

**SITE PLAN REVIEW SHEET
ENVIRONMENTAL VARIANCE REQUEST ONLY**

CASE: SP-2024-0147C.SH

ZAP DATE: January 7, 2025

PROJECT NAME: Loyola Flats

APPLICANT: Kimley-Horn (Allison Lehman)(Dwayne Shoppa)

AGENT: Kimley-Horn

ADDRESS OF SITE: 6700 Decker Lane, Austin, TX 78724

COUNTY: Travis

AREA: 10.45 acres

WATERSHED: Elm Creek Watershed

JURISDICTION: Austin Full Purpose

EXISTING ZONING: GR, GR-CO

PROPOSED DEVELOPMENT:

The applicant is proposing multi-family housing with associated improvements.

DESCRIPTION OF VARIANCES:

The applicant is requesting to vary from LDC 25-8-261(G) to allow floodplain modification in the Critical Water Quality Zone (CWQZ).

STAFF RECOMMENDATION:

Staff recommends this variance, with the following conditions:

1. Provide ~44,000 square feet of additional wetland mitigation including: 1) native plantings in sedimentation and filtration basins of the biofiltration pond, 2) low-grow native seeding in the detention pond, 3) an enhanced nonerosive pond outfall, 4) planting of native trees, shrubs and bunchgrasses in CEF setbacks and mitigation areas.
2. Provide native pollinator species for wetland CEF mitigation and floodplain restoration plantings.
3. Provide an edge barrier of limestone blocks around the perimeter of the modified CEF setbacks/restoration areas to prevent mowing and/or encroachment in these areas.
4. Provide wetland CEF educational signage next to the CEF setbacks/restoration areas.
5. Provide floodplain restoration plantings of native trees and shrubs for the remaining open area (26,349 square feet/0.61 acres) maximizing restoration within the CWQZ and enhancing the floodplain from an existing condition of Fair to Excellent.
6. Pay \$382,157.63 into the Riparian Zone Mitigation Fund for the remaining required floodplain mitigation (376,326 square feet/8.63 acres) using the appropriate ratios per ECM 1.7.6.

ENVIRONMENTAL BOARD ACTION:

December 4, 2024: With a 7-0 vote, the Environmental Board Commission recommends support of the variance request, with staff conditions.

The Environmental Commission recommends the variance request with the following conditions:

1. Recommend finding a space for a community garden and provide education programming and signage to community members.
2. Partner with local non-profits on community gardening.
3. Recommend planting native pecan trees.

ENVIRONMENTAL REVIEW STAFF:

WPD: Miranda Reinhard **PHONE:** 512-978-1537
miranda.reinhard@austintexas.gov

CASE MANAGER: Chris Sapuppo **PHONE:** 512-978-4665
chris.sapuppo@austintexas.gov

Attachments:

Item for Environmental Commission Agenda
Watershed Protection Department presentation
Supporting Plans
Environmental Board Recommendations
COA Functional Assessment of Floodplain Health



ITEM FOR ENVIRONMENTAL COMMISSION AGENDA

COMMISSION MEETING DATE: December 4, 2024

NAME & NUMBER OF PROJECT: Loyola Flats, SP-2024-0147C.SH

NAME OF APPLICANT OR ORGANIZATION: Allison Lehman, Kimley-Horn

LOCATION: 6700 Decker Lane, Austin, TX, 78724

COUNCIL DISTRICT: District 1

ENVIRONMENTAL REVIEW STAFF: Miranda Reinhard, Environmental Scientist Senior, Watershed Protection Department
512-978-1537, miranda.reinhard@austintexas.gov

WATERSHED: Elm Creek Watershed
Suburban Classification
Desired Development Zone

REQUEST: Request to vary from LDC 25-8-261(G) to allow floodplain modification in the Critical Water Quality Zone (CWQZ)

**STAFF
RECOMMENDATION:**

Staff recommends this variance, having determined the findings of fact have been met.

STAFF CONDITIONS:

Staff recommends the following conditions:

1. Provide ~44,000 square feet of additional wetland mitigation including: 1) native plantings in sedimentation and filtration basins of the biofiltration pond, 2) low-grow native seeding in the detention pond, 3) an enhanced nonerosive pond outfall, 4) planting of native trees, shrubs and bunchgrasses in CEF setbacks and mitigation areas.
2. Provide native pollinator species for wetland CEF mitigation and floodplain restoration plantings.
3. Provide an edge barrier of limestone blocks around the perimeter of the modified CEF setbacks/restoration areas to prevent mowing and/or encroachment in these areas.
4. Provide wetland CEF educational signage next to the CEF setbacks/restoration areas.
5. Provide floodplain restoration plantings of native trees and shrubs for the remaining open area (26,349 square feet/0.61 acres) maximizing restoration within the CWQZ and enhancing the floodplain from an existing condition of Fair to Excellent.
6. Pay \$382,157.63 into the Riparian Zone Mitigation Fund for the remaining required floodplain mitigation (376,326 square feet/8.63 acres) using the appropriate ratios per ECM 1.7.6.



Watershed Protection Department
Staff Recommendations Concerning Required Findings

Project Name: Loyola Flats, SP-2024-0147C.SH

Ordinance Standard: Watershed Protection Ordinance (current code)

Variance Request: Request to vary from LDC 25-8-261(G) to allow floodplain modification within the Critical Water Quality Zone (CWQZ)

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 available to owners of other similarly situated property with approximately contemporaneous development subject to similar code requirements;

Yes This project is proposing modification of the City of Austin 100-year floodplain within the Critical Water Quality Zone (CWQZ) to construct a biofiltration and detention pond and provide compensatory flood storage within the existing engineered drainage channel. The project is a Smart Housing/Affordability Unlocked multifamily residential development. There are two wetland Critical Environmental Features (CEFs) on the site, located within existing drainage channels.

The floodplain modification variance is needed to allow development of the site given the wetland CEFs, CWQZ, and floodplain constraints. Variances have been granted in similarly restrictive circumstances to allow for development of a site.

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 This project has been designed to follow existing topography to preserve natural drainage patterns and minimize impacts to the wetland CEFs, CWQZ and floodplain.

- 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; and

Yes This project has been designed to preserve wetland CEFs, restore the CWQZ, and modify the floodplain as little as possible for development.

- c. Does not create a significant probability of harmful environmental consequences; and

Yes This project does not create a significant probability of harmful environmental consequences. This project will minimize the impact to wetland CEFs, CWQZ, and floodplain by preserving contributing drainage patterns and protecting surface water quantity and quality. In addition to meeting wetland mitigation requirements, this project will provide ~44,000 square feet of additional wetland mitigation including: 1) native plantings in sedimentation and filtration basins of the biofiltration pond, 2) low-grow native seeding in the detention pond, 3) an enhanced nonerosive

pond outfall, 4) planting of native trees, shrubs and bunchgrasses in CEF setbacks and mitigation areas.

This project will modify 0.84 acres of Zone 1 (floodplain outside the CWQZ) and 1.12 acres of Zone 2 (floodplain within the CWQZ) for a total modified area of 1.96 acres. The floodplain was assessed to be in Fair condition. This project will provide floodplain restoration plantings of native trees and shrubs for the remaining open area (26,349 square feet/0.61 acres), maximizing restoration within the CWQZ and enhancing the floodplain condition from Fair to Excellent. The applicant will pay \$382,157.63 into the Riparian Zone Mitigation Fund for the remaining required floodplain mitigation (376,326 square feet/8.63 acres) using the appropriate ratios per the Environmental Criteria Manual (ECM) 1.7.6.

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

Yes This project will result in equal to or improved water quality. The proposed design will provide ECM-compliant water quality treatment. In addition, the proposed design preserves the natural drainage patterns, protecting surface water quantity and quality. Additional wetland mitigation plantings and floodplain restoration plantings will further protect water quality in the receiving stream.

The Land Use Commission may grant a variance from a requirement of Article 7, Division 1 (*Waterway and Floodplain Protection*), after determining that:

B. Additional Land Use Commission variance determinations for a requirement of Article 7, Division 1 (*Waterway and Floodplain Protection*):

1. The criteria for granting a variance in Subsection (A) are met;

Yes The criteria for granting the variance are met.

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

Yes The floodplain modification variance is required in order for the applicant make a reasonable use of the property for development of the site constrained by wetland CEFs, CWQZ, and floodplain.

3. The variance is the minimum deviation from the code requirement necessary to allow a reasonable, economic use of the entire property.




Yes This project has been designed to preserve wetland CEFs, restore the CWQZ, and modify the floodplain as little as possible for development.

Staff Determination: Staff determines that the findings of fact have been met. Staff recommends the following conditions:

1. Provide ~44,000 square feet of additional wetland mitigation including: 1) native plantings in sedimentation and filtration basins of the biofiltration pond, 2) low-grow native seeding in the detention pond, 3) an enhanced nonerosive pond outfall, 4) planting of native trees, shrubs and bunchgrasses in CEF setbacks and mitigation areas. The Director of WPD may reduce this requirement administratively to allow for a future trail connection to Colony Loop Drive.
2. Provide native pollinator species for wetland CEF mitigation and floodplain restoration plantings.
3. Provide an edge barrier of limestone blocks around the perimeter of the modified CEF setbacks/restoration areas to prevent mowing and/or encroachment in these areas.
4. Provide wetland CEF educational signage next to the CEF setbacks/restoration areas.
5. Provide floodplain restoration plantings of native trees and shrubs for the remaining open area (26,349 square feet/0.61 acres) maximizing restoration within the CWQZ and enhancing the floodplain from an existing

condition of Fair to Excellent.

6. Pay \$382,157.63 into the Riparian Zone Mitigation Fund for the remaining required floodplain mitigation (376,326 square feet/8.63 acres) using the appropriate ratios per ECM 1.7.6.

Wetland Biologist (WPD)	 _____ Miranda Reinhard	Date <u>11/25/2024</u>
Environmental Conservation Program Manager (WPD)	 _____ John Clement	Date <u>11/25/2024</u>
Interim Environmental Officer (WPD)	 _____ Liz Johnston	Date <u>11/25/2024</u>

November 25, 2024

City of Austin
6310 Wilhelmina Delco Dr
Austin, Texas 78752

RE: ***Environmental Commission Floodplain Modification Variance Request
Loyola Flats (SP-2024-0147C.SH)***

To Whom It May Concern:

On behalf of our client, Elmginton Capital Group, Kimley-Horn is requesting a variance to LDC 25-8-261(G). The request is to allow for modification within the City of Austin fully developed floodplain and Critical Water Quality Zone.

Per the attached Environmental Commission Variance Application Form Findings of Fact, this variance is required to allow for development on a tract of land at 6700 Decker Lane, located at the northwest intersection Decker Lane and Loyola Lane.

There are two locations where an existing engineered drainage channel traverses the site: one at the northern portion of the site and the second crosses further downstream at the southeastern corner of the site. Both of these channels are contained within existing drainage easements. The downstream channel at the southeastern corner of the site has been identified as a CWQZ and City of Austin floodplain due to the additional drainage that is conveyed from across Decker Lane from the east through an existing culvert crossing that has been identified as Elm Creek and is greater than 64 acres. These site characteristics present a challenge, and in order to provide buildable area and an accessible site plan layout for the proposed affordable multifamily development, there are modifications that need to be made to the COA floodplain and CWQZ to allow for fill up to 4ft in depth to better contain the floodplain within the drainage channel and drainage easement. Major effort was made to minimize modifications to the area and the site plan layout had taken the preservation of the southeastern corner into account to be able to preserve the environmental features in the area.

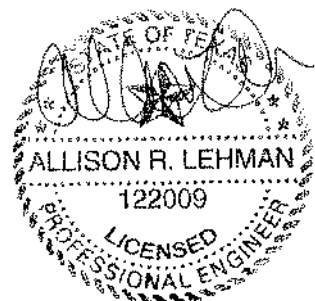
For this variance, there is only one (1) primary location where the modifications are proposed which is at the southeastern corner of the site. Due to the floodplain modifications that are being proposed, this site plan will provide floodplain restoration as a result of the Functional Assessment of Floodplain Health that was performed in the area. Based on the existing conditions the existing area was found to be in fair health. This site plan will propose additional floodplain restoration plantings to enhance the existing floodplain area into good health. In addition, mitigation seeding will be proposed in the entire area to enhance the existing wetland that is identified in the drainage channel area.

Your favorable consideration of this request is appreciated. Should you have any questions or require additional information, please contact me at 512-271-6327 or Allison.Lehman@kimley-horn.com

Sincerely,



Allison Lehman, P.E.
KIMLEY-HORN AND ASSOCIATES, INC.
(TBPE Firm No. 928)



11-25-2024



ENVIRONMENTAL COMMISSION VARIANCE APPLICATION FORM

PROJECT DESCRIPTION

Applicant Contact Information

Name of Applicant	Allison Lehman
Street Address	5301 Southwest Parkway, Building 2, Suite 100
City State ZIP Code	Austin, TX 78735
Work Phone	5126462250
E-Mail Address	allison.lehman@kimley-horn.com

Variance Case Information

Case Name	Loyola Flats
Case Number	SP-2024-0147C.SH
Address or Location	6700 Decker Lane
Environmental Reviewer Name	David Michael
Environmental Resource Management Reviewer Name	Miranda Reinhard
Applicable Ordinance	LDC 25-8-261(G)
Watershed Name	Elm Creek
Watershed Classification	<input type="checkbox"/> Urban <input checked="" type="checkbox"/> Suburban <input type="checkbox"/> Water Supply Suburban <input type="checkbox"/> Water Supply Rural <input type="checkbox"/> Barton Springs Zone

Edwards Aquifer Recharge Zone	<input type="checkbox"/> Barton Springs Segment <input type="checkbox"/> Northern Edwards Segment <input checked="" type="checkbox"/> Not in Edwards Aquifer Zones
Edwards Aquifer Contributing Zone	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Distance to Nearest Classified Waterway	On site: According to COA GIS, Elm Creek begins just east of Decker Lane from the site
Water and Waste Water service to be provided by	AWU
Request	The variance request is as follows (Cite code references): Floodplain modification in the COA fully developed floodplain and CWQZ, LDC 25-8-261(G)

Impervious cover	Existing	Proposed
square footage:	<u>0</u>	<u>79,860</u>
acreage:	<u>0</u>	<u>10.08</u>
percentage:	<u>0</u>	<u>45.4%</u>
Provide general description of the property (slope range, elevation range, summary of vegetation / trees, summary of the geology, CWQZ, WQTZ, CEFs, floodplain, heritage trees, any other notable or outstanding characteristics of the property)	<p>We are developing a 208 unit affordable multifamily development at the northwestern intersection of Loyola Lane and Decker Lane.</p> <p>The total site area is about 10.08 acres and existing topography ranges from go from 542 to 561 across the site. There are no natural slopes greater than 15% on the site. There are no heritage trees on the site.</p> <p>There is primarily an assortment of Willow and Ash trees with a few Hackberry and Cottonwood trees within the site. Most of them are located around the existing CEF wetlands on site that will be preserved. There are no heritage trees existing on the site.</p> <p>Two wetland CEFs exist on the site, they are located within the existing engineered drainage channels that run through the site, one at the northern and the other at the southeastern corner. A City of Austin floodplain 25 yr and 100 yr fully developed floodplain the crosses the southern corner of the site due to the offsite contributing area greater than 64 acres immediately on the upstream east side of Decker Lane that is conveyed under Decker Lane in existing box culverts from that is routed through the southeast corner of the site and is routed to existing box culverts under Loyola Lane. A CWQZ is also located along the south corner of the property within the same area. Also, there is a partially excavated detention pond form a previous site plan the did not complete construction that</p>	

	is currently impacting the quality of the CWQZ and CER buffer area.	
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Clearly indicate in what way the proposed project does not comply with current Code (include maps and exhibits)	This project is proposing modifications within the floodplain and CWQZ.
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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: Loyola Flats

Ordinance: LDC 25-8-263 Floodplain modification

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 available to owners of similarly situated property with approximately contemporaneous development subject to similar code requirements.

Yes

Based on the existing topography on the site and the existing engineered drainage channels that traverse the site the floodplain and wetlands that are generated limits the buildable areas. In order to generate buildable areas, it is necessary to modify in the floodplain to add fill in the CWQZ zone and existing floodplain in addition to providing mitigation planting in this area. The fill modifies the floodplain so that it is contained within a closer proximity to the existing engineered drainage channel and is able to be contained within a proposed drainage easement.

The proposed fill in the CWQZ area does not exceed 4 feet in depth.

2. The variance:

- a) Is not necessitated by the scale, layout, construction method, or other design decision made by the applicant, unless the design decision provides greater overall environmental protection than is achievable without the variance;

Yes

Loyola Flats is a Smart Housing/Affordability Unlocked multifamily residential development generally designed to follow the existing topography to preserve the natural drainage patterns and route offsite flows through the site to the low point on site. In addition, the water quality and detention basins have been placed in natural low areas to preserve the existing drainage patterns.

The site has been designed to preserve the natural drainage basin characteristics of the land and will preserve existing wetland CEFs and provide additional mitigation plantings in the CEF buffer and CWQZ to enhance the area as well as paying into the mitigation fund. This variance request is not driven by a design decision on our side and has involved in depth collaboration and guidance by City staff. All design decisions have been with the code requirements of the ECM in mind.

- b) Is the minimum deviation from the code requirement necessary to allow a reasonable use of the property;

Yes

Loyola Flats has been designed to minimally deviate from the code to allow for preservation of the CWQZ and floodplain area as well as the existing wetlands. The site layout considered these buffer areas and minimized the improvements within them to only fill of the floodplain to provide a more defined floodplain within the drainage channel for the health and safety of the public and to allow for the development of this site as well as mitigation plantings to enhance the buffer area.

- c) Does not create a significant probability of harmful environmental consequences.

Yes

The proposed site layout and associated drainage conveyance system have been designed to minimize the impact and improvements proposed within the Critical Environmental Features, CWQZ and floodplain by ensuring that the contributing drainage basins are preserved, and they receive the necessary surface water runoff quantity and quality needed to promote wetland and floodplain health. In addition, the proposed design provides mitigation plantings that will restore

the environmental area and enhance to improve the existing condition. Based on the prepared Functional Assessment of Floodplain Health, the existing condition of the floodplain was characterized as fair. The proposed improvements will allow for the floodplain condition to be enhanced from its existing condition.

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

Yes

The proposed design adheres to all water quality requirements outlined within the Environmental Criteria Manual and as such, will result in water quality that is at least equal to water quality achievable without the variance. In addition, the proposed design preserves the natural drainage patterns by better containing the floodplain along the drainage channel and providing additional planting to enhance the natural features of the area by also restoring the area where the existing detention pond is located the CWQZ to a better condition.

- B. Additional Land Use Commission variance determinations for a requirement of Section 25-8-422 (Water Quality Transition Zone), Section 25-8-452 (Water Quality Transition Zone), Article 7, Division 1 (Critical Water Quality Zone Restrictions), or Section 25-8-368 (Restrictions on Development Impacting Lake Austin, Lady Bird Lake, and Lake Walter E. Long):

1. The criteria for granting a variance in Subsection (A) are met;

Yes

There is no Water Quality Transition Zone located on the property and it is not impacting Lake Austin, Lady Bird Lake or Lake Water E. Long.

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

Yes

There is no Water Quality Transition Zone located on the property and it is not impacting Lake Austin, Lady Bird Lake or Lake Water E. Long.

Modifications in the Critical Water Quality Zone and floodplain are required to be able to make a reasonable use of the property for the affordable development.

3. The variance is the minimum deviation from the code requirement necessary to allow a reasonable, economic use of the entire property.

Yes

There is no Water Quality Transition Zone located on the property and it is not impacting Lake Austin, Lady Bird Lake or Lake Water E. Long
The proposed site plan was laid out with the Critical Water Quality zone and other environmental features in mind. Design considerations were made to be able to preserve the area to the extents possible for reasonable use of the property.

****Variance approval requires all above affirmative findings.**



Exhibits for Commission Variance

- Aerial photos of the site
- Site photos
- Aerial photos of the vicinity
- Context Map—A map illustrating the subject property in relation to developments in the vicinity to include nearby major streets and waterways
- 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.
- For cut/fill variances, a plan sheet showing areas and depth of cut/fill with topographic elevations.
- Site plan showing existing conditions if development exists currently on the property
- 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
- Environmental Map – A map that shows pertinent features including Floodplain, CWQZ, WQTZ, CEFs, Setbacks, Recharge Zone, etc.
- An Environmental Resource Inventory pursuant to ECM 1.3.0 (*if required by 25-8-121*)
- Applicant's variance request letter

OPTION 1 WORKSHEET
CALCULATION FOR PAYMENT INTO THE RIPARIAN ZONE MITIGATION FUND

A. OWNER/AGENT INFORMATION:

Name: Allison Lehman, P.E.
Company: Kimley-Horn
Telephone: 512-271-6327 Fax: _____
Loyola Flats

B. PROJECT INFORMATION:

Name: Loyola Flats
Location or Address: 6700 Decker Lane
Permit Number: SP-2024-0147C.SH
Case Manager: Chris Sapuppo

C. MITIGATION REQUIRED

Area Modified within the 100-Year Floodplain: 0.84 ac. outside CWQZ (zone 1) / 1.12 ac. inside CWQZ (zone 2) (ac.)

Area Disturbed by a Parallel Utility within the CWQZ: _____ (ac.)

Ratio Applied (circle): 1:1 2:1 outside CWQZ (zone 1) 3:1 4:1 inside CWQZ (zone 2) 6:1 8:1

The ratio for an area modified within the 100-Year Floodplain is determined by ECM 1.7.6. The ratio is 1:1 for a parallel utility within the CWQZ. Multiply the acres modified or disturbed by the ratio to determine the mitigation required.

Mitigation Required: 0.84 ac. @ 3:1 (zone 1) + 1.12 ac. @ 6:1 (zone 2) = 9.24 (ac.)

D. PAYMENT CALCULATION:

Mitigation Land Provided by Applicant: _____ 0.61 (ac.)

Mitigation land provided by the applicant must be approved by the Director of the Watershed Protection Department and the Proposed Land Manager (Option 2 Worksheet). A project disturbing the CWQZ with a parallel utility does not have the option to provide mitigation land.

Mitigation by Payment (ac.) = Mitigation Required - Mitigation Land Provided by Applicant 8.63 (ac.)

Base Fee: \$15,000 per acre
Annual Adjustment Factor: 7% beginning October 1, 2008

Adjusted Fee: \$ 44,282.46
Total Fee: Mitigation by Payment (ac.) x Adjusted Fee = \$ 382,157.63

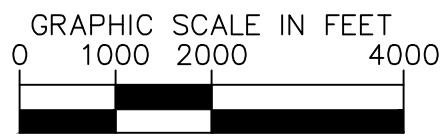
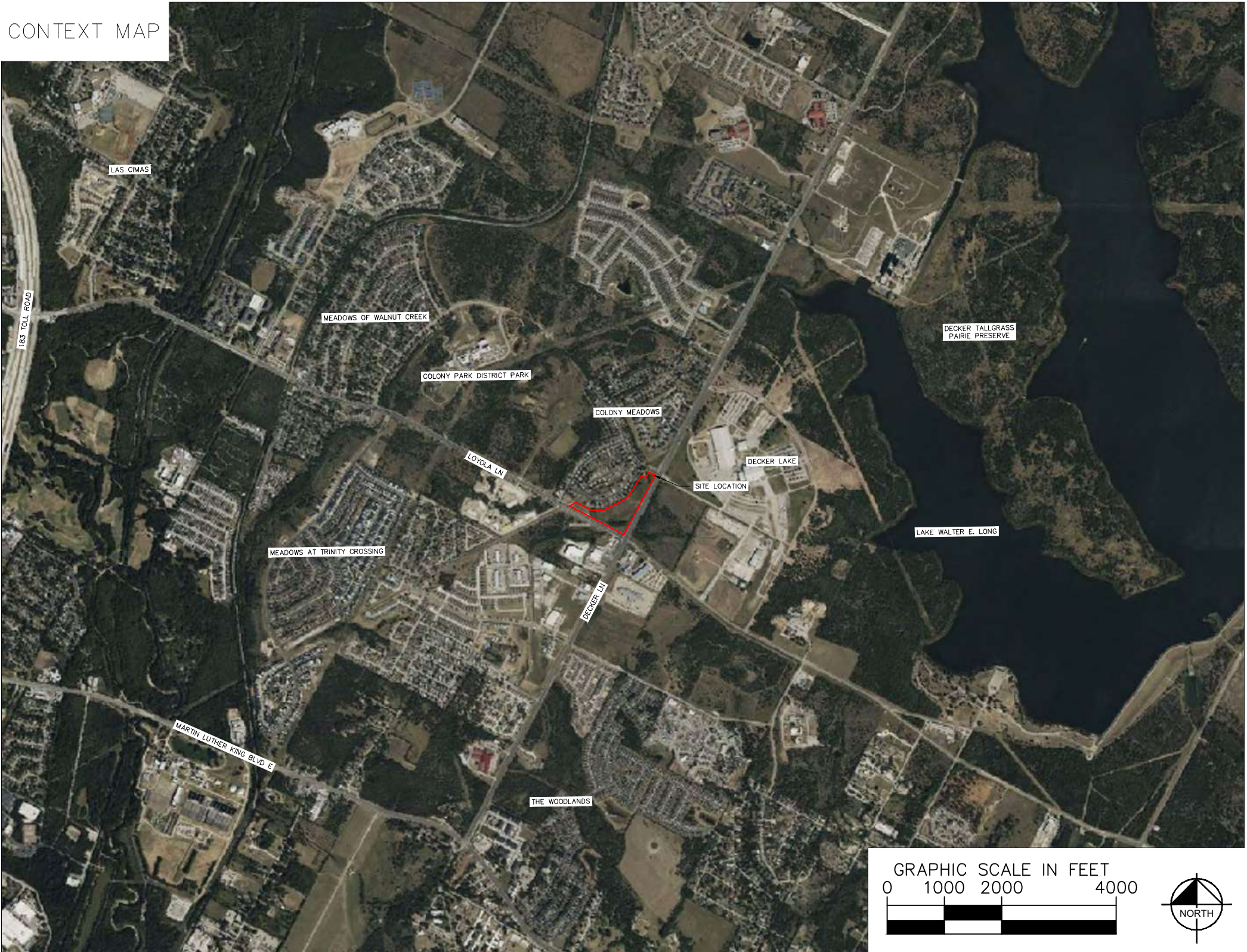
E. AUTHORIZATION:

Owner/Agent: Allison Lehman

Reviewed by: Miranda Reinhard

For the Director of the Planning and Development Review Department

CONTEXT MAP





SITE LOCATION

WENTWORTH DR

CARCREEK CIR

RIVERSTONE DR

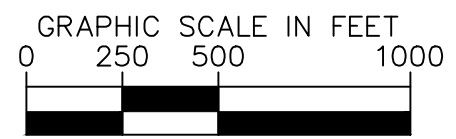
COLONY LOOP TRAIL

CARNIVAL DR

LOYOLA LN

DECKER LA

DECKER LAKE RD



Plotted By: Corvus, Dorian Date: October 29, 2024 05:30:15pm File Path: K:\SAU_CWA\069275323 Elimination - Loyola Lane MF-Cad Plan\Sheets\C - Overall Site Plan.dwg
This document, together with the concepts and designs presented herein, is an instrument of service, and is intended only for the specific purpose and client for which it was prepared. Reuse of and improper reliance on this document without written authorization and adaptation by Kimley-Horn and Associates, Inc. shall be without liability to Kimley-Horn and Associates, Inc.

	AMENITY	RESIDENTIAL					BUILDING INFORMATION				UNITS				
		1ST FLOOR	2ND FLOOR	3RD FLOOR	4TH FLOOR	TOTAL	BUILDING HEIGHT		BUILDING COVERAGE						
							ALLOWED	PROPOSED	ALLOWED	PROPOSED	1 BR UNITS	2 BR UNITS	3 BR UNITS	4 BR UNITS	TOTAL
BUILDING 1	4,332	34,605	38,302	38,302	38,302	153,843	90"	52'-1", 4 STORIES	-	40476 S.F., 9.22%	12	43	34	15	104
BUILDING 2		21,320	20,685	20,685	20,685	83,375	90"	50'-9", 4 STORIES	-	20825 S.F., 4.74%	0	24	28	4	56
BUILDING 3		17,120	16,485	16,485	16,485	66,575	90"	51'-1", 4 STORIES	-	17173 S.F., 3.91%	8	16	24	0	48
Maintenance	733						90"	12'-5", 1 STORY	-	733 S.F., 0.17%					
Mail	653						90"	11'-11", 1 STORY	-	653 S.F., 0.15%					
		GROSS FLOOR AREA (SQ.FT.)					TOTAL		TOTAL		TOTAL				
		305,179					329,171 S.F., 75%		79,860 S.F., 18.19%		208				

* MAXIMUM ALLOWABLE BUILDING HEIGHT INCREASED FROM BASE ZONING STANDARDS (60 FEET) BY 1.5 TIMES DUE TO PARTICIPATION IN THE CITY OF AUSTIN AFFORDABILITY UNLOCK DEVELOPMENT BONUS PROGRAM, TYPE 2 AS DESCRIBED IN ORDINANCE NO.20190509027

ZONING TABLE				
LOT	ZONING	EXISTING USE	PROPOSED USE	LOT ACREAGE
22B	GR*	UNDEVELOPED	MULTIFAMILY RESIDENTIAL	1.824
22C	GR-CO*	UNDEVELOPED	MULTIFAMILY RESIDENTIAL	7.087
22D	GR-CO*	UNDEVELOPED	MULTIFAMILY RESIDENTIAL	1.170

* THIS DEVELOPMENT IS IN COMPLIANCE WITH THE CITY OF AUSTIN ORDINANCE NO. 20221201-055 THAT ALLOWS RESIDENTIAL USES IN CERTAIN COMMERCIAL ZONING DISTRICTS.

IMPERVIOUS COVER TABLE		
ALLOWABLE IMPERVIOUS COVER		
TOTAL SITE AREA (AC.)	10.08	
SITE AREA (SQ. FT.)	438,895	
IMPERVIOUS COVER ALLOWED	60.00%	
EXISTING IMPERVIOUS COVER		
IMPERVIOUS COVER (AC.)	0.01	
IMPERVIOUS COVER (SQ. FT.)	319	
PROPOSED IMPERVIOUS COVER		
IMPERVIOUS COVER (AC.)	4.58	
IMPERVIOUS COVER (SQ. FT.)	199,316	

PRIVATE OPEN SPACE TABLE		
OPEN SPACE	SQ. FT.	%
TOTAL PROVIDED	22,427	5.1077
REQUIRED	21,927	5.0338

CITY OF AUSTIN FULL PURPOSE

APPENDIX Q-2

IMPERVIOUS COVER

SUBURBAN WATERSHEDS

IMPERVIOUS COVER ALLOWED AT 60.00 % X 10.08 ACRES = 6.05 ACRES

PROPOSED IMPERVIOUS COVER

EXISTING IMPERVIOUS COVER PROPOSED TO REMAIN = 0.01 ACRES

PROPOSED NEW IMPERVIOUS COVER = 4.58 ACRES

TOTAL PROPOSED IMPERVIOUS COVER = 4.59 ACRES

ALLOWABLE IMPERVIOUS COVER BREAKDOWN BY SLOPE CATEGORY

TOTAL ACERAGE WITH SLOPES 15-25% = 0.32 ACRES X 10% = 0.032 ACRES

PROPOSED IMPERVIOUS COVER ON SLOPES

IMPERVIOUS COVER

SLOPE	ACRES	BUILDINGS/ AND OTHER		DRIVEWAYS/
		ACRES	% OF CATEGORY	ACRES
0-15%	10.08	2.13	21%	2.46
15-25%	0.00	0.00	0%	0.00
25-35%	0.00	0.00	0%	0.00
OVER 35%	0.00	0.00	0%	0.00
TOTAL SITE AREA =	10.08			

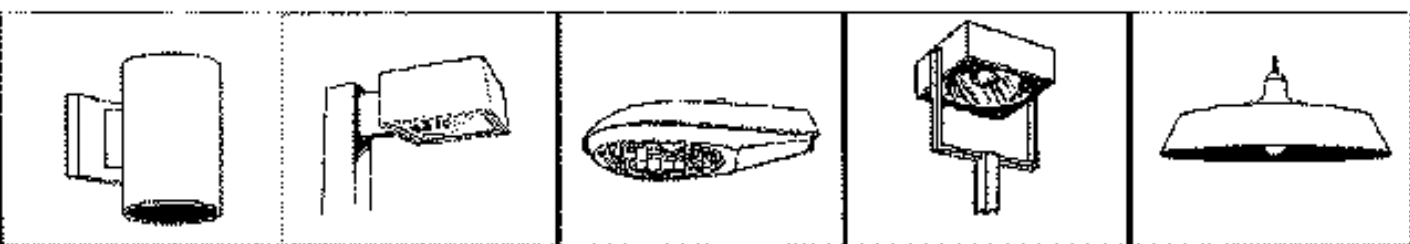
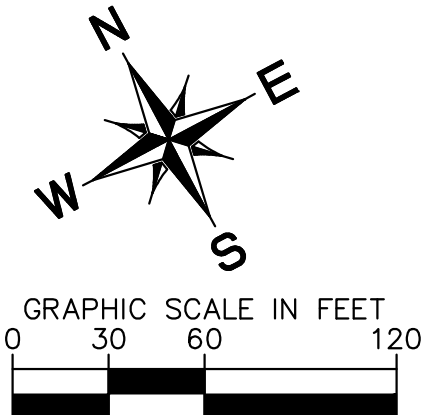
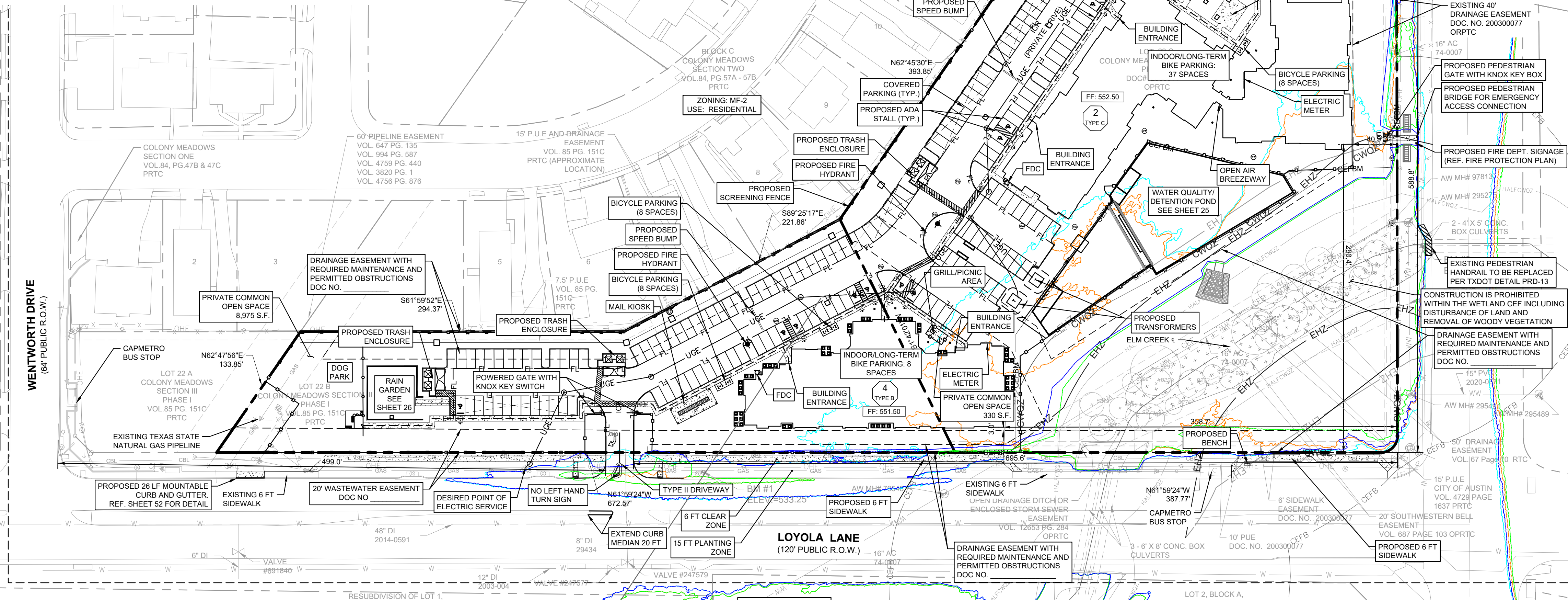


Figure 34:
Examples of fully-shielded light fixtures.



LEGEND	
---	PROPERTY LINE
⊕	PROPOSED WASTEWATER MANHOLE
⊕	PROPOSED WASTEWATER CLEANOUT
⊕	PROPOSED FIRE HYDRANT
⊕	PROPOSED FDC
---	EXISTING OVERHEAD POWER LINE
⊕	EXISTING POWER POLE
⊕	EXISTING FIRE HYDRANT
⊕	EXISTING WASTEWATER MANHOLE
---	PROPOSED WALL
⊕	BUILDING NUMBER
---	BUILDING TYPE
---	ADA ROUTE
---	CREEK CENTERLINE
---	PROPOSED 100 YR COA FULLY DEVELOPED FLOODPLAIN
---	PROPOSED 25 YR COA FULLY DEVELOPED FLOODPLAIN
---	EXISTING 100 YR COA FULLY DEVELOPED FLOODPLAIN
---	EXISTING 25 YR COA FULLY DEVELOPED FLOODPLAIN
---	MODIFIED CEF SETBACK BOUNDARY
---	CRITICAL ENVIRONMENTAL FEATURE

- NOTES:
- ALL PARKING SPACES SHALL HAVE MINIMUM 7'-0" VERTICAL CLEARANCE.
 - WARNING SIGNS ARE REQUIRED TO BE PLACED UNDER THE OVERHEAD ELECTRIC LINES TO MAKE ALL PERSONNEL AWARE OF THE ELECTRIC HAZARD.
 - EVERY HANDICAP ACCESSIBLE PARKING SPACE SHALL BE IDENTIFIED BY A SIGN CENTERED 5 FEET ABOVE THE PARKING SURFACE. AT THE HEAD OF THE PARKING SPACE. THE SIGN MUST INCLUDE THE INTERNATIONAL SYMBOL OF ACCESSIBILITY AND STATE RESERVED, OR EQUIVALENT LANGUAGE. SUCH SIGNS SHALL NOT BE OBTAINED BY A VEHICLE PARKED IN THE SPACE AND SHALL MEET THE CRITERIA SET FORTH IN UBC, 3108(i) AND ANSI A117.1-1998-4.6.2.
 - CONTRACTOR TO FIELD VERIFY LOCATION AND ELEVATION OF ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION.
 - GROUND SURFACES ALONG ACCESSIBLE ROUTES MUST BE STABLE, FIRM, AND SLIP RESISTANT.
 - RETAINING WALLS OVER FOUR FEET IN HEIGHT MEASURED FROM THE BOTTOM OF THE FOOTING TO THE TOP OF THE WALL SHALL BE ENGINEERED AND REQUIRE A SEPARATE BUILDING PERMIT. (ISC CODE 105.2)
 - APPROVAL OF THESE PLANS BY THE CITY OF AUSTIN INDICATES COMPLIANCE WITH APPLICABLE CITY REGULATIONS ONLY. COMPLIANCE WITH ACCESSIBILITY STANDARDS SUCH AS THE 2010 STANDARDS FOR ACCESSIBLE DESIGN OR THE 2012 TEXAS ACCESSIBILITY STANDARDS WAS NOT VERIFIED. THE APPLICANT IS RESPONSIBLE FOR COMPLIANCE WITH ALL APPLICABLE ACCESSIBILITY STANDARDS.
 - ACCESSIBLE ROUTES MUST HAVE A CROSS-SLOPE NO GREATER THAN 1:50. (ANSI 403.3)
 - SLOPES ON ACCESSIBLE ROUTES MAY NOT EXCEED 1:20 UNLESS DESIGNED AS A RAMP. (ANSI 403.3)
 - THE MAXIMUM SLOPE OF A RAMP IN NEW CONSTRUCTION IS 1:12. THE MAXIMUM RISE FOR ANY RAMP RUN IS 30 IN. (ANSI 405.2 - 405.6)
 - POND DRAINAGE FACILITIES MUST BE ENCLOSED BY A 6' IN HEIGHT FENCE.
 - EXTERIOR LIGHTING ABOVE THE SECOND FLOOR IS PROHIBITED IN THE GO, LR, GR, CS, OR CS-1 ZONING DISTRICTS, WHEN ADJACENT TO AN SF-5 OR MORE RESTRICTIVE ZONING DISTRICT (SECTION 25-2-585).
 - YARDS, FENCES, VEGETATIVE SCREENING OR BERMS SHALL BE PROVIDED TO SCREEN ADJACENT SF-5 OR MORE RESTRICTIVE RESIDENTIAL DISTRICTS FROM VIEWS OF OFF-STREET PARKING AREAS, MECHANICAL EQUIPMENT, STORAGE AREAS, AND FOR REFUSE COLLECTION (SECTION 25-2-1056).
 - ALL EXTERIOR LIGHTING WILL BE HOODED OR SHIELDED FROM THE VIEW OF ADJACENT RESIDENTIAL PROPERTY. (SECTION 25-2-1048)
 - ALL DUMPSTERS AND ANY PERMANENTLY PLACED REFUSE RECEPTACLES WILL BE LOCATED AT A MINIMUM OF TWENTY (20) FEET FROM A PROPERTY USED OR ZONED AS SF-5 OR MORE RESTRICTIVE. (SECTION 25-2-1067)
 - THE USE OF HIGHLY REFLECTIVE SURFACES, SUCH AS REFLECTIVE GLASS AND REFLECTIVE METAL ROOFS, WHOSE PITCH IS MORE THAN A RUN OF SEVEN (7) TO A RISE OF TWELVE (12), WILL BE PROHIBITED. (SECTION 25-2-1067)
 - THE NOISE LEVEL OF MECHANICAL EQUIPMENT WILL NOT EXCEED 70 DBA AT THE PROPERTY LINE ADJACENT TO RESIDENTIAL USES. (SECTION 25-2-1067)
 - ALL EXTERIOR LIGHTING WILL BE FULL CUT-OFF AND FULLY SHIELDED IN COMPLIANCE WITH SUBCHAPTER E 2.5 AND WILL BE REVIEWED DURING BUILDING PLAN REVIEW. ANY CHANGE OR SUBSTITUTION OF LAMPLIGHT FIXTURES SHALL BE SUBMITTED TO THE DIRECTOR FOR APPROVAL IN ACCORDANCE WITH SECTION 2.5.2.E.
 - SCREENING FOR SOLID WASTE COLLECTION AND LOADING AREAS SHALL BE THE SAME AS, OR OF EQUAL QUALITY TO, PRINCIPAL BUILDING MATERIALS.
 - A CONDITIONAL LETTER OF APPROVAL IS REQUIRED BY AUSTIN ENERGY GREEN BUILDING PROGRAM PRIOR TO BUILDING PERMIT.
 - ALL IMPROVEMENTS SHALL BE MADE IN ACCORDANCE WITH THE RELEASED SITE PLAN. ANY ADDITIONAL IMPROVEMENTS WILL REQUIRE SITE PLAN AMENDMENT AND APPROVAL OF THE DEVELOPMENT SERVICES DEPARTMENT.
 - APPROVAL OF THIS SITE PLAN DOES NOT INCLUDE BUILDING AND FIRE CODE APPROVAL NOR BUILDING PERMIT APPROVAL.
 - ALL SIGNS MUST COMPLY WITH REQUIREMENTS OF THE LAND DEVELOPMENT CODE (CHAPTER 25-10).
 - ADDITIONAL ELECTRIC EASEMENTS MAY BE REQUIRED AT A LATER DATE.
 - WATER AND WASTEWATER SERVICE WILL BE PROVIDED BY THE CITY OF AUSTIN (OR IDENTIFY THE SERVICE PROVIDER IF OTHER THAN THE CITY OF AUSTIN).
 - ALL EXISTING STRUCTURES SHOWN TO BE REMOVED WILL REQUIRE A DEMOLITION PERMIT FROM THE CITY OF AUSTIN DEVELOPMENT SERVICES DEPT.
 - A DEVELOPMENT PERMIT MUST BE ISSUED PRIOR TO AN APPLICATION FOR BUILDING PERMIT FOR NON-CONSOLIDATED OR PLANNING COMMISSION APPROVED SITE PLANS.
 - NO CERTIFICATE OF OCCUPANCY MAY BE ISSUED FOR THE PROPOSED RESIDENTIAL CONDOMINIUM PROJECT UNTIL THE OWNER OR OWNERS OF THE PROPERTY HAVE COMPLIED WITH CHAPTER 81 AND 82 OF THE PROPERTY CODE OF THE STATE OF TEXAS OR ANY OTHER STATUTES ENACTED BY THE STATE CONCERNING CONDOMINIUMS.
 - FOR DRIVEWAY CONSTRUCTION, THE OWNER IS RESPONSIBLE FOR ALL COSTS FOR RELOCATION OF, OR DAMAGE TO UTILITIES.
 - FOR CONSTRUCTION WITHIN THE RIGHT-OF-WAY, A ROW EXCAVATION PERMIT IS REQUIRED.
 - ALL ACTIVITIES WITHIN THE CRITICAL ENVIRONMENTAL FEATURES (CEFS) AND ASSOCIATED SETBACKS MUST COMPLY WITH THE CITY OF AUSTIN LAND DEVELOPMENT CODE. THE NATURAL VEGETATIVE COVER MUST BE RETAINED TO THE MAXIMUM EXTENT PRACTICABLE. CONSTRUCTION IS PROHIBITED EXCEPT AS IDENTIFIED IN THIS SITE PLAN; AND WASTEWATER DISPOSAL OR IRRIGATION IS PROHIBITED.
 - OUR PROJECT WILL BE SATISFYING THE REQUIREMENT OUTLINED IN SECTION 25.2.3.1 BY THE FOLLOWING MEASURES:
 - LIMIT CURB CUTS.
 - PROVIDE 10% ADDITIONAL BICYCLE PARKING SPACES THAN REQUIRED AS PER THE TCM.
 - PROVIDE A KNOX KEY SWITCH AT ALL POWER OPERATED GATES AND A KNOX BOX AT ALL MANUAL GATES ACROSS FIRE ACCESS ROADS FOR FIRE DEPARTMENT ACCESS.
 - ALL GATES ACROSS FIRE ACCESS ROADS SHALL OPEN THE FULL WIDTH OF THE FIRE ACCESS ROAD SO THE FIRE ACCESS ROAD IS NOT OBSTRUCTED IN ANYWAY BY THE GATE OR ANY OF THE GATE COMPONENTS.
 - ALL POWER OPERATED GATES ACROSS FIRE ACCESS ROADS SHALL BE EQUIPPED WITH GATE OPERATORS LISTED IN ACCORDANCE WITH UL 325. GATES INTENDED FOR AUTOMATIC OPERATION SHALL BE DESIGNED, CONSTRUCTED, AND INSTALLED PER ASTM F2200. A MANUAL MEANS OF OPENING THE GATE IN THE EVENT OF POWER LOSS IS REQUIRED. THE CONTRACTOR SHALL COORDINATE WITH CAPMETRO TO ENSURE ACCESS TO ALL BUS STOPS REMAINS OPEN DURING CONSTRUCTION.
 - CAPMETRO POINTS OF CONTACT: RON FOSTER, RON.FOSTER@CAPMETRO.ORG; ROSE LISSKA, ROSE.LISSKA@CAPMETRO.ORG AND LAWRENCE DEETER, LAWRENCE.DEETER@CAPMETRO.ORG.

BENCHMARKS

- MAG NAIL WITH WASHER SET ON THE NORTHEAST LINE OF LOYOLA LANE, NORTH 66°28'29" WEST, 230.01 FEET FROM THE SOUTHWEST CORNER OF TRACT 1. ELEVATION=544.25'
- MAG NAIL WITH WASHER SET ON THE WEST LINE OF DECKER LANE, NORTH 35°35'40" EAST, 174.55 FEET FROM THE SOUTHWEST CORNER OF TRACT NO. 2 ELEVATION=546.22'



Know what's below.
Call before you dig.

WARNING: CONTRACTOR IS TO VERIFY PRESENCE AND EXACT LOCATION OF ALL UTILITIES PRIOR TO CONSTRUCTION.

DD SET	REVISIONS	DATE	BY
	No.		

Kimley»Horn
5301 SOUTHWEST PARKWAY, BUILDING 2, SUITE 100
Austin, Texas 78746
PHONE: 512-946-2237
WWW.KIMLEY-HORN.COM
© 2024 KIMLEY-HORN AND ASSOCIATES, INC.
TPE Firm No. 928

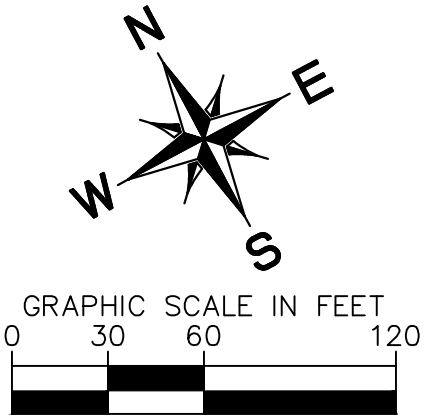
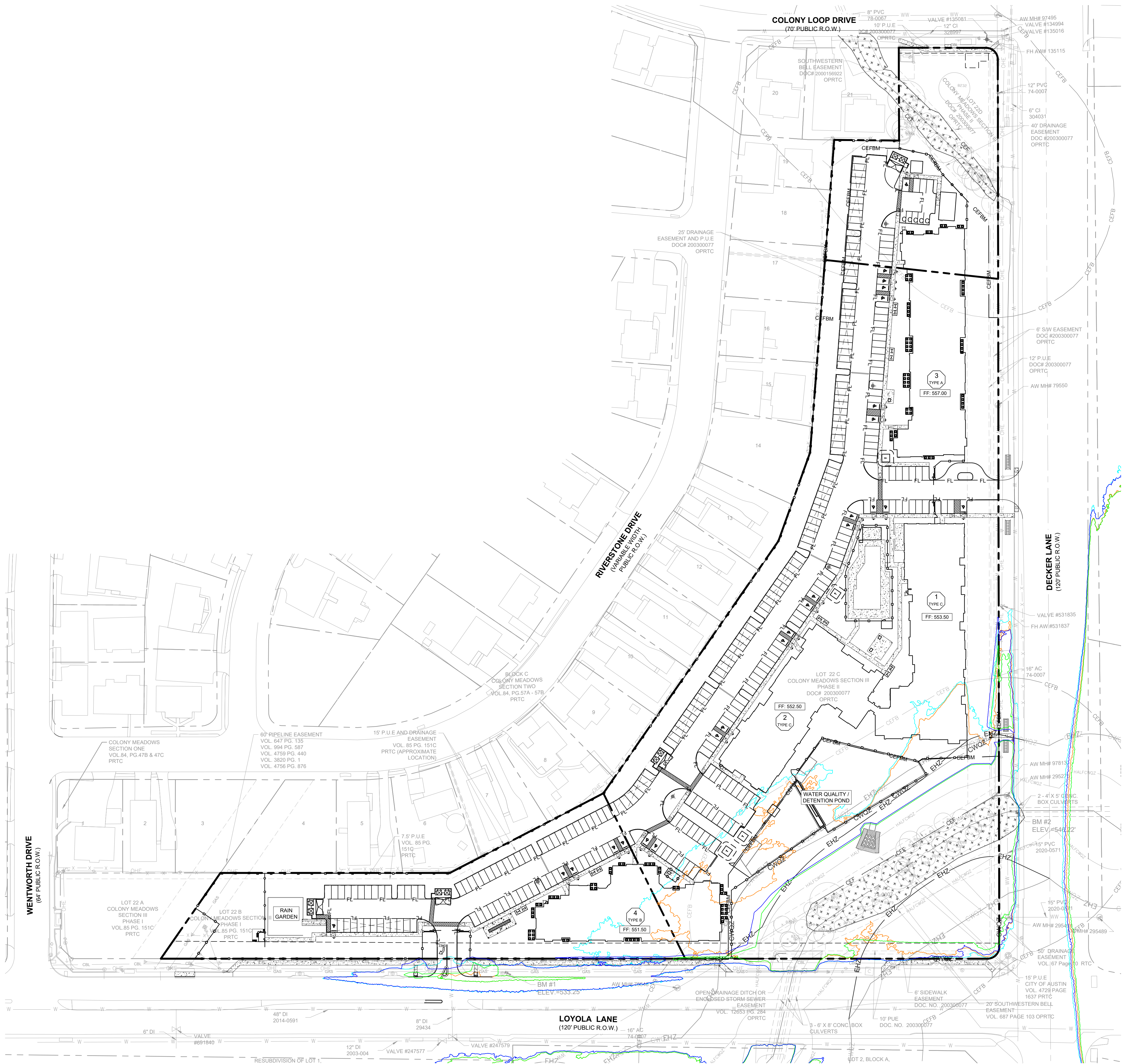
ALLISON R. LEHMAN
122008
PROFESSIONAL ENGINEER
10/28/2024

KHA PROJECT	DATE	SCALE	AS SHOWN	DESIGNED BY	ARL	DRAWN BY	DJC	CHECKED BY	ARL
069275323	AUGUST 2024								

OVERALL SITE PLAN

LOYOLA FLATS
6700 DECKER LANE
CITY OF AUSTIN
TRAVIS COUNTY, TEXAS

Plotted By: Corvado, Darlene Date: October 30, 2024 01:31:20pm File Path: K:\SAU_Civil\069275323 Elimination - Loyola Lane MF Submittals\City of Austin Environmental Variance Exhibits Environmental Map.dwg
This document, together with the concepts and designs presented herein, is intended only for the specific purpose and client for which it was prepared. Reuse of and improper reliance on this document without written authorization and adaptation by Kimley-Horn and Associates, Inc. shall be without liability to Kimley-Horn and Associates, Inc.



- PROPERTY LINE
- CRITICAL ENVIRONMENTAL FEATURE
- CREEK CENTERLINE
- EXISTING 150' CEF SETBACK BOUNDARY
- MODIFIED CEF SETBACK BOUNDARY
- PROPOSED 100 YR COA FULLY DEVELOPED FLOODPLAIN
- PROPOSED 25 YR COA FULLY DEVELOPED FLOODPLAIN
- EXISTING 100 YR COA FULLY DEVELOPED FLOODPLAIN
- EXISTING 25 YR COA FULLY DEVELOPED FLOODPLAIN
- EXISTING EROSION HAZARD ZONE
- MODIFIED EROSION HAZARD ZONE
- EXISTING CRITICAL WATER QUALITY ZONE
- MODIFIED CRITICAL WATER QUALITY ZONE

811
Know what's below.
Call before you dig.

WARNING: CONTRACTOR IS TO VERIFY PRESENCE AND EXACT LOCATION OF ALL UTILITIES PRIOR TO CONSTRUCTION.

LOYOLA FLATS
6700 DECKER LANE
CITY OF AUSTIN
TRAVIS COUNTY, TEXAS

ENVIRONMENTAL
MAP

Kimley»Horn

5301 SOUTHWEST PARKWAY, BUILDING 2, SUITE 100
AUSTIN, TEXAS 78746
PHONE: 512-946-2227
WWW.KIMLEY-HORN.COM
© 2024 KIMLEY-HORN AND ASSOCIATES, INC.
TPE Firm No. 928

10/28/2024

KHA PROJECT
069275323

DATE
AUGUST 2024

SCALE: AS SHOWN

DESIGNED BY: ARL

DRAWN BY: DJC

CHECKED BY: ARL

DD SET

08/09/2024

REVISIONS

DATE

BY

SP-2024-0147C.SH

APPENDIX C
SITE PHOTOGRAPHS



Photo 1 View of western portion of the site.



Photo 2 View of the southern portion of the site.



Photo 3 View of roadside ditch along the southeast boundary of the site.



Photo 4 View of central portion of the site.



Photo 5 View of eastern portion of the site.



Photo 6 View of roadside ditch along the eastern boundary of the site.



Photo 7 View of northeastern portion of the site.



Photo 8 View of PMP off-site and within the 150-foot buffer to the northeast of the site.



Photo 10 View of W-1.



Photo 11 View of W-2.



Photo 12 View of W-2.



Photo 13 View of W-3.



Photo 15 View of W-3.



Photo 16 View of W-4.

City of Austin (COA) Environmental Resource Inventory (ERI)

Austin Loyola Tract

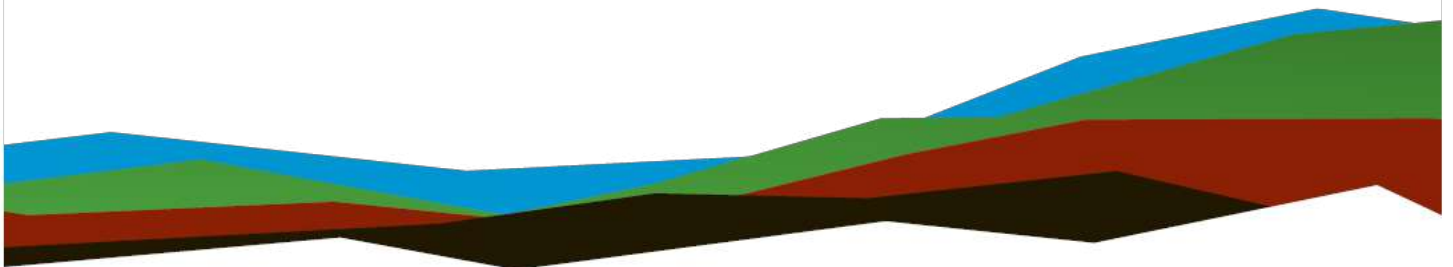
NWC Loyola and Decker Lanes

Austin, Travis County, Texas

October 12, 2023 (revised November, 2024) | Report Number: 96237567

Prepared for:

Elmington Capital Group
1030 16th Avenue South, Suite 500
Nashville, TN 37212





October 12, 2023 (November 2024)

Mr. Christian Grabeman
Elmington Capital Group
1030 16th Avenue South, Suite 500
Nashville, TN 37212

Telephone: (612) 490-6700
E-mail: cgrabeman@elmingtoncapital.com

RE: City of Austin (COA) Environmental Resource Inventory (ERI)
Austin Loyola Tracts
NWC Loyola and Decker Lanes
Austin, Travis County, Texas
Terracon Project No. 96237567

Dear Mr. Grabeman:

Terracon Consultants, Inc. (Terracon) is pleased to submit this City of Austin (COA) Environmental Resource Inventory (ERI) report addressing COA compliance requirements as they may affect the above referenced project site in accordance with Terracon Proposal No. P96237567 dated September 7, 2023 and authorization to proceed dated September 8, 2023.

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 seasonal 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 Bridgette Zapalac at (512) 358-9935 or bridgette.zapalac@terracon.com



Sincerely,

Terracon Consultants, Inc.

Bridgette Zapalac

Bridgette S. Zapalac
Senior Staff Scientist

Approved by:

S. Elizabeth Valenzuela

S. Elizabeth Valenzuela
Authorized Project Reviewer

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: Austin Loyola Tracts
2. COUNTY APPRAISAL DISTRICT PROPERTY ID (#'s): 567353, 499835, and 567354
3. ADDRESS/LOCATION OF PROJECT: 8408 Loyola Lane, Austin, Texas
4. WATERSHED: Elm Creek
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 3 (#s) Critical Environmental Feature(s)(CEFs) on or within 150 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):

Per the client, there is no developed utility plan at this point in the project.

_____ (#'s) Spring(s)/Seep(s) _____ (#'s) Point Recharge Feature(s) _____ (#'s) Bluff(s)
 _____ (#'s) Canyon Rimrock(s) 3 (#'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)
HeC2 - (Appendix A for name)	D	0-6.66'
HnB - (Appendix A for name)	D	0-6.66'

***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):*

The 1988 U.S. Geological Survey (USGS) 7.5-Minute Topographic Map (Austin East, Texas Quadrangle) of the project site was reviewed. Based on the review of the USGS map and the City of Austin 2-foot Topographic Contour GIS dataset, site elevation is depicted to be approximately 544-558 feet above mean sea level, with the site sloping south toward Elm Creek traversing the southern side of the site and extends within the 150-foot buffer to the southwest of the site. The 1988 USGS map also depicts three open water features throughout the property. The 1988 USGS map does not depict other surface waterbodies on or within 150 feet of the site boundary.

Continued in Appendix A...

List surface geologic units below:

Geologic Units Exposed at Surface		
Group	Formation	Member
N/A	Taylor Formation (Kta)	N/A

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

The site is not located within the Edwards Aquifer Recharge, Transition, or Contributing Zones as mapped by the City of Austin Property Profile Tool. According to the Geologic Map of the Austin Area, Texas, the site is underlain by Taylor Formation (Kta) and is illustrated on Exhibit 1.0 in Appendix B. Taylor Group is characterized by clay, dark gray to green-gray, calcareous, montmorillonitic; generally more calcareous in mid-portion of unit. These formations are not known to form caves and voids suitable for usage by Terrestrial Karst Invertebrates (TKIs).

No evidence of faulting was observed on the site and none is shown on the available published geologic maps reviewed for the site. Additionally, a review of aerial photographs did not reveal lineations, which typically indicate the presence of faulting. No caves, sinkholes, or significant solution cavities were observed on the site during Terracon's field assessment.

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 Texas Parks and Wildlife Department's (TPWD) Ecological Mapping Systems Database, Omernik Ecoregions Level III, of the project site was reviewed. Based on a review of the TPWD ecological mapping, the site is located in the Texas Blackland Prairies. TPWD describes the Blackland Prairies as native grasslands and woodland areas including mesquite, hackberry, elm, osage orange, and other woody species.

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
hackberry	<i>Celtis laevigata</i>
eastern cottonwood	<i>Populus deltoides</i>
eastern redbud	<i>Cercis canadensis</i>
velvet ash	<i>Fraxinus velutina</i>
honey mesquite	<i>Prosopis glandulosa</i>

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
green milkweed	<i>Asclepias viridis</i>
giant ragweed	<i>Ambrosia trifida</i>
Illinois bundleflower	<i>Desmanthus illnoensis</i>
Johnson grass	<i>Sorghum halepense</i>
Bermuda grass	<i>Cynodon dactylon</i>
maximilian sunflower	<i>Helianthus maximiliani</i>
mustang grapevine	<i>Vitis mustangensis</i>

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
black willow	<i>Salix nigra</i>	FACW
sand spikerush	<i>Eleocharis montevidensis</i>	FACW
narrowleaf cattail	<i>Typha angustifolia</i>	OBL
common spike-rush	<i>Eleocharis palustris</i>	OBL
prairie false foxglove	<i>Agalinis heterophylla</i>	OBL
swamp smartweed	<i>Persicaria hydropiperoides</i>	OBL
mexican primrose willow	<i>Ludwigia octovalvis</i>	OBL

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). Please see Appendix B

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: September 26, 2023
Date(s)

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

Bridgette Zapalac

Print Name

512.358.9935

Telephone

Bridgette.Zapalac@terracon.com

Signature

Email Address

Terracon Consultants, Inc.

October 12, 2023 revised November 2024

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:	Austin Loyola Tracts
2	Project Address:	8408 Loyola Lane, Austin, Travis County, Texas
3	Site Visit Date:	September 26, 2023
4	Environmental Resource Inventory Date:	October 12, 2023 (revised November 2024)

5	Primary Contact Name:	Bridgette S. Zapalac
6	Phone Number:	(512) 358-9935
7	Prepared By:	Bridgette S. Zapalac
8	Email Address:	bridgette.zapalac@terracon.com

[illegible]

City of Austin Use Only	
CASE NUMBER:	

<p>For rimrock, locate the midpoint of the segment that describes the feature.</p> 	<p>For wetlands, locate the approximate centroid of the feature and the estimated area.</p> 	<p>For a spring or seep, locate the source of groundwater that feeds a pool or stream.</p> 
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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

**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

APPENDIX A – ADDITIONAL DISCUSSION

APPENDIX B – EXHIBITS AND TREE SURVEY

APPENDIX C – SITE PHOTOGRAPHS

APPENDIX D – CREDENTIALS

APPENDIX E – GENERAL COMMENTS

APPENDIX A
ADDITIONAL DISCUSSION

Surface Soils:

HeC2 – Heiden clay, 3 to 5 percent slopes, eroded

HnB – Houston Black clay, 1 to 3 percent slopes

Description of Site Topography and Drainage Continued...

The National Wetlands Inventory (NWI) Mapper V2 of the project site was reviewed to identify suspect wetland areas and waterbodies within the project site boundaries. The review of the NWI Mapper indicated the presence of one suspect riverine area (R4SBC) on the southern portion of the site. R4SBC is further described as riverine, intermittent, streambed, and seasonally flooded. The NWI mapper did not reveal other suspect wetlands or waterbodies on the project site or within 150 feet.

Additionally, as mapped by the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM) Panel No. 48453C0470K (Effective January 6, 2016), the project site is mapped outside the 100-year and 500-year floodplains and is in Zone X (unshaded).

On September 25, 2023, Terracon accessed the COA Property Profile Tool to review previously identified Natural Features and setbacks within and adjoining the site. The review of the COA Property Profile Tool indicated the presence of five Natural Features (COA Creeks) and one buffer (COA Critical Water Quality Zone). This natural feature and buffer are displayed on Exhibit 6 in Appendix B.

For additional information please refer to the online COA Property Profile Tool (<https://www.austintexas.gov/departments/gis-and-maps>).

The project site is mapped outside COA 25-year and 100-year Fully Developed Floodplain. Atlas 14 floodplain regulations include amendments to the Land Development Code (LDC) Chapter 25- 7, Section 25-12-3, Title 30, Section 25-7-152, and Section 25-7-61. With these amendments in effect, the floodplain definitions will be revised so that the new 100-year floodplain is synonymous with the current 500-year floodplain and the new 25-year floodplain is synonymous with the current 100-year floodplain.

For additional information regarding Atlas 14 please refer to the online resource (<http://www.austintexas.gov/atlas14>).

Field Reconnaissance

During the site reconnaissance, Terracon assessed areas for CEF characteristics throughout the project site and identified three CEF wetland areas. Please see Appendix C for site photographs. Coordinate locations for the CEF areas are listed in the above CEF Worksheet and are illustrated on Exhibits 2.0- 2.1 in Appendix B. The CEF areas are further described below:

Wetland W-1 is a fringe wetland located on the southern portion of the site and appears to be associated with a COA Natural Feature (COA Creek), Elm Creek. The limits of W-2 coincide with the previously identified wetland CEF from the COA Property Profile Tool. W-2 is dominated by black willow (*Salix nigra* – FACW), annual marsh elder (*Iva annua* – FAC), poison ivy (*Toxicodendron radicans* – FACU), narrowleaf cattail (*Typha angustifolia* – OBL), green ash (*Fraxinus pennsylvanica* – FAC), tall goldenrod (*Solidago altissima* – FACU), variable flatsedge (*Cyperus difformis* – OBL), switchgrass (*Panicum virgatum* – FAC), common spike-rush (*Eleocharis palustris* – OBL), Chinese tallow (*Triadica sebifera* – FAC), hackberry (*Celtis laevigata* – FAC), and prairie false foxglove (*Agalinis heterophylla* – OBL) within and throughout the edges of the wetland. W-2 displays the hydrology indicators from the Great Plains Region USACE Wetland Determination Data Form in the form of Surface Water (A1), Saturation (A3), Drainage Patterns (B10), and Geomorphic Position (D2). Please refer to Exhibit 6 in Appendix B for the location of the COA Creek.

Wetland W-2 is a fringe wetland located on the northeast corner of the site and extends offsite to north of the northern site boundary and appears to be associated with a COA Natural Feature (COA Creek). W-3 is dominated mexican primrose willow (*Ludwigia octovalvis* – OBL), narrowleaf cattail (*Typha angustifolia* – OBL), giant ragweed (*Ambrosia trifida* – FAC), prairie false foxglove (*Agalinis heterophylla* – OBL), Johnson grass (*Sorghum halepense* – FACU), white mulberry (*Morus alba* – FACU), sand spikerush (*Eleocharis montevidensis* – FACW), velvet ash (*Fraxinus velutina* – FAC), poison ivy (*Toxicodendron radicans* – FACU), hackberry (*Celtis laevigata* – FAC), Jerusalem thorn (*Parkinsonia aculeata* – FAC), and sedge spp. (*Cyperus spp.* – FACW) throughout the wetland and displays the hydrology indicators from the Great Plains Region USACE Wetland Determination Data Form of algae on the Surface Water (A1), Saturation (A3), and Drainage Patterns (B10). Please refer to Exhibit 6 in Appendix B for the location of the COA Creek.

Wetland W-3 is a fringe wetland located off-site and within the 150-foot buffer to the south of the southern site boundary on the southwestern portion of the site and appears to be associated with a COA Natural Feature (COA Creek), Elm Creek. W-4 is dominated by black willow (*Salix nigra* – FACW), narrowleaf cattail (*Typha angustifolia* – OBL), green ash (*Fraxinus pennsylvanica* – FAC), Giant ragweed (*Ambrosia trifida* – FAC), Jerusalem thorn (*Parkinsonia aculeata* – FAC), Roosevelt weed (*Baccharis neglecta* – FAC), mexican primrose willow (*Ludwigia octovalvis* – OBL), Johnson grass (*Sorghum halepense* – FACU) and sand spikerush (*Eleocharis montevidensis* – FACW) throughout the wetland and displays the hydrology indicators from the Great Plains Region USACE Wetland Determination Data Form in the form of Saturation (A3). Please refer to Exhibit 6 in Appendix B for the location of the COA Creek.

Additionally, a roadside ditch with hydrophytic vegetation and flowing water present was observed along the eastern/southeastern boundary of the site during the site reconnaissance. Hydrophytic vegetation included species such as narrowleaf cattail (*Typha angustifolia* – OBL), prairie false foxglove (*Agalinis heterophylla* – OBL), annual marsh elder (*Iva annua* – FAC), swamp smartweed (*Persicaria hydropiperoides* – OBL), bushy bluestem (*Andropogon glomeratus* – FACW), black willow (*Salix nigra* – FACW), mexican primrose willow (*Ludwigia*

octovalvis – OBL), sand spikerush (*Eleocharis montevidensis* – FACW), common spike-rush (*Eleocharis palustris* – OBL), Jerusalem thorn (*Parkinsonia aculeata* – FAC) velvet ash (*Fraxinus velutina* – FAC), and vasey grass (*Paspalum urvillei* – FACW). However, according to the COA Environmental Criteria Manual (ECM) 1.10.3(E): “Permitted water quality wet ponds, roadside ditches, and ponds fed by wells or other artificial sources of hydrology are not considered wetlands” and therefore, is exempt from CEF designation.

At the time of the site reconnaissance (September 26, 2023), a privately maintained pond (PMP) was observed on the southern portion of the site and appeared to be regularly mowed and maintained. Based on a review of the COA Property Profile Tool website on January 5, 2024, this area is no longer designated as a PMP by the City of Austin.

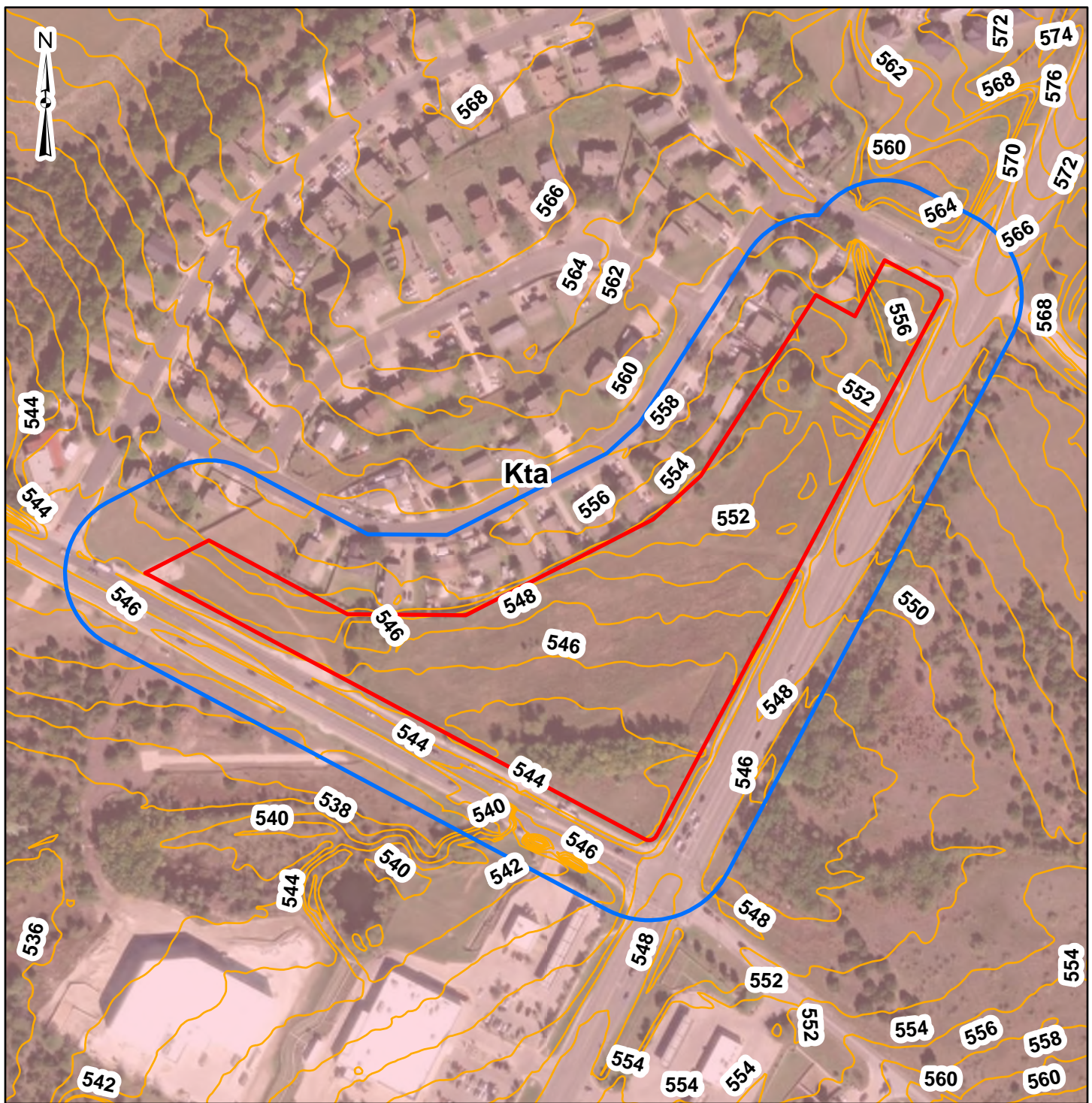
Description of Site Plant Communities *Continued...*

During the site visit, Terracon assessed 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 hackberry (*Celtis laevigata*), eastern cottonwood (*Populus deltoides*), flame leaf sumac (*Rhus copallinum*), honey mesquite (*Prosopis glandulosa*), eastern redbud (*Cercis Canadensis*), velvet ash (*Fraxinus velutina*), giant ragweed (*Ambrosia trifida*), green milk weed (*Asclepias viridis*), Illinois bundle flower (*Desmanthus illinoensis*), maximilian sunflower (*Helianthus maximiliani*), Dallis grass (*Paspalum dilatatum*), Johnson grass (*Sorghum halepense*), frog fruit (*Phyla nodiflora*), Roosevelt weed (*Baccharis neglecta*), spreading hedge parsley (*Torilis arvensis*), switchgrass (*Panicum virgatum*), Bermuda grass (*Cynodon dactylon*), poison ivy (*Toxicodendron radicans*), and mustang grapevine (*Vitis mustangensis*).

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

The overall vegetated cover associated with the site is an estimated 95 percent.

APPENDIX B
EXHIBITS



- Approximate Project Boundary
- 150-ft Project Boundary Buffer
- COA 2-ft Topography

COA Geology
 Taylor Formation (Kta)

0 125 250 500 Feet

DATA SOURCES:
 Maxar, Microsoft, FEMA Firm Panel: 48453C0470K,
 effective on 1/6/2016

Project No.:	96237567
Date:	Sep 2023
Drawn By:	RC
Reviewed By:	BZ



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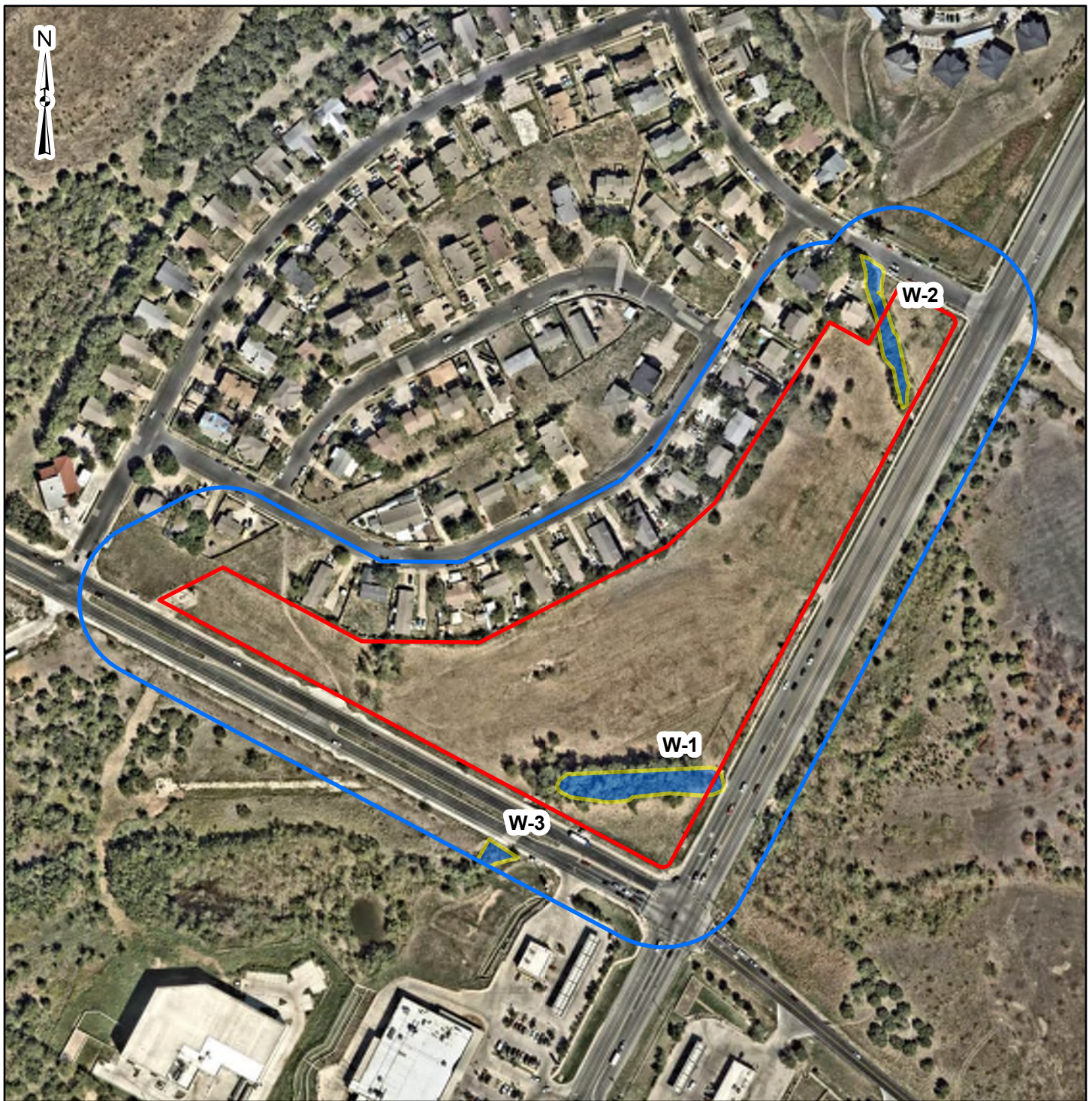
Site Specific Geology and 2-ft Topography

Austin Loyola Tracts

NWC Loyola and Decker Lanes, Austin,
 Travis County, Texas

Exhibit

1.0



▬ Approximate Project Boundary

▬ 150-ft Project Boundary Buffer

▬ Extent of Wetland CEFs

DATA SOURCES:

Esri Community Maps Contributors, Austin Community College, Baylor University, City of Austin, Texas Parks & Wildlife, © OpenStreetMap, Microsoft, CONANP, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/ NASA, USGS, EPA, NPS, US Census Bureau, USDA, USFWS, Nearmap, Maxar, FEMA Firm Panel: 48453C0470K, effective on 1/6/2016

Project No.:
96237567
Date:
Nov 2024
Drawn By:
RC
Reviewed By:
BZ



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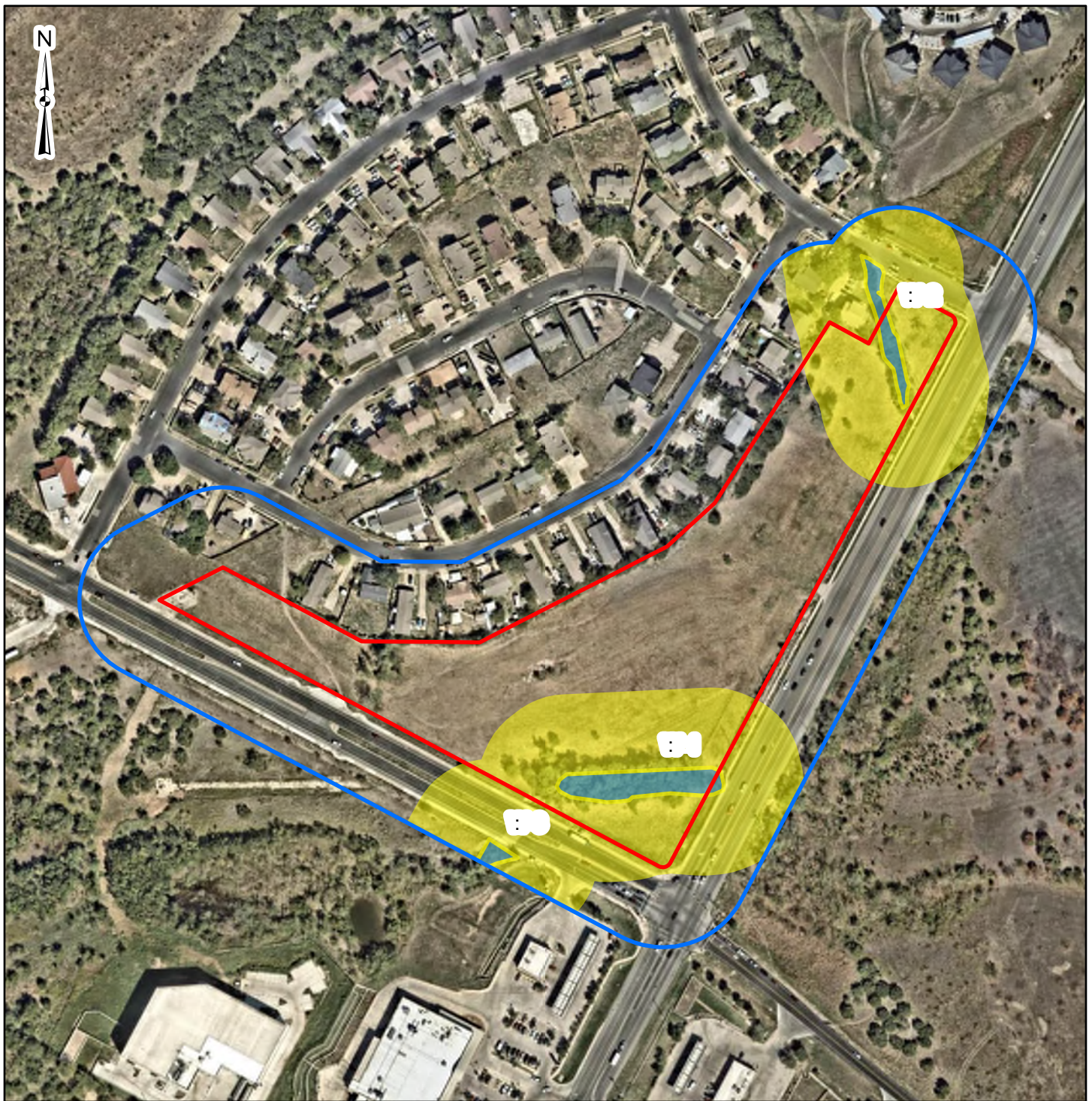
Site Aerial Imagery and CEFs

Austin Loyola Tracts

NWC Loyola and Decker Lanes, Austin,
Travis County, Texas

Exhibit

2.0



- ▬ Approximate Project Boundary
- ▬ 150-ft Project Boundary Buffer
- Extent of Wetland CEFs
- COA 150-ft CEF Setback Buffer

DATA SOURCES:
 Esri Community Maps Contributors, Austin Community College, Baylor University, City of Austin, Texas Parks & Wildlife, © OpenStreetMap, Microsoft, CONANP, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/ NASA, USGS, EPA, NPS, US Census Bureau, USDA, USFWS, Nearmap, Maxar, Microsoft, FEMA Firm Panel: 48453C0470K, effective on 1/6/2016

Project No.:	96237567
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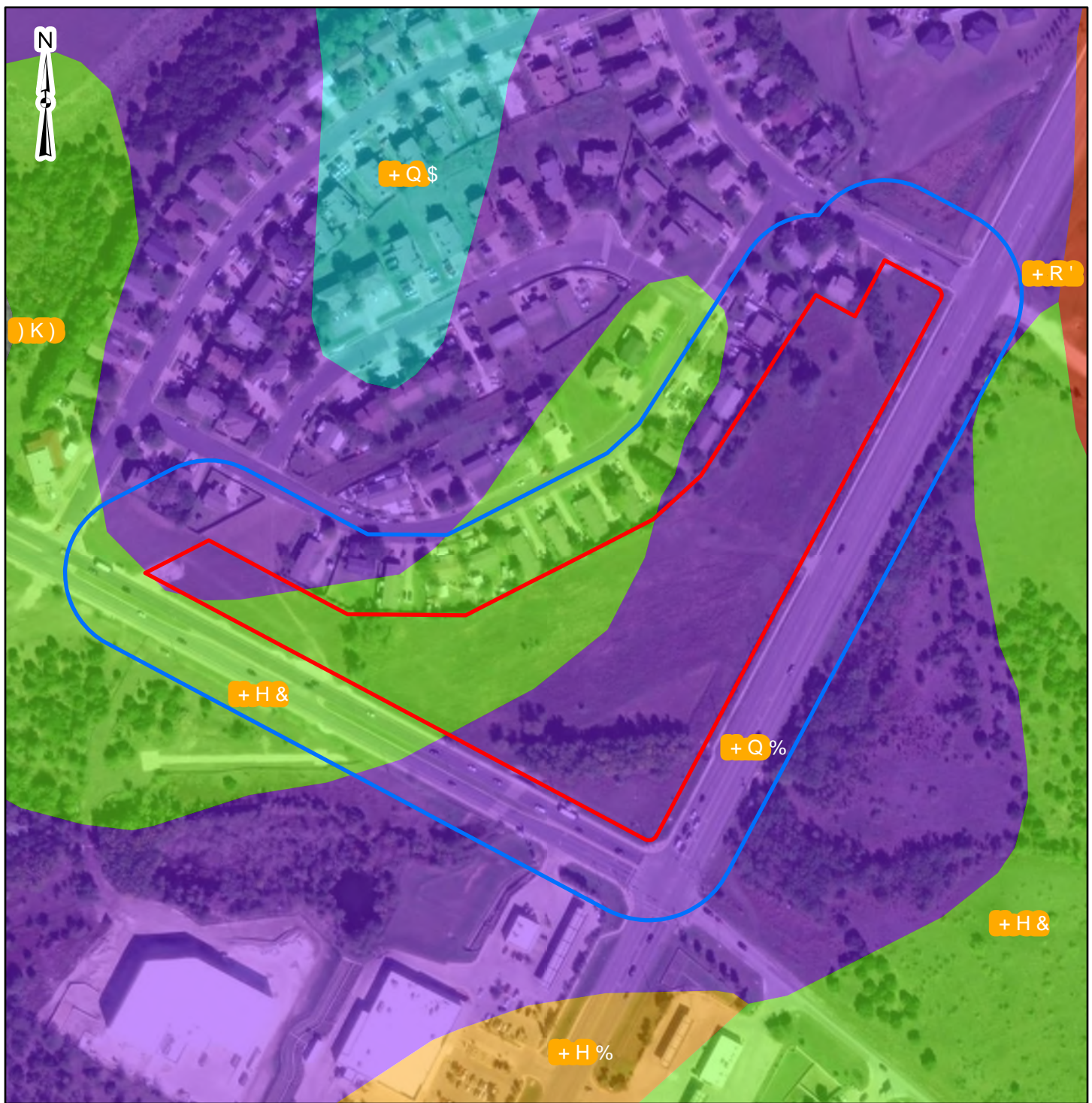
COA 150-ft CEF Setback Buffers

Austin Loyola Tracts

NWC Loyola and Decker Lanes, Austin,
 Travis County, Texas

Exhibit

2.1



▬ Approximate Project Boundary

▬ 150-ft Project Boundary Buffer

NRCS WSS Map Unit

▬ Ferris-Heiden Complex (FhF3)

▬ Heiden Clay (HeB)

▬ Heiden Clay (HeC2)

▬ Houston Black (HnA)

▬ Houston Black (HnB)

▬ Houston Black gravelly clay (HoD2)

DATA SOURCES:
Maxar, Microsoft, FEMA Firm Panel: 48453C0470K,
effective on 1/6/2016

Project No.:	96237567
Date:	Oct 2023
Drawn By:	RC
Reviewed By:	BZ



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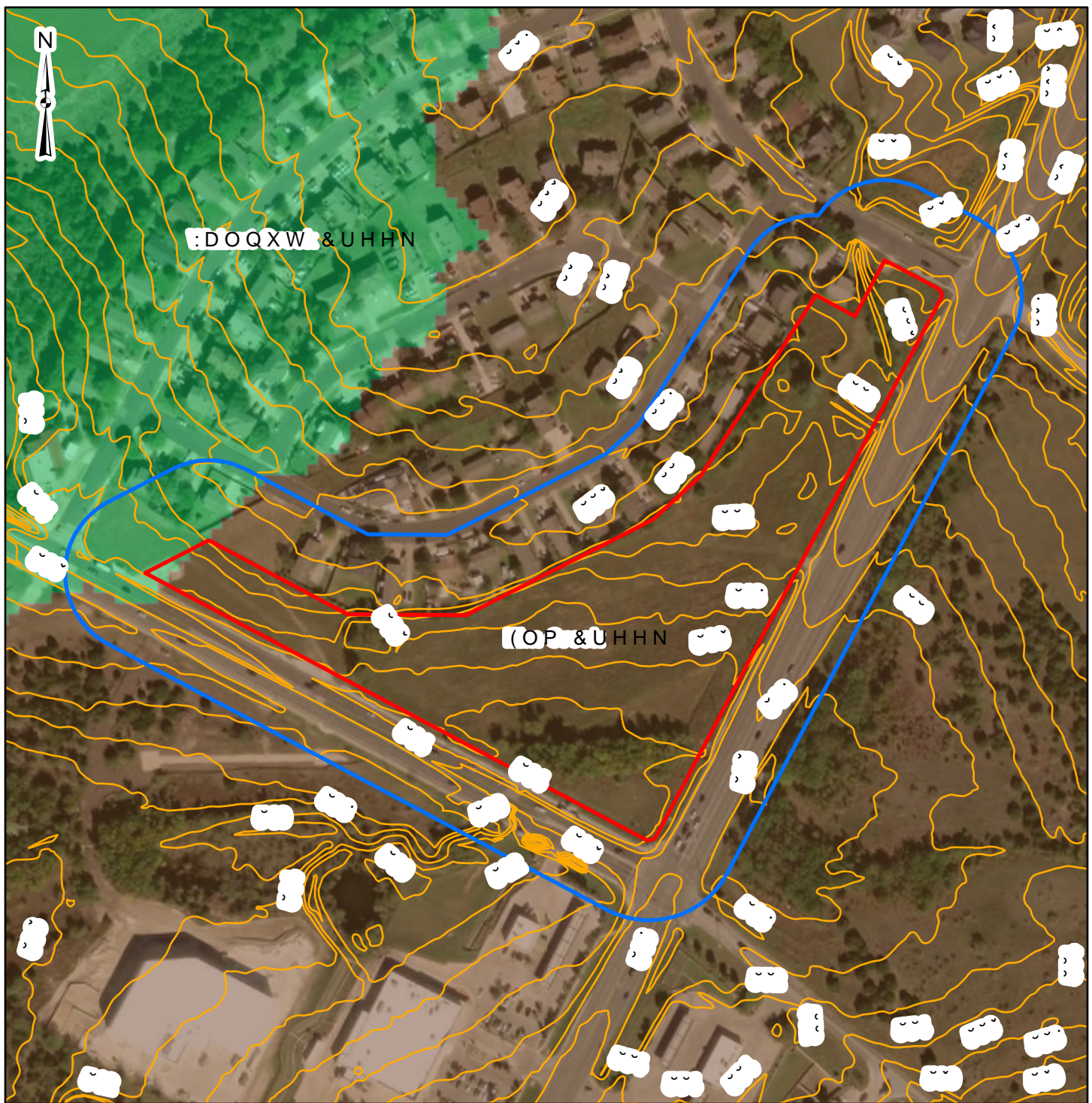
NRCS Site Soil Map

Austin Loyola Tracts

NWC Loyola and Decker Lanes, Austin,
Travis County, Texas

Exhibit

3.0



Approximate Project Boundary

150-ft Project Boundary Buffer

COA 2-ft Topography

Texas Water Development Board Well

COA Watershed

Elm Creek

Walnut Creek

0 125 250 500 Feet

DATA SOURCES:
Maxar, Microsoft, FEMA Firm Panel: 48453C0470K,
effective on 1/6/2016

Project No.:	96237567
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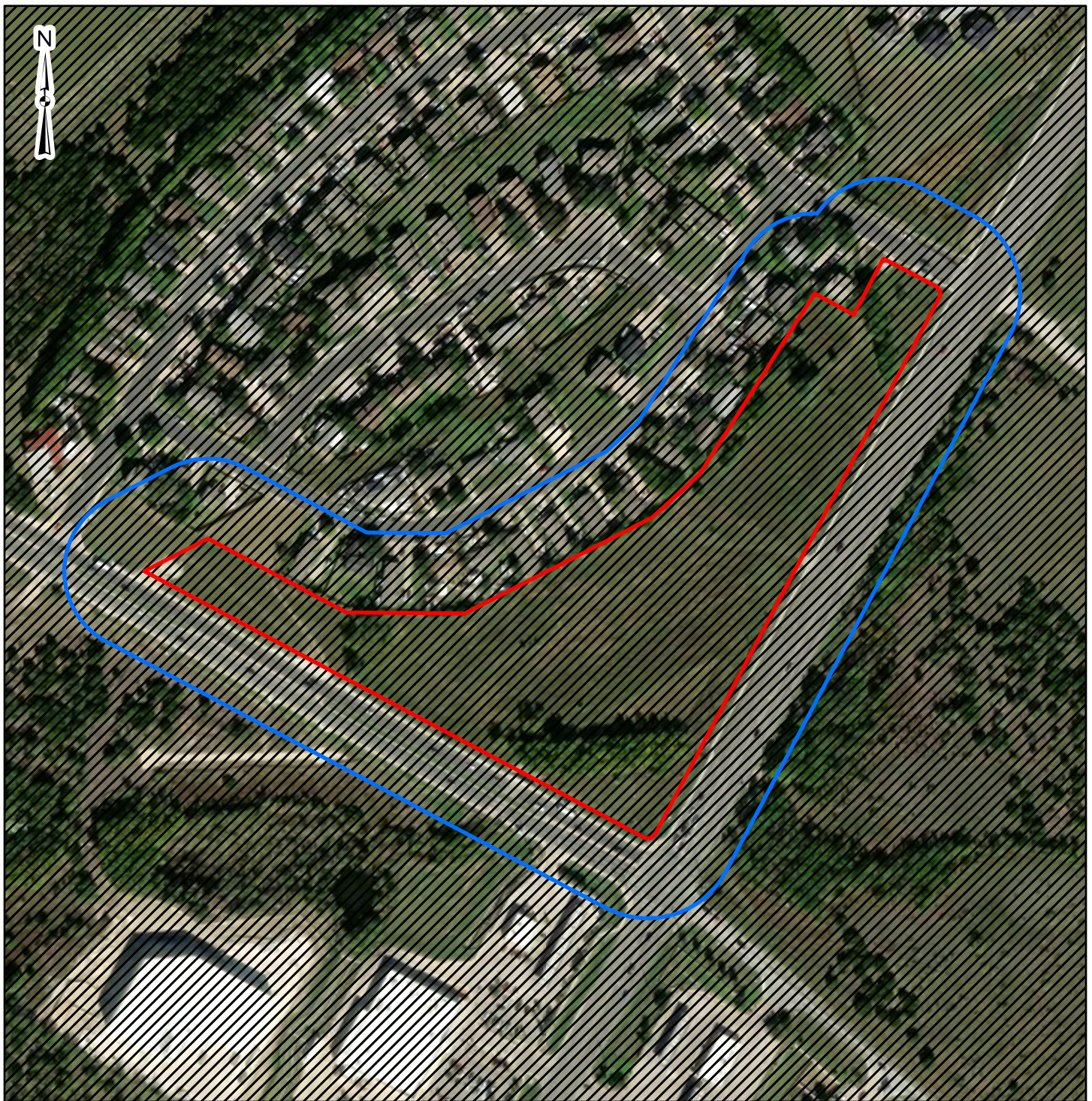
Two-Foot Topography and Wells

Austin Loyola Tracts

NWC Loyola and Decker Lanes, Austin,
Travis County, Texas

Exhibit

4.0



▬ Approximate Project Boundary

▬ 150-ft Project Boundary Buffer

USA FEMA Flood Hazard Data

Zone X, Area of Minimal Flood Hazard

0 125 250 500 Feet

DATA SOURCES:
Maxar, Microsoft, FEMA Firm Panel: 48453C0470K,
effective on 1/6/2016

Project No.:
96237567
Date:
Oct 2023
Drawn By:
RC
Reviewed By:
BZ



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FEMA Floodplain Zone

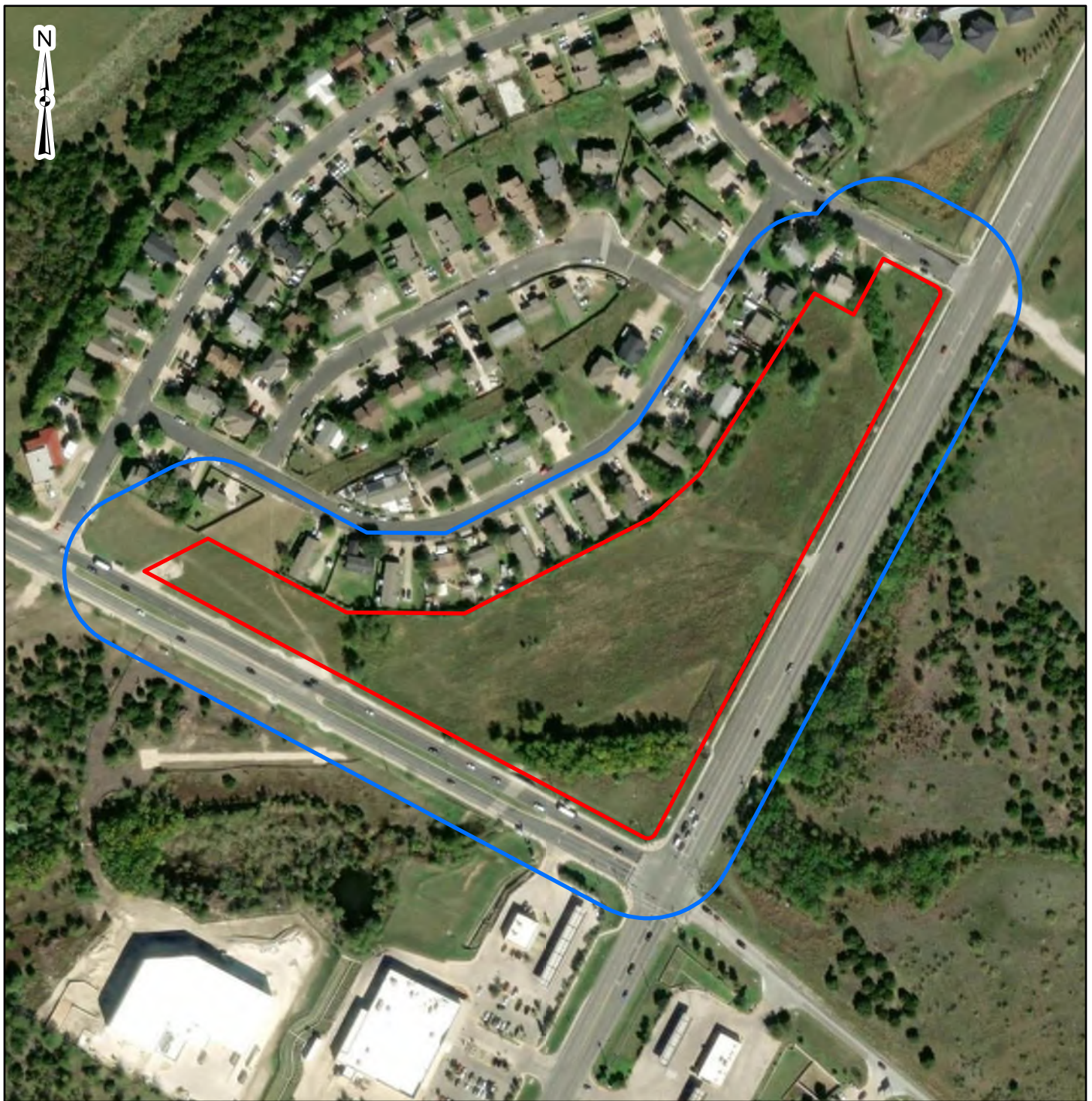
Austin Loyola Tracts

NWC Loyola and Decker Lanes, Austin,
Travis County, Texas

Exhibit

5.0

N:\GIS\Projects\2023\96237567\96237567.aprx



▬ Approximate Project Boundary

▬ 150-ft Project Boundary Buffer

COA Fully Developed Floodplain Zone

▬ 25-Year / Floodway

▬ 100-Year

0 125 250 500 Feet

DATA SOURCES:
Maxar, FEMA Firm Panel: 48453C0470K, effective on 1/6/2016

Project No.:
96237567
Date:
Sep 2023
Drawn By:
RC
Reviewed By:
BZ



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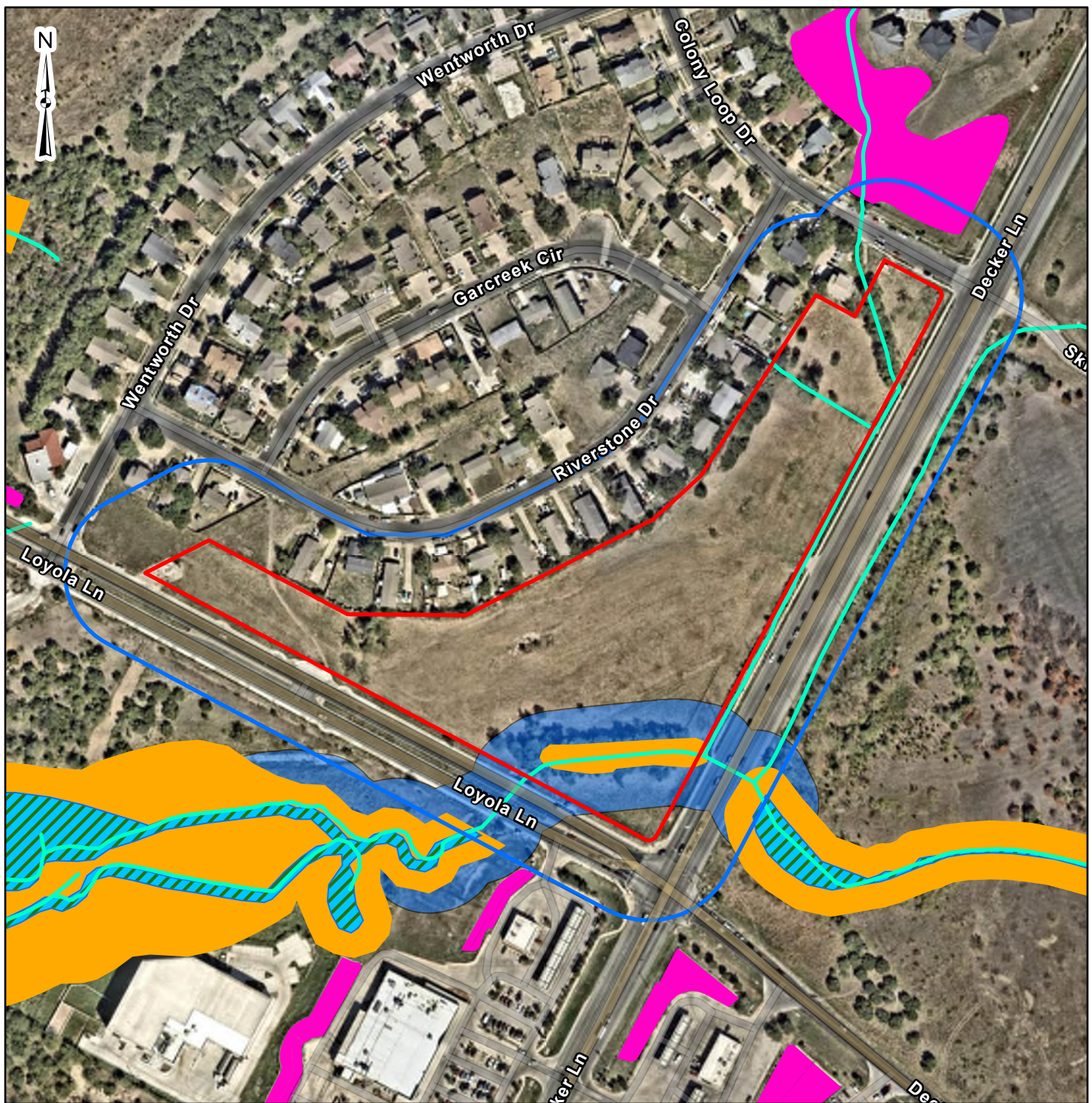
COA Fully Developed Floodplain Map

Austin Loyola Tracts

NWC Loyola and Decker Lanes, Austin,
Travis County, Texas

Exhibit

5.1



- | | |
|--|--|
| Approximate Project Boundary | COA Previously Recorded Wetland CEF Buffer |
| 150-ft Project Boundary Buffer | Privately Maintained Ponds |
| COA Creek Centerline Segment | Water Quality Transition Zone (WQTZ) |
| COA Previously Recorded Wetland CEFs | Critical Water Quality Zone (CWQZ) |
| ◆ COA Previously Recorded Seep and Spring CEFs | Edwards Aquifer Contributing Zones |
| COA Previously Recorded Rimrock CEFs | Edwards Aquifer Recharge Zones |
| | Edwards Aquifer 1,500-ft Verification Zone |

DATA SOURCES:
 Esri Community Maps Contributors, Austin Community College, Baylor University, City of Austin, Texas Parks & Wildlife, © OpenStreetMap, Microsoft, CONANP, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/ NASA, USGS, EPA, NPS, US Census Bureau, USDA, USFWS, Nearthmap, Maxar, Microsoft, FEMA Firm Panel: 48453C0470K, effective on 1/6/2016

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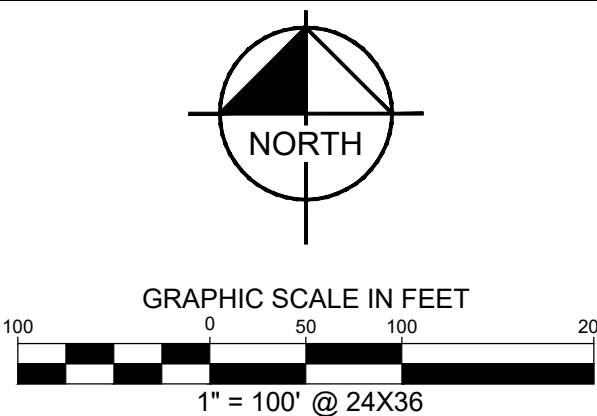
Water Quality Zones

Austin Loyola Tracts

NWC Loyola and Decker Lanes, Austin,
 Travis County, Texas

Exhibit

6.0



LINE TYPE LEGEND

	BOUNDARY LINE
	EASEMENT LINE
	BUILDING LINE
	WATER LINE
	W
	SS
	SD
	SANTARY SEWER LINE
	STORM DRAIN LINE
	UNDERGROUND GAS LINE
	OVERHEAD UTILITY LINE
	UGS
	UNDERGROUND ELECTRIC LINE
	UGT
	FENCE
	CONCRETE PAVEMENT
	ASPHALT PAVEMENT
	TRACT CORNER (CAL CAL ATEED POINT (IN ESS OTHERWISE LARI FID))

LEGEND	
	C BOX ON PEDESTAL
	E ELECTRIC OR POWER
	F FIBRIC OPTIC
	G NATURAL GAS
	H PETROLEUM OIL PIPELINE
	I RAILROAD
	S SAN. SEWER OR WASTEWATER
	T STORM SEWER
	T TELEPHONE
	TR TRAFFIC
	U UNCLASSIFIED
	W WATER
	WB SECURITY CAMERA
	SB SANITARY SEWER BOX
	SB SANITARY SEWER CLEAN OUT
	SB SANITARY SEWER LIFT STATION
	SB SANITARY SEWER DRAIN
	SB SANITARY BARRIER
	SB TRAFFIC BOLLARD
	SB TRAFFIC CAMERA
	SB TRAFFIC SIGN
	SB TRAFFIC SIGNAL
	SB TRASH BIN
	SB TREE
	SB WATER BOX
	SB FIRE SPRINKLER CONNECTION
	SB FIRE HYDRANT
	SB WATER VALVE
	SB AIR RELEASE VALVE
	SB VALVE WELL
	IRSC 12" IRON ROD W/ "HOM" CAP SET
	IRSC IRON ROD W/ CAP SET
	MACNAIL SET
	PKF PK NAIL FOUND
	IRSC IRON ROD FOUND
	XS "X" CUT IN CONCRETE SET
	"X" CUT IN CONCRETE FOUND
	POB POINT OF BEGINNING
	POC POINT OF COMMENCING
<p>RRPTC REAL PROPERTY RECORD OF TAVIS COUNTY</p> <p>PRFC PLAT RECORDS OF TAVIS COUNTY</p> <p>DRFC DEED RECORDS OF TAVIS COUNTY</p> <p>ORFC OFFICIAL PUBLIC RECORDS OF TAVIS COUNTY</p>	

BENCH MARK LIST	
DATUM IS NAVD'88, USING GEOID 12B, BASED ON GPS OBSERVATIONS.	
BM #101	MAG NAIL WITH WASHER SET ON THE NORTHEAST LINE OF LOYOLA LANE, NORTH 66°28'29" WEST, 230.01 FEET FROM THE SOUTHEAST CORNER OF TRACT 1.
•	ELEV = 544.25'
BM #102	MAG NAIL WITH WASHER SET ON THE WEST LINE OF DECKER LANE, NORTH 35°35'40" EAST, 174.55 FEET FROM THE SOUTHEAST CORNER OF TRACT NO. 2
•	ELEV = 546.22'

CURVE TABLE					
NO.	DELTA	RADIUS	LENGTH	CHORD BEARING	CHORD
C1	89°50'51"	15.00'	23.52'	S17°00'21"E	21.18'
C2	90°05'27"	15.00'	23.59'	S72°57'50"W	21.23'

TREE TABLE		TREE TABLE		TREE TABLE	
NO.	DESCRIPTION	NO.	DESCRIPTION	NO.	DESCRIPTION
8231	14" ASH	8256	14" ASH	8281	14" WILLOW
8232	20" MESQUITE	8257	15" WILLOW	8282	9" WILLOW
8233	12" ASH	8258	29" COTTONWOOD	8283	21" WILLOW
8234	14" ASH	8259	14" HACKBERRY	8284	10" ASH
8235	10" ASH	8260	12" WILLOW	8285	9" WILLOW
8236	11" ASH	8261	11" WILLOW	8286	10" WILLOW
8237	18" ASH	8262	32" WILLOW	8287	10" ASH
8238	11" ASH	8263	17" WILLOW	8288	9" WILLOW
8239	12" ASH	8264	11" WILLOW	8289	9" WILLOW
8240	9" ASH	8265	18" WILLOW	8290	9" WILLOW
8241	10" ASH	8266	17" COTTONWOOD	8291	12" WILLOW
8242	9" ASH	8267	12" WILLOW	8292	12" WILLOW
8243	19" HACKBERRY	8268	15" HACKBERRY	8293	12" WILLOW
8244	10" GUM	8269	9" HACKBERRY	8294	12" ASH
8245	13" HACKBERRY	8270	11" ASH	8295	14" WILLOW
8246	11" HACKBERRY	8271	10" ASH	8296	15" WILLOW
8247	24" ASH	8272	12" ASH	8297	23" WILLOW
8248	11" ASH	8273	11" WILLOW	8298	14" WILLOW
8249	8" ASH	8274	13" WILLOW	8299	10" WILLOW
8250	10" ASH	8275	11" MULBERRY	8300	9" ASH
8251	12" ASH	8276	8" WILLOW		
8252	10" ASH	8277	13" WILLOW		
8253	8" ASH	8278	9" WILLOW		
8254	19" ASH	8279	11" ASH		
8255	11" ASH	8280	9" WILLOW		

GENERAL NOTES:

1. This is a topographic map prepared for site improvement and design purposes only. This is not a land title survey. See the separate land title survey under Job No. 0613005022 for additional information.
2. **FLOOD STATEMENT:**
- According to Community Panel No. 48453C0470K dated 1/6/2016 of the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM), the subject tract is located within Zone "X" (un-shaded) which is defined by FEMA as "areas determined to be outside the 0.2% annual chance floodplain," commonly known as a 500-year floodplain. Zone "X" (un-shaded) is outside of any FEMA established flood hazard zone. All zone delineations shown hereon are approximate. This flood statement does not imply that the property and/or the structures thereon will be free from flooding or flood damage. On rare occasions, greater floods can and will occur and flood heights may be increased by man-made or natural causes. This flood statement shall not create any liability on the part of Kimley-Horn or the undersigned.
3. **GEODETIC BASIS STATEMENT:**
- HORIZONTAL CONTROL: The bearings shown hereon are the Texas State Plane Coordinate System, CENTRAL Central Zone (FIPS 4203) (NAD'83), as determined by the Global Positioning System (GPS). All distances shown hereon are on the SURFACE. To convert surface distances to Grid apply the Surface to Grid Scale Factor of 0.999990009. The unit of linear measurement is U.S. Survey Feet.
- VERTICAL CONTROL: This drawing shows existing spot elevations and contour lines based upon a field survey conducted by survey personnel. The contour interval is 1 foot. All elevations shown hereon are tied to the North American Vertical Datum of 1988 (NAVD '88) based on GPS observations.
4. Any underground utilities shown hereon are from Texas 811 markings located by survey crews, or record drawings obtained from utility companies representatives. Kimley-Horn cannot guarantee the locations of said utilities, except those that are observed and readily visible on the surface at the time of this survey. Kimley-Horn assumes no liability for poorly or improperly marked utility locations. Private interior service lines are not shown.
5. The tree species referenced on this exhibit reflect field identifications made by survey crew personnel. An arborist or other expert consultant should make the final determination of tree types and conditions. This survey does not show all existing trees or landscaping.

HORIZONTAL CONTROL: The bearings shown hereon are the Texas State Plane Coordinate System, CENTRAL Central Zone (FIPS 4203) (NAD'83), as determined by the Global Positioning System (GPS). All distances shown hereon are on the SURFACE. To convert Surface distances to Grid apply the Surface to Grid Scale Factor of 0.999990009. The unit of linear measurement is U.S. Survey Feet.

VERTICAL CONTROL: This drawing shows existing spot elevations and contour lines based upon a field survey conducted by survey personnel. The contour interval is 1 foot. All elevations shown herein are tied to the North American Vertical Datum of 1988 (NAVD '88) based on GPS observations.

4. Any underground utilities shown hereon are from Texas 811 markings located by survey crews, or record drawings obtained from utility companies representatives. Kimley-Horn cannot guarantee the locations of said utilities, except those that are observed and readily visible on the surface at the time of this survey. Kimley-Horn assumes no liability for poorly or improperly marked utility locations. Private interior service lines are not shown.

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DESIGN SURVEY EXHIBIT OF
1.824 and 8.253 ACRE TRACTS
JAMES BURLESON SURVEY NO. 19
SURVEY, ABSTRACT NO. 4
CITY OF AUSTIN, TRAVIS COUNTY, TEXAS

Kimley»»Horn

10101 Reunion Place, Suite 400
San Antonio, Texas 78216 FIRM # 10193973

Tel. No. (210) 541-9166
www.kimley-horn.com

<u>Scale</u>	<u>Drawn by</u>	<u>Checked by</u>	<u>Date</u>	<u>Project No.</u>	<u>Sheet No.</u>
1" = 100'	BB	JGM	12/28/2022	061305022	1 OF 1

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ADDRESS: ----

1		
No.	DATE	REVISION DESCRIPTION

APPENDIX C
SITE PHOTOGRAPHS



Photo 1 View of western portion of the site.



Photo 2 View of southern portion of the site.



Photo 3 View of roadside ditch along the southeast boundary of the site.



Photo 4 View of central portion of the site.



Photo 5 View of eastern portion of the site.



Photo 6 View of roadside ditch along the eastern boundary of the site.



Photo 7 View of northeastern portion of the site.



Photo 8 View of PMP off-site and within the 150-foot buffer to the northeast of the site.



Photo 10 View of W-1.



Photo 11 View of W-1.



Photo 12 View of W-2.



Photo 13 View of W-2.



Photo 15 View of W-3.

APPENDIX D
CREDENTIALS

Bridgette Zapalac

Environmental Project Manager

Bridgette is a Staff Scientist in Terracon's Austin, Texas office. Ms. Zapalac has experience with Phase I Environmental Site Assessments (ESA), Environmental Resource Inventories (ERI), City of Austin Habitat Assessments (HA), and Preliminary Waters of the United States (WOTUS) delineations for various sites in Austin and surrounding areas.

Ms. Zapalac also has experience in various types of natural resource evaluations, regulatory work, and extensive environmental research.

PROJECT EXPERIENCE

Research Square Project- Austin, Texas

Project Manager for Phase I Environmental Site Assessment on the Research Square facility consisting of an approximate 4.566-acre tract of land improved with a multiple-tenant retail building. At the time of the site reconnaissance, the building was occupied by Boxx, Flohr, Two Men and a Truck, Best of Realtors, Almar Furs, Home Pro, 360 Home Connect, Bell & McCoy Companies, Cen Tex Sporting Food, and ACES Jiu Jitsu Club.

Project Completed: 2019

97 Acres – Avery Ranch/183A Project – Austin, Texas

Project Manager for Phase I Environmental Site Assessment on an approximate 97.24-acre tract of mostly vacant, undeveloped land with an unimproved road and dilapidated farm structure located on the southwest portion of the site. At the time of the site reconnaissance, a loose grid of footpaths was evident throughout the site.

Project Completed: 2019

Old San Antonio Road – Austin, Texas

Project Manager for Phase I Environmental Site Assessment (ESA) and Environmental Resource Inventory (ERI) conducted on an approximate 58.278-acre tract of undeveloped land. The purpose of the ESA was to identify recognized environmental conditions on the site. The purpose of the ERI was to identify critical environmental features (CEFs) (seeps, springs, wetlands, canyon rimrock, bluffs, karst features). Terracon's client was Stillwater Capital Investments.

Project Completed: 2020

3303 Manor Road - Austin, Texas

Project Manager for the ERI conducted on an approximately 2.88 acre mostly undeveloped tract located at 3303 Manor Road. The purpose for the ERI was to oversee and conduct a site assessment to identify critical environmental features (CEFs) (seeps, springs, wetlands, canyon rimrock, bluffs, karst features). Terracon's client was Cumby Development.

Project Completed: 2021

Republic Drive – Kyle, Texas

Project Manager for the Phase I ESA and assisted with a WOTUS Delineation for an approximately 28.62-acre tract of undeveloped land located in Kyle, Texas. The purpose for the Waters of the U.S. Delineation is to address Section 404 of the Clean Water Act and Section 10 of the Rivers and Harbors Act compliance requirements as they may affect the proposed 8.86-acre tract of undeveloped land.



EDUCATION

Bachelor of Science,
Bioenvironmental Science,
Texas A&M University, 2018

WORK HISTORY

Terracon, Staff Scientist, July
2018-Present

Terracon's client was Endeavor Real Estate Group.

Project Completed: 2021

2222 Campus – Austin, Texas

Project Manager for the City of Austin Habitat Assessment (HA) for an approximately 153-acre partially undeveloped tract located in Austin, Texas. The purpose for the Habitat Assessment was to characterize the existing landcover conditions within the study area, observe the study area for protected species and/or their suitable habitats, and provide an opinion regarding whether or not proposed development within the study area may affect species/habitat listed under the Endangered Species Act (ESA), and provide an opinion as to whether or not proposed development within the study area is likely to impact species protected under the Texas Parks and Wildlife Code (TPWD Code), Bald and Golden Eagle Protection Act (BGEPA), and/or Migratory Bird Treaty Act (MBTA). Terracon's client was Karlin Real Estate Group.

Project Completed: 2021

Wimberly Tract – Wimberly, Texas

PM for the Phase I ESA and assisted with a Preliminary Waters of the United States (WOTUS) Delineation for an approximately 8.86-acre tract of undeveloped land located in Wimberly, Texas. The purpose for the Waters of the U.S. Delineation is to address Section 404 of the Clean Water Act and Section 10 of the Rivers and Harbors Act compliance requirements as they may affect the proposed 8.86-acre tract of undeveloped land. Terracon's client was Foresite Group, Inc.

Project Completed: 2022

S. Elizabeth Valenzuela

SENIOR ARCHITECTURAL HISTORIAN

PROFESSIONAL EXPERIENCE

Ms. Valenzuela is an architectural historian in Terracon's Austin, Texas office. She has 24 years of professional experience in the field of preservation and historic architecture. She has supervised and participated in historic resources surveys, building documentation, archival research, and historic context development projects throughout the United States. She has worked with municipal governments, and state and federal agencies to identify, document, and provide National Register of Historic Places (NRHP) eligibility assessments for commercial, residential, governmental, industrial, rural resources and cultural landscapes. These projects have involved archival research using primary and secondary source materials at local, state, and national repositories, and condition assessments and field documentation using standardized field survey forms and digital and 35mm photography.

Ms. Valenzuela earned a Master of Architecture degree from Texas Tech University and during her career has managed a broad range of cultural resource projects. These projects have included the identification and assessment of resources dating mostly from the early nineteenth century to the mid-twentieth century and have encompassed utilitarian structures, rural landscapes, vernacular and high-style residential, commercial, and institutional buildings. Ms. Valenzuela meets the *Secretary of Interior Standards for Professional Qualifications* in Architecture, Historic Architecture, and Architectural History.

SELECTED PROJECT EXPERIENCE

Historic Resources Survey Reports

Historic Resources Survey for the Langston University Horticulture Research and Extension Center – Langston, Logan County, Oklahoma

Project manager and architectural historian for a historic resources survey for Langston University, an 1890 Land Grant Institution, as they pursued funding from the US Department of Agriculture under the 1890 Facilities Grant Program for the construction of a horticulture facility. Conducted a reconnaissance-level historic resources survey of historic-age buildings and site features within the project area of potential effects (APE), located on an 80-acre tract of land owned by Langston University.

Historic Resources Survey for the Ivey–Moore House – San Marcos, Texas

Project manager and architectural historian for a historic resources survey in support of the obligations of the Code (Texas Natural Resource Code, Title 9, Chapter 191) and its implementing Rules of Practice and Procedure (Texas Administrative Code, Title 13, Chapter 26). Conducted a reconnaissance-level historic resources survey of the building and site features associated with the Ivey-Moore House, located on the Texas State University campus in the northwestern section of San Marcos, Hays County, Texas. *Accepted by Texas SHPO in June 2020.*

Historic Resources Survey Report of the West End School – Taylor, Williamson County, Texas

Project manager and architectural historian for a historic resources survey in support of the obligations of HUD and Williamson County (responsible entity) under Section 106 of the National Historic Preservation Act, 1966, as amended (NHPA). Conducted a reconnaissance-level historic resources survey of historic-age buildings and site features at the West End School, located on a 2.21-acre parcel located at 303 Ferguson Street in the western section of Taylor, Williamson County, Texas.

Historic Resources Survey for the City of San Marcos – San Marcos, Texas

As a subcontractor to Hicks & Company, participated in windshield and reconnaissance-level surveys to update three previous historic resources surveys and previously unevaluated commercial districts and residential neighborhoods.

EDUCATION

Master of Architecture, Texas Tech University, 1998

CERTIFICATIONS

Section 4(f) Training, National Preservation Institute, 2019

Section 106 Training, National Preservation Institute, 2007

TxDOT Pre-certification, Categories 2.15.1 and 2.15.2, 2004/2019

PROFESSIONAL ACTIVITIES

District 2 Commissioner and former Vice Chair, City of Austin Historic Landmark Commission, 2015-present

WORK HISTORY

Terracon Consultants, Inc.,
Senior Architectural Historian, 2018-Present

Valenzuela Preservation Studio, LLC
Principal/Preservation Specialist,
2010-2018

Hardy-Heck-Moore, Inc.,
Preservation Specialist/Project
Manager, 2003-2010

Volz & Associates, Inc., Architectural
Intern, 2000-2003

Parshall + Associates, Architectural
Intern, 1998-2000

PRESENTATIONS/PUBLISHED ARTICLES

"Community Connection with Rural Texas Landscapes: The Evolution of Social Encampments at the Turn-of-the-Nineteenth Century" presented at the *Southeast Chapter of the Society of Architectural Historians*, October 2020.

"Tear Down or Treasure: A Case for Historic Preservation," presented at the Rio Grande Valley American Institute of Architects annual convention, September 2017.

"Architecture of Survival: A Brief History of Building Techniques of the Big Bend Region" presented at the *Southeast Chapter of the Society of Architectural Historians*, November 1998.

** Work performed prior to joining Terracon.*

S. Elizabeth Valenzuela (continued)

The historic resources survey adhered to THC guidelines and was intended to support future planning and development initiatives by the City of San Marcos. Participated in field survey, archival research, and public outreach meetings. Accepted by THC in September 2019.

Historic Resources Survey and Survey Plan for the Gregg County Historical Commission – Gregg County, TX

As a subcontractor to Hicks & Company, participated in windshield and reconnaissance-level surveys as a case study for the Gregg County Survey Plan. The historic resources survey adhered to THC guidelines and was intended to support future planning initiatives by the Gregg County Historical Commission. Participated in field survey, archival research, and public outreach meetings. Served as primary author for the Gregg County Historic Resources Survey Plan. Document outlined goals for future survey efforts, defined survey project considerations, prioritized recommended future surveys, and provided recommended sources of funding for future surveys. Accepted by Gregg County Historical Commission in September 2018.

Historic Resources Survey for Acequia Plaza Development, San Antonio, Bexar County, Texas

Project director and report author for a reconnaissance-level historic resources survey for parcels impacted by a proposed development subject to THC consultation and coordination under *Section 106*. Completed inventory of previously designated historic properties, limited field survey, mapping, digital photography, NRHP eligibility assessment of the subject building and potential impacts analysis for identified resources.

Historic Property Eligibility Study – Fort Huachuca, Arizona

Project director and architectural historian for historic-age property evaluations for resources at Fort Huachuca in southeastern Arizona. Conducted reconnaissance-level historic resources survey of 21 identified resources; final report included a historic context for specific themes relevant to the historic-age resources, architectural descriptions and NRHP-eligibility recommendations under an expedited schedule. Accepted by Arizona SHPO in 2011.

National Register of Historic Places Nominations

Mitigative Documentation for Turpin Grain Elevator – Turpin, Oklahoma

Project Manager and architectural historian for the documentation of a 1925 wooden grain elevator, noteworthy for its association with the Light Grain & Milling Company, the Beaver, Mead, and Englewood Railroad, and as an example of innovation and mechanization of American agriculture. Conducted field survey and archival research, and served as primary author for the updated National Register nomination for the grain elevator. *Project completed January 2020.*

Update to National Register Nomination for the Central Avenue Historic District – Hot Springs, Arkansas

Project director and author for the NRHP nomination of the central commercial district for the health resort industry of Hot Springs, Arkansas. Completed archival research, fieldwork, digital photography and NRHP form preparation per NPS Standards. Accepted by the Arkansas SHPO in January 2019. Review to be completed by the Arkansas State Board of Review in April 2019 and forward to the National Park Service for listing in the NRHP.

National Register Nomination for the Eureka Springs Cemetery – Eureka Springs, Arkansas*

Project director and author for the NRHP nomination of a large, rural community burial ground located east of the main commercial center of Eureka Springs. Completed archival research, fieldwork, digital photography and NRHP form preparation per NPS Standards. Accepted by the Arkansas SHPO in January 2018 and by the Arkansas State Board of Review in April 2018. The Eureka Springs Cemetery was listed in the NRHP on June 6, 2018.

National Register Nomination for the Broadway Cemetery Historic District – Galveston, Texas*

Project director and primary author for the NRHP nomination for a large, urban burial ground centrally located within the city of Galveston, Texas. Responsibilities included contract administration, public outreach efforts, supervision and participation in archival research, fieldwork, digital and 35mm photography and NRHP form preparation, per NPS Standards. Accepted by NPS and listed in the NRHP on June 13, 2014.

Historic Preservation and Preservation Planning

Online Training for Disaster Preparedness in Historic Texas Cemeteries – Texas Gulf Coast

Project manager for the development of an online training package focused on disaster preparedness and response for historic cemeteries within a 41-county area damaged by Hurricane Harvey in 2017. The webinar series provides technical content related to pre- and post-disaster planning, safety, partnerships, funding, resource recording and treatment. The selection and presentation order of webinars is designed to offer comprehensive content from the pre- and post-disaster planning and response phases of cemetery maintenance, while individual webinars will function as stand-alone modules. Each webinar is supplemented by accompanying demonstration videos and handouts to provide additional information and tools. In addition to the technical webinar series, the Terracon team will host six virtual stakeholder meetings to collect their thoughts on the information presented in the first two webinars on disaster preparedness, share their experiences with community involvement, funding, and safety considerations for Texas cemeteries, and offer ideas for the final People's Choice webinar in the series. *Ongoing 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.

City of Austin Functional Assessment of Floodplain Health

204 East Rundberg Lane

November 13, 2024 | Report Number: Report No. 96247656

Prepared for:

Elmington Capital Group
1030 16th Avenue S, Suite 500
Nashville, TN 37203



Nationwide
[Terracon.com](https://terracon.com)

- Facilities
- Environmental
- Geotechnical
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Terracon.com

November 13, 2024

Elmington Capital Group
1030 16th Avenue, Suite 500
Nashville, TN 37203

Attn: Rick Estep
P (615) 636-6452
E restep@elmingtoncapital.com

RE: City of Austin Functional Assessment of Floodplain Health (FAFH)
204 East Rundberg Lane
Austin, Texas 78753

Terracon Proposal No. 96247656

Dear Mr. Estep:

Terracon Consultants, Inc. (Terracon) is pleased to provide this City of Austin (COA) Functional Assessment of Floodplain Health (FAFH) report prepared for the above-referenced site. Based on the proposed design plans, some modifications would impact the COA Fully Developed Floodplain and/or the COA Critical Water Quality Zone (CWQZ).

Terracon established one Zone 1 transect and one Zone 2 transect within the COA Fully Developed Floodplain area and/or Critical Water Quality Zone (CWQZ) on the northern portion of the site. To accommodate the length of the area proposed for design impact within floodplain of the project area, transect 1 (T-1) is approximately 100-meters with three 100-square meter sample plots (P1, P2, and P3). Transect 2 (T-2) is an approximately 45-meter transect with one 100-square meter sample plot (P1). The Zone 1 transect was scored for vegetative buffer gap frequency, large woody debris, soil compaction, structural diversity, and tree demography. The Zone 2 transect was scored for vegetative buffer gap frequency, large woody debris, soil compaction, structural diversity, tree demography, wetland tree status, and riparian zone width.


Below is a summary table of transects (T-1 and T-2) scores and assessed conditions:

Transect	Zone	Score	Assessed Condition
T-1	1	17	Good
T-2	2	20	Good

The attached *Exhibits 1.0* and *2.0* depict the approximate Zone 1 and Zone 2 transect locations, COA Fully Developed Floodplain, and four 100 square-meter sample plots. Also attached are the *FAFH Score Sheets* and *Photolog* for reference.

The results of our consulting services are solely the professional opinion of Terracon and are based on the site conditions documented and observed at the time of the field investigation. It should be noted that some site conditions are subject to various weather conditions (including precipitation) and other changes in the surrounding ecosystem. This report is intended to describe on-site conditions at the time of the investigation and Terracon is not liable for seasonal changes in on-site vegetation or hydrology. Additionally, Terracon's opinion is based on the most current regulations; therefore, changes in regulations may require a re-evaluation of the findings of this report. It is recommended that if this report is not to be submitted promptly to the COA, an updated report (based on an additional field assessment) be prepared.


We appreciate the opportunity to provide content of this report, please feel free to contact Bridgette.zapalac@terracon.com.


 BRIDGETTE S. ZAPALAC
 Senior Staff Scientist

For questions regarding the assessment, please contact Bridgette Zapalac at 512-358-9935 or Bridgette.zapalac@terracon.com.

Sincerely,
Terracon

Bridgette Zapalac
 Bridgette S. Zapalac
 Senior Staff Scientist


 Jeff Jenkerson, M.S., CWB
 Natural Resource Team Lead

Attachments:

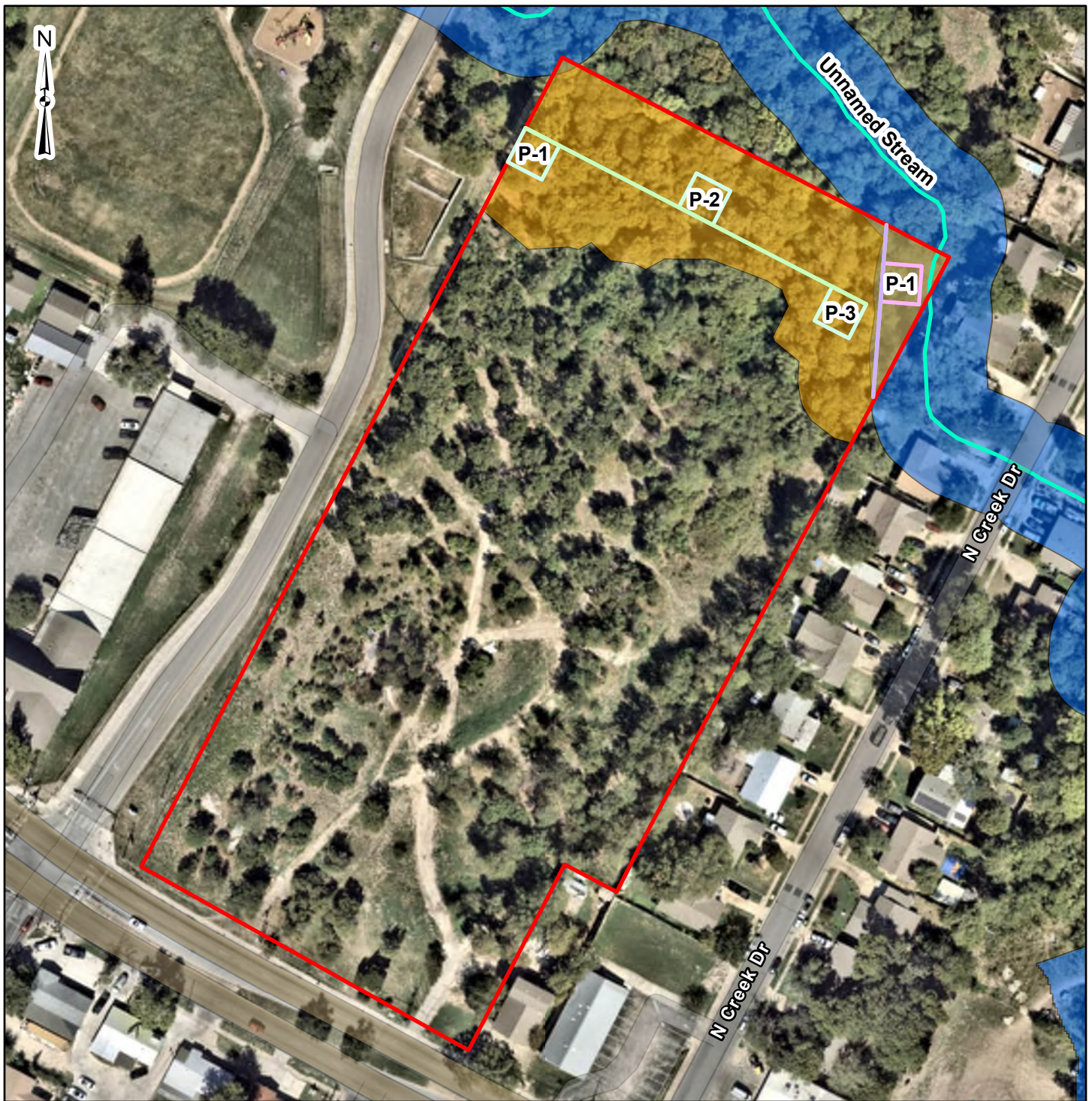
FAFH Exhibits 1.0-2.0

FAFH Score Sheets

Photolog

Credentials

FAFH EXHIBITS



- ▬ Approximate Project Boundary
- ▬ Critical Water Quality Zone (CWQZ)
- ▬ Delineated Atlas 14 100-Year Floodplain
- ▬ COA Creek Centerline Segment

- Transects
- ▬ T-1
 - ▬ T-2
- Zone Plots
- ▬ Zone 1
 - ▬ Zone 2

0 62.5 125 250 Feet

DATA SOURCES:
Esri Community Maps Contributors, Austin Community College, Baylor University, City of Austin, Texas Parks & Wildlife, © OpenStreetMap, Microsoft, CONANP, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/ NASA, USGS, EPA, NPS, US Census Bureau, USDA, USFWS, Nearmap, Maxar, Microsoft

Project No.:
96247656

Date:
Nov 2024

Drawn By:
RC

Reviewed By:
BZ



5307 Industrial Oaks Blvd. - #160 Austin, TX 78735

PH. (512) 442-1122 terracon.com

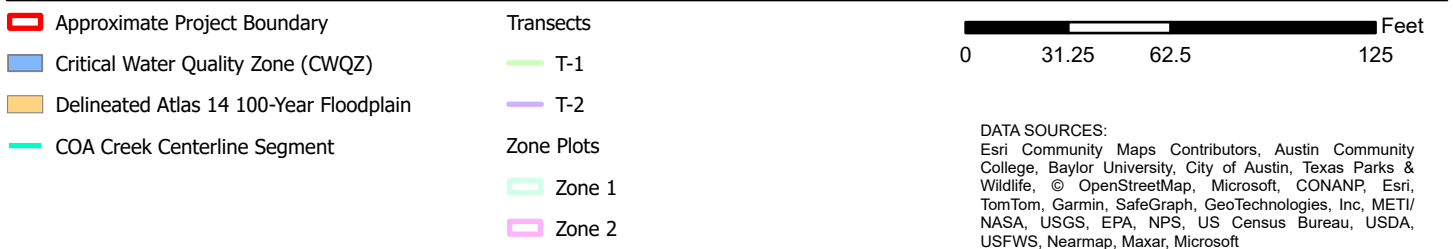
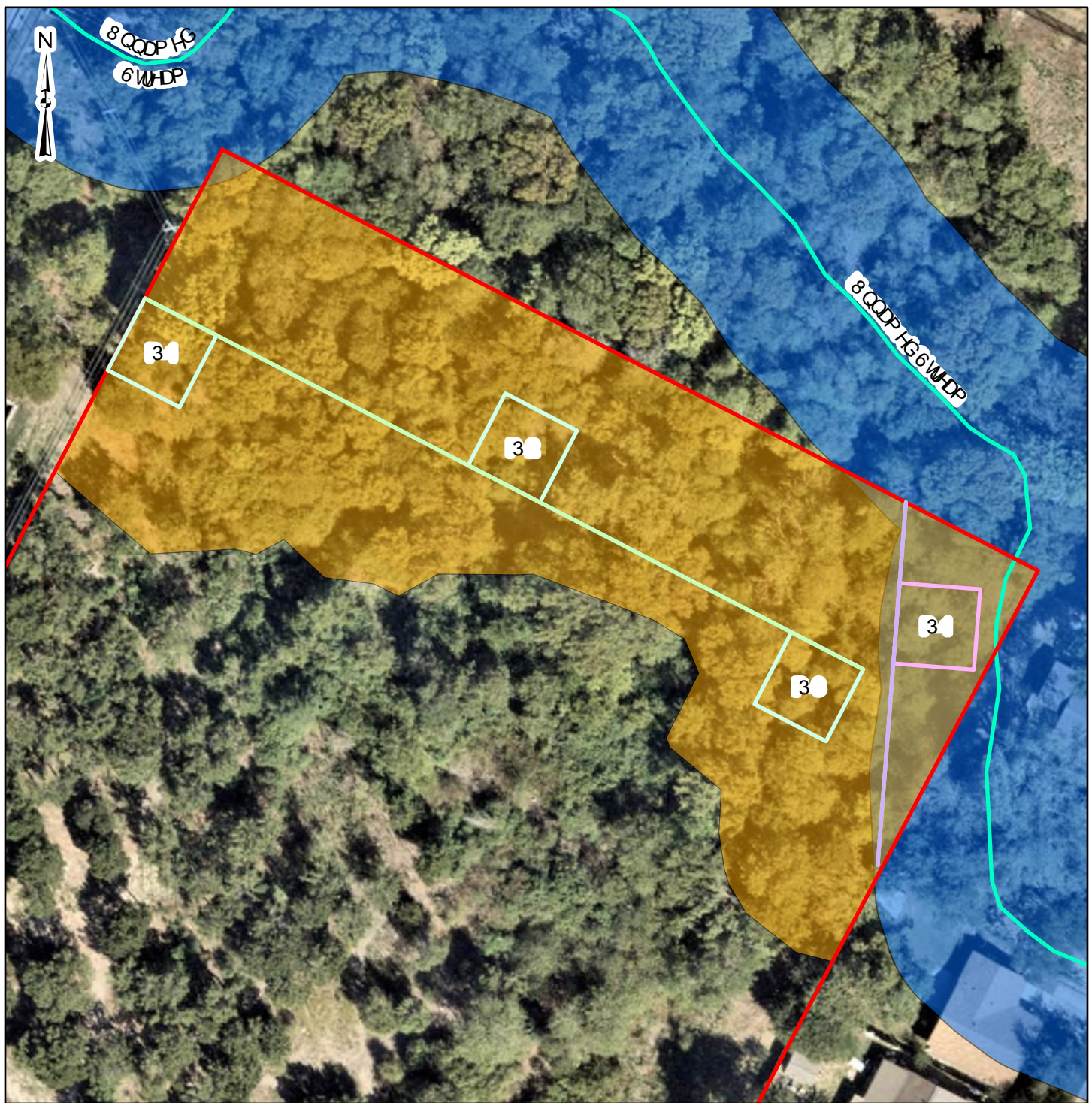
FAFH Zone Plots

204 E. Rundberg FAFH

204 E. Rundberg, Austin, TX

Exhibit

1.0



Project No.: 96247656 Date: Nov 2024 Drawn By: RC Reviewed By: BZ	 5307 Industrial Oaks Blvd. - #160 Austin, TX 78735 PH. (512) 442-1122 terracon.com	FAFH Zone Plots 204 E. Rundberg FAFH 204 E. Rundberg, Austin, TX	Exhibit 2.0
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FAFH SCORE SHEETS

Scoring: Zone 1 – Floodplain Health

Site/Project Name: 204 E. Rundberg

Date: 11/7/24

Time: 10:00-10:40

Transect Number: T-1

Staff (if applicable): BZ, RK

Parameter	Excellent (4)	Good (3)	Fair (2)	Poor (1)	Score
Gap Frequency <i>A visual assessment of the number of gaps in vegetation.</i>	0 - 20% of area has visual gaps in vegetation	20% - 40% of area has visual gaps in vegetation	40 - 60% of area has visual gaps in vegetation	> 60% of area has visual gaps in vegetation	3
Large Woody Debris <i>An evaluation of the amount of large woody debris.</i>	7 or more pieces of large woody debris	5 - 6 pieces of large woody debris	3 - 4 pieces of large woody debris	2 or less pieces of large woody debris	4
Soil Compaction <i>An assessment of the bulk density of the soil.</i>	0 - 200 pounds per square inch	201 - 400 pounds per square inch	401 - 600 pounds per square inch	> 600 pounds per square inch	4
Structural Diversity <i>An evaluation of the canopy and understory vegetation.</i>	> 65% canopy; or > 50% canopy and > 50% understory	51 - 65% canopy; or 0 - 50% canopy and > 40% understory	31 - 50% canopy; or 0 - 30% canopy and > 30% understory	0 - 30% canopy; or 0 - 15% canopy and 0 - 30% understory	3
Tree Demography <i>An assessment of the age class distribution of all canopy tree species.</i>	Canopy tree species are present in all 4 age classes	Canopy tree species are present in 3 of 4 age classes	Canopy tree species are present in 2 of 4 age classes	Canopy tree species are present in only 1 age class or no trees	3

Zone 1 Score: 17

Assessed Condition (Circle One)

Excellent: 18 - 20

Good: 13 - 17

Fair: 8 - 12

Poor: 5 - 7

Field Sheet: Zone 1 – Floodplain Health

Site/Project Name: 204 E. Rundberg

Date: 11/7/24

Time: 10:00-10:40

Transect Number: T-1

Staff (if applicable): BZ, RK

Gap Frequency

Number of 1 meter gaps: 30

Percent of Transect: 30 %

Large Woody Debris

Number of Large Woody Debris Pieces: 8

Soil Compaction

Plot 1 (5 meters)	Plot 2 (50 meters)	Plot 3 (95 meters)
#1: <u>80</u> psi #2: <u>80</u> psi #3: <u>80</u> psi Average for Plot 1: <u>80</u> psi	#1: <u>30</u> psi #2: <u>50</u> psi #3: <u>100</u> psi Average for Plot 2: <u>60</u> psi	#1: <u>20</u> psi #2: <u>90</u> psi #3: <u>100</u> psi Average for Plot 3: <u>70</u> psi

Average for All Sample Plots: 70 psi

Structural Diversity

Plot 1 (5 meters)	Plot 2 (50 meters)	Plot 3 (95 meters)
Canopy: <u>85</u> % Understory: <u>45</u> %	Canopy: <u>30</u> % Understory: <u>70</u> %	Canopy: <u>40</u> % Understory: <u>30</u> %

Average for All Sample Plots: Canopy: 51.6 % Understory: 48.3 %

Tree Demography

Plot 1 (10 meters)	Plot 2 (45 meters)	Plot 3 (90 meters)
Number of Age Classes: <u>3</u>	Number of Age Classes: <u>3</u>	Number of Age Classes: <u>3</u>

Average for All Sample Plots: 3

Scoring: Zone 2 – Critical Water Quality Zone

Site/Project Name: 204 E. Rundberg

Date: 11/7/24

Time: 10:40-11:10

Transect Number: T-2

Staff (if applicable): BZ, RK

Parameter	Excellent (4)	Good (3)	Fair (2)	Poor (1)	Score
Gap Frequency <i>A visual assessment of the number of gaps in vegetation.</i>	0 - 20% of riparian area has visual gaps in vegetation	20% - 40% of riparian area has visual gaps in vegetation	40 - 60% of riparian area has visual gaps in vegetation	> 60% of riparian area has visual gaps in vegetation	4
Large Woody Debris <i>An evaluation of the amount of large woody debris.</i>	7 or more pieces of large woody debris	5 - 6 pieces of large woody debris	3 - 4 pieces of large woody debris	2 or less pieces of large woody debris	3
Soil Compaction <i>An assessment of the bulk density of the soil.</i>	0 - 200 pounds per square inch	201 - 400 pounds per square inch	401 - 600 pounds per square inch	> 600 pounds per square inch	4
Structural Diversity <i>An evaluation of the canopy and understory vegetation.</i>	> 65% canopy; or > 50% canopy and > 50% understory	51 - 65% canopy; or 0 - 50% canopy and > 40% understory	31 - 50% canopy; or 0 - 30% canopy and > 30% understory	0 - 30% canopy; or 0 - 15% canopy and 0 - 30% understory	2
Tree Demography <i>An assessment of the age class distribution of all canopy tree species.</i>	Canopy tree species are present in all 4 age classes	Canopy tree species are present in 3 of 4 age classes	Canopy tree species are present in 2 of 4 age classes	Canopy tree species are present in only 1 age class or no trees	3
Wetland Tree Status <i>Percent of total trees that are defined as FAC+ or greater with respect to wetland status.</i>	> 65% of trees are FAC+ or greater	50 - 65% of trees are FAC+ or greater	25 - 49% of trees are FAC+ or greater	< 25% of trees are FAC+ or greater	1
Riparian Zone Width <i>A measure of the width of the undisturbed riparian zone.</i>	> 18 meters or > 75% of the CWQZ	12 - 18 meters or 50 - 75% of the CWQZ	6 - 12 meters or 25 - 49% of the CWQZ	< 6 meters or < 25% of the CWQZ	3

Zone 2 Score: 20

Assessed Condition (Circle One)

Excellent: 25 - 28

Good: 18 - 24

Fair: 11 - 17

Poor: 7 - 10

Field Sheet: Zone 2 – Critical Water Quality Zone

Site/Project Name: 204 E. Rundberg

Date: 11/7/24

Time: 10:40-11:10

Transect Number: T-2

Staff (if applicable): BZ, RK

Gap Frequency

Number of 1 meter gaps: 16

Percent of Transect: 16 %

Large Woody Debris

Number of Large Woody Debris Pieces: 6

Soil Compaction

Plot 1 (15 meters)	Plot 2 (50 meters)	Plot 3 (95 meters)
#1: <u>60</u> psi #2: <u>20</u> psi #3: <u>10</u> psi Average for Plot 1: <u>30</u> psi	#1: psi #2: psi #3: psi Average for Plot 2: psi	#1: psi #2: psi #3: psi Average for Plot 3: psi

Average for All Sample Plots: 30 psi

Structural Diversity

Plot 1 (15 meters)	Plot 2 (50 meters)	Plot 3 (95 meters)
Canopy: <u>30</u> % Understory: <u>40</u> %	Canopy: % Understory: %	Canopy: % Understory: %

Average for All Sample Plots: Canopy: 30 % Understory: 40 %

Tree Demography

Plot 1 (15 meters)	Plot 2 (50 meters)	Plot 3 (95 meters)
Number of Age Classes: <u>3</u>	Number of Age Classes:	Number of Age Classes:

Average for All Sample Plots: 3

Field Sheet: Zone 2 – Critical Water Quality Zone

Site/Project Name: 204 E. Rundberg

Date: 11/7/24

Time: 10:40-11:10

Transect Number: T-2

Staff (if applicable): BZ, RK

Wetland Tree Status

Plot 1 (15 meters)	Plot 2 (50 meters)	Plot 3 (95 meters)
Number of FAC+ or Greater Trees: <u>2</u>	Number of FAC+ or Greater Trees: _____	Number of FAC+ or Greater Trees: _____
Total Number of Trees: <u>25</u>	Total Number of Trees: _____	Total Number of Trees: _____
Percent FAC+ or Greater: <u>8</u> %	Percent FAC+ or Greater: _____ %	Percent FAC+ or Greater: _____ %

Average for All Sample Plots: 8 %

Riparian Zone Width

Measurement 1 (15 meters)	Measurement 2 (50 meters)	Measurement 3 (95 meters)
Riparian Zone Width: <u>14.33</u> m	Riparian Zone Width: _____ m	Riparian Zone Width: _____ m

Average for All Measurements: 14.33 m

PHOTOLOG



Photo 1 View of transect 1, plot 1, facing northeast



Photo 2 View of transect 1, plot 1, facing southwest



Photo 3 View of transect 1, plot 2, facing northeast



Photo 4 View of transect 1, plot 2, facing southwest



Photo 5 View of transect 1, plot 3, facing northeast



Photo 6 View of transect 1, plot 3, facing southwest



Photo 7 View of transect 2, plot 1, facing east



Photo 8 View of transect 2, plot 1, facing west

CREDENTIALS

Bridgette Zapalac

Environmental Project Manager

Bridgette is a Senior Staff Scientist in Terracon's Austin, Texas office. Ms. Zapalac has experience with Phase I Environmental Site Assessments (ESA), City of Austin (COA) Environmental Resource Inventories (ERI), Threatened and Endangered (T&E) Species Habitat Assessments (HA), Migratory Bird Treaty Act (MBTA) Nesting Surveys, Preliminary Waters of the United States (WOTUS) delineations and has assisted with multiple species Presence/Absence (P/A) Surveys for various sites throughout Texas.

Ms. Zapalac also has experience in various types of desktop natural resource reviews/evaluations, regulatory work, permitting, and extensive environmental research.



PROJECT EXPERIENCE

DB Wood Road improvements Phase II – Georgetown, Texas

Project Manager for the Golden-Cheeked Warbler (GCWA) P/A Survey and assisted with the WOTUS delineation and T&E species HA conducted on an approximately 12,144-foot alignment, located near Georgetown, Texas. The purpose of the WOTUS delineation and T&E Species Assessment was to address Section 404 of the Clean Water Act, Section 10 of the Rivers and Harbors Act, the Endangered Species Act (ESA) and provide an opinion as to whether proposed development within the study area is likely to impact species protected under the Texas Parks and Wildlife Code (TPWD Code), Bald and Golden Eagle Protection Act (BGEPA), and/or Migratory Bird Treaty Act (MBTA). The GCWA P/A survey was conducted to meet the USFWS requirements for GWCA during breeding season. Terracon's client was Kimley-Horn and Associates, LLC.

Project Completed: 2023

3303 Manor Road - Austin, Texas

Project Manager for the COA ERI, WOTUS delineation, and T&E Species Desktop Assessment conducted on three tracts of land totaling approximately 13.54-acres located in Austin, Texas. The purpose for the ERI was to oversee and conduct a site assessment to identify critical environmental features (CEFs) which include seeps, springs, wetlands, canyon rimrock, bluffs, and karst features. The purpose of the WOTUS delineation and T&E Species HA was to address Section 404 of the Clean Water Act, Section 10 of the Rivers and Harbors Act, the ESA, and provide an opinion as to whether proposed development within the study area is likely to impact species protected under the TPW Code, BGEP, and MBTA. Terracon's client was Embrey Partners, LLC.

Project Completed: 2023

High Ridge Development – Cedar Park, Texas

Project Manager for the WOTUS delineation for an approximately 496-acre tract of land located in Cedar Park, Texas. The purpose for the WOTUS delineation was to address Section 404 of the Clean Water Act and Section 10 of the Rivers and Harbors Act compliance requirements as they may affect the tract of undeveloped land. Terracon's client was High Ridge Development III, LLC.

Project Completed: 2021

Greens Bayou Mid-Reach – Houston, Texas

Assisted with the Freshwater Mussel Reconnaissance Survey and Freshwater Mussel P/A Survey for an approximate 3.6-mile stretch of Greens Bayou located in Houston, Texas. The purpose for the reconnaissance survey was to characterize the existing site conditions and evaluate the presence of suitable freshwater mussel habitat within the proposed impact area of the stream. The P/A Survey was conducted to determine mussel presence of probable absence within suitable habitat to avoid incidental take of protected mussel

EDUCATION

Bachelor of Science,
Bioenvironmental Science,
Texas A&M University, 2018

WORK HISTORY

Terracon, Senior Staff
Scientist, July 2018-Present

TPWD Scientific Permit for
Research (SPR-0223-022):
freshwater mussel sub-
permittee
March 2023-Present

species in Texas. Terracon's client was Woolpert Engineering Inc.

Project Completed: 2023

Outpost Solar Project – Laredo, Texas

Project Manager for the MBTA Active Nest Surveys and assisted with a WOTUS delineation for an approximately 3,342.65-acre tract of undeveloped land located in Laredo, Texas. The purpose for the MBTA Nest Surveys was to assist with compliance of the MBTA, to minimize the risk of incidental take of migratory birds due to the woody vegetation removal activities. The WOTUS delineation was conducted to address Section 404 of the Clean Water Act and Section 10 of the Rivers and Harbors Act compliance requirements as they may affect the undeveloped tract of land. Terracon's client was Primoris Renewable Energy, Inc.

Project Completed: 2023

Wimberly Tract – Wimberly, Texas

Project Manager for the Phase I ESA and assisted with a WOTUS delineation for an approximately 8.86-acre tract of undeveloped land located in Wimberly, Texas. The purpose for the WOTUS delineation was to address Section 404 of the Clean Water Act and Section 10 of the Rivers and Harbors Act compliance requirements as they may affect the tract of undeveloped land. Terracon's client was Foresite Group, Inc.

Project Completed: 2022

2222 Campus – Austin, Texas

Project Manager for the COA HA for an approximately 153-acre of partially undeveloped tract located in Austin, Texas. The purpose of the Habitat Assessment was to observe the study area for protected species and/or their suitable habitats and provide an opinion on if proposed development within the study area may affect species/habitat listed under the ESA, the TPWD Code, BGEPA, and/or MBTA. Terracon's client was Karlin Real Estate Group.

Project Completed: 2021

Republic Drive – Kyle, Texas

Project Manager for the Phase I ESA and assisted with a WOTUS delineation for an approximately 28.62-acre tract of undeveloped land located in Kyle, Texas. The purpose for the WOTUS delineation was to address Section 404 of the Clean Water Act and Section 10 of the Rivers and Harbors Act compliance requirements as they may affect the proposed tract of undeveloped land. Terracon's client was Endeavor Real Estate Group.

Project Completed: 2021

3303 Manor Road - Austin, Texas

Project Manager for the ERI conducted on an approximately 2.88 acre mostly undeveloped tract located in Austin, Texas. The purpose for the ERI was to oversee and conduct a site assessment to identify CEFs which include seeps, springs, wetlands, canyon rimrock, bluffs, and karst features. Terracon's client was Cumby Development.

Project Completed: 2021

Old San Antonio Road – Austin, Texas

Project Manager for Phase I Environmental Site Assessment (ESA) and Environmental Resource Inventory (ERI) conducted on an approximate 58.278-acre tract of undeveloped land. The purpose of the ESA was to identify recognized environmental conditions on the site. The purpose for the ERI was to identify critical environmental features (CEFs) (seeps, springs, wetlands, canyon rimrock, bluffs, karst features). Terracon's client was Stillwater Capital Investments.

Project Completed: 2020

Jeffrey Jenkerson, CWB®

SENIOR ECOLOGIST & LEAD BIOLOGY PRACTITIONER

PROFESSIONAL EXPERIENCE

Mr. Jenkerson currently serves as the Environmental Planning Team Lead at the Austin, Texas office. Mr. Jenkerson brings 10 years of professional experience during which he has garnered a diverse and extensive knowledge of ecology, conservation, management, and species inventory relevant to the study of numerous ecoregions and taxa across multiple states.

He is a seasoned Wildlife Biologist with a demonstrated history of applied research and environmental services in the fields of herpetology, malacology, ichthyology, ornithology, and coastal ecology. Working as a Technical Advisory Professional and Project Manager, he has obtained experience working with a litany of threatened and endangered species (at both a state and federal level) to supplement current species-specific ecological and distributional data and to facilitate regulatory compliance within both the public and private sector. In particular, his work has been focused on imperiled species in Texas, where he has gained direct experience working with taxa such as Brazos water snake, Houston toad, alligator snapping turtle, dunes sagebrush lizard, spot-tailed earless lizard, Texas *Eurycea* salamander species, eastern black rail, whooping crane, fountain darter, Texas wild rice, and all seven Texas freshwater mussel USFWS listing candidates. This engagement has given him a thorough working understanding of all phases of ESA project compliance, from planning-level habitat assessments to formal consultation. He currently holds a USFWS 10(a)(1)(A) recovery permit for the Houston toad and all listed Texas *Eurycea* species as well as a TPWD scientific permit for research for freshwater fish and mussel survey including an electrofishing team lead authorization.

In addition to his ecological expertise, Mr. Jenkerson is a competent communicator and problem solver who is familiar with tight deadlines and all phases of project management, from client communication to report preparation.

SELECT PROJECT EXPERIENCE

D B Wood Road Improvements Phase II (2023 to present). *Kimley-Horn and Associates.* Mr. Jenkerson is currently serving as the project manager and lead 10(a)(1)(A) permitted biologist related to obtaining ESA compliance on a 2.3-mile roadway project in Georgetown, Texas. He is leading the completion of groundwater depth assessments, habitat assessments and presence-absence surveys following agency-approved protocols for five federally endangered species, including golden-cheeked warbler, Georgetown salamander, tricolored bat, Bone Cave harvestman, and Tooth Cave ground beetle. In addition, Mr. Jenkerson is conducting USFWS and USACE coordination, and preparing a Biological Assessment to support ESA Section 7 formal Consultation.



EDUCATION

M.S., Wildlife Ecology, Texas State University, 2016

B.S., Biology, The University of Texas at San Antonio, 2013

WORK HISTORY

Terracon, Natural Resources Team Lead, November 2022 – present

Bio-West Inc., Senior Scientist & Project Manager, April 2017 – October 2022

Utah Division of Wildlife Resources, Endangered Species Aquatic Technician, May 2016 – January 2017

SPECIAL TRAINING/ CERTIFICATIONS

Certified Wildlife Biologist (CWB®), The Wildlife Society

TxDOT Pre-certified: 2.6.5. Protected Species Evaluations

Texas Freshwater Mussel Identification Workshop: San Marcos, TX

Mid-Coast Stunned Turtle Rescue Program (MCCSTR): trained member

Open water sport diver certification: SCUBA, Austin, TX

Spring Lake Diver Certification: Meadows Center, San Marcos, TX

Biological Assessment Preparation (2023). *Grand River Dam Authority (GRDA).* Mr. Jenkerson was the project manager and lead document preparer for a biological assessment concerning the potential impacts of hydroelectric dam operations on 13 protected species (including three fish species, one freshwater mussel species, and nine terrestrial species) in northeast Oklahoma. This comprehensive assessment was prepared in support of ESA Section 7 consultation required as part of the FERC re-licensing process. His duties included staff and agency coordination, database and literature review, statistical analysis, multi-disciplinary SME review, document preparation, and QAQC. The draft biological assessment has been submitted and is currently under review.

Phase 1 Freshwater Mussel Surveys and Alligator Snapping Turtle Construction Monitoring (2023 – Present). *Harris County Flood Control District.* Conducted in support of an extensive water detention basin construction project, Mr. Jenkerson is currently acting as a team lead and permitted biologist to complete freshwater mussel sampling (reconnaissance and tactile surveys) in Cypress Creek (a tributary of the San Jacinto River). His duties include client, staff, and agency coordination, surveys, mussel identification, drafting of the Aquatic Resource Relocation Plan (ARRP), and salvage. As part of this project, Mr. Jenkerson is also actively involved in coordinating with TPWD to implement recently developed Best Management Practices for mitigating the impacts to alligator snapping turtle during bank modification and other construction activities related to channel stabilization.

Houston Toad Bio-monitoring and ESA Compliance (2018 – 2024). *Multiple Clients.* Mr. Jenkerson has been heavily involved in numerous Houston toad bio-monitoring and ESA compliance projects related to linear construction and maintenance. Acting as the on-site permitted biologist and main client contact, his duties typically include conducting active and passive anuran call surveys, habitat suitability modeling, administration of Houston Toad Awareness Training to contractors, training and coordination of field crews, species identification, and providing construction over-sight related to USACE Nationwide Permit, Section 7 ESA Consultation, or HCP guidelines. Project examples include: a 6-mile pipeline construction project located in Colorado County (Kinder Morgan Crossover II Pipeline, 2020), a roadway construction project in Burleson County (TXDOT, 2022), an 8-mile electric transmission line construction project in Leon County (Oncor Electric Delivery Company, 2020), a 28-mile gas pipeline construction project in Colorado and Lavaca counties (Kinder Morgan Permian Highway Pipeline, 2019– 2020), a 34-mile liquid gas pipeline construction project in Leon County (Targa Grand Prix Pipeline, 2018–2019) and a bridge construction project in Lavaca County (TXDOT, 2023).

Toledo Bend American Eel Passage Study (2017 – 2022). *Sabine River Authority (SRA) and Toledo Bend Project Joint Operations (TBPJO).* Conducted as part of a FERC relicensing process, this project involved monthly sampling during select periods to document abundance, size distribution, and habitat utilization of American Eels below Toledo Bend Dam. Mr. Jenkerson led electrofishing efforts to document habitats within the project area that are being utilized by American Eels. Data were evaluated to focus ramp-trap sampling in appropriate habitats, and therefore, assess the number of migrating American Eels in the project vicinity. As part of this project, Mr. Jenkerson also implemented capture-mark-recapture techniques using Passive Integrated Transponder (PIT) tags and Variable Implant Elastomer (VIE) tags to estimate population sizes.

Biomonitoring of the Comal and San Marcos Rivers (2017 – 2022). *Edwards Aquifer Authority (EAA).* Mr. Jenkerson was involved in a long-term monitoring project that examines stochastic and deterministic influences on the threatened and endangered species of the San Marcos and Comal Rivers ecosystems. For six years, He conducted seasonal multi-method sampling (e.g., drop-netting and dip-netting) to examine temporal trends in population performance/demographics and habitat use/availability of the federally endangered fountain darter. As part of this extensive Edwards Aquifer Authority Habitat Conservation Plan (EAHCP) bio-monitoring project, Mr. Jenkerson also led the assessment of Comal Springs salamander populations via field survey efforts (timed

active searches and water quality assessments) and reporting. In addition, Mr. Jenkerson utilized scuba to conduct seasonal count surveys for the San Marcos Salamander to monitor fluctuations in species' density.

Neches River Basin Mussel Surveys (2021 – 2022). *Lower Neches Valley Authority (LNVA).* Mr. Jenkerson conducted freshwater mussel surveys in the Neches River drainage to provide additional data for the LNVA on the distribution and population status of the ESA candidate, Louisiana Pigtoe. These surveys were performed within numerous canals within the Lower Neches River Basin. His responsibilities included the application of both timed qualitative and quantitative surveys, and species identification.

Sabine River Mussel Research (2022). *Sabine River Authority (SRA).* Working with a team of four biologists, Mr. Jenkerson conducted freshwater mussel surveys in the Sabine River drainage to provide additional data to the USFWS on the distribution and population status of the ESA candidate mussel species, Louisiana pigtoe and Texas heelsplitter. As part of this study, he also collected tissue samples for research collaborators for the assessment of population genetics. In addition, he assisted with a capture-mark-recapture study to assess how hydrology influences mussel population dynamics in the Sabine River.

Guadalupe River Dam Assessments (2022). *Guadalupe-Blanco River Authority (GBRA).* Mr. Jenkerson conducted field efforts related to assessing freshwater mussel assemblage structure and the distribution and abundance of the ESA candidate mussel species, Texas fatmucket and false spike. This work involved the application of extensive qualitative searches in river reaches below recently failed dams of the Upper Guadalupe River, with the goal of assessing species' response to changing waterway conditions (i.e., lentic to lotic). Mr. Jenkerson's duties included tactile and visual surveys, freshwater mussel identification, and reporting.

Aquatic Resource Relocations (2016 – Present). *Multiple clients with examples including the Texas Railroad Commission, the City of San Marcos, and the City of Blanco.* Mr. Jenkerson leads and assists with aquatic resource salvage/relocation efforts in aquatic systems throughout Texas. He has helped prepare Aquatic Resource Relocation Plans and executed salvage/relocation of freshwater mussels and fish and associated post-relocation monitoring activities. Several projects resulted in the successful relocation of state- and federally-listed mussels, fish, and aquatic grass. Mr. Jenkerson has experience using a variety of sampling methods tailored to site specific conditions in order to maximize salvage efficiency (e.g., seine-netting, backpack electrofishing, boat electrofishing) and is conversant with the current state-level sampling protocols.

Brazos Water Snake Comprehensive Ecology Study (2020 – 2021). *Brazos River Authority (BRA).* Mr. Jenkerson was the Principal Investigator in a multi-year research study concerning Brazos water snake life history, including a basin-wide distribution assessment to update historical records, application of a robust-design mark-recapture technique to assess population demography, radiotelemetry, and occupancy modeling. His responsibilities included the development and implementation of experimental design, the coordination of field efforts, extensive multi-method sampling within riverine and lacustrine environments, agency coordination, client communication, statistical analysis, and reporting.

Federal Mussel Permitting (2020 – 2022). *Brazos River Authority (BRA).* Mr. Jenkerson conducted field sampling to support the BRA in the development of a Candidate Conservation Agreement with Assurances (CCAA) for federal candidate freshwater mussel species false spike and Texas fawnsfoot under ESA section 10 permitting. These surveys were conducted to fill freshwater mussel distributional data gaps within the Brazos River basin. These data were then used to identify areas for long-term monitoring to assess changes in population dynamics of the covered species over the course of the permit. Mr. Jenkerson was involved in all field efforts and assisted with mussel identification and reporting.

Ecological Assessment in the Upper Guadalupe Estuary (2018 – 2020). *Guadalupe-Blanco River Authority (GBRA).* Mr. Jenkerson was the project manager for multi-year seasonal survey efforts related to aquatic community sampling in the upper Guadalupe Estuary as part of a Senate Bill 3 (SB3) requirement. This study was conducted to provide baseline data to investigate relationships between freshwater inflows and marsh biological productivity and utilized Texas Water Development Board (TWDB) funding. Mr. Jenkerson led the sampling of estuarine faunal communities and quantification habitat parameters. He was responsible for coordinating field efforts, leading field sampling efforts (drop-netting, avian point counts, and vegetation quadrat sampling), and the identification and quantification of fish and macrocrustacean taxa collected along a longitudinal salinity gradient.

Spot-tailed Earless Lizard Life History Study (2017 – 2019). *Texas Comptroller of Public Accounts.* Mr. Jenkerson was heavily involved in a long-term research project exploring spot-tailed earless lizard (*Holbrookia lacerata*) life history, including home range, movement, and habitat associations, with the goal of creating Candidate Conservation Agreement and management recommendations. His activities included coordination of field efforts, lizard tagging, radio telemetry, harmonic radar monitoring, toe-clipping and vouchering, drift fence construction and monitoring, active searches, statistics-based data analysis and modeling, and reporting. Texas Comptroller of Public Accounts. 2017–2019.

Reptile and Amphibian Inventories (2017 – 2020). *Multiple Clients.* Mr. Jenkerson has acted as the principal herpetologist involved in the planning, execution and reporting on multiple comprehensive species inventory-level projects which focused on imperiled species. This work was accomplished through the application of numerous site- and species-specific sampling methodologies across multiple states and for a diverse group of clients including the Department of Defense and river authorities. Some examples include: plethodontid and ambystomid salamander surveys in Tennessee (DoD, 2019), pit-fall trapping and auditory surveys in Nevada (DoD, 2018–2019), the application of drift fence arrays and turtle trapping along the Brazos River (BRA, 2017), and amphibian auditory surveys and fish sampling related to hydroelectric dam FERC relicensing along the Guadalupe River (City of Gonzales, 2016–2018).

Central Texas Mussel Research (2017 – 2018). *Texas State University and Texas Comptroller of Public Accounts.* Mr. Jenkerson led field crews to evaluate the freshwater mussel communities in Colorado, Brazos, and Guadalupe rivers drainages of central Texas, with an emphasis on investigating ESA mussel candidates Guadalupe Orb, Texas Pimpleback, false spike, Guadalupe fatmucket, Texas fatmucket, and Texas fawnsfoot. Specific objectives for the candidate species were to assess distribution, relative abundance, population demographics, and habitat associations. Mr. Jenkerson was responsible for surveying, species identification, and quantifying functional habitat parameters. This extensive effort provided Mr. Jenkerson hands on experience with the survey, handling, and identification of thousands of endemic Texas mussel species. Mr. Jenkerson also assisted with several applied research projects related to this work, including the execution of mark-recapture studies to gain insight into population dynamics and movement of mussel assemblages in the Colorado River.

Freshwater Fish and Mussel Inventories (2017 – Present). *Multiple clients.* Jenkerson leads and assists with species inventory efforts in aquatic systems across multiple states. This work typically involves the application of various freshwater mussel (qualitative and quantitative tactile and visual surveys) and fish sampling techniques (boat, barge, and backpack electro-fishing, gill-netting, and kick-netting) and species identification to provide an assessment of assemblage structure for the development of appropriate habitat management plans. His responsibilities include development and implementation of field protocol, client and agency communication, and reporting. Multiple clients with examples including Tetra Tech (2018 – 2019) and ALL consulting (2018), and the Department of Defense (2019).

Gonzales Hydroelectric Dam FERC Relicensing Project (2016 – 2018). *Schneider Engineering.* Mr. Jenkerson inventoried fish, wildlife, and botanical resources in and around a hydroelectric dam site in Gonzales, Texas. Mr. Jenkerson was responsible for data collection and analysis, including an assessment of impingement, entrainment, and American eel passage. His responsibilities included the application of electrofishing, gill nets, eel pots, and eel ramp traps. Mr. Jenkerson also conducted all reporting related to desktop analysis assessing the potential impacts of dam operations on local fish assemblages.

PUBLICATIONS/PRESENTATIONS

- Jenkerson, J.T. 2022. Findings of a Long-term Ecological Assessment in the Upper Guadalupe Estuary. Presenter. Texas Water Development Board SB3 GSA BBASC Stakeholders meeting.
- Jenkerson, J.T. 2022. Reptiles and amphibians of the Edwards Plateau: ecological relevance and sampling techniques. Seminar module instructor, Texas Hydrogeology Workshop, Cave without a Name, Boerne, Texas.
- Jenkerson, J.T. and C.M. Jenkerson. 2019. Geographic Distribution: *Hemidactylus turcicus* (Mediterranean Gecko). *Herpetological Review*. 50(1): 799.
- Jenkerson, J.T., J.D. Owen, and A.S. Hudnall. 2018. Geographic Distribution: *Plestiodon obsoletus* (Great Plains Skink). *Herpetological Review*. 50(1): 802.
- Jenkerson, J.T. 2018. Use of T-bar anchor tags for marking a terrestrial lizard species (*Sceloporus poinsettii*). *Herpetological Review*.
- Jenkerson, J.T., D.M. Spontak, and J.D. Owen. 2017. Geographical Distribution: *Incilius nebulifer* (Gulf Coast Toad). *Herpetological Review*. 48 (4): 807.
- Jenkerson, J.T., J.D. Owen, J.T. Jackson, J.R. Hull, and D.M. Spontak. 2017. Geographical Distribution: *Arizona elegans* (Kansas Glossy Snake). *Herpetological Review*. 48 (4): 812.
- Jenkerson, J.T. 2016. Patch occupancy and population density of the crevice spiny lizard (*Sceloporus poinsettii*) in the Central Mineral Region of Texas. MS Thesis. Texas State University, San Marcos. Available online: <https://digital.library.txstate.edu/handle/10877/6061>.
- Jenkerson, J.T. 2016. Patch occupancy of the crevice spiny lizard (*Sceloporus poinsettii*) in the Central Mineral Region of Texas. Texas Chapter of the Wildlife Society Annual Meeting, San Antonio.
- Jenkerson, J.T. 2015. An alternate tagging method for marking saxicolous lizards. Guest speaker at Wildlife Society club meeting, Texas State University, San Marcos, Texas.

PERMITS

USFWS Recovery Permit: Houston toad, Barton Springs Salamander, Austin Blind Salamander, Georgetown Salamander, Jollyville Plateau Salamander, Salado Salamander, and San Marcos Salamander experimental research and associated management activities authorization (#: *ESPER0029468*).

TPWD Scientific Permit for Research: catch, salvage, and release of freshwater mussels and fish, and electrofishing team lead authorization (#: *SPR-0223-022*).

Miranda Reinhard
Environmental Scientist
Senior,
Watershed Protection
Department

LOYOLA FLATS

6700 DECKER LANE, 78724
SP-2024-0147C.SH

PROJECT LOCATION

☒  Edwards Aquifer Recharge

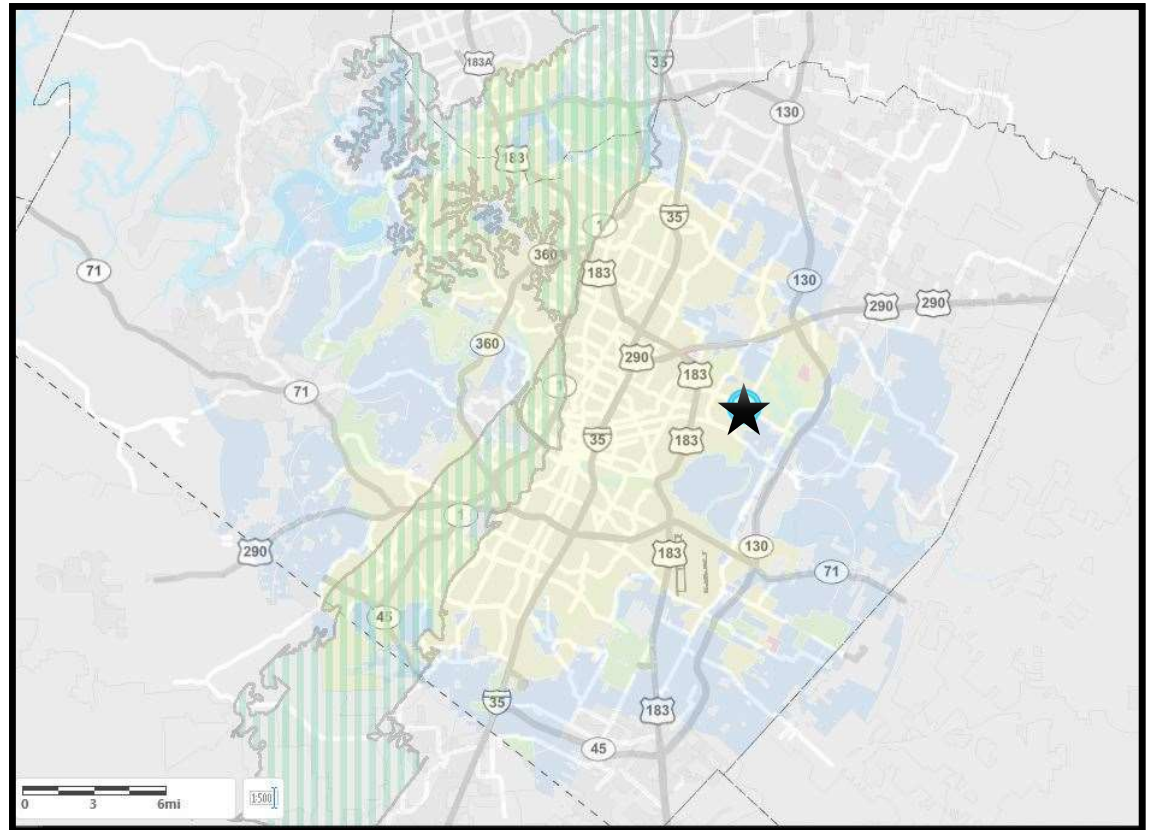
Zone

☒  Jurisdiction

 FULL PURPOSE

 LIMITED PURPOSE

 EXTRATERRITORIAL



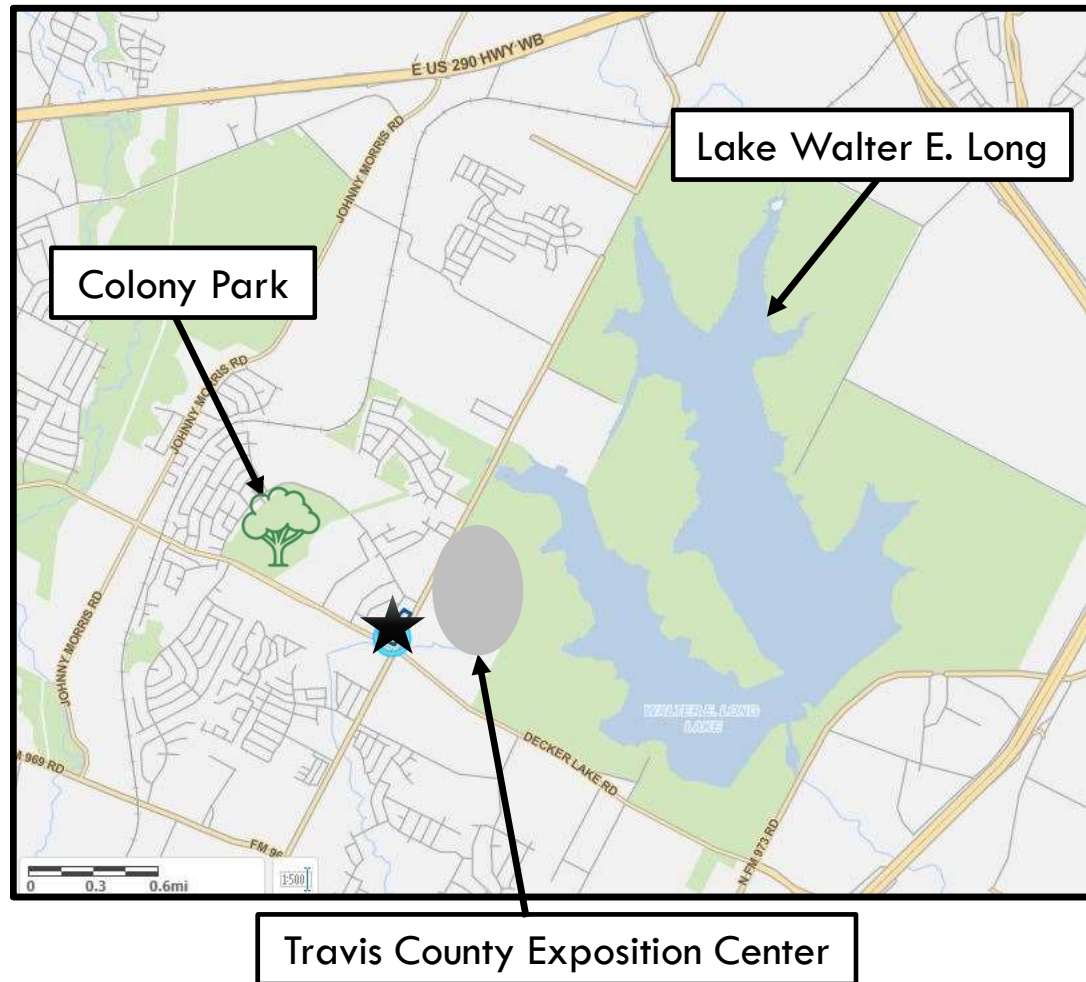
PROPERTY DATA

- Elm Creek Watershed
- Suburban Classification
- Desired Development Zone
- Full Purpose Jurisdiction
- Council District 1



PROPERTY DATA

- ★ Project Location
- Lake Walter E. Long
- 🌳 Colony Park
- Travis County Exposition Center



PROPERTY DATA

- Environmental features:
 - Critical Water Quality Zone
 - Wetland CEF
- 2 Wetland Critical Environmental Features (CEFs) on-site
- Partially excavated detention pond from previous site plan



VARIANCE REQUEST

LDC 25-8-261(G) – CRITICAL WATER QUALITY ZONE DEVELOPMENT

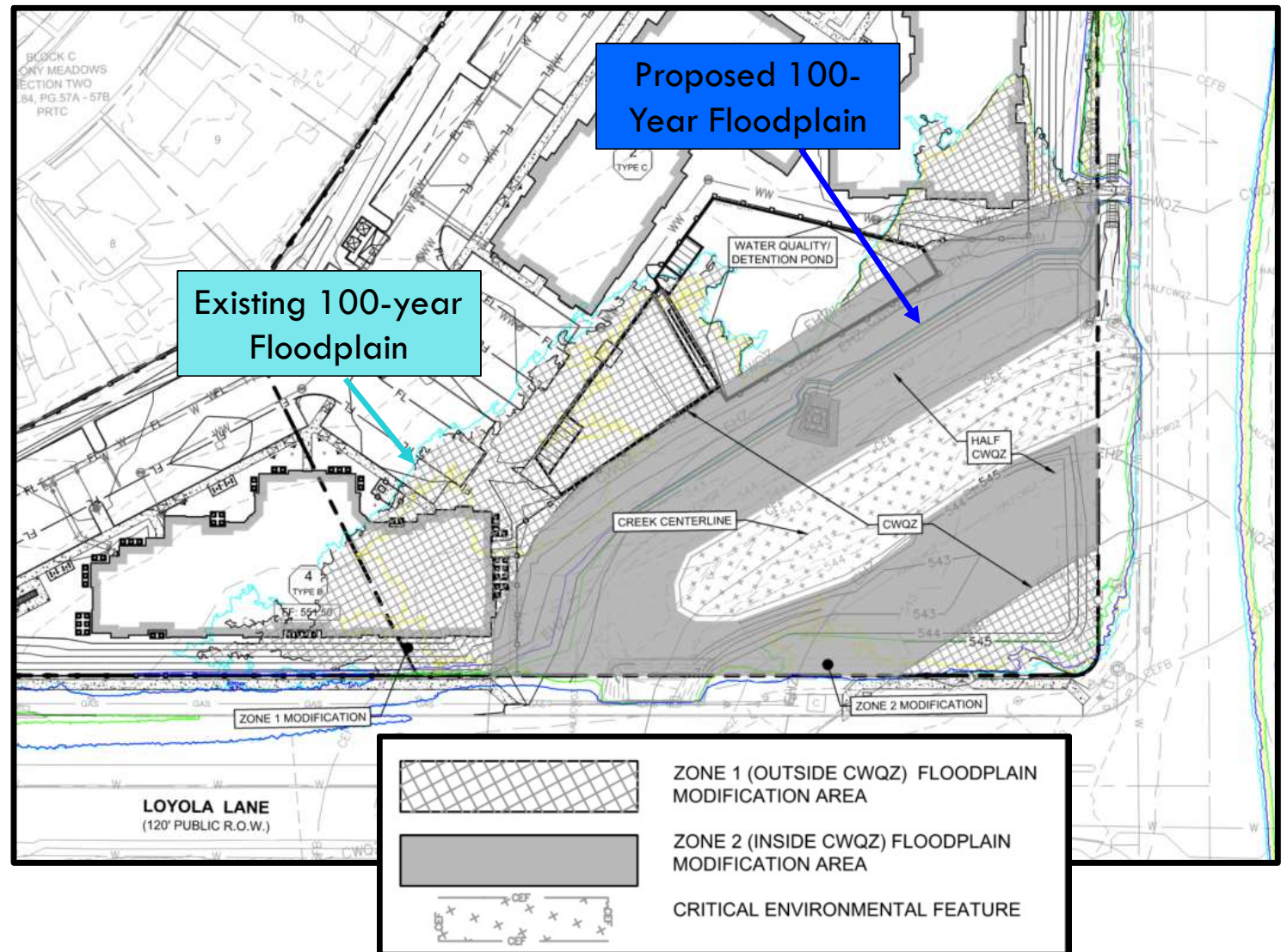
Floodplain modifications prohibited in the CWQZ unless one of the exemptions is met.

1. The variance request is to allow floodplain modification for development within the CWQZ.

VARIANCE REQUEST

25-8-261(G)

- Floodplain modifications are prohibited in the CWQZ unless one of the exemptions is met.

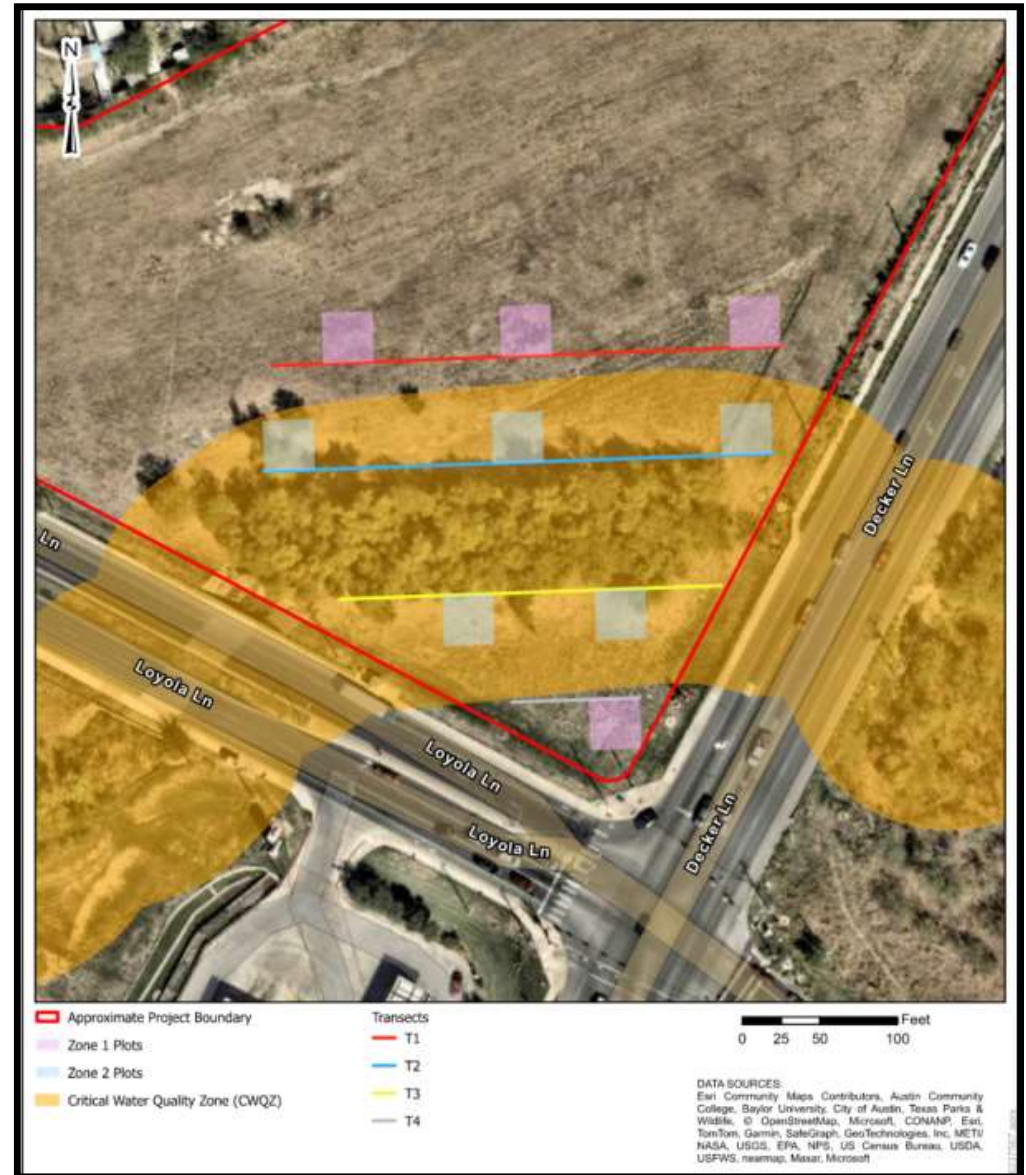


VARIANCE REQUEST

Functional Assessment of Floodplain Health

(ECM Appendix X):

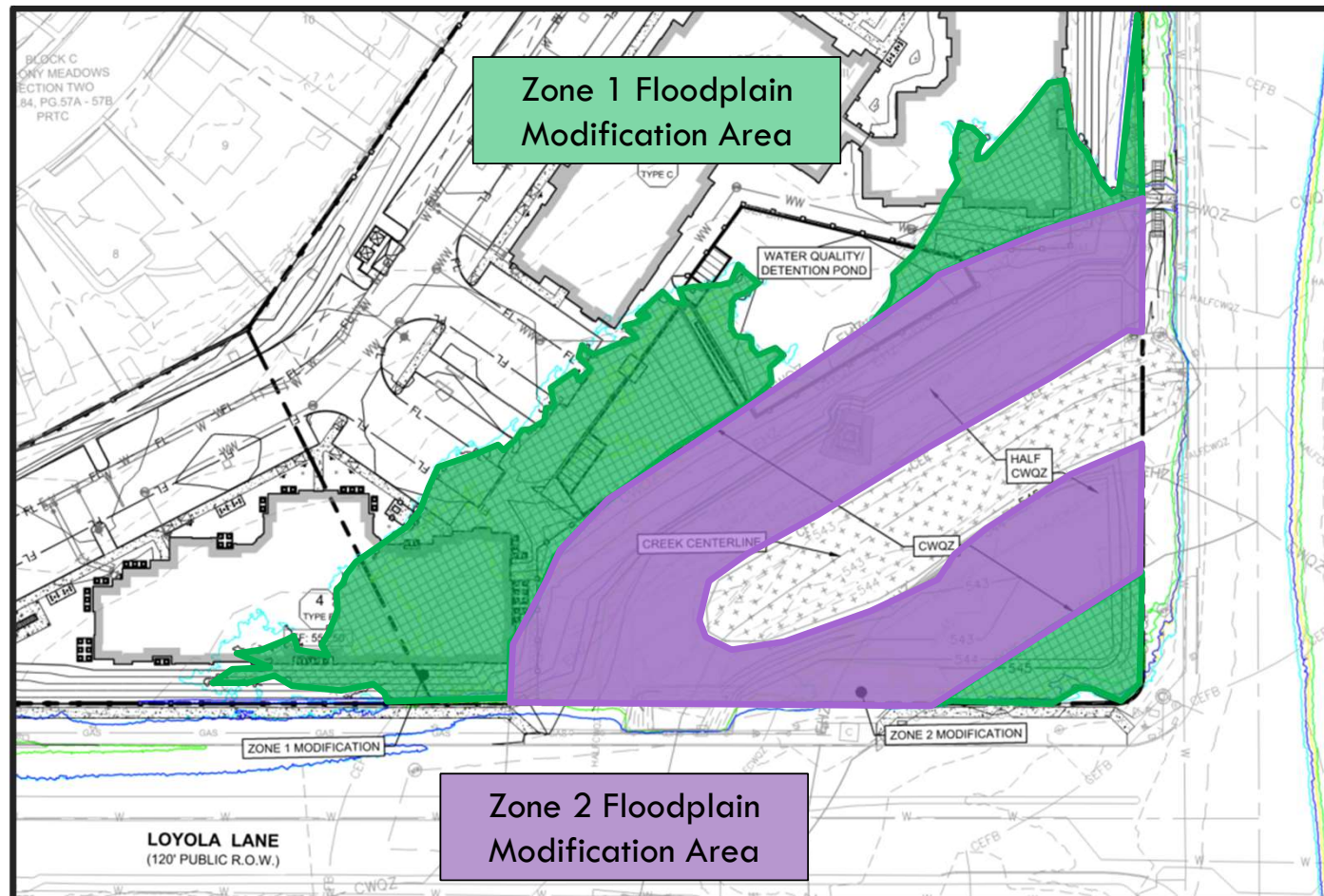
- Floodplain is in “Fair” condition
- Excellent → Good → Fair → Poor



VARIANCE REQUEST

Floodplain Restoration/Mitigation Ratios ECM 1.7.5 & ECM 1.7.6

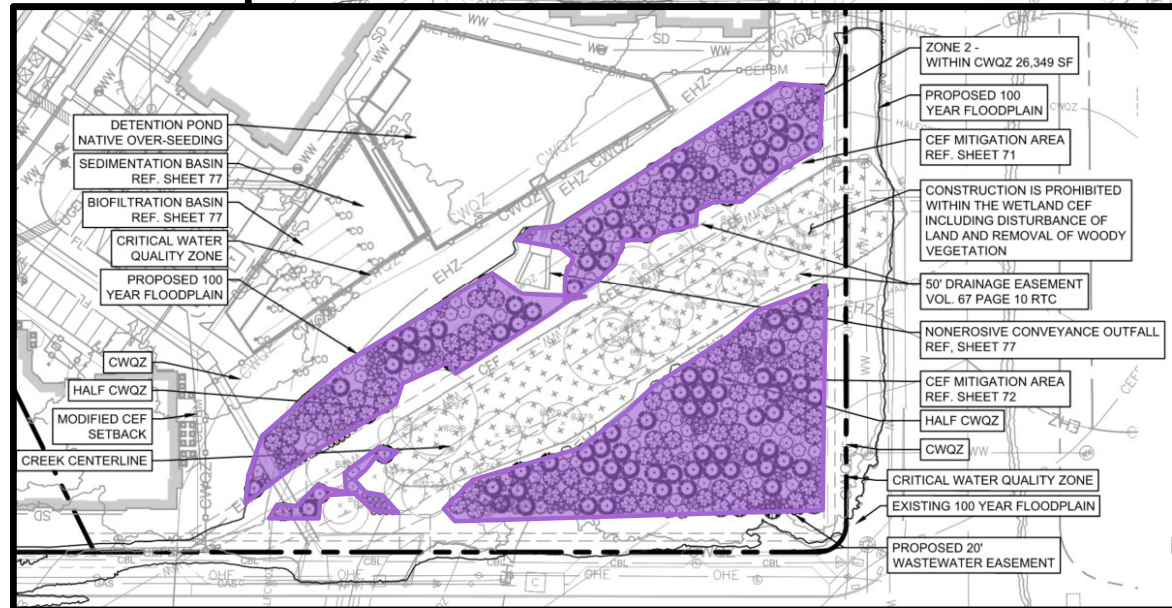
- Total Modification Area: 1.96 acres
- Zone 1 (Floodplain outside the CWQZ)
 - 0.84 acres
 - FAIR 3:1
 - 2.52 acres (Required Restoration/Mitigation)
- Zone 2 (Floodplain within the CWQZ)
 - 1.12 acres
 - FAIR 6:1
 - 6.72 acres (Required Restoration/Mitigation)
- **Total Required Restoration and/or Mitigation Area: 9.24 acres**



VARIANCE REQUEST

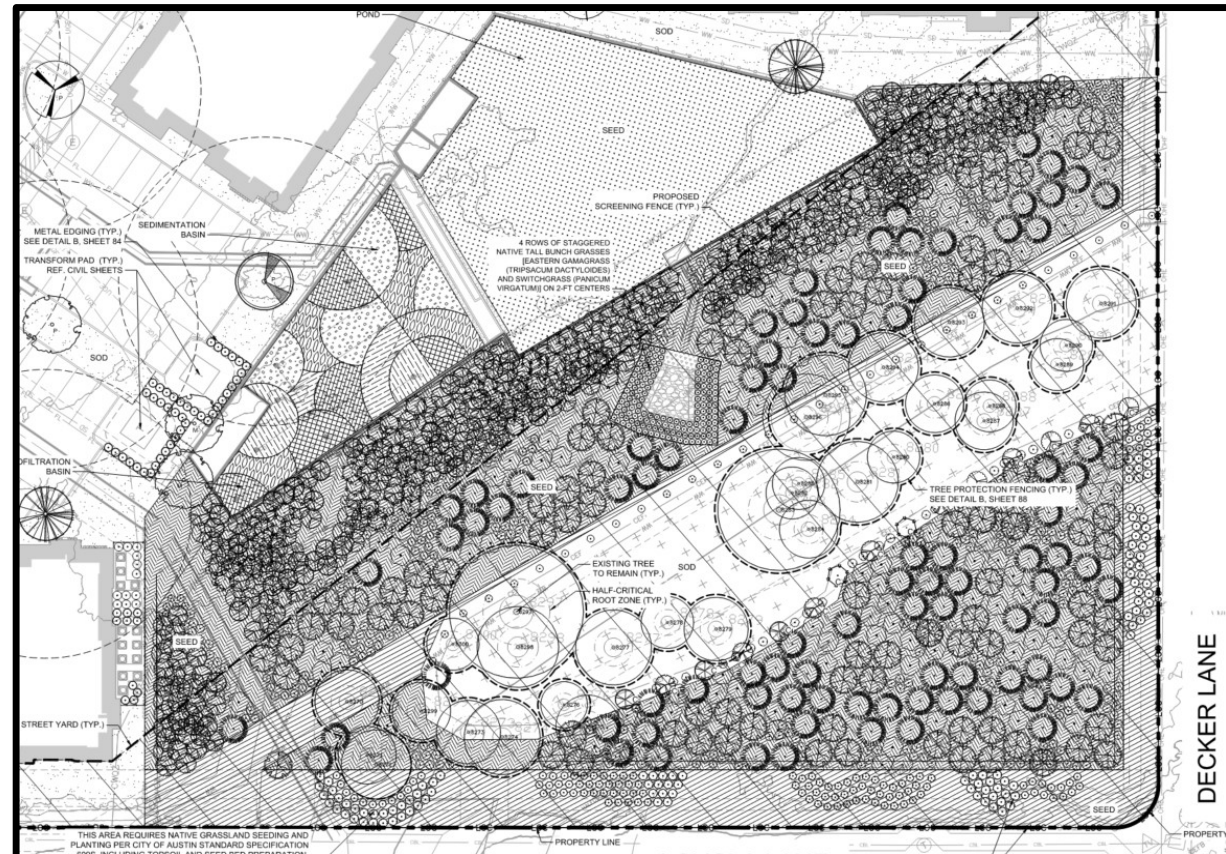
Floodplain Restoration/Mitigation Ratios ECM 1.7.5 & ECM 1.7.6

- Total Required Restoration and/or Mitigation Area:) **9.24 Acres**
- Zone 1 (Floodplain outside the CWQZ)
 - 2.52 acres
 - 0 acres (Restored)
 - 2.52 acres (Mitigated)
- **Zone 2 (Floodplain within the CWQZ)**
 - 6.72 acres
 - 0.61 acres (Restored)
 - 6.11 acres (Mitigated)
- **Total Restoration Area: 0.61 Acres**
- **Total Mitigation Area: 8.63 Acres**
 - \$382,157.63 Riparian Zone Mitigation Fund payment



Total Restoration Area (Wetland CEF Mitigation & Floodplain Restoration)

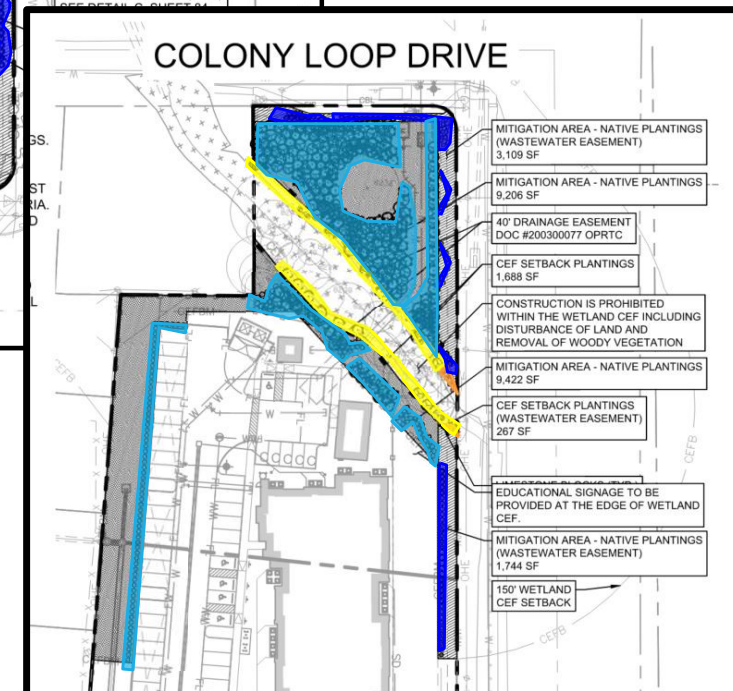
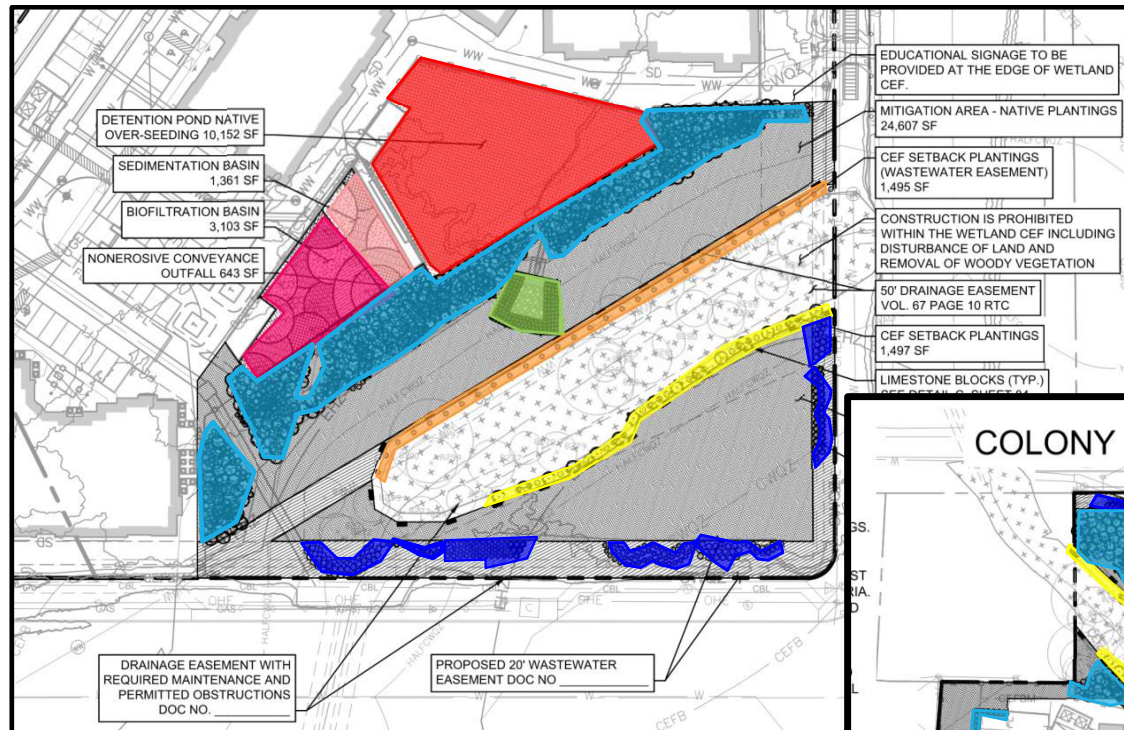
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VARIANCE REQUEST

Enhancements

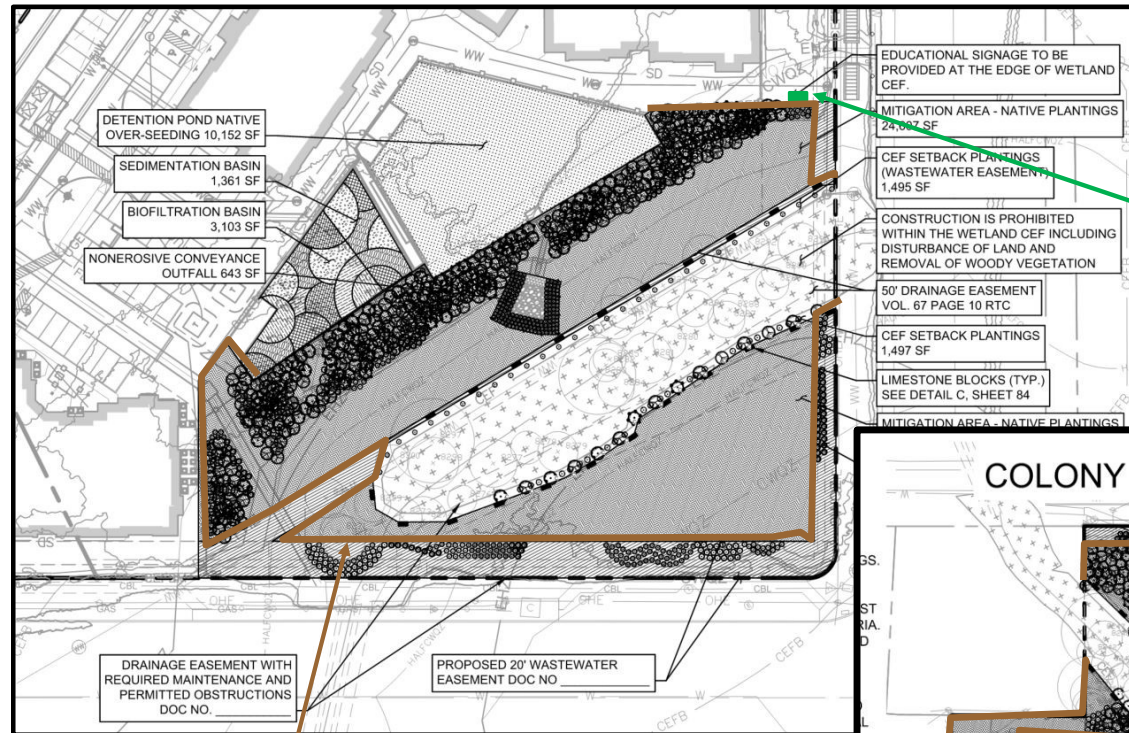
- ~44,000 sq ft of additional wetland mitigation
 - Native plantings in biofiltration pond
 - Native seeding in detention pond
 - Enhanced outfall
 - Native trees, shrubs, and bunchgrasses in CEF setbacks & mitigation areas
- Native pollinator species
 - Wetland CEF mitigation plantings
 - Floodplain restoration plantings



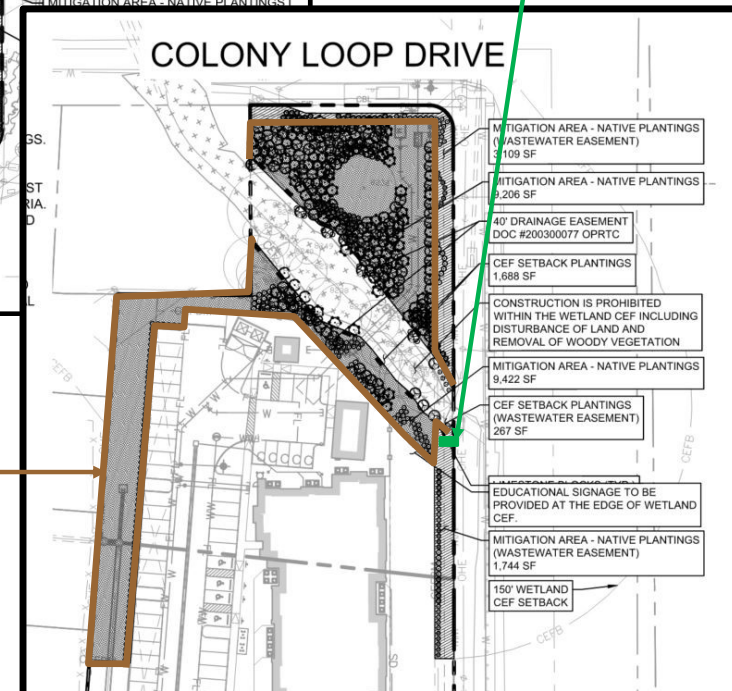
VARIANCE REQUEST

Enhancements:

- Edge barrier of limestone blocks around perimeter of modified CEF setbacks/restoration areas
- Wetland CEF educational signage



Edge barrier



Educational signage

VARIANCE RECOMMENDATION

Staff determines that the findings of fact have been met:

- Similar variances have been granted for projects with similar code requirements.
- The variance
 - Is necessitated by topographic features, not design choice;
 - Is the minimum deviation from the code; and
 - Is unlikely to result in harmful environmental consequences.
- Water quality will be equal to or better than water quality without the variance.

VARIANCE CONDITIONS

Staff recommends this variance, with the following conditions:

1. Provide ~44,000 square feet of additional wetland mitigation including: 1) native plantings in sedimentation and filtration basins of the biofiltration pond, 2) low-grow native seeding in the detention pond, 3) an enhanced nonerosive pond outfall, 4) planting of native trees, shrubs and bunchgrasses in CEF setbacks and mitigation areas. The Director of WPD may reduce this requirement administratively to allow for a future trail connection to Colony Loop Drive.
2. Provide native pollinator species for wetland CEF mitigation and floodplain restoration plantings.
3. Provide an edge barrier of limestone blocks around the perimeter of the modified CEF setbacks/restoration areas to prevent mowing and/or encroachment in these areas.

VARIANCE CONDITIONS

Staff recommends this variance, with the following conditions:

4. Provide wetland CEF educational signage next to the CEF setbacks/restoration areas.
5. Provide floodplain restoration plantings of native trees and shrubs for the remaining open area (26,349 square feet/0.61 acres) maximizing restoration within the CWQZ and enhancing the floodplain from an existing condition of Fair to Excellent.
6. Pay \$382,157.63 into the Riparian Zone Mitigation Fund for the remaining required floodplain mitigation (376,326 square feet/8.63 acres) using the appropriate ratios per ECM 1.7.6.

THANK YOU

Questions?

