

ASC – REGION 7

HEAVY CIVIL PROBLEM INSTRUCTIONS

Lehi City UTA Pedestrian Bridge – Utah Transit Authority

This year, the competition problem requires each team to prepare a proposal for the Lehi City UTA Pedestrian Bridge for the Utah Transit Authority and funded by the Utah Department of Transportation in Utah County, Utah. Your assignment includes responding to the following problem questions, preparing a proposal and a bid package per the project plans and specifications and these problem instructions. All contract documents can be found on the provided flash drives. Proposal packages will include the bid submittal in sealed envelope and proposal binder with provided tabs for organization.

I. Takeoff and Estimate Items.

- A. Prepare a quantity take-off and direct cost estimate for all bid items that are not already filled out on your bid proposal worksheet.
- B. Prepare your bid in accordance with the specifications and bid proposal forms provided.
- C. Direct cost estimates should include:
 - a. Methodology, audit trail, and must be legible.
 - b. Production calculations, crew analysis, alternatives.
 - c. Include all worksheets for review.
 - d. Analysis and selection of lowest responsible supplier / subcontractor quotes.
- D. Each bid item estimate, and all backup associated with that item, shall be placed in binder behind its respective tab that has been provided. Judges will not search for bid item backup.
- E. Logic, order, clarity, and technical accuracy will be considered when scoring.
- F. Written proposal of required information: all answers, working papers, assumptions, summaries, tables, charts, schedules, and phasing plans are to be included. Use your best judgment when preparing this document for order and presentation.
- G. Takeoff and estimate to be hard copy, and placed proposal binder behind the respective tab.

II. Bid Submittal

- A. Ensure all items on the bid submittal checklist are completed and included in bid submittal envelope that has been provided.
- B. Bid submittal packages that do not include all documents listed on the “Bid Submittal Checklist” or that are received after 09:29:59 PM on Thursday February 6th, 2025, will be deemed non-responsive.
- C. All bid submittal documents to be placed in the provided bid submittal envelope.

III. Project Plan and Specification Questions

- A. All answers can be found in the contract documents provided in the document management server.
- B. Provide detailed answers including the respective paper trail and final document name that the answer was located.
- C. Plan and specification questions to be hard copy, and placed in proposal binder behind respective tab.

IV. Project Schedule

- A. Prepare a detailed critical path method (CPM) schedule for all items of work.
- B. Include a schedule narrative to help explain potential logic, schemes, or reasoning (only for larger work items.)
- C. The schedule shall outline in sufficient detail the proposed operations, the interrelations of the various operations, and the order of performance so that the progress of the work can be evaluated accurately at any time during the performance of the contract and ensure that the work will be completed within the specified number of working days.
- D. Schedule and narrative to be hard copy and placed in proposal binder behind respective tab.

V. Project Analysis

- A. Prepare and submit a detailed site logistics plan.
- B. Your site logistics plan should include the following at minimum:
 - a. **Site Lay down area(s):** Showing the construction limits for what is need in the project
 - b. **Trucking Routes:** Routes will need to be shown for both North and South side of the bridge.
 - c. **Crane Pick Plan:** Crane location, crane sizing, loads, and radii, show the multiple areas the crane will be stationed
 - d. **Concrete Plan:** Refer to 2020 Standard UDOT Spec section 02752 1.5C
- C. Project site logistics plan to be folded neatly, placed in provided document pocket and inserted in proposal binder.

VI. Bid Proposal Worksheet

- A. Complete the Bid Proposal Worksheet utilizing all required data and selection of the lowest responsible supplier / subcontractor quotes.
- B. Prepare bid proposal worksheet: Unit pricing extension, overhead, and profit (margin).
- C. Bid proposal worksheet to be **hard copy and in excel format**. Hard copy to be placed in proposal binder. Excel format to be placed onto flash drive and inserted into provided envelope. Envelope with flash drive to be placed in bid proposal binder.

VII. Oral Presentation

- A. Presentation will be 25 minutes; this includes presentations and questions. Please allow at least 10 minutes for questions and answers. There will be a 200-point deduction for any team that does not allow 10 minutes for questions.
- B. Presentation materials must be turned in by 6:30 AM on Friday, February 7th.
- C. Presentation to be uploaded to provided flash drive and in **.ppt** format.

VIII. Assumptions

General Assumptions:

- 1. Subcontractor / Supplier quotes will be supplied in hard copy form throughout the time allowed for bid preparation.
- 2. Information provided will include project plans and specifications. You will need to use parts of each of these.
- 3. It is OKAY for your team to make assumptions on issues and information not available during the bid preparation period. Please note these assumptions on your worksheets for grading purposes.
- 4. Bid opening will be as life-like as possible. Please follow these problem instructions for bid document preparation instructions.
- 5. Another estimator completed an estimate for all items that have direct costs pre-populated on the "Bid Proposal Worksheet." Please do not change the direct costs for those items. Each team is responsible for spreading indirect costs and profit margins to all bid items as they see fit.

Project Assumptions:

1. Laydown Yard can be acquired within the project limits.
2. A water source is available on Timpanogos Highway (just East of the project) or W Ridge Drive (Southwest of the project corridor).
3. Project is a commutable distance for crews.
4. Anticipated notice to proceed date is March 17, 2025.
5. Each team will use a profit margin of 15%.
6. Total indirect costs are \$600,000.
7. Bid Item 01 Mobilization pricing is based on UDOT Standard Specification 01501 and includes costs for mobilizing all heavy equipment to site.
8. Disregard the DBE and SVBE Contract Goal requirements (i.e., Treat all subs/suppliers the same)

IX. Specification / Contract Questions

Provide answers to the following questions, ***answers may be found in either the project plans, contract provisions, technical specifications, geotechnical report, or contract documents.*** For an answer to be correct, teams must include the location where the answer was found (i.e. Standard Specifications, Special Provisions, Plans, etc.), section, page and paragraph with answer. Show your work if calculations are needed.

1. What pipe diameter is called out for a storm drain line connecting manhole - MH 04-07 to catch basin - CB 04-02?
2. Using the Special Provisions define what size casings should be used for the drilled shafts?
3. What is defined as a “fully penetrating crack” in a MSE retaining wall?
4. What curing compound should be used on the Portland cement concrete pavement (include “Type” & “Class”)?
5. How long and at what percent slope is the drainage line between CB 02-07 to CB 02-08?
6. What is the slope of the concrete lined ditch?
7. How much money is 3 VSM message board per day?

8. How thick is the elastomeric bearing pad and what gage of steel shims are inside it?
9. According to the specs what is the Maximum Water to Cementitious Ratio for class AA(AE) concrete mix?
10. What is the seeding window for an elevation from 4,000 to 6,000 ft?

Bonus: Poor people have it. Rich people need it. If you eat it, you die. What is it?