EXHIBIT "2A"

Fair Oaks Ranch
Pape-Dawson Task Order 4 (v2.0)
Dietz-Elkhorn (East) Reconstruction (Schematic Design)

PROJECT DESCRIPTION

The City of Fair Oaks Ranch (FOR) capital improvement project number 5 is the reconstruction of Dietz-Elkhorn Road from Fair Oaks Parkway to FM 3351 "Ralph Fair Road." The project, as it is programmed, includes the addition of dedicated pedestrian sidewalks as well as dedicated bicycle and golf cart paths. The estimated project construction cost is approximately $3.2M.

There are areas of the programmed improvements such as the removal of the traffic calming curves which need further study prior to defining the scope of construction. Similarly, defining the desired right-of-way and typical section are integral to the cost of the construction. Therefore, the following scope of work has been prepared to complete a schematic design and cost estimate. It is anticipated that the project budget and construction scope will be confirmed through this process.

Dietz-Elkhorn Road is a collector roadway as defined by Transportation Plan document within the City Comprehensive Plan. The Transportation Plan was developed in response to the city's Comprehensive Plan which provides further requirements for this project. Elements of the City of Fair Oaks Ranch Comprehensive Plan dated June 2018 which affect the design of Dietz-Elkhorn are summarized below:

- Expand access to sidewalks and pedestrian path
- Consider even more opportunities for other ways to move around the community, such as bicycle paths, golf cart lanes, horse paths, and shared paths.
- Search for and seize opportunities to create streets and regional arteries that complement the Fair Oaks vision – incorporating trees, landscaping, pedestrian (and alternative vehicle) needs, speed control, and environmental sensitivity into local road planning and regional negotiations; strive to protect neighborhoods from unnecessary noise.
- Actively work with TXDOT and others to ensure a transportation network that serves Fair Oaks Ranch citizens and their needs and wants.
- The City embraces the general idea of Sensitive Solutions process and Sensitive Design for all Arterial and Collector street construction and expansion within the City that are not otherwise part of a public platting process. The issues Fair Oaks residents are concerned about:
    - Sound attenuation
    - Multi-use paths for pedestrians, bicycles and possibly horses
    - Drainage
    - Sensitive lighting
    - Wayfinding and signage
    - Crosswalks and bridges with local design elements
    - Appropriate access
    - Turn lanes, or acceleration-deceleration lanes, for safety
    - Traffic calming elements and speed limits appropriate to the context of the city
    - Incorporation of low impact design (LID) standards or other best management practices (BMPs) and safeguards for the City's natural resources, including water, wildlife, trees, and natural beauty
    - Lane design and capacity-sizing that is appropriate to the location and the surrounding context
    - Timely construction, maintenance.

Pape-Dawson will perform the roadway design, hydrologic and hydraulic analysis, survey, and cultural resource surveys. Pape-Dawson will subcontract with the following firms for the following services:

- Terracon—Geotechnical exploration & recommendations.
- Laura Raun—Public involvement.

SCOPE OF WORK

Basic Services

1) Project Management

a) CONSULTANT is to develop and maintain a project schedule using Microsoft Project. The schedule is to indicate a minimum of the progress toward draft deliverables to CLIENT, CLIENT review time, and progress toward final deliverables.
b) CONSULTANT is to conduct internal coordination to allocate resources to make progress towards deliverables.
c) CONSULTANT is to coordinate with sub-consultants to facilitate the sharing of information and measure progress toward deliverables.
d) CONSULTANT is to prepare monthly invoices to include progress reporting since the prior invoice. Progress reporting will indicate key issues or concerns as well as anticipated work during the following billing period.
e) CONSULTANT is to prepare for and host monthly virtual client coordination meetings to discuss decision points, information needs, and conduct general coordination. The estimated duration for this phase is 12 months.

2) Field Surveying

a) CONSULTANT shall complete a control, improvement, topographic, and utility survey within the right-of-way of Dietz Elkhorn and 50-feet south and 20-feet north, from Fair Oaks Ranch Parkway to FM 3351 using both conventional and geospatial data collection methods.
b) CONSULTANT shall verify existing control and set new control as needed, including one pair of primary control points.
c) CONSULTANT shall survey, annotate, and incorporate existing improvements within a MicroStation 2D planimetric drawing to include, but not be limited to, paved areas, paint stripes, fences, driveways, drainage structures, mailboxes, signs, and structures.
d) CONSULTANT shall survey, annotate, and incorporate visible evidence of utilities and paint markings within a MicroStation 2D planimetric drawing. CONSULTANT is to complete Statewide One-Call requests for marking of utilities. CLIENT is to mark water line locations.
e) CONSULTANT shall survey trees having a diameter of 9-inches or larger within the project area and represent in the MicroStation planimetric drawing to include size and type.
f) CONSULTANT shall survey grade changes at a maximum 100-foot interval and represent within the MicroStation planimetric as 1-foot contours and flow line elevations at drainage structures.
g) CONSULTANT shall annotate control points with descriptions, northings, eastings, elevations, as well as a surveyor's metadata note within the MicroStation planimetric drawing. Metadata shall include the horizontal projection, vertical datum and geoid, and the site-specific grid to surface adjustment factor and point of application.
h) CONSULTANT to provide survey notes, raw data, processed data files and site photographs in the deliverables package.

Deliverables

- Design survey in both MicroStation 3D and 2D format.
- Utility survey in MicroStation 2D format.
- TIN file.
- Field returns (point files, raw files, field sketches and photographs).

Assumptions

- Survey work shall be performed under the direct supervision of a professional land surveyor, registered to practice land surveying in the State of Texas.
- Control points shall be stable, inter-visible, and constrained to the North American Datum of 1983 (NA2011), epoch 2010.00 and the North American Vertical Datum of 1988 (GEOID 18), unless directed otherwise.

3) Right-of-Way Surveying

a) CONSULTANT to obtain title reports and conduct abstracting and deed research for up to 10 parcels.
b) CONSULTANT to is to survey, annotate, and prepare a parcel map showing the general limits of ownership and easements within the project limits.
   i) Generally based upon apparent ROW.
   ii) Based upon recorded plats.

Deliverables:

- Apparent ROW exhibit.

4) Roadway Design

a) CONSULTANT is to prepare for a project kick-off meeting with CLIENT and GEC. During the kick-off meeting key project design components such as design speed, public involvement, required facilities vs. optional, etc.
b) CONSULTANT is to conduct a site visit for general awareness of the conditions which contribute to the proposed design.
c) CONSULTANT is to prepare for and attend an in-person public meeting #1 at City Hall.
d) CONSULTANT is to prepare a council brief following the first public meeting to provide a summary of the feedback received from residents during the first public meeting.
e) CONSULTANT is to prepare a maximum of three (3) alternative typical roadway sections. Typical roadway sections are to incorporate geotechnical recommendations, traffic study, drainage analysis results, and constraints from survey.
f) CONSULTANT is to present alternative typical sections to CLIENT and GEC to gain feedback for further refinement into schematic roadway layouts.
g) CONSULTANT is to prepare a maximum of two (2) alternative schematic roadway roll plots. The schematic roadway layouts are to show intersection configurations based on traffic analysis, striping layouts, face of curb or edge of pavement, pedestrian pathways, dedicated bicycle and/or golf-cart paths, and vehicular lanes with direction of travel.
   i) CONSULTANT is to determine the proposed grade line (PGL) for use in determining the end condition (e.g. retaining wall, ditch, or grade to daylight) used for determining the needed right-of-way width.

ii) CONSULTANT is to consider site distance at intersections to determine if corner clips are required. Where required site distances cannot be achieved, limited site distance intersections are to be noted on the plan.
iii) CONSULTANT is to identify right-of-way needed and locations thereof.
iv) CONSULTANT is to identify limits of reconstruction, widening, and rehabilitation.

h) CONSULTANT is to submit schematic roll plots to CLIENT and GEC for review three weeks prior to public meeting. CONSULTANT is to receive comments from CLIENT and GEC no later than one week prior to public meeting.
i) CONSULTANT is to revise the schematic roll plots and prepare presentation boards.
j) CONSULTANT is to prepare for and attend an in-person public meeting #2 at City Hall.
k) CONSULTANT is to prepare a council brief following the second public meeting to provide a summary of the feedback received from residents during the first public meeting.
l) CONSULTANT is to incorporate comments from public meeting at the direction of CLIENT and GEC and prepare the preferred alternative schematic for final submittal.
m) CONSULTANT is to complete a MicroStation OpenRoads corridor model of the preferred alternative only. The OpenRoads corridor model is to be used for checking roadside grading feasibility and determining quantities of unclassified excavation.
    (1) Template drops will be at a minimum distance of 100-feet;
    (2) Intersection grading and driveway profiles are not included;
    (3) Includes modeling of one pavement section for determining cut and fill to subgrade.
n) CONSULTANT to conduct a quality control review using the Pape-Dawson Quality Control Plan.

Deliverables

- Typical roadway sections (max 3)
- Draft schematic roll plots (max 2)
- Public meeting schematic roll plots (max 2)
- Preferred alternative schematic roll plot

Assumptions

- Design speed will be 10 miles per hour over the posted speed limit. Design speed is to be confirmed during project kick-off meeting.

5) Drainage Analysis

a) CONSULTANT to visit the project site to review existing conditions and prepare memorandum summarizing items of note.
b) CONSULTANT to develop overall drainage area map.
c) CONSULTANT to use GeoPak Drainage to model alternative for storm sewer and display trunk layout and profile on a roll plot.
    i) Storm drains to be designed to maintain an HGL a minimum of 1-foot below the proposed ground for the 25-year design event.
    ii) Storm drain calculations are limited to main sizing and are not to include inlet capacity calculations.
    iii) Discharge is to be added at a minimum of 300-foot intervals.
d) CONSUTLANT to size three (3) cross culverts for the 25-year event and perform a check run of the 100-year event for impacts to adjacent properties:
    i) HEC-RAS 1D steady-state will be used for the existing culvert near Windermere Drive.

ii) HEC-RAS 2D is to be used to size a proposed culvert near No Lehace Drive. The downstream limit of the model is to be the Fair Oaks Ranch Golf Course downstream of No Lehace Drive.
iii) HEC-RAS 2D is to be used to size a proposed culvert near Chartwell Lane. The model limits will be within the proposed right-of-way.

e) CONSULTANT is to develop a preliminary cross culvert layout showing the proposed roadway, right-of-way, design storm and check storm headwater and tailwater, proposed profile showing the proposed grade, size of culvert, and headwall configuration.
f) CONSULTANT to document assumptions in a schematic drainage report for the project.
g) CONSULTANT to conduct a quality control review using the Pape-Dawson Quality Control Plan.
h) CONSULTANT to submit schematic drainage report for one (1) review by City. CONSULTANT to address comments receive and submit a final version.

Assumptions:

- CONSULTANT assumes the hydraulic criteria is to be established by, in order of priority and resolving conflicts, the city of Fair Oaks Ranch code of ordinances, City of San Antonio Storm Water Design Criteria Manual and TxDOT Hydraulic Design Manual (HDM).

Deliverables:

- Site visit memo
- Overall Drainage Area Layout
- Drainage Plan & Profile Roll Plot
- Cross Culvert Layouts (3-11" x 17" @ 1" = 40')
- Schematic drainage report.

6) Utility Coordination

a) CONSULTANT to contact statewide One-Call and request list of utilities within limits of project. CONSULTANT is to contact listed utilities to obtain record maps and as-builts. The record maps and as-builts are to be used in conjunction with field survey information to create an existing utility base map;
b) CONSULTANT to use the existing utility base map and review of the proposed design to prepare a preliminary utility conflict matrix and identify need for additional SUE information.
c) CONSULTANT to prepare exhibits and an agenda for preliminary utility coordination meetings. Objectives for these meetings is to be:
i) Obtain design requirements for potential encroachments into existing easements and rights-of-way;
ii) Modify the proposed design to avoid conflicts which may increase cost or schedule of project;
iii) Where conflicts cannot be avoided, discuss the scope, schedule, and budget for adjustments.

Deliverables:

- Preliminary utility conflict matrix.
- Notes from first contact coordination.

Assumptions:

- The scope of utility coordination is limited.
- Utility coordination is a continuous effort throughout the entire design phase, therefore further utility coordination will be required in future design phasing not defined in this scope. Including

identification of potential utility conflicts not yet located or mapped. Resolution of those conflicts is assumed to occur in future phases of the design of the project.

7) Geotechnical Analysis

a) See proposal from Terracon

8) Cost estimating

a) CONSULTANT is to conduct a quantity take-off for items that can be identified and prepare an engineer's opinion of probable construction cost for a maximum of two (2) draft schematic alternatives. The estimate is to include a contingency of no less than 40% reflecting items that cannot be quantified for cost.

b) CONSULTANT is to conduct a quantity take-off for items that can be identified and prepare an engineer's opinion of probable construction cost for the preferred schematic alternative. The estimate is to include a contingency of no less than 30% reflecting items that cannot be quantified for cost.

Assumptions:

- Estimates are to be based on publicly available roadway construction unit cost data such as TxDOT.

Optional Services

1) Cultural Resource Survey

a) CONSULTANT anticipates the project is to require compliance with the Antiquities Code of Texas (ACT) (Texas Natural Resource Code, Title 9, Chapter 191) and accompanying Rules of Practice and Procedure (Texas Administrative Code, Title 13, Chapter 26) as implemented by the Texas Historical Commission.

b) CONSULTANT to obtain an Antiquities Permit from the Texas Historical Commission (THC) in compliance with the ACT. This permit to include a research design detailing the project approach and proposed archaeological methods. Data gathered from the cultural resources background study to be included in the research design accompanying the permit application.

c) CONSULTANT to perform a background literature and records review to determine if the proposed project area was previously investigated for cultural resources and to identify cultural resources recorded within a review area not-to-exceed a 1-km (0.6-mi) radius from the proposed project area.

d) CONSULTANT to include data from the THC online Historic and Archaeological Sites Atlas to identify previously recorded archaeological sites, NRHP-listed properties and districts, State Antiquities Landmarks (SALs), Official Texas Historical Markers (OTHMs), Recorded Texas Historic Landmarks (RTHLs), National Park Service (NPS) Historic Trails, and cemeteries within the review area.

e) CONSULTANT to examine soil, geological, and environmental data, as well as recent and historic-age maps and aerial photographs available online, and historical topographic and aerial imaging, as applicable.

f) CONSULTANT to conduct an intensive archaeological survey supplemented by systematic shovel testing. Archaeologists to observe the ground surface along evenly spaced transects and erosional exposures along drainage features for cultural materials, archaeological features, and historic

structures. Subsurface investigations to be performed in locations with the potential to contain buried cultural materials and/or archaeological features.

g) CONSULTANT to conduct a targeted chain of title search for the property along with select census research to identify potential occupants associated with the historic-age resource(s) limited to the time period associated with observed artifacts, structures, and/or features and chain of title research not to exceed one tract of land. Results of the archival research to be included in the report.
h) CONSULTANT to produce a report per the Council of Texas Archaeologist guidelines. The report to detail the methods and results of the field efforts and include maps showing the location of recorded archaeological site and/or historic-age structure(s). In addition, the report to include eligibility assessments of significance if archaeological sites are present within the project area.
i) CONSULTANT to prepare collected materials and field-generated paperwork in accordance with THC requirements for State Held-in-Trust collections and submitted to the Center for Archeological Research at the University of Texas at San Antonio upon acceptance of the final report pursuant to requirements in the permit.

Deliverables

- Antiquities Permit from the Texas Historical Commission (THC) in compliance with the ACT.
- Report detailing field efforts per Council of Texas Archaeologists guidelines.
- Final curation of collected materials and field-generated paperwork in accordance with THC requirements.

Assumptions:

- Curation and consultation or coordination with THC for significant cultural deposits, features, or foundations are not included.
- Compliance with Section 106 of the National Historic Preservation Act for federally funded projects is not included.

2) Public Involvement

a) See proposal from Laura Raun

Overarching Assumptions:

- CONSULTANT understands the completion of the performance of this scope to represent roughly 30% of overall project development.

COST

BASIC SERVICES			
1.	Project Management	*Lump Sum*	*$24,350*
2.	Field Surveying	*Lump Sum*	*$50,015*
3.	Right-of-way Surveying	*Lump Sum*	*$12,415*
4.	Roadway Design	*Lump Sum*	*$83,320*
5.	Drainage Analysis	*Lump Sum*	*$56,410*
6.	Utility Coordination	*Lump Sum*	*$33,020*
7.	Geotechnical Analysis	*Lump Sum*	*$10,320*
8.	Cost Estimating	*Lump Sum*	*$14,625*
		Subtotal (Labor)	***$284,475***
OPTIONAL SERVICES			
1.	Cultural Resource Survey	*Lump Sum*	*$20,050*
2.	Public Involvement	*Lump Sum*	*$37,970*
		Subtotal (Labor)	***$58,020***
	Other Direct Costs	*As incurred*	*$7,050*
		GRAND TOTAL:	**$349,545**

SCHEDULE

Schedule to be provided within 30 days of notice-to-proceed (NTP).

BASIC SERVICES				
1	Project Management	*Lump Sum*	*$*	*24,350.00*
2	Field Surveying	*Lump Sum*	*$*	*50,015.00*
3	Right-of-way Surveying	*Lump Sum*	*$*	*12,415.00*
4	Roadway Design	*Lump Sum*	*$*	*83,320.00*
5	Drainage Analysis	*Lump Sum*	*$*	*56,410.00*
6	Utility Coordination	*Lump Sum*	*$*	*33,020.00*
7	Geotechnical Analysis	*Lump Sum*	*$*	*10,320.00*
8	Cost Estimating	*Lump Sum*	*$*	*14,625.00*
		Subtotal (Labor)	**$**	**284,475.00**
OPTIONAL SERVICES				
1	Cultural Resource Survey	*Lump Sum*	*$*	*20,050.00*
2	Public Involvement	*Lump Sum*	*$*	*37,970.00*
		Subtotal (Labor)	**$**	**58,020.00**
	Other Direct Costs	*As incurred*	*$*	*7,050.00*
		GRAND TOTAL:	**$**	**349,545.00**

	PD Project No. 12692-04 Project Name: TO#4 Dietz-Elkhorn Road Pape-Dawson Engineers	Total Task Hours	Total Task Cost	Sr. Manager / Engineer	GIS Analyst	Project Engineer	EIT IV	EIT II	Project Surveyor	TECHNICIAN	2-PERSON CREW	3-PERSON CREW	Operations/Clerical	Expenses
				$ 235	$ 125	$ 185	$ 140	$ 130	$ 220	$ 115	$ 195	$ 260	$ 85	
Basic Services														
1)	**Project Management**		$ 24,350.00											
a)	Maintain project scehdule	10	$ 2,050.00	8									2	$ -
b)	Conduct internal coord. (6 hours/month, meetings)	26	$ 5,810.00	24									2	$ -
c)	Coord. w/ sub-consultants	26	$ 5,810.00	24									2	$ -
d)	Prepare monthly invoices	10	$ 2,050.00	8									2	$ -
e)	Host monthly client coord. Meetings (12 months @ 2 hrs/per + 1 hr travel)	38	$ 8,630.00	36									2	$ -
2)	**Field Surveying**		$ 50,015.00											
a)	Collect design survey data using UAV and LiDAR methods.	82	$ 12,180.00	1	55				6	10		10		$ -
b)	Verify existing and set new control	42	$ 8,940.00						6	12		24		$ -
c)	Survey improvements	25	$ 4,850.00						5	10		10		$ -
d)	Survey above ground evidence of utilities, Texas 811 marks, and valve and manhole inverts.	36	$ 7,145.00						1	15		20		$ -
e)	Survey and trees 9" or larger.	26	$ 5,520.00						2	8		16		$ -
f)	Survey grade changes at maximum 100-foot intervals; represent as 1-foot contours and flow line elevations at drainage structures.	40	$ 8,550.00						10	10		20		$ -
h)	Create 11x17 control layout sheets for incorporation in the plan set	13	$ 2,035.00	1					4	8				$ -
i)	Organize and package field data and site photos in deliverables.	6	$ 795.00						1	5				$ -
3)	**Right-of-way Surveying**		$ 12,415.00											
a)	Create right-of-way reference file	85	$ 12,415.00	1					24	60				$ 3,000.00
4)	**Roadway Design**		$ 83,320.00											
a)	Kick-off meeting w/ CLIENT & GEC	4	$ 940.00	4										$ -
b)	Conduct site visit	8	$ 1,680.00	4		4								$ 50.00
c)	Prepare for and attend public meeting #1	18	$ 3,830.00	10		8								$ 100.00
d)	Prepare and present Council brief of public meeting #1	6	$ 1,410.00	6										$ -
e)	Prepare prelim. typ. roadway sections (max. 3)	56	$ 7,360.00	4		4	4	4		40				$ -
f)	Present alt. typ. to CLIENT & GEC	8	$ 1,680.00	4		4								$ 100.00
h)	Prepare alt. schematic roadway layouts (max. 2)	154	$ 23,310.00	10		40	40	40		24				$ 100.00
j)	Revise schematic roll plots & attend public meeting	38	$ 5,930.00	2		12	12	12						$ 100.00
k)	Prepare for and attend public meeting #2	20	$ 4,300.00	12		8								$ -
l)	Prepare and present Council brief of public meeting #2	8	$ 1,880.00	8										$ 50.00
m)	Prepare preferred alt. schematic	80	$ 11,880.00	4		20	20	20		16				$ -
n)	OpenRoads corridor model (pref. alt. ONLY)	128	$ 19,120.00			40	40	40		8				$ -
5)	**Drainage Analysis**		$ 56,410.00											
a)	Visit project site	6	$ 1,110.00			6								$ 50.00
b)	Develop overall drainage area map	22	$ 3,570.00	2		8	6	6						$ -
c)	Model alt storm sewer	76	$ 12,260.00	12		16	24	24						$ -
d)	Size three cross culverts	52	$ 8,220.00	4		16	16	16						$ -
e)	Develop preliminary cross culvert layouts (3 sheets)	68	$ 10,380.00	4		16	24	24						$ -
f)	Draft schematic drainage report	92	$ 16,100.00	12		60				16			4	$ -
g)	Final schematic drainage report	30	$ 4,770.00	2	8	16							4	$ -
6)	**Utility Coordination**		$ 33,020.00											
a)	Contact potentially affected utilities and obtain maps/records	40	$ 5,800.00			24							16	$ -
b)	Existing utility base map & preliminary conflict matrix	108	$ 16,180.00	4		24	40	40						$ -
c)	Prepare for and attend prelim. utility coord. Meetings (min. of 12 meetings @ 1 to 2 hrs ea)	64	$ 11,040.00	24			20	20						$ -
8)	**Cost Estimating**		$ 14,625.00											
a)	Conduct prelim. quantity take-offs & estimate (max. 2)	50	$ 9,750.00	10		40								$ -
b)	Conduct final schem. quantity take-offs & estimate (1)	25	$ 4,875.00	5		20								$ -
LABOR TOTAL				250	63	386	246	246	59	242	0	100	34	$ 3,550.00

Sub-Total Labor (Pape-Dawson) **$ 274,155.00**

Total Fee **$ 274,155.00**

	PD Project No. 12692-04 Project Name: TO#4 Dietz-Elkhorn Road Terracon	Total Task Hours	Total Task Cost	Principal	Project Professional IV	Sr. Engineer	Staff Engineer	Engineering Tech (II)	Engineering Tech (IV)	Lab Testing	Administrative	No. of Sheets	$/Sheet	Hrs./Sheet	Expenses
				$ 215	$ 160	$ 190	$ 120	$ 70	$ 95	$ 2,000	$ 55				
Basic Services															
7)	**Geotechnical Analysis**		$ 10,320.00												
a)	Initial Project Setup, Scope and Safety Review	0	$ -												$ -
b)	Site Reconnaissance (Staking, Meet with Utility Locators)	5	$ 520.00			1	1	3							$ -
c)	DCP testing	32	$ 2,640.00					16	16						$ -
d)	Pavement Assessment	6	$ 1,140.00			6									$ -
e)	Traffic Control (two days)	0	$ -												$ -
f)	Asphalt Coring	8	$ 560.00					8							$ -
g)	Drilling and sampling	17	$ 1,240.00				1	16							$ -
h)	Lab Testing inculding Lime and CBR	1	$ 2,000.00							1					$ -
i)	Drilling Subcontractor	0													$ 3,500.00
j)	Final Report	16	$ 2,220.00	1	5	1	8				1				$ -
LABOR TOTAL				1	5	8	10	43	16	1	1				$ 3,500.00

Sub-Total Labor:	**$ 10,320.00**
Sub-Total Expenses	**$ 3,500.00**
Total Fee	**$ 13,820.00**

PD Project No. 12692-04 Project Name: TO#4 Dietz-Elkhorn Road	Total Task Cost	Title Reports $ 300.00	Traffic Counts 24 hour Loop detector EA $ 190.00	Turning Movement Traffic Count/ HR $ 170.00	Mileage $ 0.63	Postage $ 15.00
Labor						
1) Project Management	$ -					
a) Maintain project scehdule	$ -					
b) Conduct internal coord.	$ -					
c) Coord. w/ sub-consultants	$ -					
d) Prepare monthly invoices	$ -					
e) Host semi-monthly client coord. meetings	$ -					
2) Field Surveying	$ -					
a) Collect design survey data using UAV and LiDAR methods.	$ -					
b) Verify existing and set new control	$ -					
c) Survey improvements	$ -					
d) Survey above ground evidence of utilities, Texas 811 marks, and valve and manhole inverts.	$ -					
e) Survey and trees 6" or larger.	$ -					
f) Survey grade changes at maximum 100-foot intervals; represent as 1-foot contours and flow line elevations at drainage structures.	$ -					
g) Survey geotech. bore locations	$ -					
h) Create 11x17 control layout sheets for incorporation in the plan set	$ -					
i) Organize and package field data and site photos in deliverables.	$ -					
j) Complete field verification	$ -					
3) Right-of-way Surveying	$ 3,000.00					
a) Obtain title reports and draft record documents (69 parcels)	$ 3,000.00	10				
b) Create right-of-way reference file	$ -					
4) Roadway Design	$ 500.00					
a) Kick-off meeting w/ CLIENT & GEC	$ -					
b) Conduct site visit	$ 50.00				80.00	
c) Prepare for and attend public meeting #1	$ 100.00				160.00	
d) Prepare and present Council brief of public meeting #1	$ -					
e) Prepare prelim. typ. roadway sections (max. 3)	$ -					
f) Present alt. typ. to CLIENT & GEC	$ 100.00				160.00	
g) Coord. w/ TxDOT	$ -					
h) Prepare alt. schematic roadway layouts (max. 2)	$ 100.00				160.00	
j) Revise schematic roll plots & attend public meeting	$ 100.00				160.00	
k) Prepare for and attend public meeting #1	$ -					
l) Prepare and present Council brief of public meeting #1	$ 50.00				80.00	
m) Prepare preferred alt. schematic	$ -					
n) OpenRoads corridor model (pref. alt. ONLY)	$ -					
o) QA/QC	$ -					
5) Drainage Analysis	$ 50.00					
a) Visit project site	$ 50.00				80.00	
b) Develop overall drainage area map	$ -					
c) Model alt storm sewer	$ -					
d) Size three cross culverts	$ -					
e) Develop preliminary cross culvert layouts (3 sheets)	$ -					
f) Draft schematic drainage report	$ -					
g) QA/QC	$ -					
h) Final schematic drainage report	$ -					
6) Utility Coordination	$ -					
a) Contact potentially affected utilities and obtain maps/records	$ -					
b) Existing utility base map & preliminary conflict matrix	$ -					
c) Prepare for and attend prelim. utility coord. meetings	$ -					
7) Cost Estimating	$ -					
a) Conduct prelim. quantity take-offs & estimate (max. 2)	$ -					
b) Conduct final schem. quantity take-offs & estimate (1)	$ -					

Sub-Total Other Direct Costs (Pape-Dawson)	**$**	**3,550.00**
Sub-Total Other Direct Costs (Subconsultants)	**$**	**3,500.00**
Total Other Direct Costs	**$**	**7,050.00**

PD Project No. 12692-04 Project Name: TO#4 Dietz-Elkhorn Road Terracon (Expenses)	Total Task Cost	Sub-Contract Driller	Sub-Contract Traffic Control						Mileage
		$ 3,500.00	$ 6,000.00						
Labor									
7) Geotechnical Analysis									
a) Initial Project Setup, Scope and Safety Review	$ -								
b) Site Reconnaissance (Staking, Meet with Utility Locators)	$ -								
c) DCP testing	$ -								
d) Pavement Assessment	$ -								
e)Traffic Control (two days)	$ -								
f) Asphalt Coring	$ -								
g) Drilling and sampling	$ -								
h) Lab Testing inculding Lime and CBR									
i) Drilling Subcontractor	$ 3,500.00	1							
j) Final Report									
	$ -								

$ 3,500.00

+ Subcontract driller will charge daily rate of $1,550 per day, @ 2 days = $3,100, with markup it is about $3,500

	PD Project No. 12692-04 Project Name: TO#4 Dietz-Elkhorn Road Laura Raun Public Relations	Total Task Hours	Total Task Cost	Sr. Communications Specialist	Asst. Communications Specialist	Graphic Design	Web Programmer	No. of Sheets	$/Sheet	Hrs./Sheet	Expenses
				$ 215	$ 185	$ 135	$ 155				
Optional Services											
2)	**Public Involvement**		$ 32,920.00								
a)	Project Management	14	$ 2,740.00	5	9						$ -
b)	Public Outreach Plan	14	$ 2,770.00	6	8						$ -
c)	Council Briefing #1	8	$ 1,600.00	4	4						$ -
d)	Website	0	$ -								$ -
e)	Community Input/Public Mtg #1	60	$ 11,820.00	24	36						$ 5,050.00
f)	Council Briefing #2	28	$ 4,820.00	8	8	12					$ -
g)	Community Input/Public Mtg #2	16	$ 3,200.00	8	8						$ -
h)	Council Briefing #3	30	$ 5,970.00	14	16						$ -
i)		0	$ -								$ -
LABOR TOTAL				69	89	12	0				$ 5,050.00

Sub-Total Labor:	**$ 32,920.00**
Sub-Total Expenses	**$ 5,050.00**
Total Fee	**$ 37,970.00**

PD Project No. 12692-04 Project Name: TO#4 Dietz-Elkhorn Road Laura Raun Public Relations (Expenses)	Total Task Cost	Travel	Supplies	Refreshment					Mileage
		$ 4,800.00	$ 100.00	$ 150.00					
Labor									
7) Public Involvement									
a) Project Management	$ -								
b) Public Outreach Plan	$ -								
c) Council Briefing #1	$ -								
d) Website	$ -								
e) Community Input/Public Mtg #1	$ 5,050.00	1	1	1					
f) Council Briefing #2	$ -								
g) Community Input/Public Mtg #2	$ -								
h) Council Briefing #3	$ -								
	$ -								
	$ -								
	$ 5,050.00								

Breakdown

TRAVEL

Number of trips	**Number of hours (charged at 50% of** Sr Com Spec	Ass Com Spec		**$4,800**
6	$2,580	$2,220		

PUBLIC MEETINGS (2)

Supplies		**$100**
Refreshments		**$150**
	Total	**$250**

	PD Project No. 12692-04 Project Name: TO#4 Dietz-Elkhorn Road Pape-Dawson Engineers (Cultural)	Total Task Hours	Total Task Cost	Sr. Manager / Engineer	GIS Analyst	Project Engineer	EIT IV	EIT II	Project Surveyor	4-PERSON CREW	TECHNICIAN	2-PERSON CREW	3-PERSON CREW	GIS Analyst	Sr. Environmental Specialist	Project Environmental Specialist	Staff Environmental Specialist	Operations/Clerical						Expenses
				$ 235	$ 125	$ 185	$ 140	$ 130	$ 220	$ 195	$ 115	$ 195	$ 260	$ 125	$ 195	$ 145	$ 110	$ 85						
Optional Services																								
1)	**Cultural Resource Survey**		$ 20,050.00																					
b)	Obtain antiquities permit from THC	23	$ 3,365.00	1	8						20				4	20								$ -
c)	Perform litterary review	4	$ 580.00													4								$ -
d)	Review HASA, SALs, OTHMs, RTHLs, and NPS records	2	$ 290.00													2								$ -
e)	Examine soil, geologic, and env. Data	2	$ 290.00													2								$ -
f)	Conduct archaeological field survey (shovel testing ONLY)	44	$ 5,980.00												2	8								$ -
g)	Conduct chain of title search for property	8	$ 1,160.00													8								$ -
h)	Produce report	52	$ 7,370.00	1	12										2	35		2						$ -
i)	Prepare collected materials for curation	7	$ 1,015.00													7								$ -
2)	**Public Involvement (See 'Opt. Services - Public Involv.' Tab in spreadsheet)**		$ -																					
a)		0	$ -																					$ -
b)		0	$ -																					$ -
c)		0	$ -																					$ -
d)		0	$ -																					$ -
LABOR TOTAL				2	20	0	0	0	0	0	20	0	0	0	8	90	0	2	0	0	0	0	0	$ -

Sub-Total Labor: $ 20,050.00

Sub-Total Expenses $ -

Total Fee $ 20,050.00

April 14, 2023

Steven Dean, P.E.
Pape-Dawson Engineers, Inc
2000 NW Loop 410
San Antonio, Texas 78213

Re: Revised Proposal for Geotechnical Engineering Services
Dietz Elkhorn Improvements
From Fair Oaks Ranch Parkway to FM 3351
Fair Oaks Ranch, Texas
Terracon Proposal No. P90225302R

Dear Mr. Dean:

We appreciate the opportunity to submit this revised proposal to Pape-Dawson Engineers, Inc to provide Geotechnical Engineering services for the above referenced project. **We understand that we have been chosen to provide these services for this publicly funded project. Therefore, by providing cost information we are not in violation of the Texas Professional Services Procurement Act.** The following are exhibits to the attached Agreement for Services.

Exhibit A	Project Understanding
Exhibit B	Scope of Services
Exhibit C	Compensation and Project Schedule

Our base fee to perform the Scope of Services described in this proposal is in **Exhibit C**. See Exhibit C for more details of our fees and consideration of additional services.

Your authorization for Terracon to proceed in accordance with this proposal can be issued by signing and returning a copy of the attached Agreement for Services to our office.

Sincerely,
Terracon Consultants, Inc.
(Firm Registration: TX F3272)

Carlos Cotilla
Staff Engineer

Gregory P. Stieben, P.E.
Senior Consultant

EXHIBIT A - PROJECT UNDERSTANDING

Our Scope of Services is based on our understanding of the project and the expected subsurface conditions as described below. We request the design team verify all information prior to our initiation of field exploration activities.

Site Location and Anticipated Conditions

Item	Description
Parcel Information	The project is located along Dietz Elkhorn Road from Fair Oaks Ranch Parkway to FM 3351 in Fair Oaks Ranch, Texas.
Existing Improvements	Existing roadway.
Current Ground Cover	Asphalt pavement.
Site Access	All exploration locations, are accessible with our truck-mounted drilling equipment.

Planned Construction

Item	Description
Proposed Construction	The city of Fair Oaks Ranch (FOR) capital improvement Project Number 5 is the reconstruction of Dietz-Elkhorn Road from Fair Oaks Ranch Parkway to FM 3351 “Ralph Fair Road.” The project includes the addition of dedicated pedestrian sidewalks as well as dedicated bicycle and golf cart lanes.
Traffic loads	Not available at the time of this proposal.
Pavements	We understand flexible (asphalt) pavement will be considered for the project.

EXHIBIT B - SCOPE OF SERVICES

Our proposed Scope of Services consists of field exploration, laboratory testing, and engineering/project delivery. These services are described in the following sections.

Field Exploration

Based on the proposed development and our experience with the project site, the following field exploration is proposed:

Number of Boring/Coring	Planned Boring Depth (feet) [1]	Planned Location
6 Soil Borings	10	Proposed reconstruction areas

1. Below ground surface.

In addition, Dynamic Cone Penetration (DCP) test will be performed on the subgrade soil at 6 test locations. Dynamic Penetration Test method covers the measurement of the penetration rate of the dynamic cone penetrometer with an 8-kg [17.6-lb] hammer through undisturbed soil or compacted materials, or both. The penetration resistance may be related to in-situ strength such as estimated in-situ CBR (California Bearing Ratio), shear strength of strata, thickness of strata and bearing capacity. The tests will be performed according to ASTM D 6951.

Three (3) bulk samples will be recovered for moisture density and California Bearing Ratio (CBR) testing. Six (6) core samples (6-inch diameter) will be obtained to help determine pavement material types and approximate layer thicknesses.

Boring Layout and Elevations: We will use handheld GPS equipment to locate borings with an estimated horizontal accuracy of +/-20 feet. Field measurements from existing site features may be utilized. If available, approximate elevations will be obtained by interpolation from a site specific, surveyed topographic map.

Subsurface Exploration Procedures: We will advance soil borings with a truck-mounted drill rig using continuous flight augers (solid stem and/or hollow stem, as necessary, depending on soil conditions). Five samples will be obtained in the upper 10 feet of each boring. Soil sampling is typically performed using thin-wall tube and/or split-barrel sampling procedures. The split-barrel samplers are driven in accordance with the standard penetration test (SPT). The samples will be placed in appropriate containers, taken to our soil laboratory for testing, and classified by a Geotechnical Engineer. In addition, the existing pavement thickness will be measured at all borings locations during the field operation.

Our exploration team will prepare field boring logs as part of standard drilling operations including sampling depths, penetration distances, and other relevant sampling information. Field logs include visual classifications of materials encountered during drilling, and our interpretation of subsurface

conditions between samples. Final boring logs, prepared from field logs, represent the Geotechnical Engineer's interpretation, and include modifications based on observations and laboratory tests. Summary table shown the pavement section at each location will also be provided.

Property Disturbance: We backfill borings with auger cuttings after completion. Pavements are patched with cold-mix asphalt and/or ready mixed concrete, as appropriate. Our services do not include repair of the site beyond backfilling our boreholes, and cold patching existing pavements. Excess auger cuttings are dispersed in the general vicinity of the borehole. Because backfill material often settles below the surface after a period, we recommend boreholes are checked periodically and backfilled, if necessary. We can provide this service, or grout the boreholes for additional fees, at your request.

Pavement Condition Assessment (PCA): In addition to the sampling operations, Terracon will perform a general pavement condition assessment survey of the existing pavements.

Safety

Terracon is currently not aware of environmental concerns at this project site that would create health or safety hazards associated with our exploration program; thus, our scope considers standard OSHA Level D Personal Protection Equipment (PPE) appropriate. Our scope of services does not include environmental site assessment services, but identification of unusual or unnatural materials encountered while drilling will be noted on our logs and discussed in our report.

Exploration efforts require borings (and possibly excavations) into the subsurface, therefore Terracon complies with local regulations to request a utility location service Texas811 We consult with the owner/client regarding potential utilities, or other unmarked underground hazards. Based upon the results of this consultation, we consider the need for alternative subsurface exploration methods, as the safety of our field crew is a priority. Traffic control will consist of signage and cones only, if a crash truck is required it will be billed at a rate of $3,000 per day.

Laboratory Testing

The samples will be tested in our laboratory to determine physical engineering characteristics. Testing will be performed under the direction of a geotechnical engineer and will include visual classification, moisture content, gradation, Atterberg limits, and sulfate contents.

- Moisture Content Test.
- Gradation Tests or Percent Finer than the Nº 200 Mesh (75-µm) Sieve.
- Atterberg Limits.
- Soluble Sulfate Tests

In addition, three representative bulk samples will be collected from near the roadway and will be tested for the following:

- pH lime series tests.
- PI lime series tests.
- Moisture density relationship (ASTM D698).
- California Bearing Ratio (CBR).

Our laboratory testing program often includes examination of soil samples by an engineer. Based on the material's texture and plasticity, we will describe and classify soil samples in accordance with the Unified Soil Classification System (USCS).

Engineering and Project Delivery

Results of our field and laboratory programs will be evaluated by a professional engineer. The engineer will develop a geotechnical site characterization, perform the engineering calculations necessary to evaluate foundation alternatives, and develop appropriate geotechnical engineering design criteria for earth-related phases of the project.

Your project will be delivered using our ***GeoReport®*** system. Upon initiation, we provide you and your design team the necessary link and password to access the website (if not previously registered). Each project includes a calendar to track the schedule, an interactive site map, a listing of team members, access to the project documents as they are uploaded to the site, and a collaboration portal. The typical delivery process includes the following:

- Project Planning – Proposal information, schedule and anticipated exploration plan will be posted for review and verification
- Site Characterization – Findings of the site exploration
- Geotechnical Engineering – Recommendations and geotechnical engineering report

When utilized, our collaboration portal documents communication, eliminating the need for long email threads. This collaborative effort allows prompt evaluation and discussion of options related to the design and associated benefits and risks of each option. With the ability to inform all parties as the work progresses, decisions and consensus can be reached faster. In some cases, only minimal uploads and collaboration will be required, because options for design and construction are limited or unnecessary. This is typically the case for uncomplicated projects with no anomalies found at the site.

When services are complete, we upload a printable version of our completed geotechnical engineering report, including the professional engineer's seal and signature, which documents our services. Previous submittals, collaboration and the report are maintained in our system. This allows future reference and integration into subsequent aspects of our services as the project goes through final design and construction.

The geotechnical engineering report will provide the following:

- Boring and coring location plan.
- Description of subsurface conditions including geology.
- Computer generated boring logs with soil stratification based on Unified Soil Classification System (USCS).
- Summarized laboratory data.
- Summary of pavement cores
- Subgrade modulus from DCP testing
- Groundwater levels observed during and after completion drilling
- Subsurface exploration procedures.
- Laboratory test results.
- Discussion on the detailed PCA findings.
- Evaluation of existing pavement section for compliance with City of San Antonio/Fair Oaks Ranch street design. The street designation will need to be provided to Terracon.
- Recommendations for pavement redesign or repair depending on the existing pavement condition.

EXHIBIT C - COMPENSATION AND PROJECT SCHEDULE

Compensation

Based upon our understanding of the site, the project as summarized in Exhibit A, and our planned Scope of Services outlined in Exhibit B, our base fee is shown in the following table:

Task	Lump Sum Fee
Subsurface Exploration, Laboratory Testing, Geotechnical Consulting & Reporting [1]	**$13,820**

1. Traffic control will consist of signage and cones only, if a crash truck is required it will be billed at a rate of $3,000 per day.

Our Scope of Services does not include services associated with site clearing, wet ground conditions, tree or shrub clearing, or repair of/damage to existing landscape. If such services are desired by the owner/client, we should be notified so we can adjust our Scope of Services.

Unless instructed otherwise, we will submit our invoice(s) to the address shown at the beginning of this proposal. If conditions are encountered that require Scope of Services revisions and/or result in higher fees, we will contact you for approval, prior to initiating services. A supplemental proposal stating the modified Scope of Services as well as its effect on our fee will be prepared. We will not proceed without your authorization.

Project Schedule

We developed a schedule to complete the Scope of Services based upon our existing availability and understanding of your project schedule. However, this does not account for delays in field exploration beyond our control, such as weather conditions, permit delays, or lack of permission to access the boring locations. In the event the schedule provided is inconsistent with your needs, please contact us so we may consider alternatives.

GeoReport® **Delivery**	**Posting Date from Notice to Proceed** [1, 2]
Project Planning	7 days
Site Characterization	21 days
Geotechnical Engineering	45 days

1. Upon receipt of your notice to proceed we will activate the schedule component of our ***GeoReport®*** website with specific, anticipated calendar days for the three delivery points noted above as well as other pertinent events such as field exploration crews on-site, etc.
2. We will maintain a current calendar of activities within our ***GeoReport®*** website. In the event of a need to modify the schedule, the schedule will be updated to maintain a current awareness of our plans for delivery.

Scope of Work

Fair Oaks Ranch
Pape-Dawson Task Order #4
Dietz-Elkhorn (East) Reconstruction (Schematic Design)

Laura Raun Public Relations

LRPR will provide public outreach services designed to obtain public input from community residents about the roadway design for the reconstruction of Dietz-Elkhorn Road from Fair Oaks Ranch Parkway to FM 3351 "Ralph Fair Road."

Assumptions:
The following tasks will be undertaken over a span of 9 months.
The online survey will be created in the Survey Monkey program and distributed by the city.

Task 1: Project Management
a. Develop scope of work and fee schedule for LRPR
b. Participate in team meetings, including a kick-off meeting
c. Participate in meetings with Fair Oaks Ranch staff

Task 2: Develop Public Outreach Plan
a. Develop draft Public outreach Plan
b. Submit draft plan to Pape-Dawson for review
c. Incorporate feedback from Pape-Dawson
d. Submit draft plan to FOR Staff for approval

Task 3: Council Briefing #1

a. Prepare for presentation of Public Outreach Plan to City Council
b. Present Public Outreach Plan to City Council and get feedback

Task 4: Website

a. Develop content about reconstruction project for city of FOR staff to post on website
b. Coordinate with FOR staff to post content on city website

Task 5: Community Input to prioritize roadway elements/Public Meeting #1
a. Conduct online survey
    1) Draft survey and send to Pape-Dawson for review
    2) Get feedback from Pape-Dawson and incorporate into survey
    3) Send draft survey to FOR staff for review
    4) Incorporate feedback from FOR staff and finalize survey
    5) Coordinate with FOR staff to distribute survey to community residents
    6) Draft publicity content about survey for city to distribute
    7) Compile survey results, analyze and prepare report
    8) Create charts/graphs as needed
b. Hold Public Meeting to review survey results and solicit feedback
    1) Coordinate with FOR on meeting location and with facility on logistics/planning
    2) Draft meeting agenda, format and logistics
    3) Prepare meeting materials

4) Create publicity content for distribution by city
5) Participate in meeting
    - Handle registration
    - Facilitate
    - Take notes
6) Summarize feedback for presentation to council

Task 6: Council Briefing #2

a. Prepare for presentation of public feedback to City Council
b. Present public feedback at City Council meeting and get comments

Task 7: Public Meeting #2 to get public input on draft sections/schematics

1) Coordinate with FOR on meeting location and with facility on logistics/planning
2) Draft meeting agenda, format and logistics
3) Prepare meeting materials
4) Create publicity content for distribution by city
5) Participate in meeting
    - Handle registration
    - Facilitate
    - Take notes
6) Summarize feedback for presentation to council

Task 8: Council Briefing #3

a. Prepare for presentation of public input on schematic design to City Council
b. Present public feedback on schematic design at City Council meeting and get comments