



February 25, 2025

David Skov
Civil Engineering Division
City of Knoxville
3131 Morris Avenue
Knoxville, TN 37909

Subject: Proposal for Bridge Repairs Design and Construction Documents
Boyd's Bridge Pike bridge over the Holston River
City of Knoxville
Gresham Smith Project No. 48881.00

Dear David,

Gresham Smith is pleased to provide our proposal for professional bridge design services for the referenced bridge repair project. We understand our role will be to design and produce construction plans and bidding documents for the structural repairs of the existing concrete and steel truss bridge.

This repair work implements repairs recommended in our evaluation report of the Boyd's Bridge Pike bridge prepared for the City of Knoxville on November 27, 2024. These repairs will also include those items noted on the fracture critical member inspection form, page 10 of TDOT's Bridge Inspection report, dated April 8, 2024.

Our understanding of the proposed scope of work is shown below.

SCOPE OF SERVICES

BRIDGE REPAIR DESIGN AND CONSTRUCTION PLANS

Develop design and structural plan detail sheets depicting repairs of the following structural items:

1.0 Preliminary Design

- 1.) Prepare bridge layout sheets showing plan, elevation, and typical section views depicting the existing structure layout and location accompanied by a written scope of work describing the items of work to be performed.
- 2.) These preliminary plan sheets will generally describe the type and location of repairs and the proposed method of maintaining vehicular traffic during the phased construction of repairs for the bridge.
- 3.) These preliminary plans will be submitted to the City for review and approval before proceeding with the final design.
- 4.) We will incorporate any comments from the City as needed to submit a final preliminary design plan set for final approval.

Genuine Ingenuity

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2.0 Final Design

- 1.) Develop final plans sheets to include a title sheet containing a location map, index of drawings, and list of TDOT standard drawings included by reference in the plans.
- 2.) Prepare plans containing construction general notes, traffic control plans, and tabulated quantities to develop a unit price contract for bidding.
- 3.) Finalize the bridge layout and typical cross-section views to include the final scope of work and required construction phasing for maintenance of traffic.
- 4.) Prepare bridge slab plan views depicting the approximate areas of partial and full depth deck repairs, deck joint repairs or replacements, and application limits for a type 1 thin lift epoxy coating on the repaired bridge deck riding surface. Areas of deck removal and replacement required for structural beam repairs will be located on these plans.
- 5.) Develop structural steel repair drawings showing the areas of repair for heat straightening damaged and misaligned members of the existing overhead sway bracing. Structural steel repair details will also include a plan of locations for hand-tool cleaning and rust removal of the existing structural steel. Supplemental bolted plates will be added if necessary to retrofit the existing steel floor beams and stringers to their original capacity.
- 6.) All new structural steel will be shop-painted and field-bolted to the existing steel where possible.
- 7.) If approved during the preliminary review, we will prepare plan sheets to include jacking the existing truss ends at pier no. 4 and resetting the existing leaning bearing devices to their original position.
- 8.) Include locations and details for installing new advanced warning roadside signs indicating the minimum vertical clearance of the existing truss spans.
- 9.) If approved during preliminary design, include details for repairing or replacing the existing cracked historic marker sign on the overhead portal of truss #1 (north approach).

3.0 BIDDING AND CONSTRUCTION SERVICES

- 1.) It is assumed this project will be bid and constructed utilizing TDOT's Standard Specifications for Road and Bridge Construction (2021 edition); therefore, the preparation of written technical specifications is not included in the proposal. All material specifications and work execution procedures not shown in the detail sheets will be referenced to those provided in the TDOT Standard Specifications.
- 2.) We will prepare the project bid documents using the standard forms provided by the City of Knoxville, including the advertisement, bid proposal, bid form, proposal forms, and the standard contract.
- 3.) We will respond to contractor questions during bidding and attend a pre-bid conference if required and draft addenda as needed with coordination with the City of Knoxville.
- 4.) We will review and evaluate the bids for conformance, and prepare a bid tabulation and recommendation for award.
- 5.) After the contract award, we will respond to contractor RFIs and perform shop drawing reviews for any new structural steel to be provided for the project.

4.0 DELIVERABLES

The deliverables for this task order will be three (3) levels of project completion, as shown below, each submitted for review and approval by the owner and the final electronic issued for the construction set.

- 1.) Preliminary detail sheets (30%) level of completion plans will be produced showing preliminary repair details.
- 2.) Upon approval of Preliminary detail sheets, Final detail sheets (95%) level of completion will be prepared and submitted for the City of Knoxville's final review and comment.
- 3.) Final approved detail sheets in electronic PDF format.



5.0 SCHEDULE

Gresham Smith is prepared to begin work within one week of an approved written notice to proceed. Currently, we anticipate the following schedule:

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|-------------------------------|--|
| • Preliminary set submittal | 6 weeks following NTP. |
| • Final set submittal (90%) | 8 weeks following approval of preliminary set. |
| • Issued for construction set | 2 weeks following approval of 90% set. |

6.0 QUALIFICATIONS AND ASSUMPTIONS

Services not specifically identified as included in Gresham Smith's services are excluded from the basic services. The following services are specifically excluded:

- A comprehensive bridge inspection
- Utility location or relocation
- EPSC and Permitting
- Roadway design, survey, right-of-way, and geotechnical services are deemed not necessary for this project
- Stormwater drainage system on or off the bridge
- Testing of materials, welds, or paint system
- Design of lighting systems or utility installations.
- Written technical specifications
- Construction observation and inspection services

Any services requested by the owner, in addition to the basic services, will be billed at our standard hourly rates upon written approval from the owner. Schedule dates shown assume a one (1) week completion and return of review comments by the owner.

7.0 COMPENSATION

We will bill the design services at the hourly rates shown on the attached rates schedule up to a not-to-exceed amount of \$ 105,000. Project expenses will be billed at the actual cost incurred per the attached rates.

Gresham Smith is pleased to have the opportunity to submit a proposal for this task order. Please let us know if you have any questions or comments.

Sincerely, Gresham Smith

Patrick Fiveash P.E., CPSEC
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Exhibit A - Rate Schedule
City of Knoxville- Boyd's Bridge Repairs

Employee Classification/Category	Hourly Rate \$
Principal in Charge	325
Project Manager	300
Senior Engineer	280
Project Engineer	235
Engineer Intern	170
Senior Designer	185
Admin Support	135

Expenses	Rate \$
Mileage	0.70
Lodging (per night)	200
Per Diem	75
Copies	0.20
Auto Rental (per day)	80