

**CITY OF LAKE FOREST PARK
PROFESSIONAL SERVICES AGREEMENT
Agreement Title: Town Center to Burke-Gilman Trail Connector –
Phase 2: 30% Design**

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

Consultant Business: V+M Structural Design, Inc.
Consultant Address: 2212 Queen Anne Ave N #530, Seattle WA 98109
Consultant Phone: 206-880-1533
Consultant Fax: n/a
Contact Name Schaun Valdonis
Consultant e-mail: schaum@vm-structural.com
Federal Employee ID No.: 83-0615837
Authorized City Representative for Andrew Silvia
this contract:

WHEREAS, the City desires to complete 30% design of a grade-separated crossing of Bothell Way NE (SR 522) for active transportation connections between the Town Center and Burke-Gilman Trail, having undertaken a Type, Size, and Location Study of this capital project over the last two years; and

WHEREAS, the Consultant was retained to complete the TS&L study, and City staff were satisfied with the Consultant's performance of this contract work, and finds them qualified and best positioned to advance development of the project design to a 30% level; and

WHEREAS, the Consultant provided the City with a proposal to complete 30% design of the project, which City staff have reviewed and found acceptable;

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 A incorporated herein, for the Town Center to Burke-Gilman Trail Connector – Phase 2: 30% Design” 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 Schaun Valdonis. The project manager(s) shall not be replaced without the prior written consent of the City.

Exhibit A 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 A, including all services and expenses, shall not exceed ninety-nine thousand, one hundred, forty-eight Dollars (\$99,148.00) as shown on Exhibit B, which shall be full compensation for the Exhibit A 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 Exhibits A and 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 the City's Accounting Supervisor, ap@cityoflfp.gov, its request for payment of Exhibit A 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 Exhibits A and B according to the schedule established in Exhibits A and 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 void, 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: Andrew Silvia, Senior Project Manager
Department of Public Works
17425 Ballinger Way NE
Lake Forest Park, WA 98155

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

V+M Structural Design, Inc.
Attn: Schaun Valdonis
2212 Queen Anne Ave N #530
Seattle, WA 98109

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 last date signed below.

CITY OF LAKE FOREST PARK WASHINGTON	CONSULTANT:
By: _____ Jeff Johnson, Mayor	V+M Structural Design, Inc.
_____	By: _____
Date	Typed/Printed Name:

	Signature

	Title

	Date

ATTEST:

Matthew McLean, City Clerk

Date: _____

APPROVED AS TO FORM:

Kim Adams Pratt, City Attorney

Date: _____



EXHIBIT A

SCOPE OF WORK

City of Lake Forest Park

Town Center to Burke-Gilman Trail Connector – Phase 2: 30% Design

October 6, 2022

During the term of this Agreement, the consultant team (Consultant) including the prime and subconsultants shall perform professional services for the City of Lake Forest Park (LFP) to advance the design of a tunnel alternative (or bridge) for the Town Center to Burke-Gilman Trail Connector (Project).

The Scope and Level of Effort for Phase 2 of the design includes:

- Phase 2A: 10% Design of Tunnel Option
- Phase 2B: Light 30% Design of Tunnel Option, or
30% Design of Bridge Option

Additional future phases are not included in this scope.

Project tasks and subtasks of Phase 2 are described in the Scope of Work below.

Project Description

LFP desires to design a pedestrian/bicycle non-motorized grade-separated crossing of SR-522 to connect the Lake Forest Park Town Center to the Burke-Gilman Trail (BGT). Overpass and underpass options were evaluated in Phase 1 of the project. Phase 2 will take a two-staged approach to progress the design development. In Phase 2A, the tunnel option will be studied to determine if a more optimal geometry can be achieved, and a 10% tunnel design will be presented to King County Parks as follow up to the previous charette to request approval of the updated tunnel alternative.

In Phase 2B, it is anticipated there will be two potential outcomes from the meeting with King County Parks. The first outcome is approval given by King County for the tunnel. Design would then advance on the tunnel to a Light 30%. If approval is not obtained for the tunnel alternative, the overpass option would be advanced with the midblock crossing and south ramp parallel to the BGT to minimize grade impacts to existing trail.

The proposed tunnel option consists of a trenched segment of the Burke-Gilman Trail (BGT) to achieve necessary clearance under SR 522 and daylight into a sunken plaza with stairs and ramps (aka “stramps”) on the north end of the tunnel. A skewed tunnel alignment under SR 522 was proposed in Phase 1 to accommodate for the required length of ramp for the BGT’s intersection with the tunnel and is limited by constraints of Lyon Creek at the west end of the trench and the location of the Ballinger Way slip lane east of the proposed stramp. The tunnel alignment will be re-evaluated in Phase 2A to determine if a more direct, perpendicular orientation is feasible. This would require realignment of the Ballinger Way slip lane



and re-routing Lyon Creek to cross the BGT further west essentially extending the creek from the culvert perpendicularly across the BGT. Environmental considerations will be summarized as part of Phase 2A.

If the revised tunnel option is accepted by King County Parks at the end of Phase 2A, the design will then be developed to a “light” 30% level in Phase 2B. However, if the bridge is still the preferred option, then the bridge design preferred by King County in Phase 1 will be progressed to a 30% design level. This alignment of the bridge crosses the SR 522 at mid-block, to the east of the driveway entrance into the Town Center site. The proposed design consisted of an overpass over the SR 522 with south approach structure parallel and north of the BGT.

The selected grade separated structure will conform to AASHTO Shared-Use Path Guidelines and provide a safe pedestrian/bike route across SR 522 roadway for users connecting with the BGT, LFP Town Center, transit, and other local destinations.

The general scope of Phase 2 will include:

Phase 2A:

- Evaluating the feasibility of squaring the alignment of the tunnel with SR 522. This will include:
 - a. Evaluating the environmental implications of re-routing Lyon Creek.
 - b. A high-level assessment of impacts of the new alignment on existing utilities.
- Preparing 10% design drawings for the revised underpass alignment.

Phase 2B – Either Tunnel or Bridge Option:

- Advancing design to either:
 - a. A “light” 30% design drawing package for the tunnel option, OR
 - b. A 30% design drawing package for the bridge option.
- Developing 30% construction staging sequence and temporary trail detours drawings.
- Preparing a geotechnical memo confirming a proof-of-concept review for the selected design.
- Preparing a Cost Estimate for the selected option, either tunnel or bridge.

For the tunnel option, “light” means the 30% will not have several aspects of the design developed to a level that a typical 30% design would be to. This is due to the limited budget for this phase and will mean the geotechnical, civil, stormwater, utility relocations, permitting, and landscape architecture will only be evaluated at a high level in Phase 2B. These details will need to be completed under a future phase of work.



Project Extents

The project extents of the grade separated crossings of SR 522, as developed on the 10% plans, is shown below.

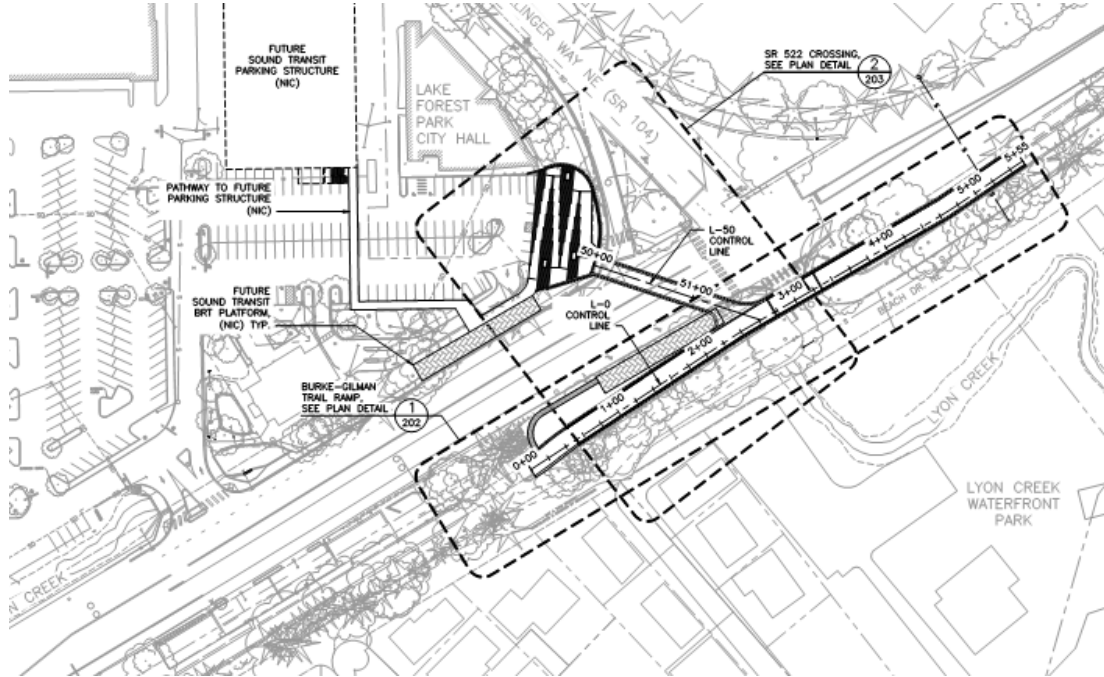


Figure 1: Project Extents of Tunnel Option

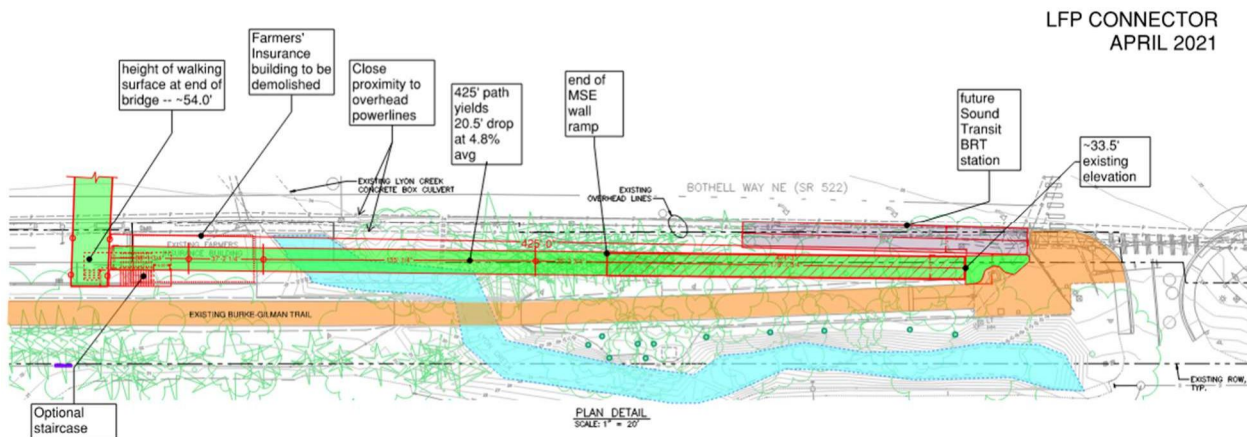


Figure 2: Project Extents of Bridge Option



Project Schedule

The anticipated project schedule for Phase 2 (30% Design) is as shown below. The key milestone dates for Phase 2 have been roughly indicated in the schedule.

The project schedule may be subject to adjustment by mutual agreement, whether initiated by LFP or Consultant.

The following preliminary schedule is proposed to develop the 30% design package:

- January 2023: Anticipated Notice to Proceed
- March 2023: Submission of 10% Drawings for revised tunnel option
- May 30, 2023: Confirmation of selected option to advance towards 30% design
- July 2023: Submission of “light” 30% Design Package for the tunnel or 30% Design Package for the bridge option.

Intellectual Property

The documents listed as “**Deliverables**” in the Detailed Task Description of this scope of work and other exhibits or presentations for the work covered by this AGREEMENT and associated supplements will be furnished by the Consultant to LFP upon completion of the various tasks of work. Whether the documents are submitted in electronic media or in tangible format, any use of the materials on another project or on extensions of this project beyond the use for which they were intended, or any modification of the materials or conversion of the materials to an alternate system or format will be without liability or legal exposure to Consultant. LFP will assume all risks associated with such use, modifications, or conversions. The Consultant may remove from the electronic materials delivered to LFP, all references to the Consultant involvement and will retain a tangible copy of the materials delivered to LFP which will govern the interpretation of the materials and the information recorded.

PHASE 2 – DETAILED TASK DESCRIPTION

General Assumptions:

1. *The level of effort for each task and subtask is limited to the amount of labor and expenses indicated in Level of Effort provided in Exhibit B. The budget may be transferred between tasks, provided the total contracted amount is not exceeded.*
2. *Additional services beyond the described services herein will be considered Extra Work.*
3. *The Project duration is anticipated to be seven (7) months for Phase 2 as described in the schedule above.*
4. *The Consultant is responsible for meeting deadlines for their tasks only; Consultant has no control over those portions of the schedule related to the tasks performed by LFP or any third party.*
5. *The analyses, design, plans, specifications, and estimate performed or prepared as part of the Project will be in English units.*
6. *LFP has the authority to approve the Proposed Scope of Work and schedule changes.*



Task 100 – Project Management

This task includes services necessary to plan, perform and control the various elements of the Project to meet the needs and expectations of LFP and other stakeholders.

Work under this task will be performed by V+M.

Subtask 100.1 – Coordination

Under this subtask, the Consultant Project Manager will provide overall direction and coordination of activities with LFP and amongst the Consultant team.

Project Management tasks will include:

- **LFP Meetings** – Consistent communication with the LFP PM and meetings with key LFP staff and outside stakeholders.
- **Interdisciplinary Communication** – Regular communication between discipline leads and conveying information and decisions between geotechnical, environmental, permitting, civil, landscape, estimating and structural.
- **Project Budget** – Establish anticipated spending rates and monitor progress using Earned Value reporting. Correct budget deviations early.
- **Schedule** – Establish a baseline schedule at project commencement that gets respected and updated. Make and hold decisions on configuration consistent with the baseline schedule.
- **Drawing Standards** – Adopt LFP drawing template for border and use V+M standard layers for AutoCAD drawings.
- **Review/Comment Periods** – It is assumed that there will be a formal Review/Comment period at the end of Phases 2A and 2B.

Subtask 100.2 – Administration

This will include preparation of meeting minutes, monthly invoices complete with brief progress statement and earned value reporting. Monthly invoices will include copies of subconsultant invoices and payment remittance documentation, if any.

Assumptions:

- *Drawings will be produced using AutoCAD.*
- *The Consultant's Project Manager will meet with the LFP PM on a regular basis throughout the project, assumed to be 1 hour per week. This is assumed to be via telephone.*
- *In person meetings will take place at Lake Forest Park City Hall. Meeting durations indicated exclude travel time.*
- *Meetings are anticipated to include:*
 - a. *Kick-Off Meeting with LFP (1 count) @ 1 hour*
 - b. *Stakeholder meetings with:*



- i. City Staff – 2 meetings @ 1 hours each*
- ii. King County Parks (1 count) @ 1 hour*
- iii. City Council (1 count) @ 1 hour*
 - 1. Assist with preparation of materials for milestone meeting*
 - 2. V+M's Project Manager may be asked to attend.*
- c. Internal project team coordination meetings held on an as-needed basis during project duration (assumed 4 count).*

Deliverables:

- *Monthly Invoices and Progress Report in pdf format (1 copy)*



Task 200 – Cost Estimate

The cost estimate presented in Phase 1 will be updated in Phase 2B of this phase to reflect the “light” 30% design of the selected grade separated option. The updated estimate will also capture recent inflation in the unit costs and will include high level input based on the design and construction staging.

Work under this task will be performed by Wirthlin Consulting Group.

Subtask 200.1 – Management

Attend project team meetings to review the selected design concept and discuss cost implications and construction staging schemes.

Assumed meetings specific to this task include:

- Coordination calls (2 meetings @ 1 hour each)

Subtask 200.2 – Cost Estimate

Prepare a high-level opinion of probable cost of the selected grade separated design.

Assumptions:

- Real estate costs and easements required for the project will be estimated by LFP.

Deliverables:

- *Phase 2B – Opinion of Probable Cost.*



Task 300 – Geotechnical

Phase 2 will be based on the Geotechnical Report produced in Phase 1 of the project. The report summarized the results of the subsurface soil investigation as well as provided geotechnical engineering analysis and preliminary recommendations which will feed into the design phase.

A Proof-of-Concept review will be provided in Phase 2B, to verify that the design concepts presented in the structural drawings are feasible and in line with the subsurface conditions determined in Phase 1.

Work under this task will be performed by GeoEngineers.

Subtask 300.1 – Management

Attend project team meetings to review the design concepts and discuss geotechnical feasibility and implications.

Assumed meetings specific to this task include:

- Coordination calls (Totaling 2 hours)

Subtask 300.2 – Proof of Concept Review

The Proof-of-Concept Review will evaluate the geotechnical system presented in the design drawings for the selected option in Phase 2B to ensure that the design loading and considerations discussed in the Geotechnical Report have been met. A review and discussion with V+M of the feasibility of the foundation system presented will be part of this task.

Deliverables:

- *Proof-of-Concept Review email of conclusions/findings*
- *Meeting minutes*



Task 400 – Environmental & Permitting

This task covers the environmental and permitting evaluations for Phase 2. The scope of services outlined below includes assessment and evaluation of project impacts to a level of detail suitable for the 30% design and supporting permitting efforts for the selected option.

Environmental & Permitting work will be performed by GeoEngineers.

Subtask 400.1 – Permitting Feasibility Assessment

The scope of services under this subtask include:

- Review proposed conceptual design, including approximate alignment, grading and restoration extents for the proposed tunnel alternative.
- Identify permitting requirements based on conceptual design information provided.
- Prepare a high-level assessment of potential environmental impacts, proposed mitigation measures, feasibility and challenges, and anticipated timeline for permit approvals of a conceptual Lyon Creek re-alignment associated with the tunnel alternative.
- A review of applicable permits will be performed during Phases 2A and 2B to inform the project process for formal permit applications in future phases of work.

Subtask 400.2 – Stream Design Concept Support

The scope of services under this subtask include:

- Review prior design work in upstream restored section of Lyon Creek and recently replaced culverts under SR 522 and the Town Center Access Drive.
- Estimate bottom width and bank full width of channel section based on prior work.
- Perform simplified calculations to estimate a 100-year water surface elevation through the structure assuming normal depth.
- Recommend freeboard above the 100-year water surface elevation for the existing trail bridge crossing over Lyon Creek on the BGT.
- Identify anticipated hydraulic opening width based on prior work.

Assumptions:

- *This effort will use the flows established for the upstream design work already completed by others.*
- *Proposed channel section will be informed from upstream design section*
- *Hydrology and hydraulic models will not be prepared for this phase of work.*
- *Permit applications, including environmental and WSDOT, will not be prepared during this phase, and will be included in a future phase of work.*

Deliverables:

- *Memo summarizing results of above assessments, as well as identify additional data gaps and design considerations not evaluated at this phase.*



Task 500 – Hazardous Materials Assessment (NOT USED)

This task is not used in Phase 2.



Task 600 – Civil

Work includes civil engineering, utility review/coordination, and stormwater management. Data collected and concept design determined in Phase 1 will form the basis of information for this task.

Phase 2A will include a high-level assessment of the impacts that the new tunnel alignment would have on existing utilities. In Phase 2B, concerns pertaining to stormwater detention, potential utility work, and pump station configuration (for the tunnel option) will need to be addressed, as outlined in the Stormwater and Utility Impacts Study Memo submitted in Phase 1.

Work within this task will be performed by MIG.

Subtask 600.1 – Civil Infrastructure Concept Design Update

Preliminary design concept recommendations for Option B – Tunnel Crossing (completed for Phase 1 in February 2021) were used to identify future waterline routing, confirm the stormwater flow control approach with the city, confirm existing fiber optic requirements, natural gas and sanitary sewer facilities, and reroute of the existing drainage in Bothell Way and on Town Center Property. This current scope includes effort for coordination and review the preliminary design concept, and provide annotated plan comments and a brief (2 page) technical memo documenting potential roadway and utility infrastructure considerations based on the updated tunnel alignment and potential stream crossing reconfiguration. MIG will work with V+M and City staff to focus efforts where most needed to evaluate the revised options within the budget provided.

Assumptions:

- *LFP will coordinate and schedule the meetings with utility owners.*
- *SCL will provide power line clearance requirements.*
- *New storm drainage outfalls will likely be required as part of this project; however, the final stormwater design requirements will be evaluated in more detail during a future phase.*

Deliverables:

- *Brief (2 page) technical memo documenting potential roadway and utility infrastructure considerations.*



STRUCTURAL
DESIGN

*Exhibit A – Scope of Work
City of Lake Forest Park
Town Center to Burke-Gilman Trail Connector*

Task 700 – Public Outreach (NOT USED)

This task is not used in Phase 2.



Task 800 – Structural

The scope under this task involves a two-part approach. In Phase 2A, 10% design drawings for the revised underpass alternative will be produced. In Phase 2B, a design package will be produced, including proposed construction staging sequence and bike detour route, based on the selected tunnel or bridge option.

Structural design work will be performed by V+M.

Subtask 800.1 – 10% Revised Tunnel Design (Phase 2A)

For the revised 10% tunnel design, our team will develop an alignment alternative to determine if a more direct crossing of SR-522 just west of Ballinger Way NE is feasible. The concepts will consider construction sequences, environmental impacts, soil conditions, and schedule. Draft 10% drawings will be prepared to reflect preliminary details including structural layout and geometry.

Subtask 800.2 – Design of 30% Bridge or “Light” 30% Tunnel Option (Phase 2B)

The selected grade separation alternative will be taken to a “light” 30% level for the tunnel or a 30% for the bridge option. Drawings will be progressed to reflect preliminary details of the preferred alternative, including structural layout, geometry, construction staging considerations, as well as a proposed bike detour route. The design drawings will be accompanied with a Design Narrative Memorandum describing the selected structural system. This memo can be incorporated into the TS&L in a future phase of work.

If relocating Lyon Creek is determined to be a feasible option in Phase 2A, there may still be a desire to relocate the stream for the bridge option, which will allow for a simplified span configuration for the bridge ramp structure. There would not be budget to explore in detail the environmental documentation needed for creek realignment, but one benefit of this with the bridge alternative is that King County could replace the existing bridge over Lyon Creek (currently rated for an H-5) with a new bridge meeting their new standard loading for an HS-20 truck.

The preliminary Basis of Design Report completed in Phase 1 will be refined to reflect design criteria for the selected grade separated option. This document will summarize best design practices and establish the Codes and Standards to be used in the design.

Assumptions:

- Drawings will be produced using AutoCAD.
- “Light” 30% means the geotechnical, calculations, civil, stormwater, utility relocations, permitting, and landscape architecture efforts will only be at a high level in Phase 2B for the tunnel alternative. These will need to be further designed in a later phase.

Deliverables:

- 10% design drawings for revised tunnel option will include general arrangement drawings showing plan, elevations, and schematic sections.
- Revised Basis of Design Report
- Design Narrative Memorandum



- Design drawings for the selected grade separated option
 - For the “Light” 30% for the tunnel, the drawing list includes:
 - i. *Cover Sheet and Index*
 - ii. *General Structural Notes*
 - iii. *Suggested Construction Sequence*
 - iv. *Site Plan*
 - v. *Bridge Plan and Elevation (General Arrangement)*
 - vi. *Alignment and Profile*
 - vii. *Secant Pile Details*
 - viii. *Trench Details*
 - ix. *Tunnel Details beneath SR 522*
 - x. *Tunnel Details beneath Ballinger Way*
 - xi. *Railing Plan and Details*
 - xii. *Trail Grading and Sections*
 - For the 30% for the bridge, the drawing list includes:
 - i. *Cover Sheet and Index*
 - ii. *General Structural Notes*
 - iii. *Suggested Construction Sequence*
 - iv. *Site Plan*
 - v. *Bridge Plan and Elevation (General Arrangement)*
 - vi. *Alignment and Profile*
 - vii. *Foundation Layout and Details*
 - viii. *Abutment Outlines*
 - ix. *Pier Details (plan, elevation, details)*
 - x. *Steel Superstructure Details (girder plan and elevation, floor beam layout, camber diagram, floor beams, plan bracing, etc.)*
 - xi. *Deck Layout and Details*
 - xii. *Railing Plan and Details*
 - xiii. *Trail Grading and Sections*
- Sketches showing temporary bike and pedestrian detours during construction. Proposed construction staging for either the tunnel or bridge option will be prepared using PDF markups.



Task 900 – Management Reserve

The management reserve is to provide LFP with flexibility to authorize additional funds, beyond those estimated for the tasks of the scope of work, for allowable unforeseen costs, or for reimbursing the Consultant for additional work requested by LFP toward completing the project.

Payment from the management reserve fund must be authorized in writing by the City's contract manager before the Consultant performs the additional work. Such written authorization will include a description of the work to be performed and shall specify the amount of the payment.



STRUCTURAL
DESIGN

*Exhibit B – Level of Effort
City of Lake Forest Park
Town Center to Burke-Gilman Trail Connector*

EXHIBIT B

LEVEL OF EFFORT

City of Lake Forest Park

Town Center to Burke-Gilman Trail Connector

SUMMARY OF PROJECT COSTS

Project: Town Center to Burke-Gilman Trail Connector

Owner: City of Lake Forest Park

Prime: V+M Structural Design, Inc.

Phase 2: 30% Design

WORK TASKS	FEES BY COMPANY				COST	
	V+M	Wirthlin Consulting Group	GeoEngineers	MIG		
100	Project Management				\$10,119	
100.1	Coordination	\$6,764			\$6,764	
100.2	Administration	\$3,355			\$3,355	
200	Cost Estimate				\$3,661	
200.1	Management		\$523		\$523	
200.2	Cost Estimate		\$3,138		\$3,138	
300	Geotechnical				\$2,372	
300.1	Management		\$474		\$474	
300.2	Proof of Concept Review		\$1,897		\$1,897	
400	Environmental & Permitting				\$10,257	
400.1	Part A: Permitting Feasibility Assessment		\$3,467		\$3,467	
400.2	Part B: Stream Design Concept Support		\$6,789		\$6,789	
500	Hazardous Materials Assessment (NOT USED)				\$0	
600	Civil and Landscape				\$5,290	
600.1	Civil Infrastructure Concept Design Update			\$5,290	\$5,290	
700	Public Outreach (NOT USED)				\$0	
800	Structural				\$62,305	
800.1	10% Revised Tunnel Design	\$24,940			\$24,940	
800.2	Light 30% Tunnel or 30% Overpass	\$37,365			\$37,365	
TOTAL NHR COST (SUM OF TASKS 1 THROUGH 8)		\$72,424	\$3,661	\$12,628	\$5,290	\$94,003
900	Owner's Reserve				\$5,000	
Other Direct Costs		\$145				\$145
Grand Total		\$72,569	\$3,661	\$12,628	\$5,290	\$99,148

LABOR DETAIL / ESTIMATE - PRIME

PROJECT NAME: Town Center to Burke-Gilman Trail Connector

OWNER: City of Lake Forest Park

PRIME: V+M Structural Design, Inc

WORK ELEMENT	LABOR HOURS											TOTAL LABOR HOURS	NHR COST
	CLASS	Project Mngr	Sr Struct Engr	Bridge Engr 4	Bridge Engr 3	AD Technologist	AD Technologist	Specialist I	Bridge Engr 2	Sr Planner			
	STAFF NAME	S. Valdovinos	S. Wang	C. Wong	C. Jacques	S. Varney	G. Lee		C. Boissy	C. Muraki			
NHR	\$235.00	\$185.00	\$129.00	\$105.00	\$119.00	\$95.00	\$155.00	\$95.00	\$135.00				
WBS	Phase 2: 30% Design												
100.0	Project Management	30	0	16	0	0	0	3	0	4		53	\$10,119.00
100.1	Coordination	20		16								36	\$6,764.00
100.2	Administration	10						3		4		17	\$3,355.00
800.0	Structural	60	40	72	56	138	97	0	0	0	0	463	\$62,305.00
800.1	10% Revised Tunnel Design	28	16	32	24	48	32					180	\$24,940.00
800.2	Light 30% Tunnel or 30% Overpass	32	24	40	32	90	65					283	\$37,365.00
Total: PHASE 2		90	40	88	56	138	97	3	0	4	0	516	\$72,424.00
TOTAL LABOR HOURS AND COST		90	40	88	56	138	97	3	0	4	0	516	\$72,424.00

OTHER DIRECT COSTS (ODCs):

Mileage	40	miles @	\$0.625	per mile	\$25.00
Tolls	2	each @	\$5.00	per each	\$10.00
Parking		each @	\$15.00	per each	\$0.00
Postage, Shipping & Delivery	2	each @	\$25.00	per each	\$50.00
Reproduction - B&W	1	each @	\$10.00	per each	\$10.00
Reproduction - Color	1	each @	\$50.00	per each	\$50.00
Other		each @	\$250.00	per each	\$0.00
SUBTOTAL - ODCs					\$145.00

Classification	Labor Hours
Project Mngr	90
Sr Struct Engr	40
Bridge Engr 4	88
Bridge Engr 3	56
CAD Technologist 2	138
CAD Technologist 1	97
Specialist I	3
Bridge Engr 2	0
Sr Planner	4
Total = 516	

NHR Cost	\$72,424
Other Direct Costs	\$145
GRAND TOTAL =	\$72,569

SUMMARY OF ESTIMATE - PRIME
Town Center to Burke-Gilman Trail Connector
City of Lake Forest Park
V+M Structural Design, Inc
Phase 2: 30% Design

NEGOTIATED HOURLY RATES (NHRs)

Classification	=	NHR
Project Mngr		\$235.00
Sr Struct Engr		\$185.00
Bridge Engr 4		\$129.00
Bridge Engr 3		\$105.00
CAD Technologist 2		\$119.00
CAD Technologist 1		\$95.00
Specialist I		\$155.00
Bridge Engr 2		\$95.00
Sr Planner		\$135.00

COST ESTIMATE (Labor Hours x NHR):

Classification	Labor Hours	x	NHR	=	Labor Cost
Project Mngr	90		\$235.00		\$21,150.00
Sr Struct Engr	40		\$185.00		\$7,400.00
Bridge Engr 4	88		\$129.00		\$11,352.00
Bridge Engr 3	56		\$105.00		\$5,880.00
CAD Technologist 2	138		\$119.00		\$16,422.00
CAD Technologist 1	97		\$95.00		\$9,215.00
Specialist I	3		\$155.00		\$465.00
Bridge Engr 2	0		\$95.00		\$0.00
Sr Planner	4		\$135.00		\$540.00
SUBTOTAL - Labor Hours x NHR	516				\$72,424

SUBTOTAL **\$72,424**

OTHER DIRECT COSTS (ODCs): **\$145**

TOTAL - PHASE 2: **\$72,569**

LABOR DETAIL / ESTIMATE - Subconsultant
 PROJECT NAME: Town Center to Burke-Gilman Trail Connector
 OWNER: City of Lake Forest Park
 PRIME: V+M Structural Design, Inc
 SUBCONSULTANT NAME: Wirthlin Consulting Group

WORK ELEMENT	LABOR HOURS											TOTAL LABOR HOURS	NHR COST
	CLASS	Principal											
	STAFF NAME	Wirthlin, Adam											
	NHR	\$261.47											
WBS	Phase 2: 30% Design												
200.0	Cost Estimate	14	0	0	0	0	0	0	0	0	0	14	\$3,660.55
200.1	Management	2										2	\$522.94
200.2	Cost Estimate	12										12	\$3,137.61
TOTAL LABOR HOURS AND COST		14	0	0	0	0	0	0	0	0	0	14	\$3,660.55

OTHER DIRECT COSTS (ODCs):

Postage, Shipping & Delivery	each @	\$25.00	per each	\$0.00
Reproduction - B&W	each @	\$10.00	per each	\$0.00
Reproduction - Color	each @	\$50.00	per each	\$0.00
Other	each @	\$250.00	per each	\$0.00
SUBTOTAL - ODCs				\$0.00

Classification	Labor Hours
Principal	14
Total = 14	

NHR Cost	\$3,661
Other Direct Costs	\$0
GRAND TOTAL =	\$3,661

SUMMARY OF ESTIMATE - Subconsultant
Town Center to Burke-Gilman Trail Connector
City of Lake Forest Park
Subconsultant: Wirthlin Consulting Group
Phase 2: 30% Design

NEGOTIATED HOURLY RATES (NHRs)

Classification	Direct Rate (DR)	+	DR x ICR 153%	+	(DR+ICR)xFF 10%	=	NHR
Principal	\$94.00		\$143.70		\$23.77		\$261.47

COST ESTIMATE (Labor Hours x NHR):

Classification	Labor Hours	x	NHR	=	Labor Cost
Principal	14		\$261.47		\$3,660.55
SUBTOTAL - Labor Hours x NHR			14		\$3,661

SUBTOTAL **\$3,661**

OTHER DIRECT COSTS (ODCs): **\$0**

TOTAL - PHASE 2: **\$3,661**

LABOR DETAIL / ESTIMATE - Subconsultant

PROJECT NAME: Town Center to Burke-Gilman Trail Connector

OWNER: City of Lake Forest Park

PRIME: V+M Structural Design, Inc

SUBCONSULTANT NAME: GeoEngineers

WORK ELEMENT	LABOR HOURS													TOTAL LABOR HOURS	NHR COST
	CLASS	Principal	Associate	Senior Engineer/ Scientist 2	Senior Engineer/ Scientist 1	Project Engineer/ Scientist 2	Project Engineer/ Scientist 1	Staff Engineer/ Scientist 3	Staff Engineer/ Scientist 2	GIS Analyst 2	CAD Designer	Admin 3	Admin 2		
	STAFF NAME		D. Overbay/ D. Eggers	D. Conlin		S. Schwartzel	E. Hurn	E. Deal G. Spann							
	NHR	\$259.81	\$237.16	\$208.35	\$184.68	\$159.80	\$148.81	\$136.90	\$126.55	\$138.08	\$130.80	\$124.31	\$110.61		
WBS	Phase 2: 30% Design														
300.0	Geotechnical	0	10	0	0	0	0	0	0	0	0	0	0	10	\$2,371.62
300.1	Management		2											2	\$474.32
300.2	Proof of Concept Review		8											8	\$1,897.30
400.0	Environmental & Permitting	0	4	12	0	16	8	16	0	0	0	7	0	63	\$10,256.77
400.1	Part A: Permitting Feasibility Assessment		1	8			8					3		20	\$3,467.42
400.2	Part B: Stream Design Concept Support		3	4		16		16				4		43	\$6,789.35

LABOR DETAIL / ESTIMATE - Subconsultant

PROJECT NAME: Town Center to Burke-Gilman Trail Connector

OWNER: City of Lake Forest Park

PRIME: V+M Structural Design, Inc

SUBCONSULTANT NAME: GeoEngineers

WORK ELEMENT	LABOR HOURS													TOTAL LABOR HOURS	NHR COST
	CLASS	Principal	Associate	Senior Engineer/ Scientist 2	Senior Engineer/ Scientist 1	Project Engineer/ Scientist 2	Project Engineer/ Scientist 1	Staff Engineer/ Scientist 3	Staff Engineer/ Scientist 2	GIS Analyst 2	CAD Designer	Admin 3	Admin 2		
	STAFF NAME		D. Overbay/ D. Eggers	D. Conlin		S. Schwartzel	E. Hurn	E. Deal G. Spann							
	NHR	\$259.81	\$237.16	\$208.35	\$184.68	\$159.80	\$148.81	\$136.90	\$126.55	\$138.08	\$130.80	\$124.31	\$110.61		
TOTAL LABOR HOURS AND COST	0	14	12	0	16	8	16	0	0	0	7	0	73	\$12,628.39	

OTHER DIRECT COSTS (ODCs):

Mileage	miles @	\$0.580	per mile	\$0.00
Tolls	each @	\$5.00	per each	\$0.00
Parking	each @	\$15.00	per each	\$0.00
GPS Unit	each @	\$50.00	per each	\$0.00
Field Supplies	each @	\$15.00	per each	\$0.00
	each @		per each	\$0.00
	each @		per each	\$0.00
	each @		per each	\$0.00
SUBTOTAL - ODCs				\$0

Classification	Labor Hours
Principal	0
Associate	14
Senior Engineer/ Scientist 2	12
Senior Engineer/ Scientist 1	0
Project Engineer/ Scientist 2	16
Project Engineer/ Scientist 1	8
Staff Engineer/ Scientist 3	16
Staff Engineer/ Scientist 2	0
GIS Analyst 2	0
CAD Designer	0
Admin 3	7
Admin 2	0

Total = 73

NHR Cost	\$12,628
Other Direct Costs	\$0
GRAND TOTAL =	\$12,628

SUMMARY OF ESTIMATE - Subconsultant
Town Center to Burke-Gilman Trail Connector
City of Lake Forest Park
Subconsultant: GeoEngineers
Phase 2: 30% Design

NEGOTIATED HOURLY RATES (NHRs)

Classification	Direct Rate (DR)	+	DR x ICR 189.41%	+	DR x FF 30%	=	NHR
Principal	\$81.34		\$154.07		\$24.40		\$259.81
Associate	\$74.25		\$140.64		\$22.28		\$237.16
Senior Engineer/ Scientist 2	\$65.23		\$123.55		\$19.57		\$208.35
Senior Engineer/ Scientist 1	\$57.82		\$109.52		\$17.35		\$184.68
Project Engineer/ Scientist 2	\$50.03		\$94.76		\$15.01		\$159.80
Project Engineer/ Scientist 1	\$46.59		\$88.25		\$13.98		\$148.81
Staff Engineer/ Scientist 3	\$42.86		\$81.18		\$12.86		\$136.90
Staff Engineer/ Scientist 2	\$39.62		\$75.04		\$11.89		\$126.55
GIS Analyst 2	\$43.23		\$81.88		\$12.97		\$138.08
CAD Designer	\$40.95		\$77.56		\$12.29		\$130.80
Admin 3	\$38.92		\$73.72		\$11.68		\$124.31
Admin 2	\$34.63		\$65.59		\$10.39		\$110.61

COST ESTIMATE (Labor Hours x NHR):

Classification	Labor Hours	x	NHR	=	Labor Cost
Principal	0		\$259.81		\$0.00
Associate	14		\$237.16		\$3,320.27
Senior Engineer/ Scientist 2	12		\$208.35		\$2,500.21
Senior Engineer/ Scientist 1	0		\$184.68		\$0.00
Project Engineer/ Scientist 2	16		\$159.80		\$2,556.81
Project Engineer/ Scientist 1	8		\$148.81		\$1,190.50
Staff Engineer/ Scientist 3	16		\$136.90		\$2,190.39
Staff Engineer/ Scientist 2	0		\$126.55		\$0.00
GIS Analyst 2	0		\$138.08		\$0.00
CAD Designer	0		\$130.80		\$0.00
Admin 3	7		\$124.31		\$870.20
Admin 2	0		\$110.61		\$0.00
SUBTOTAL - Labor Hours x NHR	73				\$12,628

SUBTOTAL **\$12,628**

OTHER DIRECT COSTS (ODCs): **\$0**
TOTAL NHR COST (SUM OF TASKS 1 THROUGH 8)

TOTAL - PHASE 2: **\$12,628**

LABOR DETAIL / ESTIMATE - Subconsultant
 PROJECT NAME: Town Center to Burke-Gilman Trail Connector
 OWNER: City of Lake Forest Park
 PRIME: V+M Structural Design, Inc
 SUBCONSULTANT NAME: MIG

WORK ELEMENT	LABOR HOURS														TOTAL LABOR HOURS	NHR COST
	CLASS	Principal II	Sr. Engineer VII	Eng V / LA V / Planner	Engineer IV	LA IV	Sr CAD Technician, Sr Proj. Asst.	CAD Technician	EIT, LA., Landscape Designer II	Project Assistant	Civil Designer I Landscape Designer II	Landscape Designer, Graphics				
	STAFF NAME	D. Rodgers														
	NHR	\$222.55	\$220.00	\$165.36	\$150.41	\$150.41	\$135.00	\$115.00	\$100.00	\$95.00	\$90.00	\$85.00				
WBS	Phase 2: 30% Design															
600.0	Civil and Landscape	4	20	0	0	0	0	0	0	0	0	0	0	0	24	\$5,290.20
600.1	Civil Infrastructure Concept Design Update	4	20												24	\$5,290.20
700.0	Public Outreach (NOT USED)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	\$0.00
TOTAL LABOR HOURS AND COST		4	20	0	0	0	0	0	0	0	0	0	0	0	24	\$5,290.20

OTHER DIRECT COSTS (ODCs):

Mileage	miles @	\$0.580	per mile	\$0.00
Tolls	each @	\$5.00	per each	\$0.00
Parking	each @	\$15.00	per each	\$0.00
Postage, Shipping & Delivery	each @	\$25.00	per each	\$0.00
Open House Supplies	each @	\$420.00	per each	\$0.00
Other	each @	\$275.00	per each	\$0.00
SUBTOTAL - ODCs				\$0.00

Classification	Labor Hours
Principal II	4
Sr. Engineer VII	20
Eng V / LA V / Planner	0
Engineer IV	0
LA IV	0
Sr CAD Technician, Sr Pro	0
CAD Technician	0
EIT, LA., Landscape Desigr	0
Project Assistant	0
Civil Designer I, Landscape	0
Landscape Designer, Grapl	0
0	0
0	0

Total = 24

NHR Cost	\$5,290
Other Direct Costs	\$0
GRAND TOTAL =	\$5,290

SUMMARY OF ESTIMATE - Subconsultant
Town Center to Burke-Gilman Trail Connector
City of Lake Forest Park
Subconsultant: MIG
Phase 2: 30% Design

NEGOTIATED HOURLY RATES (NHRs)

Classification	Direct Rate (DR)	+	DR x ICR 190%	+	(DR+ICR)xFF 10%	=	NHR
Principal II	\$69.77		\$132.55		\$20.23		\$222.55
Sr. Engineer VII	\$68.97		\$131.03		\$20.00		\$220.00
Eng V / LA V / Planner	\$51.84		\$98.49		\$15.03		\$165.36
Engineer IV	\$47.15		\$89.59		\$13.67		\$150.41
LA IV	\$47.15		\$89.59		\$13.67		\$150.41
Sr CAD Technician, Sr Proj. Asst.	\$42.32		\$80.41		\$12.27		\$135.00
CAD Technician	\$36.05		\$68.50		\$10.45		\$115.00
EIT, LA., Landscape Designer II	\$31.35		\$59.56		\$9.09		\$100.00
Project Assistant	\$29.78		\$56.58		\$8.64		\$95.00
Civil Designer I, Landscape Designer II	\$28.21		\$53.61		\$8.18		\$90.00
Landscape Designer, Graphics	\$26.65		\$50.63		\$7.73		\$85.00

COST ESTIMATE (Labor Hours x NHR):

Classification	Labor Hours	x	NHR	=	Labor Cost
Principal II	4		\$222.55		\$890.20
Sr. Engineer VII	20		\$220.00		\$4,400.00
Eng V / LA V / Planner	0		\$165.36		\$0.00
Engineer IV	0		\$150.41		\$0.00
LA IV	0		\$150.41		\$0.00
Sr CAD Technician, Sr Proj. Asst.	0		\$135.00		\$0.00
CAD Technician	0		\$115.00		\$0.00
EIT, LA., Landscape Designer II	0		\$100.00		\$0.00
Project Assistant	0		\$95.00		\$0.00
Civil Designer I, Landscape Designer II	0		\$90.00		\$0.00
Landscape Designer, Graphics	0		\$85.00		\$0.00
0	0		\$0.00		\$0.00
0	0		\$0.00		\$0.00
SUBTOTAL - Labor Hours x NHR	24				\$5,290

SUBTOTAL **\$5,290**

TOTAL NHR COST (SUM OF TASKS 1 THROUGH 8)

OTHER DIRECT COSTS (ODCs): **\$0**

TOTAL - PHASE 2: **\$5,290**