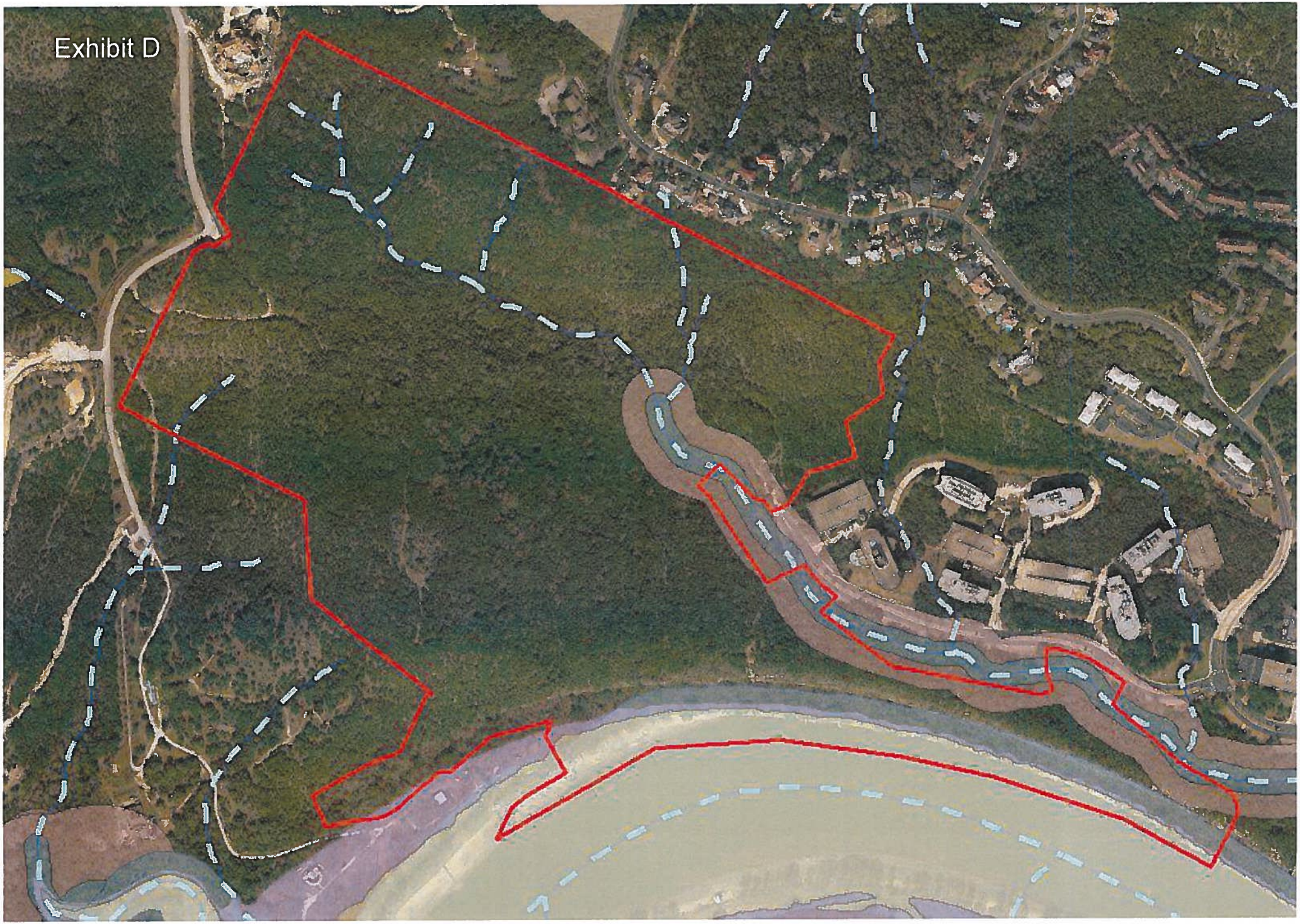


Exhibit D

Exhibit E

Austin Tree Experts

Professional Arborist Services

(512) 996-9100 | www.AustinTreeExperts.com

Arborist Report

Tree Condition Evaluation

September 14, 2018
Camelback Project, 78730

Introduction

This report contains information about the general forest makeup and some specific trees' conditions located on the Camelback project located to the north west of Loop 360 and the Pennybacker bridge. The site is in the design phase of site planning. I have been provided some information about the site:

- An incomplete tree survey
- Infrared red imagery for the site
- A map of priority areas for tree evaluations
- A list of heritage trees in the proposed development area

Tree Species Clarification

All trees referred to as "cedar" in this report are ash junipers (*juniperus ashei*), and all trees referred to live oak are escarpment live oak (*quercus fusiformis*).

Overall Forest Composition and Condition

There are two distinguishable site types: there is the waterfront section of land that is mostly a severe slope/cliff along the edge of Ladybird lake, and the second area is the upper slopes of the site. Most of the trees in the forest are very young. I have been told that the site used to be a goat farm. I observed in the field many dead and charred cedar stumps. It appears the site was likely nude of trees and vegetation in recent history.

Upper Slopes

The northern slopes are very steep and rocky. The slope is so steep that all leafy debris is washed away. There is likely nearly zero rain water penetration into the rock. The trees on

these slopes are approximately 12' tall on average. The species composition is 99% cedar with a sporadic live oak mixed in.

The southern slopes are more gradual and there is some litter layer on the soil surface. The trees in this area range between 15-25' tall; trees are tallest near the drainage valleys and progressively get smaller as you get farther from drainage valleys. There is one portion of the drainage valleys near the center of the site where the trees are largest. The few trees surveyed to be heritage are documented below. I was unable to locate a few of the identified heritage trees; I believe they have fallen or were misidentified. The area where these heritage trees grow are steeper slopes of the drainage valleys. There are some live oaks along the drainage valleys. The largest one I found was 20.5" dbh; most are in the 10-16" dbh range. Trees at the peak of the hill are stressed, many of the cedars are dead. I would estimate that approximately 80% of the trees on the upper slopes are cedar.

Waterfront

There are many large trees along the waterfront. I have not yet inventoried trees along this area, but from looking a video captured by drone, I can see that there are large bald cypress, pecan, elm and live oak. My understanding is there is no planned development along the waterfront and all these trees will be preserved.

Heritage Tree Condition Information

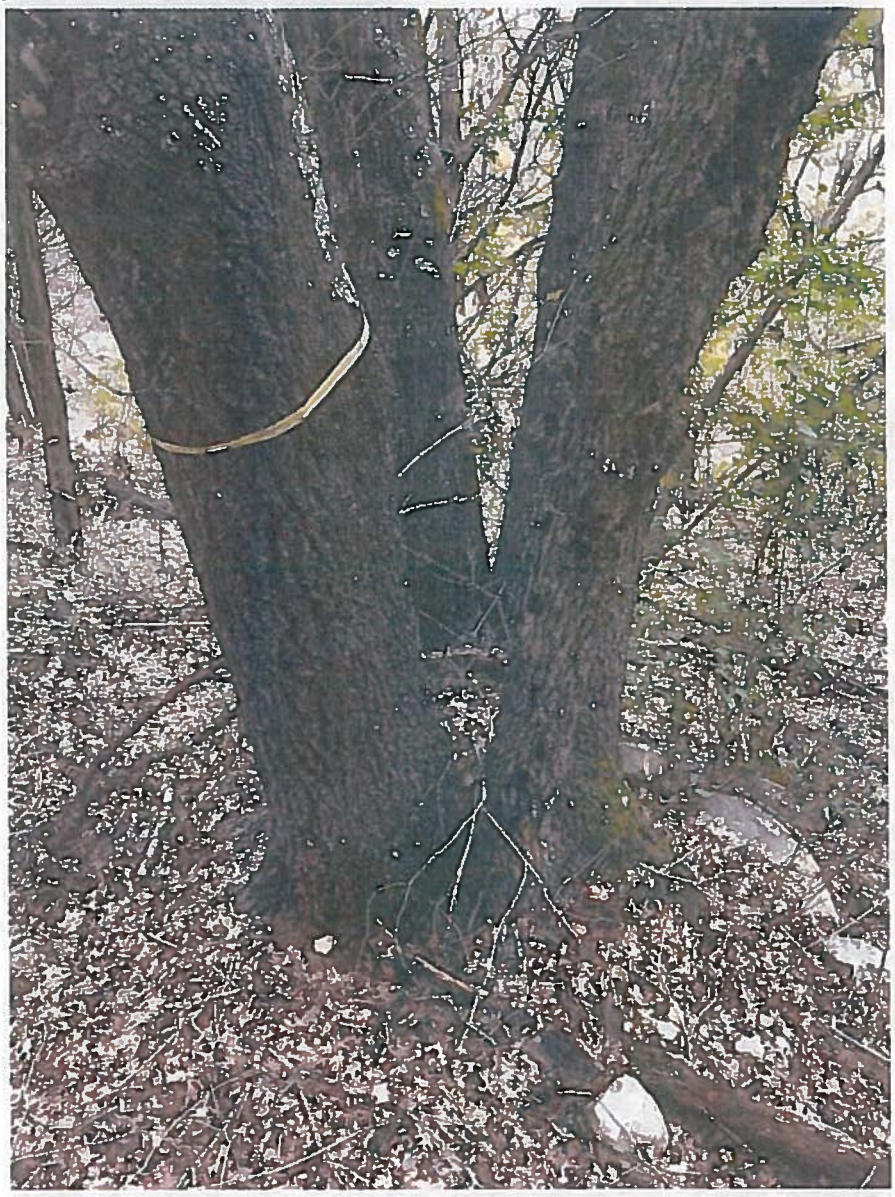
This section only contains information about heritage trees in the proposed development area. All of the surveyed heritage trees are multi-stem red oaks located along a drainage valley on the upper slopes. There are many fallen trees in this area; some fully uprooted and some broken off in the main stems. Overall, the structural integrity of these trees is questionable at best. Average lifespan of spanish oaks on hillsides in the hill country are known to be fairly short, +/- 50 years. Development activity near these trees would further shorten life expectancy.

Tree 23179 : Red Oak

All of the stems on this tree are regrowth from an old rotten stump. Half the stems are dead and all have decay and structural defects

Tree 23231 : Red Oak

Multi-stem tree with extensive decay at the base and root flare area. Armillaria mushrooms are present near the base of the tree.



23399 : Red Oak

Multi-stem tree with one stem already failed. Other stems have significant lean. High likelihood of extensive decay in the lower trunk and buttress roots.

23381, 23472, 24317

I was unable to find these trees. I think it is highly likely they have fallen or were misidentified.

Infrared Imagery

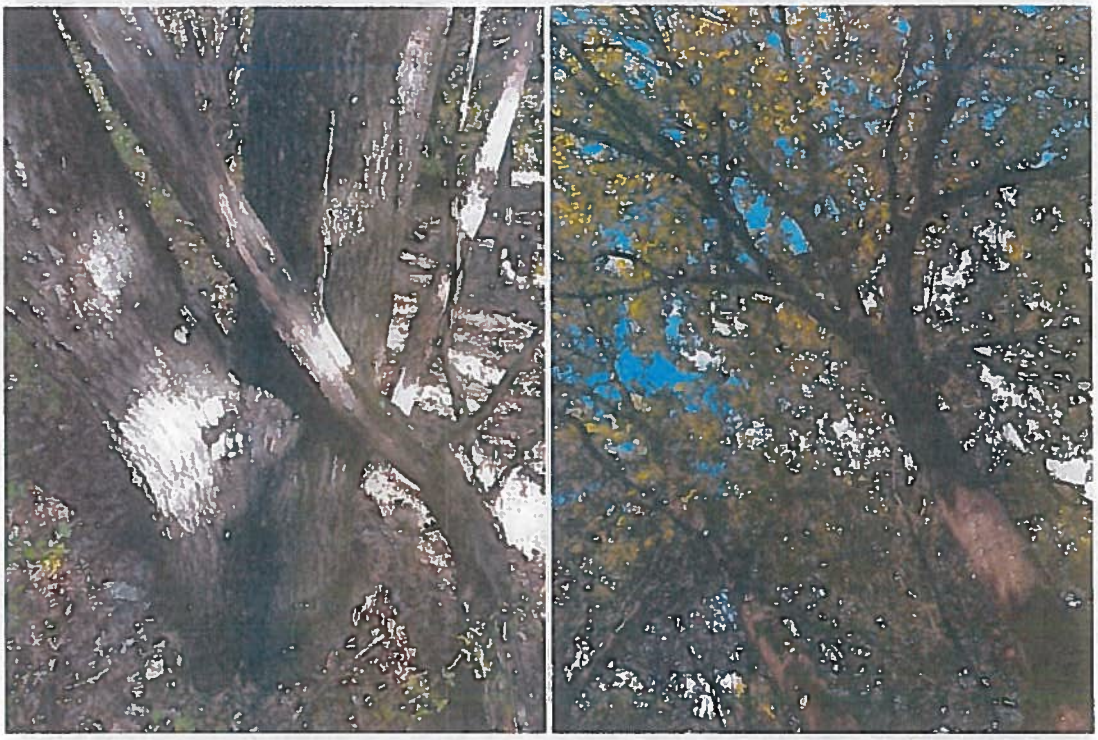
The infrared imagery below shows two trees that stand out and are circled on the image. I located these two trees in the field. The northern tree is the 20.5" live oak referenced previously in this report and the other is a group of two oaks: 17.5" multi-stem and 14" dbh red oaks. In the same way these two trees stand out on IR, they are also the best quality trees I observed in the field.

PHOTOS OF THE CIRCLED TREES BELOW

20.5" dbh Live Oak (northern tree circled above)

I was unable to get a good canopy photo due to surrounding vegetation.

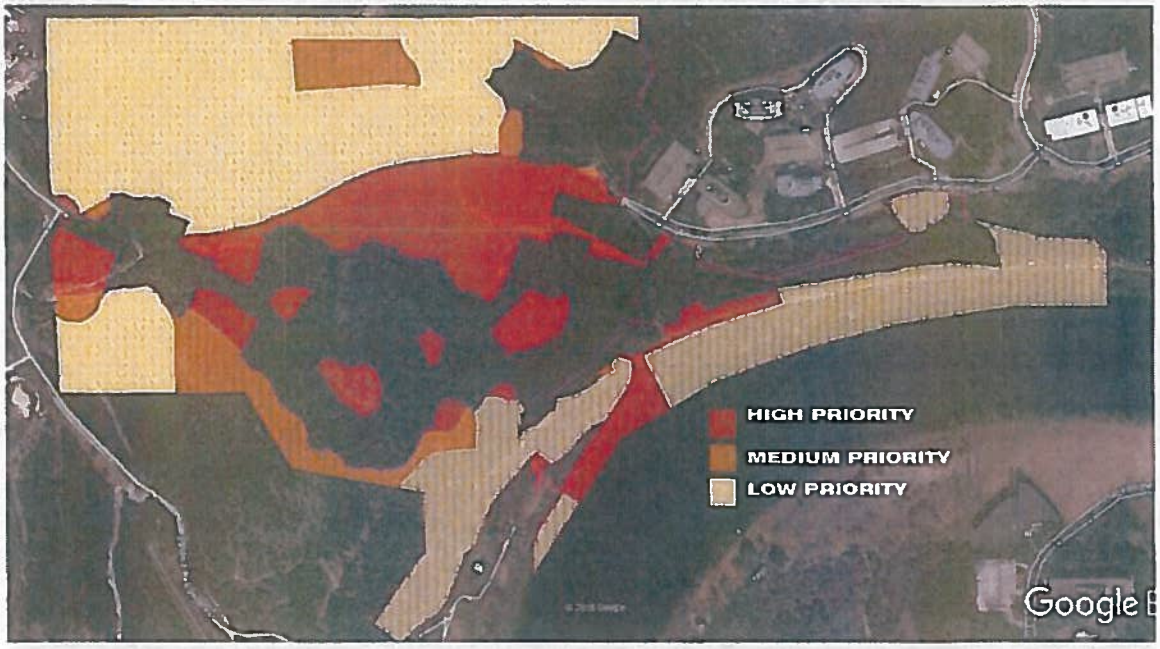
17.5" dbh Red Oak (one of the trees in the southern circle above)



14" Red Oak (other tree in souther circle above)

Priority Areas of My Work

The red areas indicated below were identified to me as priority areas to inventory. I have thoroughly walked these areas and can confidently confirm there are no heritage trees in these areas. The one exception is the red area along the waterfront. I have not thoroughly inventoried these trees. In addition to the red areas, I have very thoroughly walked the center of the site and found no additional heritage trees. The large, yellow area to the north (low priority) are very steep slopes with no realistic possibility of significant trees. The medium priority, orange area in the center of the large yellow area is a drainage valley. The best trees from this north tract are surely located here but I don't expect they are significantly different from the large trees found on the southern slopes' drainage valleys (probably no heritage trees other than multi-stem red oaks).



Regards,
Keith Brown
Board Certified Master Arborist TX-0985BT
Austin Tree Experts

Exhibit F

May 31, 2018, updated July 6, 2018

Mr. Joel Wixson, P.E.
Kimley-Horn
10814 Jollyville Road, Avallon IV, Suite 300
Austin, Texas 78759

Telephone: 512 418-4525
Email: joel.wixson@kimley-horn

RE: **Environmental Resource Inventory (ERI)**
Camelback Tract
Bridgepoint Parkway and Coldwater Canyon Parkway
Austin, Travis County, Texas
Terracon Project No. 96187142

Dear Mr. Wixson:

Terracon Consultants, Inc. (Terracon) is pleased to submit this updated Environmental Resource Inventory (ERI) report addressing City of Austin (COA) compliance requirements as they may affect the above referenced project site in accordance with Terracon Proposal No. P96187142 dated February 27, 2018 and authorized on April 17, 2018.

The results of this report are based on the professional opinion of Terracon and site conditions observed during the field reconnaissance. It should be noted that some critical environmental features (CEFs) may be seasonal or ephemeral, indicating that their presence/absence and condition are dependent on various weather conditions (including rainfall) and other changes to the surrounding ecosystem.

Terracon is not liable for ephemeral and/or seasonal CEFs that are exposed or created after Terracon's field assessment. Additionally, Terracon's opinion is based on current COA regulations; therefore, changes in regulations may require a re-evaluation of the findings of this report.

It is recommended this report be promptly submitted to the COA, otherwise an updated report (based on an additional field assessment) may be required to evaluate ephemeral and/or CEFs.

It should be noted that the COA has the ultimate authority for CEF classifications.

We appreciate the opportunity to provide this report. If you have questions regarding the content of this report, please feel free to contact Miranda Reinhard at (512) 891-2692 or miranda.reinhard@terracon.com.

Sincerely,
Terracon Consultants, Inc.

Miranda Reinhard
Staff Scientist

Approved by:

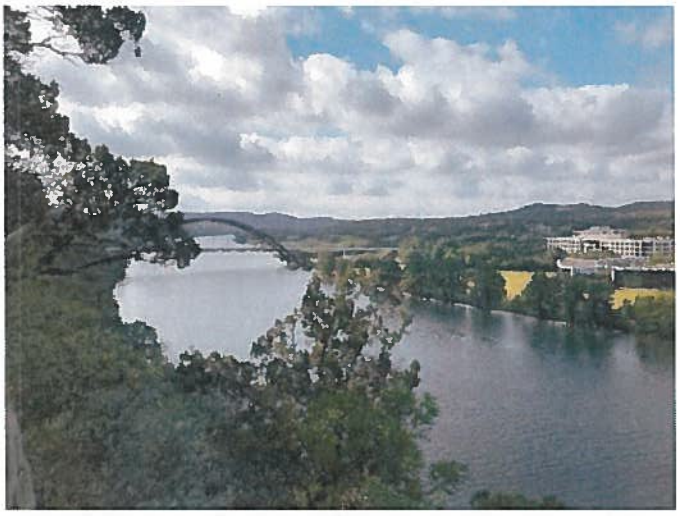
Ann M. Scott, PhD, RPA
Authorized Project Reviewer
Natural/Cultural Resources Group Manager

City of Austin Environmental Resource Inventory

Camelback Tract
Bridgepoint Parkway and Coldwater Canyon Parkway
Austin, Travis County, Texas

May 31, 2018, updated July 6, 2018

Terracon Project No. 96187142



Prepared for:
Kimley-Horn
Austin, Texas

Prepared by:
Terracon Consultants, Inc.
Austin, Texas

ENVIRONMENTAL RESOURCE INVENTORY FORM
FOR THE CITY OF AUSTIN
RELATED TO LDC 25-8-121, CITY CODE 30-5-121, ECM 1.3.0 & 1.10.0

APPENDICES

Case No.: _____
(City use only)

Environmental Resource Inventory

For the City of Austin
Related to LDC 25-8-121, City Code 30-5-121, ECM 1.3.0 & 1.10.0

The ERI is required for projects that meet one or more of the criteria listed in LDC 25-8-121(A), City Code 30-5-121(A).

1. SITE/PROJECT NAME: Camelback Tract

2. COUNTY APPRAISAL DISTRICT PROPERTY ID (#'s): 130428 and 474563

3. ADDRESS/LOCATION OF PROJECT: Bridgepoint Parkway & Coldwater Canyon Parkway, Austin

4. WATERSHED: Coldwater Creek and Lake Austin

5. THIS SITE IS WITHIN THE *(Check all that apply)*

   Edwards Aquifer Recharge Zone* *(See note below)* ..... ☐YES ■No
   Edwards Aquifer Contributing Zone* ..... ☐YES ■No
   Edwards Aquifer 1500 ft Verification Zone* ..... ☐YES ■No
   Barton Spring Zone* ..... ☐YES ■No
   **(as defined by the City of Austin – LDC 25-8-2 or City Code 30-5-2)*

   Note: If the property is over the Edwards Aquifer Recharge zone, the Hydrogeologic Report and karst surveys must be completed and signed by a Professional Geoscientist Licensed in the State of Texas.

6. DOES THIS PROJECT PROPOSE FLOODPLAIN MODIFICATION?.....☐YES** ■NO
   If yes, then check all that apply:
   - ☐ *(1) The floodplain modifications proposed are necessary to protect the public health and safety;*
   - ☐ *(2) The floodplain modifications proposed would provide a significant, demonstrable environmental benefit, as determined by a **functional assessment** of floodplain health as prescribed by the Environmental Criteria Manual (ECM), or*
   - ☐ *(3) The floodplain modifications proposed are necessary for development allowed in the critical water **quality zone under LDC 25-8-261 or 25-8-262, City Code 30-5-261 or 30-5-262.***
   - ☐ *(4) The floodplain modifications proposed are outside of the Critical Water Quality Zone in an area determined to be in poor or fair condition by a **functional assessment** of floodplain health.*

   **** If yes, then a functional assessment must be completed and attached to the ERI (see ECM 1.7 and Appendix X for forms and guidance) unless conditions 1 or 3 above apply.**

7. IF THE SITE IS WITHIN AN URBAN OR SUBURBAN WATERSHED, DOES THIS PROJECT PROPOSE A UTILITY LINE PARALLEL TO AND WITHIN THE CRITICAL WATER QUALITY ZONE? ..... ☐YES*** ■NO

   *****If yes, then riparian restoration is required by LDC 25-8-261(E) or City Code 30-5-261(E) and a functional assessment must be completed and attached to the ERI (see ECM1.5 and Appendix X for forms and guidance).**

8. There is a total of 44 (#'s) Critical Environmental Feature(s)(CEFs) on or within150 feet of the project site. If CEF(s) are present, attach a detailed **DESCRIPTION** of the CEF(s), color **PHOTOGRAPHS**, the **CEF WORKSHEET** and provide **DESCRIPTIONS** of the proposed CEF buffer(s) and/or wetland mitigation. Provide the number of each type of CEFs on or within 150 feet of the site *(Please provide the number of CEFs)*:

26 (#'s) Spring(s)/Seep(s) 1 (#'s) Point Recharge Feature(s) 1 (#'s) Bluff(s)
10 (#'s) Canyon Rimrock(s) 6 (#'s) Wetland(s)

Note: Standard buffers for CEFs are 150 feet, with a maximum of 300 feet for point recharge features. Except for wetlands, if the standard buffer is not provided, you must provide a written request for an administrative variance from LDC 25-8-281(C)(1) and provide written findings of fact to support your request. Request forms for administrative variances from requirements stated in LDC 25-8-281 are available from Watershed Protection Department.

9. The following site maps are attached at the end of this report *(Check all that apply and provide):*

All ERI reports must include:

- ■ **Site Specific Geologic Map with 2-ft Topography**
- ■ **Historic Aerial Photo of the Site**
- ■ **Site Soil Map**
- ■ **Critical Environmental Features and Well Location Map on current Aerial Photo with 2-ft Topography**

Only if present on site *(Maps can be combined):*

- ☐ **Edwards Aquifer Recharge Zone with the 1500-ft Verification Zone**
  (Only if site is over or within 1500 feet the recharge zone)
- ☐ **Edwards Aquifer Contributing Zone**
- ■ **Water Quality Transition Zone (WQTZ)**
- ■ **Critical Water Quality Zone (CWQZ)**
- ☐ **City of Austin Fully Developed Floodplains for all water courses with up to 64-acres of drainage**

10. **HYDROGEOLOGIC REPORT –** Provide a description of site soils, topography, and site specific geology below *(Attach additional sheets if needed):*

Surface Soils on the project site is summarized in the table below and uses the SCS Hydrologic Soil Groups*. If there is more than one soil unit on the project site, show each soil unit on the site soils map.

Soil Series Unit Names, Infiltration Characteristics & Thickness		
Soil Series Unit Name & Subgroup**	Group*	Thickness (feet)
BID - (Appendix A for name)	D	0-4'
BoF - (Appendix A for name)	D	0-5'
TaD - (Appendix A for name)	D	0-1'
TdF - (Appendix A for name)	D	0-1'
Ya - (Appendix A for name)	A	0-6'

Soil Hydrologic Groups Definitions *(Abbreviated)

A. Soils having a high infiltration rate when thoroughly wetted.

B. Soils having a moderate *infiltration* rate when thoroughly wetted.

C. Soils having a slow infiltration rate when thoroughly wetted.

D. Soils having a very slow infiltration rate when thoroughly wetted.

**Subgroup Classification – See Classification of Soil Series Table in County Soil Survey.

Description of Site Topography and Drainage *(Attach additional sheets if needed)*:

Based on a review of the 1981 USGS Austin West, Texas topographic map, site elevation is depicted from approximately 500 to 920 feet above sea level. A topographic uplift is depicted in the southwest portion of the site. An unnamed tributary to the Colorado River transects the site from the northwest to the southeast and the site is bounded by the Colorado River (known locally as Lake Austin) to the south.
Continued in Appendix A...

List surface geologic units below:

Geologic Units Exposed at Surface		
Group	Formation	Member
Trinity Group	Upper Glen Rose Limestone(Kgru)	N/A
Fredericksburg Group	Walnut Formation (Kfr)	N/A

Brief description of site geology *(Attach additional sheets if needed)*:

According to the Geologic Atlas of Texas, the site is underlain by the Upper Glen Rose Formation (Kgru) and the Fredericksburg Group (Kfr). Kgru which consists of gray to tan; thick to thin bedded; fine to medium grained; alternating hard and soft layers of limestone, dolomite, and marl. The upper member of the Glen Rose consists of shale and marl alternating with thin beds of limestone and dolomite; this alternating bedding forms stair-step topography. The upper 100 feet is typically heavily weathered and contains abundant porous soft dolomite and burrowed limestone resulting in many springs. The Glen Rose Formation forms the lower confining unit to the Edwards aquifer. This formation has the ability to form solution and collapse caves and voids suitable for utilization by Terrestrial Karst Invertebrates (TKIs).
Continued in Appendix A...

Wells – Identify all recorded and unrecorded wells on site (test holes, monitoring, water, oil, unplugged, capped and/or abandoned wells, etc.):

There are 0 (#) wells present on the project site and the locations are shown and labeled

___(#'s)The wells are not in use and have been properly abandoned.

___(#'s)The wells are not in use and will be properly abandoned.

___(#'s)The wells are in use and comply with 16 TAC Chapter 76.

There are 0 (#'s) wells that are off-site and within 150 feet of this site.

11. **THE VEGETATION REPORT** – Provide the information requested below:

Brief description of site plant communities *(Attach additional sheets if needed)*:

The site is located within the Balcones Canyonlands region of the Edwards Plateau physiographic province (Gould, 1960). The vegetation in the region is classified as juniper-oak savanna and is dominated primarily by woodland vegetation. Grasslands are generally restricted to drainage divides and associated valleys (Amos and Gehlbach, 1988). Mesic (moist) slopes generally support deciduous woodlands dominated by Texas oak (*Quercus texana*), plateau live oak (*Q. fusiformis*), Ashe juniper (*Juniperus ashei*), and Texas ash (*Fraxinus texensis*).
Continued in Appendix A...

There is woodland community on site .....■YES ☐ NO *(Check one).*
If yes, list the dominant species below:

Woodland species	
Common Name	Scientific Name
Escarpment oak	*Quercus fusiformis*
Ashe juniper	*Juniperus ashei*
Texas red oak	*Quercus buckleyi*
eastern red cedar	*Juniperus virginiana*
mountain laurel	*Sophora secundiflora*

There is grassland/prairie/savanna on site.....■YES ☐ NO *(Check one).*
If yes, list the dominant species below:

Grassland/prairie/savanna species	
Common Name	Scientific Name
silvery bluestem	*Bothriochloa saccharoides*
western ragweed	*Ambrosia psilostachya*
Bermuda grass	*Cynodon dactylon*
agarita	*Mahonia trifoliolata*
greenbrier	*Smilax bona-nox*
prickly pear cactus	*Opuntia spp.*
twisted leaf yucca	*Yucca rupicola*

There is hydrophytic vegetation on site .....■YES ☐ NO *(Check one).*
If yes, list the dominant species in table below *(next page):*

Hydrophytic plant species		
Common Name	Scientific Name	Wetland Indicator Status
maidenhair fern	*Adiantum capillus -veneris*	FACW
Virginia chain fern	*Woodwardia virginica*	OBL
common spike-rush	*Eleocharis palustris*	OBL
Emory's sedge	*Carex emoryi*	OBL
small-spike false nettle	*Boehmeria cylindrica*	FACW
California bulrush	*Schoenoplectus californicus*	OBL
Lindheimer's muhly	*Muhlenbergia lindheimeri*	FACW

A tree survey of all trees with a diameter of at least eight inches measured four and one-half feet above natural grade level has been completed on the site.
☐YES ■ NO *(Check one).* A partial tree survey has been completed. An additional tree survey of the proposed development areas is currently underway.

12. **WASTEWATER REPORT –** Provide the information requested below.

Wastewater for the site will be treated by *(Check of that Apply)*:

☐ On-site system(s)

■ City of Austin Centralized sewage collection system

☐ Other Centralized collection system

Note: All sites that receive water or wastewater service from the Austin Water Utility must comply with City Code Chapter 15-12 and wells must be registered with the City of Austin

The site sewage collection system is designed and will be constructed to in accordance to all State, County and City standard specifications.
☒YES ☐ NO *(Check one).*

Calculations of the size of the drainfield or wastewater irrigation area(s) are attached at the end of this report or shown on the site plan.
☐YES ☐ NO ☒ Not Applicable *(Check one).*

Wastewater lines are proposed within the Critical Water Quality Zone?
☐YES ☒ NO *(Check one).* If yes, then provide justification below:

Is the project site is over the Edwards Aquifer?
☐YES ■ NO *(Check one).*

If yes, then describe the wastewater disposal systems proposed for the site, its treatment level and effects on receiving watercourses or the Edwards Aquifer.

13. One (1) hard copy and one (1) electronic copy of the completed assessment have been provided.

Date(s) ERI Field Assessment was performed: May 8,9, & 21, 2018; June 4, 6, 7, 8, & 26, 2018
Date(s)

My signature certifies that to the best of my knowledge, the responses on this form accurately reflect all information requested.

Miranda Reinhard	(512) 442-1122
Print Name	Telephone
	Miranda.Reinhard@terracon.com
Signature	Email Address
Terracon Consultants, Inc.	July 6, 2018
Name of Company	Date

For project sites within the Edwards Aquifer Recharge Zone, my signature and seal also certifies that I am a licensed Professional Geoscientist in the State of Texas as defined by ECM 1.12.3(A).

P.G.
Seal

City of Austin Environmental Resource Inventory - Critical Environmental Feature Worksheet

1	Project Name:	Camelback Tract
2	Project Address:	Bridgepoint & Coldwater Canyon Pkwys, Austin
3	Site Visit Date:	May 8, 9 & 21, 2018; June 4, 6, 7, 8 & 26, 2018.
4	Environmental Resource Inventory Date:	May 31, 2018; Updated July 6, 2018

5	Primary Contact Name:	Miranda Reinhard
6	Phone Number:	(512) 442-1122
7	Prepared By:	Terracon Consultants, Inc.
8	Email Address:	Miranda.Reinhard@terracon.com

9	FEATURE TYPE (Wetland,Rimrock, Bluffs,Recharge Feature,Spring)	FEATURE ID (eg S-1)	FEATURE LONGITUDE (WGS 1984 in Meters)		FEATURE LATITUDE (WGS 1984 in Meters)		WETLAND DIMENSIONS (ft)		RIMROCK/BLUFF DIMENSIONS (ft)		RECHARGE FEATURE DIMENSIONS				Springs Est. Discharge
			coordinate	notation	coordinate	notation	X	Y	Length	Avg Height	X	Y	Z	Trend	cfs
	Spring/Seep	S-1	-97.804376	W	30.356048	N									<1
	Spring/Seep	S-2	-97.804640	W	30.357632	N									<1
	Spring/Seep	S-3	-97.804540	W	30.357788	N									<1
	Spring/Seep	S-4	-97.804287	W	30.358079	N									<1
	Spring/Seep	S-5	-97.804802	W	30.358061	N									<1
	Spring/Seep	S-6	-97.804830	W	30.358476	N									<1
	Spring/Seep	S-7	-97.806658	W	30.357732	N									<1
	Spring/Seep	S-8	-97.806990	W	30.357874	N									<1
	Spring/Seep	S-9	-97.807213	W	30.357940	N									<1
	Spring/Seep	S-10	-97.807343	W	30.358039	N									<1
	Spring/Seep	S-11	-97.807319	W	30.358560	N									<1
	Spring/Seep	S-12	-97.807238	W	30.358656	N									<1
	Spring/Seep	S-13	-97.807561	W	30.358212	N									<1
	Spring/Seep	S-14	-97.808155	W	30.358366	N									<1
	Spring/Seep	S-15	-97.808230	W	30.358405	N									<1
	Spring/Seep	S-16	-97.808336	W	30.358420	N									<1
	Spring/Seep	S-17	-97.808542	W	30.358528	N									<1

City of Austin Use Only CASE NUMBER:	

Legend:
* = Previously Identified CEF (4/8/2015)

Please state the method of coordinate data collection and the approximate precision and accuracy of the points and the unit of measurement.

Method		Accuracy	
GPS	☑	sub-meter	☑
Surveyed	☐	meter	☐
Other	☐	> 1 meter	☐

Professional Geologists apply seal below

For rimrock, locate the midpoint of the segment that describes the feature.

For wetlands, locate the approximate centroid of the feature and the estimated area.

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

City of Austin Environmental Resource Inventory - Critical Environmental Feature Worksheet

1	Project Name:	Camelback Tract
2	Project Address:	Bridgepoint & Coldwater Canyon Pkwys, Austin
3	Site Visit Date:	May 8, 9 & 21, 2018; June 4, 6, 7, 8 & 26, 2018.
4	Environmental Resource Inventory Date:	May 31, 2018; Updated July 6, 2018

5	Primary Contact Name:	Miranda Reinhard
6	Phone Number:	(512) 442-1122
7	Prepared By:	Terracon Consultants, Inc.
8	Email Address:	Miranda.Reinhard@terracon.com

9	FEATURE TYPE (Wetland,Rimrock, Bluffs,Recharge Feature,Spring)	FEATURE ID (eg S-1)	FEATURE LONGITUDE (WGS 1984 in Meters)		FEATURE LATITUDE (WGS 1984 in Meters)		WETLAND DIMENSIONS (ft)		RIMROCK/BLUFF DIMENSIONS (ft)		RECHARGE FEATURE DIMENSIONS				Springs Est. Discharge
			coordinate	notation	coordinate	notation	X	Y	Length	Avg Height	X	Y	Z	Trend	cfs
	Spring/Seep	S-18	-97.809134	W	30.359360	N									<1
	Spring/Seep	S-19	-97.809161	W	30.359512	N									<1
	Spring/Seep	S-20	-97.809155	W	30.359774	N									<1
	Spring/Seep	S-21	-97.809155	W	30.359774	N									<1
	Spring/Seep	S-22*	-97.808298	W	30.353309	N									<1
	Spring/Seep	S-23	-97.799036	W	30.353080	N									<1
	Spring/Seep	S-24	-97.798928	W	30.353043	N									<1
	Spring/Seep	S-25	-97.798549	W	30.352796	N									<1
	Spring/Seep	S-26	-97.798548	W	30.352737	N									<1
	Rimrock	R-1	-97.804303	W	30.355998	N			~50	~6-8					
	Rimrock	R-2	-97.805128	W	30.356516	N			~50	~6					
	Rimrock	R-3	-97.805345	W	30.357169	N			~50	~4					
	Rimrock	R-4	-97.805846	W	30.357659	N			~70	~5					
	Rimrock	R-5*	-97.807878	W	30.353472	N			~50	~8					
	Rimrock	R-6*	-97.806578	W	30.353846	N			~50	~4					
	Rimrock	R-7	-97.805942	W	30.354077	N			~50	~5					
	Rimrock	R-8	-97.804098	W	30.353746	N			~70	~8					

City of Austin Use Only CASE NUMBER:	

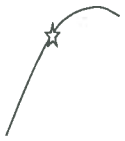
Legend:
* = Previously Identified CEF (4/8/2015)

Please state the method of coordinate data collection and the approximate precision and accuracy of the points and the unit of measurement.

Method		Accuracy	
GPS	☑	sub-meter	☑
Surveyed	☐	meter	☐
Other	☐	> 1 meter	☐

Professional Geologists apply seal below

For rimrock, locate the midpoint of the segment that describes the feature.



For wetlands, locate the approximate centroid of the feature and the estimated area.

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

City of Austin Environmental Resource Inventory - Critical Environmental Feature Worksheet

1	Project Name:	Camelback Tract
2	Project Address:	Bridgepoint & Coldwater Canyon Pkwys, Austin
3	Site Visit Date:	May 8, 9 & 21, 2018; June 4, 6, 7, 8 & 26, 2018.
4	Environmental Resource Inventory Date:	May 31, 2018; Updated July 6, 2018

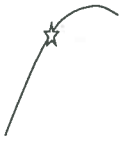
5	Primary Contact Name:	Miranda Reinhard
6	Phone Number:	(512) 442-1122
7	Prepared By:	Terracon Consultants, Inc.
8	Email Address:	Miranda.Reinhard@terracon.com

9	FEATURE TYPE (Wetland,Rimrock, Bluffs,Recharge Feature,Spring)	FEATURE ID (eg S-1)	FEATURE LONGITUDE (WGS 1984 in Meters)		FEATURE LATITUDE (WGS 1984 in Meters)		WETLAND DIMENSIONS (ft)		RIMROCK/BLUFF DIMENSIONS (ft)		RECHARGE FEATURE DIMENSIONS				Springs Est. Discharge
			coordinate	notation	coordinate	notation	X	Y	Length	Avg Height	X	Y	Z	Trend	cfs
	Rimrock	R-9	-97.802719	W	30.354073	N			~50	~4					
	Rimrock	R-10	-97.798966	W	30.353025	N			~90	~4-8					
	Point Recharge Feature	K-1	-97.808578	W	30.356327	N					~2	~.6	~7		
	Wetland	W-1	-97.803492	W	30.354955	N	~20	~10							
	Wetland	W-2	-97.804287	W	30.358079	N	~10	~10							
	Wetland	W-3	-97.804802	W	30.358061	N	~10	~10							
	Wetland	W-4	-97.807337	W	30.358514	N	~8	~240							
	Wetland	W-5	-97.809167	W	30.359677	N	~8	~140							
	Wetland	W-6	-97.806315	W	-97.806315	N	~1,020	~40-122							
	Bluff	B-1	-97.801395	W	30.353260	N			~3,300	~110					

City of Austin Use Only CASE NUMBER:	

Legend:
* = Previously Identified CEF (4/8/2015)

For rimrock, locate the midpoint of the segment that describes the feature.



For wetlands, locate the approximate centroid of the feature and the estimated area.

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

Please state the method of coordinate data collection and the approximate precision and accuracy of the points and the unit of measurement.

Method		Accuracy	
GPS	☑	sub-meter	☑
Surveyed	☐	meter	☐
Other	☐	> 1 meter	☐

Professional Geologists apply seal below

APPENDIX A
ADDITIONAL DISCUSSION

Surface Soils:
BID – Brackett-Rock outcrop complex, 1 to 12 percent slopes
BoF – Brackett-Rock outcrop-Real complex, 8 to 30 percent slopes
TaD – Tarrant soils, 5 to 18 percent slopes
TdF – Tarrant-Rock outcrop complex, 18 to 50 percent slopes
Ya – Yahola very fine sandy loam, 0 to 1 percent slopes, occasionally flooded
W – Water

Description of Site Topography and Drainage Continued…
The National Wetlands Inventory (NWI) Map of the project site was reviewed to identify suspect wetland areas and waterbodies within the project site boundaries. The review of the NWI map indicated the presence of three suspect waterbodies in the project site. These areas are further described below:

- Waterbody (R4SBC) is depicted transecting the central portion of the project site. R4SBC is further described as a riverine, intermittent, streambed that is seasonally flooded.
- Forested wetland (PSS1A) is depicted in the southwest portion of the project site. PSS1A is further described as a palustrine, scrub-shrub, broad-leaved deciduous area that is temporary flooded.
- Waterbody (L1UBHh) is depicted in the south portion of the site. L1UBHh is further described as a lacustrine, limnetic, unconsolidated bottom area that is permanently flooded and is diked/impounded.

Other suspect wetlands or waterbodies are not depicted on the project site or within 150 feet of the site.

Additionally, as mapped by the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM) Panel No. 48453C0435J (Effective January 6, 2016), the majority of the project site is mapped outside the 100-year and 500-year floodplain zones and is in Zone X (unshaded). South portions of the site are mapped in 100-year floodplain (Zone A) and 500-year floodplain (Zone C shaded).

Terracon accessed (May 4, 2018) the City of Austin (COA) Development Web Map to review previously identified Natural Features and setbacks within and adjoining the site. The review of the COA Development Web Map indicated the presence of 24 natural feature and three setbacks/buffers. These areas are further described below:

- Lake Austin (Object ID: 325, Lakes ID: 2) is mapped adjoining the project site to the south.
- A northwest-southeast oriented creek (Object ID: 26939, Creek ID: 8364) is mapped in the northwest portion of the project.
- A northwest-southeast oriented creek (Object ID: 96537, Creek ID: 46109) is mapped in the northwest portion of the project.

- A northwest-southeast oriented creek (Object ID: 97582, Creek ID: 46103) is mapped in the northwest portion of the project.
- A northwest-southeast oriented creek (Object ID: 68399, Creek ID: 28511) is mapped in the northwest portion of the project.
- A northwest-southeast oriented creek (Object ID: 29678, Creek ID: 8366) is mapped in the northwest portion of the project.
- A northwest-southeast oriented creek (Object ID: 74479, Creek ID: 32581) is mapped in the northwest portion of the project.
- A northwest-southeast oriented creek (Object ID: 97581, Creek ID: 46102) is mapped in the northwest portion of the project.
- A northeast-southwest oriented creek (Object ID: 30511, Creek ID: 6372) is mapped in the central portion of the project.
- A northwest-southeast oriented creek (Object ID: 27379, Creek ID: 6351) is mapped in the central portion of the project.
- A northwest-southeast oriented creek (Object ID: 99535, Creek ID: 46115) is mapped in the northeast portion of the project.
- A northeast-southwest oriented creek (Object ID: 60504, Creek ID: 25204) is mapped in the northeast portion of the project.
- A northeast-southwest oriented creek (Object ID: 200, Creek ID: 31827) is mapped in the northeast portion of the project.
- A northwest-southeast oriented creek (Object ID: 80830, Creek ID: 50667) is mapped in the southeast portion of the project.
- A northwest-southeast oriented creek (Object ID: 30058, Creek ID: 7732) is mapped to the southeast of the project.
- A northeast-southwest oriented creek (Object ID: 99, Creek ID: 31723) is mapped in the southeast portion of the project.
- A northeast-southwest oriented creek (Object ID: 95678, Creek ID: 45281) is mapped off-site to the northeast of the project.
- A northwest-southeast oriented creek (Object ID: 97661, Creek ID: 46270) is mapped off-site to the northeast of the project.
- A northwest-southeast oriented creek (Object ID: 94559, Creek ID: 29078) is mapped in the southeast portion of the project.
- A northeast-southwest oriented creek (Object ID: 73109, Creek ID: 32398) is mapped off-site to the southwest of the project.
- A northeast-southwest oriented creek (Object ID: 65232, Creek ID: 24383) is mapped in the southwest portion of the project.
- A northeast-southwest oriented creek (Object ID: 27469, Creek ID: 7754) is mapped off-site to the northeast of the project.
- A northwest-southeast oriented creek (Object ID: 27382, Creek ID: 6354) is mapped off-site to the east of the project.

- A northeast-southwest oriented creek (Object ID: 75232, Creek ID: 33271) is mapped off-site to the east of the project.
- A Critical Water Quality Zone (Object ID: 24903, Creek Buffer ID: 1828) is mapped in the south portion of the site.
- A Critical Water Quality Zone (Object ID: 24900, Creek Buffers ID: 1825) is mapped transecting the central portion of the site.
- A Water Quality Transition Zone (Object ID: 24897, Creek Buffers ID: 1822) is mapped transecting the central portion of the site.

For additional information please refer to the online COA Development Web Map (http://www.austintexas.gov/GIS/developmentwebmap/Viewer.aspx).

Brief Description of Site Geology

Remnant Fredericksburg Group (Kfr) strata was observed on the topographic high areas in the northwestern and south central portions of the site. The Fredericksburg Group deposits mapped onsite include the Walnut Formation (Kwa). The Walnut Formation is composed of limestone and marl and underlies the Edwards Limestone. The formation is generally not a water bearing unit and forms part of the lower confining unit of the Edwards Aquifer.

No evidence of faulting was observed on the site and none is shown on any of the available published geologic maps of the area. Additionally, a review of aerial photographs did not reveal any lineations, which typically indicate the presence of faulting. The nearest mapped fault is located approximately two miles east of the site. The fault, known as the Mount Bonnell Fault, trends toward the northeast, and is associated with the Balcones Fault zone which represents the dominant structural trend in the vicinity of the site and forms the edge of the Edwards Aquifer recharge zone.

Field Reconnaissance

During the site reconnaissance and subsequent field visits with COA staff, Terracon assessed areas for CEF characteristics throughout the project site and identified 26 CEF spring/seep areas, one CEF bluff area, one CEF point recharge feature area, 10 CEF rimrock areas, and six CEF wetland areas. Coordinate locations for the CEF areas are listed in the above CEF Worksheet and are illustrated on Exhibits 2.0 and 2.1 in Appendix B. The CEF areas are further described below:

Spring/Seeps S-1 through S-21 and S-23 through S-26 displayed moss lines and flowing water during the site visits. Each of these spring/seeps displayed at least one of the following characteristics: moisture, standing/stagnant water, and hydrophytic vegetation including Emory's sedge (*Carex emoryi* - OBL), Virginia chain fern (*Woodwardia virginica* - OBL), and/or maidenhair fern (*Adiantum capillus -veneris* - FACW).

Bluff B-1 is located in the south portion of the site and continues beyond the east and west site boundaries.

Point Recharge Features K-1 was observed in the southcentral portion of the site. Dimensions of the feature were approximated.

In order to further evaluate a suspected geologic karst feature, Terracon personnel hand excavated the feature on May 21 and June 6, 2018. The feature excavation and evaluation was conducted by Mr. Russell C. Ford, P.G., and Mr. Anthony Reid, G.I.T., of Terracon. The feature which was further evaluated has been identified as K-1. At the feature location, loose rock and debris was hand excavated down to either bedrock or compacted clay and the feature was evaluated for recharge potential. Photographs of the feature prior to excavation and following excavation are attached in Appendix C. The following provides a description of the feature evaluated:

- Feature K-1 is classified as a solution enlarged fracture located within the Walnut Formation. The feature consists of two intersecting fractures; the primary fracture trends N85°E and the secondary fracture is nearly normal to this fracture and trends N15°W. Neither of the fractures corresponds to the dominant structural trend of the area, which is toward the northeast. The primary fracture measures approximately 3 inches wide and 30 inches long and extends vertically to about 36 inches where it appears to pinch closed. The secondary fracture measures about 8-inches wide by 24 inches long and extends vertically to about 7 feet deep where it appears to pinch closed. The feature has a limited catchment area and its potential for recharge is considered low to moderate. The feature is considered to be a CEF and a developmental buffer appears to be warranted.

In order to further evaluate some additional suspected geologic karst features, Terracon personnel hand excavated selected features on May 21, 2018 and June 6 and 7,2018. The feature excavation and evaluation was conducted by Mr. Russell C. Ford, P.G., of Terracon. These features were not considered to be a critical environmental features (CEFs).

Rimrock features R-1 through R-4 and R-7 through R-10 were observed throughout the site. Rimrock dimensions were approximated by Terracon field staff.

Spring/Seep S-22 and Rimrock features R-5 and R-6 were observed and identified on April 8, 2015 during a previous COA ERI site visit conducting by Terracon. During the May 8-9, 2018 site visit, Terracon was unable to access and locate these features. According to the previous 2015 COA ERI, Spring/Seep S-22 displayed some hydrophytic vegetation including common fern (*Onoclea sensibilis*), and moss lines and flowing water were observed during the previous site visit.

Wetland W-1 is dominated by common spike-rush (*Eleocharis palustris* - OBL), Emory's sedge (*Carex emoryi*), and Roosevelt weed (*Baccharis neglecta* - FACW) throughout the wetland and displays surface water and saturation. W-1 appears to be associated with a natural channel (Object ID: 80830; Creek ID: 50667) and R4SBC in the southeast portion of the site.

Spring/Seep S-4 and Wetland W-2 is dominated by Lindheimer's muhly (*Muhlenbergia lindheimeri* – FACW), seep muhly (*Muhlenbergia reverchonii* – FAC), and tapered rosette grass (*Dichanthelium acuminatum* – FAC) throughout the seep/wetland area and displays surface water and saturation along an unnamed tributary. S-4/W-2 appears to be associated with a natural channel (Object ID: 60504, Creek ID: 25204) in the northeast portion of the site.

Spring/Seep S-5 and Wetland W-3 is dominated by Lindheimer's muhly (*Muhlenbergia lindheimeri* – FACW), seep muhly (*Muhlenbergia reverchonii* – FAC), and tapered rosette grass (*Dichanthelium acuminatum* – FAC) throughout the seep/wetland area and displays surface water and saturation along an unnamed tributary. S-5/W-3 appears to be associated with a natural channel (Object ID: 99535, Creek ID: 46115) in the northeast portion of the site.

Wetland W-4 is dominated by Lindheimer's muhly (*Muhlenbergia lindheimeri* – FACW) throughout the wetland and displays pockets of surface water and saturation along an unnamed tributary. W-2 appears to be a fringe wetland associated with a natural channel (Object ID: 30511; Creek ID: 6372) in the central portion of the site.

Wetland W-5 is dominated by Lindheimer's muhly (*Muhlenbergia lindheimeri* – FACW) and brookweed (*Samolus parviflorus* – OBL) throughout the wetland and displays pockets of surface water and saturation along an unnamed tributary. W-3 appears to be a fringe wetland associated with two natural channels (Object ID: 96537; Creek ID: 46109; and Object ID: 97582, Creek ID: 46103) and R4SBC in the northwest portion of the site.

Wetland W-6 is dominated by small-spike false nettle (*Boehmeria cylindrica* - FACW), smooth horsetail (*Equisetum laevigatum* – FAC), California bulrush (*Schoenoplectus californicus* – OBL), elephant ear (*Colocasia esculenta* – OBL), Chinese tallow tree (*Triadica sebifera* - FAC), whorled pennywort (*Hydrocotyle verticillata*), curly dock (*Rumex crispus* – FAC), and black willow (*Salix nigra* - FACW) throughout the wetland and displays surface water and saturation along the Colorado River. W-4 appears to be associated with (Object ID: 325, Lakes ID: 2) and PSS1A in the southwest portion of the site. Terracon also observed some upland vegetation throughout the wetland area including Turk's cap (Malvaviscus arboreus var. drummondii), greenbriar (*Smilax bona-nox*), wild rye (*Elymus spp.*), wild grape (*Vitis spp.*), and *Iris spp.*

Due to steep elevation Terracon personnel were not able to access a portion of the site. See Exhibits 2.0 and 2.1, attached, for the area not accessible.

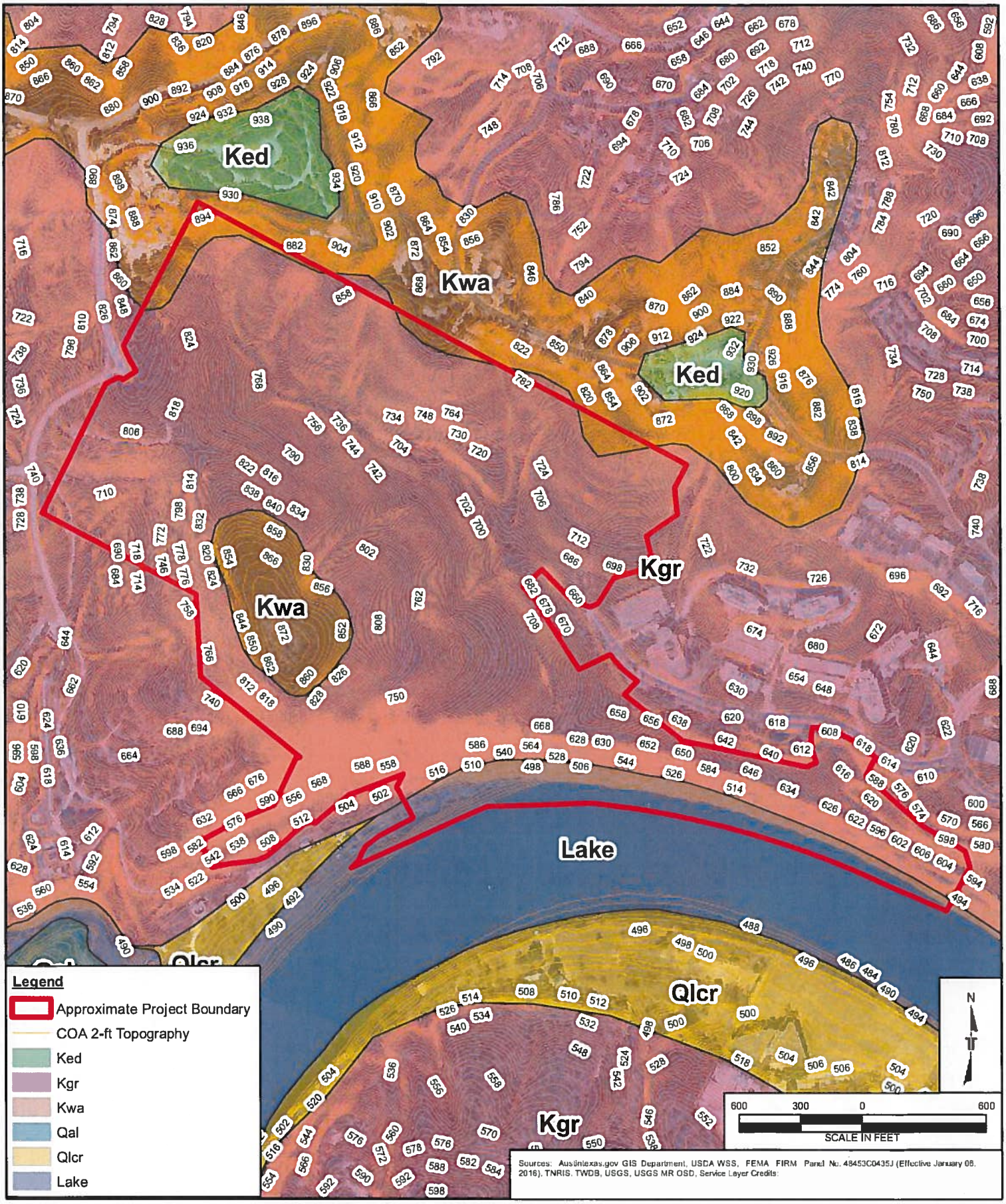
CEF dimensions were approximated by Terracon field staff.

Description of Site Plant Communities *Continued...*

During the site visit, Terracon assessed I areas that represented different vegetative communities throughout the project site to thoroughly review if these areas may exhibit hydrophytic vegetation. Upland vegetative communities were observed to be dominated by species including escarpment oak (*Quercus fusiformis*), Ashe juniper (*Juniperus ashei*), Texas red oak (*Quercus buckleyi*), eastern red cedar (*Juniperus virginiana*), mountain laurel (*Sophora secundiflora*). Dominant herbaceous vegetation includes silvery bluestem (*Bothriochloa saccharoides*), western ragweed (*Ambrosia psilostachya*), Bermuda grass (*Cynodon dactylon*), agarita (*Mahonia trifoliolata*), greenbrier (*Smilax bona-nox*), prickly pear cactus (*Opuntia spp.*), and twisted leaf yucca (*Yucca rupicola*). Overall canopy cover for the site is an estimated 95 percent.

Hydrophytic plant species are listed above in the Field Reconnaissance section.

APPENDIX B
EXHIBITS



Project Mngr:	MR
Drawn By:	Terracon
Checked By:	CG
Approved By:	AS

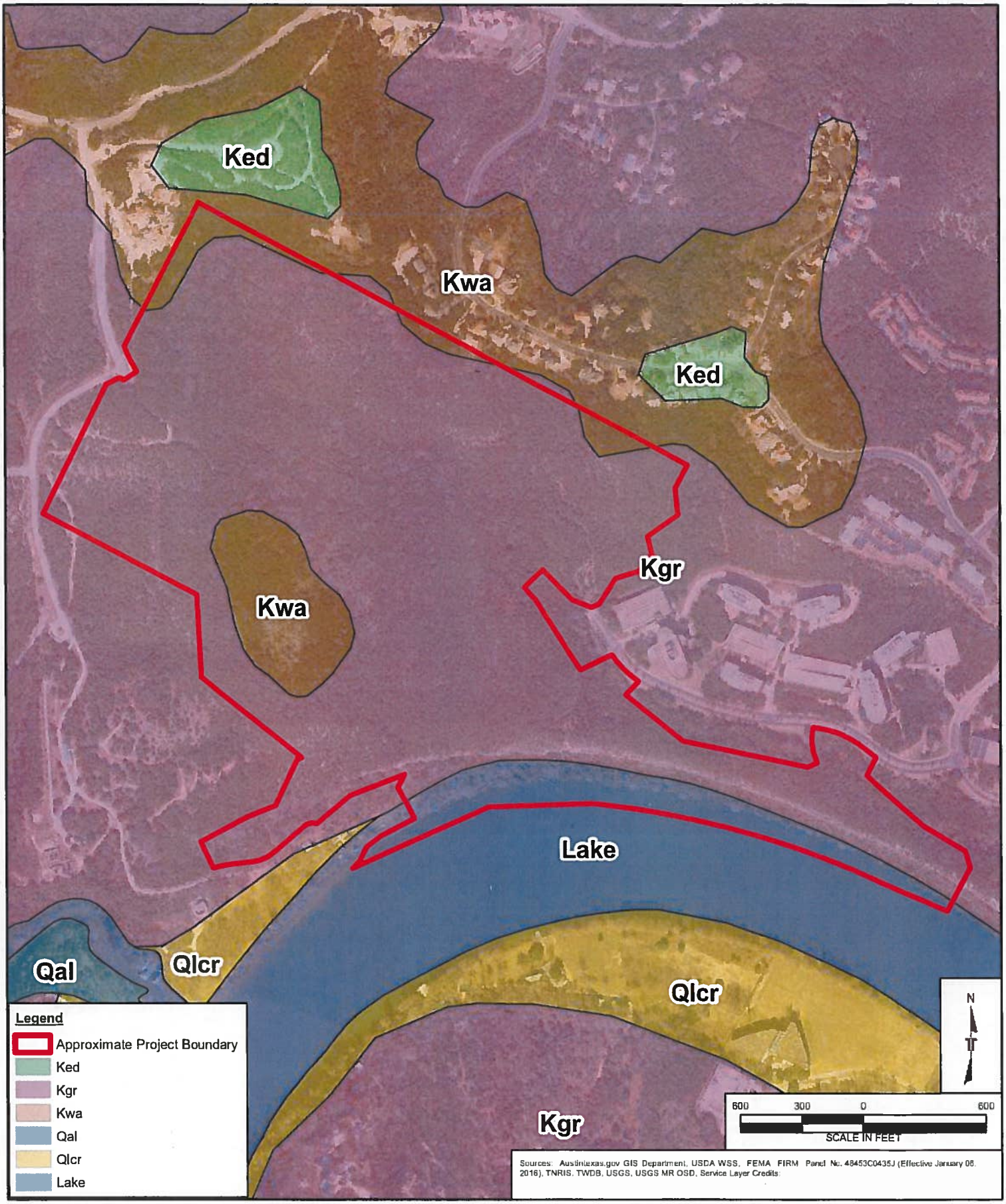
Project No.	96187142
Scale:	AS SHOWN
File No.:	96187142
Date:	Jun 15, 2018

Terracon
Consulting Engineers & Scientists
5307 INDUSTRIAL OAKS BLVD. - #160 AUSTIN, TX 78735
PH. (512) 442-1122 FAX. (512) 442-1181

Site Specific Geologic Map with 2-ft Topography

Camelback Tract
Bridgepoint Parkway and Coldwater Canyon Parkway
Austin, Travis County, Texas

EXHIBIT
1.0



Project Mngr:	MR
Drawn By:	Terracon
Checked By:	CG
Approved By:	AS

Project No.	96187142
Scale:	AS SHOWN
File No.:	96187142
Date:	Jun 15, 2018

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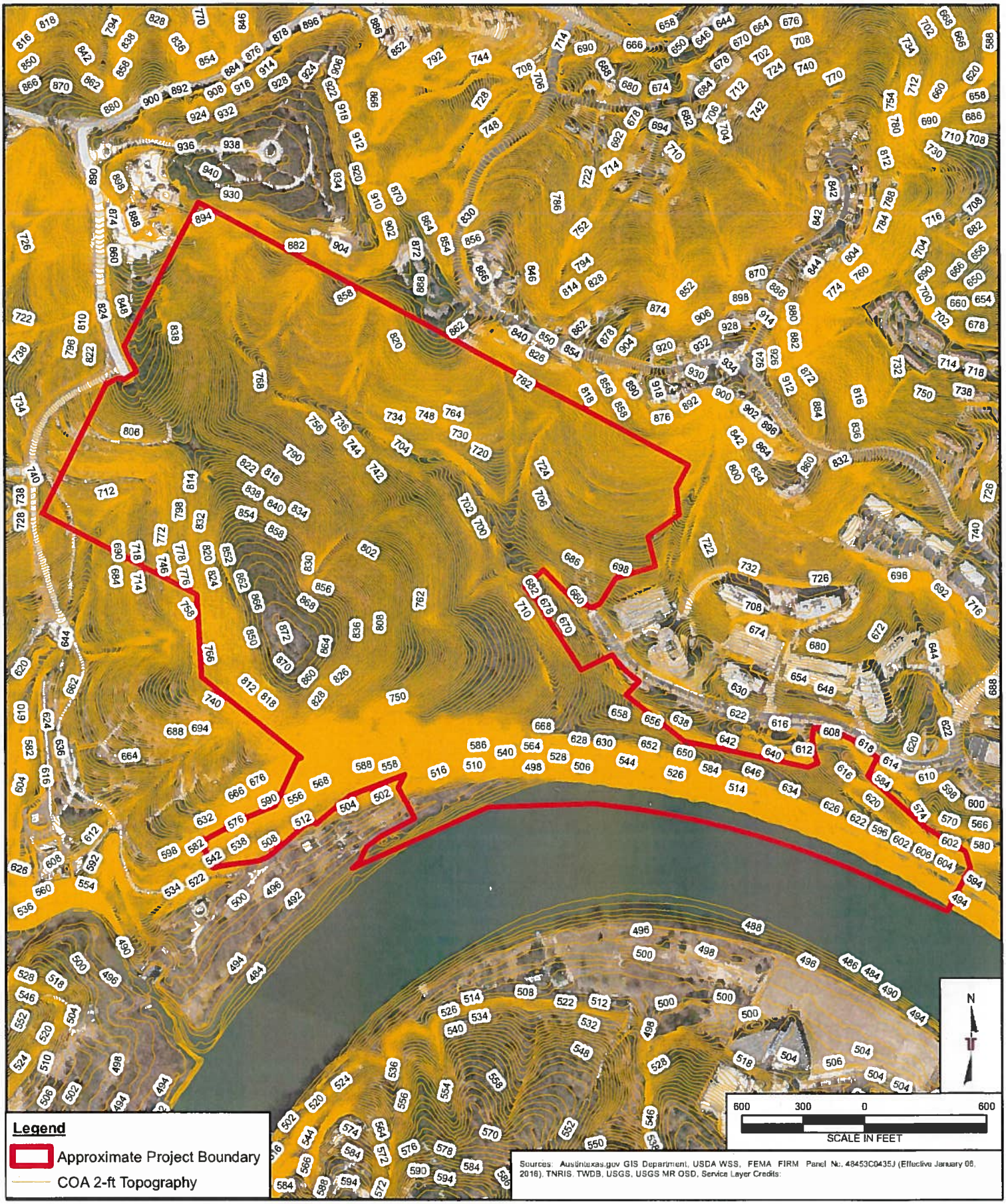
Site Specific Geologic Map

Camelback Tract

Bridgepoint Parkway and Coldwater Canyon Parkway
Austin, Travis County, Texas

EXHIBIT

1.1



Project Mngr:	MR
Drawn By:	Terracon
Checked By:	CG
Approved By:	AS

Project No.	96187142
Scale:	AS SHOWN
File No.:	96187142
Date:	Jun 15, 2018

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Consulting Engineers & Scientists
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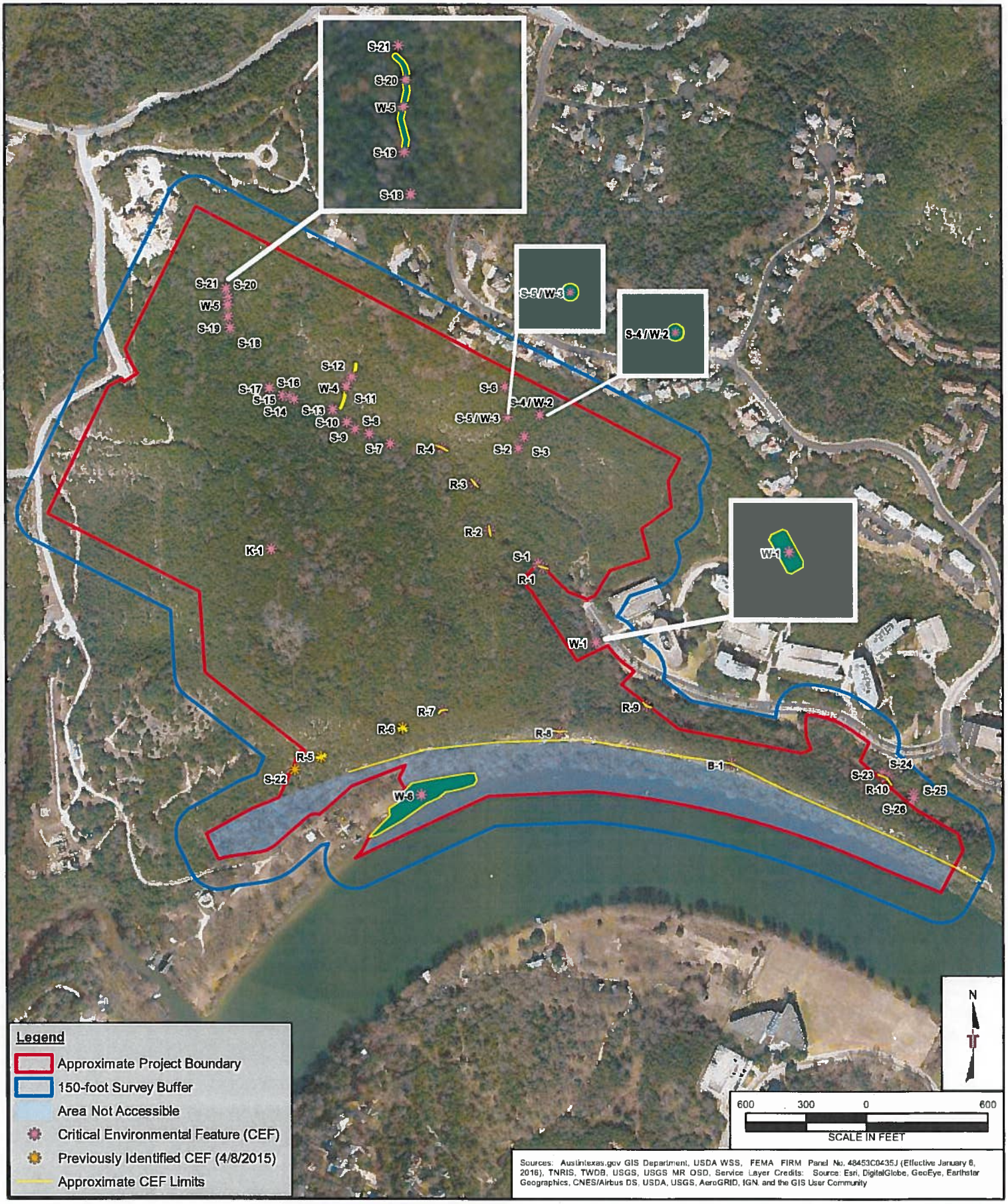
PH. (512) 442-1122 FAX. (512) 442-1181

Site Specific 2-ft Topography Map

Camelback Tract

Bridgepoint Parkway and Coldwater Canyon Parkway
Austin, Travis County, Texas

EXHIBIT 1.2



Sources: Austintexas.gov GIS Department, USDA WSS, FEMA FIRM Panel No. 48453C0435J (Effective January 6, 2016), TNRIS, TWDB, USGS, USGS MR OSD, Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

Project Mngr:	MR
Drawn By:	Terracon
Checked By:	CG
Approved By:	AS

Project No.	96187142
Scale:	AS SHOWN
File No.:	96187142
Date:	Jul 2, 2018

Terracon
Consulting Engineers & Scientists
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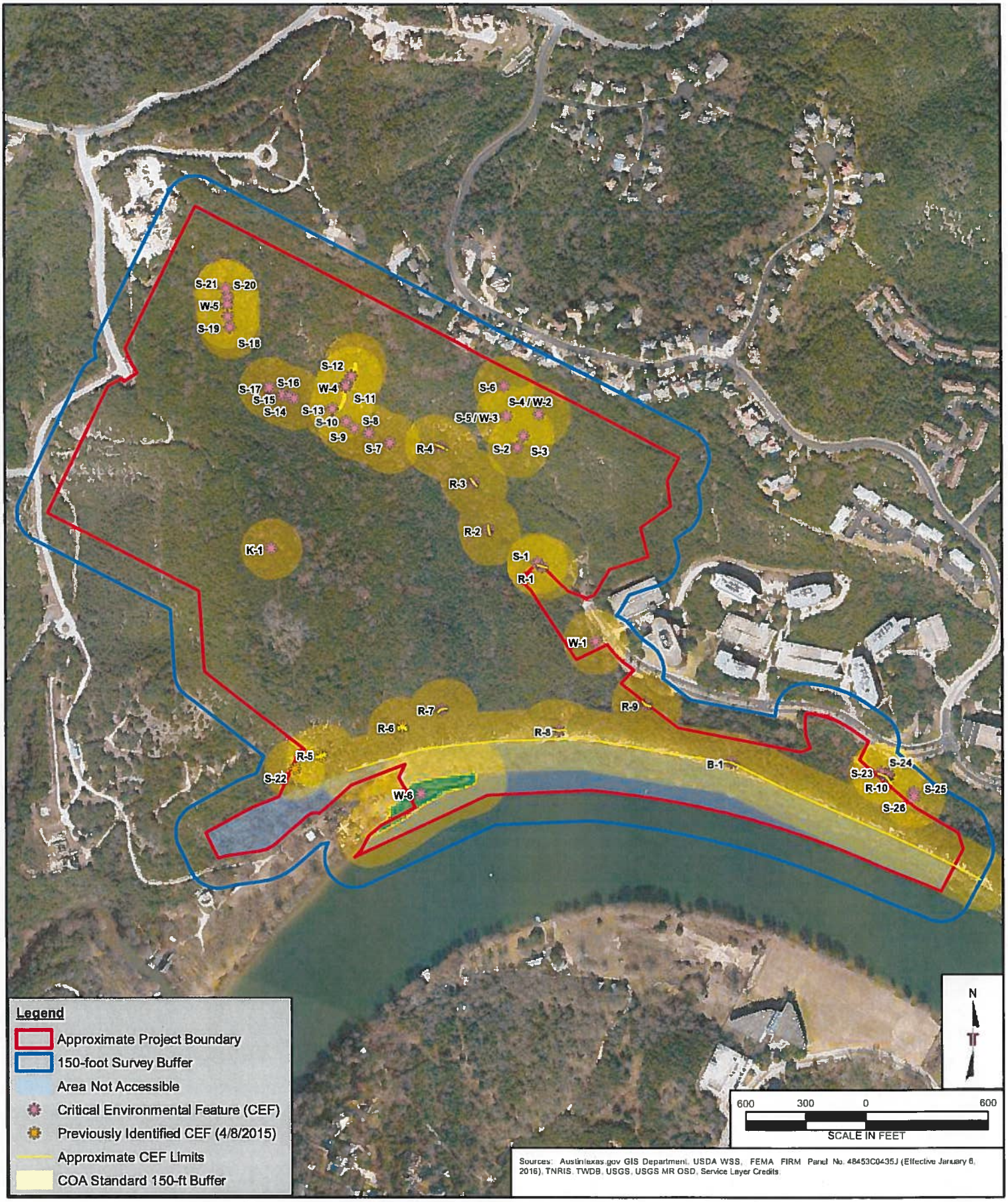
Site 2015 Historical Aerial Photo and CEFs

Camelback Tract
Bridgepoint Parkway and Coldwater Canyon Parkway
Austin, Travis County, Texas

EXHIBIT
2.0



Project Mngr:	MR
Drawn By:	Terracon
Checked By:	CG
Approved By:	AS

Project No.	96187142
Scale:	AS SHOWN
File No.:	96187142
Date:	Jul 3, 2018

Terracon
Consulting Engineers & Scientists
5307 INDUSTRIAL OAKS BLVD. - #160 AUSTIN, TX 78735
PH. (512) 442-1122 FAX. (512) 442-1181

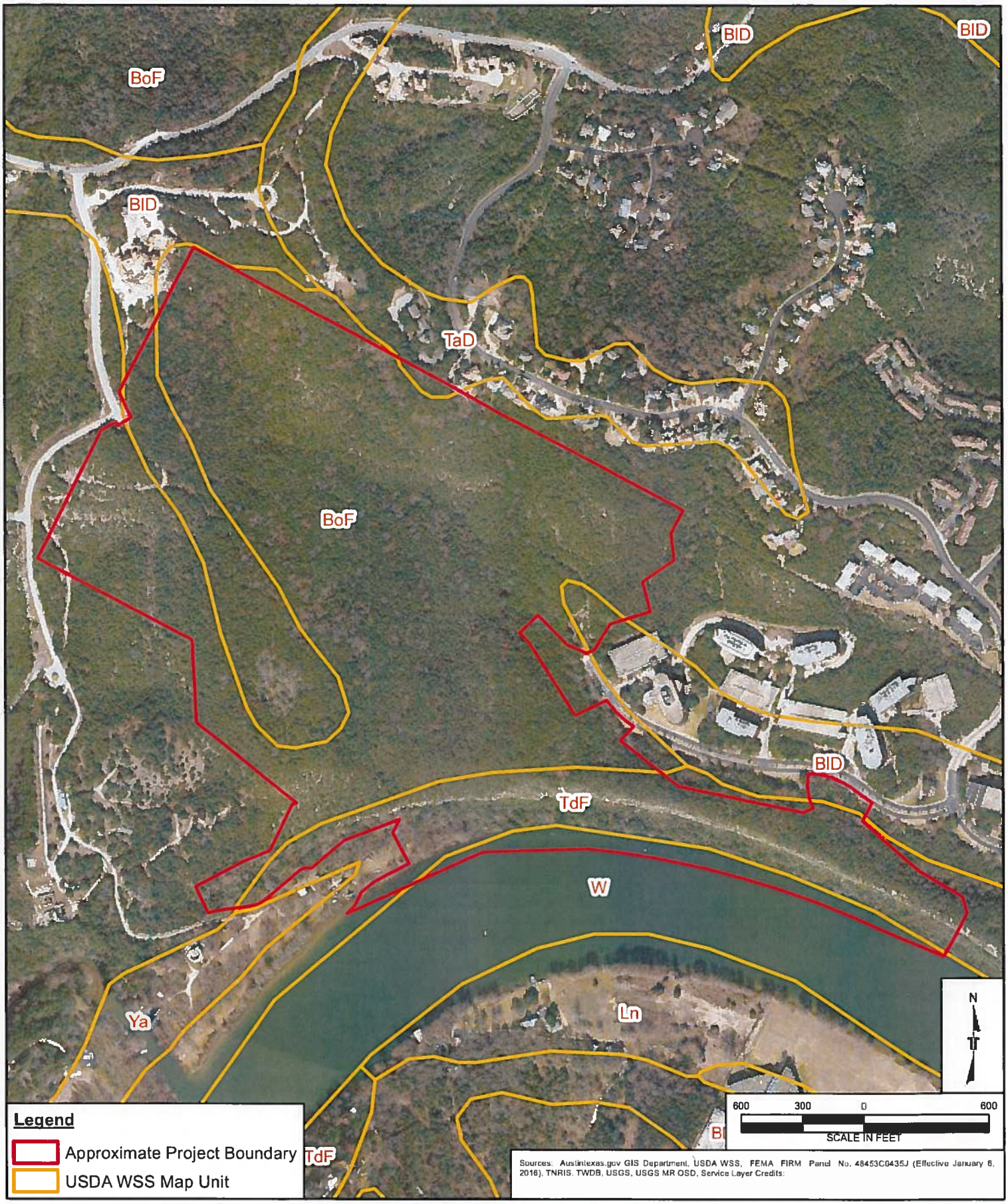
City of Austin Standard Setback Buffers

Camelback Tract

Bridgepoint Parkway and Coldwater Canyon Parkway
Austin, Travis County, Texas

EXHIBIT

2.1



Project Mngr:	MR
Drawn By:	Terracon
Checked By:	CG
Approved By:	AS

Project No.:	96187142
Scale:	AS SHOWN
File No.:	96187142
Date:	Apr 23, 2018

Terracon
Consulting Engineers & Scientists
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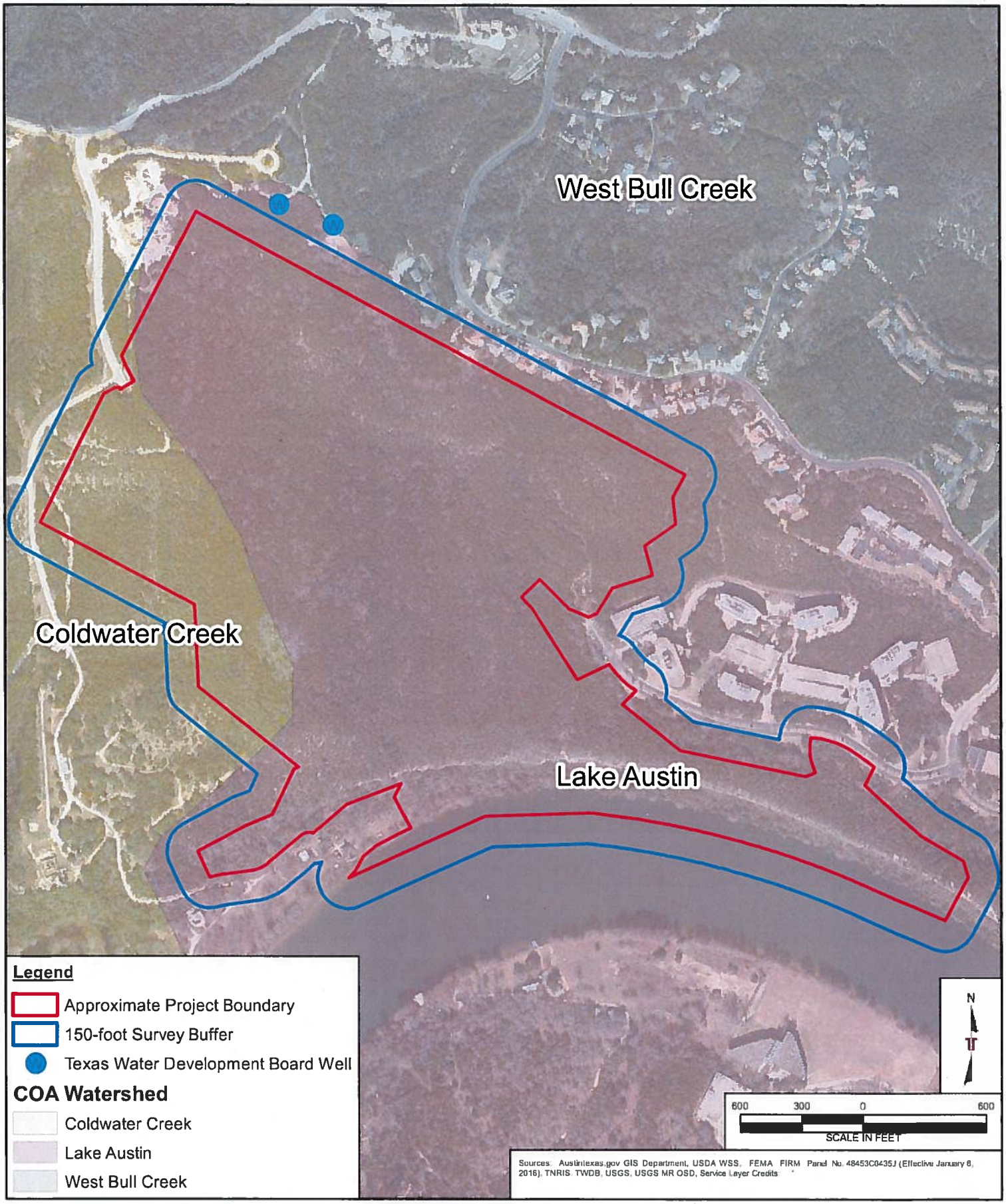
USDA Site Soil Map

Camelback Tract

Bridgepoint Parkway and Coldwater Canyon Parkway
Austin, Travis County, Texas

EXHIBIT

3



Project Mngr:	MR
Drawn By:	Terracon
Checked By:	CG
Approved By:	AS

Project No.	96187142
Scale:	AS SHOWN
File No.:	96187142
Date:	Jun 15, 2018

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Consulting Engineers & Scientists
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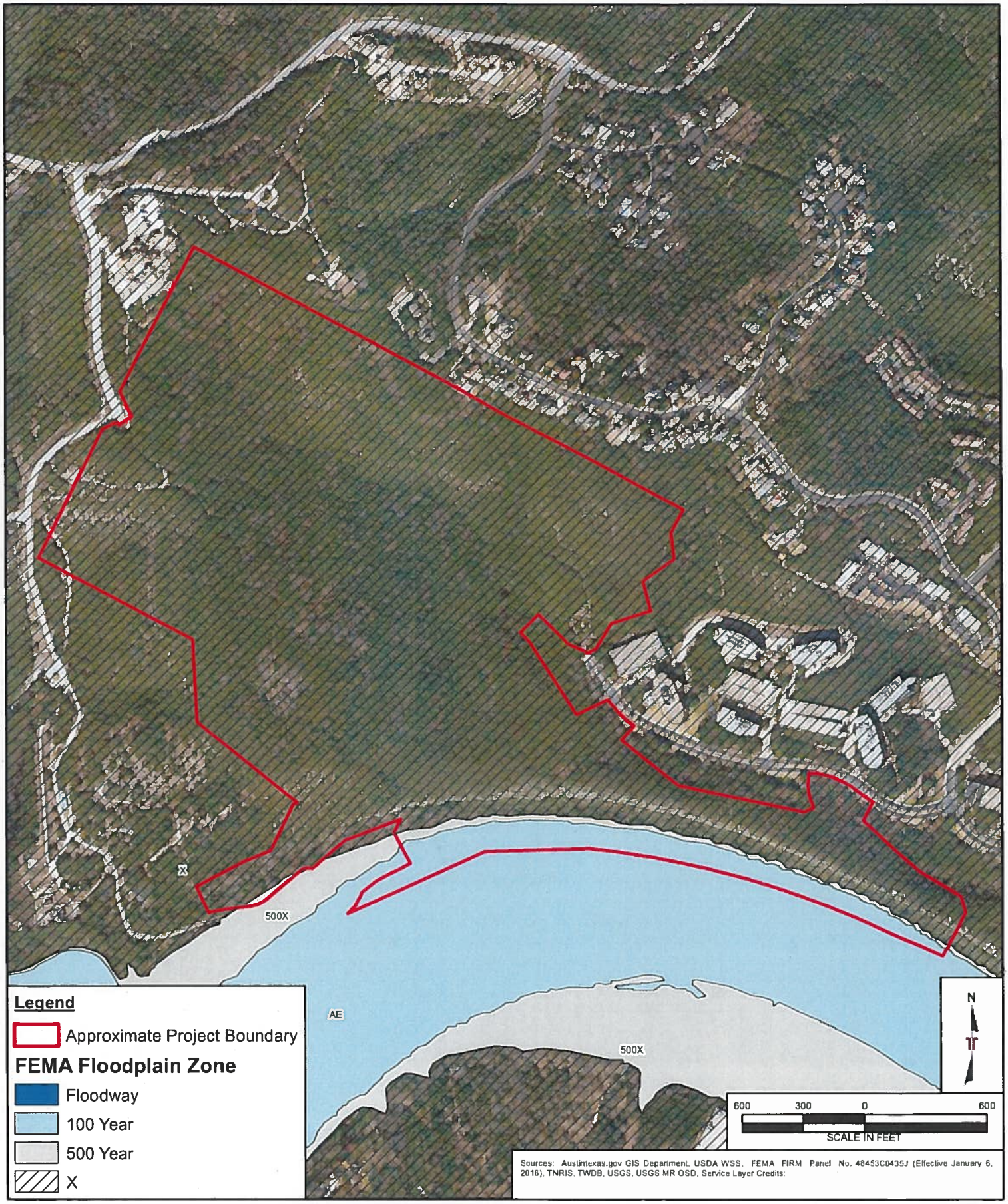
Watersheds and Wells

Camelback Tract
Bridgepoint Parkway and Coldwater Canyon Parkway
Austin, Travis County, Texas

EXHIBIT

4



Project Mngr:	MR
Drawn By:	Terracon
Checked By:	CG
Approved By:	AS

Project No.:	96187142
Scale:	AS SHOWN
File No.:	96187142
Date:	Apr 23, 2018

Terracon
Consulting Engineers & Scientists
5307 INDUSTRIAL OAKS BLVD. - #160 AUSTIN, TX 78735
PH. (512) 442-1122 FAX. (512) 442-1181

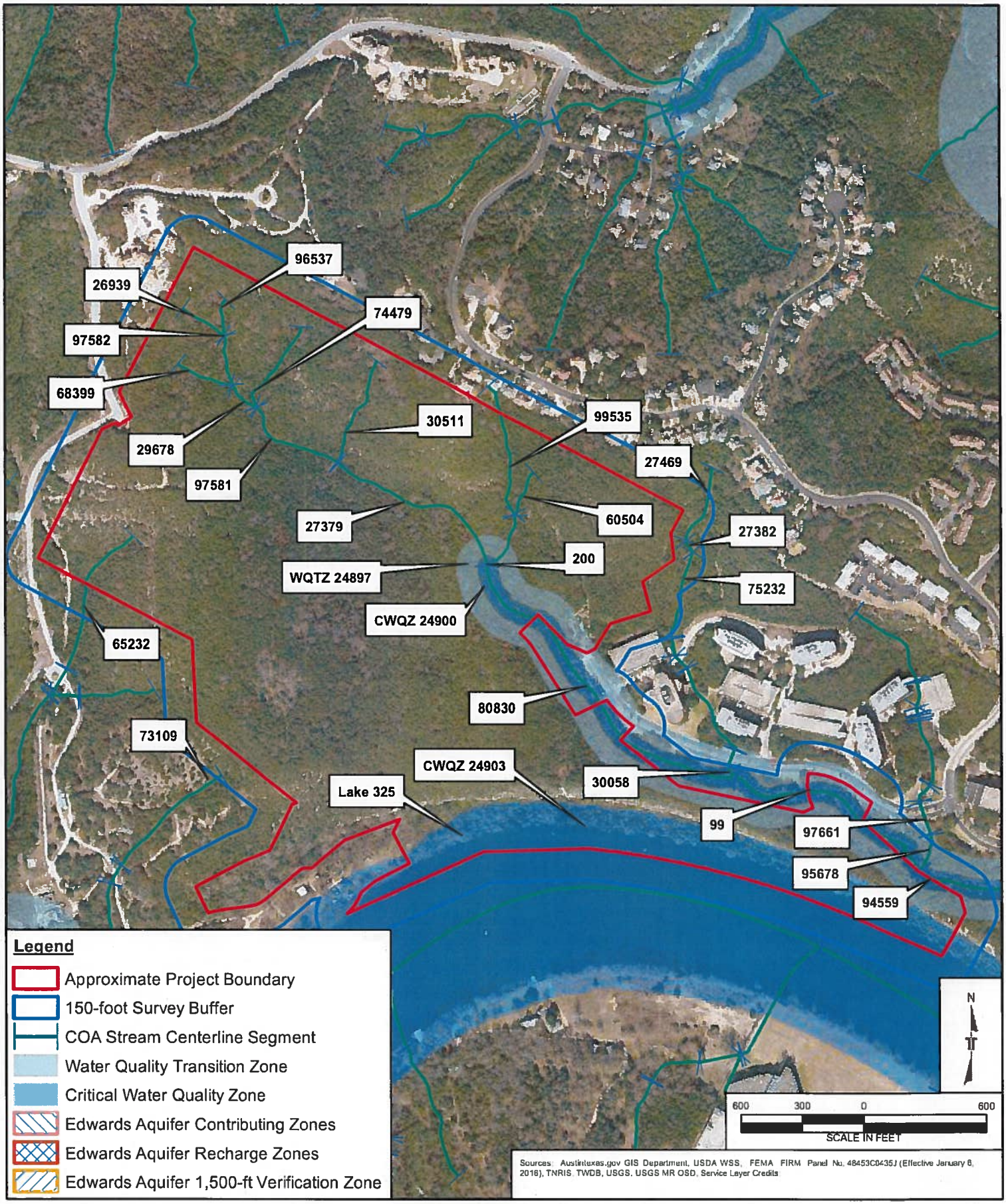
FEMA Floodplain Map

Camelback Tract

Bridgepoint Parkway and Coldwater Canyon Parkway
Austin, Travis County, Texas

EXHIBIT

5



Project Mngr:	MR
Drawn By:	Terracon
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Approved By:	AS

Project No.	96187142
Scale:	AS SHOWN
File No.:	96187142
Date:	Jun 15, 2018

Terracon
Consulting Engineers & Scientists
5307 INDUSTRIAL OAKS BLVD. - #160 AUSTIN, TX 78735
PH. (512) 442-1122 FAX. (512) 442-1181

Water Quality Zones

Camelback Tract

Bridgepoint Parkway and Coldwater Canyon Parkway
Austin, Travis County, Texas

EXHIBIT

6

APPENDIX C
SITE PHOTOGRAPHS

Photo 1 View of the northwest portion of the site.

Photo 2 View of the southwest portion of the site.

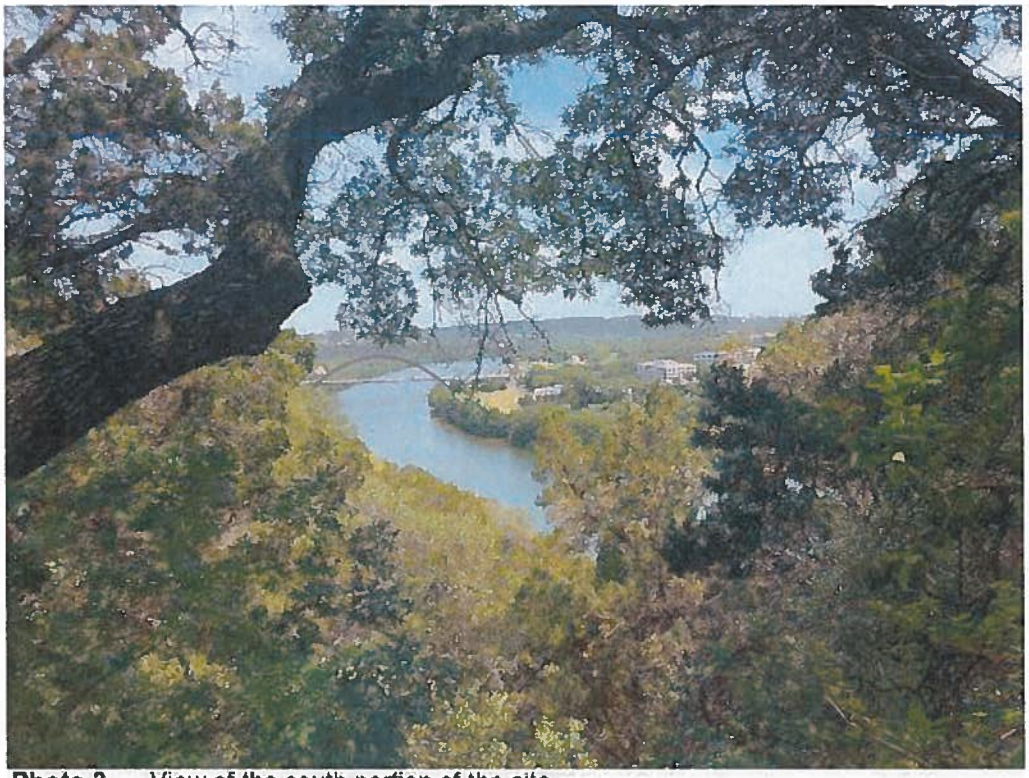

Photo 3 View of the south portion of the site.

Photo 4 View of the southeast portion of the site.

Photo 5 View of S-1 (CEF).

Photo 6 View of S-2 (CEF).

Photo 7 View of S-3 (CEF).

Photo 8 View of S-4 (CEF).

Photo 9 View of S-5 (CEF).

Photo 10 View of S-6 (CEF).

Photo 11 View of S-7 (CEF).

Photo 12 View of S-8 (CEF).

Photo 13 View of S-9 (CEF).

Photo 14 View of S-10 (CEF).

Photo 15 View of S-11 (CEF).

Photo 16 View of S-12 (CEF).

Photo 17 View of S-13 (CEF).

Photo 18 View of S-14 (CEF).

Photo 19 View of S-15 (CEF).

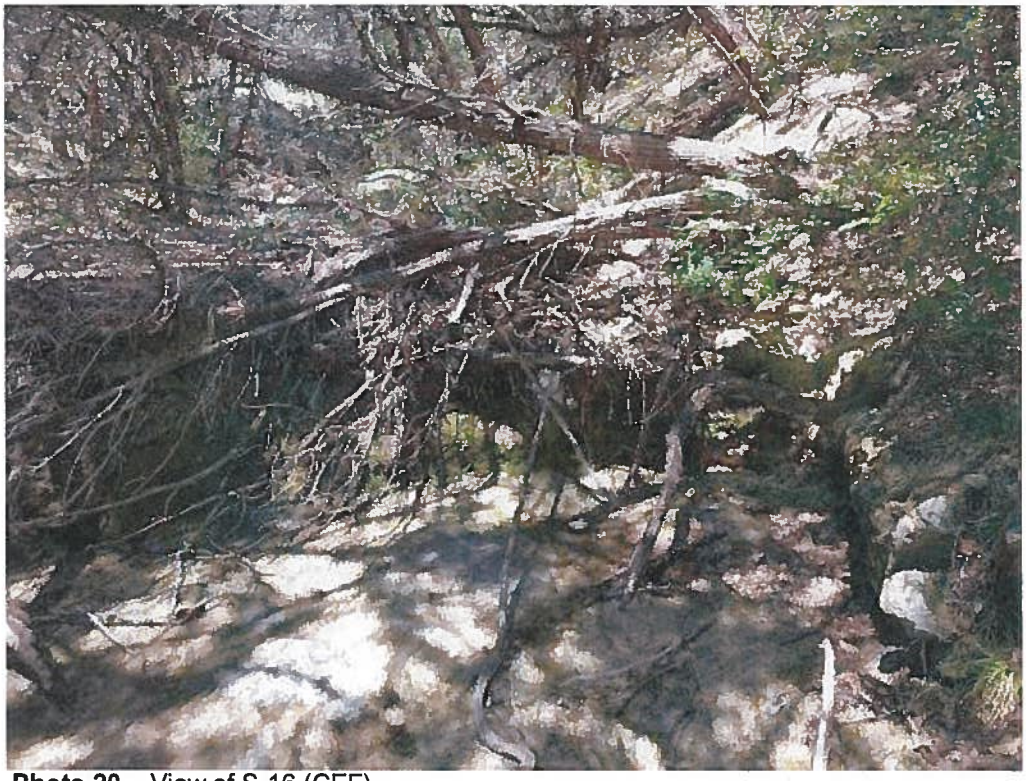

Photo 20 View of S-16 (CEF).

Photo 21 View of S-17 (CEF).

Photo 22 View of S-18 (CEF).

Photo 23 View of S-19 (CEF).

Photo 24 View of S-20 (CEF).

Photo 25 View of S-21 (CEF).

Photo 26 View of S-22 (previously identified CEF and photo taken on April 8, 2015).

Photo 27 View of S-23 (CEF).

Photo 28 View of S-24 (CEF).

Photo 29 View of S-25 (CEF).

Photo 30 View of S-26 (CEF).

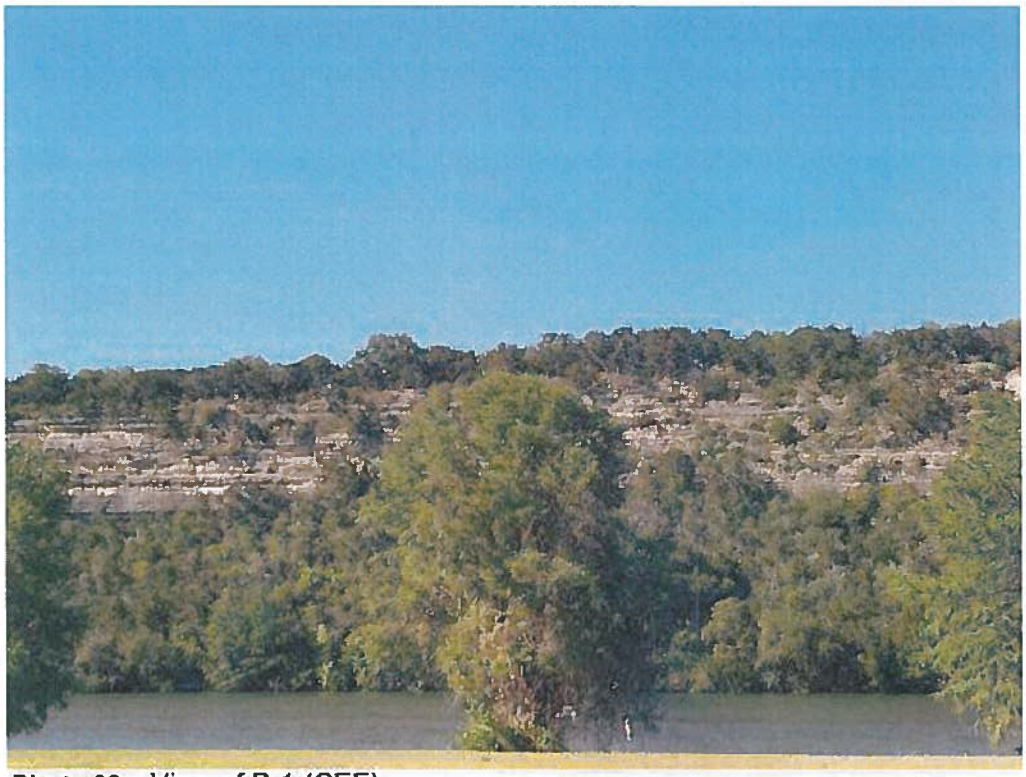

Photo 32 View of B-1 (CEF).

Photo 33 View of K-1.

Photo 45 View of K-1 after hand excavation on June 6, 2018.

Photo 46 View of R-1 (CEF).

Photo 47 View of R-2 (CEF).

Photo 48 View of R-3 (CEF).

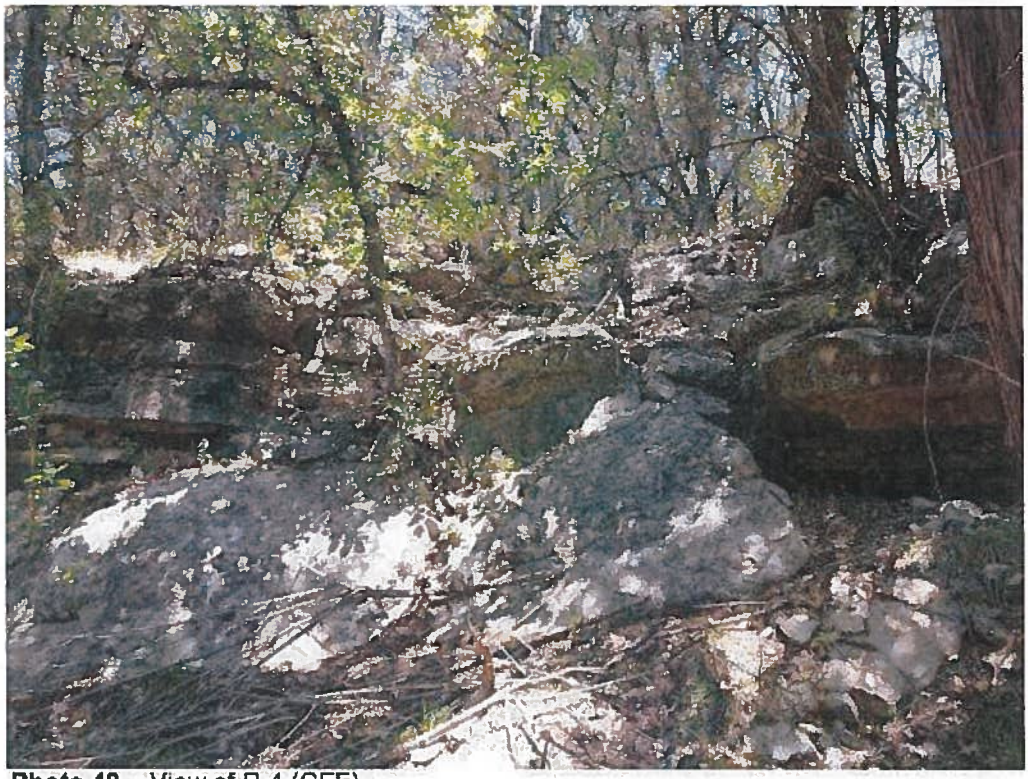

Photo 49 View of R-4 (CEF).

Photo 50 View of R-5 (previously identified CEF and photo taken on April 8, 2015).

Photo 51 View of R-6 (previously identified CEF and photo taken on April 8, 2015).

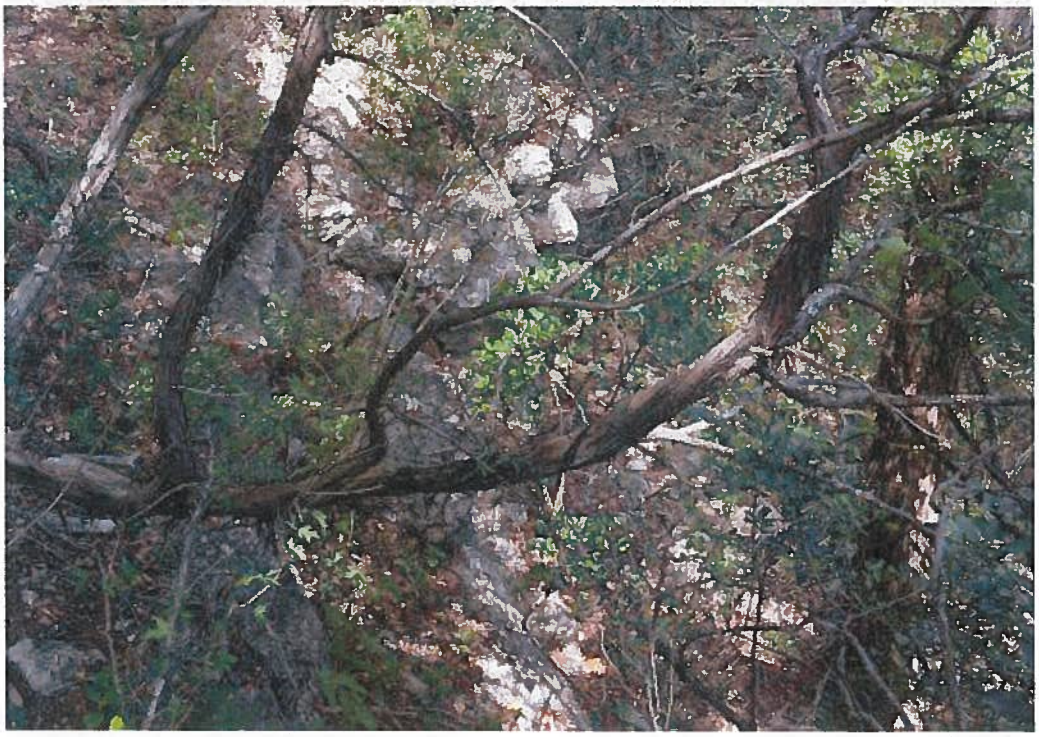

Photo 52 View of R-7 (CEF).

Photo 53 View of R-8 (CEF).

Photo 54 View of R-9 (CEF).

Photo 55 View of R-10 (CEF).

Photo 56 View of W-1 (CEF).

Photo 57 View of W-2 (CEF)

Photo 58 View of W-3 (CEF).

Photo 59 View of W-4 (CEF).

Photo 60 View of W-5 (CEF).

Photo 62 View of W-6 (CEF).

Photo 63 View of W-6 (CEF).

APPENDIX D
CREDENTIALS

MIRANDA F. REINHARD
PROJECT ENVIRONMENTAL SCIENTIST

PROFESSIONAL EXPERIENCE

Ms. Reinhard has experience performing Phase I Environmental Site Assessments (ESA), City of Austin Environmental Resource Inventories (ERI), City of Austin Habitat Assessments (HA), soil and water sampling, and performing laboratory experiments and research. She has worked for the Soil Characterization Laboratory, Office of Sustainability, and Department of Sociology at Texas A&M University. Ms. Reinhard is knowledgeable with a wide range of Federal and State environmental rules and regulations.

PROJECT EXPERIENCE

Querencia Senior Living Center-Austin, Texas

Conducted an ESA for three contiguous tracts of land totaling approximately 38.04 acres, improved with a senior living center consisting of four-to-six-story main residential buildings (Plaza Building for Assisted Living (AL) and Independent Living (IL) Buildings #1-3), ten one-story residential buildings (villas), paved access drives, paved parking lots, parking garage on the first floor of IL Building #3, and walking trails, operating as the Querencia At Barton Creek and located at 2500 Barton Creek Boulevard. The purpose for the ESA was to identify recognized environmental conditions for the client who was refinancing the site and requested due diligence. Terracon's client was Barton Creek Senior Living Center, Inc. c/or SQLC.
Professional Services Conducted: Environmental Site Assessment
Services Completed: 2015

Crossroads Park Wastewater Line-Temple, Texas

Conducted an ESA for a proposed wastewater line which will extend approximately 1,875 feet from south of Prairie View Road, and crossing Stonehollow Drive and Research Parkway (aka Hilliard Road) to approximately 700 feet north of West Adams Avenue (aka FM 2305). The purpose for the ESA was to identify recognized environmental conditions for the client who requested due diligence for the development of a wastewater line. Terracon's client was Kasberg Patrick and Associates LP.
Professional Services Conducted: Environmental Site Assessment
Services Completed: 2016

#42-1658 Burnet Chevron-Burnet, Texas

Conducted an ESA for an approximate 0.992 acre tract of land improved with an approximate 5,000 square foot, one-story retail store with outdoor playground and fueling center, occupied by a 7-Eleven/Chevron convenience store and McDonald's restaurant and located at 200 N. Water Street. The purpose for the ESA was to identify recognized environmental conditions for the client who was the owner of the site and requested due diligence for reconstruction of McDonald's restaurant and closure of the 7-Eleven/Chevron convenience store. Terracon's client was McDonald's USA, LLC.
Professional Services Conducted: Environmental Site Assessment
Services Completed: 2016

Education

Bachelor of Science, Double Major: Bioenvironmental Sciences & Plant and Environmental Soil Science, Minor: Sociology, Texas A&M University, 2014

Affiliations

National Association of Environmental Professionals

Phi Kappa Phi Honor Society

Gamma Sigma Delta Honor Society

Phi Eta Sigma National Honor Society

Commercial Real Estate Women

Work History

Terracon Consultants, Inc., Project Environmental Scientist, 2014 - Present

Texas A&M University Soil Characterization Laboratory; Student Worker; 2013 - 2014

Texas A&M University Office of Sustainability; Social Justice Outreach Specialist Intern; January 2013 – August 2013

Texas A&M University Department of Sociology; Research Assistant; August 2011 - December 2012

Terracon

Lakewood on the Park – Buildings B & C-Austin, Texas

Conducted an ESA for a 102,056 square foot, three-story office building (Lakewood on the Park-Building B); a 78,502 square foot, three-story office building (Lakewood on the Park-Building C); a three level parking garage; and associated paved parking lots constructed in 1998. The site was a part of a larger parent tract (approximately 11.3 acres) which included a 15,856 square foot, two-story office building (Lakewood on the Park-Building A) and an associated paved parking lot located at 7600 Capital of Texas Highway. The purpose for the ESA was to identify recognized environmental conditions for the client who was refinancing the site and requested due diligence. Terracon's client was CPVF II Lakewood LP c/o CapRidge Partners, LLC.
Professional Services Conducted: Environmental Site Assessment
Services Completed: 2016

Brentwood – Multifamily Properties-Austin, Texas

Conducted an ESA for two noncontiguous multifamily property tracts (Tract 1 and Tract 2) totaling approximately 1.14 acres. Tract 1 was an approximate 0.50 acre tract which was improved in 1971 with a two-story apartment building called Brentwood Terrace Apartments and a paved parking lot, located at 5306 Woodrow Avenue. Tract 2 was an approximate 0.64 acre tract which was improved in 1971 with three, two story apartment buildings called Woodland House Apartments and paved parking lot, located at 5623 Woodrow Avenue. The purpose for the ESA was to identify recognized environmental conditions for the client who was refinancing Tract 1 of the site and purchasing Tract 2 of the site and requested due diligence. Terracon's client was Joseph Companies.
Professional Services Conducted: Environmental Site Assessment
Services Completed: 2016

Granada Hills Tract-Austin, Texas

Conducted an ESA, ERI, and HA for an approximate 46.327 acre tract, improved with unimproved road traversing the central portion of the site; multiple deer hunting stands, a cattle corral, and a dilapidated vacant, rural structure, located on the south side of Highway 290 West. The purpose for the ESA was to identify recognized environmental conditions for the client who was purchasing the site. The purpose for the ERI was to oversee and conduct a site assessment to identify the presence of critical environmental features (CEFs) (seeps, springs, wetlands, canyon rimrock, bluffs, karst features). The purpose for the HA was to evaluate the presence or absence of potential endangered species habitat on site or on the immediately adjacent tracts. Terracon's client was CIP Construction.
Professional Services Conducted: Environmental Site Assessment, City of Austin Environmental Resource Inventory, City of Austin Habitat Assessment
Services Completed: 2015

Parking Spot Tracts-Austin, Texas

Conducted an ERI for an approximate 30 acre tract, improved with several concrete slabs, a two-story abandoned building and concrete and trash piles, located at 2883, 2885 and 2935 East Highway 71. The purpose for the ERI was to oversee and conduct a site assessment to identify the presence of critical environmental features (CEFs) (seeps, springs, wetlands, canyon rimrock, bluffs, karst features). Terracon's client was Halff Associates, Inc.
Professional Services Conducted: City of Austin Environmental Resource Inventory
Services Completed: 2015

Wolf Ranch West-Section 1B-Georgetown, Texas

Conducted an ESA and HA for an approximate 19.440 acre tract of mostly vacant, undeveloped land, improved with an unimproved road, a temporary mobile home, a water tank, and a septic system, located south of the intersection of W. University Avenue (Highway 29) and Wolf Ranch Parkway. The purpose for the ESA was to identify recognized environmental conditions for the client who was purchasing the site. The purpose for the HA was to evaluate the presence or absence of potential endangered species habitat on site or on the immediately adjacent tracts. Terracon's client was McCann Realty Partners.
Professional Services Conducted: Environmental Site Assessment, City of Austin Habitat Assessment
Services Completed: 2016

RUSS FORD, P.G., CAPM

SENIOR ENVIRONMENTAL MANAGER / HYDROGEOLOGIST

PROFESSIONAL EXPERIENCE

Mr. Ford is a senior hydrogeologist in Terracon's Austin office. He has more than 30 years of experience as a hydrogeologist specializing in the assessment and remediation of deep and shallow groundwater contamination. He has managed several hydrogeologic characterizations and contamination assessments. These have included monitor well siting and installation, groundwater and soil sampling, data analysis of constant rate aquifer tests, development of groundwater databases, statistical analysis of groundwater data, computer modeling of site groundwater conditions using analytical and numerical models, well head protection studies, design of comprehensive remedial systems, as well as preparation of assessment reports and remedial action plans.

He is experienced with state and federal environmental regulations, including RCRA and CERCLA. Mr. Ford's duties have included management of staff geologists and hydrogeologists, client and business development activities as well as development of a groundwater modeling group.

PROJECT EXPERIENCE

City of Austin Environmental Rotation Contract – Austin, TX
Managed the City of Austin environmental contract which included a variety of services provided on an as-needed basis. Projects have included a landfill permit modification, corrective action, and a variety of environmental site investigations.

Remedial Design and VCP Assistance – Central Texas
Performed site assessment and remedial design for an abandoned municipal incinerator ash disposal area in central Texas. Tasks included delineation of ash waste areas and associated contaminated soil, risk assessment, feasibility study, remediation design and site closure report preparation. Site remediation and final closure were completed under the TNRCC Voluntary Cleanup Program.

Subsurface Investigation and IOP Application – Austin, Texas
Performed Phase II subsurface site investigation on three blocks in downtown Austin to prepare for Innocent Owner applications associated with the coal tar contamination from the 100 Congress site (former Austin Power & Light site). Work consisted of completion of Phase II site investigation and preparation of IOP applications.

Geologic Assessment/Environmental Assessment – Lakeline Tract
Performed a geologic assessment and environmental assessment for a 30 acre site near Lakeline Mall in Austin, TX.

TxDOT Statewide Environmental Contract
Managed dozens of environmental projects involving hazardous materials site investigations, site assessments, corrective action, underground storage tanks, remediation system design and oversight.

EDUCATION

Bachelor of Science, Geology/ Hydrogeology, 1984, Northern Arizona University

CERTIFICATIONS

State of Texas, Professional Geologist #1185

Certified Professional Geologist, American Institute of Professional Geologists, #9475

TCEQ Corrective Action Project Manager (CAPM #1502)

AFFILIATIONS

National Groundwater Association

Texas Groundwater Association

American Institute of Professional Geologists

WORK HISTORY

Terracon, Senior Environmental Manager/ Hydrogeologist, 1997-present

EMCON Inc., Senior Hydrogeologist, 1994-1996

Southwestern Laboratories, Program Manager of Hydrogeological Services, 1990-1994

Applied Earth Sciences, Project Hydrogeologist/Office Manager, 1985-1990

PUBLICATIONS

Municipal Solid Waste Groundwater Protection Cost Study; Texas Water Commission Report # LP92-24; 1992

Terracon

Hydrogeologic Site Characterization – North Central Texas
Served as project hydrogeologist for a hydrogeologic site characterization at a municipal solid waste landfill in north central Texas. Tasks included identification of various hydrogeologic units, stratigraphic correlations, hydrogeologic interpretation and preparation of a site hydrogeologic model, and design of a groundwater monitor well network.

Hutto ISD - Limited Site Investigation - 100 Acres
Conducted a Limited Site Investigation on a 100-Acre tract to evaluate the potential for elevated arsenic concentrations in surface soils within areas of the site utilized for crop production.

AISD Proposed Elementary School #2 – Geologic Assessment
Performed a Geologic Assessment of a 14-Acre Site proposed for a new Elementary School.

Dripping Springs High School Conversion – Geologic Assessment
Performed a Geologic Assessment on four tracts totaling approximately 100 acres.

Town Lake Plaza Site Closure – Austin, Texas
Project Manager for dry cleaner assessment and regulatory closure project. Delineated PCE groundwater plume extending offsite. Achieved regulatory closure through State Voluntary Cleanup Program utilizing a plume management zone approach coupled with monitored natural attenuation. Successful closure achieved which allowed for redevelopment of shopping center and adjacent low income apartments with multi-family/retail center.

Jollyville Tunnel Piezometers – Austin, Texas
Project Manager for installation of deep groundwater piezometers in support of large municipal water tunnel supply project. Project included installation of 15 deep (greater than 250 feet deep) piezometers into the environmentally sensitive Edwards Aquifer. Also included detailed core logging and packer testing for determination of borehole hydraulic conductivity. Work was conducted under accelerated time schedule and coordinated with neighborhood advocacy groups opposed to the tunnel project.

620 Mall Dry Cleaner Assessment and Remediation – Lakeway, Texas
Project Manager for dry cleaner assessment and remediation project. Project included offsite delineation of PCE contaminant plume within a karst aquifer system. Remediation included in-situ chemical oxidation followed by injection of HRC for enhanced bioremediation. Regulatory closure achieved utilizing a plume management zone coupled with monitored natural attenuation.

East Austin Railroad Tracts Assessment and Remediation – Austin, Texas
Project Manager for assessment and remediation of 3 separate tracts of property formerly utilized by Union Pacific Railroad as maintenance yards. Work included assessment of the tracts and preparation of remedial action plans. Site remediation included the excavation and disposal of approximately 50,000 cubic yards of petroleum hydrocarbon impacted soil. Regulatory closure achieved through State Voluntary Cleanup program which allowed for redevelopment of the sites with multi-family and retail facilities.

Champions Shooting Range Assessment and Remediation – Austin, Texas
Project Manager for assessment and remediation of historic unpermitted shooting range. Work included assessment of approximately 25-acres of both skeet and rifle range areas. Remediation utilized stabilization of lead impacted soils to below hazardous waste levels with offsite disposal as non-hazardous waste. Total of approximately 5,000 cubic yards of material was eventually stabilized and hauled offsite. Downrange remediation included surficial removal of visible lead shot from steep, rocky cliff and spring fed streambed using truck mounted vacuum units. Regulatory closure achieved through State Voluntary Cleanup program which allowed for redevelopment of the site with multi-family and retail facilities.

Geologic Assessment / Environmental Assessment; Amber Oaks Office Development – Austin, TX
Performed a geologic assessment and environmental assessment for a new building development in Williamson County.

Ann M. Scott, PhD, RPA

NATURAL | CULTURAL RESOURCES GROUP MANAGER

EDUCATION

Doctor of Philosophy, Latin American Studies, The University of Texas at Austin, 2009

Master of Arts, Anthropology, Northern Illinois University, 1993

Bachelor of Science, Anthropology, Central Michigan University, 1988 (honors)

Archaeological Field School, University of Pittsburgh, 1986

REGISTRATIONS

Register of Professional Archeologists, #16573

CERTIFICATIONS

TXDOT Precertified
CPR and First Aid 11-2017

AFFILIATIONS

Central Texas Association of Enivornmental Professionals

Society for American Archaeology

Council of Texas Archeologists

Texas Archeological Society

Colorado Council of Professional Archaeologists

American Cultural Resources Association (Board member: 2010-2015)

National Speleological Society

PUBLICATIONS/PRESENTATIONS

Co-editor of book entitled *The National Historic Preservation Act, Past, Present, and Future* with co-editor Kimball Banks, Routledge Press, 2016

Preliminary Findings from the Mercado Site, 41TR203: An Archaic Period Site Along the West Fork Trinity River, Tarrant County, Texas. Presentation at the 85th Annual Meetings of the Texas Archeological Society, San Marcos, Texas, October 24-26, 2014. Co-author with Julie Shipp and Chalres Frederick

CLIENT TESTIMONIAL

Working with Ann is always delightful- her attention to detail and timing, coupled with her effective team communication skills, results in the avoidance of project scheduling and budget issues that typically creep into large, multi-faceted projects

--Laurie Hawkins, President, J&L Consulting, Texas

PROFESSIONAL EXPERIENCE

Dr. Scott has over 25 years of archaeological and environmental compliance experience. She has professional experience with the National Park Service, the States of Wisconsin and Illinois, and private consulting firms in the Midwest and Texas. Her experience has involved all levels of archaeological investigation including Phase I surveys, Phase II testing, and Phase III data recovery at both prehistoric and historic-period sites. The work has been performed in compliance Section 106 of the National Historic Preservation Act (NHPA), the National Environmental Policy Act (NEPA), and Texas Department of Transportation (TxDOT) NEPA assignment standards as well as various state antiquities requirements. Dr. Scott exceeds all qualifications for the *Secretary of the Interior's Standards and Guidelines* for Prehistoric and Historic Archaeology under 36 CFR 61. Additionally, she has held permits as a Principal Investigator for the Bureau of Land Management for the Texas Gulf Coast and Great Plains and the US Forest Service for National Forests and Grasslands in Texas.

In addition, Dr. Scott serves as Project Manager or Reviewer on several multi-disciplinary projects (Categorical Exclusions, Environmental Assessments, Environmental Resources Inventories) involving work with wetlands and waters, endangered species and habitats, karst surveys, Phase I Environmental Site Assessments, and cultural resources including historic resources surveys. Dr. Scott operates in the Terracon quality control program as an Authroized Project Reviewer offer guidance and project oversight throught a project's lifetime. Finally, Dr. Scott has international and domestic experience in conducting archaeological investigations in caves.

SELECT PROJECT EXPERIENCE

Prairie View Road – City of Temple, Bell County, TX
Serving as Project Manager, Dr. Scott oversaw the completion of the TxDOT NEPA Categorical Exclusion checklist. Because the road realignment included new right of way, an archeological survey was required by TxDOT. In addition to the cultural resources, a Noise Assessment, Waters and Wetland Assessment, and Biological Assessment were performed along the alignment. The project was approved by the Waco District of TxDOT.

Bunton Creek Interceptor – City of Kyle, Hays County, Texas
The proposed 7,000-linear-foot sewer line project was receiving funding with federal monies and required Section 106 compliance. One historic archeological site was recorded and, after archival and deed research, was assessed as ineligible for inclusion on the National Register of Historic Places (NRHP). The report was coordinated with the Texas State Historic Preservation Office (SHPO) (THC). The SHPO/THC agreed with our findings of no historic properties affected and the project was approved for construction. Dr. Scott served as Project Manager and Principal Investigator.

Texas Water Development Board Projects, City of Cameron Wastwater Treatment Plant – Cameron Texas, Hillside Terrace Wastewater Line – City of Buda, Texas*, Brazosport Water Authority Treatment Plant Improvements – Lake Jackson, Texas*
Serving as Project Manager, Dr. Scott oversaw the completion of the Environmental Information Document (EID), which is a combination of compliance for state and federal laws (NEPA). All aspects of the project were managed by Dr. Scott including multi-disciplinary field investigations, document quality control, agency coordination, assistance in public meetings, and delivery of final documentation. Both Buda and Lake Jackson projects received Finding of No Significant Impact (FONSI) and were approved. The City of Cameron project is on-going with Dr. Scott serving as project manager of the EID.

Ann M. Scott, PhD, RPA (continued)

Kegley Road – City of Temple, Bell County, TX
Serving as Principal Investigator, Dr. Scott supervised an archeological survey of approximately 12,000 linear feet of proposed city road improvements. A larger right of way study area was surveyed (55 acres) to allow for minor changes in the alignment. In addition to the cultural resources, Waters and Wetland Assessment and Biological Assessment were performed along the alignment in anticipation of US Army Corps of Engineers permitting. The project is on-going.

Northview School Project – Clay County, Missouri
Dr. Scott serves as Principal Investigator and Project Manager for the school expansion project in North Kansas City, Missouri. Dr. Scott performed a constraints analysis, SHPO coordination, and historical review of possible cemetery on the project site. She conducted an archaeological survey of the 100-acre parcel including an intensive site recording of an abandoned, pre-Civil War family cemetery. The school district and project engineers are currently revising construction plans to avoid disturbing the cemetery. The project received US Army Corps of Engineers (USACE) approval.

WETT (Wind Energy Transmission of Texas) Transmission Line Survey – Texas*
Dr. Scott served as Principal Investigator for a three-part, 375-mile transmission line project in 12 counties in west Texas. Approximately 100 sites, from Early Archaic to Late Prehistoric campsites, lithic procurement areas, and other site types to historic sites dating from the late 19th century to the mid 20th century were recorded. The project also required Phase II testing for National Register eligibility of several sites. Dr. Scott supervised about 10 team members on the project. Texas SHPO concurrence was received on all four reports and the project was approved for construction. Fee: $225,000

Broadband Technology Opportunity Program NEPA Environmental Assessments (EAs) and Federal Communications Commission compliance for broadband infrastructure projects for NTIA/BTOP and USDA/RUS – Oklahoma and Texas*
Dr. Scott acted as Project Manager for People's Telephone Cooperative, Inc. in north Texas, Texas A&M University, Region 18 Education Service Center in west Texas, VTX Telecom in south Texas, and Pine Telephone in Oklahoma. All cultural resources projects received federal approvals. Besides being Principal Investigator for the cultural resources projects, Dr. Scott managed the multi-disciplinary evaluations, NEPA EA document preparation, and agency coordination for the projects. Fee: $250,000

Testing and Data Recovery at 41TR203, The Mercado Site, North Tarrant Express, Segment 3A – Fort Worth, Texas*
As Principal Investigator for Segment 3A of the North Tarrant Express Tollway Project, Dr. Scott supervised testing-level and data recovery fieldwork at site 41TR203 along the North Trinity River located within the city limits of Fort Worth. Dr. Scott coordinated data recovery efforts with TxDOT and the Texas Historical Commission (THC) staff. She supervised eight to ten team members and managed the completion of the research designs, field excavation efforts for testing and data recovery, laboratory artifact processing and analyses, radiocarbon dating, subconsultants for paleobotany and geomorphology, and agency staff visits. Fee: $250,000

Loop 375 Border Highway, West Extension – El Paso County, Texas*
As Principal Investigator of the Loop 375 Border Highway West Extension, Dr. Scott performed mechanical scraping outside of Smelter Cemetery, archeological survey for work on federal land (US International Boundary and Water Commission [USIBWC]), and responded to unexpected discoveries. Because work was adjacent to BNSF and Union Pacific railroad rights-of-way, extra training and coordination was necessary to conduct the work. Similarly, because the work was being conducted on USIBWC land between Mexico and the United States, communication was critical with Immigration and Customs Enforcement. Coordination with TX State Historic Preservation Officer (SHPO), USIBWC, TxDOT and the tollway developer was ongoing throughout the project.

APPENDIX E
GENERAL COMMENTS

The City of Austin (COA) Environmental Resource Inventory (ERI) was performed in accordance with generally accepted scientific and engineering evaluation practices of this profession undertaken in similar studies at the same time and in the same geographical area. The limitations of this ERI should be recognized.

In conducting the limited scope of services described herein, certain sources of information and public records were not reviewed. The scope of this ERI was conducted in general accordance with the City of Austin's Land Development Code (LDC), Section 25-8-121 (A), and the City of Austin Title 30-5. The service's scope is not intended to be compliant or consistent with the State of Texas Edwards Aquifer Rule (30 TAC 213, Subchapter B; pertaining to Travis County, Texas) or the Texas Commission on Environmental Quality (TCEQ) Edwards Aquifer Protection Program. Field identification of Critical Environmental Features (CEFs) as defined by the COA can be seasonally influenced. Due to seasonal changes, Terracon cannot guarantee areas to exhibit or not to exhibit CEF characteristics at all times of the year.

CEF wetlands were evaluated using the USACE 1987 Manual and Great Plains Regional Supplement. The manuals provide assistance for identifying wetlands based on the three criteria discussed. However, the manuals alone may not have provided enough information to document whether or not the three criteria were met. Various physical properties or other visual signs used to evaluate whether the three wetland identification criteria areas were satisfied may not be straightforward, especially in disturbed or problem areas. The manuals also allow the user to visually estimate certain indicators, such as the percentage of area covered by dominant species for the entire community. Terracon did not attempt to identify every plant species and did not classify soil types by laboratory methods.

This report is for the exclusive use of the client and any relying government entities for the project being discussed. No warranties, either expressed or implied, are intended or made.