I-80; Weber River at Echo Junction Project No. F-I80-4(124)169/PIN7262

Project Introduction

The Utah Department of Transportation hereby submits this work plan for review and approval as a Construction Manager/General Contractor (CM/CG) project under the provisions of the Special Experimental Projects No. 14 (SEP-14) for use of alternative contracting practices.

The proposed CM/GC contracting method is an innovative process which is being considered by other state transportation agencies for construction of highways projects. The purpose of this project is to remove and replace the structurally deficient bridges carrying I-80 eastbound and westbound over the Weber River at Echo Junction as well as the addition of the structure to accommodate a new westbound connector ramp between I-84 and I-80 with minimal disruption to traffic. Roadway work will include realignment of the westbound ramp, the addition of acceleration and deceleration lanes on the mainline I-80 bridges as well as the tie-ins for these two structures. The addition of these acceleration/deceleration lanes will require soil stabilization.

CMGC Description

Utah has a state policy (R916-4) in place that allows for the use of CM/GC and provides guidelines for employing this method of project delivery. The UDOT also has a Memorandum of Understanding (MOU) in place with the Federal Highway Administration (FHWA). This MOU establishes a work plan for the use of CM/GC techniques on transportation projects. As part of the MOU, UDOT will provide a report evaluating the applicability of CM/GC on the I-80 Summit Park Bridge project.

Purpose

The traditional linear approach to managing transportation projects has used the design-bid-build (low bid) process. This system works well on conventional transportation projects that do not require innovative approaches to the design and construction phases of the projects. The majority of projects that the Utah Department of Transportation delivers fall into this traditional category.

There are certain types of projects that require a unique approach to construction management; projects that are better managed in a non-linear approach. These types of projects can be identified by the following criteria:

- Construction input is required during early phases of project design.
- Complex construction phases, where the actual contractors timely input is invaluable;

Projects where limiting budgets threaten the delivery of the project and where CM/GC alternatives can help to contain costs;

Innovative construction scenarios, where new technology is being used to accelerate or improve

construction that is not generally understood by the contracting community such as the Accelerated Bridge Construction method.

Project Description and Scope of Work

Accelerated Bridge Construction (ABC) will be used and Contractor participation is vital to the design and construction. Contractor participation will help identify and eliminate the risk of using new construction methods and innovative methods for removal of the existing structure will be explored.

There is risk because of location and the use of ABC. This risk will be minimized by Contractor participation in the design. Having a Contractor available to evaluate and give input on how the replacement process occurs will greatly reduce the risk for UDOT and Contractors. This risk reduction is expected to reduce project cost, shorten schedule, and result in a better UDOT product.

Lessons learned by the Contractor's previous experience in the means and methods of ABC will benefit the public by reducing travel delays in meeting or exceeding the MOT performance requirements set forth by the region.

These structures span the Weber River and as such are held to the stream alteration permit requirements. The CMGC process will allow the Contractor to provide input to the designers to minimize construction activities within the high water mark, and provide valuable information to help protect the river during the demolition and construction of the structures.

Schedule and Phasing

Phase 1: CM/GC Selection Process

(Estimated duration: 3 to 4 months)

The UDOT will advertise and solicit for a qualified CM/GC for this project through a best value selection process as defined in an RFP. This RFP will require all proposers to attend a mandatory pre-proposal meeting.

After the technical and fee proposals has been submitted they will be reviewed by a technical evaluation committee consisting of seven (7) voting members and at least one (1) non-voting member. This review will be based upon the project goals and weighted selection criteria. Upon completion of the technical review all participants will be notified of their score and invited to an interview with the technical evaluation committee. Following the interviews their final scores will be tallied and the top-ranked proposer will selected. Once selected, the UDOT will execute the contract and issue the pre-construction phase notice-to-proceed to the CM/GC.

Phase 2: Pre-Construction Phase Services

(Estimated duration: 3 months)

The Contractor will be part of the design team to provide input on schedule, phasing, constructability, materials, cost, value engineering, and risk reduction throughout the design phase of the project. The Contractor tasks during the design phase include:

1. Attend an regular project workshops with the UDOT and Designer to provide feedback on the following:
    a. Identification of goals and objectives based current schedule and funding.
    b. Presentation and evaluation of design alternatives.
    c. Project risks and costs associated with each design alternative.
    d. Develop and evaluate alternative MOT plans including estimated user costs.
    e. Development, evaluative, and select an innovative bridge replacement solution.
2. Participate in periodic design and pricing meetings and reviews.
3. Attend all project review meetings that include:
    a. Initial project team kick off meeting to review project scope, schedule, and budget.
    b. Field review meeting to discuss bridge design, constructability, and innovative construction methods.
    c. Attend 30%, 60%, and 90% complete P,S,&E review Meeting
4. Provide input to identify and reduce risk and provide input in assigning risk responsibility.
5. Provide input on methods to ensure the environmental commitments are implemented during construction.
6. Provide recommendations to achieve the CM/GC goal of zero change orders and overruns.
7. Participate as determined in project action teams
    a. Document and track risk and its cost and schedule impacts
    b. Document and track innovation and its cost, schedule, and quality impacts
8. Submit a guaranteed maximum price bid to the UDOT Electronic Bid System.
9. The designer and UDOT will collect data during the design phase on risk allocation and innovations employed.

Phase 3: Construction Phase Services

(Estimated duration: 6 months)

1. Contractor will schedule, coordinate and manage site operations and construction activities;
2. Coordinate with various federal, state and local agencies and utility companies;
3. Procure materials and equipment;
4. Provide, implement and document quality controls in accordance with the Agency's QC/QA program;
5. Address all federal, state and local permitting requirements;
6. Maintain a safe work site for all project participants;
7. Manage self-performed work, subcontractor work and suppliers;
8. Complete project construction of the project as described by final plans and specifications within the GMP.

Measures and Reporting

The project will have an initial report and final complete at the conclusion of phases I and II respectively per the January 12, 2010 memorandum of agreement.