



November 5, 2020

**City of Beaumont**

**Attn:** Jeff Hart, Public Works Director / City Engineer  
Public Works Department  
550 E. 6th Street  
Beaumont, CA 92223

**RE: Request for Proposal for Professional Engineering Services for Beaumont Master Drainage Plan Line 2, Stage 1 - Updated Scope of Services and Fee**

Dear Mr. Hart,

Per your letter request dated October 27, 2020, EXP U.S. Services is pleased to submit our Revised Scope of Work and Fees. We understand that Riverside County Flood Control and Water Conservation District (RCFC & WCD) will be performing an analysis for the deficient downstream facilities and the 1982 Hydrology Study will be used to design Line 2, Stage 1.

We look forward to working with the City and should you have any questions regarding this scope of work and fees, please contact Portia Gonzalez, P.E., Project Manager at 949.257.5340 or by e-mail [portia.gonzalez@exp.com](mailto:portia.gonzalez@exp.com).

Respectfully Submitted,

A handwritten signature in black ink, appearing to read "Khalil Saba".

**Khalil Saba, PE**

Vice President, Transportation Sector, Southern California  
t: 909.751.3253 | m: 909.228.2821 | e: [khalil.saba@exp.com](mailto:khalil.saba@exp.com)

## Revised Scope of Work

Together with the City at the kick-off meeting upon NTP, the EXP team will review our 12-month schedule and create a baseline schedule for your approval. Portia will update the schedule bi-weekly to apprise the City of Beaumont of the work progress.

EXP will begin with topographical mapping, utility research, right of way mapping, and permit identification. Resource allocation is the roadmap for the design and oversight teams to work together delivering the project. For our 12-month environmental and design schedule, the following scope of work defined in the RFP and our deep understand of the project are discussed in detail below.

### Detailed Workplan of Specific Work Task

#### TASK 1 | PROJECT MANAGEMENT

**1.1 Meetings:** A project kickoff meeting will be conducted to confirm the Scope of Services and design parameters. PDT meetings will be conducted monthly or as necessary throughout the duration of the project to track the overall project and facilitate the flow of information between the City, EXP, and all other stakeholders. Additional as-needed meetings will be held to address specific concerns. Agendas and meeting minutes will be generated for each meeting. (10 meetings assumed).

**1.2 Coordination + Progress Reporting:** EXP will provide coordination with City staff as well as other stakeholders as required. These may include RCFC, UPRR, Cherry Valley Water District, adjacent property owners or management companies. EXP will supervise, coordinate, monitor and review the project for conformance with standards, policies, and procedures. Monthly progress reports will also be provided to document the progress on the project. The EXP team will conduct a field review of the project site.

#### Deliverables:

- Project Schedule
- Monthly Project Status Reports
- Meeting Minutes
- PMP

#### TASK 2 | TOPOGRAPHIC SURVEY + BOUNDARY CONTROL

**2.1 Control Surveys:** Existing monuments will be utilized where available and durable monuments will be set as required where no suitable monuments exist. Should additional survey control be required to be set, horizontal and vertical control will be established from said existing survey control.

**2.2 Photogrammetric Mapping:** No additional aerial mapping will be obtained. Only existing mapping will be utilized and supplemented with ground surveys for areas of this project not covered by existing mapping.

**2.3 Topographic Survey:** Topographic field surveys will be performed to collect verification surveys within the project limits as identified by the design engineer. Supplemental surveys will be used to collect areas which are found to be different during our field review and to collect information at critical tie-in points, surface visible utilities and other features obscured by vegetation or shadows in the aerial mapping which fall within the survey limits. The topographic survey data will be processed and plotted at a scale comparable to the existing mapping files.

**2.4 Utility Mapping:** Field surveys will be performed to support the utility potholing effort. Once the potholes are completed, survey crews will obtain the location of the potholes and incorporate this information with the topographic survey.

**2.5 Right of Way Base Map:** Office staff will review existing base map provided by the city and verify the right of way and centerline data shown on said existing plans. Research will be conducted with the County of Riverside for maps and documents relating to the flood control right of way and street right of way. It is not anticipated that any field work will be needed for this task so no time has been included. Should there be a need for additional services beyond a review verification, these additional services will require additional fees outside this scope and fee.

**Deliverables:**

- Topographical Mapping
- Aerial Photography
- Base Mapping with Utilities
- Right-of-Way and Control Points

### TASK 3 | UTILITIES RESEARCH

Epic will act as the primary point of contact between the utility owners and project team identified on the utility plans. The scope of work will include:

**3.1 Utility As-Built:** They will collect utility as-builts, actively participate in PDT/utility focus meetings, prepare the introductory request for as-built notices to twelve (12) utility owners and also, prepare and issue utility verification notices to make sure the facilities are accurately plotted on the project utility plans.

**3.2 Reviews and Verification:** Coordinate and perform up to ten (10) potholes, as well as provide a fee for each additional requested. A review and verification with the design team which facilities are considered in conflict will also be completed. They will coordinate and plan a meeting amongst the utility owner, design team and the City as needed to discuss the project design, relocation alternatives, and a plan to resolve the conflict (Est. four (4) meetings including field meetings) and provide a final close-out file to the City.

**Deliverables:**

- Three (3) copies and one (1) digital copy of the Pothole Location Exhibit.

### TASK 4 | REGULATORY COMPLIANCE

**4.1 Biological Resources Technical Report and Focused Surveys:** A detailed literature and database review will be conducted to identify special-status species known or reported from the project area, as well as applicable Western Riverside Multiple Species Habitat Conservation Plan (MSHCP) area policies. Following the literature review, ICF will perform field surveys and prepare a Biological Technical Report (BTR) analyzing potential impacts to biological resources and MSHCP consistency for this task. The site is within a burrowing owl survey area, and a four-visit focused survey will be performed within all suitable habitat between March 15 and August 31 in the project's limits of disturbance (LOD) and a 500-foot buffer.

**4.2 Noise Technical Memorandum:** ICF will conduct a noise analysis of construction impacts related to the Project, which would consist of 5,000 feet of reinforced concrete pipe being placed underground. Along with the residences identified toward the southern section of the alignment, ICF will identify any other noise-sensitive land uses located in the general vicinity of the Project that could be impacted by noise and vibration during construction. Based on the nature of the project, operational noise would generally be negligible. Therefore, it is assumed that operational noise will be address qualitatively. The City of Beaumont generally exempts construction, except for interior levels that could exceed the City's municipal code at residences.

**4.3 Cultural Resources Assessment:** Historic maps and photographs will also be reviewed, if available. Due to the COVID-19 pandemic, the SCCIC is closed to outside researchers; therefore, records search results are

expected to be delayed. According to SCCIC, a duration of at least 13 weeks should be expected from the time the record search is submitted to the time that the record search information is received. The scope of work will include:

- Pre-field Coordination
- Pedestrian Survey

## Paleontological Resources

**4.4 Air Quality and Greenhouse Gas Technical Memorandum:** The Air Quality Impact Analysis will be prepared to meet County and South Coast Air Quality Management District (SCAQMD) CEQA requirements. Impact analyses will be prepared consistent with the analytical methodology, technical requirements, and significance criteria outlined by the SCAQMD in their CEQA Air Quality Analysis Handbook (as updated per the SCAQMD website).

**4.5 CEQA Categorical Exemption:** ICF will prepare a CEQA Notice of Exemption (NOE) for approval by the City and filing by ICF. ICF assumes that the noise, biological resources, air quality, and cultural resources technical studies and memos that are prepared will support the NOE. Only the NOE is assumed; no separate report or document.

### Deliverables:

- Technical Reports + Memoranda
- Three (3) copies and one (1) digital copy of applications permits and correspondence

## TASK 5 | GEOTECHNICAL INVESTIGATION

Geocon will prepare an encroachment permit application for the City of Beaumont and Caltrans to perform borings and subsequent patching within the roadways.

**5.1 Geotechnical Borings:** Geotechnical borings will be excavated along the proposed storm drain alignment. We have budgeted two days of drilling to excavate ten borings. We will measure the pavement and base thicknesses, log the geotechnical borings based on USCS criteria, and collect soil samples for laboratory testing. The borings will be backfilled with soil cuttings and temporarily patched with cold patch asphalt. The scope of work will include:

**5.2 Laboratory Testing:** Perform laboratory testing, which is anticipated to include maximum density/optimum moisture, in-situ density and moisture, direct shear, corrosion screening, and R-value testing. The final laboratory program will be based on conditions encountered during drilling.

**5.3 Geotechnical Report:** Prepare a geotechnical report for the proposed improvements. The report will include geotechnical recommendations for design and construction of the storm drain line, including temporary excavations, utility backfill, pavement restoration, temporary shoring pressures, boring logs, boring location map, results of laboratory testing, and identification of geologic hazards which could impact the proposed improvements.

**OPTIONAL - Pump Testing** will be performed if groundwater is encountered within the borings. We will collect water samples during drilling and run environmental laboratory tests to determine the chemical properties of the water so a disposal plan can be made. The cost of disposing of the water will depend on the chemicals within the groundwater.

### Deliverables:

- Three (3) copies and (1) digital copy of the draft
- Final Geotechnical Report
- Task 6 | Preliminary Design (30% + 60% Submittals)

The Preliminary Design will be based on the hydrology and hydraulic study and will include catchbasin locations, pipe alignment and profiles.

## 6a. 30% Submittal

**6a.1 Hydrology and Hydraulic Study:** EXP will utilize the Riverside County Flood Control District 1983 Hydrology Study design flows for Line 2 and develop a hydraulic model using WSPG to establish the Water Surface Profile/Hydraulic Grade Line.

The 10-year and 100-year flow rates will be calculated for all catchbasins and off-site areas. The RCFC & WCD Hydrology Manual and Rational Method will be used to calculate peak flows for all catchment points. Flowmaster will be used to size the catchbasins and calculate flow spread.

**6a.2 Hydrology + Hydraulics Report:** The report will include a narrative, Rational Method Hydrology results and summary table, WSPG calculations, and catchbasin hydraulics results and summary table. A Drainage Area Map will be included that will include information such as catchment points and respective peak flow rates, tributary areas, times of concentrations and flow lengths.

**6a.3 30% Storm Drain + Plan Profile:** With the base mapping completed, the preliminary storm drain plan and profile will show the Line 2 – Stage 1 trunk line, utilities, right of way, TCE's, lateral connections and stubouts for future connections, manholes, junction structures, transition structures, catchbasins and lengths, local depressions, outlet points, and other catchment point locations will be shown. Typical sections will also be shown for this submittal. The plans will be prepared using a 1":20' scale and profile will be prepared using 1":5'. Annotations will be added to show invert elevations, slopes, hydraulic information, pipe sizes, roadway stationing, pipe off-set distances.

### Deliverables:

- Hydrology + Hydraulics Report
- Preliminary Storm Drain Plans + Profiles
- QA/QC Certification

**6b. 60% Submittal:** The 60% submittal will incorporate comments that are agreed upon from the 30% submittal. Pothole information will define the final alignment and profiles. The Plans and Drainage Reports will be updated from the 30% submittal and also include Drainage Structure Details; Roadway Improvement Plans; Utility Relocation Plans; Traffic Control Plan; and Engineer's Estimate.

### Deliverables:

- Three (3) copies and one (1) digital copy of all deliverables
- Updated Hydrology + Hydraulics Report
- Updated Storm Drain Plans + Profiles
- Structural Details
- Traffic Control Plans
- Utility Relocation Plans
- Specifications + Special Provisions
- Engineer's Estimate
- QA/QC Certification

## TASK 7 | FINAL DESIGN (90% + 100% SUBMITTALS)

Following the incorporation of the City's and RCFC & WCD comments on the 60% level plans and draft bid package. EXP will submit final PS&E documents to the City for review and approval.

**7a. 90% Submittal Package:** The following will be provided in the 90% submittal package.

1. Title Sheet: RCFC Title Sheet
2. Storm Drain Plans and Profiles
3. Connector Pipe Profiles:
4. Structural Details
5. Utility Relocation Plans:
6. RCP Bedding and Paylines
7. Street Improvement Plans
8. Traffic Control Plans
9. SWPPP
10. Specifications and Special Provisions
11. Engineers Estimate

**7b. 100% Submittal Package:** The 100% submittal package will be finalized to include all comments/resolutions received from the City, RCFC + WCD, UPRR, Caltrans, utility owners and other stakeholders. The technical specifications and special provisions and engineers estimate will be finalized for City approval.

**Deliverables:**

- Three (3) copies and one (1) digital copy of all deliverables
- Final Hydrology + Hydraulics Report
- 90% + 100% PS&E;
- QA/QC Certification