ORGANIZED SEWAGE COLLECTION SYSTEM

KIDS ZONE CR307 APPROXIMATELY 325' NORTH OF THE INTERSECTION OF CR 305 AND CR 307 ON THE WEST SIDE OF CR 307 IN JERRELL, TX 76537 JARRELL, WILLIAMSON COUNTY, TEXAS

Prepared For:

DC BROWN, L.P.

PO BOX 292 Salado, TX 76571 254.718.7791

Prepared By:

KIMLEY-HORN AND ASSOCIATES, INC.

501 S. Austin Avenue, Suite 1310 Georgetown, Texas 78626 (512) 418-4522



Firm No. 928 KHA Project No. 067783129

February 19, 2024

Table of Contents

EDWARDS AQUIFER APPLICATION COVER PAGE	Section 1
GENERAL INFORMATION	Section 2
General Information Form	TCEQ-0587
Road Map	
USGS / Edwards Recharge Zone Map	Attachment B
Project Description	
GEOLOGIC ASSESSMENT	Section 3
Geologic Assessment Form	TCEQ-0585
Geologic Assessment Table	Attachment A
Soil Profile and Narrative of Soil Units	Attachment B
Stratigraphic Column	
Narrative of Site Specific Geology	Attachment D
Site Soils Map	
Features' Table	
Organized Sewage Collection System	
Organized Sewage Collection System Application Form	
Engineer's Design Report	
TEMPORARY STORMWATER	
Temporary Stormwater Form	
Spill Response Actions	
Potential Sources of Contamination	
Sequence of Major Activities	
Temporary Best Management Practices and Measures	
Request to Temporarily Seal a Feature	
Structural Practices	
Drainage Area Map	
Temporary Sediment Pond(s) Plans and Calculations	Attachment H
Inspection and Maintenance for BMPs	Attachment I
Schedule of Interim and Permanent Soil Stabilization Practices	
ADDITIONAL FORMS	
Agent Authorization Form	
Application Fee Form	TCEQ-0574
Check Payable to the "Texas Commission on Environmental Quality"	
Core Data Form	
EXHIBITS	
Civil Design Plan Set	Exhibit 1

Kimley *Whorn*

SECTION 1: EDWARDS AQUIFER APPLICATION COVER PAGE

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10814 Jollyville Road, Avallon IV, Suite 200, Austin, TX 78759

512 418 1771

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 <u>30 TAC 213</u>.

Administrative Review

1. <u>Edwards Aquifer applications</u> 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: <u>http://www.tceq.texas.gov/field/eapp</u>.

- 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

1. Regulated Entity Name: Kids Zone CR307				2. Regulated Entity No.: N/A					
3. Customer Name: DC Brown, L.P.				4. Customer No.:					
5. Project Type: (Please circle/check one)	<u>New</u>		Modification		Extension		Exception		
6. Plan Type: (Please circle/check one)	WPAP	CZP	<u>SCS</u>	UST	AST	EXP	EXT	Technical Clarification	Optional Enhanced Measures
7. Land Use: (Please circle/check one)	Resident	tial	<u>Non-residential</u>		8. Site (acres):		e (acres):	5.253	
9. Application Fee:	\$650		10. Permanent BN		MP(s): Batch Detent		Batch Detent	ion Pond	
11. SCS (Linear Ft.):	69		12. AST/UST (No.		. Tanks): N/		N/A		
13. County:	Williams	son	14. Watershed:				Salado Creek		

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

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.)			_X_	
Region (1 req.)	_		_ <u>X</u> _	
County(ies)			_	
Groundwater Conservation District(s)	Edwards Aquifer Authority Barton Springs/ Edwards Aquifer Hays Trinity Plum Creek	Barton Springs/ Edwards Aquifer	NA	
City(ies) Jurisdiction	Austin Buda Dripping Springs Kyle Mountain City San Marcos Wimberley Woodcreek	Austin Bee Cave Pflugerville Rollingwood Round Rock Sunset Valley West Lake Hills	Austin Cedar Park Florence Georgetown _X_Jarrell Leander Liberty Hill Pflugerville Round Rock	

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

I certify that to the best of my knowledge, that the application is complete and accurate. This application is hereby submitted to TCEQ for administrative review and technical review.

Alejandro E. Granados Rico, P.E.

Print Name of Customer/Authorized Agent

Alejandro E. Granda Rico

Signature of Customer/Authorized Agent

2/19/2024 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):	Payable to TCEQ (Y/N):	
Core Data Form Complete (Y/N):	Check: Signed (Y/N):	
Core Data Form Incomplete Nos.:	Less than 90 days old (Y/N):	

SECTION 2: GENERAL INFORMATION

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10814 Jollyville Road, Avallon IV, Suite 200, Austin, TX 78759

512 418 1771

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: Alejandro E. Granados Rico, P.E.

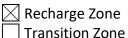
Date: <u>February 19, 2024</u>

Signature of Customer/Agent:

Alejandro E. Grandon River

Project Information

- 1. Regulated Entity Name: Kids Zone CR307
- 2. County: Williamson
- 3. Stream Basin: Salado Creek
- 4. Groundwater Conservation District (If applicable): N/A
- 5. Edwards Aquifer Zone:



6. Plan Type:

WPAP	AST
\boxtimes scs	🗌 UST
Modification	Exception Request

7. Customer (Applicant):

Contact Person: Whitney HicksEntity: DC Brown, L.P.Mailing Address: PO BOX 292City, State: Salado, TXTelephone: 254.718.7791Email Address: whitneyhicks777@yahoo.com

8. Agent/Representative (If any):

Contact Person: Alejandro E. Granados Rico, P.E.Entity: Kimley-HornMailing Address: 501 S. Austin Avenue, Suite 1310City, State: Georgetown, TexasTelephone: 512-418-4522Email Address: alex.granados@kimley-horn.com

9. Project Location:

The project site is located inside the city limits of <u>Jarrell</u>.

The project site is located outside the city limits but inside the ETJ (extra-territorial jurisdiction) of ______.

- 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.

```
Approximately 325' North of the intersection of CR 305 and CR 307 on the west side of 
CR 307 in Jerrell, TX 76537
```

- 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: <u>2/22/2024</u>

- 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

 \boxtimes Previous development

Area(s) to be demolished

15. Existing project site conditions are noted below:

\boxtimes	Existing commercial site
	Existing industrial site
	Existing residential site
	Existing paved and/or unpaved roads
\boxtimes	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.



SCALE: N.T.S.

DIRECTIONS FROM TCEQ HEADQUARTERS TO PROJECT SITE

- 1. HEAD NORTH ON I-35 TOWARDS WACO
- TAKE EXIT 279 HILL LANE
 TURN LEFT ONTO COUNTY ROAD 305
 TURN RIGHT ONTO COUNTY ROAD 307
- 5. THE PROJECT SITE WILL BE ON YOUR LEFT SOUTH OF JARRELL ELEMENTARY #3.

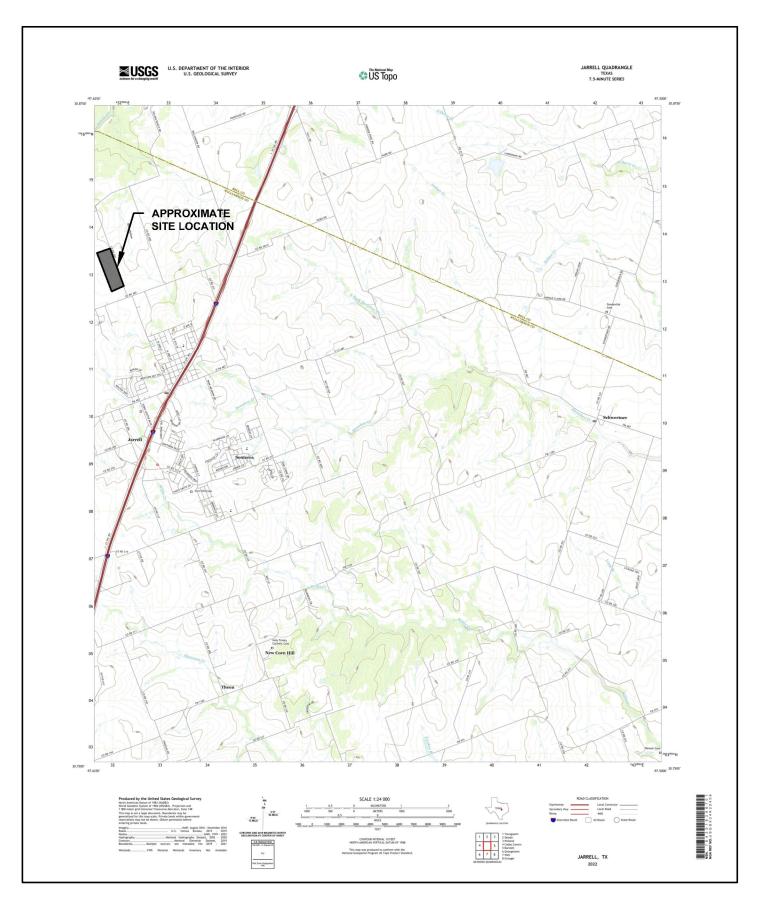
SHEET	Scale:	NTS
	Designed by:	JDR
	Drawn by:	JDR
EXA	Checked by:	JDR
	Date:	JANUARY 2024
	Project No.	069427200

KIDS ZONE JARRELL, TEXAS





ATTACHMENT A - Road Map





ATTACHMENT B – USGS Map

ATTACHMENT C – Project Description

Introduction

The subject site is a largely undeveloped 5.253 acre lot located approximately 325' north of the intersection of CR 305 and CR 307 on the west side of CR 307 in Jerrell, TX 76537 and within the Full Purpose city limits of the City of Jarrell. The subject property will be comprised of a private school and all necessary infrastructure for the school.

The site is not located in the Federal Emergency Management Agency's 100-year floodplain according to FIRM 48491C0275E. The site is located within the Edwards Aquifer Recharge Zone according to TCEQ Edwards Aquifer Map.

Current Tract Conditions

Legal Description

The legal description is: AW0172 AW0172-DAVIS, E. Sur., Acres 4.355 of the Official Public Records of Williamson County, Texas.

Land Use

The lot is zoned for commercial. The site resides within the Full Purpose city limits of the City of Jarrell in Williamson County, Texas.

Existing Drainage Conditions

Under existing conditions, the site has two ridges. One from the elementary school to the north, and the other from the county road 305 to the south. This flow travels to a low point on the site headed to the bar ditch along county road 307 into 5 existing 24" cmp pipes and off the property, eventually discharging into Salado Creek.

Proposed Development

The proposed Kids Zone project includes the construction of 3 Commercial Buildings and a playscape feature. Water and wastewater lines will be designed according to City of Jarrell specifications and connect to City of Jarrell utility services. Access to the site will be through two proposed driveways along CR 307. The project proposes 2.09 acres (40%) of total impervious cover. Water will be treated according to TCEQ requirements through one (1) on site Batch Detention Ponds. The flow will be discharged east of the site and then flow into Salado Creek. Proposed flow conditions will not exceed existing conditions.

Drainage and Water Quality Analysis

Floodplain Information

According to the FEMA Flood Insurance Rate Map Panel No. 48491C0150F for Williamson County, effective December, 20, 2019, no portion of the development lies within the 100-yr floodplain (Zone A).

On-Site Drainage

The proposed site will convey runoff through an underground storm pipe system into one (1) on site Batch detention ponds. The detention pond will release the runoff at or below existing condition flow rates onto rock riprap which will then be conveyed east via 5 existing 24" CMP's then conveyed into Salado Creek . Drainage area maps and calculations are included in the construction set included in the Exhibits Section.

Off-Site Drainage

Under existing conditions, 5.57 acres of offsite water enters the site from the east. The off-site drainage will be conveyed into a proposed on-site batch detention pond.

In proposed conditions, once runoff is released from the detention ponds it will enter 5 existing 24" CMP's that will eventually outfall into Salado Creek.

Detention and Water Quality

Water Quality Best Management Practices (BMP) for Kids Zone will address the water quality requirements for the ultimate area disturbed within this phase. All water quality areas will be treated by a batch detention pond. These drainage areas are to meet all water quality requirements per TCEQ requirements. See Permanent Stormwater Section – Attachment C for a breakdown on TSS calculations.

The batch detention pond requirements used for the purpose of this report are assumed to be based on the requirements outlined by the City of Jarrell Drainage Criteria Manual. To reduce the flow to predeveloped conditions, a detention pond will be constructed as a part of this development phase to reduce flows to existing conditions.

Erosion and Sedimentation Controls

Temporary erosion and sedimentation controls during construction are proposed on the Erosion Control Plan and include: silt fences, inlet protection, construction staging area, concrete washout, rock berm, and a stabilized construction entrance designed to City of Jarrell criteria. The land disturbed during construction, including the staging and stockpile areas, will drain into the proposed on-site storm sewer system where it will be conveyed to the proposed detention and water quality ponds located on-site. The detention ponds will discharge onto proposed rock rip rap into an existing drainage channel on the east side of the site.

SECTION 3: GEOLOGIC ASSESSMENT

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512 418 1771



GEOLOGIC ASSESSMENT FOR THE APPROXIMATELY 5.26-ACRE KIDS ZONE CR307 TRACT

Williamson County, Texas

February 2024

Submitted to: Kimley-Horn 501 S Austin Avenue Suite 1310 Georgetown, Texas 78626

Prepared by: aci environmental consulting 1001 Mopac Circle Austin, Texas 78746 TBPG Firm License No. 50260

OLOG

2/16/2024

aci project #: 22-24-016

aci environmental consulting, LLC

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: Mark T. Adams

Telephone: (512) 347-9000

Date: 2/16/2024

Fax: <u>(512) 306-0974</u>

Representing: <u>aci Group LLC TBPG License No. 50260</u> (Name of Company and TBPG or TBPE registration number)

IARK T. ADAM

Signature of Geologist:

Regulated Entity Name: Kids Zone CR307

Project Information

- 1. Date(s) Geologic Assessment was performed: 2/6/2024
- 2. Type of Project:

\boxtimes	WPAF
\boxtimes	SCS

AST
UST

3. Location of Project:

\boxtimes	Recharge	Zone

Transition Zone

Contributing Zone within the Transition Zone

- 4. X Attachment A Geologic Assessment Table. Completed Geologic Assessment Table (Form TCEQ-0585-Table) is attached.
- 5. 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, InfiltrationCharacteristics and Thickness

Soil Name	Group*	Thickness(feet)
DnB	D	5
DoC	D	1.6

- * 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. X Attachment C Site Geology. A narrative description of the site specific geology including any features identified in the Geologic Assessment Table, a discussion of the potential for fluid movement to the Edwards Aquifer, stratigraphy, structure(s), and karst characteristics is attached.
- 8. 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: $1'' = \underline{40}'$ Site Geologic Map Scale: $1'' = \underline{40}'$ Site Soils Map Scale (if more than 1 soil type): $1'' = \underline{100}$

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 _____ (#) 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.

 \square 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.



TABLE OF CONTENTS

1.0	INTRODUCTION	. 2
2.0	PROJECT INFORMATION	.2
3.0	INVESTIGATION METHODS	.3
4.0	SOILS AND GEOLOGY	.3
5.0	SUMMARY OF FINDINGS	.5
6.0	REFERENCES	. 6

LIST OF ATTACHMENTS

ATTA	CHMENT A
	Site Maps (Figures 1-4)
ATTA	CHMENT B12
	Geologic Table Geologic and Manmade Feature Map (Figure 5) Feature Descriptions and Recommendations
ATTA	CHMENT C 19
	Historic Aerial Photographs



February 2024

Geologic Assessment for the Kids Zone CR307 located in Williamson County, Texas

1.0 INTRODUCTION

The Texas Commission on the Environmental Quality (TCEQ) regulates activities that have the potential to pollute the Edwards Aquifer through the Edwards Aquifer Protection Program. Projects meeting a certain criterion over the Edwards Aquifer Recharge Zone must submit an Edwards Aquifer Protection Plan (EAPP).

The purpose of this report is to identify all potential pathways for contaminant movement to the Edwards Aquifer and provide sufficient geologic information so that the appropriate Best Management Practices (BMPs) can be proposed in the Edwards Aquifer Protection Plan (EAPP). This report complies with the requirements of Title 30, Texas Administrative Code (TAC) Chapter 213 relating to the protection of the Edwards Aquifer Recharge Zone. Per the Rules, the Geologic Assessment must be completed by a Geologist licensed according to the Texas Geoscience Practice Act.

2.0 PROJECT INFORMATION

The Kids Zone CR307, hereafter referred to as the Sit or site, is located at 787 County Road (CR) 307 in the City of Jarrell extraterritorial jurisdiction (ETJ), Williamson County, Texas (**Attachment A, Figure 1**). Pedestrian investigations of the 5.26-acre tract were performed on February 6, 2024, by Marcos Cardenas and Andrew Marlow, GIT, under the supervision of Mark Adams, P.G. with **aci environmental consulting**.

This report is intended to satisfy the requirements for a Geologic Assessment, which shall be included as a component of a Water Pollution Abatement Plan (WPAP). The site is approximately 5.35 acres in total. The scope of the report consists of a site reconnaissance, field survey, and review of existing data and reports. Features identified during the field survey were ranked utilizing the Texas Commission on Environmental Quality (TCEQ) matrix for Edwards Aquifer Recharge Zone features. The ranking of the features will determine their viability as "sensitive" features.



3.0 INVESTIGATION METHODS

The following investigation methods and activities were used to develop this report:

- Review of existing files and literature to determine the regional geology and any known caves associated with the project area;
- Review of past geological field reports, cave studies, and correspondence regarding the existing geologic features on the project area, if available;
- Site reconnaissance by a registered professional geologist to identify and examine caves, recharge features, and other significant geological structures;
- Evaluation of collected field data and a ranking of features using the TCEQ Ranking Table 0585 for the Edwards Aquifer Recharge Zone; and
- Review of historic aerial photographs to determine if there are any structural features present, and to determine any past disturbances on the subject property.

4.0 SOILS AND GEOLOGY

The following includes a site-specific description of the soils, geologic stratigraphy, geologic structure, and karstic characteristics as they relate to the Edwards aquifer. Also included in this section is a review of historic aerials for presence of geologic changes or changes to manmade features in bedrock.

<u>Soils</u>

According to the United States Department of Agriculture (USDA) Natural Resource Conservation Service (NRCS) Web Soil Survey (2024), two soil units occur within the project alignment (**Attachment A, Figure 2**):

• DnB—Denton silty clay, 1 to 3 percent slopes

The Denton component makes up 88 percent of the map unit. Slopes are 1 to 3 percent. This component is on hillslopes on dissected plateaus. The parent material consists of silty and clayey slope alluvium over residuum weathered from limestone. Depth to a root restrictive layer, bedrock, lithic, is 22 to 60 inches. The natural drainage class is well drained. Water movement in the most restrictive layer is moderately low. Available water to a depth of 60 inches (or restricted depth) is low. Shrink-swell potential is moderate. This soil is not flooded. It is not ponded. There is no zone of water saturation within a depth of 72 inches. This soil does not meet the criteria for hydric soils. Hydrologic Soil Group: D.



• DoC–Doss silty clay, moist, 1 to 5 percent slopes

The Doss component makes up 85 percent of the map unit. Slopes are 1 to 5 percent. This component is on hillslopes on dissected plateaus. The parent material consists of residuum weathered from limestone. Depth to a root restrictive layer, bedrock, paralithic, is 11 to 20 inches. The natural drainage class is well drained. Water movement in the most restrictive layer is moderately low. Available water to a depth of 60 inches (or restricted depth) is very low. Shrink-swell potential is moderate. This soil is not flooded. It is not ponded. There is no zone of water saturation within a depth of 72 inches. This soil does not meet the criteria for hydric soils. Hydrologic Soil Group: D.

<u>Geologic Stratigraphy</u>

According to the *Geologic Atlas of Texas, Austin Sheet,* one geologic unit occurs within the project alignment (**Attachment A, Figure 3**). This unit and a description by Barnes (1981) are as follows:

• Georgetown Formation (Kgt)

"limestone and marl; mostly limestone, fine grained argillaceous, nodular, moderately indurated, light gray; some limestone, hard, brittle, thick bedded, white; some shale, marly, soft light gray to yellowish gray; marine megafossils include Kingena wacoensis and Gryphaea washitaensis; thickness 30-80 feet, thins southward"

Site-Specific Stratigraphic Column

Group	Formation	Thickness (Barnes, 1981)					
Washita Group	Georgetown Formation	30-80 feet					

Geologic Structure

The geologic strata associated with the Edwards Aquifer include the Georgetown Limestone Formation of the Washita Group, the Edwards Limestone Group which is interfingered with the Comanche Peak Formation, followed by the Walnut formation, and finally the Glen Rose Formation of the Trinity Group. These Groups dip gently to the



southeast and are a characterized by the Balcones Fault Escarpment, a zone of en echelon normal faults downthrown to the southeast. Locally, the dominant structural trend of faults within the area is 25°, as evidenced by the mapped fault patterns (**Attachment A**, **Figure 4**). Thus, all features that have a trend ranging from 10° to 45° are considered "on trend" and were awarded the additional 10 points in the Geologic Assessment Table.

Karstic Characteristics

In limestone landscapes, karst is expressed by erratically developed cavernous porosity from dissolution of bedrock as water combined with weak acids moves through the subsurface. Karst terrains are typical of the Edwards Limestone, occurring across a vast region of Central Texas, including the Balcones Fault Escarpment. The features produced by karst processes include, but are not limited to, sinkholes, solution cavities, solution enlarged fractures, and caves. These features can eventually provide conduits for fluid movement such as surface water runoff, as "point recharge" to the Edwards Aquifer. Faults and manmade features within bedrock can also provide conduits for point recharge in many cases.

According to Edwards aquifer zone map produced by the TCEQ (2005), the entire subject area is within the northern segment of the Edwards aquifer Recharge Zone. Thus, all karst features identified as sensitive within the project limits have the potential to be point recharge features into the Edwards aquifer.

Review of Historic Aerials

Aerial photographs were reviewed for the site, and it was determined that agricultural activities occurred on the site since the first aerial image dated 1985 (**Attachment C**). The subject area remains relatively unchanged until land grading for the on-site school buildings can be seen in the most recent aerial.

5.0 SUMMARY OF FINDINGS

This report documents the findings of a geologic assessment conducted by **aci environmental consulting** personnel on February 6, 2024. Four manmade features in bedrock were noted on the site. Comprehensive descriptions and recommendations for each feature can be found in **Attachment B**. It was determined that there are no sensitive karst features on the subject property, Four features were man-made features in bedrock.



6.0 REFERENCES

- Barnes, V.E. (project director) et. al., 1981. *Geologic Atlas of Texas, Austin Sheet*. The University of Texas at Austin, Bureau of Economic Geology. Scale 1:250,000
- (SCS) Soil Conservation Survey. 1983. Soil Survey of Williamson County, Texas. United States Department of Agriculture. Texas Agriculture Experiment Station.
- (TCEQ) Texas Commission on Environmental Quality. 2004. Instructions to Geologists for Geologic Assessments on the Edwards Aquifer Recharge/Transition Zones. October 1, 2004. Austin, Texas.
- (TCEQ) Texas Commission on Environmental Quality. 2005. "Edwards Aquifer Protection Program, Chapter 213 Rules - Recharge Zone, Transition Zone, Contributing Zone, and Contributing Zone within the Transition Zone." Map. Digital data. September 1, 2005. Austin, Texas.
- (TWDB) Texas Water Development Board. 2024. Water Data Interactive Groundwater Data Viewer. Accessed on February 12, 2024. Available at: http://www2.twdb.texas.gov/apps/waterdatainteractive/groundwaterdataviewer
- (USDA NRCS) U.S. Department of Agriculture Natural Resources Conservation Service. 2024. WebSoilSurvey.com. Soil Survey Area: Williamson County, Texas. Date accessed: February 14, 2024.

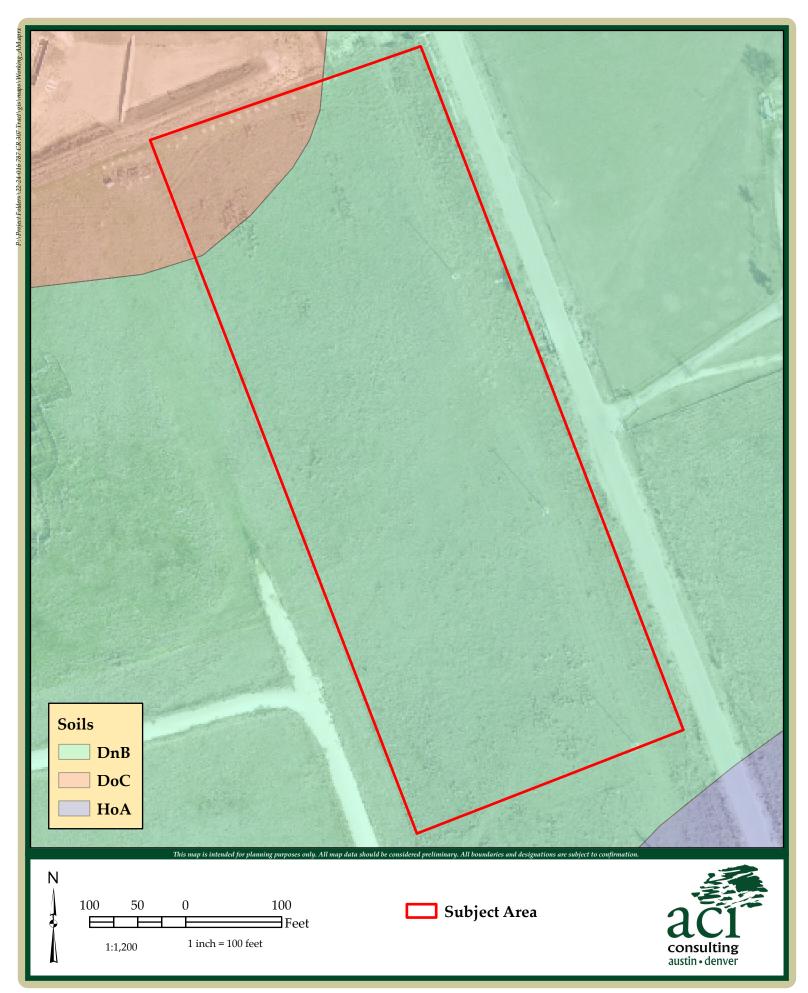


ATTACHMENT A

Site Maps



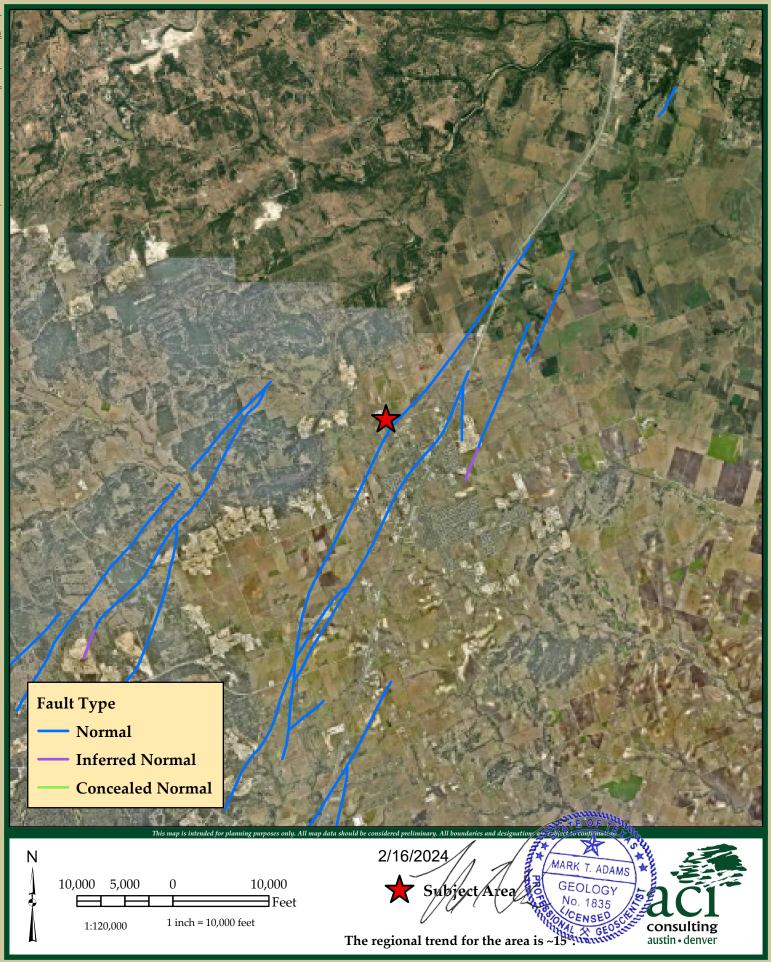
Kids Zone CR307 Geologic Assessment Figure 1: Site Location Map



Kids Zone CR307 Geologic Assessment Figure 2: Site Soils Map



Kids Zone CR307 Geologic Assessment Figure 3: Site Geology Map



Kids Zone CR307 Geologic Assessment Figure 4: Regional Trend Map



ATTACHMENT B

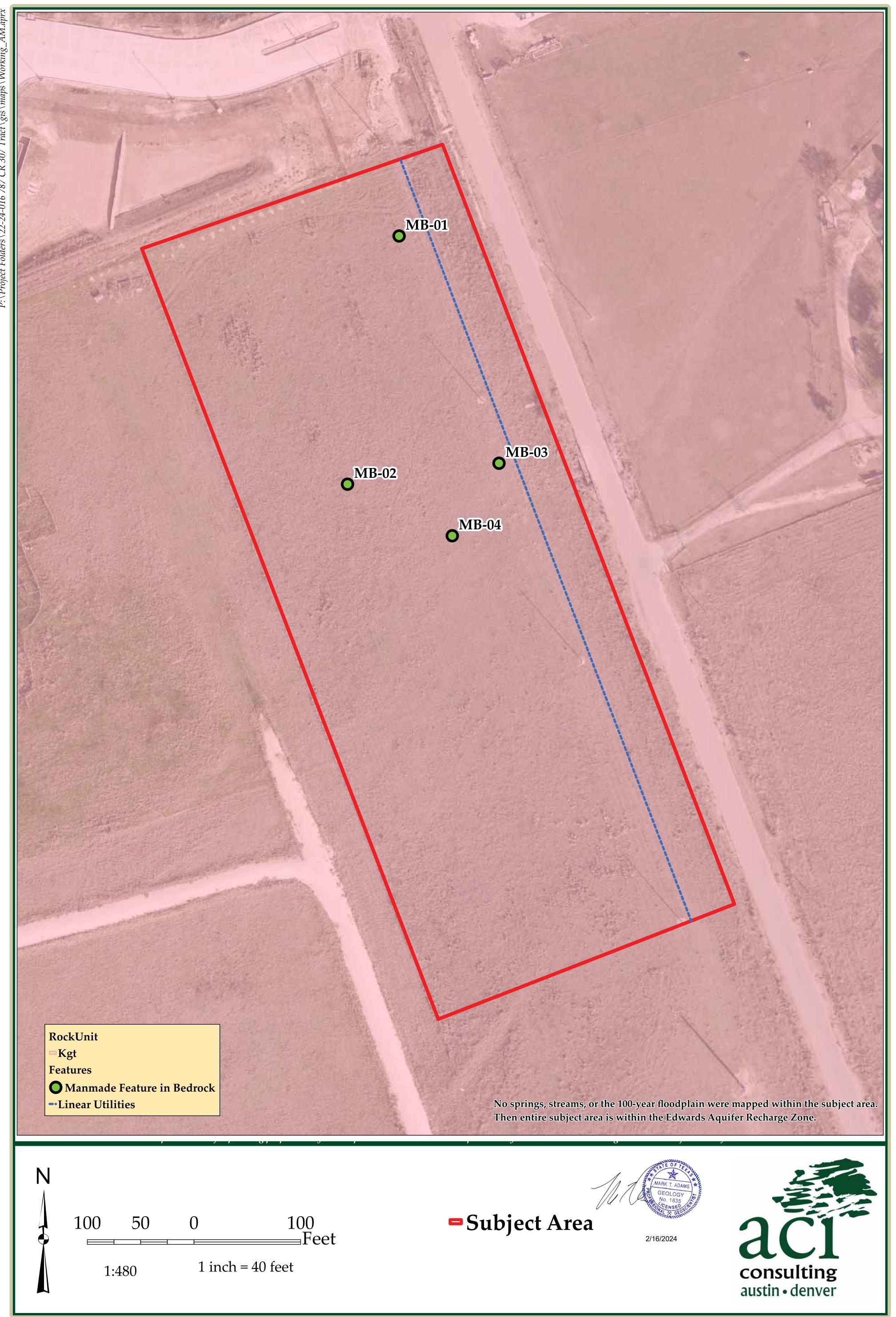
Geologic Table Geologic and Manmade Feature Map (Figure 5) Feature Descriptions and Recommendations

GEOLOGIC ASSESSMENT TABLE						PROJECT NAME: Kids Zo									one CR307						
LOCATION						FEATURE CHARACTERISTICS									EVALUATION PHYSICAL SET					L SETTING	
1A	1B *	1C*	2A	2B	3		4		5	5A	6	7	8A	8B	9	1	0	1	1	12	
FEATURE ID	LATITUDE	LONGITUDE	FEATURE TYPE	POINTS	FORMATION	DIME	NSIONS (FEET)	TREND (DEGREES)	DOM	DENSITY (NO/FT)	APERTURE (FEET)	INFILL	RELATIVE INFILTRATION RATE	TOTAL	SENS	ITIVITY		ENT AREA RES)	TOPOGRAPHY	
						х	Y	Z		10						<40	<u>>40</u>	<1.6	<u>>1.6</u>		
MB-01	30.84113	-97.619138	MB	30	Kgt	-	-	-	-	0	-	-	-	10	40	-	Х	-	Х	Drainage	
MB-02	30.840483	-97.619299	MB	30	Kgt	-	-	-	135	0	-	-	-	10	40	-	Х	-	Х	Hillside	
MB-03	30.840541	-97.618832	MB	30	Kgt	-	-	-	-	0	-	-	-	10	40	-	Х	-	Х	Drainage	
MB-04	30.840365	-97.618991	MB	30	Kgt	-	-	-	-	0	-	-	-	10	40	-	Х	-	Х	Hillside	
	DATUM: NAD 19	83 State Plane 420	03			I															
2A TYPE TYPE 2B POINTS							8A INFILLING														
С	Cave				30		N None, exposed bedrock														
	Solution cavity				20	C Coarse - cobbles, breakdown, sand, gravel															
	Solution-enlarge	d fracture(s)			20		0					•		ks, dark colo							
	Fault				20	F Fines, compacted clay-rich sediment, soil profile, gray or red colors															
-	Other natural be				5	V Vegetation. Give details in narrative description															
MB	Manmade featur	e in bedrock			30		FS Flowstone, cements, cave deposits														
	Swallow hole				30		X Other materials														
	Sinkhole				20																
	Non-karst closed	•			-	5 12 TOPOGRAPHY															
Z	Zone, clustered or aligned features 30 Cliff, Hilltop, Hillside, Drainage, Floodplain, Streambed																				

I have read, I understood, and I have followed the Texas Commission on Environmental Quality's Instructions to Geologists. The

information presented here complies with that document and is a true representation of the conditions observed in the field. My signature certifies that I am qualified as a geologist as defined by 50 PAC Chapter 213. 2/16/2024 Date á MARK T. ADAMS * Sheet __1___ of __1____ GEOLOGY No 183

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



Kids Zone CR307 Geologic Assessment

Figure 5: Geologic Feature Map

aci Project No.: 22-24-016

February 2024



MB-01 GPS: 30.841130, -97.619138

This is a manmade feature in bedrock consisting of a linear set of utility features (electric, communication, sewer, water, and stormwater) running parallel to the northeast property boundary along CR 307. The feature is located in the Georgetown Formation and is positioned along a roadside drainage. Infill material and dimensions are unknown. The feature trends towards the southeast, and a drainage greater than 1.6 acres due to the constructed roadside drainage. In using Figure 1 in Instructions to Geologists, it was determined that this feature has an infiltration rate of 10 points due to its status as a manmade feature in bedrock, in order to bring it to the attention of the project engineer.



Photo of MB-01



MB-02 GPS: 30.840483, -97.619299

This is a manmade feature in bedrock consisting of two portable metal structures. The feature is located in the Georgetown Formation and is positioned along a drainage. Infill material and dimensions are unknown. The feature has no trend and a drainage less than 1.6 acres. In using Figure 1 in Instructions to Geologists, it was determined that this feature has an infiltration rate of 10 points due to its status as a manmade feature in bedrock, in order to bring it to the attention of the project engineer.



Photo of MB-02



MB-03 GPS: 30.840541, -97.618832

This is a manmade feature in bedrock consisting of culvert under CR 307. The feature is located in the Georgetown Formation and is positioned along a drainage. Infill material and dimensions are unknown. The feature had no identified trend and a drainage greater than 1.6 acres. In using Figure 1 in Instructions to Geologists, it was determined that this feature has an infiltration rate of 10 points due to its status as a manmade feature in bedrock, in order to bring it to the attention of the project engineer.



Photo of MB-03



MB-04 GPS: 30.840365, -97.618991

This is a manmade feature in bedrock consisting of an unburied but *in situ* and connected belowground storage tank. The feature is located in the Georgetown Formation and is positioned along a hillside. Infill material and dimensions are unknown. The feature had no trend and a drainage greater than 1.6 acres. In using Figure 1 in Instructions to Geologists, it was determined that this feature has an infiltration rate of 10 points due to its status as a manmade feature in bedrock, in order to bring it to the attention of the project engineer.



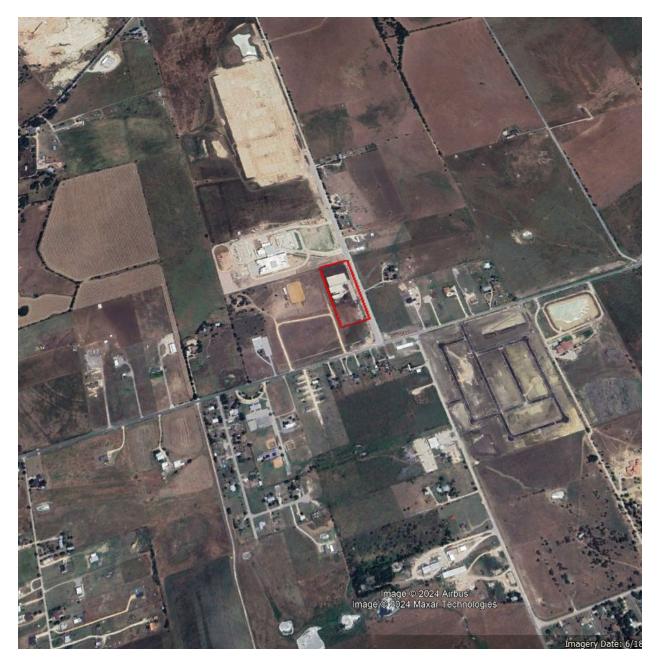
Photo of MB-04



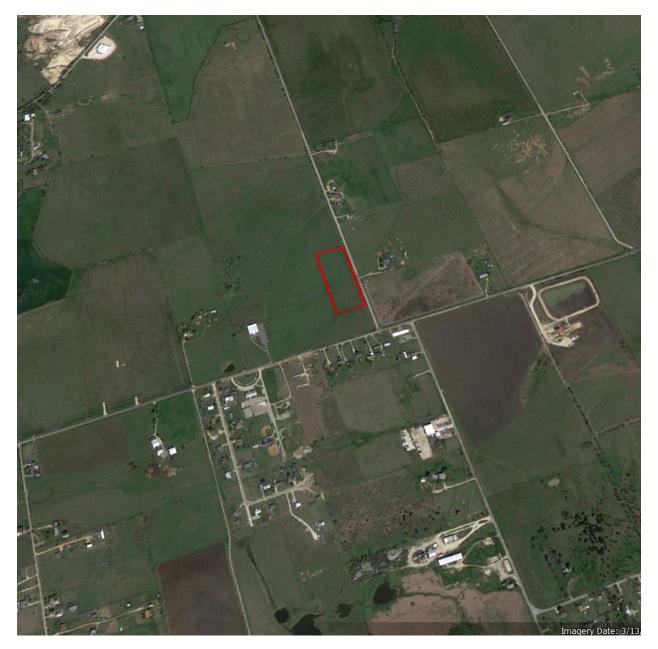
ATTACHMENT C

Historic Aerial Photographs









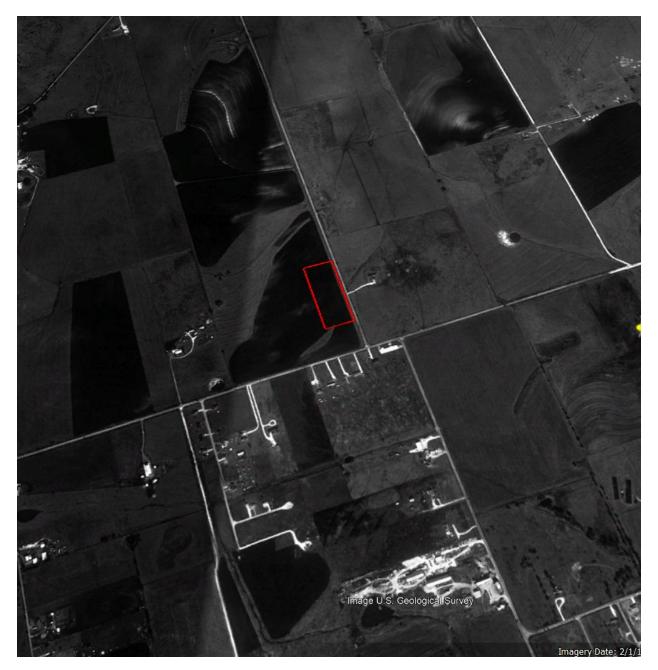




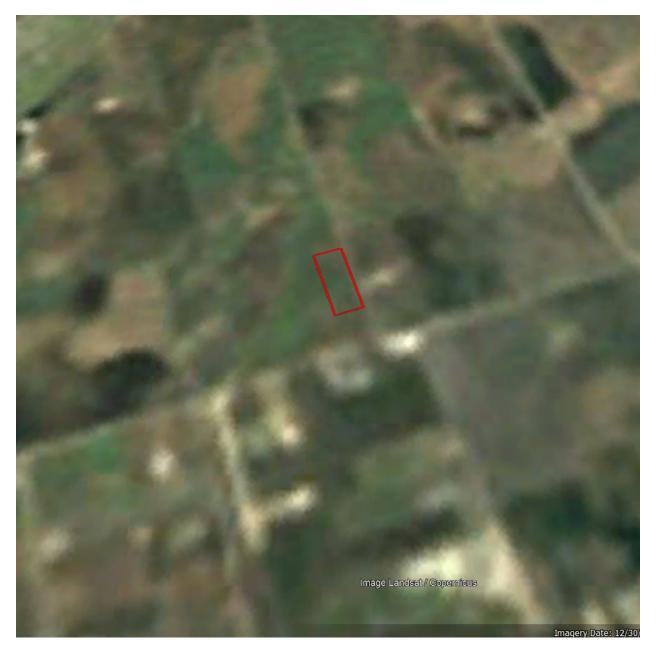












SECTION 4: ORGANIZED SEWAGE COLLECTION SYSTEM

kimley-horn.com

10814 Jollyville Road, Avallon IV, Suite 200, Austin, TX 78759

512 418 1771

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: Kids Zone CR307

 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

 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: <u>Whitney Hicks</u> Entity: <u>DC Brown, L.P.</u> Mailing Address: <u>PO BOX 292</u> City, State: <u>Salado, Texas</u> Zip: <u>76571</u> Telephone: <u>254.718.7791</u> Fax: <u>N/A</u> Email Address: <u>whitneyhicks777@yahoo.com</u> **The appropriate regional office must be informed of any changes in**

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: <u>Alejandro Granados.</u> Texas Licensed Professional Engineer's Number: <u>130084</u> Entity: <u>Kimley-Horn</u> Mailing Address: <u>501 S. Austin Ave. Suite 1310</u> City, State: <u>Georgetown, Texas</u> Zip: <u>78626</u> Telephone: <u>(512) 782-0602</u> Fax: <u>N/A</u> Email Address: <u>alex.granados@kimley-horn.com</u>

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:
 Commercial
 Industrial
 Off-site system (not associated with any development)
 Other: Private School

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

 <u>100</u> % Domestic
 <u>%</u> Industrial
 <u>%</u> Commingled
 <u>2,850</u> gallons/day. This will be addressed by: n/a.
- 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 concurrently, 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

Pipe Diameter(Inches)	Linear Feet (1)	Pipe Material (2)	Specifications (3)
2	69	PVC SDR-26	ASTM D-3034

Total Linear Feet: 69

- (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 <u>Donahoe Creek</u> <u>Wastewater</u> (name) Treatment Plant. The treatment facility is:



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

The City of <u>Jarrell</u> 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)

Line	Shown on Sheet	Station	Manhole or Clean- out?
A - PICP	15	1+68.70	Polyethylene Tank

Table 2 - Manholes and Cleanouts

Line	Shown on Sheet	Station	Manhole or Clean- out?

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

Site Plan Scale: 1" = <u>40</u>'.

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:

 \boxtimes 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

Line	Sheet	Station
n/a	n/a	n/a

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

Line	Sheet	Station
n/a	n/a	n/a

24. \boxtimes 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

Line	Station or Closest Point	Crossing or Parallel	Horizontal Separation Distance	Vertical Separation Distance

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

Line	Manhole	Station	Sheet
n/a	n/a	n/a	n/a

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(I)(2)(H).

Table 7 - Drop Manholes

Line	Manhole	Station	Sheet
n/a	n/a	n/a	n/a

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

Line	Profile Sheet	Station to Station	FPS	% Slope	Erosion/Shock Protection
n/a	n/a	n/a	n/a	n/a	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(I)(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	l Details
-------	---	---	----------	-----------

Standard Details	Shown on Sheet
Lateral stub-out marking [Required]	n/a
Manhole, showing inverts comply with 30 TAC §217.55(l)(2) [Required]	n/a
Alternate method of joining lateral to existing SCS line for potential future connections [Required]	n/a
Typical trench cross-sections [Required]	n/a
Bolted manholes [Required]	n/a
Sewer Service lateral standard details [Required]	n/a
Clean-out at end of line [Required, if used]	n/a
Baffles or concrete encasement for shock/erosion protection [Required, if flow velocity of any section of pipe >10 fps]	n/a
Detail showing Wastewater Line/Water Line Crossing [Required, if crossings are proposed]	n/a
Mandrel detail or specifications showing compliance with 30 TAC §217.57(b) and (c) [Required, if Flexible Pipe is used]	n/a
Drop manholes [Required, if a pipe entering a manhole is more than 24 inches above manhole invert]	n/a

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: <u>12/01/2023</u>
- 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:

F.IANDRO

Alejandro E. Granda Rice

GRANADOS

Print Name of Licensed Professional Engineer: Alejandro Granados, P.E.

Date: concurrently

Place engineer's seal here:

Signature of Licensed Professional Engineer:

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.

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			

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		
>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)
- Rh = hydraulic radius (ft)

S = slope (ft/ft)

ATTACHMENT A - Engineer's Design Report

This Engineering Design Report has been prepared to comply with the Texas Commission on Environmental Quality Design Criteria for Domestic Wastewater Systems, 30 TAC Chapter 217, including 217.10 of Subchapter A, §§217.51 – 217.70 of Subchapter C, and Subchapter D as applicable. Please note that throughout this application, the more stringent of AWU or TCEQ regulations shall apply.

Project Description

Introduction

Kids Zone CR307 is an undeveloped 5.253 acre property located northwest of the intersection of CR 305 and CR 307 and within the city limits of the Jerrell, Texas. The proposed Kids Zone CR307 project includes the construction of a charter school with associated paving, water, wastewater, and drainage improvements to support the project. This project proposes 2.09 acres (40%) of impervious cover.

This project is located within the Salado Creek Watershed. The site is not located in the Federal Emergency Management Agency's 100-year floodplain according to FIRM 48491C0150F. The site is located within the Edwards Aquifer Recharge Zone according to the Edward's Aquifer GIS databases. There are no critical water quality zones and or critical environmental features located on-site. The site consists of 5.253 acres of undeveloped land.

On-site infrastructure is comprised of water, electric, wastewater, and storm sewer lines. The wastewater service outlined in this report will consist of one (1) lines that will convey wastewater from a grinder pump to a tie in location proposed to be built with this development in CR 307. All proposed wastewater lines will be installed within the Edwards Aquifer Recharge Zone (EARZ).

Pipe Design

Flow Design Basis

Service for the build-out of the 5.253 ac charter school site, located at CR 305 and CR 307 will be served by this wastewater system. The City of Jerrell Utility Criteria Manual was used to determine the parameters for the design of the wastewater line system. See Appendix B for the map illustrating the property to be served by this wastewater line system and Appendix C for the calculations (as approved by the City of Austin).

Gravity Pipe and Joint Materials

The proposed pipe to be used for the 2" wastewater line will be ASTM D3034 SDR-26 PVC pipe. The joints for this pipe shall meet the requirements of ASTM D3212. The pipe joints shall have an integral bell and rubber gasket seal with the locked-in type gasket.

Separation Distances for Water and Wastewater

A 26-foot minimum horizontal separation is maintained between all proposed wastewater infrastructure and proposed water lines. See Table 5 – Water Crossings for all water line crossings. It is not feasible to provide nine-feet of vertical separation at waterline crossings due to depth limitations. In most cases, the crossing water line would need to be above the finished grade, or approximately twenty-feet below grade in order to meet the nine-foot separation requirement.

Service Connections

Service connections have been included for the charter school site.

Boring and Tunneling of Crossings

No bore locations are proposed with this site.

Corrosion Potential

PVC pipe will be utilized for or all proposed wastewater lines. No deterioration of the proposed pipe or its associated components is anticipated in this application.

Odor Control

All flows contributing to the proposed wastewater lines are from the charter school development, generating sewage. There are no significant generators of sulfide or other odorous compounds (such as lift stations) upstream of the proposed wastewater lines. Therefore, no odor control measures are proposed for this project.

Active Geologic Faults

Per the Geologic Assessment, no active geologic faults were located within the area of the project.

Capacity Analysis

The capacity of each proposed wastewater segment is calculated below based on Manning's Equation. The calculation for each segment is based on the minimum proposed slope.

$$Q = \frac{1.49}{n} * A * R^{0.67} * S^{0.5}$$

Where:

Qfull = flow rate of fluid in pipe at full flow (ft³/s) (cfs) Q90%= flow rate of fluid in pipe at 90% full flow (ft³/s) (cfs)

A = area of pipe (ft^2) =
$$\frac{\pi * d^2}{4}$$

- d = internal pipe diameter (ft) = Do 2t
- Do = outside diameter (in)
- t = pipe wall thickness (in)
- n = Manning's Roughness coefficient = 0.013
- Rfull = hydraulic radius of pipe (full flow) = A/P = D/4 (ft)

R90%= hydraulic radius of pipe (90% full flow) = 0.9*A/P = 0.9*D/4 (ft)

P = wetted perimeter of pipe = π *D (ft)

S = slope of energy line

Dinos	Length	Slope	Slope	Diam	Diameter		Manning's	Р	А	Rfull	R90%	Qfull	Q90%	Vfull	V90%	
	Pipes	ft	%	ft/ft	in	ft	Material	warming s	ft	sf	ft	ft	cfs	cfs	fps	fps
A	A-1	69	0.50	0.005	2.00	0.17	PVC	0.013	0.52	0.02	0.04	0.04	0.02	0.02	0.96	0.87

Pipe	Minimum Velocity	Maximum Velocity
Туре	fps	fps
2" PVC	0.96	0.96

The proposed wastewater line installed at the slope specified provides capacity in excess of the calculated peak wet weather design flows at full flow and 90% full flow conditions.

Structural Analysis

Flexible pipe is proposed on this project. Structural calculations are provided for the flexible pipe to be installed. The proposed collection system piping is designed to have a minimum structural life of 50 years. As previously mentioned, all proposed PVC pipe shall be cell class 12454 with a tensile strength of 7,000 psi.

Live Load Calculations - no significant live loads are anticipated on any segment of this project.

Buckling Pressure - the following equations utilized for the calculation of buckling pressure are taken from the *Handbook of PVC Pipe: Design and Construction* (Uni-Bell PVC Pipe Association, 2001).

$$Pcr = \frac{2 * E}{(1 - v^{2}) * (DR - 1)^{3}}$$
 (Equation 7.14)

$$Pb = 1.15 * \sqrt{Pcr * E}$$
 (Equation 7.18)

$$H = (Pb^{*}144)/w$$
 (Equation 6.7)

Where:

Pcr =critical buckling pressure (psi)E =modulus of elasticity (psi) = 400,000 psi for PVCv =Poisson's Ratio = 0.38 for PVCDR =dimension ratioPb =buckling pressure in soil (psi)C' =modulus of esil spection (psi) = 2,000 psi for esil spection (psi)

E' = modulus of soil reaction (psi) = 2,000 psi for crushed rock compacted to greater than 95% relative density

H = maximum allowable cover height of soil (ft)

w = weight of soil (lbs/ft³) = 120 lbs/ft³

8" ASTM D3034 SDR-26

$$\mathsf{Pcr} = \frac{2*400,000}{(1-0.38^2)*(26-1)^3}$$

Pcr = 59.84 psi APPLICATION SECTION ATTACHMENT A

Pb = $1.15 * \sqrt{59.84 * 2,000}$ Pb = 397.84 psi H = (397.84*144) / 120 H = 477.41 ft height of soil to cause pipe buckling

8" ASTM D3034 SDR-26

P = 20 * 120

P = 2,400 lbs/ft² or 16.67 psi

8" ASTM D3034 SDR-26

 $\Delta Y/D = \frac{1.0*0.096*16.67 + 0.096*0}{[2(400,000)/(3(26-1)^3)] + 0.061*2,000} * 100$ $\Delta Y/D = 1.15\%$

Wall Crushing Calculations - the following equations utilized for the calculation of wall crushing are taken from the *Handbook of PVC Pipe: Design and Construction* (Uni-Bell PVC Pipe Association, 2001).

$$Py = \frac{\Theta c * 2 * A}{D}$$
 (Equation 7.20)
H = Py / w (Equation 6.7)

Where:

Py = pressure due to soil weight (psi)

 Θc = compressive stress (psi) = 4,000 psi for PVC pipe

A= surface area of the pipe wall (in²/in)

D = mean pipe diameter (in) = Do - t

- t = pipe wall thickness (in)
- H = maximum allowable height of cover (ft)

w = soil density (lbs/ft³) = 120 lbs/ft³

8" ASTM D3034 SDR-26

Do = 8.4- 0.323 = 8.077 in, A = 3.88 in²/ft (0.323 in * 12 in/ft)

$$\mathsf{Py} = \frac{4,000 * 2 * (3.88/12)}{8.077}$$

Py = 320.25 psi

H = (320.25*144) / 120

H = 384.30 ft height of soil to cause wall crushing

APPLICATION SECTION ATTACHMENT A

Strain Calculations - the following equations utilized for the calculation of strain are taken from the *Handbook of PVC Pipe: Design and Construction* (Uni-Bell PVC Pipe Association, 2001).

$$\epsilon h = \frac{P * D}{2 * t * E}$$
(Equation 7.22)
$$\epsilon f = \frac{t}{D} * \frac{[3 * \Delta Y / D]}{[1 - 2 * \Delta Y / D]}$$
(Equation 7.24)
$$\epsilon = \epsilon h + \epsilon f$$
(Equation 7.25)

Where:

εh = maximum strain in the pipe wall due to hoop stress (in/in)

P = prism load pressure due to soil weight (psi)

D = mean pipe diameter (in) = Do - t

t = pipe wall thickness (in)

E = modulus of elasticity (psi) = 400,000 psi for PVC

εf = maximum strain in the pipe due to ring deflection or flexure (in/in)

 $\Delta Y/D$ = long term deflection

ε = maximum combined strain in pipe wall (in/in)

8" ASTM D3034 SDR-26

$$\epsilon h = \frac{16.67 * 8.077}{2 * 0.323 * 400,000}$$

$$\epsilon h = 0.00052 \text{ in/in}$$

$$\epsilon f = \frac{0.323}{8.077} * \frac{[3*0.0115]}{[1-2*0.0115]}$$

$$\epsilon f = 0.0014 \text{ in/in}$$

$$\epsilon = 0.00035 + 0.0014$$

$$\epsilon = 0.00175 \text{ in/in}$$

Per the *Handbook of PVC Pipe: Design and Construction* (Uni-Bell PVC Pipe Association, 2001), deflection test samples have experienced a pipe wall strain of up to 0.025 in/in and have not "showed any failures or cracks". The calculated strains for this project are significantly below this level, so no failure due to strain is anticipated.

Pipe Stiffness Calculation - the following equations utilized for the calculation of pipe stiffness are taken from the *Handbook of PVC Pipe: Design and Construction* (Uni-Bell PVC Pipe Association, 2001).

$$Ps = 4.47 * \frac{E}{(DR-1)^3}$$

(Equation 7.3)

Where:

Ps = pipe stiffness (psi)

DR = Dimensional Ration = Do / t

Do = Outside diameter (in)

t = pipe wall thickness (in)

E = modulus of elasticity (psi) = 400,000 psi for PVC

8" ASTM D3034 SDR-26

DR = 26

$$\mathsf{Ps} = 4.47 * \frac{400,000}{(26-1)^3}$$

Ps = 115 psi

Criteria for Laying Pipe

Pipe Embedment

Bedding and initial backfill material selection and installation will be carried out in accordance with applicable governing procedures contained within the *City of Austin Standard Specifications for Pipes and Appurtenances, TCEQ Chapter 217.54(a),* and in accordance with the City of Jerrell Detail. Bedding material shall be in accordance with City of Austin Standard Specification Item 510, Section 510.3(14). Compacted backfill, from a point one (1) foot above the pipe to the finished surface, will be comprised of suitable material removed during excavation, as described in Item 510, Section 510.2(6). Brush, debris, and junk shall not be utilized as a backfilling material.

Compaction

Trench compaction will be carried out in accordance with the *City of Austin Standard Specifications for Pipes and Appurtenances* and *TCEQ Chapter 217.54(b)*. Proper placement of the backfill and compaction per City of Austin requirements will not negatively impact the structural integrity of the pipe.

Envelope Size

Envelope size will be in accordance with *City of Austin Standard Specifications for Pipes and Appurtenances* and *TCEQ Chapter 217.54(c)*. Per the City of Jerrell Detail, a minimum of 6-inch and maximum of 12-inch space shall be allowed between the outside diameter of the pipe and the trench wall and floor. In addition, a minimum of 6-inch and maximum of 12-inch space shall be allowed between the outside diameter of the pipe bell and the trench wall. The embedment and initial backfill must be installed to a minimum depth of 12 inches above the crown of the pipe.

Trench Width

Trench width will be in accordance with the City of Jerrell Detail and *TCEQ Chapter 217.54(d)*. Per the City of Jerrell Detail, a minimum of 6-inch and maximum of 12-inch space shall be allowed between the

APPLICATION SECTION ATTACHMENT A

outside diameter of the pipe and the trench wall and floor. In addition, a minimum of 6-inch and maximum of 12-inch space shall be allowed between the outside diameter of the pipe bell and the trench wall. These limits shall be maintained to protect the structural integrity of the pipe and will be sufficient for the placement of materials and use of compaction equipment in the pipe zone.

Manholes and Related Structures

Manhole and Appurtenance Placement

Manholes are located at all points of change in alignment or grade and at the intersection of all pipes for this project.

Manhole Stub Outs

No manholes are being placed at the end of a line that may be extended in the future, so no stub outs are included on this project.

Cleanouts

There are cleanouts proposed on site, but not as part of this SCS application.

Manhole Material

There are no proposed manholes.

Manhole Spacing

Manhole spacing meets the requirements of Table C.2 in TCEQ Chapter 217.55.

Manholes within Waterways

No manholes will be located within flow paths of waterways or in areas where water ponding is probable.

Manhole Covers, Inlets, and Bases

No manholes are proposed as part of this SCS application.

Manhole Steps

No steps shall be allowed in any proposed manholes.

Manhole Connections

Manhole-pipe connections shall be watertight per City of Austin pipe to manhole connector SPL WW-146D. See detail 506S-10 on sheet 27 of 27.

Manhole Venting

There are no proposed manholes as part of this application.

Trenchless Pipe Installation

There will be no trenchless pipe installation.

Testing Requirements for Gravity Pipes

Infiltration/Exfiltration and Low Pressure Air Test

All testing will be in compliance with Texas Administrative Code title 30 Part 1 Chapter 217 Subchapter C 217.57 and 217.58. See TCEQ note on Sheet 2.

Infiltration and exfiltration or low pressure air testing in accordance with ASTM C828, C924 or F1417 are required for all proposed gravity wastewater pipe as specified in the project notes, sheet 2. The requirements specified are in accordance with *TCEQ Chapter 217.57*.

Deflection Testing

For the proposed 2-inch wastewater line, deflection shall be measured with a rigid mandrel per the project detail on sheet 2. The requirements specified are in accordance with *TCEQ Chapter 217.57*.

Owner Inspection

The Owner shall have an inspector onsite during construction of the project. A professional engineer registered in the state of Texas (Alex Granados, P.E.) shall be present to witness the testing of the wastewater lines.

Testing Requirements for Manholes

Manhole testing in accordance with *TCEQ Chapter 217.58* is specified in the project notes, sheet 2. Manholes will be tested after assembly and backfilling for leakage by either a hydrostatic test and/or a vacuum test.

For the vacuum test, all lift holes and exterior joints shall be plugged with an approved non-shrink grout and no grout shall be placed in horizontal joints before testing. All pipes entering the manhole shall be plugged, taking care to securely brace the plugs from being drawn into the manhole. Stubouts, manhole boots and pipe plugs shall be secured to prevent movement while the vacuum is drawn. A minimum 60inch/lb torque wrench shall be used to tighten the external clamps that secure the test cover to the top of the manhole. The test head shall 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 shall be drawn and the vacuum pump shut off. With the valves closed, the time shall be measured for the vacuum to drop to 9 inches of mercury. The manhole shall pass if the time is greater than 2 minutes. If the manhole fails the initial test, necessary repairs shall be made with a non-shrink grout while the vacuum is still being drawn. If the manhole fails a second time, repairs should again be made and the manhole shall be tested by means of a hydrostatic test. If any manhole fails the hydrostatic test, after failing the vacuum test twice, the contractor should 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 until it passes.

Inspection will be provided during critical phases of construction by a qualified inspector under the direction of a P.E. (Alex Granados, P.E.). Critical phases of construction are deemed at a minimum to include testing of pipe and manholes for leakage, and testing of flexible pipe for installed deflection. TCEQ approval letters for plans and specifications review contain the requirement that once the project is completed, a P.E. registered in the state of Texas (Alex Granados, P.E.) much certify that the construction was performed substantially in accordance with the approved plans and specifications.

APPLICATION SECTION ATTACHMENT A

Notification and Inspection

TCEQ Chapter 213 requires that the applicant must provide written notification to the Austin regional office at least 48 hours prior to commencing construction on the regulated activity. If any sensitive feature is discovered during construction then the work shall be suspended immediately and the Austin regional office shall be notified to then determine the appropriate course of action. All other notification and inspection requirements identified in *TCEQ Chapter 213.5(c)* shall be met.

SECTION 5: TEMPORARY STORMWATER SECTION

kimley-horn.com

10814 Jollyville Road, Avallon IV, Suite 200, Austin, TX 78759

512 418 1771

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: Alejandro E. Granados Rico, P.E.

Date: February 19, 2024

Signature of Customer/Agent:

Alejandro E. Grandon Rico

Regulated Entity Name: Kids Zone CR307

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.
	\bigotimes 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.
S	equence of Construction

- 5. X 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.
 - \boxtimes 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. \times 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: <u>N/A</u>

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. X 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:

\boxtimes	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. \square 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.

ATTACHMENT A - Spill Response Actions

If there is an accidental spill on site, the contractor shall respond with appropriate action. The contractor will be required to contact the owner and in turn the owner will contact the TCEQ in the event of a spill on site. In addition to the following guidance, reference the latest version of TCEQ's Technical Guidance Manual (TGM) RG-348 Section 2.4.16.

Cleanup

- Clean up leaks and spills immediately.
- 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.
- 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

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

- Contain spread of the spill.
- Notify the project foreman immediately.
- 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.
- If the spill occurs in dirt areas, immediately contain the spill by constructing an earthen dike. Dig up and properly dispose of contaminated soil.
- 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:

• 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.

- 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.
- Notification should first be made by telephone and followed up with a written report.
- 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.
- Other agencies which may need to be consulted include, but not limited to, the City Police Department, County Sheriff Office, Fire Departments, etc.

ATTACHMENT B - Potential Sources of Contamination

Potential Source: Oil, grease, fuel, and hydraulic fluid contamination from construction equipment and vehicle dripping.

Preventative Measures: Vehicle maintenance will be performed within the construction staging area or a local maintenance shop.

Potential Source: Miscellaneous trash and litter from construction workers and material wrappings.

Preventative Measures: Trash containers will be placed throughout the site to encourage proper disposal of trash.

Potential Source: Silt leaving the site.

Preventative Measures: Contractor will install all temporary best management practices prior to start of construction including the stabilized construction entrance to prevent tracking onto adjoining streets.

Potential Source: Construction Debris.

Preventative Measures: Construction debris will be monitored daily by contractor. Debris will be collected weekly and placed in disposal bins. Situations requiring immediate attention will be addressed on a case by case basis.

Potential Source: Soil and Mud from Construction Vehicle tires as they leave the site.

Preventative Measures: A stabilized construction exit shall be utilized as vehicles leave the site. Any soil, mud, etc. carried from the project onto public roads shall be cleaned up within 24 hours.

Potential Source: Sediment from soil, sand, gravel and excavated materials stock piled on site.

Preventative Measures: Silt fence shall be installed on the down gradient side of the stock piled materials. Reinforced rock berms shall be installed at all downstream discharge locations.

Potential Source: Portable toilet spill.

Preventative Measures: Toilets on the site will be emptied on a regular basis by the contracted toilet company.

ATTACHMENT C - Sequence of Major Activities

The installation of erosion and sedimentation controls shall occur prior to any excavation of materials or major disturbances on the site. The sequence of major construction activities will be as follows. Approximate acreage to be disturbed is listed in parentheses next to each activity.

Intended Schedule or Sequence of Major Activities:

- 1. Construct Access (0.05 Acres)
- 2. Installation of Temporary BMPs (<u>5.253</u> Acres)
- 3. Initiate Grubbing and Topsoil Stripping of Site (<u>5.253</u> Acres)
- 4. Rough Subgrade Preparation (earthwork, grading, street and drainage excavation and embankment) (<u>5.253</u> Acres)
- 5. Wet and Dry Utility Construction (<u>.1</u> Acres)
- 6. Final Subgrade Preparation (Acres)
- 7. Installation of Base Materials (____ Acres)
- 8. Concrete (foundations, curbs, flatwork) (<u>1.54</u> Acres)
- 9. Building Construction (<u>.75</u> Acres)
 10. Paving Activities (<u>1.56</u> Acres)
- 11. Topsoil, Irrigation and Landscaping (<u>5.253</u> Acres)
- 12. Site cleanup and Removal of Temporary BMPs (<u>5.253</u> Acres)

Maximum total construction time is not expected to exceed 12 months.

ATTACHMENT D - Temporary Best Management Practices and Measures

- A. No storm water originates up gradient that impacts the site.
- **B.** Temporary 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 silt from escaping the construction area. A temporary construction entrance will be placed on site to reduce vehicle "tracking" onto adjoining streets. A concrete washout pit will be used to collect all excess concrete during construction.

BMPs for this project will protect surface water or groundwater from turbid water, phosphorus, sediment, oil, and other contaminants, which may mobilize in storm water flows by slowing the flow of runoff to allow sediment and suspended solids to settle out of the runoff.

Practices may also be implemented on site for interim and permanent stabilization. Stabilization practices may include but are not limited to: establishment of temporary vegetation, establishment of permanent vegetation, mulching, geotextiles, sod stabilization, vegetative buffer strips, protection of existing trees and vegetation, and other similar measures.

- **C.** There are no sensitive features or surface streams within the boundaries of the project. The temporary onsite BMPs will be used to treat stormwater runoff before it leaves the project and prevent pollutants from entering into surface streams or any sensitive features down-gradient of the site.
- **D.** There were no sensitive features identified during the geologic assessment. However, the BMPs for this project are designed to allow water to pass through after sedimentation has occurred. Existing flow patterns will be maintained to any naturally-occurring sensitive features that are discovered during construction.

ATTACHMENT E - Request To Temporarily Seal a Feature

Naturally-occurring features will not be sealed on the site.

ATTACHMENT F - 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 downgradient sides of the property to prevent silt from escaping the construction area. 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 are shown on the erosion control plan sheet and details and specifications are provided on the erosion control details sheet which can be found at the end of this report under Section 8.

Description of Temporary BMPs

Temporary Construction Entrance/Exit

The purpose of a temporary gravel construction entrance is to provide a stable entrance/exit condition from the construction site and keep mud and sediment off public roads. A stabilized construction entrance is a stabilized pad of crushed stone located at any point traffic will be entering or leaving the construction site from a public right-of-way, street, alley, sidewalk or parking area. The purpose of a stabilized construction entrance is to reduce or eliminate the tracking or flowing of sediment onto public rights-of-way. This practice should be used at all points of construction ingress and egress.

Excessive amounts of mud can also present a safety hazard to roadway users. To minimize the amount of sediment loss to nearby roads, access to the construction site should be limited to as few points as possible and vegetation around the perimeter should be protected were access is not necessary. A rock stabilized construction entrance should be used at all designated access points.

Inspection and Maintenance Guidelines:

(1)The entrance should be maintained in a condition, which will prevent tracking or flowing of sediment onto public rights-of-way. This may require periodic top dressing with additional stone as conditions demand and repair and/or cleanout of any measures used to trap sediment.

(2) All sediment spilled, dropped, washed or tracked onto public rights-of-way should be removed immediately by contractor.

(3) When necessary, wheels should be cleaned to remove sediment prior to entrance onto public right-ofway.

(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 water course by using approved methods.

Silt Fence

The purpose of a silt fence is to intercept and detain water-borne sediment from unprotected areas of a limited extent. Silt fence is used during the period of construction near the perimeter of a disturbed area to intercept sediment while allowing water to percolate through. This fence should remain in place until the disturbed area is permanently stabilized. Silt fence should not be used where there is a concentration of water in a channel or drainage way. If concentrated flow occurs after installation, corrective action must be taken such as placing a rock berm in the areas of concentrated flow.

Silt fencing within the site may be temporarily moved during the day to allow construction activity provided it is replaced and properly anchored to the ground at the end of the day. Silt fences on the perimeter of the site or around drainage ways should not be moved at any time.

Inspection and Maintenance Guidelines:

(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 revegetated. The fence itself should be disposed of in an approved landfill.

Concrete Washout Area

The purpose of concrete washout areas is to prevent or reduce the discharge of pollutants to stormwater from concrete waste by conducting washout offsite, performing onsite washout in a designated area, and training employees and subcontractors.

The following steps will help reduce stormwater pollution from concrete wastes:

- Incorporate requirements for concrete waste management into material supplier and subcontractor agreements.
- Avoid mixing excess amounts of fresh concrete.
- Perform washout of concrete trucks in designated areas only.
- Do not wash out concrete trucks into storm drains, open ditches, streets, or streams.
- Do not allow excess concrete to be dumped onsite, except in designated areas.
- For onsite washout:
- Locate washout area at least 50 feet from sensitive features, storm drains, open ditches, or water bodies. Do not allow runoff from this area by constructing a temporary pit or bermed area large enough for liquid and solid waste.
- Wash out wastes into the temporary pit where the concrete can set, be broken up, and then disposed properly.

Below grade concrete washout facilities are typical. These consist of a lined excavation sufficiently large to hold expected volume of washout material. Above grade facilities are used if excavation is not practical. Temporary concrete washout facility (type above grade) should be constructed as shown on the details at the end of this section, with sufficient quantity and volume to contain all liquid and concrete waste generated by washout operations. Plastic lining material should be a minimum of 10 mil in polyethylene sheeting and should be free of holes, tears, or other defects that compromise the impermeability of the material.

When temporary concrete washout facilities are no longer required for the work, the hardened concrete should be removed and disposed of. Materials used to construct temporary concrete washout facilities should be removed from the site of the work and disposed of. Holes, depressions or other ground disturbance caused by the removal of the temporary concrete washout facilities should be backfilled and repaired.

Rock Berm

The purpose of a rock berm is to serve as a check dam in areas of concentrated flow, to intercept sediment-laden runoff, detain the sediment and release the water in sheet flow. The rock berm should be used when the contributing drainage area is less than 5 acres. Rock berms are used in areas where the volume of runoff is too great for a silt fence to contain. They are less effective for sediment removal than silt fences, particularly for fine particles, but are able to withstand higher flows than a silt fence. As such, rock berms are often used in areas of channel flows (ditches, gullies, etc.). Rock berms are most effective at reducing bed load in channels and should not be substituted for other erosion and sediment control measures further up the watershed.

Inspection and Maintenance Guidelines:

(1) Inspection should be made weekly and after each rainfall by the responsible party. For installations in streambeds, additional daily inspections should be made.

(2) Remove sediment and other debris when buildup reaches 6 inches and dispose of the accumulated silt in an approved manner that will not cause any additional siltation.

(3) Repair any loose wire sheathing.

(4) The berm should be reshaped as needed during inspection.

(5) The berm should be replaced when the structure ceases to function as intended due to silt accumulation among the rocks, washout, construction traffic damage, etc.

(6) The rock berm should be left in place until all upstream areas are stabilized and accumulated silt removed.

Inlet Protection

Storm sewers that are made operational prior to stabilization of the associated drainage areas can convey large amounts of sediment to natural drainage ways. In case of extreme sediment loading, the storm sewer itself may clog and lose a major portion of its capacity. To avoid these problems, it is necessary to prevent sediment from entering the system at the inlets. The following guidelines for inlet protection are based primarily on recommendations by the Virginia Dept. of Conservation and Recreation (1992) and the North Central Texas Council of Governments (NCTCOG, 1993b).

In developments for which drainage is to be conveyed by underground storm sewers (i.e., streets with curbs and gutters), all inlets that may receive storm runoff from disturbed areas should be protected. Temporary inlet protection is a series of different measures that provide protection against silt transport or accumulation in storm sewer systems. This clogging can greatly reduce or completely stop the flow in the pipes. The different measures are used for different site conditions and inlet types.

Care should be taken when choosing a specific type of inlet protection. Field experience has shown that inlet protection that causes excessive ponding in an area of high construction activity may become so inconvenient that it is removed or bypassed, thus transmitting sediment-laden flows unchecked. In such situations, a structure with an adequate overflow mechanism should be utilized.

It should also be noted that inlet protection devices are designed to be installed on construction sites and not on streets and roads open to the public. When used on public streets these devices will cause ponding of runoff, which can cause minor flooding and can present a traffic hazard. An example of appropriate siting would be a new subdivision where the storm drain system is installed before the area is stabilized and the streets open to the general public. When construction occurs adjacent to active streets, the sediment should be controlled on site and not on public thoroughfares. Occasionally, roadwork or utility installation will occur on public roads. In these cases, inlet protection is an appropriate temporary BMP.

The following inlet protection devices are for drainage areas of one acre or less. Runoff from larger disturbed areas should be routed to a temporary sediment trap or basin.

Filter barrier protection using silt fence is appropriate when the drainage area is less than one acre and the basin slope is less than five percent. This type of protection is not applicable in paved areas.

Block and gravel protection is used when flows exceed 0.5 cubic feet per second and it is necessary to allow for overtopping to prevent flooding. This form of protection is also useful for curb type inlets as it works well in paved areas.

Wire mesh and gravel protection is used when flows exceed 0.5 cubic feet per second and construction traffic may occur over the inlet. This form of protection may be used with both curb and drop inlets.

Excavated impoundment protection around a drop inlet may be used for protection against sediment entering a storm drain inlet. With this method, it is necessary to install weep holes to allow the impoundment to drain completely. If this measure is implemented, the impoundment should be sized such that the volume of excavation is 3,600 cubic feet per acre (equivalent to 1 inch of runoff) of disturbed area entering the inlet.

Inspection and Maintenance Guidelines:

(1) Inspection should be made weekly and after each rainfall. Repair or replacement should be made promptly as needed by the contractor.

(2) Remove sediment when buildup reaches a depth of 3 inches. Removed sediment should be deposited in a suitable area and in such a manner that it will not erode.

(3) Check placement of device to prevent gaps between device and curb.

(4) Inspect filter fabric and patch or replace if torn or missing.

(5) Structures should be removed and the area stabilized only after the remaining drainage area has been properly stabilized.

ATTACHMENT G - Drainage Area Map

An existing and proposed drainage area map are provided at the end of this report in Section 8.

ATTACHMENT H - Temporary Sediment Pond(s) Plans and Calculations

A sedimentation basin is required, where feasible, for a common drainage location that serves an area with ten (10) or more acres disturbed at one time.

A sedimentation basin may be temporary or permanent and must provide sufficient storage to contain a calculated volume of runoff from a 2-year, 24-hour storm from each disturbed acre drained. When calculating the volume of runoff from a 2-year, 24-hour storm event, it is not required to include the flows from offsite areas and flow from onsite areas that are either undisturbed or have already undergone permanent stabilization, if these flows are diverted around both the disturbed areas of the site and the sediment basin.

Where rainfall data is not available or a calculation cannot be performed, the sedimentation basin must provide at least 3,600 cubic feet of storage per acre drained until final stabilization of the site.

If a sedimentation basin is not feasible, then the permittee shall provide equivalent control measures until final stabilization of the site. In determining whether installing a sediment basin is feasible, the permittee may consider factors such as site soils, slope, available area, public safety, precipitation patterns, site geometry, site vegetation, infiltration capacity, geotechnical factors, depth to groundwater, and other similar considerations. The permittee shall document the reason that the sediment basins are not feasible, and shall utilize equivalent control measures, which may include a series of smaller sediment basins.

Sites With Drainage Areas Less than Ten Acres

Sediment traps and sediment basins may be used to control solids in storm water runoff for drainage locations serving less than ten (10) acres.

Alternatively, a sediment basin that provides storage for a calculated volume of runoff from a 2-year, 24hour storm from each disturbed acre drained may be utilized. Where rainfall data is not available or a calculation cannot be performed, a temporary or permanent sediment basin providing 3,600 cubic feet of storage per acre drained may be provided.

Proposed Sedimentation Basin Calculations

For Kid Zone, the proposed onsite batch detention pond will serve as a storage for on-site and off-site drainage. The basins will be designed to contain the 3,600 cubic feet per acre of disturbed area draining to the pond.

Temporary Sedimentation:

The batch detention ponds will serve as storage for on-site and off-site drainage for Kids Zone, Section 1 (as shown on sheets 19-20 of the construction drawings) during the construction phase. The total drainage area includes 8.87 acres and generates a volume of 31,392 ft³. The proposed detention ponds will contain a volume of 39,592 ft³, thus the constructed detention ponds will be adequality sized required for sedimentation purposes. Batch Detention Pond will be able to store a volume of 31,932 ft³.

ATTACHMENT I - Inspection and Maintenance for BMPs

Personnel Responsible for Inspections

The agent that performs the inspections should be knowledgeable of this general permit, familiar with the construction site, and knowledgeable of the SWPPP for the site. The contractor is to provide an inspector with a CPESC, CESSWI, or CISEC certification. Documentation of the inspector's qualifications is to be included in the attached Inspector Qualifications Log.

Inspection Schedule

The primary operator is required to choose one of the two inspections listed below.

- Option 1: Once every seven calendar days. If this alternative schedule is developed, then the inspection must occur regardless of whether or not there has been a rainfall event since the previous inspection.
 Option 2: Once every 14 calendar days and within 24 hours of the end of a storm event of two functions.
 - **Option 2:** Once every 14 calendar days and within 24 hours of the end of a storm event of two inches or greater.

The inspections may occur on either schedule provided that documentation reflects the current schedule and that any changes to the schedule are conducted in accordance with the following provisions: the schedule may be changed a maximum of one time each month, the schedule change must be implemented at the beginning of a calendar month, and the reason for the schedule change must be documented (e.g., end of "dry" season and beginning of "wet" season).

If option 2 is the chosen frequency of inspections a rain gauge must be properly maintained on site or the storm event information from a weather station that is representative of the site location. For any day of rainfall during normal business hours that measures 0.25 inches or greater, proper documentation of the total rainfall measured for that day must be recorded.

Personnel provided by the permittee must inspect:

- disturbed areas of the construction site that have not been finally stabilized;
- areas used for storage of materials that are exposed to precipitation;
- structural controls (for evidence of, or the potential for, pollutants entering the drainage system);
- sediment and erosion control measures identified in the SWP3 (to ensure they are operating correctly); and
- locations where vehicles enter or exit the site (for evidence of off-site sediment tracking).

Reductions in Inspection Frequency

Where sites have been finally or temporarily stabilized or where runoff is unlikely due to winter conditions (e.g. site is covered with snow, ice, or frozen ground exists), inspections must be conducted at least once every month. In arid, semi-arid, or drought-stricken areas, inspections must be conducted at least once every month and within 24 hours after the end of a storm event of 0.5 inches or greater. A record of the total rainfall measured, as well as the approximate beginning and ending dates of winter or drought conditions resulting in monthly frequency of inspections in the attached Rain Gauge Log.

In the event of flooding or other uncontrollable situations which prohibit access to the inspection sites, inspections must be conducted as soon as access is practicable.

Inspection Report Forms

Use the Inspection Report Forms given as a checklist to ensure that all required areas of the construction site are addressed. There is space to document the inspector's name as well as when the inspections regularly take place. The tables will document that the required area was inspected. (If there were any

areas of concern, briefly describe them in this space with a more detailed description in the narrative section. Use the last table to document any discharges found during the inspections). Describe how effective the installed BMPs are performing. Describe any BMP failures that were noted during the investigation and describe any maintenance required due to the failure. If new BMPs are needed as the construction site changes, the inspector can use the space at the bottom of the section to list BMPs to be implemented before the next inspection.

Describe the inspector's qualifications, how the inspection was conducted, and describe any areas of noncompliance in detail. If an inspection report does not identify any incidents of non-compliance, then it must contain a certifying signature stating that the facility or site is in compliance. The report must be signed by a person and in a manner required by 30 TAC 305.128. There is space at the end of the form to allow for this certifying signature.

Whenever an inspection shows that BMP modifications are needed to better control pollutants in runoff, the changes must be completed within seven calendar days following the inspection. If existing BMPs are modified or if additional BMPs are needed, you must describe your implementation schedule, and wherever possible, make the required BMP changes before the next storm event.

The Inspection Report Form functions as the required report and must be signed in accordance with TCEQ rules at 30 TAC 305.128.

Corrective Action

Personnel Responsible for Corrective Actions

Both Primary and Secondary Operators are responsible for maintaining all necessary Corrective Actions. If an individual is specifically identified as the responsible party for modifying the contact information for that individual should be documented in the attached Inspector Qualifications Log.

Corrective Action Forms

The Temporary BMPs must be modified based on the results of inspections, as necessary, to better control pollutants in runoff. Revisions must be completed within seven (7) calendar days following the inspection. If existing BMPs are modified or if additional BMPs are necessary, an implementation schedule must be described in the attached forms and wherever possible those changes implemented before the next storm event. If implementation before the next anticipated storm event is impracticable, these changes must be implemented as soon as practicable. Actions taken as a result of inspections must be properly documented by completing the corrective action forms given.

ATTACHMENT J - Schedule of Interim and Permanent Soil Stabilization

Construction practices shall disturb the minimal amount of existing ground cover as required for land clearing, grading, and construction activity for the shortest amount of time possible to minimize the potential of erosion and sedimentation from the site. Existing vegetation shall be maintained and left in place until it is necessary to disturb for construction activity. For this project the following stabilization practices will be implemented:

- 1. Hydraulic Mulch and Seeding: Disturbed areas subject to erosion shall be stabilized with hydraulic mulch and/or seeded and watered to provide interim stabilization. For areas that are not to be sodded as per the project landscaping plan, a minimum of 85% vegetative cover will be established to provide permanent stabilization.
- 2. Sodding and Wood Mulch: As per the project landscaping plan, Sodding and wood mulch will be applied to landscaped areas to provide permanent stabilization prior to project completion.

Records of the following shall be maintained:

- a) The dates when major grading activities occur;
- b) The dates when construction activities temporarily or permanently cease on a portion of the site; and
- c) The dates when stabilization measures are initiated.

Stabilization measures must be initiated as soon as practical in portions of the site where construction activities have temporarily or permanently ceased, and except as provided in the following, must be initiated no more that fourteen (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 temporarily or permanently ceased is precluded by snow cover or frozen ground conditions, stabilization measures must be initiated as soon as practical.

Where construction activity on a portion of the site is temporarily ceased and earth disturbing activities will be resumed within twenty-one (21) days, temporary stabilization measures do not have to be initiated on that portion of the site.

In arid areas (areas with an average rainfall of 0-10 inches), semiarid areas (areas with an average annual rainfall of 10 to 20 inches), and areas experiencing droughts where the initiation of stabilization measures by the 14th day after construction activity has temporarily or permanently ceased is precluded by seasonably arid conditions, stabilization measures must be initiated as soon as practical.

Maintenance

Below are some maintenance practices to be used to maintain erosion and sediment controls:

- All measures will be maintained in good working order. The operator should correct any damage or deficiencies as soon as practicable after the inspection, but in no case later than seven (7) calendar days after the inspection.
- BMP Maintenance (as applicable)
- Sediment must be removed from sediment traps and sedimentation ponds no later than the time that design capacity has been reduced by 50%. For perimeter controls such as silt fences, berms, etc., the trapped sediment must be removed before it reaches 50% of the above-ground height.
- Silt fence will be inspected for depth of sediment, tears, to see of the fabric is securely attached to the fence posts, and to see that the fence posts are firmly in the ground.
- Drainage swale will be inspected and repaired as necessary.

- Inlet control will be inspected and repaired as necessary.
- Check dam will be inspected and repaired as necessary.
- Straw bale dike will be inspected and repaired as necessary.
- Diversion dike will be inspected and any breaches promptly repaired.
- Temporary and permanent seeding and planting will be inspected for bare spots, washouts, and healthy growth.
- If sediment escapes the site, accumulations must be removed at a frequency that minimizes offsite impacts, and prior to the next rain event, if feasible. If the permittee does not own or operate the off-site conveyance, then the permittee must to work with the owner or operator of the property to remove the sediment.
- Locations where vehicles enter or exit the site must be inspected for evidence of off-site sediment tracking.

To maintain the above practices, the following will be performed:

• Maintenance and repairs will be conducted before the next anticipated storm event or as necessary to maintain the continued effectiveness of storm water controls. Following an inspection, deficiencies should be corrected no later than seven (7) calendar days after the inspection.

Inspector Qualifications Log*

Inspector Name: Qualifications (Check as appropriate and provide description): Training Course Supervised Experience Other
Inspector Name: Qualifications (Check as appropriate and provide description): Training Course Supervised Experience Other
Inspector Name: Qualifications (Check as appropriate and provide description): Training Course Supervised Experience Other
Inspector Name: Qualifications (Check as appropriate and provide description): Training Course Supervised Experience Other
Inspector Name: Qualifications (Check as appropriate and provide description): Training Course Supervised Experience Other
Inspector Name: Qualifications (Check as appropriate and provide description): Training Course Supervised Experience Other

* The agent that performs the inspections should be knowledgeable of this general permit, familiar with the construction site, and knowledgeable of the SWPPP for the site. The contractor is to provide an inspector with a CPESC, CESSWI, or CISEC certification.

Description of the Amendment	Date of Amendment	Amendment Prepared by [Name(s) and Title]
	Description of the Amendment	Description of the AmendmentDate of AmendmentImage: Image: I

Amendment Log

Construction Activity Sequence Log

Name of Operator	Projected dates Month/year	Activity Disturbing Soil clearing, excavation, etc.	Location on-site where activity will be conducted	Acreage being disturbed

*Construction activity sequences for linear projects may be conducted on a rolling basis. As a result, construction activities may be at different stages at different locations in the project area. The Contractor is required to complete and update the schedule and adjust as necessary.

Stormwater Control Installation and Removal Log

Stormwater Control	Location On-Site	Installation Date	Removal Date

Stabilization Activities Log

Date Activity Initiated	Description of Activity	Description of Stabilization Measure and Location	Date Activity Ceased (Indicate Temporary or Permanent)	Date When Stabilization Measures Initiated
~ 1 111 1				

Stabilization and erosion control practices may include, but are not limited to: establishing temporary or permanent vegetation, mulching, geotextiles, sod stabilization, vegetative buffer strips, and protecting existing trees and vegetation. List practices used where they are located, when they will be implemented, and whether they are temporary (interim) or permanent.

Inspection	Frequency	Log
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Date Frequency Schedule and Reason for Change					
Dute	Trequency Seneuale and Reason for enange				

Rain Gauge Log

Date	Location of Rain Gauge	Gauge Reading
Date		Gauge Keauling

	General Information							
Name of Project	Tracking No. Inspection Date							
Inspector Name, T Contact Informatio								
Present Phase of Co	onstruction							
Inspection Location inspections are require location where this inspection where the second	ed, specify							
- Once per n	iency : V uency : C ency : nonth (for stabi nonth and with	-	0.25" rain arid, or drought-stricken areas during seasonal	lly dry periods or during drought)				
If yes, how did	Was this inspection triggered by a 0.25" storm event? Yes No If yes, how did you determined whether a 0.25" storm event has occurred? Rain gauge on site Weather station representative of site. Specify weather station source: Total rainfall amount that triggered the inspection (in inches): It is the inspection of the inspection (in inches):							
Unsafe Conditions for Inspection Did you determine that any portion of your site was unsafe for inspection? Yes No If "yes", complete the following: - Describe the conditions that prevented you from conducting the inspection in this location:								
- Location(- Location(s) where conditions were found:							

	Condition and Effectiveness of Erosion and Sediment (E&S) Controls				
Type/Location of E&S Control	Repairs or Other Maintenance Needed?	Corrective Action Required?	Date on Which Maintenance or Corrective Action First Identified?	Notes	
1.	□Yes □No	□Yes □No			
2.	□Yes □No	□Yes □No			
3.	□Yes □No	□Yes □No			
4.	□Yes □No	□Yes □No			
5.	□Yes □No	∐Yes ∏No			
6.	□Yes □No	□Yes □No			
7.	□Yes □No	□Yes □No			
8.	□Yes □No	□Yes □No			
9.	□Yes □No	□Yes □No			
10.	□Yes □No	□Yes □No			

	Condition and Effectiveness of Pollution Prevention (P2) Practices					
Type/Location of P2 Practices	Repairs or Other Maintenance Needed?	Corrective Action Required?	Identification Date	Notes		
1.	□Yes □No	□Yes □No				
2.	□Yes □No	□Yes □No				
3.	□Yes □No	□Yes □No				
4.	□Yes □No	□Yes □No				
5.	□Yes □No	□Yes □No				
6.	□Yes □No	□Yes □No				
7.	□Yes □No	□Yes □No				
8.	□Yes □No	□Yes □No				
9.	□Yes □No	□Yes □No				
10.	□Yes □No	∐Yes ∏No				

Stabilization of Exposed Soil				
Stabilization Area	Stabilization Method	Have You Initiated Stabilization?	Notes	
1.		☐ YES ☐ NO If yes, provide date:		
2.		☐ YES ☐ NO If yes, provide date:		
3.		☐ YES ☐ NO If yes, provide date:		
4.		☐ YES ☐ NO If yes, provide date:		
5.		☐ YES ☐ NO If yes, provide date:		
	Description of	Discharges		
	er discharge occurring from any par nformation for each point of dischar	rt of your site at the time of the inspec rge:	tion? 🗌 Yes 🗌 No	
Discharge Location	Observations			
1.	Describe the discharge:			
	At points of discharge and the channels and banks of surface waters in the immediate vicinity, are there any visible signs of erosion and/or sediment accumulation that can be attributed to your discharge? If yes, describe what you see, specify the location(s) where these conditions were found, and indicate whether modification, maintenance, or corrective action is needed to resolve the issue:			
2.	Describe the discharge:			
	At points of discharge and the channels and banks of surface waters in the immediate vicinity, are there any visible signs of erosion and/or sediment accumulation that can be attributed to your discharge? If yes, describe what you see, specify the location(s) where these conditions were found, and indicate whether modification, maintenance, or corrective action is needed to resolve the issue:			
3.	Describe the discharge:			
	At points of discharge and the channels and banks of surface waters in the immediate vicinity, are there any visible signs of erosion and/or sediment accumulation that can be attributed to your discharge? If yes, describe what you see, specify the location(s) where these conditions were found, and indicate whether modification, maintenance, or corrective action is needed to resolve the issue:			

Kimley *Whorn*

Contractor or Subcontractor Certification and Signature

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

Signature of Contractor or Subcontractor:

Printed Name and Affiliation:

-

-

Certification and Signature by Permittee

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

Signature of Permittee or "Duly Authorized Representative":	Date:
Printed Name and Affiliation:	

Date:

Section A – Initial Report (Complete this section <u>within 24 hours</u> of discovering the condition that triggered corrective action)					
Name of Project	Tracking N	Jo.		Today's Date	
Date Problem First Discov	Date Problem First Discovered		Time Problem Firs	t Discovered	
Name and Contact Information of Individual Completing this Form					
What site conditions triggered the requirement to conduct corrective action: A required stormwater control was never installed, was installed incorrectly, or not in accordance with the requirements in Part 2 and/or 3 The stormwater controls that have been installed and maintained are not effective enough for the discharge to meet applicable water quality standards A prohibited discharge has occurred or is occurring 					
Provide a description of the problem:					
Deadline for completing corrective action (Enter date that is either: (1) no more than 7 calendar days after the date you discovered the problem, or (2) if it is infeasible to complete work within the first 7 days, enter the date that is as soon as practicable following the 7th day):					
If your estimated date of completion falls after the 7-day deadline, explain (1) why you believe it is infeasible to complete work within 7 days, and (2) why the date you have established for making the new or modified stormwater control operational is the soonest practicable timeframe:					
Section B – Corrective Action Progress (Complete this section <u>no later than 7 calendar days</u> after discovering the condition that triggered corrective action)					
Section B.1 – Why the	Problem Occurred				
Cause(s) of Problem (Add an additional sheet if necessary)		How This Was Determined and the Date You Determined the Cause			
1.		1.			
2.		2.			
3.	3.		3.		
Section B.2 – Stormwater Control Modifications to be Implemented to Correct the Problem					
List of Stormwater Contro Problem (Add an addition	l Modification(s) Needed to Correct al sheet if necessary)	Completion Date	SWPPP Update Necessary?	Notes	
1.			□Yes □No Date:		
2.			□Yes □No Date:		
3.			□Yes □No Date:		

	(Complete this section <u>within 2</u>		Initial Report ering the condition that	t triggered corrective action)	
Name of Project	Tracking N	lo.		Today's Date	
Date Problem First Discov	vered		Time Problem Firs	t Discovered	
Name and Contact Information of Individual Completing this Form					
A required stormwate	ered the requirement to conduct corre r control was never installed, was insta ols that have been installed and mainta e has occurred or is occurring	lled incorrectly	7, or not in accordand fective enough for th	ce with the requirements in Part ne discharge to meet applicable w	2 and/or 3 vater quality standards
Provide a description of the problem:					
Deadline for completing corrective action (Enter date that is either: (1) no more than 7 calendar days after the date you discovered the problem, or (2) if it is infeasible to complete work within the first 7 days, enter the date that is as soon as practicable following the 7th day):					
If your estimated date of completion falls after the 7-day deadline, explain (1) why you believe it is infeasible to complete work within 7 days, and (2) why the date you have established for making the new or modified stormwater control operational is the soonest practicable timeframe:					
	Section (Complete this section <u>no later than 7 c</u>		ctive Action Progr r discovering the condi		,
Section B.1 – Why the	Problem Occurred				
Cause(s) of Problem (Add an additional sheet if necessary)		How This Was Determined and the Date You Determined the Cause			
1.		1.			
2.		2.			
3.		3.			
Section B.2 - Stormwater Control Modifications to be Implemented to Correct the Problem					
List of Stormwater Contro Problem (Add an addition	ol Modification(s) Needed to Correct aal sheet if necessary)	Completion Date	SWPPP Update Necessary?	Notes	
1.			□Yes □No Date:		
2.			□Yes □No Date:		
3.			□Yes □No Date:		

Kimley *Whorn*

Contractor or Subcontractor Certification and Signature

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

Signature of Contractor or Subcontractor:

Printed Name and Affiliation:

Certification and Signature by Permittee

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

Signature of Permittee or "Duly Authorized Representative":	Date:
Printed Name and Affiliation:	

Date:

SECTION 6: Additional Forms

kimley-horn.com

10814 Jollyville Road, Avallon IV, Suite 200, Austin, TX 78759

512 418 1771

Agent Authorization Form

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

I	Whitney Hicks
,	Print Name
	Chief Operating Officer Title - Owner/President/Other
of	Kids Zone Gym Corporation/Partnership/Entity Name
have authorized	Alejandro E. Granados Rico, P.E.
	Print Name of Agent/Engineer
of	Kimley-Horn and Associates 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:



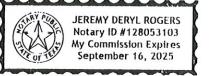
2-19-202 Date

THE STATE OF ______ §

County of <u>Williamson</u> §

BEFORE ME, the undersigned authority, on this day personally appeared <u>Whitney Hicks</u> 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 19 day of February



NOTARY PUBI4 Jerc ... Kogers

Typed or Printed Name of Notary

MY COMMISSION EXPIRES: 9/16/2025

Application Fee Form

Texas Commission on Environme Name of Proposed Regulated Ent Regulated Entity Location: <u>approv</u> <u>on the west side of CR 307 in</u> Name of Customer: <u>DC Brown, L.</u> Contact Person: <u>Whitney Hicks</u> Customer Reference Number (if i Regulated Entity Reference Numb	ity: <u>Kids Zone CR307</u> <u>ximately 325' north of th</u> <u>Jerrell, TX 76537</u> <u>P.</u> Phone ssued): 604305250	<u>e intersection of CR 30</u> e: <u>254.718.7791</u>	<u>)5 and CR 307</u>
Austin Regional Office (3373)			
Hays San Antonio Regional Office (336	Travis 5 2)	🖂 Wil	liamson
Bexar Comal Application fees must be paid by	Medina Kinney check, certified check, or	Uva r money order, payable	
Commission on Environmental C form must be submitted with yo	•	•	-
 Austin Regional Office Mailed to: TCEQ - Cashier Revenues Section Mail Code 214 P.O. Box 13088 Austin, TX 78711-3088 	— Ov 12 Bu Au	n Antonio Regional Of vernight Delivery to: T(100 Park 35 Circle uilding A, 3rd Floor ustin, TX 78753 12)239-0357	
Site Location (Check All That App	bly):		
🔀 Recharge Zone	Contributing Zone	Transit	ion Zone
Type of Pla	an	Size	Fee Due
Water Pollution Abatement Plar Plan: One Single Family Residen		Acres	\$
Water Pollution Abatement Plar Plan: Multiple Single Family Res		Acres	\$
Water Pollution Abatement Plar Plan: Non-residential	n, Contributing Zone	Acres	
Sewage Collection System		69 LF	\$650
Lift Stations without sewer lines		Acres	\$
Underground or Aboveground S	torage Tank Facility	Tanks	\$
Piping System(s)(only)		Each	\$
Exception		Each	\$
Extension of Time		Each	\$

Alejandro E. Granda Rico

Signature:

Date: <u>February 19, 2024</u>

Application Fee Schedule

Texas Commission on Environmental Quality

Edwards Aquifer Protection Program 30 TAC Chapter 213 (effective 05/01/2008)

Water Pollution Abatement Plans and Modifications

Contributing Zone Plans and Modifications

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

Organized Sewage Collection Systems and Modifications

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

Underground and Aboveground Storage Tank System Facility Plans and Modifications

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

Exception Requests

Project	Fee
Exception Request	\$500

Extension of Time Requests

Project	Fee
Extension of Time Request	\$150

Kimley **»Horn**

Check Payable to the "Texas Commission on Environmental Quality"

Kimley **»Horn**

Core Data Form



TCEQ Core Data Form

For detailed instructions on completing this form, please read the Core Data Form Instructions or call 512-239-5175.

SECTION I: General Information

1. Reason for Submission (If other is checked please describe in space provided.)					
New Permit, Registration or Authorization (Core Data Form should be submitted with the program application.)					
Renewal (Core Data Form should be submitted with th	e renewal form)	Other			
2. Customer Reference Number (if issued)	Follow this link to search for CN or RN numbers in	3. Regulated Entity Reference Number (if issued)			
СN	Central Registry**	RN			

SECTION II: Customer Information

4. General Cu	istomer Ir	formation	5. Effectiv	5. Effective Date for Customer Information Updates (mm/dd/yyyy) 1/31/2024								
		r	7									
New Custor		L Verifiable with th)	Update to Cust			tra		0	egulated Ent	tity Own	ership	
	egai Nairie	(vermable with th	e Texas Secretary			πριτο		L ALLUL	ints)			
The Custome	r Name sı	ıbmitted here m	ay be updated	automatical	lly base	ed on	n what is c	urrent	and active	with th	he Texas Sec	retary of State
(SOS) or Texa	is Comptr	oller of Public A	ccounts (CPA).									
6. Customer	Legal Nan	ne (If an individual	, print last name j	first: eg: Doe, .	John)			<u>If nev</u>	v Customer,	enter pr	evious Custom	er below:
DC Brown, L.P.												
7. TX SOS/CP	A Filing N	umber	8. TX State	e Tax ID (11 d	digits)			9. Fe	deral Tax I	D	10. DUNS 1	Number (if
0800387015			320355424	0				(9 dig	itc)		applicable)	
0000307013			520555424	0				(5 018	.1.3)			
										a wal M I insite d		
11. Type of C		Corp					Individual Partnership: General 🛛 Limited					
Government:	_ City (County 🗌 Federal	Local Sta	te 🗌 Other			Sole Proprietorship Other: Foundation				on	
12. Number o	of Employ	ees				13. Independently Owned and Operated?						
⊠ 0-20 □ 2	21-100 [101-250	251-500 50	1 and higher		🛛 Yes 🗌 No						
14. Customer	Role (Pro	posed or Actual) –	as it relates to th	e Regulated E	ntity lis	ted or	n this form.	Please	check one of	f the follo	owing	
Owner		Operator	C	wner & Opera	ator				Other:			
	al Licensee	Responsibl	e Party	VCP/BSA Ap	plicant							
	PO Box 2	92										
15. Mailing												
Address:												
City Salado State TX			ТΧ		ZIP	7657	1		ZIP + 4			
16 Country I	Apiling In	formation (if out	sida USA)		1							
10. Country P	vianing in		Side USA)			17. E-Mail Address (if applicable)						
						whitneyhicks777@yahoo.com						
18. Telephon	18. Telephone Number 19. Extension or			19. Extensio	on or C	ode			20. Fax N	umber	(if applicable)	

SECTION III: Regulated Entity Information

21. General Regulated Entity Information (If 'New Regulated Entity" is selected, a new permit application is also required.)								
New Regulated Entity	🛛 New Regulated Entity 🛛 Update to Regulated Entity Name 📄 Update to Regulated Entity Information							
The Regulated Entity Name submitted may be updated, in order to meet TCEQ Core Data Standards (removal of organizational endings such as Inc, LP, or LLC).								
22. Regulated Entity Nan	ne (Enter name	e of the site where the	regulated action	is taking pla	ce.)			
Kids Zone CR307								
23. Street Address of the Regulated Entity:								
<u>(No PO Boxes)</u>	City	Jerrell	State	тх	ZIP	76537	ZIP + 4	
24. County	Williamson							

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

25. Description to Physical Location:	Approximat	ely 325' North of th	ne intersection of CR	305 and CR	307 on the we	est side of CR 307	in Jerrell, TX 765	37
26. Nearest City	1					State	Nea	arest ZIP Code
Jerrell						ТХ	765	37
Latitude/Longitude are r used to supply coordinat	•	•	•		Data Standa	rds. (Geocoding	of the Physica	l Address may be
27. Latitude (N) In Decimal: 30.840455				28. L	ongitude (W	/) In Decimal:	-97.6189	49
Degrees	Minutes	S	econds	Degre	es	Minutes		Seconds
30	50 25.638				-97		37	8.2164
29. Primary SIC Code 30. Secondary SIC Code (4 digits) (4 digits)				31. Primary NAICS Code (5 or 6 digits) 32. Secondary NAICS Code (5 or 6 digits)(5 or 6 digits)				CS Code
8299				611710				
33. What is the Primary I	Business of 1	his entity? (Do)	not repeat the SIC or	NAICS descr	iption.)			
Charter School								
24 Mailing	PO BOX 29	92						
34. Mailing Address:								
Address.	City	SALADO	State	тх	ZIP	76571	ZIP + 4	
35. E-Mail Address:	WH	ITNEYHICKS777@Y	AHOO.COM					
36. Telephone Number			37. Extension or (Code	38. Fa	ax Number (if ap	plicable)	
(254) 718-7791					()	-		

39. TCEQ Programs and ID Numbers Check all Programs and write in the permits/registration numbers that will be affected by the updates submitted on this form. See the Core Data Form instructions for additional guidance.

Dam Safety	Districts	Edwards Aquifer	Emissions Inventory Air	Industrial Hazardous Waste
🗌 Municipal Solid Waste	New Source Review Air	OSSF	Petroleum Storage Tank	D PWS
Sludge	Storm Water	Title V Air	Tires	Used Oil
Voluntary Cleanup	Wastewater	Wastewater Agriculture	Water Rights	Other:

SECTION IV: Preparer Information

40. Name:	0. Name: Alex Granados, P.E.			41. Title:	Project Manager	
42. Telephone Number		43. Ext./Code	44. Fax Number	per 45. E-Mai	45. E-Mail Address	
(512) 418-4522			() -	alex.granad	los@kimley-horn.com	

SECTION V: Authorized Signature

46. By my signature below, I certify, to the best of my knowledge, that the information provided in this form is true and complete, and that I have signature authority to submit this form on behalf of the entity specified in Section II, Field 6 and/or as required for the updates to the ID numbers identified in field 39.

Company:	DCBROWN LP / KIDS ZONE INC Job Title:	owner	
Name (In Print):	Whitney Hicks	Phone:	(254) 718- 7791 (979) 571 - 1414
Signature:		Date:	2/19/2024

Kimley **»Horn**

SECTION 7: EXHIBITS

GF#23001391

NOTICE OF CONFIDENTIALITY RIGHTS: IF YOU ARE A NATURAL PERSON, YOU MAY REMOVE OR STRIKE ANY OR ALL OF THE FOLLOWING INFORMATION FROM ANY INSTRUMENT THAT TRANSFERS AN INTEREST IN REAL PROPERTY BEFORE IT IS FILED FOR RECORD IN THE PUBLIC RECORDS: YOUR SOCIAL SECURITY NUMBER OR YOUR DRIVER'S LICENSE NUMBER.

WARRANTY DEED

Date: September 6, 2023

Grantor: Steve D. Brown

Grantor's Mailing Address (including county):

P.O. BOX 292 SALADO, TX 76571 County P.O. BOX 292

Grantee: DC Brown, L.P.

Grantee's Mailing Address (including county):

P.O. BOX 292 **P.O. BOX FIL** SALADO, 716 76571 County

Consideration:

For the sum of Ten and No/100 Dollars (\$10.00) and other valuable consideration to the undersigned paid by the Grantee herein named, the receipt and sufficiency of which are hereby acknowledged.

Property (including any improvements):

5.253 acre tract, more or less, out of the ELISHA DAVIS Survey, Abstract No. 172, Williamson County, Texas, and being more particularly described by metes and bounds on Exhibit "A" attached hereto; SAVE AND EXCEPT an 0.898 acre tract of land out of the ELISHA DAVIS Survey, Abstract No. 172, being more particularly described on Exhibit "B" attached hereto.

Reservations from and Exceptions to Conveyance and Warranty:

Easements, rights-of-way, and prescriptive rights of record; all presently recorded restrictions, reservations, covenants, conditions, oil and gas leases, mineral severances, and other instruments, other than liens and conveyances, that affect the

property; rights of adjoining owners in any walls and fences situated on a common boundary; any discrepancies, conflicts, or shortages in area or boundary lines, any encroachments or overlapping of improvements; all rights, obligations, and other matters emanating from and existing by reason of the creation, establishment, maintenance, and operation of any applicable governmental district, agency, authority, etc. taxes for current year, the payment of which Grantee assumes.

Grantor for the consideration and subject to the reservations from and exceptions to conveyance and warranty, grants, sells, and conveys to Grantee the property, together with all and singular the rights and appurtenances thereto in any wise belonging, to have and hold it to Grantee, Grantee's heirs, executors, administrators, successors, or assigns forever. Grantor hereby binds Grantor and Grantor's heirs, executors, administrators, and successors to warrant and forever defend all and singular the property to Grantee and Grantee's heirs, executors, administrators, successors, and assigns, against every person whomsoever lawfully claiming or to claim the same or any part thereof, except as to the reservations from and exceptions to warranty.

When the context requires, singular nouns and pronouns include the plural.

EXECUTED this _____ day of September, 2023.

Bra

Steve D. Brown

STATE OF TEXAS COUNTY OF <u>Bell</u>

This instrument was acknowledged before me on the (\mathcal{O}) day of September, 2023, by Steve D. Brown.



Notary Public, State of Texas

Notary's name (printed): Notary's commission expires:

AFTER RECORDING RETURN TO:

First Community Title 40 N. Main Street, Suite C Salado, Texas 76571

Exhibit "A"

Quick Inc. Land Surveying, Land Planning, Consulting, Firm: 10194104 512-915-4950 1430 N. Robertson Road, Salado, Texas 76571

FIELD NOTES FOR A 5.253 ACRE TRACT OF LAND:

BEING A 5.253 ACRE TRACT OF LAND, LOCATED IN THE ELISHA DAVIS SURVEY, ABSTRACT NO. 172, WILLIAMSON COUNTY, TEXAS, SAID 5.253 ARE TRACT, BEING A PORTION OF THAT CALLED 446.1 ACRE TRACT OF LAND RECORDED IN VOLUME 365, PAGE 115, DEED RECORDS, WILLIAMSON COUNTY, TEXAS; SAID 5.253 ACRE TRACT BEING MORE PARTICULARLY DESCRIBED BY METES AND BOUNDS AS FOLLOWS:

BEGINNING at a 1/2" iron rod located at an interior corner of the remainder of said 446.1 acre tract, the northernmost corner of that called 20.000 acre tract of land recorded in Document No. 2019034748, Official Public Records, Williamson County, Texas, said point being the westernmost corner of the herein described tract of land;

- Thence, across the remainder of said 446.1 acre tract, N 68° 54' 38" E, a distance of 300.00', to a 1/2" iron rod with a blue "QUICK INC RPLS 6447" plastic cap set at an existing wire fence in the occupied southwest right-ofway line of County Road 307, said point being the northernmost corner of the herein described tract of land;
- 2. Thence, along said wire fence, with the accupied southwest right-of-way line of County Road 307, continuing across the remainder of said 446.1 acre tract, S 21° 05' 22" E, a distance of 762.12', to a 1/2" iron rod with a blue "QUICK INC RPLS 6447" plastic cap set at said wire fence in the occupied southwest right-of-way line of County Road 307, said point being the easternmost corner of the herein described tract of land which bears N 21° 05' 22" W, a distance of 300.00' from a 1/2" iron rod located at the intersection of the occupied right-of-way of County Road 307 and County Road 305, said point also being in the southeast line of the remainder of said 446.1 acre tract;

Exhibit A pg 2

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- 3. Thence, departing the occupied southwest right-of-way line of County Road 307, continuing across the remainder of said 446.1 acre tract, \$ 68° 41' 35" W, a distance of 300.00', to a 1/2" iron rod with a blue "QUICK INC RPLS 6447" plastic cap set in a southwest line of the remainder of said 446.1 acre tract, the northeast line of said 20.000 acre tract, said point being the southernmost corner of the herein described tract of land which bears N 21° 05' 22" W, a distance of 300.00' from a 1/2" iron rod located in the northwest right-of-way line of County Road 305 for the easternmost corner of said 20.000 acre tract;
- 4. Thence, with a southwest line of the remainder of said 446.1 acre tract, the northeast line of said 20.000 acre tract, N 21° 05' 22" W, a distance of 763.26' (Record per Doc. No. 2019034748: N 21° 05' 22" W, a distance of 1063.26'), to the POINT OF BEGINNING containing 5.253 acres of land.

Note: The basis of bearing was established using the Trimble VRS Network, NAD (83), Texas State Plane Coordinate System, Central Zone, 4203, US Survey Foot, Grid. A survey plat was prepared by a separate document.

RPLS #6447

Travis L. Quićksall Date: 07/13/2021 Job # 18-2292.1

Exhibit "B"

County:WilliamsonParcel No.:5-ROWTax ID:R_____Highway:County Road 307 at County Road 305

METES AND BOUNDS DESCRIPTION FOR PARCEL 5-ROW

FOR A 0.898 ACRE (39,114 SQ. FT.) TRACT OF LAND SITUATED IN THE ELISHA DAVIS SURVEY, ABSTRACT NO. 172, WILLIAMSON COUNTY, TEXAS AND BEING A PORTION OF THE CALLED 5.253 ACRE TRACT OF LAND CONVEYED TO STEVE D. BROWN, RECORDED IN DOCUMENT NO. 2021119336 OF THE OFFICIAL PUBLIC RECORDS OF WILLIAMSON COUNTY, TEXAS. SAID 0.898 ACRE TRACT OF LAND BEING SURVEYED ON THE GROUND BY DIAMOND SURVEYING DURING THE MONTH OF NOVEMBER 2021, AND BEING MORE PARTICULARLY DESCRIBED BY METES AND BOUNDS AS FOLLOWS:

COMMENCING at a 1/2" iron rod found (Surface Coordinates: N=10280574.56, E=3149124.85) monumenting the southeast corner of a remnant portion of the called 446.1 acre tract of land (Fourth Tract) conveyed to Solana Ranch Company, recorded in Volume 365, Page 115 of the Deed Records of Williamson County, Texas and an interior ell corner of the called 0.92 acre tract of land conveyed to County Judge John Doerfler, recorded in Document No. 9749963 of the Official Records of Williamson County, Texas, same being on the intersection of the north right-of-way line of County Road 305 and the west right-of-way line of County Road 307, from which a 1/2" iron rod found (bent) monumenting the southwest corner of the remnant portion of the called 15.428 acre tract of land conveyed to Alicia Martinez, recorded in Document No. 2016103459 of the Official Public Records of Williamson County, Texas, and an interior ell corner of the called 0.62 acre tract of land conveyed to County Judge John Doerfler, recorded in Document No. 9749962 of the Official Records of Williamson County, Texas, same being on the intersection of Said north right-of-way line of County Road 305 and the east right-of-way line of said County Road 307, bears N 70°04'08" E for a distance of 61.37 feet;

THENCE, N 21°05'39" W with the east boundary line of said remnant portion of the 446.1 acre Solana Ranch Company tract and said west right-of-way line of County Road 307 common with said 0.92 acre County Judge John Doerfler tract for a distance of 300.07 feet to a calculated point (Surface Coordinates: N=10280854.52, E=3149016.86) on the northeast corner of said remnant portion of the 446.1 acre Solana Ranch Company tract and the southeast corner of said 5.523 acre Brown tract, for the southeast corner and **POINT OF BEGINNING** hereof;

Exhubit B pg 2

County:WilliamsonParcel No.:5-ROWTax ID:R______Highway:County Road 307 at County Road 305

THENCE, **S** 68°40'44" **W** with the north boundary line of said remnant portion of the 446.1 acre Solana Ranch Company tract and the south boundary line of said 5.253 acre Brown tract passing at a distance of 0.29 feet an iron rod found with cap marked "Quick Inc RPLS 6447", in all a total distance of **51.51 feet** to a 5/8" iron rod set with cap marked "Williamson County, for the southwest corner hereof, from which an iron rod found with cap marked "Quick Inc RPLS 6447" on the northwest corner of said remnant portion of the 446.1 acre Solana Ranch Company tract and the southwest corner of said 5.253 acre Brown tract, same being on a point in the east boundary line of the called 20.000 acre tract of land conveyed to Williamson County Sheriff's Posse Inc., recorded in Document No. 2019034748 bears S 68°40'44" W for a distance of 248.69 feet;

THENCE, N 21°03'52" W through the interior of said 5.253 acre Brown tract for a distance of 762.35 feet to a 5/8" iron rod set with cap marked "Williamson County" on the north boundary line of said 5.253 acre Brown tract, same being on the south boundary line of the called 20.00 acre tract of land conveyed to Jarrell Independent School District, recorded in Document No. 2021107151 of the Official Public Records of Williamson County, Texas, for the northwest corner hereof, from which an iron rod found with cap marked "Quick Inc RPLS 6447" monumenting the northwest corner of said 5.253 acre Brown tract and the northeast corner of said 20.000 acre Williamson County Sheriff's Posse Inc., tract, same being on said south boundary line of the 20.00 acre Jarrell Independent School District tract, bears S 68°56'00" W for a distance of 248.96 feet;

THENCE, **N 68°56'00"** E with said north boundary line of the 5.253 acre Brown tract and said south boundary line of the 20.00 acre Jarrell Independent School District tract for a distance of **51.12 feet** to an iron rod found with cap marked "Quick Inc RPLS 6447" monumenting the northeast corner of said 5.253 acre Brown tract and the southeast corner of said 20.00 acre Jarrell Independent School District tract, same being on said west right-of-way line of County Road 307 common with said 0.92 acre County Judge John Doerfler tract, for the northeast corner hereof, from which an iron rod found with cap marked "Quick Inc RPLS 6447" monumenting the northeast corner of said 20.00 acre Jarrell Independent School District tract, same being on said west right-of-way line of County Road 307 common with said 0.92 acre County Judge John Doerfler tract, for the northeast corner hereof, from which an iron rod found with cap marked "Quick Inc RPLS 6447" monumenting the northeast corner of said 20.00 acre Jarrell Independent School District tract and the most easterly southeast corner of a remnant portion of said called 446.1 acre Solana Ranch Company tract, bears N 21°05'39" W for a distance of 658.97 feet;

Exhibit B pg 3 Page 7 of 12

County:WilliamsonParcel No.:5-ROWTax ID:R______Highway:County Road 307 at County Road 305

THENCE, **S 21°05'39"** E with the east boundary line of said 5.253 acre Brown tract and said west right-of-way line of County Road 307 common with said 0.92 acre County Judge John Doerfler tract for a distance of **762.12 feet** to the **POINT OF BEGINNING** hereof and containing 0.898 acre of land more or less.

Bearing Basis: NAD-83, Texas Central Zone (4203) State Plane System. Coordinates and Distances shown hereon are surface based on a combined surface adjustment factor or 1.00014.

A drawing has been prepared to accompany this metes and bounds description.

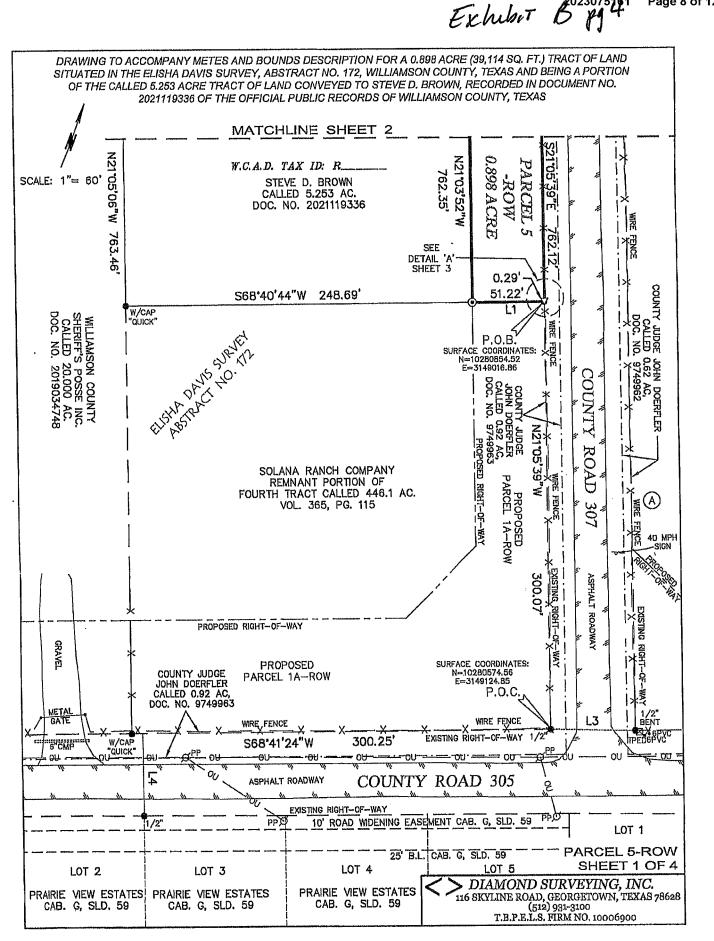
DIAMOND SURVEYING, INC. 116 SKYLINE ROAD, GEORGETOWN, TX 78628 (512) 931-3100 T.B.P.E.L.S. FIRM NUMBER 10006900 November 16, 2021



SHANE SHAFER, R.P.L.S. NO. 5281

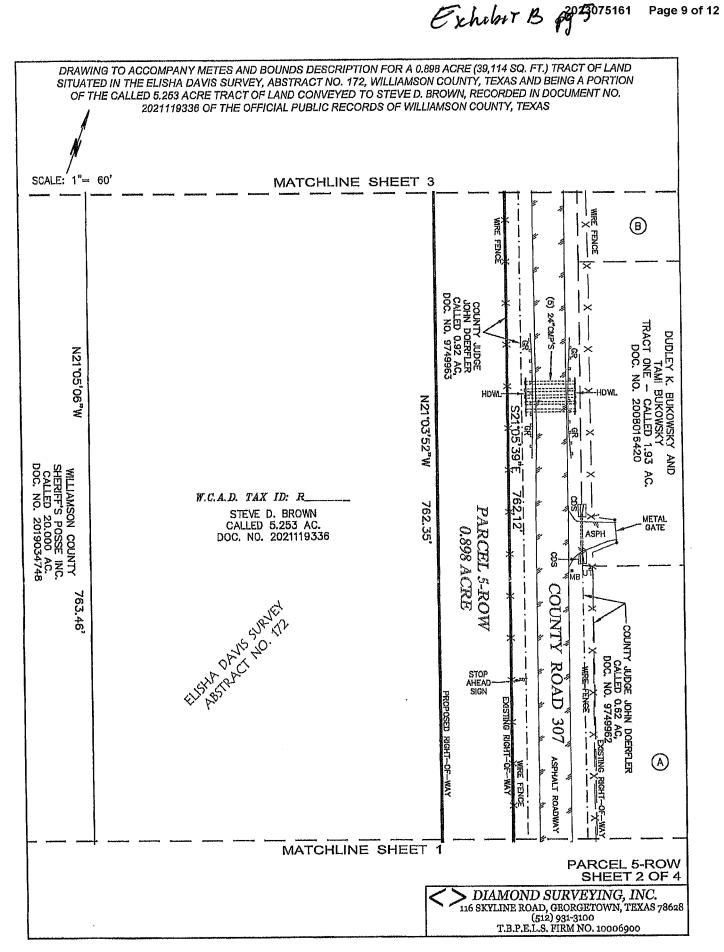
Z:\WCRB_2020 WA-5 CR 307 TOPO ROW 2021-63_STANDARD LAND SURVEYS ROW PARCELS\PARCEL 5 ROW BROWN\CR 307 PARCEL 5-ROW STANDARD LAND SURVEY M&B.doc

DATE



Page 8 of 12

2023075191



Page 9 of 12

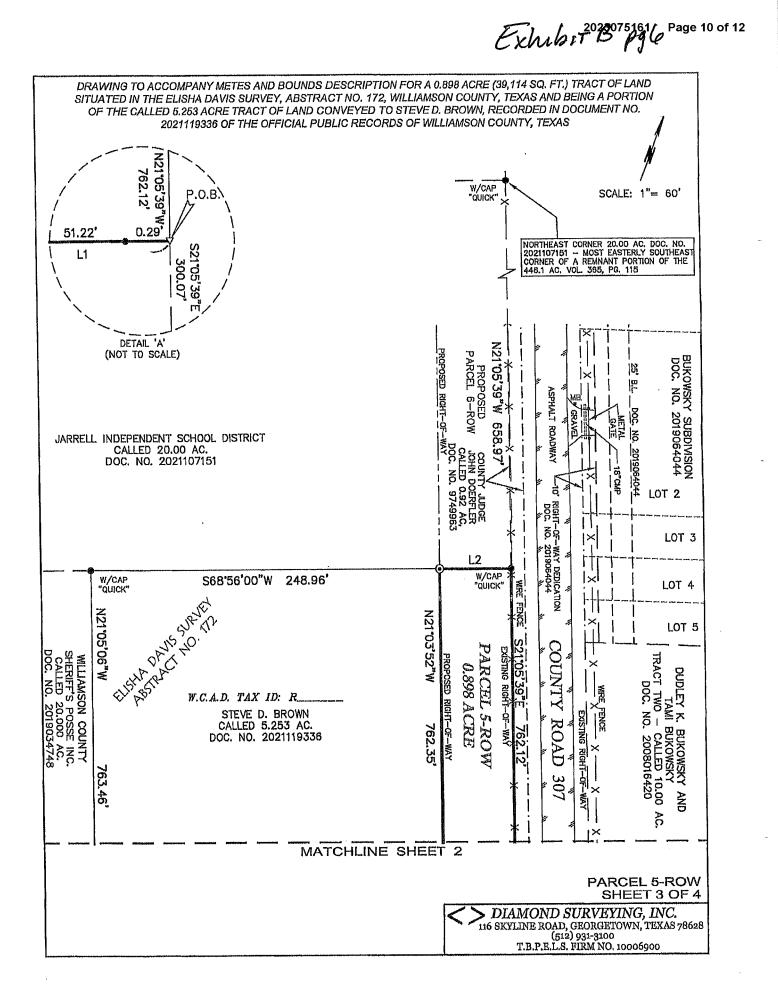


Exhibit 7 20280751617 Page 11 of 12

DRAWING TO ACCOMPANY METES AND BOUNDS DESCRIPTION FOR A 0.898 ACRE (39,114 SQ. FT.) TRACT OF LAND SITUATED IN THE ELISHA DAVIS SURVEY, ABSTRACT NO. 172, WILLIAMSON COUNTY, TEXAS AND BEING A PORTION OF THE CALLED 5.253 ACRE TRACT OF LAND CONVEYED TO STEVE D. BROWN, RECORDED IN DOCUMENT NO. 2021119336 OF THE OFFICIAL PUBLIC RECORDS OF WILLIAMSON COUNTY, TEXAS

LINE TABLE				
LINE	BEARING	DISTANCE		
L1	S68'40'44"W	51.51		
L2	N68*56'00"E	51.12'		
L3	N70'04'08"E	61.37'		
L4	S21"18'36"E	57.96'		

RECORD DEED INFORMATION

\land	ALICIA MARTINEZ REMNANT PORTION OF
	CALLED 15.428 AC. DOC. NO. 2016103459 SEE SHEETS 1 AND 2

DUDLEY K. BUKOWSKY AND TAMI BUKOWSKY (8) TRACT TWO - CALLED 10.00 AC. DOC, NO. 2008016420 SEE SHEET 2

NOTESI

1) BEARING BASIS: NAD-83, TEXAS CENTRAL ZUNE (4203) STATE PLANE SYSTEM. COORDINATES AND DISTANCES SHOWN HEREON ARE SURFACE BASED ON A COMBINED SURFACE ADJUSTMENT FACTOR OF 1.00014.

2) ALL DOCUMENTS LISTED HEREON ARE RECORDED IN THE OFFICE OF THE COUNTY CLERK OF WILLIAMSON COUNTY, TEXAS

3) PARCEL 5-ROW SHOWN HEREON LIE'S WITHIN ZONE "X" (NO SCREEN), AREAS OF MINIMAL FLOOD HAZARD ACCORDING TO THE FLOOD INSURANCE RATE MAP ND. 48491C0150F, WITH AN EFFECTIVE DATE OF DECEMBER 20, 2019.

THIS SURVEY WAS MADE WITHOUT THE BENEFIT OF A TITLE COMMITMENT OR POLICY. THERE MAY BE EASEMENTS AND/OR RESTRICTIONS NOT SHOWN HEREON WHICH MAY AFFECT THE SUBJECT TRACT.

LEGEND IRON ROD FOUND

- 5/8" IRON ROD SET WITH ALUMINUM CAP MARKED "WILLIAMSON COUNTY" ۲ ∇ CALCULATED POINT
- ØPP POWER POLE
- 図^{TPED} TELEPHONE PEDESTAL
- -**_**UT UNDERGROUND TELEPHONE MARKER
 - SIGN 5 6PVC 6" PVC RISER
 - .MB MAIL BOX
- 011 ------- ou ----- OVERHEAD UTILITY LINE
- X ----- X --- WIRE FENCE
- \$ EDGE OF PAVEMENT
- GUARD RAIL
 - HDWL HEADWALL GUARD RAIL GR
 - ASPHALT ASPH CONCRETE DRAINAGE STRUCTURE CDS CORRUGATED METAL PIPE CMP B.L. BUILDING SETBACK LINE
 - "QUICK" QUICK INC RPLS 6447 POINT OF COMMENCEMENT P.O.C. POINT OF BEGINNING P.O.B.
- WILLIAMSON CENTRAL APPRAISAL DISTRICT W.C.A.D.

To: Williamson County, Texas, exclusively.

I, Shane Shafer, Registered Professional Land Surveyor in the State of Texas, hereby certify that this drawing represents a survey made on the ground under my direct supervision completed on November 12, 2021. At the time of this survey there were no encroachments, conflicts or protrusions apparent on the ground, EXCEPT AS SHOWN. This survey substantially complies with the standards for a CATEGORY 1B, CONDITION III STANDARD LAND SURVEY per the current Manual of Practice for Land Surveying in the State of Texas, issued by the Texas Society of Professional Surveyors. USE DF THIS SURVEY BY DTHER PARTIES SHALL BE AT THEIR DWN RISK AND UNDERSIGNED SURVEYOR IS NOT RESPONSIBLE FOR ANY LOSS RESULTING THEREFROM.



SHEET 4 OF 4 > DIAMOND SURVEYING, INC. 116 SKYLINE ROAD, GEORGETOWN, TEXAS 78628 NOVEMBER 16, 2021 SHANE SHAFER, R.P.L.S. NO.V5281 DATE

(512) 931-3100 T.B.P.E.L.S. FIRM NO. 10006900

ELECTRONICALLY RECORDED OFFICIAL PUBLIC RECORDS

2023075161

Pages: 12 Fee: \$66.00 09/07/2023 02:38 PM JDISHER



Namey E. Rater

Nancy E. Rister, County Clerk Williamson County,Texas

ASSIGNMENT OF LIMITED PARTNERSHIP INTEREST ("Assignment") DC BROWN, L.P.

Steve D. Brown ("Assignor"), for and in consideration of Ten Dollars and No Cents (\$10.00) cash and other valuable consideration paid to Assignor by Whitney Hicks ("Assignee"), the receipt and sufficiency of which are acknowledged and confessed, hereby TRANSFERS and ASSIGNS unto Assignee 49.5% limited partnership interest ("Assigned Interest") of DC BROWN, L.P., a Texas limited partnership (the "Partnership"), standing in Assignor's name on the books of said Partnership, and hereby irrevocably constitutes and appoints the appropriate authority of the Partnership to transfer the Assigned Interest on the books of the Partnership with full power of substitution in the premises.

Further, Assignor and Assignee acknowledge that BCSW has not established or determined the correctness of the value of the Assigned Interest, and Assignor and Assignee acknowledge that they have been advised by BCSW that they satisfy themselves by individual investigation and by consultation with consultants, appraisers, and other advisers as to the value of the Assigned Interest.

Further, Assignor and Assignee acknowledge that BCSW has not ordered or examined a UCC search upon the Assigned Interest, and accordingly BCSW makes no representation or warranty, express or implied, regarding the existence of UCC liens.

Executed to be effective March 4, 2020.

ASSIGNOR

STEVE D. BROWN

ASSIGNEE

ASSIGNMENT OF LIMITED PARTNERSHIP INTEREST ("Assignment") DC BROWN, L.P.

Steve D. Brown ("Assignor"), for and in consideration of Ten Dollars and No Cents (\$10.00) cash and other valuable consideration paid to Assignor by Matt Hicks ("Assignee"), the receipt and sufficiency of which are acknowledged and confessed, hereby TRANSFERS and ASSIGNS unto Assignee 49.5% limited partnership interest ("Assigned Interest") of DC BROWN, L.P., a Texas limited partnership (the "Partnership"), standing in Assignor's name on the books of said Partnership, and hereby irrevocably constitutes and appoints the appropriate authority of the Partnership to transfer the Assigned Interest on the books of the Partnership with full power of substitution in the premises.

Further, Assignor and Assignee acknowledge that BCSW has not established or determined the correctness of the value of the Assigned Interest, and Assignor and Assignee acknowledge that they have been advised by BCSW that they satisfy themselves by individual investigation and by consultation with consultants, appraisers, and other advisers as to the value of the Assigned Interest.

Further, Assignor and Assignee acknowledge that BCSW has not ordered or examined a UCC search upon the Assigned Interest, and accordingly BCSW makes no representation or warranty, express or implied, regarding the existence of UCC liens.

Executed to be effective March 4, 2020.

ASSIGNOR:

STEVE D. BROWN

ASSIGNEE MATT HICKS

CIVIL CONSTRUCTION PLANS PAVING, GRADING & UTILITIES FOR KID ZONE ON CR307 CITY OF JARRELL, WILLIAMSON COUNTY, TEXAS

RACT OF LAND. LOCATED IN THE ELIS DAVIS SURVEY, ABSTRACT NO. 172, WILLIAMSON COUNTY, TEXAS, SAID 4.356 ACRE TRACT, BEING THE REMAINING PORTION OF THAT CERTAIN 5.253 ACRE TRACT OF LAND RECORDED IN DOCUMENT NO. 2021119336, OFFICIAL PUBLIC RECORDS, WILLIAMSON COUNTY.

LOT ACREAGE: 4.36 ACRES

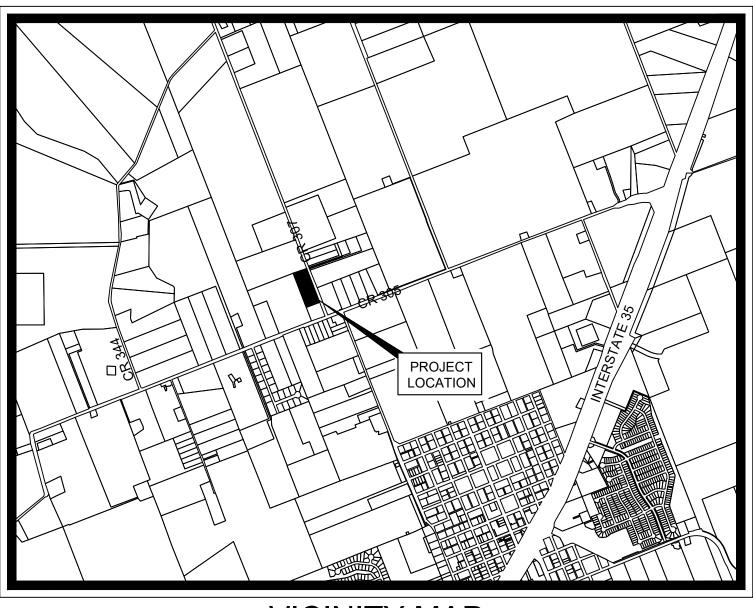
CURRENT ZONING: SF1

UTILITY PROVIDERS

WATER: JARRELL SCHWERTNER DISTRICT WASTEWATER: CITY OF JARRELL ELECTRIC: BARTLETT ELECTRICAL COOPERATIVE



Know what's below. Call before you dig.



VICINITY MAP SCALE: 1" = 2,000'

FEBRUARY 2024

THIS SITE DEVELOPMENT PLAN HAS BEEN REVIEWED AND APPROVED BY THE CITY OF JARRELL. ALL CONSTRUCTION ON THE SUBJECT SITE MUST BE CONSTRUCTED CONSISTENT WITH THESE PLANS.

JORDAN CANTU, DIRECTOR, PLANNING AND DEVELOPMENT

DATE

THE PLANS AND SPECIFICATIONS CONTAINED HEREIN HAVE BEEN REVIEWED AND ARE FOUND TO BE IN COMPLIANCE WITH THE STORMWATER MANAGEMENT REQUIREMENTS OF THE CITY OF JARRELL

CITY ENGINEER

DATE



KID ZONE GYM PO BOX 292 SALADO, TEXAS 76571 TEL: (254) 718-7791 CONTACT: STEVE BROWN AND/OR WHITNEY HICKS



Sheet List Table				
Sheet Number	Sheet Title			
1	COVER SHEET			
2	GENERAL NOTES			
3	KH GENERAL NOTES			
4	EXISTING CONDITIONS & DEMOLITION PLAN			
5	EROSION CONTROL PLAN			
6	EROSION CONTROL DETAILS			
7	OVERALL SITE PLAN			
8	PHASING PLAN			
9	DIMENSION CONTROL PLAN			
10	FIRE PROTECTION PLAN			
11	PAVING & STRIPING PLAN			
12	GRADING PLAN			
13	OVERALL WATER PLAN			
14	OVERALL WASTEWATER PLAN			
15	EXISTING DRAINAGE AREA MAP			
16	PROPOSED DRAINAGE AREA MAP			
17	OVERALL STORM PLAN			
18	POND PLAN			
19	POND CROSS SECTIONS			
20	PAVING DETAILS			
21	WATER DETAILS			
22	WASTEWATER DETAILS			
23	WASTEWATER DETAILS (GRINDER PUMP DETAIL)			
24	STORM DRAIN DETAILS			
25	ALARM DETAILS			



BENCHMARKS

I	BM 7208 - MAG NAIL SET IN CONCRETE
I	ELEV.=822.21

BM 7210 - MAG NAIL SET IN CONCRETE ELEV. 823.90

	A WRITTEN NOTICE OF CONSTRUCTION MUST BE SUBMITTED TO THE TCEQ REGIONAL OFFICE AT LEAST 48 HOURS PRIOR TO THE START OF ANY REGULATED ACTIVITIES. THIS NOTICE MUST INCLUDE:	12.	NEW SEWAGE COLLECTION THE LOCATION OF SUCH ST TIME OF CONNECTION OF T MATERIAL WITH BOTH THE CONSTRUCTED SUFFICIENT
	-THE NAME OF THE APPROVED PROJECT; -THE ACTIVITY START DATE; AND -THE CONTACT INFORMATION OF THE PRIME CONTRACTOR.		MANUFACTURED SOFFICIEN ARE TO BE CONNECTED TO SADDLE AND IN ACCORDAN
	ALL CONTRACTORS CONDUCTING REGULATED ACTIVITIES ASSOCIATED WITH THIS PROJECT MUST BE PROVIDED WITH COMPLETE COPIES OF THE WATER POLLUTION ABATEMENT PLAN (WPAP) AND THE TCEQ LETTER INDICATING THE SPECIFIC CONDITIONS OF ITS APPROVAL. DURING THE COURSE OF THESE REGULATED ACTIVITIES, THE CONTRACTORS ARE REQUIRED TO KEEP ON-SITE COPIES OF THE APPROVED PLAN AND APPROVAL LETTER.		IF NO STUB-OUT IS PRESEN POTENTIAL FUTURE LATER
	IF ANY SENSITIVE FEATURE(S) (CAVES, SOLUTION CAVITY, SINK HOLE, ETC.) IS DISCOVERED DURING CONSTRUCTION, ALL REGULATED ACTIVITIES NEAR THE SENSITIVE FEATURE MUST BE SUSPENDED IMMEDIATELY. THE APPROPRIATE TCEQ REGIONAL OFFICE MUST BE IMMEDIATELY NOTIFIED OF ANY SENSITIVE FEATURES ENCOUNTERED DURING CONSTRUCTION. CONSTRUCTION ACTIVITIES MAY NOT BE RESUMED UNTIL THE TCEQ HAS REVIEWED AND APPROVED THE APPROPRIATE PROTECTIVE MEASURES IN ORDER TO PROTECT ANY SENSITIVE FEATURE AND THE EDWARDS AQUIFER FROM POTENTIALLY ADVERSE IMPACTS TO WATER QUALITY.		THE PRIVATE SERVICE LAT AND MARKED AFTER BACKI
4.	NO TEMPORARY OR PERMANENT HAZARDOUS SUBSTANCE STORAGE TANK SHALL BE INSTALLED WITHIN 150 FEET OF A WATER SUPPLY SOURCE, DISTRIBUTION SYSTEM, WELL, OR SENSITIVE FEATURE.	13.	TRENCHING, BEDDING AND WITH THE STANDARDS OF A (ANSI A 106.2) CLASSES A, E
	PRIOR TO BEGINNING ANY CONSTRUCTION ACTIVITY, ALL TEMPORARY EROSION AND SEDIMENTATION (E&S) CONTROL MEASURES MUST BE PROPERLY INSTALLED AND MAINTAINED IN ACCORDANCE WITH THE APPROVED PLANS AND MANUFACTURERS SPECIFICATIONS. IF INSPECTIONS INDICATE A CONTROL HAS BEEN USED INAPPROPRIATELY, OR INCORRECTLY, THE APPLICANT MUST REPLACE OR MODIFY THE CONTROL FOR SITE SITUATIONS. THESE CONTROLS MUST REMAIN IN PLACE UNTIL THE DISTURBED AREAS HAVE BEEN PERMANENTLY STABILIZED.	14.	SEWER LINES MUST BE TES CLEAN-OUT, IT MUST BE TE PROPOSED SEWER LINE, N UNLESS IT CAN BE CERTIFII
	ANY SEDIMENT THAT ESCAPES THE CONSTRUCTION SITE MUST BE COLLECTED AND PROPERLY DISPOSED OF BEFORE THE NEXT RAIN EVENT TO ENSURE IT IS NOT WASHED INTO SURFACE STREAMS, SENSITIVE FEATURES, ETC.	15.	ALL SEWER LINES MUST BE
	SEDIMENT MUST BE REMOVED FROM SEDIMENT TRAPS OR SEDIMENTATION BASINS NOT LATER THAN WHEN IT OCCUPIES 50% OF THE BASIN'S DESIGN CAPACITY. LITTER, CONSTRUCTION DEBRIS, AND CONSTRUCTION CHEMICALS EXPOSED TO STORMWATER SHALL BE PREVENTED FROM BEING DISCHARGED OFFSITE.		MUST BE MADE AVAILABLE LINES HAVE PASSED ALL RE USE OF THE NEW COLLECT
9.	ALL SPOILS (EXCAVATED MATERIAL) GENERATED FROM THE PROJECT SITE MUST BE STORED ON-SITE WITH PROPER E&S CONTROLS. FOR STORAGE OR DISPOSAL OF SPOILS AT ANOTHER SITE ON THE EDWARDS AQUIFER RECHARGE ZONE, THE OWNER OF THE SITE MUST RECEIVE APPROVAL OF A WATER POLLUTION ABATEMENT PLAN FOR THE PLACEMENT OF FILL MATERIAL OR MASS GRADING PRIOR TO THE PLACEMENT OF SPOILS AT THE OTHER SITE.	()	FOR A COLLECTION SYSTI AND EXFILTRATION TE LOW PRESSURE AIR TEST A LOW PRESSURE AIR TEST
	IF PORTIONS OF THE SITE WILL HAVE A TEMPORARY OR PERMANENT CEASE IN CONSTRUCTION ACTIVITY LASTING LONGER THAN 14 DAYS, SOIL STABILIZATION IN THOSE AREAS SHALL BE INITIATED AS SOON AS POSSIBLE PRIOR TO THE 14TH DAY OF INACTIVITY. IF ACTIVITY WILL RESUME PRIOR TO THE 21ST DAY, STABILIZATION MEASURES ARE NOT REQUIRED. IF DROUGHT CONDITIONS OR INCLEMENT WEATHER PREVENT ACTION BY THE 14TH DAY, STABILIZATION MEASURES SHALL BE INITIATED AS SOON AS POSSIBLE.	(A) (B)	C-828, ASTM C-924, OR REQUIRED IN TABLE C. FOR SECTIONS OF COLLE UNLESS A PIPE IS TO B
11.	THE FOLLOWING RECORDS SHALL BE MAINTAINED AND MADE AVAILABLE TO THE TCEQ UPON REQUEST: -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.	(i) (ii)	A PIPE MUST BE PRESSUF THE F ONCE THE PRESSURE IS S COMF
	THE HOLDER OF ANY APPROVED EDWARD AQUIFER PROTECTION PLAN MUST NOTIFY THE APPROPRIATE REGIONAL OFFICE IN WRITING AND OBTAIN APPROVAL FROM THE EXECUTIVE DIRECTOR PRIOR TO INITIATING ANY OF THE FOLLOWING:	WH	EQUATION C.3
	 A. ANY PHYSICAL OR OPERATIONAL MODIFICATION OF ANY WATER POLLUTION ABATEMENT STRUCTURE(S), INCLUDING BUT NOT LIMITED TO PONDS, DAMS, BERMS, SEWAGE TREATMENT PLANTS, AND DIVERSIONARY STRUCTURES; 		T = TIME FOR K = 0.000419 X D = AVERAGE
	 B. ANY CHANGE IN THE NATURE OR CHARACTER OF THE REGULATED ACTIVITY FROM THAT WHICH WAS ORIGINALLY APPROVED OR A CHANGE WHICH WOULD SIGNIFICANTLY IMPACT THE ABILITY OF THE PLAN TO PREVENT POLLUTION OF THE EDWARDS AQUIFER; 		L = LENGTH OI L = LENGTH OI Q = RATE OF L
	C. ANY DEVELOPMENT OF LAND PREVIOUSLY IDENTIFIED AS UNDEVELOPED IN THE ORIGINAL WATER POLLUTION ABATEMENT PLAN.	(C)	SINCE A K VALUE OF LESS
	§213.5(C), THE TEXAS COMMISSION ON ENVIRONMENTAL QUALITY'S (TCEQ) EDWARDS AQUIFER RULES AND ANY LOCAL GOVERNMENT STANDARD SPECIFICATIONS.	(F)	WASTEWATER COLLECTI
	ALL CONTRACTORS CONDUCTING REGULATED ACTIVITIES ASSOCIATED WITH THIS PROPOSED REGULATED PROJECT MUST BE PROVIDED WITH COPIES OF THE SCS PLAN AND THE TCEQ LETTER INDICATING THE SPECIFIC CONDITIONS OF ITS APPROVAL. DURING THE COURSE OF THESE REGULATED ACTIVITIES, THE CONTRACTORS MUST BE REQUIRED TO KEEP ON-SITE COPIES OF THE PLAN AND THE APPROVAL LETTER. A WRITTEN NOTICE OF CONSTRUCTION MUST BE SUBMITTED TO THE PRESIDING TCEQ REGIONAL OFFICE AT LEAST 48 HOURS PRIOR TO THE	(2)	INSTEAD OF FOLLOWIN A TESTING PROCEDURE F
	START OF ANY REGULATED ACTIVITIES. THIS NOTICE MUST INCLUDE:	(A)	THE TOTAL EXFILTRATION
	-THE NAME OF THE APPROVED PROJECT; -THE ACTIVITY START DATE; AND	(B)	THE TOTAL EXFILTRATION MILE OF PIPE PER 24 H AN OWNER SHALL USE AN LEVEL. THE TOTAL EXFILTRATION OF PIPE PER 24 HOURS
		(B) (C) (D)	 THE TOTAL EXFILTRATION MILE OF PIPE PER 24 H AN OWNER SHALL USE AN LEVEL. THE TOTAL EXFILTRATION OF PIPE PER 24 HOURS TWO FEET ABOVE EXIS FOR CONSTRUCTION WITH DIAMETER PER MILE O IF THE QUANTITY OF INFIL REMEDIAL ACTION IN CONSTRUCTION IN C
5.	-THE ACTIVITY START DATE; AND -THE CONTACT INFORMATION OF THE PRIME CONTRACTOR. ANY MODIFICATION TO THE ACTIVITIES DESCRIBED IN THE REFERENCED SCS APPLICATION FOLLOWING THE DATE OF APPROVAL MAY REQUIRE THE SUBMITTAL OF AN SCS APPLICATION TO MODIFY THIS APPROVAL, INCLUDING THE PAYMENT OF APPROPRIATE FEES AND ALL	 (B) (C) (D) (E) (B) (1) (A) 	 THE TOTAL EXFILTRATION MILE OF PIPE PER 24 H AN OWNER SHALL USE AN LEVEL. THE TOTAL EXFILTRATION OF PIPE PER 24 HOURS TWO FEET ABOVE EXIS FOR CONSTRUCTION WITH DIAMETER PER MILE OF IF THE QUANTITY OF INFIL REMEDIAL ACTION IN C SHALL RETEST A PIPE I IF A GRAVITY COLLECTION MUST BE FOLLOWED: FOR A COLLECTION PIPE I MANDREL SIZING.
5.	-THE ACTIVITY START DATE; AND -THE CONTACT INFORMATION OF THE PRIME CONTRACTOR. ANY MODIFICATION TO THE ACTIVITIES DESCRIBED IN THE REFERENCED SCS APPLICATION FOLLOWING THE DATE OF APPROVAL MAY REQUIRE THE SUBMITTAL OF AN SCS APPLICATION TO MODIFY THIS APPROVAL, INCLUDING THE PAYMENT OF APPROPRIATE FEES AND ALL INFORMATION NECESSARY FOR ITS REVIEW AND APPROVAL. PRIOR TO BEGINNING ANY CONSTRUCTION ACTIVITY, ALL TEMPORARY EROSION AND SEDIMENTATION (E&S) CONTROL MEASURES MUST BE PROPERLY INSTALLED AND MAINTAINED IN ACCORDANCE WITH THE MANUFACTURERS SPECIFICATIONS. THESE CONTROLS MUST REMAIN IN	(B) (C) (D) (E) (B) (1)	 THE TOTAL EXFILTRATION MILE OF PIPE PER 24 H AN OWNER SHALL USE AN LEVEL. THE TOTAL EXFILTRATION OF PIPE PER 24 HOURS TWO FEET ABOVE EXIS FOR CONSTRUCTION WITH DIAMETER PER MILE OF IF THE QUANTITY OF INFIL REMEDIAL ACTION IN C SHALL RETEST A PIPE I IF A GRAVITY COLLECTION MUST BE FOLLOWED: FOR A COLLECTION PIPE IN MANDREL SIZING. A RIGID MANDREL MUST H PIPE, AS SPECIFIED IN NATIONAL STANDARDS IF A MANDREL SIZING DIAN THE ID OF A PIPE. IN THE
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SYSTEM LINES MUST BE CONSTRUCTED WITH STUB OUTS FOR THE CONNECTION OF ANTICIPATED EXTENSIONS. B OUTS MUST BE MARKED ON THE GROUND SUCH THAT THEIR LOCATION CAN BE EASILY DETERMINED AT THE E EXTENSIONS. SUCH STUB OUTS MUST BE MANUFACTURED WYES OR TEES THAT ARE COMPATIBLE IN SIZE AND EWER LINE AND THE EXTENSION. AT THE TIME OF ORIGINAL CONSTRUCTION, NEW STUB-OUTS MUST BE Y TO EXTEND BEYOND THE END OF THE STREET PAVEMENT. ALL STUB-OUTS MUST BE SEALED WITH A EVENT LEAKAGE. EXTENSIONS THAT WERE NOT ANTICIPATED AT THE TIME OF ORIGINAL CONSTRUCTION OR THAT AN EXISTING SEWER LINE NOT FURNISHED WITH STUB OUTS MUST BE CONNECTED USING A MANUFACTURED E WITH ACCEPTED PLUMBING TECHNIQUES.

AN ALTERNATE METHOD OF JOINING LATERALS IS SHOWN IN THE DETAIL ON PLAN SHEET <u>N/A</u> OF <u>N/A</u>. (FOR

RAL STUB-OUTS MUST BE INSTALLED AS SHOWN ON THE PLAN AND PROFILE SHEETS ON PLAN SHEET <u>N/A</u> OF <u>N/A</u> LING AS SHOWN IN THE DETAIL ON PLAN SHEET N/A OF N/A.

ACKFILL MUST CONFORM WITH 30 TAC §217.54. THE BEDDING AND BACKFILL FOR FLEXIBLE PIPE MUST COMPLY STM D-2321, CLASSES IA, IB, II OR III. RIGID PIPE BEDDING MUST COMPLY WITH THE REQUIREMENTS OF ASTM C 12 OR C.

FED FROM MANHOLE TO MANHOLE. WHEN A NEW SEWER LINE IS CONNECTED TO AN EXISTING STUB OR TED FROM EXISTING MANHOLE TO NEW MANHOLE. IF A STUB OR CLEAN-OUT IS USED AT THE END OF THE PRIVATE SERVICE ATTACHMENTS MAY BE CONNECTED BETWEEN THE LAST MANHOLE AND THE CLEANOUT AS CONFORMING WITH THE PROVISIONS OF 30 TAC §213.5(C)(3)(E).

ESTED IN ACCORDANCE WITH 30 TAC §217.57. THE ENGINEER MUST RETAIN COPIES OF ALL TEST RESULTS WHICH THE EXECUTIVE DIRECTOR UPON REQUEST. THE ENGINEER MUST CERTIFY IN WRITING THAT ALL WASTEWATER QUIRED TESTING TO THE APPROPRIATE REGIONAL OFFICE WITHIN 30 DAYS OF TEST COMPLETION AND PRIOR TO ON SYSTEM. TESTING METHOD WILL BE:

I PIPE THAT WILL TRANSPORT WASTEWATER BY GRAVITY FLOW, THE DESIGN MUST SPECIFY AN INFILTRATION OR A LOW-PRESSURE AIR TEST. A TEST MUST CONFORM TO THE FOLLOWING REQUIREMENTS:

MUST FOLLOW THE PROCEDURES DESCRIBED IN AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM) STM F-1417 OR OTHER PROCEDURE APPROVED BY THE EXECUTIVE DIRECTOR, EXCEPT AS TO TESTING TIMES AS IN SUBPARAGRAPH (C) OF THIS PARAGRAPH OR EQUATION C.3 IN SUBPARAGRAPH (B)(II) OF THIS PARAGRAPH. TION SYSTEM PIPE LESS THAN 36 INCH AVERAGE INSIDE DIAMETER, THE FOLLOWING PROCEDURE MUST APPLY, TESTED AS REQUIRED BY PARAGRAPH (2) OF THIS SUBSECTION. ZED TO 3.5 POUNDS PER SQUARE INCH (PSI) GREATER THAN THE PRESSURE EXERTED BY GROUNDWATER ABOVE

ABILIZED, THE MINIMUM TIME ALLOWABLE FOR THE PRESSURE TO DROP FROM 3.5 PSI GAUGE TO 2.5 PSI GAUGE IS TED FROM THE FOLLOWING EQUATION:

T = (0.085 * D * K) / Q

RESSURE TO DROP 1.0 POUND PER SQUARE INCH GAUGE IN SECONDS

D X L, BUT NOT LESS THAN 1.0 SIDE PIPE DIAMETER IN INCHES

LINE OF SAME SIZE BEING TESTED, IN FEET

LINE OF SAME SIZE BEING TESTED, IN FEET SS, 0.0015 CUBIC FEET PER MINUTE PER SQUARE FOOT INTERNAL SURFACE

THAN 1.0 MAY NOT BE USED, THE MINIMUM TESTING TIME FOR EACH PIPE DIAMETER IS SHOWN IN THE FOLLOWING

PIPE DIAMETER (IN)	MINIMUM TIME (SEC)	MAXIMUM LENGTH FOR MINIMUM TIME (FT)	TIME FOR LONGER LENGTH (SEC/FT)
6	340	398	0.8550
8	454	298	1.5200
10	567	239	2.3740
12	680	199	3.4190
15	850	159	5.3420
18	1020	133	7.6930
21	1190	114	10.4710
24	1360	100	13.6760
27	1530	88	17.3090
30	1700	80	21.3690
33	1870	72	25.8560

ST IF NO PRESSURE LOSS HAS OCCURRED DURING THE FIRST 25% OF THE CALCULATED TESTING TIME. LEAKAGE HAS OCCURRED DURING THE FIRST 25% OF TESTING PERIOD, THEN THE TEST MUST CONTINUE FOR TION AS OUTLINED ABOVE OR UNTIL FAILURE.

I SYSTEM PIPES WITH A 27 INCH OR LARGER AVERAGE INSIDE DIAMETER MAY BE AIR TESTED AT EACH JOINT THE PROCEDURE OUTLINED IN THIS SECTION. R PIPE WITH AN INSIDE DIAMETER GREATER THAN 33 INCHES MUST BE APPROVED BY THE EXECUTIVE DIRECTOR.

AS DETERMINED BY A HYDROSTATIC HEAD TEST, MUST NOT EXCEED 50 GALLONS PER INCH OF DIAMETER PER JRS AT A MINIMUM TEST HEAD OF 2.0 FEET ABOVE THE CROWN OF A PIPE AT AN UPSTREAM MANHOLE. INFILTRATION TEST IN LIEU OF AN EXFILTRATION TEST WHEN PIPES ARE INSTALLED BELOW THE GROUNDWATER

AS DETERMINED BY A HYDROSTATIC HEAD TEST, MUST NOT EXCEED 50 GALLONS PER INCH DIAMETER PER MILE AT A MINIMUM TEST HEAD OF TWO FEET ABOVE THE CROWN OF A PIPE AT AN UPSTREAM MANHOLE, OR AT LEAST NG GROUNDWATER LEVEL. WHICHEVER IS GREATER.

IN A 25-YEAR FLOOD PLAIN, THE INFILTRATION OR EXFILTRATION MUST NOT EXCEED 10 GALLONS PER INCH PIPE PER 24 HOURS AT THE SAME MINIMUM TEST HEAD AS IN SUBPARAGRAPH (C) OF THIS PARAGRAPH. RATION OR EXFILTRATION EXCEEDS THE MAXIMUM QUANTITY SPECIFIED. AN OWNER SHALL UNDERTAKE DER TO REDUCE THE INFILTRATION OR EXFILTRATION TO AN AMOUNT WITHIN THE LIMITS SPECIFIED. AN OWNER OLLOWING A REMEDIATION ACTION.

PIPE IS COMPOSED OF FLEXIBLE PIPE, DEFLECTION TESTING IS ALSO REQUIRED. THE FOLLOWING PROCEDURES 'ITH INSIDE DIAMETER LESS THAN 27 INCHES, DEFLECTION MEASUREMENT REQUIRES A RIGID MANDREL.

AVE AN OUTSIDE DIAMETER (OD) NOT LESS THAN 95% OF THE BASE INSIDE DIAMETER (ID) OR AVERAGE ID OF A HE APPROPRIATE STANDARD BY THE ASTMS, AMERICAN WATER WORKS ASSOCIATION, UNI-BELL, OR AMERICAN NSTITUTE, OR ANY RELATED APPENDIX.

ETER IS NOT SPECIFIED IN THE APPROPRIATE STANDARD, THE MANDREL MUST HAVE AN OD EQUAL TO 95% OF S CASE, THE ID OF THE PIPE, FOR THE PURPOSE OF DETERMINING THE OD OF THE MANDREL, MUST EQUAL BE THE IETER MINUS TWO MINIMUM WALL THICKNESSES FOR OD CONTROLLED PIPE AND THE AVERAGE INSIDE DIAMETER

ET THE APPROPRIATE STANDARD.

E CONSTRUCTED OF A METAL OR A RIGID PLASTIC MATERIAL THAT CAN WITHSTAND 200 PSI WITHOUT BEING

NE OR MORE ODD NUMBER OF RUNNERS OR LEGS.

HMUST EQUAL AT LEAST 75% OF THE INSIDE DIAMETER OF A PIPE. USE A SEPARATE PROVING RING.

LE MANDREL IS PROHIBITED.

VISION INSPECTION AS A SUBSTITUTE FOR A DEFLECTION TEST.

TIVE DIRECTOR MAY APPROVE THE USE OF A DEFLECTOMETER OR A MANDREL WITH REMOVABLE LEGS OR -CASE BASIS.

IN SYSTEM PIPE WITH AN INSIDE DIAMETER 27 INCHES AND GREATER, OTHER TEST METHODS MAY BE USED TO

LECTION. OD MUST BE ACCURATE TO WITHIN PLUS OR MINUS 0.2% DEFLECTION.

NDUCT A DEFLECTION TEST UNTIL AT LEAST 30 DAYS AFTER THE FINAL BACKFILL.

TEM PIPE DEFLECTION MUST NOT EXCEED FIVE PERCENT (5%).

DEFLECTION TEST, AN OWNER SHALL CORRECT THE PROBLEM AND CONDUCT A SECOND TEST AFTER THE FINAL CE AT LEAST 30 DAYS.

STED TO MEET OR EXCEED THE REQUIREMENTS OF 30 TAC §217.58.

A LEAKAGE TEST.

CH MANHOLE (AFTER ASSEMBLY AND BACKFILLING) FOR LEAKAGE, SEPARATE AND INDEPENDENT OF THE PES, BY HYDROSTATIC EXFILTRATION TESTING, VACUUM TESTING, OR OTHER METHOD APPROVED BY THE

DR HYDROSTATIC TESTING OR ANY ALTERNATIVE TEST METHODS IS 0.025 GALLONS PER FOOT DIAMETER PER TH PER HOUR

TIC EXFILTRATION TEST, AN OWNER SHALL SEAL ALL WASTEWATER PIPES COMING INTO A MANHOLE WITH AN L THE MANHOLE WITH WATER, AND MAINTAIN THE TEST FOR AT LEAST ONE HOUR. NHOLES MAY USE A 24-HOUR WETTING PERIOD BEFORE TESTING TO ALLOW SATURATION OF THE CONCRETE.

EST, AN OWNER SHALL PLUG ALL LIFT HOLES AND EXTERIOR JOINTS WITH A NON-SHRINK GROUT AND PLUG ALL IOI F

D IN HORIZONTAL JOINTS BEFORE TESTING. DTS, AND PIPE PLUGS MUST BE SECURED TO PREVENT MOVEMENT WHILE A VACUUM IS DRAWN. NIMUM 60 INCH/LB TORQUE WRENCH TO TIGHTEN THE EXTERNAL CLAMPS THAT SECURE A TEST COVER TO THE

CED AT THE INSIDE OF THE TOP OF A CONE SECTION, AND THE SEAL INFLATED IN ACCORDANCE WITH THE MMENDATIONS.

1 OF 10 INCHES OF MERCURY INSIDE A MANHOLE TO PERFORM A VALID TEST.

- (G) A TEST DOES NOT BEGIN UNTIL AFTER THE VACUUM PUMP IS OFF. (H) A MANHOLE PASSES THE TEST IF AFTER 2.0 MINUTES AND WITH ALL VALVES CLOSED, THE VACUUM I
- 17. ALL PRIVATE SERVICE LATERALS MUST BE INSPECTED AND CERTIFIED IN ACCORDANCE WITH 30 TAC AND, PRIOR TO COVERING AND CONNECTING A PRIVATE SERVICE LATERAL TO AN EXISTING ORGANIZ TEXAS LICENSED PROFESSIONAL ENGINEER, TEXAS REGISTERED SANITARIAN, OR APPROPRIATE CIT THE PRIVATE SERVICE LATERAL AND THE CONNECTION TO THE SEWAGE COLLECTION SYSTEM, AND (CONFORMITY WITH THE APPLICABLE PROVISIONS OF THIS SECTION. THE OWNER OF THE COLLECTION CERTIFICATIONS FOR FIVE YEARS AND FORWARD COPIES TO THE APPROPRIATE REGIONAL OFFICE BE MADE TO AN APPROVED SEWAGE COLLECTION SYSTEM.

CITY OF JARRELL CONSTRUCTION PLAN NOTES

GENERAL NOTES:

1. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE CITY OF JARRELL STANDARD SPECIFICA MANUAL

- 2. ANY EXISTING UTILITIES, PAVEMENT, CURBS, SIDEWALKS, STRUCTURES, TREES, ETC., NOT PLANNE DESTRUCTION OR REMOVAL THAT ARE DAMAGED OR REMOVED SHALL BE REPAIRED OR REPLACED CONTRACTOR'S EXPENSE.
- 3. THE CONTRACTOR SHALL VERIFY ALL DEPTHS AND LOCATIONS OF EXISTING UTILITIES PRIOR TO A CONSTRUCTION. ANY DISCREPANCIES WITH THE CONSTRUCTION PLANS FOUND IN THE FIELD SHA BROUGHT IMMEDIATELY TO THE ATTENTION OF THE ENGINEER WHO SHALL BE RESPONSIBLE FOR PLANS AS APPROPRIATE.
- 4. MANHOLE FRAMES, COVERS, VALVES, CLEANOUTS, ETC. SHALL BE RAISED TO FINISHED GRADE PF PAVING CONSTRUCTION.
- 5. THE CONTRACTOR SHALL GIVE THE CITY OF JARRELL 48 HOURS NOTICE BEFORE BEGINNING EACH CONSTRUCTION. TELEPHONE (512)746-4593 (PERMITS/DEVELOPMENT DEPARTMENT).
- 6. ALL AREAS DISTURBED OR EXPOSED DURING CONSTRUCTION SHALL BE REVEGETATED IN ACCORI THE PLANS AND SPECIFICATIONS. REVEGETATION OF ALL DISTURBED OR EXPOSED AREAS SHALL SODDING OR SEEDING, AT THE CONTRACTOR'S OPTION. HOWEVER, THE TYPE OF REVEGETATION OR EXCEED THE TYPE OF VEGETATION PRESENT BEFORE CONSTRUCTION.
- 7. PRIOR TO ANY CONSTRUCTION, THE ENGINEER SHALL CONVENE A PRECONSTRUCTION CONFERE THE CITY OF JARRELL, HIMSELF, THE CONTRACTOR, OTHER UTILITY COMPANIES, ANY AFFECTED F ANY OTHER ENTITY THE CITY OR ENGINEER MAY REQUIRE.
- 8. THE CONTRACTOR AND THE ENGINEER SHALL KEEP ACCURATE RECORDS OF ALL CONSTRUCTION DEVIATES FROM THE PLANS. THE ENGINEER SHALL FURNISH THE CITY OF JARRELL ACCURATE "AS DRAWINGS FOLLOWING COMPLETION OF ALL CONSTRUCTION. THESE "AS-BUILT" DRAWINGS SHAL THE SATISFACTION OF THE PERMITS/DEVELOPMENT DEPARTMENT PRIOR TO FINAL ACCEPTANCE.
- 9. WHEN CONSTRUCTION IS BEING CARRIED OUT WITHIN EASEMENTS, THE CONTRACTOR SHALL CO WORK TO WITHIN THE PERMANENT AND ANY TEMPORARY EASEMENTS. PRIOR TO FINAL ACCEPTA CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING ALL TRASH AND DEBRIS WITHIN THE PERM TEMPORARY EASEMENTS. CLEAN-UP SHALL BE TO THE SATISFACTION OF THE CITY ENGINEER.
- 10. PRIOR TO ANY CONSTRUCTION, THE CONTRACTOR SHALL APPLY FOR AND SECURE ALL PROPER THE APPROPRIATE AUTHORITIES.

TRENCH SAFETY NOTES:

- 1. IN ACCORDANCE WITH THE LAWS OF THE STATE OF TEXAS AND THE U. S. OCCUPATIONAL SAFETY ADMINISTRATION REGULATIONS, ALL TRENCHES OVER 5 FEET IN DEPTH IN EITHER HARD AND COL AND UNSTABLE SOIL SHALL BE SLOPED. SHORED. SHEETED. BRACED OR OTHERWISE SUPPORTEI FURTHERMORE, ALL TRENCHES LESS THAN 5 FEET IN DEPTH SHALL ALSO BE EFFECTIVELY PROTE HAZARDOUS GROUND MOVEMENT MAY BE EXPECTED. TRENCH SAFETY SYSTEMS TO BE UTILIZED PROJECT WILL BE PROVIDED BY THE CONTRACTOR.
- 2. IN ACCORDANCE WITH THE U. S. OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION REGULAT PERSONS ARE IN TRENCHES 4 FEET DEEP OR MORE, ADEQUATE MEANS OF EXIT, SUCH AS A LADD MUST BE PROVIDED AND LOCATED SO AS TO REQUIRE NO MORE THAN 25 FEET OF LATERAL TRAV
- 3. IF TRENCH SAFETY SYSTEM DETAILS WERE NOT PROVIDED IN THE PLANS BECAUSE TRENCHES WE ANTICIPATED TO BE LESS THAN 5 FEET IN DEPTH AND DURING CONSTRUCTION IT IS FOUND THAT IN FACT 5 FEET OR MORE IN DEPTH OR TRENCHES LESS THAN 5 FEET IN DEPTH ARE IN AN AREA HAZARDOUS GROUND MOVEMENT IS EXPECTED, ALL CONSTRUCTION SHALL CEASE, THE TRENCHE BE BARRICADED AND THE ENGINEER NOTIFIED IMMEDIATELY, CONSTRUCTION SHALL NOT RESUMI APPROPRIATE TRENCH SAFETY SYSTEM DETAILS, AS DESIGNED BY A PROFESSIONAL ENGINEER, A AND COPIES SUBMITTED TO THE CITY OF JARRELL.

STREET AND DRAINAGE NOTES:

- 1. ALL TESTING SHALL BE DONE BY AN INDEPENDENT LABORATORY AT THE OWNER'S EXPENSE. ANY SHALL BE PAID FOR BY THE CONTRACTOR. A CITY INSPECTOR SHALL BE PRESENT DURING ALL TE SHALL BE COORDINATED WITH THE CITY INSPECTOR AND HE SHALL BE GIVEN A MINIMUM OF 24 HO PRIOR TO ANY TESTING. TELEPHONE (512)746-4593 (INSPECTIONS).
- 2. BACKFILL BEHIND THE CURB SHALL BE COMPACTED TO OBTAIN A MINIMUM OF 95% MAXIMUM DENS 3" OF TOP OF CURB. MATERIAL USED SHALL BE PRIMARILY GRANULAR WITH NO ROCKS LARGER T GREATEST DIMENSION. THE REMAINING 3" SHALL BE CLEAN TOPSOIL FREE FROM ALL CLODS AND S SUSTAINING PLANT LIFE.
- 3. DEPTH OF COVER FOR ALL CROSSINGS UNDER PAVEMENT INCLUDING GAS, ELECTRIC, TELEPHONE WATER SERVICES, ETC., SHALL BE A MINIMUM OF 30" BELOW SUBGRADE.
- 4. STREET RIGHTS-OF-WAY SHALL BE GRADED AT A SLOPE OF 1/4" PER FOOT TOWARD THE CURB UN OTHERWISE INDICATED. HOWEVER, IN NO CASE SHALL THE WIDTH OF RIGHT-OF-WAY AT 1/4" PER I LESS THAN 10 FEET UNLESS A SPECIFIC REQUEST FOR AN ALTERNATE GRADING SCHEME IS MADE ACCEPTED BY THE CITY OF JARRELL PERMITS/DEVELOPMENT DEPARTMENT.
- 5. BARRICADES BUILT TO CITY OF JARRELL STANDARDS SHALL BE CONSTRUCTED ON ALL DEAD-END AS NECESSARY DURING CONSTRUCTION TO MAINTAIN JOB AND PUBLIC SAFETY.
- 6. ALL R.C.P. SHALL BE MINIMUM CLASS III.

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1 IS AT LEAST 9.0 INC	HES OF MERCURY.	ATE
C §213.5(C)(3)(I). AFTE ZED SEWAGE COLLE		
TY INSPECTOR MUST	VISUALLY INSPECT CONSTRUCTED IN	
ON SYSTEM MUST MA UPON REQUEST. COM	INTAIN SUCH INECTIONS MAY ONLY	
		S Z
	WATER AND WASTEWATER NOTES: 1. PIPE MATERIAL FOR WATER MAINS SHALL BE PVC (AWWA C-900, MIN. CLASS 200), OR DUCTILE IRON (AWWA C-100,	EVISION
	 MIN. CLASS 200). WATER SERVICES (2" OR LESS) SHALL BE POLYETHYLENE TUBING (BLACK, 200 PSI, DR 9). PIPE MATERIAL FOR PRESSURE WASTEWATER MAINS SHALL BE PVC (AWWA C-900, MIN. CLASS 150), OR DUCTILE IRON (AWWA C-100, MIN. CLASS 200). PIPE MATERIAL FOR GRAVITY WASTEWATER MAINS SHALL BE PVC (ASTM D2241 OR D3034, MAX. DR-26), DUCTILE IRON (AWWA C-100, MIN. CLASS 200). 	
	 UNLESS OTHERWISE ACCEPTED BY THE CITY ENGINEER, DEPTH OF COVER FOR ALL LINES OUT OF THE PAVEMENT SHALL BE 42" MIN., AND DEPTH OF COVER FOR ALL LINES UNDER PAVEMENT SHALL BE A MIN. OF 30" BELOW SUBGRADE. 	
	 ALL FIRE HYDRANT LEADS SHALL BE DUCTILE IRON PIPE (AWWA C-100, MIN. CLASS 200). ALL IRON PIPE AND FITTINGS SHALL BE WRAPPED WITH MINIMUM 8-MIL POLYETHYLENE AND SEALED WITH DUCT 	o z
	TAPE OR EQUAL ACCEPTED BY THE CITY ENGINEER.6. THE CONTRACTOR SHALL CONTACT THE CITY INSPECTOR AT (512)746-4593 TO COORDINATE UTILITY TIE-INS AND	
	NOTIFY HIM AT LEAST 48 HOURS PRIOR TO CONNECTING TO EXISTING LINES. 7. ALL MANHOLES SHALL BE CONCRETE WITH CAST IRON RING AND COVER. ALL MANHOLES LOCATED OUTSIDE OF	ODD 5, INC. N, TX 78626 3–1791 =–928
	 THE PAVEMENT SHALL HAVE BOLTED COVERS. TAPPING OF FIBERGLASS MANHOLES SHALL NOT BE ALLOWED. 8. THE CONTRACTOR MUST OBTAIN A BULK WATER PERMIT OR PURCHASE AND INSTALL A WATER METER FOR ALL WATER USED DURING CONSTRUCTION. A COPY OF THIS PERMIT MUST BE CARRIED AT ALL TIMES BY ALL WHO 	LATES, INC. ETOWN, TX 7 2-418-1791 IRM F-928
	USE WATER. 9. LINE FLUSHING OR ANY ACTIVITY USING A LARGE QUANTITY OF WATER MUST BE SCHEDULED WITH THE CITY OF	
	JARRELL INSPECTOR, TELEPHONE (512)746-4593. 10. THE CONTRACTOR, AT HIS EXPENSE, SHALL PERFORM STERILIZATION OF ALL POTABLE WATER LINES	AND ASS 310, GEOI FAX: 5 HORN.CC
CATIONS NED FOR	CONSTRUCTED AND SHALL PROVIDE ALL EQUIPMENT (INCLUDING TEST GAUGES), SUPPLIES (INCLUDING CONCENTRATED CHLORINE DISINFECTING MATERIAL), AND NECESSARY LABOR REQUIRED FOR THE STERILIZATION PROCEDURE. THE STERILIZATION PROCEDURE SHALL BE MONITORED BY CITY OF JARRELL PERSONNEL. WATER SAMPLES WILL BE COLLECTED BY THE CITY OF JARRELL TO VERIFY EACH TREATED LINE HAS ATTAINED AN INITIAL CHLORINE CONCENTRATION OF 50 PPM. WHERE MEANS OF FLUSHING IS NECESSARY, THE CONTRACTOR, AT HIS EXPENSE, SHALL PROVIDE FLUSHING DEVICES AND REMOVE SAID DEVICES PRIOR TO	DRN A JITE 1 0768 ALEY- ENGI
ED AT ANY ALL BE R REVISING THE	 FINAL ACCEPTANCE BY THE CITY OF JARRELL. 11. SAMPLING TAPS SHALL BE BROUGHT UP TO 3 FEET ABOVE GRADE AND SHALL BE EASILY ACCESSIBLE FOR CITY PERSONNEL. AT THE CONTRACTOR'S REQUEST, AND IN HIS PRESENCE, SAMPLES FOR BACTERIOLOGICAL TESTING WILL BE COLLECTED BY THE CITY OF JARRELL NOT LESS THAN 24 HOURS AFTER THE TREATED LINE HAS BEEN FLUSHED OF THE CONCENTRATED CHLORINE SOLUTION AND CHARGED WITH WATER APPROVED BY THE 	© 2024 KIMLEY-HO S. AUSTIN AVENUE, SI PHONE: 512-520- WWW.KIN TEXAS REGISTERED
PRIOR TO FINAL	CITY. THE CONTRACTOR SHALL SUPPLY A CHECK OR MONEY ORDER, PAYABLE TO THE CITY OF JARRELL, TO COVER THE FEE CHARGED FOR TESTING EACH WATER SAMPLE. CITY OF JARRELL FEE AMOUNTS MAY BE OBTAINED BY CALLING THE PERMITS/DEVELOPMENT DEPARTMENT AT (512)746-4593.	501 S. V
CH PHASE OF	12. THE CONTRACTOR, AT HIS EXPENSE, SHALL PERFORM QUALITY TESTING FOR ALL WASTEWATER PIPE INSTALLED AND PRESSURE PIPE HYDROSTATIC TESTING OF ALL WATER LINES CONSTRUCTED AND SHALL PROVIDE ALL EQUIPMENT (INCLUDING PUMPS AND GAUGES), SUPPLIES AND LABOR NECESSARY TO PERFORM THE TESTS. QUALITY AND PRESSURE TESTING SHALL BE MONITORED BY CITY OF JARRELL PERSONNEL.	2/09/2024
L CONSIST OF N MUST EQUAL	13. THE CONTRACTOR SHALL COORDINATE TESTING WITH THE CITY OF JARRELL INSPECTOR AND PROVIDE NO LESS THAN 24 HOURS NOTICE PRIOR TO PERFORMING STERILIZATION, QUALITY TESTING OR PRESSURE TESTING.	STATE OF TEAMS
ENCE BETWEEN PARTIES AND		ALEJANDRO E. GRANADOS RICO
N THAT \S-BUILT" LL MEET WITH	 THE CONTRACTOR SHALL NOT OPEN OR CLOSE ANY VALVES UNLESS AUTHORIZED BY THE CITY OF JARRELL. ALL VALVE BOXES AND COVERS SHALL BE CAST IRON. 	Post CENSES
E. DNFINE HIS ANCE, THE	16. ALL WATER SERVICE, WASTEWATER SERVICE AND VALVE LOCATIONS SHALL BE APPROPRIATELY MARKED AS FOLLOWS: WATER SERVICE "W" ON TOP OF CURB WASTEWATER SERVICE "S" ON TOP OF CURB	CT AEG AEG AEG AEG AEG AEG AEG AEG AEG AEG
MANENT AND PERMITS FROM	VALVE "V" ON FACE OF CURB TOOLS FOR MARKING THE CURB SHALL BE PROVIDED BY THE CONTRACTOR. OTHER APPROPRIATE MEANS OF MARKING SERVICE AND VALVE LOCATIONS SHALL BE PROVIDED IN AREAS WITHOUT CURBS. SUCH MEANS OF	PROJE ATE ARY 2 BY: Y: BY:
		KHA F 0694 D FEBRUA SCALE: / DESIGNED DRAWN B' CHECKED
Y AND HEALTH	18. THE CITY OF JARRELL FIRE DEPARTMENT SHALL BE NOTIFIED 48 HOURS PRIOR TO TESTING OF ANY BUILDING SPRINKLER PIPING IN ORDER THAT THE FIRE DEPARTMENT MAY MONITOR SUCH TESTING.	
MPACT OR SOFT ED. ECTED WHEN D FOR THIS	19. SAND, AS DESCRIBED IN SPECIFICATION ITEM 510 PIPE, SHALL NOT BE USED AS BEDDING FOR WATER AND WASTEWATER LINES. ACCEPTABLE BEDDING MATERIALS ARE PIPE BEDDING STONE, PEA GRAVEL AND IN LIEU OF SAND, A NATURALLY OCCURRING OR MANUFACTURED STONE MATERIAL CONFORMING TO ASTM C33 FOR STONE QUALITY AND MEETING THE FOLLOWING GRADATION SPECIFICATION: SIEVE SIZE PERCENT RETAINED BY WEIGHT	S
TIONS, WHEN DER OR STEPS, VEL.	1/2" 0 3/8" 0-2 #4 40-85	
VERE TRENCHES ARE	 #10 95-100 20. THE CONTRACTOR IS HEREBY NOTIFIED THAT CONNECTING TO, SHUTTING DOWN, OR TERMINATING EXISTING 	
WHERE HED AREA SHALL //E UNTIL	UTILITY LINES, MAY HAVE TO OCCUR AT OFF-PEAK HOURS. SUCH HOURS ARE USUALLY OUTSIDE NORMAL WORKING HOURS AND POSSIBLY BETWEEN 12 A.M. AND 6 A.M. 21. ALL WASTEWATER CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE TEXAS COMMISSION ON	
, ARE RETAINED	ENVIRONMENTAL QUALITY (TCEQ) REGULATIONS, 30 TAC CHAPTER 213 AND 317, AS APPLICABLE. WHENEVER TCEQ AND CITY OF JARRELL SPECIFICATIONS CONFLICT, THE MORE STRINGENT SHALL APPLY. TRAFFIC MARKING NOTES:	
IY RETESTING ESTS. TESTING IOURS NOTICE	 ANY METHODS, STREET MARKINGS AND SIGNAGE NECESSARY FOR WARNING MOTORISTS, WARNING PEDESTRIANS OR DIVERTING TRAFFIC DURING CONSTRUCTION SHALL CONFORM TO THE TEXAS MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS, LATEST EDITION. 	I Z I
NSITY TO WITHIN THAN 6" IN THE D SUITABLE FOR	 ALL PAVEMENT MARKINGS, MARKERS, PAINT, TRAFFIC BUTTONS, TRAFFIC CONTROLS AND SIGNS SHALL BE INSTALLED IN ACCORDANCE WITH THE TEXAS DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR CONSTRUCTION OF HIGHWAYS, STREETS AND BRIDGES AND, THE TEXAS MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS, LATEST EDITIONS. 	U
NE, CABLE TV,	EROSION AND SEDIMENTATION CONTROL NOTES:	
NLESS	1. EROSION CONTROL MEASURES, SITE WORK AND RESTORATION WORK SHALL BE IN ACCORDANCE WITH THE CITY OF JARRELL EROSION AND SEDIMENTATION CONTROL ORDINANCE.	
DE TO AND	2. ALL SLOPES SHALL BE SODDED OR SEEDED WITH APPROVED GRASS, GRASS MIXTURES OR GROUND COVER SUITABLE TO THE AREA AND SEASON IN WHICH THEY ARE APPLIED.	
D STREETS AND	3. SILT FENCES, ROCK BERMS, SEDIMENTATION BASINS AND SIMILARLY RECOGNIZED TECHNIQUES AND MATERIALS SHALL BE EMPLOYED DURING CONSTRUCTION TO PREVENT POINT SOURCE SEDIMENTATION LOADING OF DOWNSTREAM FACILITIES. SUCH INSTALLATION SHALL BE REGULARLY INSPECTED BY THE CITY OF JARRELL FOR EFFECTIVENESS. ADDITIONAL MEASURES MAY BE REQUIRED IF, IN THE OPINION OF THE CITY ENGINEER, THEY ARE WARRANTED.	CR3 TEXAS
	4. ALL TEMPORARY EROSION CONTROL MEASURES SHALL NOT BE REMOVED UNTIL FINAL INSPECTION AND APPROVAL OF THE PROJECT BY THE ENGINEER. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO MAINTAIN ALL TEMPORARY EROSION CONTROL STRUCTURES AND TO REMOVE EACH STRUCTURE AS APPROVED BY THE ENGINEER.	
	5. ALL MUD, DIRT, ROCKS, DEBRIS, ETC., SPILLED, TRACKED OR OTHERWISE DEPOSITED ON EXISTING PAVED STREETS, DRIVES AND AREAS USED BY THE PUBLIC SHALL BE CLEANED UP IMMEDIATELY.	ZONE CITY OF J
	BENCHMARKS	Q ≤

BENCHMARKS

SHEET NUMBER

ELEV.=822.21

BM 7208 - MAG NAIL SET IN CONCRETE

BM 7210 - MAG NAIL SET IN CONCRETE ELEV. 823.90



- 11. OFF-SITE SOIL BORROW, SPOIL, AND STORAGE AREAS (IF APPLICABLE) ARE CONSIDERED AS PART OF THE PROJECT SITE AND MUST ALSO COMPLY WITH THE EROSION CONTROL REQUIREMENTS FOR THIS PROJECT. THIS INCLUDES THE INSTALLATION OF BMP'S TO CONTROL EROSION AND SEDIMENTATION AND THE ESTABLISHMENT OF PERMANENT GROUND COVER ON DISTURBED AREAS PRIOR TO FINAL APPROVAL OF THE PROJECT. CONTRACTOR IS RESPONSIBLE FOR MODIFYING THE SWPPP AND EROSION CONTROL PLAN TO INCLUDE BMPS FOR ANY OFF-SITE THAT ARE NOT ANTICIPATED OR SHOWN ON THE EROSION CONTROL PLAN. 12. ALL STAGING, STOCKPILES, SPOIL, AND STORAGE SHALL BE LOCATED SUCH THAT THEY WILL NOT ADVERSELY AFFECT STORM WATER
- QUALITY. PROTECTIVE MEASURES SHALL BE PROVIDED IF NEEDED TO ACCOMPLISH THIS REQUIREMENT, SUCH AS COVERING OR 13. CONTRACTORS SHALL INSPECT ALL EROSION CONTROL DEVICES, BMPS, DISTURBED AREAS, AND VEHICLE ENTRY AND EXIT AREAS WEEKLY AND WITHIN 24 HOURS OF ALL RAINFALL EVENTS OF 0.5 INCHES OR GREATER, AND KEEP A RECORD OF THIS INSPECTION IN THE SWPPP BOOKLET IF APPLICABLE, TO VERIFY THAT THE DEVICES AND EROSION CONTROL PLAN ARE FUNCTIONING PROPERLY. 14. CONTRACTOR SHALL CONSTRUCT A STABILIZED CONSTRUCTION ENTRANCE AT ALL PRIMARY POINTS OF ACCESS IN ACCORDANCE WITH CITY SPECIFICATIONS. CONTRACTOR SHALL ENSURE THAT ALL CONSTRUCTION TRAFFIC USES THE STABILIZED ENTRANCE AT 15. SITE ENTRY AND EXITS SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT THE TRACKING AND FLOWING OF SEDIMENT AND
- DIRT ONTO OFF-SITE ROADWAYS. ALL SEDIMENT AND DIRT FROM THE SITE THAT IS DEPOSITED ONTO AN OFF-SITE ROADWAY SHALL BE 16. THE CONTRACTOR IS RESPONSIBLE FOR REMOVING ALL SILT AND DEBRIS FROM THE AFFECTED OFF-SITE ROADWAYS THAT ARE A
- RESULT OF THE CONSTRUCTION, AS REQUESTED BY OWNER AND CITY. AT A MINIMUM, THIS SHOULD OCCUR ONCE PER DAY FOR THE
- 17. WHEN WASHING OF VEHICLES IS REQUIRED TO REMOVE SEDIMENT PRIOR TO EXITING THE SITE, IT SHALL BE DONE IN AN AREA STABILIZED WITH CRUSHED STONE THAT DRAINS INTO AN APPROVED SEDIMENT TRAP BMP 18. CONTRACTOR SHALL INSTALL A TEMPORARY SEDIMENT BASIN FOR ANY ON-SITE DRAINAGE AREAS THAT ARE GREATER THAN 10 ACRES, PER TCEQ AND CITY STANDARDS. IF NO ENGINEERING DESIGN HAS BEEN PROVIDED FOR A SEDIMENTATION BASIN ON THESE PLANS, THEN THE CONTRACTOR SHALL ARRANGE FOR AN APPROPRIATE DESIGN TO BE PROVIDED. 19. ALL FINES IMPOSED FOR SEDIMENT OR DIRT DISCHARGED FROM THE SITE SHALL BE PAID BY THE RESPONSIBLE CONTRACTOR. NOT BE ALLOWED TO DRAIN DIRECTLY OFF SITE WITHOUT FIRST FLOWING THROUGH ANOTHER BMP TO CONTROL SEDIMENTATION. PERIODIC RE-GRADING OR NEW STONE MAY BE REQUIRED TO MAINTAIN THE EFFECTIVENESS OF THE CONSTRUCTION ENTRANCE. AREA, UNLESS ADDITIONAL CONSTRUCTION IN THE AREA IS EXPECTED WITHIN 21 DAYS OF THE LAST DISTURBANCE.
- 22.CONTRACTOR SHALL FOLLOW GOOD HOUSEKEEPING PRACTICES DURING CONSTRUCTION, ALWAYS CLEANING UP DIRT, LOOSE ACHIEVED WHEN THE AREA IS EITHER COVERED BY PERMANENT IMPERVIOUS STRUCTURES, SUCH AS BUILDINGS, SIDEWALK,
- CONSTRUCTION SHALL BE DREDGED, AND THE SEDIMENT GENERATED BY THE PROJECT SHALL BE REMOVED AND DISPOSED IN 25. ANY SEQUENCE OF CONSTRUCTION SHOWN HEREON IS A GENERAL OVERVIEW AND IS INTENDED TO CONVEY THE GENERAL CONCEPTS OF THE EROSION CONTROL DESIGN AND SHOULD NOT BE RELIED UPON FOR CONSTRUCTION PURPOSES. THE CONTRACTOR IS SOLED RESPONSIBLE FOR DETAILED PHASING AND CONSTRUCTION SEQUENCING NECESSARY TO CONSTRUCT THE PROPOSED. IMPROVEMENTS INCLUDED IN THESE PLANS. THE CONTRACTOR SHALL NOTIFY ENGINEER IN WRITING IMMEDIATELY, PRIOR TO AND/OR DURING CONSTRUCTION IF ANY ADDITIONAL INFORMATION ON THE CONSTRUCTION SEQUENCE IS NECESSARY. CONTRACTOR IS SOLELY RESPONSIBLE FOR COMPLYING WITH THE REQUIREMENTS OF THE AUTHORITY HAVING JURISDICTION AND ALL OTHER
- CONTRACTOR SHALL COMPLY WITH ALL TCEQ AND EPA STORM WATER POLLUTION PREVENTION REQUIREMENTS. CONTRACTOR SHALL COMPLY WITH THE REQUIREMENTS OF THE TCEQ GENERAL PERMIT TO DISCHARGE UNDER THE TEXAS
- COMMENCING CONSTRUCTION (IF APPLICABLE), OR IF UTILIZING ELECTRONIC SUBMITTAL, PRIOR TO COMMENCING CONSTRUCTION. ALL PRIMARY OPERATORS SHALL PROVIDE A COPY OF THE SIGNED NOI TO THE OPERATOR OF ANY MS4 (TYPICALLY THE CITY) 4. CONTRACTOR SHALL BE RESPONSIBLE FOR THE IMPLEMENTATION OF THE STORM WATER POLLUTION PREVENTION PLAN (SWPPP) IF APPLICABLE, INCLUDING POSTING SITE NOTICE, INSPECTIONS, DOCUMENTATION, AND SUBMISSION OF ANY INFORMATION REQUIRED
- 5. ALL CONTRACTORS AND SUBCONTRACTORS PROVIDING SERVICES RELATED TO THE SWPPP SHALL SIGN THE REQUIRED CONTRACTOR CERTIFICATION STATEMENT ACKNOWLEDGING THEIR RESPONSIBILITIES AS SPECIFIED IN THE SWPPP. 6. A COPY OF THE SWPPP, INCLUDING NOI, SITE NOTICE, CONTRACTOR CERTIFICATIONS, AND ANY REVISIONS, SHALL BE SUBMITTED TO THE CITY BY THE CONTRACTOR AND SHALL BE RETAINED ON-SITE DURING CONSTRUCTION. 7. A NOTICE OF TERMINATION (NOT) SHALL BE SUBMITTED TO TCEQ BY ANY PRIMARY OPERATOR WITHIN 30 DAYS AFTER ALL SOIL DISTURBING ACTIVITIES AT THE SITE HAVE BEEN COMPLETED AND A UNIFORM VEGETATIVE COVER HAS BEEN ESTABLISHED ON ALL UNPAVED AREAS AND AREAS NOT COVERED BY STRUCTURES, A TRANSFER OF OPERATIONAL CONTROL HAS OCCURRED, OR THE OPERATOR HAS OBTAINED ALTERNATIVE AUTHORIZATION UNDER A DIFFERENT PERMIT. A COPY OF THE NOT SHALL BE PROVIDED TO
- KH IS NOT RESPONSIBLE FOR THE MEANS AND METHODS EMPLOYED BY THE CONTRACTOR TO IMPLEMENT THIS DEMOLITION PLAN. THIS PRELIMINARY DEMOLITION PLAN SIMPLY INDICATES THE KNOWN OBJECTS ON THE SUBJECT TRACT THAT ARE TO BE DEMOLISHED
- 2. KH DOES NOT WARRANT OR REPRESENT THAT THE PLAN, WHICH WAS PREPARED BASED ON SURVEY AND UTILITY INFORMATION PROVIDED BY OTHERS, SHOWS ALL IMPROVEMENTS AND UTILITIES, THAT THE IMPROVEMENTS AND UTILITIES ARE SHOWN ACCURATELY, OR THAT THE UTILITIES SHOWN CAN BE REMOVED. THE CONTRACTOR IS RESPONSIBLE FOR PERFORMING ITS OWN SITE RECONNAISSANCE TO SCOPE ITS WORK AND TO CONFIRM WITH THE OWNERS OF IMPROVEMENTS AND UTILITIES THE ABILITY AND 3. THIS PLAN IS INTENDED TO GIVE A GENERAL GUIDE TO THE CONTRACTOR, NOTHING MORE. THE GOAL OF THE DEMOLITION IS TO LEAVE THE SITE IN A STATE SUITABLE FOR THE CONSTRUCTION OF THE PROPOSED DEVELOPMENT. REMOVAL OR PRESERVATION OF IMPROVEMENTS, UTILITIES, ETC. TO ACCOMPLISH THIS GOAL ARE THE RESPONSIBILITY OF THE CONTRACTOR.
- 5. CONTRACTOR SHALL CONTACT THE OWNER TO VERIFY WHETHER ADDITIONAL REPORTS OR AMENDMENTS TO THE ABOVE CITED REPORTS HAVE BEEN PREPARED AND TO OBTAIN/REVIEW/AND COMPLY WITH THE RECOMMENDATION OF SUCH STUDIES PRIOR TO 6. CONTRACTOR SHALL COMPLY WITH ALL LOCAL, STATE, AND FEDERAL REGULATIONS REGARDING THE DEMOLITION OF OBJECTS ON THE SITE AND THE DISPOSAL OF THE DEMOLISHED MATERIALS OFF-SITE. IT IS THE CONTRACTOR'S SOLE RESPONSIBILITY TO REVIEW THE SITE DETERMINE THE APPLICABLE REGULATIONS RECEIVE THE REQUIRED PERMITS AND AUTHORIZATIONS AND COMPLY 7. KH DOES NOT REPRESENT THAT THE REPORTS AND SURVEYS REFERENCED ABOVE ARE ACCURATE, COMPLETE, OR COMPREHENSIVE SHOWING ALL ITEMS THAT WILL NEED TO BE DEMOLISHED AND REMOVED 8. SURFACE PAVEMENT INDICATED MAY OVERLAY OTHER HIDDEN STRUCTURES, SUCH AS ADDITIONAL LAYERS OF PAVEMENT,
- 1. THE CONTRACTOR AND GRADING SUBCONTRACTOR SHALL VERIFY THE SUITABILITY OF EXISTING AND PROPOSED SITE CONDITIONS INCLUDING GRADES AND DIMENSIONS BEFORE START OF CONSTRUCTION. THE CIVIL ENGINEER SHALL BE NOTIFIED IMMEDIATELY OF
- 3. UNLESS OTHERWISE NOTED, PROPOSED CONTOURS AND SPOT ELEVATIONS SHOWN IN PAVED AREA REFLECT TOP OF PAVEMENT 4. PROPOSED SPOT ELEVATIONS AND CONTOURS OUTSIDE THE PAVEMENT ARE TO TOP OF FINISHED GRADE.
- 5. PROPOSED CONTOURS ARE APPROXIMATE, PROPOSED SPOT ELEVATIONS AND DESIGNATED GRADIENT ARE TO BE USED IN CASE OF 6 ALL FINISHED GRADES SHALL TRANSITION UNIFORMLY BETWEEN THE FINISHED FLEVATIONS SHOWN 7. CONTOURS AND SPOT GRADES SHOWN ARE ELEVATIONS OF TOP OF THE FINISHED SURFACE. WHEN PERFORMING THE GRADING
- OPERATIONS, THE CONTRACTOR SHALL PROVIDE AN APPROPRIATE ELEVATION HOLD-DOWN ALLOWANCE FOR THE THICKNESS OF PAVEMENT, SIDEWALK, TOPSOIL, MULCH, STONE, LANDSCAPING, RIP-RAP AND ALL OTHER SURFACE MATERIALS THAT WILL CONTRIBUTE TO THE TOP OF FINISHED GRADE. FOR EXAMPLE, THE LIMITS OF EARTHWORK IN PAVED AREAS IS THE BOTTOM OF THE 3. NO REPRESENTATIONS OF EARTHWORK QUANTITIES OR SITE BALANCE ARE MADE BY THESE PLANS. THE CONTRACTOR SHALL
- PROVIDE THEIR OWN EARTHWORK CALCULATION TO DETERMINE THEIR CONTRACT QUANTITIES AND COST. ANY SIGNIFICANT VARIANCE FROM A BALANCED SITE SHALL BE IMMEDIATELY BROUGHT TO THE ATTENTION OF THE CIVIL ENGINEER. 10. ALL EXCAVATION IS UNCLASSIFIED AND SHALL INCLUDE ALL MATERIALS ENCOUNTERED. UNUSABLE EXCAVATED MATERIAL AND ALL WASTE RESULTING FROM SITE CLEARING AND GRUBBING SHALL BE REMOVED FROM THE SITE AND APPROPRIATELY DISPOSED BY THE
- 11. EROSION CONTROL DEVICES SHOWN ON THE EROSION CONTROL PLAN FOR THE PROJECT SHALL BE INSTALLED PRIOR TO THE START OF GRADING. REFERENCE EROSION CONTROL PLAN, DETAILS, GENERAL NOTES, AND SWPPP FOR ADDITIONAL INFORMATION AND
- 12.BEFORE ANY EARTHWORK IS PERFORMED, THE CONTRACTOR SHALL STAKE OUT AND MARK THE LIMITS OF THE PROJECT'S PROPERTY LINE AND SITE IMPROVEMENTS. THE CONTRACTOR SHALL PROVIDE ALL NECESSARY ENGINEERING AND SURVEYING FOR LINE AND 13. CONTRACTOR TO DISPOSE OF ALL EXCESS EXCAVATION MATERIALS IN A MANNER THAT ADHERES TO LOCAL, STATE AND FEDERAL
- LAWS AND REGULATIONS. THE CONTRACTOR SHALL KEEP A RECORD OF WHERE EXCESS EXCAVATION WAS DISPOSED, ALONG WITH 14. CONTRACTOR IS RESPONSIBLE FOR REMOVAL AND REPLACEMENT OF TOPSOIL AT THE COMPLETION OF FINE GRADING. CONTRACTOR SHALL REFER TO LANDSCAPE ARCHITECTURE PLANS FOR SPECIFICATIONS AND REQUIREMENTS FOR TOPSOIL. 15. CONTRACTOR SHALL MAINTAIN ADEQUATE SITE DRAINAGE DURING ALL PHASES OF CONSTRUCTION, INCLUDING MAINTAINING EXISTING 16.NO EARTHWORK FILL SHALL BE PLACED IN ANY EXISTING DRAINAGE WAY, SWALE, CHANNEL, DITCH, CREEK, OR FLOODPLAIN FOR ANY REASON OR ANY LENGTH OF TIME, UNLESS THESE PLANS SPECIFICALLY INDICATE THIS IS REQUIRED.
- 18. REFER TO DIMENSION CONTROL PLAN, AND PLAT FOR HORIZONTAL DIMENSIONS. 19. THE CONTRACTOR SHALL CLEAR AND GRUB THE SITE AND PLACE, COMPACT, AND CONDITION FILL PER THE PROJECT GEOTECHNICAL ENGINEER'S SPECIFICATIONS. THE FILL MATERIAL TO BE USED SHALL BE APPROVED BY THE GEOTECHNICAL ENGINEER PRIOR TO
- 20.CONTRACTOR IS RESPONSIBLE FOR ALL SOILS TESTING AND CERTIFICATION, UNLESS SPECIFIED OTHERWISE BY OWNER. ALL SOILS TESTING SHALL BE COORDINATED WITH THE APPROPRIATE CITY INSPECTOR AND SHALL COMPLY WITH CITY STANDARD SPECIFICATIONS AND THE GEOTECHNICAL REPORT. SOILS TESTING SHALL BE PERFORMED BY AN APPROVED INDEPENDENT AGENCY FOR TESTING SOILS. THE OWNER SHALL APPROVE THE AGENCY NOMINATED BY THE CONTRACTOR FOR SOILS TESTING 21.ALL COPIES OF SOILS TEST RESULTS SHALL BE SENT TO THE OWNER, ENGINEER AND ARCHITECT DIRECTLY FROM THE TESTING
- 22.IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO SHOW, BY THE STANDARD TESTING PROCEDURES OF THE SOILS, THAT THE WORK CONSTRUCTED MEETS THE PROJECT REQUIREMENTS AND CITY SPECIFICATIONS. 23. THE SCOPE OF WORK FOR CIVIL IMPROVEMENT SHOWN ON THESE PLANS TERMINATES 5-FEET FROM THE BUILDING. CONTRACTOR SHALL REFER TO THE GEOTECHNICAL REPORT AND STRUCTURAL PLANS AND SPECIFICATIONS FILL, CONDITIONING, AND PREPARATION
- 24 DUE TO THE POTENTIAL FOR DIFFERENTIAL SOIL MOVEMENT ADJACENT TO THE BUILDING. THE CONTRACTOR SHALL ADHERE TO GEOTECHNICAL REPORT'S RECOMMENDATION FOR SUBGRADE PREPARATION SPECIFIC TO FLATWORK ADJACENT TO THE PROPOSED BUILDING. THE OWNER AND CONTRACTOR ARE ADVISED TO OBTAIN A GEOTECHNICAL ENGINEER RECOMMENDATION SPECIFIC TO FLATWORK ADJACENT TO THE BUILDING. IF NONE IS CURRENTLY EXISTING.
- THIS WILL NOT BE ACHIEVED. THE CONTRACTOR SHALL CONTACT THE ENGINEER TO REVIEW THE LOCATION. 26. THE CONTRACTOR SHALL TAKE ALL AVAILABLE PRECAUTIONS TO CONTROL DUST, CONTRACTOR SHALL CONTROL DUST BY SPRINKLING WATER, OR BY OTHER MEANS APPROVED BY THE CITY, AT NO ADDITIONAL COST TO THE OWNER.
- 27.CONTRACTOR SHALL COORDINATE WITH THE UTILITY COMPANIES FOR ANY REQUIRED UTILITY ADJUSTMENTS AND/OR RELOCATIONS NEEDED FOR GRADING OPERATIONS AND TO ACCOMMODATE PROPOSED GRADE, INCLUDING THE UNKNOWN UTILITIES NOT SHOWN ON THESE PLANS. CONTRACTOR SHALL REFER TO THE GENERAL NOTES "OVERALL" SECTION THESE PLANS FOR ADDITIONAL

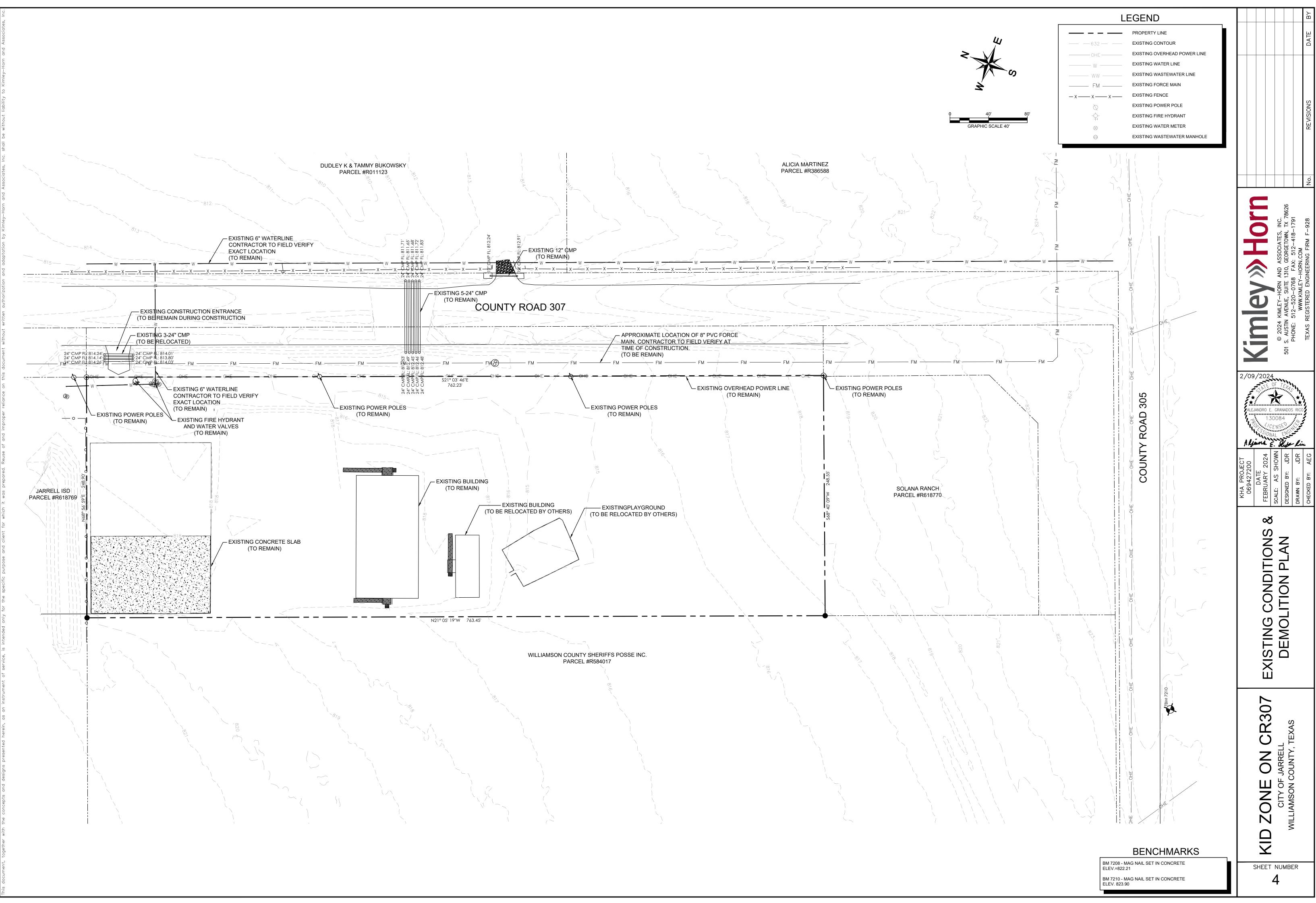
- INFORMATION. 28.EXISTING TREE LOCATIONS SHOWN ON THESE PLANS ARE APPROXIMATE. CONTRACTOR SHALL REPORT ANY DISCREPANCIES IN THE FIELD THAT AFFECT THE GRADING PLAN TO THE CIVIL ENGINEER. 29.CONTRACTOR SHALL FIELD VERIFY ALL PROTECTED TREE LOCATIONS, INDIVIDUAL PROTECTED TREE CRITICAL ROOT ZONES, A
- PROPOSED SITE GRADING, AND NOTIFY THE CIVIL ENGINEER AND LANDSCAPE ARCHITECT OF ANY CONFLICTS WITH THE TREE PRESERVATION PLAN BY THE LANDSCAPE ARCHITECT PRIOR TO COMMENCING THE WORK. 30. TREE PROTECTION MEASURES SHALL BE INSTALLED IN ACCORDANCE WITH THE CITY STANDARD TREE PROTECTION DETAILS A APPROVED TREE PRESERVATION PLANS BY THE LANDSCAPE ARCHITECT.
- 31.CONTRACTOR SHALL REFER TO THE LANDSCAPING AND TREE PRESERVATIONS PLANS FOR ALL INFORMATION AND DETAILS REGARDING EXISTING TREES TO BE REMOVED AND PRESERVED. 32.NO TREE SHALL BE REMOVED UNLESS A TREE REMOVAL PERMIT HAS BEEN ISSUED BY THE CITY, OR CITY HAS OTHERWISE CON
- IN WRITING THAT ONE IS NOT NEEDED FOR THE TREE(S) 33.NO TREE SHALL BE REMOVED OR DAMAGED WITHOUT PRIOR AUTHORIZATION OF THE OWNER OR OWNER'S REPRESENTATIVE. EXISTING TREES SHALL BE PRESERVED WHENEVER POSSIBLE AND GRADING IMPACT TO THEM HELD TO A MINIMUM. 34 AFTER PLACEMENT OF SUBGRADE AND PRIOR TO PLACEMENT OF PAVEMENT. CONTRACTOR SHALL TEST AND OBSERVE PAVEM AREAS FOR EVIDENCE OF PONDING AND INADEQUATE SLOPE FOR DRAINAGE. ALL AREAS SHALL ADEQUATELY DRAIN TOWARDS INTENDED STRUCTURE TO CONVEY STORMWATER RUNOFF. CONTRACTOR SHALL IMMEDIATELY NOTIFY OWNER AND ENGINEER
- AREAS OF POOR DRAINAGE ARE DISCOVERED. 35.CONTRACTOR FIELD ADJUSTMENT OF PROPOSED SPOT GRADES IS ALLOWED, IF THE APPROVAL OF THE CIVIL ENGINEER IS OBT **RETAINING WALLS:**
- RETAINING WALLS SHOWN ARE FOR SITE GRADING PURPOSES ONLY, AND INCLUDE ONLY LOCATION AND SURFACE SPOT ELEVA AT THE TOP AND BOTTOM OF THE WALL. 2. RETAINING WALL TYPE OR SYSTEM SHALL BE SELECTED BY THE OWNER.
- 3. RETAINING WALL DESIGN SHALL BE PROVIDED BY OTHERS AND SHALL FIT IN THE WALL ZONE OR LOCATION SHOWN ON THESE STRUCTURAL DESIGN AND PERMITTING OF RETAINING WALLS, RAILINGS, AND OTHER WALL SAFETY DEVICES SHALL BE PERFOR A LICENSED ENGINEER AND ARE NOT PART OF THIS PLAN SET 4. RETAINING WALL DESIGN SHALL MEET THE INTENT OF THE GRADING PLAN AND SHALL ACCOUNT FOR ANY INFLUENCE ON ADJAC
- ONTO A ROADWAY, THE AGGREGATE PAD MUST BE WASHED DOWN OR REPLACED. RUNOFF FROM THE WASH-DOWN OPERATION SHALL 5. RETAINING WALL ENGINEER SHALL CONSULT THESE PLANS AND THE GEOTECHNICAL REPORT FOR POTENTIAL CONFLICTS. 1. ALL PAVING MATERIALS AND CONSTRUCTION SHALL BE IN ACCORDANCE WITH THESE PLANS, THE CITY STANDARD DETAILS AND
 - SPECIFICATIONS. THE FINAL GEOTECHNICAL REPORT AND ALL ISSUED ADDENDA, AND COMMONLY ACCEPTED CONSTRUCTION STANDARDS. THE CITY SPECIFICATIONS SHALL GOVERN WHERE OTHER SPECIFICATIONS DO NOT EXIST. IN CASE OF CONFLICTI SPECIFICATIONS OR DETAILS, THE MORE RESTRICTIVE SPECIFICATION/DETAIL SHALL BE FOLLOWED. 2. ALL PRIVATE ON-SITE PAVING AND PAVING SUBGRADE SHALL COMPLY WITH THE PROJECT'S FINAL GEOTECHNICAL REPORT (OR EDITION), INCLUDING ALL ADDENDA.
- 3. ALL FIRELANE PAVING AND PAVING SUBGRADE SHALL COMPLY WITH CITY STANDARDS AND DETAILS. IF THESE ARE DIFFERENT 24.AT THE CONCLUSION OF THE PROJECT, ALL INLETS, DRAIN PIPE, CHANNELS, DRAINAGEWAYS AND BORROW DITCHES AFFECTED BY THE THOSE IN THE GEOTECHNICAL REPORT. THEN THE MORE RESTRICTIVE SHALL BE FOLLOWED. 4. ALL PUBLIC PAVING AND PAVING SUBGRADE SHALL COMPLY WITH CITY STANDARD CONSTRUCTION DETAILS AND SPECIFICATIO 5. CONTRACTOR IS RESPONSIBLE FOR ALL PAVING AND PAVING SUBGRADE TESTING AND CERTIFICATION, UNLESS SPECIFIED OTH BY OWNER. ALL PAVING AND PAVING SUBGRADE TESTING SHALL BE COORDINATED WITH THE APPROPRIATE CITY INSPECTOR.
 - TESTING SHALL BE PERFORMED BY AN APPROVED INDEPENDENT AGENCY FOR TESTING PAVING AND SUBGRADE. OWNER SHA APPROVE THE AGENCY NOMINATED BY THE CONTRACTOR FOR PAVING AND PAVING SUBGRADE TESTING. 6. IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO SHOW, BY THE STANDARD TESTING PROCEDURES OF THE PAVING AND PA SUBGRADE, THAT THE WORK CONSTRUCTED MEETS THE PROJECT REQUIREMENTS AND CITY SPECIFICATIONS.
 - 7. DUE TO THE POTENTIAL FOR DIFFERENTIAL SOIL MOVEMENT ADJACENT TO THE BUILDING, THE CONTRACTOR SHALL ADHERE TO GEOTECHNICAL REPORT'S RECOMMENDATION FOR SUBGRADE PREPARATION SPECIFIC TO FLATWORK ADJACENT TO THE PROF BUILDING. THE OWNER AND CONTRACTOR ARE ADVISED TO OBTAIN A GEOTECHNICAL ENGINEER RECOMMENDATION SPECIFIC FLATWORK ADJACENT TO THE BUILDING, IF NONE IS CURRENTLY EXISTING. 8. CURB RAMPS ALONG PUBLIC STREETS AND IN THE PUBLIC RIGHT-OF-WAY SHALL BE CONSTRUCTED BASED ON THE CITY STAND
 - CONSTRUCTION DETAIL AND SPECIFICATIONS. 9. PRIVATE CURB RAMPS ON THE SITE (I.E. OUTSIDE PUBLIC STREET RIGHT-OF-WAY) SHALL CONFORM TO ADA AND TAS STANDARI SHALL HAVE A DETECTABLE WARNING SURFACE THAT IS FULL WIDTH AND FULL DEPTH OF THE CURB RAMP. NOT INCLUDING FL 10. ALL ACCESSIBLE RAMPS, CURB RAMPS, STRIPING, AND PAVEMENT MARKINGS SHALL CONFORM TO ADA AND TAS STANDARDS, I EDITION.
 - 11. ANY COMPONENTS OF THE PROJECT SUBJECT TO RESIDENTIAL USE SHALL ALSO CONFORM TO THE FAIR HOUSING ACT, AND CO WITH THE FAIR HOUSING ACT DESIGN MANUAL BY THE US DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT. 12 CONTRACTOR SHALL CONSTRUCT PROPOSED PAVEMENT TO MATCH EXISTING PAVEMENT WITH A SMOOTH FLUSH CONNECTION 13. CONTRACTOR SHALL FURNISH AND INSTALL ALL PAVEMENT MARKINGS FOR FIRE LANES, PARKING STALLS, HANDICAPPED PARK SYMBOLS, AND MISCELLANEOUS STRIPING WITHIN PARKING LOT AND AROUND BUILDING AS SHOWN ON THE PLANS. ALL PAINT
 - PAVEMENT MARKINGS SHALL ADHERE TO CITY AND OWNER STANDARDS. 14. REFER TO GEOTECHNICAL REPORT FOR PAVING JOINT LAYOUT PLAN REQUIREMENTS FOR PRIVATE PAVEMENT. 15. REFER TO CITY STANDARD DETAILS AND SPECIFICATIONS FOR JOINT LAYOUT PLAN REQUIREMENTS FOR PUBLIC PAVEMENT. 16. ALL REINFORCING STEEL SHALL CONFORM TO THE GEOTECHNICAL REPORT, CITY STANDARDS, AND ASTM A-615, GRADE 60, ANI BE SUPPORTED BY BAR CHAIRS. CONTRACTOR SHALL USE THE MORE STRINGENT OF THE CITY AND GEOTECHNICAL STANDARD
 - 17. ALL JOINTS SHALL EXTEND THROUGH THE CURB. 18. THE MINIMUM LENGTH OF OFFSET JOINTS AT RADIUS POINTS SHALL BE 2 FEET.
 - 19. CONTRACTOR SHALL SUBMIT A JOINTING PLAN TO THE ENGINEER AND OWNER PRIOR TO BEGINNING ANY OF THE PAVING WORK 20.ALL SAWCUTS SHALL BE FULL DEPTH FOR PAVEMENT REMOVAL AND CONNECTION TO EXISTING PAVEMENT. 21.FIRE LANES SHALL BE MARKED AND LABELED AS A FIRELANE PER CITY STANDARDS 22.UNLESS THE PLANS SPECIFICALLY DICTATE TO THE CONTRARY, ON-SITE AND OTHER DIRECTIONAL SIGNS SHALL BE ORIENTED
 - THEY ARE READILY VISIBLE TO THE ONCOMING TRAFFIC FOR WHICH THEY ARE INTENDED. 23. CONTRACTOR IS RESPONSIBLE FOR INSTALLING NECESSARY CONDUIT FOR LIGHTING, IRRIGATION, FTC, PRIOR TO PLACEMENT PAVEMENT. ALL CONSTRUCTION DOCUMENTS (CIVIL, MEP, LANDSCAPE, IRRIGATION, AND ARCHITECT) SHALL BE CONSULTED. 24.BEFORE PLACING PAVEMENT, CONTRACTOR SHALL VERIFY THAT SUITABLE ACCESSIBLE PEDESTRIAN ROUTES (PER ADA, TAS, FHA) EXIST TO AND FROM EVERY DOOR AND ALONG SIDEWALKS, ACCESSIBLE PARKING SPACES, ACCESS AISLES, AND ACCESS ROUTES. IN NO CASE SHALL AN ACCESSIBLE RAMP SLOPE EXCEED 1 VERTICAL TO 12 HORIZONTAL. IN NO CASE SHALL SIDEWAL CROSS SLOPE EXCEED 2.0 PERCENT. IN NO CASE SHALL LONGITUDINAL SIDEWALK SLOPE EXCEED 5.0 PERCENT. ACCESSIBLE SPACES AND ACCESS AISLES SHALL NOT EXCEED 2.0 PERCENT SLOPE IN ANY DIRECTION. 25. CONTRACTOR SHALL TAKE FIELD SLOPE MEASUREMENTS ON FINISHED SUBGRADE AND FORM BOARDS PRIOR TO PLACING PAV TO VERIFY THAT ADA/TAS SLOPE REQUIREMENTS ARE PROVIDED. CONTRACTOR SHALL CONTACT ENGINEER PRIOR TO PAVING EXCESSIVE SLOPES ARE ENCOUNTERED. NO CONTRACTOR CHANGE ORDERS WILL BE ACCEPTED FOR ADA AND TAS SLOPE
 - COMPLIANCE ISSUES.
 - ALL STORM SEWER MATERIALS AND CONSTRUCTION SHALL COMPLY WITH CITY STANDARD CONSTRUCTION DETAILS AND SPECIFICATIONS
 - 2. THE SITE UTILITY CONTRACTOR SHALL PROVIDE ALL MATERIALS AND APPURTENANCES NECESSARY FOR COMPLETE INSTALLAT THE STORM SEWER. 3. THE CONTRACTOR SHALL FIELD VERIFY THE SIZE, CONDITION, HORIZONTAL, AND VERTICAL LOCATIONS OF ALL EXISTING STOR
 - SEWER FACILITIES THAT ARE TO BE CONNECTED TO, PRIOR TO START OF CONSTRUCTION OF ANY STORM SEWER, AND SHALL N THE ENGINEER OF ANY CONFLICTS DISCOVERED. 4. THE CONTRACTOR SHALL VERIFY AND COORDINATE ALL DIMENSIONS SHOWN, INCLUDING THE HORIZONTAL AND VERTICAL LOC OF CURB INLETS AND GRATE INLETS AND ALL UTILITIES CROSSING THE STORM SEWER.
 - 5. FLOW LINE, TOP-OF-CURB, RIM, THROAT, AND GRATE ELEVATIONS OF PROPOSED INLETS SHALL BE VERIFIED WITH THE GRADIN AND FIELD CONDITIONS PRIOR TO THEIR INSTALLATION. 6. ALL PUBLIC STORM SEWER CONSTRUCTION, PIPE, STRUCTURES, AND FITTINGS SHALL ADHERE TO CITY PUBLIC WORKS STANDA DETAILS AND SPECIFICATIONS. CONTRACTOR SHALL ARRANGE FOR REQUIRED CITY INSPECTIONS
 - 7. ALL PRIVATE STORM SEWER CONSTRUCTION, PIPE, STRUCTURES, AND FITTINGS SHALL ADHERE TO THE APPLICABLE PLUMBING CONTRACTOR SHALL ARRANGE FOR REQUIRED CITY INSPECTIONS 8. ALL PVC TO RCP CONNECTIONS AND ALL STORM PIPE CONNECTIONS ENTERING STRUCTURES OR OTHER STORM PIPES SHALL
- CONCRETE COLLAR AND BE GROUTED TO ASSURE THE CONNECTION IS WATERTIGHT. 9. ALL PUBLIC STORM SEWER LINES SHALL BE MINIMUM CLASS III RCP. PRIVATE STORM SEWER LINES 18-INCHES AND GREATER S CLASS III RCP OR OTHER APPROVED MATERIAL. SURFACE. IN LOCATIONS ALONG A CURB LINE, ADD 6-INCHES (OR THE HEIGHT OF THE CURB) TO THE PAVING GRADE FOR TOP OF CURB 10. WHERE COVER EXCEEDS 20-FEET OR IS LESS THAN 2-FEET, CLASS IV RCP SHALL BE USED.
 - 11. JF CONTRACTOR PROPOSES TO USE HDPE OR PVC IN LIEU OF RCP FOR PRIVATE STORM SEWER. CONTRACTOR SHALL SUBMIT TECHNICAL DATA TO THE OWNER, ENGINEER AND CITY ENGINEER/INSPECTOR FOR APPROVAL PRIOR TO ORDERING THE MATERI ANY PROPOSED HDPE AND PVC SHALL BE WATERTIGHT 12. THE CONTRACTOR SHALL PROVIDE CONSTRUCTION SURVEYING FOR ALL STORM SEWER LINES.
 - 3. EMBEDMENT FOR ALL STORM SEWER LINES, PUBLIC OR PRIVATE, SHALL BE PER CITY STANDARD DETAILS. 14. ALL WYE CONNECTIONS AND PIPE BENDS ARE TO BE PREFABRICATED AND INSTALLED PER MANUFACTURERS SPECIFICATIONS.
 - 15. USE 4 FOOT JOINTS WITH BEVELED ENDS IF RADIUS OF STORM SEWER IS LESS THAN 100 FEET 16. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING AND SUBMITTING A TRENCH SAFETY PLAN. PREPARED BY A PROFESSIONA ENGINEER IN THE STATE OF TEXAS, TO THE CITY PRIOR TO CONSTRUCTION. CONTRACTOR IS RESPONSIBLE FOR MAINTAINING SAFETY REQUIREMENTS IN ACCORDANCE WITH CITY, STATE, AND FEDERAL REQUIREMENTS, INCLUDING OSHA FOR ALL TRENCH OPEN TRENCHES SHALL BE ALLOWED OVERNIGHT WITHOUT PRIOR WRITTEN APPROVAL OF THE CITY. 17. THE CONTRACTOR SHALL KEEP TRENCHES FREE FROM WATER.

- ANY PONDS THAT ARE INTENDED TO HOLD WATER INDEFINITELY SHALL BE CONSTRUCTED WATERTIGHT. 2. FOR ANY PONDS INTENDED TO HOLD WATER INDEFINITELY: THE CONTRACTOR SHALL REFER TO THE GEOTECHNICAL REPORT POND LINER SPECIFICATIONS.
- 3. A GEOTECHNICAL ENGINEER SHALL REVIEW AND APPROVE ALL POND LINER MATERIAL, PLACEMENT PROCEDURES, AND PROVI TESTING TO ENSURE THE POND LINER MATERIAL PLACED IS WATERTIGHT.
- 4. STORM SEWER PIPES AND HEADWALLS THAT CONNECT TO A POND INTENDED TO HOLD WATER INDEFINITELY SHALL BE INSTAL WITH WATERTIGHT JOINTS TO AT LEAST 1-FOOT ABOVE THE NORMAL POOL WATER SURFACE ELEVATION.
- 5. ANY GRAVEL OR OTHER PERVIOUS EMBEDMENT AROUND PIPES OR OUTFALL STRUCTURES NEAR THE POND SHALL BE ELIMINA AT LEAST 20-FEET FROM THE POND SO NO ROUTE FOR WATER TO LEAK THROUGH THE EMBEDMENT MATERIAL IS PROVIDED. BA IN THESE AREAS SHALL BE OF IMPERVIOUS MATERIAL.
- 6. FOR ANY PONDS INTENDED TO HOLD WATER INDEFINITELY: THE WATER LEVEL FOLLOWING COMPLETION AND FILLING OF THE F SHALL BE MONITORED BY THE CONTRACTOR FOR AT LEAST 60 DAYS TO OBSERVE WATER INFLOW, OUTFLOW, AND CALCULATE EVAPORATION TO VERIFY THAT THE POND IS WATERTIGHT 7. FOR ANY PONDS INTENDED TO HOLD WATER INDEFINITELY: THE POND WATER LEVEL SHALL ALSO BE MAINTAINED BY THE
- CONTRACTOR FOR THE DURATION OF CONSTRUCTION SO THAT IT REMAINS FULL TO ITS DESIGN WATER LEVEL, AND IS NOT LOW AS THIS MAY DRY-OUT THE POND LINER AND RISK ITS WATERTIGHT PROPERTIES.

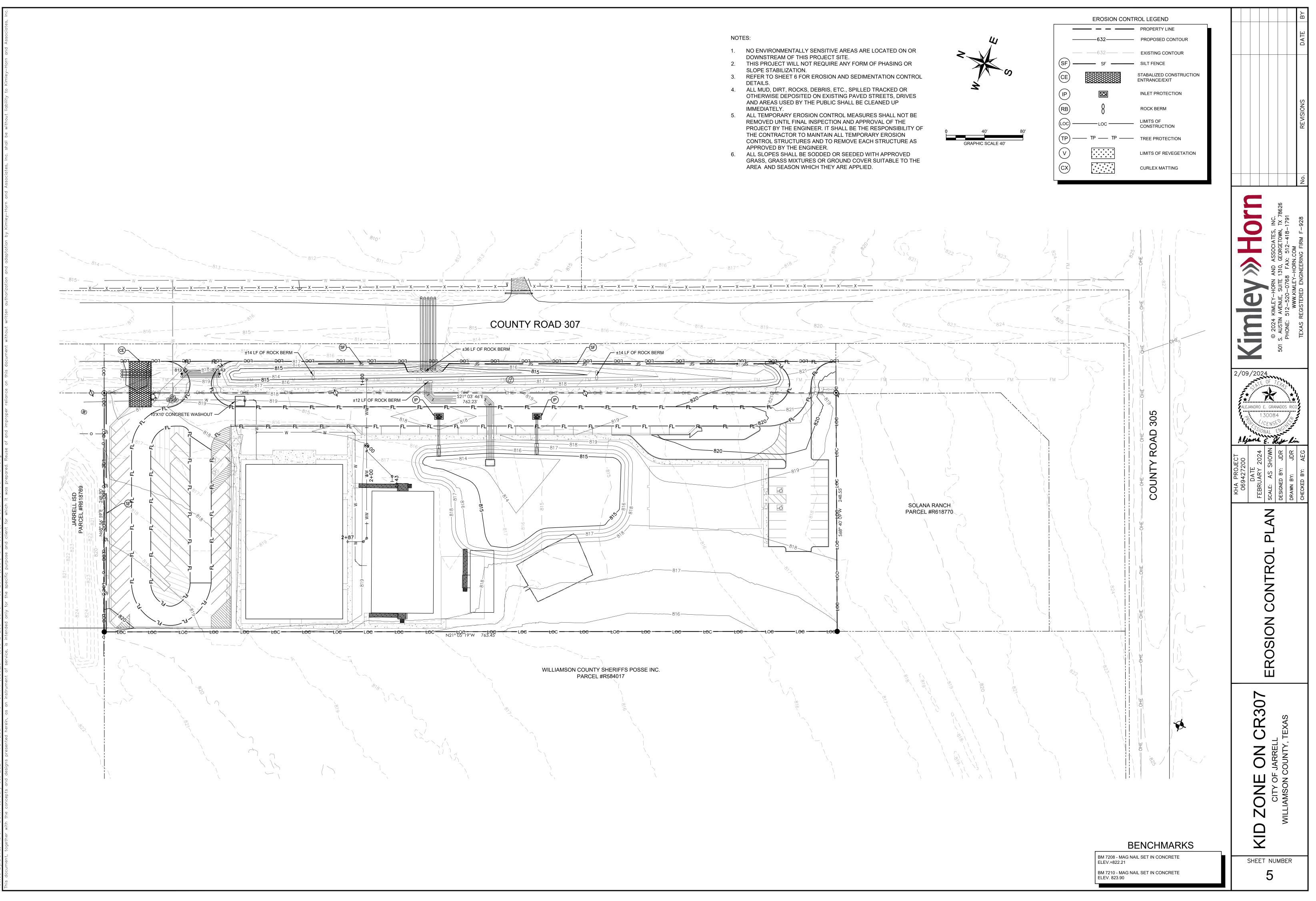
WATER AND WASTEWATER 1. ALL WATER AND WASTEWATER MATERIALS AND CONSTRUCTION SHALL COMPLY WITH CITY STANDARD CONSTRUCTION DETAIL

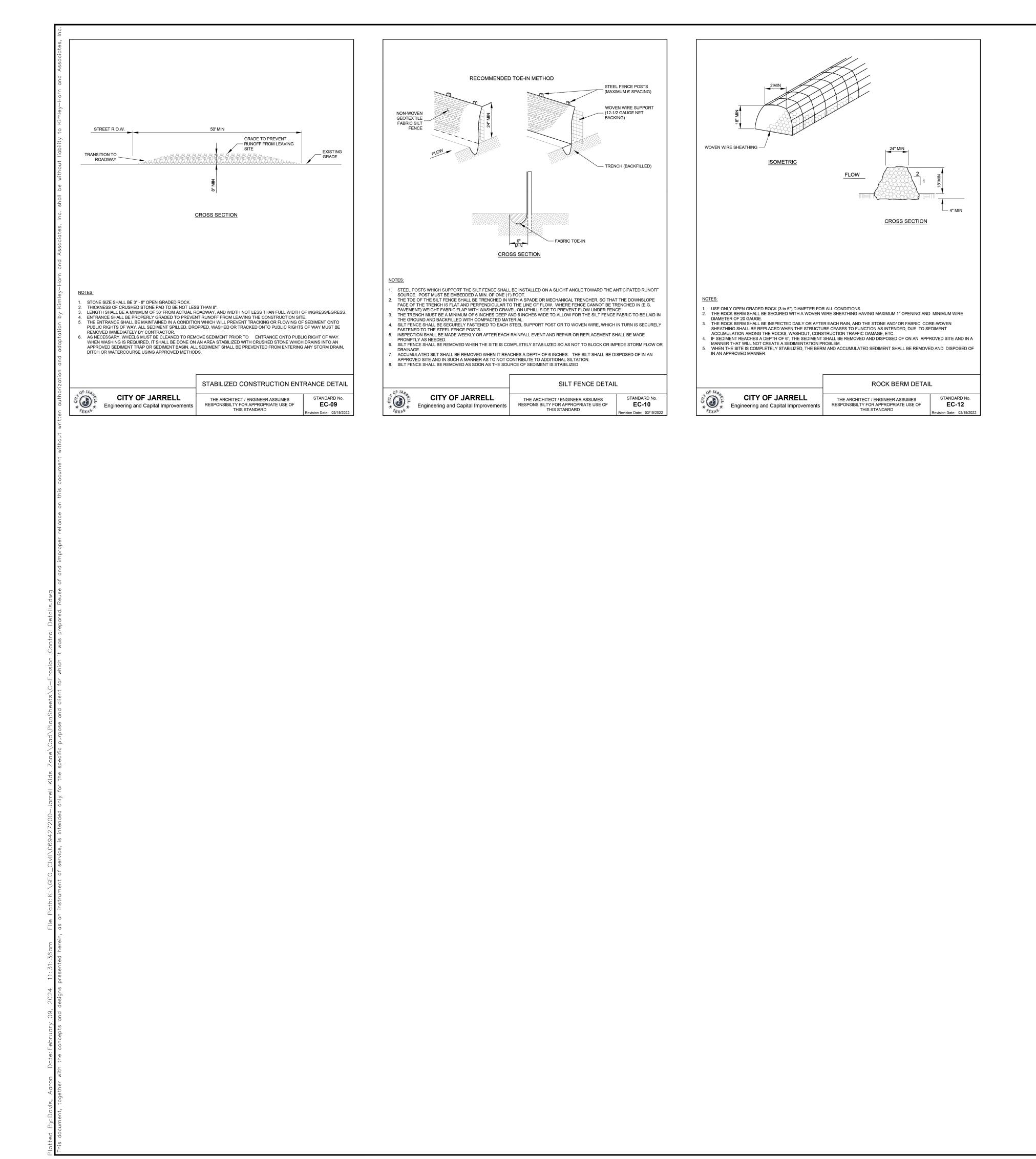
- SPECIFICATIONS 2. CONTRACTOR SHALL FIELD VERIFY THE SIZE. CONDITION. HORIZONTAL, AND VERTICAL LOCATIONS OF ALL EXISTING WATER AN WASTEWATER FACILITIES THAT ARE TO BE CONNECTED TO, PRIOR TO START OF CONSTRUCTION OF ANY WATER OR WASTEWAT CONSTRUCTION, AND SHALL NOTIFY THE ENGINEER OF ANY CONFLICTS DISCOVERED. 3. CONTRACTOR SHALL VERIFY AND COORDINATE ALL DIMENSIONS SHOWN, INCLUDING THE HORIZONTAL AND VERTICAL LOCATIO
- ALL UTILITY SERVICES ENTERING THE BUILDING. 4. THE CONTRACTOR SHALL FIELD VERIFY THE ELEVATION OF ALL UTILITY CROSSINGS PRIOR TO THE INSTALLATION OF ANY PIPE. 5. THE SITE UTILITY CONTRACTOR SHALL PROVIDE ALL MATERIALS AND APPURTENANCES NECESSARY FOR COMPLETE INSTALLAT
- THE WATER AND WASTEWATER IMPROVEMENTS. 6. ALL PUBLIC WATER AND WASTEWATER CONSTRUCTION, PIPE, STRUCTURES, AND FITTINGS SHALL ADHERE TO CITY PUBLIC WOR STANDARD DETAILS AND SPECIFICATIONS. CONTRACTOR SHALL ARRANGE FOR REQUIRED CITY INSPECTIONS.
- 7. ALL PRIVATE WATER AND WASTEWATER CONSTRUCTION, PIPE, STRUCTURES, AND FITTINGS SHALL ADHERE TO THE APPLICABL PLUMBING CODE. CONTRACTOR SHALL ARRANGE FOR REQUIRED CITY INSPECTIONS. 8. FIRE SPRINKLER LINES SHALL BE DESIGNED AND INSTALLED BY A LICENSED FIRE SPRINKLER CONTRACTOR, AND COMPLY TO T APPLICABLE CODES AND INSPECTIONS REQUIRED. THESE PLANS WERE PREPARED WITHOUT THE BENEFIT OF THE FIRE SPRINI
- DESIGN. CONTRACTOR SHALL NOTIFY THE ENGINEER IF ANY DISCREPANCIES. 9. EMBEDMENT FOR ALL WATER AND WASTEWATER LINES, PUBLIC OR PRIVATE, SHALL BE PER CITY STANDARD DETAILS. 10. CONTRACTOR SHALL TAKE REQUIRED SANITARY PRECAUTIONS, FOLLOWING ANY CITY, TCEQ, AND AWWA STANDARDS, TO KEEF WATER PIPE AND FITTINGS CLEAN AND CAPPED AT TIMES WHEN INSTALLATION IS NOT IN PROGRESS.
- 11. CONTRACTOR SHALL PROVIDE CONSTRUCTION SURVEYING FOR ALL WATER AND WASTEWATER LINES
- 25.CONTRACTOR SHALL ENSURE THAT SUFFICIENT POSITIVE SLOPE AWAY FROM THE BUILDING PAD IS ACHIEVED FOR ENTIRE PERIMETER 12. ALL WATER AND WASTEWATER SERVICES SHALL TERMINATE 5-FEET OUTSIDE THE BUILDING, UNLESS NOTED OTHERWISE. OF THE PROPOSED BUILDING(S) DURING GRADING OPERATIONS AND IN THE FINAL CONDITION. IF THE CONTRACTOR OBSERVES THAT 13. CONTRACTOR SHALL COMPLY WITH CITY REQUIREMENTS FOR WATER AND WASTEWATER SERVICE DISRUPTIONS AND THE AMO PRIOR NOTICE THAT IS REQUIRED, AND SHALL COORDINATE DIRECTLY WITH THE APPROPRIATE CITY DEPARTMENT. 14. CONTRACTOR SHALL SEQUENCE WATER AND WASTEWATER CONSTRUCTION TO AVOID INTERRUPTION OF SERVICE TO SURROU PROPERTIES
 - 15. CONTRACTOR SHALL MAINTAIN WATER SERVICE AND WASTEWATER SERVICE TO ALL CUSTOMERS THROUGHOUT CONSTRUCTIO NECESSARY, BY USE OF TEMPORARY METHODS APPROVED BY THE CITY AND OWNER). THIS WORK SHALL BE CONSIDERED SUBSIDIARY TO THE PROJECT AND NO ADDITIONAL COMPENSATION SHALL BE ALLOWED.

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	S THE	22.ALL CRO SHALL C 23.ALL WAT	ISSING AND LOCATIONS WHERE WATER IS LESS THAN 9-FEET FROM WASTEWATER, OMPLY WITH TCEQ CHAPTER 290.44. 'ER AND WASTEWATER SHALL BE TESTED IN ACCORDANCE WITH THE CITY, AWWA,			
	TAINED.	a. ALL WAT SHALL C b. WASTEV REQUIR	ERLINES SHALL BE HYDROSTATICALLY TESTED AND CHLORINATED BEFORE BEING OORDINATE WITH THE CITY FOR THEIR REQUIRED PROCEDURES AND SHALL ALSO VATER LINES AND MANHOLES SHALL BE PRESSURE TESTED. CONTRACTOR SHALL ED PROCEDURES AND SHALL ALSO COMPLY WITH TCEQ REGULATIONS. AFTER COM	COMPLY WITH TCEQ REGULATIONS. COORDINATE WITH THE CITY FOR THEIR		REVISIONS
	PLANS.	24.CONTRA MARKER SHALL C 25.DUCTILE	CTOR SHALL INSTALL DETECTABLE WIRING OR MARKING TAPE A MINIMUM OF 12" A DECALS SHALL BE LABELED "CAUTION - WATER LINE", OR "CAUTION - SEWER LINE" OMPLY WITH CITY STANDARDS, AND SHALL BE INCLUDED IN THE COST OF THE WAT IRON PIPE SHALL BE PROTECTED FROM CORROSION BY A LOW-DENSITY POLYETH	. DETECTABLE WIRING AND MARKING TAPE ER AND WASTEWATER PIPE.		
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ND ATER 2. <u>WASTEWATER</u> , CITY OF JARRELL, (512)746-4593 3. <u>CITY WATERUITILITIES DEPARTMENT</u> , JARRELL SCHWERTNER DISTRICT, (512)746-2114 DRKS LLE THE IKLER SP CUINT OF DUNT	_S AND				U X Z	
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BM 7210 - MAG NAIL SET IN CONCRETE				IAIL SET IN CONCRETE	SHEET NUMBER	
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© COPYRIGHT 2017 KIMLEY-HORN AND ASSOCIATES, INC., ALL RIGHTS RESERVED	© COPY	RIGHT 2017			\checkmark	



otted By: Davis, Aaron Date: February 09, 2024 11:31:08am File Path: K: \GE0_Civil \069427200-Jarrell Kids Zone \Cad \PlanSheets \C-Existing Conditions.dwg

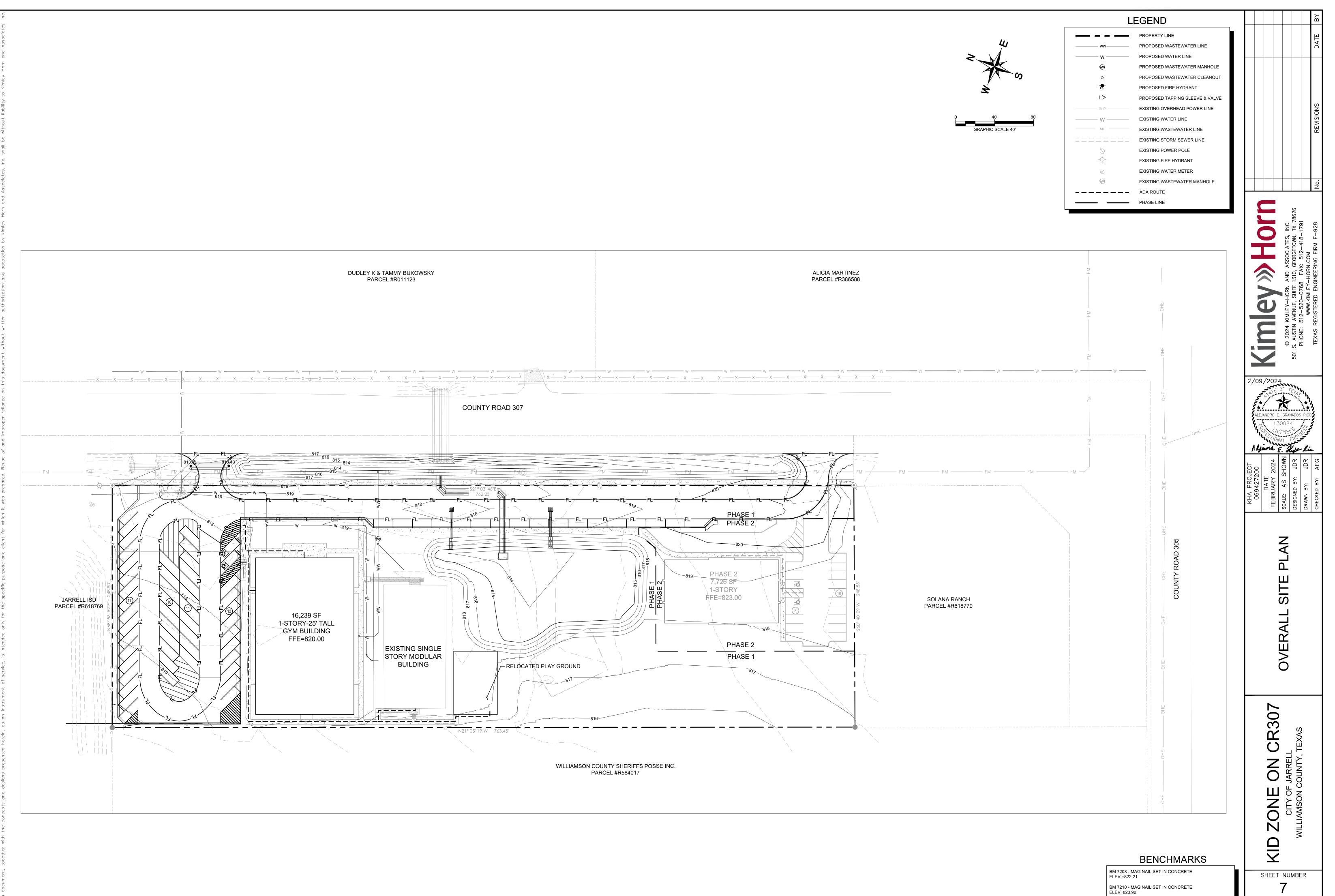




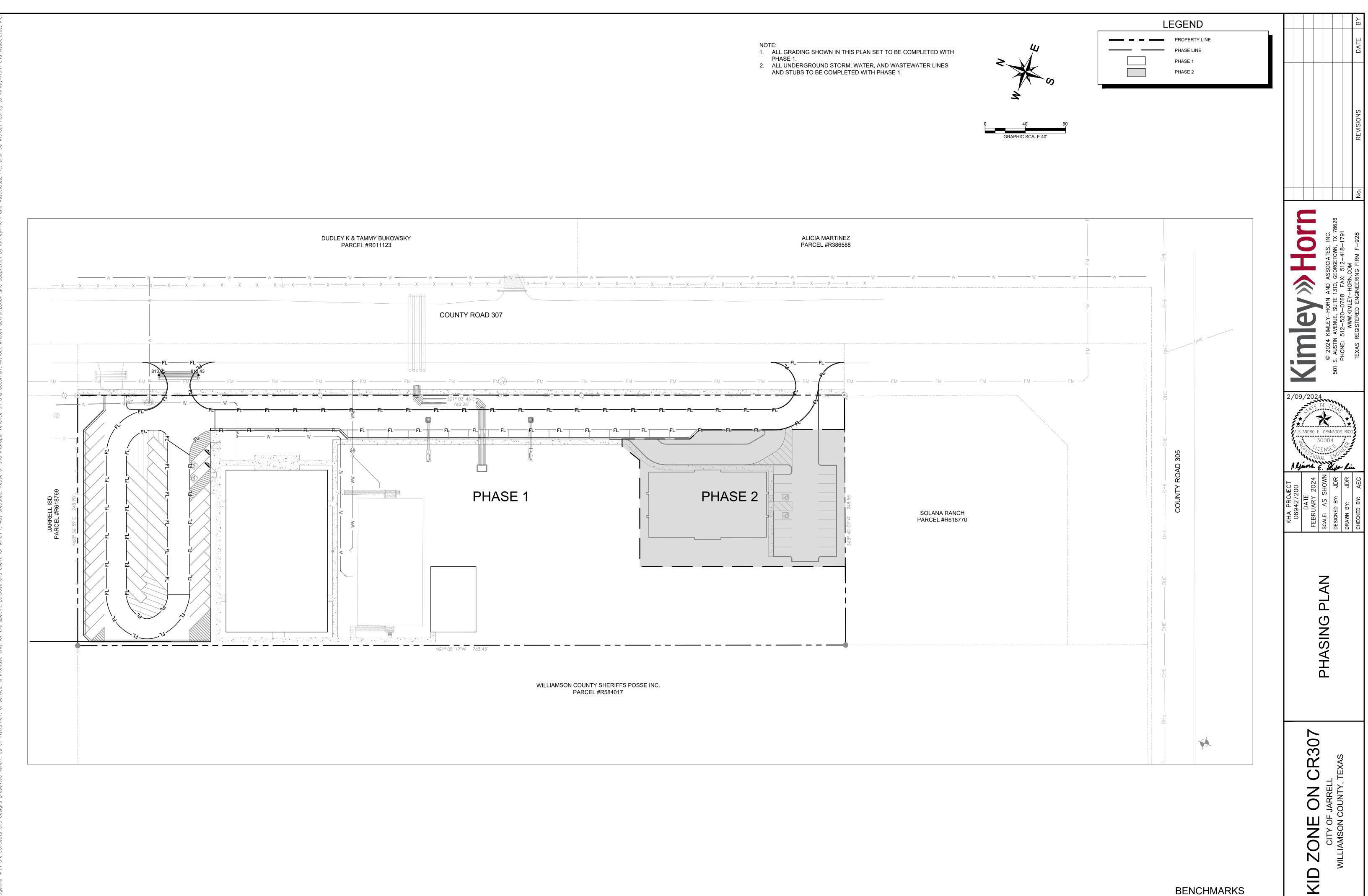
						DATE BY
						REVISIONS
						No.
			© 2024 KIMLEY-HORN AND ASSOCIATES, INC.	501 S. AUSTIN AVENUE, SUITE 1310, GEORGETOWN, TX 78626 PHONE: 612 620 0768 6AV: 612 418 1701	WWW.KIMLEY-HORN.COM	RM F-928
	9/20 51.4 EJANDRC	24 E OF D E. 0 130 7CE 0NA		ADOS	RICC	
KHA PROJECT 069427200	DATE FERRIARY 2024		SUALE: AS SHUWIN	DESIGNED BY: JDR	DRAWN BY: XIBR	снескер ву: АЕС
			CITY OF JARRELL			
	SHEE		3 10	MBE	R	

BM 7208 - MAG NAIL SET IN CONCRETE ELEV.=822.21

BM 7210 - MAG NAIL SET IN CONCRETE ELEV. 823.90



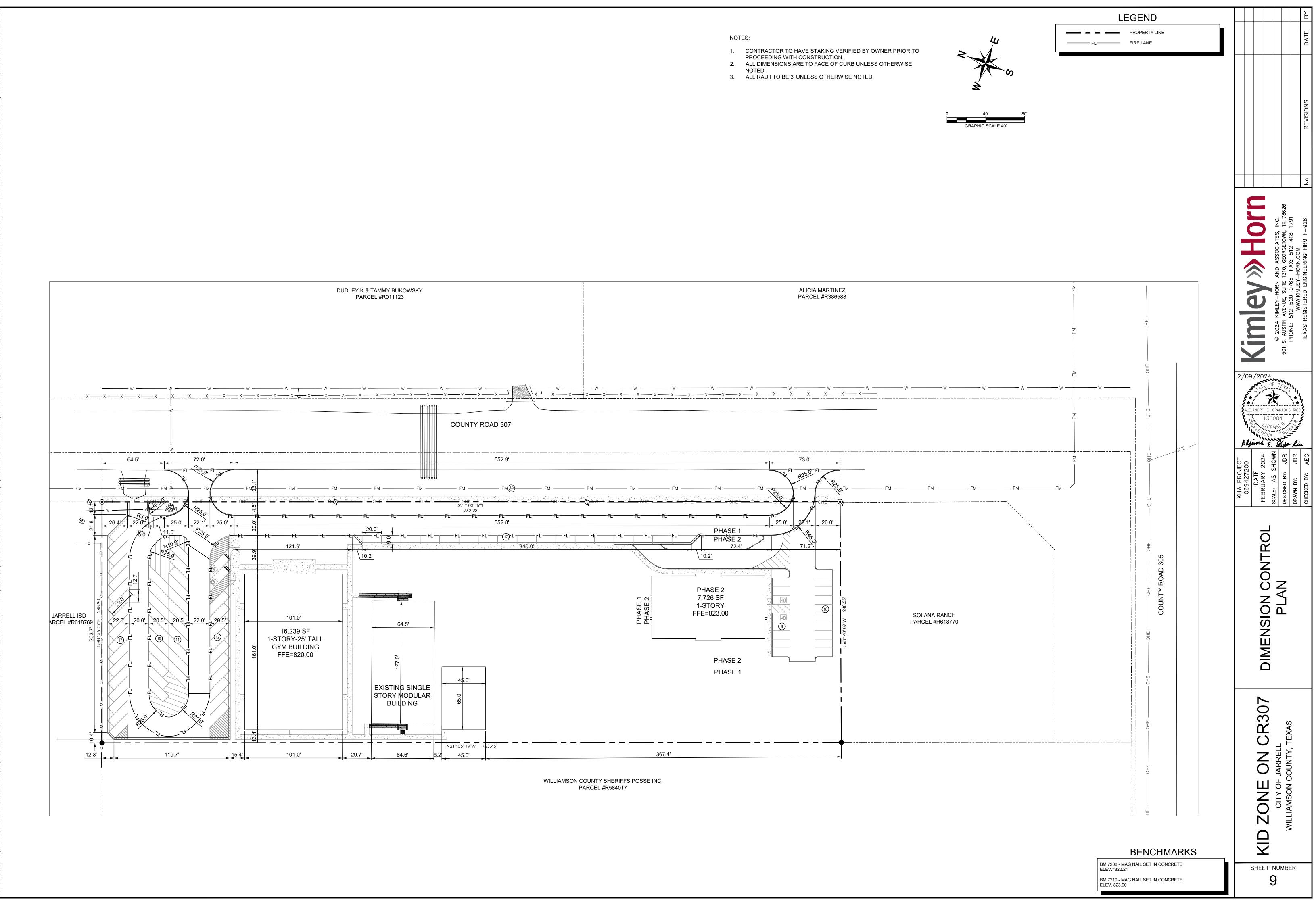
by: Davis, Aaron Date: February 09, 2024 11: 31: 50am File Path: K: \GE0_Civil \069427200-Jarrell Kids Zone \Cad

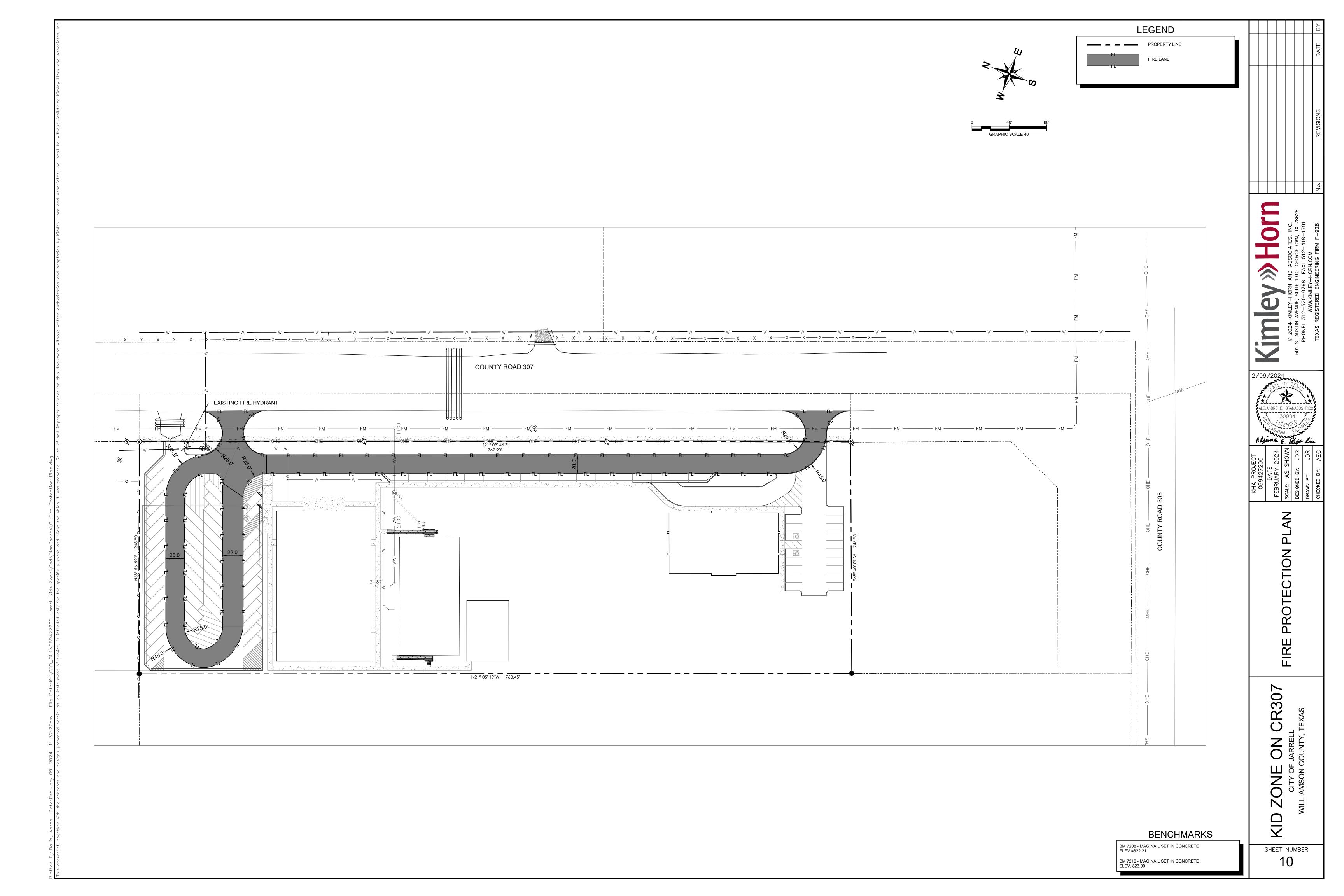


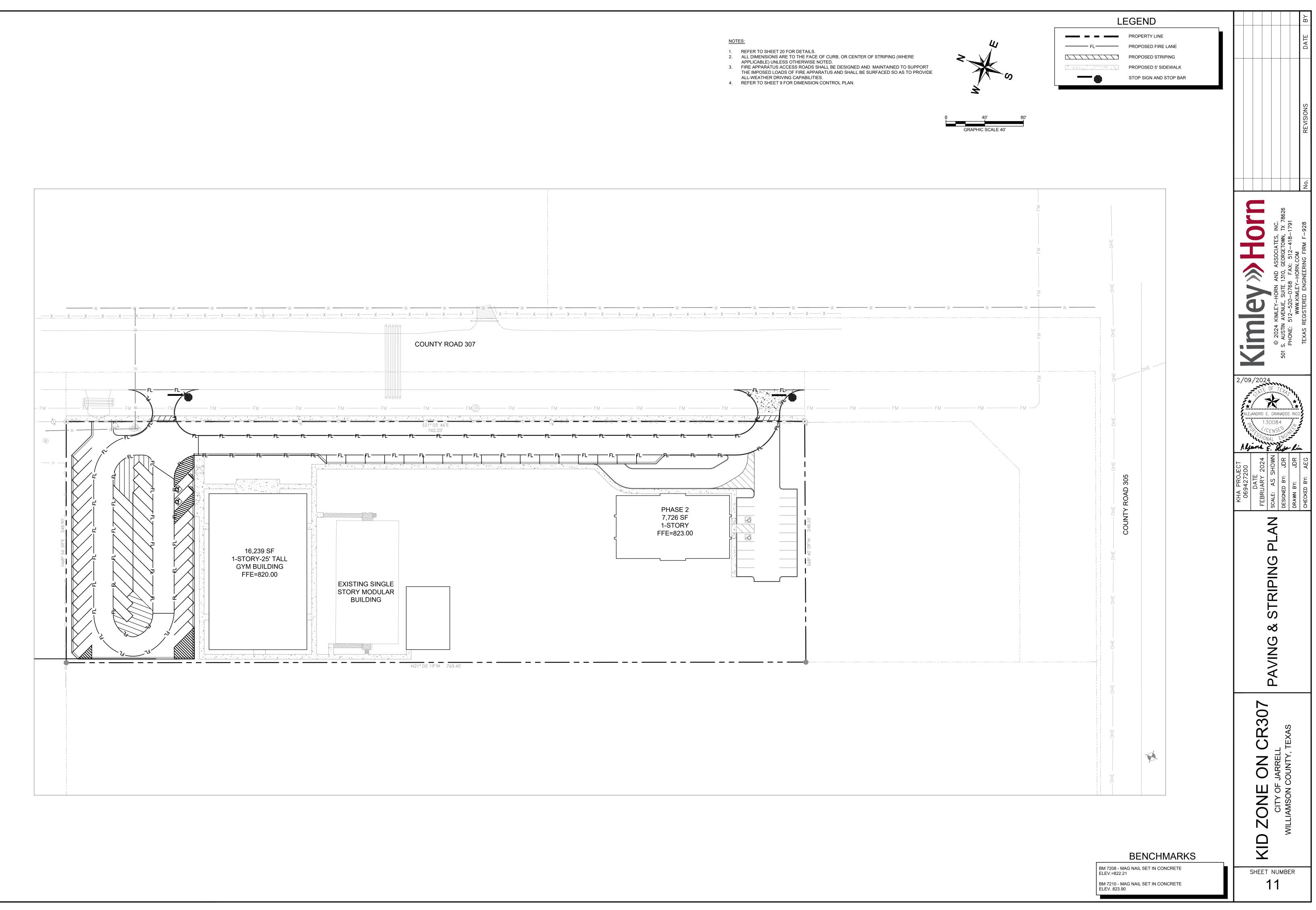
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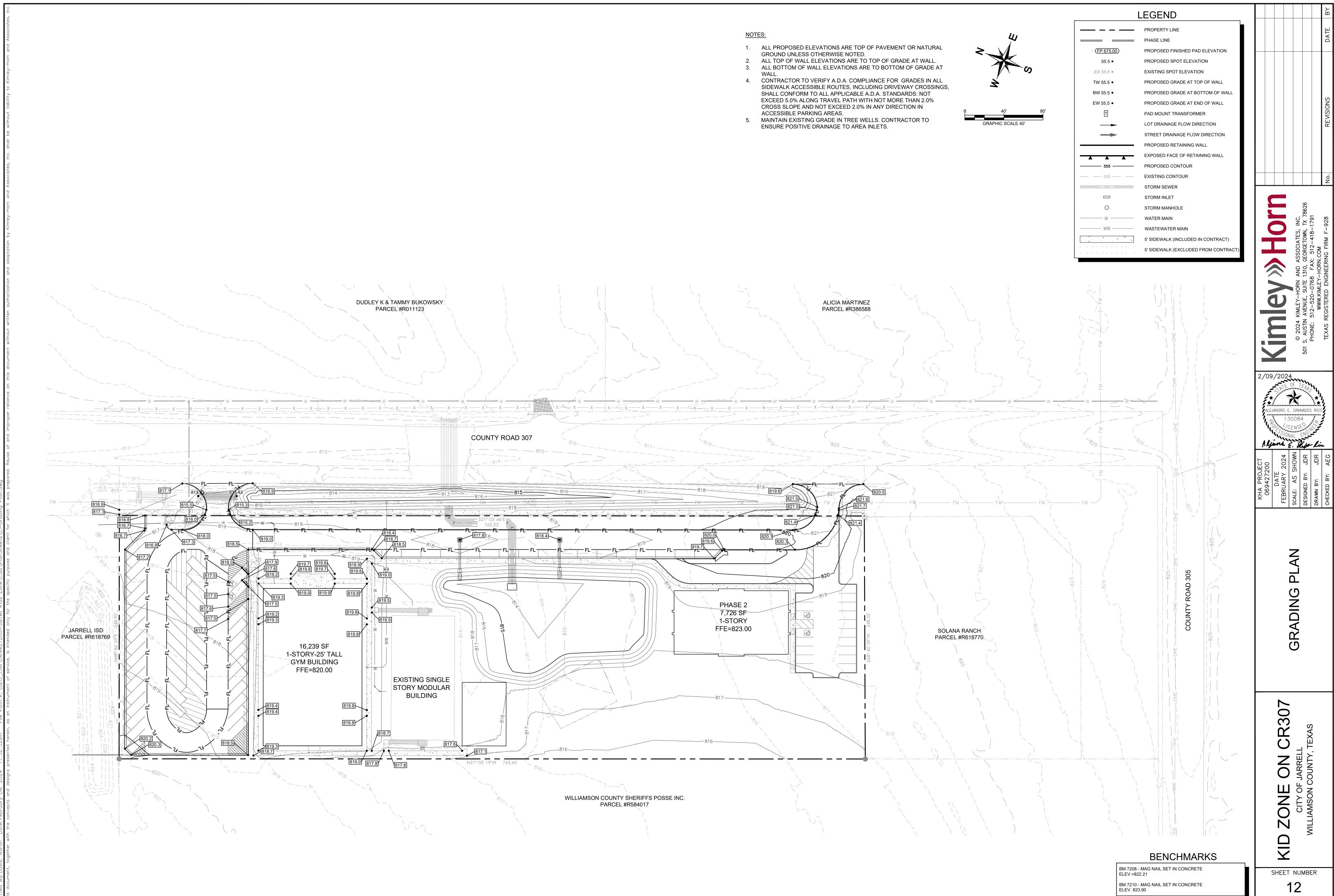
BM 7208 - MAG NAIL SET IN CONCRETE ELEV.=822.21
BM 7210 - MAG NAIL SET IN CONCRETE ELEV. 823.90

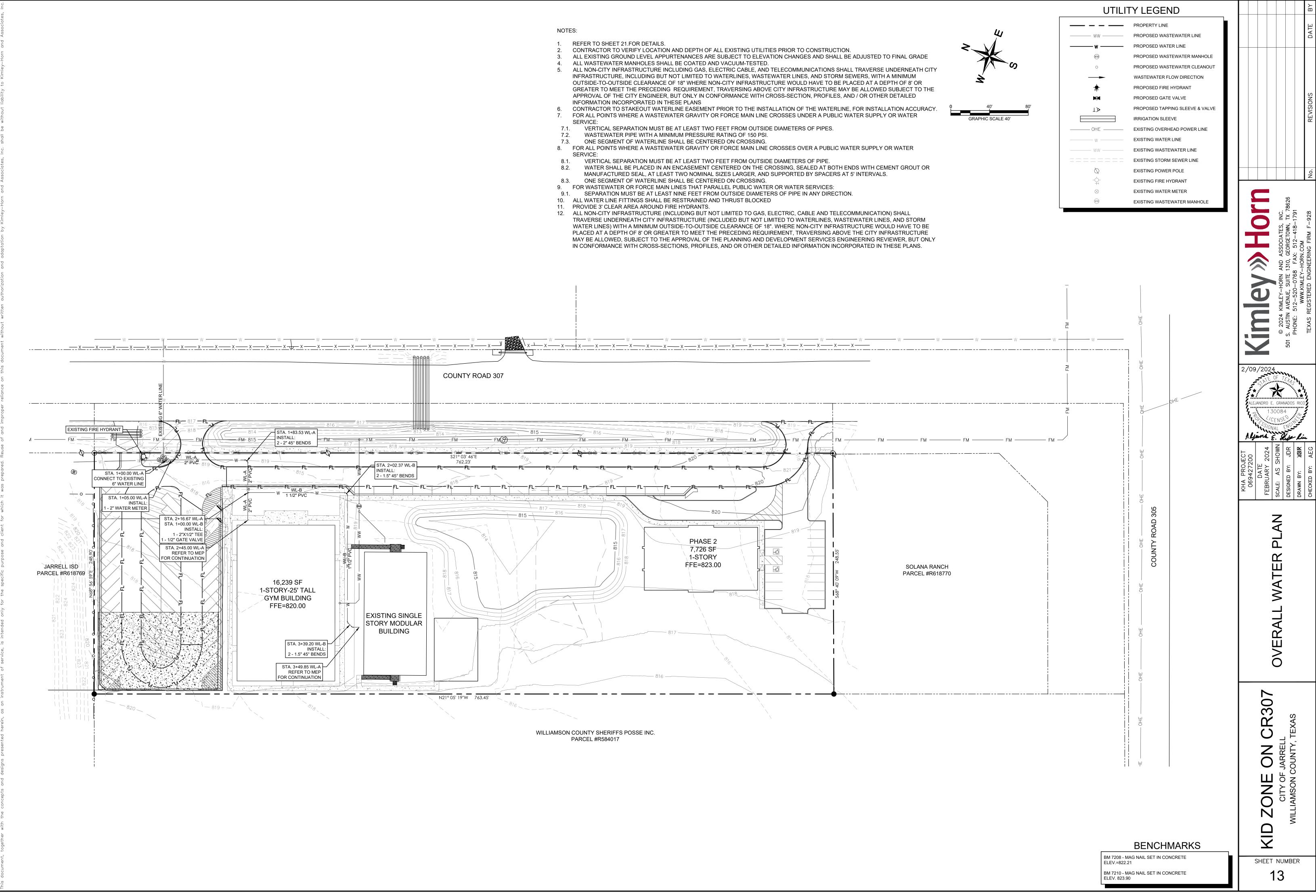
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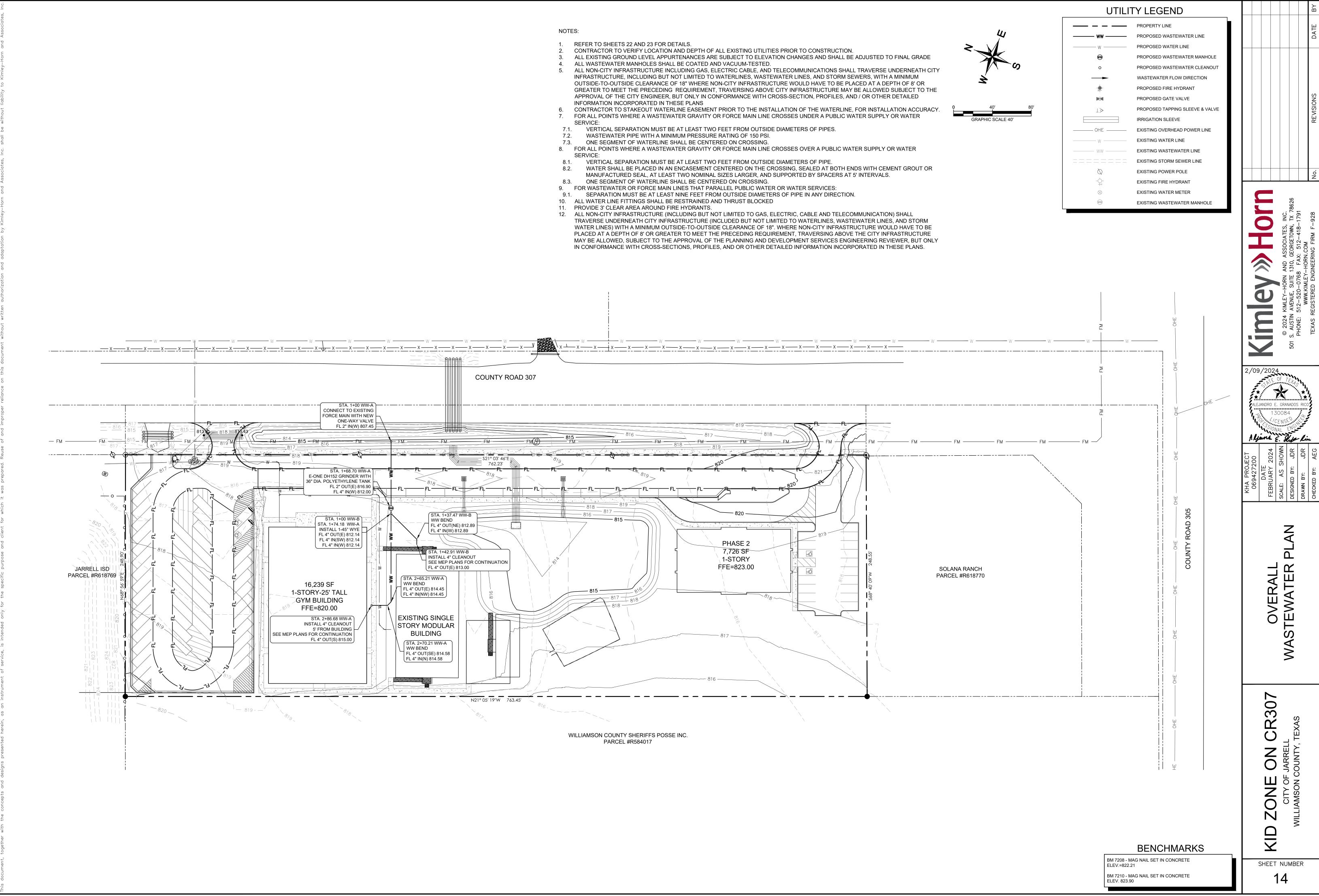


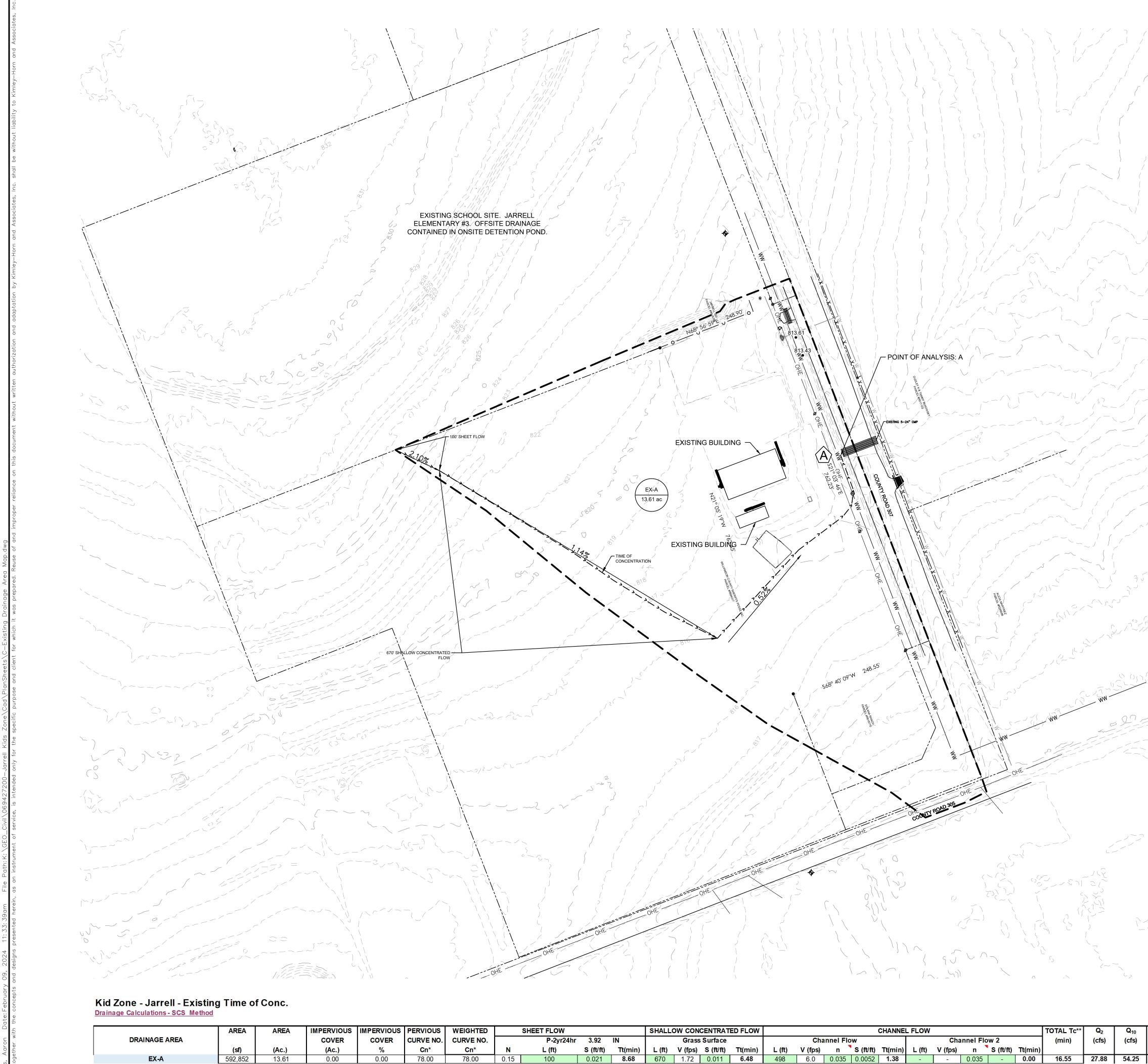






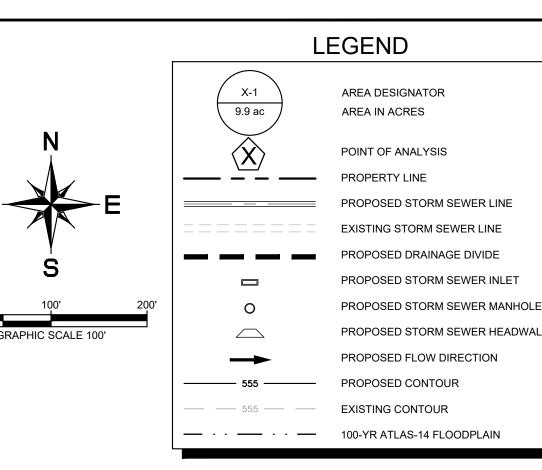






**The minimum Tc is 6 minutes per the TR-55.

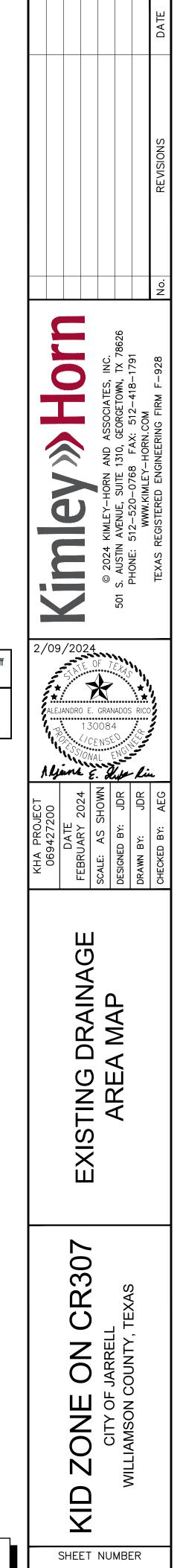
T FLOW			SHALL	OM CON	CENTRAT	ED FLOW		CHANNEL FLOW TO				TOTAL Tc**	Q ₂	Q ₁₀	Q ₂₅	Q ₁₀₀					
P-2yr24hr	3.92	IN		Grass	Surface			Cha	nnel Flo	w			Cha	nnel Flo	ow 2		(min)	(cfs)	(cfs)	(cfs)	(cfs)
L (ft)	S (ft/ft)	Tt(min)	L (ft)	V (fps)	S (ft/ft)	Tt(min)	L (ft)	V (fps)	n	S (ft/ft)	Tt(min)	L (ft)	V (fps)	n	S (ft/ft)	Tt(min)					
100	0.021	8.68	670	1.72	0.011	6.48	498	6.0	0.035	0.0052	1.38	— 1	-	0.035	-	0.00	16.55	27.88	54.25	72.7	102.95
																				-	_





EXISTING CONDITIONS

EXICTING CO						
Point of Analysis	Total Drainage Area (Acres)	Total Impervious Cover Area (acres)	Impervious Area (%)	Storm Event	Existing Runoff (cfs)	
A	13.61	0.00	0.00%	2 10 25 100	27.88 54.25 72.70 102.95	

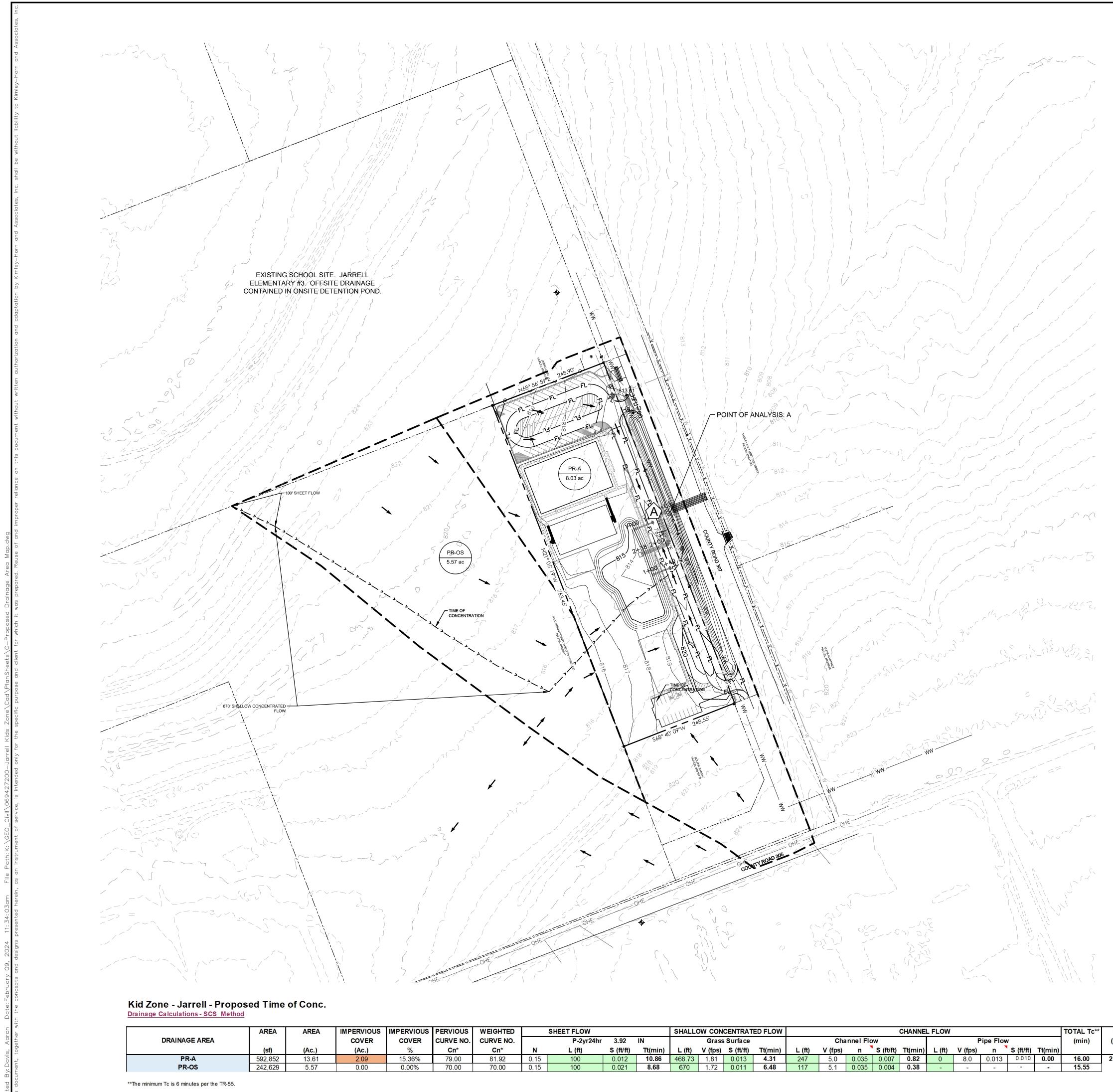




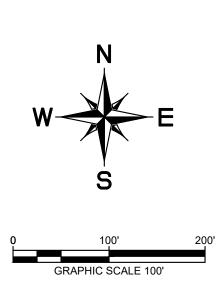
BENCHMARKS

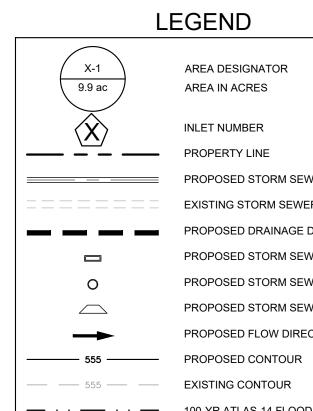
BM 7208 - MAG NAIL SET IN CONCRETE ELEV.=822.21 BM 7210 - MAG NAIL SET IN CONCRETE ELEV. 823.90

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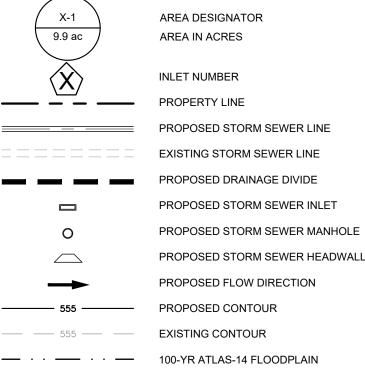


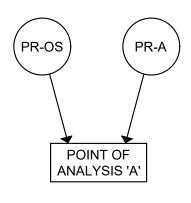
																				_
SHEET FLOW SHALLOW CONCENTRATED FLOW				CHANNEL FLOW							TOTAL Tc**	Q_2	ſ							
	P-2yr24hr	3.92	IN		Grass	Surface			Cha	nnel Flo	w			P	ipe Flow	v		(min)	(cfs)	
1	L (ft)	S (ft/ft)	Tt(min)	L (ft)	V (fps)	S (ft/ft)	Tt(min)	L (ft)	V (fps)	n	S (ft/ft)	Tt(min)	L (ft)	V (fps)	n	S (ft/ft)	Tt(min)			
15	100	0.012	10.86	468.73	1.81	0.013	4.31	247	5.0	0.035	0.007	0.82	0	8.0	0.013	0.010	0.00	16.00	21.28	ſ
15	100	0.021	8.68	670	1.72	0.011	6.48	117	5.1	0.035	0.004	0.38	-	-	-	E		15.55	12.28	





LEGEND





					DATE BY
					REVISIONS
					No.
		© 2024 KIMLEY-HORN AND ASSOCIATES, INC.	501 S. AUSTIN AVENUE, SUITE 1310, GEORGETOWN, TX 78626	PHONE: DIZ-DZU-U/68 FAX: DIZ-418-1791 WWW.KIMLEY-HORN.COM	TEXAS REGISTERED ENGINEERING FIRM F-928
2/09 ALE:	JANDRO I	3008 CENS WAL	TEHAS NADOS 4 ENGI	RICC	
KHA PROJECT 069427200	DATE FEBRUARY 2024	SCALE: AS SHOWN	DESIGNED BY: JDR	DRAWN BY: JDR	снескер ву: АЕС
			AKE		

Kids Zone - Jarrell DETENTION RESULTS - SCS METHOD **PROPOSED CONDITIONS**

I KOI OOLD O	CINDINGING				
Point of Analysis	Total Drainage Area (Acres)	Total Impervious Cover Area (acres)		Storm Event	Developed Runoff (With Detention) (cfs)
PR-A	13.61	2.09	15.36%	2 10 25 100	21.28 37.52 48.41 65.81
PR-OS	5.57	0.00	0.00%	2 10 25 100	15.55 23.47 31.27 43.96

PROPOSED VS. EXISTING COMPARISON

Point of Analysis	Storm Event	Existing Runoff (cfs)	Developed Runoff (cfs)	Runoff Difference at Point of Analysis (cfs)	ls Developed ≤ Existing?
	2	27.88	21.28	(6.60)	YES
А	10	54.25	37.52	(16.73)	YES
~	25	72.70	48.41	(24.29)	YES
	100	102.95	65.81	(37.14)	YES

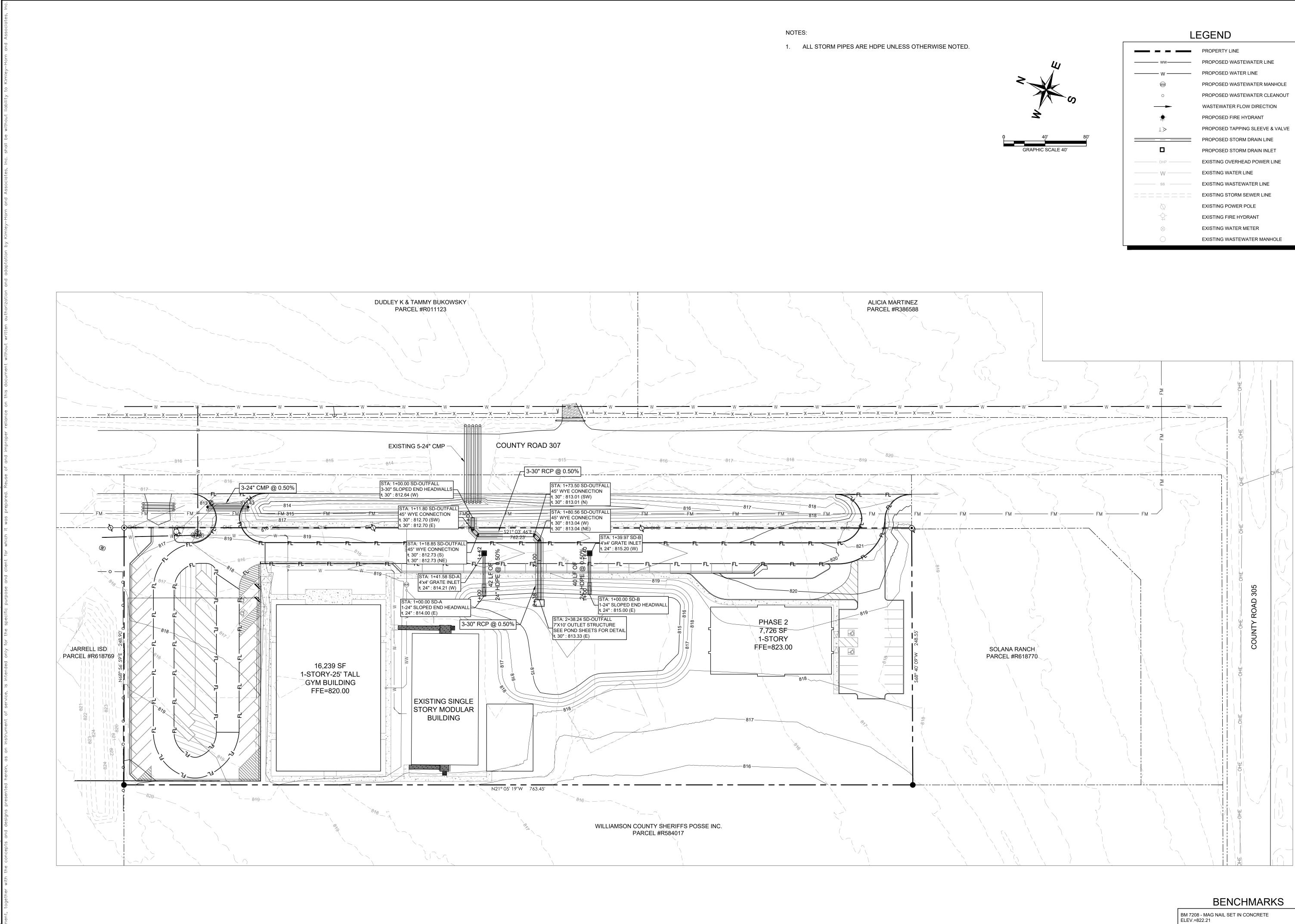
Q₁₀ **Q**₂₅ Q₁₀₀ (cfs) (cfs) (cfs)
 37.52
 48.41
 65.81

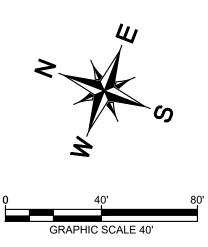
 23.47
 31.27
 43.96
 43.96

BENCHMARKS

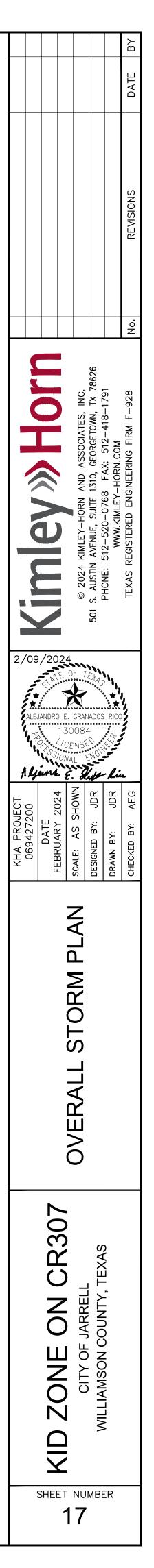
BM 7208 - MAG NAIL SET IN CONCRETE ELEV.=822.21 BM 7210 - MAG NAIL SET IN CONCRETE ELEV. 823.90

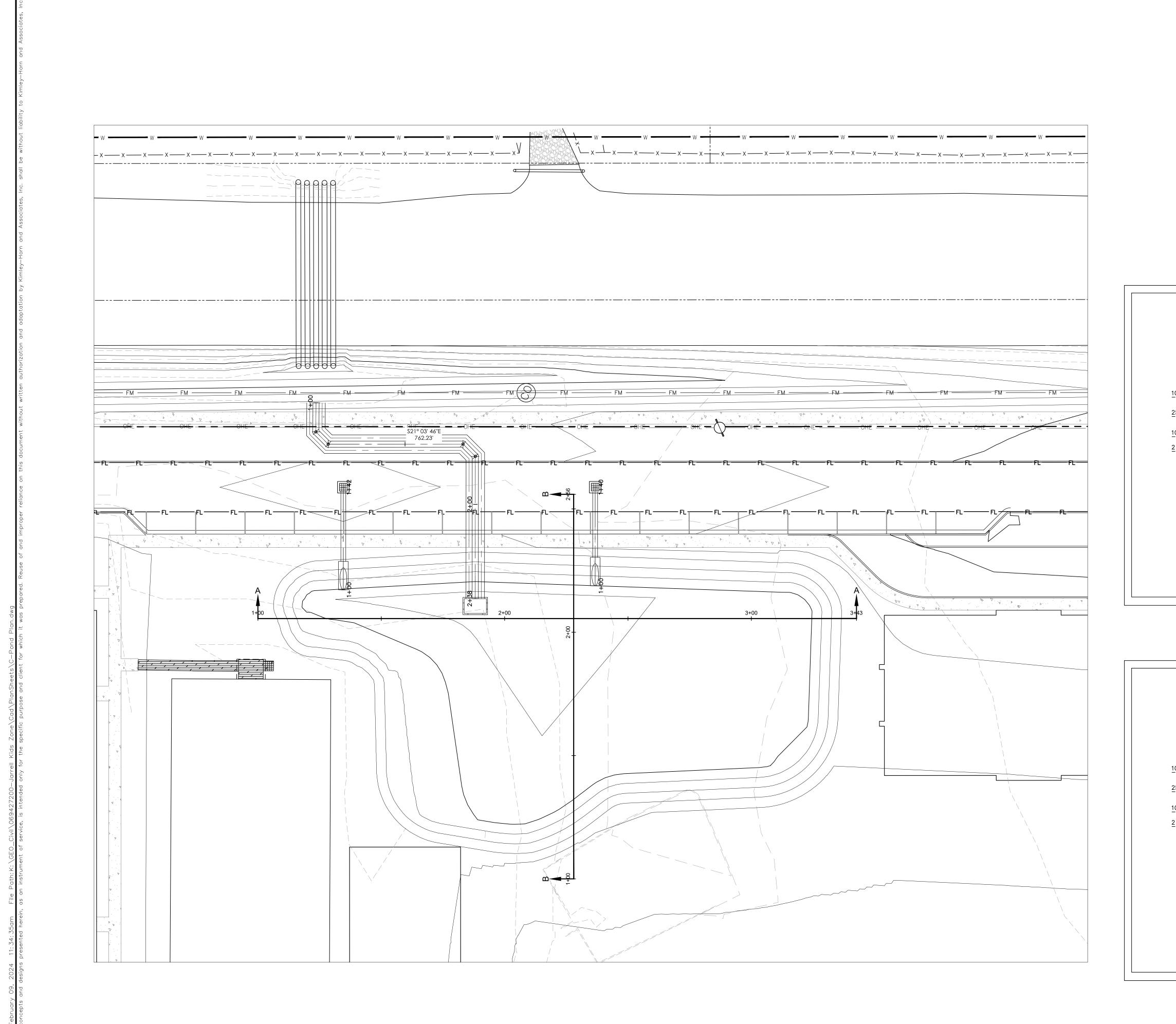
SHEET NUMBER



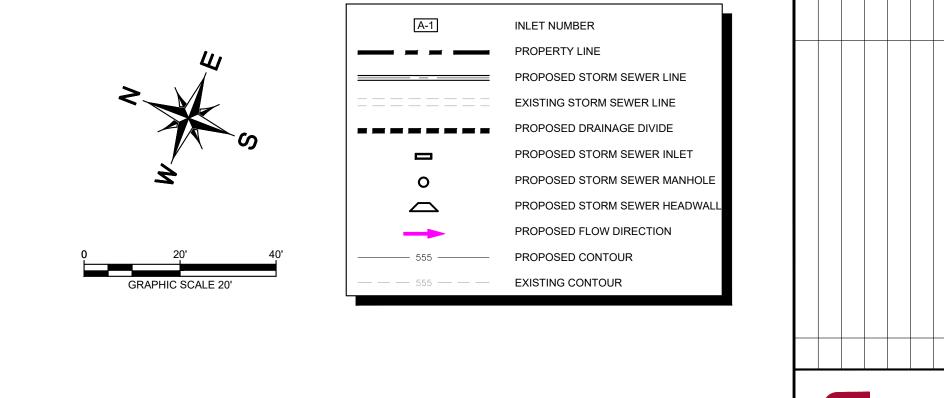


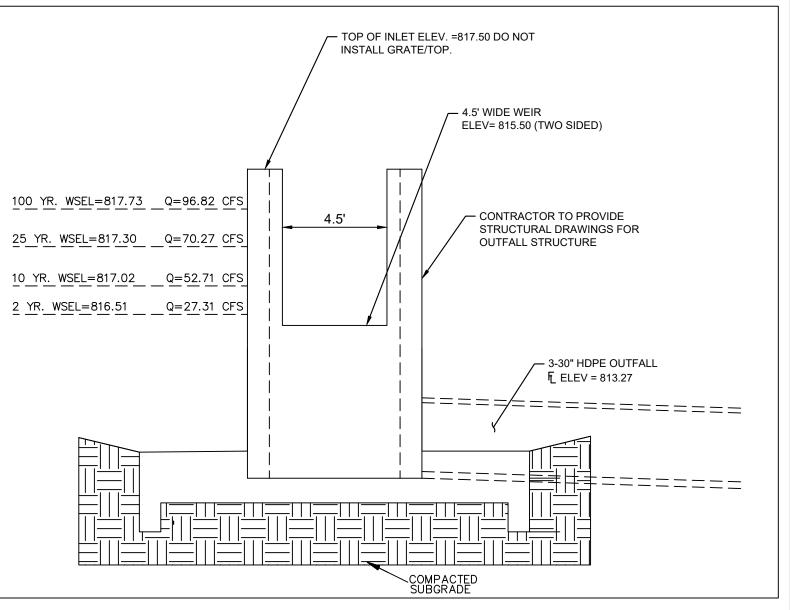
L	EGEND
	PROPERTY LINE
ww	PROPOSED WASTEWATER LI
w	PROPOSED WATER LINE
\bigotimes	PROPOSED WASTEWATER M
0	PROPOSED WASTEWATER C
_ >	WASTEWATER FLOW DIRECT
÷	PROPOSED FIRE HYDRANT
	PROPOSED TAPPING SLEEVE
	PROPOSED STORM DRAIN LI
	PROPOSED STORM DRAIN IN
OHP	EXISTING OVERHEAD POWER
W	EXISTING WATER LINE
SS	EXISTING WASTEWATER LINE
	EXISTING STORM SEWER LIN
Ø	EXISTING POWER POLE
	EXISTING FIRE HYDRANT
\otimes	EXISTING WATER METER
\bigcirc	EXISTING WASTEWATER MAN



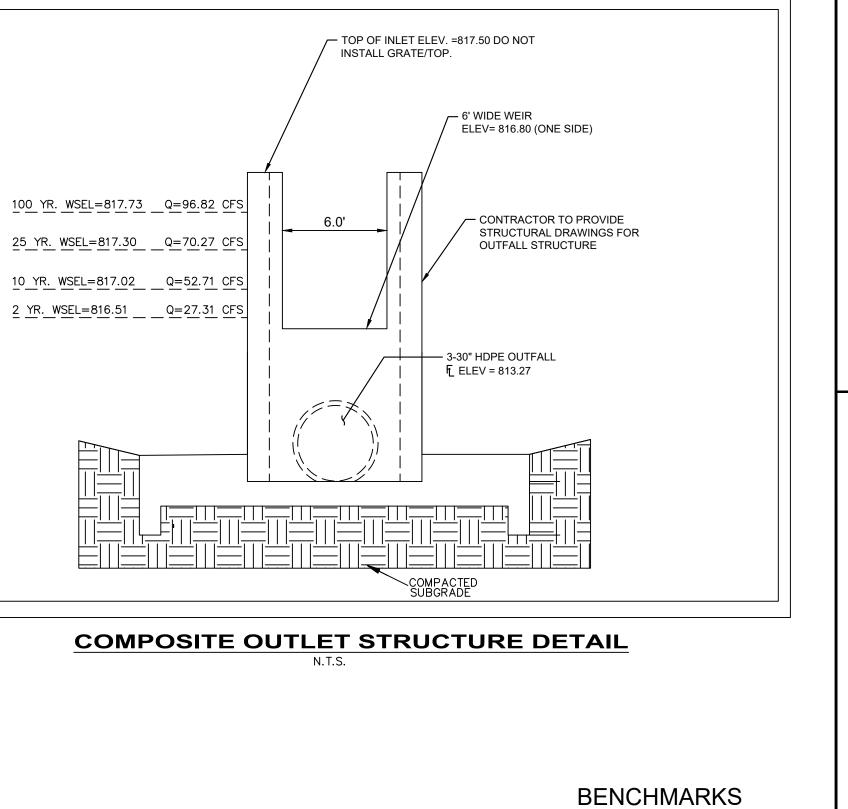




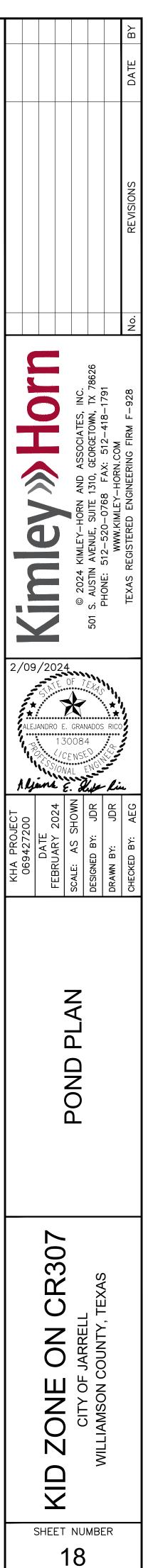


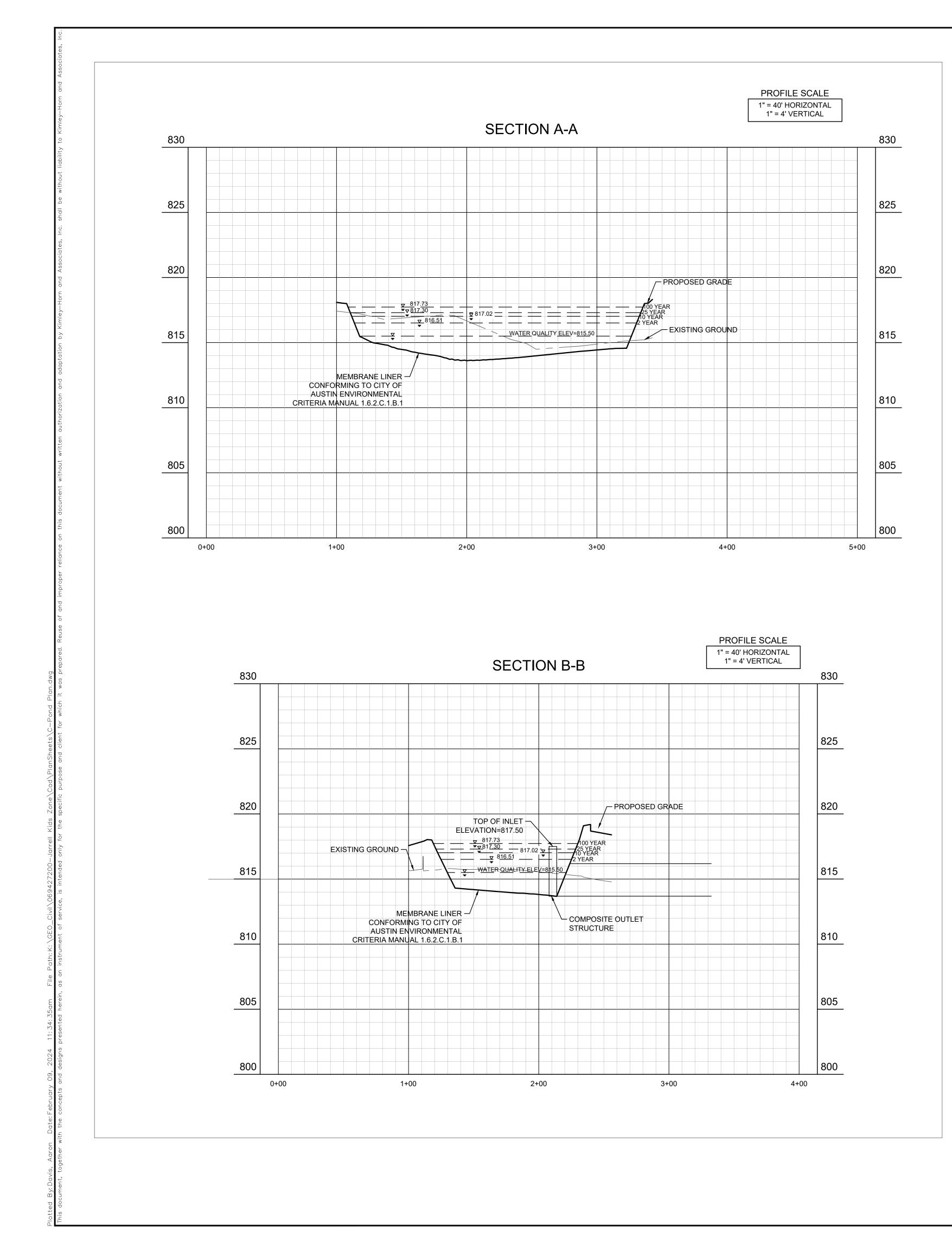






BM 7208 - MAG NAIL SET IN CONCRETE ELEV.=822.21





Texas Cor	nmission on	Environmental	Qualit
TSS Remov	al Calculation	s 04-20-2009	
		provided for ce	
		are data entry f	
		k (Bold) are cal	
1. The Requir	ed Load Reducti	on for the total pro	ject:
			je 3-29 l
where			
Site Data	¹ Determine Reg	ired Load Removal I	Rased o
One Date		Total projec	
T-4-1		impervious area with	nin the li
TOLAI		: impervious area wit post-development im	
* The values	entered in these	fields should be fo	r the to
Ν	lumber of drainag	e basins / outfalls are	eas leav
2 Drainago P	asin Paramotors	(This information s	bould
2. Drainage b		Drainage	
Pre	development impe	Total dr rvious area within dr	ainage l ainage l
		rvious area within dr	
Post-dev	elopment impervic	ous fraction within dr	anager
3. Indicate the	e proposed BMP	Code for this basir	<u>ı.</u>
			Re
4. Calculate N	laximum TSS Loa	ad Removed (L _R) fo	<u>r this D</u>
		RG-348 Pag	ge 3-33
where			
where	2.		
5. Calculate F	raction of Annua	I Runoff to Treat th	ne drain
			De
<u>6. Calculate C</u>	apture Volume r	equired by the BM	P Type 1
		Post Develop	oment Ru
			te Wate
			ite area
		Off-site Imperviou Imperviou	
			ff-site R ite Wate
		OII-SI	le vvale
Tota	Capture Volume	e (required water q	Stora uality vo
STAGE S			
Contour	Contour	Depth	In
Elevation	Area	(ft)	Ve
	(sq. ft)		A١
			(c
813.50	122.72	N/A	
814.00	3,818.43	0.500	
814.50 815.00	11,836.22	0.500	
815.00 815.50	<u>16,462.86</u> 18,208.55	0.500	
816.00	19,381.46	0.500	
816.50	20,579.15	0.500	
817.00	21,801.62	0.500	

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817.50

0.05

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V								ATE
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			Project Name: Date Prepared:	Kid Zone - Jarrell 1/30/2024				
			Date Prepared.	1100/2024				
			ner. Place the cursor over the c	ell.				
in the Technical	Guidance M	anuai - RG-	-340.					
d fields. Chan	ges to these	e fields will	remove the equations used in t	he spreadsheet.				NS
	Calculations fr	om RG-348		Pages 3-27 to 3-30				REVISIONS
				1 4900 0 21 8 0 00				Ч К Ц
Equation 3.3: $L_M =$	27.2(A _N x P)							
LM TOTAL PROJECT =	Required TSS	removal resul	ting from the proposed development = 80%	% of increased load				
			area for the project					
P-	Average annua		i, inches		_			
n the Entire Project County =		•			_			o. N
cluded in plan 🍾 =	4.36	acres						
mits of the plan * = mits of the plan* =		acres acres					626	
cover fraction * = P =		inches					X 78 X 78 791	928
F -	V2						ETOWN, TX 78626 	6 -
LM TOTA L PROJECT =	2142	lbs.					ET0V 2-41	Σ
tal project area.							JITE 1310, GEORGE1 2768 FAX: 512– ILEY–HORN.COM	ר אני
ng the plan area =	1						0, G PAX: ORN.	EKI
							- 1310, 88 FA Ү-НОК	GINE
e provided for ea	<u>ich basin):</u>							
Dutfall Area No. =	WQP-A	•					ENUE, SUITE 2-520-0768 WWW.KIMLEY	Е К Г
Julian Area No							AV 12	REGISTERED
oasin/outfall area =	8.87		This includes the offsite drainage areas coming to pond				S. AUSTIN PHONE: 5	
oasin/outfall area =		acres					AUN	TEXAS
oasin/outfall area = oasin/outfall area =		acres					501 S. (
$L_{M THIS BASIN} =$	2142	lbs.	Trying to remove this much TSS				ũ	
						·		
Proposed BMP =	Batch Extend	ed Detention			2	/09/2024		
moval efficiency =	91	percent						
rainage Basin by	the selected B	ivir Type.						,
Equation 3.7: L _R =	(BMP efficience	x P x (A⊢x) x P x (A⊢x	34.6 + A _P x 0.54)			\sim 13008	34	, , ,
A _c =	Total On-Site o	Irainage area	in the BMP catchment area			POR CICENS		
	-		the BMP catchment area			Aljans E. S	Vie lin	
			the BMP catchment area catchment area by the proposed BMP			4 Z		
					FCT	200 2024 SHOWN	JDR JDR	AEG
A _c =		acres acres			ROJ	89427200 DATE UARY 2024 AS SHOW		BY:
A _P =		acres					NED B	KED
L _R =	2580	lbs				0694272 DATE FEBRUARY SCALE: AS S	DESIGNED BY: DRAWN BY:	CHECKED
								-
age basin / outfall	area					S		
sired L _{M THIS BASIN} =	2350	lbs.				SNO		
	2000	INO.				\underline{O}		
F =	0.91					E E		
or this drainage b	oasin / outfall a	rea.	Calculations from RG-348					
						Ш S		
Rainfall Depth = noff Coefficient =	1	inches				S		
r Quality Volume =	0.25 14278	cubic feet				Ś		
						Q		
	Calculations fr	om RG-348	Pages 3-36 to 3-37			С С		
draining to BMP =		acres						
draining to BMP = n of off-site area =	0.00	acres						
unoff Coefficient =	0.02							
r Quality Volume =	774	cubic feet				n		
ige for Sediment =								
olume(s) x 1.20) =	18062	cubic feet						
						307		
						\mathbf{O}		

ncremental	Cumulative	Incremental	Cumulative	
'olume	Volume Volume Volume			
vg. End	Avg. End	Conic	Conic	
cu. ft)	(cu.ft)	(cu. ft)	(cu. ft)	
N/A	0.00	N/A	0.00	
985.29	985.29	770.95	770.95	
3913.66	4898.95	3729.57	4500.52	
7074.77	11973.72	7043.04	11543.56	_
8667.85	20641.57	8664.19	20207.75	WATER QUALITY ELEVATION
9397.50	30039.07	9395.98	29603.72	-
9990.15	40029.23	9988.65	39592.38	
10595.19	50624.42	10593.72	50186.10	
5450.42	56074.84	3639.35	53825.46	

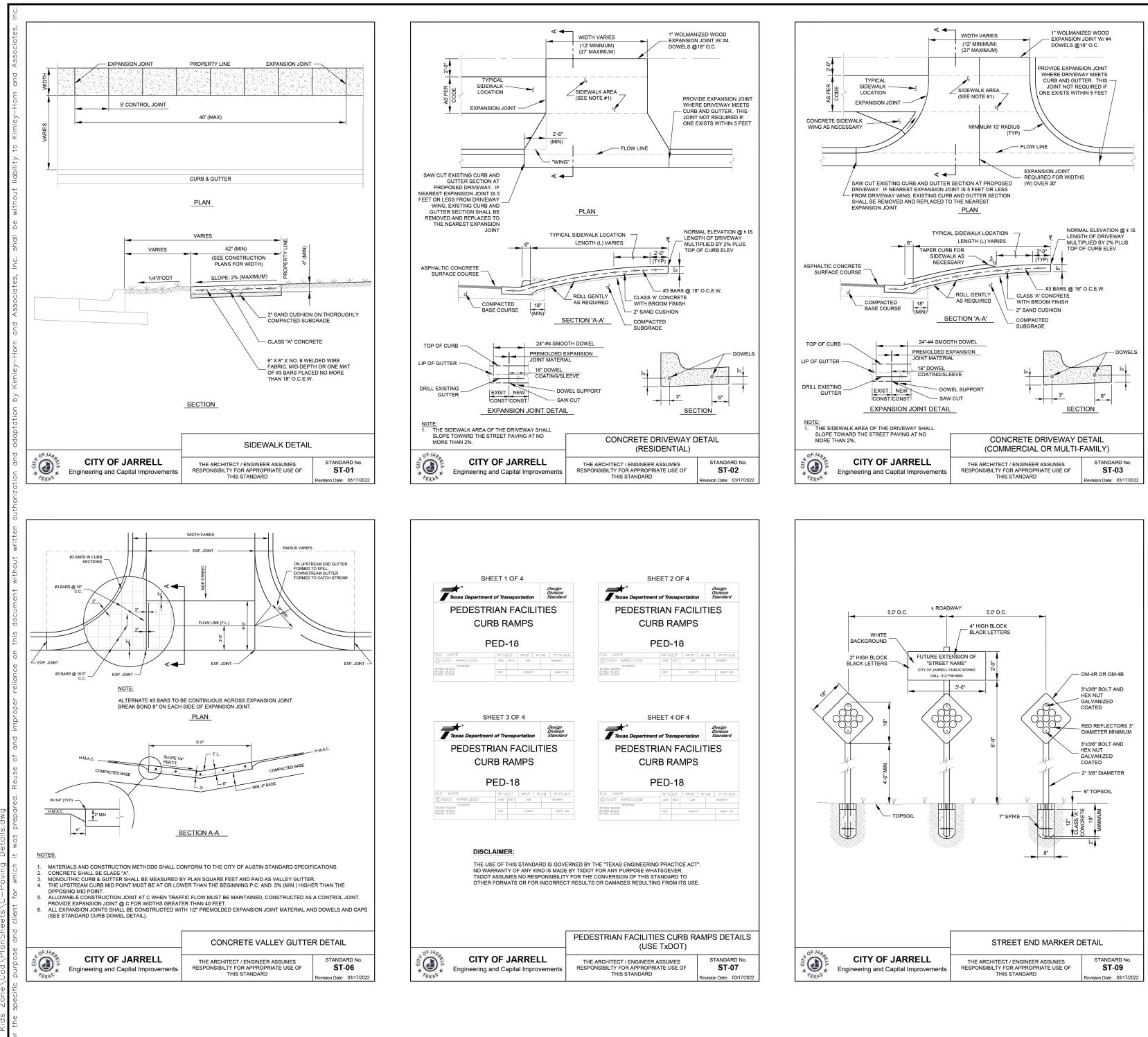
D ZONE ON CR3 CITY OF JARRELL WILLIAMSON COUNTY, TEXAS CR3 КD

BENCHMARKS

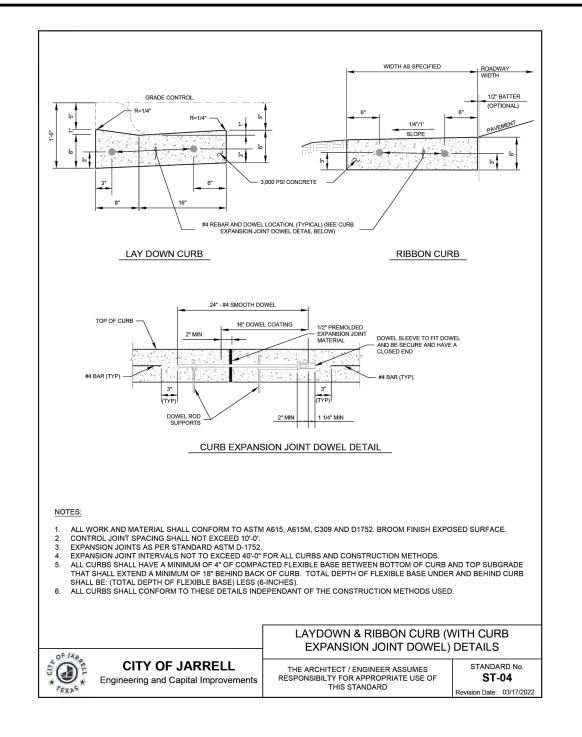
BM 7208 - MAG NAIL SET IN CONCRETE ELEV.=822.21

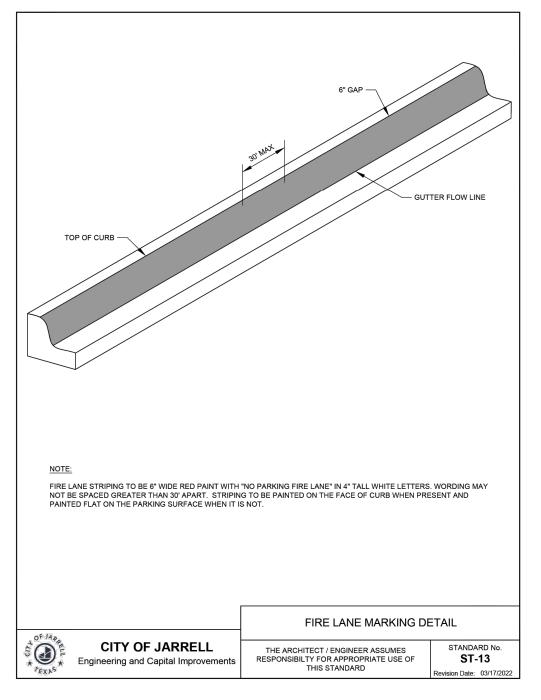
BM 7210 - MAG NAIL SET IN CONCRETE ELEV. 823.90

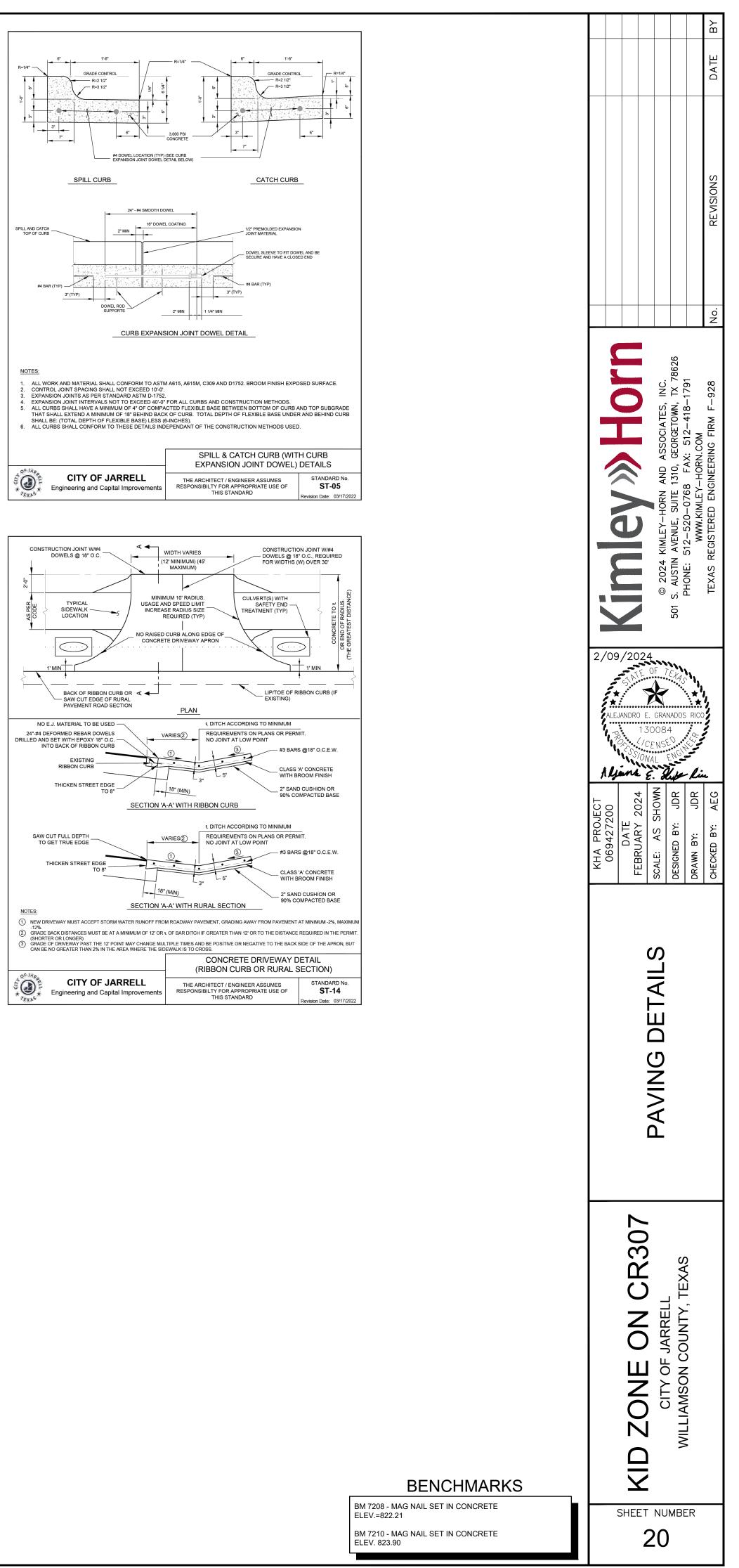
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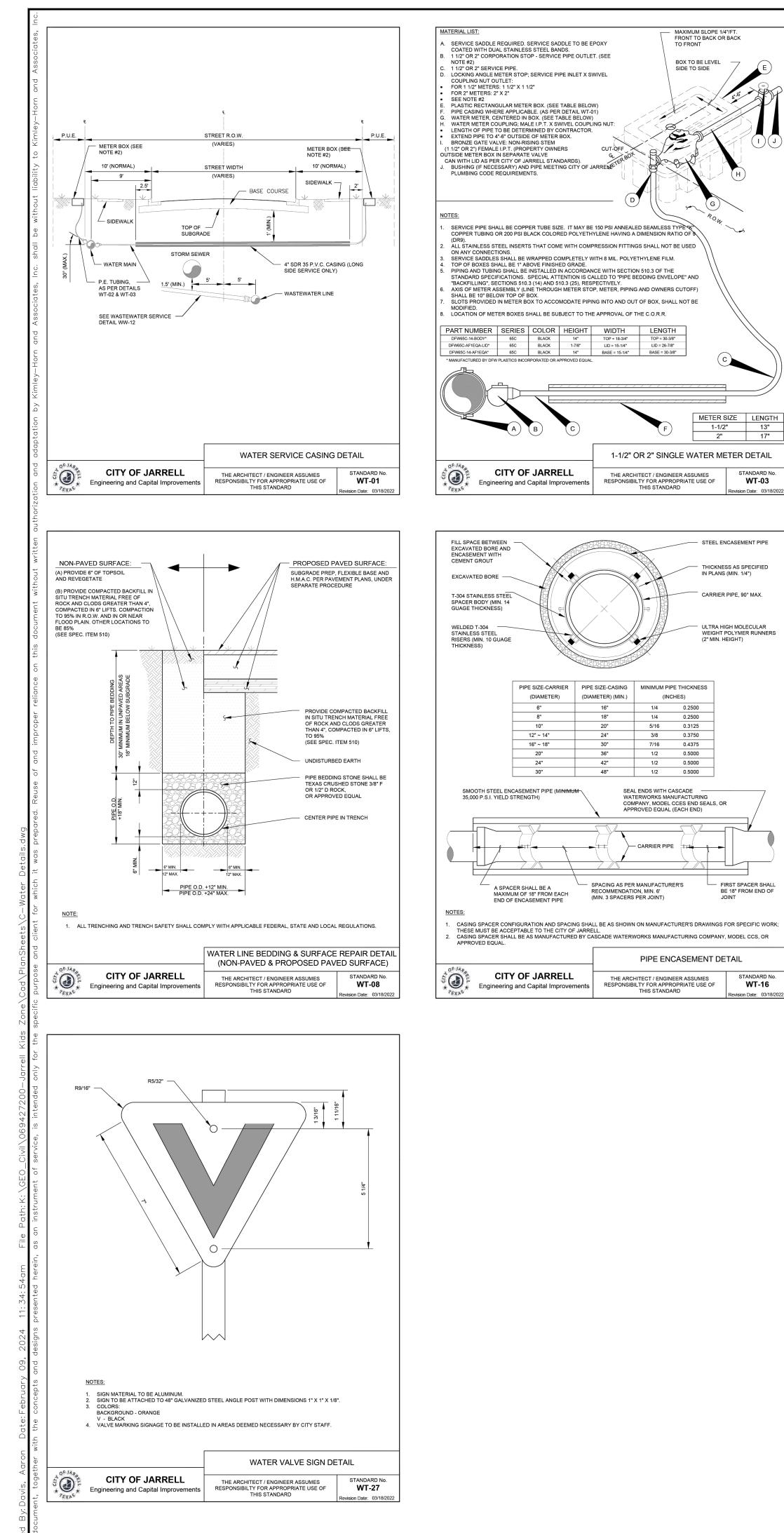


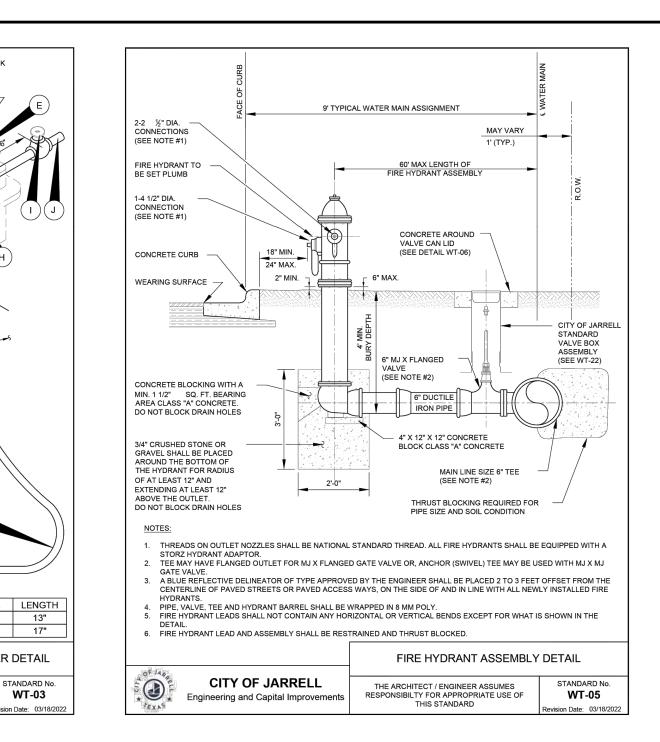
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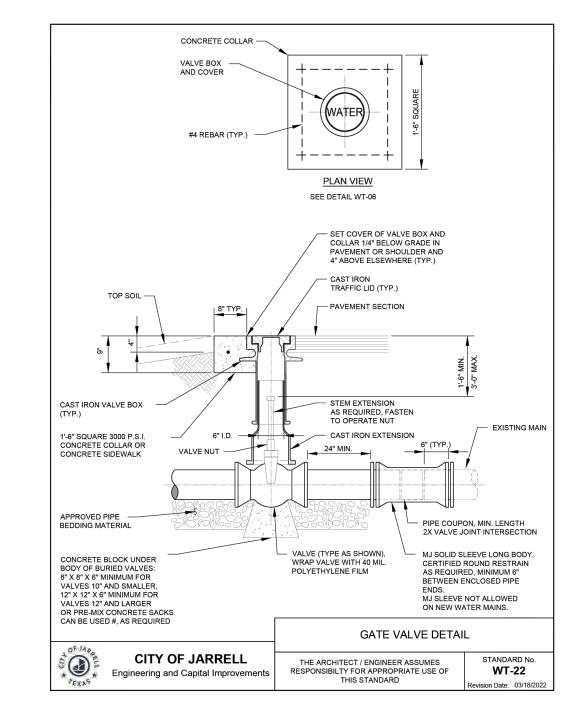


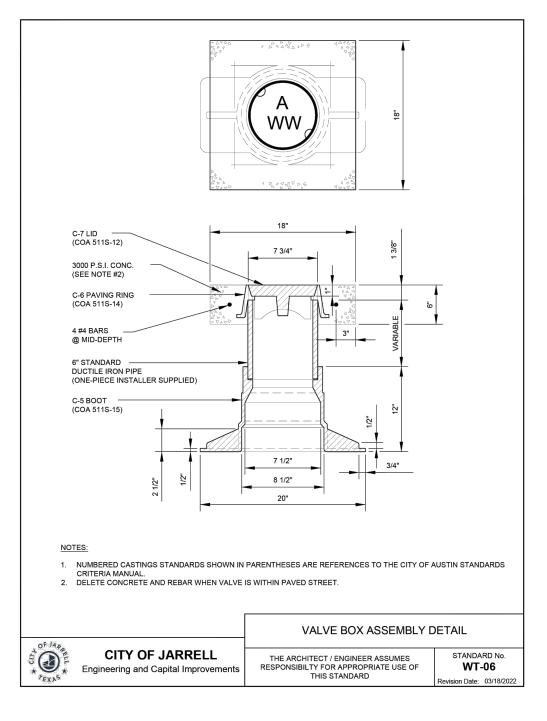


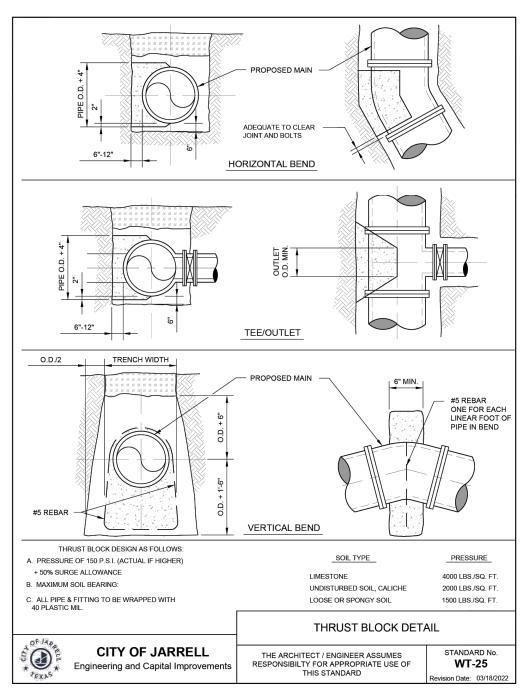


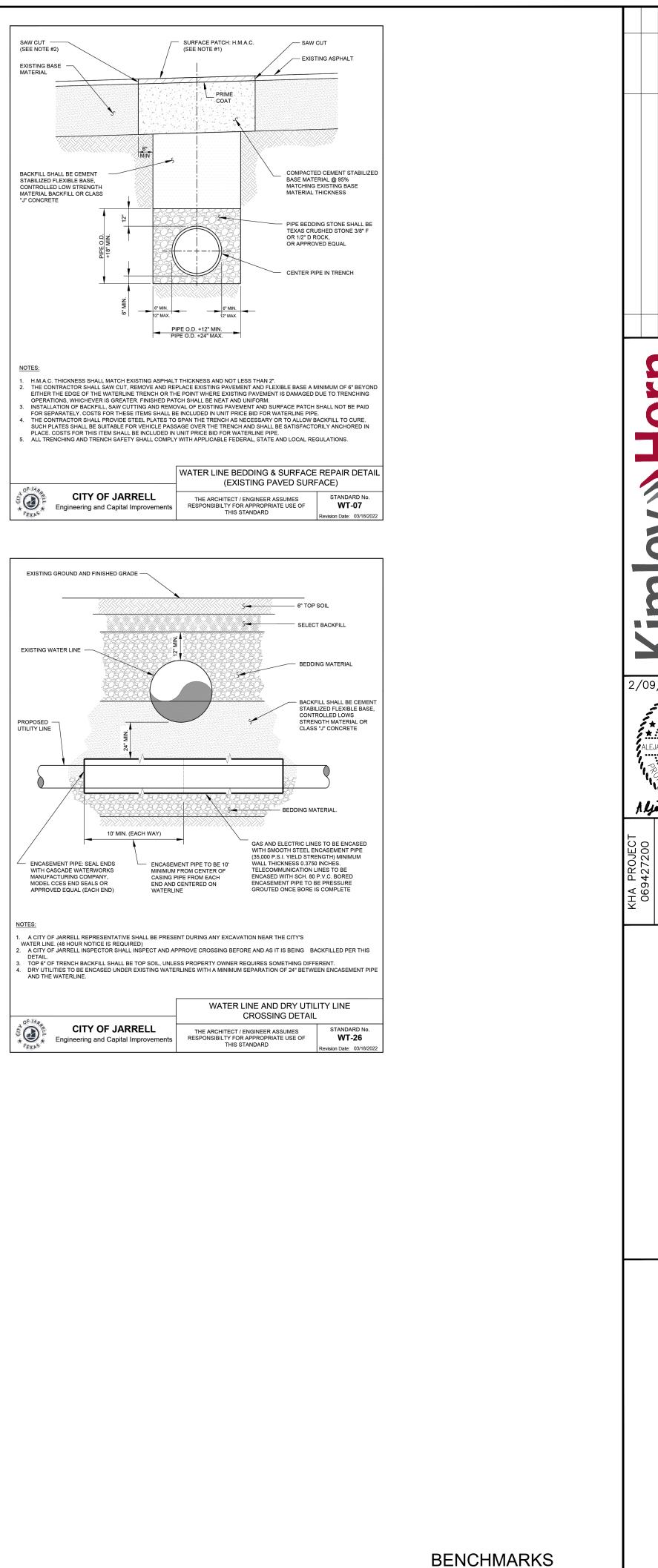








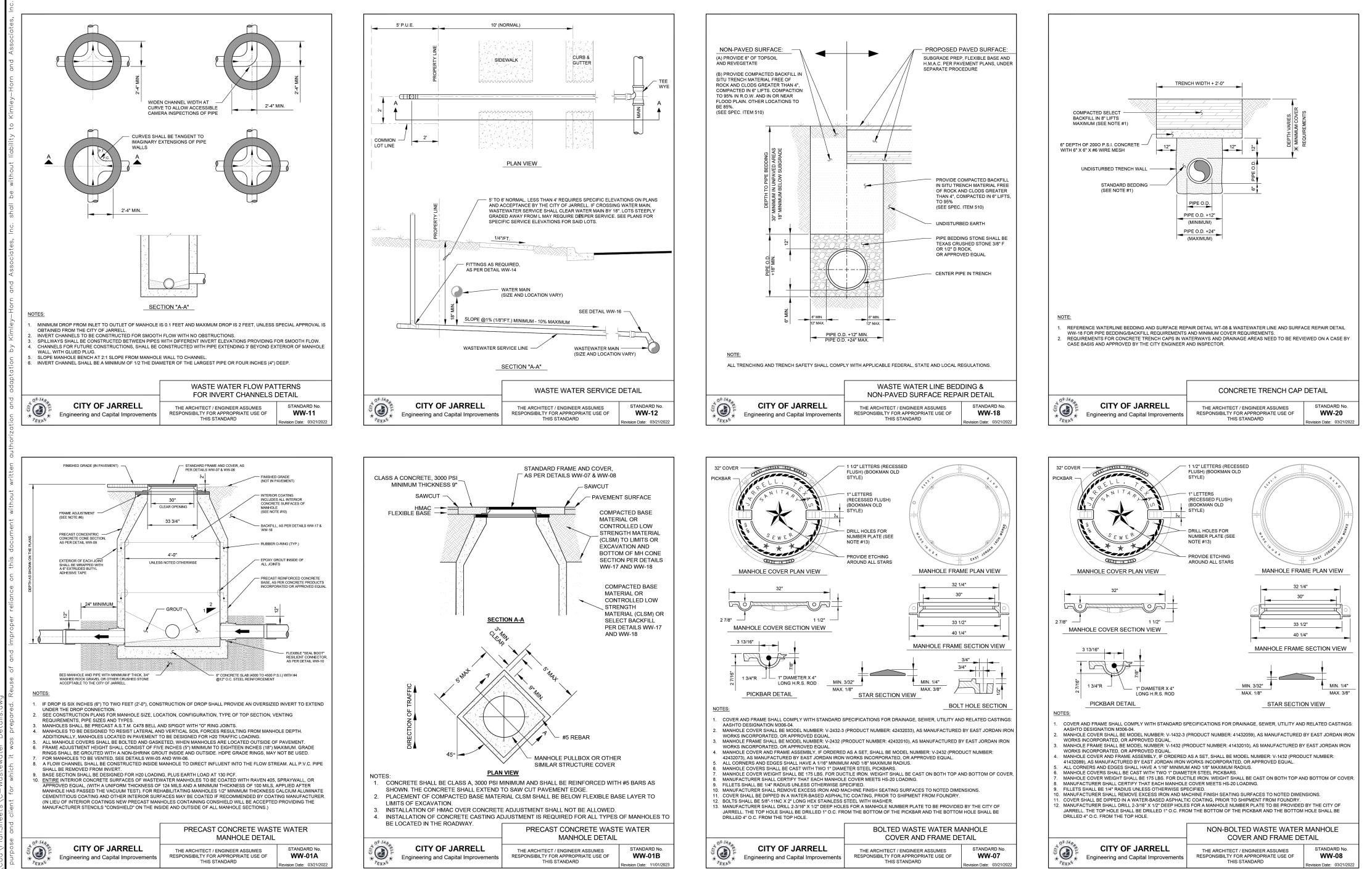




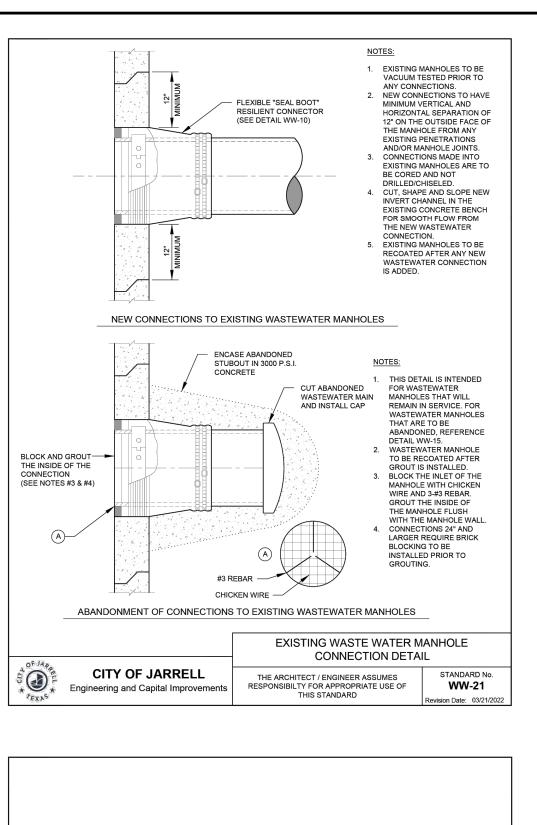


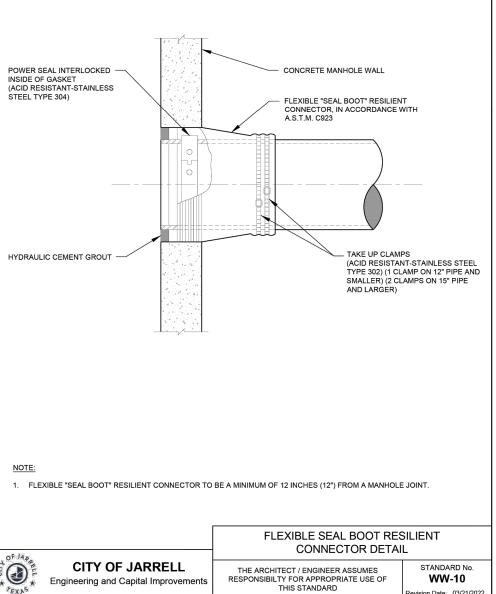
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BM 7208 - MAG NAIL SET IN CONCRETE ELEV.=822.21

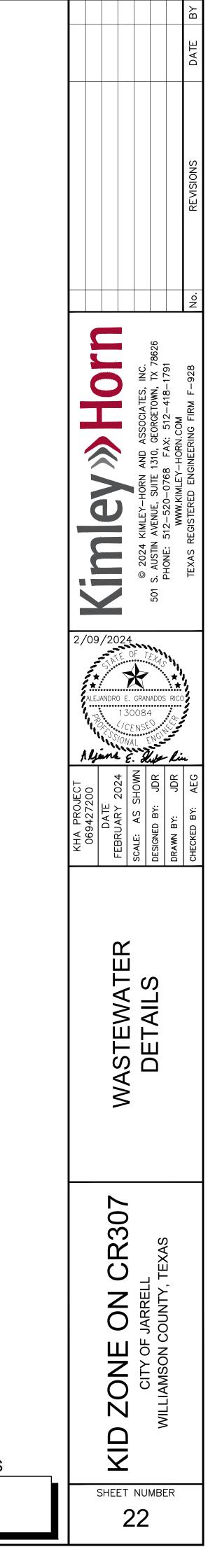








ion Date: 03/21/2022



BENCHMARKS

BM 7208 - MAG NAIL SET IN CONCRETE ELEV.=822.21



DH152/DR152

General Features

The model DH152 or DR152 grinder pump station is a complete unit that includes: two grinder pumps, check valve, polyethylene tank, controls, and alarm panel. A single DH152 or DR152 is ideal for up to four, average single-family homes and can also be used for up to 12 average single-family homes where codes allow and with consent of the factory.

- Rated for flows of 3000 gpd (11,356 lpd) 150 gallons (568 liters) of capacity
- Indoor or outdoor installation Standard outdoor heights range from 93 inches to 160 inches
- The DH152 is the "hardwired," or "wired," model where a cable connects the motor controls to the level controls through watertight penetrations.

The DR152 is the "radio frequency identification" (RFID), or "wireless," model that uses wireless technology to communicate between the level controls and the motor controls.

Operational Information

Motor 1 hp, 1,725 rpm, high torque, capacitor start, thermally protected, 120/240V, 60 Hz, 1 phase

Inlet Connections 4-inch inlet grommet standard for DWV pipe. Other inlet configurations available

from the factory.

Discharge Connections Pump discharge terminates in 1.25-inch NPT female thread. Can easily be adapted to 1.25-inch PVC pipe or any other material required by local codes.

Discharge 15 gpm at 0 psig (0.95 lps at 0 m)

11 gpm at 40 psig (0.69 lps at 28 m) 7.8 gpm at 80 psig (0.49 lps at 56 m)

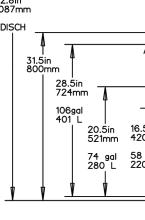
Accessories

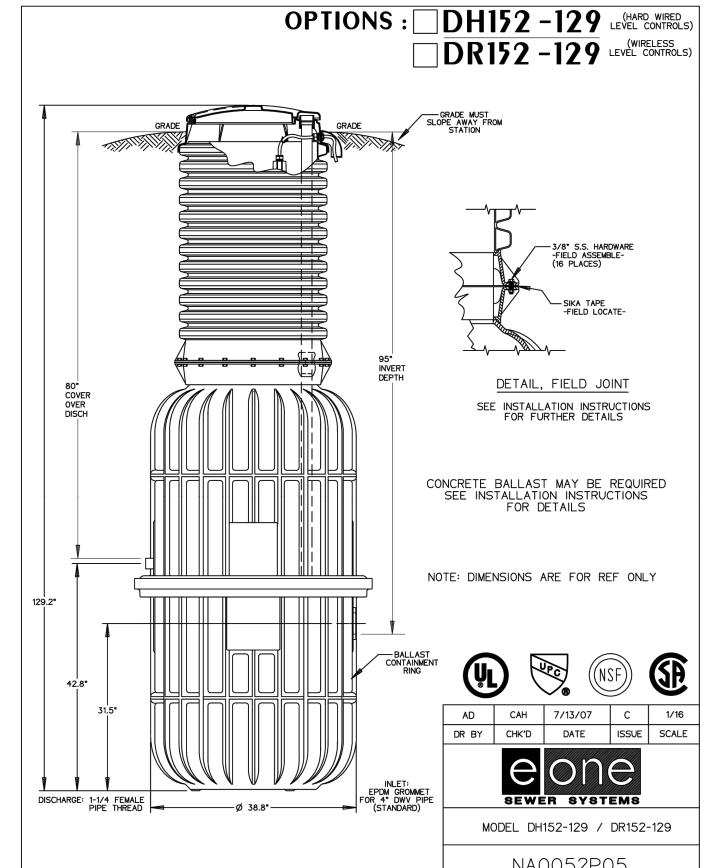
E/One requires that the Uni-Lateral, E/One's own stainless steel check valve, be installed between the grinder pump station and the street main for added protection against backflow.

Alarm panels are available with a variety of options, from basic monitoring to advanced notice of service requirements.

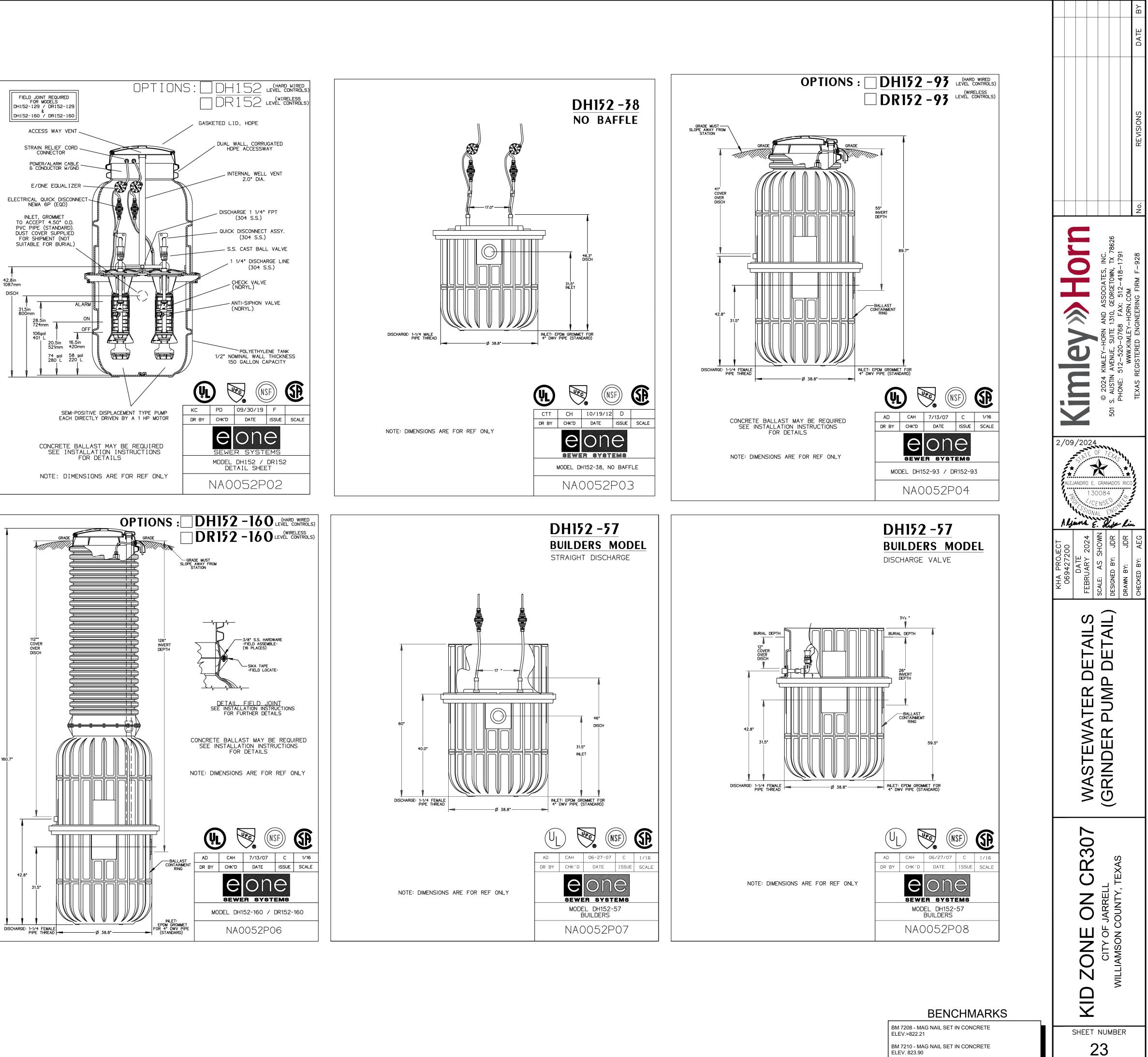
The Remote Sentry is ideal for installations where the alarm panel may be hidden from view.

INLET, GROMMET

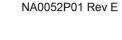




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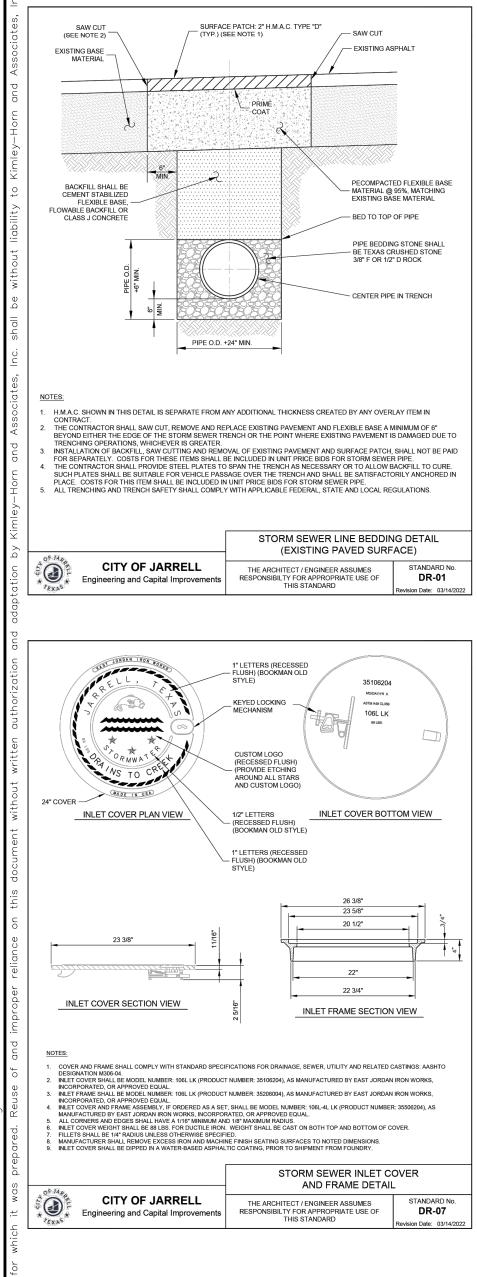


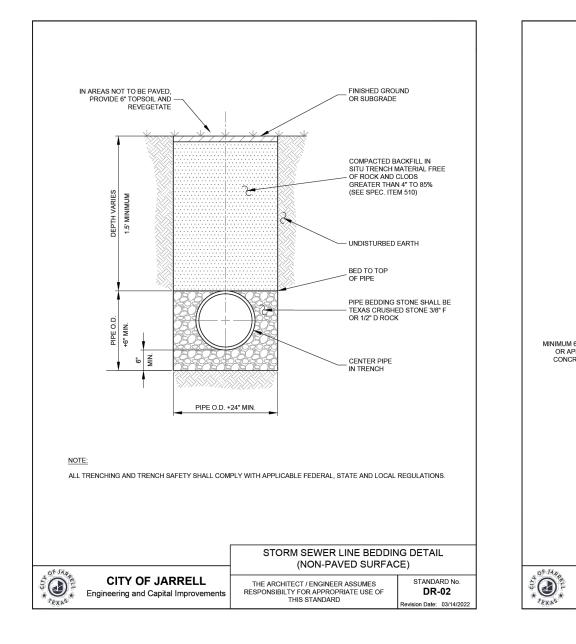
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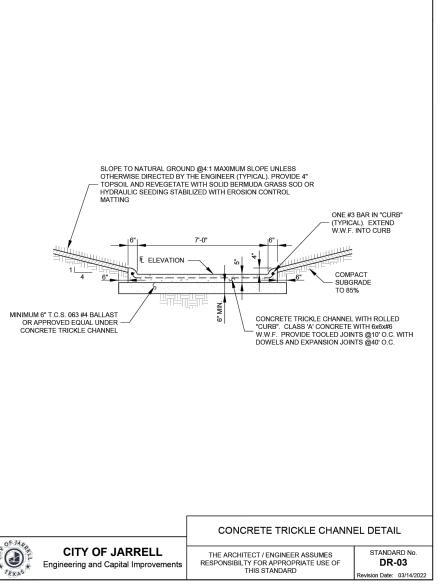
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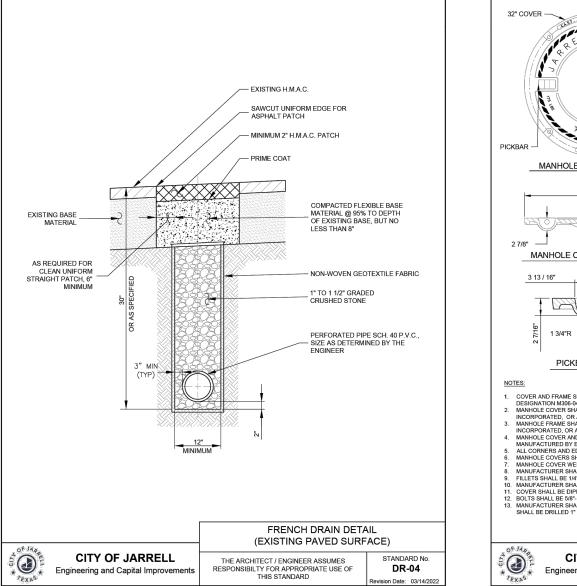
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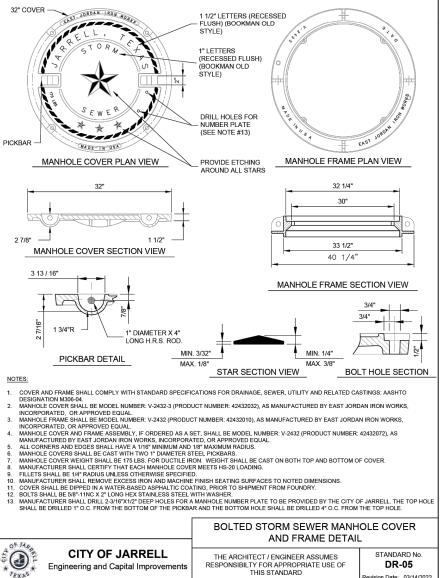


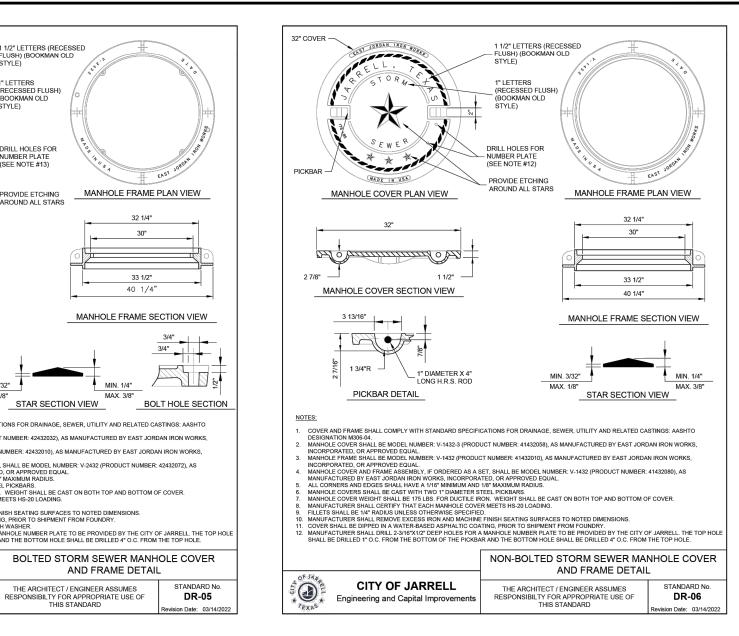


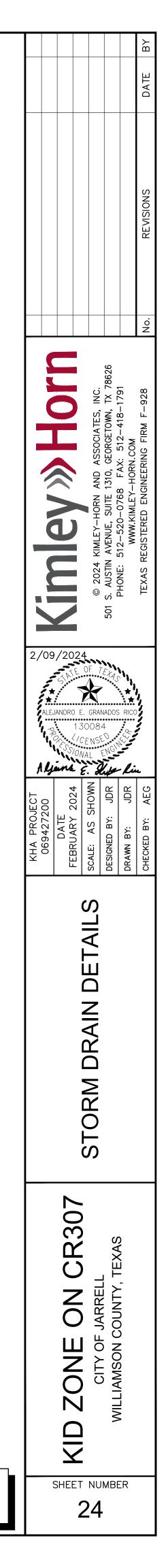










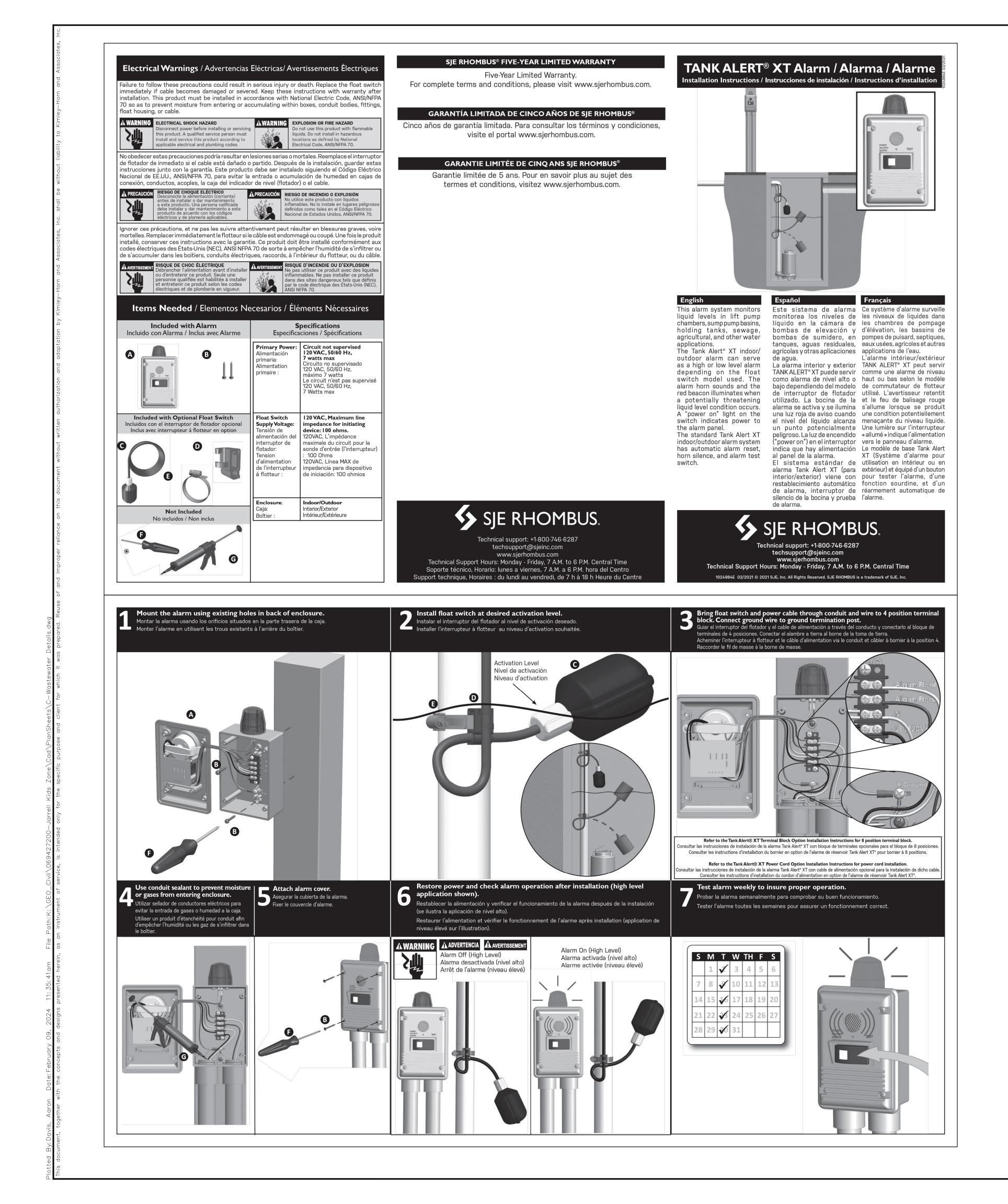


BENCH	MARKS

ELEV.=822.21 BM 7210 - MAG NAIL SET IN CONCRETE

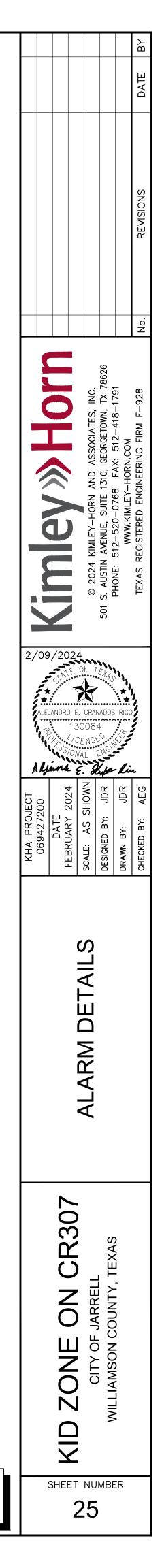
BM 7208 - MAG NAIL SET IN CONCRETE

ELEV. 823.90



		AUK AFEKT® XT AFAKU
	Ver	rsatile, Indoor or Outdoor Liquid Level Alarm System
555555	\$5\$	
	This	s alarm system monitors liquid levels in lift pump chambers, sump
	bas	ins, holding tanks, sewage, agricultural, and other water applicatio
		 Tank Alert[®] XT indoor/outdoor alarm can serve as a high or low le ending on the float switch model used.
	The	alarm horn sounds and the red LED beacon illuminates when a po
	light	eatening liquid level condition occurs. The horn can be silenced, bu t remains on until the condition is remedied. Once the condition is
		alarm will automatically reset. hower on" light on the switch indicates power to the alarm panel.
	Λp	• · · ·
		FEATURES
	:	Enclosure meets Type 3R water-tight standard Automatic alarm reset, horn silence switch, and alarm test switcl
	•	Alarm horn sounds at 85 decibels at 10 feet (3 meters)
	•	Alarm system (when installed on separate circuit) operates even circuit fails
		OPTIONS
	Whe	en ordered with the alarm, the system is available with:
	•	Alternate float switch models for high or low liquid level warning
	•	Auxiliary dry normally open contacts for easy attachment of rem devices
	•	Premounted terminal block so enclosure can also be used as a ju box for splicing pump, pump switch, and pump power; meets NE
		standard for junction boxes 6 foot (1.8 meter) power cord and liquid-tight connectors
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		SJE RHOMBU
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E E E E E	9500	1097K Rev 07/23
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BENCHMARKS

BM 7208 - MAG NAIL SET IN CONCRETE

BM 7210 - MAG NAIL SET IN CONCRETE

ELEV.=822.21

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