

Christopher S. Cobb, PE.
Capital Projects Manager
City of Sparks Public Works
P.O. Box 857
431 Prater Way
Sparks, NV 89432

Re: 6th Street from Victorian Ave. to Prater Way – Conceptual Design Alternatives for Street Improvements

Dear Chris:

Summit Engineering Corp. appreciates the opportunity to provide the City of Sparks with this proposal for street rehabilitation alternatives for 6th Street between Victorian Ave. and Prater Way. Existing 6th St. has excess pavement width for its current purpose and use. In addition, the existing asphalt surface and various concrete improvements are nearing the end of their useful life and will require rehabilitation in the near future. Prior to the rehabilitation, the City of Sparks desires to review alternative improvement scenarios as to future economics and beneficial service to the public users and adjacent property owners.

Summit Engineering proposes to provide four geometric design alternatives (details discussed below) for the 6th Street roadway rehabilitation. Each design concept will be brought to a 30% or greater design level, adequate to assess the benefits and impacts of the proposed improvements. Impacts may include excess right-of-way requiring abandonment, lowering of the vertical profile thus affecting shallow utilities, initial construction costs and long term operation and maintenance costs. The 30% designs will be depicted on plan and profile plan sheets. An engineer's estimate of probable costs and a 30 year life-cycle cost assessment will be completed for each alternative.

Regardless of the alternate, certain ancillary services will be required for the design including topographic surveys, geotechnical study, potholing of utilities, and a review of the health and quality of the existing trees that may be affected by the project. In addition, Summit proposes to retain the services of Sage Green Design, LLC (Kreg Mebust, RLA) to provide landscape architectural consultation on each proposed design alternative.

Summit Engineering's proposed scope of services is as follows:

TASK 1 – Project Planning & Management

Upon receiving a notice to proceed, Summit will meet with City Staff to finalize the project goals and parameters. Summit will contact the various utility companies with facilities in or in the vicinity of 6th St. requesting they review their facilities for any necessary upgrades such that any upgrades can be coordinated with future street rehabilitation. Again at the mid point of the design task, Summit will meet with City Staff to discuss progress, findings and confirm project direction. At the conclusion of the design, Summit will provide a letter report summarizing the benefits and impacts of each concept. The cost estimate and life-cycle assessments will be attached to the letter report.

TASK 2 – Topographic Survey

Summit Engineering proposes to use the latest Washoe County Mapping ortho and contour maps as the basis for our plan base maps. This mapping will be supplemented with detailed field survey topographical data including street centerline profile, curbs and gutters, valley gutters, sidewalks, ADA ramps, driveways including shots on property for drainage assessment, other shots on property for drainage, storm drain manhole rims and inverts, catch basin inlet and invert, valve box rim and top of nut, trees within the project limit and other physical features which may affect design. Sanitary sewer is not located in 6th Street, however it crosses 6th at various intersections. Summit will tie the upstream and downstream manhole at each crossing to determine the depth at 6th Street. The field survey data will be reduced and incorporated into the base maps. The topographic mapping will be sufficient for final design and construction document preparation.

TASK 3 – Tree Assessment

Summit Engineering proposes to retain the services of a qualified arborist to assess each tree identified on our topographic mapping as to health, condition and quality. In addition, the arborist will assess root issues which are affecting existing improvements and may affect new improvements. The arborist's findings will be reported on a map display and will be considered in the concept designs.

TASK 4 – Geotechnical Study

Summit Engineering proposes to drill 8 soil borings to a depth of up to 8 ft. to obtain existing asphalt depth, aggregate base depth, and obtain samples of subgrade soils. Two of the borings will be utilized for perc testing (one near the north end and one near the south) to investigate the potential for LID storm water infiltration. Lab testing will be performed on the gathered samples including gradations, moisture content, Atterberg limits, Proctor density, sulfates and R-value. A final geotechnical report suitable for final design and construction will be prepared.

TASK 5 – Utility Potholing

Utilizing the Utility Alert utility locates, Summit will identify up to 10 critical locations for potholing of existing utilities. (Note: The utility locates will be requested prior to the topographic survey such that horizontal alignments can be tied.) The size and depth of each potholed facility will be documented. Potholes will be filled, compacted and surfaced with a hot mix asphalt patch.

TASK 6 – 30% Design Alternatives

Summit Engineering will prepare four design alternatives at a scale of 1in. = 20 ft. to a 30% or greater design state.

Concept A – Rehabilitate 6th St. in its current horizontal and vertical alignment, improvement layout and existing right-of-way. Drainage patterns will generally remain the same. Intersection bulb outs for horizontal parking may or may not be included. Minimal landscape consultation is anticipated.

Concept B – Rehabilitate 6th St. with angled parking and intersection bulb-outs. The improved width would remain close to existing, with minimal impact to vertical profile and drainage. Landscape consultation for bulb-out treatment is anticipated with minimal consultation for the remainder of the roadway.

Concept C – Reconstruct 6th St. with a narrower improved section. This concept is anticipated to lower the vertical profile in order to accommodate drainage from the adjacent properties, thus potentially affecting shallow utilities. This concept will also produce excess right-of-way which will likely require abandonment during the final design process. Landscape consultation for dealing with the excess right-of-way area is anticipated.

Concept D – Reconstruct 6th St. with a narrower improved section and incorporate a low impact development (LID) drainage/landscape feature on one side. This concept will reduce the improved width without the need of lowering the vertical profile, thus preserving utility cover. Significant landscape consultation for the LID is anticipated.

Quantities, and Engineer's Estimate of Probable Costs, and a 30 year life cycle assessment of future operation and maintenance for each concept will be generated.

Following is our cost proposal to complete the above scope of work:

TASK 1 – Project Planning & Management

Project Admin.	20 hrs @ \$175.00	=	\$3,500.00
Project Manager	30 hrs @ \$120.00	=	<u>\$3,600.00</u>
	TASK 1 Total		\$7,100.00

TASK 2 – Topographic Survey

Field Crew	60 hrs @ \$135.00	=	\$8,100.00
Office Reduction	16 hrs @ \$70.00	=	\$1,120.00

Supervision	08 hrs @ \$100.00	=	<u>\$800.00</u>
TASK 2 Total			\$10,020.00

TASK 3 – Tree Assessment

Arborist	L.S.	=	\$1,000.00
	Mark-up(10%)	=	<u>\$100.00</u>
TASK 3 Total			\$1,100.00

TASK 4 – Geotechnical Study

A. Field Work			
Utility Alert	04 hrs @ \$85.00	=	\$340.00
Drill Rig	08 hrs @ \$175.00	=	\$1,400.00
	10% mark-up	=	\$140.00
Engineer	08 hrs @ \$85.00	=	\$680.00
Flagger	08 hrs @ \$85.00	=	\$680.00
Perc Test	04 hrs @ \$85.00	=	<u>\$340.00</u>
Total			\$3,580.00

B. Laboratory			
Moisture Content	08 hrs @ \$25.00	=	\$200.00
Gradations	08 hrs @ \$120.00	=	\$960.00
PI	08 hrs @ \$120.00	=	\$960.00
Proctor	04 hrs @ \$140.00	=	\$560.00
Sulfates	02 hrs @ \$65.00	=	\$130.00
R – Value	02 hrs @ \$130.00	=	<u>\$600.00</u>
Total			\$3,410.00

C. Report			
Engineer	25 hrs @ \$85.00	=	\$2,125.00
Clerical	02 hrs @ \$65.00	=	\$130.00
PE Review	02 hrs @ \$130.00	=	<u>\$260.00</u>
Total			\$2,575.00

TASK 4 Total \$9,565.00

TASK 5 – Pothole Utilities

Sawcutting	04 hrs @ \$100.00	=	\$400.00
Backhole & Crew	16 hrs @ \$150.00	=	\$2,400.00
Hot Patch	10 ea. @ \$400.00	=	\$4,000.00
Flagger	16 hrs @ \$45.00	=	\$720.00
	10% mark-up	=	\$750.00
Engineer	16 hrs @ \$85.00	=	<u>\$1,360.00</u>
TASK 5 Total			\$9,630.00

TASK 6 – 30% Design Alternatives

A. Concept A – Rehabilitate As-Is			
Project Admin.	04 hrs @ \$175.00	=	\$700.00
Project Manager	10 hrs @ \$110.00	=	\$1,100.00
Designer	50 hrs @ \$90.00	=	\$5,400.00
Landscape Architect	L.S.	=	<u>\$500.00</u>
	Total		\$7,700.00
B. Concept B – Rehabilitate Angle Parking			
Project Admin.	04 hrs @ \$175.00	=	\$700.00
Project Manager	20 hrs @ \$110.00	=	\$2,200.00
Designer	60 hrs @ \$90.00	=	\$5,400.00
Landscape Architect	L.S.	=	<u>\$500.00</u>
	Total		\$8,800.00
C. Concept C – Reconstruct Narrower			
Project Admin.	06 hrs @ \$175.00	=	\$1,050.00
Project Manager	30 hrs @ \$110.00	=	\$3,300.00
Designer	80 hrs @ \$90.00	=	\$7,200.00
Landscape Architect	L.S.	=	<u>\$1,500.00</u>
	Total		\$13,050.00
D. Concept D – Reconstruct LID			
Project Admin.	06 hrs @ \$175.00	=	\$1,050.00
Project Manager	30 hrs @ \$110.00	=	\$3,300.00
Designer	70 hrs @ \$90.00	=	\$6,300.00
Landscape Architect	L.S.	=	<u>\$1,500.00</u>
	Total		\$12,150.00

TASK 6 Total \$41,700.00

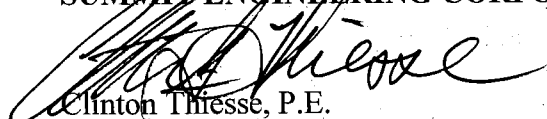
PROJECT TOTAL \$79,115.00

Clinton Thiesse, P.E., Executive Vice President, will serve as the Principal in Charge and Project Administrator. Rich Pettinari, P.E., will serve as the Project Manager.

Summit Engineering looks forward to working with the City of Sparks on this project. If you have any questions or concerns, please do not hesitate to call me at (775)787-4364.

Sincerely,

SUMMIT ENGINEERING CORPORATION



Clinton Thiesse, P.E.
Executive Vice President