



Weston Solutions, Inc.
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25 March 2020

Mr. Kirk Abbott, P.E.
Project Engineer
Engineering/Capital Improvements Department
City of San Marcos, Texas
630 East Hopkins
San Marcos, TX 78666

VIA E-MAIL: kabbott@sanmarcostx.gov

**RE: Highway 21 Waterline Extension Project
Scope and Fee Proposal – Professional Engineering Services
WESTON WO# 12877.004.001**

Dear Mr. Abbott:

Weston Solutions Inc. (WESTON®) is pleased to submit this scope and fee proposal to perform professional engineering services for the Highway 21 Waterline Extension Project. The project will provide design of approximately 9,100 linear feet of 12-inch water line and 6,400 linear feet of fiber optic conduit along Highway 21 in preparation for a proposed fire training facility.

This scope of services is based on our scoping meeting held on 11 February 2020 and the City Scope of Services Checklist.

PROJECT BACKGROUND

The City of San Marcos Water Department is planning on building a fire training facility along Highway 21, adjacent to the airport. In preparation for the fire training facility, the City is proposing to install a 12-inch water line along Highway 21, adjacent to the airport, between Airport Drive and William Pettus Road, connecting to an existing 12-line south of Airport Drive. A fiber optic conduit is also proposed between Airport Drive and the fire training facility.

SCOPE OF SERVICES

Proposed tasks for each phase were based on the City of San Marcos Engineering Scope of Services Checklist. WESTON's proposed Scope of Work is provided as **Attachment A**.

COST

A Fee Estimate summary is provided as **Attachment B**. Design professional services are Not-to-Exceed.

Byrn & Associates, Inc. (Byrn) will provide a topographic survey for the project area. **Attachment B1** includes the proposal from Byrn for the topographic survey.

Design services by other subconsultants is not anticipated and is not included in this proposal. Should specialized subconsultant support be required, a request for Additional Services will be made.



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CLOSING

WESTON appreciates the opportunity to provide these services for the Highway 21 Waterline Extension Project. We look forward to working with you to successfully complete this project. If you have any questions regarding this scope of services and budget please contact me at 512-651-7106 or 512-787-3509 (cell) or Dain Chernick, P.E. at 512-651-7138.

Very truly yours,

WESTON SOLUTIONS, INC.

A handwritten signature in blue ink, appearing to read "S. Irrinki".

Sam Irrinki, PE
Senior Project Manager

Attachments

A – Scope of Work

B – Fee Estimate

B1 – Proposal for Topographic Survey (Byrn & Associates, Inc.)

C – Project Schedule



**ATTACHMENT A
SCOPE OF SERVICES
CITY OF SAN MARCOS
HIGHWAY 21 WATER LINE EXTENSION
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PROJECT UNDERSTANDING

The work to be performed by Weston Solutions, Inc. (WESTON) under this contract shall consist of providing Preliminary Engineering Phase (30%), Design Engineering Phase (60%, 90%, and 100%), Bid Phase, and Construction Phase Services for the Highway 21 Water Line Extension Project. The Highway 21 Water Line Extension Project will provide for the design of approximately 9,100 LF of 12-inch water main along Highway 21, between Airport Drive and William Pettus Road and approximately 6,400 LF of conduit installation for future fiber optic service between Airport Drive and the planned fire training facility.

BASIC SCOPE OF SERVICES

Task 1000 Preliminary Phase (30%)

1. Project Management and QA/QC: This task includes routine communication with the City; managing subconsultants, staff resources, budgets, and schedules; preparation of field health and safety plans (HASP) for field investigations and site visits; invoicing; implementing and monitoring of QA/QC efforts; and other activities associated with managing the project.
2. Meetings
 - a. Project Meetings: WESTON will prepare for and attend one (1) project kickoff meeting, one (1) coordination meeting, and (1) meeting with the City to review the 30% Technical Memo submittal, including review of the proposed design and required project permitting.
 - b. Public Meetings: A public meeting is not included in this scope of services.
 - c. Utility Coordination Meeting: Participation in a utility coordination meeting is not included in this scope of services.
3. Data Collection/Review
 - a. Review Reports/Studies/Drawings: WESTON will obtain and review reports, studies, as-builts, and other data related to the project. A base map of the project area will be developed using available information. The base map will include aerial photography, topography, parcels, right-of-way, existing water and wastewater lines from the City's GIS system, FEMA floodplain, and other appropriate data. The base map will be utilized by the project team during the Preliminary Phase of the project. Information for this review includes but is not limited to:
 - a. Plans and survey for the proposed fire training facility
 - b. The City of Maxwell water system maps
 - c. The existing electrical easement along Highway 21
 - d. Record drawings of the water line recently installed by the City of San Marcos along Highway 21 that this proposed water line will tie into.
 - e. City GIS data of utilities and property information.
 - b. Site Visits: One site visit will be performed during this phase to verify project conditions and familiarize the team with the project area.



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4. Field Investigations

- a. Topographic Surveying: Byrn & Associates, Inc. will provide topographic surveying services for the project. WESTON will not be on-site during the field survey. The surveying services shall include:
 - Provide horizontal and vertical control for topographic survey.
 - Topographic survey of the utility installation corridor, which shall be from approximately 100 feet from the fenceline to the edge of the Highway 21 roadway. At driveway locations, additional topo shall be captured, and the building and parking lot of the existing support building off of Highway 21 shall be captured as well as additional area at the future fire training location.
 - Locate all above ground planimetric features, including existing structures, edge of roads, evidence of underground utilities, overhead utilities, fences, trees 6-inch diameter and larger, ditch flowlines and other pertinent features affecting design.
 - Water valve top of nut elevations.
 - Locate existing property lines and property corners.
 - Contact Digg-Tess for location of existing utilities. Utility ROWs will not be located.
 - The topographic information will be provided in Autocad format with the triangulation network for the existing surface.
- b. Subsurface Utility Locates: Subsurface Utility Location will be performed by the City of San Marcos as needed.
- c. Geotechnical Investigation: Any Geotechnical Investigation work will be performed by the City of San Marcos as needed.
- d. Geological Assessment: A Geological Assessment is not included in this scope of work.
- e. Environmental and Permitting Review: WESTON will perform desktop review of environmental and natural resources mapping and databases to identify project constraints listed in the SOW checklist. Potential sources of information include published reports, aerial photographs, maps, and records at the Texas Natural Resources Information Systems archives. The results of the desktop review search and permitting identification will be summarized in the Preliminary Engineering Technical Memorandum.
- f. Archeological: WESTON will prepare and submit a coordination letter to the Texas Historical Commission (THC) to determine if any archeological surveys are required for the project area. This scope of services does not include preparation of any archeological permits and/or archeological field surveys.

5. Pipelines

- a. Determine Alignments: Using the survey and other field investigation data, WESTON will determine the suitable alignment for the new water pipelines, with consideration to water/sanitary sewer minimum separation distances, constructability/traffic, connections/tie-in to existing water distribution system, and other existing utilities.



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- b. Preliminary Hydraulics/Modeling: Water line hydraulics/modeling is not required of WESTON; proposed water line sizing was previously determined by City of San Marcos staff.
- 6. Information Technology
 - a. Determine Alignments: Using the survey, other field investigation data, and information provided by the City, WESTON will determine the suitable alignment for the proposed fiber optic conduit for future use. Consideration will be given to separation distances, constructability and traffic, accessibility, and other existing and proposed utilities.
- 7. Identify Utility Providers: WESTON will contact the utility providers listed in the SOW checklist and request input on other utilities located within the project limits. WESTON will identify any potential utility conflicts and identify any locations in which any design phase subsurface utility locates are recommended.
- 8. Preliminary Opinion of Probable Construction Cost (OPCC): WESTON will prepare an Engineer's Cost Estimate based on the 30% phase design plan. Unit costs will be based recent bid tabulations for other water line construction projects in the San Marcos and surrounding area.
- 9. Deliverables:
 - a. Monthly Status Report: WESTON will prepare a monthly status report on or before the 10th of each month, providing information on project work performed, project issues, and work to be completed.
 - b. WESTON will prepare a brief Technical Memorandum (TM) summarizing the Preliminary Engineering Phase data, field investigations, environmental/permitting findings, design plan, and OPCC. WESTON will provide a draft TM in electronic (.pdf) format.
 - c. WESTON will also provide a final TM in hard copy (two (2) copies) and electronic (.pdf) formats once all comments are addressed.
 - d. WESTON will provide a completed Design Checklist in electronic (.pdf) format with each deliverable.

Task 2000 Design Phase (60/90/100%)

- 1. Project Management and QA/QC: This task includes routine communication with the City; managing surveyor, staff resources, budgets, and schedules; invoicing; implementing and monitoring of QA/QC efforts; and other activities associated with managing the project.
- 2. Meetings
 - a. Project Meetings: WESTON will prepare for and attend four (4) project meetings with the City for project coordination and plan review.
 - b. Public Meetings: Participation in a public meeting is not included in this scope of services.
 - c. Utility Coordination Meeting: Participation in a utility coordination meeting is not included in this scope of services.



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- d. The City shall facilitate meetings with the airport operator.
3. Design Phase Site Visits: Design engineering staff will conduct one site visit during the Design Phase to verify design data and confirm proposed improvements.
4. Permitting Submittals: WESTON will coordinate with TXDOT and the airport for any required submittals or notifications.
5. Storm Water Pollution Prevention Plan (SWPPP): WESTON will complete standard TxDOT SWP3 sheets including 1) Environmental Permits, Issues, and Commitments (EPIC) Sheet and 2) TxDOT Storm Water Pollution Prevention Plan (SWP3).
6. 60% Design Phase Submittal: The 60% deliverable will include:
 - a. 60% Plans – two (2) 11"x17" hard copy sets and 1 PDF. Plans will include: Cover Sheet, General Notes, Project Layout Sheet, Tree Protection and Erosion/Sedimentation Control Sheets, Plan View Sheets (Profile not included until 90%), List of Standard Details, Special Details, and Traffic Control Sheets. City of San Marcos details will be provided as a list, where available, for the 60% submittal; City of Austin details will be listed otherwise.
 - i. It is assumed that fiber optic conduit will be shown on the same Plan View Sheets as the proposed water line.
 - b. 60% List of Specifications. City of San Marcos Division 1 specifications will be used. City of Austin standard specifications will be used.
 - c. 60% Opinion of Probable Construction Cost (OPCC). An updated OPCC will be provided.
 - d. 60% Construction Schedule. A construction schedule will be provided.
 - e. 60% Design Checklist. An updated design checklist will be provided.
7. 90% Design Phase Submittal: The 90% deliverable will include:
 - a. 90% Plans – four (4) 11"x17" hard copy sets and 1 PDF. Plans will include: Cover Sheet, Project Layout Sheet, Quantities By Sheet, Tree Protection and Erosion Sedimentation Control Sheets, Plan and Profile Sheets, Standard Details, Special Details, and Traffic Control Sheets.
 - i. It is assumed that fiber optic conduit will be shown on the same Plan and Profile Sheets as the proposed water line.
 - b. 90% Specifications including Project Specific/Special Specifications.
 - c. 90% Opinion of Probable Construction Cost (OPCC). An updated OPCC will be provided.
 - d. 90% Construction Schedule. An updated construction schedule will be provided.
 - e. 90% Design Checklist. An updated design checklist will be provided.
 - f. 90% Bid Form. A draft bid form will be provided.



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- g. Comment Responses to any comments provided during review of the 60% Design Phase Submittal will be provided.
- 8. 99% Submittal: A 99% design set of plans will not be prepared for this project.
- 9. 100% Final Submittal: WESTON will provide final sealed plans including: two (2) 11"x17" Sets; electronic copies in PDF and CAD; Construction Checklist; Design Checklist; Bid Form in MSWord; Specifications in PDF; and Comment Responses in PDF. CAD submissions shall be in accordance with City GIS submittal requirements.

Task 3000 Bid Phase

- 1. Project Management: This task includes routine communication with the City; managing manpower, budgets, and schedules; invoicing; and other activities associated with managing the project.
- 2. Attend Pre-Bid Meeting: WESTON will assist the City in conducting pre-bid meeting and developing the agenda.
- 3. Answer Questions: WESTON will coordinate with the City for issuing responses for technical questions and requests for additional information.
- 4. Issue Addenda: WESTON will prepare Addenda required to address changes to bid documents during the bid phase. Budget for 1 Addendum has been included; additional addenda will be added scope.
- 5. Bid Tabulation and Recommendation of Award: WESTON will review bids and evaluate bids for responsiveness and bid amount. WESTON will also check references, by email or telephone, of the apparent low bidder and second low bidder, and will check for debarment. Because federal funds will not be involved, a background check will not be provided. WESTON will prepare a letter summarizing the review and evaluation and include recommendations for award of the contract for construction, or other action as may be appropriate. The City shall make the final decision on the award of the contract for construction and the acceptance or rejection of all bids.
- 6. Conformed Documents Deliverables: WESTON will incorporate addenda items in the Construction Plans; include addenda in the bound Project Manual; and issue a "Conformed" set of plans for construction. WESTON will provide one (1) electronic copy of Construction Plans in pdf, one (1) CAD copy, and two (2) full size 22" x 34" plan sets, four (4) 11" x 17" plan sets.

Task 4000 Construction Phase

Construction phase services budget was based on a construction phase duration of ten (10) months (300 calendar days), working 8 hours a day, 5 days per week. This assumes 270 calendar days from notice to proceed until substantial completion, and 30 days from substantial to final completion. Should construction be delayed or extended, a request for additional services will be requested to provide continued support.

- 1. Project Management: This task includes routine communication with the City; managing manpower, budgets, and schedules; invoicing; and other activities associated with managing the project.



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2. Attend Pre-Construction Conference: WESTON will attend a pre-construction conference for the project with the City, Contractor, and other parties as appropriate.
3. Project Meetings and Construction Observation Site Visits: WESTON will attend regular construction meetings with the City, Contractor, and other parties as appropriate. WESTON will visit the site to check the progress of the work and verify general conformance with the project plans and technical specifications. For budgeting purposes we have assumed one (1) meeting per month of construction, for a total of ten (10) combined site visits/meetings. This does not include the pre-construction conference or final walkthrough.
4. Submittal Review: WESTON will review submittals provided by the Contractor and make a recommendation to the City for approval. Review effort for up to twenty-four (24) submittals is included, with an assumption that one third will need resubmittal.
5. Respond to Requests for Information/Modifications: WESTON will respond to requests for information (RFIs) from the Contractor related to design clarifications of plans and technical specifications. Effort is included for response to up to six (6) RFIs.
6. Pay Application Review: WESTON will review Contractor's Pay Applications after quantity concurrence by the City's Construction Inspector. Review of up to twelve (12) Pay Applications has been assumed. Effort is also included for review of the Contractor punch list after substantial completion.
7. Review of Change Orders: WESTON will provide review of two (2) Contractor's requests for Change Orders and coordinate Change Orders with the City as appropriate.
8. Final Completion Walk-Through: WESTON will participate in one site visit to determine outstanding items and document any "punch list items." A substantial completion walk-through is not planned, and a one-year warranty walk-through is not planned.

Task 5000 Record Drawing Phase

1. Draft Drawings. WESTON will review the Contractor's redline as-built drawings and incorporate deviations from the construction drawings as appropriate. WESTON will deliver one (1) set of full size bond drawings, one (1) set of half size plan set for review, one (1) pdf electronic copy and one (1) CAD copy.
2. Final Drawings. After review, WESTON will deliver two (2) sets of full size 22" x 34" bond drawings, two (2) 11x17 hard copy sets, one (1) pdf electronic copy and one (1) CAD copy. CAD submissions shall be in accordance with City GIS submittal requirements.
3. GIS Files. WESTON will convert CAD drawings and provide GIS Files along with the surface to grid conversion scale factor for GIS, in accordance with City GIS submittal requirements.

Schedule

Refer to Attachment C for the anticipated project schedule.



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City Responsibilities / Assumptions in Scope Preparation

1. The City will provide to WESTON all data in the City's possession relating to WESTON's services on the Project. WESTON will reasonably rely upon the accuracy, timeliness, and completeness of the information provided by the City.
2. The City will give prompt notice to WESTON whenever the City observes or becomes aware of any development that affects the scope or timing of WESTON's services.
3. The City shall examine information submitted by WESTON and render in writing or otherwise provide comments and decisions in a timely manner.
4. The City will obtain right-of-entry for all properties as necessary for WESTON to complete the design phase of the project.
5. The City will obtain all permanent water line, access, and temporary construction easements should any easements be required.
6. WESTON will show fiber optic conduit alignment on the same sheets as the water line plan and profile.
7. The City will provide necessary information for WESTON to design the fiber optic conduit installation. This may include but not be limited to: conduit size and material, pull box spacing, minimum curve radii, bury depth, necessary horizontal spacing from other utilities, starting and termination points, and typical details for cross sections, pull boxes, and other necessary appurtenances.
8. The City will pay for all permit and license fees.
9. The City will field and document all questions during the Bid period and route technical questions to WESTON requiring input from the Design Engineer.
10. WESTON will review submittal and RFIs and make recommendations to the City. The City will make the final decision and issue responses to the Contractor.
11. The City will distribute all Addenda.
12. The City will draft and route all Change Orders
13. Scope of Services does not include archeological field surveys.
14. Scope of Services does not include karst endangered species habitat surveys.

Attachment 1 Proposal Table

	Unit Rate	TASK 1		TASK 2		TASK 3		TASK 4		TASK 5		Totals	
		Prelim Engineering 30%		Design 60/90/100%		Bid Phase		Construction Phase		Record Drawing Phase			
		Units	Amount	Units	Amount	Units	Amount	Units	Amount	Units	Amount	Units	Amount
Labor Estimate (per hour)													
Project Manager	\$200.00	20.0	\$ 4,000.00	42.0	\$ 8,400.00	2.0	\$ 400.00	24.0	\$ 4,800.00	3.0	\$ 600.00	91.0	\$ 18,200.00
QC Engineer	\$176.55	9.0	\$ 1,588.91	26.0	\$ 4,590.17	2.0	\$ 353.09	16.0	\$ 2,824.72	4.0	\$ 706.18	57.0	\$ 10,063.07
Project Engineer	\$106.76	65.0	\$ 6,939.66	200.0	\$ 21,352.80	13.0	\$ 1,387.93	85.0	\$ 9,074.94	14.0	\$ 1,494.70	377.0	\$ 40,250.03
Associate EIT	\$89.03	130.0	\$ 11,574.16	434.0	\$ 38,639.89	24.0	\$ 2,136.77	140.0	\$ 12,464.48	18.0	\$ 1,602.58	746.0	\$ 66,417.87
CAD Operator	\$105.49	48.0	\$ 5,063.66	390.0	\$ 41,142.27	9.0	\$ 949.44	12.0	\$ 1,265.92	30.0	\$ 3,164.79	489.0	\$ 51,586.08
GIS Analyst	\$167.77	4.0	\$ 671.09	-	\$ -	-	\$ -	-	\$ -	6.0	\$ 1,006.63	10.0	\$ 1,677.72
Financial Analyst	\$99.45	8.0	\$ 795.58	14.0	\$ 1,392.27	4.0	\$ 397.79	12.0	\$ 1,193.38	3.0	\$ 298.34	41.0	\$ 4,077.37
Labor Total			\$ 31,357.35		\$ 117,287.87		\$ 6,188.35		\$ 32,589.14		\$ 9,114.65		\$ 196,537.36
Subcontractor Costs													
Surveying			\$ 15,000.00		\$ -		\$ -		\$ -		\$ 3,500.00	-	\$ 18,500.00
Subcontractor Total			\$ 15,000.00		\$ -		\$ -		\$ -		\$ 3,500.00		\$ 18,500.00
External ODCs													
Full Size Plans Printing	\$220.00	-	\$ -	-	\$ -	2	\$ 440.00	-	\$ -	2	\$ 440.00	4	\$ 880.00
External ODC Total			\$ -		\$ -		\$ 440.00		\$ -		\$ 440.00		\$ 880.00

Subtotal Estimated Cost	\$ 46,357.35		\$ 117,287.87		\$ 6,628.35		\$ 32,589.14		\$ 13,054.65		\$ 215,917.36
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Contingency	\$ -
Base Fee	\$ -
Award Fee	\$ -
Fixed Fee	\$ -
Incentive Fee	\$ -
Other Fees	\$ -

Estimated Cost	\$ 215,917.36
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SURVEYING

February 24, 2020

Dain Chernick, P.E.
Weston Solutions, Inc.

PROPOSAL FOR TOPOGRAPHIC SURVEY OF APPROXIMATELY 9,100 LINEAR FEET ALONG THE SOUTHEAST SIDE OF STATE HIGHWAY 21, FROM THE SAN MARCOS AIRPORT ENTRANCE TO WILLIAM PETTUS ROAD, CALDWELL COUNTY, TEXAS

Thank you for considering Byrn & Associates, Inc. for this work.

We can provide you with a topographic survey of the referenced property for a fee of \$15,000.00. This includes hardwood trees 6" and larger.

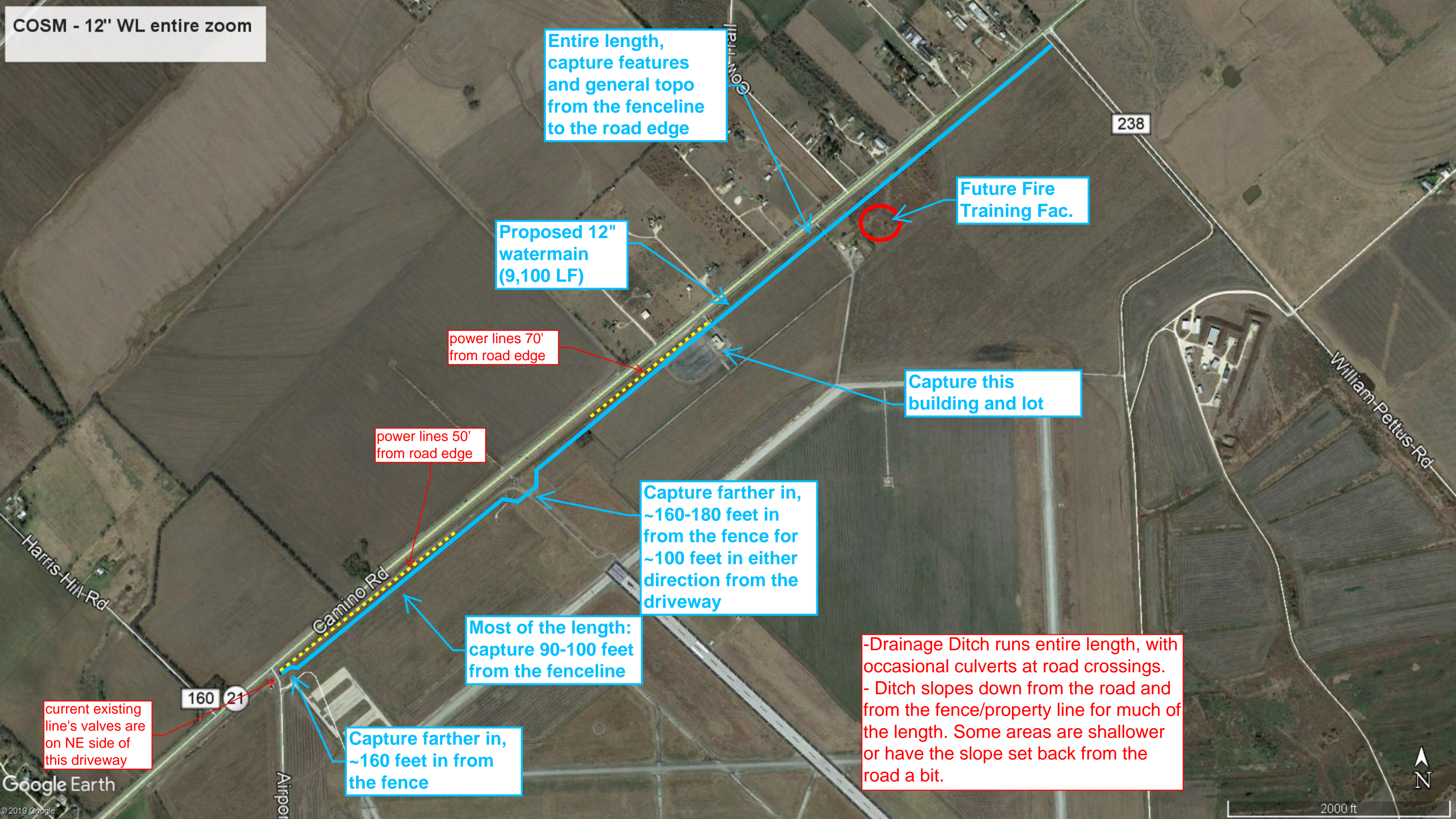
Scope of services:

- Provide detailed topographic survey of area located on City of San Marcos property as shown on attached sketch provided by you, including visible utilities, geotechnical borings and SUE test holes.
- Provide general topographic survey information from the City of San Marcos property line to the ditch top slope on the Highway side.
- Locate City of San Marcos boundaries and existing easement boundaries along topo route.
- Provide survey control points every 1500'.
- Provide topographic survey in Autocad format.

This proposal does not include the preparation of easement plats and field note descriptions if needed.

An as-built survey of the visible waterline structures can be provided for a fee of \$3,500.00.

Kyle Smith, R.P.L.S.



COSM - 12" WL entire zoom

Entire length, capture features and general topo from the fenceline to the road edge

Proposed 12" watermain (9,100 LF)

Future Fire Training Fac.

power lines 70' from road edge

Capture this building and lot

power lines 50' from road edge

Capture farther in, ~160-180 feet in from the fence for ~100 feet in either direction from the driveway

Most of the length: capture 90-100 feet from the fenceline

-Drainage Ditch runs entire length, with occasional culverts at road crossings.
- Ditch slopes down from the road and from the fence/property line for much of the length. Some areas are shallower or have the slope set back from the road a bit.

current existing line's valves are on NE side of this driveway

Capture farther in, ~160 feet in from the fence



**ATTACHMENT C
SCHEDULE
CITY OF SAN MARCOS
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25 MARCH 2020**

The anticipated project schedule is as follows:

Preliminary Design:	120 Calendar days (4 months)
Design Phase:	240 Calendar days (8 months)
60% and Review	120 days
90% and Review	90 days
100% and Approval	45 days
Bid:	120 Calendar days (4 months)
Construction:	300 Calendar days (10 months)
Record Drawings:	90 Calendar days (3 months)