

To: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

From: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Project Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Project Number: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Scope of Services**

**Boundary/Topographic Survey**

The project property is located on the southwest corner of Deauville Boulevard at its west extent. The deliverable survey will be used for design of project improvements and is requested to contain the following:

**Topographical Survey Requirements**

* Provide grid and additional points sufficient to accurately show existing ground surface and existing site features. Topo grid to be obtained at max 100 foot interval.
* Show contours on 1’ interval.
* Show benchmark(s) used for survey and establish two (2) marked BMs for use during construction.
* Obtain info in NAD 83 Texas State Plane, Central Zone with the elevations on benchmark NAVD88.

Natural Features and Structural Elements

* Locate and identify visible obstructions and objects to include but not be limited to the following:
  + Drainage swales, ridges, flow lines and specific drainage features
  + Extend topo minimum 100’ beyond lot boundary (extend further for various utilities located beyond the site as noted in Utility Requirements.)
  + Utility information as outlined in the following section

Utility Requirements

* Show all existing utilities to include but not be limited to the following: (Coordinate with DIGTESS, the City of Midland, and utility providers as necessary to have them mark existing buried utilities.) List size and material, if known.
  + Municipal – water, sewer, storm sewer, fire protection lines, post indicator valves, culverts, inlets, fire hydrants, meter boxes, valve boxes, cleanouts, manholes, and catchbasins
  + Private – On-site utilities typically extending from property line to existing building, also private storm sewer and culverts, central plant utilities, buried tanks, septic fields, water wells, irrigation system valve boxes
  + Name the operating authority, including contact person and phone number for each utility indicated above
* Provide 2D view of all utilities on property and adjacent streets, alleys, and rights of way.
* A sanitary sewer line is located northeast of the site in Deauville Boulevard. Obtain the flowline of the sewer in the manhole at which this sewer turns north and obtain a panhandle of topo extending from this manhole westward to the Chevron site. Such panhandle shall extend from the centerline of Deauville Boulevard to 50’ south of the south ROW line of Deauville Boulevard. (See sketch.)
* A storm sewer stub line exists at the western-most end of the divided boulevard section of Deauville Boulevard. Please obtain the diameter and flowline of this storm sewer where it meets the south wall of the boulevard concrete channel. Similar to the sanitary sewer panhandle described above, obtain a panhandle of topo extending from this storm sewer stub westward to the Chevron site. Such panhandle shall extend from the centerline of Deauville Boulevard to 50’ south of the south ROW of Deauville Boulevard. (See sketch.)
* A large diameter water line exists at the northeast corner of the Chevron site. Please coordinate with the City of Midland to obtain elevations on the top of this water line south of Deauville Boulevard and verify the line diameter.
* Water lines are being constructed north and west of the Chevron site. Obtain topo of the surface features of these water lines as available at the time of the survey. Also extend the topo limits north and west of the Chevron site to cover these water lines. (See sketch.)

**Deliverable Requirements**

* Provide electronic drawing in AutoCAD compatible with Version 2008.
  + Entity color and line type shall be “by-layer.”
  + Follow Maverick Cadd Standards. Contact Maverick to obtain cadd block for line types and layers.
  + Provide all contours, breaklines, TIN elements, and existing ground shots on elevation. (Extraneous shots for locating features that are not on the ground surface should be on elevation but on a separate layer from the ground surface shots.)
  + All other line work shall be all on actual elevation or all on elevation “0,” but not a mixture of the two.
  + Points should be blocks with elevation, point number, and descriptor attributes.
* Provide a comma delimited ASCII text file of all points obtained in the following format: POINT #, NORTHING, EASTING, ELEVATION, DESCRIPTION
* Provide a point codes description list describing abbreviations and symbols used.
* Provide three (3) prints of each drawing. The Surveyor shall sign and seal each drawing and shall state to the best of the Surveyor’s knowledge, information and belief, all information thereon is true and accurately shown.
  + Note benchmark datum used, both horizontal and vertical.
  + Show scale and north arrow.
  + Sheet shall be trim size 30” x 42” with 1 1/2” left binding edge and 1.2” borders. Show spot elevations to the nearest 0.01 foot.