

Late Backup

Geologic Assessment Report

**5816 Harper Park Drive
Austin, Texas**

Prepared for:

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Prepared by:

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GEOLOGIC ASSESSMENT REPORT

This report along with the TCEQ Geologic Assessment Forms and other attachments serve to document the performance and findings of a TCEQ Edwards aquifer geologic assessment for recharge features for the 17.754 acre tract designated as "5816 Harper Park Drive".

This assessment was conducted in compliance with the Texas Commission on environmental Quality (TCEQ) requirements for regulated developments located on the Edwards Aquifer Recharge Zone. The purpose of this report is to identify and characterize any significant recharge features located on the subject property.

PROJECT DESCRIPTION

This report was prepared in support of a proposed residential development to be located on the Harper Park Drive Property described in the section below. This project will clear land, create a number of residential home sites, install a residential street (loop) and result in the construction of homes. This project will include leaving a portion of the land as natural areas and as green spaces to preserve a recharge feature and City of Austin designated heritage/protected trees.

PROJECT LOCATION

The 17.754 acre project site is roughly rectangular in shape and it is located off of US 290. At a point that is between the intersection of US290 and Mopac (Loop 1) about 1 mile to the east of the site and the intersection of US 290 and US 71 about 1 mile to the west in Oak Hill, Texas. This site is within the City Limits of Austin, Texas and is in south central Travis County.

There is no road frontage on US 290. The tract is accessed via a platted road designated as Harper Park Drive that has not yet been constructed. The property is currently known as 5816 Harper Park Drive.

This tract is located approximately 400 feet north of Highway US 290. It is located between two residential areas with Oakclaire Drive located just west of the site and Oak Blvd West just east of the subject tract. Saint Andrews, a private school, is located adjacent to the north property line.

REGIONAL GEOLOGY

Physiography

There are two physiographic provinces in Travis County are: the Blackland Prairie on the east side of the county and the Edwards Plateau on the west. These are separated by the Balcones fault zone which runs north-south through the central portion of the county. The Edwards Plateau terrain is rugged and hilly, with elevations ranging from 750 feet to 1,400 feet above sea level. This area is underlain by beds of limestone that dip gently to the southeast. Southeast of the Edwards Plateau is the Balcones Fault Zone, which is also the western most limit of the Blackland Prairie. The Balcones Fault Zone is composed of

fault blocks of limestone, chalk, shale and marl. The undulating, hilly topography of the Blackland Prairie ranges in elevation from about 400 feet to 750 feet above sea level. The faults are predominantly normal, down thrown-to-the Gulf Coast, with near vertical throws.

The subject property lies on the eastern edge of the Edwards Plateau and within the Balcones fault zone. (BFZ). According to the 1981 Austin Sheet of the Geologic Atlas of Texas, (Bureau of Economic Geology in cooperation with the University of Texas at Austin) no faults are mapped on the site.

Stratigraphy and Structure

The site is predominantly clay covered, with extensive rock outcropping on the western half of the site and reduced levels of outcropping on the eastern half of the site. Limestone bedrock is exposed at a relatively shallow soil depth at the one observed recharge feature and in the bed of a wet weather stream channel that runs west to east across the southern portion of the site. According to the Austin Sheet of the Geologic Atlas of Texas, the underlying rocks at the site are mapped as the Fredricksburg Group (Kfr).

One sensitive feature was identified on the subject tract. This is a recharge feature located near the northwest corner of the site.

SITE INVESTIGATION

The site investigation was performed by Curt Champlin, CPG and two associates Bill McCurley, PE (environmental engineer) and Roberto Vega (graduate engineer). Beginning in the northwest corner, the site traversed radially moving outward from the northwest corner of the subject tract. The ground surface was checked for caves, sinkholes, limestone outcrops (particularly fractured or vuggy rock outcrops), depressions, and indications of fault/fracture zones. The ground surface was evaluated for any characteristic or feature with recharge potential that may warrant special protection or consideration in the development design process. GPS was used to identify the location for any significant feature which was found so that the feature could be mapped.

Each potential feature was evaluated by the CPG to determine if it warranted designation as a recharge feature. Measurements were made of the x, y, and z dimensions and features were checked to see if they connected to underground caverns or passages.

One significant recharge feature was identified and mapped. The location and dimensions of this feature are shown on the attached TCEQ Geologic assessment form. Several photographs of the feature and other areas area site are also attached.

Photographs 1 through 4 (8441, 8442, 8443, and 8444) show the feature found near the northwest corner of the site. Photographs 5 and 6 (8438, 8440) provide views of the limestone outcropping which occurs on the western half of the site. Photograph 7 (8219) is a view of the central portion of the property showing the nature of vegetation and Photograph 8 (8216) is a view of the wet weather stream bed on the southern portion of the property showing the exposed limestone bedrock which lies just below the surface soils.

The data developed during the site investigation was used to complete the attached TCEQ Geologic Assessment Form. No faults are mapped on the subject site, and no evidence of faults was observed during the site reconnaissance.

SUMMARY

One sensitive recharge feature was found to be present near the northwest corner of the property. This feature is described on the attached forms and will be protected during construction and after completion of the construction project by use of the setbacks specified in the TCEQ rules and guidance. Please note that it is possible that other recharge features may be discovered during land clearing activities. Should this occur, work must be stopped until the feature can be evaluated.