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INC.

J-U-B FAMILY OF COMPANIES

August 31, 2023

Kayla Dowty, P.E.  
10180 Timberwolf Drive  
Reno, NV 89523

**RE: PROPOSAL FOR PROFESSIONAL SERVICES  
RIVERSIDE DRIVE CONCEPTUAL FLOOD MITIGATION DESIGN**

Dear Ms. Dowty,

J-U-B ENGINEERS, Inc. (J-U-B) is pleased to provide Carson Truckee Water Conservancy District (CTWCD) (CLIENT) with this proposal for engineering design services for the Riverside Drive Conceptual Flood Mitigation Design.

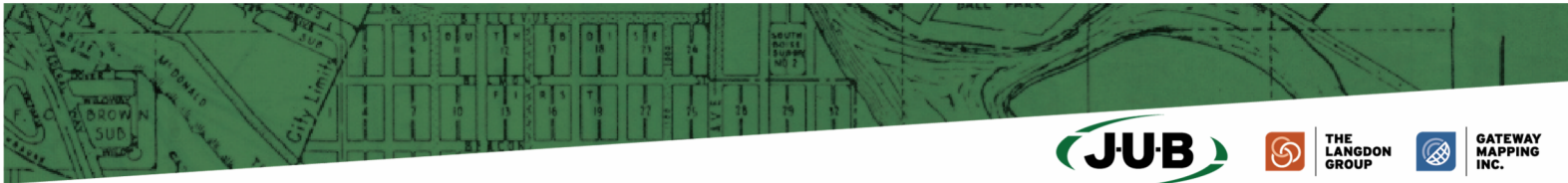
The project will be performed under the existing on-call agreement for professional services entitled **XX**, dated **XX**.

## **PART 1 - PROJECT UNDERSTANDING**

CTWCD has requested the conceptual design of a floodwall or similar flood mitigation along Riverside Drive between the Keystone Avenue Bridge and the Arlington Avenue Bridge on the Truckee River in downtown Reno, Nevada. The design flow rate to mitigate is 14,000 cubic feet per second (cfs).

The work will include the following tasks;

- Data Gathering
- Pre- and Post-Mitigation Inundation Mapping
- Conceptual (~15%) Drawings
- Technical Design Memorandum



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## **PART 2 - SCOPE OF SERVICES BY J-U-B**

J-U-B will perform the following scope of work:

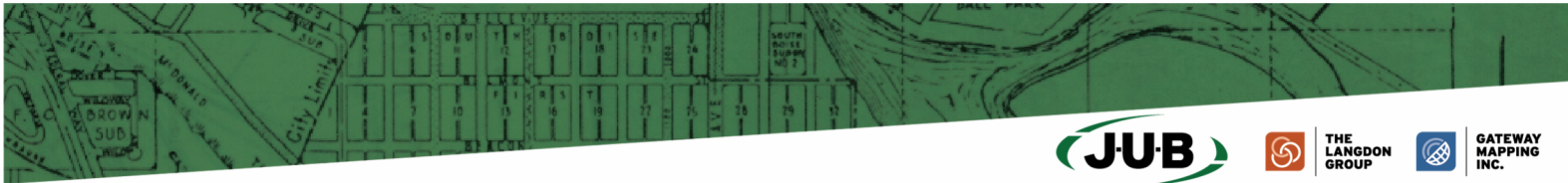
### **A. Task 010: Contract Administration/Project Management**

- 1. Project Management tasks to include the following:
  - a. Set up project into J-U-B's financial and record keeping systems for document retention and project controls.
  - b. Communicate and coordinate J-U-B team activities with kickoff and progress meetings as required.
  - c. Process monthly subconsultant invoices.
  - d. Regularly monitor project status, budget, and schedule. Provide a monthly invoice including budget status.
  - e. The following project meetings are anticipated as part of the project management effort:
    - i. Monthly Project Team Meeting with CTWCD representative (Kayla Dowty & J-U-B)
    - ii. Final deliverable review Meeting

### **B. Task 020 - Data Gathering**

- 1. J-U-B will gather existing relevant documents and data for the work effort this is anticipated to include the following:
  - a. Gather and review previously performed studies and/or historical photos of the breakout areas around Riverside Drive.
  - b. Perform a site visit to understand the existing conditions, and potential conflicts.
  - c. Request record drawings and utility records from the City of Reno and review existing utility conflicts.
  - d. Topographic Survey and Mapping: J-U-B will prepare a topographic surface of the design area, the main source of the data with be the Washoe County LiDAR. The Washoe County LiDAR will be supplemented with spot surveys and verification including areas under and around bridges, and with dense vegetation. The map will be implemented into the drawings. J-U-B will characterize existing conditions by locating existing surface-apparent features. The horizontal and vertical control will be based on published data. Horizontal control will conform to North American Datum of 1983 (NAD 83), and vertical control will conform to North American Vertical Datum of 1988 (NAVD 88).
  - e. Utility Investigations: J-U-B will use existing mapping provided by the City of Reno to establish the existing utilities. The utilities will be added to the base map of the drawings. During this phase of the work no pot holing or underground utility survey will be performed.

- 2. Deliverables:



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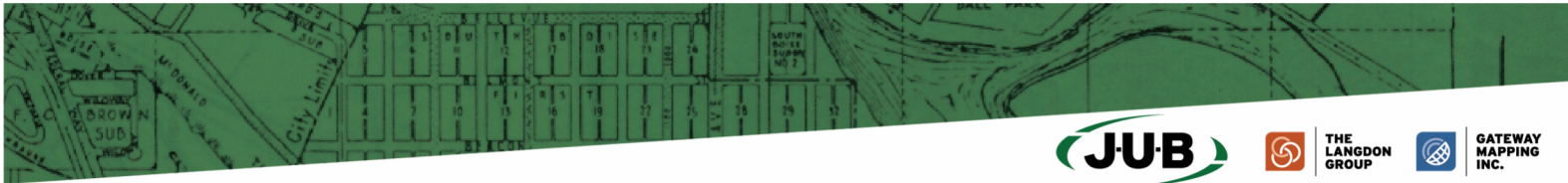
- Data gathering and review section in the technical design memorandum.
- Topographic and utility mapping in the conceptual design plans.

**C. Task 030 – Conceptual Design**

1. The conceptual design for the floodwall will be created by J-U-B. Preliminary plans will be drawn in the J-U-B standard format. The focus of the plans will be on alignment and elevation. However, the plans will consider additional design elements from a feasibility perspective such as storm drainage handling, potential utility conflicts, pedestrian access, existing landscaping, and ADA compliance.
  - a. The plans will include the proposed alignments for the floodwall with plan and profile drawings that include the 14,000 cfs water surface elevation. The following sheets are anticipated in the conceptual design plan:
    - i. Title Sheet – Including Vicinity Map & Sheet Index
    - ii. Overall Site Plan & Index Sheet Map
    - iii. Plan and Profile Sheets
    - iv. Conceptual Detail sheets
2. Deliverables:
  - Conceptual Design Plans Draft for Client review
  - Final Conceptual Design Plans

**D. Task 040 – Modeling & Evaluation of Downstream Impacts**

1. The existing models will be used to the extent possible, it is anticipated that minor upgrades to the model are anticipated.
2. Downstream effects of the proposed Riverside Drive containment will be investigated as part of this task. The team will examine the inundation for newly created breakouts caused by the containment of the flood. The effort of this investigation will extend no farther than wells avenue. If a breakout area is found a figure will be created as documentation. The proposed investigation will not solve the breakout issues if identified rather it will serve just to identify the potential issues.
3. Deliverables:
  - Downstream impacts section of the Technical Design Memorandum



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**E. Task 050 – Opinion of Probable Costs**

- 4. J-U-B will prepare a preliminary Engineer’s Opinion of Probable Construction Cost Estimate based on conceptual design quantities, the estimate will be broken out by line item, and show the complete program including estimates for final design, construction, permitting, and construction management.
- 5. Deliverables:
  - Opinion of Probable Cost section of the Technical Design Memorandum.

**F. Task 060 – Technical Design Memorandum**

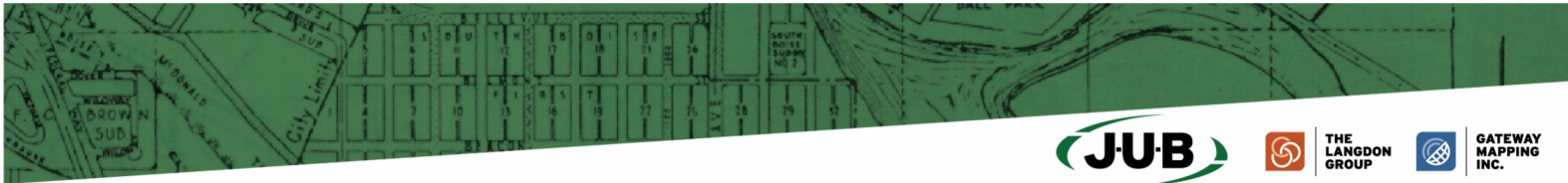
- 1. A brief memorandum documenting the effort including findings, design elements, and recommendations will be prepared. The report will, in conjunction with the conceptual plans, describe the preliminary design of the flood mitigation structure. One draft version of the report will be submitted to Client for review. Following review by Client, J-U-B will respond to one consolidated set of comments and finalize the report.
- 2. The report outline is anticipated as follows:
  - b. Introduction and Background
  - c. Data Gathering and Review
  - d. Alternatives Review
  - e. Hydrology and Hydraulics
  - f. Design and Construction Considerations
  - g. Downstream impacts
  - h. Permitting Considerations
  - i. Opinion of Probable Cost
  - j. Recommendations

Appendices:

Preliminary Plans

**PART 3 - ASSUMPTIONS AND EXCEPTIONS**

The following assumptions were made while preparing this Scope of Services:

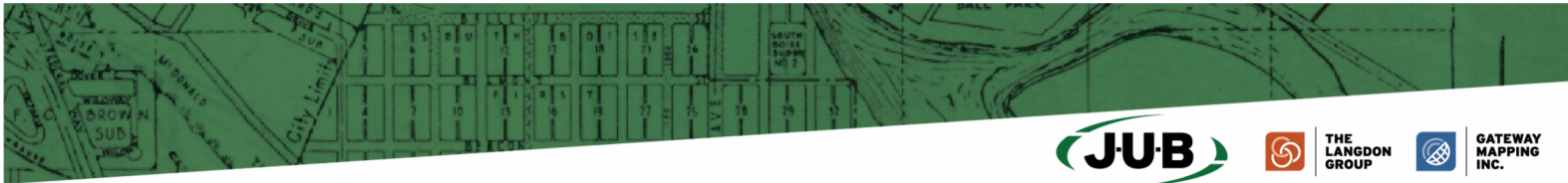


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- The conceptual level design will represent a 15% level of completeness. The purpose of the effort is to provide a concept of design that can be used to communicate with stakeholders as the mitigation design effort progresses. While elements of feasibility will be addressed the design will not be an exhaustive feasibility study due to its conceptual nature, and lack of a geotechnical investigation.
- Geotechnical investigations will not be included in the conceptual design.
- The existing CTWCD HEC-RAS models will be used.
- Washoe County LiDAR and topographic data will be utilized with minor survey as supplement to the LiDAR.
- Structural design, calculations and details will be provided in future phases.
- Specifications will be provided in a future phase of design.
- No roadway geometry changes will be evaluated in this scope.

**PART 4 BASIS OF FEE AND SCHEDULE OF SERVICES**

1. CLIENT shall pay J-U-B for the identified Services in PART 2 as follows:
  - a. For Time and Materials fees:
    - i. For all services performed on the project, Client shall pay J-U-B an amount equal to the cumulative hours charged to the Project by each class of J-U-B’s personnel times J-U-B’s standard billing rates. J-U-B standard billing rates are attached.
    - ii. Client shall pay J-U-B for J-U-B’s Subconsultants’ charges times a multiplier of 1.10.
  - b. J-U-B may alter the distribution of compensation between individual tasks to be consistent with services actually rendered while not exceeding the total project amount.
2. CLIENT acknowledges that J-U-B will not be responsible for impacts to the schedule by actions of others over which J-U-B has no control.
3. The following table summarizes the fees for the services identified in PART 2.



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<b>Task Number</b>	<b>Task Name</b>	<b>Fee Type</b>	<b>Amount</b>
010	Contract Administration/Project Management	Lump Sum	\$9,000
020	Data Gathering	Lump Sum	\$15,400
030	Conceptual Design	Lump Sum	\$29,800
040	Evaluation of Downstream Impacts	Lump Sum	\$8,000
040	Opinion of Probable Costs	Lump Sum	\$8,300
050	Technical Design Memorandum	Lump Sum	\$8,600
<b>Total:</b>			<b>\$79,100</b>

Sincerely,

Shane Dyer, Area Manager  
J-U-B ENGINEERS, Inc.

Attachments:

J-U-B Standard Billing Rate