



January 19, 2023

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

RE: City of Seguin Springs Hill WSC Water Service Transfer Area Water Line Improvements Project,  
Seguin, Texas

Dear Mr. Parker:

This proposal presents Trihydro Corporation's (Trihydro) professional engineering scope of work and fee estimate for the Springs Hill Water Supply Corporation (WSC) Water Service Transfer Area Water Line Improvements Project for the City of Seguin. This project was identified in response to the transfer of water service area from Springs Hill WSC to City of Seguin. Trihydro's scope of work for engineering design, permitting, bidding, and construction administration services is presented below.

### **SCOPE OF WORK**

The design services task involves the preparation of plans, specifications, estimate(s), permitting, bidding, and construction administration for the installation of approximately 24,000 linear feet of new water line. The new water line alignment will be along Huber Road from south of IH-10 to approximately 5,000 linear feet north of Cordova Road, and an extension of approximately 2,400 linear feet east from intersection of Huber Road and Rudeloff Road. The design also includes utility crossings at the intersections of IH 10/Huber Road and Huber Road/Cordova Road. 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 staff resources.

### **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 (City). Trihydro will collect survey data including topography, visible features, property and ROW boundaries, and existing utilities within the estimated 60 feet-wide pipeline alignment



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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.
- Survey and data mapping information will also be obtained via use of Unmanned Aerial Systems (UAS).
- Preparation of a survey base map drawing.
- Easement exhibits with metes and bounds descriptions.

Trihydro made the following assumptions regarding this task:

- Surveying work includes 8 days.
- Base map will be provided in AutoCAD format.
- The proposed pipeline alignment will cross 40 parcels and require 40 permanent easements and 40 temporary construction easements.
- ROE and ROW acquisition will be performed by a consultant retained by the City.

It is anticipated that up to two days of surveying and/or field investigation work will be performed to identify adjacent property owners and proposed temporary and permanent easements for the route analysis. 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 Springs Hill WSC Water Service Transfer Area Water Line Improvements 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).



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- Maps illustrating locations of all jurisdictional waters in the project area. The maps will be aerial photo-based and prepared using ArcGIS.
- USACE Wetland Determination Data Forms for each sample point and representative photographs for each vegetative stratum.

Threatened/Endangered species evaluation services include the evaluation of published literature and a site visit 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 as considered by the United States Fish and Wildlife (USFWS) in Guadalupe County along the project area.

Cultural resources assessment will include the following:

- Background review, agency consultations, and antiquities permit application
- Archaeological fieldwork
- Survey meeting Texas Historic Commission (THC) and Council of Texas Archeologists (CTA) archaeological standards
- Reporting and curation

It is anticipated that only a desktop 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 in Task A300. Following final route selection, the natural and cultural resources investigation will be completed.

Trihydro made the following assumptions regarding this task:

- Proposed cost does not include preparation of permit submittal or pre-construction notification to the USACE.

### **Task A300 – 30% Design Phase**

Following the survey and field investigation, Trihydro will evaluate survey data to identify a preferred route. Trihydro will develop up to three routes for consideration by City of Seguin, and the preferred water line alignment will be provided in the preliminary design submittal. Trihydro's preliminary design task will include the following subtasks:

- Preparation of preliminary design plans.
- Preparation of an opinion of probable construction cost.



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- Submittal of the preliminary design and attend a review meeting with the City.
- Participate in up to three progress meetings with the City of Seguin. Trihydro will prepare an agenda.
- Plan view plan sheets of preferred water line alignment will be provided.
- Preliminary permitting coordination with Texas Department of Transportation (TxDOT), Texas Commission on Environmental Quality (TCEQ), and the City.

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

- Preliminary alignments for review by the City.
- Meeting agendas for progress meetings.
- 30% design submittal.

Trihydro made the following assumptions:

- Three preliminary routes will be provided.
- Total length of water line infrastructure is 24,000 linear feet.
- 30% design includes plan view information for water line.
- Design of one Pressure Reducing Valve (PRV) installation.

Comments received during the 30% plan phase meeting will be addressed during the 60% design phase.

#### **Task A400 – 60% Design Phase**

Upon receipt of City's 30% design review comments, Trihydro will incorporate comments and prepare 60% plans. A 60% project meeting will be held to review and discuss the design plans and to present a construction cost estimate. Comments received during this meeting will be incorporated into the 90% design. During the 60% design phase, Trihydro will also prepare easement exhibits and metes and bounds descriptions for properties along the preferred route. The following subtasks will be performed under this task:

- Prepare 60% design plans for review by the City.
- Prepare an opinion of probable construction cost.
- Participate in up to three progress meetings with the City of Seguin. Trihydro will prepare agenda.
- Prepare exhibits and metes and bounds descriptions for easement acquisition.



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- Profile information for proposed water line improvements will be shown for water lines 12 inches or greater in diameter and/or proposed water line improvements crossing TxDOT and Guadalupe County roadways.

The following deliverables will be prepared during the 60% design task:

- 60% design plans for submission to the City.
- Construction cost estimate for submission to the City.

Trihydro made the following assumptions:

- Profile information for proposed water line improvements will be shown for water lines 12 inches or greater in diameter and/or proposed water line improvements crossing TxDOT and Guadalupe County roadways.
- Total length of water line infrastructure is 24,000 linear feet.

Comments received during the 60% design phase meeting with the City will be addressed and the updated plans will be subsequently submitted for review and comment to the City, which will be addressed during the final design phase.

### **Task A500 – 90% Design Phase**

Upon receipt of the City's 60% review comments, Trihydro will incorporate comments and prepare 90% plans and specifications. A 90% project meeting will be held to review and discuss the design plans, and to present a construction cost estimate. Comments received during this meeting will be incorporated into the final design. The following subtasks will be accomplished in this task:

- Trihydro will incorporate the City's comments from 60% design into the 90% design.
- Trihydro will prepare a construction cost estimate.
- Trihydro will attend a meeting with the City to review the 90% design submittal and receive comments.
- Participate in up to 3 progress meetings with the City of Seguin. Trihydro will prepare agenda.
- Profile information for proposed water line improvements will be shown for water lines 12 inches or greater in diameter and/or proposed water line improvements crossing TxDOT roadways.
- Project specifications and front-end documents will be prepared specific to the City requirements.
- Trihydro will prepare final plans and permit documents for submission to TCEQ and respond to questions received from TCEQ.



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The following deliverables will be prepared during the 60% design task:

- 90% design plans for submission to the City.
- Construction cost estimate for submission to the City.

Trihydro made the following assumptions:

- Profile information for proposed water line improvements will be shown for water lines 12 inches or greater in diameter and/or proposed water line improvements crossing TxDOT and Guadalupe County roadways.
- Total length of water line infrastructure is 24,000 linear feet.

#### **Task A600 – Final Design and Permitting**

Upon receipt of the City's 90% review comments, Trihydro will incorporate comments and prepare final design plans and specifications. A final design project meeting will be held to review and discuss the design plans, and to present a construction cost estimate. Comments received during this meeting will be incorporated into the final design plans. The final documents will be submitted to the City, TxDOT, and TCEQ for approval to construct. The final bidding documents will be completed after comments are received from TCEQ. The following subtasks will be accomplished in this task:

- Trihydro will incorporate the City's comments from 90% design into the final design.
- Trihydro will prepare a final construction cost estimate.
- Trihydro will attend a meeting with the City to review the final design submittal and receive comments.
- Participate in up to 3 progress meetings with the City of Seguin. Trihydro will prepare agenda.
- Profile information for proposed water line improvements will be shown for water lines 12 inches or greater in diameter and/or proposed water line improvements crossing TxDOT roadways.
- Project specifications and front-end documents will be prepared specific to the City requirements.
- Trihydro will prepare final plans and permit documents for submission to TCEQ and respond to questions received from TCEQ.

The following deliverables will be prepared during the final design and permitting task:

- Construction cost estimate
- Final design plans for submission to the City, TxDOT, and TCEQ
- Specifications and permit documents for submission to TxDOT, Guadalupe County, and TCEQ



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Trihydro made the following assumptions:

- Profile information for proposed water line improvements will be shown for water lines 12 inches or greater in diameter and/or proposed water line improvements crossing TxDOT and Guadalupe County roadways.
- Total length of water line infrastructure is 24,000 linear feet.

### **Task A700 – Bidding Services**

Trihydro will assist the City during the bidding process. Electronic copies of the plans and specifications will be prepared for distribution to potential bidders and plan holders. Trihydro will use CIVCAST to bid the project and will also maintain a plan-holder's list throughout the bidding process. Trihydro will respond to bidder questions and prepare addenda for electronic distribution through CIVCAST. Once bids are opened, Trihydro will evaluate the bids, prepare a bid tabulation, and prepare a recommendation for award to the lowest qualified bidder.

Trihydro made the following assumptions regarding the bidding services task:

- Trihydro will facilitate bidding using CIVCAST and maintain the plan holders' list.
- Trihydro will respond to Contractor questions and prepare addenda, as necessary.
- Project will be bid one time.
- Trihydro will attend City Council meeting for recommendation of Award of Bid Contract.

The following deliverables will be prepared during the bidding services task:

- Issue for bid plans, contract documents, and specifications for Contractors.
- A bid tabulation indicating the bid costs from the Contractors.
- A bid recommendation letter highlighting the lowest qualified bidder for acceptance by City of Seguin's City Council.

### **Task A800 – Construction Administration**

The construction administration task involves contract administration with Trihydro serving as City of Seguin's representative. Our role will be to monitor contract progress and review various submittals. Under this task, we will provide office support to process paperwork including submittal reviews, field orders, work orders, change orders, contractor payment applications, and payment recommendations. The following are included in the construction administration task:



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- Respond to questions during construction
- Review payment applications, change orders, and make recommendations to City of Seguin
- Prepare a list of items to be completed or corrected before final project acceptance
- Review progress and recommend the issuance of the Certificate of Substantial Completion when complete
- Prepare as-constructed documents in .pdf and AutoCAD format based on observation notes and red lines from the City Inspector/3<sup>rd</sup> Party Inspector and Contractor
- Coordinate with TxDOT, Guadalupe County, and other utilities
- Attended bi-weekly construction meetings with the City, 3<sup>rd</sup> Party Inspector, and the Contractor

Trihydro made the following assumptions regarding this task:

- As-built drawings will be provided in .pdf and AutoCAD format only.
- Construction phase duration of 12 months.
- City Staff and/or 3<sup>rd</sup> Party Inspector will confirm Contractor quantities as part of payment application process.

## **FEE ESTIMATE**

Estimated fee for design services is **\$1,094,000**. 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:

- Task A100, Surveying and Field Investigation – \$131,000, which includes easement exhibits with metes and bounds descriptions (80 total @ \$750 Each)
- Task A200, Natural Resources and Cultural Resources – \$25,000
- Task A300, 30% Design Phase – \$300,000
- Task A400, 60% Design Phase – \$245,000
- Task A500, 90% Design Phase – \$113,000
- Task A600, Final Design and Permitting – \$57,000
- Task A700, Bidding Services – \$43,000
- Task A800, Construction Administration – \$180,000



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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.

Sincerely,  
Trihydro Corporation

A handwritten signature in black ink, appearing to read "D. Rabago".

David Rabago, P.E., CFM  
Project Manager

A handwritten signature in blue ink, appearing to read "J. Vreeland".

Jason Vreeland, P.E.  
Project Director

999-81P-006