



April 18, 2022

Mr. Steve Parker, City Manager
City of Seguin
205 N. River Street
Seguin, TX 78155

RE: City of Seguin, Texas: Love's Force Main Relocation Project
Preliminary Engineering Design Phase

Dear Mr. Parker:

Trihydro Corporation (Trihydro) is pleased to present this professional engineering scope of work and fee estimate for the design of the Love's Force Main Relocation Project for the City of Seguin (City). This project was identified in response to the Texas Department of Transportation (TxDOT) expansion of IH-10 (US90A to FM464) CSJ#0535-01-077. Trihydro's scope of work for preliminary engineering design phase is presented below. Final design, permitting, bidding, and construction administration and observation services will be presented in subsequent proposals.

Federal law and Texas State statutes require TxDOT to reimburse a utility company for any cost associated with the removal or relocation of facilities along Federal Interstate Highway rights-of-way. A portion of the Loves Force Main is eligible for TxDOT reimbursement. The following scope of work includes the engineering services and fees for the preliminary engineering phase of the Love's Force Main Relocation Project.

SCOPE OF WORK

The design services task involves the preparation of preliminary engineering design plans for the relocation of approximately 7,200 linear feet of City of Seguin force main adjacent to Interstate Highway 10 (IH-10), including the removal of approximately 930 linear feet attached to IH-10 bridge over the Guadalupe River. The design also includes a segment of the proposed force main to be installed under the Guadalupe River via horizontal directional drilling (HDD). Our proposed scope of work is outlined below for your review.

Mr. David Rabago will serve as the project manager (PM) and primary point of contact. Mr. Rabago will provide design oversight, management of subconsultants, quality control reviews of submittals, client updates, and project administrative duties. Mr. Jason Vreeland will serve as the Project Director supporting David with QA/QC reviews and providing staff resources.



Mr. Steve Parker
April 18, 2022
Page 2

Task A100 – Surveying and Field Investigation

Establishment of survey project control is important for accurate design mapping. Prior to surveying, right-of-entry permits will be obtained from property owners impacted by the project, with the assistance of the City of Seguin. Trihydro will collect survey data including topography, visible features, property and ROW boundaries, and existing utilities within the estimated 60 feet-wide pipeline alignment corridor. The information obtained from surveying will be incorporated into a survey base map drawing. Trihydro will provide the following under this task:

- Trihydro surveyors will provide topographical, visible features, property and ROW boundary, and existing utility surveying services.
- Preparation of a survey base map drawing.
- Prepare exhibits and metes and bounds descriptions for easement acquisition.
- It is assumed that the proposed pipeline alignment will cross 13 parcels and require 13 permanent easements and 13 temporary construction easements.

It is anticipated that a limited amount of field investigation will be performed to the extent required to identify adjacent property owners and proposed temporary and permanent easements for the route analysis as discussed in Task A400. Following final route selection, all surveying activities will be completed.

Task A200 – Natural Resources and Cultural Resources

Trihydro will coordinate with SWCA Environmental Consultants (SWCA) to conduct environmental services for the Love's Force Main Relocation Project, which include jurisdictional waters delineation, threatened/endangered species evaluation, and a cultural resources assessment.

Jurisdictional waters delineation includes:

- Field data collection.
- A narrative description of the methods utilized in conducting the field investigations.
- A results section that describes (1) the vegetation communities observed, (2) the soils observed, (3) the types of wetlands encountered and (4) the water bodies observed.
- A conclusion section including professional opinion of waters and/or wetlands anticipated to be considered by the U.S. Army Corps of Engineers (USACE).
- Maps illustrating locations of all jurisdictional waters in the project area.
- The maps would be aerial photo-based and prepared using ArcGIS.
- USACE Wetland Determination Data Forms for each sample point.



Mr. Steve Parker
April 18, 2022
Page 3

- A photographic log displaying representative photographs for each vegetative stratum.
- Representative photographs of each aquatic feature observed.

It is anticipated that only a desktop a natural and cultural resources investigation will be performed to the extent required to identify possible environmental concerns along each proposed alignment for the route analysis as discussed in Task A400. Following final route selection, the natural and cultural resources investigation will be completed.

Threatened/Endangered species evaluation services include the evaluation of published literature and perform a site visit to along the project alignment to describe the structural and compositional elements of the vegetation and other habitat features in and adjacent to the project. Following the field visit, SWCA will prepare a report that provides a description of the vegetation communities and habitat features present and assessment of the potential for the occurrence of the species listed above along the project area.

Cultural resources assessment will include the following:

- Background review, agency consultations, and antiquities permit application
- Archaeological fieldwork
- Historic resources survey
- Reporting and curation

Task A300 – Geotechnical Engineering Services

Trihydro will be coordinate with Rock Engineering and Testing Laboratory, Inc. (RETL) to perform geotechnical engineering services for the planning of a horizontal directional drill (HDD). The services performed will include subsurface exploration and field and laboratory testing. Additionally, a geotechnical engineering letter report will be prepared for the project that includes a description of the field exploration and laboratory tests, boring location plan, boring logs, and a discussion of the engineering properties of the subsurface materials encountered.

It is anticipated that the geotechnical investigation will not begin until the route analysis, as discussed in Task A400, is completed.

Task A400 – Preliminary Design

Following the survey and field investigation, Trihydro will evaluate TxDOT's utility conflict matrix and begin the preliminary design phase to identify a preferred route. The preferred force main alignment will be provided in the preliminary design submittal.



Mr. Steve Parker
April 18, 2022
Page 4

Following the route selection, Tasks A100, A200 and A300 will be completed. Trihydro's preliminary design will include the following tasks:

- Trihydro will review the TxDOT utility conflict matrix. Adjust the proposed force main where possible to avoid other utilities. Attend up to six TxDOT utility coordination meetings facilitated by TxDOT's designated utility coordination engineer.
- Prepare preliminary design plans for review. It is anticipated that construction of the force main relocation will be bid and constructed by contractor hired by the City, and not "in plan" by the TxDOT contractor.
- Prepare an evaluation of existing lift station capacity and sizing of proposed force main based on future growth within sewer shed. Design modifications for the lift station are not included in the scope of work but may be added at the request of the City.
- Participate in up to six progress meetings with TxDOT and City of Seguin. Trihydro will prepare an agenda.
- Prepare an opinion of probable construction cost.
- Submit the preliminary design submittal and attend a joint review meeting with the City and TxDOT to receive comments. Comments received during the preliminary design submittal meeting will be incorporated into the future design phase.
- Trihydro will provide preliminary permitting coordination with USACE, TxDOT, TCEQ, City of Seguin, GBRA, and GLO.

The following deliverables will be prepared during the preliminary design task:

- Utility conflict map for submission to TxDOT.
- Preliminary alignments for review by City of Seguin.
- Prepare meeting agenda for progress meetings.
- Prepare preliminary design submittal for submission to City of Seguin and TxDOT.

Comments received during the preliminary plan meeting with City of Seguin will be addressed and incorporated into the design. The updated plans will be sent to TxDOT for review and comment, which will be addressed during a future design phase.

FEE ESTIMATE

Estimated fee for design services is **\$147,700**. Our fee is based on the tasks outlined above, hourly rates, and expenses. Invoices will be prepared on a time and materials basis with a cost not to exceed the estimated amount without written authorization. The fee by task includes:



Mr. Steve Parker
April 18, 2022
Page 5

- Task A100, Surveying and Field Investigation – \$27,500, which includes easement exhibits with metes and bounds descriptions (26 total @ \$750 Each) for \$19,500
- Task A200, Natural Resources and Cultural Resources – \$27,000
- Task A300, Geotechnical Engineering Services – \$20,700
- Task A400, Preliminary Design – \$72,500

Upon your acceptance of this fee proposal, approved contract, and notice to proceed, we will schedule our team to commence work with design. Please call us at (830) 626-3588 if you have questions.

Authorized By: _____

City of Seguin

Authorized Date: _____

Sincerely,
Trihydro Corporation

David Rabago, P.E., CFM
Project Manager

Jason Vreeland, P.E.
Project Director

999-81P-002