

WORK AUTHORIZATION NO. 1

**PROJECT: Structural and Civil Karst Mitigation Relating to the Cave at Cambria Drive,
Round Rock, Texas**

This Work Authorization is made pursuant to the terms and conditions of the Williamson County Contract for Engineering Services, being dated **March 20, 2018** and entered into by and between Williamson County, Texas, a political subdivision of the State of Texas, (the "County") and **Dunaway Associates, L.P., a Texas Limited Partnership acting by and through its General Partner, Dunaway Genpar, LLC** (the "Engineer").

Part 1. The Engineer will provide the following Engineering Services set forth in Attachment "B" of this Work Authorization.

Part 2. The maximum amount payable for services under this Work Authorization without modification is **\$76,000.00.**

Part 3. Payment to the Engineer for the services established under this Work Authorization shall be made in accordance with the Contract.

Part 4. This Work Authorization shall become effective on the date of final acceptance and full execution of the parties hereto and shall terminate on **September 30, 2019.** The Engineering Services set forth in Attachment "B" of this Work Authorization shall be fully completed on or before said date unless extended by a Supplemental Work Authorization.

Part 5. This Work Authorization does not waive the parties' responsibilities and obligations provided under the Contract.

Part 6. County believes it has sufficient funds currently available and authorized for expenditure to finance the costs of this Work Authorization. Engineer understands and agrees that County's payment of amounts under this Work Authorization is contingent on the County receiving appropriations or other expenditure authority sufficient to allow the County, in the exercise of reasonable administrative discretion, to continue to make payments under this Contract. It is further understood and agreed by Engineer that County shall have the right to terminate this Contract at the end of any County fiscal year if the governing body of County does not appropriate sufficient funds as determined by County's budget for the fiscal year in question. County may effect such termination by giving written notice of termination to Engineer.

Part 7. This Work Authorization is hereby accepted and acknowledged below.

EXECUTED this 31 day of July, 2018.

ENGINEER:

Dunaway Associates, L.P.

By: Eddie Bogard
Signature

Eddie Bogard, PE
Printed Name

Engagement Manager
Title

COUNTY:

Williamson County, Texas

By: [Signature]
Signature

Don A. CATT
Printed Name

County Engineer
Title

LIST OF ATTACHMENTS

Attachment A - Services to be Provided by County

Attachment B - Services to be Provided by Engineer

Attachment C - Work Schedule

Attachment D - Fee Schedule

Attachment A

Services to be Provided by County

Williamson County will provide a Project Manager and any requested data that is in the County's control.

Attachment B - Services to be Provided by Engineer

ENGINEERING SERVICES

Project Understanding and Approach

The Scope of Work consists of civil infrastructure repair, structural analysis and mitigation of an undocumented karst feature (void) discovered on 2/7/2018 on Cambrai Drive in Round Rock, Texas. The void is located beneath existing Cambria Dr. and the residential lots extending from the southeast corner of Ephraim Rd. and Cambria Dr. Due to the location and geometry of the void, utility line restraints, and apparent concerns related to public safety; adequate measures shall be taken to structurally mitigate the void within the County ROW, repair the existing roadway, and restore the utility lines to their original condition.

The Project approach follows the task items listed below in the detailed Scope of Work. In addition to the tasks listed herein, Engineer will coordinate the following subconsultants' work on behalf of Williamson County:

- Geotechnical Investigation to obtain in-situ soil/rock material properties
- Surface Elevation Survey to map topography within the roadway and determine cave roof thicknesses in relation to the geological void description and profiles.

DETAILED SCOPE OF WORK

1. Site Investigation and Stabilization Plan – Engineer will conduct site visits to document the as-is conditions, research the appropriate regulatory approval agency requirements and prepare a site stabilization plan to the County. This exhibit will show an overlay of the extents of the void on an aerial map (as provided in the geologist's report), utility information, extents of demolition to the void opening, and procedure to stabilize and secure the void opening and adjacent areas.
2. Topographical and Right of Way Survey - topographic and right-of-way survey encompassing Ephraim Road and Cambria Drive. Locate and take elevation shots of karst entrance area.
3. Geotechnical Subsurface Exploration –
 - a. Perform a subsurface exploration to core the underlying limestone rock
 - b. Obtain rock recovery and rock quality designation (RQD) information
 - c. Perform unconfined compressive strength testing on five (5) rock cores to 30feet depth collected during the drilling.
4. Coordination with Approval Agencies (Hourly) – Engineer will participate in meetings and conferences to discuss the approach and development of mitigation procedures for the void. Engineer will coordinate with the following agencies:

- Williamson County
- Texas Commission on Environmental Quality (TCEQ)
- Brushy Creek Municipal Utility District (BCMUD)
- Geotechnical Engineering Company
- Licensed Surveyor
- Franchise Utility Companies

In addition, Engineer will respond to comments and requests. Engineer has included the time to make any and all necessary revisions to design plans per regulatory agency code and regulations. Engineer will perform site visits as requested.

5. Construction Documents – Public Improvements – Engineer will prepare construction documents for the public infrastructure repair and structural mitigation procedures for this project. The anticipated repairs consist of the following:
 - a. Replacement of the damaged water line, gas line and storm sewer inlet in Cambria Dr. where the void ceiling collapsed.
 - b. Reconstruction of the roadway, curb and sidewalk improvements in the County ROW.
 - c. Structural mitigation plans, details and procedures to properly close off and seal the void in the County ROW and in accordance with TCEQ requirements.

These construction documents will be signed and sealed by a Registered Professional Engineer licensed in the State of Texas and will be processed with Williamson County for approval and construction. A set of engineering specifications will accompany the construction drawings. A tentative list of drawings required to meet the objectives of this Project are as follows:

Cover Sheet
 General Notes
 Existing Site Civil Plan w/ Erosion Control Facilities & Details
 Final Site Civil Plan
 Structural Mitigation Plan
 Utility Details
 Miscellaneous Details

6. Project Management and Construction Administration Services (Hourly) – Engineer will provide the following services as necessary:
 - a. Submit bid documents and specifications to prequalified contractors (invited by Williamson County) to bid construction documents. Engineer will help manage the procurement of bids and present to Williamson County for selection and approval.
 - b. Review and respond on the County's behalf for site plan submittals related to elements of the design for which Engineer is responsible.
 - c. Review and respond to written Requests for Information from the County's contractor regarding elements of the design for which Engineer is responsible.
 - d. Make site visits, as required, during construction to monitor the progress of construction in accordance with the approved plans and specifications.

Only those services specifically mentioned in the Scope of Work above shall be provided by Engineer.

ADDITIONAL SERVICES (not included in the Scope of Work)

The following is a list of services not included in the Scope of Work. If the County determines any of these services are necessary to the Project, Engineer and County shall execute a contract modification setting out a description of the Additional Services, fees for such services and a schedule for performing the Additional Services.

1. Design of franchise utilities (gas, electric, telephone and cable TV) will be conducted by the franchise utility companies. Usually, each franchise utility company will provide its own design. If desired, Engineer will show the conduit for each of these on our drawings provided that the size, number and material for each conduit is provided to Engineer by the utility company.
2. Redesign efforts related to site plan changes after significant design efforts have begun or redesign efforts to meet construction budgets are not included.
3. Surveying services such as boundary, tree, and as-built surveys and easements by separate instrument are not included unless specifically mentioned in the Scope of Work.
4. Soil Investigation/Laboratory Testing – Engineer recommends that the County retain an independent laboratory for use in any testing required during the design phase, i.e., for density approval in the street rights-of-way, and for any site excavation and embankment that might be required for this Project.
5. Construction testing services are not included; however, Engineer recommends that the County retain a geotechnical engineering consultant to provide construction testing services.
6. Sanitary sewer design and maintenance services will not be included in the Scope of Services.
7. All civil work within the Scope of Work is limited to the public Right-of-Way.
8. Water profile design is not included in the Scope of Services.
9. Traffic control plan and details will not be included as part of this Project's Scope of Work.
10. Additional karst features beyond geologic study dated: February 19, 2018.
11. Contract amendments by contractor are not included in the Scope of Work.

Attachment C

Work Schedule

Final written work products shall be due 90 days after field investigations are complete.

Attachment D - Fee Schedule

2018 STANDARD HOURLY BILL RATE SCHEDULE

STAFF TYPE HOURLY BILL RATE

Administrative	\$ 85.00 - \$154.00
Department Directors	\$145.00 - \$286.00
Information Systems	\$ 95.00 - \$105.00
Marketing/Business Development	\$105.00 - \$149.00
Financial	\$120.00 - \$275.00
Civil Technician	\$ 87.00 - \$132.00
Civil Designer	\$115.00 - \$143.00
Graduate Engineer	\$115.00 - \$132.00
Project Engineer	\$135.00 - \$176.00
Assistant Project Manager	\$140.00 - \$154.00
Project Manager	\$155.00 - \$204.00
Field Manager/Chief of Parties	\$120.00 - \$176.00
Survey Project Manager	\$135.00 - \$187.00
Senior Project Surveyor	\$150.00 - \$165.00
Survey Party Chief	\$120.00 - \$149.00
Survey Technician	\$ 90.00 - \$121.00
Survey Field Assistant	\$ 60.00 - \$ 66.00
GIS	\$ 95.00 - \$171.00
PLA Technician	\$ 80.00 - \$116.00
Sr. Land Planner.....	\$185.00 - \$204.00
Graduate Landscape Architect	\$ 95.00 - \$105.00
Landscape Architect	\$110.00 - \$209.00
Planner	\$100.00 - \$149.00
Construction Administrator	\$125.00 - \$138.00
Environmental Scientist	\$105.00 - \$154.00
Intern	\$ 75.00 - \$ 83.00
Senior Technical Expert	\$190.00 - \$209.00
Principal	\$190.00 - \$315.00
President	\$500.00

CPI Rate Adjustments: Rates will remain firm for the initial first year of the Contract and such rates shall be deemed the "Initial Base Rates". Engineer must request rate adjustments, in writing, at least thirty (30) days prior to each annual anniversary date of the Contract and any rate changes will take effect on the first day following the prior year. If Engineer fails to request a CPI rate adjustment, as set forth herein, the adjustment will be effective thirty (30) days after the County receives Engineer's written request. No retroactive rate adjustments will be allowed.

Price adjustments will be made in accordance with changes in the U.S. Department of Labor Consumer Price Index (CPI-U) for All Urban Consumers, All Items, South Region (Base 1982-84 = 100).

The rate adjustment will be determined by multiplying the Initial Base Rates by a fraction, the numerator of which is the index number for most recently released index before each annual anniversary date of the Contract and the denominator of which is the index number for the first month of the Contract (the index number for the month in which the Contract was originally executed). If the products are greater than the Initial Base Rates, County will pay the greater amounts as the rates during the successive year until the next rate adjustment. Rates for each successive year will never be less than the Initial Base Rates.