RESOLUTION NO. 1797

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF LAKE FOREST PARK, WASHINGTON, AUTHORIZING THE MAYOR TO SIGN A PROFESSIONAL SERVICES AGREEMENT WITH TRANSPORTATION SOLUTIONS, INC. FOR DESIGN OF THE SR 104/40TH PLACE NE ROUNDABOUT PROJECT

WHEREAS, the City desires to construct a roundabout at the intersection of SR 104 and 40th Place NE; and

WHEREAS, public convenience and necessity required the City to obtain the services of a consultant with experience to plan and design transportation improvement projects; and

WHEREAS, the City found Transportation Solutions, Inc. to be qualified to perform and is experienced in performing the required services.

NOW, THEREFORE, BE IT RESOLVED, by the City Council of the City of Lake Forest Park as follows:

Section 1. AUTHORIZATION TO EXECUTE AGREEMENT. The City Council of the City of Lake Forest Park authorizes the Mayor to sign the consultant agreement with Transportation Solutions, Inc. for design of the SR 104/40th Place NE roundabout, attached as Exhibit A.

Section 2. CORRECTIONS. The City Clerk is authorized to make necessary corrections to this resolution including, but not limited to, the correction of scrivener's/clerical errors, references, resolution numbering, section/subsection numbers and any references thereto.

PASSED BY A MAJORITY VOTE of the members of Lake Forest Park City Council this 14th day of January, 2021.

APPROVED:

Jeff Johnson
Mayor

ATTEST/AUTHENTICATED:

Evelyn Jahed
City Clerk

FILED WITH THE CITY CLERK: January 11, 2021
PASSED BY THE CITY COUNCIL: January 14, 2021
RESOLUTION NO.: 1797

EXHIBIT A

CITY OF LAKE FOREST PARK
PROFESSIONAL SERVICES AGREEMENT
Agreement Title: Design and Construction Management Services for the SR 104 and 40th Place NE Roundabout Project

THIS AGREEMENT made and entered into by and between the **CITY OF LAKE FOREST PARK,** a Washington municipal corporation (the "City"), and **Transportation Solutions** (the "Consultant"), is dated this _____ day of _____ 20_____.

Consultant Business:	Transportation Solutions, Inc.
Consultant Address:	16932 Woodinville Redmond Road STE A206
	Woodinville, WA 98072
Consultant Phone:	425.375.2091
Consultant Fax:	NA
Contact Name	Victor Salemann
Consultant e-mail:	victors@tsinw.com
Federal Employee ID No.:	91-1383114
Authorized City Representative for this contract:	Neil Jensen, City Engineer

WHEREAS, the City desires to complete the design and construction of a roundabout to be located at **SR 104 and 40th Place NE**, to improve safety and mobility for the community; and

WHEREAS, pursuant to an invitation of the City, the Consultant submitted to the City a Statement of Qualifications; and

WHEREAS, the City completed an evaluation of all submittals and determined Transportation Solutions has the experience and expertise; and

WHEREAS, Transportation Solutions is qualified and willing to undertake the aforementioned services, consistent with all requirements of State law and City ordinances and regulations;

NOW, THEREFORE, the parties herein do mutually agree as follows:

1. **Employment of Consultant**. The City retains the Consultant to provide the services described in Exhibit B incorporated herein, for the SR 104 and 40th Place NE Roundabout Project ("collectively "Scope of Work" or the "Work"). Any inconsistency between this Agreement and the Scope of Work shall be resolved in favor of this Agreement. The Consultant shall perform the Work according to the terms and conditions of this Agreement.

The City may revise the Work and the compensation only by a written Change Order signed by the authorized representatives of the parties that shall become a part of this Agreement.

The project manager(s) of the Work shall be Victor Salemann and Michelle Mach. The project manager(s) shall not be replaced without the prior written consent of the City.

Exhibit B Work shall commence when the City issues a notice to proceed and it shall be completed no later than December 31, 2023, unless the completion date is extended in writing by the City. Notwithstanding the foregoing, Consultant shall not be responsible for any delay or failure to meet deliverable deadlines if such delay or failure was caused in whole or in part by a delay or failure of the City.

2. Compensation.

A. The total compensation to be paid to Consultant for the Work in Exhibit B, including all services and expenses, shall not exceed five hundred sixteen thousand three hundred twenty nine Dollars ($516,329) as shown on Exhibit B, which shall be full compensation for the Exhibit B Work. Consultant shall invoice the City monthly on the basis of the portion of the Work completed each month by the Consultant and sub-consultants.

B. Consultant shall be paid in such amounts and in such manner as described in Exhibit B.

C. Consultant shall be reimbursed for Eligible Expenses actually incurred that are approved for reimbursement by the City in writing before the expense is incurred. If overnight lodging is authorized, Consultant shall lodge within the corporate limits of City.

3. Request for Payment.

A. Not more than once every thirty days the Consultant shall send electronically to Neil Jensen, City Engineer, njensen@ci.lake-forest-park.wa.us its request for payment of Exhibit B Work, accompanied by evidence satisfactory to the City justifying the request for payment, including a report of Work accomplished and tasks completed, and an itemization of Eligible Expenses with copies of receipts and invoices.

4. Work Product. The Consultant shall submit all reports and other documents specified in Exhibit B according to the schedule established in Exhibit B. If, after review by the City, the information is found to be unacceptable, Consultant, at its expense, shall expeditiously correct such unacceptable work. If Consultant fails to correct unacceptable work, the City may withhold from any payment due an amount that the City reasonably believes will equal the cost of correcting the work.

All reports, drawings, plans, specifications, and intangible property created in furtherance of the Work, and any intellectual property in such documents, are property of the City and may be used by the City for any purpose; provided that re-use without Consultant's permission shall be at the City's sole risk.

5. Termination of Contract. City may terminate this Agreement by sending a written notice of termination to Consultant ("Notice") that specifies a termination date ("Termination Date") at least fourteen (14) days after the date of the Notice. Upon receipt of the Notice, the Consultant shall acknowledge receipt to the City in writing and immediately commence to end the Work in a reasonable and orderly manner. Unless terminated for Consultant's material breach, the Consultant shall be paid or reimbursed for all hours worked and Eligible Expenses incurred up to the Termination date, less all payments previously made; provided that work performed after date of the Notice is reasonably necessary to terminate the Work in an orderly manner. The Notice may be sent by any method reasonably believed to provide Consultant actual notice in a timely manner.

6. Assignment of Contract – Subcontractors. Consultant shall not assign this contract or sub-contract or assign any of the Work without the prior written consent of the City.

7. Indemnification. To the extent provided by law and irrespective of any insurance required of the Consultant, the Consultant shall defend and indemnify the City from any and all Claims arising out of or in any way relating to this Agreement; provided, however, the requirements of this paragraph shall not apply to that portion of such Claim that reflects the percentage of negligence of the City compared to the total negligence of all persons, firms or corporations that resulted in the Claim.

Consultant agrees that the provisions of this paragraph 7 apply to any claim of injury or damage to the persons or property of consultant's employees. As to such claims and with respect to the City only, consultant waives any right of immunity, which it may have under industrial insurance (Title 51 RCW and any amendment thereof or substitution therefore). THIS WAIVER IS SPECIFICALLY NEGOTIATED BY THE PARTIES AND IS SOLELY FOR THE BENEFIT OF THE CITY AND CONSULTANT.

As used in this paragraph: (1) "City" includes the City's officers, employees, agents, and representatives; (2) "Consultant" includes employees, agents, representatives sub-consultants; and (3) "Claims" include, but is not limited to, any and all losses, claims, causes of action, demands, expenses, attorney's fees and litigation expenses, suits, judgments, or damage arising from injury to persons or property.

Consultant shall ensure that each sub-consultant shall agree to defend and indemnify the City to the extent and on the same terms and conditions as the Consultant pursuant to this paragraph.

8. Insurance.

A. Consultant shall comply with the following conditions and procure and keep in force at all times during the term of this Agreement, at Consultant's expense, the following policies of insurance with companies authorized to do business in the State of Washington. The Consultant's insurance shall be rated by A. M. Best Company at least "A" or better with a numerical rating of no less than seven (7) and otherwise acceptable to the City.

1. Workers' Compensation Insurance as required by Washington law and Employer's Liability Insurance with limits not less than $1,000,000 per occurrence. If the City authorizes sublet work, the Consultant shall require each sub-consultant to provide Workers' Compensation Insurance for its employees, unless the Consultant covers such employees.

2. Commercial General Liability Insurance on an occurrence basis in an amount not less than $1,000,000 per occurrence and at least $2,000,000 in the annual aggregate, including but not limited to: premises/operations (including off-site operations), blanket contractual liability and broad form property damage.

3. Business Automobile Liability Insurance in an amount not less than $1,000,000 per occurrence, extending to any automobile. A statement certifying that no vehicle will be used in accomplishing this Agreement may be substituted for this insurance requirement.

4. Professional Errors and Omissions Insurance in an amount not less than $1,000,000 per occurrence and $1,000,000 in the annual aggregate. Coverage may be written on a claims made basis; provided that the retroactive date on the policy or any renewal policy shall be the effective date of this Agreement or prior, and that the extended reporting or discovery period shall not be less than 36 months following expiration of the policy. The City may waive the requirement for Professional Errors and Omissions Insurance whenever the Work does not warrant such coverage or the coverage is not available.

5. Each policy shall contain a provision that the policy shall not be canceled or materially changed without 30 days prior written notice to the City.

Upon written request to the City, the insurer will furnish, before or during performance of any Work, a copy of any policy cited above, certified to be a true and complete copy of the original.

B. Before the Consultant performs any Work, Consultant shall provide the City with a Certificate of Insurance acceptable to the City Attorney evidencing the above-required insurance and naming the City of Lake Forest Park, its officers, employees and agents as Additional Insured on the Commercial General Liability Insurance policy and the Business Automobile Liability Insurance policy with respect to the operations performed and services provided under this Agreement and that such insurance shall apply as primary insurance on behalf of such Additional Insured. Receipt by the City of any certificate showing less coverage than required is not a waiver of the Consultant's obligations to fulfill the requirements.

C. Consultant shall comply with the provisions of Title 51 of the Revised Code of Washington before commencing the performance of the Work. Consultant shall provide the City with evidence of Workers' Compensation Insurance (or evidence of qualified self-insurance) before any Work is commenced.

D. In case of the breach of any provision of this section, the City may provide and maintain at the expense of Consultant insurance in the name of the Consultant and deduct the cost of providing and maintaining such insurance from any sums due to Consultant under this Agreement, or the City may demand Consultant to promptly reimburse the City for such cost.

9. Independent Contractor. The Consultant is an independent Contractor responsible for complying with all obligations of an employer imposed under federal or state law. Personnel employed by Consultant shall not acquire any rights or status regarding the City.

10. Employment. The Consultant warrants that it did not employ or retain any company or person, other than a bona fide employee working solely for the Consultant, to solicit or secure this Agreement or pay or agree to pay any such company or person any consideration, contingent upon or resulting from the award or making of this Agreement. For breach or violation of this warranty, the City shall have the right either to terminate this Agreement without liability or to deduct from the Agreement price or consideration or to otherwise recover, the full amount of such consideration.

11. Audits and Inspections. The Consultant shall make available to the City during normal business hours and as the City deems necessary for audit and copying all of the Consultant's records and documents with respect to all matters covered by this Agreement.

12. City of Lake Forest Park Business License. Consultant shall obtain a City of Lake Forest Park business license before performing any Work.

13. Compliance with Federal, State and Local Laws. Consultant shall comply with and obey all federal, state and local laws, regulations, and ordinances applicable to the operation of its business and to its performance of the Work.

14. Waiver. Any waiver by the Consultant or the City of the breach of any provision of this Agreement by the other party will not operate, or be construed, as a waiver of any subsequent breach by either party or prevent either party from thereafter enforcing any such provisions.

15. Complete Agreement. This Agreement contains the complete and integrated understanding and agreement between the parties and supersedes any understanding, agreement or negotiation whether oral or written not set forth herein.

16. Modification of Agreement. This Agreement may be modified by a Change Order as provided in Section 1, or by a writing that is signed by authorized representatives of the City and the Consultant.

17. Severability. If any part of this Agreement is found to be in conflict with applicable laws, such part shall be inoperative, null and voice, insofar as it is in conflict with said laws, the remainder of the Agreement shall remain in full force and effect.

18. Notices.

A. Notices to the City of Lake Forest Park shall be sent to the following address:

City of Lake Forest Park
Attn: Neil Jensen, P.E., City Engineer
Public Works Department
17425 Ballinger Way NE
Lake Forest Park, WA 98155

B. Notices to the Consultant shall be sent to the following address:

Transportation Solutions
Attn: Victor Salemann
16932 Woodinville Redmond Road STE A206
Woodinville, WA 98072

19. Venue. This Agreement shall be governed by the law of the State of Washington and venue for any lawsuit arising out of this Agreement shall be in King County.

20. Counterpart Signatures. This Agreement may be executed in one or more counterparts, including by facsimile, scanned or electronic signatures, each of which shall be deemed an original and all of which together shall constitute one and the same instrument.

IN WITNESS WHEREOF, the City and Consultant have executed this Agreement as of the date first above written

	CONSULTANT: Please fill in the spaces and sign in the box appropriate for your business entity.
CITY OF LAKE FOREST PARK WASHINGTON By: _____ Jeff Johnson, Mayor Date:_____	**CONSULTANT: Transportation Solutions, Inc.** By: _____ Printed Name:_____ Its _____ Date: _____
ATTEST: _____ Evelyn Jahed, City Clerk Date: _____	
APPROVED AS TO FORM: _____ Kim Adams Pratt, City Attorney Date: _____	

Exhibit B

Scope of Services
SR 104/40th Pl NE Roundabout Plans, Specifications, and Estimates

INTRODUCTION

A. Project Description

The objective of this project is to prepare Plans, Specifications, and Estimates necessary for the construction of a single lane roundabout with a raised central island and sidewalks at the intersection of SR 104/40th Pl NE in Lake Forest Park, Washington.

The intersection is set in a primarily residential area yet is the intersection of two primary roadways. SR 104 is an east west State Highway connecting SR 522 to the Edmonds Ferry Terminal and beyond and 40th Pl NE is a major local north-south route.

Existing Conditions, Opportunities & Challenges

- Surrounding land uses are mostly single-family homes with driveways onto SR 104. Proposed changes will need to consider neighborhood access.
- The stop-controlled intersection has misaligned legs and can be confusing to navigate. For drivers heading north on SR 104, 40th Place NE can be viewed as the natural through movement, rather than northbound SR 104, which requires drivers to bear left. Left turns from the side streets onto southbound SR 104 are especially difficult due to limited sight distance. The intersection operates at LOS F today and will further degrade in the future.
- Moreover, the corner between 40th Place NE and NE 184th Street is very wide with no pedestrian landing or marked crosswalk between the two approaches. The curb ramps on 40th Place NE are located 40 feet from the intersection, adding to the confusion of where to cross the stop controlled approaches.
- There is no pedestrian crossing of SR 104.
- The angle of intersection legs and topography pose challenges for any proposed improvements.

Proposed Improvements

The City of Lake Forest Park is proposing to construct a traditional four-leg single lane roundabout. Southbound through movements on SR 104 would make a right turn at the roundabout, and northbound through movements would be left turns.

- A short retaining wall may be needed on the northeast corner to minimize right-of-way impacts.
- The roundabout design will include pedestrian crossings for all legs. RRFB's may be desirable on the SR 104 approaches.
- The central island may include art and/or hardscaping.
- Each adjacent property will ideally maintain one point of access in and out of their property from SR 104 in both directions.

- The roundabout design will be forward compatible with future buffered bike lanes and sidewalks on the SR 104 approaches.
- The roundabout design will address safety for all modes.
- The roundabout design will maintain the corridor's unique identity and natural landscape.
- The roundabout design will take a phased approach that provides benefits over time.
- The roundabout design will consider the draw on the City's financial resources in selecting design solutions, as well as positioning future improvements for regional, state and federal investment.
- The roundabout design will protect natural environment and encourage low impact design approaches.
- The roundabout design will discourage neighborhood cut-through traffic.
- The roundabout design will minimize impacts on neighboring properties (e.g., right-of-way, access, noise, visibility).

B. Project Coordination

This scope of work uses the following references for project team members:

CITY or the City is the City of Lake Forest Park

WSDOT is the Washington State Department of Transportation

CONSULTANT is Transportation Solutions, Inc. or its subconsultants

C. Design Criteria

As part of the design effort on this project, design criteria will be developed and approved by the CITY. When developing this design criteria, City of Lake Forest Park standards will govern. Additionally the following Standards and guidelines will be used:

- WSDOT Local Agency Guidelines June 2020
- WSDOT Design Manual September 2020
- NCHRP REPORT 672 Roundabouts, An Informational Guide, Second Edition 2010
- AASHTO's "A Policy on Geometric Design of Highways and Streets" 2011

D. Key Project Tasks and Schedule

Task	Task Duration
Task 1 Project Management and Quality Control	February - December 2021
Task 2 Data Collection and Survey	February - March 2021
Task 3 WSDOT Approvals/Preliminary (30%) Design	February - June 2021
Task 4 Environmental Documentation	February - June 2021
Task 5 ROW Acquisition	May - November, 2021
Task 6 Design (90%)	June - September, 2021
Task 7 Final Design and PS&E (100%)	October - December 2021
Task 8 Landscape Design	June - December 2021
Task 9 Constructability Review	April – December 2021
Task 10 Geotechnical	February - June 2021

E. Information, Responsibilities, and Services Provided by the CITY

The following information will be provided by the CITY. This is not intended to be an exhaustive list and additional data to be provided by the CITY are included throughout the scope of work:

- City of Lake Forest Park, Safe Highways Report, March 2018 including all appendices
- WSDOT approved Channelization Plans for the existing intersection configuration
- Roadway and utility as-built drawings
- Available geotechnical data, boring logs, and as-built drawings showing geotechnical information
- Typical pavement structural section recommendations based on other area projects (for cost estimating purposes)
- Typical storm water infiltration rate recommendations based on other area projects
- Planning and land use data
- Any available recent traffic counts
- 5 year crash data
- Existing WSDOT right-of-way plans for the project area

F. General Project Assumptions

This Scope of Services is based upon certain assumptions and exclusions, identified below and under specific tasks. The following assumptions were used in the development of this scope of services:

- AutoCAD 2016 or later will be utilized on the project
- AGi32 software will be used for illumination design
- MS Excel will be utilized for spreadsheets
- MS Word will be utilized for word processing
- Roundabout LOS will be analyzed using SIDRA and WSDOT LOS procedures
- AutoTurn will be utilized to evaluate truck turning movements
- Construction bid estimates and other opinions of cost and schedule are estimates. Therefore, Consultant makes no warranty that actual project costs, financial aspects, economic feasibility, or schedules will not vary from Consultant's opinions, analyses, projections or estimates.

G. Change Management

The Project Managers from the CITY and the CONSULTANT are responsible for managing changes to the scope and schedule. The CITY is responsible for the authorization of any changes to the scope, budget, and/or schedule. Team members must ensure that work within their areas remains within the defined project scope, schedule, and budget. When issues, actions, or circumstances occur that could cause a change in scope, personnel, cost, or schedule, team members must communicate potential changes to the Project Manager as early as possible.

The Project Managers will determine whether the potential change issue will lead to a change in scope, cost, or schedule. Verified changes will be communicated to project stakeholders. The

Project Manager will be prepared to explain the effect of the change to the team, so schedules and budgets can be adjusted.

This is a time and materials contract with a not to exceed maximum. The level of effort for various tasks are estimates and may vary. The contract will be managed to the contract maximum, not the task level budgets.

Task 1.0 PROJECT MANAGEMENT AND QUALITY CONTROL

1.1 Project Management

Project management will be on-going during the course of the project. The project manager will maintain communication with the CITY, will monitor the project's scope, schedule, and budget, and other similar project management tasks.

1.2 Monthly Progress Reports and Invoices

CONSULTANT will provide monthly progress reports and invoices in accordance with CITY standard procedure. The project team will coordinate on the first invoice so that the format is acceptable to the CITY. Each progress report and invoice package will include the CONSULTANT invoice showing all labor and direct expenses included for the period, the monthly progress report, and breakdown of labor hours and direct expenses charged for the period for CONSULTANT and each subconsultant.

Assumptions

- The invoice format for this project will be one that is acceptable to the CITY.
- Progress Report and Invoice packages will be prepared monthly for eighteen (18) months.
- For purposes of this scope it is assumed that project management will require 4 hours per month.

Deliverables

- Monthly Progress Report and Invoice Packages

1.3 Progress Meetings

Meetings (typically videoconference) will be scheduled weekly as needed to monitor the progress of the project, to coordinate with team members, and to maintain accountability between all members of the team including the CONSULTANT, subconsultants, and the CITY.

1.4 Quality Control/Quality Assurance

Quality Control reviews will be completed prior to submittal of major deliverables. These will include:

- Draft and Final Topographic Survey
- Draft and Final WSDOT Submittals (ICE, BOD, Context and Modal Accommodation Report, and Channelization Plan)
- Draft and Final 30% Submittals
- Draft and Final 90% Plan Set
- Draft and Final 100% Plan Set
- Draft and Final Plans, Specifications and Estimates

Task 2.0 DATA COLLECTION AND SURVEY

Sources of information may include prior contract plans, WSDOT plans, as-builts, surveys, and field visits to collect information, City files and databases, design and policy manuals, transportation plans, previous studies, discussions with City, and other sources of information as needed.

2.1 Obtain As-Builts and Contract Plan Sheets

CONSULTANT will request from the City any as-built construction documents and contract plans for improvements located in the project vicinity. Any existing area boring logs, roadway structural sections or area infiltration rates that were developed for other area projects will also be provided to the CONSULTANT team.

2.2 Review Relevant City Plans and Studies

CONSULTANT will review the Highway Safety Plan and Transportation Element of the Comprehensive Plan, and Six-year TIP.

2.3 Verify Environmental Constraints

The CONSULTANT will review available critical areas mapping (steep slopes, streams, and buffers), and significant trees that may influence design.

2.4 Review Existing Utilities

Utilizing the topographic survey and available files and information received from the City, existing utility constraints will be identified and considered.

2.5 Site Visits to Obtain Additional Information

Technical staff from the project team will perform a site visit to obtain additional project information not obtainable through electronic media. This may include confirming or reviewing existing surface features, topographical, utility, boundary, environmental and other constraints.

2.6 Topographic Survey

CONSULTANT will provide Topographic Survey as described below.

Full Mapping for Design

- Entirety of the intersection stated above along with 200' North along 40th Place NE, 200' East along NE 184th Street, 450' West along SR 104, and 250' South along SR 104.
- Mapping will extend for the full ROW width plus 20' beyond ROW where possible.

Limited Mapping for WSDOT Channelization Plan preparation

- Extending an additional 100' along 40th Place NE and NE 184th Street, and an additional 300' North and South along SR 104.
- Mapping will be from edge of roadway to edge of roadway.

Survey PM, Admin, QA/QC

This task includes the survey project management, administrative duties, and quality control required for a project of this complexity and magnitude.

Survey Control

This task includes the establishment of survey control, or the recovery of existing survey control, as

required for the project. Typically, survey control will be set, found, or referenced utilizing Real Time Kinematic (RTK) GPS (GNSS) and the Washington State Reference Network (WSRN) in conformance with industry standards. This survey control is then typically propagated, as required, utilizing standard terrestrial total station measurements.

Geodetic Survey Control (Coordinates)

Current WSRN coordinate system is NAD83-2011 Epoch 2010.00 Coordinates.

Horizontal

Typically, survey work shall reference the Washington State Plane Coordinate System of 1983 as established in accordance with Chapter 58.20 Revised Code of Washington.

Vertical

Typically, the Vertical Datum for the survey work shall reference the North American Vertical Datum of 1988 (NAVD88).

Cadastral Survey Control (Lines established and marked on the ground by suitable monuments, which are used as starting and closing points in surveys of the public domain of the United States.)

Units shall be in US Survey Feet.

Field Surveying and Mapping

This task includes the field surveying and mapping required for this specific effort. CONSULTANT will be using a 3D Laser Scanner supplemented with traditional Total Station and GPS technologies to collect the data for use in the creation of a basemap.

CONSULTANT will provide ground-based topographic surveys to generate basemaps at a 1"=20' scale and to prepare DTM generated 1-foot contours. Field survey will pick up curbs, edges of pavements, drainage structures (centers of lids), fences, mailboxes, retaining structures, culverts, guard rails, utility surface features, field markings of existing sub-surface utilities, traffic and business signs, striping, trees (type and size for trees over 6-inches DBH), and limits of landscape areas.

CONSULTANT will obtain Right of Entry for survey on private property.

CONSULTANT will use appropriate signage, high-visibility clothing and traffic control devices while performing field survey.

Utility Surveying Services

CONSULTANT will locate all visible surface features of subsurface utilities.

CONSULTANT will subcontract with a private utility locating company to mark the horizontal locations of conductible utilities within the full mapping area. CONSULTANT will survey the utility markings for incorporation into the basemap.

Measure Downs for sewer manholes, catch basins and storm drain manholes with pipe size, material, direction, and invert elevations will be obtained, if possible, at each structure. Nearest drainage structure outside the mapping limits will also be collected.

Office Processing

This task includes the office processing of the collected survey data, data extraction, field book note reductions, CADD drafting, and other duties required for the generation of the deliverable(s). Break lines will be created along curbs, walls, and other surface features in order to generate an accurate

Digital Terrain Model.

For 3D laser scanning efforts, sub-tasks include the registering of point clouds; evaluating the registrations; exporting the point cloud data to Civil3D; creating or picking of appropriate points in Civil3D; Linework and Layering, and standard CADD drafting of the deliverables, as required.

Right-of-Way/Boundary Resolution and Acquisition Support

Right-of-way and parcel boundaries will be resolved within the full mapping area. Up to 15 parcels will be resolved along with easements that affect the parcel.

Up to 5 land descriptions and exhibits will be prepared to support temporary construction easement or ROW acquisition.

Task 3.0 WSDOT Approvals/Preliminary Design (30%)

The intersection is on a State Route and therefore WSDOT approval is required for several design elements. Key WSDOT approvals include:

- Intersection Control Evaluation (ICE)
- Geometric Design Peer Review
- Basis of Design (BOD) and Modal Accommodation Report
- Channelization Plan for Approval

3.1 Intersection Control Evaluation (ICE)

The CONSULTANT shall complete a WSDOT Intersection Control Evaluation (ICE), formerly known as the Intersection Control Analysis. The ICE is a 5-step process meant to screen and evaluate alternatives to determine the best possible intersection type and design. Due to the safety and operational performance record, a roundabout is required to be evaluated. The ICE will follow the latest WSDOT guidance and generally include:

- Summary of Background and Project Needs
- Alternatives Feasibility
- Operational and Safety Performance Analysis
- Alternatives Evaluation
- Additional Information to support Control Type Selection

The CONSULTANT will rely upon the CITY's Completed Highway Safety Study for the data necessary to complete the ICE to the greatest extent feasible. Information not included in the Highway Safety Study or its appendices will be developed by the CONSULTANT.

The CONSULTANT assumes that the WSDOT review comment cycle will take up to three (3) cycles. Any revisions requested by WSDOT beyond three (3) review cycles is considered extra work. CONSULTANT assumes that WSDOT will require 3 to 4 weeks to create and return written comments to the CONSULTANT.

3.2 Basis of Design (BOD) and Modal Accommodation Report (MOR)

The CONSULTANT shall complete WSDOT BOD and Modal Accommodation Report Forms for the project. The BOD and MOR will follow the latest WSDOT guidance and generally include:

- A Summary of Community Engagement to Date
- A General Project Description
- Identification of Project Needs
- Identification of Roadway Context
- Identification of Design Controls
- Alternatives Analysis
- Identification of Design Elements Changed

The CONSULTANT will rely upon the CITY's Completed Highway Safety Study for the data necessary to complete the BOD and MOR to the greatest extent feasible. Information not included in

the Highway Safety Study or its appendices will be developed by the CONSULTANT.

The CONSULTANT assumes that the WSDOT review comment cycle will take up to three (3) cycles. Any revisions requested by WSDOT beyond three (3) review cycles is considered extra work. CONSULTANT assumes that WSDOT will require 3 to 4 weeks to create and return written comments to the CONSULTANT.

3.3 Geometric Design Peer Review

The CONSULTANT shall coordinate a WSDOT Geometric Plan Review. WSDOT requires a Geometric Design Peer Review for new roundabouts on State Routes. The Peer review will be held soon after the conceptual roundabout layout is developed. The peer review should include the following WSDOT participants:

- Region Traffic Office
- Assistant State Traffic Engineer
- Region Project Development Engineer or Engineering Manager
- Assistant State Design Engineer

The intent of this peer review is to review, discuss, evaluate, and provide feedback on the 2-D roundabout layout design in order to finalize the channelization plan.

3.4 WSDOT Channelization Plan for Approval

The CONSULTANT will work with the CITY and WSDOT to prepare channelization plans and documentation necessary to obtain WSDOT Channelization Plan Approval. The Channelization Plans will be prepared in accordance with the latest version of the WSDOT NORTHWEST REGION CHANNELIZATION PLAN CHECKLIST. The Channelization Plans will include:

- Channelization Plan Sheets
- Detail Sheets
- Typical Roadway Sections
- Roundabout Details

The channelization plan review process is typically an iterative process. The first submittal is reviewed by an Area Traffic Analyst, the Area Design Reviewer, and several operations groups within Traffic. The first review usually takes the longest time due to the number of groups reviewing the plans.

The CONSULTANT will review the written comments from WSDOT. The CONSULTANT will make the required changes, document design decisions, and submit a revised submittal to WSDOT and the CITY.

The CONSULTANT assumes that the WSDOT review comment cycle will take up to three (3) cycles. Any revisions requested by WSDOT beyond three (3) review cycles is considered extra work. CONSULTANT assumes that WSDOT will require 3 to 4 weeks to create and return written comments to the CONSULTANT.

3.5 Preliminary Paving and Grading Plans

The CONSULTANT will prepare preliminary paving and grading plans based upon the WSDOT approved BOD and Channelization Plan. The preliminary paving and grading plans will include motorized and non-motorized elements of the project. Key design elements in the preliminary paving

and grading plans include:

- General roundabout geometry
- Central island
- Splitter islands
- Circulating roadway
- Curbing details
- Pavement details including colors and textures
- Non-motorized facilities
- Sidewalks
- Crossings
- Required ADA facilities
- Illumination
- Signing and pavement markings

3.6 Drainage Report and Preliminary Drainage Plans

It is assumed that the new plus the replaced impervious surface area is less than 5,000 square feet, therefore a drainage report is not required. The CONSULTANT shall:

- Determine and document the new and replaced pervious and impervious areas.
- Determine and document the criteria for detention/retention and water quality design.
- Develop and size drainage collection and conveyance tie-ins. It is assumed that new catch basins and storm drains will be tied into existing storm drains within 50 feet of the project site.
- Drainage Plan and Profile will be included in the plan set.

3.7 Preliminary WSDOT Right-of-Way Plans

The CONSULTANT will prepare preliminary right-of-way plans in WSDOT format based upon the WSDOT approved Channelization Plan, Preliminary Paving and Grading Plans, and Preliminary Drainage Plans. The preliminary right-of-way plan will be the basis for initial property acquisition activities.

3.8 Utility Coordination Plan

The CONSULTANT will prepare a utility coordination plan identifying CITY and Franchised utilities requiring adjustment or relocation due to the project. No potholing is anticipated at this time. If potholing is deemed necessary, it will be considered extra work.

3.9 Cost Estimate

The CONSULTANT will develop a 30% cost estimate for the preliminary design. The cost estimate will use WSDOT Standard Bid Items. All major work items will be quantified. Miscellaneous items such as traffic control, landscaping, drainage, barrier, etc. will not quantified but will be included as a percentage of major work items.

Task 4.0 ENVIRONMENTAL DOCUMENTATION

The CONSULTANT shall work with the CITY to complete a State Environmental Policy Act (SEPA) checklist for the project.

Assumptions

- The project will require a SEPA Checklist
- No additional technical reports or surveys will be required in support of the SEPA Checklist including but not limited to air quality, noise, environmental justice, and hazardous materials. If this documentation is required, it can be prepared by the CONSULTANT as an extra service. An allowance for these extra services are included in the fee estimate.

4.1 NEPA

NEPA documentation will not be required for this project.

4.2 Section 106 Cultural Resources Compliance

The CONSULTANT shall complete the Washington State Cultural Resources compliance process.

4.3 SEPA

The CONSULTANT shall complete the SEPA Checklist for the CITY's SEPA responsible officials' review and signature.

Deliverables:
SEPA Checklist for CITY's SEPA responsible officials' review and signature.

Task 5.0 RIGHT-OF-WAY ACQUISITION

CONSULTANT will furnish these services under the processes and procedures as outlined in CH 468-100 WAC and the City's Property Acquisition Policies and Procedures, Washington State Department of Transportation's Local Agency Guideline Manual, M36-63 and the Right-of-Way Manual.
The overall right-of-way acquisition objectives are:

Negotiate to purchase Temporary Construction Easements from two parcels, and right-of-way in fee from (5) five parcels:

- 18411 acquisition
- 18410 acquisition and TCE for driveway adjustment
- 18242 acquisition
- 18403 acquisition and TCE for driveway adjustment
- 18251 acquisition TCE for driveway adjustment

5.1 Review Title Reports

Provide CITY with a parcel summary memo listing ownership, title exceptions, existing easements, or other rights of record, and comments or concerns for five (5) parcels.

5.2 Prepare and setup parcel files for five (5) parcels

Review title reports. Provide CITY with a parcel summary memo listing ownership, title exceptions, existing easements, or other rights of record, and comments or concerns for five (5) parcels.

5.3 Prepare a True Cost Estimate

5.4 Acquisition Forms

Prepare acquisitions forms needed to get temporary construction easements and fee acquisitions for five (5) parcels.

5.5 Offer packages

Prepare and review offer package and package assemblage for five (5) parcels. This scope of work does not include condemnation, or the preparation and negotiations of Possession and Use agreements. Possession and use agreements can be provided as extra services, if requested.

5.6 Negotiation Services

Provide negotiation services for the purchase of temporary construction easements and right-of-way in fee for (5) parcels.

5.7 Vest Titles

Coordinate with the title company to get titles vested in the CITY, prepare payment vouchers, title policy and recording fees, and submit to CITY to process payment for the parcel (CITY will issue actual payment of all fees and closing costs such as title policies, recording fees, and escrow services) for (5) parcels.

5.8 Coordination and Documentation

Provide overall coordination for right-of-way activities; maintain records, parcel diary reports, files, documents, and reports.

5.9 Status Reports

Provide written status reports on a monthly basis and provide verbal status reports as requested.

Task 6.0 DESIGN (90%)

Design (90%) shall consist of a 90% plan set based on the 30% design for City review followed by a 100% plan set for final review. The 90% plans will include all the following elements. (The 90% plans may include requests for clarification for minor details that will be resolved in the 100% plans.)

6.1 Index, Vicinity Map, Legend, and General Notes

CONSULTANT will develop an Index and Vicinity Map showing the project location and a list of sheets included in the design plans.

6.2 Site Preparation Plan

The site preparation plan will specify site preparation activities including but not limited to clearing, grubbing, cut, fill, roadway removal, sidewalk removal, demolition, and existing utility protection, demarcation and/or relocation in order to create favorable site conditions which facilitate construction activities.

6.3 Horizontal Layout and Grading Plans

Horizontal layout and grading plans will be prepared using a combination of plan view and curve data tables including:

- Horizontal geometry for the intersection including:
  - Central island
  - Splitter islands
  - Truck aprons
  - Approach roadways
  - Curb, gutter, and sidewalk limits
  - Driveway restoration limits
- Point elevations corresponding with horizontal geometry, high points, and low points

Assumptions

- Plans will be prepared at 1" = 20' full size (22"x34") and 1"=40' half size (11"x17")
- Plans will use City and WSDOT Standard Details

6.4 Roundabout Details

Roundabout detail sheets will be prepared to show mountable curb details, splitter island geometric details, and truck apron details.

6.5 TESC Plan

Project specific temporary erosion sedimentation control (TESC) plan will be prepared consistent with CITY requirements.

6.6 Paving Plans and Roadway Sections

The paving plans will include:

- Paving limits
- Curb, gutter, and sidewalk limits
- Driveway restoration limits
- Roadway sections
- Driveway sections

6.7 Drainage Plans

It is anticipated/assumed that the new plus the replaced impervious surface area is less than 5,000 square feet, therefore a drainage report is not required. The CONSULTANT shall:

- Determine and document the new and replaced pervious and impervious areas.
- Determine and document the criteria for detention/retention and water quality design.
- Develop and size drainage collection and conveyance tie-ins. It is assumed that new catch basins and storm drains will be tied into existing storm drains within 50 feet of the project site.
- Drainage Plan and Profile will be included in the plan set (2 sheets).

6.8 Pavement Marking and Signing Plans

The CONSULTANT shall prepare pavement marking plans indicating locations for channelization and pavement markings. The CONSULTANT shall prepare signing plans including standard roundabout signage and Rectangular Rapid Flash Beacons for the crosswalks.

6.9 Illumination Plans

It is anticipated that illumination will be required and provided by Seattle City Light (SCL). The CONSULTANT will provide design criteria for SCL to utilize for design. If SCL is unable to provide the illumination design the CONSULTANT will provide the design as extra work.

Assumptions:

- Illumination will be designed, installed, and maintained by SCL
- City will coordinate with SCL

6.10 Utility Relocation Plans

The City shall coordinate utility relocations based upon the roundabout design and utility relocation plan provided by the CONSULTANT. The CONSULTANT will make minor revisions to the roundabout design to avoid utilities if requested.

Found utilities will be used to create preliminary utility plans. These plans will show the locations of each existing utility based on plans provided by the utility companies and/or existing plans. Initial utility contacts will be made, requests for utility company maps of existing utilities will be delivered and an explanation of the project provided. The preliminary utility plans will be provided to the utility companies for their verification of location and to plan the relocation of any facilities necessary to the project. The preliminary utility packages are provided to the utility companies to initiate the verification process and begin the coordination effort of confirming utility location and depth and confirming potholing/monitoring.

Assumptions

- Utility relocation will be the responsibility of the affected utility

6.11 Traffic Control Plans

Project specific traffic control plans will be prepared consistent with WSDOT requirements for State Routes. The traffic control plans will consider the potential closure of one or more intersection approaches to accelerate construction and reduce construction costs.

6.12 Specifications

The CONSULTANT will prepare WSDOT/APWA specifications required for the public ad and award of the project.

6.13 Itemized Quantity Takeoff and Cost Estimate

Quantity takeoffs for the multiple design tasks will be reported by each task lead and a preliminary cost estimate for the project will be developed. The cost estimate will take into account recent construction project bid prices in the project vicinity. The cost estimate will also include right-of-way costs, construction contingencies, construction engineering, and contractor mobilization.

6.14 Compile and Submit Design Package

CONSULTANT will prepare the Design Submittal package based on CITY requirements and

WSDOT's Design Manual and submit the package for review and comment. The Design Plans are as described above and as summarized below:

Scope Item	Description
6.1	Index, Vicinity Map, Legend and General Notes
6.2	Site Preparation Plan
6.3	Horizontal Layout and Grading Plans
6.4	Roundabout Details
6.5	TESC Plan
6.6	Paving Plans and Roadway Sections
6.7	Drainage Plans
6.8	Pavement Marking and Signing Plans
6.9	Illumination Plans
6.10	Utility Relocation Plans
6.11	Traffic Control Plans
6.12	Specifications
6.13	Itemized Quantity Takeoff and Cost Estimate
6.14	Compile and Submit Design Package
8.0	Landscape/Irrigation Plans

Deliverables:

- 90% Design Plans
- Itemized Quantity Takeoff and Cost Estimate
- 90% Specifications
- Bid Forms

Task 7.0 FINAL DESIGN AND PS&E (100%)

Final Design (100%) shall consist of a 100% PS&E Plan Package. The Final Design plans will include all the following elements as described in Task 6 and including resolution of comments received on 90% submittal.

Deliverables:

- 100% Design Plans
- Itemized Quantity Takeoff and Cost Estimate
- 100% Specifications
- Bid Forms

Task 8.0 LANDSCAPE/URBAN DESIGN

The full scope of landscape/urban design services will be developed subsequent to the completion of the 30% design at which time areas requiring landscape restoration, landscape installation, hardscape installation, or art installation will be more fully known. No additional work on this task will be undertaken prior to written approval of scope and fee for services for this task.

8.1 Initial Landscape/Urban Design Coordination

Deliverables: To be determined

Task 9.0 CONSTRUCTABILITY REVIEW

The CONSULTANT will complete constructability reviews at the 30%, 90%, and 100% design milestones.

9.1 30% Constructability Review

The constructability reviewer will accompany lead designer on a plans-in-hand site visit to acquaint CONSULTANT with the Project and site.

The constructability review at this stage will be for areas of:

- Cost saving opportunities
- Constructability and operability
- Maintenance of traffic during construction
- Utility coordination

The constructability reviewer will submit a letter report detailing limits of the review, in the time and budget available, and highlighting key areas of concern.

9.2 90% Constructability Review

Review the 90% Plans, Project Manual/Contract Provisions, and Engineer's Estimate for such things as:

- General clarity
- Consistency among standard specifications, amendments, and special provisions/bid items
- Completeness and adequacy of bidding and contracting documents/forms
- Special Provisions for non-standard items
- Pay items for construction elements

The constructability reviewer will prepare and submit a Constructability Review Comments spreadsheet along with red-line markup of the documents.

9.3 100% Constructability Review

The constructability reviewer will complete a final review of 100% Plans, Project Manual/Contract Provisions and Preliminary Engineer's Estimate, prior to going to Ad. This review will be only to ascertain if previous review comments were addressed.

Task 10.0 GEOTECHNICAL

It is anticipated that the geotechnical services for the project will consist of a review of existing data to provide geotechnical parameters for design and construction of the retaining walls and illumination foundations. The CONSULTANT shall provide the following scope of services:

10.1 Review Existing Data

Collect and review existing geologic and geotechnical data available for the general vicinity.

10.2 Site Reconnaissance

Complete a site reconnaissance to observe site conditions, soil exposures, and plan the hand auger exploration locations. Complete a general assessment of the existing pavement distress.

10.3 Evaluate Near-Surface Soil Conditions

Evaluate near-surface soil conditions by completing hand auger borings outside the existing pavement area. Based on geologic maps, we anticipate soils will consist of recessional outwash deposits with a minor thickness of surficial fill. Depending on perched groundwater conditions or gravel content, borings may be appropriate during a subsequent phase if hand augers obtain refusal near the surface.

10.4 Geotechnical Laboratory Testing

Complete geotechnical laboratory testing to evaluate in-situ moisture contents and gradation characteristics to assess earthwork recommendations and LID feasibility. Depending on subsurface findings and stormwater design requirements, field infiltration testing may be required during a subsequent phase in accordance with KCSWDM guidelines as adopted by City of Lake Forest Park.

10.5 Evaluate Feasibility of Low Impact Drainage Design

Evaluate feasibility of low impact drainage design based on grain sized analyses of soils collected in the hand augers.

10.6 Pole Foundation Recommendations

Provide preliminary recommendations for design of the illumination pole foundations based on conditions encountered in the hand augers. Subsequent borings may be appropriate if the hand augers meet refusal without confirming subsurface conditions consistent with recessional outwash deposits.

10.7 Retaining Wall Recommendations

Provide recommendations for retaining walls including earthwork and subgrade preparation, placement and compaction of structural fill, allowable bearing pressure, and mitigation of unsuitable soil conditions. This will include an evaluation of the effects of weather and/or construction equipment on site soils.

10.8 Technical Memorandum

Summarize the results of the data review, hand augers and recommendations in a technical memorandum with appropriate figures.

Deliverables:

- Geotechnical Memorandum

Task 11.0 BID SUPPORT

The CONSULTANT will be available by phone and email to respond to contractor questions during the bidding period. All questions will be documented by the CITY and forwarded to the CONSULTANT for processing. The CONSULTANT assumes that up to three (3) addenda may be processed under this scope of work. The CONSULTANT will draft addenda, if any, and forward to the CITY for processing. The cutoff date for the Q&A and/or Addenda will be 3 working days prior to the bid advertisement date, as amended.

Deliverables:

- Prepare Responses to Bidder Questions
- Prepare up to three (3) Addenda

Task 12.0 CONSTRUCTION MANAGEMENT SUPPORT SERVICES

At the CITY'S discretion, a separate scope of work with an addendum to this contract will be prepared by the CONSULTANT for construction management support.

Fee Estimate
SR 104/40TH PL SE ROUNDABOUT
Plans, Specifications, and Estimates

Anticipated Work Tasks	VLS PIC	MLM Sr. Engr	ALB Traffic Engr	MS Sr. Engr Tech CADD	DH Engr I	JB Admin	Task Hours	Task Cost
	$235.00	$180.00	$168.60	$155.00	$105	$115.00		
Task 1.0 PROJECT MANAGEMENT AND QUALITY CONTROL	92	100	0	0	0	24	156	$42,380.00
Task 1.1 Project Management	8	40				12	60	$10,460.00
Task 1.2 Monthly Progress Reports and Invoices		12				12	24	$3,540.00
Task 1.3 Progress Meetings	24	48					72	$14,280.00
Task 1.4 Quality Control/Quality Assurance	60						60	$14,100.00
Task 2.0 DATA COLLECTION AND SURVEY	0	16	2	4	0	0	22	$3,837.00
Task 2.1 Obtain As-Builts and Contract Plan Sheets		2		2			4	$670.00
Task 2.2 Review Relevant City Plans and Studies		2	2				4	$697.00
Task 2.3 Verify Environmental Constraints		2					2	$360.00
Task 2.4 Review Existing Utilities		2					2	$360.00
Task 2.5 Site Visits to Obtain Additional Information		6					6	$1,080.00
Task 2.6 Obtain Topographical Survey		2		2			4	$670.00
TASK 3.0 WSDOT APPROVALS/PRELIMINARY DESIGN (30%)	14	128	32	100	64	0	338	$53,942.00
Task 3.1 Intersection Control Evaluation (ICE)	2	24	16				42	$7,486.00
Task 3.2 Basis of Design and Modal Accommodation Report		8					8	$1,440.00
Task 3.3 Geometric Design Peer Review	4	4		12			20	$3,520.00
Task 3.4 WSDOT Channelization Plan for Approval	2	32	16	40	40		130	$19,326.00
Task 3.5 Preliminary Paving and Grading Plan	4	32		32			68	$11,660.00
Task 3.6 Drainage Report and Preliminary Drainage Plan		8					8	$1,440.00
Task 3.7 Preliminary WSDOT Right-of-Way Plan		8					8	$1,440.00
Task 3.8 Utility Coordination Plan		4		16			20	$3,200.00
Task 3.9 Cost Estimate	2	8			24		34	$4,430.00
TASK 4.0 ENVIRONMENTAL DOCUMENTATION	0	8	10	10	0	0	28	$4,675.00
Task 4.1 NEPA							0	$0.00
Task 4.2 Section 106 Cultural Resources Compliance			2	2			4	$647.00
Task 4.3 SEPA		8	8	8			24	$4,028.00
Task 5.0 RIGHT-OF-WAY ACQUISITION	2	12	0	12	0	0	26	$4,490.00
Task 5.1 Review Title Reports							0	$0.00
Task 5.2 Prepare Parcel Files							0	$0.00
Task 5.3 Prepare True Cost Estimate							0	$0.00
Task 5.4 Acquisition Forms							0	$0.00
Task 5.5 Offer Packages							0	$0.00
Task 5.6 Negotiation Services							0	$0.00
Task 5.7 Vest Titles							0	$0.00
Task 5.8 Coordination and Documentation	2	12		12			26	$4,490.00
Task 5.9 Status Reports							0	$0.00
Task 6.0 DESIGN (90%)	0	157	0	220	42	2	421	$67,000.00
Task 6.1 Index, Vicinity Map, Legend, and General Notes		1		2			3	$490.00
Task 6.2 Site Preparation Plan		2		8			10	$1,600.00
Task 6.3 Horizontal Layout and Grading Plans		40		60			100	$16,500.00
Task 6.4 Roundabout Details		16		32			48	$7,840.00
Task 6.5 TESC Plan		2		2			4	$670.00
Task 6.6 Paving Plans and Roadway Sections		8		2			10	$1,750.00
Task 6.7 Drainage Plans		8		2			10	$1,750.00
Task 6.8 Pavement Marking and Signing Plans		12		32			44	$7,120.00
Task 6.9 Illumination Plans		8		32			40	$6,400.00
Task 6.10 Utility Relocation Plans		8		8			16	$2,680.00

Task 6.11 Traffic Control Plans		8		32			40	$6,400.00
Task 6.12 Specifications		32					32	$5,760.00
Task 6.13 Itemized Quantity Takeoff and Cost Estimate		8			40		48	$5,640.00
Task 6.14 Compile and Submit Design Package		4		8	2	2	16	$2,400.00
Task 7.0 FINAL DESIGN AND PS&E (100%)	**0**	**81**	**0**	**113**	**12**	**2**	**208**	**$33,585.00**
Task 7.1 Index, Vicinity Map, Legend, and General Notes		1		1			2	$335.00
Task 7.2 Site Preparation Plan		1		4			5	$800.00
Task 7.3 Horizontal Layout and Grading Plans		20		30			50	$8,250.00
Task 7.4 Roundabout Details		8		16			24	$3,920.00
Task 7.5 TESC Plan		1		2			3	$490.00
Task 7.6 Paving Plans and Roadway Sections		4		2			6	$1,030.00
Task 7.7 Drainage Plans		4		2			6	$1,030.00
Task 7.8 Pavement Marking and Signing Plans		6		16			22	$3,560.00
Task 7.9 Illumination Plans		4		16			20	$3,200.00
Task 7.10 Utility Relocation Plans		4		4			8	$1,340.00
Task 7.11 Traffic Control Plans		4		16			20	$3,200.00
Task 7.12 Specifications		16					16	$2,880.00
Task 7.13 Itemized Quantity Takeoff and Cost Estimate		4			10		14	$1,770.00
Task 7.14 Compile and Submit PS&E Package		4		4	2	2	12	$1,780.00
Task 8.0 LANDSCAPE/URBAN DESIGN	**0**	**12**	**0**	**12**	**0**	**0**	**24**	**$4,020.00**
Task 8.1 Initial Landscape/Urban Design Coordination		12		12			24	$4,020.00
Task 9.0 CONSTRUCTABILITY REVIEW	**0**	**4**	**0**	**0**	**0**	**0**	**4**	**$720.00**
Task 9.1 Constructability Review (30%)		1					1	$180.00
Task 9.2 Constructability Review (90%)		2					2	$360.00
Task 9.3 Constructability Review (100%)		1					1	$180.00
Task 10.0 GEOTECHNICAL	**0**	**8**	**0**	**0**	**0**	**0**	**8**	**$1,440.00**
Task 10.1 Collect Existing Data		1					1	$180.00
Task 10.2 Site Reconnaissance		1					1	$180.00
Task 10.3 Evaluate Near Surface Conditions							0	$0.00
Task 10.4 Laboratory Testing							0	$0.00
Task 10.5 Evaluate LID		2					2	$360.00
Task 10.6 Foundation Recommendations		1					1	$180.00
Task 10.7 Retaining Wall Recommendations		1					1	$180.00
Task 10.8 Technical Memorandum		2					2	$360.00
Task 11. BID SUPPORT	**0**	**16**	**0**	**16**	**0**	**4**	**36**	**$5,820.00**
Task 12 CONSTRUCTION MANAGEMENT SUPPORT	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**$0.00**
Totals	**108**	**542**	**44**	**487**	**118**	**32**	**1271**	**$221,909.00**
							Hours Tota	**Labor Total**

Direct Expenses	
Survey Subconsultant - 1Alliance Geomatics	$56,530.00
Civil Subconsultant - Terravista	$108,036.00
ENV Subconsultant - Widener (Allowance)	$10,000.00
GeoTech Subconsultant - Geoengineers	$11,736.00
Constructibility Review Subconsultant - KBA	$9,680.00
Landscape Subconsultant Berger Partnership (Allowance)	$10,000.00
Design Services Subtotal Total	**$427,891.00**
Management Reserve Fund	$19,090.00
Design Total Not to Exceed	**$446,981.00**
ROW Acquisition Services	
ROW Subconsultant	$69,348.00
Grand Total Not to Exceed	**$516,329.00**

1 ALLIANCE
GEOMATICS
SURVEYING & MAPPING
MBE/DBE

Scope of Services

Background

This is a skewed, four-legged intersection with stop control for the Southbound (40th Place NE) and Westbound (NE 184th Street) approaches. The geometry of the intersection is problematic for many users including misaligned legs that lead to confusion over which route is SR 104, and lack of sight distance which makes turning left onto SR 104 and pedestrian crossings hazardous. Moreover, the intersection lacks amenities for those choosing to walk or bike.

Project Limits

Full Mapping:

Entirety of the intersection stated above along with 200' North along 40th Place NE, 200' East along NE 184th Street, 450' West along SR 104, and 250' South along SR 104.

Mapping will extend for the full ROW width plus 20' beyond ROW were possible.

Limited Mapping:

Extending an additional 100' along 40th Place NE and NE 184th Stree, and an additional 300' North and South along SR 104.

Mapping will be from edge of roadway to edge of roadway

1. Surveying and Mapping
   1.1. Survey PM, Admin, QA/QC
   This task includes the survey project management, administrative duties, and quality control required for a project of this complexity and magnitude.

   1.2. Survey Control
   This task includes the establishment of survey control, or the recovery of existing survey control, as required for the project. Typically, survey control will be set, found, or referenced utilizing Real Time Kinematic (RTK) GPS (GNSS) and the Washington State Reference Network (WSRN) in conformance with industry standards. This survey control is then typically propagated, as required, utilizing standard terrestrial total station measurements.
   - Geodetic Survey Control (Coordinates)
     - Current WSRN coordinate system is NAD83-2011 Epoch 2010.00 Coordinates
     - Horizontal
       Typically, survey work shall reference the Washington State Plane Coordinate System of 1983 as established in accordance with Chapter 58.20 Revised Code of Washington.
     - Vertical

Typically, the Vertical Datum for the survey work shall reference the North American Vertical Datum of 1988 (NAVD88).

- Cadastral Survey Control (Lines established and marked on the ground by suitable monuments, which are used as starting and closing points in surveys of the public domain of the United States.)
- Units shall be in US Survey Feet.

1.3. Field Surveying and Mapping

This task includes the field surveying and mapping required for this specific effort. 1 Alliance will be using a 3D Laser Scanner supplemented with traditional Total Station and GPS technologies to collect the data for use in the creation of a basemap.

1 ALLIANCE will provide ground-based topographic surveys to generate basemaps at a 1"=20' scale and to prepare DTM generated 1-foot contours. Field survey will pick up curbs, edges of pavements, drainage structures (centers of lids), fences, mailboxes, retaining structures, culverts, guard rails, utility surface features, field markings of existing sub-surface utilities, traffic and business signs, striping, trees (type and size for trees over 6-inches DBH), and limits of landscape areas.

CONSULTANT will obtain Right of Entry for survey on private property. 1 ALLIANCE will use appropriate signage, high-visibility clothing and traffic control devices while performing field survey.

1.4. Utility Surveying Services

1 ALLIANCE will locate all visible surface features of subsurface utilities.

1 ALLIANCE will subcontract a private utility locating company to mark the horizontal locations of conductible utilities within the full mapping area. 1 ALLIANCE will survey the utility markings for incorporation into the basemap.

Measure Downs for sewer manholes, catch basins and storm drain manholes with pipe size, material, direction, and invert elevations will be obtained, if possible, at each structure. Nearest drainage structure outside the mapping limits will also be collected.

1.5. Office Processing

This task includes the office processing of the collected survey data, data extraction, field book note reductions, CADD drafting, and other duties required for the generation of the deliverable(s). Breaklines will be created along curbs, walls, and other surface features in order to generate an accurate Digital Terrain Model.

For 3D laser scanning efforts, sub-tasks include the registering of point clouds; evaluating the registrations; exporting the point cloud data to Civil3D; creating or picking of appropriate points in Civil3D; Linework and Layering, and standard CADD drafting of the deliverables, as required.

1.6. Right-of-Way/Boundary Resolution and Acquisition Support

Right-of-Way and parcel boundaries will be resolved within the full mapping area.
Up to 15 parcels will be resolved along with easements that affect the parcel.

The CONSULTANT will provide title reports for each parcel being resolved.

Up to 5 land descriptions and exhibits will be prepared to support temporary construction easement or ROW acquisition

Exhibit A – Survey Limits

PROJECT		
	NUMBER	20-139
	NAME	SR 104 Roundabout
	CLIENT	Transportation Solutions
	OWNER	City of Lake Forest Park

Date 28-Dec-20
by MG
ckd BB

2020-21 WSDOT OH - Loaded Rates

1 ALLIANCE GEOMATICS SURVEYING & MAPPING
MBE/DBE

TASK			Director	Land Surveyor 3	Land Surveyor 3	Land Surveyor 2	Eng Aid 4	Eng Aid 4	Eng Aid 4	Eng Aid 2	Eng Aid 2	Admin Assist 5	Admin Assist 5	
			Principal	PM	QM	PLS/Project	CADD 5	CADD 4	TECH 5	TECH 3	TECH 3	APM	ACCT	FEE
			$ 248.00	$ 175.00	$ 131.00	$ 131.00	$ 121.00	$ 121.00	$ 121.00	$ 93.00	$ 93.00	$ 127.00	$ 127.00	
No.	DESCRIPTION	HRS												TASK
1	PM; Admin; QA/QC	26	2	8								8	8	$ 3,928
2	Survey Control	45	1	4	2	6			16	16				$ 5,420
3	3D Laser Scanner	21	1	4					8	8				$ 2,660
4	Field Mapping	110	2	8					40	40	20			$ 12,316
5	Utility Locates and Mapping	18		2					8	8				$ 2,062
6	Office Processing	65	1	4	4		56							$ 8,248
7	ROW/Boundary/Easements	130		8	8	90			8	8	8			$ 16,694
	TOTAL HOURS	415	7	38	14	96	56	0	80	80	28	8	8	415
			$ 1,736.00	$ 6,650.00	$ 1,834.00	$ 12,576.00	$ 6,776.00	$ -	$ 9,680.00	$ 7,440.00	$ 2,604.00	$ 1,016.00	$ 1,016.00	$ 51,328.00
			TOTAL DIRECT BURDENED SALARY COSTS											$ 51,328

			OTHER DIRECT COSTS					
MILEAGE	(ONE WAY)	20	MILEAGE (TOTAL MILES)	800		$ 0.575		$ 460
number of field days		20	PER DIEM (DAYS)					$ -
NOTES			LODGING (DAYS)					$ -
			MATERIALS & SUPPLIES			Scanner Rental		$ 2,242
			OTHER (DESCRIBE)			Utility Locates (APS)		$ 1,500
			SUE LOCATES			Traffic Control (Uniformed Officer)		$ 1,000
			TOTAL OTHER DIRECT COSTS					$ 5,202
			GRAND TOTAL FEE ESTIMATE					$ 56,530

Project Description

The project is located at the intersection of SR-104 and 40th PL NE in Lake Forest Park, Washington and will include development of a roundabout to replace the existing intersection. Transportation Solutions will be the Prime Consultant and will provide the layout of the roundabout. TerraVista NW will prepare the civil grading, drainage, utilities, and hardscape documentation.

This scope of services shall be for the Engineering Phase of the project, which will follow a schedule of 30%, 90%, and 100% completion. The 30% submittal will coincide with the submittal to WSDOT for review of the traffic control plan.

Scope of Work

Task 1 – Project Management and Coordination

TerraVista NW will perform the following tasks:

- Contract management
- Coordinate with the Client on project design, budget, and schedule
- Perform up to two (2) in-person meetings
- Participate in periodic online coordination meetings.
- Provide up to 8 hours of support with public outreach
- Perform QA/QC review

Task 2 – Data Gathering and Engineering

TerraVista NW will perform the following tasks:

- Review studies and documentation provided by others
- Perform up to two (2) site visits
- Review available information on existing utilities within the area.
- Perform stormwater hydrologic and hydraulic calculations
- Prepare stormwater drainage report

Task 3 – Preliminary Design

TerraVista NW will prepare 30% design documents that will include:

Plans

- Traffic control plan
- Road Cross Sections
- Grading Plan
- Grading Profiles
- Drainage Plan
- Paving Plan
- Utility Plan

Technical Specifications
Opinion of Probable Cost

Task 4 – Final Design

TerraVista NW will prepare 90% and 100% design documents that will include:

Plans

- Traffic control plan
- Erosion control and site prep plan
- Road Cross Sections
- Curb Layout Plan
- Grading Plan
- Grading Profiles
- Drainage Plan
- Drainage Profiles
- Paving Plan
- Island Details
- ADA Ramp Details
- Utility Plan
- Misc Details

Technical Specifications
Opinion of Probable Cost

Assumptions

1. TerraVista NW will issue electronic files to Client their records. Hard copies will not be provided.
2. Permitting and approval will only be required through WSDOT for traffic control plan and the City of Lake Forest Park for the design.
3. Support for public outreach by TerraVista NW will be minimal and less than 8 hours of effort.
4. As a transportation project, the project is exempt from stormwater quantity and quality control.
5. Quantitative downstream stormwater analysis will not be required.
6. Relocation design of franchise utilities (dry utilities) will be provided by utility purveyors.
7. Relocation of water and sewer mains will not be required.
8. Relocation of up to two fire hydrants and 8 water meters may be necessary
9. TSI will prepare project manual
10. TSI will perform all permit coordination.
11. Right-of-way coordination and documentation will be provided by others.

Exclusions

1. Construction Support Services
2. Channelization Plan
3. Signage Plan
4. Landscape and Irrigation Plan
5. Pump/lift stations
6. Retaining wall design and detailing
7. Notice of Intent (NOI) to Dept of Ecology
8. SEPA checklist

TerraVista NW
Consulting Engineers

Task #	Description	PIC/PM ES $185	Engineer III RP $136	Engineer III KH $136	Total Hours
Task 1	Project Management and Coordination				
	Coorespondence and coordination with team	30	12		42
	Contract management	8			8
	Attend Meetings	12	12		24
	Public Outreach	8			24
	QA/QC	24			
Task 2	Data Gathering and Engineering				
	Review documentation	2	12		14
	Perform site visits	12	12		24
	Perform stormwater calculations	4	16		
	Prepare drainage report	2	16		
Task 3	Preliminary Design				
	Prepare 30% Plans	44	180		224
	Prepare 30% Technical Specifications	16			16
	Prepare 30% Opinion of Probable Cost	8	8		16
Task 4	90% Design				
	Prepare 90% Plans	20	100	78	198
	Prepare 90% Technical Specifications	6			6
	Prepare 90% Opinion of Probable Cost	2	8		10
Task 5	100% Design				
	Prepare 100% Plans	8	36	10	54
	Prepare 100% Technical Specifications	4			4
	Prepare 100% Opinion of Probable Cost	2	6		8
	Subtotal Hours	212	418	88	672
	Subtotal Fee	$ 39,220	$ 56,848	$ 11,968	
	TOTAL FEE				**$ 108,036**

PROPOSED GEOENGINEERS SCOPE OF SERVICES
BALLINGER WAY NE (SR 104) AND 40TH PLACE NE ROUNDABOUT
LAKE FOREST PARK, WASHINGTON

FILE NO. 197-009-00

GeoEngineers is pleased to present our scope of services for the proposed roundabout to be located at the intersection of Ballinger Way NE, 40th Place NE and NE 184th Street in Lake Forest Park, Washington. Our scope is based on our discussions with Transportation Solutions, our experience working on similar pavement projects, and our experience working on geotechnical projects within Lake Forest Park. Our services are requested to complete a site reconnaissance, and evaluate near-surface soils outside of the existing pavement area by completing hand augers as a basis for providing preliminary geotechnical recommendations for earthwork, retaining walls, illumination pole foundations, and a preliminary assessment of infiltration feasibility. Based on our project understanding, we propose our scope of services include the following tasks:

1. Collect and review existing geologic and geotechnical data available for the general vicinity.

2. Complete a site reconnaissance to observe site conditions, soil exposures, and plan the hand auger exploration locations. Complete a general assessment of the existing pavement distress.

3. Evaluate near-surface soil conditions by completing hand auger borings outside the existing pavement area. Based on geologic maps, we anticipate soils will consist of recessional outwash deposits with a minor thickness of surficial fill. Depending on perched groundwater conditions or gravel content, borings may be appropriate during a subsequent phase if hand augers obtain refusal near the surface.

4. Complete geotechnical laboratory testing to evaluate in-situ moisture contents and gradation characteristics to assess earthwork recommendations and LID feasibility. Depending on subsurface findings and stormwater design requirements, field infiltration testing may be required during a subsequent phase in accordance with KCSWDM guidelines as adopted by City of Lake Forest Park.

5. Evaluate feasibility of low impact drainage design based on grain size analyses of soils collected in the hand augers.

6. Provide preliminary recommendations for design of the illumination pole foundations based on conditions encountered in the hand augers. Subsequent borings may be appropriate if the hand augers meet refusal without confirming subsurface conditions consistent with recessional outwash deposits.

7. Provide recommendations for retaining walls including earthwork and subgrade preparation, placement and compaction of structural fill, allowable bearing pressure, and mitigation of unsuitable soil conditions. This will include an evaluation of the effects of weather and/or construction equipment on site soils.

8. Summarize the results of our data review, hand augers and recommendations in a technical memorandum with appropriate figures.

GEOENGINEERS LABOR HOURS ESTIMATE

	Job Number:	197-009-00	Job Name:	Ballinger Way NE and 40th Ave NE Roundabout			Owner:	City of Lake Forest Park		
	Client:	TSI								
		$246.00	$231.00	$188.00	$164.00	$145.00	$112.00	$98.00	Total Hours	Total Labor Cost
Task	Task Description	Principal/ Associate	Senior Engineer	Project Engineer	Staff Engineer	GIS/CAD	Admin 3	Admin 2		
1	Data Review/Project Setup and Coordination and Management	1		4			2	1	8	1,320
2	Site Reconnaisance			6			2		8	1,352
3	Hand Auger Explorations/Logs			2	8		1	2	13	1,996
4	Sample Review and Laboratory Testing			2	2				4	704
5 - 7	Engineering Analyses/Recommendations	2		6	4		2	2	16	2,696
8	Technical Memorandum, Site Plan and Figures	2		8	2	4	2		18	3,128
	Total Labor	5	0	28	16	4	9	5	67	$11,196
	Total Labor Costs		**$11,196**							

Expenses

Field Equipment and Expenses/ Mileage	
Subcontracted Drilling	
Subcontracted Private Locate and Air-Knife	0
Laboratory Tests	
440	
Total Expenses	

Total Fee Estimate	**$11,736**

SCOPE OF WORK

Right of Way Acquisition Services for the City of Lake Forest Park for the SR105/50th Place Roundabout Project. We will furnish these services under the processes and procedures as outlined in CH 568-100 WAC and the City's Property Acquisition Policies and Procedures, Washington State Department of Transportation's Local Agency Guideline Manual, M36-63 and the Right of Way Manual.

The overall right-of-way acquisition objectives are:

1. Negotiate to purchase Temporary Construction Easements from two parcels, and right-of-way in fee from five parcels;
2. Determine property values for five parcels;
3. Assist the City of Lake Forest Park with the acquisition forms

We outline a specific list of Performance Objectives in the following paragraphs.

SPECIFIC OBJECTIVES

The key objectives for this project include:

1. Review title reports. Provide the City of Lake Forest Park with a parcel summary memo listing ownership, title exceptions, existing easements, or other rights of record, and comments or concerns for (5 parcels);
2. Prepare and setup parcel files (5 parcels);
3. Prepare a True Cost Estimate;
4. Prepare acquisitions forms needed to get temporary construction easements for driveway adjustments for three parcels and fee acquisitions for five parcels;
5. Prepare and review offer package and package assemblage. This proposal does not include condemnation, or the preparation and negotiations of a Possession and Use agreements.
6. Provide negotiation services for the purchase of temporary construction easements and right-of-way in fee from (five parcels);
7. Obtain appraisal reports and review appraisal reports prepared by a fee appraisers approved by the Washington State Department of Transportation, a total of five parcels.
8. Coordinate with the title company to get titles vested in the City, prepare payment vouchers title policy and recording fees, and submit to City to process payment for the parcel (The City will issue actual payment of all fees and closing costs such as title policies, recording fees, and escrow services) - (5 parcels);
9. Provide overall coordination for right-of-way activities; maintain records, parcel diary reports, files, documents and reports (four parcels);
10. provide written status reports on a monthly basis and provide verbal status reports as requested;
11. Attend monthly project status meetings as requested (maximum of 1 meeting); and
12. Deliver completed file to the City of Lake Forrest Park, a total of five parcel files.

PROJECT SCOPE EXCLUSIONS

1. Those services related to getting releases of encumbrances from title, which require legal action;
2. Condemnation support, preparing and negotiating P&U agreements, and subsequent litigation;
3. Closing costs such as recording fees, escrow services, title insurance fees, title reports, transfer taxes, penalty costs for pre-payments; costs of a pre-existing mortgage; the pro rate share of real property taxes paid after vesting title to the CITY;
4. Continuing negotiations for those parcels listed for condemnation or for possession and use agreements;
5. Appraisal and appraisal review fees for litigation;
6. Relocation Assistance; and
7. Legal descriptions.

Prepared for: Transportation Solutions

Proposal
SR104/40th Place Roundabout

Item 1: Project Administration	Prop Mgt	Admin	PM / Sr. Acq Agent	Acq Agent	ROW Tech	Title	REO	Escrow	Total
Coord w/ TS and City of Lake Forest Park			10						10
Certification Assistance -			0	0					0
Clerical -									0
Contract Admin -			5						5
Administrative Offer Summaries/ TCE			15						15
Progress Reporting -			16						16
True Cost Estimate			0						0
Coord w/Subconsultants-			7						7
Hours:	0		53	0		0	0	0	53
Direct Labor $:		0.00	7,155.00	0.00	0.00				$ 7,155.00
Item 2: Right-of-Way Acquisition									
Title, Plans, and Appr. Review			8	8	4				20
Pre-Offer/File Setup/Document Prep			20	20	4				44
Negotiations - 1 Parcel (3 Property Owners)			65	55					120
Clearing Title -			25	20					45
Condemn Support -			0						0
Data/file & Diary Management, Maintenance and overall ROW activities.			6	6	8				20
Hours:	0	0	124	109	16	0	0	0	249
Direct Labor $:		0.00	16,740.00	12,535.00	1,648.00				$ 30,923.00
Direct Labor Totals:									
Hours:	0	0	177	109	16	0	0	0	302
Dollars:	0	0.00	23,895.00	12,535.00	1,648	0	0	0	$ 38,078.00

Direct Salary Cost:	$ 38,078.00
Direct Labor Rate:	n/a
Audited Overhead Rate:	n/a
Profit:	n/a
Composite Multiplier:	
*Total Labor Fee:	$ 38,078.00

Expenses:	
Review Appraisal	$ 6,000.00
Appraisal (3)	$ 25,000.00
Mileage/Travel	$ 175.00
Reprographic, Copy, & Printing	$ 55.00
Courier Overnight Postage	$ 40.00
Subtotal:	$ 31,270.00
*TOTAL	$ 69,348.00

Per Parcel Breakdown:
Five Parcels