

Engineer does further understand and agree, said understanding and agreement also being of the absolute essence of the Agreement, that the total Maximum Compensation that Engineer may become entitled to and the total maximum sum that County may become liable to pay to Engineer under the Agreement, as amended, shall not under any conditions, circumstances, or interpretations thereof exceed \$421,816.00.

3. **Recitals.** The recitals set forth above are incorporated herein by reference and made a part of the Agreement.
4. **Human Trafficking.** BY ACCEPTANCE OF THIS AGREEMENT, ENGINEER ACKNOWLEDGES THAT FORT BEND COUNTY IS OPPOSED TO HUMAN TRAFFICKING AND THAT NO COUNTY FUNDS WILL BE USED IN SUPPORT OF SERVICES OR ACTIVITIES THAT VIOLATE HUMAN TRAFFICKING LAWS.
5. **Modifications and Conflict.** Except as modified herein, the Agreement shall remain in full force and effect and has not been otherwise modified or amended. If there is a conflict among documents that make up the Agreement, this First Amendment shall prevail with regard to the conflict.
6. **Certification.** By his or her signature below, each signatory individual certifies that he or she is the properly authorized person or officer of the applicable Party hereto and has the requisite authority necessary to execute this Agreement on behalf of such Party, and each Party hereby certifies to the other that it has obtained the appropriate approvals or authorizations from its governing body as required by law.

{Execution Page Follows}

FORT BEND COUNTY, TEXAS

KP George, County Judge

Date

ATTEST:

Laura Richard, County Clerk

ARDURRA GROUP, INC.



Authorized Agent – Signature

Raghu Veturi, PE

Authorized Agent- Printed Name

Director of Traffic & Systems Engineering

Title

8/26/2025

Date

APPROVED:



J. Stacy Slawinski, P.E., County Engineer

AUDITOR'S CERTIFICATE

I hereby certify that funds are available in the amount of \$_____ to accomplish and pay the obligation of the Fort Bend County under this Agreement.

Robert E. Sturdivant, County Auditor

i:\agreements\2025 agreements\engineering\ardurra (25-eng-100673-a1)\1st amendment to agmt - ardurra group, inc..docx - JLF

EXHIBIT A-1

(Follows Behind)



July 15, 2025

Randy Robles, PE
Project Engineer, Transportation
LJA
3600 W Sam Houston Pkwy S, Suite 600
Houston, Texas 77042

Subject: 23403 Intersection Improvements Program
Traffic Signal Design Services for the intersections of

- South Mason Road @ Lakemont Bend Lane
- Williams Way Boulevard @ Sansbury Blvd/Manford Boulevard

Fort Bend County, Texas
Ardurra Proposal No. P25044

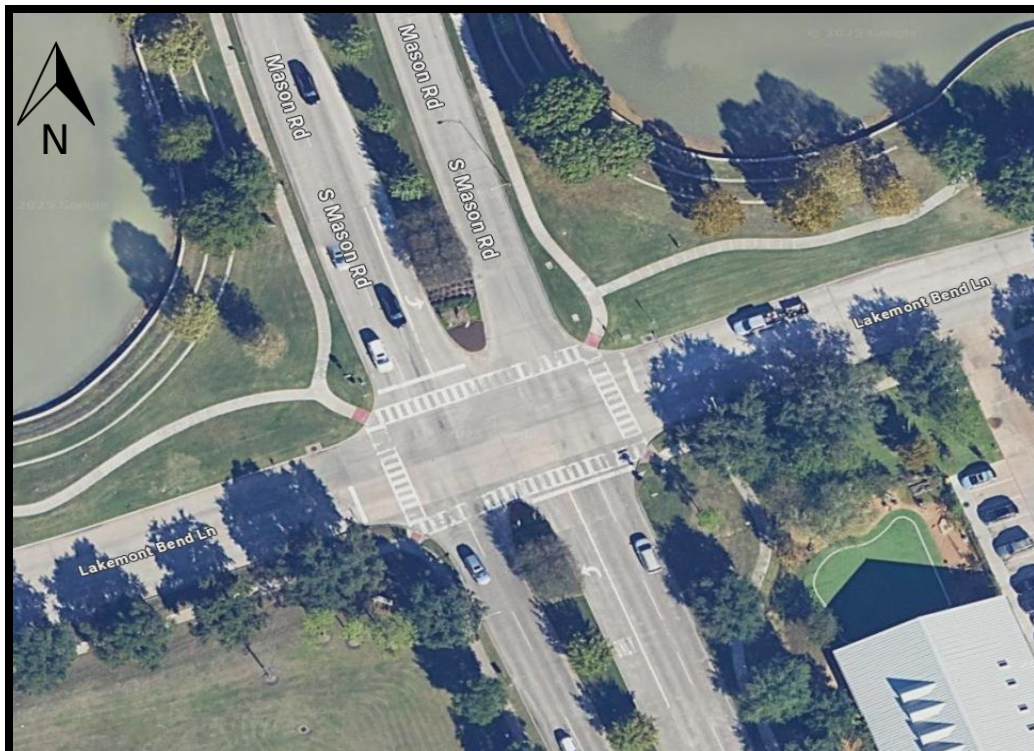
Dear Mr. Robles:

In accordance with your request, Ardurra Group, Inc. (Engineer) is pleased to submit this proposal to provide traffic signalization designs for the intersection of South Mason Road at Lakemont Bend Lane and Williams Way Boulevard at Sansbury/Manford Boulevard in Fort Bend County, Texas.

UNDERSTANDING

The intersections of South Mason Road at Lakemont Bend Lane and Williams Way Boulevard at Sansbury/Manford Boulevard in Fort Bend County, Texas, require upgrades to enhance safety and improve traffic flow. This project aims to design a new traffic signal, update ADA-compliant ramps, and implement other necessary improvements to comply with the latest Fort Bend County standards.

SOUTH MASON ROAD AT LAKEMONT BEND LANE





WILLIAMS WAY BOULEVARD AT SANSBURY/MANFORD BOULEVARD



SCOPE OF SERVICES FOR TRAFFIC SIGNAL DESIGN AT TWO (2) INTERSECTIONS

1. SOUTH MASON ROAD AT LAKEMONT BEND LANE
2. WILLIAMS WAY BOULEVARD AT SANSBURY/MANFORD BOULEVARD

TASK 1: INTERSECTIONS SURVEY

Engineer will coordinate with the surveyor to collect survey data information for up to two (2) intersections. Please see the attached for survey scope and fee from United Engineers, Inc.

Deliverables
CAD file in dwg / dgn format.

TASK 2: TRAFFIC SIGNAL DESIGN (TWO INTERSECTIONS)

1. Engineer will provide project management for this project to include preparing contract documents, project set-up, and invoicing.
2. Engineer will meet with the Fort Bend County's staff to discuss project requirements and design standards.
3. Engineer will conduct field visits and gather the following data:
 - a. Photos of the project areas



- b. Existing roadway geometry
 - c. Review visible above ground utilities (water, sanitary, storm sewer)
 - d. Identify private utilities (cable, telecom, and pipelines)
4. Engineer will review and include applicable general notes, provided by the Fort Bend County for permanent traffic signalization plans.
5. Engineer will prepare summary of quantities applicable to the intersection redesign including signing and striping plans, permanent signal plans, ADA Ramps.
6. Engineer will prepare existing conditions layout based upon the survey information and field observations. Engineer will obtain the following from the Fort Bend County:
 - a. Existing ROW maps (to be provided by County)
7. Engineer will review available traffic data to determine the lane assignment on South Mason Road at Lakemont Bend Lane and Williams Way Boulevard at Sansbury/Manford Boulevard.
8. Engineer will perform Flashing Yellow Arrow (FYA) analysis to determine the need for FYA signal heads.
9. Engineer will prepare the signing and striping plan based on Fort Bend County's latest design standards.
10. Engineer will review and re-design the existing ADA ramps per the latest Fort Bend County's standards and requirements, as required.
11. Engineer will review and design right-turn lanes at all corners of the intersection per the latest Fort Bend County's standards and requirements, as required.
12. Engineer will prepare the traffic signal design layouts to include mast arms with luminaires, detection, new controller cabinet based on the latest Fort Bend County's requirements.
13. Engineer will prepare traffic signal details to include the number and type of signal heads, signs, mounting, and location.
14. Engineer will prepare electrical wiring charts based for high voltage and low voltage circuits.
15. Engineer will review and include applicable latest Fort Bend County's standard detail sheets.
16. Engineer will review existing as-built plans, survey, and coordinate with utility companies to determine if there are any conflicts with the proposed design and identify potential solutions.
17. Engineer will coordinate with Center Point Energy (CPE) to determine the power source location for the proposed signal. Engineer will prepare and submit CPE service outlet statement (SOLS) to the County.
18. Engineer will provide two (2) rounds of response to comments on traffic signal plans and revise plans to address the comments.
19. Engineer will provide QA/QC on the traffic signal design plans.



- 20. Engineer will prepare 30% preliminary engineering report (PER), 60%, 90% and final plans based on the review comments and provide signed and sealed plans.
- 21. Engineer will prepare project manual to include plans, specifications and quantity take-offs, and cost estimates.
- 22. Provide Construction Phase Services which includes review of submittals, respond to up to ten (10) RFI's, field visits, provide revised drawings and provide as-built drawings (this task will be provided on hourly, time and material basis).

Deliverables

*60%, 90% and Final Signal Design Plans
 Project Manual with Plans, Specifications and Cost Estimates
 As-Built Drawings*

TASK 3: SUBSURFACE UTILITY EXPLORATION (SUE) LEVEL A

Engineer will coordinate with the SUE consultant for up to ten (10) Level A test holes as needed. Please see the attached proposal from MBCO.

TASK 4: GEOTECHNICAL ANALYSIS

Engineer will coordinate with the Geotechnical Engineer for soil borings for up to four (4) locations as needed. Please see the attached proposal from Geotest Engineering, Inc.

PROJECT FEE

Engineer will provide Traffic Signal Design services as follows:

South Mason Road and Lakemont Bend Lane	
Task	South Mason Road and Lakemont Bend Lane
Traffic Signal Design - ARDURRA	\$128,020.00
Intersection Survey - UNITED	\$41,830.00
SUE - MBCO	\$11,800.00
Geotech - GEOTEST	\$8,758.00
Total	\$190,408.00
Williams Way Boulevard and Sansbury Blvd/Manford Boulevard	
Task	South Mason Road and Lakemont Bend Lane
Traffic Signal Design - ARDURRA	\$128,020.00
Intersection Survey - UNITED	\$41,830.00
SUE - MBCO	\$11,800.00
Geotech - GEOTEST	\$8,758.00
Total	\$190,408.00
Final Total	\$380,816.00



ADDITIONAL SERVICES

Following services are provided as additional services:

- ROW takes and corner clips;
- Design of a temporary signal;
- Field traffic data collections, observations, and special studies;
- Detailed Geotech/drainage reports;
- SUE services if required
- Any ITS/Fiber Design; and other engineering services not listed above.

CLIENT SUPPLIED INFORMATION

1. Authorization to proceed with this work.
2. Existing as-built plans for the intersection.
3. Traffic signal warrant analysis reports long with traffic volume data.
4. Items that are identified in the scope of services to be provided by the County.

We appreciate the opportunity to work with you on this project. Should you have any comments or questions, please do not hesitate to call.

Sincerely,

Ardurra Group, Inc.
Raghu Veturi, PE
Director of Traffic & Systems Engineering

ACCEPTED:

Company/Agency

Signature

Printed Name

Title

Date Accepted

Attachments:

- Level of Effort
- Survey Proposal from United
- SUE Proposal from MBCO
- Geotechnical Proposal from GeoTest

Fort Bend County
Scope of Services - Proposed Project Budget for Intersection South Mason Road and Lakemont Bend Lane
Ardurra Group, Inc.
July 15, 2025

Staff	Sr. Project Manager	Senior Engineer	Engineer	Sr. CADD Tech	Clerical	Total Man Hours	Expenses	Total Task
\$/Hour	\$270	\$207	\$170	\$155	\$93			
Task								
1. SUB-CONSULTANT SERVICES	0	0	0	0	0	0	\$62,388.00	\$ 62,388.00
1.1 Survey by UNITED						0	\$41,830.00	\$ 41,830.00
1.2 SUE by MBCO							\$11,800.00	\$ 11,800.00
1.3 Geotech by GEOTEST							\$8,758.00	\$ 8,758.00
2. TRAFFIC SIGNAL DESIGN	41	112	150	178	4	485	\$260.00	\$ 87,976.00
2.1 Project Management	2	8			4	14		\$ 2,568.00
2.2 Coordination/Meetings	12	12	20			44		\$ 9,124.00
2.3 Field Review		6	4			10		\$ 1,922.00
2.4 General Notes (Permanent)		4	4	2		10		\$ 1,818.00
2.5 Summary of Quantities	2		4	8		14		\$ 2,460.00
2.6 Existing Conditions Layout			4	6		10		\$ 1,610.00
2.7 Review Traffic Data for lane assignment		2	4			6		\$ 1,094.00
2.8 Perform FYA analysis	1	2	6			9		\$ 1,704.00
2.9 Signing and Striping Layout		4	6	8		18		\$ 3,088.00
2.10 Review ADA Ramps Layout		4	6	8		18		\$ 3,088.00
2.11 Design of 4 Right-Turn Lanes	8	14	36	100		158		\$ 26,678.00
2.12 Signal Design Layout		4	6	10		20		\$ 3,398.00
2.13 Traffic Signal Details		2	6	10		18		\$ 2,984.00
2.14 Electrical Wiring Chart			6	10		16		\$ 2,570.00
2.15 Traffic Signal Standards			4	8		12		\$ 1,920.00
2.16 Utility Coordination	2	4	4			10		\$ 2,048.00
2.17 Electrical Service Coordination		4	2			6		\$ 1,168.00
2.18 Responses to Comments (30, 60%, & 90%)	2	6	8	8		24		\$ 4,382.00
2.19 QA/QC	6	24				30		\$ 6,588.00
2.20 Final Plans (Signed and Sealed)	2	4	8			14		\$ 2,728.00
2.21 Project Manual (Plans, Specs, Quantity Take-offs)	4	8	12			24		\$ 4,776.00
2.22 Mileage (Using Current IRS Rates)							\$260.00	\$ 260.00
3. CONSTRUCTION PHASE SERVICES (TIME & MATERIAL)	16	32	80	100	0	228		\$ 40,044.00
3.1 Construction Phase Services	16	32	80	100		228		\$ 40,044.00
<i>Total Hours</i>	57	144	230	278	4	713		
<i>Total Cost</i>	\$15,390.00	\$29,808.00	\$39,100.00	\$43,090.00	\$372.00		\$62,648.00	\$190,408.00

Fort Bend County
Scope of Services - Proposed Project Budget for Intersection Williams Way Boulevard and Sansbury Blvd/Manford Boulevard
Ardurra Group, Inc.
July 15, 2025

Staff	Sr. Project Manager	Senior Engineer	Engineer	Sr. CADD Tech	Clerical	Total Man Hours	Expenses	Total Task
\$/Hour	\$270	\$207	\$170	\$155	\$93			
Task								
1. SUB-CONSULTANT SERVICES	0	0	0	0	0	0	\$62,388.00	\$ 62,388.00
1.1 Survey by UNITED						0	\$41,830.00	\$ 41,830.00
1.2 SUE by MBCO							\$11,800.00	\$ 11,800.00
1.3 Geotech by GEOTEST							\$8,758.00	\$ 8,758.00
2. TRAFFIC SIGNAL DESIGN	41	112	150	178	4	485	\$260.00	\$ 87,976.00
2.1 Project Management	2	8			4	14		\$ 2,568.00
2.2 Coordination/Meetings	12	12	20			44		\$ 9,124.00
2.3 Field Review		6	4			10		\$ 1,922.00
2.4 General Notes (Permanent)		4	4	2		10		\$ 1,818.00
2.5 Summary of Quantities	2		4	8		14		\$ 2,460.00
2.6 Existing Conditions Layout			4	6		10		\$ 1,610.00
2.7 Review Traffic Data for lane assignment		2	4			6		\$ 1,094.00
2.8 Perform FYA analysis	1	2	6			9		\$ 1,704.00
2.9 Signing and Striping Layout		4	6	8		18		\$ 3,088.00
2.10 Review ADA Ramps Layout		4	6	8		18		\$ 3,088.00
2.11 Design of 4 Right-Turn Lanes	8	14	36	100		158		\$ 26,678.00
2.12 Signal Design Layout		4	6	10		20		\$ 3,398.00
2.13 Traffic Signal Details		2	6	10		18		\$ 2,984.00
2.14 Electrical Wiring Chart			6	10		16		\$ 2,570.00
2.15 Traffic Signal Standards			4	8		12		\$ 1,920.00
2.16 Utility Coordination	2	4	4			10		\$ 2,048.00
2.17 Electrical Service Coordination		4	2			6		\$ 1,168.00
2.18 Responses to Comments (30, 60%, & 90%)	2	6	8	8		24		\$ 4,382.00
2.19 QA/QC	6	24				30		\$ 6,588.00
2.20 Final Plans (Signed and Sealed)	2	4	8			14		\$ 2,728.00
2.21 Project Manual (Plans, Specs, Quantity Take-offs)	4	8	12			24		\$ 4,776.00
2.22 Mileage (Using Current IRS Rates)							\$260.00	\$ 260.00
3. CONSTRUCTION PHASE SERVICES (TIME & MATERIAL)	16	32	80	100	0	228		\$ 40,044.00
3.1 Construction Phase Services	16	32	80	100		228		\$ 40,044.00
Total Hours	57	144	230	278	4	713		
Total Cost	\$15,390.00	\$29,808.00	\$39,100.00	\$43,090.00	\$372.00		\$62,648.00	\$190,408.00



United Engineers, Inc.

CIVIL ENGINEERING ♦ LAND DEVELOPMENT ♦ CONSTRUCTION MANAGEMENT
SURVEYING ♦ UTILITY ENGINEERING
TBPE FIRM #F-000142; TBPLS FIRM #10117800

June 12, 2025

Raghu Veturi, P.E., PTOE
Ardurra Group, Inc.
11767 Katy Freeway, Suite 1040
Houston, Texas 77079

Re: Survey Proposal for S. Mason Rd. and Sansbury Blvd., Intersection Design UEI Proposal P2025-05-29

Mr. Veturi:

United Engineers, Inc. (UEI) is in receipt of your request for a cost proposal to perform professional surveying services on the above captioned project. The topographic survey will extend from right-of-way to right-of-way and outside the right-of-way 25 feet as indicated below. The total project limit for the full survey will be approximately 1,600 linear feet for each project location, see Exhibit "A" and "B". This project includes a Topographic Survey (Cat. 6, Cond. II), ROW Maps (Cat. 1B, Cond. II), Proposed ROW Acquisition (Cat. 1A, Cond. II) and Survey Control Maps per Fort Bend County Survey requirements. The project areas consist of the following items listed below:

INITIAL SURVEY SERVICES:

A. Location: Sansbury Blvd. at Williams Way Exhibit "A"

1. Establish Horizontal and Vertical Datum:

- a. Texas State Plane Coordinate System, South Central Zone (4204), NAD 83' (2011), ITRF (EPOCH 2010.0000), NAVD 88 (2001 Adj., GD 99).
- b. GPS observe control (RTK), UEI Control and (3) Fort Bend County Monuments.
- c. GPS observe control (Static), UEI Control and (3) Fort Bend County Monuments.
- d. UEI will run conventional levels through UEI control.
- e. UEI will provide Project FBC Monument conversion factor in Survey notes.

2. Category 6, Condition II (Topographic Survey, Approximately 1,600 LF):

- a. Standard Topographic survey to include 100' cross sections.
- b. Topographic Survey will extend 400 feet up each direction along the roadways.
- c. Topographic Survey will extend 25' beyond the existing/proposed/ultimate ROW where possible.
- d. Client will need to provide Right of Entry (ROE) if entering private property is restricted.
- e. Place 811 ONE CALL and all locates will be surveyed in.
- f. UEI will provide elevations for the sloping wheelchair ramps and surrounding sidewalks at intersections for the design consultant.

- g. UEI will tie in striping, construction joints and redlight sensors within the project limits.
 - h. There are no pipelines found in the project limits.
 - i. UEI will provide SAG elevations/heights on lowest aerial cable/line/redlight attaching to existing poles if found crossing roadways within project limits.
- 3. CAD Services (Utility Base Plan view only):**
- a. UEI will perform private and public Utility Research.
 - b. Create and provide a Utility Base Plan (no profile), also provide a TIN file.
- 4. Existing Topo/ROW Survey Maps:**
- a. Provide Category 1B, Condition II (Topo/ROW Maps) along project limits.
- 5. Survey Control Maps:**
- a. Generate Survey Control Maps for the project area.
- 6. Construction Staking (Horizontal only):**
- a. UEI will provide construction staking for the new curb alignment horizontally only, no cut and fill will be provided.
 - b. UEI will allot three days for staking or re-staking, if construction staking is removed or destroyed after the third day and needs to be re-staked this will be at an additional cost not part of this proposal.
- 7. ROW Parcel Acquisition (4 Tracts, R35007, R34654, R34653 & R280952):**
- a. Recon and utilize existing Control, see Exhibit "A".
 - b. Provide Category 1A, Condition II, ROW Parcel Acquisition.
 - c. UEI will provide Limited Title Report for all abstracting requested and identify all current property owners at the time of survey.
 - d. UEI will set all parcel corners prior to signing and sealing parcel acquisition plats.
 - e. UEI will provide parcel plats and metes and bounds for all parcels.

INITIAL SURVEY SERVICES:

A. Location: S. Mason Rd. at Lakemont Bend Ln. Exhibit "B"

1. Establish Horizontal and Vertical Datum:

- a. Texas State Plane Coordinate System, South Central Zone (4204), NAD 83' (2011), ITRF (EPOCH 2010.0000), NAVD 88 (2001 Adj., GD 99).
- b. GPS observe control (RTK), UEI Control and (3) Fort Bend County Monuments.
- c. GPS observe control (Static), UEI Control and (3) Fort Bend County Monuments.
- d. UEI will run conventional levels through UEI control.
- e. UEI will provide Project FBC Monument conversion factor in Survey notes.

2. Category 6, Condition II (Topographic Survey, Approximately 1,600 LF):

- a. Standard Topographic survey to include 100' cross sections.
- b. Topographic Survey will extend 400 feet up each direction along the roadways.
- c. Topographic Survey will extend 25' beyond the existing/proposed/ultimate ROW where possible.
- d. Client will need to provide Right of Entry (ROE) if entering private property is restricted.
- e. Place 811 ONE CALL and all locates will be surveyed in.
- f. UEI will provide elevations for the sloping wheelchair ramps and surrounding sidewalks at intersections for the design consultant.
- g. UEI will tie in striping, construction joints and redlight sensors within the project limits.
- h. There are no pipelines found in the project limits.
- i. UEI will provide SAG elevations/heights on lowest aerial cable/line/redlight attaching to existing poles if found crossing roadways within project limits.

3. CAD Services (Utility Base Plan view only):

- a. UEI will perform private and public Utility Research.
- b. Create and provide a Utility Base Plan (no profile), also provide a TIN file.

4. Existing Topo/ROW Survey Maps:

- a. Provide Category 1B, Condition II (Topo/ROW Maps) along project limits.

5. Survey Control Maps:

- a. Generate Survey Control Maps for the project area.

6. Construction Staking (Horizontal only):

- c. UEI will provide construction staking for the new curb alignment horizontally only, no cut and fill will be provided.
- d. UEI will allot three days for staking or re-staking, if construction staking is removed or destroyed after the third day and needs to be re-staked this will be at an additional cost not part of this proposal.

7. Proposed ROW Parcel Acquisition (4 Tracts, R282738, R326176, R337964 & R282958):

- a. Recon and utilize existing Control, see Exhibit "B".
- b. Provide Category 1A, Condition II, ROW Parcel Acquisition.
- c. UEI will provide Limited Title Report for all abstracting requested and identify all current property owners at the time of survey.
- d. UEI will set all parcel corners prior to signing and sealing parcel acquisition plats.
- e. UEI will provide parcel plats and metes and bounds for all parcels.

SUBMISSION SCHEDULE AND DELIVERABLES:

UEI proposes to begin the work within five (5) working days after receiving your written notice to proceed and will attempt to complete all work described in the scope of services, for each location within 20 working days each.

UEI's deliverables for the topographic survey will be an ascii file, base plan drawing in Autocad format depicting existing right of way, current conditions, and utilities in plan view only, Topographic/ROW maps as well as Survey Control Maps signed and sealed by the Registered Professional Land Surveyor responsible for the project. Parcel Plats and Metes and Bounds signed and sealed by the Registered Professional Land Surveyor if scope includes this Optional Service

COMPENSATION

Our fee for providing the professional surveying services as outlined in the SCOPE OF SERVICES fee will be **LUMP SUM**, see breakdown below:

INITIAL SURVEY SERVICES (Location Sansbury Blvd. at Williams Way):

Item #1: Horizontal and Vertical Control	\$ 2,820.00
Item #2: Topographic Survey	\$ 8,820.00
Item #3: CAD Services Utility Base Plan	\$ 2,100.00
Item #4: Existing Topo/ROW Survey Maps	\$ 3,670.00
Item #5: Survey Control Maps	\$ 2,180.00
Item #6: Construction Staking	\$ 6,640.00
Item #7: ROW Acquisition (\$3,900 per parcel x 4 Parcels)	<u>\$15,600.00</u>
Total	\$41,830.00

INITIAL SURVEY SERVICES (Location S. Mason Rd. at Lakemont Bend Ln.):

Item #1: Horizontal and Vertical Control	\$ 2,820.00
Item #2: Topographic Survey	\$ 8,820.00
Item #3: CAD Services Utility Base Plan	\$ 2,100.00
Item #4: Existing Topo/ROW Survey Maps	\$ 3,670.00
Item #5: Survey Control Maps	\$ 2,180.00
Item #6: Construction Staking	\$ 6,640.00

Mr. Raghu Veturi, P.E., PTOE
Survey Proposal for Mason Rd. and Sansbury Blvd.
UEI Proposal P2025-06-12 June 12, 2025

Item #7: ROW Acquisition (\$3,900 per parcel x 4 Parcels)	<u>\$15,600.00</u>
Total	\$41,830.00

UEI appreciates this opportunity to submit this proposal and we look forward to working with you to make this a successful project. Should you have any questions, please call me or Kefelegne Tesfaye, P.E. at 713-271-2900.

Sincerely,

UNITED ENGINEERS, INC.



Christin M. Norris, P.E., R.P.L.S.
Director of OSP Telecommunications Design, Land Surveying, SUE and Utility Coord.

PROJECT NAME:
 CONTRACT NUMBER:
 CLIENT:
 SUB PROVIDER NAME:

S. MASON AT LAKEMONT BEND

TASK DESCRIPTION	Hours RPLS	Hours Senior Survey Tech	Hours 3-Person Survey Crew	Hours Survey GPS Instrument	Hours Survey Crew Truck	TOTAL LABOR HRS	TOTAL LABOR COST
Set Horizontal and Vertical Control			2		2	4	
						0	
GPS Control and Define Datum			8	8	8	24	
						0	
Process GPS and produce Control Layout	1					1	
						0	
Topographic Survey		12	28		28	68	
						0	
Locate and tie Right of Way or Property Lines			4		4	8	
						0	
Process control and topographic survey		4				4	
						0	
Draft ROW/Topographic survey plat		12				12	
						0	
Draft Utility Plan and Profile		12				12	
						0	
Survey Control Map		8	4	4	4	20	
						0	
Property Research		8				8	
						0	
Review Topographic Survey Plat	1					1	
						0	
One Call 811		1				1	
						0	
Utility Coordination		2				2	
						0	
Construction Staking		2	24	24	24	74	
						0	
HOURS SUB-TOTALS	2	61	70	36	70	239	
LABOR RATE PER HOUR	\$250.00	\$140.00	\$200.00	\$40.00	\$25.00		
ESTIMATED HOURS PER DAY	8	8	8	8	8		
ESTIMATED DAYS	0.25	7.625	8.75	4.5	8.75		
TOTAL COSTS	\$500.00	\$8,540.00	\$14,000.00	\$1,440.00	\$1,750.00		\$26,230.00

\$26,230.00

PROJECT NAME:

SANSBURY AT WILLIAMS WAY

CONTRACT NUMBER:

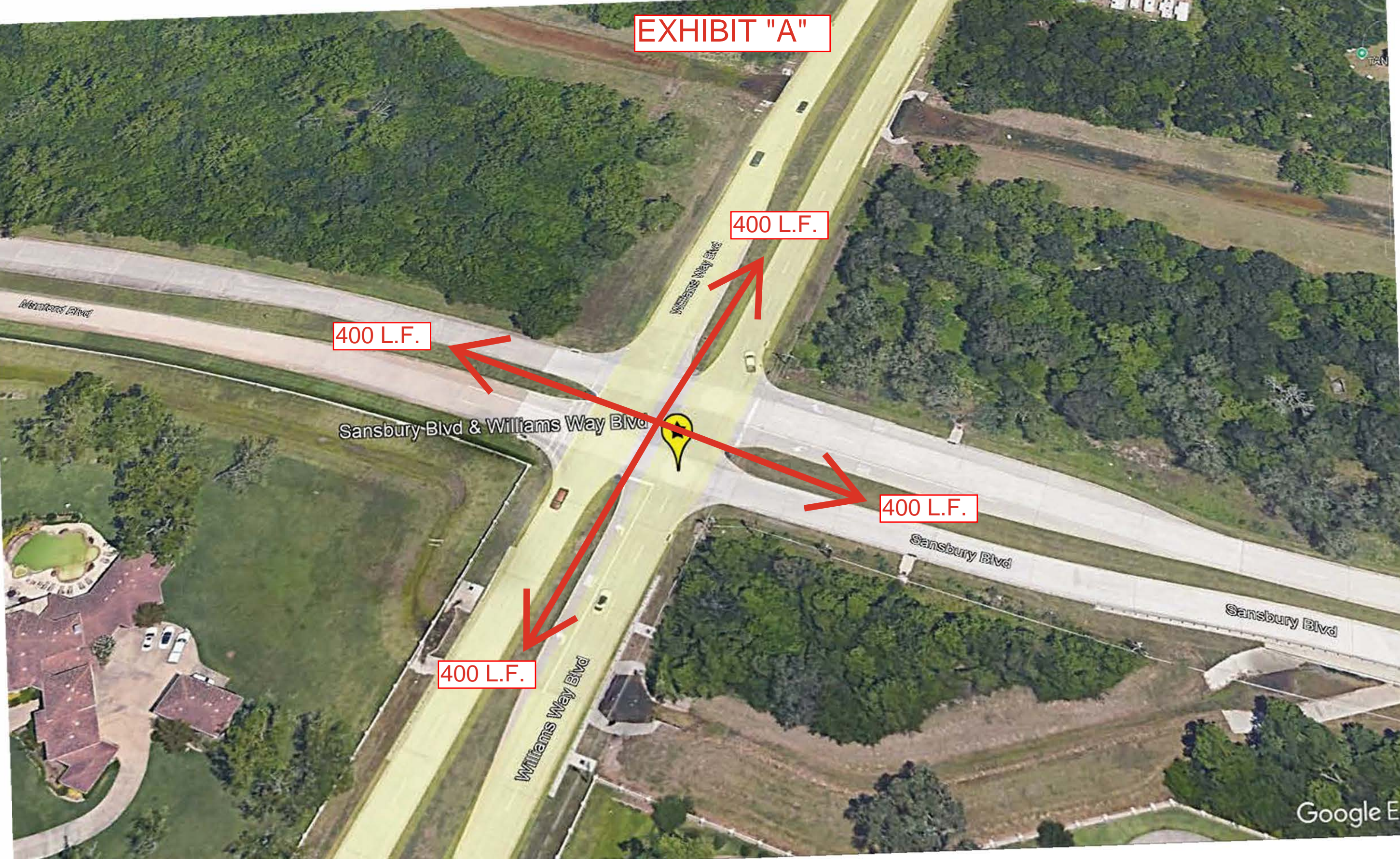
CLIENT:

SUB PROVIDER NAME:

TASK DESCRIPTION	Hours RPLS	Hours Senior Survey Tech	Hours 3-Person Survey Crew	Hours Survey GPS Instrument	Hours Survey Crew Truck	TOTAL LABOR HRS	TOTAL LABOR COST
Set Horizontal and Vertical Control			2		2	4	
						0	
GPS Control and Define Datum			8	8	8	24	
						0	
Process GPS and produce Control Layout	1					1	
						0	
Topographic Survey		12	28		28	68	
						0	
Locate and tie Right of Way or Property Lines			4		4	8	
						0	
Process control and topographic survey		4				4	
						0	
Draft ROW/Topographic survey plat		12				12	
						0	
Draft Utility Plan and Profile		12				12	
						0	
Survey Control Map		8	4	4	4	20	
						0	
Property Research		8				8	
						0	
Review Topographic Survey Plat	1					1	
						0	
One Call 811		1				1	
						0	
Utility Coordination		2				2	
						0	
Construction Staking		2	24	24	24	74	
						0	
HOURS SUB-TOTALS	2	61	70	36	70	239	
LABOR RATE PER HOUR	\$250.00	\$140.00	\$200.00	\$40.00	\$25.00		
ESTIMATED HOURS PER DAY	8	8	8	8	8		
ESTIMATED DAYS	0.25	7.625	8.75	4.5	8.75		
TOTAL COSTS	\$500.00	\$8,540.00	\$14,000.00	\$1,440.00	\$1,750.00		\$26,230.00

\$26,230.00

EXHIBIT "A"



400 L.F.

400 L.F.

400 L.F.

400 L.F.

EXHIBIT "B"

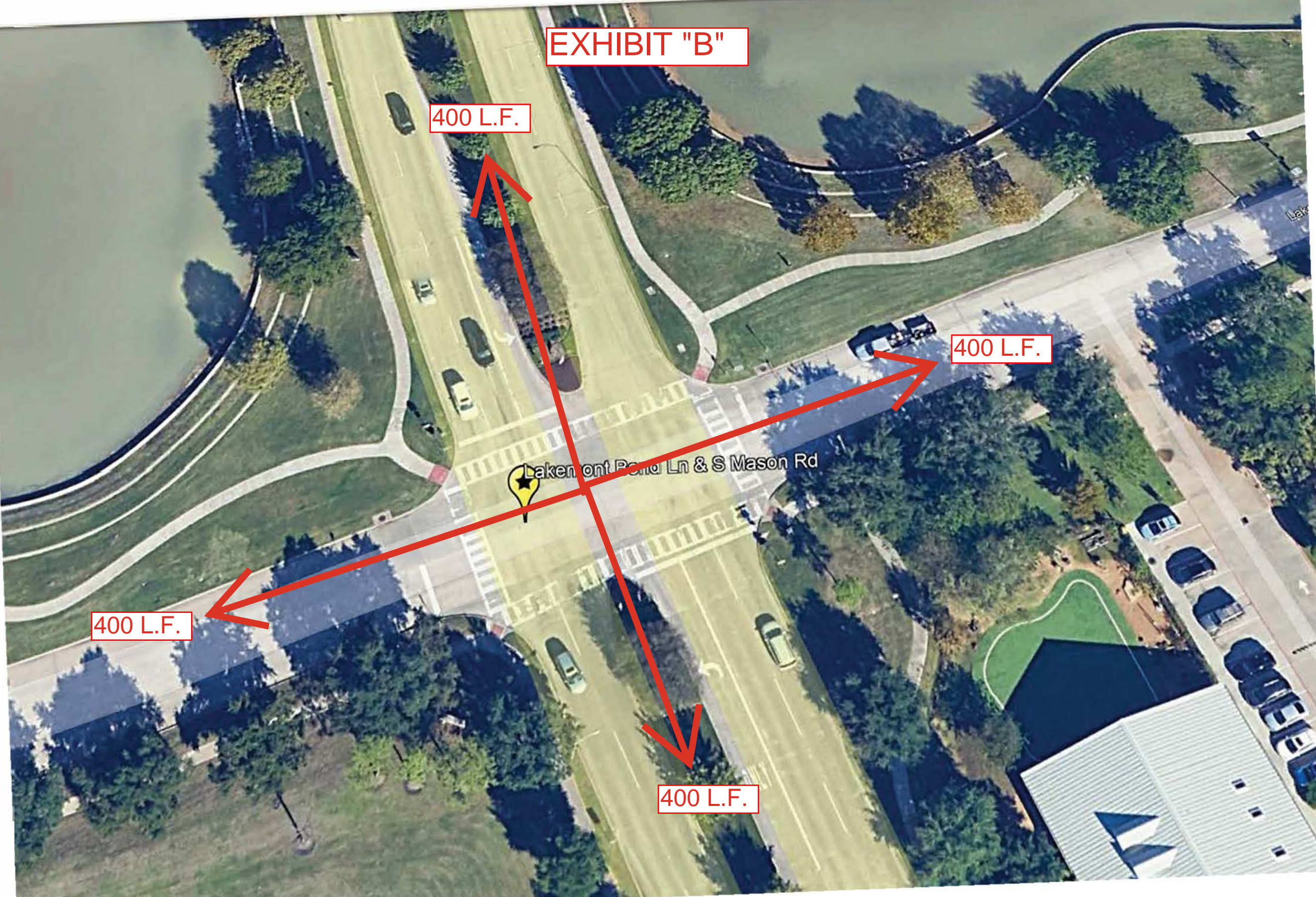
400 L.F.

400 L.F.

400 L.F.

400 L.F.

Lakemont Pond Ln & S Mason Rd



June 4, 2025

SUBSURFACE UTILITY ENGINEERING COST PROPOSAL

ARDURA Group
Lokesh Vijayagopal
11767 Katy Fwy, Ste 1040
Houston, Texas, 77079

Ref: Request for Level A SUE for the Fort Bend County Mobility Project for Intersection of **South Mason Rd at Lakemont Bend Ln.**

SCOPE OF WORK

SUE QUALITY LEVEL A SERVICES

MBCO will provide Full-Service Quality Level A SUE services to clear utilities for four traffic signal pole locations at the intersection of South Mason Rd at Lakemont Bend Ln.

MBCO will perform five SUE Level A Test Holes to locate the precise vertical and horizontal location on conductive utility lines conflicting with the traffic signals per design location.

Nonconductive utilities may require additional utility investigation such as air vacuum trenching by creating a three foot long "X" at or near the traffic pole design location at a depth of no more than eight feet to clear the utility from the conflict for the traffic signal foundation.

Our service will be performed in accordance with the standards as set by the American Society of Civil Engineers in publication *CI/ASCE 38-22 – Standard Guideline for Investigating and Documenting Existing Utilities*.

Deliverables: CAD file (AutoCAD Civil3D .dwg format)

ASSUMPTIONS

- Traffic control will be provided in the Traffic Signal contract to perform Lane closure for Level A Test Hole work if necessary.
- Backfill material will consist of the same material excavated by the air vacuum truck. Any other required backfill will be considered additional cost per Test Hole.
- No work or Test Holes to be performed in the sidewalks.



SCHEDULE:

MBCO will complete the above-described basic service tasks for the subservice utility engineering survey within thirty-five (35) business days of receipt of the signed Sub-Agreement and written notice-to-proceed.

COMPENSATION:

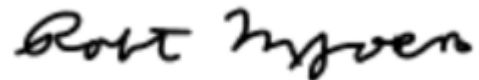
SUMMARY OF SUE TOTALS	
QL-D Total	\$ -
QL-C Total	\$ -
QL-B Total	\$ -
QL-A Total	\$ 7,800.00
Subcontractors	\$ 4,000.00
SUE Total - Hourly	\$ 11,800.00
SUE Unit Total	\$ -
Expenses	\$ -
Total Fee	\$ 11,800.00

The above-mentioned surveying services and fees are based on estimated times to complete tasks and will be billed on a **LUMP SUM** basis, which will be billed at project completion or percentage complete at the end of every month for the duration of the project.

This cost proposal is valid for 30 days from the date of the proposal and may be re-evaluated after such time to account for any changes with the project scope, environmental factors and/or the general rate schedule. If this proposal is acceptable, please sign and return a copy. If you have any questions, you may reach me at bob.mjoen@mbcoengineering.com.

Thank you for the opportunity and we appreciate doing business with you.

Sincerely,



Robert (Bob) Mjoen
Sr SUE Project Manager



Proposal Estimate for LOE Lump Sum to Perform five Test Holes
 Location: South Mason Rd at Lakemont Bend Ln

Date: 06/05/2025

MBCO ENGINEERING, LLC

Specified Rate	Office							Field			TOTAL HRS.	Total Office Amt.	Total Field Amt.	TOTAL LABOR HRS. & COSTS		
	SUE PROJECT MANAGER	SUE Sr.PROJECT MANAGER	SUE DIRECTOR	SUE ENGINEER	SUE CAD TECHNICIAN	SR CAD TECHNICIAN	ADMIN/ CLERICAL	1-MAN SUE CREW	2-MAN SUE CREW	3-Man SUE CREW						
QL-A SUE Services	Office							Field								
Field - exploratory drill shaft location (3' x 3' X-Trench x 8' depth)									20			20	\$ -	\$ 4,400.00	\$ 4,400.00	
Field Coordination		1										1	\$ 255.00	\$ -	\$ 255.00	
CADD - Add test holes to QLC/D SUE drawing					8							8	\$ 1,040.00	\$ -	\$ 1,040.00	
CADD - Test Hole Attribute Table					8							8	\$ 1,040.00	\$ -	\$ 1,040.00	
QAQC		2										2	\$ 510.00	\$ -	\$ 510.00	
Engineer Review			1									1	\$ 300.00	\$ -	\$ 300.00	
Progress Meetings		1										1	\$ 255.00	\$ -	\$ 255.00	
QL-A TOTAL	0	4		0	16	0	0					41	\$ 3,400.00	\$ 4,400.00	\$ 7,800.00	
Subcontractors												Rate	Quantity	units		
Air/Hydro Vacuum Truck Rental													\$200.00	20	hours	\$ 4,000.00
SUBCONTRACTORS TOTAL	0	0		0	0	0	0						200			\$ 4,000.00
HOURS SUB-TOTALS	\$0.00	\$4.00	\$1.00	\$0.00	\$16.00	\$0.00	\$0.00	\$0.00	\$0.00	\$20.00	\$0.00					\$11,800.00
CONTRACT RATE PER HOUR	\$240.00	\$255.00	\$300.00	\$235.00	\$130.00	\$145.00	\$115.00	\$140.00	\$220.00	\$260.00						
TOTAL LABOR COSTS	\$0.00	\$1,020.00	\$300.00	\$0.00	\$2,080.00	\$0.00	\$0.00	\$0.00	\$4,400.00	\$0.00						
SUBTOTAL Task	\$0.00	\$1,020.00	\$300.00	\$0.00	\$2,080.00	\$0.00	\$0.00	\$0.00	\$4,400.00	\$0.00			\$0.00	\$0.00	\$0.00	\$ 11,800.00
Basic Services Total																\$ 11,800.00

SUMMARY OF SUE TOTALS	
QL-D Total	\$ -
QL-C Total	\$ -
QL-B Total	\$ -
QL-A Total	\$ 7,800.00
Subcontractors	\$ 4,000.00
SUE Total - Hourly	\$ 11,800.00
SUE Unit Total	\$ -
Expenses	\$ -
Total Fee	\$ 11,800.00

Does not include Utility conflict table
 Deliverable will be CAD file (AutoCAD Civil3D .dwg format).

June 5, 2025

SUBSURFACE UTILITY ENGINEERING COST PROPOSAL

ARDURA Group
Lokesh Vijayagopal
11767 Katy Fwy, Ste 1040
Houston, Texas, 77079

Ref: Request for Level A SUE for the Fort Bend County Mobility Project for the Intersection of **Sansbury Blvd at Williams Way Blvd.**

SCOPE OF WORK

SUE QUALITY LEVEL A SERVICES

MBCO will provide Full-Service Quality Level A SUE services to clear utilities for four traffic signal pole locations at the intersection of Sansbury Blvd at Williams Way Blvd.

MBCO will perform five SUE Level A Test Holes to locate the precise vertical and horizontal location on conductive utility lines conflicting with the traffic signals per design location.

Nonconductive utilities may require additional utility investigation such as air vacuum trenching by creating a three foot long "X" at or near the traffic pole design location at a depth of no more than eight feet to clear the utility from the conflict for the traffic signal foundation.

Our service will be performed in accordance with the standards as set by the American Society of Civil Engineers in publication *CI/ASCE 38-22 – Standard Guideline for Investigating and Documenting Existing Utilities*.

Deliverables: CAD file (AutoCAD Civil3D .dwg format)

ASSUMPTIONS

- Traffic control will be provided in the Traffic Signal contract to perform Lane closure for Level A Test Hole work if necessary.
- Backfill material will consist of the same material excavated by the air vacuum truck. Any other required backfill will be considered additional cost per Test Hole.
- No work or Test Holes to be performed in the sidewalks.



SCHEDULE:

MBCO will complete the above-described basic service tasks for the subservice utility engineering survey within thirty-five (35) business days of receipt of the signed Sub-Agreement and written notice-to-proceed.

COMPENSATION:

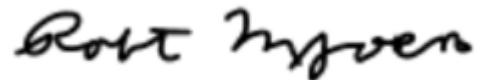
SUMMARY OF SUE TOTALS	
QL-D Total	\$ -
QL-C Total	\$ -
QL-B Total	\$ -
QL-A Total	\$ 7,800.00
Subcontractors	\$ 4,000.00
SUE Total - Hourly	\$ 11,800.00
SUE Unit Total	\$ -
Expenses	\$ -
Total Fee	\$ 11,800.00

The above-mentioned surveying services and fees are based on estimated times to complete tasks and will be billed on a **LUMP SUM** basis, which will be billed at project completion or percentage complete at the end of every month for the duration of the project.

This cost proposal is valid for 30 days from the date of the proposal and may be re-evaluated after such time to account for any changes with the project scope, environmental factors and/or the general rate schedule. If this proposal is acceptable, please sign and return a copy. If you have any questions, you may reach me at bob.mjoen@mbcoengineering.com.

Thank you for the opportunity and we appreciate doing business with you.

Sincerely,



Robert (Bob) Mjoen
Sr SUE Project Manager



Proposal Estimate for LOE Lump Sum to Perform five Test Holes
 Location: Sansbury Blvd at William Way Blvd

Date: 06/05/2025

MBCO ENGINEERING, LLC

Specified Rate	Office							Field			TOTAL HRS.	Total Office Amt.	Total Field Amt.	TOTAL LABOR HRS. & COSTS		
	SUE PROJECT MANAGER	SUE Sr.PROJECT MANAGER	SUE DIRECTOR	SUE ENGINEER	SUE CAD TECHNICIAN	SR CAD TECHNICIAN	ADMIN/ CLERICAL	1-MAN SUE CREW	2-MAN SUE CREW	3-Man SUE CREW						
QL-A SUE Services	Office							Field								
Field - exploratory drill shaft location (3' x 3' X-Trench x 8' depth)									20			20	\$ -	\$ 4,400.00	\$ 4,400.00	
Field Coordination		1										1	\$ 255.00	\$ -	\$ 255.00	
CADD - Add test holes to QLC/D SUE drawing					8							8	\$ 1,040.00	\$ -	\$ 1,040.00	
CADD - Test Hole Attribute Table					8							8	\$ 1,040.00	\$ -	\$ 1,040.00	
QAQC		2										2	\$ 510.00	\$ -	\$ 510.00	
Engineer Review			1									1	\$ 300.00	\$ -	\$ 300.00	
Progress Meetings		1										1	\$ 255.00	\$ -	\$ 255.00	
QL-A TOTAL	0	4		0	16	0	0					41	\$ 3,400.00	\$ 4,400.00	\$ 7,800.00	
Subcontractors												Rate	Quantity	units		
Air/Hydro Vacuum Truck Rental													\$200.00	20	hours	\$ 4,000.00
SUBCONTRACTORS TOTAL	0	0		0	0	0	0						200			\$ 4,000.00
HOURS SUB-TOTALS	\$0.00	\$4.00	\$1.00	\$0.00	\$16.00	\$0.00	\$0.00	\$0.00	\$0.00	\$20.00	\$0.00					\$11,800.00
CONTRACT RATE PER HOUR	\$240.00	\$255.00	\$300.00	\$235.00	\$130.00	\$145.00	\$115.00	\$140.00	\$220.00	\$260.00						
TOTAL LABOR COSTS	\$0.00	\$1,020.00	\$300.00	\$0.00	\$2,080.00	\$0.00	\$0.00	\$0.00	\$4,400.00	\$0.00						
SUBTOTAL Task	\$0.00	\$1,020.00	\$300.00	\$0.00	\$2,080.00	\$0.00	\$0.00	\$0.00	\$4,400.00	\$0.00			\$0.00	\$0.00	\$0.00	\$ 11,800.00
Basic Services Total																\$ 11,800.00
SUMMARY OF SUE TOTALS																
QL-D Total	\$	-														
QL-C Total	\$	-														
QL-B Total	\$	-														
QL-A Total	\$	7,800.00														
Subcontractors	\$	4,000.00														
SUE Total - Hourly	\$	11,800.00														
SUE Unit Total	\$	-														
Expenses	\$	-														
Lump Sum Total Fee	\$	11,800.00														

Does not include Utility conflict table
 Deliverable will be CAD file (AutoCAD Civil3D .dwg format).



GEOTEST ENGINEERING, INC.

Geotechnical Engineers & Materials Testing

5600 Bintliff Drive

Houston, Texas 77036

Telephone: (713) 266-0588

Fax: (713) 266-2977

Proposal No. 1140727099

June 2, 2025

Mr. Raghu Veturi, PE, PTOE
Ardurra Group, Inc.
3115 Allen Parkway, Suite 300
Houston, Texas 77019

**Re: Proposal for Geotechnical Services
Design and Construction of Traffic Signal Poles for FBC
Mobility Project - Intersection Improvements Program
Fort Bend County, Texas**

Dear Mr. Veturi:

In accordance with your request on May 30, 2025, Geotest Engineering, Inc., is pleased to submit this proposal for the referenced project. The project involves the design and construction of traffic signal poles at two intersections, Mason Road at Lakemont Bend Lane, and Sansbury Boulevard at Williams Way Boulevard, in Fort Bend County, TX.

Purpose and Scope

The purpose of this investigation is to explore subsurface soil and water level conditions for the proposed improvements located at the intersection of Mason Road at Lakemont Bend Lane, and Sansbury Boulevard at Williams Way Boulevard, Fort Bend County, Texas. The scope of this investigation is based on the information provided to us on May 27, 2025. The scope will include the following:

- Coordinating with utility locators to get areas for the proposed borings cleared.
- Drilling and sampling
 - A total of four (4) soil borings each to a depth of 30 feet for the proposed traffic signal poles, two (2) borings at each intersection of Mason Road and Lakemont Bend Lane, and the intersection of Sansbury Blvd and Williams Way Boulevard.

The Proposed Plan of Borings are Shown in Figure-1 and 2, and the proposed boring program is shown in Attachment No. 1

- Grouting all boreholes using non-shrink cement bentonite grout after completion of drilling and water level measurements.
- Performing appropriate laboratory tests on selected representative soil samples to develop the engineering properties of the soil.
- Performing engineering analyses to develop geotechnical recommendations for the proposed improvements. The recommendations will include a minimum of traffic signal foundation recommendations and construction considerations.
- Prepare one (1) geotechnical investigation report including field and laboratory data and geotechnical recommendations listed above.

It is our understanding that your surveyors will tie-in our borings after completion of the drilling.

Project Schedule

We should be able to start the fieldwork within one (1) week after receiving your written authorization. It is estimated that the fieldwork will be completed in about one (1) week, barring bad weather. The laboratory tests will be completed in about two (2) weeks. A geotechnical report, which will include field and laboratory data and geotechnical recommendations, will be submitted in about eight (8) weeks after receiving your written authorization.

Cost

Based on the scope of work outlined above, the cost of the field investigation, laboratory testing, engineering analyses and geotechnical report will be a lump sum amount of as given below.

• Mason Road at Lakemont Drive (Attachment No. 2)	\$8,758.00
• Sansbury Boulevard at Williams Way (Attachment No 3)	\$8,758.00
Total	\$17,516.00

The invoices will be billed on a Lump Sum basis based on percentage completion. This cost is based on the assumption that the site is accessible to a truck mounted drilling rig and no site clearance will be required.

We appreciate the opportunity to propose on this project. We hope that this proposal meets your approval. If you have any questions, please call us at (713) 266-0588. Please indicate your formal acceptance by signing one copy of this letter in the space below and returning one original to us.

Sincerely,
GEOTEST ENGINEERING, INC.
TBPE Registration No. F-410



Xuewei "Vivian" Ning, Ph.D., E.I.T.
Assistant Project Manager



Naresh Kolli, P.E.
Sr. Project Manager

XN/ego

Copies Submitted: (1-PDF)

Enclosures:

Figure 1-Proposed Plan of Borings for Mason Road at Lakemont Bend Lane

Figure 2-Proposed Plan of Borings for Sansbury Boulevard at Williams Way Boulevard

Attachment No.1- Proposed Boring Program

Attachment No.2 - Cost Breakdown for Mason Road at Lakemont Bend Lane

Attachment No.3 - Cost Breakdown for Sansbury Boulevard at Williams Way Boulevard

PC61\Geotechnical\1140727099.DOC

ACCEPTED BY: _____

PRINTED NAME: _____

TITLE: _____

DATE: _____

**Attachment No. 1
 PROPOSED BORING PROGRAM**

Structure	Proposed Boring			
	Location	Number	Depth (feet)	Footage (feet)
Proposed Traffic Signal	Mason Road at Lakemont Bend Lane	2	30	60
Proposed Traffic Signal	Sansbury Boulevard at Williams Way Boulevard	2	30	60
Total		4		120

**Attachment No. 2
 COST BREAKDOWN FOR MASON ROAD AT LAKEMONT BEND LANE**

	<u>QUANTITY</u>	<u>UNIT RATE</u>	<u>COST</u>
Engineering Services			
Principal	2 hrs.	\$250.00	\$500.00
Project Engineer	6 hrs.	\$165.00	\$990.00
Staff Engineer	16 hrs.	\$122.00	\$1,952.00
Support Personnel (Drafting, Word Processing)	6 hrs.	\$70.00	\$420.00
		Subtotal	\$3,862.00
Direct Expenses			
Subsurface Field Investigation			
Mobilization/Demobilization of Truck Mounted Drill Rig and Crew	1 ea.	\$400.00	\$400.00
Drilling and Continuous Sampling, Truck Mounted Rig, from 0 to 50 feet	40 ft.	\$24.00	\$960.00
Drilling and Intermittent Sampling, 0 to 50 feet	20 ft.	\$25.00	\$500.00
Grouting of Completed Bore Holes	60 ft.	\$8.00	\$480.00
Utility Coordination and Marking Borings	13 hrs.	\$80.00	\$1,040.00
Vehicle Charge	1 Trip	\$96.00	\$96.00
		Subtotal	\$3,476.00
Laboratory Tests			
Liquid and Plastic Limits	6 ea.	\$68.00	\$408.00
Percent Passing No. 200 Sieve	6 ea.	\$52.00	\$312.00
Moisture Content	18 ea.	\$9.00	\$162.00
Mechanical Sieve Analysis, through No. 200 Sieve	2 ea.	\$62.00	\$124.00
Unconsolidated-Undrained Triaxial Compressive Strength	6 ea.	\$69.00	\$414.00
		Subtotal	\$1,420.00
	Total		\$8,758.00

**Attachment No. 3
 COST BREAKDOWN FOR SANBURY BOULEVARD AT WILLIAMS WAY BOULEVARD**

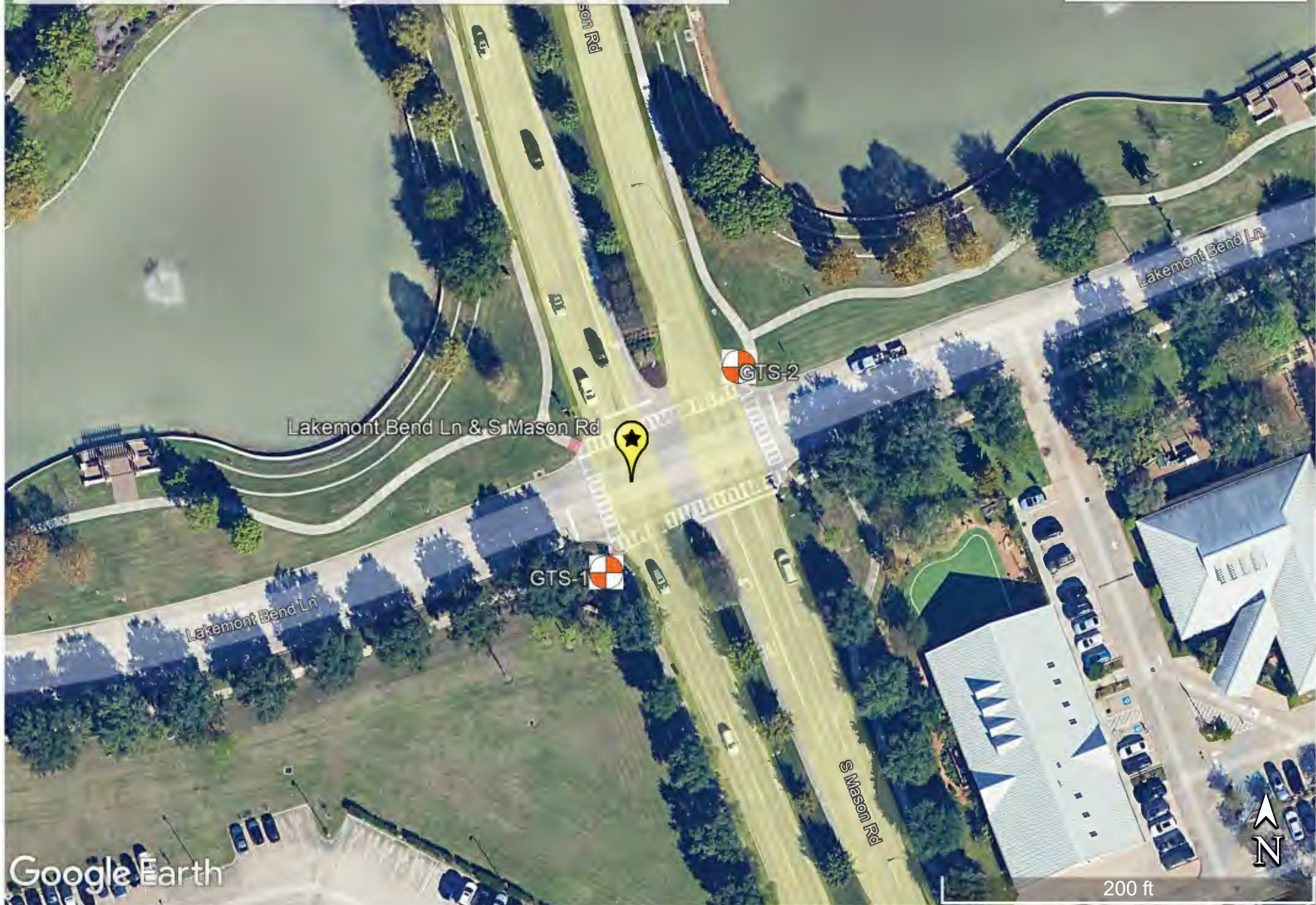
	<u>QUANTITY</u>	<u>UNIT RATE</u>	<u>COST</u>
Engineering Services			
Principal	2 hrs.	\$250.00	\$500.00
Project Engineer	6 hrs.	\$165.00	\$990.00
Staff Engineer	16 hrs.	\$122.00	\$1,952.00
Support Personnel (Drafting, Word Processing)	6 hrs.	\$70.00	\$420.00
		Subtotal	\$3,862.00
Direct Expenses			
Subsurface Field Investigation			
Mobilization/Demobilization of Truck Mounted Drill Rig and Crew	1 ea.	\$400.00	\$400.00
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Mechanical Sieve Analysis, through No. 200 Sieve	2 ea.	\$62.00	\$124.00
Unconsolidated-Undrained Triaxial Compressive Strength	6 ea.	\$69.00	\$414.00
		Subtotal	\$1,420.00
	Total		\$8,758.00

1140727099-Traffic Signal-FBC Mobility Project

Write a description for your map.

Legend


 Traffic Signal Boring



1140727099-Traffic Signal-FBC Mobility Project

Write a description for your map.

Legend

 Traffic Signal Boring

