



WATER POLLUTION ABATEMENT PLAN (WPAP) AND ORGANIZED SEWAGE COLLECTION SYSTEM PLAN (SCS)

FOR

WELLS BRANCH MULTIFAMILY

2800 W WELLS BRANCH PKWY,
AUSTIN, TRAVIS COUNTY, TEXAS 78726

PREPARED FOR:

**LG WELLS BRANCH LLC
3500 MAPLE AVE STE 1600
Austin, Texas 78746**

PREPARED BY:

**WGI
4700 Mueller Blvd, Suite 300
Austin, Texas 78723**

**Texas Engineering Firm # F-15085
WGI Project # 01228323.00**

August 2023



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: Wells Branch Multifamily				2. Regulated Entity No.:					
3. Customer Name: LG WELLS BRANCH LLC				4. Customer No.:					
5. Project Type: (Please circle/check one)	<input checked="" type="radio"/> New	Modification		Extension	Exception				
6. Plan Type: (Please circle/check one)	<input checked="" type="radio"/> WPAP	<input type="radio"/> CZP	<input checked="" type="radio"/> SCS	<input type="radio"/> UST	<input type="radio"/> AST	<input type="radio"/> EXP	<input type="radio"/> EXT	Technical Clarification	Optional Enhanced Measures
7. Land Use: (Please circle/check one)	<input checked="" type="radio"/> Residential		Non-residential		8. Site (acres):		±7.26		
9. Application Fee:	\$5650		10. Permanent BMP(s):			Biofiltration			
11. SCS (Linear Ft.):	1044		12. AST/UST (No. Tanks):			N/A			
13. County:	Travis		14. Watershed:			Walnut 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.)	—	<u>X</u>	—
Region (1 req.)	—	<u>X</u>	—
County(ies)	—	<u>X</u>	—
Groundwater Conservation District(s)	<u>—</u> Edwards Aquifer Authority <u>—</u> Barton Springs/Edwards Aquifer <u>—</u> Hays Trinity <u>—</u> Plum Creek	<u>X</u> Barton Springs/Edwards Aquifer	NA
City(ies) Jurisdiction	<u>—</u> Austin <u>—</u> Buda <u>—</u> Dripping Springs <u>—</u> Kyle <u>—</u> Mountain City <u>—</u> San Marcos <u>—</u> Wimberley <u>—</u> Woodcreek	<u>X</u> Austin <u>—</u> Bee Cave <u>—</u> Pflugerville <u>—</u> Rollingwood <u>—</u> Round Rock <u>—</u> Sunset Valley <u>—</u> West Lake Hills	<u>—</u> Austin <u>—</u> Cedar Park <u>—</u> Florence <u>—</u> Georgetown <u>—</u> Jerrell <u>—</u> Leander <u>—</u> Liberty Hill <u>—</u> Pflugerville <u>—</u> Round Rock

San Antonio Region					
County:	Bexar	Comal	Kinney	Medina	Uvalde
Original (1 req.)	—	—	—	—	—
Region (1 req.)	—	—	—	—	—
County(ies)	—	—	—	—	—
Groundwater Conservation District(s)	<u>—</u> Edwards Aquifer Authority <u>—</u> Trinity-Glen Rose	<u>—</u> Edwards Aquifer Authority	<u>—</u> Kinney	<u>—</u> EAA <u>—</u> Medina	<u>—</u> EAA <u>—</u> Uvalde
City(ies) Jurisdiction	<u>—</u> Castle Hills <u>—</u> Fair Oaks Ranch <u>—</u> Helotes <u>—</u> Hill Country Village <u>—</u> Hollywood Park <u>—</u> San Antonio (SAWS) <u>—</u> Shavano Park	<u>—</u> Bulverde <u>—</u> Fair Oaks Ranch <u>—</u> Garden Ridge <u>—</u> New Braunfels <u>—</u> Schertz	NA	<u>—</u> 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.

Ian Williams P.E.

Print Name of Customer/Authorized Agent



08/07/2023

Signature of Customer/Authorized Agent

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):



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General Information, **1**

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: Ian Williams , P.E.

Date: 08/07/2023

Signature of Customer/Agent:



Project Information

1. Regulated Entity Name: Wells Branch Multifamily
2. County: Travis
3. Stream Basin: Walnut Creek
4. Groundwater Conservation District (If applicable): N/A
5. Edwards Aquifer Zone:
 Recharge Zone
 Transition Zone
6. Plan Type:
 WPAP
 SCS
 Modification
 AST

UST

Exception Request

7. Customer (Applicant):

Contact Person: Nash Thomas

Entity: LG WELLS BRANCH LLC

Mailing Address: 3500 MAPLE AVE STE 1600

City, State: DALLAS, TX

Zip: 75219

Telephone: (918)-8016-810

FAX: _____

Email Address: nthomas@leoncapitalgroup.com

8. Agent/Representative (If any):

Contact Person: Ian Williams , P.E.

Entity: WGI

Mailing Address: 4700 Mueller Blvd, Suite 300

City, State: Austin, Texas

Zip: 78723

Telephone: 512-669-5560

FAX: _____

Email Address: ian.williams@wginc.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.

2800 W Wells Branch Pkwy, Austin, Travis County, Texas 78728

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. **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:

- Area of the site
- Offsite areas
- Impervious cover
- Permanent BMP(s)
- Proposed site use
- Site history
- Previous development
- 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
- Undeveloped (Cleared)
- Undeveloped (Undisturbed/Uncleared)
- Other: _____

Prohibited Activities

16. 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. 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:

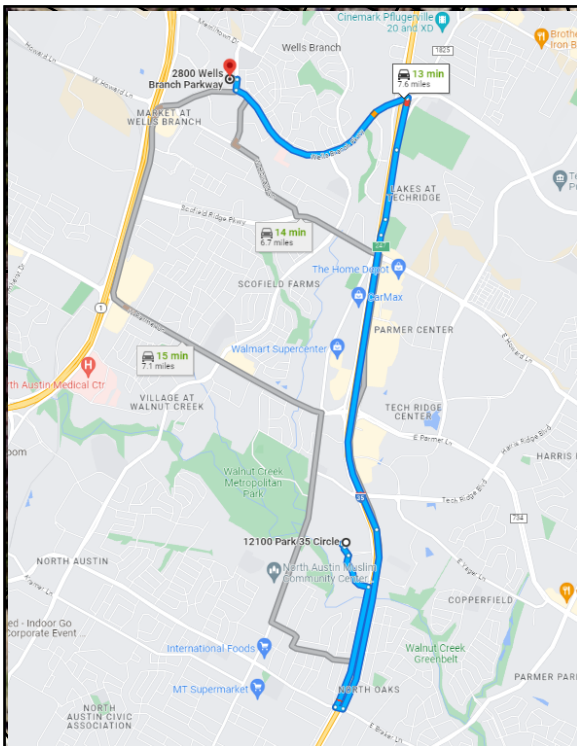
- For a Water Pollution Abatement Plan or Modification, the total acreage of the site where regulated activities will occur.
- For an Organized Sewage Collection System Plan or Modification, the total linear footage of all collection system lines.
- For a UST Facility Plan or Modification or an AST Facility 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. 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
- 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. 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. 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.



12100 Park 35 Cir
Austin, TX 78753

Take Park 35 Cir to S I-35 Frontage Rd 2 min (0.4 mi)

1. Head south toward Park 35 Cir 164 ft
2. Turn right toward Park 35 Cir 377 ft
3. Turn right onto Park 35 Cir 0.3 mi

Continue on S I-35 Frontage Rd. Drive from N Interstate 35 Frontage Rd, I-35 N, N Interstate 35 Frontage Rd and Wells Branch Pkwy to Wells Branch 12 min (7.2 mi)

4. Turn right onto S I-35 Frontage Rd 0.9 mi
5. Use the left lane to turn left onto E Braker Ln 292 ft
6. Turn left onto N Interstate 35 Frontage Rd 1.3 mi
7. Use the left lane to take the ramp onto I-35 N 2.2 mi
8. Take exit 247 toward State Rte 1825/Pflugerville 0.1 mi
9. Merge onto N Interstate 35 Frontage Rd
10. Slight right to stay on N Interstate 35 Frontage Rd 0.5 mi
11. Turn left onto Wells Branch Pkwy 0.4 mi
12. Turn right onto Single Trce 410 ft


Drive to your destination 39 sec (177 ft)

13. Turn left 164 ft
14. Turn right
- Destination will be on the left 13 ft

2800 Wells Branch Pkwy
Austin, TX 78728



Legend




 Subject_Site





SUBJECT SITE
+/- 7.256 acres

Legend

TYPE	
	Edwards Aquifer Contributing Zone
	Edwards Aquifer Recharge Zone
	Subject_Site



Edward's Aquifer Recharge Zone Map

Wells Branch Multifamily
2800 W Wells Branch Parkway
City of Austin, Travis County, Texas 78728

0 187.5 375 750 Feet

30228323.00 | 07.24.2023 | WGINC.COM





General Information Form [TCEQ-0587]

ATTACHMENT C

WELLS BRANCH MULTIFAMILY

Project Description

The site is located at 2800 W Wells Branch Pkwy, located in the Austin 2-Mile ETJ, in Travis County, Texas. The ±7.26-acre site is currently developed as commercial. The water quality and detention facilities located on the site have been sized to accommodate the development of the site. The WPAP and SCS applications herein are specific to the overall development above the Edwards Aquifer Recharge Zone.

In existing conditions, the development is broken up into three drainage areas. The existing drainage areas are outlined in plan view on the Existing Drainage Area Map, sheet CG100, on the construction plan set. Drainage Area EX-2 is a 4.50-acre watershed that consists of the original development, permitted under existing site plan number SP-94-0254D, and is captured through inlets located in the parking lot and conveyed to the southwestern corner of the site to a water quality pond that overflows to a detention pond. Drainage area EX-1 is a 1.64-acre watershed that includes the building expansion drainage associated with site plan exemption DA-2010-0028. The northern area, associated with this drainage area, drains to inlets in the parking lot to the water quality pond with the overflow bypassing the detention pond and connecting to the storm infrastructure within Double File Trail. Drainage Area EX-3 is a 1.13-acre watershed which consists of landscaping that flows directly to the public right of way due to berming around the perimeter of the site. All drainage ultimately enters the same storm system located at the southwestern portion of the site at Analysis Point A. There is no off-site drainage associated with this development.

The proposed project will consist of the design and construction of one multifamily apartment complex with associated grading, drainage and site improvements. The project includes necessary site improvements for access, utility services, grading, and drainage improvements, and environmental protections

The property is located within the Walnut Creek Watershed, and it is classified as a suburban watershed. The subject site is located within the Edwards Aquifer Recharge Zone, as defined by the City of Austin and TCEQ. Additionally, no portion of the site is located within a 100-year FEMA designated flood plain as shown on FEMA Map Panel No. 48453C0255K, dated January 22, 2020.



Geologic Assessment, 2

GEOLOGIC ASSESSMENT

**Leon Capital Geologic Assessment
2800 Wells Branch Parkway
Austin, Travis County, Texas 78278**

March 31, 2023

Prepared for:

**WGI, Inc
C/O Ian Williams
2021 East 5th Street
Suite 200
Austin Texas 78702**

ECS Project No. 51:3442-A



March 31, 2023

Mr. Ian Williams
WGI, Inc
2021 East 5th Street, Suite 200
Austin, Texas 78702

ECS Project: 51:3442-a

Subject: TCEQ Geologic Assessment, Leon Capital ERI, 2800 Wells
Branch Parkway, Austin, Travis County, Texas 78728

Dear Mr. Williams:

We are pleased to provide WGI, Inc with a Geologic Assessment for the above referenced property. ECS' services were conducted in accordance with the services outlined in ECS Proposal 51-4849 dated and authorized on March 24, 2023.

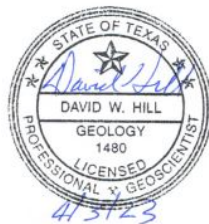
ECS did not observe recharge features on the site. Should features be observed during the course of construction activities please contact ECS. If there are questions regarding this report, or a need for further information, please contact the undersigned at (512) 837-8005.

Respectfully submitted,

Roger S. Willis, M.S.
Senior Environmental Project Manager

Michael DeLalio.
Assistant Staff Project Manager

David W. Hill
Associate Principal Engineer



**GEOLOGIC ASSESSMENT FOR DEVELOPMENT
OVER THE EDWARDS AQUIFER**

**Leon Capital GA
2800 Wells Branch Parkway
Austin, Travis County, Texas 78728**

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Completed Form TCEQ-0585
Stratigraphic Column
Narrative Description of Site-Specific Geology
Photo Documentation

Attachments

Soil Survey

1.0 Introduction

The geologic assessment provided here, as part of the applicant's plan, addresses the required items as cited in Title 30 of the Texas Administrative Code (TAC), Part 1, Chapter 213, Subchapter A, Rule 213.5, relating to development over the Edwards Aquifer. This report identifies observed potential pathways for contaminant movement into the underlying Edwards Aquifer as required by the Texas Commission on Environmental Quality (TCEQ).

The subject property is comprised of approximately 7.25 acres of commercially developed property, identified by the Travis County Central Appraisal District as a portion of parcel 271460, located at 2800 Wells Branch Parkway in Austin, Travis County, Texas. The subject property is located over the Edwards Aquifer Recharge Zone.

The purpose of this Geologic Assessment is to fulfill the requirements for the applicant's plan for site improvements on the property. This report will describe surficial geologic units and identify the locations and extent of significant features that may impact the underlying Edwards Aquifer Recharge Zone.

2.0 Soil Units

According to the United States Department of Agriculture (USDA) Soil Survey of Travis County, Texas, there are three (3) soil units mapped on the site (Figure 5). The soils on site consist of: Austin silty clay, 1 to 3 percents slopes (AsB), Houston Black clay, 1 to 3 percents slopes (HnB), and Castaphen silty clay loam, 3 to 5 percent slopes (StC.)

Austin silty clay, 1 to 3 percent slopes (AsB), is formed on ridges derived from residuum weathered from chalk (USDA, 2021). The Hydrologic Soil Group is listed as D, and the soil is well drained. Flooding or ponding is reported as "none." The depth to a restrictive layer is reported to be 22 to 39 inches to paralithic bedrock, and the available water storage (in profile) is listed as low.

Houston Black clay, 1 to 3 percent slopes (HnB), is formed on ridges derived from residuum weathered from calcareous mudstone of upper cretaceous age (USDA, 2021). The Hydrologic Soil Group is listed

as D, and the soil is moderately well drained. Flooding or ponding is reported as “none.” The depth to a restrictive layer is reported to be more than 80 inches, and the available water storage (in profile) is listed as high.

Castaphen silty clay loam, 3 to 5 percent slopes (StC), is formed on ridges derived from residuum weathered from Austin chalk formation (USDA, 2021). The Hydrologic Soil Group is listed as D, and the soil is well drained. Flooding or ponding is reported as “none.” The depth to a restrictive layer is reported to be 8 to 20 inches, and the available water storage (in profile) is listed as very low.

3.0 Regional Geology

Ranging from north to south, two primary physiographic provinces are present in Travis County: the Great Plain and the Gulf Coastal Plain. The Gulf Coastal Plain is comprised mainly of Blackland prairie.

The Great Plain is comprised chiefly of limestone plains, which locally merges with the Edwards Plateau in the vicinity of the Colorado River.

Groundwater recharge and flow are controlled by faulted Edwards Aquifer and adjacent strata. Water enters the aquifer by means of solution features controlled by faults, fractures and solution conduits. Solution features are created by the dissolution of limestone primarily from rainwater and groundwater. Deformation of the Balcones fault system controls both the large- and small-scale flow barriers and pathways present in the Edwards Aquifer.

4.0 Site Geology

Geological information pertaining to the area was obtained from the Geologic Atlas of Texas, Austin Sheet, published by University of Texas at Austin, Bureau of Economic Geology (BEG), 1997. The subject property is situated on Eagle Ford Group (Kef) (Figure 6).

BEG describes Kef as “shale and limestone. Upper part-shale compact silty contains fossil fish teeth and bones, 10 feet or more thick; middle part-silty limestone grading to calcareous siltstone, flaggy medium

gray, weathers pale yellowish brown, 5 feet thick. Lower part- shale, calcareous, dark gray, 7-50 feet thick. Thickness of Eagle Ford Group 25-65 feet.”

Obvious signs of faulting were not mapped or observed on the subject property. However, the above referenced Atlas indicates faulting less than 500 feet east of the site. Also, the stratigraphically adjacent Buda limestone (Kbu) is less than 500 feet west of the site. Kbu is adjacent to Del Rio Georgetown (Kdg) which is expected to be thin and likely fractures from faulting in the area

5.0 Site Hydrology

Based upon interpretation of the United States Geological Survey 7.5 Minute Series topographic quadrangle maps, Pflugerville West, Texas, and the onsite reconnaissance, the estimated regional shallow groundwater flow direction for the subject property is generally west. The subject property is located within the Walnut Creek watershed. Local conditions that may influence the subsurface hydrology would be local topography (hills and valleys), geologic anomalies, utilities, and nearby wells or sumps. ECS visited the subject site on March 28, 2023, the weather was clear and 77 degrees at the time of the site visit.

Seeps or springs were not observed on the subject property.

5.1 Surface Water Hydrology

The subject property generally drains west towards Double File Trail. Two stormwater basins were observed in the southwest portion of the subject property. Wetlands, springs or seeps were not observed. Field observations and analysis are supported from the Pflugerville West, Texas USGS Topographic Quadrangle maps (USGS, 2019).

6.0 Site Investigation

The site reconnaissance was performed on March 28, 2023. The site investigation was performed by traversing the subject property in meandering transects, spaced 10 to 15 meters apart. Photographs were taken to document any features observed during the reconnaissance. The subject property appeared to be improved with a commercial building and associated parking. The stormwater drainage system flows

from east to west to the stormwater basins located on the subject property prior to discharging into the municipal stormwater system off site.

The subject property is largely improved with a commercial structure and associated parking. The subject property is covered by native and naturalized grasses, herbs, forbs, shrubs and trees such as post oak (*Quercus stellata*), bermuda grass (*Cynodon dactylon*), ryegrass (*Lolium perenne*), field thistle (*Cirsium discolor*), horseherb (*Calyptocarpus vialis*), prickly pear (*Opuntia spp*), cleavers (*Galium aparine*), common dandelion (*Taraxacum officinale*), hackberry (*Celtis occidentalis*), crepe myrtle (*Lagerstroemia spp.*) and boxwoods (*Buxus spp.*).

Evidence of septic systems or water well were not observed during the site reconnaissance.

Other potential natural recharge features such as caves, sinkholes, closed depressions, solution cavities, fractured rock outcrops, faults or lineaments were not observed on the subject property. Additionally, seeps or springs were not observed on the subject property.

7.0 Summary

The subject property is comprised of approximately 7.25 acres of commercially developed property, identified by the Travis County Central Appraisal District as a portion of parcel 271460, located at 2800 Wells Branch Parkway in Austin, Travis County, Texas. The subject property is located over the Edwards Aquifer Recharge Zone.

Recharge features were not identified on the site. Caves, sinkholes or cavities were not observed on the subject property at the time of the site reconnaissance with the potential for contaminant movement into the Edwards Aquifer. Additionally, seeps or springs were not observed on the subject property. Should features be observed during the course of construction activities please contact ECS.

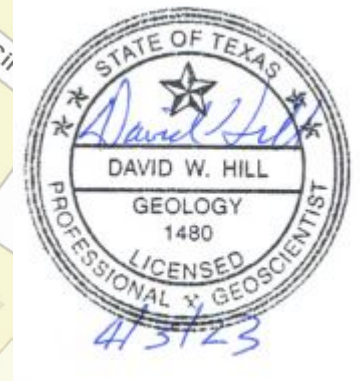
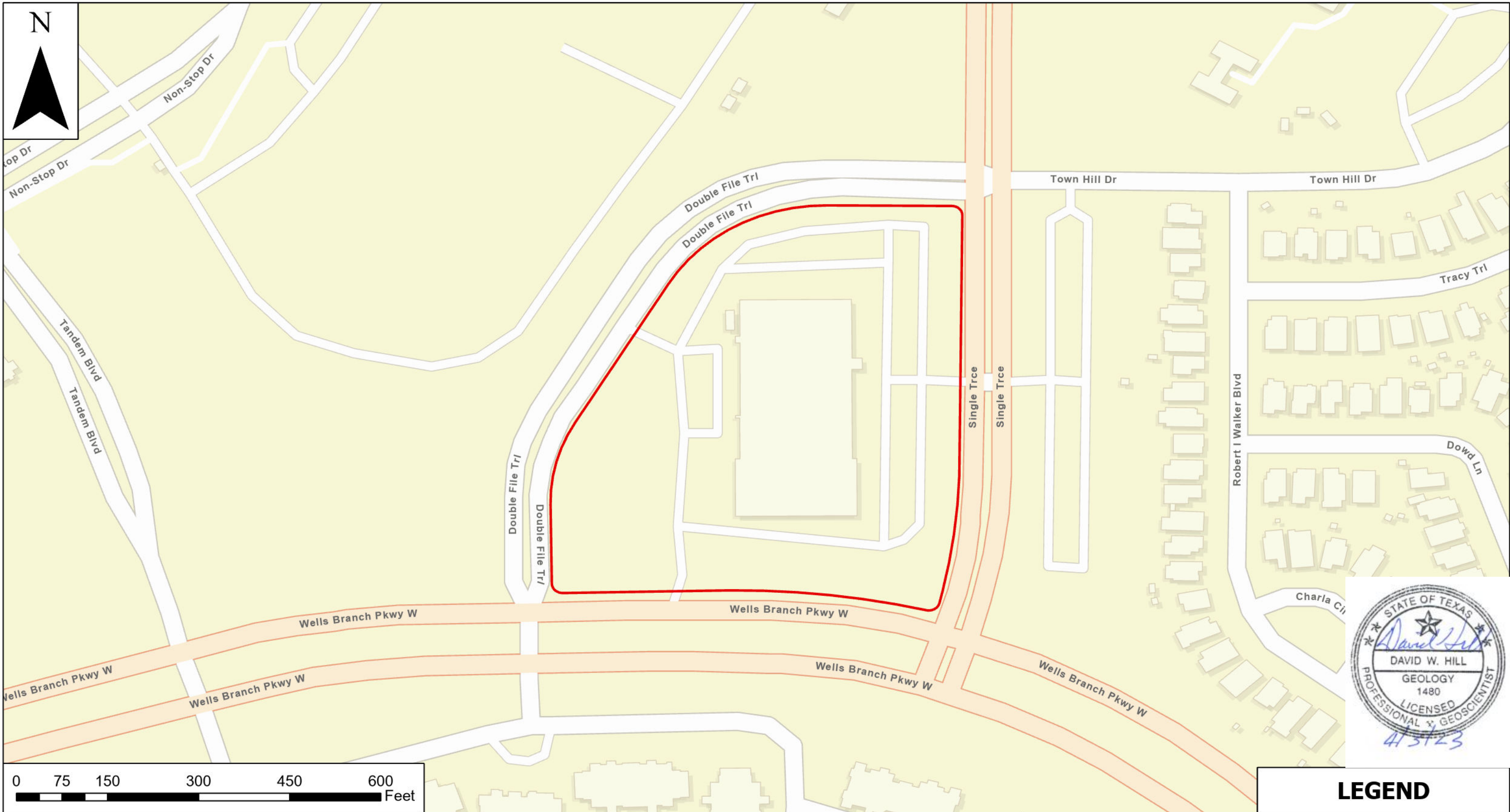
It appears that the property drains to the west. Improved drainage features were observed on the subject property.

8.0 References

- (BEG) The University of Texas at Austin Bureau of Economic Geology, Geologic Map of Texas, Austin Sheet, 1997.
- (USDA) United States Department of Agriculture (USDA) Custom Soil Survey of Williamson County, 2022.
- (USGS) United States Geologic Survey (USGS), 7.5- Minute Topographic Quadrangle Pflugerville West, Texas. 2019.

ATTACHMENTS

FIGURES



LEGEND



ECS Southwest, LLC
 14050 Summit Drive, Suite 104
 Austin, Texas 78728
 Phone: (512) 837-8005
 www.ecslimited.com

ECS Project No. 51:3442-A

**Leon Capital Geologic Assessment
 2800 Wells Branch Parkway
 Austin, Texas 78278**

Project Acreage: 7.25 acres

**Figure 1
 Subject Property Location Map**

USGS Quadrangle: Pflugerville East
 Watershed: Walnut Creek

Service Layer Credits:
 World Street Map: Esri Community Maps Contributors, Austin Community College, Baylor University, City of Austin, County of Williamson, Texas Parks & Wildlife, © OpenStreetMap, Microsoft, CONANP, Esri, HERE, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA
 USGS Topographic Map of the LOCALITY, STATE(S) Quadrangle (20XX)
 Soils Data: USDA NRCS Web Soil Survey
 Wetlands Data: National Wetlands Inventory



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ECS Project No. 51:3442-A

Leon Capital Geologic Assessment
2800 Wells Branch Parkway
Austin, Texas 78278

Project Acreage: 7.25 acres

Figure 2
Topographic Map

USGS Quadrangle: Pflugerville East
 Watershed: Walnut Creek

Service Layer Credits:
 USGSTopo: USGS The National Map: National Boundaries Dataset, 3DEP Elevation Program, Geographic Names Information System, National Hydrography Dataset, National Land Cover Database, National Structures Dataset, and National Transportation Dataset; USGS Global Ecosystems; U.S. Census Bureau TIGER/Line data; USFS Road Data; Natural Earth Data; U.S. Department of State Humanitarian Information Unit; and NOAA National Centers for Environmental Information, U.S. Coastal Relief Model. Data refreshed June, 2022.
 USGS Topographic Map of the LOCALITY, STATE(S) Quadrangle (20XX)

LEGEND

 Subject Property



LEGEND

- Subject Property
- Drainage Features



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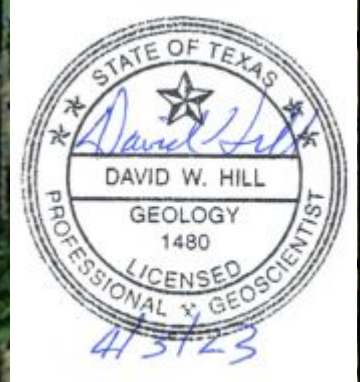
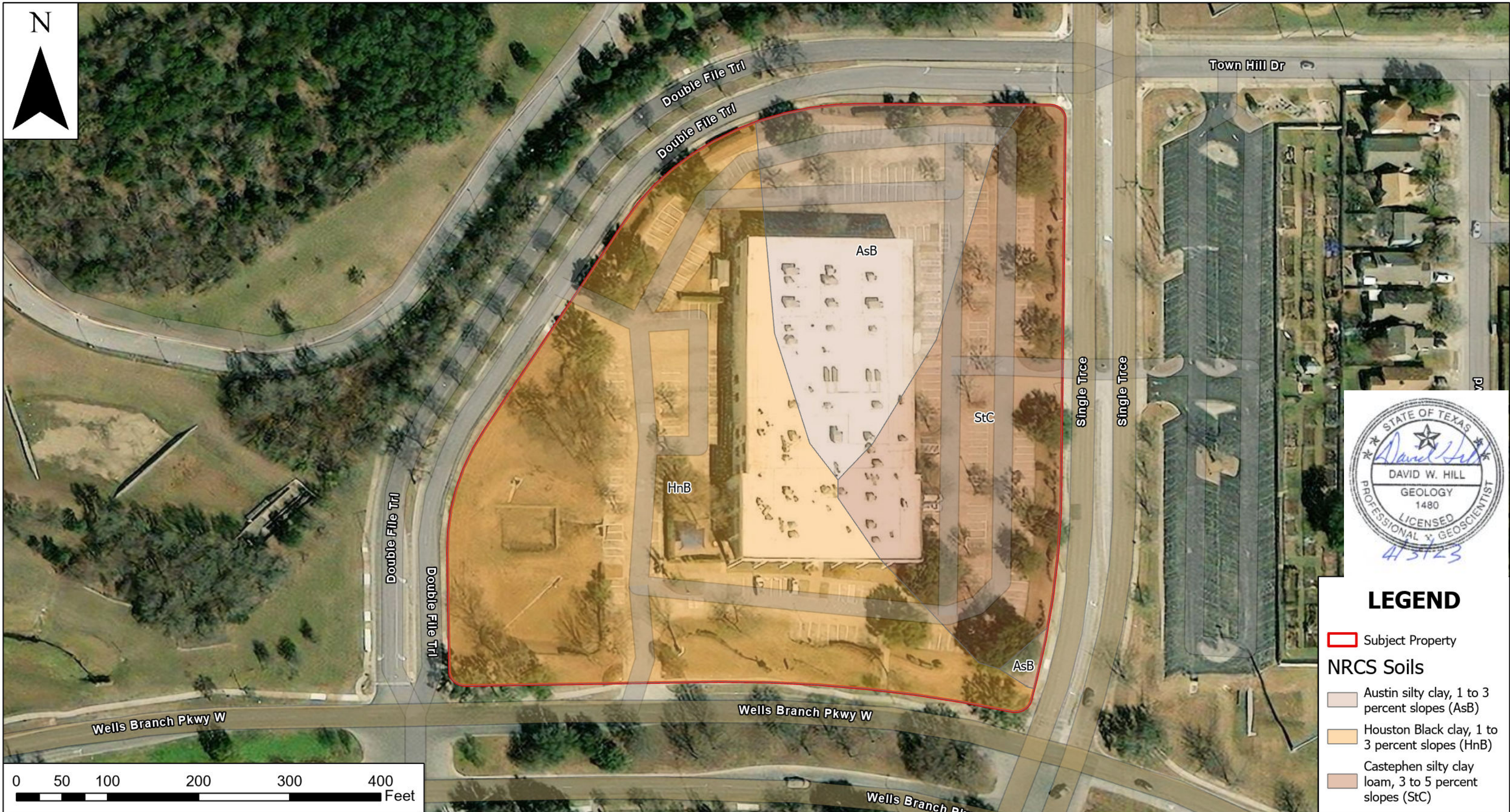
Leon Capital Geologic Assessment
2800 Wells Branch Parkway
Austin, Texas 78278

Project Acreage: 7.25 acres

Figure 3
Subject Property Map

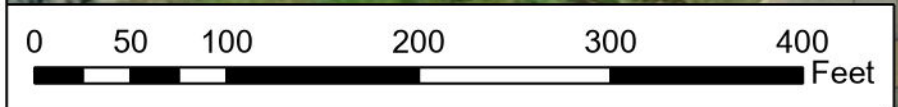
USGS Quadrangle: Pflugerville East
 Watershed: Walnut Creek

Service Layer Credits:
 Hybrid Reference Layer: Esri Community Maps Contributors, Austin Community College, Baylor University, City of Austin, County of Williamson, Texas Parks & Wildlife, © OpenStreetMap, Microsoft, CONANP, Esri, HERE, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA
 World Imagery: Williamson County TX, Maxar, Microsoft
 USGS Topographic Map of the LOCALITY, STATE(S) Quadrangle (20XX)
 Soils Data: USDA NRCS Web Soil Survey



LEGEND

- Subject Property
- NRCS Soils**
- Austin silty clay, 1 to 3 percent slopes (AsB)
- Houston Black clay, 1 to 3 percent slopes (HnB)
- Caststephen silty clay loam, 3 to 5 percent slopes (StC)



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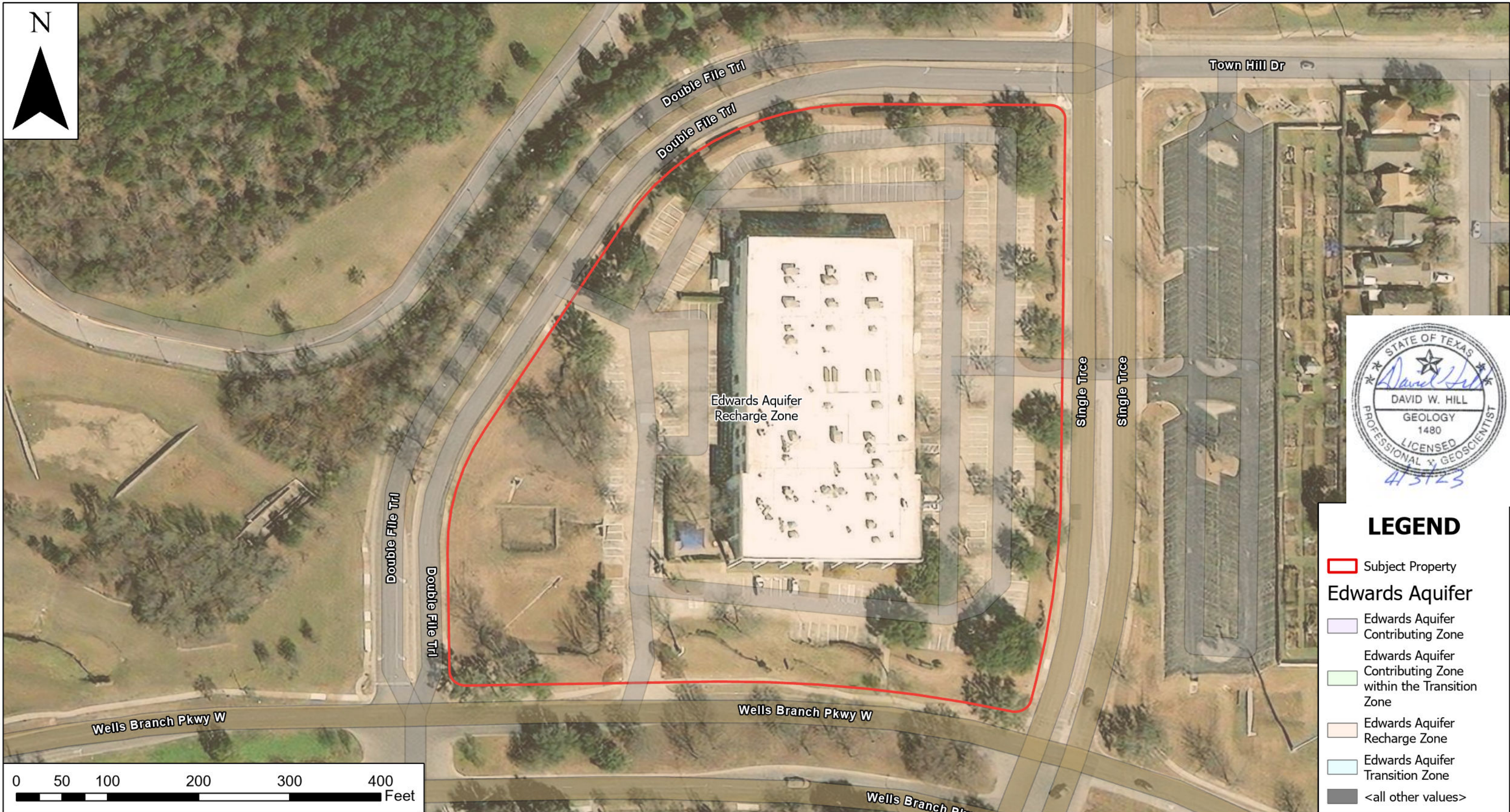
Leon Capital Geologic Assessment
2800 Wells Branch Parkway
Austin, Texas 78278

Project Acreage: 7.25 acres

Figure 5
NRCS Soils Map

USGS Quadrangle: Pflugerville East
 Watershed: Walnut Creek

Service Layer Credits:
 Hybrid Reference Layer: Esri Community Maps Contributors, Austin Community College, Baylor University, City of Austin, County of Williamson, Texas Parks & Wildlife, © OpenStreetMap, Microsoft, CONANP, Esri, HERE, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA
 World Imagery: Williamson County TX, Maxar, Microsoft
 USGS Topographic Map of the LOCALITY, STATE(S) Quadrangle (20XX)
 Soils Data: USDA NRCS Web Soil Survey



LEGEND

- Subject Property
- Edwards Aquifer**
- Edwards Aquifer Contributing Zone
- Edwards Aquifer Contributing Zone within the Transition Zone
- Edwards Aquifer Recharge Zone
- Edwards Aquifer Transition Zone
- <all other values>



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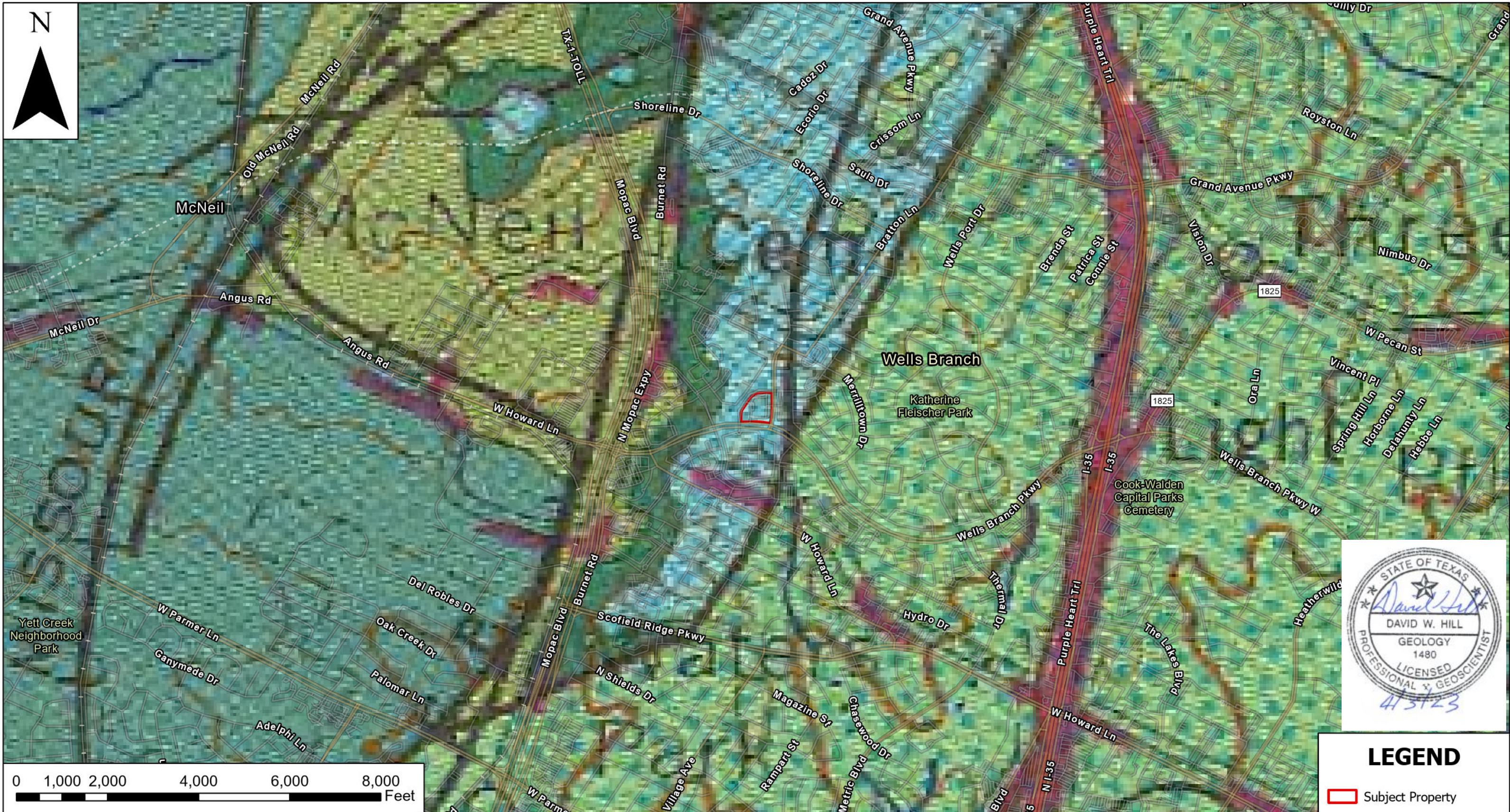
Leon Capital Geologic Assessment
2800 Wells Branch Parkway
Austin, Texas 78278

Project Acreage: 7.25 acres

Figure 4
Edwards Aquifer Map

USGS Quadrangle: Pflugerville East
 Watershed: Walnut Creek

Service Layer Credits:
 Hybrid Reference Layer: Esri Community Maps Contributors, Austin Community College, Baylor University, City of Austin, County of Williamson, Texas Parks & Wildlife, © OpenStreetMap, Microsoft, CONANP, Esri, HERE, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA
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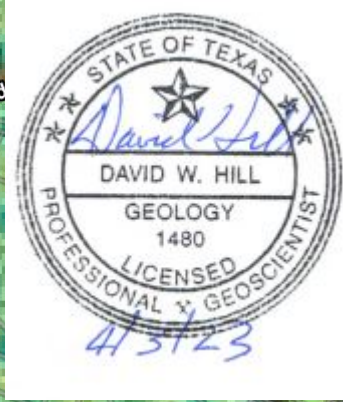
Leon Capital Geologic Assessment
2800 Wells Branch Parkway
Austin, Texas 78278

Project Acreage: 7.25 acres

Figure 6
Geologic Map

USGS Quadrangle: Pflugerville East
 Watershed: Walnut Creek

Service Layer Credits:
 World Imagery: Williamson County TX, Maxar
 Hybrid Reference Layer: Austin Community College, Baylor University, City of Austin, County of Williamson, Texas Parks & Wildlife, CONANP, Esri, HERE, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA
 USGS Topographic Map of the LOCALITY, STATE(S) Quadrangle (20XX)
 Soils Data: USDA NRCS Web Soil Survey
 Wetlands Data: National Wetlands Inventory



LEGEND

Subject Property

APPENDIX

Completed Form TCEQ-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: Dave Hill

Telephone: 512-837-8005

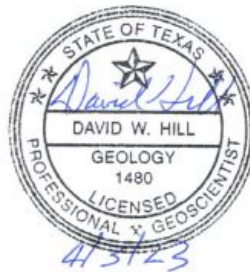
Date: March 31, 2023

Fax: 512-837-8221

Representing: ECS Southwest, LLP, TBPG 50674 (Name of Company and TBPG or TBPE registration number)

Signature of Geologist:

David Hill



Regulated Entity Name: Leon Capital

Project Information

1. Date(s) Geologic Assessment was performed: March 27, 2023

2. Type of Project:

WPAP
 SCS

AST
 UST

3. Location of Project:

Recharge Zone
 Transition Zone
 Contributing Zone within the Transition Zone

4. **Attachment A - Geologic Assessment Table.** Completed Geologic Assessment Table (Form TCEQ-0585-Table) is attached.
5. 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.

Table 1 - Soil Units, Infiltration Characteristics and Thickness

Soil Name	Group*	Thickness(feet)
Austin silty clay, 1 to 3 percent slopes	D	2-3
Houston Black clay, 1 to 3 percent slopes	D	>6.5
Castaphen sitly clay loam, 3 to 5 percent slopes	D	0.5-2

Soil Name	Group*	Thickness(feet)

** 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. **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. **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. **Attachment D – Site Geologic Map(s).** The Site Geologic Map must be the same scale as the applicant's Site Plan. The minimum scale is 1": 400'
 Applicant's Site Plan Scale: 1" = 300'
 Site Geologic Map Scale: 1" = 300'
 Site Soils Map Scale (if more than 1 soil type): 1" = 400'
9. Method of collecting positional data:
 - 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. 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.
 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.
 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. 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.

GEOLOGIC ASSESSMENT TABLE						PROJECT NAME:														
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)	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		
St. W Discharge 1	-97.6902553	30.4425027	MB	30		X	X	X					n		X				Hillslope	
St. W Discharge 2	-97.6899998	30.4423491	MB	30		X	X	X					n		X				Hillslope	
St. W Municipal DC	-97.6903025	30.4420412	MB	30		X	X	X					n		X				Hillslope	

* DATUM: WGS 1984

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
Gently sloping west

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 3/31/2023

David Hill

Sheet 1 of 1

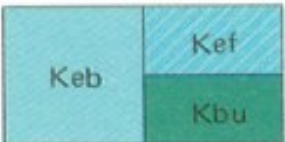


Stratigraphic Column

**Stratigraphic Column
Leon Capital GA
2800 Wells Branch Parkway
Austin, Travis County, Texas**



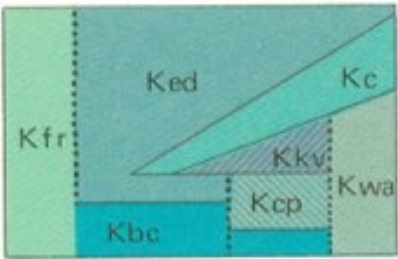
Austin Chalk



Eagle Ford Group and Buda Limestone



Del Rio Clay ("Grayson Marl") and Georgetown Formation



Fredericksburg Group



Paluxy Sand

Narrative Description of Site-Specific Geology

NARRATIVE DESCRIPTION OF SITE-SPECIFIC GEOLOGY

Ranging from north to south, two primary physiographic provinces are present in Travis County: the Great Plain and the Gulf Coastal Plain. The Gulf Coastal Plain is comprised mainly of Blackland prairie. The Great Plain is comprised chiefly of limestone plains, which merges with the Edwards Plateau in the vicinity of the Colorado River.

Groundwater recharge and flow are controlled by faulted Edwards Aquifer and adjacent strata. Water enters the aquifer by means of solution features controlled by faults, fractures and solution conduits. Solution features are created by the dissolution of limestone primarily from rainwater and groundwater. Deformation of the Balcones fault system controls both the large- and small-scale flow barriers and pathways present in the Edwards Aquifer.

Geological information pertaining to the area was obtained from the Geologic Atlas of Texas, Austin Sheet, published by University of Texas at Austin, Bureau of Economic Geology (BEG), 1997. The subject property is situated on Eagle Ford formation (Kef) (Figure 6).

BEG describes Kef as “shale and limestone. Upper part-shale compact silty contains fossil fish teeth and bones, 10 feet or more thick; middle part-silty limestone grading to calcareous siltstone, flaggy medium gray, weathers pale yellowish brown, 5 feet thick. Lower part- shale, calcareous, dark gray, 7-50 feet thick. Thickness of Eagle Ford Group 25-65 feet.”

Evidence of septic systems or water well were not observed during the site reconnaissance.

Other potential natural recharge features such as caves, sinkholes, closed depressions, solution cavities, fractured rock outcrops, faults or lineaments were not observed on the subject property. Additionally, seeps or springs were not observed on the subject property.

Photo Documentation



1 - Improved Parking Area in the west portion



2 - Typical Vegetation in the west portion



3 - Vegetation along the west property boundary



4 - Stormwater Basins



5 - Stormwater discharge



6 - Stormwater outfall



7 - Stormwater discharge



8 - Municipal Stormwater connection



9 - Typical improved parking



10 - Vegetation along South property boundary



11 - Vegetation along Wells Branch Parkway



12 - Typical Vegetation along south property boundary



13 - Improved parking in the east portion



14 - South east property corner



15 - Along east property boundary



16 - Typical Vegetation



17 - Vegetation along east property boundary



18 - Vegetation along east property boundary



19 - Improved parking in the north portion



20 - Vegetation along north property boundary



21 - Vegetation along north property boundary facing southwest



22 - Stormwater collection



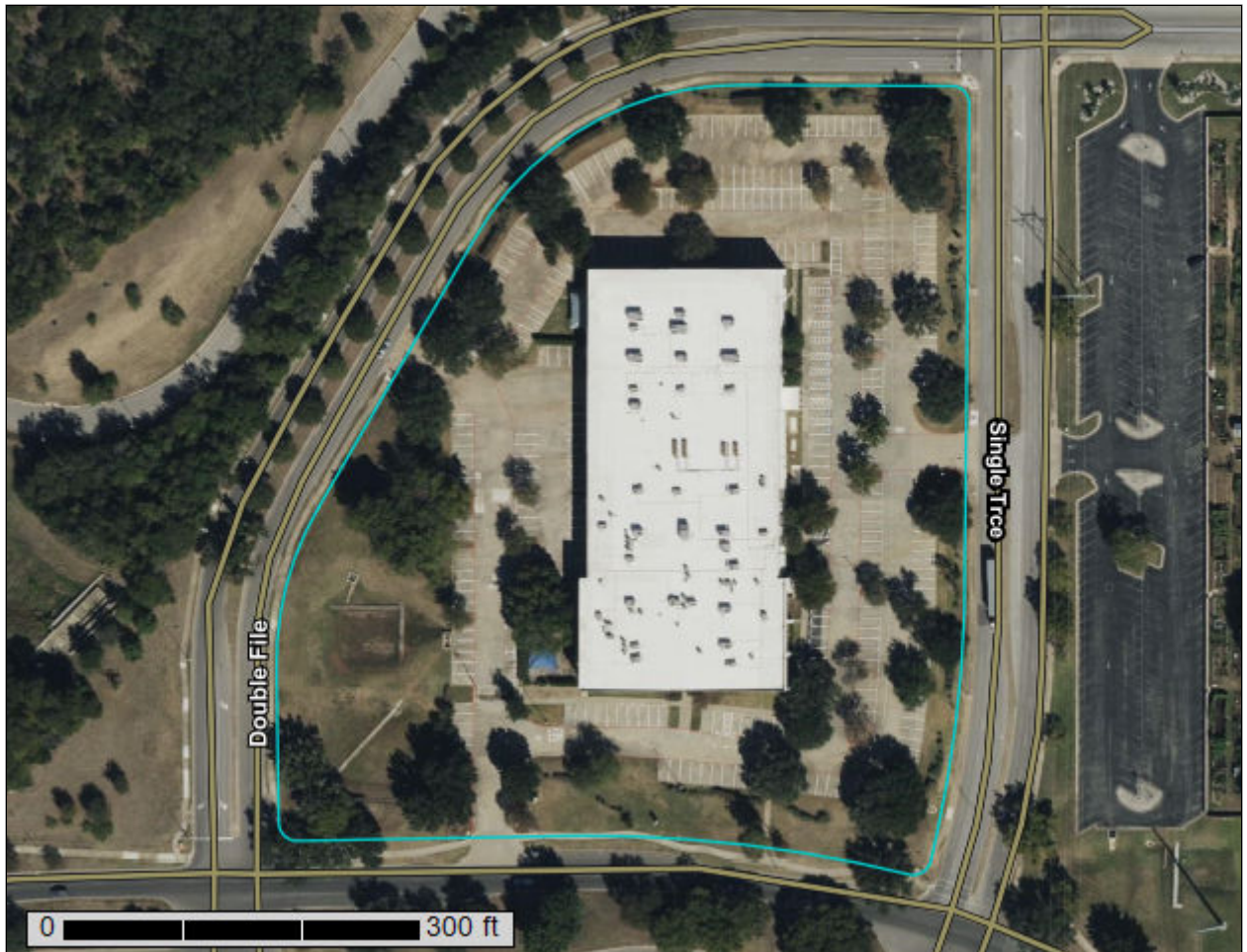
23 - Typical Vegetation

ATTACHMENTS

Soil Survey

Attachment 1:
NRCS Soil Map Report

Custom Soil Resource Report for Travis County, Texas



Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (<http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/>) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (<https://offices.sc.egov.usda.gov/locator/app?agency=nrcs>) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

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How Soil Surveys Are Made

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil

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scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and

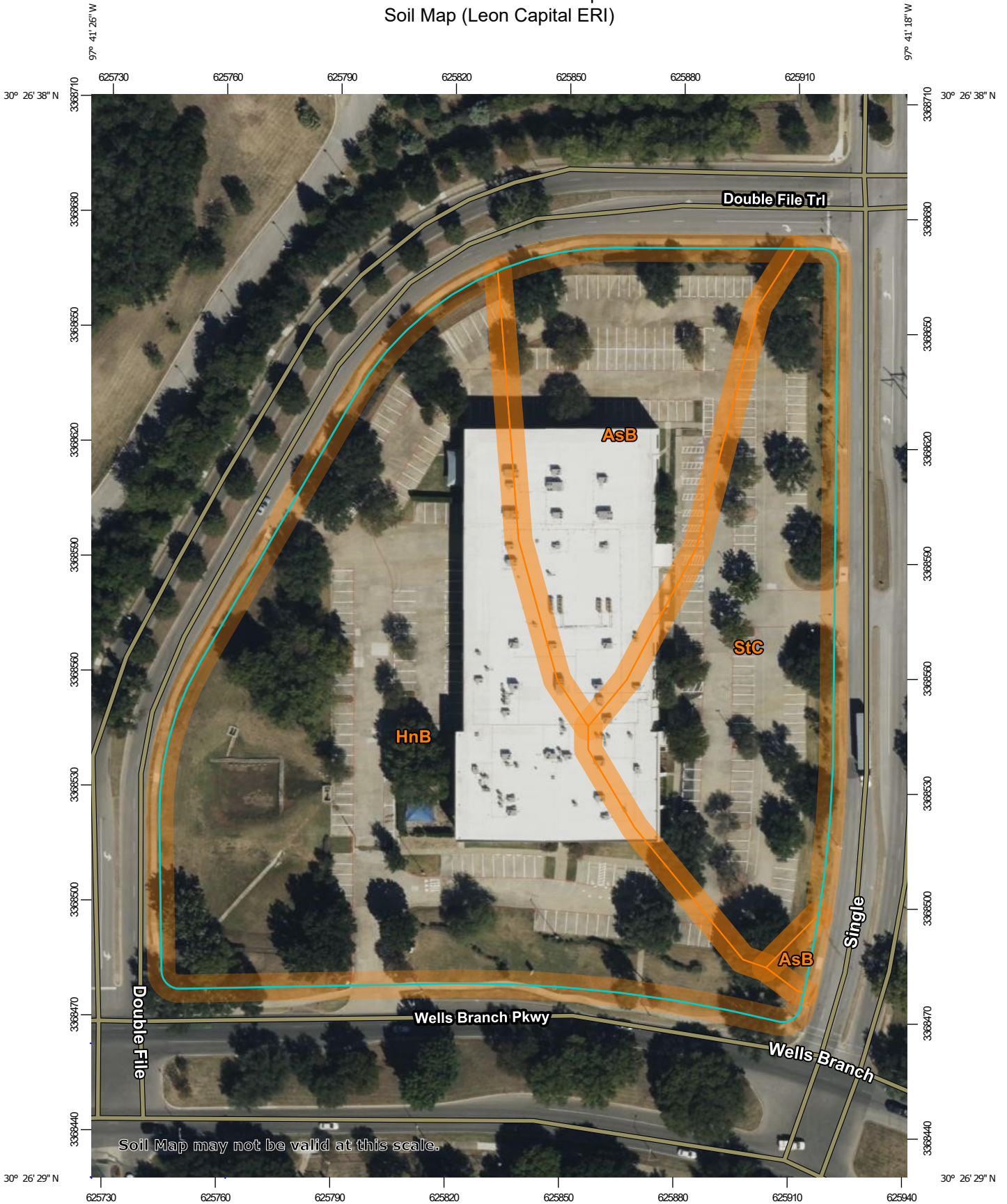
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identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

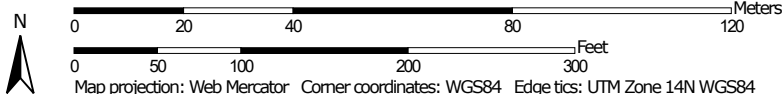
Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

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Soil Map (Leon Capital ERI)



Map Scale: 1:1,380 if printed on A portrait (8.5" x 11") sheet.



MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)


Soils

 Soil Map Unit Polygons

 Soil Map Unit Lines


 Soil Map Unit Points

Special Point Features

 Blowout

 Borrow Pit


 Clay Spot

 Closed Depression

 Gravel Pit

 Gravelly Spot


 Landfill

 Lava Flow

 Marsh or swamp

 Mine or Quarry

 Miscellaneous Water


 Perennial Water

 Rock Outcrop


 Saline Spot

 Sandy Spot

 Severely Eroded Spot

 Sinkhole

 Slide or Slip

 Sodic Spot

 Spoil Area

 Stony Spot


 Very Stony Spot

 Wet Spot

 Other

 Special Line Features

Water Features

 Streams and Canals


Transportation

 Rails

 Interstate Highways

 US Routes

 Major Roads

 Local Roads

Background

 Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
 Web Soil Survey URL:
 Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Travis County, Texas
 Survey Area Data: Version 24, Aug 24, 2022

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Data not available.

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend (Leon Capital ERI)

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
AsB	Austin silty clay, 1 to 3 percent slopes	1.5	20.5%
HnB	Houston Black clay, 1 to 3 percent slopes	4.0	55.4%
StC	Castephen silty clay loam, 3 to 5 percent slopes	1.7	24.1%
Totals for Area of Interest		7.2	100.0%

Map Unit Descriptions (Leon Capital ERI)

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or

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landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Travis County, Texas

AsB—Austin silty clay, 1 to 3 percent slopes

Map Unit Setting

National map unit symbol: 2vtgj

Elevation: 440 to 810 feet

Mean annual precipitation: 30 to 40 inches

Mean annual air temperature: 63 to 70 degrees F

Frost-free period: 228 to 293 days

Farmland classification: Farmland of statewide importance

Map Unit Composition

Austin and similar soils: 90 percent

Minor components: 10 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Austin

Setting

Landform: Ridges

Landform position (two-dimensional): Summit, shoulder

Landform position (three-dimensional): Interfluve

Down-slope shape: Linear

Across-slope shape: Convex

Parent material: Residuum weathered from chalk

Typical profile

Ap - 0 to 16 inches: silty clay

Bw - 16 to 22 inches: silty clay

Bk - 22 to 29 inches: silty clay

Cr - 29 to 57 inches: bedrock

Properties and qualities

Slope: 1 to 3 percent

Depth to restrictive feature: 22 to 39 inches to paralithic bedrock

Drainage class: Well drained

Runoff class: High

Capacity of the most limiting layer to transmit water (Ksat): Low to moderately high
(0.00 to 0.20 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None

Frequency of ponding: None

Calcium carbonate, maximum content: 85 percent

Maximum salinity: Nonsaline to very slightly saline (0.5 to 2.1 mmhos/cm)

Sodium adsorption ratio, maximum: 1.0

Available water supply, 0 to 60 inches: Low (about 4.9 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 3e

Hydrologic Soil Group: D

Ecological site: R086AY007TX - Southern Clay Loam

Hydric soil rating: No

Minor Components

Houston black

Percent of map unit: 10 percent
Landform: Ridges
Landform position (two-dimensional): Summit, shoulder
Landform position (three-dimensional): Interfluve
Microfeatures of landform position: Linear gilgai
Down-slope shape: Convex, linear
Across-slope shape: Convex, linear
Ecological site: R086AY011TX - Southern Blackland
Hydric soil rating: No

HnB—Houston Black clay, 1 to 3 percent slopes

Map Unit Setting

National map unit symbol: 2ssh0
Elevation: 270 to 1,040 feet
Mean annual precipitation: 33 to 43 inches
Mean annual air temperature: 62 to 63 degrees F
Frost-free period: 217 to 244 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Houston black and similar soils: 80 percent
Minor components: 20 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Houston Black

Setting

Landform: Ridges
Landform position (two-dimensional): Summit, shoulder
Landform position (three-dimensional): Interfluve
Microfeatures of landform position: Linear gilgai
Down-slope shape: Convex, linear
Across-slope shape: Convex, linear
Parent material: Clayey residuum weathered from calcareous mudstone of upper cretaceous age

Typical profile

Ap - 0 to 6 inches: clay
Bkss - 6 to 70 inches: clay
BCkss - 70 to 80 inches: clay

Properties and qualities

Slope: 1 to 3 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Moderately well drained
Runoff class: Very high

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Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.06 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None

Frequency of ponding: None

Calcium carbonate, maximum content: 35 percent

Gypsum, maximum content: 5 percent

Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)

Sodium adsorption ratio, maximum: 2.0

Available water supply, 0 to 60 inches: High (about 9.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 2e

Hydrologic Soil Group: D

Ecological site: R086AY011TX - Southern Blackland

Hydric soil rating: No

Minor Components

Heiden

Percent of map unit: 15 percent

Landform: Plains

Landform position (two-dimensional): Shoulder

Landform position (three-dimensional): Interfluve

Microfeatures of landform position: Linear gilgai

Down-slope shape: Linear

Across-slope shape: Convex

Ecological site: R086AY011TX - Southern Blackland

Hydric soil rating: No

Fairlie

Percent of map unit: 5 percent

Landform: Ridges

Landform position (two-dimensional): Footslope, toeslope

Landform position (three-dimensional): Base slope

Down-slope shape: Linear

Across-slope shape: Convex

Ecological site: R086AY011TX - Southern Blackland

Hydric soil rating: No

StC—Castephen silty clay loam, 3 to 5 percent slopes

Map Unit Setting

National map unit symbol: f666

Elevation: 800 to 1,200 feet

Mean annual precipitation: 29 to 35 inches

Mean annual air temperature: 64 to 70 degrees F

Frost-free period: 230 to 240 days

Farmland classification: Not prime farmland

Map Unit Composition

Castephen and similar soils: 95 percent

Minor components: 5 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Castephen

Setting

Landform: Ridges

Landform position (two-dimensional): Summit, shoulder

Landform position (three-dimensional): Interfluve

Down-slope shape: Convex

Across-slope shape: Convex

Parent material: Residuum weathered from austin chalk formation

Typical profile

H1 - 0 to 14 inches: silty clay loam

H2 - 14 to 22 inches: bedrock

Properties and qualities

Slope: 3 to 5 percent

Depth to restrictive feature: 8 to 20 inches to paralithic bedrock

Drainage class: Well drained

Runoff class: Medium

Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.57 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None

Frequency of ponding: None

Calcium carbonate, maximum content: 70 percent

Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)

Available water supply, 0 to 60 inches: Very low (about 1.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 4e

Hydrologic Soil Group: D

Ecological site: R086AY002TX - Southern Chalky Ridge

Hydric soil rating: No

Minor Components

Unnamed

Percent of map unit: 5 percent

Hydric soil rating: No

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Water Pollution Abatement Plan Application, **3**

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: Ian Williams, P.E.

Date: 08/07/2023

Signature of Customer/Agent:



Regulated Entity Name: WELLS BRANCH MULTIFAMILY

Regulated Entity Information

1. The type of project is:

- Residential: Number of Lots: _____
- Residential: Number of Living Unit Equivalents: 269
- Commercial
- Industrial
- Other: _____

2. Total site acreage (size of property): 7.26

3. Estimated projected population: n/a

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	76,143	÷ 43,560 =	1.7
Parking	43,874	÷ 43,560 =	1
Other paved surfaces	67,617	÷ 43,560 =	1.5
Total Impervious Cover	187,632	÷ 43,560 =	4.3

Total Impervious Cover 4.3 ÷ Total Acreage 7.26 X 100 = 59% Impervious Cover

5. **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. 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 = _____ Ft² ÷ 43,560 Ft²/Acre = _____ acres.

10. Length of pavement area: _____ feet.

Width of pavement area: _____ feet.

L x W = _____ Ft² ÷ 43,560 Ft²/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:

<u>100%</u> Domestic	<u>33,075</u> Gallons/day
<u> </u> % Industrial	<u> </u> Gallons/day
<u> </u> % Commingled	<u> </u> Gallons/day
TOTAL gallons/day <u>33,075</u>	

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.

The sewage collection system will convey the wastewater to the Walnut Creek (name) Treatment Plant. The treatment facility is:

- 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. The Site Plan must have a minimum scale of 1" = 400'.

Site Plan Scale: 1" = 50'.

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.

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 MAP NO. 48453C0255K, DATED JANUARY 22, 2020

19. 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.

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.

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. The drainage patterns and approximate slopes anticipated after major grading activities.
- 23. Areas of soil disturbance and areas which will not be disturbed.
- 24. Locations of major structural and nonstructural controls. These are the temporary and permanent best management practices.
- 25. Locations where soil stabilization practices are expected to occur.
- 26. Surface waters (including wetlands).
 - N/A
- 27. Locations where stormwater discharges to surface water or sensitive features are to occur.
 - There will be no discharges to surface water or sensitive features.
- 28. Legal boundaries of the site are shown.

Administrative Information

- 29. 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. Any modification of this WPAP will require Executive Director approval, prior to construction, and may require submission of a revised application, with appropriate fees.



Water Pollution Abatement Plan Application Form (TCEQ-0584)

ATTACHMENT A

Wells Branch Multifamily

Factors Affecting Water Quality

Urbanization will affect water quality by increasing sediment loading and introducing nutrients, pathogens, oxygen-demanding matter and toxic pollutants to receiving waters.

Factors affecting water quality for the proposed development include the following:

- 1) Proposed road and vehicular traffic,
- 2) Human litter and pet waste,

One biofiltration pond and one detention pond are proposed with this project. This will help mitigate pollutants from the factors listed above.



Water Pollution Abatement Plan Application Form (TCEQ-0584)

ATTACHMENT B

Wells Branch Multifamily

Volume and Character of Stormwater

The total site area is ± 7.26 acres and in the City of Austin 2-Mile ETJ. The site is currently developed for commercial. The proposed development will result in no more than 59% impervious cover. The water quality pond has been sized and designed for these fully developed conditions.

Stormwater runoff will be treated by a proposed biofiltration pond, and a detention pond will be provided for flood control.

Routing Analysis Summary – Analysis Point A				
Wells Branch Multifamily				
Storm Return Period	Peak Site Discharge [cfs]			
	Existing Conditions	Proposed Conditions Before Detention	Required Detention	Proposed Conditions After Detention
2-yr	13.01	30.34	17.33	9.55
10-yr	52.31	56.27	3.96	49.13
25-yr	72.36	72.1	-.26	70.24
100-yr	97.92	103.11	5.19	94.98
* HEC-HMS Analysis using NRCS ATLAS 14 ZONE 2				

Comparisons of the existing and proposed flow calculations are included on the following pages. Please refer to the plan set for more information, including drainage area maps.



Water Pollution Abatement Plan Application Form (TCEQ-0584)

ATTACHMENT C

Wells Branch Multifamily

Suitability Letter from Authorized Agent

There is no on-site sewage facility (OSSF) proposed with this project.



Water Pollution Abatement Plan Application Form (TCEQ-0584)

ATTACHMENT D

Wells Branch Multifamily

Exception to the Required Geologic Assessment

There were no sensitive geologic or manmade features identified in the Geologic Assessment.



Organized Sewage Collection System Plan Application, **4**

Organized Sewage Collection System Application

Texas Commission on Environmental Quality

For Regulated Activities on the Edwards Aquifer Recharge Zone and Relating to 30 TAC §213.5(c), 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.

Regulated Entity Name: LG WELLS BRANCH LLC

1. **Attachment A – SCS Engineering Design Report.** This Engineering Design Report is provided to fulfill the requirements of 30 TAC Chapter 217, including 217.10 of Subchapter A, §§217.51 – 217.70 of Subchapter C, and Subchapter D as applicable, and is required to be submitted with this SCS Application Form.

Customer Information

2. The entity and contact person responsible for providing the required engineering certification of testing for this sewage collection system upon completion (including private service connections) and every five years thereafter to the appropriate TCEQ region office pursuant to 30 TAC §213.5(c) is:

Contact Person: NASH THOMAS

Entity: LG WELLS BRANCH LLC

Mailing Address: 3500 MAPLE AVE STE 1600

City, State: DALLAS, TX

Zip: 75219

Telephone: 918-801-6810

Fax: _____

Email Address: nthomas@leoncapitalgroup.com

The appropriate regional office must be informed of any changes in this information within 30 days of the change.

3. The engineer responsible for the design of this sewage collection system is:

Contact Person: Ian Williams , P.E.

Texas Licensed Professional Engineer's Number: 144848

Entity: WGI

Mailing Address: 4700 MUELLER BLVD SUITE 300

City, State: AUSTIN, TX

Zip: 78723

Telephone: 512-669-5560

Fax: _____

Email Address: Ian.Williams@WGInc.com

Project Information

4. Anticipated type of development to be served (estimated future population to be served, plus adequate allowance for institutional and commercial flows):

- Residential: Number of single-family lots: _____
 Multi-family: Number of residential units: 269
 Commercial
 Industrial
 Off-site system (not associated with any development)
 Other: _____

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

100% Domestic 33,075 gallons/day
 _____% Industrial _____gallons/day
 _____% Commingled _____gallons/day
 Total gallons/day: 33,075

6. Existing and anticipated infiltration/inflow is 5,445 gallons/day. This will be addressed by: Wastewater system will be designed to accommodate infiltration/inflow from the site.

7. A Water Pollution Abatement Plan (WPAP) is required for construction of any associated commercial, industrial or residential project located on the Recharge Zone.

- The WPAP application for this development was approved by letter dated _____. A copy of the approval letter is attached.
 The WPAP application for this development was submitted to the TCEQ on _____, but has not been approved.
 A WPAP application is required for an associated project, but it has not been submitted.
 There is no associated project requiring a WPAP application.

8. Pipe description:

Table 1 - Pipe Description

<i>Pipe Diameter(Inches)</i>	<i>Linear Feet (1)</i>	<i>Pipe Material (2)</i>	<i>Specifications (3)</i>
8"	1,044	PVC SDR - 26	ASTM D - 3034

Total Linear Feet: 1,044

- (1) Linear feet - Include stub-outs and double service connections. Do not include private service laterals.
 (2) Pipe Material - If PVC, state SDR value.
 (3) Specifications - ASTM / ANSI / AWWA specification and class numbers should be included.

9. The sewage collection system will convey the wastewater to the Walnut Creek (name) Treatment Plant. The treatment facility is:

- Existing
- Proposed

10. All components of this sewage collection system will comply with:

- The City of Austin standard specifications.
- Other. Specifications are attached.

11. No force main(s) and/or lift station(s) are associated with this sewage collection system.
- A force main(s) and/or lift station(s) is associated with this sewage collection system and the **Lift Station/Force Main System Application** form (TCEQ-0624) is included with this application.

Alignment

12. There are no deviations from uniform grade in this sewage collection system without manholes and with open cut construction.
13. There are no deviations from straight alignment in this sewage collection system without manholes.
- Attachment B - Justification and Calculations for Deviation in Straight Alignment without Manholes.** A justification for deviations from straight alignment in this sewage collection system without manholes with documentation from pipe manufacturer allowing pipe curvature is attached.
- For curved sewer lines, all curved sewer line notes (TCEQ-0596) are included on the construction plans for the wastewater collection system.

Manholes and Cleanouts

14. Manholes or clean-outs exist at the end of each sewer line(s). These locations are listed below: (Please attach additional sheet if necessary)

Table 2 - Manholes and Cleanouts

<i>Line</i>	<i>Shown on Sheet</i>	<i>Station</i>	<i>Manhole or Clean-out?</i>
WW-A	53 Of 61	19+20	CLEAN-OUT
WW-A	50-53 Of 61	18+92, 16+37, 15+41, 13+33, 13+03, 11+92, 10+00	Manhole
WW-B	50-53 Of 61	10+00.	Clean-out
WW-C	50-53 Of 61	10+00	Clean-out
	Of		
	Of		

<i>Line</i>	<i>Shown on Sheet</i>	<i>Station</i>	<i>Manhole or Clean-out?</i>
	Of		
	Of		
	Of		
	Of		

15. Manholes are installed at all Points of Curvature and Points of Termination of a sewer line.
16. The maximum spacing between manholes on this project for each pipe diameter is no greater than:

Pipe Diameter (inches)	Max. Manhole Spacing (feet)
6 - 15	500
16 - 30	800
36 - 48	1000
≥54	2000

- Attachment C – Justification for Variance from Maximum Manhole Spacing.** The maximum spacing between manholes on this project (for each pipe diameter used) is greater than listed in the table above. A justification for any variance from the maximum spacing is attached, and must include a letter from the entity which will operate and maintain the system stating that it has the capability to maintain lines with manhole spacing greater than the allowed spacing.
17. All manholes will be monolithic, cast-in-place concrete.
- The use of pre-cast manholes is requested for this project. The manufacturer's specifications and construction drawings, showing the method of sealing the joints, are attached.

Site Plan Requirements

Items 18 - 25 must be included on the Site Plan.

18. The Site Plan must have a minimum scale of 1" = 400'.
Site Plan Scale: 1" = 50'.
19. The Site Plan must include the sewage collection system general layout, including manholes with station numbers, and sewer pipe stub outs (if any). Site plan must be overlain by topographic contour lines, using a contour interval of not greater than ten feet and showing the area within both the five-year floodplain and the 100-year floodplain of any drainage way.
20. Lateral stub-outs:
 The location of all lateral stub-outs are shown and labeled.

- No lateral stub-outs will be installed during the construction of this sewer collection system.

21. Location of existing and proposed water lines:

- The entire water distribution system for this project is shown and labeled.
- If not shown on the Site Plan, a Utility Plan is provided showing the entire water and sewer systems.
- There will be no water lines associated with this project.

22. 100-year floodplain:

- After construction is complete, no part of this project will be in or cross a 100-year floodplain, either naturally occurring or manmade. (Do not include streets or concrete-lined channels constructed above of sewer lines.)
- After construction is complete, all sections located within the 100-year floodplain will have water-tight manholes. These locations are listed in the table below and are shown and labeled on the Site Plan. (Do not include streets or concrete-lined channels constructed above sewer lines.)

Table 3 - 100-Year Floodplain

<i>Line</i>	<i>Sheet</i>	<i>Station</i>
	of	to
	of	to
	of	to
	of	to

23. 5-year floodplain:

- After construction is complete, no part of this project will be in or cross a 5-year floodplain, either naturally occurring or man-made. (Do not include streets or concrete-lined channels constructed above sewer lines.)
- After construction is complete, all sections located within the 5-year floodplain will be encased in concrete or capped with concrete. These locations are listed in the table below and are shown and labeled on the Site Plan. (Do not include streets or concrete-lined channels constructed above sewer lines.)

Table 4 - 5-Year Floodplain

<i>Line</i>	<i>Sheet</i>	<i>Station</i>
	of	to
	of	to
	of	to
	of	to

- 24. Legal boundaries of the site are shown.

25. The **final plans and technical specifications** are submitted for the TCEQ's review. Each sheet of the construction plans and specifications are dated, signed, and sealed by the Texas Licensed Professional Engineer responsible for the design on each sheet.

Items 26 - 33 must be included on the Plan and Profile sheets.

26. All existing or proposed water line crossings and any parallel water lines within 9 feet of sewer lines are listed in the table below. These lines must have the type of pressure rated pipe to be installed shown on the plan and profile sheets. Any request for a variance from the required pressure rated piping at crossings must include a variance approval from 30 TAC Chapter 290.

There will be no water line crossings.

There will be no water lines within 9 feet of proposed sewer lines.

Table 5 - Water Line Crossings

<i>Line</i>	<i>Station or Closest Point</i>	<i>Crossing or Parallel</i>	<i>Horizontal Separation Distance</i>	<i>Vertical Separation Distance</i>
WW-A	17+84	CROSSING		4'

27. Vented Manholes:

No part of this sewer line is within the 100-year floodplain and vented manholes are not required by 30 TAC Chapter 217.

A portion of this sewer line is within the 100-year floodplain and vented manholes will be provided at less than 1500 foot intervals. These water-tight manholes are listed in the table below and labeled on the appropriate profile sheets.

A portion of this sewer line is within the 100-year floodplain and an alternative means of venting shall be provided at less than 1500 feet intervals. A description of the alternative means is described on the following page.

A portion of this sewer line is within the 100-year floodplain; however, there is no interval longer than 1500 feet located within. No vented manholes will be used.

Table 6 - Vented Manholes

<i>Line</i>	<i>Manhole</i>	<i>Station</i>	<i>Sheet</i>

<i>Line</i>	<i>Manhole</i>	<i>Station</i>	<i>Sheet</i>

28. Drop manholes:

- There are no drop manholes associated with this project.
- Sewer lines which enter new or existing manholes or "manhole structures" higher than 24 inches above the manhole invert are listed in the table below and labeled on the appropriate profile sheets. These lines meet the requirements of 30 TAC §217.55(l)(2)(H).

Table 7 - Drop Manholes

<i>Line</i>	<i>Manhole</i>	<i>Station</i>	<i>Sheet</i>

29. Sewer line stub-outs (For proposed extensions):

- The placement and markings of all sewer line stub-outs are shown and labeled.
- No sewer line stub-outs are to be installed during the construction of this sewage collection system.

30. Lateral stub-outs (For proposed private service connections):

- The placement and markings of all lateral stub-outs are shown and labeled.
- No lateral stub-outs are to be installed during the construction of this sewage collection system.

31. Minimum flow velocity (From Appendix A)

- Assuming pipes are flowing full; all slopes are designed to produce flows equal to or greater than 2.0 feet per second for this system/line.

32. Maximum flow velocity/slopes (From Appendix A)

- Assuming pipes are flowing full, all slopes are designed to produce maximum flows of less than or equal to 10 feet per second for this system/line.
- Attachment D – Calculations for Slopes for Flows Greater Than 10.0 Feet per Second.** Assuming pipes are flowing full, some slopes produce flows which are greater than 10 feet per second. These locations are listed in the table below. Calculations are attached.

Table 8 - Flows Greater Than 10 Feet per Second

<i>Line</i>	<i>Profile Sheet</i>	<i>Station to Station</i>	<i>FPS</i>	<i>% Slope</i>	<i>Erosion/Shock Protection</i>
N/A					

33. Assuming pipes are flowing full, where flows are ≥ 10 feet per second, the provisions noted below have been made to protect against pipe displacement by erosion and/or shock under 30 TAC §217.53(l)(2)(B).

- Concrete encasement shown on appropriate Plan and Profile sheets for the locations listed in the table above.
- Steel-reinforced, anchored concrete baffles/retards placed every 50 feet shown on appropriate Plan and Profile sheets for the locations listed in the table above.
- N/A

Administrative Information

- 34. The final plans and technical specifications are submitted for TCEQ review. Each sheet of the construction plans and specifications are dated, signed, and sealed by the Texas Licensed Professional Engineer responsible for the design on each sheet.
- 35. Standard details are shown on the detail sheets, which are dated, signed, and sealed by the Texas Licensed Professional Engineer, as listed in the table below:

Table 9 - Standard Details

<i>Standard Details</i>	<i>Shown on Sheet</i>
Lateral stub-out marking [Required]	53-61 of 61
Manhole, showing inverts comply with 30 TAC §217.55(l)(2) [Required]	53-61 of 61
Alternate method of joining lateral to existing SCS line for potential future connections [Required]	53-61 of 61
Typical trench cross-sections [Required]	53-61 of 61
Bolted manholes [Required]	53-61 of 61
Sewer Service lateral standard details [Required]	53-61 of 61
Clean-out at end of line [Required, if used]	53-61 of 61
Baffles or concrete encasement for shock/erosion protection [Required, if flow velocity of any section of pipe >10 fps]	of
Detail showing Wastewater Line/Water Line Crossing [Required, if crossings are proposed]	53-61 of 61
Mandrel detail or specifications showing compliance with 30 TAC §217.57(b) and (c) [Required, if Flexible Pipe is used]	of

Standard Details	Shown on Sheet
Drop manholes [Required, if a pipe entering a manhole is more than 24 inches above manhole invert]	of

36. All organized sewage collection system general construction notes (TCEQ-0596) are included on the construction plans for this sewage collection system.
37. All proposed sewer lines will be sufficiently surveyed/staked to allow an assessment prior to TCEQ executive director approval. If the alignments of the proposed sewer lines are not walkable on that date, the application will be deemed incomplete and returned.
- Survey staking was completed on this date: _____
38. 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.
39. Any modification of this SCS application will require TCEQ approval, prior to construction, and may require submission of a revised application, with appropriate fees.

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 **Organized Sewage Collection System Application** is hereby submitted for TCEQ review and executive director approval. The system was designed in accordance with the requirements of 30 TAC §213.5(c) and 30 TAC §217 and prepared by:

Print Name of Licensed Professional Engineer: Ian Williams, P.E.

Date: 09/07/2023

Place engineer's seal here:



Signature of Licensed Professional Engineer:

A handwritten signature in blue ink, appearing to read "Ian Williams", written over a horizontal line.

Appendix A-Flow Velocity Table

Flow Velocity (Flowing Full) All gravity sewer lines on the Edwards Aquifer Recharge Zone shall be designed and constructed with hydraulic slopes sufficient to give a velocity when flowing full of not less than 2.0 feet per second, and not greater than 10 feet per second. The grades shown in the following table are based on Manning's formula and an n factor of 0.013 and shall be the minimum and maximum acceptable slopes unless provisions are made otherwise.

Table 10 - Slope Velocity

Pipe Diameter(Inches)	% Slope required for minimum flow velocity of 2.0 fps	% Slope which produces flow velocity of 10.0 fps
6	0.50	12.35
8	0.33	8.40
10	0.25	6.23
12	0.20	4.88
15	0.15	3.62
18	0.11	2.83
21	0.09	2.30
24	0.08	1.93
27	0.06	1.65
30	0.055	1.43
33	0.05	1.26
36	0.045	1.12
39	0.04	1.01
>39	*	*

*For lines larger than 39 inches in diameter, the slope may be determined by Manning's formula (as shown below) to maintain a minimum velocity greater than 2.0 feet per second when flowing full and a maximum velocity less than 10 feet per second when flowing full.

$$v = \frac{1.49}{n} \times R_h^{0.67} \times \sqrt{S}$$

Figure 1 - Manning's Formula

Where:

v = velocity (ft/sec)

n = Manning's roughness coefficient (0.013)

R_h = hydraulic radius (ft)

S = slope (ft/ft)



Organized Sewage Collection System Plan (TCEQ-0582)

Attachment A

Wells Branch Multifamily

Engineering Design Report

The following SCS Engineering Design Report is provided to fulfill the requirements of 30 TAC Chapter 217, including 217.10 of Subchapter A, 217.51-217.70 of Subchapter C, and Subchapter D as applicable. The contents of this report are based on 30 TAC Chapter 217, Subchapter A 217.10, section E.

1. Service Area Map

Please reference the Overall Utility Plan and Profile Sheets in the included plan set.

2. TOPOGRAPHIC FEATURES OF THE SERVICE AREA

Please reference the Overall Utility Plan and Profile Sheets in the included plan set.

3. DESIGN FLOW DETERMINATION

- a) Type of development to be served: Multi-Family (Domestic)
- b) Peak factor used for design: 4.00

4. MINIMUM AND MAXIMUM GRADES

All sewer pipes are designed with slopes that will provide a velocity of at least 2 fps flowing full, as calculated using Manning's Equation with a Roughness Coefficient (n) of 0.011. Sewer pipes are also designed with slopes that will provide a velocity less than 10 fps.

Pipe Diameter	Pipe Type	Minimum Slope	Maximum Slope
8"	PVC SDR-26	1.00%	2.99%

5. MINIMUM AND MAXIMUM VELOCITIES AND FLOWS

All sewer pipes are designed with slopes that will provide a velocity of at least 2 fps flowing full, as calculated using Manning's Equation with a Roughness Coefficient (n) of 0.011. Sewer pipes are also designed with slopes that will provide a velocity less than 10 fps.

6. EFFECT ON EXISTING SYSTEM'S CAPACITY

Per discussions with the City of Austin, the existing system has capacity to handle the sewer flow generated from the subject area.

7. INFLOW AND INFILTRATION

The anticipated inflow and infiltration flows are calculated below.

- VOLUME OF WASTEWATER PRODUCED:
Units = 269
LUE's = 269 * 0.5 = 135
135 LUE's * 245 GPD/LUE = 33,075 GPD (22.97 GPM)
- ANTICIPATED INFLOW AND INFILTRATION:
Area = 7.26 Acres
Infiltration = 750 GPD/Acre
7.26 Acres * 750 GPD/Acre = 5,445 GPD (3.78 GPM)
- PEAK DRY WEATHER FLOW:
Per Austin Water Utility Living Unit Equivalent (LUE) Guidance Document:
Peak Flow Factor (max 4.0) = $\frac{18 + \sqrt{(0.0206 * F)}}{4 + \sqrt{(0.0206 * F)}} = 3.996$, where F = 22.97 GPM
Peak Dry Weather Flow = 3.996 * 33,075 GPD = 132,168 GPD (91.78 GPM)
- PEAK WET WEATHER FLOW:
Peak Dry Weather Flow + Inflow and Infiltration = 137,613 (95.56 GPM)
- TOTAL REQUIRED CAPACITY FOR PIPE DESIGN = 137,613 (95.56 GPM)

The following testing measures shall take place upon completion to minimize the inflow and infiltration rates:

- a) Leakage Test:
A LOW PRESSURE AIR TEST will be performed on all the lines according to 30 TAC Chapter 217, Subchapter C, Rule 217.57, Section (a) (1).
- b) Manholes:
Manholes will be tested with a vacuum test.

Each manhole will be tested immediately after assembly and prior to backfilling. Manholes which have been backfilled shall either be excavated to expose the entire exterior prior to vacuum testing or the manhole will be tested for leakage by means of a hydrostatic test.

Stub outs, manhole boots, and pipe lugs shall be secured to prevent movement while the vacuum is drawn.

A minimum of 60-inch/lb torque wrench will be used to tighten the external clamps that secure the test cover to the top of the manhole.

The test head will be placed at the inside of the top of the cone section and the seal inflated in accordance with the manufacturer's recommendation.

A vacuum of 10 inches of mercury will be drawn and the vacuum pump must be shut off. With the valves closed, the time will be measured for the vacuum to drop to 9 inches of mercury. The manhole will pass if the time is greater than 2 minutes. If the manhole fails a second time, repairs will again be made and the manhole will be tested by means of a hydrostatic test which complies with Rule 217.58(b) (1) of Title 30 of the TAC, Chapter 217, Subchapter C. If any manhole fails the hydrostatic test, after failing the vacuum test twice, the contractor shall consider replacing that manhole. If the contractor chooses to attempt to repair that manhole, the manhole must be retested by means of the hydrostatic test outlined in Rule 217.58(b) (1) of Title 30 of the TAC, Chapter 217, Subchapter C, until it passes.

c) Deflection Test:

All flexible pipe gravity lines will be tested for deflection by pulling a rigid mandrel through the installed pipe. The test will be conducted at least 30 days after placement and compaction of final backfill. No pipe will exceed a deflection of 5%. A rigid mandrel will be used to measure deflection. The test will be performed without mechanical pulling devices. The mandrel’s minimum outside diameter will be 95% of the pipes inside diameter. The mandrel will have an odd number of runners, totaling nine or more. The barrel section of the mandrel must have a length at least 75% of the pipe inside diameter.

8. EXISTING AND PROPOSED TRUNK AND INTERCEPTOR WASTEWATER COLLECTION

Per discussions with the City of Austin, the existing system has capacity to handle the sewer flow generated from the subject site.

9. RECEIVING TREATMENT FACILITY CAPACITY

Per discussions with the City of Austin, the existing system has capacity to handle the sewer flow generated from the subject site.

10. ENGINEERING ANALYSIS OF STRUCTURAL DESIGN

General Structural Components

Materials Used and ASTM Standards Adhered to: 30 TAC 217.53(b) (1)

Lateral	Manhole ID		Pipe Diameter (in)	LINEAR FEET	PIPE MATERIAL	NATIONAL SPECIFICATION PIPE MATERIAL	NATIONAL SPECIFICATION PIPE JOINTS
WW-A	19+19.62	18+91.83	8	27.79	PVC SDR-26	ASTM D-3034	ASTM D-3212
	18+91.83	16+37.07	8	254.77	PVC SDR-26	ASTM D-3034	ASTM D-3212
	16+37.07	15+40.55	8	117.45	PVC SDR-26	ASTM D-3034	ASTM D-3212
	15+40.55	13+32.53	8	222.16	PVC SDR-26	ASTM D-3034	ASTM D-3212
	13+32.53	13+03.10	8	70.65	PVC SDR-26	ASTM D-3034	ASTM D-3212
	12+37.68	11+91.46	8	46.17	PVC SDR-26	ASTM D-3034	ASTM D-3212
	11+91.46	10+00.00	8	191.51	PVC SDR-26	ASTM D-3034	ASTM D-3212

WW-B	10+00	10+29.19	8	29.19	PVC SDR-26	ASTM D-3034	ASTM D-3212
WW-C	10+00	10+32.53	8	32.53	PVC SDR-26	ASTM D-3034	ASTM D-3212

Watertight, size on size resilient connectors conforming to ASTM C-923 will be specified for connecting pipe to manholes.

Bedding for placement of flexible pipe must comply with ASTM D2321-11 Class IA, IB, II, or III for materials and densification. A minimum of 6 inches of bedding is required for all pipes.

Pipe Diameter: 6"
Pipe Diameter: 8"

Pipe Material: PVC
Pipe Material: PVC

Bedding Class: IA
Bedding Class: IA

Manholes shall be pre-cast reinforced concrete, ASTM C-478.

11. CORROSION PREVENTION

There are NO components within the proposed collection system that will be susceptible to deterioration through the corrosive effects of an anaerobic sewage environment

12. MANHOLES – GENERAL

Manholes are provided at all changes in size, grade, or alignment of the wastewater pipe. Manholes or cleanouts are provided at the end of all lines.

Pipe Diameter	Max. Proposed Spacing	Max. Spacing Allowed by TCEQ
8"	255 LF	500 LF

13. MANHOLES – VENTILATION

Vented Manholes are not required. The site is NOT within the 100-year flood plain. The proposed manholes shall be watertight and are not proposed to be vented.

14. MANHOLES – MINIMIZING TURBULENCE

The number of drop manholes within this system has been kept to a minimum. There are no sewer lines that enter the manholes higher than 42 inches above the manhole invert.

15. MANHOLE CONNECTION

The connection to the existing sewer manhole shall use watertight size on size resilient connectors that allow differential settlement and conform to ASTM C-923 (30TAC 217.55(n)).

16. INVERTED SIPHONS

This project does not include any sag pipes.

17. TRENCHLESS TECHNOLOGY

This project does not propose any trenchless installation of pipe

18. VERTICAL CURVATURE

This project has been designed without vertically curved gravity collection piping between manholes.

19. HORIZONTAL CURVATURE

The sewer lines have been designed to be laid in straight alignment with uniform grade between manholes.

20. RIGID PIPE DESIGN

NOT APPLICABLE

21. FLEXIBLE PIPE DESIGN

The following computations are for a 8-inch diameter PVC SDR-26 pipe. A summary of results table may be found at the end of this section.

The 8" PVC pipe will be used for the gravity sewer system and will range in depth from 3 to 13 ft. (Not profiled)

Pipe Diameter	Pipe Wall Thickness [t]	Mean Pipe Diameter [D] (O.D. - t)	Modulus of Elasticity [E]	Pipe Stiffness
8"	0.323"	8.077"	400,000 psi	115 psi

Live Load Analysis:

The live load on the pipe (W_L) for calculations purposes is zero, as the proposed sewer pipe will not be subjected to live loads during or after construction that affect pipe design. Additionally, "...the influence of pipe loads on the performance of PVC pipe is only significant in shallow depths, usually 4 ft..." (page 191 *Uni-Bell Handbook, 3rd Edition, Second Printing, 1993*).

Buckling Analysis:

A. Allowable Buckling Pressure

- 1) Calculate Moment of Inertia, I , where t = pipe wall thickness (in.)

8-inch

$I = (t^3/12)$ in units of inches⁴/linear inch (*Equation 4 TCEQ-10243, page 21*)

$I = 0.323^3/12 = 0.002808 \text{ in}^4/\text{in}$

- 2) Calculate B' , an empirical coefficient of elastic support. The max cover height (H) is the worst case and will be used in the buckling calculation.

The equation used below is from *Equation 3 TCEQ-10243, page 21*.

8-inch

$$B' = \frac{1}{1 + 4 * e^{-0.065(H)}} = \frac{1}{1 + 4 * e^{-0.065(13)}} \\ B' = \mathbf{0.36789}$$

- 3) Calculate R_w , the water buoyancy factor. The worst case occurs when groundwater height above the pipe equals the height of cover. This is the case that is calculated.

h_w = height of water surface above top of pipe in inches (in)

h = height of soil surface above top of pipe in inches (in)

R_w = water buoyancy factor

4, 6, 8, and 12-inch

$R_w = 1 - 0.33 * (h_w/h)$; $0 \leq h_w \leq h$ (Equation 2 TCEQ-10243, page 20)

$R_w = 1 - 0.33 * (0) = \mathbf{1.0}$

- 4) Calculate q_a , allowable buckling pressure. (Equation 1 TCEQ-10243, page 20)

$$q_a = (DF) * \sqrt{\frac{32R_w B' E' EI}{D_{avg}^3}}$$

where:

q_a = allowable buckling pressure (psi)

E' = Modulus of soil reaction for the bedding material (psi)

$E' = 3000$ psi (Class 1A bedding w/ slight compaction, +/-85%) (Table 7.3, Handbook of PVC Pipe Design and Construction, 5th Edition, 2013)

DF = Design factor, 0.40

$E =$ Modulus of Elasticity of pipe material = 400,000psi

8-inch

$D = D_{average} =$ mean pipe diameter (O.D. - t_{min}) = 8.077 in.

$$q_a = (0.40) * \sqrt{\frac{32 * 1.0 * 0.39860 * 3000 * 400,000 * 0.002808}{8.077^3}} \\ q_a = \mathbf{114.24 \text{ psi}}$$

B. Calculate pressure applied to pipe under installed conditions.

- 1) Calculate W_c , vertical soil load on pipe per unit length (lb/in). (Equation 6 TCEQ-10243, page 21)

$$W_c = \gamma_s * H * \frac{D_{avg} + t}{144}$$

where:

8-inch

γ_s = specific weight of soil = 125 pcf

H = Depth of burial = 13 feet

D_{avg} = mean pipe diameter (O.D. - t_{min}) = 8.077 in.

t = pipe structural wall thickness = 0.323 in

$$W_c = 125 * 13 * \frac{8.077 + 0.323}{144} = 94.79 \text{ lb/in}$$

- 2) Calculate q_p , pressure applied to pipe under installed conditions. (Equation 5 TCEQ-10243, page 21).

$$q_p = \gamma_w * h_w + R_w * \frac{W_c}{D_{avg}} + W_L$$

where:

8-inch

γ_w = specific weight of water in pounds per cubic inch = 0.0361 lb/in³

h_w = height of groundwater surface above top of pipe (inches) = 0.0 in

h = height of ground surface above top of pipe (inches) = 120 in.

R_w = water buoyancy factor, calculated as $R_w = 1 - .33 (h_w/h)$; $0 \leq h_w \leq h$

W_c = vertical soil load on pipe per unit length (lb/in) = 109.38 lb/in

W_L = Live load on pipe = 0

D_{avg} = mean pipe diameter (O.D. - t_{mi}) = 8.077 in.

$$q_p = 0.0361 * 0.0 + 1.00 * \frac{109.38}{8.077} + 0 = 13.54 \text{ psi}$$

- 3) If $q_a > q_p$, specified pipe is acceptable for the proposed installation. (TCEQ-10243)

8-inch

q_a = 114.24 psi

q_p = 13.542 psi

114.24 psi > 13.542 psi

Therefore, buckling requirements are met

Pipe Diameter = 8" Pipe Material = PVC SDR-26

Wall Crushing:

The following computations are for 8-inch diameter PVC SDR-26 pipe. The following formula is used to calculate the maximum depth that the pipe can be buried before wall crushing (or failure by ring compression) will occur.

1) Calculate Wall Thrust (lb/in) and Vertical Soil Pressure (psi)

$$T = P_y * \frac{D_o}{2} \quad (\text{Eq. 7.19, Handbook of PVC Pipe Design and Construction, 5th Edition, 2013})$$

$$\sigma_c = \frac{T}{A} \quad (\text{Eq. 7.20, Handbook of PVC Pipe Design and Construction, 5th Edition, 2013})$$

where:

8-inch

T = wall thrust (lb/in)

P_y = Vertical Soil Pressure (psi)

D_o = Outside Wall Diameter = 8.400 in

σ_c = Compressive Stress = 4,000 psi (Ch 7, Example 7.4, Handbook of PVC Pipe Design and Construction, 5th Edition, 2013)

A = area of pipe wall (in²/in) = 0.323 in²/in

$$P_y = \sigma_c * \frac{2A}{D_o} = 4,000 \text{ psi} * \frac{2 * 0.323}{8.400}$$

P_y = 307.62 psi

2) Calculate Maximum Allowable Depth, H (ft)

$$P_y = w * H \quad (\text{Ch 7, Example 7.4, Handbook of PVC Pipe Design and Construction, 5th Edition, 2013})$$

where:

8-inch

P_y = Vertical Soil Pressure = 307.62 psi

W=soil unit weight = 120 pcf (Assumed)

$$H = \frac{P_y}{w} = \frac{307.62 \text{ psi}}{120 \text{ pcf}} * 144 \frac{\text{in}^2}{\text{ft}^2}$$

H = 369.14 ft

Design does not exceed allowable depth for PVC pipe

Installation Temperature Effects:

The PVC pipe will be installed using recommended installation practices. Following recommended installation practices will ensure adequate installation for normal installation temperatures.

Tensile Strength:

Pipe Material: PVC, Tensile Strength = 7,000 psi, Cell Class (PVC only) 12454

Strain:

$$\varepsilon = \varepsilon_f + \varepsilon_h \quad (\text{Eq. 7.25, Handbook of PVC Pipe Design and Construction, 5th Edition, 2013})$$

$$\varepsilon_f = \frac{1}{DR} * \left(\frac{3 * \frac{\Delta Y}{D}}{1 - 2 * \frac{\Delta Y}{D}} \right) \quad (\text{Eq. 7.24, Handbook of PVC Pipe Design and Construction, 5th Edition, 2013})$$

$$\varepsilon_h = \frac{PD}{2tE} \quad (\text{Eq. 7.22, Handbook of PVC Pipe Design and Construction, 5th Edition, 2013})$$

where:

$$\varepsilon = 0.000701 + 0.000313 = 0.001013 \frac{\text{in}}{\text{in}}$$

8-inch

ε = Maximum combined strain in pipe wall, in/in

ε_f = Max. Strain on pipe wall due to ring deflection (in/in)

ε_h = Max. Strain on pipe wall due to hoop stress (in/in)

P = pressure on pipe (psi) = 15 ft*120pcf/144 in²/ft²=12.5 psi

E = Modulus of elasticity of pipe material = 400,000 psi

t = pipe wall thickness = 0.323 in

D=mean pipe diameter= 8.077 in.

DY=vertical decrease in diameter

DY/D=.0060 (max deflection at 15 ft depth)

DR=dimension ratio = 26

$$\varepsilon_f = \frac{1}{26} * \left(\frac{3 * 0.0060}{1 - 2 * 0.0060} \right) = 0.000701 \frac{\text{in}}{\text{in}}$$

$$\varepsilon_h = \frac{12.5 * 8.077}{2 * 0.323 * 400,000} = 0.000391 \frac{\text{in}}{\text{in}}$$

$$\varepsilon = 0.000701 + 0.000390 = 0.001091 \frac{\text{in}}{\text{in}}$$

Deflection Analysis:

$E_b = E_2$ = Modulus of soil reaction of bedding =3000 psi (Class 1A bedding w/ slight compaction, +/-85%)

(Table 7.3, Handbook of PVC Pipe Design and Construction, 5th Edition, 2013)

$E_n = E_3$ = Modulus of soil reaction for the in-situ soil = 3,000 psi (Assume)

Zeta = correction factor

b= trench width (ft)

D_o = Outside Wall Diameter = (ft)

The ratio of bedding modulus to soil modulus:

$$E_b/E_n = E2/E3=3000/3,000 = 1$$

$$Zeta = \frac{1.44}{f + (1.44 - f) \frac{E2}{E3}} \quad (\text{Eq. 7.31, Handbook of PVC Pipe Design and Construction, 5th Edition, 2013})$$

$$f = \frac{\frac{b}{D_o} - 1}{1.154 + 0.444 * \left(\frac{b}{D_o} - 1\right)} \quad (\text{Ch 7, page 7.51, Handbook of PVC Pipe Design and Construction, 5th Edition, 2013})$$

Where:

8-inch

$$f = \frac{\frac{3.0'}{0.52'} - 1}{1.154 + 0.444 * \left(\frac{3.0'}{0.52'} - 1\right)} = 1.258$$

$$Zeta = \frac{1.44}{1.258 + (1.44 - 1.258) * 1} = 1.0$$

Pipe Diameter = 8"

Trench Width = 3.0'

Zeta = 1.0

Pipe stiffness (P_s) in psi.

The pipe stiffness for PVC is determined from North American Pipe Corporation Product Specification Sheet

Outside Pipe Diameter	Pipe Material	Modulus of Elasticity, E	P _s
10.500"	PVC SDR-26	400,000 psi	115 psi

Deflection Calculation:

(Ch 7, Handbook of PVC Pipe Design and Construction, 5th Edition, 2013)

$$\frac{\Delta Y}{D} = \frac{D_L * K * P * 100}{\left(\frac{2E}{3(DR - 1)^3}\right) + 0.061 * Zeta * E'} \quad (\text{Eq. 7.10, Handbook of PVC Pipe Design and Construction, 5th Edition, 2013})$$

Where:

ΔY/D=Vertical Deflection, %

D_L=Deflection Lag Factor = 1.0

K = Bedding Constant = .096

E= Modulus of Elasticity of pipe (psi) = 400,000 psi

DR=outside diameter to thickness ratio= 26

E'- Modulus of Soil Reaction = 3,000 psi (Class 1A bedding w/ slight compaction, +/-85%) (Table 7.3, Handbook of PVC Pipe Design and Construction, 5th Edition, 2013)

P=Prism Load Pressure=12.50 psi (15 ft), 3.75 psi (4.5 ft) (*Table 6.3 of Ch. VI, Uni-Bell handbook, 3rd Edition, Second Printing, 1993*)
w= unit weight of soil = 120 pcf
H=Depth or bury, 15 ft max and 4.5 ft min
Zeta=correction factor

15 Feet of Cover:

$$\frac{\Delta Y}{D} = \frac{1.0 * 0.096 * 12.50 * 100}{\left(\frac{2 * 400,000}{3(26 - 1)^3}\right) + 0.061 * 1.0 * 3,000} = 0.60\% \text{ for 15 feet of cover}$$

4.5 Feet of Cover:

$$\frac{\Delta Y}{D} = \frac{1.0 * 0.096 * 3.75 * 100}{\left(\frac{2 * 400,000}{3(26 - 1)^3}\right) + 0.061 * 1.0 * 3,000} = 0.18\% \text{ for 4.5 feet of cover}$$

All pipes proposed for this project have a maximum deflection less than 5.00%

22. SPECIAL PROVISIONS FOR FUTURE EXPANSION

There will be three stub-outs as shown on the plans for future connections to the wastewater system. Each future connection will have its own force main pipe discharging into WWMH-03, and each future connection will be required to provide a lift station to pump wastewater to the manhole. The 12-inch gravity line is sized to allow for these future expansions.

23. OPERATING CHARACTERISTICS OF LIFT STATION

All lift station calculations and data can be found in Attachment A of the Lift Station/Force Main System Application.

24. SAFETY CONSIDERATIONS

Occupational Safety, Public Health, and Environmental Protection:

The project plans and specifications will ensure that the pipe installation will adhere to the minimum separation distances allowed by rule 217.13 of the TAC Title 30. Additionally, the project plans or specifications will include an exact reproduction of the separation distance wording detailed by rule 217.13 of the TAC Title 30, which ensures that the separation distance between any unknown water lines which are discovered during the installation phase of the project and the gravity sanitary sewer pipe which will be installed, will be sufficient to comply with the minimum separation distances allowed by the reference stated above.

Provisions to control erosion or sedimentation due to runoff during construction of the project are:

Silt Fence – SEE ATTACHED section with Pollution Prevention Plan.

This site does not contain any water wells, springs, surface water sources of potable water or potable water storage facilities.

Occupational Safety:

All manhole base sections will be at least 48 inches in diameter.

All manhole covers will be at least 30 inches nominal diameter.

Portable ladders will be used for access to manholes for maintenance purposes.

The GENERAL CONTRACTOR will be responsible for ensuring that personal gas detectors will be provided to the appropriate personnel that are entering enclosed spaces.

Testing, Inspection, and Certification

Criteria for laying Pipe: Pipe embedment, compaction, and envelope size shall comply with TAC Title 30 §217.54 and Austin Water Utility requirements.

Manholes and Related Structures: All manhole covers will be at least 30 inches nominal diameter. Manhole connections shall comply with by rule 217.55(n) of the TAC Title 30.

Testing Requirements for Installation of Gravity Collection System Pipes: Infiltration and exfiltration test or low air pressure test shall conform to TAC Title 30 §217.57 note 16(a)(1) and 16(a)(2).

Testing Requirements for Manholes: All manholes shall be subjected to a leakage test and shall conform to TAC Title 30 §217.58.

The professional engineer signing and sealing this document is responsible for the completion of this Engineering Design Report and will certify that all the information provided in this document and in the accompanying set of plans and specifications show full compliance with the requirements of Chapter 217 of the TAC Title 30 (TCEQ's rules).

Signature, Seal, and Date of the Texas Professional engineer who is certifying this document.



Organized Sewage Collection System Plan (TCEQ-0582)

Attachment B

Wells Branch Multifamily

Justification and Calculations for Deviation in Straight Alignment Without Manholes

We are not requesting to deviate from a straight alignment without manholes.



Organized Sewage Collection System Plan (TCEQ-0582)

Attachment C

Wells Branch Multifamily

Justification for Variance from Manhole Spacing

We are not requesting a variance from standard manhole spacing.



Organized Sewage Collection System Plan (TCEQ-0582)

Attachment D

Wells Branch Multifamily

Explanation of Slopes for Flows Greater Than 10.0 Feet per Second

We are not requesting a flow greater than 10 fps.



Lift Station / Force Main System, 5



Lift Station/Force Main System Application (TCEQ-0624)

Wells Branch Multifamily

Lift Station Design Report

A lift station is not proposed with this application.



Temporary Stormwater Section, 6

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: Ian Williams, P.E.

Date: 08/07/2023

Signature of Customer/Agent:



Regulated Entity Name: LG WELLS BRANCH LLC

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: Walnut 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:

- 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.
 - 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.
 - A description of how BMPs and measures will prevent pollutants from entering surface streams, sensitive features, or the aquifer.
 - 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. 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.
 - There will be no temporary sealing of naturally-occurring sensitive features on the site.
9. **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. **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.

- 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.
- N/A
12. **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. 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. 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. 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. 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. **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. 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. Stabilization practices must be initiated as soon as practicable where construction activities have temporarily or permanently ceased.

Administrative Information

20. All structural controls will be inspected and maintained according to the submitted and approved operation and maintenance plan for the project.
21. 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. 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.



Temporary Stormwater Section (TCEQ-0602)

ATTACHMENT A

Wells Branch Multifamily

Spill Response Actions

SPILL RESPONSE ACTIONS

In the event of accidental spills of hazardous materials or hydrocarbons, the contractor will be required to maintain a stockpile of sand material in the construction staging area. This sand material will be used to provide a dike to contain large spills and to provide an absorbent material that can be disposed of off the Edwards Aquifer Recharge, Contributing and Transition Zones during the cleanup process.

The contractor will be required to contact the owner, who will notify the Texas Commission on Environmental Quality (TCEQ) in the event of a spill. It is required that all contaminated soils be removed from the project site and disposed of in accordance with applicable regulations off of the Edwards Aquifer Recharge, Contributing and Transition Zones.

Below are measures outlined by TCEQ for spill prevention and response:

Education

1. Be aware that different materials pollute in different amounts. Make sure that each employee knows what a “significant spill” is for each material they use, and what is the appropriate response for “significant” and “insignificant” spills. Employees should also be aware of when spills must be reported to the TCEQ. Information is available in 30 TAC 327.4 and 40 CFR 302.4.
2. Educate employees and subcontractors on potential dangers to humans and the environment from spills and leaks.
3. Hold regular meetings to discuss and reinforce appropriate disposal procedures (incorporate into regular safety meetings).
4. Establish a continuing education program to indoctrinate new employees.
5. Have contractor’s superintendent or representative oversee and enforce proper spill prevention and control measures.

General Measures

1. To the extent that the work can be accomplished safely, spills of oil, petroleum products, substances listed under 40 CFR parts 110,117, and 302, and sanitary and septic wastes should be contained and cleaned up immediately.
2. Store hazardous materials and wastes in covered containers and protect from vandalism.
3. Place a stockpile of spill cleanup materials where it will be readily accessible.
4. Train employees in spill prevention and cleanup.
5. Designate responsible individuals to oversee and enforce control measures.
6. Spills should be covered and protected from stormwater run on during rainfall to the extent that it doesn't compromise cleanup activities.
7. Do not bury or wash spills with water.
8. Store and dispose of used clean up materials, contaminated materials, and recovered spill material that is no longer suitable for the intended purpose in conformance with the provisions in applicable BMPs.
9. Do not allow water used for cleaning and decontamination to enter storm drains or watercourses. Collect and dispose of contaminated water in accordance with applicable regulations.
10. Contain water overflow or minor water spillage and do not allow it to discharge into drainage facilities or watercourses.
11. Place Material Safety Data Sheets (MSDS), as well as proper storage, cleanup, and spill reporting instructions for hazardous materials stored or used on the project site in an open, conspicuous, and accessible location.
12. Keep waste storage areas clean, well-organized, and equipped with ample cleanup supplies as appropriate for the materials being stored. Perimeter controls, containment structures, covers, and liners should be repaired or replaced as needed to maintain proper function.

Cleanup

1. Clean up leaks and spills immediately.
2. Use a rag for small spills on paved surfaces, a damp mop for general cleanup, and absorbent material for larger spills. If the spilled material is hazardous, then the used cleanup materials are also hazardous and must be disposed of as hazardous waste.
3. Never hose down or bury dry material spills. Clean up as much of the material as possible and dispose of properly. See the waste management BMPs in this section for specific information.

Minor Spills

1. Minor spills typically involve small quantities of oil, gasoline, paint, etc. which can be

controlled by the first responder at the discovery of the spill.

2. Use absorbent materials on small spills rather than hosing down or burying the spill.
3. Absorbent materials should be promptly removed and disposed of properly.
4. Follow the practice below for a minor spill:
 - a. Contain the spread of the spill.
 - b. Recover spilled materials.
 - c. Clean the contaminated area and properly dispose of contaminated materials.

Semi-Significant Spills

Semi-significant spills still can be controlled by the first responder along with the aid of other personnel such as laborers and the foreman, etc. This response may require the cessation of all other activities. Spills should be cleaned up immediately:

1. Contain spread of the spill.
2. Notify the project foreman immediately.
3. If the spill occurs on paved or impermeable surfaces, clean up using "dry methods (absorbent materials, cat litter and/or rags). Contain the spill by encircling with absorbent materials and do not let the spill spread widely.
4. If the spill occurs in dirt areas, immediately contain the spill by constructing an earthen dike. Dig up and properly dispose of contaminated soil.
5. If the spill occurs during rain, cover spill with tarps or other material to prevent contaminating runoff.

Significant/Hazardous Spills

For significant or hazardous spills that are in reportable quantities:

1. Notify the TCEQ by telephone as soon as possible and within 24 hours at 512- 339-2929 (Austin) or 210-490-3096 (San Antonio) between 8 AM and 5 PM. After hours, contact the Environmental Release Hotline at 1-800-832-8224. It is the contractor's responsibility to have all emergency phone numbers at the construction site.
2. For spills of federal reportable quantities, in conformance with the requirements in 40 CFR parts 110,119, and 302, the contractor should notify the National Response Center at (800) 424-8802.
3. Notification should first be made by telephone and followed up with a written report.
4. The services of a spills contractor or a Haz-Mat team should be obtained immediately. Construction personnel should not attempt to clean up until the appropriate and qualified staffs have arrived at the job site.
5. Other agencies which may need to be consulted include, but are not limited to, the City

Police Department, County Sheriff Office, Fire Departments, etc.

6. More information on spill rules and appropriate responses is available on the TCEQ website at: http://www.tnrcc.state.tx.us/enforcement/emergency_response.html

Vehicle and Equipment Maintenance

1. If maintenance must occur onsite, use a designated area and a secondary containment, located away from drainage courses, to prevent the run-on of stormwater and the runoff of spills.
2. Regularly inspect onsite vehicles and equipment for leaks and repair immediately
3. Check incoming vehicles and equipment (including delivery trucks, and employee and subcontractor vehicles) for leaking oil and fluids. Do not allow leaking vehicles or equipment onsite.
4. Always use secondary containment, such as a drain pan or drop cloth, to catch spills or leaks when removing or changing fluids.
5. Place drip pans or absorbent materials under paving equipment when not in use.
6. Use absorbent materials on small spills rather than hosing down or burying the spill. Remove the absorbent materials promptly and dispose of properly.
7. Promptly transfer used fluids to the proper waste or recycling drums. Don't leave full drip pans or other open containers lying around.
8. Oil filters disposed of in trashcans or dumpsters can leak oil and pollute stormwater. Place the oil filter in a funnel over a waste oil-recycling drum to drain excess oil before disposal. Oil filters can also be recycled. Ask the oil supplier or recycler about recycling oil filters.
9. Store cracked batteries in a non-leaking secondary container. Do this with all cracked batteries even if you think all the acid has drained out. If you drop a battery, treat it as if it is cracked. Put it into the containment area until you are sure it is not leaking.

Vehicle and Equipment Fueling

1. If fueling must occur on site, use designated areas, located away from drainage courses, to prevent the run-on of stormwater and the runoff of spills.
2. Discourage "topping off" of fuel tanks.
3. Always use secondary containment, such as a drain pan, when fueling to catch spills/leaks.



Temporary Stormwater Section (TCEQ-0602)

ATTACHMENT B

Wells Branch Multifamily

Potential Sources of Contamination

Potential Sources of Pollutants During Construction:

1. Soil, erosion due to construction.
2. Oil, grease, fuel and hydraulic fluid contamination from construction equipment and vehicle drippings.
3. Hydrocarbons from asphalt paving operations.
4. Miscellaneous trash and debris from construction and material wrappings.
5. Proposed sewer connection.
6. Portable toilet spills.

Potential Sources of Pollutants After Construction:

1. Traffic related pollutants from cars, roads, and driveways.
2. Improper disposal of trash.
3. Short-term storage and use of fertilizers in establishing vegetation.

Please refer to Attachment A: Spill Response Actions-Form 0602 for details for preventative and responsive actions of this report.

All activities will be conducted in a manner to minimize the potential impact to the environment.



Temporary Stormwater Section (TCEQ-0602)

ATTACHMENT C

Wells Branch Multifamily

Sequence of Major Activities

Intended schedule or sequence of major activities:

1. Installation of temporary erosion controls and tree protection fencing. (partial perimeter of ± 7.26 -acre limits of construction).
2. Demolition of existing buildings and pavement. (± 3.87 acres of deconstruction activities).
3. Clearing and grubbing activities (± 7.26 -acres of construction activities).
4. Subgrade preparation (earthwork, grading street and drainage excavation and embankment, preparation for sand and sedimentation basins.)
5. Construction of sand and sedimentation basins (± 2.3 acres of construction activities).
6. Wet and dry utility construction ($\pm .85$ -acres of construction activities).
7. Installation of base materials, complete final grading, roadway paving construction (± 7.26 acres of construction activities).
8. Construction of concrete and building foundations, curbs, flatwork (± 2.5 -acres of construction activities).
9. Building construction (± 1.7 acres of construction activities).
10. Topsoil, Irrigation, Landscaping, completion of permanent erosion control and restoration of site vegetation. (± 7.26 acres of construction activities).
11. Site cleanup and removal of temporary BMPs



Temporary Stormwater Section (TCEQ-0602)

ATTACHMENT D

Wells Branch Multifamily

Temporary Best Management Practices (TBMPs)

Temporary Erosion and Sediment Control Best Management Practices (BMPs) shall be designed and placed in accordance with the City of Austin and TCEQ requirements. The temporary BMPs shall be installed prior to any site preparation work (clearing, grubbing or excavation).

Silt Fence:

Silt fence shall be installed immediately down gradient of areas of soil disturbance. See City of Austin Standard Detail on the Construction Plans for details on construction and installation.

Tree Protection

Tree protection shall be installed around trees to prevent tree damage and potential damage or disturbance of the tree's root zone. See the City of Austin Standard Detail on the Construction Plans for details on construction and installation.

Dust Control

Dust control can prevent blowing and movement of dust from exposed soil surfaces, reduce onsite and off-site damage, and improve traffic safety. Dust control will be implemented at the site during all phases of construction. Dust control during construction shall be done with mulch, irrigation, or an alternative method described in Section 1.4.5D of the City of Austin Environmental Criteria Manual.

Disturbed Area Minimization

An effective way of minimizing potential impact of storm water runoff from construction sites is to minimize the area of soil disturbance. The site will be developed in such a manner as to limit the necessary construction to as small an area as practical, thereby reducing the amount of runoff generated by a storm event.

Stabilized Construction Entrance

Anti-tracking pads consisting of stone will be installed at the entrance as identified on the site plan to prevent the off-site transport of sediment by construction vehicles. Crushed stone will be placed over a layer of geotextile filter fabric to reduce the mitigation of sediment from underlying soil. The stabilization entrance will be installed prior to construction beginning on the site. The stone will remain in place until the sub grade of pavement is installed at the site.

Triangular Filter Dike

Triangular filter dike shall be installed immediately down gradient of areas of soil disturbance over pervious cover. See City of Austin Standard Detail on the Construction Plans for details on construction and installation.

Inlet Protection

Inlet filter inserts will be installed as the stormsewer system is constructed onsite. The catch basin filter inserts will be inspected weekly and immediately after storm events. If the basin insert becomes clogged with sediment, the insert will be removed and cleaned or replaced per the manufacturer's recommendations.

Concrete Washout

A designated temporary, above-grade concrete washout area will be constructed. The temporary concrete washout area will be constructed with sufficient quantity and volume to contain all liquid and concrete waste generated by washout operations. Concrete mixer trucks and chutes will be washed during or before an anticipated storm event in the designated area and any concrete waste will be properly disposed of off-site.



Temporary Stormwater Section (TCEQ-0602)

ATTACHMENT E

Wells Branch Multifamily

Request to Temporarily Seal a Feature

We are not requesting to seal any sensitive features on site.



Temporary Stormwater Section (TCEQ-0602)

ATTACHMENT F

Wells Branch Multifamily

Structural Practices

Structural BMPs will be used to limit runoff discharge of pollutants from exposed areas of the site. BMPs will be installed prior to soil disturbing construction activity. Silt fencing will be placed along the down-gradient sides of the property to prevent runoff from escaping the construction area. Inlet protection will be placed on all storm water inlets to prevent pollutants from entering into the stormwater drainage system. A temporary construction entrance will be placed at the site entry/exit point to reduce tracking onto adjoining streets. A construction staging area will be used onsite to perform all vehicle maintenance and for equipment and material storage. A concrete truck washout pit will be placed on site to provide containment and easier cleanup of waste from concrete operations. The location of all structural temporary BMP's is shown on the site plan within the attachments.

The proposed private storm drainage system ultimately discharges into the biofiltration pond system which connects to the underground storm system within Double File Trail.



Temporary Stormwater Section (TCEQ-0602)

ATTACHMENT G

Wells Branch Multifamily

Drainage Area Map

A drainage area map has been included in the construction documents that accompany this WPAP & SCS Report submittal.



Temporary Stormwater Section (TCEQ-0602)

ATTACHMENT H

Wells Branch Multifamily

Temporary Sediment Pond(s) Plans and Calculations

There are no temporary sediment ponds associated with this development, however a biofiltration pond is proposed to be constructed. Refer to the “Permanent Stormwater Section” for more information.



Temporary Stormwater Section (TCEQ-0602)

ATTACHMENT I

Wells Branch Multifamily

Inspection and Maintenance for BMPs

Inspection

Designated and qualified person(s) should inspect the Pollution Control Measures every seven (7) days and after each rainfall event. An inspection report that summarizes the scope of the inspection, names and qualifications of personnel conducting the inspection, date of the inspection, major observations and actions that will be taken as a result of the inspection should be kept with the TPDES data for the project. The general contractor will be responsible to review and reference sections 1.3 and 1.4 of “Complying with the Edwards Aquifer Rules: Technical Guidance on Best Management Practices” (TCEQ RG-348) for erosion and sedimentation control and maintenance as applicable.

Construction Entrance / Exit and Construction Staging Area Maintenance

1. The entrance should be maintained in a condition, which will prevent tracking or flowing of sediment onto public right-of-way. This may require periodic top dressing with additional stone as conditions demand and repair and/or clean out of any measures used to trap sediment.
2. All sediment spilled, dropped, washed or tracked on to public right-of-ways should be removed immediately by the contractor.
3. When necessary, wheels should be cleaned to remove sediment prior to entrance onto public right-of-ways.
4. 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.
5. All sediment should be prevented from entering any storm drain, ditch or watercourse by using approved methods.

Sediment Filter Structure Maintenance

1. Inspect all fencing weekly, and after any rainfall.
2. Remove sediment when buildup reaches 6 inches.
3. Replace any torn fabric or install a second line of fencing parallel to the torn section.

4. 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.
5. 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 re-vegetated. The fence itself should be disposed of in an approved landfill.

Curb Inlet Gravel Filter Structure Maintenance

1. Inspection should be made weekly or after each rainfall event and repair or replacement should be made promptly as needed by the contractor.
2. Inspect and realign dikes as needed to prevent gaps between sections.
3. Accumulated silt should be removed after each rainfall and disposed of in a manner which will not cause additional siltation.
4. After the site is completely stabilized, the dikes and any remaining silt should be removed. Silt should be disposed of in a manner that will not contribute to additional siltation.

SAMPLE INSPECTION REPORT

Name & Qualification of Inspector: _____

Date of Inspection: _____

Inspectors shall observe the following items on each inspection:

- Disturbed areas that have not been fully stabilized
- Areas used for storage of materials that are exposed to precipitation
- Control measures outlined in the site plan
- Locations where vehicles enter/exit the site

Inspectors shall denote if any corrective actions are required and when the action was completed.

Major Observations:

Corrective Actions Required:

Corrective Actions Performed:

Signature

Date



Temporary Stormwater Section (TCEQ-0602)

ATTACHMENT J

Wells Branch Multifamily

Schedule of Interim and Permanent Soil Stabilization Practices

Stabilization measures shall be initiated as soon as practicable in portions of the site where construction activities have temporarily or permanently ceased, but in no case more than 14 days after the construction activity in that portion of the site has temporarily or permanently ceased. Where the initiation of stabilization measures by the 14th day after construction activity temporary or permanently ceased is precluded by weather conditions, stabilization measures shall be initiated as soon as practicable. Where construction activity on a portion of the site is temporarily ceased, and earth disturbing activities will be resumed within 21 days, temporary stabilization measures do not have to be initiated on that portion of site. In areas experiencing droughts where the initiation of stabilization measures by the 14th day after construction activity has temporarily or permanently ceased is precluded by seasonal arid conditions, stabilization measures shall be initiated as soon as practicable. Below are guidelines from TCEQ for the installation of sod to stabilized exposed areas.

Materials

- *Hydraulic Mulches*: Wood fiber mulch can be applied alone or as a component of hydraulic matrices. Wood fiber applied alone is typically applied at the rate of 2,000 to 4,000 lb/acre. Wood fiber mulch is manufactured from wood or wood waste from lumber mills or from urban sources.
- *Hydraulic Matrices*: Hydraulic matrices include a mixture of wood fiber and acrylic polymer or other tackifier as binder. Apply as a liquid slurry using a hydraulic application machine (i.e., hydro seeder) at the following minimum rates, or as specified by the manufacturer to achieve complete coverage of the target area: 2,000 to 4,000 lb/acre wood fiber mulch, and 5 to 10% (by weight) of tackifier (acrylic copolymer, guar, psyllium, etc.)
- *Bonded Fiber Matrix*: Bonded fiber matrix (BFM) is a hydraulically applied system of fibers and adhesives that upon drying forms an erosion resistant blanket that promotes vegetation, and prevents soil erosion. BFMs are typically applied at rates from 3,000 lb/acre to 4,000 lb/acre based on the manufacturer's recommendation. A biodegradable BFM is composed of materials that are 100% biodegradable. The binder in the BFM should also be biodegradable and should not dissolve or disperse upon re-wetting.

Typically, biodegradable BFMs should not be applied immediately before, during or immediately after rainfall if the soil is saturated. Depending on the product, BFMs typically require 12 to 24 hours to dry and become effective.

Installation

1. Prior to application, roughen embankment and fill areas by rolling with a crimping or punching type roller or by track walking. Track walking shall only be used where other methods are impractical.
2. To be effective, hydraulic matrices require 24 hours to dry before rainfall occurs.
3. Avoid mulch over spray onto roads, sidewalks, drainage channels, existing vegetation, etc.

Inspection and Maintenance Guidelines

1. Mulched areas should be inspected weekly and after each rain event to locate and repair any damage.
2. Areas damaged by storms or normal construction activities should be regarded and hydraulic mulch reapplied as soon as practical.



Permanent Stormwater Section, 7

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)(li), (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: Ian Williams PE

Date: 08/07/2023

Signature of Customer/Agent



Regulated Entity Name: LG WELLS BRANCH ILLC

Permanent Best Management Practices (BMPs)

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

- Permanent BMPs and measures must be implemented to control the discharge of pollution from regulated activities after the completion of construction.
 N/A
- 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.
 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. **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:
- Prepared and certified by the engineer designing the permanent BMPs and measures
 - Signed by the owner or responsible party
 - Procedures for documenting inspections, maintenance, repairs, and, if necessary retrofit
 - 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.
- 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.
- N/A

Responsibility for Maintenance of Permanent BMP(s)

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

14. 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. 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



Permanent Stormwater Section (TCEQ-0600)

ATTACHMENT A

Wells Branch Multifamily

20% or Less Impervious Cover Waiver

This waiver is not applicable for this site.



Permanent Stormwater Section (TCEQ-0600)

ATTACHMENT B

Wells Branch Multifamily

BMPs for Upgradient Stormwater

There is an existing water quality pond and detention ponds that will be reconstructed to a proposed biofiltration pond and detention pond. The current general flow across the site goes from north to southwest. The proposed outfall will reconnect to the existing storm infrastructure at Double File Trail.



Permanent Stormwater Section (TCEQ-0600)

ATTACHMENT C

Wells Branch Multifamily

Permanent BMP's for On-Site Stormwater

Implementation of one biofiltration pond has been selected as the permanent Best Management Practice (BMP) to reduce the increase in total suspended solids (TSS) loads associated with the site development. This is designed to provide water quality for the proposed site. The biofiltration pond has been designed per the City of Austin Environmental Criteria manual. The CoA ECM appendix R-3 and TCEQ TSS removal calculations show that the pond is sufficiently sized to treat a total of 4.31-acres of on-site impervious cover (59% of the overall site). The calculations demonstrate that the pond will sufficiently remove the required TSS load. TSS removal calculations are included in this attachment.



Permanent Stormwater Section (TCEQ-0600)

ATTACHMENT D

Wells Branch Multifamily

Permanent BMP's for Surface Streams

There are no surface streams on the regulated site.



Permanent Stormwater Section (TCEQ-0600)

ATTACHMENT E

Wells Branch Multifamily

Request to Temporarily Seal Features

There are no sensitive environmental features on the regulated entity that are proposed to be sealed.



Permanent Stormwater Section (TCEQ-0600)

ATTACHMENT F

Wells Branch Multifamily

Construction Plans

Construction plans for this project have been prepared and submitted along with this WPAP & SCS Report Application.



Permanent Stormwater Section (TCEQ-0600)

ATTACHMENT G

Wells Branch Multifamily

Inspection, Maintenance, Repair, and Retrofit Plan

It is the responsibility of the owner or designated responsible party to keep records of inspections, maintenance, repair, or retrofits needed for the on-site permanent stormwater BMPs. The schedule is attached on the following sheet.

INSPECTION AND MAINTENANCE PLAN FOR BIORETENTION POND

PROJECT NAME: WELLS BRANCH MULTIFAMILY
ADDRESS: 2800 W WELLS BRANCH PKWY.
CITY, STATE, ZIP: AUSTIN, TEXAS 78728

The following are guidelines that should be met for pond maintenance:

- 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 re-vegetated 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 or 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 media should be removed and replaced with new material meeting the original specifications. Any discolored media 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 as needed to remove any sediment buildup and 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.

An amended copy of this document will be provided to the TCEQ within thirty (30) days of any changes in the following information.

Signature of Responsible Party: R. Nash Thomas

Printed Name: Nash Thomas , LG Wells Branch LLC

Mailing Address: 3500 MAPLE AVE STE 1600

City, State, Zip: Dallas, Texas, 78759

Telephone: (512)669-5560 Fax: _____

Printed Name of Agent/Engineer: Ian Williams

Signature of Agent/Engineer: 



Permanent Stormwater Section (TCEQ-0600)

ATTACHMENT H

Wells Branch Multifamily

Pilot Scale Field Testing Plan

The City of Austin Environmental Criteria Manual and City of Austin Drainage Criteria Manual was used to design the pond for the regulated entity, therefore a Pilot Scale Field Testing Plan has not been provided.



Permanent Stormwater Section (TCEQ-0600)

ATTACHMENT I

Apartments Wells Branch Multifamily

Measures for Minimizing Surface Stream Contamination

Drainage facilities have been designed to capture storm water runoff from proposed developments and direct the flows to the on-site water quality and detention ponds. The detention pond has been designed to reduce peak flow rates discharging downstream. Reduced peak flow rates will result in lower velocities for storm water entering surface streams, thereby reducing the potential for erosion. This pond has been designed to provide for TSS removal and increased water quality for storm water discharge downstream.



Agent Authorization Form, **8**

Agent Authorization Form
For Required Signature
Edwards Aquifer Protection Program
Relating to 30 TAC Chapter 213
Effective June 1, 1999

I _____ Nash Thomas _____,
Print Name

_____ Authorized Signatory _____,
Title - Owner/President/Other

of _____ LG Wells Branch LLC _____,
Corporation/Partnership/Entity Name

have authorized _____ Ian Williams _____
Print Name of Agent/Engineer

of _____ WGI _____
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:

R. Nosh Thomas
Applicant's Signature

8/8/23
Date

THE STATE OF Texas §

County of DALLAS §

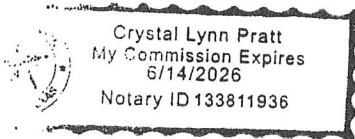
BEFORE ME, the undersigned authority, on this day personally appeared R. Nosh Thomas known to me to be the person whose name is subscribed to the foregoing instrument, and acknowledged to me that (s)he executed same for the purpose and consideration therein expressed.

GIVEN under my hand and seal of office on this 8th day of August 2023.

Crystal Pratt
NOTARY PUBLIC

Crystal Pratt
Typed or Printed Name of Notary

MY COMMISSION EXPIRES: 6/14/2026





Application Fee Form, 9

Application Fee Form

Texas Commission on Environmental Quality

Name of Proposed Regulated Entity: WELLS BRANCH MULTIFAMILY

Regulated Entity Location: 2800 W WELLS BRANCH PKWY, AUSTIN, TX 78728

Name of Customer: LG WELLS BRANCH LLC

Contact Person: NASH THOMAS

Phone: (918) 801-6810

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

San Antonio Regional Office

Mailed to: TCEQ - Cashier

Overnight Delivery to: TCEQ - Cashier

Revenues Section

Mail Code 214

P.O. Box 13088

Austin, TX 78711-3088

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

<i>Type of Plan</i>	<i>Size</i>	<i>Fee Due</i>
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	7.26 Acres	\$ 5000
Sewage Collection System	1044 L.F.	\$ 650
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: R. Nash Thomas

Date: 07/28/2023

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

<i>Project</i>	<i>Project Area in Acres</i>	<i>Fee</i>
One Single Family Residential Dwelling	< 5	\$650
Multiple Single Family Residential and Parks	< 5	\$1,500
	5 < 10	\$3,000
	10 < 40	\$4,000
	40 < 100	\$6,500
	100 < 500	\$8,000
	≥ 500	\$10,000
Non-residential (Commercial, industrial, institutional, multi-family residential, schools, and other sites where regulated activities will occur)	< 1	\$3,000
	1 < 5	\$4,000
	5 < 10	\$5,000
	10 < 40	\$6,500
	40 < 100	\$8,000
	≥ 100	\$10,000

Organized Sewage Collection Systems and Modifications

<i>Project</i>	<i>Cost per Linear Foot</i>	<i>Minimum Fee- Maximum Fee</i>
Sewage Collection Systems	\$0.50	\$650 - \$6,500

Underground and Aboveground Storage Tank System Facility Plans and Modifications

<i>Project</i>	<i>Cost per Tank or Piping System</i>	<i>Minimum Fee- Maximum Fee</i>
Underground and Aboveground Storage Tank Facility	\$650	\$650 - \$6,500

Exception Requests

<i>Project</i>	<i>Fee</i>
Exception Request	\$500

Extension of Time Requests

<i>Project</i>	<i>Fee</i>
Extension of Time Request	\$150



Core Data Form, **10**



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.)		
<input checked="" type="checkbox"/> New Permit, Registration or Authorization (Core Data Form should be submitted with the program application.)		
<input type="checkbox"/> Renewal (Core Data Form should be submitted with the renewal form)	<input type="checkbox"/> 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)		
<input type="checkbox"/> New Customer <input type="checkbox"/> Update to Customer Information <input type="checkbox"/> Change in Regulated Entity Ownership <input type="checkbox"/> Change in Legal Name (Verifiable with the Texas Secretary of State or Texas Comptroller of Public Accounts)				
<i>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).</i>				
6. Customer Legal Name (If an individual, print last name first: eg: Doe, John)			<i>If new Customer, enter previous Customer below:</i>	
LG WELLS BRANCH LLC				
7. TX SOS/CPA Filing Number	8. TX State Tax ID (11 digits)		9. Federal Tax ID	10. DUNS Number (if applicable)
0804700635			(9 digits)	
11. Type of Customer:		<input checked="" type="checkbox"/> Corporation	<input type="checkbox"/> Individual	Partnership: <input type="checkbox"/> General <input type="checkbox"/> Limited
Government: <input type="checkbox"/> City <input type="checkbox"/> County <input type="checkbox"/> Federal <input type="checkbox"/> Local <input type="checkbox"/> State <input type="checkbox"/> Other		<input type="checkbox"/> Sole Proprietorship	<input type="checkbox"/> Other:	
12. Number of Employees			13. Independently Owned and Operated?	
<input checked="" type="checkbox"/> 0-20 <input type="checkbox"/> 21-100 <input type="checkbox"/> 101-250 <input type="checkbox"/> 251-500 <input type="checkbox"/> 501 and higher			<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
14. Customer Role (Proposed or Actual) – as it relates to the Regulated Entity listed on this form. Please check one of the following				
<input type="checkbox"/> Owner <input checked="" type="checkbox"/> Operator <input type="checkbox"/> Owner & Operator <input type="checkbox"/> Other: <input type="checkbox"/> Occupational Licensee <input type="checkbox"/> Responsible Party <input type="checkbox"/> VCP/BSA Applicant				
15. Mailing Address:		3500 MAPLE AVE STE 1660		
City	DALLAS	State	TX	ZIP
				75219
			ZIP + 4	3936
16. Country Mailing Information (if outside USA)			17. E-Mail Address (if applicable)	
18. Telephone Number		19. Extension or Code		20. Fax Number (if applicable)

SECTION III: Regulated Entity Information

21. General Regulated Entity Information <i>(If 'New Regulated Entity' is selected, a new permit application is also required.)</i>								
<input type="checkbox"/> New Regulated Entity <input type="checkbox"/> Update to Regulated Entity Name <input type="checkbox"/> Update to Regulated Entity Information								
<i>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).</i>								
22. Regulated Entity Name <i>(Enter name of the site where the regulated action is taking place.)</i>								
WELLS BRANCH MULTIFAMILY								
23. Street Address of the Regulated Entity: <i>(No PO Boxes)</i>		2800 W WELLS BRANCH PKWY.						
City	AUSTIN	State	TX	ZIP	78728	ZIP + 4		
24. County	TRAVIS							

If no Street Address is provided, fields 25-28 are required.

25. Description to Physical Location:								
26. Nearest City			State			Nearest ZIP Code		
<i>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).</i>								
27. Latitude (N) In Decimal:			28. Longitude (W) In Decimal:					
Degrees	Minutes	Seconds	Degrees	Minutes	Seconds			
29. Primary SIC Code <small>(4 digits)</small>		30. Secondary SIC Code <small>(4 digits)</small>		31. Primary NAICS Code <small>(5 or 6 digits)</small>		32. Secondary NAICS Code <small>(5 or 6 digits)</small>		
1522				236117				
33. What is the Primary Business of this entity? <i>(Do not repeat the SIC or NAICS description.)</i>								
MULTIFAMILY RESIDENTIAL								
34. Mailing Address:		3500 MAPLE AVE STE 1600						
City	DALLAS	State	TX	ZIP	75219	ZIP + 4	3936	
35. E-Mail Address:								
36. Telephone Number			37. Extension or Code			38. Fax Number <i>(if applicable)</i>		
(918) 801-6810						() -		

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.

<input type="checkbox"/> Dam Safety	<input type="checkbox"/> Districts	<input type="checkbox"/> Edwards Aquifer	<input type="checkbox"/> Emissions Inventory Air	<input type="checkbox"/> Industrial Hazardous Waste
<input type="checkbox"/> Municipal Solid Waste	<input type="checkbox"/> New Source Review Air	<input type="checkbox"/> OSSF	<input type="checkbox"/> Petroleum Storage Tank	<input type="checkbox"/> PWS
<input type="checkbox"/> Sludge	<input type="checkbox"/> Storm Water	<input type="checkbox"/> Title V Air	<input type="checkbox"/> Tires	<input type="checkbox"/> Used Oil
<input type="checkbox"/> Voluntary Cleanup	<input type="checkbox"/> Wastewater	<input type="checkbox"/> Wastewater Agriculture	<input type="checkbox"/> Water Rights	<input type="checkbox"/> Other:

SECTION IV: Preparer Information

40. Name:		41. Title:	
42. Telephone Number	43. Ext./Code	44. Fax Number	45. E-Mail Address
(512) 699-5560		() -	

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.

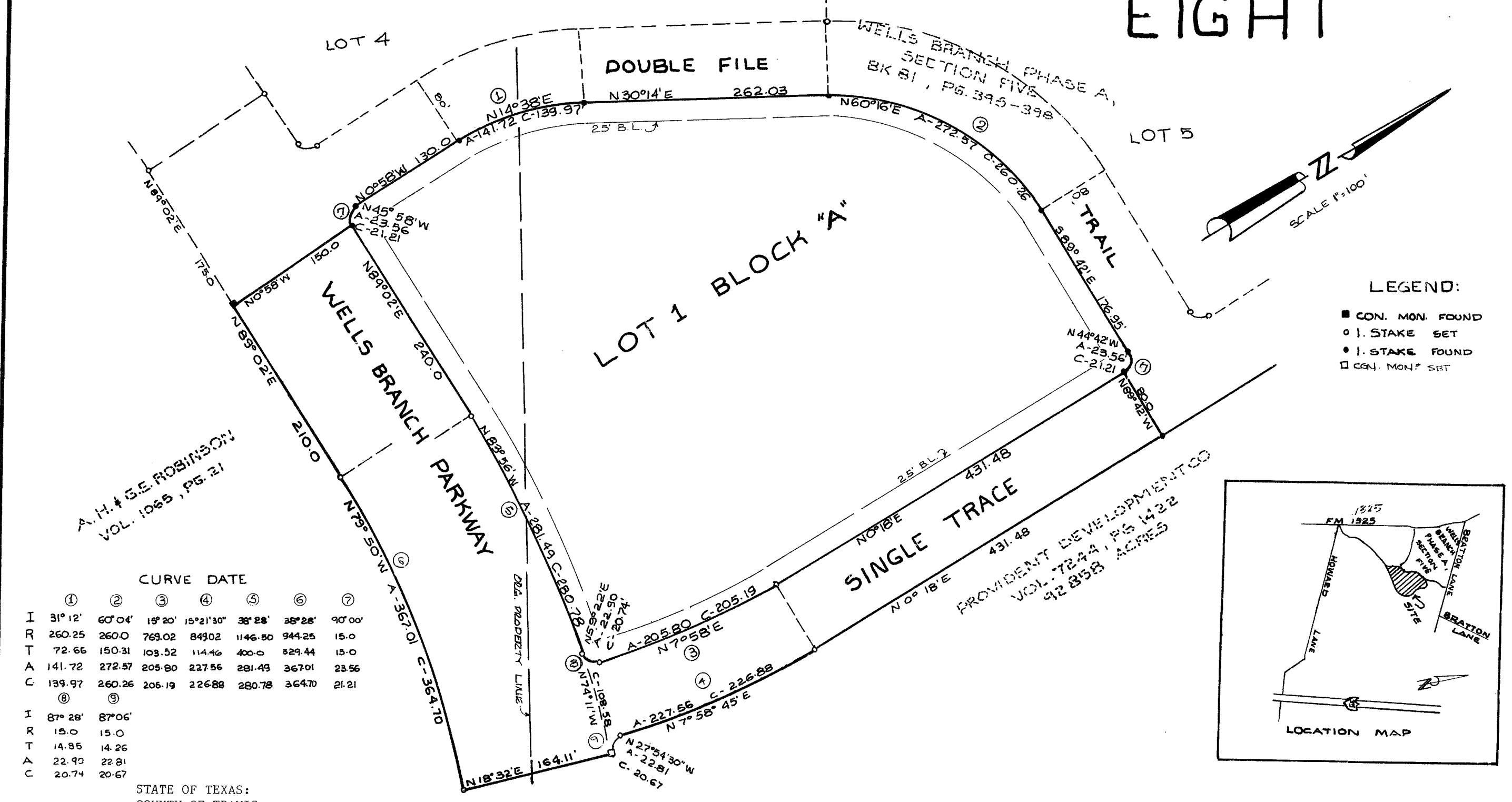
Company:	WGI	Job Title:	
Name (In Print):		Phone:	(512) 699- 5560
Signature:		Date:	



Site Construction Plans, **11**

Resto VOL 8087 pg. 944

WELLS BRANCH PHASE A SECTION EIGHT



CURVE DATA

①	②	③	④	⑤	⑥	⑦
I 31°12'	67°04'	10°50'	10°21'37"	30°28'	40°28'	90°00'
R 260.25	260.00	705.02	843.02	1146.80	944.25	15.0
T 72.66	150.31	103.52	114.40	400.00	424.44	15.0
A 141.72	272.57	205.80	237.56	281.43	367.01	23.56
C 199.97	260.26	206.19	226.88	280.78	264.70	21.21

STATE OF TEXAS: COUNTY OF TRAVIS: KNOW ALL MEN BY THESE PRESENTS: THAT, PROVIDENT DEVELOPMENT COMPANY, A DIVISION OF LEXINGTON DEVELOPMENT COMPANY, A TEXAS LIMITED PARTNERSHIP, ACTING HEREIN BY AND THROUGH JAMES H. MILLS, ATTORNEY-IN-FACT, OWNER OF THAT CERTAIN TRACT OUT OF THE FRANCISCO GARCIA SURVEY NO. 60, SITUATED IN TRAVIS COUNTY, TEXAS, CONVEYED BY VOLUME 7244, PAGE 1422 OF THE TRAVIS COUNTY, TEXAS DEED RECORDS, AND A.H. AND G.E. ROBINSON, OWNERS OF THAT CERTAIN TRACT OF LAND OUT OF THE FRANCISCO GARCIA SURVEY NO. 60, SITUATED IN TRAVIS COUNTY, TEXAS CONVEYED BY VOLUME 1065, PAGE 21 OF THE TRAVIS COUNTY, TEXAS DEED RECORDS, DO HEREBY SUBDIVIDE 10.07 ACRES OF LAND TO BE KNOWN AS "WELLS BRANCH PHASE A SECTION EIGHT", AND DO HEREBY DEDICATE TO THE PUBLIC USE OF THE STREETS AND EASEMENTS AS SHOWN HEREON.

WITNESS OUR HANDS THIS 29th DAY OF September, 1982, A.D.

A.H. Robinson
A.H. ROBINSON P.O. Box 9556 Austin TX 78766
STATE OF TEXAS: Austin TX 78766
COUNTY OF TRAVIS:

James H. Mills
JAMES H. MILLS, ATTORNEY-IN-FACT, 6140 N. MO. PK. AUSTIN TX
G.E. Robinson
G.E. ROBINSON P.O. Box 9556 Austin TX 78766

BEFORE ME, THE UNDERSIGNED AUTHORITY, ON THIS DAY PERSONALLY APPEARED JAMES H. MILL, ATTORNEY-IN-FACT, 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.

GIVEN UNDER MY HAND AND SEAL OF OFFICE, THIS THE 29th DAY OF September, 1982, A.D.

STATE OF TEXAS: COUNTY OF TRAVIS: BEFORE ME, THE UNDERSIGNED AUTHORITY, ON THIS DAY PERSONALLY APPEARED A.H. ROBINSON, 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.

GIVEN UNDER MY HAND AND SEAL OF OFFICE, THIS THE 10th DAY OF NOVEMBER, 1982, A.D.

STATE OF TEXAS: COUNTY OF TRAVIS: BEFORE ME, THE UNDERSIGNED AUTHORITY, ON THIS DAY PERSONALLY APPEARED G.E. ROBINSON, 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.

GIVEN UNDER MY HAND AND SEAL OF OFFICE, THIS THE 10th DAY OF NOVEMBER, 1982, A.D.

APPROVED FOR ACCEPTANCE: DATE DEC. 7, 1982 *Richard R. Lillie by Donna Kristaponis*
RICHARD R. LILLIE, DIRECTOR OF PLANNING DONNA KRISTAPONIS
ACCEPTED AND AUTHORIZED FOR RECORD BY THE CITY PLANNING COMMISSION, CITY OF AUSTIN, TEXAS 12-7, 1982, A.D.

Mary E. Ley MARY E. LEY SECRETARY
Gilbert M. Martinez GILBERT M. MARTINEZ CHAIRMAN

STATE OF TEXAS: COUNTY OF TRAVIS: I, DORIS SHROPSHIRE, CLERK OF THE COUNTY COURT, WITHIN AND FOR THE COUNTY AND STATE AFORESAID DO HEREBY CERTIFY THAT THE WITHIN AND FOREGOING INSTRUMENT OF WRITING WITH ITS CERTIFICATE OF AUTHENTICATION WAS FILED FOR RECORD IN MY OFFICE ON THE 20th DAY OF Dec, 1982, A.D. AND WAS RECORDED ON THE 20th DAY OF Dec, 1982, A.D. AT 9:15 O'CLOCK P.M. IN THE PLAT RECORDS OF SAID COUNTY AND STATE IN PLAT BOOK 85, PAGE 37.

WITNESS MY HAND AND SEAL OF THE COUNTY COURT OF SAID COUNTY, THIS THE 20th DAY OF Dec, 1982, A.D.

L. Jones DEPUTY
L. Jones DEPUTY
FILED FOR RECORD THE 20th DAY OF Dec, 1982, A.D. at 9:10 p.m.

Doris Shropshire DORIS SHROPSHIRE, CLERK, COUNTY COURT, TRAVIS COUNTY, TEXAS
Doris Shropshire DORIS SHROPSHIRE, CLERK, COUNTY COURT, TRAVIS COUNTY, TEXAS

STATE OF TEXAS: COUNTY OF TRAVIS: I, DORIS SHROPSHIRE, COUNTY CLERK OF TRAVIS CO., TX, DO HEREBY CERTIFY THAT ON THE 20 DAY OF Dec, 1982, A.D., THE COMMISSIONERS COURT OF TRAVIS CO., TX PASSED AN ORDER AUTHORIZING THE FILING OF THIS PLAT AND THAT SAID ORDER WAS DULY ENTERED IN THE MINUTES OF SAID COUNTY IN BK 3, PG 442. WITNESS MY HAND AND SEAL OF OFFICE OF THE COUNTY COURT OF SAID COUNTY, THE 20 DAY OF Dec, 1982, A.D.

D. Halstrom DEPUTY
Doris Shropshire DORIS SHROPSHIRE, CLERK, COUNTY COURT, TRAVIS COUNTY, TEXAS

IN APPROVING THIS PLAT BY THE COMMISSIONERS COURT OF TRAVIS COUNTY, TEXAS, IT IS UNDERSTOOD THAT THE BUILDING OF ALL STREETS, ROADS OR OTHER PUBLIC THOROUGHFARES OR ANY BRIDGES OR CULVERTS NECESSARY TO BE PLACED ON SUCH ROADS, STREETS OR OTHER PUBLIC THOROUGHFARES SHALL BE THE RESPONSIBILITY OF THE OWNERS AND/OR DEVELOPERS OF THE TRACT OF LAND COVERED BY THIS PLAT AND IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS PRESCRIBED BY THE COMMISSIONERS COURT OF TRAVIS COUNTY, TEXAS, AND SAID COURT ASSUMES NO OBLIGATION TO BUILD ANY OF THE STREETS, ROADS, OR OTHER PUBLIC THOROUGHFARES OR ANY BRIDGES OR CULVERTS THEREWITH.

BE IT RESOLVED BY THE COMMISSIONERS COURT OF TRAVIS COUNTY, TEXAS, THAT THE ACCEPTANCE FOR MAINTENANCE BY TRAVIS COUNTY, TEXAS OF THE ROADS OR STREETS IN REAL ESTATE SUBDIVISIONS DOES NOT OBLIGATE THE COUNTY TO INSTALL STREET MARKING SIGNS, AS THIS IS CONSIDERED TO BE A PART OF THE DEVELOPERS CONSTRUCTION, BUT THAT ERRECTING SIGNS FOR TRAFFIC CONTROL, SUCH AS FOR SPEED LIMITS AND STOP AND YIELD SIGNS, SHALL REMAIN THE RESPONSIBILITY OF THE COUNTY.

I, WILEY E. MARK, AM AUTHORIZED UNDER THE LAWS OF THE STATE OF TEXAS TO PRACTICE THE PROFESSION OF SURVEYING, AND HEREBY CERTIFY THAT THIS PLAT COMPLIES WITH CHAPTER 13-3 OF THE AUSTIN CITY CODE, IS TRUE AND CORRECT TO THE BEST OF MY ABILITY, AND WAS PREPARED FROM AN ACTUAL SURVEY OF THE PROPERTY MADE UNDER MY SUPERVISION ON THE GROUND.

SURVEYED BY: *Wiley E. Mark* Date: 9/29/82
Wiley E. Mark, P.S. #1931
Carlson, Dippel & Marx Surveying Company
2499 Capital of Texas Highway, Suite 204
Austin, Texas 78746

NO PORTION IN SUBDIVISION IS AFFECTED BY THE 100-YEAR FLOOD PLAIN.

ENGINEERING BY: *David Ham* Date: 9/29/82
DAVID HAM, P.E.
CARLSON & DIPPEL, INC.
2499 Capital of Texas Highway, Suite 204
Austin, Texas 78746

NOTE: SIDEWALKS SHALL BE INSTALLED ON BOTH SIDES OF WELLS BRANCH PARKWAY, SINGLE TRACE AND SUND SIDE OF DOUBLE FILE TRAIL. SUCH SIDEWALKS SHALL BE COMPLETED PRIOR TO ACCEPTANCE OF ANY TYPE OF DRIVEWAY APPROACH AND /OR CERTIFICATE OF OCCUPANCY.

NOTE: NO LOT IN THIS SUBDIVISION SHALL BE OCCUPIED UNTIL CONNECTION IS MADE TO THE MAGE. AND NO #1 WATER AND WASTEWATER SYSTEMS.

NOTE: PRIOR TO CONSTRUCTION ON THIS SUBDIVISION DRAINAGE PLANS WILL BE SUBMITTED TO THE CITY OF AUSTIN PUBLIC WORKS DEPT. FOR REVIEW. RAINFALL SHALL BE HELD TO THE AMOUNT ESTABLISHED BY THE REGIONAL DETENTION PLANS APPROVED BY THE CITY OF AUSTIN. RUNOFF IN EXCESS OF THE AMOUNT ESTABLISHED FOR THE REGIONAL DETENTION SYSTEM SHALL BE DETAILED BY THE USE OF PONDING OR OTHER APPROVED METHODS.

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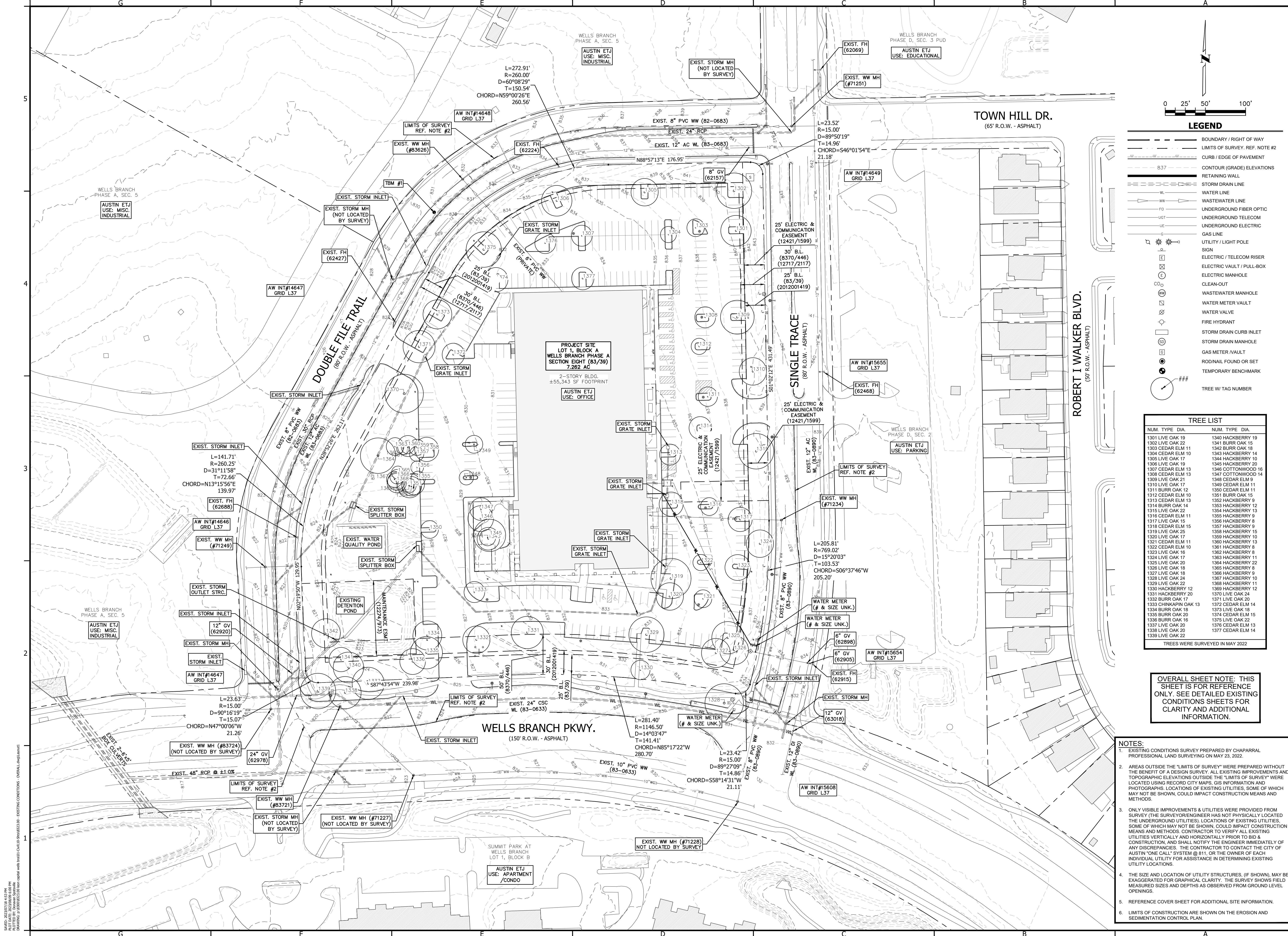
NOT AUTHORIZED FOR CONSTRUCTION PRIOR TO FORMAL CITY AND MUNICIPAL UTILITY DISTRICT APPROVAL



WELLS BRANCH MULTIFAMILY
2800 W WELLS BRANCH PKWY.
AUSTIN, TRAVIS COUNTY, TEXAS 78728
PLAT

SHEET C002
02 OF 63
SP-2023-0082D

SAVED: 2023/11/18 4:57 PM
PLOTTED BY: DORIS SHROPSHIRE
C:\Users\dshropsh\OneDrive\Documents\SP-2023-0082D\SP-2023-0082D.dwg - 1/27/23 4:57 PM



LEGEND

- BOUNDARY / RIGHT OF WAY
- LIMITS OF SURVEY, REF. NOTE #2
- CURB / EDGE OF PAVEMENT
- 8.37
- CONTOUR (GRADE) ELEVATIONS
- RETAINING WALL
- STORM DRAIN LINE
- WATER LINE
- WASTEWATER LINE
- UNDERGROUND FIBER OPTIC
- UNDERGROUND TELECOM
- UNDERGROUND ELECTRIC
- GAS LINE
- UTILITY / LIGHT POLE
- SIGN
- ELECTRIC / TELECOM RISER
- ELECTRIC VAULT / PULL-BOX
- ELECTRIC MANHOLE
- CLEAN-OUT
- WASTEWATER MANHOLE
- WATER METER VAULT
- WATER VALVE
- FIRE HYDRANT
- STORM DRAIN CURB INLET
- STORM DRAIN MANHOLE
- GAS METER VAULT
- ROD/NAIL FOUND OR SET
- TEMPORARY BENCHMARK
- TREE W/ TAG NUMBER

TREE LIST

NUM	TYPE	DIA	NUM	TYPE	DIA
1301	LIVE OAK	19	1340	HACKBERRY	19
1302	LIVE OAK	22	1341	BURR OAK	15
1303	CEDAR ELM	11	1342	BURR OAK	18
1304	CEDAR ELM	10	1343	HACKBERRY	14
1305	LIVE OAK	17	1344	HACKBERRY	10
1306	LIVE OAK	19	1345	HACKBERRY	20
1307	CEDAR ELM	13	1346	COTTONWOOD	16
1308	CEDAR ELM	13	1347	COTTONWOOD	14
1309	LIVE OAK	21	1348	CEDAR ELM	9
1310	LIVE OAK	17	1349	CEDAR ELM	11
1311	BURR OAK	12	1350	CEDAR ELM	11
1312	CEDAR ELM	10	1351	BURR OAK	15
1313	CEDAR ELM	13	1352	HACKBERRY	9
1314	BURR OAK	14	1353	HACKBERRY	12
1315	LIVE OAK	22	1354	HACKBERRY	13
1316	CEDAR ELM	11	1355	HACKBERRY	9
1317	LIVE OAK	15	1356	HACKBERRY	8
1318	CEDAR ELM	15	1357	HACKBERRY	9
1319	LIVE OAK	25	1358	HACKBERRY	15
1320	LIVE OAK	17	1359	HACKBERRY	10
1321	CEDAR ELM	11	1360	HACKBERRY	13
1322	CEDAR ELM	10	1361	HACKBERRY	8
1323	LIVE OAK	16	1362	HACKBERRY	8
1324	LIVE OAK	17	1363	HACKBERRY	11
1325	LIVE OAK	20	1364	HACKBERRY	22
1326	LIVE OAK	18	1365	HACKBERRY	8
1327	LIVE OAK	18	1366	HACKBERRY	9
1328	LIVE OAK	24	1367	HACKBERRY	10
1329	LIVE OAK	22	1368	HACKBERRY	11
1330	HACKBERRY	12	1369	HACKBERRY	12
1331	HACKBERRY	20	1370	LIVE OAK	24
1332	BURR OAK	17	1371	LIVE OAK	20
1333	CHINKAPIN OAK	13	1372	CEDAR ELM	14
1334	BURR OAK	18	1373	LIVE OAK	16
1335	BURR OAK	20	1374	CEDAR ELM	15
1336	BURR OAK	16	1375	LIVE OAK	22
1337	LIVE OAK	20	1376	CEDAR ELM	13
1338	LIVE OAK	20	1377	CEDAR ELM	14
1339	LIVE OAK	22			

TREES WERE SURVEYED IN MAY 2022

OVERALL SHEET NOTE: THIS SHEET IS FOR REFERENCE ONLY. SEE DETAILED EXISTING CONDITIONS SHEETS FOR CLARITY AND ADDITIONAL INFORMATION.

- NOTES:**
- EXISTING CONDITIONS SURVEY PREPARED BY CHIAPPARRAL PROFESSIONAL LAND SURVEYING ON MAY 23, 2022.
 - AREAS OUTSIDE THE "LIMITS OF SURVEY" WERE PREPARED WITHOUT THE BENEFIT OF A DESIGN SURVEY. ALL EXISTING IMPROVEMENTS AND TOPOGRAPHIC ELEVATIONS OUTSIDE THE "LIMITS OF SURVEY" WERE LOCATED USING RECORD CITY MAPS, GIS INFORMATION AND PHOTOGRAPHS. LOCATIONS OF EXISTING UTILITIES, SOME OF WHICH MAY NOT BE SHOWN, COULD IMPACT CONSTRUCTION MEANS AND METHODS.
 - ONLY VISIBLE IMPROVEMENTS & UTILITIES WERE PROVIDED FROM SURVEY (THE SURVEYOR/ENGINEER HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES). LOCATIONS OF EXISTING UTILITIES, SOME OF WHICH MAY NOT BE SHOWN, COULD IMPACT CONSTRUCTION MEANS AND METHODS. CONTRACTOR TO VERIFY ALL EXISTING UTILITIES VERTICALLY AND HORIZONTALLY PRIOR TO BID & CONSTRUCTION, AND SHALL NOTIFY THE ENGINEER IMMEDIATELY OF ANY DISCREPANCIES. THE CONTRACTOR TO CONTACT THE CITY OF AUSTIN "ONE CALL" SYSTEM @ 811, OR THE OWNER OF EACH INDIVIDUAL UTILITY FOR ASSISTANCE IN DETERMINING EXISTING UTILITY LOCATIONS.
 - THE SIZE AND LOCATION OF UTILITY STRUCTURES, (IF SHOWN), MAY BE EXAGGERATED FOR GRAPHICAL CLARITY. THE SURVEY SHOWS FIELD MEASURED SIZES AND DEPTHS AS OBSERVED FROM GROUND LEVEL OPENINGS.
 - REFERENCE COVER SHEET FOR ADDITIONAL SITE INFORMATION.
 - LIMITS OF CONSTRUCTION ARE SHOWN ON THE EROSION AND SEDIMENTATION CONTROL PLAN.

NOT AUTHORIZED FOR CONSTRUCTION PRIOR TO FORMAL CITY AND MUNICIPAL UTILITY DISTRICT APPROVAL

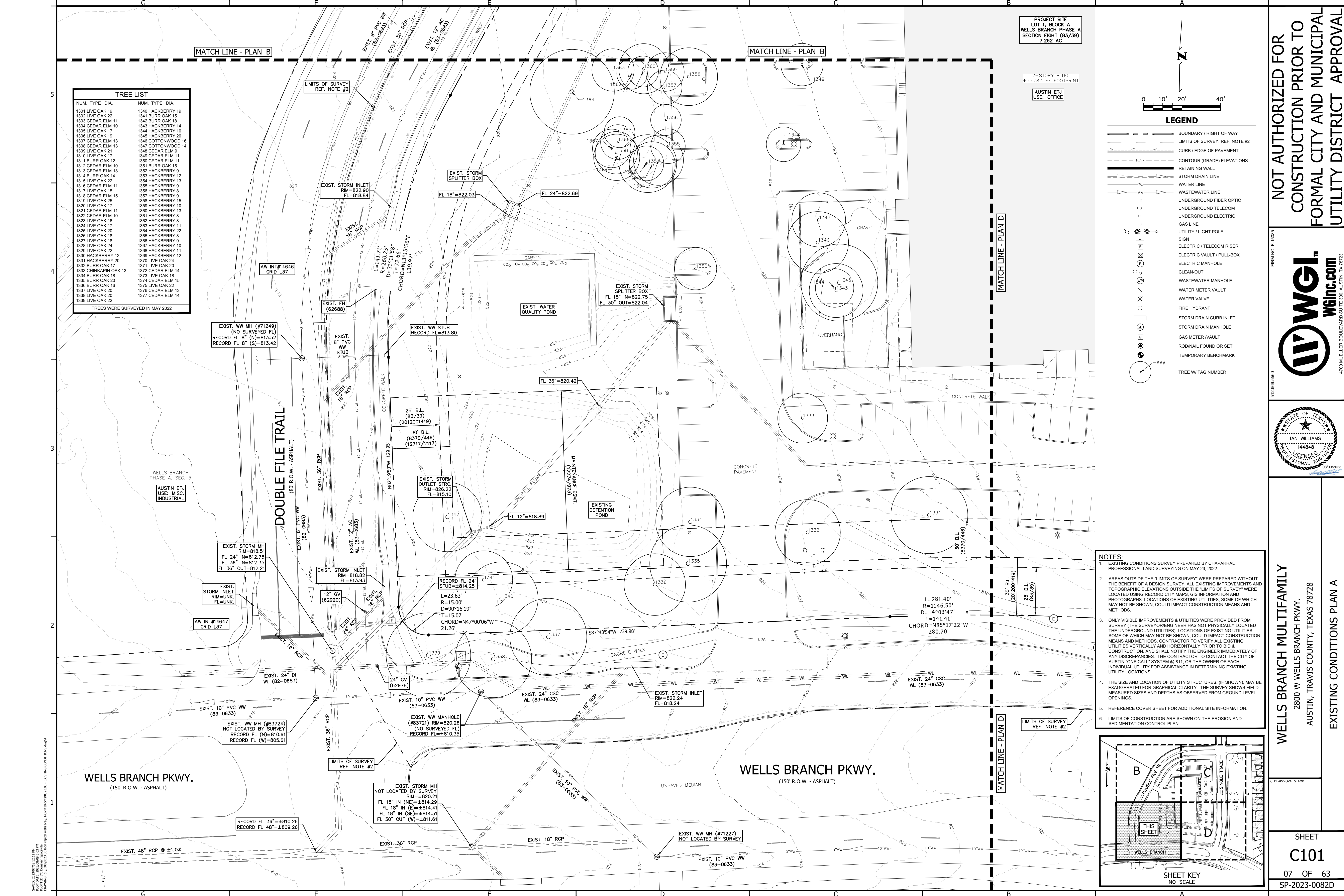
WELLS BRANCH MULTIFAMILY
 2800 W WELLS BRANCH PKWY.
 AUSTIN, TRAVIS COUNTY, TEXAS 78728

OVERALL EXISTING CONDITIONS

SHEET
C100
 06 OF 63
 SP-2023-0082D

WGL
 WGLinc.com
 4700 MUELLER BOULEVARD SUITE 300, AUSTIN, TX 78723
 512.669.5580

STATE OF TEXAS
 IAN WILLIAMS
 LICENSED PROFESSIONAL ENGINEER
 08/03/2023



PROJECT SITE
 LOT 1, BLOCK A
 WELLS BRANCH PHASE A
 SECTION EIGHT (83/39)
 7.262 AC

2-STORY BLDG.
 ±55,343 SF FOOTPRINT

AUSTIN ETJ
 USE: OFFICE

0 10' 20' 40'

LEGEND

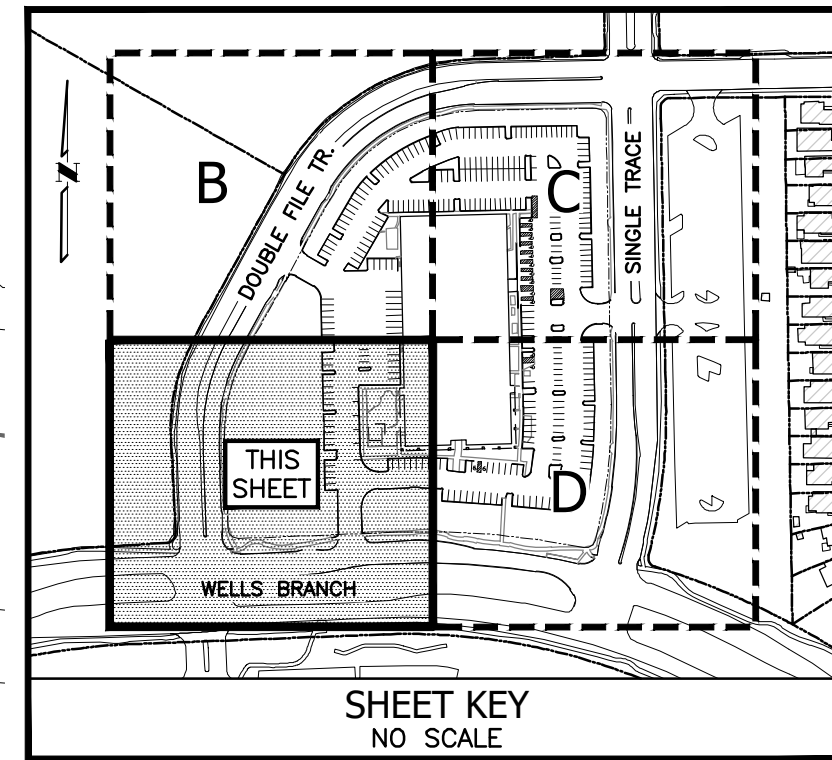
- BOUNDARY / RIGHT OF WAY
- LIMITS OF SURVEY, REF. NOTE #2
- CURB / EDGE OF PAVEMENT
- 8.37' CONTOUR (GRADE) ELEVATIONS
- RETAINING WALL
- STORM DRAIN LINE
- WATER LINE
- WASTEWATER LINE
- UNDERGROUND FIBER OPTIC
- UNDERGROUND TELECOM
- UNDERGROUND ELECTRIC
- GAS LINE
- UTILITY / LIGHT POLE
- SIGN
- ELECTRIC / TELECOM RISER
- ELECTRIC VAULT / PULL-BOX
- ELECTRIC MANHOLE
- CLEAN-OUT
- WASTEWATER MANHOLE
- WATER METER VAULT
- WATER VALVE
- FIRE HYDRANT
- STORM DRAIN CURB INLET
- STORM DRAIN MANHOLE
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- ROD/NAIL FOUND OR SET
- TEMPORARY BENCHMARK
- TREE W/ TAG NUMBER

TREE LIST

NUM.	TYPE	DIA.	NUM.	TYPE	DIA.
1301	LIVE OAK	19	1340	HACKBERRY	19
1302	LIVE OAK	22	1341	BURR OAK	15
1303	CEDAR ELM	11	1342	BURR OAK	18
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1305	LIVE OAK	17	1344	HACKBERRY	10
1306	LIVE OAK	19	1345	HACKBERRY	20
1307	CEDAR ELM	13	1346	COTTONWOOD	16
1308	CEDAR ELM	13	1347	COTTONWOOD	14
1309	LIVE OAK	21	1348	CEDAR ELM	9
1310	LIVE OAK	17	1349	CEDAR ELM	11
1311	BURR OAK	12	1350	CEDAR ELM	11
1312	CEDAR ELM	10	1351	BURR OAK	15
1313	CEDAR ELM	13	1352	HACKBERRY	9
1314	BURR OAK	14	1353	HACKBERRY	12
1315	LIVE OAK	22	1354	HACKBERRY	13
1316	CEDAR ELM	11	1355	HACKBERRY	9
1317	LIVE OAK	15	1356	HACKBERRY	8
1318	CEDAR ELM	15	1357	HACKBERRY	9
1319	LIVE OAK	25	1358	HACKBERRY	15
1320	LIVE OAK	17	1359	HACKBERRY	10
1321	CEDAR ELM	11	1360	HACKBERRY	13
1322	CEDAR ELM	10	1361	HACKBERRY	8
1323	LIVE OAK	16	1362	HACKBERRY	8
1324	LIVE OAK	17	1363	HACKBERRY	11
1325	LIVE OAK	20	1364	HACKBERRY	22
1326	LIVE OAK	18	1365	HACKBERRY	8
1327	LIVE OAK	18	1366	HACKBERRY	9
1328	LIVE OAK	24	1367	HACKBERRY	10
1329	LIVE OAK	22	1368	HACKBERRY	11
1330	HACKBERRY	12	1369	HACKBERRY	12
1331	HACKBERRY	20	1370	LIVE OAK	24
1332	BURR OAK	17	1371	LIVE OAK	20
1333	CHINKAPIN OAK	13	1372	CEDAR ELM	14
1334	BURR OAK	18	1373	LIVE OAK	18
1335	BURR OAK	20	1374	CEDAR ELM	15
1336	BURR OAK	16	1375	LIVE OAK	22
1337	LIVE OAK	20	1376	CEDAR ELM	13
1338	LIVE OAK	20	1377	CEDAR ELM	14
1339	LIVE OAK	22			

TREES WERE SURVEYED IN MAY 2022

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 - REFERENCE COVER SHEET FOR ADDITIONAL SITE INFORMATION.
 - LIMITS OF CONSTRUCTION ARE SHOWN ON THE EROSION AND SEDIMENTATION CONTROL PLAN.



NOT AUTHORIZED FOR CONSTRUCTION PRIOR TO FORMAL CITY AND MUNICIPAL UTILITY DISTRICT APPROVAL

FORM NO. F-10095

WGL
 WGLinc.com

4700 MUELLER BOULEVARD SUITE 300, AUSTIN, TX 78723

512.669.5860

STATE OF TEXAS
 IAN WILLIAMS
 144845
 LICENSED PROFESSIONAL ENGINEER
 08/03/2023

WELLS BRANCH MULTIFAMILY
 2800 W WELLS BRANCH PKWY.
 AUSTIN, TRAVIS COUNTY, TEXAS 78728

EXISTING CONDITIONS PLAN A

CITY APPROVAL STAMP

SHEET
C101
 07 OF 63
 SP-2023-0082D

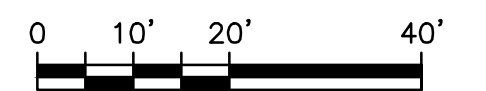
TREE LIST					
NUM.	TYPE	DIA.	NUM.	TYPE	DIA.
1301	LIVE OAK	19	1340	HACKBERRY	19
1302	LIVE OAK	22	1341	BURR OAK	15
1303	CEDAR ELM	11	1342	BURR OAK	18
1304	CEDAR ELM	10	1343	HACKBERRY	14
1305	LIVE OAK	17	1344	HACKBERRY	10
1306	LIVE OAK	19	1345	HACKBERRY	20
1307	CEDAR ELM	13	1346	COTTONWOOD	16
1308	CEDAR ELM	13	1347	COTTONWOOD	14
1309	LIVE OAK	21	1348	CEDAR ELM	9
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1311	BURR OAK	12	1350	CEDAR ELM	11
1312	CEDAR ELM	10	1351	BURR OAK	15
1313	CEDAR ELM	13	1352	HACKBERRY	9
1314	BURR OAK	14	1353	HACKBERRY	12
1315	LIVE OAK	22	1354	HACKBERRY	13
1316	CEDAR ELM	11	1355	HACKBERRY	22
1317	LIVE OAK	15	1356	HACKBERRY	9
1318	CEDAR ELM	15	1357	HACKBERRY	9
1319	LIVE OAK	25	1358	HACKBERRY	15
1320	LIVE OAK	17	1359	HACKBERRY	10
1321	CEDAR ELM	11	1360	HACKBERRY	13
1322	CEDAR ELM	10	1361	HACKBERRY	8
1323	LIVE OAK	16	1362	HACKBERRY	9
1324	LIVE OAK	17	1363	HACKBERRY	11
1325	LIVE OAK	20	1364	HACKBERRY	22
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1339	LIVE OAK	22			

TREES WERE SURVEYED IN MAY 2022

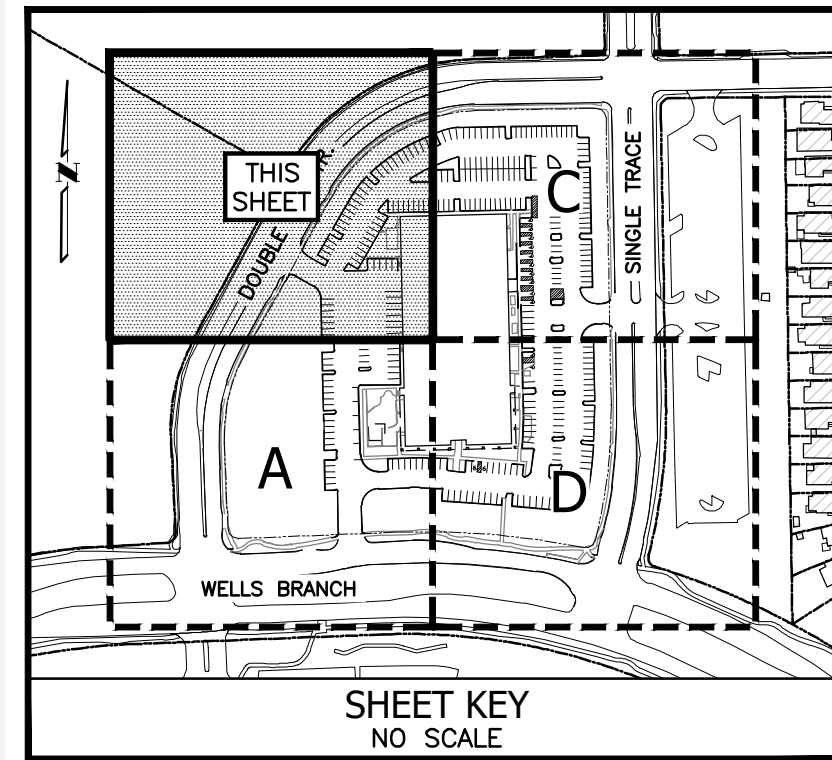
WELLS BRANCH
PHASE A, SEC. 5
AUSTIN ETJ
USE: MISC.
INDUSTRIAL

LEGEND

- BOUNDARY / RIGHT OF WAY
- LIMITS OF SURVEY, REF. NOTE #2
- CURB / EDGE OF PAVEMENT
- 8.37 --- CONTOUR (GRADE) ELEVATIONS
- RETAINING WALL
- STORM DRAIN LINE
- WATER LINE
- WASTE WATER LINE
- UNDERGROUND FIBER OPTIC
- UNDERGROUND TELECOM
- UNDERGROUND ELECTRIC
- GAS LINE
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- STORM DRAIN MANHOLE
- GAS METER / VAULT
- ROD/NAIL FOUND OR SET
- TEMPORARY BENCHMARK
- TREE W/ TAG NUMBER

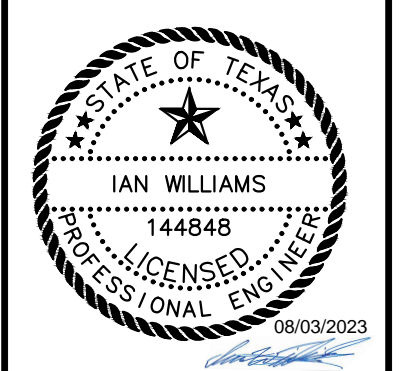


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NOT AUTHORIZED FOR
CONSTRUCTION PRIOR TO
FORMAL CITY AND MUNICIPAL
UTILITY DISTRICT APPROVAL

512.669.5560
FIRM NO. F-10095
WGI
WGInc.com
4700 MUELLER BOULEVARD SUITE 300, AUSTIN, TX 78723



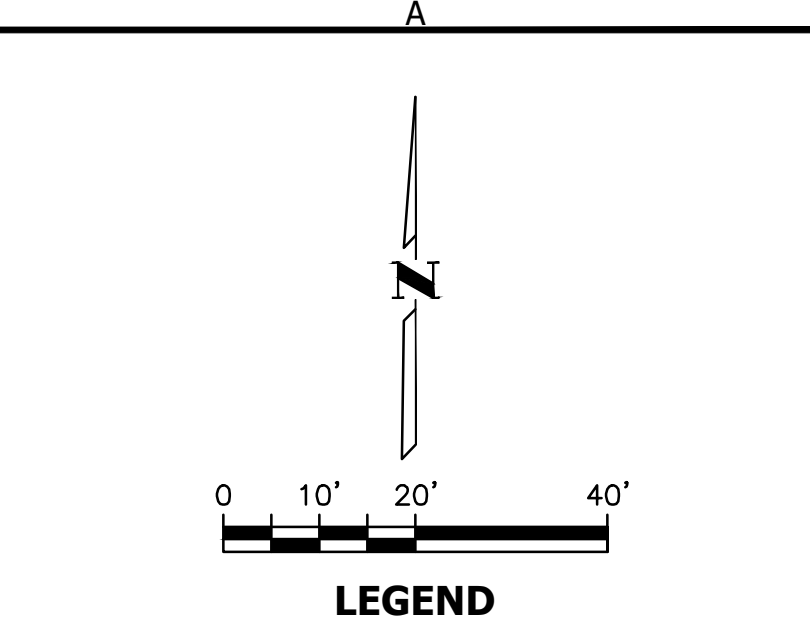
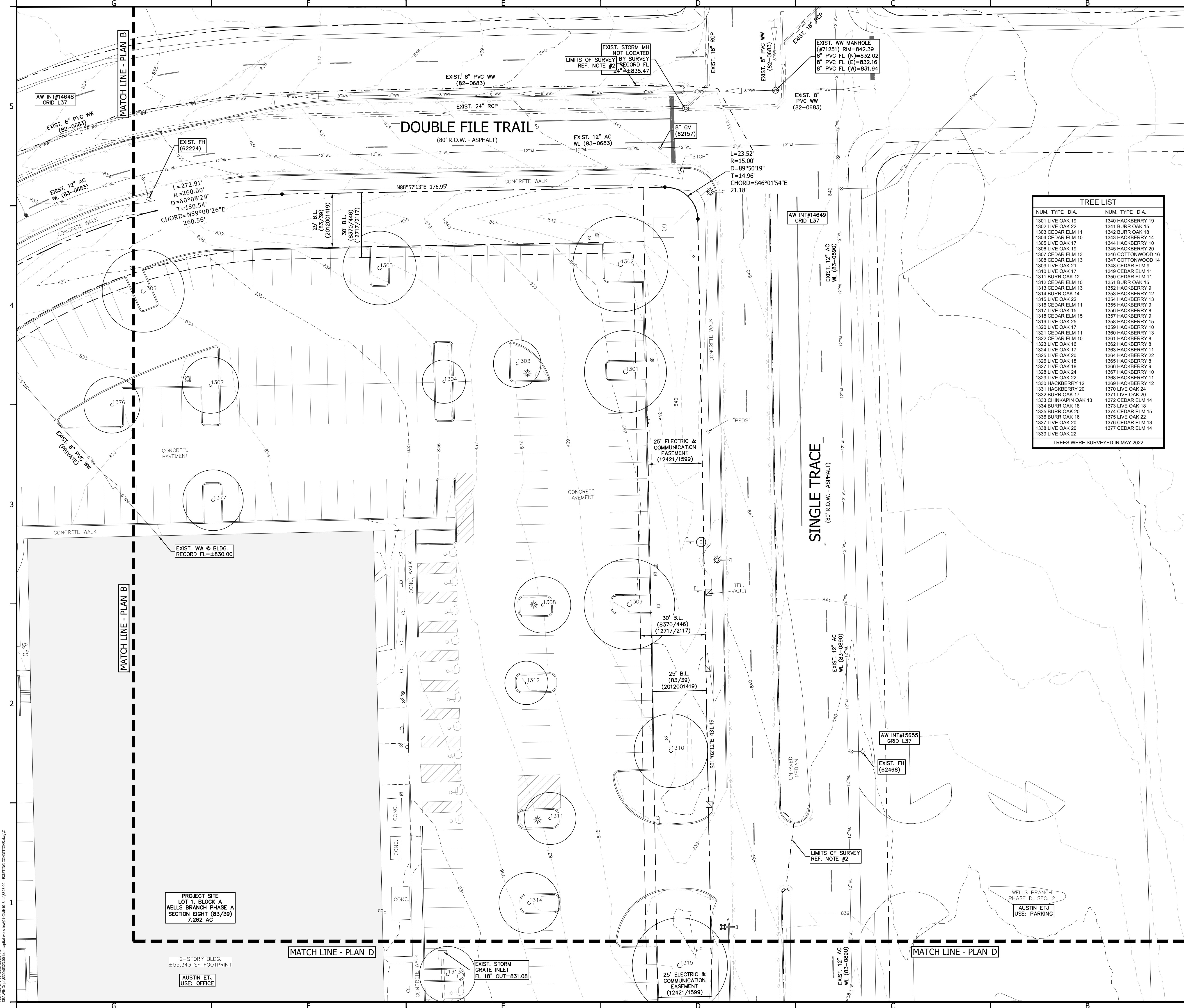
WELLS BRANCH MULTIFAMILY
2800 W WELLS BRANCH PKWY.
AUSTIN, TRAVIS COUNTY, TEXAS 78728
EXISTING CONDITIONS PLAN B

CITY APPROVAL STAMP

SHEET
C102
08 OF 63
SP-2023-0082D

SAUNDERS & ASSOCIATES, INC. 1211 19th
 AUSTIN, TX 78701
 512.476.1111
 www.saundersandassociates.com

SDMS: 20230718 12:11 PM
 AUTHORITY: D:\DWG\2023\08\SP-2023-0082D.dwg
 USER: DWG_PLOTTER

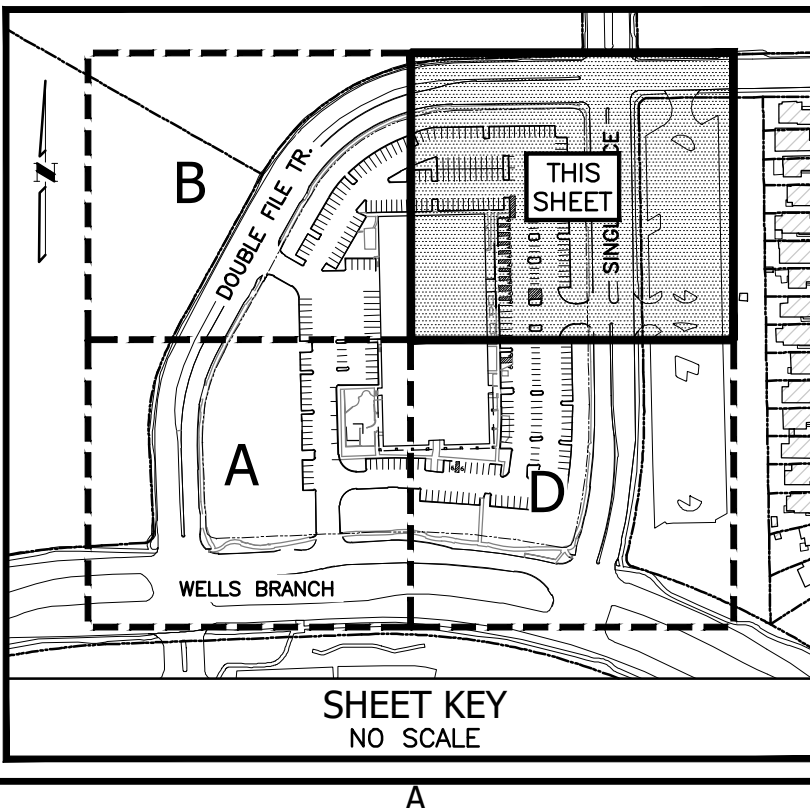


TREE LIST					
NUM.	TYPE	DIA.	NUM.	TYPE	DIA.
1301	LIVE OAK	19	1340	HACKBERRY	19
1302	LIVE OAK	22	1341	BURR OAK	15
1303	CEDAR ELM	11	1342	BURR OAK	18
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 FORMAL CITY AND MUNICIPAL
 UTILITY DISTRICT APPROVAL

FIRM NO: F-10065
WGL
 WGLinc.com
 4700 MUELLER BOULEVARD SUITE 300, AUSTIN, TX 78723

WELLS BRANCH MULTIFAMILY
 2800 W WELLS BRANCH PKWY.
 AUSTIN, TRAVIS COUNTY, TEXAS 78728

EXISTING CONDITIONS PLAN C

CITY APPROVAL STAMP

SHEET
C103
 09 OF 63
 SP-2023-0082D

PROJECT SITE
LOT 1, BLOCK A
WELLS BRANCH PHASE A
SECTION EIGHT (83/39)
7.262 AC

AUSTIN ETJ
USE: OFFICE

2-STORY BLDG.
±55,343 SF FOOTPRINT

MATCH LINE - PLAN C

MATCH LINE - PLAN C

MATCH LINE - PLAN A

MATCH LINE - PLAN A

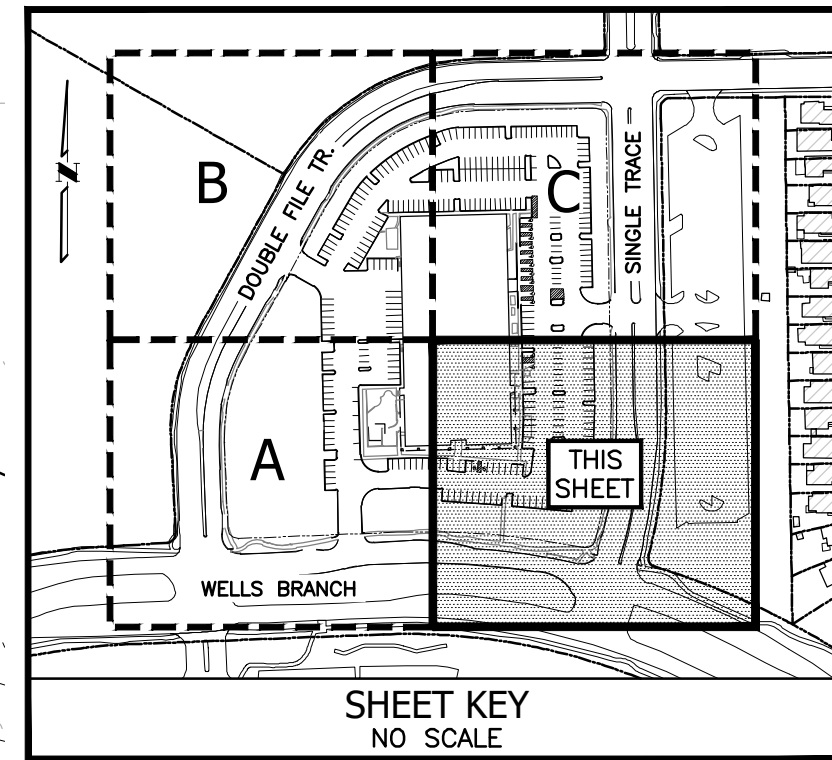
LEGEND	
	BOUNDARY / RIGHT OF WAY
	LIMITS OF SURVEY, REF. NOTE #2
	CURB / EDGE OF PAVEMENT
	CONTOUR (GRADE) ELEVATIONS
	RETAINING WALL
	STORM DRAIN LINE
	WATER LINE
	WASTEWATER LINE
	UNDERGROUND FIBER OPTIC
	UNDERGROUND TELECOM
	UNDERGROUND ELECTRIC
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	TEMPORARY BENCHMARK
	TREE W/ TAG NUMBER

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NOT AUTHORIZED FOR CONSTRUCTION PRIOR TO FORMAL CITY AND MUNICIPAL UTILITY DISTRICT APPROVAL

WELLS BRANCH MULTIFAMILY
 2800 W WELLS BRANCH PKWY.
 AUSTIN, TRAVIS COUNTY, TEXAS 78728

EXISTING CONDITIONS PLAN D

SHEET
C104
 10 OF 63
 SP-2023-0082D

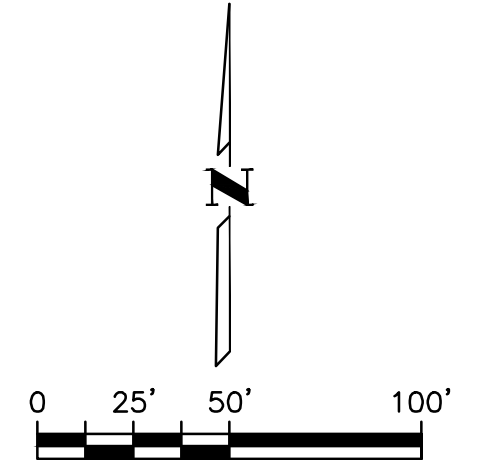
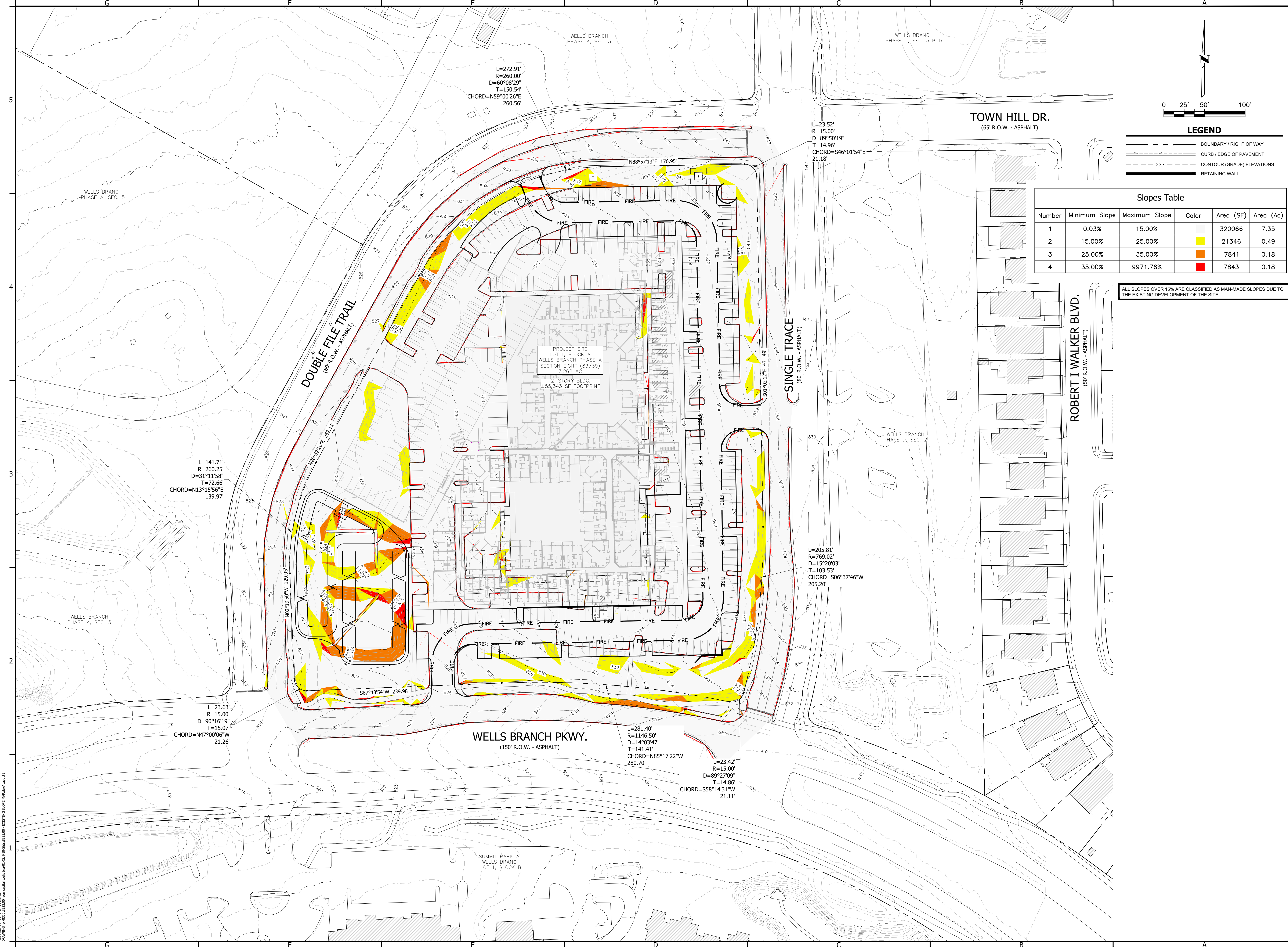
512.669.5560

WGI
WGInc.com

4700 MUELLER BOULEVARD SUITE 300, AUSTIN, TX 78723

IAN WILLIAMS
144545
LICENSED PROFESSIONAL ENGINEER
08/03/2023

SAVIDY, 2023/07/18 12:11 PM
 PLOTTED BY: DONOVAN SORRELLS
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 C:\Users\dsorrells\OneDrive\Documents\SP-2023-0082D.dwg



LEGEND

- BOUNDARY / RIGHT OF WAY
- CURB / EDGE OF PAVEMENT
- CONTOUR (GRADE) ELEVATIONS
- RETAINING WALL

Slopes Table

Number	Minimum Slope	Maximum Slope	Color	Area (SF)	Area (Ac)
1	0.03%	15.00%	White	320066	7.35
2	15.00%	25.00%	Yellow	21346	0.49
3	25.00%	35.00%	Orange	7841	0.18
4	35.00%	9971.76%	Red	7843	0.18

ALL SLOPES OVER 15% ARE CLASSIFIED AS MAN-MADE SLOPES DUE TO THE EXISTING DEVELOPMENT OF THE SITE.

L=272.91'
R=260.00'
D=60°08'29"
T=150.54'
CHORD=N59°00'26"E
260.56'

L=23.52'
R=15.00'
D=89°50'19"
T=14.96'
CHORD=S46°01'54"E
21.18'

L=141.71'
R=260.25'
D=31°11'58"
T=72.66'
CHORD=N13°15'56"E
139.97'

L=23.63'
R=15.00'
D=90°16'19"
T=15.07'
CHORD=N47°00'06"W
21.26'

L=281.40'
R=1146.50'
D=14°03'47"
T=141.41'
CHORD=N85°17'22"W
280.70'

L=23.42'
R=15.00'
D=89°27'09"
T=14.86'
CHORD=S58°14'31"W
21.11'

L=205.81'
R=769.02'
D=15°20'03"
T=103.53'
CHORD=S06°37'46"W
205.20'

WELLS BRANCH PKWY.
(150' R.O.W. - ASPHALT)

DOUBLE FILE TRAIL
(80' R.O.W. - ASPHALT)

SINGLE TRACE
(80' R.O.W. - ASPHALT)

ROBERT I WALKER BLVD.
(50' R.O.W. - ASPHALT)

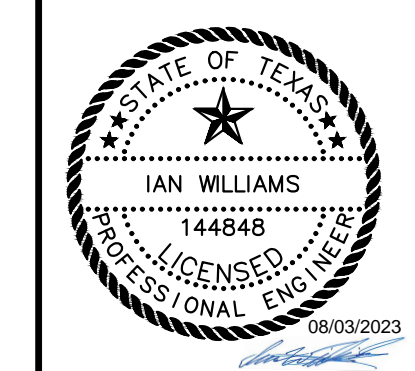
TOWN HILL DR.
(65' R.O.W. - ASPHALT)

PROJECT SITE
LOT 1, BLOCK A
WELLS BRANCH PHASE A
SECTION EIGHT (83/39)
7.262 AC
2-STORY BLDG.
±55,343 SF FOOTPRINT

NOT AUTHORIZED FOR
CONSTRUCTION PRIOR TO
FORMAL CITY AND MUNICIPAL
UTILITY DISTRICT APPROVAL

FIRM NO: F-10085

WGInc.com
4700 MUELLER BOULEVARD SUITE 300, AUSTIN, TX 78728



WELLS BRANCH MULTIFAMILY
2800 W WELLS BRANCH PKWY.
AUSTIN, TRAVIS COUNTY, TEXAS 78728

EXISTING SLOPES MAP

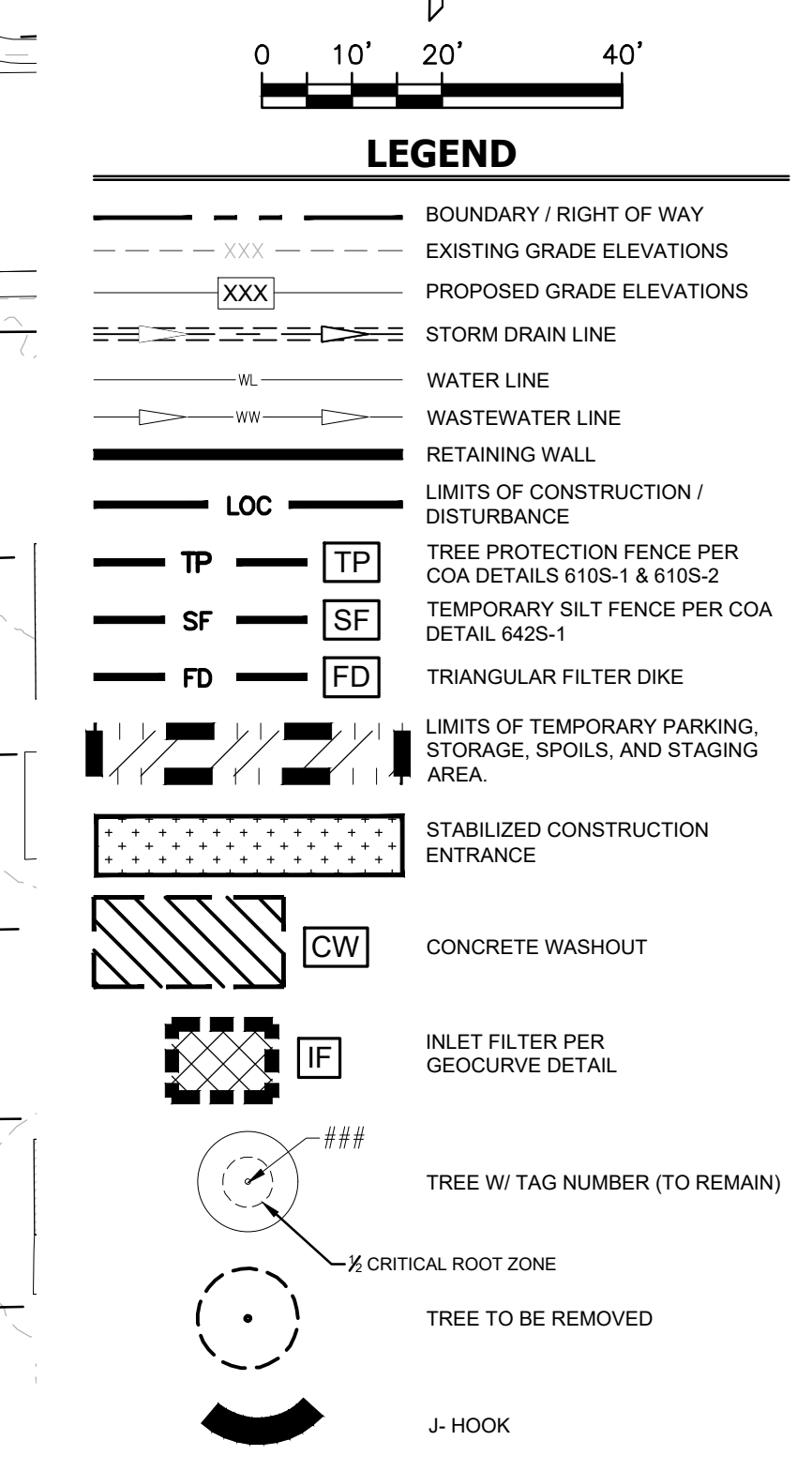
CITY APPROVAL STAMP

SHEET
C105
11 OF 63
SP-2023-0082D

SANITARY: 2023/07/18 8:37 PM
 PLOTTED BY: Doreen Slocum
 C:\Users\dwilkins\OneDrive\Documents\GIS\Projects\2023\SP-2023-0082D\Output\Map\SP-2023-0082D-EXISTING_SLOPES_MAP.dwg(1/1)

TREE LIST		
NUM. TYPE DIA.	NUM. TYPE DIA.	NUM. TYPE DIA.
1001 LIVE OAK 19	1340 HACKBERRY 19	
1302 LIVE OAK 22	1341 BURR OAK 15	
1004 CEDAR ELM 14	1042 BURR OAK 10	
1005 LIVE OAK 19	1043 HACKBERRY 14	
1006 LIVE OAK 19	1044 HACKBERRY 10	
1007 CEDAR ELM 13	1045 HACKBERRY 20	
1008 CEDAR ELM 13	1046 GOTTON WOOD 16	
1009 LIVE OAK 19	1047 GOTTON WOOD 14	
1010 LIVE OAK 19	1048 CEDAR ELM 14	
1310 LIVE OAK 17	1049 CEDAR ELM 14	
1311 LIVE OAK 17	1350 CEDAR ELM 11	
1312 LIVE OAK 22	1050 BURR OAK 15	
1313 LIVE OAK 22	1051 HACKBERRY 9	
1314 LIVE OAK 22	1052 HACKBERRY 9	
1315 LIVE OAK 22	1053 HACKBERRY 12	
1316 LIVE OAK 22	1054 HACKBERRY 10	
1317 LIVE OAK 22	1055 HACKBERRY 9	
1318 CEDAR ELM 15	1056 HACKBERRY 9	
1319 LIVE OAK 25	1057 HACKBERRY 16	
1320 LIVE OAK 12	1058 HACKBERRY 10	
1321 LIVE OAK 17	1059 HACKBERRY 10	
1322 LIVE OAK 17	1060 HACKBERRY 10	
1323 LIVE OAK 18	1061 HACKBERRY 9	
1324 LIVE OAK 17	1062 HACKBERRY 11	
1325 LIVE OAK 18	1063 HACKBERRY 10	
1326 LIVE OAK 18	1064 HACKBERRY 9	
1327 LIVE OAK 18	1065 HACKBERRY 9	
1328 LIVE OAK 24	1066 HACKBERRY 10	
1329 LIVE OAK 22	1067 HACKBERRY 11	
1330 HACKBERRY 12	1068 HACKBERRY 12	
1331 HACKBERRY 10	1069 LIVE OAK 24	
1332 BURR OAK 17	1070 LIVE OAK 20	
1333 CHINA PINE OAK 19	1071 LIVE OAK 20	
1334 BURR OAK 16	1072 CEDAR ELM 14	
1335 BURR OAK 16	1073 LIVE OAK 10	
1336 BURR OAK 16	1074 LIVE OAK 22	
1337 LIVE OAK 20	1075 LIVE OAK 22	
1338 LIVE OAK 20	1076 CEDAR ELM 10	
1339 LIVE OAK 22	1077 CEDAR ELM 10	

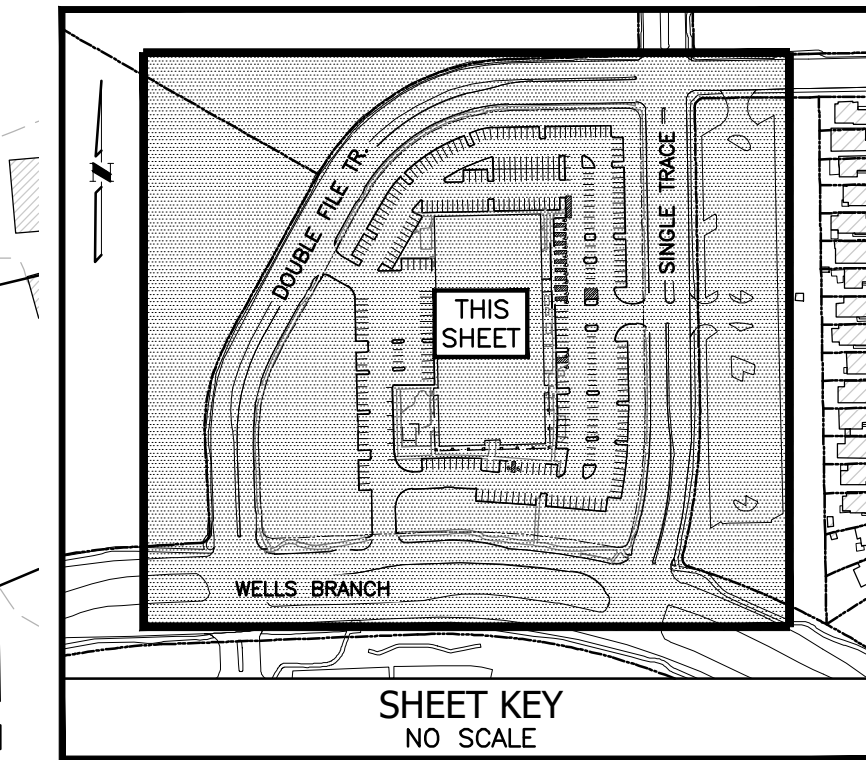
EROSION CONTROL QUANTITIES	
LIMITS OF CONSTRUCTION	± 7.26 ACRES
TOTAL LENGTH OF SILT FENCE	2,137 LF
TOTAL LENGTH OF TREE PROTECTION	887 LF
TOTAL NUMBER OF INLET PROTECTION	14 EACH
STABILIZED CONSTRUCTION ENTRANCE	2 EACH
TOTAL LENGTH OF MULCH SOCK	0 LF
REVEGETATION MATTING	±0 SY



NOTE: J-HOOKS ARE TO BE EVERY 100'

CAUTION: CONTRACTOR TO VERIFY ALL EXISTING UTILITIES VERTICALLY AND HORIZONTALLY PRIOR TO CONSTRUCTION. CONTRACTOR TO NOTIFY THE ENGINEER IMMEDIATELY OF ANY DISCREPANCIES.

- NOTES:**
- ENVIRONMENTAL INSPECTOR HAS THE AUTHORITY TO ADD OR MODIFY EROSION/SEDIMENTATION CONTROLS ON SITE TO KEEP PROJECT IN COMPLIANCE WITH THE CITY OF AUSTIN RULES AND REGULATIONS.
 - PURSUANT TO 14-11-131 OF THE CITY CODE, THE CONTRACTOR MAY NOT BLOCK, DIRECT, IMPEDE, OR REROUTE PEDESTRIAN AND VEHICULAR TRAFFIC, NOR PLACE A BARRICADE OR OTHER TRAFFIC CONTROL DEVICE IN A RIGHT-OF-WAY, WITHOUT FIRST OBTAINING A TEMPORARY USE OF RIGHT-OF-WAY PERMIT FROM THE DEPARTMENT OF PUBLIC WORKS AND TRANSPORTATION.
 - THE CONTRACTOR SHALL COORDINATE WITH THE DEPARTMENT OF PUBLIC WORKS AND TRANSPORTATION PRIOR TO PRECONSTRUCTION MEETING AND INSTALLATION OF EROSION & SEDIMENTATION CONTROLS.
 - THE CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS THAT ARE REQUIRED TO COMPLY WITH SECTIONS 15-12-161 THROUGH 15-12-181 OF THE CITY CODE REGARDING EXCAVATION IN PUBLIC RIGHT-OF-WAY.
 - CONTRACTOR SHALL UTILIZE DUST CONTROL MEASURES DURING SITE CONSTRUCTION SUCH AS BRIGATION TRUCKS AND MULCHING AS PER ECM 1.4.5(A), OR AS DIRECTED BY THE ENVIRONMENTAL INSPECTOR.
 - CONTRACTOR SHALL CLEAN UP SPOILS THAT MIGRATE INTO EXISTING RIGHT-OF-WAY A MINIMUM OF ONCE PER DAY.
 - CONTRACTOR TO INSTALL TEMPORARY CHAIN LINK FENCE FOR PEDESTRIAN SAFETY PER THE OWNER/DEVELOPER'S DIRECTION.
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 - PER LDC 25-8-323(C), FOR AREAS ON THE SITE THAT ARE TO REMAIN PERVIOUS AFTER DEVELOPMENT, ANY SOILS THAT ARE COMPACTED DURING SITE GRADING AND CONSTRUCTION OPERATIONS MUST BE DECOMPACTED IN COMPLIANCE WITH THE ECM AND IN COMPLIANCE WITH SSM 6615.



NOT AUTHORIZED FOR CONSTRUCTION PRIOR TO FORMAL CITY AND MUNICIPAL UTILITY DISTRICT APPROVAL
 FIRM NO. F-10085
WGL
 WGLinc.com
 4700 MUELLER BOULEVARD SUITE 300, AUSTIN, TX 78723
 STATE OF TEXAS
 IAN WILLIAMS
 144545
 LICENSED PROFESSIONAL ENGINEER
 08/03/2023
 WELLS BRANCH MULTIFAMILY
 2800 W WELLS BRANCH PKWY.
 AUSTIN, TRAVIS COUNTY, TEXAS 78728
 CITY APPROVAL STAMP
 SHEET C200
 12 OF 63
 SP-2023-0082D
 OVERALL EROSION AND SEDIMENTATION CONTROLS

TREE LIST	
NUM. TYPE DIA.	NUM. TYPE DIA.
1301 LIVE OAK 19	1340 HACKBERRY 19
1302 LIVE OAK 22	1341 BURR OAK 15
1303 CEDAR ELM 14	1342 BURR OAK 10
1304 CEDAR ELM 16	1343 HACKBERRY 14
1305 LIVE OAK 15	1344 HACKBERRY 10
1306 LIVE OAK 19	1345 HACKBERRY 20
1307 CEDAR ELM 13	1346 GOTTENWOOD 16
1308 CEDAR ELM 13	1347 GOTTENWOOD 14
1309 LIVE OAK 17	1348 CEDAR ELM 14
1310 LIVE OAK 17	1349 CEDAR ELM 14
1311 BURR OAK 12	1350 CEDAR ELM 11
1312 CEDAR ELM 14	1351 BURR OAK 15
1313 CEDAR ELM 13	1352 HACKBERRY 9
1314 BURR OAK 14	1353 HACKBERRY 12
1315 LIVE OAK 22	1354 HACKBERRY 10
1316 CEDAR ELM 14	1355 HACKBERRY 9
1317 LIVE OAK 15	1356 HACKBERRY 16
1318 CEDAR ELM 15	1357 HACKBERRY 10
1319 LIVE OAK 25	1358 HACKBERRY 10
1320 LIVE OAK 12	1359 HACKBERRY 10
1321 CEDAR ELM 14	1360 HACKBERRY 10
1322 CEDAR ELM 10	1361 HACKBERRY 9
1323 LIVE OAK 16	1362 HACKBERRY 9
1324 LIVE OAK 17	1363 HACKBERRY 11
1325 LIVE OAK 18	1364 HACKBERRY 22
1326 LIVE OAK 18	1365 HACKBERRY 9
1327 LIVE OAK 18	1366 HACKBERRY 9
1328 LIVE OAK 24	1367 HACKBERRY 10
1329 LIVE OAK 22	1368 HACKBERRY 11
1330 HACKBERRY 12	1369 HACKBERRY 12
1331 HACKBERRY 20	1370 LIVE OAK 20
1332 BURR OAK 17	1371 LIVE OAK 20
1333 CHINA PINE OAK 19	1372 CEDAR ELM 14
1334 BURR OAK 10	1373 LIVE OAK 10
1335 BURR OAK 20	1374 CEDAR ELM 15
1336 BURR OAK 16	1375 LIVE OAK 22
1337 LIVE OAK 20	1376 CEDAR ELM 10
1338 LIVE OAK 20	1377 CEDAR ELM 10
1339 LIVE OAK 22	

TREES WERE SURVEYED IN MAY 2022

EROSION CONTROL QUANTITIES	
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REVEGETATION MATTING	±0 SY

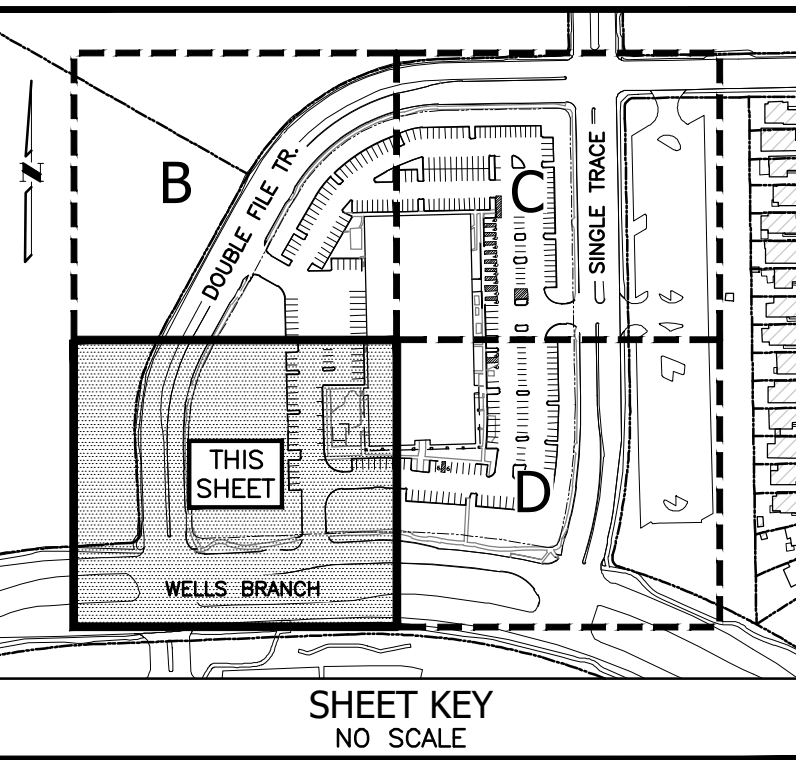
LEGEND

- BOUNDARY / RIGHT OF WAY
- XXX EXISTING GRADE ELEVATIONS
- XXX PROPOSED GRADE ELEVATIONS
- STORM DRAIN LINE
- WATER LINE
- WASTEWATER LINE
- RETAINING WALL
- LIMITS OF CONSTRUCTION / DISTURBANCE
- LOC
- TP TREE PROTECTION FENCE PER COA DETAILS 610S-1 & 610S-2
- SF TEMPORARY SILT FENCE PER COA DETAIL 642S-1
- FD TRIANGULAR FILTER DIKE
- LIMITS OF TEMPORARY PARKING, STORAGE, SPOILS, AND STAGING AREA
- STABILIZED CONSTRUCTION ENTRANCE
- CW CONCRETE WASHOUT
- IF INLET FILTER PER GEORCURE DETAIL
- TREE W/ TAG NUMBER (TO REMAIN)
- CRITICAL ROOT ZONE
- TREE TO BE REMOVED
- J-HOOK

NOTE: J-HOOKS ARE TO BE EVERY 100'

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NOT AUTHORIZED FOR CONSTRUCTION PRIOR TO FORMAL CITY AND MUNICIPAL UTILITY DISTRICT APPROVAL

WELLS BRANCH MULTIFAMILY
 2800 W WELLS BRANCH PKWY.
 AUSTIN, TRAVIS COUNTY, TEXAS 78728

EROSION AND SEDIMENTATION CONTROLS PLAN A

SHEET C201
 13 OF 63
 SP-2023-0082D

WGL INC. 4700 MUELLER BOULEVARD SUITE 300, AUSTIN, TX 78723
 512.669.5580
 IAN WILLIAMS
 LICENSED PROFESSIONAL ENGINEER
 144545
 08/03/2023

EROSION CONTROL QUANTITIES

LIMITS OF CONSTRUCTION	± 7.26 ACRES
TOTAL LENGTH OF SILT FENCE	2,137 LF
TOTAL LENGTH OF TREE PROTECTION	887 LF
TOTAL NUMBER OF INLET PROTECTION	14 EACH
STABILIZED CONSTRUCTION ENTRANCE	2 EACH
TOTAL LENGTH OF MULCH SOCK	0 LF
REVEGETATION MATTING	±0 SY

TREE LIST	
NUM. TYPE DIA.	NUM. TYPE DIA.
4904 LIVE OAK 14	1340 HACKBERRY 19
1302 LIVE OAK 22	1341 BURR OAK 15
4909 CEDAR ELM 14	4342 BURR OAK 10
4904 CEDAR ELM 10	4343 HACKBERRY 14
4905 LIVE OAK 17	4344 HACKBERRY 10
4906 LIVE OAK 19	4345 HACKBERRY 20
4907 CEDAR ELM 10	4346 GOTTENWOOD 16
4908 CEDAR ELM 10	4347 GOTTENWOOD 14
4909 LIVE OAK 21	4348 CEDAR ELM 9
1310 LIVE OAK 17	4349 CEDAR ELM 14
4911 BURR OAK 12	1350 CEDAR ELM 11
4912 CEDAR ELM 10	4351 BURR OAK 15
4913 CEDAR ELM 10	4352 HACKBERRY 10
4914 BURR OAK 14	4353 HACKBERRY 12
1315 LIVE OAK 22	4354 HACKBERRY 10
4916 CEDAR ELM 14	4355 HACKBERRY 9
4917 LIVE OAK 15	4356 HACKBERRY 9
1318 CEDAR ELM 15	4357 HACKBERRY 9
4919 LIVE OAK 25	4358 HACKBERRY 10
4920 LIVE OAK 19	4359 HACKBERRY 10
4921 CEDAR ELM 14	4360 HACKBERRY 10
4922 CEDAR ELM 10	4361 HACKBERRY 10
4923 LIVE OAK 16	4362 HACKBERRY 9
1324 LIVE OAK 17	4363 HACKBERRY 14
4925 LIVE OAK 19	4364 HACKBERRY 22
1326 LIVE OAK 18	4365 HACKBERRY 10
1327 LIVE OAK 18	4366 HACKBERRY 10
1328 LIVE OAK 24	4367 HACKBERRY 10
4928 LIVE OAK 22	4368 HACKBERRY 14
1330 HACKBERRY 12	4369 HACKBERRY 12
4931 HACKBERRY 20	4370 LIVE OAK 24
4932 BURR OAK 17	4371 LIVE OAK 20
4933 BURR OAK 10	4372 CEDAR ELM 14
4934 BURR OAK 10	4373 LIVE OAK 16
4935 BURR OAK 20	4374 CEDAR ELM 15
1336 BURR OAK 16	4375 LIVE OAK 25
1337 LIVE OAK 20	4376 CEDAR ELM 10
1338 LIVE OAK 20	4377 CEDAR ELM 14
1339 LIVE OAK 22	

TREES WERE SURVEYED IN MAY 2022

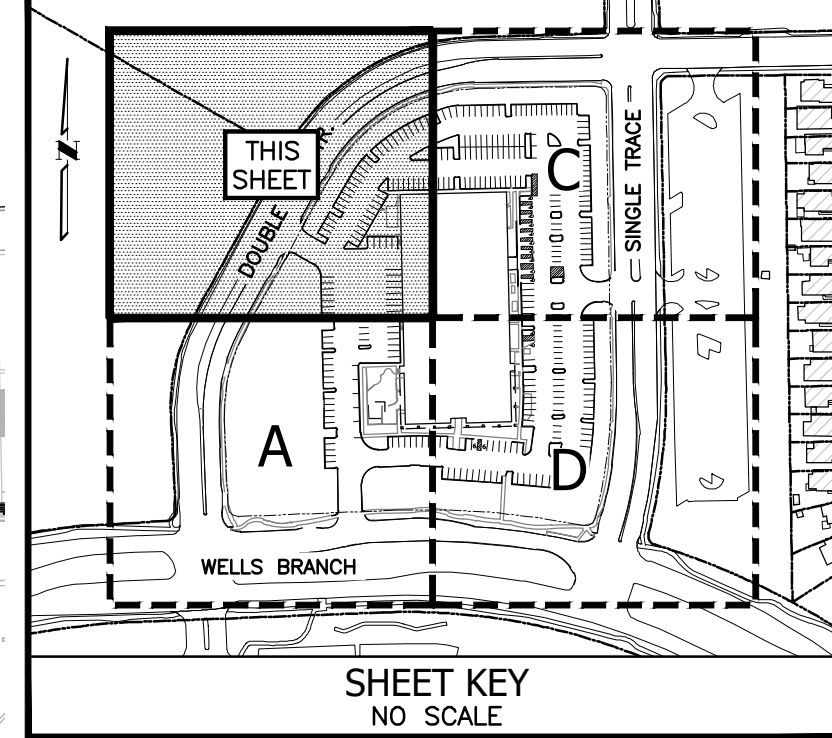
LEGEND

- BOUNDARY / RIGHT OF WAY
- EXISTING GRADE ELEVATIONS
- PROPOSED GRADE ELEVATIONS
- STORM DRAIN LINE
- WATER LINE
- WASTEWATER LINE
- RETAINING WALL
- LOC LIMITS OF CONSTRUCTION / DISTURBANCE
- TP TREE PROTECTION FENCE PER COA DETAILS 610S-1 & 610S-2
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- CW CONCRETE WASHOUT
- IF INLET FILTER PER GEOCURVE DETAIL
- ### TREE W/ TAG NUMBER (TO REMAIN)
- CRITICAL ROOT ZONE
- TREE TO BE REMOVED
- J-HOOK

NOTE: J-HOOKS ARE TO BE EVERY 100'

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NOT AUTHORIZED FOR CONSTRUCTION PRIOR TO FORMAL CITY AND MUNICIPAL UTILITY DISTRICT APPROVAL

FIRM NO. F-10095

WGL
WGInc.com

4700 MUELLER BOULEVARD SUITE 300, AUSTIN, TX 78723

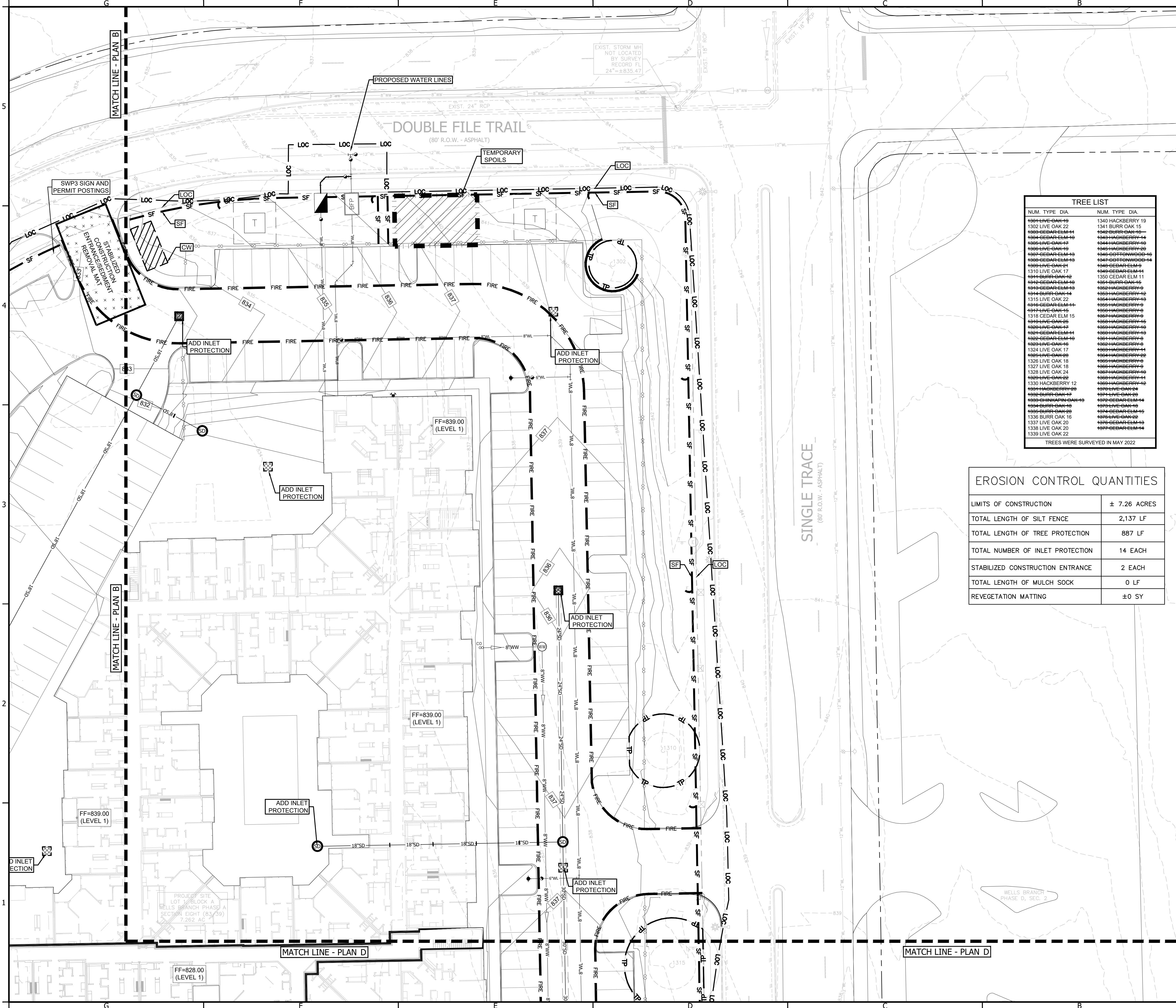
WELLS BRANCH MULTIFAMILY
2800 W WELLS BRANCH PKWY.
AUSTIN, TRAVIS COUNTY, TEXAS 78728

EROSION AND SEDIMENTATION CONTROLS PLAN B

CITY APPROVAL STAMP

SHEET
C202
14 OF 63
SP-2023-0082D

SAUNDY, 2023/07/18 04:14 PM
 PLOTTED BY: DONOVAN SCOTT
 C:\Users\saundy\OneDrive\Documents\2023\SP-2023-0082D\EROSION AND SEDIMENTATION CONTROLS PLAN B



LEGEND

- BOUNDARY / RIGHT OF WAY
- XXX EXISTING GRADE ELEVATIONS
- PROPOSED GRADE ELEVATIONS
- STORM DRAIN LINE
- WL WATER LINE
- WW WASTEWATER LINE
- RETAINING WALL
- LOC LIMITS OF CONSTRUCTION / DISTURBANCE
- TP TREE PROTECTION FENCE PER COA DETAILS 610S-1 & 610S-2
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- TREE W/ TAG NUMBER (TO REMAIN)
- CRITICAL ROOT ZONE
- TREE TO BE REMOVED
- J-HOOK

TREE LIST

NUM.	TYPE	DIA.	NUM.	TYPE	DIA.
1302	LIVE OAK	22	1340	HACKBERRY	19
1303	CE-DAR	ELM-14	1341	BURR OAK	15
1304	CE-DAR	ELM-10	1342	BURR OAK	10
1305	LIVE OAK	19	1343	HACKBERRY	14
1306	LIVE OAK	16	1344	HACKBERRY	10
1307	CE-DAR	ELM-13	1345	HACKBERRY	20
1308	CE-DAR	ELM-10	1346	GOTTENWOOD	10
1309	LIVE OAK	24	1347	GOTTENWOOD	14
1310	LIVE OAK	17	1348	CE-DAR	ELM-9
1311	BURR OAK	12	1349	CE-DAR	ELM-14
1312	CE-DAR	ELM-10	1350	CE-DAR	ELM-11
1313	BURR OAK	14	1351	BURR OAK	15
1314	LIVE OAK	15	1352	BURR OAK	15
1315	LIVE OAK	22	1353	HACKBERRY	12
1316	CE-DAR	ELM-14	1354	HACKBERRY	10
1317	LIVE OAK	17	1355	HACKBERRY	9
1318	CE-DAR	ELM-15	1356	HACKBERRY	9
1319	LIVE OAK	15	1357	HACKBERRY	12
1320	LIVE OAK	25	1358	HACKBERRY	10
1321	LIVE OAK	17	1359	HACKBERRY	10
1322	LIVE OAK	18	1360	HACKBERRY	10
1323	LIVE OAK	18	1361	HACKBERRY	10
1324	LIVE OAK	17	1362	HACKBERRY	10
1325	LIVE OAK	18	1363	HACKBERRY	10
1326	LIVE OAK	18	1364	HACKBERRY	10
1327	LIVE OAK	18	1365	HACKBERRY	10
1328	LIVE OAK	24	1366	HACKBERRY	10
1329	LIVE OAK	22	1367	HACKBERRY	10
1330	LIVE OAK	20	1368	HACKBERRY	14
1331	HACKBERRY	12	1369	HACKBERRY	12
1332	HACKBERRY	12	1370	HACKBERRY	10
1333	HACKBERRY	12	1371	HACKBERRY	10
1334	HACKBERRY	12	1372	HACKBERRY	14
1335	HACKBERRY	12	1373	HACKBERRY	14
1336	BURR OAK	16	1374	CE-DAR	ELM-15
1337	LIVE OAK	20	1375	LIVE OAK	22
1338	LIVE OAK	20	1376	CE-DAR	ELM-14
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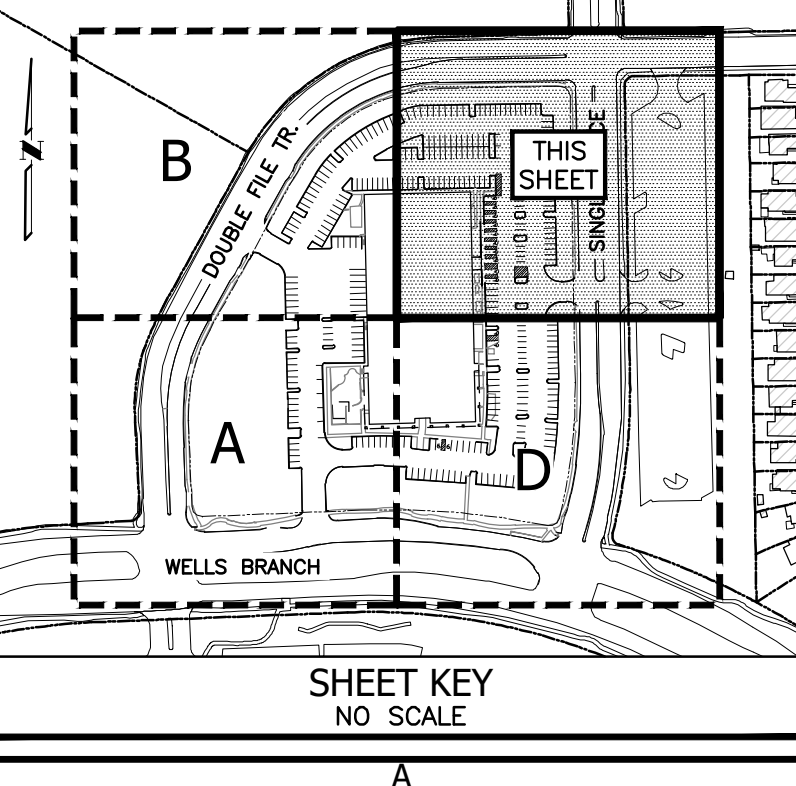
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 - PURSUANT TO 14-11-131 OF THE CITY CODE, THE CONTRACTOR MAY NOT BLOCK, DIRECT, IMPEDE, OR REROUTE PEDESTRIAN AND VEHICULAR TRAFFIC. NOR PLACE A BARRICADE OR OTHER TRAFFIC CONTROL DEVICE IN A RIGHT-OF-WAY, WITHOUT FIRST OBTAINING A TEMPORARY USE OF RIGHT-OF-WAY PERMIT FROM THE DEPARTMENT OF PUBLIC WORKS AND TRANSPORTATION.
 - THE CONTRACTOR SHALL COORDINATE FOR RIGHT-OF-WAY PERMIT PRIOR TO PRECONSTRUCTION MEETING AND INSTALLATION OF EROSION & SEDIMENTATION CONTROLS.
 - THE CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS THAT ARE REQUIRED TO COMPLY WITH SECTIONS 15-12-161 THROUGH 15-12-181 OF THE CITY CODE REGARDING EXCAVATION IN PUBLIC RIGHT-OF-WAY.
 - 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.
 - CONTRACTOR SHALL CLEAN UP SPOILS THAT MIGRATE INTO EXISTING RIGHT-OF-WAY A MINIMUM OF ONCE PER DAY.
 - CONTRACTOR TO INSTALL TEMPORARY CHAIN LINK FENCE FOR PEDESTRIAN SAFETY PER THE OWNER/DEVELOPER'S DIRECTION.
 - ALL STORM WATER LEAVING THE SITE DURING CONSTRUCTION ACTIVITIES MUST PASS THROUGH THE SILT FENCE OR ROCK BERM(S).
 - SILT FENCE TYPE AND INSTALLATION SHALL COMPLY WITH ECM 1.4.2(G).
 - REFERENCE "GENERAL NOTES" SHEETS FOR EROSION CONTROL NOTES, SEQUENCE OF CONSTRUCTION AND TREE CARE NOTES.
 - IF DISTURBED AREA IS NOT TO BE WORKED ON FOR MORE THAN 14 DAYS, DISTURBED AREA NEEDS TO BE STABILIZED BY REVEGETATION, MULCH, TARP OR REVEGETATION MATTING.
 - CONTRACTOR IS RESPONSIBLE FOR REMOVING ANY SEDIMENT TRANSPORTED FROM THE LOC TO THE OFFSITE DETENTION/WATER QUALITY POND(S).
 - PER LDC 25-8-323(C), FOR AREAS ON THE SITE THAT ARE TO REMAIN PERVIOUS AFTER DEVELOPMENT, ANY SOILS THAT ARE COMPACTED DURING SITE GRADING AND CONSTRUCTION OPERATIONS MUST BE DECOMPACTED IN COMPLIANCE WITH THE ECM AND IN COMPLIANCE WITH SSM 661S.



NOT AUTHORIZED FOR CONSTRUCTION PRIOR TO FORMAL CITY AND MUNICIPAL UTILITY DISTRICT APPROVAL

WELLS BRANCH MULTIFAMILY
 2800 W WELLS BRANCH PKWY.
 AUSTIN, TRAVIS COUNTY, TEXAS 78728

EROSION AND SEDIMENTATION CONTROLS PLAN C

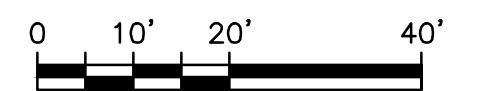
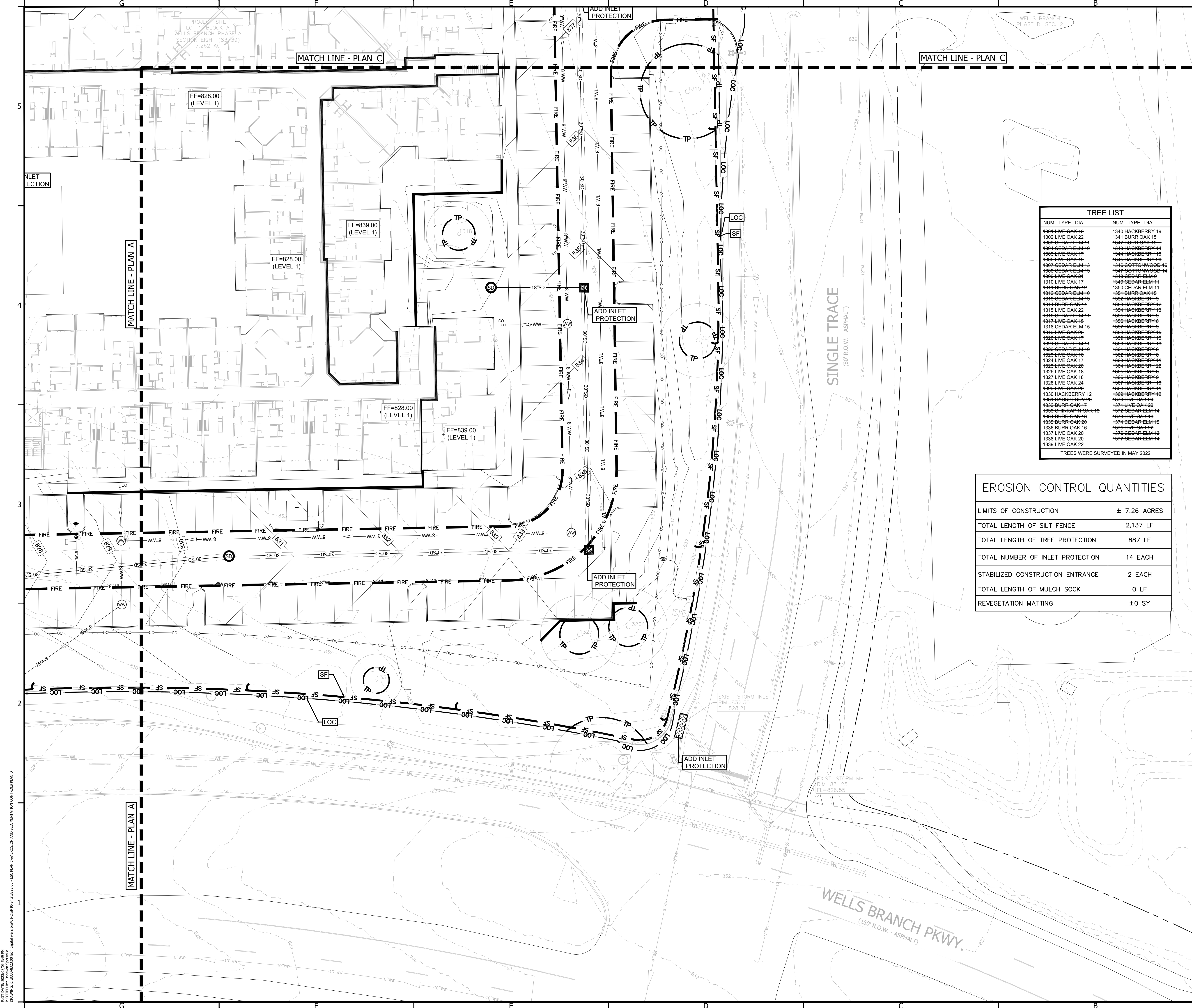
SHEET C203
 15 OF 63
 SP-2023-0082D

WGL
 WGlnc.com
 4700 MUELLER BOULEVARD SUITE 300, AUSTIN, TX 78723

STATE OF TEXAS
 IAN WILLIAMS
 LICENSED PROFESSIONAL ENGINEER
 144845
 08/03/2023

CITY APPROVAL STAMP

NOTE: METERS MUST BE APPLIED AND PURCHASED THROUGH CROSSROADS UTILITY SERVICES AT LEAST 90-DAYS IN ADVANCE OF INSTALLATION.



LEGEND

- BOUNDARY / RIGHT OF WAY
- XXX- EXISTING GRADE ELEVATIONS
- XXX- PROPOSED GRADE ELEVATIONS
- STORM DRAIN LINE
- WL WATER LINE
- WW WASTEWATER LINE
- RETAINING WALL
- LOC LIMITS OF CONSTRUCTION / DISTURBANCE
- TP TREE PROTECTION FENCE PER COA DETAILS 610S-1 & 610S-2
- SF TEMPORARY SILT FENCE PER COA DETAIL 642S-1
- FD TRIANGULAR FILTER DIKE
- LIMITS OF TEMPORARY PARKING, STORAGE, SPOILS, AND STAGING AREA
- STABILIZED CONSTRUCTION ENTRANCE
- CW CONCRETE WASHOUT
- IF INLET FILTER PER GEOCURVE DETAIL
- ### TREE W/ TAG NUMBER (TO REMAIN)
- CRITICAL ROOT ZONE
- TREE TO BE REMOVED
- J-HOOK

TREE LIST

NUM.	TYPE	DIA.	NUM.	TYPE	DIA.
4004	LIVE OAK	14	1340	HACKBERRY	19
1302	LIVE OAK	22	1341	BURR OAK	15
4006	CEDAR ELM	14	4007	BURR OAK	10
4004	CEDAR ELM	10	4003	HACKBERRY	14
4005	LIVE OAK	17	1343	HACKBERRY	16
4006	CEDAR ELM	10	1344	HACKBERRY	16
4007	CEDAR ELM	10	1345	HACKBERRY	16
4008	CEDAR ELM	10	1346	HACKBERRY	16
4009	CEDAR ELM	10	1347	COTTONGWOOD	10
1310	LIVE OAK	17	1348	CELANO	10
4010	CEDAR ELM	10	1349	CELANO	11
4011	BURR OAK	12	1350	CELANO	11
4012	BURR OAK	10	4013	BURR OAK	10
4013	CEDAR ELM	10	4014	BURR OAK	10
4014	BURR OAK	10	4015	HACKBERRY	10
4015	LIVE OAK	22	4016	HACKBERRY	10
4016	CEDAR ELM	14	4017	HACKBERRY	10
4017	LIVE OAK	15	4018	HACKBERRY	10
1318	CEDAR ELM	15	4019	HACKBERRY	10
4020	LIVE OAK	17	4021	HACKBERRY	10
4021	LIVE OAK	17	4022	HACKBERRY	10
4022	CEDAR ELM	14	4023	HACKBERRY	10
4023	LIVE OAK	16	4024	HACKBERRY	10
1324	LIVE OAK	17	4025	HACKBERRY	10
4026	CEDAR ELM	10	4026	HACKBERRY	10
4027	LIVE OAK	18	4027	HACKBERRY	10
1327	LIVE OAK	18	4028	HACKBERRY	10
1328	LIVE OAK	24	4029	HACKBERRY	10
4029	LIVE OAK	22	4030	HACKBERRY	10
4030	LIVE OAK	22	4031	HACKBERRY	10
1330	HACKBERRY	12	4032	HACKBERRY	10
4031	HACKBERRY	12	4033	LIVE OAK	20
4032	BURR OAK	12	4034	LIVE OAK	20
4033	SHINKAPIN OAK	10	4035	LIVE OAK	20
4034	SHINKAPIN OAK	10	4036	LIVE OAK	20
4035	SHINKAPIN OAK	10	4037	LIVE OAK	20
4036	BURR OAK	16	4038	LIVE OAK	20
4037	LIVE OAK	20	4039	LIVE OAK	20
4038	LIVE OAK	20	4040	CELANO	14
1339	LIVE OAK	22	4041	CELANO	14

TREES WERE SURVEYED IN MAY 2022

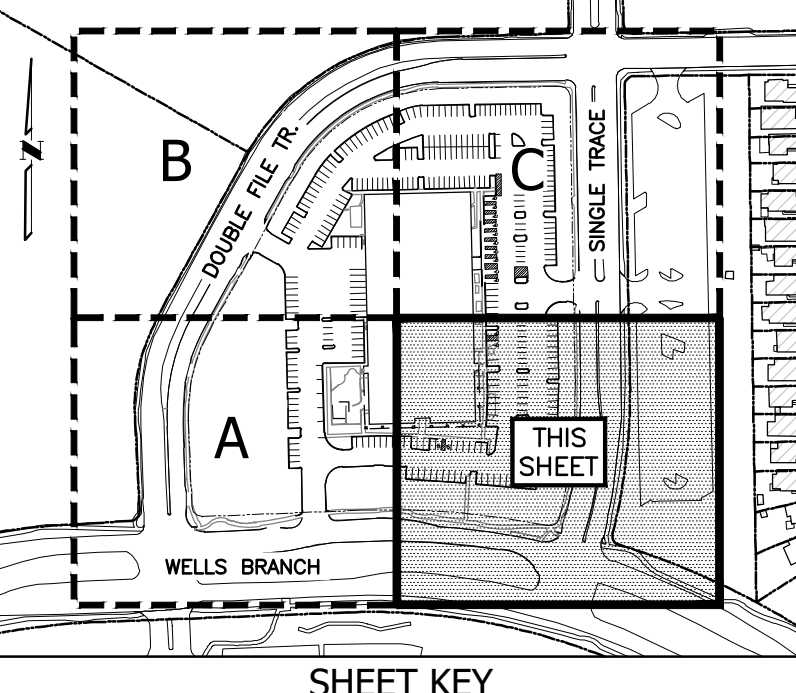
EROSION CONTROL QUANTITIES

LIMITS OF CONSTRUCTION	± 7.26 ACRES
TOTAL LENGTH OF SILT FENCE	2,137 LF
TOTAL LENGTH OF TREE PROTECTION	887 LF
TOTAL NUMBER OF INLET PROTECTION	14 EACH
STABILIZED CONSTRUCTION ENTRANCE	2 EACH
TOTAL LENGTH OF MULCH SOCK	0 LF
REVEGETATION MATTING	±0 SY

NOTE: J-HOOKS ARE TO BE EVERY 100'

CAUTION: CONTRACTOR TO VERIFY ALL EXISTING UTILITIES VERTICALLY AND HORIZONTALLY PRIOR TO CONSTRUCTION. CONTRACTOR TO NOTIFY THE ENGINEER IMMEDIATELY OF ANY DISCREPANCIES.

- NOTES:**
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NOT AUTHORIZED FOR CONSTRUCTION PRIOR TO FORMAL CITY AND MUNICIPAL UTILITY DISTRICT APPROVAL

WELLS BRANCH MULTIFAMILY
 2800 W WELLS BRANCH PKWY.
 AUSTIN, TRAVIS COUNTY, TEXAS 78728

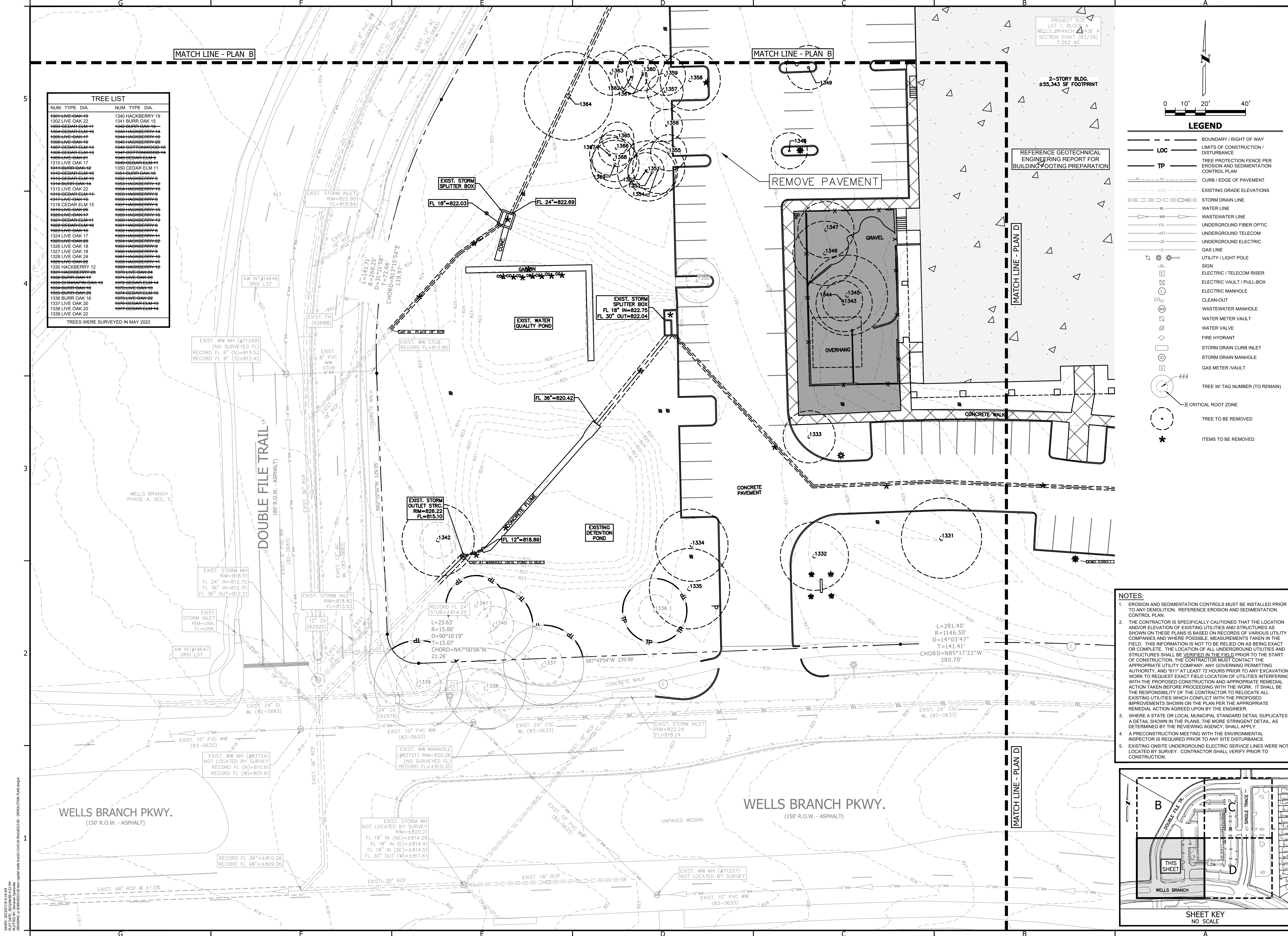
WG1
 WGIinc.com
 4700 MUELLER BOULEVARD SUITE 300, AUSTIN, TX 78723
 512.669.5890

EROSION AND SEDIMENTATION CONTROLS PLAN D

SHEET C204
 16 OF 63
 SP-2023-0082D

CITY APPROVAL STAMP

IAN WILLIAMS
 14454S
 LICENSED PROFESSIONAL ENGINEER
 08/03/2023



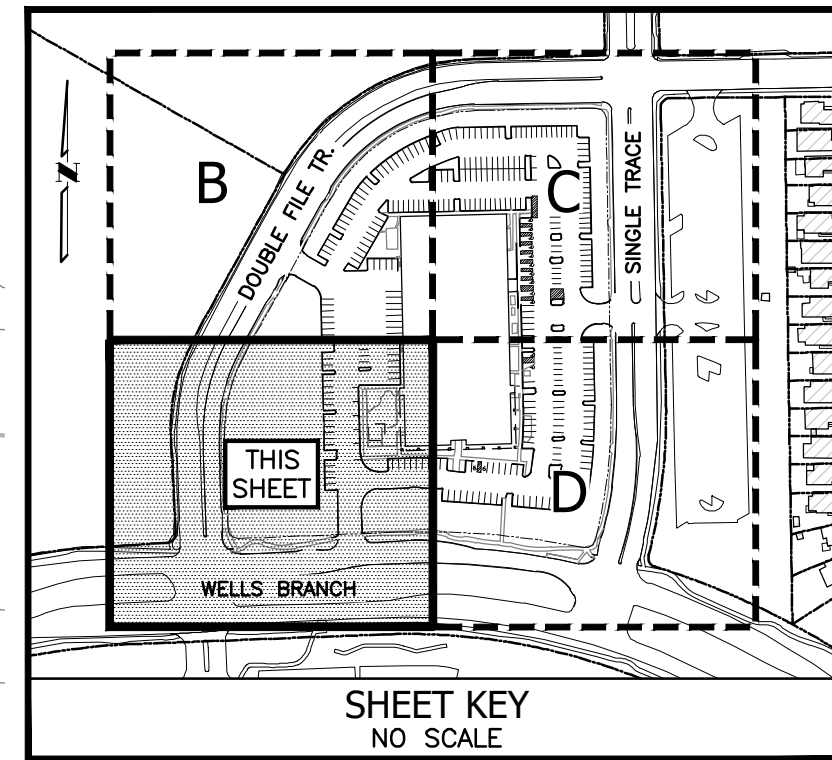
TREE LIST				
NUM.	TYPE	DIA.	NUM.	
1301	LIVE OAK	19	1340	HACKBERRY
1302	LIVE OAK	22	1341	BURR OAK
1303	GEDAR ELM	14	1342	BURR OAK
1304	GEDAR ELM	16	1343	HACKBERRY
1305	LIVE OAK	19	1344	HACKBERRY
1306	LIVE OAK	19	1345	HACKBERRY
1307	GEDAR ELM	13	1346	GOTTENWOOD
1308	GEDAR ELM	13	1347	GOTTENWOOD
1309	LIVE OAK	21	1348	GEDAR ELM
1310	LIVE OAK	17	1349	GEDAR ELM
1311	BURR OAK	14	1350	GEDAR ELM
1312	GEDAR ELM	13	1351	BURR OAK
1313	GEDAR ELM	13	1352	HACKBERRY
1314	BURR OAK	14	1353	HACKBERRY
1315	LIVE OAK	22	1354	HACKBERRY
1316	GEDAR ELM	14	1355	HACKBERRY
1317	LIVE OAK	15	1356	HACKBERRY
1318	GEDAR ELM	15	1357	HACKBERRY
1319	LIVE OAK	25	1358	HACKBERRY
1320	LIVE OAK	12	1359	HACKBERRY
1321	GEDAR ELM	14	1360	HACKBERRY
1322	GEDAR ELM	14	1361	HACKBERRY
1323	LIVE OAK	16	1362	HACKBERRY
1324	LIVE OAK	17	1363	HACKBERRY
1325	LIVE OAK	18	1364	HACKBERRY
1326	LIVE OAK	18	1365	HACKBERRY
1327	LIVE OAK	18	1366	HACKBERRY
1328	LIVE OAK	24	1367	HACKBERRY
1329	LIVE OAK	22	1368	HACKBERRY
1330	HACKBERRY	12	1369	HACKBERRY
1331	HACKBERRY	12	1370	HACKBERRY
1332	BURR OAK	17	1371	LIVE OAK
1333	CHINA PINE	19	1372	GEDAR ELM
1334	BURR OAK	16	1373	GEDAR ELM
1335	BURR OAK	20	1374	GEDAR ELM
1336	BURR OAK	16	1375	GEDAR ELM
1337	LIVE OAK	20	1376	GEDAR ELM
1338	LIVE OAK	20	1377	GEDAR ELM
1339	LIVE OAK	22	1378	GEDAR ELM

TREES WERE SURVEYED IN MAY 2022

PROJECT SITE
LOT 1, BLOCK A
WELLS BRANCH PHASE A
SECTION EIGHT (83/39)
7.262 AC

- LEGEND**
- BOUNDARY / RIGHT OF WAY
 - LIMITS OF CONSTRUCTION / DISTURBANCE
 - TP TREE PROTECTION FENCE PER EROSION AND SEDIMENTATION CONTROL PLAN
 - CURB / EDGE OF PAVEMENT
 - XXX EXISTING GRADE ELEVATIONS
 - STORM DRAIN LINE
 - WL WATER LINE
 - WW WASTEWATER LINE
 - FO UNDERGROUND FIBER OPTIC
 - UGT UNDERGROUND TELECOM
 - UGE UNDERGROUND ELECTRIC
 - GAS LINE
 - UTILITY / LIGHT POLE
 - SIGN
 - ELECTRIC / TELECOM RISER
 - ELECTRIC VAULT / PULL-BOX
 - ELECTRIC MANHOLE
 - CLEAN-OUT
 - WASTEWATER MANHOLE
 - WATER METER VAULT
 - WATER VALVE
 - FIRE HYDRANT
 - STORM DRAIN CURB INLET
 - STORM DRAIN MANHOLE
 - GAS METER /VAULT
 - ### TREE W/ TAG NUMBER (TO REMAIN)
 - * CRITICAL ROOT ZONE
 - TREE TO BE REMOVED
 - * ITEMS TO BE REMOVED

- NOTES:**
- EROSION AND SEDIMENTATION CONTROLS MUST BE INSTALLED PRIOR TO ANY DEMOLITION. REFERENCE EROSION AND SEDIMENTATION CONTROL PLAN.
 - THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AND STRUCTURES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF VARIOUS UTILITY COMPANIES AND WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THIS INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE LOCATION OF ALL UNDERGROUND UTILITIES AND STRUCTURES SHALL BE VERIFIED IN THE FIELD PRIOR TO THE START OF CONSTRUCTION. THE CONTRACTOR MUST CONTACT THE APPROPRIATE UTILITY COMPANY, ANY GOVERNING PERMITTING AUTHORITY, AND "811" AT LEAST 72 HOURS PRIOR TO ANY EXCAVATION WORK TO REQUEST EXACT FIELD LOCATION OF UTILITIES INTERFERING WITH THE PROPOSED CONSTRUCTION AND APPROPRIATE REMEDIAL ACTION TAKEN BEFORE PROCEEDING WITH THE WORK. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THE PLAN PER THE APPROPRIATE REMEDIAL ACTION AGREED UPON BY THE ENGINEER.
 - WHERE A STATE OR LOCAL MUNICIPAL STANDARD DETAIL DUPLICATES A DETAIL SHOWN IN THE PLANS, THE MORE STRINGENT DETAIL AS DETERMINED BY THE REVIEWING AGENCY, SHALL APPLY.
 - A PRE-CONSTRUCTION MEETING WITH THE ENVIRONMENTAL INSPECTOR IS REQUIRED PRIOR TO ANY SITE DISTURBANCE.
 - EXISTING ON-SITE UNDERGROUND ELECTRIC SERVICE LINES WERE NOT LOCATED BY SURVEY. CONTRACTOR SHALL VERIFY PRIOR TO CONSTRUCTION.



NOT AUTHORIZED FOR CONSTRUCTION PRIOR TO FORMAL CITY AND MUNICIPAL UTILITY DISTRICT APPROVAL

WELLS BRANCH MULTIFAMILY
 2800 W WELLS BRANCH PKWY.
 AUSTIN, TRAVIS COUNTY, TEXAS 78728

DEMOLITION PLAN A

SHEET
CD101
 17 OF 63
 SP-2023-0082D

CITY APPROVAL STAMP

PROJECT NO. F-10085

 WGI Inc.
 4700 MUELLER BOULEVARD SUITE 300, AUSTIN, TX 78723
 512.669.5580

 IAN WILLIAMS
 LICENSED PROFESSIONAL ENGINEER

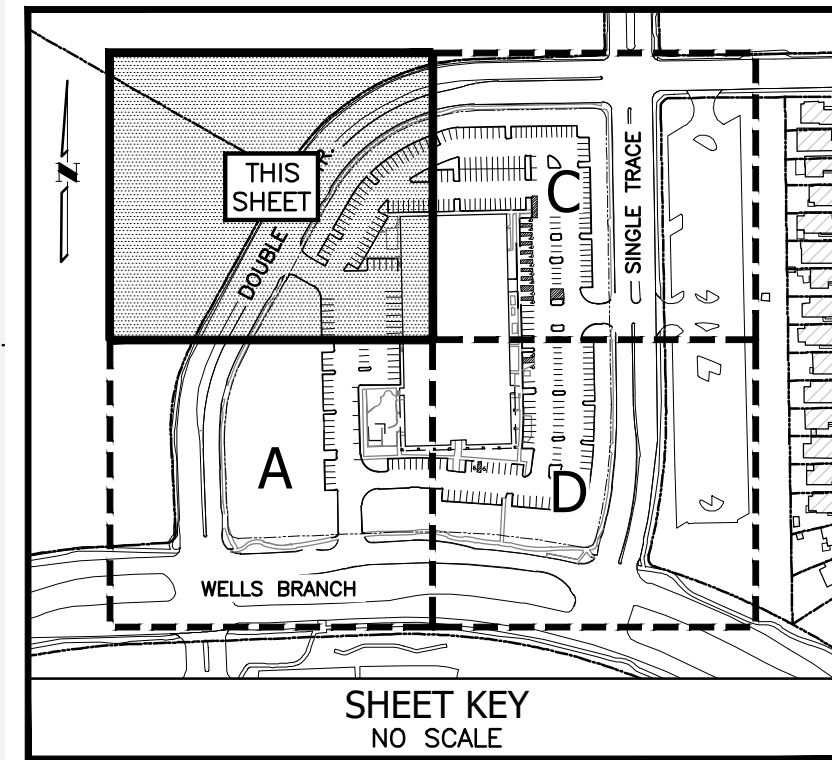
TREE LIST					
NUM.	TYPE	DIA.	NUM.	TYPE	DIA.
4904	LIVE OAK	14	1340	HACKBERRY	19
1302	LIVE OAK	22	1341	BURR OAK	15
4905	CEDEAR ELM	14	4942	BURR OAK	15
4906	CEDEAR ELM	14	4943	HACKBERRY	19
4907	LIVE OAK	17	4944	HACKBERRY	19
4908	LIVE OAK	17	4945	HACKBERRY	19
4909	CEDEAR ELM	14	4946	GOTTENWOOD	14
4910	CEDEAR ELM	14	4947	GOTTENWOOD	14
4911	LIVE OAK	17	4948	CEDEAR ELM	14
4912	LIVE OAK	17	4949	CEDEAR ELM	14
4913	LIVE OAK	17	4950	CEDEAR ELM	14
4914	LIVE OAK	17	4951	CEDEAR ELM	14
4915	LIVE OAK	17	4952	CEDEAR ELM	14
4916	LIVE OAK	17	4953	CEDEAR ELM	14
4917	LIVE OAK	17	4954	CEDEAR ELM	14
4918	LIVE OAK	17	4955	CEDEAR ELM	14
4919	LIVE OAK	17	4956	CEDEAR ELM	14
4920	LIVE OAK	17	4957	CEDEAR ELM	14
4921	LIVE OAK	17	4958	CEDEAR ELM	14
4922	LIVE OAK	17	4959	CEDEAR ELM	14
4923	LIVE OAK	17	4960	CEDEAR ELM	14
4924	LIVE OAK	17	4961	CEDEAR ELM	14
4925	LIVE OAK	17	4962	CEDEAR ELM	14
4926	LIVE OAK	17	4963	CEDEAR ELM	14
4927	LIVE OAK	17	4964	CEDEAR ELM	14
4928	LIVE OAK	17	4965	CEDEAR ELM	14
4929	LIVE OAK	17	4966	CEDEAR ELM	14
4930	LIVE OAK	17	4967	CEDEAR ELM	14
4931	LIVE OAK	17	4968	CEDEAR ELM	14
4932	LIVE OAK	17	4969	CEDEAR ELM	14
4933	LIVE OAK	17	4970	CEDEAR ELM	14
4934	LIVE OAK	17	4971	CEDEAR ELM	14
4935	LIVE OAK	17	4972	CEDEAR ELM	14
4936	LIVE OAK	17	4973	CEDEAR ELM	14
4937	LIVE OAK	17	4974	CEDEAR ELM	14
4938	LIVE OAK	17	4975	CEDEAR ELM	14
4939	LIVE OAK	17	4976	CEDEAR ELM	14
4940	LIVE OAK	17	4977	CEDEAR ELM	14

TREES WERE SURVEYED IN MAY 2022

LEGEND

- BOUNDARY / RIGHT OF WAY
- LIMITS OF CONSTRUCTION / DISTURBANCE
- LOC --- TREE PROTECTION FENCE PER EROSION AND SEDIMENTATION CONTROL PLAN
- TP --- CURB / EDGE OF PAVEMENT
- XXX --- EXISTING GRADE ELEVATIONS
- WL --- STORM DRAIN LINE
- WLL --- WATER LINE
- WWT --- WASTEWATER LINE
- FO --- UNDERGROUND FIBER OPTIC
- UGT --- UNDERGROUND TELECOM
- UE --- UNDERGROUND ELECTRIC
- G --- GAS LINE
- U --- UTILITY / LIGHT POLE
- SIGN --- SIGN
- E --- ELECTRIC / TELECOM RISER
- EV --- ELECTRIC VAULT / PULL-BOX
- EM --- ELECTRIC MANHOLE
- CO --- CLEAN-OUT
- WM --- WASTEWATER MANHOLE
- WTV --- WATER METER VAULT
- WV --- WATER VALVE
- FH --- FIRE HYDRANT
- SD --- STORM DRAIN CURB INLET
- SM --- STORM DRAIN MANHOLE
- GM --- GAS METER /VAULT
- ### --- TREE W/ TAG NUMBER (TO REMAIN)
- (---) --- CRITICAL ROOT ZONE
- (---) --- TREE TO BE REMOVED
- * --- ITEMS TO BE REMOVED

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NOT AUTHORIZED FOR CONSTRUCTION PRIOR TO FORMAL CITY AND MUNICIPAL UTILITY DISTRICT APPROVAL

WELLS BRANCH MULTIFAMILY
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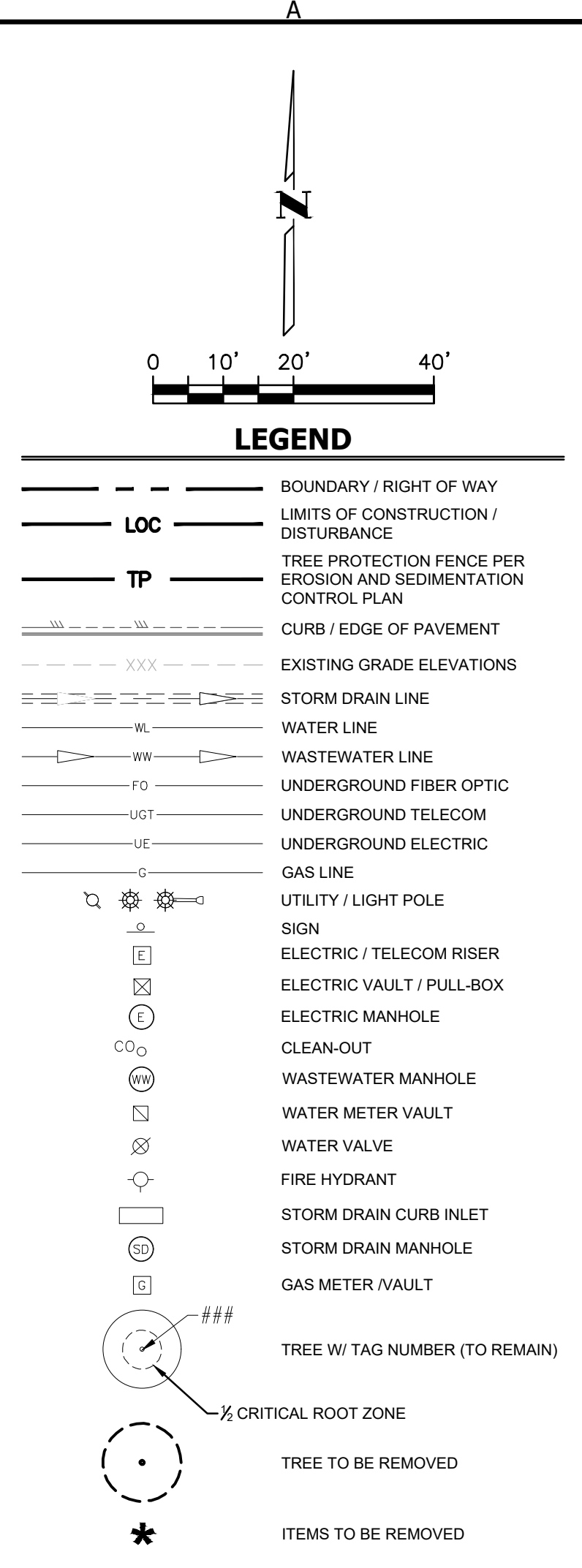
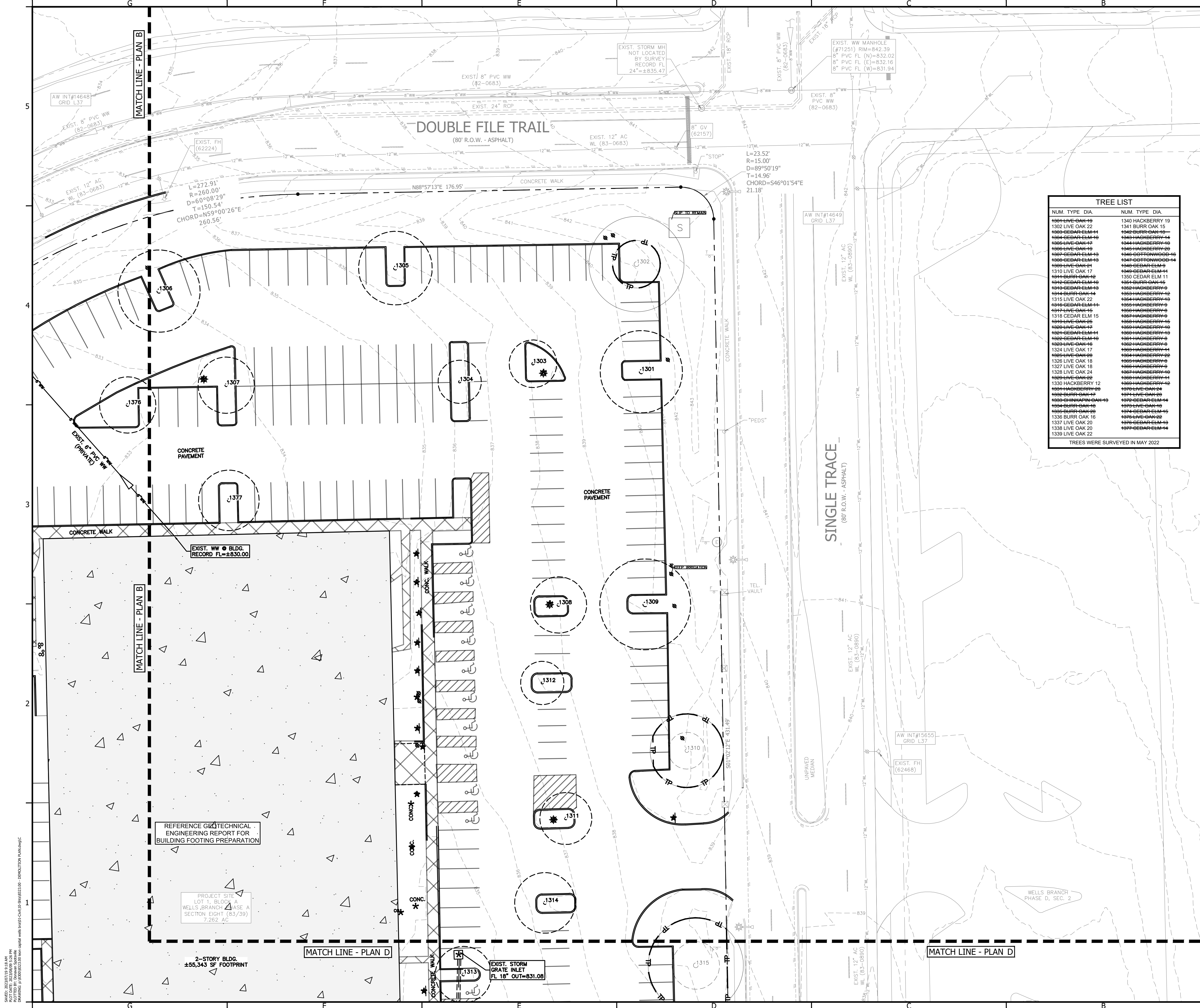
DEMOLITION PLAN B

SHEET CD102
 18 OF 63
 SP-2023-0082D

FIRM NO. F-10085
WGI
 WGIinc.com
 4700 MUELLER BOULEVARD SUITE 300, AUSTIN, TX 78723

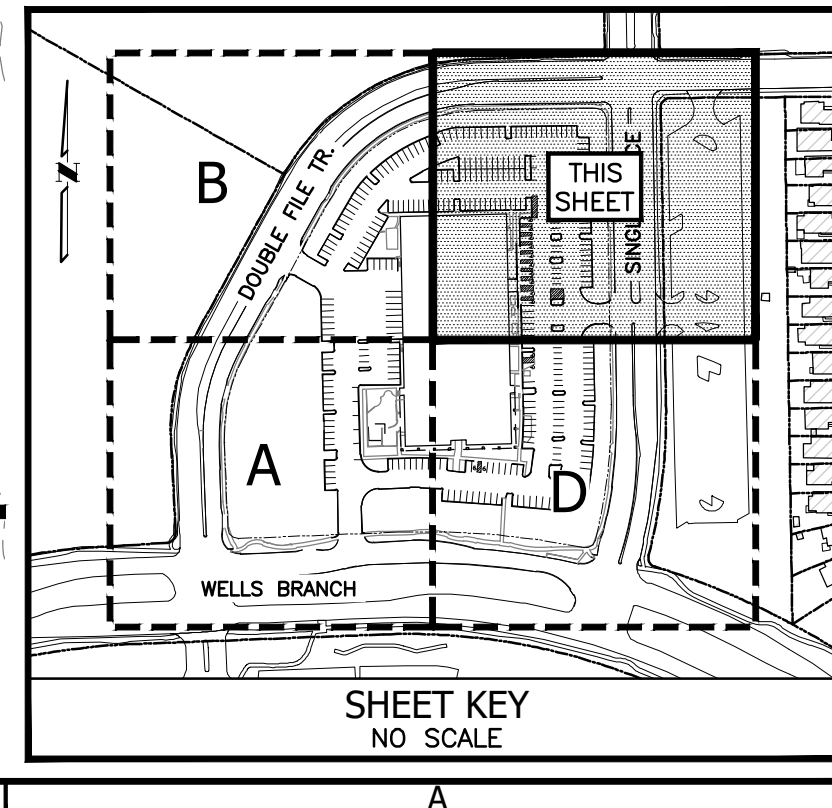
STATE OF TEXAS
 IAN WILLIAMS
 144845
 LICENSED PROFESSIONAL ENGINEER
 08/03/2023

CITY APPROVAL STAMP



NOTES:

- EROSION AND SEDIMENTATION CONTROLS MUST BE INSTALLED PRIOR TO ANY DEMOLITION. REFERENCE EROSION AND SEDIMENTATION CONTROL PLAN.
- THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AND STRUCTURES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF VARIOUS UTILITY COMPANIES AND WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THIS INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE LOCATION OF ALL UNDERGROUND UTILITIES AND STRUCTURES SHALL BE VERIFIED IN THE FIELD PRIOR TO THE START OF CONSTRUCTION. THE CONTRACTOR MUST CONTACT THE APPROPRIATE UTILITY COMPANY, ANY GOVERNING PERMITTING AUTHORITY, AND "811" AT LEAST 72 HOURS PRIOR TO ANY EXCAVATION WORK TO REQUEST EXACT FIELD LOCATION OF UTILITIES INTERFERING WITH THE PROPOSED CONSTRUCTION AND APPROPRIATE REMEDIAL ACTION TAKEN BEFORE PROCEEDING WITH THE WORK. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THE PLAN PER THE APPROPRIATE REMEDIAL ACTION AGREED UPON BY THE ENGINEER.
- WHERE A STATE OR LOCAL MUNICIPAL STANDARD DETAIL DUPLICATES A DETAIL SHOWN IN THE PLANS, THE MORE STRINGENT DETAIL AS DETERMINED BY THE REVIEWING AGENCY, SHALL APPLY.
- A PRECONSTRUCTION MEETING WITH THE ENVIRONMENTAL INSPECTOR IS REQUIRED PRIOR TO ANY SITE DISTURBANCE.
- EXISTING ONSITE UNDERGROUND ELECTRIC SERVICE LINES WERE NOT LOCATED BY SURVEY. CONTRACTOR SHALL VERIFY PRIOR TO CONSTRUCTION.



NOT AUTHORIZED FOR CONSTRUCTION PRIOR TO FORMAL CITY AND MUNICIPAL UTILITY DISTRICT APPROVAL

WELLS BRANCH MULTIFAMILY
 2800 W WELLS BRANCH PKWY.
 AUSTIN, TRAVIS COUNTY, TEXAS 78728

DEMOLITION PLAN C

STATE OF TEXAS

IAN WILLIAMS

144845

REGISTERED PROFESSIONAL ENGINEER

08/03/2023

SHEET CD103 19 OF 63 SP-2023-0082D

Project Name: Wells Branch Multifamily
 Address: 2800 W Wells Branch Parkway
 Project No.: 8323
 Date: 3/23/2023

Gross Site Area 7.26 acres
 Impervious Cover Allowed at 60% x Gross Site Area = 4.36 acres

Allowable Impervious Cover Breakdown by Slope Category
 Total Acreage 15 - 25% = 4.36 ac. x 10% = 0.44 acres

Proposed Total Impervious Cover
 Total Proposed Impervious Cover: 4.36 acres = 60%

SLOPE CATEGORIES	ACRES	IMPERVIOUS COVER		ACRES	% OF CATEGORY
		ACRES	% OF CATEGORY		
0-15%	7.35	4.36	59.3%	0.04	0.00
15-25%	0.49	0.00	0.0%	0.00	0.00
25-35%	0.18	0.00	0.0%	0.00	0.0%
OVER 35%	0.18	0.00	0.0%		
TOTAL SITE AREA	8.20				

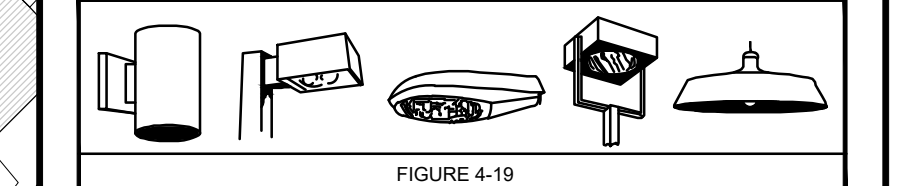
BUILDING USE: MULTIFAMILY COMMERCIAL.
 BUILDING HEIGHT: 4 STORY
 AREA OF DISTURBANCE: 7.33 AC

LEGEND

	BOUNDARY / RIGHT OF WAY
	CURB / EDGE OF PAVEMENT
	ACCESSIBLE ROUTE
	FIRE LANE STRIPING
	LIMITS OF FINISHED FLOOR ELEV. (GRADE BREAKS)
	OVERHEAD ELECTRIC
	FENCE PER LANDSCAPE DESIGN
	RETAINING / STRUCTURAL WALL
	BUILDING AREA
	CONCRETE SIDEWALK / PAVEMENT
	HEAVY DUTY ASPHALT PAVEMENT
	FINISHED FLOOR ELEVATION
	UTILITY / LIGHT POLE
	ELECTRIC / TELECOM RISER
	ELECTRIC VAULT / PULL-BOX
	ELECTRIC TRANSFORMER
	CLEAN-OUT
	WASTEWATER MANHOLE
	WATER METER VAULT
	WATER VALVE
	FIRE HYDRANT
	BACKFLOW PREVENTER
	STORM DRAIN INLET
	STORM DRAIN MANHOLE
	GAS METER / VAULT
	RODINAL FOUND OR SET
	TEMPORARY BENCHMARK
	TREE W TAG NUMBER (TO REMAIN)
	CRITICAL ROOT ZONE

OVERALL SHEET NOTE: THIS SHEET IS FOR REFERENCE ONLY. SEE DETAILED SITE PLAN SHEETS FOR CLARITY AND ADDITIONAL INFORMATION.

- NOTES:**
- REFERENCE SITE NOTES & CALCULATIONS SHEET FOR BUILDING, SITE, PARKING DATA AND ADDITIONAL SITE PLAN NOTES.
 - ALL ITEMS ARE TO BE FURNISHED & INSTALLED BY CONTRACTOR. REFERENCE CONSTRUCTION DETAILS SHEETS FOR ADDITIONAL INFORMATION.
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 - ALL EXTERIOR LIGHTING WILL BE FULL CUT-OFF AND FULLY SHIELDED IN COMPLIANCE WITH SUBCHAPTER E.2.5 AND WILL BE REVIEWED DURING BUILDING PLAN REVIEW. ANY CHANGE OR SUBSTITUTION OF LAMP/LIGHT FIXTURES SHALL BE SUBMITTED TO THE DIRECTOR FOR APPROVAL IN ACCORDANCE WITH SECTION 25.2.E.



- 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 WHAT ADDITIONAL APPROVALS MAY BE NECESSARY.
- ALL EXTERIOR LIGHTING WILL BE HOODED OR SHIELDED FROM THE VIEW OF ADJACENT RESIDENTIAL PROPERTY. (SECTION 25-2-1064)
- ALL DUMPSTERS AND ANY PERMANENTLY PLACED REFUSE RECEPTACLES WILL BE LOCATED AT A MINIMUM OF TWENTY (20) FEET FROM A PROPERTY USED OR ZONED AS SF-5 OR MORE RESTRICTIVE. (SECTION 25-2-1067)
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- THE NOISE LEVEL OF MECHANICAL EQUIPMENT WILL NOT EXCEED 70 DBA AT THE PROPERTY LINE ADJACENT TO RESIDENTIAL USES. (SECTION 25-2-1067)

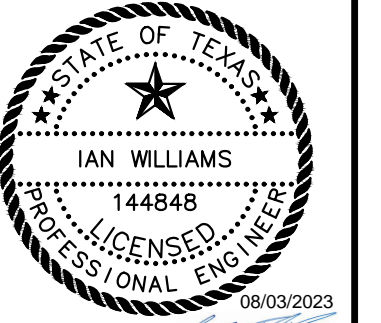
Wells Branch- SITE DATA		EXISTING USE:		(PROPOSED)	
ZONING:	COA ETJ (2-MILE)		VACANT		
SITE LAND USE:	Multifamily				
SITE AREA:	7.26 ACRES (346,215 S.F.)				
LIMITS OF CONSTRUCTION:	± 7.26 ACRES				
(ALLOWABLE)					
BUILDING HEIGHT:	N/A	BUILDING HEIGHT:	50'-0"		
# OF STORIES:	N/A	# OF STORIES:	4 STORY		
F.A.R.	N/A	F.A.R.	96.31%		
BUILDING COVERAGE:	N/A	BUILDING COVERAGE:	76,143 S.F. 24%		
IMPERVIOUS COVERAGE:	60%	IMPERVIOUS COVERAGE:	187,744 S.F. 59%		
EXISTING IMPERVIOUS COVERAGE:	70.00%	OPEN SPACE:	0.0%		
		GROSS FLOOR AREA	304,572 S.F.		

AUSTIN ETJ		FOOTPRINT		FLOORS		HEIGHT (FT)		GROSS FLOOR AREA		BCR		FAR	
PROPOSED BUILDING	SF	%											
BUILDING 1	76,143	24.00%	4	50	304,572	0.241	0.963						
TOTAL	76,143	24.00%	4	50	304,572	0.241	0.963						

AUSTIN ETJ		REQUIRED		TYPE		TOTAL	
PROPOSED BUILDING	PARKING						
BUILDING 1	439	474	4	N/A	478		
TOTAL	439	474	4	N/A	478		

AUSTIN ETJ
 USE: APARTMENT/
 CONDO

NOT AUTHORIZED FOR
 CONSTRUCTION PRIOR TO
 FORMAL CITY AND MUNICIPAL
 UTILITY DISTRICT APPROVAL



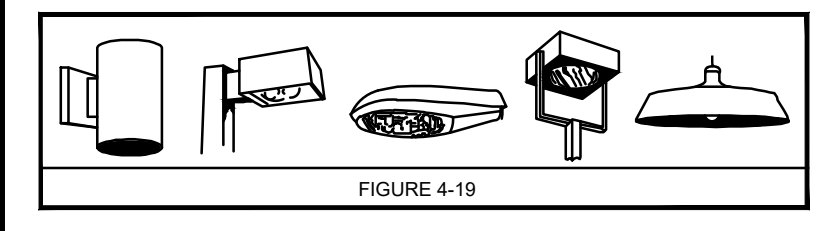
WELLS BRANCH MULTIFAMILY
 2800 W WELLS BRANCH PKWY.
 AUSTIN, TRAVIS COUNTY, TEXAS 78728

OVERALL SITE PLAN

SHEET
 CS100
 21 OF 63
 SP-2023-0082D

A	CONCRETE "SPILL" CURB & GUTTER PER COA STANDARD DETAIL 430S-1. REFERENCE CONSTRUCTION DETAILS.
D	TYPE II DRIVEWAY PER COA STANDARD DETAIL 433S-2.
F	PROPOSED FENCE. REF. LANDSCAPE PLANS FOR DETAILS.
H	PAVEMENT MARKINGS. REFERENCE CONSTRUCTION DETAILS.
I	ACCESSIBLE STRIPING. REFERENCE CONSTRUCTION DETAILS.
J	ACCESSIBLE PARKING SIGN AND "VAN ACCESSIBLE" SIGN WITH BOLLARD.
O	FIRE LANE STRIPING. REFERENCE CONSTRUCTION DETAILS (SHEET C505). FIRE LANE CURB PAINTED RED AND LEGIBLY MARKED WITH THE WARNING "FIRE LANE - TOW AWAY ZONE" IN WHITE LETTERS AT LEAST 3" TALL, AT INTERVALS NOT EXCEEDING 35-FEET.
Q	POWER OPERATED GATE WITH KNOX KEY SWITCH
R	MANUAL GATE WITH KNOX BOX
S	FIRE HYDRANT REF. UTILITY PLANS
T	SIDEWALK PER COA DETAIL 432S-1
AA	10'X10' CONCRETE TRANSFORMER PAD.
BE	BUILDING ENTRANCE. REFERENCE ARCHITECTURAL PLANS FOR ADDITIONAL INFORMATION
BR	BIKE RACK. PER COA DETAIL 710S-1. REFERENCE CONSTRUCTION DETAILS.

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 - ALL EXTERIOR LIGHTING WILL BE FULL CUT-OFF AND FULLY SHIELDED IN COMPLIANCE WITH SUBCHAPTER E 2.3 AND WILL BE REVIEWED DURING BUILDING PLAN REVIEW. ANY CHANGE OR SUBSTITUTION OF LAMPLIGHT FIXTURES SHALL BE SUBMITTED TO THE DIRECTOR FOR APPROVAL IN ACCORDANCE WITH SECTION 2.5.2.E.



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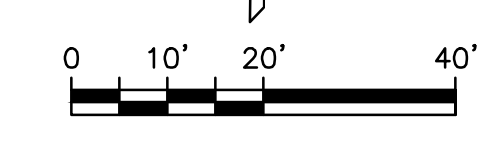
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 - FOR APARTMENTS OR CONDOMINIUMS, WHEN THE SLOPE OF THE FINISHED GRADE BETWEEN ACCESSIBLE BUILDINGS AND FACILITIES EXCEEDS 1:12, OR AN ACCESSIBLE ROUTE, A VEHICULAR ROUTE WITH PARKING AT EACH ACCESSIBLE BUILDING OR FACILITY MAY BE PROVIDED IN PLACE OF AN ACCESSIBLE ROUTE. (IBC 1107.4.11)

MATCH LINE - PLAN B

MATCH LINE - PLAN B

MATCH LINE - PLAN D

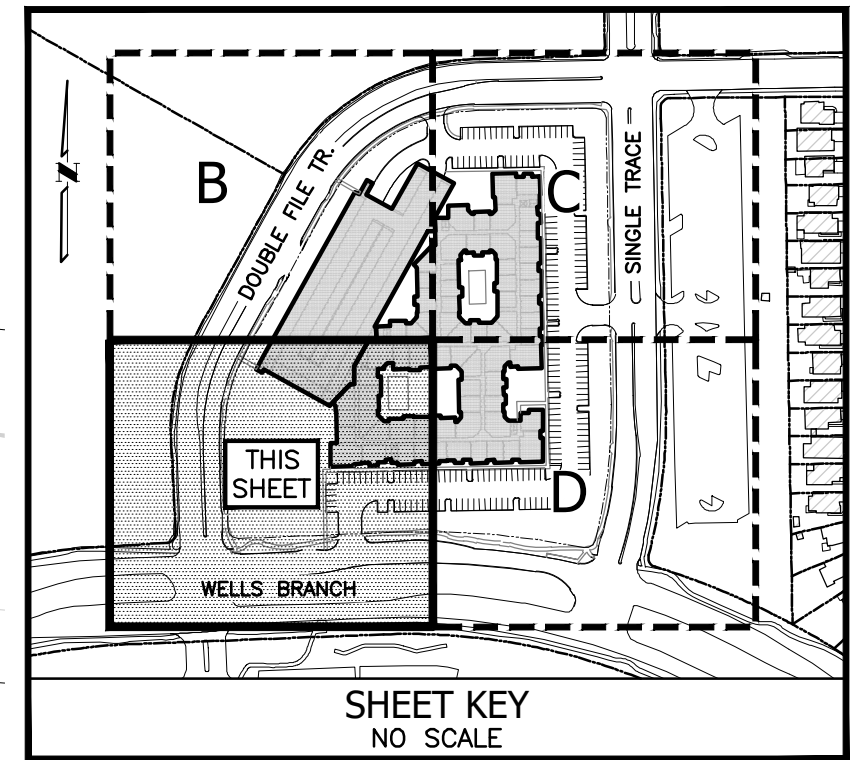
MATCH LINE - PLAN D



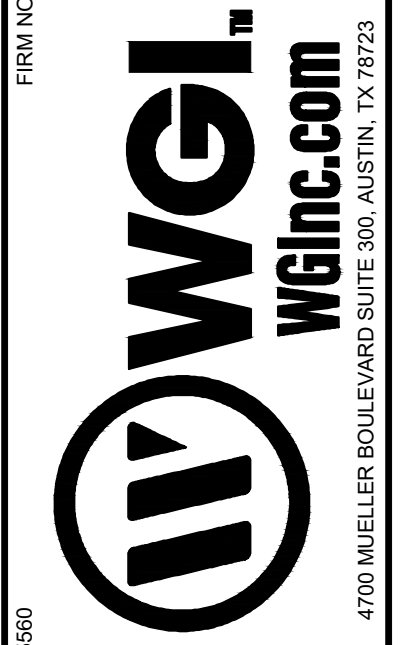
LEGEND

[Symbol]	BOUNDARY / RIGHT OF WAY
[Symbol]	CURB / EDGE OF PAVEMENT
[Symbol]	ADA ACCESSIBLE ROUTE
[Symbol]	FIRE LANE STRIPING
[Symbol]	LIMITS OF FINISHED FLOOR ELEV. (GRADE BREAK)
[Symbol]	OVERHEAD ELECTRIC
[Symbol]	FENCE PER LANDSCAPE DESIGN
[Symbol]	RETAINING / STRUCTURAL WALL
[Symbol]	BUILDING AREA
[Symbol]	CONCRETE SIDEWALK / PAVEMENT
[Symbol]	HEAVY DUTY ASPHALT PAVEMENT
[Symbol]	FF FINISHED FLOOR ELEVATION
[Symbol]	UTILITY / LIGHT POLE SIGN
[Symbol]	ELECTRIC / TELECOM RISER
[Symbol]	ELECTRIC VAULT / PULL-BOX
[Symbol]	ELECTRIC TRANSFORMER
[Symbol]	ELECTRIC MANHOLE
[Symbol]	CLEAN-OUT
[Symbol]	WASTEWATER MANHOLE
[Symbol]	WATER METER VAULT
[Symbol]	WATER VALVE
[Symbol]	FIRE HYDRANT
[Symbol]	BACKFLOW PREVENTER
[Symbol]	STORM DRAIN INLET
[Symbol]	STORM DRAIN MANHOLE
[Symbol]	GAS METER / VAULT
[Symbol]	ROD/NAIL FOUND OR SET
[Symbol]	TEMPORARY BENCHMARK
[Symbol]	TREE W/ TAG NUMBER (TO REMAIN)
[Symbol]	1/2 CRITICAL ROOT ZONE

REFERENCE SITE PLAN SHEET D FOR NOTES AND ADDITIONAL SITE INFORMATION.



NOT AUTHORIZED FOR
CONSTRUCTION PRIOR TO
FORMAL CITY AND MUNICIPAL
UTILITY DISTRICT APPROVAL

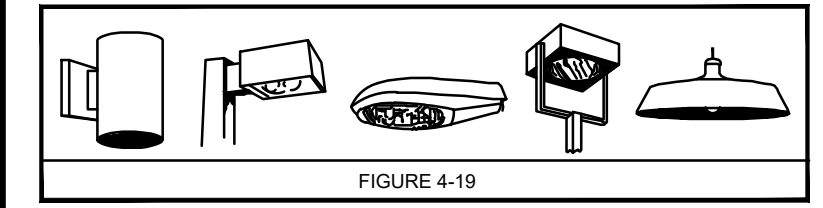


WELLS BRANCH MULTIFAMILY
2800 W WELLS BRANCH PKWY.
AUSTIN, TRAVIS COUNTY, TEXAS 78728

SHEET
CS101
22 OF 63
SP-2023-0082D

DWG NO: 20230718 0414 PM
 DRAWN BY: DOMINIC SCORRONE
 CHECKED BY: DOMINIC SCORRONE
 DATE: 08/03/2023 09:08 AM

- NOTES:**
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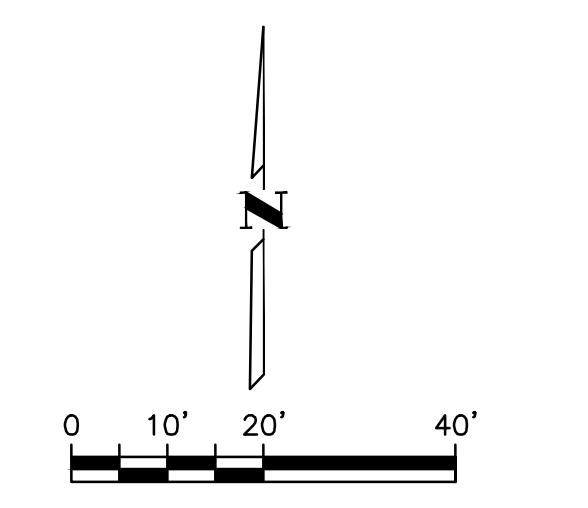


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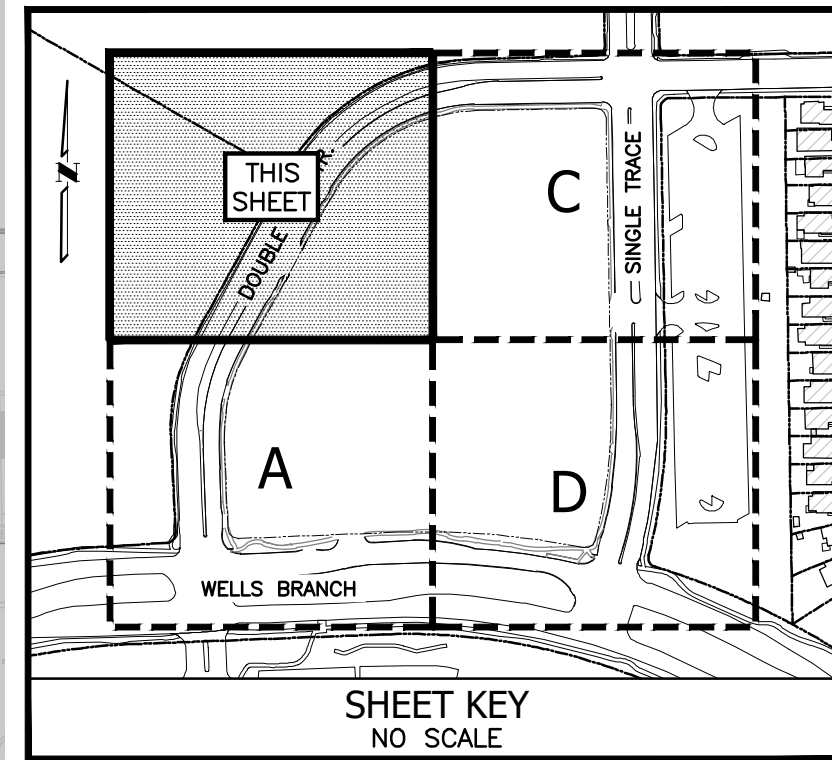
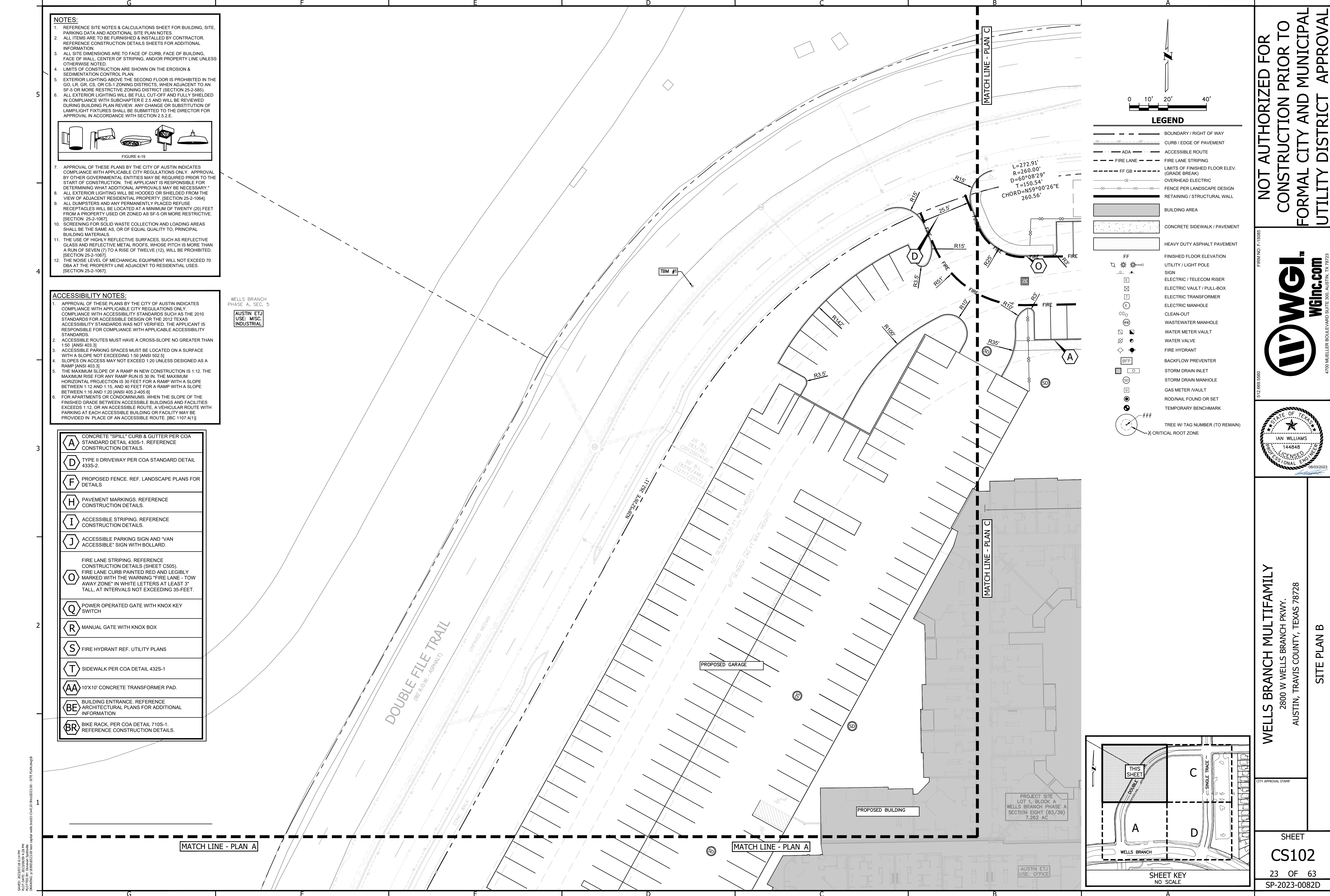
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- | | |
|-----------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| A | CONCRETE "SPILL" CURB & GUTTER PER COA STANDARD DETAIL 430S-1. REFERENCE CONSTRUCTION DETAILS. |
| D | TYPE II DRIVEWAY PER COA STANDARD DETAIL 433S-2. |
| F | PROPOSED FENCE. REF. LANDSCAPE PLANS FOR DETAILS. |
| H | PAVEMENT MARKINGS. REFERENCE CONSTRUCTION DETAILS. |
| I | ACCESSIBLE STRIPING. REFERENCE CONSTRUCTION DETAILS. |
| J | ACCESSIBLE PARKING SIGN AND "VAN ACCESSIBLE" SIGN WITH BOLLARD. |
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| Q | POWER OPERATED GATE WITH KNOX KEY SWITCH |
| R | MANUAL GATE WITH KNOX BOX |
| S | FIRE HYDRANT REF. UTILITY PLANS |
| T | SIDEWALK PER COA DETAIL 432S-1 |
| AA | 10'X10' CONCRETE TRANSFORMER PAD. |
| BE | BUILDING ENTRANCE. REFERENCE ARCHITECTURAL PLANS FOR ADDITIONAL INFORMATION |
| BR | BIKE RACK. PER COA DETAIL 710S-1. REFERENCE CONSTRUCTION DETAILS. |

WELLS BRANCH
PHASE A, SEC. 5
AUSTIN ETJ
USE: MISC.
INDUSTRIAL



- LEGEND**
- BOUNDARY / RIGHT OF WAY
 - CURB / EDGE OF PAVEMENT
 - ACCESSIBLE ROUTE
 - FIRE LANE STRIPING
 - FIRE LANE
 - LIMITS OF FINISHED FLOOR ELEV. (GRADE BREAK)
 - FF GB
 - OVERHEAD ELECTRIC
 - FENCE PER LANDSCAPE DESIGN
 - RETAINING / STRUCTURAL WALL
 - BUILDING AREA
 - CONCRETE SIDEWALK / PAVEMENT
 - HEAVY DUTY ASPHALT PAVEMENT
 - FINISHED FLOOR ELEVATION
 - UTILITY / LIGHT POLE
 - SIGN
 - ELECTRIC / TELECOM RISER
 - ELECTRIC VAULT / PULL-BOX
 - ELECTRIC TRANSFORMER
 - ELECTRIC MANHOLE
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 - WATER VALVE
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 - BACKFLOW PREVENTER
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 - STORM DRAIN MANHOLE
 - GAS METER / VAULT
 - ROD/NAIL FOUND OR SET
 - TEMPORARY BENCHMARK
 - TREE TAG NUMBER (TO REMAIN)
 - CRITICAL ROOT ZONE



NOT AUTHORIZED FOR
CONSTRUCTION PRIOR TO
FORMAL CITY AND MUNICIPAL
UTILITY DISTRICT APPROVAL

FIRM NO. F-10085

WGL
 WGLinc.com
 4700 MUELLER BOULEVARD SUITE 300, AUSTIN, TX 78723

STATE OF TEXAS

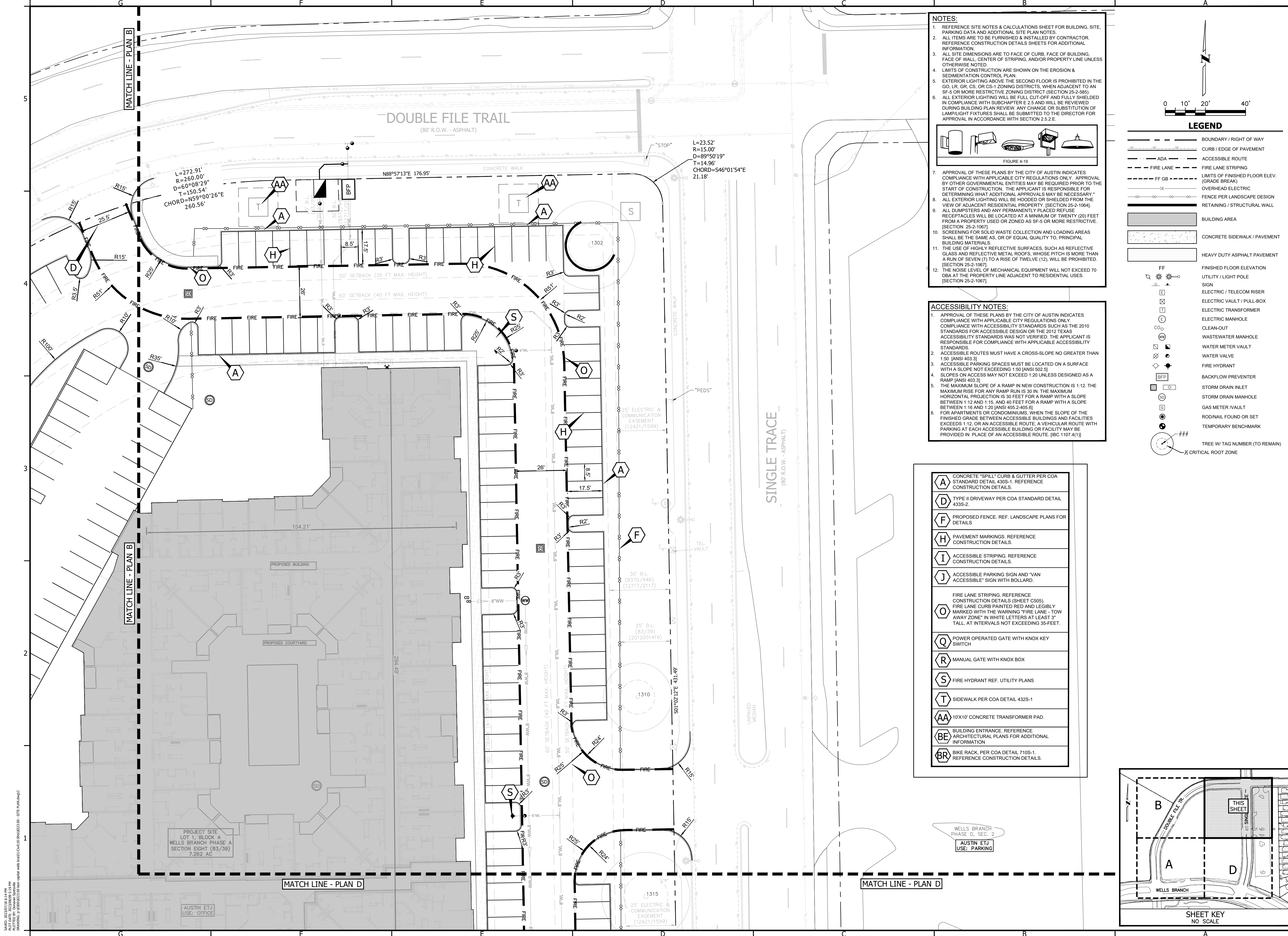
 IAN WILLIAMS
 LICENSED PROFESSIONAL ENGINEER
 14848
 08/03/2023

WELLS BRANCH MULTIFAMILY
 2800 W WELLS BRANCH PKWY.
 AUSTIN, TRAVIS COUNTY, TEXAS 78728

SHEET
CS102
 23 OF 63
 SP-2023-0082D

CITY APPROVAL STAMP

SAUTO: 20230718 6:14 PM
 PLOTTED BY: Doreen Sorensen
 C:\Users\dsorensen\OneDrive\Documents\sp-2023-0082d\CS102.dwg - SITE PLAN.dwg



L=272.91'
R=260.00'
D=60°08'29"
T=150.54'
CHORD=N59°00'26"E
260.56'

L=23.52'
R=15.00'
D=89°50'19"
T=14.96'
CHORD=S46°01'54"E
21.18'

NOTES:

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2. ALL ITEMS ARE TO BE FURNISHED & INSTALLED BY CONTRACTOR. REFERENCE CONSTRUCTION DETAILS SHEETS FOR ADDITIONAL INFORMATION.
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4. LIMITS OF CONSTRUCTION ARE SHOWN ON THE EROSION & SEDIMENTATION CONTROL PLAN.
5. EXTERIOR LIGHTING ABOVE THE SECOND FLOOR IS PROHIBITED IN THE GO, LR, GR, CS, OR CS-1 ZONING DISTRICTS. WHEN ADJACENT TO AN SF-5 OR MORE RESTRICTIVE ZONING DISTRICT (SECTION 25-2-585).
6. ALL EXTERIOR LIGHTING WILL BE FULL CUT-OFF AND FULLY SHIELDED IN COMPLIANCE WITH SUBCHAPTER E 2.5 AND WILL BE REVIEWED DURING BUILDING PLAN REVIEW. ANY CHANGE OR SUBSTITUTION OF LAMPLIGHT FIXTURES SHALL BE SUBMITTED TO THE DIRECTOR FOR APPROVAL IN ACCORDANCE WITH SECTION 25.2.E.

FIGURE 4-19

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 WHAT ADDITIONAL APPROVALS MAY BE NECESSARY.

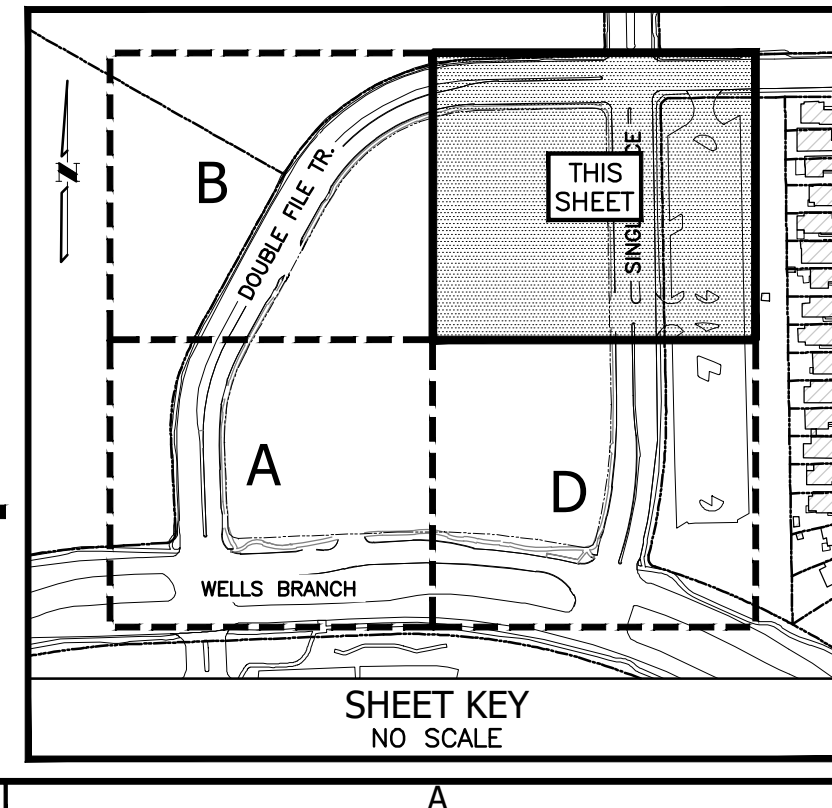
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9. ALL DUMPSTERS AND ANY PERMANENTLY PLACED REFUSE RECEPTACLES WILL BE LOCATED AT A MINIMUM OF TWENTY (20) FEET FROM A PROPERTY USED OR ZONED AS SF-5 OR MORE RESTRICTIVE. (SECTION 25-2-1067).
10. SCREENING FOR SOLID WASTE COLLECTION AND LOADING AREAS SHALL BE THE SAME AS, OR OF EQUAL QUALITY TO, PRINCIPAL BUILDING MATERIALS.
11. THE USE OF HIGHLY REFLECTIVE SURFACES, SUCH AS REFLECTIVE GLASS AND REFLECTIVE METAL ROOFS, WHOSE PITCH IS MORE THAN A RUN OF SEVEN (7) TO A RISE OF TWELVE (12), WILL BE PROHIBITED. (SECTION 25-2-1067).
12. THE NOISE LEVEL OF MECHANICAL EQUIPMENT WILL NOT EXCEED 70 DBA AT THE PROPERTY LINE ADJACENT TO RESIDENTIAL USES. (SECTION 25-2-1067).

ACCESSIBILITY NOTES:

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6. FOR APARTMENTS OR CONDOMINIUMS, WHEN THE SLOPE OF THE FINISHED GRADE BETWEEN ACCESSIBLE BUILDINGS AND FACILITIES EXCEEDS 1:12, OR AN ACCESSIBLE ROUTE, A VEHICULAR ROUTE WITH PARKING AT EACH ACCESSIBLE BUILDING OR FACILITY MAY BE PROVIDED IN PLACE OF AN ACCESSIBLE ROUTE. (IBC 1107.4(1)).

A	CONCRETE "SPILL" CURBS & GUTTER PER COA STANDARD DETAIL 430S-1. REFERENCE CONSTRUCTION DETAILS.
D	TYPE II DRIVEWAY PER COA STANDARD DETAIL 433S-2.
F	PROPOSED FENCE. REF. LANDSCAPE PLANS FOR DETAILS.
H	PAVEMENT MARKINGS. REFERENCE CONSTRUCTION DETAILS.
I	ACCESSIBLE STRIPING. REFERENCE CONSTRUCTION DETAILS.
J	ACCESSIBLE PARKING SIGN AND "VAN ACCESSIBLE" SIGN WITH BOLLARD.
O	FIRE LANE STRIPING. REFERENCE CONSTRUCTION DETAILS (SHEET C505). FIRE LANE CURB PAINTED RED AND LEGIBLY MARKED WITH THE WARNING "FIRE LANE - TOW AWAY ZONE" IN WHITE LETTERS AT LEAST 3" TALL AT INTERVALS NOT EXCEEDING 35-FEET.
Q	POWER OPERATED GATE WITH KNOX KEY SWITCH.
R	MANUAL GATE WITH KNOX BOX.
S	FIRE HYDRANT REF. UTILITY PLANS.
T	SIDEWALK PER COA DETAIL 432S-1.
AA	10'X10' CONCRETE TRANSFORMER PAD.
BE	BUILDING ENTRANCE. REFERENCE ARCHITECTURAL PLANS FOR ADDITIONAL INFORMATION.
BR	BIKE RACK. PER COA DETAIL 710S-1. REFERENCE CONSTRUCTION DETAILS.

LEGEND



NOT AUTHORIZED FOR CONSTRUCTION PRIOR TO FORMAL CITY AND MUNICIPAL UTILITY DISTRICT APPROVAL

WGL
 WGLinc.com
 4700 MUELLER BOULEVARD SUITE 300, AUSTIN, TX 78723
 512.669.5580

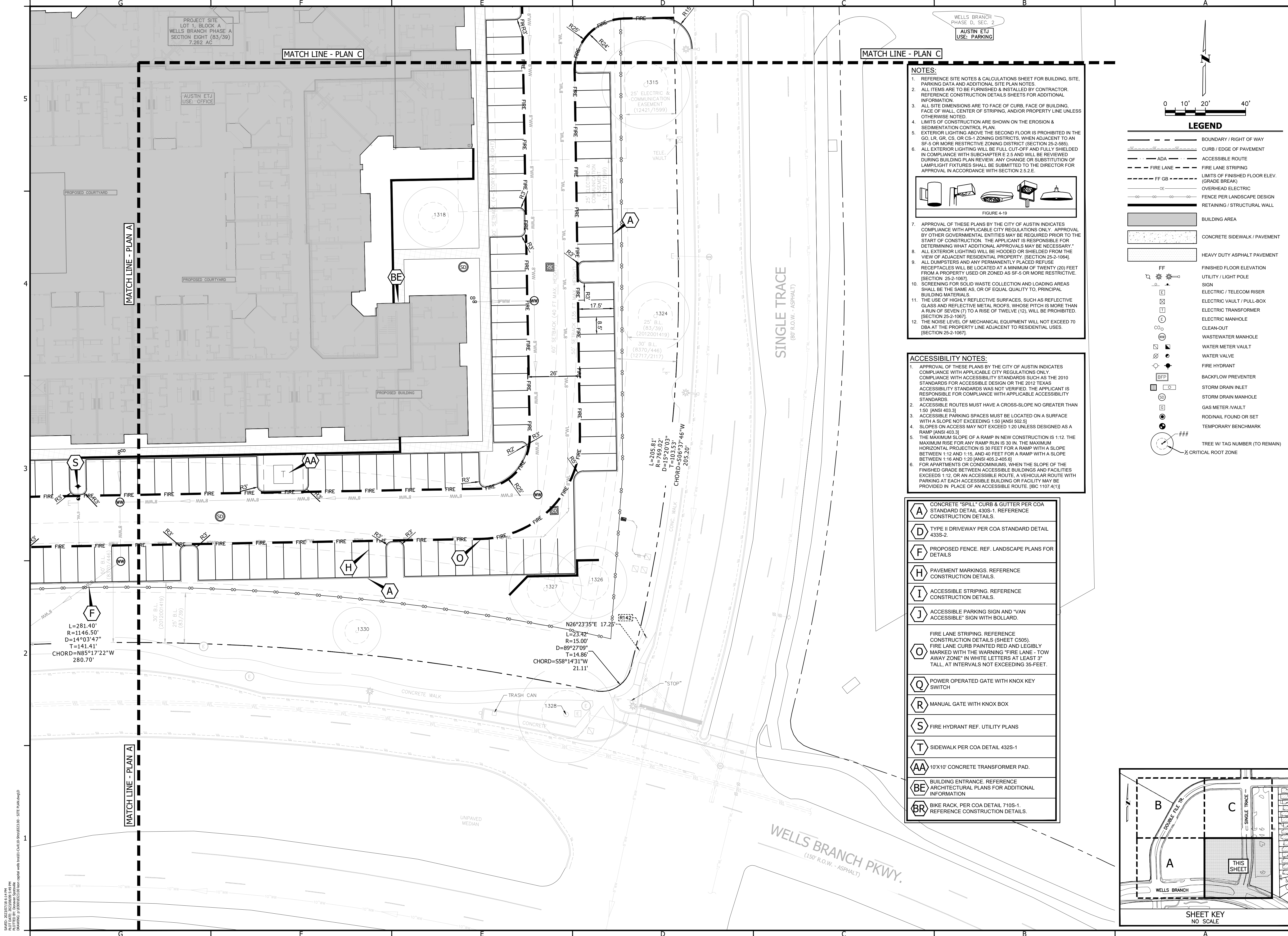
STATE OF TEXAS
 IAN WILLIAMS
 LICENSED PROFESSIONAL ENGINEER
 144845
 08/03/2023

WELLS BRANCH MULTIFAMILY
 2800 W WELLS BRANCH PKWY.
 AUSTIN, TRAVIS COUNTY, TEXAS 78728

SITE PLAN C

SHEET
 CS103
 24 OF 63
 SP-2023-0082D

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 PRINTED: 2023/07/18 6:41 PM
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 Plotter: C:\ProgramData\Bentley\MapGuide\bin\mgdplotter.exe



PROJECT SITE
LOT 1, BLOCK A
WELLS BRANCH PHASE A
SECTION EIGHT (83/39)
7.262 AC

AUSTIN ETJ
USE: OFFICE

WELLS BRANCH
PHASE D, SEC. 2
AUSTIN ETJ
USE: PARKING

MATCH LINE - PLAN C

MATCH LINE - PLAN C

MATCH LINE - PLAN A

MATCH LINE - PLAN A

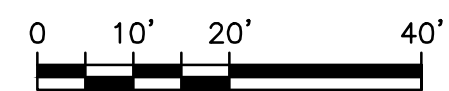
SINGLE TRACE
(80' R.O.W. - ASPHALT)

WELLS BRANCH PKWY.
(150' R.O.W. - ASPHALT)

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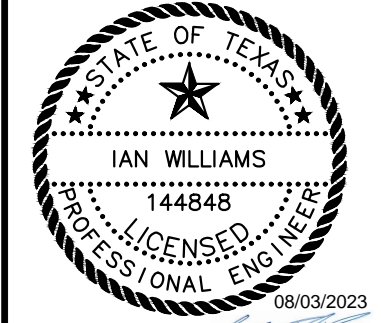
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LEGEND

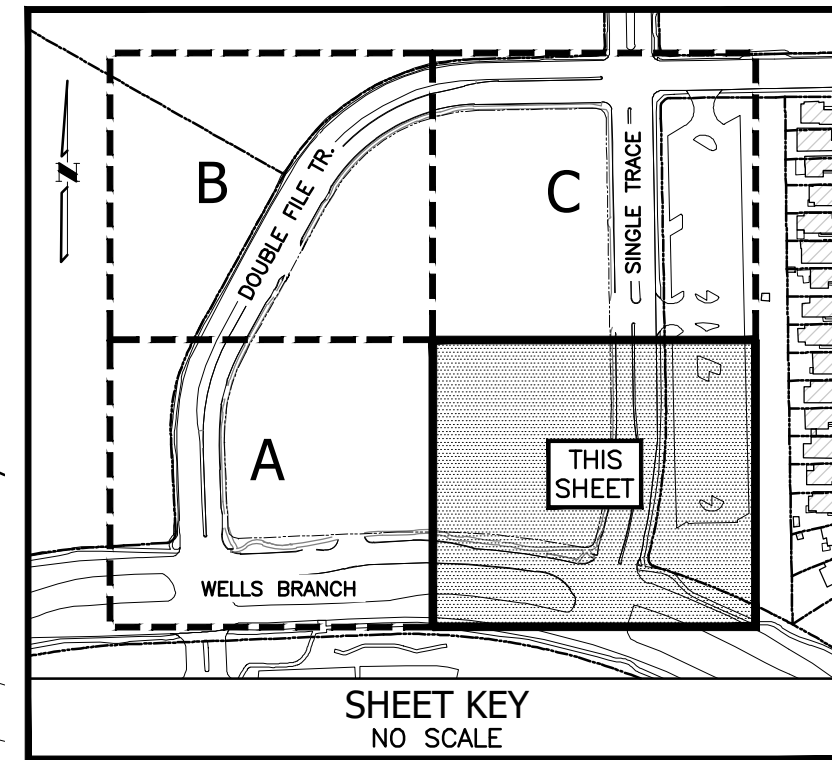
- BOUNDARY / RIGHT OF WAY
- CURB / EDGE OF PAVEMENT
- ADA ACCESSIBLE ROUTE
- FIRE LANE STRIPING
- LIMITS OF FINISHED FLOOR ELEV. (GRADE BREAK)
- OVERHEAD ELECTRIC
- FENCE PER LANDSCAPE DESIGN
- RETAINING / STRUCTURAL WALL
- BUILDING AREA
- CONCRETE SIDEWALK / PAVEMENT
- HEAVY DUTY ASPHALT PAVEMENT
- FF FINISHED FLOOR ELEVATION
- UTILITY / LIGHT POLE
- SIGN
- ELECTRIC / TELECOM RISER
- ELECTRIC VAULT / PULL-BOX
- ELECTRIC TRANSFORMER
- ELECTRIC MANHOLE
- CLEAN-OUT
- WASTEWATER MANHOLE
- WATER METER VAULT
- WATER VALVE
- FIRE HYDRANT
- BACKFLOW PREVENTER
- STORM DRAIN INLET
- STORM DRAIN MANHOLE
- GAS METER /VAULT
- ROD/NAIL FOUND OR SET
- TEMPORARY BENCHMARK
- ### TREE BY TAG NUMBER (TO REMAIN)
- 1/2 CRITICAL ROOT ZONE

NOT AUTHORIZED FOR
CONSTRUCTION PRIOR TO
FORMAL CITY AND MUNICIPAL
UTILITY DISTRICT APPROVAL

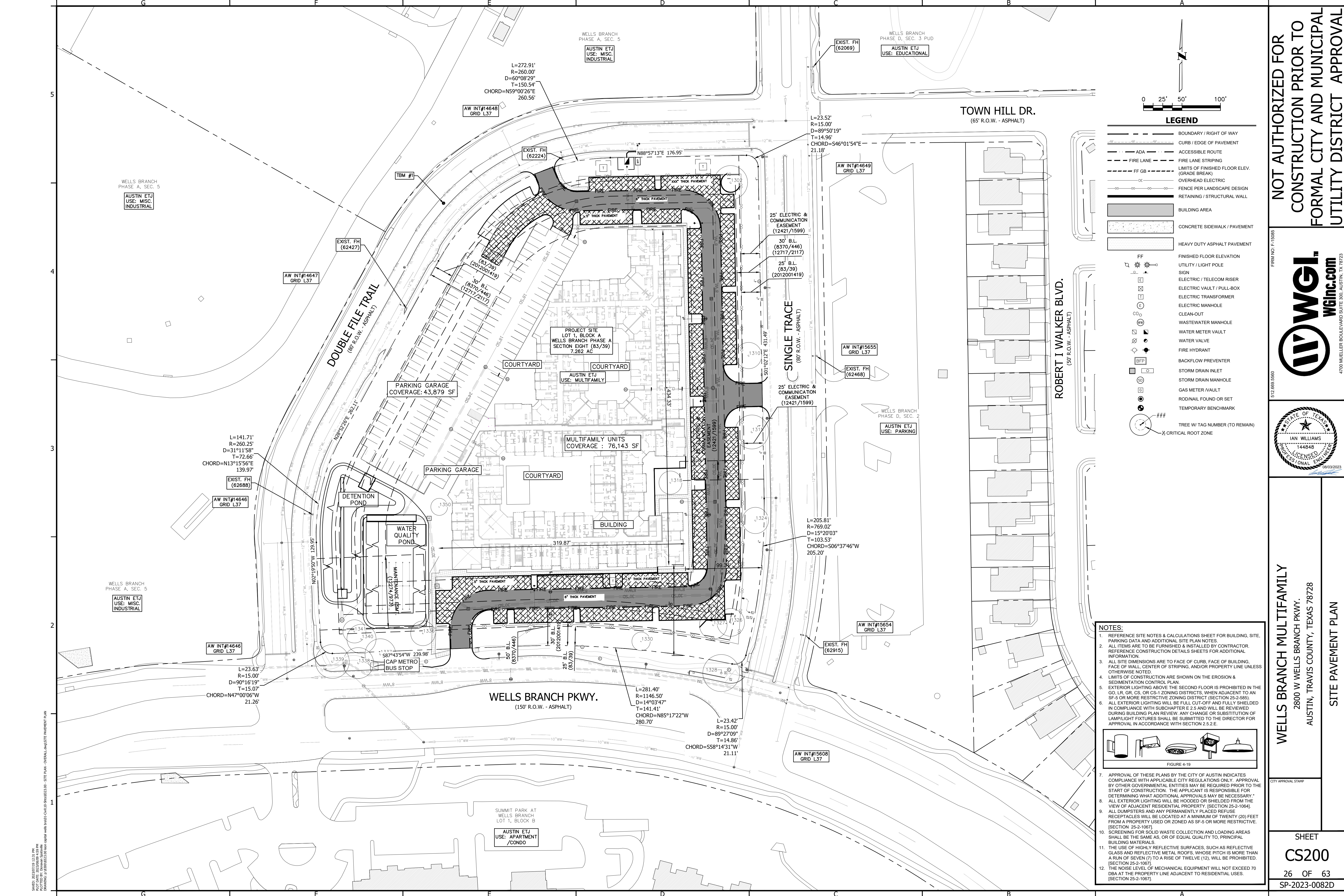


WELLS BRANCH MULTIFAMILY
2800 W WELLS BRANCH PKWY.
AUSTIN, TRAVIS COUNTY, TEXAS 78728

SHEET
CS104
25 OF 63
SP-2023-0082D



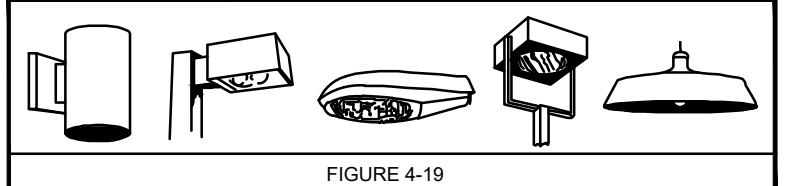
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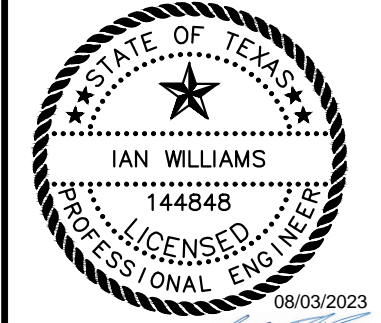
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	FIRE LANE
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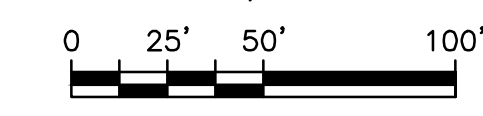
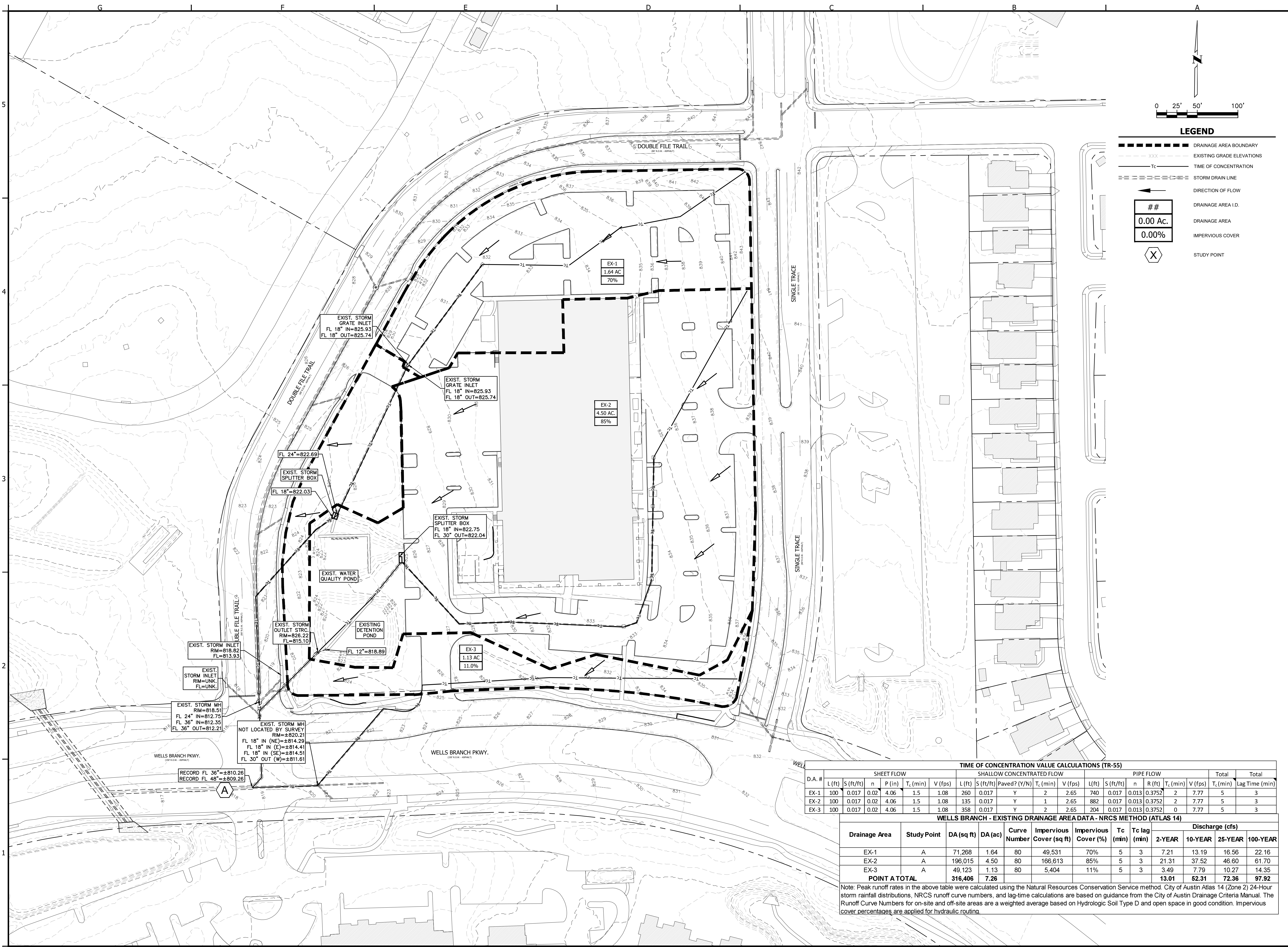


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NOT AUTHORIZED FOR
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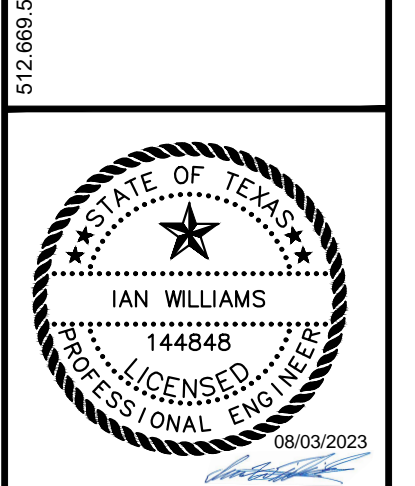
WELLS BRANCH MULTIFAMILY
2800 W WELLS BRANCH PKWY.
AUSTIN, TRAVIS COUNTY, TEXAS 78728



LEGEND

- DRAINAGE AREA BOUNDARY
- EXISTING GRADE ELEVATIONS
- TIME OF CONCENTRATION
- STORM DRAIN LINE
- DIRECTION OF FLOW
- DRAINAGE AREA I.D.
- DRAINAGE AREA
- IMPERVIOUS COVER
- STUDY POINT

NOT AUTHORIZED FOR
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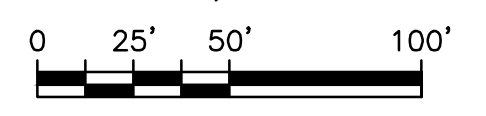
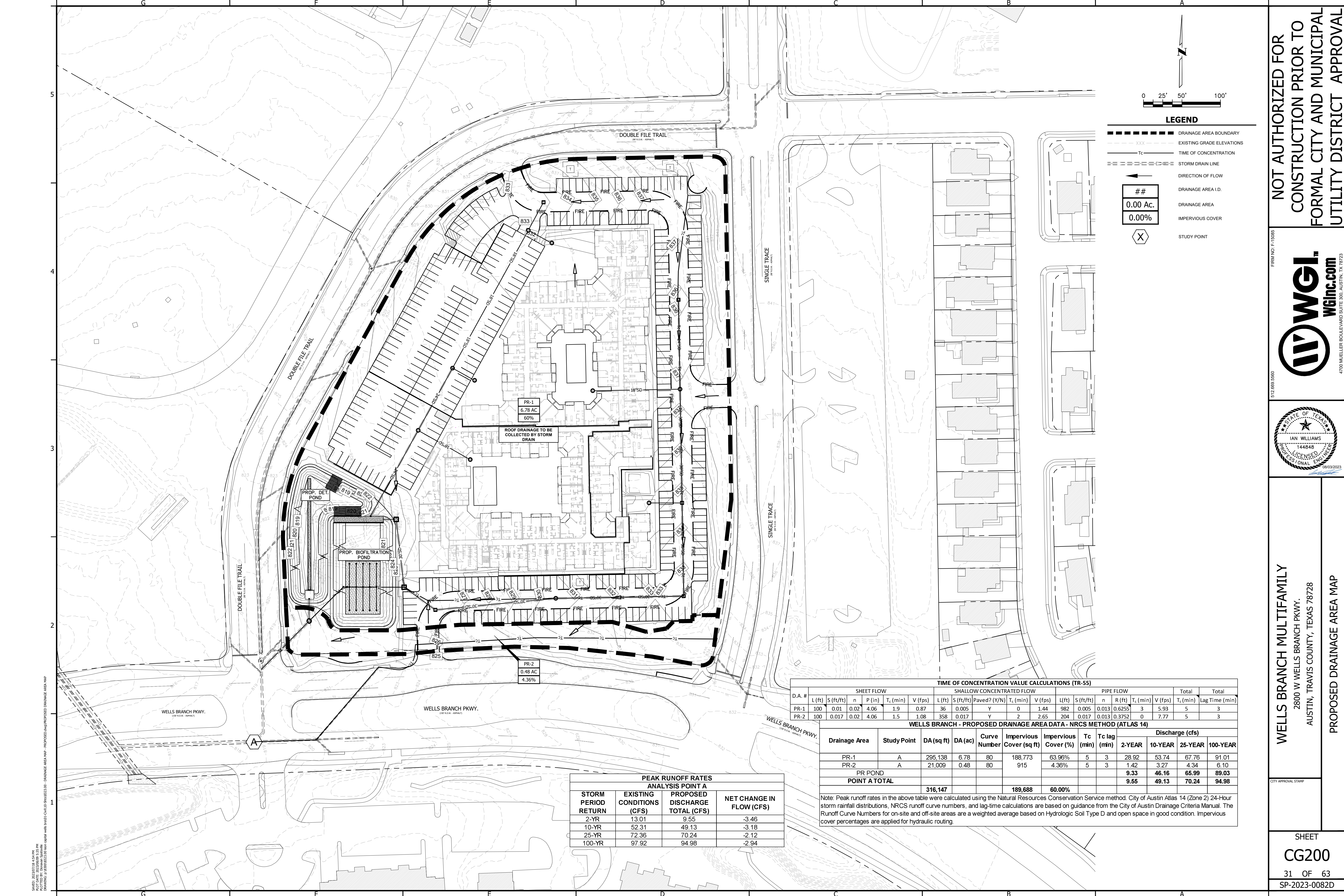


WELLS BRANCH MULTIFAMILY
 2800 W WELLS BRANCH PKWY.
 AUSTIN, TRAVIS COUNTY, TEXAS 78728
 EXISTING DRAINAGE AREA MAP

D.A. #	TIME OF CONCENTRATION VALUE CALCULATIONS (TR-55)																		
	SHEET FLOW						SHALLOW CONCENTRATED FLOW						PIPE FLOW				Total	Total	
	L (ft)	S (ft/ft)	n	P (in)	T _c (min)	V (fps)	L (ft)	S (ft/ft)	Paved? (Y/N)	T _c (min)	V (fps)	L (ft)	S (ft/ft)	n	R (ft)	T _c (min)	V (fps)	T _c (min)	Lag Time (min)
EX-1	100	0.017	0.02	4.06	1.5	1.08	260	0.017	Y	2	2.65	740	0.017	0.013	0.3752	2	7.77	5	3
EX-2	100	0.017	0.02	4.06	1.5	1.08	135	0.017	Y	1	2.65	882	0.017	0.013	0.3752	2	7.77	5	3
EX-3	100	0.017	0.02	4.06	1.5	1.08	358	0.017	Y	2	2.65	204	0.017	0.013	0.3752	0	7.77	5	3

Drainage Area	Study Point	WELLS BRANCH - EXISTING DRAINAGE AREA DATA - NRCS METHOD (ATLAS 14)											
		DA (sq ft)	DA (ac)	Curve Number	Impervious Cover (sq ft)	Impervious Cover (%)	T _c (min)	T _c lag (min)	Discharge (cfs)				
									2-YEAR	10-YEAR	25-YEAR	100-YEAR	
EX-1	A	71,268	1.64	80	49,531	70%	5	3	7.21	13.19	16.56	22.16	
EX-2	A	196,015	4.50	80	166,613	85%	5	3	21.31	37.52	46.60	61.70	
EX-3	A	49,123	1.13	80	5,404	11%	5	3	3.49	7.79	10.27	14.35	
POINT A TOTAL		316,406	7.26						13.01	52.31	72.36	97.92	

Note: Peak runoff rates in the above table were calculated using the Natural Resources Conservation Service method, City of Austin Atlas 14 (Zone 2) 24-hour storm rainfall distributions, NRCS runoff curve numbers, and lag-time calculations are based on guidance from the City of Austin Drainage Criteria Manual. The Runoff Curve Numbers for on-site and off-site areas are a weighted average based on Hydrologic Soil Type D and open space in good condition. Impervious cover percentages are applied for hydraulic routing.



LEGEND

- DRAINAGE AREA BOUNDARY
- EXISTING GRADE ELEVATIONS
- TIME OF CONCENTRATION
- STORM DRAIN LINE
- DIRECTION OF FLOW
- ## DRAINAGE AREA I.D.
- 0.00 Ac. DRAINAGE AREA
- 0.00% IMPERVIOUS COVER
- X STUDY POINT

PR-1
6.78 AC
60%

ROOF DRAINAGE TO BE COLLECTED BY STORM DRAIN

PR-2
0.48 AC
4.36%

TIME OF CONCENTRATION VALUE CALCULATIONS (TR-55)

D.A. #	SHEET FLOW					SHALLOW CONCENTRATED FLOW					PIPE FLOW					Total T _c (min)	Total Lag Time (min)		
	L (ft)	S (ft/ft)	n	P (in)	T _c (min)	V (fps)	L (ft)	S (ft/ft)	Paved? (Y/N)	T _c (min)	V (fps)	L (ft)	S (ft/ft)	n	R (ft)			T _c (min)	V (fps)
PR-1	100	0.01	0.02	4.06	1.9	0.87	36	0.005	Y	0	1.44	982	0.005	0.013	0.6255	3	5.93	5	3
PR-2	100	0.017	0.02	4.06	1.5	1.08	358	0.017	Y	2	2.65	204	0.017	0.013	0.3752	0	7.77	5	3

WELLS BRANCH - PROPOSED DRAINAGE AREA DATA - NRCS METHOD (ATLAS 14)

Drainage Area	Study Point	DA (sq ft)	DA (ac)	Curve Number	Impervious Cover (sq ft)	Impervious Cover (%)	T _c (min)	T _c lag (min)	Discharge (cfs)			
									2-YEAR	10-YEAR	25-YEAR	100-YEAR
PR-1	A	295,138	6.78	80	188,773	63.96%	5	3	28.92	53.74	67.76	91.01
PR-2	A	21,009	0.48	80	915	4.36%	5	3	1.42	3.27	4.34	6.10
PR POND									9.33	46.16	65.99	89.03
POINT A TOTAL									9.55	49.13	70.24	94.98
		316,147			189,688	60.00%						

PEAK RUNOFF RATES ANALYSIS POINT A

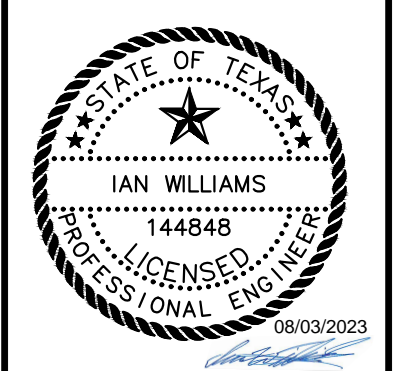
STORM PERIOD RETURN	EXISTING CONDITIONS (CFS)	PROPOSED DISCHARGE TOTAL (CFS)	NET CHANGE IN FLOW (CFS)
2-YR	13.01	9.55	-3.46
10-YR	52.31	49.13	-3.18
25-YR	72.36	70.24	-2.12
100-YR	97.92	94.98	-2.94

Note: Peak runoff rates in the above table were calculated using the Natural Resources Conservation Service method. City of Austin Atlas 14 (Zone 2) 24-hour storm rainfall distributions, NRCS runoff curve numbers, and lag-time calculations are based on guidance from the City of Austin Drainage Criteria Manual. The Runoff Curve Numbers for on-site and off-site areas are a weighted average based on Hydrologic Soil Type D and open space in good condition. Impervious cover percentages are applied for hydraulic routing.

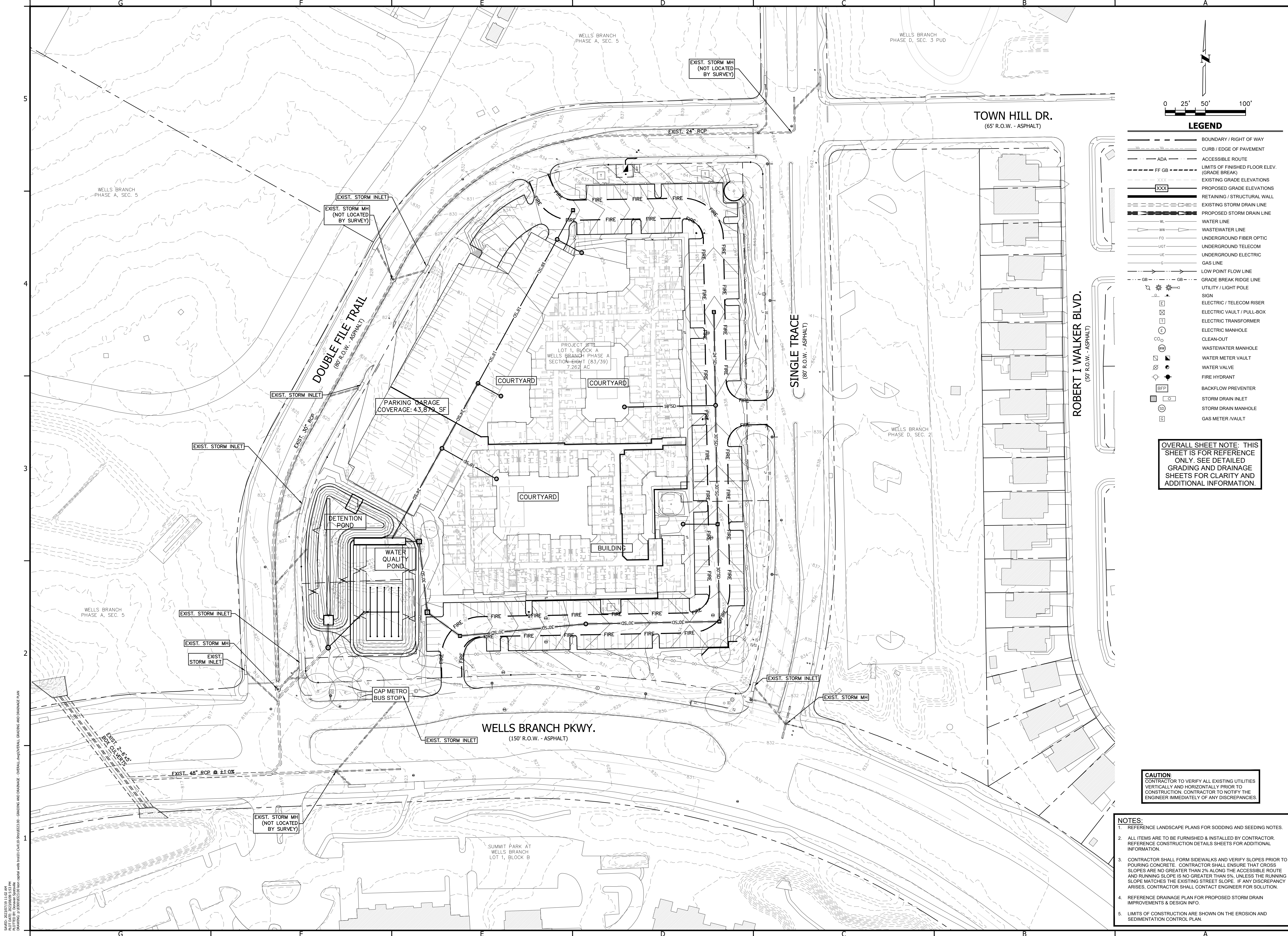
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 FORMAL CITY AND MUNICIPAL
 UTILITY DISTRICT APPROVAL

FIRM NO. F-16085

 WGI Inc.
 4700 MUELLER BOULEVARD SUITE 300, AUSTIN, TX 78723



WELLS BRANCH MULTIFAMILY
 2800 W WELLS BRANCH PKWY.
 AUSTIN, TRAVIS COUNTY, TEXAS 78728
 PROPOSED DRAINAGE AREA MAP



LEGEND

- BOUNDARY / RIGHT OF WAY
- CURB / EDGE OF PAVEMENT
- ACCESSIBLE ROUTE
- LIMITS OF FINISHED FLOOR ELEV. (GRADE BREAK)
- FF GB
- XXX
- PROPOSED GRADE ELEVATIONS
- RETAINING / STRUCTURAL WALL
- EXISTING STORM DRAIN LINE
- PROPOSED STORM DRAIN LINE
- WATER LINE
- WASTE WATER LINE
- UNDERGROUND FIBER OPTIC
- UNDERGROUND TELECOM
- UNDERGROUND ELECTRIC
- GAS LINE
- LOW POINT FLOW LINE
- GRADE BREAK RIDGE LINE
- UTILITY / LIGHT POLE
- SIGN
- ELECTRIC / TELECOM RISER
- ELECTRIC VAULT / PULL-BOX
- ELECTRIC TRANSFORMER
- ELECTRIC MANHOLE
- CLEAN-OUT
- WASTE WATER MANHOLE
- WATER METER VAULT
- WATER VALVE
- FIRE HYDRANT
- BACKFLOW PREVENTER
- STORM DRAIN INLET
- STORM DRAIN MANHOLE
- GAS METER /VAULT

OVERALL SHEET NOTE: THIS SHEET IS FOR REFERENCE ONLY. SEE DETAILED GRADING AND DRAINAGE SHEETS FOR CLARITY AND ADDITIONAL INFORMATION.

CAUTION:
CONTRACTOR TO VERIFY ALL EXISTING UTILITIES VERTICALLY AND HORIZONTALLY PRIOR TO CONSTRUCTION. CONTRACTOR TO NOTIFY THE ENGINEER IMMEDIATELY OF ANY DISCREPANCIES.

- NOTES:**
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 2. ALL ITEMS ARE TO BE FURNISHED & INSTALLED BY CONTRACTOR. REFERENCE CONSTRUCTION DETAILS SHEETS FOR ADDITIONAL INFORMATION.
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 4. REFERENCE DRAINAGE PLAN FOR PROPOSED STORM DRAIN IMPROVEMENTS & DESIGN INFO.
 5. LIMITS OF CONSTRUCTION ARE SHOWN ON THE EROSION AND SEDIMENTATION CONTROL PLAN.

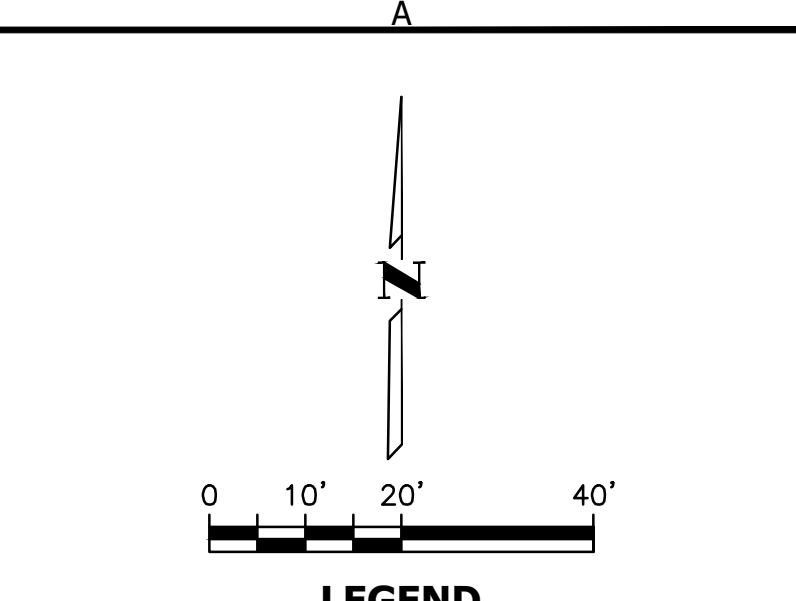
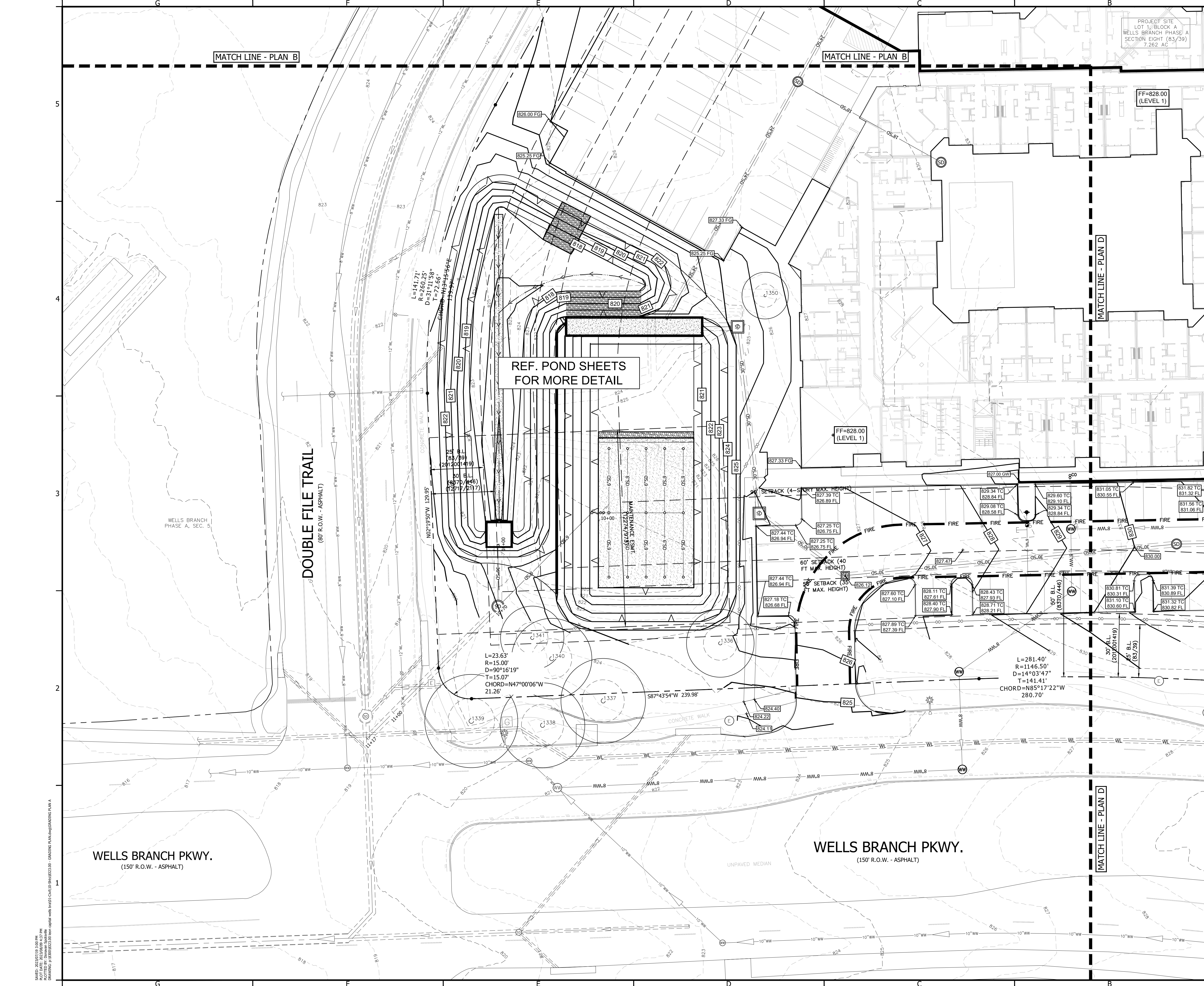
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WELLS BRANCH MULTIFAMILY
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 AUSTIN, TRAVIS COUNTY, TEXAS 78728
OVERALL GRADING AND DRAINAGE PLAN

CITY APPROVAL STAMP
 SHEET
CG300
 32 OF 63
 SP-2023-0082D

SANITARY: 20230719 11:02 AM
 PLOTTED BY: DORIAN SORRELL
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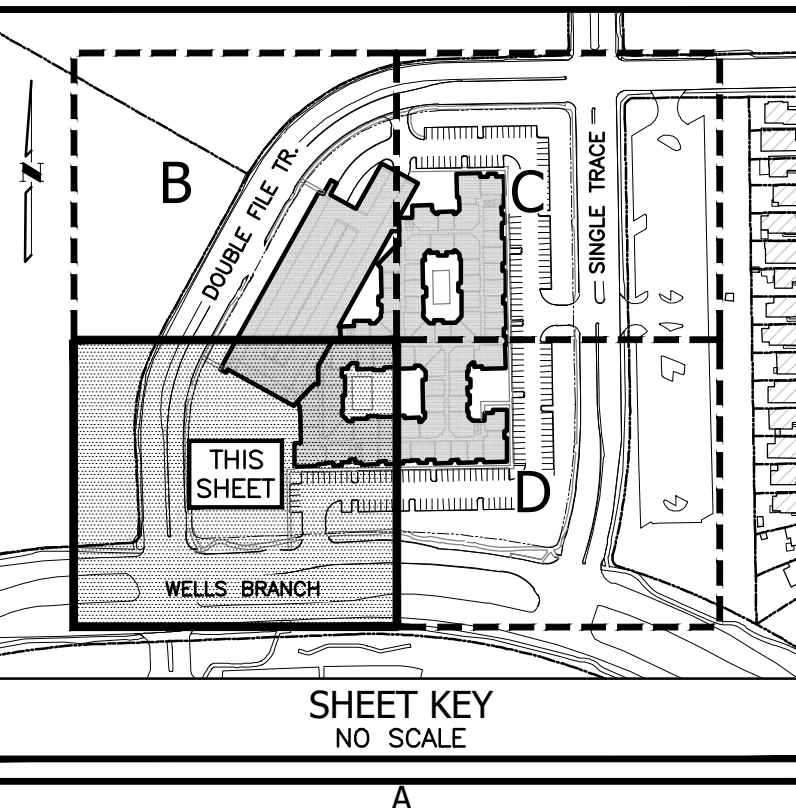


LEGEND

	BOUNDARY / RIGHT OF WAY
	CURB / EDGE OF PAVEMENT
	ACCESSIBLE ROUTE
	LIMITS OF FINISHED FLOOR ELEV. (GRADE BREAK)
	EXISTING GRADE ELEVATIONS
	PROPOSED GRADE ELEVATIONS
	RETAINING / STRUCTURAL WALL
	EXISTING STORM DRAIN LINE
	PROPOSED STORM DRAIN LINE
	WATER LINE
	WASTEWATER LINE
	UNDERGROUND FIBER OPTIC
	UNDERGROUND TELECOM
	UNDERGROUND ELECTRIC
	GAS LINE
	LOW POINT FLOW LINE
	GRADE BREAK RIDGE LINE
	UTILITY / LIGHT POLE
	SIGN
	ELECTRIC / TELECOM RISER
	ELECTRIC VAULT / PULL-BOX
	ELECTRIC TRANSFORMER
	ELECTRIC MANHOLE
	CLEAN-OUT
	WASTEWATER MANHOLE
	WATER METER VAULT
	WATER VALVE
	FIRE HYDRANT
	BACKFLOW PREVENTER
	STORM DRAIN INLET
	STORM DRAIN MANHOLE
	GAS METER / VAULT
	PROPOSED FINISHED GRADE
	EXISTING GRADE ELEVATION
	MATCH EXISTING GRADE
	TOP OF CURB ELEVATION
	FLOW LINE ELEVATION
	FINISHED FLOOR ELEVATION
	FINISHED GRADE AT WALL
	TOP OF WALL ELEVATION
	TREE W TAG NUMBER (TO REMAIN)
	CRITICAL ROOT ZONE

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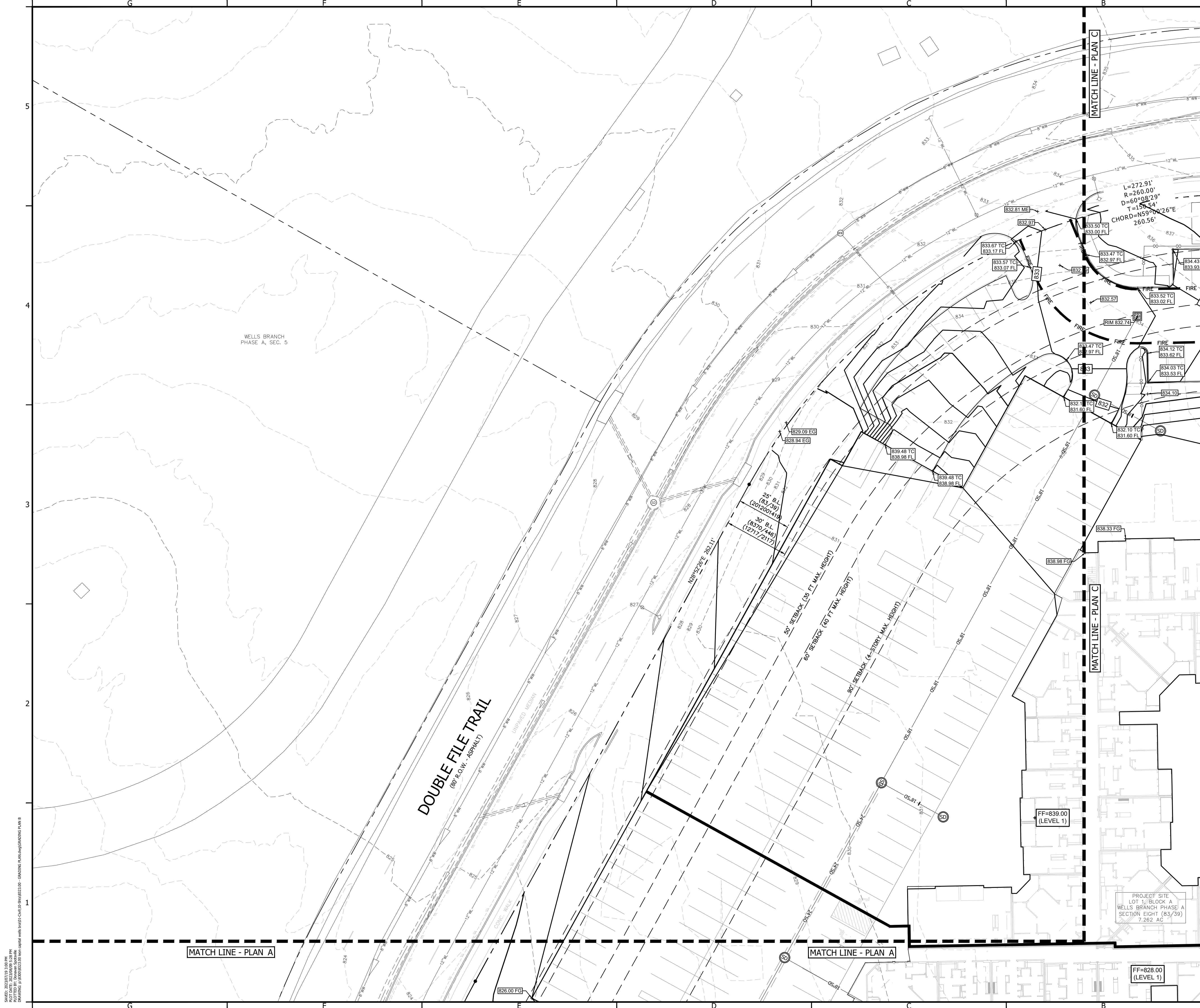


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UTILITY DISTRICT APPROVAL



WELLS BRANCH MULTIFAMILY
2800 W WELLS BRANCH PKWY.
AUSTIN, TRAVIS COUNTY, TEXAS 78728

GRADING PLAN A
CITY APPROVAL STAMP
SHEET
CG301
33 OF 63
SP-2023-0082D

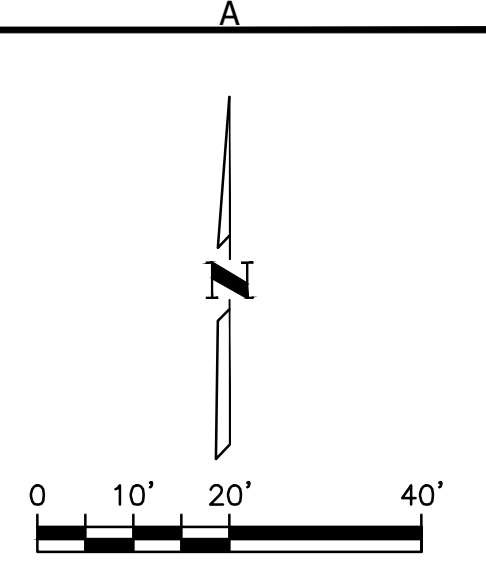
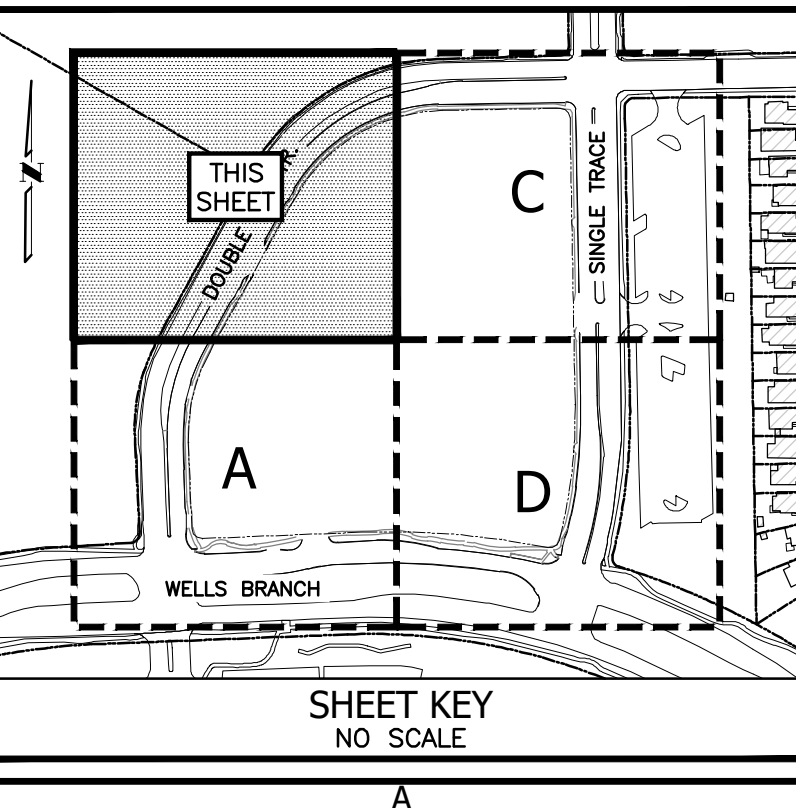


LEGEND

	BOUNDARY / RIGHT OF WAY
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	ACCESSIBLE ROUTE
	LIMITS OF FINISHED FLOOR ELEV. (GRADE BREAK)
	EXISTING GRADE ELEVATIONS
	PROPOSED GRADE ELEVATIONS
	RETAINING / STRUCTURAL WALL
	EXISTING STORM DRAIN LINE
	PROPOSED STORM DRAIN LINE
	WATER LINE
	WASTEWATER LINE
	UNDERGROUND FIBER OPTIC
	UNDERGROUND TELECOM
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	GAS LINE
	LOW POINT FLOW LINE
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	ELECTRIC MANHOLE
	CLEAN-OUT
	WASTEWATER MANHOLE
	WATER METER VAULT
	WATER VALVE
	FIRE HYDRANT
	BACKFLOW PREVENTER
	STORM DRAIN INLET
	STORM DRAIN MANHOLE
	GAS METER / VAULT
	PROPOSED FINISHED GRADE
	EXISTING GRADE ELEVATION
	MATCH EXISTING GRADE
	TOP OF CURB ELEVATION
	FLOW LINE ELEVATION
	FINISHED FLOOR ELEVATION
	FINISHED GRADE AT WALL
	TOP OF WALL ELEVATION
	TREE W/ TAG NUMBER (TO REMAIN)
	1/2 CRITICAL ROOT ZONE

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WELLS BRANCH MULTIFAMILY
 2800 W WELLS BRANCH PKWY.
 AUSTIN, TRAVIS COUNTY, TEXAS 78728

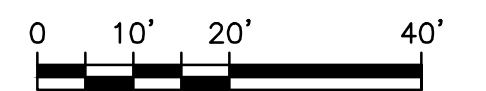
GRADING PLAN B

SHEET
CG302
 34 OF 63
 SP-2023-0082D

SWMT: 20230719 10:01 PM
 PLOTTED BY: Doreen Scoville
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DOUBLE FILE TRAIL
(80' R.O.W. - ASPHALT)

SINGLE TRACE
(80' R.O.W. - ASPHALT)

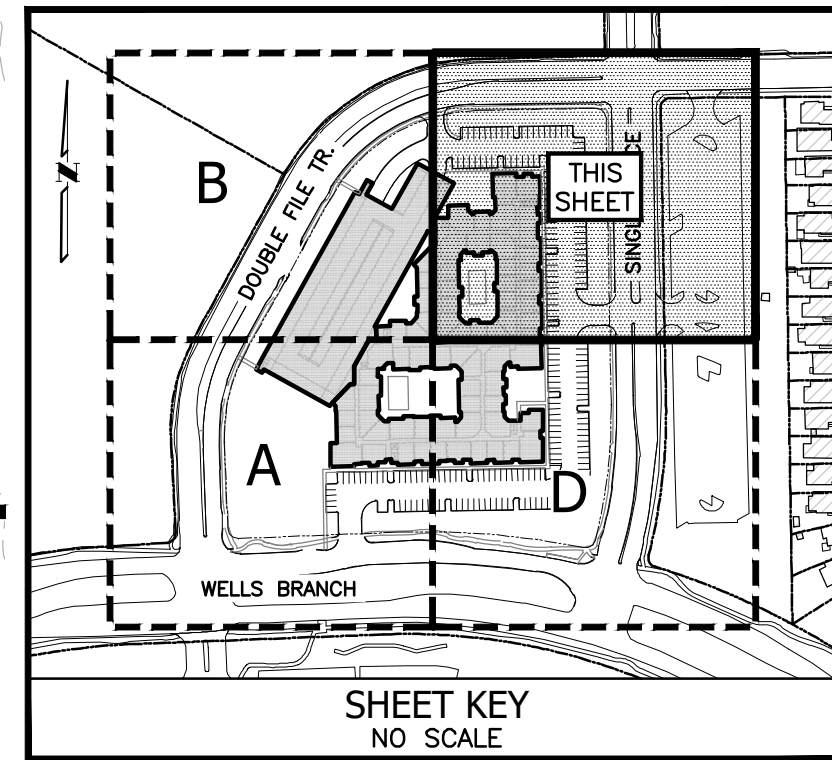


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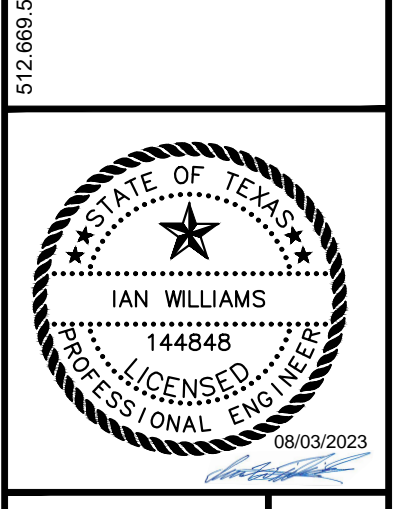
	BOUNDARY / RIGHT OF WAY
	CURB / EDGE OF PAVEMENT
	ACCESSIBLE ROUTE
	ADA
	LIMITS OF FINISHED ELEV. (GRADE BREAK)
	EXISTING GRADE ELEVATIONS
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	WATER LINE
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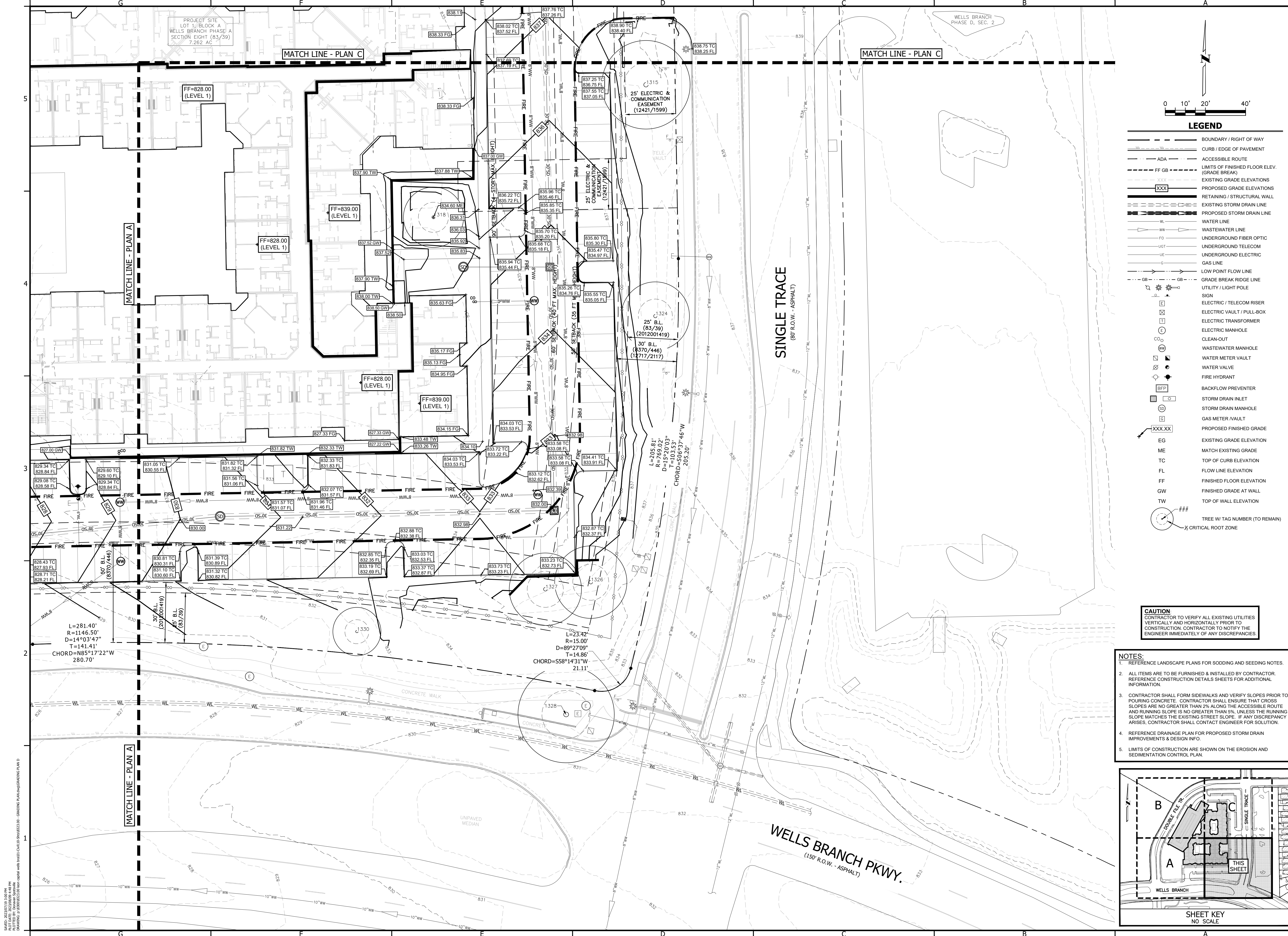
WELLS BRANCH MULTIFAMILY
2800 W WELLS BRANCH PKWY.
AUSTIN, TRAVIS COUNTY, TEXAS 78728

GRADING PLAN C

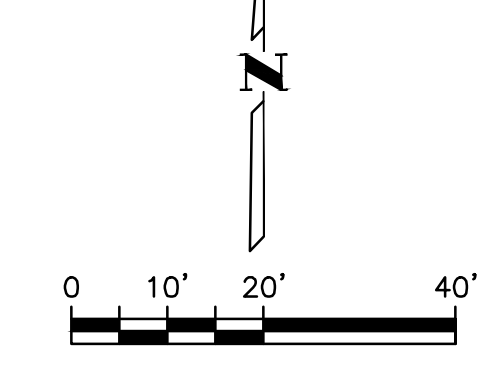
CITY APPROVAL STAMP

SHEET
CG303
35 OF 63
SP-2023-0082D

SWMT: 20230719 3:07 PM
 PLOTTED BY: DORIAN SOWDER
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PROJECT SITE
LOT 1/2, BLOCK A
WELLS BRANCH PHASE A
SECTION EIGHT (83/39)
7.262 AC

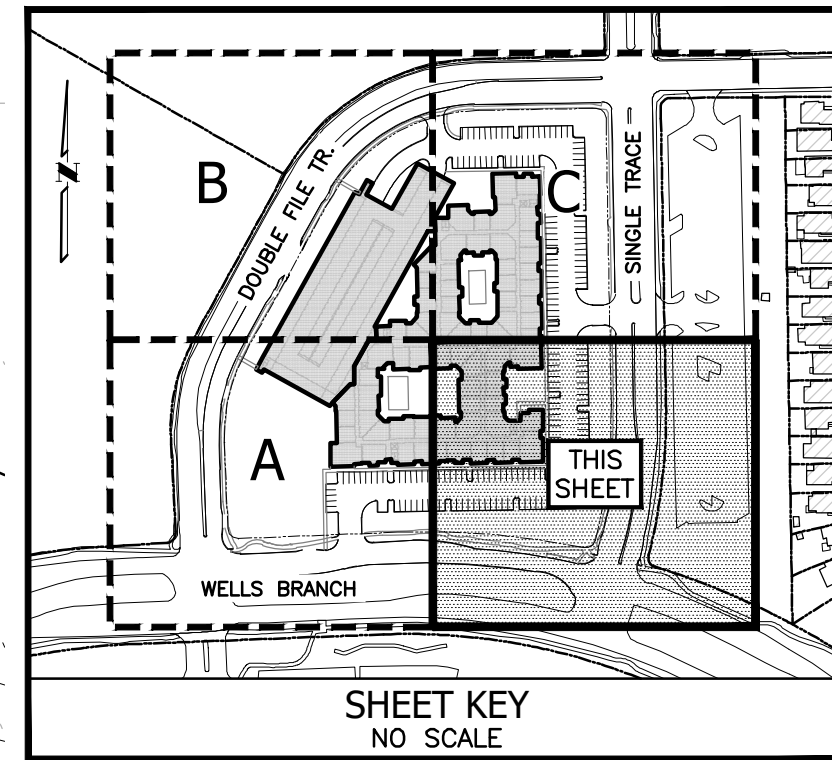


LEGEND

	BOUNDARY / RIGHT OF WAY
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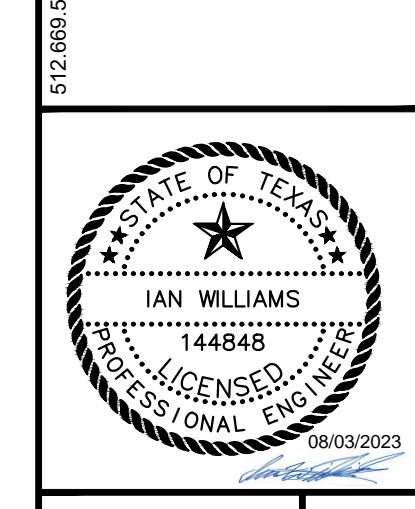


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UTILITY DISTRICT APPROVAL

512.669.5580

WGI
WGInc.com

4700 MUELLER BOULEVARD SUITE 300, AUSTIN, TX 78723

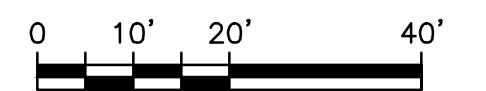
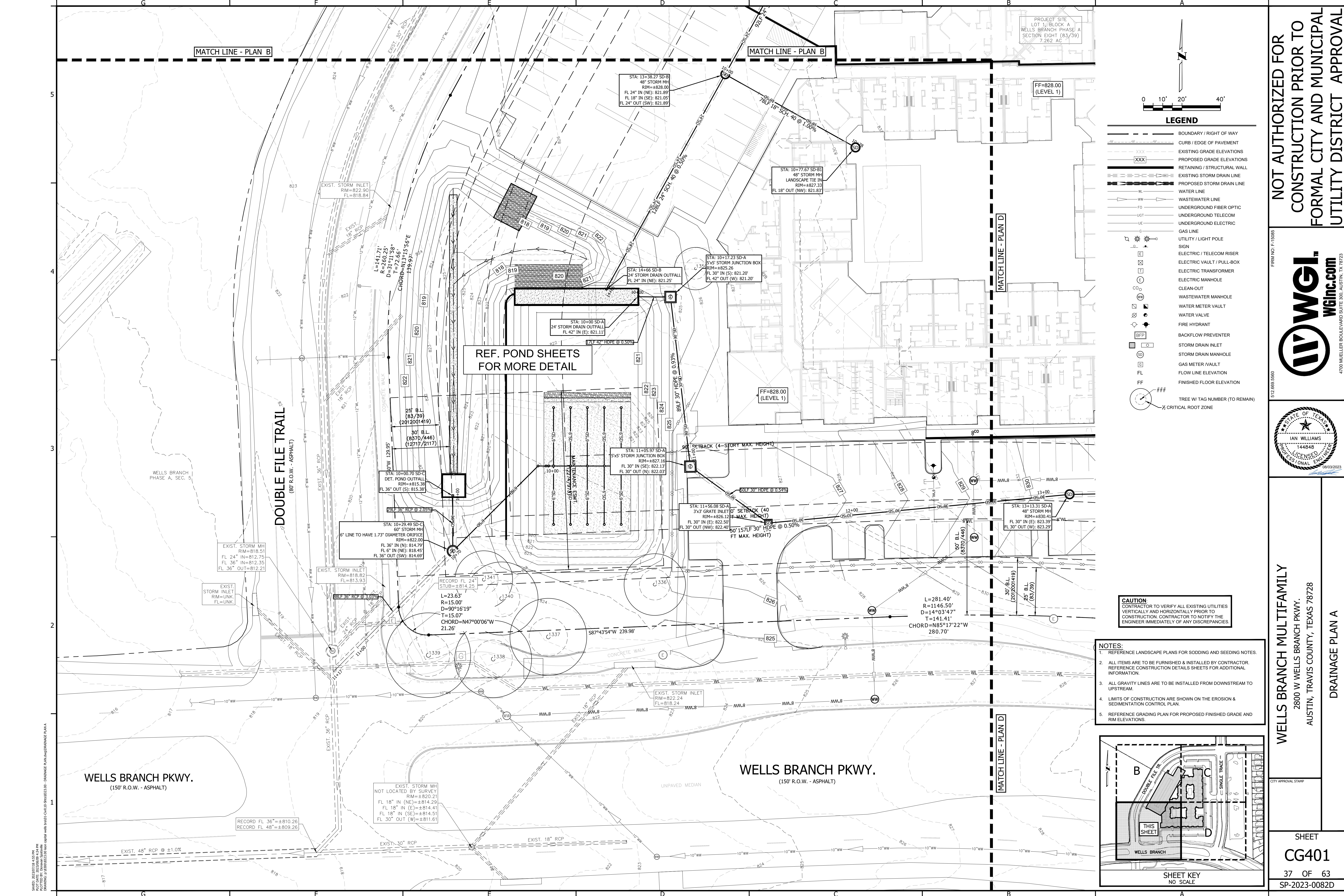


WELLS BRANCH MULTIFAMILY
2800 W WELLS BRANCH PKWY.
AUSTIN, TRAVIS COUNTY, TEXAS 78728

GRADING PLAN D

CITY APPROVAL STAMP

SHEET
CG304
36 OF 63
SP-2023-0082D

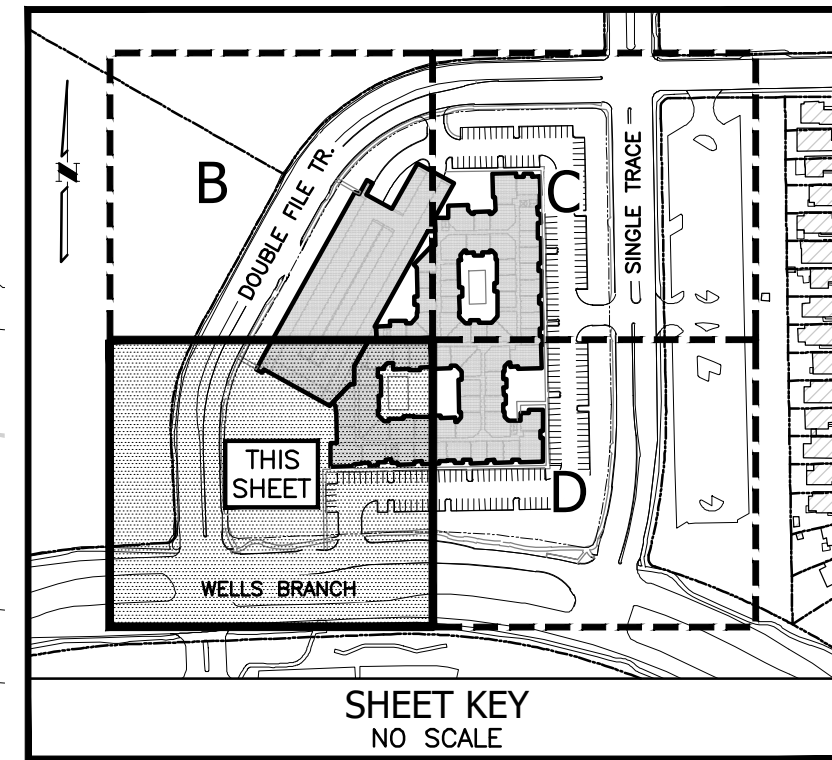


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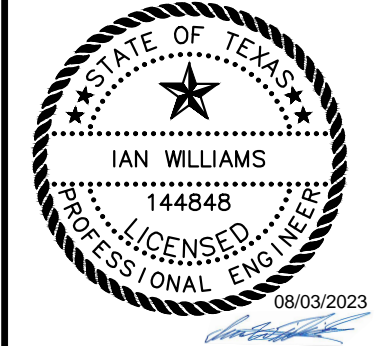
- BOUNDARY / RIGHT OF WAY
- CURB / EDGE OF PAVEMENT
- XXX EXISTING GRADE ELEVATIONS
- PROPOSED GRADE ELEVATIONS
- RETAINING / STRUCTURAL WALL
- EXISTING STORM DRAIN LINE
- PROPOSED STORM DRAIN LINE
- WL WATER LINE
- WW WASTEWATER LINE
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- UGT UNDERGROUND TELECOM
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- BFP BACKFLOW PREVENTER
- STORM DRAIN INLET
- STORM DRAIN MANHOLE
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- FL FLOW LINE ELEVATION
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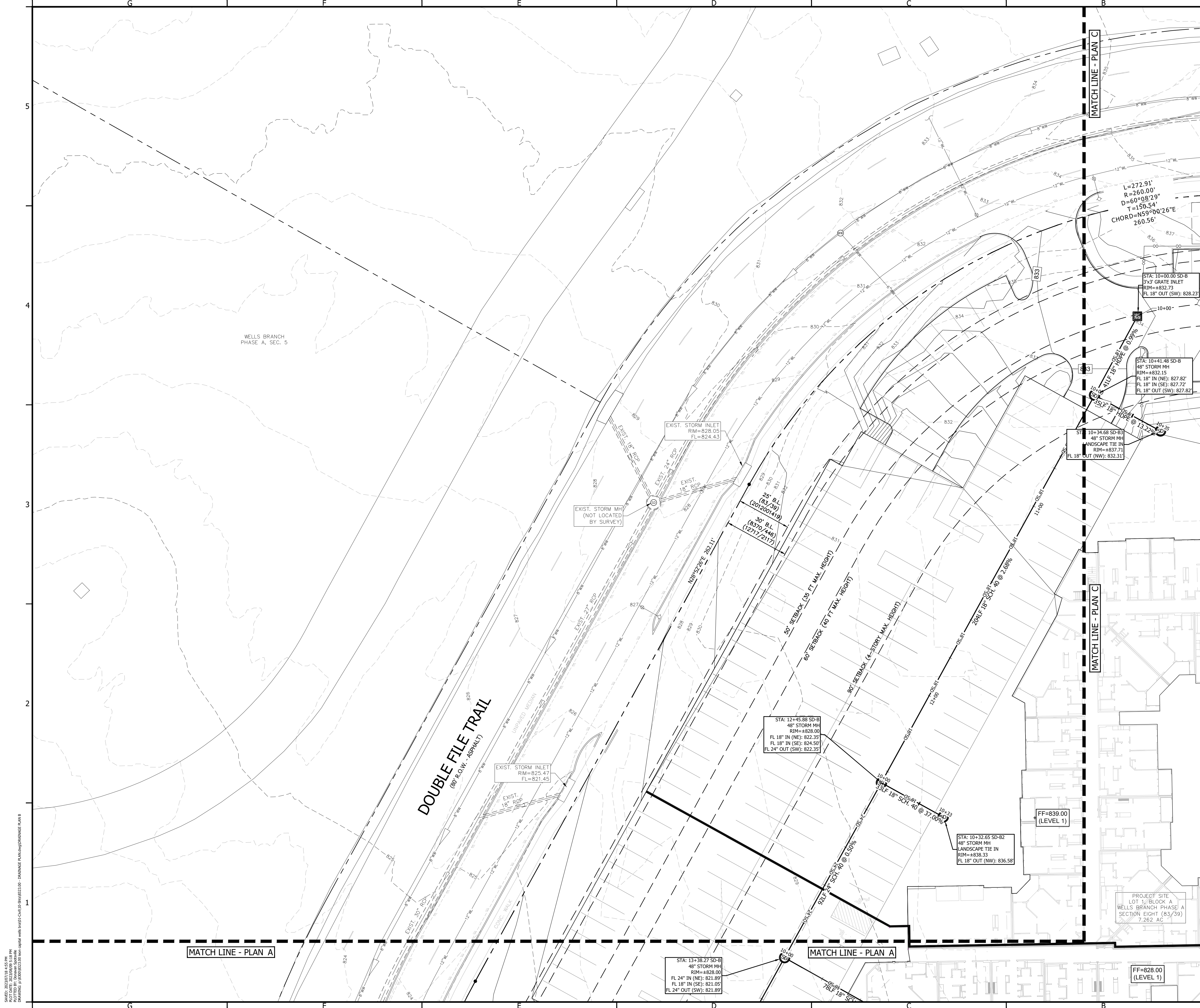


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WELLS BRANCH MULTIFAMILY
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 AUSTIN, TRAVIS COUNTY, TEXAS 78728
 DRAINAGE PLAN A

SHEET
CG401
 37 OF 63
 SP-2023-0082D

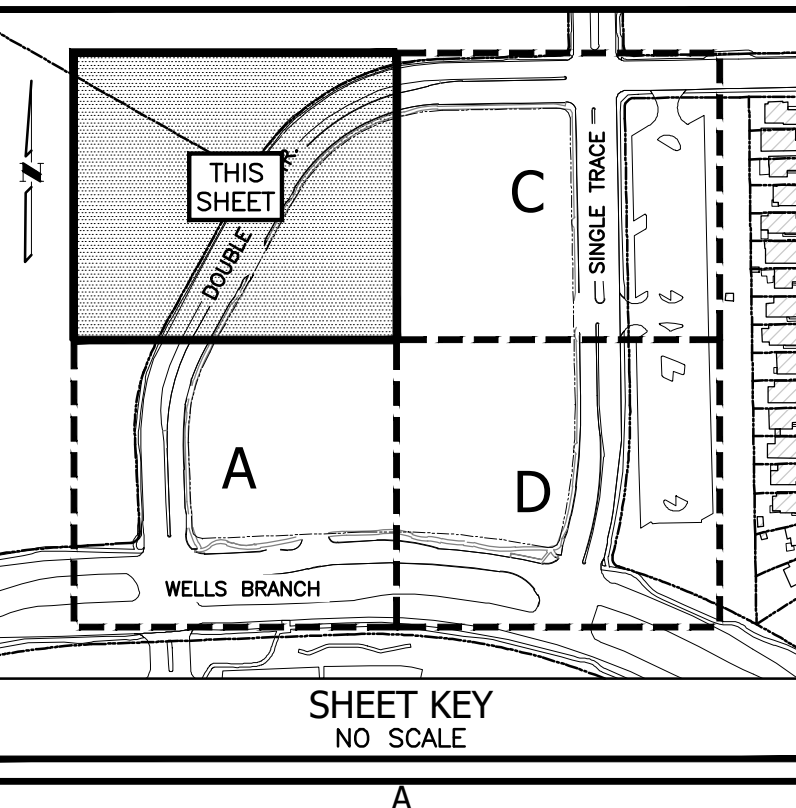


LEGEND

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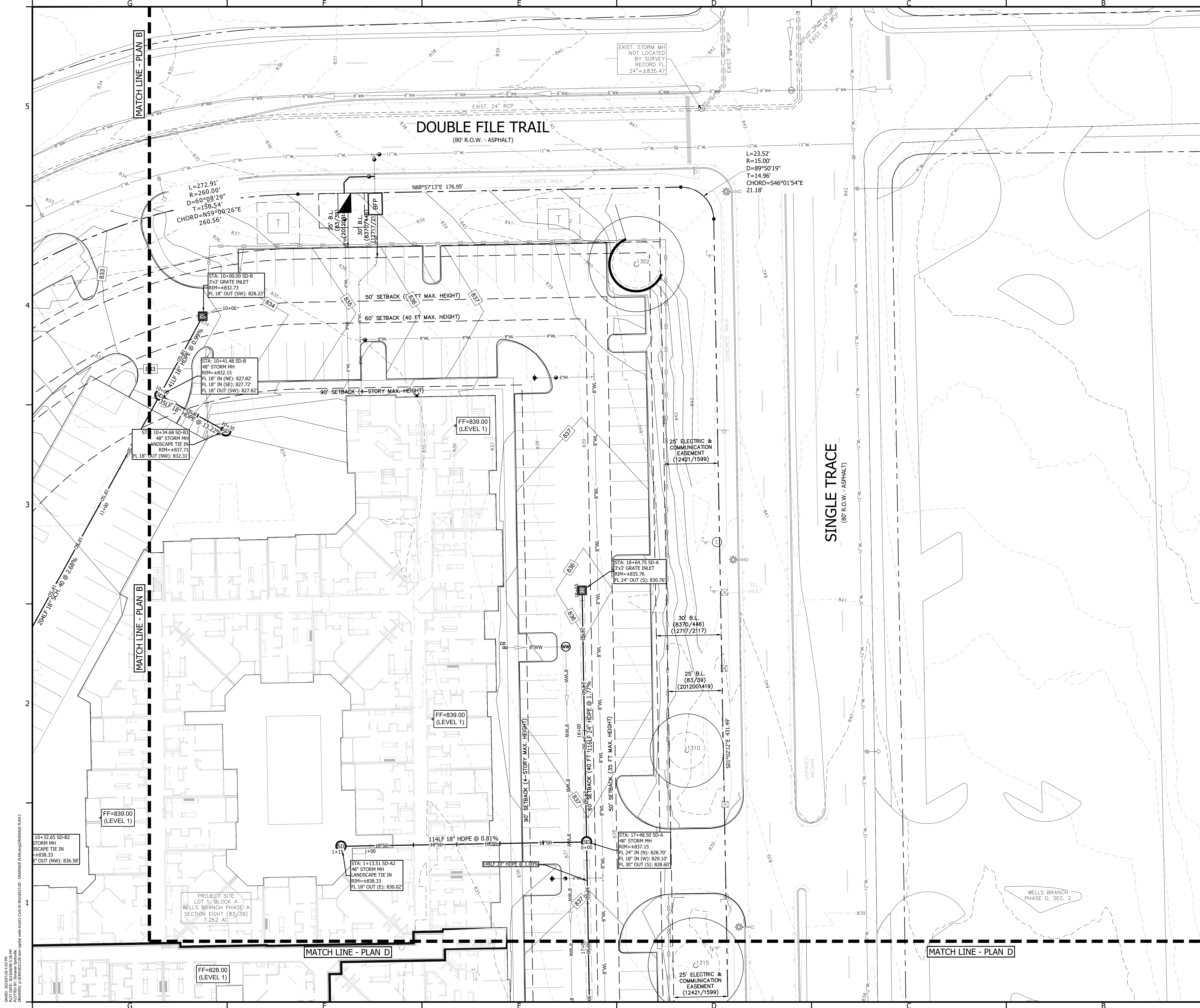
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FIRM NO. F-10085

WGI
 WGIinc.com
 4700 MUELLER BOULEVARD SUITE 300, AUSTIN, TX 78723
 512.669.5580

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 AUSTIN, TRAVIS COUNTY, TEXAS 78728
 DRAINAGE PLAN B
 CITY APPROVAL STAMP
 SHEET
CG402
 38 OF 63
 SP-2023-0082D

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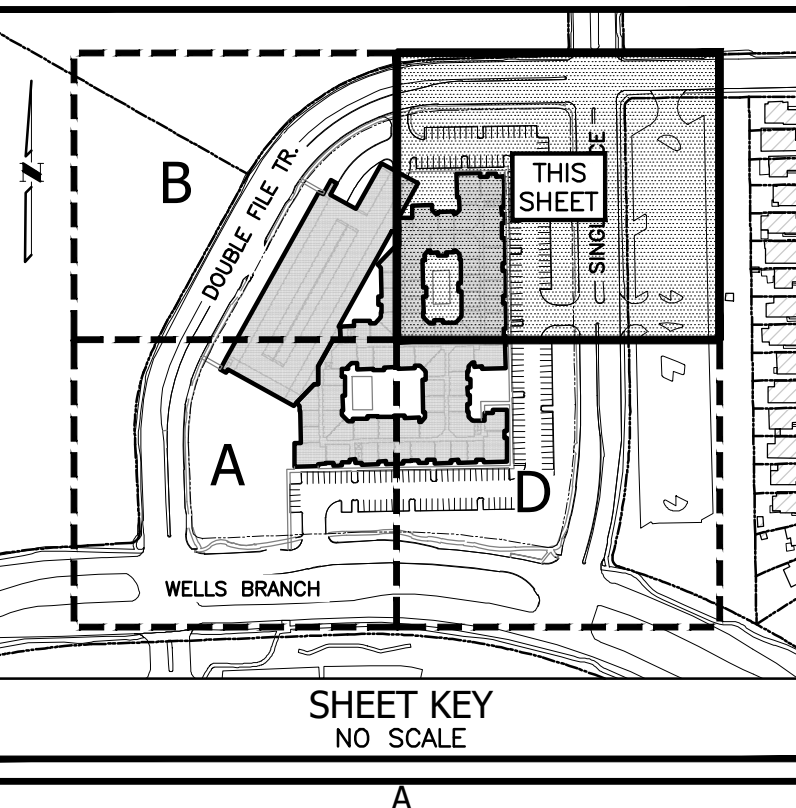
LEGEND

- BOUNDARY / RIGHT OF WAY
- CURB / EDGE OF PAVEMENT
- EXISTING GRADE ELEVATIONS
- PROPOSED GRADE ELEVATIONS
- RETAINING / STRUCTURAL WALL
- EXISTING STORM DRAIN LINE
- PROPOSED STORM DRAIN LINE
- WATER LINE
- WASTEWATER LINE
- UNDERGROUND FIBER OPTIC
- UNDERGROUND TELECOM
- UNDERGROUND ELECTRIC
- GAS LINE
- UTILITY / LIGHT POLE
- SIGN
- ELECTRIC / TELECOM RISER
- ELECTRIC VAULT / PULL-BOX
- ELECTRIC TRANSFORMER
- ELECTRIC MANHOLE
- CLEAN-OUT
- WASTEWATER MANHOLE
- WATER METER VAULT
- WATER VALVE
- FIRE HYDRANT
- BACKFLOW PREVENTER
- STORM DRAIN INLET
- STORM DRAIN MANHOLE
- GAS METER /VAULT
- FLOW LINE ELEVATION
- FINISHED FLOOR ELEVATION
- TREE W/ TAG NUMBER (TO REMAIN)
- CRITICAL ROOT ZONE

CAUTION:
CONTRACTOR TO VERIFY ALL EXISTING UTILITIES VERTICALLY AND HORIZONTALLY PRIOR TO CONSTRUCTION. CONTRACTOR TO NOTIFY THE ENGINEER IMMEDIATELY OF ANY DISCREPANCIES.

NOTES:

- REFERENCE LANDSCAPE PLANS FOR SODDING AND SEEDING NOTES.
- ALL ITEMS ARE TO BE FURNISHED & INSTALLED BY CONTRACTOR. REFERENCE CONSTRUCTION DETAILS SHEETS FOR ADDITIONAL INFORMATION.
- ALL GRAVITY LINES ARE TO BE INSTALLED FROM DOWNSTREAM TO UPSTREAM.
- LIMITS OF CONSTRUCTION ARE SHOWN ON THE EROSION & SEDIMENTATION CONTROL PLAN.
- REFERENCE GRADING PLAN FOR PROPOSED FINISHED GRADE AND RIM ELEVATIONS.



NOT AUTHORIZED FOR CONSTRUCTION PRIOR TO FORMAL CITY AND MUNICIPAL UTILITY DISTRICT APPROVAL

512.669.5580

WGL
WGInc.com

4700 MUELLER BOULEVARD SUITE 300, AUSTIN, TX 78728

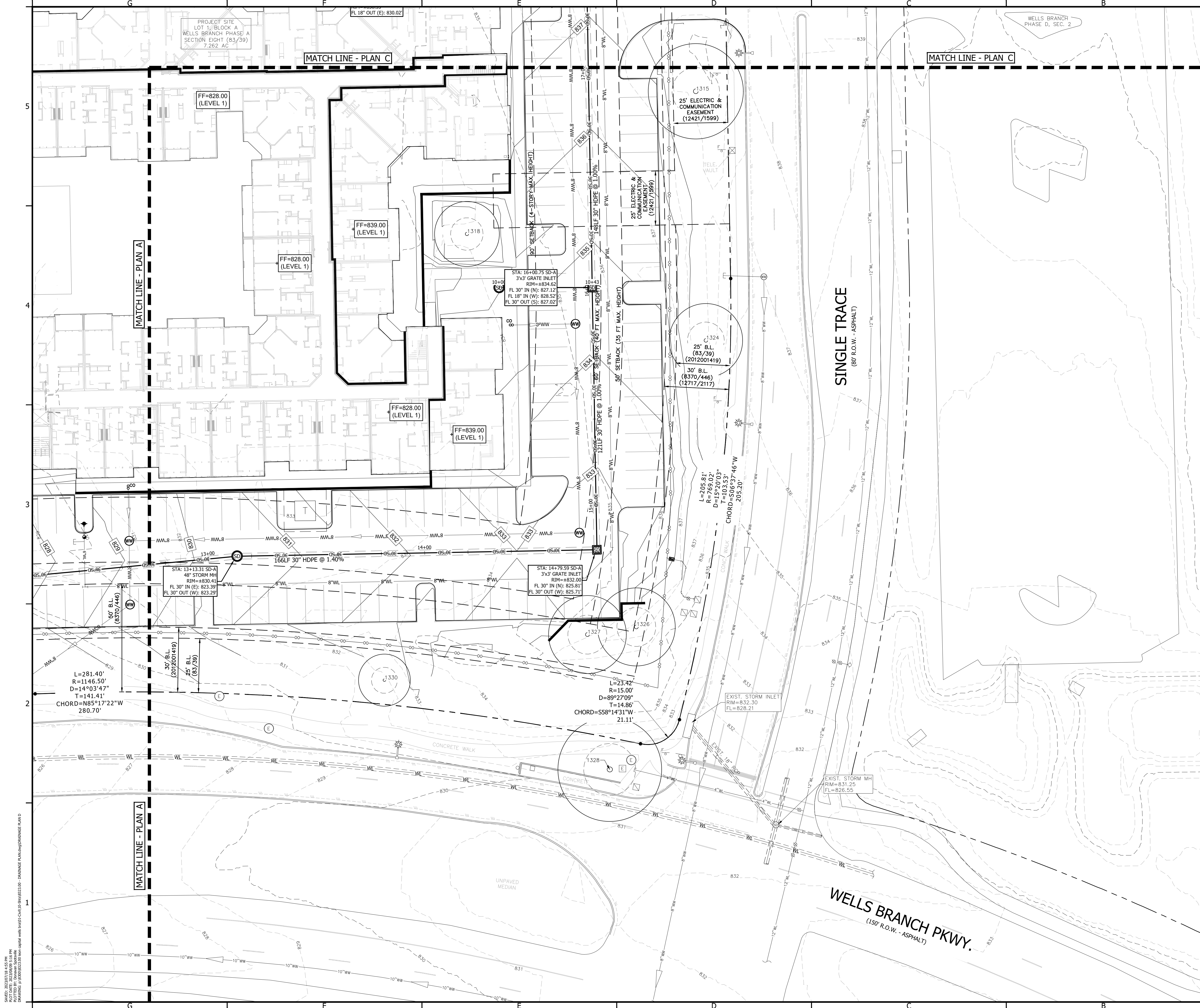
STATE OF TEXAS
IAN WILLIAMS
144845
LICENSED PROFESSIONAL ENGINEER
08/03/2023

WELLS BRANCH MULTIFAMILY
2800 W WELLS BRANCH PKWY.
AUSTIN, TRAVIS COUNTY, TEXAS 78728

DRAINAGE PLAN C

CITY APPROVAL STAMP

SHEET
CG403
39 OF 63
SP-2023-0082D



0 10' 20' 40'

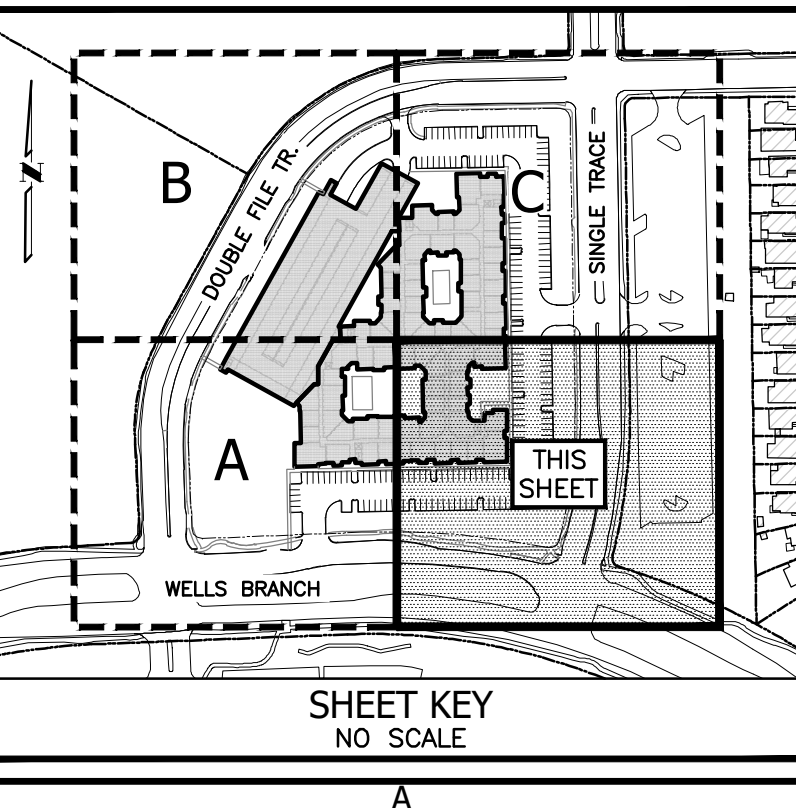
LEGEND

	BOUNDARY / RIGHT OF WAY
	CURB / EDGE OF PAVEMENT
	EXISTING GRADE ELEVATIONS
	PROPOSED GRADE ELEVATIONS
	RETAINING / STRUCTURAL WALL
	EXISTING STORM DRAIN LINE
	PROPOSED STORM DRAIN LINE
	WATER LINE
	WASTEWATER LINE
	UNDERGROUND FIBER OPTIC
	UNDERGROUND TELECOM
	UNDERGROUND ELECTRIC
	GAS LINE
	UTILITY / LIGHT POLE
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	ELECTRIC TRANSFORMER
	ELECTRIC MANHOLE
	CLEAN-OUT
	WASTEWATER MANHOLE
	WATER METER VAULT
	WATER VALVE
	FIRE HYDRANT
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	STORM DRAIN MANHOLE
	GAS METER / VAULT
	FLOW LINE ELEVATION
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	TREE W/ TAG NUMBER (TO REMAIN)
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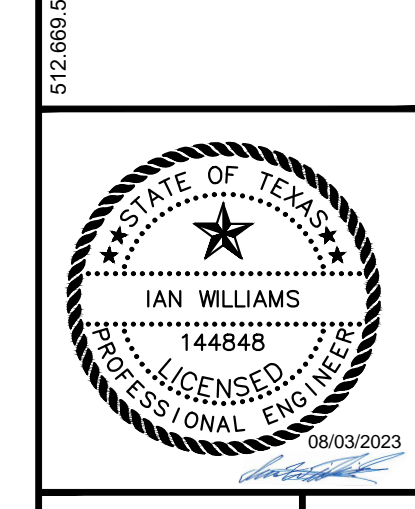
- REFERENCE LANDSCAPE PLANS FOR SODDING AND SEEDING NOTES.
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- ALL GRAVITY LINES ARE TO BE INSTALLED FROM DOWNSTREAM TO UPSTREAM.
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- REFERENCE GRADING PLAN FOR PROPOSED FINISHED GRADE AND RIM ELEVATIONS.



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FIRM NO. F-15085

4700 MUELLER BOULEVARD SUITE 300, AUSTIN, TX 78723



WELLS BRANCH MULTIFAMILY
2800 W WELLS BRANCH PKWY.
AUSTIN, TRAVIS COUNTY, TEXAS 78728

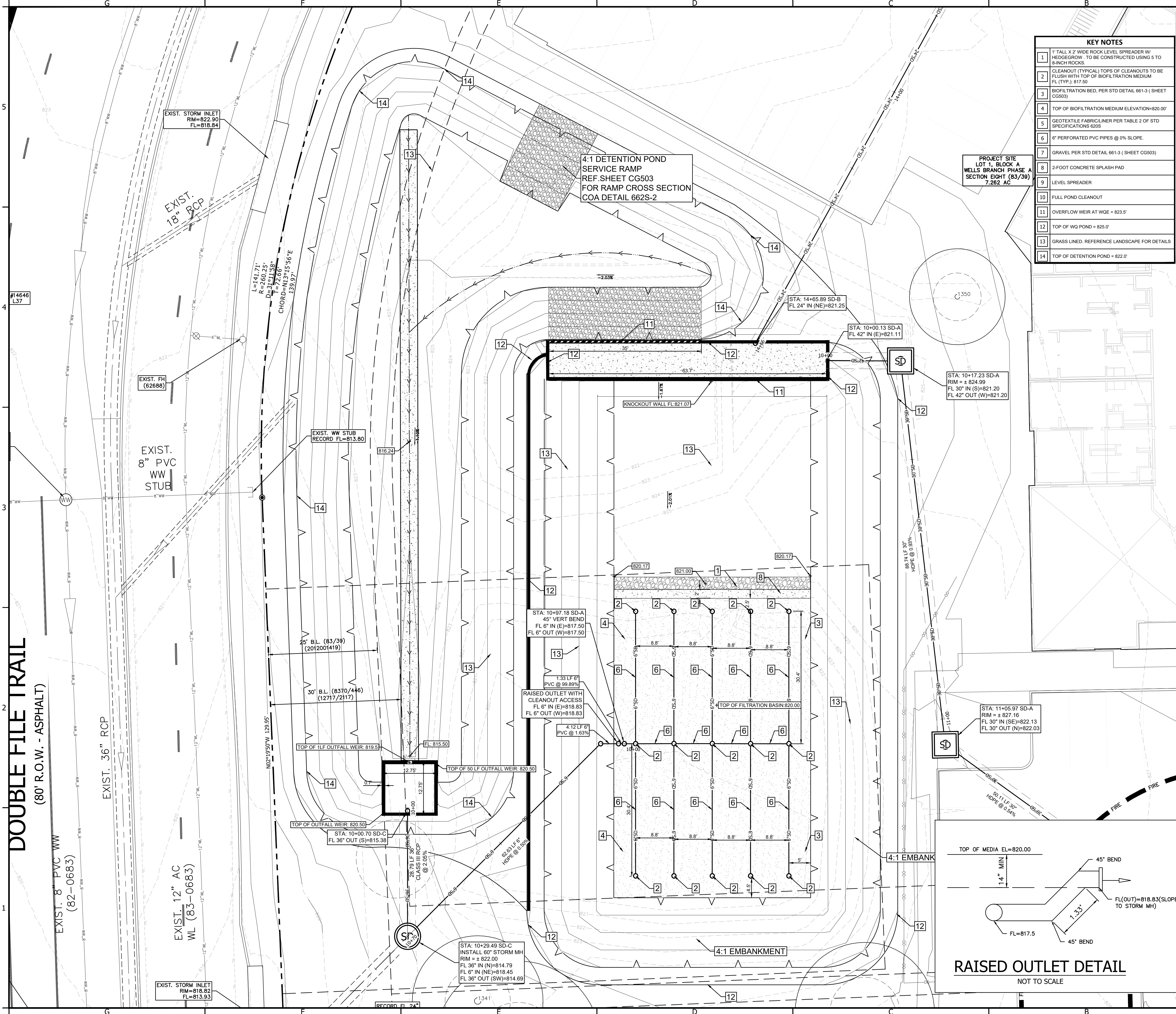
DRAINAGE PLAN D

CITY APPROVAL STAMP

SHEET
CG404
40 OF 63
SP-2023-0082D

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 PLOTTED BY: DORIAN SCOTT
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 PLOT DATE: 20230718 8:57 PM

DATE: 2023/07/19 9:02 AM
 DRAWN BY: DORIAN SORRELL
 CHECKED BY: JAMES WILSON
 PROJECT NO.: 2023-0082D



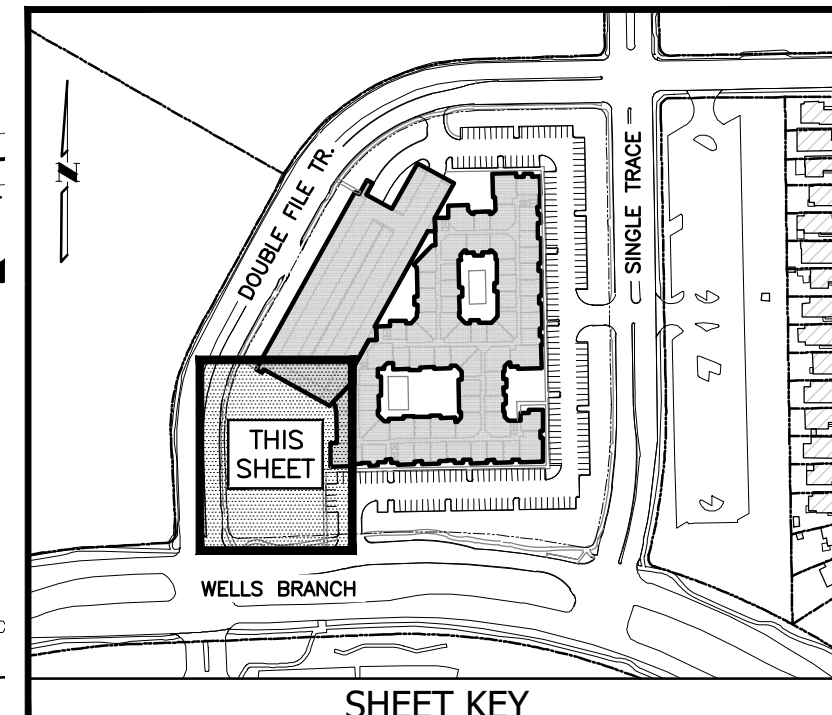
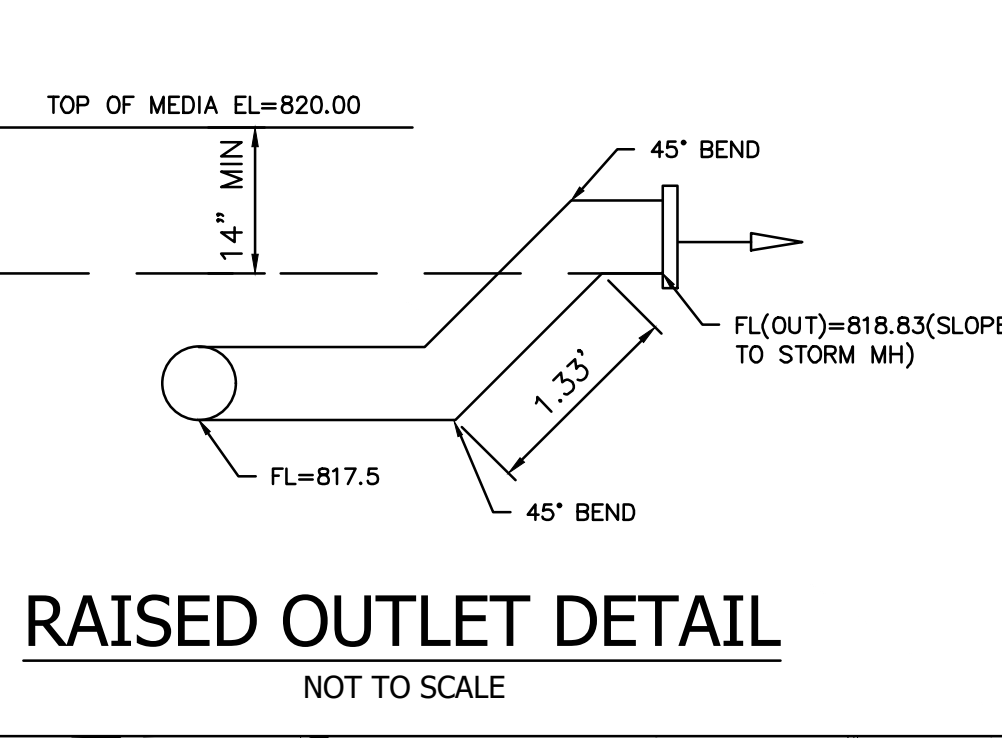
KEY NOTES	
1	1" TALL X 2' WIDE ROCK LEVEL SPREADER W/ HEDGESGROW. TO BE CONSTRUCTED USING 5 TO 8-INCH ROCKS.
2	CLEANOUT (TYPICAL) TOPS OF CLEANOUTS TO BE FLUSH WITH TOP OF BIOFILTRATION MEDIUM FL (TYP.): 817.50
3	BIOFILTRATION BED, PER STD DETAIL 661-3 (SHEET CG503)
4	TOP OF BIOFILTRATION MEDIUM ELEVATION=820.00'
5	GEOTEXTILE FABRIC/LINER PER TABLE 2 OF STD SPECIFICATIONS 620S
6	6" PERFORATED PVC PIPES @ 0% SLOPE.
7	GRAVEL PER STD DETAIL 661-3 (SHEET CG503)
8	2-FOOT CONCRETE SPLASH PAD
9	LEVEL SPREADER
10	FULL POND CLEANOUT
11	OVERFLOW WEIR AT WOE = 823.5'
12	TOP OF WQ POND = 825.0'
13	GRASS LINED. REFERENCE LANDSCAPE FOR DETAILS
14	TOP OF DETENTION POND = 822.0'

LEGEND	
	BOUNDARY / RIGHT OF WAY
	CURB / EDGE OF PAVEMENT
	EXISTING GRADE ELEVATIONS
	PROPOSED GRADE ELEVATIONS
	STRUCTURAL POND WALL
	EXISTING STORM DRAIN LINE
	PROPOSED STORM DRAIN LINE
	WATER LINE
	WASTEWATER LINE
	OVERHEAD UTILITY
	UNDERGROUND ELECTRIC
	UNDERGROUND TELECOM
	GAS LINE
	UTILITY POLE
	GUY WIRE
	WASTEWATER MANHOLE
	WATER METER VAULT
	WATER VALVE
	FIRE HYDRANT
	CLEAN-OUT
	STORM DRAIN INLET
	STORM DRAIN MANHOLE
	FLOW LINE ELEVATION
	FINISHED FLOOR ELEVATION
	TREE W/ TAG NUMBER (TO REMAIN)
	CRITICAL ROOT ZONE

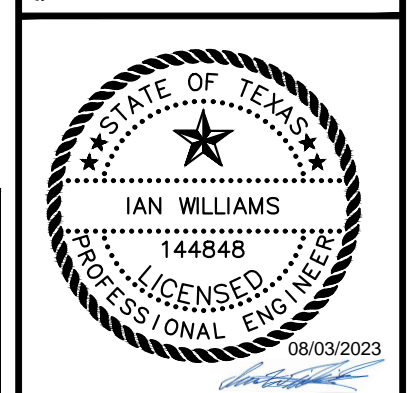
CAUTION
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- NOTES:**
- REFERENCE OVERALL GRADING AND DRAINAGE PLAN FOR CONTINUATION OF STORM DRAIN SYSTEM.
 - REFERENCE ARCHITECTURAL BUILDING AND STRUCTURAL PLANS FOR ADDITIONAL POND DESIGN INFORMATION INCLUDING COLUMN LAYOUT, SLAB THICKNESS, AND STRUCTURAL STEEL REINFORCEMENT.
 - ALL ITEMS ARE TO BE FURNISHED & INSTALLED BY CONTRACTOR. REFERENCE CONSTRUCTION DETAILS SHEETS FOR ADDITIONAL INFORMATION.
 - ALL GRAVITY LINES ARE TO BE INSTALLED FROM DOWNSTREAM TO UPSTREAM.
 - ALL DIMENSIONS ARE FACE OF WALL, FACE OF BUILDING, PROPERTY LINE AND CENTER LINE OF PIPES.
 - EXPANSION JOINTS ON FREE STANDING WALLS SHALL HAVE WATERTIGHT SEALS AS NEEDED.

- POND MAINTENANCE:**
- OUTLETS SHOULD BE INSPECTED AFTER EACH RAINFALL EVENT EXCEEDING 1" IN A 24 HOUR PERIOD.
 - ACCUMULATED PAPER, TRASH AND DEBRIS SHALL BE REMOVED EVERY SIX (6) MONTHS OR AS NECESSARY. ANY DEBRIS OR SEDIMENT BLOCKING THE OUTLET SHALL BE REMOVED.
 - VEGETATION WITHIN THE BASIN SHALL NOT BE ALLOWED TO EXCEED THREE (3) FEET IN HEIGHT AT ANY TIME, EXCEPT FOR THOSE PROVIDED IN THE DESIGN.
 - THE BASINS SHALL BE INSPECTED ANNUALLY AND REPAIRS SHALL BE MADE IF NECESSARY.
 - WATER QUALITY AND DETENTION CONTROLS REQUIRED FOR COMMERCIAL DEVELOPMENT SHALL BE MAINTAINED BY THE PROPERTY OWNER.
 - ALL CLEANOUTS WITH THE EXCEPTION OF THE ACCESSIBLE CLEANOUTS MUST BE FLUSH WITH THE TOP OF THE BIOFILTRATION MEDIUM.
 - REFER TO POND NOTE 7-9 ON GENERAL NOTES SHEETS C004



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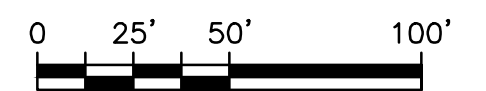
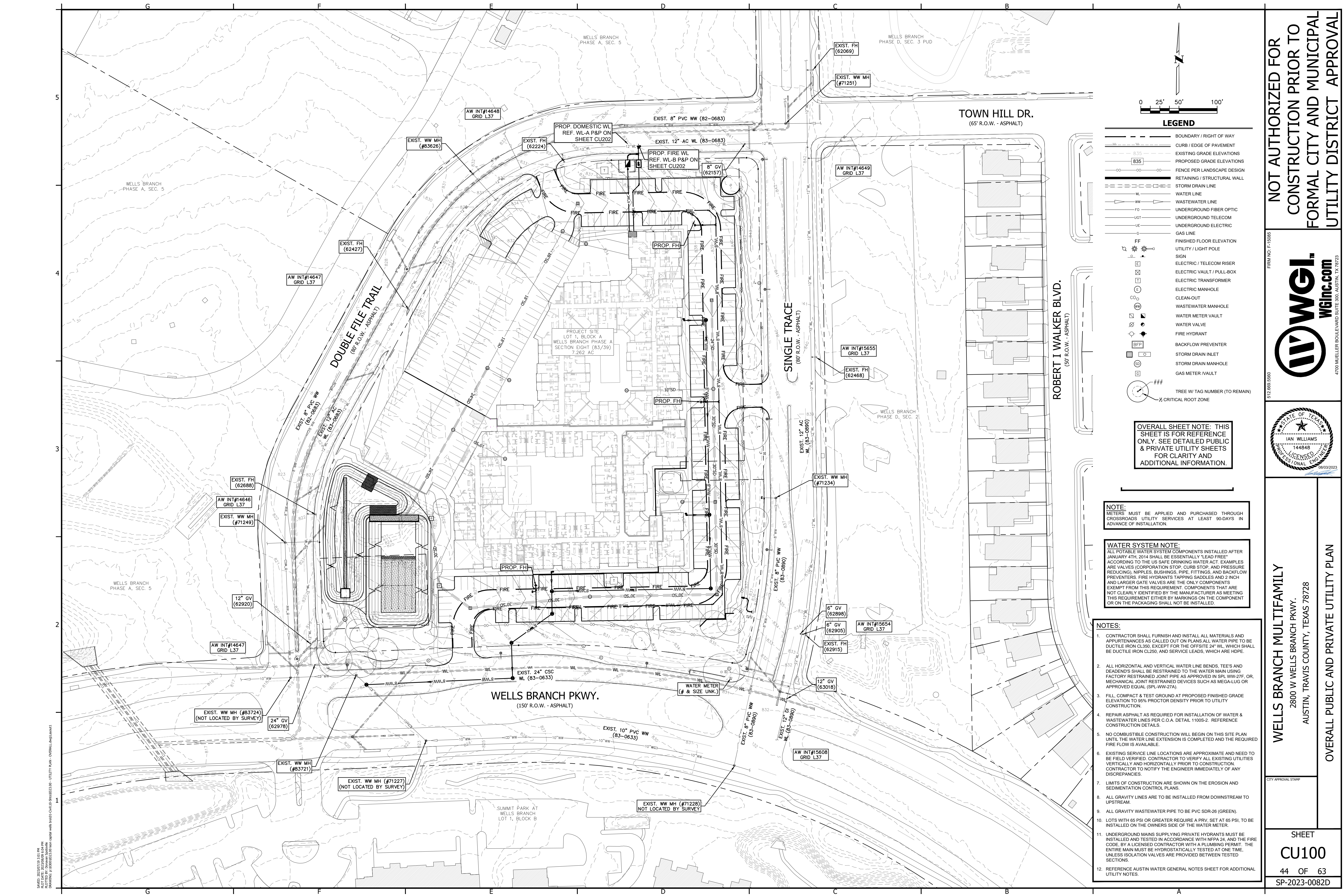


WELLS BRANCH MULTIFAMILY
 2800 W WELLS BRANCH PKWY.
 AUSTIN, TRAVIS COUNTY, TEXAS 78728

POND PLAN

CITY APPROVAL STAMP

SHEET
CG501
 41 OF 63
 SP-2023-0082D



LEGEND

	BOUNDARY / RIGHT OF WAY
	CURB / EDGE OF PAVEMENT
	EXISTING GRADE ELEVATIONS
	PROPOSED GRADE ELEVATIONS
	FENCE PER LANDSCAPE DESIGN
	RETAINING / STRUCTURAL WALL
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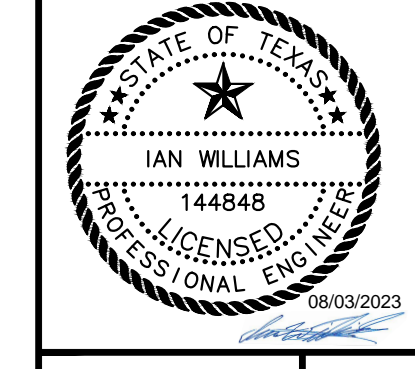
OVERALL SHEET NOTE: THIS SHEET IS FOR REFERENCE ONLY. SEE DETAILED PUBLIC & PRIVATE UTILITY SHEETS FOR CLARITY AND ADDITIONAL INFORMATION.

NOTE: METERS MUST BE APPLIED AND PURCHASED THROUGH CROSSROADS UTILITY SERVICES AT LEAST 90-DAYS IN ADVANCE OF INSTALLATION.

WATER SYSTEM NOTE: ALL POTABLE WATER SYSTEM COMPONENTS INSTALLED AFTER JANUARY 4TH, 2014 SHALL BE ESSENTIALLY LEAD FREE ACCORDING TO THE US SAFE DRINKING WATER ACT. EXAMPLES ARE VALVES (CORPORATION STOP, CURB STOP, AND PRESSURE REDUCING), NIPPLES, BUSHINGS, PIPE, FITTINGS, AND BACKFLOW PREVENTERS. FIRE HYDRANTS TAPPING SADDLES AND 2 INCH AND LARGER GATE VALVES ARE THE ONLY COMPONENTS EXEMPT FROM THIS REQUIREMENT. COMPONENTS THAT ARE NOT CLEARLY IDENTIFIED BY THE MANUFACTURER AS MEETING THIS REQUIREMENT EITHER BY MARKINGS ON THE COMPONENT OR ON THE PACKAGING SHALL NOT BE INSTALLED.

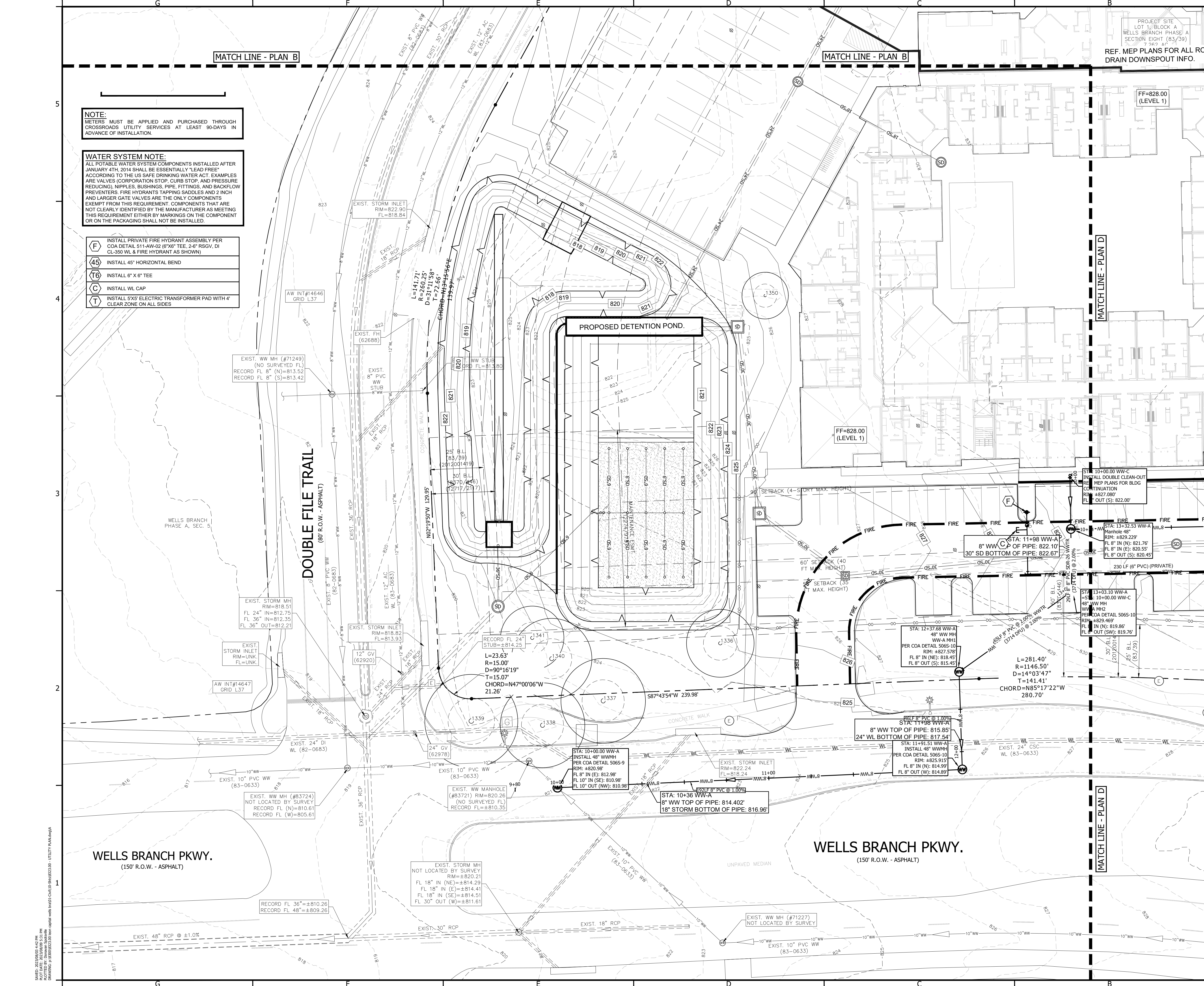
- NOTES:**
- CONTRACTOR SHALL FURNISH AND INSTALL ALL MATERIALS AND APPURTENANCES AS CALLED OUT ON PLANS. ALL WATER PIPE TO BE DUCTILE IRON CL350, EXCEPT FOR THE OFFSITE 24" WL, WHICH SHALL BE DUCTILE IRON CL250, AND SERVICE LEADS, WHICH ARE HDPE.
 - ALL HORIZONTAL AND VERTICAL WATER LINE BENDS, TEE'S AND DEADEND'S SHALL BE RESTRAINED TO THE WATER MAIN USING FACTORY RESTRAINED JOINT PIPE AS APPROVED IN SPL-WW-27F, OR MECHANICAL JOINT RESTRAINED DEVICES SUCH AS MEGA-LUG OR APPROVED EQUAL (SPL-WW-27A).
 - FILL, COMPACT & TEST GROUND AT PROPOSED FINISHED GRADE ELEVATION TO 95% PROCTOR DENSITY PRIOR TO UTILITY CONSTRUCTION.
 - REPAIR ASPHALT AS REQUIRED FOR INSTALLATION OF WATER & WASTEWATER LINES PER C.O.A. DETAIL 1100S-2. REFERENCE CONSTRUCTION DETAILS.
 - NO COMBUSTIBLE CONSTRUCTION WILL BEGIN ON THIS SITE PLAN UNTIL THE WATER LINE EXTENSION IS COMPLETED AND THE REQUIRED FIRE FLOW IS AVAILABLE.
 - EXISTING SERVICE LINE LOCATIONS ARE APPROXIMATE AND NEED TO BE FIELD VERIFIED. CONTRACTOR TO VERIFY ALL EXISTING UTILITIES VERTICALLY AND HORIZONTALLY PRIOR TO CONSTRUCTION. CONTRACTOR TO NOTIFY THE ENGINEER IMMEDIATELY OF ANY DISCREPANCIES.
 - LIMITS OF CONSTRUCTION ARE SHOWN ON THE EROSION AND SEDIMENTATION CONTROL PLANS.
 - ALL GRAVITY LINES ARE TO BE INSTALLED FROM DOWNSTREAM TO UPSTREAM.
 - ALL GRAVITY WASTEWATER PIPE TO BE PVC SDR-26 (GREEN).
 - LOTS WITH 65 PSI OR GREATER REQUIRE A PRIV. SET AT 65 PSI. TO BE INSTALLED ON THE OWNERS SIDE OF THE WATER METER.
 - UNDERGROUND MAINS SUPPLYING PRIVATE HYDRANTS MUST BE INSTALLED AND TESTED IN ACCORDANCE WITH NFPA 24, AND THE FIRE CODE. BY A LICENSED CONTRACTOR WITH A PLUMBING PERMIT. THE ENTIRE MAIN MUST BE HYDROSTATICALLY TESTED AT ONE TIME, UNLESS ISOLATION VALVES ARE PROVIDED BETWEEN TESTED SECTIONS.
 - REFERENCE AUSTIN WATER GENERAL NOTES SHEET FOR ADDITIONAL UTILITY NOTES.

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 CONSTRUCTION PRIOR TO
 FORMAL CITY AND MUNICIPAL
 UTILITY DISTRICT APPROVAL



WELLS BRANCH MULTIFAMILY
 2800 W WELLS BRANCH PKWY.
 AUSTIN, TRAVIS COUNTY, TEXAS 78728

OVERALL PUBLIC AND PRIVATE UTILITY PLAN



NOTE:
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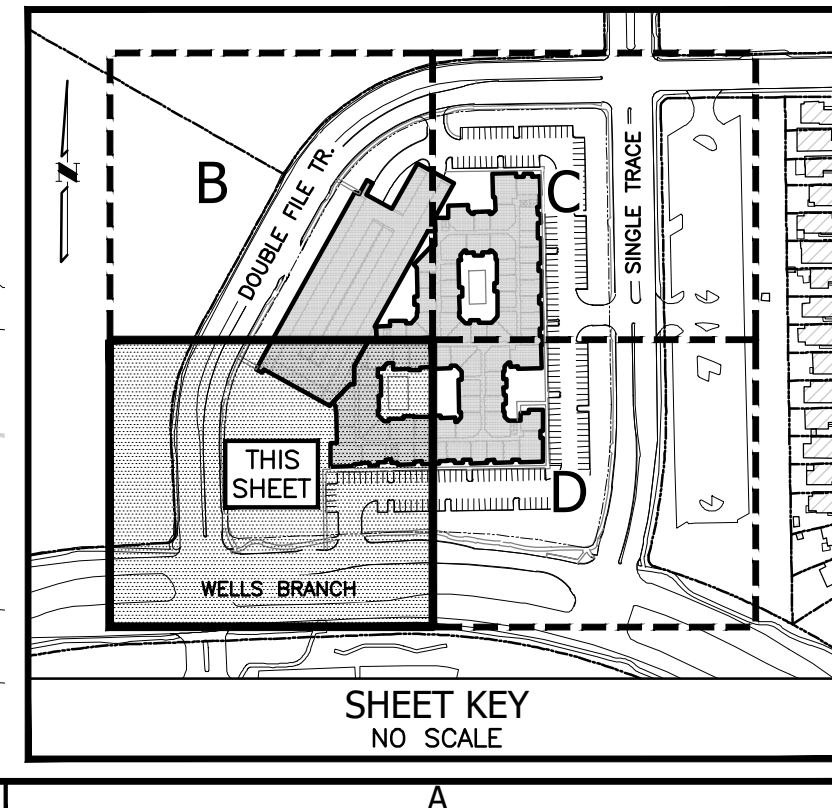
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- (F) INSTALL PRIVATE FIRE HYDRANT ASSEMBLY PER COA DETAIL 511-AW-02 (6" TEE, 2" RSGV, DI CL-350 WL & FIRE HYDRANT AS SHOWN)
- (45) INSTALL 45° HORIZONTAL BEND
- (T6) INSTALL 6" X 6" TEE
- (C) INSTALL WL CAP
- (T) INSTALL 5X5' ELECTRIC TRANSFORMER PAD WITH 4' CLEAR ZONE ON ALL SIDES

LEGEND

	BOUNDARY / RIGHT OF WAY
	CURB / EDGE OF PAVEMENT
	EXISTING GRADE ELEVATIONS
	PROPOSED GRADE ELEVATIONS
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	WATER METER VAULT
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	STORM DRAIN MANHOLE
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	TREE W/ TAG NUMBER (TO REMAIN)
	CRITICAL ROOT ZONE

- NOTES:**
- CONTRACTOR SHALL FURNISH AND INSTALL ALL MATERIALS AND APPURTENANCES AS CALLED OUT ON PLANS ALL WATER PIPE TO BE DUCTILE IRON CL350, EXCEPT FOR THE OFFSITE 24" WL, WHICH SHALL BE DUCTILE IRON CL250, AND SERVICE LEADS, WHICH ARE HOPE.
 - ALL HORIZONTAL AND VERTICAL WATER LINE BENDS, TEES AND DEADENDS SHALL BE RESTRAINED TO THE WATER MAIN USING FACTORY RESTRAINED JOINT PIPE AS APPROVED IN SPL WW-27F, OR MECHANICAL JOINT RESTRAINED DEVICES SUCH AS MEGA-LUG OR APPROVED EQUAL (SPL-WW-27A).
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WELLS BRANCH MULTIFAMILY
 2800 W WELLS BRANCH PKWY.
 AUSTIN, TRAVIS COUNTY, TEXAS 78728

PRIVATE UTILITY PLAN A

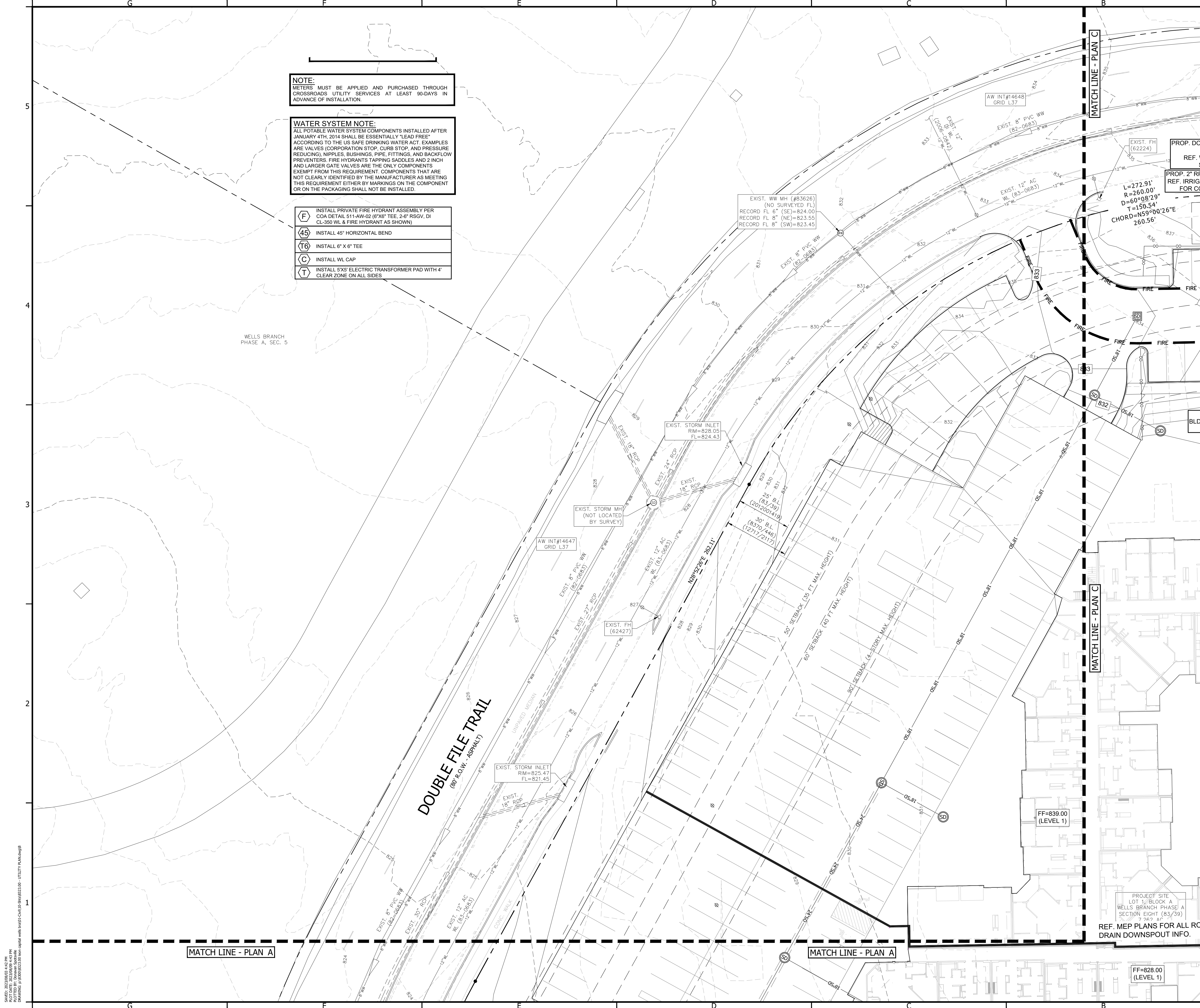
WGL
WGInc.com

512.669.5580
4700 MUELLER BOULEVARD SUITE 300, AUSTIN, TX 78723

IAN WILLIAMS
144845
LICENSED PROFESSIONAL ENGINEER
08/03/2023

CITY APPROVAL STAMP

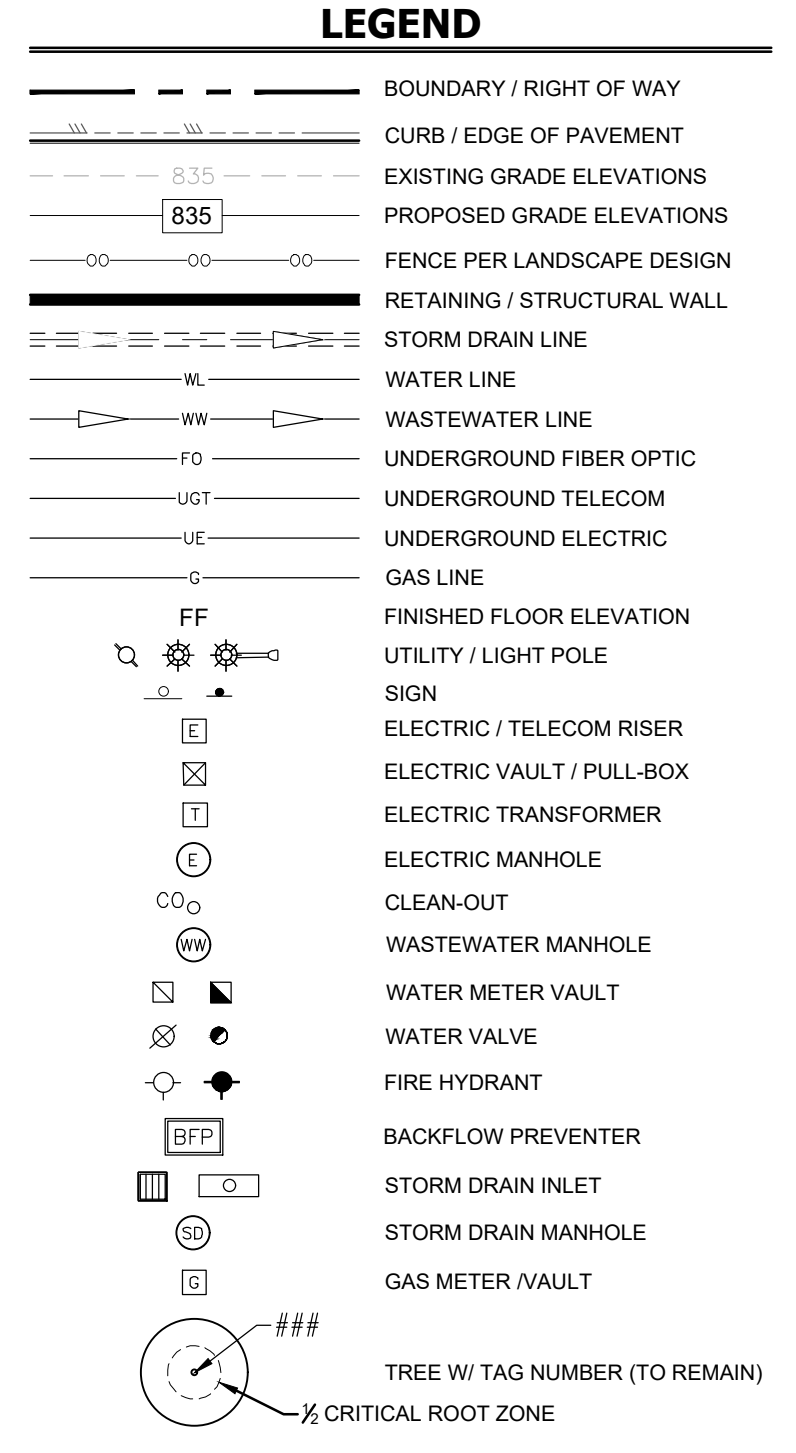
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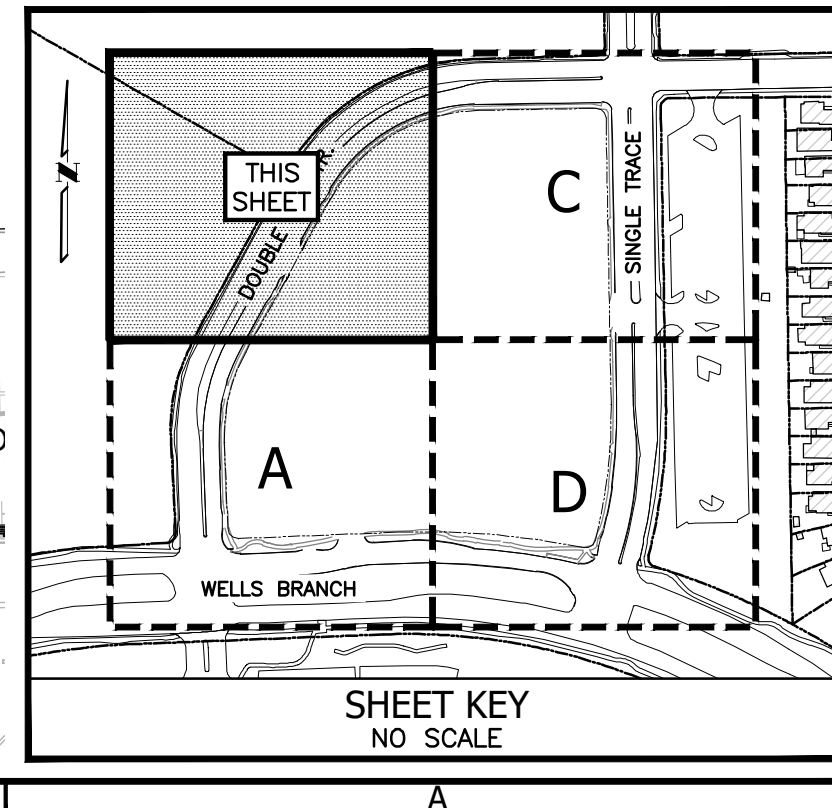
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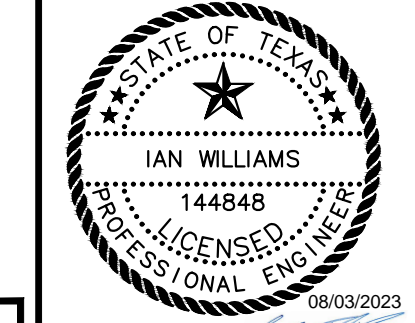
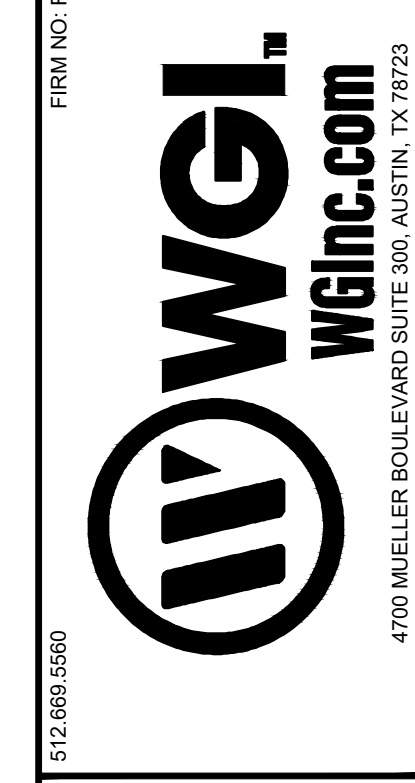
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- (T6) INSTALL 6" X 6" TEE
- (C) INSTALL WL CAP
- (T) INSTALL 5X5 ELECTRIC TRANSFORMER PAD WITH 4' CLEAR ZONE ON ALL SIDES



- NOTES:**
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 - ALL HORIZONTAL AND VERTICAL WATER LINE BENDS, TEES AND DEADENDS SHALL BE RESTRAINED TO THE WATER MAIN USING FACTORY RESTRAINED JOINT PIPE AS APPROVED IN SPL WW-27F OR MECHANICAL JOINT RESTRAINED DEVICES SUCH AS MEGA-LUG OR APPROVED EQUAL (SPL-WW-27A).
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 - LOTS WITH 65 PSI OR GREATER REQUIRE A PRV, SET AT 65 PSI, TO BE INSTALLED ON THE OWNERS SIDE OF THE WATER METER.
 - UNDERGROUND MAINS SUPPLYING PRIVATE HYDRANTS MUST BE INSTALLED AND TESTED IN ACCORDANCE WITH NFPA 24, AND THE FIRE CODE, BY A LICENSED CONTRACTOR WITH A PLUMBING PERMIT. THE ENTIRE MAIN MUST BE HYDROSTATICALLY TESTED AT ONE TIME, UNLESS ISOLATION VALVES ARE PROVIDED BETWEEN TESTED SECTIONS.
 - REFERENCE AUSTIN WATER GENERAL NOTES SHEET FOR ADDITIONAL UTILITY NOTES.



NOT AUTHORIZED FOR CONSTRUCTION PRIOR TO FORMAL CITY AND MUNICIPAL UTILITY DISTRICT APPROVAL

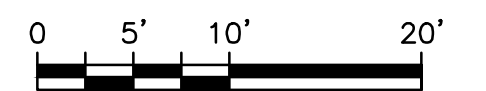
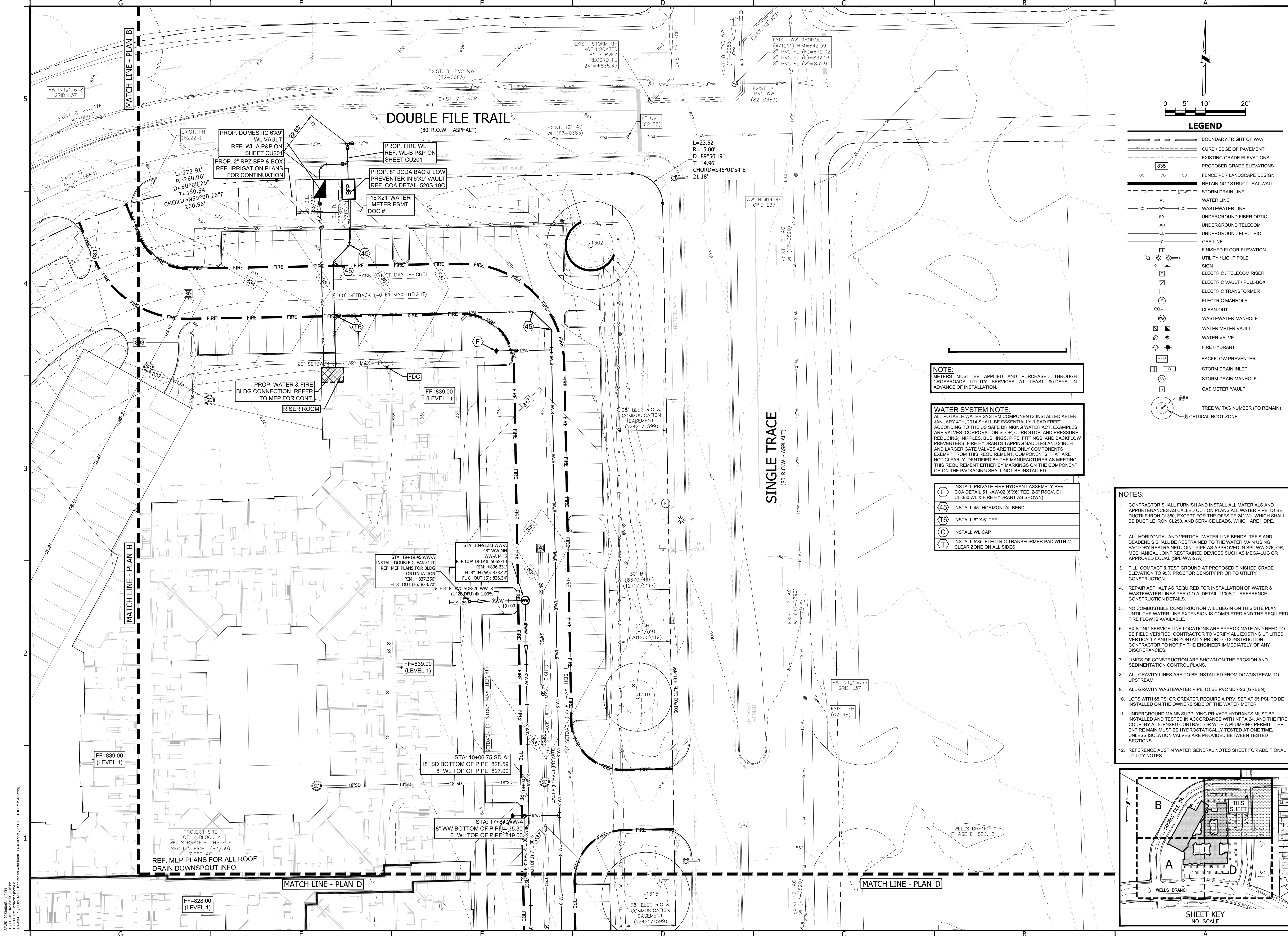


WELLS BRANCH MULTIFAMILY
2800 W WELLS BRANCH PKWY.
AUSTIN, TRAVIS COUNTY, TEXAS 78728

PRIVATE UTILITY PLAN B

CITY APPROVAL STAMP

SHEET
CU102
46 OF 63
SP-2023-0082D



LEGEND

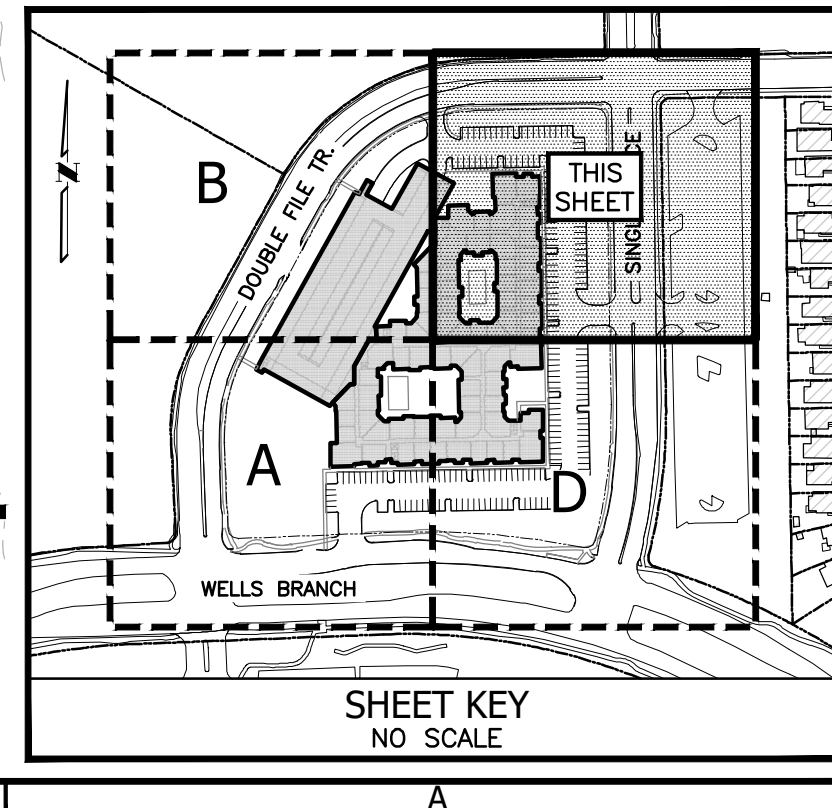
	BOUNDARY / RIGHT OF WAY
	CURB / EDGE OF PAVEMENT
	EXISTING GRADE ELEVATIONS
	PROPOSED GRADE ELEVATIONS
	FENCE PER LANDSCAPE DESIGN
	RETAINING / STRUCTURAL WALL
	STORM DRAIN LINE
	WATER LINE
	WASTEWATER LINE
	UNDERGROUND FIBER OPTIC
	UNDERGROUND TELECOM
	UNDERGROUND ELECTRIC
	GAS LINE
	FINISHED FLOOR ELEVATION
	UTILITY / LIGHT POLE
	SIGN
	ELECTRIC / TELECOM RISER
	ELECTRIC VAULT / PULL-BOX
	ELECTRIC TRANSFORMER
	ELECTRIC MANHOLE
	CLEAN-OUT
	WASTEWATER MANHOLE
	WATER METER VAULT
	WATER VALVE
	FIRE HYDRANT
	BACKFLOW PREVENTER
	STORM DRAIN INLET
	STORM DRAIN MANHOLE
	GAS METER / VAULT
	TREE W/ TAG NUMBER (TO REMAIN)
	CRITICAL ROOT ZONE

NOTE:
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- F** INSTALL PRIVATE FIRE HYDRANT ASSEMBLY PER COA DETAIL 511-AW-02 (6"X6" TEE, 2-6" RSGV, DI CL-550 WL & FIRE HYDRANT AS SHOWN)
- 45** INSTALL 45° HORIZONTAL BEND
- T6** INSTALL 6" X 6" TEE
- C** INSTALL WL CAP
- T** INSTALL 5X5" ELECTRIC TRANSFORMER PAD WITH 4" CLEAR ZONE ON ALL SIDES

- NOTES:**
- CONTRACTOR SHALL FURNISH AND INSTALL ALL MATERIALS AND APPURTENANCES AS CALLED OUT ON PLANS ALL WATER PIPE TO BE DUCTILE IRON CL350, EXCEPT FOR THE OFFSITE 24" WL, WHICH SHALL BE DUCTILE IRON CL250, AND SERVICE LEADS, WHICH ARE HDPE.
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NOT AUTHORIZED FOR CONSTRUCTION PRIOR TO FORMAL CITY AND MUNICIPAL UTILITY DISTRICT APPROVAL

FIRM NO: F-10085

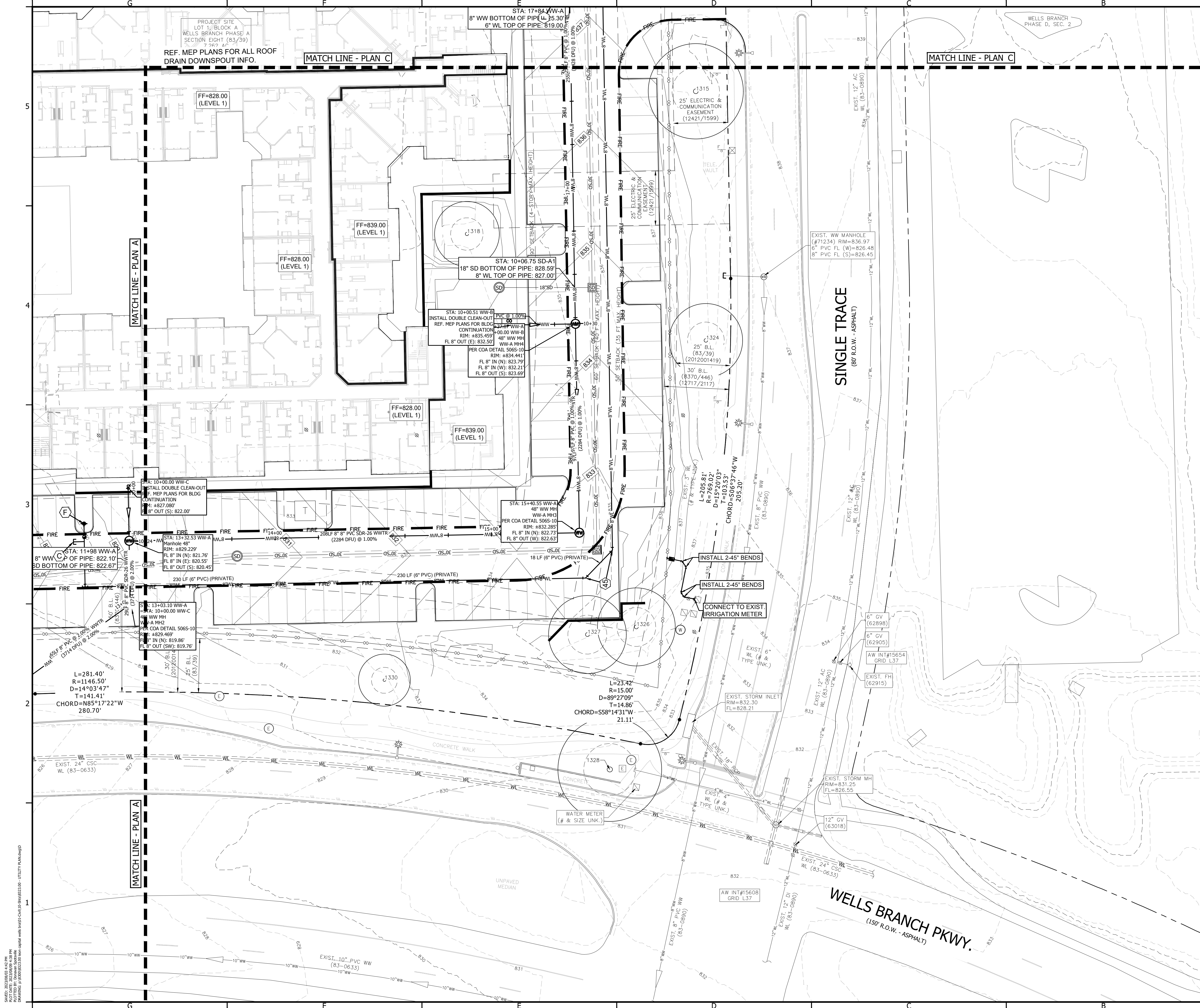
4700 MUELLER BOULEVARD SUITE 300, AUSTIN, TX 78723

WELLS BRANCH MULTIFAMILY
2800 W WELLS BRANCH PKWY.
AUSTIN, TRAVIS COUNTY, TEXAS 78728

PRIVATE UTILITY PLAN C

CITY APPROVAL STAMP

SHEET
CU103
47 OF 63
SP-2023-0082D

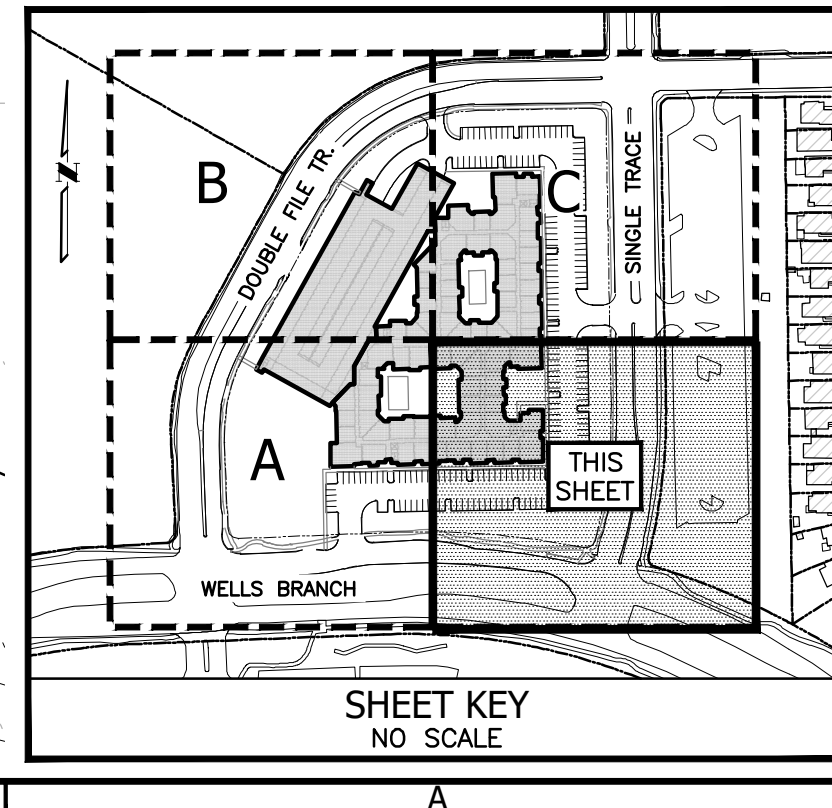


0 5' 10' 20'

LEGEND

	BOUNDARY / RIGHT OF WAY
	CURB / EDGE OF PAVEMENT
	EXISTING GRADE ELEVATIONS
	PROPOSED GRADE ELEVATIONS
	FENCE PER LANDSCAPE DESIGN
	RETAINING / STRUCTURAL WALL
	STORM DRAIN LINE
	WATER LINE
	WASTEWATER LINE
	UNDERGROUND FIBER OPTIC
	UNDERGROUND TELECOM
	UNDERGROUND ELECTRIC
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	WATER METER VAULT
	WATER VALVE
	FIRE HYDRANT
	BACKFLOW PREVENTER
	STORM DRAIN INLET
	STORM DRAIN MANHOLE
	GAS METER / VAULT
	TREE W TAG NUMBER (TO REMAIN)
	CRITICAL ROOT ZONE

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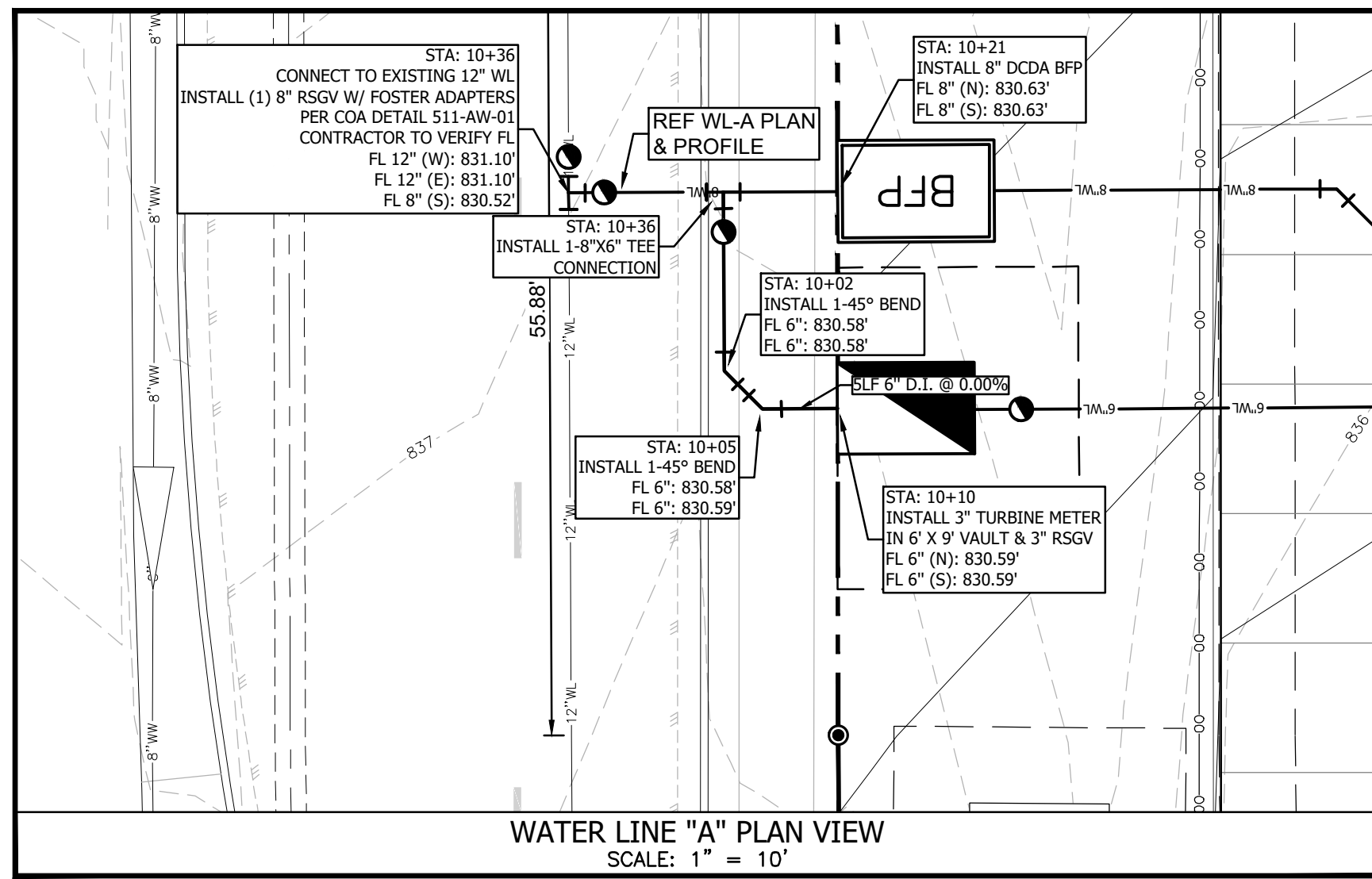
WELLS BRANCH MULTIFAMILY
2800 W WELLS BRANCH PKWY.
AUSTIN, TRAVIS COUNTY, TEXAS 78728

PRIVATE UTILITY PLAN D

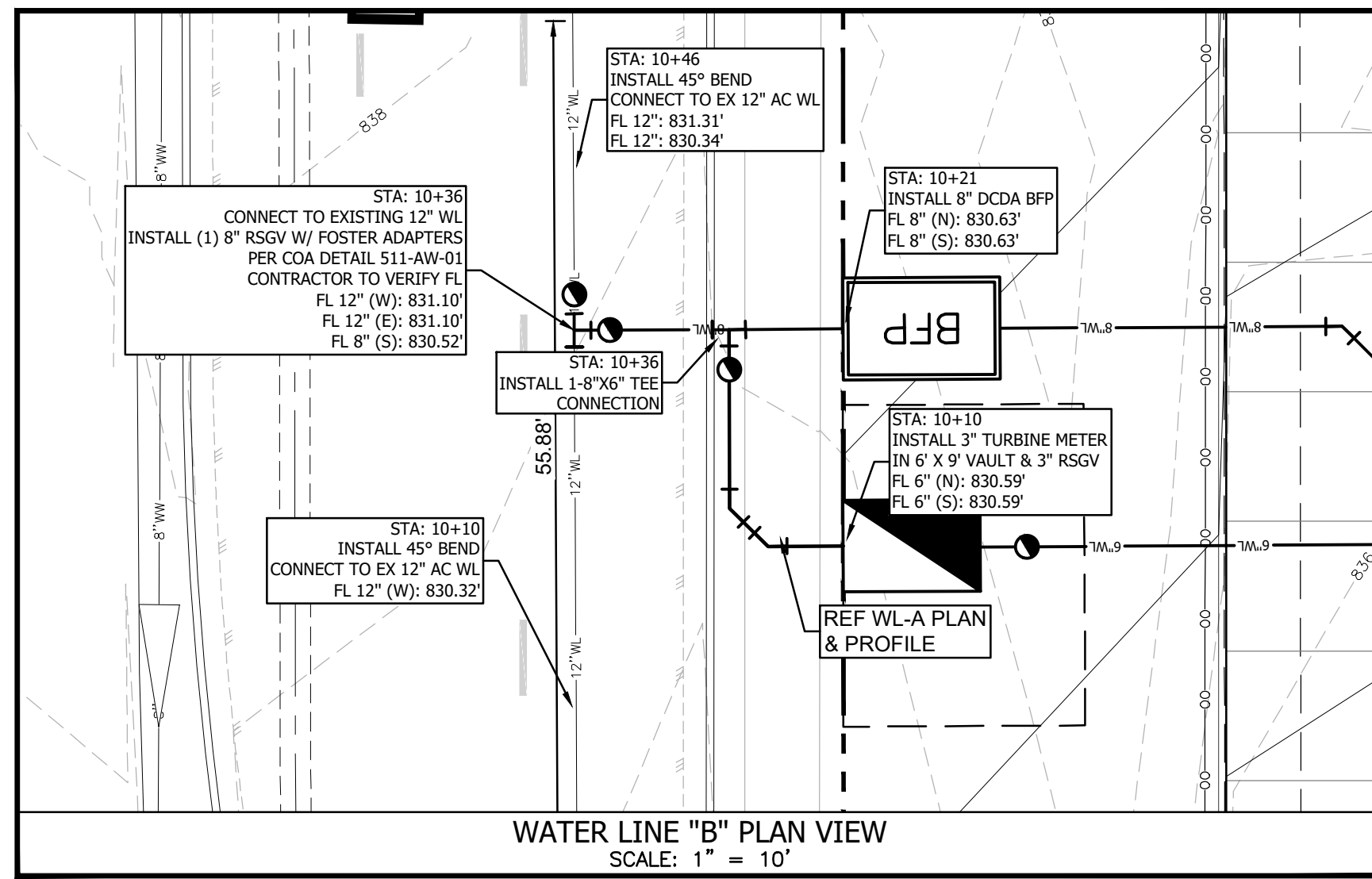
SHEET
CU104
48 OF 63
SP-2023-0082D

512.669.5580
FORM NO. F-1005
IAN WILLIAMS
14848
LICENSED PROFESSIONAL ENGINEER
08/03/2023

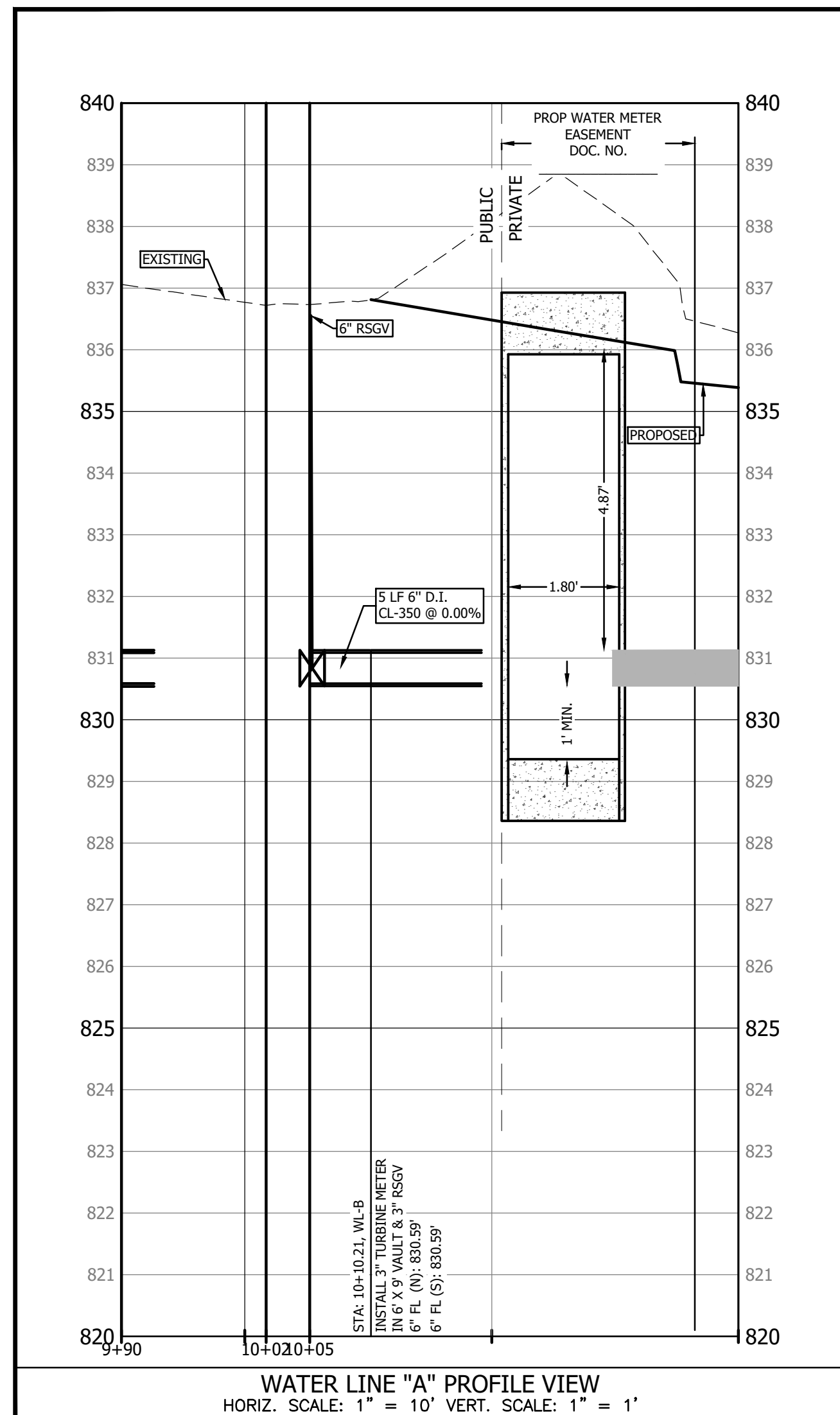
CITY APPROVAL STAMP



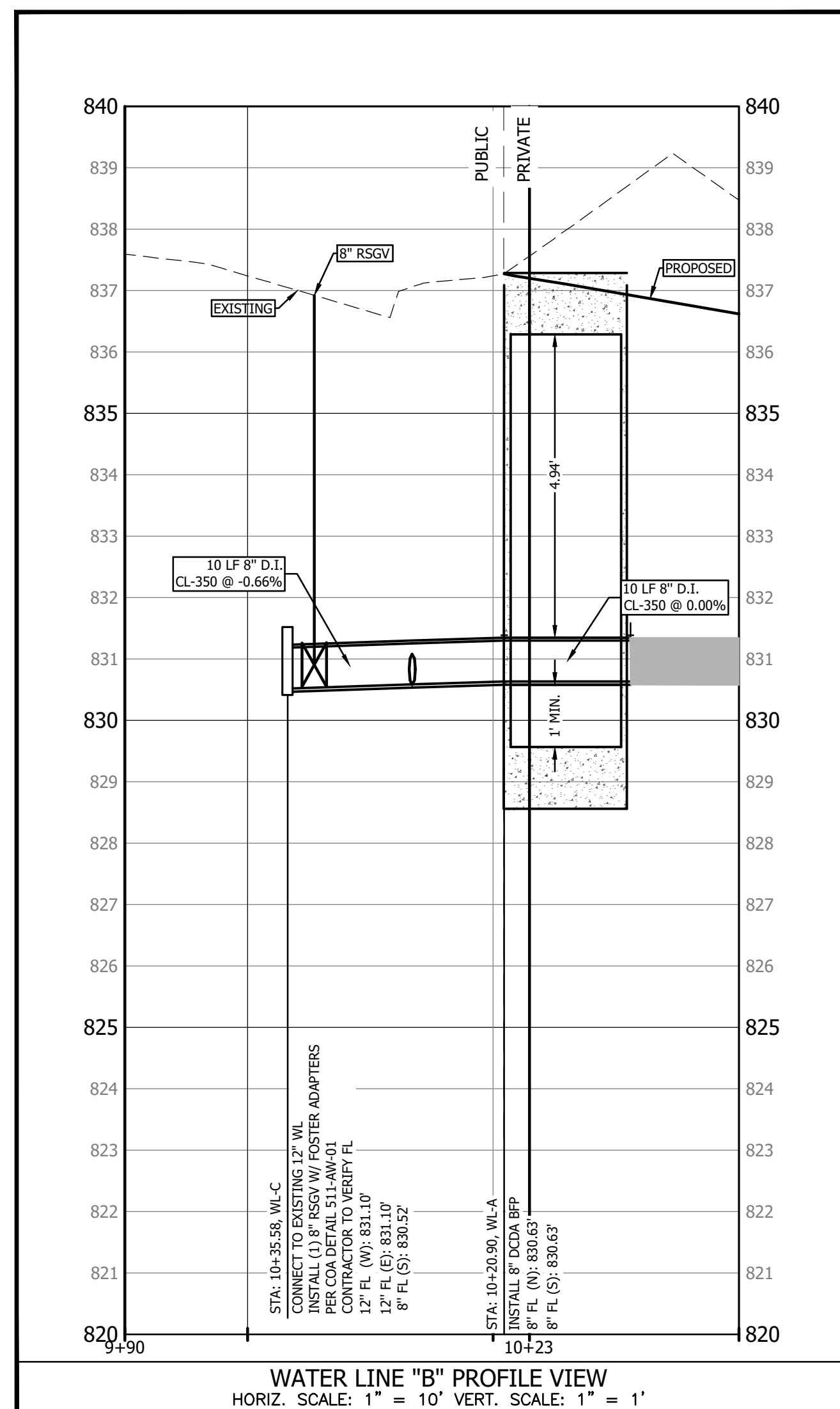
WATER LINE "A" PLAN VIEW
SCALE: 1" = 10'



WATER LINE "B" PLAN VIEW
SCALE: 1" = 10'



WATER LINE "A" PROFILE VIEW
HORIZ. SCALE: 1" = 10' VERT. SCALE: 1" = 1'



WATER LINE "B" PROFILE VIEW
HORIZ. SCALE: 1" = 10' VERT. SCALE: 1" = 1'

0 5' 10' 20'

LEGEND

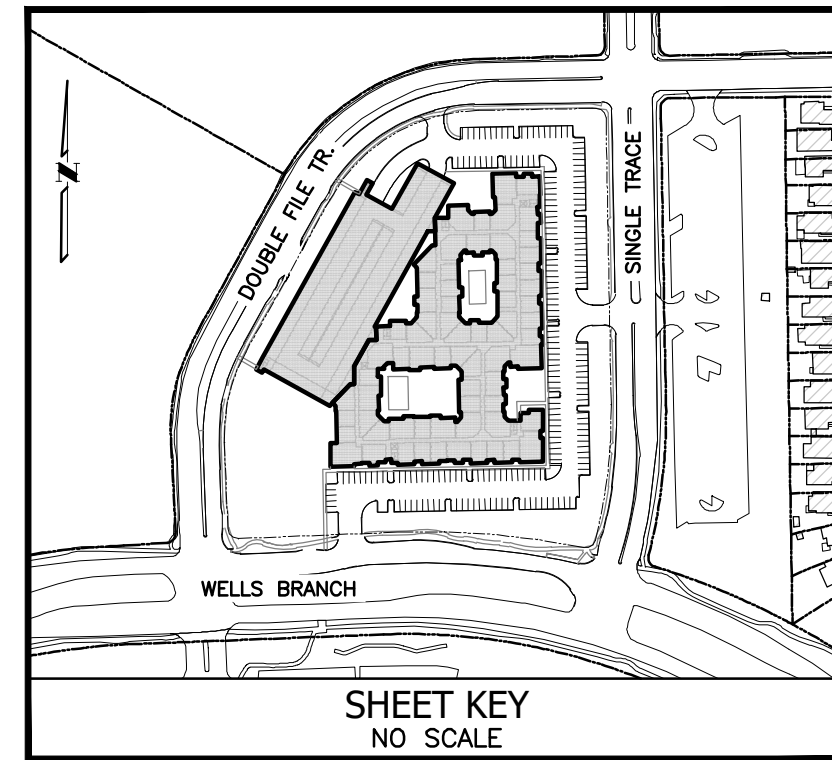
	BOUNDARY / RIGHT OF WAY
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	GAS METER / VAULT
	TREE W/ TAG NUMBER (TO REMAIN)
	CRITICAL ROOT ZONE

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NOT AUTHORIZED FOR CONSTRUCTION PRIOR TO FORMAL CITY AND MUNICIPAL UTILITY DISTRICT APPROVAL

FIRM NO: F-10085

4700 MUELLER BOULEVARD SUITE 300, AUSTIN, TX 78723

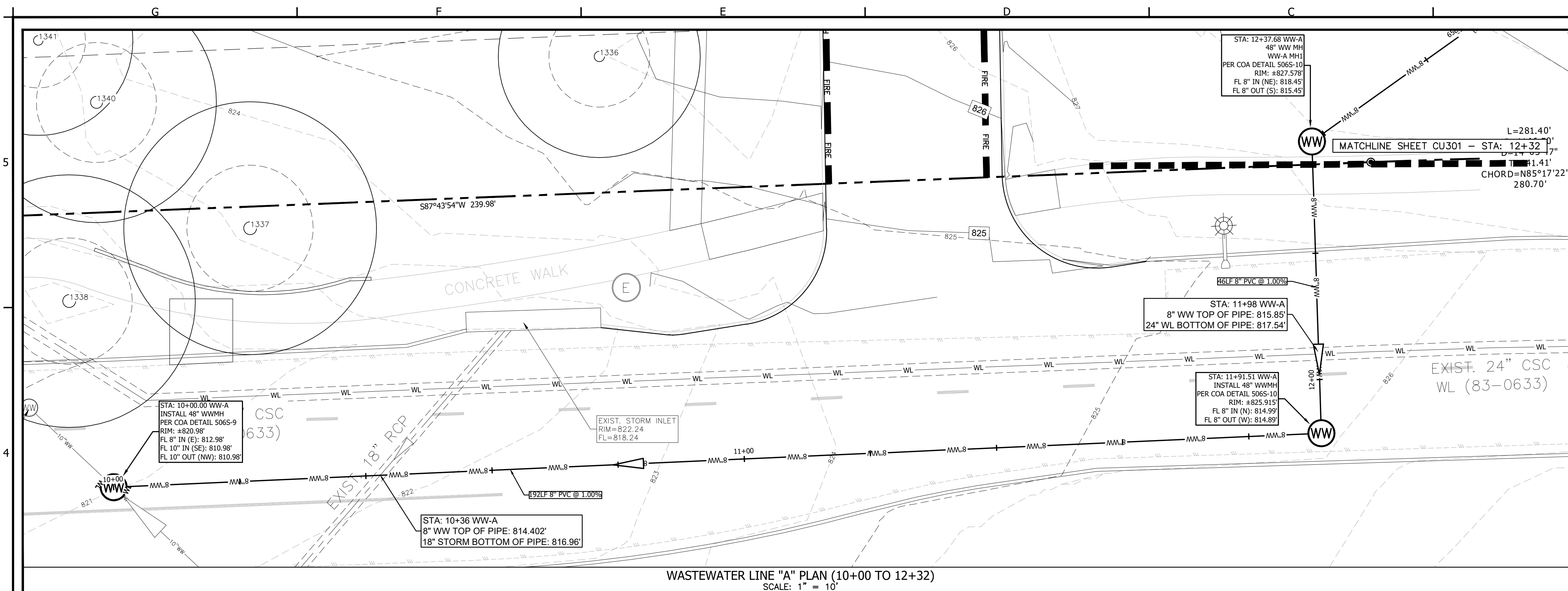
WELLS BRANCH MULTIFAMILY
2800 W WELLS BRANCH PKWY.
AUSTIN, TRAVIS COUNTY, TEXAS 78728

WATER LINE A & B PLAN & PROFILE

CITY APPROVAL STAMP

SHEET
CU201
49 OF 63
SP-2023-0082D

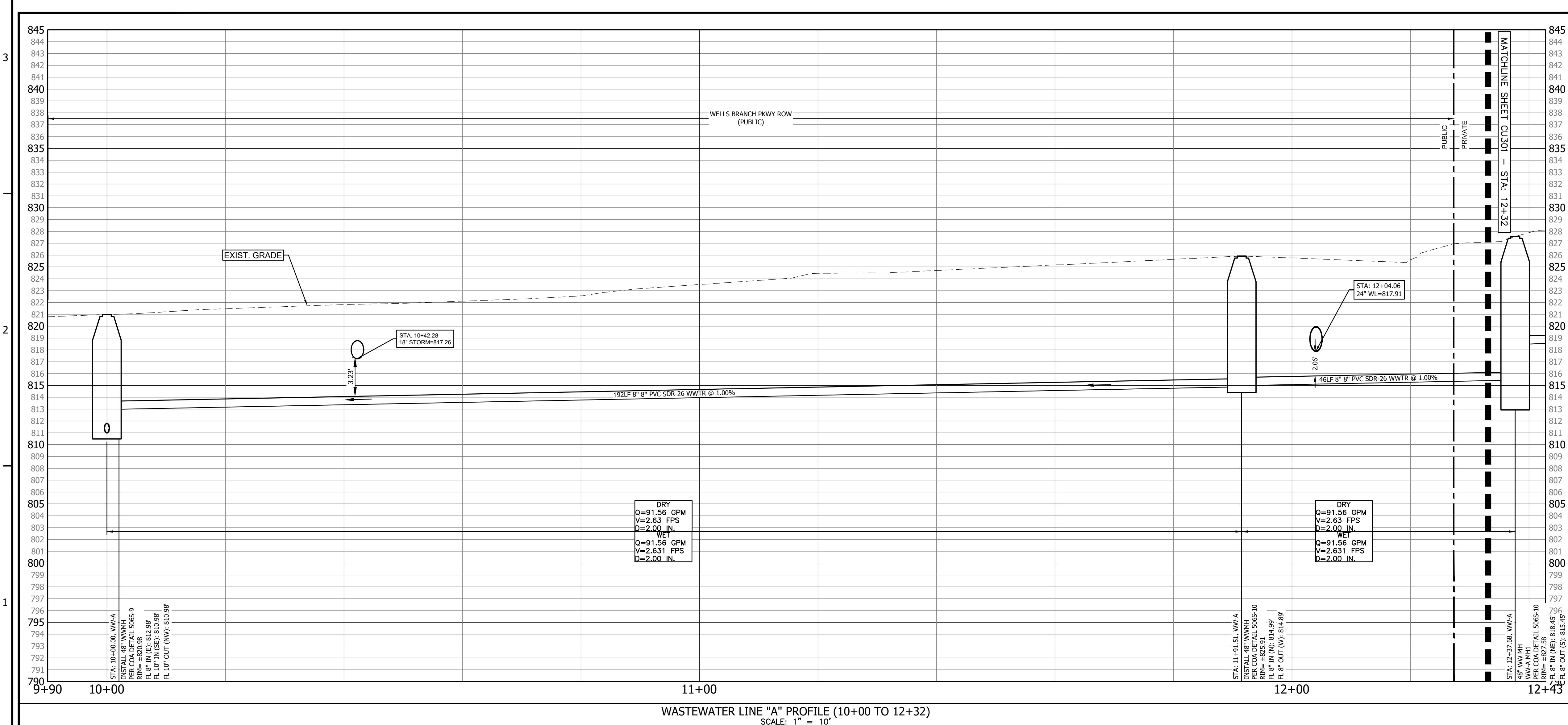
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Date Plotted: 10/25/2023 10:29:00 AM
Printer: HP DesignJet 5000



WASTEWATER LINE "A" PLAN (10+00 TO 12+32)
SCALE: 1" = 10'

LEGEND

- BOUNDARY / RIGHT OF WAY
- CURB / EDGE OF PAVEMENT
- EXISTING GRADE ELEVATIONS
- PROPOSED GRADE ELEVATIONS
- FENCE PER LANDSCAPE DESIGN
- RETAINING / STRUCTURAL WALL
- STORM DRAIN LINE
- WATER LINE
- WASTEWATER LINE
- UNDERGROUND FIBER OPTIC
- UNDERGROUND TELECOM
- UNDERGROUND ELECTRIC
- GAS LINE
- FINISHED FLOOR ELEVATION
- UTILITY / LIGHT POLE
- SIGN
- ELECTRIC / TELECOM RISER
- ELECTRIC VAULT / PULL-BOX
- ELECTRIC TRANSFORMER
- ELECTRIC MANHOLE
- CLEAN-OUT
- WASTEWATER MANHOLE
- WATER METER VAULT
- WATER VALVE
- FIRE HYDRANT
- BACKFLOW PREVENTER
- STORM DRAIN INLET
- STORM DRAIN MANHOLE
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- CRITICAL ROOT ZONE



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WGL
 WGLinc.com
 4700 MUELLER BOULEVARD SUITE 300, AUSTIN, TX 78723
 512.669.5860

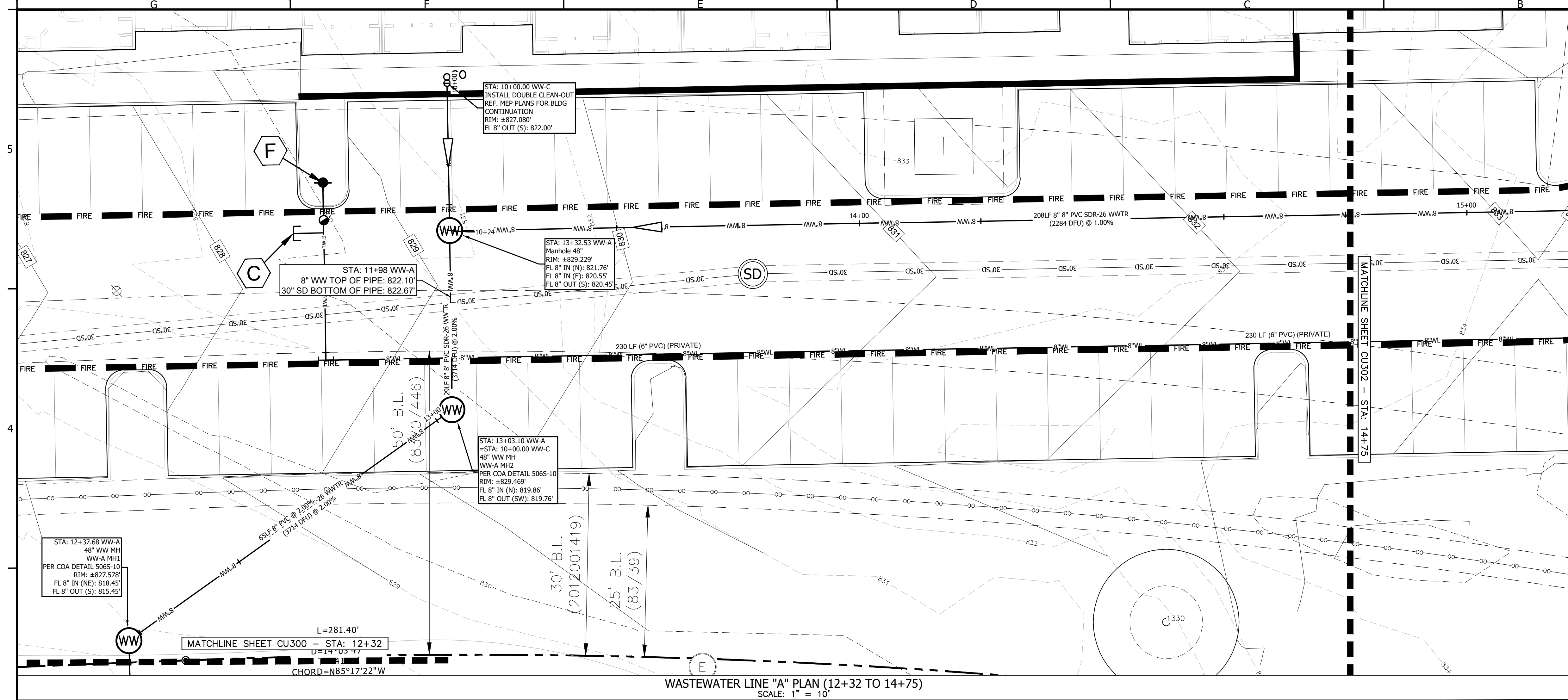
STATE OF TEXAS
 IAN WILLIAMS
 LICENSED PROFESSIONAL ENGINEER
 14848
 08/03/2023

WELLS BRANCH MULTIFAMILY
 2800 W WELLS BRANCH PKWY.
 AUSTIN, TRAVIS COUNTY, TEXAS 78728

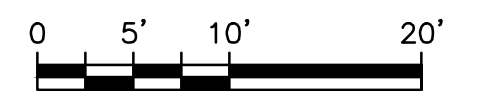
WASTEWATER LINE A P&P

CITY APPROVAL STAMP

SHEET
 CU300
 50 OF 63
 SP-2023-0082D



WASTEWATER LINE "A" PLAN (12+32 TO 14+75)
SCALE: 1" = 10'



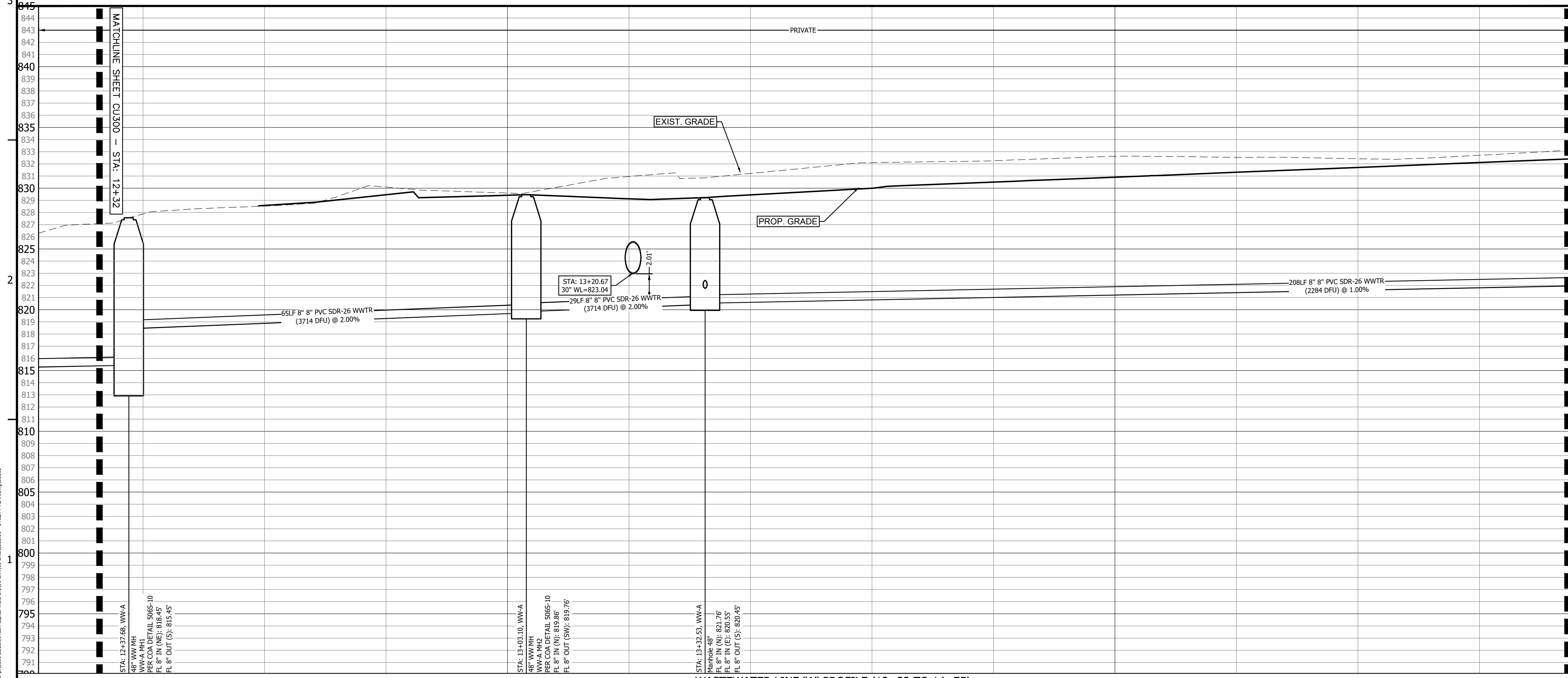
LEGEND

	BOUNDARY / RIGHT OF WAY
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 - ALL GRAVITY WASTEWATER PIPE TO BE PVC SDR-26 (GREEN).
 - LOTS WITH 65 PSI OR GREATER REQUIRE A PRV. SET AT 65 PSI. TO BE INSTALLED ON THE OWNERS SIDE OF THE WATER METER.
 - UNDERGROUND MAINS SUPPLYING PRIVATE HYDRANTS MUST BE INSTALLED AND TESTED IN ACCORDANCE WITH NFPA 24, AND THE FIRE CODE, BY A LICENSED CONTRACTOR WITH A PLUMBING PERMIT. THE ENTIRE MAIN MUST BE HYDROSTATICALLY TESTED AT ONE TIME, UNLESS ISOLATION VALVES ARE PROVIDED BETWEEN TESTED SECTIONS.
 - REFERENCE AUSTIN WATER GENERAL NOTES SHEET FOR ADDITIONAL UTILITY NOTES.

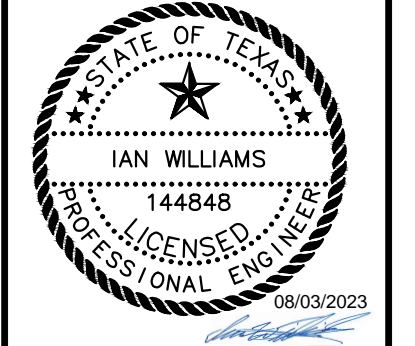
NOTE:
METERS MUST BE APPLIED AND PURCHASED THROUGH CROSSROADS UTILITY SERVICES AT LEAST 90-DAYS IN ADVANCE OF INSTALLATION.

WATER SYSTEM NOTE:
ALL POTABLE WATER SYSTEM COMPONENTS INSTALLED AFTER JANUARY 4TH, 2014 SHALL BE ESSENTIALLY "LEAD FREE" ACCORDING TO THE US SAFE DRINKING WATER ACT. EXAMPLES ARE VALVES, CORPORATION STOP, CURB STOP, AND PRESSURE REDUCING, NIPPLES, BUSHINGS, PIPE, FITTINGS, AND BACKFLOW PREVENTERS. FIRE HYDRANTS TAPPING SADDLES AND 2 INCH AND LARGER GATE VALVES ARE THE ONLY COMPONENTS EXEMPT FROM THIS REQUIREMENT. COMPONENTS THAT ARE NOT CLEARLY IDENTIFIED BY THE MANUFACTURER AS MEETING THIS REQUIREMENT EITHER BY MARKINGS ON THE COMPONENT OR ON THE PACKAGING SHALL NOT BE INSTALLED.

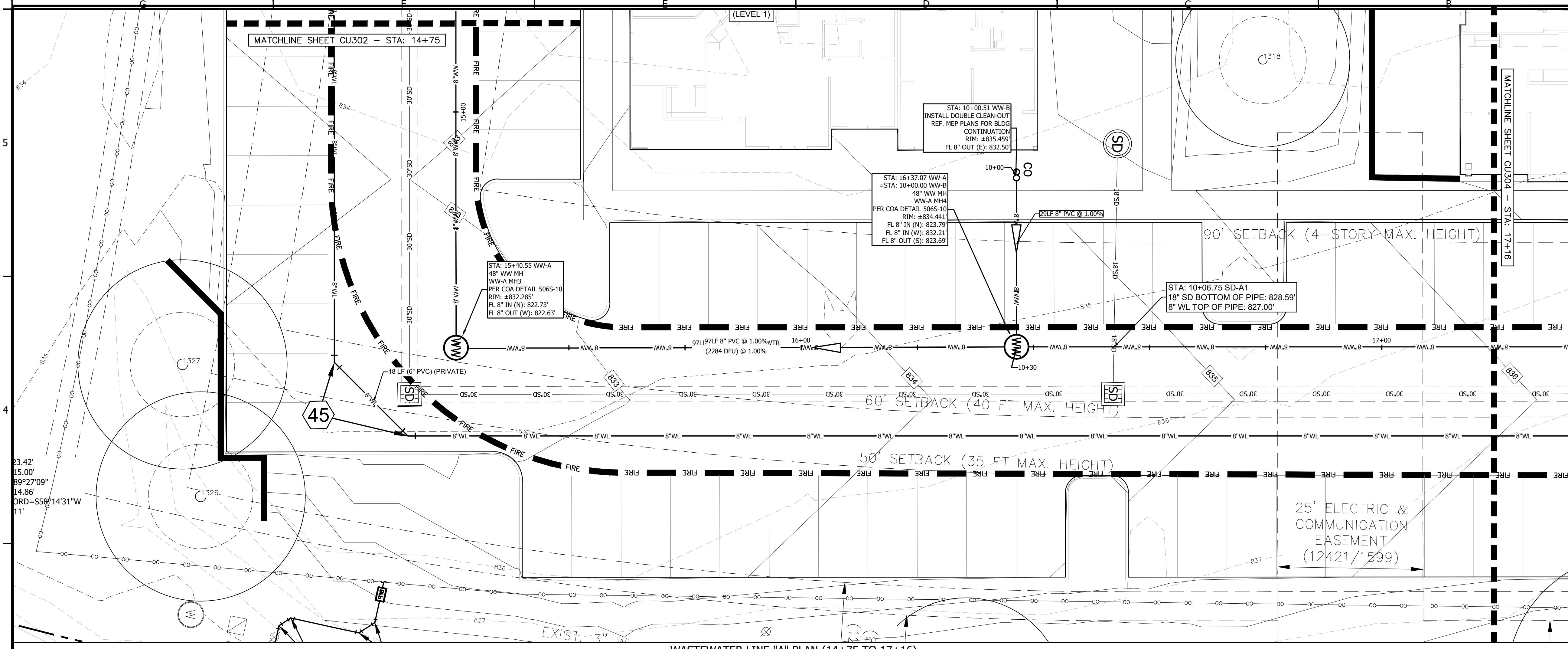


WASTEWATER LINE "A" PROFILE (12+32 TO 14+75)
SCALE: 1" = 10'

NOT AUTHORIZED FOR
CONSTRUCTION PRIOR TO
FORMAL CITY AND MUNICIPAL
UTILITY DISTRICT APPROVAL



WELLS BRANCH MULTIFAMILY
2800 W WELLS BRANCH PKWY.
AUSTIN, TRAVIS COUNTY, TEXAS 78728
WASTEWATER LINE B P&P



WASTEWATER LINE "A" PLAN (14+75 TO 17+16)
SCALE: 1" = 10'

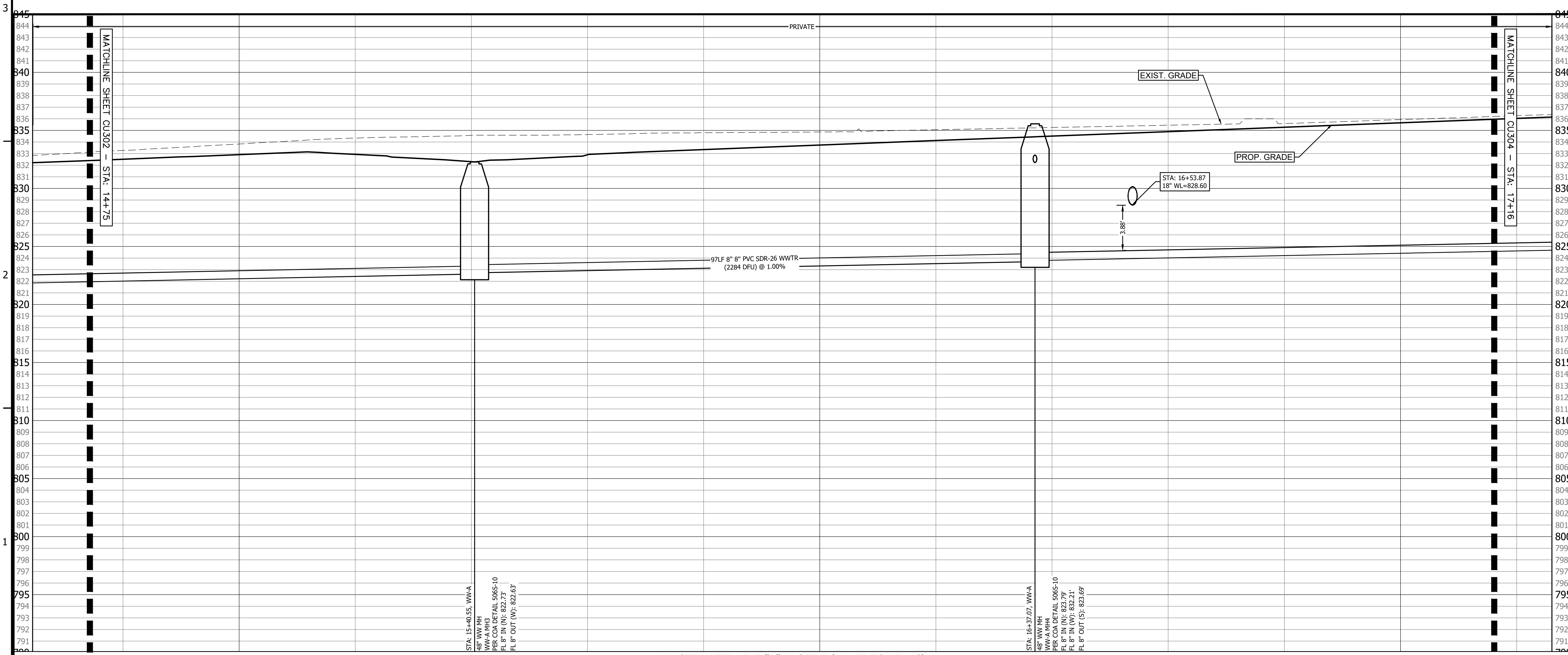
LEGEND

- BOUNDARY / RIGHT OF WAY
- CURB / EDGE OF PAVEMENT
- EXISTING GRADE ELEVATIONS
- PROPOSED GRADE ELEVATIONS
- FENCE PER LANDSCAPE DESIGN
- RETAINING / STRUCTURAL WALL
- STORM DRAIN LINE
- WATER LINE
- WASTEWATER LINE
- UNDERGROUND FIBER OPTIC
- UNDERGROUND TELECOM
- UNDERGROUND ELECTRIC
- GAS LINE
- FINISHED FLOOR ELEVATION
- UTILITY / LIGHT POLE
- SIGN
- ELECTRIC / TELECOM RISER
- ELECTRIC VAULT / PULL-BOX
- ELECTRIC TRANSFORMER
- ELECTRIC MANHOLE
- CLEAN-OUT
- WASTEWATER MANHOLE
- WATER METER VAULT
- WATER VALVE
- FIRE HYDRANT
- BACKFLOW PREVENTER
- STORM DRAIN INLET
- STORM DRAIN MANHOLE
- GAS METER VAULT
- TREE W/ TAG NUMBER (TO REMAIN)
- CRITICAL ROOT ZONE

- NOTES:**
- CONTRACTOR SHALL FURNISH AND INSTALL ALL MATERIALS AND APPURTENANCES AS CALLED OUT ON PLANS ALL WATER PIPE TO BE DUCTILE IRON CL350, EXCEPT FOR THE OFFSITE 24" WL, WHICH SHALL BE DUCTILE IRON CL250, AND SERVICE LEADS, WHICH ARE HDPE.
 - ALL HORIZONTAL AND VERTICAL WATER LINE BENDS, TEE'S AND DEADEND'S SHALL BE RESTRAINED TO THE WATER MAIN USING FACTORY RESTRAINED JOINT PIPE AS APPROVED IN SPL-WW-27F, OR MECHANICAL JOINT RESTRAINED DEVICES SUCH AS MEGA-LUG OR APPROVED EQUAL (SPL-WW-27A).
 - FILL, COMPACT & TEST GROUND AT PROPOSED FINISHED GRADE ELEVATION TO 95% PROCTOR DENSITY PRIOR TO UTILITY CONSTRUCTION.
 - REPAIR ASPHALT AS REQUIRED FOR INSTALLATION OF WATER & WASTEWATER LINES PER C.O.A. DETAIL 11005-2. REFERENCE CONSTRUCTION DETAILS.
 - NO COMBUSTIBLE CONSTRUCTION WILL BEGIN ON THIS SITE PLAN UNTIL THE WATER LINE EXTENSION IS COMPLETED AND THE REQUIRED FIRE FLOW IS AVAILABLE.
 - EXISTING SERVICE LINE LOCATIONS ARE APPROXIMATE AND NEED TO BE FIELD VERIFIED. CONTRACTOR TO VERIFY ALL EXISTING UTILITIES VERTICALLY AND HORIZONTALLY PRIOR TO CONSTRUCTION. CONTRACTOR TO NOTIFY THE ENGINEER IMMEDIATELY OF ANY DISCREPANCIES.
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NOTE:
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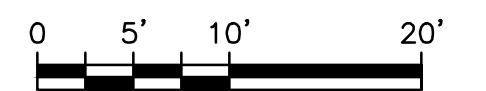
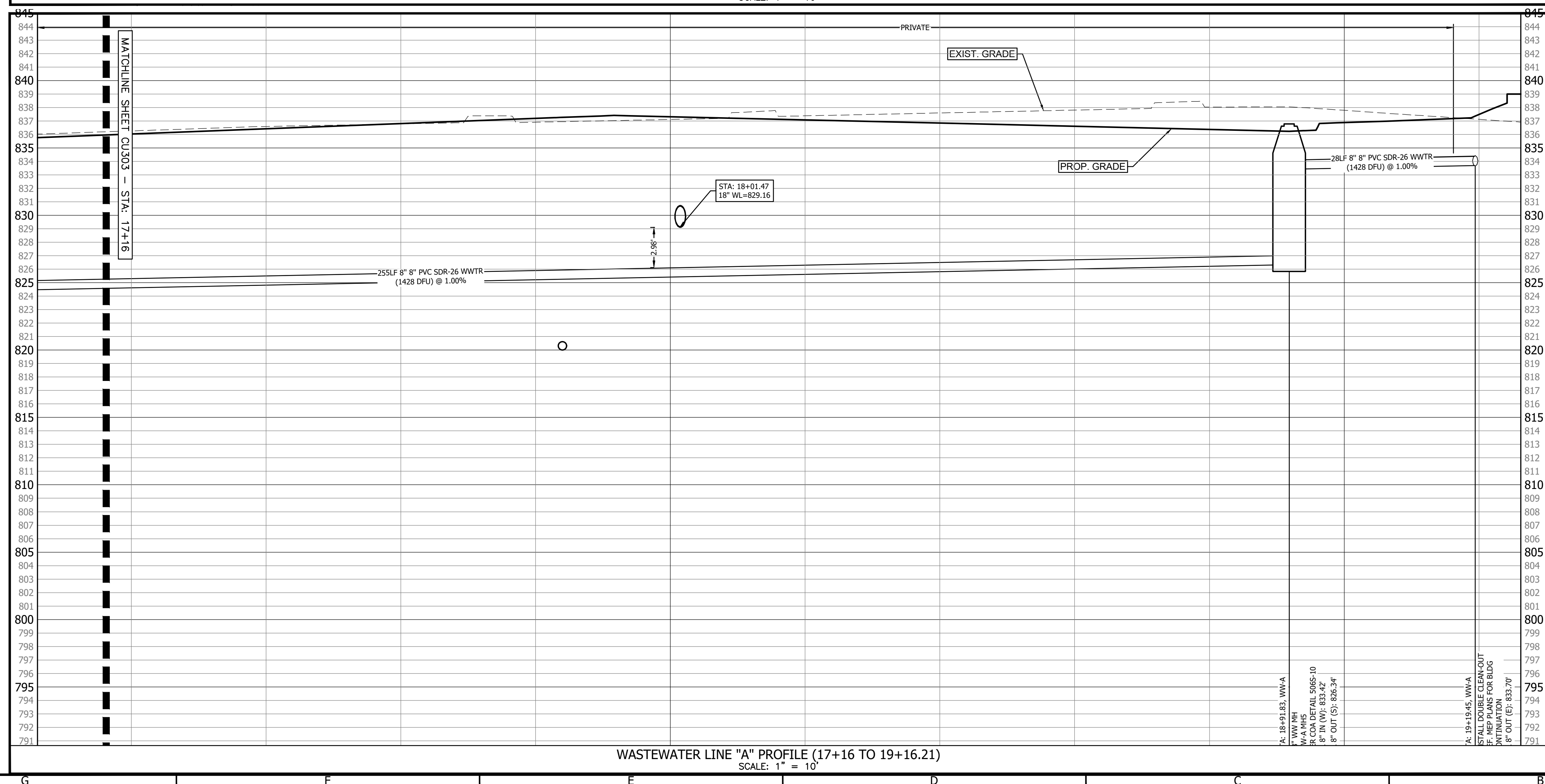
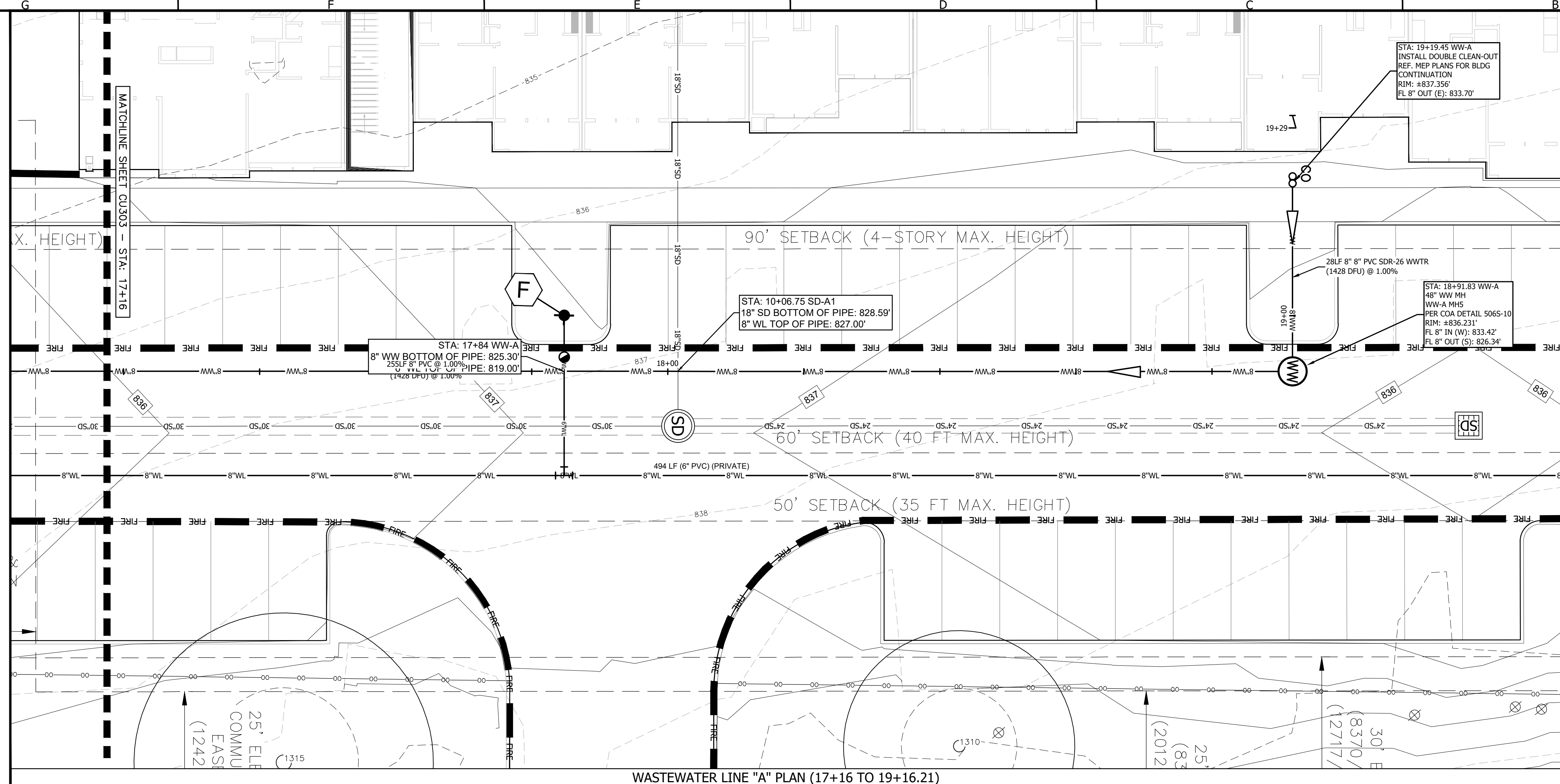


WASTEWATER LINE "A" PROFILE (14+75 TO 17+16)
SCALE: 1" = 10'

NOT AUTHORIZED FOR
CONSTRUCTION PRIOR TO
FORMAL CITY AND MUNICIPAL
UTILITY DISTRICT APPROVAL



WELLS BRANCH MULTIFAMILY
2800 W WELLS BRANCH PKWY.
AUSTIN, TRAVIS COUNTY, TEXAS 78728
WASTEWATER LINE C P&P



LEGEND

- BOUNDARY / RIGHT OF WAY
- CURB / EDGE OF PAVEMENT
- - - EXISTING GRADE ELEVATIONS
- 835 PROPOSED GRADE ELEVATIONS
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- RETAINING / STRUCTURAL WALL
- STORM DRAIN LINE
- WATER LINE
- WASTEWATER LINE
- UNDERGROUND FIBER OPTIC
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- UNDERGROUND ELECTRIC
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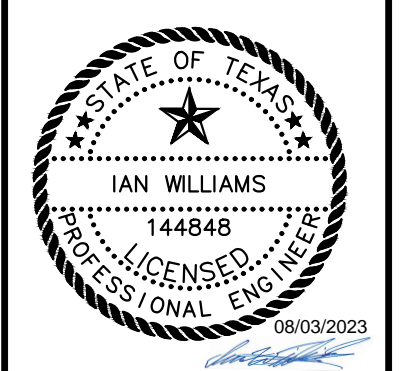
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NOT AUTHORIZED FOR CONSTRUCTION PRIOR TO FORMAL CITY AND MUNICIPAL UTILITY DISTRICT APPROVAL

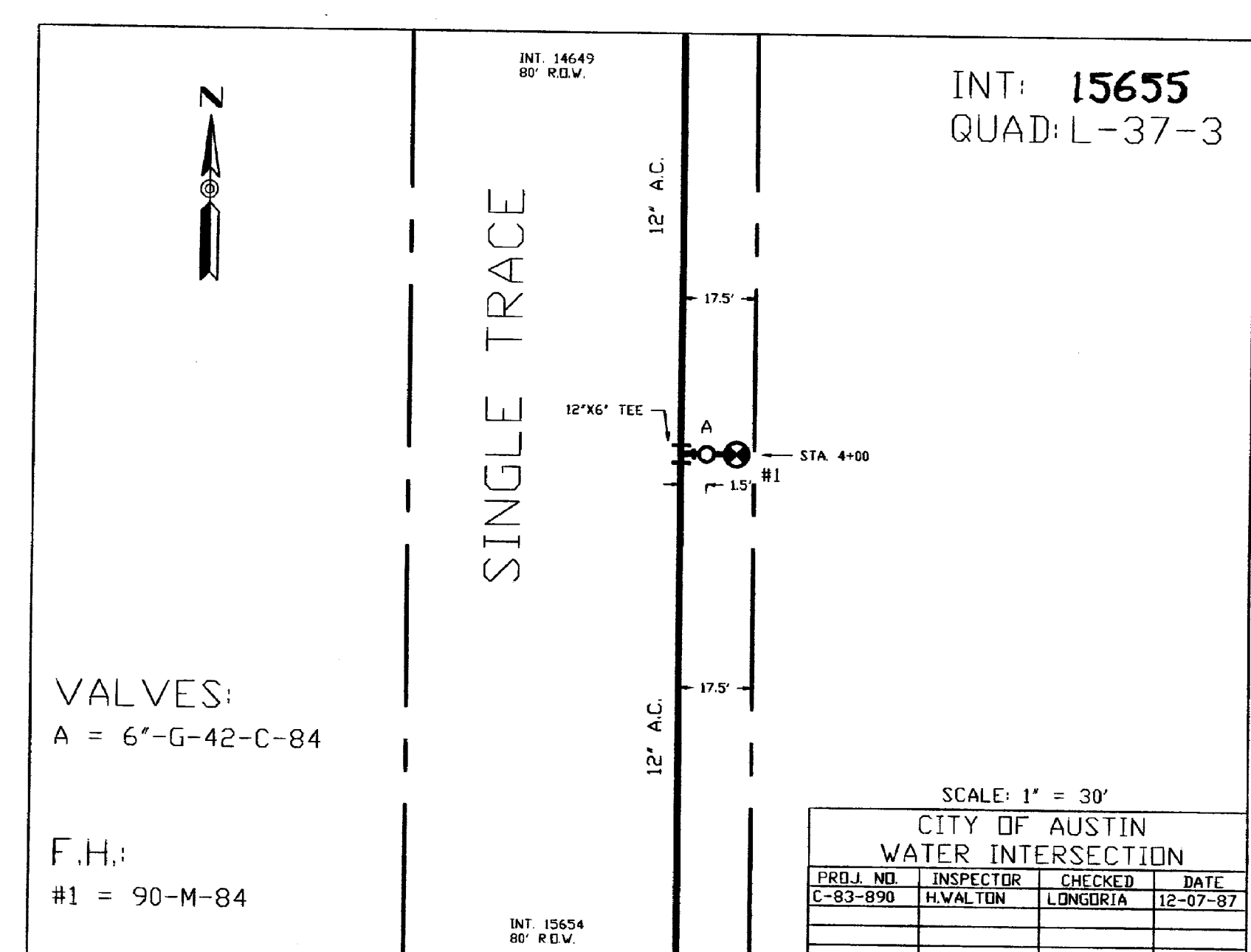
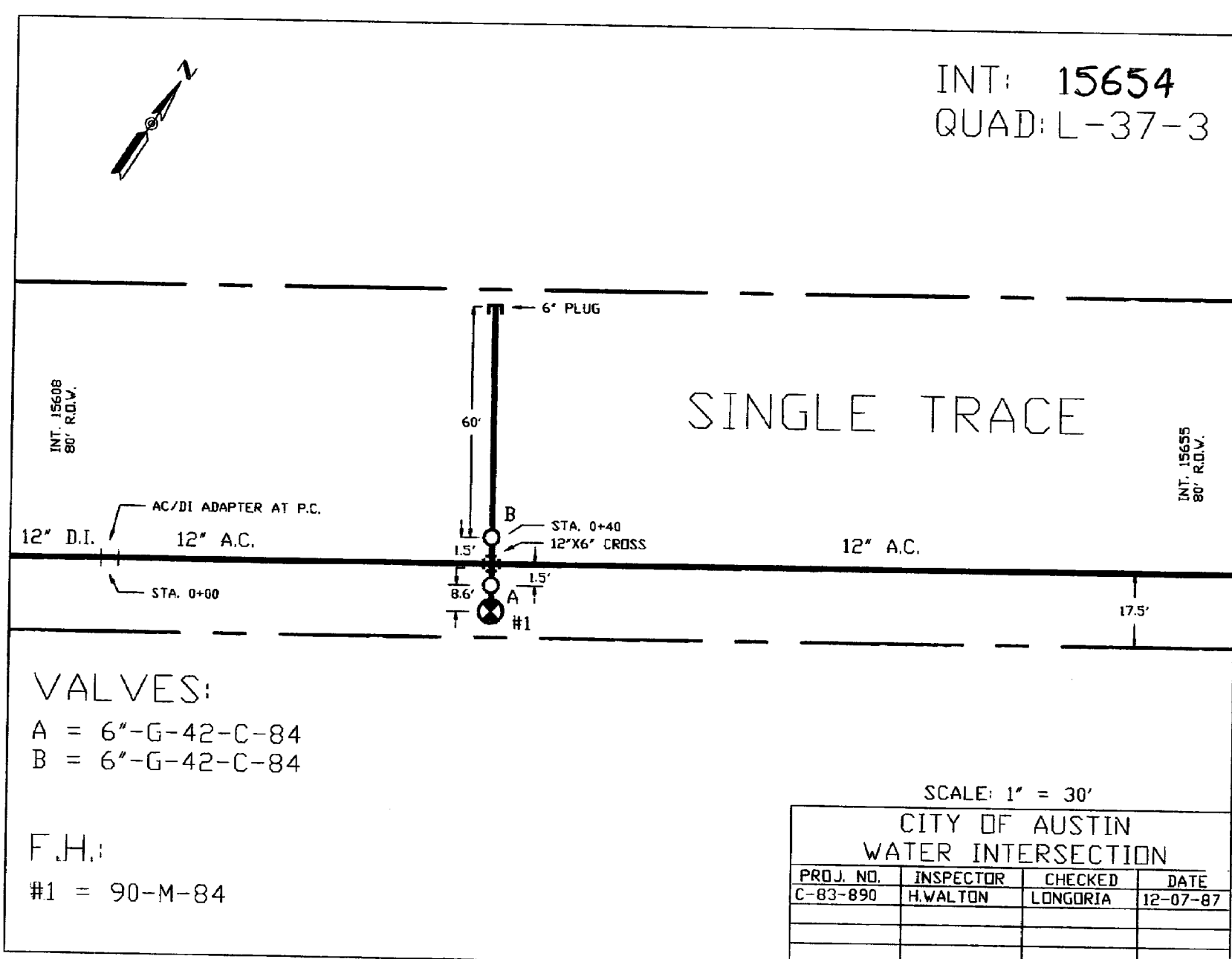
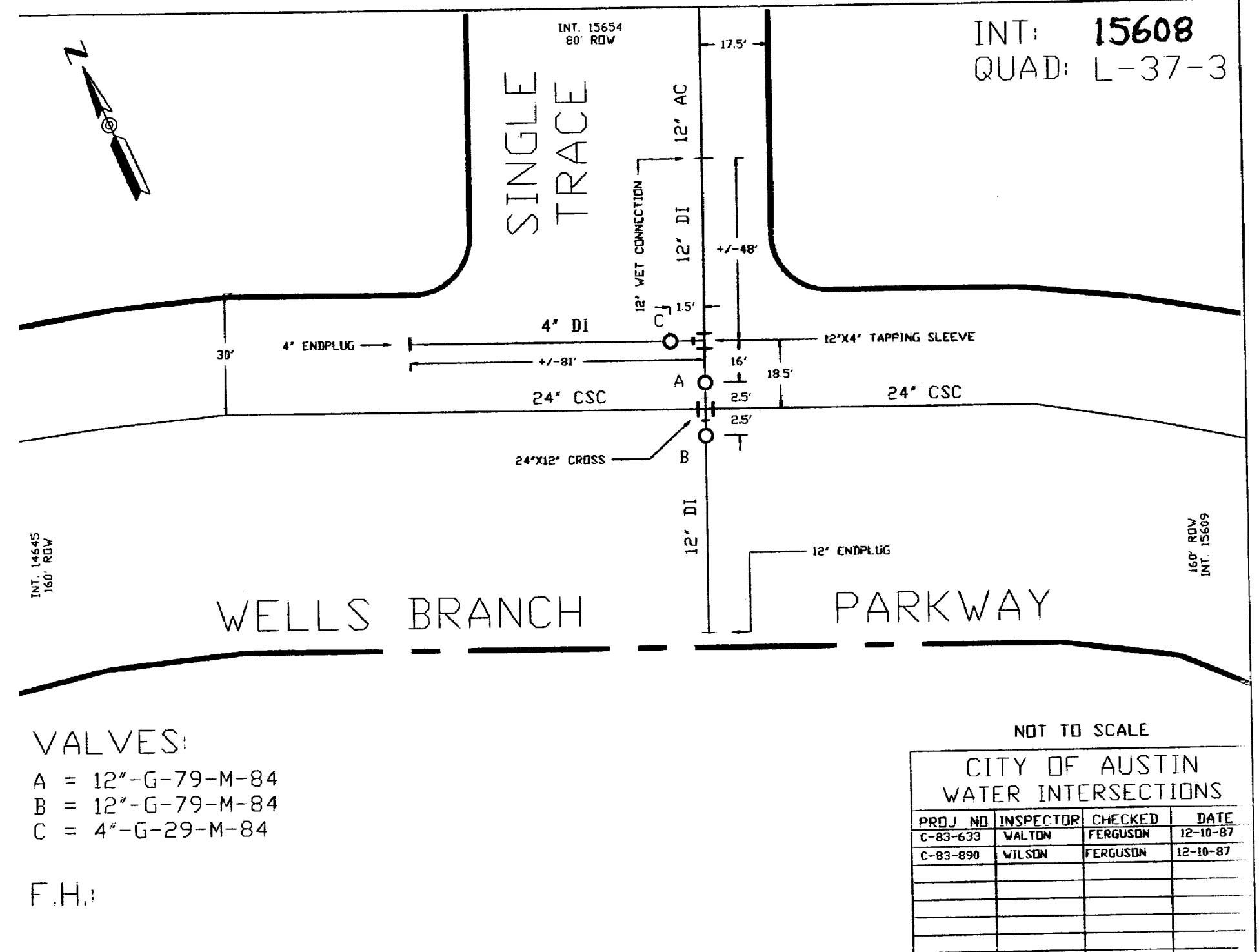
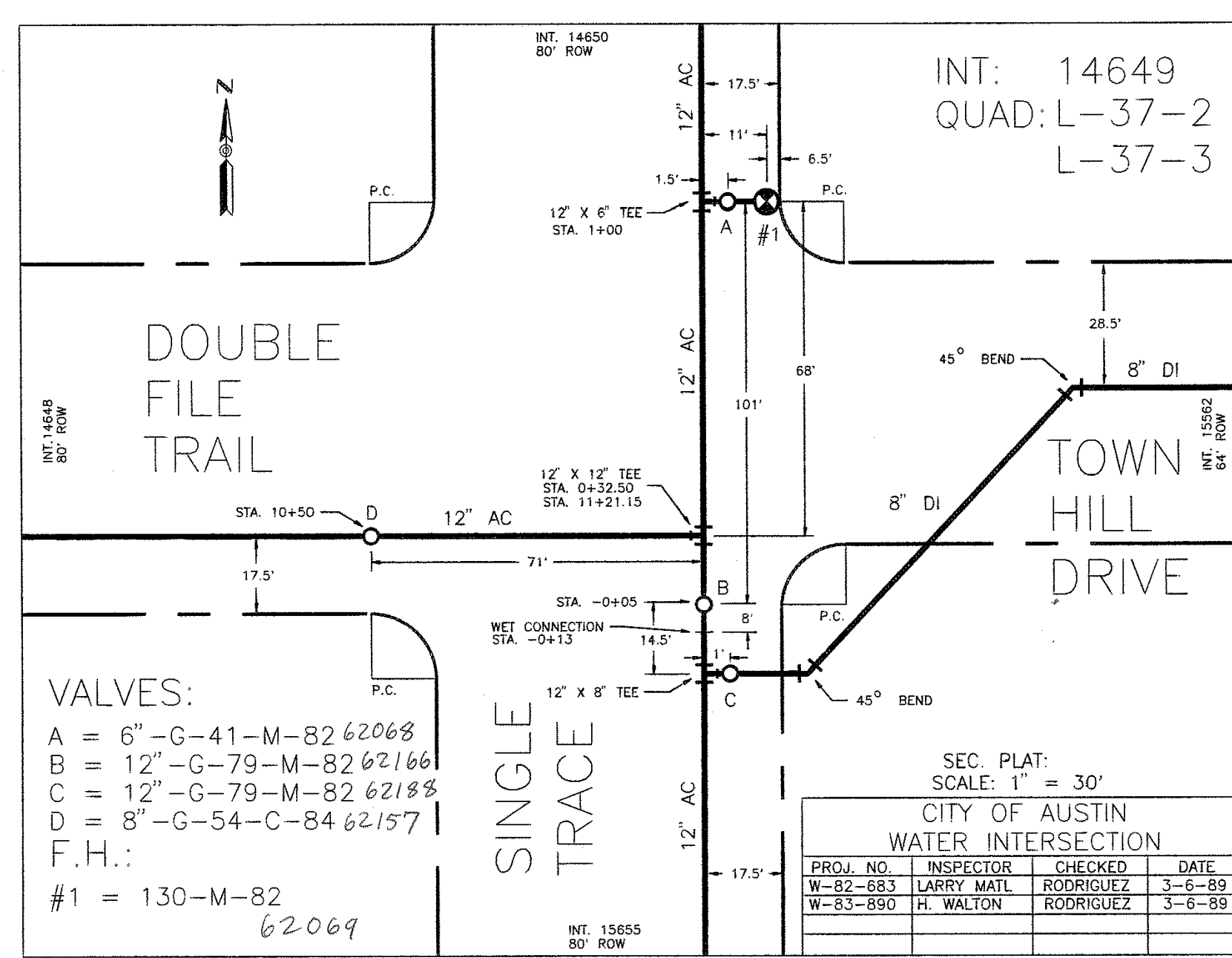
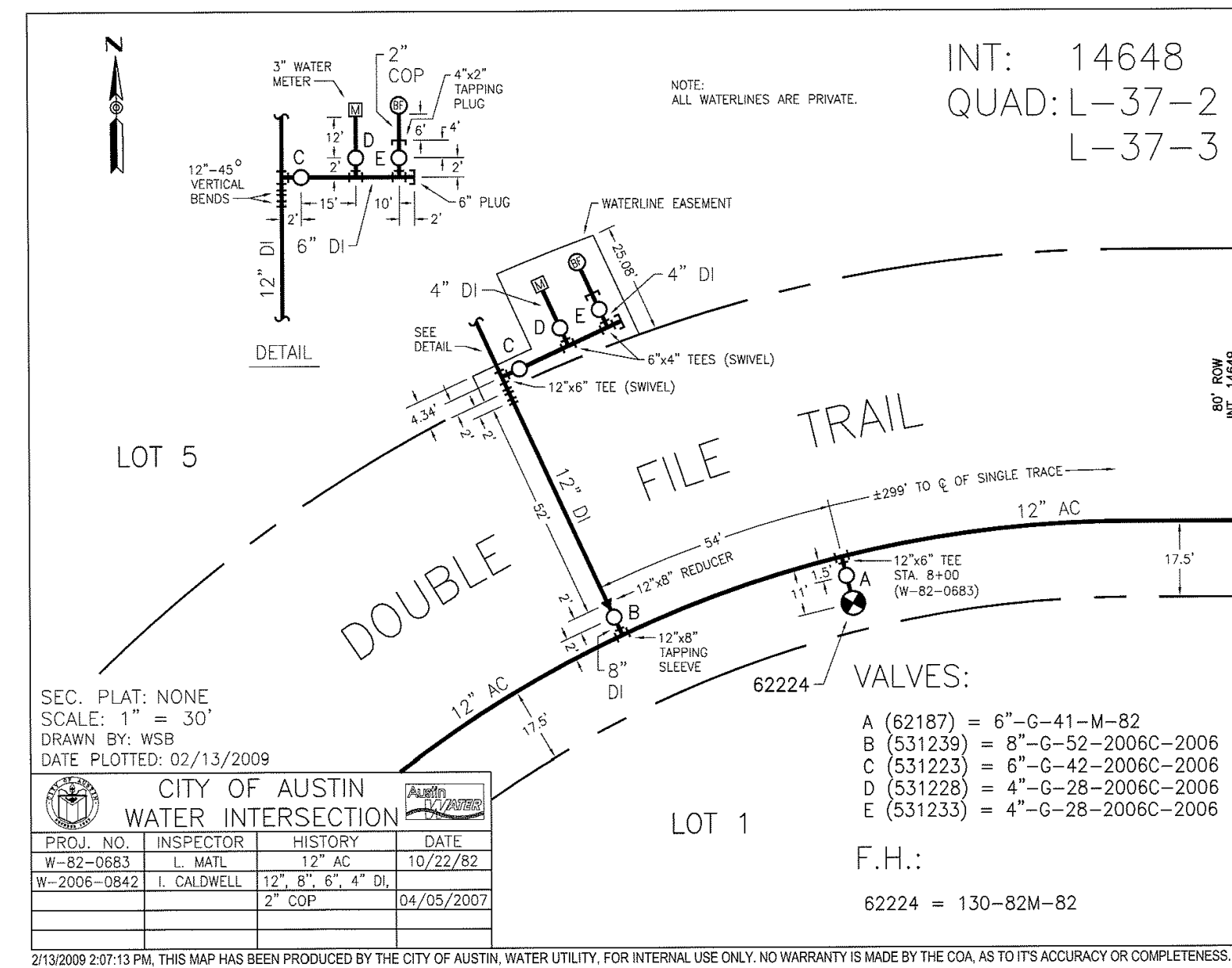
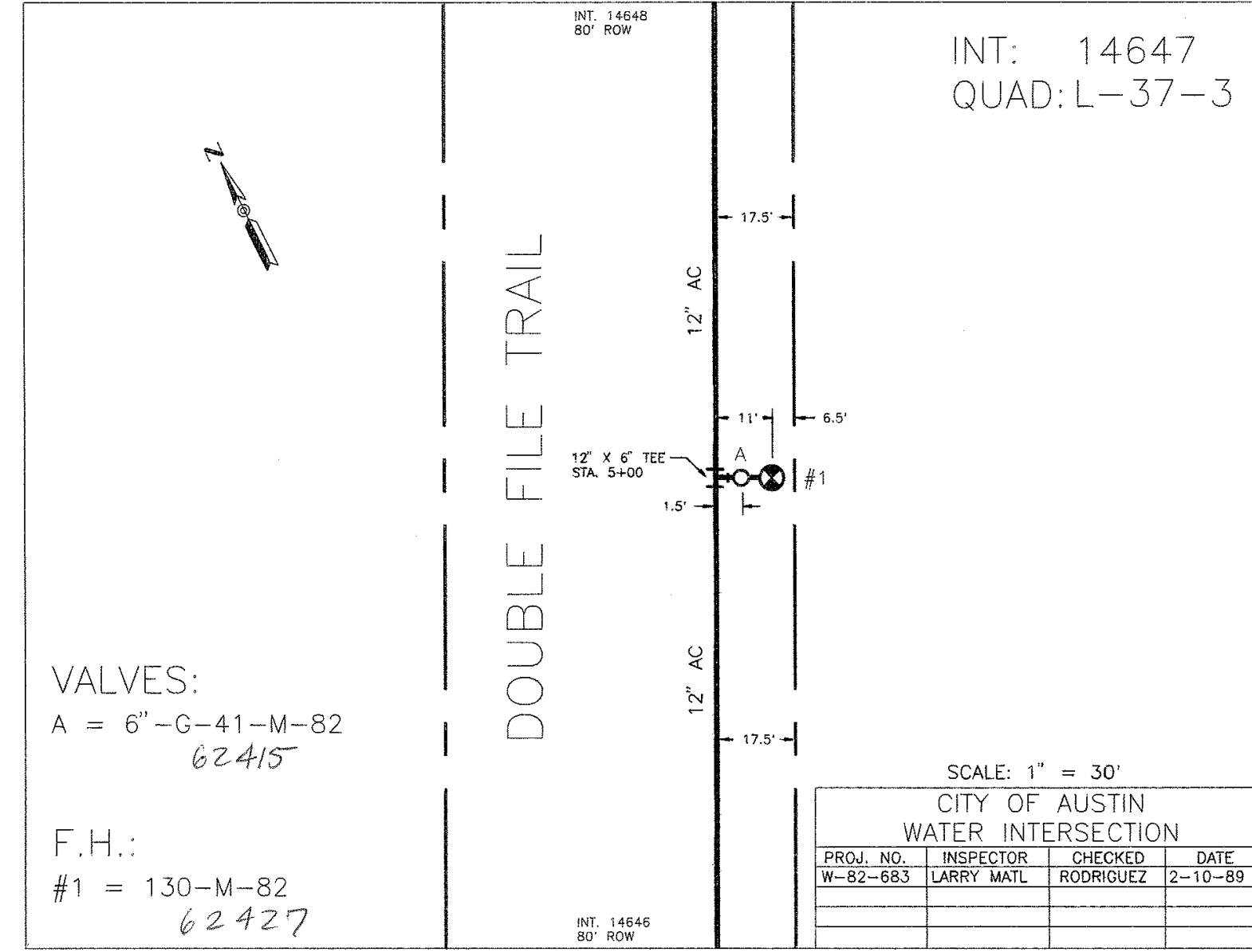
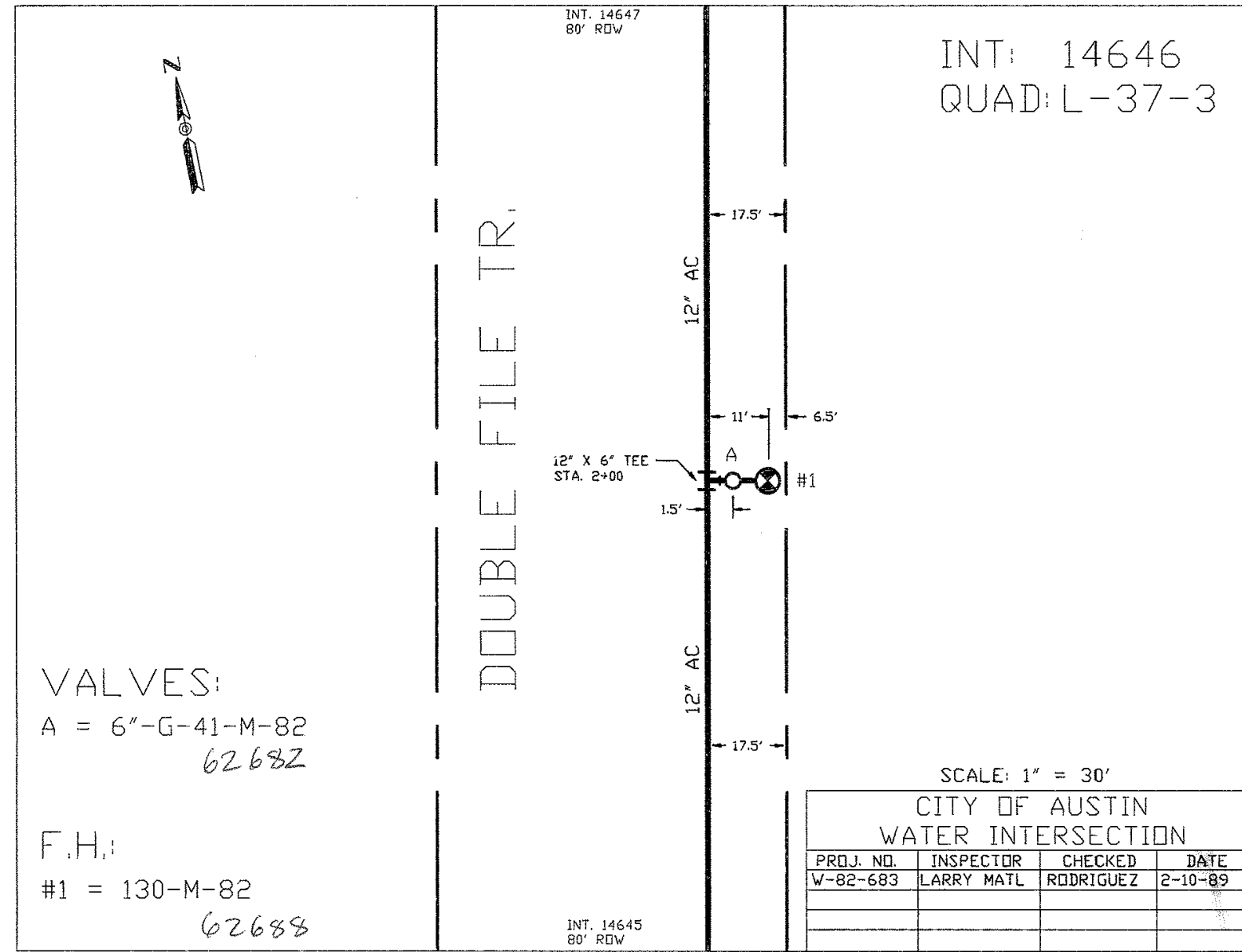
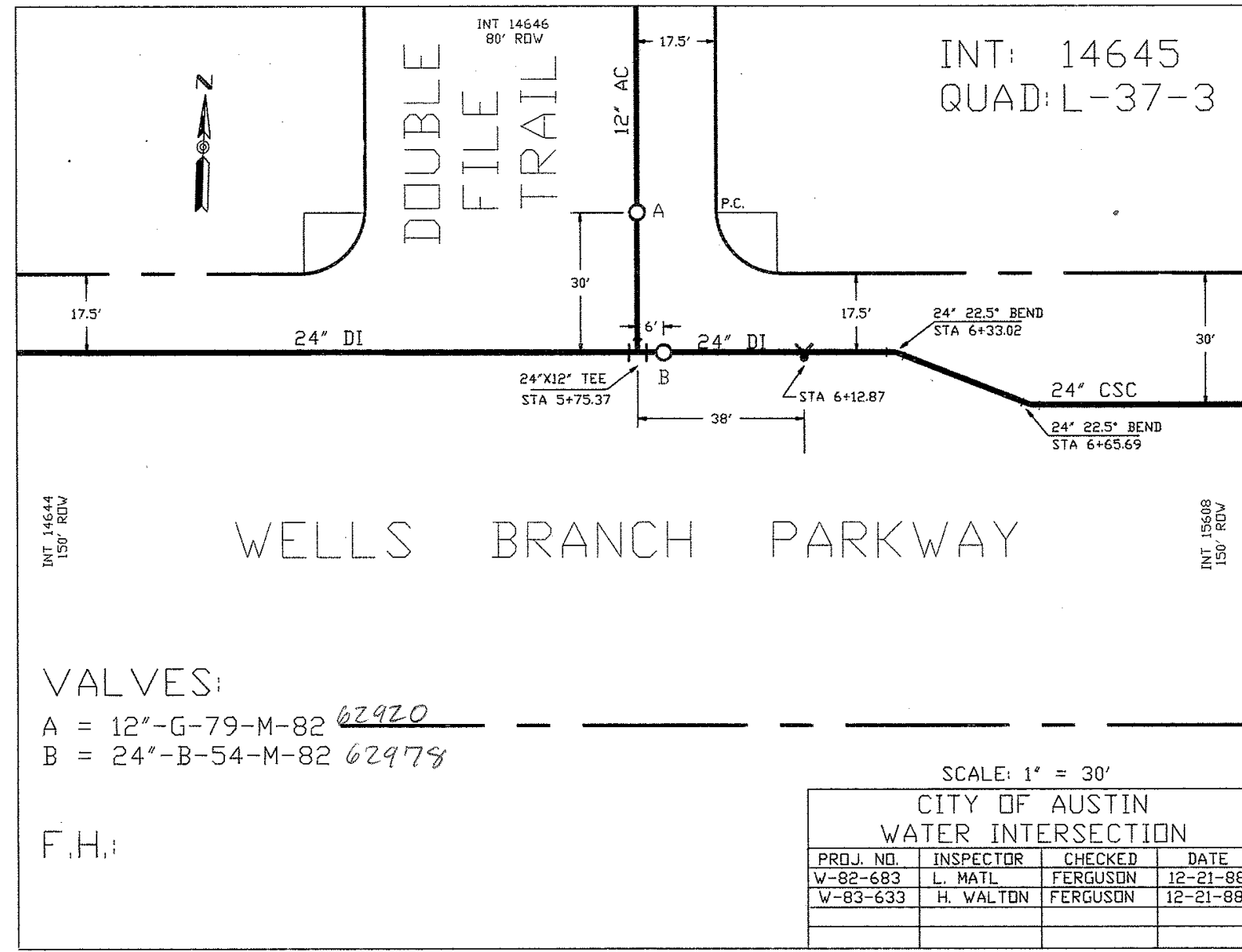
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 WGI Inc.com
 4700 MUELLER BOULEVARD SUITE 300, AUSTIN, TX 78723

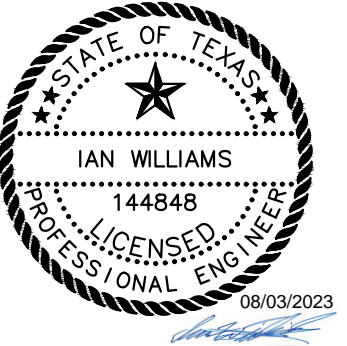


WELLS BRANCH MULTIFAMILY
 2800 W WELLS BRANCH PKWY.
 AUSTIN, TRAVIS COUNTY, TEXAS 78728
WASTEWATER LINE D P&P

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NOT AUTHORIZED FOR
CONSTRUCTION PRIOR TO
FORMAL CITY AND MUNICIPAL
UTILITY DISTRICT APPROVAL

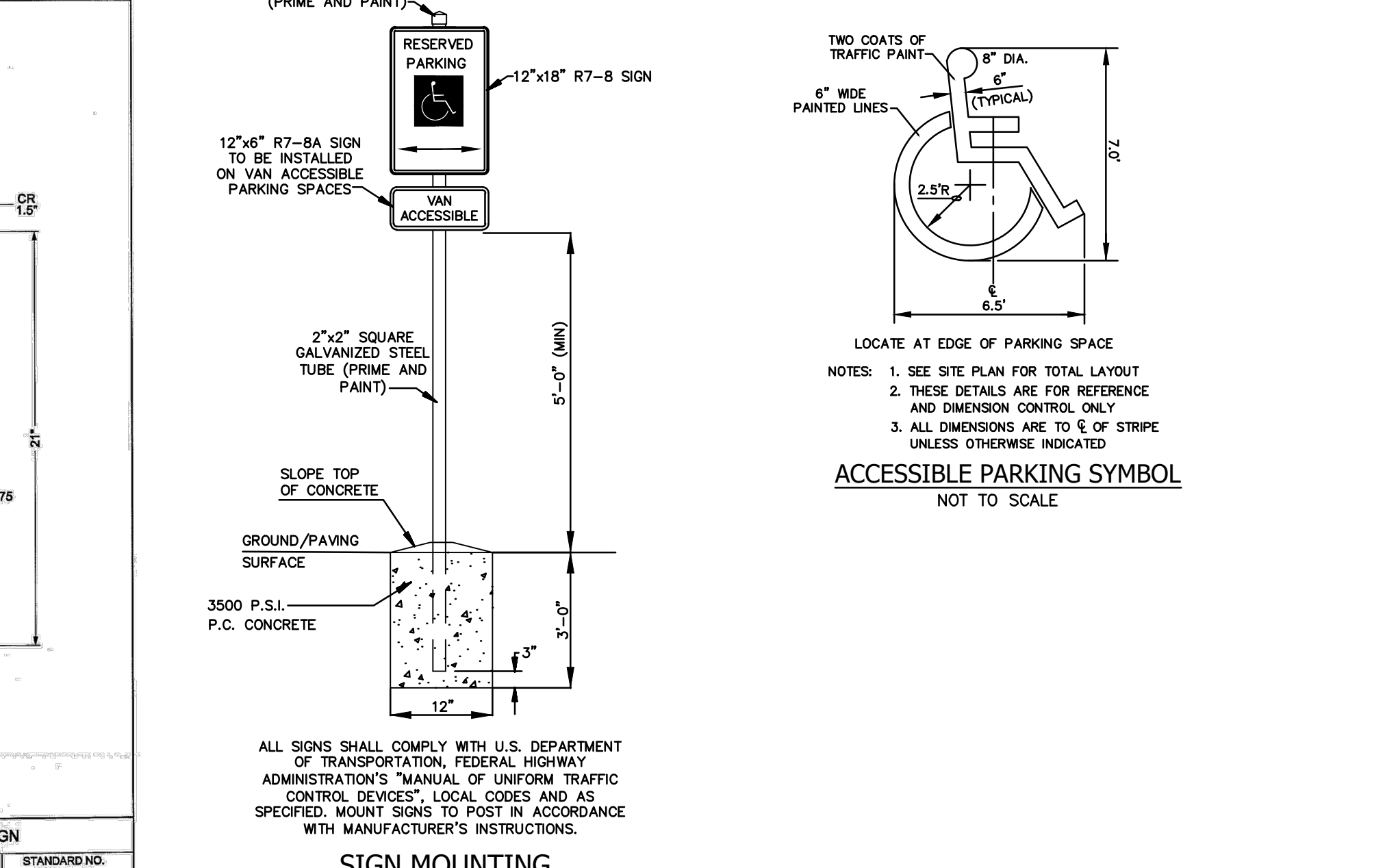
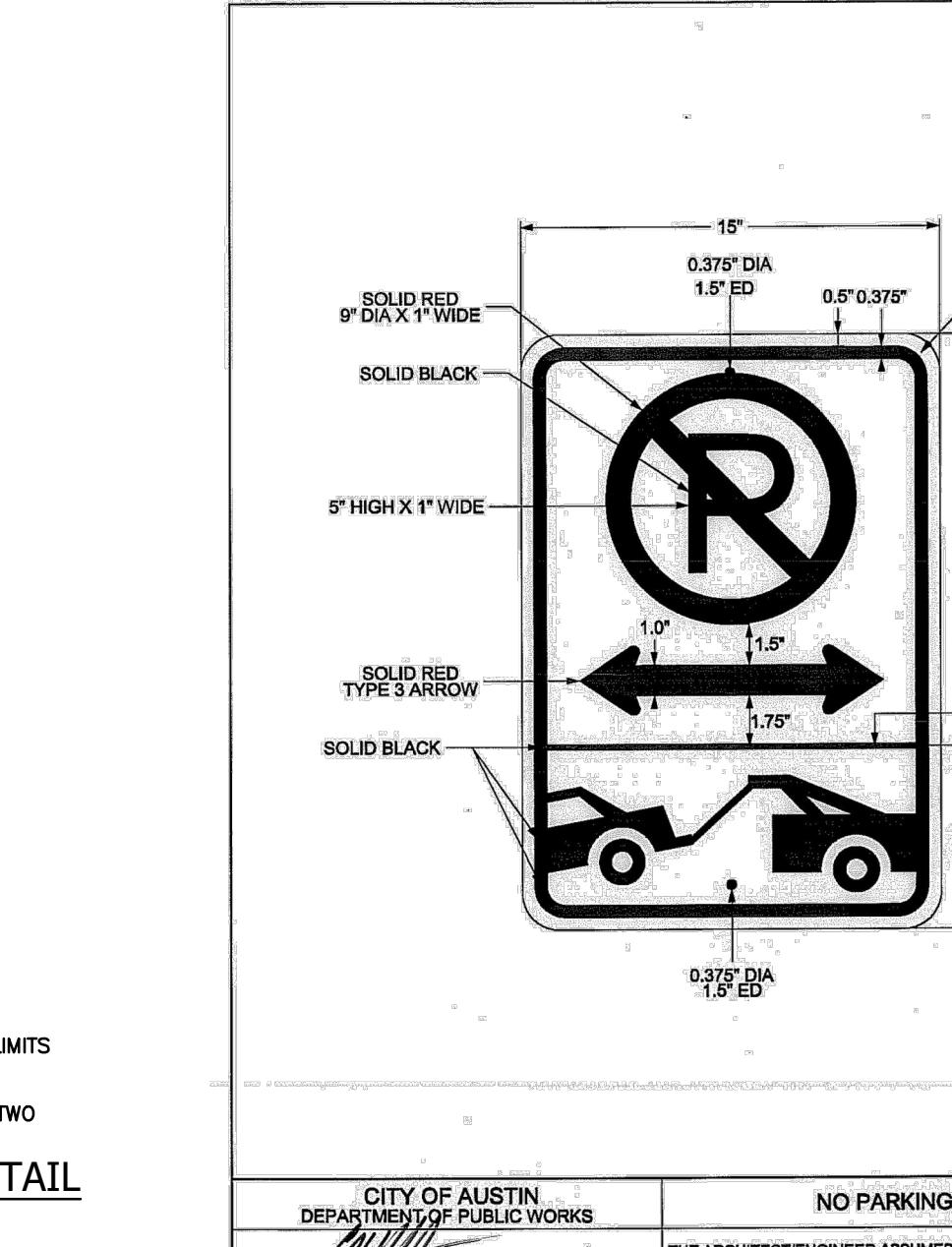
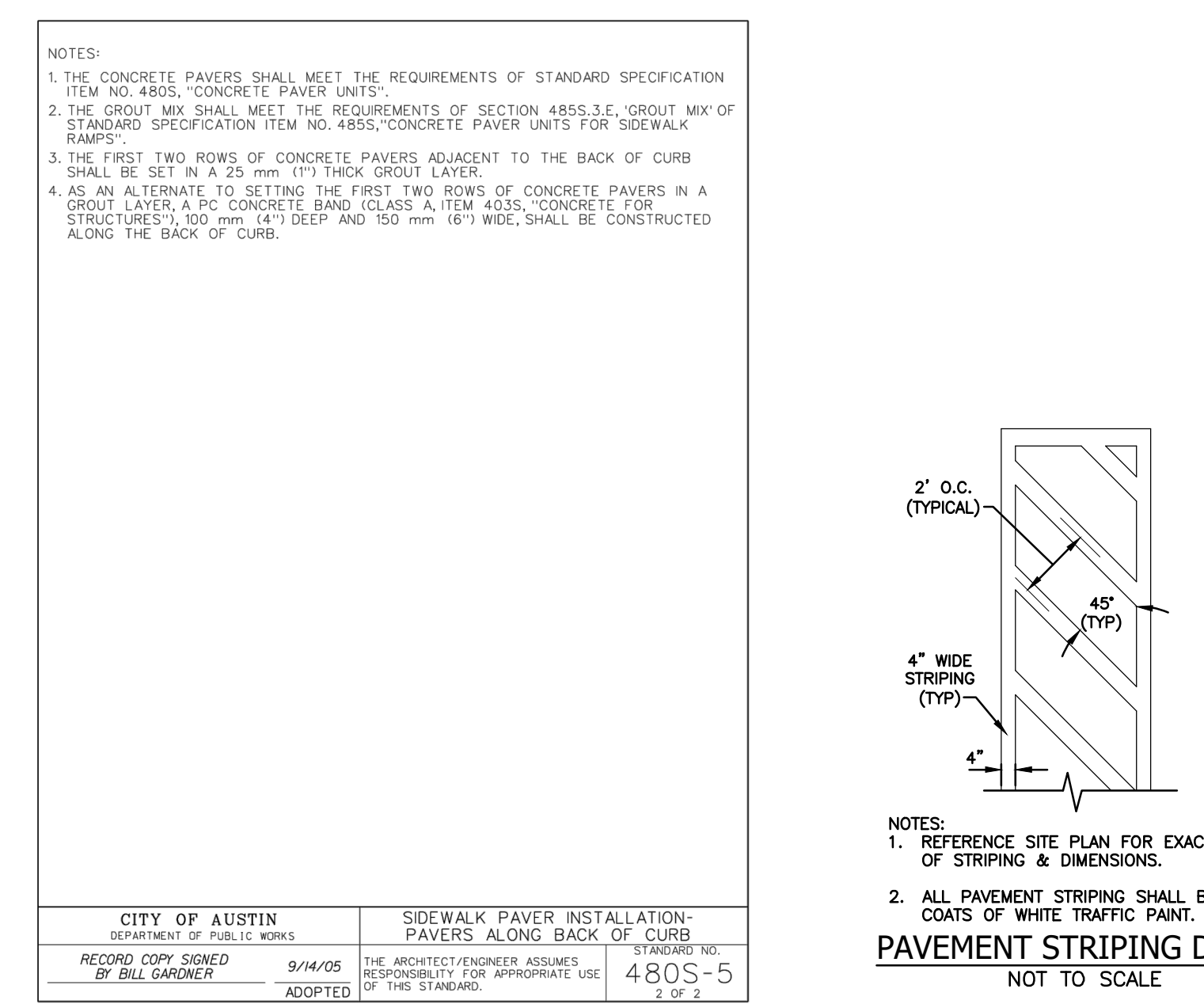
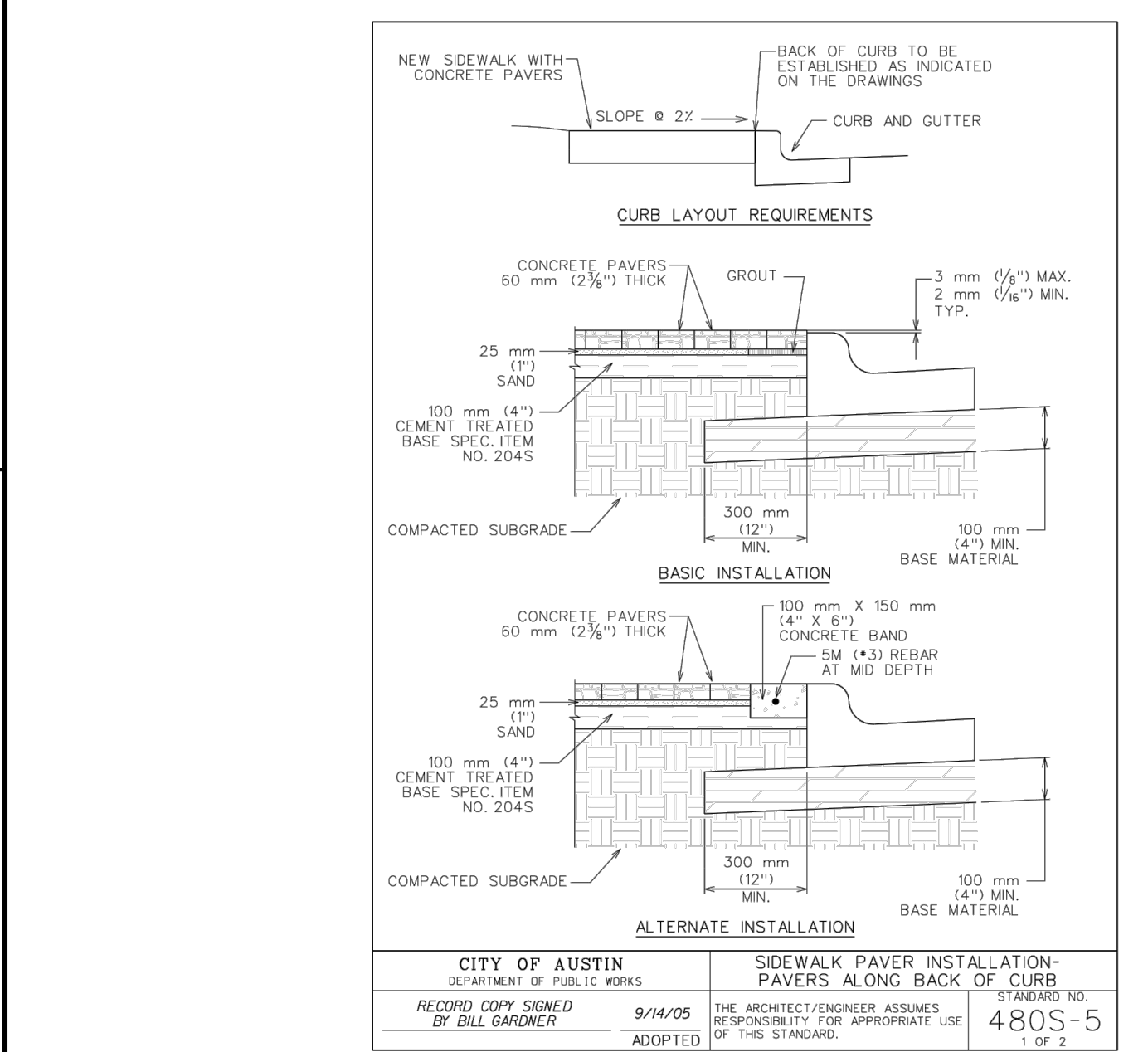
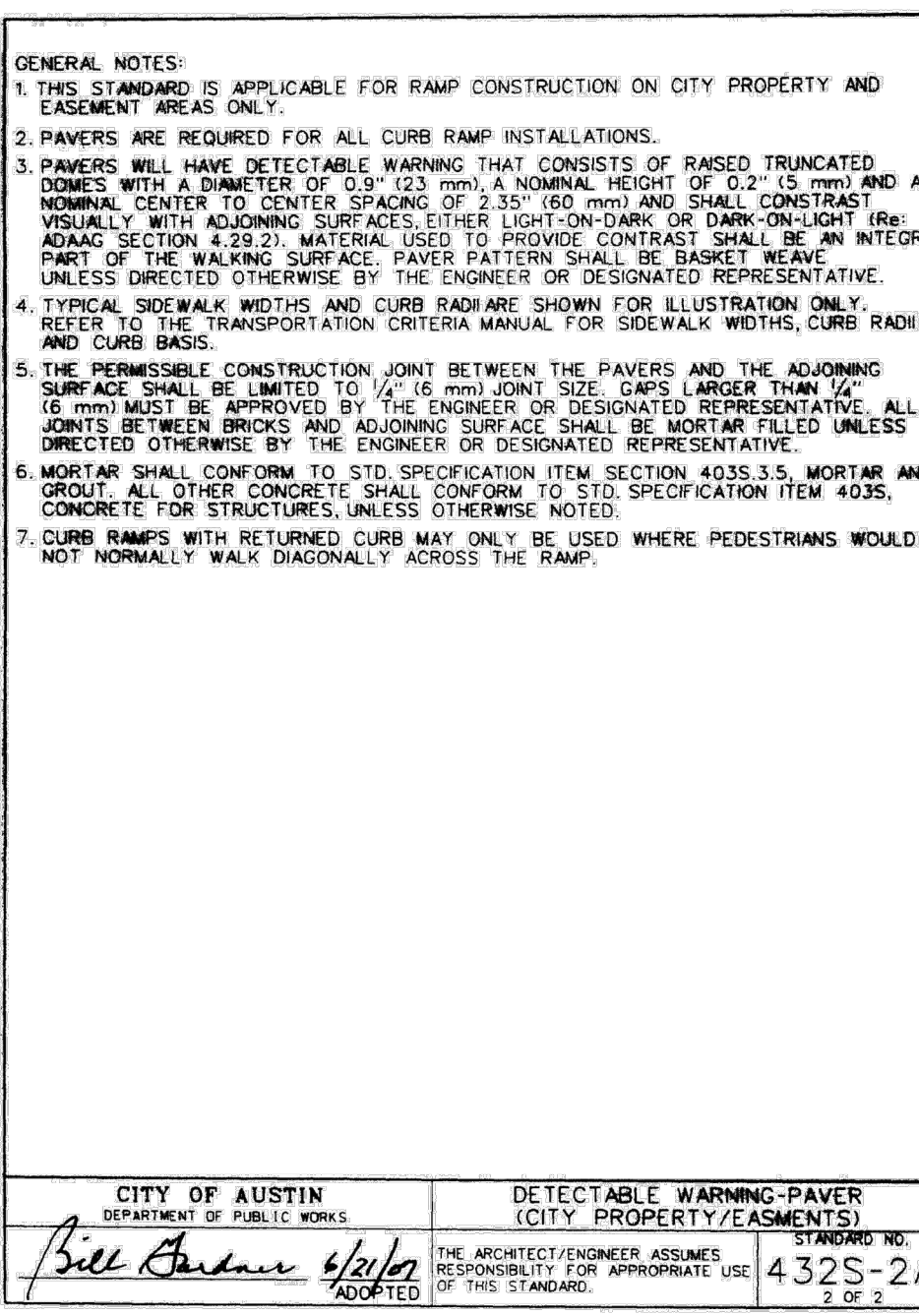
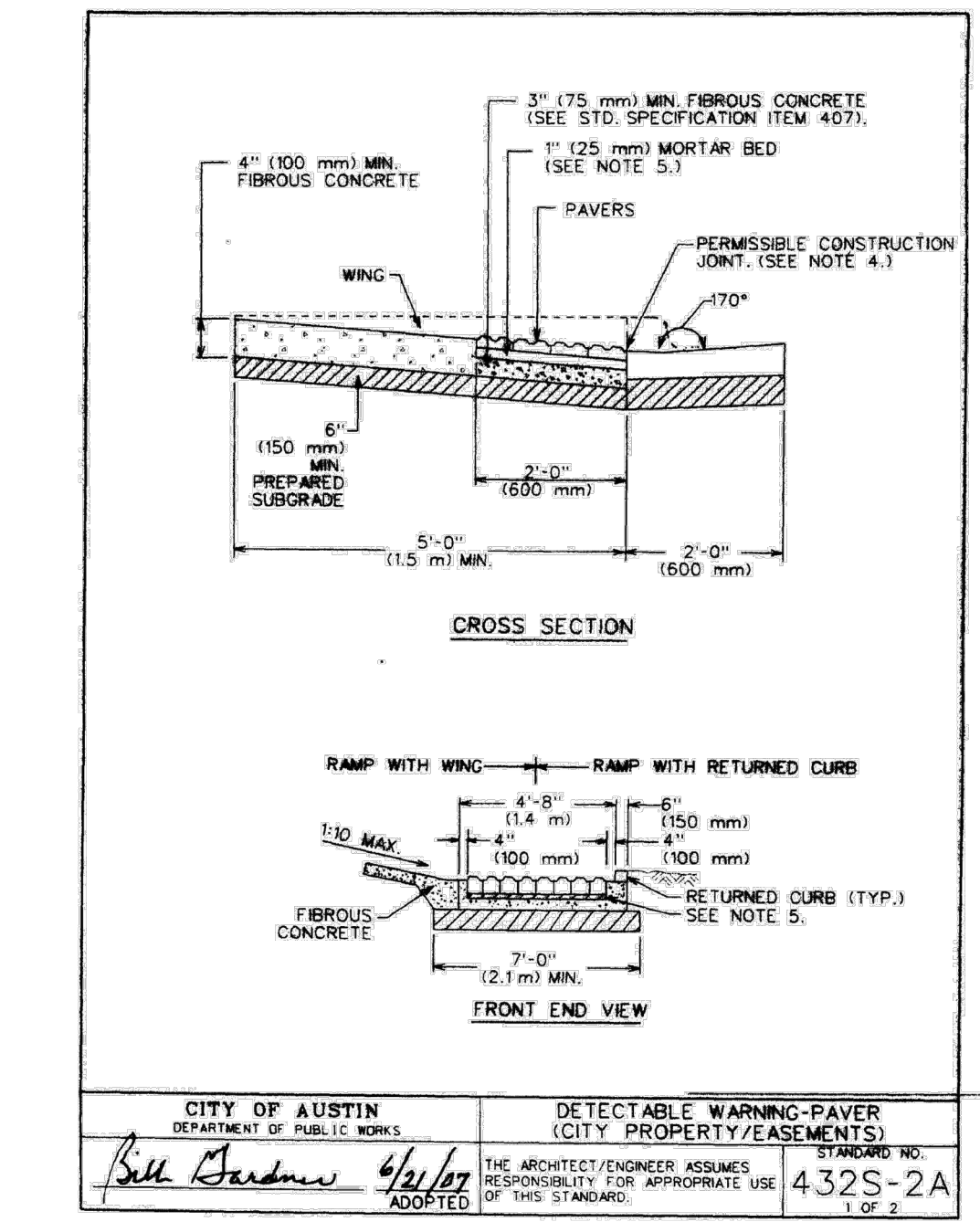
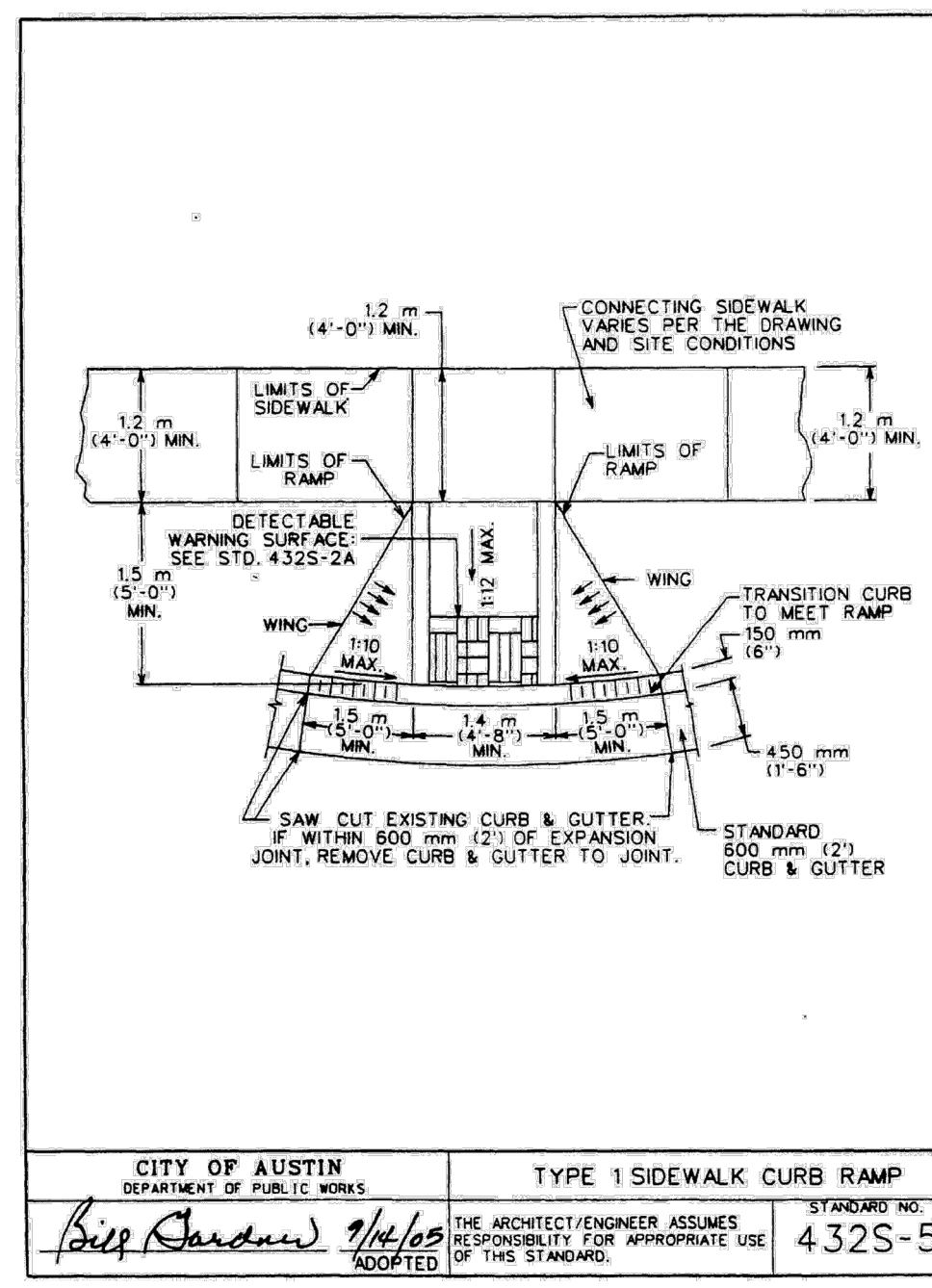
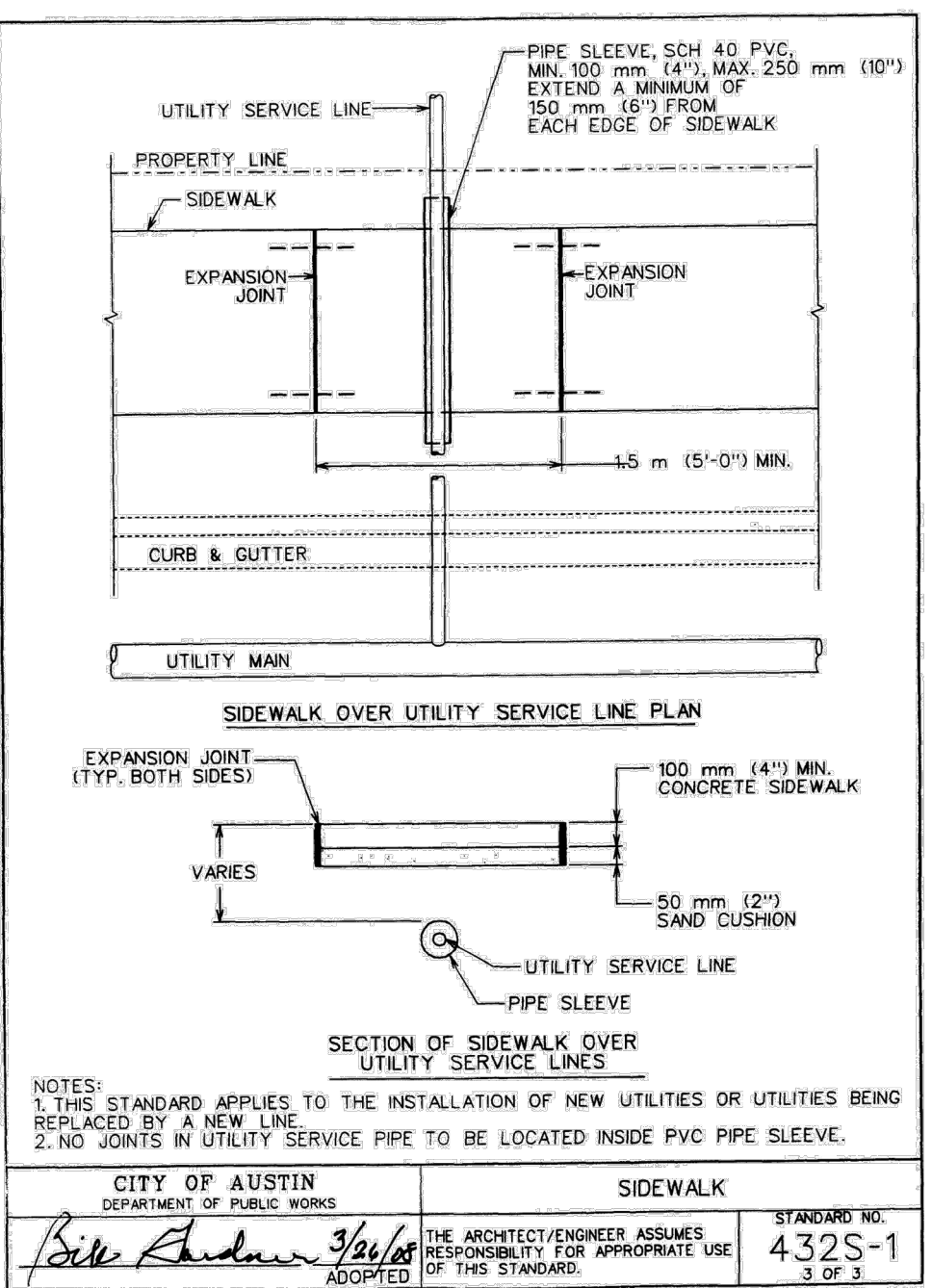
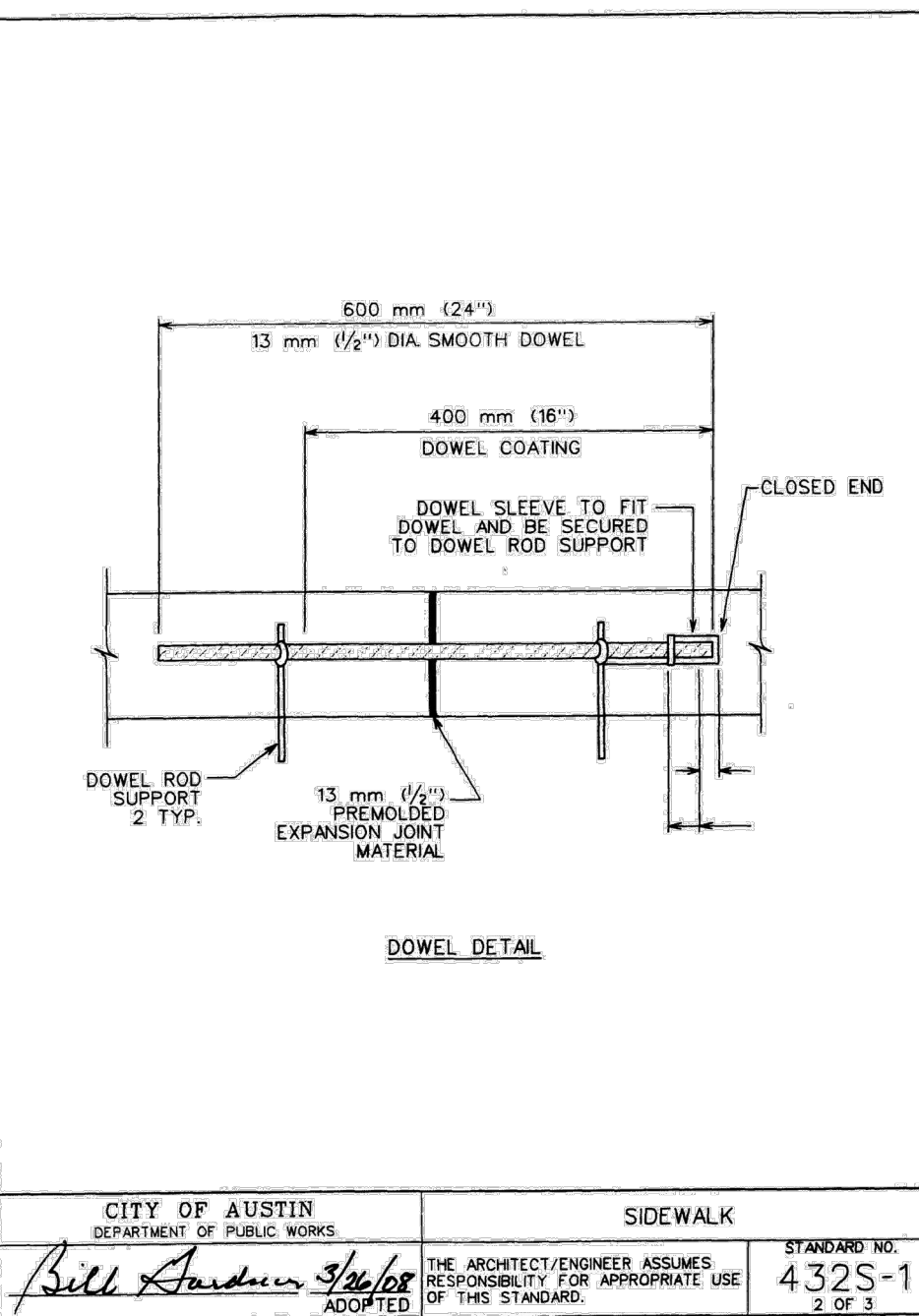
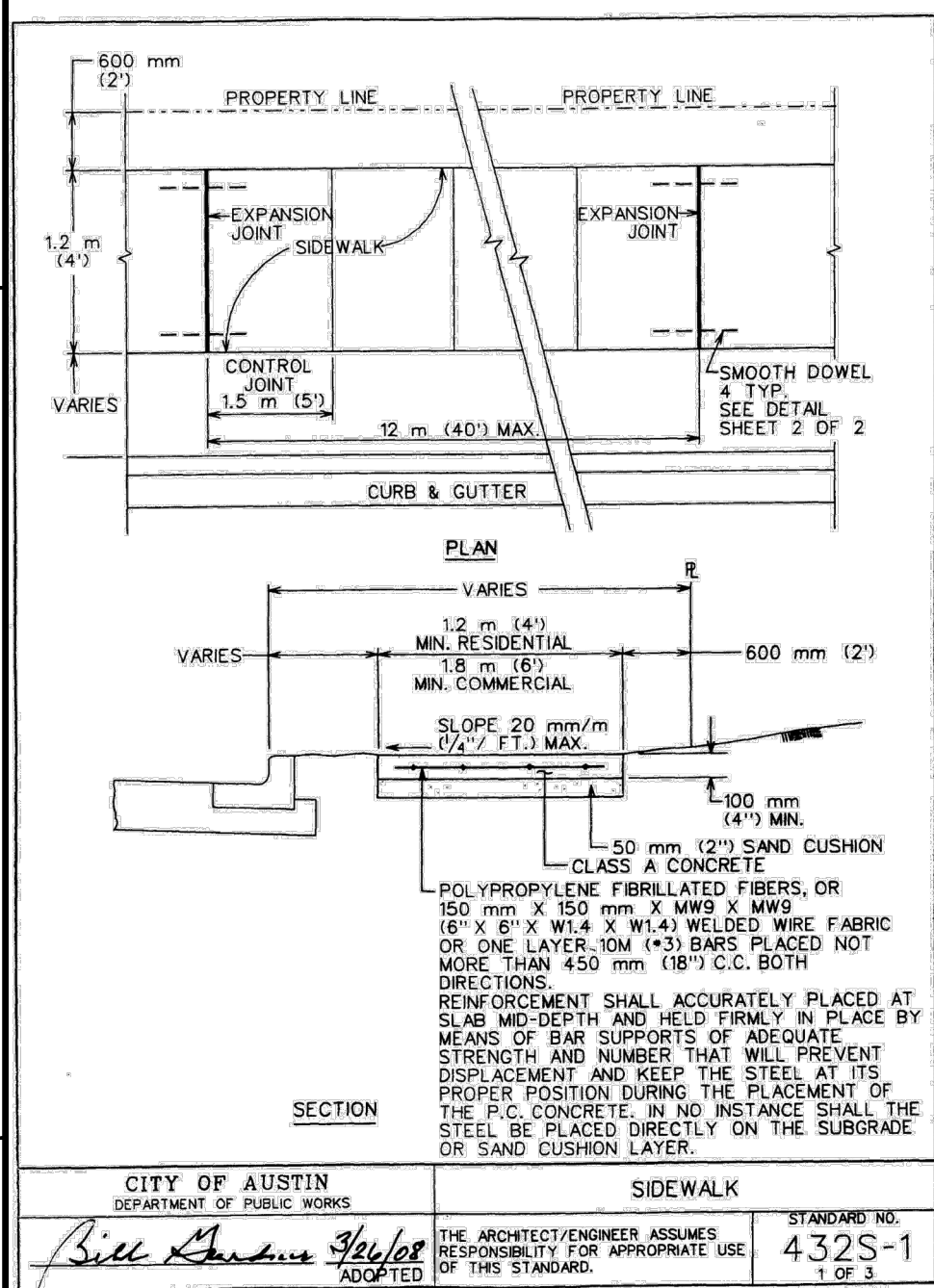
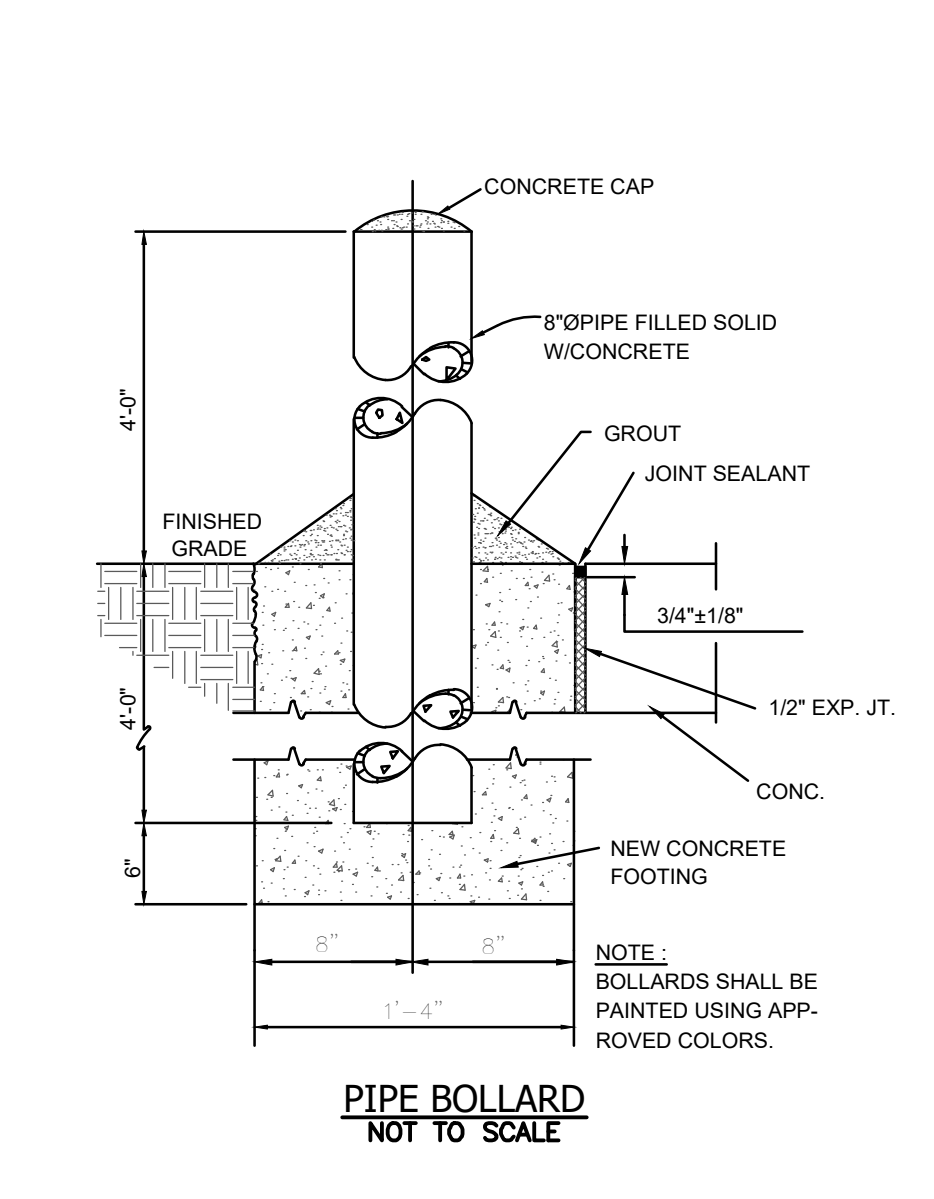
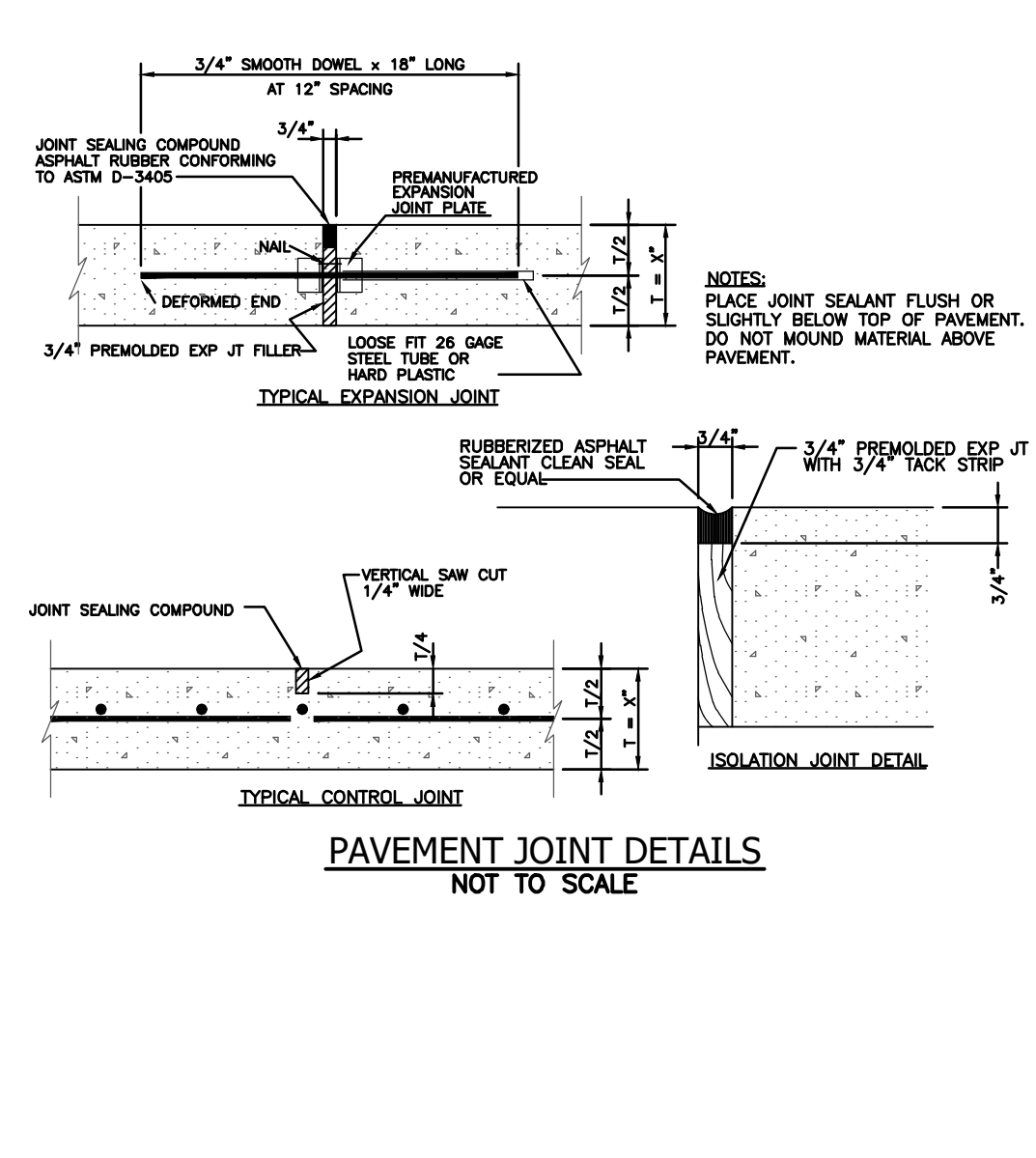
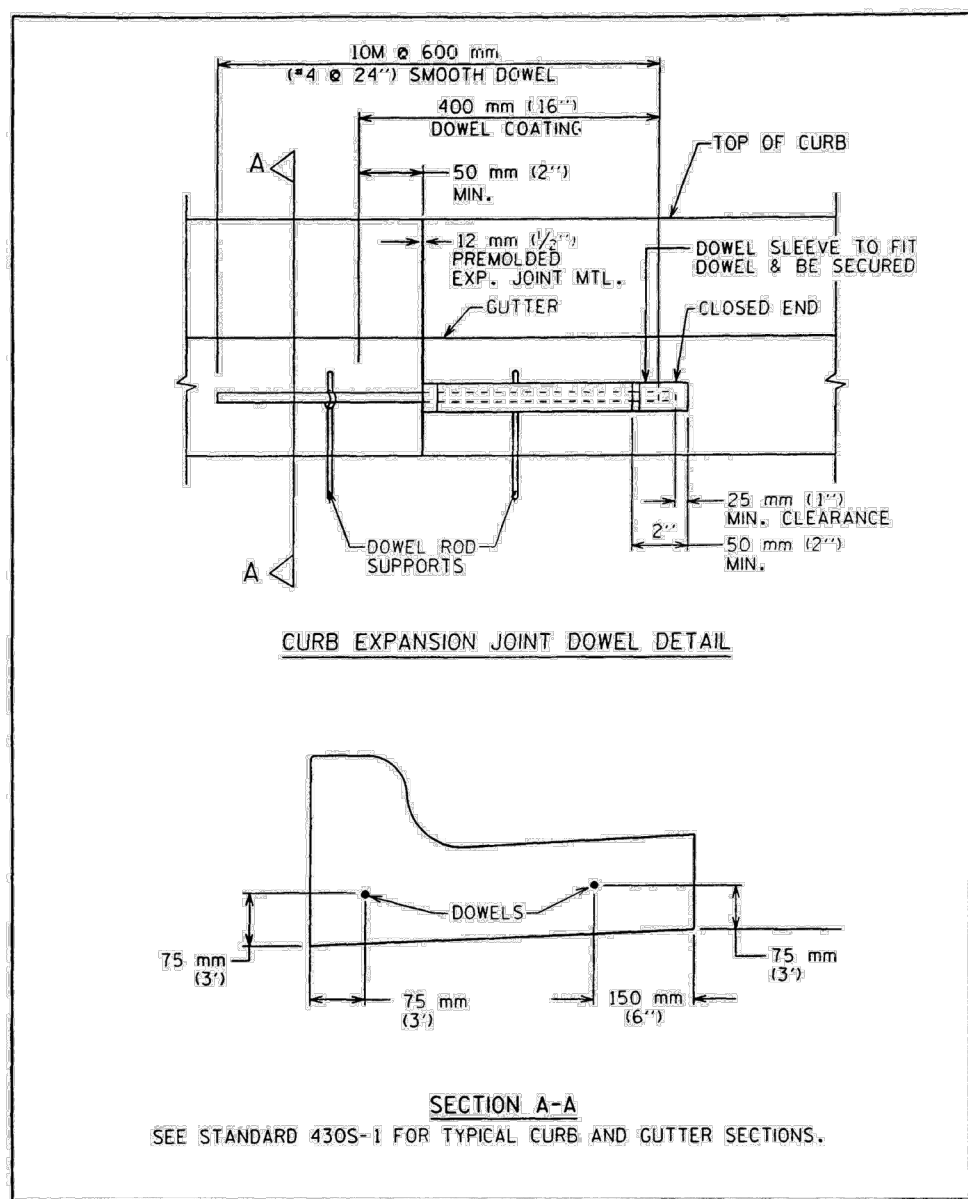
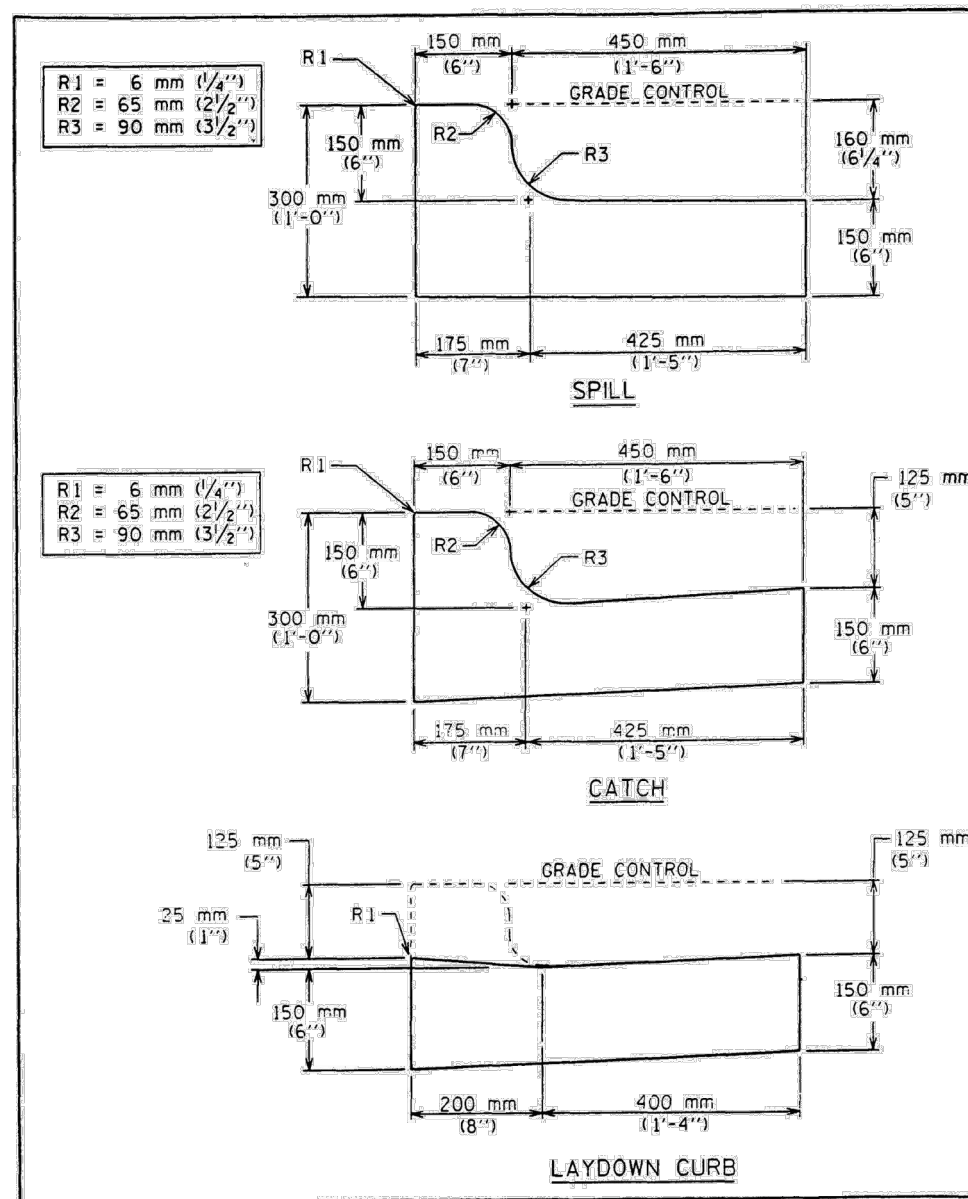
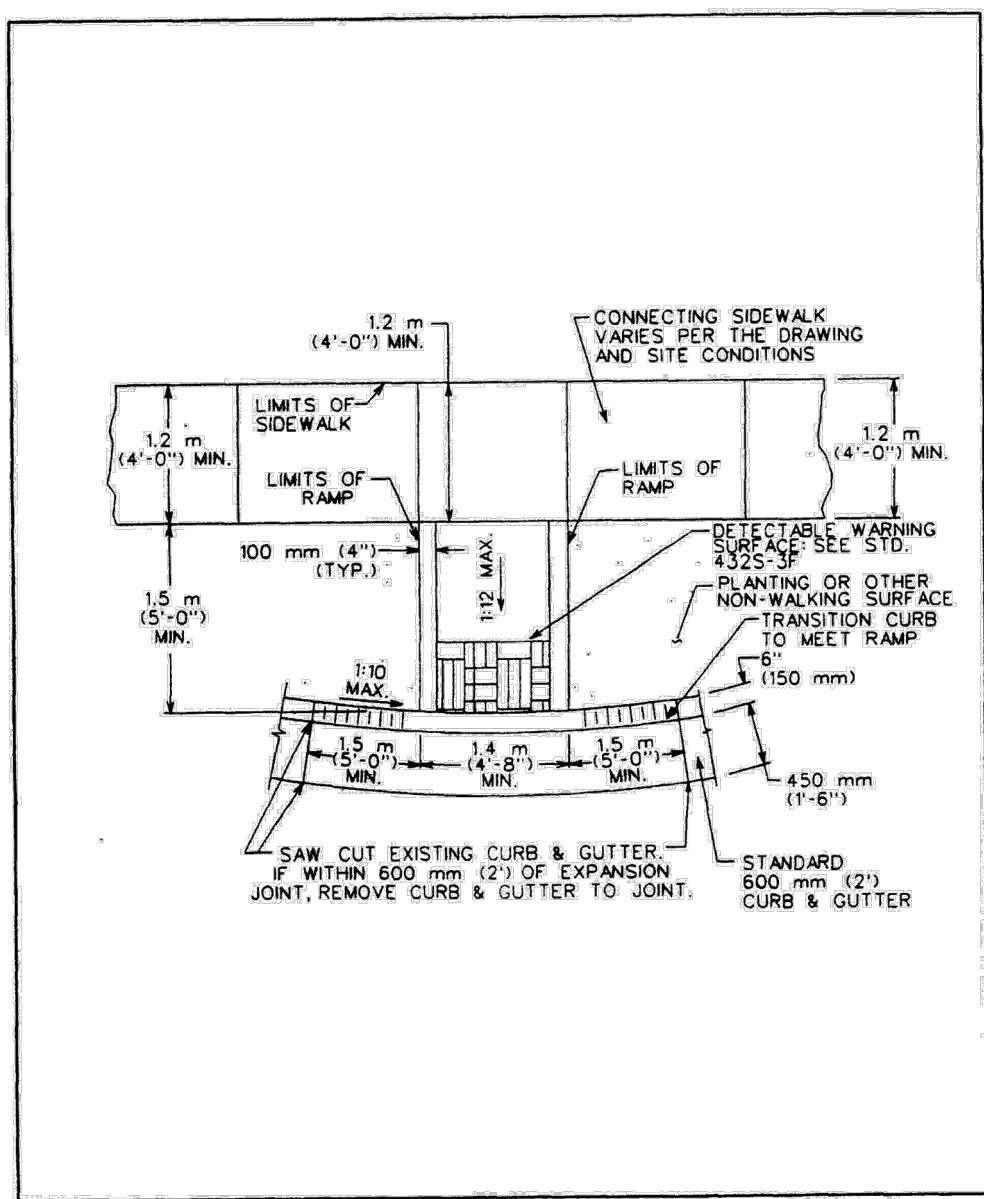


WELLS BRANCH MULTIFAMILY
2800 W WELLS BRANCH PKWY.
AUSTIN, TRAVIS COUNTY, TEXAS 78728

AW INTERSECTIONS (FOR REFERENCE ONLY)

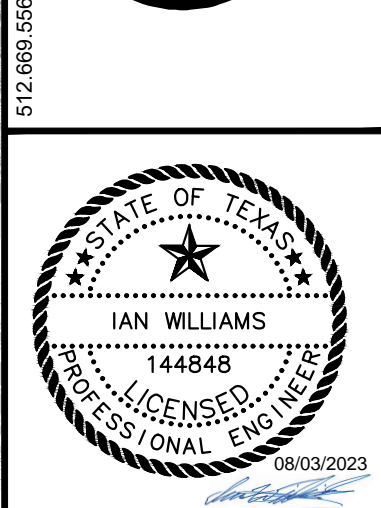
SHEET
CU500
55 OF 63
SP-2023-0082D

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NOT AUTHORIZED FOR CONSTRUCTION PRIOR TO FORMAL CITY AND MUNICIPAL UTILITY DISTRICT APPROVAL

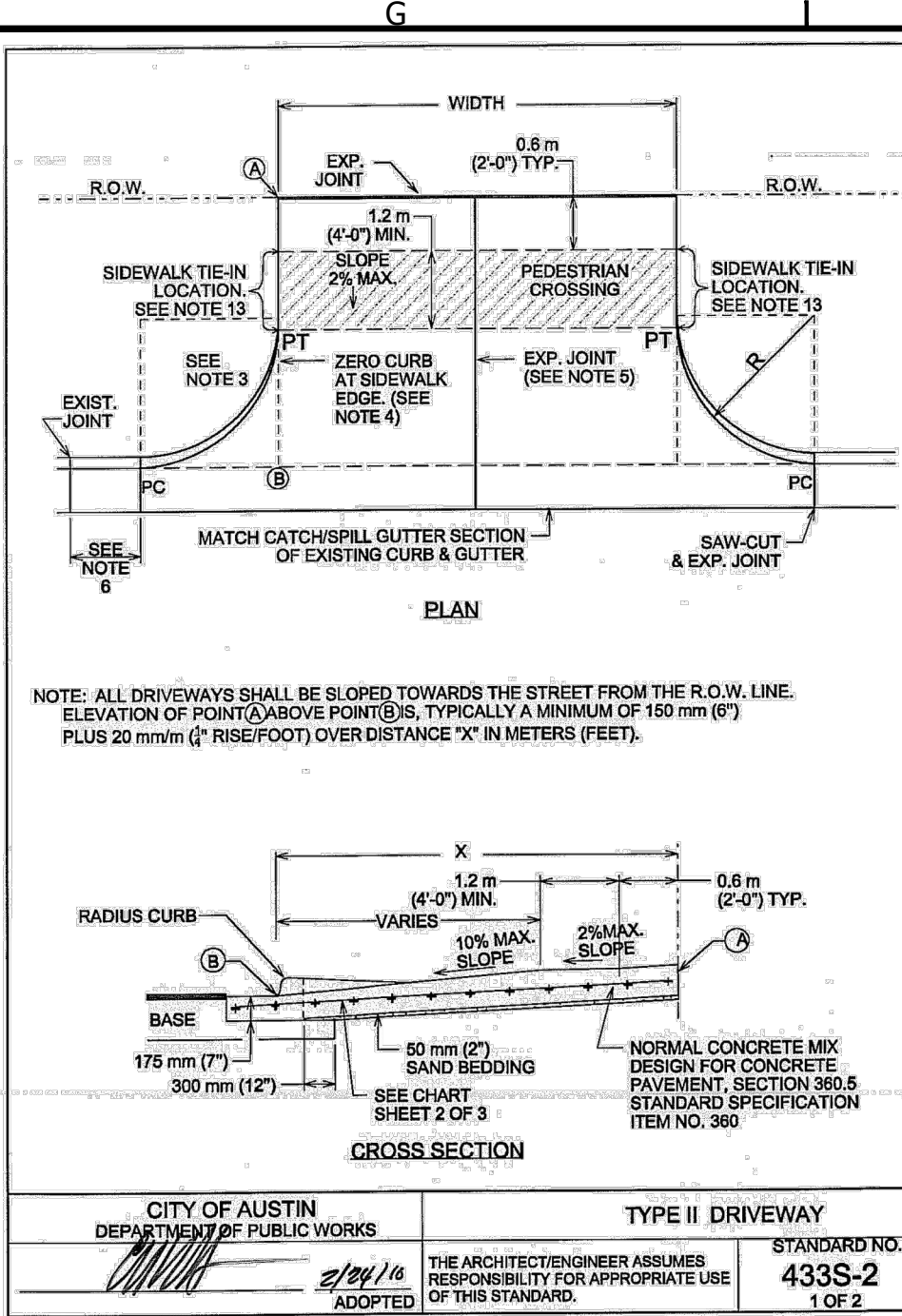
WGL INC. WGLINC.COM



WELLS BRANCH MULTIFAMILY
2800 W WELLS BRANCH PKWY.
AUSTIN, TRAVIS COUNTY, TEXAS 78728

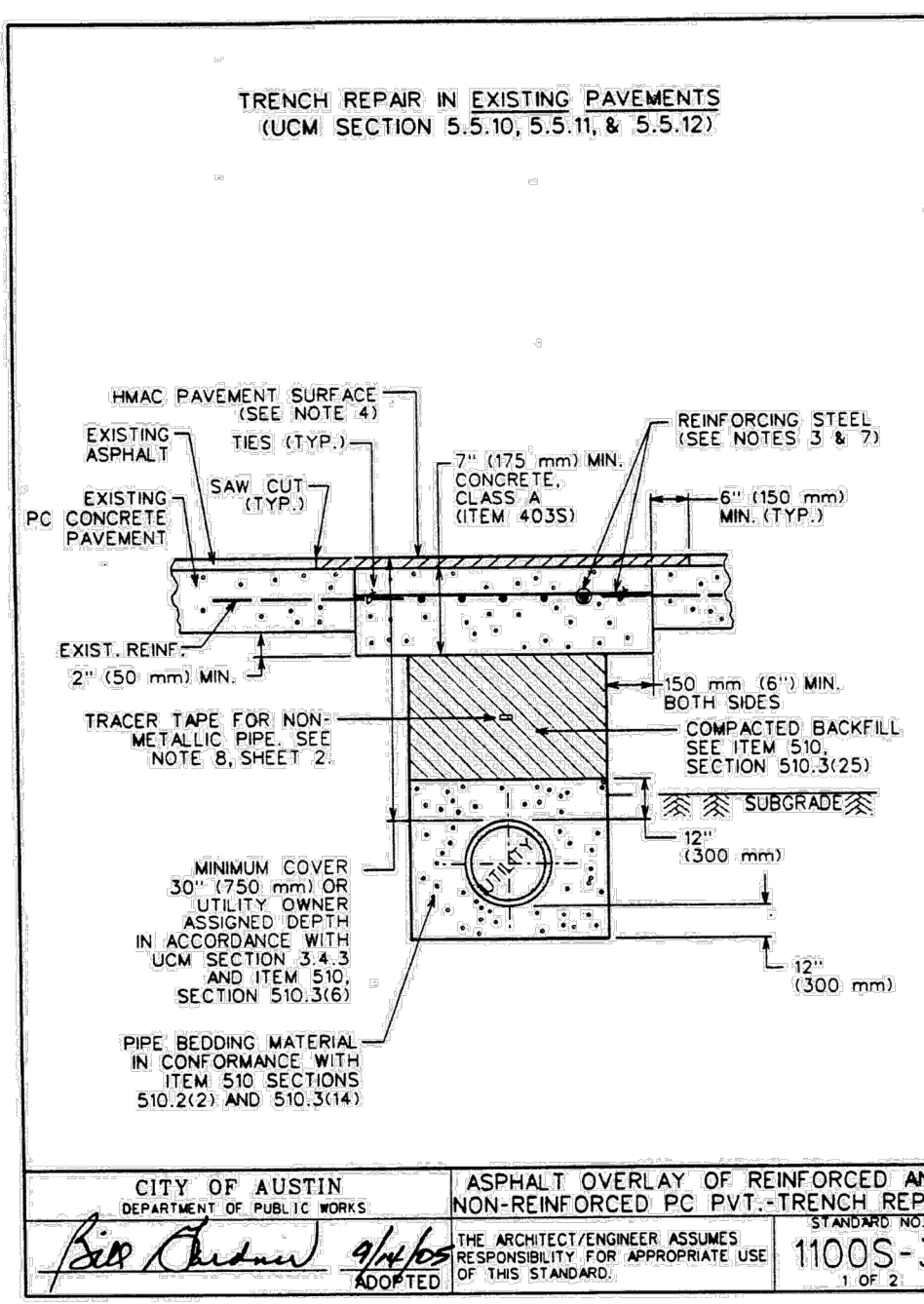
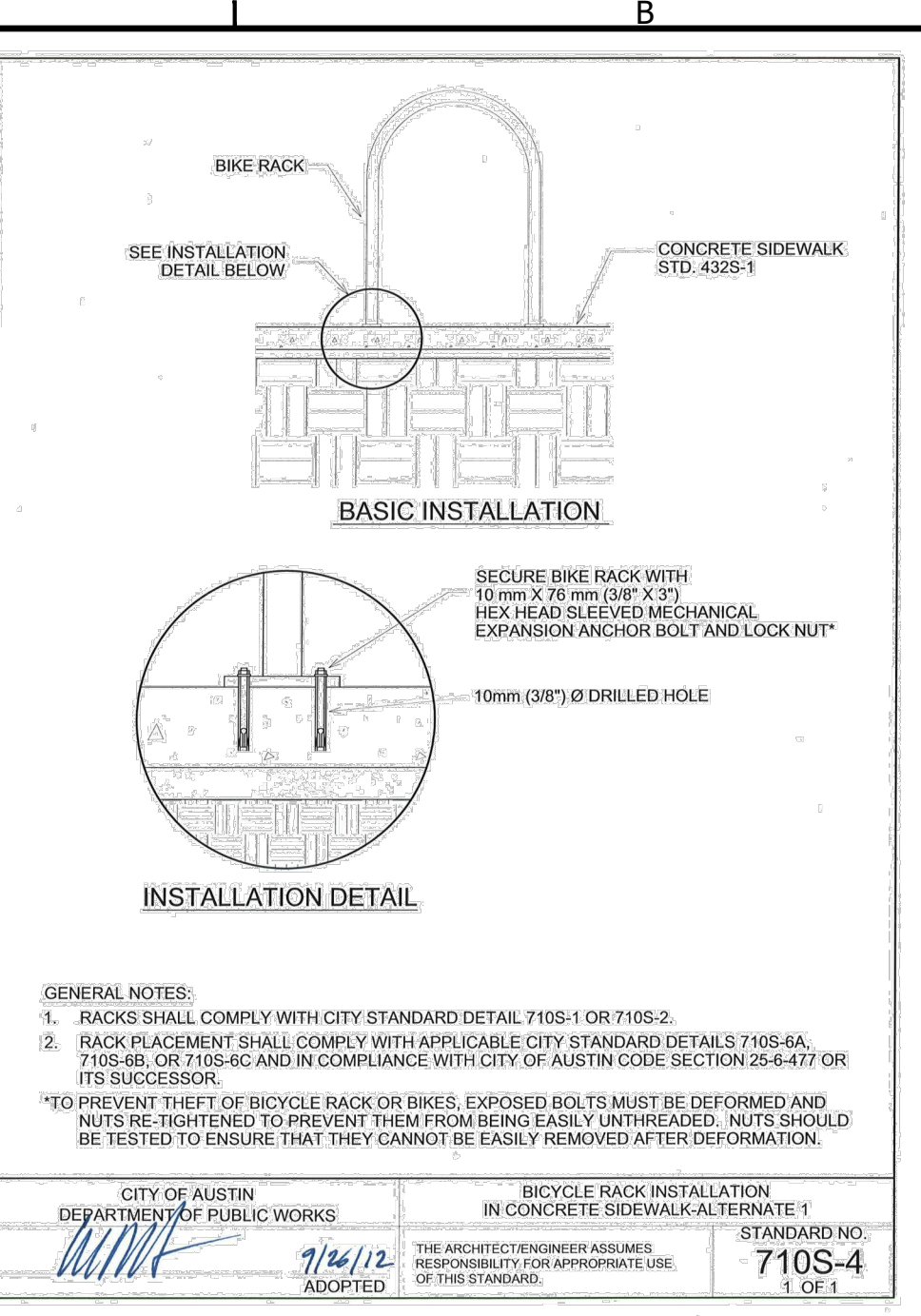
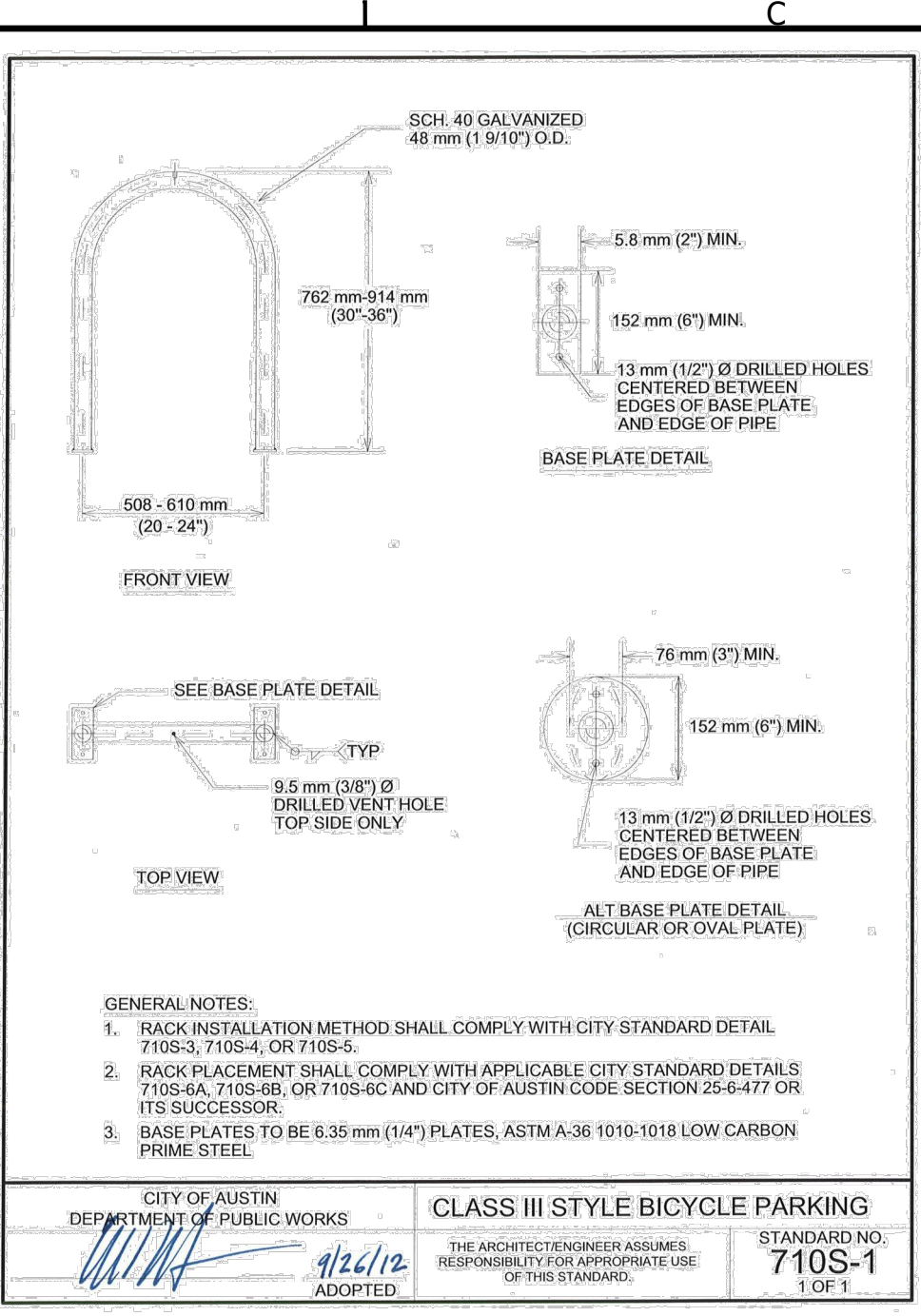
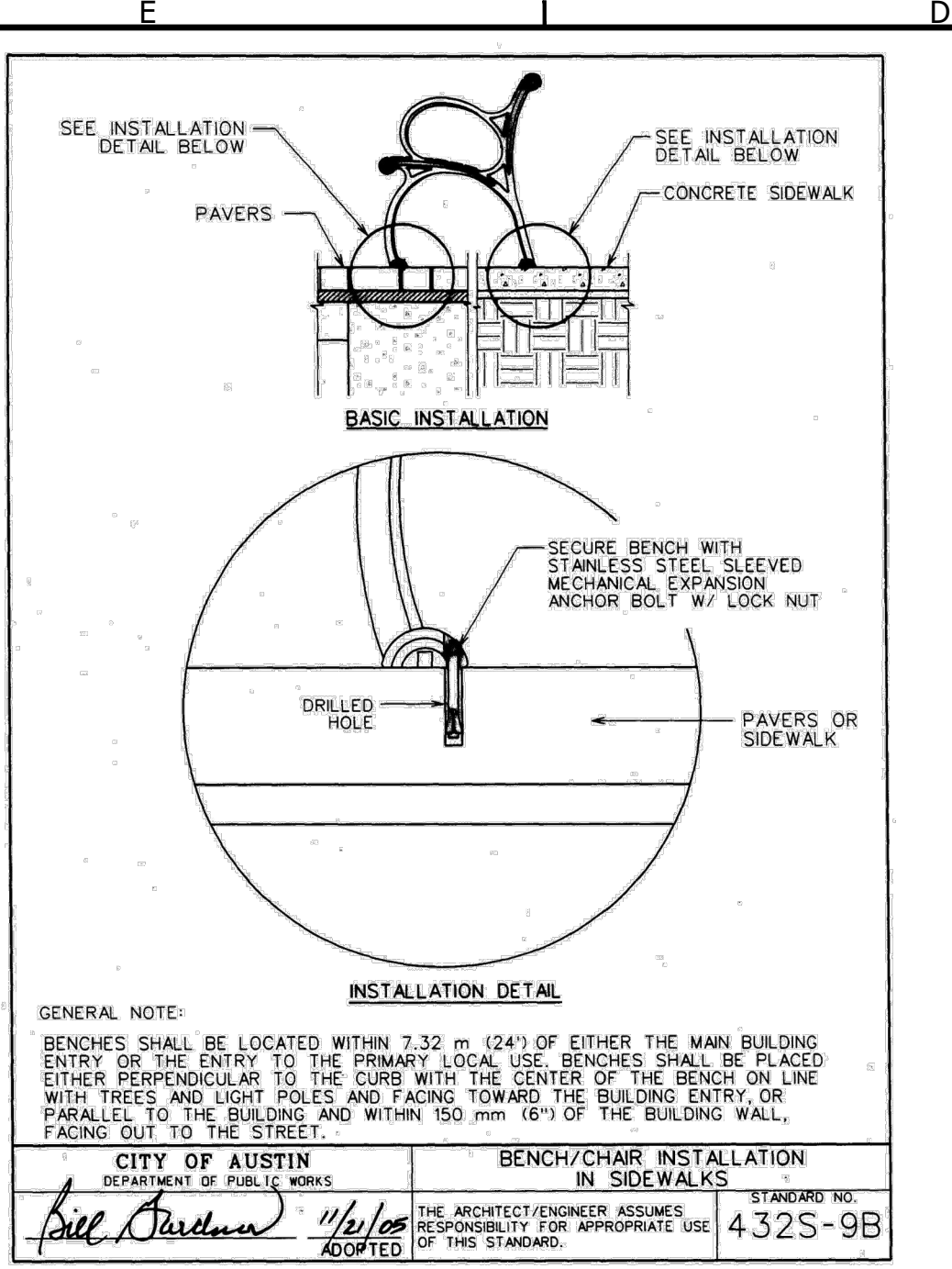
CONSTRUCTION DETAILS-2

SHEET C502
57 OF 63
SP-2023-0082D



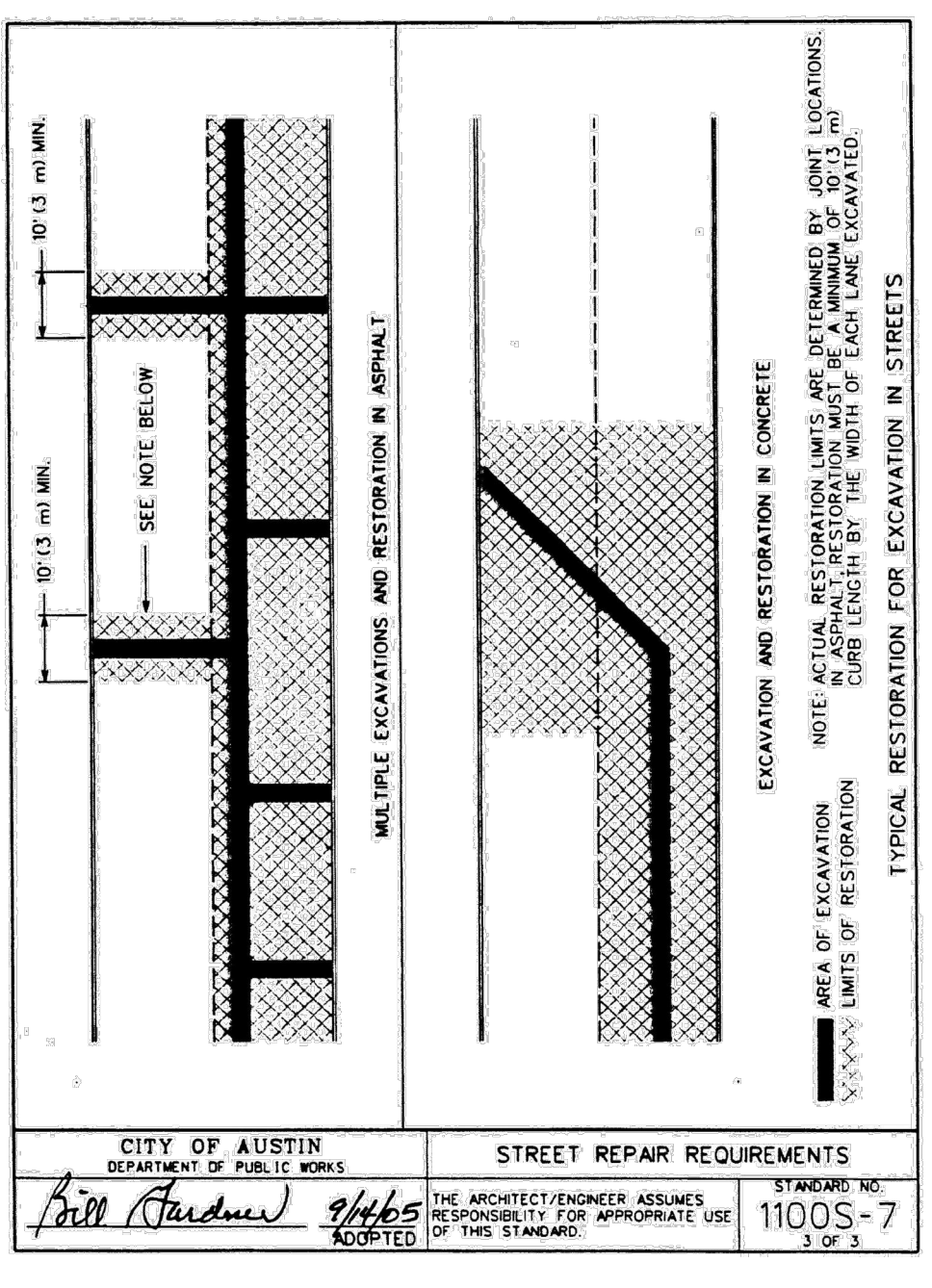
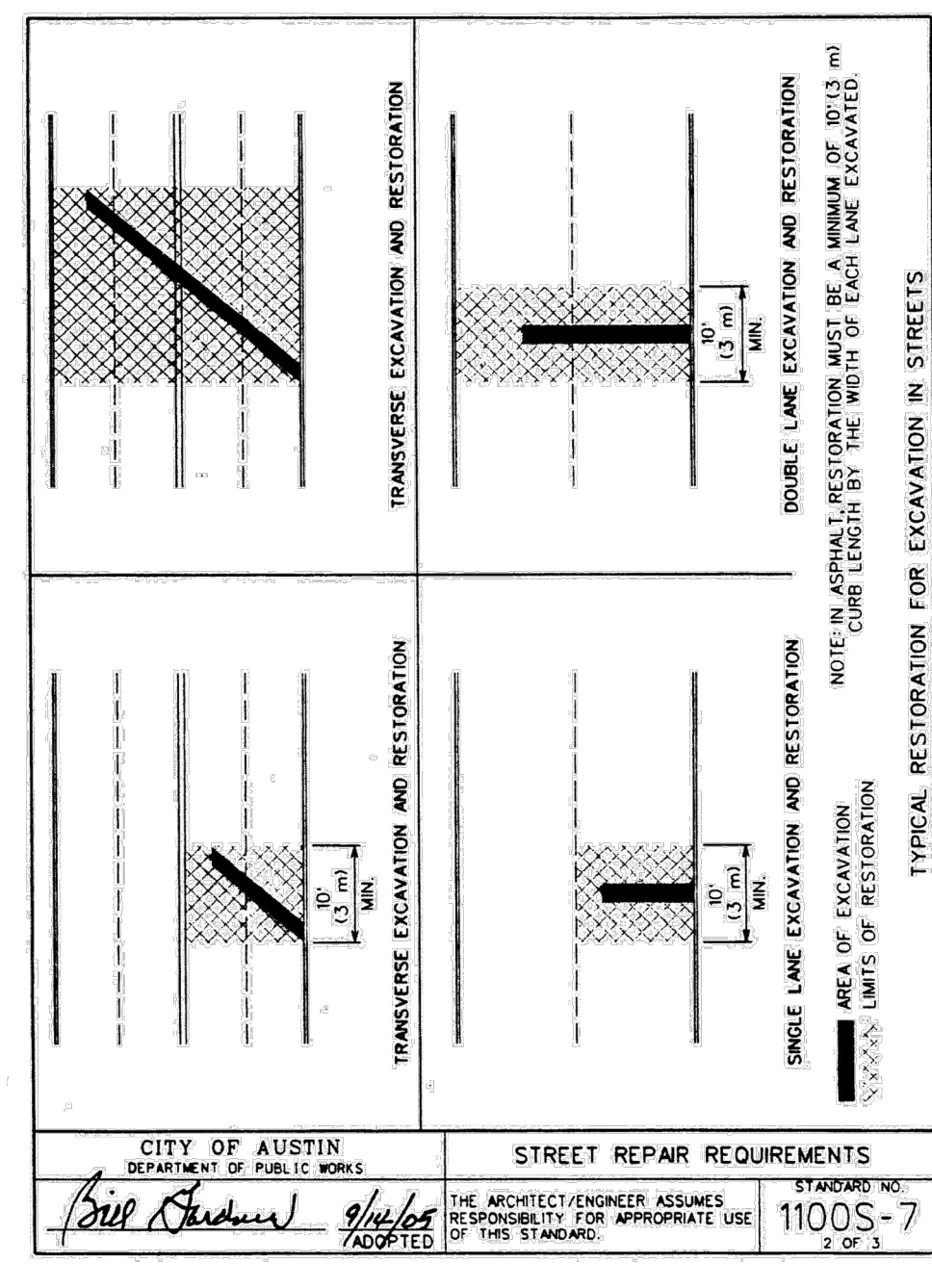
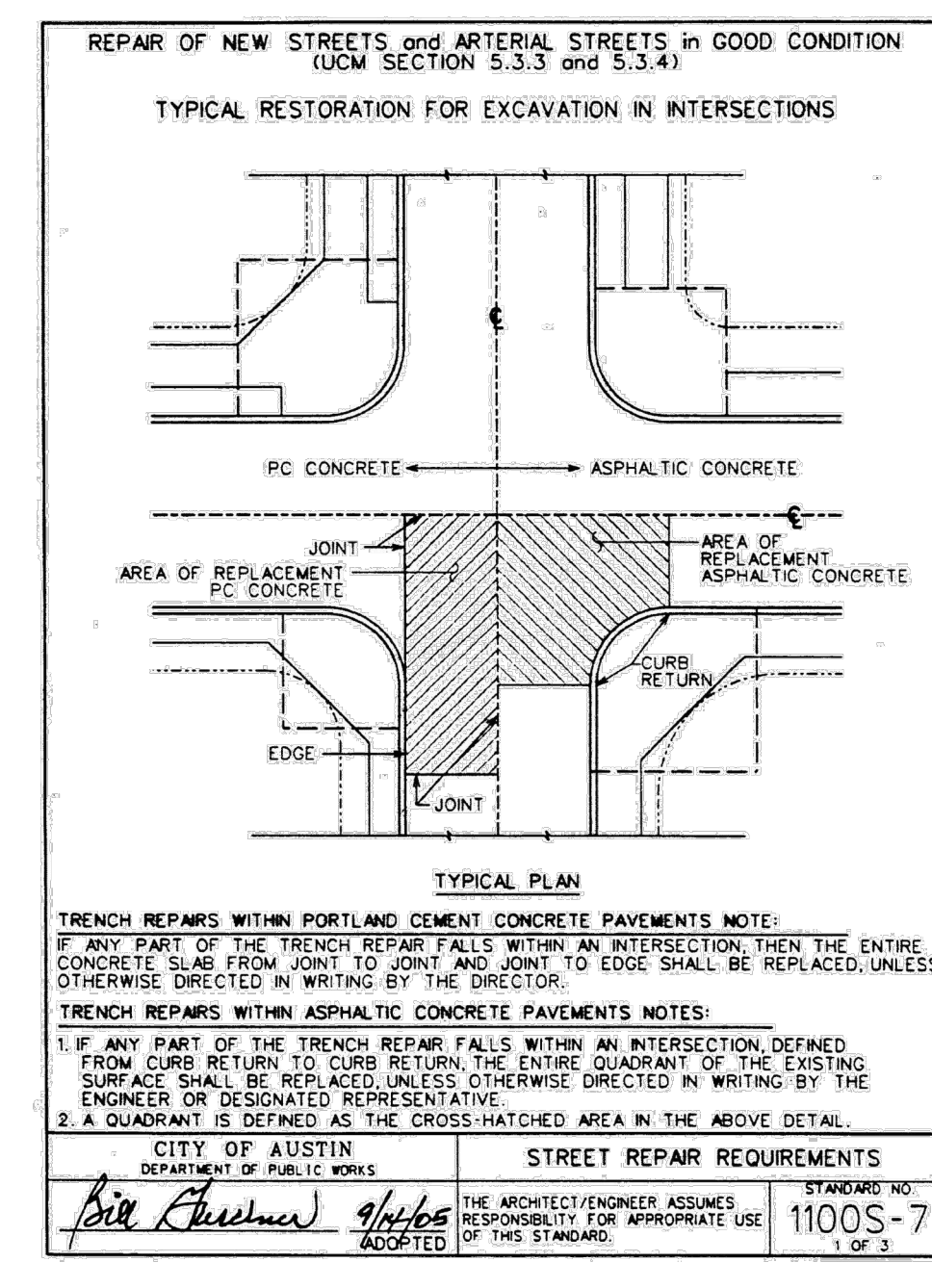
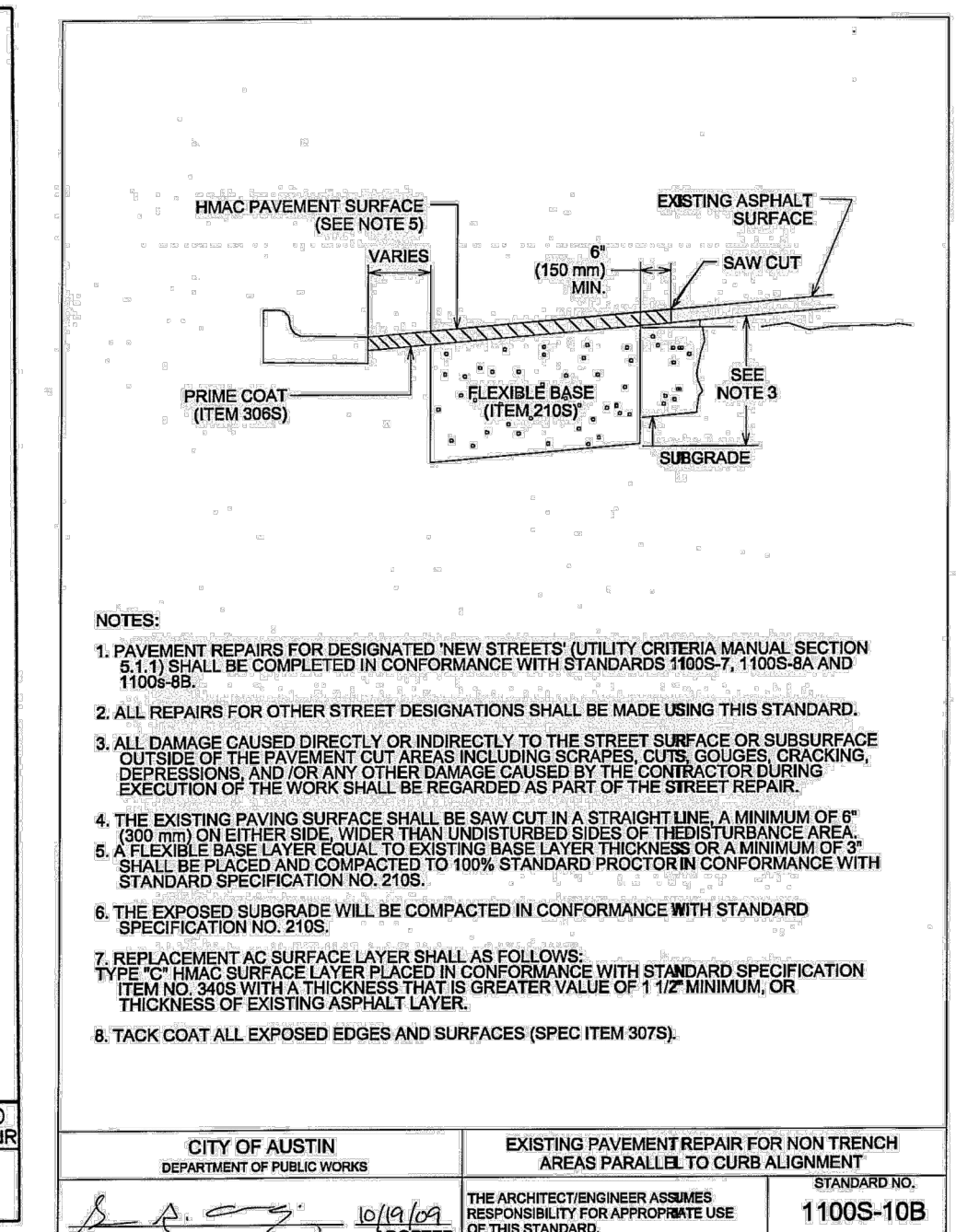
USE	THICKNESS	REINFORCEMENT
DRIVEWAYS FOR PASSENGER VEHICLE PARKING LOTS	150 mm (6) MIN.	125 mm (5) MIN. CONCRETE WITH ONE LAYER OF 3M (4) BARS PLACED ON CHAIRS AT MIDDLE OF SLAB AT NO MORE THAN 450 mm (18") O.C. BOTH DIRECTIONS
ALL OTHERS	175 mm (7) MIN.	125 mm (5) MIN. CONCRETE WITH ONE LAYER OF 3M (4) BARS PLACED ON CHAIRS AT MIDDLE OF SLAB AT NO MORE THAN 450 mm (18") O.C. BOTH DIRECTIONS

ALLOWABLE GRADES	DRIVEWAY VOLUME (ADT)	STD.	MAX.
NOTES:	>400	0%	3%
	500-1000	3%	6%
	<600	6%	15%
	<600	6%	15%



NOTES:

- EXISTING REINFORCED CONCRETE SHALL BE SAW CUT TO A MINIMUM DEPTH OF 1/2" (12.5 mm) AT A MINIMUM DISTANCE OF 6" (150 mm) BACK OF THE VERTICAL WALL OF THE UTILITY TRENCH.
- REPLACEMENT REINFORCED CONCRETE SHALL BE CLASS A AND SHALL MATCH EXISTING FINISH AND THICKNESS, BUT THE THICKNESS SHALL NOT BE LESS THAN 7" (175 mm).
- REINFORCING STEEL IN THE REPLACEMENT SLAB SHALL BE AT LEAST #5 (16M) BARS. REINFORCING STEEL SHALL BE LAP SPICED ACCORDING TO ITEM NO. 4065. IF LENGTH OF LAP CAN NOT BE ACHIEVED, BARS SHALL BE OVERLAPPED AND WELDED A MINIMUM LENGTH OF 6" (150 mm).
- IF EXISTING PAVEMENT SECTION HAS AN ASPHALT SURFACE THE FOLLOWING APPLIES: REPLACEMENT AC SURFACE LAYER SHALL BE OF THE TYPE AND THICKNESS BASED ON FUNCTIONAL CLASSIFICATION.
 - MIN. 3" (75 mm) HMAc TYPE "C" FOR TRENCH REPAIR IN LOCAL/RESIDENTIAL STREETS.
 - MIN. 3" (75 mm) HMAc TYPE "C" FOR TRENCH REPAIR IN COLLECTOR/ARTERIAL STREETS.
- CLASS "B" PC CONCRETE ITEM 4035 OR CONTROLLED LOW STRENGTH MATERIAL (CLSM) MAY BE SUBSTITUTED IN THESE REPAIRS FOR THE FLEXIBLE BASE AND COMPACTED BACKFILL. PC CONCRETE GREATER THAN A 2 SACK MIX WILL NOT BE ALLOWED.
- TACK COAT (ITEM 3075) ALL EXPOSED EDGES AND SURFACES.
- ON EXISTING PC CONCRETE PAVEMENT WITHOUT REINFORCING STEEL USE 4" TO 6" (100 mm TO 150 mm) #5 (16M) DOWELS AT 12" (300 mm) ON CENTER FOR PAVEMENT THICKNESS 6" (150 mm) OR GREATER.
- AS PER CITY OF AUSTIN STANDARD SPECIFICATION 510 SECTION 510.21(1)(1), FOR ALL NON-METALLIC PIPE DIRECTLY ABOVE THE CENTERLINE OF THE PIPE AND A MINIMUM OF 12" (300 mm) BELOW THE SUBGRADE OR A MINIMUM OF 18" (450 mm) BELOW FINISHED GRADE ON AREAS OUTSIDE THE LIMITS OF PAVEMENT SHALL BE PLACED INDUCTIVE TRACER TAPE IN ACCORDANCE WITH THE MANUFACTURER'S REQUIREMENTS. THE TAPE SHALL BE ENCASED IN A PROTECTIVE INERT PLASTIC JACKET AND COLOR CODED IN ACCORDANCE WITH APWA UNIFORM COLOR CODE.
- REPLACEMENT AC SURFACE LAYER SHALL AS FOLLOWS: TYPE "A" HMAc SURFACE LAYER PLACED IN CONFORMANCE WITH STANDARD SPECIFICATION ITEM NO. 3065 WITH A THICKNESS THAT IS GREATER VALUE OF 1 1/2" MINIMUM OR THICKNESS OF EXISTING ASPHALT LAYER.
- TACK COAT ALL EXPOSED EDGES AND SURFACES (SPEC ITEM 3075).



CITY OF AUSTIN DEPARTMENT OF PUBLIC WORKS	ASPHALT OVERLAY OF REINFORCED AND NON-REINFORCED PC PVT.-TRENCH REPAIR	STANDARD NO. 1100S-3
<i>Bill Churnan</i> 9/16/15	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	1 OF 2

CITY OF AUSTIN DEPARTMENT OF PUBLIC WORKS	ASPHALT OVERLAY OF REINFORCED AND NON-REINFORCED PC PVT.-TRENCH REPAIR	STANDARD NO. 1100S-3
<i>Bill Churnan</i> 9/16/15	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	2 OF 2

CITY OF AUSTIN DEPARTMENT OF PUBLIC WORKS	EXISTING PAVEMENT REPAIR FOR NON-TRENCH AREAS PARALLEL TO CURB ALIGNMENT	STANDARD NO. 1100S-10B
<i>Bill Churnan</i> 9/16/15	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	1 OF 1

CITY OF AUSTIN DEPARTMENT OF PUBLIC WORKS	STREET REPAIR REQUIREMENTS	STANDARD NO. 1100S-7
<i>Bill Churnan</i> 9/16/15	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	2 OF 3

CITY OF AUSTIN DEPARTMENT OF PUBLIC WORKS	STREET REPAIR REQUIREMENTS	STANDARD NO. 1100S-7
<i>Bill Churnan</i> 9/16/15	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	3 OF 3

CITY OF AUSTIN DEPARTMENT OF PUBLIC WORKS	STREET REPAIR REQUIREMENTS	STANDARD NO. 1100S-7
<i>Bill Churnan</i> 9/16/15	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	1 OF 1

NOT AUTHORIZED FOR CONSTRUCTION PRIOR TO FORMAL CITY AND MUNICIPAL UTILITY DISTRICT APPROVAL

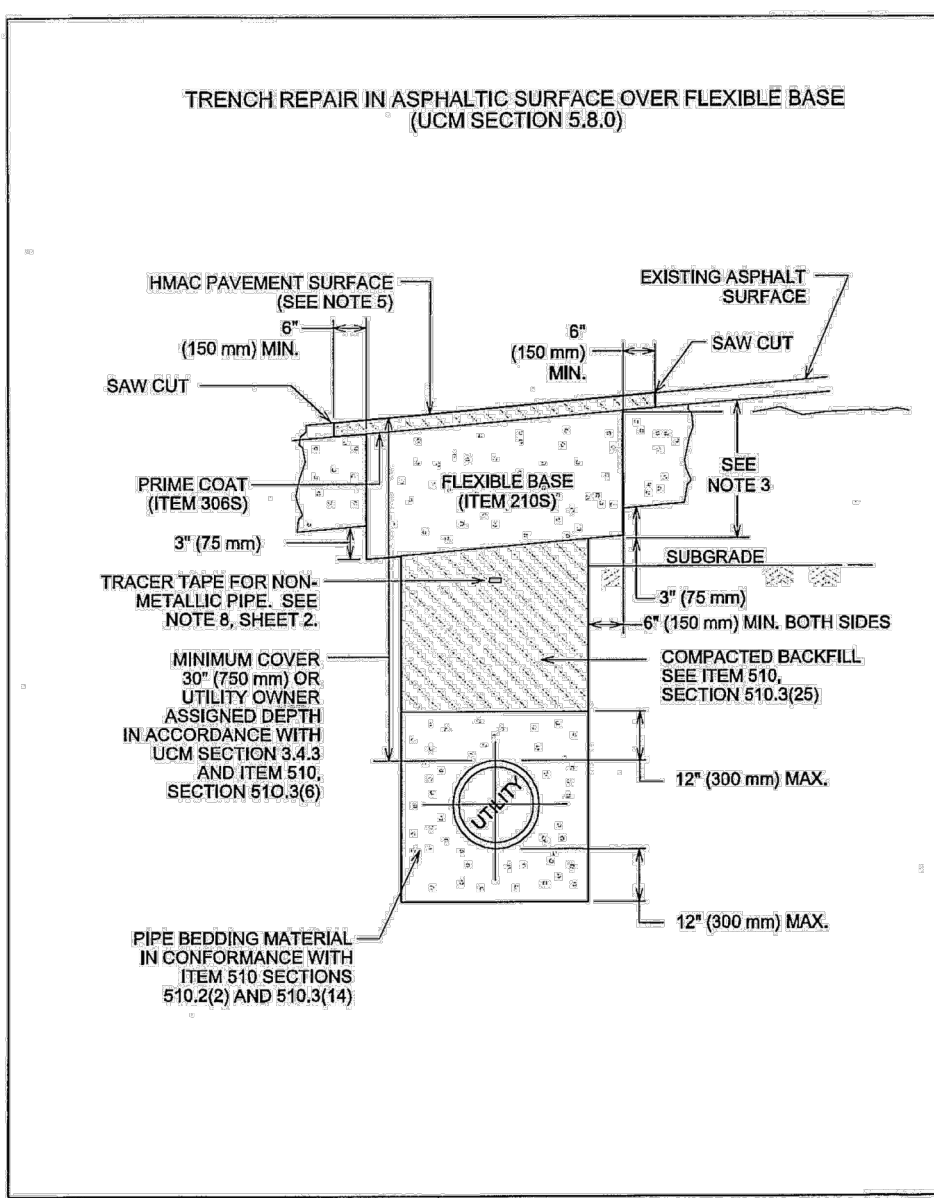
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 2800 W WELLS BRANCH PKWY.
 AUSTIN, TRAVIS COUNTY, TEXAS 78728

CONSTRUCTION DETAILS-3

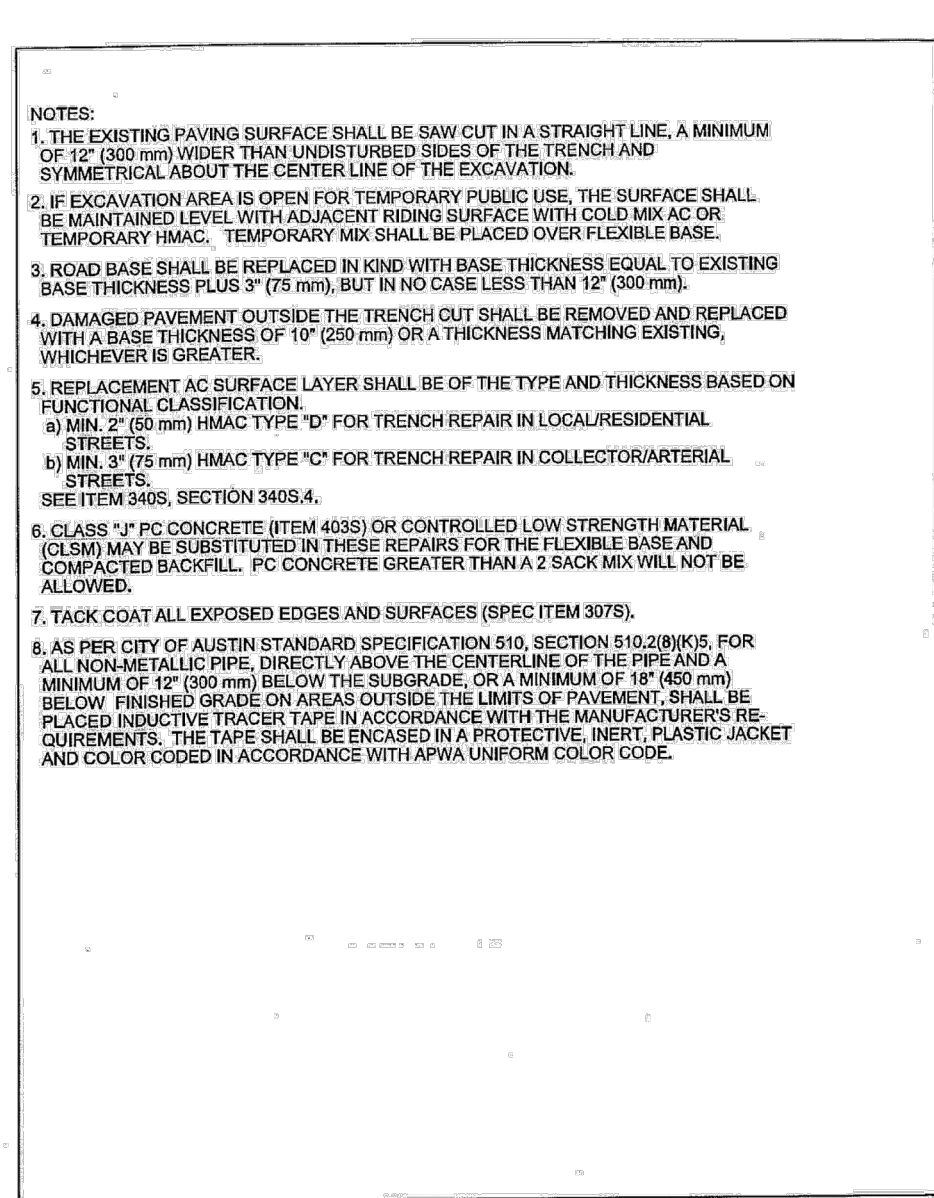
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 SP-2023-0082D

WGL
 WGLinc.com
 4700 MUELLER BOULEVARD SUITE 300, AUSTIN, TX 78723

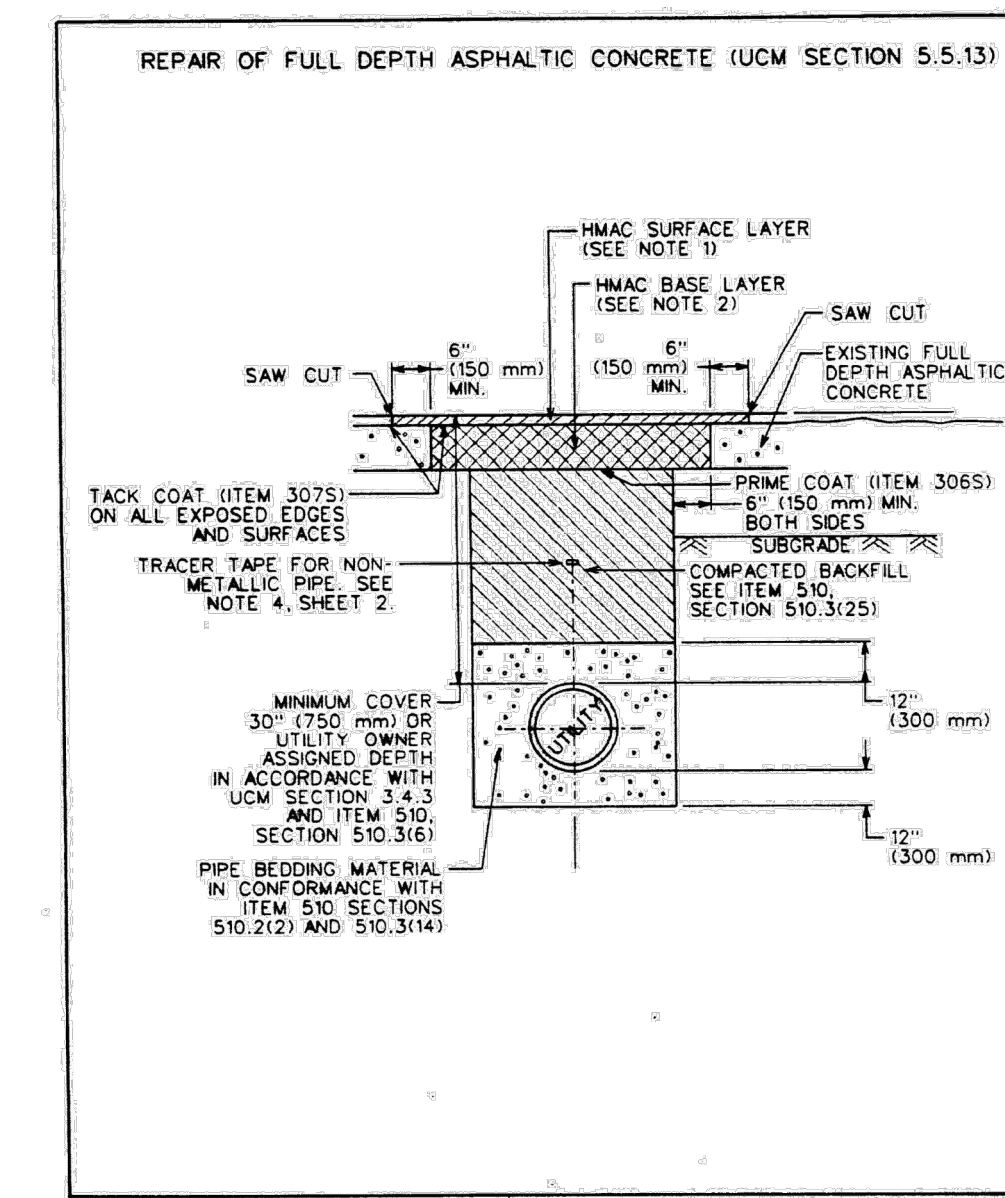
STATE OF TEXAS
 IAN WILLIAMS
 LICENSED PROFESSIONAL ENGINEER



CITY OF AUSTIN DEPARTMENT OF PUBLIC WORKS	FLEXIBLE BASE WITH ASPHALT SURFACE TRENCH REPAIR-EXISTING PAVEMENT	STANDARD NO. 1100S-2 1 OF 2
<i>Kath L Flowers</i> 9/1/16 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	



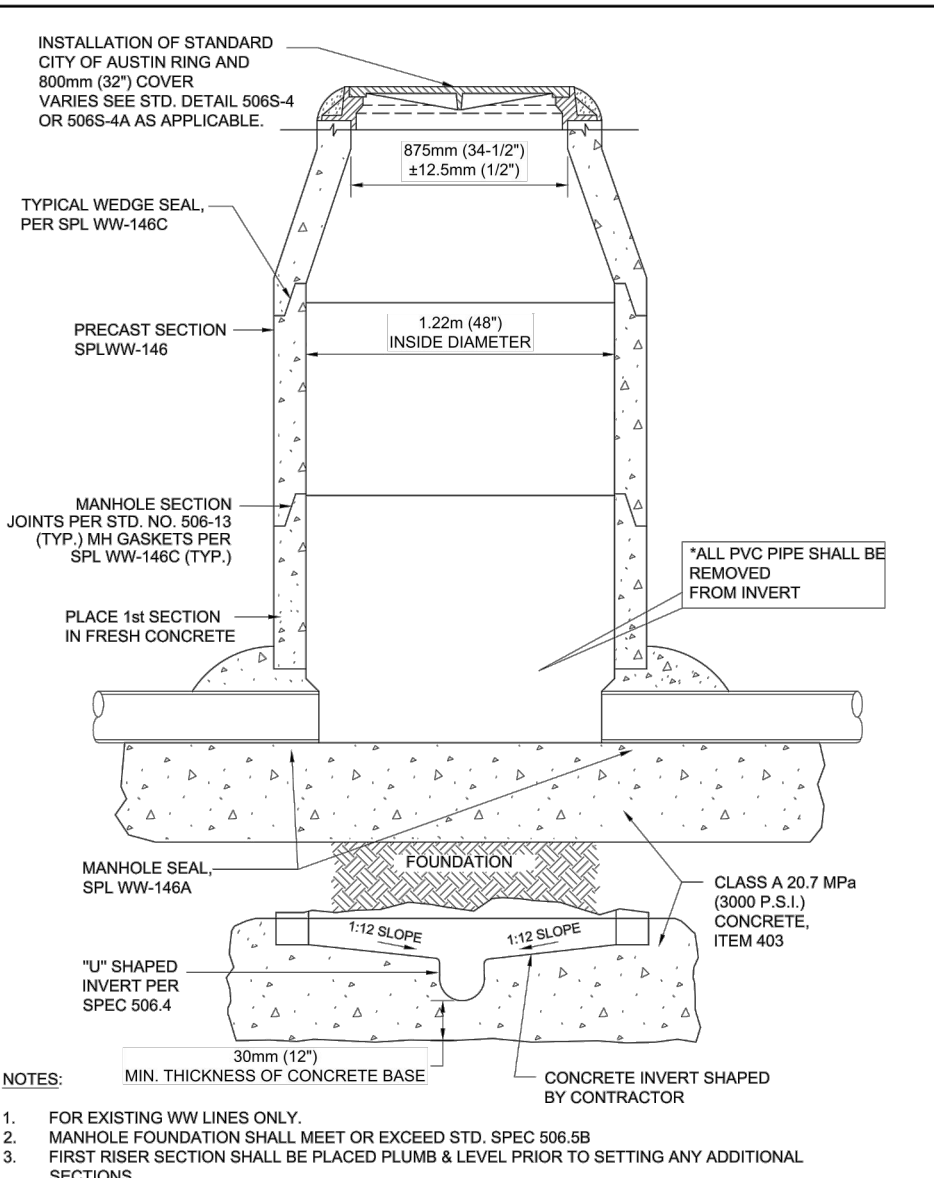
CITY OF AUSTIN DEPARTMENT OF PUBLIC WORKS	FULL DEPTH ASPHALTIC CONCRETE PAVEMENT TRENCH REPAIR	STANDARD NO. 1100S-5 1 OF 2
<i>Kath L Flowers</i> 9/1/16 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	



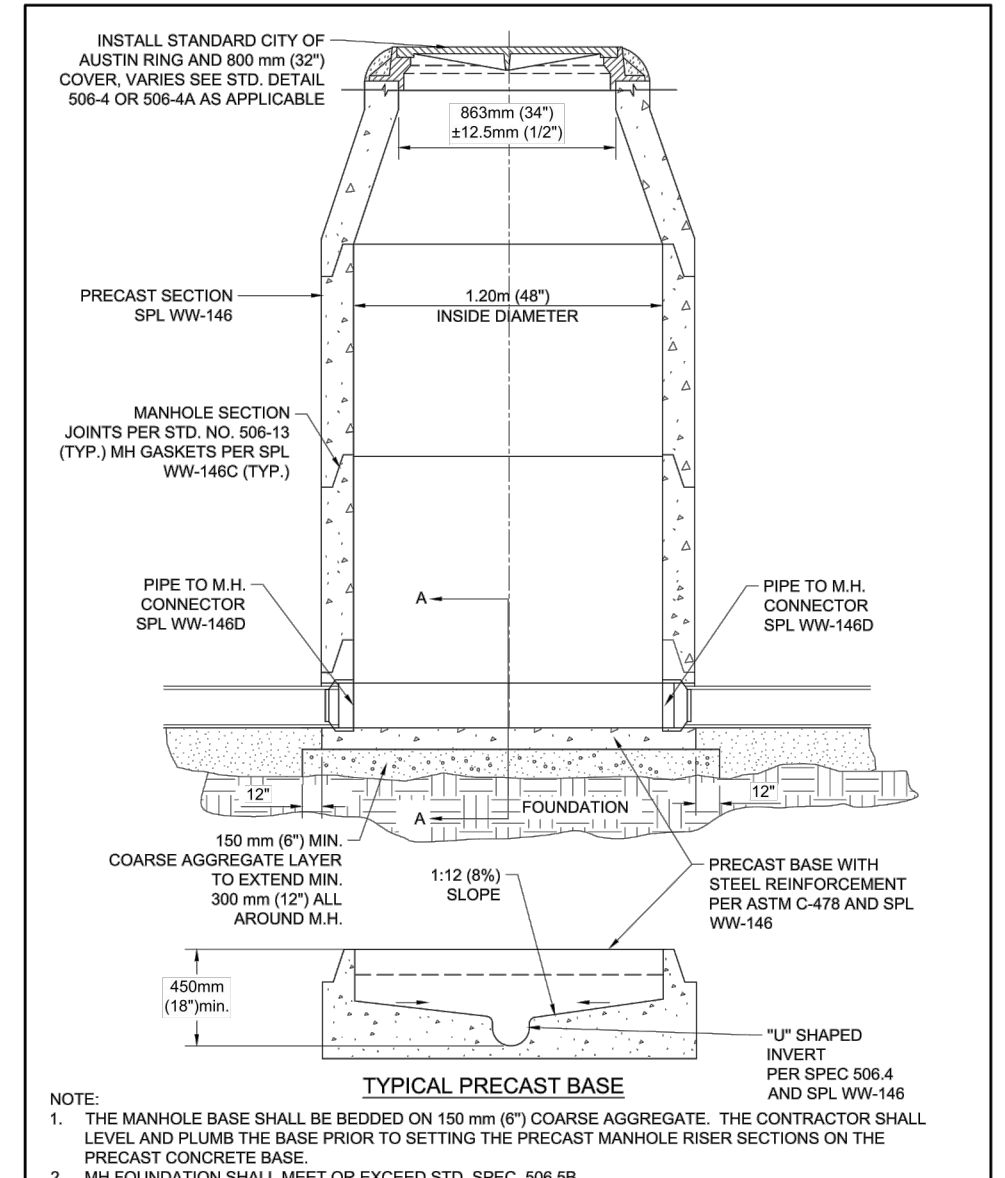
CITY OF AUSTIN DEPARTMENT OF PUBLIC WORKS	FULL DEPTH ASPHALTIC CONCRETE PAVEMENT TRENCH REPAIR	STANDARD NO. 1100S-5 1 OF 2
<i>Kath L Flowers</i> 9/1/16 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	

NOTES:
1. REPLACEMENT AC SURFACE LAYER SHALL BE OF THE TYPE AND THICKNESS BASED ON FUNCTIONAL CLASSIFICATION.
a) MIN. 2\"/>

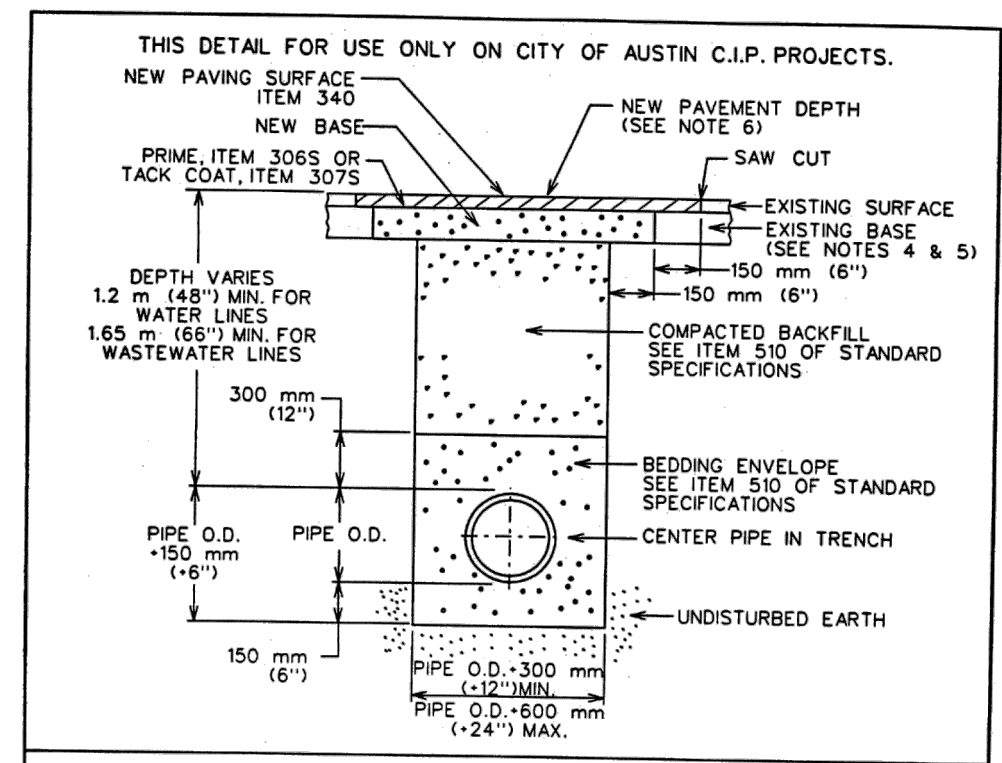
CITY OF AUSTIN DEPARTMENT OF PUBLIC WORKS	FULL DEPTH ASPHALTIC CONCRETE PAVEMENT TRENCH REPAIR	STANDARD NO. 1100S-5 1 OF 2
<i>Kath L Flowers</i> 9/1/16 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	



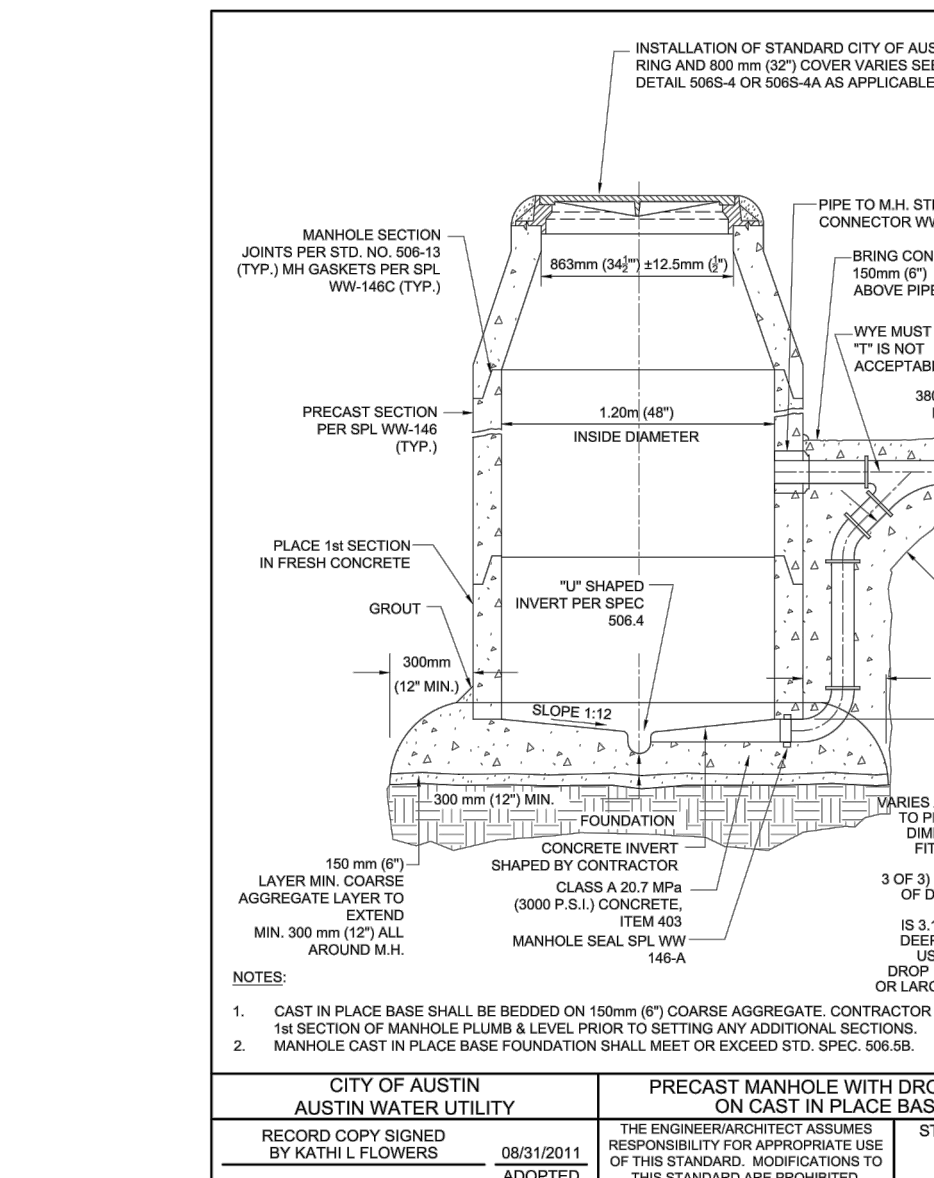
CITY OF AUSTIN AUSTIN WATER UTILITY	PRECAST MANHOLE ON CAST IN PLACE BASE	STANDARD NO. 506S-9 1 OF 1
RECORD COPY SIGNED BY KATH L FLOWERS 08/31/2011 ADOPTED	THE ENGINEER/ARCHITECT ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD. MODIFICATIONS TO THIS STANDARD ARE PROHIBITED.	



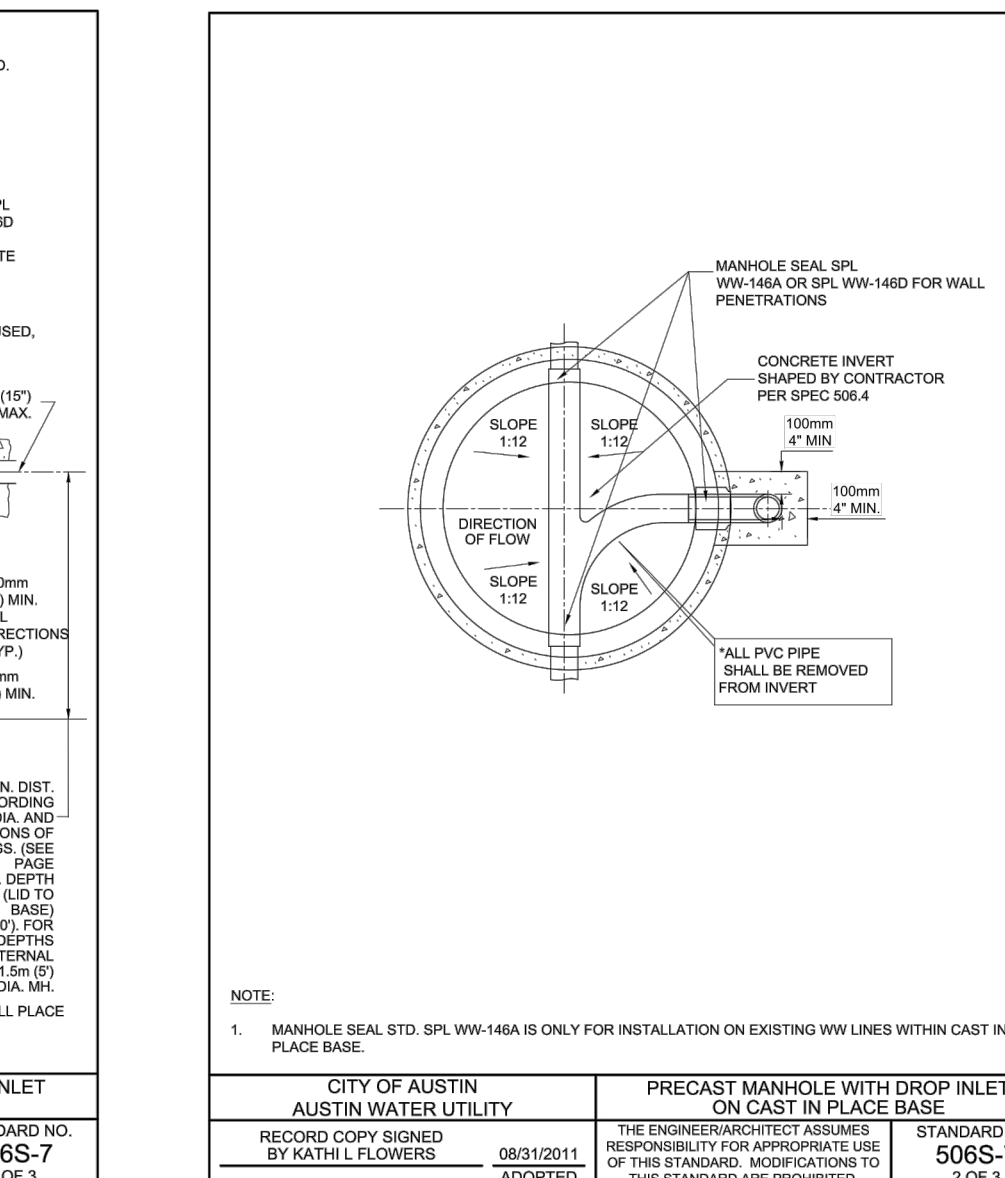
CITY OF AUSTIN AUSTIN WATER UTILITY	WASTEWATER MANHOLE ON PRECAST BASE	STANDARD NO. 506S-10 1 OF 1
RECORD COPY SIGNED BY KATH L FLOWERS 08/31/2011 ADOPTED	THE ENGINEER/ARCHITECT ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD. MODIFICATIONS TO THIS STANDARD ARE PROHIBITED.	



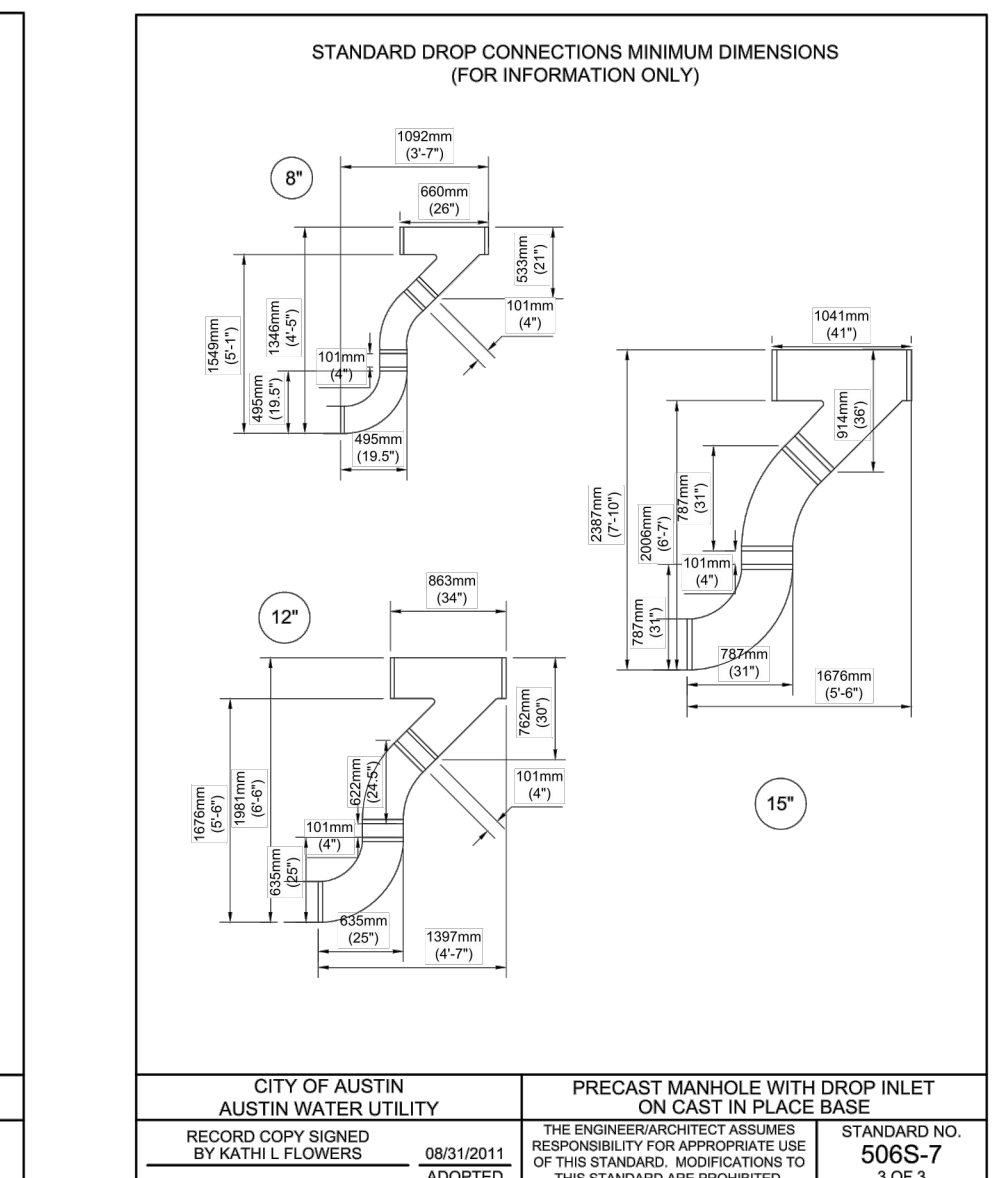
CITY OF AUSTIN WATER AND WASTEWATER UTILITY	TYPICAL TRENCH WITH PAVED SURFACE	STANDARD NO. 510S-3 1 OF 1
<i>Kath L Flowers</i> 9/1/16 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	



CITY OF AUSTIN AUSTIN WATER UTILITY	PRECAST MANHOLE WITH DROP INLET ON CAST IN PLACE BASE	STANDARD NO. 506S-7 1 OF 2
RECORD COPY SIGNED BY KATH L FLOWERS 08/31/2011 ADOPTED	THE ENGINEER/ARCHITECT ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD. MODIFICATIONS TO THIS STANDARD ARE PROHIBITED.	

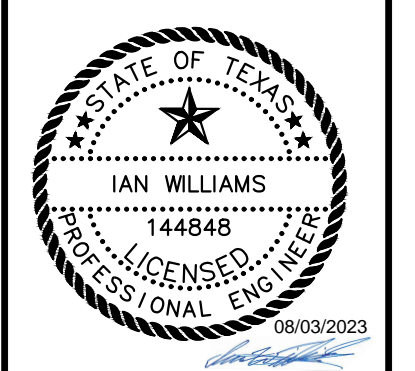
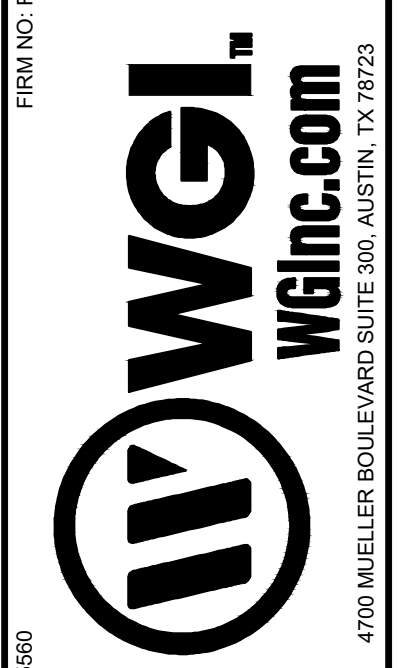


CITY OF AUSTIN AUSTIN WATER UTILITY	PRECAST MANHOLE WITH DROP INLET ON CAST IN PLACE BASE	STANDARD NO. 506S-7 1 OF 2
RECORD COPY SIGNED BY KATH L FLOWERS 08/31/2011 ADOPTED	THE ENGINEER/ARCHITECT ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD. MODIFICATIONS TO THIS STANDARD ARE PROHIBITED.	



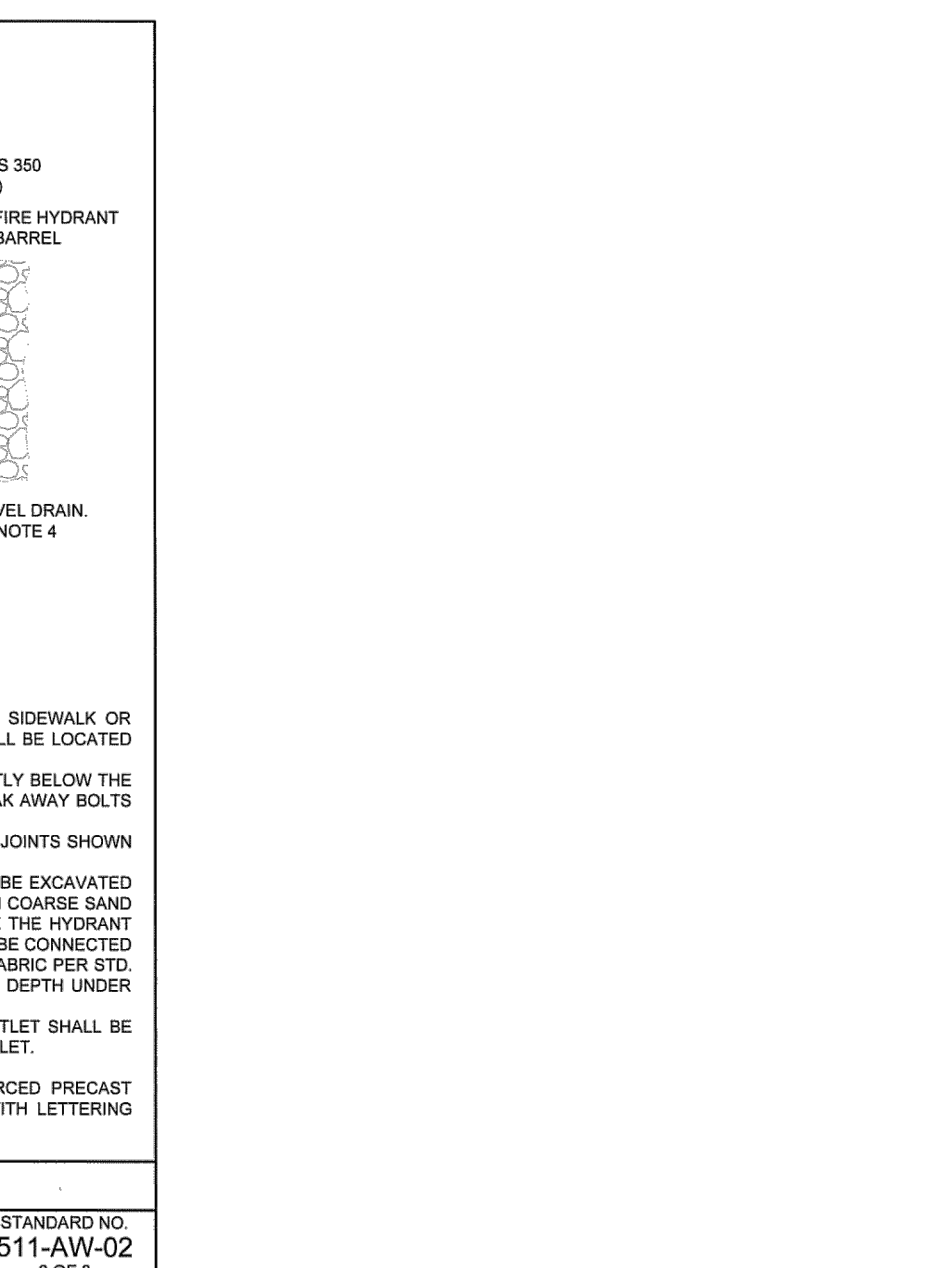
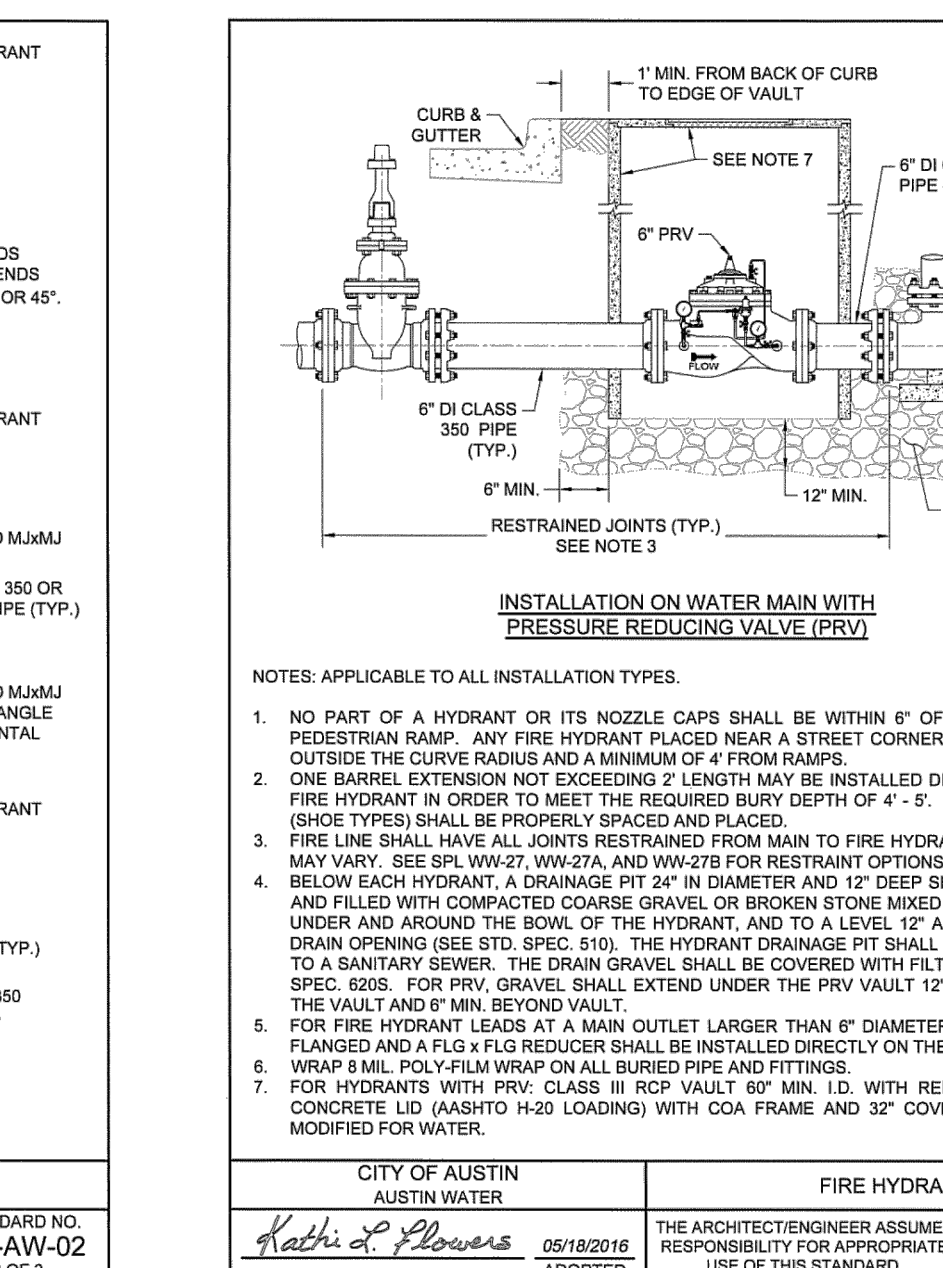
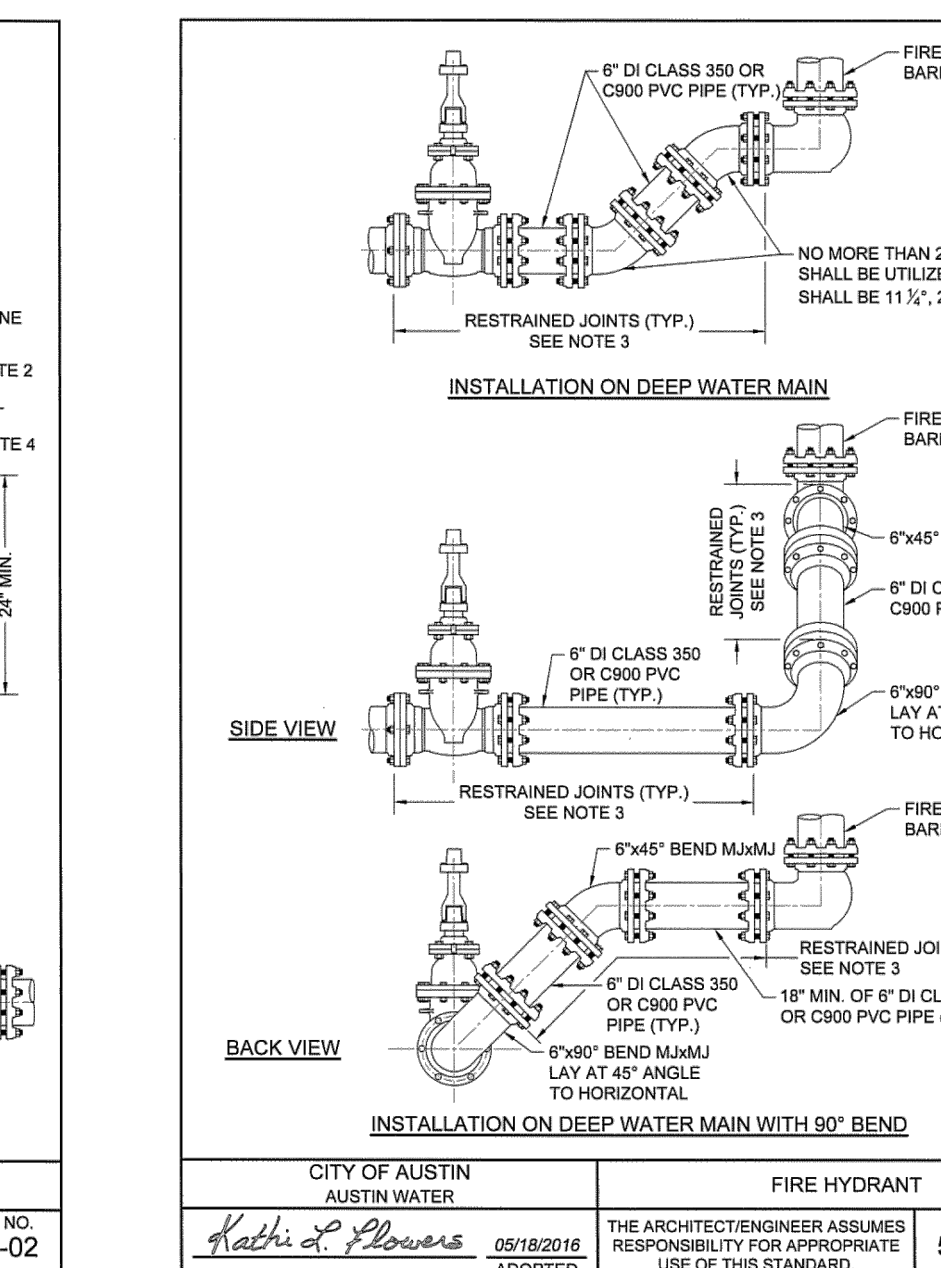
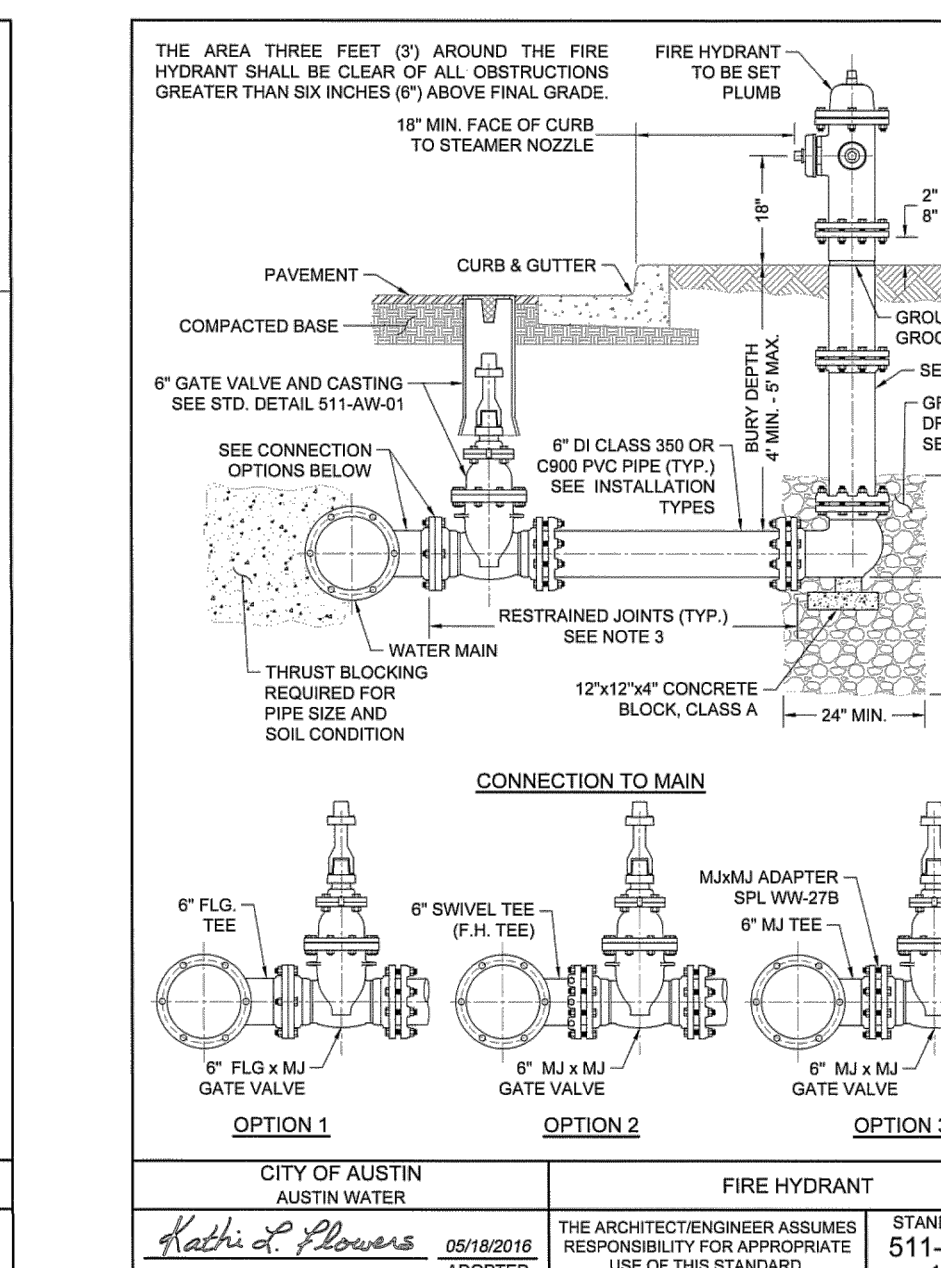
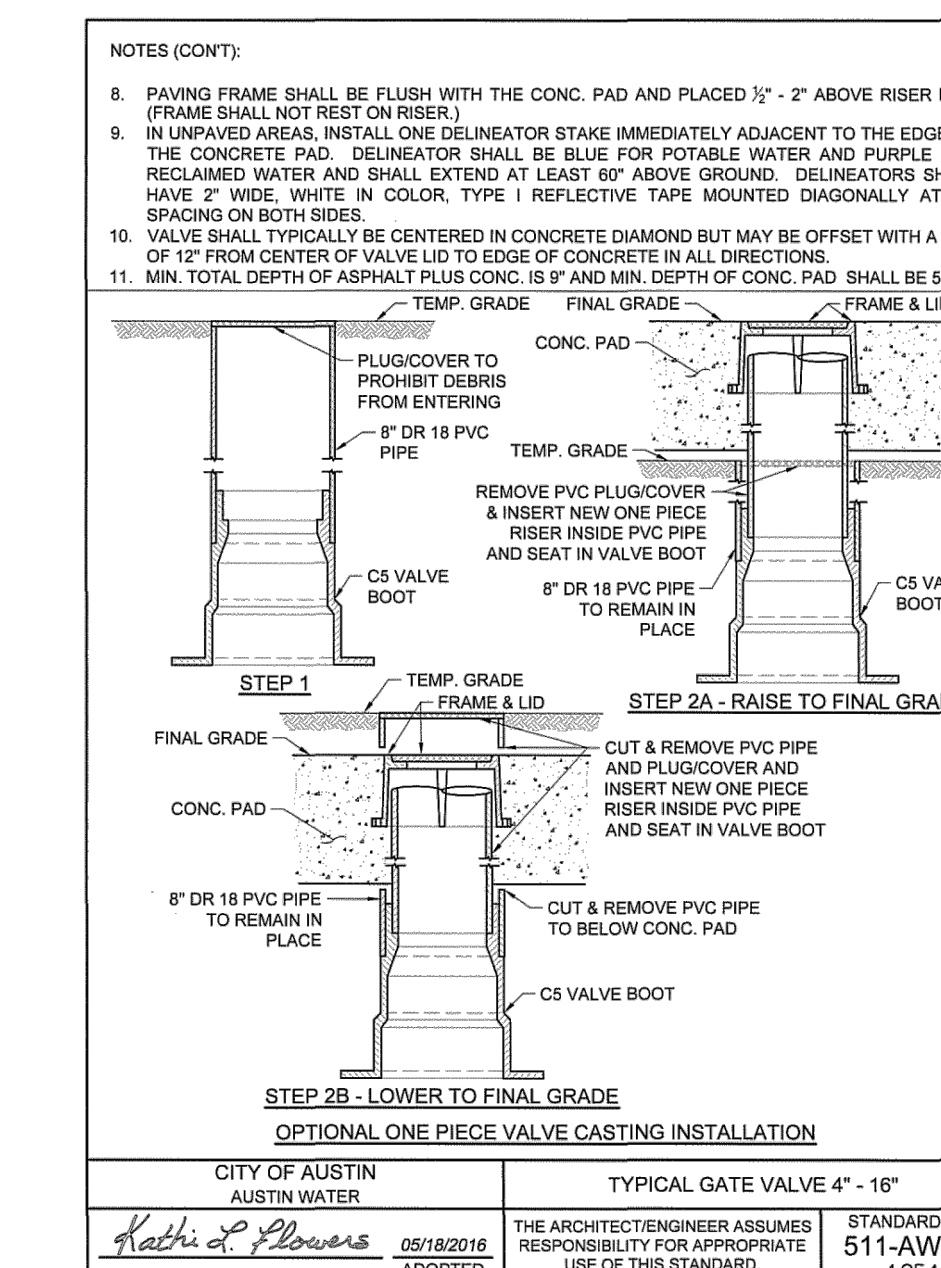
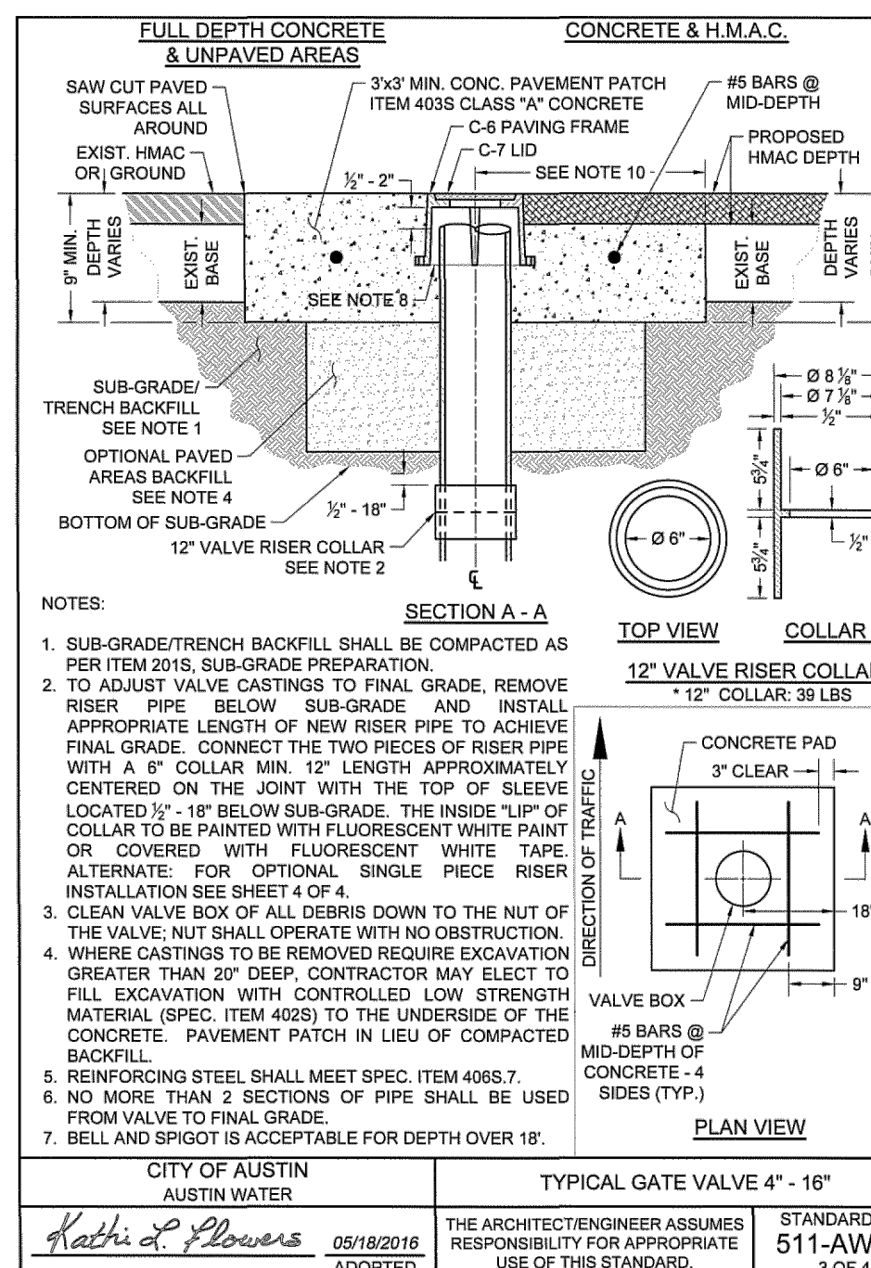
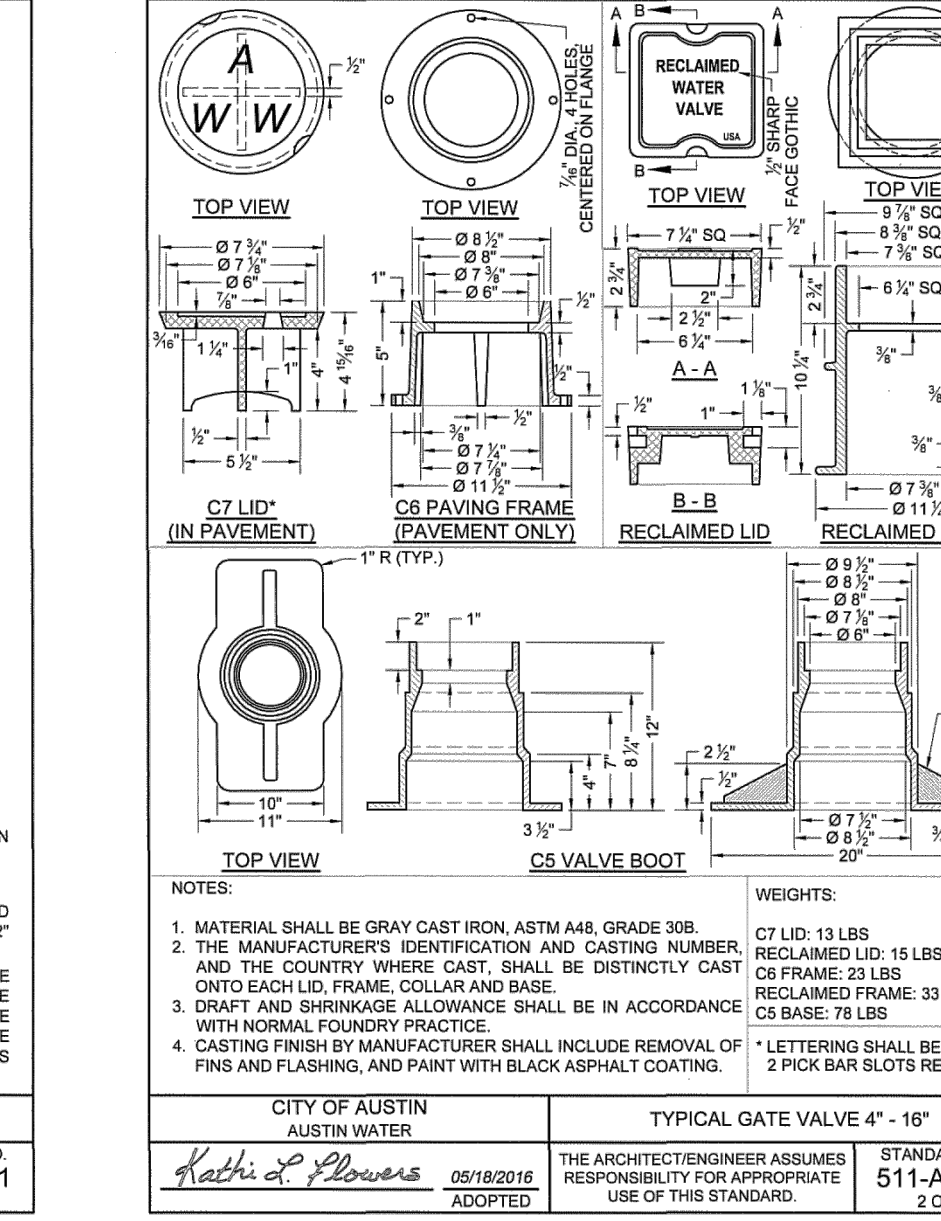
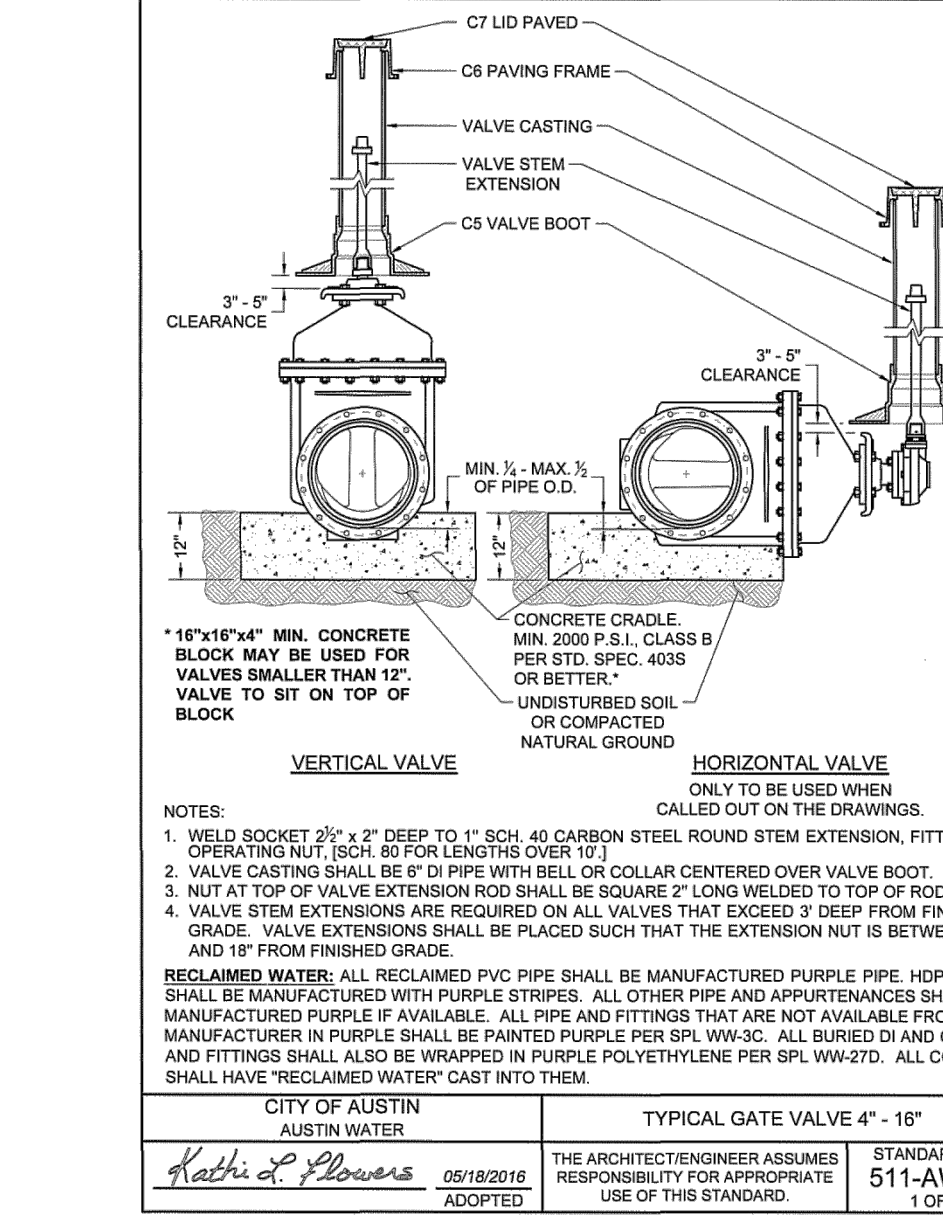
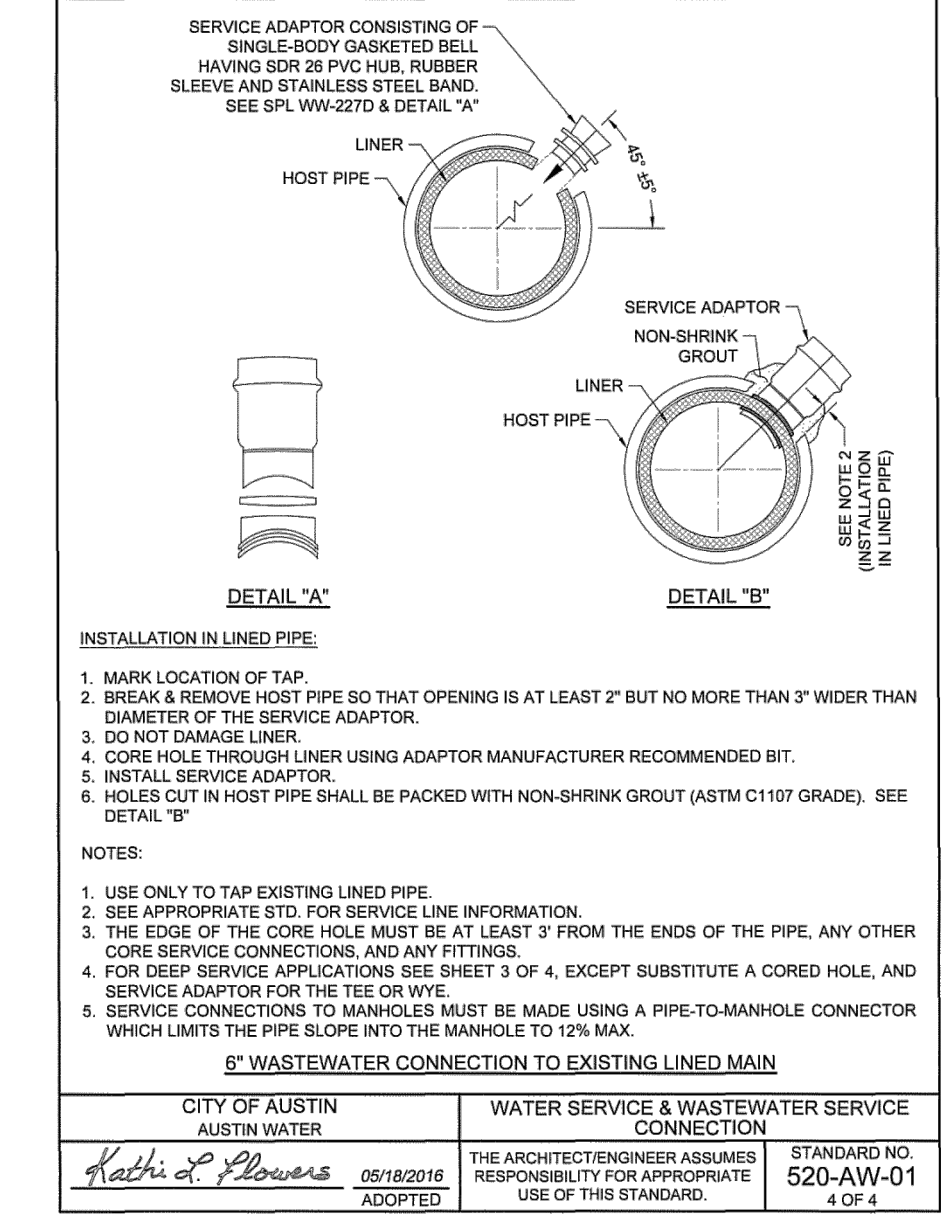
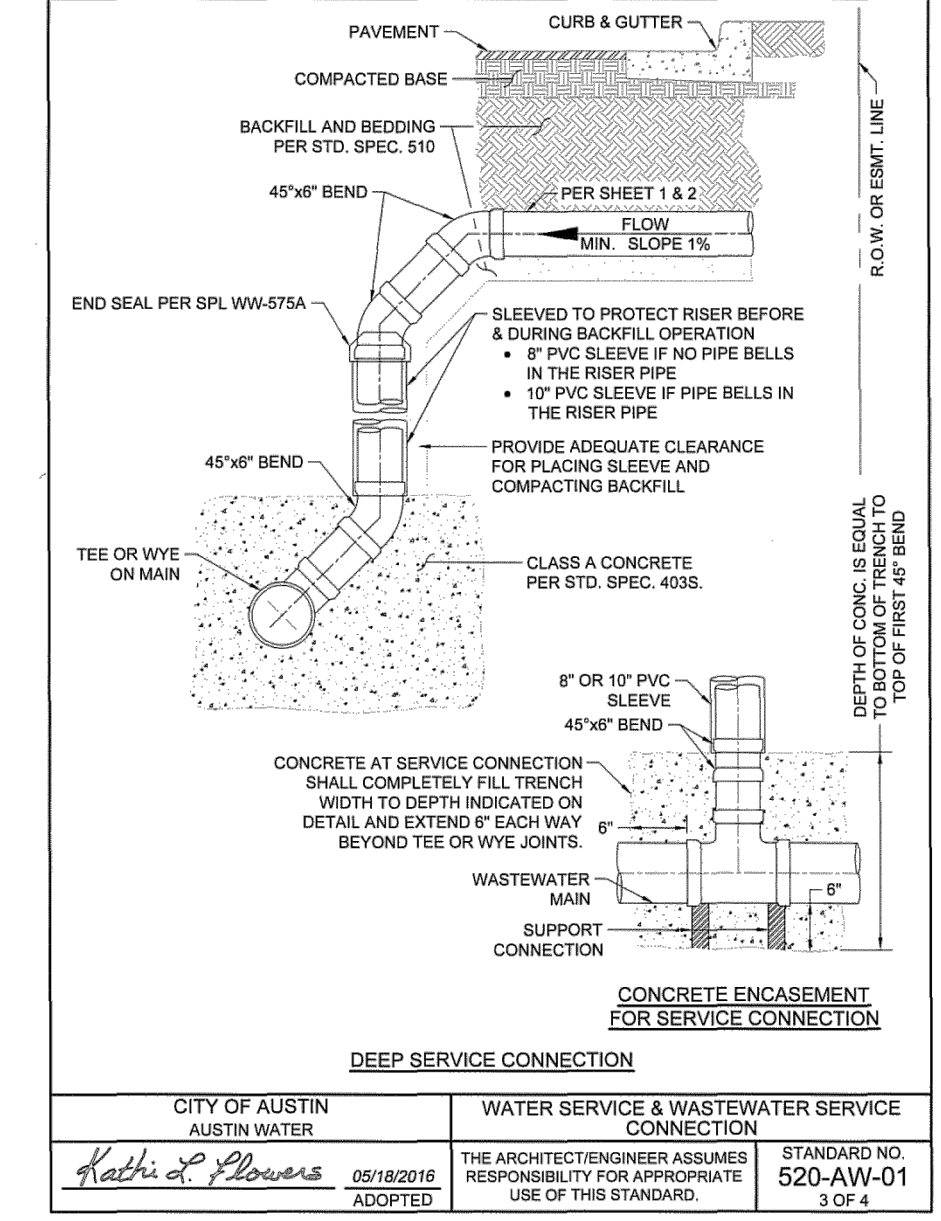
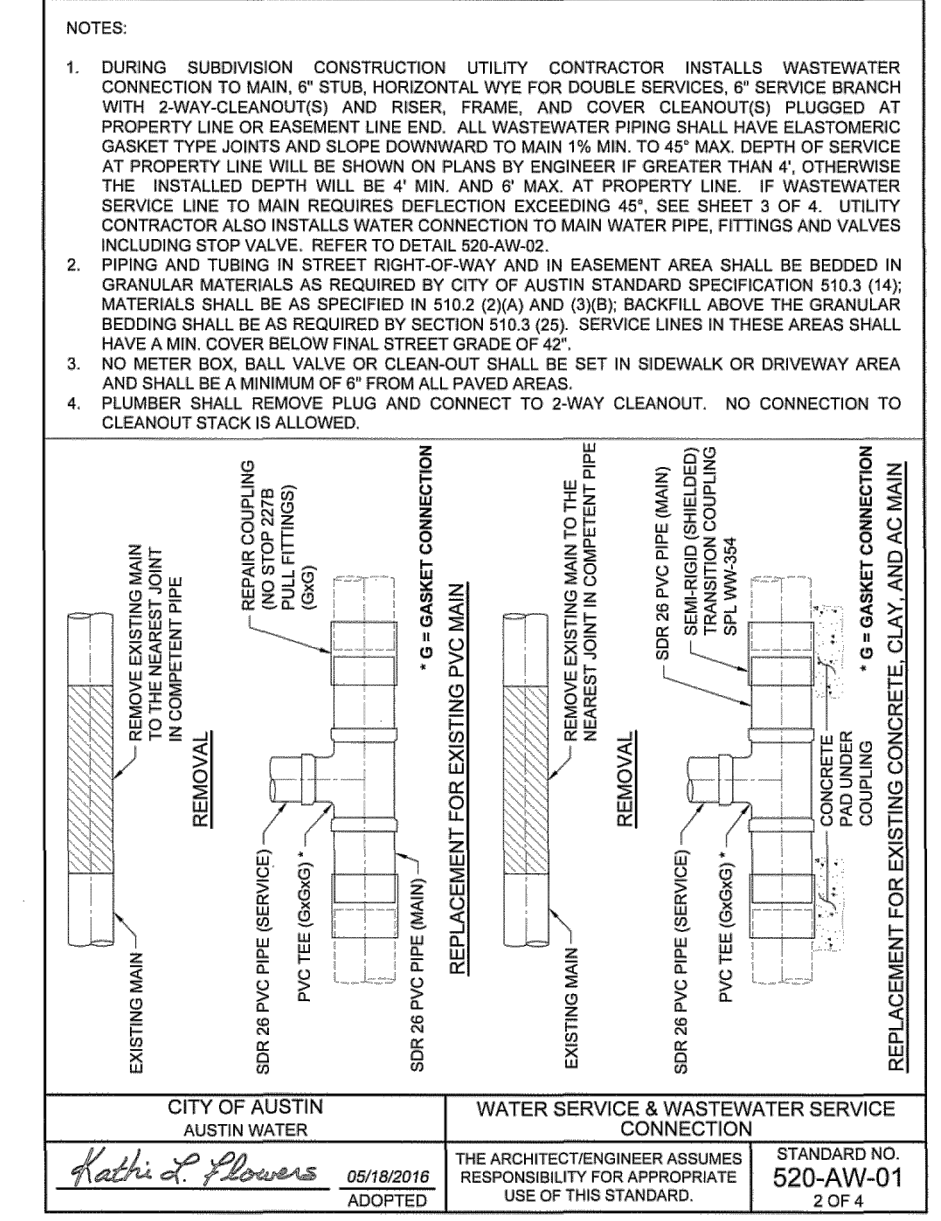
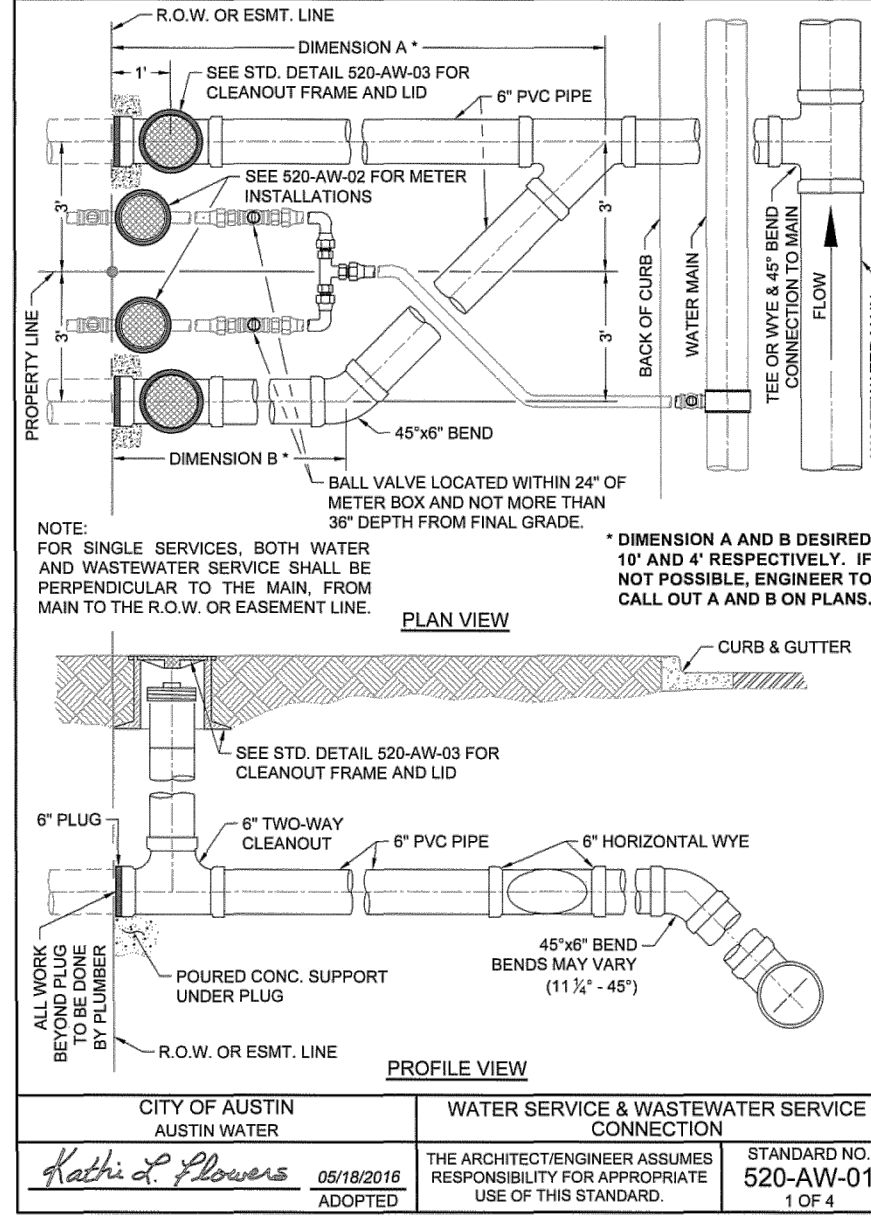
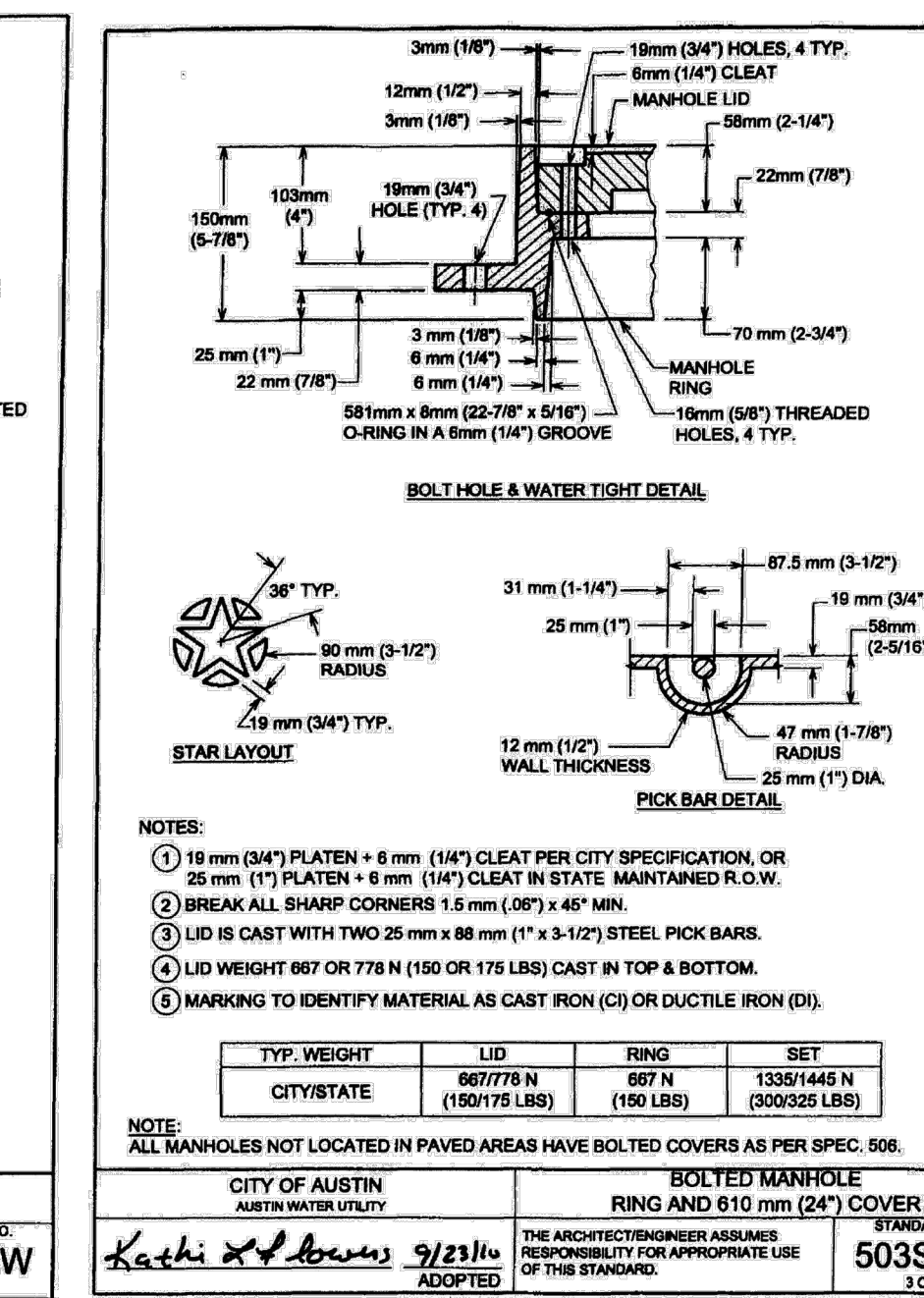
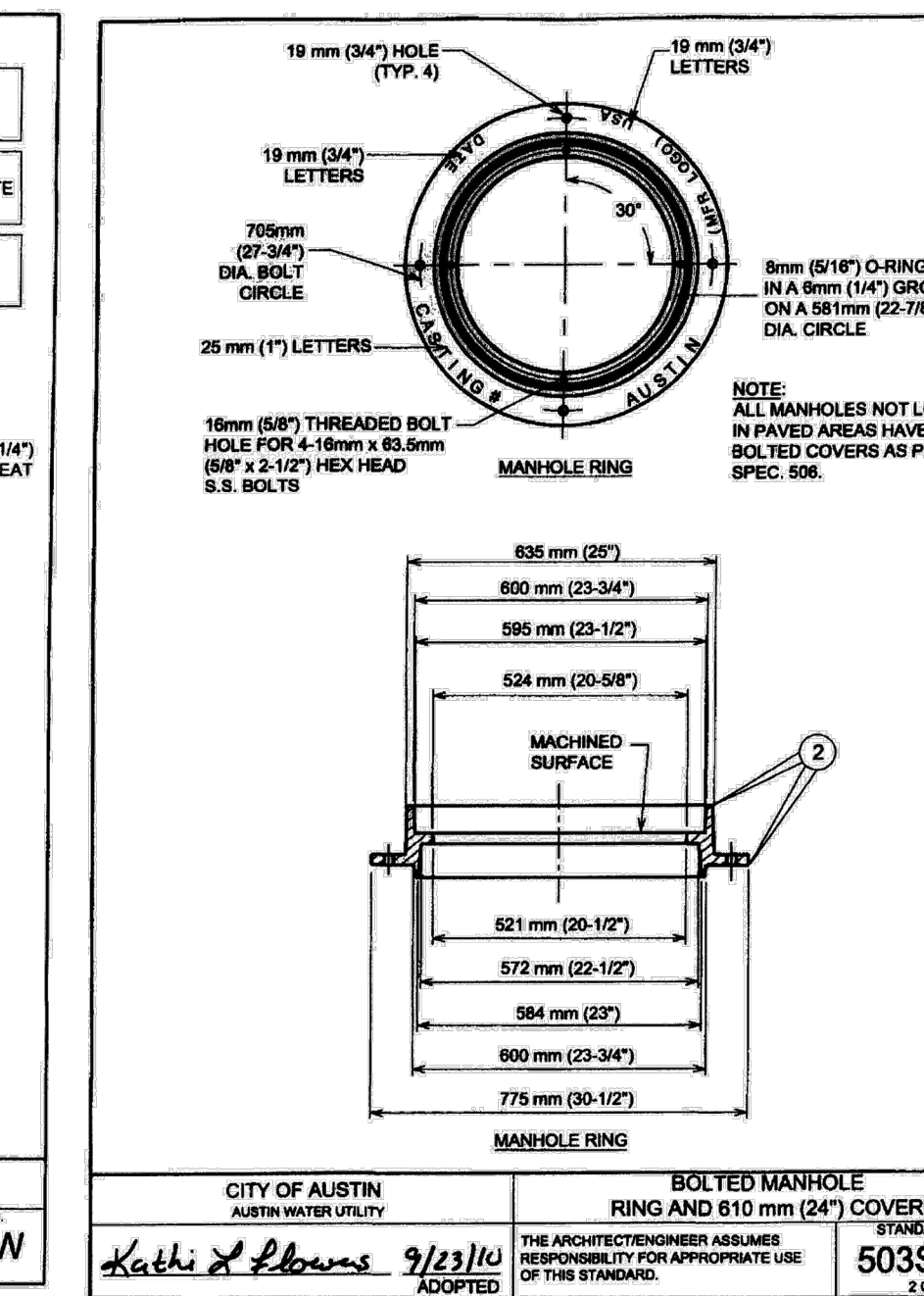
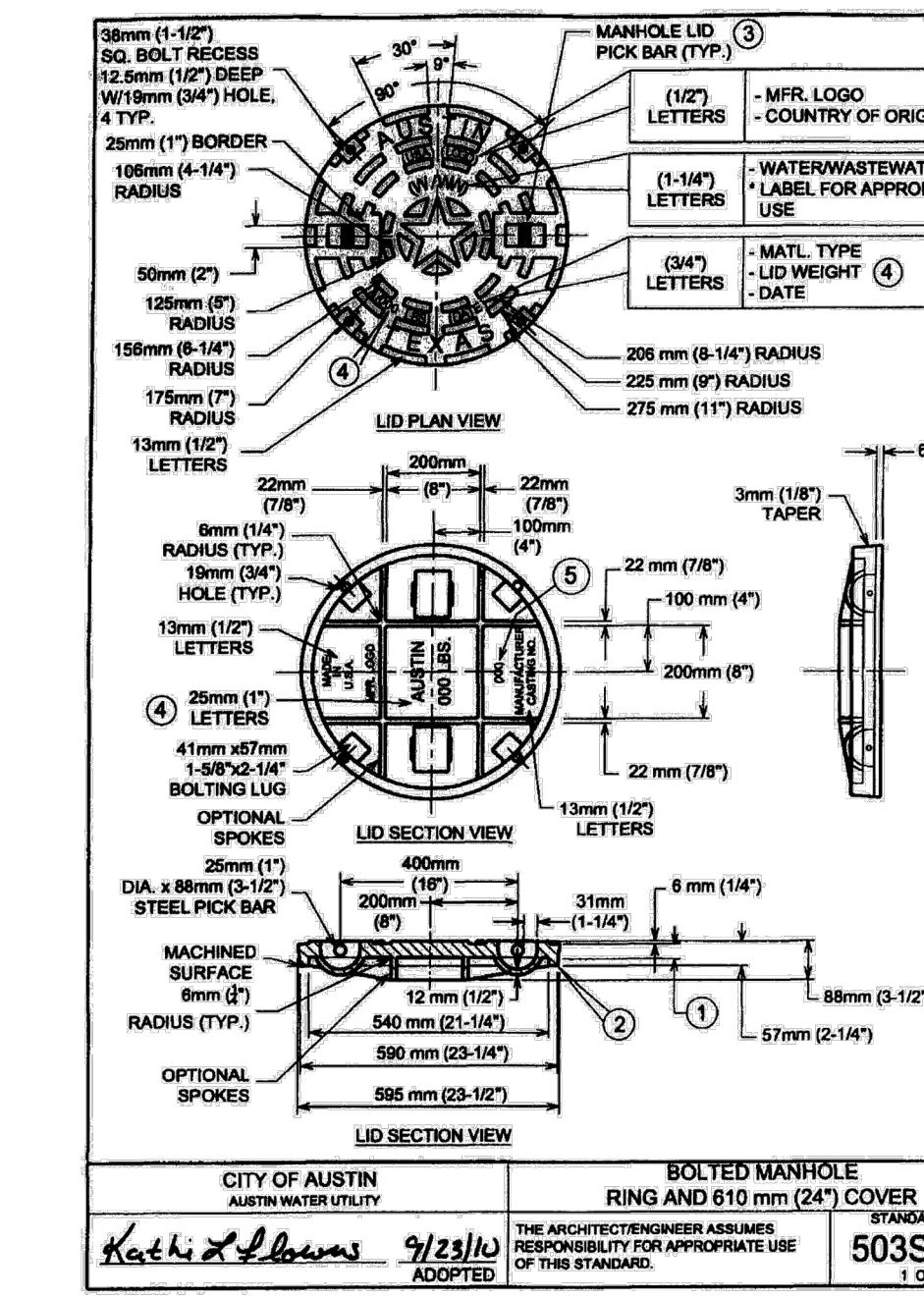
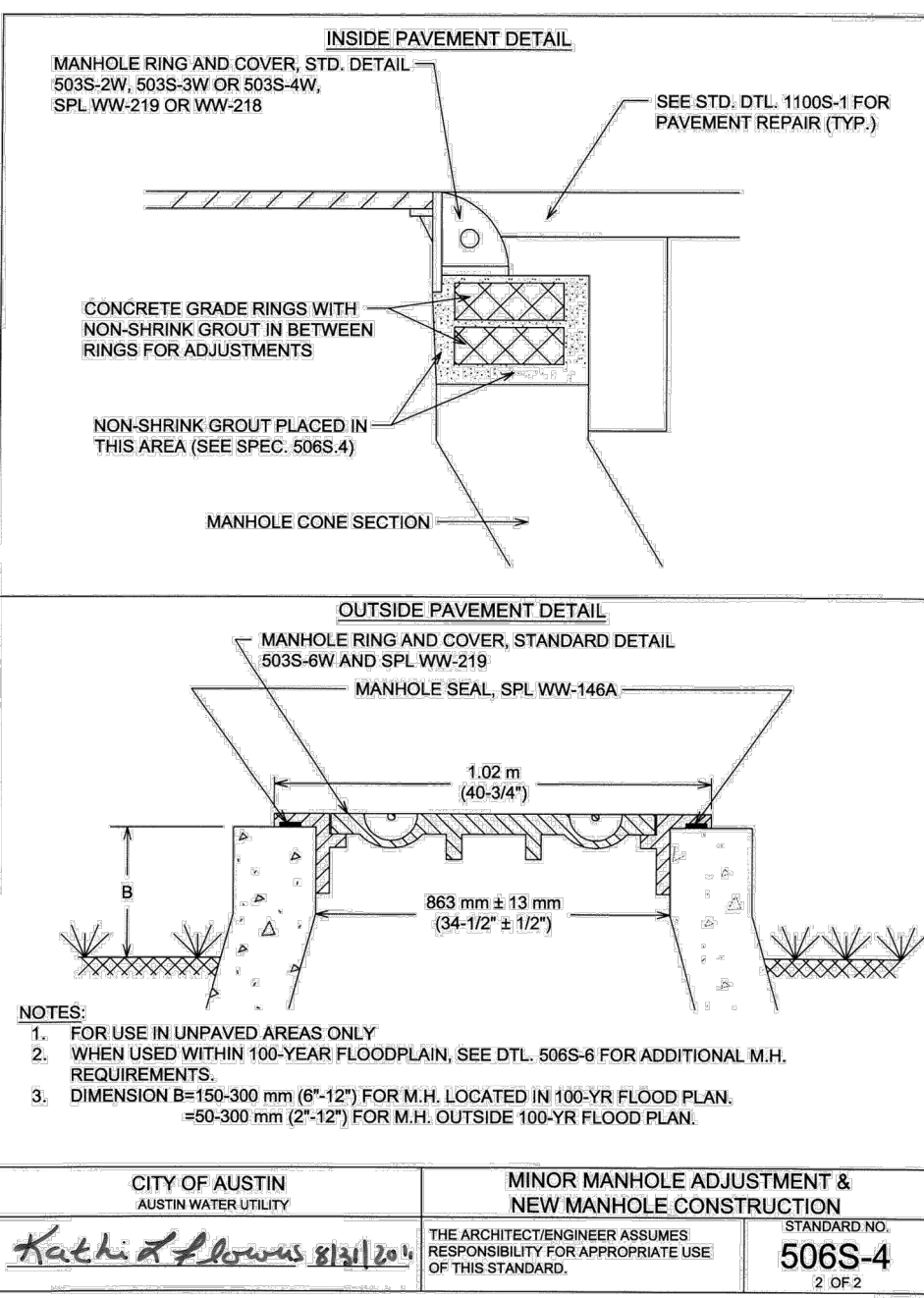
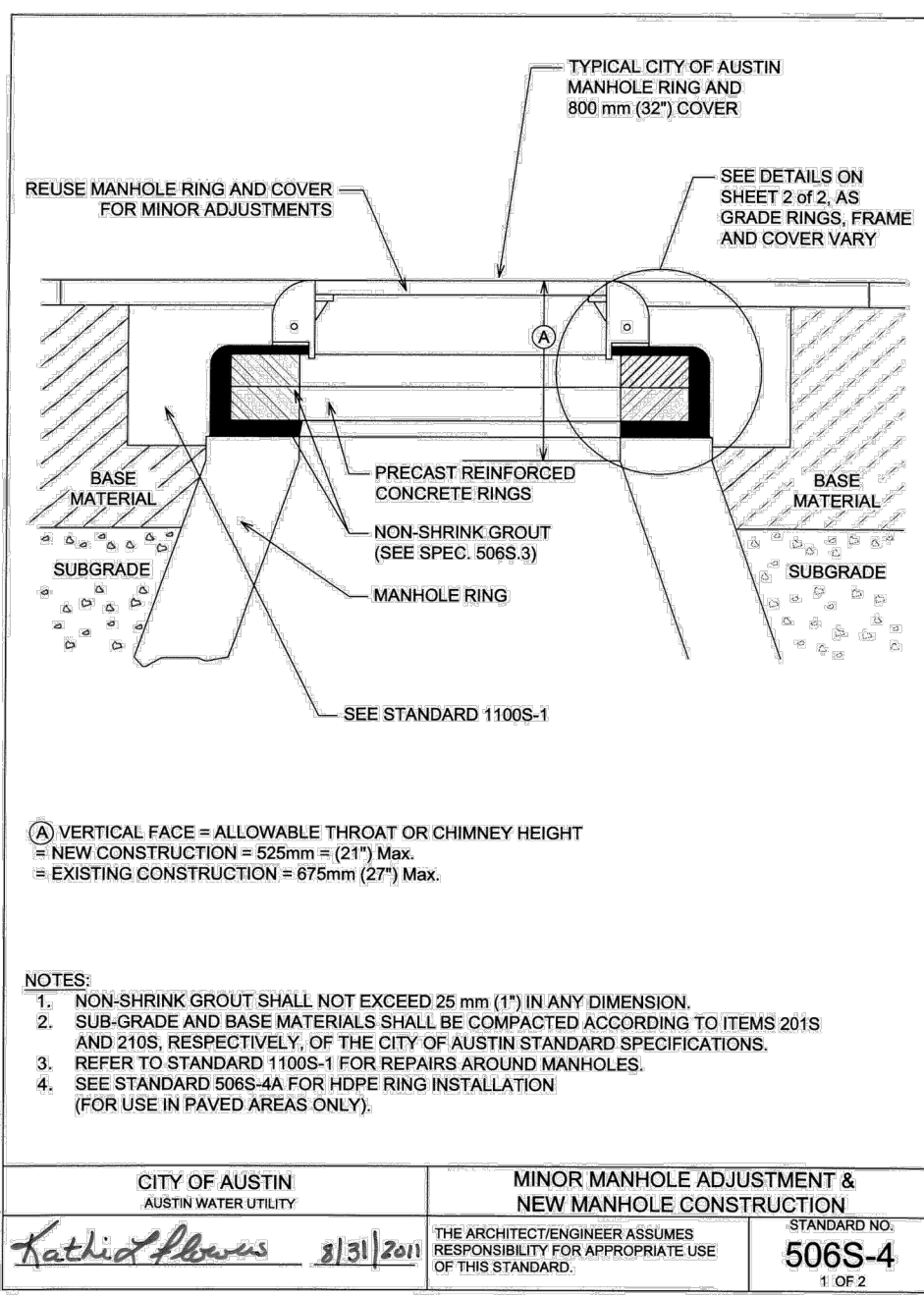
CITY OF AUSTIN AUSTIN WATER UTILITY	PRECAST MANHOLE WITH DROP INLET ON CAST IN PLACE BASE	STANDARD NO. 506S-7 1 OF 2
RECORD COPY SIGNED BY KATH L FLOWERS 08/31/2011 ADOPTED	THE ENGINEER/ARCHITECT ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD. MODIFICATIONS TO THIS STANDARD ARE PROHIBITED.	

NOT AUTHORIZED FOR
CONSTRUCTION PRIOR TO
FORMAL CITY AND MUNICIPAL
UTILITY DISTRICT APPROVAL



WELLS BRANCH MULTIFAMILY
2800 W WELLS BRANCH PKWY.
AUSTIN, TRAVIS COUNTY, TEXAS 78728

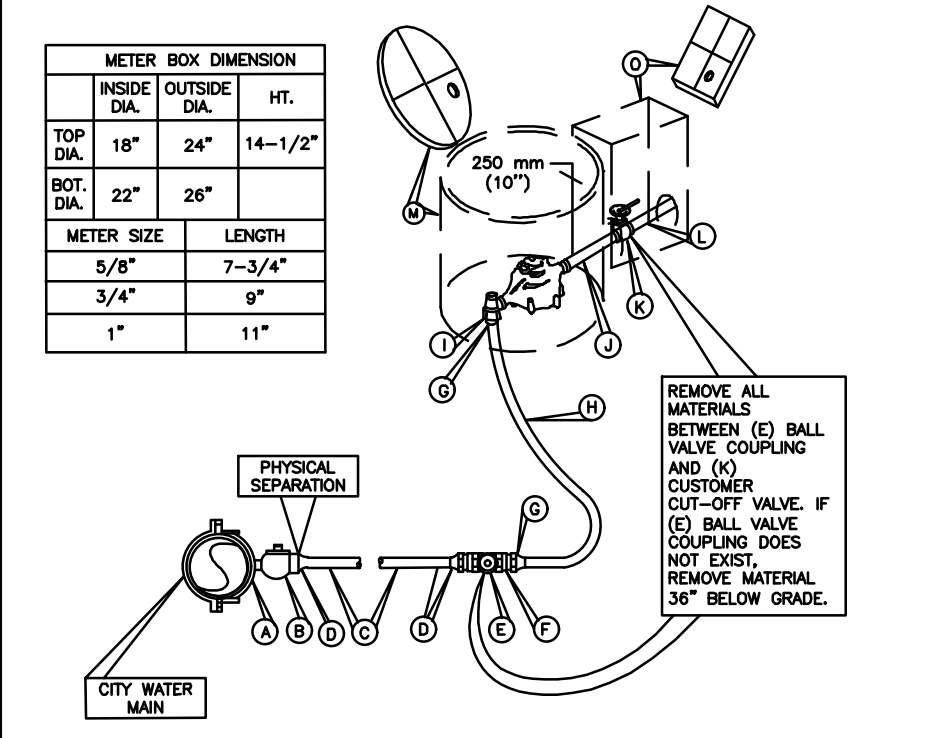
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 CONSTRUCTION DETAILS 04/04/2024



NOT AUTHORIZED FOR CONSTRUCTION PRIOR TO FORMAL CITY AND MUNICIPAL UTILITY DISTRICT APPROVAL
 WGL INC. WGLINC.COM
 4700 MUELLER BOULEVARD SUITE 300, AUSTIN, TX 78723
 STATE OF TEXAS
 IAN WILLIAMS
 LICENSED PROFESSIONAL ENGINEER
 08/03/2023
 WELLS BRANCH MULTIFAMILY
 2800 W WELLS BRANCH PKWY.
 AUSTIN, TRAVIS COUNTY, TEXAS 78728
 CONSTRUCTION DETAILS-5
 SHEET C505
 60 OF 63
 SP-2023-0082D

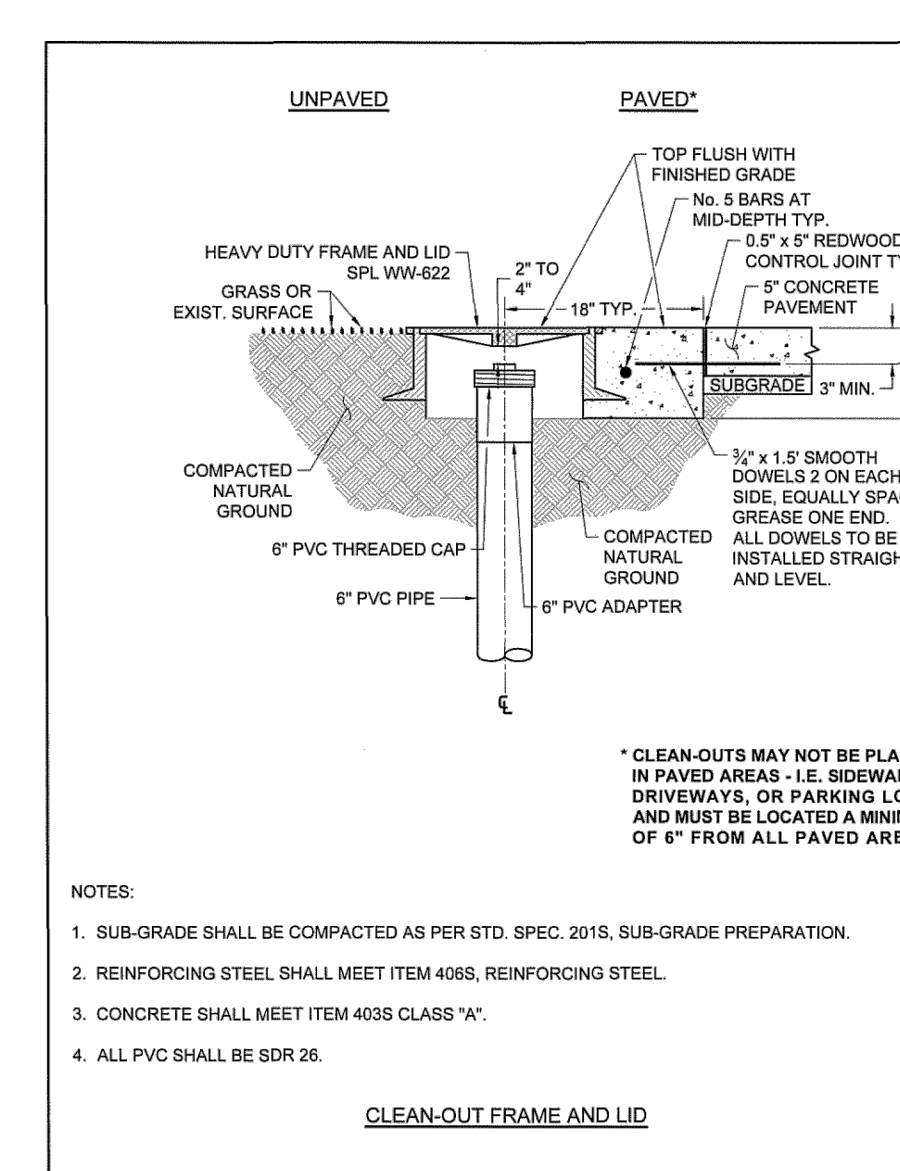
NOTES:

- METER BOX (M), METER ANGLE METER STOP (C), WATER METER COUPLING (L), SERVICE PIPE FROM BALL VALVE TO ANGLE STOP (D), BALL VALVE COUPLINGS (E), SHALL BE REMOVED FROM RIGHT OF WAY (ROW). SYNOPSIS REMOVE (C) AND ALL MATERIAL UP TO (E).
- IF BALL VALVE COUPLING (E) DOES NOT EXIST REMOVE ALL MATERIALS TO 3" BELOW GRADE.
- A PHYSICAL SEPARATION BETWEEN AND CORPORATION STOP (B) AT THE MAIN AND THE SERVICE PIPE (C) SHALL BE PERFORMED. THIS IS ACCOMPLISHED BY REMOVING THE PIPE COUPLING AT THE CORPORATION STOP (D). CORPORATION STOP (B) SHALL BE ABANDONED IN PLACE IN THE SEE POSITION.
- AFTER SEPARATION BETWEEN THE CORPORATION STOP (B) AND THE SERVICE PIPE (C) IS ACHIEVED THE CORPORATION STOP (B) AND MAIN WATER PIPE (D) IS WRAPPED WITH BLACK POLYETHYLENE FILM.
- ALL VOIDS BEHIND THE CURB SHALL BE FILL WITH SELECT BACKFILL AND 6" OF TOPSOIL IN ACCORDANCE WITH THE PUBLIC WORKS UTILITY STREET CUT MANUAL.
- ALL WORK PERFORMED IN THE ROW SHALL BE IN ACCORDANCE WITH THE CITY OF AUSTIN STANDARDS, SPECIFICATIONS AND UTILITY STREET CUT MANUAL.

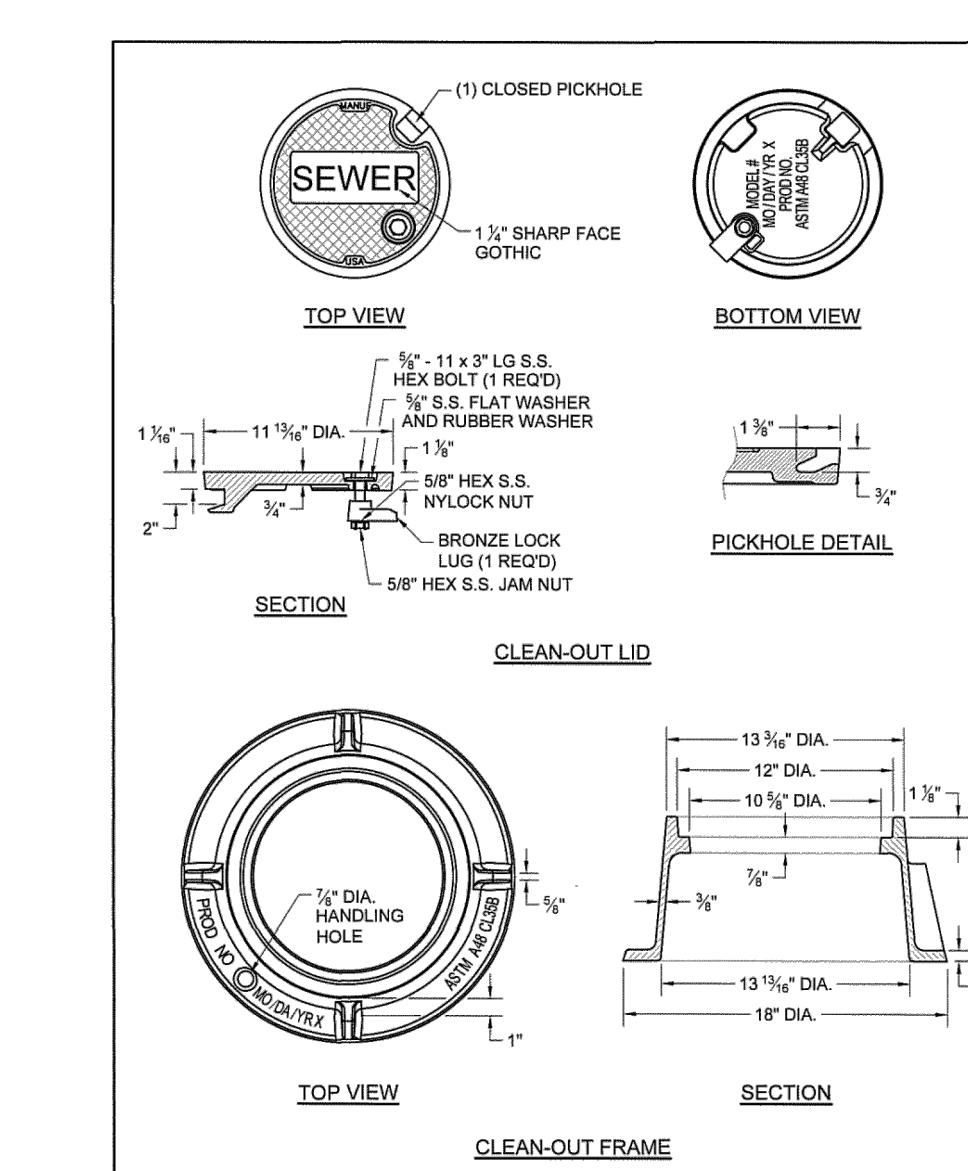


ABANDONMENT OF SERVICES AT THE MAIN (RESIDENTIAL AND COMMERCIAL)

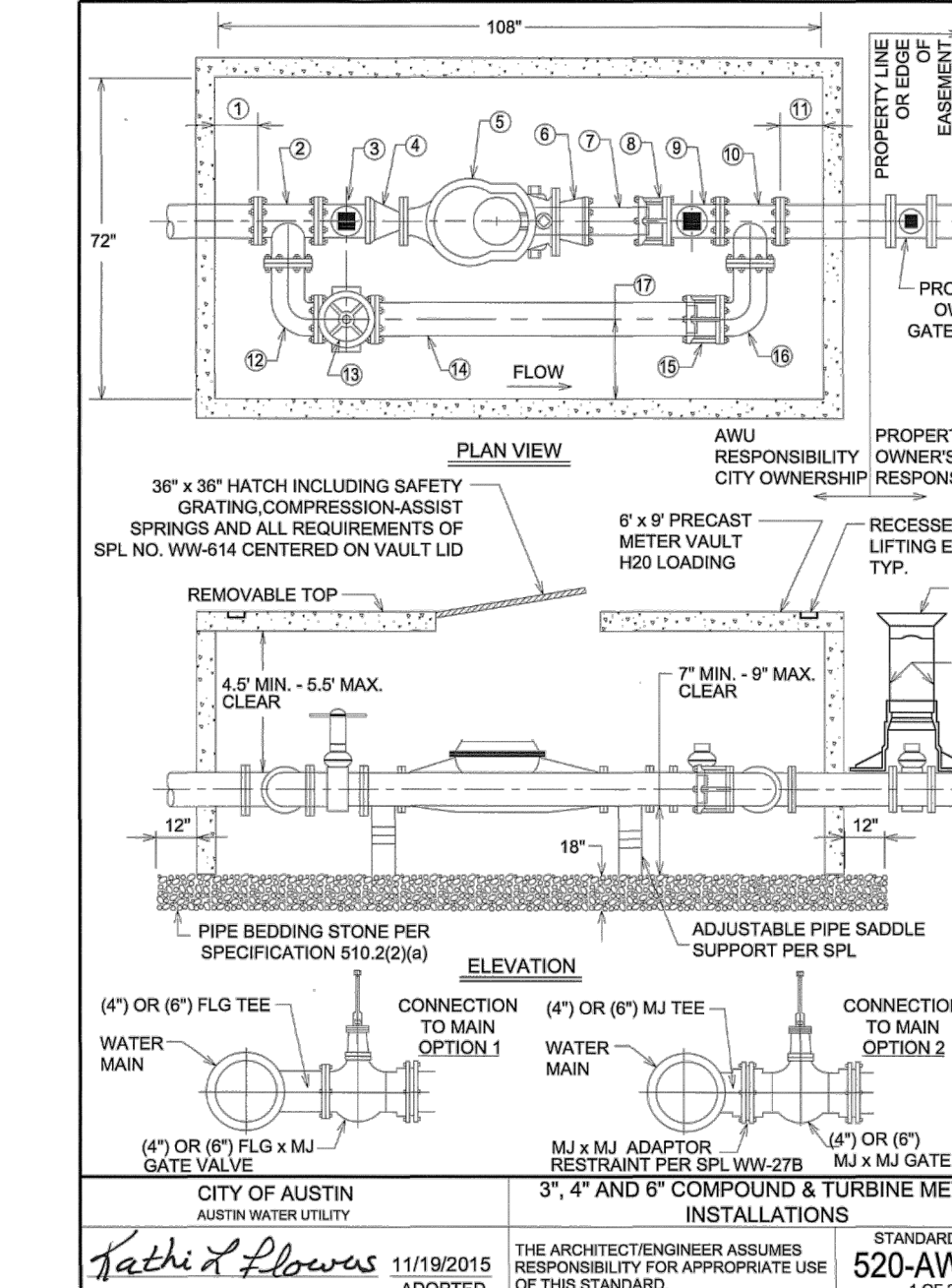
CITY OF AUSTIN AUSTIN WATER UTILITY	WASTEWATER CLEAN-OUT FRAME AND LID	STANDARD NO. 520-AW-03 1 OF 2
Kathi & Flowers 05/18/2016 DATE	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	



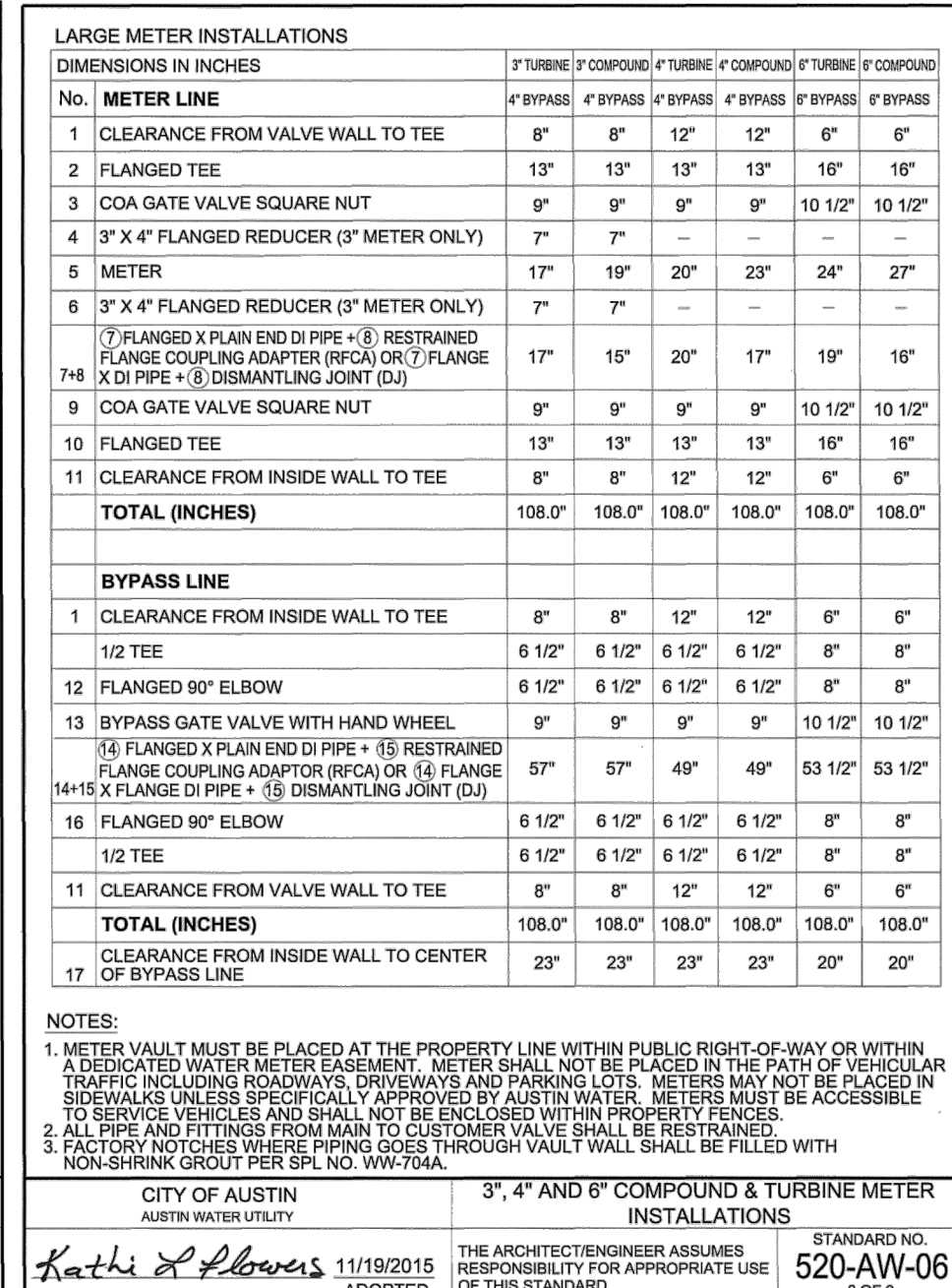
CITY OF AUSTIN AUSTIN WATER	WASTEWATER CLEAN-OUT FRAME AND LID	STANDARD NO. 520-AW-03 2 OF 2
Kathi & Flowers 05/18/2016 DATE	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	



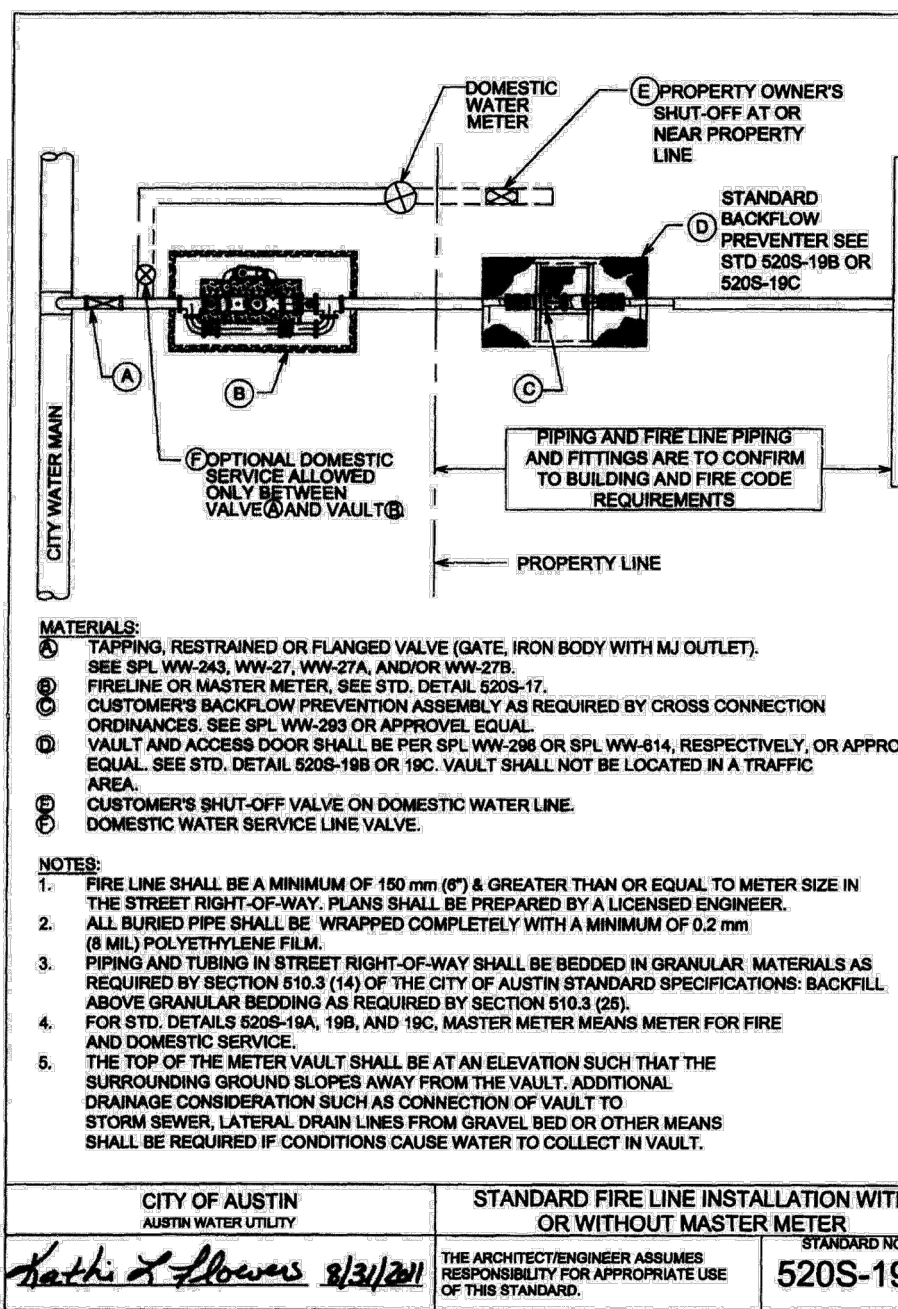
CITY OF AUSTIN AUSTIN WATER UTILITY	WASTEWATER CLEAN-OUT FRAME AND LID	STANDARD NO. 520-AW-06 1 OF 2
Kathi & Flowers 11/19/2015 DATE	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	



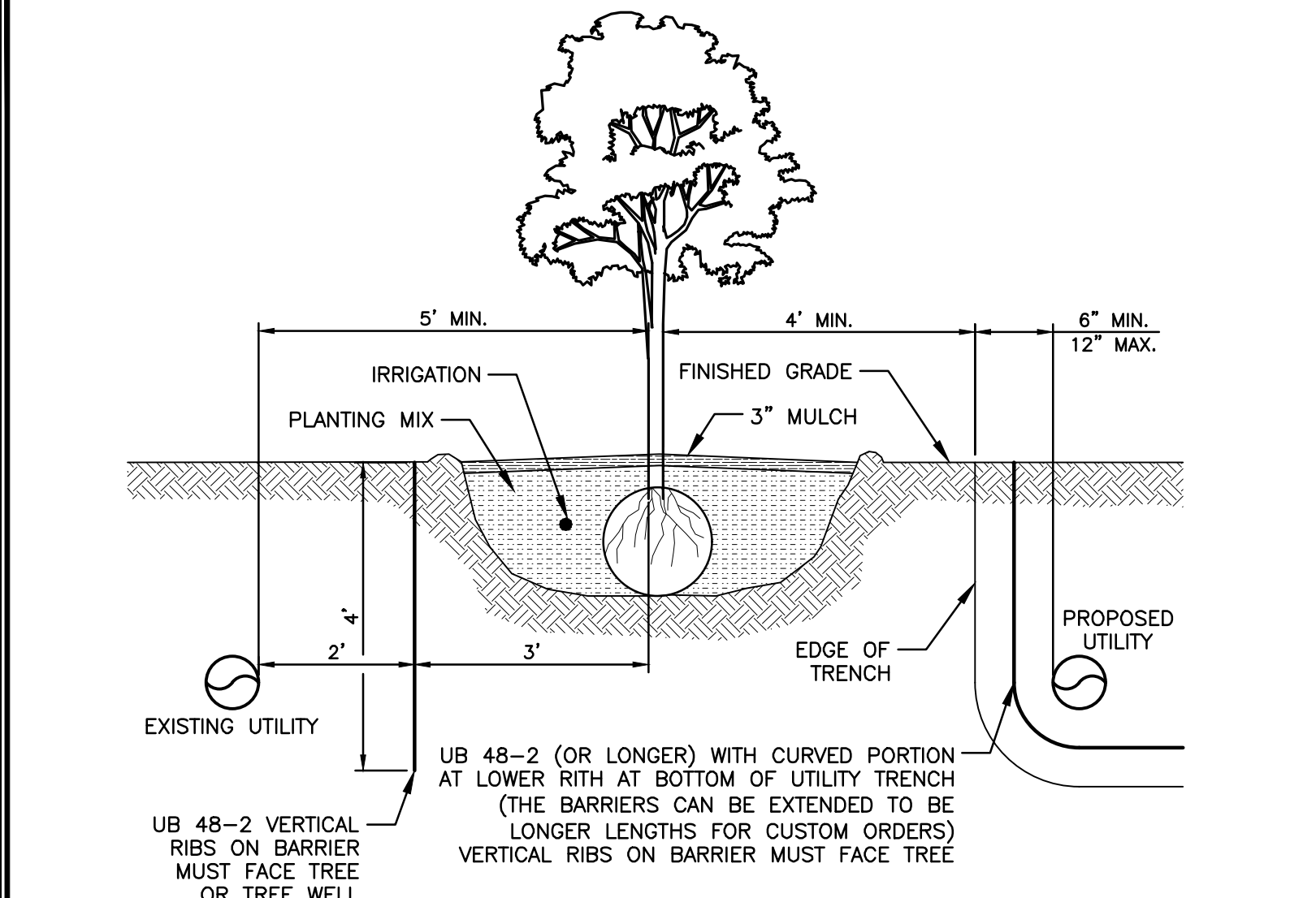
CITY OF AUSTIN AUSTIN WATER UTILITY	WATER SERVICE & METER INSTALLATION - 3", 4" AND 6" COMPOLIND & TURBINE METER INSTALLATIONS	STANDARD NO. 520-AW-06 1 OF 2
Kathi & Flowers 11/19/2015 DATE	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	



CITY OF AUSTIN AUSTIN WATER UTILITY	WATER SERVICE & METER INSTALLATION - 1" & SMALLER METERS	STANDARD NO. 520-AW-02 1 OF 3
Kathi & Flowers 05/18/2016 DATE	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	



CITY OF AUSTIN AUSTIN WATER UTILITY	STANDARD FIRE LINE INSTALLATION WITH OR WITHOUT MASTER METER	STANDARD NO. 520S-19A
Kathi & Flowers 05/18/2016 DATE	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	



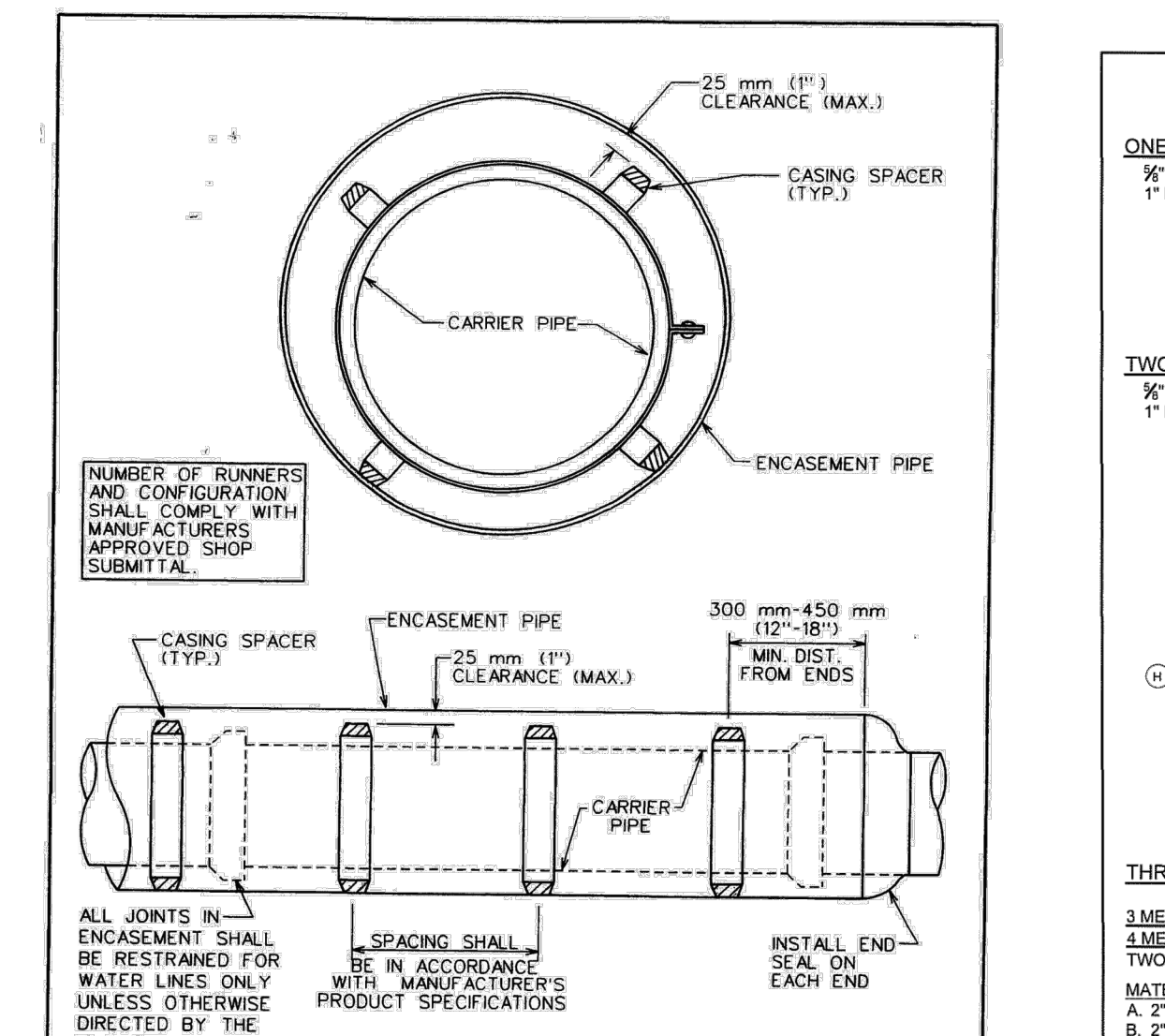
UB 48-2 (OR LONGER) WITH CURVED PORTION AT LOWER RITH AT BOTTOM OF UTILITY TRENCH (THE BARRIERS CAN BE EXTENDED TO BE LONGER LENGTHS FOR CUSTOM ORDERS). VERTICAL RIBS ON BARRIER MUST FACE TREE.

UB 48-2 VERTICAL RIBS ON BARRIER MUST FACE TREE OR TREE WELL.

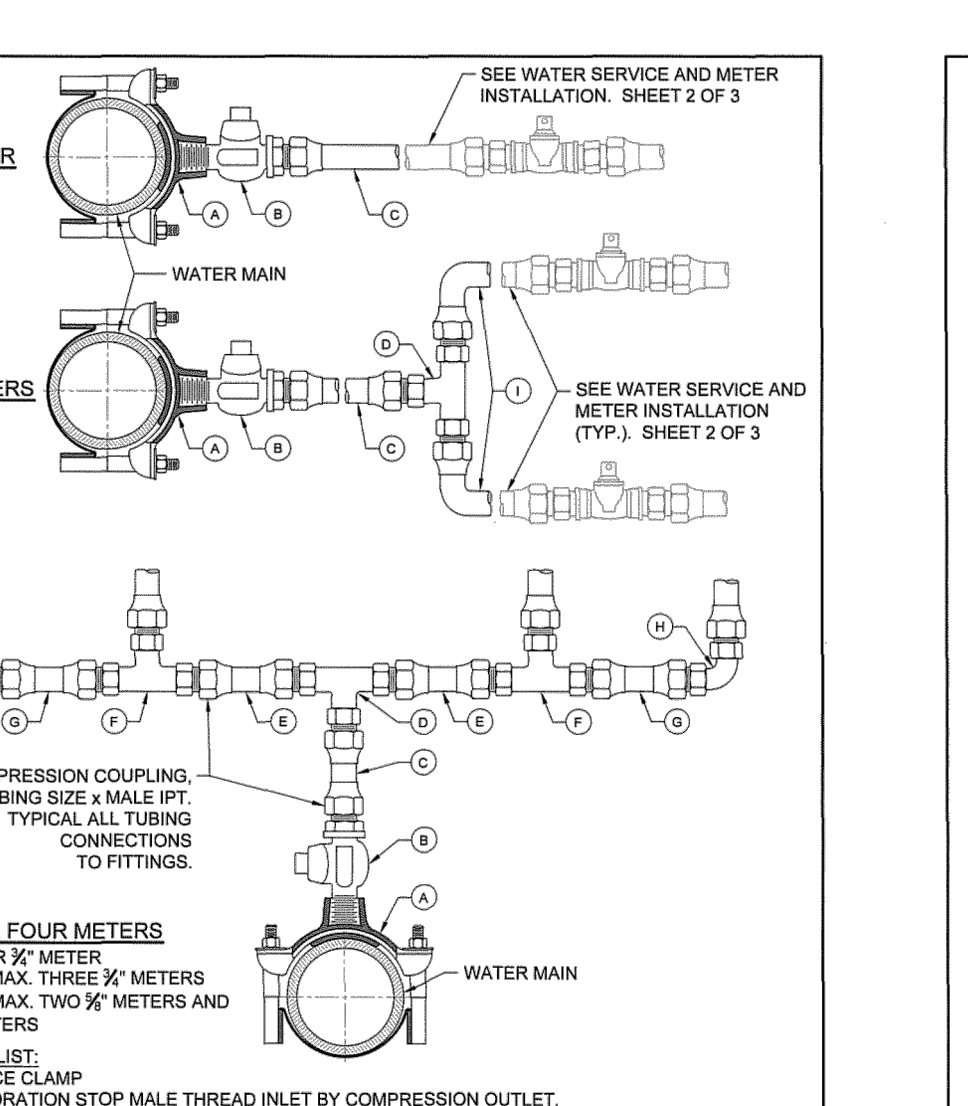
NOTES:

- TREE WELLS SHALL NOT CONFLICT WITH EXISTING OR PROPOSED WATER OR WASTEWATER LINES OR APPURTENANCES AND SHALL NOT BE INSTALLED WITHIN A MINIMUM HORIZONTAL DISTANCE OF FIVE FEET (5') FROM THE OUTSIDE EDGE OF ANY PUBLIC OR PRIVATE UTILITY LINE OR APPURTENANCE TO THE OUTSIDE EDGE OF THE TREE.
- ALL TREES/SHRUBS INSTALLED WITHIN A HORIZONTAL SEPARATION DISTANCE OF TEN FEET (10') MAXIMUM TO FIVE FEET (5') MINIMUM FROM EXISTING OR PROPOSED WATER OR WASTEWATER LINES OR APPURTENANCES, SHALL INCLUDE DEEP ROOT UB 48-2 ROOT BARRIER, OR APPROVED EQUAL, TO BE INSTALLED VERTICALLY, 48" FROM TOP OF GROUND, 2" FROM THE OUTER DIAMETER OF THE UTILITY PIPE/APURTENANCE, AND 8" TO 3" FROM THE OUTSIDE EDGE OF THE TREE/SHRUB.
- ANY PROPOSED UTILITY OR APPURTENANCE INSTALLED WITHIN 10' OF AN EXISTING TREE WILL REQUIRE DEEP ROOT UB 48-2 ROOT BARRIER, OR APPROVED EQUAL, TO BE INSTALLED FOR A LENGTH NECESSARY TO EXTEND BEYOND THE TREES ROOT ZONE.

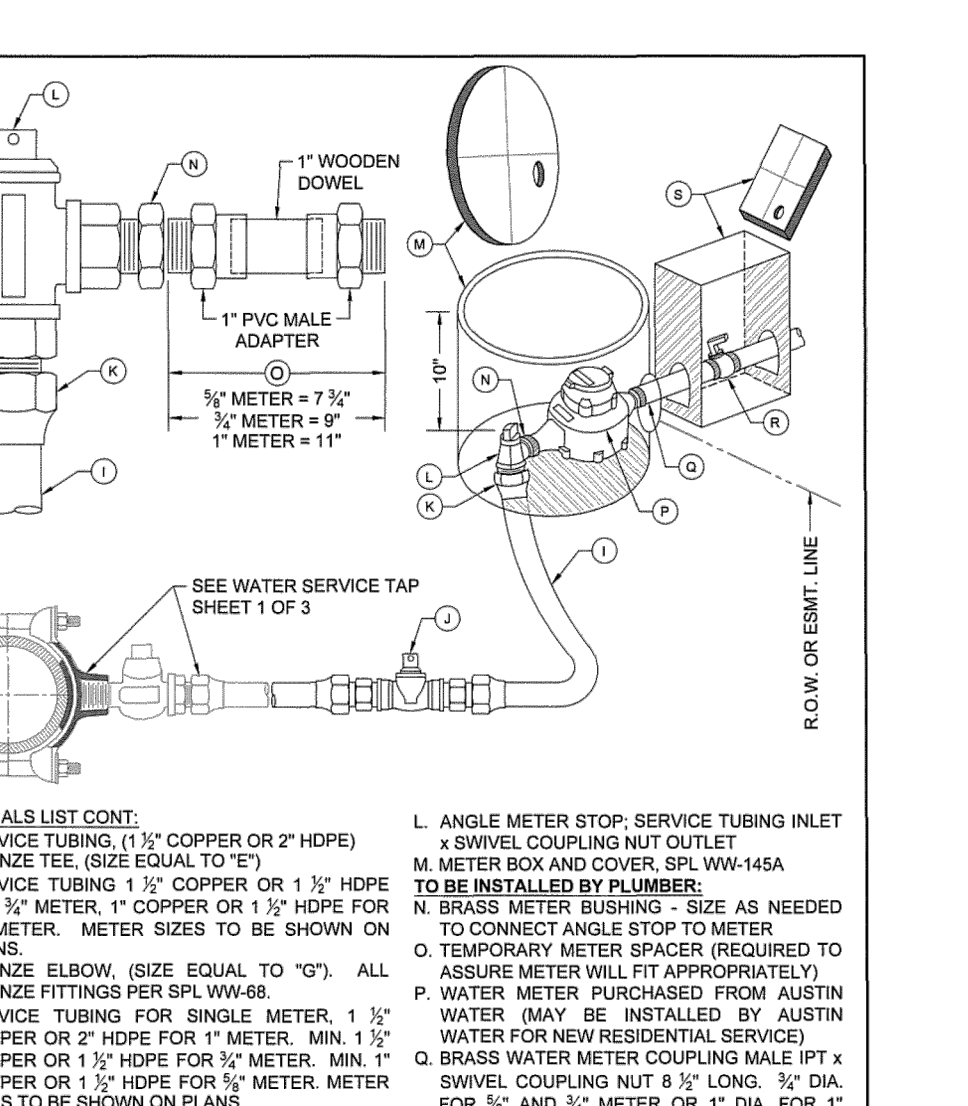
DEEP ROOT ROOT BARRIER UB 48-2 (OR LONGER) DETAIL FOR TREES ADJACENT TO A UTILITY
NOT TO SCALE



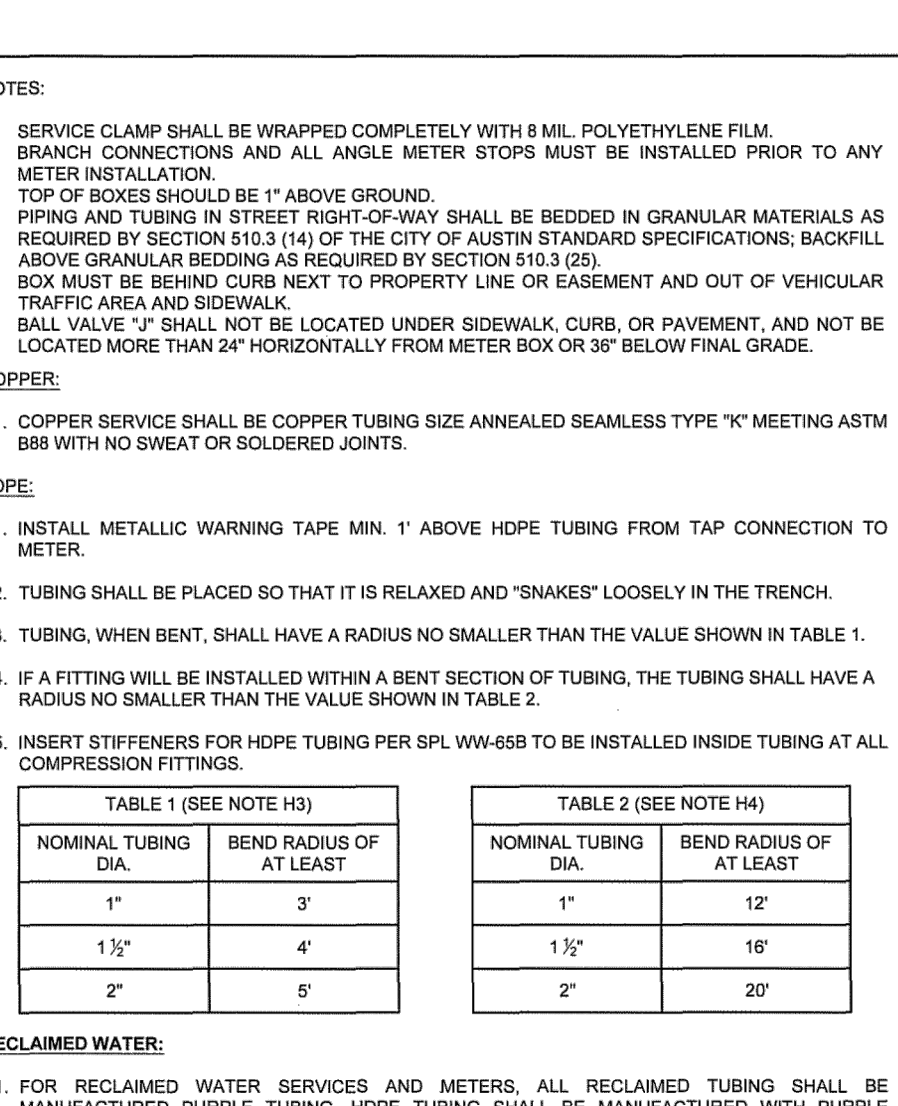
CITY OF AUSTIN AUSTIN WATER UTILITY	ENCASUREMENT DETAIL W/ CASING SPACERS	STANDARD NO. 501S-1
Kathi & Flowers 05/18/2016 DATE	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	



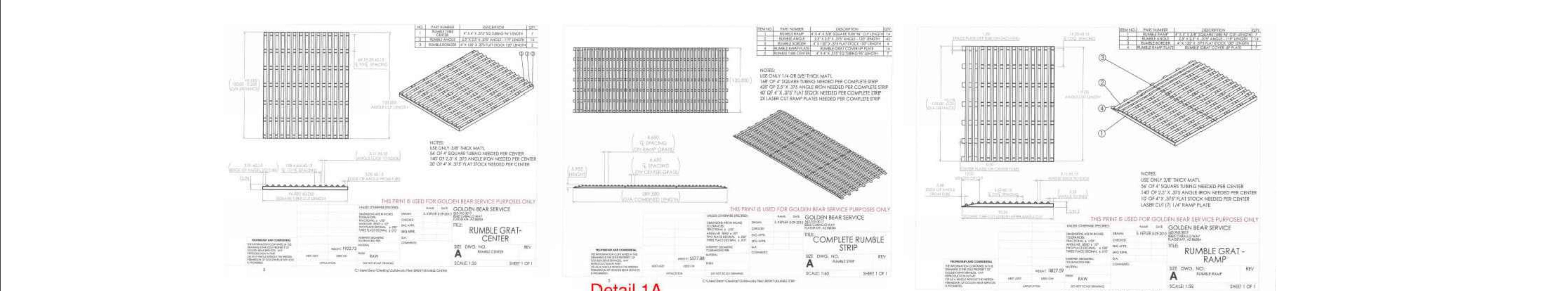
CITY OF AUSTIN AUSTIN WATER	WATER SERVICE & METER INSTALLATION - 1" & SMALLER METERS	STANDARD NO. 520-AW-02 1 OF 3
Kathi & Flowers 05/18/2016 DATE	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	



CITY OF AUSTIN AUSTIN WATER	WATER SERVICE & METER INSTALLATION - 1" & SMALLER METERS	STANDARD NO. 520-AW-02 2 OF 3
Kathi & Flowers 05/18/2016 DATE	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	



CITY OF AUSTIN AUSTIN WATER	WATER SERVICE & METER INSTALLATION - 1" & SMALLER METERS	STANDARD NO. 520-AW-02 3 OF 3
Kathi & Flowers 05/18/2016 DATE	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	



GOLDEN BEAR SERVICE - SEDIMENT REMOVAL MAT

Detail 1A

NOT AUTHORIZED FOR CONSTRUCTION PRIOR TO FORMAL CITY AND MUNICIPAL UTILITY DISTRICT APPROVAL

512.669.5880

WGL INC.

4700 MUELLER BOULEVARD SUITE 300, AUSTIN, TX 78723

IAN WILLIAMS
LICENSED PROFESSIONAL ENGINEER
08/03/2023

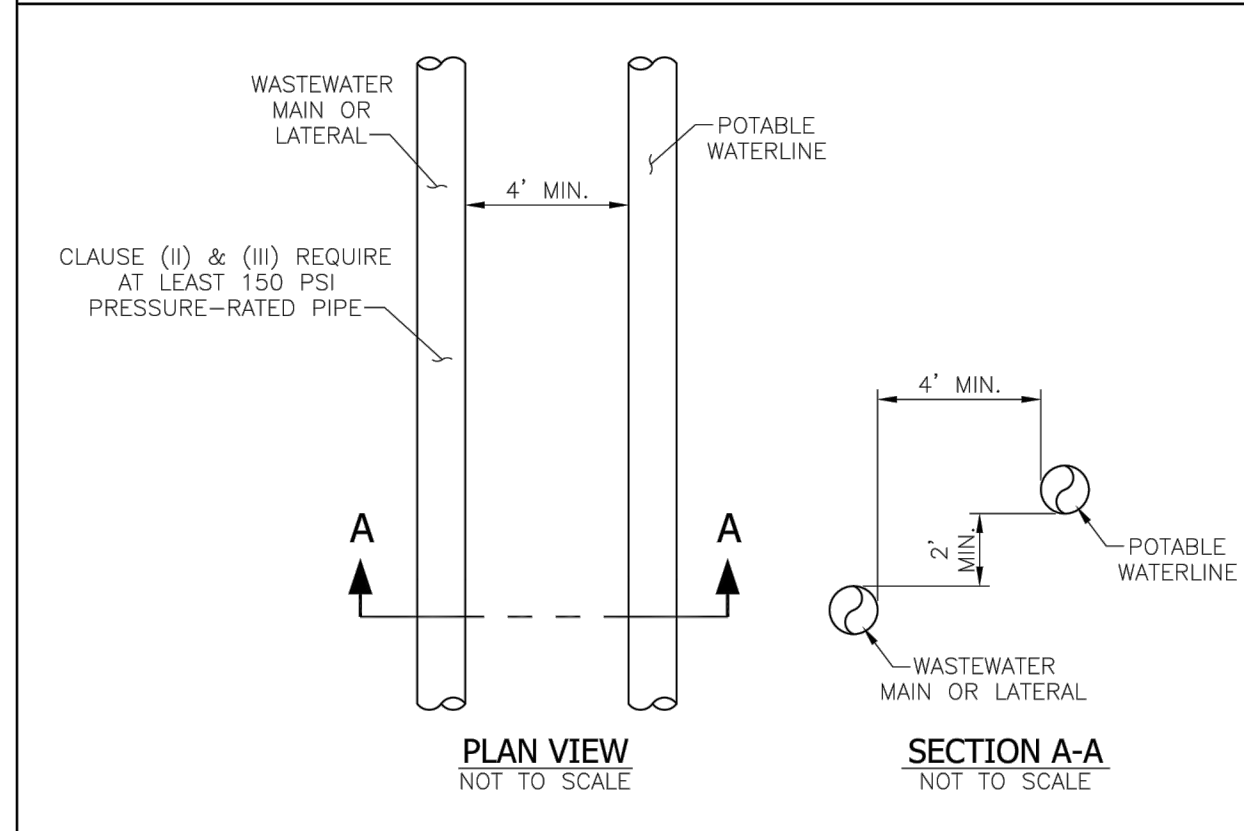
WELLS BRANCH MULTIFAMILY
2800 W WELLS BRANCH PKWY.
AUSTIN, TRAVIS COUNTY, TEXAS 78728

CONSTRUCTION DETAILS-6

CITY APPROVAL STAMP

SHEET
C506
61 OF 63
SP-2023-0082D

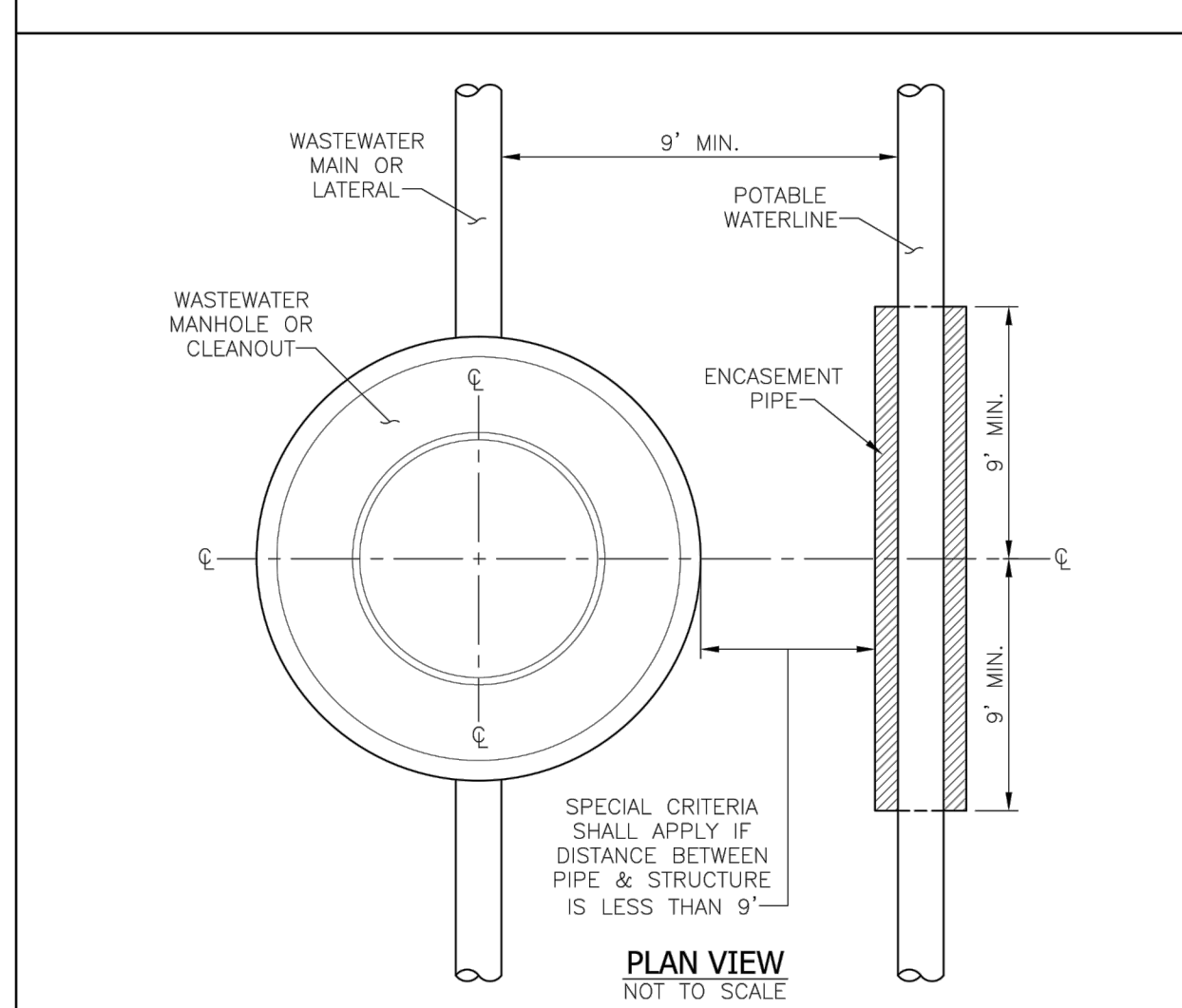
TYPICAL WATER & WASTEWATER PIPE CROSSING SCENARIO DETAILS PER TEXAS ADMINISTRATIVE CODE TITLE 30, PART 1, CHAPTER 290, EFFECTIVE JULY 30, 2015



IN ACCORDANCE WITH TEXAS ADMINISTRATIVE CODE TITLE 30, PART 1, CHAPTER 290, SUBCHAPTER D, RULE 290.44.(e)(4) WHERE NINE-FOOT (9') SEPARATIONS DISTANCE CANNOT BE ACHIEVED, THE FOLLOWING CRITERIA SHALL APPLY:

- (A) NEW WATERLINE INSTALLATION - PARALLEL LINES
- (i) WHERE A NEW POTABLE WATERLINE PARALLELS AN EXISTING, NONPRESSURE OR PRESSURE RATED WASTEWATER MAIN OR LATERAL AND THE LICENSED PROFESSIONAL ENGINEER LICENSED IN THE STATE OF TEXAS IS ABLE TO DETERMINE THAT THE EXISTING WASTEWATER MAIN OR LATERAL IS NOT LEAKING, THE NEW POTABLE WATERLINE SHALL BE LOCATED AT LEAST TWO FEET ABOVE THE EXISTING WASTEWATER MAIN OR LATERAL, MEASURED VERTICALLY, AND AT LEAST FOUR FEET AWAY, MEASURED HORIZONTALLY, FROM THE EXISTING WASTEWATER MAIN OR LATERAL. EVERY EFFORT SHALL BE EXERTED NOT TO DISTURB THE BEDDING AND BACKFILL OF THE EXISTING WASTEWATER MAIN OR LATERAL.
- (ii) WHERE A NEW POTABLE WATERLINE PARALLELS AN EXISTING PRESSURE-RATED WASTEWATER MAIN OR LATERAL AND IT CANNOT BE DETERMINED BY THE LICENSED PROFESSIONAL ENGINEER IF THE EXISTING LINE IS LEAKING, THE EXISTING WASTEWATER MAIN OR LATERAL SHALL BE REPLACED WITH AT LEAST 150 PSI PRESSURE-RATED PIPE. THE NEW POTABLE WATERLINE SHALL BE LOCATED AT LEAST TWO FEET ABOVE THE NEW WASTEWATER LINE, MEASURED VERTICALLY, AND AT LEAST FOUR FEET AWAY, MEASURED HORIZONTALLY, FROM THE REPLACED WASTEWATER MAIN OR LATERAL.
- (iii) WHERE A NEW POTABLE WATERLINE PARALLELS A NEW WASTEWATER MAIN, THE WASTEWATER MAIN OR LATERAL SHALL BE CONSTRUCTED OF AT LEAST 150 PSI PRESSURE-RATED PIPE. THE NEW POTABLE WATERLINE SHALL BE LOCATED AT LEAST TWO FEET ABOVE THE WASTEWATER MAIN OR LATERAL, MEASURED VERTICALLY, AND AT LEAST FOUR FEET AWAY, MEASURED HORIZONTALLY, FROM THE WASTEWATER MAIN OR LATERAL.

NEW WATERLINE INSTALLATION - PARALLEL LINES



IN ACCORDANCE WITH TEXAS ADMINISTRATIVE CODE TITLE 30, PART 1, CHAPTER 290, SUBCHAPTER D, RULE 290.44.(e)(5):

WATERLINE AND WASTEWATER MAIN OR LATERAL MANHOLE OR CLEANOUT SEPARATION.

THE SEPARATION DISTANCE FROM A POTABLE WATERLINE TO A WASTEWATER MAIN MANHOLE OR LATERAL MANHOLE OR CLEANOUT SHALL BE A MINIMUM OF NINE FEET. WHERE THE NINE-FOOT SEPARATION DISTANCE CANNOT BE ACHIEVED, THE POTABLE WATERLINE SHALL BE ENCASED IN A JOINT OF AT LEAST 150 PSI PRESSURE CLASS PIPE AT LEAST 18 FEET LONG AND TWO NOMINAL SIZES LARGER THAN THE NEW CONVEYANCE. 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 SHALL BE CENTERED ON THE CROSSING AND BOTH ENDS SEALED WITH CEMENT GROUT OR MANUFACTURED SEALANT.

WATERLINE AND WASTEWATER MANHOLE OR CLEANOUT SEPARATION

IN ACCORDANCE WITH TEXAS ADMINISTRATIVE CODE TITLE 30, PART 1, CHAPTER 290, SUBCHAPTER D, RULE 290.44.(e)(4)(B):

NEW WATERLINE INSTALLATION - CROSSING LINES

(i) WHERE A NEW POTABLE WATERLINE CROSSES ABOVE A WASTEWATER MAIN OR LATERAL, THE SEGMENT OF THE WATERLINE PIPE SHALL BE CENTERED OVER AND MUST BE PERPENDICULAR TO THE WASTEWATER MAIN OR LATERAL SUCH THAT THE JOINTS OF THE WATERLINE PIPE ARE EQUIDISTANT AND AT LEAST NINE FEET HORIZONTALLY FROM THE CENTERLINE OF THE WASTEWATER MAIN OR LATERAL. WHEN CROSSING AN EXISTING WASTEWATER MAIN OR LATERAL AND IT IS DISTURBED OR SHOWS SIGNS OF LEAKING, THE WASTEWATER MAIN OR LATERAL SHALL BE REPLACED FOR AT LEAST NINE FEET IN BOTH DIRECTIONS (18 FEET TOTAL) WITH AT LEAST 150 PSI PRESSURE-RATED PIPE EMBEDDED IN CEMENT STABILIZED SAND (SEE CLAUSE (v) OF THIS SUBPARAGRAPH) FOR THE TOTAL LENGTH OF ONE PIPE SEGMENT PLUS 12 INCHES BEYOND THE JOINT ON EACH END.

- (i) THE POTABLE WATERLINE SHALL BE AT LEAST TWO FEET ABOVE AN EXISTING, NON-PRESSURE RATED WASTEWATER MAIN OR LATERAL.
- (ii) THE POTABLE WATERLINE SHALL BE AT LEAST SIX INCHES ABOVE AN EXISTING, PRESSURE-RATED WASTEWATER MAIN OR LATERAL.
- (iii) WHERE A NEW POTABLE WATERLINE CROSSES A NEW, NONPRESSURE RATED WASTEWATER MAIN OR LATERAL, THE SEGMENT OF THE WATERLINE PIPE SHALL BE CENTERED OVER AND SHALL BE PERPENDICULAR TO THE WASTEWATER MAIN OR LATERAL SUCH THAT THE JOINTS OF THE WATERLINE PIPE ARE EQUIDISTANT AND AT LEAST NINE FEET HORIZONTALLY FROM THE CENTERLINE OF THE WASTEWATER MAIN OR LATERAL. THE POTABLE WATERLINE SHALL BE AT LEAST TWO FEET ABOVE THE WASTEWATER MAIN OR LATERAL. WHENEVER POSSIBLE THE CROSSING SHALL BE CENTERED BETWEEN THE JOINTS OF THE WASTEWATER MAIN OR LATERAL. THE WASTEWATER PIPE SHALL HAVE A MINIMUM PIPE STIFFNESS OF 115 PSI AT 5.0% DEFLECTION. THE WASTEWATER MAIN OR LATERAL SHALL BE EMBEDDED IN CEMENT STABILIZED SAND (SEE CLAUSE (v) OF THIS SUBPARAGRAPH) FOR THE TOTAL LENGTH OF ONE PIPE SEGMENT PLUS 12 INCHES BEYOND THE JOINT ON EACH END. THE MATERIALS AND METHOD OF INSTALLATION SHALL CONFORM TO ONE OF THE FOLLOWING OPTIONS:

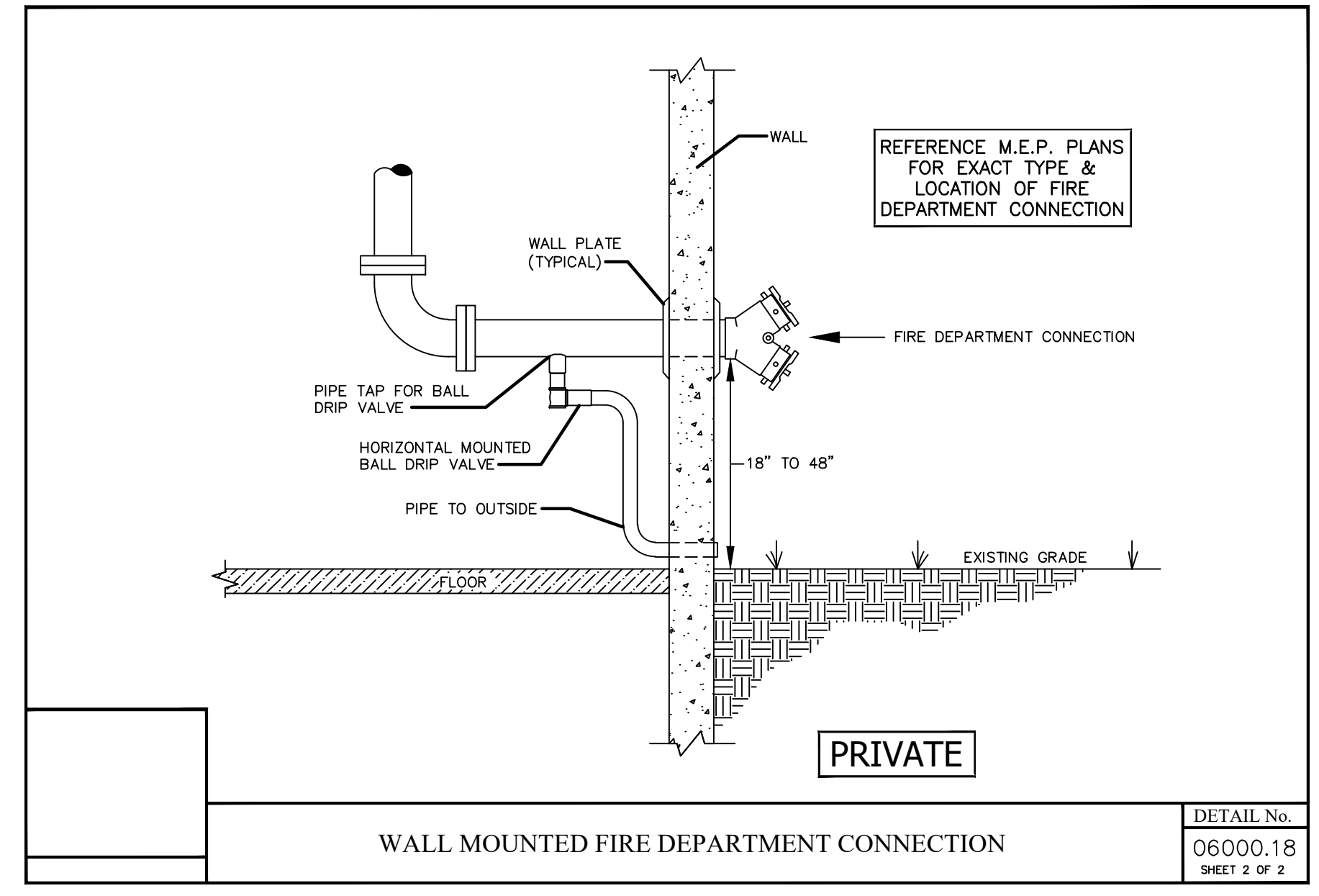
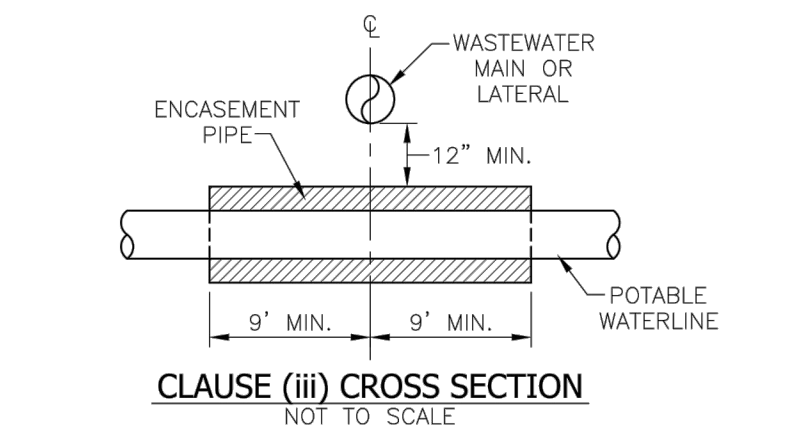
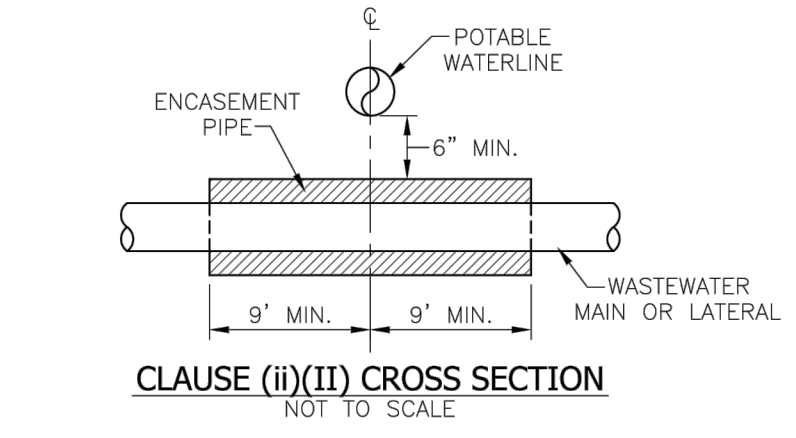
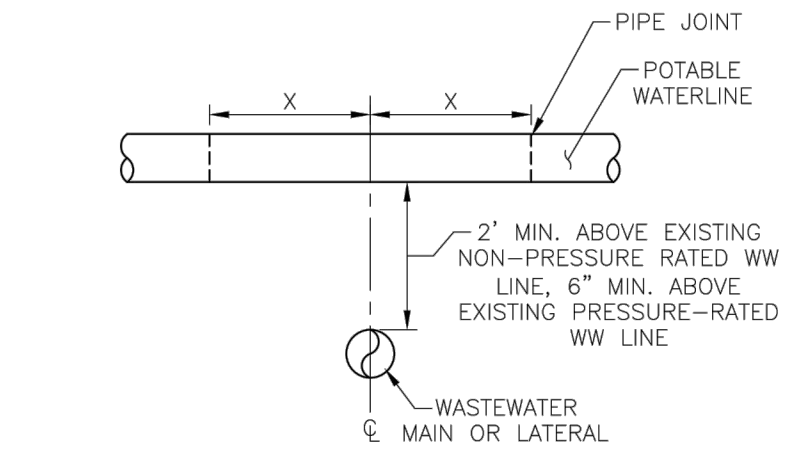
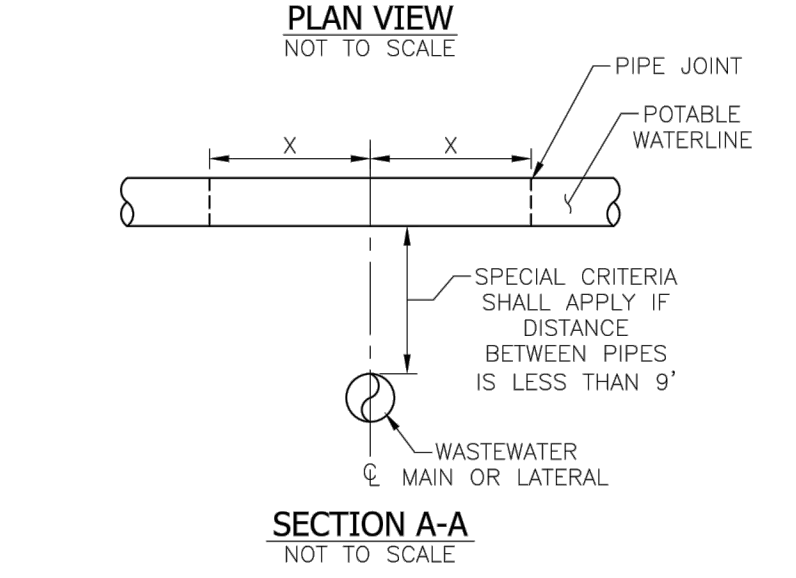
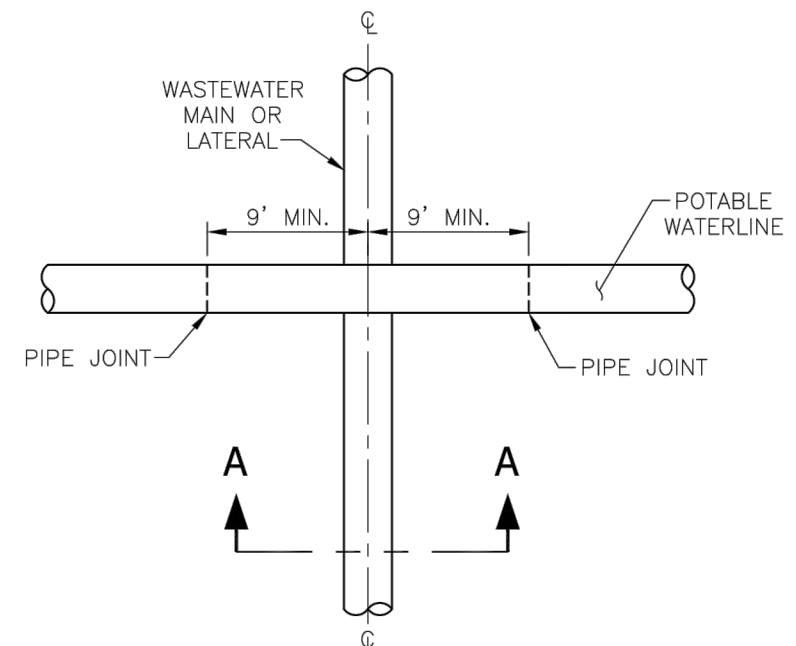
- (i) WITHIN NINE FEET HORIZONTALLY OF EITHER SIDE OF THE WATERLINE, THE WASTEWATER PIPE AND JOINTS SHALL BE CONSTRUCTED WITH PIPE MATERIAL HAVING A MINIMUM PRESSURE RATING OF AT LEAST 150 PSI. AN ABSOLUTE MINIMUM VERTICAL SEPARATION DISTANCE OF TWO FEET SHALL BE PROVIDED. THE WASTEWATER MAIN OR LATERAL SHALL BE LOCATED BELOW THE WATERLINE.
- (ii) ALL SECTIONS OF WASTEWATER MAIN OR LATERAL WITHIN NINE FEET HORIZONTALLY OF THE WATERLINE SHALL BE ENCASED IN AN 18-FOOT (OR LONGER) SECTION OF PIPE. FLEXIBLE ENCASING PIPE SHALL HAVE A MINIMUM PIPE STIFFNESS OF 115 PSI AT 5.0% DEFLECTION. THE SPACE AROUND THE CARRIER PIPE SHALL BE SUPPORTED AT FIVE-FOOT (OR LESS) INTERVALS WITH SPACERS OR BE FILLED TO THE SPRINGLINE WITH WASHED SAND. EACH END OF THE CASING SHALL BE SEALED WITH WATER-TIGHT NON-SHRINK CEMENT GROUT OR A MANUFACTURED WATER-TIGHT SEAL. AN ABSOLUTE MINIMUM SEPARATION DISTANCE OF SIX INCHES BETWEEN THE ENCASEMENT PIPE AND THE WATERLINE SHALL BE PROVIDED. THE WASTEWATER LINE SHALL BE LOCATED BELOW THE WATERLINE.

(iii) WHEN A NEW WATERLINE CROSSES UNDER A WASTEWATER MAIN OR LATERAL, THE WATERLINE SHALL BE ENCASED AS DESCRIBED FOR WASTEWATER MAINS OR LATERALS IN CLAUSE (ii) OF THIS SUBPARAGRAPH OR CONSTRUCTED OF DUCTILE IRON OR STEEL PIPE WITH MECHANICAL OR WELDED JOINTS AS APPROPRIATE. AN ABSOLUTE MINIMUM SEPARATION DISTANCE OF ONE FOOT BETWEEN THE WATERLINE AND THE WASTEWATER MAIN OR LATERAL SHALL BE PROVIDED. WHEN A NEW WATERLINE CROSSES UNDER A WASTEWATER MAIN, THE PROCEDURES IN §217.53(D) OF THIS TITLE (RELATING TO PIPE DESIGN) MUST BE FOLLOWED.

(iv) WHERE A NEW POTABLE WATERLINE CROSSES A NEW, PRESSURE RATED WASTEWATER MAIN OR LATERAL, ONE SEGMENT OF THE WATERLINE PIPE SHALL BE CENTERED OVER AND SHALL BE PERPENDICULAR TO THE WASTEWATER LINE SUCH THAT THE JOINTS OF THE TEXAS COMMISSION ON ENVIRONMENTAL QUALITY PAGE 71 CHAPTER 290 - PUBLIC DRINKING WATER WATERLINE PIPE ARE EQUIDISTANT AND AT LEAST NINE FEET HORIZONTALLY FROM THE CENTER LINE OF THE WASTEWATER MAIN OR LATERAL. THE POTABLE WATERLINE SHALL BE AT LEAST SIX INCHES ABOVE THE WASTEWATER MAIN OR LATERAL. WHENEVER POSSIBLE, THE CROSSING SHALL BE CENTERED BETWEEN THE JOINTS OF THE WASTEWATER MAIN OR LATERAL. THE WASTEWATER PIPE SHALL HAVE A MINIMUM PRESSURE RATING OF AT LEAST 150 PSI. THE WASTEWATER MAIN OR LATERAL SHALL BE EMBEDDED IN CEMENT STABILIZED SAND (SEE CLAUSE (v) OF THIS SUBPARAGRAPH) FOR THE TOTAL LENGTH OF ONE PIPE SEGMENT PLUS 12 INCHES BEYOND THE JOINT ON EACH END.

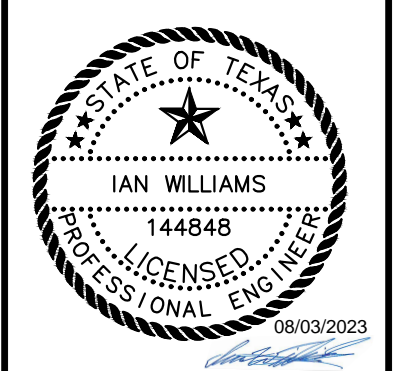
(v) WHERE CEMENT STABILIZED SAND BEDDING IS REQUIRED, THE CEMENT STABILIZED SAND SHALL HAVE A MINIMUM OF 10% CEMENT PER CUBIC YARD OF CEMENT STABILIZED SAND MIXTURE, BASED ON LOOSE DRY WEIGHT VOLUME (AT LEAST 2.5 BAGS OF CEMENT PER CUBIC YARD OF MIXTURE). THE CEMENT STABILIZED SAND BEDDING SHALL BE A MINIMUM OF SIX INCHES ABOVE AND FOUR INCHES BELOW THE WASTEWATER MAIN OR LATERAL. THE USE OF BROWN COLORING IN CEMENT STABILIZED SAND FOR WASTEWATER MAIN OR LATERAL BEDDING IS RECOMMENDED FOR THE IDENTIFICATION OF PRESSURE RATED WASTEWATER MAINS DURING FUTURE CONSTRUCTION.

NEW WATERLINE INSTALLATION - CROSSING LINES



NOT AUTHORIZED FOR CONSTRUCTION PRIOR TO FORMAL CITY AND MUNICIPAL UTILITY DISTRICT APPROVAL

FWM NO. F-10085
WGL
wglinc.com
4700 MUELLER BOULEVARD SUITE 300, AUSTIN, TX 78723
512.669.5580



WELLS BRANCH MULTIFAMILY
2800 W WELLS BRANCH PKWY.
AUSTIN, TRAVIS COUNTY, TEXAS 78728

CONSTRUCTION DETAILS (PRIVATE UTILITIES)

SWMTD 20230809 10:59 PM
NOTIFIED BY: DOMINIC SCORRELL
DATE/TIME: 23/09/2023 09:59 AM
OFFICIAL: web:94971-CH01-03-09-0332330 - CONSTRUCTION DETAILS 07.rvt/1:10x1