Ivins City Staff Report
City Council Meeting 02/20/25

Agenda Item: Discuss and consider approval of expenditure for engineering professional services for Snow Canyon Parkway & Hamblin Parkway Roundabout design.

Submitted by: Thomas J. Jorgensen, P.E. Assistant City Engineer

Recommended City Council Action:
Approve expenditure of $80,460.00 for engineering professional services for Snow Canyon Parkway & Hamblin Parkway Roundabout design.

BACKGROUND:
The Ivins City Transportation Master Plan designates the intersection of Snow Canyon Parkway and Hamblin Parkway for a roundabout. Horrocks has provided a preliminary design, which includes a bypass lane for northwest-bound traffic. The design aims to minimize disruption to the existing trail and landscaping on the northeast side of Snow Canyon Parkway.

This project has become necessary due to the Black Desert Resort development. Installing the roundabout before the developer makes improvements at this intersection would prevent the need to remove and redo newly completed work.

Staff has issued a request for proposals (RFP) for engineering services to develop construction drawings for the project, with the goal of putting it out for bid by late summer 2025.

FINDINGS AND ANALYSIS:
Staff received five proposals. Below shows the five engineering firms and their cost proposals.

Civil Science	$67,600.00 or $61,505 (without geotechnical services)
Mainline Engineering	$80,460.00 or $70,560 (without geotechnical services)
CMT Technical Services	$82,775.00
Jones and DeMille	$123,625.00
J-U-B Engineers	$247,600.00

After reviewing the proposals, staff found that Civil Science had the lowest budget, followed by Mainline Engineering. Both firms have a good track record with the city.

Looking closer at the pricing, Civil Science proposed a fixed lump sum fee, while Mainline Engineering used a time-and-materials approach with a "not to exceed" limit. In our most recent project with Mainline, they came in nearly 25% under budget even while dealing with several significant staff directed changes.

Staff also noticed that Mainline included extra geotechnical services beyond the project's needs. However, Mainline clarified that Ivins City could decide which of these services to include. To make a fair comparison, staff evaluated costs excluding geotechnical services.

After considering all factors, staff scored the proposals, finding the results to be very close among the top three proposers, it came down to Civil Science and Mainline Engineering. Ultimately, staff recommend selecting Mainline Engineering and approving an $80,460 expenditure. We are confident in their qualifications, staffing on this project, fair pricing, and a strong history of completing projects on time and under budget.

SUPPORT MATERIALS:

- Request for Proposals
- Mainline Engineering Proposal

FINANCIAL IMPACT:

This project was not included in the latest Transportation Master Plan's five-year projection but will be added in the next amendment or update as fully impact fee eligible. In the meantime, funding may need to be temporarily allocated from the capital projects fund, with reimbursement from impact fee funds once the master plan is updated.

This item is not currently budgeted and will be included in the budget amendment process. It will be addressed as part of the estimated-to-complete fiscal year (FY) budget amendment, which takes place alongside the approval of the upcoming FY budget.

Additionally, the capital projects fund should come in under budget as the BLM land acquisition costs are expected to be delayed until FY26. The budgeted costs for the land was $480,040.

Respectfully Submitted:

Thomas J. Jorgensen, P.E. Assistant City Engineer

Content Review:

Dale Coulam, City Manager

MAINLINE ENGINEERING

January 20, 2025

Thomas Jorgensen, PE
Assistant City Engineer
Ivins City
via email: tjorgensen@ivinsutah.gov

RE: Request For Proposals – Snow Canyon Parkway/Hamblin Parkway Roundabout

Dear Tom,

We appreciate the opportunity to present the attached scope and fee estimate for preconstruction engineering for the subject project. We recognize the importance of completing work for the City in a timely manner and are committed to devoting the resources necessary to produce a thorough and accurate construction plan set for the construction of the **Snow Canyon Parkway/Hamblin Parkway Roundabout Project.**

We propose the following scope of work and fee for this project: See attached.

Schedule Proposal (dates shown are proposed completion dates)

Estimated NTP and Kickoff Meeting	February 3, 2025
30% Review – Survey/ROW Mapping, Utility Mapping, Basic Geometry	February 28, 2025
60% Review – Horizontal and Vertical layout with design improvements	April 4, 2025
90% Review – Final Plans, Technical Specifications, and Estimate	May 16, 2025
Final Package to Ivins City	May 30, 2025

We recognize the importance of completing work for the City in a timely manner and are committed to devoting the resources necessary to produce a thorough construction package for the construction of the Snow Canyon Parkway/Hamblin Parkway Roundabout Project. Please feel free to reach out to me regarding any questions related to our proposal. We look forward to your response.

Sincerely,

Phil B. Giles

Phil Giles, PE
435-669-4810
pgiles@mainline-eng.com

COST PROPOSAL FOR DESIGN ENGINEERING SERVICES

SNOW CANYON PARKWAY/HAMBLIN PARKWAY ROUNDABOUT

MAINLINE ENGINEERING

Discipline	Activity Description	Proposed Cost	Proposed Hours
Coordination Meetings	Conduct Meetings: Kickoff, 30%, 60%, & 100%	$2,560.00	16
Coordination Meetings Subtotal		***$2,560.00***	***16***
Data Gathering	Establish Survey Control	$320.00	2
	Complete Topo Survey (Traditional & Drone)	$2,560.00	16
	Develop Survey Control Sheet	$640.00	4
	Identify existing utilities and obstacles	$1,280.00	8
	Develop Base Map	$2,560.00	16
Data Gathering Subtotal		***$7,360.00***	***46***
Right of Way	Identify and Map Existing ROW	$2,560.00	16
Right-of-Way Subtotal		***$2,560.00***	***16***
Geotechnical	Provide Geotechnical Recommendations	$10,220.00	2
Geotechnical Subtotal		***$10,220.00***	***2***
Prepare Design Drawings	Provide 30%, 60%, and 100% design sets for City review	$1,440.00	9
	Develop typical sections of the roadway cross-section	$2,560.00	16
	Develop geometric and vertical/profile designs for the roundabout	$12,800.00	80
	Design pedestrian crossings and splitter islands	$6,400.00	40
	Design storm drainage improvements	$5,120.00	32
	Prepare signage and striping plans	$6,400.00	40
	Develop a conduit plan to support future landscaping	$1,280.00	8
	Design street lighting for the project	$2,560.00	16
	Address any non-standard details not covered by Ivins City guidelines	$2,560.00	16
	Coordinate with Black Desert Resort on the tunnel design, incorporate their design into the plans	$2,560.00	16
Prepare Design Drawings		***$43,680.00***	***273***
Technical Specifications	Provide 90% and 100% technical specifications for City review	$1,920.00	12
	Supplement standard City specifications where necessary	$1,280.00	8
Technical Specifications Subtotal		***$3,200.00***	***20***
Construction Cost Estimate	Prepare a detailed construction cost estimate and summary sheets	$2,560.00	16
Construction Cost Estimate Subtotal		***$2,560.00***	***16***
Contract Documents	Provide 100% complete contract documents for review	$640.00	4
	Finalize bid documents, including design drawings, technical specifications, and standard bid and contract conditions	$1,280.00	8
	Make necessary revisions for the final bid set based on City feedback	$1,280.00	8
Contract Documents Subtotal		***$3,200.00***	***20***
Bidding Services	Addressing contractor questions and issuing addenda	$640.00	4
	Attending and conducting the pre-bid tour	$960.00	6
	Supporting the City during the bid process	$960.00	6
Bidding Services Subtotal		***$2,560.00***	***16***

Project Management	Coordination with Stakeholders and other project management services	$2,560.00	16
Project Management Subtotal		***$2,560.00***	***16***
Grand Total		***$80,460.00***	***441***

Cost Proposal Assumptions

#	Explanation
1	Proposed cost is subject to change based on owner changes or requests which invalidate the scope of the RFP and assumptions below.
2	Construction support services are not included. These services include construction management, inspection, staking, or materials testing. If these services are desired, they will be negotiated separately at a later date.
3	No new landscaping or aesthetic treatments are anticipated for this project. Conduit sleeves will be placed to support future landscaping of the roundabout.
4	No environmental clearances, resource surveys, or documents will be required.
5	No structural design will be required under this contract. Ivins City will contract separately for these services if required.
6	Utility potholing will be completed by the City.
7	Third party utilities, other than those owned by the City, requiring relocation will provide their own relocation design for inclusion in the plans. This design will be coordinated with the new improvements.
8	If right-of-way is required, Mainline will provide an exhibit and a legal description. Ivins City will then work with the property owners to secure the fee title. All fees including appraisals and title reports to be paid by the owner.
9	Storm drain design assumes drainage will pass through the roundabout as discussed in the RFP. A full trunk line and/or outfall is not included. Added drainage elements will compliment existing storm drain systems.
10	Geotechnical investigation assumes $9,900 for Landmark Testing to evaluate the following: A roundabout at the intersection of Snow Canyon Parkway and Hamblin Parkway. A pedestrian tunnel under Hamblin Pkwy. A 10-foot-wide trail connections on the south side of Snow Canyon Parkway. Retaining structures or stabilized slopes for trails coming up out from the buried pedestrian tunnel. If some of these items are not required, a cost reduction will be negotiated.
11	The roundabout layout will match the draft layout provided in the RFP and Ivins City will provide a CADD file with this preliminary horizontal geometric layout as a starting point for design.

LANDMARK
TESTING & ENGINEERING

January 17, 2025

Mainline Engineering
Phil Giles
321 N Mall Drive, Suite T101
St. George, UT 84790

Subject: Geotechnical Investigation Proposal
Snow Canyon Parkway / Hamblin Parkway Roundabout
Ivins, Utah
Landmark Proposal No. YP5180

Phil:

Landmark Testing & Engineering is pleased to present this proposal to provide a geotechnical investigation and engineering report for the proposed Snow Canyon Parkway / Hamblin Parkway Roundabout project in Ivins, Utah. Landmark has reviewed the RFP provided for this project. Based on our understanding of the project the following items will require geotechnical evaluation:

- A roundabout at the intersection of Snow Canyon Parkway and Hamblin Parkway.
- A pedestrian tunnel under Hamblin Pkwy.
- 10-foot-wide trail connections on the south side of Snow Canyon Parkway.
- Retaining structures or stabilized slopes for trails coming up out from the buried pedestrian tunnel.

The soils on the majority of the project site to be developed are mapped by the Utah Geological Survey (UGS) [1] as Qbs: Santa Clara basaltic lava flow and Qea: Mixed eolian sand and alluvium. Landmark has completed investigations SE of the project site for the Black Desert Resort in the same geological units. Qea deposits typically overlay basalt at depths of 5 to greater than 10 feet and then transition to the lava flow at the surface, where seen.

SCOPE OF WORK

Task 1 –Geotechnical Investigation

Roundabout

We proposed investigating two locations within the existing Snow Canyon Parkway roadway to determine the current pavement structure. At each location the asphalt will be cored and the core thickness determined, a dynamic cone penetrometer (DCP) test will be conducted to a depth of 30 inches or until refusal, the base course thickness will be determined, and samples of the subgrade soil will be obtained to a maximum depth of 5 feet or until refusal.

1 Interactive Geologic Map Portal, Retrieved January 10, 2025, from Utah Geological Survey, https://geology.utah.gov/apps/intgeomap.

We proposed investigating two locations within the Hamblin Parkway side of the roundabout to determine subsurface soil conditions for pavement structure design. At each location a dynamic cone penetrometer (DCP) test will be conducted to a depth of 30 inches or until refusal and samples of the subgrade soil will be obtained to a maximum depth of 5 feet or until refusal.

Pedestrian Tunnel Structure and Trail

We propose to complete two borings, one on each end of the proposed pedestrian tunnel structure. The borings will be drilled to a depth of 15 feet below the estimated bottom of the structure, or an estimated depth of 30 feet. Drive sample of soil will be obtained at 2.5- and 5-foot increments with a California type split spoon sampler. If basalt lava flow is encountered in the borings, a tri-cone or button bit will be used to drill through the basalt to a minimum depth of 10 feet into the basalt lava flow and a minimum depth of 10 feet below the estimated bottom of the structure. If the basalt lava flow is less than 10 feet thick in the locations, underlying soil will be sampled.

Data from these borings will also be used for recommendations for the trail and retaining structures or slope stabilization for the trail coming up out of the pedestrian tunnel.

Prior to mobilization to the site, an LTE representative will coordinate with the Bluestakes of Utah to identify the locations of public utilities within the project boundaries. LTE will not advance any borings until a response has been received from each public utility identified on the Bluestake ticket. A copy of the Bluestakes ticket will be provided to you. Identification of the locations of the utilities by use of the Bluestakes of Utah does not include private utilities which may be present on the project site. Our scope of services does not include private utility locate services. The locations of private utilities will need to be disclosed to us prior to the advancement of our field exploration. LTE will not be responsible for damage to private utilities not disclosed to us.

We will contract with Utah Barricade or other contractor to provide a traffic control plan and traffic control services during the investigations within Snow Canyon Parkway. Our estimated fee **does not** include administration of traffic control during the investigations. An encroachment permit will be obtained from the City of Ivins prior to commencement with our work. We assume that no fee will be charged by the City for the encroachment permit.

Task 2 –Geotechnical Laboratory Testing

Depending on subsurface conditions encountered, laboratory testing will be performed on soil and bedrock samples retained from the field investigation. Laboratory testing will include the following items:

- Mechanical gradations and Atterberg Limits to assist in soil classification and for correlations with design parameters.
- Unit weight and moisture content.
- Unconfined compressive strength on bedrock core specimen.
- Modified Proctor and California Bearing Ratio for pavement design.
- Water soluble sulfate content, chloride content, soil pH, and resistivity for corrosion potential.

Task 3 –Geotechnical Design and Report

Landmark Testing & Engineering will issue a final report following UDOT's Geotechnical Report format. The report will include but is not limited to the following:

- Site map showing the project layout with investigation locations.
- Investigation logs that will include sampling method, sample locations, soil descriptions and classifications in accordance with ASTM D2487, and depth to water (if encountered).
- Soil/bedrock classification and terminology chart for the logs.
- Description of surface and subsurface conditions encountered including geologic setting, and location of groundwater, if encountered.
- Results of laboratory tests.
- Site geology and geologic hazards.
- Seismicity and seismic coefficients for each structure site.
- Slope stability analysis.
- Foundation design recommendations for the pedestrian tunnel.
- Lateral earth pressures for on-site and imported material including, active, at-rest, passive and coefficient of sliding friction. Coefficients will be also be provided for seismic loading.
- Earthwork recommendations, including cut and fill slopes, use of on-site soils, rock excavation requirements, and compaction requirements.
- Cement type recommendations.
- Pavement structure design recommendations.

BASIS OF COMPENSATION

For our geotechnical engineering services outlined in the above tasks, Landmark proposes a **LUMP SUM FEE of $9,900.00.**

Any scope of work performed outside of that defined herein will be billed separately in accordance with our most recent fee schedule. Subcontractor invoices and other expenses will include a 10 percent markup.

Landmark is prepared to commence the investigation within 7 business days of authorization. A final report will be provided within 4 weeks of the investigation. Preliminary data can be provided once the investigation is completed. If this proposal is acceptable, please respond in email providing your authorization to proceed with the work.

Sincerely,

LANDMARK TESTING & ENGINEERING

Steven Wells, P.E.
Chief Executive Officer

Ivins City
Request for Proposals for
Engineering Services
for design of
Snow Canyon Parkway / Hamblin Parkway Roundabout

Ivins City, Utah is soliciting letter proposals from qualified engineers to provide services as outlined in the **Scope of Services** section of this request.

I. Information:

This request for proposals (RFP) consists of roundabout project in Ivins City.

Although this RFP includes a suggested scope of work, the City is requesting if an item has been omitted or if the consultant feels an item would enhance or better the project, please include these items in the proposal. The City is requesting the consultant prepare a proposal letter for this work.

II. Background:

The project is located at the "T" intersection of Snow Canyon Parkway and the future Hamblin Parkway. Currently, this is an uncontrolled intersection with a two-way left-turn lane in the median. The north entrance serves as a construction access point for the Reserve development, while the south entrance is the future Hamblin Parkway, currently used as a construction entrance for the Black Desert Resort.

The primary objective of this project is to construct a roundabout at the intersection, marking the terminus of Hamblin Parkway at Snow Canyon Parkway. Key features for Snow Canyon Parkway include:

- A bypass lane for north/westbound traffic.
- A single lane for north/westbound left-turn traffic.
- Double through lanes for south/eastbound traffic.

For Hamblin Parkway, the design includes:

- A single south/westbound lane.
- Two north/eastbound lanes: one for left turns and another for right turns.

The bypass lane may need to maintain access to the construction entrance for the Reserve development. Please refer to the attached concept geometric design map for additional details.

The project will also include a 10-foot-wide trail along the south side of Snow Canyon Parkway. This trail must seamlessly transition into the planned trails associated with the Black Desert Resort developments to the north and south of the roundabout.

The project also includes a pedestrian tunnel under Hamblin Parkway, designed by consultants for Black Desert Resort. This tunnel must be incorporated into the roundabout's plan set. Additionally, the consultant will need to evaluate the need for pedestrian crossings on Snow Canyon Parkway and recommend their inclusion if deemed necessary.

Right-of-way constraints exist for this project, though there is potential to acquire additional land at the south corner from Black Desert Resort if needed.

No stormwater infrastructure currently exists at the intersection. Pending the vertical design of the roundabout:

- Stormwater from Snow Canyon Parkway is expected to continue flowing along Snow Canyon Parkway.
- Stormwater from Hamblin Parkway is anticipated to flow into the Black Desert Resort's storm drainage system.

It is assumed that underground utilities will remain in place. However, power and communication pedestals in the area may need to be relocated. The consultant will coordinate with utility providers to address any necessary adjustments. The consultant should plan on analyzing and adjusting the design as necessary to avoid unnecessary utility conflicts.

The following information will be provided by the City:

- 2024 Aerial Photography by Pictometry, 3-inch pixels
- Utility mapping information (Ivins can pothole utilities deemed necessary for the design)

III. Scope of Services:

The City has compiled an anticipated scope of work for this project, but we'd ask the consultant to add or delete items from this list as they deem appropriate.

A. Coordination Meetings
    a. Conduct four meetings: kickoff, 30%, 60%, and 100% design milestones.
B. Data Gathering
    a. Perform survey and topographic mapping of the project area.
    b. Identify existing utilities and obstacles.
C. Right of Way
    a. Review ROW boundaries and confirm project limits.
D. Geotechnical and Geological Investigation
    a. Procure geotechnical evaluation for the project area.
E. Prepare Design Drawings
    a. Provide 30%, 60%, and 100% design sets for City review.

b. Develop typical sections of the roadway cross-section.
c. Develop geometric and vertical/profile designs for the roundabout.
d. Design pedestrian crossings and splitter islands.
e. Design storm drainage improvements.
f. Prepare signage and striping plans.
g. Develop a conduit plan to support future landscaping.
h. Design street lighting for the project.
i. Address any non-standard details not covered by Ivins City guidelines.
j. Coordinate with Black Desert Resort on the tunnel design, incorporate their design into the plans.

F. Technical Specifications
   a. Provide 90% and 100% technical specifications for City review.
   b. Supplement standard City specifications where necessary.

G. Construction Cost Estimates
   c. Prepare a detailed construction cost estimate.

H. Contract Documents
   d. Provide 100% complete contract documents for review.
   e. Finalize bid documents, including design drawings, technical specifications, and standard bid and contract conditions.
   f. Make necessary revisions for the final bid set based on City feedback.

I. Bidding Services
   a. Addressing contractor questions and issuing addenda.
   b. Attending and conducting the pre-bid tour.
   c. Supporting the City during the bid process.

IV. Project Schedule:

The City's goal is to complete the design and begin construction by the beginning of June, 2025.

V. Contracting and Compensation for Services:

Ivins City intends to enter into a professional services contract with the successful engineer. The terms of the Ivins City standard contract are attached to this document. Compensation for the services rendered, is to be based upon a time-expended basis with an agreed maximum not to exceed value. The consultant must be willing to sign the attached engineering services contract.

VI. Proposal Letter Format and Content

The proposal shall be in a letter format with company letter head and shall consist of no more than three pages and shall identify the following information: commitment to a time frame for completion, breakdown on total estimated fees for each major task and subtask level of detail (should be presented

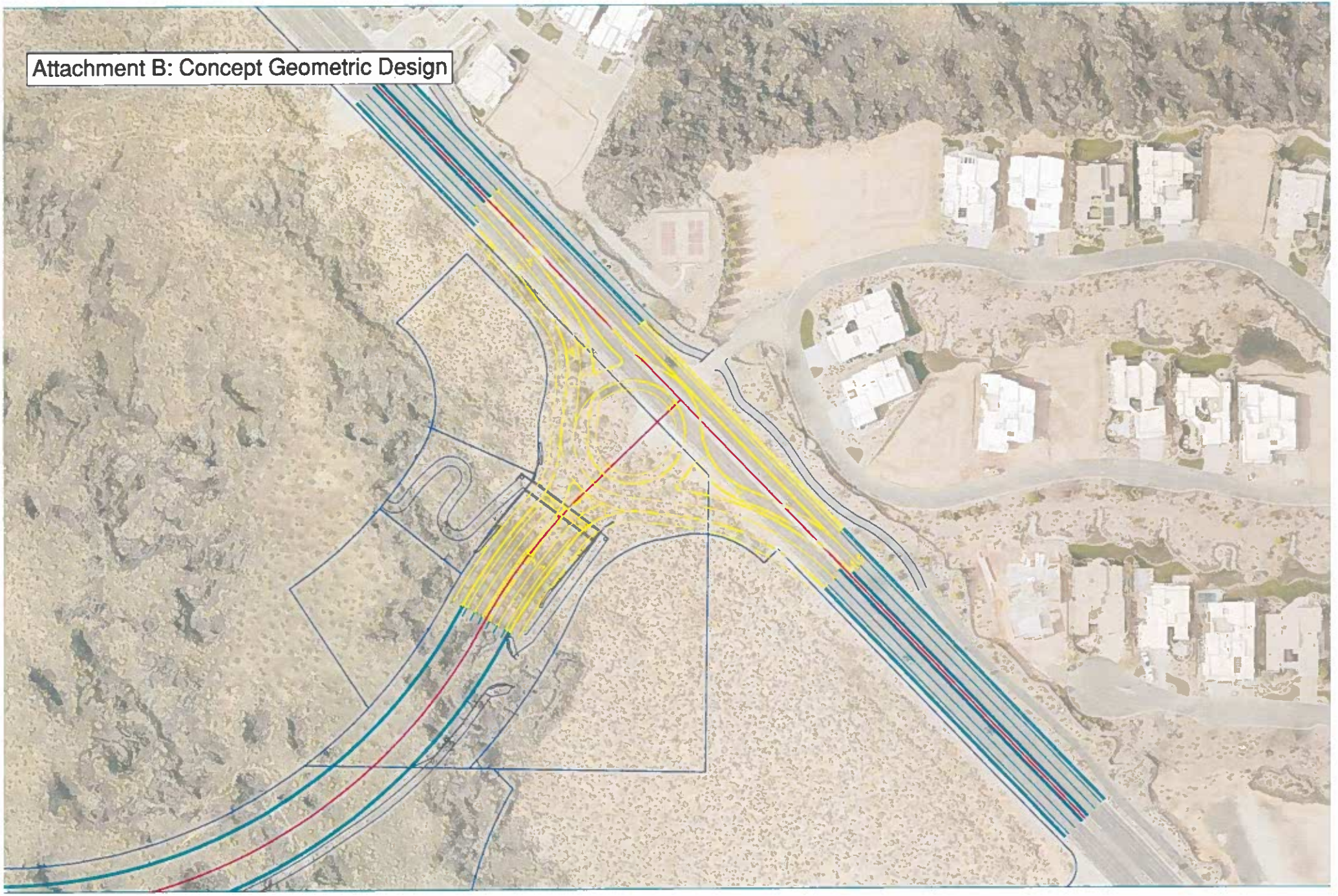
in table form), and total proposed cost. Qualifications and experience are not necessary in the proposal, as this RFP is only being submitted to a short list of qualified firms.

VII Submittal Requirements

Submit proposal by email to Thomas Jorgensen, P.E., Assistant City Engineer at tjorgensen@ivinutah.gov by 3:00 p.m., Thursday, January 23rd, 2025.

Attachment A: Sample Engineering Services Contract

Attachment B: Concept Geometric Design


Attachment B: Concept Geometric Design