

ITEM FOR ENVIRONMENTAL BOARD AGENDA

BOARD MEETING

DATE REQUESTED:

JUNE 18, 2014

NAME & NUMBER

HOMESTEAD OAKS

OF PROJECT:

SP-2013-0435C.SH

NAME OF APPLICANT OR ORGANIZATION:

FC SW Housing LP - 512-217-0429

LOCATION:

3226 W Slaughter Lane

PROJECT FILING DATE:

November 15, 2013

WPDR/ENVIRONMENTAL Jim Dymkowski, 974-2707

STAFF:

james.dymkowski@austintexas.gov

WPDR/

Michael Simmons-Smith, 974-1225

CASE MANAGER:

michael.simons-smith@austintexas.gov

WATERSHED:

Slaughter Creek Watershed (Barton Springs Zone)

Drinking Water Protection Zone

ORDINANCE:

Watershed Protection Ordinance - SOS (Current Code)

REQUEST:

Variance request is as follows:

1. To allow the construction of a driveway in a WQTZ (Water Quality Transition Zone) within the Barton Springs

LDC Section 25-8-482 (A) (1)

STAFF RECOMMENDATION: Recommend approval

REASONS FOR RECOMMENDATION: Findings of fact have been met.



MEMORANDUM

TO:

Mary Gay Maxwell, Chairperson and Members of the Environmental Board

FROM:

Jim Dymkowski, Environmental Review Specialist Senior

Planning and Development Review Department

DATE:

June 18, 2014

SUBJECT: Homestead Oaks - SP-2013-0435C.SH

On the June 18, 2014 agenda is a request for the consideration of one variance from LDC 25-8-482 (A) (1) - to allow the construction of a driveway within the WOTZ (Water Quality Transition Zone) of two minor classified waterways within the Barton Springs Zone to allow the only access to a proposed multi-family development.

Description of Property

The subject property is located in the Slaughter Creek Watershed, which is classified as the Barton Springs Zone (Recharge), within the Drinking Water Protection Zone. It is within the City of Austin full purpose jurisdiction. There are two minor classified waterways that affect this site along the east and south perimeters that leave the site within culverts intersecting as they emerge on the south side of Slaughter lane. The 16.79 acre site is currently a single family residence with associated structures and drives. It is bordered to the north and south by single family residential development and to the east and west by commercial and multi-family development.

Existing Topography/Soil Characteristics/Vegetation

The property contains some slopes greater than 15%, all located within the Critical Water Quality Zone buffers of the two tributaries. The site grades from the north to the south toward both classified waterways. Vegetation generally consists of Live oak and Cedar elm with both native and ornamental grasses. According to the Environmental Resource Inventory, geology at this site is characterized by the Edwards limestone and soils consist of Speck and Tarrant clay soils.

Critical Environmental Features/Endangered Species

Watershed Protection Department Environmental Resource Management (ERM) staff has confirmed that no Critical Environmental Features were found on or adjacent to the site. Existing groundwater wells associated with the old home will be abandoned and capped per required standards.

Description of Project

Homestead Oaks, is a proposed multi-family project with associated parking and drives. It complies fully with SOS water quality standards. The project is within the Barton Springs Zone and is limited to a

net site area allowable impervious cover of 15% or 3.215 acres. The proposed impervious cover for the development is 3.15 acres or 14.72% of the net site area.

Environmental Code Variance Request

The following variance to the land development code is being requested to allow the construction of a driveway within the WQTZ (Water Quality Transition Zone) of two minor classified waterways within the Barton Springs Zone. This is the only possible access location the multi-family development.

1. To allow the construction of a driveway in a WQTZ (Water Quality Transition Zone) within the Barton Springs Zone. LDC Section 25-8-482 (A) (1)

Recommendation

Staff recommends approval of the variance without conditions as the Findings of Fact have been met (see attached)

Similar Cases

Staff was unable to find a similar case for comparison.



Planning and Development Review Department Staff Recommendations Concerning Required Findings Water Quality Variances

Project:

Homestead Oaks - SP-2013-0435C.SH

Ordinance Standard: Variance Request: Land Development Code Section 25-8-482 (A) (1)

To allow the construction of a driveway in a WQTZ (Water Quality

Transition Zone) within the Barton Springs Zone.

Findings:

A. Land Use Commission variance determinations from Chapter 25-8, Subchapter A – Water Quality of the City Code:

The requirement will deprive the applicant of a privilege or the safety of property given to owners
of other similarly situated property with approximately contemporaneous development.
Yes. Given the lots proximity to existing development on three sides and no viable access
from one of those three occupied sides, the only possible access is from the south off
Slaughter Lane. Without this proposed driveway, access to the site's 21.43 acres of
developable upland would be cut off.

2. The variance:

- a) Is not based on a condition caused by the method chosen by the applicant to develop the property, unless the development method provides greater overall environmental protection than is achievable without the variance;
 - Yes. The variance is not based on the method chosen by the applicant to develop the property. This property is surrounded on three sides with existing development and no access point to an adjacent street. The two tributaries affecting the site leave the southern property separately underneath Slaughter lane. The waterways and their critical buffers effectively cut off any other access to the property from the south as a drive across a critical zone is not permitted under Save Our Springs section of the code. The proposed drive location where the two Water Quality Transition Zones meet is therefore the only access opportunity.
- b) Is the minimum change necessary to avoid the deprivation of a privilege given to other property owners and to allow a reasonable use of the property;

 Yes. This is the minimum change necessary to allow for reasonable use of and safe access to the site. The driveway has been sited at the narrowest location within the WQTZ (Water Quality Transition Zone) to limit possible disturbance.
- c) Does not create a significant probability of harmful environmental consequences; and

Yes. The drive has been sited to limit the disturbance with the WQTZ (Water Quality Transition Zone) and erosion control has been installed to limit downstream sediment deposit. They are proposing to comply fully with SOS water quality standards for the drive and the project.

3. Development with the variance will result in water quality that is at least equal to the water quality achievable without the variance.

Yes. Development with the variance will result in water quality that is at least equal to the water quality achievable without the variance. They are proposing to comply fully with SOS water quality standards. The applicant has also either removed or will remove previous development from the critical and water quality transition zones and revegetate per the City's 609's native standard.

- B. Additional Land Use Commission variance determinations for a requirement of Section 25-8-392 (Water Quality Transition Zone), Section 25-8-422 (Water Quality Transition Zone), Section 25-8-452 (Water Quality Transition Zone), or Article 7, Division 1 (Critical Water Quality Zone Restrictions):
 - 1. The above criteria for granting a variance are met;
 - 2. The requirement for which a variance is requested prevents a reasonable, economic use of the entire property; and

Yes. Without this proposed driveway, access to the site's available 21.43 acres of upland developable land would be cut off.

3. The variance is the minimum change necessary to allow a reasonable, economic use of the entire property.

Yes. This is the minimum change necessary to allow for reasonable use of and safe access to the site. The driveway has been sited at the narrowest location within the WQTZ (Water Quality Transition Zone) to limit possible disturbance.

Environmental Reviewer:

Jim Dymkowski

Environmental Program Coordinator:

Susan 1

Environmental Officer:

1-5/-

Sue Barnett

Chuck Lesniak

Date: June 4, 2014

Staff may recommend approval of a variance after answering all applicable determinations in the affirmative (YES).

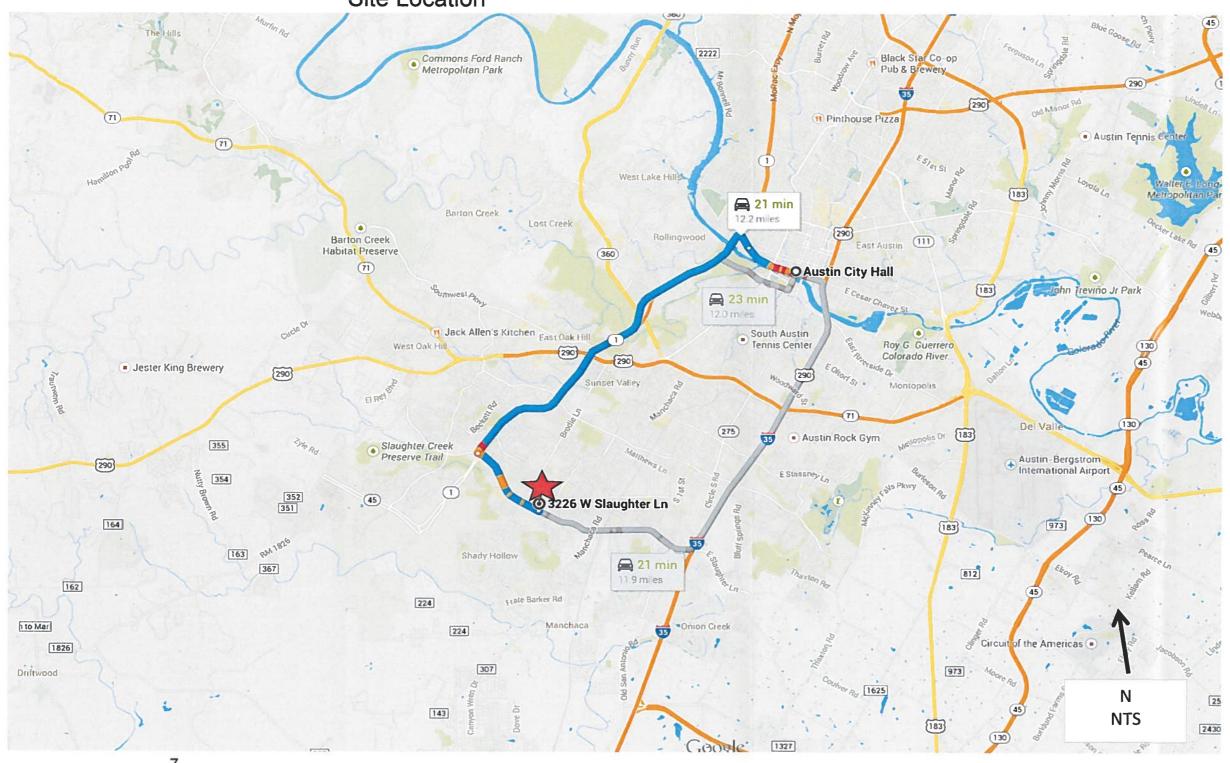
Homestead Oaks - SP-2013-0435C.SH Driving Directions

Beginning at Austin City Hall 301 W 2nd Street:

Go west on Cesar Chavez approximately 1.2 miles.
Go south on Mopac Loop 1 approximately 8.7 miles to exit for Slaughter Lane
Turn left and go east on Slaughter Lane approximately 2.1 miles.
Make U-turn
3226 W Slaughter Lane will be on your right

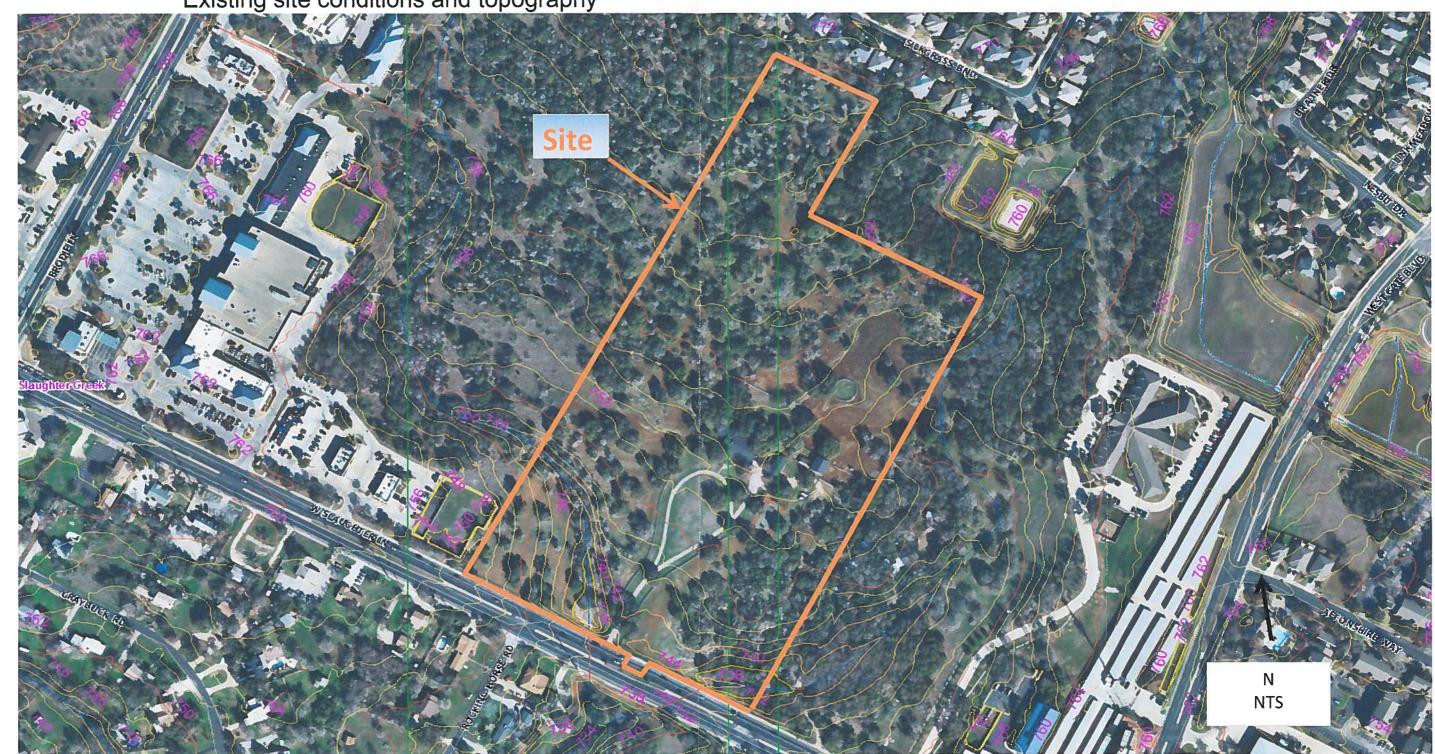


Homestead Oaks SP-2013-0435C.SH Site Location



Homestead Oaks SP-2013-0435C.SH

Existing site conditions and topography



Homestead Oaks SP-2013-0435C.SH

Project and Waterway Setback WQTZ Homestead Oaks SP-2013-0435C.SH Site Photos



Site Looking North at Proposed Drive Entrance



West Minor Tributary Looking North



West Minor Tributary Looking North

VARIANCE REQUEST DOCUMENT

FOR

HOMESTEAD OAKS 3226 WEST SLAUGHTER LANE AUSTIN, TEXAS 78748

PREPARED FOR:

M STATION HOUSING, L.P. 3036 SOUTH FIRST STREET SUITE 200 AUSTIN, TEXAS 78704

PREPARED BY:



13276 RESEARCH BOULEVARD SUITE 208 AUSTIN, TEXAS 78750 (512) 506-9335 Texas P.E. Firm No. F-43

June, 2014

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EXHIBIT 1 ENVIRONMENTAL BOARD VARIANCE APPLICATION



ENVIRONMENTAL BOARD VARIANCE APPLICATION TEMPLATE

May 16, 2014

Department Director
City of Austin
Watershed Protection & Development Review Department
P.O. Box 1088
Austin, Texas 78767

Re:

City File No: SP-2013-0435C.SH

Homestead Oaks

Construction in WQTZ Variance

Dear Director:

On behalf of the owner of the above referenced subdivision, we wish respectfully request a variance from the following provision of the *Land Development Code*:

25-8-482 Water Quality Transition Zone Development

This section of this provision prohibits development within the Water Quality Transition Zone. The proposed development will ultimately consist of one large apartment building that will contain 140 units, plus accessory uses including a learning center and a leasing office. Associated improvements will include demolition of existing buildings, grading, utility improvements, parking areas, sidewalks and other amenities. The project lies entirely within the Barton Springs Zone and is over the Edwards Aquifer Recharge Zone. The property occupies a peninsula of sorts between two tributaries of Slaughter Creek, both of which contain classified floodplains. The entire south frontage along Slaughter Lane is encumbered by a water quality transition zone (WQTZ). This is the only access point to the site. As such, the access driveway for the site will therefore cross the WQTZ. The magnitude of the construction within the WQTZ is the minimum required to construct these improvements. We believe that the variance is appropriate and justified. Our reasoning is outlined in the attached document for your review. Your favorable consideration and support of our request would be appreciated.

If you have any questions, please feel free to call.

Very truly yours,

Axiom Engineers Inc.

Alan D. Rhames, P.E.

PROJECT DESCRIPTION Applicant Contact Information

Name of Applicant	FC SW Housing LP	
Street Address	3036 South First Street	
City State ZIP Code	Austin, Texas 78704	
Work Phone	512-217-0429	
E-Mail Address	sunshine.mathon@Foundcom.org	

Variance Case Information

Case Name	Homestead Oaks
Case Number	SP-2013-0435C.SH
Address or Location	3226 Slaughter Lane
Environmental Reviewer Name	Jim Dymkowski
Applicable Ordinance	Current - SOS
Watershed Name	Slaughter Creek – Barton Springs Zone
Watershed Classification	☐ Urban ☐ Suburban ☐ Water Supply Suburban ☐ Water Supply Rural ☐ Barton Springs Zone
Edwards Aquifer Recharge Zone	■ Barton Springs Segment □ Northern Edwards Segment □ Not in Edwards Aquifer Zones
Edwards Aquifer Contributing Zone	□ Yes No
Distance to Nearest Classified Waterway	Two minor waterways cross the property.
Water and Waste Water service to be provided by	City of Austin
Request	The variance request is as follows (Cite code references:

Section 25-8-482 (A) Development is prohibited in a water quality transition zone that lies over the Edwards Aquifer recharge zone except

- (1) development described in Article 7, Division 1 (Critical Water Quality Zone Restrictions); and
- (2) minor drainage facilities or water quality controls that comply with Section 25-8-364 (Floodplain Modification) and the floodplain modification criteria of the Environmental Criteria Manual.

Impervious cover	Existing	Proposed	
square footage:	35,431	137,388_	
acreage:	0.813	3.154	
percentage:	3.79% NSA	14.72% NSA	
Provide general description of the property (slope range, elevation range, summary of vegetation / trees, summary of the geology, CWQZ, WQTZ, CEFs, floodplain, heritage	southwest Austin on Slaughter Lane. The acres of land, about eight of which will acre property is currently zoned MF-4-CO. The Springs Zone and is over the Edwards Aquit the Slaughter Creek (SOS) watershed. The property occupies a peninsula of sorts Creek, both of which contain classified flood south frontage along Slaughter Lane is end zone (WQTZ). The access driveway for the No development is proposed in the critical crossing for a wastewater line near the north. The soil profile on the site is more or less thin layers of silty clay overlying limestor recharge features on the site.	operty occupies a peninsula of sorts between two tributaries of Slaughter both of which contain classified floodplains (minor waterways). The entire frontage along Slaughter Lane is encumbered by a water quality transition WQTZ). The access driveway for the site will therefore cross the WQTZ. velopment is proposed in the critical water quality zone except for a creeking for a wastewater line near the northeast corner of the property. Soil profile on the site is more or less in a natural condition and consists of yers of silty clay overlying limestone and marl. There are no known	
trees, any other notable or outstanding characteristics of the property)	The site contains approximately five hundred trees including seventy-thre heritage trees. Sixty-seven trees are proposed to be removed. The topograph of the property slopes generally from north to south from a high point (~772 fee located near the northwest property corner. Slopes are typically mild to moderat except for the creek bank areas (which are not being disturbed). The low point of the site is about 736 feet at the entrance to the roadway culvert near the		

includes Elm, Hackberry, Cedar Elm and Chinaberry.

City of Austin | Environmental Board Variance Application Guide 3

southeast property corner. Vegetation consists of scattered a variety of native and introduced species. The tree distribution is dominated by Live Oaks but also

Clearly indicate in what way the proposed project does not comply with current Code (include maps and exhibits)

It is not possible to access the main body of the property without crossing the water quality transition zone (WQTZ). Two tributaries of Slaughter Creek (both classified as minor waterways) cross the property near its southern boundary. The WQTZ of these two waterways intersect, effectively forming a large single transition zone along the Slaughter Lane frontage. It is not possible to access the site without crossing the WQTZ. The location of the proposed driveway is such that it minimizes the distance of WQTZ that will be crossed (about 125 feet). A residential driveway has existed at this location for years.

FINDINGS OF FACT

As required in LDC Section 25-8-41, in order to grant a variance the Land Use Commission must make the following findings of fact:

Include an explanation with each applicable finding of fact.

Project: Homestead Oaks - SP-2013-0435C.SH

Ordinance: 25-8-482(A) – Water Quality Transition Zone Restrictions

- A. Land Use Commission variance determinations from Chapter 25-8-41 of the City Code:
 - 1. The requirement will deprive the applicant of a privilege or the safety of property given owners of other similarly situated property with approximately contemporaneous development
 - The property contains 21.43 acres of land in the Uplands Zone (out of 29.4 acres tota If a permit cannot be obtained to install a driveway over the water quality transition zone, no portion of the property can be developed. The two waterways that cross th property block access from the east and west and the zoning on the property prohibi development on the north part of the tract. For this reason the only feasible drivewa access to the site is from Slaughter Lane on the south. Failure to grant the variance would therefore deprive the owner use of the property.

2. The variance:

a) Is not based on a condition caused by the method chosen by the applicant to develop property, unless the development method provides greater overall environme protection than is achievable without the variance;

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YES The property has been in its current configuration for decades. The development of surrounding property is such that the only feasible driveway access to the site is from Slaughter Lane to the south. The current and prior owners are not responsible for the development of the surrounding property or the current road network and therefore did not create the current surrounding land configuration.

- b) Is the minimum change necessary to avoid the deprivation of a privilege given to other property owners and to allow a reasonable use of the property;
 - The only feasible way to provide vehicle access to the property is from Slaughter Lane. The proposed driveway location is such that is minimizes the distance of crossing of the water quality transition zone that is necessary; thereby minimizing disturbance of the transition zone to the smallest amount possible. The proposed driveway is in the same general location as a residential driveway that existed for decades.
- c) Does not create a significant probability of harmful environmental consequences; and
 - The proposed driveway location is such that is minimizes the distance of crossing of the water quality transition zone that is necessary; thereby minimizing disturbance of the transition zone to the smallest amount possible. The proposed driveway is in the same general location as a residential driveway that existed for decades. In addition, both waterways are confined to concrete box culverts at the Slaughter Lane crossing and neither can therefore reasonably be considered to be in a natural condition.
- 3. Development with the variance will result in water quality that is at least equal to the water quality achievable without the variance.
 - The variance will allow a driveway that provides the shortest crossing of the transition zone possible. All other possible driveway locations would either cross a larger length of the transition zone or would also require crossing of the critical water quality zone as well. Either of these scenarios would result in more disturbance, degrading water quality. Other options (not actually available due to zoning) to access the site from the northwest, north or northeast would require a much longer access drive resulting on more

YES

impervious cover allocated to the driveway which would result in a net decrease in water quality.

- B. Additional Land Use Commission variance determinations for a requirement of Section 25-8-393 (Water Quality Transition Zone), Section 25-8-423 (Water Quality Transition Zone), Section 25-8-453 (Water Quality Transition Zone), or Article 7, Division 1 (Critical Water Quality Zone Restrictions):
 - 1. The criteria for granting a variance in Section A are met;

YES Granting the variance will allow for reasonable use of the property similar to surrounding properties. The variance requested represents the minimum departure from the code necessary to allow access to the site. All other options for accessing the site would likely result in decreased water quality relative to the option proposed.

2. The requirement for which a variance is requested prevents a reasonable, economic use of the entire property; and

The site is being developed to provide affordable housing by a non-profit entity. The property is being developed in compliance with the SOS ordinance and applicable zoning restrictions. No additional density is being requested, only permission to physically access the site with a driveway.

3. The variance is the minimum change necessary to allow a reasonable, economic use of the entire property.

YES

The variance will allow a driveway that provides the shortest crossing of the transition zone possible. All other possible driveway locations would either cross a larger length of the transition zone or would also require crossing of the critical water quality zone as well. Either of these scenarios would result in more disturbance, degrading water quality. Other options (not actually available due to zoning) to access the site from the northwest, north or northeast would require a much longer access drive resulting on more impervious cover allocated to the driveway which would result in a net decrease in water quality.





Exhibits for Board Backup and/or Presentation

Please attach and paginate.

- Aerial photos of the site (backup and presentation)
- Site photos (backup and presentation)
- o Aerial photos of the vicinity (backup and presentation)
- Context Map—A map illustrating the subject property in relation to developments in the vicinity to include nearby major streets and waterways (backup and presentation)
- Topographic Map A topographic map is recommended if a significant grade change on the subject site exists or if there is a significant difference in grade in relation to adjacent properties. (backup and presentation)
- For cut/fill variances, a plan sheet showing areas and depth of cut/fill with topographic elevations. (backup and presentation)
- Site plan showing existing conditions if development exists currently on the property (presentation only)
- Proposed Site Plan- full size electronic or at least legible 11x17 showing proposed development, include tree survey if required as part of site or subdivision plan (backup and presentation)
- Environmental Map A map that shows pertinent features including Floodplain, CWQZ,
 WQTZ, CEFs, Setbacks, Recharge Zone, etc. (backup and presentation)
- An Environmental Assessment pursuant to ECM 1.3.0 (if required by 25-8-121) (backup only)
- Applicant's variance request letter (backup only)

EXHIBIT 2 AERIAL PHOTO OF SURROUNDING AREA



EXHIBIT 3

AERIAL PHOTO WITH DEVELOPMENT OVERLAY

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EXHIBIT 4

VARIANCE ENCUMBRANCE EXHIBIT

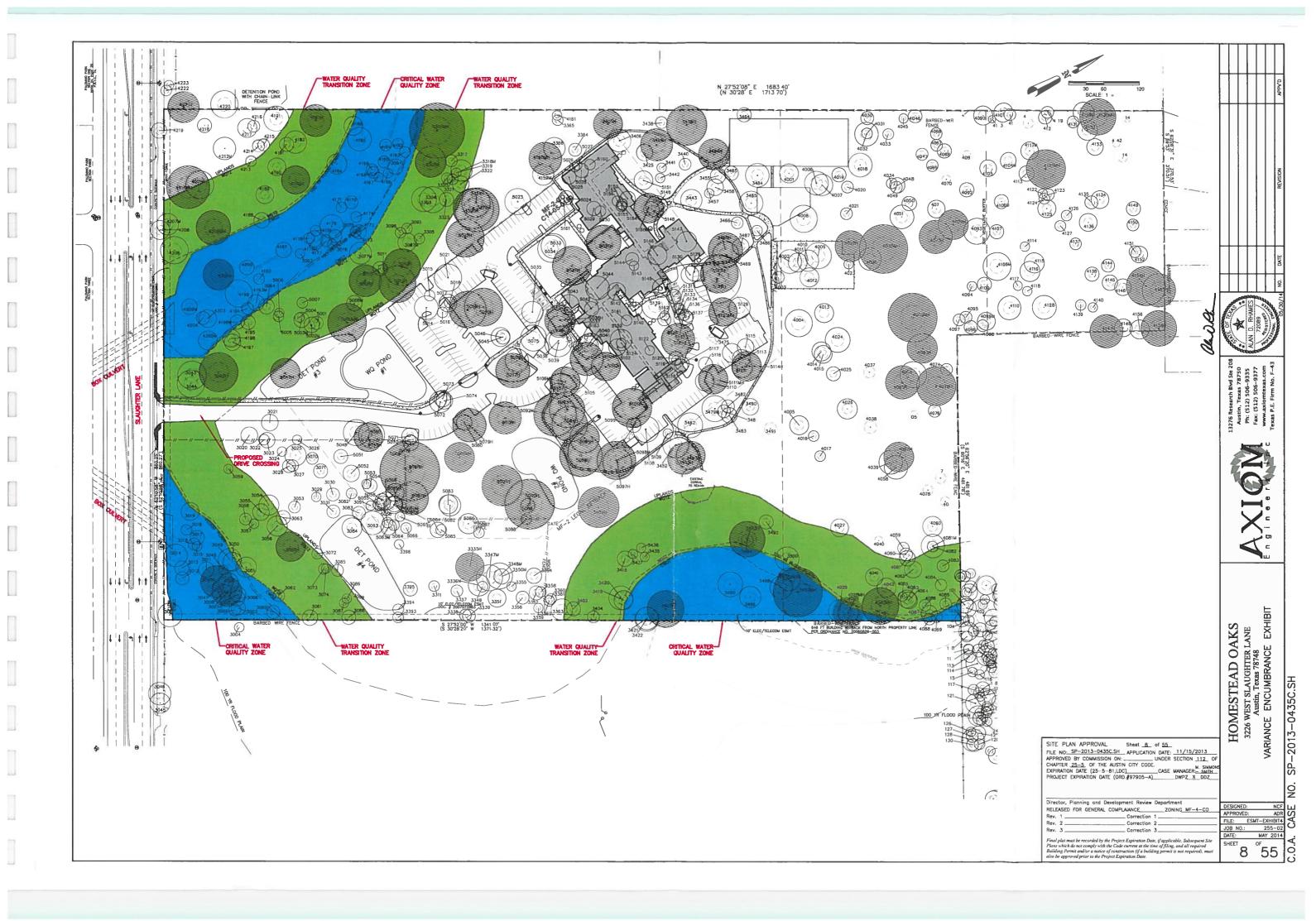


EXHIBIT 5 **TOPOGRAPHIC MAP WITH GRADING PLAN**

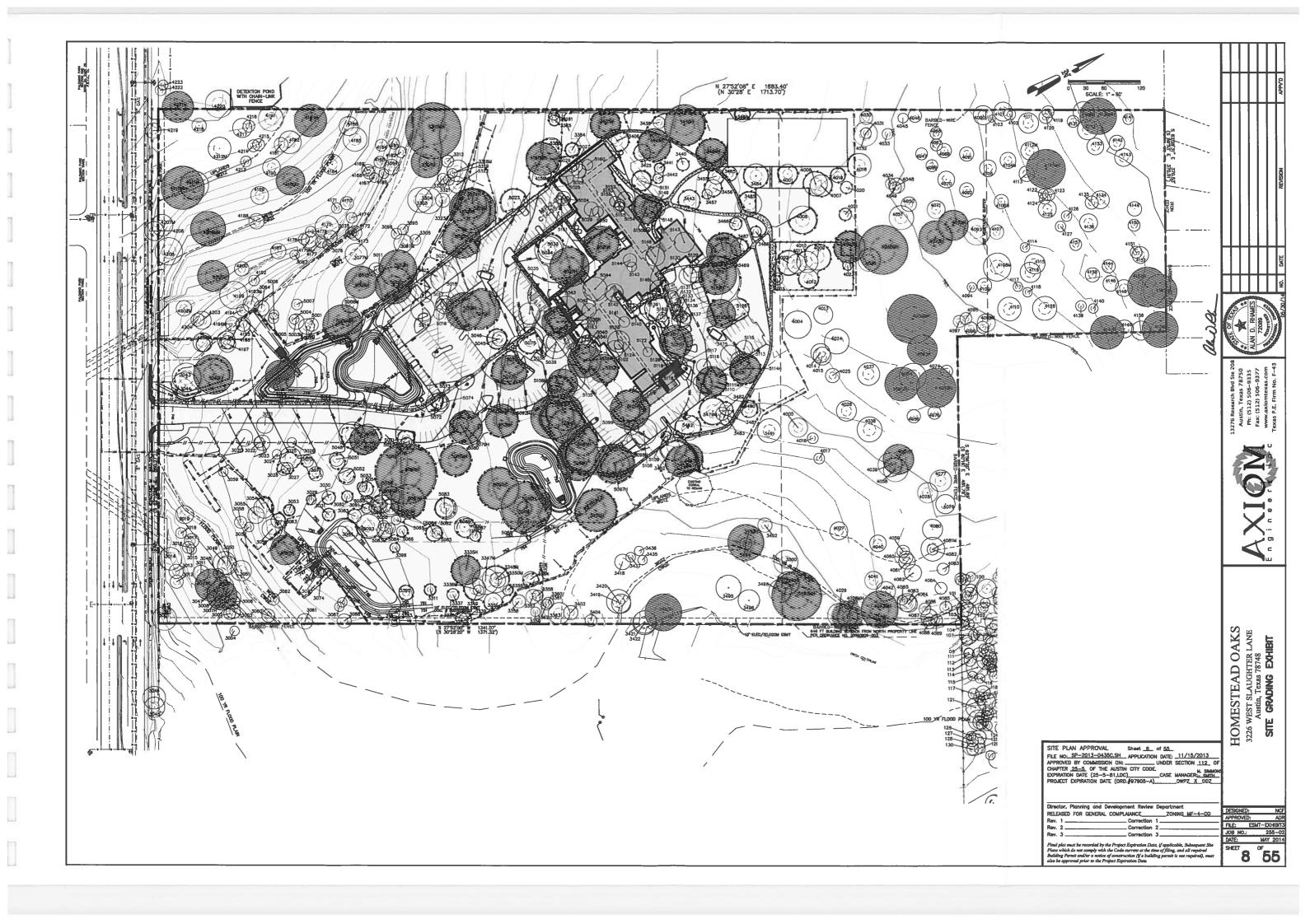


EXHIBIT 6 EXISTING CONDITIONS MAP

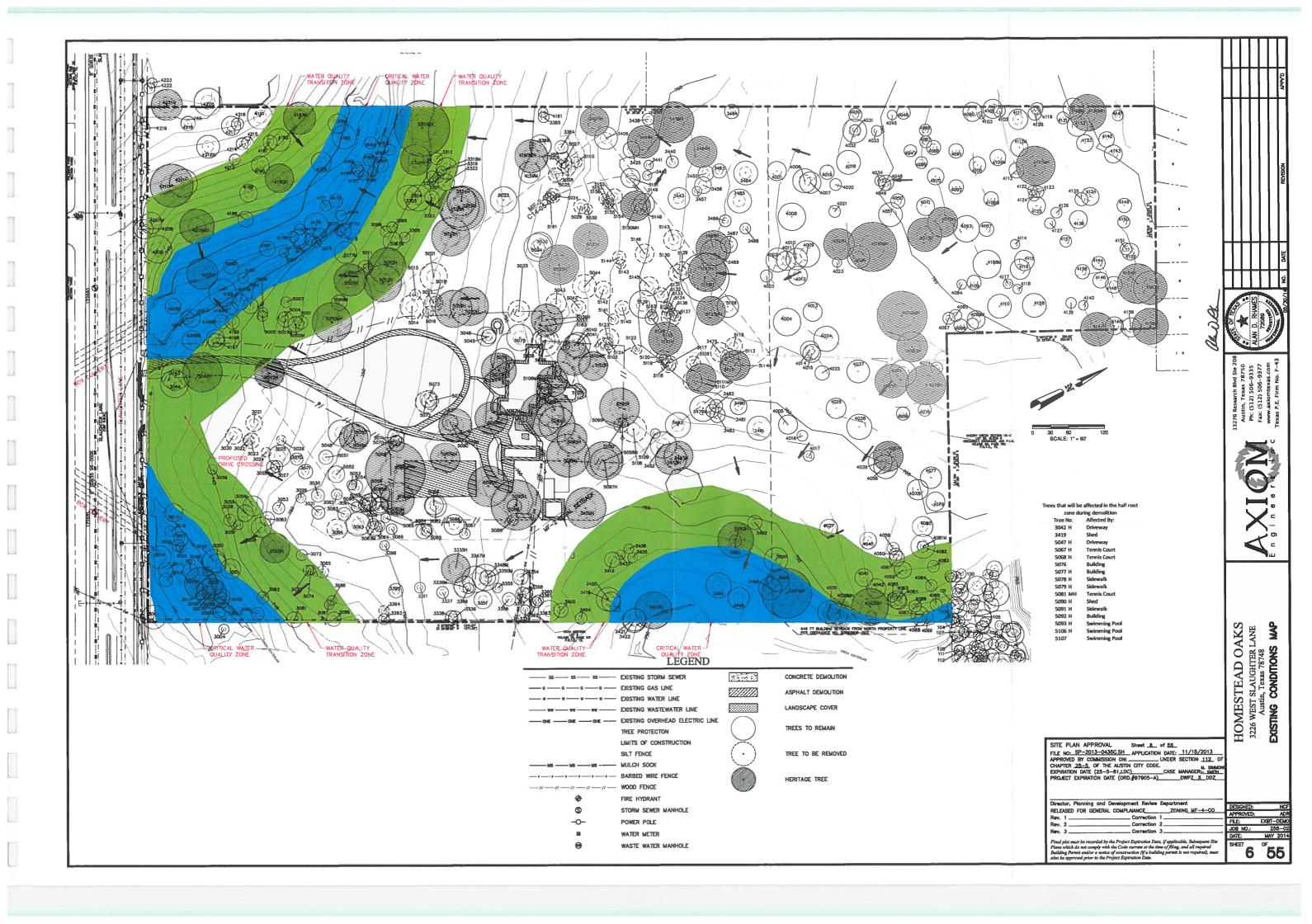


EXHIBIT 7 OVERALL SITE PLAN

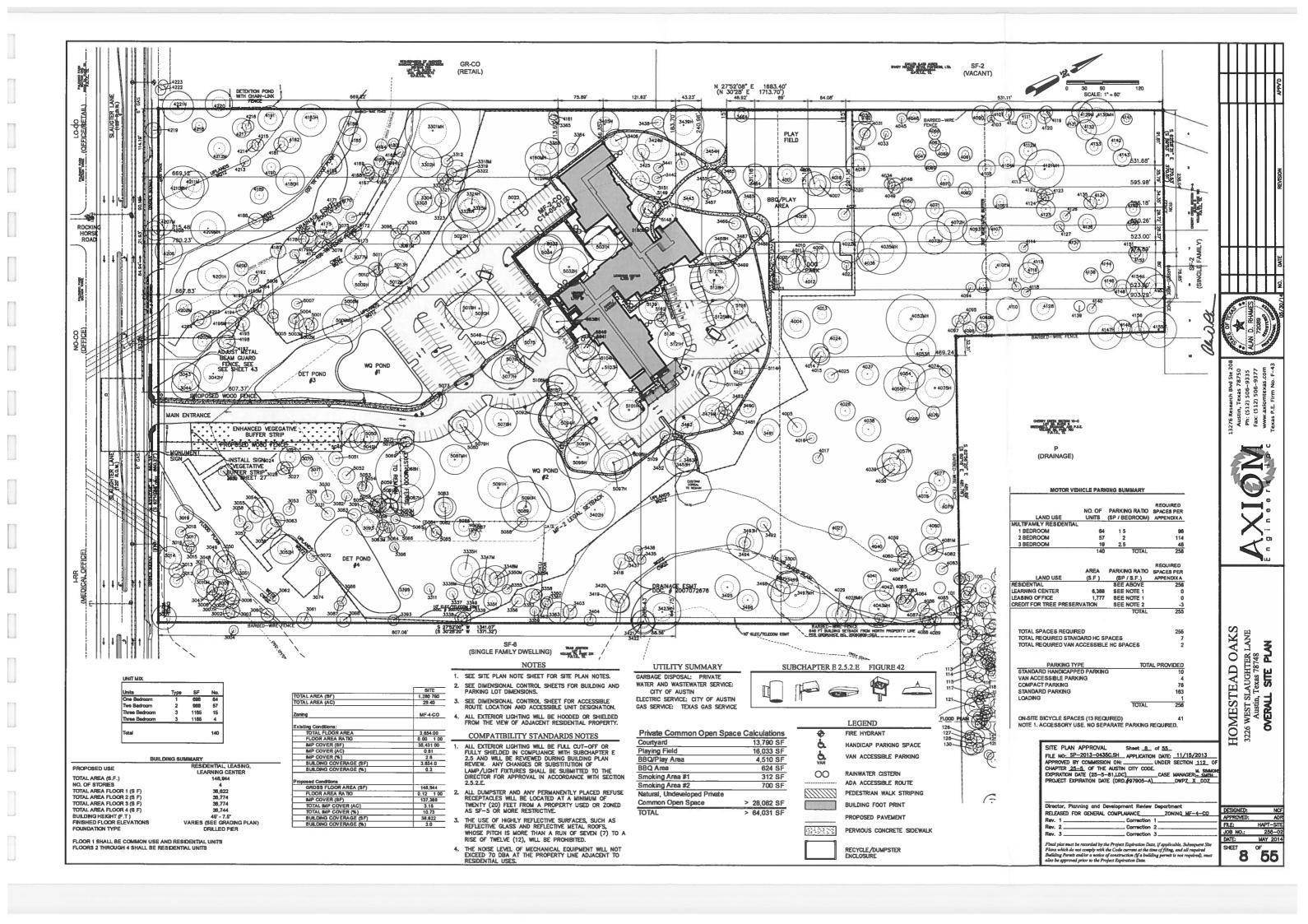


EXHIBIT 8 ENVIRONMENTAL MAP

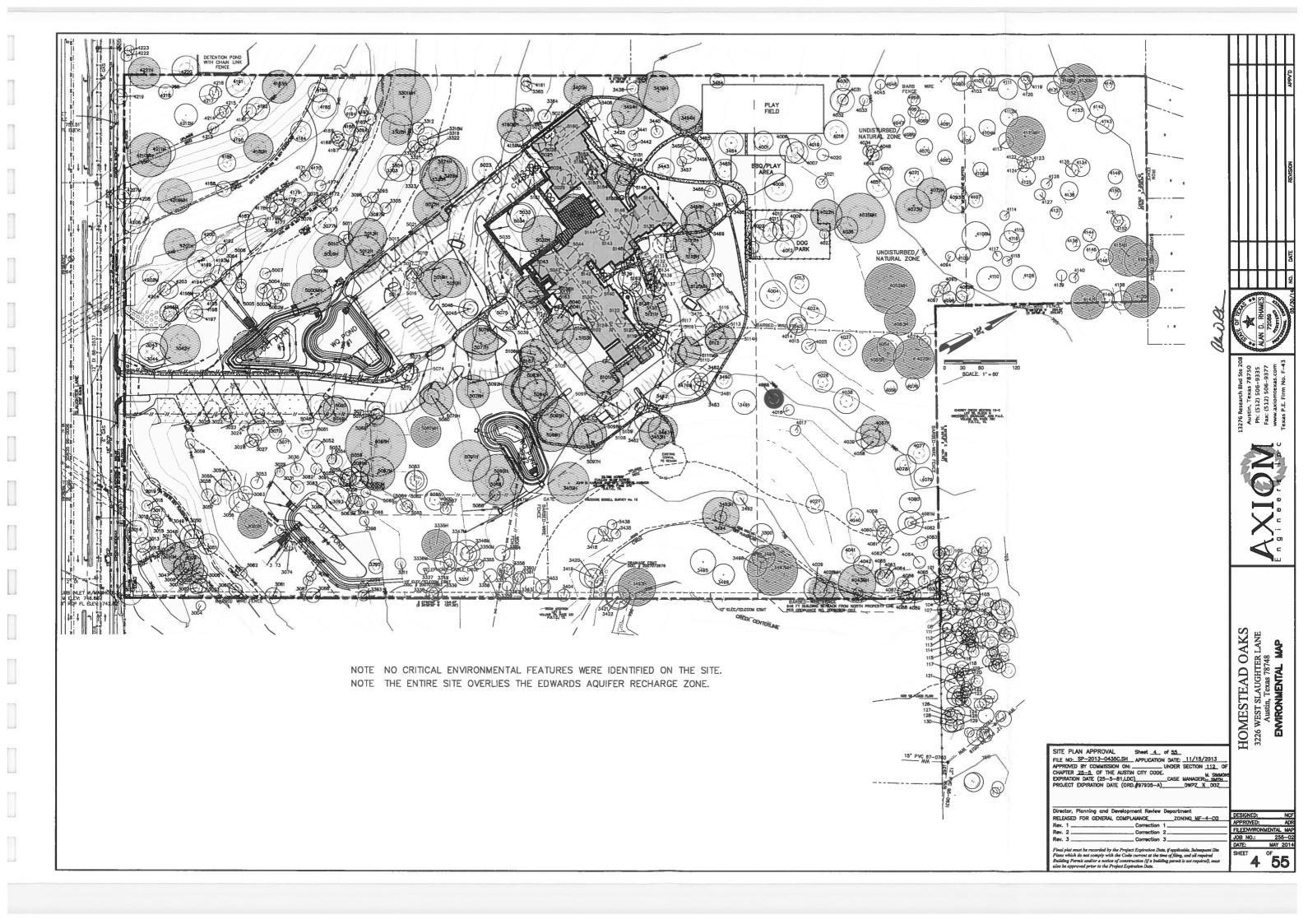


EXHIBIT 9 EROSION/SEDIMENTATION CONTROL PLAN

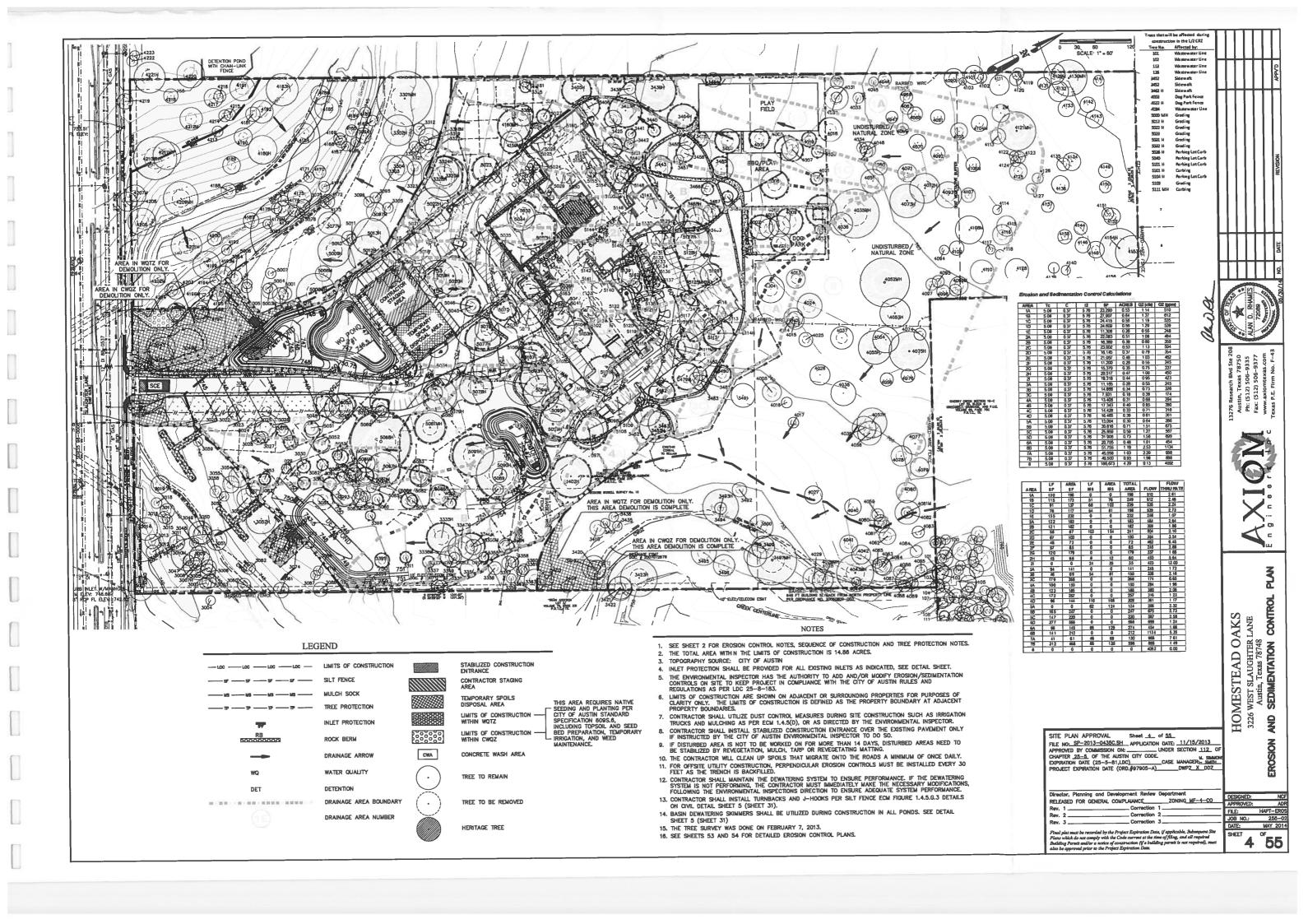


EXHIBIT 10

GEOLOGIC REPORT

James W. Sansom, Jr., P.G.

Consulting Geologist
Licensed Geologist, State of Texas No. 29
Certified Professional Geologist, AIPG
3495 County Road 258
Liberty Hill, Texas 78642
512/515-0916
FAX 512/515-0916

July 31, 2013

Mr. Steve Johnson, P.E. Holt Engineering, Inc. 2220 Barton Skyway Austin, Texas 78704

Dear Mr. Johnson:

This is my report on the proposed Homestead Apartments to be built at 3226 W. Slaughter Lane in southwest Austin, Texas on an approximate 29.4 acre tract of land. The report addresses the components of the Hydrogeologic Report outlined in the City of Austin's Land Development Code, Subchapter A: Water Quality, Article 3: Environmental Assessment, Chapter §25-8-122.

A reconnaissance was made of the subject site on July 12, 18, and 26, 2013. The reconnaissance consisted of walking the subject site. The site at the time of the reconnaissance had a residence and some out-buildings located near the center of the tract. Most of the front one-half and a portion of the rear had been cleared and well maintained. Thick vegetation covered the southeast corner and a larger portion of the northern part of the tract.

Speck and Tarrant soils occur on site. They have been mapped by the Soil Conservation Service. Speck soils occur over approximately 90 percent of the site. Tarrant soils, that occupy the remaining less than 10 percent of the site, occur along its front in an intermittent drainage. Speck soils are shallow (14" to 18"), reddish-brown stony clay loam that have chert pebbles and limestone cobblestones 2" to 10" that cover 30 to 50 percent of the ground surface. Tarrant soils are shallow to very shallow (4" to 14"), stony clays that have limestone cobbles that cover 25 to 85 percent of the ground surface.

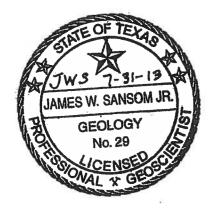
The Edwards formation crops out over almost the entire subject site. A fault has been mapped and is shown in a report published by the Bureau of Economic Geology crosses the north end of the site that faults Edwards formation on the east against the Georgetown formation on the west. Its alignment is southwest to northeast. This fault was not apparent during the reconnaissance of the site. The Edwards formation is a thin to thick bedded limestone, dolomite, and dolomitic limestone that is hard to soft, fossilifereous, in places cherty, and commonly has solution features such as caves, sinkholes, dissolution along faults, and honeycomb. In the Austin area it is up to 350 feet

thick. The Georgetown formation ranges in thickness from 40 to 100 feet and is a fossiliferous nodular fine-grained limestone, marly limestone, and marl.

Topographically the site is relatively flat and slopes gently from north to south. There are intermittent drainages on its southwest corner and two along its east and southeast side that all drain to the south. All three of these drainages have 100 year floodplains, water quality transition zones (WQTZ), and critical water quality zones (CWQZ) designated on the Site Geologic Map. In the drainage located on the site's southwest corner numerous limestone cobbles and boulders have been placed within the drainage area possibly to slow down the flow of run-off along the drainage and dispose of large boulders from the site.

No Critical Environmental Feature (CEF) was identified on the site that meets the criteria in the City of Austin rules. Two Non-Karst Closed Depressions and a water well that meet TCEQ criteria were identified on site. The Closed Depressions are of little significance as recharge features in that they are filled with soil and leaves, are small in size, and have small catchment areas. The water well is no longer being utilized by the landowner and the developer plans to plug it. Eighteen geotechnical core holes were drilled on site for pavement, buildings, and detention ponds engineering design criteria. All of these holes were visited and confirmed that they are plugged. Attached is a spreadsheet listing the holes with their GPS coordinates.

The one fault mentioned previously is shown on the Geologic Site Map. A Site Geologic Map and a Location and Geologic Map are attached.



Sincerely,

James W. Sansom, Jr., P.G.

References:

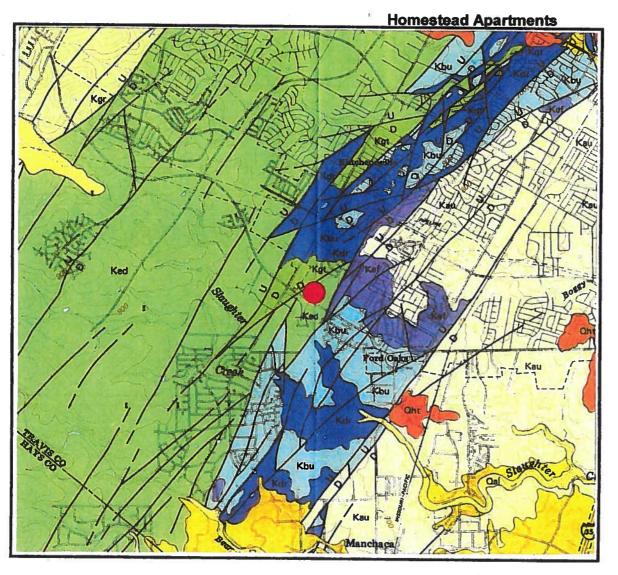
Werchan, Lowther, and Ramey, 1974, Soil Survey of Travis County, Texas, Soil Conservation Service, U. S. Department of Agriculture.

Garner and Young, 1976, Environmental Geology of the Austin Area: An Aid to Urban Planning, Bureau of Economic Geology Report of Investigations No. 86.

Brune and Duffin, 1983, Occurrence, Availability, and Quality of Ground Water in Travis County, Texas, Texas Department of Water Resources, Report 276.

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LOCATION AND GEOLOGIC MAP OF SITE AREA

Qal Qtt	Alluvium Tributary terrace deposits		Kbu Kdr	Buda fm. Del Rio fm.		Λ
Qht	High terrace deposits	4	Kgt	Georgetown fm.		/1
Kau	Austin Group		Ked	Edwards fm.		
Kef	Eagle Ford fm.		Kgr	Glen Rose fm.	,	
Site:		, t	1 ir	Scale:		h
Faults	: U = upthrown side,					- 1
	D = downthrown side,		U		950	•
	dashed where inferred,		D		85	

Map Source: Garner & Young, 1976, "Environmental Geology of the Austin Area: An Aid to Urban Planning," Bureau of Economic Geology Report of Investigations No. 86.

Homestead Apartments	Hole	Latitude	Longitude
GPS locations for Geo-	Numbers	North (degrees)	West (degrees)
technical holes drilled:	P-1	30 10' 51.8"	97 50' 39.5"
P holes for pavement,	P-2	30 10' 53.7"	97 50' 37.1"
B holes for buildings,	P-3	30 10' 55.1"	97 50' 37.4"
DP holes for detention	P-4	30 10' 56.2"	97 50' 38.5"
ponds.	P-5	30 10' 58.5"	97 50' 39.5"
	P-6	30 10' 57.6"	97 50' 38.7"
Map Datum used:	P-7	30 10' 56.5"	97 50' 37.0"
NAD27CONUS	P-8	30 10' 58.3"	97 50' 34.7"
	P-9	30 11' 00.2"	97 50' 35.2"
	B-1	30 11' 00.3"	97 50' 40.1"
	B-2	30 10' 59.9"	97 50' 38.5"
	B-3	30 10' 58.5"	97 50' 37.7"
	B-4	30 10' 59.6"	97 50' 37.6"
	B-5	30 11' 00.4"	97 50' 37.7"
	B-6	30 10' 59.0"	97 50' 36.8"
	B-7	30 10' 59.1"	97 50' 35.5"
	DB-1	30 10' 54.6"	97 50' 34.8"
	DB-2	30 10' 54.0"	97 50' 34.5"

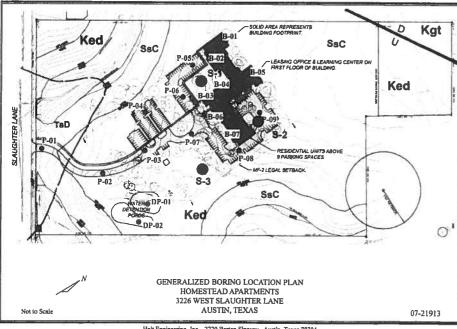
SITE GEOLOGIC MAP

Homestead Apartments

Expla	nation:	
	Site Boundary	
	Sensitive Feature	S-1
	Geologic Features:	
	Georgetown Formation Outcrop	Kgt
	Edwards Formation Outcrop	Ked
	Faults (dashed where inferred)	U D
	U, upthrown side D, downthrown side	, , , , , , , , , , , , , , , , , , ,
	Geotechnical Holes (Pavement, buildings, detention ponds)	P -, B -, DP -
	Soil Series:	
	Speck soils occurrence	SsC
	Tarrant soils occurrence	TaD
	Soil Series contact	

Geologic Map Source: Garner and Young, 1976, "Environmental Geology of the Austin Area: An Aid to Urban Planning," Bureau of Economic Geology Report of Investigations No. 86.

Scale: 1 inch = +/- 180 feet



Site Geologic Map Homestead Apartments



Holt Engineering, Inc. . 2220 Barton Skyway . Austin, Texas 78704

EXHIBIT 11 ENVIRONMENTAL RESOURCE INVENTORY



Environmental Services, Inc.

6 February 2014

Environmental Resource Inventory
City of Austin Land Development Code (Section 25-8-121)
Compliance Report

RE: 3226 Slaughter Lane, Austin, Travis County, Texas

HJN 130202 EA

1.0 INTRODUCTION

This report provides the results of an environmental resource inventory conducted by Horizon Environmental Services, Inc. (Horizon) on the above referenced site (Appendix A, Figure 1). Horizon conducted the field reconnaissance on 9 September 2013 and 4 February 2014. Horizon spent a minimum of 10 person-hours in the field evaluating the site and surrounding area, and completed the assessment process by conducting a review of existing literature.

2.0 ENVIRONMENTAL SETTING

2.1 LAND USE

Current land use on the subject site is single-family residential (SFR) with associated amenities including swimming pool, tennis court, guest house, barn and dog kennels. The following land uses border the subject site:

North: S

South:

Slaughter Lane and SFR beyond

East:

Rural SFR and commercial beyond

West:

Wooded rangeland and commercial beyond

2.2 VEGETATION

The subject site is situated within the Edwards Plateau and Blackland Prairie vegetational areas of Texas (Gould, 1975). Vegetation is characterized as plateau live oak (Quercus fusiformis), little bluestem (Schizachyrium scoparium), bermudagrass (Cynodon dactylon), silver bluestem (Bothriochloa saccharoides), Texas persimmon (Diospyros texana), Texas pricklypear (Opuntia engelmannii), Cedar elm (Ulmus crassifolia), other assorted native grasses and ornamental species near the SFR structure.

130202 ERI Report.docx

CORPORATE HEADQUARTERS

1507 South IH 35 ★ Austin, Texas 78741 ★ 512.328.2430 ★ Fax 512.328.1804 ★ www.horizon-esi.com Certified WBE/HUB/DBE/SBE



2.3 TOPOGRAPHY AND SURFACE WATER

This site is within the Slaughter Creek Watershed, as classified by the City of Austin (COA, 2012a). Topographically, the site ranges from approximately 740 to 770 feet above mean sea level (USGS, 1988). Drainage on the subject site occurs primarily by overland sheet flow in a north-to-south direction toward a tributary of Slaughter Creek. None of the subject site is within the 100-year floodplain (FEMA, 2008).

2.4 SOILS

Soils mapped within the subject site include the following:

TABLE 1 - SOILS

SOIL NAME	SOIL TYPE	SOIL DEPTH (FEET)	UNDERLYING MATERIAL	PERMEABILITY	AVAILABLE WATER CAPACITY	SHRINK- SWELL CAPACITY	
Speck stony clay loam, 1-5% slopes (SsC)	oam, stony clay 0 to 1.7 weathered fr		residuum weathered from limestone	well drained	very low	moderate	
Tarrant soils, 5-8% slopes (TaD)	very stony clay	0 to 1	residuum weathered from limestone	well drained	very low	low	

Source: NRCS, 2013a and 2013b

2.5 EDWARDS AQUIFER ZONE

The subject site is found within the Edwards Aquifer Recharge Zone as mapped by the City of Austin Watershed Regulation Areas Map (COA, 2008) and the Texas Commission on Environmental Quality (TCEQ) Recharge Zone Boundary Maps (TCEQ, 2013).

The Recharge Zone is known as the area where the stratigraphic units constituting the Edwards Aquifer are exposed at the surface and where water may filter into the aquifer through permeable features such as cracks, fissures, caves, and other openings in these layers. The Recharge Zone includes other geologic formations in proximity to the Edwards Aquifer where caves, sinkholes, faults, fractures, or other permeable features may create a potential for recharge of surface waters into the Edwards Aquifer (TCEQ, 1999).

2.6 GEOLOGY

A review of existing literature shows the site is underlain by the Edwards Limestone (Ked) (UT-BEG, 1995). The Edwards Limestone is a thinly to massively bedded, hard to soft, cherty, fossiliferous, fine-grained limestone and dolomite that commonly have red clay and calcite associated with solution features, such as caves and collapsed zones. The Edwards Limestone is known to form caves and voids and is further described as:



Limestone, dolomite, and chert; limestone aphanitic to fine grained, massive to thin bedded, hard, brittle, in part rudistid biostromes, much miliolid biosparite; dolomite fine to very fine grained, porous, medium gray to grayish brown; chert, nodules and plates common, varies in amount from bed to bed, some intervals free of chert, mostly white to light gray; in zone of weathering considerably recrystalized, "honeycombed," and cavernous forming an aquifer; forms flat areas and plateaus bordered by scarps; thickness 60 to 350 feet, thins northward (UT-BEG, 1995).

2.7 WATER WELLS

A review of the records of the Texas Water Development Board (TWDB) revealed no documented water wells on or within 150 feet from the subject site (TWDB, 2013). One water well was observed on the subject site near the SFR during Horizon's site reconnaissance.

The results of this assessment do not preclude the existence of additional undocumented/abandoned wells. If a water well or casing is encountered during construction, work should be halted near the feature until the TCEQ is contacted.

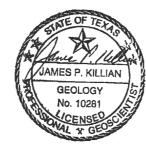
3.0 CRITICAL ENVIRONMENTAL FEATURES

The City of Austin definition of a critical environmental feature (CEF) includes caves, sinkholes, springs, wetlands, bluffs, canyon rimrock, water wells within the Edwards Aquifer, and significant recharge features located over the Edwards Aquifer Recharge Zone. One water well was identified which would be classified as a potential CEF as defined by the City of Austin due to the location within the Edwards Aquifer Recharge Zone. The location of this water well is shown on Figure 1 and is also provided in the CEF table. No other CEFs were found on or within 150 feet from the subject property.

For Horizon Environmental Services, Inc.

Shannon Dorsey Principal James Killian Registered Professional Geologist

James P. Ville



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4.0 REFERENCES (BCCP) Balcones Canyonlands Conservation Plan. Map of the Permit Area. 19 October 1996. (COA) City of Austin. City of Austin GIS Data Sets. Recharge and Contributing Zones <ftp://ftp.ci.austin.tx.us/GIS-Data/Regional/coa_gis.html>. 3 April 2008. ______. 2012a. City of Austin. City of Austin GIS Data Sets. Watersheds. <ftp://ftp.ci.austin.tx.us/GIS-Data/Regional/coa_gis.html>. 26 July 2012. ______. 2012b. City of Austin. Barton Springs Zone Water Quality Ordinance Area (Within City of Austin Corporate Limits and ETJ). Communications and Technology

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- _____. 2013b. Soil Data Mart, http://soildatamart.nrcs.usda.gov/. Accessed 9 September 2013.
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- _____. Edwards Aquifer Protection Program. Edwards Aquifer Viewer, http://gis.tceq.state.tx.us/website/iredwards1/viewer.htm. Accessed 9 September 2013.
- (TPWD) Texas Parks and Wildlife Department. T/E and Rare Species Elemental Occurrences, Natural Diversity Database. Wildlife Division, Habitat Assessment Program, Austin, Texas. 15 September 2013.
- (TWDB) Texas Water Development Board. Water Information Integration and Dissemination System. TWDB Groundwater Database (ArcIMS), http://wiid.twdb.state.tx.us/ims/wwm_drl/viewer.htm?DISCL=1&. Accessed 9 September 2013.
- (USFWS) US Department of the Interior, Fish and Wildlife Service. Southwest Region Ecological Services Office. Endangered Species, Lists of Species by County for Texas, Travis County, http://www.fws.gov/southwest/es/EndangeredSpecies/lists/default.cfm. Accessed 10 September 2013.

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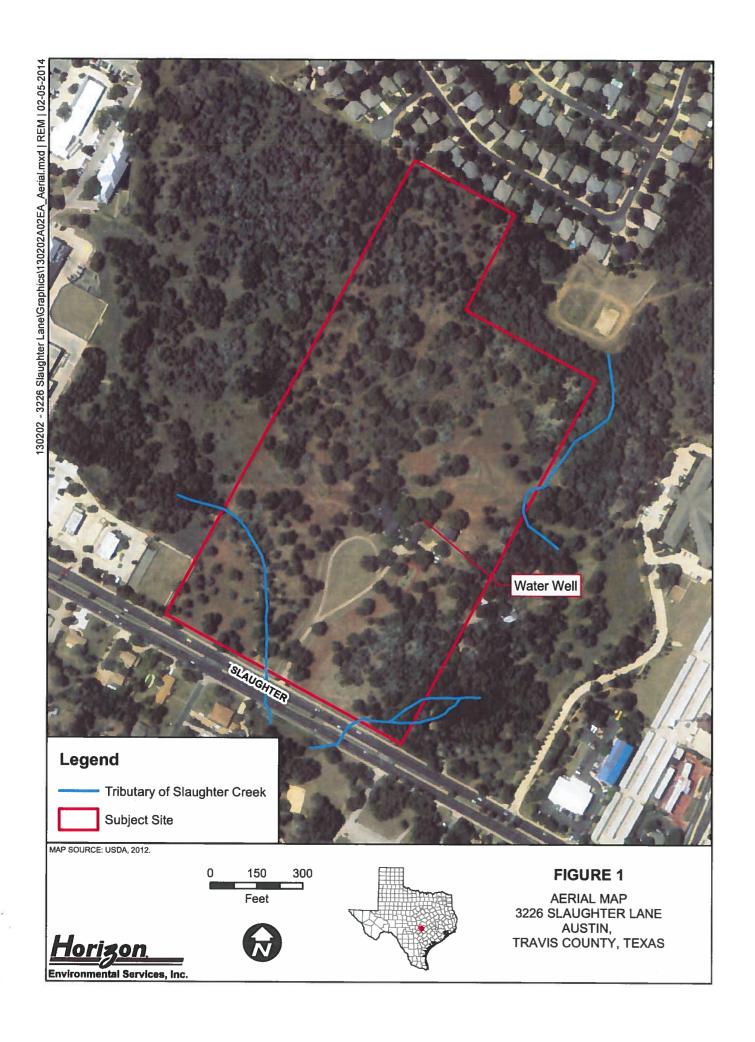
- (USGS) US Geological Survey. 7.5-minute series topographic maps, Oak Hill Texas, quadrangle. 1988.
- (UT-BEG) University of Texas Bureau of Economic Geology, C.V. Proctor, Jr., T.E. Brown, J.H. McGowen, N.B. Waechter, and V.E. Barnes. *Geologic Atlas of Texas*, Austin Sheet, Francis Luther Whitney Memorial Edition. 1974; revised 1995.
- Veni, George, and Associates. *Endangered Cave Species Karst Zone Map*, Oak Hill quadrangle. George Veni and Associates. Austin, Texas. 1991.

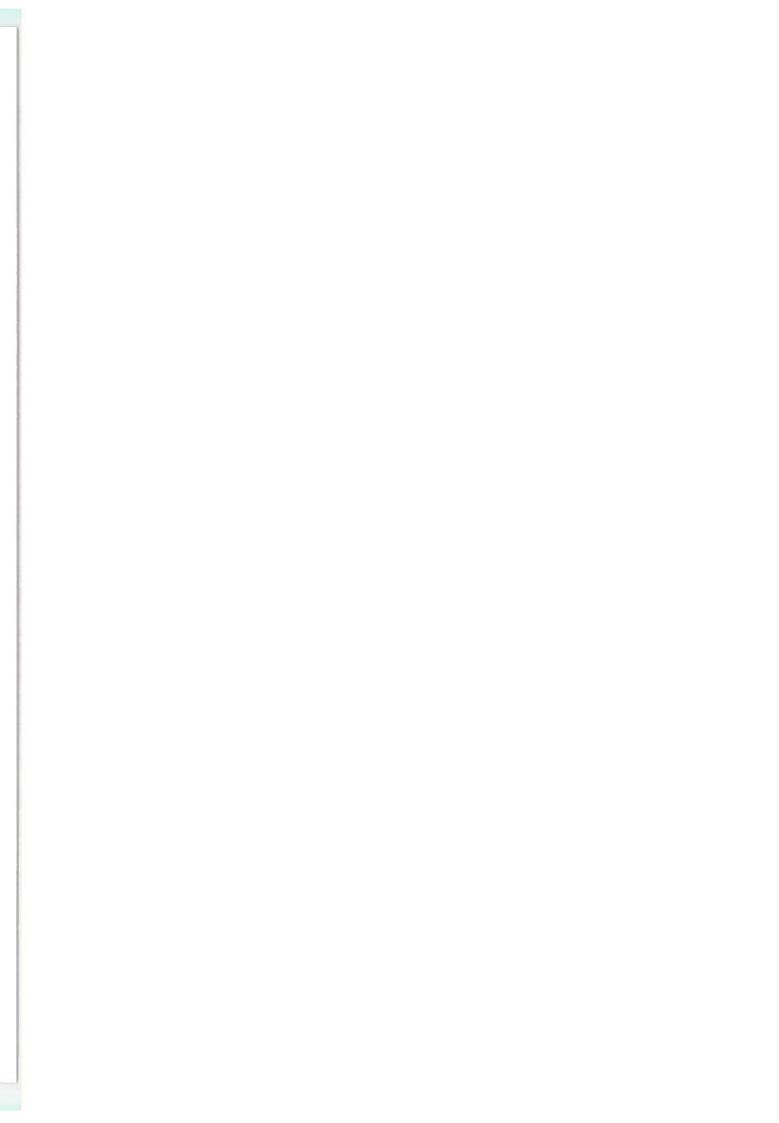




APPENDIX A

FIGURE







APPENDIX B SITE PHOTOGRAPHS



PHOTO 1
View of northern portion of the subject site



View of southerly adjacent SFR development and Slaughter Lane





PHOTO 3
View of driveway access to SFR



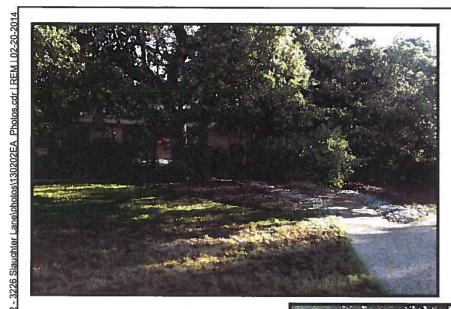


PHOTO 4
View of on-site SFR structure





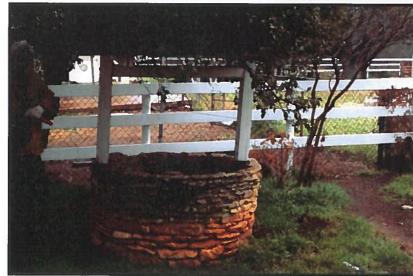


PHOTO 6 View of on-site water well





APPENDIX C

CEF WORKSHEET

City of Austin Site Review Critical Environmental Feature Worksheet

1	Project Name:	Homestead Oaks	5	Primary Contact Name:		Shannon Dorsey
2	Project Address:	3226 Slaughter Lane 6		Phone Number:		512-328-2430
3	Date:	2/8/2014 7		2/8/2014 7 Prepared By		Shannon Dorsey
4	Environmental Assessment Date:	2/4/2014	8	CEFS Located? (yes,no):	Yes	

9	FEATURE TYPE (Wetland,Rimrock,Recharge Feature,Seep,Spring)	FEATURE ID FEATURE LONGITUDE (WGS 1984 in Meters)		FEATURE LATITUDE (WGS 1984 In Meters)		WETLAND DIMENSIONS (ft)		RIMROCK DIMENSIONS (ft)		
	(Walland, Milliock, Nacharge Feature, Seep, Spring)	(eg 3-1)	coordinate	notation	coordinate	notation	Х	Y	Length	Avg Height
	Recharge Feature	Water Well 1	-97.843355	DD	30.18273	DD				
									0	
		ected in Windshill State								
						THE WAY	-			
						9				
				Fig. 8						
		and the same of								
		AUTO-CON II							-	

City of Austin Use Only WPDRD CASE NUMBER.

For rimrock, locate the midpoint of the segment that describes the feature. or wetlands, locate the approximate entroid of the feature and the estimate rea...

*

For a spring or seep, locate the source of groundwater that feeds a pool or stream.