WATER POLLUTION ABATEMENT PLAN

KID 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

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SECTION 1: EDWARDS AQUIFER APPLICATION COVER PAGE

kimley-horn.com | 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 30 TAC 213.

Administrative Review

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

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

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

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

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

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

5. If an application is received by mail, courier service, or otherwise submitted without a review meeting, the administrative review will be conducted within 30 days. The applicant and agent will be contacted with the results of the administrative review. If the application is found to be administratively incomplete, it can be retrieved from the regional office or returned by regular mail. If returned by mail, the regional office may require arrangements for return shipping.
6. If the geologic assessment was completed before October 1, 2004 and the site contains “possibly sensitive” features, the assessment must be updated in accordance with the *Instructions to Geologists* (TCEQ-0585 Instructions).

Technical Review

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

2. A site assessment is usually conducted as part of the technical review, to evaluate the geologic assessment and observe existing site conditions. The site must be accessible to our staff. The site boundaries should be clearly marked, features identified in the geologic assessment should be flagged, roadways marked and the alignment of the Sewage Collection System and manholes should be staked at the time the application is submitted. If the site is not marked the application may be returned.

3. We evaluate the application for technical completeness and contact the applicant and agent via Notice of Deficiency (NOD) to request additional information and identify technical deficiencies. There are two deficiency response periods available to the applicant. There are 14 days to resolve deficiencies noted in the first NOD. If a second NOD is issued, there is an additional 14 days to resolve deficiencies. If the response to the second notice is not received, is incomplete or inadequate, or provides new information that is incomplete or inadequate, the application must be withdrawn or will be denied. Please note that because the technical review is underway, whether the application is withdrawn or denied **the application fee will be forfeited**.
4. The program has 90 calendar days to complete the technical review of the application. If the application is technically adequate, such that it complies with the Edwards Aquifer rules, and is protective of the Edwards Aquifer during and after construction, an approval letter will be issued. Construction or other regulated activity may not begin until an approval is issued.

Mid-Review Modifications

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

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

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

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

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

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

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

1. Regulated Entity Name: Kid 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)**	**New**		Modification			Extension		Exception	
6. Plan Type: **(Please circle/check one)**	**WPAP**	CZP	SCS	UST	AST	EXP	EXT	Technical Clarification	Optional Enhanced Measures
7. Land Use: **(Please circle/check one)**	Residential		**Non-residential**			**8. Site (acres):**		5.253	
9. Application Fee:	$5,000		**10. Permanent BMP(s):**			Batch Detention Pond			
11. SCS (Linear Ft.):	N/A		**12. AST/UST (No. Tanks):**			N/A			
13. County:	Williamson		**14. Watershed:**			Salado Creek			

Application Distribution

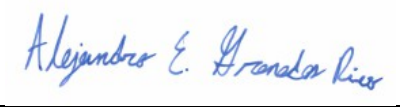
Instructions: Use the table below to determine the number of applications required. One original and one copy of the application, plus additional copies (as needed) for each affected incorporated city, county, and groundwater conservation district are required. Linear projects or large projects, which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

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

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

Austin Region			
County:	**Hays**	**Travis**	**Williamson**
Original (1 req.)	___	___	_X_
Region (1 req.)	___	___	_X_
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

San Antonio Region					
County:	**Bexar**	**Comal**	**Kinney**	**Medina**	**Uvalde**
Original (1 req.)	___	___	___	___	___
Region (1 req.)	___	___	___	___	___
County(ies)	___	___	___	___	___
Groundwater Conservation District(s)	___ Edwards Aquifer Authority ___Trinity-Glen Rose	___Edwards Aquifer Authority	___Kinney	___EAA ___Medina	___EAA ___Uvalde
City(ies) Jurisdiction	___Castle Hills ___Fair Oaks Ranch ___Helotes ___Hill Country Village ___Hollywood Park ___San Antonio (SAWS) ___Shavano Park	___Bulverde ___Fair Oaks Ranch ___Garden Ridge ___New Braunfels ___Schertz	NA	___San Antonio ETJ (SAWS)	NA

I certify that to the best of my knowledge, that the application is complete and accurate. This application is hereby submitted to TCEQ for administrative review and technical review. Alejandro E. Granados Rico, P.E.
Print Name of Customer/Authorized Agent
 1/22/2024
Signature of Customer/Authorized Agent Date

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

SECTION 2:
GENERAL INFORMATION

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: February 19, 2024

Signature of Customer/Agent:

_____

Project Information

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

   ☒ Recharge Zone
   ☐ Transition Zone

6. Plan Type:

   ☒ WPAP
   ☐ SCS
   ☐ Modification
   ☐ AST
   ☐ UST
   ☐ Exception Request

7. Customer (Applicant):

   Contact Person: Whitney Hicks
   Entity: DC Brown, L.P.
   Mailing Address: PO BOX 292
   City, State: Salado, TX Zip: 76571
   Telephone: 254.718.7791 Fax: N/A
   Email Address: whitneyhicks777@yahoo.com

8. Agent/Representative (If any):

   Contact Person: Alejandro E. Granados Rico, P.E.
   Entity: Kimley-Horn
   Mailing Address: 501 S. Austin Avenue, Suite 1310
   City, State: Georgetown, Texas Zip: 78626
   Telephone: 512-418-4522 Fax: N/A
   Email Address: alex.granados@kimley-horn.com

9. Project Location:

   ☒ The project site is located inside the city limits of Jarrell.
   ☐ 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: 2/22/2024.

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

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

15. Existing project site conditions are noted below:

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

Prohibited Activities

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

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

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

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

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

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

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

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

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

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

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

Administrative Information

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

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

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

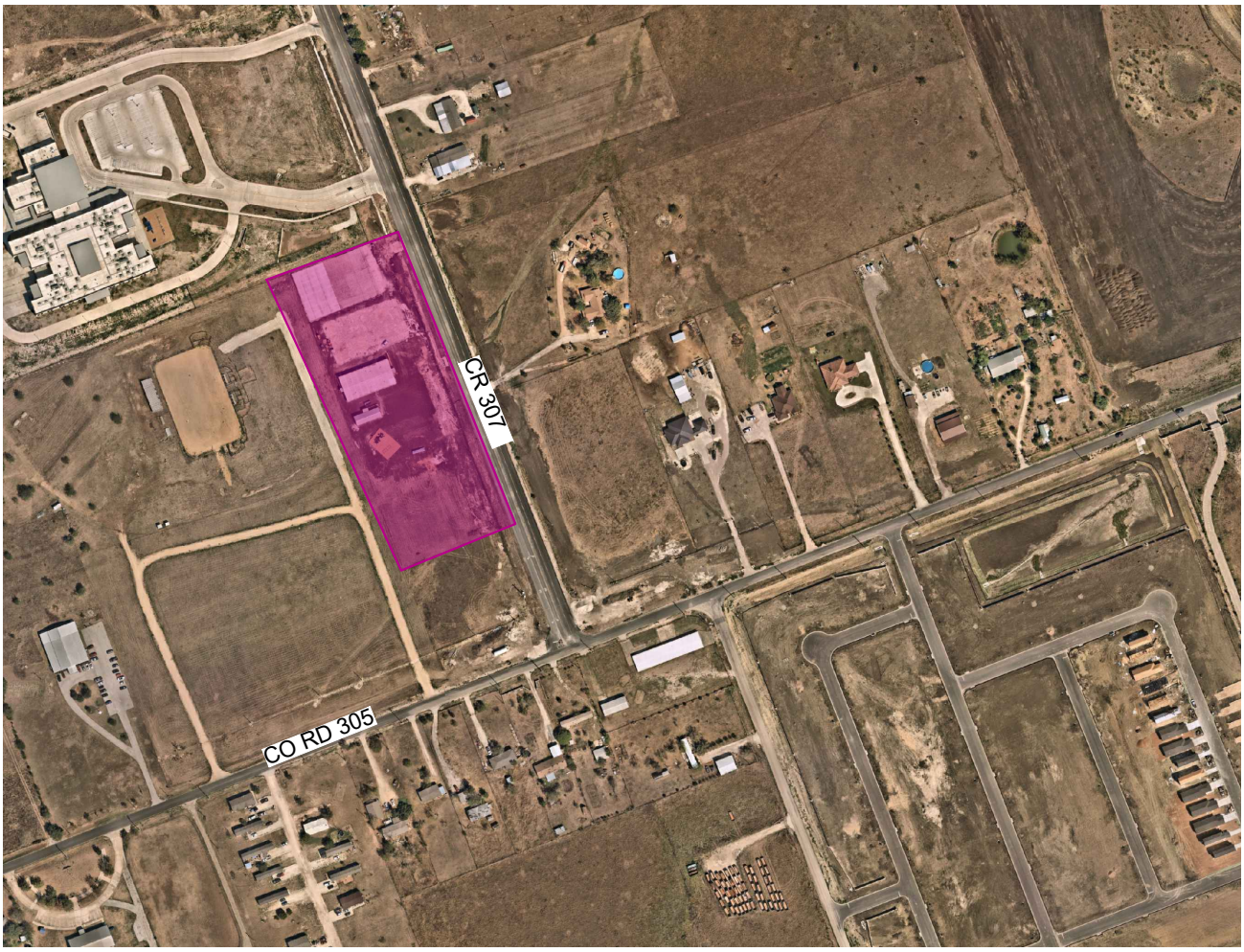
☐ TCEQ cashier
☒ Austin Regional Office (for projects in Hays, Travis, and Williamson Counties)
☐ San Antonio Regional Office (for projects in Bexar, Comal, Kinney, Medina, and Uvalde Counties)

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

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

Kimley»Horn

Road Map



N
W E
S

SCALE: N.T.S.

DIRECTIONS FROM TCEQ HEADQUARTERS TO PROJECT SITE

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

SHEET

EX A

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

KIDS ZONE
JARRELL, TEXAS

Kimley»Horn
501 S. AUSTIN AVENUE, SUITE 1310, GEORGETOWN, TX 78626
PHONE: 512-418-1771
WWW.KIMLEY-HORN.COM

TBPE Firm No. 928

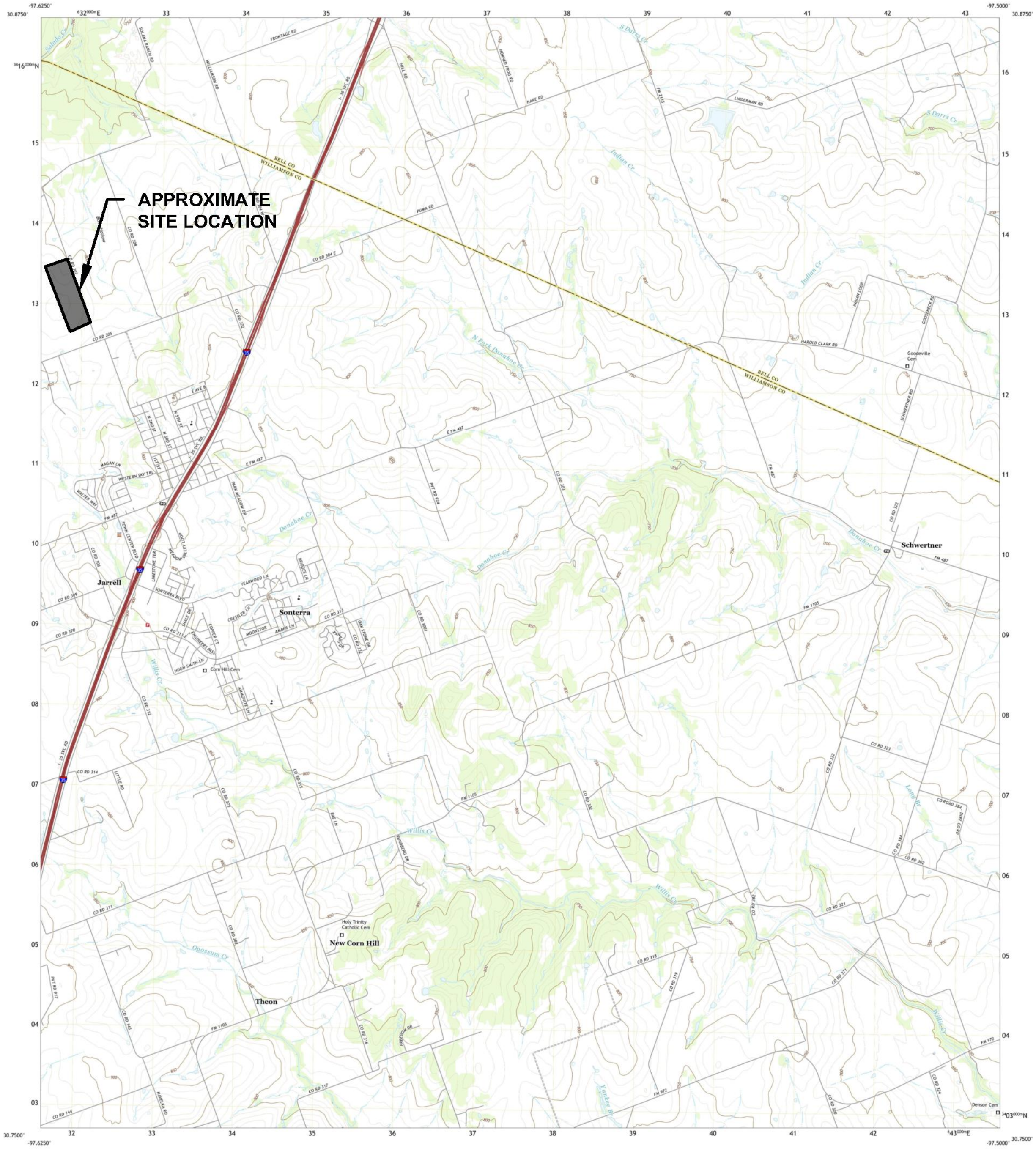
Kimley»Horn

USGS/Edwards Recharge Zone Map

U.S. DEPARTMENT OF THE INTERIOR
U.S. GEOLOGICAL SURVEY

The National Map
US Topo

JARRELL QUADRANGLE
TEXAS
7.5-MINUTE SERIES



Produced by the United States Geological Survey
North American Datum of 1983 (NAD83)
World Geodetic System of 1984 (WGS84). Projection and 1 000-meter grid:Universal Transverse Mercator, Zone 14R
This map is not a legal document. Boundaries may be generalized for this map scale. Private lands within government reservations may not be shown. Obtain permission before entering private lands.

Imagery....NAIP, August 2016 - November 2016
Roads.... U.S. Census Bureau, 2015 - 2019
Names....GNIS, 1979 - 2022
Hydrography....National Hydrography Dataset, 2002 - 2020
Contours....National Elevation Dataset, 2019
Boundaries....Multiple sources; see metadata file 2019 - 2021

Wetlands....FWS National Wetlands Inventory Not Available

MN
GN
3°37′
64 MILS
0°44′
13 MILS
UTM GRID AND 2019 MAGNETIC NORTH DECLINATION AT CENTER OF SHEET

U.S. National Grid
100,000 - m Square ID
PV
Grid Zone Designation
14R

SCALE 1:24 000
KILOMETERS
METERS
MILES
FEET

CONTOUR INTERVAL 10 FEET
NORTH AMERICAN VERTICAL DATUM OF 1988

This map was produced to conform with the National Geospatial Program US Topo Product Standard.

TEXAS
QUADRANGLE LOCATION

1 Youngsport
2 Salado
3 Holland
4 Cobbs Cavern
5 Bartlett
6 Georgetown
7 Weir
8 Granger
ADJOINING QUADRANGLES

ROAD CLASSIFICATION
Expressway
Secondary Hwy
Ramp
Local Connector
Local Road
4WD
Interstate Route
US Route
State Route

JARRELL, TX
2022

NSN. 7643016396701
NGA REF NO. USGSX24K22406

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 Leander. The subject property is proposed for the development of a Kid Zone School, which encompasses ±5 acres and will comprise of non-residential commercial.

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 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 (C2). 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 pre-developed 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

aci
consulting
austin • denver

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

aci project #: 22-24-016

2/16/2024

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

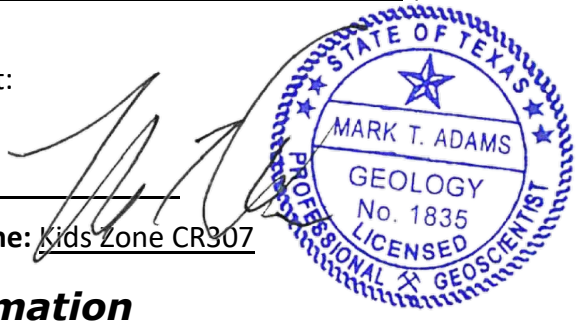
To the best of my knowledge, the responses to this form accurately reflect all information requested concerning the proposed regulated activities and methods to protect the Edwards Aquifer. My signature certifies that I am qualified as a geologist as defined by 30 TAC Chapter 213.

Print Name of Geologist: Mark T. Adams Telephone: (512) 347-9000

Date: 2/16/2024 Fax: (512) 306-0974

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

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:
   - ☒ WPAP
   - ☒ SCS
   - ☐ AST
   - ☐ UST
3. Location of Project:
   - ☒ Recharge Zone
   - ☐ Transition Zone
   - ☐ Contributing Zone within the Transition Zone

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

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

Table 1 - Soil Units, Infiltration Characteristics and Thickness

Soil Name	Group*	Thickness(feet)
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. ☒ **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" = 40'
   Site Geologic Map Scale: 1" = 40'
   Site Soils Map Scale (if more than 1 soil type): 1" = 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.

    ☒ 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.

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LIST OF ATTACHMENTS

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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.

Soils

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.

Geologic Stratigraphy

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.

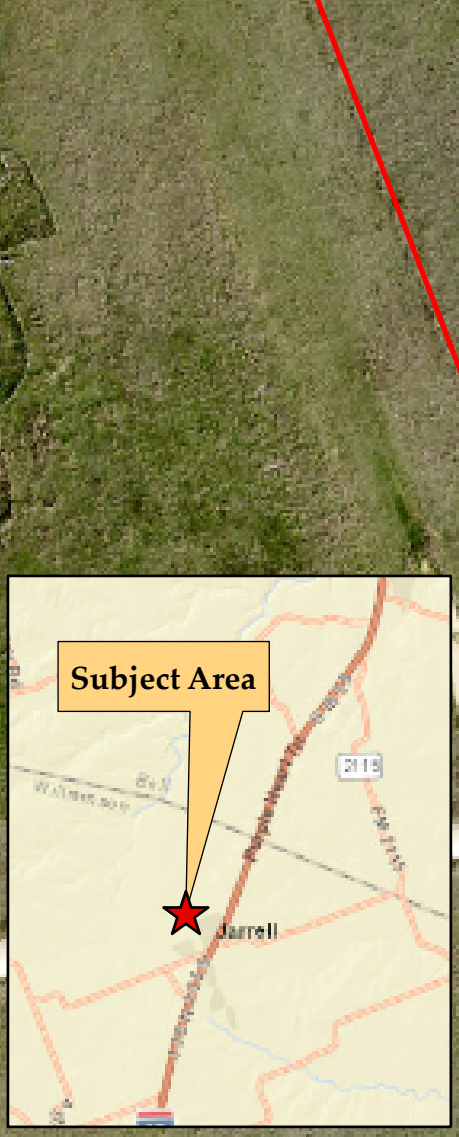
(TCEQ) Texas Commission on Environmental Quality. 2005. "Edwards Aquifer Protection Program, Chapter 213 Rules - Recharge Zone, Transition Zone, Contributing Zone, and Contributing Zone within the Transition Zone." Map. Digital data. September 1, 2005. Austin, Texas.

(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



This map is intended for planning purposes only. All map data should be considered preliminary. All boundaries and designations are subject to confirmation.

N

100 50 0 100 Feet

1:1,200 1 inch = 100 feet

Subject Area

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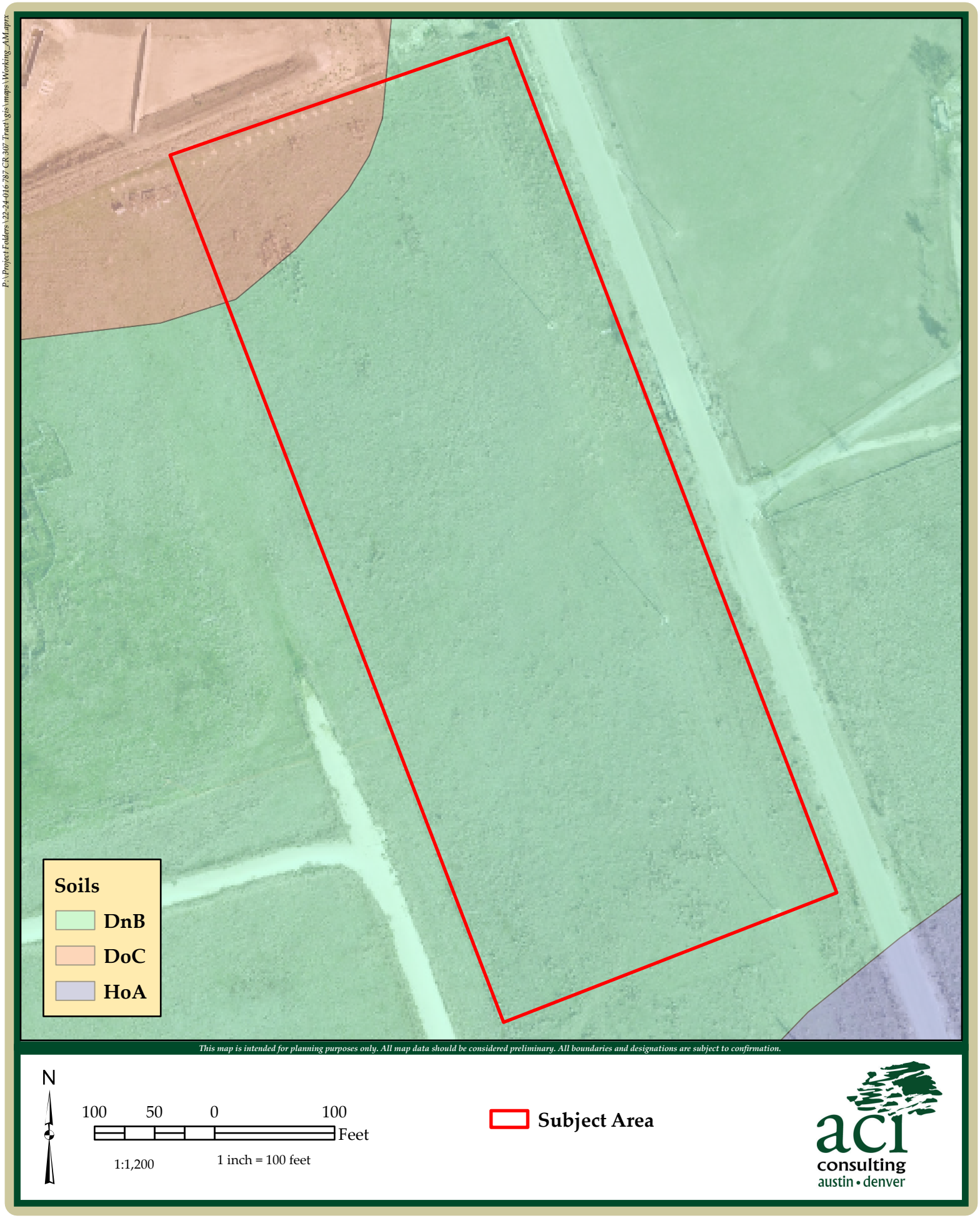
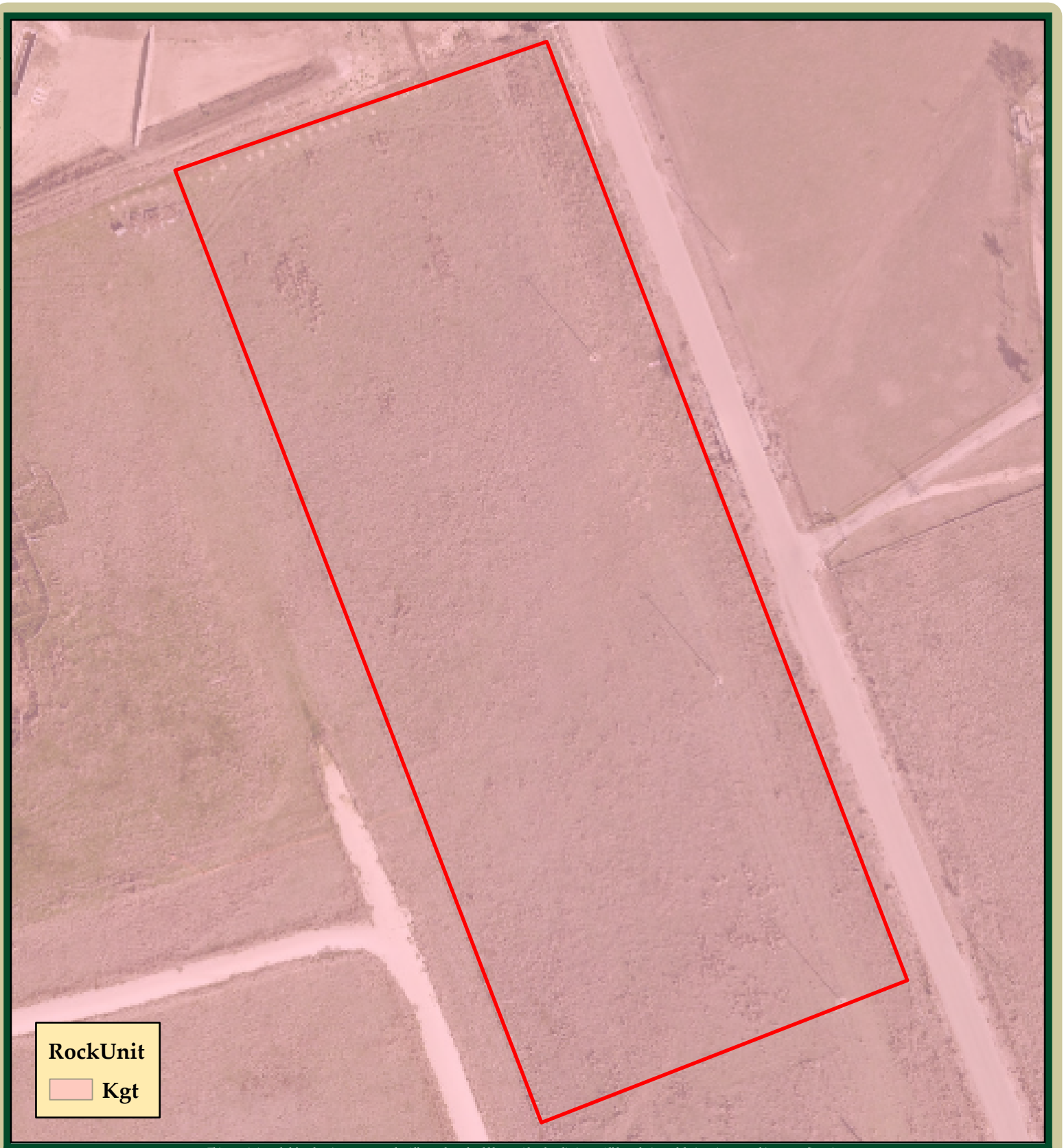
Kids Zone CR307 Geologic Assessment **aci Project No.: 22-24-016**

Figure 1: Site Location Map **February 2024**



Kids Zone CR307 Geologic Assessment **aci Project No.: 22-24-016**

Figure 2: Site Soils Map **February 2024**



This map is intended for planning purposes only. All map data should be considered preliminary. All boundaries and designations are subject to confirmation.

N

100 50 0 100 Feet

1:1,200

1 inch = 100 feet

Subject Area

aci consulting
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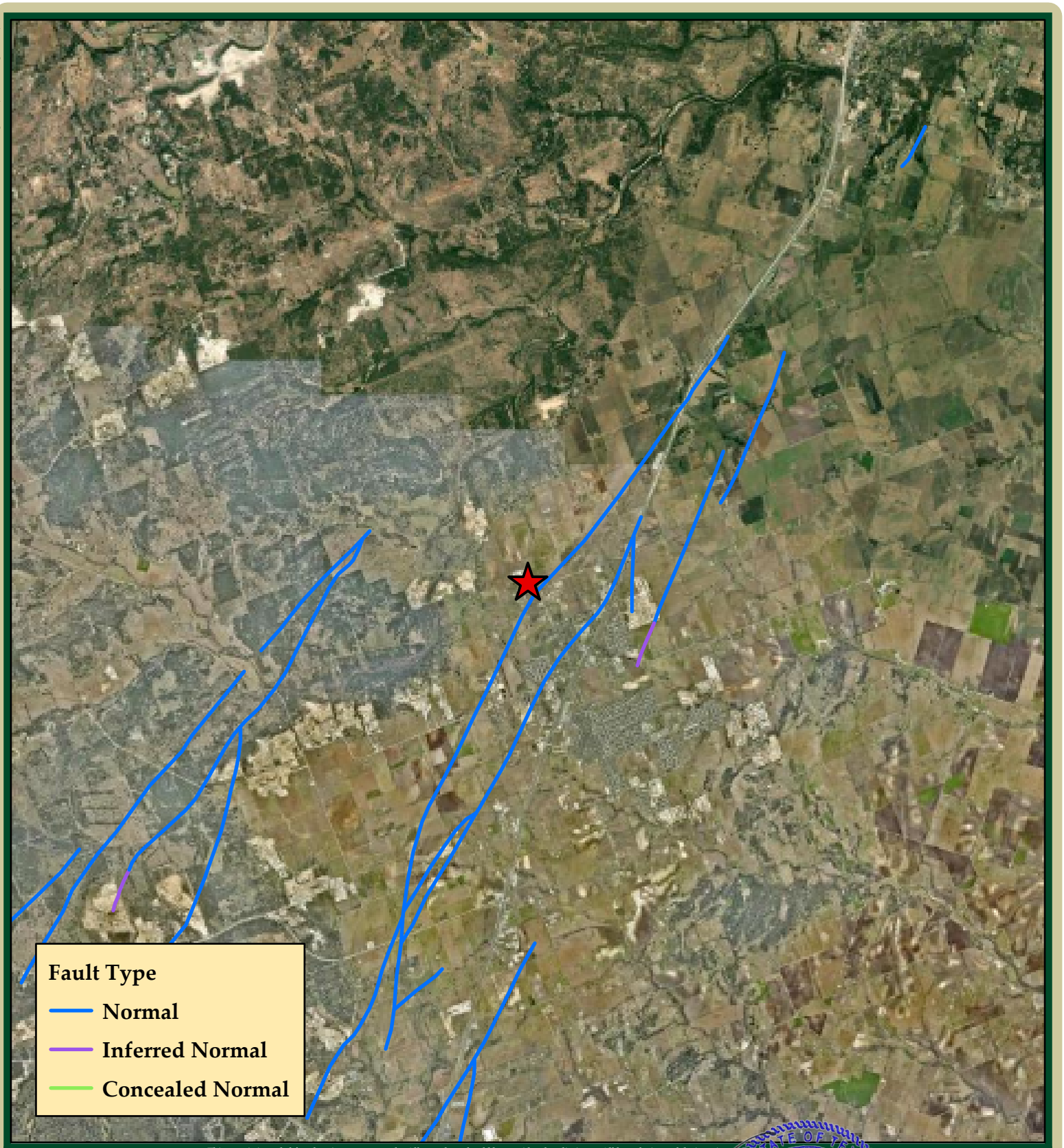
Kids Zone CR307 Geologic Assessment | **aci Project No.: 22-24-016**

Figure 3: Site Geology Map | **February 2024**



Kids Zone CR307 Geologic Assessment **aci Project No.: 22-24-016**

Figure 4: Regional Trend Map **February 2024**

ATTACHMENT B

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

GEOLOGIC ASSESSMENT TABLE

PROJECT NAME: Kids Zone CR307

LOCATION			FEATURE CHARACTERISTICS												EVALUATION			PHYSICAL SETTING		
1A	1B *	1C*	2A	2B	3	4			5	5A	6	7	8A	8B	9	10		11		12
FEATURE ID	LATITUDE	LONGITUDE	FEATURE TYPE	POINTS	FORMATION	DIMENSIONS (FEET)			TREND (DEGREES)	DOM	DENSITY (NO/FT)	APERTURE (FEET)	INFILL	RELATIVE INFILTRATION RATE	TOTAL	SENSITIVITY		CATCHMENT AREA (ACRES)		TOPOGRAPHY
						X	Y	Z		10						<40	>40	<1.6	>1.6	
MB-01	30.84113	-97.619138	MB	30	Kgt	-	-	-	-	0	-	-	-	10	40	-	X	-	X	Drainage
MB-02	30.840483	-97.619299	MB	30	Kgt	-	-	-	135	0	-	-	-	10	40	-	X	-	X	Hillside
MB-03	30.840541	-97.618832	MB	30	Kgt	-	-	-	-	0	-	-	-	10	40	-	X	-	X	Drainage
MB-04	30.840365	-97.618991	MB	30	Kgt	-	-	-	-	0	-	-	-	10	40	-	X	-	X	Hillside

* DATUM: NAD 1983 State Plane 4203

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

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

12 TOPOGRAPHY

Cliff, Hilltop, Hillside, Drainage, Floodplain, Streambed

I have read, I understood, and I have followed the Texas Commission on Environmental Quality's Instructions to Geologists. The information presented here complies with that document and is a true representation of the conditions observed in the field. My signature certifies that I am qualified as a geologist as defined by 30 TAC Chapter 213.

Date 2/16/2024

Sheet __1___ of __1____

STATE OF TEXAS
MARK T. ADAMS
GEOLOGY
No. 1835
LICENSED
PROFESSIONAL GEOSCIENTIST

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

P:\Project Folders\22-24-016 787 CR 307 Tract\gis\maps\Working_AM.aprx

MB-01

MB-02

MB-03

MB-04

RockUnit
Kgt
Features
Manmade Feature in Bedrock
Linear Utilities

No springs, streams, or the 100-year floodplain were mapped within the subject area.
Then entire subject area is within the Edwards Aquifer Recharge Zone.

N

100 50 0 100 Feet

1:480

1 inch = 40 feet

Subject Area

STATE OF TEXAS
MARK T. ADAMS
GEOLOGY
No. 1835
LICENSED
PROFESSIONAL GEOSCIENTIST

2/16/2024

aci consulting
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Kids Zone CR307 Geologic Assessment | **aci Project No.: 22-24-016**

Figure 5: Geologic Feature Map | **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.

Recommendation: This feature needs to be brought to the attention of the 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.

Recommendation: This feature needs to be brought to the attention of the 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.

Recommendation: This feature needs to be brought to the attention of the 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.

Recommendation: This feature needs to be brought to the attention of the engineer.

Photo of MB-04

ATTACHMENT C

Historic Aerial Photographs

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2023

2017

2010

2005

1995

1985

SECTION 4: WATER POLLUTION ABATEMENT PLAN

Water Pollution Abatement Plan Application

Texas Commission on Environmental Quality

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

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

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

Signature

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

Print Name of Customer/Agent: Alejandro E. Granados Rico, P.E.

Date: February 19, 2024

Signature of Customer/Agent:

Regulated Entity Name: Kid Zone CR307

Regulated Entity Information

1. The type of project is:

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

2. Total site acreage (size of property): 5.253

3. Estimated projected population: 130

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

Table 1 - Impervious Cover Table

Impervious Cover of Proposed Project	Sq. Ft.	Sq. Ft./Acre	Acres
Structures/Rooftops	23,958	÷ 43,560 =	0.55
Other paved surfaces	67,082	÷ 43,560 =	1.54
Total Impervious Cover	91,040	÷ 43,560 =	2.09

Total Impervious Cover 2.09 **÷ Total Acreage** 5.253 **X 100 =** 40 **% Impervious Cover**

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

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

For Road Projects Only

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

7. Type of project:

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

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

☐ Concrete
☐ Asphaltic concrete pavement
☐ Other: _____

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

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

10. Length of pavement area: _____ feet.

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

11. ☐ A rest stop will be included in this project.

☐ A rest stop will not be included in this project.

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

Stormwater to be generated by the Proposed Project

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

Wastewater to be generated by the Proposed Project

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

100 % Domestic	2,850 Gallons/day
_____% Industrial	_____ Gallons/day
_____% Commingled	_____ Gallons/day
TOTAL gallons/day 2,850	

15. Wastewater will be disposed of by:

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

☐ **Attachment C - Suitability Letter from Authorized Agent**. An on-site sewage facility will be used to treat and dispose of the wastewater from this site. The appropriate licensing authority's (authorized agent) written approval is attached. It states that the land is suitable for the use of private sewage facilities and will meet or exceed the requirements for on-site sewage facilities as specified under 30 TAC Chapter 285 relating to On-site Sewage Facilities.

☐ Each lot in this project/development is at least one (1) acre (43,560 square feet) in size. The system will be designed by a licensed professional engineer or registered sanitarian and installed by a licensed installer in compliance with 30 TAC Chapter 285.

☒ Sewage Collection System (Sewer Lines):

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

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

☐ The SCS was previously submitted on_____.

☒ The SCS was submitted with this application.

☐ The SCS will be submitted at a later date. The owner is aware that the SCS may not be installed prior to Executive Director approval.

☒ The sewage collection system will convey the wastewater to the Donahoe Creek Wastewater Treatment Plant. The treatment facility is:

☒ Existing.
☐ Proposed.

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

Site Plan Requirements

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

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

Site Plan Scale: 1" = 40'.

18. 100-year floodplain boundaries:

☐ Some part(s) of the project site is located within the 100-year floodplain. The floodplain is shown and labeled.
☒ No part of the project site is located within the 100-year floodplain.
The 100-year floodplain boundaries are based on the following specific (including date of material) sources(s): FEMA Map No. 48491C0150F, Dated December 20,2019

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

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

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

☐ There is zero (0) well present on the project site and the locations are shown and labeled. (Check all of the following that apply)

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

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

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

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

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

    ☒ N/A
27. ☐ Locations where stormwater discharges to surface water or sensitive features are to occur.

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

Administrative Information

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

Factors Affecting Water Quality

Materials that are anticipated to be used on site that could be a potential source of contamination include the following:

During Construction:

1. Concrete and Masonry Materials
2. Wood, plastic, and metal Materials
3. Tar and hydrocarbons from paving operations
4. Oil, Grease, fuel, and hydraulic fluid from construction equipment and vehicle drippings
5. Fertilizers, Herbicides, and Pesticides
6. Cleaning solutions and detergents
7. Miscellaneous construction trash and debris
8. Soil erosion and sedimentation due to construction activity

Ultimate Use:

1. Pollutants generated from vehicles utilizing the site
2. Fertilizers, Herbicides, and pesticides used to maintain landscaping
3. Miscellaneous trash and debris generated from the public

(This is not intended to be an all-inclusive list)

All practical management practices will be used to reduce the risk of spills and other exposure of any contaminant to surface or groundwater.

Volume and Character of Storm Water

The proposed Kid Zone CR307 project includes the construction of 3 buildings and a playground area and associated civil improvements including, water, wastewater, roadways. Two (2) driveways are proposed along CR175 to provide ingress and egress from the site. Impervious cover for the site with 2.09 total acres (40)% of impervious cover proposed.

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.

The site is not located in the Federal Emergency Management Agency's 100-year floodplain according to FIRM 48491C0150F, Williamson County, Texas and incorporated areas, dated December 20, 2019.
In proposed conditions, all onsite flow will be captured and conveyed through a proposed storm system. W. 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.

The subject site has no existing detention or water quality ponds. One Batch Detention Pond is proposed on site. The Detention and Water Quality Structures are sized per current City of Jarrell and TCEQ design standards. Drainage area maps and calculations are included in the plan set for reference

Regarding stormwater volume (quantity) of the stormwater runoff which is expected to occur from the proposed project, see table below depicting existing vs proposed runoff volume. This increase of runoff is being detained in proposed detention ponds to at or below existing condition runoff rates for the 2, 10, 25 and 100 year events.

	Storm Event	**Volume of Runoff (CF)**
EXISTING	2 10 25 100	27.88 54.25 72.7 102.95
PROPOSED	2 10 25 100	21.28 37.52 48.41 65.81

Suitability Letter From Authorized Agent

An on-site sewage facility will not be used to treat and dispose of the wastewater.

Attachment D – Exception to the Required Geologic Assessment

No sensitive geologic or manmade features were identified in the geologic assessment. Therefore, an exception to the Geologic Assessment Requirements will not be required.

SECTION 5: TEMPORARY STORMWATER SECTION

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:

Regulated Entity Name: Kid 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.

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

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

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

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

Sequence of Construction

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

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

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

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

Temporary Best Management Practices (TBMPs)

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

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

☒ A description of how BMPs and measures will prevent pollution of surface water, groundwater or stormwater that originates upgradient from the site and flows across the site.

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

☒ A description of how BMPs and measures will prevent pollutants from entering surface streams, sensitive features, or the aquifer.

☒ A description of how, to the maximum extent practicable, BMPs and measures will maintain flow to naturally-occurring sensitive features identified in either the geologic assessment, TCEQ inspections, or during excavation, blasting, or construction.

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

☐ **Attachment E - Request to Temporarily Seal a Feature**. A request to temporarily seal a feature is attached. The request includes justification as to why no reasonable and practicable alternative exists for each feature.

☒ There will be no temporary sealing of naturally-occurring sensitive features on the site.

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

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

☐ For areas that will have more than 10 acres within a common drainage area disturbed at one time, a sediment basin will be provided.

☐ For areas that will have more than 10 acres within a common drainage area disturbed at one time, a smaller sediment basin and/or sediment trap(s) will be used.

☐ For areas that will have more than 10 acres within a common drainage area disturbed at one time, a sediment basin or other equivalent controls are not attainable, but other TBMPs and measures will be used in combination to protect down slope and side slope boundaries of the construction area.

☒ There are no areas greater than 10 acres within a common drainage area that will be disturbed at one time. A smaller sediment basin and/or sediment trap(s) will be used in combination with other erosion and sediment controls within each disturbed drainage area.

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

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

☒ N/A

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

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

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

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

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

Soil Stabilization Practices

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

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

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

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

Administrative Information

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

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

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

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 1.4.16.

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 (5.253 Acres)
3. Initiate Grubbing and Topsoil Stripping of Site (5.253 Acres)
4. Rough Subgrade Preparation (earthwork, grading, street and drainage excavation and embankment) (5.253 Acres)
5. Wet and Dry Utility Construction (.1 Acres)
6. Final Subgrade Preparation (___ Acres)
7. Installation of Base Materials (___ Acres)
8. Concrete (foundations, curbs, flatwork) (1.54 Acres)
9. Building Construction (0.75 Acres)
10. Paving Activities (1.56 Acres)
11. Topsoil, Irrigation and Landscaping (5.253 Acres)
12. Site cleanup and Removal of Temporary BMPs (5.253 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 down-gradient 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-of-way.
(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

There are no areas greater than 10 acres within a common drainage area that will be disturbed at one time. An existing and proposed drainage area map is provided at the end of this report in Section 8 to support the aforementioned requirement.

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, 24-hour 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 ponds will serve as a storage for on-site and off-site drainage. The basins will be designed to contain the 31,932 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 ft^3. The proposed detention ponds will contain a volume of 39,592 ft^3, 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 ft^3.

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 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 non-compliance 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.

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 off-site 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.

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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.*

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Amendment Log

No.	Description of the Amendment	Date of Amendment	Amendment Prepared by [Name(s) and Title]

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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.

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Stormwater Control Installation and Removal Log

Stormwater Control	Location On-Site	Installation Date	Removal Date

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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

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.

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Inspection Frequency Log

Date	Frequency Schedule and Reason for Change

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Rain Gauge Log

Date	Location of Rain Gauge	Gauge Reading

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General Information					
Name of Project		**Tracking No.**		**Inspection Date**	
Inspector Name, Title & Contact Information					
Present Phase of Construction					
Inspection Location (if multiple inspections are required, specify location where this inspection is being conducted)					

Inspection Frequency

Standard Frequency: ☐ Weekly ☐ Every 14 days and within 24 hours of a 0.25" rain

Increased Frequency: ☐ Every 7 days and within 24 hours of a 0.25" rain

Reduced Frequency:

- ☐ Once per month (for stabilized areas)
- ☐ Once per month and within 24 hours of a 0.25" rain (for arid, semi-arid, or drought-stricken areas during seasonally dry periods or during drought)
- ☐ Once per month (for frozen conditions where earth-disturbing activities are being conducted)

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)**:**

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(s) where conditions were found:

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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	
Was a stormwater discharge or other discharge occurring from any part of your site at the time of the inspection? ☐ Yes ☐ No **If "yes", provide the following information for each point of discharge:**	
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? ☐ Yes ☐ No 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? ☐ Yes ☐ No 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? ☐ Yes ☐ No 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:

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:** _____ **Date:** **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:** _____

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Section A – Initial Report (Complete this section within 24 hours of discovering the condition that triggered corrective action)					
Name of Project		Tracking No.		Today's Date	
Date Problem First Discovered			Time Problem First 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 no later than 7 calendar days 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.

Section B.2 – Stormwater Control Modifications to be Implemented to Correct the Problem

List of Stormwater Control Modification(s) Needed to Correct Problem (Add an additional sheet if necessary)	Completion Date	SWPPP Update Necessary?	Notes
1.		☐Yes ☐No Date:	
2.		☐Yes ☐No Date:	
3.		☐Yes ☐No Date:	

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Section A – Initial Report (Complete this section within 24 hours of discovering the condition that triggered corrective action)					
Name of Project		Tracking No.		Today's Date	
Date Problem First Discovered			Time Problem First 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 no later than 7 calendar days 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.

Section B.2 – Stormwater Control Modifications to be Implemented to Correct the Problem			
List of Stormwater Control Modification(s) Needed to Correct Problem (Add an additional sheet if necessary)	Completion Date	SWPPP Update Necessary?	Notes
1.		☐Yes ☐No Date:	
2.		☐Yes ☐No Date:	
3.		☐Yes ☐No Date:	

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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:** _____ **Date:** **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:** _____

SECTION 6: PERMANENT STORMWATER

Permanent Stormwater Section

Texas Commission on Environmental Quality

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

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

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

Signature

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

Print Name of Customer/Agent: Alejandro E. Granados Rico, P.E.

Date: February 19, 2024

Signature of Customer/Agent

Regulated Entity Name: Kid Zone CR307

Permanent Best Management Practices (BMPs)

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

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

   ☐ N/A

2. ☒ These practices and measures have been designed, and will be constructed, operated, and maintained to insure that 85% of the incremental increase in the annual mass loading of total suspended solids (TSS) from the site caused by the regulated activity is

removed. These quantities have been calculated in accordance with technical guidance prepared or accepted by the executive director.

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

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

☐ N/A

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

   ☐ N/A

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

   ☐ The site will be used for low density single-family residential development and has 20% or less impervious cover.

   ☐ The site will be used for low density single-family residential development but has more than 20% impervious cover.

   ☒ The site will not be used for low density single-family residential development.

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

   ☐ **Attachment A - 20% or Less Impervious Cover Waiver**. The site will be used for multi-family residential developments, schools, or small business sites and has 20% or less impervious cover. A request to waive the requirements for other permanent BMPs and measures is attached.

   ☒ The site will be used for multi-family residential developments, schools, or small business sites but has more than 20% impervious cover.

   ☐ The site will not be used for multi-family residential developments, schools, or small business sites.

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

   ☐ A description of the BMPs and measures that will be used to prevent pollution of surface water, groundwater, or stormwater that originates upgradient from the site and flows across the site is attached.
   ☐ No surface water, groundwater or stormwater originates upgradient from the site and flows across the site, and an explanation is attached.
   ☒ Permanent BMPs or measures are not required to prevent pollution of surface water, groundwater, or stormwater that originates upgradient from the site and flows across the site, and an explanation is attached.

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

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

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

   ☒ N/A

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

   ☒ The permanent sealing of or diversion of flow from a naturally-occurring sensitive feature that accepts recharge to the Edwards Aquifer as a permanent pollution abatement measure has not been proposed.
   ☐ **Attachment E - Request to Seal Features**. A request to seal a naturally-occurring sensitive feature, that includes, for each feature, a justification as to why no reasonable and practicable alternative exists, is attached.

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

    ☒ Design calculations (TSS removal calculations)
    ☒ TCEQ construction notes
    ☒ All geologic features
    ☒ All proposed structural BMP(s) plans and specifications

    ☐ N/A

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

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

    ☐ N/A

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

    ☒ N/A

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

    ☒ N/A

Responsibility for Maintenance of Permanent BMP(s)

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

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

    ☐ N/A

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

    ☐ N/A

Attachment A - 20% or Less Impervious Cover Waiver

The site has more than 20% impervious cover. Therefore, a waiver will not be submitted for this project.

Attachment B - BMPs for UP-GRADIENT STORMWATER

An area of up-gradient storm water exists to the south and west of the site, based on current topography maps and field observations. 5.57 acres of offsite water enters the site and flows onto the property. Please refer to the Existing and Proposed Drainage Area Maps that are provided at the end of this report in Section 8.

Attachment C - BMPs for On-Site Stormwater

Kids Zone has a total of 1 onsite basins and 1 off-site basins. The overall required removal for this phase of development is Lm = 2142 LBS. The system has been designed to provide 2350 LBS of TSS removal. The basins have been broken out and are shown on the construction drawings (Water Quality Drainage Area Map, Sheet 17). Water quality drainage area WQP-A will overland flow to the Batch Detention Pond. The Batch Detention Pond will provide 2350 LBS of TSS removal. All TSS calculations are shown on the construction drawings sheets 19-20. The impervious breakdown is shown under the project narrative.

After construction, all disturbed areas on the site will be re-vegetated and runoff from the proposed improvements will be captured by the proposed storm system and conveyed through the proposed BMP's.

Construction plans, calculations and specifications are provided in Section 8 which is located at the end of this report.

Attachment D – BMPs for Surface Streams

There are no existing surface streams or sensitive features on site. All permanent BMP's have been designed to remove 85% of the increase in Total Suspended Solids as per current TCEQ and City of Leander requirements.

Attachment E - Request To Seal a Feature

The permanent sealing of or diversion of flow from a naturally-occurring “sensitive” or “possibly sensitive” feature that accepts recharge to the Edwards Aquifer as a permanent pollution abatement measure has not been proposed for any naturally-occurring “sensitive” or “possibly sensitive” features on this site.

Attachment F – Construction Plans

Calculations for the load removal requirements for the project and the load removal provided by the permanent BMP's are provided as an exhibit in section 8 which have been preliminary approved by a professional engineer licensed in the state of Texas. The load removal requirements are derived from the equations from the technical guidance manual based upon project area and increase in impervious cover. All stormwater runoff from impervious areas will be treated by the proposed permanent BMP's to provide the overall required removal of 85% of the increase in Total Suspended Solids. Provided within the calculations is a summary of the amount of pollutant load required to be removed from the drainage areas and the amount of removal provided by the permanent BMP's.

Construction plans, details, specifications, calculations, and construction notes are provided in section 8 which is attached at the end of this report.

Attachment G - Inspection, Maintenance, Repair and Retrofit Plan

The inspection and maintenance plan outlines the procedures necessary to maintain the performance of the Permanent Best Management Practices for this project. It should be noted that the plan provides guidelines that may have to be adjusted dependent on site specific and weather related conditions.

It is the responsibility of the owner to provide the inspections and maintenance as outlined in the plan for the duration of the project. The owner will maintain this responsibility until it is assumed or transferred to another entity in writing. If the property is leased or sold, the responsibility for the maintenance will be required to be transferred through the lease agreement, binding covenants, closing documents, or other binding legal instrument.

Disposal of accumulated silt shall be accomplished following Texas Commission on Environmental Quality guidelines and specifications.

Maintenance records shall be kept on the installation, maintenance, or removal of items necessary for the proper operation of the facilities. All inspections shall be documented.

An amended copy of this document will be provided to the Texas Commission on Environmental Quality within thirty (30) days of any changes in the following information.

Responsible Party: DC Brown, L.P.

Mailing Address: PO BOX 292

City, State: Salado, TX Zip: 76571

Telephone: 254.718.7791 Fax: N/A

I, the owner, have read and understand the requirements of the attached Inspection and Maintenance Plan for the proposed Permanent Best Management Practices for my project. I acknowledge that I will maintain responsibility for the implementation and execution of the plan until the responsibility is transferred to or assumed by another party in writing through a binding legal instrument.

Signature of Responsible Party _____ Date 2/19/2024

This Maintenance Plan is based on TCEQ Maintenance Guidelines.

Alejandro E. Granados Rico

By: _____ Date 2/19/2024
Alejandro E. Granados Rico, P.E.

INSPECTION AND MAINTENANCE FOR BMPS

Batch Detention Basin

1. Inspections: Basins should be inspected at least twice a year (once during or immediately following wet weather) to evaluate facility operation. When possible, inspections should be conducted during wet weather to determine if the pond is meeting the target detention times. In particular, the extended detention control device should be regularly inspected for evidence of clogging, or conversely, for too rapid a release. If the design drawdown times are exceeded by more than 24 hours, then repairs should be scheduled immediately. The upper stage pilot channel, if any, and its flow path to the lower stage should be checked for erosion problems. During each inspection, erosion areas inside and downstream of the BMP should be identified and repaired or revegetated immediately.
2. Mowing. The upper stage, side slopes, embankment, and emergency spillway of an extended detention basin must be mowed regularly to discourage woody growth and control weeds. Grass areas in and around basins should be mowed at least twice annually to limit vegetation height to 18 inches. More frequent mowing to maintain aesthetic appeal may be necessary in landscaped areas. When mowing of grass is performed, a mulching mower should be used, or grass clippings should be caught and removed.
3. Debris and Litter Removal. Debris and litter will accumulate near the extended detention control device and should be removed during regular mowing operations and inspections. Particular attention should be paid to floating debris that can eventually clog the control device or riser.
4. Erosion Control. The pond side slopes, emergency spillway, and embankment all may periodically suffer from slumping and erosion, although this should not occur often if the soils are properly compacted during construction. Regrading and revegetation may be required to correct the problems. Similarly, the channel connecting an upper stage with a lower stage may periodically need to be replaced or repaired. g: Grass areas in and around sand filters must be mowed at least twice annually to limit vegetation height to 18 inches. More frequent mowing to maintain aesthetic appeal may be necessary in landscape areas. Vegetation on the pond embankments should be mowed as appropriate to prevent the establishment of woody vegetation
5. Structural Repairs and Replacement. With each inspection, any damage to the structural elements of the system (pipes, concrete drainage structures, retaining walls, etc.) should be identified and repaired immediately. These repairs should include patching of cracked concrete, sealing of voids, and removal of vegetation from cracks and joints. The various inlet/outlet and riser works in a basin will eventually deteriorate and must be replaced. Public works experts have estimated that corrugated metal pipe (CMP) has a useful life of about 25 yr, whereas reinforced concrete barrels and risers may last from 50 to 75 yr.
6. Nuisance Control. Standing water (not desired in a extended detention basin) or soggy conditions within the lower stage of the basin can create nuisance conditions for nearby residents. Odors, mosquitoes, weeds, and litter are all occasionally perceived to be problems. Most of these problems are generally a sign that regular inspections and maintenance are not being performed (e.g., mowing, debris removal, clearing the outlet control device).

7. Sediment Removal. When properly designed, dry extended detention basins will accumulate quantities of sediment over time. Sediment accumulation is a serious maintenance concern in extended detention dry ponds for several reasons. First, the sediment gradually reduces available stormwater management storage capacity within the basin. Second, unlike wet extended detention basins (which have a permanent pool to conceal deposited sediments), sediment accumulation can make dry extended detention basins very unsightly. Third, and perhaps most importantly, sediment tends to accumulate around the control device. Sediment deposition increases the risk that the orifice will become clogged, and gradually reduces storage capacity reserved for pollutant removal. Sediment can also be resuspended if allowed to accumulate over time and escape through the hydraulic control to downstream channels and streams. For these reasons, accumulated sediment needs to be removed from the lower stage when sediment buildup fills 20% of the volume of the basin or at least every 10 years.

Rock Berm

1. Inspection should be made weekly and after each rainfall in accordance to Section 1.4.5 of RG-348. If placed in streambeds, inspection should occur on a daily basis.

2. Accumulated silt shall be removed when it reaches a depth of six (6) inches. The silt shall be disposed of on an approved site and in such a manner that will not contribute to additional siltation.

3. Loose wire sheathing shall be repaired immediately when necessary and the berm shall be reshaped as needed during inspection.

4. Berm shall be replaced if the structure ceases to function as initially intended due to factors such as silt accumulation, washout, construction traffic damage, etc.

5. When all upstream areas are stabilized and the accumulated silt has been removed, the rock berm should be removed and disposed of.

VEGETATIVE FILTER STRIPS

First Two Months: The first two months are the most important for vegetative filter strips, or until they are well established. The following guidelines should be followed most closely during this time period. After the vegetative filter strips have been well established, little additional maintenance is necessary.

Pest Management: An Integrated Pest Management (IPM) Plan should be developed for vegetated areas. This plan should specify how problem insects and weeds will be controlled with minimal or no use of insecticides and herbicides.

Seasonal Mowing and Lawn Care: If the filter strip is made up of turf grass, it should be mowed as needed to limit vegetation height to 18 inches, using a mulching mower (or removal of clippings). If native grasses are used, the filter may require less frequent mowing, but a minimum of twice annually. Grass clippings and brush debris should not be deposited on vegetated filter strip area Regular mowing should also include weed control practices, however herbicide use should be kept to a minimum (Urbonas et al., 1992). Healthy grass can be maintained without using fertilizers

because runoff usually contains sufficient nutrients. Irrigation of the site can help assure a dense and healthy vegetative cover.

Inspection: Inspect filter strips at least twice annually for erosion or damage to vegetation; however, additional inspection after periods of heavy runoff is most desirable. The strip should be checked for uniformity of grass cover, debris and litter, and areas of sediment accumulation. More frequent inspections of the grass cover during the first few years after establishment will help to determine if any problems are developing, and to plan for long-term restorative maintenance needs. Bare spots and areas of erosion identified during semi-annual inspections must be replanted and restored to meet specifications. Construction of a level spreader device may be necessary to reestablish shallow overland flow.

Debris and Litter Removal: Trash tends to accumulate in vegetated areas, particularly along highways. Any filter strip structures (i.e. level spreaders) should be kept free of obstructions to reduce floatables being flushed downstream, and for aesthetic reasons. The need for this practice is determined through periodic inspection, but should be performed no less than 4 times per year.

Sediment Removal: Sediment removal is not normally required in filter strips, since the vegetation normally grows through it and binds it to the soil. However, sediment may accumulate along the upstream boundary of the strip preventing uniform overland flow. Excess sediment should be removed by hand or with flat-bottomed shovels.

Grass Reseeding and Mulching: A healthy dense grass should be maintained on the filter strip. If areas are eroded, they should be filled, compacted, and reseeded so that the final grade is level. Grass damaged during the sediment removal process should be promptly replaced using the same seed mix used during filter strip establishment. If possible, flow should be diverted from the damaged areas until the grass is firmly established. Bare spots and areas of erosion identified during semi-annual inspections must be replanted and restored to meet specifications. Corrective maintenance such as weeding or replanting should be done more frequently in the first two to three years after installation to ensure stabilization. Dense vegetation may require irrigation immediately after planting, and during particularly dry periods, particularly as the vegetation is initially established.

Attachment H – Pilot-Scale Field Testing Plan

The TCEQ Technical Guidance Manual (TGM) was used to design permanent BMPs and measures for this site; therefore pilot-scale field testing is not required.

Attachment I – Measures for Minimizing Surface Stream Contamination

Surface streams do not exist on site. Therefore, a description of the measures that will be used to avoid or minimize surface stream contamination and changes in the way in which water enters a stream as a result of the construction and development is not provided at the end of this form. All disturbed areas will be re-vegetated as soon as practical.

Section 7: Additional Forms

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

OWNER,
Title - Owner/President/Other

of DC Brown, L.P.,
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:

Applicant's Signature

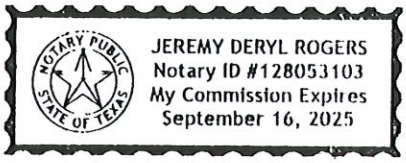
2-19-2024
Date

THE STATE OF TEXAS §

County of Williamson §

BEFORE ME, the undersigned authority, on this day personally appeared Whitney Hicks 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 19th day of February.



NOTARY PUBLIC

Jeremy Rogers
Typed or Printed Name of Notary

MY COMMISSION EXPIRES: 9/16/2025

Application Fee Form

Texas Commission on Environmental Quality

Name of Proposed Regulated Entity: Kid Zone CR307

Regulated Entity Location: approximately 325' north of the intersection of CR 305 and CR 307 on the west side of CR 307 in Jerrell, TX 76537

Name of Customer: DC Brown, L.P.

Contact Person: Whitney Hicks Phone: 254.718.7791

Customer Reference Number (if issued):

Regulated Entity Reference Number (if issued):N/A

Austin Regional Office (3373)

☐ Hays ☐ Travis ☒ Williamson

San Antonio Regional Office (3362)

☐ Bexar ☐ Medina ☐ Uvalde

☐ Comal ☐ Kinney

Application fees must be paid by check, certified check, or money order, payable to the **Texas Commission on Environmental Quality**. Your canceled check will serve as your receipt. **This form must be submitted with your fee payment**. This payment is being submitted to:

☒ Austin Regional Office

☐ Mailed to: TCEQ - Cashier
Revenues Section
Mail Code 214
P.O. Box 13088
Austin, TX 78711-3088

☐ San Antonio Regional Office

☐ Overnight Delivery to: TCEQ - Cashier
12100 Park 35 Circle
Building A, 3rd Floor
Austin, TX 78753
(512)239-0357

Site Location (Check All That Apply):

☒ Recharge Zone ☐ Contributing Zone ☐ Transition Zone

Type of Plan	***Size***	***Fee Due***
Water Pollution Abatement Plan, Contributing Zone Plan: One Single Family Residential Dwelling	Acres	$
Water Pollution Abatement Plan, Contributing Zone Plan: Multiple Single Family Residential and Parks	Acres	$
Water Pollution Abatement Plan, Contributing Zone Plan: Non-residential	5.253 Acres	$ 5,000
Sewage Collection System		
Lift Stations without sewer lines	Acres	$
Underground or Aboveground Storage Tank Facility	Tanks	$
Piping System(s)(only)	Each	$
Exception	Each	$
Extension of Time	Each	$

Signature: Alejandro E. Granados Rios Date: February 19, 2024

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

Check Payable to the "Texas Commission on Environmental Quality"

Kimley»Horn

Core Data Form

TCEQ Use Only

TCEQ Core Data Form

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

SECTION I: General Information

1. Reason for Submission (*If other is checked please describe in space provided.*)

☒ New Permit, Registration or Authorization (*Core Data Form should be submitted with the program application.*)

☐ Renewal *(Core Data Form should be submitted with the renewal form)* ☐ Other

2. Customer Reference Number *(if issued)*	Follow this link to search for CN or RN numbers in Central Registry**	**3. Regulated Entity Reference Number** *(if issued)*
CN		**RN**

SECTION II: Customer Information

4. General Customer Information	**5. Effective Date for Customer Information Updates** (mm/dd/yyyy)	1/31/2024

☒ New Customer ☐ Update to Customer Information ☐ Change in Regulated Entity Ownership
☐ Change in Legal Name (Verifiable with the Texas Secretary of State or Texas Comptroller of Public Accounts)

The Customer Name submitted here may be updated automatically based on what is current and active with the Texas Secretary of State (SOS) or Texas Comptroller of Public Accounts (CPA).

6. Customer Legal Name *(If an individual, print last name first: eg: Doe, John)*	*If new Customer, enter previous Customer below:*
DC Brown, L.P.	

7. TX SOS/CPA Filing Number	**8. TX State Tax ID** (11 digits)	**9. Federal Tax ID** (9 digits)	**10. DUNS Number** *(if applicable)*
0800387015	3203554248		

11. Type of Customer:	☐ Corporation	☐ Individual	Partnership: ☐ General ☒ Limited
Government: ☐ City ☐ County ☐ Federal ☐ Local ☐ State ☐ Other		☐ Sole Proprietorship	☐ Other: Foundation

12. Number of Employees	**13. Independently Owned and Operated?**
☒ 0-20 ☐ 21-100 ☐ 101-250 ☐ 251-500 ☐ 501 and higher	☒ **Yes** ☐ **No**

14. Customer Role (Proposed or Actual) – *as it relates to the Regulated Entity listed on this form. Please check one of the following*

☒ Owner ☐ Operator ☐ Owner & Operator
☐ Occupational Licensee ☐ Responsible Party ☐ VCP/BSA Applicant ☐ Other:

15. Mailing Address:	PO Box 292						
	City	Salado	**State**	TX	**ZIP**	76571	**ZIP + 4**

16. Country Mailing Information *(if outside USA)*	**17. E-Mail Address** *(if applicable)*
	whitneyhicks777@yahoo.com

18. Telephone Number	**19. Extension or Code**	**20. Fax Number** *(if applicable)*

(254) 718-7791		( ) -

SECTION III: Regulated Entity Information

21. General Regulated Entity Information *(If 'New Regulated Entity" is selected, a new permit application is also required.)*

☒ New Regulated Entity ☐ Update to Regulated Entity Name ☐ Update to Regulated Entity Information

The Regulated Entity Name submitted may be updated, in order to meet TCEQ Core Data Standards (removal of organizational endings such as Inc, LP, or LLC).

22. Regulated Entity Name *(Enter name of the site where the regulated action is taking place.)*

Kids Zone CR307

23. Street Address of the Regulated Entity: ***(No PO Boxes)***								
	City	Jerrell	**State**	TX	**ZIP**	76537	**ZIP + 4**	
24. County	Williamson							

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

25. Description to Physical Location:	Approximately 325' North of the intersection of CR 305 and CR 307 on the west side of CR 307 in Jerrell, TX 76537				
26. Nearest City			**State**	**Nearest ZIP Code**	
Jerrell			TX	76537	

Latitude/Longitude are required and may be added/updated to meet TCEQ Core Data Standards. (Geocoding of the Physical Address may be used to supply coordinates where none have been provided or to gain accuracy).

27. Latitude (N) In Decimal:	30.840455		**28. Longitude (W) In Decimal:**	-97.618949	
Degrees	Minutes	Seconds	Degrees	Minutes	Seconds
30	50	25.638	-97	37	8.2164

29. Primary SIC Code (4 digits)	**30. Secondary SIC Code** (4 digits)	**31. Primary NAICS Code** (5 or 6 digits)	**32. Secondary NAICS Code** (5 or 6 digits)
8299		611710	

33. What is the Primary Business of this entity? *(Do not repeat the SIC or NAICS description.)*

Charter School

34. Mailing Address:	**PO BOX 292**							
	City	**SALADO**	**State**	**TX**	**ZIP**	**76571**	**ZIP + 4**	
35. E-Mail Address:	**WHITNEYHICKS777@YAHOO.COM**							

36. Telephone Number	**37. Extension or Code**	**38. Fax Number** *(if applicable)*
(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	☐ PWS
☐ Sludge	☐ Storm Water	☐ Title V Air	☐ Tires	☐ Used Oil
☐ Voluntary Cleanup	☐ Wastewater	☐ Wastewater Agriculture	☐ Water Rights	☐ Other:

SECTION IV: Preparer Information

40. Name:	Alex Granados, P.E.	41. Title:	Project Manager

42. Telephone Number	43. Ext./Code	44. Fax Number	45. E-Mail Address
(512) 418-4522		( ) -	alex.granados@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

SECTION 8: EXHIBITS

ELECTRONICALLY RECORDED 2023075161
Williamson County, Texas Total Pages: 12

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
BELL County

23001391

Grantee: **DC Brown, L.P.**

Grantee's Mailing Address (including county):

P.O. BOX 292
SALADO, TX 76571
BELL 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 6 day of September, 2023.

Steve D. Brown

STATE OF TEXAS
COUNTY OF Bell

This instrument was acknowledged before me on the 6 day of September, 2023, by **Steve D. Brown**.

MARIA CRUMLEY NOTARY PUBLIC STATE OF TEXAS ID 13096271-8 EXP. 05-16-2024

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;

1. **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-of-way line of County Road 307, said point being the northernmost corner of the herein described tract of land;

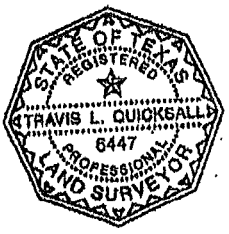
2. **Thence,** along said wire fence, with the occupied southwest right-of-way line of County Road 307, continuing across the remainder of said 446.1 acre tract, **S 21° 05' 22" E,** a distance of **762.12',** to a 1/2" iron rod with a blue "QUICK INC RPLS 6447" plastic cap set at said wire fence in 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

3. **Thence,** departing the occupied southwest right-of-way line of County Road 307, continuing across the remainder of said 446.1 acre tract, **S 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.



Travis L. Quicksall RPLS #6447
Date: 07/13/2021
Job # 18-2292.1

Exhibit "B"

County: Williamson
Parcel No.: 5-ROW
Tax 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;

Exhibit B pg 2

County: Williamson
Parcel No.: 5-ROW
Tax 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 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

County: Williamson
Parcel No.: 5-ROW
Tax 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

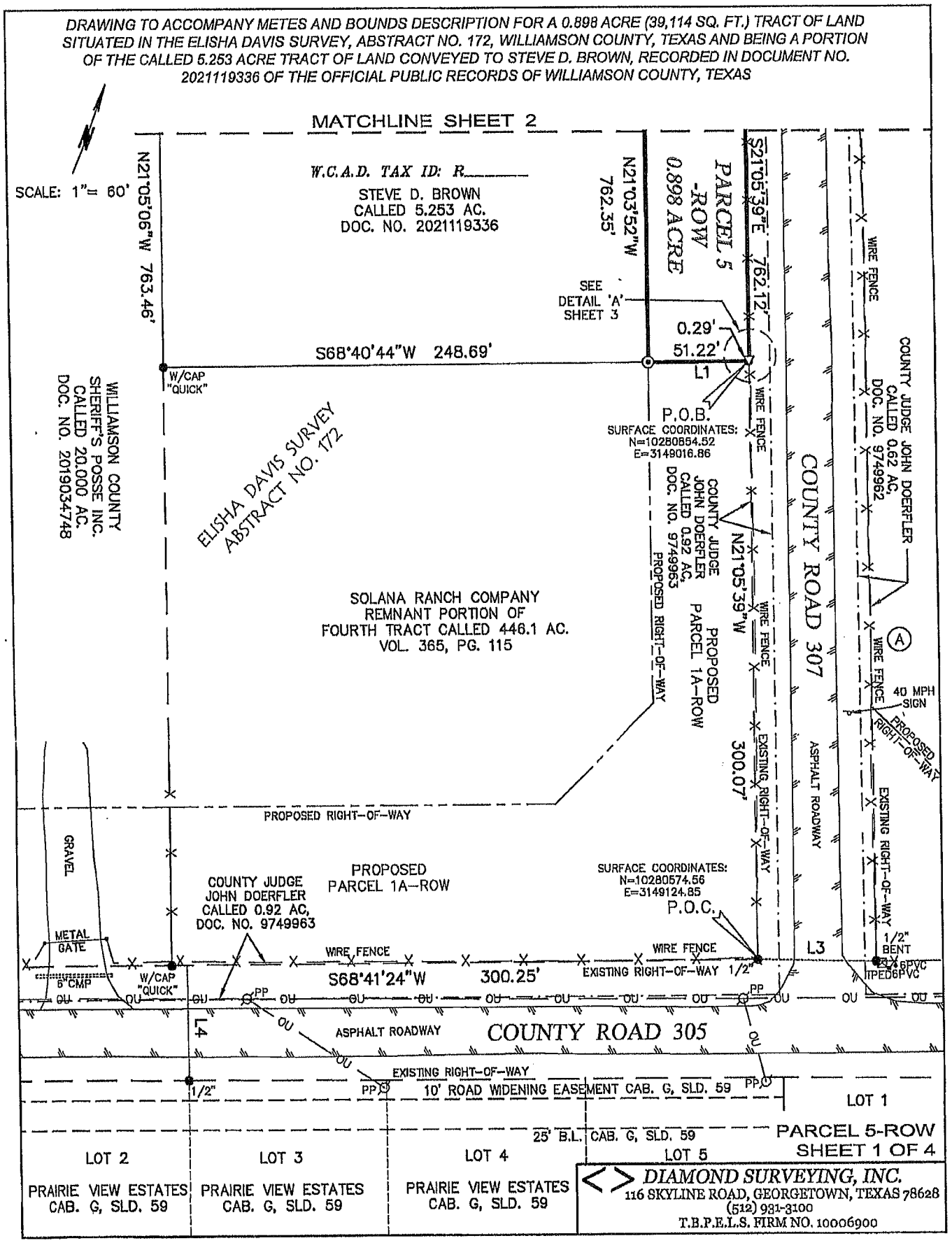
November 16, 2021

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

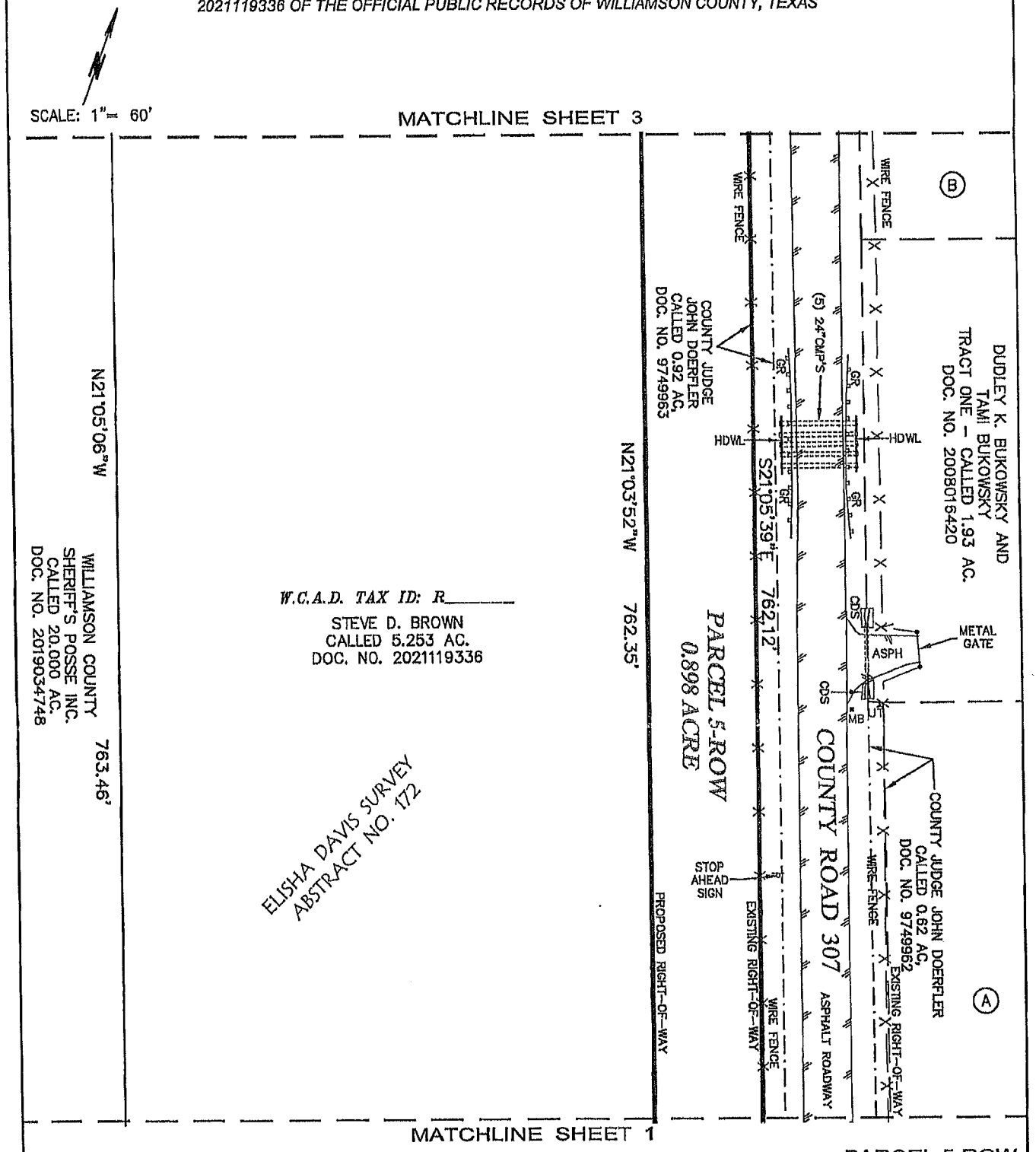
STATE OF TEXAS REGISTERED SHANE SHAFER 5281 PROFESSIONAL LAND SURVEYOR

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

Exhibit B pg 4



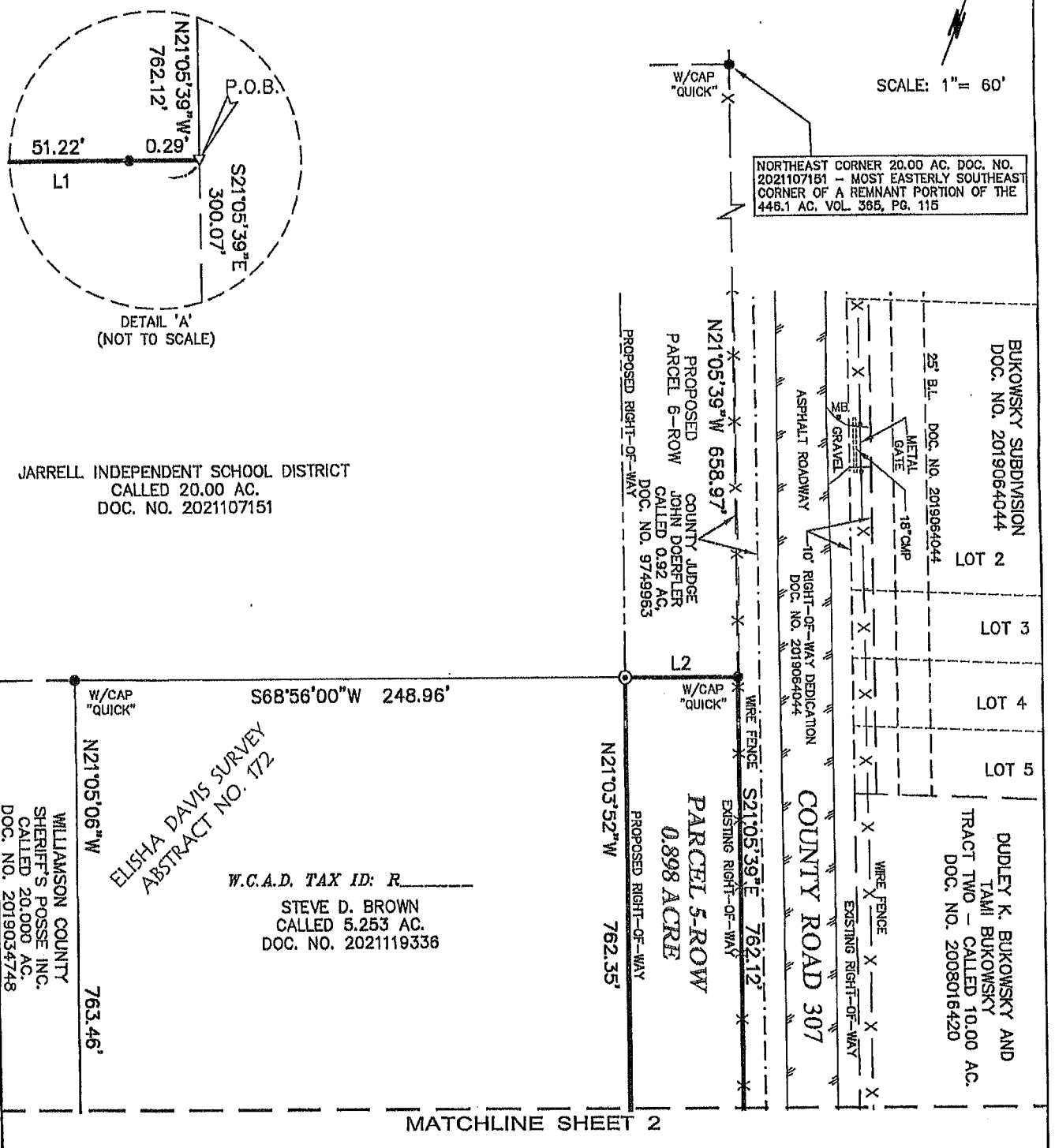
DRAWING TO ACCOMPANY METES AND BOUNDS DESCRIPTION FOR A 0.898 ACRE (39,114 SQ. FT.) TRACT OF LAND SITUATED IN THE ELISHA DAVIS SURVEY, ABSTRACT NO. 172, WILLIAMSON COUNTY, TEXAS AND BEING A PORTION OF THE CALLED 5.253 ACRE TRACT OF LAND CONVEYED TO STEVE D. BROWN, RECORDED IN DOCUMENT NO. 2021119336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



PARCEL 5-ROW
SHEET 2 OF 4

DIAMOND SURVEYING, INC.
116 SKYLINE ROAD, GEORGETOWN, TEXAS 78628
(512) 931-3100
T.B.P.E.L.S. FIRM NO. 10006900

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



PARCEL 5-ROW
SHEET 3 OF 4

DIAMOND SURVEYING, INC.
116 SKYLINE ROAD, GEORGETOWN, TEXAS 78628
(512) 931-3100
T.B.P.E.L.S. FIRM NO. 10006900

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 5.263 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

(A) ALICIA MARTINEZ
REMNANT PORTION OF
CALLED 15.428 AC.
DOC. NO. 2016103459
SEE SHEETS 1 AND 2

(B) DUDLEY K. BUKOWSKY AND
TAMI BUKOWSKY
TRACT TWO – CALLED 10.00 AC.
DOC. NO. 2008016420
SEE SHEET 2

LEGEND

●	IRON ROD FOUND
⊙	5/8" IRON ROD SET WITH ALUMINUM CAP MARKED "WILLIAMSON COUNTY"
▽	CALCULATED POINT
PP	POWER POLE
TPED	TELEPHONE PEDESTAL
UT	UNDERGROUND TELEPHONE MARKER
	SIGN
6PVC	6" PVC RISER
MB	MAIL BOX
OU	OVERHEAD UTILITY LINE
X	WIRE FENCE
	EDGE OF PAVEMENT
	GUARD RAIL
HDWL	HEADWALL
GR	GUARD RAIL
ASPH	ASPHALT
CDS	CONCRETE DRAINAGE STRUCTURE
CMP	CORRUGATED METAL PIPE
B.L.	BUILDING SETBACK LINE
"QUICK"	QUICK INC RPLS 6447
P.O.C.	POINT OF COMMENCEMENT
P.O.B.	POINT OF BEGINNING
W.C.A.D.	WILLIAMSON CENTRAL APPRAISAL DISTRICT

NOTES:

1) 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 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 NO. 48491C0150F, WITH AN EFFECTIVE DATE OF DECEMBER 20, 2019.

5) 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.

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 OF THIS SURVEY BY OTHER PARTIES SHALL BE AT THEIR OWN RISK AND UNDERSIGNED SURVEYOR IS NOT RESPONSIBLE FOR ANY LOSS RESULTING THEREFROM.

STATE OF TEXAS REGISTERED SHANE SHAFER 5281 PROFESSIONAL LAND SURVEYOR

SHANE SHAFER, R.P.L.S. NO. 5281 — NOVEMBER 16, 2021 DATE

PARCEL 5-ROW
SHEET 4 OF 4

DIAMOND SURVEYING, INC.
116 SKYLINE ROAD, GEORGETOWN, TEXAS 78628
(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

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:

WHITNEY HICKS

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.

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Executed to be effective March 4, 2020.

ASSIGNOR:

STEVE D. BROWN

ASSIGNEE:

MATT HICKS

Map Scale: 1:2,030 if printed on A portrait (8.5" x 11") sheet.

N

Meters: 0 30 60 120 180

Feet: 0 50 100 200 300

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 14N WGS84

MAP LEGEND

Area of Interest (AOI)

- Area of Interest (AOI)

Soils

- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features

- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features

- Streams and Canals

Transportation

- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background

- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:20,000.

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

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

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

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

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

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

Soil Survey Area: Williamson County, Texas
Survey Area Data: Version 24, Sep 5, 2023

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

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

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

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

LEGAL DESCRIPTION

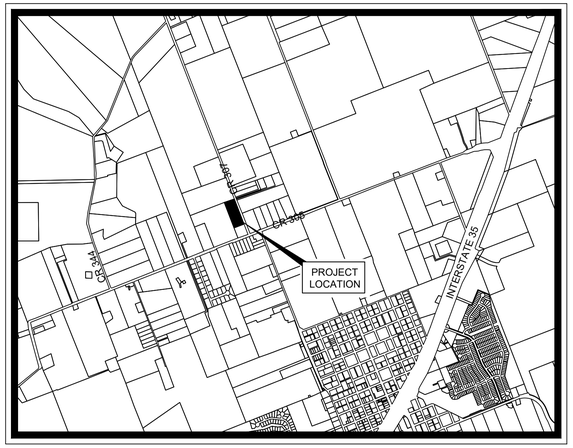
4.356 ACRE TRACT OF LAND, LOCATED IN THE ELISHA DAVIS SURVEY, ABSTRACT NO. 172, WILLIAMSON COUNTY, TEXAS, SAID 4.356 ACRE TRACT, BEING THE REMAINING PORTION OF THAT CERTAIN 5.253 ACRE TRACT OF LAND RECORDED IN DOCUMENT NO. 2021119336, OFFICIAL PUBLIC RECORDS, WILLIAMSON COUNTY.

LOT ACREAGE: 4.36 ACRES

CURRENT ZONING: SF1

UTILITY PROVIDERS

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



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

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

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

OWNER/DEVELOPER

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

ENGINEER

Kimley»Horn

501 S. AUSTIN AVE
SUITE 1310
GEORGETOWN, TX 78626
PH. (512) 418-1771
CONTACT: ALEX E. GRANADOS RICO, P.E.

STATE OF TEXAS
REGISTRATION NO. F-928

BENCHMARKS

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

BM 7210 - MAG NAIL SET IN CONCRETE
ELEV. 823.90

No.	REVISIONS	DATE	BY

Kimley»Horn
© 2024 KIMLEY-HORN AND ASSOCIATES, INC.
501 S. AUSTIN AVENUE, SUITE 1310, GEORGETOWN, TX 78626
PHONE: 512-520-0788 FAX: 512-418-1791
WWW.KIMLEY-HORN.COM
TEXAS REGISTERED ENGINEERING FIRM F-928

2/09/2024
STATE OF TEXAS
ALEJANDRO E. GRANADOS RICO
130084
LICENSED
PROFESSIONAL ENGINEER

KHA PROJECT 069427200	
DATE	FEBRUARY 2024
SCALE	AS SHOWN
DESIGNED BY:	JDR
DRAWN BY:	JDR
CHECKED BY:	AEG

COVER SHEET

KID ZONE ON CR307
CITY OF JARRELL
WILLIAMSON COUNTY, TEXAS

SHEET NUMBER
1

KID ZONE ON CR307
KHA PROJECT NO. 069427200
CIVIL CONSTRUCTION PLANS

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY WATER POLLUTION ABATEMENT PLAN
GENERAL CONSTRUCTION NOTES:

1. 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:
   - -THE NAME OF THE APPROVED PROJECT;
   - -THE ACTIVITY START DATE; AND
   - -THE CONTACT INFORMATION OF THE PRIME CONTRACTOR.
2. 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.
3. 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.
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.
5. 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.
6. 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.
7. SEDIMENT MUST BE REMOVED FROM SEDIMENT TRAPS OR SEDIMENTATION BASINS NOT LATER THAN WHEN IT OCCUPIES 50% OF THE BASIN'S DESIGN CAPACITY.
8. LITTER, CONSTRUCTION DEBRIS, AND CONSTRUCTION CHEMICALS EXPOSED TO STORMWATER SHALL BE PREVENTED FROM BEING DISCHARGED OFFSITE.
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.
10. 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.
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.
12. 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:
   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;
   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;
   C. ANY DEVELOPMENT OF LAND PREVIOUSLY IDENTIFIED AS UNDEVELOPED IN THE ORIGINAL WATER POLLUTION ABATEMENT PLAN.

TCEQ REGION 11 OFFICE
12100 PARK 35 CIRCLE,
BUILDING A, RM 179
AUSTIN, TEXAS 78753-3795
PHONE: (512) 339-2929
FAX: (512) 339-3795

TCEQ - SEWAGE COLLECTION SYSTEM PLAN NOTES

1. THIS ORGANIZED SEWAGE COLLECTION SYSTEM (SCS) MUST BE CONSTRUCTED IN ACCORDANCE WITH 30 TEXAS ADMINISTRATIVE CODE (TAC) §213.5(C), THE TEXAS COMMISSION ON ENVIRONMENTAL QUALITY'S (TCEQ) EDWARDS AQUIFER RULES AND ANY LOCAL GOVERNMENT STANDARD SPECIFICATIONS.
2. 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.
3. A WRITTEN NOTICE OF CONSTRUCTION MUST BE SUBMITTED TO THE PRESIDING TCEQ REGIONAL OFFICE AT LEAST 48 HOURS PRIOR TO THE START OF ANY REGULATED ACTIVITIES. THIS NOTICE MUST INCLUDE:
   - -THE NAME OF THE APPROVED PROJECT;
   - -THE ACTIVITY START DATE; AND
   - -THE CONTACT INFORMATION OF THE PRIME CONTRACTOR.
4. 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.
5. 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 PLACE UNTIL THE DISTURBED AREAS HAVE BEEN PERMANENTLY STABILIZED.
6. IF ANY SENSITIVE FEATURES ARE DISCOVERED DURING THE WASTEWATER LINE TRENCHING ACTIVITIES, ALL REGULATED ACTIVITIES NEAR THE SENSITIVE FEATURE MUST BE SUSPENDED IMMEDIATELY. THE APPLICANT MUST IMMEDIATELY NOTIFY THE APPROPRIATE REGIONAL OFFICE OF THE TCEQ OF THE FEATURE DISCOVERED. A GEOLOGIST'S ASSESSMENT OF THE LOCATION AND EXTENT OF THE FEATURE DISCOVERED MUST BE REPORTED TO THAT REGIONAL OFFICE IN WRITING AND THE APPLICANT MUST SUBMIT A PLAN FOR ENSURING THE STRUCTURAL INTEGRITY OF THE SEWER LINE OR FOR MODIFYING THE PROPOSED COLLECTION SYSTEM ALIGNMENT AROUND THE FEATURE. THE REGULATED ACTIVITIES NEAR THE SENSITIVE FEATURE MAY NOT PROCEED UNTIL THE EXECUTIVE DIRECTOR HAS REVIEWED AND APPROVED THE METHODS PROPOSED TO PROTECT THE SENSITIVE FEATURE AND THE EDWARDS AQUIFER FROM ANY POTENTIALLY ADVERSE IMPACTS TO WATER QUALITY WHILE MAINTAINING THE STRUCTURAL INTEGRITY OF THE LINE.
7. SEWER LINES LOCATED WITHIN OR CROSSING THE 5-YEAR FLOODPLAIN OF A DRAINAGE WAY WILL BE PROTECTED FROM INUNDATION AND STREAM VELOCITIES WHICH COULD CAUSE EROSION AND SCOURING OF BACKFILL. THE TRENCH MUST BE CAPPED WITH CONCRETE TO PREVENT SCOURING OF BACKFILL, OR THE SEWER LINES MUST BE ENCASED IN CONCRETE. ALL CONCRETE SHALL HAVE A MINIMUM THICKNESS OF 6 INCHES.
8. BLASTING PROCEDURES FOR PROTECTION OF EXISTING SEWER LINES AND OTHER UTILITIES WILL BE IN ACCORDANCE WITH THE NATIONAL FIRE PROTECTION ASSOCIATION CRITERIA. SAND IS NOT ALLOWED AS BEDDING OR BACKFILL IN TRENCHES THAT HAVE BEEN BLASTED. IF ANY EXISTING SEWER LINES ARE DAMAGED, THE LINES MUST BE REPAIRED AND RETESTED.
9. ALL MANHOLES CONSTRUCTED OR REHABILITATED ON THIS PROJECT MUST HAVE WATERTIGHT SIZE ON SIZE RESILIENT CONNECTORS ALLOWING FOR DIFFERENTIAL SETTLEMENT. IF MANHOLES ARE CONSTRUCTED WITHIN THE 100-YEAR FLOODPLAIN, THE COVER MUST HAVE A GASKET AND BE BOLTED TO THE RING. WHERE GASKETED MANHOLE COVERS ARE REQUIRED FOR MORE THAN THREE MANHOLES IN SEQUENCE OR FOR MORE THAN 1500 FEET, ALTERNATE MEANS OF VENTING WILL BE PROVIDED. BRICKS ARE NOT AN ACCEPTABLE CONSTRUCTION MATERIAL FOR ANY PORTION OF THE MANHOLE.

   THE DIAMETER OF THE MANHOLES MUST BE A MINIMUM OF FOUR FEET AND THE MANHOLE FOR ENTRY MUST HAVE A MINIMUM CLEAR OPENING DIAMETER OF 30 INCHES. THESE DIMENSIONS AND OTHER DETAILS SHOWING COMPLIANCE WITH THE COMMISSION'S RULES CONCERNING MANHOLES AND SEWER LINE/MANHOLE INVERTS DESCRIBED IN 30 TAC §217.55 ARE INCLUDED ON PLAN SHEET 109 OF 112.

   IT IS SUGGESTED THAT ENTRANCE INTO MANHOLES IN EXCESS OF FOUR FEET DEEP BE ACCOMPLISHED BY MEANS OF A PORTABLE LADDER. THE INCLUSION OF STEPS IN A MANHOLE IS PROHIBITED.
10. WHERE WATER LINES AND NEW SEWER LINE ARE INSTALLED WITH A SEPARATION DISTANCE CLOSER THAN NINE FEET (I.E., WATER LINES CROSSING WASTEWATER LINES, WATER LINES PARALLELING WASTEWATER LINES, OR WATER LINES NEXT TO MANHOLES) THE INSTALLATION MUST MEET THE REQUIREMENTS OF 30 TAC §217.53(D) (PIPE DESIGN) AND 30 TAC §290.44(E) (WATER DISTRIBUTION).
11. WHERE SEWERS LINES DEVIATE FROM STRAIGHT ALIGNMENT AND UNIFORM GRADE ALL CURVATURE OF SEWER PIPE MUST BE ACHIEVED BY THE FOLLOWING PROCEDURE WHICH IS RECOMMENDED BY THE PIPE MANUFACTURER: NONE

   IF PIPE FLEXURE IS PROPOSED, THE FOLLOWING METHOD OF PREVENTING DEFLECTION OF THE JOINT MUST BE USED: NO FLEXURE PROPOSED

   SPECIFIC CARE MUST BE TAKEN TO ENSURE THAT THE JOINT IS PLACED IN THE CENTER OF THE TRENCH AND PROPERLY BEDDED IN ACCORDANCE WITH 30 TAC §217.54.
12. NEW SEWAGE COLLECTION SYSTEM LINES MUST BE CONSTRUCTED WITH STUB OUTS FOR THE CONNECTION OF ANTICIPATED EXTENSIONS. THE LOCATION OF SUCH STUB OUTS MUST BE MARKED ON THE GROUND SUCH THAT THEIR LOCATION CAN BE EASILY DETERMINED AT THE TIME OF CONNECTION OF THE EXTENSIONS. SUCH STUB OUTS MUST BE MANUFACTURED WYES OR TEES THAT ARE COMPATIBLE IN SIZE AND MATERIAL WITH BOTH THE SEWER LINE AND THE EXTENSION. AT THE TIME OF ORIGINAL CONSTRUCTION, NEW STUB-OUTS MUST BE CONSTRUCTED SUFFICIENTLY TO EXTEND BEYOND THE END OF THE STREET PAVEMENT. ALL STUB-OUTS MUST BE SEALED WITH A MANUFACTURED CAP TO PREVENT LEAKAGE. EXTENSIONS THAT WERE NOT ANTICIPATED AT THE TIME OF ORIGINAL CONSTRUCTION OR THAT ARE TO BE CONNECTED TO AN EXISTING SEWER LINE NOT FURNISHED WITH STUB OUTS MUST BE CONNECTED USING A MANUFACTURED SADDLE AND IN ACCORDANCE WITH ACCEPTED PLUMBING TECHNIQUES.

   IF NO STUB-OUT IS PRESENT AN ALTERNATE METHOD OF JOINING LATERALS IS SHOWN IN THE DETAIL ON PLAN SHEET N/A OF N/A. (FOR POTENTIAL FUTURE LATERALS).

   THE PRIVATE SERVICE LATERAL STUB-OUTS MUST BE INSTALLED AS SHOWN ON THE PLAN AND PROFILE SHEETS ON PLAN SHEET N/A OF N/A AND MARKED AFTER BACKFILLING AS SHOWN IN THE DETAIL ON PLAN SHEET N/A OF N/A.
13. TRENCHING, BEDDING AND BACKFILL MUST CONFORM WITH 30 TAC §217.54. THE BEDDING AND BACKFILL FOR FLEXIBLE PIPE MUST COMPLY WITH THE STANDARDS OF ASTM D-2321, CLASSES IA, IB, II OR III. RIGID PIPE BEDDING MUST COMPLY WITH THE REQUIREMENTS OF ASTM C 12 (ANSI A 106.2) CLASSES A, B OR C.
14. SEWER LINES MUST BE TESTED FROM MANHOLE TO MANHOLE. WHEN A NEW SEWER LINE IS CONNECTED TO AN EXISTING STUB OR CLEAN-OUT, IT MUST BE TESTED FROM EXISTING MANHOLE TO NEW MANHOLE. IF A STUB OR CLEAN-OUT IS USED AT THE END OF THE PROPOSED SEWER LINE, NO PRIVATE SERVICE ATTACHMENTS MAY BE CONNECTED BETWEEN THE LAST MANHOLE AND THE CLEANOUT UNLESS IT CAN BE CERTIFIED AS CONFORMING WITH THE PROVISIONS OF 30 TAC §213.5(C)(3)(E).
15. ALL SEWER LINES MUST BE TESTED IN ACCORDANCE WITH 30 TAC §217.57. THE ENGINEER MUST RETAIN COPIES OF ALL TEST RESULTS WHICH MUST BE MADE AVAILABLE TO THE EXECUTIVE DIRECTOR UPON REQUEST. THE ENGINEER MUST CERTIFY IN WRITING THAT ALL WASTEWATER LINES HAVE PASSED ALL REQUIRED TESTING TO THE APPROPRIATE REGIONAL OFFICE WITHIN 30 DAYS OF TEST COMPLETION AND PRIOR TO USE OF THE NEW COLLECTION SYSTEM. TESTING METHOD WILL BE:

(A) FOR A COLLECTION SYSTEM PIPE THAT WILL TRANSPORT WASTEWATER BY GRAVITY FLOW, THE DESIGN MUST SPECIFY AN INFILTRATION AND EXFILTRATION TEST OR A LOW-PRESSURE AIR TEST. A TEST MUST CONFORM TO THE FOLLOWING REQUIREMENTS:
(1) LOW PRESSURE AIR TEST.
(A) A LOW PRESSURE AIR TEST MUST FOLLOW THE PROCEDURES DESCRIBED IN AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM) C-828, ASTM C-924, OR ASTM F-1417 OR OTHER PROCEDURE APPROVED BY THE EXECUTIVE DIRECTOR, EXCEPT AS TO TESTING TIMES AS REQUIRED IN TABLE C.3 IN SUBPARAGRAPH (C) OF THIS PARAGRAPH OR EQUATION C.3 IN SUBPARAGRAPH (B)(II) OF THIS PARAGRAPH.
(B) FOR SECTIONS OF COLLECTION SYSTEM PIPE LESS THAN 36 INCH AVERAGE INSIDE DIAMETER, THE FOLLOWING PROCEDURE MUST APPLY, UNLESS A PIPE IS TO BE TESTED AS REQUIRED BY PARAGRAPH (2) OF THIS SUBSECTION.
(i) A PIPE MUST BE PRESSURIZED TO 3.5 POUNDS PER SQUARE INCH (PSI) GREATER THAN THE PRESSURE EXERTED BY GROUNDWATER ABOVE THE PIPE.
(ii) ONCE THE PRESSURE IS STABILIZED, THE MINIMUM TIME ALLOWABLE FOR THE PRESSURE TO DROP FROM 3.5 PSI GAUGE TO 2.5 PSI GAUGE IS COMPUTED FROM THE FOLLOWING EQUATION:

EQUATION C.3

$$T = (0.085 * D * K) / Q$$

WHERE:

T = TIME FOR PRESSURE TO DROP 1.0 POUND PER SQUARE INCH GAUGE IN SECONDS
K = 0.000419 X D X L, BUT NOT LESS THAN 1.0
D = AVERAGE INSIDE PIPE DIAMETER IN INCHES
L = LENGTH OF LINE OF SAME SIZE BEING TESTED, IN FEET
L = LENGTH OF LINE OF SAME SIZE BEING TESTED, IN FEET
Q = RATE OF LOSS, 0.0015 CUBIC FEET PER MINUTE PER SQUARE FOOT INTERNAL SURFACE

(C) SINCE A K VALUE OF LESS THAN 1.0 MAY NOT BE USED, THE MINIMUM TESTING TIME FOR EACH PIPE DIAMETER IS SHOWN IN THE FOLLOWING TABLE C.3:

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

(D) AN OWNER MAY STOP A TEST IF NO PRESSURE LOSS HAS OCCURRED DURING THE FIRST 25% OF THE CALCULATED TESTING TIME.
(E) IF ANY PRESSURE LOSS OR LEAKAGE HAS OCCURRED DURING THE FIRST 25% OF TESTING PERIOD, THEN THE TEST MUST CONTINUE FOR THE ENTIRE TEST DURATION AS OUTLINED ABOVE OR UNTIL FAILURE.

(F) WASTEWATER COLLECTION SYSTEM PIPES WITH A 27 INCH OR LARGER AVERAGE INSIDE DIAMETER MAY BE AIR TESTED AT EACH JOINT INSTEAD OF FOLLOWING THE PROCEDURE OUTLINED IN THIS SECTION.
(G) A TESTING PROCEDURE FOR PIPE WITH AN INSIDE DIAMETER GREATER THAN 33 INCHES MUST BE APPROVED BY THE EXECUTIVE DIRECTOR.
(2) INFILTRATION/EXFILTRATION TEST.
(A) THE TOTAL EXFILTRATION, AS DETERMINED BY A HYDROSTATIC HEAD TEST, MUST NOT EXCEED 50 GALLONS PER INCH OF DIAMETER PER MILE OF PIPE PER 24 HOURS AT A MINIMUM TEST HEAD OF 2.0 FEET ABOVE THE CROWN OF A PIPE AT AN UPSTREAM MANHOLE.
(B) AN OWNER SHALL USE AN INFILTRATION TEST IN LIEU OF AN EXFILTRATION TEST WHEN PIPES ARE INSTALLED BELOW THE GROUNDWATER LEVEL.
(C) THE TOTAL EXFILTRATION, AS DETERMINED BY A HYDROSTATIC HEAD TEST, MUST NOT EXCEED 50 GALLONS PER INCH DIAMETER PER MILE OF PIPE PER 24 HOURS AT A MINIMUM TEST HEAD OF TWO FEET ABOVE THE CROWN OF A PIPE AT AN UPSTREAM MANHOLE, OR AT LEAST TWO FEET ABOVE EXISTING GROUNDWATER LEVEL, WHICHEVER IS GREATER.
(D) FOR CONSTRUCTION WITHIN A 25-YEAR FLOOD PLAIN, THE INFILTRATION OR EXFILTRATION MUST NOT EXCEED 10 GALLONS PER INCH DIAMETER PER MILE OF PIPE PER 24 HOURS AT THE SAME MINIMUM TEST HEAD AS IN SUBPARAGRAPH (C) OF THIS PARAGRAPH.
(E) IF THE QUANTITY OF INFILTRATION OR EXFILTRATION EXCEEDS THE MAXIMUM QUANTITY SPECIFIED, AN OWNER SHALL UNDERTAKE REMEDIAL ACTION IN ORDER TO REDUCE THE INFILTRATION OR EXFILTRATION TO AN AMOUNT WITHIN THE LIMITS SPECIFIED. AN OWNER SHALL RETEST A PIPE FOLLOWING A REMEDIATION ACTION.
(B) IF A GRAVITY COLLECTION PIPE IS COMPOSED OF FLEXIBLE PIPE, DEFLECTION TESTING IS ALSO REQUIRED. THE FOLLOWING PROCEDURES MUST BE FOLLOWED:
(1) FOR A COLLECTION PIPE WITH INSIDE DIAMETER LESS THAN 27 INCHES, DEFLECTION MEASUREMENT REQUIRES A RIGID MANDREL.
(A) MANDREL SIZING.
(I) A RIGID MANDREL MUST HAVE AN OUTSIDE DIAMETER (OD) NOT LESS THAN 95% OF THE BASE INSIDE DIAMETER (ID) OR AVERAGE ID OF A PIPE, AS SPECIFIED IN THE APPROPRIATE STANDARD BY THE ASTMS, AMERICAN WATER WORKS ASSOCIATION, UNI-BELL, OR AMERICAN NATIONAL STANDARDS INSTITUTE, OR ANY RELATED APPENDIX.
(II) IF A MANDREL SIZING DIAMETER IS NOT SPECIFIED IN THE APPROPRIATE STANDARD, THE MANDREL MUST HAVE AN OD EQUAL TO 95% OF THE ID OF A PIPE. IN THIS CASE, THE ID OF THE PIPE, FOR THE PURPOSE OF DETERMINING THE OD OF THE MANDREL, MUST EQUAL BE THE AVERAGE OUTSIDE DIAMETER MINUS TWO MINIMUM WALL THICKNESSES FOR OD CONTROLLED PIPE AND THE AVERAGE INSIDE DIAMETER FOR ID CONTROLLED PIPE.
(III) ALL DIMENSIONS MUST MEET THE APPROPRIATE STANDARD.
(B) MANDREL DESIGN.
(I) A RIGID MANDREL MUST BE CONSTRUCTED OF A METAL OR A RIGID PLASTIC MATERIAL THAT CAN WITHSTAND 200 PSI WITHOUT BEING DEFORMED.
(II) A MANDREL MUST HAVE NINE OR MORE ODD NUMBER OF RUNNERS OR LEGS.
(III) A BARREL SECTION LENGTH MUST EQUAL AT LEAST 75% OF THE INSIDE DIAMETER OF A PIPE.
(IV) EACH SIZE MANDREL MUST USE A SEPARATE PROVING RING.
(C) METHOD OPTIONS.
(I) AN ADJUSTABLE OR FLEXIBLE MANDREL IS PROHIBITED.
(II) A TEST MAY NOT USE TELEVISION INSPECTION AS A SUBSTITUTE FOR A DEFLECTION TEST.
(III) IF REQUESTED, THE EXECUTIVE DIRECTOR MAY APPROVE THE USE OF A DEFLECTOMETER OR A MANDREL WITH REMOVABLE LEGS OR RUNNERS ON A CASE-BY-CASE BASIS.
(2) FOR A GRAVITY COLLECTION SYSTEM PIPE WITH AN INSIDE DIAMETER 27 INCHES AND GREATER, OTHER TEST METHODS MAY BE USED TO DETERMINE VERTICAL DEFLECTION.
(3) A DEFLECTION TEST METHOD MUST BE ACCURATE TO WITHIN PLUS OR MINUS 0.2% DEFLECTION.
(4) AN OWNER SHALL NOT CONDUCT A DEFLECTION TEST UNTIL AT LEAST 30 DAYS AFTER THE FINAL BACKFILL.
(5) GRAVITY COLLECTION SYSTEM PIPE DEFLECTION MUST NOT EXCEED FIVE PERCENT (5%).
(6) IF A PIPE SECTION FAILS A DEFLECTION TEST, AN OWNER SHALL CORRECT THE PROBLEM AND CONDUCT A SECOND TEST AFTER THE FINAL BACKFILL HAS BEEN IN PLACE AT LEAST 30 DAYS.

16. ALL MANHOLES MUST BE TESTED TO MEET OR EXCEED THE REQUIREMENTS OF 30 TAC §217.58.

(A) ALL MANHOLES MUST PASS A LEAKAGE TEST.
(B) AN OWNER SHALL TEST EACH MANHOLE (AFTER ASSEMBLY AND BACKFILLING) FOR LEAKAGE, SEPARATE AND INDEPENDENT OF THE COLLECTION SYSTEM PIPES, BY HYDROSTATIC EXFILTRATION TESTING, VACUUM TESTING, OR OTHER METHOD APPROVED BY THE EXECUTIVE DIRECTOR.
(1) HYDROSTATIC TESTING.
(A) THE MAXIMUM LEAKAGE FOR HYDROSTATIC TESTING OR ANY ALTERNATIVE TEST METHODS IS 0.025 GALLONS PER FOOT DIAMETER PER FOOT OF MANHOLE DEPTH PER HOUR.
(B) TO PERFORM A HYDROSTATIC EXFILTRATION TEST, AN OWNER SHALL SEAL ALL WASTEWATER PIPES COMING INTO A MANHOLE WITH AN INTERNAL PIPE PLUG, FILL THE MANHOLE WITH WATER, AND MAINTAIN THE TEST FOR AT LEAST ONE HOUR.
(C) A TEST FOR CONCRETE MANHOLES MAY USE A 24-HOUR WETTING PERIOD BEFORE TESTING TO ALLOW SATURATION OF THE CONCRETE.
(2) VACUUM TESTING.
(A) TO PERFORM A VACUUM TEST, AN OWNER SHALL PLUG ALL LIFT HOLES AND EXTERIOR JOINTS WITH A NON-SHRINK GROUT AND PLUG ALL PIPES ENTERING A MANHOLE.
(B) NO GROUT MUST BE PLACED IN HORIZONTAL JOINTS BEFORE TESTING.
(C) STUB-OUTS, MANHOLE BOOTS, AND PIPE PLUGS MUST BE SECURED TO PREVENT MOVEMENT WHILE A VACUUM IS DRAWN.
(D) AN OWNER SHALL USE A MINIMUM 60 INCH/LB TORQUE WRENCH TO TIGHTEN THE EXTERNAL CLAMPS THAT SECURE A TEST COVER TO THE TOP OF A MANHOLE.
(E) A TEST HEAD MUST BE PLACED AT THE INSIDE OF THE TOP OF A CONE SECTION, AND THE SEAL INFLATED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.
(F) THERE MUST BE A VACUUM 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 IS AT LEAST 9.0 INCHES OF MERCURY.

17. ALL PRIVATE SERVICE LATERALS MUST BE INSPECTED AND CERTIFIED IN ACCORDANCE WITH 30 TAC §213.5(C)(3)(I). AFTER INSTALLATION OF AND, PRIOR TO COVERING AND CONNECTING A PRIVATE SERVICE LATERAL TO AN EXISTING ORGANIZED SEWAGE COLLECTION SYSTEM, A TEXAS LICENSED PROFESSIONAL ENGINEER, TEXAS REGISTERED SANITARIAN, OR APPROPRIATE CITY INSPECTOR MUST VISUALLY INSPECT THE PRIVATE SERVICE LATERAL AND THE CONNECTION TO THE SEWAGE COLLECTION SYSTEM, AND CERTIFY THAT IT IS CONSTRUCTED IN CONFORMITY WITH THE APPLICABLE PROVISIONS OF THIS SECTION. THE OWNER OF THE COLLECTION SYSTEM MUST MAINTAIN SUCH CERTIFICATIONS FOR FIVE YEARS AND FORWARD COPIES TO THE APPROPRIATE REGIONAL OFFICE UPON REQUEST. CONNECTIONS MAY ONLY 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 SPECIFICATIONS MANUAL.
2. ANY EXISTING UTILITIES, PAVEMENT, CURBS, SIDEWALKS, STRUCTURES, TREES, ETC., NOT PLANNED FOR DESTRUCTION OR REMOVAL THAT ARE DAMAGED OR REMOVED SHALL BE REPAIRED OR REPLACED AT CONTRACTOR'S EXPENSE.
3. THE CONTRACTOR SHALL VERIFY ALL DEPTHS AND LOCATIONS OF EXISTING UTILITIES PRIOR TO ANY CONSTRUCTION. ANY DISCREPANCIES WITH THE CONSTRUCTION PLANS FOUND IN THE FIELD SHALL BE BROUGHT IMMEDIATELY TO THE ATTENTION OF THE ENGINEER WHO SHALL BE RESPONSIBLE FOR REVISING THE PLANS AS APPROPRIATE.
4. MANHOLE FRAMES, COVERS, VALVES, CLEANOUTS, ETC. SHALL BE RAISED TO FINISHED GRADE PRIOR TO FINAL PAVING CONSTRUCTION.
5. THE CONTRACTOR SHALL GIVE THE CITY OF JARRELL 48 HOURS NOTICE BEFORE BEGINNING EACH PHASE OF CONSTRUCTION. TELEPHONE (512)746-4593 (PERMITS/DEVELOPMENT DEPARTMENT).
6. ALL AREAS DISTURBED OR EXPOSED DURING CONSTRUCTION SHALL BE REVEGETATED IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS. REVEGETATION OF ALL DISTURBED OR EXPOSED AREAS SHALL CONSIST OF SODDING OR SEEDING, AT THE CONTRACTOR'S OPTION. HOWEVER, THE TYPE OF REVEGETATION MUST EQUAL OR EXCEED THE TYPE OF VEGETATION PRESENT BEFORE CONSTRUCTION.
7. PRIOR TO ANY CONSTRUCTION, THE ENGINEER SHALL CONVENE A PRECONSTRUCTION CONFERENCE BETWEEN THE CITY OF JARRELL, HIMSELF, THE CONTRACTOR, OTHER UTILITY COMPANIES, ANY AFFECTED PARTIES AND ANY OTHER ENTITY THE CITY OR ENGINEER MAY REQUIRE.
8. THE CONTRACTOR AND THE ENGINEER SHALL KEEP ACCURATE RECORDS OF ALL CONSTRUCTION THAT DEVIATES FROM THE PLANS. THE ENGINEER SHALL FURNISH THE CITY OF JARRELL ACCURATE "AS-BUILT" DRAWINGS FOLLOWING COMPLETION OF ALL CONSTRUCTION. THESE "AS-BUILT" DRAWINGS SHALL MEET WITH THE SATISFACTION OF THE PERMITS/DEVELOPMENT DEPARTMENT PRIOR TO FINAL ACCEPTANCE.
9. WHEN CONSTRUCTION IS BEING CARRIED OUT WITHIN EASEMENTS, THE CONTRACTOR SHALL CONFINE HIS WORK TO WITHIN THE PERMANENT AND ANY TEMPORARY EASEMENTS. PRIOR TO FINAL ACCEPTANCE, THE CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING ALL TRASH AND DEBRIS WITHIN THE PERMANENT AND 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 PERMITS FROM THE APPROPRIATE AUTHORITIES.

TRENCH SAFETY NOTES:

1. IN ACCORDANCE WITH THE LAWS OF THE STATE OF TEXAS AND THE U. S. OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION REGULATIONS, ALL TRENCHES OVER 5 FEET IN DEPTH IN EITHER HARD AND COMPACT OR SOFT AND UNSTABLE SOIL SHALL BE SLOPED, SHORED, SHEETED, BRACED OR OTHERWISE SUPPORTED. FURTHERMORE, ALL TRENCHES LESS THAN 5 FEET IN DEPTH SHALL ALSO BE EFFECTIVELY PROTECTED WHEN HAZARDOUS GROUND MOVEMENT MAY BE EXPECTED. TRENCH SAFETY SYSTEMS TO BE UTILIZED FOR THIS PROJECT WILL BE PROVIDED BY THE CONTRACTOR.
2. IN ACCORDANCE WITH THE U. S. OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION REGULATIONS, WHEN PERSONS ARE IN TRENCHES 4 FEET DEEP OR MORE, ADEQUATE MEANS OF EXIT, SUCH AS A LADDER OR STEPS, MUST BE PROVIDED AND LOCATED SO AS TO REQUIRE NO MORE THAN 25 FEET OF LATERAL TRAVEL.
3. IF TRENCH SAFETY SYSTEM DETAILS WERE NOT PROVIDED IN THE PLANS BECAUSE TRENCHES WERE ANTICIPATED TO BE LESS THAN 5 FEET IN DEPTH AND DURING CONSTRUCTION IT IS FOUND THAT TRENCHES ARE IN FACT 5 FEET OR MORE IN DEPTH OR TRENCHES LESS THAN 5 FEET IN DEPTH ARE IN AN AREA WHERE HAZARDOUS GROUND MOVEMENT IS EXPECTED, ALL CONSTRUCTION SHALL CEASE, THE TRENCHED AREA SHALL BE BARRICADED AND THE ENGINEER NOTIFIED IMMEDIATELY. CONSTRUCTION SHALL NOT RESUME UNTIL APPROPRIATE TRENCH SAFETY SYSTEM DETAILS, AS DESIGNED BY A PROFESSIONAL ENGINEER, ARE RETAINED 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 RETESTING SHALL BE PAID FOR BY THE CONTRACTOR. A CITY INSPECTOR SHALL BE PRESENT DURING ALL TESTS. TESTING SHALL BE COORDINATED WITH THE CITY INSPECTOR AND HE SHALL BE GIVEN A MINIMUM OF 24 HOURS NOTICE PRIOR TO ANY TESTING. TELEPHONE (512)746-4593 (INSPECTIONS).
2. BACKFILL BEHIND THE CURB SHALL BE COMPACTED TO OBTAIN A MINIMUM OF 95% MAXIMUM DENSITY TO WITHIN 3" OF TOP OF CURB. MATERIAL USED SHALL BE PRIMARILY GRANULAR WITH NO ROCKS LARGER THAN 6" IN THE GREATEST DIMENSION. THE REMAINING 3" SHALL BE CLEAN TOPSOIL FREE FROM ALL CLODS AND SUITABLE FOR SUSTAINING PLANT LIFE.
3. DEPTH OF COVER FOR ALL CROSSINGS UNDER PAVEMENT INCLUDING GAS, ELECTRIC, TELEPHONE, CABLE TV, 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 UNLESS OTHERWISE INDICATED. HOWEVER, IN NO CASE SHALL THE WIDTH OF RIGHT-OF-WAY AT 1/4" PER FOOT SLOPE BE LESS THAN 10 FEET UNLESS A SPECIFIC REQUEST FOR AN ALTERNATE GRADING SCHEME IS MADE TO AND ACCEPTED BY THE CITY OF JARRELL PERMITS/DEVELOPMENT DEPARTMENT.
5. BARRICADES BUILT TO CITY OF JARRELL STANDARDS SHALL BE CONSTRUCTED ON ALL DEAD-END STREETS AND AS NECESSARY DURING CONSTRUCTION TO MAINTAIN JOB AND PUBLIC SAFETY.
6. ALL R.C.P. SHALL BE MINIMUM CLASS III.

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, MIN. CLASS 200). WATER SERVICES (2" OR LESS) SHALL BE POLYETHYLENE TUBING (BLACK, 200 PSI, DR 9).
2. 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).
3. 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.
4. ALL FIRE HYDRANT LEADS SHALL BE DUCTILE IRON PIPE (AWWA C-100, MIN. CLASS 200).
5. ALL IRON PIPE AND FITTINGS SHALL BE WRAPPED WITH MINIMUM 8-MIL POLYETHYLENE AND SEALED WITH DUCT 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 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 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 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 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 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.
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.
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.
14. THE CONTRACTOR SHALL NOT OPEN OR CLOSE ANY VALVES UNLESS AUTHORIZED BY THE CITY OF JARRELL.
15. ALL VALVE BOXES AND COVERS SHALL BE CAST IRON.
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
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 MARKING SHALL BE AS SPECIFIED BY THE ENGINEER AND ACCEPTED BY THE CITY OF JARRELL.

17. CONTACT THE CITY OF JARRELL PERMITS/DEVELOPMENT DEPARTMENT AT (512)746-4593 FOR ASSISTANCE IN OBTAINING EXISTING WATER AND WASTEWATER LOCATIONS.
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.
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
1/2"	0
3/8"	0-2
#4	40-85
#10	95-100

20. THE CONTRACTOR IS HEREBY NOTIFIED THAT CONNECTING TO, SHUTTING DOWN, OR TERMINATING EXISTING 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 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:

1. 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.
2. 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.

EROSION AND SEDIMENTATION CONTROL NOTES:

1. EROSION CONTROL MEASURES, SITE WORK AND RESTORATION WORK SHALL BE IN ACCORDANCE WITH THE CITY OF JARRELL EROSION AND SEDIMENTATION CONTROL ORDINANCE.
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.
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.
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.

BENCHMARKS

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

BM 7210 - MAG NAIL SET IN CONCRETE
ELEV. 823.90

No.	REVISIONS	DATE	BY

Kimley»Horn

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PHONE: 512-520-0768 FAX: 512-418-1791
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TEXAS REGISTERED ENGINEERING FIRM F-928

2/09/2024
STATE OF TEXAS
ALEJANDRO E. GRANADOS RICO
130084
LICENSED
PROFESSIONAL ENGINEER

KHA PROJECT 069427200
DATE FEBRUARY 2024
SCALE: AS SHOWN
DESIGNED BY: JDR
DRAWN BY: [illegible]
CHECKED BY: AEG

GENERAL NOTES

KID ZONE ON CR307
CITY OF JARRELL
WILLIAMSON COUNTY, TEXAS

SHEET NUMBER
2

KH GENERAL NOTES

OVERALL:

1. ALL CONSTRUCTION AND MATERIALS SHALL BE IN ACCORDANCE WITH THESE PLANS, CITY (OR TOWN) 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 CONFLICTING SPECIFICATIONS OR DETAILS, THE MORE RESTRICTIVE SPECIFICATION AND DETAIL SHALL BE FOLLOWED.
2. THE CONTRACTOR SHALL COMPLY WITH CITY (OR TOWN) "GENERAL NOTES" FOR CONSTRUCTION, IF EXISTING AND REQUIRED BY THE CITY. FOR INSTANCES WHERE THEY CONFLICT WITH THESE KH GENERAL NOTES, THEN THE MORE RESTRICTIVE SHALL APPLY.
3. THE CONTRACTOR SHALL FURNISH ALL MATERIAL AND LABOR TO CONSTRUCT THE FACILITY AS SHOWN AND DESCRIBED IN THE CONSTRUCTION DOCUMENTS IN ACCORDANCE WITH THE APPROPRIATE AUTHORITIES' SPECIFICATIONS AND REQUIREMENTS.
4. THE CONTRACTOR SHALL VISIT THE SITE PRIOR TO BIDDING TO DETERMINE EXISTING CONDITIONS.
5. THE EXISTING CONDITIONS SHOWN ON THESE PLANS WERE PROVIDED BY THE TOPOGRAPHIC SURVEY PREPARED BY THE PROJECT SURVEYOR, AND ARE BASED ON THE BENCHMARKS SHOWN. THE CONTRACTOR SHALL REFERENCE THE SAME BENCHMARKS.
6. THE CONTRACTOR SHALL REVIEW AND VERIFY THE EXISTING TOPOGRAPHIC SURVEY SHOWN ON THE PLANS REPRESENTS EXISTING FIELD CONDITIONS PRIOR TO CONSTRUCTION, AND SHALL REPORT ANY DISCREPANCIES FOUND TO THE OWNER AND ENGINEER IMMEDIATELY.
7. IF THE CONTRACTOR DOES NOT ACCEPT THE EXISTING TOPOGRAPHIC SURVEY AS SHOWN ON THE PLANS, WITHOUT EXCEPTION, THEN THE CONTRACTOR SHALL SUPPLY AT THEIR OWN EXPENSE, A TOPOGRAPHIC SURVEY BY A REGISTERED PROFESSIONAL LAND SURVEYOR TO THE OWNER AND ENGINEER FOR REVIEW.
8. CONTRACTOR SHALL PROVIDE ALL CONSTRUCTION SURVEYING AND STAKING.
9. CONTRACTOR SHALL VERIFY HORIZONTAL AND VERTICAL CONTROL, INCLUDING BENCHMARKS PRIOR TO COMMENCING CONSTRUCTION OR STAKING OF IMPROVEMENTS. PROPERTY LINES AND CORNERS SHALL BE HELD AS THE HORIZONTAL CONTROL.
10. THE CONTRACTOR SHALL REVIEW AND VERIFY ALL DIMENSIONS, ELEVATIONS, AND FIELD CONDITIONS THAT MAY AFFECT CONSTRUCTION. ANY DISCREPANCIES ON THE DRAWINGS SHALL BE IMMEDIATELY BROUGHT TO THE ATTENTION OF THE ARCHITECT AND ENGINEER BEFORE COMMENCING WORK. NO FIELD CHANGES OR DEVIATIONS FROM DESIGN ARE TO BE MADE WITHOUT PRIOR APPROVAL OF THE ARCHITECT, ENGINEER, AND IF APPLICABLE THE CITY AND OWNER. NO CONSIDERATION WILL BE GIVEN TO CHANGE ORDERS FOR WHICH THE CITY, ENGINEER, AND OWNER WERE NOT CONTACTED PRIOR TO CONSTRUCTION OF THE AFFECTED ITEM.
11. CONTRACTOR SHALL THOROUGHLY CHECK COORDINATION OF CIVIL, LANDSCAPE, MEP, ARCHITECTURAL, AND OTHER PLANS PRIOR TO COMMENCING CONSTRUCTION. OWNER/ENGINEER SHALL BE NOTIFIED OF ANY DISCREPANCY PRIOR TO COMMENCING WITH CONSTRUCTION.
12. IT IS THE CONTRACTOR'S RESPONSIBILITY TO CONTACT THE VARIOUS UTILITY COMPANIES WHICH MAY HAVE BURIED OR AERIAL UTILITIES WITHIN OR NEAR THE CONSTRUCTION AREA BEFORE COMMENCING WORK TO HAVE THEM LOCATE THEIR EXISTING UTILITIES PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL PROVIDE AN ADEQUATE MINIMUM NOTICE TO ALL UTILITY COMPANIES PRIOR TO BEGINNING CONSTRUCTION.
13. CONTRACTOR SHALL CALL TEXAS 811 AN ADEQUATE AMOUNT OF TIME PRIOR TO COMMENCING CONSTRUCTION OR ANY EXCAVATION.
14. CONTRACTOR SHALL USE EXTREME CAUTION AS THE SITE CONTAINS VARIOUS KNOWN AND UNKNOWN PUBLIC AND PRIVATE UTILITIES.
15. THE LOCATIONS, ELEVATIONS, DEPTH, AND DIMENSIONS OF EXISTING UTILITIES SHOWN ON THE PLANS WERE OBTAINED FROM AVAILABLE UTILITY COMPANY MAPS AND PLANS, AND ARE CONSIDERED APPROXIMATE AND INCOMPLETE. IT SHALL BE THE CONTRACTORS' RESPONSIBILITY TO VERIFY THE PRESENCE, LOCATION, ELEVATION, DEPTH, AND DIMENSION OF EXISTING UTILITIES SUFFICIENTLY IN ADVANCE OF CONSTRUCTION SO THAT ADJUSTMENTS CAN BE MADE TO PROVIDE ADEQUATE CLEARANCES. THE ENGINEER SHALL BE NOTIFIED WHEN A PROPOSED IMPROVEMENT CONFLICTS WITH AN EXISTING UTILITY.
16. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING ANY ADJUSTMENTS AND RELOCATIONS OF EXISTING UTILITIES THAT CONFLICT WITH THE PROPOSED IMPROVEMENTS, INCLUDING BUT NOT LIMITED TO, ADJUSTING EXISTING MANHOLES TO MATCH PROPOSED GRADE, RELOCATING EXISTING POLES AND GUY WIRES THAT ARE LOCATED IN PROPOSED DRIVEWAYS, ADJUSTING THE HORIZONTAL OR VERTICAL ALIGNMENT OF EXISTING UNDERGROUND UTILITIES TO ACCOMMODATE PROPOSED GRADE OR CROSSING WITH A PROPOSED UTILITY, AND ANY OTHERS THAT MAY BE ENCOUNTERED THAT ARE UNKNOWN AT THIS TIME AND NOT SHOWN ON THESE PLANS.
17. CONTRACTOR SHALL ARRANGE FOR OR PROVIDE, AT ITS EXPENSE, ALL GAS, TELECOMMUNICATIONS, CABLE, OVERHEAD AND UNDERGROUND POWER LINE, AND UTILITY POLE ADJUSTMENTS NEEDED.
18. CONTRACTOR IS RESPONSIBLE FOR COORDINATING INSTALLATION OF FRANCHISE UTILITIES THAT ARE NECESSARY FOR ON-SITE AND OFF-SITE CONSTRUCTION, AND SERVICE TO THE PROPOSED DEVELOPMENT.
19. THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR ALL DAMAGES DUE TO THE CONTRACTORS' FAILURE TO EXACTLY LOCATE AND PRESERVE ALL UTILITIES. THE OWNER OR ENGINEER WILL ASSUME NO LIABILITY FOR ANY DAMAGES SUSTAINED OR COST INCURRED BECAUSE OF THE OPERATIONS IN THE VICINITY OF EXISTING UTILITIES OR STRUCTURES. IF IT IS NECESSARY TO SHORE, BRACE, SWING OR RELOCATE A UTILITY, THE UTILITY COMPANY OR DEPARTMENT AFFECTED SHALL BE CONTACTED BY THE CONTRACTOR AND THEIR PERMISSION OBTAINED REGARDING THE METHOD TO USE FOR SUCH WORK.
20. BRACING OF UTILITY POLES MAY BE REQUIRED BY THE UTILITY COMPANIES WHEN TRENCHING OR EXCAVATING IN CLOSE PROXIMITY TO THE POLES. THE COST OF BRACING POLES WILL BE BORNE BY THE CONTRACTOR, WITH NO SEPARATE PAY ITEM FOR THIS WORK. THE COST IS INCIDENTAL TO THE PAY ITEM.
21. CONTRACTOR SHALL USE ALL NECESSARY SAFETY PRECAUTIONS TO AVOID CONTACT WITH OVERHEAD AND UNDERGROUND POWER LINES. CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE LOCAL, STATE, FEDERAL AND UTILITY OWNER REGULATIONS PERTAINING TO WORK SETBACKS FROM POWER LINES.
22. THE CONTRACTOR SHALL BE RESPONSIBLE TO OBTAIN ALL REQUIRED CONSTRUCTION PERMITS, APPROVALS, AND BONDS PRIOR TO CONSTRUCTION.
23. THE CONTRACTOR SHALL HAVE AVAILABLE AT THE JOB SITE AT ALL TIMES A COPY OF THE CONTRACT DOCUMENTS INCLUDING PLANS, GEOTECHNICAL REPORT AND ADDENDA, PROJECT AND CITY SPECIFICATIONS, AND SPECIAL CONDITIONS, COPIES OF ANY REQUIRED CONSTRUCTION PERMITS, EROSION CONTROL PLANS, SWPPP AND INSPECTION REPORTS.
24. ALL SHOP DRAWINGS AND OTHER DOCUMENTS THAT REQUIRE ENGINEER REVIEW SHALL BE SUBMITTED BY THE CONTRACTOR SUFFICIENTLY IN ADVANCE OF CONSTRUCTION OF THAT ITEM, SO THAT NO LESS THAN 10 BUSINESS DAYS FOR REVIEW AND RESPONSE IS AVAILABLE.
25. ALL NECESSARY INSPECTIONS AND/OR CERTIFICATIONS REQUIRED BY CODES, JURISDICTIONAL AGENCIES, AND/OR UTILITY SERVICE COMPANIES SHALL BE PERFORMED PRIOR TO USE OF THE FACILITY AND THE FINAL CONNECTION OF SERVICES.
26. CONTRACTOR SHALL ARRANGE FOR REQUIRED CITY INSPECTIONS.
27. CONTRACTOR'S BID PRICE SHALL INCLUDE ALL INSPECTION FEES.
28. ALL SYMBOLS SHOWN ON THESE PLANS (E.G. FIRE HYDRANT, METERS, VALVES, INLETS, ETC....) ARE FOR PRESENTATION PURPOSES ONLY AND ARE NOT TO SCALE. CONTRACTOR SHALL COORDINATE FINAL SIZES AND LOCATIONS WITH APPROPRIATE CITY INSPECTOR.
29. THE SCOPE OF WORK FOR THE CIVIL IMPROVEMENTS SHOWN ON THESE PLANS TERMINATES 5-FEET FROM THE BUILDING. REFERENCE THE BUILDING PLANS (E.G. ARCHITECTURAL, STRUCTURAL, MEP) FOR AREAS WITHIN 5-FEET OF THE BUILDING AND WITHIN THE BUILDING FOOTPRINT.
30. REFER TO ARCHITECTURAL AND STRUCTURAL PLANS FOR ALL FINAL BUILDING DIMENSIONS.
31. THE PROPOSED BUILDING FOOTPRINT(S) SHOWN IN THESE PLANS WAS PROVIDED TO KIMLEY-HORN AND ASSOCIATES, INC. (KH) BY THE PROJECT ARCHITECT AT THE TIME THESE PLANS WERE PREPARED. IT MAY NOT BE THE FINAL CORRECT VERSION BECAUSE THE BUILDING DESIGN WAS ONGOING. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR CONFIRMING THE FINAL CORRECT VERSION OF THE BUILDING FOOTPRINT WITH THE ARCHITECT AND STRUCTURAL ENGINEER PRIOR TO LAYOUT. DIMENSIONS AND/OR COORDINATES SHOWN ON THESE PLANS WERE BASED ON THE ABOVE STATED ARCHITECTURAL FOOTPRINT, AND ARE THEREFORE A PRELIMINARY LOCATION OF THE BUILDING. THE CONTRACTOR IS SOLELY RESPONSIBLE TO VERIFY WHAT PART OF THE BUILDING THE ARCHITECT'S FOOTPRINT REPRESENTS (E.G. SLAB, OUTSIDE WALL, MASONRY LEDGE, ETC.....) AND TO CONFIRM ITS FINAL POSITION ON THE SITE BASED ON THE FINAL ARCHITECTURAL FOOTPRINT, CIVIL DIMENSION CONTROL PLAN, SURVEY BOUNDARY AND/OR PLAT. ANY DIFFERENCES FOUND SHALL BE REPORTED TO KH IMMEDIATELY.
32. ALL CONSTRUCTION SHALL COMPLY WITH THE PROJECT'S FINAL GEOTECHNICAL REPORT (OR LATEST EDITION), INCLUDING SUBSEQUENT ADDENDA.
33. CONTRACTOR IS RESPONSIBLE FOR ALL MATERIALS TESTING AND CERTIFICATION, UNLESS SPECIFIED OTHERWISE BY OWNER. ALL MATERIALS TESTING SHALL BE COORDINATED WITH THE APPROPRIATE CITY INSPECTOR AND COMPLY WITH CITY STANDARD SPECIFICATIONS AND GEOTECHNICAL REPORT. TESTING SHALL BE PERFORMED BY AN APPROVED INDEPENDENT AGENCY FOR TESTING MATERIALS. OWNER SHALL APPROVE THE AGENCY NOMINATED BY THE CONTRACTOR FOR MATERIALS TESTING.
34. ALL COPIES OF MATERIALS TEST RESULTS SHALL BE SENT TO THE OWNER, ENGINEER AND ARCHITECT DIRECTLY FROM THE TESTING AGENCY.
35. IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO SHOW, BY THE STANDARD TESTING PROCEDURES OF THE MATERIALS, THAT THE WORK CONSTRUCTED MEETS THE PROJECT REQUIREMENTS AND CITY SPECIFICATIONS.
36. 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.
37. ALL CONTRACTORS MUST CONFINE THEIR ACTIVITIES TO THE WORK AREA. NO ENCROACHMENTS OUTSIDE OF THE WORK AREA WILL BE ALLOWED. ANY DAMAGE RESULTING THEREFROM SHALL BE CONTRACTOR'S SOLE RESPONSIBILITY TO REPAIR.
38. THE CONTRACTOR SHALL PROTECT ALL EXISTING STRUCTURES, UTILITIES, MANHOLES, POLES, GUY WIRES, VALVE COVERS, VAULT LIDS, FIRE HYDRANTS, COMMUNICATION BOXES/PEDESTALS, AND OTHER FACILITIES TO REMAIN AND SHALL REPAIR ANY DAMAGES AT NO COST TO THE OWNER.
39. THE CONTRACTOR SHALL IMMEDIATELY REPAIR OR REPLACE ANY PHYSICAL DAMAGE TO PRIVATE PROPERTY OR PUBLIC IMPROVEMENTS, INCLUDING BUT NOT LIMITED TO: FENCES, WALLS, SIGNS, PAVEMENT, CURBS, UTILITIES, SIDEWALKS, GRASS, TREES, LANDSCAPING, AND IRRIGATION SYSTEMS, ETC.... TO ORIGINAL CONDITION OR BETTER AT NO COST TO THE OWNER.
40. ALL AREAS IN EXISTING RIGHT-OF-WAY DISTURBED BY SITE CONSTRUCTION SHALL BE REPAIRED TO ORIGINAL CONDITION OR BETTER, INCLUDING AS NECESSARY GRADING, LANDSCAPING, CULVERTS, AND PAVEMENT.
41. THE CONTRACTOR SHALL SALVAGE ALL EXISTING POWER POLES, SIGNS, WATER VALVES, FIRE HYDRANTS, METERS, ETC... THAT ARE TO BE RELOCATED DURING CONSTRUCTION.
42. CONTRACTOR SHALL MAINTAIN ADEQUATE SITE DRAINAGE DURING ALL PHASES OF CONSTRUCTION, INCLUDING MAINTAINING EXISTING DITCHES OR CULVERTS FREE OF OBSTRUCTIONS AT ALL TIMES.
43. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING AND SUBMITTING A TRENCH SAFETY PLAN, PREPARED BY A PROFESSIONAL ENGINEER IN THE STATE OF TEXAS, TO THE CITY PRIOR TO CONSTRUCTION. CONTRACTOR IS RESPONSIBLE FOR MAINTAINING TRENCH SAFETY REQUIREMENTS IN ACCORDANCE WITH CITY, STATE, AND FEDERAL REQUIREMENTS, INCLUDING OSHA FOR ALL TRENCHES. NO OPEN TRENCHES SHALL BE ALLOWED OVERNIGHT WITHOUT PRIOR WRITTEN APPROVAL OF THE CITY.
44. THE CONTRACTOR SHALL KEEP TRENCHES FREE FROM WATER.
45. SITE SAFETY IS SOLELY THE RESPONSIBILITY OF THE CONTRACTOR.
46. THESE PLANS DO NOT EXTEND TO OR INCLUDE DESIGNS OR SYSTEMS PERTAINING TO THE SAFETY OF THE CONTRACTOR OR ITS EMPLOYEES, AGENTS OR REPRESENTATIVES IN THE PERFORMANCE OF THE WORK. THE ENGINEER'S SEAL HEREON DOES NOT EXTEND TO ANY SUCH SAFETY SYSTEM. THE CONTRACTOR SHALL BE RESPONSIBLE FOR IMPLEMENTATION OF ALL REQUIRED SAFETY PROCEDURES AND PROGRAMS.
47. SIGNS RELATED TO SITE OPERATION OR SAFETY ARE NOT INCLUDED IN THESE PLANS.
48. CONTRACTOR OFFICE AND STAGING AREA SHALL BE AGREED ON BY THE OWNER AND CONTRACTOR PRIOR TO BEGINNING OF CONSTRUCTION. CONTRACTOR IS RESPONSIBLE FOR ALL PERMITTING REQUIREMENTS FOR THE CONSTRUCTION OFFICE, TRAILER, STORAGE, AND STAGING OPERATIONS AND LOCATIONS.
49. LIGHT POLES, SIGNS, AND OTHER OBSTRUCTIONS SHALL NOT BE PLACED IN ACCESSIBLE ROUTES.
50. ALL SIGNS, PAVEMENT MARKINGS, AND OTHER TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE "TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES".
51. TOP RIM ELEVATIONS OF ALL EXISTING AND PROPOSED MANHOLES SHALL BE COORDINATED WITH TOP OF PAVEMENT OR FINISHED GRADE AND SHALL BE ADJUSTED TO BE FLUSH WITH THE ACTUAL FINISHED GRADE AT THE TIME OF PAVING.
52. CONTRACTOR SHALL ADJUST ALL EXISTING AND PROPOSED VALVES, FIRE HYDRANTS, AND OTHER UTILITY APPURTENANCES TO MATCH ACTUAL FINISHED GRADES AT THE TIME OF PAVING.
53. THE CONTRACTOR IS RESPONSIBLE FOR CONSTRUCTION SEQUENCING AND PHASING, AND SHALL CONTACT THE APPROPRIATE CITY OFFICIALS, INCLUDING BUILDING OFFICIAL, ENGINEERING INSPECTOR, AND FIRE MARSHALL TO LEARN OF ANY REQUIREMENTS.
54. CONTRACTOR IS RESPONSIBLE FOR PREPARATION, SUBMITTAL, AND APPROVAL BY THE CITY OF A TRAFFIC CONTROL PLAN PRIOR TO THE START OF CONSTRUCTION, AND THEN THE IMPLEMENTATION OF THE PLAN.
55. CONTRACTOR SHALL KEEP A NEAT AND ACCURATE RECORD OF CONSTRUCTION, INCLUDING ANY DEVIATIONS OR VARIANCES FROM THE PLANS.
56. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING AS-BUILT PLANS TO THE ENGINEER AND CITY IDENTIFYING ALL DEVIATIONS AND VARIATIONS FROM THESE PLANS MADE DURING CONSTRUCTION.

EROSION CONTROL:

1. THE CONTRACTOR SHALL COMPLY WITH ALL LOCAL, STATE, AND FEDERAL EROSION CONTROL AND WATER QUALITY REQUIREMENTS, LAWS, AND ORDINANCES THAT APPLY TO THE CONSTRUCTION SITE LAND DISTURBANCE.
2. CONTRACTOR SHALL COMPLY WITH THE REQUIREMENTS OF THE "TCEQ GENERAL PERMIT TO DISCHARGE UNDER THE TEXAS POLLUTANT DISCHARGE ELIMINATION SYSTEM TXR 150000".
3. EROSION CONTROL DEVICES SHOWN ON THE EROSION CONTROL PLAN FOR THE PROJECT SHALL BE INSTALLED PRIOR TO THE START OF LAND DISTURBANCE.
4. ALL EROSION CONTROL DEVICES ARE TO BE INSTALLED IN ACCORDANCE WITH THE APPROVED PLANS AND SPECIFICATIONS FOR THE PROJECT.
5. CONTRACTOR IS SOLELY RESPONSIBLE FOR INSTALLATION, IMPLEMENTATION, MAINTENANCE, AND EFFECTIVENESS OF ALL EROSION CONTROL DEVICES, BEST MANAGEMENT PRACTICES (BMPS), AND FOR UPDATING THE EROSION CONTROL PLAN DURING CONSTRUCTION AS FIELD CONDITIONS CHANGE.
6. CONTRACTOR SHALL DOCUMENT THE DATES OF INSTALLATION, MAINTENANCE OR MODIFICATION, AND REMOVAL FOR EACH BMP EMPLOYED IN THE STORM WATER POLLUTION PREVENTION PLAN (SWPPP) IF APPLICABLE.
7. AS STORM SEWER INLETS ARE INSTALLED ON-SITE, TEMPORARY EROSION CONTROL DEVICES SHALL BE INSTALLED AT EACH INLET PER APPROVED DETAILS.
8. THE EROSION CONTROL DEVICES SHALL REMAIN IN PLACE UNTIL THE AREA IT PROTECTS HAS BEEN PERMANENTLY STABILIZED.
9. CONTRACTOR SHALL PROVIDE ADEQUATE EROSION CONTROL DEVICES NEEDED DUE TO PROJECT PHASING.
10. CONTRACTOR SHALL OBSERVE THE EFFECTIVENESS OF THE EROSION CONTROL DEVICES AND MAKE FIELD ADJUSTMENTS AND MODIFICATIONS AS NEEDED TO PREVENT SEDIMENT FROM LEAVING THE SITE. IF THE EROSION CONTROL DEVICES DO NOT EFFECTIVELY CONTROL EROSION AND PREVENT SEDIMENTATION FROM WASHING OFF THE SITE, THEN THE CONTRACTOR SHALL NOTIFY THE ENGINEER.
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 ENCIRCLING THE AREA WITH AN APPROPRIATE BARRIER.
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 ALL TIMES FOR ALL INGRESS/EGRESS.
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 REMOVED IMMEDIATELY.
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 OFF-SITE ROADWAYS.
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.
20. WHEN SEDIMENT OR DIRT HAS CLOGGED THE CONSTRUCTION ENTRANCE VOID SPACES BETWEEN STONES OR DIRT IS BEING TRACKED ONTO A ROADWAY, THE AGGREGATE PAD MUST BE WASHED DOWN OR REPLACED. RUNOFF FROM THE WASH-DOWN OPERATION SHALL 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.
21. TEMPORARY SEEDING OR OTHER APPROVED STABILIZATION SHALL BE INITIATED WITHIN 14 DAYS OF THE LAST DISTURBANCE OF ANY 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 MATERIAL, AND TRASH AS CONSTRUCTION PROGRESSES.
23. UPON COMPLETION OF FINE GRADING, ALL SURFACES OF DISTURBED AREAS SHALL BE PERMANENTLY STABILIZED. STABILIZATION IS ACHIEVED WHEN THE AREA IS EITHER COVERED BY PERMANENT IMPERVIOUS STRUCTURES, SUCH AS BUILDINGS, SIDEWALK, PAVEMENT, OR A UNIFORM PERENNIAL VEGETATIVE COVER.
24. AT THE CONCLUSION OF THE PROJECT, ALL INLETS, DRAIN PIPE, CHANNELS, DRAINAGEWAYS AND BORROW DITCHES AFFECTED BY THE CONSTRUCTION SHALL BE DREDGED, AND THE SEDIMENT GENERATED BY THE PROJECT SHALL BE REMOVED AND DISPOSED IN ACCORDANCE WITH APPLICABLE REGULATIONS.
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 SOLELY 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 APPLICABLE LAWS.

STORM WATER DISCHARGE AUTHORIZATION:

1. CONTRACTOR SHALL COMPLY WITH ALL TCEQ AND EPA STORM WATER POLLUTION PREVENTION REQUIREMENTS.
2. CONTRACTOR SHALL COMPLY WITH THE REQUIREMENTS OF THE TCEQ GENERAL PERMIT TO DISCHARGE UNDER THE TEXAS POLLUTANT DISCHARGE ELIMINATION SYSTEM TXR 150000.
3. THE CONTRACTOR SHALL ENSURE THAT ALL PRIMARY OPERATORS SUBMIT A NOI TO TCEQ AT LEAST SEVEN DAYS PRIOR TO 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) RECEIVING DISCHARGE FROM THE SITE.
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 BY THE TCEQ AND EPA (E.G. NOI).
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 THE OPERATOR OF ANY MS4 RECEIVING DISCHARGE FROM THE SITE.

DEMOLITION:

1. 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 AND REMOVED FROM THE SITE.
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 PROCESS FOR THE REMOVAL OF THEIR FACILITIES.
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.
4. CONTRACTOR IS STRONGLY CAUTIONED TO REVIEW THE FOLLOWING REPORTS DESCRIBING SITE CONDITIONS PRIOR TO BIDDING AND IMPLEMENTING THE DEMOLITION PLAN:
   a. ENVIRONMENTAL SITE ASSESSMENT PROVIDED BY THE OWNER,
   b. ASBESTOS BUILDING INSPECTION REPORT(S) PROVIDED BY THE OWNER,
   c. GEOTECHNICAL REPORT PROVIDED BY THE OWNER.
   d. OTHER REPORTS THAT ARE APPLICABLE AND AVAILABLE.
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 STARTING ANY WORK ON THE SITE.
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, FOUNDATIONS OR WALLS, THAT ARE ALSO TO BE REMOVED.

GRADING:

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 ANY DISCREPANCIES.
2. CONTRACTOR SHALL OBTAIN ANY REQUIRED GRADING PERMITS FROM THE CITY.
3. UNLESS OTHERWISE NOTED, PROPOSED CONTOURS AND SPOT ELEVATIONS SHOWN IN PAVED AREA REFLECT TOP OF PAVEMENT SURFACE. IN LOCATIONS ALONG A CURB LINE, ADD 6-INCHES (OR THE HEIGHT OF THE CURB) TO THE PAVING GRADE FOR TOP OF CURB ELEVATION.
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 DISCREPANCY.
6. ALL FINISHED GRADES SHALL TRANSITION UNIFORMLY BETWEEN THE FINISHED ELEVATIONS 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 PAVEMENT SECTION.
8. 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.
9. ALL GRADING AND EARTHWORK SHALL COMPLY WITH THE PROJECT'S FINAL GEOTECHNICAL REPORT (OR LATEST EDITION), INCLUDING SUBSEQUENT ADDENDA.
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 CONTRACTOR AT NO ADDITIONAL EXPENSE.
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 REQUIREMENTS.
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 GRADE CONTROL POINTS RELATED TO EARTHWORK.
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 THE RECEIVING LANDOWNER'S APPROVAL TO DO SO.
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 DITCHES OR CULVERTS FREE OF OBSTRUCTIONS AT ALL TIMES.
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.
17. TEMPORARY CULVERTS MAY BE REQUIRED IN SOME LOCATIONS TO CONVEY RUN-OFF.
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 PLACEMENT.
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 AGENCY.
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 IN THE BUILDING PAD.
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.
25. CONTRACTOR SHALL ENSURE THAT SUFFICIENT POSITIVE SLOPE AWAY FROM THE BUILDING PAD IS ACHIEVED FOR ENTIRE PERIMETER OF THE PROPOSED BUILDING(S) DURING GRADING OPERATIONS AND IN THE FINAL CONDITION. IF THE CONTRACTOR OBSERVES THAT 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 FOUND 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, AND 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 AND THE 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 CONFIRMED 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 PAVEMENT AREAS FOR EVIDENCE OF PONDING AND INADEQUATE SLOPE FOR DRAINAGE. ALL AREAS SHALL ADEQUATELY DRAIN TOWARDS THE INTENDED STRUCTURE TO CONVEY STORMWATER RUNOFF. CONTRACTOR SHALL IMMEDIATELY NOTIFY OWNER AND ENGINEER IF ANY AREAS OF POOR DRAINAGE ARE DISCOVERED.
35. CONTRACTOR FIELD ADJUSTMENT OF PROPOSED SPOT GRADES IS ALLOWED, IF THE APPROVAL OF THE CIVIL ENGINEER IS OBTAINED.

RETAINING WALLS:

1. RETAINING WALLS SHOWN ARE FOR SITE GRADING PURPOSES ONLY, AND INCLUDE ONLY LOCATION AND SURFACE SPOT ELEVATIONS 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 PLANS. STRUCTURAL DESIGN AND PERMITTING OF RETAINING WALLS, RAILINGS, AND OTHER WALL SAFETY DEVICES SHALL BE PERFORMED BY 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 ADJACENT BUILDING FOUNDATIONS, UTILITIES, PROPERTY LINES AND OTHER CONSTRUCTABILITY NOTES.
5. RETAINING WALL ENGINEER SHALL CONSULT THESE PLANS AND THE GEOTECHNICAL REPORT FOR POTENTIAL CONFLICTS.

PAVING:

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 CONFLICTING 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 LATEST EDITION), INCLUDING ALL ADDENDA.
3. ALL FIRELANE PAVING AND PAVING SUBGRADE SHALL COMPLY WITH CITY STANDARDS AND DETAILS. IF THESE ARE DIFFERENT THAN 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 SPECIFICATIONS.
5. CONTRACTOR IS RESPONSIBLE FOR ALL PAVING AND PAVING SUBGRADE TESTING AND CERTIFICATION, UNLESS SPECIFIED OTHERWISE 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 SHALL 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 PAVING 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 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.
8. CURB RAMPS ALONG PUBLIC STREETS AND IN THE PUBLIC RIGHT-OF-WAY SHALL BE CONSTRUCTED BASED ON THE CITY STANDARD 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 STANDARDS AND SHALL HAVE A DETECTABLE WARNING SURFACE THAT IS FULL WIDTH AND FULL DEPTH OF THE CURB RAMP, NOT INCLUDING FLARES.
10. ALL ACCESSIBLE RAMPS, CURB RAMPS, STRIPING, AND PAVEMENT MARKINGS SHALL CONFORM TO ADA AND TAS STANDARDS, LATEST EDITION.
11. ANY COMPONENTS OF THE PROJECT SUBJECT TO RESIDENTIAL USE SHALL ALSO CONFORM TO THE FAIR HOUSING ACT, AND COMPLY 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 PARKING SYMBOLS, AND MISCELLANEOUS STRIPING WITHIN PARKING LOT AND AROUND BUILDING AS SHOWN ON THE PLANS. ALL PAINT AND 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, AND SHALL BE SUPPORTED BY BAR CHAIRS. CONTRACTOR SHALL USE THE MORE STRINGENT OF THE CITY AND GEOTECHNICAL STANDARDS.
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 SO THEY ARE READILY VISIBLE TO THE ONCOMING TRAFFIC FOR WHICH THEY ARE INTENDED.
23. CONTRACTOR IS RESPONSIBLE FOR INSTALLING NECESSARY CONDUIT FOR LIGHTING, IRRIGATION, ETC. PRIOR TO PLACEMENT OF 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, AND FHA) EXIST TO AND FROM EVERY DOOR AND ALONG SIDEWALKS, ACCESSIBLE PARKING SPACES, ACCESS AISLES, AND ACCESSIBLE ROUTES. IN NO CASE SHALL AN ACCESSIBLE RAMP SLOPE EXCEED 1 VERTICAL TO 12 HORIZONTAL. IN NO CASE SHALL SIDEWALK CROSS SLOPE EXCEED 2.0 PERCENT. IN NO CASE SHALL LONGITUDINAL SIDEWALK SLOPE EXCEED 5.0 PERCENT. ACCESSIBLE PARKING 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 PAVEMENT TO VERIFY THAT ADA/TAS SLOPE REQUIREMENTS ARE PROVIDED. CONTRACTOR SHALL CONTACT ENGINEER PRIOR TO PAVING IF ANY EXCESSIVE SLOPES ARE ENCOUNTERED. NO CONTRACTOR CHANGE ORDERS WILL BE ACCEPTED FOR ADA AND TAS SLOPE COMPLIANCE ISSUES.

STORM DRAINAGE:

1. 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 INSTALLATION OF THE STORM SEWER.
3. THE CONTRACTOR SHALL FIELD VERIFY THE SIZE, CONDITION, HORIZONTAL, AND VERTICAL LOCATIONS OF ALL EXISTING STORM SEWER FACILITIES THAT ARE TO BE CONNECTED TO, PRIOR TO START OF CONSTRUCTION OF ANY STORM SEWER, AND SHALL NOTIFY THE ENGINEER OF ANY CONFLICTS DISCOVERED.
4. THE CONTRACTOR SHALL VERIFY AND COORDINATE ALL DIMENSIONS SHOWN, INCLUDING THE HORIZONTAL AND VERTICAL LOCATION 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 GRADING PLAN AND FIELD CONDITIONS PRIOR TO THEIR INSTALLATION.
6. ALL PUBLIC STORM SEWER CONSTRUCTION, PIPE, STRUCTURES, AND FITTINGS SHALL ADHERE TO CITY PUBLIC WORKS STANDARD 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 CODE. 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 HAVE A 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 SHALL BE CLASS III RCP OR OTHER APPROVED MATERIAL.
10. WHERE COVER EXCEEDS 20-FEET OR IS LESS THAN 2-FEET, CLASS IV RCP SHALL BE USED.
11. IF 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 MATERIAL. ANY PROPOSED HDPE AND PVC SHALL BE WATERTIGHT.
12. THE CONTRACTOR SHALL PROVIDE CONSTRUCTION SURVEYING FOR ALL STORM SEWER LINES.
13. 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 PROFESSIONAL ENGINEER IN THE STATE OF TEXAS, TO THE CITY PRIOR TO CONSTRUCTION. CONTRACTOR IS RESPONSIBLE FOR MAINTAINING TRENCH SAFETY REQUIREMENTS IN ACCORDANCE WITH CITY, STATE, AND FEDERAL REQUIREMENTS, INCLUDING OSHA FOR ALL TRENCHES. NO OPEN TRENCHES SHALL BE ALLOWED OVERNIGHT WITHOUT PRIOR WRITTEN APPROVAL OF THE CITY.
17. THE CONTRACTOR SHALL KEEP TRENCHES FREE FROM WATER.

POND NOTES:

1. 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 FOR POND LINER SPECIFICATIONS.
3. A GEOTECHNICAL ENGINEER SHALL REVIEW AND APPROVE ALL POND LINER MATERIAL, PLACEMENT PROCEDURES, AND PROVIDE 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 INSTALLED 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 ELIMINATED FOR AT LEAST 20-FEET FROM THE POND SO NO ROUTE FOR WATER TO LEAK THROUGH THE EMBEDMENT MATERIAL IS PROVIDED. BACKFILL 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 POND 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 LOWERED, 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 DETAILS AND SPECIFICATIONS.
2. CONTRACTOR SHALL FIELD VERIFY THE SIZE, CONDITION, HORIZONTAL, AND VERTICAL LOCATIONS OF ALL EXISTING WATER AND WASTEWATER FACILITIES THAT ARE TO BE CONNECTED TO, PRIOR TO START OF CONSTRUCTION OF ANY WATER OR WASTEWATER CONSTRUCTION, AND SHALL NOTIFY THE ENGINEER OF ANY CONFLICTS DISCOVERED.
3. CONTRACTOR SHALL VERIFY AND COORDINATE ALL DIMENSIONS SHOWN, INCLUDING THE HORIZONTAL AND VERTICAL LOCATION OF 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 INSTALLATION OF THE WATER AND WASTEWATER IMPROVEMENTS.
6. ALL PUBLIC WATER AND WASTEWATER CONSTRUCTION, PIPE, STRUCTURES, AND FITTINGS SHALL ADHERE TO CITY PUBLIC WORKS 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 APPLICABLE 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 THE APPLICABLE CODES AND INSPECTIONS REQUIRED. THESE PLANS WERE PREPARED WITHOUT THE BENEFIT OF THE FIRE SPRINKLER 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 KEEP 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.
12. ALL WATER AND WASTEWATER SERVICES SHALL TERMINATE 5-FEET OUTSIDE THE BUILDING, UNLESS NOTED OTHERWISE.
13. CONTRACTOR SHALL COMPLY WITH CITY REQUIREMENTS FOR WATER AND WASTEWATER SERVICE DISRUPTIONS AND THE AMOUNT OF 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 SURROUNDING PROPERTIES.
15. CONTRACTOR SHALL MAINTAIN WATER SERVICE AND WASTEWATER SERVICE TO ALL CUSTOMERS THROUGHOUT CONSTRUCTION (IF 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.
16. THE CONTRACTOR IS RESPONSIBLE TO PROTECT ALL WATER AND WASTEWATER LINES CROSSING THE PROJECT. THE CONTRACTOR SHALL REPAIR ALL DAMAGED LINES IMMEDIATELY. ALL REPAIRS OF EXISTING WATER MAINS, WATER SERVICES, SEWER MAINS, AND SANITARY SEWER SERVICES ARE SUBSIDIARY TO THE WORK, AND NO ADDITIONAL COMPENSATION SHALL BE ALLOWED.
17. VALVE ADJUSTMENTS SHALL BE CONSTRUCTED SUCH THAT THE COVERS ARE AT FINISHED SURFACE GRADE OF THE PROPOSED PAVEMENT.
18. THE ENDS OF ALL EXISTING WATER MAINS THAT ARE CUT, BUT NOT REMOVED, SHALL BE PLUGGED AND ABANDONED IN PLACE. THIS WORK SHALL BE CONSIDERED AS A SUBSIDIARY COST TO THE PROJECT AND NO ADDITIONAL COMPENSATION SHALL BE ALLOWED.
19. ALL FIRE HYDRANTS, VALVES, TEES, BENDS, WYES, REDUCERS, FITTINGS, AND ENDS SHALL BE MECHANICALLY RESTRAINED AND/OR THRUST BLOCKED TO CITY STANDARDS.
20. CONTRACTOR SHALL INSTALL A FULL SEGMENT OF WATER OR WASTEWATER PIPE CENTERED AT ALL UTILITY CROSSINGS SO THAT THE JOINTS ARE GREATER THAN 9-FEET FROM THE CROSSING.
21. ALL CROSSINGS AND LOCATIONS WHERE WASTEWATER IS LESS THAN 9-FEET FROM WATER, WASTEWATER CONSTRUCTION AND MATERIALS SHALL COMPLY WITH TCEQ CHAPTER 217.53.
22. ALL CROSSING AND LOCATIONS WHERE WATER IS LESS THAN 9-FEET FROM WASTEWATER, WATER CONSTRUCTION AND MATERIALS SHALL COMPLY WITH TCEQ CHAPTER 290.44.
23. ALL WATER AND WASTEWATER SHALL BE TESTED IN ACCORDANCE WITH THE CITY, AWWA, AND TCEQ STANDARDS AND SPECIFICATIONS. AT A MINIMUM, THIS SHALL CONSIST OF THE FOLLOWING:
   a. ALL WATERLINES SHALL BE HYDROSTATICALLY TESTED AND CHLORINATED BEFORE BEING PLACED INTO SERVICE. CONTRACTOR SHALL COORDINATE WITH THE CITY FOR THEIR REQUIRED PROCEDURES AND SHALL ALSO COMPLY WITH TCEQ REGULATIONS.
   b. WASTEWATER LINES AND MANHOLES SHALL BE PRESSURE TESTED. CONTRACTOR SHALL COORDINATE WITH THE CITY FOR THEIR REQUIRED PROCEDURES AND SHALL ALSO COMPLY WITH TCEQ REGULATIONS. AFTER COMPLETION OF THESE TESTS, A TELEVISION INSPECTION SHALL BE PERFORMED AND PROVIDED TO THE CITY AND OWNER ON A DVD.
24. CONTRACTOR SHALL INSTALL DETECTABLE WIRING OR MARKING TAPE A MINIMUM OF 12" ABOVE WATER AND WASTEWATER LINES. MARKER DECALS SHALL BE LABELED "CAUTION - WATER LINE", OR "CAUTION - SEWER LINE". DETECTABLE WIRING AND MARKING TAPE SHALL COMPLY WITH CITY STANDARDS, AND SHALL BE INCLUDED IN THE COST OF THE WATER AND WASTEWATER PIPE.
25. DUCTILE IRON PIPE SHALL BE PROTECTED FROM CORROSION BY A LOW-DENSITY POLYETHYLENE LINER WRAP THAT IS AT LEAST A SINGLE LAYER OF 8-MIL. ALL DUCTILE IRON JOINTS SHALL BE BONDED.
26. WATERLINES SHALL BE INSTALLED AT NO LESS THAN THE MINIMUM COVER REQUIRED BY THE CITY.
27. CONTRACTOR SHALL PROVIDE CLEAN-OUTS FOR PRIVATE SANITARY SEWER LINES AT ALL CHANGES IN DIRECTION AND 100-FOOT INTERVALS, OR AS REQUIRED BY THE APPLICABLE PLUMBING CODE. CLEAN-OUTS REQUIRED IN PAVEMENT OR SIDEWALKS SHALL HAVE CAST IRON COVERS FLUSH WITH FINISHED GRADE.
28. CONTRACTOR SHALL PROVIDE BACKWATER VALVES FOR PLUMBING FIXTURES AS REQUIRED BY THE APPLICABLE PLUMBING CODE (E.G. FLOOR ELEVATION OF FIXTURE UNIT IS BELOW THE ELEVATION OF THE MANHOLE COVER OF THE NEXT UPSTREAM MANHOLE IN THE PUBLIC SEWER). CONTRACTOR SHALL REVIEW BOTH MEP AND CIVIL PLANS TO CONFIRM WHERE THESE ARE REQUIRED.
29. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING AND SUBMITTING A TRENCH SAFETY PLAN, PREPARED BY A PROFESSIONAL ENGINEER IN THE STATE OF TEXAS, TO THE CITY PRIOR TO CONSTRUCTION. CONTRACTOR IS RESPONSIBLE FOR MAINTAINING TRENCH SAFETY REQUIREMENTS IN ACCORDANCE WITH CITY, STATE, AND FEDERAL REQUIREMENTS, INCLUDING OSHA FOR ALL TRENCHES. NO OPEN TRENCHES SHALL BE ALLOWED OVERNIGHT WITHOUT PRIOR WRITTEN APPROVAL OF THE CITY.
30. THE CONTRACTOR SHALL KEEP TRENCHES FREE FROM WATER.

ABBREVIATIONS AND DEFINITIONS:

A	AREA
ADA	AMERICANS WITH DISABILITIES ACT
AWWA	AMERICAN WATER WORKS ASSOCIATION
B-B	BACK TO BACK
BC	BEGIN CURVE
BC	BACK OF CURB
BCR	BEGIN CURB RETURN
BMP	BEST MANAGEMENT PRACTICE
BOC	BACK OF CURB
BVCE	BEGIN VERTICAL CURVE ELEVATION
BVCS	BEGIN VERTICAL CURVE STATION
BW	BOTTOM OF WALL
CFS	CUBIC FEET PER SECOND
CITY	CITY, TOWN, OR OTHER APPLICABLE LOCAL GOVERNMENT JURISDICTION
C/L	CENTERLINE
CL	CENTERLINE
CONC	CONCRETE
CY	CUBIC YARD
DEMO	DEMOLITION
DG	DECOMPOSED GRANITE
DTL	DETAIL
EA	EACH
EC	END CURVE
ECR	END CURB RETURN
EG	EXISTING GROUND
EL	ELEVATION
ELEC	ELECTRICAL / ELECTRICITY
ELEV	ELEVATION
EPA	UNITES STATES ENVIRONMENTAL PROTECTION AGENCY
ESMT	EASEMENT
EVCE	END VERTICAL CURVE ELEVATION
EVCS	END VERTICAL CURVE STATION
EX.	EXISTING
F-F	FACE TO FACE
FG	FINISHED GROUND
FH	FIRE HYDRANT
FL	FLOW LINE
FOC	FACE OF CURB
FT	FEET
HGL	HYDRAULIC GRADE LINE
KH	KIMLEY-HORN AND ASSOCIATES, INC.
KHA	KIMLEY-HORN AND ASSOCIATES, INC.
LAT	LATERAL
LF	LINEAR FEET
LT	LEFT
MAX	MAXIMUM
ME	MATCH EXISTING ELEVATION
MH	MANHOLE
MIN	MINUTE / MINIMUM
NO	NUMBER
NOI	NOTICE OF INTENT, REF. TCEQ GENERAL PERMIT
NOT	NOTICE OF TERMINATION, REF. TCEQ GENERAL PERMIT
NTS	NOT TO SCALE
OC	ON CENTER
OFF	OFFSET
OSHA	OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION
PC	POINT OF CURVATURE
PCC	PORTLAND CEMENT CONCRETE / POINT OF COMPOUND CURVATURE
PGL	PROPOSED GRADE LINE
PI	POINT OF INFLECTION
PROP	PROPOSED
PRC	POINT OF REVERSE CURVATURE
PSI	POUNDS PER SQUARE INCH
PT	POINT OF TANGENCY
PVC	POLYVINYL CHLORIDE
PVI	POINT OF VERTICAL INFLECTION
PVMT	PAVEMENT
RCP	REINFORCED CONCRETE PIPE
ROW	RIGHT OF WAY
RT	RIGHT
SF	SQUARE FEET
SS	SANITARY SEWER
SSMH	SANITARY SEWER MANHOLE
STA	STATION
STD	STANDARD
SY	SQUARE YARD
TAS	ARCHITECTURAL BARRIERS TEXAS ACCESSIBILITY STANDARDS
TC	TOP OF CURB
TCEQ	TEXAS COMMISSION OF ENVIRONMENTAL QUALITY
TEMP	TEMPORARY
TXDOT	TEXAS DEPARTMENT OF TRANSPORTATION
TXMUTCD	TEXAS MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES
TW	TOP OF WALL
TYP	TYPICAL
VC	VERTICAL CURVE
WTR	WATER
WW	WASTEWATER

UTILITY CONTACTS:

1. ELECTRIC COMPANY, **BARTLETT ELECTRICAL COOPERATIVE, (254)527-3551**
2. WASTEWATER, **CITY OF JARRELL, (512)746-4593**
3. CITY WATER/UTILITIES DEPARTMENT, **JARRELL SCHWERTNER DISTRICT, (512)746-2114**

BENCHMARKS

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

BM 7210 - MAG NAIL SET IN CONCRETE
ELEV. 823.90

No.	REVISIONS	DATE	BY

Kimley»Horn
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501 S. AUSTIN AVENUE, SUITE 1310, GEORGETOWN, TX 78626
PHONE: 512-520-0768 FAX: 512-418-1791
WWW.KIMLEY-HORN.COM
TEXAS REGISTERED ENGINEERING FIRM F-928

2/09/2024
STATE OF TEXAS
ALEJANDRO E. GRANADOS RICO
130084
LICENSED
PROFESSIONAL ENGINEER

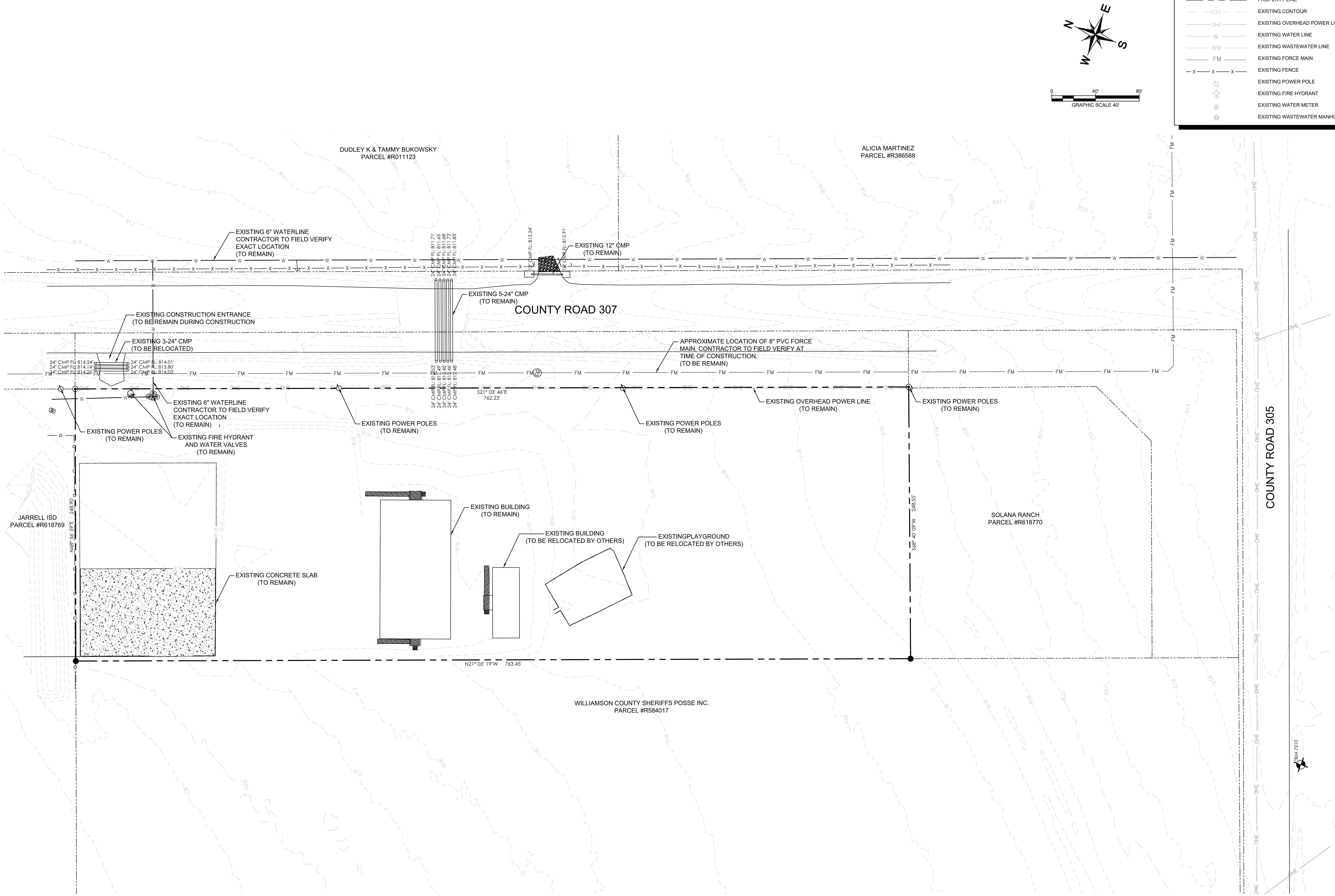
KHA PROJECT	069427200
DATE	FEBRUARY 2024
SCALE:	AS SHOWN
DESIGNED BY:	JDR
DRAWN BY:	JDR
CHECKED BY:	AEG

KH GENERAL NOTES

KID ZONE ON CR307

CITY OF JARRELL
WILLIAMSON COUNTY, TEXAS

SHEET NUMBER
3



LEGEND

— — —	PROPERTY LINE
632	EXISTING CONTOUR
OHE	EXISTING OVERHEAD POWER LINE
W	EXISTING WATER LINE
WW	EXISTING WASTEWATER LINE
FM	EXISTING FORCE MAIN
X X X	EXISTING FENCE
⊘	EXISTING POWER POLE
⌖	EXISTING FIRE HYDRANT
⊗	EXISTING WATER METER
ⓦ	EXISTING WASTEWATER MANHOLE

BENCHMARKS

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2/09/2024
STATE OF TEXAS
ALEJANDRO E. GRANADOS RICO
130084
LICENSED
PROFESSIONAL ENGINEER
[illegible]

KHA PROJECT 069427200
DATE FEBRUARY 2024
SCALE: AS SHOWN
DESIGNED BY: JDR
DRAWN BY: JDR
CHECKED BY: AEG

EXISTING CONDITIONS & DEMOLITION PLAN

KID ZONE ON CR307

CITY OF JARRELL
WILLIAMSON COUNTY, TEXAS

SHEET NUMBER
4

NOTES:

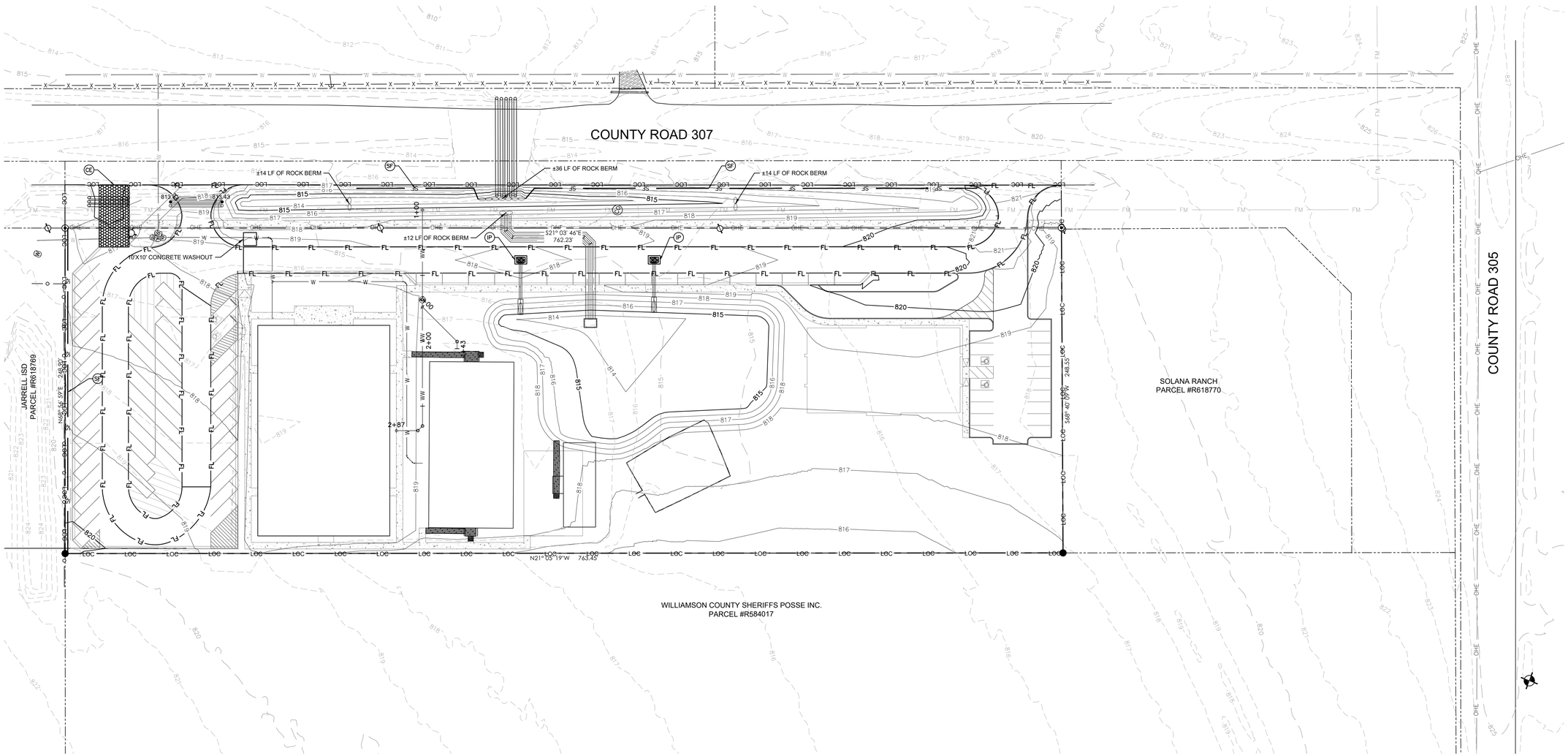
1. NO ENVIRONMENTALLY SENSITIVE AREAS ARE LOCATED ON OR DOWNSTREAM OF THIS PROJECT SITE.
2. THIS PROJECT WILL NOT REQUIRE ANY FORM OF PHASING OR SLOPE STABILIZATION.
3. REFER TO SHEET 6 FOR EROSION AND SEDIMENTATION CONTROL DETAILS.
4. ALL MUD, DIRT, ROCKS, DEBRIS, ETC., SPILLED TRACKED OR OTHERWISE DEPOSITED ON EXISTING PAVED STREETS, DRIVES AND AREAS USED BY THE PUBLIC SHALL BE CLEANED UP IMMEDIATELY.
5. 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.
6. ALL SLOPES SHALL BE SODDED OR SEEDED WITH APPROVED GRASS. GRASS MIXTURES OR GROUND COVER SUITABLE TO THE AREA AND SEASON WHICH THEY ARE APPLIED.

N E S W

0 40' 80'
GRAPHIC SCALE 40'

EROSION CONTROL LEGEND

		PROPERTY LINE
	632	PROPOSED CONTOUR
	632	EXISTING CONTOUR
SF	SF	SILT FENCE
CE		STABALIZED CONSTRUCTION ENTRANCE/EXIT
IP		INLET PROTECTION
RB		ROCK BERM
LOC	LOC	LIMITS OF CONSTRUCTION
TP	TP TP	TREE PROTECTION
V		LIMITS OF REVEGETATION
CX		CURLEX MATTING



BENCHMARKS

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

BM 7210 - MAG NAIL SET IN CONCRETE
ELEV. 823.90

No.	REVISIONS	DATE	BY

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2/09/2024

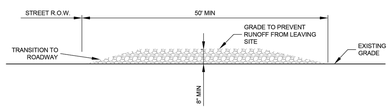
STATE OF TEXAS
ALEJANDRO E. GRANADOS RICO
130084
LICENSED
PROFESSIONAL ENGINEER

KHA PROJECT	069427200
DATE	FEBRUARY 2024
SCALE:	AS SHOWN
DESIGNED BY:	JDR
DRAWN BY:	JDR
CHECKED BY:	AEG

EROSION CONTROL PLAN

KID ZONE ON CR307
CITY OF JARRELL
WILLIAMSON COUNTY, TEXAS

SHEET NUMBER
5



CROSS SECTION

NOTES:

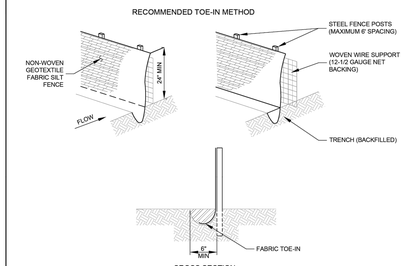
1. STONE SIZE SHALL BE 3" - 8" OPEN GRADED ROCK.
2. THICKNESS OF CRUSHED STONE PAD TO BE NOT LESS THAN 8".
3. LENGTH SHALL BE A MINIMUM OF 50' FROM ACTUAL ROADWAY, AND WIDTH NOT LESS THAN FULL WIDTH OF INGRESS/EGRESS.
4. ENTRANCE SHALL BE PROPERLY GRADED TO PREVENT RUNOFF FROM LEAVING THE CONSTRUCTION SITE.
5. THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS OF WAY. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC RIGHTS OF WAY MUST BE REMOVED IMMEDIATELY BY CONTRACTOR.
6. AS NECESSARY, WHEELS MUST BE CLEANED TO REMOVE SEDIMENT PRIOR TO ENTRANCE ONTO PUBLIC RIGHT OF WAY. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE WHICH DRAINS INTO AN APPROVED SEDIMENT TRAP OR SEDIMENT BASIN. ALL SEDIMENT SHALL BE PREVENTED FROM ENTERING ANY STORM DRAIN, DITCH OR WATERCOURSE USING APPROVED METHODS.

CITY OF JARRELL
Engineering and Capital Improvements

STABILIZED CONSTRUCTION ENTRANCE DETAIL

THE ARCHITECT / ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD

STANDARD No. **EC-09**
Revision Date: 03/15/2022



CROSS SECTION

NOTES:

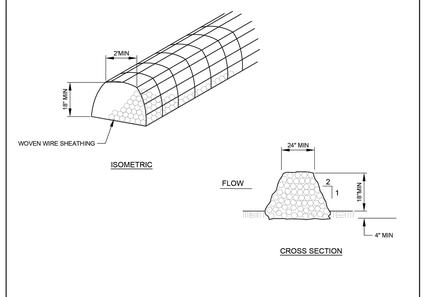
1. STEEL POSTS WHICH SUPPORT THE SILT FENCE SHALL BE INSTALLED ON A SLIGHT ANGLE TOWARD THE ANTICIPATED RUNOFF SOURCE. POST MUST BE EMBEDDED A MIN. OF ONE (1) FOOT.
2. THE TOE OF THE SILT FENCE SHALL BE TRENCHED IN WITH A SPADE OR MECHANICAL TRENCHER, SO THAT THE DOWNSLOPE FACE OF THE TRENCH IS FLAT AND PERPENDICULAR TO THE LINE OF FLOW. WHERE FENCE CANNOT BE TRENCHED IN (E.G. PAVEMENT) WEIGHT FABRIC FLAP WITH WASHED GRAVEL ON UPHILL SIDE TO PREVENT FLOW UNDER FENCE.
3. THE TRENCH MUST BE A MINIMUM OF 6 INCHES DEEP AND 6 INCHES WIDE TO ALLOW FOR THE SILT FENCE FABRIC TO BE LAID IN THE GROUND AND BACKFILLED WITH COMPACTED MATERIAL.
4. SILT FENCE SHALL BE SECURELY FASTENED TO EACH STEEL SUPPORT POST OR TO WOVEN WIRE, WHICH IN TURN IS SECURELY FASTENED TO THE STEEL FENCE POSTS.
5. INSPECTION SHALL BE MADE WEEKLY OR AFTER EACH RAINFALL EVENT AND REPAIR OR REPLACEMENT SHALL BE MADE PROMPTLY AS NEEDED.
6. SILT FENCE SHALL BE REMOVED WHEN THE SITE IS COMPLETELY STABILIZED SO AS NOT TO BLOCK OR IMPEDE STORM FLOW OR DRAINAGE.
7. ACCUMULATED SILT SHALL BE REMOVED WHEN IT REACHES A DEPTH OF 6 INCHES. THE SILT SHALL BE DISPOSED OF IN AN APPROVED SITE AND IN SUCH A MANNER AS TO NOT CONTRIBUTE TO ADDITIONAL SILTATION.
8. SILT FENCE SHALL BE REMOVED AS SOON AS THE SOURCE OF SEDIMENT IS STABILIZED

CITY OF JARRELL
Engineering and Capital Improvements

SILT FENCE DETAIL

THE ARCHITECT / ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD

STANDARD No. **EC-10**
Revision Date: 03/15/2022



CROSS SECTION

NOTES:

1. USE ONLY OPEN GRADED ROCK (3 to 5") DIAMETER FOR ALL CONDITIONS.
2. THE ROCK BERM SHALL BE SECURED WITH A WOVEN WIRE SHEATHING HAVING MAXIMUM 1" OPENING AND MINIMUM WIRE DIAMETER OF 20 GAUGE.
3. THE ROCK BERM SHALL BE INSPECTED DAILY OR AFTER EACH RAIN, AND THE STONE AND/ OR FABRIC CORE-WOVEN SHEATHING SHALL BE REPLACED WHEN THE STRUCTURE CEASES TO FUNCTION AS INTENDED, DUE TO SEDIMENT ACCUMULATION AMONG THE ROCKS, WASHOUT, CONSTRUCTION TRAFFIC DAMAGE, ETC.
4. IF SEDIMENT REACHES A DEPTH OF 9", THE SEDIMENT SHALL BE REMOVED AND DISPOSED OF ON AN APPROVED SITE AND IN A MANNER THAT WILL NOT CREATE A SEDIMENTATION PROBLEM.
5. WHEN THE SITE IS COMPLETELY STABILIZED, THE BERM AND ACCUMULATED SEDIMENT SHALL BE REMOVED AND DISPOSED OF IN AN APPROVED MANNER.

CITY OF JARRELL
Engineering and Capital Improvements

ROCK BERM DETAIL

THE ARCHITECT / ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD

STANDARD No. **EC-12**
Revision Date: 03/15/2022

BENCHMARKS

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ELEV.=822.21

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TEXAS REGISTERED ENGINEERING FIRM F-928

2/09/2024

KHA PROJECT	069427200
DATE	FEBRUARY 2024
SCALE:	AS SHOWN
DESIGNED BY:	JDR
DRAWN BY:	XDR
CHECKED BY:	AEG

KID ZONE ON CR307

CITY OF JARRELL
WILLIAMSON COUNTY, TEXAS

EROSION CONTROL DETAILS

SHEET NUMBER
6

LEGEND

- PROPERTY LINE
- PROPOSED WASTEWATER LINE
- PROPOSED WATER LINE
- PROPOSED WASTEWATER MANHOLE
- PROPOSED WASTEWATER CLEANOUT
- PROPOSED FIRE HYDRANT
- PROPOSED TAPPING SLEEVE & VALVE
- EXISTING OVERHEAD POWER LINE
- EXISTING WATER LINE
- EXISTING WASTEWATER LINE
- EXISTING STORM SEWER LINE
- EXISTING POWER POLE
- EXISTING FIRE HYDRANT
- EXISTING WATER METER
- EXISTING WASTEWATER MANHOLE
- ADA ROUTE
- PHASE LINE

N E S W

0 40' 80'
GRAPHIC SCALE 40'

DUDLEY K & TAMMY BUKOWSKY
PARCEL #R011123

ALICIA MARTINEZ
PARCEL #R386588

COUNTY ROAD 307

JARRELL ISD
PARCEL #R618769

SOLANA RANCH
PARCEL #R618770

COUNTY ROAD 305

WILLIAMSON COUNTY SHERIFFS POSSE INC.
PARCEL #R584017

16,239 SF
1-STORY-25' TALL
GYM BUILDING
FFE=820.00

EXISTING SINGLE
STORY MODULAR
BUILDING

RELOCATED PLAY GROUND

PHASE 1
PHASE 2

PHASE 2
7,726 SF
1-STORY
FFE=823.00

PHASE 2
PHASE 1

S21° 03' 46"E
762.23'

N68° 56' 59"E 248.90'

S68° 40' 09"W 248.55'

N21° 05' 19"W 763.45'

BENCHMARKS

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

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TEXAS REGISTERED ENGINEERING FIRM F-928

2/09/2024

STATE OF TEXAS
ALEJANDRO E. GRANADOS RICO
130084
LICENSED
PROFESSIONAL ENGINEER

KHA PROJECT	069427200
DATE	FEBRUARY 2024
SCALE:	AS SHOWN
DESIGNED BY:	JDR
DRAWN BY:	JDR
CHECKED BY:	AEG

OVERALL SITE PLAN

KID ZONE ON CR307

CITY OF JARRELL
WILLIAMSON COUNTY, TEXAS

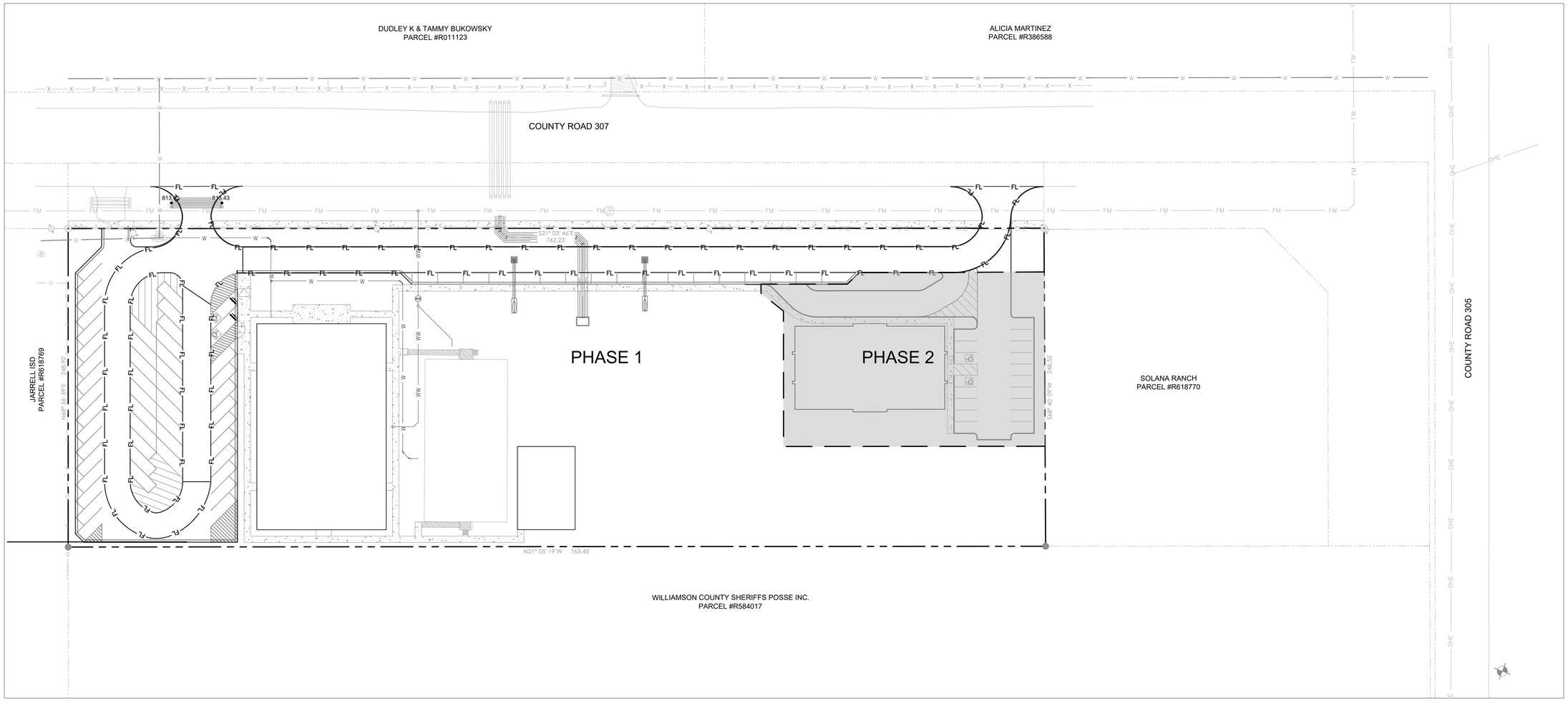
SHEET NUMBER
7

NOTE:
1. ALL GRADING SHOWN IN THIS PLAN SET TO BE COMPLETED WITH PHASE 1.
2. ALL UNDERGROUND STORM, WATER, AND WASTEWATER LINES AND STUBS TO BE COMPLETED WITH PHASE 1.

LEGEND

- PROPERTY LINE
- PHASE LINE
- PHASE 1
- PHASE 2

0 40' 80'
GRAPHIC SCALE 40'



BENCHMARKS

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

BM 7210 - MAG NAIL SET IN CONCRETE
ELEV. 823.90

No.	REVISIONS	DATE	BY

Kimley»Horn
© 2024 KIMLEY-HORN AND ASSOCIATES, INC.
501 S. AUSTIN AVENUE, SUITE 1310, GEORGETOWN, TX 78626
PHONE: 512-520-0768 FAX: 512-418-1791
WWW.KIMLEY-HORN.COM
TEXAS REGISTERED ENGINEERING FIRM F-928

2/09/2024

STATE OF TEXAS
ALEJANDRO E. ORANDOS RICO
130084
LICENSED
PROFESSIONAL ENGINEER

KHA PROJECT	069427200
DATE	FEBRUARY 2024
SCALE:	AS SHOWN
DESIGNED BY:	JDR
DRAWN BY:	JDR
CHECKED BY:	AEG

PHASING PLAN

KID ZONE ON CR307

CITY OF JARRELL
WILLIAMSON COUNTY, TEXAS

SHEET NUMBER
8

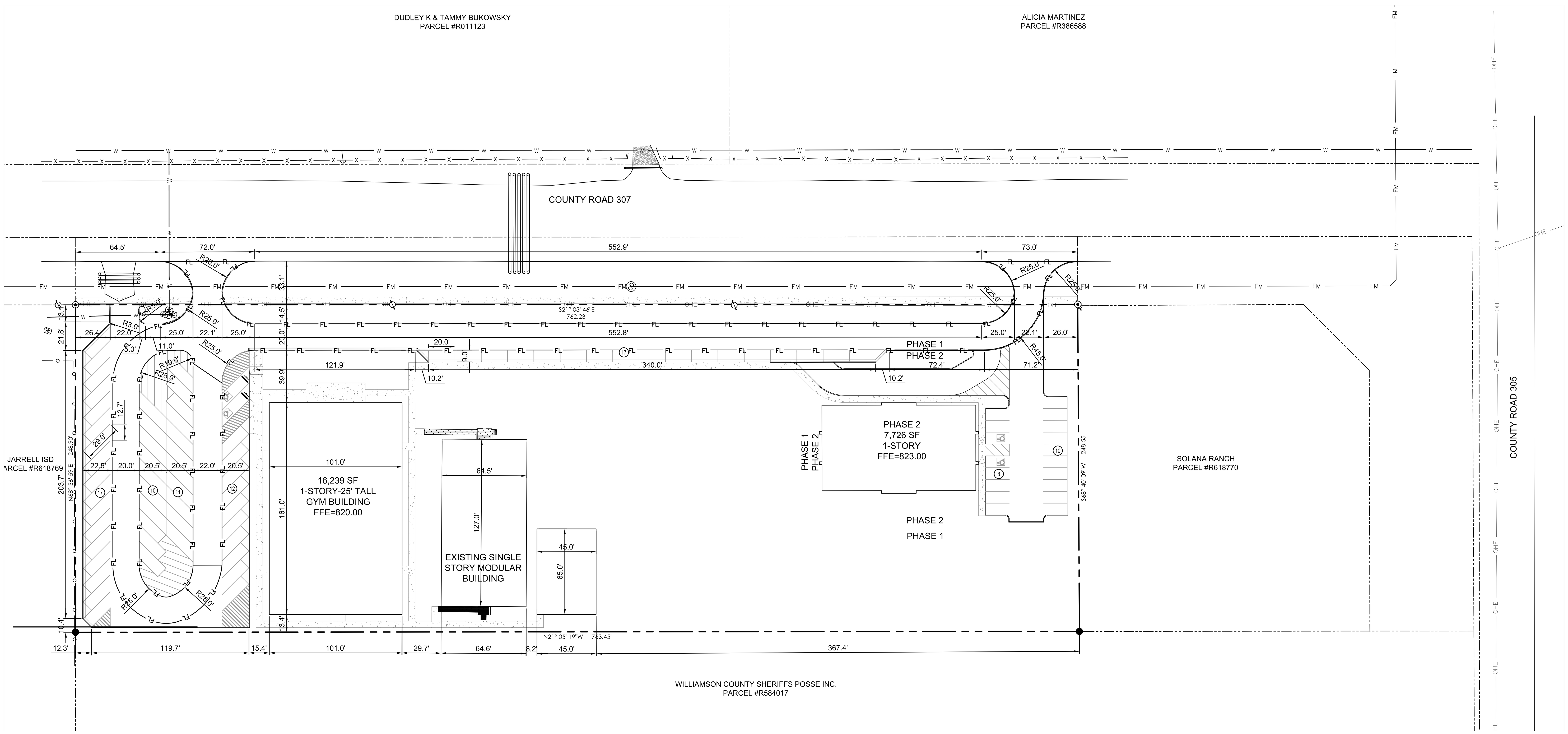
NOTES:

1. CONTRACTOR TO HAVE STAKING VERIFIED BY OWNER PRIOR TO PROCEEDING WITH CONSTRUCTION.
2. ALL DIMENSIONS ARE TO FACE OF CURB UNLESS OTHERWISE NOTED.
3. ALL RADII TO BE 3' UNLESS OTHERWISE NOTED.

LEGEND

— — —	PROPERTY LINE
—— FL ——	FIRE LANE

GRAPHIC SCALE 40'



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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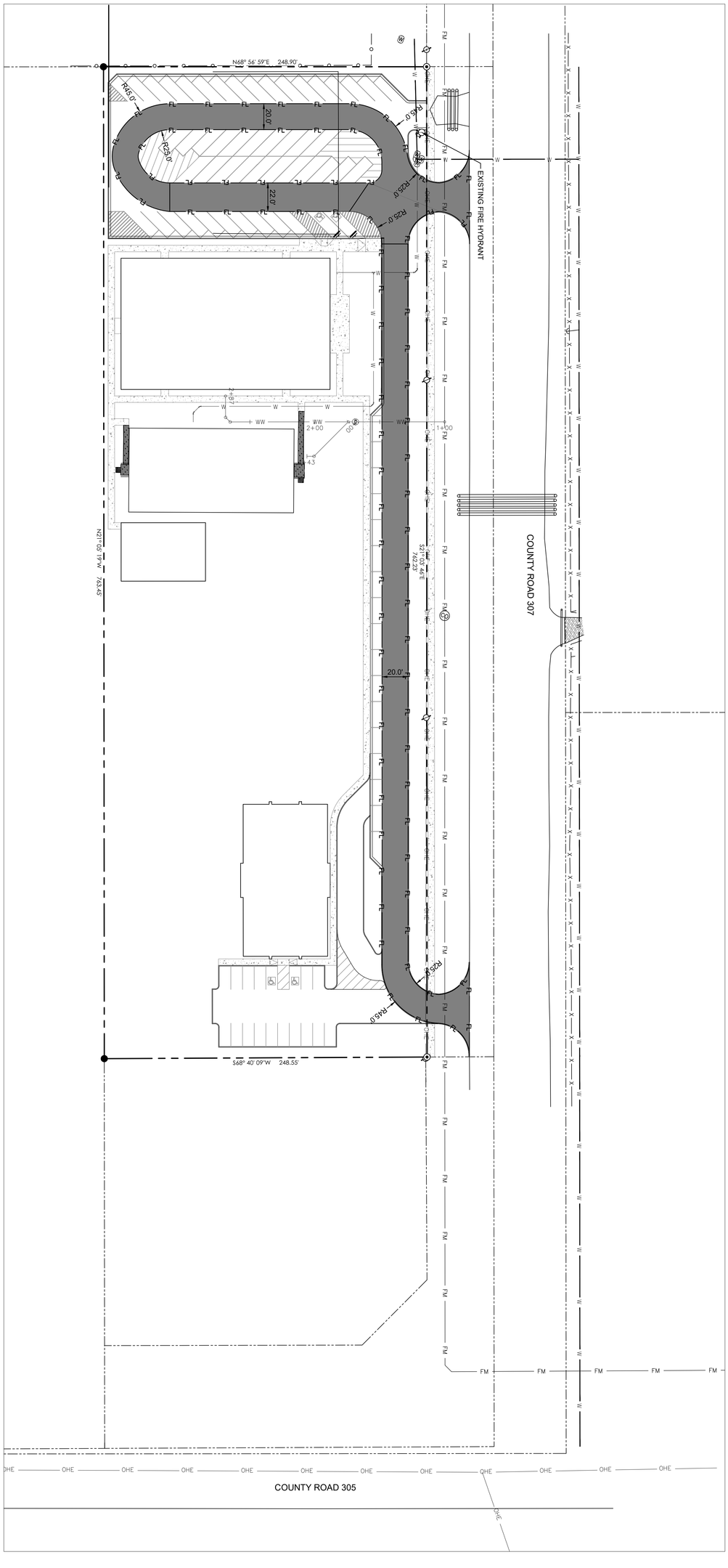
DIMENSION CONTROL PLAN

KID ZONE ON CR307

CITY OF JARRELL
WILLIAMSON COUNTY, TEXAS

SHEET NUMBER
9



BENCHMARKS

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

BM 7210 - MAG NAIL SET IN CONCRETE
ELEV. 823.90

LEGEND

FL — FIRE LANE

PROPERTY LINE

0 40' 80'
GRAPHIC SCALE 40'

N
W E
S

SHEET NUMBER 10

KID ZONE ON CR307

CITY OF JARRELL
WILLIAMSON COUNTY, TEXAS

FIRE PROTECTION PLAN

KHA PROJECT	069427200
DATE	FEBRUARY 2024
SCALE:	AS SHOWN
DESIGNED BY:	JDR
DRAWN BY:	JDR
CHECKED BY:	AEG

2/09/2024

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TEXAS REGISTERED ENGINEERING FIRM F-928

No.	REVISIONS	DATE	BY

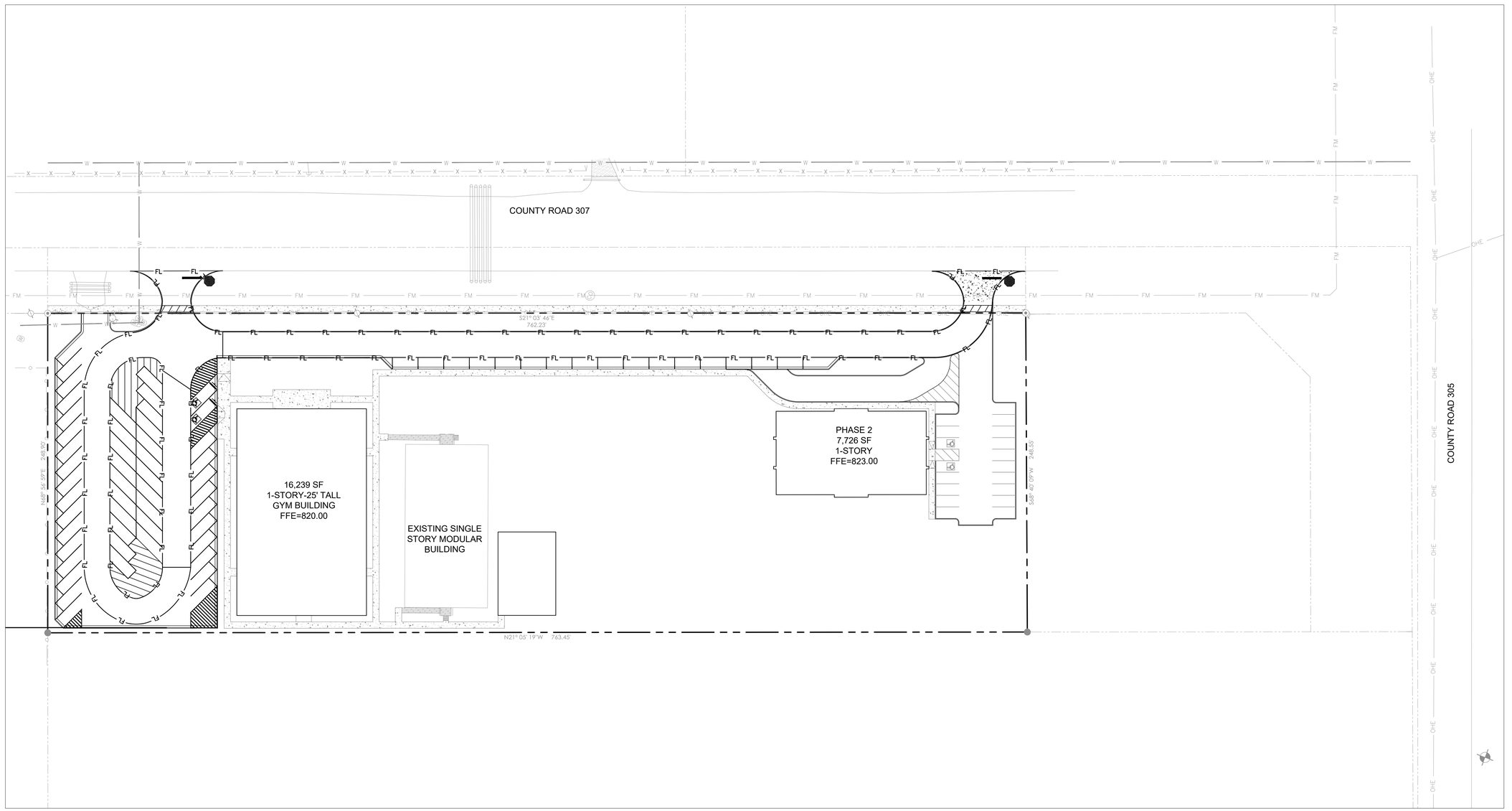
NOTES:

1. REFER TO SHEET 20 FOR DETAILS.
2. ALL DIMENSIONS ARE TO THE FACE OF CURB, OR CENTER OF STRIPING (WHERE APPLICABLE) UNLESS OTHERWISE NOTED.
3. FIRE APPARATUS ACCESS ROADS SHALL BE DESIGNED AND MAINTAINED TO SUPPORT THE IMPOSED LOADS OF FIRE APPARATUS AND SHALL BE SURFACED SO AS TO PROVIDE ALL-WEATHER DRIVING CAPABILITIES.
4. REFER TO SHEET 9 FOR DIMENSION CONTROL PLAN.

LEGEND

- PROPERTY LINE
- FL — PROPOSED FIRE LANE
- PROPOSED STRIPING
- PROPOSED 5' SIDEWALK
- STOP SIGN AND STOP BAR

0 40' 80'
GRAPHIC SCALE 40'



BENCHMARKS

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2/09/2024

STATE OF TEXAS
LEONARDO E. ORANDOS ROJAS
130084
LICENSED
PROFESSIONAL ENGINEER

KHA PROJECT	069427200
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SCALE:	AS SHOWN
DESIGNED BY:	JDR
DRAWN BY:	JDR
CHECKED BY:	AEG

PAVING & STRIPING PLAN

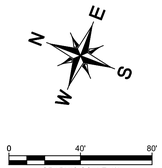
KID ZONE ON CR307

CITY OF JARRELL
WILLIAMSON COUNTY, TEXAS

SHEET NUMBER
11

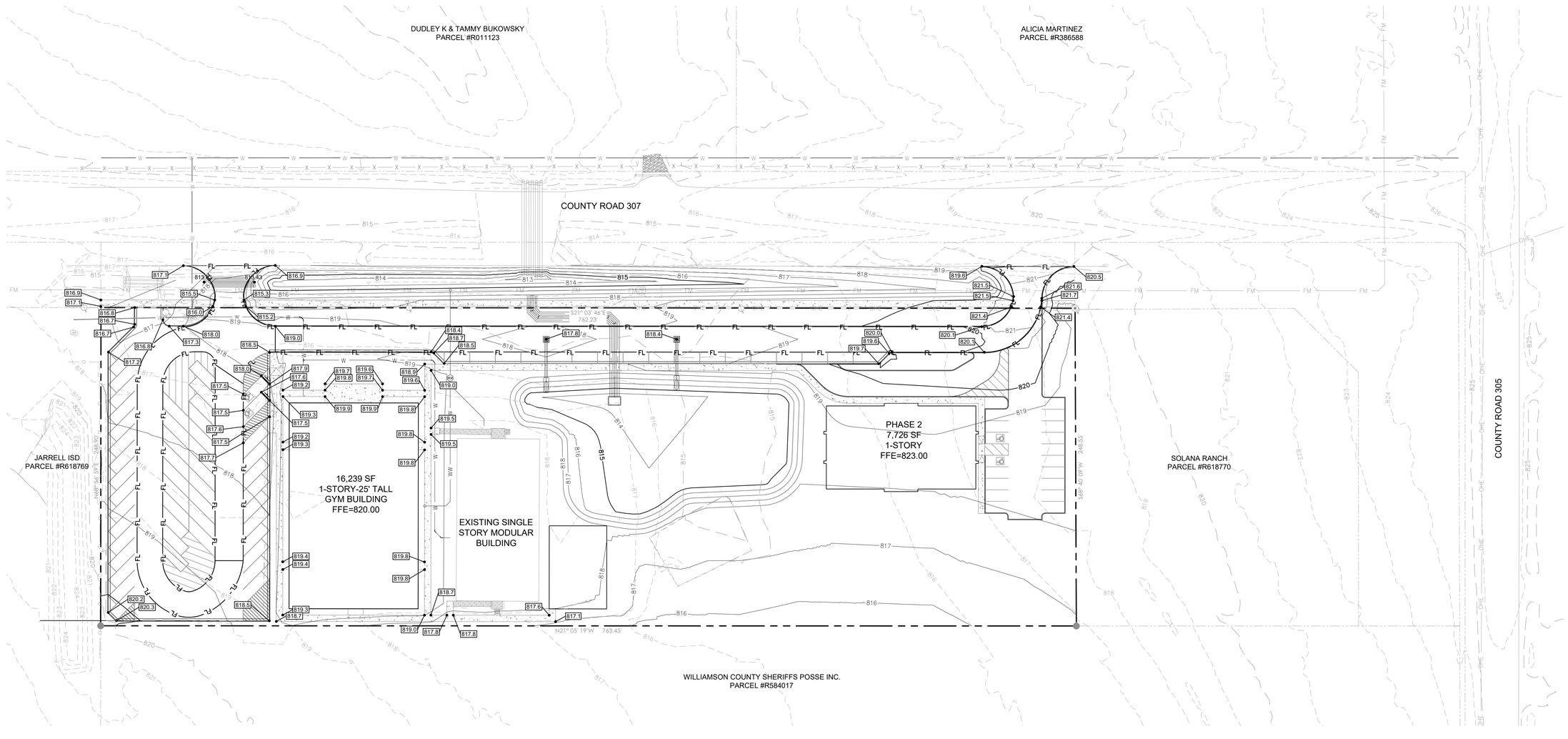
NOTES:

1. ALL PROPOSED ELEVATIONS ARE TOP OF PAVEMENT OR NATURAL GROUND UNLESS OTHERWISE NOTED.
2. ALL TOP OF WALL ELEVATIONS ARE TO TOP OF GRADE AT WALL.
3. ALL BOTTOM OF WALL ELEVATIONS ARE TO BOTTOM OF GRADE AT WALL.
4. CONTRACTOR TO VERIFY A.D.A. COMPLIANCE FOR GRADES IN ALL SIDEWALK ACCESSIBLE ROUTES, INCLUDING DRIVEWAY CROSSINGS, SHALL CONFORM TO ALL APPLICABLE A.D.A. STANDARDS: NOT EXCEED 5.0% ALONG TRAVEL PATH WITH NOT MORE THAN 2.0% CROSS SLOPE AND NOT EXCEED 2.0% IN ANY DIRECTION IN ACCESSIBLE PARKING AREAS.
5. MAINTAIN EXISTING GRADE IN TREE WELLS. CONTRACTOR TO ENSURE POSITIVE DRAINAGE TO AREA INLETS.



LEGEND

- PROPERTY LINE
- PHASE LINE
- FP 675.00 — PROPOSED FINISHED PAD ELEVATION
- 55.5 • — PROPOSED SPOT ELEVATION
- EX 55.5 • — EXISTING SPOT ELEVATION
- TW 55.5 • — PROPOSED GRADE AT TOP OF WALL
- BW 55.5 • — PROPOSED GRADE AT BOTTOM OF WALL
- EW 55.5 • — PROPOSED GRADE AT END OF WALL
- PAD MOUNT TRANSFORMER
- LOT DRAINAGE FLOW DIRECTION
- STREET DRAINAGE FLOW DIRECTION
- PROPOSED RETAINING WALL
- EXPOSED FACE OF RETAINING WALL
- 555 — PROPOSED CONTOUR
- 555 — EXISTING CONTOUR
- STORM SEWER
- STORM INLET
- STORM MANHOLE
- W — WATER MAIN
- WW — WASTEWATER MAIN
- 5' SIDEWALK (INCLUDED IN CONTRACT)
- 5' SIDEWALK (EXCLUDED FROM CONTRACT)



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PROFESSIONAL ENGINEER

KHA PROJECT	069427200
DATE	FEBRUARY 2024
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DESIGNED BY:	JDR
DRAWN BY:	JDR
CHECKED BY:	AEG

GRADING PLAN

KID ZONE ON CR307

CITY OF JARRELL
WILLIAMSON COUNTY, TEXAS

SHEET NUMBER
12

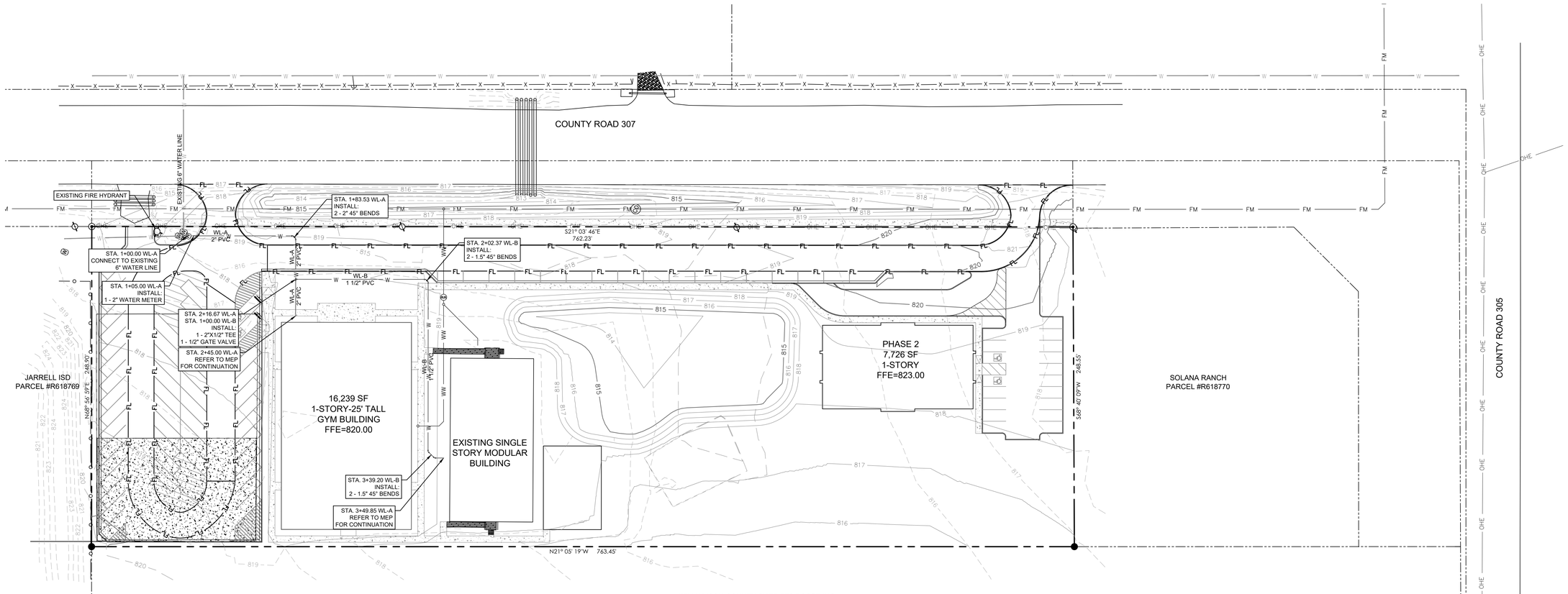
NOTES:

1. REFER TO SHEET 21.FOR DETAILS.
2. CONTRACTOR TO VERIFY LOCATION AND DEPTH OF ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION.
3. ALL EXISTING GROUND LEVEL APPURTENANCES ARE SUBJECT TO ELEVATION CHANGES AND SHALL BE ADJUSTED TO FINAL GRADE
4. ALL WASTEWATER MANHOLES SHALL BE COATED AND VACUUM-TESTED.
5. ALL NON-CITY INFRASTRUCTURE INCLUDING GAS, ELECTRIC CABLE, AND TELECOMMUNICATIONS SHALL TRAVERSE UNDERNEATH CITY INFRASTRUCTURE, INCLUDING BUT NOT LIMITED TO WATERLINES, WASTEWATER LINES, AND STORM SEWERS, WITH A MINIMUM OUTSIDE-TO-OUTSIDE CLEARANCE OF 18" WHERE NON-CITY INFRASTRUCTURE WOULD HAVE TO BE PLACED AT A DEPTH OF 8' OR GREATER TO MEET THE PRECEDING REQUIREMENT, TRAVERSING ABOVE CITY INFRASTRUCTURE MAY BE ALLOWED SUBJECT TO THE APPROVAL OF THE CITY ENGINEER, BUT ONLY IN CONFORMANCE WITH CROSS-SECTION, PROFILES, AND / OR OTHER DETAILED INFORMATION INCORPORATED IN THESE PLANS
6. CONTRACTOR TO STAKEOUT WATERLINE EASEMENT PRIOR TO THE INSTALLATION OF THE WATERLINE, FOR INSTALLATION ACCURACY.
7. FOR ALL POINTS WHERE A WASTEWATER GRAVITY OR FORCE MAIN LINE CROSSES UNDER A PUBLIC WATER SUPPLY OR WATER SERVICE:
   - 7.1. VERTICAL SEPARATION MUST BE AT LEAST TWO FEET FROM OUTSIDE DIAMETERS OF PIPES.
   - 7.2. WASTEWATER PIPE WITH A MINIMUM PRESSURE RATING OF 150 PSI.
   - 7.3. ONE SEGMENT OF WATERLINE SHALL BE CENTERED ON CROSSING.
8. FOR ALL POINTS WHERE A WASTEWATER GRAVITY OR FORCE MAIN LINE CROSSES OVER A PUBLIC WATER SUPPLY OR WATER SERVICE:
   - 8.1. VERTICAL SEPARATION MUST BE AT LEAST TWO FEET FROM OUTSIDE DIAMETERS OF PIPE.
   - 8.2. WATER SHALL BE PLACED IN AN ENCASEMENT CENTERED ON THE CROSSING, SEALED AT BOTH ENDS WITH CEMENT GROUT OR MANUFACTURED SEAL, AT LEAST TWO NOMINAL SIZES LARGER, AND SUPPORTED BY SPACERS AT 5' INTERVALS.
   - 8.3. ONE SEGMENT OF WATERLINE SHALL BE CENTERED ON CROSSING.
9. FOR WASTEWATER OR FORCE MAIN LINES THAT PARALLEL PUBLIC WATER OR WATER SERVICES:
   - 9.1. SEPARATION MUST BE AT LEAST NINE FEET FROM OUTSIDE DIAMETERS OF PIPE IN ANY DIRECTION.
10. ALL WATER LINE FITTINGS SHALL BE RESTRAINED AND THRUST BLOCKED
11. PROVIDE 3' CLEAR AREA AROUND FIRE HYDRANTS.
12. ALL NON-CITY INFRASTRUCTURE (INCLUDING BUT NOT LIMITED TO GAS, ELECTRIC, CABLE AND TELECOMMUNICATION) SHALL TRAVERSE UNDERNEATH CITY INFRASTRUCTURE (INCLUDED BUT NOT LIMITED TO WATERLINES, WASTEWATER LINES, AND STORM WATER LINES) WITH A MINIMUM OUTSIDE-TO-OUTSIDE CLEARANCE OF 18". WHERE NON-CITY INFRASTRUCTURE WOULD HAVE TO BE PLACED AT A DEPTH OF 8' OR GREATER TO MEET THE PRECEDING REQUIREMENT, TRAVERSING ABOVE THE CITY INFRASTRUCTURE MAY BE ALLOWED, SUBJECT TO THE APPROVAL OF THE PLANNING AND DEVELOPMENT SERVICES ENGINEERING REVIEWER, BUT ONLY IN CONFORMANCE WITH CROSS-SECTIONS, PROFILES, AND OR OTHER DETAILED INFORMATION INCORPORATED IN THESE PLANS.

0 40' 80'
GRAPHIC SCALE 40'

UTILITY LEGEND

- PROPERTY LINE
- PROPOSED WASTEWATER LINE
- PROPOSED WATER LINE
- PROPOSED WASTEWATER MANHOLE
- PROPOSED WASTEWATER CLEANOUT
- WASTEWATER FLOW DIRECTION
- PROPOSED FIRE HYDRANT
- PROPOSED GATE VALVE
- PROPOSED TAPPING SLEEVE & VALVE
- IRRIGATION SLEEVE
- EXISTING OVERHEAD POWER LINE
- EXISTING WATER LINE
- EXISTING WASTEWATER LINE
- EXISTING STORM SEWER LINE
- EXISTING POWER POLE
- EXISTING FIRE HYDRANT
- EXISTING WATER METER
- EXISTING WASTEWATER MANHOLE



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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TEXAS REGISTERED ENGINEERING FIRM F-928

2/09/2024

STATE OF TEXAS
ALEJANDRO E. GRANADOS RICO
130084
LICENSED
PROFESSIONAL ENGINEER

KHA PROJECT	069427200
DATE	FEBRUARY 2024
SCALE:	AS SHOWN
DESIGNED BY:	JDR
DRAWN BY:	XXBR
CHECKED BY:	AEG

OVERALL WATER PLAN

KID ZONE ON CR307

CITY OF JARRELL
WILLIAMSON COUNTY, TEXAS

SHEET NUMBER
13

NOTES:

1. REFER TO SHEETS 22 AND 23 FOR DETAILS.
2. CONTRACTOR TO VERIFY LOCATION AND DEPTH OF ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION.
3. ALL EXISTING GROUND LEVEL APPURTENANCES ARE SUBJECT TO ELEVATION CHANGES AND SHALL BE ADJUSTED TO FINAL GRADE
4. ALL WASTEWATER MANHOLES SHALL BE COATED AND VACUUM-TESTED.
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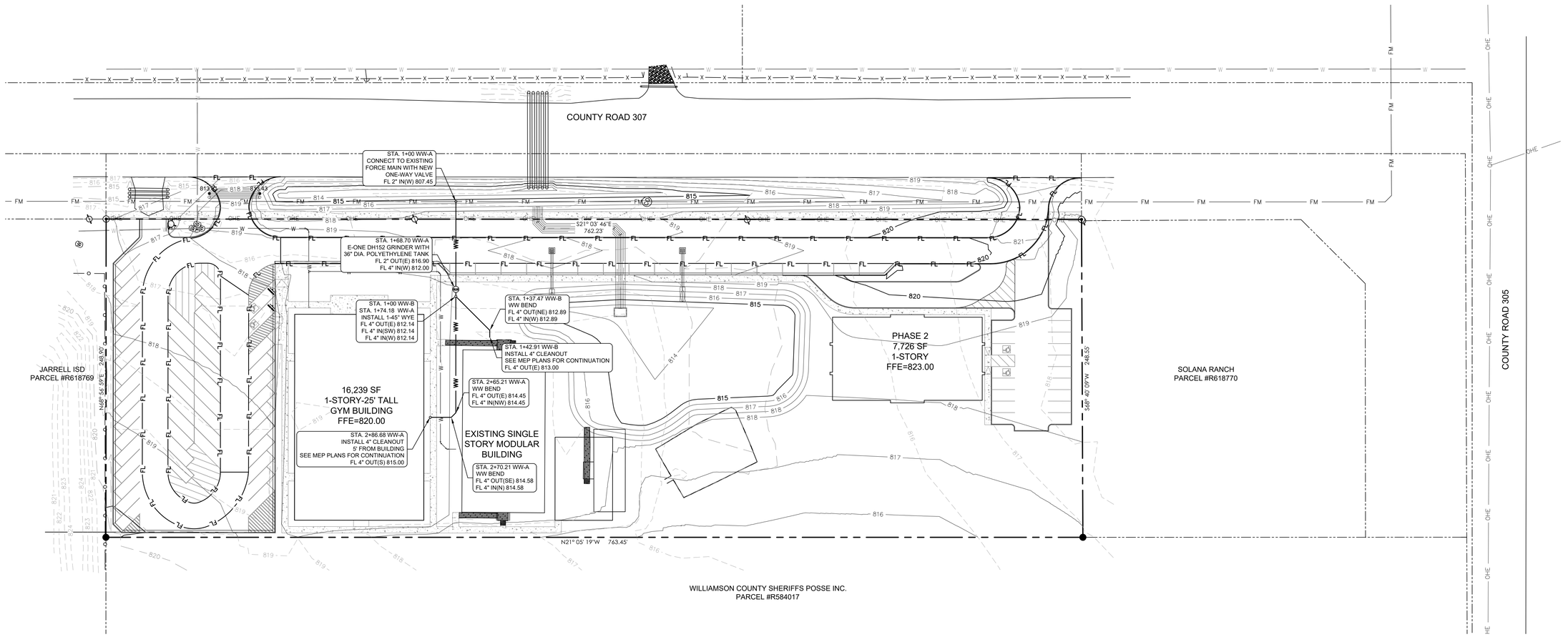
0 40' 80'
GRAPHIC SCALE 40'

UTILITY LEGEND

- PROPERTY LINE
- PROPOSED WASTEWATER LINE
- PROPOSED WATER LINE
- PROPOSED WASTEWATER MANHOLE
- PROPOSED WASTEWATER CLEANOUT
- WASTEWATER FLOW DIRECTION
- PROPOSED FIRE HYDRANT
- PROPOSED GATE VALVE
- PROPOSED TAPPING SLEEVE & VALVE
- IRRIGATION SLEEVE
- EXISTING OVERHEAD POWER LINE
- EXISTING WATER LINE
- EXISTING WASTEWATER LINE
- EXISTING STORM SEWER LINE
- EXISTING POWER POLE
- EXISTING FIRE HYDRANT
- EXISTING WATER METER
- EXISTING WASTEWATER MANHOLE



BENCHMARKS

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

BM 7210 - MAG NAIL SET IN CONCRETE
ELEV. 823.90

No.	REVISIONS	DATE	BY

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2/09/2024

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ALEJANDRO E. GRANADOS RICO
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LICENSED
PROFESSIONAL ENGINEER

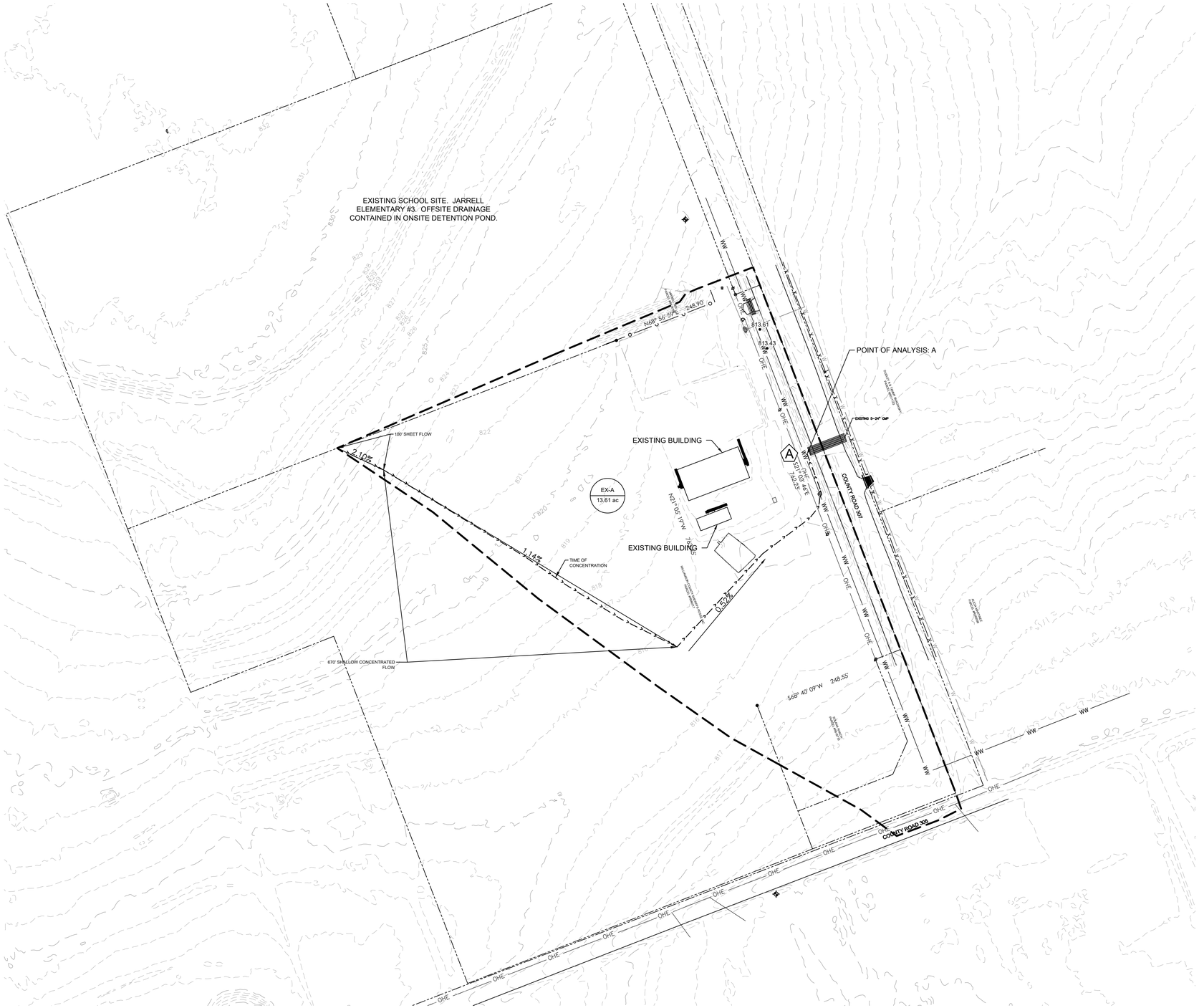
KHA PROJECT 069427200	DATE FEBRUARY 2024	SCALE: AS SHOWN	DESIGNED BY: JDR	DRAWN BY: JDR	CHECKED BY: AEG

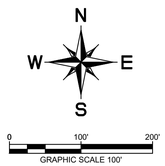
OVERALL WASTEWATER PLAN

KID ZONE ON CR307

CITY OF JARRELL
WILLIAMSON COUNTY, TEXAS

SHEET NUMBER
14





LEGEND

- X-1 / 9.9 ac — AREA DESIGNATOR / AREA IN ACRES
- POINT OF ANALYSIS
- PROPERTY LINE
- PROPOSED STORM SEWER LINE
- EXISTING STORM SEWER LINE
- PROPOSED DRAINAGE DIVIDE
- PROPOSED STORM SEWER INLET
- PROPOSED STORM SEWER MANHOLE
- PROPOSED STORM SEWER HEADWALL
- PROPOSED FLOW DIRECTION
- 555 — PROPOSED CONTOUR
- 555 — EXISTING CONTOUR
- 100-YR ATLAS-14 FLOODPLAIN

Kids Zone - Jarrell

DETENTION RESULTS - SCS METHOD

EXISTING CONDITIONS

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	27.88
				10	54.25
				25	72.70
				100	102.95

Kid Zone - Jarrell - Existing Time of Conc.

Drainage Calculations - SCS Method

DRAINAGE AREA	AREA	AREA	IMPERVIOUS COVER	IMPERVIOUS COVER	PERVIOUS CURVE NO.	WEIGHTED CURVE NO.	SHEET FLOW				SHALLOW CONCENTRATED FLOW				CHANNEL FLOW										TOTAL Tc**	Q_2	Q_{10}	Q_{25}	Q_{100}
							P-2yr24hr 3.92 IN				Grass Surface				Channel Flow					Channel Flow 2					(min)	(cfs)	(cfs)	(cfs)	(cfs)
	(sf)	(Ac.)	(Ac.)	%	Cn*	Cn*	N	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)					
EX-A	592,852	13.61	0.00	0.00	78.00	78.00	0.15	100	0.021	8.68	670	1.72	0.011	6.48	498	6.0	0.035	0.0052	1.38	-	-	0.035	-	0.00	16.55	27.88	54.25	72.7	102.95

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

100.02

BENCHMARKS

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ELEV.=822.21

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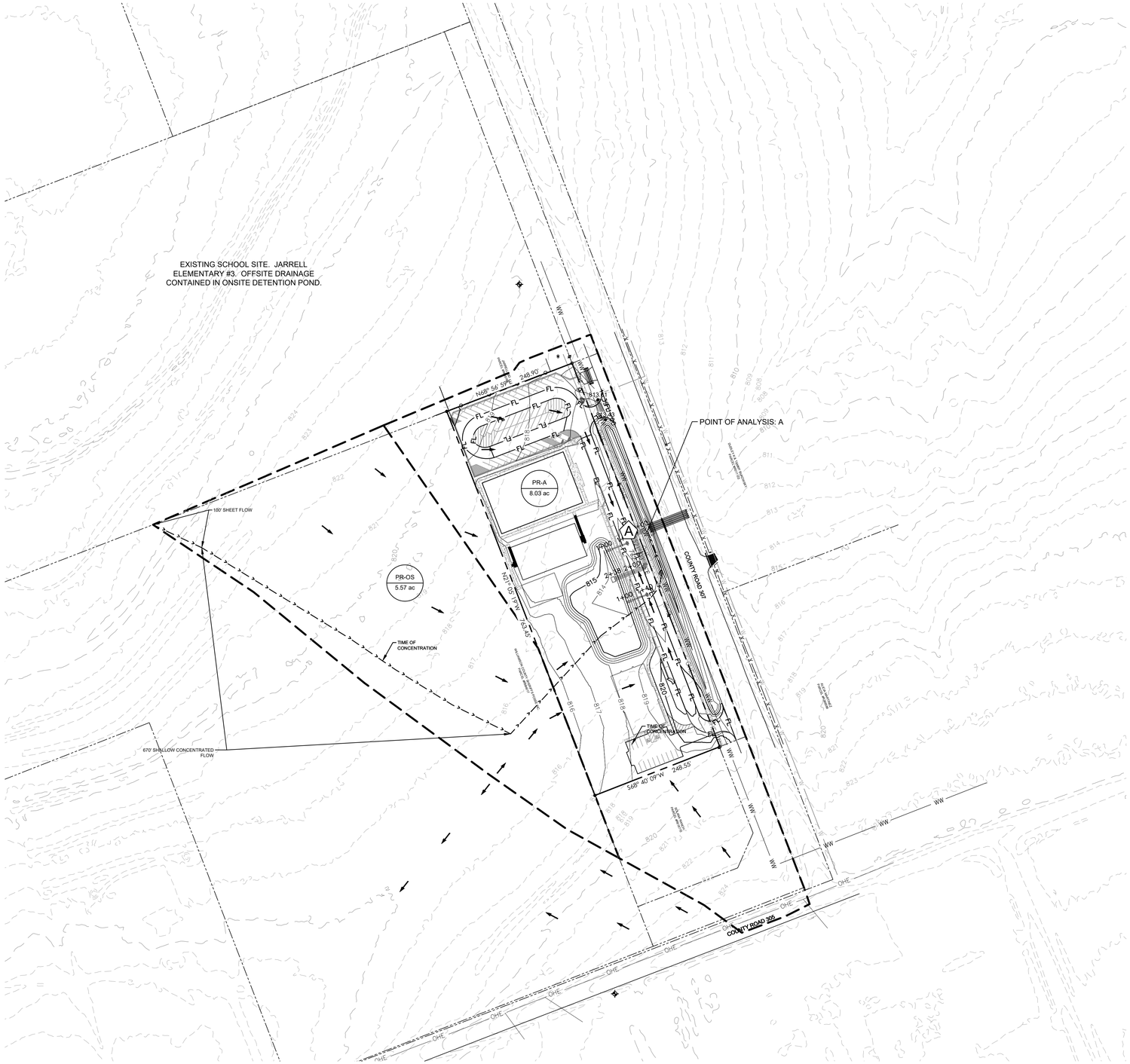
EXISTING DRAINAGE AREA MAP

KID ZONE ON CR307

CITY OF JARRELL
WILLIAMSON COUNTY, TEXAS

SHEET NUMBER
15



N

W E

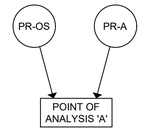
S

0 100' 200'

GRAPHIC SCALE 100'

LEGEND

X-1 / 9.9 ac	AREA DESIGNATOR / AREA IN ACRES
X	INLET NUMBER
	PROPERTY LINE
	PROPOSED STORM SEWER LINE
	EXISTING STORM SEWER LINE
	PROPOSED DRAINAGE DIVIDE
	PROPOSED STORM SEWER INLET
	PROPOSED STORM SEWER MANHOLE
	PROPOSED STORM SEWER HEADWALL
	PROPOSED FLOW DIRECTION
555	PROPOSED CONTOUR
555	EXISTING CONTOUR
	100-YR ATLAS-14 FLOODPLAIN



Kids Zone - Jarrell

DETENTION RESULTS - SCS METHOD

PROPOSED CONDITIONS

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

PROPOSED VS. EXISTING COMPARISON

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

Kid Zone - Jarrell - Proposed Time of Conc.

Drainage Calculations - SCS Method

DRAINAGE AREA	AREA (sf)	AREA (Ac.)	IMPERVIOUS COVER (Ac.)	IMPERVIOUS COVER %	PERVIOUS CURVE NO. Cn*	WEIGHTED CURVE NO. Cn*	SHEET FLOW				SHALLOW CONCENTRATED FLOW				CHANNEL FLOW											TOTAL Tc** (min)	Q_2 (cfs)	Q_{10} (cfs)	Q_{25} (cfs)	Q_{100} (cfs)
								P-2yr24hr	3.92	IN		Grass Surface			Channel Flow					Pipe Flow									
							N	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)					
PR-A	592,852	13.61	2.09	15.36%	79.00	81.92	0.15	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	37.52	48.41	65.81
PR-OS	242,629	5.57	0.00	0.00%	70.00	70.00	0.15	100	0.021	8.68	670	1.72	0.011	6.48	117	5.1	0.035	0.004	0.38	-	-	-	-	-	15.55	12.28	23.47	31.27	43.96

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

BENCHMARKS

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

BM 7210 - MAG NAIL SET IN CONCRETE
ELEV. 823.90

No.	REVISIONS	DATE	BY

Kimley»Horn
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TEXAS REGISTERED ENGINEERING FIRM F-928

2/09/2024

STATE OF TEXAS
ALEJANDRO E. GRANADOS RICO
130084
LICENSED
PROFESSIONAL ENGINEER

KHA PROJECT 069427200
DATE FEBRUARY 2024
SCALE: AS SHOWN
DESIGNED BY: JDR
DRAWN BY: JDR
CHECKED BY: AEG

PROPOSED DRAINAGE AREA MAP

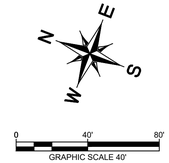
KID ZONE ON CR307

CITY OF JARRELL
WILLIAMSON COUNTY, TEXAS

SHEET NUMBER
16

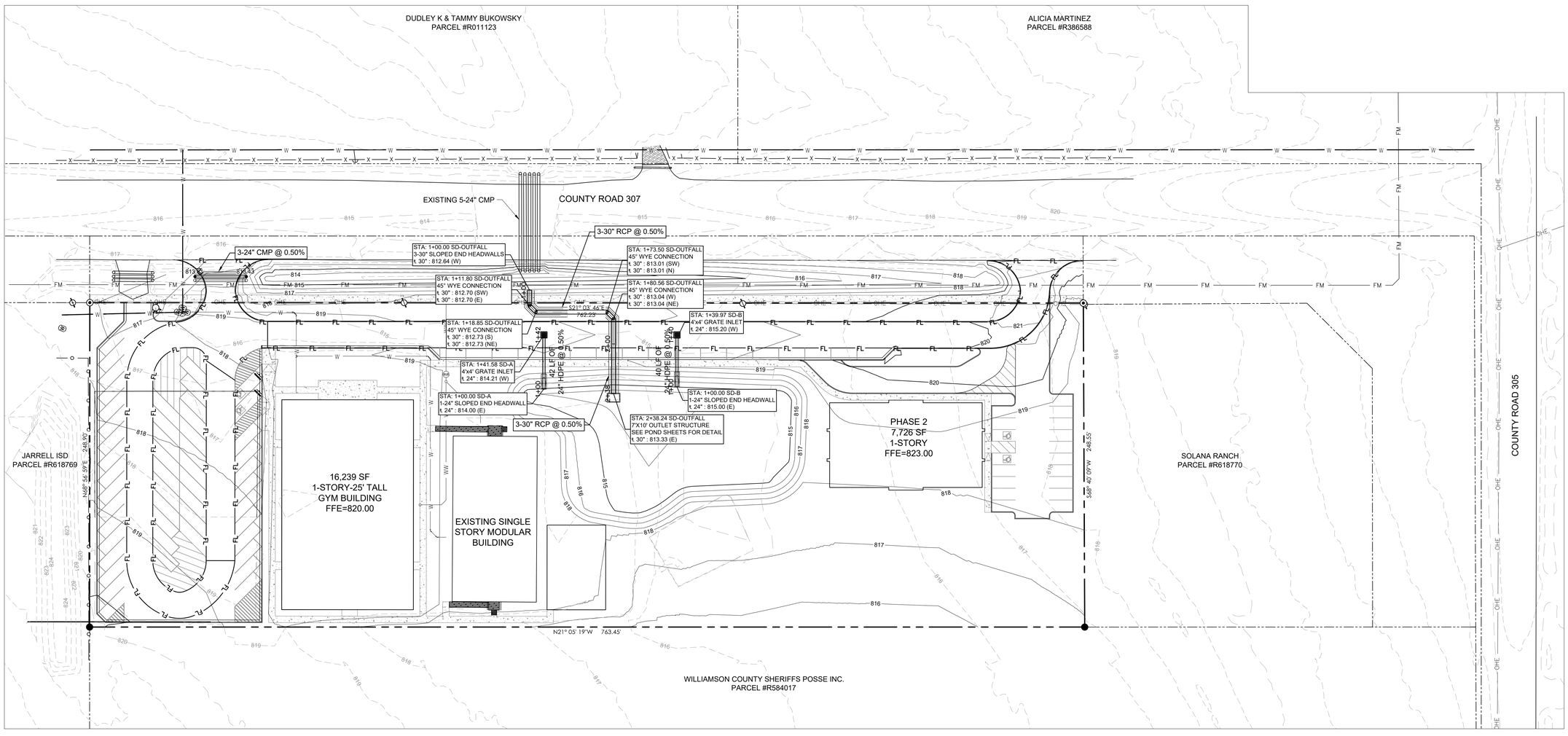
NOTES:

1. ALL STORM PIPES ARE HDPE UNLESS OTHERWISE NOTED.



LEGEND

- PROPERTY LINE
- PROPOSED WASTEWATER LINE
- PROPOSED WATER LINE
- PROPOSED WASTEWATER MANHOLE
- PROPOSED WASTEWATER CLEANOUT
- WASTEWATER FLOW DIRECTION
- PROPOSED FIRE HYDRANT
- PROPOSED TAPPING SLEEVE & VALVE
- PROPOSED STORM DRAIN LINE
- PROPOSED STORM DRAIN INLET
- EXISTING OVERHEAD POWER LINE
- EXISTING WATER LINE
- EXISTING WASTEWATER LINE
- EXISTING STORM SEWER LINE
- EXISTING POWER POLE
- EXISTING FIRE HYDRANT
- EXISTING WATER METER
- EXISTING WASTEWATER MANHOLE



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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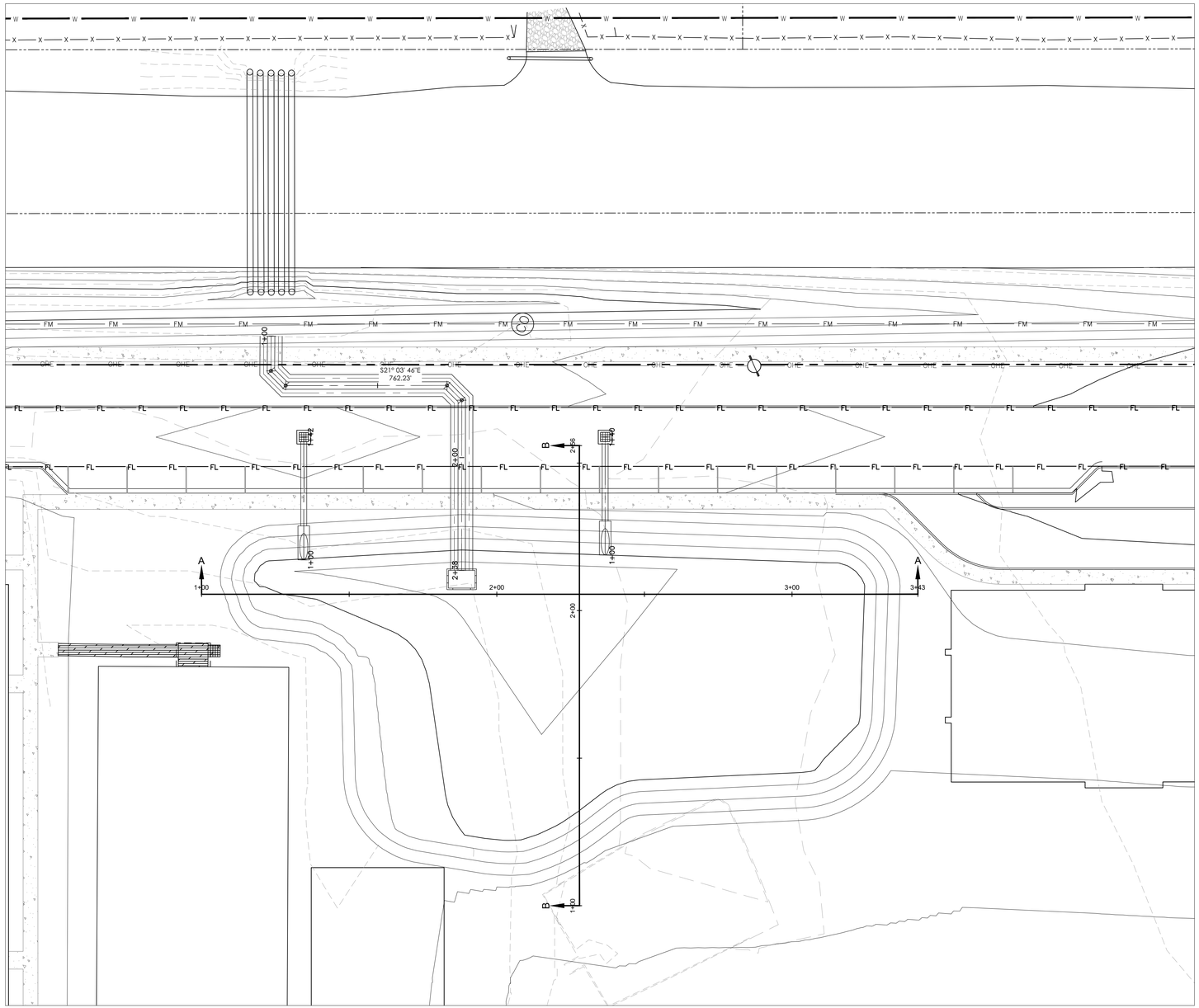
OVERALL STORM PLAN

KID ZONE ON CR307

CITY OF JARRELL
WILLIAMSON COUNTY, TEXAS

SHEET NUMBER
17

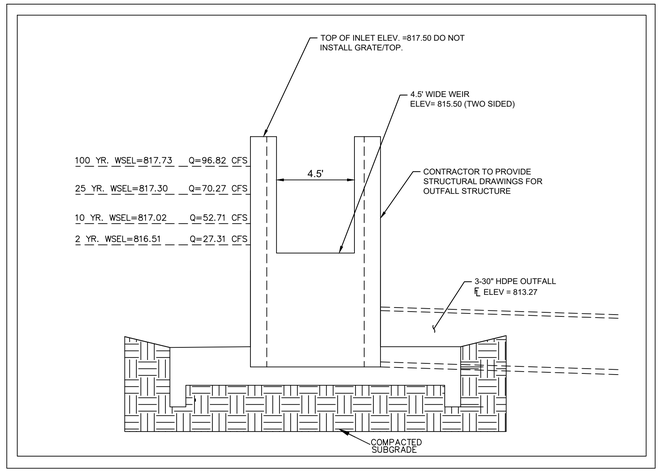


0 20' 40'

GRAPHIC SCALE 20'

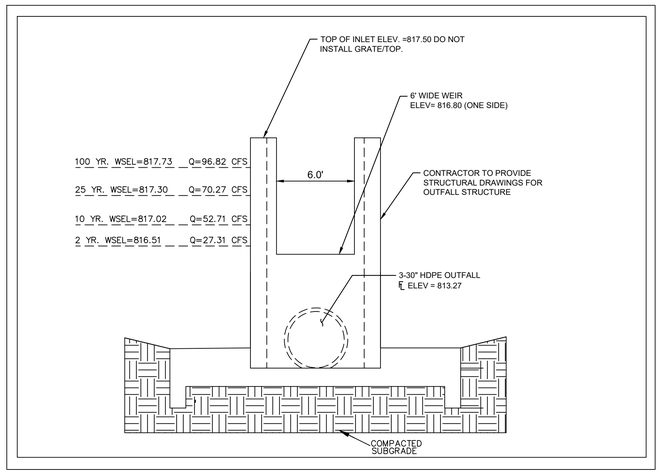
LEGEND

- A-1 — INLET NUMBER
- PROPERTY LINE
- PROPOSED STORM SEWER LINE
- EXISTING STORM SEWER LINE
- PROPOSED DRAINAGE DIVIDE
- PROPOSED STORM SEWER INLET
- PROPOSED STORM SEWER MANHOLE
- PROPOSED STORM SEWER HEADWALL
- PROPOSED FLOW DIRECTION
- 555 — PROPOSED CONTOUR
- 555 — EXISTING CONTOUR



COMPOSITE OUTLET STRUCTURE DETAIL

N.T.S.



COMPOSITE OUTLET STRUCTURE DETAIL

N.T.S.

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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LICENSED PROFESSIONAL ENGINEER

KHA PROJECT 069427200
DATE FEBRUARY 2024
SCALE: AS SHOWN
DESIGNED BY: JDR
DRAWN BY: JDR
CHECKED BY: AEG

POND PLAN

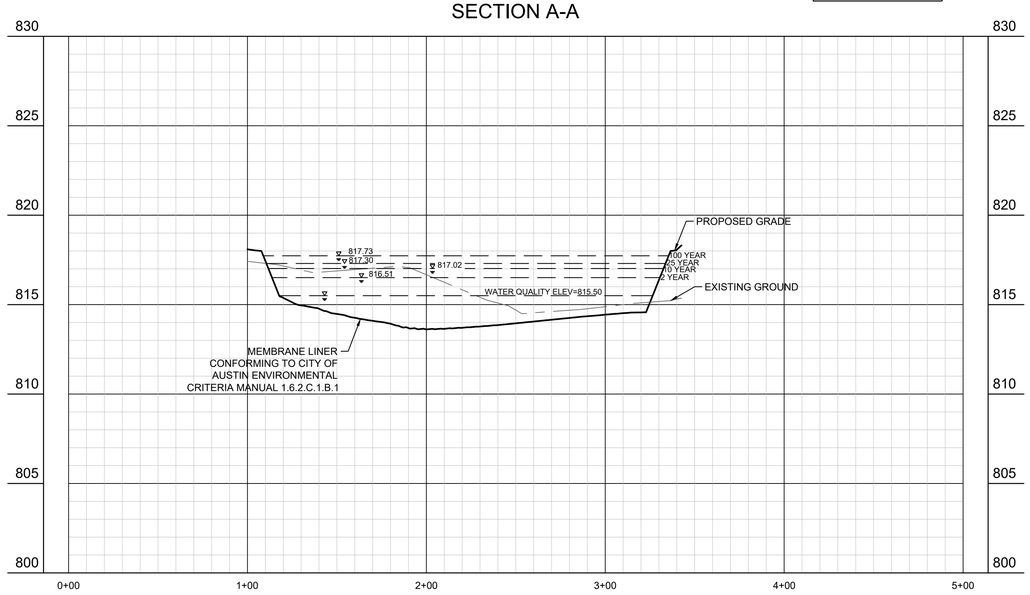
KID ZONE ON CR307

CITY OF JARRELL
WILLIAMSON COUNTY, TEXAS

SHEET NUMBER
18

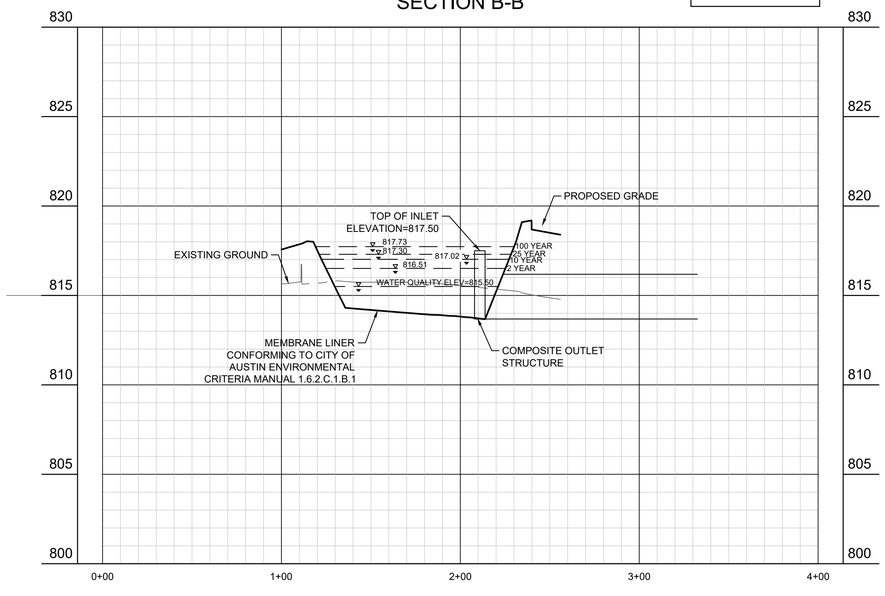
PROFILE SCALE
1" = 40' HORIZONTAL
1" = 4' VERTICAL

SECTION A-A



PROFILE SCALE
1" = 40' HORIZONTAL
1" = 4' VERTICAL

SECTION B-B



Texas Commission on Environmental Quality

TSS Removal Calculations 04-20-2009

Project Name: Kid Zone - Jarrell
Date Prepared: 1/30/2024

Additional information is provided for cells with a red triangle in the upper right corner. Place the cursor over the cell.
Text shown in blue indicate location of instructions in the Technical Guidance Manual - RG-348.
Characters shown in red are data entry fields.
Characters shown in black (Bold) are calculated fields. Changes to these fields will remove the equations used in the spreadsheet.

1. The Required Load Reduction for the total project: Calculations from RG-348 — Pages 3-27 to 3-30

Page 3-29 Equation 3.3: $L_M = 27.2(A_N \times P)$

where:
$L_{M\ TOTAL\ PROJECT}$ = Required TSS removal resulting from the proposed development = 80% of increased load
A_N = Net increase in impervious area for the project
P = Average annual precipitation, inches

Site Data: Determine Required Load Removal Based on the Entire Project

County =	Williamson	
Total project area included in plan * =	4.36	acres
Predevelopment impervious area within the limits of the plan * =	0.00	acres
Total post-development impervious area within the limits of the plan* =	2.46	acres
Total post-development impervious cover fraction * =	0.56	
P =	32	inches
$L_{M\ TOTAL\ PROJECT}$ =	2142	lbs.

* The values entered in these fields should be for the total project area.

Number of drainage basins / outfalls areas leaving the plan area = 1

2. Drainage Basin Parameters (This information should be provided for each basin):

Drainage Basin/Outfall Area No. = WQP-A

Total drainage basin/outfall area =	8.87	acres	This includes the offsite drainage areas coming to pond
Predevelopment impervious area within drainage basin/outfall area =	0.00	acres	
Post-development impervious area within drainage basin/outfall area =	2.46	acres	
Post-development impervious fraction within drainage basin/outfall area =	0.28		
$L_{M\ THIS\ BASIN}$ =	2142	lbs.	Trying to remove this much TSS

3. Indicate the proposed BMP Code for this basin.

Proposed BMP = Batch Extended Detention
Removal efficiency = 91 percent

4. Calculate Maximum TSS Load Removed (L_R) for this Drainage Basin by the selected BMP Type.

RG-348 Page 3-33 Equation 3.7: L_R = (BMP efficiency) x P x (A_I x 34.6 + A_P x 0.54)

where:
A_C = Total On-Site drainage area in the BMP catchment area
A_I = Impervious area proposed in the BMP catchment area
A_P = Pervious area remaining in the BMP catchment area
L_R = TSS Load removed from this catchment area by the proposed BMP

A_C =	8.87	acres
A_I =	2.46	acres
A_P =	6.41	acres
L_R =	2580	lbs

5. Calculate Fraction of Annual Runoff to Treat the drainage basin / outfall area

Desired $L_{M\ THIS\ BASIN}$ =	2350	lbs.
F =	0.91	

6. Calculate Capture Volume required by the BMP Type for this drainage basin / outfall area. Calculations from RG-348

Rainfall Depth =	1.80	inches
Post Development Runoff Coefficient =	0.25	
On-site Water Quality Volume =	14278	cubic feet

Calculations from RG-348 — Pages 3-36 to 3-37

Off-site area draining to BMP =	5.92	acres
Off-site Impervious cover draining to BMP =	0.00	acres
Impervious fraction of off-site area =	0.00	
Off-site Runoff Coefficient =	0.02	
Off-site Water Quality Volume =	774	cubic feet
Storage for Sediment =	3010	
Total Capture Volume (required water quality volume(s) x 1.20) =	18062	cubic feet

STAGE STORAGE

Contour Elevation	Contour Area (sq. ft)	Depth (ft)	Incremental Volume Avg. End (cu. ft)	Cumulative Volume Avg. End (cu. ft)	Incremental Volume Conic (cu. ft)	Cumulative Volume Conic (cu. ft)	
813.50	122.72	N/A	N/A	0.00	N/A	0.00	
814.00	3,818.43	0.500	985.29	985.29	770.95	770.95	
814.50	11,836.22	0.500	3913.66	4898.95	3729.57	4500.52	
815.00	16,462.86	0.500	7074.77	11973.72	7043.04	11543.56	
815.50	18,208.55	0.500	8667.85	20641.57	8664.19	20207.75	WATER QUALITY ELEVATION
816.00	19,381.46	0.500	9397.50	30039.07	9395.98	29603.72	
816.50	20,579.15	0.500	9990.15	40029.23	9988.65	39592.38	
817.00	21,801.62	0.500	10595.19	50624.42	10593.72	50186.10	
817.50	0.05	0.500	5450.42	56074.84	3639.35	53825.46	

BENCHMARKS

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

BM 7210 - MAG NAIL SET IN CONCRETE
ELEV. 823.90

No.	REVISIONS	DATE	BY

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TEXAS REGISTERED ENGINEERING FIRM F-928

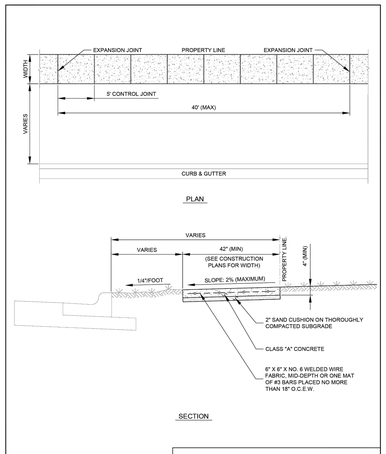
2/09/2024
STATE OF TEXAS
ALEJANDRO E. ORNELAS RIOS
130084
LICENSED
PROFESSIONAL ENGINEER
Alejandro E. Ornelas Rios

KHA PROJECT	069427200
DATE:	FEBRUARY 2024
SCALE:	AS SHOWN
DESIGNED BY:	JDR
DRAWN BY:	JDR
CHECKED BY:	AEG

POND CROSS SECTIONS

KID ZONE ON CR307
CITY OF JARRELL
WILLIAMSON COUNTY, TEXAS

SHEET NUMBER
19

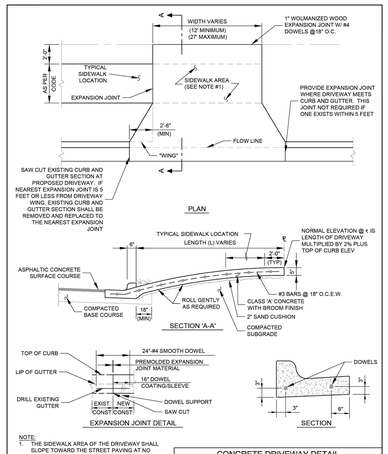


SIDEWALK DETAIL

CITY OF JARRELL
Engineering and Capital Improvements

THE ARCHITECT / ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD

STANDARD No. **ST-01**
Revision Date: 03/17/2022



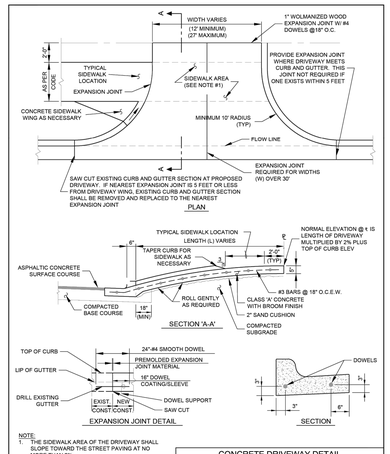
NOTE:
1. THE SIDEWALK AREA OF THE DRIVEWAY SHALL SLOPE TOWARD THE STREET PAVING AT NO MORE THAN 2%.

CONCRETE DRIVEWAY DETAIL (RESIDENTIAL)

CITY OF JARRELL
Engineering and Capital Improvements

THE ARCHITECT / ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD

STANDARD No. **ST-02**
Revision Date: 03/17/2022



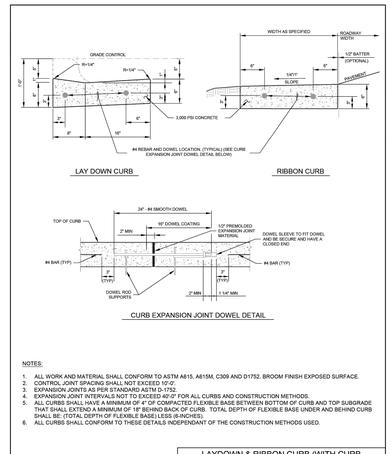
NOTE:
1. THE SIDEWALK AREA OF THE DRIVEWAY SHALL SLOPE TOWARD THE STREET PAVING AT NO MORE THAN 2%.

CONCRETE DRIVEWAY DETAIL (COMMERCIAL OR MULTI-FAMILY)

CITY OF JARRELL
Engineering and Capital Improvements

THE ARCHITECT / ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD

STANDARD No. **ST-03**
Revision Date: 03/17/2022



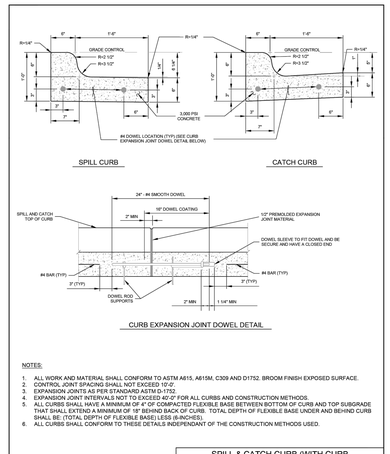
NOTES:
1. ALL WORK AND MATERIAL SHALL CONFORM TO ASTM A615, A615M, C309 AND D1752. BROOM FINISH EXPOSED SURFACE.
2. CONTROL JOINT SPACING SHALL NOT EXCEED 10'-0".
3. EXPANSION JOINTS AS PER STANDARD ASTM D-1752.
4. EXPANSION JOINT INTERVALS NOT TO EXCEED 40'-0" FOR ALL CURBS AND CONSTRUCTION METHODS.
5. ALL CURBS SHALL HAVE A MINIMUM OF 4" OF COMPACTED FLEXIBLE BASE BETWEEN BOTTOM OF CURB AND TOP SUBGRADE THAT SHALL EXTEND A MINIMUM OF 18" BEHIND BACK OF CURB. TOTAL DEPTH OF FLEXIBLE BASE UNDER AND BEHIND CURB SHALL BE: (TOTAL DEPTH OF FLEXIBLE BASE) LESS (6-INCHES).
6. ALL CURBS SHALL CONFORM TO THESE DETAILS INDEPENDANT OF THE CONSTRUCTION METHODS USED.

LAYDOWN & RIBBON CURB (WITH CURB EXPANSION JOINT DOWEL) DETAILS

CITY OF JARRELL
Engineering and Capital Improvements

THE ARCHITECT / ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD

STANDARD No. **ST-04**
Revision Date: 03/17/2022



NOTES:
1. ALL WORK AND MATERIAL SHALL CONFORM TO ASTM A615, A615M, C309 AND D1752. BROOM FINISH EXPOSED SURFACE.
2. CONTROL JOINTS AS PER STANDARD ASTM D-1752
3. EXPANSION JOINTS AS PER STANDARD ASTM D-1752
4. EXPANSION JOINT INTERVALS NOT TO EXCEED 40'-0" FOR ALL CURBS AND CONSTRUCTION METHODS.
5. ALL CURBS SHALL HAVE A MINIMUM OF 4" OF COMPACTED FLEXIBLE BASE BETWEEN BOTTOM OF CURB AND TOP SUBGRADE THAT SHALL EXTEND A MINIMUM OF 18" BEHIND BACK OF CURB. TOTAL DEPTH OF FLEXIBLE BASE UNDER AND BEHIND CURB SHALL BE: (TOTAL DEPTH OF FLEXIBLE BASE) LESS (6-INCHES).
6. ALL CURBS SHALL CONFORM TO THESE DETAILS INDEPENDANT OF THE CONSTRUCTION METHODS USED.

SPILL & CATCH CURB (WITH CURB EXPANSION JOINT DOWEL) DETAILS

CITY OF JARRELL
Engineering and Capital Improvements

THE ARCHITECT / ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD

STANDARD No. **ST-05**
Revision Date: 03/17/2022

NOTES:
1. MATERIALS AND CONSTRUCTION METHODS SHALL CONFORM TO THE CITY OF AUSTIN STANDARD SPECIFICATIONS.
2. CONCRETE SHALL BE CLASS "A".
3. MONOLITHIC CURB & GUTTER SHALL BE MEASURED BY PLAN SQUARE FEET AND PAID AS VALLEY GUTTER.
4. THE UPSTREAM CURB MID POINT MUST BE AT OR LOWER THAN THE BEGINNING P.C. AND .5% (MIN.) HIGHER THAN THE OPPOSING MID POINT.
5. ALLOWABLE CONSTRUCTION JOINT AT C WHEN TRAFFIC FLOW MUST BE MAINTAINED, CONSTRUCTED AS A CONTROL JOINT. PROVIDE EXPANSION JOINT @ C FOR WIDTHS GREATER THAN 40 FEET.
6. ALL EXPANSION JOINTS SHALL BE CONSTRUCTED WITH 1/2" PREMOLDED EXPANSION JOINT MATERIAL AND DOWELS AND CAPS (SEE STANDARD CURB DOWEL DETAIL).

CONCRETE VALLEY GUTTER DETAIL

CITY OF JARRELL
Engineering and Capital Improvements

THE ARCHITECT / ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD

STANDARD No. **ST-06**
Revision Date: 03/17/2022

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PEDESTRIAN FACILITIES CURB RAMPS DETAILS (USE TxDOT)

CITY OF JARRELL
Engineering and Capital Improvements

THE ARCHITECT / ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD

STANDARD No. **ST-07**
Revision Date: 03/17/2022

STREET END MARKER DETAIL

CITY OF JARRELL
Engineering and Capital Improvements

THE ARCHITECT / ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD

STANDARD No. **ST-09**
Revision Date: 03/17/2022

NOTE:

FIRE LANE STRIPING TO BE 6" WIDE RED PAINT WITH "NO PARKING FIRE LANE" IN 4" TALL WHITE LETTERS. WORDING MAY NOT BE SPACED GREATER THAN 30' APART. STRIPING TO BE PAINTED ON THE FACE OF CURB WHEN PRESENT AND PAINTED FLAT ON THE PARKING SURFACE WHEN IT IS NOT.

FIRE LANE MARKING DETAIL

CITY OF JARRELL
Engineering and Capital Improvements

THE ARCHITECT / ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD

STANDARD No. **ST-13**
Revision Date: 03/17/2022

NOTES:
1. NEW DRIVEWAY MUST ACCEPT STORM WATER RUNOFF FROM ROADWAY PAVEMENT, GRADING AWAY FROM PAVEMENT AT MINIMUM -2%, MAXIMUM -12%.
2. GRADE BACK DISTANCES MUST BE AT A MINIMUM OF 12' OR ℄ OF BAR DITCH IF GREATER THAN 12' OR TO THE DISTANCE REQUIRED IN THE PERMIT. WHICHEVER IS GREATER.
3. GRADE OF DRIVEWAY PAST THE 12' POINT MAY CHANGE MULTIPLE TIMES AND BE POSITIVE OR NEGATIVE TO THE BACK SIDE OF THE APRON, BUT CAN BE NO GREATER THAN 2% IN THE AREA WHERE THE SIDEWALK IS TO CROSS.

CONCRETE DRIVEWAY DETAIL (RIBBON CURB OR RURAL SECTION)

CITY OF JARRELL
Engineering and Capital Improvements

THE ARCHITECT / ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD

STANDARD No. **ST-14**
Revision Date: 03/17/2022

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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TEXAS REGISTERED ENGINEERING FIRM F-928

No.	REVISIONS	DATE	BY

2/09/2024

STATE OF TEXAS
ALEJANDRO E. GRANADOS RICO
130084
LICENSED PROFESSIONAL ENGINEER

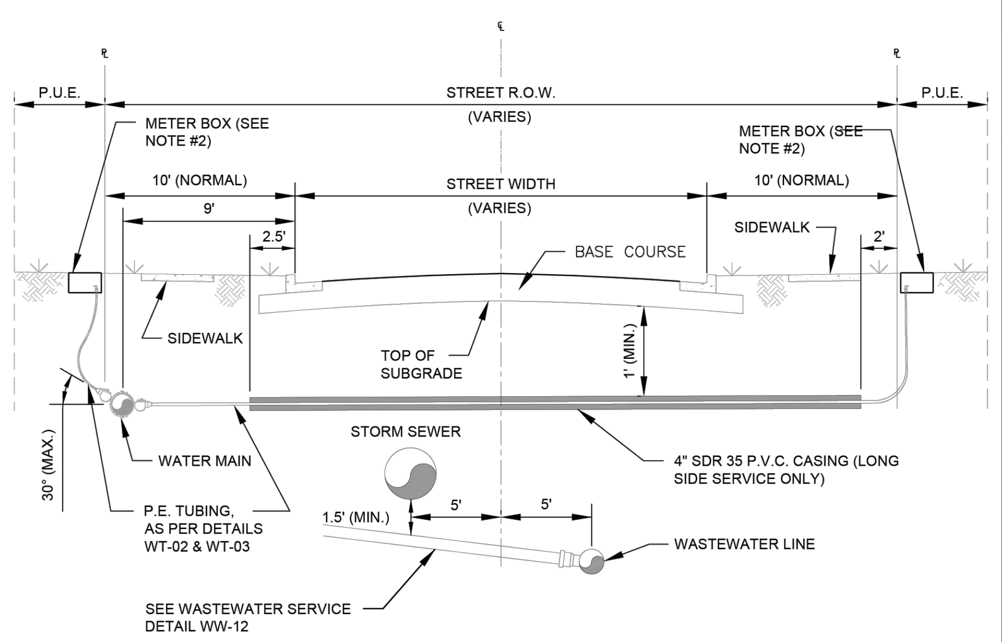
KHA PROJECT 069427200
DATE FEBRUARY 2024
SCALE: AS SHOWN
DESIGNED BY: JDR
DRAWN BY: JDR
CHECKED BY: AEG

PAVING DETAILS

KID ZONE ON CR307

CITY OF JARRELL
WILLIAMSON COUNTY, TEXAS

SHEET NUMBER
20



WATER SERVICE CASING DETAIL

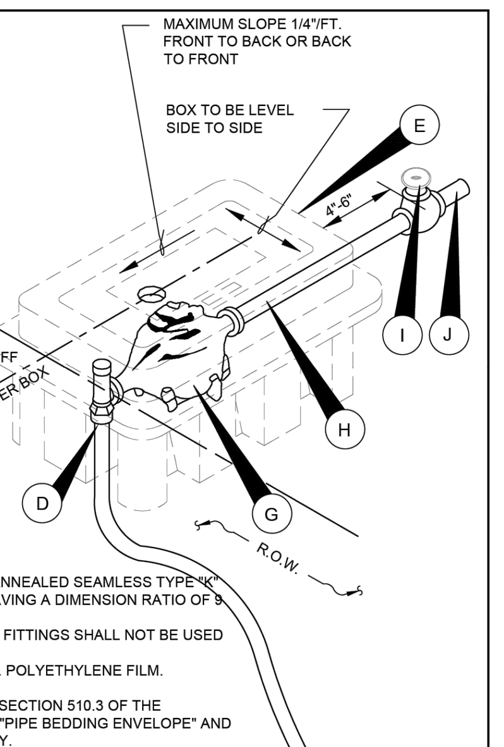
CITY OF JARRELL
Engineering and Capital Improvements

THE ARCHITECT / ENGINEER ASSUMES RESPONSIBILTY FOR APPROPRIATE USE OF THIS STANDARD

STANDARD No. WT-01
Revision Date: 03/18/2022

MATERIAL LIST:

A. SERVICE SADDLE REQUIRED. SERVICE SADDLE TO BE EPOXY COATED WITH DUAL STAINLESS STEEL BANDS.
B. 1 1/2" OR 2" CORPORATION STOP - SERVICE PIPE OUTLET. (SEE NOTE #2)
C. 1 1/2" OR 2" SERVICE PIPE.
D. LOCKING ANGLE METER STOP; SERVICE PIPE INLET X SWIVEL COUPLING NUT OUTLET:
- FOR 1 1/2" METERS: 1 1/2" X 1 1/2"
- FOR 2" METERS: 2" X 2"
- SEE NOTE #2
E. PLASTIC RECTANGULAR METER BOX. (SEE TABLE BELOW)
F. PIPE CASING WHERE APPLICABLE. (AS PER DETAIL WT-01)
G. WATER METER, CENTERED IN BOX. (SEE TABLE BELOW)
H. WATER METER COUPLING; MALE I.P.T. X SWIVEL COUPLING NUT:
- LENGTH OF PIPE TO BE DETERMINED BY CONTRACTOR.
- EXTEND PIPE TO 4"-6" OUTSIDE OF METER BOX.
I. BRONZE GATE VALVE: NON-RISING STEM (1 1/2" OR 2") FEMALE I.P.T. (PROPERTY OWNERS CUT-OFF OUTSIDE METER BOX IN SEPARATE VALVE CAN WITH LID AS PER CITY OF JARRELL STANDARDS).
J. BUSHING (IF NECESSARY) AND PIPE MEETING CITY OF JARRELL PLUMBING CODE REQUIREMENTS.

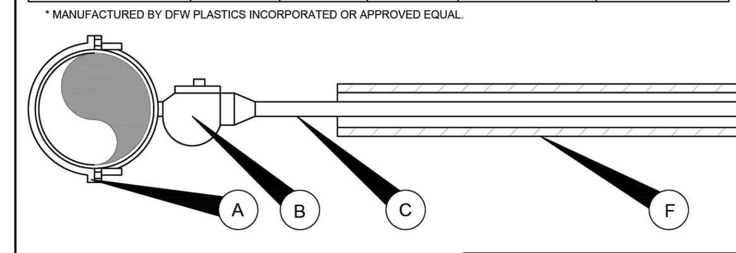


NOTES:

1. SERVICE PIPE SHALL BE COPPER TUBE SIZE. IT MAY BE 150 PSI ANNEALED SEAMLESS TYPE "K" COPPER TUBING OR 200 PSI BLACK COLORED POLYETHYLENE HAVING A DIMENSION RATIO OF 9 (DR9).
2. ALL STAINLESS STEEL INSERTS THAT COME WITH COMPRESSION FITTINGS SHALL NOT BE USED ON ANY CONNECTIONS.
3. SERVICE SADDLES SHALL BE WRAPPED COMPLETELY WITH 8 MIL. POLYETHYLENE FILM.
4. TOP OF BOXES SHALL BE 1" ABOVE FINISHED GRADE.
5. PIPING AND TUBING SHALL BE INSTALLED IN ACCORDANCE WITH SECTION 510.3 OF THE STANDARD SPECIFICATIONS. SPECIAL ATTENTION IS CALLED TO "PIPE BEDDING ENVELOPE" AND "BACKFILLING", SECTIONS 510.3 (14) AND 510.3 (25), RESPECTIVELY.
6. AXIS OF METER ASSEMBLY (LINE THROUGH METER STOP, METER, PIPING AND OWNERS CUTOFF) SHALL BE 10" BELOW TOP OF BOX.
7. SLOTS PROVIDED IN METER BOX TO ACCOMODATE PIPING INTO AND OUT OF BOX, SHALL NOT BE MODIFIED.
8. LOCATION OF METER BOXES SHALL BE SUBJECT TO THE APPROVAL OF THE C.O.R.R.

PART NUMBER	SERIES	COLOR	HEIGHT	WIDTH	LENGTH
DFW65C-14-BODY*	65C	BLACK	14"	TOP = 18-3/4"	TOP = 30-3/8"
DFW65C-AF1EQA-LID*	65C	BLACK	1-7/8"	LID = 15-1/4"	LID = 26-7/8"
DFW65C-14-AF1EQA*	65C	BLACK	14"	BASE = 15-1/4"	BASE = 30-3/8"

* MANUFACTURED BY DFW PLASTICS INCORPORATED OR APPROVED EQUAL.



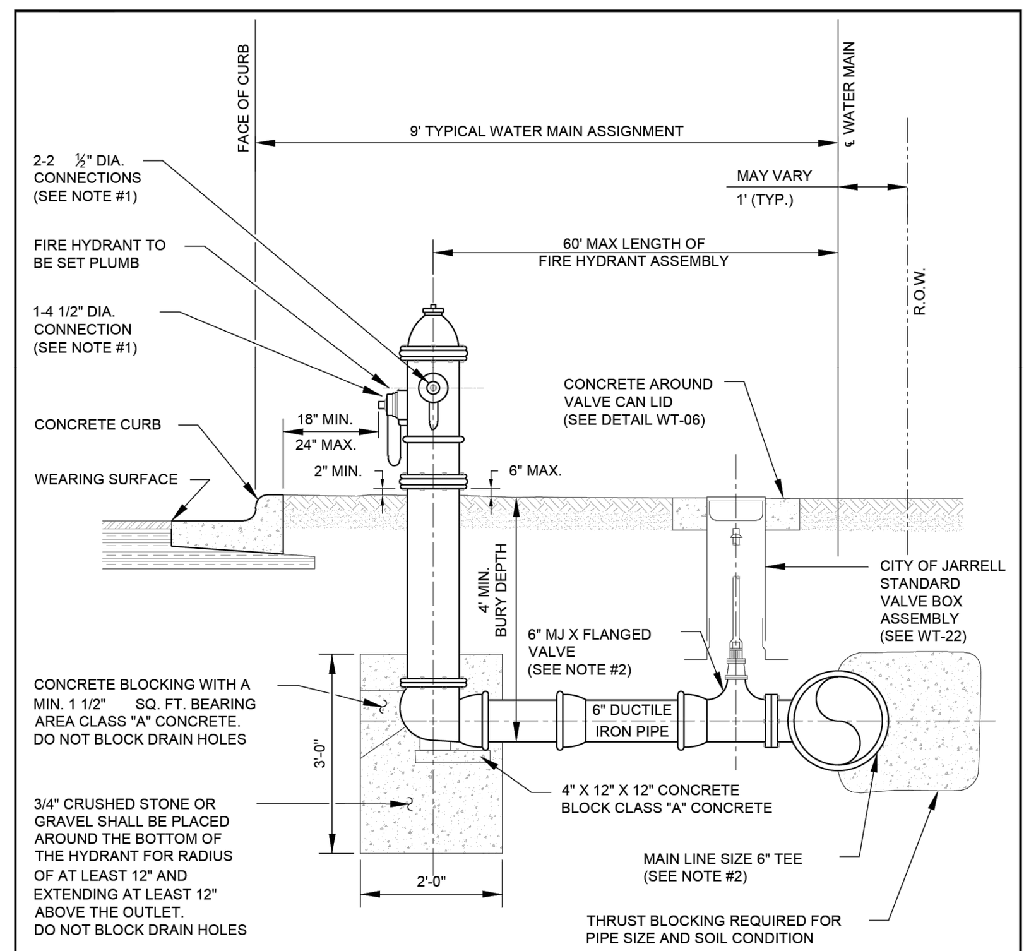
METER SIZE	LENGTH
1-1/2"	13"
2"	17"

1-1/2" OR 2" SINGLE WATER METER DETAIL

CITY OF JARRELL
Engineering and Capital Improvements

THE ARCHITECT / ENGINEER ASSUMES RESPONSIBILTY FOR APPROPRIATE USE OF THIS STANDARD

STANDARD No. WT-03
Revision Date: 03/18/2022



NOTES:

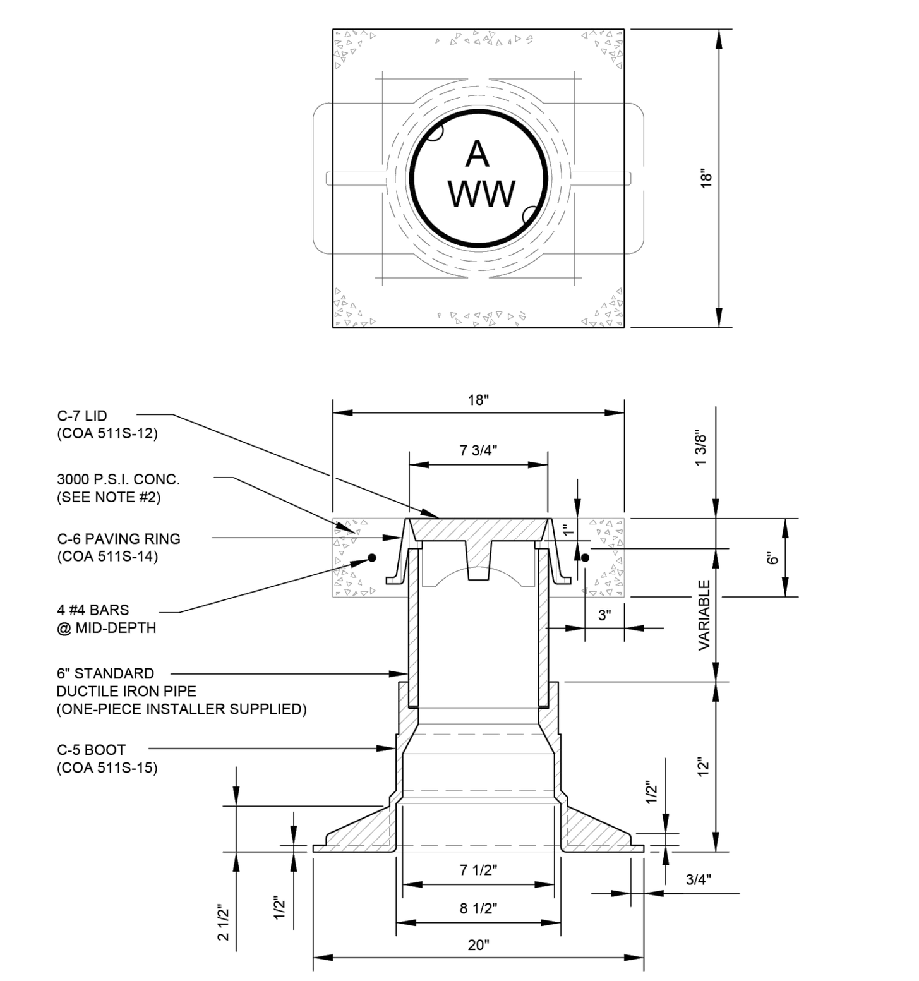
1. THREADS ON OUTLET NOZZLES SHALL BE NATIONAL STANDARD THREAD. ALL FIRE HYDRANTS SHALL BE EQUIPPED WITH A STORZ HYDRANT ADAPTOR.
2. TEE MAY HAVE FLANGED OUTLET FOR MJ X FLANGED GATE VALVE OR, ANCHOR (SWIVEL) TEE MAY BE USED WITH MJ X MJ GATE VALVE.
3. A BLUE REFLECTIVE DELINEATOR OF TYPE APPROVED BY THE ENGINEER SHALL BE PLACED 2 TO 3 FEET OFFSET FROM THE CENTERLINE OF PAVED STREETS OR PAVED ACCESS WAYS, ON THE SIDE OF AND IN LINE WITH ALL NEWLY INSTALLED FIRE HYDRANTS.
4. PIPE, VALVE, TEE AND HYDRANT BARREL SHALL BE WRAPPED IN 8 MM POLY.
5. FIRE HYDRANT LEADS SHALL NOT CONTAIN ANY HORIZONTAL OR VERTICAL BENDS EXCEPT FOR WHAT IS SHOWN IN THE DETAIL.
6. FIRE HYDRANT LEAD AND ASSEMBLY SHALL BE RESTRAINED AND THRUST BLOCKED.

FIRE HYDRANT ASSEMBLY DETAIL

CITY OF JARRELL
Engineering and Capital Improvements

THE ARCHITECT / ENGINEER ASSUMES RESPONSIBILTY FOR APPROPRIATE USE OF THIS STANDARD

STANDARD No. WT-05
Revision Date: 03/18/2022



NOTES:

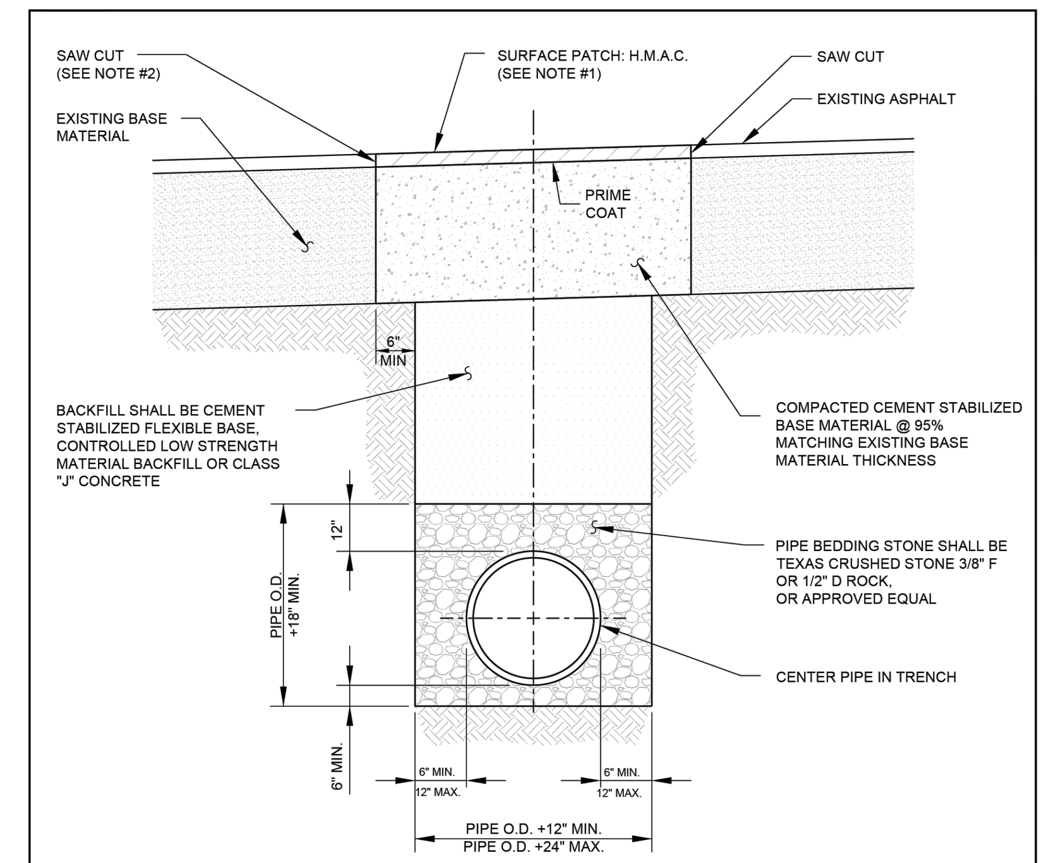
1. NUMBERED CASTINGS STANDARDS SHOWN IN PARENTHESES ARE REFERENCES TO THE CITY OF AUSTIN STANDARDS CRITERIA MANUAL.
2. DELETE CONCRETE AND REBAR WHEN VALVE IS WITHIN PAVED STREET.

VALVE BOX ASSEMBLY DETAIL

CITY OF JARRELL
Engineering and Capital Improvements

THE ARCHITECT / ENGINEER ASSUMES RESPONSIBILTY FOR APPROPRIATE USE OF THIS STANDARD

STANDARD No. WT-06
Revision Date: 03/18/2022



NOTES:

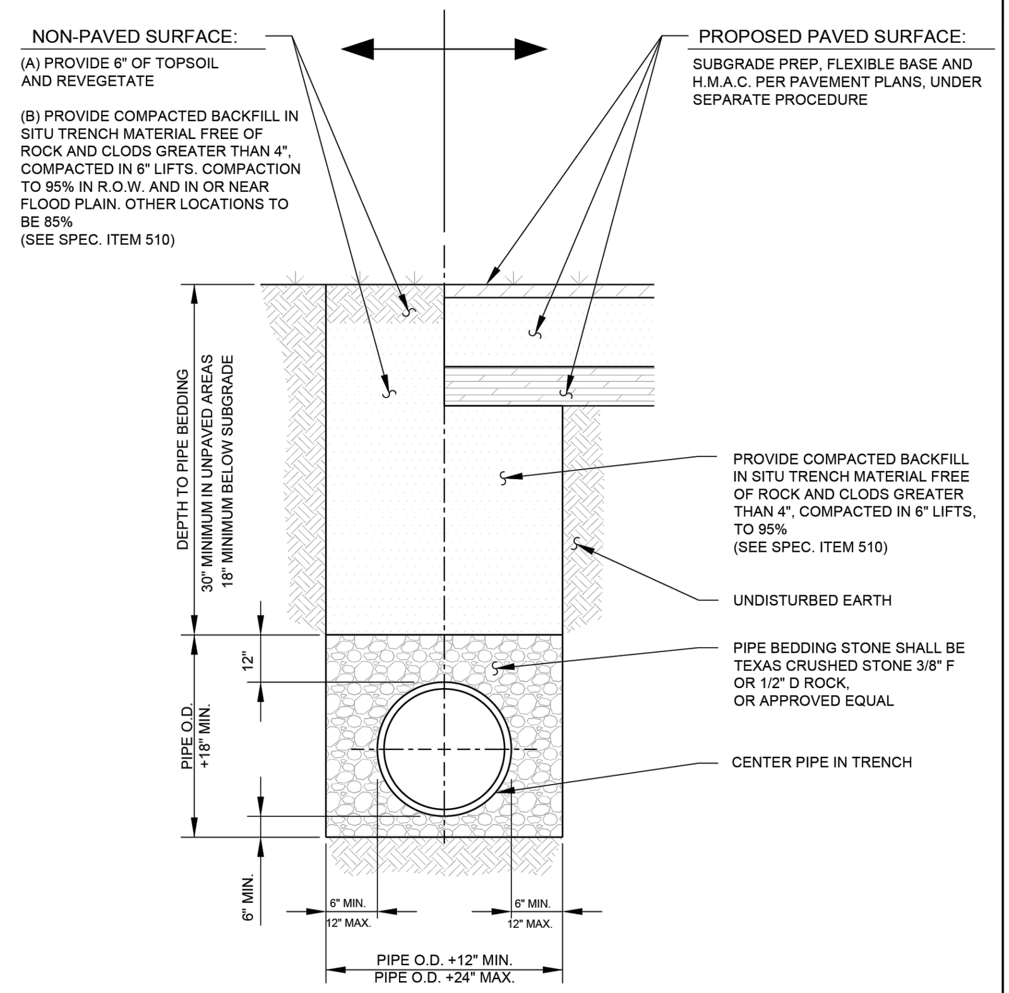
1. H.M.A.C. THICKNESS SHALL MATCH EXISTING ASPHALT THICKNESS AND NOT LESS THAN 2".
2. THE CONTRACTOR SHALL SAW CUT, REMOVE AND REPLACE EXISTING PAVEMENT AND FLEXIBLE BASE A MINIMUM OF 6" BEYOND EITHER THE EDGE OF THE WATERLINE TRENCH OR THE POINT WHERE EXISTING PAVEMENT IS DAMAGED DUE TO TRENCHING OPERATIONS, WHICHEVER IS GREATER. FINISHED PATCH SHALL BE NEAT AND UNIFORM.
3. INSTALLATION OF BACKFILL, SAW CUTTING AND REMOVAL OF EXISTING PAVEMENT AND SURFACE PATCH SHALL NOT BE PAID FOR SEPARATELY. COSTS FOR THESE ITEMS SHALL BE INCLUDED IN UNIT PRICE BID FOR WATERLINE PIPE.
4. THE CONTRACTOR SHALL PROVIDE STEEL PLATES TO SPAN THE TRENCH AS NECESSARY OR TO ALLOW BACKFILL TO CURE. SUCH PLATES SHALL BE SUITABLE FOR VEHICLE PASSAGE OVER THE TRENCH AND SHALL BE SATISFACTORILY ANCHORED IN PLACE. COSTS FOR THIS ITEM SHALL BE INCLUDED IN UNIT PRICE BID FOR WATERLINE PIPE.
5. ALL TRENCHING AND TRENCH SAFETY SHALL COMPLY WITH APPLICABLE FEDERAL, STATE AND LOCAL REGULATIONS.

WATER LINE BEDDING & SURFACE REPAIR DETAIL (EXISTING PAVED SURFACE)

CITY OF JARRELL
Engineering and Capital Improvements

THE ARCHITECT / ENGINEER ASSUMES RESPONSIBILTY FOR APPROPRIATE USE OF THIS STANDARD

STANDARD No. WT-07
Revision Date: 03/18/2022



NOTE:

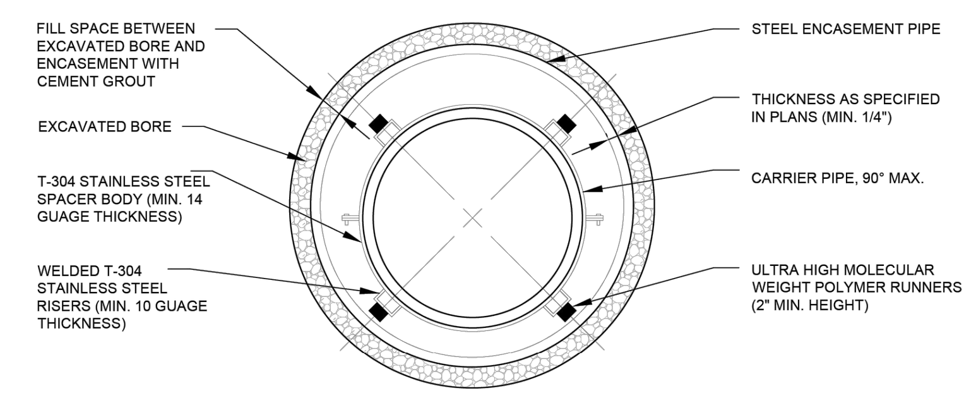
1. ALL TRENCHING AND TRENCH SAFETY SHALL COMPLY WITH APPLICABLE FEDERAL, STATE AND LOCAL REGULATIONS.

WATER LINE BEDDING & SURFACE REPAIR DETAIL (NON-PAVED & PROPOSED PAVED SURFACE)

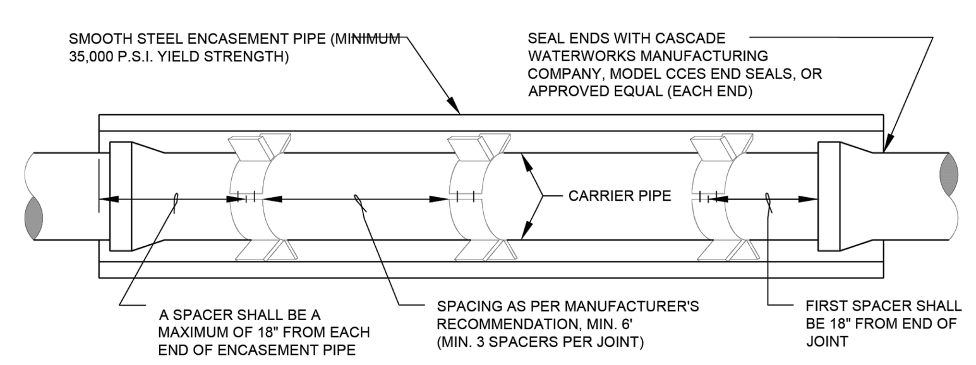
CITY OF JARRELL
Engineering and Capital Improvements

THE ARCHITECT / ENGINEER ASSUMES RESPONSIBILTY FOR APPROPRIATE USE OF THIS STANDARD

STANDARD No. WT-08
Revision Date: 03/18/2022



PIPE SIZE-CARRIER (DIAMETER)	PIPE SIZE-CASING (DIAMETER) (MIN.)	MINIMUM PIPE THICKNESS (INCHES)	
6"	16"	1/4	0.2500
8"	18"	1/4	0.2500
10"	20"	5/16	0.3125
12" ~ 14"	24"	3/8	0.3750
16" ~ 18"	30"	7/16	0.4375
20"	36"	1/2	0.5000
24"	42"	1/2	0.5000
30"	48"	1/2	0.5000



NOTES:

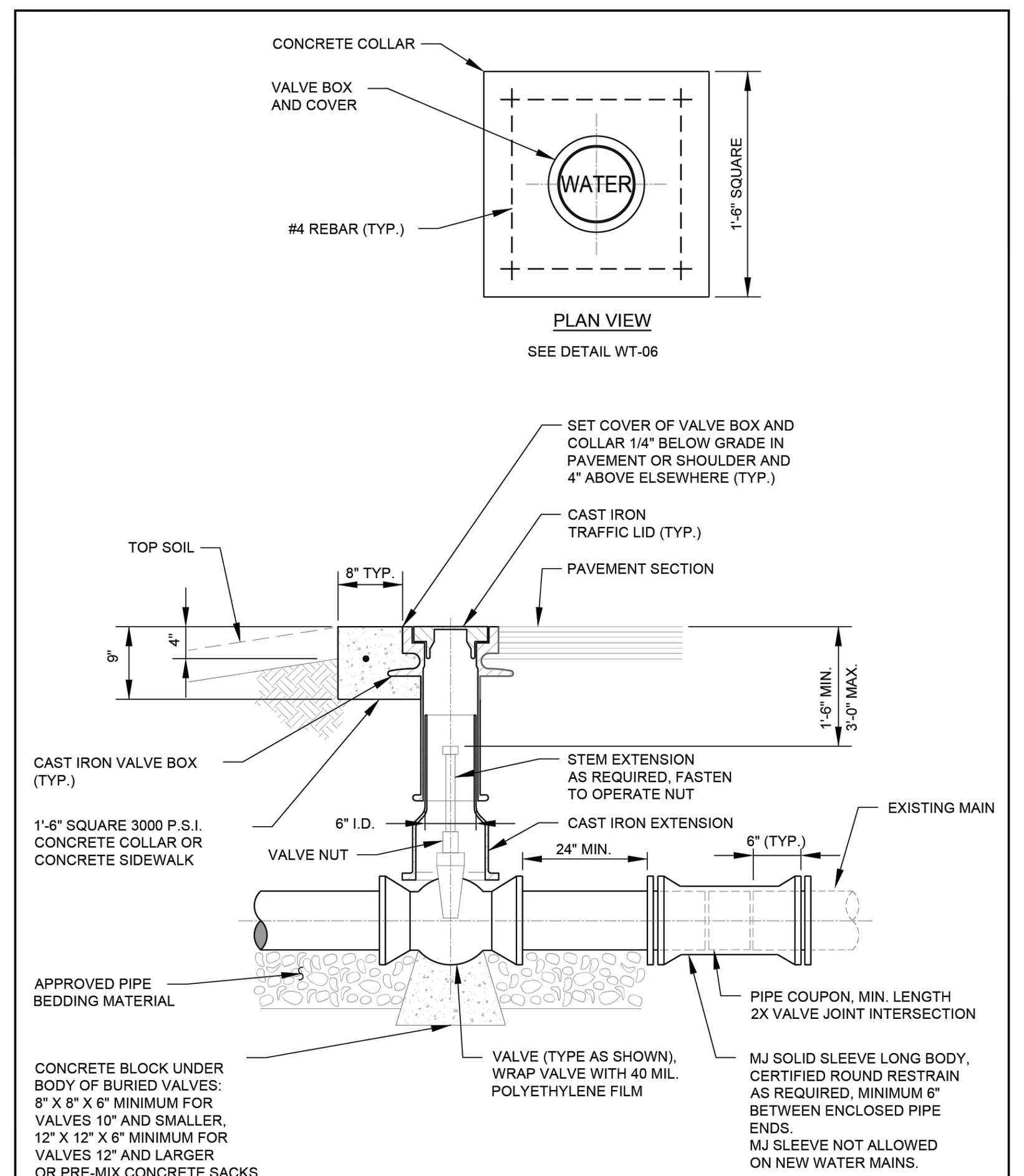
1. CASING SPACER CONFIGURATION AND SPACING SHALL BE AS SHOWN ON MANUFACTURER'S DRAWINGS FOR SPECIFIC WORK; THESE MUST BE ACCEPTABLE TO THE CITY OF JARRELL.
2. CASING SPACER SHALL BE AS MANUFACTURED BY CASCADE WATERWORKS MANUFACTURING COMPANY, MODEL CCS, OR APPROVED EQUAL.

PIPE ENCASEMENT DETAIL

CITY OF JARRELL
Engineering and Capital Improvements

THE ARCHITECT / ENGINEER ASSUMES RESPONSIBILTY FOR APPROPRIATE USE OF THIS STANDARD

STANDARD No. WT-16
Revision Date: 03/18/2022

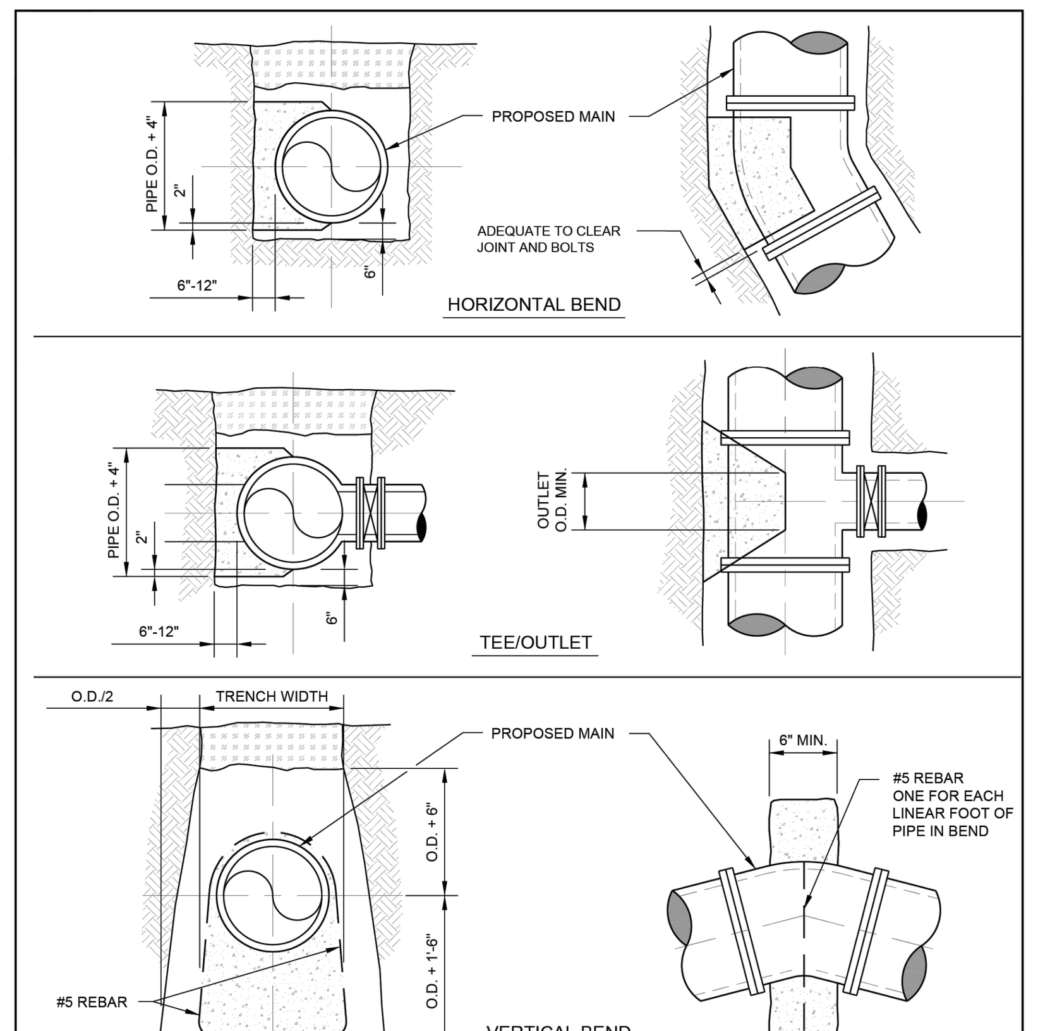


GATE VALVE DETAIL

CITY OF JARRELL
Engineering and Capital Improvements

THE ARCHITECT / ENGINEER ASSUMES RESPONSIBILTY FOR APPROPRIATE USE OF THIS STANDARD

STANDARD No. WT-22
Revision Date: 03/18/2022



THRUST BLOCK DESIGN AS FOLLOWS:

A. PRESSURE OF 150 P.S.I. (ACTUAL IF HIGHER) + 50% SURGE ALLOWANCE
B. MAXIMUM SOIL BEARING:
C. ALL PIPE & FITTING TO BE WRAPPED WITH 40 PLASTIC MIL.

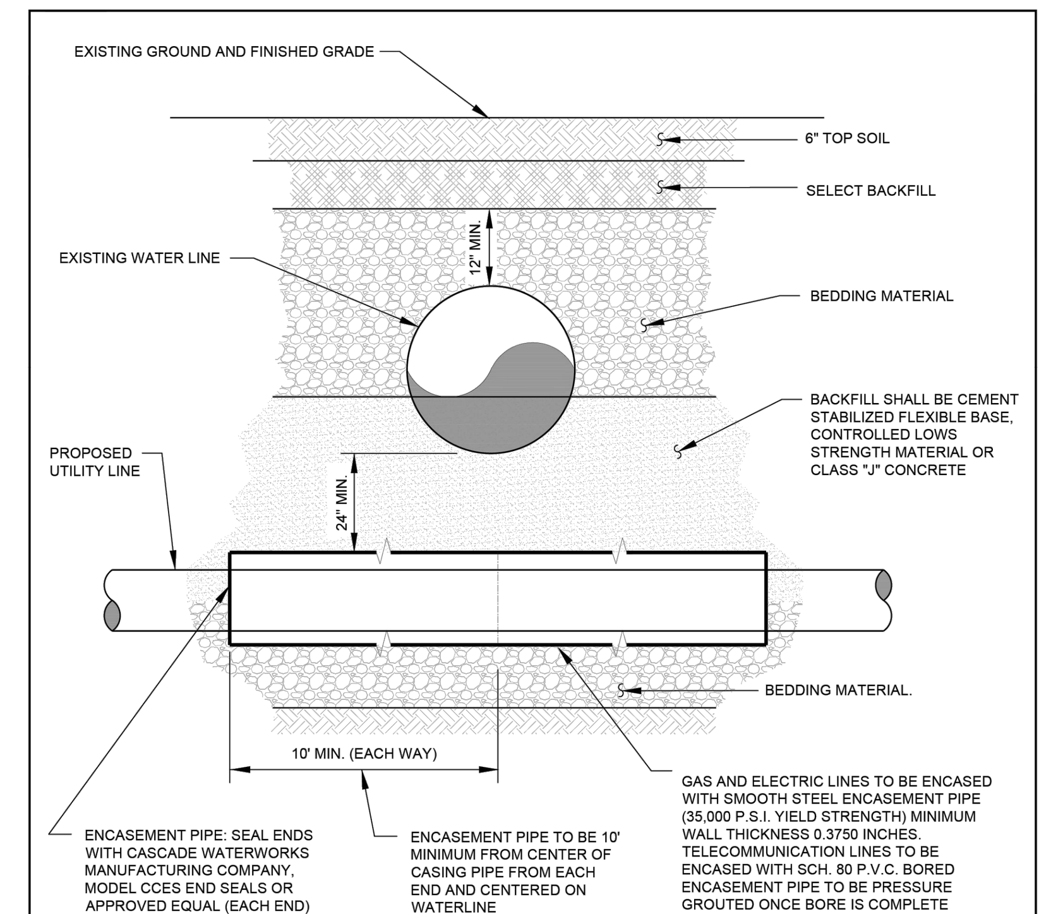
SOIL TYPE	PRESSURE
LIMESTONE	4000 LBS./SQ. FT.
UNDISTURBED SOIL, CALICHE	2000 LBS./SQ. FT.
LOOSE OR SPONGY SOIL	1500 LBS./SQ. FT.

THRUST BLOCK DETAIL

CITY OF JARRELL
Engineering and Capital Improvements

THE ARCHITECT / ENGINEER ASSUMES RESPONSIBILTY FOR APPROPRIATE USE OF THIS STANDARD

STANDARD No. WT-25
Revision Date: 03/18/2022



NOTES:

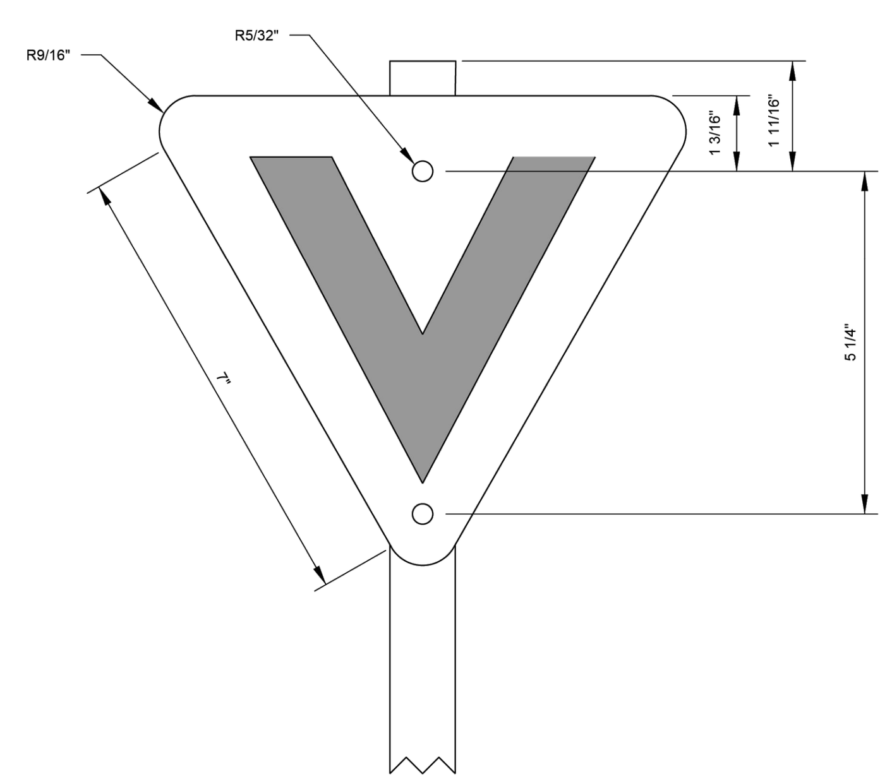
1. A CITY OF JARRELL REPRESENTATIVE SHALL BE PRESENT DURING ANY EXCAVATION NEAR THE CITY'S WATER LINE. (48 HOUR NOTICE IS REQUIRED)
2. A CITY OF JARRELL INSPECTOR SHALL INSPECT AND APPROVE CROSSING BEFORE AND AS IT IS BEING BACKFILLED PER THIS DETAIL.
3. TOP 6" OF TRENCH BACKFILL SHALL BE TOP SOIL, UNLESS PROPERTY OWNER REQUIRES SOMETHING DIFFERENT.
4. DRY UTILITIES TO BE ENCASED UNDER EXISTING WATERLINES WITH A MINIMUM SEPARATION OF 24" BETWEEN ENCASEMENT PIPE AND THE WATERLINE.

WATER LINE AND DRY UTILITY LINE CROSSING DETAIL

CITY OF JARRELL
Engineering and Capital Improvements

THE ARCHITECT / ENGINEER ASSUMES RESPONSIBILTY FOR APPROPRIATE USE OF THIS STANDARD

STANDARD No. WT-26
Revision Date: 03/18/2022



NOTES:

1. SIGN MATERIAL TO BE ALUMINUM.
2. SIGN TO BE ATTACHED TO 48" GALVANIZED STEEL ANGLE POST WITH DIMENSIONS 1" X 1" X 1/8".
3. COLORS:
   BACKGROUND - ORANGE
   V - BLACK
4. VALVE MARKING SIGNAGE TO BE INSTALLED IN AREAS DEEMED NECESSARY BY CITY STAFF.

WATER VALVE SIGN DETAIL

CITY OF JARRELL
Engineering and Capital Improvements

THE ARCHITECT / ENGINEER ASSUMES RESPONSIBILTY FOR APPROPRIATE USE OF THIS STANDARD

STANDARD No. WT-27
Revision Date: 03/18/2022

BENCHMARKS

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

BM 7210 - MAG NAIL SET IN CONCRETE
ELEV. 823.90

No.	REVISIONS	DATE	BY

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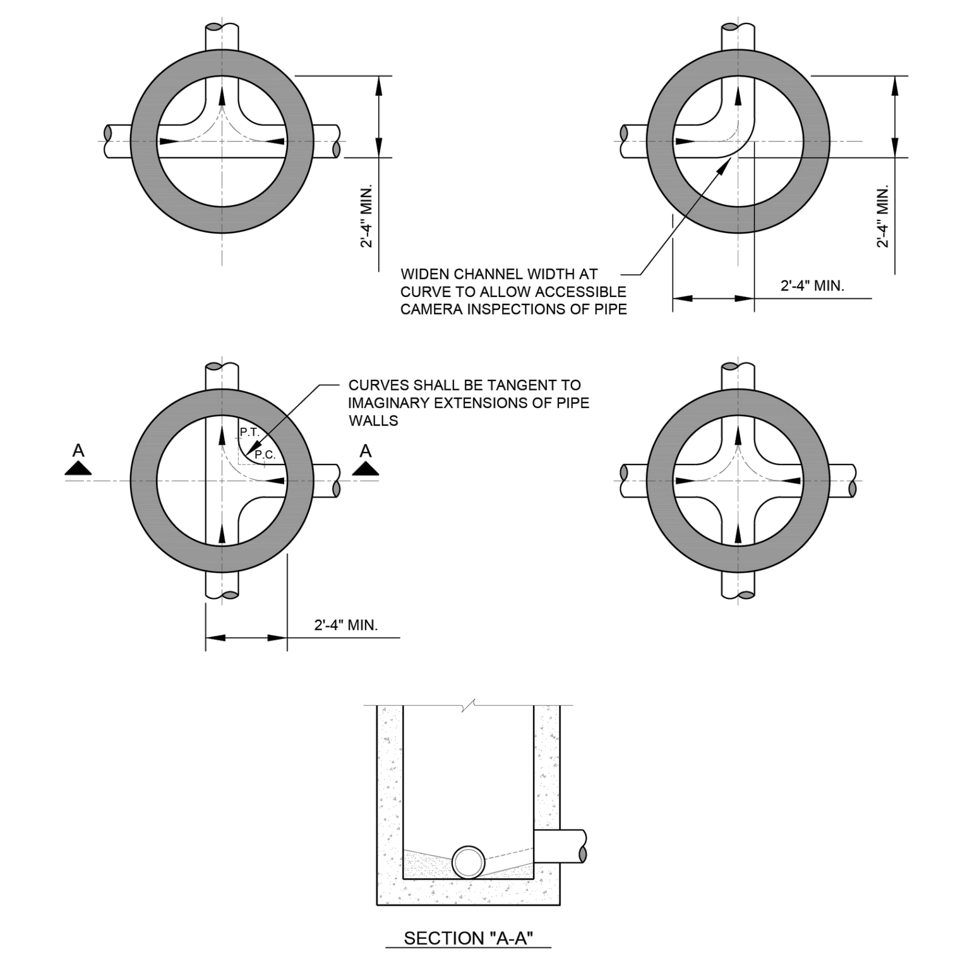
WATER DETAILS

KID ZONE ON CR307
CITY OF JARRELL
WILLIAMSON COUNTY, TEXAS

SHEET NUMBER
21



NOTES:

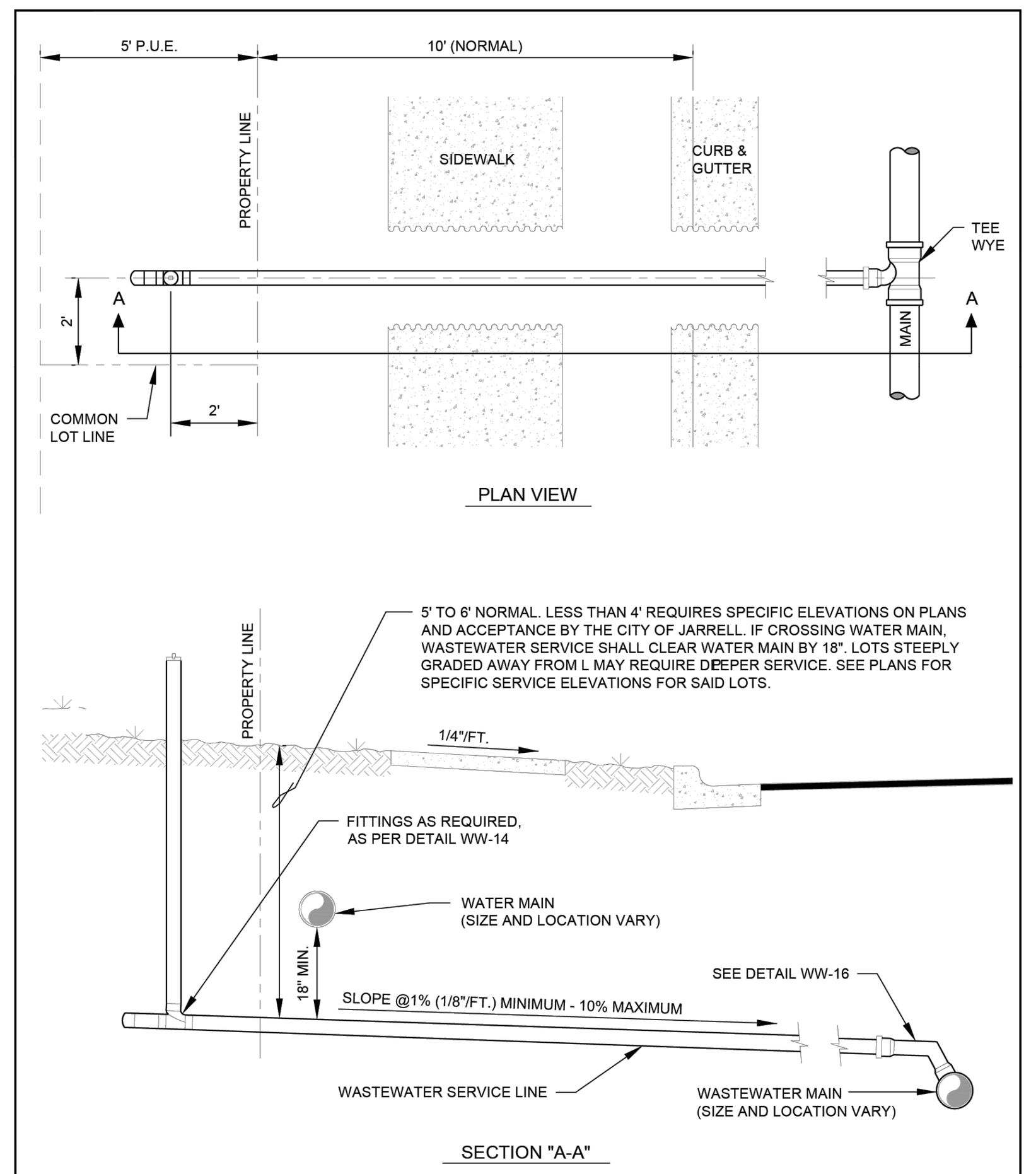
1. MINIMUM DROP FROM INLET TO OUTLET OF MANHOLE IS 0.1 FEET AND MAXIMUM DROP IS 2 FEET, UNLESS SPECIAL APPROVAL IS OBTAINED FROM THE CITY OF JARRELL.
2. INVERT CHANNELS TO BE CONSTRUCTED FOR SMOOTH FLOW WITH NO OBSTRUCTIONS.
3. SPILLWAYS SHALL BE CONSTRUCTED BETWEEN PIPES WITH DIFFERENT INVERT ELEVATIONS PROVIDING FOR SMOOTH FLOW.
4. CHANNELS FOR FUTURE CONSTRUCTIONS, SHALL BE CONSTRUCTED WITH PIPE EXTENDING 3' BEYOND EXTERIOR OF MANHOLE WALL, WITH GLUED PLUG.
5. SLOPE MANHOLE BENCH AT 2:1 SLOPE FROM MANHOLE WALL TO CHANNEL.
6. INVERT CHANNEL SHALL BE A MINIMUM OF 1/2 THE DIAMETER OF THE LARGEST PIPE OR FOUR INCHES (4") DEEP.

WASTE WATER FLOW PATTERNS FOR INVERT CHANNELS DETAIL

CITY OF JARRELL
Engineering and Capital Improvements

THE ARCHITECT / ENGINEER ASSUMES RESPONSIBILTY FOR APPROPRIATE USE OF THIS STANDARD

STANDARD No. **WW-11**
Revision Date: 03/21/2022

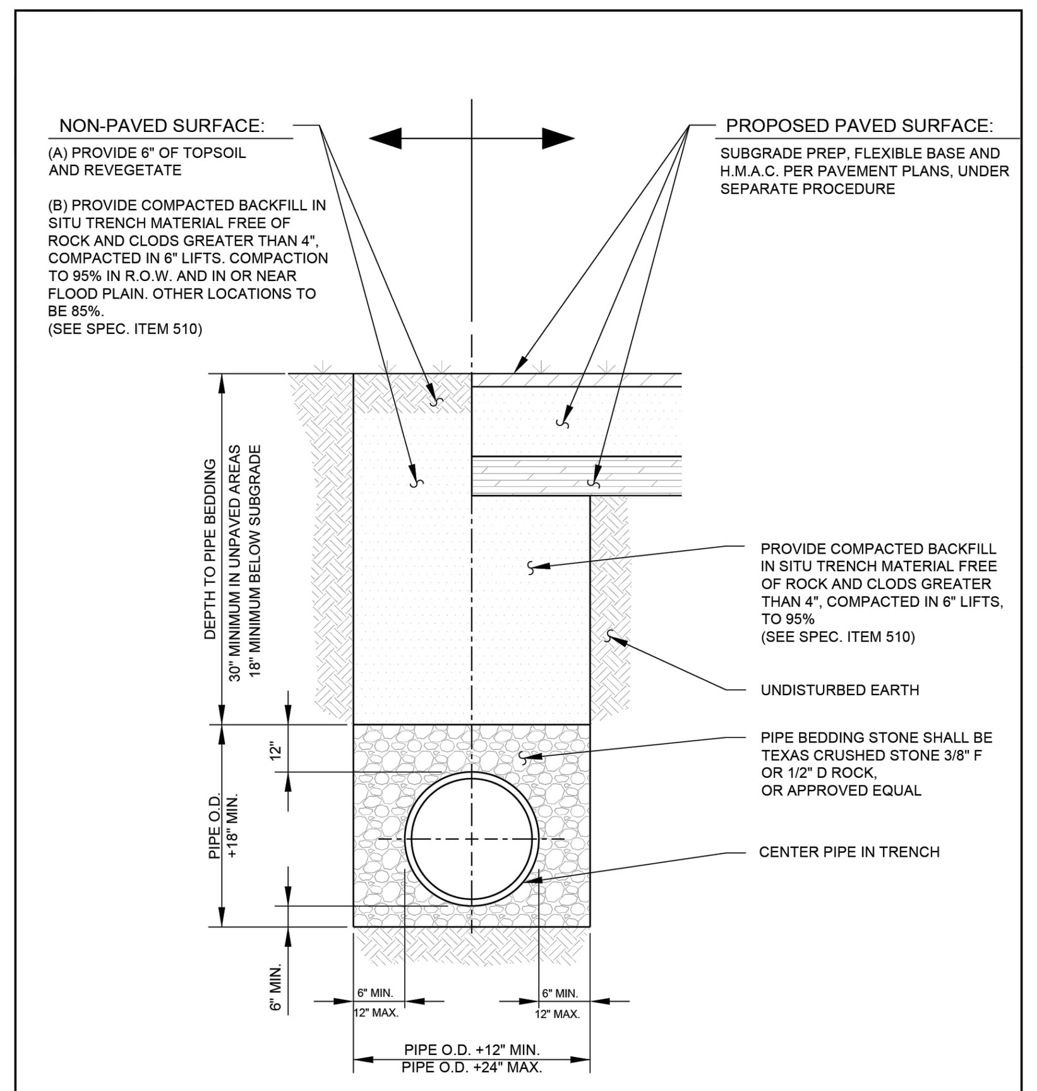


WASTE WATER SERVICE DETAIL

CITY OF JARRELL
Engineering and Capital Improvements

THE ARCHITECT / ENGINEER ASSUMES RESPONSIBILTY FOR APPROPRIATE USE OF THIS STANDARD

STANDARD No. **WW-12**
Revision Date: 03/21/2022



NOTE:

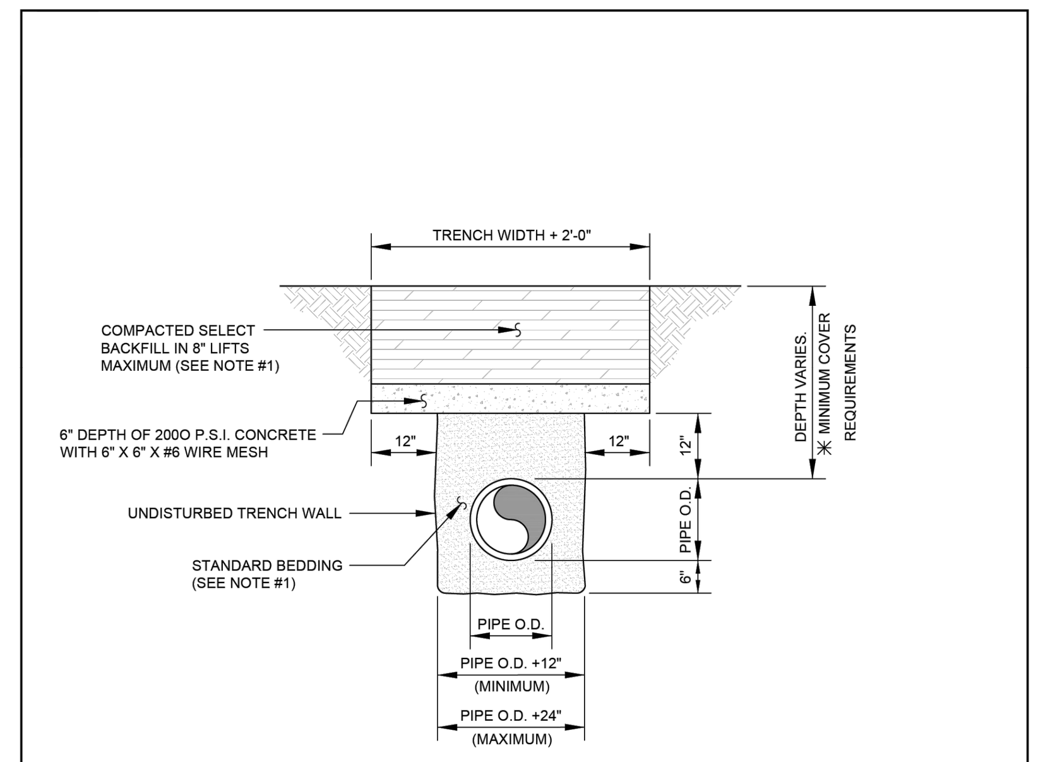
ALL TRENCHING AND TRENCH SAFETY SHALL COMPLY WITH APPLICABLE FEDERAL, STATE AND LOCAL REGULATIONS.

WASTE WATER LINE BEDDING & NON-PAVED SURFACE REPAIR DETAIL

CITY OF JARRELL
Engineering and Capital Improvements

THE ARCHITECT / ENGINEER ASSUMES RESPONSIBILTY FOR APPROPRIATE USE OF THIS STANDARD

STANDARD No. **WW-18**
Revision Date: 03/21/2022



NOTE:

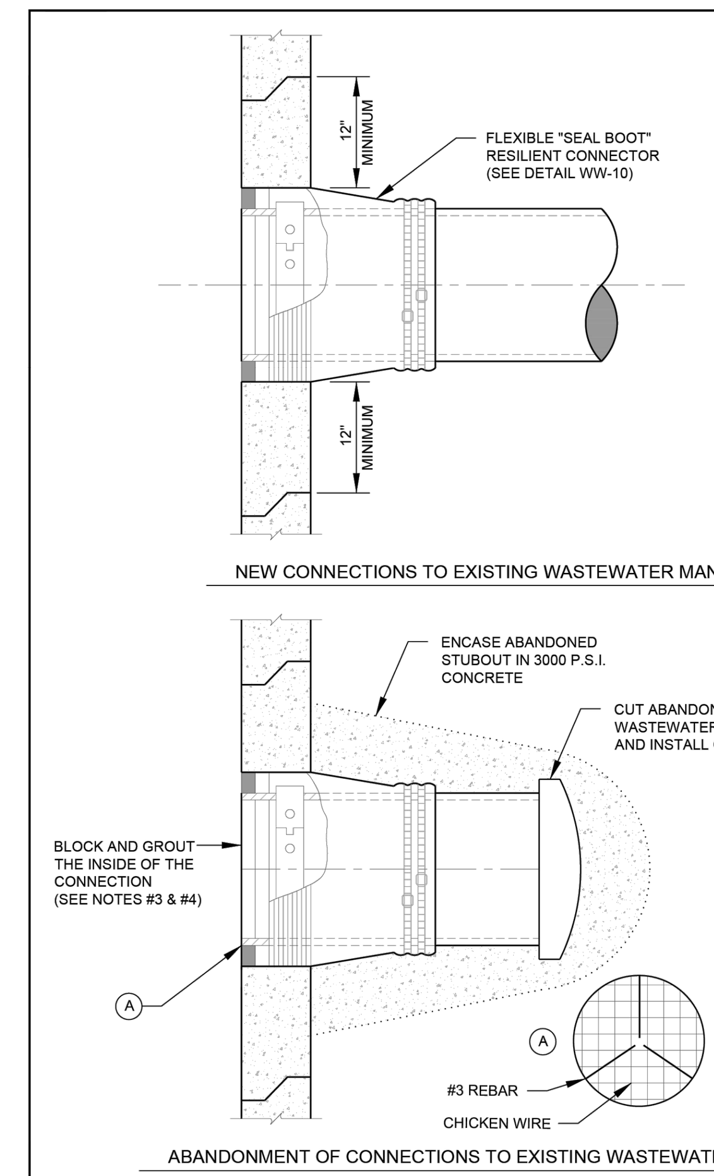
1. REFERENCE WATERLINE BEDDING AND SURFACE REPAIR DETAIL WT-08 & WASTEWATER LINE AND SURFACE REPAIR DETAIL WW-18 FOR PIPE BEDDING/BACKFILL REQUIREMENTS AND MINIMUM COVER REQUIREMENTS.
2. REQUIREMENTS FOR CONCRETE TRENCH CAPS IN WATERWAYS AND DRAINAGE AREAS NEED TO BE REVIEWED ON A CASE BY CASE BASIS AND APPROVED BY THE CITY ENGINEER AND INSPECTOR.

CONCRETE TRENCH CAP DETAIL

CITY OF JARRELL
Engineering and Capital Improvements

THE ARCHITECT / ENGINEER ASSUMES RESPONSIBILTY FOR APPROPRIATE USE OF THIS STANDARD

STANDARD No. **WW-20**
Revision Date: 03/21/2022



NOTES:

1. EXISTING MANHOLES TO BE VACUUM TESTED PRIOR TO ANY CONNECTIONS.
2. NEW CONNECTIONS TO HAVE MINIMUM VERTICAL AND HORIZONTAL SEPARATION OF 12" ON THE OUTSIDE FACE OF THE MANHOLE FROM ANY EXISTING PENETRATIONS AND/OR MANHOLE JOINTS.
3. CONNECTIONS MADE INTO EXISTING MANHOLES ARE TO BE CORED AND NOT DRILLED/CHISELED.
4. CUT, SHAPE AND SLOPE NEW INVERT CHANNEL IN THE EXISTING CONCRETE BENCH FOR SMOOTH FLOW FROM THE NEW WASTEWATER CONNECTION.
5. EXISTING MANHOLES TO BE RECOATED AFTER ANY NEW WASTEWATER CONNECTION IS ADDED.

NOTES:

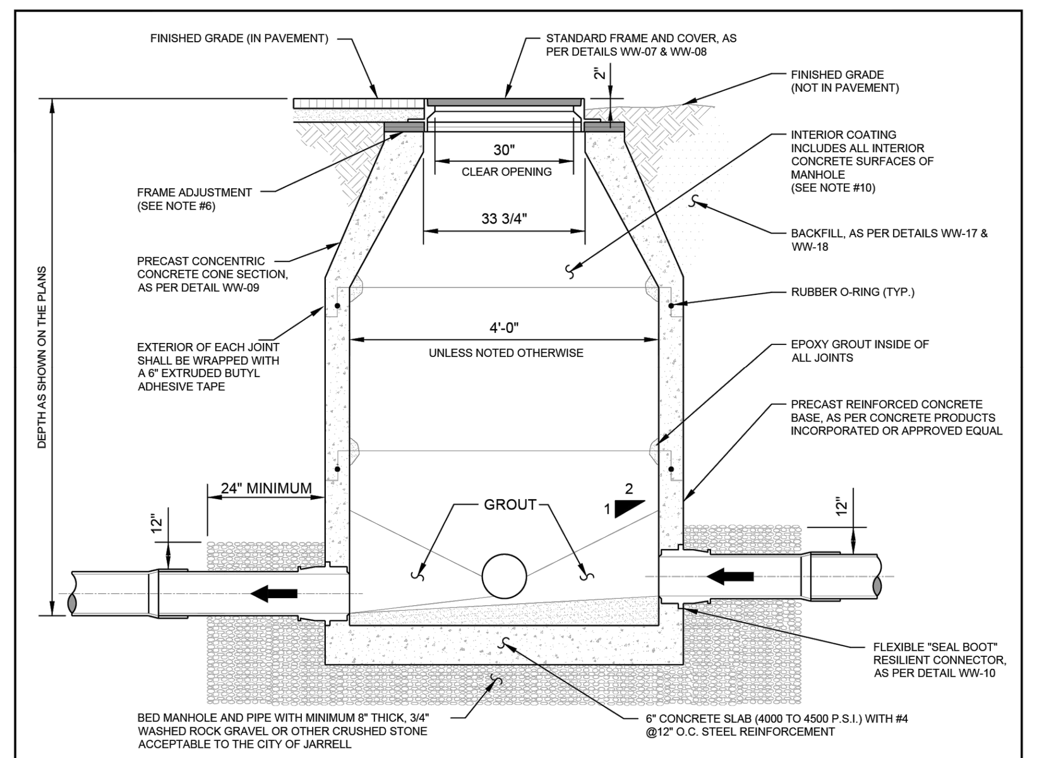
1. THIS DETAIL IS INTENDED FOR WASTEWATER MANHOLES THAT WILL REMAIN IN SERVICE. FOR WASTEWATER MANHOLES THAT ARE TO BE ABANDONED, REFERENCE DETAIL WW-15.
2. WASTEWATER MANHOLE TO BE RECOATED AFTER GROUT IS INSTALLED.
3. BLOCK THE INLET OF THE MANHOLE WITH CHICKEN WIRE AND 3-#3 REBAR. GROUT THE INSIDE OF THE MANHOLE FLUSH WITH THE MANHOLE WALL.
4. CONNECTIONS 24" AND LARGER REQUIRE BRICK BLOCKING TO BE INSTALLED PRIOR TO GROUTING.

EXISTING WASTE WATER MANHOLE CONNECTION DETAIL

CITY OF JARRELL
Engineering and Capital Improvements

THE ARCHITECT / ENGINEER ASSUMES RESPONSIBILTY FOR APPROPRIATE USE OF THIS STANDARD

STANDARD No. **WW-21**
Revision Date: 03/21/2022



NOTES:

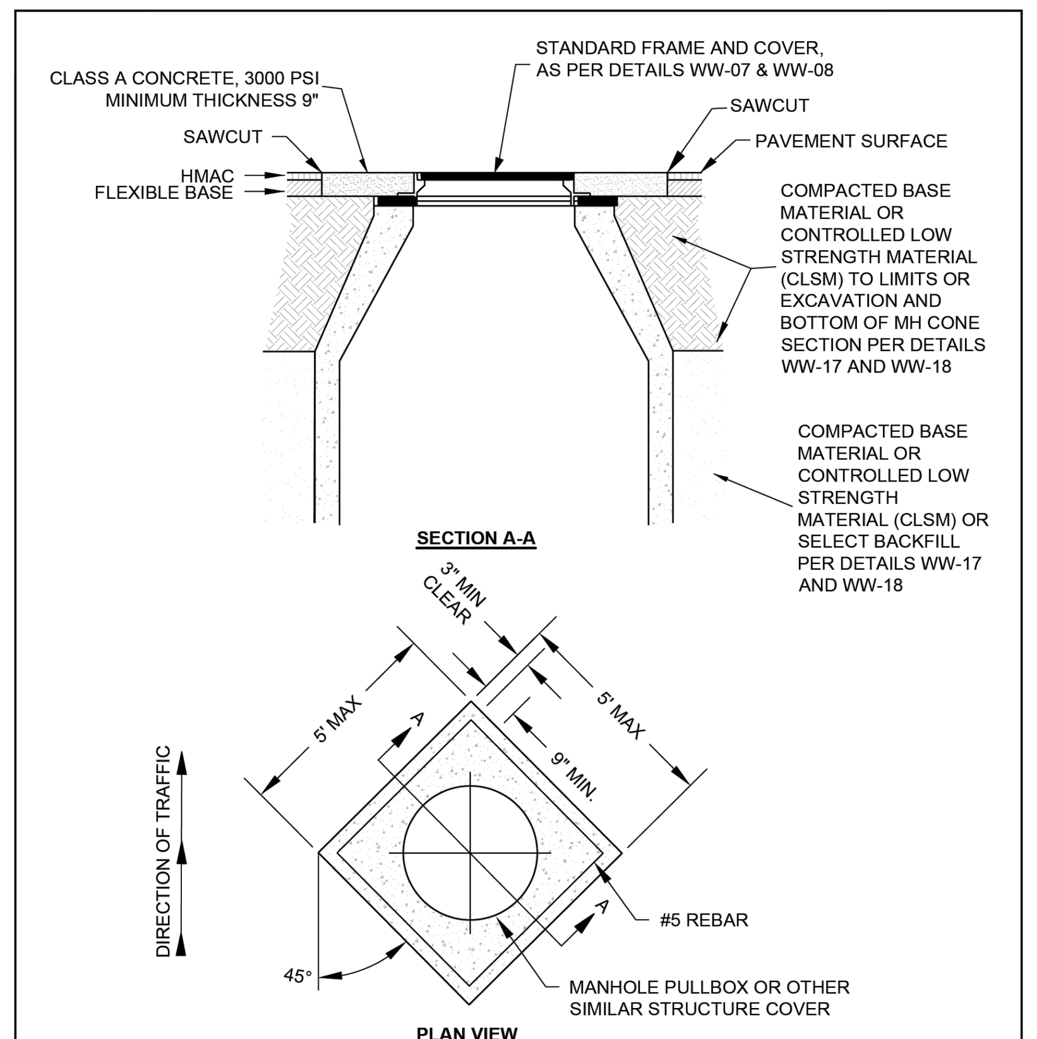
1. IF DROP IS SIX INCHES (6") TO TWO FEET (2'-0"), CONSTRUCTION OF DROP SHALL PROVIDE AN OVERSIZED INVERT TO EXTEND UNDER THE DROP CONNECTION.
2. SEE CONSTRUCTION PLANS FOR MANHOLE SIZE, LOCATION, CONFIGURATION, TYPE OF TOP SECTION, VENTING REQUIREMENTS, PIPE SIZES AND TYPES.
3. MANHOLES SHALL BE PRECAST A.S.T.M. C478 BELL AND SPIGOT WITH "O" RING JOINTS.
4. MANHOLES TO BE DESIGNED TO RESIST LATERAL AND VERTICAL SOIL FORCES RESULTING FROM MANHOLE DEPTH. ADDITIONALLY, MANHOLES LOCATED IN PAVEMENT TO BE DESIGNED FOR H20 TRAFFIC LOADING.
5. ALL MANHOLE COVERS SHALL BE BOLTED AND GASKETED, WHEN MANHOLES ARE LOCATED OUTSIDE OF PAVEMENT.
6. FRAME ADJUSTMENT HEIGHT SHALL CONSIST OF FIVE INCHES (5") MINIMUM TO EIGHTEEN INCHES (18") MAXIMUM. GRADE RINGS SHALL BE GROUTED WITH A NON-SHRINK GROUT INSIDE AND OUTSIDE. HDPE GRADE RINGS, MAY NOT BE USED.
7. FOR MANHOLES TO BE VENTED, SEE DETAILS WW-05 AND WW-06.
8. A FLOW CHANNEL SHALL BE CONSTRUCTED INSIDE MANHOLE TO DIRECT INFLUENT INTO THE FLOW STREAM. ALL P.V.C. PIPE SHALL BE REMOVED FROM INVERT.
9. BASE SECTION SHALL BE DESIGNED FOR H20 LOADING, PLUS EARTH LOAD AT 130 PCF.
10. ENTIRE INTERIOR CONCRETE SURFACES OF WASTEWATER MANHOLES TO BE COATED WITH RAVEN 405, SPRAYWALL, OR APPROVED EQUAL, (WITH A UNIFORM THICKNESS OF 124 MILS AND A MINIMUM THICKNESS OF 100 MILS, APPLIED AFTER MANHOLE HAS PASSED THE VACUUM TEST). FOR REHABILITATING MANHOLES 1/2" MINIMUM THICKNESS CALCIUM ALUMINATE CEMENTITIOUS COATING AND OTHER INTERIOR SURFACES MAY BE COATED IF RECOMMENDED BY COATING MANUFACTURER. (IN LIEU OF INTERIOR COATINGS NEW PRECAST MANHOLES CONTAINING CONSHIELD WILL BE ACCEPTED PROVIDING THE MANUFACTURER STENCILS "CONSHIELD" ON THE INSIDE AND OUTSIDE OF ALL MANHOLE SECTIONS.)

PRECAST CONCRETE WASTE WATER MANHOLE DETAIL

CITY OF JARRELL
Engineering and Capital Improvements

THE ARCHITECT / ENGINEER ASSUMES RESPONSIBILTY FOR APPROPRIATE USE OF THIS STANDARD

STANDARD No. **WW-01A**
Revision Date: 03/21/2022



NOTES:

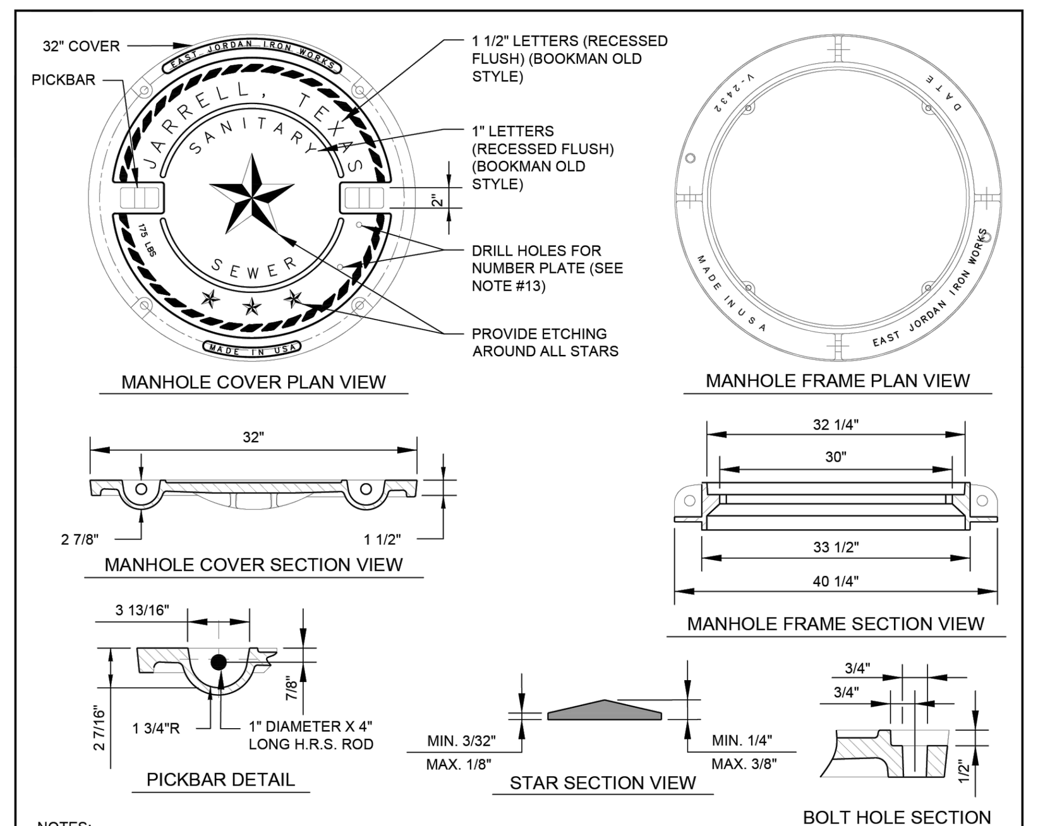
1. CONCRETE SHALL BE CLASS A, 3000 PSI MINIMUM AND SHALL BE REINFORCED WITH #5 BARS AS SHOWN. THE CONCRETE SHALL EXTEND TO SAW CUT PAVEMENT EDGE.
2. PLACEMENT OF COMPACTED BASE MATERIAL CLSM SHALL BE BELOW FLEXIBLE BASE LAYER TO LIMITS OF EXCAVATION.
3. INSTALLATION OF HMAC OVER CONCRETE ADJUSTMENT SHALL NOT BE ALLOWED.
4. INSTALLATION OF CONCRETE CASTING ADJUSTMENT IS REQUIRED FOR ALL TYPES OF MANHOLES TO BE LOCATED IN THE ROADWAY.

PRECAST CONCRETE WASTE WATER MANHOLE DETAIL

CITY OF JARRELL
Engineering and Capital Improvements

THE ARCHITECT / ENGINEER ASSUMES RESPONSIBILTY FOR APPROPRIATE USE OF THIS STANDARD

STANDARD No. **WW-01B**
Revision Date: 11/01/2023



NOTES:

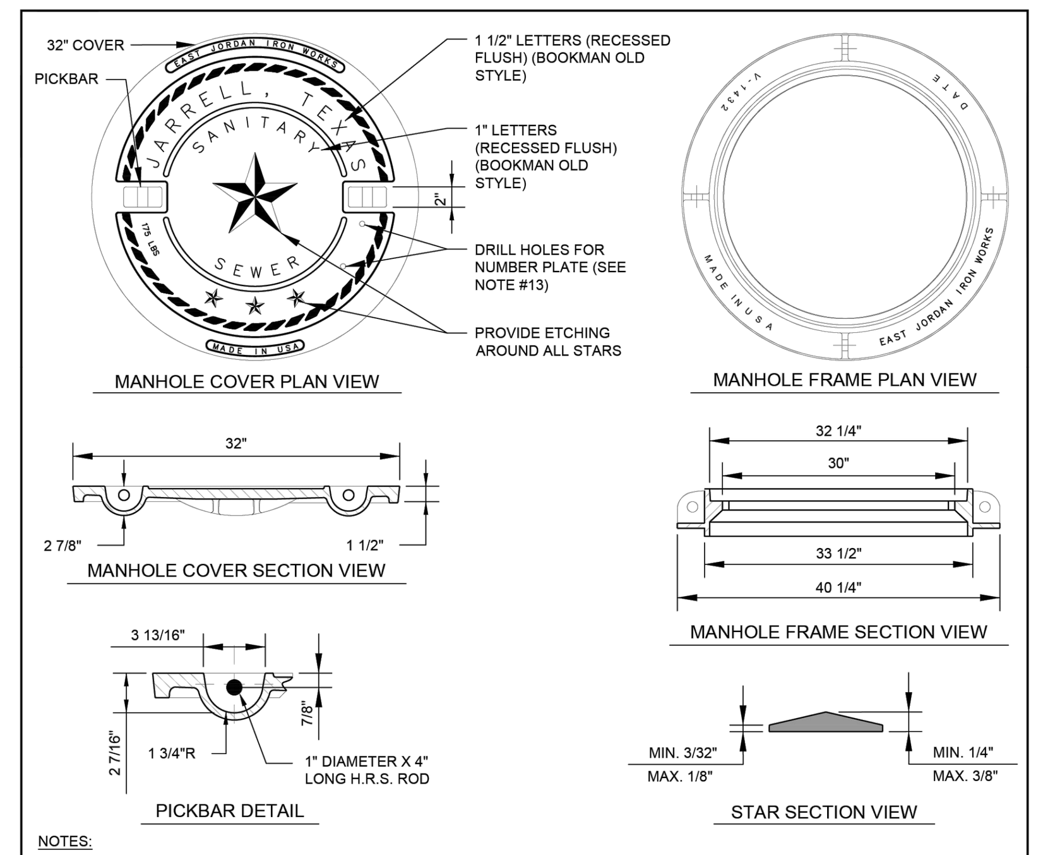
1. COVER AND FRAME SHALL COMPLY WITH STANDARD SPECIFICATIONS FOR DRAINAGE, SEWER, UTILITY AND RELATED CASTINGS: AASHTO DESIGNATION M306-04.
2. MANHOLE COVER SHALL BE MODEL NUMBER: V-2432-3 (PRODUCT NUMBER: 42432033), AS MANUFACTURED BY EAST JORDAN IRON WORKS INCORPORATED, OR APPROVED EQUAL.
3. MANHOLE FRAME SHALL BE MODEL NUMBER: V-2432 (PRODUCT NUMBER: 42432010), AS MANUFACTURED BY EAST JORDAN IRON WORKS INCORPORATED, OR APPROVED EQUAL.
4. MANHOLE COVER AND FRAME ASSEMBLY, IF ORDERED AS A SET, SHALL BE MODEL NUMBER: V-2432 (PRODUCT NUMBER: 42432073), AS MANUFACTURED BY EAST JORDAN IRON WORKS INCORPORATED, OR APPROVED EQUAL.
5. ALL CORNERS AND EDGES SHALL HAVE A 1/16" MINIMUM AND 1/8" MAXIMUM RADIUS.
6. MANHOLE COVERS SHALL BE CAST WITH TWO 1" DIAMETER STEEL PICKBARS.
7. MANHOLE COVER WEIGHT SHALL BE 175 LBS. FOR DUCTILE IRON. WEIGHT SHALL BE CAST ON BOTH TOP AND BOTTOM OF COVER.
8. MANUFACTURER SHALL CERTIFY THAT EACH MANHOLE COVER MEETS HS-20 LOADING.
9. FILLETS SHALL BE 1/4" RADIUS UNLESS OTHERWISE SPECIFIED.
10. MANUFACTURER SHALL REMOVE EXCESS IRON AND MACHINE FINISH SEATING SURFACES TO NOTED DIMENSIONS.
11. COVER SHALL BE DIPPED IN A WATER-BASED ASPHALTIC COATING, PRIOR TO SHIPMENT FROM FOUNDRY.
12. BOLTS SHALL BE 5/8"-11NC X 2" LONG HEX STAINLESS STEEL WITH WASHER.
13. MANUFACTURER SHALL DRILL 2-3/16" X 1/2" DEEP HOLES FOR A MANHOLE NUMBER PLATE TO BE PROVIDED BY THE CITY OF JARRELL. THE TOP HOLE SHALL BE DRILLED 1" O.C. FROM THE BOTTOM OF THE PICKBAR AND THE BOTTOM HOLE SHALL BE DRILLED 4" O.C. FROM THE TOP HOLE.

BOLTED WASTE WATER MANHOLE COVER AND FRAME DETAIL

CITY OF JARRELL
Engineering and Capital Improvements

THE ARCHITECT / ENGINEER ASSUMES RESPONSIBILTY FOR APPROPRIATE USE OF THIS STANDARD

STANDARD No. **WW-07**
Revision Date: 03/21/2022



NOTES:

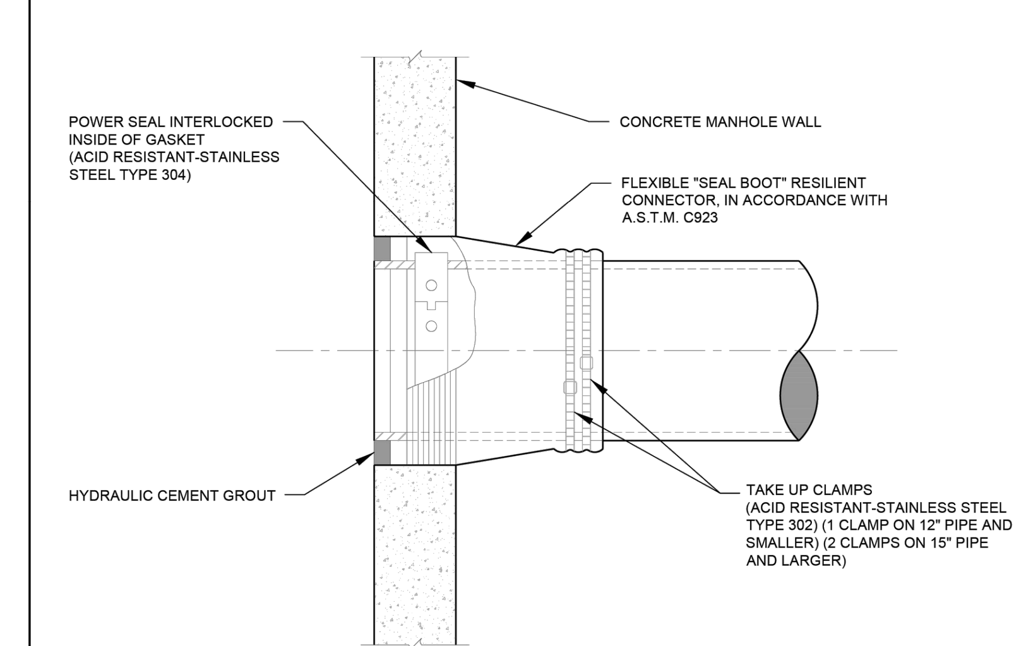
1. COVER AND FRAME SHALL COMPLY WITH STANDARD SPECIFICATIONS FOR DRAINAGE, SEWER, UTILITY AND RELATED CASTINGS: AASHTO DESIGNATION M306-04.
2. MANHOLE COVER SHALL BE MODEL NUMBER: V-1432-3 (PRODUCT NUMBER: 41432059), AS MANUFACTURED BY EAST JORDAN IRON WORKS INCORPORATED, OR APPROVED EQUAL.
3. MANHOLE FRAME SHALL BE MODEL NUMBER: V-1432 (PRODUCT NUMBER: 41432010), AS MANUFACTURED BY EAST JORDAN IRON WORKS INCORPORATED, OR APPROVED EQUAL.
4. MANHOLE COVER AND FRAME ASSEMBLY, IF ORDERED AS A SET, SHALL BE MODEL NUMBER: V-1432 (PRODUCT NUMBER: 41432089), AS MANUFACTURED BY EAST JORDAN IRON WORKS INCORPORATED, OR APPROVED EQUAL.
5. ALL CORNERS AND EDGES SHALL HAVE A 1/16" MINIMUM AND 1/8" MAXIMUM RADIUS.
6. MANHOLE COVERS SHALL BE CAST WITH TWO 1" DIAMETER STEEL PICKBARS.
7. MANHOLE COVER WEIGHT SHALL BE 175 LBS. FOR DUCTILE IRON. WEIGHT SHALL BE CAST ON BOTH TOP AND BOTTOM OF COVER.
8. MANUFACTURER SHALL CERTIFY THAT EACH MANHOLE COVER MEETS HS-20 LOADING.
9. FILLETS SHALL BE 1/4" RADIUS UNLESS OTHERWISE SPECIFIED.
10. MANUFACTURER SHALL REMOVE EXCESS IRON AND MACHINE FINISH SEATING SURFACES TO NOTED DIMENSIONS.
11. COVER SHALL BE DIPPED IN A WATER-BASED ASPHALTIC COATING, PRIOR TO SHIPMENT FROM FOUNDRY.
12. MANUFACTURER SHALL DRILL 2-3/16" X 1/2" DEEP HOLES FOR A MANHOLE NUMBER PLATE TO BE PROVIDED BY THE CITY OF JARRELL. THE TOP HOLE SHALL BE DRILLED 1" O.C. FROM THE BOTTOM OF THE PICKBAR AND THE BOTTOM HOLE SHALL BE DRILLED 4" O.C. FROM THE TOP HOLE.

NON-BOLTED WASTE WATER MANHOLE COVER AND FRAME DETAIL

CITY OF JARRELL
Engineering and Capital Improvements

THE ARCHITECT / ENGINEER ASSUMES RESPONSIBILTY FOR APPROPRIATE USE OF THIS STANDARD

STANDARD No. **WW-08**
Revision Date: 03/21/2022



NOTE:

1. FLEXIBLE "SEAL BOOT" RESILIENT CONNECTOR TO BE A MINIMUM OF 12 INCHES (12") FROM A MANHOLE JOINT.

FLEXIBLE SEAL BOOT RESILIENT CONNECTOR DETAIL

CITY OF JARRELL
Engineering and Capital Improvements

THE ARCHITECT / ENGINEER ASSUMES RESPONSIBILTY FOR APPROPRIATE USE OF THIS STANDARD

STANDARD No. **WW-10**
Revision Date: 03/21/2022

BENCHMARKS

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

BM 7210 - MAG NAIL SET IN CONCRETE
ELEV. 823.90

No.	REVISIONS	DATE	BY

501 S. AUSTIN AVENUE, SUITE 1310, GEORGETOWN, TX 78626
PHONE: 512-520-0768 FAX: 512-418-1791
WWW.KIMLEY-HORN.COM
TEXAS REGISTERED ENGINEERING FIRM F-928

2/09/2024
STATE OF TEXAS
ALEJANDRO E. GRANADOS RICO
130084
LICENSED PROFESSIONAL ENGINEER

KHA PROJECT 069427200
DATE FEBRUARY 2024
SCALE: AS SHOWN
DESIGNED BY: JDR
DRAWN BY: JDR
CHECKED BY: AEG

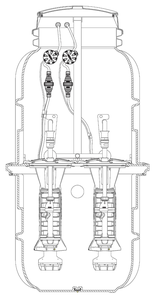
WASTEWATER DETAILS

KID ZONE ON CR307
CITY OF JARRELL
WILLIAMSON COUNTY, TEXAS

SHEET NUMBER
22

E/ONE EXTREME SERIES

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

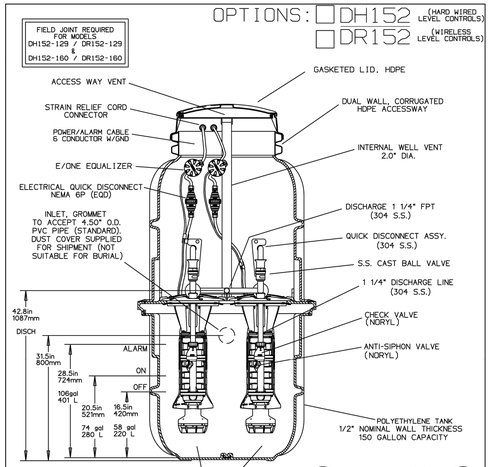
E/One requires that the Uni-Lateral, E/One's own stainless steel check valve, be installed between the grinder pump station and the street main for added protection against backflow.

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.

NA0052P01 Rev E

OPTIONS: ☐ DH152 (HARD WIRED LEVEL CONTROLS)
☐ DR152 (WIRELESS LEVEL CONTROLS)



CONCRETE BALLAST MAY BE REQUIRED SEE INSTALLATION INSTRUCTIONS FOR DETAILS

NOTE: DIMENSIONS ARE FOR REF ONLY

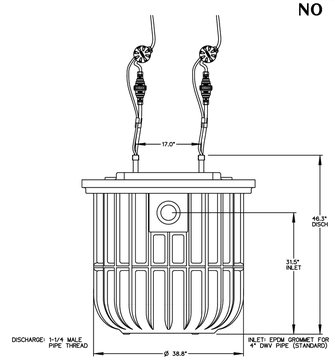
KC	PD	09/30/19	F	
DR BY	CHK'D	DATE	ISSUE	SCALE

e/one SEWER SYSTEMS

MODEL DH152 / DR152 DETAIL SHEET

NA0052P02

DH152-38
NO BASELINE



NOTE: DIMENSIONS ARE FOR REF ONLY

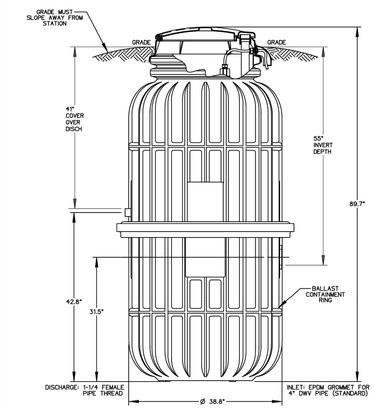
CTT	CH	10/19/12	D	
DR BY	CHK'D	DATE	ISSUE	SCALE

e/one SEWER SYSTEMS

MODEL DH152-38, NO BAFFLE

NA0052P03

OPTIONS: ☐ DH152-93 (HARD WIRED LEVEL CONTROLS)
☐ DR152-93 (WIRELESS LEVEL CONTROLS)



CONCRETE BALLAST MAY BE REQUIRED SEE INSTALLATION INSTRUCTIONS FOR DETAILS

NOTE: DIMENSIONS ARE FOR REF ONLY

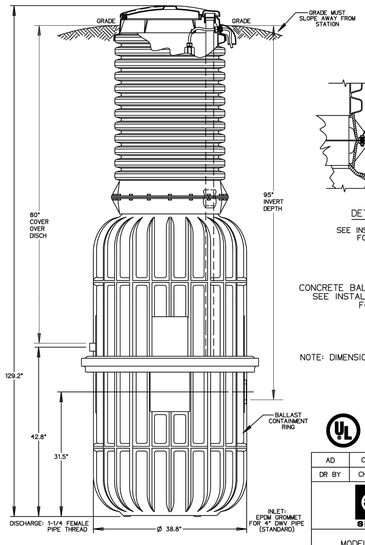
AD	CAH	7/13/07	C	1/16
DR BY	CHK'D	DATE	ISSUE	SCALE

e/one SEWER SYSTEMS

MODEL DH152-93 / DR152-93

NA0052P04

OPTIONS: ☐ DH152-129 (HARD WIRED LEVEL CONTROLS)
☐ DR152-129 (WIRELESS LEVEL CONTROLS)



CONCRETE BALLAST MAY BE REQUIRED SEE INSTALLATION INSTRUCTIONS FOR DETAILS

NOTE: DIMENSIONS ARE FOR REF ONLY

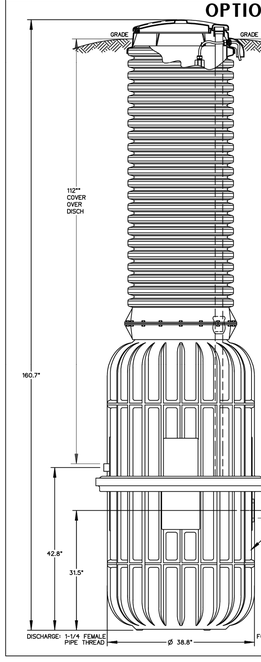
AD	CAH	7/13/07	C	1/16
DR BY	CHK'D	DATE	ISSUE	SCALE

e/one SEWER SYSTEMS

MODEL DH152-129 / DR152-129

NA0052P05

OPTIONS: ☐ DH152-160 (HARD WIRED LEVEL CONTROLS)
☐ DR152-160 (WIRELESS LEVEL CONTROLS)



CONCRETE BALLAST MAY BE REQUIRED SEE INSTALLATION INSTRUCTIONS FOR DETAILS

NOTE: DIMENSIONS ARE FOR REF ONLY

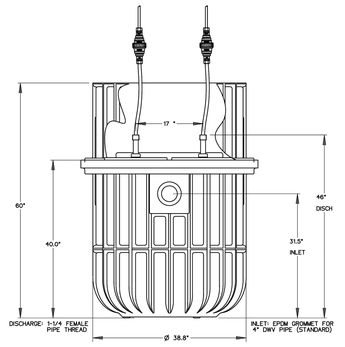
AD	CAH	7/13/07	C	1/16
DR BY	CHK'D	DATE	ISSUE	SCALE

e/one SEWER SYSTEMS

MODEL DH152-160 / DR152-160

NA0052P06

DH152-57
BUILDERS MODEL
STRAIGHT DISCHARGE



NOTE: DIMENSIONS ARE FOR REF ONLY

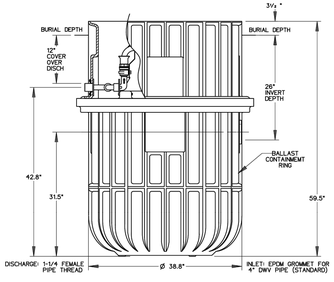
AD	CAH	06-27-07	C	1/16
DR BY	CHK'D	DATE	ISSUE	SCALE

e/one SEWER SYSTEMS

MODEL DH152-57 BUILDERS

NA0052P07

DH152-57
BUILDERS MODEL
DISCHARGE VALVE



NOTE: DIMENSIONS ARE FOR REF ONLY

AD	CAH	06/27/07	C	1/16
DR BY	CHK'D	DATE	ISSUE	SCALE

e/one SEWER SYSTEMS

MODEL DH152-57 BUILDERS

NA0052P08

BENCHMARKS

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

BM 7210 - MAG NAIL SET IN CONCRETE
ELEV. 823.90

No.	REVISIONS	DATE	BY

Kimley»Horn
© 2024 KIMLEY-HORN AND ASSOCIATES, INC.
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WWW.KIMLEY-HORN.COM
TEXAS REGISTERED ENGINEERING FIRM F-928

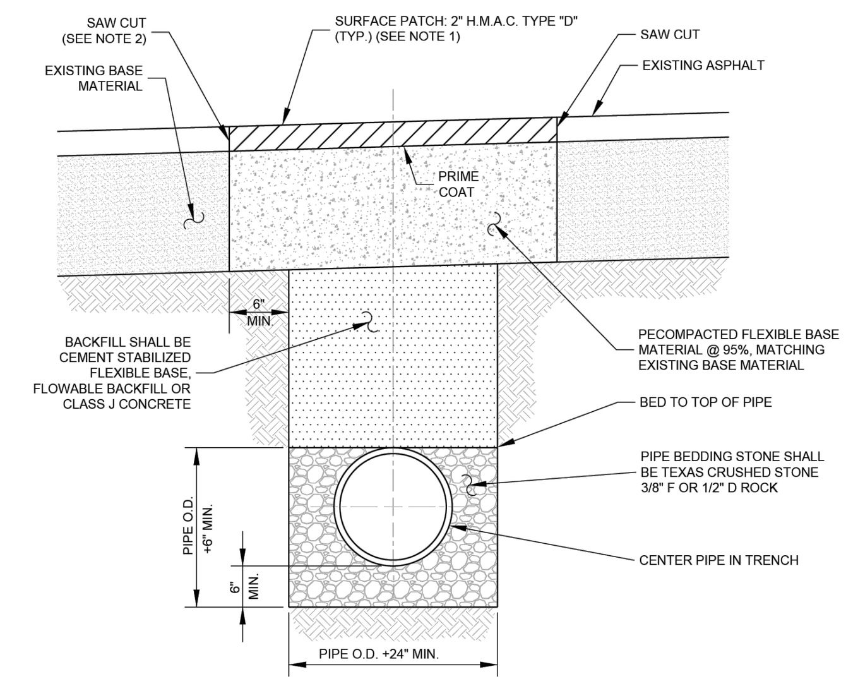
2/09/2024
STATE OF TEXAS
ALEJANDRO E. GRANADOS RICO
130084
LICENSED
PROFESSIONAL ENGINEER

KHA PROJECT 069427200	DESIGNED BY: JDR
DATE FEBRUARY 2024	DRAWN BY: JDR
SCALE: AS SHOWN	CHECKED BY: AEG

WASTEWATER DETAILS (GRINDER PUMP DETAIL)

KID ZONE ON CR307
CITY OF JARRELL
WILLIAMSON COUNTY, TEXAS

SHEET NUMBER
23



NOTES:

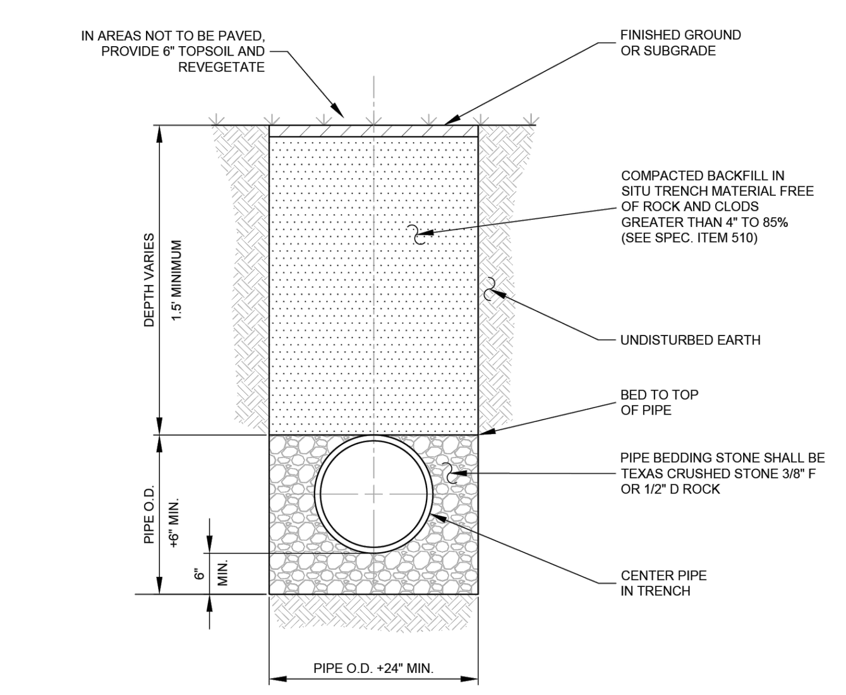
1. H.M.A.C. SHOWN IN THIS DETAIL IS SEPARATE FROM ANY ADDITIONAL THICKNESS CREATED BY ANY OVERLAY ITEM IN CONTRACT.
2. THE CONTRACTOR SHALL SAW CUT, REMOVE AND REPLACE EXISTING PAVEMENT AND FLEXIBLE BASE A MINIMUM OF 6" BEYOND EITHER THE EDGE OF THE STORM SEWER TRENCH OR THE POINT WHERE EXISTING PAVEMENT IS DAMAGED DUE TO TRENCHING OPERATIONS, WHICHEVER IS GREATER.
3. INSTALLATION OF BACKFILL, SAW CUTTING AND REMOVAL OF EXISTING PAVEMENT AND SURFACE PATCH, SHALL NOT BE PAID FOR SEPARATELY. COSTS FOR THESE ITEMS SHALL BE INCLUDED IN UNIT PRICE BIDS FOR STORM SEWER PIPE.
4. THE CONTRACTOR SHALL PROVIDE STEEL PLATES TO SPAN THE TRENCH AS NECESSARY OR TO ALLOW BACKFILL TO CURE. SUCH PLATES SHALL BE SUITABLE FOR VEHICLE PASSAGE OVER THE TRENCH AND SHALL BE SATISFACTORILY ANCHORED IN PLACE. COSTS FOR THIS ITEM SHALL BE INCLUDED IN UNIT PRICE BIDS FOR STORM SEWER PIPE.
5. ALL TRENCHING AND TRENCH SAFETY SHALL COMPLY WITH APPLICABLE FEDERAL, STATE AND LOCAL REGULATIONS.

STORM SEWER LINE BEDDING DETAIL (EXISTING PAVED SURFACE)

CITY OF JARRELL
Engineering and Capital Improvements

THE ARCHITECT / ENGINEER ASSUMES RESPONSIBILTY FOR APPROPRIATE USE OF THIS STANDARD

STANDARD No. **DR-01**
Revision Date: 03/14/2022



NOTE:

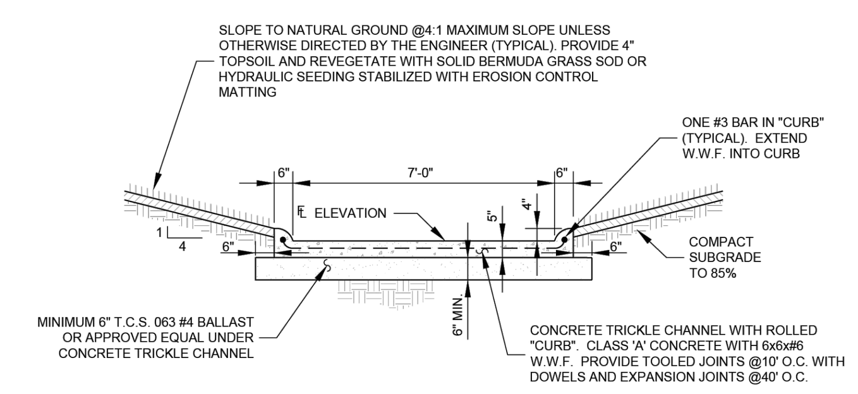
ALL TRENCHING AND TRENCH SAFETY SHALL COMPLY WITH APPLICABLE FEDERAL, STATE AND LOCAL REGULATIONS.

STORM SEWER LINE BEDDING DETAIL (NON-PAVED SURFACE)

CITY OF JARRELL
Engineering and Capital Improvements

THE ARCHITECT / ENGINEER ASSUMES RESPONSIBILTY FOR APPROPRIATE USE OF THIS STANDARD

STANDARD No. **DR-02**
Revision Date: 03/14/2022

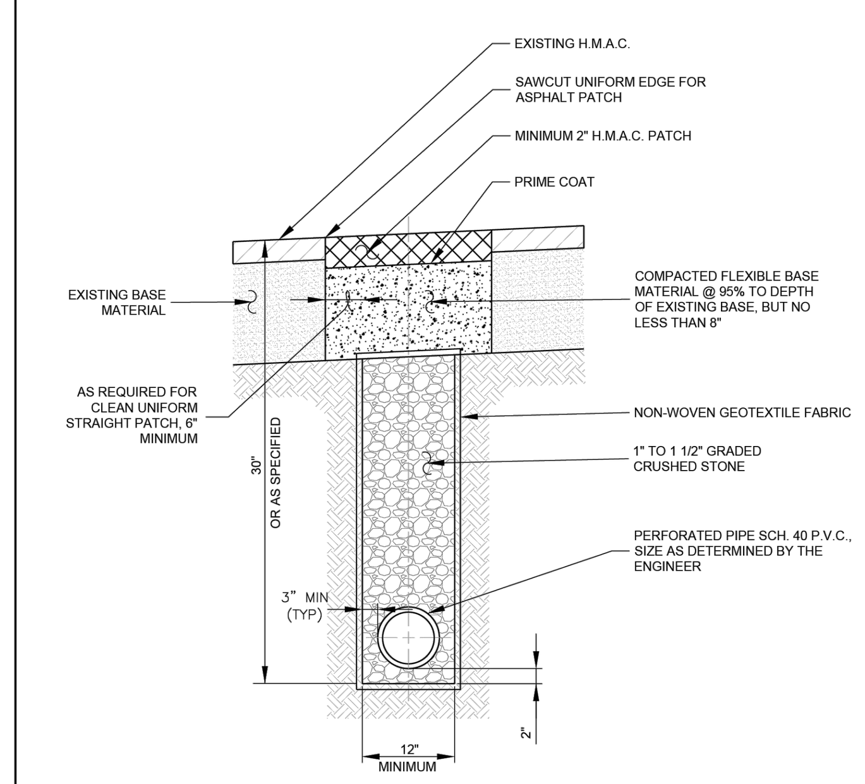


CONCRETE TRICKLE CHANNEL DETAIL

CITY OF JARRELL
Engineering and Capital Improvements

THE ARCHITECT / ENGINEER ASSUMES RESPONSIBILTY FOR APPROPRIATE USE OF THIS STANDARD

STANDARD No. **DR-03**
Revision Date: 03/14/2022

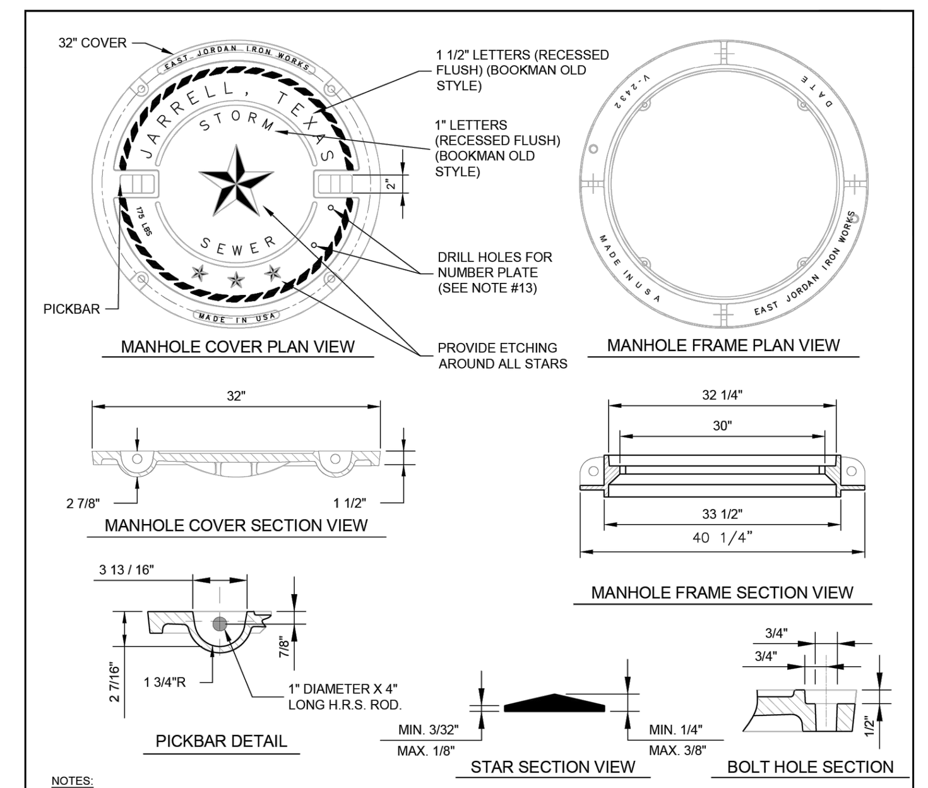


FRENCH DRAIN DETAIL (EXISTING PAVED SURFACE)

CITY OF JARRELL
Engineering and Capital Improvements

THE ARCHITECT / ENGINEER ASSUMES RESPONSIBILTY FOR APPROPRIATE USE OF THIS STANDARD

STANDARD No. **DR-04**
Revision Date: 03/14/2022



NOTES:

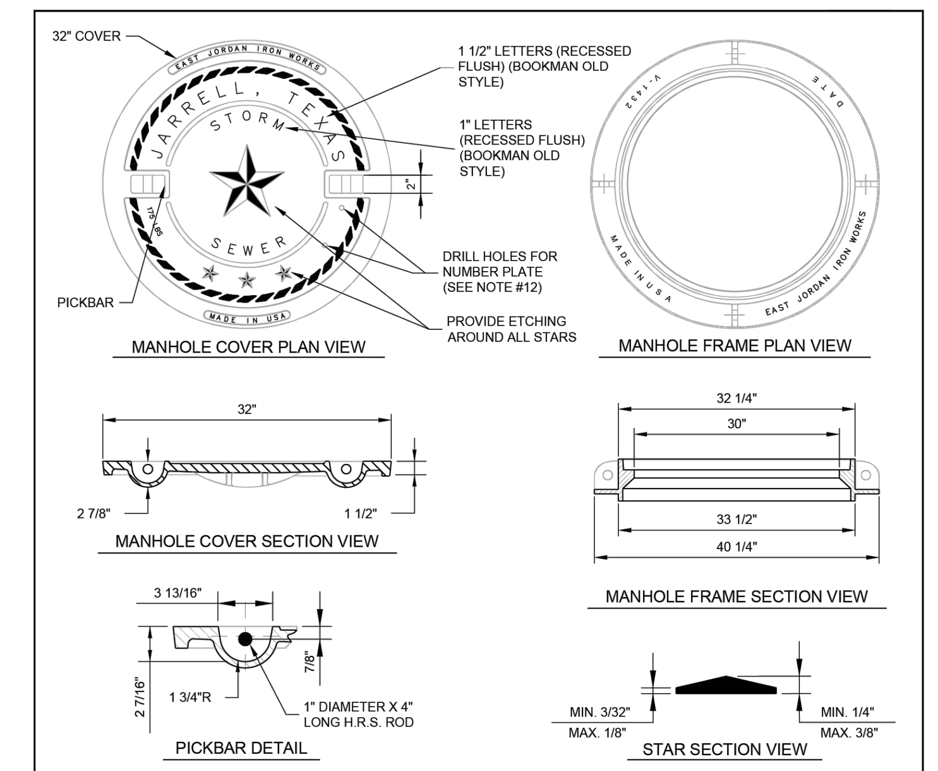
1. COVER AND FRAME SHALL COMPLY WITH STANDARD SPECIFICATIONS FOR DRAINAGE, SEWER, UTILITY AND RELATED CASTINGS: AASHTO DESIGNATION M306-04.
2. MANHOLE COVER SHALL BE MODEL NUMBER: V-2432-3 (PRODUCT NUMBER: 42432032), AS MANUFACTURED BY EAST JORDAN IRON WORKS, INCORPORATED, OR APPROVED EQUAL.
3. MANHOLE FRAME SHALL BE MODEL NUMBER: V-2432 (PRODUCT NUMBER: 42432010), AS MANUFACTURED BY EAST JORDAN IRON WORKS, INCORPORATED, OR APPROVED EQUAL.
4. MANHOLE COVER AND FRAME ASSEMBLY, IF ORDERED AS A SET, SHALL BE MODEL NUMBER: V-2432 (PRODUCT NUMBER: 42432072), AS MANUFACTURED BY EAST JORDAN IRON WORKS, INCORPORATED, OR APPROVED EQUAL.
5. ALL CORNERS AND EDGES SHALL HAVE A 1/16" MINIMUM AND 1/8" MAXIMUM RADIUS.
6. MANHOLE COVERS SHALL BE CAST WITH TWO 1" DIAMETER STEEL PICKBARS.
7. MANHOLE COVER WEIGHT SHALL BE 175 LBS. FOR DUCTILE IRON. WEIGHT SHALL BE CAST ON BOTH TOP AND BOTTOM OF COVER.
8. MANUFACTURER SHALL CERTIFY THAT EACH MANHOLE COVER MEETS HS-20 LOADING.
9. FILLETS SHALL BE 1/4" RADIUS UNLESS OTHERWISE SPECIFIED.
10. MANUFACTURER SHALL REMOVE EXCESS IRON AND MACHINE FINISH SEATING SURFACES TO NOTED DIMENSIONS.
11. COVER SHALL BE DIPPED IN A WATER-BASED ASPHALTIC COATING, PRIOR TO SHIPMENT FROM FOUNDRY.
12. BOLTS SHALL BE 5/8"-11NC X 2" LONG HEX STAINLESS STEEL WITH WASHER.
13. MANUFACTURER SHALL DRILL 2-3/16"X1/2" DEEP HOLES FOR A MANHOLE NUMBER PLATE TO BE PROVIDED BY THE CITY OF JARRELL. THE TOP HOLE SHALL BE DRILLED 1" O.C. FROM THE BOTTOM OF THE PICKBAR AND THE BOTTOM HOLE SHALL BE DRILLED 4" O.C. FROM THE TOP HOLE.

BOLTED STORM SEWER MANHOLE COVER AND FRAME DETAIL

CITY OF JARRELL
Engineering and Capital Improvements

THE ARCHITECT / ENGINEER ASSUMES RESPONSIBILTY FOR APPROPRIATE USE OF THIS STANDARD

STANDARD No. **DR-05**
Revision Date: 03/14/2022



NOTES:

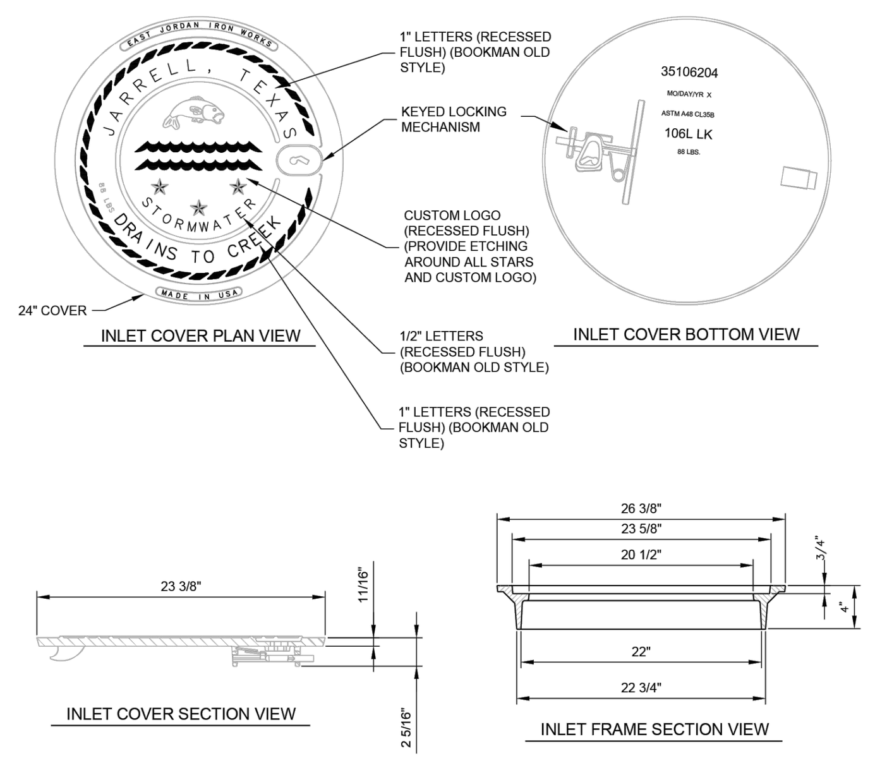
1. COVER AND FRAME SHALL COMPLY WITH STANDARD SPECIFICATIONS FOR DRAINAGE, SEWER, UTILITY AND RELATED CASTINGS: AASHTO DESIGNATION M306-04.
2. MANHOLE COVER SHALL BE MODEL NUMBER: V-1432-3 (PRODUCT NUMBER: 41432058), AS MANUFACTURED BY EAST JORDAN IRON WORKS, INCORPORATED, OR APPROVED EQUAL.
3. MANHOLE FRAME SHALL BE MODEL NUMBER: V-1432 (PRODUCT NUMBER: 41432010), AS MANUFACTURED BY EAST JORDAN IRON WORKS, INCORPORATED, OR APPROVED EQUAL.
4. MANHOLE COVER AND FRAME ASSEMBLY, IF ORDERED AS A SET, SHALL BE MODEL NUMBER: V-1432 (PRODUCT NUMBER: 41432080), AS MANUFACTURED BY EAST JORDAN IRON WORKS, INCORPORATED, OR APPROVED EQUAL.
5. ALL CORNERS AND EDGES SHALL HAVE A 1/16" MINIMUM AND 1/8" MAXIMUM RADIUS.
6. MANHOLE COVERS SHALL BE CAST WITH TWO 1" DIAMETER STEEL PICKBARS.
7. MANHOLE COVER WEIGHT SHALL BE 175 LBS. FOR DUCTILE IRON. WEIGHT SHALL BE CAST ON BOTH TOP AND BOTTOM OF COVER.
8. MANUFACTURER SHALL CERTIFY THAT EACH MANHOLE COVER MEETS HS-20 LOADING.
9. FILLETS SHALL BE 1/4" RADIUS UNLESS OTHERWISE SPECIFIED.
10. MANUFACTURER SHALL REMOVE EXCESS IRON AND MACHINE FINISH SEATING SURFACES TO NOTED DIMENSIONS.
11. COVER SHALL BE DIPPED IN A WATER-BASED ASPHALTIC COATING, PRIOR TO SHIPMENT FROM FOUNDRY.
12. MANUFACTURER SHALL DRILL 2-3/16"X1/2" DEEP HOLES FOR A MANHOLE NUMBER PLATE TO BE PROVIDED BY THE CITY OF JARRELL. THE TOP HOLE SHALL BE DRILLED 1" O.C. FROM THE BOTTOM OF THE PICKBAR AND THE BOTTOM HOLE SHALL BE DRILLED 4" O.C. FROM THE TOP HOLE.

NON-BOLTED STORM SEWER MANHOLE COVER AND FRAME DETAIL

CITY OF JARRELL
Engineering and Capital Improvements

THE ARCHITECT / ENGINEER ASSUMES RESPONSIBILTY FOR APPROPRIATE USE OF THIS STANDARD

STANDARD No. **DR-06**
Revision Date: 03/14/2022



NOTES:

1. COVER AND FRAME SHALL COMPLY WITH STANDARD SPECIFICATIONS FOR DRAINAGE, SEWER, UTILITY AND RELATED CASTINGS: AASHTO DESIGNATION M306-04.
2. INLET COVER SHALL BE MODEL NUMBER: 106L LK (PRODUCT NUMBER: 35106204), AS MANUFACTURED BY EAST JORDAN IRON WORKS, INCORPORATED, OR APPROVED EQUAL.
3. INLET FRAME SHALL BE MODEL NUMBER: 106L LK (PRODUCT NUMBER: 35206004), AS MANUFACTURED BY EAST JORDAN IRON WORKS, INCORPORATED, OR APPROVED EQUAL.
4. INLET COVER AND FRAME ASSEMBLY, IF ORDERED AS A SET, SHALL BE MODEL NUMBER: 106L-4L LK (PRODUCT NUMBER: 35506204), AS MANUFACTURED BY EAST JORDAN IRON WORKS, INCORPORATED, OR APPROVED EQUAL.
5. ALL CORNERS AND EDGES SHALL HAVE A 1/16" MINIMUM AND 1/8" MAXIMUM RADIUS.
6. INLET COVER WEIGHT SHALL BE 88 LBS. FOR DUCTILE IRON. WEIGHT SHALL BE CAST ON BOTH TOP AND BOTTOM OF COVER.
7. FILLETS SHALL BE 1/4" RADIUS UNLESS OTHERWISE SPECIFIED.
8. MANUFACTURER SHALL REMOVE EXCESS IRON AND MACHINE FINISH SEATING SURFACES TO NOTED DIMENSIONS.
9. INLET COVER SHALL BE DIPPED IN A WATER-BASED ASPHALTIC COATING, PRIOR TO SHIPMENT FROM FOUNDRY.

STORM SEWER INLET COVER AND FRAME DETAIL

CITY OF JARRELL
Engineering and Capital Improvements

THE ARCHITECT / ENGINEER ASSUMES RESPONSIBILTY FOR APPROPRIATE USE OF THIS STANDARD

STANDARD No. **DR-07**
Revision Date: 03/14/2022

BENCHMARKS

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

BM 7210 - MAG NAIL SET IN CONCRETE
ELEV. 823.90

No.	REVISIONS	DATE	BY

Kimley»Horn

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PHONE: 512-520-0768 FAX: 512-418-1791
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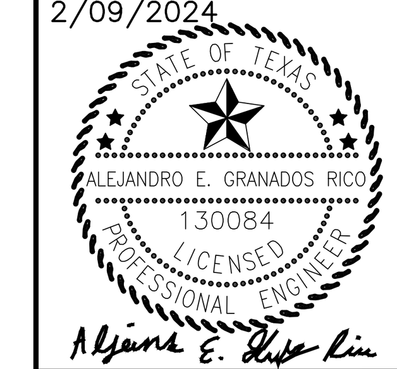
TEXAS REGISTERED ENGINEERING FIRM F-928

2/09/2024



KHA PROJECT 069427200
DATE FEBRUARY 2024
SCALE: AS SHOWN
DESIGNED BY: JDR
DRAWN BY: JDR
CHECKED BY: AEG

STORM DRAIN DETAILS

KID ZONE ON CR307

CITY OF JARRELL
WILLIAMSON COUNTY, TEXAS

SHEET NUMBER
24

Plotted By:Davis, Aaron Date:February 09, 2024 11:35:29am File Path:K:\GEO_Civil\069427200-Jarrell Kids Zone\Cad\PlanSheets\C-Storm Drain Details.dwg

Electrical Warnings / Advertencias Eléctricas/ Avertissements Électriques

Failure to follow these precautions could result in serious injury or death. Replace the float switch immediately if cable becomes damaged or severed. Keep these instructions with warranty after installation. This product must be installed in accordance with National Electric Code, ANSI/NFPA 70 so as to prevent moisture from entering or accumulating within boxes, conduit bodies, fittings, float housing, or cable.

⚠ WARNING — **ELECTRICAL SHOCK HAZARD** Disconnect power before installing or servicing this product. A qualified service person must install and service this product according to applicable electrical and plumbing codes.

⚠ WARNING — **EXPLOSION OR FIRE HAZARD** Do not use this product with flammable liquids. Do not install in hazardous locations as defined by National Electrical Code, ANSI/NFPA 70.

No obedecer estas precauciones podría resultar en lesiones serias o mortales. Reemplace el interruptor de flotador de inmediato si el cable está dañado o partido. Después de la instalación, guardar estas instrucciones junto con la garantía. Este producto debe ser instalado siguiendo el Código Eléctrico Nacional de EE.UU., ANSI/NFPA 70, para evitar la entrada o acumulación de humedad en cajas de conexión, conductos, acoples, la caja del indicador de nivel (flotador) o el cable.

⚠ PRECAUCIÓN — **RIESGO DE CHOQUE ELÉCTRICO** Desconecte la alimentación (corriente) antes de instalar o dar mantenimiento a este producto. Una persona calificada debe instalar y dar mantenimiento a este producto de acuerdo con los códigos eléctricos y de plomería aplicables.

⚠ PRECAUCIÓN — **RIESGO DE INCENDIO O EXPLOSIÓN** No utilice este producto con líquidos inflamables. No lo instale en lugares peligrosos definidos como tales en el Código Eléctrico Nacional de Estados Unidos, ANSI/NFPA 70.

Ignorer ces précautions, et ne pas les suivre attentivement peut résulter en blessures graves, voire mortelles. Remplacer immédiatement le flotteur si le câble est endommagé ou coupé. Une fois le produit installé, conserver ces instructions avec la garantie. Ce produit doit être installé conformément aux codes électriques des États-Unis (NEC), ANSI NFPA 70 de sorte à empêcher l'humidité de s'infiltrer ou de s'accumuler dans les boitiers, conduits électriques, raccords, à l'intérieur du flotteur, ou du câble.

⚠ AVERTISSEMENT — **RISQUE DE CHOC ÉLECTRIQUE** Débrancher l'alimentation avant d'installer ou d'entretenir ce produit. Seule une personne qualifiée est habilitée à installer et entretenir ce produit selon les codes électriques et de plomberie en vigueur.

⚠ AVERTISSEMENT — **RISQUE D'INCENDIE OU D'EXPLOSION** Ne pas utiliser ce produit avec des liquides inflammables. Ne pas installer ce produit dans des sites dangereux tels que définis par le code électrique des États-Unis (NEC), ANSI NFPA 70.

Items Needed / Elementos Necesarios / Éléments Nécessaires

Included with Alarm
Incluido con Alarma / Inclus avec Alarme

Included with Optional Float Switch
Incluidos con el interruptor de flotador opcional
Inclus avec interrupteur á flotteur en option

Not Included
No incluidos / Non inclus

Specifications
Especificaciones / Spécifications

Primary Power: Alimentación primaria: Alimentation primaire :	**Circuit not supervised 120 VAC, 50/60 Hz, 7 watts max** Circuito no supervisado 120 VAC, 50/60 Hz, máximo 7 watts Le circuit n'est pas supervisé 120 VAC, 50/60 Hz, 7 Watts max
Float Switch Supply Voltage: Tensión de alimentación del interruptor de flotador: Tension d'alimentation de l'interrupteur á flotteur :	**120 VAC, Maximum line impedance for initiating device: 100 ohms.** 120VAC, L'impédance maximale du circuit pour la sonde d'entrée (l'interrupteur) : 100 Ohms 120VAC, Línea MAX de impedancia para dispositivo de iniciación: 100 ohmios
Enclosure: Caja: Boîtier :	**Indoor/Outdoor** Interior/Exterior Intérieur/Extérieure

SJE RHOMBUS® FIVE-YEAR LIMITED WARRANTY

Five-Year Limited Warranty.
For complete terms and conditions, please visit www.sjerhombus.com.

GARANTÍA LIMITADA DE CINCO AÑOS DE SJE RHOMBUS®

Cinco años de garantía limitada. Para consultar los términos y condiciones, visite el portal www.sjerhombus.com.

GARANTIE LIMITÉE DE CINQ ANS SJE RHOMBUS®

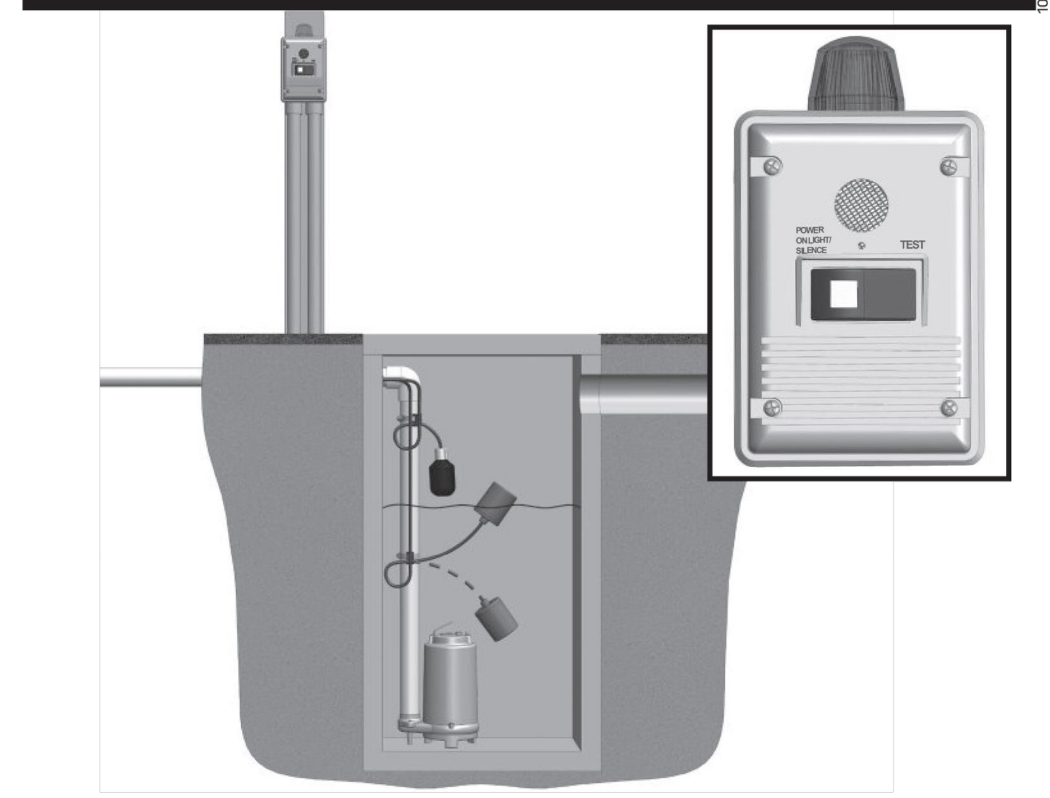
Garantie limitée de 5 ans. Pour en savoir plus au sujet des termes et conditions, visitez www.sjerhombus.com.

SJE RHOMBUS®

Technical support: +1-800-746-6287
techsupport@sjeinc.com
www.sjerhombus.com
Technical Support Hours: Monday - Friday, 7 A.M. to 6 P.M. Central Time
Soporte técnico, Horario: lunes a viernes, 7 A.M. a 6 P.M. hora del Centro
Support technique, Horaires : du lundi au vendredi, de 7 h à 18 h Heure du Centre

TANK ALERT® XT Alarm / Alarma / Alarme

Installation Instructions / Instrucciones de instalación / Instructions d'installation



English

This alarm system monitors liquid levels in lift pump chambers, sump pump basins, holding tanks, sewage, agricultural, and other water applications.

The Tank Alert® XT indoor/outdoor alarm can serve as a high or low level alarm depending on the float switch model used. The alarm horn sounds and the red beacon illuminates when a potentially threatening liquid level condition occurs. A "power on" light on the switch indicates power to the alarm panel.

The standard Tank Alert XT indoor/outdoor alarm system has automatic alarm reset, horn silence, and alarm test switch.

Español

Este sistema de alarma monitorea los niveles de líquido en la cámara de bombas de elevación y bombas de sumidero, en tanques, aguas residuales, agrícolas y otras aplicaciones de agua.

La alarma interior y exterior TANK ALERT® XT puede servir como alarma de nivel alto o bajo dependiendo del modelo de interruptor de flotador utilizado. La bocina de la alarma se activa y se ilumina una luz roja de aviso cuando el nivel del líquido alcanza un punto potencialmente peligroso. La luz de encendido ("power on") en el interruptor indica que hay alimentación al panel de la alarma.

El sistema estándar de alarma Tank Alert XT (para interior/exterior) viene con restablecimiento automático de alarma, interruptor de silencio de la bocina y prueba de alarma.

Français

Ce système d'alarme surveille les niveaux de liquides dans les chambres de pompage d'élévation, les bassins de pompes de puisard, septiques, eaux usées, agricoles et autres applications de l'eau.

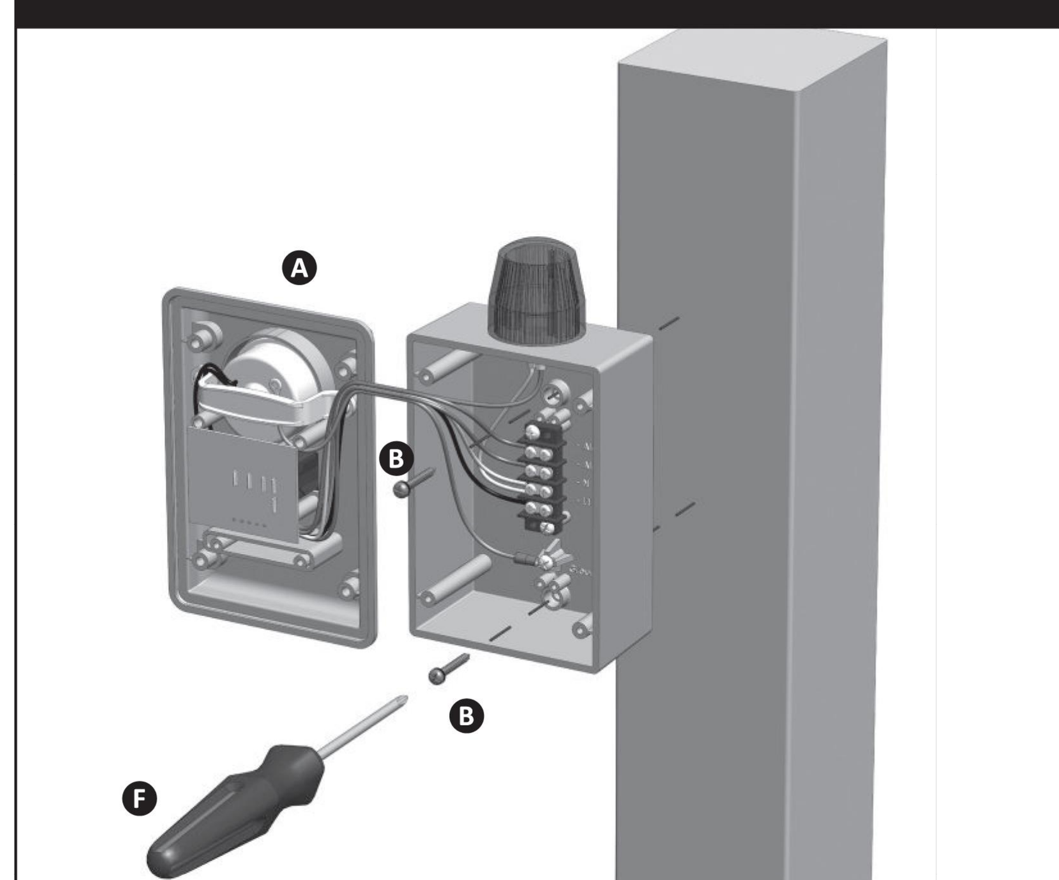
L'alarme intérieur/extérieur TANK ALERT® XT peut servir comme une alarme de niveau haut ou bas selon le modèle de commutateur de flotteur utilisé. L'avertisseur retentit et le feu de balisage rouge s'allume lorsque se produit une condition potentiellement menaçante du niveau liquide. Une lumière sur l'interrupteur « allumé » indique l'alimentation vers le panneau d'alarme.

Le modèle de base Tank Alert XT (Système d'alarme pour utilisation en intérieur ou en extérieur) et équipé d'un bouton pour tester l'alarme, d'une fonction sourdine, et d'un réarmement automatique de l'alarme.

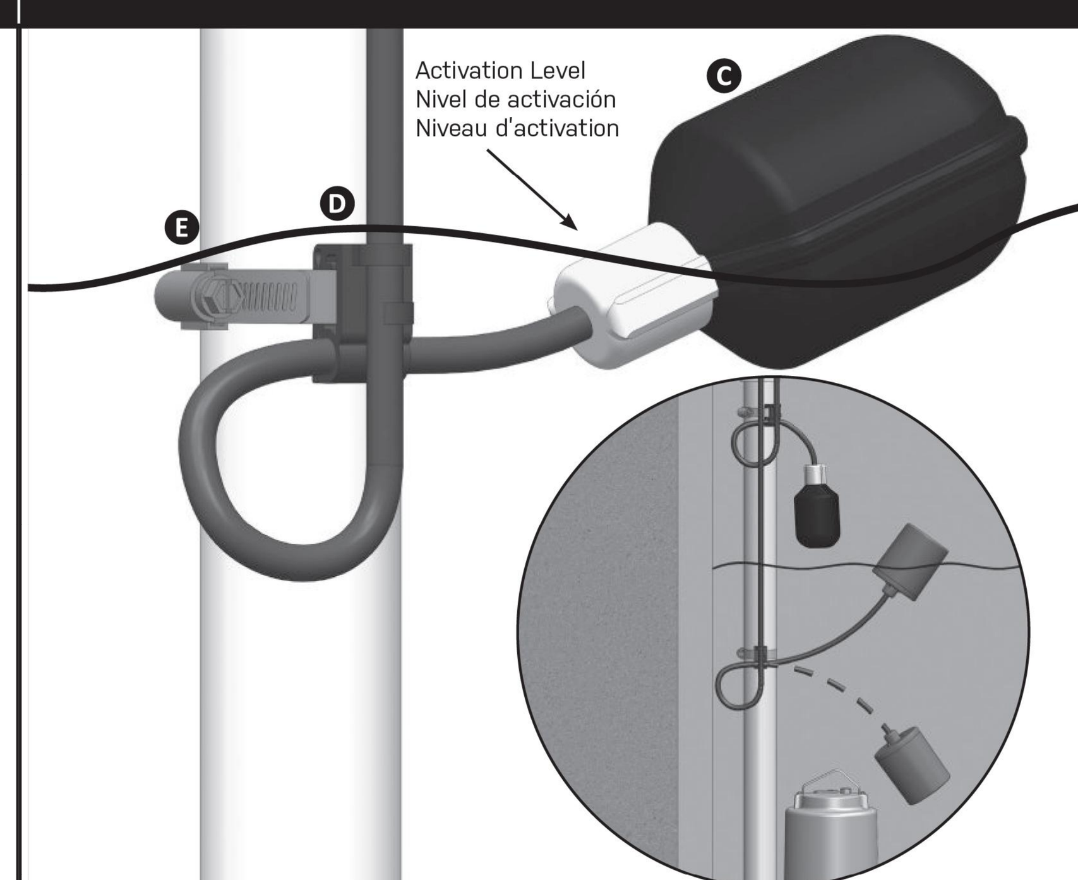
SJE RHOMBUS®

Technical support: +1-800-746-6287
techsupport@sjeinc.com
www.sjerhombus.com
Technical Support Hours: Monday - Friday, 7 A.M. to 6 P.M. Central Time

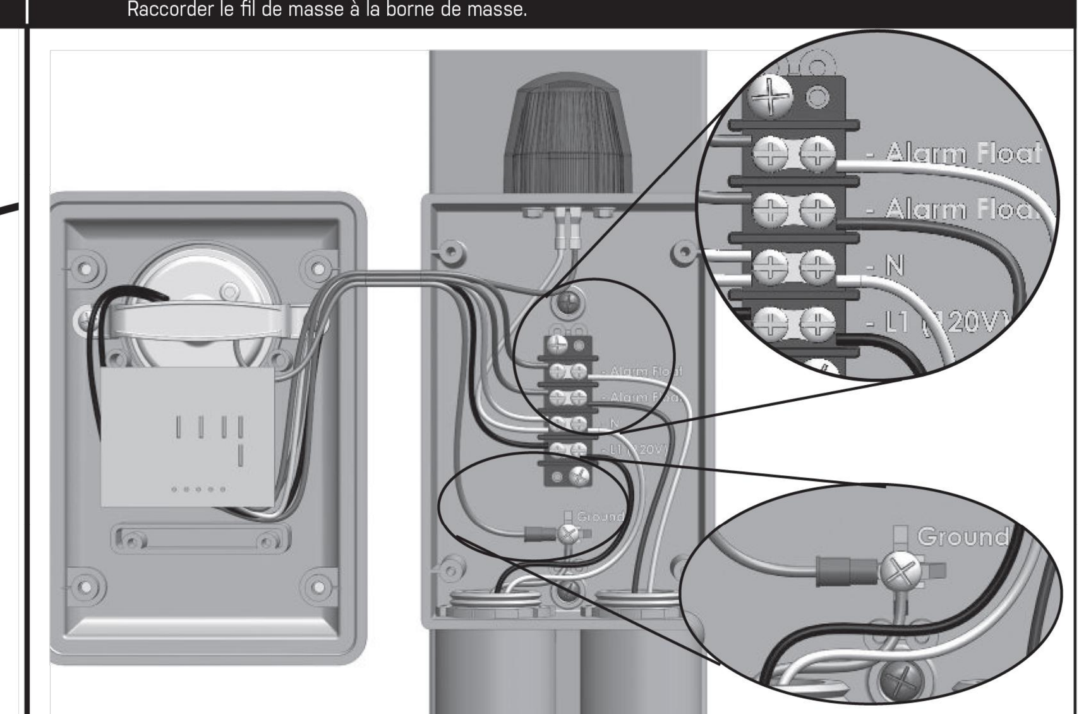
1 Mount the alarm using existing holes in back of enclosure.
Montar la alarma usando los orificios situados en la parte trasera de la caja.
Monter l'alarme en utilisant les trous existants à l'arrière du boîtier.



2 Install float switch at desired activation level.
Instalar el interruptor del flotador al nivel de activación deseado.
Installer l'interrupteur à flotteur au niveau d'activation souhaitée.



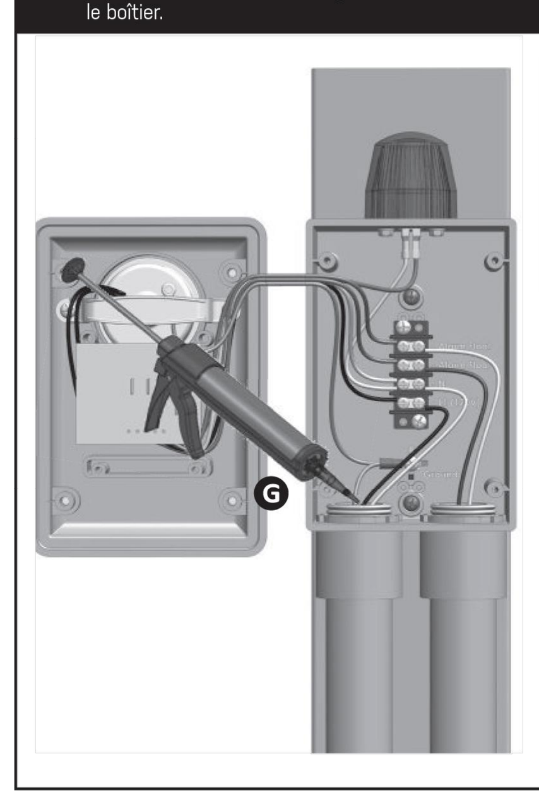
3 Bring float switch and power cable through conduit and wire to 4 position terminal block. Connect ground wire to ground termination post.
Guiar el interruptor del flotador y el cable de alimentación a través del conducto y conectarlo al bloque de terminales de 4 posiciones. Conectar el alambre a tierra al borne de la toma de tierra.
Acheminer l'interrupteur à flotteur et le câble d'alimentation via le conduit et câbler à bornier à la position 4. Raccorder le fil de masse à la borne de masse.



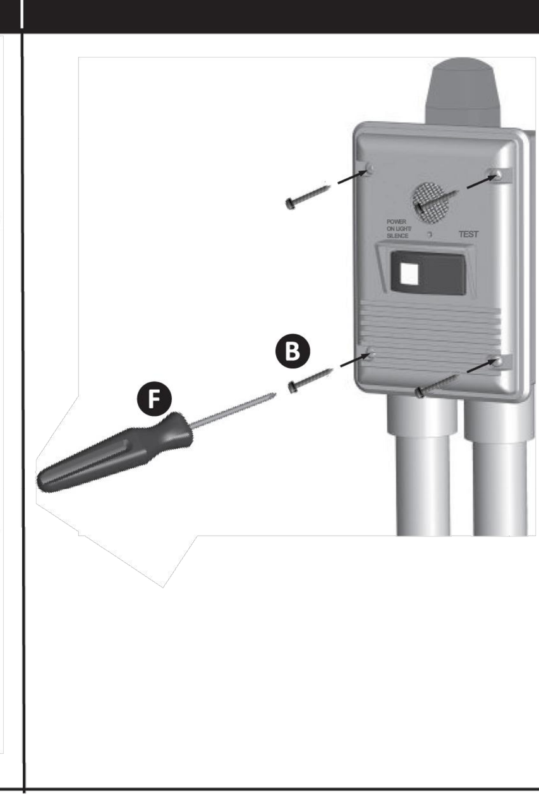
Refer to the Tank Alert® XT Terminal Block Option Installation Instructions for 8 position terminal block.
Consultar las instrucciones de instalación de la alarma Tank Alert® XT con bloque de terminales opcionales para el bloque de 8 posiciones.
Consulter les instructions d'installation du bornier en option de l'alarme de réservoir Tank Alert XT® pour bornier à 8 positions.

Refer to the Tank Alert® XT Power Cord Option Installation Instructions for power cord installation.
Consultar las instrucciones de instalación de la alarma Tank Alert® XT con cable de alimentación opcional para la instalación de dicho cable.
Consulter les instructions d'installation du cordon d'alimentation en option de l'alarme de réservoir Tank Alert XT®.

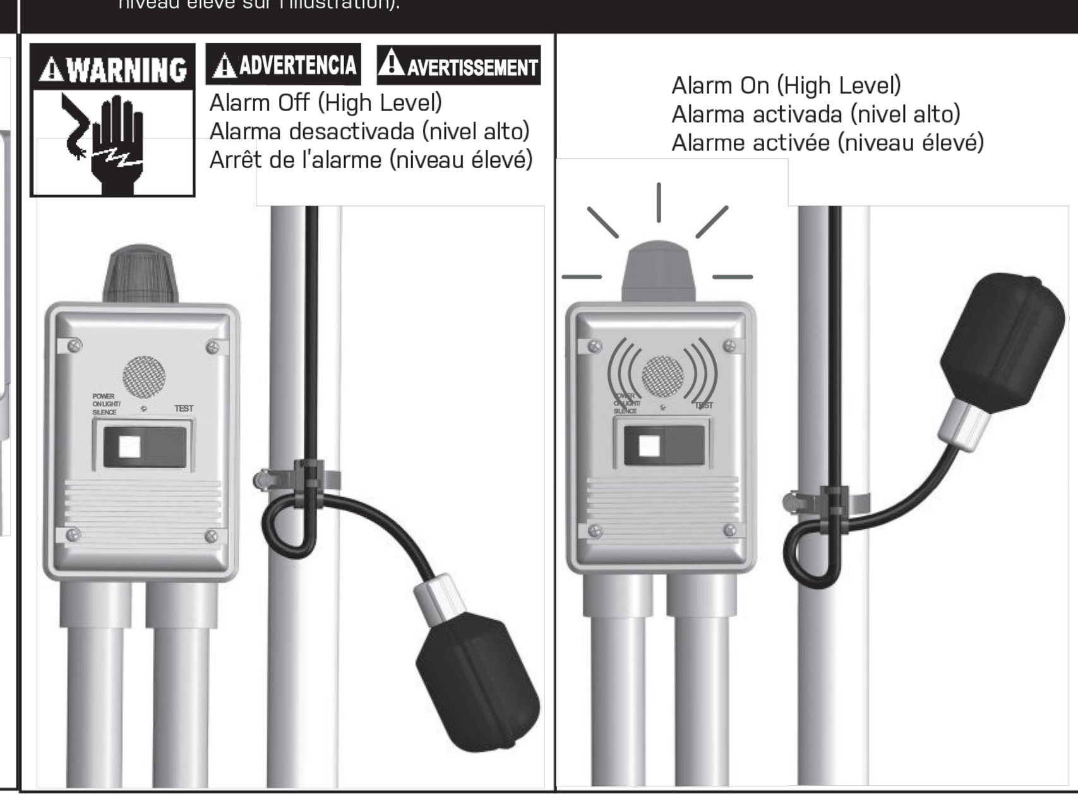
4 Use conduit sealant to prevent moisture or gases from entering enclosure.
Utilizar sellador de conductores eléctricos para evitar la entrada de gases o humedad a la caja.
Utiliser un produit d'étanchéité pour conduit afin d'empêcher l'humidité ou les gaz de s'infiltrer dans le boîtier.



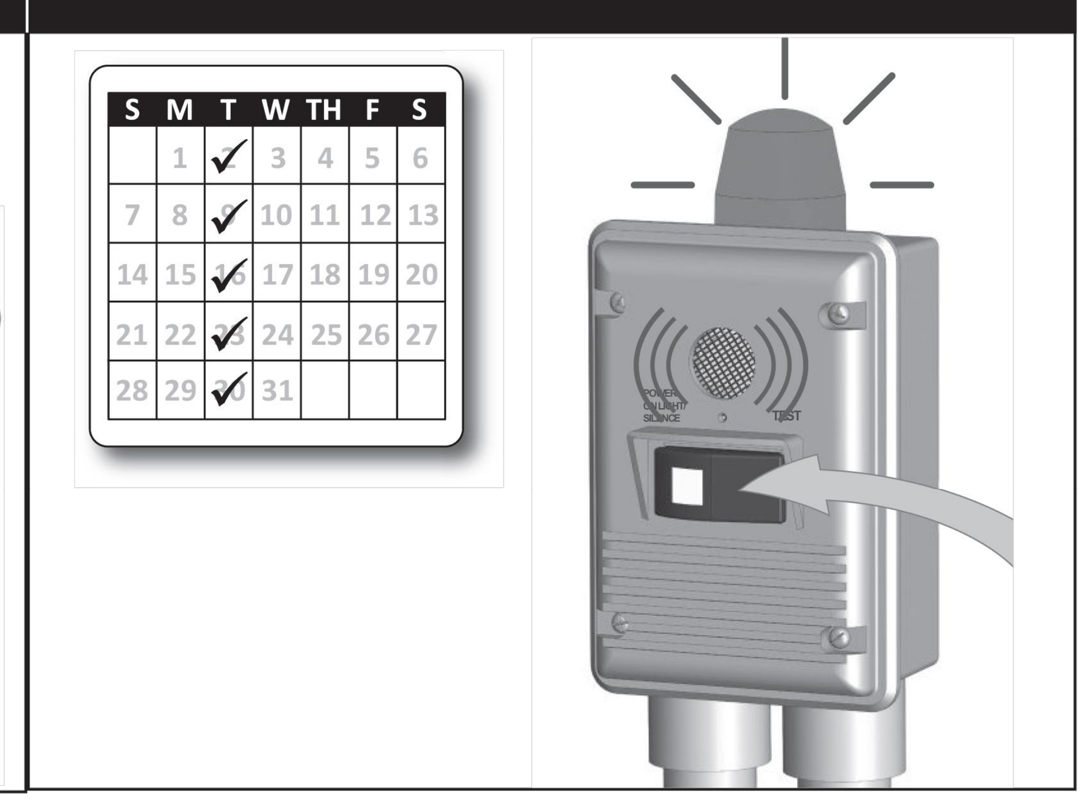
5 Attach alarm cover.
Asegurar la cubierta de la alarma.
Fixer le couvercle d'alarme.



6 Restore power and check alarm operation after installation (high level application shown).
Restablecer la alimentación y verificar el funcionamiento de la alarma después de la instalación (se ilustra la aplicación de nivel alto).
Restaurer l'alimentation et vérifier le fonctionnement de l'alarme après installation (application de niveau élevé sur l'illustration).



7 Test alarm weekly to insure proper operation.
Probar la alarma semanalmente para comprobar su buen funcionamiento.
Tester l'alarme toutes les semaines pour assurer un fonctionnement correct.



TANK ALERT® XT ALARM SYSTEM

Versatile, Indoor or Outdoor Liquid Level Alarm System

This alarm system monitors liquid levels in lift pump chambers, sump pump basins, holding tanks, sewage, agricultural, and other water applications.

The Tank Alert® XT indoor/outdoor alarm can serve as a high or low level alarm depending on the float switch model used.

The alarm horn sounds and the red LED beacon illuminates when a potentially threatening liquid level condition occurs. The horn can be silenced, but the alarm light remains on until the condition is remedied. Once the condition is cleared, the alarm will automatically reset.

A "power on" light on the switch indicates power to the alarm panel.

FEATURES

- Enclosure meets Type 3R water-tight standard
- Automatic alarm reset, horn silence switch, and alarm test switch
- Alarm horn sounds at 85 decibels at 10 feet (3 meters)
- Alarm system (when installed on separate circuit) operates even if pump circuit fails

OPTIONS

When 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 remote devices
- Premounted terminal block so enclosure can also be used as a junction box for splicing pump, pump switch, and pump power; meets NEC standard for junction boxes
- 6 foot (1.8 meter) power cord and liquid-tight connectors

SIGNALING TYPE E UL LISTED 288X — CSA LR54245 — 5 YEAR LIMITED WARRANTY

Indoor/Outdoor Alarms

SJE RHOMBUS®

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D.17

BENCHMARKS

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

BM 7210 - MAG NAIL SET IN CONCRETE
ELEV. 823.90

No.	REVISIONS	DATE	BY

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TEXAS REGISTERED ENGINEERING FIRM F-928

2/09/2024
STATE OF TEXAS — ALEJANDRO E. GRANADOS RICO — 130084 — LICENSED PROFESSIONAL ENGINEER

KHA PROJECT 069427200
DATE FEBRUARY 2024
SCALE: AS SHOWN
DESIGNED BY: JDR
DRAWN BY: JDR
CHECKED BY: AEG

ALARM DETAILS

KID ZONE ON CR307

CITY OF JARRELL
WILLIAMSON COUNTY, TEXAS

SHEET NUMBER
25

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
DnB	Denton silty clay, 1 to 3 percent slopes	6.8	77.8%
DoC	Doss silty clay, moist, 1 to 5 percent slopes	0.4	4.2%
HoA	Houston Black clay, 0 to 1 percent slopes	1.6	18.0%
Totals for Area of Interest		**8.7**	**100.0%**