STATE OF TEXAS §
§
COUNTY OF FORT BEND §

SECOND AMENDMENT TO AGREEMENT FOR PROFESSIONAL ENGINEERING SERVICES

THIS SECOND AMENDMENT TO AGREEMENT FOR PROFESSIONAL ENGINEERING SERVICES (the "Second Amendment"), is made and entered into by and between Fort Bend County (hereinafter "County"), a body corporate and politic under the laws of the State of Texas, and Gradient Group, LLC (hereinafter "Contractor"), a company authorized to conduct business in the State of Texas.

WHEREAS, the parties executed and accepted that certain Agreement for Professional Engineering Services on August 24, 2021 pursuant to SOQ 14-025, and the Amendment to Agreement for Professional Engineering Services on May 24, 2022 (collectively the "Agreement"), and incorporated fully by reference; and

WHEREAS, the parties desire to amend the Agreement to allow Contractor to provide additional Services under the Agreement.

NOW, THEREFORE, the parties do mutually agree as follows:

1. County shall pay Contractor an additional amount not to exceed seven hundred twenty-six thousand three hundred ninety-five dollars and 60/100 ($726,395.60) to perform the additional Services, as described in Contractor's proposal dated March 27, 2023, attached hereto as Exhibit "A" and incorporated herein for all purposes.

2. The Maximum Compensation payable to Contractor for all Services rendered is hereby increased to an amount not to exceed one million fifty-nine thousand four hundred forty-seven dollars and 40/100 ($1,059,447.40), authorized as follows:

   $333,051.80 under the Agreement; and

   $726,395.60 under this Second Amendment.

3. In no case shall the amount paid by County for all Services under the Agreement and this Second Amendment exceed the Maximum Compensation without an agreement executed by the parties.

4. BY ACCEPTANCE OF AGREEMENT, CONTRACTOR ACKNOWLEDGES THAT THE 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.

Except as provided herein, all terms and conditions of the Agreement shall remain unchanged.

IN WITNESS WHEREOF, the parties hereto have signed or have caused their respective names to be signed to multiple counterparts to be effective on the date signed by the final party.

FORT BEND COUNTY	GRADIENT GROUP, LLC
_____	_____
KP George, County Judge	Authorized Agent – Signature
_____	Stephanie Anderson, PE
Date	Authorized Agent – Printed Name
ATTEST:	
	President
	Title
_____	19 January 2023
Laura Richard, County Clerk	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 Fort Bend County under this contract.

_____
Robert Ed Sturdivant, County Auditor

Exhibit A: Contractor's Proposal, dated March 27, 2023

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EXHIBIT A

GRADIENT GROUP, LLC
2107 CityWest
Suite 450
Houston, Texas 77042

March 27, 2023

Mr. Kevin Mineo, P.E.
Senior Project Manager
Binkley & Barfield, Inc.
1710 Seamist Drive
Sent Via Email: kmineo@binkleybarfield.com

Reference: Proposal for Professional Engineering Services for Reading Road
FBC Project Number 20109
GG Job No: 20300-0005
Addendum #2 – Boulevard Section

Dear Mr. Mineo:

Gradient Group respectfully submits this Addendum in reference to the approved scope of work dated August 24, 2021, for the preparation of the expanded scope to include to include the professional engineering, surveying, geotechnical, Drainage analysis/report and traffic services for boulevard section of the existing Reading Road to a 82-foot wide (4–12-foot lanes with 33-foot median) concrete 4 lane boulevard curb and gutter section with an 100-foot ROW. Reading Road is an existing 2 lane asphalt roadway with roadside ditches. will be designed to the Fort Bend County design criteria. Expanded scope will also include underground storm sewer design, waterline relocation design, sidewalk design, driveway design and adding the geometric layout in the PER and providing the additional sheets for the design plans. Proposed improvement limits of Reading Road is approximately 6,500 linear feet, starting at the existing concrete curb and cutter of Reading Road and ending at FM 762. The project is anticipated to require additional ROW for the proposed improvements.

1.P – Pre-Design Study (Full Boulevard Section)

Gradient was asked to submit this Addendum in reference to the approved scope of work dated August 24, 2021, and coordination with the team. This task is to provide professional engineering (study and design), surveying, geotechnical, and traffic services of full boulevard section of Reading Road.

With the effort described above Gradient will provide full boulevard section within the project limits for Reading Road. The proposed road will be provided based on Fort Bend County engineering standards and will provide a schematic layout with the associated geometric design.

With the revised scope included providing a concrete curb and gutter roadway design with underground storm sewer, waterline relocation, driveways design, UVEs, sidewalk on both sides of the roadway. The added effort includes preliminary layouts for these items as well as driveway layouts revising the existing connections to the proposed roadway, as well as TxDOT Coordination.

1.D – Drainage

Fort Bend County has requested to evaluate the drainage impact analysis for Reading Road.

The Drainage Impact Study will determine the impacts associated with the proposed roadway improvements and will present the existing site conditions, drainage patterns and existing drainage infrastructure: proposed project impacts, proposed drainage feature, and mitigation measures.

- Gradient will prepare the final calculations and hydrologic/hydraulic models reflecting the proposed project features. The features will represent the anticipated final design considerations.
- Hydrologic and hydraulic modeling will be prepared to verify the sizing of the storm sewer and detention pond. Off-site flows will be included in the routing to determine if the storm sewer sizing determined from the preliminary drainage efforts is appropriately sized to collect and convey off site flows draining to the roadway.
- Gradient will prepare a drainage report detailing "no adverse impact" for the proposed improvements. This drainage report will utilize current Fort Bend County criteria to establish pre- and post-project improvement conditions and identify how potential impacts are addressed. The appropriate exhibits and tables will be prepared to clarify the report assumptions and findings.
- The Engineer will perform the H&H analysis for the channel (just east of existing boulevard section), hydraulic analysis of the ditches east and west of Berdett Road and FM 762 to appropriately size the culverts.
- Perform an analysis to define existing drainage areas and drainage patterns along the roadway and evaluate changes to the existing conditions as a result of the proposed roadway alignments. Evaluate sheet flow drainage patterns along the roadway corridor to define runoff flows defined by the existing drainage areas based on LiDAR topography and FBC drainage criteria.

<u>Drainage deliverables</u>

- Drainage Impact Analysis report
- SWMM existing and proposed Models
- H&H analysis for the cross -culverts (3 locations)
- Exhibits (Existing Drainage Areas, Existing Drainage System, Proposed Drainage Areas, and Proposed Drainage System)

2.P – Design Plans

The effort described below is related to the revised design scope. Gradient will include the following sheets to the design plans to provide a concrete curb and gutter roadway with underground storm sewer, waterline relocation, sidewalk on both sides of the roadway and TxDOT Coordination.

Added sheets to the design plans are as follows:

1. <u>Existing Condition and Demolition Plan</u>: Additional sheets.
2. <u>Waterline</u>: Waterline overall sheet & details.

3. Typical Sections: Existing and proposed typical sections sheets.
4. Roadway Curb & Gutter – Additional roadway plan and profile sheets.
5. Paving & Storm & Sidewalk Details: Additional details sheets.
6. Traffic Control Plan: Additional sheets.
7. Signing & Pavement marking: Additional sheets.
8. Driveway: Driveway overall layout sheet & Driveway summary
9. SWPPP: Additional sheets.

Compensation

We will perform the work on a lump sum basis for the professional services provided under this addendum.

BASIC SERVICES		**$**	**627,075.60**
Phase 1	**Preliminary Engineering Report**	**$**	**276,821.00**
	1P - Pre-Design Study	$	80,066.60
	1D - Drainage	$	54,454.40
	1G - Geotechnical	$	47,290.00
	1S - Survey	$	94,340.00
Phase 2	**Engineering Design Services**	**$**	**350,254.60**
	2P - Design Plans	$	283,267.60
	2G - Detention Geotechnical	$	40,933.00
	2S - Detention Survey	$	26,054.00
OPTIONAL ADDITIONAL SERVICES		**$**	**99,320.00**
Phase 1	**Preliminary Engineering Report**	**$**	**99,320.00**
	1.1T - Traffic	$	11,500.00
	Proposed Acquisition Parcel Survey	$	87,072.00
TOTAL PROJECT COST		**$**	**726,395.60**

Engineering services will be billed monthly based on the percentage of work completed. Optional Services will be billed as defined by authorization for such optional services.

We appreciate the opportunity to present this Addendum #2. If you need additional information in support of this proposal, please contact me at 832-779-5700 or on my mobile at 979-574-5173.

Respectfully Submitted,
GRADIENT GROUP, LLC

Stephanie Anderson, PE
Project Manager

PRODUCTION MANHOUR LEVEL OF EFFORT - PHASE 1 PRELIMINARY ENGINEERING

Project: **Reading Road**

Project #: Project Number

Date: 2/14/2023

Revised: **3/27/2023**

Project Manager: Stephanie Anderson, PE

SHEET NO.	DESCRIPTION	QA/QC Manager $374.00	Sr. Project Manager $323.00	Roadway Engineer $272.00	Drainage Engineer $272.00	Traffic Engineer $272.00	Engineer -In-Training $153.00	Senior CADD Designer $159.80	CADD Designer $108.80	Administrative $102.00	TOTAL HOURS	COST
BASIC SERVICES - PHASE 1 PRELIMINARY ENGINEERING REPORT												
1P - Pre-Design Study												
	Bi-Weekly 30 Minute Progress Meetings (3 Months)		4.0	4.0	4.0						12.0	$ 3,468.00
	Preliminary Conference & Coordination Meeting	2.0	2.0	2.0	2.0						8.0	$ 2,482.00
	TxDOT Coordination	2.0	2.0	2.0	2.0						8.0	$ 2,482.00
	Schematic Plan Sheets Layout of Roadway and Detention - Proposed Conditions Evaluation	1.0	4.0	8.0	8.0	8.0	16.0	20.0	40.0		105.0	$ 18,190.00
	Identify Existing Utilities and Create Utility Conflict Table		2.0	4.0	4.0		2.0	4.0	12.0		28.0	$ 5,072.80
	Utility and ROW Coordination Meeting		2.0	4.0			4.0	2.0	4.0		16.0	$ 3,100.80
	Waterline Relocation		2.0	4.0			4.0	4.0	24.0		38.0	$ 5,596.40
	Reading Road & 762 - Sight Triangle Evaluation (2 Approaches)		2.0			2.0	2.0	2.0	12.0		20.0	$ 3,121.20
	Reading Road & Savannah Glen Ln - Sight Triangle Evaluation (3 Approaches)		2.0			4.0	4.0	4.0	12.0		26.0	$ 4,290.80
	Reading Road & Rolling Meadow Dr.- Sight Triangle Evaluation (3 Approaches)		2.0			4.0	4.0	4.0	12.0		26.0	$ 4,290.80
	Reading Road & Berdett Road - Sight Triangle Evaluation (4 Approaches)		2.0			4.0	4.0	4.0	15.0		29.0	$ 4,617.20
	Draft PER Report (30% Design Plans)	1.0	4.0	4.0	4.0	4.0	4.0	15.0	40.0	8.0	84.0	$ 13,107.00
	Final PER Report (30% Design Plans)	1.0	4.0	4.0	4.0	4.0	4.0	8.0	24.0	8.0	61.0	$ 10,247.60
1P - Pre-Design Study Total												**$ 80,066.60**
1D - Drainage												
	Collect & Review Drainage Data	1.0	2.0	8.0	8.0		8.0				27.0	$ 6,596.00
	Develop Drainage Alternatives	1.0	2.0	8.0	8.0		24.0	16.0	40.0		99.0	$ 15,952.80
	Perform Drainage Impact Analysis	1.0	2.0	8.0	8.0		24.0	16.0	40.0		99.0	$ 15,952.80
	Drainage Report	1.0	2.0	8.0	8.0		24.0	16.0	40.0		99.0	$ 15,952.80
1D - Drainage Total												**$ 54,454.40**
1G - Geotechnical												
	Geotechnical Roadway Report (15' Bores)											$ 42,768.00
	Coordination & Management		16.0								16.0	$ 5,168.00
1G - Geotechnical Total												**$ 47,936.00**
1S - Survey												
	Control Surveying											$ 10,180.00
	Topographic Surveying and Mapping											$ 35,825.00
	Existing ROW Surveying & Mapping											$ 31,435.00
	Subsurface Utility Engineering (Level B) Utility/Pipeline Investigations											$ 7,880.00
	Coordination & Management		28.0								28.0	$ 9,044.00
1S - Survey Total												**$ 94,364.00**
BASIC SERVICES - PHASE 1 PRELIMINARY ENGINEERING REPORT COST												**$ 276,821.00**
OPTIONAL / ADDITIONAL SERVICES - PHASE 1 PRELIMINARY ENGINEERING REPORT												
1.1T - Traffic												
	24 Hour Traffic Data Collection - Turning Movement Counts	2.0	Locations @	$ 1,250.00	per location							$ 2,500.00
	Reading Road & Berdett Road - Traffic Signal Warrant Analysis	1.0	Intersection @	$ 4,500.00	per intersection							$ 4,500.00
	Reading Road & FM 762 - Traffic Signal Warrant Analysis	1.0	Intersection @	$ 4,500.00	per intersection							$ 4,500.00
1.1T - Traffic Total												**$ 11,500.00**
1.1S - Survey												
	Proposed Acquisition Parcel Survey	32.0	Parcels @	$ 2,500.00	per Parcel							$ 80,000.00
	Coordination & Management		4.0	$ 24.00							28.0	$ 7,820.00
1.1S - Survey Total												**$ 87,820.00**
OPTIONAL / ADDITIONAL SERVICES - PHASE 1 PRELIMINARY ENGINEERING REPORT COST												**$ 99,320.00**
TOTAL - PHASE 1 PRELIMINARY ENGINEERING REPORT COST												**$ 376,141.00**

PRODUCTION MANHOUR LEVEL OF EFFORT - PHASE 2 ENGINEERING DESIGN

Project: **Reading Road**
Project #: Project Number
Date: 2/14/2023
Revised: **2/28/2023**

Project Manager: Stephanie Anderson, PE

GRADIENT

		Sr. Project Manager	Roadway Engineer	Drainage Engineer	Traffic Engineer	Engineer -In-Training	Senior CADD Designer	CADD Designer	Administrative	TOTAL HOURS	COST / SHEET	COST
SHEET NO.	**DESCRIPTION**	**$323.00**	**$272.00**	**$272.00**	**$272.00**	**$153.00**	**$159.80**	**$108.80**	**$102.00**			
BASIC SERVICES - PHASE 2 ENGINEERING DESIGN PHASE												
2P - Design Plans												
	COVER SHEET											**$ 1,822.40**
Sheets - 1	Drawing Index Sheet	1.0				1.0		4.0		6.0	$ 911.20	$ 911.20
Sheets - 1	General Notes	1.0				1.0		4.0		6.0	$ 911.20	$ 911.20
	EXISTING CONDITIONS & DEMOLITION PLAN											**$ 14,076.00**
Sheets - 9	Existing Condition And Demolition Plan	9.0	9.0	9.0		9.0		45.0		81.0	$ 1,564.00	$ 14,076.00
	LAYOUT & STORM SEWER											**$ 25,061.40**
Sheets - 4	Project Layout	4.0	4.0	4.0		8.0	8.0	16.0		44.0	$ 1,927.80	$ 7,711.20
Sheets - 4	Driveway Layout	4.0	4.0	4.0		8.0	8.0	16.0		44.0	$ 1,927.80	$ 7,711.20
Sheets - 1	Driveway Summary	1.0	1.0	1.0		2.0	2.0	4.0		11.0	$ 1,927.80	$ 1,927.80
Sheets - 3	Drainage Area Map - Proposed	3.0	3.0	3.0		6.0	6.0	12.0		33.0	$ 1,927.80	$ 5,783.40
Sheets - 1	Drainage Calculations	1.0	1.0	1.0		2.0	2.0	4.0		11.0	$ 1,927.80	$ 1,927.80
	TYPICAL SECTIONS											**$ 4,749.80**
Sheets - 1	Typical Sections - Existing	1.0	2.0	1.0	1.0		1.0	4.0		10.0	$ 2,006.00	$ 2,006.00
Sheets - 1	Typical Section - Proposed	1.0	2.0	2.0	1.0	2.0	2.0	4.0		14.0	$ 2,743.80	$ 2,743.80
	PLAN & PROFILE											**$ 89,413.20**
Sheets - 13	Plan & Profile (Reading Road)	26.0	52.0	26.0	26.0	52.0	26.0	78.0		286.0	$ 4,406.40	$ 57,283.20
Sheets - 2	Paving Details	2.0	8.0			8.0	4.0	16.0		38.0	$ 3,213.00	$ 6,426.00
Sheets - 3	Storm Details	3.0	12.0			12.0	6.0	24.0		57.0	$ 3,213.00	$ 9,639.00
Sheets - 2	Waterline Details	2.0	8.0			8.0	4.0	16.0		38.0	$ 3,213.00	$ 6,426.00
Sheets - 1	Sidewalk Details	1.0	4.0			4.0	2.0	8.0		19.0	$ 3,213.00	$ 3,213.00
Sheets - 2	Drievway Details	2.0	8.0			8.0	4.0	16.0		38.0	$ 3,213.00	$ 6,426.00
	DETENTION											**$ 6,249.20**
Sheets - 1	Detention Pond Design	2.0	0.0	4.0	0.0	4.0	4.0	30.0		44.0	$ 6,249.20	$ 6,249.20
	TRAFFIC CONTROL											**$ 75,014.20**
Sheets - 1	General Construction Sequencing	1.0	1.0		2.0	4.0		4.0		12.0	$ 2,186.20	$ 2,186.20
Sheets - 17	Traffic Control Plans	17.0	17.0		68.0	68.0		102.0		272.0	$ 2,947.80	$ 50,112.60
Sheets - 17	Traffic Control Plan Details	17.0	0.0		17.0	34.0		68.0		136.0	$ 1,336.20	$ 22,715.40
	SIGNING & PAVEMENT MARKING											**$ 31,691.40**
Sheets - 13	Signing & Pavement Marking Plan	13.0	13.0		13.0	39.0	13.0	65.0		156.0	$ 2,029.80	$ 26,387.40
Sheets - 3	Summary of Details	3.0	3.0		3.0	6.0	3.0	12.0		30.0	$ 1,768.00	$ 5,304.00
	STORM WATER POLLUTION PREVENTION											**$ 7,204.60**
Sheets - 4	Storm Water Pollution Prevention Plans (100 Scale)	1.0	1.0	4.0		12.0	4.0	28.0		50.0	$ 1,801.15	$ 7,204.60
	CROSS SECTIONS											**$ 2,400.40**
Sheets - 1	Cross Sections	1.0	2.0	2.0		4.0	1.0	2.0		12.0	$ 2,400.40	$ 2,400.40
	DETAILS											**$ 1,506.20**
Sheets - 1	SWPPP Details	2.0	1.0			1.0		4.0		8.0	$ 1,506.20	$ 1,506.20
2P - Design Plans Total												**$ 259,188.80**
2P - Project Management (Meetings & Coordination)												
	Bi-Weeklt 30 Minte Progress Meetings (12 Months)	12.0	12.0			12.0				36.0	$ 1,496.00	$ 8,976.00
	SW3P Narrative		1.0	1.0		2.0		6.0		10.0	$ 1,502.80	$ 1,502.80
	TxDOT Coordination	2.0	8.0	8.0	8.0					26.0	$ 7,174.00	$ 7,174.00
	Cost Estimate	6.0	1.0	1.0	1.0	24.0				33.0	$ 6,426.00	$ 6,426.00
2P - Project Management (Meetings & Coordination) Total												**$ 24,078.80**
2G - Geotechnical												
	Geotechnical Detention Pond (25' Bores)											$ 37,057.00
	Coordination & Management	12.0								12.0	$ 3,876.00	$ 3,876.00
2G - Geotechnical Total												**$ 40,933.00**
2S - Survey												
	Detention Pond Survey (Cleared Site)											$ 9,910.00
	Detention Pond Survey (Wooded Site)											$ 13,560.00
	Coordination & Management	8.0								8.0	$ 2,584.00	$ 2,584.00
2S - Survey Total												**$ 26,054.00**
BASIC SERVICES - PHASE 2 ENGINEERING DESIGN PHASE												**$ 350,254.60**
OPTIONAL / ADDITIONAL SERVICES - PHASE 2 DESIGN PHASE												
OPTIONAL / ADDITIONAL SERVICES - PHASE 2 DESIGN PHASE												**$ -**
TOTAL - PHASE 2 DESIGN PHASE												**$ 350,254.60**

WEISSER Engineering & Surveying

TBPLS Reg. No. 10194324
TBPE Reg. No. F-68

PROPOSAL AGREEMENT FOR PROFESSIONAL SERVICES
Effective Date: March 13, 2023

Stephanie Anderson
Gradient Group
2107 CityWest Boulevard, Suite 450
Houston, TX 77042
832-779-5700
sandereson@gradient-group.com

Proposal for Professional Services in Connection With: Reading Road from Misty Meadow Court/Bridlewood Drive to FM 762 in Fort Bend County, Texas

Weisser Engineering & Surveying is pleased to submit this proposal and terms of service (together, the "Agreement") to Gradient Group (the "Client").

I. SCOPE OF SERVICES

Surveying and Mapping
The Surveyor shall evaluate the existing ROW envelope and make recommendations for the acquisition of ROW necessary for the Project including but not limited to roadway, corner cuts, sight distance triangles, detention, and outfalls, if necessary. The Surveyor shall establish a project baseline based on the centerline of the right-of-way. The Surveyor shall create an existing utility list (Excel Format) including the type, owner, location, and contact information for available existing utilities within the project limits to be supplied to the Engineering Consultant to complete the identification of potential utility conflicts. The Surveyor shall sign and seal all survey documents.

The specific survey limits are as follows:
The linear topographic and right-of-way survey will begin 250 feet east of the intersection of Reading Road and Misty Meadow Court/Bridlewood Drive and proceed approx. 2,000 feet east to a point 250 feet west of the intersection of Reading Road and Rustling Oaks Drive and begin again 250 feet east of the intersection of Reading Road and Rustling Oaks Drive and proceed approx. 3,000 feet to the intersection of Proposed Reading Road and Farm to Market (FM) 762. Survey limits also include 300 feet (150 feet north and south) along FM 762, 150 feet along Rolling Meadow Drive, 300 feet (150 north and south) along Berdett Road and 150 feet along Savannah Glen Lane for an approximate total of **5,900 linear feet**. (As Shown on the Attached Aerial Images)

1. **Existing Right of Way Mapping (Cat. 1B; Cond. 3)**
    a. Perform abstract survey; obtain deeds of record, and plats for the above-described Survey Limits.
    b. Establish the existing right-of-way of Reading Road, Savannah Glen Lane, FM 762 and adjoining properties.
    c. Prepare existing Right-of-Way Map of the Project certifying to a Cat. 1B, Cond. III Right-of-Way Survey to be delivered in PDF format.
    d. Prepare Survey Control Sheet(s) for the project to be delivered in PDF format.

COST: $31,435.00 (non-taxable)

3-Person Survey Crew	20 hrs @ $170/hr	$3,400.00
2-Person Survey Crew	45 hrs @ $145/hr	$6,525.00
Survey Technician	80 hrs @ $110/hr	$8,800.00
CADD Technician	35 hrs @ $95/hr	$3,325.00
Clerical	4 hrs @ $65/hr	$ 260.00
Field Coordinator	5 hrs @ $105/hr	$ 525.00
Records Research	40 hrs @ $85/hr	$3,400.00
RPLS/PM	40 hrs @ $160/hr	$6,400.00

2. Topographic Surveying for Reading Road, Bridlewood Drive and Rustling Oaks Drive (Cat 6; Cond. 2)

The Surveyor will provide the following within the surveying limits described in above:

a. Utilize existing Fort Bend County horizontal and vertical control.
b. For the roadway and ditches, obtain cross-sections at 100-foot intervals with grade breaks. Cross-sections shall extend 25 feet beyond the existing or proposed right-of-way lines where accessible. Identify locations and elevations of physical features to include buildings, fences, walls, trees (trunk diameter, drip line, and type), sidewalks, driveways and driveway curbs, power poles, light poles, water meters, water wells, ponds, sprinklers, off-site drain pipe, etc. Horizontally and vertically locate available existing utilities within, crossing, and adjoining project limits. Utilities will be located and tied based on visual evidence and utilities based on maps, plans, and marked by "One Call" within the project limits, flow line elevations, sizes, material types and directions of pipes will be obtained on storm sewer lines, sanitary sewer lines and culverts. The rim (top) and flow line elevations will be obtained on inlets, manholes, and drainage structures.
c. The Surveyor will coordinate with pipeline companies, municipal utility districts (MUDs), homeowner's associations (HOA's), Fort Bend County, and private utility agencies to obtain locations of available existing utilities and depths of existing pipelines per plans.
d. Survey geotechnical bore hole locations as indicated by Client and provide information to Client in an approved digital format.
e. Prepare existing Topographic Survey Map of the Project certifying to a Cat. 6, Cond. II Topographic Survey to be delivered in PDF format.
f. The 3D topographical survey base map and digital terrain model (DTM) will be created and delivered for the existing roadway using AutoCAD (DWG).

COST: $35,825.00 (non-taxable)

3-Person Survey Crew	20 hrs @ $170/hr	$3,400.00
2-Person Survey Crew	95 hrs @ $145/hr	$13,775.00
Survey Technician	40 hrs @ $110/hr	$4,400.00
CADD Technician	100 hrs @ $95/hr	$9,500.00
Clerical	4 hrs @ $65/hr	$ 260.00
Field Coordinator	5 hrs @ $105/hr	$ 525.00
Records Research	10 hrs @ $85/hr	$ 850.00
RPLS/PM	24 hrs @ $160/hr	$3,840.00

3. **Subsurface Utility Engineering (Level B) Utility/Pipeline Investigations**
The Survey shall perform such investigations, research, and other activities necessary to identify any potential utility/pipeline conflicts with the Project, including but not limited to:

a. Locating and identifying available existing utilities/pipelines including casings and vent pipes within the existing and proposed rights-of-way, including obtaining information from utility owners record drawings and site reconnaissance, as well as shooting elevations marked or uncovered by others, and providing Subsurface Utility Engineering Level B effort to locate all available subsurface utilities within the existing and proposed right-of-way.
    - Level B – Two dimensional (x,y) information obtained through the application and interpretation of non-destructive surface geophysical methods. Also known as "designating", this quality level provides the horizontal position of subsurface utilities within approximately one foot.

COST: $7,880.00 (non-taxable)

2-Person Survey Crew	24 hrs @ $145/hr	$3,480.00
Survey Technician	4 hrs @ $110/hr	$ 440.00
CADD Technician	24 hrs @ $95/hr	$2,280.00
Clerical	2 hrs @ $65/hr	$ 130.00
Field Coordinator	2 hrs @ $105/hr	$ 210.00
Records Research	12 hrs @ $85/hr	$1,020.00
RPLS/PM	2 hrs @ $160/hr	$ 320.00

4. Project Control for Construction

a. Recover or Reestablish project control referenced to the project baseline for construction.
b. Recover or Reestablish monumentation on project baseline at the beginning, end, street intersections, angle points, beginning of curves, end of curves and at 1,000-foot intervals in between.

COST: $10,180.00 (non-taxable)

3-Person Survey Crew	40 hrs @ $170/hr	$6,800.00
Survey Technician	16 hrs @ $110/hr	$1,760.00
Clerical	2 hrs @ $65/hr	$ 130.00
Field Coordinator	2 hrs @ $105/hr	$ 210.00
RPLS/PM	8 hrs @ $160/hr	$1,280.00

II. Optional Additional Services

a. **Parcel Surveys (Cat. 1A; Cond. 3)** - Prepare metes and bounds descriptions in accordance with Fort Bend County guidelines for property acquisition and add parcels to the existing right-of-way maps.

COST: $2,500.00 per parcel (**non-taxable**)
(Estimated 32 Tract = $80,000.00)

b. Detention Pond Survey (Cat. 1A, Cond. 3) (Cat. 6, Cond. 2) (Cleared Site)
Surveying services to delineate location for a new proposed detention pond. Will include topographic surveying with elevations at 100-foot intervals, parcel plat, and metes & bounds description. Price based on a 7-10-acre site and relatively cleared property.

COST: $9,910.00 (7-10 Acres Cleared)

c. Detention Pond Survey (Cat. 1A, Cond. 3) (Cat. 6, Cond. 2) (Wooded Site)
Surveying services to delineate location for a new proposed detention pond. Will include topographic surveying with elevations at 100-foot intervals, parcel plat, and metes & bounds description. Price based on a 7-10-acre site and wooded property.

COST: $13,560.00 (7-10 Acres Wooded)

III. TERMS AND CONDITIONS

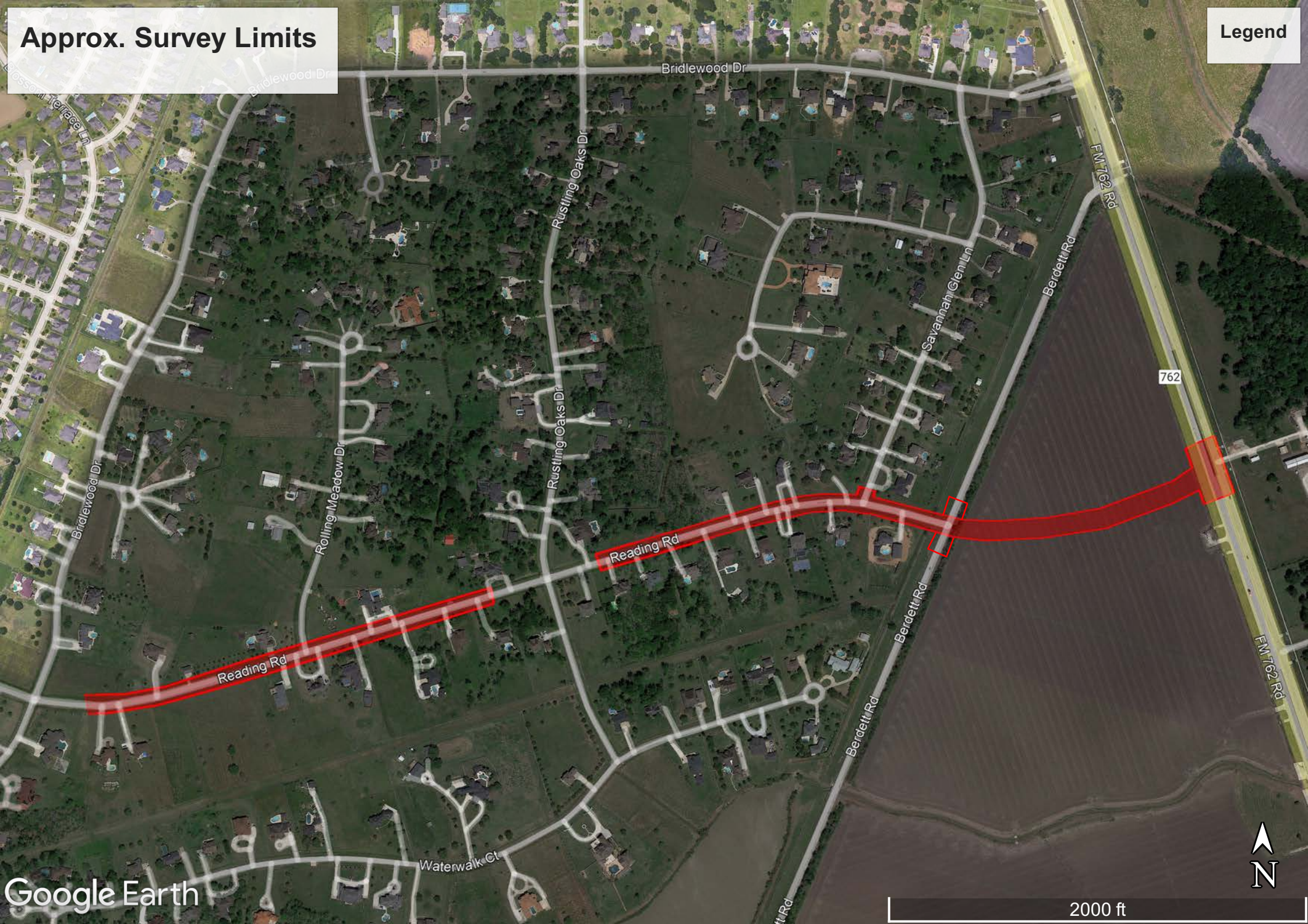
1. This Agreement may only be modified by a writing acknowledging agreement of modification by both parties.
2. The Responsible Party signing this Agreement agrees to be fully responsible for the timely and complete payment for Services within thirty (30) days of invoicing. Any requests for modification of this provision must be signed by an officer or department director of Weisser Engineering & Surveying.
3. Weisser Engineering & Surveying is an independent contractor. Nothing in this Agreement forms a partnership, joint venture, employment, franchise, master-servant, or agency relationship between Client and Weisser Engineering & Surveying.
4. WEISSER ENGINEERING & SURVEYING SHALL ONLY BE LIABLE FOR DAMAGE OR LOSS TO ANY PERSON OR PROPERTY TO THE EXTENT SUCH DAMAGE OR LOSS IS CAUSED BY WEISSER ENGINEERING & SURVEYING'S NEGLIGENT ACT OR OMISSION IN CONNECTION WITH THE SERVICES. WEISSER ENGINEERING & SURVEYING'S LIABILITY TO CLIENT OR ANY OTHER PARTY FOR CLAIMS OF ANY KIND, WHETHER BASED ON CONTRACT OR TORT OR OTHERWISE RELATING TO THIS AGREEMENT, SHALL NOT EXCEED THE COMPENSATION PAID OR OWED TO WEISSER ENGINEERING & SURVEYING FOR SERVICES UNDER THIS AGREEMENT.
5. Client shall not solicit Weisser Engineering & Surveying employees for purposes of employment during the course of the Agreement or for a period of twelve (12) months thereafter. Client acknowledges and agrees that breach of this provision may result in irreparable and continuing damage to Weisser Engineering & Surveying, for which there would be no adequate remedy at law, and that, in the event of such breach, Weisser Engineering & Surveying may be entitled to equitable or injunctive relief and/or a decree for specific performance, in addition to all such other and further relief as may be available at law, in equity, or otherwise.
6. Upon request, Weisser Engineering & Surveying may make electronic files of its CAD drawings available to Client on an "as is" basis for informational purposes only that may not be relied upon for any other purpose. ALL WARRANTIES AND REPRESENTATIONS OF ANY KIND WITH REGARD TO ELECTRONIC FILES ARE DISCLAIMED, INCLUDING BUT NOT LIMITED TO THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR USE. Since revisions or additions to design file drawings may occur at any time, Client agrees to indemnify, defend and hold harmless Weisser Engineering & Surveying, its officers, directors, agents, shareholders, and employees from and against any and all claims, suits, losses, damages or costs, including reasonable attorney's fees, arising from the use of outdated or amended design file drawings by Client or any third party, and such indemnification shall survive acceptance of said file(s) by Client or the termination of this Agreement. Client promises to notify any third party that the third party may not reasonably rely on electronic files, drawings, or documents not directly provided to such third party by Weisser Engineering & Surveying.
7. This Agreement shall be deemed entered into in Texas and shall be governed by and construed and interpreted in accordance with the laws of the State of Texas, without reference to any rules of conflict of laws. Venue shall be in Houston, Harris County, Texas.
8. In the event that any one or more of the provisions contained in this Agreement shall for any reason be held to be invalid, illegal, or unenforceable in any respect, such invalidity, illegality, or unenforceability shall not affect any other provisions, and the Agreement shall be construed as if such invalid, illegal, or unenforceable provision had never been contained in it.

9. This Agreement may be executed by facsimile or scanned and electronically transferred signatures. A copy of this Agreement bearing such a signature or signatures shall have the same force and effect as an original agreement with inked original signatures. Once signed, any reproduction of this Agreement made by reliable means (e.g., photocopy, scan, facsimile) is considered an original.
10. Client's failure to sign and return this Agreement to Weisser Engineering & Surveying within fifteen (15) days of Effective Date renders the Agreement voidable by Weisser Engineering & Surveying.
11. Notwithstanding anything to the contrary in this Agreement or any other ancillary documents, Weisser Engineering & Surveying shall not be responsible for delays caused by factors beyond Weisser Engineering & Surveying's reasonable control, including but not limited to delays because of strikes, lockouts, work slowdowns or stoppages, government ordered industry shutdowns, power or server outages, acts of nature, widespread infectious disease outbreaks (including, but not limited to epidemics and pandemics), failure of any governmental or other regulatory authority to act in a timely manner, failure of the Client to furnish timely information or approve or disapprove of Weisser Engineering & Surveying's services or work product, or delays caused by faulty performance by the Client or by contractors of any level. When such delays beyond Weisser Engineering & Surveying's reasonable control occur, Client agrees that Weisser Engineering & Surveying shall not be responsible for damages, nor shall Weisser Engineering & Surveying be deemed in default of this Agreement or any other agreement.

We appreciate the opportunity to provide this proposal. If you have any questions or comments, please do not hesitate to contact John Harvill, RPLS (jharvill@weissereng.com).

The Client, by signing below, represents that he or she has the authority to enter into this Agreement, agrees to the terms and conditions in this Agreement, is willing to be the Responsible Party, promises to pay the invoiced amount within thirty (30) days of invoicing, and authorizes Weisser Engineering & Surveying to proceed with the Services as described above.

CLIENT	**WEISSER ENGINEERING & SURVEYING**
Gradient Group	
By: _____	By: _____
Printed Name: _____	Printed Name: Walter P. Sass
Title: _____	Title: Principal
Date of Acceptance: _____	Date of Acceptance: 3/13/2023


Approx. Survey Limits
Legend
Bridlewood Dr
Rustling Oaks Dr
FM 762 Rd
Berdett Rd
Savannah Glen Ln
762
Bridlewood Dr
Rolling Meadow Dr
Rustling Oaks Dr
Reading Rd
Reading Rd
Berdett Rd
Berdett Rd
FM 762 Rd
Waterwalk Ct
Google Earth
N
2000 ft

PROPOSAL FOR
ADDITIONAL GEOTECHNICAL STUDY
READING ROAD PAVING AND DRAINAGE IMPROVEMENTS
BETWEEN FM 762 ROAD AND BRIDLEWOOD ROAD
FORT BEND COUNTY PROJECT NO. 20109
FORT BEND COUNTY, TEXAS

PROPOSAL NO. P21-071-1

TO

GRADIENT GROUP LLC
HOUSTON, TEXAS

BY

GEOTECH ENGINEERING AND TESTING

www.geotecheng.com

FEBRUARY 2023

Gradient Group LLC
2107 CityWest Blvd Suite 450
Houston, Texas 77042

Attention: Ms. Stephanie Anderson, P.E., ENV SP
President

Proposal No. P21-071-1
February 22, 2023
Tel.: 832-779-5700
E-mail: sanderson@gradient-group.com
MAlmarzooq@gradient-group.com

PROPOSAL FOR
ADDITIONAL GEOTECHNICAL STUDY
READING ROAD PAVING AND DRAINAGE IMPROVEMENTS
BETWEEN FM 762 ROAD AND BRIDLEWOOD ROAD
FORT BEND COUNTY PROJECT NO. 20109
FORT BEND COUNTY, TEXAS

Dear Madam:

At your request, we are pleased to submit this proposal for additional geotechnical study for the proposed improvements to Reading Road in Fort Bend County, Texas. GET conducted an initial geotechnical study along with desktop geologic fault study for the roundabouts and tapers additions along Reading Road per our Proposals P21-036 Revision III, dated July 7, 2021. The results of this study were presented in our Geotechnical Report 21-235E, dated June 24, 2022.

Based on the recent communication with the client, existing 2-lane asphalt roadway will be converted to a concrete boulevard along with storm sewer. The roadway improvement will be about 6,300-ft, from FM 762 Road to Bridlewood Road in Fort Bend County, Texas. A detention pond will also be constructed near the proposed alignment. The size, depth and location of the detention pond is not available at this time. The planned paving and drainage improvements were discussed in detail with Mr. Mustafa Almarzooq, EIT, PMP in order to plan a study that would provide the necessary design and construction data.

INTRODUCTION

It is planned to improve approximately 6,300 linear feet of Reading Road from FM 762 Road to Bridlewood Road in Fort Bend County, Texas. The details on these additions are provided below:

Facility	Remarks
Paving	The roadway will be about 6,300-ft long, concrete paving. We understand, client will provide the traffic loading in a form of Equivalent Single Axial Load (ESAL). Furthermore, we understand that 20-year design life will be used for concrete pavement design.
Storm Sewers	The underground utilities will consist of storm sewers. We assumed that the depth of the underground utilities will be less than 10-ft deep.
Detention Pond (Optional)	We understand a detention pond will also be constructed near the proposed alignment. Size, depth and location of the pond is not available at this time. The proposed pond is considered optional.

This proposal is divided into two sections. Each section will be discussed and estimated separately. These sections are as follows:

- o Geotechnical Exploration Study for the pavement and drainage improvements.
- o Geotechnical Exploration Study for the detention pond (Optional).

The scope of our work will be in general accordance with Fort Bend County Geotechnical Guidelines Draft, May 2021. As recommended in Fort Bend County Geotechnical Guidelines Draft, May 2021, the study for proposed detention pond will be conducted in general accordance with Harris County Flood Control District (HCFCD) requirements, dated December 31, 2021. We will not perform the geotechnical exploration for the road in accordance with the TxDOT Guidelines. We understand that the scope of our work will not include review of plans and specifications prior to the final design.

GEOTECHNICAL STUDY

Field Exploration

Site Access. The site access can be provided using a truck-mounted drilling rig along the major portion of alignment. Traffic control will be required. Due to presence of soft subgrade soils and potential access problems along a portion of the project alignment near FM 762 and at the proposed detention pond location, an ATV rig may have to be used to drill borings.

Surveying. The client will establish and provide GET the boring coordinates and ground surface elevations. GET will mark the boring locations in the field so that the survey crew can locate them.

Checking for Utilities. GET will call Texas 811-Call for the locations of utilities. GET will coordinate these activities. GET will not hire a contractor to conduct subsurface utility studies to find location of any and all utilities. This is not the scope of GET work. We recommend the scope of our work to include subsurface utility investigation at boring locations to assess those underground utilities are not hit during field exploration.

Traffic Control. Traffic control will be required along the project alignment during our field exploration. The scope of our field work will require a lane closure during drilling and sampling and borehole grouting. Our traffic control will be subcontracted out.

Drilling and Sampling. We will evaluate the soil stratigraphy and groundwater conditions for the proposed paving and storm sewer improvements by conducting fourteen (15) soil borings to a depth of 15-ft from existing grade. It should be noted that spacing between borings is about 500-ft. We will conduct two (2) soil borings near the proposed detention pond (optional) to a depth of 25-ft from existing grade. The Plan of Borings is shown on Plate 2. The borings schedule is as follows:

Facility	Borings	Depth, ft	Remark
Paving and Underground Utilities	B-1[1] through B-5[1] & B-6 through B-15	15	A truck-mounted drilling rig. An ATV rig may be needed, if wet and soft soils are encountered at the borings.
Detention Pond (Optional)	B-16 and B-17	25	A truck-mounted drilling rig. An ATV rig may be needed, if wet and soft soils are encountered.

Note: Borings B-1 through B-5 were drilled previously by GET for tapers and roundabout additions to 10-ft below the existing grade at the project site. Hence, these borings will be augered to 10-ft and then drilled and sampled between 10-ft and 15-ft below the existing grade.

Soil samples will be obtained continuously from the surface to the completion depth of borings. The cohesive soils will be sampled, using a Shelby Tube sampler. Standard Penetration Tests (SPT) will be performed in sands, if encountered. Shear strengths of the clays will be measured in the field with a hand penetrometer and correlations between this data and laboratory unconfined compression and Torvane tests used to supplement laboratory shear strength data.

Groundwater. Depth to groundwater will be important for design and construction of the facilities. For this reason, borings will be drilled dry and the depth at which groundwater is encountered will be recorded.

Piezometer

We will install one (1) piezometer at the detention basin boring. Boring B-16 will be converted to piezometer PZ-1, after the completion of drilling and sampling. The piezometer will be 20-ft deep and three (3)-inch in diameter with a 10-ft screen. The piezometer will be developed by GET. It will be monitored twice in one month. After the completion of monitoring, the piezometer will be abandoned in accordance with TCEQ requirements.

Borehole Grouting. All of the geotechnical boreholes on the existing paving will be grouted with non-shrink grout with tremie-pipe after drilling and sampling. Borings on grass will be backfilled with soil cuttings.

LABORATORY TESTING

Laboratory tests will vary with the soils encountered but will be planned to evaluate soils design parameters for the proposed pavement, storm sewer and detention pond (optional).

It is anticipated that the tests will include hand penetrometer, torvane, unconfined compression, unit weight, moisture content, percent passing #200 sieve, liquid and plastic limit tests, sieve analysis with hydrometer, unconsolidated undrained triaxial tests etc.

Harris County Flood Control District (HCFCD) requires additional detailed testing for the pond slope stability and erosion protection. These tests will consist of Triaxial Shear tests for slope stability and crumb tests and double hydrometer tests to evaluate the dispersive characteristics of the on-site soils. These tests will be conducted in accordance with the HCFCD Standards.

All of the subsoils will be classified in general accordance with the American Society of Testing Materials (ASTM) Soil Classification System. All tests will be performed in general accordance with the ASTM Procedures.

ENGINEERING ANALYSES AND REPORTING

The field and laboratory data will be summarized in an engineering report. Analyses of these data will be presented, and recommendations made relative to the following:

Facility	Recommendations
General	○ Summary. ○ Project site pictures. ○ Geology. ○ Generalized soils stratigraphy and groundwater levels. ○ Boring logs per GET format.

Facility	Recommendations
Road Paving	o Estimated subgrade properties (based on correlations) including CBR and Resilient Modulus values for natural soils. o Concrete pavement design, using AASHTO 1993 pavement design method. The client will provide traffic loading in the form of ESAL. o Concrete pavement recommendations. o Pavement steel placement and spacing. o Soil stabilization requirements for the pavements. o Potential construction problems. o Recommendations on site drainage.
Storm Sewers	o In the event that open excavation is used, we will provide bedding, backfilling, excavation wall and bottom stability, thrust restraint, dewatering, pipe design parameters. o In the event that augering is used, we will provide, soil design parameters, ground stability, auger pit excavation stability and dewatering. o OSHA soil classification for the trench safety.
Detention Pond (Optional)	o Recommendations on design of the detention pond, including the recommended slope ratios based on the furnished cross sections. A detailed slope-stability analysis will be conducted. The slope-stability studies will be per HCFCD Requirements. o Computerized slope-stability recommendations for short-term, long-term and rapid draw down conditions. o Boring logs per HCFCD format. o Recommended slope ratios and erosion protection. o Recommendations on subsoil dispersive characteristics. o Seepage and bottom blow up recommendations.

Facility	Recommendations
Detention Pond (Optional)	o OSHA soil classification for the trench safety. o Trench safety report o Erosion recommendations, including the use of grass for erosion protection. o Recommendations on subsoil stabilization, if necessary. o Recommendations on the use of excavated materials as fill, per HCFCD requirements. o Recommendations on earthwork, select fill and construction procedures. o Recommendations on site drainage. o Constructability considerations.

COST ESTIMATE

General

Based on the scope of work outlined above, we estimate the cost for field, laboratory, and engineering services based on the Harris County Fee Schedule as shown on Plates 3 through 6. This estimate assumes underground obstructions will not be encountered that require boring relocations. GET is not responsible for damages to underground utilities, man-made utilities, etc. In the event that concrete, rock/rubble is encountered, the boring(s) will be terminated. We understand that all of the boring elevations will be provided by the client prior to completion of GET report. Our cost estimate includes one draft report copy and one final report copy. A digital copy of the report will also be provided. Additional report copies will be provided at a separate charge.

Underground Utilities

The cost estimate for geotechnical services assumes that underground obstructions will not be encountered during boring that requires boring relocation(s). GET will contact Texas 811 for the presence of underground utilities. However, Texas 811 does not have information regarding the presence of underground utilities inside the properties. GET is not responsible for damage to underground utilities, man-made objects, etc., that are not identified by Texas 811. The scope of our work does not include subsurface utility engineering. We recommend the scope of our work to include subsurface utility investigation at boring locations to assess that underground utilities are not hit during field exploration.

Traffic Control Allowance

The cost estimate for traffic control is only an allowance. The actual cost may be lower or higher, depending on access, pavement thickness, strength and daily production. GET is prepared to use any qualified traffic control subcontractor specified by the client. **Our estimated traffic control schedule is as follow:**

	Day	Services
	2.0	Drilling and Sampling, Borehole Grouting
Total:	2.0	

Cost Summary

A summary of estimated cost is presented below:

Scope of Work	Estimated Cost	Cost Breakdown Plate(s)
Geotechnical Exploration for Paving and Storm Sewer	39,428.00	3 – 4
ATV Rig (allowance)	700.00	4
Traffic Control (allowance)	2,640.00	4
Subtotal	$ 42,768.00	
Geotechnical Exploration for a detention pond (optional)	34,195.00	5 – 6
ATV Rig (allowance)	750.00	6
Piezometer Installation	2,112.00	6
Subtotal	$ 37,057.00	
Grand Total	**$ 79,825.00**	

REPORT REVIEWS AND COMMENTS

Our report will be submitted to Gradient Group, LLC in a draft form for comments. Once these reviews are completed, a final report will be issued. All of these comments will be incorporated in the final report. The client agrees that all reviews are complete once a notice for a final report is issued. Any changes to the final report will be outside the scope of our study. We will incorporate any future comments after the final report is issued on a time and materials basis per the applicable fee schedule.

TIME SCHEDULES

We estimate that the field work can be started about one (1) week after authorization is received. The project schedule will be as follows:

Facility	Right of Way/Utility Clearance	Field Exploration	Laboratory Testing	Engineering	Total
Paving and Utilities	10	10	15	25	60
Detention Pond (Optional)	10	10	20	25	65

Preliminary recommendations will be submitted during the course of the exploration, if required to expedite design.

We appreciate the opportunity to submit this proposal and look forward to being of service to you on this project. Formal acceptance of this proposal and our general conditions can be acknowledged by signing below and returning one copy for our files.

Very truly yours,

GEOTECH ENGINEERING AND TESTING
TBPE Registration Number F-001183

James Namekar, Ph D., P.E.
Chief Engineer

ACCEPTED BY:_____

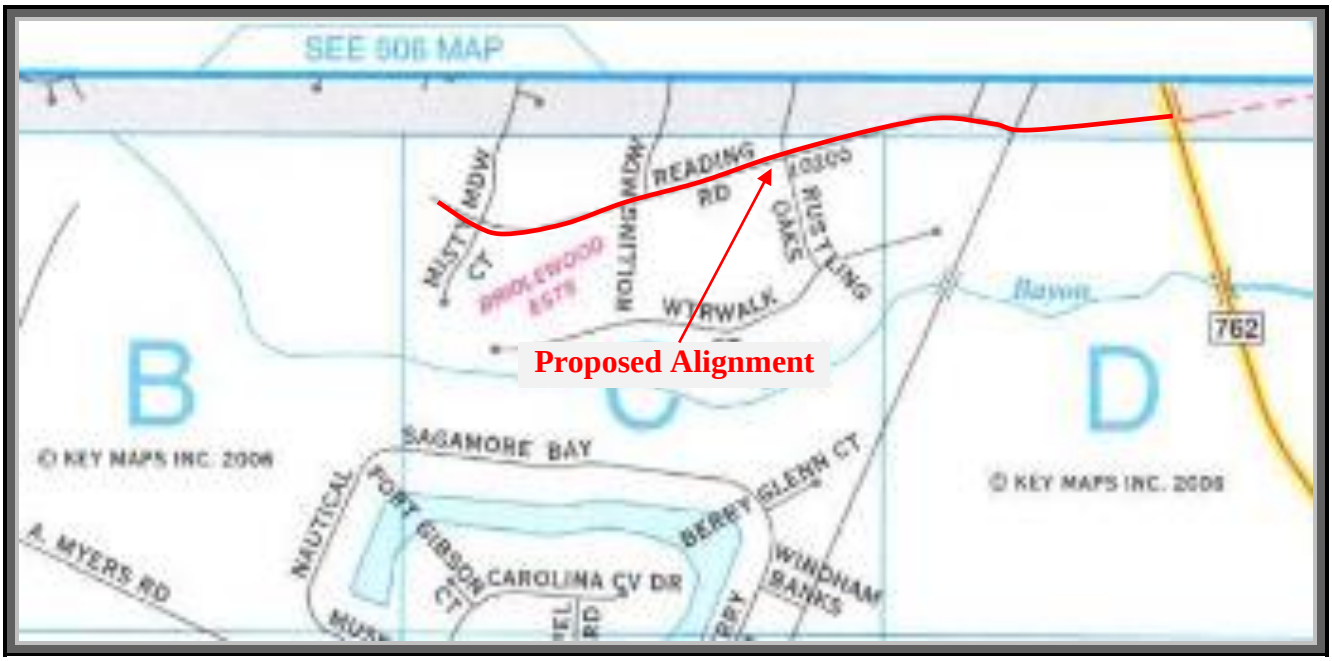
COMAPANY NAME: _____

PRINTED NAME:_____

DATE:_____

Enclosures: Site Vicinity Map – Plate 1
Plan of Borings – Plate 2
Cost Estimate – Plates 3 and 4
Traffic Control Estimate
General Conditions
Harris County Fee Schedule

Copies Submitted: (1) Gradient Group LLC - Ms. Stephanie Anderson, P.E., ENV SP
(1) DAE



SITE VICINITY MAP

NORTH

PROJECT: Additional Geotechnical Study for Reading Rd. Paving and Drainage Improvements between FM 762 & Bridlewood Rd.
FBC Project No. 20109, Fort Bend County, Texas

SCALE: NOT TO SCALE	DATE: FEBRUARY 2023	PROPOSAL NO.: 21-071E-1

- **B-1 through B-5: Previously drilled Borings B-1 through B-5 for roundabouts and tapers**
- **B-6 through B-15: Proposed borings to be drilled for pavement improvements**

PLAN OF BORINGS (Boring locations are approximate)			NORTH
PROJECT: Additional Geotechnical Study for Reading Rd. Paving and Drainage Improvements between FM 762 & Bridlewood Rd. FBC Project No. 20109, Fort Bend County, Texas			
SCALE: NOT TO SCALE	DATE: FEBRUARY 2023	PROPOSAL NO.: P21-071-1	

Estimated Cost Summary (Detailed)
Additional Geotechnical Study
Reading Road Paving and Drainage Improvements
Fort Bend County, Texas

P21-071

Consultant Proposal Breakdown

GEOTECH ENGINEERING AND TESTING Date: March 8, 2023		Principal Engineer	Senior Engineer	Project Engineer	Field Technician	Typing/ Drafting	Unit of Measure	Estimated Quantity	Rate	Subtotal (Cost $)
		Billing Rate per Hour								
Based on Harris County Fee Schedule		**$250.00**	**$205.00**	**$165.00**	**$65.00**	**$70.00**				
Task No.	**Task Description**	*** L E V E L O F E F F O R T**								
Project Initiation upon Receiving NTP										
1	Review of the scope of the work	2	3	2						$1,445.00
									Subtotal	**$1,445.00**
Paving and Utilities along project alignment, 15 Borings (Augering to 10-ft in previously drilled borings B-1 through B-5)										
Field Investigation										
2	Develop a Drilling Plan			1						$165.00
3	Staking the Fifteen (15) Borings in the Field		0.5	7						$1,257.50
4	Coordinate with Surveyors to Locate & Tie in Borings at Site			1						$165.00
5	Field Coordination during Drilling Including Utility Clearance, Texas One Call, and/or obtain drilling permission		0.5	8						$1,422.50
6	Mobilization / Demobilization						LS	1	$700.00	$700.00
7	Drilling and Sampling Fifteen (15) Borings									
8	Continous (0' - 15')						LF	175	$25.00	$4,375.00
9	Augering (0' - 10') (5 previously drilled borings to 10-ft)						LF	50	$13.00	$650.00
10	Borehole Grouting						FT	225	$12.00	$2,700.00
11	Technician, Logging Borings, Borehole cleaning and Water Level Reading				25					$1,625.00
12	Vehicle Charge (Boring staking, site visits during field coordination during drilling including utility clearance, Texas One Call etc., and borehole logging and grouting)						HR	41	$12.00	$492.00
									Subtotal	**$16,442.00**
Laboratory Testing										
13	Assign Laboratory Tests, Looking at Soil Samples			4						$660.00
14	Data Reduction and Evaluation			1						$165.00
15	Water Content (all samples)						EA	95	$11.00	$1,045.00
16	Liquid and Plastic Limits						EA	18	$71.00	$1,278.00
17	Percent Passing #-200 Sieve						EA	18	$55.00	$990.00
18	Torvane						EA	95		$0.00
19	Hand Penetrometer						EA	95		$0.00
20	Unconfined Compression						EA	18	$51.00	$918.00
									Subtotal	**$5,056.00**

Estimated Cost Summary (Detailed)
Additional Geotechnical Study
Reading Road Paving and Drainage Improvements
Fort Bend County, Texas

P21-071

Consultant Proposal Breakdown

GEOTECH ENGINEERING AND TESTING Date: March 8, 2023		Principal Engineer	Senior Engineer	Project Engineer	Field Technician	Typing/ Drafting	Unit of Measure	Estimated Quantity	Rate	Subtotal (Cost $)
		Billing Rate per Hour								
Based on Harris County Fee Schedule		**$250.00**	**$205.00**	**$165.00**	**$65.00**	**$70.00**				
Task No.	**Task Description**	***LEVEL OF EFFORT**								
Engineering Analysis and Report										
21	Prepare Plan of Borings			1						$165.00
22	Analyze field and laboratory test results			2						$330.00
23	Prepare summary of laboratory test data			1						$165.00
24	Edit and prepare final boring log profiles			14						$2,310.00
25	Prepare and develop boring log profiles			1						$165.00
26	Develop concrete pavement design based on traffic loading	0.5	2	6						$1,525.00
27	Recommendations on undergraound utilities		1	5						$1,030.00
28	OSHA soil classification for the trench safety and Trench Safety		3	6						$1,605.00
29	Document the results of soil exploration, laboratory testing and geotechnical recommendations in a geotechnical draft report	4	10	24						$7,010.00
30	Responding to comments	1	2	4						$1,320.00
31	Technical Typing/Drafting					8				$560.00
32	Report Reproduction Allowance									$300.00
									Subtotal	**$16,485.00**
									Total:	**$39,428.00**
ALLOWANCE ITEMS										
Traffic Coordination/Allowance										
33	Traffic Control (cost + 10%)						DAY	2	$1,320.00	$2,640.00
									Subtotal	**$2,640.00**
ATV Rig Allowance										
34	Mobilization/Demobilization						LS	1	$250.00	$250.00
35	Drilling and Sampling Surcharge (Boings on grass near FM 762)						FT	45	$10.00	$450.00
									Subtotal	**$700.00**
									Total:	**$3,340.00**
									Grand Total:	**$42,768.00**

Plate 4

8311 N 53rd St, Paradise Valley, AZ 85253

Phone: 713.476.9300 / Fax: 713.677.0223
estimating@RTSrents.com

ESTIMATE

Letting Date:	Estimate #
2/16/23	3522

Customer / Project:

Geotech Engineering and Testing
17407 US Hwy 59
Houston, Texas 77396

Project Location:

Project Location:
FBC
Reading Rd

Bid Item	Description	Qty	Rate	Total
Lane Clos...	Daily Traffic Control Operations / Devices & Labor - 2 Flagger	1	1,200.00	1,200.00T
	Non-Taxable Sale		0.00	0.00

Total: $1,200.00

Any contract entered into as a result of this quotation shall contain the following indemnity language:

"Contractor shall indemnify and hold harmless the Subcontractor and its officers, agents, and employees from all suits, actions, losses, damages, claims or liability of any character, type or description, including without limiting the generality of the foregoing all expenses of litigation, court costs, and attorney's fees provided such claims, damages and reasonable expenses are attributable to injury or death to any person, or injury to any property, received or sustained by any person or persons or property, arising out of, or occasioned by the negligent acts of subcontractor or its agents or employees, in the execution or performance of this contract. Subcontractor's obligation to indemnify contractor shall extend only to the percentage of negligence of subcontractor in contributing to such claims, demands, liabilities or reasonable expenses."

•Contractor is responsible for daily servicing to insure all traffic control devices are placed per TCP. Daily maintenance and movement of devices is excluded from agreement.
•Sales tax will be billed accordingly unless a tax exemption certificate is provided.
•Equipment lease quantity is based on the actual time the equipment is on the project, not the quantity as paid by the project owner(s).
•Regional Traffic Services requires a (2) week notice prior to initial mobilization.
•Proposal excludes AGC dues and performance bonds.
•Proposals of less than $10,000 shall not have retainage withheld.
•Additional insurance cost(s) are not included.
•Project bonding information shall be furnished by Contractor prior to mobilization.

Estimate does not include any incidentals. Regional Traffic Services, LLC. will provide a proposal including cost estimates for any additional work, as the need arises. Should any unforeseen or physical latent conditions be encountered during the installation(s) / rental term, an additional proposal will be submitted to your Contract Administrator. Total price does not include Lane Closures, Police Officers, Flaggers, Arrowboards, Messageboards, Roll-Up Signs and Stands, Attenuators, Concrete/Water Barrier, Project Signs, Informational Guide Signs, Bridge/Rail Sign Mounts or any Work Zone Pavement Markings. (Unless otherwise stated). MINIMUM PAVEMENT MARKINGS MOBILZATION CHARGE $1,850.00.

Accepted By:

Name:_____

Title: _____

Signature:_____