Texas Commission on Environmental Quality

Edwards Aquifer Application Cover Page

Our Review of Your Application

The Edwards Aquifer Program staff conducts an administrative and technical review of all applications. The turnaround time for administrative review can be up to 30 days as outlined in 30 TAC 213.4(e). Generally administrative completeness is determined during the intake meeting or within a few days of receipt. The turnaround time for technical review of an administratively complete Edwards Aquifer application is 90 days as outlined in 30 TAC 213.4(e). Please know that the review and approval time is directly impacted by the quality and completeness of the initial application that is received. In order to conduct a timely review, it is imperative that the information provided in an Edwards Aquifer application include final plans, be accurate, complete, and in compliance with 30 TAC 213.

Administrative Review

1. Edwards Aquifer applications must be deemed administratively complete before a technical review can begin. To be considered administratively complete, the application must contain completed forms and attachments, provide the requested information, and meet all the site plan requirements. The submitted application and plan sheets should be final plans. Please submit one full-size set of plan sheets with the original application, and half-size sets with the additional copies.

   To ensure that all applicable documents are included in the application, the program has developed tools to guide you and web pages to provide all forms, checklists, and guidance. Please visit the below website for assistance: http://www.tceq.texas.gov/field/eapp.

2. This Edwards Aquifer Application Cover Page form (certified by the applicant or agent) must be included in the application and brought to the administrative review meeting.

3. Administrative reviews are scheduled with program staff who will conduct the review. Applicants or their authorized agent should call the appropriate regional office, according to the county in which the project is located, to schedule a review. The average meeting time is one hour.

4. In the meeting, the application is examined for administrative completeness. Deficiencies will be noted by staff and emailed or faxed to the applicant and authorized agent at the end of the meeting, or shortly after. Administrative deficiencies will cause the application to be deemed incomplete and returned.

   An appointment should be made to resubmit the application. The application is re-examined to ensure all deficiencies are resolved. The application will only be deemed administratively complete when all administrative deficiencies are addressed.

5. If an application is received by mail, courier service, or otherwise submitted without a review meeting, the administrative review will be conducted within 30 days. The applicant and agent will be contacted with the results of the administrative review. If the application is found to be administratively incomplete, it can be retrieved from the regional office or returned by regular mail. If returned by mail, the regional office may require arrangements for return shipping.

6. If the geologic assessment was completed before October 1, 2004 and the site contains “possibly sensitive” features, the assessment must be updated in accordance with the *Instructions to Geologists* (TCEQ-0585 Instructions).

Technical Review

1. When an application is deemed administratively complete, the technical review period begins. The regional office will distribute copies of the application to the identified affected city, county, and groundwater conservation district whose jurisdiction includes the subject site. These entities and the public have 30 days to provide comments on the application to the regional office. All comments received are reviewed by TCEQ.

2. A site assessment is usually conducted as part of the technical review, to evaluate the geologic assessment and observe existing site conditions. The site must be accessible to our staff. The site boundaries should be

clearly marked, features identified in the geologic assessment should be flagged, roadways marked and the alignment of the Sewage Collection System and manholes should be staked at the time the application is submitted. If the site is not marked the application may be returned.

3. We evaluate the application for technical completeness and contact the applicant and agent via Notice of Deficiency (NOD) to request additional information and identify technical deficiencies. There are two deficiency response periods available to the applicant. There are 14 days to resolve deficiencies noted in the first NOD. If a second NOD is issued, there is an additional 14 days to resolve deficiencies. If the response to the second notice is not received, is incomplete or inadequate, or provides new information that is incomplete or inadequate, the application must be withdrawn or will be denied. Please note that because the technical review is underway, whether the application is withdrawn or denied **the application fee will be forfeited**.

4. The program has 90 calendar days to complete the technical review of the application. If the application is technically adequate, such that it complies with the Edwards Aquifer rules, and is protective of the Edwards Aquifer during and after construction, an approval letter will be issued. Construction or other regulated activity may not begin until an approval is issued.

Mid-Review Modifications

It is important to have final site plans prior to beginning the permitting process with TCEQ to avoid delays.

Occasionally, circumstances arise where you may have significant design and/or site plan changes after your Edwards Aquifer application has been deemed administratively complete by TCEQ. This is considered a "Mid-Review Modification". Mid-Review Modifications may require redistribution of an application that includes the proposed modifications for public comment.

If you are proposing a Mid-Review Modification, two options are available:

- If the technical review has begun your application can be denied/withdrawn, your fees will be forfeited, and the plan will have to be resubmitted.
- TCEQ can continue the technical review of the application as it was submitted, and a modification application can be submitted at a later time.

If the application is denied/withdrawn, the resubmitted application will be subject to the administrative and technical review processes and will be treated as a new application. The application will be redistributed to the affected jurisdictions.

Please contact the regional office if you have questions. If your project is located in Williamson, Travis, or Hays County, contact TCEQ's Austin Regional Office at 512-339-2929. If your project is in Comal, Bexar, Medina, Uvalde, or Kinney County, contact TCEQ's San Antonio Regional Office at 210-490-3096

Please fill out all required fields below and submit with your application.

1. Regulated Entity Name: North Austin Crossroads Community Church						**2. Regulated Entity No.:**			
3. Customer Name: North Austin Crossroads Community Church						**4. Customer No.:**			
5. Project Type: **(Please circle/check one)**	New		Modification			Extension		Exception	
6. Plan Type: **(Please circle/check one)**	WPAP	CZP	SCS	UST	AST	EXP	EXT	Technical Clarification	Optional Enhanced Measures
7. Land Use: **(Please circle/check one)**	Residential		Non-residential			**8. Site (acres):**			16.495
9. Application Fee:	$6,500		**10. Permanent BMP(s):**					Sand Filter	
11. SCS (Linear Ft.):			**12. AST/UST (No. Tanks):**						
13. County:	Williamson		**14. Watershed:**					Lake Creek	

Application Distribution

Instructions: Use the table below to determine the number of applications required. One original and one copy of the application, plus additional copies (as needed) for each affected incorporated city, county, and groundwater conservation district are required. Linear projects or large projects, which cross into multiple jurisdictions, can require additional copies. Refer to the "Texas Groundwater Conservation Districts within the EAPP Boundaries" map found at:

http://www.tceq.texas.gov/assets/public/compliance/field_ops/eapp/EAPP%20GWCD%20map.pdf

For more detailed boundaries, please contact the conservation district directly.

Austin Region			
County:	**Hays**	**Travis**	**Williamson**
Original (1 req.)	__	__	__
Region (1 req.)	__	__	__
County(ies)	__	__	__
Groundwater Conservation District(s)	__Edwards Aquifer Authority __Barton Springs/ Edwards Aquifer __Hays Trinity __Plum Creek	__Barton Springs/ Edwards Aquifer	NA
City(ies) Jurisdiction	__Austin __Buda __Dripping Springs __Kyle __Mountain City __San Marcos __Wimberley __Woodcreek	__Austin __Bee Cave __Pflugerville __Rollingwood __Round Rock __Sunset Valley __West Lake Hills	__Austin __Cedar Park __Florence X Georgetown __Jerrell __Leander __Liberty Hill __Pflugerville __Round Rock

San Antonio Region					
County:	**Bexar**	**Comal**	**Kinney**	**Medina**	**Uvalde**
Original (1 req.)	__	__	__	__	__
Region (1 req.)	__	__	__	__	__
County(ies)	__	__	__	__	__
Groundwater Conservation District(s)	__ Edwards Aquifer Authority __Trinity-Glen Rose	__Edwards Aquifer Authority	__Kinney	__EAA __Medina	__EAA __Uvalde
City(ies) Jurisdiction	__Castle Hills __Fair Oaks Ranch __Helotes __Hill Country Village __Hollywood Park __San Antonio (SAWS) __Shavano Park	__Bulverde __Fair Oaks Ranch __Garden Ridge __New Braunfels __Schertz	NA	__San Antonio ETJ (SAWS)	NA

I certify that to the best of my knowledge, that the application is complete and accurate. This application is hereby submitted to TCEQ for administrative review and technical review. Jen Henderson
Print Name of Customer/Authorized Agent
Signature of Customer/Authorized Agent 10/31/2025 Date

FOR TCEQ INTERNAL USE ONLY				
Date(s)Reviewed:		Date Administratively Complete:		
Received From:		Correct Number of Copies:		
Received By:		Distribution Date:		
EAPP File Number:		Complex:		
Admin. Review(s) (No.):		No. AR Rounds:		
Delinquent Fees (Y/N):		Review Time Spent:		
Lat./Long. Verified:		SOS Customer Verification:		
Agent Authorization Complete/Notarized (Y/N):		Fee Check:	Payable to TCEQ (Y/N):	
Core Data Form Complete (Y/N):			Signed (Y/N):	
Core Data Form Incomplete Nos.:			Less than 90 days old (Y/N):	

General Information Form

Texas Commission on Environmental Quality

For Regulated Activities on the Edwards Aquifer Recharge and Transition Zones and Relating to 30 TAC §213.4(b) & §213.5(b)(2)(A), (B) Effective June 1, 1999

To ensure that the application is administratively complete, confirm that all fields in the form are complete, verify that all requested information is provided, consistently reference the same site and contact person in all forms in the application, and ensure forms are signed by the appropriate party.

Note: Including all the information requested in the form and attachments contributes to more streamlined technical reviews.

Signature

To the best of my knowledge, the responses to this form accurately reflect all information requested concerning the proposed regulated activities and methods to protect the Edwards Aquifer. This **General Information Form** is hereby submitted for TCEQ review. The application was prepared by:

Print Name of Customer/Agent: Jen Henderson

Date: 10/14/2025

Signature of Customer/Agent:

Project Information

1. Regulated Entity Name: North Austin Crossroads Community Church
2. County: Williamson
3. Stream Basin: Lake Creek
4. Groundwater Conservation District (If applicable): _____
5. Edwards Aquifer Zone:

   [X] Recharge Zone
   [ ] Transition Zone

6. Plan Type:

   [X] WPAP
   [ ] SCS
   [ ] Modification
   [ ] AST
   [ ] UST
   [ ] Exception Request

7. Customer (Applicant):

Contact Person: Brady Traywick
Entity: North Austin Crossroads Community Church
Mailing Address: 15800 Crossroads Dr.
City, State: Austin, Texas Zip: 78717
Telephone: 512.623.0600 FAX: _____
Email Address: brady@crossroadschurchaustin.com

8. Agent/Representative (If any):

Contact Person: Jen Henderson, P.E.
Entity: Henderson Professional Engineers
Mailing Address: 600 Round Rock West Drive, Suite 604
City, State: Round Rock, Texas Zip: 78681
Telephone: 737.203.8953 FAX: _____
Email Address: hpe@hendersonpe.com

9. Project Location:

☐ The project site is located inside the city limits of _____.
☒ The project site is located outside the city limits but inside the ETJ (extra-territorial jurisdiction) of Austin
☐ The project site is not located within any city's limits or ETJ.

10. ☒ The location of the project site is described below. The description provides sufficient detail and clarity so that the TCEQ's Regional staff can easily locate the project and site boundaries for a field investigation.

15800 Crossroads Dr. Austin, TX 78717

11. ☒ **Attachment A – Road Map**. A road map showing directions to and the location of the project site is attached. The project location and site boundaries are clearly shown on the map.

12. ☒ **Attachment B - USGS / Edwards Recharge Zone Map**. A copy of the official 7 ½ minute USGS Quadrangle Map (Scale: 1" = 2000') of the Edwards Recharge Zone is attached. The map(s) clearly show:

☒ Project site boundaries.
☒ USGS Quadrangle Name(s).
☒ Boundaries of the Recharge Zone (and Transition Zone, if applicable).
☒ Drainage path from the project site to the boundary of the Recharge Zone.

13. ☒ **The TCEQ must be able to inspect the project site or the application will be returned**. Sufficient survey staking is provided on the project to allow TCEQ regional staff to locate the boundaries and alignment of the regulated activities and the geologic or manmade features noted in the Geologic Assessment.

☐ Survey staking will be completed by this date: _____

14. [X] **Attachment C – Project Description**. Attached at the end of this form is a detailed narrative description of the proposed project. The project description is consistent throughout the application and contains, at a minimum, the following details:

- [X] Area of the site
- [X] Offsite areas
- [X] Impervious cover
- [X] Permanent BMP(s)
- [X] Proposed site use
- [X] Site history
- [X] Previous development
- [X] Area(s) to be demolished

15. Existing project site conditions are noted below:

- [ ] Existing commercial site
- [ ] Existing industrial site
- [ ] Existing residential site
- [ ] Existing paved and/or unpaved roads
- [X] Undeveloped (Cleared)
- [ ] Undeveloped (Undisturbed/Uncleared)
- [ ] Other: _____

Prohibited Activities

16. [X] I am aware that the following activities are prohibited on the Recharge Zone and are not proposed for this project:

(1) Waste disposal wells regulated under 30 TAC Chapter 331 of this title (relating to Underground Injection Control);

(2) New feedlot/concentrated animal feeding operations, as defined in 30 TAC §213.3;

(3) Land disposal of Class I wastes, as defined in 30 TAC §335.1;

(4) The use of sewage holding tanks as parts of organized collection systems; and

(5) New municipal solid waste landfill facilities required to meet and comply with Type I standards which are defined in §330.41(b), (c), and (d) of this title (relating to Types of Municipal Solid Waste Facilities).

(6) New municipal and industrial wastewater discharges into or adjacent to water in the state that would create additional pollutant loading.

17. [X] I am aware that the following activities are prohibited on the Transition Zone and are not proposed for this project:

(1) Waste disposal wells regulated under 30 TAC Chapter 331 (relating to Underground Injection Control);

(2) Land disposal of Class I wastes, as defined in 30 TAC §335.1; and

(3) New municipal solid waste landfill facilities required to meet and comply with Type I standards which are defined in §330.41 (b), (c), and (d) of this title.

Administrative Information

18. The fee for the plan(s) is based on:

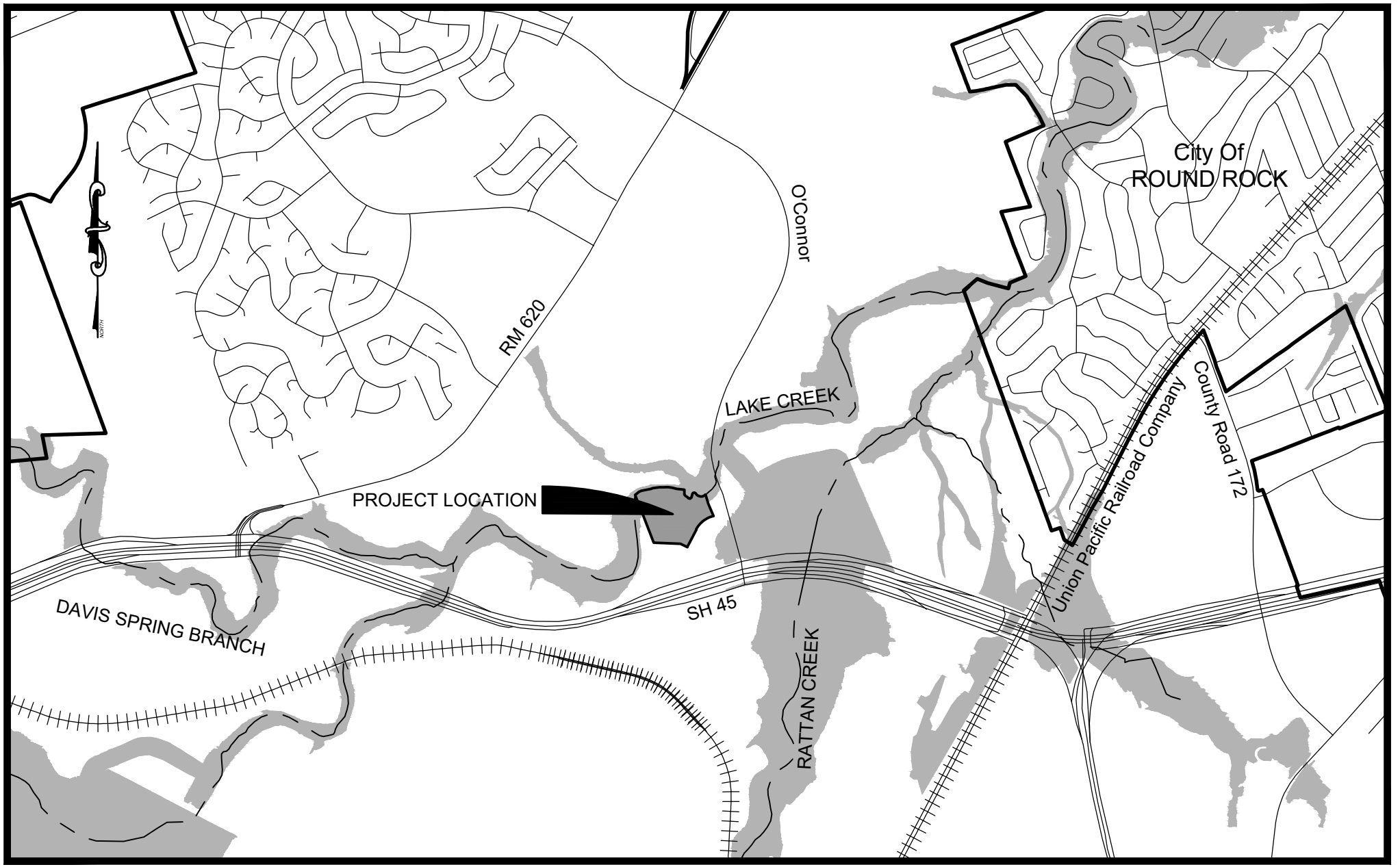
- [X] For a Water Pollution Abatement Plan or Modification, the total acreage of the site where regulated activities will occur.
- [ ] For an Organized Sewage Collection System Plan or Modification, the total linear footage of all collection system lines.
- [ ] For a UST Facility Plan or Modification or an AST Facility Plan or Modification, the total number of tanks or piping systems.
- [ ] A request for an exception to any substantive portion of the regulations related to the protection of water quality.
- [ ] A request for an extension to a previously approved plan.

19. [X] Application fees are due and payable at the time the application is filed. If the correct fee is not submitted, the TCEQ is not required to consider the application until the correct fee is submitted. Both the fee and the Edwards Aquifer Fee Form have been sent to the Commission's:

- [ ] TCEQ cashier
- [X] Austin Regional Office (for projects in Hays, Travis, and Williamson Counties)
- [ ] San Antonio Regional Office (for projects in Bexar, Comal, Kinney, Medina, and Uvalde Counties)

20. [X] Submit one (1) original and one (1) copy of the application, plus additional copies as needed for each affected incorporated city, groundwater conservation district, and county in which the project will be located. The TCEQ will distribute the additional copies to these jurisdictions. The copies must be submitted to the appropriate regional office.

21. [X] No person shall commence any regulated activity until the Edwards Aquifer Protection Plan(s) for the activity has been filed with and approved by the Executive Director.

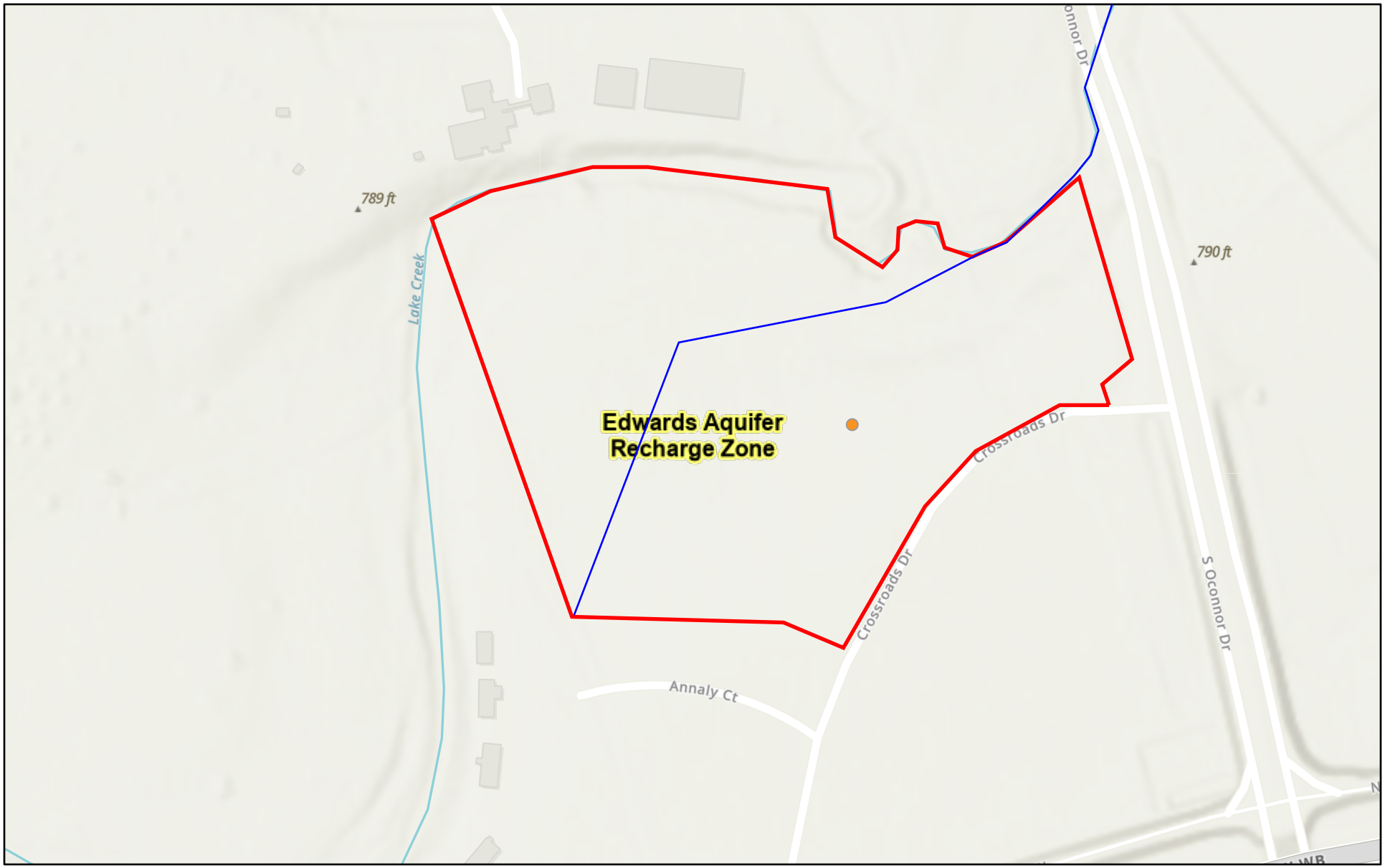


VICINITY MAP

SCALE: 1"=2,000'

MAPSCO GRID K-27

Edwards Aquifer Viewer Custom Print



10/7/2025, 2:50:57 PM

ArcGIS World Geocoding Service

TCEQ_EDWARDS_OFFICIAL_MAPS

7.5 Minute Quad Grid

TX Counties

Edwards Aquifer Label

World_Hillshade

1:3,565

0 0.03 0.05 0.1 mi

0 0.04 0.08 0.16 km

Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, (c) OpenStreetMap contributors, and the GIS User Community, TCEQ, Sources: Esri, Maxar,

Project Description

The project site is 16.495 acres located at the northwest corner of the O'Conner Drive and State Highway 45 intersection. The address is 15800 Crossroads Dr, Austin, TX 78717. The project site is located within the City of Austin Extraterritorial Jurisdiction (ETJ), Williamson County, Texas. A portion of the project site is located in the 1% annual chance (100-year) floodplain per the FEMA map panel 48491C0630F effective December 20, 2019. The project site is located within the Edwards Aquifer Recharge Zone. Hydrologic soil group information came from digital information served by the United States Department of Agriculture Natural Resources Conservation Service through the Web Soil Survey 2.0 portal. The project site is entirely type 'D' soil.

The project site pre-developed conditions is undeveloped with no existing impervious cover. Most of the site slopes at approximately 1 to 4%, with steeper slopes (>15%) along Lake Creek. The project site is mostly an open field with a mix of grasses and clusters of trees.

A tree survey was conducted on the site by Early Land Surveying on October of 2018. The majority of the surveyed trees are located in the north half of the property, which are primarily pecan, cedar elm, and live oak. The existing impervious cover of the project site is 0% and the proposed is 16.45%.

The proposed development of this project includes a roughly 18,000 sf church, a new parking lot, a new septic field, and a new water quality pond. The drainage study and calculations took into consideration the future development plans, which include two additional buildings, totaling approximately 27,000 sf, with sidewalks, parking and drive lanes to serve the buildings. The detention and water quality controls were sized accordingly for a property with a percent impervious cover of 29.77%.

A detention pond is planned for this project. For water quality, sedimentation and filtration basins are planned. No demolition of impervious cover is planned, removal of trees is planned.

WCAD

Property	Owner	Property Address	Tax Year	2026 Market Value
R582686	NORTH AUSTIN CROSSROADS COMMUNITY CHURCH	15800 CROSSROADS DR, AUSTIN, TX 78717	2026	N/A

Page: Property Details

2026 GENERAL INFORMATION

Property Status	Active
Property Type	Land - Transitional
Legal Description	S11974 - GENE TAYLOR TRACT, BLOCK A, Lot 1 & 2, ACRES 17.706
Neighborhood	R30 - West Round Rock Vacant
Account	R-16-4303-000A-0002
Map Number	3-6707
Effective Acres	0.000000

2026 OWNER INFORMATION

Owner Name	NORTH AUSTIN CROSSROADS COMMUNITY CHURCH
Owner ID	
Exemptions	Exempt Property (Active 1/1/2023)
Percent Ownership	100%
Mailing Address	120 CROSSROADS DR AUSTIN, TX 78717
Agent	-

2026 VALUE INFORMATION

MARKET VALUE

Improvement Homesite Value	N/A
Improvement Non-Homesite Value	N/A
Total Improvement Market Value	N/A
Land Homesite Value	N/A
Land Non-Homesite Value	N/A
Land Agricultural Market Value	N/A
Land Timber Market Value	N/A
Total Land Market Value	N/A
Total Market Value	N/A

ASSESSED VALUE

Total Improvement Market Value	N/A
Land Homesite Value	N/A
Land Non-Homesite Value	N/A
Agricultural Use	N/A
Timber Use	N/A
Total Appraised Value	N/A
Homestead Cap Loss	N/A
Circuit Breaker Limit Cap Loss	
Total Assessed Value	N/A

2026 ENTITIES & EXEMPTIONS

Special Exemptions **EX - Exempt Property**

TAXING ENTITY	EXEMPTIONS	EXEMPTIONS AMOUNT	TAXABLE VALUE	TAX RATE PER 100
CAD- Williamson CAD		N/A	N/A	N/A
F91- Wmsn ESD #2		N/A	N/A	N/A
GWI- Williamson CO		N/A	N/A	N/A
J01- Aus Comm Coll		N/A	N/A	N/A
RFM- Wmsn CO FM/RD		N/A	N/A	N/A
SRR- Round Rock ISD		N/A	N/A	N/A
W09- Upper Brushy Creek WCID		N/A	N/A	N/A

2026 LAND SEGMENTS

LAND SEGMENT TYPE	STATE CODE	HOMESITE	MARKET VALUE	AG USE	TIM USE	LAND SIZE
1 - Commercial	XV - Other Exemptions	No	N/A	N/A	N/A	718,522 Sq. ft
2 - Vacant Land	XV - Other Exemptions	No	N/A	N/A	N/A	1.211000 acres
TOTALS						**771,273 Sq. ft / 17.706000 acres**

VALUE HISTORY

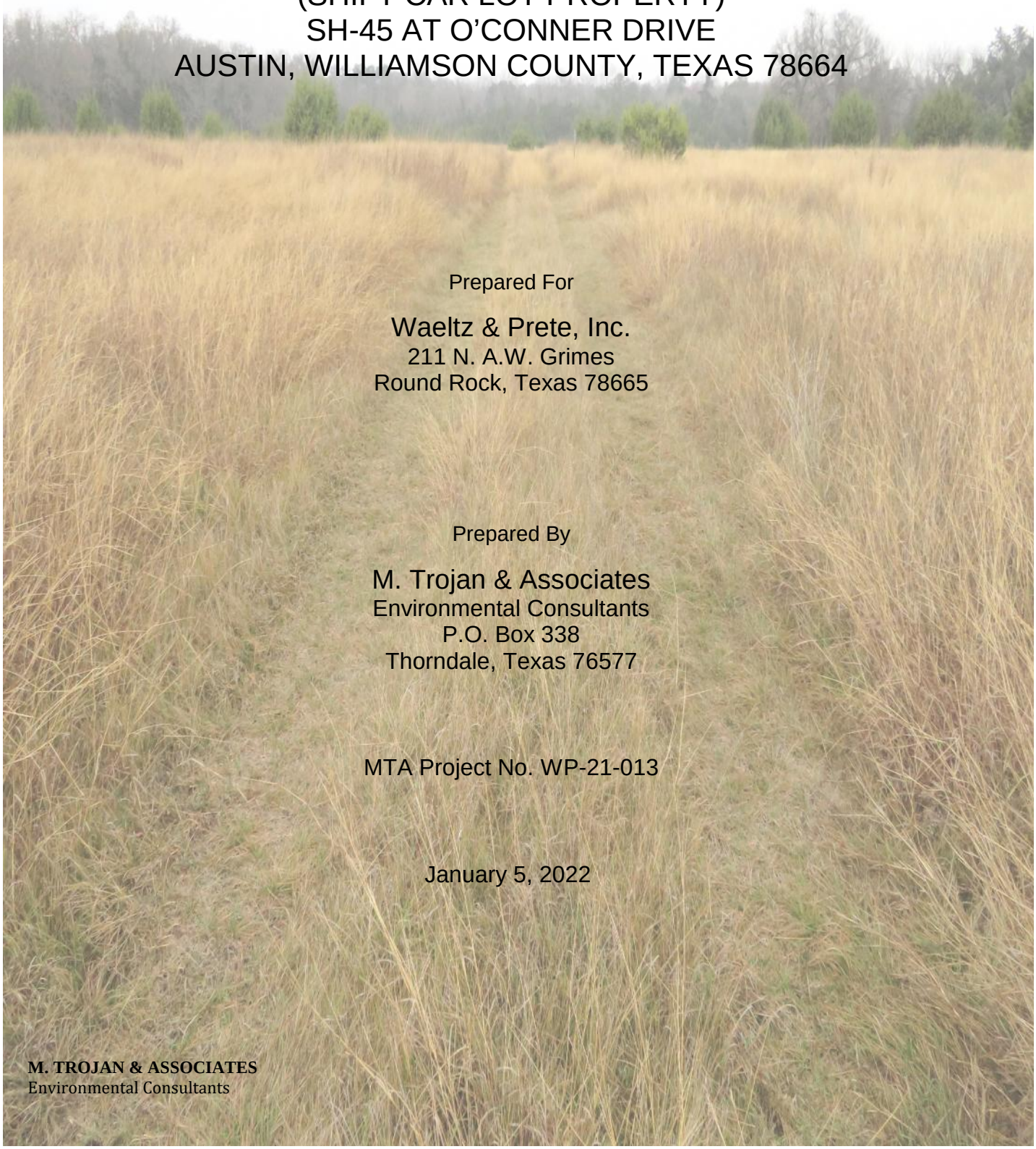
YEAR	IMPROVEMENT	LAND	MARKET	AG MARKET	AG USE	TIM MARKET	TIM USE	APPRAISED	HS CAP LOSS	CBL CAP LOSS	ASSESSED
2025	$0	$2,033,781	$2,033,781	$0	$0	$0	$0	$2,033,781	$0	$0	$2,033,781
2024	$0	$2,033,781	$2,033,781	$0	$0	$0	$0	$2,033,781	$0	$0	$2,033,781
2023	$0	$2,033,418	$2,033,418	$0	$0	$0	$0	$2,033,418	$0	$0	$2,033,418
2022	$0	$1,451,415	$1,451,415	$0	$0	$0	$0	$1,451,415	$0	$0	$1,451,415
2021	$0	$1,077,783	$1,077,783	$0	$0	$0	$0	$1,077,783	$0	$0	$1,077,783

SALES HISTORY

DEED DATE	SELLER	BUYER	INSTR #	VOLUME/PAGE
10/25/2019	LEWIS WOODS LLC	NORTH AUSTIN CROSSROADS COMMUNITY CHURCH	2019102495	

TCEQ GEOLOGIC ASSESSMENT

32-ACRE UNDEVELOPED TRACT
(SHIFT CAR LOT PROPERTY)
SH-45 AT O'CONNER DRIVE
AUSTIN, WILLIAMSON COUNTY, TEXAS 78664



Prepared For

Waeltz & Prete, Inc.
211 N. A.W. Grimes
Round Rock, Texas 78665

Prepared By

M. Trojan & Associates
Environmental Consultants
P.O. Box 338
Thorndale, Texas 76577

MTA Project No. WP-21-013

January 5, 2022

M. TROJAN & ASSOCIATES
Environmental Consultants

January 5, 2022

Tony Prete, PE
Waeltz & Prete, Inc.
211 N. A.W. Grimes
Round Rock, Texas 78665

Subject: Report of TCEQ Geologic Assessment
32-Acre Undeveloped Tract (Shift Car Lot Property)
SH-45 at O'Conner Drive
Austin, Williamson County, Texas 78664
MTA Project No. WP-21-013

Mr. Prete:

M. Trojan & Associates is pleased to submit this report of a Texas Commission on Environmental Quality (TCEQ) *Geologic Assessment* for the above referenced property. This *Geologic Assessment* was performed in accordance with the TCEQ requirements and instructions for completing TCEQ Form 0585.

I appreciate the opportunity to assist you in your environmental matters associated with the subject property. Should you have any questions or require additional information, please feel free to contact me at (512) 917-3695, or forward an email to mtrojan0316@gmail.com.

Respectfully,

Michael Trojan, PG
M. TROJAN & ASSOCIATES

Certified Professional Geoscientist #1109 (TX)

c: MTA Project File WP-21-013

TABLE OF CONTENTS

ATTACHMENTS

1.0 TCEQ FORM 0585

Geologic Assessment

Texas Commission on Environmental Quality

For Regulated Activities on the Edwards Aquifer Recharge/Transition Zones and Relating to 30 TAC §213.5(b)(3), Effective June 1, 1999

To ensure that the application is administratively complete, confirm that all fields in the form are complete, verify that all requested information is provided, consistently reference the same site and contact person in all forms in the application, and ensure forms are signed by the appropriate party.

Note: Including all the information requested in the form and attachments contributes to more streamlined technical reviews.

Signature

To the best of my knowledge, the responses to this form accurately reflect all information requested concerning the proposed regulated activities and methods to protect the Edwards Aquifer. My signature certifies that I am qualified as a geologist as defined by 30 TAC Chapter 213.

Print Name of Geologist: Michael Trojan, PG Telephone: (512) 917-3695

Representing: M. Trojan & Associates Fax:

Signature of Geologist:

_____

Michael Trojan, PG
Certified Professional Geoscientist #1109 (TX)

Regulated Entity Name: 32-Acre Undeveloped Tract (Shift Car Lot Property)
SH-45 at O'Conner Drive, Austin, Williamson Co, Texas 78664

Project Information

1. Date(s) Geologic Assessment was performed: December 28, 2021

2. Type of Project:

X	WPAP		AST
X	SCS		UST

3. Location of Project:

X	Recharge Zone
	Transition Zone
	Contributing Zone within the Transition Zone

4. [X] **Attachment A – Geologic Assessment Table**. Completed Geologic Assessment Table (Form TCEQ-0585-Table) is attached.

5. [X] Soil cover on the project site is summarized in the table below and uses the SCS Hydrologic Soil Groups* (Urban Hydrology for Small Watersheds, Technical Release No. 55, Appendix A, Soil Conservation Service, 1986). If there is more than one soil type on the project site, show each soil type on the site Geologic Map or a separate soils map (refer to Attachment D).

Table 1 – Soil Units, Infiltration, Characteristics and Thickness

Soil Units, Infiltration Characteristics & Thickness		
Soil Name	Group*	Thickness (feet)
Crawford clay, 1-3% slopes (CfB)	D	up to 2.3
Eckrant-Rock outcrop association, 1-10% slopes (ErE)	D	up to 1.0
Georgetown stony clay loam, 1-3% slopes (GsB)	D	up to 2.9

* Soil Group 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.

6. [X] **Attachment B – Stratigraphic Column**. A stratigraphic column showing formations, members, and thicknesses is attached. The outcropping unit, if present, should be at the top of the stratigraphic column. Otherwise, the uppermost unit should be at the top of the stratigraphic column.

7. [X] **Attachment C – Site Geology**. A narrative description of the site specific geology including any features identified in the Geologic Assessment Table, a discussion of the potential for fluid movement to the Edwards Aquifer, stratigraphy, structure(s), and karst characteristics is attached.

8. [X] **Attachment D – Site Geologic Map(s)**. The Site Geologic Map must be the same scale as the applicant's Site Plan.

   Applicant's Site Plan Scale: unknown
   Site Geologic Map Scale: 1" = 150'
   Site Soils Map Scale (if more than 1 soil type): 1" = 150'

9. Method of collecting positional data:

   [X] Global Positioning System (GPS) technology.
   [ ] Other method(s). Please describe method of data collection: _____

10. [ ] The project site and boundaries are clearly shown and labeled on the Site Geologic Map.

11. [X] Surface geologic units are shown and labeled on the Site Geologic Map.

12. [ ] Geologic or manmade features were discovered on the project site during the field investigation. They are shown and labeled on the Site Geologic Map and are described in the attached Geologic Assessment Table.

    [X] Geologic or manmade features were not discovered on the project site during the field investigation.

13. [ ] The Recharge Zone boundary is shown and labeled, if appropriate.

14. All known wells (test holes, water, oil, unplugged, capped and/or abandoned, etc.): If applicable, the information must agree with Item No. 20 of the WPAP Application Section

    [X] There are 0 (#) wells present on the project site and the locations are shown and labeled. (Check all of the following that apply).

- [ ] The wells are not in use and have been properly abandoned.
- [ ] The wells are not in use and will be properly abandoned.
- [ ] The wells are in use and comply with 16 TAC Chapter 76.

[ ] There are no wells or test holes of any kind known to exist on the project site.

Administrative Information

15. [X] Submit one (1) original and one (1) copy of the application, plus additional copies as needed for each affected incorporated city, groundwater conservation district, and county in which the project will be located. The TCEQ will distribute the additional copies to these jurisdictions. The copies must be submitted to the appropriate regional office.

2.0 OVERVIEW

M. Trojan & Associates was retained to conduct a Geologic *Assessment* for proposed future development on a 32-acre undeveloped tract (Shift Car Lot property) located at SH-45 and O'Conner Drive in Austin, Williamson County, Texas 78664 (refer to Figures 1 and 2 of Attachment D). All aspects of the *Geologic Assessment* were conducted by Mr. Michael Trojan, PG (Certified Professional Geoscientist #1109 in Texas), and the assessment was performed in accordance with Texas Commission on Environmental Quality (TCEQ) requirements and instructions for completing TCEQ Form 0585. The assessment included reconnaissance of the entire property as well as bordering portions of all neighboring properties.

Based on information obtained from the TCEQ, the study area is located on the Edwards Aquifer Recharge Zone. Accordingly, the objective of the *Geologic Assessment* was to identify any naturally occurring geologic (karst) or manmade features that may significantly contribute to recharge of the subsurface. The Edwards Aquifer rules define sensitive features as:

> *" . . . those that have potential for interconnectedness between the surface and the Edwards Aquifer and where rapid infiltration to the subsurface may occur."*

The scope of the *Geologic Assessment* included the following general components:

- Review of published soils and geologic/hydrogeologic information;
- Field evaluation of topographic features;
- Field evaluation of soil types and horizons, relative thicknesses, and hydrologic characteristics (visual only);
- General review of the subsurface geologic units beneath the property as well as geologic units exposed at ground surface (if visible);
- Field evaluation of geologic conditions to determine the presence or absence of caves, solution cavities, solution-enlarged fractures, faults, other natural bedrock features, sinkholes, swallets or swallow holes in drainage features, non-karst closed depressions, manmade features in bedrock, and any other natural or manmade features, and evaluation of such features with respect to their potential ability to convey infiltrating surface water to the underlying subsurface; and
- Preparation of TCEQ Form 0585 for presentation of the findings of this assessment.

3.0 GENERAL PROPERTY DESCRIPTION AND SITE DEVELOPMENT

3.1 Study Area

The study area is comprised of approximately 32 acres of undeveloped land located at the intersection of SH-45 and S. O'Conner Drive (refer to Figures 1 and 2 of Attachment D and photographs included in Attachment E). With the exception of woodlands along the north property boundary (centerline of Lake Creek) and on the northeast quadrant of the tract, majority of the property has been historically cleared. The cleared component of the study area represents gently-sloping grassland that is routinely shredded/mowed.

3.2 Proposed Site Development

The study area is divided into five components (lots), of which the southwest quadrant (Lot 3) will be developed as a car lot facility. In addition, the car lot site plan includes a roadway (Crossroads Drive) on the southern and eastern parts of the tract and a potential drainage channel. The northwest quadrant (Lot 2) will be developed as the North Austin Crossroads Community Church (Note: The church development is not part of the Shift Car Lot site plan).

3.3 Previously Published Reports

No previously published, site-specific technical report were reviewed as part of this *Geologic Assessment*.

4.0 GEOLIC ASSESSMENT LIMITATIONS

This *Geologic Assessment* was conducted in accordance with rules and guidelines set forth by the TCEQ, as well as consistent with standard methods and practices generally employed by professionals engaged in conducting karst assessments. Still, the scope of the *Geologic Assessment* presents certain limitations. The primary limitations include:

1. The field reconnaissance is conducted to effectively identify the geologic conditions/features at the subject property. However, certain site conditions may render features undetectable as a result of obstruction by: (1) soil cover, (2) very dense, inaccessible vegetation, (3) manmade cover including, but not limited to driveways, concrete slabs, soil and debris piles/mounds, and/or (4) stormwater runoff ground cover following significant rainfall events.

2. The scope of the *Geologic Assessment* does not include identification of features that may be discovered at the time of site development – during excavation, trenching, grading and/or leveling.

3. While this *Geologic Assessment* is confident of the identification of karst features, or lack thereof, the regulatory community reserves the right to conduct a reconnaissance of the study area. At times, regulatory field inspectors may identify additional potential karst features that, in their professional opinion, may require consideration in terms of proposed development on the study area. In this event, the author of this *Geologic Assessment* and the developer are provided the opportunity to conduct additional field investigation of such features, including employment of certain invasive methodologies (e.g., excavation), to either confirm or refute the field findings of the regulatory field inspectors.

ATTACHMENT A

GEOLOGIC ASSESSMENT TABLE

GEOLOGIC ASSESSMENT TABLE — PROJECT NAME: Shift Car Lot Property

LOCATION			FEATURE CHARACTERISTICS												EVALUATION			PHYSICAL SETTING		
1A	1B *	1C*	2A	2B	3	4			5	5A	6	7	8A	8B	9	10		11		12
FEATURE ID	LATITUDE	LONGITUDE	FEATURE TYPE	POINTS	FORMATION	DIMENSIONS (FEET)			TREND (DEGREES)	DOM	DENSITY (NO/FT)	APERTURE (FEET)	INFILL	RELATIVE INFILTRATION RATE	TOTAL	SENSITIVITY		CATCHMENT AREA (ACRES)		TOPOGRAPHY
						X	Y	Z		10						<40	≥40	<1.6	>1.6	
ONSITE																				
None																				
OFFSITE																				
MB-1	30.480341	97.719551	MB	30	Ked	160	130	4					F/X	≤5	≤35	≤35		unk	unk	drainage
MB-2	30.480817	97.719411	MB	30	Ked	unk	unk	unk					X	0	30	30		unk	unk	drainage
MB-3	30.482093	97.719777	MB	30	Ked	unk	unk	unk					X	0	30	30		unk	unk	drainage
MB-4	30.482813	97.720002	MB	30	Ked	90	13	4					X	0	30	30		unk	unk	drainage

* DATUM:_____

2A TYPE	TYPE	2B POINTS
C	Cave	30
SC	Solution cavity	20
SF	Solution-enlarged fracture(s)	20
F	Fault	20
O	Other natural bedrock features	5
MB	Manmade feature in bedrock	30
SW	Swallow hole	30
SH	Sinkhole	20
CD	Non-karst closed depression	5
Z	Zone, clustered or aligned features	30

8A INFILLING	
N	None, exposed bedrock
C	Coarse - cobbles, breakdown, sand, gravel
O	Loose or soft mud or soil, organics, leaves, sticks, dark colors
F	Fines, compacted clay-rich sediment, soil profile, gray or red colors
V	Vegetation. Give details in narrative description
FS	Flowstone, cements, cave deposits
X	Other materials

12 TOPOGRAPHY

Cliff, Hilltop, Hillside, Drainage, Floodplain, Streambed

I have read, I understood, and I have followed the Texas Commission on Environmental Quality's Instructions to Geologists. The information presented here complies with that document and is a true representation of the conditions observed in the field.

My signature certifies that I am qualified as a geologist as defined by 30 TAC Chapter 213.

_____ Date: January 5, 2022

Sheet 1 of 1

TCEQ-0585-Table (Rev. 10-01-04)

ATTACHMENT B

STRATIGRAPHIC COLUMN

SYSTEM	SERIES	GROUP	FORMATION	LITHOLOGY/ THICKNESS
QUATERNARY				TERRACE AND ALLUVIUM SAND, SILT, CLAY, AND GRAVEL THICKNESS NOT REPORTED
CRETACEOUS	UPPER CRETACEOUS (GULFIAN)	AUSTIN		CHALK, MARL, AND LIMESTONE 325–420 FEET THICK
		EAGLE FORD	EAGLE FORD	SHALE AND SILTY LIMESTONE TO CALCAREOUS SILTSTONE 25–65 FEET THICK
			BUDA	LIMESTONE UP TO 45 FEET THICK
	LOWER CRETACEOUS (COMANCHEAN)	FREDERICKSBURG	DEL RIO	CLAY 40–70 FEET THICK
			GEORGETOWN	LIMESTONE AND MARL 30–80 FEET THICK
			EDWARDS	LIMESTONE AND DOLOSTONE 60–350 FEET THICK
			COMANCHE PEAK	LIMESTONE AND MARL UP TO 80 FEET THICK
			WALNUT FORMATION	LIMESTONE AND MARL UP TO 130 FEET THICK
			PALUXY SAND	SAND UP TO 10 FEET THICK

Geologic unit that directly underlies the subject property

M. TROJAN & ASSOCIATES
Environmental Consultants
P.O. Box 338
Thorndale, Texas 76577
(512) 917-3695

Scale: No Scale
Date: January 5, 2022
Project: TCEQ Geologic Assessment
MTA Project: WP-21-013

STRATIGRAPHIC COLUMN

32-ACRE UNDEVELOPED TRACT
(SHIFT CAR LOT PROPERTY)
SH-45 AT S. O'CONNER DRIVE
AUSTIN, WILLIAMSON COUNTY, TEXAS 78664

ATTACHMENT C

SITE GEOLOGY

TOPOGRAPHY AND SURFACE WATER HYDROLOGY

The central and northern components of the study area slop gently to the north-northwest, while the southern-most portion of the property slope toward the east-northeast (refer to Figure 3 of Attachment D). Topographic elevations on the study area range between approximately 796 and 765 feet above mean sea level (msl), with the highest elevations located at the southwest property corner and the lowest elevations at the northeast corner within the Lake Creek bed. As is depicted on Figure 3 of Attachment D, a small component of runoff generated on the southern-most part of the tract flows to the east-northeast, while majority of onsite runoff flows generally to the north-northwest and discharges directly to Lake Creek along the north property boundary. This segment of Lake Creek is described as follows:

> The Lake Creek segment along the north property boundary is comprised of a manmade pond and as an intermittent stream below the earthen dam (refer to photographs in Attachment E). While the pond dam has been largely breached, the feature has maintained its original pond dimensions. The pond component exhibits relatively steep banks, while the downstream component exhibits traditional well defined bed and low banks. The average widths of the pond component and downstream creek are 43 and 26 feet, respectively. A very modest amount of debris on trees and shrubs along the entire feature shows a somewhat defined ordinary high water mark (OHWM). On the day of the site reconnaissance, the pond was observed at full pool, and the downstream creek component exhibited moderate flow. Majority of the pond/stream corridor exhibits a well-established riparian zone, with gentle topographic slopes and dense woodlands with high closed canopy.

According to the City of Austin GIS, Lake Creek has an associated floodplain (refer to site plan) and a designated Critical Water Quality Zone (CWQZ).

SOILS

According to the *Soil Survey of Williamson County, Texas*, the soils that are reported to cover the study area are as follows (also refer to Figure 4 of Attachment D for soil type locations):

Soil Component Name:	Crawford clay, 1–3% slopes (CfB)
Soil Surface Texture:	Brown to dark reddish brown clay to approximately 27 inches; surface layer may crack when dry
Hydrologic Group:	Permeability is very slow when soil is wet and rapid when soil is dry; available water capacity is low
Soil Drainage Class:	Well drained

Soil Name:	Eckrant-Rock outcrop complex, 1–10% slopes (ErE)
Soil Surface Texture:	Eckrant soils and rock outcrops; slopes are 5 to 15 percent; surface soil is about eight inches; underlying material is fractured indurated limestone
Hydrologic Group:	Permeability is very slow; surface runoff is rapid
Soil Drainage Class:	Well drained
Soil Name:	Georgetown Stony Clay Loam, 1–3% slopes (GsB)
Soil Surface Texture:	Brown stony clay loam to about seven inches; subsoil is reddish brown clay and cobbly clay to about 35 inches; the underlying material is indurated limestone
Hydrologic Group:	Permeability is very slow; surface runoff is medium
Soil Drainage Class:	Well drained

Based on the *Soil Survey* and as is depicted on Figure 4 of Attachment D, the Crawford clay and Georgetown stony clay loam silty clay soils cover majority of the study area, while the Eckrant-Rock outcrop complex covers the northern-most portion of the property.

Shallow excavations were made at various locations across the study area and soil characteristics were observed to be similar to those described in the *Soil Survey*. The soils were observed to be relatively fine-grained and thin to medium thick. The site reconnaissance did not observe any evidence of significant surface soil erosion.

GEOLOGY

Based on the *Geologic Atlas of Texas, Austin Sheet* and other available geologic/hydrologic publications, the outcropping (near surface) geologic material directly beneath the study area is the Edwards Formation (Ked) (refer to the stratigraphic column in Attachment B and Figure 5 of Attachment D). In addition, some alluvium is observed along the Lake Creek banks.

Given the consistent soil cover across the study area, no true bedrock was observed at ground surface. However, bedrock fragments up to 3.5 feet in size were observed within woodland areas on the northern portion of the tract. In addition, alluvium and minor amounts of bedrock were observed along the banks of Lake Creek.

ONSITE FEATURES

The field reconnaissance of the study area included search for and identification of sensitive karst and manmade features, as defined by TCEQ, and to note potential

ground recharge points that may be associated with such features. The field reconnaissance entailed walking 25- to 50-foot spaced transects across the entire study area. The results of the reconnaissance are provided below.

Caves

Based on TCEQ criteria, a cave is a natural underground open (or filled) space formed by dissolution of limestone that is large enough for an average-sized person to enter. When a surface cave opening is encountered, then the subsurface extent of the cave is relevant in terms of subsurface recharge.

Based on observations made across the entire study area, no cave openings/caves were identified.

Solution Cavities

Based on TCEQ criteria, a solution cavity is a natural cavity or depression formed as a result of dissolution of limestone. This category is designed to capture features that are not large enough for a normal-sized person to enter but appear to be part of a system of interconnected voids that connect the surface with the subsurface. The size and geometry of the feature is defined by in-place bedrock. Solution cavities also include areas where dissolution has increased the opening size and permeability along bedding planes as well as fractures.

Based on observations made across the entire study area, no solution cavities were identified.

Solution-Enlarged Fractures

Based on TCEQ criteria, a solution-enlarged fracture is one that shows evidence of being locally enlarged by dissolution of limestone, recognized by measurable (larger than hairline) openings and miss-matched fracture surface shapes.

Based on observations made across the entire study area, no solution-enlarged fractures were identified.

Faults

Based on TCEQ criteria, a fault is defined as a fracture along which there has been displacement of one side of the fracture relative to the other side.

Displaced geologic materials and/or an abrupt change in surface topography can both be indicative of the presence of a fault.

Based on observations made across the entire study area, no field evidence of the presence of faults was observed.

Swallet or Swallow Holes

Based on TCEQ criteria, a swallet or swallow hole may include a focused recharge feature in an intermittent drainage or stream in karst terrain. Some swallow holes have a surface expression, for example, a cave opening or formation of a whirlpool in the stream at high flow. The general case is that fine soil and sediment as well as gravel are deposited over the bedrock feature during falling stages of flow, thereby intermittently or frequently obscuring the feature.

Based on observations made across the entire study area, no swallet or swallow holes were identified.

Sinkholes

Based on TCEQ criteria, a sinkhole represents a shallow, broad topographic depression formed in response to karst processes. Sinkholes are pragmatically defined as features greater than six (6) feet in diameter with more than six (6) inches of topographic relief. Sinkholes are usually circular in map view. In cross section they may be subtle swales or funnel-shaped pits and some have exposed rimrock at the perimeter. The presence of a sinkhole implies that processes including collapse, subsidence, and soil sapping over geologic time have caused the land surface to sink below the surrounding area.

Based on observations made across the entire study area, no sinkholes were identified.

Non-karst Closed Depressions

Based on TCEQ criteria, a non-karst closed depression is a natural or non-natural topographic depression that is not formed by karst processes and is not bedrock floored. A feature larger than six (6) feet in at least one direction and with six (6) inches or more of topographic relief should be considered as a feature.

Based on observations made across the entire study area, no non-karst closed depressions were identified.

Zones

Based on TCEQ criteria, a zone is an area in which any type of karst feature occurs along a trend or in a cluster. Clustered or aligned features are more likely to be an indicator of an integrated flow system at depth than isolated features. Alignment is expected in areas where conduit flow is strongly influenced by structurally controlled fractures.

Based on observations made across the entire study area, no zones were identified.

Other Natural Bedrock Features

Based on TCEQ criteria, other natural bedrock features include vuggy rock and reef deposits that may contain large holes or vugs.

Based on observations made across the entire study area, no other natural bedrock features were identified.

Manmade Features in Bedrock

Based on TCEQ criteria, manmade features in bedrock may include water wells, sanitary sewer lines, storm sewer lines, trenches, quarries, and other cultural features that intersect bedrock and can potentially increase the rate of recharge to the subsurface.

Based on observations made across the entire study area, no manmade features in bedrock were identified.

OFFSITE FEATURES

The field reconnaissance also included inspection of neighboring properties a distance of approximately 200 feet (as practical) from all boundaries of the subject property for identification of offsite sensitive karst and manmade features that could be deemed as significant in terms of development on the study area. The following offsite features were identified:

Offsite Manmade Feature in Bedrock MB-1

Latitude: 30.480341
Longitude: -97.719551

Dimensions: 160'X130'X4'

Offsite Feature MB-1 qualifies as a manmade feature in bedrock. The feature is located at the southeast property corner and represents a water quality pond with concrete sidewalls and earth bottom (refer to the Geologic Assessment Table in Attachment A, Figure 6 of Attachment D and photograph in Attachment E).

The pond is installed in bedrock that presumably showed no evidence of karst features during the installation process. Therefore, it is assessed that the feature is not significant in the potential to increase the rate of recharge to the subsurface. It is further assessed that the feature will not be affected by future development on the property.

Offsite Manmade Feature in Bedrock MB-2

Latitude: 30.480817
Longitude: -97.719411
Dimensions: unknown

Offsite Feature MB-2 qualifies as a manmade feature in bedrock. The feature is located along the east property boundary and represents underground stormwater infrastructure beneath S. O'Conner Drive (refer to the Geologic Assessment Table in Attachment A, Figure 6 of Attachment D and photograph in Attachment E).

The feature is installed in bedrock that presumably showed no evidence of karst features during the installation process. Therefore, it is assessed that the infrastructure is not significant in the potential to increase the rate of recharge to the subsurface. It is further assessed that the feature will not be affected by future development on the property.

Offsite Manmade Feature in Bedrock MB-3

Latitude: 30.482093
Longitude: -97.719777
Dimensions: unknown

Offsite Feature MB-3 qualifies as a manmade feature in bedrock. The feature is located along the east property boundary and represents underground stormwater infrastructure beneath S. O'Conner Drive (refer to the Geologic Assessment Table in Attachment A, Figure 6 of Attachment D and photograph in Attachment E).

The feature is installed in bedrock that presumably showed no evidence of karst features during the installation process. Therefore, it is assessed that the infrastructure is not significant in the potential to increase the rate of recharge to the subsurface. It is further assessed that the feature will not be affected by future development on the property.

Offsite Manmade Feature in Bedrock MB-4

Latitude: 30.482813
Longitude: -97.720002
Dimensions: 90'X13'X4'

Offsite Feature MB-4 qualifies as a manmade feature in bedrock. The feature is located along the east property boundary and represents a deep, concrete-lined stormwater conveyance channel along S. O'Conner Drive (refer to the Geologic Assessment Table in Attachment A, Figure 6 of Attachment D and photograph in Attachment E).

The feature is installed in bedrock that presumably showed no evidence of karst features during the installation process. Therefore, it is assessed that the infrastructure is not significant in the potential to increase the rate of recharge to the subsurface. It is further assessed that the feature will not be affected by future development on the property.

POTENTIAL FOR FLUID MOVEMENT TO THE SUBSURFACE

Based on review of available information and visual observations made during the field reconnaissance, this *Geologic Assessment* presents the following observations regarding the potential for recharge of the subsurface within the study area:

- Characteristics of soils that cover the study area are the primary factors that influence potential subsurface recharge on the property. Based on the *Soil Survey of Williamson County*, the Crawford clay, Eckrant-Rock outcrop complex and Georgetown Stony Clay Loam soils are reported to consist of thin to medium-thick, generally fine-grained soils that exhibit very slow permeability. Thus, this *Geologic Assessment* assesses that percolation via soils to the subsurface is very slow.

- No significant, "defined" karst recharge points with focused recharge potential were observed to be located on the study area.

ATTACHMENT D

SITE GEOLOGIC MAPS

M. TROJAN & ASSOCIATES
Environmental Consultants

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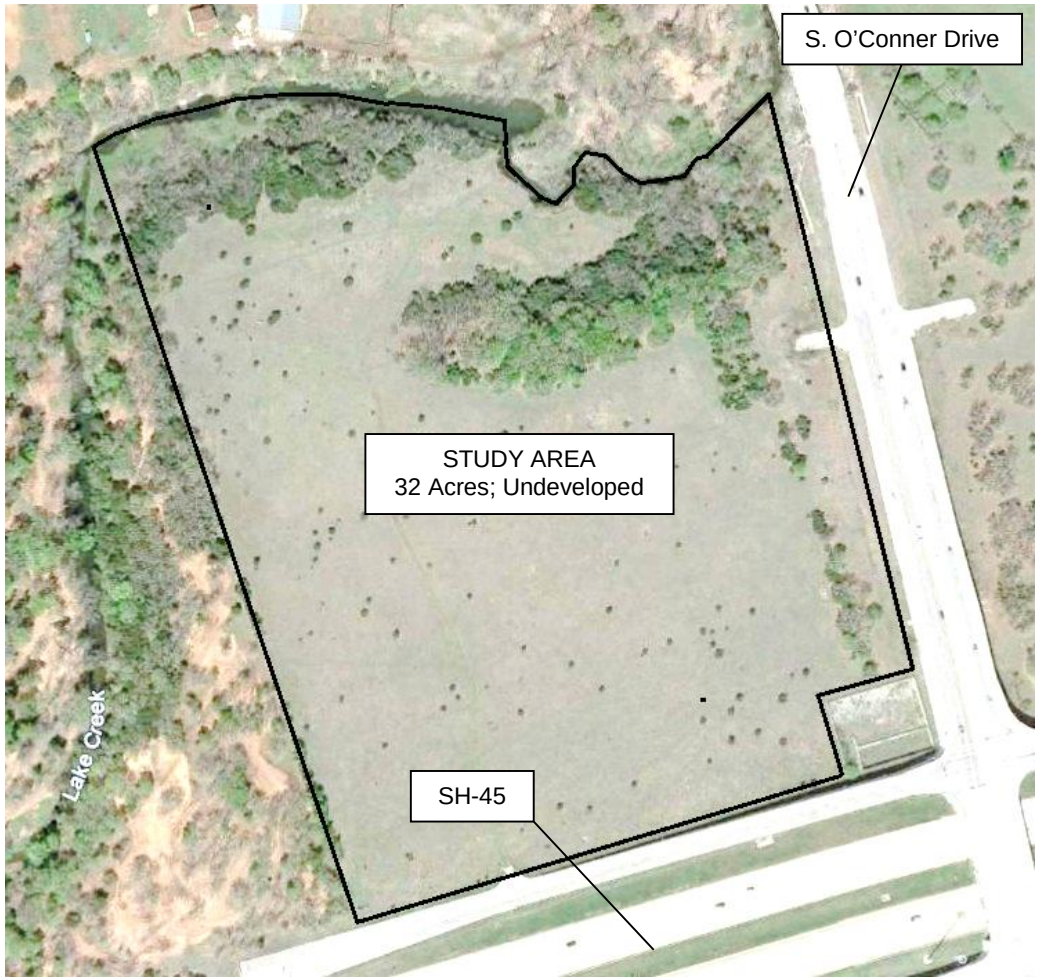
Thorndale, Texas 76577
(512) 917-3695

Scale: No Scale
Date: January 5, 2022
Project: TCEQ Geologic Assessment
MTA Project: WP-21-013

FIGURE 1

SITE LOCATION MAP

32-ACRE UNDEVELOPED TRACT
(SHIFT CAR LOT PROPERTY)
SH-45 AT S. O'CONNER DRIVE
AUSTIN, WILLIAMSON COUNTY, TEXAS 78664



M. TROJAN & ASSOCIATES
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P.O. Box 338
Thorndale, Texas 76577
(512) 917-3695

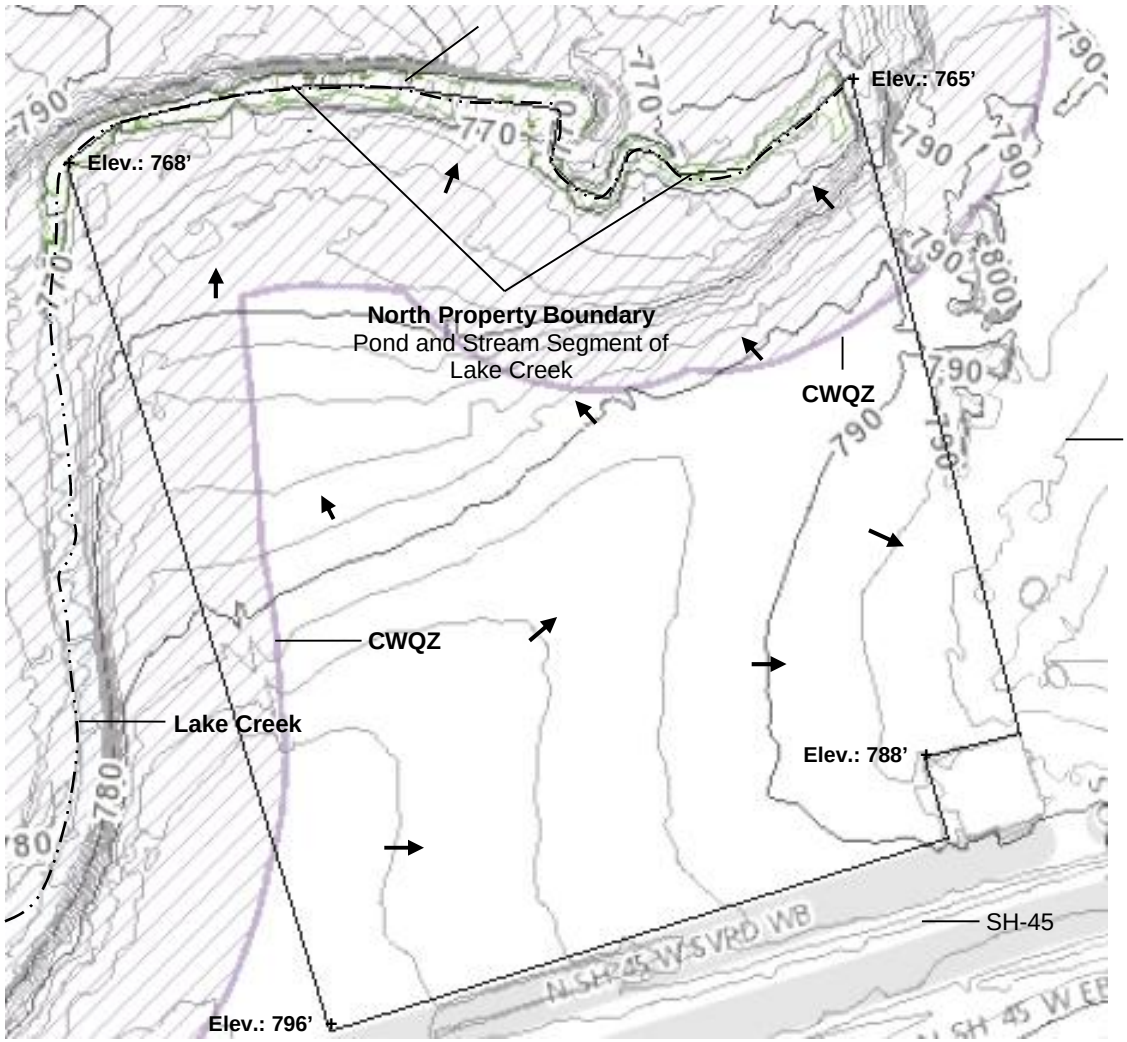
Scale: 1" = 330' (approx.)
Date: January 5, 2022
Project: TCEQ Geologic Assessment
MTA Project: WP-21-013

FIGURE 2

SITE AERIAL PHOTOGRAPH

32-ACRE UNDEVELOPED TRACT
(SHIFT CAR LOT PROPERTY)
SH-45 AT S. O'CONNER DRIVE
AUSTIN, WILLIAMSON COUNTY, TEXAS 78664

Lake Creek Watershed



NOTES

Map source: COA GIS

M. TROJAN & ASSOCIATES
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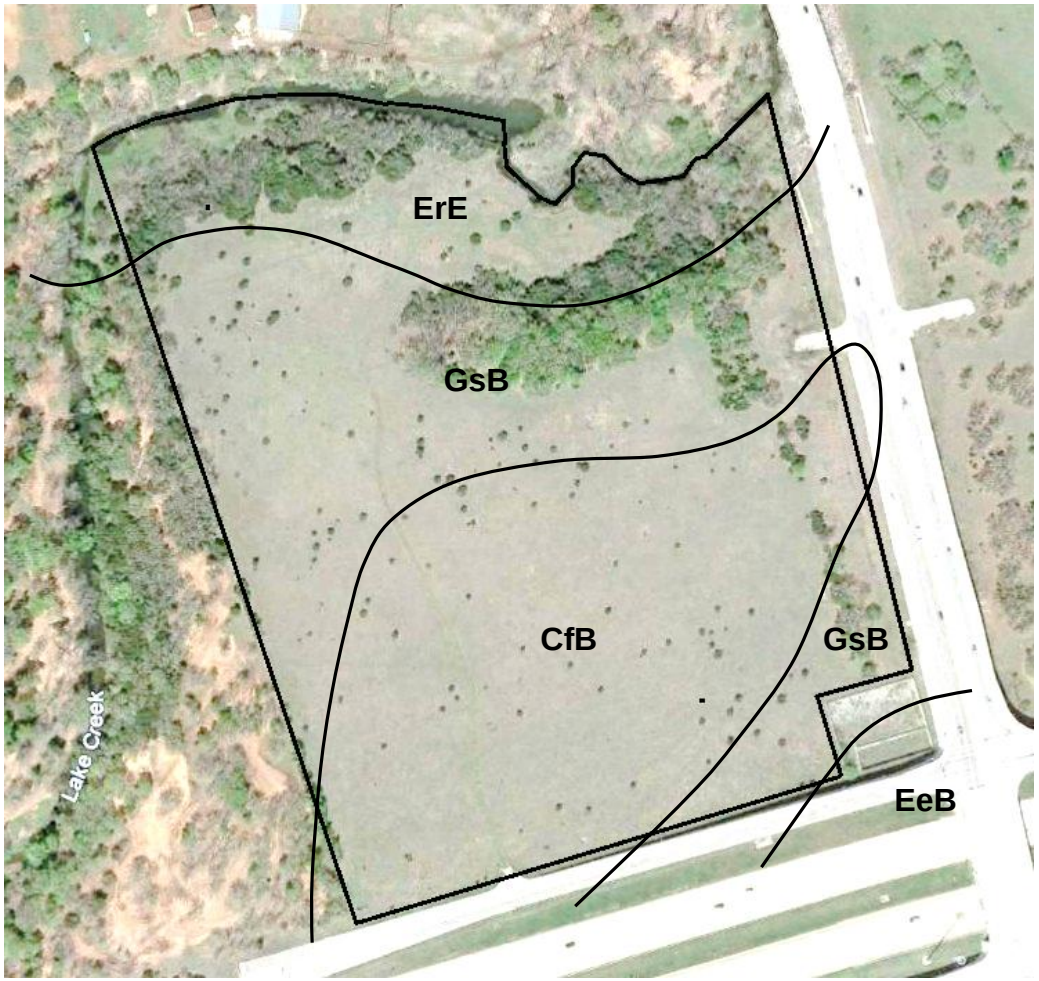
Thorndale, Texas 76577
(512) 917-3695

Scale: 1" = 300' (approx.)
Date: January 5, 2022
Project: TCEQ Geologic Assessment
MTA Project: WP-21-013

FIGURE 3

SURFACE WATER HYDROLOGY

32-ACRE UNDEVELOPED TRACT
(SHIFT CAR LOT PROPERTY)
SH-45 AT S. O'CONNER DRIVE
AUSTIN, WILLIAMSON COUNTY, TEXAS 78664



CfB – Crawford clay, 1-3% slopes / EeB – Eckrant stony clay, 0-3% slopes
ErE – Eckrant-Rock outcrop association, 1-10% slopes / GsB – Georgetown stony clay loam, 1-3% slopes

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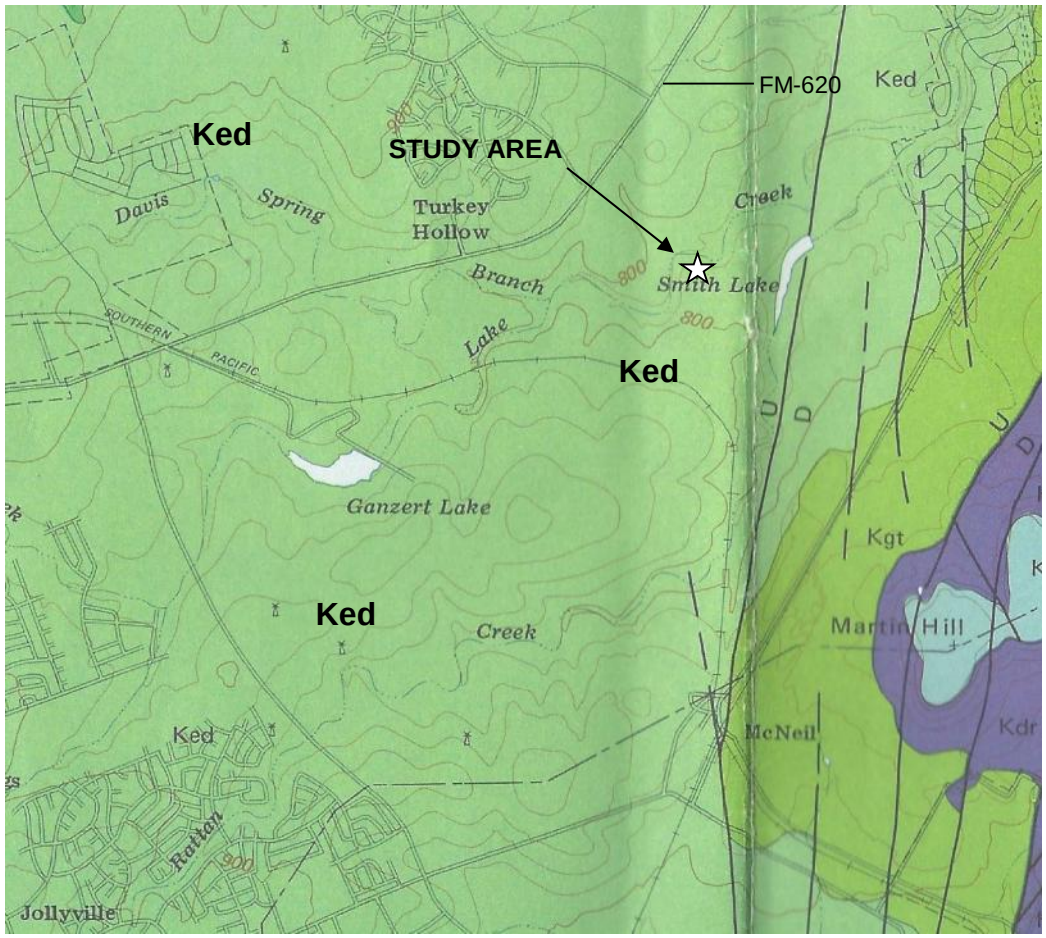
(512) 917-3695

Scale:	1" = 330' (approx.)
Date:	January 5, 2022
Project:	TCEQ Geologic Assessment
MTA Project:	WP-21-013

FIGURE 4

SITE SOILS MAP

32-ACRE UNDEVELOPED TRACT
(SHIFT CAR LOT PROPERTY)
SH-45 AT S. O'CONNER DRIVE
AUSTIN, WILLIAMSON COUNTY, TEXAS 78664



NOTES

Ked – Edwards Formation
Source: *Geologic Map of the Austin Area, Texas,* The University of Texas at Austin, Bureau of Economic Geology, dated 1992

M. TROJAN & ASSOCIATES
Environmental Consultants

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Thorndale, Texas 76577
(512) 917-3695

Scale: No Scale
Date: January 5, 2022
Project: TCEQ Geologic Assessment
MTA Project: WP-21-013

FIGURE 5

GENERAL GEOLOGIC MAP

32-ACRE UNDEVELOPED TRACT
(SHIFT CAR LOT PROPERTY)
SH-45 AT S. O'CONNER DRIVE
AUSTIN, WILLIAMSON COUNTY, TEXAS 78664

ONSITE FEATURES

No onsite features identified

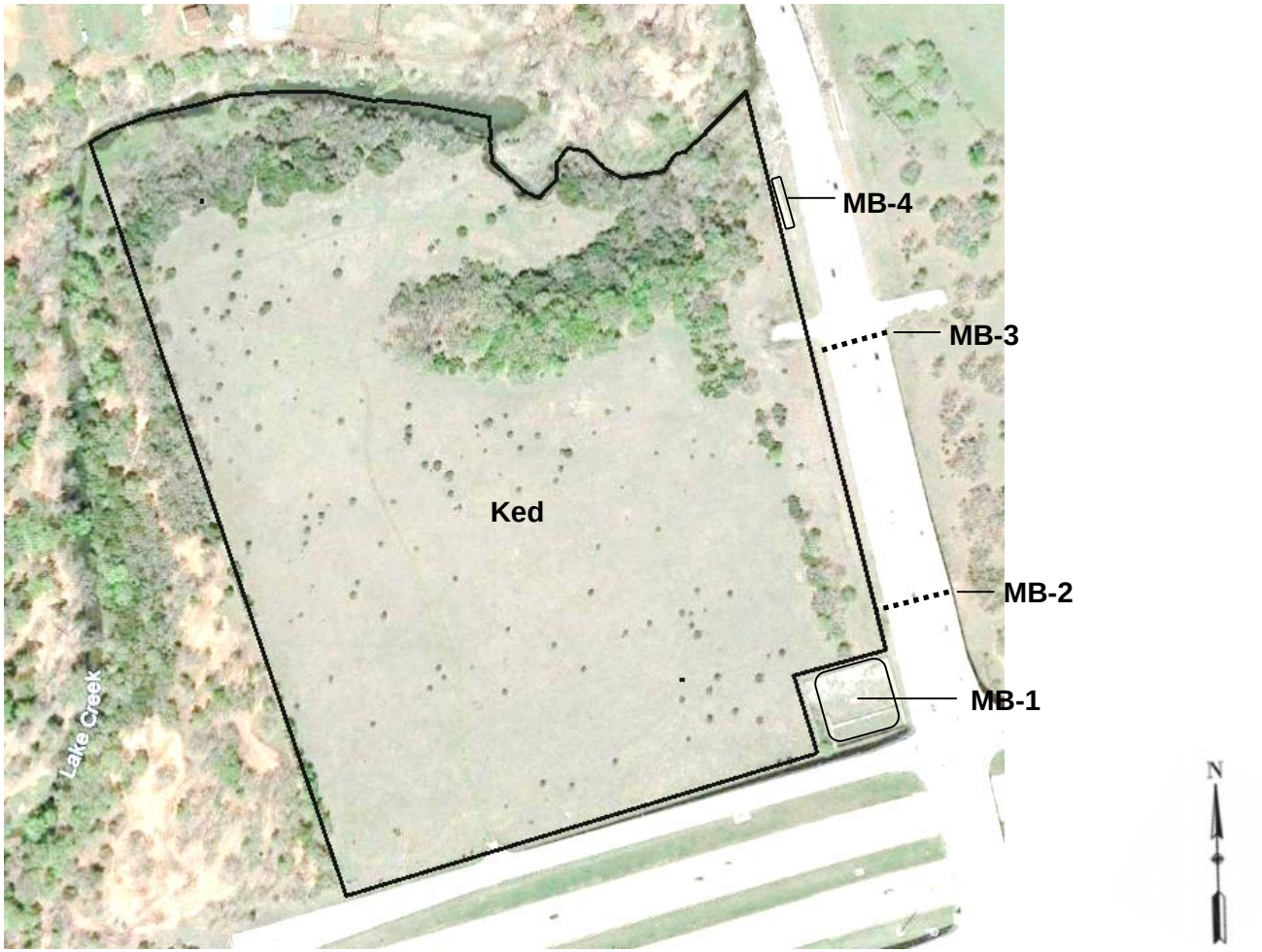
OFFSITE FEATURES (within 200 feet)

MB-1: Manmade feature in bedrock (water quality pond).

MB-2: Manmade feature in bedrock (underground storm infrastructure beneath S. O'Conner Drive).

MB-3: Manmade feature in bedrock (underground storm infrastructure beneath S. O'Conner Drive).

MB-4: Manmade feature in bedrock (deep concrete storm water conveyance channel).



No Onsite Karst or Manmade Features Identified

The subject property is underlain by the Edwards Formation (Ked) and the Edwards Aquifer Recharge Zone

M. TROJAN & ASSOCIATES
Environmental Consultants

P.O. Box 338
Thorndale, Texas 76577
(512) 917-3695

Scale:	1" = 330' (approx.)
Date:	January 5, 2022
Project:	TCEQ Geologic Assessment
MTA Project	WP-21-013

FIGURE 6

SITE GEOLOGIC MAP

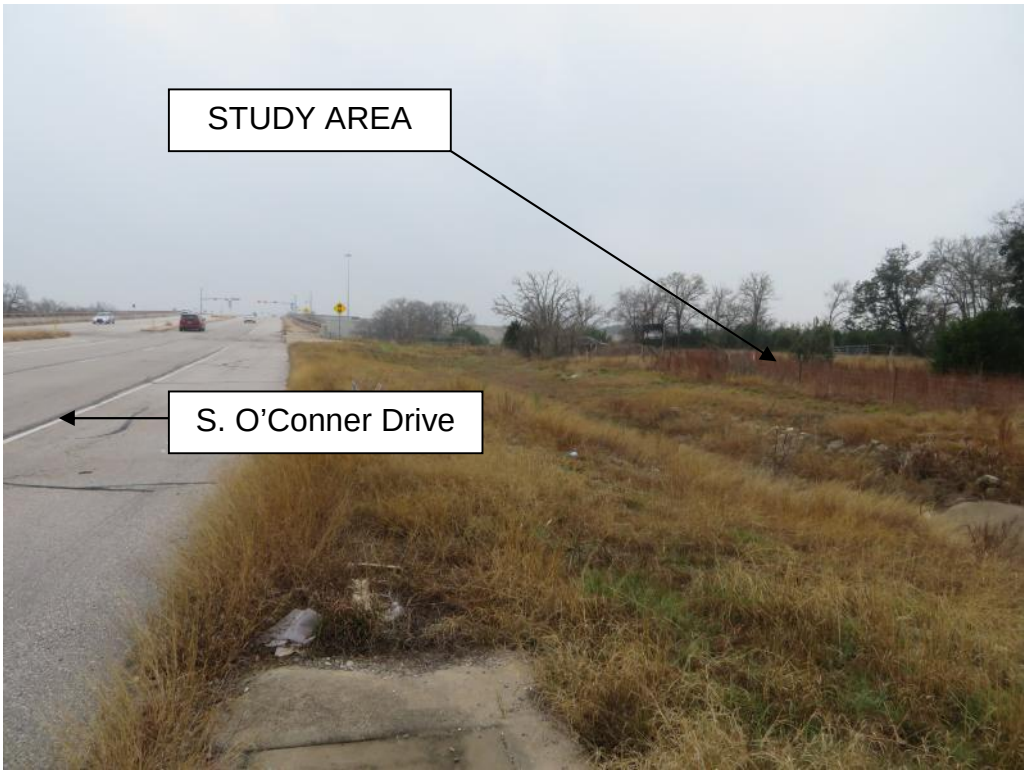
32-ACRE UNDEVELOPED TRACT
(SHIFT CAR LOT PROPERTY)
SH-45 AT S. O'CONNER DRIVE
AUSTIN, WILLIAMSON COUNTY, TEXAS 78664

ATTACHMENT E

SITE PHOTOGRAPHS

PHOTOGRAPHIC REPORTING DATA SHEET

[PHOTOGRAPH 1]



Project:	TCEQ Geologic Assessment
Site:	32-Acre Undeveloped Tract (Shift Car Lot Property)
Location:	SH-45 at S. O'Conner Drive Austin, Williamson County, 78664
Description:	View of the eastern-most part of the study area along S. O'Conner Drive. Photograph taken from S. O'Conner Drive facing south.

PHOTOGRAPHIC REPORTING DATA SHEET

[PHOTOGRAPH 2]

Project: TCEQ Geologic Assessment

Site: 32-Acre Undeveloped Tract (Shift Car Lot Property)

Location: SH-45 at S. O'Conner Drive
Austin, Williamson County, 78664

Description: View of typical landscape on the southern and central portions of the study area.

PHOTOGRAPHIC REPORTING DATA SHEET

[PHOTOGRAPH 3]

Project: TCEQ Geologic Assessment

Site: 32-Acre Undeveloped Tract (Shift Car Lot Property)

Location: SH-45 at S. O'Conner Drive
Austin, Williamson County, 78664

Description: View of typical woodland landscape on the northern part of the study area.

PHOTOGRAPHIC REPORTING DATA SHEET

[PHOTOGRAPH 4]

Project: TCEQ Geologic Assessment

Site: 32-Acre Undeveloped Tract (Shift Car Lot Property)

Location: SH-45 at S. O'Conner Drive
Austin, Williamson County, 78664

Description: View of typical bedrock fragments imbedded in surface soils on the woodlands part of the study area.

PHOTOGRAPHIC REPORTING DATA SHEET

[PHOTOGRAPH 5]

Project: TCEQ Geologic Assessment

Site: 32-Acre Undeveloped Tract (Shift Car Lot Property)

Location: SH-45 at S. O'Conner Drive
Austin, Williamson County, 78664

Description: Typical view of the pond segment of Lake Creek along the northern property boundary.

PHOTOGRAPHIC REPORTING DATA SHEET

[PHOTOGRAPH 6]

Project: TCEQ Geologic Assessment

Site: 32-Acre Undeveloped Tract (Shift Car Lot Property)

Location: SH-45 at S. O'Conner Drive
Austin, Williamson County, 78664

Description: Second view of the pond segment of Lake Creek along the northern property boundary.

PHOTOGRAPHIC REPORTING DATA SHEET

[PHOTOGRAPH 7]

Project: TCEQ Geologic Assessment

Site: 32-Acre Undeveloped Tract (Shift Car Lot Property)

Location: SH-45 at S. O'Conner Drive
Austin, Williamson County, 78664

Description: Typical view of the stream segment of Lake Creek along the northern property boundary.

PHOTOGRAPHIC REPORTING DATA SHEET

[PHOTOGRAPH 8]

Project: TCEQ Geologic Assessment

Site: 32-Acre Undeveloped Tract (Shift Car Lot Property)

Location: SH-45 at S. O'Conner Drive
Austin, Williamson County, 78664

Description: Typical view of the stream segment of Lake Creek at the northeast property corner.

PHOTOGRAPHIC REPORTING DATA SHEET

[PHOTOGRAPH 9]

Project: TCEQ Geologic Assessment

Site: 32-Acre Undeveloped Tract (Shift Car Lot Property)

Location: SH-45 at S. O'Conner Drive
Austin, Williamson County, 78664

Description: View of the water quality pond (offsite manmade feature in bedrock MB-1) at the southeast corner of the study area.

PHOTOGRAPHIC REPORTING DATA SHEET

[PHOTOGRAPH 10]

Project: TCEQ Geologic Assessment

Site: 32-Acre Undeveloped Tract (Shift Car Lot Property)

Location: SH-45 at S. O'Conner Drive
Austin, Williamson County, 78664

Description: View of one of the stormwater infrastructure features (offsite manmade features in bedrock MB-2 and MB-3) beneath S. O'Conner Drive.

PHOTOGRAPHIC REPORTING DATA SHEET

[PHOTOGRAPH 11]

Project: TCEQ Geologic Assessment

Site: 32-Acre Undeveloped Tract (Shift Car Lot Property)

Location: SH-45 at S. O'Conner Drive
Austin, Williamson County, 78664

Description: View of the deep concrete stormwater conveyance channel (offsite manmade feature in bedrock MB-4) directly northeast of the study area.

Water Pollution Abatement Plan Application

Texas Commission on Environmental Quality

for Regulated Activities on the Edwards Aquifer Recharge Zone and Relating to 30 TAC §213.5(b), Effective June 1, 1999

To ensure that the application is administratively complete, confirm that all fields in the form are complete, verify that all requested information is provided, consistently reference the same site and contact person in all forms in the application, and ensure forms are signed by the appropriate party.

Note: Including all the information requested in the form and attachments contributes to more streamlined technical reviews.

Signature

To the best of my knowledge, the responses to this form accurately reflect all information requested concerning the proposed regulated activities and methods to protect the Edwards Aquifer. This **Water Pollution Abatement Plan Application Form** is hereby submitted for TCEQ review and Executive Director approval. The form was prepared by:

Print Name of Customer/Agent: Jen Henderson, P.E.

Date: 10/14/2025

Signature of Customer/Agent:

Regulated Entity Name: North Austin Crossroads Community Church

Regulated Entity Information

1. The type of project is:

   ☐ Residential: Number of Lots:_____
   ☐ Residential: Number of Living Unit Equivalents:_____
   ☒ Commercial
   ☐ Industrial
   ☐ Other:_____

2. Total site acreage (size of property): 16.495

3. Estimated projected population:_____

4. The amount and type of impervious cover expected after construction are shown below:

Table 1 - Impervious Cover Table

Impervious Cover of Proposed Project	Sq. Ft.	Sq. Ft./Acre	Acres
Structures/Rooftops	17,472	÷ 43,560 =	0.401
Parking	100,749.84	÷ 43,560 =	2.313
Other paved surfaces		÷ 43,560 =	
Total Impervious Cover	118,221.84	÷ 43,560 =	2.714

Total Impervious Cover 2.714 **÷ Total Acreage** 16.495 **X 100 =** 16.45 **% Impervious Cover**

5. [X] **Attachment A - Factors Affecting Surface Water Quality**. A detailed description of all factors that could affect surface water and groundwater quality that addresses ultimate land use is attached.

6. [X] Only inert materials as defined by 30 TAC §330.2 will be used as fill material.

For Road Projects Only

Complete questions 7 - 12 if this application is exclusively for a road project.

7. Type of project:

   [ ] TXDOT road project.
   [ ] County road or roads built to county specifications.
   [ ] City thoroughfare or roads to be dedicated to a municipality.
   [ ] Street or road providing access to private driveways.

8. Type of pavement or road surface to be used:

   [ ] Concrete
   [ ] Asphaltic concrete pavement
   [ ] Other: _____

9. Length of Right of Way (R.O.W.): _____ feet.

   Width of R.O.W.: _____ feet.
   L x W = _____ Ft^2 ÷ 43,560 Ft^2/Acre = _____ acres.

10. Length of pavement area: _____ feet.

    Width of pavement area: _____ feet.
    L x W = _____ Ft^2 ÷ 43,560 Ft^2/Acre = _____ acres.
    Pavement area _____ acres ÷ R.O.W. area _____ acres x 100 = _____% impervious cover.

11. [ ] A rest stop will be included in this project.

    [ ] A rest stop will not be included in this project.

12. ☐ Maintenance and repair of existing roadways that do not require approval from the TCEQ Executive Director. Modifications to existing roadways such as widening roads/adding shoulders totaling more than one-half (1/2) the width of one (1) existing lane require prior approval from the TCEQ.

Stormwater to be generated by the Proposed Project

13. ☐ **Attachment B - Volume and Character of Stormwater**. A detailed description of the volume (quantity) and character (quality) of the stormwater runoff which is expected to occur from the proposed project is attached. The estimates of stormwater runoff quality and quantity are based on the area and type of impervious cover. Include the runoff coefficient of the site for both pre-construction and post-construction conditions.

Wastewater to be generated by the Proposed Project

14. The character and volume of wastewater is shown below:

_____% Domestic	_____Gallons/day
_____% Industrial	_____Gallons/day
_____% Commingled	_____Gallons/day
TOTAL gallons/day _____	

15. Wastewater will be disposed of by:

☐ On-Site Sewage Facility (OSSF/Septic Tank):

- ☐ **Attachment C - Suitability Letter from Authorized Agent**. An on-site sewage facility will be used to treat and dispose of the wastewater from this site. The appropriate licensing authority's (authorized agent) written approval is attached. It states that the land is suitable for the use of private sewage facilities and will meet or exceed the requirements for on-site sewage facilities as specified under 30 TAC Chapter 285 relating to On-site Sewage Facilities.
- ☐ Each lot in this project/development is at least one (1) acre (43,560 square feet) in size. The system will be designed by a licensed professional engineer or registered sanitarian and installed by a licensed installer in compliance with 30 TAC Chapter 285.

☒ Sewage Collection System (Sewer Lines):

- ☒ Private service laterals from the wastewater generating facilities will be connected to an existing SCS.
- ☐ Private service laterals from the wastewater generating facilities will be connected to a proposed SCS.

- ☐ The SCS was previously submitted on_____.
- ☐ The SCS was submitted with this application.
- ☐ The SCS will be submitted at a later date. The owner is aware that the SCS may not be installed prior to Executive Director approval.

[X] The sewage collection system will convey the wastewater to the City of Austin Treatment Plant. The treatment facility is:

[X] Existing.
[ ] Proposed.

16. [ ] All private service laterals will be inspected as required in 30 TAC §213.5.

Site Plan Requirements

Items 17 – 28 must be included on the Site Plan.

17. [X] The Site Plan must have a minimum scale of 1" = 400'.

Site Plan Scale: 1" = 20 '.

18. 100-year floodplain boundaries:

[ ] Some part(s) of the project site is located within the 100-year floodplain. The floodplain is shown and labeled.
[X] No part of the project site is located within the 100-year floodplain.
The 100-year floodplain boundaries are based on the following specific (including date of material) sources(s): FEMA Flood Map 48491C0630F dated December 20, 2019.

19. [X] The layout of the development is shown with existing and finished contours at appropriate, but not greater than ten-foot contour intervals. Lots, recreation centers, buildings, roads, open space, etc. are shown on the plan.

[ ] The layout of the development is shown with existing contours at appropriate, but not greater than ten-foot intervals. Finished topographic contours will not differ from the existing topographic configuration and are not shown. Lots, recreation centers, buildings, roads, open space, etc. are shown on the site plan.

20. All known wells (oil, water, unplugged, capped and/or abandoned, test holes, etc.):

[ ] There are _____ (#) wells present on the project site and the locations are shown and labeled. (Check all of the following that apply)

[ ] The wells are not in use and have been properly abandoned.
[ ] The wells are not in use and will be properly abandoned.
[ ] The wells are in use and comply with 16 TAC §76.

[X] There are no wells or test holes of any kind known to exist on the project site.

21. Geologic or manmade features which are on the site:

[ ] All sensitive geologic or manmade features identified in the Geologic Assessment are shown and labeled.
[X] No sensitive geologic or manmade features were identified in the Geologic Assessment.
[ ] **Attachment D - Exception to the Required Geologic Assessment**. A request and justification for an exception to a portion of the Geologic Assessment is attached.

22. [X] The drainage patterns and approximate slopes anticipated after major grading activities.
23. [X] Areas of soil disturbance and areas which will not be disturbed.
24. [X] Locations of major structural and nonstructural controls. These are the temporary and permanent best management practices.
25. [X] Locations where soil stabilization practices are expected to occur.
26. [ ] Surface waters (including wetlands).

    [X] N/A
27. [ ] Locations where stormwater discharges to surface water or sensitive features are to occur.

    [X] There will be no discharges to surface water or sensitive features.
28. [X] Legal boundaries of the site are shown.

Administrative Information

29. [X] Submit one (1) original and one (1) copy of the application, plus additional copies as needed for each affected incorporated city, groundwater conservation district, and county in which the project will be located. The TCEQ will distribute the additional copies to these jurisdictions. The copies must be submitted to the appropriate regional office.
30. [X] Any modification of this WPAP will require Executive Director approval, prior to construction, and may require submission of a revised application, with appropriate fees.

Factors Affecting Surface Water Quality

The construction activities associated with the Stars Towing plan of development could result in additional Total Suspended Solids (TSS) loads during the construction of the site improvements. This potential increased locating will be mitigated with the use of silt fencing that is to be placed downgradient of the active construction areas and the placement of stabilized construction entrances at the entrance(s) of the project. Rock berms may be used in areas of concentrated flows during construction activities.

The overall impervious cover of the site will be approximately 16.45%, 2.714-acres of the 16.495-acre site. The runoff from the site will be treated by sedimentation and filtration basins. The permanent stormwater control calculations have been provided on the plan set and demonstrate the functionality of the proposed stormwater Best Management Practices. The proposed stormwater conveyance system will protect the water quality of Lake Creek.

HPE
Civil Engineering

Volume and Character of Stormwater

The drainage patterns for this project possess three separate points of interest.

The peak storm water before construction for Crossroads Community Church improvements has been calculated to be the following for the 25-yr and 100-yr storm events at the points of interest:

Pre-Development		
	25-yr	**100-yr**
Analysis 1	9.096	12.865
Analysis 2	48.054	68.937
Analysis 3	4.299	6.135

This is given that the pre-development conditions project site is 16.495 acres of land that is mostly an open field with a mix of grasses and clusters of trees over soils group D at 1 - 4 percent slopes and a percent impervious cover of 0%. The character of existing runoff is that of undeveloped land in proximity of highways. After construction the character of the runoff will change such that hydrocarbon residues from vehicles, buildings, and other contamination typical of a place of worship may be present.

The peak storm water discharges post-construction has been calculated to be the following for the 25-yr and 100-yr storm events, given that the proposed impervious cover percentage is about 16.45%:

Post-Development		
	25-yr	**100-yr**
Analysis 1	22.972	32.397
Analysis 2	80.453	110.512
Analysis 3	1.912	2.561

The proposed sedimentation and filtration basins on the site will treat most of the foreign elements. A proposed detention pond has been designed for the 2-year storm.

Detailed calculations will be shown within the drainage area map sheets.

Temporary Stormwater Section

Texas Commission on Environmental Quality

for Regulated Activities on the Edwards Aquifer Recharge Zone and Relating to 30 TAC §213.5(b)(4)(A), (B), (D)(I) and (G); Effective June 1, 1999

To ensure that the application is administratively complete, confirm that all fields in the form are complete, verify that all requested information is provided, consistently reference the same site and contact person in all forms in the application, and ensure forms are signed by the appropriate party.

Note: Including all the information requested in the form and attachments contributes to more streamlined technical reviews.

Signature

To the best of my knowledge, the responses to this form accurately reflect all information requested concerning the proposed regulated activities and methods to protect the Edwards Aquifer. This **Temporary Stormwater Section** is hereby submitted for TCEQ review and executive director approval. The application was prepared by:

Print Name of Customer/Agent: Jen Henderson, PE

Date: 10/31/2025

Signature of Customer/Agent:

Regulated Entity Name: North Austin Crossroads Community Church

Project Information

Potential Sources of Contamination

Examples: Fuel storage and use, chemical storage and use, use of asphaltic products, construction vehicles tracking onto public roads, and existing solid waste.

1. Fuels for construction equipment and hazardous substances which will be used during construction:

   ☐ The following fuels and/or hazardous substances will be stored on the site: _____

   These fuels and/or hazardous substances will be stored in:

   ☐ Aboveground storage tanks with a cumulative storage capacity of less than 250 gallons will be stored on the site for less than one (1) year.

☐ Aboveground storage tanks with a cumulative storage capacity between 250 gallons and 499 gallons will be stored on the site for less than one (1) year.

☐ Aboveground storage tanks with a cumulative storage capacity of 500 gallons or more will be stored on the site. An Aboveground Storage Tank Facility Plan application must be submitted to the appropriate regional office of the TCEQ prior to moving the tanks onto the project.

☒ Fuels and hazardous substances will not be stored on the site.

2. ☒ **Attachment A - Spill Response Actions**. A site specific description of the measures to be taken to contain any spill of hydrocarbons or hazardous substances is attached.

3. ☒ Temporary aboveground storage tank systems of 250 gallons or more cumulative storage capacity must be located a minimum horizontal distance of 150 feet from any domestic, industrial, irrigation, or public water supply well, or other sensitive feature.

4. ☒ **Attachment B - Potential Sources of Contamination**. A description of any activities or processes which may be a potential source of contamination affecting surface water quality is attached.

Sequence of Construction

5. ☒ **Attachment C - Sequence of Major Activities**. A description of the sequence of major activities which will disturb soils for major portions of the site (grubbing, excavation, grading, utilities, and infrastructure installation) is attached.

   ☒ For each activity described, an estimate (in acres) of the total area of the site to be disturbed by each activity is given.

   ☒ For each activity described, include a description of appropriate temporary control measures and the general timing (or sequence) during the construction process that the measures will be implemented.

6. ☒ Name the receiving water(s) at or near the site which will be disturbed or which will receive discharges from disturbed areas of the project: Lake Creek

Temporary Best Management Practices (TBMPs)

Erosion control examples: tree protection, interceptor swales, level spreaders, outlet stabilization, blankets or matting, mulch, and sod. Sediment control examples: stabilized construction exit, silt fence, filter dikes, rock berms, buffer strips, sediment traps, and sediment basins. Please refer to the Technical Guidance Manual for guidelines and specifications. All structural BMPs must be shown on the site plan.

7. ☒ **Attachment D – Temporary Best Management Practices and Measures**. TBMPs and measures will prevent pollution of surface water, groundwater, and stormwater. The construction-phase BMPs for erosion and sediment controls have been designed to retain sediment on site to the extent practicable. The following information is attached:

- [X] A description of how BMPs and measures will prevent pollution of surface water, groundwater or stormwater that originates upgradient from the site and flows across the site.
- [X] A description of how BMPs and measures will prevent pollution of surface water or groundwater that originates on-site or flows off site, including pollution caused by contaminated stormwater runoff from the site.
- [X] A description of how BMPs and measures will prevent pollutants from entering surface streams, sensitive features, or the aquifer.
- [X] A description of how, to the maximum extent practicable, BMPs and measures will maintain flow to naturally-occurring sensitive features identified in either the geologic assessment, TCEQ inspections, or during excavation, blasting, or construction.

8. [X] The temporary sealing of a naturally-occurring sensitive feature which accepts recharge to the Edwards Aquifer as a temporary pollution abatement measure during active construction should be avoided.

   - [ ] **Attachment E - Request to Temporarily Seal a Feature**. A request to temporarily seal a feature is attached. The request includes justification as to why no reasonable and practicable alternative exists for each feature.
   - [X] There will be no temporary sealing of naturally-occurring sensitive features on the site.

9. [X] **Attachment F - Structural Practices**. A description of the structural practices that will be used to divert flows away from exposed soils, to store flows, or to otherwise limit runoff discharge of pollutants from exposed areas of the site is attached. Placement of structural practices in floodplains has been avoided.

10. [X] **Attachment G - Drainage Area Map**. A drainage area map supporting the following requirements is attached:

    - [ ] For areas that will have more than 10 acres within a common drainage area disturbed at one time, a sediment basin will be provided.
    - [ ] For areas that will have more than 10 acres within a common drainage area disturbed at one time, a smaller sediment basin and/or sediment trap(s) will be used.
    - [ ] For areas that will have more than 10 acres within a common drainage area disturbed at one time, a sediment basin or other equivalent controls are not attainable, but other TBMPs and measures will be used in combination to protect down slope and side slope boundaries of the construction area.
    - [ ] There are no areas greater than 10 acres within a common drainage area that will be disturbed at one time. A smaller sediment basin and/or sediment trap(s) will be used in combination with other erosion and sediment controls within each disturbed drainage area.

[X] There are no areas greater than 10 acres within a common drainage area that will be disturbed at one time. Erosion and sediment controls other than sediment basins or sediment traps within each disturbed drainage area will be used.

11. [ ] **Attachment H - Temporary Sediment Pond(s) Plans and Calculations**. Temporary sediment pond or basin construction plans and design calculations for a proposed temporary BMP or measure have been prepared by or under the direct supervision of a Texas Licensed Professional Engineer. All construction plans and design information must be signed, sealed, and dated by the Texas Licensed Professional Engineer. Construction plans for the proposed temporary BMPs and measures are attached.

    [X] N/A

12. [X] **Attachment I - Inspection and Maintenance for BMPs.** A plan for the inspection of each temporary BMP(s) and measure(s) and for their timely maintenance, repairs, and, if necessary, retrofit is attached. A description of the documentation procedures, recordkeeping practices, and inspection frequency are included in the plan and are specific to the site and/or BMP.

13. [X] All control measures must be properly selected, installed, and maintained in accordance with the manufacturer's specifications and good engineering practices. If periodic inspections by the applicant or the executive director, or other information indicate a control has been used inappropriately, or incorrectly, the applicant must replace or modify the control for site situations.

14. [X] If sediment escapes the construction site, off-site accumulations of sediment must be removed at a frequency sufficient to minimize offsite impacts to water quality (e.g., fugitive sediment in street being washed into surface streams or sensitive features by the next rain).

15. [X] Sediment must be removed from sediment traps or sedimentation ponds not later than when design capacity has been reduced by 50%. A permanent stake will be provided that can indicate when the sediment occupies 50% of the basin volume.

16. [X] Litter, construction debris, and construction chemicals exposed to stormwater shall be prevented from becoming a pollutant source for stormwater discharges (e.g., screening outfalls, picked up daily).

Soil Stabilization Practices

Examples: establishment of temporary vegetation, establishment of permanent vegetation, mulching, geotextiles, sod stabilization, vegetative buffer strips, protection of trees, or preservation of mature vegetation.

17. [X] **Attachment J - Schedule of Interim and Permanent Soil Stabilization Practices**. A schedule of the interim and permanent soil stabilization practices for the site is attached.

18. [X] Records must be kept at the site of the dates when major grading activities occur, the dates when construction activities temporarily or permanently cease on a portion of the site, and the dates when stabilization measures are initiated.

19. [X] Stabilization practices must be initiated as soon as practicable where construction activities have temporarily or permanently ceased.

Administrative Information

20. [X] All structural controls will be inspected and maintained according to the submitted and approved operation and maintenance plan for the project.

21. [X] If any geologic or manmade features, such as caves, faults, sinkholes, etc., are discovered, all regulated activities near the feature will be immediately suspended. The appropriate TCEQ Regional Office shall be immediately notified. Regulated activities must cease and not continue until the TCEQ has reviewed and approved the methods proposed to protect the aquifer from any adverse impacts.

22. [X] Silt fences, diversion berms, and other temporary erosion and sediment controls will be constructed and maintained as appropriate to prevent pollutants from entering sensitive features discovered during construction.

Attachment A – Spill Response Actions

The first steps that should be taken in the event of a spill are keeping people safe, identifying what has been spilled, and determining if warning signs are needed. The next step is to call the State of Texas Spill-Reporting Hotline and the SERC: 1-800-832-8224 no later than 24 hours after the discovery of the spill or discharge. The local TCEQ office shall also be contacted at 512-339-2929. All clean-up will follow the Spill Prevention and Control guidance outlined in Chapter 327 of the Texas Administrative Code.

Reasonable Response Actions:

1. Arrival of the responsible person or response personnel hired by the responsible person at the time of the discharge/spill
2. Make an effort to stop the spill or discharge
3. Minimizing the impact of the spill on public health and the environment
4. Neutralizing the effects of the incident
5. Removing the discharged or spilled substances
6. Managing the wastes

Kind of spill	Where discharged	Reportable quantity	Rule, statute, or responsible agency
Hazardous substance	onto land	"Final RQ" in Table 302.4 in **40 CFR 302.4** (PDF)	**30 TAC 327**
	into water	"Final RQ" or 100 lbs, whichever is **less**	
Any oil	coastal waters	as required by the Texas General Land Office	**Texas General Land Office**
Crude oil, oil that is neither a petroleum product nor used oil	onto land	210 gallons (five barrels)	**30 TAC 327**
	directly into water	enough to create a sheen	
Petroleum product, used oil	onto land, from an exempt PST facility	210 gallons (five barrels)	**30 TAC 327**
	onto land, or onto land from a non-exempt PST facility	25 gallons	
	directly into water	enough to create a sheen	
Associated with the exploration, development and production of oil, gas, or geothermal resources	under the jurisdiction of the Railroad Commission of Texas	as required by the Railroad Commission of Texas	**Railroad Commission of Texas**
Industrial solid waste or other substances	into water	100 lbs	**30 TAC 327**
From petroleum storage tanks, underground or aboveground	into water	enough to create a sheen on water	**30 TAC 334** .75-81
From petroleum storage tanks, underground or aboveground	onto land	25 gallons or equal to the RQ under **40 CFR 302**	**30 TAC 327**
Other substances that may be useful or valuable and are not ordinarily considered to be waste, but will cause pollution if discharged into water in the state	into water	100 lbs	**30 TAC 327**

https://www.tceq.texas.gov/response/spills/spill_rq.html

If a spill or accidental discharge is to occur it will be promptly contained by the responsible persons. Any spills will be excavated and properly disposed of.

Attachment B – Potential Sources of Contamination

There are a few potential sources of contamination with the construction of this project. A potential source of contamination is fuel for the equipment that will be utilized for excavation and other construction activities on the site. Concrete paving as well as a concrete curb and gutter will also take place on the site to construct the buildings, driveway, and parking lot. Paving can introduce a potential for surface water contamination.

Attachment C – Sequence of Major Activities

Below is a list of the major activities that will take place for the site development. The nearest receiving water ultimately discharges to Lake Creek.

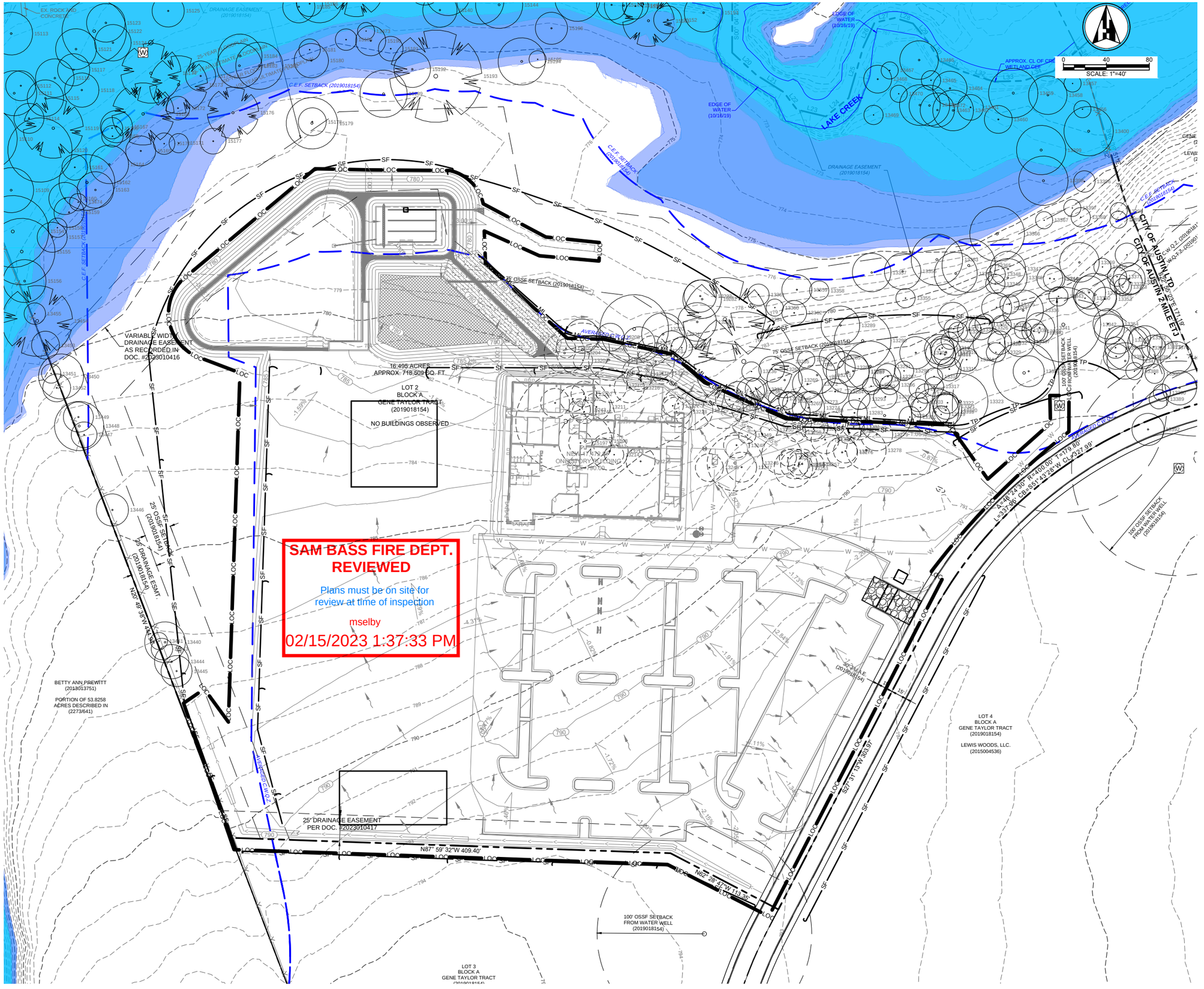
1. There will be clearing and grubbing where the construction will take place. Approximately 7.82 acres of the site will be cleared of brush and trees. Silt fence will be put in place downstream of the disturbance to ensure that any soil loosened in the process will be contained on the site in the event of a storm. Tree protection will be installed before other trees are removed.
2. Excavation and utility installation will take place after the clearing and grubbing. The silt fence will still be in place from the initial installation and will be inspected to ensure it is still intact. Any damaged portions will be removed and replaced. A stabilized construction entrance will be used to prevent track out from the site.
3. After the utilities are installed the construction of the buildings, parking lots, driveways, and other developments will proceed. All previously mentioned erosion and sediment controls will be incorporated into the site development. Additional silt fencing will be put in place downstream if necessary. A concrete washout will be utilized for concrete waste.

Attachment D – Temporary Best Management Practices and Measures

Several temporary BMPs will be utilized on the project site. A silt fence will be placed downstream of the site to prevent flows from picking up sediment and discharging from the site. A stabilized construction entrance will also be provided in order to prevent any vehicles entering or exiting the site from tracking out sediment into the street. Flows from the site will be contained in order to prevent them from entering surface streams, sensitive features, or the aquifer. There have not been any naturally occurring sensitive features identified on the site by the geologic survey. There are no manmade sensitive features identified on the site.

HPE
Civil Engineering

Attachment F – Structural Practices



LEGEND

LOC	LIMITS OF CONSTRUCTION (7.82 Ac.)
CD	ROCK CHECK DAM
IP	INLET PROTECTION
SF	SILT FENCE
CF	CONSTRUCTION FENCE
FD	FILTER DIKE
TP	TREE PROTECTION FENCE
ML	MULCH LOG
	FLOW ARROW

KEY MAP (NOT TO SCALE)

NOTES:

1. NO ENVIRONMENTALLY SENSITIVE AREAS ARE LOCATED ON OR DOWNSTREAM OF THIS PROJECT SITE.
2. THIS PROJECT WILL NOT REQUIRE ANY FORM OF PHASING OR SLOPE STABILIZATION.
3. REFER TO LANDSCAPE PLANS FOR RESEEDING AND REVEGETATION REQUIREMENTS.
4. NO PERMANENT EROSION CONTROL MEASURES WILL BE INSTALLED WITH THIS PROJECT.
5. REFER TO SHEET 47 FOR EROSION AND SEDIMENTATION CONTROL DETAILS.
6. ALL MUD, DIRT, ROCKS, DEBRIS, ETC., SPILLED, TRACKED OR OTHERWISE DEPOSITED ON EXISTING PAVED STREETS, DRIVES AND AREAS USED BY THE PUBLIC SHALL BE CLEANED UP IMMEDIATELY.
7. ALL TEMPORARY EROSION CONTROL MEASURES SHALL NOT BE REMOVED UNTIL FINAL INSPECTION AND APPROVAL OF THE PROJECT BY THE ENGINEER. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO MAINTAIN ALL TEMPORARY EROSION CONTROL STRUCTURES AND TO REMOVE EACH STRUCTURE AS APPROVED BY THE ENGINEER.
8. ALL SLOPES SHALL BE SODDED OR SEEDED WITH APPROVED GRASS, GRASS MIXTURES OR GROUND COVER SUITABLE TO THE AREA AND SEASON IN WHICH THEY ARE APPLIED.
9. IF DISTURBED AREA IS NOT TO BE WORKED FORMORE THAN 14 DAYS, DISTURBED AREA NEEDS TO BE STABILIZED BY REVEGETATION, MULCH, TARP, OR REVEGETATION MATTING. [ECM 1.4.4.B.3, SECTION 5.I]ENVIRONMENTAL INSPECTOR HAS THE AUTHORITY TO ADD AND/OR MODIFY EROSION/SEDIMENTATION CONTROLS ON SITE TO KEEP PROJECT IN COMPLIANCE WITH THE CITY OF AUSTIN RULES AND REGULATIONS [LDC 25-8-182]CONTRACTOR SHALL UTILIZE DUST CONTROL MEASURES DURING SITE CONSTRUCTION SUCH AS IRRIGATION TRUCKS AND MULCHING AS PER ECM 1.4.5(A), OR AS DIRECTED BY THE ENVIRONMENTAL INSPECTOR.THE CONTRACTOR WILL CLEAN UP SPOILS THAT MIGRATE ONTO THE ROADS A MINIMUM OF ONCE DAILY. [ECM 1.4.4.D.4]
10. ONLY RUBBER-TIRED EQUIPMENT IS ALLOWED WITHIN THE CWQZ AND FLOODPLAIN. NO TRACK EQUIPMENT IS ALLOWED.
11. ALL EQUIPMENT AND SPOILS ARE TO BE REMOVED FROM THE CREEK, THE CWQZ, AND THE 100-YEAR FLOODPLAIN NIGHTLY.

Henderson Professional Engineers
600 ROUND ROCK WEST DRIVE, SUITE 604
ROUND ROCK, TX 78681
512.350.6228
PELS FIRM #F-22208
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Civil Engineering
WBE2101166 | HUB 1853873845300

No.	REVISION
1	
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SITE DEVELOPMENT PLANS TO SERVE

NORTH AUSTIN CROSSROADS COMMUNITY CHURCH
15800 CROSSROADS DRIVE
AUSTIN, TEXAS 78681

OVERALL EROSION AND SEDIMENTATION CONTROL PLAN

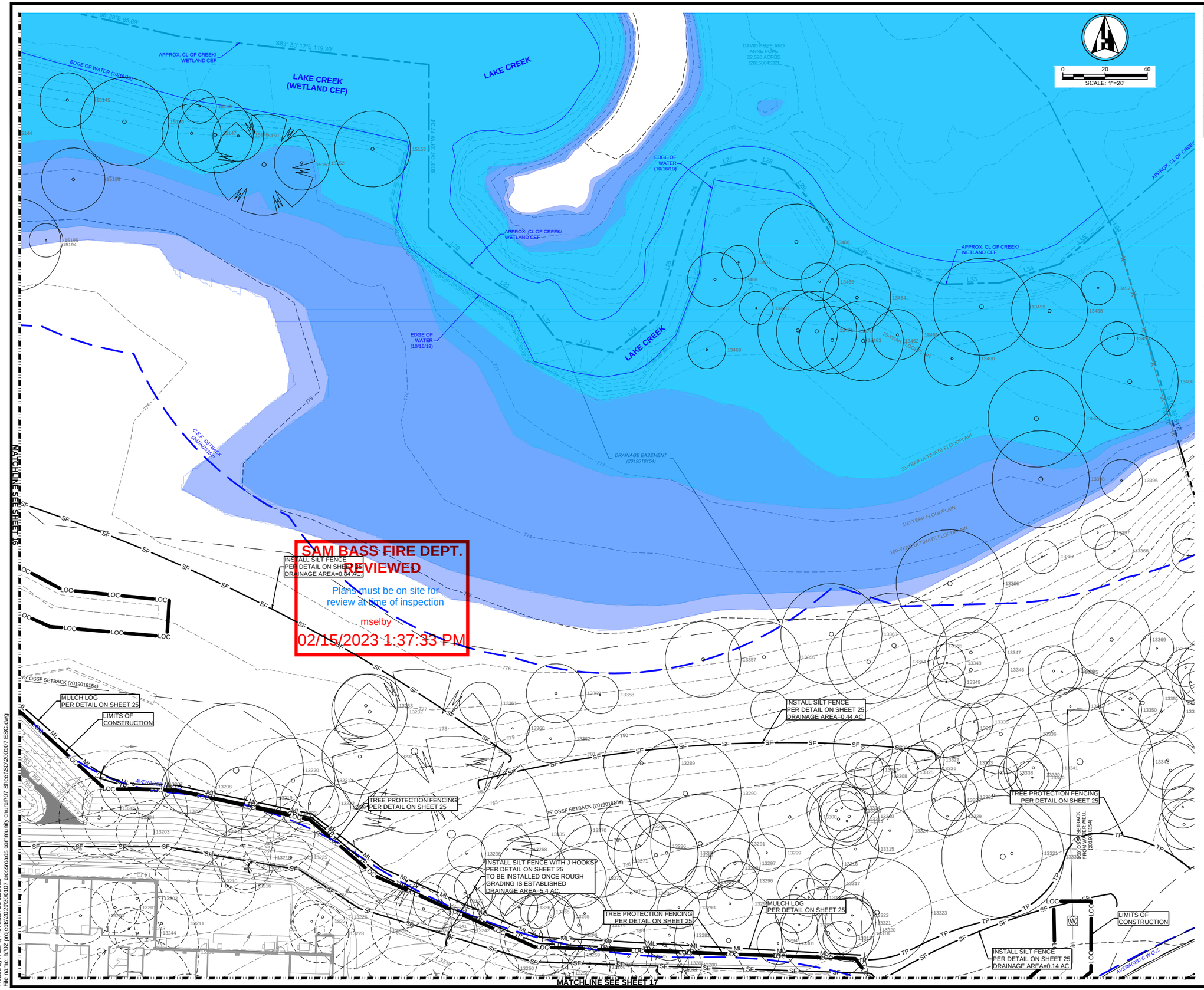
STATE OF TEXAS
JENNIFER L. HENDERSON
116883
LICENSED
PROFESSIONAL ENGINEER
02/10/2023

CITY OF AUSTIN
APPROVED
Date 08/03/2023
FOUNDED 1839

PROJECT NO. 200107	02/10/2023	DRAWN BY: JS	CHECKED BY: AR	APPROVED BY: JH

Plotted by: Adam, Plot date: 10/02/2023
File name: h:\02 projects\2020\200107 crossroads community church\07 Sheet\SD\200107 ESC.dwg

CITY PROJECT NUMBER SP-2020-0328D



LEGEND

LOC	LIMITS OF CONSTRUCTION (7.82 Ac.)
CD	ROCK CHECK DAM
IP	INLET PROTECTION
SF	SILT FENCE
CF	CONSTRUCTION FENCE
FD	FILTER DIKE
TP	TREE PROTECTION FENCE
ML	MULCH LOG
	FLOW ARROW

KEY MAP
(NOT TO SCALE)

NOTES:

1. NO ENVIRONMENTALLY SENSITIVE AREAS ARE LOCATED ON OR DOWNSTREAM OF THIS PROJECT SITE.
2. THIS PROJECT WILL NOT REQUIRE ANY FORM OF PHASING OR SLOPE STABILIZATION.
3. REFER TO LANDSCAPE PLANS FOR RESEEDING AND REVEGETATION REQUIREMENTS.
4. NO PERMANENT EROSION CONTROL MEASURES WILL BE INSTALLED WITH THIS PROJECT.
5. REFER TO SHEET 47 FOR EROSION AND SEDIMENTATION CONTROL DETAILS.
6. ALL MUD, DIRT, ROCKS, DEBRIS, ETC., SPILLED, TRACKED OR OTHERWISE DEPOSITED ON EXISTING PAVED STREETS, DRIVES AND AREAS USED BY THE PUBLIC SHALL BE CLEANED UP IMMEDIATELY.
7. ALL TEMPORARY EROSION CONTROL MEASURES SHALL NOT BE REMOVED UNTIL FINAL INSPECTION AND APPROVAL OF THE PROJECT BY THE ENGINEER. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO MAINTAIN ALL TEMPORARY EROSION CONTROL STRUCTURES AND TO REMOVE EACH STRUCTURE AS APPROVED BY THE ENGINEER.
8. ALL SLOPES SHALL BE SODDED OR SEEDED WITH APPROVED GRASS, GRASS MIXTURES OR GROUND COVER SUITABLE TO THE AREA AND SEASON IN WHICH THEY ARE APPLIED.
9. IF DISTURBED AREA IS NOT TO BE WORKED FORMORE THAN 14 DAYS, DISTURBED AREA NEEDS TO BE STABILIZED BY REVEGETATION, MULCH, TARP, OR REVEGETATION MATTING. [ECM 1.4.4.B.3, SECTION 5.I]ENVIRONMENTAL INSPECTOR HAS THE AUTHORITY TO ADD AND/OR MODIFY EROSION/SEDIMENTATION CONTROLS ON SITE TO KEEP PROJECT IN COMPLIANCE WITH THE CITY OF AUSTIN RULES AND REGULATIONS [LDC 25-8-182]CONTRACTOR SHALL UTILIZE DUST CONTROL MEASURES DURING SITE CONSTRUCTION SUCH AS IRRIGATION TRUCKS AND MULCHING AS PER ECM 1.4.5(A), OR AS DIRECTED BY THE ENVIRONMENTAL INSPECTOR.THE CONTRACTOR WILL CLEAN UP SPOILS THAT MIGRATE ONTO THE ROADS A MINIMUM OF ONCE DAILY. [ECM 1.4.4.D.4]
10. ONLY RUBBER-TIRED EQUIPMENT IS ALLOWED WITHIN THE CWQZ AND FLOODPLAIN. NO TRACK EQUIPMENT IS ALLOWED.
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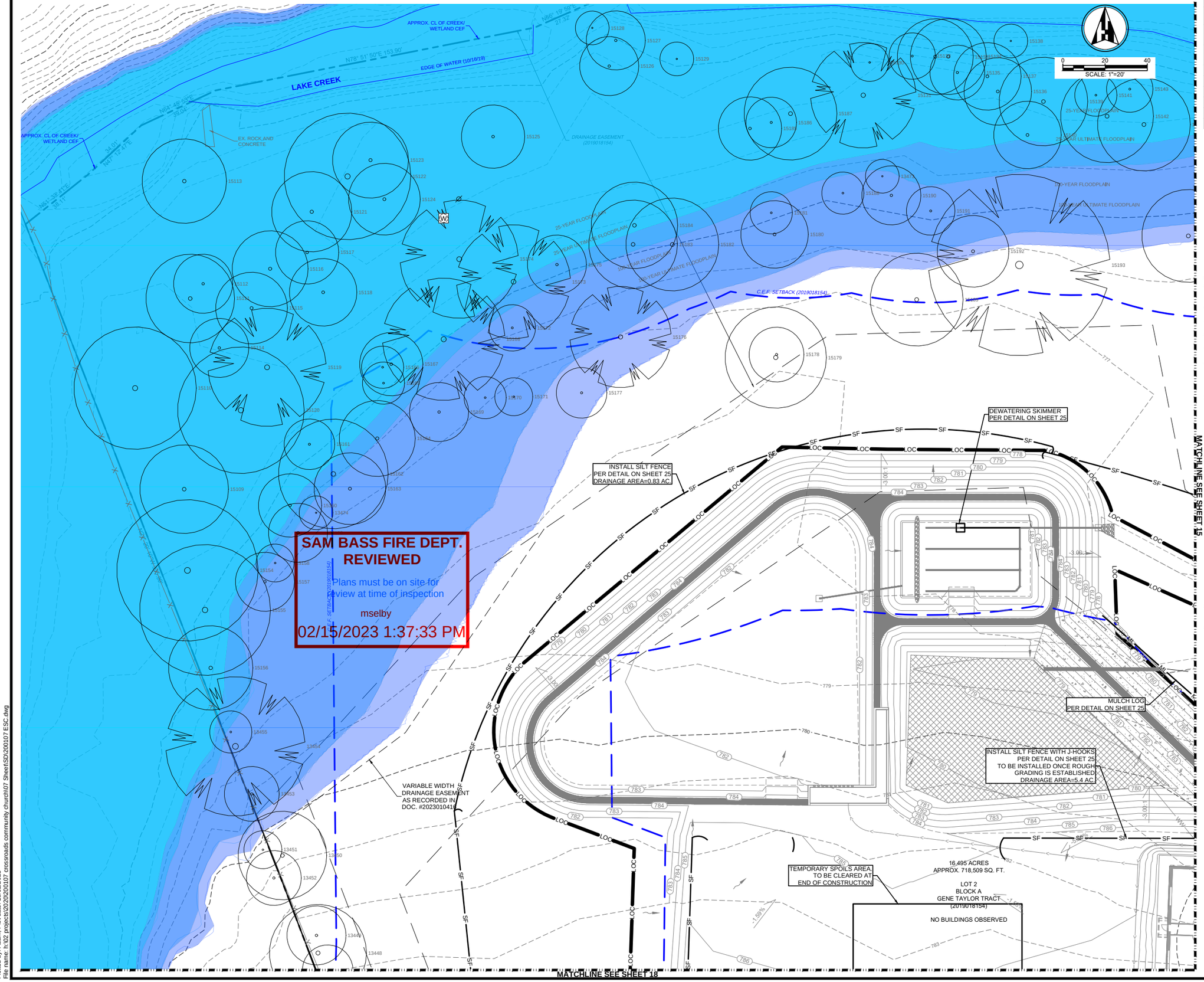

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CITY OF AUSTIN APPROVED Date 08/03/2023

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16 OF 54

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File name: h:\02 projects\2020\200107 crossroads community church\07 Sheet\SD\200107 ESC.dwg

MATCHLINE SEE SHEET 15

MATCHLINE SEE SHEET 16

NEW 17,472 SF ONE STORY BUILDING FFE=790.00

SAM BASS FIRE DEPT.
REVIEWED
Plans must be on site for review at time of inspection
mselby
02/15/2023 1:37:34 PM

CONCRETE WASHOUT PER DETAIL ON SHEET C13.00

STABILIZED CONSTRUCTION ENTRANCE PER DETAIL ON SHEET C13.00

INSTALL SILT FENCE PER DETAIL ON SHEET 25

LIMITS OF CONSTRUCTION

INSTALL SILT FENCE WITH J-HOOKS PER DETAIL ON SHEET 25 DRAINAGE AREA=1.77 AC

25' DRAINAGE EASEMENT PER DOC. #2023010417

LOT 4
BLOCK A
GENE TAYLOR TRACT
(2019018154)

LEWIS WOODS, LLC.
(2015004536)

SCALE: 1"=20'

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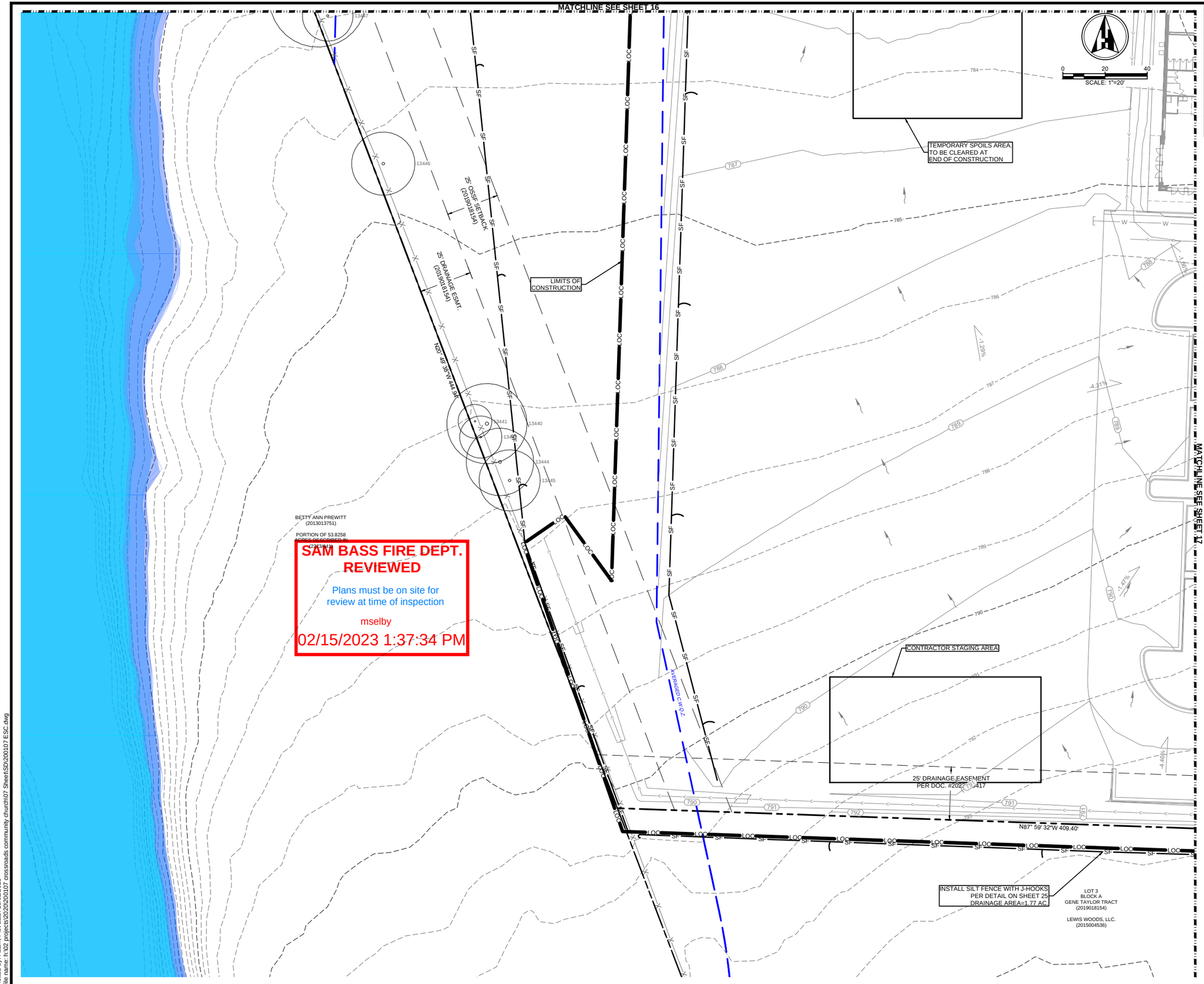

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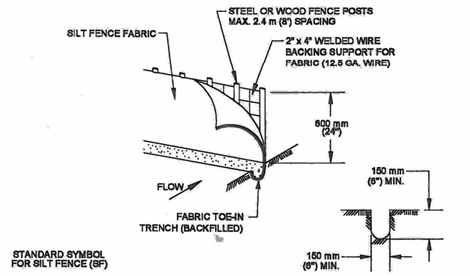


TRENCH CROSS SECTION

1. STEEL OR WOOD POSTS WHICH SUPPORT THE SILT FENCE SHALL BE INSTALLED ON A SLIGHT ANGLE TOWARD THE ANTICIPATED RUNOFF SOURCE. POST MUST BE EMBEDDED A MINIMUM OF 300 mm (12 INCHES). IF WOOD POSTS CANNOT ACHIEVE 300 mm (12 Inches) DEPTH, USE STEEL POSTS.

2. THE TOE OF THE SILT FENCE SHALL BE TRENCHED IN WITH A SPADE OR MECHANICAL TRENCHER, SO THAT THE DOWNSLOPE FACE OF THE TRENCH IS FLAT AND PERPENDICULAR TO THE LINE OF FLOW.

3. THE TRENCH MUST BE A MINIMUM OF 150 mm (6 Inches) DEEP AND 150 mm (6 Inches) WIDE TO ALLOW FOR THE SILT FENCE FABRIC TO BE LAID IN THE GROUND AND BACKFILLED WITH COMPACTED MATERIAL.

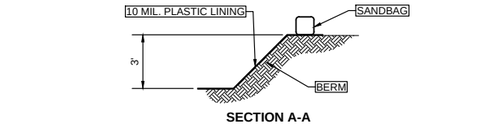
4. SILT FENCE FABRIC SHOULD BE SECURELY FASTENED TO EACH STEEL OR WOOD SUPPORT POST OR TO WOVEN WIRE , WHICH IS IN TURN ATTACHED TO THE STEEL OR WOOD FENCE POST.

5. INSPECTION SHALL BE MADE WEEKLY OR AFTER EACH RAINFALL EVENT AND REPAIR OR REPLACEMENT SHALL BE MADE PROMPTY AS NEEDED.

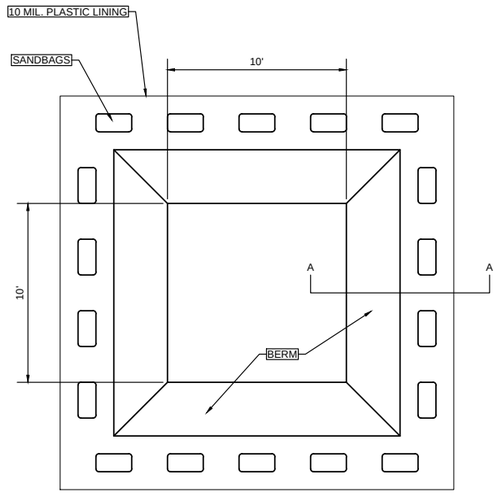
6. SILT FENCE SHALL BE REMOVED WHEN THE SITE IS COMPLETELY STABILIZED SO AS NOT TO BLOCK OR IMPEDE STORM FLOW OR DRAINAGE.

7. ACCUMULATED SILT SHALL BE REMOVED WHEN IT REACHES A DEPTH OF 150 mm (6 Inches). THE SILT SHALL BE DISPOSED OF ON AN APPROVED SITE AND IN SUCH A MANNER THAT WILL NOT CONTRIBUTE TO ADDITIONAL SILTATION.

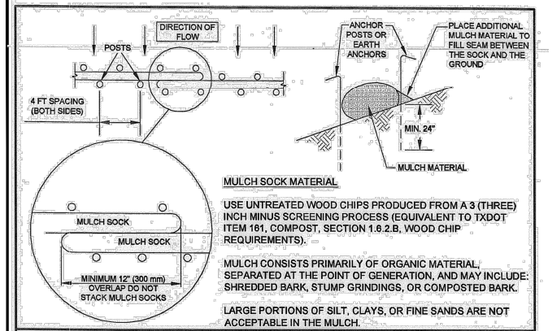
CITY OF AUSTIN WATERSHED PROTECTION DEPARTMENT	SILT FENCE	
9/1/2011 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 642S-1



SECTION A-A



01 CONCRETE WASHOUT
SCALE: 1/4" = 1'-0"



MULCH SOCK MATERIAL

USE UNTREATED WOOD CHIPS PRODUCED FROM A 3 (THREE) INCH MINUS SCREENING PROCESS (EQUIVALENT TO TXDOT ITEM 161, COMPOST, SECTION 1.6.2.B, WOOD CHIP REQUIREMENTS).

MULCH CONSISTS PRIMARILY OF ORGANIC MATERIAL, SEPARATED AT THE POINT OF GENERATION, AND MAY INCLUDE: SHREDDED BARK, STUMP GRINDINGS, OR COMPOSTED BARK.

LARGE PORTIONS OF SILT, CLAYS, OR FINE SANDS ARE NOT ACCEPTABLE IN THE MULCH.

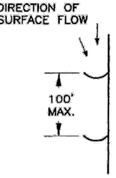
NOTES:

1. STEEL OR WOOD POSTS WHICH SUPPORT THE MULCH SOCK SHALL BE INSTALLED ON A SLIGHT ANGLE TOWARD THE ANTICIPATED RUNOFF SOURCE. POST MUST BE EMBEDDED A MINIMUM OF 600mm (24 Inches). IF WOOD POSTS CANNOT ACHIEVE 600mm (24 Inches) DEPTH, USE STEEL POSTS. EARTH ANCHORS ARE ALSO ACCEPTABLE.
2. THE TOE OF THE MULCH SOCK SHALL BE PLACED SO THAT THE MULCH SOCK IS FLAT AND PERPENDICULAR TO THE LINE OF FLOW. IN ORDER TO PREVENT WATER FROM FLOWING BETWEEN THE JOINTS OF ADJACENT ENDS OFMULCH SOCKS, LAP THE ENDS OF ADJACENT MULCH SOCKS A MINIMUM OF 300mm (12 Inches).
3. MULCH MATERIAL MUST BE FREE OF REFUSE, PHYSICAL CONTAMINANTS, AND MATERIAL TOXIC TO PLANT GROWTH; IT IS NOT ACCEPTABLE FOR THE MULCH MATERIAL TO CONTAIN GROUND CONSTRUCTION DEBRIS, BIOSOLIDS, OR MANURE.
4. SOCK MATERIAL WILL BE 100% BIODEGRADABLE, PHOTODEGRADABLE, OR RECYCLABLE SUCH AS BURLAP, TWINE, UV PHOTOBIODEGRADABLE PLASTIC, POLYESTER, OR ANY OTHER ACCEPTABLE MATERIAL.
5. MULCH SOCKS SHOULD BE USED AT THE BASE OF SLOPES NO STEEPER THAN 2:1 AND SHOULD NOT EXCEED THE MAXIMUM SPACING CRITERIA PROVIDED IN CITY OF AUSTIN ENVIRONMENTAL CRITERIA MANUAL TABLE 1.4.5.F.1 FOR A GIVEN SLOPE CATEGORY.
6. ACCUMULATED SILT SHALL BE REMOVED WHEN IT REACHES A DEPTH OF 150mm (6 Inches). THE SILT SHALL BE DISPOSED OF ON AN APPROVED SITE AND IN SUCH A MANNER THAT WILL NOT CONTRIBUTE TO ADDITIONAL SILTATION.

CITY OF AUSTIN WATERSHED PROTECTION DEPARTMENT	MULCH SOCK	
08/24/2010 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 648S-1

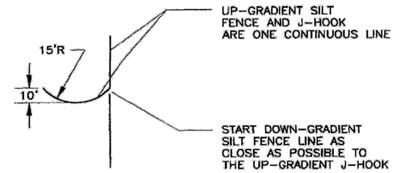
PLAN VIEW

I. SPACING REQUIREMENTS

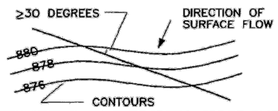


NOTE: SPACING DISTANCES WILL VARY, BUT ARE NOT TO EXCEED 100 FEET.

II. SIZING REQUIREMENTS:



FOR CATCHMENT AREA <0.25 ACRES



NOTE: J-HOOKS SHALL ALSO BE USED WHEN THE SILT FENCE IS INSTALLED AT AN ANGLE OF 30 DEGREES OR GREATER FROM PARALLEL TO THE CONTOURS.

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REVIEWED
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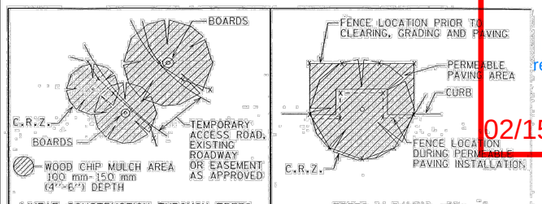
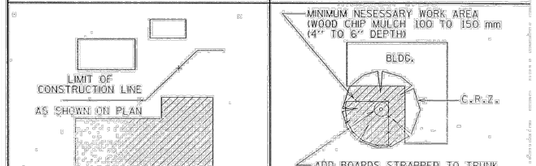
mselby
02/15/2023 1:37:35 PM



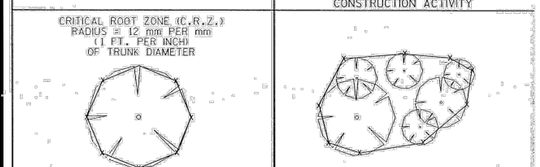
LINEAR CONSTRUCTION THROUGH TREES

TREES IN PAVING AREA



NATURAL AREAS

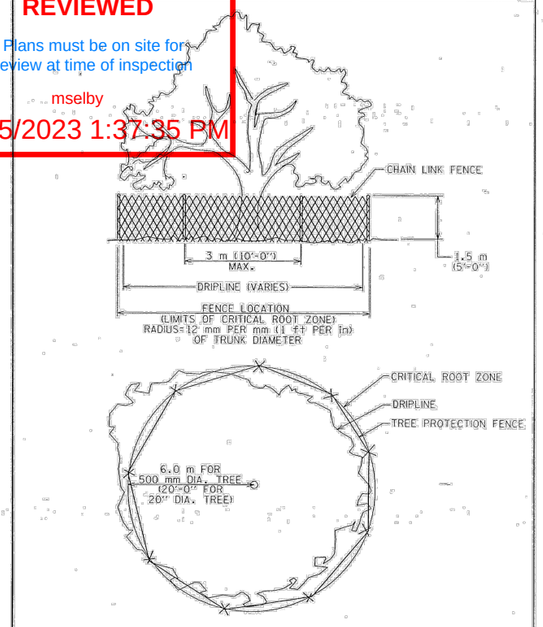
TREES NEAR CONSTRUCTION ACTIVITY



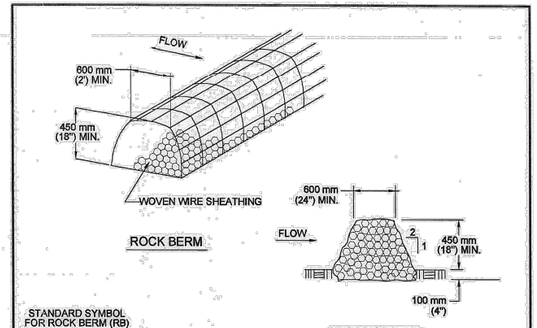
INDIVIDUAL TREE

GROUP OF TREES

CITY OF AUSTIN WATERSHED PROTECTION DEPARTMENT	TREE PROTECTION FENCE LOCATIONS	
11/15/99 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 610S-1



CITY OF AUSTIN WATERSHED PROTECTION DEPARTMENT	TREE PROPTECTION FENCE TYPE A - CHAIN LINK	
11/15/99 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 610S-2

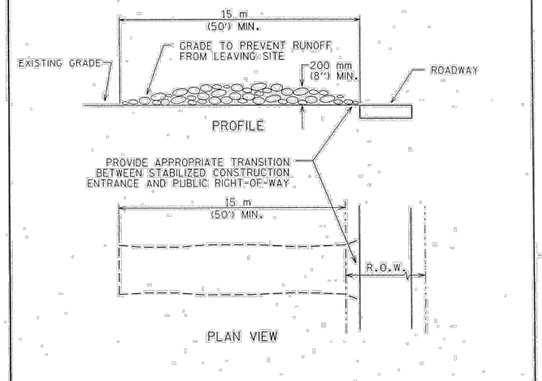


CROSS SECTION

NOTES:

1. USE ONLY OPEN GRADED ROCK 75 to 125 mm (3 to 5") DIAMETER FOR ALL CONDITIONS.
2. THE ROCK BERM SHALL BE SECURED WITH A WOVEN WIRE SHEATHING HAVING MAXIMUM 25 mm (1") OPENING AND MINIMUM WIRE DIAMETER OF 12.9 mm (20 GAUGE).
3. THE ROCK BERM SHALL BE INSPECTED DAILY OR AFTER EACH RAIN, AND THE STONE AND/OR FABRIC CORE-WOVEN SHEATHING SHALL BE REPLACED WHEN THE STRUCTURE CEASES TO FUNCTION AS INTENDED, DUE TO SEDIMENT ACCUMULATION AMONG THE ROCKS, WASHOUT, CONSTRUCTION TRAFFIC DAMAGE, ETC.
4. IF SEDIMENT REACHES A DEPTH EQUAL TO ONE-THIRD THE HEIGHT OF THE BERM OR 150 mm (6"), WHICHEVER IS LESS, THE SEDIMENT SHALL BE REMOVED AND DISPOSED OF ON AN APPROVED SITE AND IN A MANNER THAT WILL NOT CREATE A SEDIMENTION PROBLEM.
5. WHEN THE SITE IS COMPLETELY STABILIZED,THE BERM AND ACCUMULATED SEDIMENT SHALL BE REMOVED AND DISPOSED OF IN AN APPROVED MANNER.

CITY OF AUSTIN WATERSHED PROTECTION DEPARTMENT	ROCK BERM	
8/24/2010 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 639S-1



PLAN VIEW

NOTES:

1. STONE SIZE: 75-125 mm (3-5") OPEN GRADED ROCK.
2. LENGTH: AS EFFECTIVE BUT NOT LESS THAN 15 m (50').
3. THICKNESS: NOT LESS THAN 200 mm (8").
4. WIDTH: NOT LESS THAN FULL WIDTH OF ALL POINTS OF INGRESS/EGRESS.
5. WASHING: WHEN NECESSARY, VEHICLE WHEELS SHALL BE CLEANED TO REMOVE SEDIMENT PRIOR TO ENTRANCE ONTO PUBLIC ROADWAY. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE AND DRAINS INTO AN APPROVED TRAP OR SEDIMENT BASIN. ALL SEDIMENT SHALL BE PREVENTED FROM ENTERING ANY STORM DRAIN, DITCH OR WATERCOURSE USING APPROVED METHODS.
6. MAINTENANCE: THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC ROADWAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND, AS WELL AS REPAIR AND CLEAN OUT OF ANY MEASURE DEVICES USED TO TRAP SEDIMENT. ALL SEDIMENTS THAT IS SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC ROADWAY MUST BE REMOVED IMMEDIATELY.
7. DRAINAGE: ENTRANCE MUST BE PROPERLY GRADED OR INCORPORATE A DRAINAGE SWALE TO PREVENT RUNOFF FROM LEAVING THE CONSTRUCTION SITE.

CITY OF AUSTIN WATERSHED PROTECTION DEPARTMENT	STABILIZED CONSTRUCTION ENTRANCE	
5/23/00 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 641S-1

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SITE DEVELOPMENT PLANS TO SERVE

NORTH AUSTIN CROSSROADS COMMUNITY CHURCH
15800 CROSSROADS DRIVE
AUSTIN, TEXAS 78681

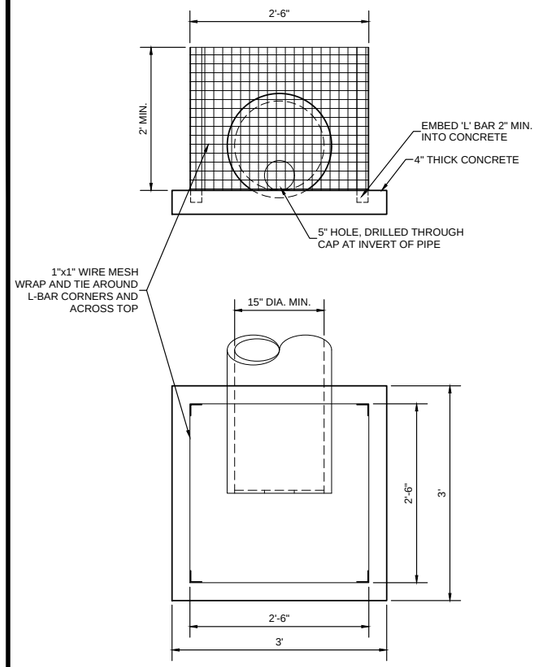
EROSION AND SEDIMENTATION CONTROL DETAILS

STATE OF TEXAS
JENNIFER L. HENDERSON
116883
LICENSED PROFESSIONAL ENGINEER
02/08/2023

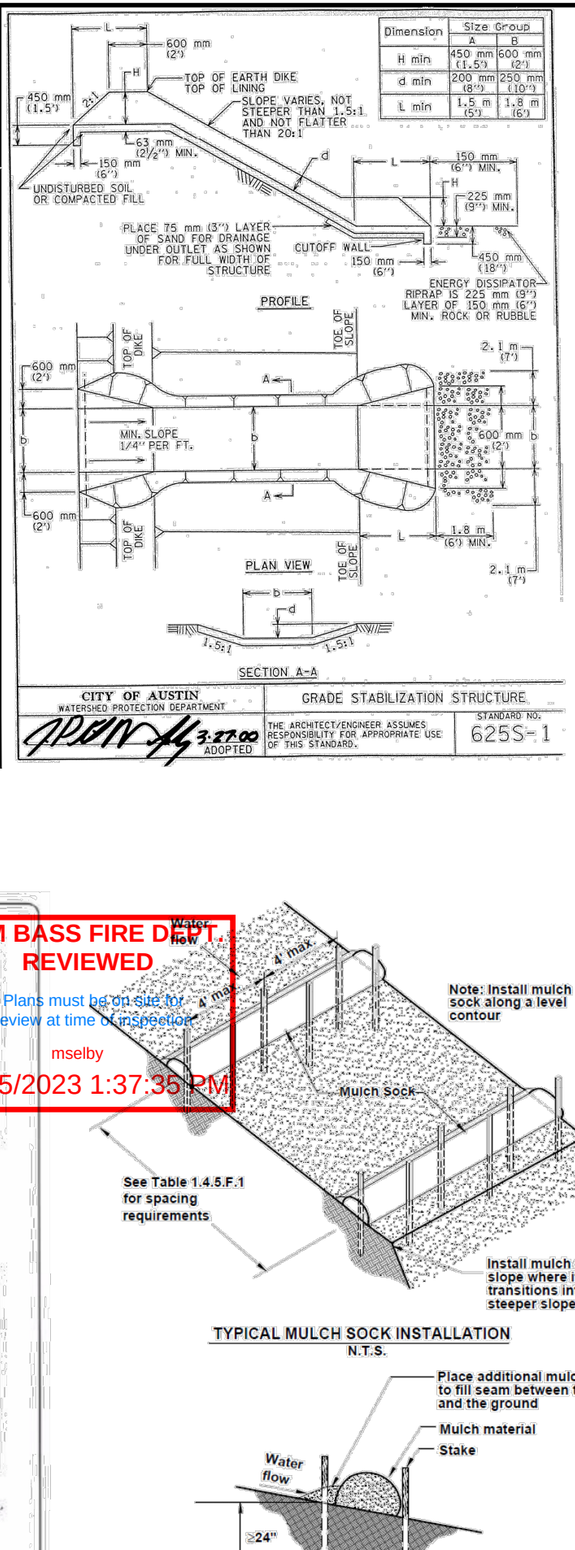
PROJECT NO. 200107	02/08/2023	DRAWN BY: JS	CHECKED BY: AR	APPROVED BY: JH

Plotted by: Adam, Plot date: 08/02/2023
File name: h:\02 projects\202020\200107 crossroads community church\07 Sheet\SD200107 DETAILS.dwg

CITY PROJECT NUMBER SP-2020-0328D

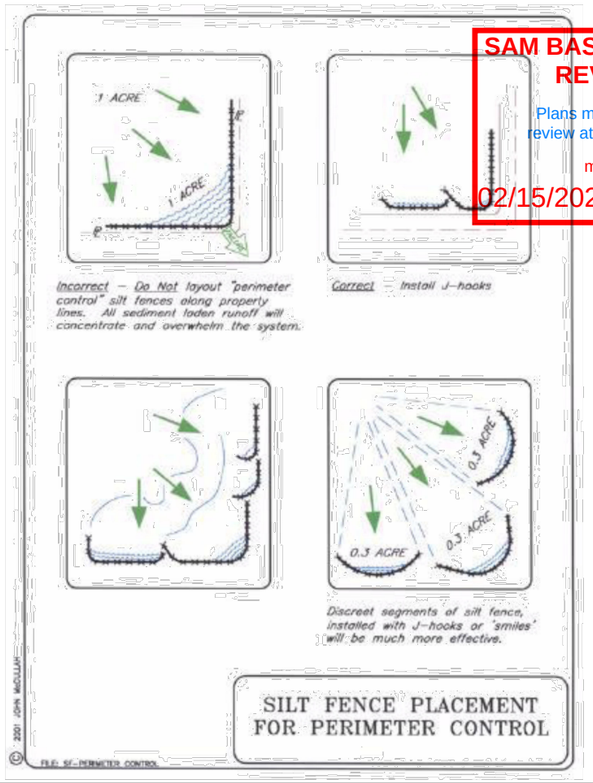


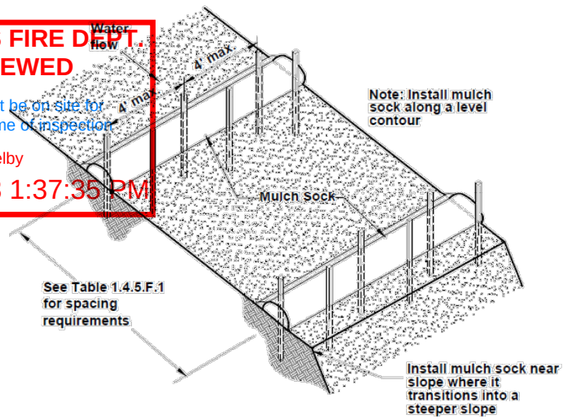
01 **TRASH RACK AT POND OUTLET**
SCALE: 1" = 1'-0"



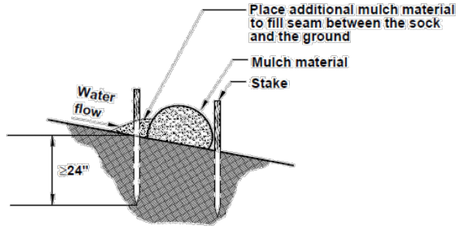
Dimension	Size Group A	Size Group B
H min	450 mm (1.5')	600 mm (2')
d min	200 mm (8")	250 mm (10")
L min	1.5 m (5')	1.8 m (6')

CITY OF AUSTIN WATERSHED PROTECTION DEPARTMENT	GRADE STABILIZATION STRUCTURE
3-27-00 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.
	STANDARD NO. 625S-1





TYPICAL MULCH SOCK INSTALLATION
N.T.S.



MULCH SOCK
N.T.S.

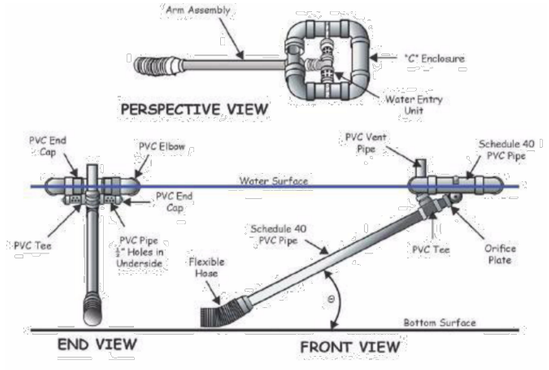


Figure 6.64a Schematic of a skimmer, from Pennsylvania Erosion and Sediment Pollution Control Manual, March, 2000.

CITY OF AUSTIN APPROVED Date 08/03/2023 FOUNDED 1839

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SITE DEVELOPMENT PLANS
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AUSTIN, TEXAS 78681

EROSION AND SEDIMENTATION CONTROL DETAILS

STATE OF TEXAS
JENNIFER L. HENDERSON
116883
LICENSED
PROFESSIONAL ENGINEER
02/08/2023

PROJECT NO. 200107	02/08/2023	DRAWN BY: JS	CHECKED BY: AR	APPROVED BY: JH

48 OF 54

Plotted by: Adam, Plot date: 08/02/2023
File name: h:\02 projects\2020\200107 crossroads community church\07 Sheets\SD\200107 DETAILS.dwg

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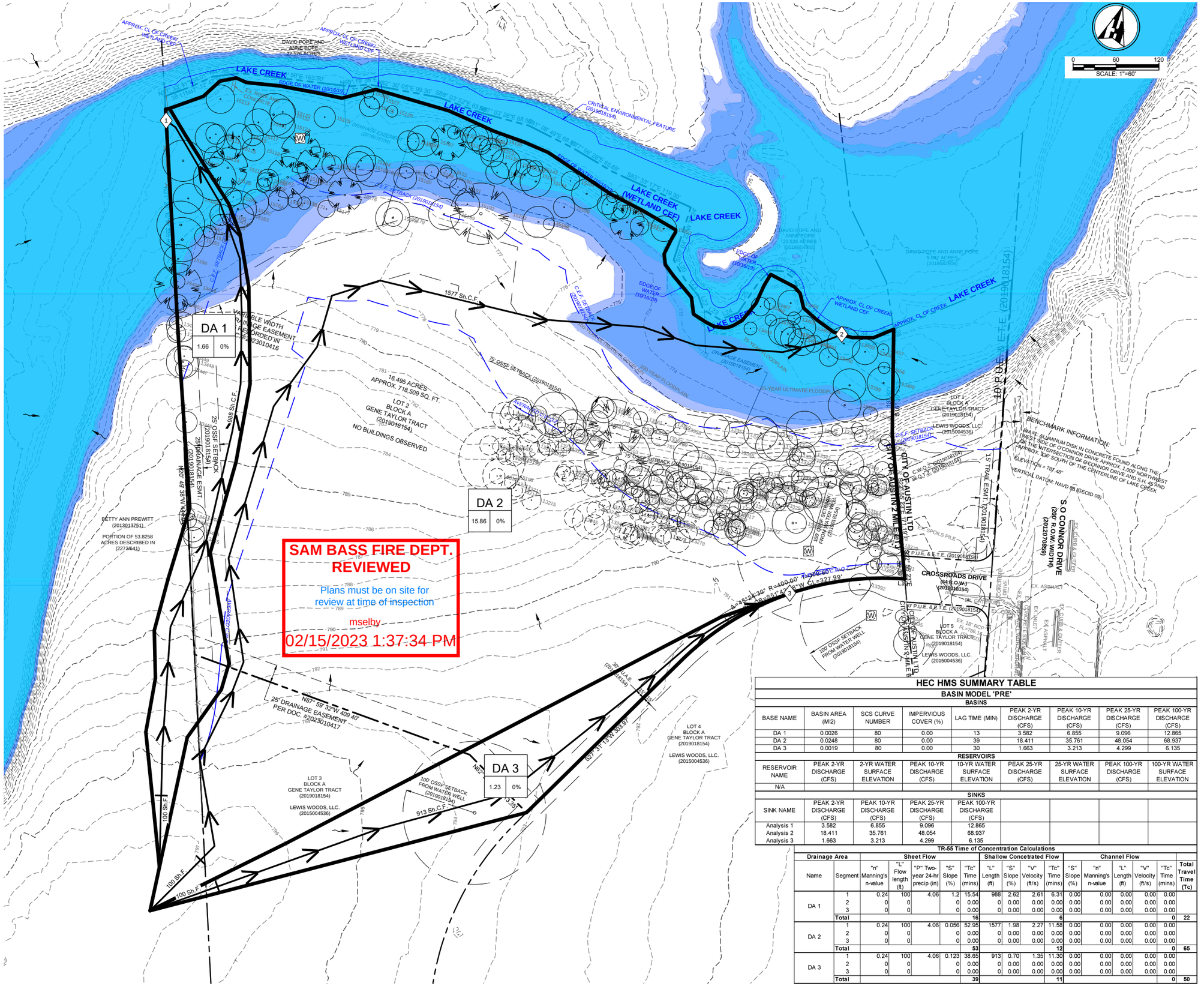
Attachment G – Drainage Area Map



BENCHMARK INFORMATION:
BM #1: ALUMINUM DISK IN CONCRETE FOUND ALONG THE WEST SIDE OF O'CONNOR DRIVE APPROX. 1,000' NORTHWEST OF THE INTERSECTION OF O'CONNOR DRIVE AND S.H. 45 AND APPROX. 236' SOUTH OF THE CENTERLINE OF LAKE CREEK
ELEVATION = 787.48"
VERTICAL DATUM: NAVD 88 (GEOID 09)

SAM BASS FIRE DEPT. REVIEWED
Plans must be on site for review at time of inspection
mselby
02/15/2023 1:37:34 PM

LEGEND

DA 1 0.90 0%	DRAINAGE AREA LABEL AREA NAME, AREA (ACRES), IMPERVIOUS COVER PERCENTAGE
X	ANALYSIS POINT
100 LF Sh.F.	SHEET FLOW SEGMENT OF TIME OF CONCENTRATION (Tc) PATH
500 LF Sh.C.F.	SHALLOW CONCENTRATED FLOW SEGMENT OF Tc PATH
500 LF Ch.F.	CHANNELIZED FLOW SEGMENT OF Tc PATH
~→	FLOW ARROW

NOTES:
1. WEB SOIL SURVEY SHOWS THE PROJECT SITE TO HAVE A HYDROLOGIC SOIL GROUP RATING 'D'.
2. THE EXISTING SITE IS MOSTLY CLEAR WITH GRASS COVER OVER 75% OF THE SITE. RANDOM SHRUBS AND PATCHES OF TREES AND SCRUB ARE LOCATED ON THE SITE. A CURVE NUMBER OF 80 WAS SELECTED FOR THESE CONDITIONS.
3. TIME OF CONCENTRATION IS CALCULATED USING STANDARD TR-55 FORMULAE, WITH A MINIMUM OF 5 MINUTES ALLOWED.
4. LAG TIME IS CALCULATED USING TIME OF CONCENTRATION MULTIPLIED BY 0.6, WITH A MINIMUM OF 5 MINUTES ALLOWED.
5. SITE IS LOCATED WITHIN THE CITY OF AUSTIN ZONE 2 FOR PRECIPITATION CALCULATIONS. DEPTH-DURATION-FREQUENCY VALUES FOR ZONE 2 WERE USED IN CALCULATING THE RAINFALL RUNOFF USING HEC-HMS. THE OUTPUT TABLES SHOWN ARE SUMMARIES OF THE ANALYSIS FROM THE MODEL.

HEC HMS SUMMARY TABLE

BASIN MODEL 'PRE'

BASINS

BASE NAME	BASIN AREA (MI2)	SCS CURVE NUMBER	IMPERVIOUS COVER (%)	LAG TIME (MIN)	PEAK 2-YR DISCHARGE (CFS)	PEAK 10-YR DISCHARGE (CFS)	PEAK 25-YR DISCHARGE (CFS)	PEAK 100-YR DISCHARGE (CFS)
DA 1	0.0026	80	0.00	13	3.582	6.855	9.096	12.865
DA 2	0.0248	80	0.00	39	18.411	35.761	48.054	68.937
DA 3	0.0019	80	0.00	30	1.663	3.213	4.299	6.135

RESERVOIRS

RESERVOIR NAME	PEAK 2-YR DISCHARGE (CFS)	2-YR WATER SURFACE ELEVATION	PEAK 10-YR DISCHARGE (CFS)	10-YR WATER SURFACE ELEVATION	PEAK 25-YR DISCHARGE (CFS)	25-YR WATER SURFACE ELEVATION	PEAK 100-YR DISCHARGE (CFS)	100-YR WATER SURFACE ELEVATION
N/A								

SINKS

SINK NAME	PEAK 2-YR DISCHARGE (CFS)	PEAK 10-YR DISCHARGE (CFS)	PEAK 25-YR DISCHARGE (CFS)	PEAK 100-YR DISCHARGE (CFS)
Analysis 1	3.582	6.855	9.096	12.865
Analysis 2	18.411	35.761	48.054	68.937
Analysis 3	1.663	3.213	4.299	6.135

TR-55 Time of Concentration Calculations

Drainage Area		Sheet Flow					Shallow Concetrated Flow				Channel Flow					
Name	Segment	"n" Manning's n-value	"L" Flow length (ft)	"P" Two-year 24-hr precip (in)	"S" Slope (%)	"Tc" Time (mins)	"L" Length (ft)	"S" Slope (%)	"V" Velocity (ft/s)	"Tc" Time (mins)	"S" Slope (%)	"n" Manning's n-value	"L" Length (ft)	"V" Velocity (ft/s)	"Tc" Time (mins)	Total Travel Time (Tc)
DA 1	1	0.24	100	4.06	1.2	15.54	988	2.62	2.61	6.31	0.00	0.00	0.00	0.00	0.00	
	2	0	0		0	0.00	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
	3	0	0		0	0.00	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
	Total					16				6					0	22
DA 2	1	0.24	100	4.06	0.056	52.95	1577	1.98	2.27	11.58	0.00	0.00	0.00	0.00	0.00	
	2	0	0		0	0.00	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
	3	0	0		0	0.00	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
	Total					53				12					0	65
DA 3	1	0.24	100	4.06	0.123	38.65	913	0.70	1.35	11.30	0.00	0.00	0.00	0.00	0.00	
	2	0	0		0	0.00	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
	3	0	0		0	0.00	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
	Total					39				11					0	50

CITY OF AUSTIN
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Date 08/03/2023

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SITE DEVELOPMENT PLANS
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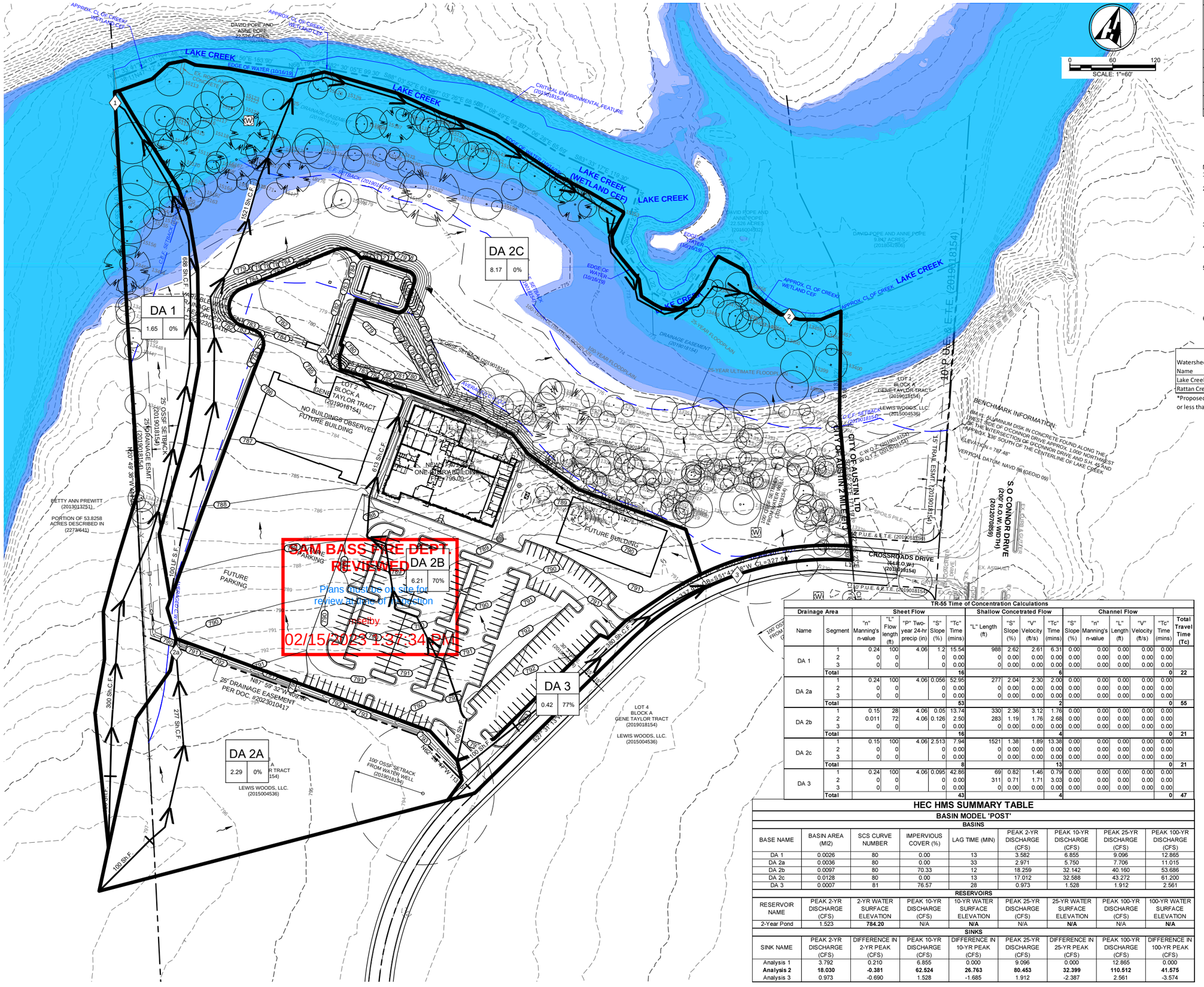
PRE-DEVELOPMENT DRAINAGE AREA MAP

JENNIFER L. HENDERSON
116883
02/10/2023

PROJECT NO. 200107
02/10/2023
DRAWN BY: JS
CHECKED BY: AR
APPROVED BY: JH



SAM BASS FIRE DEPT. REVIEWED

Plans must be on site for review at time of inspection

mselby

02/15/2023 1:37:34 PM

LEGEND

DA 1 / 0.90 / 0%	DRAINAGE AREA LABEL AREA NAME, AREA (ACRES), IMPERVIOUS COVER PERCENTAGE
X	ANALYSIS POINT
100 LF Sh.F.	SHEET FLOW SEGMENT OF TIME OF CONCENTRATION (Tc) PATH
500 LF Sh.C.F.	SHALLOW CONCENTRATED FLOW SEGMENT OF Tc PATH
500 LF Ch.F.	CHANNELIZED FLOW SEGMENT OF Tc PATH
⟿	FLOW ARROW

NOTES:
1. WEB SOIL SURVEY SHOWS THE PROJECT SITE TO HAVE A HYDROLOGIC SOIL GROUP RATING 'D'.
2. THE EXISTING SITE IS MOSTLY CLEAR WITH GRASS COVER OVER 75% OF THE SITE. RANDOM SHRUBS AND PATCHES OF TREES AND SCRUB ARE LOCATED ON THE SITE. A CURVE NUMBER OF 80 WAS SELECTED FOR THESE CONDITIONS.
3. TIME OF CONCENTRATION IS CALCULATED USING STANDARD TR-55 FORMULAE, WITH A MINIMUM OF 5 MINUTES ALLOWED.
4. LAG TIME IS CALCULATED USING TIME OF CONCENTRATION MULTIPLIED BY 0.6, WITH A MINIMUM OF 5 MINUTES ALLOWED.
5. SITE IS LOCATED WITHIN THE CITY OF AUSTIN ZONE 2 FOR PRECIPITATION CALCULATIONS. DEPTH-DURATION-FREQUENCY VALUES FOR ZONE 2 WERE USED IN CALCULATING THE RAINFALL RUNOFF USING HEC-HMS. THE OUTPUT TABLES SHOWN ARE SUMMARIES OF THE ANALYSIS FROM THE MODEL.
6. POST-DEVELOPED DRAINAGE AREAS USED THE SAME PRE-DEVELOPED CURVE NUMBERS WITH AN IMPERVIOUS COVER VALUE ADDED.

Watershed Name	Existing Site Area Draining to Watershed (ac.)	Proposed Site Area Draining to Watershed (ac.)	Proposed Quantity (in ac. of drainage) of Diversion*
Lake Creek	15.92	16.06	0.14
Rattan Creek	0.58	0.44	-0.14

*Proposed diversion must be less than 20 percent of the gross site area or less than 1 acre, whichever is smaller.

TR-55 Time of Concentration Calculations

Drainage Area		Sheet Flow					Shallow Concetrated Flow				Channel Flow					
Name	Segment	"n" Manning's n-value	"L" Flow length (ft)	"P" Two-year 24-hr precip (in)	"S" Slope (%)	"Tc" Time (mins)	"L" Length (ft)	"S" Slope (%)	"V" Velocity (ft/s)	"Tc" Time (mins)	"S" Slope (%)	"n" Manning's n-value	"L" Length (ft)	"V" Velocity (ft/s)	"Tc" Time (mins)	Total Travel Time (Tc)
DA 1	1	0.24	100	4.06	1.2	15.54	988	2.62	2.61	6.31	0.00	0.00	0.00	0.00	0.00	
	2	0	0		0	0.00	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
	3	0	0		0	0.00	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
	Total					16				6					0	22
DA 2a	1	0.24	100	4.06	0.056	52.95	277	2.04	2.30	2.00	0.00	0.00	0.00	0.00	0.00	
	2	0	0		0	0.00	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
	3	0	0		0	0.00	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
	Total					53				2					0	55
DA 2b	1	0.15	28	4.06	0.05	13.74	330	2.36	3.12	1.76	0.00	0.00	0.00	0.00	0.00	
	2	0.011	72	4.06	0.126	2.50	283	1.19	1.76	2.68	0.00	0.00	0.00	0.00	0.00	
	3	0	0		0	0.00	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
	Total					16				4					0	21
DA 2c	1	0.15	100	4.06	2.513	7.94	1521	1.38	1.89	13.38	0.00	0.00	0.00	0.00	0.00	
	2	0	0		0	0.00	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
	3	0	0		0	0.00	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
	Total					8				13					0	21
DA 3	1	0.24	100	4.06	0.095	42.86	69	0.82	1.46	0.79	0.00	0.00	0.00	0.00	0.00	
	2	0	0		0	0.00	311	0.71	1.71	3.03	0.00	0.00	0.00	0.00	0.00	
	3	0	0		0	0.00	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
	Total					43				4					0	47

HEC HMS SUMMARY TABLE

BASIN MODEL 'POST'

BASINS

BASE NAME	BASIN AREA (MI2)	SCS CURVE NUMBER	IMPERVIOUS COVER (%)	LAG TIME (MIN)	PEAK 2-YR DISCHARGE (CFS)	PEAK 10-YR DISCHARGE (CFS)	PEAK 25-YR DISCHARGE (CFS)	PEAK 100-YR DISCHARGE (CFS)
DA 1	0.0026	80	0.00	13	3.582	6.855	9.096	12.865
DA 2a	0.0036	80	0.00	33	2.971	5.750	7.706	11.015
DA 2b	0.0097	80	70.33	12	18.259	32.142	40.160	53.686
DA 2c	0.0128	80	0.00	13	17.012	32.588	43.272	61.200
DA 3	0.0007	81	76.57	28	0.973	1.528	1.912	2.561

RESERVOIRS

RESERVOIR NAME	PEAK 2-YR DISCHARGE (CFS)	2-YR WATER SURFACE ELEVATION	PEAK 10-YR DISCHARGE (CFS)	10-YR WATER SURFACE ELEVATION	PEAK 25-YR DISCHARGE (CFS)	25-YR WATER SURFACE ELEVATION	PEAK 100-YR DISCHARGE (CFS)	100-YR WATER SURFACE ELEVATION
2-Year Pond	1.523	**784.20**	N/A	**N/A**	N/A	**N/A**	N/A	**N/A**

SINKS

SINK NAME	PEAK 2-YR DISCHARGE (CFS)	DIFFERENCE IN 2-YR PEAK (CFS)	PEAK 10-YR DISCHARGE (CFS)	DIFFERENCE IN 10-YR PEAK (CFS)	PEAK 25-YR DISCHARGE (CFS)	DIFFERENCE IN 25-YR PEAK (CFS)	PEAK 100-YR DISCHARGE (CFS)	DIFFERENCE IN 100-YR PEAK (CFS)
Analysis 1	3.792	0.210	6.855	0.000	9.096	0.000	12.865	0.000
Analysis 2	**18.030**	**-0.381**	**62.524**	**26.763**	**80.453**	**32.399**	**110.512**	**41.575**
Analysis 3	0.973	-0.690	1.528	-1.685	1.912	-2.387	2.561	-3.574

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SITE DEVELOPMENT PLANS
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POST-DEVELOPMENT DRAINAGE AREA MAP

JENNIFER L. HENDERSON
116883
02/10/2023

APPROVED
Date 08/03/2023

PROJECT NO. 200107
02/10/2023
DRAWN BY: JS
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APPROVED BY: JH

27 OF 54

Plotted by: Adam, Plot date: 10/02/2023
File name: h:\02 projects\2020\200107 crossroads community church\07 Sheets\SD\200107-POST DAM.dwg

CITY PROJECT NUMBER SP-2020-0328D

Attachment I – Inspection and Maintenance for BMPs

The following inspection plan has been laid out for each BMP:

1. Silt fence
    a. Silt fence will be inspected monthly and after large rainfall events to ensure there are not any compromised points. If it is found that the silt fence is damaged it will be removed and replaced with new fence.
2. Stabilized Construction Entrance
    a. A stabilized construction entrance will be provided for the site. The construction entrance will be inspected on a monthly basis. If the aggregate becomes damaged or no longer prevents track out, it will be removed and replaced with new aggregate.
3. Concrete Washout
    a. A concrete washout will be provided for any excess concrete and for truck cleaning. The washout will be inspected on a monthly basis and at the end of the day on concrete pours. Once the washout is full, it will be disposed of properly and either replaced with a new washout or emptied fully.
4. Tree Protection
    a. Tree protection will be installed at the beginning of the project. All tree protection will be inspected on a monthly basis. If the protection is damaged at any point during the construction process it will be replaced with adequate protection.

HPE
Civil Engineering

Silt Fence Maintenance	Date	Signature
Inspect all fencing weekly, and after any rainfall.		
Remove sediment when buildup reaches 6 inches.		
Replace any torn fabric or install a second line of fencing parallel to the torn section.		
Replace or repair any sections crushed or collapsed in the course of construction activity. If a section of fence is obstructing vehicular access, consider relocating it to a spot where it will provide equal protection, but will not obstruct vehicles. A triangular filter dike may be preferable to a silt fence at common vehicle access points.		
When construction is complete, the sediment should be disposed of in a manner that will not cause additional siltation and the prior location of the silt fence should be revegetated. The fence itself should be disposed of in an approved landfill.		

Stabilized Construction Entrance	Date	Signature
The entrance should be maintained in a condition, which will prevent tracking or flowing of sediment onto public rights-of-way. This may require periodic top dressing with additional stone as conditions demand and repair and/or cleanout of any measures used to trap sediment.		
All sediment spilled, dropped, washed or tracked onto public rights-of-way should be removed immediately by contractor.		
When necessary, wheels should be cleaned to remove sediment prior to entrance onto public right-of-way.		
When washing is required, it should be done on an area stabilized with crushed stone that drains into an approved sediment trap or sediment basin.		
All sediment should be prevented from entering any storm drain, ditch or water course by using approved methods.		

HPE
Civil Engineering

Tree Protection	Date	Signature
If the soil has become compacted over the root zone of any tree, the ground should be aerated by punching holes with an iron bar. The bar should be driven 1- foot deep and then moved back and forth until the soil is loosened. This procedure should be repeated every 18 inches until all of the compacted soil beneath the crown of the tree has been loosened.		
Any damage to the crown, trunk, or root system of any tree retained on the site should be repaired immediately.		
Whenever major root or bark damage occurs, remove some foliage to reduce the demand for water and nutrients.		
Damaged roots should immediately be cut off cleanly inside the exposed or damaged area. Cut surfaces should be painted with approved tree paint, and moist peat moss, burlap, or topsoil should be spread over the exposed area.		
To treat bark damage, carefully cut away all loosened bark back into the undamaged area, taper the cut at the top and bottom, and provide drainage at the base of the wound.		
All tree limbs damaged during construction or removed for any other reason should be cut off above the collar at the preceding branch junction.		

Care for serious injuries should be prescribed by a forester or a tree specialist.		
Broadleaf trees that have been stressed or damaged should receive a heavy application of fertilizer to aid their recovery. Trees should be fertilized in the late fall (after November 1) or the early spring (until April 1). Fall applications are preferred, as the nutrients will be made available over a longer period of time. Fertilizer should be applied to the soil over the feeder roots. In no case should it be applied closer than 3 feet to the trunk. Fertilizer should be applied using approved fertilization methods and equipment.		
Maintain a ground cover of organic mulch around trees that is adequate to prevent erosion, protect roots, and hold water.		

Sediment Basins	Date	Signature
Inspection should be made weekly and after each rainfall. Check the embankment, spillways, and outlet for erosion damage, and inspect the embankment for piping and settlement. Repair should be made promptly as needed by the contractor.		
Trash and other debris should be removed after each rainfall to prevent clogging of the outlet structure.		
Accumulated silt should be removed and the basin should be re-graded to its original dimensions at such point that the capacity of the impoundment has been reduced to 75% of its original storage capacity.		
The removed sediment should be stockpiled or redistributed in areas that are protected from erosion.		

Attachment J – Schedule of Interim and Permanent Soil Stabilization Practices

The following inspection plan has been laid out for each soil stabilization practices:

1. Tree Protection
    a. Tree protection will be installed at the beginning of the project. All tree protection will be inspected on a monthly basis. If the protection is damaged at any point during the construction process it will be replaced with adequate protection.
2. Permanent Vegetation
    a. At the conclusion of construction, all disturbed areas will be re-seeded with permanent grass/vegetation.
    b. Bare soils should be seeded or otherwise stabilized within 14 calendar days after final grading or where construction activity has temporarily ceased for more than 21 days.

Permanent Stormwater Section

Texas Commission on Environmental Quality

for Regulated Activities on the Edwards Aquifer Recharge Zone and Relating to 30 TAC §213.5(b)(4)(C), (D)(Ii), (E), and (5), Effective June 1, 1999

To ensure that the application is administratively complete, confirm that all fields in the form are complete, verify that all requested information is provided, consistently reference the same site and contact person in all forms in the application, and ensure forms are signed by the appropriate party.

Note: Including all the information requested in the form and attachments contributes to more streamlined technical reviews.

Signature

To the best of my knowledge, the responses to this form accurately reflect all information requested concerning the proposed regulated activities and methods to protect the Edwards Aquifer. This **Permanent Stormwater Section** is hereby submitted for TCEQ review and executive director approval. The application was prepared by:

Print Name of Customer/Agent: Jen Henderson, PE

Date: 10/14/2025

Signature of Customer/Agent

Regulated Entity Name: North Austin Crossroads Community Church

Permanent Best Management Practices (BMPs)

Permanent best management practices and measures that will be used during and after construction is completed.

1. [X] Permanent BMPs and measures must be implemented to control the discharge of pollution from regulated activities after the completion of construction.

   [ ] N/A

2. [X] These practices and measures have been designed, and will be constructed, operated, and maintained to insure that 80% of the incremental increase in the annual mass loading of total suspended solids (TSS) from the site caused by the regulated activity is removed. These quantities have been calculated in accordance with technical guidance prepared or accepted by the executive director.

   [X] The TCEQ Technical Guidance Manual (TGM) was used to design permanent BMPs and measures for this site.

☐ A technical guidance other than the TCEQ TGM was used to design permanent BMPs and measures for this site. The complete citation for the technical guidance that was used is: _____

☐ N/A

3. ☒ Owners must insure that permanent BMPs and measures are constructed and function as designed. A Texas Licensed Professional Engineer must certify in writing that the permanent BMPs or measures were constructed as designed. The certification letter must be submitted to the appropriate regional office within 30 days of site completion.

   ☐ N/A

4. Where a site is used for low density single-family residential development and has 20 % or less impervious cover, other permanent BMPs are not required. This exemption from permanent BMPs must be recorded in the county deed records, with a notice that if the percent impervious cover increases above 20% or land use changes, the exemption for the whole site as described in the property boundaries required by 30 TAC §213.4(g) (relating to Application Processing and Approval), may no longer apply and the property owner must notify the appropriate regional office of these changes.

   ☐ The site will be used for low density single-family residential development and has 20% or less impervious cover.
   ☐ The site will be used for low density single-family residential development but has more than 20% impervious cover.
   ☒ The site will not be used for low density single-family residential development.

5. The executive director may waive the requirement for other permanent BMPs for multi-family residential developments, schools, or small business sites where 20% or less impervious cover is used at the site. This exemption from permanent BMPs must be recorded in the county deed records, with a notice that if the percent impervious cover increases above 20% or land use changes, the exemption for the whole site as described in the property boundaries required by 30 TAC §213.4(g) (relating to Application Processing and Approval), may no longer apply and the property owner must notify the appropriate regional office of these changes.

   ☐ **Attachment A - 20% or Less Impervious Cover Waiver**. The site will be used for multi-family residential developments, schools, or small business sites and has 20% or less impervious cover. A request to waive the requirements for other permanent BMPs and measures is attached.
   ☐ The site will be used for multi-family residential developments, schools, or small business sites but has more than 20% impervious cover.
   ☒ The site will not be used for multi-family residential developments, schools, or small business sites.

6. ☒ **Attachment B - BMPs for Upgradient Stormwater**.

☐ A description of the BMPs and measures that will be used to prevent pollution of surface water, groundwater, or stormwater that originates upgradient from the site and flows across the site is attached.

☐ No surface water, groundwater or stormwater originates upgradient from the site and flows across the site, and an explanation is attached.

☒ Permanent BMPs or measures are not required to prevent pollution of surface water, groundwater, or stormwater that originates upgradient from the site and flows across the site, and an explanation is attached.

7. ☒ **Attachment C - BMPs for On-site Stormwater**.

☒ A description of the BMPs and measures that will be used to prevent pollution of surface water or groundwater that originates on-site or flows off the site, including pollution caused by contaminated stormwater runoff from the site is attached.

☐ Permanent BMPs or measures are not required to prevent pollution of surface water or groundwater that originates on-site or flows off the site, including pollution caused by contaminated stormwater runoff, and an explanation is attached.

8. ☐ **Attachment D - BMPs for Surface Streams**. A description of the BMPs and measures that prevent pollutants from entering surface streams, sensitive features, or the aquifer is attached. Each feature identified in the Geologic Assessment as sensitive has been addressed.

☒ N/A

9. ☒ The applicant understands that to the extent practicable, BMPs and measures must maintain flow to naturally occurring sensitive features identified in either the geologic assessment, executive director review, or during excavation, blasting, or construction.

☒ The permanent sealing of or diversion of flow from a naturally-occurring sensitive feature that accepts recharge to the Edwards Aquifer as a permanent pollution abatement measure has not been proposed.

☐ **Attachment E - Request to Seal Features**. A request to seal a naturally-occurring sensitive feature, that includes, for each feature, a justification as to why no reasonable and practicable alternative exists, is attached.

10. ☒ **Attachment F - Construction Plans**. All construction plans and design calculations for the proposed permanent BMP(s) and measures have been prepared by or under the direct supervision of a Texas Licensed Professional Engineer, and are signed, sealed, and dated. The plans are attached and, if applicable include:

☒ Design calculations (TSS removal calculations)

☒ TCEQ construction notes

☒ All geologic features

☒ All proposed structural BMP(s) plans and specifications

☐ N/A

11. [X] **Attachment G - Inspection, Maintenance, Repair and Retrofit Plan**. A plan for the inspection, maintenance, repairs, and, if necessary, retrofit of the permanent BMPs and measures is attached. The plan includes all of the following:

    [X] Prepared and certified by the engineer designing the permanent BMPs and measures
    [X] Signed by the owner or responsible party
    [X] Procedures for documenting inspections, maintenance, repairs, and, if necessary retrofit
    [X] A discussion of record keeping procedures

    [ ] N/A

12. [ ] **Attachment H - Pilot-Scale Field Testing Plan**. Pilot studies for BMPs that are not recognized by the Executive Director require prior approval from the TCEQ. A plan for pilot-scale field testing is attached.

    [X] N/A

13. [ ] **Attachment I -Measures for Minimizing Surface Stream Contamination**. A description of the measures that will be used to avoid or minimize surface stream contamination and changes in the way in which water enters a stream as a result of the construction and development is attached. The measures address increased stream flashing, the creation of stronger flows and in-stream velocities, and other in-stream effects caused by the regulated activity, which increase erosion that results in water quality degradation.

    [X] N/A

Responsibility for Maintenance of Permanent BMP(s)

Responsibility for maintenance of best management practices and measures after construction is complete.

14. [X] The applicant is responsible for maintaining the permanent BMPs after construction until such time as the maintenance obligation is either assumed in writing by another entity having ownership or control of the property (such as without limitation, an owner's association, a new property owner or lessee, a district, or municipality) or the ownership of the property is transferred to the entity. Such entity shall then be responsible for maintenance until another entity assumes such obligations in writing or ownership is transferred.

    [ ] N/A

15. [X] A copy of the transfer of responsibility must be filed with the executive director at the appropriate regional office within 30 days of the transfer if the site is for use as a multiple single-family residential development, a multi-family residential development, or a non-residential development such as commercial, industrial, institutional, schools, and other sites where regulated activities occur.

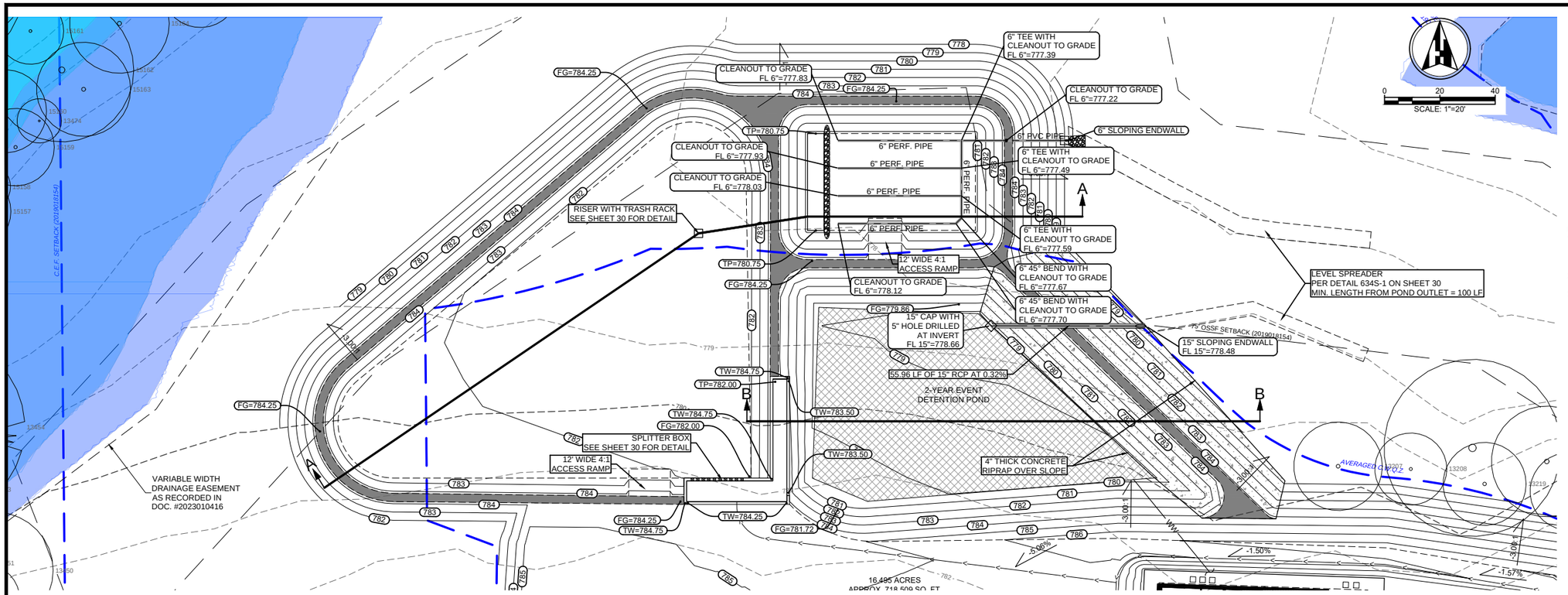
    [ ] N/A

Attachment B - BMPs for Upgradient Stormwater

No BMPs for upgradient stormwater runoff will be necessary with the proposed development.

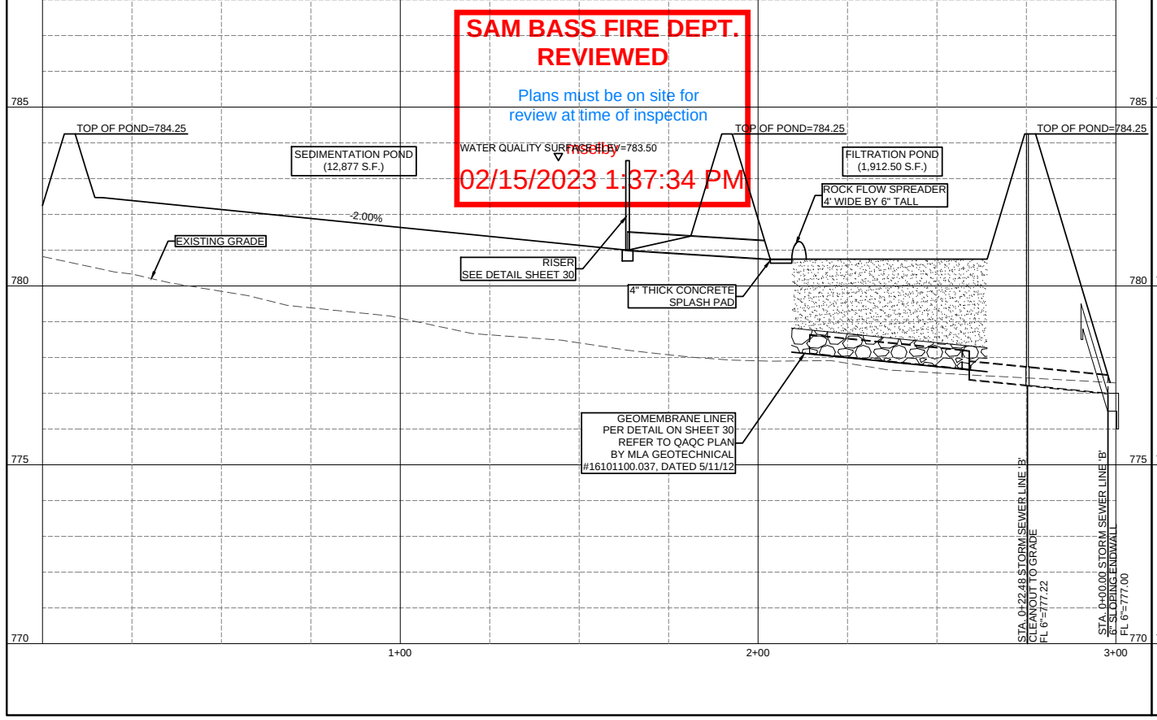
Attachment C - BMPs for On-site Stormwater

A sand filter system with a sedimentation basin and filtration basin is proposed for this development.



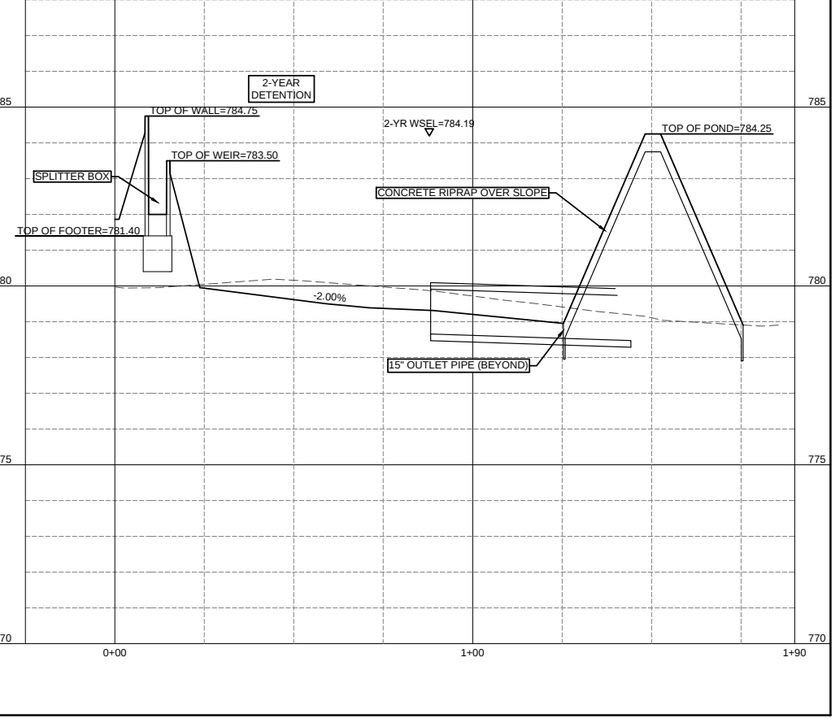
POND SECTION 'A'

VERT. SCALE: 1"=20'
HORIZ. SCALE: 1"=2'



POND SECTION 'B'

VERT. SCALE: 1"=20'
HORIZ. SCALE: 1"=2'



NOTES:

1. ALL EARTHEN EMBANKMENTS SHALL BE COMPACTED TO 95% OF MAXIMUM DENSITY IN ACCORDANCE WITH COA STANDARD SPECIFICATIONS.
2. EARTHEN EMBANKMENT SIDE SLOPES SHALL BE NO STEEPER THAN 3 HORIZONTAL TO 1 VERTICAL.
3. THE FOLLOWING MAINTENANCE ITEMS SHOULD BE PERFORMED DEPENDING ON FREQUENCY AND TIME OF YEAR:
   - 3.1. BIWEEKLY DURING FIRST GROWING SEASON: INSPECT VEGETATION UNTIL 95% VEGETATIVE COVER IS ESTABLISHED.
   - 3.2. MONTHLY: CHECK FOR ACCUMULATED SEDIMENTS, REMOVE AS NEEDED.
   - 3.3. QUARTERLY: REMOVE DEBRIS AND ACCUMULATED SEDIMENT; REPLACE SOIL MEDIA IN VOID AREAS CAUSED BY SETTLEMENT; REPAIR ERODED AREAS; REMULCH BY HAND ANY VOID AREAS.
   - 3.4. SEMI-ANNUALLY: REMOVE AND REPLACE DEAD OR DISEASED VEGETATION THAT IS CONSIDERED BEYOND TREATMENT (SEE PLANTING SPECIFICATIONS); TREAT ALL DISEASED TREES AND SHRUBS MECHANICALLY OR BY HAND DEPENDING ON THE INSECT OR DISEASE INFESTATION. IF DRAWDOWN EXCEEDS THE DRAWDOWN TIME ACCORDING TO SECTION 1.6.3.C.1, LIGHTLY SCARIFY SOIL WITH HAND CULTIVATOR; IF STANDING WATER REMAINS FOR GREATER THAN 96 HOURS, REMOVE TOP LAYER OF SEDIMENT, MULCH, AND POTENTIALLY VEGETATION; DE-COMPACT SOIL BY SCARIFICATION, AND REPLACE MULCH AND DISTURBED VEGETATION.
   - 3.5. LATE WINTER: TRIM BUNCH GRASSES; MOW TURF GRASSES; HARVEST OTHER TYPES OF VEGETATION ACCORDING TO RECOMMENDATIONS IN THE PLANTING SPECIFICATIONS. ADHERE TO SECTION 1.6.2.F.
   - 3.6. SPRING: REMOVE PREVIOUS MULCH LAYER AND APPLY NEW MULCH LAYER BY HAND (OPTION) ONCE EVERY TWO TO THREE YEARS.

Henderson Professional Engineers
600 ROUND ROCK WEST DRIVE, SUITE 604
ROUND ROCK, TX 78681
512.350.6228
PELS FIRM #F-22208
www.hendersonpe.com
Civil Engineering
WBE2101166 | HUB 1853873845300

No.	REVISION
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SITE DEVELOPMENT PLANS TO SERVE

NORTH AUSTIN CROSSROADS COMMUNITY CHURCH
15800 CROSSROADS DRIVE
AUSTIN, TEXAS 78681

WATER QUALITY POND AND SECTIONS

PROJECT NO. 200107	02/10/2023	DRAWN BY: JS	CHECKED BY: AR	APPROVED BY: JH

CITY OF AUSTIN
APPROVED
Date 08/03/2023
FOUNDED 1839

CITY PROJECT NUMBER SP-2020-0328D

Plotted by: Adam, Plot date: 10/02/2023
File name: h:\02 projects\2020\200107 crossroads community church\07 Sheets\SD\200107 WQ.dwg

APPENDIX R-6:
FULL OR PARTIAL BIOFILTRATION POND CALCULATIONS
FOR DEVELOPMENT PERMITS
Crossroads Community Church, SD-2020-0328D

DRAINAGE AREA DATA:

Drainage area to control (DA)	5.71	ac.
Drainage area Impervious Cover	76.54%	
Capture Depth (CD) = (0.5+(IC-20)/100)	1.065	in

WATER QUALITY CONTROL CALCULATIONS	Required		Provided	
The Water Quality Control is to be BIOFILTRATON				
25-year peak flow rate to control (Q25)	37.25	cfs	37.45	cfs
100-year peak flow rate to control (Q100)	49.576	cfs		
Water Quality Volume (WQV=CD*DA*3630) @ WQE	22083	cf	23,992	cf
Maximum Ponding Depth above Sand Bed (H)			2.50	ft
Sedimentation Pond Area			12,877	sf
For Full Sedimentation Pond Volume (min. of WQV)	≥ 23992	cf	23992.00	cf
For Partial Sedimentation Pond Volume (min of 20% of WQV)	≥	cf		cf
For Full Filtration Pond Area , Af = WQV/(7 + 2.33*H)	≥ 1870.72	sf	1912.50	sf
For Partial Filtration Pond Area , Af = WQV/(4 + 1.33*H)	≥	sf		sf
Filtration Pond Volume			7,784	cf
Water Qualtiy Elevation			783.50	ft msl
Elevation of Splitter/Overflow Weir (min WQ elev)	≥ 783.5	ft msl	783.50	ft msl
Length of Splitter Weir			42	ft
Required head to Pass Q100 (max 1ft)	≤ 1.00	ft	0.49788	ft
Pond freeboard to pass Q100 (min 0.25 ft)	≥ 0.25	ft	0.252	ft
Top of peripheral wall (elev)			784.25	ft msl
Biofiltration Pond Drawdown Time (min.48 hrs)	≥ 48	hrs	49.74	hrs
Underdrain Orifice Size (diameter)		in	1.60	in
Underdrain Orifice Size (area)		sq in	2.01	sq in
BIOLOGICAL ELEMENTS CALCULATIONS:				
Surface Area of Entire Pond Bottom (SA)	≥	sf	**14789.50**	sf
Total Plantings Required (Min 10% of SA)	≥	plants		plants
Sedimentation Pond Plantings (Min. 20% of Total Plantings)	≥	plants		plants
Filtration Pond Plantings (Min. 50% of Total Planitings)	≥	plants		plants

Sedimentation pond

Stage (ft msl) (Elevation)	Area (sf)	Storage Volume (cf)	
780.75	0.00	0	
781.00	0.00	0	
781.25	985.93	82	
781.50	3,488.04	610	
781.75	6,357.97	1,822	
782.00	9,602.04	3,804	
782.25	11,937.12	6,491	
782.50	13,251.65	9,638	
782.75	13,597.26	12,994	
783.00	13,945.83	16,437	
783.25	14,297.34	19,967	
783.50	14,651.85	23,586	WQV
783.75	15,009.39	27,293	
784.00	15,369.92	31,090	

Filtration Pond

Stage (ft msl) (Elevation)	Area (sf)	Storage Volume (cf)	
780.75	2,122.50	0	
781.00	2,267.73	549	
781.25	2,416.49	1,134	
781.50	2,568.79	1,757	
781.75	2,724.62	2,419	
782.00	2,883.98	3,120	
782.25	3,046.87	3,861	
782.50	3,213.30	4,643	
782.75	3,383.26	5,468	
783.00	3,556.75	6,335	
783.25	3,733.77	7,247	
783.50	3,914.33	8,202	WQV
783.75	4,098.42	9,204	
784.00	4,286.04	10,252	

Splitter Box Outlet Orifice

Inputs		Outputs	
Weir Type	Rectangular	Head Depth (ft) (H)	0.58
Crest	Broad	Area (sf)	0.58
Width (ft) (L)	1.00	Velocity (ft/s)	0.46
Max Depth (ft)	0.58	Q (cfs)	0.267
Weir Coefficient (Cw)	0.60		
Known Q (cfs)			
Known Head (ft) (H)			
Formula	Q=CwLH^1.5		

PMF Calculation Through Splitter Weir

Inputs		Outputs	
Weir Type	Rectangular	Head Depth (ft) (H)	0.59
Crest	Broad	Area (sf)	26.77
Width (ft) (L)	45.00	Velocity (ft/s)	2.01
Max Depth (ft)	1.00	Q (cfs)	
Weir Coefficient (Cw)	2.60	Will it pass?	Yes
Known Q (cfs)	53.680		
Known Head (ft) (H)			
Head Depth 100 yr (ft)	0.252		
Formula	Q=CwLH^1.5		

2-year Detention Pond Stage-Storage

.25' Interval Elevation	Area S.F.	Area AC.	Storm Event	Avg. End Area Method	Accumulated Volume	Conic Approx. Method	Accumulated Volume	Outflow (cfs)
778.50	0.00	-		-	-	-	-	0.000
778.75	326.75	0.00750		40.84	40.84	27.23	27.23	0.020
779.00	1337.14	0.03070		207.99	248.83	193.74	220.97	0.280
779.25	2769.62	0.06358		513.35	762.18	502.60	723.57	0.430
779.50	4044.08	0.09284		851.71	1,613.89	846.70	1,570.27	0.541
779.75	5106.13	0.11722		1,143.78	2,757.66	1,141.20	2,711.47	0.631
780.00	5939.00	0.13634		1,380.64	4,138.31	1,379.33	4,090.80	0.711
780.25	6625.42	0.15210		1,570.55	5,708.86	1,569.77	5,660.57	0.787
780.50	7064.57	0.16218		1,711.25	7,420.11	1,710.96	7,371.53	0.848
780.75	7335.92	0.16841		1,800.06	9,220.17	1,799.95	9,171.48	0.912
781.00	7612.19	0.17475		1,868.51	11,088.68	1,868.41	11,039.89	0.974
781.25	7893.24	0.18120		1,938.18	13,026.86	1,938.07	12,977.96	1.025
781.50	8179.06	0.18777		2,009.04	15,035.90	2,008.93	14,986.89	1.074
781.75	8469.22	0.19443		2,081.04	17,116.93	2,080.93	17,067.82	1.118
782.00	8762.35	0.20116		2,153.95	19,270.88	2,153.84	19,221.66	1.173
782.25	9058.35	0.20795		2,227.59	21,498.47	2,227.49	21,449.15	1.214
782.50	9357.20	0.21481		2,301.94	23,800.41	2,301.84	23,750.99	1.262
782.75	9658.93	0.22174		2,377.02	26,177.43	2,376.92	26,127.91	1.305
783.00	9962.82	0.22871		2,452.72	28,630.15	2,452.62	28,580.53	1.345
783.25	10260.35	0.23555		2,527.90	31,158.04	2,527.81	31,108.33	1.383
783.50	10550.73	0.24221		2,601.39	33,759.43	2,601.30	33,709.63	1.420
783.75	11336.25	0.26024		2,735.87	36,495.30	2,735.28	36,444.92	1.458
784.00	11625.16	0.26688		2,870.18	39,365.48	2,870.10	39,315.02	1.494
784.20	11868.58	0.27247	2 year	2,349.37	41,714.85	2,349.33	41,664.35	1.523
784.25	11912.14	0.27347		594.52	42,309.37	592.47	42,256.83	

DAM SAFETY CERTIFICATION STATEMENT:

I JENNIFER L. HENDERSON, P.E. TEXAS LICENSE NUMBER 116883 CERTIFY THAT THE DESIGN OF THE DAM IN THIS SET OF PLANS CAN SAFELY PASS THE MINIMUM DESIGN FLOOD HYDROGRAPH AS REQUIRED BY THE CITY OF AUSTIN AND THE STATE OF TEXAS BASED ON THE HYDROLOGIC, HYDRAULIC, STRUCTURAL AND GEOTECHNICAL ANALYSIS USING STANDARD ACCEPTED ENGINEERING PRACTICES.

SAN MARCOS FIRE DEPT.
REVIEWED
Plans must be on site for review at time of inspection
mselby
02/15/2023 1:37:34 PM

CITY OF AUSTIN APPROVED Date 08/03/2023 FOUNDED 1839

Henderson Professional Engineers
600 ROUND ROCK WEST DRIVE, SUITE 604
ROUND ROCK, TX 78681
512.350.6228
PELS FIRM #F-22208
www.hendersonpe.com
Civil Engineering
WBE2101166 | HUB 1853873845300

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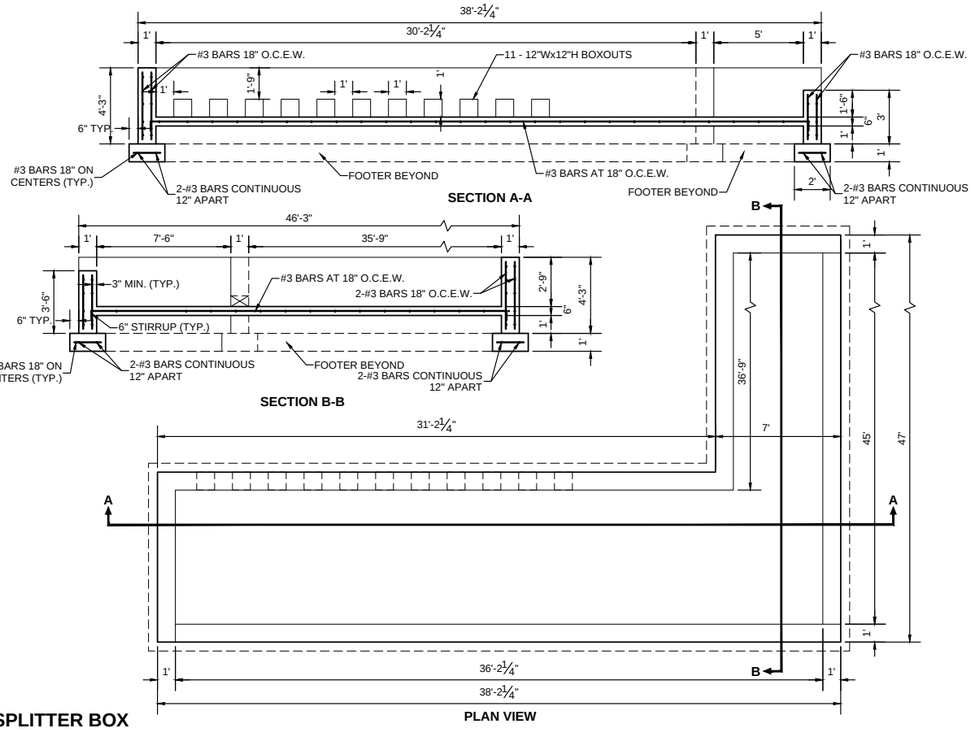
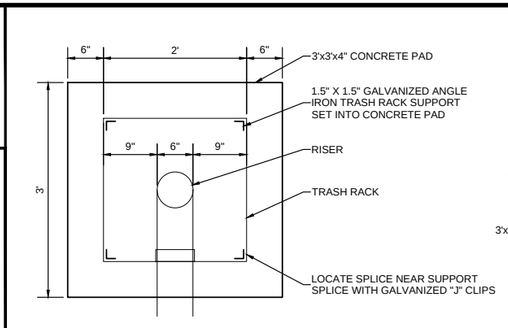
SITE DEVELOPMENT PLANS TO SERVE
NORTH AUSTIN CROSSROADS COMMUNITY CHURCH
15800 CROSSROADS DRIVE
AUSTIN, TEXAS 78681
WATER QUAILITY POND CALCULATIONS

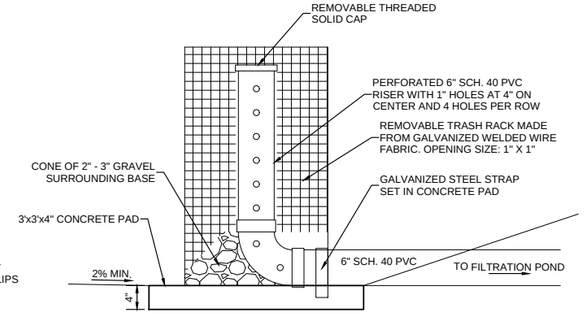
STATE OF TEXAS
JENNIFER L. HENDERSON
116883
LICENSED PROFESSIONAL ENGINEER
02/08/2023

PROJECT NO. 200107	02/08/2023	DRAWN BY: JS	CHECKED BY: AR	APPROVED BY: JH

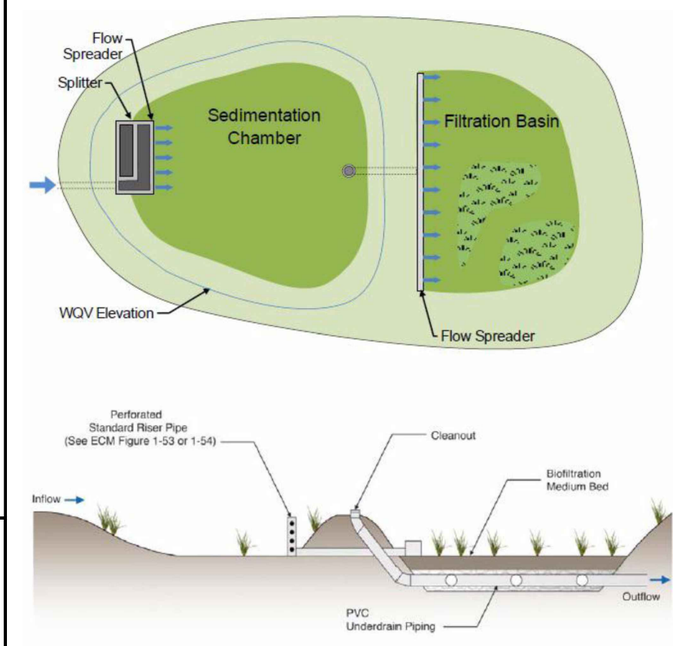


01 **SPLITTER BOX**
SCALE: 1/4" = 1'-0"

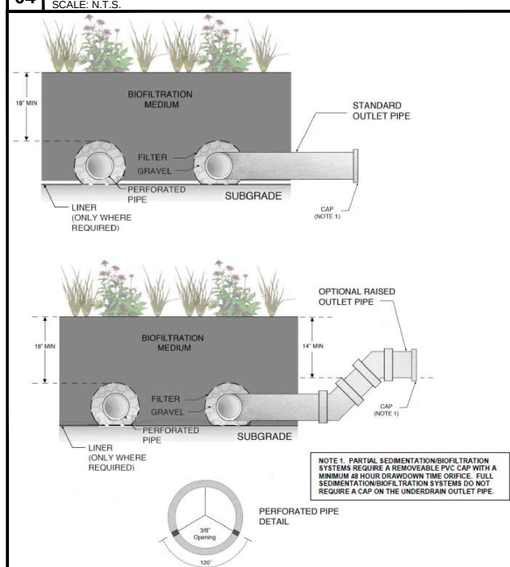




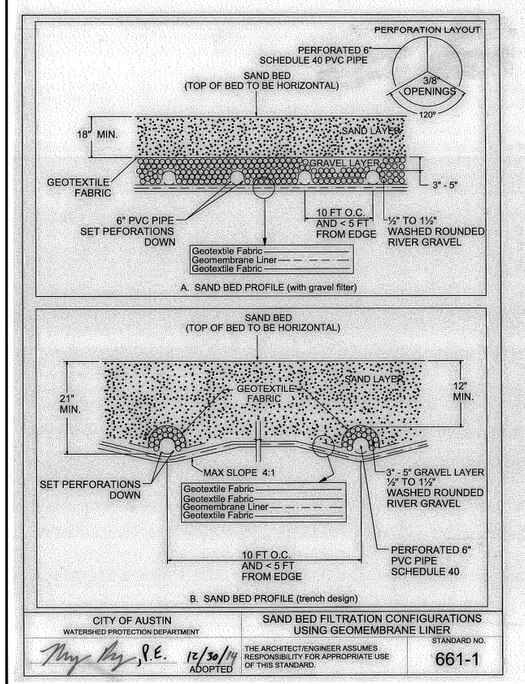
03 **TRASH RACK AND RISER**
SCALE: 1" = 1'-0"

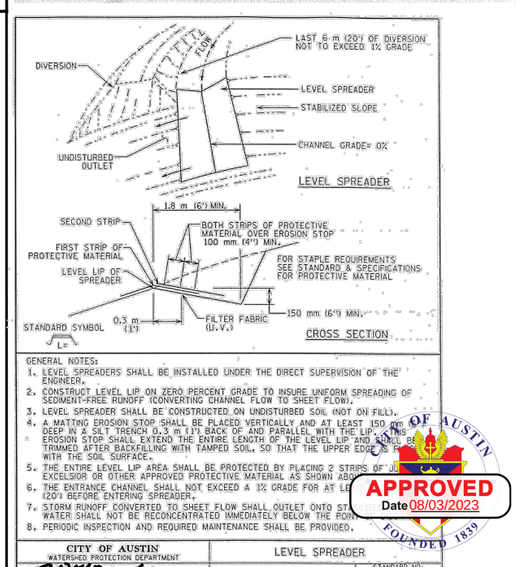


04 **FIG.1.6.7.C-1 FULL BIOFILTRATION POND**
SCALE: N.T.S.

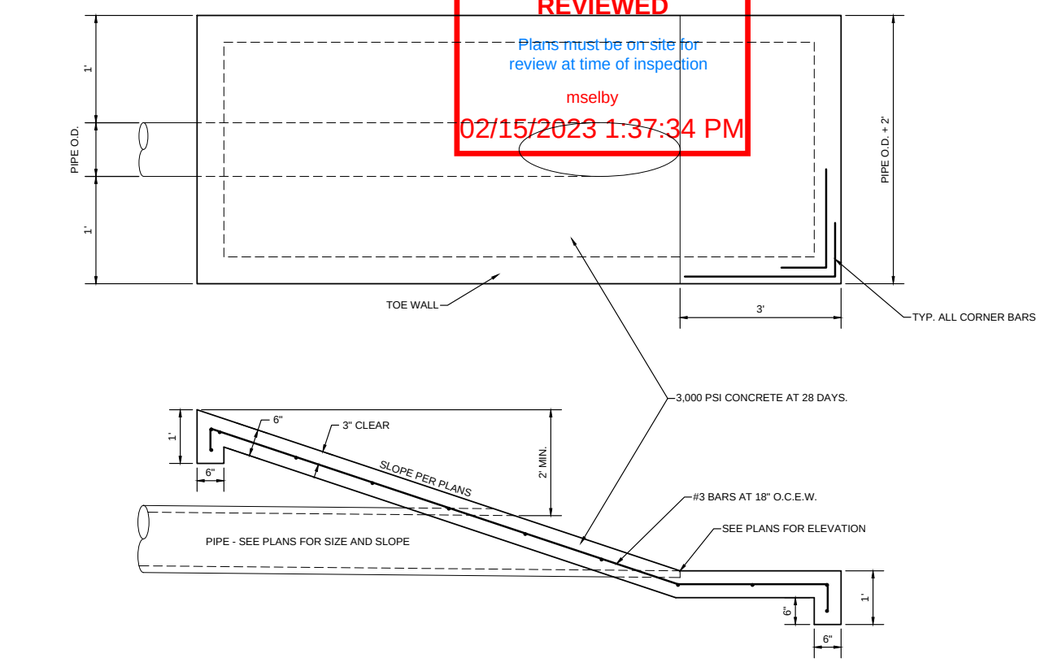


05 **FIG 1.6.7.C-3 BIOFILTRATION MEDIUM WITH UNDERDRAIN**
SCALE: N.T.S.





APPROVED
Date 08/03/2023



02 **SLOPING ENDWALL**
SCALE: 3/4" = 1'-0"

Henderson Professional Engineers
600 ROUND ROCK WEST DRIVE, SUITE 604
ROUND ROCK, TX 78681
512.350.6228
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SITE DEVELOPMENT PLANS
TO SERVE
NORTH AUSTIN CROSSROADS COMMUNITY CHURCH
15800 CROSSROADS DRIVE
AUSTIN, TEXAS 78681
WATER QUALITY DETAILS

STATE OF TEXAS
JENNIFER L HENDERSON
116883
LICENSED
PROFESSIONAL ENGINEER
02/08/2023

PROJECT NO. 200107	02/08/2023	DRAWN BY: JS	CHECKED BY: AR	APPROVED BY: JH

30 OF 54

CITY PROJECT NUMBER SP-2020-0328D

Plotted by: Adam, Plot date: 08/02/2023
File name: h:\02 projects\2020\200107 crossroads community church\07 Sheet\SD\200107 DETAILS.dwg

HPE
Civil Engineering

Attachment F - Construction Plan

SITE DEVELOPMENT PLANS

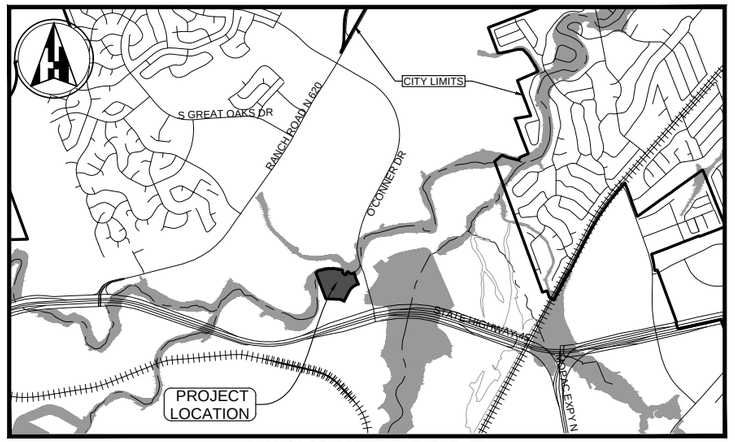
TO SERVE

NORTH AUSTIN CROSSROADS COMMUNITY CHURCH

15800 CROSSROADS DRIVE

AUSTIN, TEXAS 78681

SHEET INDEX	
NUMBER	TITLE
01	COVER SHEET
02	SITE PLAN
03	CWQZ BUFFER AVERAGING PLAN
04	CUT AND FILL EXHIBIT
05	SLOPE MAP EXHIBIT
06	FINAL PLAT
07	FINAL PLAT
08	FINAL PLAT
09	CITY OF AUSTIN CONSTRUCTION NOTES
10	GENERAL NOTES
11	LEGEND AND ABBREVIATIONS
12	EXISTING CONDITIONS
13	TREE LIST
14	OVERALL EROSION AND SEDIMENTATION CONTROL PLAN
15	EROSION AND SEDIMENTATION CONTROL PLAN
16	EROSION AND SEDIMENTATION CONTROL PLAN
17	EROSION AND SEDIMENTATION CONTROL PLAN
18	EROSION AND SEDIMENTATION CONTROL PLAN
19	DEMOLITION PLAN
20	OVERALL UTILITY PLAN
21	UTILITY PLAN 1
22	UTILITY PLAN 2
23	UTILITY PLAN 3
24	UTILITY PLAN 4
25	EROSION HAZARD ZONE EXHIBIT
26	PRE-DEVELOPMENT DRAINAGE AREA MAP
27	POST-DEVELOPMENT DRAINAGE AREA MAP
28	WATER QUALITY POND AND SECTIONS
29	WATER QUAILITY POND CALCULATIONS
30	WATER QUALITY DETAILS
31	OVERALL DIMENSION CONTROL PLAN
32	DIMENSION CONTROL PLAN 1
33	DIMENSION CONTROL PLAN 2
34	DIMENSION CONTROL PLAN 3
35	DIMENSION CONTROL PLAN 4
36	OVERALL PAVING AND STRIPING PLAN
37	PAVING AND STRIPING PLAN 1
38	PAVING AND STRIPING PLAN 2
39	PAVING AND STRIPING PLAN 3
40	PAVING AND STRIPING PLAN 4
41	OVERALL GRADING PLAN
42	GRADING PLAN 1
43	GRADING PLAN 2
44	GRADING PLAN 3
45	GRADING PLAN 4
46	BYPASS CHANNEL PLAN AND PROFILE
47	EROSION AND SEDIMENTATION CONTROL DETAILS
48	EROSION AND SEDIMENTATION CONTROL DETAILS
49	WATER DETAILS
50	WATER DETAILS
51	PAVING DETAILS
52	LANDSCAPE NOTES AND CALCULATIONS
53	PLANTING PLAN
54	RAIN GARDEN



VICINITY MAP

SCALE: 1"=2,000'

SAM BASS FIRE DEPT. REVIEWED

Plans must be on site for review at time of inspection

mselby

02/15/2023 1:37:13 PM

"ALL RESPONSIBILITY FOR THE ADEQUACY OF THESE PLANS REMAINS WITH THE ENGINEER WHO PREPARED THEM. IN ACCEPTING THESE PLANS, THE CITY OF AUSTIN MUST RELY UPON THE ADEQUACY OF THE WORK OF THE DESIGN ENGINEER."

RELEASE FOR CONSTRUCTION

RELEASE OF THIS APPLICATION DOES NOT CONSTITUTE A VERIFICATION OF ALL DATA, INFORMATION AND CALCULATIONS SUPPLIED BY THE APPLICANT. THE ENGINEER OF RECORD IS SOLELY RESPONSIBLE FOR THE COMPLETENESS, ACCURACY AND ADEQUACY OF HIS/HER SUBMITTAL, WHETHER OR NOTE THE APPLICATION IS REVIEWED FOR CODE COMPLIANCE BY THE CITY ENGINEERS.

Kate Castles 08/03/2023
DEVELOPMENT SERVICES DEPARTMENT DATE

~~No~~ FO/ No OM 08/02/2023
WATER UTILITY DATE

2-15-23
FIRE DEPARTMENT DATE
See electronic set for plans for stamp.

REVIEW FOR COMPLIANCE WITH COUNTY REQUIREMENTS

Andrew Hogan 07/28/2023
FOR WILLIAMSON COUNTY DATE

AUSTIN WATER
EXPIRATION DATE
August 02, 2026

NOTES:

1. ONE POTENTIAL CRITICAL ENVIRONMENTAL FEATURE HAS BEEN IDENTIFIED ON THIS SITE.
2. THIS PROJECT IS SUBJECT TO THE WATERSHED PROTECTION REGULATIONS.
3. THIS NOTE IS BEING PLACED ON THE PLAN SET IN THE ABSENCE OF A TEMPORARY TRAFFIC CONTROL STRATEGY WITH THE FULL UNDERSTANDING THAT A MINIMUM OF 6 WEEKS PRIOR TO THE START OF CONSTRUCTION, A TEMPORARY TRAFFIC CONTROL PLAN MUST BE REVIEWED AND APPROVED BY RIGHT OF WAY MANAGEMENT DIVISION. STANDARD DETAILS ARE NOT A TRAFFIC CONTROL PLAN. THE OWNER/REPRESENTATIVE FURTHER RECOGNIZES THAT A REVIEW FEE, AS PRESCRIBED BY THE MOST CURRENT VERSION IS SUBMITTED TO RIGHT OF WAY MANAGEMENT DIVISION FOR REVIEW. THE FOLLOWING MUST BE TAKEN INTO CONSIDERATION WHEN DEVELOPING FUTURE TRAFFIC CONTROL STRATEGIES:
   - 3.1. PEDESTRIAN AND BICYCLE TRAFFIC ACCESS MUST BE MAINTAINED AT ALL TIMES,UNLESS OTHERWISE AUTHORIZED BY RIGHT OF WAY MANAGEMENT.
   - 3.2. NO LONG TERM LANE CLOSURES WILL BE AUTHORIZED, UNLESS RIGHT OF WAY MANAGEMENT DETERMINES THAT ADEQUATE ACCOMMODATIONS HAVE BEEN MADE TO MINIMIZE TRAFFIC IMPACT.
   - 3.3. PROJECT SHOULD BE PHASED SO THAT UTILITY INSTALLATIONS MINIMALLY IMPACTS EXISTING OR TEMPORARY PEDESTRIAN FACILITIES.
4. THIS PROJECT IS LOCATED IN THE LAKE CREEK WATERSHED, WHICH IS CLASSIFIED AS A SUBURBAN WATERSHED.
5. THIS PROJECT IS SUBJECT TO THE VOID AND WATER FLOW MITIGATION RULE (COA ECM 1.12.0 AND COA ITEM NO. 658S OF THE SSM) PROVISION THAT ALL TRENCHING GREATER THAN 5 FEET DEEP MUST BE INSPECTED BY A GEOLOGIST (TEXAS P.G.) OR A GEOLOGIST'S REPRESENTATIVE.
6. APPROVAL OF THESE PLANS BY THE CITY OF AUSTIN INDICATES COMPLIANCE WITH APPLICABLE CITY REGULATIONS ONLY. APPROVAL BY OTHER GOVERNMENTAL ENTITIES MAY BE REQUIRED PRIOR TO THE START OF CONSTRUCTION. THE APPLICANT IS RESPONSIBLE FOR DETERMINING IF ADDITIONAL APPROVALS ARE NECESSARY.
7. 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.
   - 7.1. ADDITIONAL ELECTRIC EASEMENTS MAY BE REQUIRED AT A LATER DATE.
   - 7.2. WATER AND WASTEWATER SERVICE WILL BE PROVIDED BY PRIVATE ON-SITE WELL AND ON-SITE SEPTIC FACILITIES.
   - 7.3. FOR DRIVEWAY CONSTRUCTION: THE OWNER IS RESPONSIBLE FOR ALL COSTS FOR RELOCATION OF, OR DAMAGE TO UTILITIES.
   - 7.4. FOR CONSTRUCTION WITHIN THE RIGHT-OF-WAY (CITY OF AUSTIN OR COUNTY), A ROW EXCAVATION PERMIT MAY BE REQUIRED.
8. THIS PROJECT IS LOCATED IN THE LAKE CREEK AND RATTAN CREEK WATERSHED, WHICH IS CLASSIFIED AS A SUBURBAN WATERSHED.
9. THIS SITE IS LOCATED OVER THE EDWARDS AQUIFER RECHARGE ZONE.
10. IF AT ANY TIME DURING CONSTRUCTION OF THIS PROJECT AN UNDERGROUND STORAGE TANK (UST) IS FOUND, CONSTRUCTION IN THAT AREA MUST STOP UNTIL A CITY OF AUSTIN UST CONSTRUCTION PERMIT IS APPLIED FOR AND APPROVED. ANY UST REMOVAL WORK MUST BE CONDUCTED BY A UST CONTRACTOR THAT IS REGISTERED WITH THE TEXAS COMMISSION ON ENVIRONMENTAL QUALITY (TCEQ). CONTACT ELIZABETH SIMMONS AT ELIZABETH.SIMMONS@AUSTINTEXAS.GOV IF YOU HAVE ANY QUESTIONS. [COA TITLE 6]
11. THE CRITICAL ENVIRONMENTAL FEATURE (CEF) BUFFERS MUST BE MAINTAINED PER CITY OF AUSTIN CODE AND CRITERIA. EXISTING DRAINAGE AND NATIVE VEGETATION SHALL REMAIN UNDISTURBED TO ALLOW THE WATER QUALITY FUNCTION OF THE BUFFER. INSPECTION AND MAINTENANCE OF BUFFER SHALL OCCUR SEMIANNUALLY IN ACCORDANCE TO CITY OF AUSTIN CODE AND CRITERIA.
12. ALL ACTIVITIES WITHIN THE CEF SETBACK MUST COMPLY WITH THE CITY OF AUSTIN LAND DEVELOPMENT CODE. THE NATURAL VEGETATIVE COVER MUST BE RETAINED TO THE MAXIMUM EXTENT PRACTICABLE, AND CONSTRUCTION IS PROHIBITED
13. WATER QUALITY POND WILL BE PRIVATELY MAINTAINED.
14. FOR INTEGRATED PEST MANAGEMENT PLAN, SEE AGREEMENT FILED IN DOCUMENT NO. 2023010418, OFFICIAL PUBLIC RECORDS, WILLIAMSON COUNTY, TEXAS.
15. I, JENNIFER L. HENDERSON, TEXAS LICENSE NUMBER 116883, CERTIFY THAT THE DESIGN OF THE DAM IN THIS SET OF PLANS CAN SAFELY PASS THE MINIMUM DESIGN FLOOD HYDROGRAPH AS REQUIRED BY THE CITY OF AUSTIN AND THE STATE OF TEXAS BASED ON THE HYDROLOGIC, HYDRAULIC, STRUCTURAL AND GEOTECHNICAL ANALYSIS USING STANDARD ACCEPTED ENGINEERING PRACTICES.
16. PARTICIPATION IN THE REGIONAL STORMWATER MANAGEMENT PROGRAM THROUGH THE UPPER BRUSHY CREEK WCID REGIONAL DETENTION PROGRAM. THE CITY OF AUSTIN RSMP CASE NUMBER FOR THIS PROJECT IS LKC-RS-2022-0015O. REFER TO RSMP APPROVAL LETTER AND AGREEMENT FOR CONDITIONS OF PARTICIPATION. UPPER BRUSHY CREEK WCID AGREEMENT DATED 12/15/21.
17. PRIOR TO CERTIFICATE OF OCCUPANCY: THE FINALIZED STORM WATER MANAGEMENT AGREEMENT WITH UPPER BRUSHY CREEK WATERSHED CONTROL AND IMPROVEMENT DISTRICT MUST BE PROVIDED TO THE COA RSMP GROUP. CONFIRM SUBMISSION WITH RSMP PROGRAM AT RSMP@AUSTINTEXAS.GOV
18. AN ADMINISTRATIVE ENVIRONMENTAL VARIANCE HAS BEEN GRANTED TO ALLOW FILL UP TO 8' 25-8-342/30-5-342.

PROJECT DATA	
PROJECT NAME	NORTH AUSTIN CROSSROADS COMMUNITY CHURCH
LOCATION	15800 CROSSROADS DRIVE AUSTIN, TEXAS 78681
PROJECT DESCRIPTION	A NEW CHURCH BUILDING WITH A PARKING LOT, WATER QUALITY AND DETENTION POND.
LEGAL DESCRIPTION:	LOT 2, BLOCK A, GENE TAYLOR TRACT, AS RECORDED IN DOCUMENT #2019018154
FLOOD PLAIN	A PORTION OF THIS PROPERTY IS WITHIN THE FEMA 1% ANNUAL CHANCE FLOODPLAIN, AS SHOWN ON FEMA PANEL 48491C0630F, DATED DECEMBER 20, 2019
WATER QUALITY ZONE	EDWARDS AQUIFER RECHARGE ZONE
WATERSHED	LAKE CREEK
CURRENT ZONING	ETJ
ZONING CASE NUMBERS	PROPERTY IS WITHIN THE ETJ, NO ZONING CASE NUMBERS ARE AVAILABLE.
PRINCIPLE STREET	CROSSROADS DRIVE

PROJECT TEAM	
OWNER/DEVELOPER:	NORTH AUSTIN CROSSROADS COMMUNITY CHURCH 4201 W. PARMER LANE, BLDG. A, SUITE 250 AUSTIN, TEXAS 78727 DON ALLENSWORTH PHONE 863.640.1486 EMAIL DON@THENEWGROUNDGROUP.COM
ARCHITECT:	BISHOP ARCHITECTS 5300 MAGDELENA DRIVE AUSTIN, TEXAS 78735 512.653.1467 BRIAN BISHOP, NCARB, AIA BISHOP5300@GMAIL.COM
ENGINEER:	HENDERSON PROFESSIONAL ENGINEERS FIRM # F-22208 600 ROUND ROCK WEST DRIVE, SUITE 604 ROUND ROCK, TEXAS 78681 JENNIFER L. HENDERSON, P.E. PHONE 512.350.6228 EMAIL JEN@HENDERSONPE.COM
LANDSCAPE ARCHITECT:	MWM DESIGN GROUP FIRM #F-1416 DAVID CAZARES, RLA, LEED AP, LI 305 E. HUNTLAND DRIVE, SUITE 200 AUSTIN, TEXAS 78752 PHONE 512.731.1080 EMAIL DAVIDC@MWMDESIGNGROUP.COM

REVISIONS

NO.	DESCRIPTION	REVISE (R) CORRECT (C) ADD (A) VOID (V) SHEET NO'S	NET CHANGE IMPERVIOUS COVER (SQ.FT.)/%	TOTAL IMPERVIOUS COVER (SQ.FT.)/%	DESIGN ENGINEER SIGNATURE	CITY OF AUSTIN APPROVAL	APPROVAL DATE

PLAN SUBMITTALS

NO.	DATE	DESCRIPTION
1	7/22/2021	SUBMIT TO THE CITY OF AUSTIN
2	10/14/2021	UPDATE 1 TO THE CITY OF AUSTIN
3	1/31/2022	UPDATE 2 TO THE CITY OF AUSTIN
4	5/27/2022	UPDATE 3 TO THE CITY OF AUSTIN
5	8/1/2022	UPDATE 4 TO THE CITY OF AUSTIN
6	11/4/2022	UPDATE 5 TO THE CITY OF AUSTIN

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

STATE OF TEXAS
JENNIFER L. HENDERSON
116883
LICENSED
PROFESSIONAL ENGINEER
02/10/2023

Henderson Professional Engineers
HPE Civil Engineering
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ROUND ROCK, TX 78681
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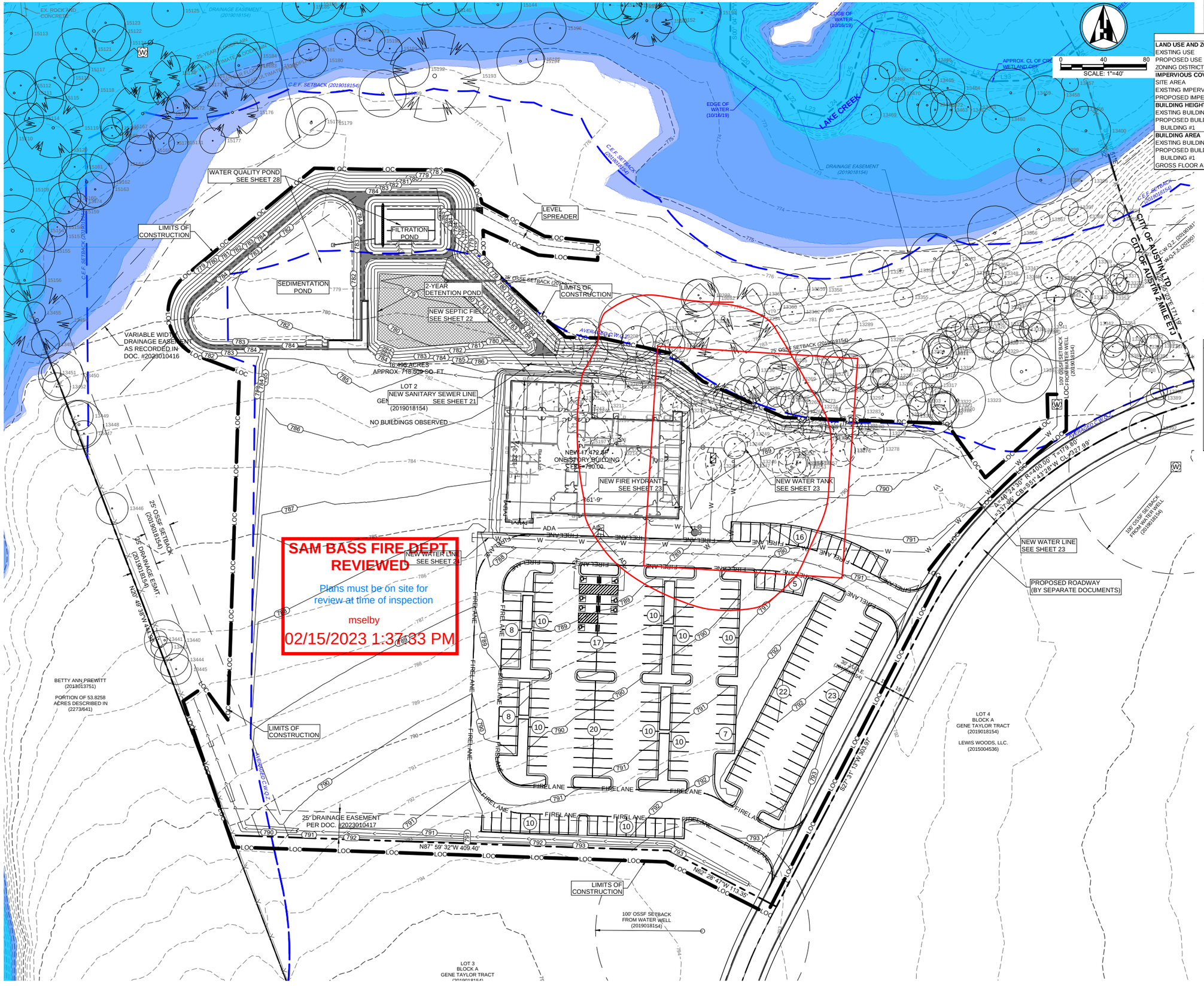
PELS FIRM #F-22208
www.hendersonpe.com
WBE210166 | HUB 1853873845300

CITY OF AUSTIN
APPROVED
Date 08/03/2023
FOUNDED 1839

SITE PLAN APPROVAL SHEET 01 OF 54
FILE NUMBER SP-2020-0328D APPLICATION DATE: 08/25/2020
APPROVED ~~BY COMMISSION~~ ON: 08/03/2023 UNDER SECTION 112
OF CHAPTER 25-5 OF THE CITY OF AUSTIN CODE.
EXPIRATION DATE (25-5-81,LDC) 08/03/2026 CASE MANAGER KATE CASTLES
PROJECT EXPIRATION DATE (ORD.#970905-A) 08/03/2026 DWPZ
Kate Castles
Director, Development Services Department
RELEASED FOR GENERAL COMPLIANCE: 08/03/2023 ZONING: ETJ
Rev. 1 Correction 1
Rev. 2 Correction 2
Rev. 3 Correction 3
FINAL PLAT MUST BE RECORDED BY THE PROJECT EXPIRATION DATE, IF APPLICABLE. SUBSEQUENT SITE PLANS WHICH DO NOT COMPLY WITH THE CODE CURRENT AT THE TIME OF FILING, AND ALL REQUIRED BUILDING PERMITS AND/OR A NOTICE OF CONSTRUCTION (IF A BUILDING PERMIT IS NOT REQUIRED), MUST ALSO BE APPROVED PRIOR TO THE PROJECT EXPIRATION DATE.

CITY CASE NUMBER: SP-2020-0328D



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SITE DEVELOPMENT PLANS TO SERVE
NORTH AUSTIN CROSSROADS COMMUNITY CHURCH
15800 CROSSROADS DRIVE
AUSTIN, TEXAS 78681
SITE PLAN

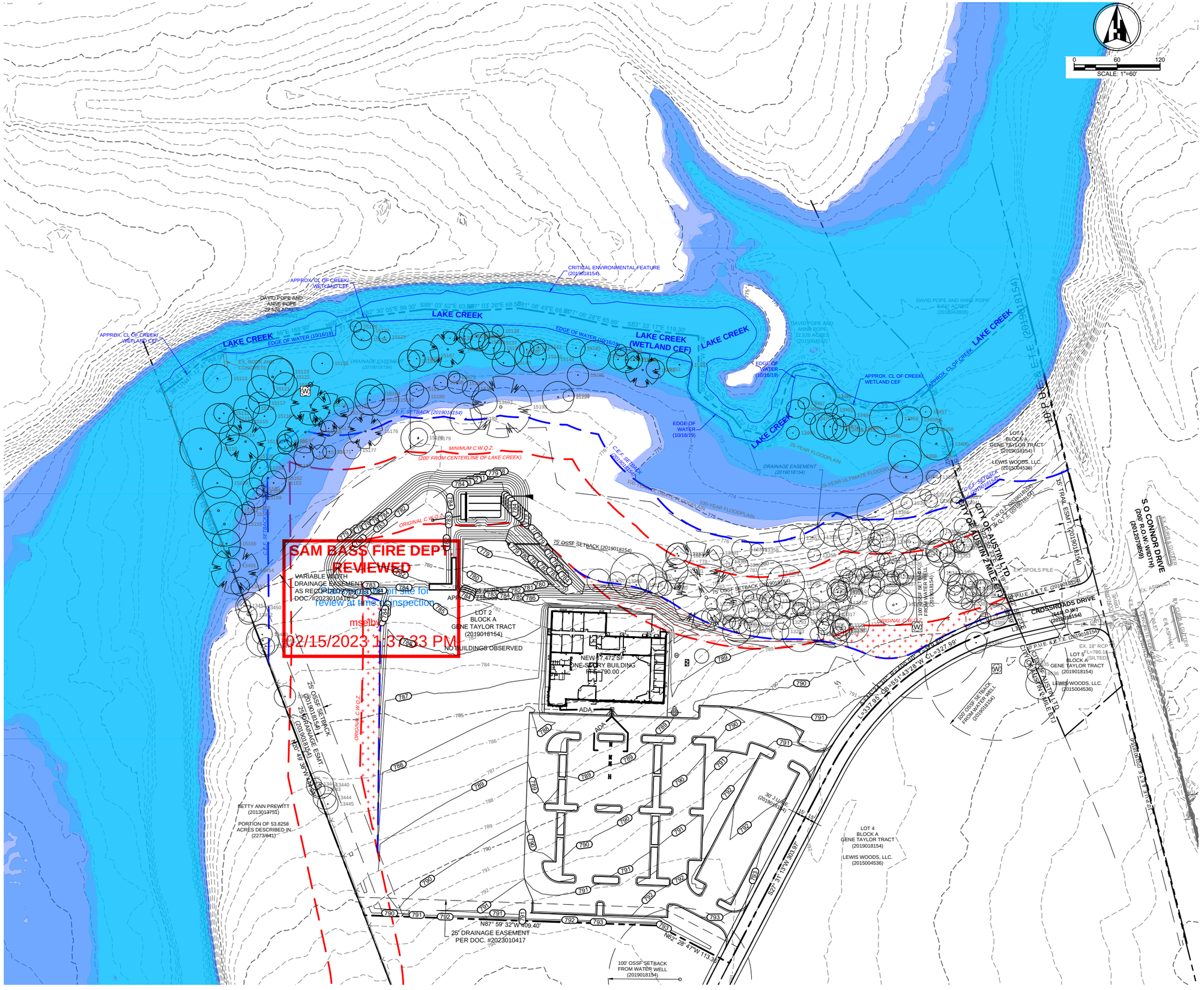
STATE OF TEXAS
JENNIFER L. HENDERSON
116883
LICENSED
PROFESSIONAL ENGINEER
02/10/2023

PROJECT NO. 200107
02/10/2023
DRAWN BY: JS
CHECKED BY: AR
APPROVED BY: JH

02 OF 54

Plotted by: Adam, Plot date: 10/02/2023
File name: h:\02 projects\2020\200107 crossroads community church\07 Sheets\SD\200107 SITE PLAN.dwg

CITY PROJECT NUMBER SP-2020-0328D



Plotted by: Adam, Plot date: 10/02/2023
File name: h:\02 projects\2020\200107 crossroads community church\07 Sheet\Sd\200107 CWQZ BUFFER EXHIBIT.dwg

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SITE DEVELOPMENT PLANS TO SERVE

NORTH AUSTIN CROSSROADS COMMUNITY CHURCH

15800 CROSSROADS DRIVE
AUSTIN, TEXAS 78681

CWQZ BUFFER AVERAGING PLAN

STATE OF TEXAS
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02/10/2023

CITY OF AUSTIN
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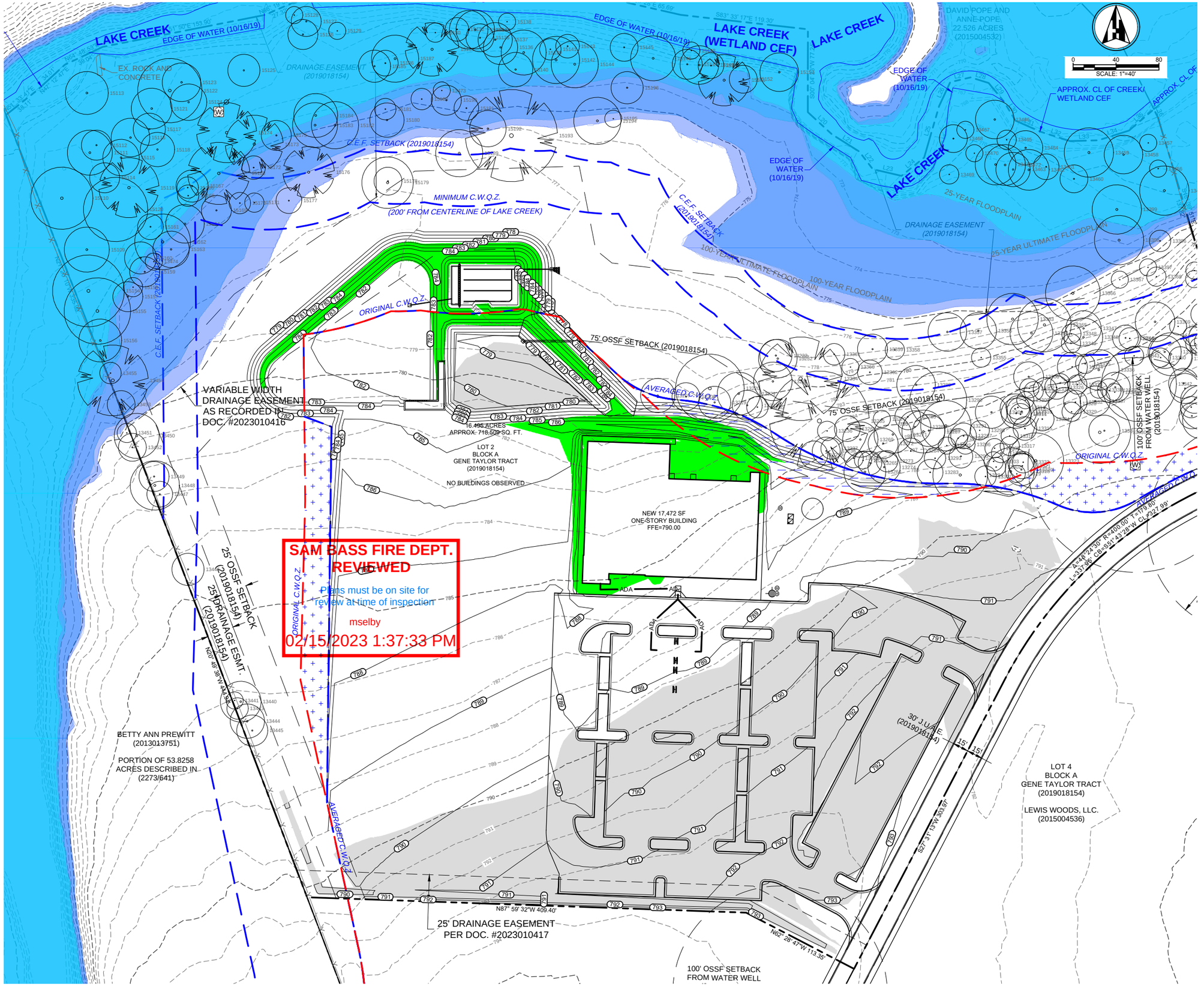
PROJECT NO. 200107	02/10/2023	DRAWN BY: JS	CHECKED BY: AR	APPROVED BY: JH

03 OF 54

CITY PROJECT NUMBER SP-2020-0328D



LEGEND

	AREA OF EXISTING C.W.Q.Z. TO BE AVERAGED TOTAL AREA = 15,967 S.F.
	AREA OF NEW C.W.Q.Z. TO BE INCLUDED IN AVERAGING TOTAL AREA = 16,701 S.F.

ELEVATIONS TABLE

NUMBER	MIN. ELEV	MAX. ELEV	COLOR
1	-100.00	-8.00	
2	-8.00	-4.00	
3	-4.00	0.00	
4	0.00	4.00	
5	4.00	8.00	
6	8.00	100.00	

ADMINISTRATIVE VARIANCE REQUESTED FOR:
MAX ELEVATION 8.00-8.007: 499.56 SF OF SIDEWALK BEHIND THE PROPOSED BUILDING

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SITE DEVELOPMENT PLANS TO SERVE

NORTH AUSTIN CROSSROADS COMMUNITY CHURCH
15800 CROSSROADS DRIVE
AUSTIN, TEXAS 78681

CUT AND FILL EXHIBIT

STATE OF TEXAS
JENNIFER L. HENDERSON
116883
LICENSED
PROFESSIONAL ENGINEER
02/10/2023

PROJECT NO. 200107	
02/10/2023	
DRAWN BY: JS	
CHECKED BY: AR	
APPROVED BY: JH	

CITY OF AUSTIN
APPROVED
Date 08/03/2023
FOUNDED 1839

04 OF 54

CITY PROJECT NUMBER SP-2020-0328D

Plotted by: Adam, Pkrt date: 10/02/2023
File name: h:\02 projects\2020\200107 crossroads community church\07 Sheet\SD\200107 CUT AND FILL.dwg

LAKE CREEK
EDGE OF WATER (10/16/19)
LAKE CREEK (WETLAND CEF)
DAVID POPE AND ANNE POPE 22.526 ACRES (2015004532)
EX. ROCK AND CONCRETE
DRAINAGE EASEMENT (2019018154)
C.E.F. SETBACK (2019018154)
EDGE OF WATER (10/16/19)
APPROX. CL OF CREEK/ WETLAND CEF
25-YEAR FLOODPLAIN
25-YEAR ULTIMATE FLOODPLAIN
100-YEAR ULTIMATE FLOODPLAIN
100-YEAR FLOODPLAIN
75' OSSF SETBACK (2019018154)
AVERAGED C.W.Q.Z.
VARIABLE WIDTH DRAINAGE EASEMENT AS RECORDED IN DOC. #2023010416
16.495 ACRES
APPROX. 718,609 SQ. FT.
LOT 2
BLOCK A
GENE TAYLOR TRACT
(2019018154)
NO BUILDINGS OBSERVED
NEW 17,472 SF ONE STORY BUILDING FFE=790.00
100' OSSF SETBACK FROM WATER WELL (2019018154)
ADA
25' OSSF SETBACK (2019018154)
25' DRAINAGE ESMT. (2019018154)
N20° 49' 38"W 44.54'
BETTY ANN PREWITT (2013013751)
PORTION OF 53.8258 ACRES DESCRIBED IN (2273/641)
N87° 59' 32"W 409.40'
25' DRAINAGE EASEMENT PER DOC. #2023010417
30' J.U.A.E. (2019018154)
S27° 31' 15"W 393.97'
N62° 28' 47"W 113.35'
100' OSSF SETBACK FROM WATER WELL
0 40 80
SCALE: 1"=40'

SAM BASS FIRE DEPT. REVIEWED
Plans must be on site for review at time of inspection
mselby
02/15/2023 1:37:33 PM

SLOPES TABLE			
NUMBER	MIN. SLOPE	MAX. SLOPE	COLOR
1	0.00%	15.00%	
2	15.00%	25.00%	
3	25.00%	35.00%	
4	35.00%	100.00%	

APPENDIX Q-2
IMPERVIOUS COVER

SUBURBAN WATERSHEDS

NOTE: Q1 TABLES ARE NOT REQUIRED FOR SUBURBAN WATERSHEDS

IMPERVIOUS COVER ALLOWED AT 65% X GROSS SITE AREA = 10.722 ACRES

ALLOWABLE IMPERVIOUS COVER BREAKDOWN BY SLOPE CATEGORY

TOTAL ACREAGE 15 - 25 % = 0.377 X 10 % = 3.77%

PROPOSED TOTAL IMPERVIOUS COVER

TOTAL PROPOSED IMPERVIOUS COVER = 4.633 ACRES = 28%

PROPOSED IMPERVIOUS COVER ON SLOPES

SLOPE CATEGORIES	ACRES	BUILDING/ AND OTHER IMPERVIOUS COVER ACRES	% OF CATEGORY	DRIVEWAYS/ ROADWAYS ACRES
0 - 15 %	14.680	1.309	9%	3.324
15 - 25 %	0.377	0	0%	0
25 - 35 %	1.228	0	0%	0
OVER 35 %	0.210	0	0%	0
TOTAL SITE AREA	16.495			

APPROVED
Date 08/03/2023

Henderson Professional Engineers
600 ROUND ROCK WEST DRIVE, SUITE 604
ROUND ROCK, TX 78681
512.350.6228
PELS FIRM #F-22208
www.hendersonpe.com
Civil Engineering
WBE2101166 | HUB 1853873845300

No.	REVISION
1	
2	
3	
4	
5	

SITE DEVELOPMENT PLANS TO SERVE
NORTH AUSTIN CROSSROADS COMMUNITY CHURCH
15800 CROSSROADS DRIVE
AUSTIN, TEXAS 78681
SLOPE MAP EXHIBIT

JENNIFER L. HENDERSON 116883 LICENSED PROFESSIONAL ENGINEER
STATE OF TEXAS
02/10/2023

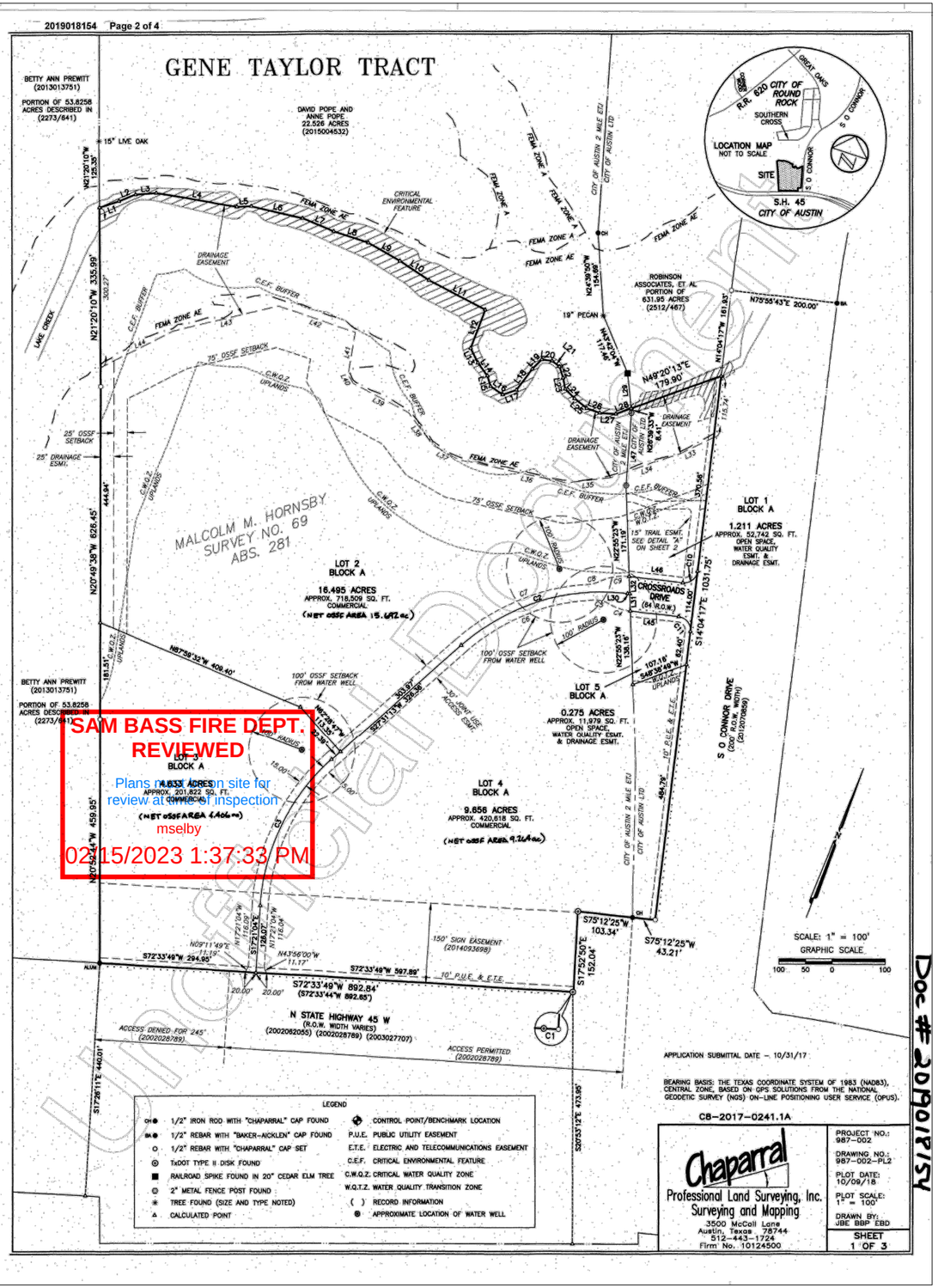
PROJECT NO. 200107	02/10/2023	DRAWN BY: JS	CHECKED BY: AR	APPROVED BY: JH

05 OF 54

Plotted by: Adam, Plot date: 10/02/2023
File name: h:\02 projects\2020\200107 crossroads community church\07 Sheet\SD\200107 SLOPE MAP.dwg

CITY PROJECT NUMBER SP-2020-0328D

GENE TAYLOR TRACT



APPLICATION SUBMITTAL DATE – 10/31/17

BEARING BASIS: THE TEXAS COORDINATE SYSTEM OF 1983 (NAD83), CENTRAL ZONE, BASED ON GPS SOLUTIONS FROM THE NATIONAL GEODETIC SURVEY (NGS) ON-LINE POSITIONING USER SERVICE (OPUS).

C8-2017-0241.1A

LEGEND

1/2" IRON ROD WITH "CHAPARRAL" CAP FOUND	CONTROL POINT/BENCHMARK LOCATION
1/2" REBAR WITH "BAKER-AICKLEN" CAP FOUND	P.U.E. PUBLIC UTILITY EASEMENT
1/2" REBAR WITH "CHAPARRAL" CAP SET	E.T.E. ELECTRIC AND TELECOMMUNICATIONS EASEMENT
TxDOT TYPE II DISK FOUND	C.E.F. CRITICAL ENVIRONMENTAL FEATURE
RAILROAD SPIKE FOUND IN 20" CEDAR ELM TREE	C.W.Q.Z. CRITICAL WATER QUALITY ZONE
2" METAL FENCE POST FOUND	W.Q.T.Z. WATER QUALITY TRANSITION ZONE
TREE FOUND (SIZE AND TYPE NOTED)	( ) RECORD INFORMATION
CALCULATED POINT	APPROXIMATE LOCATION OF WATER WELL

Chaparral
Professional Land Surveying, Inc.
Surveying and Mapping
3500 McCall Lane
Austin, Texas 78744
512-443-1724
Firm No. 10124500

PROJECT NO.: 987-002
DRAWING NO.: 987-002-PL2
PLOT DATE: 10/09/18
PLOT SCALE: 1" = 100'
DRAWN BY:: JBE BBP EBD
SHEET 1 OF 3

Henderson Professional Engineers
600 ROUND ROCK WEST DRIVE, SUITE 604
ROUND ROCK, TX 78681
512.350.6228
PELS FIRM #F-22208
Civil Engineering www.hendersonpe.com
WBE210166 | HUB 1853873845300

No.	REVISION
1	
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SITE DEVELOPMENT PLANS TO SERVE

NORTH AUSTIN CROSSROADS COMMUNITY CHURCH

15800 CROSSROADS DRIVE
AUSTIN, TEXAS 78681

FINAL PLAT

STATE OF TEXAS
JENNIFER L. HENDERSON
116883
LICENSED
PROFESSIONAL ENGINEER
02/08/2023

PROJECT NO. 200107	02/08/2023	DRAWN BY: JS	CHECKED BY: AR	APPROVED BY: JH

06 OF 54

Doc#2019018154

GENE TAYLOR TRACT

A DESCRIPTION OF 32.454 ACRES IN THE MALCOLM M. HORNSBY SURVEY NO. 69, ABSTRACT NO. 281 IN WILLIAMSON COUNTY, TEXAS, BEING A PORTION OF A 52.591 ACRE TRACT CONVEYED TO LEWIS WOODS, LLC IN A SPECIAL WARRANTY DEED WITH VENDOR'S LIEN DATED JANUARY 15, 2015 AND RECORDED IN DOCUMENT NO. 2015004536 AND ALL OF A 2.390 ACRE TRACT CONVEYED TO LEWIS WOODS, LLC IN A SPECIAL WARRANTY DEED DATED MAY 17, 2018 AND RECORDED IN DOCUMENT NO. 2018042807, BOTH OF THE OFFICIAL PUBLIC RECORDS OF WILLIAMSON COUNTY, TEXAS; SAID 32.454 ACRES BEING MORE PARTICULARLY DESCRIBED BY METES AND BOUNDS AS FOLLOWS:

BEGINNING a 1/2" rebar with aluminum cap found at the intersection of the north line of State Highway 45 (right-of-way width varies) as described in Document No. 2002062055, 2002028789 and 2003027707 of the Official Public Records of Williamson County, Texas and the east line of a 53.8258 acre tract described in Volume 2273, Page 841 of the Deed Records of Williamson County, Texas, for the southwest corner of said 52.591 Acre Tract and the herein described tract;

THENCE with the west line of the said 52.591 Acre Tract and the east line of the said 53.8258 Acre Tract, the following three (3) courses and distances:

1. North 20°52'44" West, a distance of 459.95 feet to a 1/2" rebar with "Chaparral" cap set;
2. North 20°49'38" West, a distance of 626.45 feet to a 1/2" rebar with "Chaparral" cap set;
3. North 21°20'10" West, a distance of 335.99 feet to an inundated/calculated point in the centerline of Lake Creek at the southwest corner of a 22.526 acre tract described in Document No. 2015004532 of the Official Public Records of Williamson County, Texas, for the northwest corner of the herein described tract;

THENCE over and across said 52.591 Acre Tract, with the centerline of Lake Creek, same being the south line of said 22.526 Acre Tract, the following twenty-eight (28) courses and distances:

1. North 51°33'41" East, a distance of 38.11 feet to an inundated/calculated point;
2. North 47°12'47" East, a distance of 34.01 feet to an inundated/calculated point;
3. North 64°48'53" East, a distance of 39.04 feet to an inundated/calculated point;
4. North 78°51'50" East, a distance of 153.90 feet to an inundated/calculated point;
5. North 66°19'59" East, a distance of 27.32 feet to an inundated/calculated point;
6. North 82°30'05" East, a distance of 99.30 feet to an inundated/calculated point;
7. South 88°03'52" East, a distance of 63.58 feet to an inundated/calculated point;
8. North 87°03'26" East, a distance of 68.50 feet to an inundated/calculated point;
9. South 81°06'49" East, a distance of 68.81 feet to an inundated/calculated point;
10. South 77°06'28" East, a distance of 65.69 feet to an inundated/calculated point;
11. South 83°33'17" East, a distance of 119.30 feet to an inundated/calculated point;
12. South 00°04'23" West, a distance of 77.24 feet to an inundated/calculated point;
13. South 47°28'10" East, a distance of 30.55 feet to an inundated/calculated point;
14. South 57°49'31" East, a distance of 29.97 feet to an inundated/calculated point;
15. South 37°29'52" East, a distance of 20.73 feet to an inundated/calculated point;
16. South 76°46'23" East, a distance of 27.53 feet to an inundated/calculated point;
17. North 51°00'17" East, a distance of 27.21 feet to an inundated/calculated point;
18. North 16°08'19" East, a distance of 49.56 feet to an inundated/calculated point;
19. North 24°48'59" East, a distance of 24.87 feet to an inundated/calculated point;
20. North 76°46'41" East, a distance of 19.57 feet to an inundated/calculated point;
21. South 72°42'28" East, a distance of 17.57 feet to an inundated/calculated point;
22. South 39°32'39" East, a distance of 22.01 feet to an inundated/calculated point;
23. South 31°22'53" East, a distance of 21.27 feet to an inundated/calculated point;
24. South 66°01'31" East, a distance of 24.83 feet to an inundated/calculated point;
25. South 72°21'11" East, a distance of 29.43 feet to an inundated/calculated point;
26. North 88°25'03" East, a distance of 26.38 feet to an inundated/calculated point;
27. North 72°25'21" East, a distance of 29.98 feet to an inundated/calculated point;
28. North 49°20'14" East, a distance of 30.57 feet to an inundated/calculated point at the northwest corner of said 2.390 Acre Tract, same being the southeast corner of said 22.526 Acre Tract;

THENCE North 49°20'13" East, continuing with the centerline of Lake Creek, same being the north line of said 2.390 Acre Tract a distance of 179.90 feet to an inundated/calculated point in the west right-of-way line of S O Connor Drive (200' right-of-way width) as described in Document No. 2012070859 of the Official Public Records of Williamson County, Texas, for the northeast corner of said 2.390 Acre Tract and the herein described tract;

THENCE South 14°04'17" East, with the west right-of-way line of S O Connor Drive and the east line of said 2.390 Acre Tract, a distance of 1031.75 feet to a 1/2" rebar with "Chaparral" cap found at the intersection of the north right-of-way line of said State Highway 45 and the west right-of-way line of said S O Connor Drive, for the southeast corner of said 2.390 Acre Tract and the herein described tract;

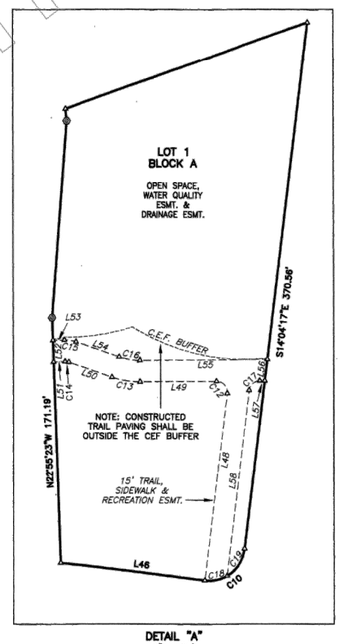
THENCE South 75°12'25" West with the north right-of-way line of said State Highway 45 and the south line of said 2.390 Acre Tract, a distance of 43.21 feet to a 1/2" rebar with "Chaparral" cap found at the common south corner of said 2.390 Acre Tract and said 52.591 Acre Tract;

THENCE continuing with the north right-of-way line of State Highway 45 and the south line of said 52.591 Acre Tract, the following four (4) courses and distances:

1. South 75°12'25" West, a distance of 103.34 feet to a TxDot type II disk found;
2. South 17°52'50" East, a distance of 152.04 feet to a 1/2" rebar with "Chaparral" cap set;
3. With a curve to the left, having a radius of 4386.39 feet, a delta angle of 00°00'53", an arc length of 1.12 feet, and a chord which bears South 72°33'26" West, a distance of 1.12 feet to a TxDot type II disk found;
4. South 72°33'49" West, a distance of 892.84 feet to the POINT OF BEGINNING, containing 32.454 acres of land, more or less.

LINE TABLE		
LINE	BEARING	DISTANCE
L1	N51°33'41"E	38.11'
L2	N47°12'47"E	34.01'
L3	N64°48'53"E	39.04'
L4	N78°51'50"E	153.90'
L5	N66°19'59"E	27.32'
L6	N82°30'05"E	99.30'
L7	S88°03'52"E	63.58'
L8	N87°03'26"E	68.50'
L9	S81°08'49"E	68.81'
L10	S77°06'28"E	65.69'
L11	S83°33'17"E	119.30'
L12	S00°04'23"W	77.24'
L13	S47°28'10"E	30.55'
L14	S57°49'31"E	29.97'
L15	S37°29'52"E	20.73'
L16	S76°46'23"E	27.53'
L17	N51°00'17"E	27.21'
L18	N16°08'19"E	49.56'
L19	N24°48'59"E	24.87'
L20	N76°46'41"E	19.57'
L21	S72°42'28"E	17.57'
L22	S39°32'39"E	22.01'
L23	S31°22'53"E	21.27'
L24	S66°01'31"E	24.83'
L25	S72°21'11"E	29.43'
L26	N88°25'03"E	26.38'
L27	N72°25'21"E	29.98'
L28	N49°20'14"E	30.57'
L29	N26°39'33"W	66.28'
L30	S75°05'40"W	4.16'
L31	N22°55'10"W	32.39'
L32	N22°55'36"W	32.39'
L33	S42°56'37"W	69.50'
L34	S49°40'09"W	139.87'
L35	S61°58'35"W	84.18'
L36	S81°29'24"W	206.27'
L37	N81°23'38"W	56.70'
L38	N57°36'17"W	76.53'
L39	N83°16'06"W	117.36'
L40	N51°01'51"W	19.45'
L41	N11°09'45"W	79.50'
L42	S88°15'15"W	153.41'
L43	S55°44'18"W	203.39'
L44	S42°30'22"W	152.99'
L45	N75°55'43"E	91.50'
L46	S75°55'43"W	101.46'
L47	N16°39'51"W	137.82'
L48	N14°04'17"W	131.54'
L49	S68°29'50"W	53.37'
L50	S88°19'24"W	32.02'
L51	S67°04'37"W	7.94'
L52	N22°55'23"W	15.00'
L53	N67°04'37"E	7.94'
L54	N88°19'24"E	32.02'
L55	N68°29'50"E	89.08'
L56	S14°04'17"E	15.13'
L57	S68°29'50"W	3.50'
L58	S14°04'17"E	130.46'

CURVE TABLE					
CURVE	RADIUS	DELTA	ARC	BEARING	CHORD
C1	4386.39'	0°00'53"	1.12'	S72°33'26"W	1.12'
C2	400.00'	48°24'30"	337.95'	S51°43'28"W	327.99'
C3	400.00'	44°52'17"	313.26'	S05°05'04"W	305.32'
C4	100.00'	23°58'53"	41.86'	S87°50'53"W	41.55'
C5	50.00'	32°53'56"	28.71'	S83°28'28"W	28.32'
C6	385.00'	39°30'17"	265.45'	S47°16'22"W	260.23'
C7	415.00'	38°08'22"	276.25'	N46°35'24"E	271.18'
C8	50.00'	22°54'19"	19.99'	N54°12'26"E	19.86'
C9	100.00'	33°10'40"	57.91'	N59°16'48"E	57.10'
C10	25.00'	90°00'00"	39.27'	S30°55'43"W	35.36'
C11	25.00'	90°00'00"	39.27'	S59°04'17"E	35.36'
C12	7.50'	97°25'53"	12.75'	N62°47'14"W	11.27'
C13	57.50'	19°49'34"	19.90'	S78°24'37"W	19.80'
C14	7.50'	21°14'48"	2.78'	S77°42'00"W	2.77'
C15	22.50'	21°14'48"	8.34'	N77°42'00"E	8.30'
C16	42.50'	19°49'34"	14.71'	N78°24'37"E	14.63'
C17	7.50'	82°34'07"	10.81'	S27°12'46"W	9.90'
C18	25.00'	36°52'12"	16.09'	S57°29'37"W	15.81'
C19	25.00'	53°07'48"	23.18'	N12°29'37"E	22.36'



DETAIL "A"
1" = 50'

LOT SUMMARY		SQUARE FOOTAGE
RIGHT-OF-WAY	0.184 ACRES	8,015 S.F.
COMMERCIAL (3)	30.784 ACRES	1,340,959 S.F.
OPEN SPACE, WATER QUALITY AND DRAINAGE EASEMENT (2)	1.486 ACRES	64,721 S.F.
TOTAL	32.454 ACRES	1,413,695 S.F.

TABLE OF LAND USES		SQUARE FOOTAGE	ACRES
LOT 1, BLOCK A	OPEN SPACE, WATER QUALITY EASEMENT AND DRAINAGE EASEMENT	52,742 S.F.	1.211
LOT 2, BLOCK A	COMMERCIAL	718,509 S.F.	16.495
LOT 3, BLOCK A	COMMERCIAL	201,822 S.F.	4.633
LOT 4, BLOCK A	COMMERCIAL	420,618 S.F.	9.656
LOT 5, BLOCK A	OPEN SPACE, WATER QUALITY EASEMENT AND DRAINAGE EASEMENT	11,979 S.F.	0.275

C8-2017-0241.1A

Chaparral
Professional Land Surveying, Inc.
Surveying and Mapping
3500 McCall Lane
Austin, Texas 78744
512-443-1724
Firm No. 10124500

PROJECT NO.: 987-002
DRAWING NO.: 987-002-PL2
PLOT DATE: 10/09/18
PLOT SCALE: 1" = 100'
DRAWN BY: JBE BBP EBD
SHEET 2 OF 3

SAM BASS FIRE DEPT.
REVIEWED
Plans must be on site for review at time of inspection
mselby
02/15/2023 1:37:33 PM

Henderson Professional Engineers
600 ROUND ROCK WEST DRIVE, SUITE 604
ROUND ROCK, TX 78681
512.350.6228
PELS FIRM #F-22208
Civil Engineering www.hendersonpe.com
WBE2101166 | HUB 1853873845300

No.	REVISION
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SITE DEVELOPMENT PLANS TO SERVE
NORTH AUSTIN CROSSROADS COMMUNITY CHURCH
15800 CROSSROADS DRIVE
AUSTIN, TEXAS 78681
FINAL PLAT

STATE OF TEXAS
JENNIFER L. HENDERSON
116883
LICENSED
PROFESSIONAL ENGINEER
02/08/2023

PROJECT NO. 200107	02/08/2023	DRAWN BY: JS	CHECKED BY: AR	APPROVED BY: JH

07 OF 54

CITY OF AUSTIN
APPROVED
Date 08/03/2023
FOUNDED 1839

Plotted by: Adam, Plot date: 08/02/2023
File name: h:\02 projects\2020\200107 crossroads community church\07 Sheet\SD\200107 PLAT.dwg

CITY PROJECT NUMBER SP-2020-0328D

Doc # 2019018154

GENE TAYLOR TRACT

STATE OF TEXAS
COUNTY OF WILLIAMSON

KNOW ALL MEN BY THE PRESENTS:

THAT LEWIS WOODS, LLC, BEING THE OWNER OF THAT CERTAIN 52.591 ACRE TRACT OF LAND OUT OF THE MALCOLM M. HORNSBY SURVEY NO. 69, ABSTRACT NO. 281 IN WILLIAMSON COUNTY, TEXAS, AS CONVEYED BY DEED RECORDED IN DOCUMENT NO. 2015004536 OF THE OFFICIAL PUBLIC RECORDS OF WILLIAMSON COUNTY, TEXAS AND THAT CERTAIN 2.390 ACRE TRACT OF LAND OUT OF THE MALCOLM M. HORNSBY SURVEY NO. 69, ABSTRACT NO. 281 IN WILLIAMSON COUNTY, TEXAS, AS CONVEYED BY DEED RECORDED IN DOCUMENT NO. 2018042807 OF THE OFFICIAL PUBLIC RECORDS OF WILLIAMSON COUNTY, TEXAS,

DO HEREBY SUBDIVIDE 32.454 ACRES OF LAND IN ACCORDANCE WITH THE ATTACHED MAP OR PLAT SHOWN HEREON, PURSUANT TO CHAPTER 212 OF THE TEXAS LOCAL GOVERNMENT CODE, TO BE KNOWN AS:

GENE TAYLOR TRACT

AND DO HEREBY DEDICATE TO THE PUBLIC, THE USE OF THE STREETS AND EASEMENTS SHOWN HEREON, SUBJECT TO ANY EASEMENTS AND/OR RESTRICTIONS HERETOFORE GRANTED AND NOT RELEASED.

WITNESS MY HAND THIS THE 12th DAY OF December, 2018 A.D.

BY:
LEWIS WOODS, LLC
1508 S LAMAR
AUSTIN, TX 78704
Barrett Wood, PRESIDENT

STACEY ANGELINE KAROLIK
Notary Public, State of Texas
Comm. Expires 05-03-2021
Notary ID 129293021

STATE OF TEXAS
COUNTY OF Williamson

BEFORE ME, THE UNDERSIGNED AUTHORITY, ON THIS DAY PERSONALLY APPEARED Barrett Wood KNOWN TO ME TO BE THE PERSON WHOSE NAME IS SUBSCRIBED TO THE FOREGOING INSTRUMENT AND HE ACKNOWLEDGED TO ME THAT HE EXECUTED THE SAME FOR THE PURPOSES AND CONSIDERATIONS THEREIN EXPRESSED AND IN THE CAPACITY THEREIN STATED.

WITNESS MY HAND AND SEALED IN MY OFFICE, THIS THE 12th DAY OF December, 2018 AD.

Stacey Angeline Karolik
NOTARY PUBLIC, STATE OF TEXAS
Stacey Angeline Karolik 5-3-21
PRINTED NAME MY COMMISSION EXPIRES

STACEY ANGELINE KAROLIK
Notary Public, State of Texas
Comm. Expires 05-03-2021
Notary ID 129293021

SURVEYOR'S CERTIFICATION:

I, PHILLIP L. MCLAUGHLIN, AM AUTHORIZED UNDER THE LAWS OF THE STATE OF TEXAS TO PRACTICE THE PROFESSION OF SURVEYING AND HEREBY CERTIFY THAT THIS PLAT COMPLIES WITH THE SURVEYING RELATED PORTIONS OF TITLE 30 OF THE AUSTIN CITY CODE OF 2003 AS AMENDED, IS TRUE AND CORRECT TO THE BEST OF MY ABILITY, AND WAS PREPARED FROM AN ACTUAL ON THE GROUND SURVEY OF THE PROPERTY SHOWN HEREON UNDER MY SUPERVISION.

PHILLIP L. MCLAUGHLIN, R.P.L.S. NO. 5300 OCTOBER 9, 2018
CHAPARRAL PROFESSIONAL LAND SURVEYING, INC.
3500 MCCALL LANE
AUSTIN, TEXAS 78744
(512) 443-1724
FIRM NO. 10124500

STATE OF TEXAS
PHILLIP L. MCLAUGHLIN
5300
REGISTERED
PROFESSIONAL
LAND SURVEYOR

ENGINEER'S CERTIFICATION:

I, T. W. HOYSA, AM AUTHORIZED UNDER THE LAWS OF THE STATE OF TEXAS TO PRACTICE THE PROFESSION OF ENGINEERING; THAT I PREPARED THE PLAT SUBMITTED HEREWITH; THAT ALL INFORMATION SHOWN HEREON IS ACCURATE AND CORRECT TO THE BEST OF MY KNOWLEDGE AS RELATED TO THE ENGINEERING PORTIONS THEREOF.

A PORTION OF THE TRACT SHOWN HEREON LIES WITHIN ZONE "AE" (AREAS DETERMINED TO BE INSIDE THE 1% ANNUAL CHANCE FLOODPLAIN AKA 100-YEAR FLOOD WITH BASE FLOOD ELEVATIONS DETERMINED), AS IDENTIFIED BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY, NATIONAL FLOOD INSURANCE PROGRAM, AS SHOWN ON MAP NO. 48491C0630E, REVISED TO REFLECT LOMR EFFECTIVE MARCH 22, 2010, FOR WILLIAMSON COUNTY, TEXAS AND INCORPORATED AREAS.

THIS TRACT IS LOCATED WITHIN THE EDWARDS AQUIFER RECHARGE ZONE.

T. W. HOYSA
PROFESSIONAL ENGINEER NO. 100072
STATE OF TEXAS

ENGINEERING BY:

LJA ENGINEERING
921 W NEW HOPE DR SUITE 603
CEDAR PARK, TX 78613
P: 512-306-0228
M: 512-914-6762
TEXAS REGISTERED ENGINEERING FIRM FRN-F1386

STATE OF TEXAS
T. W. HOYSA
100072
REGISTERED
PROFESSIONAL
ENGINEER

SUBDIVISION NOTES:

1. WATER AND WASTEWATER SERVICE FOR THIS PROPERTY WILL BE PROVIDED BY ON-SITE WATER WELLS AND AN ON-SITE SANITARY FACILITY (OSSF). ON-SITE WATER AND WASTEWATER FACILITIES SHALL BE APPROVED BY THE WILLIAMSON COUNTY AND CITIES HEALTH DISTRICT (WCCHD).
2. NO STRUCTURE SHALL BE OCCUPIED UNTIL CONNECTED TO ON-SITE WATER AND WASTEWATER FACILITIES APPROVED AND INSPECTED BY WCCHD.
3. BY APPROVING THIS PLAT, THE CITY OF AUSTIN AND WILLIAMSON COUNTY ASSUME NO OBLIGATION TO CONSTRUCT ANY INFRASTRUCTURE IN CONNECTION WITH THIS SUBDIVISION. ANY SUBDIVISION INFRASTRUCTURE REQUIRED FOR THE DEVELOPMENT OF THE LOTS IN THIS SUBDIVISION IS THE RESPONSIBILITY OF THE DEVELOPER AND/OR THE OWNERS OF THE LOTS. FAILURE TO CONSTRUCT ANY REQUIRED INFRASTRUCTURE TO CITY STANDARDS MAY BE JUST CAUSE FOR THE CITY TO DENY APPLICATIONS FOR CERTAIN DEVELOPMENT PERMITS, INCLUDING BUILDING PERMITS, SITE PLAN APPROVALS, AND/OR CERTIFICATES OF OCCUPANCY.
4. THE OWNER OF THIS SUBDIVISION, AND HIS OR HER SUCCESSORS AND ASSIGNS, ASSUMES RESPONSIBILITY FOR PLANS FOR CONSTRUCTION OF SUBDIVISION IMPROVEMENTS WHICH COMPLY WITH APPLICABLE CODES AND REQUIREMENTS OF THE CITY OF AUSTIN. THE OWNER UNDERSTANDS AND ACKNOWLEDGES THAT PLAT VACATION OR REPLATTING MAY BE REQUIRED, AT THE OWNER'S SOLE EXPENSE, IF PLANS TO CONSTRUCT THIS SUBDIVISION DO NOT COMPLY WITH SUCH CODES AND REQUIREMENTS.
6. DETENTION NOTE: PRIOR TO DEVELOPMENT OF THIS SUBDIVISION, DRAINAGE PLANS WILL BE SUBMITTED TO CITY OF AUSTIN FOR REVIEW. RAINFALL RUNOFF SHALL BE DETAINED BY THE USE OF PONDING, OR OTHER APPROVED METHODS IF AVAILABLE AT SITE PLAN, EXCESS RUNOFF MAY BE ALLOWED TO AN AMOUNT ESTABLISHED BY REGIONAL DETENTION PLANS APPROVED BY THE UPPER BRUSHER CREEK WCID.
7. THE OWNER/DEVELOPER OF THIS SUBDIVISION/LOT SHALL PROVIDE TXU WITH ANY EASEMENT AND/OR ACCESS REQUIRED, IN ADDITION TO THOSE INDICATED, FOR THE INSTALLATION AND ONGOING MAINTENANCE OF OVERHEAD AND UNDERGROUND ELECTRIC FACILITIES. THESE EASEMENTS AND/OR ACCESS ARE REQUIRED TO PROVIDE ELECTRIC SERVICE TO THE BUILDING AND WILL NOT BE LOCATED SO AS TO CAUSE THE SITE TO BE OUT OF COMPLIANCE WITH THE CITY OF AUSTIN LAND DEVELOPMENT CODE.
8. THE OWNER SHALL BE RESPONSIBLE FOR INSTALLATION OF TEMPORARY EROSION CONTROL, REVEGETATION AND TREE PROTECTION. IN ADDITION, THE OWNER SHALL BE RESPONSIBLE FOR ANY INITIAL TREE PRUNING AND TREE REMOVAL THAT IS WITHIN TEN FEET OF THE CENTER LINE OF THE PROPOSED OVERHEAD ELECTRICAL FACILITIES DESIGNED TO PROVIDE ELECTRIC SERVICE TO THIS PROJECT. THE OWNER SHALL INCLUDE TXU'S WORK WITHIN THE LIMITS OF CONSTRUCTION FOR THIS PROJECT. ANY RELOCATIONS OR OUTAGES CAUSED BY THIS PROJECT WILL BE CHARGED TO THE CONTRACTOR/OWNER.
9. PUBLIC SIDEWALKS, BUILT TO CITY OF AUSTIN STANDARDS ARE REQUIRED ALONG THE FOLLOWING STREETS AND AS SHOWN BY A DOTTED LINE ON THE FACE OF THE PLAT: CROSSROADS DRIVE AND S O CONNOR DRIVE. THE REQUIRED SIDEWALKS SHALL BE IN PLACE PRIOR TO THE LOT BEING OCCUPIED. FAILURE TO CONSTRUCT THE REQUIRED SIDEWALKS MAY RESULT IN THE WITHHOLDING OF CERTIFICATES OF OCCUPANCY, BUILDING PERMITS, OR UTILITY CONNECTIONS BY THE GOVERNING BODY OR UTILITY COMPANY. LDC, 25-6-351.
10. EROSION/SEDIMENTATION CONTROLS AREA REQUIRED FOR ALL CONSTRUCTION IN THIS SUBDIVISION PURSUANT TO THE LAND DEVELOPMENT CODE AND THE ENVIRONMENTAL CRITERIA MANUAL.
11. NO OBJECTS, INCLUDING BUT NOT LIMITED TO, BUILDINGS, FENCES, OR LANDSCAPING SHALL BE ALLOWED IN A DRAINAGE EASEMENT EXCEPT AS APPROVED BY THE CITY OF AUSTIN.
12. FACILITIES FOR OFF-STREET LOADING AND UNLOADING SHALL BE PROVIDED FOR ALL LOTS IN THIS SUBDIVISION.
13. ALL STREETS, DRAINAGE, SIDEWALKS, WATER AND WASTEWATER LINES, AND EROSION CONTROLS SHALL BE CONSTRUCTED TO CITY OF AUSTIN STANDARDS.
14. PRIOR TO CONSTRUCTION, EXCEPT DETACHED SINGLE FAMILY ON ANY LOT IN THIS SUBDIVISION, A SITE DEVELOPMENT PERMIT MUST BE OBTAINED FROM THE CITY OF AUSTIN.
15. LANDSCAPE AND OPEN SPACE LOTS SHALL BE OWNED AND MAINTAINED BY THE OWNER OR HIS SUCCESSOR/ASSIGNS.
16. LANDSCAPE AND OPEN SPACE LOTS SHALL BE EXCLUDED FROM DEVELOPMENT EXCEPT FOR ENVIRONMENTAL FEATURES, LANDSCAPING, SIGNAGE AND TRAILS. CONSTRUCTION WITHIN CRITICAL ENVIRONMENTAL FEATURE SETBACKS IS LIMITED TO CONSTRUCTION ALLOWED BY LDC 25-8-281 AND 25-8-282.
17. WATER QUALITY CONTROLS ARE REQUIRED FOR ALL DEVELOPMENT WITH IMPERVIOUS COVER IN EXCESS OF 20% OF THE NET SITE AREA, PURSUANT TO LDC SECTION 25-8-211.
18. THIS PLAT INCLUDES 1.486 ACRES OF PRIVATE OPEN SPACE LAND AS DESCRIBED IN THE ROBINSON RANCH ANNEXATION AND DEVELOPMENT AGREEMENT, COMPRISED OF LOTS 1 AND 5, BLOCK A.
19. ALL OF LOT 1, A PORTION OF LOT 4 AND ALL OF LOT 5 ARE WITHIN THE LIMITED PURPOSE CITY LIMITS OF THE CITY OF AUSTIN SHALL BE DEVELOPED IN ACCORDANCE WITH THE ROBINSON RANCH DEVELOPMENT AGREEMENT.
20. THIS PLAT IS SUBJECT TO THE CITY OF AUSTIN'S VOID AND WATER FLOW MITIGATION RULES.
21. PUBLIC SIDEWALKS ARE REQUIRED ALONG SH 45W AS SHOWN BY A DOTTED LINE ON THE FACE OF THE PLAT. THE SIDEWALKS ALONG SH45 ARE SUBJECT TO THE APPROVAL OF TXDOT AT THE SITE PLAN PHASE, THE REQUIRED SIDEWALKS SHALL BE IN PLACE PRIOR TO THE LOT BEING OCCUPIED. FAILURE TO CONSTRUCT THE REQUIRED SIDEWALKS MAY RESULT IN THE WITHHOLDING OF CERTIFICATES OF OCCUPANCY, BUILDING PERMITS, OR UTILITY CONNECTIONS BY THE GOVERNING BODY OR UTILITY COMPANY. LDC, 25-6-351.
22. ALL ACTIVITIES WITHIN THE CEF BUFFER 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; AND WASTEWATER DISPOSAL OR IRRIGATION IS PROHIBITED.
23. ACCESS TO LOTS 1 AND 5 SHALL BE FROM CROSSROADS DRIVE.
24. This subdivision plat was approved and recorded before the construction and acceptance of streets and other subdivision improvements. Pursuant to the terms of a Subdivision Construction Agreement between the Subdivider and the City of Austin, dated JANUARY 23, 2019, the Subdivider is responsible for the construction of all streets and facilities needed to serve the lots within the subdivision. This responsibility may be assigned in accordance with the terms of that agreement. For the Construction Agreement pertaining to this subdivision, see the separate instrument recorded in Document Number 2019014299, in the Official Public Records of Williamson County, Texas."

OSSF NOTES:

1. THIS TRACT IS LOCATED OVER THE EDWARDS AQUIFER RECHARGE ZONE.
2. NO CONSTRUCTION IN THE SUBDIVISION MAY BEGIN UNTIL THE TEXAS COMMISSION ON ENVIRONMENTAL QUALITY (TCEQ) HAS APPROVED THE WATER POLLUTION ABATEMENT PLAN (WPAP) IN WRITING.
3. ON SITE SEWAGE FACILITIES MUST BE DESIGNED BY A REGISTERED PROFESSIONAL ENGINEER OR REGISTERED SANITARIAN.
4. WATER SERVICE FOR THIS SUBDIVISION WILL BE PROVIDED BY ON-SITE WATER WELLS.
5. SEWER SERVICE FOR THIS SUBDIVISION WILL BE PROVIDED BY ON-SITE SEWAGE FACILITIES.
6. PROPOSED WELLS MUST BE LOCATED 50' FROM THE PROPERTY LINE.
7. NO DEVELOPMENT REQUIRING AN OSSF MAY OCCUR ON LOT 1 OR LOT 5, BLOCK A.
8. SETBACKS FROM WATER WELL SHALL BE PER CONSTRUCTED WELL LOCATION. WELL LOCATIONS SHOWN ON THIS PLAT MAY BE REVISED WITH PERMITTING OF EACH INDIVIDUAL LOT.

BASED UPON THE ABOVE REPRESENTATIONS OF THE ENGINEER OF SURVEYOR WHOSE SEAL IS AFFIXED HERETO, AND AFTER A REVIEW OF THE SURVEY AS REPRESENTED BY THE SAID ENGINEER OR SURVEYOR, I FIND THAT THIS BLUE LINE (SURVEY) COMPLIES WITH THE REQUIREMENTS OF EDWARDS AQUIFER REGULATIONS FOR WILLIAMSON COUNTY AND WILLIAMSON COUNTY ON-SITE SEWAGE FACILITY REGULATIONS. THIS CERTIFICATION IS MADE SOLELY UPON SUCH REPRESENTATION AND SHOULD NOT BE RELIED UPON FOR VERIFICATIONS OF THE FACTS ALLEGED. THE WILLIAMSON COUNTY ENGINEER'S OFFICE AND WILLIAMSON COUNTY DISCLAIM ANY RESPONSIBILITY TO ANY MEMBER OF THE PUBLIC FOR INDEPENDENT VERIFICATION OF THE REPRESENTATIONS, FACTUAL OR OTHERWISE, CONTAINED IN THIS BLUE LINE (SURVEY) AND THE DOCUMENTS ASSOCIATED WITH IT.

J. TERRON EVERTSON, PE, DR, CFM
COUNTY ENGINEER

12/5/18
DATE

THIS SUBDIVISION PLAT IS LOCATED WITHIN THE 2-MILE EXTRA TERRITORIAL JURISDICTION AND THE LIMITED PURPOSE JURISDICTION OF THE CITY OF AUSTIN ON THIS THE 8 DAY OF February, 2019.

APPROVED AND AUTHORIZED FOR RECORD BY THE DIRECTOR, DEVELOPMENT SERVICES DEPARTMENT, CITY OF AUSTIN, COUNTY OF TRAVIS,

THIS THE 8 DAY OF February, 2019 AD.

Cesar Zavala For
CESAR ZAVALA FOR J. RODNEY GONZALES, DIRECTOR
DEVELOPMENT SERVICES DEPARTMENT

ACCEPTED AND AUTHORIZED FOR RECORD BY THE ZONING AND PLATTING COMMISSION OF THE CITY OF AUSTIN, TEXAS, THIS THE 18 DAY OF December, 2018.

JOLENE KIOLBASSA, CHAIR

ANA AQUIRRE, SECRETARY

STATE OF TEXAS
COUNTY OF WILLIAMSON

I, NANCY RISTER, CLERK OF THE COUNTY COURT OF SAID COUNTY, DO HEREBY CERTIFY THAT THE FOREGOING INSTRUMENT OF WRITING, WITH ITS CERTIFICATE OF AUTHENTICATION, WAS FILED FOR RECORD IN MY OFFICE ON THE 6th DAY OF MARCH, A.D. 2019, AT 10:25 O'CLOCK, A. M., AND DULY RECORDED THIS THE 6th DAY OF MARCH 2019, AD, AT 10:37 O'CLOCK A. M., IN THE OFFICIAL PUBLIC RECORDS OF SAID COUNTY; IN INSTRUMENT NO. 2019018154. TO CERTIFY WHICH, WITNESS MY HAND AND SEAL AT THE COUNTY COURT OF SAID COUNTY, AT MY OFFICE IN GEORGETOWN, TEXAS, THE LAST DATE SHOWN ABOVE WRITTEN.

NANCY E. RISTER, CLERK OF THE COUNTY COURT
OF WILLIAMSON COUNTY, TEXAS

BY: Brenda McKenzie, DEPUTY
Brenda McKenzie

COUNTY COURT
WILLIAMSON COUNTY, TEXAS

C8-2017-0241.1A

Chaparral
Professional Land Surveying, Inc.
Surveying and Mapping
3500 McCall Lane
Austin, Texas 78744
512-443-1724
Firm No. 10124500

PROJECT NO.: 987-002
DRAWING NO.: 987-002-PL2
PLOT DATE: 10/09/18
PLOT SCALE: 1" = 100'
DRAWN BY: JBE BBP EBD
SHEET 3 OF 3

Henderson Professional Engineers
600 ROUND ROCK WEST DRIVE, SUITE 604
ROUND ROCK, TX 78681
512.350.6228
PELS FIRM #F-22208
HPE Civil Engineering
www.hendersonpe.com
WBE210166 | HUB 1853873845300

No.	REVISION
1	
2	
3	
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5	

SITE DEVELOPMENT PLANS TO SERVE
NORTH AUSTIN CROSSROADS COMMUNITY CHURCH
15800 CROSSROADS DRIVE
AUSTIN, TEXAS 78681
FINAL PLAT

STATE OF TEXAS
JENNIFER L. HENDERSON
116883
LICENSED
PROFESSIONAL ENGINEER
02/08/2023

PROJECT NO. 200107	02/08/2023	DRAWN BY: JS	CHECKED BY: AR	APPROVED BY: JH

08 OF 54

CITY OF AUSTIN
APPROVED
Date 08/03/2023
FOUNDED 1839

Plotted by: Adam, Plot date: 08/02/2023
File name: h:\02 projects\2020\200107 crossroads community church\07 Sheet\SD\200107 PLAT.dwg

CITY PROJECT NUMBER SP-2020-0328D

APPENDIX P-1 - EROSION CONTROL NOTES

1. THE CONTRACTOR SHALL INSTALL EROSION/SEDIMENTATION CONTROLS, TREE/NATURAL AREA PROTECTIVE FENCING, AND CONDUCT "PRE-CONSTRUCTION" TREE FERTILIZATION (IF APPLICABLE) PRIOR TO ANY SITE PREPARATION WORK (CLEARING, GRUBBING OR EXCAVATION).
2. THE PLACEMENT OF EROSION/SEDIMENTATION CONTROLS SHALL BE IN ACCORDANCE WITH THE ENVIRONMENTAL CRITERIA MANUAL AND THE APPROVED EROSION AND SEDIMENTATION CONTROL PLAN. THE COA ESC PLAN SHALL BE CONSULTED AND USED AS THE BASIS FOR A TPDES REQUIRED SWPPP. IF A SWPPP IS REQUIRED, IT SHALL BE AVAILABLE FOR REVIEW BY THE CITY OF AUSTIN ENVIRONMENTAL INSPECTOR AT ALL TIMES DURING CONSTRUCTION, INCLUDING AT THE PRE-CONSTRUCTION MEETING. THE CHECKLIST BELOW CONTAINS THE BASIC ELEMENTS THAT SHALL BE REVIEWED FOR PERMIT APPROVAL BY COA EV PLAN REVIEWERS AS WELL AS COA EV INSPECTORS.

— PLAN SHEETS SUBMITTED TO THE CITY OF AUSTIN MUST SHOW THE FOLLOWING:

DIRECTION OF FLOW DURING GRADING OPERATIONS.

LOCATION, DESCRIPTION, AND CALCULATIONS FOR OFF-SITE FLOW DIVERSION STRUCTURES.

AREAS THAT WILL NOT BE DISTURBED; NATURAL FEATURES TO BE PRESERVED.

DELINEATION OF CONTRIBUTING DRAINAGE AREA TO EACH PROPOSED BMP (E.G., SILT FENCE, SEDIMENT BASIN, ETC.).

LOCATION AND TYPE OF E&S BMPS FOR EACH PHASE OF DISTURBANCE.

CALCULATIONS FOR BMPS AS REQUIRED.

LOCATION AND DESCRIPTION OF TEMPORARY STABILIZATION MEASURES.

LOCATION OF ON-SITE SPOILS, DESCRIPTION OF HANDLING AND DISPOSAL OF BORROW MATERIALS, AND DESCRIPTION OF ON-SITE PERMANENT SPOILS DISPOSAL AREAS, INCLUDING SIZE, DEPTH OF FILL AND REVEGETATION PROCEDURES.

DESCRIBE SEQUENCE OF CONSTRUCTION AS IT PERTAINS TO ESC INCLUDING THE FOLLOWING ELEMENTS:

1. INSTALLATION SEQUENCE OF CONTROLS (E.G. PERIMETER CONTROLS, THEN SEDIMENT BASINS, THEN TEMPORARY STABILIZATION, THEN PERMANENT, ETC.)
2. PROJECT PHASING IF REQUIRED (LOC GREATER THAN 25 ACRES)
3. SEQUENCE OF GRADING OPERATIONS AND NOTATION OF TEMPORARY STABILIZATION MEASURES TO BE USED
4. SCHEDULE FOR CONVERTING TEMPORARY BASINS TO PERMANENT WQ CONTROLS
5. SCHEDULE FOR REMOVAL OF TEMPORARY CONTROLS
6. ANTICIPATED MAINTENANCE SCHEDULE FOR TEMPORARY CONTROLS

— CATEGORIZE EACH BMP UNDER ONE OF THE FOLLOWING AREAS OF BMP ACTIVITY AS DESCRIBED BELOW:

3.1 MINIMIZE DISTURBED AREA AND PROTECT NATURAL FEATURES AND SOIL

3.2 CONTROL STORMWATER FLOWING ONTO AND THROUGH THE PROJECT

3.3 STABILIZE SOILS

3.4 PROTECT SLOPES

3.5 PROTECT STORM DRAIN INLETS

3.6 ESTABLISH PERIMETER CONTROLS AND SEDIMENT BARRIERS

3.7 RETAIN SEDIMENT ON-SITE AND CONTROL DEWATERING PRACTICES

3.8 ESTABLISH STABILIZED CONSTRUCTION EXITS

3.9 ANY ADDITIONAL BMPS

— NOTE THE LOCATION OF EACH BMP ON YOUR SITE MAP(S).

— FOR ANY STRUCTURAL BMPS, YOU SHOULD PROVIDE DESIGN SPECIFICATIONS AND DETAILS AND REFER TO THEM.

— FOR MORE INFORMATION, SEE CITY OF AUSTIN ENVIRONMENTAL CRITERIA MANUAL 1.4.

3. THE PLACEMENT OF TREE/NATURAL AREA PROTECTIVE FENCING SHALL BE IN ACCORDANCE WITH THE CITY OF AUSTIN STANDARD NOTES FOR TREE AND NATURAL AREA PROTECTION AND THE APPROVED GRADING/TREE AND NATURAL AREA PLAN.
4. A PRE-CONSTRUCTION CONFERENCE SHALL BE HELD ON-SITE WITH THE CONTRACTOR, DESIGN ENGINEER/PERMIT APPLICANT AND ENVIRONMENTAL INSPECTOR AFTER INSTALLATION OF THE EROSION/SEDIMENTATION CONTROLS, TREE/NATURAL AREA PROTECTION MEASURES AND "PRE-CONSTRUCTION" TREE FERTILIZATION (IF APPLICABLE) PRIOR TO BEGINNING ANY SITE PREPARATION WORK. THE OWNER OR OWNER'S REPRESENTATIVE SHALL NOTIFY THE DEVELOPMENT SERVICES DEPARTMENT, 512-974-2278 OR BY EMAIL AT ENVIRONMENTAL.INSPECTIONS@AUSTINTEXAS.GOV, AT LEAST THREE DAYS PRIOR TO THE MEETING DATE. COA APPROVED ESC PLAN AND TPDES SWPPP (IF REQUIRED) SHOULD BE REVIEWED BY COA EV INSPECTOR AT THIS TIME.
5. ANY MAJOR VARIATION IN MATERIALS OR LOCATIONS OF CONTROLS OR FENCES FROM THOSE SHOWN ON THE APPROVED PLANS WILL REQUIRE A REVISION AND MUST BE APPROVED BY THE REVIEWING ENGINEER, ENVIRONMENTAL SPECIALIST OR CITY ARBORIST AS APPROPRIATE. MAJOR REVISIONS MUST BE APPROVED BY AUTHORIZED COA STAFF. MINOR CHANGES TO BE MADE AS FIELD REVISIONS TO THE EROSION AND SEDIMENTATION CONTROL PLAN MAY BE REQUIRED BY THE ENVIRONMENTAL INSPECTOR DURING THE COURSE OF CONSTRUCTION TO CORRECT CONTROL INADEQUACIES.
6. THE CONTRACTOR IS REQUIRED TO PROVIDE A CERTIFIED INSPECTOR THAT IS EITHER A LICENSED ENGINEER (OR PERSON DIRECTLY SUPERVISED BY THE LICENSED ENGINEER) OR CERTIFIED PROFESSIONAL IN EROSION AND SEDIMENT CONTROL (CPESC OR CPESC - IT), CERTIFIED EROSION, SEDIMENT AND STORMWATER - INSPECTOR (CESSWI OR CESSWI - IT) OR CERTIFIED INSPECTOR OF SEDIMENTATION AND EROSION CONTROLS (CISEC OR CISEC - IT) CERTIFICATION TO INSPECT THE CONTROLS AND FENCES AT WEEKLY OR BI-WEEKLY INTERVALS AND AFTER ONE-HALF (½) INCH OR GREATER RAINFALL EVENTS TO INSURE THAT THEY ARE FUNCTIONING PROPERLY. THE PERSON(S) RESPONSIBLE FOR MAINTENANCE OF CONTROLS AND FENCES SHALL IMMEDIATELY MAKE ANY NECESSARY REPAIRS TO DAMAGED AREAS. SILT ACCUMULATION AT CONTROLS MUST BE REMOVED WHEN THE DEPTH REACHES SIX (6) INCHES OR ONE-THIRD (⅓) OF THE INSTALLED HEIGHT OF THE CONTROL WHICHEVER IS LESS.
7. PRIOR TO FINAL ACCEPTANCE BY THE CITY, HAUL ROADS AND WATERWAY CROSSINGS CONSTRUCTED FOR TEMPORARY CONTRACTOR ACCESS MUST BE REMOVED, ACCUMULATED SEDIMENT REMOVED FROM THE WATERWAY AND THE AREA RESTORED TO THE ORIGINAL GRADE AND REVEGETATED. ALL LAND CLEARING DEBRIS SHALL BE DISPOSED OF IN APPROVED SPOIL DISPOSAL SITES.
8. ALL WORK MUST STOP IF A VOID IN THE ROCK SUBSTRATE IS DISCOVERED WHICH IS; ONE SQUARE FOOT IN TOTAL AREA; BLOWS AIR FROM WITHIN THE SUBSTRATE AND/OR CONSISTENTLY RECEIVES WATER DURING ANY RAIN EVENT. AT THIS TIME IT IS THE RESPONSIBILITY OF THE PROJECT MANAGER TO IMMEDIATELY CONTACT A CITY OF AUSTIN ENVIRONMENTAL INSPECTOR FOR FURTHER INVESTIGATION.
9. TEMPORARY AND PERMANENT EROSION CONTROL: ALL DISTURBED AREAS SHALL BE RESTORED AS NOTED BELOW:

9.1. ALL DISTURBED AREAS TO BE REVEGETATED ARE REQUIRED TO PLACE A MINIMUM OF SIX (6) INCHES OF TOPSOIL [SEE STANDARD SPECIFICATION ITEM NO. 601S.3(A)]. DO NOT ADD TOPSOIL WITHIN THE CRITICAL ROOT ZONE OF EXISTING TREES.

- TOPSOIL SALVAGED FROM THE EXISTING SITE IS ENCOURAGED FOR USE, BUT IT SHOULD MEET THE STANDARDS SET FORTH IN 601S.

AN OWNER/ENGINEER MAY PROPOSE USE OF ONSITE SALVAGED TOPSOIL WHICH DOES NOT MEET THE CRITERIA OF STANDARD SPECIFICATION 601S BY PROVIDING A SOIL ANALYSIS AND A WRITTEN STATEMENT FROM A QUALIFIED PROFESSIONAL IN SOILS, LANDSCAPE ARCHITECTURE, OR AGRONOMY INDICATING THE ONSITE TOPSOIL WILL PROVIDE AN EQUIVALENT GROWTH MEDIA AND SPECIFYING WHAT, IF ANY, SOIL AMENDMENTS ARE REQUIRED.

- SOIL AMENDMENTS SHALL BE WORKED INTO THE EXISTING ONSITE TOPSOIL WITH A DISC OR TILLER TO CREATE A WELL-BLENDED MATERIAL.

THE VEGETATIVE STABILIZATION OF AREAS DISTURBED BY CONSTRUCTION SHALL BE AS FOLLOWS:

TEMPORARY VEGETATIVE STABILIZATION:

1. FROM SEPTEMBER 15 TO MARCH 1, SEEDING SHALL BE WITH OR INCLUDE A COOL SEASON COVER CROP: (WESTERN WHEATGRASS (PASCOPYRUM SMITHII) AT 5.6 POUNDS PER ACRE, OATS (AVENA SATIVA) AT 4.0 POUNDS PER ACRE, CEREAL RYE GRAIN (SECALE CEREALE) AT 45 POUNDS PER ACRE. CONTRACTOR MUST ENSURE THAT ANY SEED APPLICATION REQUIRING A COOL SEASON COVER CROP DOES NOT UTILIZE ANNUAL RYEGRASS (LOLIUM MULTIFLORUM) OR PERENNIAL RYEGRASS (LOLIUM PERENNE). COOL SEASON COVER CROPS ARE NOT PERMANENT EROSION CONTROL.
2. FROM MARCH 2 TO SEPTEMBER 14, SEEDING SHALL BE WITH HULLED BERMUDA AT A RATE OF 45 POUNDS PER ACRE OR A NATIVE PLANT SEED MIX CONFORMING TO ITEM 604S OR 609S.
   A. FERTILIZER SHALL BE APPLIED ONLY IF WARRANTED BY A SOIL TEST AND SHALL CONFORM TO ITEM NO. 606S, FERTILIZER. FERTILIZATION SHOULD NOT OCCUR WHEN RAINFALL IS EXPECTED OR DURING SLOW PLANT GROWTH OR DORMANCY. CHEMICAL FERTILIZER MAY NOT BE APPLIED IN THE CRITICAL WATER QUALITY ZONE.
   B. HYDROMULCH SHALL COMPLY WITH TABLE 1, BELOW.
   C. TEMPORARY EROSION CONTROL SHALL BE ACCEPTABLE WHEN THE GRASS HAS GROWN AT LEAST 1½ INCHES HIGH WITH A MINIMUM OF 95% TOTAL COVERAGE SO THAT ALL AREAS OF A SITE THAT RELY ON VEGETATION FOR TEMPORARY STABILIZATION ARE UNIFORMLY VEGETATED, AND PROVIDED THERE ARE NO BARE SPOTS LARGER THAN 10 SQUARE FEET.
   D. WHEN REQUIRED, NATIVE PLANT SEEDING SHALL COMPLY WITH REQUIREMENTS OF THE CITY OF AUSTIN ENVIRONMENTAL CRITERIA MANUAL, AND STANDARD SPECIFICATION 604S OR 609S.

TABLE 1: HYDROMULCHING FOR TEMPORARY VEGETATIVE STABILIZATION

MATERIAL	DESCRIPTION	LONGEVITY	TYPICAL APPLICATIONS	APPLICATION RATES
100% OR ANY BLEND OF WOOD, CELLULOSE, STRAW, AND/OR COTTON PLANT MATERIAL (EXCEPT NO MULCH SHALL EXCEED 30% PAPER)	70% OR GREATER WOOD/STRAW 30% OR LESS PAPER OR NATURAL FIBERS	0-3 MONTHS	MODERATE SLOPES; FROM FLAT TO 3:1	1,500 TO 2,000 LBS PER ACRE

TEMPORARY VEGETATIVE STABILIZATION:

1. FROM SEPTEMBER 15 TO MARCH 1, SEEDING IS CONSIDERED TO BE TEMPORARY STABILIZATION ONLY. IF COOL SEASON COVER CROPS EXIST WHERE PERMANENT VEGETATIVE STABILIZATION IS DESIRED, THE GRASSES SHALL BE MOWED TO A HEIGHT OF LESS THAN ONE-HALF (½) INCH AND THE AREA SHALL BE RE-SEEDED IN ACCORDANCE WITH TABLE 2 BELOW. ALTERNATIVELY, THE COOL SEASON COVER CROP CAN BE MIXED WITH BERMUDAGRASS OR NATIVE SEED AND INSTALLED TOGETHER, UNDERSTANDING THAT GERMINATION OF WARM-SEASON SEED TYPICALLY REQUIRES SOIL TEMPERATURES OF 60 TO 70 DEGREES.
2. FROM MARCH 2 TO SEPTEMBER 14, SEEDING SHALL BE WITH HULLED BERMUDA AT A RATE OF 45 POUNDS PER ACRE WITH A PURITY OF 95% AND A MINIMUM PURE LIVE SEED (PLS) OF 0.83. BERMUDA GRASS IS A WARM SEASON GRASS AND IS CONSIDERED PERMANENT EROSION CONTROL. PERMANENT VEGETATIVE STABILIZATION CAN ALSO BE ACCOMPLISHED WITH A NATIVE PLANT SEED MIX CONFORMING TO ITEM 604S OR 609S.
   A. FERTILIZER USE SHALL FOLLOW THE RECOMMENDATION OF A SOIL TEST. SEE ITEM 606S, FERTILIZER. APPLICATIONS OF FERTILIZER (AND PESTICIDE) ON CITY-OWNED AND MANAGED PROPERTY REQUIRES THE YEARLY SUBMITTAL OF A PESTICIDE AND FERTILIZER APPLICATION RECORD, ALONG WITH A CURRENT COPY OF THE APPLICATOR'S LICENSE. FOR CURRENT COPY OF THE RECORD TEMPLATE CONTACT THE CITY OF AUSTIN'S IPM COORDINATOR.
   B. HYDROMULCH SHALL COMPLY WITH TABLE 2, BELOW.
   C. WATER THE SEEDED AREAS IMMEDIATELY AFTER INSTALLATION TO ACHIEVE GERMINATION AND A HEALTHY STAND OF PLANTS THAT CAN ULTIMATELY SURVIVE WITHOUT SUPPLEMENTAL WATER. APPLY THE WATER UNIFORMLY TO THE PLANTED AREAS WITHOUT CAUSING DISPLACEMENT OR EROSION OF THE MATERIALS OR SOIL. MAINTAIN THE SEEDBED IN A MOIST CONDITION FAVORABLE FOR PLANT GROWTH. ALL WATERING SHALL COMPLY WITH CITY CODE CHAPTER 6-4 (WATER CONSERVATION), AT RATES AND FREQUENCIES DETERMINED BY A LICENSED IRRIGATOR OR OTHER QUALIFIED PROFESSIONAL, AND AS ALLOWED BY THE AUSTIN WATER UTILITY AND CURRENT WATER RESTRICTIONS AND WATER CONSERVATION INITIATIVES.
   D. PERMANENT EROSION CONTROL SHALL BE ACCEPTABLE WHEN THE GRASS HAS GROWN AT LEAST 1½ INCHES HIGH WITH A MINIMUM OF 95 PERCENT FOR THE NON-NATIVE MIX, AND 95 PERCENT COVERAGE FOR THE NATIVE MIX SO THAT ALL AREAS OF A SITE THAT RELY ON VEGETATION FOR STABILITY MUST BE UNIFORMLY VEGETATED, AND PROVIDED THERE ARE NO BARE SPOTS LARGER THAN 10 SQUARE FEET.
   E. WHEN REQUIRED, NATIVE PLANT SEEDING SHALL COMPLY WITH REQUIREMENTS OF THE CITY OF AUSTIN ENVIRONMENTAL CRITERIA MANUAL, ITEMS 604S AND 609S.

SAM BASS FIRE DEPT.
REVIEWED
Plans must be on site for
review at time of inspection
mselby
02/15/2023 1:37:33 PM

TABLE 2: HYDROMULCHING FOR PERMANENT VEGETATIVE STABILIZATION

MATERIAL	DESCRIPTION	LONGEVITY	TYPICAL APPLICATIONS	APPLICATION RATES
BONDED FIBER MATRIX (BFM)	80% ORGANIC DEFIBRATED FIBERS			
10% TACKIFIER	6 MONTHS	ON SLOPES UP TO 2:1 AND EROSIVE SOIL CONDITIONS	2,500 TO 4,000 LBS PER ACRE (SEE MANUFACTURERS RECOMMENDATIONS)	
FIBER REINFORCED MATRIX (FRM)	65% ORGANIC DEFIBRATED FIBERS 25% REINFORCING FIBERS OR LESS 10% TACKIFIER	UP TO 12 MONTHS	ON SLOPES UP TO 1:1 AND EROSIVE SOIL CONDITIONS	3,000 TO 4,500 LBS PER ACRE (SEE MANUFACTURERS RECOMMENDATIONS)

10. DEVELOPER INFORMATION:

OWNER: NORTH AUSTIN CROSSROADS COMMUNITY CHURCH
PHONE #: 863-640-1486
ADDRESS: 421 W. PARMER LANE, BLDG. 1, SUITE 250
AUSTIN, TEXAS 78727

OWNER'S REPRESENTATIVE RESPONSIBLE FOR PLAN ALTERATIONS:
JEN HENDERSON, P.E., PRESIDENT, HENDERSON PROFESSIONAL ENGINEERS
PHONE #: 512-350-6228

PERSON OR FIRM RESPONSIBLE FOR EROSION/SEDIMENTATION CONTROL MAINTENANCE:
____
PHONE #: ___-___-____

PERSON OR FIRM RESPONSIBLE FOR TREE/NATURAL AREA PROTECTION MAINTENANCE:
____
PHONE #: ___-___-____

11. THE CONTRACTOR SHALL NOT DISPOSE OF SURPLUS EXCAVATED MATERIAL FROM THE SITE WITHOUT NOTIFYING THE DEVELOPMENT SERVICES DEPARTMENT AT 512-974-2278 AT LEAST 48 HOURS PRIOR WITH THE LOCATION AND A COPY OF THE PERMIT ISSUED TO RECEIVE THE MATERIAL.

APPENDIX P-2 - CITY OF AUSTIN STANDARD NOTES FOR TREE AND NATURAL AREA PROTECTION

1. ALL TREES AND NATURAL AREAS SHOWN ON PLAN TO BE PRESERVED SHALL BE PROTECTED DURING CONSTRUCTION WITH TEMPORARY FENCING.
2. PROTECTIVE FENCES SHALL BE ERECTED ACCORDING TO CITY OF AUSTIN STANDARDS FOR TREE PROTECTION.
3. PROTECTIVE FENCES SHALL BE INSTALLED PRIOR TO THE START OF ANY SITE PREPARATION WORK (CLEARING, GRUBBING OR GRADING), AND SHALL BE MAINTAINED THROUGHOUT ALL PHASES OF THE CONSTRUCTION PROJECT.
4. EROSION AND SEDIMENTATION CONTROL BARRIERS SHALL BE INSTALLED OR MAINTAINED IN A MANNER WHICH DOES NOT RESULT IN SOIL BUILD-UP WITHIN TREE DRIP LINES.
5. PROTECTIVE FENCES SHALL SURROUND THE TREES OR GROUP OF TREES, AND WILL BE LOCATED AT THE OUTERMOST LIMIT OF BRANCHES (DRIP LINE) , FOR NATURAL AREAS, PROTECTIVE FENCES SHALL FOLLOW THE LIMIT OF CONSTRUCTION LINE, IN ORDER TO PREVENT THE FOLLOWING:
   A. SOIL COMPACTION IN THE ROOT ZONE AREA RESULTING FROM VEHICULAR TRAFFIC OR STORAGE OF EQUIPMENT OR MATERIALS;
   B. ROOT ZONE DISTURBANCES DUE TO GRADE CHANGES (GREATER THAN 6 INCHES CUT OR FILL), OR TRENCHING NOT REVIEWED AND AUTHORIZED BY THE CITY ABORIST;
   C. WOUNDS TO EXPOSED ROOTS, TRUNK OR LIMBS BY MECHANICAL EQUIPMENT;
   D. OTHER ACTIVITIES DETRIMENTAL TO TREES SUCH AS CHEMICAL STORAGE, CEMENT TRUCK CLEANING, AND FIRES.
6. EXCEPTIONS TO INSTALLING FENCES AT TREE DRIP LINES MAY BE PERMITTED IN THE FOLLOWING CASES:
   A. WHERE THERE IS TO BE AN APPROVED GRADE CHANGE, IMPERMEABLE PAVING SURFACE, TREE WELL, OR OTHER SUCH SITE DEVELOPMENT, ERECT THE FENCE APPROXIMATELY 2 TO 4 FEET BEYOND THE AREA DISTURBED;
   B. WHERE PERMEABLE PAVING IS TO BE INSTALLED WITHIN A TREE'S DRIP LINE, ERECT THE FENCE AT THE OUTER LIMITS OF THE PERMEABLE PAVING AREA (PRIOR TO SITE GRADING SO THAT THIS AREA IS GRADED SEPARATELY PRIOR TO PAVING INSTALLATION TO MINIMIZED ROOT DAMAGE);
   C. WHERE TREES ARE CLOSE TO PROPOSED BUILDINGS, ERECT THE FENCE TO ALLOW 6 TO 10 FEET OF WORK SPACE BETWEEN THE FENCE AND THE BUILDING;
   D. WHERE THERE ARE SEVERE SPACE CONSTRAINTS DUE TO TRACT SIZE, OR OTHER SPECIAL REQUIREMENTS, CONTACT THE CITY ARBORIST AT 974-1876 TO DISCUSS ALTERNATIVES.

   SPECIAL NOTE: FOR THE PROTECTION OF NATURAL AREAS, NO EXCEPTIONS TO INSTALLING FENCES AT THE LIMIT OF CONSTRUCTION LINE WILL BE PERMITTED.
7. WHERE ANY OF THE ABOVE EXCEPTIONS RESULT IN A FENCE BEING CLOSER THAN 4 FEET TO A TREE TRUNK, PROTECT THE TRUNK WITH STRAPPED-ON PLANKING TO A HEIGHT OF 8 FT (OR TO THE LIMITS OF LOWER BRANCHING) IN ADDITION TO THE REDUCED FENCING PROVIDED.
8. TREES APPROVED FOR REMOVAL SHALL BE REMOVED IN A MANNER WHICH DOES NOT IMPACT TREES TO BE PRESERVED.
9. ANY ROOTS EXPOSED BY CONSTRUCTION ACTIVITY SHALL BE PRUNED FLUSH WITH THE SOIL. BACKFILL ROOT AREAS WITH GOOD QUALITY TOP SOIL AS SOON AS POSSIBLE. IF EXPOSED ROOT AREAS ARE NOT BACKFILLED WITHIN 2 DAYS, COVER THEM WITH ORGANIC MATERIAL IN A MANNER WHICH REDUCES SOIL TEMPERATURE AND MINIMIZES WATER LOSS DUE TO EVAPORATION.
10. ANY TRENCHING REQUIRED FOR THE INSTALLATION OF LANDSCAPE IRRIGATION SHALL BE PLACED AS FAR FROM EXISTING TREE TRUNKS AS POSSIBLE.
11. NO LANDSCAPE TOPSOIL DRESSING GREATER THAN 4 INCHES SHALL BE PERMITTED WITHIN THE DRIP LINE OF TREES. NO SOIL IS PERMITTED ON THE ROOT FLARE OF ANY TREE.
12. PRUNING TO PROVIDE CLEARANCE FOR STRUCTURES, VEHICULAR TRAFFIC AND EQUIPMENT SHALL TAKE PLACE BEFORE DAMAGE OCCURS (RIPPING OF BRANCHES, ETC.).
13. ALL FINISHED PRUNING SHALL BE DONE ACCORDING TO RECOGNIZED, APPROVED STANDARDS OF THE INDUSTRY (REFERENCE THE NATIONAL ARBORIST ASSOCIATION PRUNING STANDARDS FOR SHADE TREES AVAILABLE ON REQUEST FROM THE CITY ARBORIST).
14. DEVIATIONS FROM THE ABOVE NOTES MAY BE CONSIDERED ORDINANCE VIOLATIONS IF THERE IS SUBSTANTIAL NON-COMPLIANCE OR IF A TREE SUSTAINS DAMAGE AS A RESULT.

ORDINANCE REQUIREMENTS

1. ALL IMPROVEMENTS SHALL BE MADE IN ACCORDANCE WITH THE RELEASED SITE PLAN. ANY ADDITIONAL IMPROVEMENTS WILL REQUIRE A SITE PLAN AMENDMENT AND APPROVAL FROM THE DEVELOPMENT SERVICES DEPARTMENT.
2. APPROVAL OF THIS SITE PLAN DOES NOT INCLUDE BUILDING CODE APPROVAL; FIRE CODE APPROVAL; OR BUILDING, DEMOLITION, OR RELOCATION PERMITS APPROVAL. A CITY DEMOLITION OR RELOCATION PERMIT CAN ONLY BE ISSUED ONCE THE HISTORIC REVIEW PROCESS IS COMPLETED.
3. ALL SIGNS MUST COMPLY WITH THE REQUIREMENTS OF THE CITY OF AUSTIN LAND DEVELOPMENT CODE.
4. THE OWNER IS RESPONSIBLE FOR ALL COSTS OF RELOCATION OF, OR DAMAGE TO, UTILITIES.
5. ADDITIONAL ELECTRIC EASEMENTS MAY BE REQUIRED AT A LATER DATE.
6. A SITE DEVELOPMENT PERMIT MUST BE ISSUED PRIOR TO AN APPLICATION FOR BUILDING PERMIT FOR NON-CONSOLIDATED OR LAND USE COMMISSION APPROVED SITE PLANS.
7. WATER AND WASTEWATER SERVICE WILL BE PROVIDED BY AN ON-SITE WATER WELL AND AN ON-SITE SEPTIC FACILITY (OSSF).
8. 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.
9. FOR CONSTRUCTION WITHIN THE RIGHT-OF-WAY, A R.O.W. EXCAVATION PERMIT IS REQUIRED.

COMPATABILITY

1. HIGHLY REFLECTIVE MATERIALS WILL NOT BE USED. MATERIALS MAY NOT EXCEED 20% REFLECTIVITY. THIS REQUIREMENT SHALL NOT APPLY TO SOLAR PANELS OR TO COPPER OR PAINTED METAL ROOFS.
2. THE NOISE LEVEL OF MECHANICAL EQUIPMENT WILL NOT EXCEED 70 D.B.A. AT THE PROPERTY LINE ADJACENT TO RESIDENTIAL USES.
3. ALL EXTERIOR LIGHTING SHALL BE HOODED OR SHIELDED FROM THE VIEW OF ADJACENT RESIDENTIAL USES, OR PROPERTY ZONED RESIDENTIAL.
4. EXTERIOR LIGHTING ABOVE THE SECOND FLOOR IS PROHIBITED WHEN ADJACENT TO RESIDENTIAL PROPERTY.
5. 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.

APPENDIX P-4 - STANDARD SEQUENCE OF CONSTRUCTION

1. TEMPORARY EROSION AND SEDIMENTATION CONTROLS ARE TO BE INSTALLED AS INDICATED ON THE APPROVED SITE PLAN OR SUBDIVISION CONSTRUCTION PLAN AND IN ACCORDANCE WITH THE EROSION SEDIMENTATION CONTROL PLAN (ESC) AND STORMWATER POLLUTION PREVENTION PLAN (SWPPP) THAT IS REQUIRED TO BE POSTED ON THE SITE. INSTALL TREE PROTECTION, INITIATE TREE MITIGATION MEASURES AND CONDUCT "PRE - CONSTRUCTION" TREE FERTILIZATION (IF APPLICABLE).
2. THE ENVIRONMENTAL PROJECT MANAGER OR SITE SUPERVISOR MUST CONTACT THE DEVELOPMENT SERVICES DEPARTMENT, ENVIRONMENTAL INSPECTION, AT 512-974-2278, 72 HOURS PRIOR TO THE SCHEDULED DATE OF THE REQUIRED ON-SITE PRECONSTRUCTION MEETING.
3. THE ENVIRONMENTAL PROJECT MANAGER, AND/OR SITE SUPERVISOR, AND/OR DESIGNATED RESPONSIBLE PARTY, AND THE GENERAL CONTRACTOR WILL FOLLOW THE EROSION SEDIMENTATION CONTROL PLAN (ESC) AND STORM WATER POLLUTION PREVENTION PLAN (SWPPP) POSTED ON THE SITE. TEMPORARY EROSION AND SEDIMENTATION CONTROLS WILL BE REVISED, IF NEEDED, TO COMPLY WITH CITY INSPECTORS' DIRECTIVES, AND REVISED CONSTRUCTION SCHEDULE RELATIVE TO THE WATER QUALITY PLAN REQUIREMENTS AND THE EROSION PLAN.
4. ROUGH GRADE THE POND(S) AT 100% PROPOSED CAPACITY. EITHER THE PERMANENT OUTLET STRUCTURE OR A TEMPORARY OUTLET MUST BE CONSTRUCTED PRIOR TO DEVELOPMENT OF EMBANKMENT OR EXCAVATION THAT LEADS TO PONDING CONDITIONS. THE OUTLET SYSTEM MUST CONSIST OF A SUMP PIT OUTLET AND AN EMERGENCY SPILLWAY MEETING THE REQUIREMENTS OF THE DRAINAGE CRITERIA MANUAL AND/OR THE ENVIRONMENTAL CRITERIA MANUAL, AS REQUIRED. THE OUTLET SYSTEM SHALL BE PROTECTED FROM EROSION AND SHALL BE MAINTAINED THROUGHOUT THE COURSE OF CONSTRUCTION UNTIL INSTALLATION OF THE PERMANENT WATER QUALITY POND(S).
5. TEMPORARY EROSION AND SEDIMENTATION CONTROLS WILL BE INSPECTED AND MAINTAINED IN ACCORDANCE WITH THE EROSION SEDIMENTATION CONTROL PLAN (ESC) AND STORM WATER POLLUTION PREVENTION PLAN (SWPPP) POSTED ON THE SITE.
6. BEGIN SITE CLEARING/CONSTRUCTION (OR DEMOLITION) ACTIVITIES.
7. IN THE BARTON SPRINGS ZONE, THE ENVIRONMENTAL PROJECT MANAGER OR SITE SUPERVISOR WILL SCHEDULE A MID-CONSTRUCTION CONFERENCE TO COORDINATE CHANGES IN THE CONSTRUCTION SCHEDULE AND EVALUATE EFFECTIVENESS OF THE EROSION CONTROL PLAN AFTER POSSIBLE CONSTRUCTION ALTERATIONS TO THE SITE. PARTICIPANTS SHALL INCLUDE THE CITY INSPECTOR, PROJECT ENGINEER, GENERAL CONTRACTOR AND ENVIRONMENTAL PROJECT MANAGER OR SITE SUPERVISOR. THE ANTICIPATED COMPLETION DATE AND FINAL CONSTRUCTION SEQUENCE AND INSPECTION SCHEDULE WILL BE COORDINATED WITH THE APPROPRIATE CITY INSPECTOR.
8. PERMANENT WATER QUALITY PONDS OR CONTROLS WILL BE CLEANED OUT AND FILTER MEDIA WILL BE INSTALLED PRIOR TO/CONCURRENTLY WITH REVEGETATION OF SITE.
9. COMPLETE CONSTRUCTION AND START REVEGETATION OF THE SITE AND INSTALLATION OF LANDSCAPING.
10. UPON COMPLETION OF THE SITE CONSTRUCTION AND REVEGETATION OF A PROJECT SITE, THE DESIGN ENGINEER SHALL SUBMIT AN ENGINEER'S LETTER OF CONCURRENCE BEARING THE ENGINEER'S SEAL, SIGNATURE, AND DATE TO THE DEVELOPMENT SERVICES DEPARTMENT INDICATING THAT CONSTRUCTION, INCLUDING REVEGETATION, IS COMPLETE AND IN SUBSTANTIAL COMPLIANCE WITH THE APPROVED PLANS. AFTER RECEIVING THIS LETTER, A FINAL INSPECTION WILL BE SCHEDULED BY THE APPROPRIATE CITY INSPECTOR.
11. UPON COMPLETION OF LANDSCAPE INSTALLATION OF A PROJECT SITE, THE LANDSCAPE ARCHITECT SHALL SUBMIT A LETTER OF CONCURRENCE TO THE DEVELOPMENT SERVICES DEPARTMENT INDICATING THAT THE REQUIRED LANDSCAPING IS COMPLETE AND IN SUBSTANTIAL CONFORMITY WITH THE APPROVED PLANS. AFTER RECEIVING THIS LETTER, A FINAL INSPECTION WILL BE SCHEDULED BY THE APPROPRIATE CITY INSPECTOR.
12. AFTER A FINAL INSPECTION HAS BEEN CONDUCTED BY THE CITY INSPECTOR AND WITH APPROVAL FROM THE CITY INSPECTOR, REMOVE THE TEMPORARY EROSION AND SEDIMENTATION CONTROLS AND COMPLETE ANY NECESSARY FINAL REVEGETATION RESULTING FROM REMOVAL OF THE CONTROLS. CONDUCT ANY MAINTENANCE AND REHABILITATION OF THE WATER QUALITY PONDS OR CONTROLS.

FIRE DEPARTMENT

1. THE AUSTIN AND SAM BASS FIRE DEPARTMENTS REQUIRE ASPHALT OR CONCRETE PAVEMENT PRIOR TO CONSTRUCTION AS AN "ALL-WEATHER DRIVING SURFACE."
2. HYDRANTS MUST BE INSTALLED WITH THE CENTER OF THE FOUR-INCH OPENING AT LEAST 18 INCHES ABOVE FINISHED GRADE. THE FOUR-INCH OPENING MUST FACE THE DRIVEWAY OR STREET WITH THREE- TO SIX-FOOT SETBACKS FROM THE CURBLINE(S). NO OBSTRUCTION IS ALLOWED WITHIN THREE FEET OF ANY HYDRANT AND THE FOUR-INCH OPENING MUST BE TOTALLY UNOBSTRUCTED FROM THE STREET.
3. TIMING OF INSTALLATION: WHEN FIRE PROTECTION FACILITIES ARE INSTALLED BY THE DEVELOPER, SUCH FACILITIES SHALL INCLUDE ALL SURFACE ACCESS ROADS WHICH SHALL BE INSTALLED AND MADE SERVICEABLE PRIOR TO AND DURING THE TIME OF CONSTRUCTION. WHERE ALTERNATIVE METHODS OF PROTECTION, AS APPROVED BY THE FIRE CHIEF, ARE PROVIDED, THE ABOVE MAY BE MODIFIED OR WAIVED.
4. ALL PERVIOUS/DECORATIVE PAVING SHALL BE ENGINEERED AND INSTALLED FOR 80,000 LB. LIVE-VEHICLE LOADS. ANY PERVIOUS/DECORATIVE PAVING WITHIN 100 FEET OF ANY BUILDING MUST BE APPROVED BY THE FIRE DEPARTMENT.
5. COMMERCIAL DUMPSTERS AND CONTAINERS WITH AN INDIVIDUAL CAPACITY OF 1.5 CUBIC YARDS OR GREATER SHALL NOT BE STORED OR PLACED WITHIN TEN FEET OF OPENINGS, COMBUSTIBLE WALLS, OR COMBUSTIBLE EAVE LINES.
6. FIRE LANES DESIGNATED ON SITE PLAN SHALL BE REGISTERED WITH THE SAM BASS FIRE DEPARTMENT'S OFFICE AND INSPECTED FOR FINAL APPROVAL.
7. VERTICAL CLEARANCE REQUIRED FOR FIRE APPARATUS IS 14 FEET FOR FULL WIDTH OF ACCESS DRIVE.

GENERAL CONSTRUCTION NOTES

1. ALL RESPONSIBILITY FOR THE ADEQUACY OF THESE PLANS REMAINS WITH THE ENGINEER WHO PREPARED THEM. IN REVIEWING THESE PLANS, THE CITY OF AUSTIN AND SAM BASS FIRE DEPARTMENT MUST RELY ON THE ADEQUACY OF THE WORK OF THE DESIGN ENGINEER.
2. CONTRACTOR SHALL CALL TEXAS 811 (811 OR 1-800-344-8377) FOR UTILITY LOCATIONS PRIOR TO ANY WORK IN CITY EASEMENTS OR STREET R.O.W.
3. CONTRACTOR SHALL NOTIFY THE CITY OF AUSTIN – SITE & SUBDIVISION DIVISION AND SAM BASS FIRE DEPARTMENT TO SUBMIT REQUIRED DOCUMENTATION, PAY CONSTRUCTION INSPECTION FEES, AND TO SCHEDULE THE REQUIRED SITE AND SUBDIVISION PRE-CONSTRUCTION MEETING. THIS MEETING MUST BE HELD PRIOR TO ANY CONSTRUCTION ACTIVITIES WITHIN THE R.O.W. OR PUBLIC EASEMENTS. PLEASE VISIT HTTP://AUSTINTEXAS.GOV/PAGE/COMMERCIAL-SITE-AND-SUBDIVISION-INSPECTIONS FOR A LIST OF SUBMITTAL REQUIREMENTS, INFORMATION CONCERNING FEES, AND CONTACT INFORMATION.
4. FOR SLOPES OR TRENCHES GREATER THAN FIVE FEET IN DEPTH, A NOTE MUST BE ADDED STATING: "ALL CONSTRUCTION OPERATIONS SHALL BE ACCOMPLISHED IN ACCORDANCE WITH APPLICABLE REGULATIONS OF THE U.S. OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION." (OSHA STANDARDS MAY BE PURCHASED FROM THE GOVERNMENT PRINTING OFFICE; INFORMATION AND RELATED REFERENCE MATERIALS MAY BE PURCHASED FROM OSHA, 611 EAST 6TH STREET, AUSTIN TEXAS.)
5. ALL SITE WORK MUST ALSO COMPLY WITH ENVIRONMENTAL REQUIREMENTS.
6. UPON COMPLETION OF THE PROPOSED SITE IMPROVEMENTS AND PRIOR TO THE FOLLOWING, THE ENGINEER SHALL CERTIFY IN WRITING THAT THE PROPOSED DRAINAGE, FILTRATION AND DETENTION FACILITIES WERE CONSTRUCTED IN CONFORMANCE WITH THE APPROVED PLANS:
   - RELEASE OF THE CERTIFICATE OF OCCUPANCY BY THE DEVELOPMENT SERVICES DEPARTMENT (INSIDE THE CITY LIMITS); OR
   - INSTALLATION OF AN ELECTRIC OR WATER METER (IN THE FIVE-MILE ETJ)

APPROVED
Date 08/03/2023

Henderson Professional Engineers
HPE
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SITE DEVELOPMENT PLANS
TO SERVE
NORTH AUSTIN CROSSROADS COMMUNITY CHURCH
15800 CROSSROADS DRIVE
AUSTIN, TEXAS 78681

CITY OF AUSTIN CONSTRUCTION NOTES

JENNIFER L. HENDERSON
116883
02/08/2023

PROJECT NO. 200107
02/08/2023
DRAWN BY: JS
CHECKED BY: AR
APPROVED BY: JH

09 OF 54

CITY PROJECT NUMBER SP-2020-0328D

Plotted by: Adam, Plot date: 08/02/2023
File name: h:\02 projects\2020\200107 crossroads community church\07 Sheet\SD\200107 NOTES.dwg

GENERAL NOTES:

1. ENGINEER OF RECORD SHALL BE NOTIFIED IN WRITING 48-HOURS PRIOR TO THE START OF CONSTRUCTION
2. BLASTING IS NOT PERMITTED ON THIS PROJECT UNDER ANY CIRCUMSTANCE. SHOULD BLASTING BE NECESSARY PLEASE NOTIFY THE ENGINEER OF RECORD.
3. ALL CONSTRUCTION OPERATIONS SHALL BE ACCOMPLISHED IN ACCORDANCE WITH APPLICABLE REGULATIONS OF THE U.S. OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA).
4. THESE PLANS DO NOT EXTEND TO OR INCLUDE DESIGNS OR SYSTEMS PERTAINING TO THE SAFETY OF THE CONSTRUCTION CONTRACTOR OR ITS EMPLOYEES, AGENTS OR REPRESENTATIVES IN THE PERFORMANCE OF THE WORK. THE SEAL OF THE REGISTERED PROFESSIONAL ENGINEER(S) HEREON DOES NOT EXTEND TO ANY SUCH SAFETY SYSTEMS THAT MAY NOW OR HEREAFTER BE INCORPORATED IN THE WORK.
5. THE TRENCH EXCAVATION AND SHORING SAFETY SYSTEM, AS OUTLINED IN THE TECHNICAL SPECIFICATIONS, WILL BE REQUIRED AS A MINIMUM TRENCH SAFETY MEASURE.
6. CONTRACTOR SHALL ASSURE HIMSELF THAT ALL CONSTRUCTION PERMITS HAVE BEEN OBTAINED PRIOR TO COMMENCEMENT OF WORK. REQUIRED PERMITS THAT CAN ONLY BE ISSUED TO CONTRACTOR ARE TO BE OBTAINED AT THE CONTRACTORS EXPENSE.
7. CONTRACTOR SHALL GIVE A MINIMUM OF 48 HOURS NOTICE TO ALL AUTHORIZED INSPECTORS, SUPERINTENDENTS, OR PERSONS IN CHARGE OF PRIVATE AND PUBLIC UTILITIES AFFECTED BY HIS OPERATIONS PRIOR TO COMMENCEMENT OF WORK.
8. CONTRACTOR SHALL TAKE ALL DUE PRECAUTIONS TO PROTECT EXISTING FACILITIES FROM DAMAGE. ANY DAMAGE TO EXISTING FACILITIES INCURRED AS A RESULT OF THESE CONSTRUCTION OPERATIONS ARE TO BE REPAIRED IMMEDIATELY BY THE CONTRACTOR TO AT LEAST THE PRE-EXISTING CONDITION AT NO ADDITIONAL COST TO OWNER.
9. LOCATION OF EXISTING UTILITIES SHOWN ON PLANS ARE APPROXIMATE. NO WARRANTY IS IMPLIED AS TO THE ACTUAL LOCATION OF EXISTING UTILITIES. CONTRACTOR MUST FIELD VERIFY LOCATIONS OF EXISTING UTILITIES PRIOR TO COMMENCEMENT OF CONSTRUCTION.
10. WHEN UNLOCATED OR INCORRECTLY LOCATED UNDERGROUND PIPING OR A BREAK IN A LINE OR OTHER UTILITIES AND SERVICES ARE ENCOUNTERED DURING SITE WORK OPERATIONS, THE CONTRACTOR SHALL NOTIFY THE APPLICABLE UTILITY COMPANY IMMEDIATELY TO OBTAIN PROCEDURE DIRECTIONS. THE CONTRACTOR SHALL COOPERATE WITH THE APPLICABLE UTILITY COMPANY IN MAINTAINING ACTIVE SERVICES IN OPERATION.
11. THE CONTRACTOR SHALL MAINTAIN ACCESS TO PUBLIC AND PRIVATE FACILITIES DURING CONSTRUCTION. CONSTRUCTION ACTIVITIES TO BE COORDINATED WITH THE OWNER.
12. THE CONTRACTOR SHALL COORDINATE INTERRUPTIONS OF ALL UTILITIES AND SERVICES WITH APPLICABLE UTILITY COMPANY OR COMPANIES. ALL WORK SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE APPLICABLE UTILITY COMPANY OR AGENCY INVOLVED.
13. 1THE CONTRACTOR SHALL LOCATE, PROTECT, AND MAINTAIN BENCHMARKS, MONUMENTS, AND CONTROL POINTS. RE-ESTABLISH DISTURBED OR DESTROYED ITEMS BY REGISTERED PUBLIC SURVEYOR IN THE STATE OF TEXAS AT NO ADDITIONAL COST TO OWNER.
14. EXISTING PAVING, BUILDING, AND OTHER ITEMS SHOWN ON THESE PLANS NOT SPECIFICALLY RELATED TO THE WORK OF THE CONTRACTOR IS FOR INFORMATION ONLY.
15. DEMOLITION PERMITS (IF NEEDED) ARE TO BE OBTAINED BY THE CONTRACTOR.
16. EXISTING SURFACE AND SUBSURFACE STRUCTURES (GAS MAINS, WATER MAINS, STORM SEWER, TELEPHONE CABLES, ETC.) ARE SHOWN ON THE PLANS IF THEIR LOCATION HAS BEEN DETERMINED, BUT IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO AVOID DAMAGING THESE EXISTING STRUCTURES WHETHER OR NOT THEY ARE SHOWN ON THE PLANS. THE OWNER AND ENGINEER ASSUME NO RESPONSIBILITY FOR FAILURE TO SHOW ANY OR ALL OF THESE STRUCTURES ON THE PLANS OR TO SHOW THEM IN THEIR EXACT LOCATION. IF ANY STRUCTURE IS DAMAGED BY THE CONTRACTOR, IT SHALL BE HIS RESPONSIBILITY TO REPAIR THE DAMAGE AT HIS EXPENSE AND RESTORE THE STRUCTURE TO IT'S ORIGINAL CONDITION.
17. IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO VERIFY LOCATIONS, ELEVATIONS AND DIMENSIONS OF ADJACENT AND/OR CONFLICTING UTILITIES IN ADVANCE OF CONSTRUCTION IN ORDER THAT ADJUSTMENTS CAN BE MADE TO PROVIDE ADEQUATE CLEARANCE, IF REQUIRED. THE CONTRACTOR SHALL PRESERVE AND PROTECT PUBLIC UTILITIES AT ALL TIMES DURING CONSTRUCTION. ANY DAMAGE TO UTILITIES RESULTING FROM THE CONTRACTORS OPERATIONS SHALL BE RESTORED AT HIS EXPENSE. THE ENGINEER SHALL BE NOTIFIED WHEN PROPOSED FACILITY GRADES CONFLICT WITH EXISTING UTILITY GRADES.
18. ALL CONCEPTS, IDEAS, DESIGNS, ARRANGEMENTS, AND PLANS INDICATED OR REPRESENTED BY THESE INSTRUMENTS, AS OUTLINED ON THE TITLE SHEET INDEX, AND BY ANY ADDENDUM ARE OWNED BY AND ARE THE PROPERTY OF HENDERSON PROFESSIONAL ENGINEERS, L.L.C. AND WERE CREATED AND DEVELOPED FOR THE USE ON AND IN CONNECTION WITH THE SPECIFIED PROJECT. THESE CONCEPTS, IDEAS, DESIGN, ARRANGEMENTS, OR PLANS SHALL NOT BE USED BY ANY PERSON, FIRM OR CORPORATION FOR ANY PURPOSE WHATSOEVER WITHOUT THE WRITTEN PERMISSION AND CONSENT OF HENDERSON PROFESSIONAL ENGINEERS WHOSE CONTACT INFO IS FOUND IN THE TITLE BLOCK OF EVERY PLAN SHEET.
19. A PRE-CONSTRUCTION CONFERENCE IS TO BE HELD PRIOR TO BEGINNING CONSTRUCTION. THE CONFERENCE SHALL TAKE PLACE EITHER VIRTUALLY OR AT A LOCATION AND TIME SELECTED BY OWNER AND ENGINEER. CONTRACTOR TO ARRANGE ENGINEER, OWNER AND PERTINENT SUB CONTRACTOR ATTENDANCE AT THIS MEETING.
20. CONTRACTOR SHALL NOTIFY THE TEXAS ONE CALL CENTER PRIOR TO ANY CONSTRUCTION.
21. IN THE EVENT OF A DISCREPANCY WITHIN THE PLANS OR BETWEEN THE PLANS AND SPECIFICATIONS, THE CONTRACTOR SHALL BE REQUIRED TO PERFORM THE MOST INVOLVED WORK TO SATISFY THE INTENT OF THE PROJECT.
22. TOPSOIL REPLACEMENT IS REQUIRED IN ALL AREAS. AREAS OF BACKFILL, EXCAVATION, OR GRADING SHALL BE BROUGHT TO WITHIN SIX INCHES OF FINAL GRADE AND BROUGHT TO GRADE WITH COMPACTED TOP SOIL. DISTURBED AREA BETWEEN ROW AND EDGE OF PAVEMENT TO BE VEGETATED ACCORDING TO COSA ITEM 516 "HYDROMULCH."
23. MAIL SERVICE SHALL BE MAINTAINED FOR THE DURATION OF THE PROJECT. PAYMENT FOR REMOVAL, TEMPORARY RELOCATION AND PERMANENT LOCATION OF ALL MAILBOXES SHALL CONSIDERED SUBSIDIARY TO OTHER ITEMS OF WORK.
24. EXISTING SIGNS TO BE RELOCATED TO WITHIN A MINIMUM OF SEVEN FEET FROM THE PROPOSED EDGE OF PAVEMENT.
25. SHOULD HENDERSON PROFESSIONAL ENGINEERS INSTALL SIGNAGE AT THE CONSTRUCTION SITE THEN ANY DAMAGES OR ISSUES SHOULD BE IMMEDIATELY CONVEYED TO THE ENGINEER OF RECORD FOR REMEDIATION.

GENERAL ENVIRONMENTAL NOTES:

1. CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE LOCAL, STATE AND FEDERAL REQUIREMENTS REGARDING EXCESS AND WASTE MATERIALS, INCLUDING METHODS OF HANDLING AND DISPOSAL.
2. CONTRACTOR SHALL LOCATE MATERIAL STORAGE AREAS AWAY FROM STORM WATER CONVEYANCE SYSTEMS. PROVIDE PROTECTED STORAGE AREAS FOR CHEMICALS, PAINTS, SOLVENTS, FERTILIZERS, AND OTHER POTENTIALLY TOXIC MATERIALS.
3. FUEL STORAGE IS ALLOWED ON THIS PROJECT AND SHALL BE IN ACCORDANCE WITH APPLICABLE REGULATORY REQUIREMENTS.
4. THE CONTRACTOR SHALL ADVISE OWNER IMMEDIATELY, VERBALLY AND IN WRITING, OF ANY FUEL OR TOXIC MATERIALS SPILLS WITHIN THE PROJECT/CONSTRUCTION AREA AND THE ACTIONS TO BE TAKEN TO REMEDY THE PROBLEM.
5. THE CONTRACTOR SHALL DISPOSE OF FUELS, HAZARDOUS MATERIALS, AND CONTAMINATED EXCAVATIONS IN A LEGALLY APPROVED MANNER.
6. NO OPEN BURNING IS ALLOWED ON THIS PROJECT.

STORM WATER NOTES:

1. THROUGHOUT THE CONSTRUCTION, AND AT THE COMPLETION OF CONSTRUCTION, THE CONTRACTOR SHALL ASSURE THAT DRAINAGE OF STORM WATER RUNOFF IS NOT BLOCKED.
2. MODIFICATIONS TO ANY STORM CONVEYANCE SYSTEM MUST BE IMMEDIATELY REPORTED TO THE ENGINEER OF RECORD TO ENSURE GENERAL CONFORMANCE WITH APPLICABLE PERMITS.
3. CONSTRUCTION MEANS AND METHODS SHALL BE USED TO ENSURE RUNOFF FROM THE SITE IS CONTROLLED THROUGH THE DURATION OF THE PROJECT. PONDS MAY BE ROUGH CUT WHEN NECESSARY.

SITE GRADING NOTES:

1. THE CONTRACTOR SHALL CONTROL DUST CAUSED BY THE WORK AND COMPLY WITH POLLUTION CONTROL REGULATIONS OF GOVERNING AUTHORITIES.
2. ALL EXCESS EXCAVATED MATERIAL IS TO BE REMOVED FROM THE SITE. THE EXCESS EXCAVATION MATERIAL SHALL NOT BE STOCKPILED.
3. ADJUST MANHOLES COVERS, VALVE BOXES, ELECTRICAL MANHOLES, ETC. TO MATCH PROPOSED FINISHED GRADE (NO SEPARATE PAY).

PAVING NOTES / TRAFFIC CONTROL NOTES:

1. ANY EXISTING PAVEMENT, CURBS, AND/OR SIDEWALK DAMAGED OR REMOVED BY THE CONTRACTOR ARE TO BE REPAIRED BY THE CONTRACTOR TO AT LEAST THE PRE-EXISTING CONDITION AT HIS EXPENSE BEFORE ACCEPTANCE OF THE WORK.
2. TRAFFIC CONTROLS DURING CONSTRUCTION TO BE CONTRACTORS RESPONSIBILITY AND INSTALLED IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.
3. THE CONTRACTOR SHALL MAINTAIN AT LEAST ONE TRAFFIC LANE OPEN AT ALL TIMES DURING CONSTRUCTION (ALL AFFECTED STREETS).

CONCRETE CONSTRUCTION NOTES:

1. ALL STRUCTURAL CONCRETE SHALL HAVE A MINIMUM 28 DAY COMPRESSIVE STRENGTH AS NOTED IN THE PLANS.
2. ALL REINFORCING BARS SHALL CONFORM TO ASTM A-305 AND ASTM A-316, GRADE 60.
3. ALL CONCRETE AND REINFORCING STEEL SHALL CONFORM TO CURRENT A.C.I. CODE.
4. ALL BAR SPLICES, CORNER DOWELS, AND JOINT DOWELS SHALL HAVE A MINIMUM LAP LENGTH OF 40 BAR DIAMETERS OR 30", WHICHEVER IS GREATER.
5. NO FLY ASH ADDITIVES WILL BE PERMITTED IN STRUCTURAL CONCRETE.

UTILITY NOTES:

1. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR THE ACCURACY OF THE LOCATION OF THE UNDERGROUND UTILITIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING AND AVOIDING ALL EXISTING UTILITIES.
2. ALL UTILITY TRENCH COMPACTION TESTS WITHIN THE STREET PAVEMENT SECTION SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND VERIFIED BY THE OWNER'S TESTING PROVIDER. FILL MATERIAL SHALL BE PLACED IN UNIFORM LAYERS NOT TO EXCEED TWELVE INCHES (12") LOOSE. EACH MATERIAL SHALL BE COMPACTED AS SPECIFIED AND TESTED FOR DENSITY AND MOISTURE IN ACCORDANCE WITH TEST METHODS TEX-113-E, TEX-114-E, TEX-115-E. THE NUMBER OF LOCATIONS OF REQUIRED TESTS SHALL BE DETERMINED BY THE ENGINEER, APPROVED BY THE STREET INSPECTOR AND AGREED TO AT THE PRE-CONSTRUCTION MEETING. UPON COMPLETION OF TESTING THE OWNER'S TESTING PROVIDER SHALL PROVIDE THE STREET INSPECTOR WITH ALL TESTING DOCUMENTATION AND A CERTIFICATION STATING THAT THE PLACEMENT OF FILL MATERIAL HAS BEEN COMPLETED IN ACCORDANCE WITH THE PLANS.

SAFETY FENCE NOTES:

1. SAFETY FENCE, WHEN NECESSARY, SHALL BE USED TO PROTECT ALL EXCAVATIONS AND TO SEPARATE CONSTRUCTION ACTIVITIES FROM PEDESTRIAN, DURING THE ENTIRE CONSTRUCTION PERIOD.
2. ALL SAFETY FENCING SHALL BE PLASTIC, 4' MINIMUM HEIGHT AND ORANGE IN COLOR.
3. SAFETY FENCE USED WITHIN THE ROADWAY SHALL BE REFLECTORIZED WITH A MINIMUM OF TWO (2) STRIPS OF RETROREFLECTIVE MATERIAL. A MINIMUM OF 1' WIDE THE LENGTH OF THE FENCE OR DELINEATED BY CHANNELIZING DEVICES.
4. SAFETY FENCE USED TO SEPARATE SIDEWALKS FROM CONSTRUCTION ACTIVITIES SHALL HAVE MINIMUM ENCROACHMENT TO THE SIDEWALK.
5. FENCE MATERIAL SHALL BE SUPPORTED FROM 1/4" DIA. NYLON ROPE FROM POSTS SPACED ON A MAXIMUM 8 FT. CENTERS. POSTS SHALL EXTEND 4' ABOVE NATURAL GROUND. FENCE MATERIAL SHALL BE SECURED TO POSTS W/ PLASTIC WIRE TIES, MINIMUM 3 PER POST.
6. POST SHALL INCLUDE SUPPORT BRACES SUFFICIENT TO HANDLE ALL LOADS.
7. PAYMENT FOR SECURITY FENCE SHALL BE BASED ON A LUMP SUM FOR EACH EXTENSION INCLUDING ALL INCIDENTAL WORK (LABOR, MATERIALS, EQUIPMENT, ETC.)

TRENCH EXCAVATION SAFETY PROTECTION:

CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR STRUCTURAL DESIGN/GEOTECHNICAL SAFETY/EQUIPMENT CONSULTANT, IF ANY SHALL REVIEW THESE PLANS AND ANY GEOTECHNICAL INFORMATION AND THE ANTICIPATED INSTALLATION SITES WITHIN THE PROJECT WORK AREA IN ORDER TO IMPLEMENT CONTRACTOR'S TRENCH EXCAVATION SAFETY PROTECTION SYSTEMS, PROGRAMS AND/OR PROCEDURES FOR THE PROJECT DESCRIBED IN THE CONTRACT DOCUMENTS. THE CONTRACTOR'S IMPLEMENTATION OF THESE SYSTEMS, PROGRAMS AND/OR PROCEDURES SHALL PROVIDE FOR ADEQUATE TRENCH EXCAVATION SAFETY PROTECTION THAT COMPLY WITH AS A MINIMUM, OSHA STANDARDS FOR TRENCH EXCAVATIONS. SPECIFICALLY, CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR SAFETY CONSULTANT SHALL IMPLEMENT A TRENCH SAFETY PROGRAM IN ACCORDANCE WITH OSHA STANDARDS GOVERNING THE PRESENCE AND ACTIVITIES OF INDIVIDUALS WORKING IN AND AROUND TRENCH EXCAVATION.

SPECIAL CONDITIONS AND NOTES:

1. EXISTING UTILITIES IN THE AREA ARE SHOWN IN ACCORDANCE WITH ASCE 38-02 "STANDARD GUIDELINES FOR THE COLLECTION AND DEPICTION OF EXISTING SUBSURFACE UTILITY DATA" AS SPECIFIED IN THE SIGNED CONTRACT SCOPE OF WORK. IT IS THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY THE TEXAS ONE CALL CENTER PRIOR TO THE START OF ANY CONSTRUCTION. IT IS THE CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY THE EXACT LOCATION AND DEPTH OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK.
2. ALL UTILITY SYMBOLS SHOWN REPRESENT APPROXIMATE LOCATIONS UNLESS OTHERWISE NOTED. CONTRACTOR SHALL REFER TO THE APPROPRIATE AGENCY'S STANDARD SPECIFICATIONS AND INSTALLATION DETAILS FOR ACTUAL LOCATIONS UNLESS OTHERWISE DIRECTED BY THE ENGINEER.

SAW BASS FIRE DEPT
REVIEWED
Plans must be on site for review at time of inspection
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CITY OF AUSTIN
APPROVED
Date 08/03/2023
FOUNDED 1839

Henderson Professional Engineers
600 ROUND ROCK WEST DRIVE, SUITE 604
ROUND ROCK, TX 78681
512.350.6228
PELS FIRM #F-22208
www.hendersonpe.com
Civil Engineering
WBE2101166 | HUB 1853873845300

No.	REVISION
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SITE DEVELOPMENT PLANS TO SERVE

NORTH AUSTIN CROSSROADS COMMUNITY CHURCH

15800 CROSSROADS DRIVE
AUSTIN, TEXAS 78681

GENERAL NOTES

STATE OF TEXAS
JENNIFER L. HENDERSON
116683
LICENSED
PROFESSIONAL ENGINEER
02/08/2023

PROJECT NO. 200107	02/08/2023	DRAWN BY: JS	CHECKED BY: AR	APPROVED BY: JH

CITY PROJECT NUMBER SP-2020-0328D

Plotted by: Adam, Plot date: 08/02/2023
File name: h:\02 projects\2020\200107 crossroads community church\07 Sheet\SD\200107 NOTES.dwg

LEGEND

EXISTING WROUGHT IRON FENCE

EXISTING CHAIN LINK FENCE

EXISTING WIRE FENCE

EXISTING WOOD FENCE

EX OE — EXISTING OVERHEAD ELECTRIC LINE

EX UE — EXISTING UNDERGROUND ELECTRIC LINE

EX FOC — EXISTING FIBER OPTIC LINE

EX GAS — EXISTING GAS LINE

EX WW — EXISTING WASTEWATER LINE (THICKNESS INDICATES INNER PIPE DIAMETER)

EX SD — EXISTING STORM SEWER LINE (THICKNESS INDICATES INNER PIPE DIAMETER)

EX OT — EXISTING OVERHEAD TELEPHONE LINE

EX UT — EXISTING UNDERGROUND TELEPHONE LINE

EX W — EXISTING WATER LINE (THICKNESS INDICATES INNER PIPE DIAMTER)

599 / 600 — EXISTING CONTOURS, WITH ELEVATION LABELED

EXISTING CURB AND GUTTER

EXISTING WASTEWATER MANHOLE (DRAWN TO SCALE)

EX. CO — EXISTING WASTEWATER CLEANOUT

D — EXISTING STORM SEWER MANHOLE

D — EXISTING CURB INLET

EXISTING FDC

EXISTING FIRE HYDRANT

EXISTING GATE VALVE

EXISTING LIGHT POLE

TAG / TAG — EXISTING TREES (HERITAGE TREES (SIZE ADJUSTED PER ZRE)) TAG REFERS TO TREE SURVEY DATA TABLE

WM — EXISTING WATER METER

W — EXISTING WATER WELL

EXISTING HOSE BIB/FAUCET

EXISTING UTILITY POLE

SIGN TEXT — EXISTING SIGN (TEXT VARIES)

T — EXISTING TELEPHONE RISER

CATV — EXISTING CABLE/TV BOX

GM — EXISTING GAS METER

PB — EXISTING PULL BOX

E — EXISTING ELECTRIC METER

EXISTING GUY WIRE

MB — EXISTING MAILBOX

NEW WROUGHT IRON FENCE

NEW CHAIN LINK FENCE

NEW WIRE FENCE

NEW WOOD FENCE

NEW CURB AND GUTTER

LOC — LIMITS OF CONSTRUCTION

ADA — ACCESSIBLE ROUTE

NEW WASTEWATER MANHOLE (DRAWN TO SCALE)

NEW WASTEWATER CLEANOUT

NEW GATE VALVE

NEW LIGHT POLE

NEW FIRE DEPARTMENT CONNECTION

NEW FIRE HYDRANT

NEW GRATE INLET

ABBREVIATIONS LEGEND

EX.	EXISTING
O.C.E.W.	ON CENTER, EACH WAY
TYP.	TYPICAL
APPROX.	APPROXIMATE

SAM BASS FIRE DEPT.
REVIEWED
Plans must be on site for review at time of inspection
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CITY OF AUSTIN APPROVED Date 08/03/2023 FOUNDED 1839

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SITE DEVELOPMENT PLANS TO SERVE
NORTH AUSTIN CROSSROADS COMMUNITY CHURCH
15800 CROSSROADS DRIVE
AUSTIN, TEXAS 78681

LEGEND AND ABBREVIATIONS

STATE OF TEXAS — JENNIFER L. HENDERSON — 116883 — LICENSED PROFESSIONAL ENGINEER
02/08/2023

PROJECT NO. 200107	02/08/2023	DRAWN BY: JS	CHECKED BY: AR	APPROVED BY: JH

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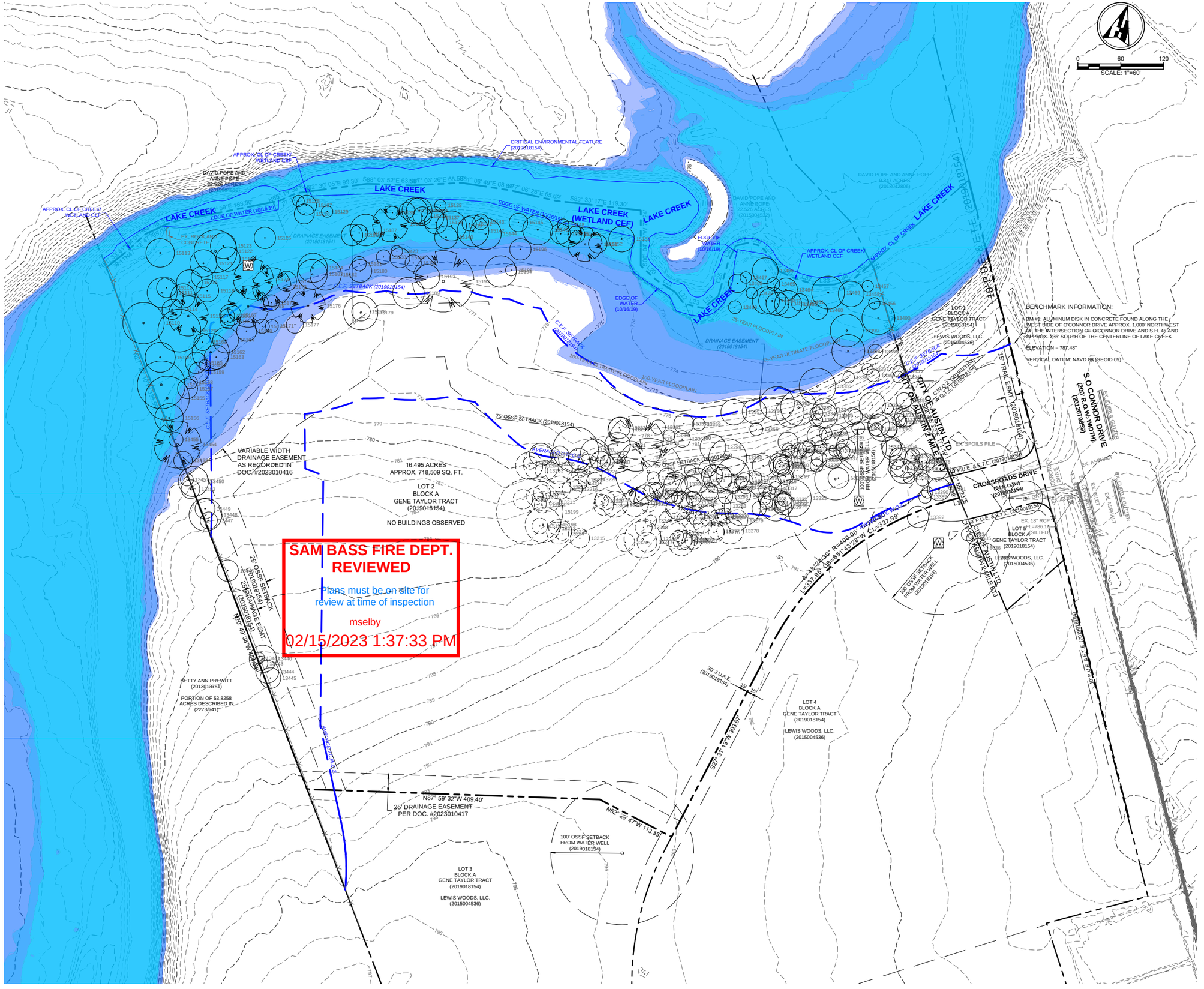
CITY PROJECT NUMBER SP-2020-0328D



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SITE DEVELOPMENT PLANS TO SERVE

NORTH AUSTIN CROSSROADS COMMUNITY CHURCH
15800 CROSSROADS DRIVE
AUSTIN, TEXAS 78681

EXISTING CONDITIONS

STATE OF TEXAS
JENNIFER L. HENDERSON
116883
LICENSED
PROFESSIONAL ENGINEER
02/10/2023

PROJECT NO. 20107	02/10/2023	DRAWN BY: JS	CHECKED BY: AR	APPROVED BY: JH

CITY OF AUSTIN
APPROVED
Date 08/03/2023
FOUNDED 1839

12 OF 54

CITY PROJECT NUMBER SP-2020-0328D

Plotted by: Adam, Plot date: 10/02/2023
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TREE SURVEY

SURVEY NO.	SPECIES	CALIPERS	TOTAL CALIPERS	NOTES
13201	PECAN	8", 8"	12"	
13202	PECAN	12"	12"	
13203	PECAN	9"	9"	
13204	PECAN	13", 12"	19"	
13205	PECAN	9"	9"	
13206	PECAN	18", 14"	25"	
13207	PECAN	16"	16"	
13208	PECAN	13"	13"	
13209	PECAN	11", 11", 5"	19"	
13210	PECAN	11", 10"	16"	
13211	PECAN	13"	13"	
13212	CEDAR ELM	8"	8"	
13213	CEDAR ELM	11", 7", 6"	17.5"	
13214	CEDAR ELM	9"	9"	
13215	CEDAR ELM	11", 5"	13.5"	
13216	PECAN	10", 8"	14"	
13217	PECAN	8", 7"	11.5"	
13218	PECAN	15"	15"	
13219	PECAN	15"	15"	
13220	PECAN	23", 10", 8"	32"	
13221	PECAN	11", 10", 8"	20"	
13222	PECAN	14"	14"	
13223	PECAN	14"	14"	
13224	PECAN	13", 9"	17.5"	
13225	PECAN	10"	10"	
13226	LIVE OAK	14"	14"	
13227	LIVE OAK	10"	10"	
13228	LIVE OAK	14"	14"	
13229	LIVE OAK	15", 6"	18"	
13230	PECAN	10"	10"	
13231	PECAN	13", 10"	18"	
13232	PECAN	18"	18"	
13233	PECAN	15"	15"	
13234	LIVE OAK	27", 24"	39"	
13235	LIVE OAK	28", 20", 17"	46.5"	
13236	CEDAR ELM	9"	9"	
13237	CEDAR ELM	10"	10"	
13238	CEDAR ELM	10", 6"	13"	
13239	LIVE OAK	9", 8"	13"	
13240	LIVE OAK	13"	13"	
13241	CEDAR ELM	19"	19"	
13242	CEDAR ELM	11"	11"	
13243	PECAN	10"	10"	
13244	PECAN	11"	11"	
13245	CEDAR ELM	9", 8"	13"	
13246	LIVE OAK	18", 16"	26"	
13247	CEDAR ELM	8", 6", 6"	14"	
13248	CEDAR ELM	9", 6"	12"	
13249	CEDAR ELM	8"	8"	
13250	LIVE OAK	8"	8"	
13251	CEDAR ELM	10", 9", 8"	18.5"	
13252	CEDAR ELM	8"	8"	
13253	LIVE OAK	15", 6"	18"	
13254	LIVE OAK	13"	13"	
13255	LIVE OAK	10"	10"	
13256	LIVE OAK	14"	14"	
13257	CEDAR ELM	12"	12"	
13258	CEDAR ELM	9"	9"	
13259	CEDAR ELM	9"	9"	
13260	CEDAR ELM	10"	10"	
13261	LIVE OAK	13"	13"	
13262	LIVE OAK	9"	9"	
13263	LIVE OAK	13"	13"	
13264	LIVE OAK	13", 13"	19.5"	
13265	LIVE OAK	11"	11"	
13266	LIVE OAK	8"	8"	
13267	CEDAR ELM	9"	9"	
13268	CEDAR ELM	12"	12"	
13269	CEDAR ELM	13"	13"	
13270	BUMELIA	8"	8"	
13271	CEDAR ELM	12"	12"	
13272	LIVE OAK	14"	14"	
13273	CEDAR ELM	10"	10"	
13274	LIVE OAK	15"	15"	
13275	CEDAR ELM	11"	11"	
13276	CEDAR ELM	11", 8"	14.5"	
13277	CEDAR ELM	11"	11"	
13278	CEDAR ELM	10", 9", 8"	18.5"	
13279	CEDAR ELM	15"	15"	DEAD
13280	LIVE OAK	11"	11"	
13281	LIVE OAK	26"	26"	
13282	CEDAR ELM	8", 8"	12"	DEAD
13283	CEDAR ELM	12"	12"	
13284	CEDAR ELM	8", 8"	12"	
13285	CEDAR ELM	12"	12"	
13286	CEDAR ELM	11", 8"	15"	
13287	LIVE OAK	20"	20"	
13288	LIVE OAK	15"	15"	
13289	LIVE OAK	18"	18"	
13290	CEDAR ELM	15", 12", 11"	26.5"	
13291	CEDAR ELM	15", 9", 8"	23.5"	
13292	CEDAR ELM	8"	8"	
13293	CEDAR ELM	10"	10"	DEAD
13294	CEDAR	18", 8", 7"	25.5"	
13295	CEDAR ELM	11"	11"	
13296	CEDAR ELM	9"	9"	
13297	CEDAR ELM	12"	12"	
13298	CEDAR ELM	9"	9"	
13299	CEDAR ELM	9"	9"	
13300	CEDAR ELM	15"	15"	
13301	CEDAR ELM	10"	10"	
13302	CEDAR ELM	9"	9"	
13303	CEDAR ELM	9"	9"	
13304	CEDAR ELM	9"	9"	
13305	CEDAR ELM	9"	9"	
13306	CEDAR ELM	14"	14"	
13307	CEDAR ELM	9"	9"	
13308	CEDAR ELM	9"	9"	

TREE SURVEY

SURVEY NO.	SPECIES	CALIPERS	TOTAL CALIPERS	NOTES
13309	LIVE OAK	8"	8"	
13310	LIVE OAK	14"	14"	
13311	LIVE OAK	10"	10"	
13312	LIVE OAK	14"	14"	
13313	LIVE OAK	14"	14"	
13314	LIVE OAK	11"	11"	
13315	CEDAR ELM	11"	11"	
13316	CEDAR ELM	8"	8"	
13317	CEDAR ELM	9"	9"	
13318	LIVE OAK	16", 12"	22"	
13319	CEDAR ELM	8"	8"	DEAD
13320	LIVE OAK	15"	15"	
13321	LIVE OAK	12"	12"	
13322	LIVE OAK	10"	10"	
13323	LIVE OAK	12", 12", 6", 5", 5"	26"	
13324	CEDAR ELM	11"	11"	
13325	CEDAR ELM	11"	11"	
13326	CEDAR ELM	11"	11"	
13327	CEDAR ELM	9"	9"	
13328	LIVE OAK	15"	15"	
13329	CEDAR ELM	9"	9"	
13330	LIVE OAK	14", 11", 10", 9"	29"	
13331	LIVE OAK	11", 7"	14.5"	
13332	LIVE OAK	11"	11"	
13333	CEDAR ELM	9"	9"	
13334	LIVE OAK	14"	14"	
13335	CEDAR ELM	9"	9"	
13336	CEDAR ELM	11", 8", 8"	19"	
13337	CEDAR ELM	14"	14"	
13338	CEDAR ELM	8"	8"	
13339	LIVE OAK	11"	11"	
13340	CEDAR ELM	8"	8"	
13341	LIVE OAK	14"	14"	
13342	LIVE OAK	16", 14", 10", 8", 6"	35"	
13343	CEDAR ELM	9"	9"	
13344	CEDAR ELM	12"	12"	
13345	CEDAR ELM	10"	10"	
13346	CEDAR ELM	18"	18"	
13347	CEDAR ELM	12", 9"	16.5"	
13348	CEDAR ELM	9"	9"	
13349	BUMELIA	9"	9"	
13350	LIVE OAK	9"	9"	
13351	LIVE OAK	12", 7"	15.5"	
13352	LIVE OAK	14", 12"	20"	
13353	CEDAR ELM	11"	11"	
13354	CEDAR ELM	14"	14"	
13355	CEDAR	9"	9"	
13356	PECAN	17"	17"	DEAD
13357	PECAN	18"	18"	
13358	CEDAR	9"	9"	
13359	CEDAR	11", 6"	14"	
13360	CEDAR	8"	8"	
13361	CEDAR	10"	10"	
13362	CEDAR	8", 7"	11.5"	
13363	PECAN	24"	24"	
13364	PECAN	14", 12"	20"	
13365	PECAN	14", 12", 10"	25"	
13366	PECAN	19", 13"	25.5"	
13367	CEDAR	8"	8"	
13368	CEDAR	9"	9"	
13369	CEDAR ELM	13", 11"	18.5"	
13370	CEDAR ELM	8"	8"	
13371	LIVE OAK	9"	9"	
13372	LIVE OAK	9"	9"	
13373	LIVE OAK	8"	8"	
13374	LIVE OAK	15"	15"	
13375	CEDAR ELM	11"	11"	
13376	BLACK JACK OAK	16"	16"	
13377	POST OAK	8", 6"	11"	
13378	CEDAR ELM	12"	12"	
13379	CEDAR ELM	11", 8"	15"	
13380	CEDAR ELM	9"	9"	
13381	UNABLE TO DETERMINE	11"	11"	DEAD
13382	BLACK JACK OAK	10"	10"	
13383	POST OAK	16", 10"	21"	DEAD
13384	CEDAR ELM	13"	13"	DEAD
13385	CEDAR ELM	10"	10"	
13386	CEDAR ELM	12"	12"	
13387	CEDAR ELM	14"	14"	
13388	CEDAR ELM	8"	8"	
13389	CEDAR ELM	9"	9"	
13390	CEDAR ELM	8"	8"	
13391	LIVE OAK	16"	16"	
13392	POST OAK	10", 10"	15"	
13393	LIVE OAK	11"	11"	
13394	CEDAR ELM	8"	8"	
13395	CEDAR ELM	8"	8"	
13396	HACKBERRY	10"	10"	
13397	CEDAR	8"	8"	
13398	PECAN	23"	23"	
13399	PECAN	23"	23"	
13400	PECAN	23"	23"	
13440	POST OAK	19"	19"	
13441	POST OAK	8"	8"	
13443	POST OAK	10"	10"	
13444	POST OAK	16"	16"	
13445	CEDAR ELM	11", 7"	14.5"	
13446	PECAN	15"	15"	
13447	PECAN	12"	12"	
13448	POST OAK	23"	23"	
13449	PECAN	14"	14"	
13450	POST OAK	21"	21"	
13451	PECAN	9"	9"	
13452	PECAN	9", 8"	13"	
13453	PECAN	13"	13"	
13454	POST OAK	33"	33"	
13455	PECAN	10"	10"	
13456	CEDAR	8"	8"	
13457	CEDAR	8"	8"	
13458	PECAN	18"	18"	

TREE SURVEY

SURVEY NO.	SPECIES	CALIPERS	TOTAL CALIPERS	NOTES
13459	PECAN	23"	23"	
13460	PECAN	13"	13"	
13461	PECAN	12"	12"	
13462	PECAN	19"	19"	
13463	PECAN	16"	16"	
13464	PECAN	16"	16"	
13465	PECAN	9"	9"	
13466	COTTONWOOD	12", 12"	18"	
13467	CHINESE TALLOW	8"	8"	
13468	PECAN	13"	13"	DEAD
13469	CEDAR	9"	9"	
13470	CEDAR	8"	8"	
13471	PECAN	13", 12"	19"	
13472	PECAN	13", 12"	19"	
13473	PECAN	8"	8"	
13474	PECAN	8"	8"	
13475	CEDAR ELM	12", 10"	17"	DEAD
15109	PECAN	21"	21"	
15110	PECAN	29"	29"	
15111	PECAN	21"	21"	
15112	PECAN	14"	14"	
15113	PECAN	20"	20"	DEAD
15114	PECAN	14"	14"	
15115	PECAN	17"	17"	
15116	PECAN	18"	18"	
15117	PECAN	15"	15"	
15118	PECAN	16"	16"	
15119	PECAN	28"	28"	
15120	PECAN	23", 14"	30"	
15121	PECAN	19"	19"	
15122	PECAN	22", 16"	30"	
15123	PECAN	18"	18"	
15124	PECAN	17"	17"	
15125	CHINESE TALLOW	9", 6", 6"	15"	
15126	CEDAR	14"	14"	
15127	PECAN	14"	14"	
15128	COTTONWOOD	8"	8"	
15129	CHINESE TALLOW	8"	8"	
15130	PECAN	9"	9"	
15131	PECAN	25"	25"	
15132	PECAN	11"	11"	
15133	PECAN	18"	18"	
15134	PECAN	18"	18"	
15135	PECAN	13"	13"	
15136	PECAN	16"	16"	
15137	PECAN	16"	16"	
15138	CHINESE TALLOW	8"	8"	
15139	PECAN	21"	21"	
15140	PECAN	16"	16"	
15141	PECAN	10"	10"	
15142	PECAN	22"	22"	
15143	CEDAR	11"	11"	
15144	PECAN	22"	22"	
15145	PECAN	13"	13"	
15146	PECAN	21"	21"	
15147	PECAN	14"	14"	
15148	CHINESE TALLOW	8"	8"	
15149	PECAN	18"	18"	
15150	PECAN	12"	12"	
15151	PECAN	24"	24"	
15152	PECAN	13"	13"	
15153	PECAN	18"	18"	DEAD
15154	PECAN	24", 19"	33.5"	DEAD
15155	PECAN	22", 18"	31"	
15156	PECAN	20"	20"	
15157	PECAN	14"	14"	
15158	PECAN	9"	9"	
15159	PECAN	14"	14"	
15160	PECAN	15"	15"	
15161	PECAN	12"	12"	
15162	PECAN	21", 10"	26"	
15163	WALNUT	12", 10"	17"	
15164	WALNUT	18"	18"	
15165	PECAN	10"	10"	
15166	PECAN	10"	10"	
15167	PECAN	15"	15"	
15168	WALNUT	29"	29"	
15169	WALNUT	14"	14"	
15170	PECAN	10"	10"	
15171	CEDAR	9"	9"	
15172	PECAN	11"	11"	
15173	PECAN	27"	27"	
15174	WALNUT	28"	28"	
15175	PECAN	14"	14"	
15176	PECAN	24"	24"	
15177	PECAN	12"	12"	
15178	WALNUT	13"	13"	
15179	WALNUT	13", 9", 8", 5"	24"	
15180	CEDAR ELM	16"	16"	
15181	CEDAR	10"	10"	
15182	PECAN	22"	22"	
15183	PECAN	21"	21"	
15184	PECAN	14", 13"	20.5"	
15185	PECAN	15"	15"	
15186	PECAN	12"	12"	
15187	PECAN	22"	22"	
15188	CEDAR	10"	10"	
15189	PECAN	16", 12"	22"	
15190	PECAN	14"	14"	
15191	CEDAR	9", 5"	11.5"	
15192	CEDAR	17"	17"	
15193	LIVE OAK	33", 20"	43"	
15194	PECAN	22"	22"	
15195	CEDAR	8"	8"	
15196	PECAN	15"	15"	
15197	CEDAR ELM	11"	11"	
15198	CEDAR ELM	12", 11", 5", 5", 5"	25"	
15199	POST OAK	24"	24"	
15200	PECAN	10", 7"	13.5"	
20952	CEDAR ELM	9", 6", 6"	15"	
20953	CEDAR ELM	14"	14"	
20954	BUMELIA	15"	15"	
20955	CEDAR ELM	11", 8"	15"	DEAD
20956	CEDAR ELM	10"	10"	
20957	CEDAR ELM	11"	11"	
20958	CEDAR ELM	14"	14"	
8634	CEDAR ELM	9"	9"	
8635	CEDAR ELM	8"	8"	DEAD
8636	POST OAK	16"	16"	
8637	POST OAK	15", 13"	21.5"	
8638	POST OAK	16", 15"	23.5"	

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REVISION

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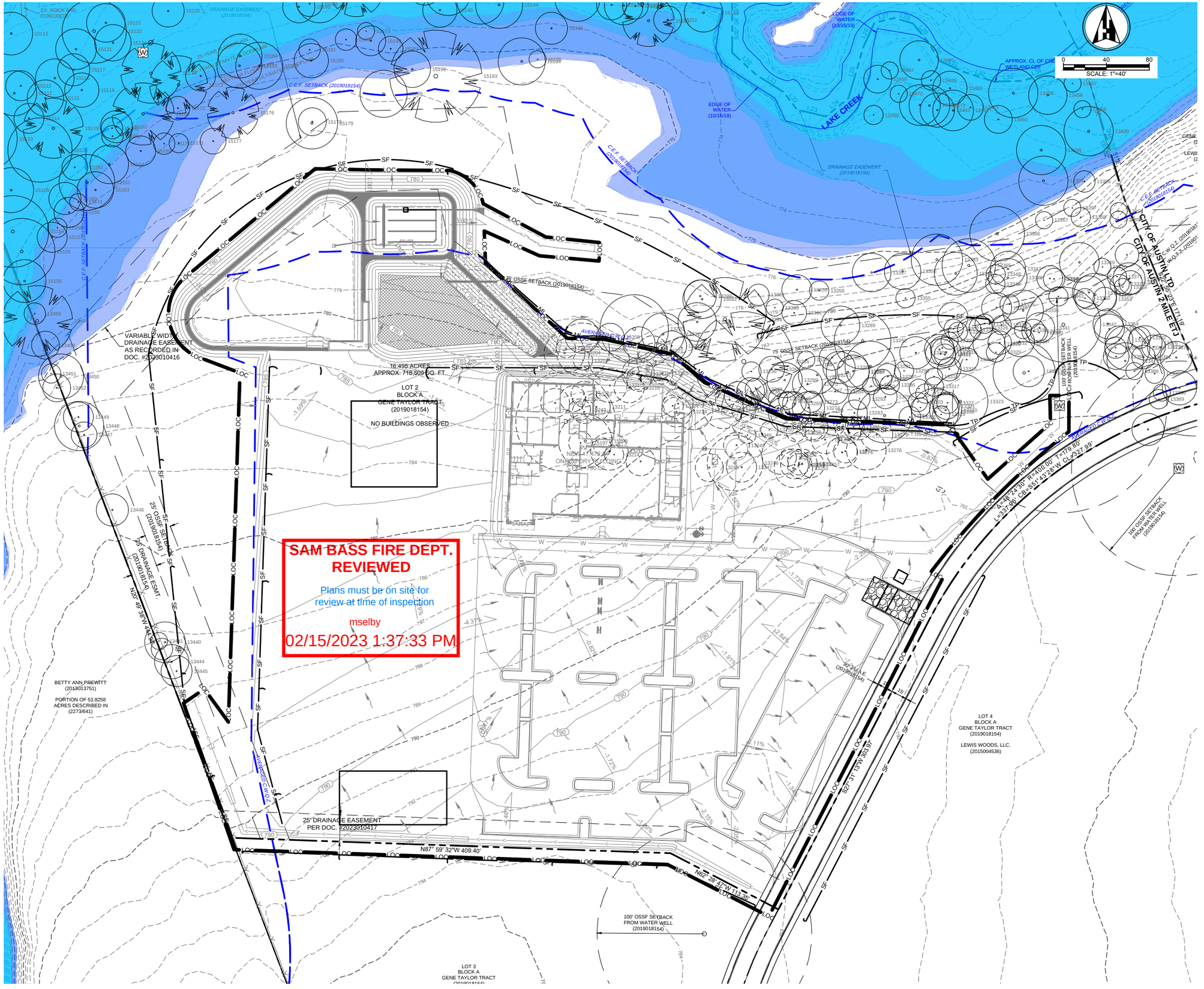
SITE DEVELOPMENT PLANS
TO SERVE
NORTH AUSTIN CROSSROADS COMMUNITY CHURCH
15800 CROSSROADS DRIVE
AUSTIN, TEXAS 78681

TREE LIST

PROJECT NO. 200107	02/08/2023	DRAWN BY: JS	CHECKED BY: AR	APPROVED BY: JH

CITY PROJECT NUMBER SP-2020-0328D

Plotted by: Adam, Plot date: 08/02/2023
File name: h:\02 projects\2020\200107 crossroads community church\07 Sheet\SD\200107 EX CONDITIONS.dwg



LEGEND

LOC	LIMITS OF CONSTRUCTION (7.82 Ac.)
CD	ROCK CHECK DAM
IP	INLET PROTECTION
SF	SILT FENCE
CF	CONSTRUCTION FENCE
FD	FILTER DIKE
TP	TREE PROTECTION FENCE
ML	MULCH LOG
	FLOW ARROW

KEY MAP (NOT TO SCALE)

NOTES:

1. NO ENVIRONMENTALLY SENSITIVE AREAS ARE LOCATED ON OR DOWNSTREAM OF THIS PROJECT SITE.
2. THIS PROJECT WILL NOT REQUIRE ANY FORM OF PHASING OR SLOPE STABILIZATION.
3. REFER TO LANDSCAPE PLANS FOR RESEEDING AND REVEGETATION REQUIREMENTS.
4. NO PERMANENT EROSION CONTROL MEASURES WILL BE INSTALLED WITH THIS PROJECT.
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6. ALL MUD, DIRT, ROCKS, DEBRIS, ETC., SPILLED, TRACKED OR OTHERWISE DEPOSITED ON EXISTING PAVED STREETS, DRIVES AND AREAS USED BY THE PUBLIC SHALL BE CLEANED UP IMMEDIATELY.
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8. ALL SLOPES SHALL BE SODDED OR SEEDED WITH APPROVED GRASS, GRASS MIXTURES OR GROUND COVER SUITABLE TO THE AREA AND SEASON IN WHICH THEY ARE APPLIED.
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10. ONLY RUBBER-TIRED EQUIPMENT IS ALLOWED WITHIN THE CWQZ AND FLOODPLAIN. NO TRACK EQUIPMENT IS ALLOWED.
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SITE DEVELOPMENT PLANS TO SERVE

NORTH AUSTIN CROSSROADS COMMUNITY CHURCH
15800 CROSSROADS DRIVE
AUSTIN, TEXAS 78681

OVERALL EROSION AND SEDIMENTATION CONTROL PLAN

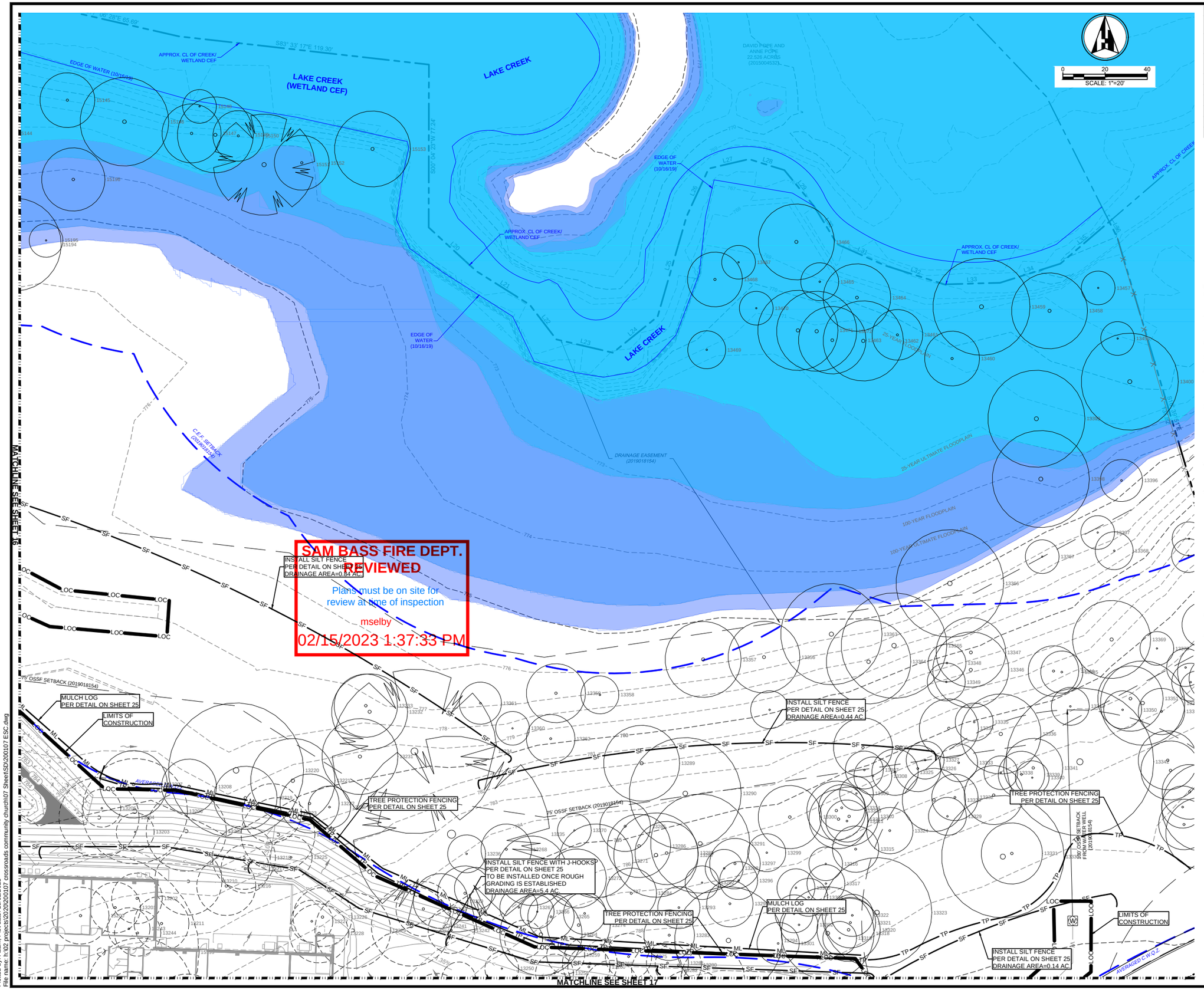
STATE OF TEXAS
JENNIFER L. HENDERSON
116883
LICENSED
PROFESSIONAL ENGINEER
02/10/2023

CITY OF AUSTIN
APPROVED
Date 08/03/2023
FOUNDED 1839

PROJECT NO. 200107	02/10/2023	DRAWN BY: JS	CHECKED BY: AR	APPROVED BY: JH

Plotted by: Adam, Plot date: 10/02/2023
File name: h:\02 projects\2020\200107 crossroads community church\07 Sheet\SD\200107 ESC.dwg

CITY PROJECT NUMBER SP-2020-0328D



LEGEND

LOC	LIMITS OF CONSTRUCTION (7.82 Ac.)
CD	ROCK CHECK DAM
IP	INLET PROTECTION
SF	SILT FENCE
CF	CONSTRUCTION FENCE
FD	FILTER DIKE
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ML	MULCH LOG
	FLOW ARROW

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SITE DEVELOPMENT PLANS TO SERVE

NORTH AUSTIN CROSSROADS COMMUNITY CHURCH
15800 CROSSROADS DRIVE
AUSTIN, TEXAS 78681

EROSION AND SEDIMENTATION CONTROL PLAN

STATE OF TEXAS
JENNIFER L HENDERSON
116883
LICENSED
PROFESSIONAL ENGINEER
02/10/2023

CITY OF AUSTIN
APPROVED
Date 08/03/2023
FOUNDED 1839

PROJECT NO. 200107	02/10/2023	DRAWN BY: JS	CHECKED BY: AR	APPROVED BY: JH

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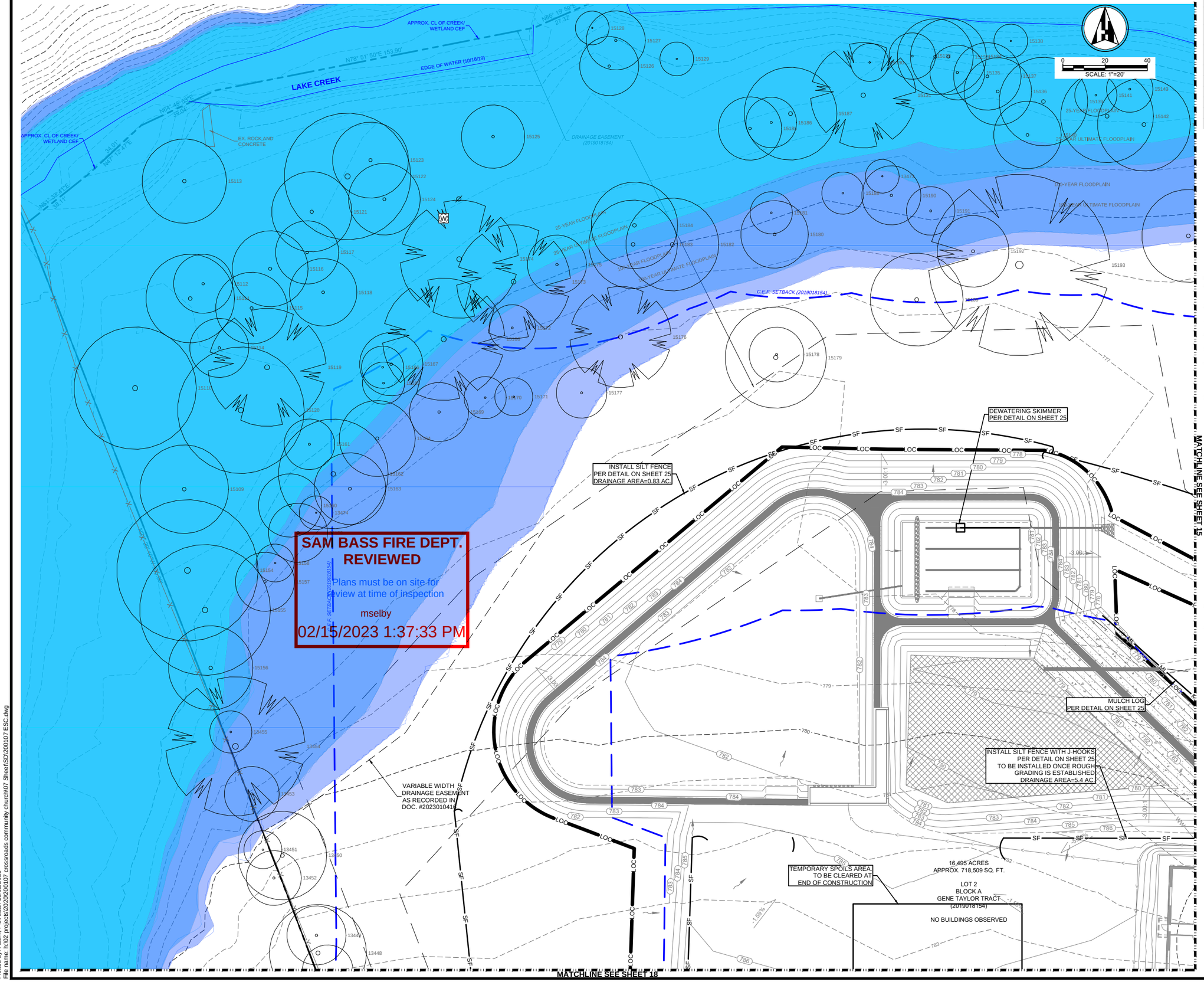

LEGEND	
LOC	LIMITS OF CONSTRUCTION (7.82 Ac.)
	ROCK CHECK DAM
IP	INLET PROTECTION
SF	SILT FENCE
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CITY OF AUSTIN APPROVED Date 08/03/2023

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SITE DEVELOPMENT PLANS TO SERVE
NORTH AUSTIN CROSSROADS COMMUNITY CHURCH
15800 CROSSROADS DRIVE
AUSTIN, TEXAS 78681
EROSION AND SEDIMENTATION CONTROL PLAN

STATE OF TEXAS
JENNIFER L. HENDERSON
116883
LICENSED
PROFESSIONAL ENGINEER
02/10/2023

PROJECT NO. 200107	02/10/2023	DRAWN BY: JS	CHECKED BY: AR	APPROVED BY: JH

16 OF 54

CITY PROJECT NUMBER SP-2020-0328D

Plotted by: Adam, Plot date: 10/02/2023
File name: h:\02 projects\2020\200107 crossroads community church\07 Sheet\SD\200107 ESC.dwg

MATCHLINE SEE SHEET 15

MATCHLINE SEE SHEET 16

NEW 17,472 SF ONE STORY BUILDING FFE=790.00

SAM BASS FIRE DEPT.
REVIEWED
Plans must be on site for review at time of inspection
mselby
02/15/2023 1:37:34 PM

CONCRETE WASHOUT PER DETAIL ON SHEET C13.00

STABILIZED CONSTRUCTION ENTRANCE PER DETAIL ON SHEET C13.00

INSTALL SILT FENCE PER DETAIL ON SHEET 25

LIMITS OF CONSTRUCTION

INSTALL SILT FENCE WITH J-HOOKS PER DETAIL ON SHEET 25 DRAINAGE AREA=1.77 AC

25' DRAINAGE EASEMENT PER DOC. #2023010417

LOT 4
BLOCK A
GENE TAYLOR TRACT
(2019018154)

LEWIS WOODS, LLC.
(2015004536)

SCALE: 1"=20'

LEGEND	
LOC	LIMITS OF CONSTRUCTION (7.82 Ac.)
RC	ROCK CHECK DAM
IP	INLET PROTECTION
SF	SILT FENCE
CF	CONSTRUCTION FENCE
FD	FILTER DIKE
TP	TREE PROTECTION FENCE
ML	MULCH LOG
	FLOW ARROW

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APPROVED
Date 08/03/2023

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NORTH AUSTIN CROSSROADS COMMUNITY CHURCH
SITE DEVELOPMENT PLANS TO SERVE
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EROSION AND SEDIMENTATION CONTROL PLAN

STATE OF TEXAS
JENNIFER L. HENDERSON
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LICENSED PROFESSIONAL ENGINEER
02/10/2023

PROJECT NO. 200107	02/10/2023	DRAWN BY: JS	CHECKED BY: AR	APPROVED BY: JH

17 OF 54

Plotted by: Adam, Plot date: 10/02/2023
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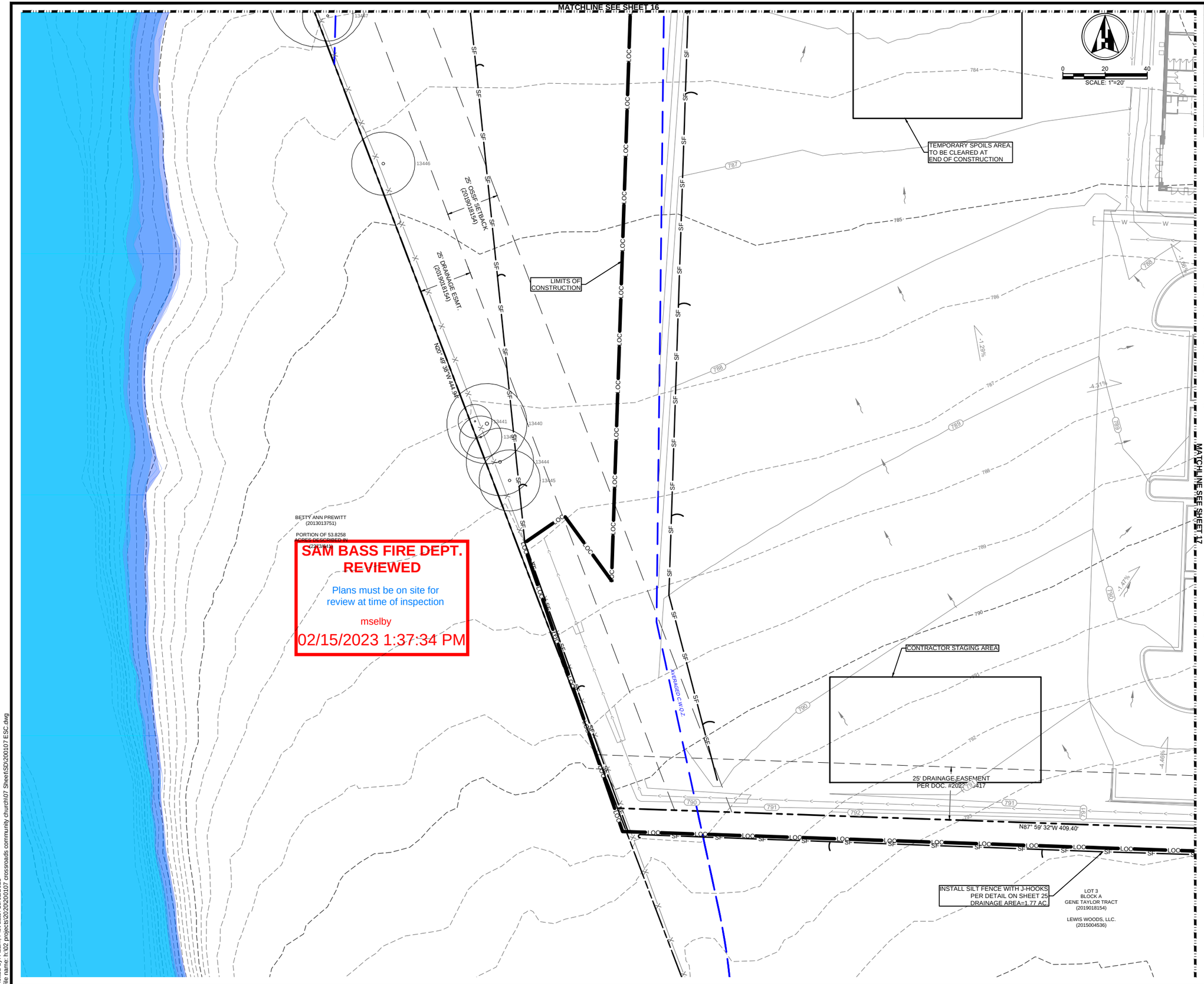

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CITY OF AUSTIN
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18 OF 54

CITY PROJECT NUMBER SP-2020-0328D

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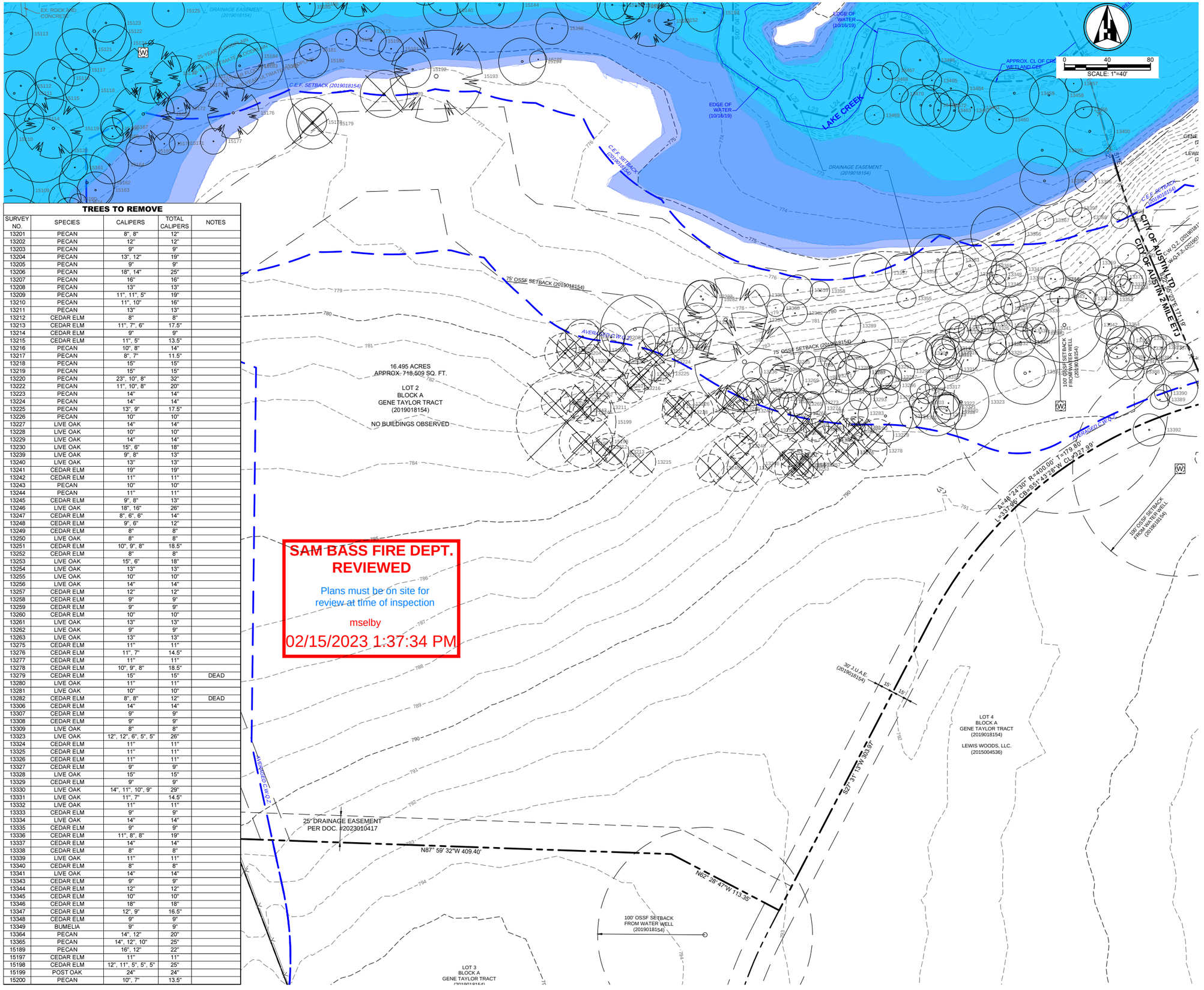
TREES TO REMOVE

SURVEY NO.	SPECIES	CALIPERS	TOTAL CALIPERS	NOTES
13201	PECAN	8", 8"	12"	
13202	PECAN	12"	12"	
13203	PECAN	9"	9"	
13204	PECAN	13", 12"	19"	
13205	PECAN	9"	9"	
13206	PECAN	18", 14"	25"	
13207	PECAN	16"	16"	
13208	PECAN	13"	13"	
13209	PECAN	11", 11", 5"	19"	
13210	PECAN	11", 10"	16"	
13211	PECAN	13"	13"	
13212	CEDAR ELM	8"	8"	
13213	CEDAR ELM	11", 7", 6"	17.5"	
13214	CEDAR ELM	9"	9"	
13215	CEDAR ELM	11", 5"	13.5"	
13216	PECAN	10", 8"	14"	
13217	PECAN	8", 7"	11.5"	
13218	PECAN	15"	15"	
13219	PECAN	15"	15"	
13220	PECAN	23", 10", 8"	32"	
13222	PECAN	11", 10", 8"	20"	
13223	PECAN	14"	14"	
13224	PECAN	14"	14"	
13225	PECAN	13", 9"	17.5"	
13226	PECAN	10"	10"	
13227	LIVE OAK	14"	14"	
13228	LIVE OAK	10"	10"	
13229	LIVE OAK	14"	14"	
13230	LIVE OAK	15", 6"	18"	
13239	LIVE OAK	9", 8"	13"	
13240	LIVE OAK	13"	13"	
13241	CEDAR ELM	19"	19"	
13242	CEDAR ELM	11"	11"	
13243	PECAN	10"	10"	
13244	PECAN	11"	11"	
13245	CEDAR ELM	9", 8"	13"	
13246	LIVE OAK	18", 16"	26"	
13247	CEDAR ELM	8", 6", 6"	14"	
13248	CEDAR ELM	9", 6"	12"	
13249	CEDAR ELM	8"	8"	
13250	LIVE OAK	8"	8"	
13251	CEDAR ELM	10", 9", 8"	18.5"	
13252	CEDAR ELM	8"	8"	
13253	LIVE OAK	15", 6"	18"	
13254	LIVE OAK	13"	13"	
13255	LIVE OAK	10"	10"	
13256	LIVE OAK	14"	14"	
13257	CEDAR ELM	12"	12"	
13258	CEDAR ELM	9"	9"	
13259	CEDAR ELM	9"	9"	
13260	CEDAR ELM	10"	10"	
13261	LIVE OAK	13"	13"	
13262	LIVE OAK	9"	9"	
13263	LIVE OAK	13"	13"	
13275	CEDAR ELM	11"	11"	
13276	CEDAR ELM	11", 7"	14.5"	
13277	CEDAR ELM	11"	11"	
13278	CEDAR ELM	10", 9", 8"	18.5"	
13279	CEDAR ELM	15"	15"	DEAD
13280	LIVE OAK	11"	11"	
13281	LIVE OAK	10"	10"	
13282	CEDAR ELM	8", 8"	12"	DEAD
13306	CEDAR ELM	14"	14"	
13307	CEDAR ELM	9"	9"	
13308	CEDAR ELM	9"	9"	
13309	LIVE OAK	8"	8"	
13323	LIVE OAK	12", 12", 6", 5", 5"	26"	
13324	CEDAR ELM	11"	11"	
13325	CEDAR ELM	11"	11"	
13326	CEDAR ELM	11"	11"	
13327	CEDAR ELM	9"	9"	
13328	LIVE OAK	15"	15"	
13329	CEDAR ELM	9"	9"	
13330	LIVE OAK	14", 11", 10", 9"	29"	
13331	LIVE OAK	11", 7"	14.5"	
13332	LIVE OAK	11"	11"	
13333	CEDAR ELM	9"	9"	
13334	LIVE OAK	14"	14"	
13335	CEDAR ELM	9"	9"	
13336	CEDAR ELM	11", 8", 8"	19"	
13337	CEDAR ELM	14"	14"	
13338	CEDAR ELM	8"	8"	
13339	LIVE OAK	11"	11"	
13340	CEDAR ELM	8"	8"	
13341	LIVE OAK	14"	14"	
13343	CEDAR ELM	9"	9"	
13344	CEDAR ELM	12"	12"	
13345	CEDAR ELM	10"	10"	
13346	CEDAR ELM	18"	18"	
13347	CEDAR ELM	12", 9"	16.5"	
13348	CEDAR ELM	9"	9"	
13349	BUMELIA	9"	9"	
13364	PECAN	14", 12"	20"	
13365	PECAN	14", 12", 10"	25"	
15189	PECAN	16", 12"	22"	
15197	CEDAR ELM	11"	11"	
15198	CEDAR ELM	12", 11", 5", 5", 5"	25"	
15199	POST OAK	24"	24"	
15200	PECAN	10", 7"	13.5"	



LEGEND	
	AREA OF PAVEMENT TO BE REMOVED
	LINEAR FEATURE TO BE REMOVED
LOC	LIMITS OF CONSTRUCTION
	TREES TO BE REMOVED

KEY MAP
(NOT TO SCALE)

NOTES:
1. NO EXISTING TREES WERE LOCATED WITHIN THE LIMITS OF THIS PROJECT SITE.
2. A PRE-CONSTRUCTION MEETING WITH THE ENVIRONMENTAL INSPECTOR IS REQUIRED PRIOR TO ANY SITE DISTURBANCE.

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REVISION

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SITE DEVELOPMENT PLANS
TO SERVE

NORTH AUSTIN CROSSROADS COMMUNITY CHURCH
15800 CROSSROADS DRIVE
AUSTIN, TEXAS 78681

DEMOLITION PLAN

STATE OF TEXAS
JENNIFER L. HENDERSON
116883
LICENSED
PROFESSIONAL ENGINEER
02/10/2023

CITY OF AUSTIN
APPROVED
Date 08/03/2023
FOUNDED 1839

PROJECT NO. 200107	02/10/2023	DRAWN BY: JS	CHECKED BY: AR	APPROVED BY: JH

CITY PROJECT NUMBER SP-2020-0328D

Plotted by: Adam, Plot date: 10/02/2023
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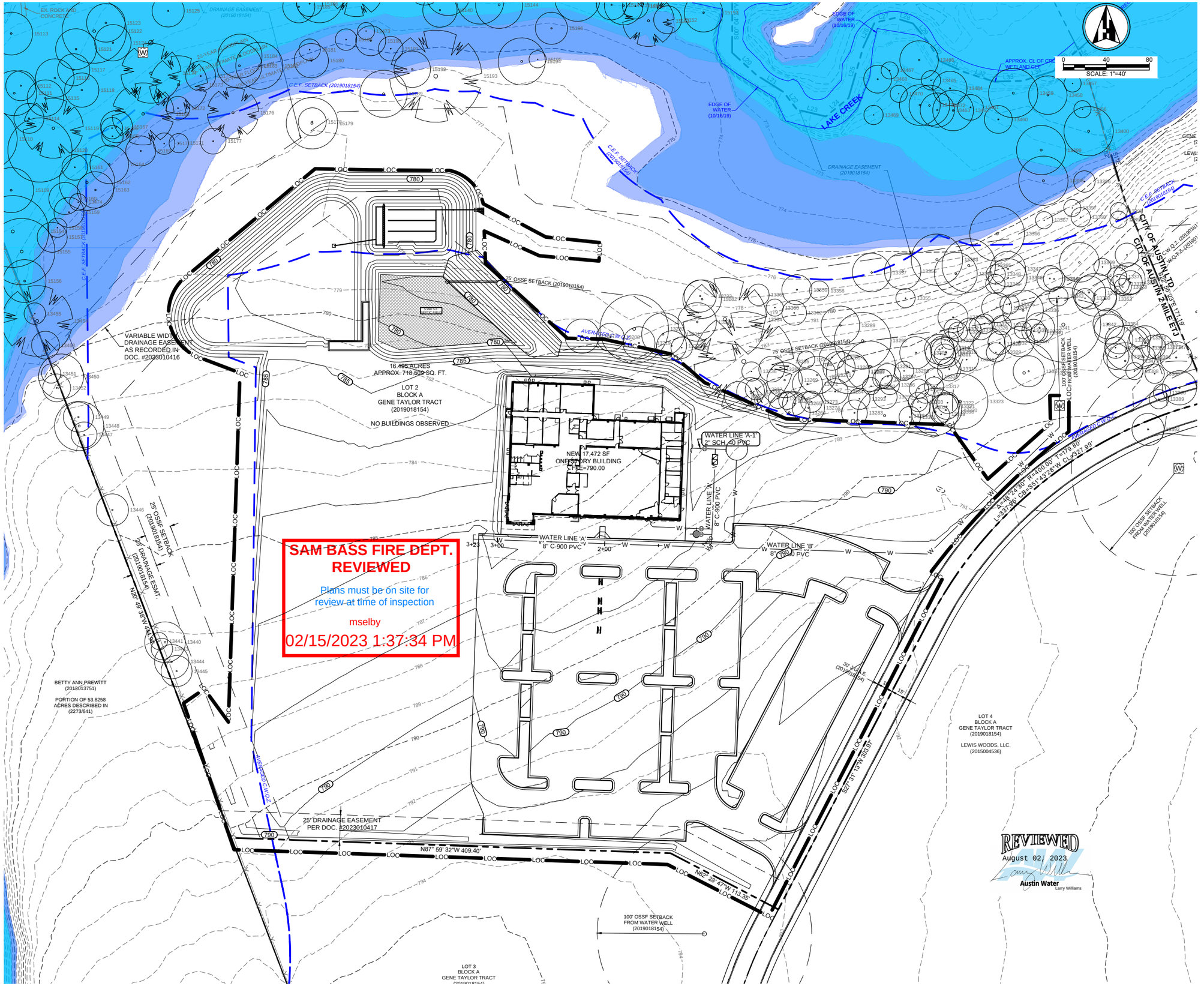

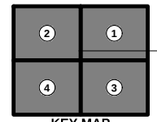

KEY MAP
(NOT TO SCALE)

NOTES:

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6. CONTRACTOR TO STAKEOUT WATERLINE EASEMENT PRIOR TO THE INSTALLATION OF THE WATERLINE, FOR INSTALLATION ACCURACY.
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   - 7.1. VERTICAL SEPARATION MUST BE AT LEAST TWO FEET FROM OUTSIDE DIAMETERS OF PIPES.
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11. PROVIDE 3' CLEAR AREA AROUND FIRE HYDRANTS.
12. ALL HYDRANTS SHALL MEET CITY OF ROUND ROCK'S 4-1/2" NST REQUIREMENTS AND WILL NEED TO HAVE A 6" MALE TO 4-1/2" FEMALE ADAPTER.

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SITE DEVELOPMENT PLANS TO SERVE

NORTH AUSTIN CROSSROADS COMMUNITY CHURCH

15800 CROSSROADS DRIVE
AUSTIN, TEXAS 78681

OVERALL UTILITY PLAN

PROJECT NO. 200107	02/10/2023	DRAWN BY: JS	CHECKED BY: AR	APPROVED BY: JH

Plotted by: Adam, Plot date: 10/02/2023
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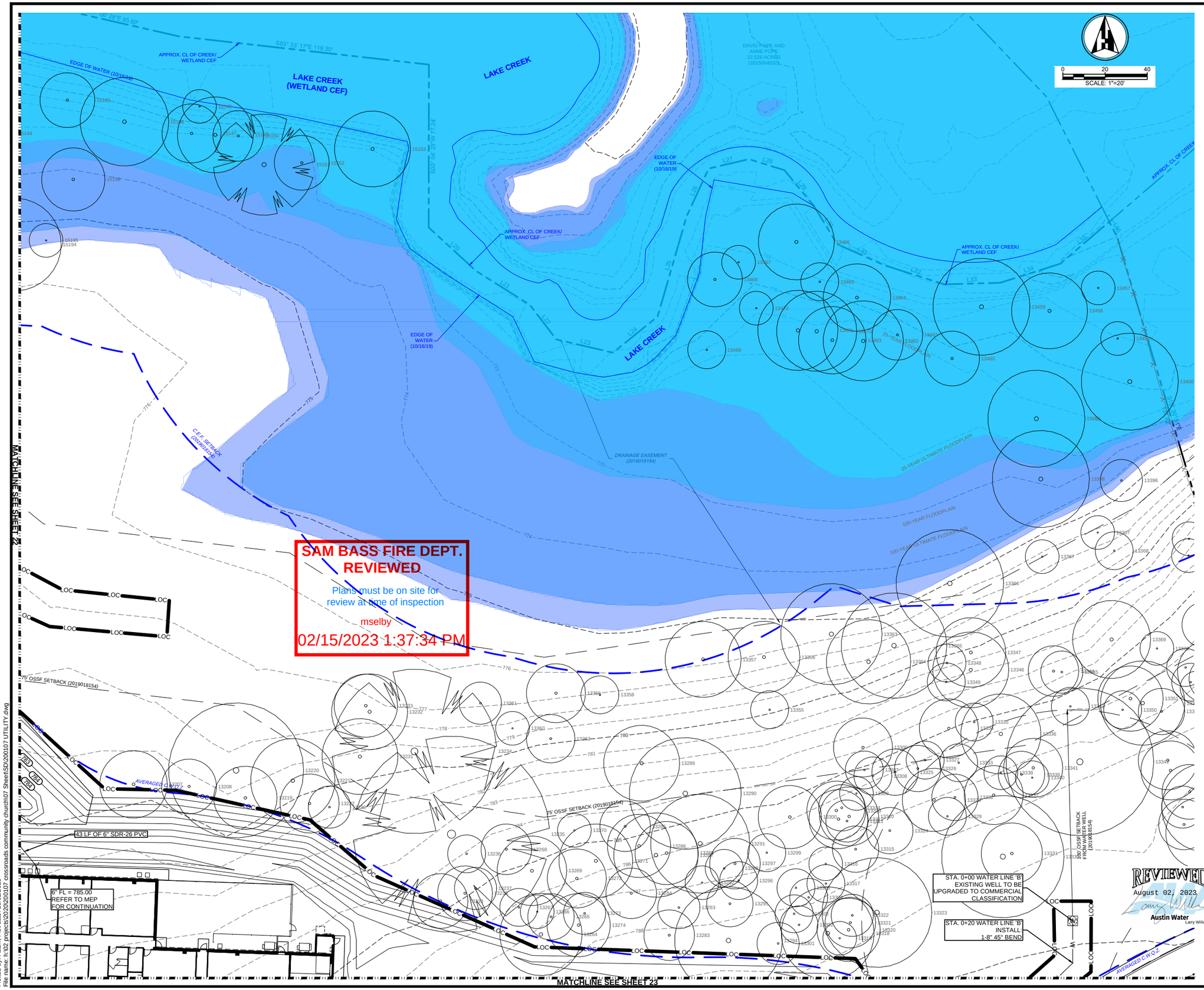
CITY PROJECT NUMBER SP-2020-0328D



SAM BASS FIRE DEPT.
REVIEWED
Plans must be on site for review at time of inspection
mselby
02/15/2023 1:37:34 PM

KEY MAP
(NOT TO SCALE)

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REVIEWED
August 02, 2023
Austin Water
Larry Williams

CITY OF AUSTIN
APPROVED
Date 08/03/2023
FOUNDED 1839

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SITE DEVELOPMENT PLANS TO SERVE
NORTH AUSTIN CROSSROADS COMMUNITY CHURCH
15800 CROSSROADS DRIVE
AUSTIN, TEXAS 78681

UTILITY PLAN 1

STATE OF TEXAS
JENNIFER L. HENDERSON
116883
LICENSED
PROFESSIONAL ENGINEER
02/10/2023

PROJECT NO. 200107	DRAWN BY: JS	CHECKED BY: AR	APPROVED BY: JH
02/10/2023			

21 OF 54

Plotted by: Adam, Plot date: 10/02/2023
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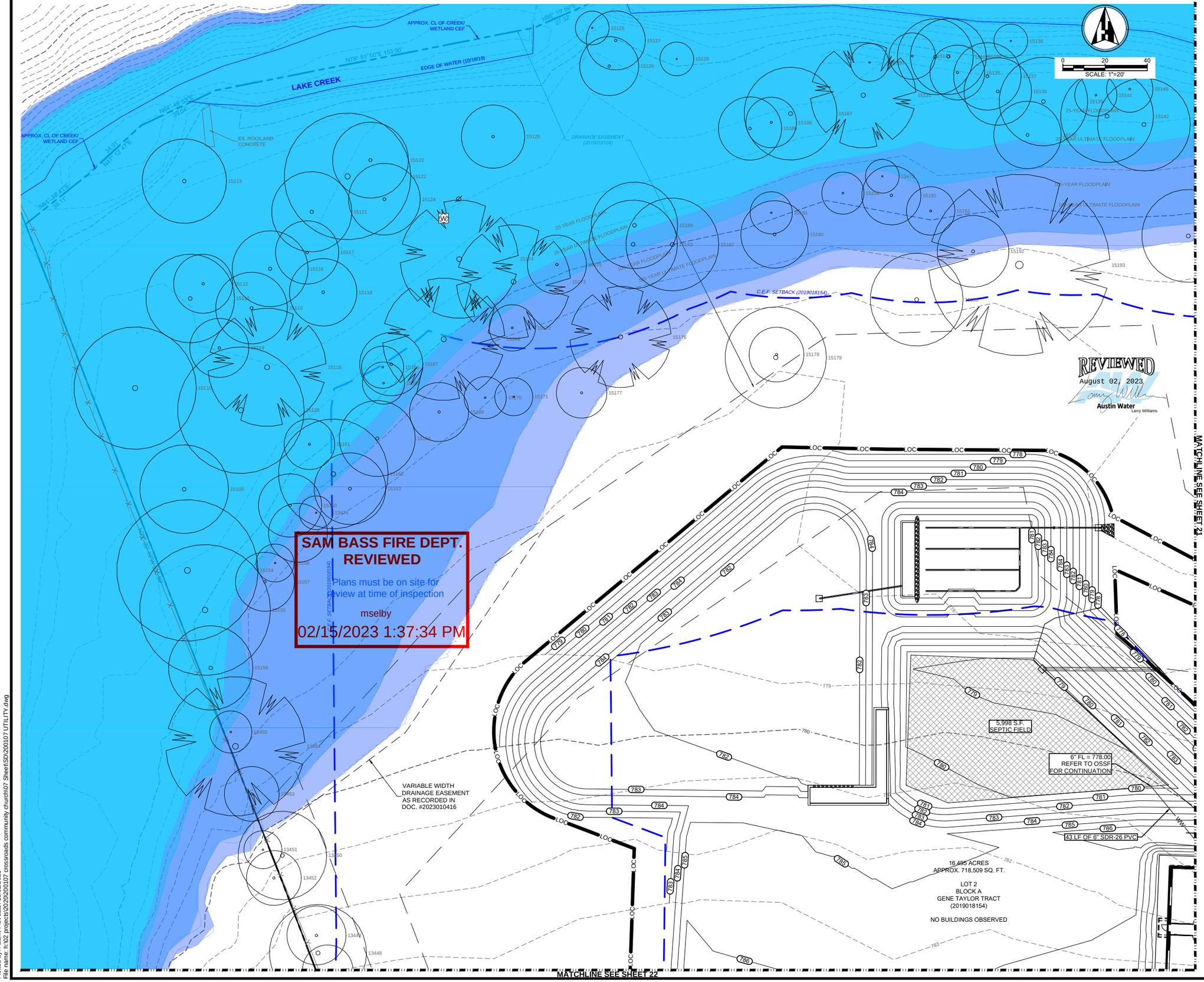
CITY PROJECT NUMBER SP-2020-0328D



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SITE DEVELOPMENT PLANS TO SERVE

NORTH AUSTIN CROSSROADS COMMUNITY CHURCH

15800 CROSSROADS DRIVE
AUSTIN, TEXAS 78681

UTILITY PLAN 2

JENNIFER L. HENDERSON
116883
LICENSED PROFESSIONAL ENGINEER
STATE OF TEXAS
02/10/2023

CITY OF AUSTIN
APPROVED
Date 08/03/2023
FOUNDED 1839

PROJECT NO. 200107	02/10/2023	DRAWN BY: JS	CHECKED BY: AR	APPROVED BY: JH

Plotted by: Adam, Plot date: 10/02/2023
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CITY PROJECT NUMBER SP-2020-0328D

MATCHLINE SEE SHEET 21

MATCHLINE SEE SHEET 22

STA. 0+22 WATER LINE 'A-1'
REFER TO MEP
FOR CONTINUATION

WATER LINE 'A-1'
2" SCH. 40 PVC

STA. 0+00 WATER LINE 'A'
CONNECT TO STORAGE TANK

190,000 GAL. TANK

STA. 0+10 WATER LINE 'A'=
STA. 0+00 WATER LINE 'A-1'
INSTALL:
1-8" GATE VALVE
1-8"x8" TEE
1-8"x2" REDUCER
1-2" GATE VALVE

STA. 0+20 WATER LINE 'A'
INSTALL:
8" BACKFLOW PREVENTER
PER DETAIL ON SHEET 26

NEW 17,472 SF
ONE STORY BUILDING
FFE=790.00

STA. 0+85 WATER LINE 'A'=
STA. 0+00 FIRE LINE 'A-2'
INSTALL:
1-8"x6" TEE
1-6" GATE VALVE
61 LF OF 6" DI

WATER LINE 'A'
8" C-900 PVC

STA. 0+61 FIRE LINE 'A-2'
REFER TO MEP
FOR CONTINUATION

STA. 0+56 FIRE LINE 'A-2'
INSTALL:
2-6" 45° BENDS

WATER LINE 'A'
8" C-900 PVC

2+00

STA. 3+74 WATER LINE 'B'
INSTALL:
1-8" 45° BEND

STA. 3+67 WATER LINE 'B'
INSTALL:
1-8" 45° BEND

FDC location?

STA. 0+90 WATER LINE 'A'=
STA. 0+00 FIRE LINE 'A-3'
INSTALL:
1-8"x6" TEE
1-6" GATE VALVE
15 LF OF 6" DI
1-FIRE HYDRANT ASSEMBLY
PER DETAIL ON SHEET 26

STA. 1+01 WATER LINE 'A'
INSTALL:
2-8" 45° BENDS

WATER LINE 'B'
8" C-900 PVC

STA. 1+90 WATER LINE 'B'
INSTALL:
1-8" 45° BEND

SAM BASS FIRE DEPT.
REVIEWED

Plans must be on site for
review at time of inspection

mselby

02/15/2023 1:37:34 PM

25' DRAINAGE EASEMENT
PER DOC. #2023010417

N02° 28' 47"W 113.35'

30' U.A.E.
(2019018154)

S27° 31' 15"W 393.97'

LOT 4
BLOCK A
GENE TAYLOR TRACT
(2019018154)

LEWIS WOODS, LLC.
(2015004536)

Δ=48°24'20" R=400.00'
L=337.95' CB=S57°43'28"W

SCALE: 1"=20'

KEY MAP
(NOT TO SCALE)

NOTES:
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CITY OF AUSTIN
APPROVED
Date 08/03/2023
FOUNDED 1839

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DRIVE, SUITE 604
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SITE DEVELOPMENT PLANS
TO SERVE

NORTH AUSTIN CROSSROADS COMMUNITY CHURCH
15800 CROSSROADS DRIVE
AUSTIN, TEXAS 78681

UTILITY PLAN 3

STATE OF TEXAS
JENNIFER L HENDERSON
116883
LICENSED
PROFESSIONAL ENGINEER
02/10/2023

PROJECT NO. 200107	02/10/2023	DRAWN BY: JS	CHECKED BY: AR	APPROVED BY: JH

23 OF 54

CITY PROJECT NUMBER SP-2020-0328D

MATCHLINE SEE SHEET 22

MATCHLINE SEE SHEET 23

0 20 40
SCALE: 1"=20'

STA. 3+23 WATER LINE 'A' INSTALL 1-8" CAP AND PLUG

3+23

3+00

W

25' OSSF SETBACK (2019018154)

25' DRAINAGE ESMT. (2019018154)

N20° 49' 38"W 444.98'

13446

13447

13441

13440

13443

13444

13445

BETTY ANN PREWITT
(2013013751)

PORTION OF 53.8258
ACRES DESCRIBED IN
2223/841

AVERAGED C.W.Q.Z.

25' DRAINAGE EASEMENT
PER DOC. #2022[illegible]417

N87° 59' 32"W 409.40'

LOT 3
BLOCK A
GENE TAYLOR TRACT
(2019018154)

LEWIS WOODS, LLC.
(2015004536)

784 785 786 787 788 789 790 791 792 793 794

SAM BASS FIRE DEPT.
REVIEWED

Plans must be on site for
review at time of inspection

mselby

02/15/2023 1:37:34 PM

KEY MAP
(NOT TO SCALE)

APPROVED
Date 08/03/2023

CITY PROJECT NUMBER SP-2020-0328D

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SITE DEVELOPMENT PLANS
TO SERVE

NORTH AUSTIN CROSSROADS COMMUNITY CHURCH
15800 CROSSROADS DRIVE
AUSTIN, TEXAS 78681

UTILITY PLAN 4

STATE OF TEXAS
JENNIFER L. HENDERSON
116883
LICENSED
PROFESSIONAL ENGINEER
02/10/2023

PROJECT NO. 200107	02/10/2023	DRAWN BY: JS	CHECKED BY: AR	APPROVED BY: JH

24 OF 54

Plotted by: Adam, Plot date: 10/02/2023
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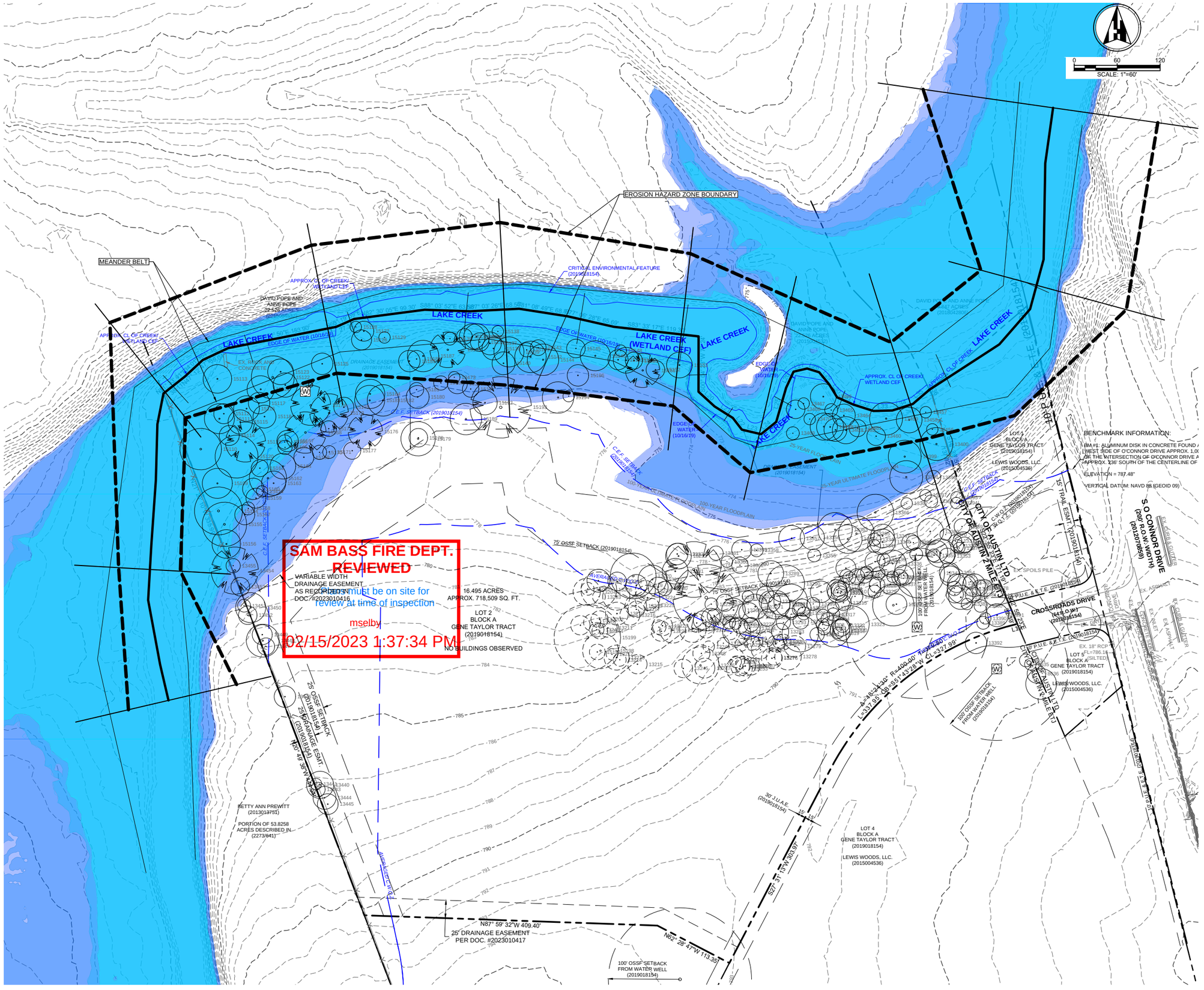

NOTES:
1. EROSION HAZARD ZONE SHOWN PER AUSTIN DRAINAGE CRITERIA MANUAL, APPENDIX E.
2. CALCULATED AVERAGE STREAM WIDTH = 43'
3. STREAM REACH LENGTH = 86+1286 = 2146'
4. CROSS SECTIONS SPACED EVERY 250'.
5. CROSS SECTION WIDTHS MINIMUM 400' ON CENTER OF LAKE CREEK.

BENCHMARK INFORMATION:

BM #1: ALUMINUM DISK IN CONCRETE FOUND A
WEST SIDE OF O'CONNOR DRIVE APPROX. 1.0
OF THE INTERSECTION OF O'CONNOR DRIVE A
APPROX. 136' SOUTH OF THE CENTERLINE OF

ELEVATION = 787.48'

VERTICAL DATUM: NAVD 88 (GEOID 09)

APPROVED
Date 08/03/2023

CITY PROJECT NUMBER SP-2020-0328D

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SITE DEVELOPMENT PLANS
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15800 CROSSROADS DRIVE
AUSTIN, TEXAS 78681

EROSION HAZARD ZONE EXHIBIT

STATE OF TEXAS
JENNIFER L. HENDERSON
116883
LICENSED
PROFESSIONAL ENGINEER
02/10/2023

PROJECT NO. 200107	02/10/2023	DRAWN BY: JS	CHECKED BY: AR	APPROVED BY: JH

25 OF 54

Plotted by: Adam. Plot date: 10/02/2023
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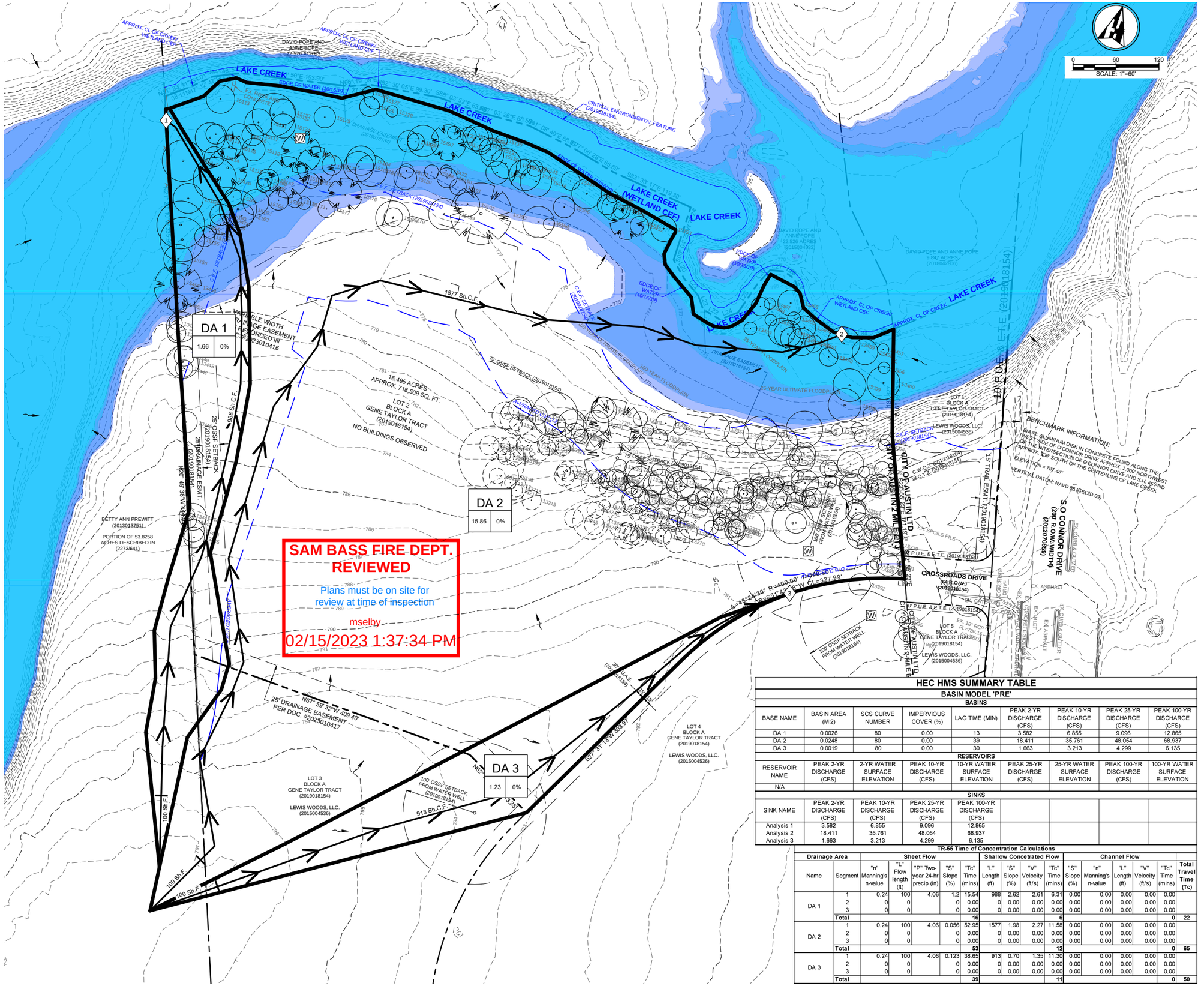

SAM BASS FIRE DEPT. REVIEWED

Plans must be on site for review at time of inspection

mselby

02/15/2023 1:37:34 PM

LEGEND

DA 1 0.90 | 0%	DRAINAGE AREA LABEL AREA NAME, AREA (ACRES), IMPERVIOUS COVER PERCENTAGE
◇ X	ANALYSIS POINT
100 LF Sh.F.	SHEET FLOW SEGMENT OF TIME OF CONCENTRATION (Tc) PATH
500 LF Sh.C.F.	SHALLOW CONCENTRATED FLOW SEGMENT OF Tc PATH
500 LF Ch.F.	CHANNELIZED FLOW SEGMENT OF Tc PATH
~→	FLOW ARROW

NOTES:

1. WEB SOIL SURVEY SHOWS THE PROJECT SITE TO HAVE A HYDROLOGIC SOIL GROUP RATING 'D'.
2. THE EXISTING SITE IS MOSTLY CLEAR WITH GRASS COVER OVER 75% OF THE SITE. RANDOM SHRUBS AND PATCHES OF TREES AND SCRUB ARE LOCATED ON THE SITE. A CURVE NUMBER OF 80 WAS SELECTED FOR THESE CONDITIONS.
3. TIME OF CONCENTRATION IS CALCULATED USING STANDARD TR-55 FORMULAE, WITH A MINIMUM OF 5 MINUTES ALLOWED.
4. LAG TIME IS CALCULATED USING TIME OF CONCENTRATION MULTIPLIED BY 0.6, WITH A MINIMUM OF 5 MINUTES ALLOWED.
5. SITE IS LOCATED WITHIN THE CITY OF AUSTIN ZONE 2 FOR PRECIPITATION CALCULATIONS. DEPTH-DURATION-FREQUENCY VALUES FOR ZONE 2 WERE USED IN CALCULATING THE RAINFALL RUNOFF USING HEC-HMS. THE OUTPUT TABLES SHOWN ARE SUMMARIES OF THE ANALYSIS FROM THE MODEL.

HEC HMS SUMMARY TABLE

BASIN MODEL 'PRE'

BASINS

BASE NAME	BASIN AREA (MI2)	SCS CURVE NUMBER	IMPERVIOUS COVER (%)	LAG TIME (MIN)	PEAK 2-YR DISCHARGE (CFS)	PEAK 10-YR DISCHARGE (CFS)	PEAK 25-YR DISCHARGE (CFS)	PEAK 100-YR DISCHARGE (CFS)
DA 1	0.0026	80	0.00	13	3.582	6.855	9.096	12.865
DA 2	0.0248	80	0.00	39	18.411	35.761	48.054	68.937
DA 3	0.0019	80	0.00	30	1.663	3.213	4.299	6.135

RESERVOIRS

RESERVOIR NAME	PEAK 2-YR DISCHARGE (CFS)	2-YR WATER SURFACE ELEVATION	PEAK 10-YR DISCHARGE (CFS)	10-YR WATER SURFACE ELEVATION	PEAK 25-YR DISCHARGE (CFS)	25-YR WATER SURFACE ELEVATION	PEAK 100-YR DISCHARGE (CFS)	100-YR WATER SURFACE ELEVATION
N/A								

SINKS

SINK NAME	PEAK 2-YR DISCHARGE (CFS)	PEAK 10-YR DISCHARGE (CFS)	PEAK 25-YR DISCHARGE (CFS)	PEAK 100-YR DISCHARGE (CFS)
Analysis 1	3.582	6.855	9.096	12.865
Analysis 2	18.411	35.761	48.054	68.937
Analysis 3	1.663	3.213	4.299	6.135

TR-55 Time of Concentration Calculations

Drainage Area		Sheet Flow					Shallow Concetrated Flow				Channel Flow					
Name	Segment	"n" Manning's n-value	"L" Flow length (ft)	"P" Two-year 24-hr precip (in)	"S" Slope (%)	"Tc" Time (mins)	"L" Length (ft)	"S" Slope (%)	"V" Velocity (ft/s)	"Tc" Time (mins)	"S" Slope (%)	"n" Manning's n-value	"L" Length (ft)	"V" Velocity (ft/s)	"Tc" Time (mins)	Total Travel Time (Tc)
DA 1	1	0.24	100	4.06	1.2	15.54	988	2.62	2.61	6.31	0.00	0.00	0.00	0.00	0.00	
	2	0	0		0	0.00	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
	3	0	0		0	0.00	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
	Total					16				6					0	22
DA 2	1	0.24	100	4.06	0.056	52.95	1577	1.98	2.27	11.58	0.00	0.00	0.00	0.00	0.00	
	2	0	0		0	0.00	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
	3	0	0		0	0.00	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
	Total					53				12					0	65
DA 3	1	0.24	100	4.06	0.123	38.65	913	0.70	1.35	11.30	0.00	0.00	0.00	0.00	0.00	
	2	0	0		0	0.00	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
	3	0	0		0	0.00	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
	Total					39				11					0	50

CITY OF AUSTIN
APPROVED
Date 08/03/2023

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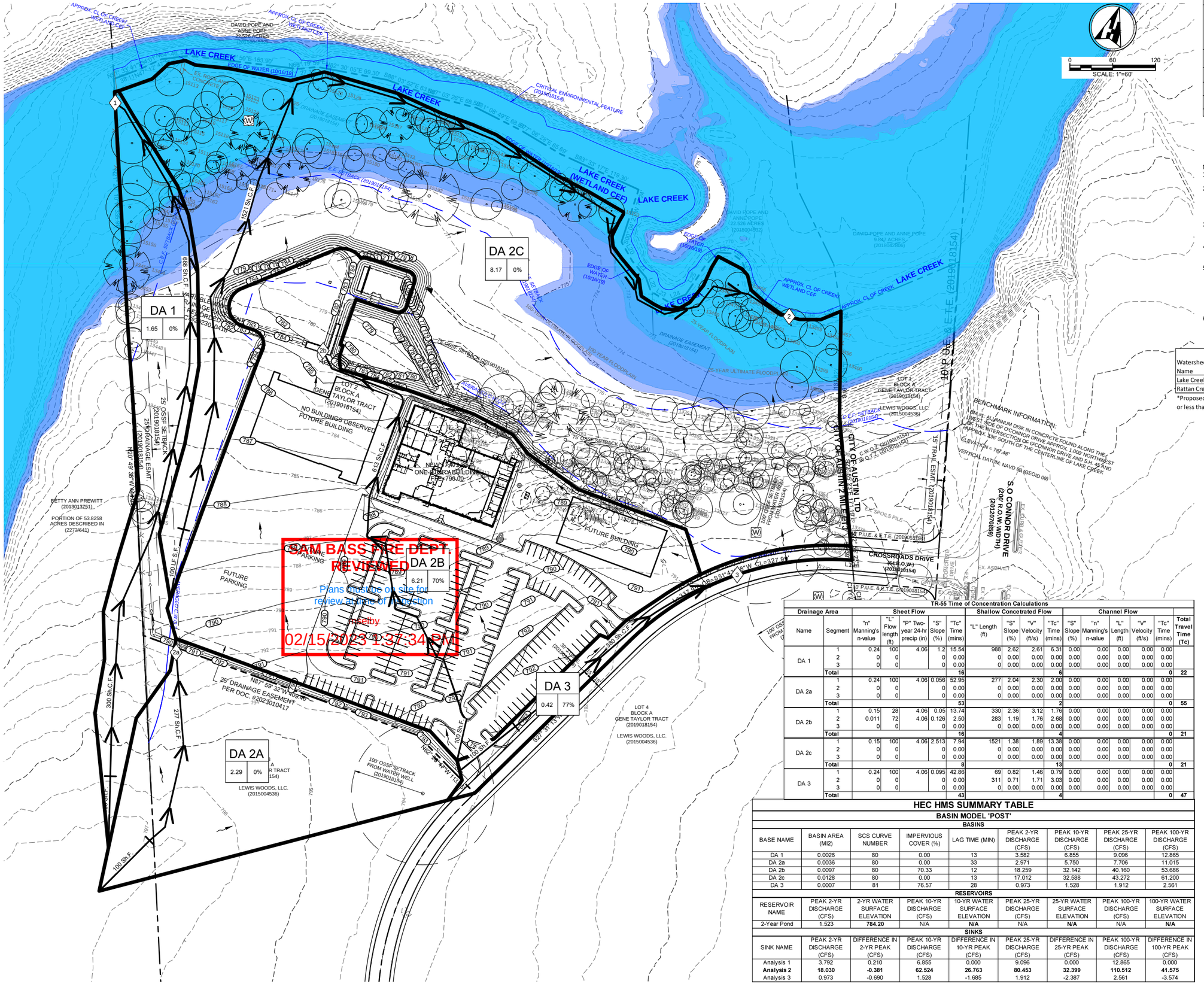
SITE DEVELOPMENT PLANS
TO SERVE
NORTH AUSTIN CROSSROADS COMMUNITY CHURCH
15800 CROSSROADS DRIVE
AUSTIN, TEXAS 78681

PRE-DEVELOPMENT DRAINAGE AREA MAP

JENNIFER L. HENDERSON
116883
02/10/2023

PROJECT NO. 200107
02/10/2023
DRAWN BY: JS
CHECKED BY: AR
APPROVED BY: JH



SAM BASS FIRE DEPT. REVIEWED

Plans must be on site for review at time of inspection

mselby

02/15/2023 1:37:34 PM

LEGEND

DA 1 0.90 0%	DRAINAGE AREA LABEL AREA NAME, AREA (ACRES), IMPERVIOUS COVER PERCENTAGE
X	ANALYSIS POINT
100 LF Sh.F.	SHEET FLOW SEGMENT OF TIME OF CONCENTRATION (Tc) PATH
500 LF Sh.C.F.	SHALLOW CONCENTRATED FLOW SEGMENT OF Tc PATH
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⁓→	FLOW ARROW

NOTES:

1. WEB SOIL SURVEY SHOWS THE PROJECT SITE TO HAVE A HYDROLOGIC SOIL GROUP RATING 'D'.
2. THE EXISTING SITE IS MOSTLY CLEAR WITH GRASS COVER OVER 75% OF THE SITE. RANDOM SHRUBS AND PATCHES OF TREES AND SCRUB ARE LOCATED ON THE SITE. A CURVE NUMBER OF 80 WAS SELECTED FOR THESE CONDITIONS.
3. TIME OF CONCENTRATION IS CALCULATED USING STANDARD TR-55 FORMULAE, WITH A MINIMUM OF 5 MINUTES ALLOWED.
4. LAG TIME IS CALCULATED USING TIME OF CONCENTRATION MULTIPLIED BY 0.6, WITH A MINIMUM OF 5 MINUTES ALLOWED.
5. SITE IS LOCATED WITHIN THE CITY OF AUSTIN ZONE 2 FOR PRECIPITATION CALCULATIONS. DEPTH-DURATION-FREQUENCY VALUES FOR ZONE 2 WERE USED IN CALCULATING THE RAINFALL RUNOFF USING HEC-HMS. THE OUTPUT TABLES SHOWN ARE SUMMARIES OF THE ANALYSIS FROM THE MODEL.
6. POST-DEVELOPED DRAINAGE AREAS USED THE SAME PRE-DEVELOPED CURVE NUMBERS WITH AN IMPERVIOUS COVER VALUE ADDED.

Watershed Name	Existing Site Area Draining to Watershed (ac.)	Proposed Site Area Draining to Watershed (ac.)	Proposed Quantity (in ac. of drainage) of Diversion*
Lake Creek	15.92	16.06	0.14
Rattan Creek	0.58	0.44	-0.14

*Proposed diversion must be less than 20 percent of the gross site area or less than 1 acre, whichever is smaller.

TR-55 Time of Concentration Calculations

Drainage Area		Sheet Flow					Shallow Concetrated Flow				Channel Flow					
Name	Segment	"n" Manning's n-value	"L" Flow length (ft)	"P" Two-year 24-hr precip (in)	"S" Slope (%)	"Tc" Time (mins)	"L" Length (ft)	"S" Slope (%)	"V" Velocity (ft/s)	"Tc" Time (mins)	"S" Slope (%)	"n" Manning's n-value	"L" Length (ft)	"V" Velocity (ft/s)	"Tc" Time (mins)	Total Travel Time (Tc)
DA 1	1	0.24	100	4.06	1.2	15.54	988	2.62	2.61	6.31	0.00	0.00	0.00	0.00	0.00	
	2	0	0		0	0.00	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
	3	0	0		0	0.00	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
	Total					**16**				**6**					**0**	**22**
DA 2a	1	0.24	100	4.06	0.056	52.95	277	2.04	2.30	2.00	0.00	0.00	0.00	0.00	0.00	
	2	0	0		0	0.00	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
	3	0	0		0	0.00	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
	Total					**53**				**2**					**0**	**55**
DA 2b	1	0.15	28	4.06	0.05	13.74	330	2.36	3.12	1.76	0.00	0.00	0.00	0.00	0.00	
	2	0.011	72	4.06	0.126	2.50	283	1.19	1.76	2.68	0.00	0.00	0.00	0.00	0.00	
	3	0	0		0	0.00	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
	Total					**16**				**4**					**0**	**21**
DA 2c	1	0.15	100	4.06	2.513	7.94	1521	1.38	1.89	13.38	0.00	0.00	0.00	0.00	0.00	
	2	0	0		0	0.00	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
	3	0	0		0	0.00	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
	Total					**8**				**13**					**0**	**21**
DA 3	1	0.24	100	4.06	0.095	42.86	69	0.82	1.46	0.79	0.00	0.00	0.00	0.00	0.00	
	2	0	0		0	0.00	311	0.71	1.71	3.03	0.00	0.00	0.00	0.00	0.00	
	3	0	0		0	0.00	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
	Total					**43**				**4**					**0**	**47**

HEC HMS SUMMARY TABLE

BASIN MODEL 'POST'

BASINS

BASE NAME	BASIN AREA (MI2)	SCS CURVE NUMBER	IMPERVIOUS COVER (%)	LAG TIME (MIN)	PEAK 2-YR DISCHARGE (CFS)	PEAK 10-YR DISCHARGE (CFS)	PEAK 25-YR DISCHARGE (CFS)	PEAK 100-YR DISCHARGE (CFS)
DA 1	0.0026	80	0.00	13	3.582	6.855	9.096	12.865
DA 2a	0.0036	80	0.00	33	2.971	5.750	7.706	11.015
DA 2b	0.0097	80	70.33	12	18.259	32.142	40.160	53.686
DA 2c	0.0128	80	0.00	13	17.012	32.588	43.272	61.200
DA 3	0.0007	81	76.57	28	0.973	1.528	1.912	2.561

RESERVOIRS

RESERVOIR NAME	PEAK 2-YR DISCHARGE (CFS)	2-YR WATER SURFACE ELEVATION	PEAK 10-YR DISCHARGE (CFS)	10-YR WATER SURFACE ELEVATION	PEAK 25-YR DISCHARGE (CFS)	25-YR WATER SURFACE ELEVATION	PEAK 100-YR DISCHARGE (CFS)	100-YR WATER SURFACE ELEVATION
2-Year Pond	1.523	**784.20**	N/A	**N/A**	N/A	**N/A**	N/A	**N/A**

SINKS

SINK NAME	PEAK 2-YR DISCHARGE (CFS)	DIFFERENCE IN 2-YR PEAK (CFS)	PEAK 10-YR DISCHARGE (CFS)	DIFFERENCE IN 10-YR PEAK (CFS)	PEAK 25-YR DISCHARGE (CFS)	DIFFERENCE IN 25-YR PEAK (CFS)	PEAK 100-YR DISCHARGE (CFS)	DIFFERENCE IN 100-YR PEAK (CFS)
Analysis 1	3.792	0.210	6.855	0.000	9.096	0.000	12.865	0.000
Analysis 2	**18.030**	**-0.381**	**62.524**	**26.763**	**80.453**	**32.399**	**110.512**	**41.575**
Analysis 3	0.973	-0.690	1.528	-1.685	1.912	-2.387	2.561	-3.574

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SITE DEVELOPMENT PLANS TO SERVE

NORTH AUSTIN CROSSROADS COMMUNITY CHURCH

15800 CROSSROADS DRIVE
AUSTIN, TEXAS 78681

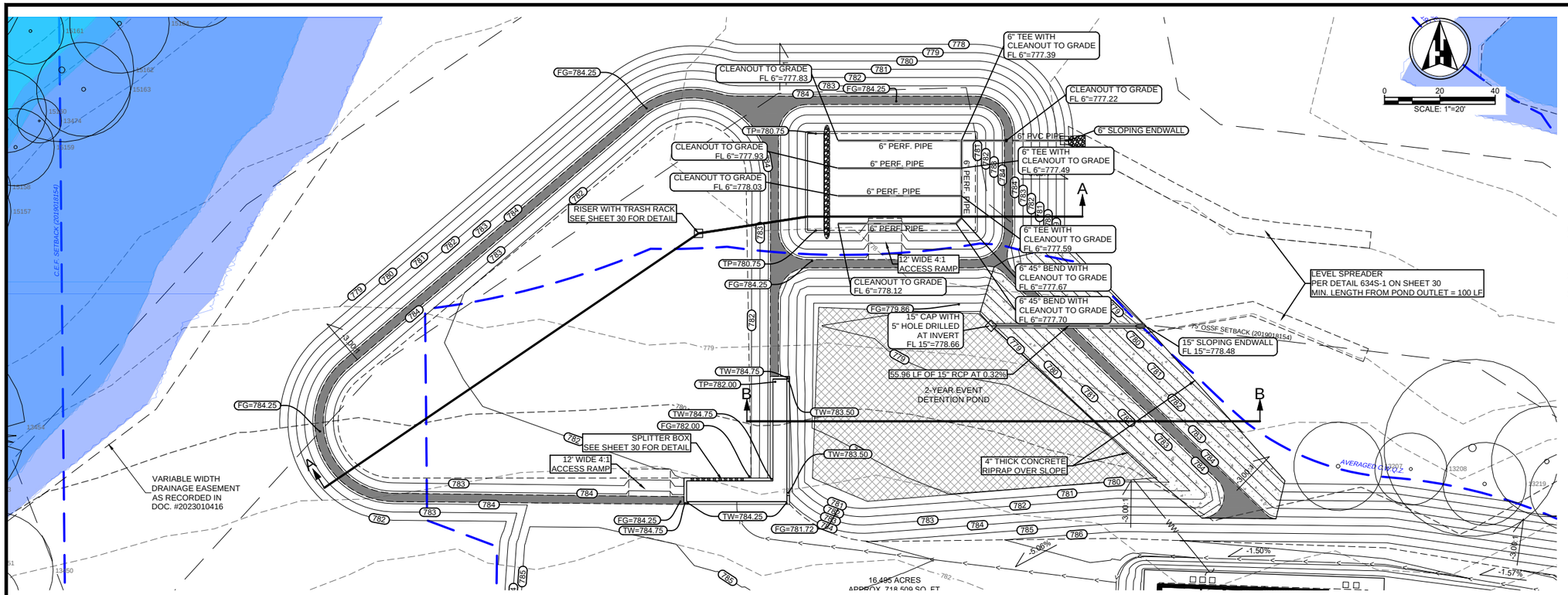
POST-DEVELOPMENT DRAINAGE AREA MAP

JENNIFER L. HENDERSON
116883

02/10/2023

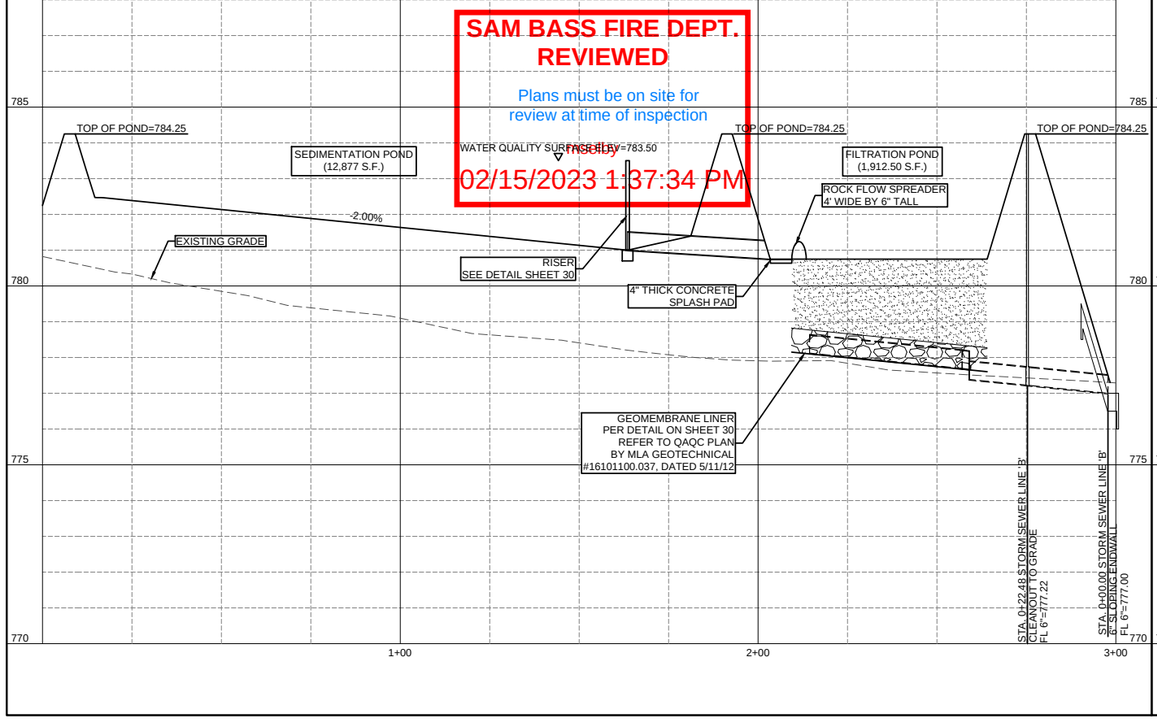
PROJECT NO. 200107
02/10/2023
DRAWN BY: JS
CHECKED BY: AR
APPROVED BY: JH

APPROVED
Date 08/03/2023



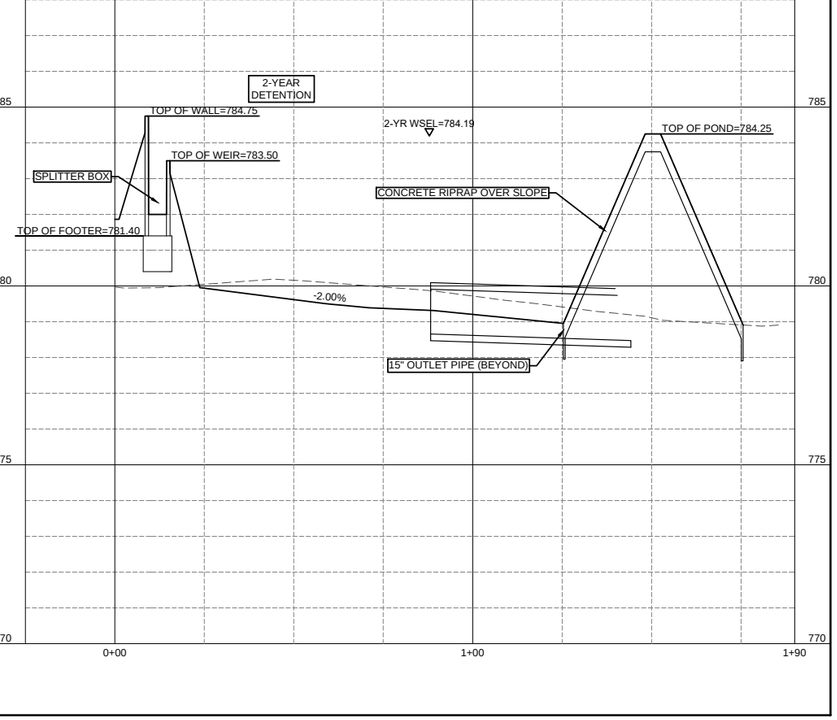
POND SECTION 'A'

VERT. SCALE: 1"=20'
HORIZ. SCALE: 1"=2'



POND SECTION 'B'

VERT. SCALE: 1"=20'
HORIZ. SCALE: 1"=2'



NOTES:

1. ALL EARTHEN EMBANKMENTS SHALL BE COMPACTED TO 95% OF MAXIMUM DENSITY IN ACCORDANCE WITH COA STANDARD SPECIFICATIONS.
2. EARTHEN EMBANKMENT SIDE SLOPES SHALL BE NO STEEPER THAN 3 HORIZONTAL TO 1 VERTICAL.
3. THE FOLLOWING MAINTENANCE ITEMS SHOULD BE PERFORMED DEPENDING ON FREQUENCY AND TIME OF YEAR:
   - 3.1. BIWEEKLY DURING FIRST GROWING SEASON: INSPECT VEGETATION UNTIL 95% VEGETATIVE COVER IS ESTABLISHED.
   - 3.2. MONTHLY: CHECK FOR ACCUMULATED SEDIMENTS, REMOVE AS NEEDED.
   - 3.3. QUARTERLY: REMOVE DEBRIS AND ACCUMULATED SEDIMENT; REPLACE SOIL MEDIA IN VOID AREAS CAUSED BY SETTLEMENT; REPAIR ERODED AREAS; REMULCH BY HAND ANY VOID AREAS.
   - 3.4. SEMI-ANNUALLY: REMOVE AND REPLACE DEAD OR DISEASED VEGETATION THAT IS CONSIDERED BEYOND TREATMENT (SEE PLANTING SPECIFICATIONS); TREAT ALL DISEASED TREES AND SHRUBS MECHANICALLY OR BY HAND DEPENDING ON THE INSECT OR DISEASE INFESTATION. IF DRAWDOWN EXCEEDS THE DRAWDOWN TIME ACCORDING TO SECTION 1.6.3.C.1, LIGHTLY SCARIFY SOIL WITH HAND CULTIVATOR; IF STANDING WATER REMAINS FOR GREATER THAN 96 HOURS, REMOVE TOP LAYER OF SEDIMENT, MULCH, AND POTENTIALLY VEGETATION; DE-COMPACT SOIL BY SCARIFICATION, AND REPLACE MULCH AND DISTURBED VEGETATION.
   - 3.5. LATE WINTER: TRIM BUNCH GRASSES; MOW TURF GRASSES; HARVEST OTHER TYPES OF VEGETATION ACCORDING TO RECOMMENDATIONS IN THE PLANTING SPECIFICATIONS. ADHERE TO SECTION 1.6.2.F.
   - 3.6. SPRING: REMOVE PREVIOUS MULCH LAYER AND APPLY NEW MULCH LAYER BY HAND (OPTION) ONCE EVERY TWO TO THREE YEARS.

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SITE DEVELOPMENT PLANS TO SERVE

NORTH AUSTIN CROSSROADS COMMUNITY CHURCH
15800 CROSSROADS DRIVE
AUSTIN, TEXAS 78681

WATER QUALITY POND AND SECTIONS

PROJECT NO. 200107	02/10/2023	DRAWN BY: JS	CHECKED BY: AR	APPROVED BY: JH

CITY OF AUSTIN
APPROVED
Date 08/03/2023
FOUNDED 1839

CITY PROJECT NUMBER SP-2020-0328D

Plotted by: Adam, Plot date: 10/02/2023
File name: h:\02 projects\2020\200107 crossroads community church\07 Sheets\SD\200107 WQ.dwg

APPENDIX R-6:
FULL OR PARTIAL BIOFILTRATION POND CALCULATIONS
FOR DEVELOPMENT PERMITS
Crossroads Community Church, SD-2020-0328D

DRAINAGE AREA DATA:

Drainage area to control (DA)	5.71	ac.
Drainage area Impervious Cover	76.54%	
Capture Depth (CD) = (0.5+(IC-20)/100)	1.065	in

WATER QUALITY CONTROL CALCULATIONS	Required		Provided	
The Water Quality Control is to be BIOFILTRATON				
25-year peak flow rate to control (Q25)	37.25	cfs	37.45	cfs
100-year peak flow rate to control (Q100)	49.576	cfs		
Water Quality Volume (WQV=CD*DA*3630) @ WQE	22083	cf	23,992	cf
Maximum Ponding Depth above Sand Bed (H)			2.50	ft
Sedimentation Pond Area			12,877	sf
For Full Sedimentation Pond Volume (min. of WQV)	≥ 23992	cf	23992.00	cf
For Partial Sedimentation Pond Volume (min of 20% of WQV)	≥	cf		cf
For Full Filtration Pond Area , Af = WQV/(7 + 2.33*H)	≥ 1870.72	sf	1912.50	sf
For Partial Filtration Pond Area , Af = WQV/(4 + 1.33*H)	≥	sf		sf
Filtration Pond Volume			7,784	cf
Water Qualtiy Elevation			783.50	ft msl
Elevation of Splitter/Overflow Weir (min WQ elev)	≥ 783.5	ft msl	783.50	ft msl
Length of Splitter Weir			42	ft
Required head to Pass Q100 (max 1ft)	≤ 1.00	ft	0.49788	ft
Pond freeboard to pass Q100 (min 0.25 ft)	≥ 0.25	ft	0.252	ft
Top of peripheral wall (elev)			784.25	ft msl
Biofiltration Pond Drawdown Time (min.48 hrs)	≥ 48	hrs	49.74	hrs
Underdrain Orifice Size (diameter)		in	1.60	in
Underdrain Orifice Size (area)		sq in	2.01	sq in
BIOLOGICAL ELEMENTS CALCULATIONS:				
Surface Area of Entire Pond Bottom (SA)	≥	sf	**14789.50**	sf
Total Plantings Required (Min 10% of SA)	≥	plants		plants
Sedimentation Pond Plantings (Min. 20% of Total Plantings)	≥	plants		plants
Filtration Pond Plantings (Min. 50% of Total Planitings)	≥	plants		plants

Sedimentation pond

Stage (ft msl) (Elevation)	Area (sf)	Storage Volume (cf)	
780.75	0.00	0	
781.00	0.00	0	
781.25	985.93	82	
781.50	3,488.04	610	
781.75	6,357.97	1,822	
782.00	9,602.04	3,804	
782.25	11,937.12	6,491	
782.50	13,251.65	9,638	
782.75	13,597.26	12,994	
783.00	13,945.83	16,437	
783.25	14,297.34	19,967	
783.50	14,651.85	23,586	WQV
783.75	15,009.39	27,293	
784.00	15,369.92	31,090	

Filtration Pond

Stage (ft msl) (Elevation)	Area (sf)	Storage Volume (cf)	
780.75	2,122.50	0	
781.00	2,267.73	549	
781.25	2,416.49	1,134	
781.50	2,568.79	1,757	
781.75	2,724.62	2,419	
782.00	2,883.98	3,120	
782.25	3,046.87	3,861	
782.50	3,213.30	4,643	
782.75	3,383.26	5,468	
783.00	3,556.75	6,335	
783.25	3,733.77	7,247	
783.50	3,914.33	8,202	WQV
783.75	4,098.42	9,204	
784.00	4,286.04	10,252	

Splitter Box Outlet Orifice

Inputs		Outputs	
Weir Type	Rectangular	Head Depth (ft) (H)	0.58
Crest	Broad	Area (sf)	0.58
Width (ft) (L)	1.00	Velocity (ft/s)	0.46
Max Depth (ft)	0.58	Q (cfs)	0.267
Weir Coefficient (Cw)	0.60		
Known Q (cfs)			
Known Head (ft) (H)			
Formula	Q=CwLH^1.5		

PMF Calculation Through Splitter Weir

Inputs		Outputs	
Weir Type	Rectangular	Head Depth (ft) (H)	0.59
Crest	Broad	Area (sf)	26.77
Width (ft) (L)	45.00	Velocity (ft/s)	2.01
Max Depth (ft)	1.00	Q (cfs)	
Weir Coefficient (Cw)	2.60	Will it pass?	Yes
Known Q (cfs)	53.680		
Known Head (ft) (H)			
Head Depth 100 yr (ft)	0.252		
Formula	Q=CwLH^1.5		

2-year Detention Pond Stage-Storage

.25' Interval Elevation	Area S.F.	Area AC.	Storm Event	Avg. End Area Method	Accumulated Volume	Conic Approx. Method	Accumulated Volume	Outflow (cfs)
778.50	0.00	-		-	-	-	-	0.000
778.75	326.75	0.00750		40.84	40.84	27.23	27.23	0.020
779.00	1337.14	0.03070		207.99	248.83	193.74	220.97	0.280
779.25	2769.62	0.06358		513.35	762.18	502.60	723.57	0.430
779.50	4044.08	0.09284		851.71	1,613.89	846.70	1,570.27	0.541
779.75	5106.13	0.11722		1,143.78	2,757.66	1,141.20	2,711.47	0.631
780.00	5939.00	0.13634		1,380.64	4,138.31	1,379.33	4,090.80	0.711
780.25	6625.42	0.15210		1,570.55	5,708.86	1,569.77	5,660.57	0.787
780.50	7064.57	0.16218		1,711.25	7,420.11	1,710.96	7,371.53	0.848
780.75	7335.92	0.16841		1,800.06	9,220.17	1,799.95	9,171.48	0.912
781.00	7612.19	0.17475		1,868.51	11,088.68	1,868.41	11,039.89	0.974
781.25	7893.24	0.18120		1,938.18	13,026.86	1,938.07	12,977.96	1.025
781.50	8179.06	0.18777		2,009.04	15,035.90	2,008.93	14,986.89	1.074
781.75	8469.22	0.19443		2,081.04	17,116.93	2,080.93	17,067.82	1.118
782.00	8762.35	0.20116		2,153.95	19,270.88	2,153.84	19,221.66	1.173
782.25	9058.35	0.20795		2,227.59	21,498.47	2,227.49	21,449.15	1.214
782.50	9357.20	0.21481		2,301.94	23,800.41	2,301.84	23,750.99	1.262
782.75	9658.93	0.22174		2,377.02	26,177.43	2,376.92	26,127.91	1.305
783.00	9962.82	0.22871		2,452.72	28,630.15	2,452.62	28,580.53	1.345
783.25	10260.35	0.23555		2,527.90	31,158.04	2,527.81	31,108.33	1.383
783.50	10550.73	0.24221		2,601.39	33,759.43	2,601.30	33,709.63	1.420
783.75	11336.25	0.26024		2,735.87	36,495.30	2,735.28	36,444.92	1.458
784.00	11625.16	0.26688		2,870.18	39,365.48	2,870.10	39,315.02	1.494
784.20	11868.58	0.27247	2 year	2,349.37	41,714.85	2,349.33	41,664.35	1.523
784.25	11912.14	0.27347		594.52	42,309.37	592.47	42,256.83	

DAM SAFETY CERTIFICATION STATEMENT:

I JENNIFER L. HENDERSON, P.E. TEXAS LICENSE NUMBER 116883 CERTIFY THAT THE DESIGN OF THE DAM IN THIS SET OF PLANS CAN SAFELY PASS THE MINIMUM DESIGN FLOOD HYDROGRAPH AS REQUIRED BY THE CITY OF AUSTIN AND THE STATE OF TEXAS BASED ON THE HYDROLOGIC, HYDRAULIC, STRUCTURAL AND GEOTECHNICAL ANALYSIS USING STANDARD ACCEPTED ENGINEERING PRACTICES.

SAN MARCOS FIRE DEPT.
REVIEWED
Plans must be on site for review at time of inspection
mselby
02/15/2023 1:37:34 PM

CITY OF AUSTIN APPROVED Date 08/03/2023 FOUNDED 1839

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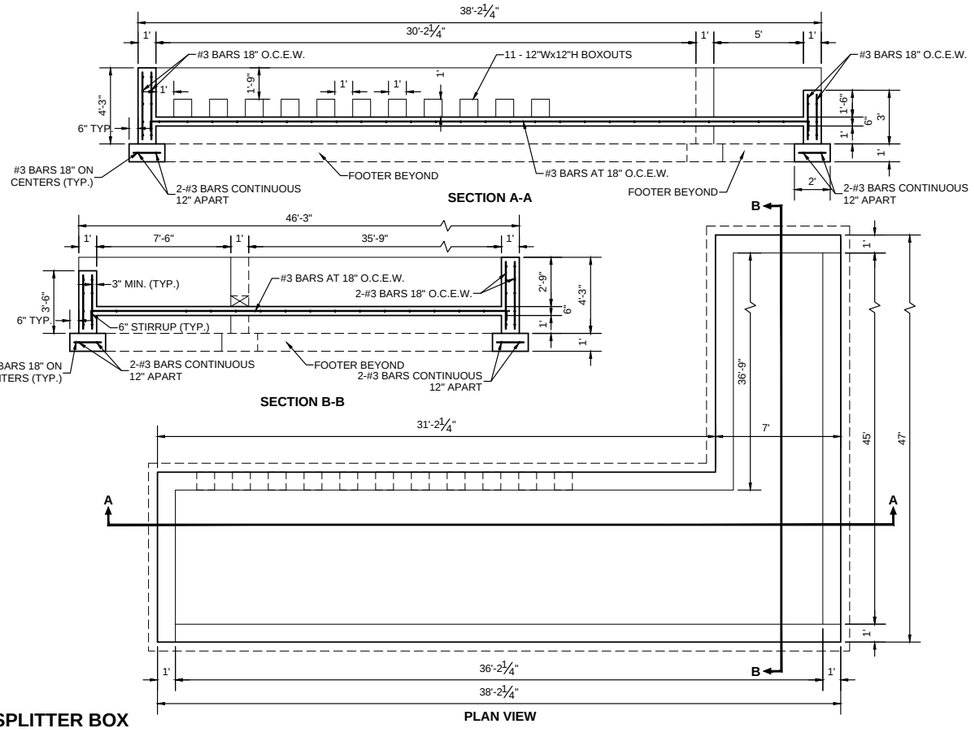
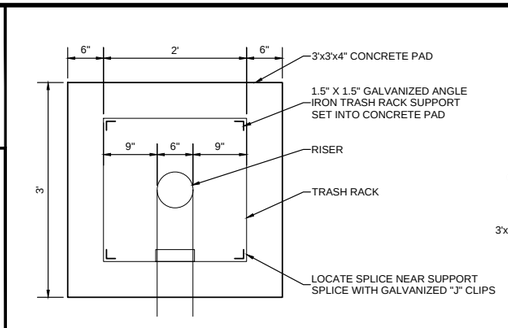
SITE DEVELOPMENT PLANS TO SERVE
NORTH AUSTIN CROSSROADS COMMUNITY CHURCH
15800 CROSSROADS DRIVE
AUSTIN, TEXAS 78681
WATER QUAILITY POND CALCULATIONS

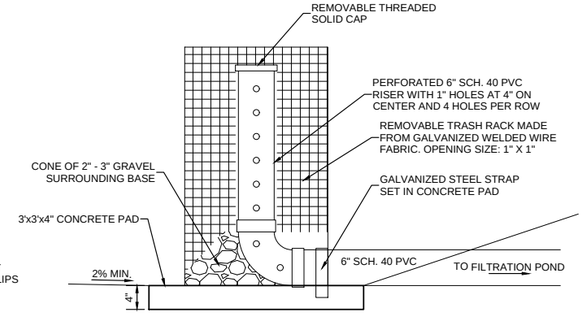
STATE OF TEXAS
JENNIFER L. HENDERSON
116883
LICENSED PROFESSIONAL ENGINEER
02/08/2023

PROJECT NO. 200107	02/08/2023	DRAWN BY: JS	CHECKED BY: AR	APPROVED BY: JH

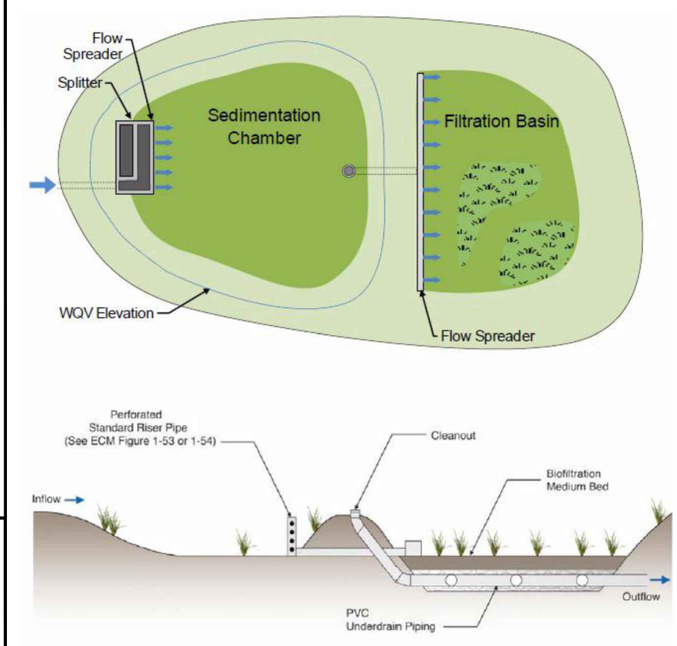


01 **SPLITTER BOX**
SCALE: 1/4" = 1'-0"

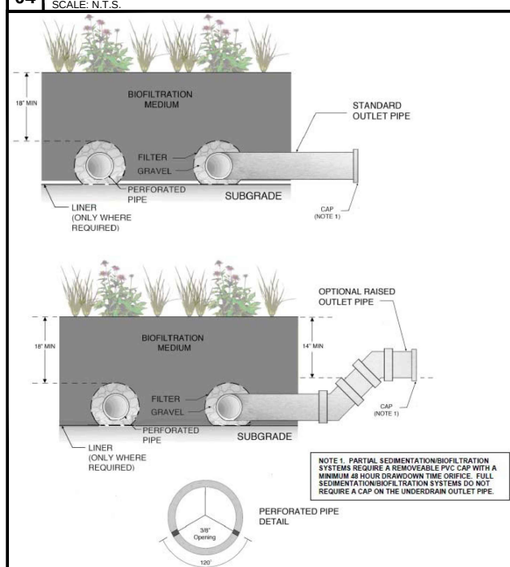




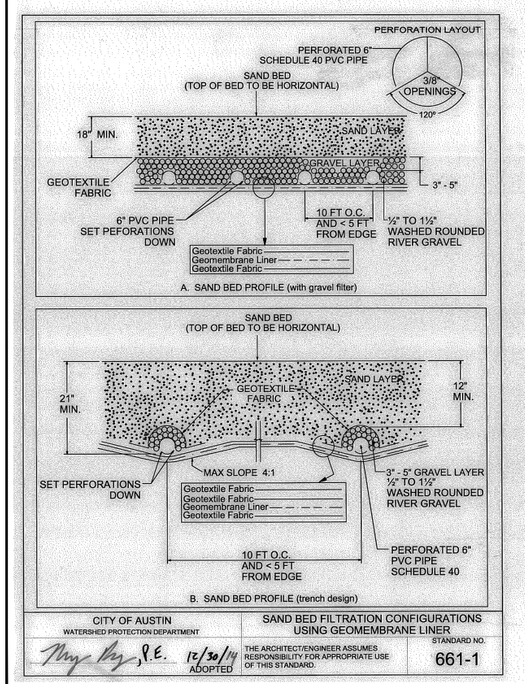
03 **TRASH RACK AND RISER**
SCALE: 1" = 1'-0"

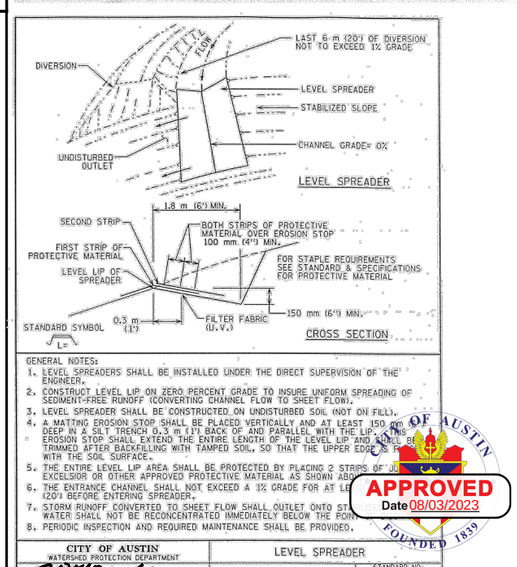


04 **FIG.1.6.7.C-1 FULL BIOFILTRATION POND**
SCALE: N.T.S.

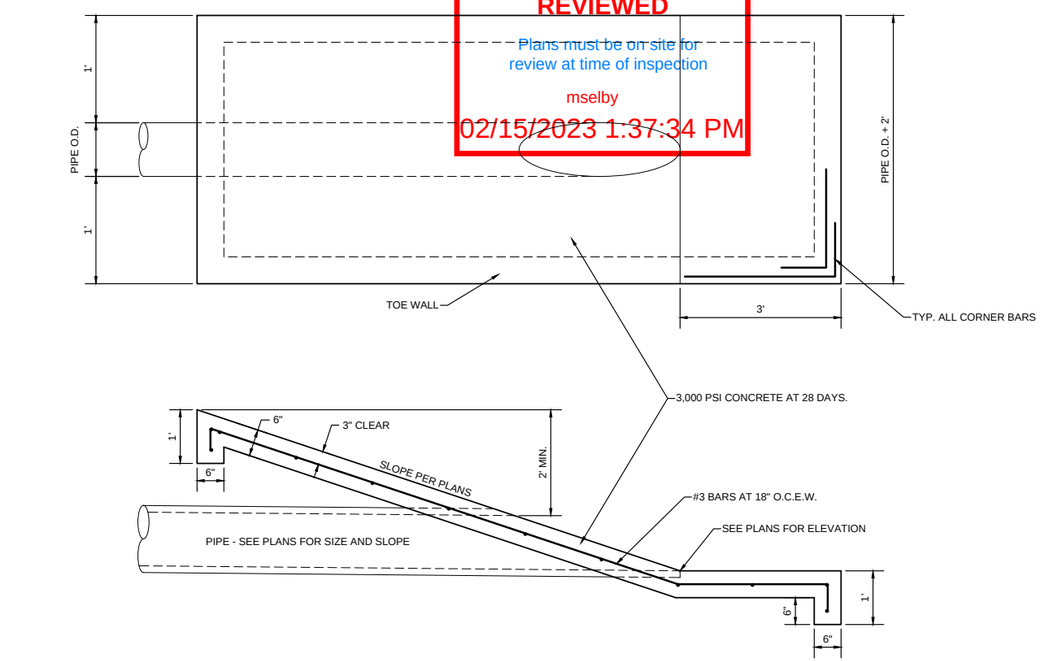


05 **FIG 1.6.7.C-3 BIOFILTRATION MEDIUM WITH UNDERDRAIN**
SCALE: N.T.S.





APPROVED
Date 08/03/2023



02 **SLOPING ENDWALL**
SCALE: 3/4" = 1'-0"

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SITE DEVELOPMENT PLANS
TO SERVE
NORTH AUSTIN CROSSROADS COMMUNITY CHURCH
15800 CROSSROADS DRIVE
AUSTIN, TEXAS 78681
WATER QUALITY DETAILS

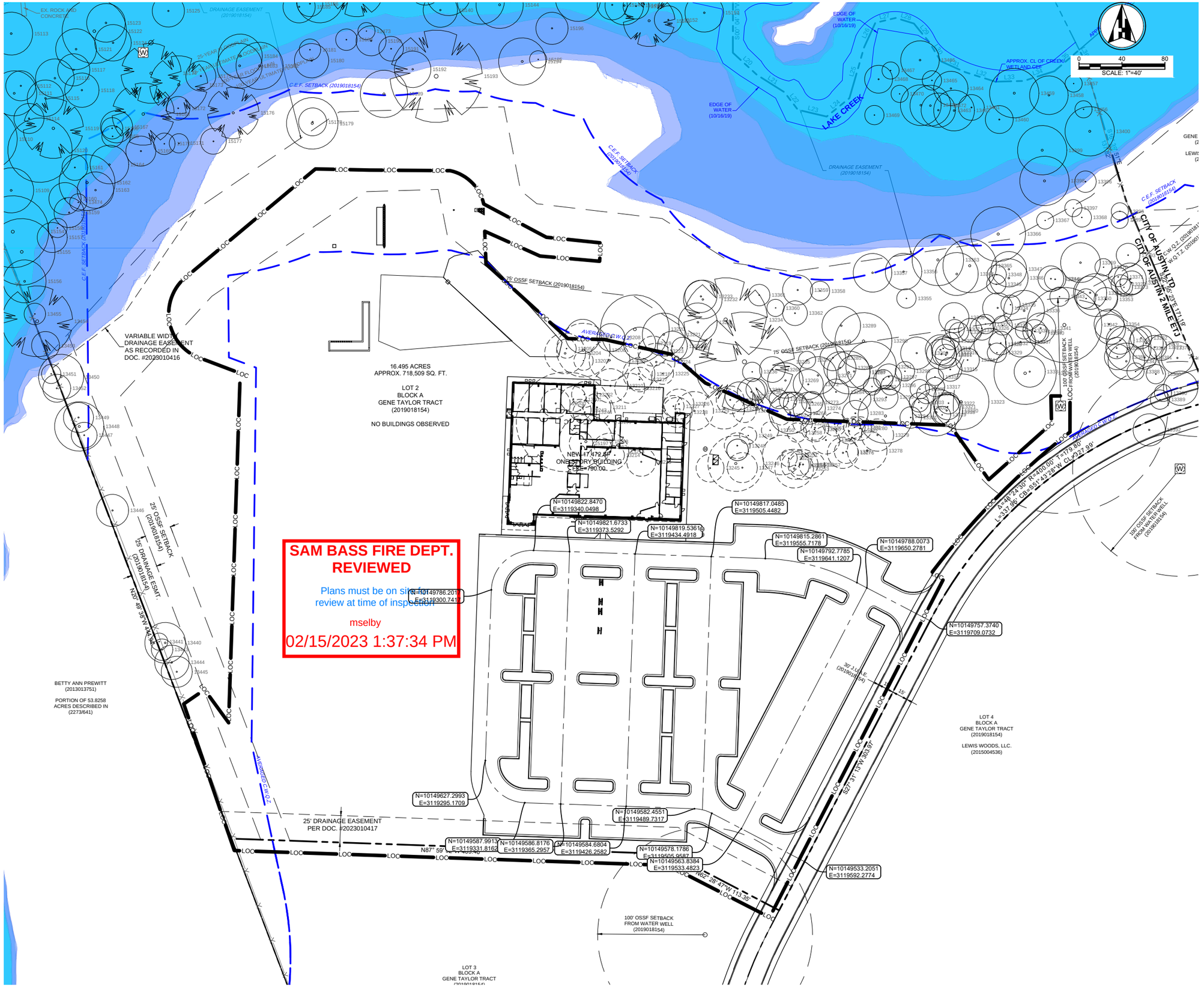
STATE OF TEXAS
JENNIFER L HENDERSON
116883
LICENSED
PROFESSIONAL ENGINEER
02/08/2023

PROJECT NO. 200107	02/08/2023	DRAWN BY: JS	CHECKED BY: AR	APPROVED BY: JH

30 OF 54

CITY PROJECT NUMBER SP-2020-0328D

Plotted by: Adam, Plot date: 08/02/2023
File name: h:\02 projects\2020\200107 crossroads community church\07 Sheet\SD\200107 DETAILS.dwg



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SITE DEVELOPMENT PLANS
TO SERVE
NORTH AUSTIN CROSSROADS COMMUNITY CHURCH
15800 CROSSROADS DRIVE
AUSTIN, TEXAS 78681

OVERALL DIMENSION CONTROL PLAN

STATE OF TEXAS
JENNIFER L. HENDERSON
116883
LICENSED
PROFESSIONAL ENGINEER
02/10/2023

PROJECT NO. 200107	02/10/2023	DRAWN BY: JS	CHECKED BY: AR	APPROVED BY: JH

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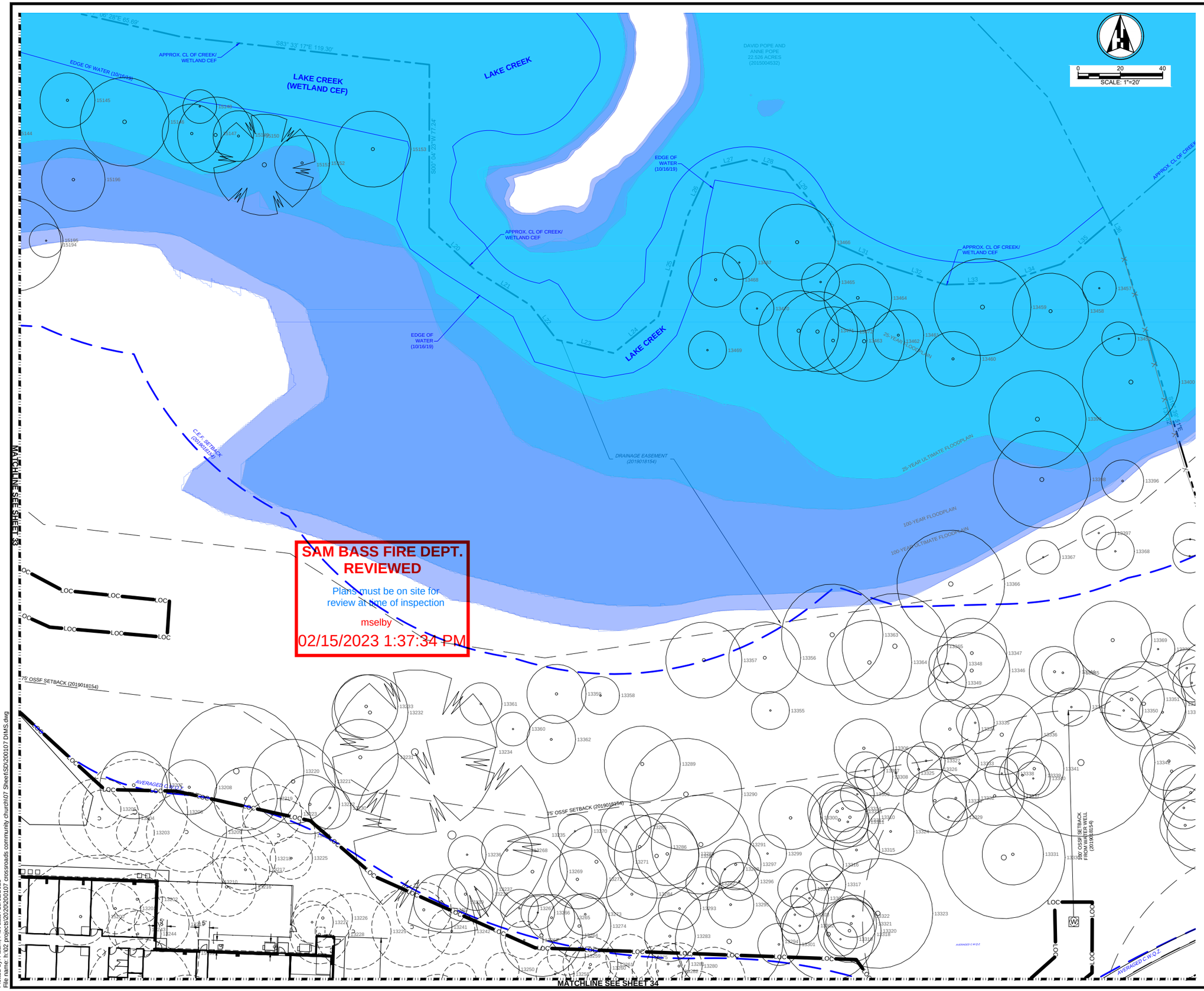

SAM BASS FIRE DEPT.
REVIEWED
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mselby
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NOTES:
1. ALL DIMENSIONS ARE TO THE BACK OF CURB, UNLESS OTHERWISE NOTED.
2. ALL CURB RETURN RADII ARE 2'-6" (AT BACK OF CURB), UNLESS OTHERWISE NOTED.
3. REFER TO SHEET 36 FOR PAVING AND STRIPING DIMENSIONS.

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SITE DEVELOPMENT PLANS
TO SERVE

NORTH AUSTIN CROSSROADS COMMUNITY CHURCH
15800 CROSSROADS DRIVE
AUSTIN, TEXAS 78681

DIMENSION CONTROL PLAN 1

STATE OF TEXAS
JENNIFER L. HENDERSON
116883
LICENSED
PROFESSIONAL ENGINEER
02/10/2023

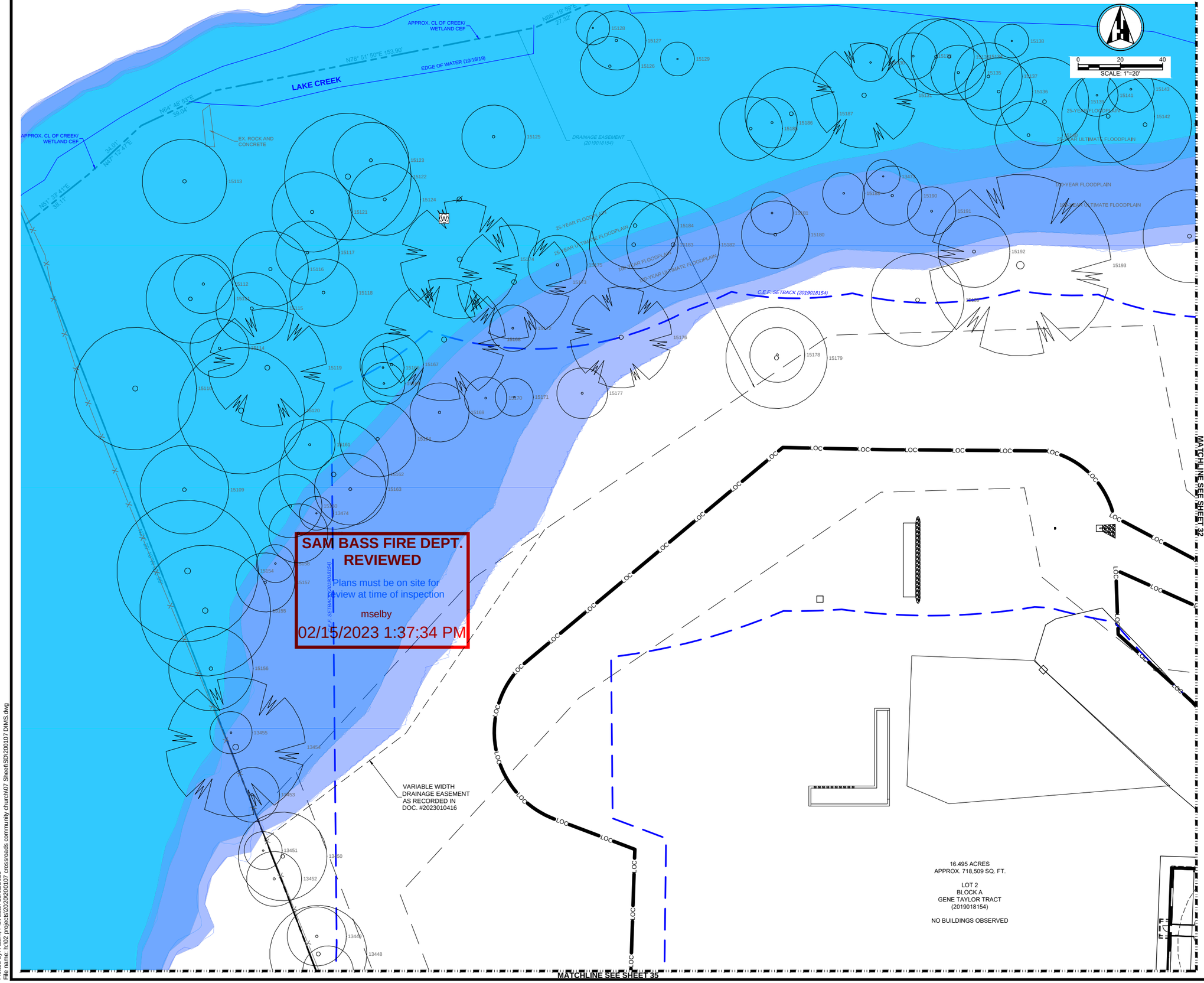
CITY OF AUSTIN
APPROVED
Date 08/03/2023
FOUNDED 1839

PROJECT NO. 200107	02/10/2023	DRAWN BY: JS	CHECKED BY: AR	APPROVED BY: JH

32 OF 54

Plotted by: Adam, Pkrt date: 10/02/2023
File name: h:\02 projects\2020\200107 crossroads community church\07 Sheet\SD\200107 DIMS.dwg

CITY PROJECT NUMBER SP-2020-0328D



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SITE DEVELOPMENT PLANS TO SERVE

NORTH AUSTIN CROSSROADS COMMUNITY CHURCH
15800 CROSSROADS DRIVE
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DIMENSION CONTROL PLAN 2

JENNIFER L. HENDERSON
116883
LICENSED PROFESSIONAL ENGINEER
02/10/2023

PROJECT NO. 20107	02/10/2023	DRAWN BY: JS	CHECKED BY: AR	APPROVED BY: JH

APPROVED
Date 08/03/2023

CITY PROJECT NUMBER SP-2020-0328D

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MATCHLINE SEE SHEET 32

MATCHLINE SEE SHEET 35

NEW 17,472 SF
ONE STORY BUILDING
FFE=790.00

SAM BASS FIRE DEPT.
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LOT 4
BLOCK A
GENE TAYLOR TRACT
(2019018154)

LEWIS WOODS, LLC.
(2015004536)

25' DRAINAGE EASEMENT
PER DOC. #2023010417

30' U.A.E.
(2019018154)

SCALE: 1"=20'

KEY MAP
(NOT TO SCALE)

NOTES:
1. ALL DIMENSIONS ARE TO THE BACK OF CURB, UNLESS OTHERWISE NOTED.
2. ALL CURB RETURN RADII ARE 2'-6" (AT BACK OF CURB), UNLESS OTHERWISE NOTED.
3. REFER TO SHEET 36 FOR PAVING AND STRIPING DIMENSIONS.

APPROVED
Date 08/03/2023
CITY OF AUSTIN
FOUNDED 1839

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SITE DEVELOPMENT PLANS
TO SERVE
NORTH AUSTIN CROSSROADS COMMUNITY CHURCH
15800 CROSSROADS DRIVE
AUSTIN, TEXAS 78681

DIMENSION CONTROL PLAN 3

STATE OF TEXAS
JENNIFER L. HENDERSON
116883
LICENSED
PROFESSIONAL ENGINEER
02/10/2023

PROJECT NO. 200107	02/10/2023	DRAWN BY: JS	CHECKED BY: AR	APPROVED BY: JH

CITY PROJECT NUMBER SP-2020-0328D

Plotted by: Adam, Plot date: 10/02/2023
File name: h:\02 projects\20\20200107 crossroads community church\07 Sheet\SD\200107 DIMS.dwg

MATCHLINE SEE SHEET 33

MATCHLINE SEE SHEET 34

13447
13446
13441
13440
13443
13444
13445

25' OSSF SETBACK (2019018154)

25' DRAINAGE ESMT. (2019018154)

N20° 49' 38"W 444.98'

AVERAGED C.W.Q.Z.

BETTY ANN PREWITT
(2013013751)

PORTION OF 53.8258 ACRES DESCRIBED IN (2273841)

25' DRAINAGE EASEMENT
PER DOC. #2023010417

N87° 59' 32"W 409.40'

LOT 3
BLOCK A
GENE TAYLOR TRACT
(2019018154)

LEWIS WOODS, LLC.
(2015004536)

SAM BASS FIRE DEPT.
REVIEWED

Plans must be on site for
review at time of inspection

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02/15/2023 1:37:35 PM

0 20 40
SCALE: 1"=20'

22'-3/4"

10'

R44'-6"

R2'-6"

15'-6"

78'

221'-2"

13'

16'

15'-6"

R2'-6"

R2'-6"

78'

15'-6"

R2'-6"

R24'-6"

R51'

19'-10"

R3'

15'-6"

KEY MAP
(NOT TO SCALE)

2 1
4 3

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Date 08/03/2023
CITY OF AUSTIN
FOUNDED 1839

Plotted by: Adam, Plot date: 10/02/2023
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CITY PROJECT NUMBER SP-2020-0328D

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SITE DEVELOPMENT PLANS
TO SERVE

NORTH AUSTIN CROSSROADS COMMUNITY CHURCH
15800 CROSSROADS DRIVE
AUSTIN, TEXAS 78681

DIMENSION CONTROL PLAN 4

STATE OF TEXAS
JENNIFER L. HENDERSON
116883
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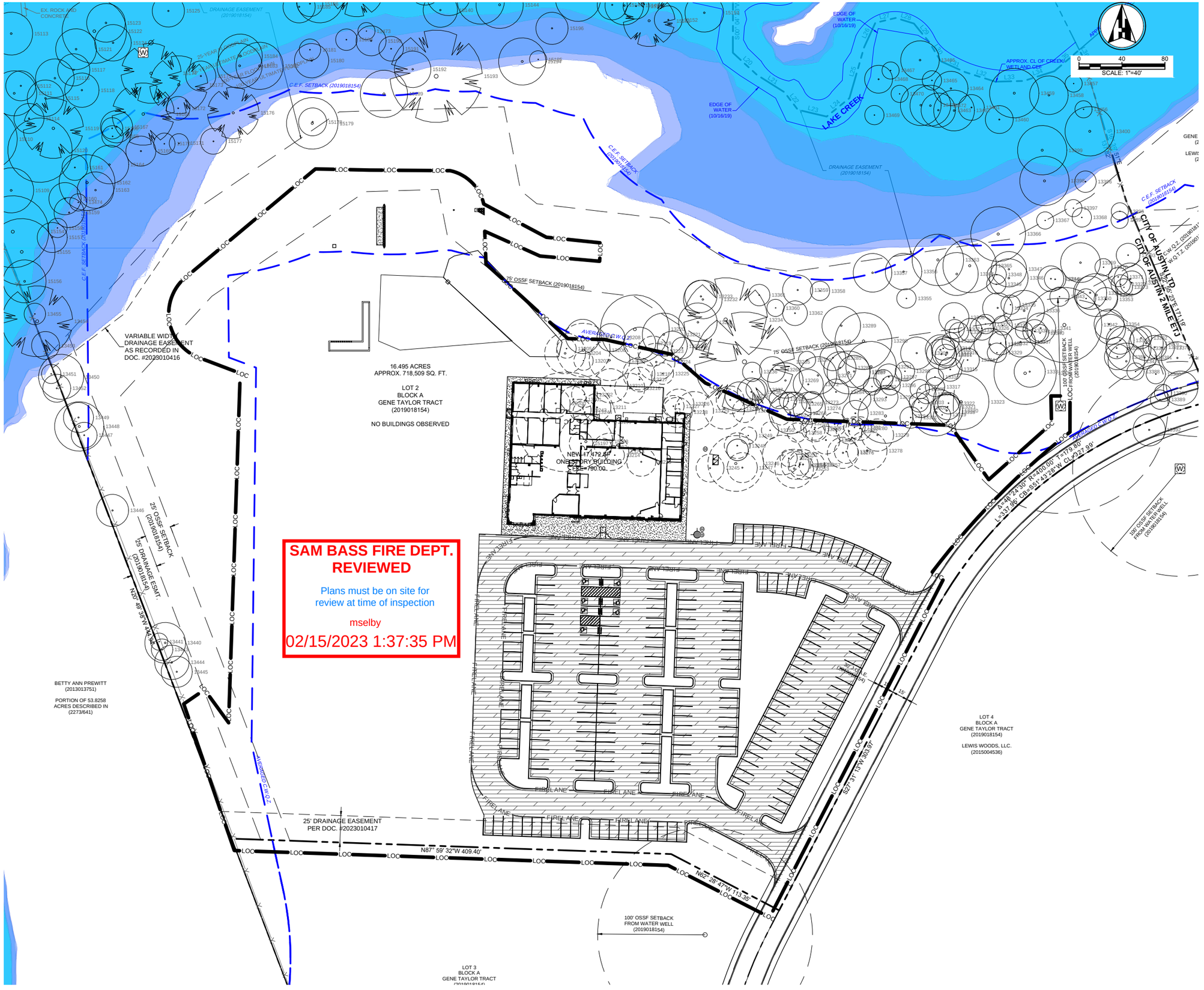
PROFESSIONAL ENGINEER
02/10/2023

PROJECT NO. 200107	02/10/2023	DRAWN BY: JS	CHECKED BY: AR	APPROVED BY: JH



LEGEND	
	ASPHALT PAVEMENT
	CONCRETE PAVEMENT
	CONCRETE SIDEWALK
FIRELANE	FIRE LANE STRIPE

KEY MAP
(NOT TO SCALE)

NOTES:
1. REFER TO SHEETS 51 FOR DETAILS.
2. ALL DIMENSIONS ARE TO THE FACE OF CURB, OR CENTER OF STRIPING (WHERE APPLICABLE), UNLESS OTHERWISE NOTED.
3. FIRE APPARATUS ACCESS ROADS SHALL BE DESIGNED AND MAINTAINED TO SUPPORT THE IMPOSED LOADS OF FIRE APPARATUS AND SHALL BE SURFACED SO AS TO PROVIDE ALL-WEATHER DRIVING CAPABILITIES.
4. REFER TO SHEET 31-34 FOR DIMENSION CONTROL PLANS.
5. FIRELANE STRIPING TO BE 6" WIDE RED PAINT WITH "FIRE LANE-NO PARKING" IN 4" TALL WHITE LETTERS. WORDING MAY NOT BE SPACED MORE THAN 30 FEET APART. STRIPING TO BE PAINTED ON FACE OF CURB WHEN PRESENT AND PAINTED FLAT ON PARKING SURFACE WHEN IT IS NOT.
6. AN ALL WEATHER ROADWAY SHALL BE CONSTRUCTED BEFORE ANY COMBUSTIBLES SHALL BE ALLOWED ON-SITE.

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SITE DEVELOPMENT PLANS
TO SERVE
NORTH AUSTIN CROSSROADS COMMUNITY CHURCH
15800 CROSSROADS DRIVE
AUSTIN, TEXAS 78681

OVERALL PAVING AND STRIPING PLAN

STATE OF TEXAS
JENNIFER L. HENDERSON
116883
LICENSED
PROFESSIONAL ENGINEER
02/10/2023

CITY OF AUSTIN
APPROVED
Date 08/03/2023
FOUNDED 1839

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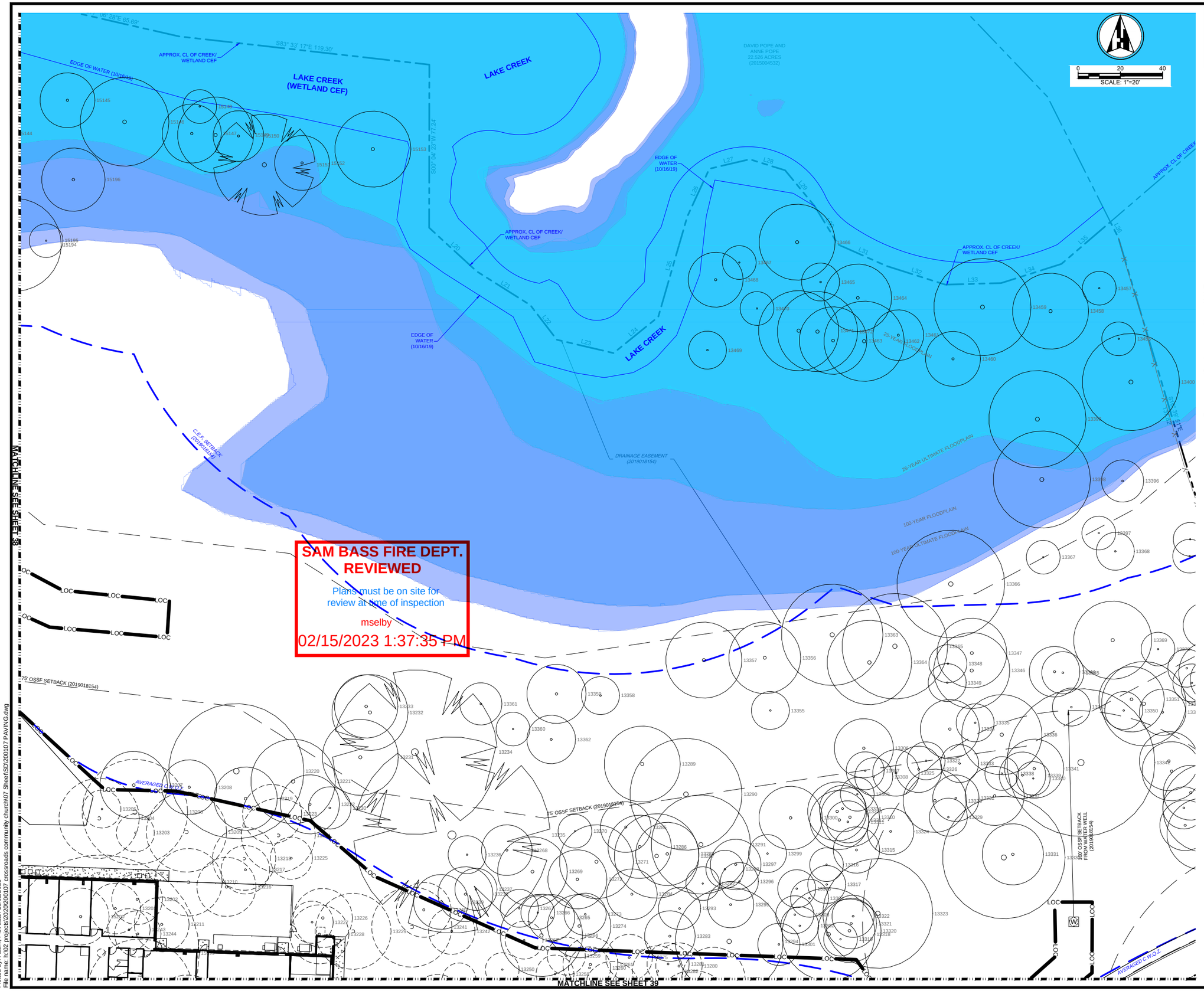

LEGEND	
	ASPHALT PAVEMENT
	CONCRETE PAVEMENT
	CONCRETE SIDEWALK
FIRELANE	FIRE LANE STRIPE

KEY MAP
(NOT TO SCALE)

NOTES:
1. REFER TO SHEETS 51 FOR DETAILS.
2. ALL DIMENSIONS ARE TO THE FACE OF CURB, OR CENTER OF STRIPING (WHERE APPLICABLE), UNLESS OTHERWISE NOTED.
3. FIRE APPARATUS ACCESS ROADS SHALL BE DESIGNED AND MAINTAINED TO SUPPORT THE IMPOSED LOADS OF FIRE APPARATUS AND SHALL BE SURFACED SO AS TO PROVIDE ALL-WEATHER DRIVING CAPABILITIES.
4. REFER TO SHEET 31-34 FOR DIMENSION CONTROL PLANS.
5. FIRELANE STRIPING TO BE 6" WIDE RED PAINT WITH "FIRE LANE-NO PARKING" IN 4" TALL WHITE LETTERS. WORDING MAY NOT BE SPACED MORE THAN 30 FEET APART. STRIPING TO BE PAINTED ON FACE OF CURB WHEN PRESENT AND PAINTED FLAT ON PARKING SURFACE WHEN IT IS NOT.
6. AN ALL WEATHER ROADWAY SHALL BE CONSTRUCTED BEFORE ANY COMBUSTIBLES SHALL BE ALLOWED ON-SITE.

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SITE DEVELOPMENT PLANS TO SERVE

NORTH AUSTIN CROSSROADS COMMUNITY CHURCH
15800 CROSSROADS DRIVE
AUSTIN, TEXAS 78681

PAVING AND STRIPING PLAN 1

STATE OF TEXAS
JENNIFER L. HENDERSON
116883
LICENSED
PROFESSIONAL ENGINEER
02/10/2023

CITY OF AUSTIN
APPROVED
Date 08/03/2023
FOUNDED 1839

PROJECT NO. 200107	02/10/2023	DRAWN BY: JS	CHECKED BY: AR	APPROVED BY: JH

37 OF 54

CITY PROJECT NUMBER SP-2020-0328D

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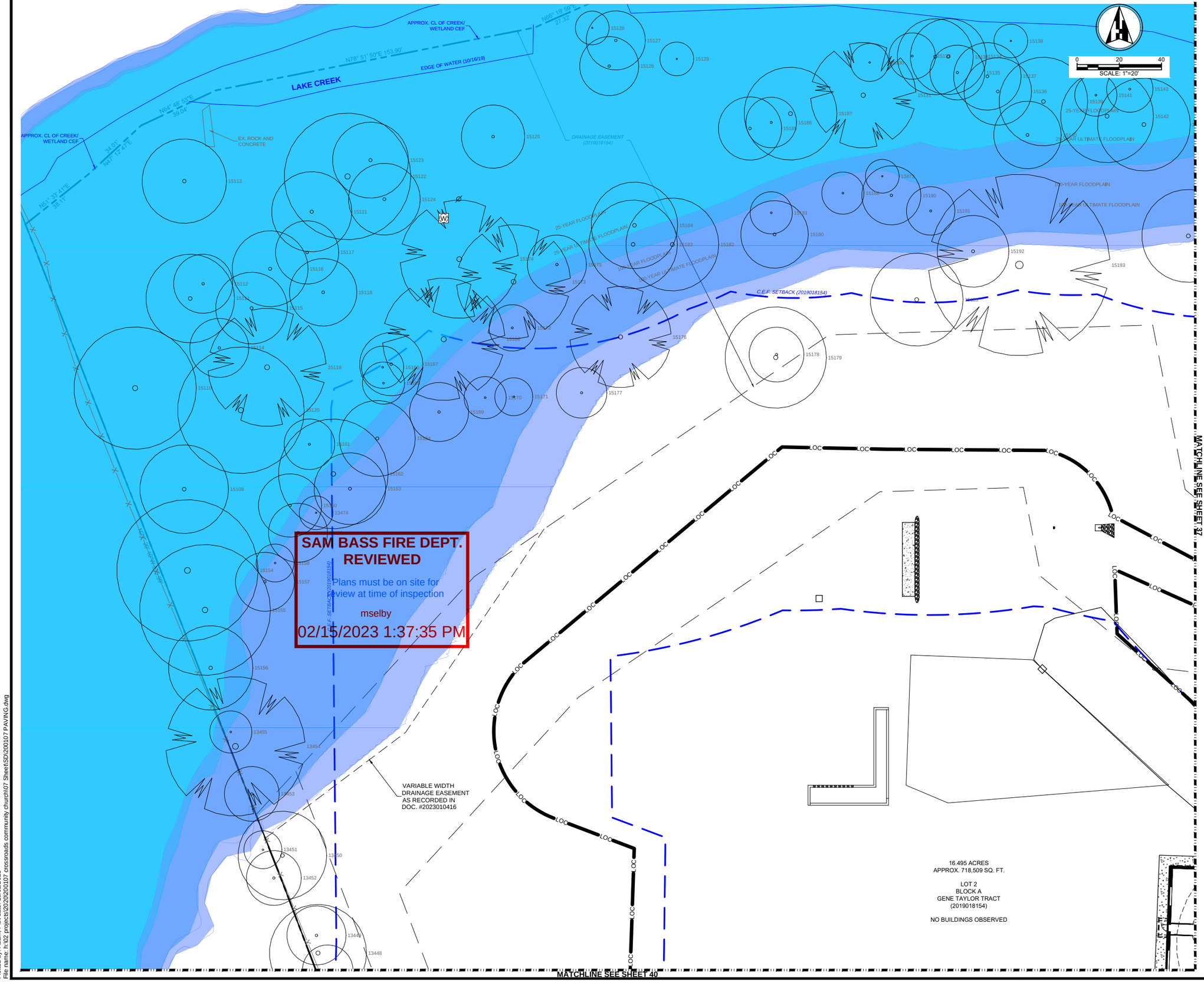

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SITE DEVELOPMENT PLANS
TO SERVE

NORTH AUSTIN CROSSROADS COMMUNITY CHURCH
15800 CROSSROADS DRIVE
AUSTIN, TEXAS 78681

PAVING AND STRIPING PLAN 2

JENNIFER L. HENDERSON
116883
LICENSED
PROFESSIONAL ENGINEER
STATE OF TEXAS
02/10/2023

CITY OF AUSTIN
APPROVED
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PROJECT NO. 200107	02/10/2023	DRAWN BY: JS	CHECKED BY: AR	APPROVED BY: JH

38 OF 54

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CITY PROJECT NUMBER SP-2020-0328D

MATCHLINE SEE SHEET 37

MATCHLINE SEE SHEET 40

NEW 17,472 SF
ONE STORY BUILDING
FFE=790.00

TYPE 1 ADA RAMP
PER DETAIL ON SHEET 33

4" WHITE
STRIPE (TYP.)

FIRE LANE STRIPING
PER DETAIL ON SHEET 33

CONCRETE CURB AND GUTTER
PER DETAIL ON SHEET 33

8-CONCRETE TIRE STOPS
PER DETAIL ON SHEET 33

4-ADA SIGN AND POSTS
PER DETAIL ON SHEET 32

7-ADA PAINT
MARKINGS

26' WIDE
FIRELANE

16 PARKING SPACES AT 9'x18'
[TOTAL LENGTH=145']

RIBBON CURB AND GUTTER
PER DETAIL ON SHEET 33

5 PARKING SPACES AT 9'x18'
[TOTAL LENGTH=45']

26' WIDE
FIRELANE

9' WIDE BY 5' DEEP
RIP-RAP OUTFALL
AT CURB CUTS

Δ=48°24'20" R=400.00' T=179
L=337.95' CB=S57°43'26"W CL

SCALE: 1"=20'

0 20 40

10 PARKING SPACES AT 9'x18'
[TOTAL LENGTH=90']

8 PARKING SPACES AT 9'x18'
[TOTAL LENGTH=90']

9 PARKING SPACES AT 9'x18'
[TOTAL LENGTH=90']

10 PARKING SPACES AT 9'x18'
[TOTAL LENGTH=90']

10 PARKING SPACES AT 9'x18'
[TOTAL LENGTH=90']

10 PARKING SPACES AT 9'x18'
[TOTAL LENGTH=90']

23 PARKING SPACES AT 9'x18'
[TOTAL LENGTH=180']

23 PARKING SPACES AT 9'x18'
[TOTAL LENGTH=207']

CONCRETE CURB AND GUTTER
PER DETAIL ON SHEET 33

30' I.U.A.E.
(20190191A)

LOT 4
BLOCK A
GENE TAYLOR TRACT
(20190191A)

LEWIS WOODS, LLC.
(2015004536)

S27° 31' 15"W 393.97'

N62° 28' 47"W 113.35'

25' DRAINAGE EASEMENT
PER DOC. #2023010417

SAM BASS FIRE DEPT.
REVIEWED
Plans must be on site for
review at time of inspection
Reviewed by
02/15/2023 1:37:35 PM

LEGEND	
	ASPHALT PAVEMENT
	CONCRETE PAVEMENT
	CONCRETE SIDEWALK
FIRELANE	FIRE LANE STRIPE

KEY MAP
(NOT TO SCALE)

NOTES:
1. REFER TO SHEETS 51 FOR DETAILS.
2. ALL DIMENSIONS ARE TO THE FACE OF CURB, OR CENTER OF STRIPING (WHERE APPLICABLE), UNLESS OTHERWISE NOTED.
3. FIRE APPARATUS ACCESS ROADS SHALL BE DESIGNED AND MAINTAINED TO SUPPORT THE IMPOSED LOADS OF FIRE APPARATUS AND SHALL BE SURFACED SO AS TO PROVIDE ALL-WEATHER DRIVING CAPABILITIES.
4. REFER TO SHEET 31-34 FOR DIMENSION CONTROL PLANS.
5. FIRELANE STRIPING TO BE 6" WIDE RED PAINT WITH "FIRE LANE-NO PARKING" IN 4" TALL WHITE LETTERS. WORDING MAY NOT BE SPACED MORE THAN 30 FEET APART. STRIPING TO BE PAINTED ON FACE OF CURB WHEN PRESENT AND PAINTED FLAT ON PARKING SURFACE WHEN IT IS NOT.
6. AN ALL WEATHER ROADWAY SHALL BE CONSTRUCTED BEFORE ANY COMBUSTIBLES SHALL BE ALLOWED ON-SITE.

CITY OF AUSTIN
APPROVED
Date 08/03/2023
FOUNDED 1839

Henderson Professional Engineers
600 ROUND ROCK WEST
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ROUND ROCK, TX 78681
512.350.6228
PELS FIRM #F-22208
www.hendersonpe.com
Civil Engineering
WBE2101166 | HUB 1853873845300

REVISION					
No.	1	2	3	4	5

SITE DEVELOPMENT PLANS
TO SERVE
NORTH AUSTIN CROSSROADS COMMUNITY CHURCH
15800 CROSSROADS DRIVE
AUSTIN, TEXAS 78681

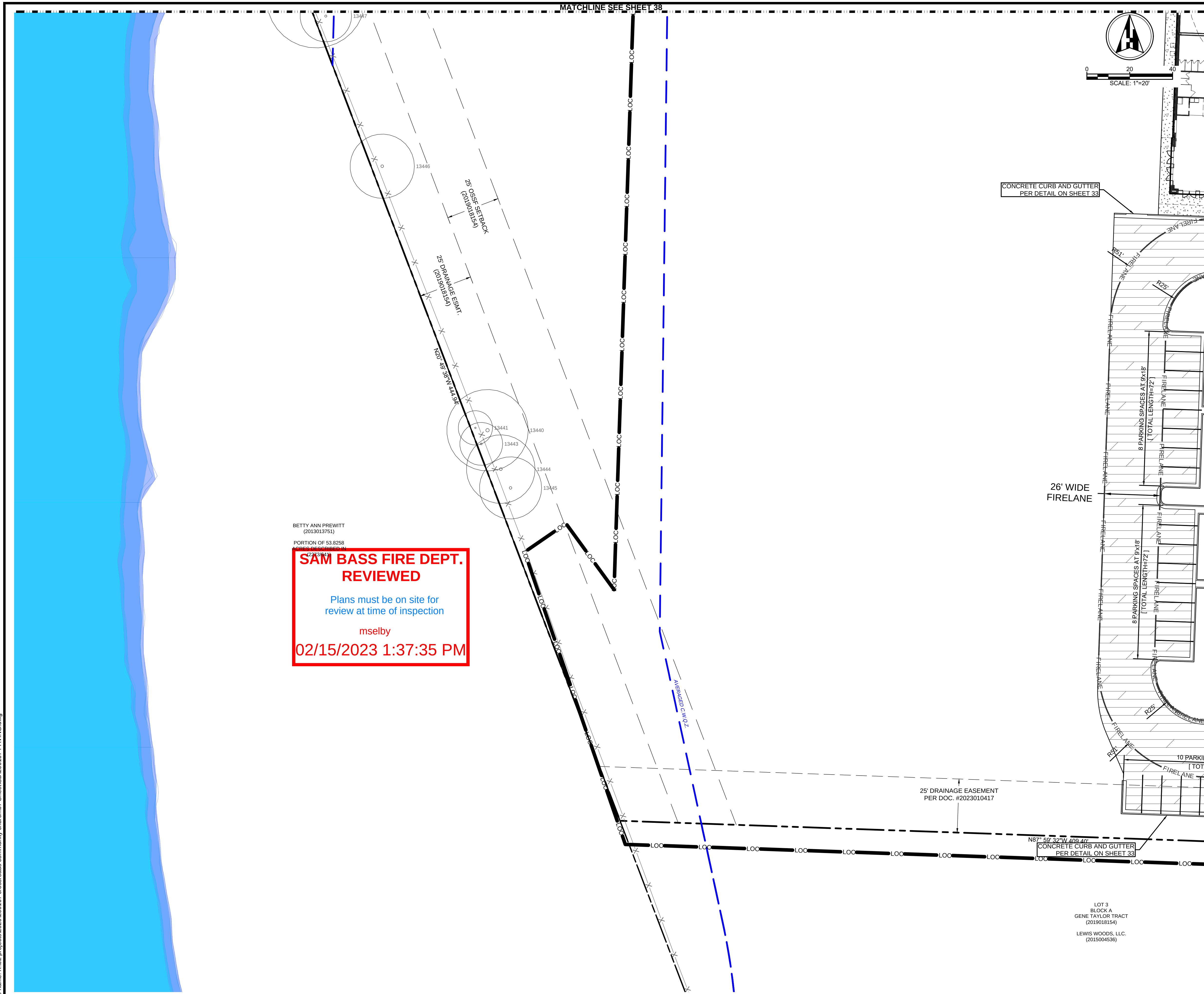
PAVING AND STRIPING PLAN 3

STATE OF TEXAS
JENNIFER L HENDERSON
116883
LICENSED
PROFESSIONAL ENGINEER
02/10/2023

PROJECT NO. 200107	02/10/2023	DRAWN BY: JS	CHECKED BY: AR	APPROVED BY: JH

Plotted by: Adam, Plot date: 10/02/2023
File name: h:\02 projects\20\200107 crossroads community church\07 Sheet\SD\200107 PAVING.dwg

CITY PROJECT NUMBER SP-2020-0328D



SAM BASS FIRE DEPT. REVIEWED

Plans must be on site for review at time of inspection

mselby

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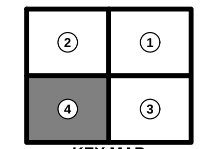

KEY MAP
(NOT TO SCALE)

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HPE
Civil Engineering
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ROUND ROCK, TX 78681
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WBE210166 | HUB 1853873845300

No.	REVISION
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SITE DEVELOPMENT PLANS TO SERVE

NORTH AUSTIN CROSSROADS COMMUNITY CHURCH

15800 CROSSROADS DRIVE
AUSTIN, TEXAS 78681

PAVING AND STRIPING PLAN 4

STATE OF TEXAS
JENNIFER L. HENDERSON
116883
LICENSED
PROFESSIONAL ENGINEER
02/10/2023

PROJECT NO. 200107
02/10/2023
DRAWN BY: JS
CHECKED BY: AR
APPROVED BY: JH

CITY OF AUSTIN
APPROVED
Date 08/03/2023
FOUNDED 1839

CITY PROJECT NUMBER SP-2020-0328D

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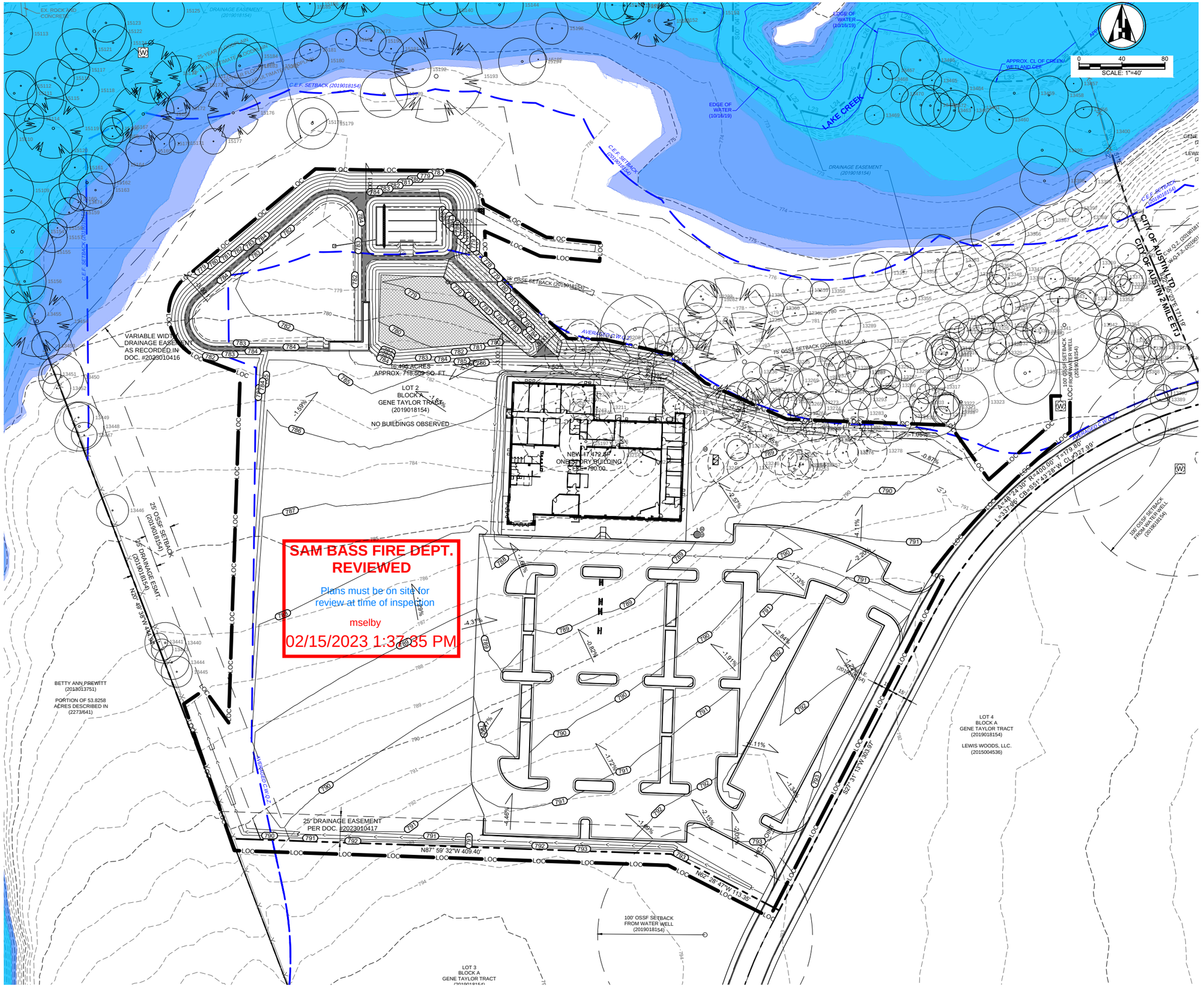

LEGEND	
ADA	ACCESSIBLE ROUTE OF TRAVEL
TC	TOP OF CURB
G	GUTTER
TW	TOP OF WALL
BW	BOTTOM OF WALL
FG	FINISHED GRADE
FL	FLOWLINE
TP	TOP OF PAVEMENT
TI	TOP OF INLET
EG	EXISTING GRADE

KEY MAP (NOT TO SCALE)

NOTES:
1. SLOPES OF ACCESSIBLE ROUTES MAY NOT EXCEED 1:20 UNLESS DESIGNED AS A RAMP.
2. THE MAXIMUM SLOPE OF A RAMP IN NEW CONSTRUCTION IS 1:12. THE MAXIMUM RISE FOR ANY RAMP RUN IS 30". RAMPS SHALL BE PROVIDED WITH HANDRAILS AND GROUND SURFACE EDGE PROTECTION EACH SIDE AND ENTIRE LENGTH OF RAMP PER TDLR ADA REQUIREMENTS.
3. ACCESSIBLE ROUTES MUST HAVE A CROSS-SLOPE NO GREATER THAN 1:50.
4. GROUND SURFACE ALONG ACCESSIBLE ROUTES MUST BE STABLE, FIRM AND SLIP RESISTANT.
5. ALL DOWNSPOUTS AND ROOF DRAINS SHALL BE DIRECTED IN SUCH A WAY THAT THEY FLOW WITH THE PROPOSED GRADING TO THE SPLITTER BOX. SHOWN ON SHEET 43.

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No.	REVISION
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SITE DEVELOPMENT PLANS TO SERVE

NORTH AUSTIN CROSSROADS COMMUNITY CHURCH
15800 CROSSROADS DRIVE
AUSTIN, TEXAS 78681

OVERALL GRADING PLAN

STATE OF TEXAS
JENNIFER L. HENDERSON
116883
LICENSED
PROFESSIONAL ENGINEER
02/10/2023

PROJECT NO. 200107	02/10/2023	DRAWN BY: JS	CHECKED BY: AR	APPROVED BY: JH

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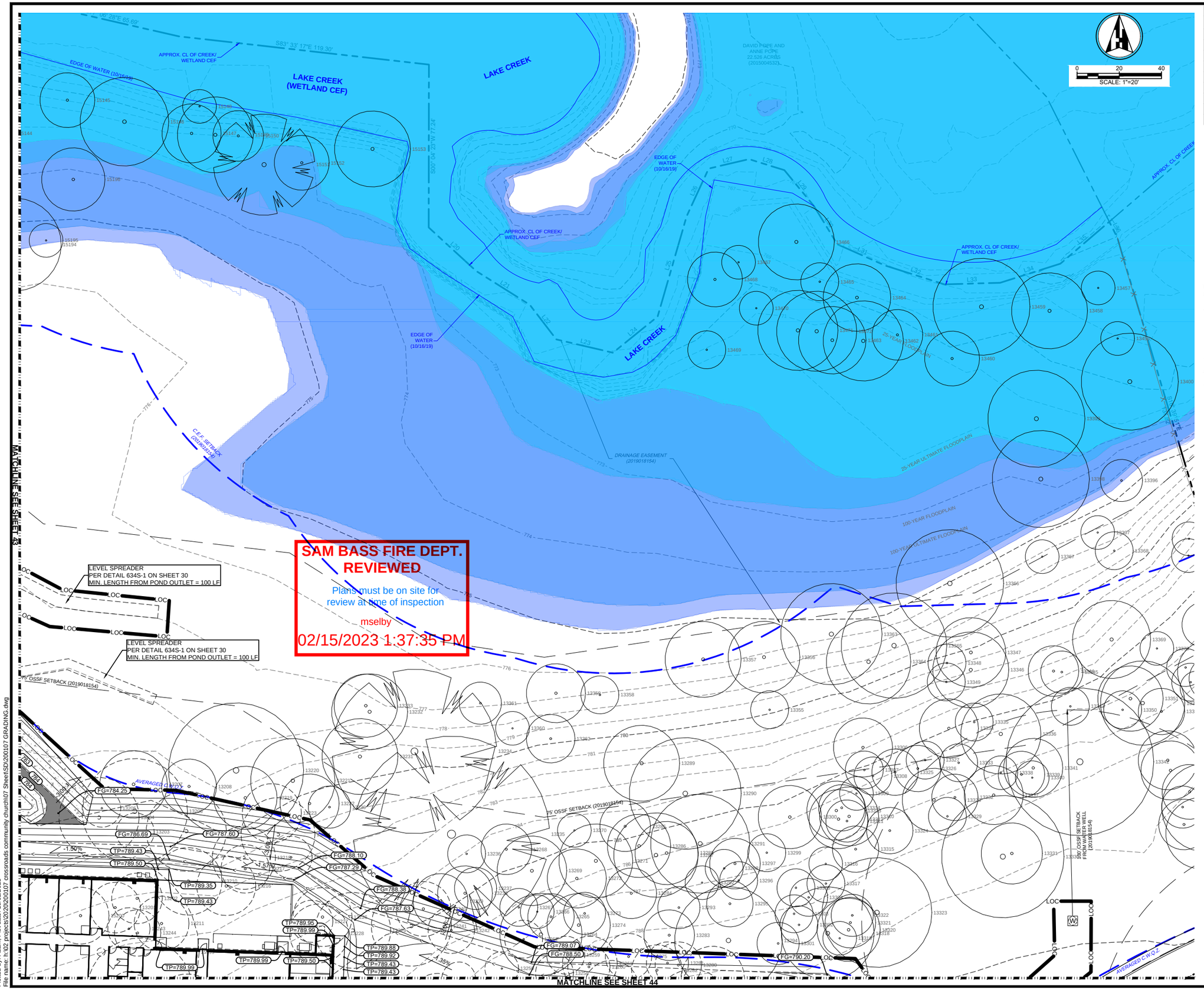
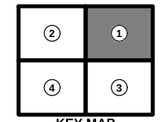
CITY PROJECT NUMBER SP-2020-0328D



LEGEND	
ADA	ACCESSIBLE ROUTE OF TRAVEL
TC	TOP OF CURB
G	GUTTER
TW	TOP OF WALL
BW	BOTTOM OF WALL
FG	FINISHED GRADE
FL	FLOWLINE
TP	TOP OF PAVEMENT
TI	TOP OF INLET
EG	EXISTING GRADE



KEY MAP
(NOT TO SCALE)

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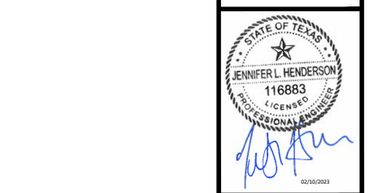
SITE DEVELOPMENT PLANS TO SERVE

NORTH AUSTIN CROSSROADS COMMUNITY CHURCH
15800 CROSSROADS DRIVE
AUSTIN, TEXAS 78681

GRADING PLAN 1



CITY OF AUSTIN
APPROVED
Date 08/03/2023
FOUNDED 1839

PROJECT NO. 200107	02/10/2023	DRAWN BY: JS	CHECKED BY: AR	APPROVED BY: JH

CITY PROJECT NUMBER SP-2020-0328D

Plotted by: Adam, Plot date: 10/02/2023
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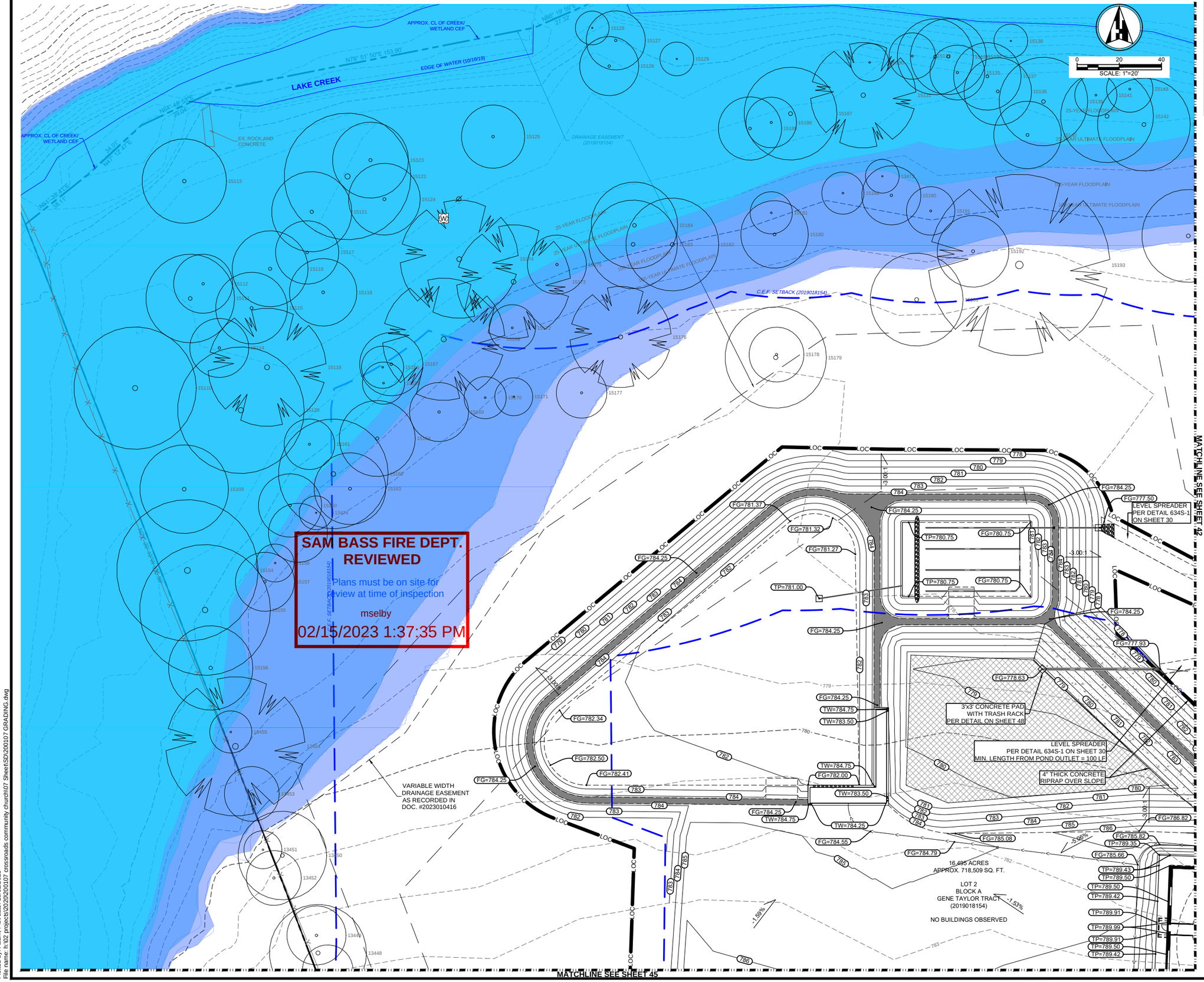

LEGEND	
ADA	ACCESSIBLE ROUTE OF TRAVEL
TC	TOP OF CURB
G	GUTTER
TW	TOP OF WALL
BW	BOTTOM OF WALL
FG	FINISHED GRADE
FL	FLOWLINE
TP	TOP OF PAVEMENT
TI	TOP OF INLET
EG	EXISTING GRADE

KEY MAP
(NOT TO SCALE)

NOTES:
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REVISION	No.
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SITE DEVELOPMENT PLANS
TO SERVE
NORTH AUSTIN CROSSROADS COMMUNITY CHURCH
15800 CROSSROADS DRIVE
AUSTIN, TEXAS 78681

GRADING PLAN 2

STATE OF TEXAS
JENNIFER L. HENDERSON
116883
LICENSED
PROFESSIONAL ENGINEER
02/10/2023

CITY OF AUSTIN
APPROVED
Date 08/03/2023
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PROJECT NO. 200107	02/10/2023	DRAWN BY: JS	CHECKED BY: AR	APPROVED BY: JH

43 OF 54

CITY PROJECT NUMBER SP-2020-0328D

Plotted by: Adam, Plot date: 10/02/2023
File name: h:\02 projects\2020\200107 crossroads community church\07 Sheet\SD\200107 GRADING.dwg

MATCHLINE SEE SHEET 42

MATCHLINE SEE SHEET 45

NEW 17,472 SF ONE STORY BUILDING FFE=790.00

LOT 4
BLOCK A
GENE TAYLOR TRACT
(2019018154)

LEWIS WOODS, LLC.
(2015004536)

S27° 31' 15"W 603.97'

Δ=48°24'20" R=400.00' T=179
L=337.95' CB=S57°43'28"W CL

N62° 28' 47"W 113.35'

25' DRAINAGE EASEMENT
PER DOC. #2023010417

30' J.U.A.E.
(2019018154)

HIGH POINT

SCALE: 1"=20'

LEGEND	
ADA	ACCESSIBLE ROUTE OF TRAVEL
TC	TOP OF CURB
G	GUTTER
TW	TOP OF WALL
BW	BOTTOM OF WALL
FG	FINISHED GRADE
FL	FLOWLINE
TP	TOP OF PAVEMENT
TI	TOP OF INLET
EG	EXISTING GRADE

KEY MAP
(NOT TO SCALE)

NOTES:
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5. ALL DOWNSPOUTS AND ROOF DRAINS SHALL BE DIRECTED IN SUCH A WAY THAT THEY FLOW WITH THE PROPOSED GRADING TO THE SPLITTER BOX. SHOWN ON SHEET 43.

SAM BASS FIRE DEPT.
REVIEWED
Plans must be on site for review at time of inspection
mseitz
02/15/2023 1:37:35 PM

APPROVED
Date 08/03/2023

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SITE DEVELOPMENT PLANS
TO SERVE

NORTH AUSTIN CROSSROADS COMMUNITY CHURCH
15800 CROSSROADS DRIVE
AUSTIN, TEXAS 78681

GRADING PLAN 3

JENNIFER L. HENDERSON
116883
LICENSED
PROFESSIONAL ENGINEER
STATE OF TEXAS
02/10/2023

PROJECT NO. 20107	02/10/2023	DRAWN BY: JS	CHECKED BY: AR	APPROVED BY: JH

CITY PROJECT NUMBER SP-2020-0328D

Plotted by: Adam, Plot date: 10/02/2023
File name: h:\02 projects\2020\20107 crossroads community church\07 Sheet\SD\20107 GRADING.dwg

MATCHLINE SEE SHEET 43

MATCHLINE SEE SHEET 44

LEGEND	
ADA	ACCESSIBLE ROUTE OF TRAVEL
TC	TOP OF CURB
G	GUTTER
TW	TOP OF WALL
BW	BOTTOM OF WALL
FG	FINISHED GRADE
FL	FLOWLINE
TP	TOP OF PAVEMENT
TI	TOP OF INLET
EG	EXISTING GRADE

SCALE: 1"=20'

KEY MAP
(NOT TO SCALE)

NOTES:
1. SLOPES OF ACCESSIBLE ROUTES MAY NOT EXCEED 1:20 UNLESS DESIGNED AS A RAMP.
2. THE MAXIMUM SLOPE OF A RAMP IN NEW CONSTRUCTION IS 1:12. THE MAXIMUM RISE FOR ANY RAMP RUN IS 30". RAMPS SHALL BE PROVIDED WITH HANDRAILS AND GROUND SURFACE EDGE PROTECTION EACH SIDE AND ENTIRE LENGTH OF RAMP PER TDLR ADA REQUIREMENTS.
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5. ALL DOWNSPOUTS AND ROOF DRAINS SHALL BE DIRECTED IN SUCH A WAY THAT THEY FLOW WITH THE PROPOSED GRADING TO THE SPLITTER BOX. SHOWN ON SHEET 43.

TP=789.50
TP=789.42
TP=789.99
TP=789.92
TP=789.99
TP=789.92
TP=789.79
TP=789.71
FG=787.49
TP=787.62
TP=789.99
TC=788.66
G=788.16
TC=789.21
G=788.71
TC=789.67
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G=788.83
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TC=789.53
G=789.03
TC=789.74
G=789.24
TC=790.46
G=789.96
TC=790.72
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G=790.51
TP=791.13
TP=791.37
TC=791.91
G=791.41
TC=792.05
G=791.55
FG=789.50

-1.61%
-1.29%
-4.31%
-1.47%
-4.46%

784 785 786 787 788 789 790 791 792 793 794

13447 13446 13441 13440 13443 13444 13445

25' OSSF SETBACK (2019018154)
25' DRAINAGE ESMT. (2019018154)
N20° 49' 38"W 444.98'
N87° 59' 32"W 409.40'
25' DRAINAGE EASEMENT PER DOC. #2022[illegible]417
AVERAGED C.W.Q.Z.

BETTY ANN PREWITT
(2013013751)
PORTION OF 53.8258
ACRES DESCRIBED IN
(2273941)

LOT 3
BLOCK A
GENE TAYLOR TRACT
(2019018154)

LEWIS WOODS, LLC.
(2015004536)

SAM BASS FIRE DEPT.
REVIEWED
Plans must be on site for review at time of inspection
mselby
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APPROVED
Date 08/03/2023

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No.	REVISION
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SITE DEVELOPMENT PLANS
TO SERVE
NORTH AUSTIN CROSSROADS COMMUNITY CHURCH
15800 CROSSROADS DRIVE
AUSTIN, TEXAS 78681

GRADING PLAN 4

STATE OF TEXAS
JENNIFER L. HENDERSON
116883
LICENSED
PROFESSIONAL ENGINEER
02/10/2023

PROJECT NO. 200107	02/10/2023	DRAWN BY: JS	CHECKED BY: AR	APPROVED BY: JH

CITY PROJECT NUMBER SP-2020-0328D

Plotted by: Adam, Plot date: 10/02/2023
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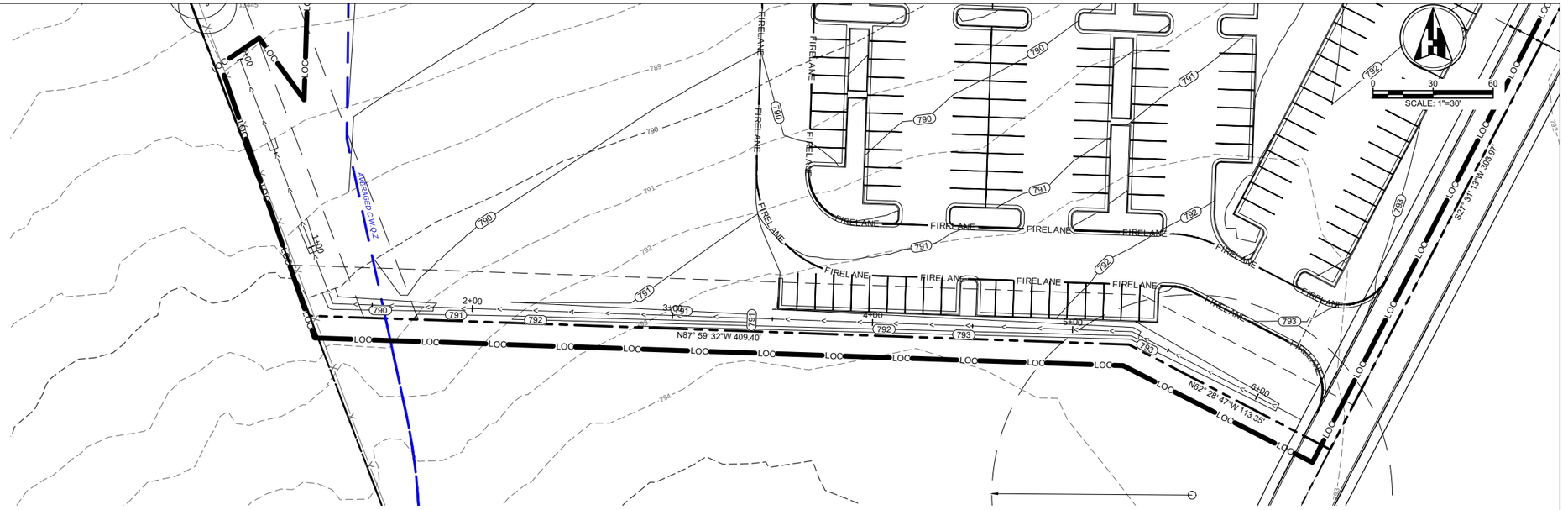

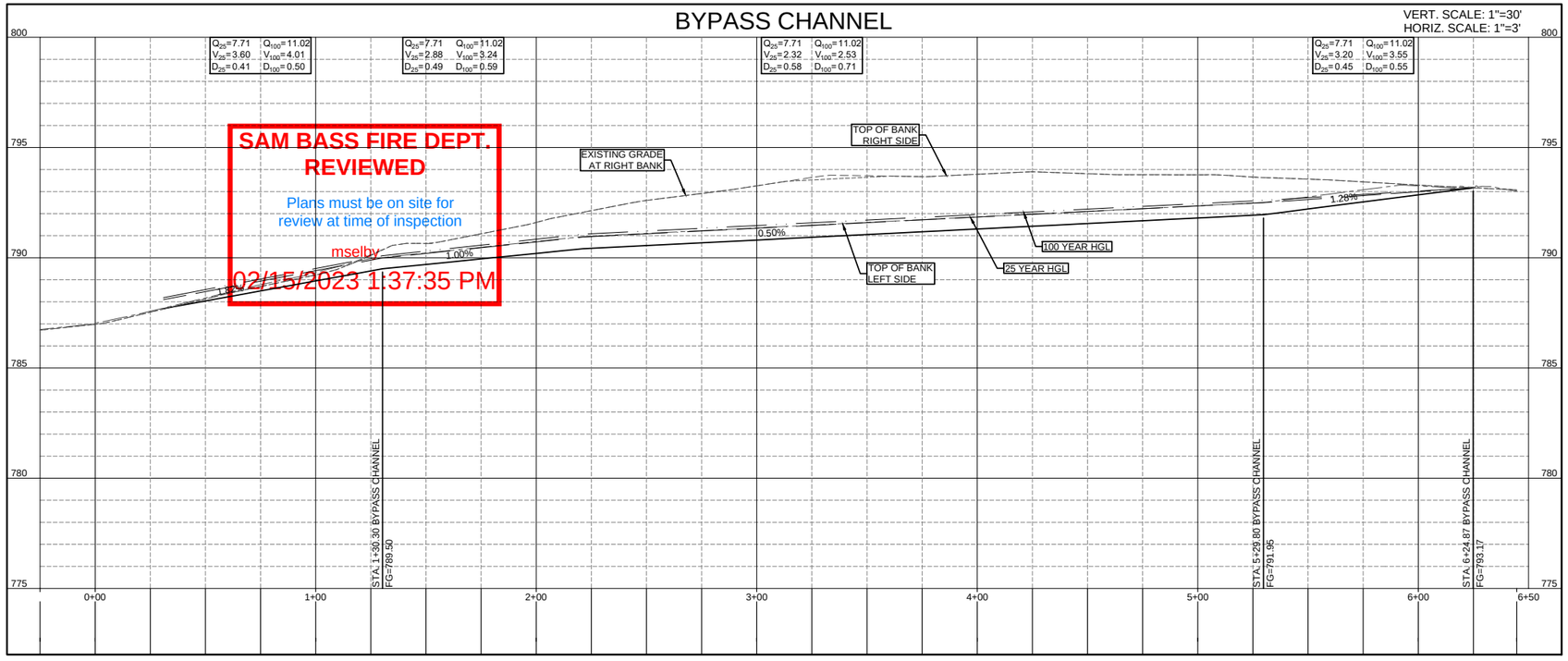

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SITE DEVELOPMENT PLANS
TO SERVE
NORTH AUSTIN CROSSROADS COMMUNITY CHURCH
15800 CROSSROADS DRIVE
AUSTIN, TEXAS 78681

BYPASS CHANNEL PLAN AND PROFILE

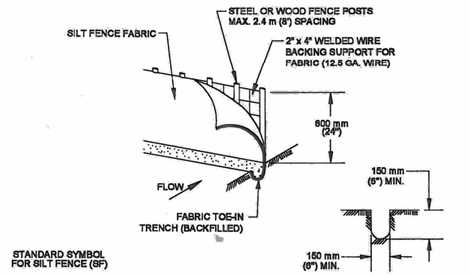
STATE OF TEXAS
JENNIFER L. HENDERSON
116883
LICENSED
PROFESSIONAL ENGINEER
02/10/2023

PROJECT NO. 200107	02/10/2023	DRAWN BY: JS	CHECKED BY: AR	APPROVED BY: JH

CITY OF AUSTIN
APPROVED
Date 08/03/2023
FOUNDED 1839

CITY PROJECT NUMBER SP-2020-0328D

Plotted by: Adam, Plot date: 10/02/2023
File name: h:\02 projects\2020\200107 crossroads community church\07 Sheets\SD\200107 CHANNEL P&P.dwg



TRENCH CROSS SECTION

1. STEEL OR WOOD POSTS WHICH SUPPORT THE SILT FENCE SHALL BE INSTALLED ON A SLIGHT ANGLE TOWARD THE ANTICIPATED RUNOFF SOURCE. POST MUST BE EMBEDDED A MINIMUM OF 300 mm (12 INCHES). IF WOOD POSTS CANNOT ACHIEVE 300 mm (12 Inches) DEPTH, USE STEEL POSTS.

2. THE TOE OF THE SILT FENCE SHALL BE TRENCHED IN WITH A SPADE OR MECHANICAL TRENCHER, SO THAT THE DOWNSLOPE FACE OF THE TRENCH IS FLAT AND PERPENDICULAR TO THE LINE OF FLOW.

3. THE TRENCH MUST BE A MINIMUM OF 150 mm (6 Inches) DEEP AND 150 mm (6 Inches) WIDE TO ALLOW FOR THE SILT FENCE FABRIC TO BE LAID IN THE GROUND AND BACKFILLED WITH COMPACTED MATERIAL.

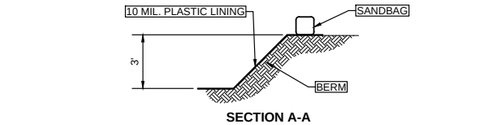
4. SILT FENCE FABRIC SHOULD BE SECURELY FASTENED TO EACH STEEL OR WOOD SUPPORT POST OR TO WOVEN WIRE , WHICH IS IN TURN ATTACHED TO THE STEEL OR WOOD FENCE POST.

5. INSPECTION SHALL BE MADE WEEKLY OR AFTER EACH RAINFALL EVENT AND REPAIR OR REPLACEMENT SHALL BE MADE PROMPTY AS NEEDED.

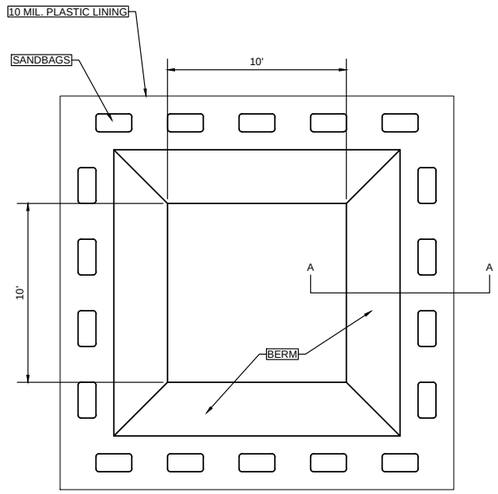
6. SILT FENCE SHALL BE REMOVED WHEN THE SITE IS COMPLETELY STABILIZED SO AS NOT TO BLOCK OR IMPEDE STORM FLOW OR DRAINAGE.

7. ACCUMULATED SILT SHALL BE REMOVED WHEN IT REACHES A DEPTH OF 150 mm (6 Inches). THE SILT SHALL BE DISPOSED OF ON AN APPROVED SITE AND IN SUCH A MANNER THAT WILL NOT CONTRIBUTE TO ADDITIONAL SILTATION.

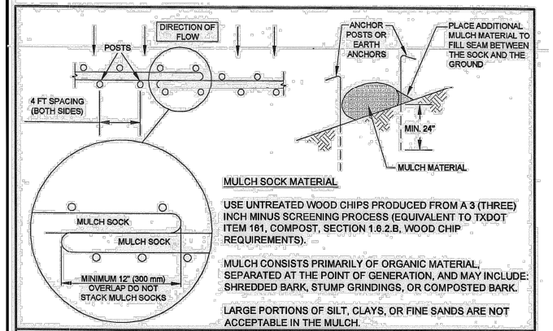
CITY OF AUSTIN WATERSHED PROTECTION DEPARTMENT	SILT FENCE	
9/1/2011 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 642S-1



SECTION A-A



01 CONCRETE WASHOUT
SCALE: 1/4" = 1'-0"



MULCH SOCK MATERIAL

USE UNTREATED WOOD CHIPS PRODUCED FROM A 3 (THREE) INCH MINUS SCREENING PROCESS (EQUIVALENT TO TXDOT ITEM 161, COMPOST, SECTION 1.6.2.B, WOOD CHIP REQUIREMENTS).

MULCH CONSISTS PRIMARILY OF ORGANIC MATERIAL, SEPARATED AT THE POINT OF GENERATION, AND MAY INCLUDE: SHREDDED BARK, STUMP GRINDINGS, OR COMPOSTED BARK.

LARGE PORTIONS OF SILT, CLAYS, OR FINE SANDS ARE NOT ACCEPTABLE IN THE MULCH.

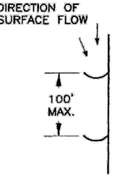
NOTES:

1. STEEL OR WOOD POSTS WHICH SUPPORT THE MULCH SOCK SHALL BE INSTALLED ON A SLIGHT ANGLE TOWARD THE ANTICIPATED RUNOFF SOURCE. POST MUST BE EMBEDDED A MINIMUM OF 600mm (24 Inches). IF WOOD POSTS CANNOT ACHIEVE 600mm (24 Inches) DEPTH, USE STEEL POSTS. EARTH ANCHORS ARE ALSO ACCEPTABLE.
2. THE TOE OF THE MULCH SOCK SHALL BE PLACED SO THAT THE MULCH SOCK IS FLAT AND PERPENDICULAR TO THE LINE OF FLOW. IN ORDER TO PREVENT WATER FROM FLOWING BETWEEN THE JOINTS OF ADJACENT ENDS OFMULCH SOCKS, LAP THE ENDS OF ADJACENT MULCH SOCKS A MINIMUM OF 300mm (12 Inches).
3. MULCH MATERIAL MUST BE FREE OF REFUSE, PHYSICAL CONTAMINANTS, AND MATERIAL TOXIC TO PLANT GROWTH; IT IS NOT ACCEPTABLE FOR THE MULCH MATERIAL TO CONTAIN GROUND CONSTRUCTION DEBRIS, BIOSOLIDS, OR MANURE.
4. SOCK MATERIAL WILL BE 100% BIODEGRADABLE, PHOTODEGRADABLE, OR RECYCLABLE SUCH AS BURLAP, TWINE, UV PHOTOBIODEGRADABLE PLASTIC, POLYESTER, OR ANY OTHER ACCEPTABLE MATERIAL.
5. MULCH SOCKS SHOULD BE USED AT THE BASE OF SLOPES NO STEEPER THAN 2:1 AND SHOULD NOT EXCEED THE MAXIMUM SPACING CRITERIA PROVIDED IN CITY OF AUSTIN ENVIRONMENTAL CRITERIA MANUAL TABLE 1.4.5.F.1 FOR A GIVEN SLOPE CATEGORY.
6. ACCUMULATED SILT SHALL BE REMOVED WHEN IT REACHES A DEPTH OF 150mm (6 Inches). THE SILT SHALL BE DISPOSED OF ON AN APPROVED SITE AND IN SUCH A MANNER THAT WILL NOT CONTRIBUTE TO ADDITIONAL SILTATION.

CITY OF AUSTIN WATERSHED PROTECTION DEPARTMENT	MULCH SOCK	
08/24/2010 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 648S-1

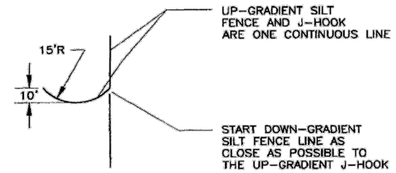
PLAN VIEW

I. SPACING REQUIREMENTS

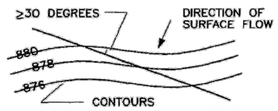


NOTE: SPACING DISTANCES WILL VARY, BUT ARE NOT TO EXCEED 100 FEET.

II. SIZING REQUIREMENTS:



FOR CATCHMENT AREA <0.25 ACRES



NOTE: J-HOOKS SHALL ALSO BE USED WHEN THE SILT FENCE IS INSTALLED AT AN ANGLE OF 30 DEGREES OR GREATER FROM PARALLEL TO THE CONTOURS.

APPROVED
Date 08/03/2023
CITY OF AUSTIN FOUNDED 1839

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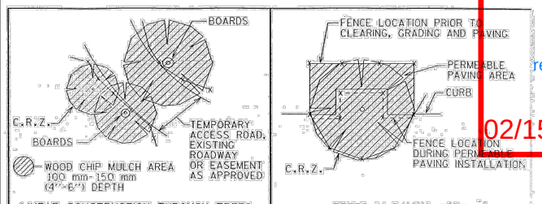
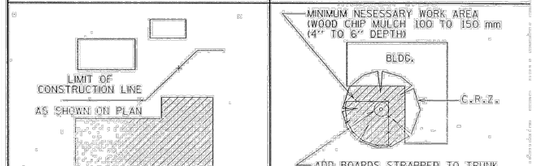
mselby
02/15/2023 1:37:35 PM



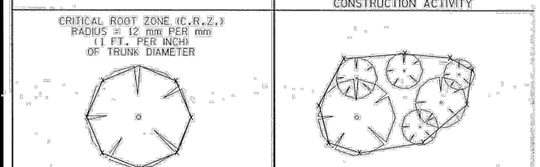
LINEAR CONSTRUCTION THROUGH TREES

TREES IN PAVING AREA



NATURAL AREAS

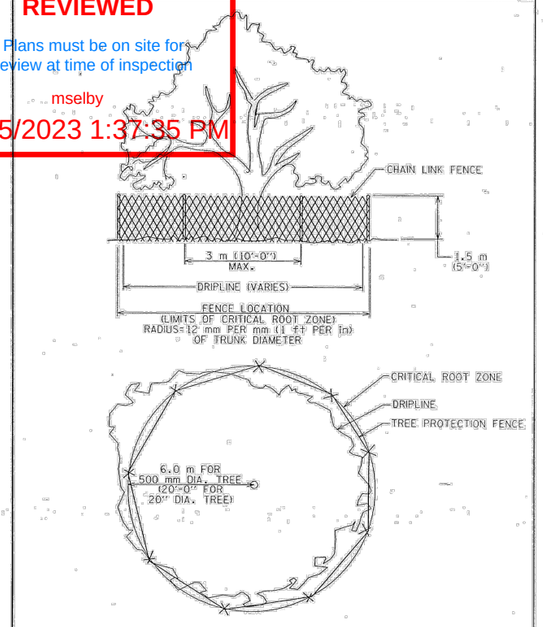
TREES NEAR CONSTRUCTION ACTIVITY



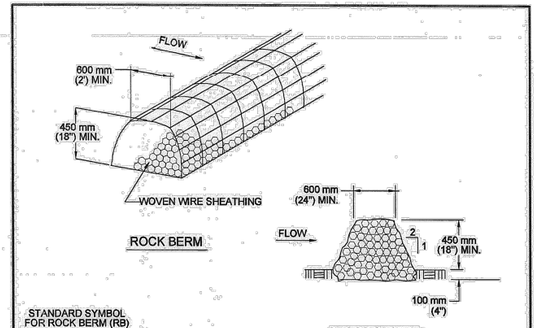
INDIVIDUAL TREE

GROUP OF TREES

CITY OF AUSTIN WATERSHED PROTECTION DEPARTMENT	TREE PROTECTION FENCE LOCATIONS	
11/15/99 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 610S-1



CITY OF AUSTIN WATERSHED PROTECTION DEPARTMENT	TREE PROPTECTION FENCE TYPE A - CHAIN LINK	
11/15/99 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 610S-2

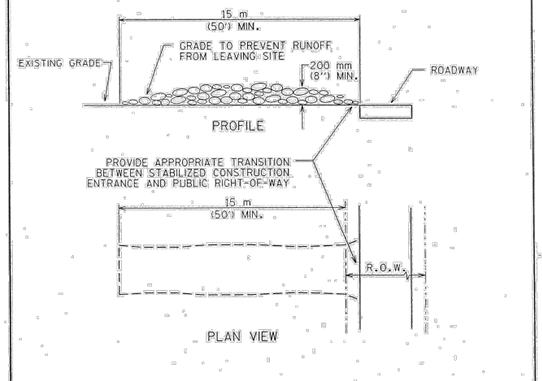


CROSS SECTION

NOTES:

1. USE ONLY OPEN GRADED ROCK 75 to 125 mm (3 to 5") DIAMETER FOR ALL CONDITIONS.
2. THE ROCK BERM SHALL BE SECURED WITH A WOVEN WIRE SHEATHING HAVING MAXIMUM 25 mm (1") OPENING AND MINIMUM WIRE DIAMETER OF 12.9 mm (20 GAUGE).
3. THE ROCK BERM SHALL BE INSPECTED DAILY OR AFTER EACH RAIN, AND THE STONE AND/OR FABRIC CORE-WOVEN SHEATHING SHALL BE REPLACED WHEN THE STRUCTURE CEASES TO FUNCTION AS INTENDED, DUE TO SEDIMENT ACCUMULATION AMONG THE ROCKS, WASHOUT, CONSTRUCTION TRAFFIC DAMAGE, ETC.
4. IF SEDIMENT REACHES A DEPTH EQUAL TO ONE-THIRD THE HEIGHT OF THE BERM OR 150 mm (6"), WHICHEVER IS LESS, THE SEDIMENT SHALL BE REMOVED AND DISPOSED OF ON AN APPROVED SITE AND IN A MANNER THAT WILL NOT CREATE A SEDIMENTION PROBLEM.
5. WHEN THE SITE IS COMPLETELY STABILIZED,THE BERM AND ACCUMULATED SEDIMENT SHALL BE REMOVED AND DISPOSED OF IN AN APPROVED MANNER.

CITY OF AUSTIN WATERSHED PROTECTION DEPARTMENT	ROCK BERM	
8/24/2010 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 639S-1



PLAN VIEW

NOTES:

1. STONE SIZE: 75-125 mm (3-5") OPEN GRADED ROCK.
2. LENGTH: AS EFFECTIVE BUT NOT LESS THAN 15 m (50').
3. THICKNESS: NOT LESS THAN 200 mm (8").
4. WIDTH: NOT LESS THAN FULL WIDTH OF ALL POINTS OF INGRESS/EGRESS.
5. WASHING: WHEN NECESSARY, VEHICLE WHEELS SHALL BE CLEANED TO REMOVE SEDIMENT PRIOR TO ENTRANCE ONTO PUBLIC ROADWAY. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE AND DRAINS INTO AN APPROVED TRAP OR SEDIMENT BASIN. ALL SEDIMENT SHALL BE PREVENTED FROM ENTERING ANY STORM DRAIN, DITCH OR WATERCOURSE USING APPROVED METHODS.
6. MAINTENANCE: THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC ROADWAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND, AS WELL AS REPAIR AND CLEAN OUT OF ANY MEASURE DEVICES USED TO TRAP SEDIMENT. ALL SEDIMENTS THAT IS SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC ROADWAY MUST BE REMOVED IMMEDIATELY.
7. DRAINAGE: ENTRANCE MUST BE PROPERLY GRADED OR INCORPORATE A DRAINAGE SWALE TO PREVENT RUNOFF FROM LEAVING THE CONSTRUCTION SITE.

CITY OF AUSTIN WATERSHED PROTECTION DEPARTMENT	STABILIZED CONSTRUCTION ENTRANCE	
5/23/00 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 641S-1

Henderson Professional Engineers
600 ROUND ROCK WEST DRIVE, SUITE 604
ROUND ROCK, TX 78681
512.350.6228
PELS FIRM #F-22208
Civil Engineering www.hendersonpe.com
WBE210166 | HUB 1853873845300

No.	REVISION
1	
2	
3	
4	
5	

SITE DEVELOPMENT PLANS TO SERVE

NORTH AUSTIN CROSSROADS COMMUNITY CHURCH
15800 CROSSROADS DRIVE
AUSTIN, TEXAS 78681

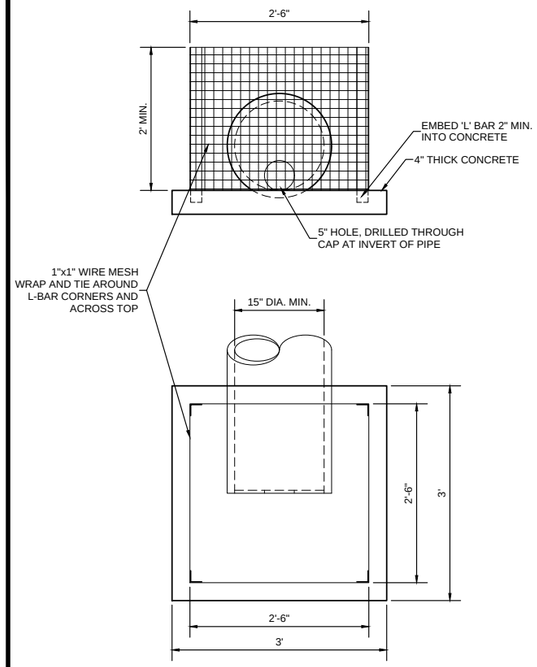
EROSION AND SEDIMENTATION CONTROL DETAILS

STATE OF TEXAS
JENNIFER L. HENDERSON
116883
LICENSED PROFESSIONAL ENGINEER
02/08/2023

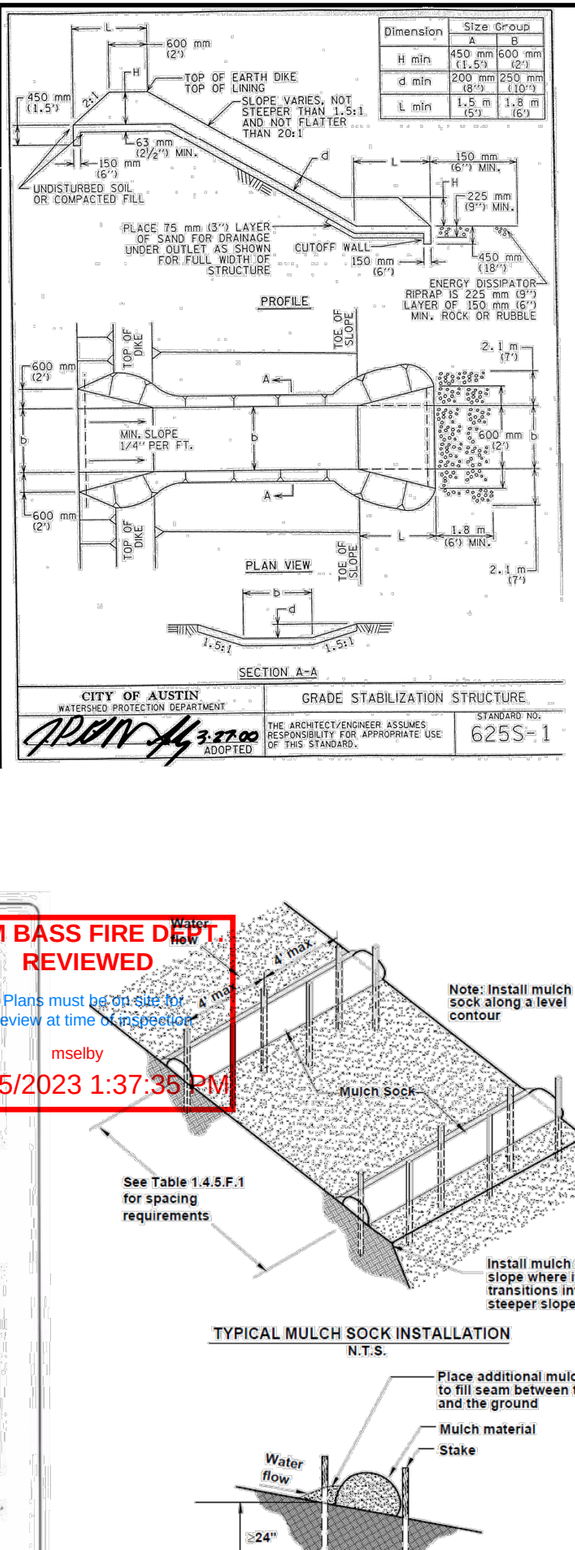
PROJECT NO. 200107	02/08/2023	DRAWN BY: JS	CHECKED BY: AR	APPROVED BY: JH

Plotted by: Adam, Plot date: 08/02/2023
File name: h:\02 projects\202020\200107 crossroads community church\07 Sheet\SD200107 DETAILS.dwg

CITY PROJECT NUMBER SP-2020-0328D

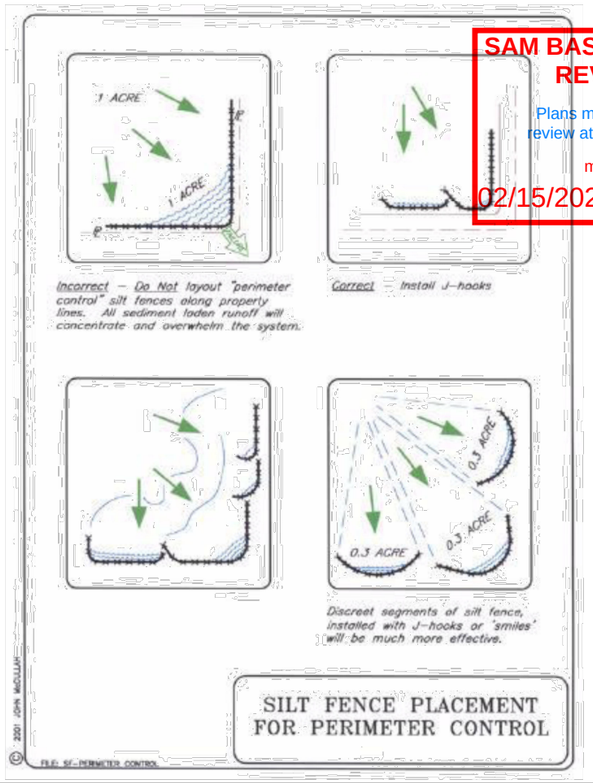


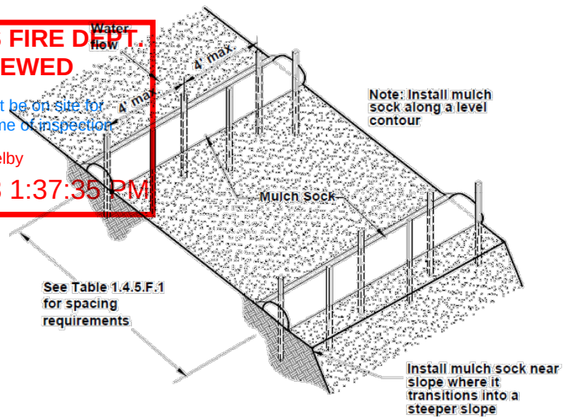
01 **TRASH RACK AT POND OUTLET**
SCALE: 1" = 1'-0"



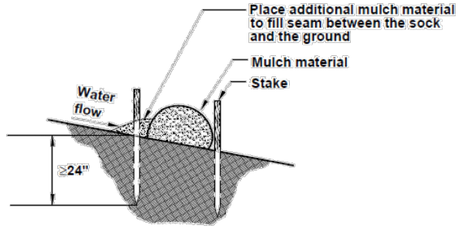
Dimension	Size Group A	Size Group B
H min	450 mm (1.5')	600 mm (2')
d min	200 mm (8")	250 mm (10")
L min	1.5 m (5')	1.8 m (6')

CITY OF AUSTIN WATERSHED PROTECTION DEPARTMENT	GRADE STABILIZATION STRUCTURE
3-27-00 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.
	STANDARD NO. 625S-1





TYPICAL MULCH SOCK INSTALLATION
N.T.S.



MULCH SOCK
N.T.S.

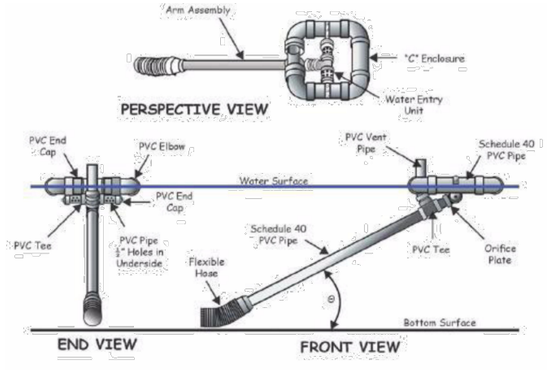


Figure 6.64a Schematic of a skimmer, from Pennsylvania Erosion and Sediment Pollution Control Manual, March, 2000.

CITY OF AUSTIN APPROVED Date 08/03/2023 FOUNDED 1839

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No.	REVISION
1	
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SITE DEVELOPMENT PLANS
TO SERVE
NORTH AUSTIN CROSSROADS COMMUNITY CHURCH
15800 CROSSROADS DRIVE
AUSTIN, TEXAS 78681

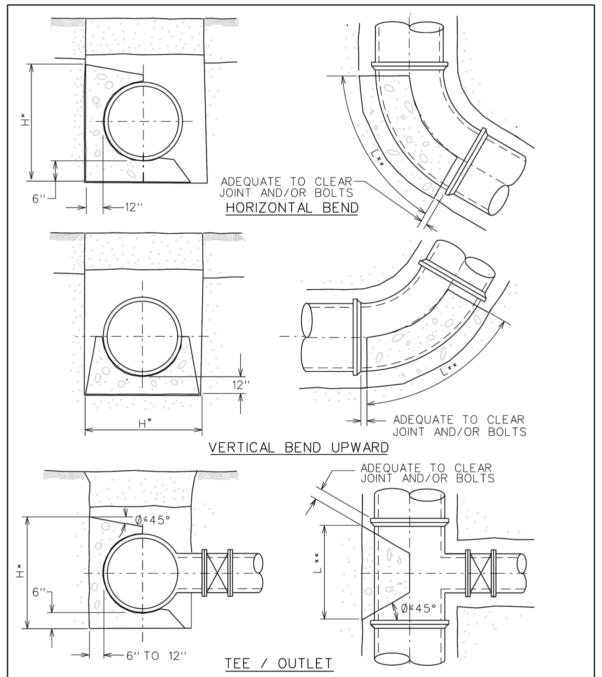
EROSION AND SEDIMENTATION CONTROL DETAILS

STATE OF TEXAS
JENNIFER L. HENDERSON
116883
LICENSED
PROFESSIONAL ENGINEER
02/08/2023

PROJECT NO. 200107	02/08/2023	DRAWN BY: JS	CHECKED BY: AR	APPROVED BY: JH

48 OF 54

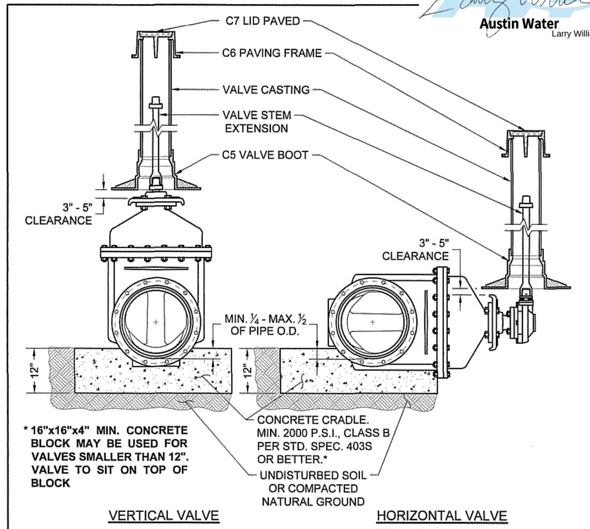
Plotted by: Adam, Plot date: 08/02/2023
File name: h:\02 projects\2020\200107 crossroads community church\07 Sheets\SD\200107 DETAILS.dwg



* THE DIMENSION FOR "H" MUST BE GREATER THAN DIAMETER OF THE PIPE
** LENGTH "L" ALONG THE BEND MUST BE GREATER THAN "H" AND LESS THAN 2 TIMES "H"

CITY OF AUSTIN WATER AND WASTEWATER UTILITY	CONCRETE THRUST BLOCKING	
RECORD COPY SIGNED BY JAMES E. THOMPSON — 2/11/86 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 510-6 2 OF 2

REVIEWED
August 02, 2023
Austin Water
Larry Williams



* 16"x16"x4" MIN. CONCRETE BLOCK MAY BE USED FOR VALVES SMALLER THAN 12". VALVE TO SIT ON TOP OF BLOCK

VERTICAL VALVE

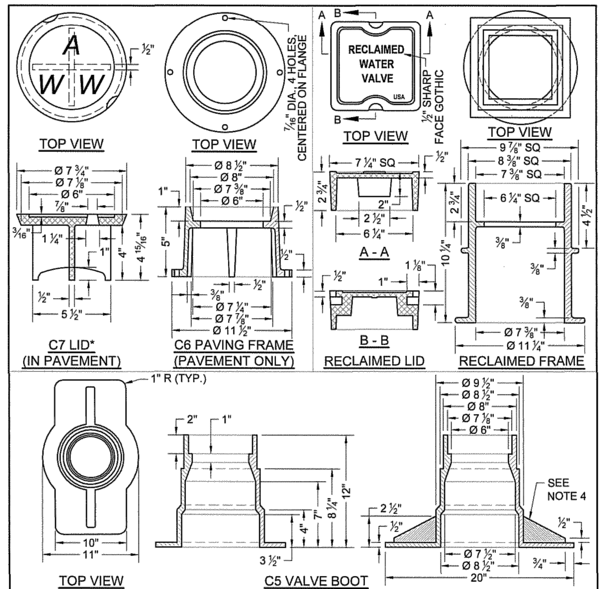
HORIZONTAL VALVE
ONLY TO BE USED WHEN CALLED OUT ON THE DRAWINGS.

NOTES:

1. WELD SOCKET 2½" x 2" DEEP TO 1" SCH. 40 CARBON STEEL ROUND STEM EXTENSION, FITTED ON OPERATING NUT, [SCH. 80 FOR LENGTHS OVER 10'.]
2. VALVE CASTING SHALL BE 6" DI PIPE WITH BELL OR COLLAR CENTERED OVER VALVE BOOT.
3. NUT AT TOP OF VALVE EXTENSION ROD SHALL BE SQUARE 2" LONG WELDED TO TOP OF ROD.
4. VALVE STEM EXTENSIONS ARE REQUIRED ON ALL VALVES THAT EXCEED 3' DEEP FROM FINISHED GRADE. VALVE EXTENSIONS SHALL BE PLACED SUCH THAT THE EXTENSION NUT IS BETWEEN 12" AND 18" FROM FINISHED GRADE.

RECLAIMED WATER: ALL RECLAIMED PVC PIPE SHALL BE MANUFACTURED PURPLE PIPE. HDPE PIPE SHALL BE MANUFACTURED WITH PURPLE STRIPES. ALL OTHER PIPE AND APPURTENANCES SHALL BE MANUFACTURED PURPLE IF AVAILABLE. ALL PIPE AND FITTINGS THAT ARE NOT AVAILABLE FROM THE MANUFACTURER IN PURPLE SHALL BE PAINTED PURPLE PER SPL WW-3C. ALL BURIED DI AND CI PIPE AND FITTINGS SHALL ALSO BE WRAPPED IN PURPLE POLYETHYLENE PER SPL WW-27D. ALL COVERS SHALL HAVE "RECLAIMED WATER" CAST INTO THEM.

CITY OF AUSTIN AUSTIN WATER	TYPICAL GATE VALVE 4" - 16"	
Kathi L. Flowers — 05/18/2016 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 511-AW-01 1 OF 4



NOTES:

1. MATERIAL SHALL BE GRAY CAST IRON, ASTM A48, GRADE 30B.
2. THE MANUFACTURER'S IDENTIFICATION AND CASTING NUMBER, AND THE COUNTRY WHERE CAST, SHALL BE DISTINCTLY CAST ONTO EACH LID, FRAME, COLLAR AND BASE.
3. DRAFT AND SHRINKAGE ALLOWANCE SHALL BE IN ACCORDANCE WITH NORMAL FOUNDRY PRACTICE.
4. CASTING FINISH BY MANUFACTURER SHALL INCLUDE REMOVAL OF FINS AND FLASHING, AND PAINT WITH BLACK ASPHALT COATING.

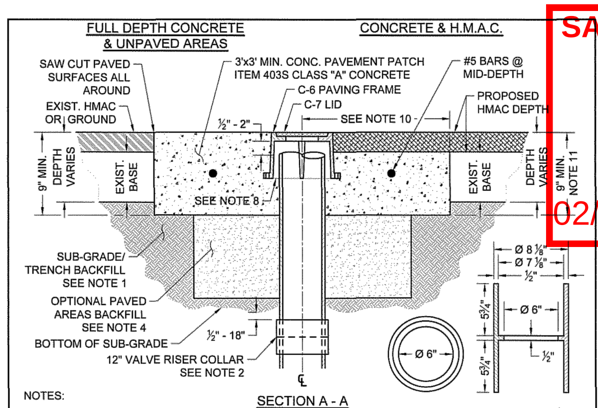
WEIGHTS:

C7 LID: 13 LBS
RECLAIMED LID: 15 LBS
C6 FRAME: 23 LBS
RECLAIMED FRAME: 33 LBS
C5 BASE: 78 LBS

* LETTERING SHALL BE 1½"
2 PICK BAR SLOTS REQUIRED

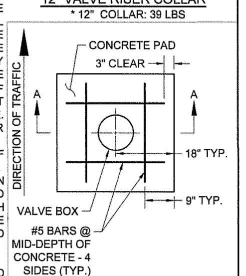
CITY OF AUSTIN AUSTIN WATER	TYPICAL GATE VALVE 4" - 16"	
Kathi L. Flowers — 05/18/2016 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 511-AW-01 2 OF 4

CITY OF AUSTIN
APPROVED
Date 08/03/2023
FOUNDED 1839



NOTES:

1. SUB-GRADE/TRENCH BACKFILL SHALL BE COMPACTED AS PER ITEM 201S, SUB-GRADE PREPARATION.
2. TO ADJUST VALVE CASTINGS TO FINAL GRADE, REMOVE RISER PIPE BELOW SUB-GRADE AND INSTALL APPROPRIATE LENGTH OF NEW RISER PIPE TO ACHIEVE FINAL GRADE. CONNECT THE TWO PIECES OF RISER PIPE WITH A 6" COLLAR MIN. 12" LENGTH APPROXIMATELY CENTERED ON THE JOINT WITH THE TOP OF SLEEVE LOCATED ½" - 18" BELOW SUB-GRADE. THE INSIDE "LIP" OF COLLAR TO BE PAINTED WITH FLUORESCENT WHITE PAINT OR COVERED WITH FLUORESCENT WHITE TAPE. ALTERNATE: FOR OPTIONAL SINGLE PIECE RISER INSTALLATION SEE SHEET 4 OF 4.
3. CLEAN VALVE BOX OF ALL DEBRIS DOWN TO THE NUT OF THE VALVE; NUT SHALL OPERATE WITH NO OBSTRUCTION.
4. WHERE CASTINGS TO BE REMOVED REQUIRE EXCAVATION GREATER THAN 20" DEEP, CONTRACTOR MAY ELECT TO FILL EXCAVATION WITH CONTROLLED LOW STRENGTH MATERIAL (SPEC. ITEM 402S) TO THE UNDERSIDE OF THE CONCRETE. PAVEMENT PATCH IN LIEU OF COMPACTED BACKFILL.
5. REINFORCING STEEL SHALL MEET SPEC. ITEM 406S.7.
6. NO MORE THAN 2 SECTIONS OF PIPE SHALL BE USED FROM VALVE TO FINAL GRADE.
7. BELL AND SPIGOT IS ACCEPTABLE FOR DEPTH OVER 18'.



CITY OF AUSTIN AUSTIN WATER	TYPICAL GATE VALVE 4" - 16"	
Kathi L. Flowers — 05/18/2016 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 511-AW-01 3 OF 4

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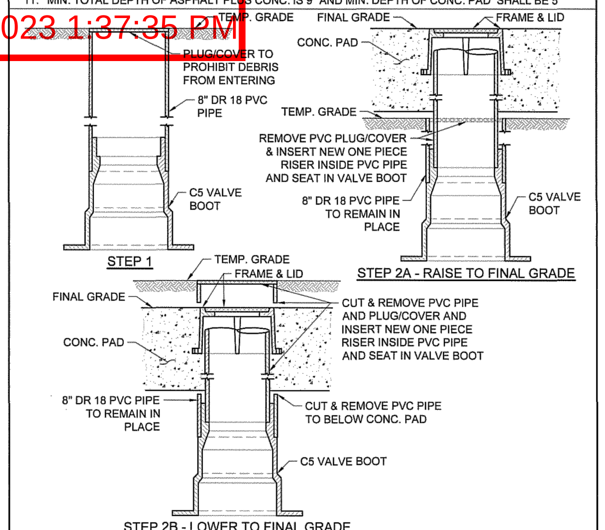
REVIEWED
Plans must be on site for review at time of inspection
mselby
02/15/2023 1:37:35 PM

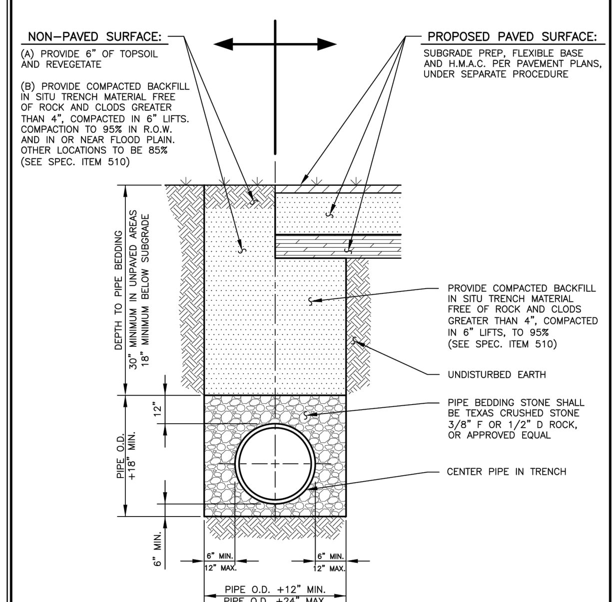
NOTES (CON'T):

8. PAVING FRAME SHALL BE FLUSH WITH THE CONC. PAD AND PLACED ½" - 2" ABOVE RISER PIPE (FRAME SHALL NOT REST ON RISER.)
9. IN UNPAVED AREAS, INSTALL ONE DELINEATOR STAKE IMMEDIATELY ADJACENT TO THE EDGE OF THE CONCRETE PAD. DELINEATOR SHALL BE BLUE FOR POTABLE WATER AND PURPLE FOR RECLAIMED WATER AND SHALL EXTEND AT LEAST 60" ABOVE GROUND. DELINEATORS SHALL HAVE 2" WIDE, WHITE IN COLOR, TYPE I REFLECTIVE TAPE MOUNTED DIAGONALLY AT 12" SPACING ON BOTH SIDES.
10. VALVE SHALL TYPICALLY BE CENTERED IN CONCRETE DIAMOND BUT MAY BE OFFSET WITH A MIN. OF 12" FROM CENTER OF VALVE LID TO EDGE OF CONCRETE IN ALL DIRECTIONS.
11. MIN. TOTAL DEPTH OF ASPHALT PLUS CONC. IS 9" AND MIN. DEPTH OF CONC. PAD SHALL BE 5"



OPTIONAL ONE PIECE VALVE CASTING INSTALLATION

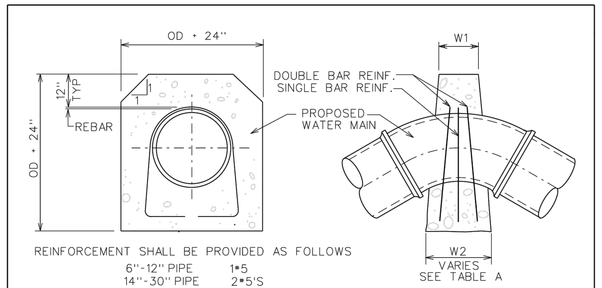
CITY OF AUSTIN AUSTIN WATER	TYPICAL GATE VALVE 4" - 16"	
Kathi L. Flowers — 05/18/2016 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 511-AW-01 4 OF 4



NOTE:

1. ALL TRENCHING AND TRENCH SAFETY SHALL COMPLY WITH APPLICABLE FEDERAL, STATE AND LOCAL REGULATIONS.

RECORD SIGNED COPY ON FILE AT U&ES DEPARTMENT APPROVED 03-01-18 DATE	CITY OF ROUND ROCK	DRAWING NO: WT-08
THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR THE APPROPRIATE USE OF THIS DETAIL. (NOT TO SCALE)	WATERLINE BEDDING AND SURFACE REPAIR DETAIL (NON-PAVED & PROPOSED PAVED SURFACE)	ROUND ROCK TEXAS UTILITIES AND ENVIRONMENTAL SERVICES



REINFORCEMENT SHALL BE PROVIDED AS FOLLOWS

6"-12" PIPE 1#5
14"-30" PIPE 2#5'S
36"-48" PIPE 2#7'S

W2 VARIES SEE TABLE A

VERTICAL DOWN BEND

TABLE A
UPWARD THRUST GRAVITY BLOCKS

PIPE DIA.	MIN. TOP WIDTH W1	ANGLE (degrees)	BOTTOM WIDTH- W2 (in)
6"	6"	0-5	NOTE 2
		5-15	24
		15-25	48
		> 25	NOTE 1
8"	6"	0-5	NOTE 2
		5-9	30
		9-15	36
		>15	NOTE 1
12"	6"	0-5	NOTE 2
		5-15	48
		>15	NOTE 1
16"	12"	0-5	NOTE 2
		5-10	60
		10-15	96
		> 15	NOTE 1
24" THRU 36" DIA.		>5.0	NOTE 1
42" THRU 48" DIA.		>3.0	NOTE 1

NOTES:

1- FOR ANGLES GREATER THAN THOSE INDICATED RESTRAINED JOINTS SHALL BE INSTALLED

2- FOR JOINT DEFLECTIONS LESS THAN 5 DEGREES, NO HORIZONTAL OR VERTICAL THRUST RESTRAINT IS REQUIRED FOR PIPES LESS THAN 42" IN DIAMETER.

THRUST BLOCK DESIGN AS FOLLOWS
A. PRESSURE OF 150 P.S.I. (ACTUAL IF HIGHER) + 50 % SURGE ALLOWANCE
B. MAXIMIM SOIL BEARING SEE TABLE BELOW

SOIL TYPES	PRESSURE
LOOSE OR SPONGY SOIL	1500 Lb/Sq.Ft.
UNDISTURBED SOIL, CALICHE	2000 Lb/Sq.Ft.
LIMESTONE ROCK	4000 Lb/Sq.Ft.

CITY OF AUSTIN WATER AND WASTEWATER UTILITY	CONCRETE THRUST BLOCKING	
RECORD COPY SIGNED BY JAMES E. THOMPSON — 2/11/86 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 510-6 1 OF 2

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SITE DEVELOPMENT PLANS TO SERVE
NORTH AUSTIN CROSSROADS COMMUNITY CHURCH
15800 CROSSROADS DRIVE
AUSTIN, TEXAS 78681

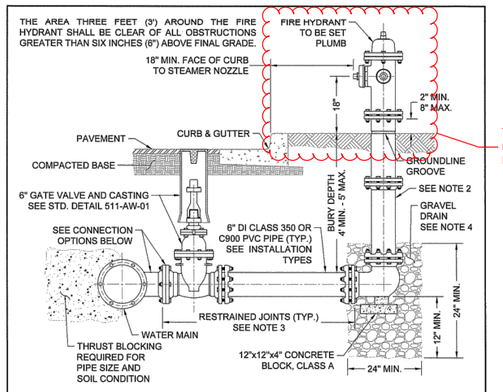
WATER DETAILS

STATE OF TEXAS
JENNIFER L. HENDERSON
116883
LICENSED PROFESSIONAL ENGINEER
02/08/2023

PROJECT NO. 200107
02/08/2023
DRAWN BY: JS
CHECKED BY: AR
APPROVED BY: JH

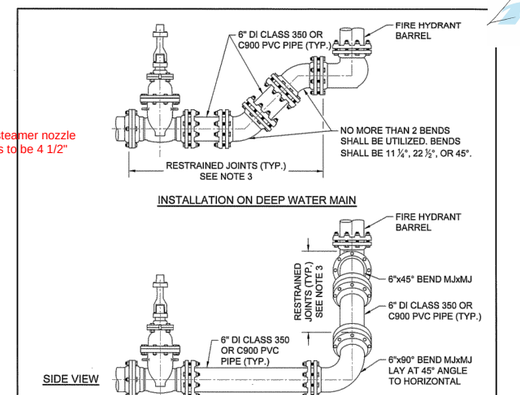
Plotted by: Adam, Plot date: 08/02/2023
File name: h:\02 projects\2020\200107 crossroads community church\07 Sheets\SD\200107 DETAILS.dwg

CITY PROJECT NUMBER SP-2020-0328D

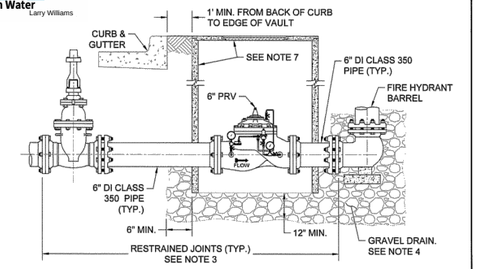


The steamer nozzle needs to be 4 1/2" NST

CITY OF AUSTIN AUSTIN WATER	FIRE HYDRANT	
Kathi L. Flowers 05/18/2016 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 511-AW-02 1 OF 3



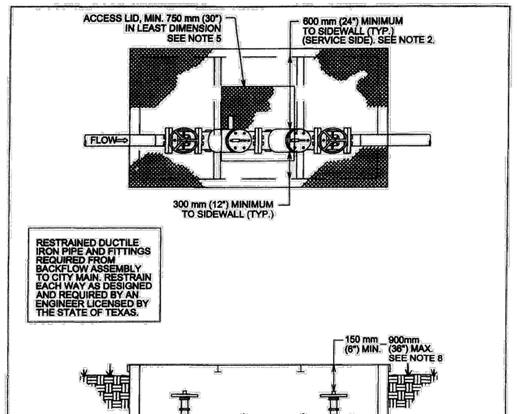
CITY OF AUSTIN AUSTIN WATER	FIRE HYDRANT	
Kathi L. Flowers 05/18/2016 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 511-AW-02 2 OF 3



NOTES: APPLICABLE TO ALL INSTALLATION TYPES.

1. NO PART OF A HYDRANT OR ITS NOZZLE CAPS SHALL BE WITHIN 6" OF ANY SIDEWALK OR PEDESTRIAN RAMP. ANY FIRE HYDRANT PLACED NEAR A STREET CORNER SHALL BE LOCATED OUTSIDE THE CURVE RADIUS AND A MINIMUM OF 4' FROM RAMPS.
2. ONE BARREL EXTENSION NOT EXCEEDING 2' LENGTH MAY BE INSTALLED DIRECTLY BELOW THE FIRE HYDRANT IN ORDER TO MEET THE REQUIRED BURY DEPTH OF 4' - 5'. BREAK AWAY BOLTS (SHOE TYPES) SHALL BE PROPERLY SPACED AND PLACED.
3. FIRE LINE SHALL HAVE ALL JOINTS RESTRAINED FROM MAIN TO FIRE HYDRANT. JOINTS SHOWN MAY VARY. SEE SPL WW-27, WW-27A, AND WW-27B FOR RESTRAINT OPTIONS.
4. BELOW EACH HYDRANT, A DRAINAGE PIT 24" IN DIAMETER AND 12" DEEP SHALL BE EXCAVATED AND FILLED WITH COMPACTED COARSE GRAVEL OR BROKEN STONE MIXED WITH COARSE SAND UNDER AND AROUND THE BOWL OF THE HYDRANT, AND TO A LEVEL 12" ABOVE THE HYDRANT DRAIN OPENING (SEE STD. SPEC. 510). THE HYDRANT DRAINAGE PIT SHALL NOT BE CONNECTED TO A SANITARY SEWER. THE DRAIN GRAVEL SHALL BE COVERED WITH FILTER FABRIC PER STD. SPEC. 620S. FOR PRV, GRAVEL SHALL EXTEND UNDER THE PRV VAULT 12" MIN. DEPTH UNDER THE VAULT AND 6" MIN. BEYOND VAULT.
5. FOR FIRE HYDRANT LEADS AT A MAIN OUTLET LARGER THAN 6" DIAMETER, OUTLET SHALL BE FLANGED AND A FLG x FLG REDUCER SHALL BE INSTALLED DIRECTLY ON THE OUTLET.
6. WRAP 8 MIL. POLY-FILM WRAP ON ALL BURIED PIPE AND FITTINGS.
7. FOR HYDRANTS WITH PRV: CLASS III RCP VAULT 60" MIN. I.D. WITH REINFORCED PRECAST CONCRETE LID (AASHTO H-20 LOADING) WITH COA FRAME AND 32" COVER WITH LETTERING MODIFIED FOR WATER.

CITY OF AUSTIN AUSTIN WATER	FIRE HYDRANT	
Kathi L. Flowers 05/18/2016 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 511-AW-02 3 OF 3

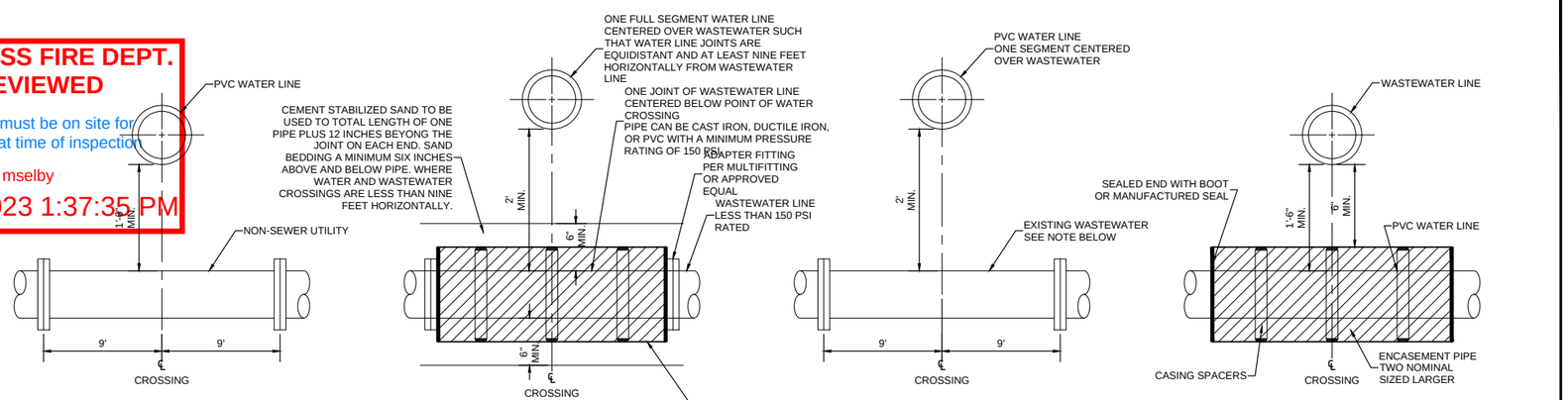


CITY OF AUSTIN AUSTIN WATER UTILITY	STANDARD BACKFLOW PREVENTER ON FIRE LINE WITH MASTER METER	
Kathi L. Flowers 8/31/2011	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 520S-19B 1 OF 2

NOTES:

1. ALL BACKFLOW PREVENTION ASSEMBLIES SHALL HAVE LAB AND FIELD APPROVAL FROM THE UNIVERSITY OF SOUTHERN CALIFORNIA FOUNDATION FOR CROSS CONNECTION CONTROL AND HYDRAULIC RESEARCH.
2. ALL TEST PORTS SHALL BE DIRECTED UPWARD AND PLUGGED. TEST PORTS ARE LOCATED ON SERVICE SIDE. PLUGS SHALL BE NON-FERROUS.
3. BACKFLOW PREVENTION ASSEMBLIES SHALL BE INSTALLED IN THE UPRIGHT HORIZONTAL POSITION, UNLESS OTHERWISE APPROVED. BACKFLOW PREVENTION ASSEMBLIES SHALL NOT BE ROTATED ON THEIR AXIS.
4. CLEARANCE SHALL BE AS INDICATED,AND IN THE STANDARD CROSS CONNECTION ORDINANCES AND UCM.
5. ACCESS OPENING MUST BE LARGE ENOUGH TO REMOVE LARGEST PORTION OF BACKFLOW PREVENTER, BUT NOT LESS THAN 750 mm (30") IN LEAST DIMENSION.
6. TEST AND MAINTENANCE REPORT SHALL BE RECEIVED BY AUSTIN WATER UTILITY'S SPECIAL SERVICE DIVISION WITHIN 5 DAYS AFTER BEING INSTALLED.
7. VAULT SHALL NOT BE INSTALLED IN TRAFFIC AREA.
8. VAULT DEPTH MAY NOT EXCEED 1.8m (72"), BOTTOM OF LID TO TOP OF FLOOR.
9. HAND WHEELS SHALL BE HORIZONTALLY LOCATED WITHIN 300mm (12") OF ACCESS OPENING.
10. FOR ACCESS DOORS SEE SPL WW-614 OR APPROVED EQUAL (H20 LOADING REQUIRED).
11. FOR VAULT SEE SPL WW-298 OR APPROVED EQUAL (H20 LOADING REQUIRED).
12. VAULT PIPE WALL VOIDS SHALL BE SEALED WITH NON-SHRINK GROUT OR SEALANT PER SPL WW-148A OR APPROVED EQUAL.
13. THE TOP OF THE METER VAULT SHALL BE AT AN ELEVATION SUCH THAT THE SURROUNDING GROUND SLOPES AWAY FROM THE VAULT. ADDITIONAL DRAINAGE CONSIDERATION SUCH AS CONNECTION OF VAULT TO STORM SEWER, LATERAL DRAIN LINES FROM GRAVEL BED OR OTHER MEANS SHALL BE REQUIRED IF CONDITIONS CAUSE WATER TO COLLECT IN VAULT.

CITY OF AUSTIN AUSTIN WATER UTILITY	STANDARD BACKFLOW PREVENTER ON FIRE LINE WITH MASTER METER	
Kathi L. Flowers 8/31/2011	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 520S-19B 2 OF 2



NOTE:
WHERE ANY UTILITY OTHER THAN WASTEWATER CROSSES UNDER A WATER LINE, THE SEPARATION BETWEEN THEM SHALL BE A MINIMUM OF 18".

NOTES:

1. ALL SECTIONS OF WASTEWATER MAIN OR LATERAL WITHIN NINE FEET HORIZONTALLY OF THE WATER LINE SHALL BE ENCASED IN AN 18 FOOT OR LONGER SECTION OF PIPE.
2. ENCASEMENT PIPE IS ONLY REQUIRED WHERE WASTEWATER PIPE IS LESS THAN 18 FEET IN LENGTH.
3. CENTER THE ENCASEMENT PIPE ON THE CROSSING.
4. WHERE CEMENT STABILIZED SAND SHALL HAVE A MINIMUM 10% CEMENT PER CUBIC YARD OF STABILIZED SAND MIXTURE ON LOOSE DRY WEIGHT VOLUME (2.5 BAGS OF CEMENT PER CUBIC YARD OF MIXTURE).
5. ENCASED WASTEWATER LINE AND JOINTS SHALL HAVE A MINIMUM PRESSURE RATING OF 150 PSI.

NOTE:
IF THE EXISTING WASTEWATER LINE IS DISTURBED OR LEACHING, REPLACE AT LEAST NINE FEET IN EACH DIRECTION OF THE CROSSING WITH MINIMUM150 PSI PIPE.

NOTE:
THE MINIMUM LENGTH OF ENCASEMENT PIPE SHALL BE 18 FEET AND TWO NOMINAL SIZES LARGER THAN THE NEW WATER LINE. THE SPACE AROUND THE CARRIER PIPE SHALL BE SUPPORTED AT FIVE FOOT INTERVALS WITH SPACERS OR BE FILLED TO THE SPRINGLINE WITH WASHED SAND. THE ENCASEMENT PIPE SHOULD BE CENTERED ON THE CROSSING AND BOTH ENDS SEALED WITH NON-SHRINK CEMENT GROUT OR MANUFACTURED SEAL. ENCASEMENT PIPE SHALL BE STEEL OR PVC WITH A PIPE STIFFNESS OF 115 PSI AT 5.0% DEFLECTION.

01 **WATER CROSSING DETAILS**
SCALE: 1" = 1'-0"

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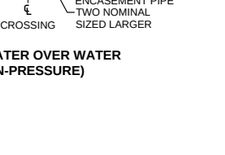
SITE DEVELOPMENT PLANS TO SERVE
NORTH AUSTIN CROSSROADS COMMUNITY CHURCH
15800 CROSSROADS DRIVE
AUSTIN, TEXAS 78681
WATER DETAILS



PROJECT NO. 200107	02/08/2023	DRAWN BY: JS	CHECKED BY: AR	APPROVED BY: JH

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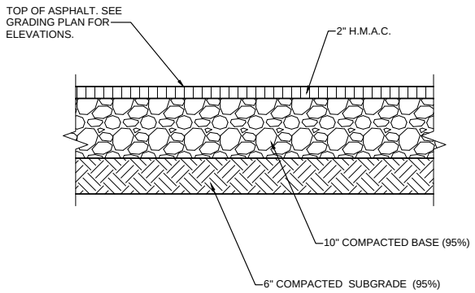
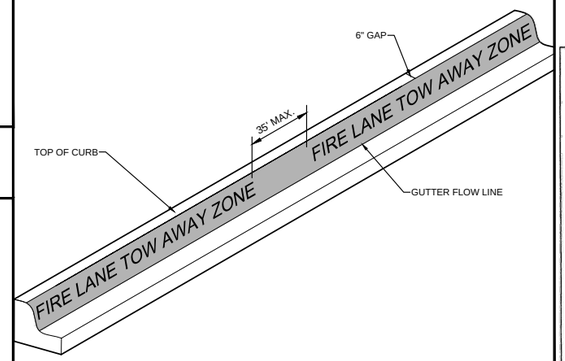
CITY PROJECT NUMBER SP-2020-0328D



01 ASPHALT SECTION
SCALE: 1" = 1'-0"

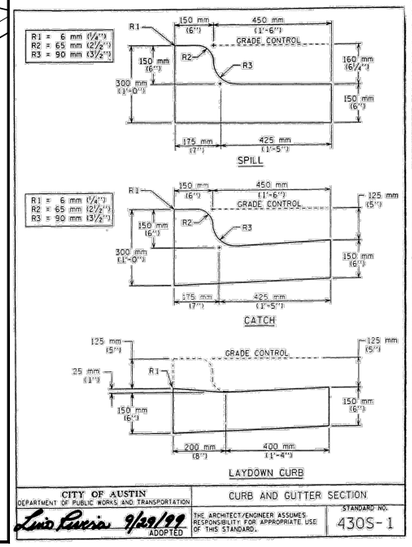
COLORS:
- LEGEND AND BORDER - GREEN
- WHITE SYMBOL ON BLUE
- BACKGROUND
- BACKGROUND - WHITE

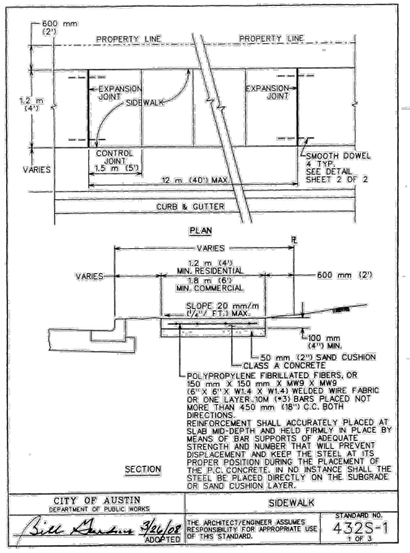
02 ADA SIGN AND SYMBOL
SCALE: 3" = 1'-0"

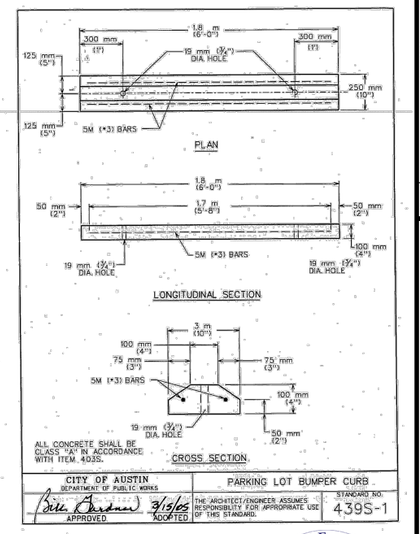


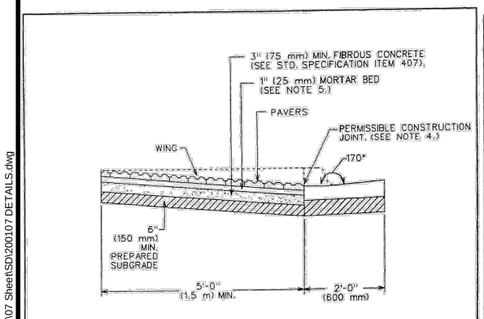
NOTES:
FIRE LANE STRIPING TO BE 6" WIDE RED PAINT WITH "FIRE LANE TOW AWAY ZONE" IN 4" TALL WHITE LETTERS. WORDING MAY NOT BE SPACED GREATER THAN 35' APART. STRIPING TO BE PAINTED ON THE FACE OF CURB WHEN PRESENT AND PAINTED FLAT ON THE PARKING SURFACE WHEN IT IS NOT.

03 FIRE LANE STRIPING
SCALE: 1' = 1'-0"



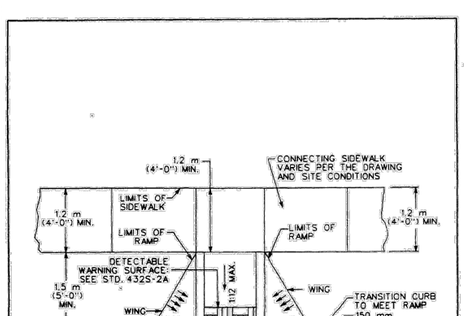




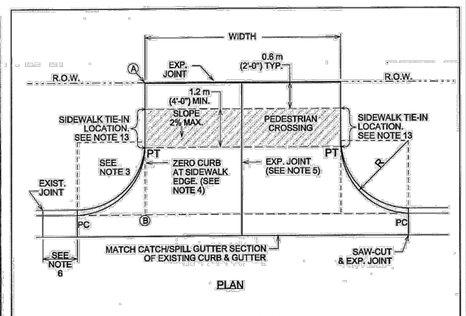


GENERAL NOTES:
1. THIS STANDARD IS ENFORCEABLE FOR RAMP CONSTRUCTION WITHIN PRIVATE PROPERTY ONLY.
2. PAVERS ARE REQUIRED FOR ALL CURB RAMP INSTALLATIONS.
3. PAVERS SHALL HAVE DETECTABLE WARNING UNIT CONSISTS OF RAISED TRUNCATED DOMES WITH A DIAMETER OF 0.9" (23 mm), A NOMINAL HEIGHT OF 0.2" (5 mm) AND A NOMINAL CENTER TO CENTER SPACING OF 2.35" (60 mm) AND SHALL CONSTRAST VISUALLY WITH ADJOINING SURFACES, EITHER LIGHT-ON-DARK OR DARK-ON-LIGHT (Ref: ADAAG SECTION 4.29.2). MATERIAL USED TO PROVIDE CONTRAST SHALL BE AN INTEGRAL PART OF THE WALKING SURFACE. PAVER PATTERN SHALL BE BASKET WEAVE UNLESS DIRECTED OTHERWISE BY THE ENGINEER OR DESIGNATED REPRESENTATIVE.
4. TYPICAL SIDEWALK WIDTHS AND CURB RADII ARE SHOWN FOR ILLUSTRATION ONLY. REFER TO THE TRANSPORTATION CRITERIA MANUAL FOR SIDEWALK WIDTHS, CURB RADII AND CURB BASIS.
5. THE PERMISSIBLE CONSTRUCTION JOINT BETWEEN THE PAVERS AND THE ADJOINING SURFACE SHALL BE LIMITED TO 1/4" (6 mm) JOINT SIZE. GAPS LARGER THAN 1/4" (6 mm) MUST BE APPROVED BY THE ENGINEER OR DESIGNATED REPRESENTATIVE. ALL JOINTS BETWEEN BRICKS AND ADJOINING SURFACE SHALL BE MORTAR FILLED UNLESS DIRECTED OTHERWISE BY THE ENGINEER OR DESIGNATED REPRESENTATIVE.
6. MORTAR SHALL CONFORM TO STD. SPECIFICATION ITEM SECTION 403S.3.5. MORTAR AND GROUT. ALL OTHER CONCRETE SHALL CONFORM TO STD. SPECIFICATION ITEM 403S, CONCRETE FOR STRUCTURES, UNLESS OTHERWISE NOTED.
7. CURB RAMPS WITH RETURNED CURB MAY ONLY BE USED WHERE PEDESTRIANS WOULD NOT NORMALLY WALK DIAGONALLY ACROSS THE RAMP.

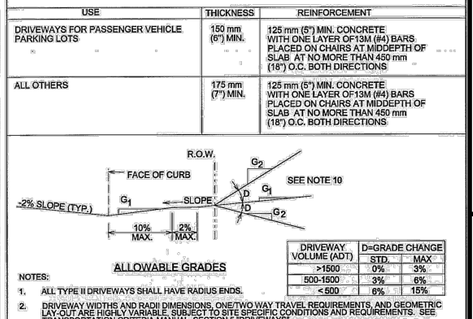
CITY OF AUSTIN
DEPARTMENT OF PUBLIC WORKS
DETECTABLE WARNING-PAVER (PRIVATE PROPERTY)
STANDARD NO. 432S-2B
2 OF 2



CITY OF AUSTIN
DEPARTMENT OF PUBLIC WORKS
TYPE 1 SIDEWALK CURB RAMP
STANDARD NO. 432S-5



USE	THICKNESS	REINFORCEMENT
DRIVEWAYS FOR PASSENGER VEHICLE PARKING LOTS	150 mm (6") MIN.	125 mm (5") MIN. CONCRETE WITH ONE LAYER OF 13M (#4) BARS PLACED ON CHAIRS AT MIDDEPTH OF SLAB AT NO MORE THAN 450 mm (18") O.C. BOTH DIRECTIONS
ALL OTHERS	175 mm (7") MIN.	125 mm (5") MIN. CONCRETE WITH ONE LAYER OF 13M (#4) BARS PLACED ON CHAIRS AT MIDDEPTH OF SLAB AT NO MORE THAN 450 mm (18") O.C. BOTH DIRECTIONS



DRIVEWAY VOLUME (ADT)	D=GRADE CHANGE STD.	MAX
>1500	0%	3%
500-1500	3%	6%
< 500	6%	15%

NOTES:
1. ALL TYPE II DRIVEWAYS SHALL HAVE RADIUS ENDS.
2. DRIVEWAY WIDTHS AND RADII DIMENSIONS, ONE/TWO WAY TRAVEL REQUIREMENTS, AND GEOMETRIC LAY-OUT ARE HIGHLY VARIABLE, SUBJECT TO SITE SPECIFIC CONDITIONS AND REQUIREMENTS. SEE TRANSPORTATION CRITERIA MANUAL, SECTION 5 "DRIVEWAYS".
3. THE DRIVEWAY EDGE SHALL BE SMOOTHLY TRANSITIONED INTO THE SIDEWALK TIE-IN LOCATION BEGINNING AT THE RADIUS PC LINE.
4. "ZERO" CURB AT PT OR SIDEWALK EDGE, WHICHEVER IS ENCOUNTERED FIRST.
5. PLACE AN EXPANSION JOINT DOWN THE CENTER OF DRIVEWAY ALL DRIVEWAYS.
6. IF DIMENSION IS LESS THAN 1.5 METERS (5 FEET), REMOVE CURB AND GUTTER TO EXISTING JOINT AND POUR MONOLITHICALLY WITH DRIVEWAY.
7. IF THE BASE IS OVER-EXCAVATED WHERE THE CURB AND GUTTER WERE REMOVED, BACKFILL WITH CONCRETE MONOLITHICALLY WITH THE DRIVEWAY.
8. TYPE II DRIVEWAYS ARE TO BE LOCATED NO CLOSER TO THE CORNER OF INTERSECTING RIGHT OF WAY THAN 60% OF PARCEL FRONTAGE AT 30 METERS (100 FEET) WHICHEVER IS LESS.
9. DRIVEWAY SHALL NOT BE CONSTRUCTED WITHIN THE CURB RETURN OF A STREET INTERSECTION.
10. WHILE THE PROPERTY OWNER REMAINS RESPONSIBLE FOR GRADE BREAKS WITHIN PRIVATE PROPERTY, THE FIRE DEPARTMENT SHALL BE CONSULTED WHERE THE DRIVEWAY IS ESSENTIAL TO EMERGENCY VEHICLE ACCESS AND %2 IS GREATER THAN 15%.
11. USE 12 MM (1/2") ASPHALT BOARD OR OTHER APPROVED MATERIAL FOR CURB AND GUTTER EXPANSION JOINTS. SIDEWALK, AT THE R.O.W. LINE AND AT MIDWIDTH, SEE NOTE 5.
12. SEE TRANSPORTATION CRITERIA MANUAL, SECTION 5 FOR OTHER DRIVEWAY REQUIREMENTS.
13. THE SIDEWALK, REGARDLESS OF ITS LOCATION WITH RESPECT TO THE CURB OR PROPERTY LINE, SHALL BE CONNECTED TO THE DRIVEWAY AT THESE LOCATIONS.
14. WATER METER BOXES AND WASTEWATER CLEAN OUTS ARE PROHIBITED FROM BEING LOCATED IN DRIVEWAY AREAS.

CITY OF AUSTIN
DEPARTMENT OF PUBLIC WORKS
TYPE II DRIVEWAY
STANDARD NO. 433S-2
2 OF 2

CITY OF AUSTIN
APPROVED
Date 08/03/2023
FOUNDED 1839

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Civil Engineering www.hendersonpe.com
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SITE DEVELOPMENT PLANS TO SERVE
NORTH AUSTIN CROSSROADS COMMUNITY CHURCH
15800 CROSSROADS DRIVE
AUSTIN, TEXAS 78681

PAVING DETAILS

STATE OF TEXAS
JENNIFER L. HENDERSON
116883
LICENSED
PROFESSIONAL ENGINEER
02/08/2023

PROJECT NO. 200107	02/08/2023	DRAWN BY: JS	CHECKED BY: AR	APPROVED BY: JH

51 OF 54

CITY PROJECT NUMBER SP-2020-0328D

LANDSCAPE NOTES

1. THE CONTRACTOR SHALL LOCATE AND VERIFY THE EXISTENCE OF ALL OVERHEAD AND UNDERGROUND UTILITIES (INCLUDING THOSE PROPOSED WITH THIS PROJECT, I.E. IRRIGATION, WASTEWATER, WATER, STORM SEWER, GAS, TELECOM, FIBER OPTIC, ELECTRIC, ETC.) PRIOR TO STARTING WORK.

2. INFORMATION PROVIDED ON THIS PLAN IS GENERAL IN NATURE; DIMENSIONS, AREAS, AND DISTANCES ARE APPROXIMATE AND SHOULD BE FIELD VERIFIED PRIOR TO BIDDING. DISCREPANCIES SHALL BE REPORTED TO THE LANDSCAPE ARCHITECT FOR RESOLUTION PRIOR TO STARTING WORK.

3. THE CONTRACTOR IS TO THOROUGHLY FAMILIARIZE HIM/HERSELF WITH ALL PLANS, SPECIFICATIONS AND THE SITE PRIOR TO BIDDING. FAILURE TO DO SO WILL NOT REDUCE THE CONTRACTOR'S OBLIGATION TO PERFORM THE WORK AS DESCRIBED FOR THE PRICE BID.

4. QUANTITIES SHOWN ARE INTENDED TO ASSIST CONTRACTORS IN EVALUATING THEIR OWN TAKE OFFS AND ARE NOT GUARANTEED AS ACCURATE REPRESENTATIONS OF REQUIRED MATERIALS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR HIS BID QUANTITIES AND IS REQUIRED TO REFLECT THE DESIGN INTENT.

5. ALL PLANT MATERIALS SHALL CONFORM TO THE GUIDELINES ESTABLISHED BY THE CURRENT AMERICAN STANDARD FOR NURSERY STOCK, PUBLISHED BY THE AMERICAN ASSOCIATION OF NURSERYMEN, OR EQUIVALENT

6. NO SUBSTITUTIONS OF PLANT MATERIAL LOCATIONS, SPECIES OR SIZE WILL BE ALLOWED WITHOUT PRIOR APPROVAL OF THE LANDSCAPE ARCHITECT. ALL PLANT MATERIALS SHALL BE APPROVED BY THE LANDSCAPE ARCHITECT PRIOR TO INSTALLATION.

7. AS PART OF THE BASE BID, THE CONTRACTOR IS RESPONSIBLE FOR ALL LANDSCAPE MAINTENANCE DURING THE PLANT ESTABLISHMENT PERIOD AS DEFINED IN THE PROJECT SPECIFICATIONS (INCLUDING, BUT NOT LIMITED TO MULCH, PLANT BASING AND BED MAINTENANCE; PLANT IRRIGATION; MOWING AND TRIMMING; RESTAKING, REGUYING AND REBRACING OF PLANTS, PRUNING, INSECT, DISEASE AND ANIMAL CONTROL, LITTER PICKUP, FERTILIZATION, PLANT REMOVAL. MOWING, WATERING, REPLACEMENT OF UNACCEPTABLE, DISEASED OR DEAD PLANTS, ETC.).

8. CONTRACTOR SHALL GUARANTEE ALL PLANT MATERIAL TO BE ALIVE AND BE IN A HEALTHY, VIGOROUS CONDITION DURING THE PLANT ESTABLISHMENT PERIOD.

9. ACCEPTANCE AND/OR OF PLANTS SHALL BE AS DEFINED IN THE PROJECT SPECIFICATIONS.

10. ALL PLANTS SHALL BE HEALTHY, VIGOROUS AND REPRESENTATIVE OF THE SPECIES SPECIFIED. ALL PLANTS SHALL BE WELL BRANCHED, PROPORTIONED, AND FREE OF ALL INSECTS, DISEASES, BARK BRUISES, SCRAPES, CRACKED BRANCHES AND PHYSICAL DAMAGE. PLANTS SHALL BE BALLED AND WRAPPED OR CONTAINER GROWN AS SPECIFIED. NO PLANT MATERIALS WILL BE ACCEPTED IF IT IS ROOT BOUND. ALL ROOT WRAPPING MATERIAL SHALL BE REMOVED AT TIME OF PLANTING, AS SHOWN ON DETAILS.

11. ALL PLANTS SHALL BE INSTALLED AS PER DETAILS AND THE CONTRACT SPECIFICATIONS.

12. ALL PLANTS AND STAKES SHALL BE SET PLUMB UNLESS OTHERWISE SPECIFIED.

13. THE LANDSCAPE CONTRACTOR SHALL REFER TO THE CONTRACT SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.

14. INSTALLATION OF LANDSCAPE SHALL BE PERFORMED BY A QUALIFIED LANDSCAPE INSTALLER WITH A MINIMUM OF FIVE YEARS CONTINUOUS EXPERIENCE OF INSTALLING LANDSCAPE PLANTINGS OF SIMILAR SIZE AND SCOPE.

15. CONTRACTOR SHALL PROVIDE MAINTENANCE FOR LANDSCAPE & IRRIGATION SYSTEM DURING THE ENTIRE PLANT ESTABLISHMENT PERIOD.

16. LANDSCAPE MATERIALS SHALL BE LOCATED SO AS NOT TO OBSTRUCT VISUAL OR PHYSICAL ACCESS TO FIRE HYDRANTS. ALL LANDSCAPE MATERIALS SHALL BE INSTALLED IN CONFORMANCE WITH UTILITY COMPANY REQUIREMENTS AT TRANSFORMERS, METERS, OVERHEAD LINES, ETC. NOTIFY LANDSCAPE ARCHITECT OF ANY DISCREPANCIES.

17. EXECUTE ALL LANDSCAPING AND REVEGETATION PRIOR TO REQUESTING CERTIFICATE OF OCCUPANCY, FINAL INSPECTION OR AS OTHERWISE DIRECTED BY THE LANDSCAPE ARCHITECT OR OWNER. HOWEVER, NO PLANT MATERIALS SHALL BE INSTALLED BEFORE ROUGH GRADING HAS BEEN COMPLETED AND APPROVED BY THE LANDSCAPE ARCHITECT, OWNER OR OWNER'S DESIGNATED REPRESENTATIVE. FULLY PREPARE ALL LANDSCAPE BEDS (INCLUDING IRRIGATION) PRIOR TO INSTALLATION OF LANDSCAPE PLANTS.

18. SITE STOCKPILED TOPSOIL MAY BE USED IF IT HAS BEEN DEEMED ACCEPTABLE IN QUALITY AND APPROVED BY LANDSCAPE ARCHITECT.

19. ALL PLANTS SHALL BEAR THE SAME RELATIONSHIP TO FINISHED GRADE AS THE PLANT'S ORIGINAL GRADE BEFORE DIGGING.

20. THE CONTRACTOR SHALL PROVIDE AN IRRIGATION SYSTEM FULLY COMPLIANT WITH TCEQ REQUIREMENTS AND COMPLIANT WITH THE LANDSCAPE IRRIGATION NOTES AND CONTRACT SPECIFICATIONS FOR THE ESTABLISHMENT OF REQUIRED LANDSCAPE INSTALLATION.

21. IF ESTABLISHING VEGETATION DURING ANY STAGE OF A DROUGHT, SECTION 6-4-30 MAY REQUIRE A VARIANCE. CONTACT AUSTIN WATER CONSERVATION STAFF AT WATERUSECOMPVAR@AUSTINTEXAS.GOV OR CALL (512) 974-2199.

22. ALL LANDSCAPED AREAS ARE TO BE PROTECTED BY 6 INCH WHEEL CURBS, WHEELSTOPS OR OTHER APPROVED BARRIERS AS PER ECM 2.4.7. [LDC 25-2-1004(A), ECM 2.4.7(A)]

SAM BASS FIRE DEPT
REVIEWED
Plans must be on site for review at time of inspection
mselby
02/15/2023 1:37:36 PM

LANDSCAPE IRRIGATION NOTES

AUTOMATIC IRRIGATION SYSTEMS SHALL COMPLY WITH THE FOLLOWING REQUIREMENTS. THESE REQUIREMENTS SHALL BE NOTED ON THE SITE DEVELOPMENT PERMIT AND SHALL BE IMPLEMENTED AS PART OF THE LANDSCAPE INSPECTION:

1. A NEW COMMERCIAL AND MULTI-FAMILY IRRIGATION SYSTEM MUST BE DESIGNED AND INSTALLED SO THAT:

(A) THERE IS NOT DIRECT OVERSPRAY ONTO NON-IRRIGATED AREAS;

(B) THE SYSTEM DOES NOT INCLUDE SPRAY IRRIGATION ON AREAS LESS THAN SIX (6) FEET WIDE (SUCH AS MEDIANS, BUFFER STRIPS, AND PARKING LOT ISLANDS)

(C) ABOVE-GROUND IRRIGATION EMISSION DEVICES ARE SET BACK AT LEAST SIX (6) INCHES FROM IMPERVIOUS SURFACES;

(D) THE IRRIGATION SYSTEM HAS A MASTER VALVE;

(E) CIRCUIT REMOTE CONTROL VALVES HAVE ADJUSTABLE FLOW CONTROLS;

(F) SERVICEABLE IN-HEAD CHECK VALVES ARE ADJACENT TO PAVED AREAS WHERE ELEVATION DIFFERENCES MAY CAUSE LOW HEAD DRAINAGE;

(G) THE IRRIGATION SYSTEM HAS A CITY- APPROVED WEATHER BASED CONTROLLER;
   1. PROVIDE PEDESTAL MOUNTED AMBIENT LIGHT IRRIGATION CONTROLLER.
   2. LEIT X (DIGCORP) OR EQUAL.
   3. COMPATIBLE WITH RAIN SHUT-OFF DEVICE.
   4. COMPATIBLE WITH IRRIGATION CONTROL VALVES.

(H) AN AUTOMATIC RAIN SHUT-OFF DEVICE SHUTS OFF THE IRRIGATION SYSTEM AUTOMATICALLY AFTER NOT MORE THAN A ONE-HALF INCH (1/2") RAINFALL;

(I) ZONE VALVES AND CIRCUITS ARE SEPARATED BASED ON PLANT WATER REQUIREMENTS;

(J) AN IRRIGATION EMISSION DEVICE (SUCH AS SPRAY, ROTOR, OR DRIP EMITTER) DOES NOT EXCEED THE MANUFACTURER'S RECOMMENDED OPERATING PRESSURE; AND

(K) NO COMPONENT OF THE IRRIGATION SYSTEM DEVIATES FROM THE MANUFACTURER'S RECOMMENDED USE OF THE PRODUCT.

2. THE MAXIMUM SPACING BETWEEN SPRAY OR ROTARY SPRINKLER HEADS MUST NOT EXCEED THE RADIUS OF THROW OF THE HEAD UNLESS MANUFACTURER OF THE SPRINKLER HEAD SPECIFICALLY RECOMMENDS A GREATER SPACING. THE RADIUS OF THROW IS DETERMINED BY REFERENCE TO THE MANUFACTURER'S SPECIFICATIONS FOR A SPECIFIC NOZZLE AT A SPECIFIC OPERATING PRESSURE.

3. THE IRRIGATION INSTALLER SHALL DEVELOP AND PROVIDE AN AS-BUILT DESIGN PLAN AND WATER BUDGET TO THE CITY AT THE TIME THE FINAL PLUMBING INSPECTION IS PERFORMED. THE WATER BUDGET SHALL INCLUDE:

(A) A CHART CONTAINING ZONE NUMBERS, PRECIPITATION RATE, AND GALLONS PER MINUTE; AND

(B) THE LOCATION OF THE EMERGENCY IRRIGATION SYSTEM SHUT-OFF VALVE. A LAMINATED COPY OF THE WATER BUDGET SHALL BE PERMANENTLY INSTALLED INSIDE THE IRRIGATION CONTROLLER DOOR.

4. THE IRRIGATION INSTALLER SHALL PROVIDE A REPORT TO THE CITY ON A FORM PROVIDED BY THE AUSTIN WATER UTILITY DEPARTMENT CERTIFYING COMPLIANCE WITH SUBSECTION 1 WHEN THE FINAL PLUMBING INSPECTION IS PERFORMED BY THE CITY.

5. IRRIGATION CONTRACTOR SHALL PROVIDE A COMPLETE AS-BUILT PLAN TO OWNER, OR OWNER'S DESIGNATED REPRESENTATIVE SHOWING ALL IRRIGATION COMPONENTS AND SIZE OF COMPONENTS, INCLUDING WATER PRESSURE, MAIN LINE, LATERAL LINES, VALVES, HEADS, BACKFLOW DEVICE, CONTROLLER, QUICK COUPLERS, ETC.

6. COMPLY WITH ALL APPLICABLE TCEQ IRRIGATION RULES AND REGULATIONS.

7. CONTRACTOR IS TO VERIFY PRESSURE AND WATER SUPPLY CHARACTERISTICS ARE ADEQUATE FOR THIS INSTALLATION. ANY DISCREPANCIES OR INADEQUACIES SHALL BE REPORTED TO THE OWNER IMMEDIATELY, BEFORE STARTING CONSTRUCTION. DESIGN PRESSURE IS 65 PSI AT 45 GMP.

8. CONTRACTOR SHALL OBTAIN ALL PERMITS AND HANDLE ALL INSPECTIONS FOR THIS WORK AS REQUIRED BY LOCAL REGULATIONS AND SHALL PAY ALL FEES ASSOCIATED WITH THESE PERMIT(S).

9. VERIFY LOCATION OF CONTROLLER, WATER SUPPLY; SITE CONDITIONS MAY VARY. OPERABLE IRRIGATION EQUIPMENT (VALVES, QUICK COUPLERS, BFP, ETC.) SHALL BE INSTALLED SEPARATELY IN VALVE BOXES.

10. ALL HEADS SHALL BE INSTALLED ON TRIPLE SWING JOINTS. HEADS SHALL BE NOT BE LOCATED CLOSER THAN 6" FROM PAVEMENT.

11. ADJUST RADII AND SPRAY PATTERNS TO ELIMINATE OVERSPRAY ONTO BUILDINGS, SIDEWALKS, FENCES, DRIVEWAYS, ROADWAYS, ETC.

12. ALL PAVEMENT CROSSINGS (LATERALS, WIRING, MAINLINE, ETC.) SHALL OCCUR WITHIN SLEEVES. INCLUDING SIDEWALKS, DRIVEWAYS, TRAILS, BIKE WAYS, ROADWAYS, ETC.

13. PRIOR TO CONSTRUCTION, VERIFY WITH THE GENERAL CONTRACTOR AND ALL UTILITY COMPANIES THE EXACT LOCATION OF ALL UNDERGROUND UTILITIES. IMMEDIATELY REPORT ANY BREAKAGES TO THE APPROPRIATE UTILITY COMPANY.

14. THE CONTRACTOR IS TO INSTALL ALL SLEEVES IN SEQUENCE WITH OTHER CONSTRUCTION ACTIVITIES, AND WILL BE RESPONSIBLE FOR COORDINATING WITH OTHER SITE CONTRACTORS FOR THIS WORK. ADEQUATELY MARK THE LOCATIONS OF ALL SLEEVES AND PIPE CONNECTION POINTS TO EXISTING LINES.

15. INSTALL THE MAIN LINE A MINIMUM OF 15" DEEP AND LATERAL LINES MIN. 12" DEEP.

16. PROVIDE A NEW WATER PROOF TAG WITH CONTRACTOR'S NAME AND TELEPHONE NUMBER CLEARLY SHOWN AND SECURELY ATTACHED TO THE INSIDE OF THE CONTROLLER DOOR.

LANDSCAPE MAINTENANCE NOTES

1. FOLLOWING FINAL COMPLETION, THE OWNER WILL CONTINUOUSLY MAINTAIN REQUIRED LANDSCAPING IN ACCORDANCE WITH CITY OF AUSTIN LAND DEVELOPMENT CODE, SECTION 25-2-984

   A) THIS SECTION APPLIES TO AN OWNER WHO IS RESPONSIBLE FOR PROPERTY FOR WHICH A SITE PLAN HAS BEEN APPROVED BY THE CITY.

   B) AN OWNER SHALL MAINTAIN REQUIRED LANDSCAPED AREAS IN ACCORDANCE WITH THE SITE PLAN AND IN HEALTHY CONDITION, FREE FROM DISEASES, PESTS, WEEDS, AND LITTER, IN ACCORDANCE WITH GENERALLY ACCEPTED HORTICULTURAL PRACTICE.

   C) AN OWNER WHO RECEIVES NOTIFICATION FROM THE WATERSHED PROTECTION AND DEVELOPMENT REVIEW DEPARTMENT THAT PLANTS ON A SITE ARE DEAD, DISEASED, OR SEVERELY DAMAGED:
      1) SHALL REMOVE THE PLANTS NOT LATER THAN THE 60TH DAY AFTER NOTIFICATION; AND
      2) REPLACE THE PLANTS WITHIN SIX MONTHS AFTER NOTIFICATION, OR BY THE NEXT PLANTING SEASON, WHICHEVER COMES FIRST.

   D) AN OWNER REQUIRED TO REPLACE PLANTS UNDER SUBSECTION (B) MUST USE REPLACEMENT PLANTS THAT ARE THE SAME SIZE AND SPECIES AS SHOWN ON THE APPROVED SITE PLAN OR MUST BE OF EQUIVALENT QUALITY AND SIZE. THE REPLACEMENT OF PLANTS UNDER THIS SECTION IS NOT AN AMENDMENT TO THE APPROVED PLAN.

LANDSCAPE CERTIFICATION

I, CHRISTOPHER KELLY, A PROFESSIONAL LANDSCAPE ARCHITECT, DO HEREBY CERTIFY THAT ALL INFORMATION SHOWN TO BE TRUE AND ACCURATE AND THAT THIS PLAN SATISFIES THE WRITTEN REQUIREMENTS OF THE LANDSCAPE REGULATIONS, CHAPTER 25-2, SUBCHAPTER C, ARTICLE 9 OF THE LAND DEVELOPMENT CODE

CITY OF AUSTIN FOUNDED 1839
APPROVED
Date 08/03/2023

REGISTERED LANDSCAPE ARCHITECT · CHRISTOPHER D. KELLY · 2309 · STATE OF TEXAS
07-28-22

mwm DesignGroup
305 East Huntland Drive
Suite 200
Austin, Texas 78752
p: 512.453.0767
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TBAE FIRM REGISTRATION NO.: 1452
TBPE FIRM REGISTRATION NO.: F-1416
TBPLS FIRM REGISTRATION NO.: 10065600

NO.	DATE	DESCRIPTION	BY

0 1"
The bar above measures one inch on the original drawing. Adjust scales accordingly.

LANDSCAPE NOTES & CALCUATIONS

NORTH AUSTIN CROSSROADS COMMUNITY CHURCH
15800 CROSSROADS DRIVE
AUSTIN, TEXAS 78681

PLOTTED: 1/28/2022
JOB NO: 902-01

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52 OF 54

SP-2020-0328D

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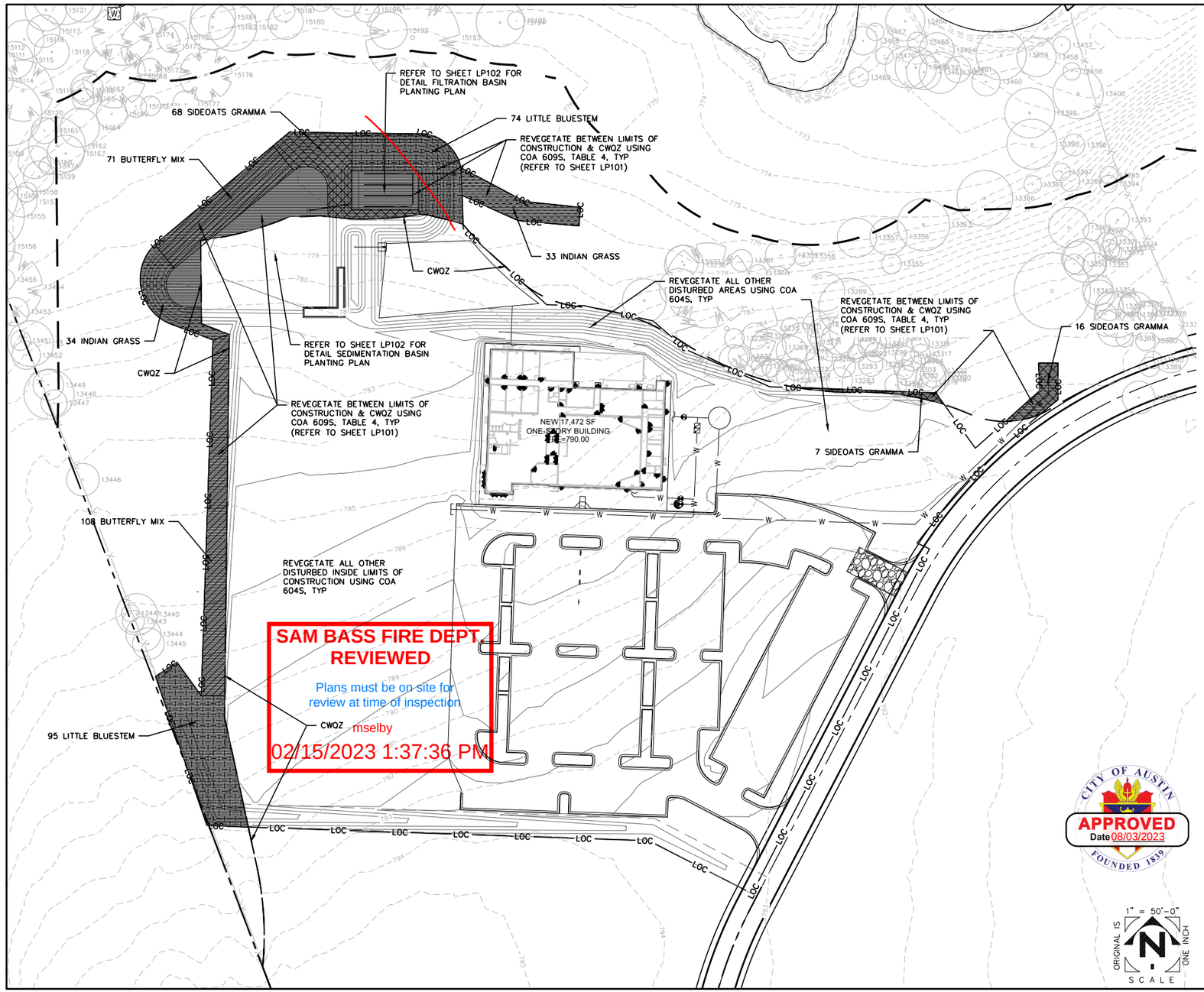

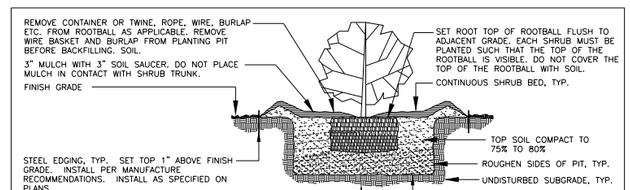

1 LP101 — 1-3 GALLON PLANTING DETAIL — NO SCALE

PLANT LIST				
NATIVE GRASSES AND BIOFILTRATION PLANT MATERIAL				COMMENTS
BIG MUHLY	MUHLENBERGIA LINDHEIMERI	3 GALLON	10'-0" MAX, 3'-0" MIN	
BLUE MISTFLOWER	CONOCLINIUM COELESTINUM	1 GALLON	10'-0" MAX, 3'-0" MIN	
EASTERN GAMMAGRASS	TRIPSACUM DACTYLOIDES	3 GALLON	10'-0" MAX, 3'-0" MIN	
INDIANGRASS	SORGHASTRUM NUTANS	1 GALLON	10'-0" MAX, 3'-0" MIN	
LITTLE BLUESTEM	SCHIZACHYRIUM SCOPARIUM	1 GALLON	10'-0" MAX, 3'-0" MIN	
OBEDIENT PLANT	PHYSOSTEGIA VIRGINIANA	1 GALLON	10'-0" MAX, 3'-0" MIN	
SIDEOATS GRAMMA	BOUTELOUA CURTIPENDULA	1 GALLON	10'-0" MAX, 3'-0" MIN	
SOFT RUSH	JUNCUS EFFUSUS	1 GALLON	10'-0" MAX, 3'-0" MIN	
SWITCH GRASS	PANICUM VIRGATUM	1 GALLON	10'-0" MAX, 3'-0" MIN	
BUTTERFLY MIX				
ANTELOPE HORNS MILKWEED	ASCLEPIAS ASPERULA	1 GALLON	10'-0" MAX, 3'-0" MIN	USE 4 PLANTS MINIMUM PER EACH PLANTING AREA IDENTIFIED ON THE PLAN.
BLACKEYED SUSAN	RUDBECKAI HIRTA var ANGUSTIFOLIA	1 GALLON	10'-0" MAX, 3'-0" MIN	
GREEN MILKWEED	ASCLEPIAS VIRIDIFLORA	1 GALLON	10'-0" MAX, 3'-0" MIN	NO MORE THAN 20% OF TOTAL BUTTERFLY MIX PLANTS SHOULD BE FROM SINGLE PLANT SPECIES.
LEMON MINT	MONARDA CITRIODORA	1 GALLON	10'-0" MAX, 3'-0" MIN	
ORANGE MILKWEED	ASCLEPIAS TUBEROSA	1 GALLON	10'-0" MAX, 3'-0" MIN	
PINK PRIMROSE	OENOTHERA KUNTHIANA	1 GALLON	10'-0" MAX, 3'-0" MIN	TOTAL PLANT COUNT SHALL EQUAL THE TOTAL NUMBER OF PLANTS IDENTIFIED AT EACH PLANTING AREA IDENTIFIED ON THE PLAN.
PLAINS COREOPSIS	COREOPSIS TINCTORIA	1 GALLON	10'-0" MAX, 3'-0" MIN	
PRARIE VERBENA	GLANDULARIA BIPINNATIFIDA var BIPINNATIFIDA	1 GALLON	10'-0" MAX, 3'-0" MIN	

NATIVE REVEGETATION CALCULATIONS

DISTURBED AREA IN CWQZ	36,928	SF		REQUIRED PLANTS	568
PLANT			QUANTITY	SIZE	EQUIVALENT PLANTS
BUTTERFLY MIX	9,119	SF	179	1 GALLON	179
INDIANGRASS	6,893	SF	67	3 GALLON	134
LITTLE BLUESTEM	7,753	SF	169	1 GALLON	169
SIDEOATS GRAMMA	6,599	SF	91	1 GALLON	91
				PROVIDED EQUIVALENT PLANTS	573

SEED LIST

Total Area Revegetated with 609S, Table 4 = **36,928 SF (.85 Acres)**

	COMMON NAME	BOTANICAL NAME	LBS / ACRE	% OF TOTAL	TOTAL LBS
Grass Seed Mix	Grassses				
	Buffalograss	Buchloe dactyloides	12.4	35%	10.5
	Blue Grama	Bouteloua gracilis	5.1	15%	4.4
	Green Sprangletop	Leptochloa dubia	1.0	3%	0.9
	Sand Dropseed	Sporobolus cryptandrus	0.5	1%	0.4
	Galleta	Pleuraphis jamesii	5.1	15%	4.4
	Canada Wild Rye	Elymus canadensis	5.1	15%	4.4
	Purple Threeawn	Aristida purpurea	2.1	6%	1.7
	Sideoats Grama	Bouteloua curtipendula	3.6	10%	3.1
		TOTAL GRASSES	35.0		29.7
Forb Seed Mix	Forbs				
	Bluebonnet	Lupinus texensis	3.1	27%	2.7
	Purple Prairie Clover	Dalea purpurea	0.6	5%	0.5
	Plains Coreopsis	Coreopsis tinctoria	0.3	3%	0.3
	Partridge Pea	Chamaecrista fasciculata	3.1	27%	2.7
	Greenthread	Thelesperma filifolium	0.9	8%	0.8
	Indian Blanket	Gaillardia pulchella	1.6	14%	1.3
	Lemon Mint	Monarda citriodora	0.5	4%	0.4
	Mexican Hat	Ratibida columnaris	0.3	3%	0.3
	Pink Evening Primrose	Oenethera speciosa	0.2	1%	0.1
	Sunflower (Common)	Helianthus annuus	0.8	7%	0.7
	Milkweed (Antelope Horn or Green milkweed)	Asclepias asperula or Asclepias viridis	0.1	1%	0.1
		TOTAL FORBS	11.6		9.8

CITY OF AUSTIN APPROVED Date 08/03/2023 FOUNDED 1839

1" = 50'-0" ORIGINAL IS ONE INCH SCALE

CHRISTOPHER D. KELLY REGISTERED LANDSCAPE ARCHITECT 3309 STATE OF TEXAS 01-28-22

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TBPLS FIRM REGISTRATION NO.: 10065600

NO.	DATE	DESCRIPTION	BY

0 — 1"
The bar above measures one inch on the original drawing. Adjust scales accordingly.

PLANTING PLAN

NORTH AUSTIN CROSSROADS COMMUNITY CHURCH
15800 CROSSROADS DRIVE
AUSTIN, TEXAS 78681

PLOTTED: 1/28/2022
JOB NO: 902-01

LP101
53 OF 54

SP-2020-0328D

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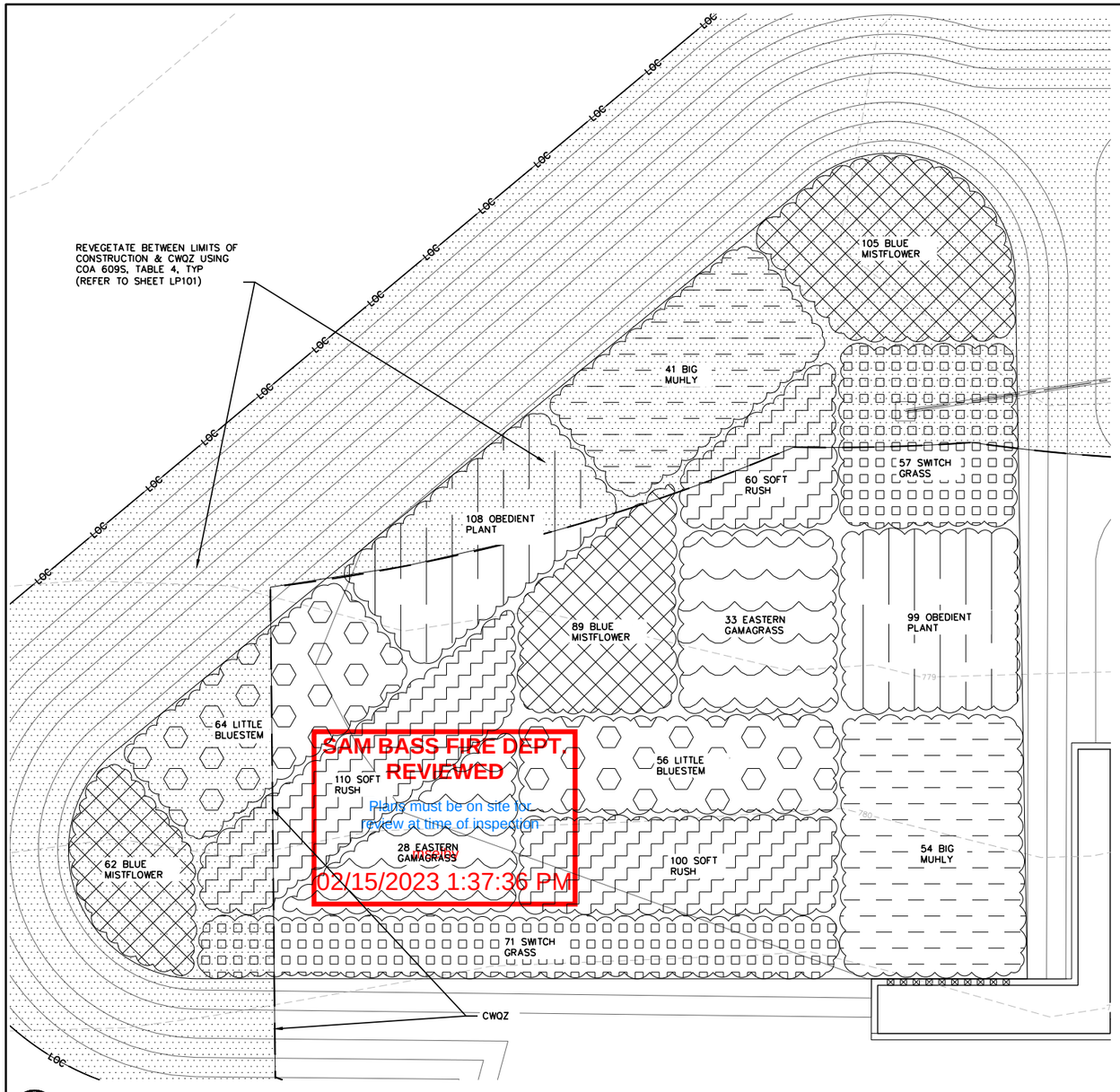


1 SEDIMENTATION BASIN DETAIL PLANTING PLAN
LP102 SCALE: 1=10'

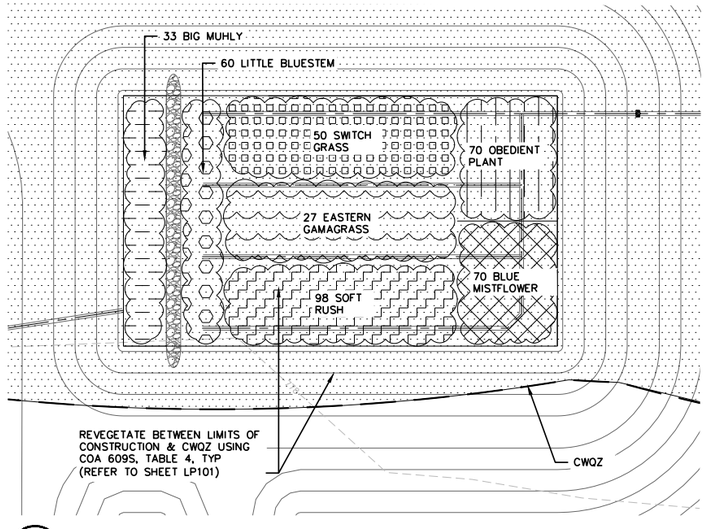
Biofiltration Pond Calculations							27-Jan-22
Filtration Basin Bottom		2,323	sf				
Sedimentation Basin Bottom		12,878	sf				
Number of Plants					Required		Provided
Filtration Basin			2,323	x 20% =	465		468
Sedimentation Basin			12,878	x 10% =	1,288		1,293
				Total Required	1,752	Total Provided	1,761

Filtration Basin Required Landscape			Size			Equivalent 1-Gallon	
Big Muhly			3 Gallon	33		2	66
Blue Mistflower			1 Gallon	70		1	70
Eastern Gamagrass			3 Gallon	27		2	54
Little Bluestem			1 Gallon	60		1	60
Obedient Plant			1 Gallon	70		1	70
Soft Rush			1 Gallon	98		1	98
Switch Grass			1 Gallon	50		1	50
						Total	468

Sedimentation Basin Required Landscape			Size				
Big Muhly			3 Gallon	95		2	190
Blue Mistflower			1 Gallon	256		1	256
Eastern Gamagrass			3 Gallon	61		2	122
Little Bluestem			1 Gallon	120		1	120
Obedient Plant			1 Gallon	207		1	207
Soft Rush			1 Gallon	270		1	270
Switch Grass			1 Gallon	128		1	128
						Total	1293

CITY OF AUSTIN APPROVED Date 08/03/2023 FOUNDED 1839

1" = 10'-0" ORIGINAL IS ONE INCH SCALE



2 FILTRATION BASIN DETAIL PLANTING PLAN
LP102 SCALE: 1=10'

Christopher D. Kelly Registered Landscape Architect 9309 State of Texas 01-28-22

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RAIN GARDEN

NORTH AUSTIN CROSSROADS COMMUNITY CHURCH
15800 CROSSROADS DRIVE
AUSTIN, TEXAS 78681

PLOTTED: 1/28/2022
JOB NO: 902-01

LP102

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SP-2020-0328D

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Attachment G - Inspection, Maintenance, Repair and Retrofit Plan.

STORMWATER MAINTENANCE PLAN

It is the responsibility of the property owner's association to maintain detention ponds on nonresidential property, unless otherwise approved by the City. If regular maintenance and inspections are not undertaken, the detention pond will not achieve its intended purposes and can create nuisance conditions for nearby residents. This page provides guidance on maintenance and inspection activities that are typically required for detention ponds, along with a suggested frequency for each activity.

Inspection Activities	Suggested Schedule
After several storm events or an extreme storm event, inspect for: bank stability; signs of erosion; and damage to, or clogging of, the outlet structures and pilot channels.	As Needed
Note excessive erosion of pond banks or bottom; trash and debris; clogging of the outlet structures and any pilot channels; sediment accumulation in the pond and inlet/outlet structures; tree growth on pond walls; the presence of burrowing animals; standing water where there should be none; vigor and density of the grass turf on the pond side slopes and floor; differential settlement; cracking; leakage; and slope stability.	Semi-annually
Inspect that the outlet structures, pipes, level spreaders, and downstream and pilot channels are free of debris and are operational.	Annually
Note signs of pollution, such as oil sheens, discolored water, or unpleasant odors.	Annually
Check for sediment accumulation in the facility.	Annually

Maintenance Activities	Suggested Schedule
Mowing the facility. Mulch the grass or catch and remove the grass clippings.	Monthly or As Needed
Debris and litter removal.	Monthly or As Needed
Seed or sod to restore dead or damaged ground cover.	Annual or As Needed
Repair and revegetate eroded or undercut areas. Repair any damage to the structural elements of the pond.	As Needed
Remove vegetation that may hinder the operation of the pond.	As Needed
Monitor sediment accumulations and remove sediment when the pond volume has been reduced by 20%.	10-years or As Needed

HPE
Civil Engineering

Sand Filter Maintenance Requirements

Regular, routine maintenance is essential to effective, long-lasting performance of sand filters. Neglect or failure to service the filters on a regular basis will lead to poor performance and eventual costly repairs. It is recommended that sand filter BMPs be inspected on a quarterly basis and after large storms for the first year of operation. This intensive monitoring is intended to ensure proper operation and provide maintenance personnel with a feel for the operational characteristics of the filter. Subsequent inspections can be limited to semi-annually or more often if deemed necessary (Young et al., 1996).

Certain construction and maintenance practices are essential to efficient operation of the filter. The biggest threat to any filtering system is exposure to heavy sediment loads that clog the filter media. Construction within the watershed should be complete prior to exposing the filter to stormwater runoff. All exposed areas should be stabilized to minimize sediment loads. Runoff from any unstabilized construction areas should be treated via a separate sediment system that bypasses the filter media.

Another important consideration in constructing the filter bed is to ensure that the top of the media is completely level. The filter design is based on the use of the entire filter media surface area; a sloped filter surface would result in disproportionate use of the filter media.

Other recommended maintenance guidelines include:

- *Inspections*. BMP facilities must be inspected at least twice a year (once during or immediately following wet weather) to evaluate facility operation. During each inspection, erosion areas inside and downstream of the BMP must be identified and repaired or revegetated immediately. With each inspection, any damage to the structural elements of the system (pipes, concrete drainage structures, retaining walls, etc.) must be identified and repaired immediately. Cracks, voids and undermining should be patched/filled to prevent additional structural damage. Trees and root systems should be removed to prevent growth in cracks and joints that can cause structural damage.

- *Sediment Removal*. Remove sediment from the inlet structure and sedimentation chamber when sediment buildup reaches a depth of 6 inches or when the proper functioning of inlet and outlet structures is impaired. Sediment should be cleared from the inlet structure at least every year and from the sedimentation basin at least every 5 years.

- *Media Replacement*. Maintenance of the filter media is necessary when the drawdown time exceeds 48 hours. When this occurs, the upper layer of sand should be removed and replaced with new material meeting the original specifications. Any discolored sand should also be removed and replaced. In filters that have been regularly maintained, this should be limited to the top 2 to 3 inches.

- *Debris and Litter Removal*. Debris and litter will accumulate near the sedimentation basin outlet device and should be removed during regular mowing operations and inspections. Particular attention should be paid to floating debris that can eventually clog the control device or riser.

- *Filter Underdrain*. Clean underdrain piping network to remove any sediment buildup as needed to maintain design drawdown time.

- *Mowing*. Grass areas in and around sand filters must be mowed at least twice annually to limit vegetation height to 18 inches. More frequent mowing to maintain aesthetic appeal may be necessary in landscaped areas. Vegetation on the pond embankments should be mowed as appropriate to prevent the establishment of woody vegetation.

Additional Maintenance Notes:

Besides the detention pond, outlet structures, pipes, level spreader, and channels that are mentioned in the suggested maintenance plan, any other components of stormwater management should also be checked periodically and kept in full working order. Furthermore, ensure that any potential sources of debris on the property does not contribute to the deterioration of the stormwater management structures. Failure to do so could not only cause maintenance issues to the aforementioned stormwater management structures, but negatively impact the ability of the property as a whole to handle storm events.

Recommended Frequency of Service:

Potential sources of debris on the property include, but are not limited to, the townhome building, garage, and workshop. Other components of stormwater management include, but are not limited to, roof gutters and roof leaders. Ultimately, the frequency of inspection and service cleaning of these sources and components depends on the amount of runoff, pollutant loading, and interference from debris (leaves, vegetation, trash, etc.). It is recommended that they are to be inspected and cleaned at least four times a year (especially during the fall, when leaves have fallen from the trees), both to maintain the function of those components and appearances of the property.

Suggested Service Procedures:

Roof gutters: The roof gutters of the house shall be inspected and cleared of any leaves, twigs, debris, etc. This shall be done at in the early spring, and late fall after all of the leaves have fallen from trees.

Roof Leaders: The maintenance of the roof leaders shall be in accordance with the aforementioned suggested schedule and shall include the inspection of the leaders via the cleanouts and removal of any debris, obstruction and sediment.

Reporting:

A maintenance log shall be kept of each inspection outlining the items inspected and the maintenance performed. These logs should be kept on file by the Owner and must be shared with the City upon request.

HPE
Civil Engineering

DRY POND INSPECTION AND MAINTENANCE CHECKLIST

Facility:			
Location/Address:			
Date:	**Time**:	**Weather Conditions**:	**Date of Last Inspection**:
Inspector:		**Title**:	
Rain in Last 48 Hours: ☐ **Yes** ☐ **No**		**If yes, list amount and timing**:	
Pretreatment: ☐ **vegetated filter strip** ☐ **swale** ☐ **forebay** ☐ **other, specify:**			
Site Plan or As-Built Plan Available: ☐ **Yes** ☐ **No**			

Inspection Item		Comment	Action Needed
1. PRETREATMENT			
Sediment has accumulated.	☐**Yes** ☐**No** ☐**N/A**		☐**Yes** ☐**No**
Trash and debris have accumulated.	☐**Yes** ☐**No** ☐**N/A**		☐**Yes** ☐**No**
2. DEWATERING			
The water quality orifice is visible.	☐**Yes** ☐**No** ☐**N/A**		☐**Yes** ☐**No**
3. INLETS			
Inlets are in poor structural condition.	☐**Yes** ☐**No** ☐**N/A**		☐**Yes** ☐**No**
Sediment has accumulated and/or is blocking the inlets.	☐**Yes** ☐**No** ☐**N/A**		☐**Yes** ☐**No**
Erosion is occurring around the inlets.	☐**Yes** ☐**No** ☐**N/A**		☐**Yes** ☐**No**
4. EMBANKMENT			
Sinkholes or cracks are visible in the embankment.	☐**Yes** ☐**No** ☐**N/A**		☐**Yes** ☐**No**
Trees or woody vegetation present on the dam or embankment.	☐**Yes** ☐**No** ☐**N/A**		☐**Yes** ☐**No**
5. POND AREA			
Trash and debris have accumulated.	☐**Yes** ☐**No** ☐**N/A**		☐**Yes** ☐**No**
Invasive plants are present.	☐**Yes** ☐**No** ☐**N/A**		☐**Yes** ☐**No**
Erosion is evident on the pond floor or low flow channel.	☐**Yes** ☐**No** ☐**N/A**		☐**Yes** ☐**No**
The micro-pool has sediment accumulation.	☐**Yes** ☐**No** ☐**N/A**		☐**Yes** ☐**No**
Sinkholes or animal borrows are present.	☐**Yes** ☐**No** ☐**N/A**		☐**Yes** ☐**No**
6. SIDE WALLS AND EMBANKMENT			
Erosion is evident.	☐**Yes** ☐**No** ☐**N/A**		☐**Yes** ☐**No**
Sinkholes, animal borrows, or instability are present.	☐**Yes** ☐**No** ☐**N/A**		☐**Yes** ☐**No**
7. OUTLETS AND OVERFLOW STRUCTURE			
Outlets or overflow structures in poor structural condition.	☐**Yes** ☐**No** ☐**N/A**		☐**Yes** ☐**No**
Sediment, trash or debris is blocking the outlets or overflow structure.	☐**Yes** ☐**No** ☐**N/A**		☐**Yes** ☐**No**
Erosion is occurring around the outlets or overflow structure.	☐**Yes** ☐**No** ☐**N/A**		☐**Yes** ☐**No**
Joints are not watertight and/or leaks are visible.	☐**Yes** ☐**No** ☐**N/A**		☐**Yes** ☐**No**

HPE
Civil Engineering

Plan Prepared: October 7, 2025

Brady Traywick
North Austin Crossroads Community Church
120 Crossroads Dr.
Austin, TX 78717
brady@crossroadschurchaustin.com

Reference: 15800 Crossroads Dr. Austin, TX 78717
Stormwater Maintenance Plan

This signature form is in reference to the pages preceding which include:

- Stormwater Maintenance Plan:
  - Additional maintenance notes
  - Frequency of service
  - Service procedures
  - Reporting
- Dry Pond Inspection & Maintenance Plan

I, Brady Traywick, acknowledge the fore-mentioned plans and will adhere to them in accordance with the requirements as provided by the State of Texas.

Brady Traywick
Owner / Owner Representative

10/13/25
Date

State of Texas
County of Williamson

I, the undersigned Notary Public, do hereby certify that the foregoing instrument was acknowledged before me this 13th day of October and the document was executed by the above named Brady Traywick of his/her own free will.

Witness my hand and seal this 13th day of October, 2025.

RANDI JO CULP
Notary ID #124421768
My Commission Expires
July 29, 2028

Randi Jo Culp
Notary Public for Texas

Commission Expires: 7/29/28

Agent Authorization Form
For Required Signature
Edwards Aquifer Protection Program
Relating to 30 TAC Chapter 213
Effective June 1, 1999

I Brady Traywick,
Print Name

Pastor,
Title - Owner/President/Other

of Crossroads Community Church,
Corporation/Partnership/Entity Name

have authorized Jen Henderson
Print Name of Agent/Engineer

of Henderson Professional Engineers
Print Name of Firm

to represent and act on the behalf of the above named Corporation, Partnership, or Entity for the purpose of preparing and submitting this plan application to the Texas Commission on Environmental Quality (TCEQ) for the review and approval consideration of regulated activities.

I also understand that:

1. The applicant is responsible for compliance with 30 Texas Administrative Code Chapter 213 and any condition of the TCEQ's approval letter. The TCEQ is authorized to assess administrative penalties of up to $10,000 per day per violation.

2. For those submitting an application who are not the property owner, but who have the right to control and possess the property, additional authorization is required from the owner.

3. Application fees are due and payable at the time the application is submitted. The application fee must be sent to the TCEQ cashier or to the appropriate regional office. The application will not be considered until the correct fee is received by the commission.

4. A notarized copy of the Agent Authorization Form must be provided for the person preparing the application, and this form must accompany the completed application.

5. No person shall commence any regulated activity on the Edwards Aquifer Recharge Zone, Contributing Zone or Transition Zone until the appropriate application for the activity has been filed with and approved by the Executive Director.

SIGNATURE PAGE:

Brady Traywick
Applicant's Signature

10/13/25
Date

THE STATE OF Texas §

County of Williamson §

BEFORE ME, the undersigned authority, on this day personally appeared Brady Traywick known to me to be the person whose name is subscribed to the foregoing instrument, and acknowledged to me that (s)he executed same for the purpose and consideration therein expressed.

GIVEN under my hand and seal of office on this 13th day of October, '25.

Randi Jo Culp
NOTARY PUBLIC

RANDI JO CULP
Notary ID #124421768
My Commission Expires
July 29, 2028

Randi Culp
Typed or Printed Name of Notary

MY COMMISSION EXPIRES: 7/29/28

Application Fee Form

Texas Commission on Environmental Quality
Name of Proposed Regulated Entity: North Austin Crossroads Community Church
Regulated Entity Location: 15800 Crossroads Dr. Austin, TX 78717
Name of Customer: North Austin Crossroads Community Church
Contact Person: Brady Traywick Phone: 512.623.0600
Customer Reference Number (if issued):CN _____
Regulated Entity Reference Number (if issued):RN _____
Austin Regional Office (3373)

☐ Hays ☐ Travis ☒ Williamson

San Antonio Regional Office (3362)

☐ Bexar ☐ Medina ☐ Uvalde
☐ Comal ☐ Kinney

Application fees must be paid by check, certified check, or money order, payable to the **Texas Commission on Environmental Quality.** Your canceled check will serve as your receipt. **This form must be submitted with your fee payment.** This payment is being submitted to:

☒ Austin Regional Office
☐ Mailed to: TCEQ - Cashier
Revenues Section
Mail Code 214
P.O. Box 13088
Austin, TX 78711-3088

☐ San Antonio Regional Office
☐ Overnight Delivery to: TCEQ - Cashier
12100 Park 35 Circle
Building A, 3rd Floor
Austin, TX 78753
(512)239-0357

Site Location (Check All That Apply):

☒ Recharge Zone ☐ Contributing Zone ☐ Transition Zone

Type of Plan	*Size*	*Fee Due*
Water Pollution Abatement Plan, Contributing Zone Plan: One Single Family Residential Dwelling	Acres	$
Water Pollution Abatement Plan, Contributing Zone Plan: Multiple Single Family Residential and Parks	Acres	$
Water Pollution Abatement Plan, Contributing Zone Plan: Non-residential	16.495 Acres	$ 6,500
Sewage Collection System	L.F.	$
Lift Stations without sewer lines	Acres	$
Underground or Aboveground Storage Tank Facility	Tanks	$
Piping System(s)(only)	Each	$
Exception	Each	$
Extension of Time	Each	$

Signature: Brady Traywick Date: 10/13/25

TCEQ-0574 (Rev. 02-24-15)

Application Fee Schedule

Texas Commission on Environmental Quality
Edwards Aquifer Protection Program 30 TAC Chapter 213 (effective 05/01/2008)

Water Pollution Abatement Plans and Modifications

Contributing Zone Plans and Modifications

Project	*Project Area in Acres*	*Fee*
One Single Family Residential Dwelling	< 5	$650
Multiple Single Family Residential and Parks	< 5 5 < 10 10 < 40 40 < 100 100 < 500 ≥ 500	$1,500 $3,000 $4,000 $6,500 $8,000 $10,000
Non-residential (Commercial, industrial, institutional, multi-family residential, schools, and other sites where regulated activities will occur)	< 1 1 < 5 5 < 10 10 < 40 40 < 100 ≥ 100	$3,000 $4,000 $5,000 $6,500 $8,000 $10,000

Organized Sewage Collection Systems and Modifications

Project	*Cost per Linear Foot*	*Minimum Fee-Maximum Fee*
Sewage Collection Systems	$0.50	$650 - $6,500

Underground and Aboveground Storage Tank System Facility Plans and Modifications

Project	*Cost per Tank or Piping System*	*Minimum Fee-Maximum Fee*
Underground and Aboveground Storage Tank Facility	$650	$650 - $6,500

Exception Requests

Project	*Fee*
Exception Request	$500

Extension of Time Requests

Project	*Fee*
Extension of Time Request	$150

TCEQ Use Only

TCEQ Core Data Form

For detailed instructions on completing this form, please read the Core Data Form Instructions or call 512-239-5175.

SECTION I: General Information

1. Reason for Submission (*If other is checked please describe in space provided.*)

☒ New Permit, Registration or Authorization (*Core Data Form should be submitted with the program application.*)

☐ Renewal (*Core Data Form should be submitted with the renewal form*) ☐ Other

2. Customer Reference Number (*if issued*)	Follow this link to search for CN or RN numbers in Central Registry**	**3. Regulated Entity Reference Number** (*if issued*)
CN		**RN**

SECTION II: Customer Information

4. General Customer Information | **5. Effective Date for Customer Information Updates** (mm/dd/yyyy)

☒ New Customer ☐ Update to Customer Information ☐ Change in Regulated Entity Ownership
☐ Change in Legal Name (Verifiable with the Texas Secretary of State or Texas Comptroller of Public Accounts)

The Customer Name submitted here may be updated automatically based on what is current and active with the Texas Secretary of State (SOS) or Texas Comptroller of Public Accounts (CPA).

6. Customer Legal Name (*If an individual, print last name first: eg: Doe, John*) — *If new Customer, enter previous Customer below:*

North Austin Crossroads Community Church

7. TX SOS/CPA Filing Number	**8. TX State Tax ID** (11 digits)	**9. Federal Tax ID** (9 digits)	**10. DUNS Number** (*if applicable*)
0800850897		12603954491	

11. Type of Customer: ☐ Corporation ☐ Individual Partnership: ☒ General ☐ Limited
Government: ☐ City ☐ County ☐ Federal ☐ Local ☐ State ☐ Other ☐ Sole Proprietorship ☐ Other:

12. Number of Employees
☒ 0-20 ☐ 21-100 ☐ 101-250 ☐ 251-500 ☐ 501 and higher

13. Independently Owned and Operated?
☒ **Yes** ☐ **No**

14. Customer Role (Proposed or Actual) – *as it relates to the Regulated Entity listed on this form. Please check one of the following*

☐ Owner ☐ Operator ☒ Owner & Operator ☐ Other:
☐ Occupational Licensee ☐ Responsible Party ☐ VCP/BSA Applicant

15. Mailing Address: 15800 Crossroads Dr.

City	Austin	**State**	TX	**ZIP**	78717	**ZIP + 4**	

16. Country Mailing Information (*if outside USA*)	**17. E-Mail Address** (*if applicable*)
	brady@crossroadschurchaustin.com

18. Telephone Number	19. Extension or Code	20. Fax Number *(if applicable)*
(512) 623-0600		( ) -

SECTION III: Regulated Entity Information

21. General Regulated Entity Information *(If 'New Regulated Entity" is selected, a new permit application is also required.)*

☒ New Regulated Entity ☐ Update to Regulated Entity Name ☐ Update to Regulated Entity Information

The Regulated Entity Name submitted may be updated, in order to meet TCEQ Core Data Standards (removal of organizational endings such as Inc, LP, or LLC).

22. Regulated Entity Name *(Enter name of the site where the regulated action is taking place.)*

North Austin Crossroads Community Church

23. Street Address of the Regulated Entity: ***(No PO Boxes)***	15800 Crossroads Dr.							
	City	Austin	**State**	TX	**ZIP**	78717	**ZIP + 4**	5168
24. County	Williamson							

If no Street Address is provided, fields 25-28 are required.

25. Description to Physical Location:	GENE TAYLOR TRACT, BLOCK A, Lot 1 & 2, ACRES 17.706				
26. Nearest City			**State**	**Nearest ZIP Code**	
Austin			TX	78717	

Latitude/Longitude are required and may be added/updated to meet TCEQ Core Data Standards. (Geocoding of the Physical Address may be used to supply coordinates where none have been provided or to gain accuracy).

27. Latitude (N) In Decimal:	30.482362838776254		**28. Longitude (W) In Decimal:**	-97.72180921460557	
Degrees	Minutes	Seconds	Degrees	Minutes	Seconds

29. Primary SIC Code (4 digits)	30. Secondary SIC Code (4 digits)	31. Primary NAICS Code (5 or 6 digits)	32. Secondary NAICS Code (5 or 6 digits)
8661		813110	

33. What is the Primary Business of this entity? *(Do not repeat the SIC or NAICS description.)*

a place of worship

34. Mailing Address:	**15800 Crossroads Dr.**							
	City	**Austin**	**State**	**TX**	**ZIP**	**78717**	**ZIP + 4**	
35. E-Mail Address:	**brady@crossroadschurchaustin.com**							

36. Telephone Number	37. Extension or Code	38. Fax Number *(if applicable)*
(512) 623-600		( ) -

39. TCEQ Programs and ID Numbers Check all Programs and write in the permits/registration numbers that will be affected by the updates submitted on this form. See the Core Data Form instructions for additional guidance.

☐ Dam Safety	☐ Districts	☒ Edwards Aquifer	☐ Emissions Inventory Air	☐ Industrial Hazardous Waste
☐ Municipal Solid Waste	☐ New Source Review Air	☐ OSSF	☐ Petroleum Storage Tank	☐ PWS
☐ Sludge	☐ Storm Water	☐ Title V Air	☐ Tires	☐ Used Oil
☐ Voluntary Cleanup	☐ Wastewater	☐ Wastewater Agriculture	☐ Water Rights	☐ Other:

SECTION IV: Preparer Information

40. Name:	Jen Henderson	**41. Title:**	PE

42. Telephone Number	**43. Ext./Code**	**44. Fax Number**	**45. E-Mail Address**
(737) 203-8953		( ) -	hpe@hendersonpe.com

SECTION V: Authorized Signature

46. By my signature below, I certify, to the best of my knowledge, that the information provided in this form is true and complete, and that I have signature authority to submit this form on behalf of the entity specified in Section II, Field 6 and/or as required for the updates to the ID numbers identified in field 39.

Company:	North Austin Crossroads Community Church	**Job Title:**	Pastor
Name *(In Print):*	Brady Traywick	**Phone:**	(512) 623-0600
Signature:	Brady Traywick	**Date:**	10/13/25