



8901 John W. Carpenter Freeway  
Dallas, Texas 75247  
P (214) 630-1010  
**Terracon.com**

December 13, 2024

Collin County Texas  
4600 Community Avenue  
McKinney, TX 75071

**Attn:** Ms. Bridell Miers  
P: (972) 548-3723  
E: [bmiers@co.collin.tx.us](mailto:bmiers@co.collin.tx.us)

**RE:** Proposal for Geotechnical Engineering Services  
Myers Park Buildings  
County Road 166  
McKinney, Texas  
Terracon Proposal No. P9424698

Dear Ms. Miers:

We appreciate the opportunity to submit this proposal to Collin County Texas (CCT) to provide Geotechnical Engineering services for the above referenced project. The following are exhibits to the proposal.

|           |  |
|-----------|--|
| Exhibit A | Project Understanding                      |
| Exhibit B | Scope of Services                          |
| Exhibit C | Compensation and Project Schedule          |
| Exhibit D | Site Location and Nearby Geotechnical Data |
| Exhibit E | Anticipated Exploration Plan               |

Our anticipated fee to perform the Scope of Services described in this proposal is provided in Exhibit C which includes details of our fees and consideration of additional services as well as a general breakdown of our anticipated schedule.

The terms, conditions, and limitations stated in the Professional Services Agreement No. 2023-29 and Amendment 2 between Collin County Texas and Terracon Consultants, Inc. and sections of this proposal incorporated therein shall constitute the exclusive terms and conditions and services to be performed for this project. This proposal may be accepted by issuing Purchase Order which will serve as our notice to proceed.

Sincerely,

**Terracon**

Registration No. F-3272

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

Joseph K. Waugh, M.S., P.E.  
Project Geotechnical Engineer

A handwritten signature in blue ink, appearing to read "Christopher W. Eddy".

Christopher W. Eddy, P.E.  
Senior Geotechnical Engineer

## Exhibit A – Project Understanding

Our Scope of Services is based on our understanding of the project as described by CCT and the expected subsurface conditions as described in this section. We have not visited the project site to confirm the information provided. Aspects of the project, undefined or assumed, are highlighted. We request CCT and/or the design team verify all information prior to our initiation of field exploration activities.

### Planned Construction

| Item                            | Description   |
|---------------------------------|---|
| <b>Project Description</b>      | The project consists of constructing new foundations for two historic buildings on the project site.                                    |
| <b>Building Construction</b>    | The buildings are wood-framed structures.   |
| <b>Finished Floor Elevation</b> | We understand the buildings will be placed on new foundations to elevate the structures above existing grade.                           |
| <b>Maximum Loads</b>            | We anticipate structural load will be less than <b>5 kips</b> per isolated footing/column and less than <b>1 kip/ft</b> for wall loads. |
| <b>Grading/Slopes</b>           | Proposed finished grade elevation for the building pads area expected to be within about 6 inches of existing grades.                   |
| <b>Below-Grade Structures</b>   | None  |
| <b>Retaining Walls</b>          | None  |
| <b>Pavements</b>                | None  |

### Site Location and Anticipated Conditions

| Item                         | Description   |
|------------------------------|---|
| <b>Parcel Information</b>    | The project site is located at Myers Park in the southwest quadrant of County Road 166 and County Road 168 in McKinney, Texas.<br>Latitude / Longitude (approximate): 33.27472 / -96.68114<br>See Exhibit D |
| <b>Existing Improvements</b> | The site is a park with existing structures and pavements. Two of the structures are currently supported on portland cement concrete slabs.   |

| Item                                  | Description   |
|---------------------------------------|---|
| <b>Current Ground Cover</b>           | Grass in the area of the structures.  |
| <b>Existing Topography</b>            | Based on topographical information available from North Central Texas Council of Governments' website ( <a href="http://www.dfwmaps.com">www.dfwmaps.com</a> ), the ground surface of the project site slopes downward to the southwest with as much as 2 feet of elevation change across the building areas. |
| <b>Site Access</b>                    | We expect the site, and all exploration locations, are accessible with our truck-mounted drilling equipment and support vehicles when the site is dry.  |
| <b>Expected Subsurface Conditions</b> | Our experience near the vicinity of the proposed development and review of geologic maps indicates subsurface conditions consist of clay soil overlying limestone. Unweathered limestone is anticipated at depths of about 20 to 25 feet below grade.   |

## 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

CCT requested one boring location. The boring depth was determined based on our understanding of the project and our experience with similar projects in the vicinity of the project site:

| Number of Borings | Planned Boring Depth  | Planned Location <sup>1</sup>  |
|-------------------|---|--------------------------------|
| 1                 | 10 feet into unweathered bedrock or 35 feet maximum, whichever occurs first | Between the two building areas |

1. The planned boring locations are shown on the attached **Anticipated Exploration Plan**.

**Boring Layout and Elevations:** We will use handheld GPS equipment to locate the boring with an estimated horizontal accuracy of +/-20 feet. Field measurements from existing site features may be utilized. If available, approximate surface elevations will be obtained by interpolation from a site specific, surveyed topographic map. Otherwise, surface elevations will be interpolated from publicly available data (Google Earth, [www.dfwmaps.com](http://www.dfwmaps.com), etc.). If accurate boring layout and surface elevations are required, a survey of the boring location should be provided by others.

**Subsurface Exploration Procedures:** We will advance the boring with a truck-mounted drill rig using continuous flight augers (solid stem and/or hollow stem, as necessary, depending on soil conditions) and/or rotary wash boring techniques. Four to five soil samples will be obtained in the upper 10 feet of each boring and at intervals of 5 feet thereafter. Soil sampling is typically performed using push tube and/or split-barrel sampling procedures. The split-barrel samplers are driven in accordance with the standard penetration test (SPT). The load carrying capacity of bedrock (if encountered) will be evaluated in the field using the Texas Department of Transportation’s (TxDOT) cone penetration test.

The samples will be placed in appropriate containers, taken to our soil laboratory for testing, and classified by a Geotechnical Engineer. In addition, we will observe and record groundwater levels during drilling and sampling.

Our exploration team will prepare a field boring log as part of standard drilling operations including sampling depths, penetration distances, and other relevant sampling information. Field logs include visual classifications of materials observed during drilling and our interpretation of subsurface conditions between samples. A final boring log, prepared from the field logs, represents the Geotechnical Engineer's interpretation and include modifications based on observations and laboratory tests.

**Property Disturbance:** Terracon will make reasonable efforts to reduce damage to the property; however, it should be understood that in the normal course of our work some disturbance could occur including rutting of the ground surface and damage to landscaping.

We will backfill the boring with auger cuttings upon completion. Our services do not include repair of the site beyond backfilling our borehole. Excess auger cuttings will be dispersed in the general vicinity of the borehole. Because backfill material often settles below the surface after a period, we recommend the borehole be periodically checked and backfilled, if necessary. We can provide this service or grout the borehole for additional fees at your request.

## Safety

Terracon is 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 observed while drilling will be noted on our logs.

Exploration efforts require borings and/or test pit excavations into the subsurface, therefore Terracon will comply with local regulations to request a utility location service through Texas811.

Private utilities should be marked by the client prior to commencement of field exploration. Terracon will not be responsible for damage to private utilities not disclosed to us. Terracon's Scope of Services does **not** include private utility locating services. If the client is unable to accurately locate private utilities, and it becomes apparent that the risk of private utilities on/near the site exists, then Terracon will initiate these services by forwarding the additional scope and corresponding fee to our client for approval.

The detection of underground utilities is dependent upon the composition and construction of the utility line; some utilities are comprised of non-electrically conductive materials and may not be readily detected. The use of a private utility locate service

would not relieve the landowner/client of their responsibilities in identifying private underground utilities.

**Site Access:** Terracon must be granted access to the site by the property owner. Without information to the contrary, we consider acceptance of this proposal as authorization to access the property for conducting field exploration in accordance with the Scope of Services. Our proposed fees do not include time to negotiate and coordinate access with landowners or tenants. Terracon will conduct field services during normal business hours (Monday through Friday between 7:00am and 5:00pm). If our exploration must take place over a weekend or at night, please contact us so we can adjust our schedule and fee.

## Laboratory Testing

The project engineer will review field data and assign laboratory tests to understand the engineering properties of various soil and rock strata. Exact types and number of tests cannot be defined until completion of fieldwork, but we anticipate the following laboratory testing may be performed:

- Water (moisture) content
- Liquid limit, plastic limit, and plasticity index
- Unconfined compressive strength of soil
- Absorption swell tests
- Material finer than 75- $\mu$ m (No. 200) sieve

Our laboratory testing program often includes examination of soil samples by an engineer. Based on the results of our field and laboratory programs, we will describe and classify soil samples in accordance with the Unified Soil Classification System (USCS).

## Engineering and Project Delivery

The results of our field and laboratory programs will be evaluated, and a geotechnical engineering report will be prepared under the supervision of a licensed professional engineer. The geotechnical engineering report will provide the following:

- Boring log with field and laboratory data
- Stratification based on visual soil (and rock) classification
- Groundwater levels observed during and after the completion of drilling
- Site Location and Exploration Plans
- Subsurface exploration procedures
- Description of subsurface conditions

- Recommended foundation options and engineering design parameters
- Estimated settlement of foundations
- Seismic site classification
- Earthwork recommendations including site/subgrade preparation

In addition to an emailed report, your project will also be delivered using our **Compass** website. 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. We welcome the opportunity to have project kickoff conversations with the team to discuss key elements of the project and demonstrate features of the portal. The typical delivery process includes the following:

- Project Planning – Proposal information, schedule and anticipated exploration plan
- Site Characterization – Findings of the site exploration and laboratory results
- Geotechnical Engineering Report

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.

## Additional Services

In addition to the previously noted services, the following are often associated with geotechnical engineering services. Fees for services previously noted do not include the following:

**Perform Environmental Assessments:** Our Scope for this project does not include, either specifically or by implication, an environmental assessment of the site intended to identify or quantify potential site contaminants. If the client/owner is concerned about the potential for such conditions, an environmental site assessment should be conducted. We can provide a proposal for an environmental assessment, if desired.

**Review of Plans and Specifications:** Our geotechnical report and associated verbal and written communications will be used by others in the design team to develop plans and specifications for construction. Review of project plans and specifications is a vital part of our geotechnical engineering services. This consists of review of project plans and specifications related to site preparation, foundation, and pavement construction.

Our review will include a written statement conveying our opinions relating to the plans and specifications' consistency with our geotechnical engineering recommendations.

**Observation and Testing of Pertinent Construction Materials:** Development of our geotechnical engineering recommendations and report relies on an interpretation of soil conditions. Our assessment is based on widely spaced exploration locations and the assumption that construction methods will be performed in a manner sufficient to meet our expectations and consistent with recommendations made at the time the geotechnical engineering report is issued. We should be retained to conduct construction observations, and perform/document associated materials testing, for site preparation, foundation, and pavement construction. These services allow a more comprehensive understanding of subsurface conditions and necessary documentation of construction to confirm and/or modify (when necessary) the assumptions and recommendations made by our engineers.



## 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 anticipated fee is shown in the following table. Our services will be based on the unit rates provided in the table.

| Description                                     | Rate     | Quantity | Units    | Fee               |
|---|----------|----------|----------|-------------------|
| Engineer - Senior (15+ years)                   | \$245.22 | 2        | hours    | \$490.44          |
| Engineer - Design (5 to 10 years)               | \$166.04 | 8        | hours    | \$1,328.32        |
| Engineering Technician (5 to 15 years)          | \$129.42 | 1        | hours    | \$129.42          |
| Engineering Technician - Junior (0 to 5 years)  | \$88.55  | 11       | hours    | \$974.05          |
| Administrative/Clerical                         | \$114.09 | 1.5      | hours    | \$171.14          |
| Mobilization and Demobilization of Drilling Rig | \$600.00 | 1        | lump sum | \$600.00          |
| Drilling and Sampling - Soils                   | \$39.14  | 25       | foot     | \$978.50          |
| Drilling and Sampling - Rock                    | \$53.56  | 10       | foot     | \$535.60          |
| CADD Operator - Senior (15+ years)              | \$122.61 | 1        | hours    | \$122.61          |
| Moisture Content Determination                  | \$36.05  | 7        | tests    | \$252.35          |
| Atterberg Limits Determination (1 pt.)          | \$77.25  | 2        | tests    | \$154.50          |
| Ucc Soil, Undisturbed Soil Sample               | \$72.10  | 2        | tests    | \$144.20          |
| Swell Test                                      | \$267.80 | 2        | tests    | \$535.60          |
| <b>Total</b>                                    |          |          |          | <b>\$6,416.73</b> |

Additional services that are not part of the base fee include the following:

| Task   | Fee | Initial for Authorization |
|--|-----|---------------------------|
| Private Utility Clearance Service (At Boring Locations Only) | TBD |                           |
| Perform Environmental Assessments                            | TBD |                           |

| Task  | Fee                                     | Initial for Authorization |
|---|---|---------------------------|
| Post Report Consulting / Review of Plans and Specifications | In accordance with applicable unit fees |                           |
| Observation and Testing of Pertinent Construction Materials | TBD                                     |                           |

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, our schedule does not account for delays in field exploration beyond our control, such as weather conditions, delays resulting from utility clearance, 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.

| Delivery on Compass             | Completion Schedule <sup>1, 2</sup>   |
|---------------------------------|---------------------------------------|
| Field Exploration               | 10 to 15 days after notice to proceed |
| Laboratory Testing              | 20 to 25 days after notice to proceed |
| Geotechnical Engineering Report | 25 to 30 days after notice to proceed |

1. Upon receipt of your notice to proceed we will activate the schedule component on **Compass** with specific, anticipated dates for the delivery points noted as well as other pertinent events.
2. Standard workdays are Monday through Friday and exclude holidays. We will maintain an activities calendar within on **Compass**. The schedule will be updated to maintain a current awareness of our plans for delivery.

## Exhibit D – Site Location



DIAGRAM IS FOR GENERAL LOCATION ONLY, AND IS NOT INTENDED FOR CONSTRUCTION PURPOSES

## Exhibit E – Anticipated Exploration Plan

