# WATER POLLUTION ABATEMENT PLAN MODIFICATION

# ROUND ROCK COMMERCIAL Round Rock, Williamson County, Texas

Prepared For:

**Round Rock Commercial** 

16225 N RM 620 RD Austin, TX 78717

Prepared By:

KIMLEY-HORN AND ASSOCIATES, INC.

6800 Burleson Rd, Bldg 312, Suite 150 Austin, TX 78744 (512) 616-9942

Firm No. 928

KHA Project No. 064589710



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Kimley » Horn

# SECTION 1: EDWARDS AQUIFER APPLICATION COVER PAGE

#### **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. <u>Edwards Aquifer applications</u> must be deemed administratively complete before a technical review can begin. To be considered administratively complete, the application must contain completed forms and attachments, provide the requested information, and meet all the site plan requirements. The submitted application and plan sheets should be final plans. Please submit one full-size set of plan sheets with the original application, and half-size sets with the additional copies.
  - To ensure that all applicable documents are included in the application, the program has developed tools to guide you and web pages to provide all forms, checklists, and guidance. Please visit the below website for assistance: <a href="http://www.tceq.texas.gov/field/eapp">http://www.tceq.texas.gov/field/eapp</a>.
- 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**

- 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: Round Rock Commercial  |         |       |                      | 2. R            | egulat | ed Entity No.:           | 105093744 |                            |                                  |           |  |
|--|---------|-------|----------------------|-----------------|--------|--------------------------|-----------|----------------------------|----------------------------------|-----------|--|
| 3. Customer Name: AG Round Rock RE Holdings, LLC |         |       | 4. Customer No.: N/A |                 |        |                          |           |                            |                                  |           |  |
| 5. Project Type:<br>(Please circle/check one)    | New     |       | Modif                | Modification    |        | <u>Iodification</u> Exte |           | Exter                      | nsion                            | Exception |  |
| 6. Plan Type:<br>(Please circle/check one)       | WPAP    | CZP   | SCS                  | SCS UST AST     |        | EXP                      | EXT       | Technical<br>Clarification | Optional Enhanced<br>Measures    |           |  |
| 7. Land Use:<br>(Please circle/check one)        | Resider | ntial | Non-r                | Non-residential |        |                          | 8. Sit    | e (acres):                 | 1.573                            |           |  |
| 9. Application Fee:                              | \$4,000 |       | 10. Permanent BM     |                 |        | BMP(                     | s):       | N/A - existing regio       | nal water quality/detention pond |           |  |
| 11. SCS (Linear Ft.):                            |         |       | 12. AST/UST (No. Ta  |                 |        | o. Tar                   | ıks):     |                            |                                  |           |  |
| 13. County:                                      | William | son   | 14. Watershed:       |                 |        |                          |           | Lake Creek                 |                                  |           |  |

## **Application Distribution**

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

http://www.tceq.texas.gov/assets/public/compliance/field\_ops/eapp/EAPP%2oGWCD%2omap.pdf

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

| Austin Region                           |  |   |  |  |  |
|---|--|---|--|--|--|
| County:                                 | Hays   | Travis  | Williamson   |  |  |
| Original (1 req.)                       | _  | _   | <u>x</u>   |  |  |
| Region (1 req.)                         | _  | _   | <u>x</u>   |  |  |
| County(ies)                             |  | _   | <u>X</u>   |  |  |
| Groundwater Conservation<br>District(s) | Edwards Aquifer AuthorityBarton Springs/ Edwards AquiferHays TrinityPlum Creek | Barton Springs/<br>Edwards Aquifer  | NA   |  |  |
| City(ies) Jurisdiction                  | AustinBudaDripping SpringsKyleMountain CitySan MarcosWimberleyWoodcreek        | AustinBee CavePflugervilleRollingwoodRound RockSunset ValleyWest Lake Hills | AustinCedar ParkFlorenceGeorgetownJerrellLeanderLiberty HillPflugervilleX_Round Rock |  |  |

| San Antonio Region                         |  |   |        |                              |               |
|--|--|---|--------|------------------------------|---------------|
| County:                                    | Bexar  | Comal   | Kinney | Medina                       | Uvalde        |
| Original (1 req.)                          | _  |   | _      |                              |               |
| Region (1 req.)                            | _  |   | _      |                              |               |
| County(ies)                                | _  |   | _      |                              |               |
| Groundwater<br>Conservation<br>District(s) | Edwards Aquifer<br>Authority<br>Trinity-Glen Rose  | Edwards Aquifer<br>Authority  | Kinney | EAA<br>Medina                | EAA<br>Uvalde |
| City(ies)<br>Jurisdiction                  | Castle HillsFair Oaks RanchHelotesHill Country VillageHollywood ParkSan Antonio (SAWS)Shavano Park | Bulverde<br>Fair Oaks Ranch<br>Garden Ridge<br>New Braunfels<br>Schertz | NA     | San<br>Antonio ETJ<br>(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. |            |  |
|---|------------|--|
| Ryan McKay  |            |  |
| Print Name of Customer/Authorized Agent   |            |  |
| The Mary  | 08/16/2024 |  |
| Signature of Customer/Authorized Agent  | Date       |  |
|   |            |  |

| **FOR TCEQ INTERNAL USE ONLY**                   |   |          |                        |          |
|--|---|----------|------------------------|----------|
| Date(s)Reviewed:                                 | Г | ate Adn  | ninistratively Comple  | te:      |
| Received From:                                   | C | orrect N | Tumber of Copies:      | •        |
| Received By:                                     | D | istribut | ion Date:              |          |
| EAPP File Number:                                | C | omplex   | :                      |          |
| Admin. Review(s) (No.):                          | N | lo. AR R | ounds:                 |          |
| Delinquent Fees (Y/N):                           | R | Leview T | ime Spent:             |          |
| Lat./Long. Verified:                             | S | OS Cust  | omer Verification:     |          |
| Agent Authorization<br>Complete/Notarized (Y/N): | F | 'ee      | Payable to TCEQ (Y/N): |          |
| Core Data Form Complete (Y/N):                   | - | heck:    | Signed (Y/N):          |          |
| Core Data Form Incomplete Nos.:                  |   |          | Less than 90 days ol   | d (Y/N): |

Kimley » Horn

# **SECTION 2:**General Information Form

### **General Information Form**

**Texas Commission on Environmental Quality** 

Print Name of Customer/Agent: Ryan McKay

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:

| Da  | te: <u>08/16</u> /2024  |  |
|-----|---|--|
| Sig | nature of Customer/Agent:                                     |  |
|     | 13 Mil  |  |
| Pi  | roject Information  |  |
| 1.  | Regulated Entity Name: Round Rock Commercial                  |  |
| 2.  | County: Williamson  |  |
| 3.  | Stream Basin: Lake Creek                                      |  |
| 4.  | Groundwater Conservation District (If applicable): N/A        |  |
| 5.  | Edwards Aquifer Zone:   |  |
|     | X Recharge Zone Transition Zone                               |  |
| 6.  | Plan Type:  |  |
|     | X WPAP □ AST   SCS □ UST   X Modification □ Exception Request |  |

| 7.  | Customer (Applicant):  |   |
|-----|--|---|
|     | Contact Person: Grey Reed Entity: AG Round Rock RE Holdings, LLC Mailing Address: 12360 Market Dr City, State: Oklahoma City, OK Telephone: (214)725-4886 Email Address: Greyreed@ashtongray.com   | Zip: <u>73114</u><br>FAX:                     |
| 8.  | Agent/Representative (If any):   |   |
|     | Contact Person: Ryan McKay Entity: Kimley-Horn Mailing Address: 6800 Burleson Rd, Building 312, Suite 150 City, State: Austin, Texas Telephone: 512-518-4875 Email Address: ryan.mckay@kimley-horn.com   | Zip: <u>78744</u><br>FAX:                     |
| 9.  | Project Location:  |   |
|     | ☐ The project site is located inside the city limit  X The project site is located outside the city limit  jurisdiction) of Round Rock  ☐ The project site is not located within any city  | nits but inside the ETJ (extra-territorial    |
| 10. | The location of the project site is described be detail and clarity so that the TCEQ's Regional boundaries for a field investigation.  South of the Great Oaks Dr and N FM 62  | staff can easily locate the project and site  |
| 11  |  |   |
| 11. | Attachment A – Road Map. A road map show project site is attached. The project location the map.   | _   |
| 12. | X Attachment B - USGS / Edwards Recharge Zo<br>USGS Quadrangle Map (Scale: 1" = 2000') of<br>The map(s) clearly show:  |   |
|     | <ul> <li>X Project site boundaries.</li> <li>X USGS Quadrangle Name(s).</li> <li>X Boundaries of the Recharge Zone (and Translation of the project site to the project site to</li></ul> |   |
| 13. | X The TCEQ must be able to inspect the project Sufficient survey staking is provided on the puthe boundaries and alignment of the regulate features noted in the Geologic Assessment.  | roject to allow TCEQ regional staff to locate |
|     | Survey staking will be completed by this date  | : when advised of TCEQ site visit             |
|     |  |   |

| 14. X Attachment C – Project Description. Attached at the end of this form is a detailed narrative description of the proposed project. The project description is consistent throughout the application and contains, at a minimum, the following details: |
|---|
| <ul> <li>X Area of the site</li> <li>X Offsite areas</li> <li>X Impervious cover</li> <li>X Permanent BMP(s)</li> <li>X Proposed site use</li> <li>X Site history</li> <li>X Previous development</li> <li>X Area(s) to be demolished</li> </ul>            |
| 15. Existing project site conditions are noted below:   |
| Existing commercial site Existing industrial site Existing residential site X Existing paved and/or unpaved roads X Undeveloped (Cleared) X Undeveloped (Undisturbed/Uncleared) X Other:  |
| Prohibited Activities   |
| 16. X I am aware that the following activities are prohibited on the Recharge Zone and are not proposed for this project:   |
| (1) Waste disposal wells regulated under 30 TAC Chapter 331 of this title (relating to<br>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  |

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

17. NA 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

of Municipal Solid Waste Facilities).

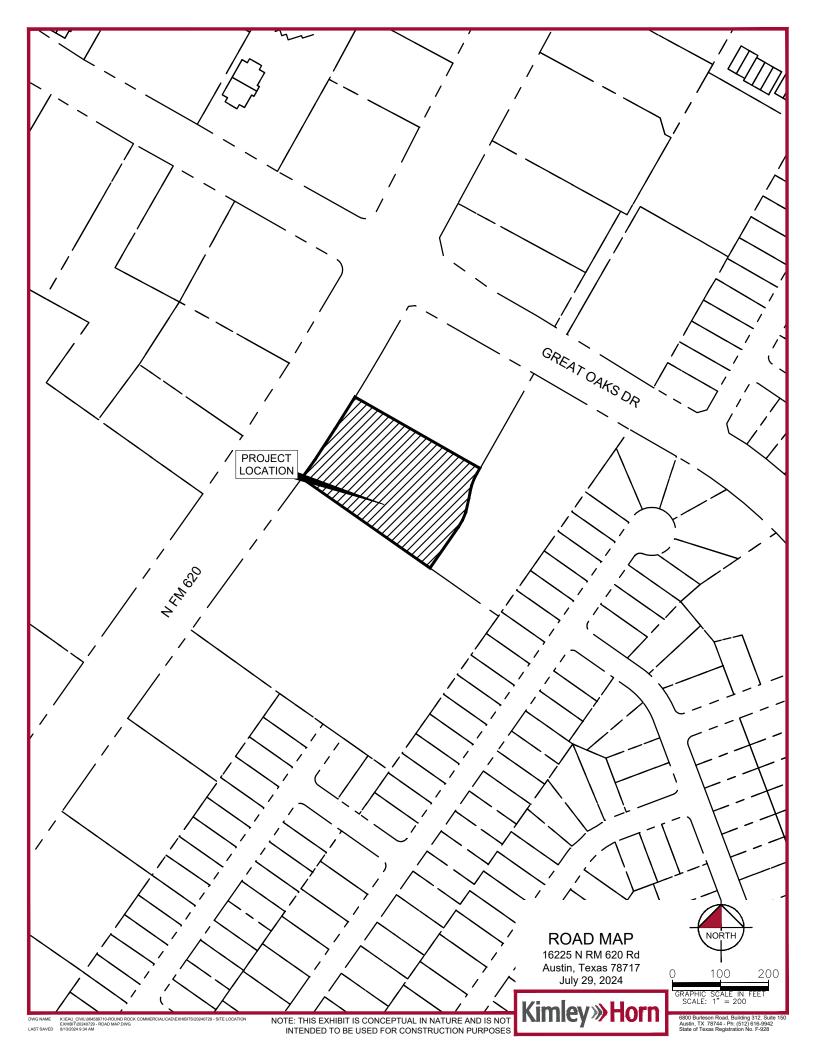
(3) New municipal solid waste landfill facilities required to meet and comply with Type I standards which are defined in §330.41 (b), (c), and (d) of this title.

#### **Administrative Information**

| 18. The | e fee for the plan(s) is based on:   |
|---------|--|
| X       | For a Water Pollution Abatement Plan or Modification, the total acreage of the site where regulated activities will occur.  For an Organized Sewage Collection System Plan or Modification, the total linear footage of all collection system lines.  For a UST Facility Plan or Modification or an AST Facility Plan or Modification, the total number of tanks or piping systems.  A request for an exception to any substantive portion of the regulations related to the protection of water quality.  A request for an extension to a previously approved plan. |
| 19. 🗌   | 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:   |
|         | <ul> <li>☐ TCEQ cashier</li> <li>X Austin Regional Office (for projects in Hays, Travis, and Williamson Counties)</li> <li>☐ San Antonio Regional Office (for projects in Bexar, Comal, Kinney, Medina, and Uvalde Counties)</li> </ul>  |
| 20. X   | Submit one (1) original and one (1) copy of the application, plus additional copies as needed for each affected incorporated city, groundwater conservation district, and county in which the project will be located. The TCEQ will distribute the additional copies to these jurisdictions. The copies must be submitted to the appropriate regions office.  |
| 21. X   | No person shall commence any regulated activity until the Edwards Aquifer Protection Plan(s) for the activity has been filed with and approved by the Executive Director.  |

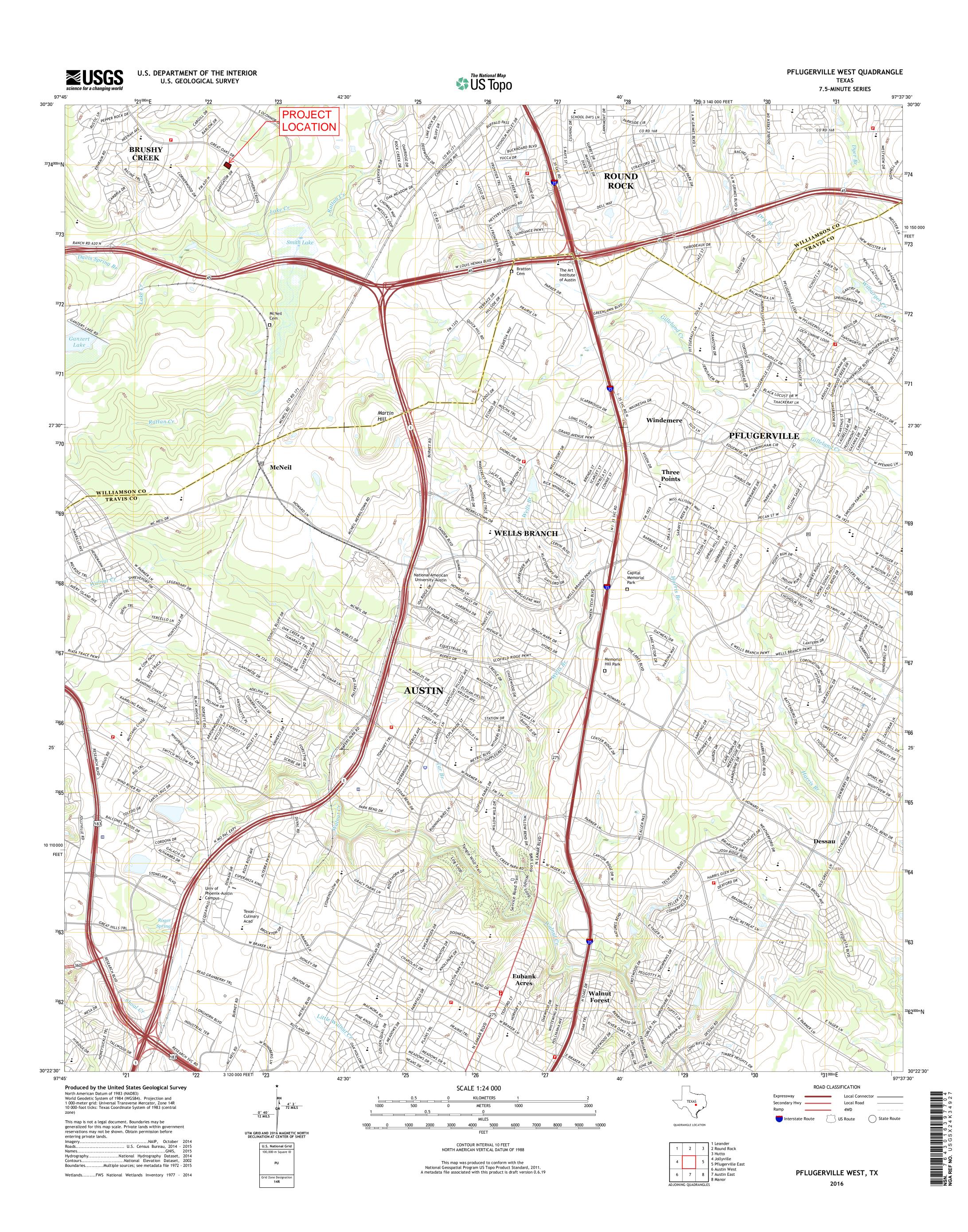


**ATTACHMENT A: Road map** 





### ATTACHMENT B: USGS / Edwards Recharge Zone Map





#### **ATTACHMENT C: Project Description**

The Round Rock Commercial project proposes improvements on a ±1.573-acre tract located at 16225 N RM 620 Rd, Round Rock, Texas. This tract is currently undeveloped. The development proposed with this site plan application is for the construction of a commercial building, and associated parking and utility improvements.

No portion of the site is located within the Federal Emergency Management Agency's 100-year floodplain according to Flood Insurance Rate Map number 48491C0630F, dated December 20, 2019, for Travis County, Texas and unincorporated areas. The site is located within the Edwards Aquifer Recharge Zone according to the Texas Commission on Environmental Quality (TCEQ). There are no critical water quality zones or water quality transition zones on-site. No ERI has been performed for this site, however, a geologic assessment has been provided with this report in Section 3. There is an existing karst feature on site which is an undeveloped cave. This feature will remain undeveloped.

The site is in the Lake Creek watershed. There is an existing Water Quality Best Management Practice (BMP) for the original WPAP of Highland Horizon Phase I Subdivision Improvements approved by TCQE on September 11, 2007 (EAPP ID No. 11-06102402B). The detention pond proposed with the Highland Horizon Phase I Subdivision Improvements will be used by this project to address the water quality requirements for the ultimate area disturbed by this commercial development.

The proposed impervious cover for this project is  $\pm 0.76$ -acres and no areas are to be demolished considering that the site is undeveloped.

Kimley » Horn

# SECTION 3: GEOLOGIC ASSESSMENT FORM



# GEOLOGIC ASSESSMENT FOR THE APPROXIMATELY 1.57-ACRE 16225 NORTH RANCH-TO-MARKET 620 ROAD TRACT

Williamson County, Texas

August 2024

#### Submitted to:

Ashton Grey Real Estate, L.L.C. 12360 Market Drive Oklahoma City, Oklahoma 73114

#### Prepared by:

aci environmental consulting 1001 Mopac Circle Austin, Texas 78746 TBPG Firm License No. 50713

aci project #: 22-24-075

## **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.

| Pri      | int Name of Geologist: Mark T. Adams  | Telephone: <u>(512) 347-9000</u>              |
|----------|---|---|
| Da       | te: 8/19/2024   | Fax: (512) 306-0974                           |
| Re<br>an | d TBPG or TBPE registration number)   | ng, LC TBPG License No. 50713 (Name of Compan |
| Sig      | gnature of Geologist: GEOLO No. 18  | OGY SHE                                       |
| IVE      | guiated Littly Name. Thortzand from   | IZON FITASE I SOBDIVISION INFROVENIENTS       |
| P        | roject Information  |   |
| 1.       | Date(s) Geologic Assessment was per   | formed: <u>5/21/2024</u>                      |
| 2.       | Type of Project:  |   |
|          |   | AST UST                                       |
| 3.       | Location of Project:  |   |
|          | <ul><li>Recharge Zone</li><li>Transition Zone</li><li>Contributing Zone within the Tran</li></ul> | nsition 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. |            |                   |                   |   |  |  |  |  |
|   | ble 1 - Soil U<br>aracteristics  | =          |                   |                   | Group Definitions (Abbreviated)<br>Soils having a high infiltration |  |  |  |  |
|   | Soil Name  | Group*     | Thickness(feet)   |                   | rate when thoroughly wetted.<br>Soils having a moderate             |  |  |  |  |
|   | See Section<br>4.0 of report   |            |                   |                   | infiltration rate when thoroughly wetted.                           |  |  |  |  |
|   |  |            |                   | С.                | Soils having a slow infiltration rate when thoroughly wetted.       |  |  |  |  |
|   |  |            |                   | D.                | Soils having a very slow infiltration rate when thoroughly wetted.  |  |  |  |  |
|   |  |            |                   |                   | wetted.   |  |  |  |  |
| 6.  | 5. 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.  |  |            |                   |                   |   |  |  |  |  |
| <ul> <li>Attachment D – Site Geologic Map(s). The Site Geologic Map must be the same sca the applicant's Site Plan. The minimum scale is 1": 400'         Applicant's Site Plan Scale: 1" = 20'         Site Geologic Map Scale: 1" = 20'         Site Soils Map Scale (if more than 1 soil type): 1" = 80'     </li> </ul> |  |            |                   |                   |   |  |  |  |  |
|   |  |            |                   |                   |   | 9. Method of collecting positional data: |  |  |  |
|   | Global Positioning System (GPS) technology.  Other method(s). Please describe method of data collection:   |            |                   |                   |   |  |  |  |  |
| 10  | D. $igwidge$ The project site and boundaries are clearly shown and labeled on the Site Geologic Map  |            |                   |                   |   |  |  |  |  |
| 11  | . 🔀 Surface go   | eologic un | its are shown and | labeled on the Si | te 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.   |
|       | known wells (test holes, water, oil, unplugged, capped and/or abandoned, etc.): If plicable, 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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aci Project No.: 22-24-075

August 2024



#### August 2024

Geologic Assessment for the 16225 North Ranch-to-Market 620 Road Tract located in Williamson County, Texas

#### 1.0 INTRODUCTION

The Texas Commission on 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 16225 North Ranch-to-Market 620 Road Tract, hereafter referred to as the subject area or site, is located at 16225 North (N) Ranch-to-Market (RM) 620 Road (Rd) in the extraterritorial jurisdiction (ETJ) of Round Rock, Williamson County, Texas (**Attachment A, Figure 1**) according to the City of Austin Jurisdictions Web Map (CoA 2024). Pedestrian investigations of the 1.57-acre tract were performed on May 21, 2024, by Marcos Cárdenas and Andrew McGlothlin, G.I.T. under the supervision of Mark Adams, P.G. with **aci environmental consulting, LLC**.

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) and Sewage Collection System Plan (SCS). The site is approximately 1.57 acres in total. The proposed site use is for commercial development. 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

August 2024



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 area.

#### 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 subject area (**Attachment A, Figure 2**):

EeB - Eckrant stony clay, 0 to 3 percent slopes, stony

The Eckrant, stony component makes up 85 percent of the map unit. Slopes are 0 to 3 percent. This component is on ridges on dissected plateaus. The parent material consists of residuum weathered from limestone. Depth to a root restrictive layer, bedrock, lithic, is 4 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.

Georgetown (8%) and Doss (7%) are minor soil components that make up the remaining 15 % of the map unit. These do not meet the criteria for hydric soils.

#### • GsB - Georgetown stony clay loam, 1 to 3 percent slopes

The Georgetown component makes up 90 percent of the map unit. Slopes are 1 to 3 percent. This component is on broad ridges on dissected plateaus. The parent material consists of clayey residuum weathered from limestone. Depth to a root restrictive layer, bedrock, lithic, is 20 to 40 inches. The natural drainage class is well drained. Water movement in the most restrictive layer is low. Available water to a depth of 60 inches (or restricted depth) is low. Shrink-swell potential is high. 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.

Tarpley (5%), Eckrant (3%), and Fairlie (2%) are minor soil components that make up the remaining 10 % of the map unit.

#### Geologic Stratigraphy

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

#### • Edwards Limestone (Ked)

"Limestone, dolomite, and chert; limestone aphanitic to fine grained massive to thin bedded, hard, brittle, in part rudistid biostromes, much miliolid biosparite; dolomite fine to very fine grained, porous, medium gray to grayish brown; chert, nodules and plates common, varies in amount from bed to bed, some intervals free of chert, mostly white to light gray; in zone of weathering considerably recrystallized, 'honeycombed,' and cavernous forming an aquifer, forms flat areas and plateaus bordered by scarps; thickness 60-350 feet, thins northward"



#### Site-Specific Stratigraphic Column

| Formation         | Members           | Thickness<br>(Barnes, 1981) |
|-------------------|-------------------|-----------------------------|
| Edwards Limestone | Edwards Limestone | 60-350 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 40° 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 the site was used as undeveloped or agricultural land since before the first aerial dated 1941(Attachment C). FM 620 has been resurfaced and Great Oaks Drive first appears in the 1981 aerial. O'Connor Drive and additional rural roads first appear in the 1995 aerial. Commercial and residential developments to the north and northwest of the site appear in the 2004 aerial. A continuance for Great Oaks Drive to the north and residential developments to the southeast appear by the 2010 aerial. Clearing for a medical facility is seen to the south in the 2016 aerial, and the structure appears in the 2020 aerial. Residential and commercial buildings first appear to the north, south, and east in the 2004 aerial and continuously appear throughout the 2020 aerial.

#### 5.0 SUMMARY OF FINDINGS

This report documents the findings of a geologic assessment conducted by **aci environmental consulting, LLC** personnel on May 21, 2024. Three features (manmade features in bedrock and karst features) were noted on the site. Comprehensive descriptions and recommendations for each feature can be found in **Attachment B**. Based on assessment of each feature, it was determined that there is one sensitive feature within the subject area, F-01 or "Underdeveloped Cave." Two features were man-made features in bedrock.



#### **6.0 REFERENCES**

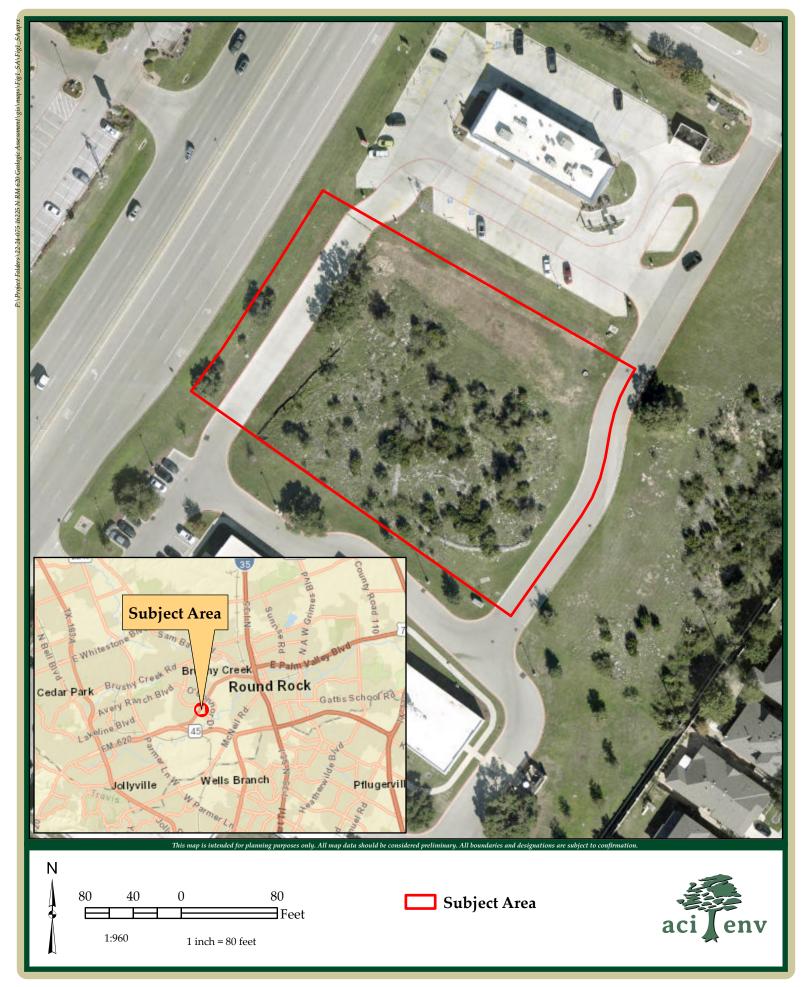
- Barnes, V.E. (project director) et. al., 1981. Geologic Atlas of Texas, Austin Sheet. The University of Texas at Austin, Bureau of Economic Geology. Scale 1:250,000
- (CoA) City of Austin. 2024. Jurisdictions Web Map. Accessed on June 5, 2024. Available at: https://maps.austintexas.gov/GIS/JurisdictionsWebMap/
- (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 June 5, 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: May 23, 2024.

6



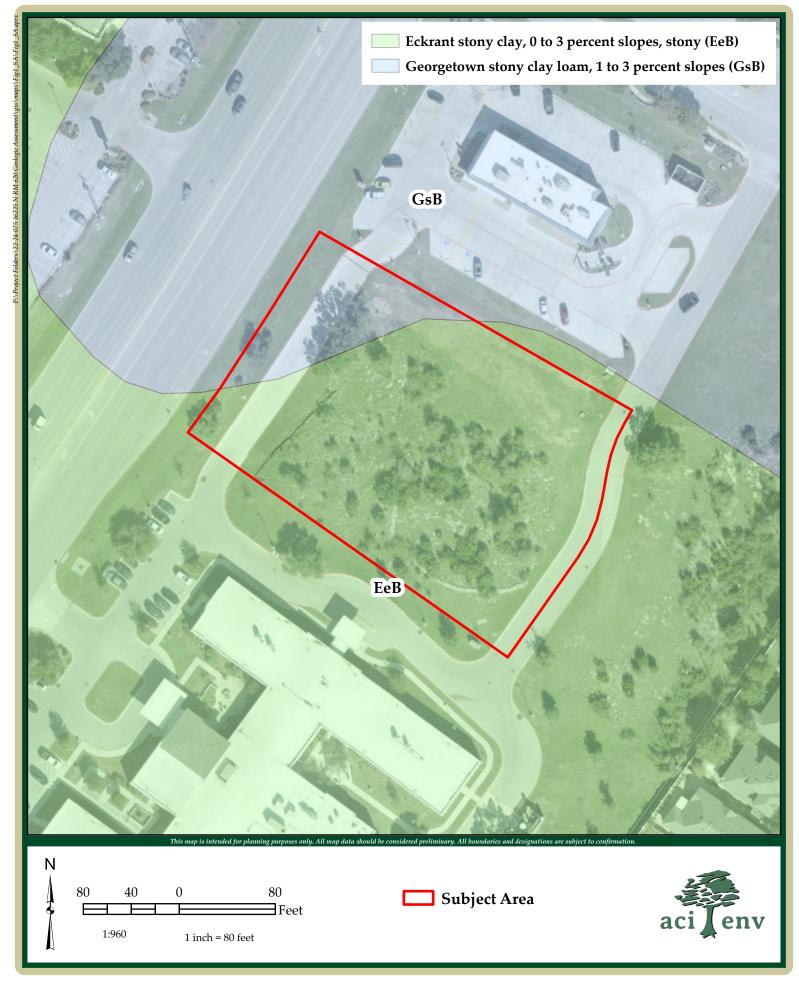
#### ATTACHMENT A

Site Maps

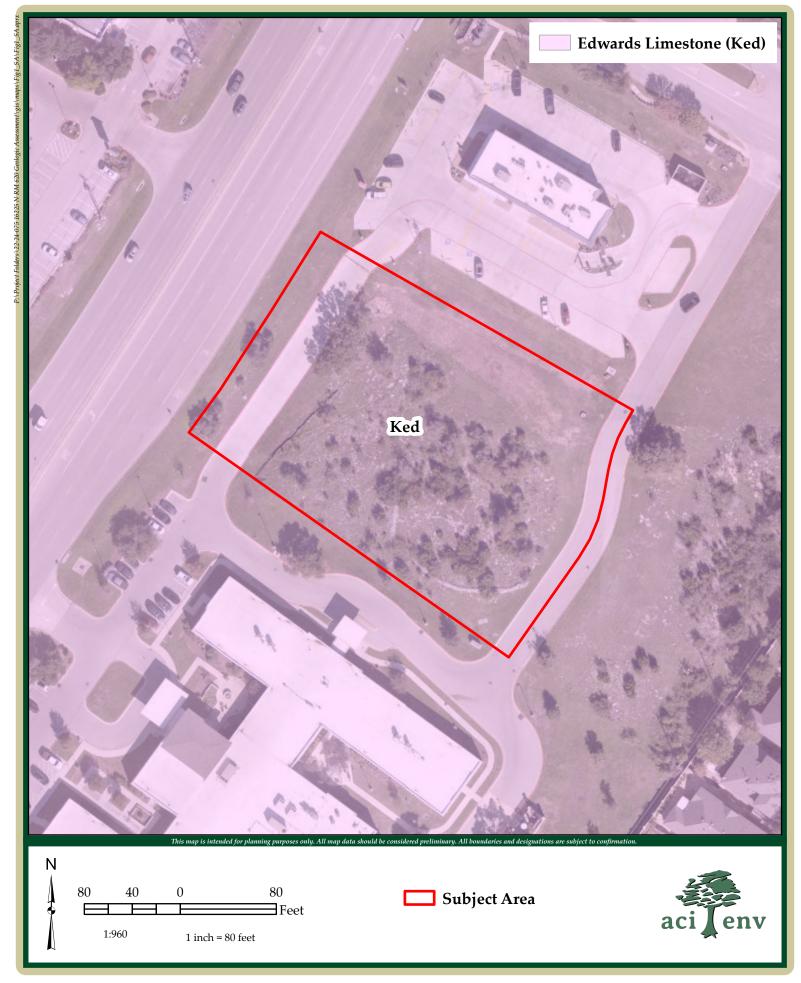


16225 N RM 620 Rd Tract Figure 1: Site Location Map

aci Project No.: 22-24-075

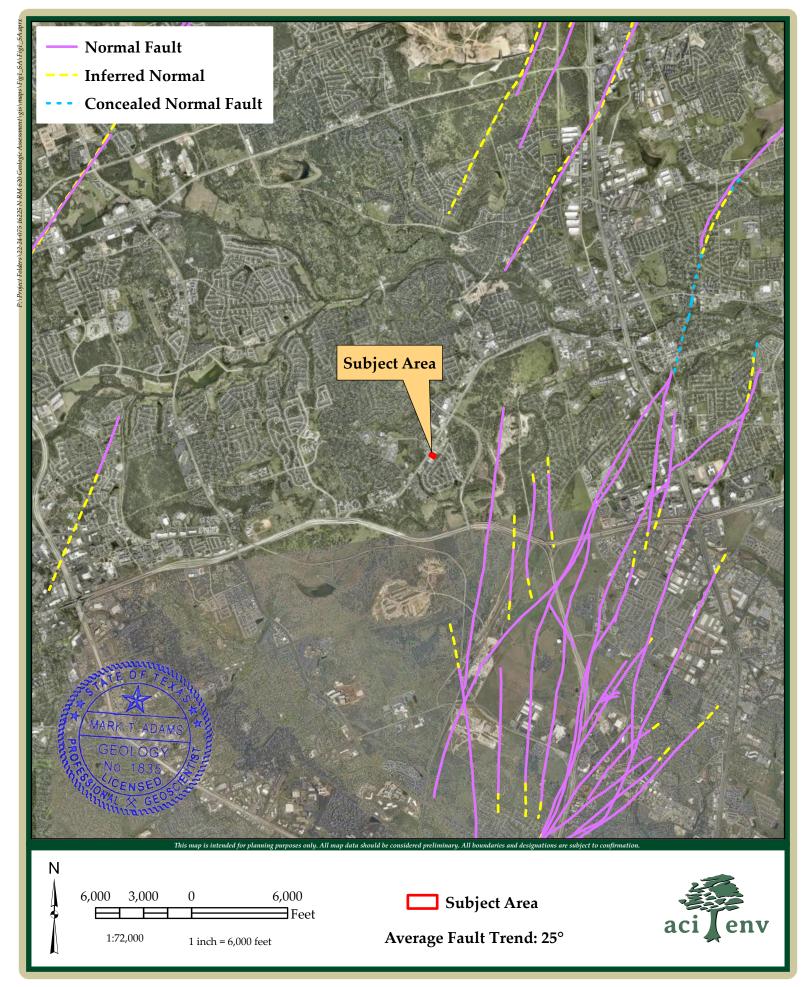


16225 N RM 620 Rd Tract Figure 2: Site Soils Map



16225 N RM 620 Rd Tract Figure 3: Site Geology Map

aci Project No.: 22-24-075





#### **ATTACHMENT B**

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

| GEOL       | OGIC ASS  | ESSMENT 1  | ABLE            | 1      |           |      | PR       | OJE   | CT NA              | ME  |                    |                    | 16225  | N RM 620                         | Rd Tr | act  |               |                 |                  |            |
|------------|-----------|------------|-----------------|--------|-----------|------|----------|-------|--------------------|-----|--------------------|--------------------|--------|----------------------------------|-------|------|---------------|-----------------|------------------|------------|
|            | LOCATION  | ON         |                 |        |           | FE   | ATUF     | RE C  | HARAC              | TEF | RISTIC             | S                  |        |                                  | EVAL  | LUAT | ION           | PHY             | SICAI            | SETTING    |
| 1A         | 1B *      | 1C*        | 2A              | 2B     | 3         |      | 4        |       | 5                  | 5A  | 6                  | 7                  | 8A     | 8B                               | 9     | 1    | 0             | 1               | 1                | 12         |
| FEATURE ID | LATITUDE  | LONGITUDE  | FEATURE<br>TYPE | POINTS | FORMATION | DIME | NSIONS ( | FEET) | TREND<br>(DEGREES) | DOM | DENSITY<br>(NO/FT) | APERTURE<br>(FEET) | INFILL | RELATIVE<br>INFILTRATION<br>RATE | TOTAL | SENS | ITIVITY       | CATCHMI<br>(ACI | ENT AREA<br>RES) | TOPOGRAPHY |
|            |           |            |                 |        |           | Х    | Υ        | Z     |                    | 10  |                    |                    |        |                                  |       | <40  | <u>&gt;40</u> | <1.6            | <u>&gt;1.6</u>   |            |
| MB-01      | 30.492268 | -97.725206 | MB              | 30     | Ked       | -    | •        | -     | -                  | 0   | -                  | -                  | -      | 10                               | 40    |      | Χ             | Χ               |                  | Hilltop    |
| MB-02      | 30.491805 | -97.725549 | MB              | 30     | Ked       | ı    | ı        | ı     | -                  | 0   | -                  | -                  | -      | 10                               | 40    |      | Χ             | Χ               |                  | Hilltop    |
| F-01       | 30.492025 | -97.725521 | С               | 30     | Ked       | 5    | 5        | ı     | -                  | 0   | -                  | •                  | N, O   | 30                               | 60    |      | Χ             | Χ               |                  | Hilltop    |
|            |           |            |                 |        |           |      |          |       |                    |     |                    |                    |        |                                  |       |      |               |                 |                  |            |
|            |           |            |                 |        |           |      |          |       |                    |     |                    |                    |        |                                  |       |      |               |                 |                  |            |
|            |           |            |                 |        |           |      |          |       |                    |     |                    |                    |        |                                  |       |      |               |                 |                  |            |
|            |           |            |                 |        |           |      |          |       |                    |     |                    |                    |        |                                  |       |      |               |                 |                  |            |
|            |           |            |                 |        |           |      |          |       |                    |     |                    |                    |        |                                  |       |      |               |                 |                  |            |
|            |           |            |                 |        |           |      |          |       |                    |     |                    |                    |        |                                  |       |      |               |                 |                  |            |
|            |           |            |                 |        |           |      |          |       |                    |     |                    |                    |        |                                  |       |      |               |                 |                  |            |
|            |           |            |                 |        |           |      |          |       |                    |     |                    |                    |        |                                  |       |      |               |                 |                  |            |
|            |           |            |                 |        |           |      |          |       |                    |     |                    |                    |        |                                  |       |      |               |                 |                  |            |
|            |           |            |                 |        |           |      |          |       |                    |     |                    |                    |        |                                  |       |      |               |                 |                  |            |
|            |           |            |                 |        |           |      |          |       |                    |     |                    |                    |        |                                  |       |      |               |                 |                  |            |
|            |           |            |                 |        |           |      |          |       |                    |     |                    |                    |        |                                  |       |      |               |                 |                  |            |

\* DATUM: NAD 1983 State Plane 4203

| 2A TYPE | TYPE                                | 2B POINTS |
|---------|-------------------------------------|-----------|
| С       | Cave                                | 30        |
| SC      | Solution cavity                     | 20        |
| SF      | Solution-enlarged fracture(s)       | 20        |
| F       | Fault                               | 20        |
| 0       | 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   |
| С  | Coarse - cobbles, breakdown, sand, gravel                             |
| 0  | 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                                     |
| Х  | 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 docume sand is a true to presentation of the conditions observed in the field.

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

MARK T. ADAMS

Date 8/19/2024

Sheet \_\_1\_\_ of \_\_1\_\_\_

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





#### **MB-01**

GPS: 30.492268, -97.725206

MB-01 is a cluster of manmade features in bedrock: a sewer manhole and wastewater subsurface infrastructure. The exact dimensions of these utilities are undetermined. The feature is located in the Edwards Limestone and is positioned on a hilltop. Infill material is unknown. The feature has no trend, and a drainage area of less than 1.6 acres. It was determined that this feature has a low infiltration rate and given a score of 10 points. The feature was given a total sensitivity rating of 40, making it sensitive in order to bring it to the attention of the project engineer.

**Recommendation**: No setbacks required. This feature needs to be brought to the attention of the engineer.

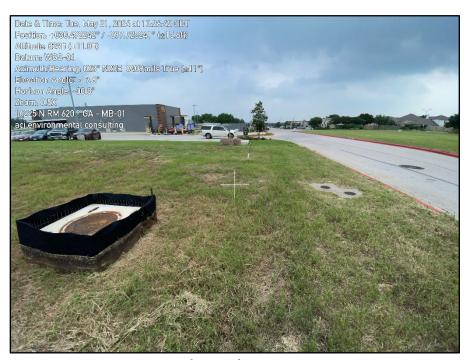


Photo of MB-01



#### **MB-02**

GPS: 30.491805, -97.725549

MB-02 is a cluster of manmade features in bedrock: an electrical infrastructure manhole and a buried gas pipeline. There is also an electrical box located just off-site to the southwest. The exact dimensions of these utilities are undetermined. The feature is located in the Edwards Limestone and is positioned on a hilltop. Infill material is unknown. The feature has no trend, and a drainage area of less than 1.6 acres. It was determined that this feature has a low infiltration rate and given a score of 10 points. The feature was given a total sensitivity rating of 40, making it sensitive in order to bring it to the attention of the project engineer.

**Recommendation**: No setbacks required. This feature needs to be brought to the attention of the engineer.



Photo of MB-02



# F-01 ("Underdeveloped Cave") GPS: 30.492025, -97.725521

This feature is a named cave, Underdeveloped Cave. The opening is approximately 5 feet in diameter. Measurements inside the feature were not taken. The feature is located in the Edwards Limestone and is positioned on a hillside. Infill material consists of bedrock, leaf litter, and other organic material. The trend of this feature was not determined, and the drainage area appears to be less than 1.6 acres. It was determined that this feature has an intermediate infiltration rate due to its constricted catchment area, and has been assigned a value of 30 points. The feature was given a total sensitivity rating of 60 points, making it sensitive in terms of recharge potential. There is an existing buffer that appears to be 50 feet from the footprint of the cave and bounded to the south and west by a riprap wall that is 1-2 feet high.

**Recommendation**: This feature is sensitive. A 50-foot buffer around the footprint of the cave is required.

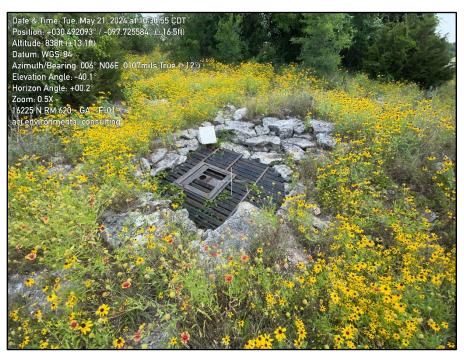


Photo of F-01: Underdeveloped Cave



#### ATTACHMENT C

Historic Aerial Photographs

#### Prepared for:

**ACI CONSULTING** 1001 Mopac Circle Austin, TX 78746



# Historical Highland Horizon Lot 8 TX Aerial Williamson County Photographs PO #: 22-21-196

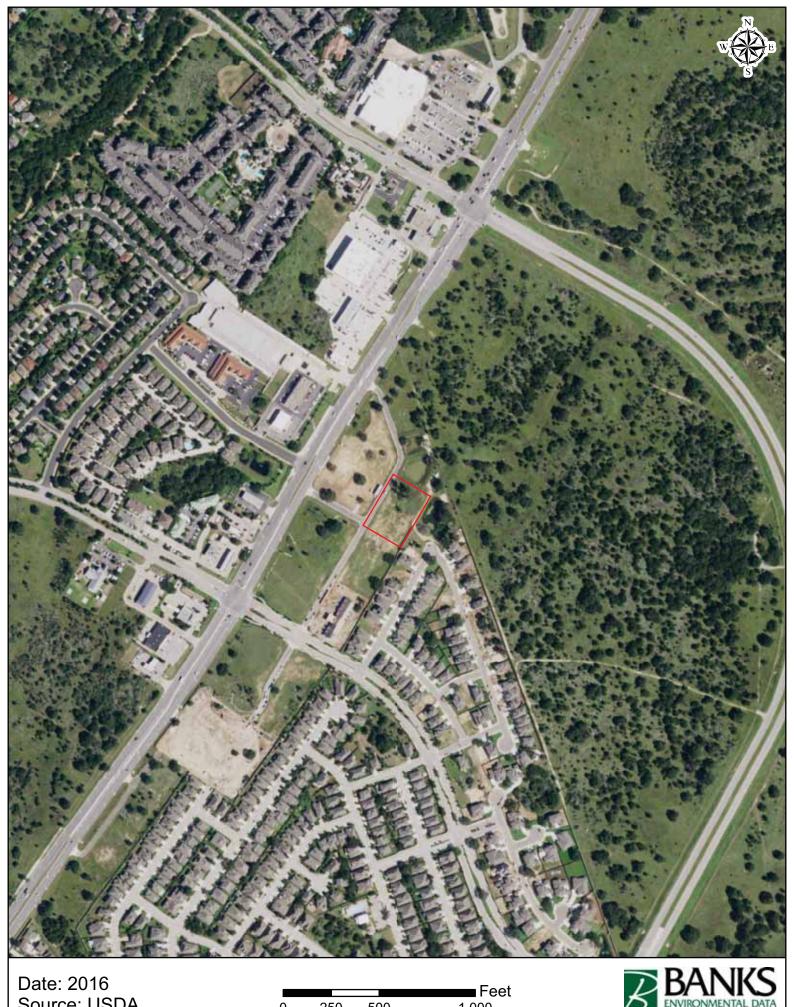
Monday, November 22, 2021



Source: USDA

Feet 1,000 0 250 500





Source: USDA

Feet 1,000 0 250 500

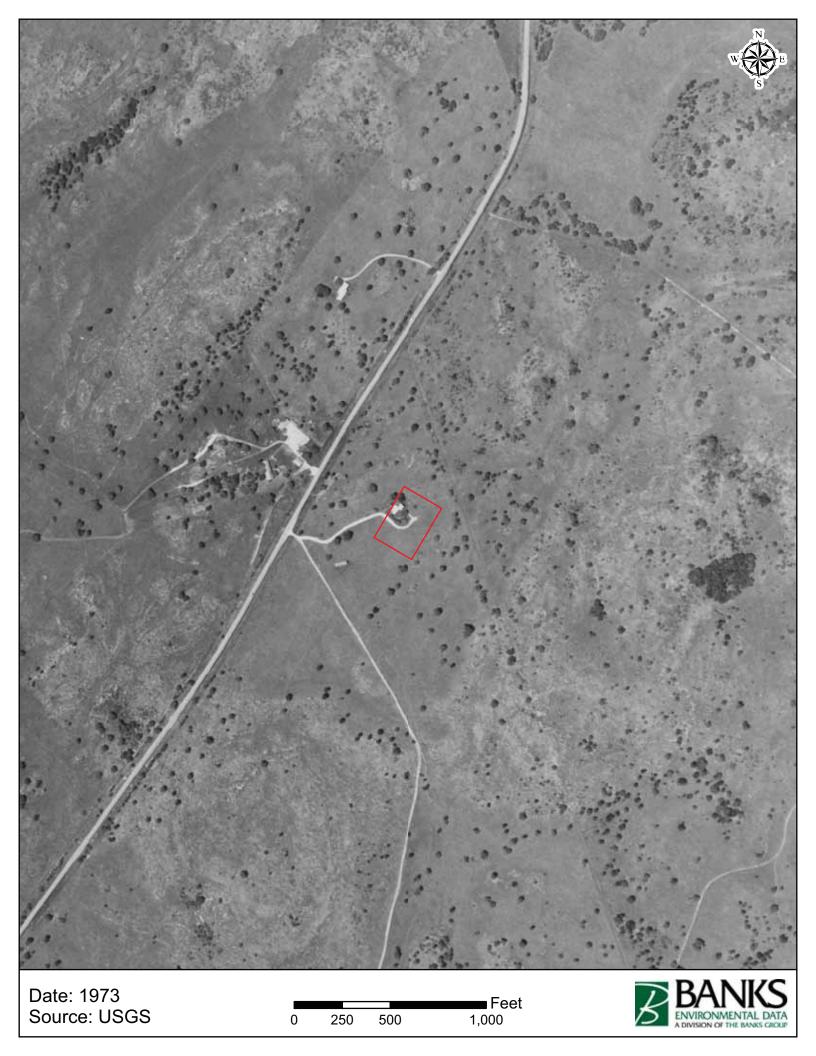






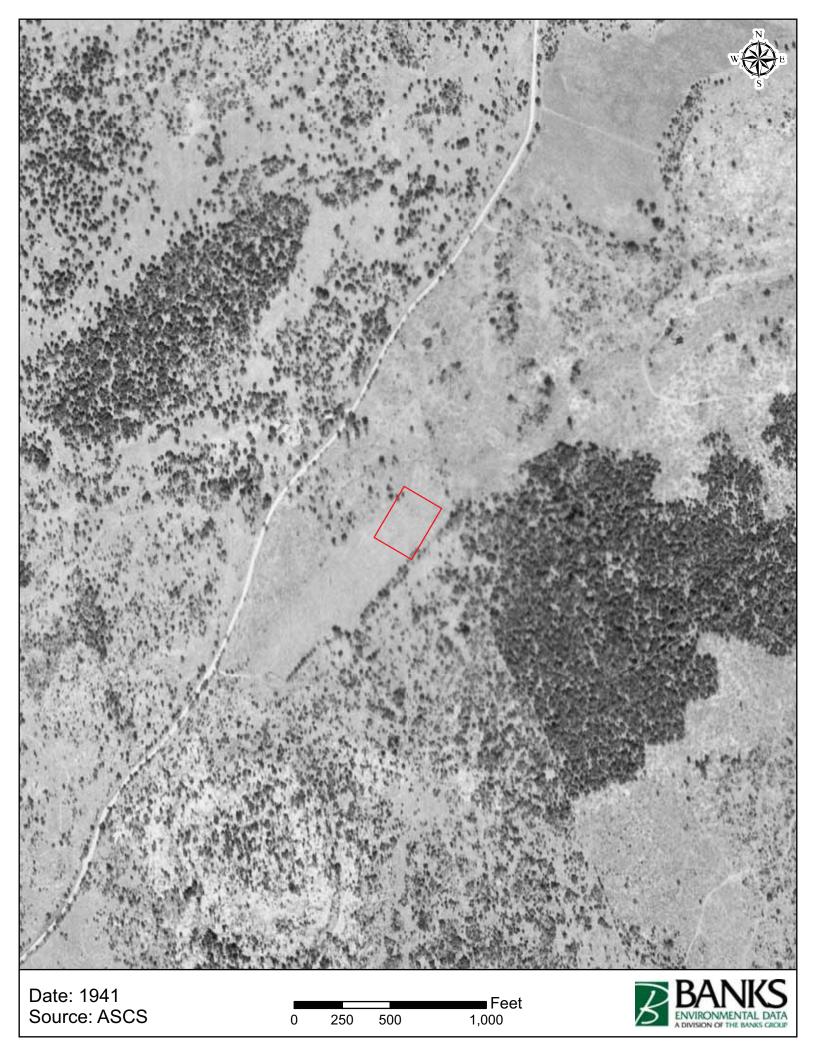














### **AERIAL SOURCE DEFINITIONS**

| Acronym   | Agency  |
|-----------|---|
| NASA      | National Aeronautics & Space Administration       |
| AMS       | Army Mapping Service                              |
| ASCS      | Agricultural Stabilization & Conservation Service |
| SCS       | Soil Conservation Service                         |
| USBR      | United States Bureau of Reclamation               |
| Fairchild | Fairchild Aerial Surveys                          |
| TXDOT     | Texas Department of Transportation                |
| BLM       | Bureau of Land Management                         |
| USAF      | United States Air Force                           |
| USCOE     | United States Corps of Engineers                  |
| USDA      | United States Department of Agriculture           |
| USGS      | United States Geological Survey                   |
| WALLACE   | Wallace-Zingery Aerial Surveys                    |
| TNRIS     | Texas Natural Resources Information System        |



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Kimley » Horn

# SECTION 4: MODIFICATION OF A PREVIOUSLY APPROVED PLAN

# Modification of a Previously Approved Plan

#### **Texas Commission on Environmental Quality**

for Regulated Activities on the Edwards Aquifer Recharge Zone and Transition Zone and Relating to 30 TAC 213.4(j), 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 request for a **Modification of a Previously Approved Plan** is hereby submitted for TCEQ review and executive director approval. The request was prepared by:

Print Name of Customer/Agent: Ryan McKay

Date: 08/16/2024

Signature of Customer/Agent:

#### **Project Information**

| Original Regulated Entity Name: Highland Horizon Phase I Subdivision Improvements Regulated Entity Number(s) (RN): 105093744 Edwards Aquifer Protection Program ID Number(s): N/A  The applicant has not changed and the Customer Number (CN) is:  The applicant or Regulated Entity has changed. A new Core Data Form ha provided. | 1. | Current Regulated Entity Name: Round Rock Commercial                              |
|---|----|---|
| Edwards Aquifer Protection Program ID Number(s): N/A  The applicant has not changed and the Customer Number (CN) is:  The applicant or Regulated Entity has changed. A new Core Data Form ha  |    | Original Regulated Entity Name: Highland Horizon Phase I Subdivision Improvements |
| The applicant has not changed and the Customer Number (CN) is:  X The applicant or Regulated Entity has changed. A new Core Data Form ha  |    | Regulated Entity Number(s) (RN): 105093744  |
| The applicant or Regulated Entity has changed. A new Core Data Form ha  |    | Edwards Aquifer Protection Program ID Number(s): N/A                              |
|   |    | The applicant has not changed and the Customer Number (CN) is:                    |
| provided.   |    | X The applicant or Regulated Entity has changed. A new Core Data Form has been    |
|   |    | provided.   |

2. X Attachment A: Original Approval Letter and Approved Modification Letters. A copy of the original approval letter and copies of any modification approval letters are attached.

| Physical or operation including but not lim diversionary structured Change in the nature originally approved originally approved or plan to prevent pollux Development of land pollution abatement Physical modification Physical modification | e or character of the regulated ac<br>or a change which would significa<br>ution of the Edwards Aquifer;<br>d previously identified as undeve | lution abatement structure(s) vage treatment plants, and ctivity from that which was antly impact the ability of the loped in the original water age collection system; torage tank system; |
|--|---|---|
| plan has been modified   | Modifications (select plan type be more than once, copy the apprope the information for each addition   | priate table below, as  |
| WPAP Modification  | Approved Project  | <b>Proposed Modification</b>  |
| Summary  |   |   |
| Acres  | 94.5  | <u>1.573</u>  |
| Type of Development  | Residential/mixed   | Commercial  |
| Number of Residential  | 204   | 0   |
| Lots   |   |   |
| Impervious Cover (acres)   | 23.1  | 0.76  |
| Impervious Cover (%  | 24.4  | 48.31   |
| Permanent BMPs   | regional wet pond   | existing regional wet pond  |
| Other  |   |   |
| SCS Modification   | Approved Project  | Proposed Modification   |
| Summary  |   |   |
| Linear Feet  | N/A   | N/A   |

N/A

N/A

N/A

N/A

Pipe Diameter

Other

| AST Modification  | Approved Project  | Proposed Modification  |  |  |
|---|---|--|--|--|
| Summary   |   |  |  |  |
| Number of ASTs  | N/A   | N/A  |  |  |
| Volume of ASTs  | N/A   | N/A  |  |  |
| Other   | N/A   | N/A  |  |  |
| UST Modification  | Approved Project  | Proposed Modification  |  |  |
| Summary   |   |  |  |  |
| Number of USTs  | N/A   | N/A  |  |  |
| Volume of USTs  | N/A   | <u>N/A</u>   |  |  |
| Other   | N/A   | <u>N/A</u>   |  |  |
| the nature of the propose   | of Proposed Modification. A deta<br>d modification is attached. It discu<br>difications, and how this proposed  | sses what was approved,  |  |  |
| the existing site developmed modification is attached. In modification is required elemany subsequent modification any subsequent modification that the approved construction illustrates that the site of the approved construction illustrates that the site of the approved construction approved construction of the approved construction | ction has not commenced. The origication approval letters are include   | time this application for roposed in the submitted ginal approval letter and ed as Attachment A to a completed. Attachment C a completed. Attachment C been completed. ructed as approved. been completed. |  |  |
| provided for the new acre   | ed plan has increased. A Geologic<br>age.<br>ed to or removed from the approve  |  |  |  |
| needed for each affected i<br>county in which the project   | d one (1) copy of the application, p<br>ncorporated city, groundwater con<br>it will be located. The TCEQ will di<br>ns. The copies must be submitted | nservation district, and stribute the additional   |  |  |



**ATTACHMENT A:** Original Approval Letter and Approved Modification Letters

Kathleen Hartnett White, Chairman Larry R. Soward, Commissioner H. S. Buddy Garcia, Commissioner Glenn Shankle, Executive Director



#### TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

September 11, 2007

Mr. David Bodenman Highland Six Twenty Residential, Ltd. Highland 620 Land Investment, Ltd. 211 East 7th Street, Suite 700 Austin, Texas 78701

Edwards Aquifer, Williamson County Re:

NAME OF PROJECT: Highland Horizon Phase I Subdivision Improvements; Approximately at 16409 RM 620 (South of RM 620 at the Intersection of Great Oaks Drive), Round Rock, Texas

TYPE OF PLAN: Request for Approval of a Water Pollution Abatement Plan (WPAP); 30

Texas Administrative Code (TAC) Chapter 213 Edwards Aquifer

Edwards Aquifer Protection Program ID No. 06102402B

#### Dear Mr. Bodenman:

The Texas Commission on Environmental Quality (TCEQ) has completed its review of the WPAP application for the referenced project submitted to the Austin Regional Office by Baker-Aicklen & Associates, Inc. on behalf of Highland Six Twenty Residential, Ltd. and Highland 620 Land Investment, Ltd. on July 13, 2007. Final review of the WPAP submittal was completed after additional material was received on September 10, 2007. As presented to the TCEO, the Temporary and Permanent Best Management Practices (BMPs) and construction plans were prepared by a Texas Licensed Professional Engineer to be in general compliance with the requirements of 30 TAC Chapter 213. These planning materials were sealed, signed, and dated by a Texas Licensed Professional Engineer. Therefore, based on the engineer's concurrence of compliance, the planning materials for construction of the proposed project and pollution abatement measures are hereby approved subject to applicable state rules and the conditions in this letter. The applicant or a person affected may file with the chief clerk a motion for reconsideration of the executive director's final action on this Edwards Aquifer protection plan. A motion for reconsideration must be filed no later than 23 days after the date of this approval letter. This approval expires two (2) years from the date of this letter unless, prior to the expiration date, more than 10 percent of the construction has commenced on the project or an extension of time has been requested.

Mr. David Bodenman Page 2 September 11, 2007

#### PROJECT DESCRIPTION

The 94.5 acre project includes the construction of 204 homes along with associated streets, utilities and drainage improvements within Phase I. The project also includes approximately 1,800 linear feet of Great Oaks Drive extension. Estimates of future impervious cover were included for the amenity center and future commercial lots, but the construction on these lots is not included in this WPAP. The impervious cover will be 23.1 acres (24.4 percent). Wastewater will be conveyed to the Brushy Creek Regional Wastewater System owned by the Brazos River Authority and the Lower Colorado River Authority.

#### PERMANENT POLLUTION ABATEMENT MEASURES

One wet basin (water quality pond) will be constructed to treat stormwater runoff from the site. The pond will drain 66.4 acres out of a 73.5 acre drainage area. The main pool will provide a permanent storage volume of 146,831 cubic feet. The total volume at the water quality elevation will be 268,426 cubic feet. Additional storage will be provided in the pond for detention purposes. The approved measures meet the required 80 percent removal of the increased load in total suspended solids caused by the project.

#### **GEOLOGY**

According to the geologic assessment included with the application, the Edwards Limestone outcrops on the Highland Horizon Subdivision. The structural trend of geologic features in the area is 30 degrees. The geologic assessment included with the submittal was dated May 3, 2007. It was revised on June 27, 2007 (See EAPP File ID No. 11-07050302). It included 36 features numbered F-1 through F-31, and WS-97, WS-99, O6-3, O6-4, and O6-5. The different identification numbers following F-31 represent features that were identified on a different survey. The natural feature types include caves, sinkholes, solution cavities, solution enlarged fractures, and one bedrock outcrop.

Staff from the Austin Regional Office conducted multiple site investigations to examine geologic features. The last investigation was conducted on April 19, 2007. Our letter of June 28, 2007, regarding the protection of sensitive features and exception request to seal certain sensitive features, gives the disposition of sensitive features for the entire subdivision.

#### SPECIAL CONDITIONS

I. A copy of the TCEQ letter dated June 28, 2007, must be deed recorded along with this approval letter.

Mr. David Bodenman Page 3 September 11, 2007

- II. A WPAP is required to be submitted to the Austin Regional Office for any construction on the amenity lot and the future commercial lots. A WPAP must be approved prior to the commencement of construction activities on these lots.
- III. Intentional discharges of sediment laden stormwater during construction are not allowed. If dewatering excavated areas and/or areas of accumulated stormwater becomes necessary, the discharge shall be filtered through appropriately selected temporary best management practices. These may include vegetative filter strips, sediment traps, rock berms, silt fence rings, etc.
- IV. This approval does not authorize the installation of temporary aboveground storage tanks on this project. If the contractor desires to install a temporary aboveground storage tank for use during construction, an application to modify this approval must be submitted and approved prior to installation. The application must include information related to tank location and spill containment. Refer to Standard Condition No. 4 below.

#### STANDARD CONDITIONS

1. Pursuant to Chapter 7 Subchapter C of the Texas Water Code, any violations of the requirements in 30 TAC Chapter 213 may result in administrative penalties.

#### Prior to Commencement of Construction:

- Within 60 days of receiving written approval of an Edwards Aquifer protection plan, the applicant must submit to the Austin Regional Office, proof of recordation of notice in the county deed records, with the volume and page number(s) of the county deed records of the county in which the property is located. A description of the property boundaries shall be included in the deed recordation in the county deed records. A suggested form (Deed Recordation Affidavit, TCEQ-0625) that you may use to deed record the approved WPAP is enclosed.
- 3. All contractors conducting regulated activities at the referenced project location shall be provided a copy of this notice of approval. At least one complete copy of the approved WPAP and this notice of approval shall be maintained at the project location until all regulated activities are completed.
- 4. Modification to the activities described in the referenced WPAP application following the date of approval may require the submittal of a plan to modify this approval, including the payment of appropriate fees and all information necessary for its review and approval prior to initiating construction of the modifications.

Mr. David Bodenman Page 4 September 11, 2007

- 5. The applicant must provide written notification of intent to commence construction, replacement, or rehabilitation of the referenced project. Notification must be submitted to the Austin Regional Office no later than 48 hours prior to commencement of the regulated activity. Written notification must include the date on which the regulated activity will commence, the name of the approved plan and ID number for the regulated activity, and the name of the prime contractor with the name and telephone number of the contact person. The executive director will use the notification to determine if the approved plan is eligible for an extension.
- 6. Temporary erosion and sedimentation (E&S) controls, i.e., silt fences, rock berms, stabilized construction entrances, or other controls described in the approved WPAP, must be installed prior to construction and maintained during construction. Temporary E&S controls may be removed when vegetation is established and the construction area is stabilized. The water quality pond shall be used as a sedimentation basin during construction. The TCEQ may monitor stormwater discharges from the site to evaluate the adequacy of temporary E&S control measures. Additional controls may be necessary if excessive solids are being discharged from the site.
- 7. All borings with depths greater than or equal to 20 feet must be plugged with non-shrink grout from the bottom of the hole to within three (3) feet of the surface. The remainder of the hole must be backfilled with cuttings from the boring. All borings less than 20 feet must be backfilled with cuttings from the boring. All borings must be backfilled or plugged within four (4) days of completion of the drilling operation. Voids may be filled with gravel.

#### **During Construction:**

- 8. During the course of regulated activities related to this project, the applicant or agent shall comply with all applicable provisions of 30 TAC Chapter 213, Edwards Aquifer. The applicant shall remain responsible for the provisions and conditions of this approval until such responsibility is legally transferred to another person or entity.
- 9. If any sensitive feature (caves, solution cavities, sink holes, etc.) is discovered during construction, all regulated activities near the feature must be suspended immediately. The applicant or his agent must immediately notify the Austin Regional Office of the discovery of the feature. Regulated activities near the feature may not proceed until the executive director has reviewed and approved the methods proposed to protect the feature and the aquifer from potentially adverse impacts to water quality. The plan must be sealed, signed, and dated by a Texas Licensed Professional Engineer.

Mr. David Bodenman Page 5 September 11, 2007

- 10. No wells exist on the project. All water wells, including injection, dewatering, and monitoring wells must be in compliance with the requirements of the Texas Department of Licensing and Regulation under Title 16 TAC Chapter 76 (relating to Water Well Drillers and Pump Installers) and all other locally applicable rules, as appropriate.
- 11. If sediment escapes the construction site, the 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). Sediment must be removed from sediment traps or sedimentation ponds not later than when design capacity has been reduced by 50 percent. Litter, construction debris, and construction chemicals shall be prevented from becoming stormwater discharge pollutants.
- 12. The following records shall be maintained and made available to the executive director 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.
- 13. Stabilization measures shall be initiated as soon as practicable in portions of the site where construction activities have temporarily or permanently ceased, and construction activities will not resume within 21 days. When the initiation of stabilization measures by the 14th day is precluded by weather conditions, stabilization measures shall be initiated as soon as practicable.

#### After Completion of Construction:

- 14. 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 Austin Regional Office within 30 days of site completion.
- 15. The applicant shall be 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. The regulated entity shall then be responsible for maintenance until another entity assumes such obligations in writing or ownership is transferred. A copy of the transfer of responsibility must be filed with the executive director through the Austin Regional Office within 30 days of the transfer. A copy of the transfer form (TCEQ-10263) is enclosed.

Mr. David Bodenman Page 6 September 11, 2007

- 16. Upon legal transfer of this property, the new owner(s) is required to comply with all terms of the approved Edwards Aquifer protection plan. If the new owner intends to commence any new regulated activity on the site, a new Edwards Aquifer protection plan that specifically addresses the new activity must be submitted to the executive director. Approval of the plan for the new regulated activity by the executive director is required prior to commencement of the new regulated activity.
- 17. An Edwards Aquifer protection plan approval or extension will expire and no extension will be granted if more than 50 percent of the total construction has not been completed within ten years from the initial approval of a plan. A new Edwards Aquifer protection plan must be submitted to the Austin Regional Office with the appropriate fees for review and approval by the executive director prior to commencing any additional regulated activities.
- 18. At project locations where construction is initiated and abandoned, or not completed, the site shall be returned to a condition such that the aquifer is protected from potential contamination.

If you have any questions or require additional information, please contact Ms. Heather L. Beatty, P.G. of the Edwards Aquifer Protection Program of the Austin Regional Office at (512)339-2929.

Sincerely,

Glenn Shankle

**Executive Director** 

Texas Commission on Environmental Quality

GS/hlb

Enclosures: De

Deed Recordation Affidavit, TCEQ-0625

Change in Responsibility for Maintenance on Permanent BMPs, TCEQ-10263

cc:

Mr. H. D. Roye, P.E., Baker-Aicklen & Associates, Inc.

The Honorable Dan A. Gattis, County Judge, Williamson County

Mr. Danny Halden, P.E., City Engineer, City of Round Rock

Mr. Paulo Pinto, R.S., Williamson County & Cities Health District, Georgetown, Texas

TCEQ Central Records

Central Records, TCEQ Information Resources Division, Austin



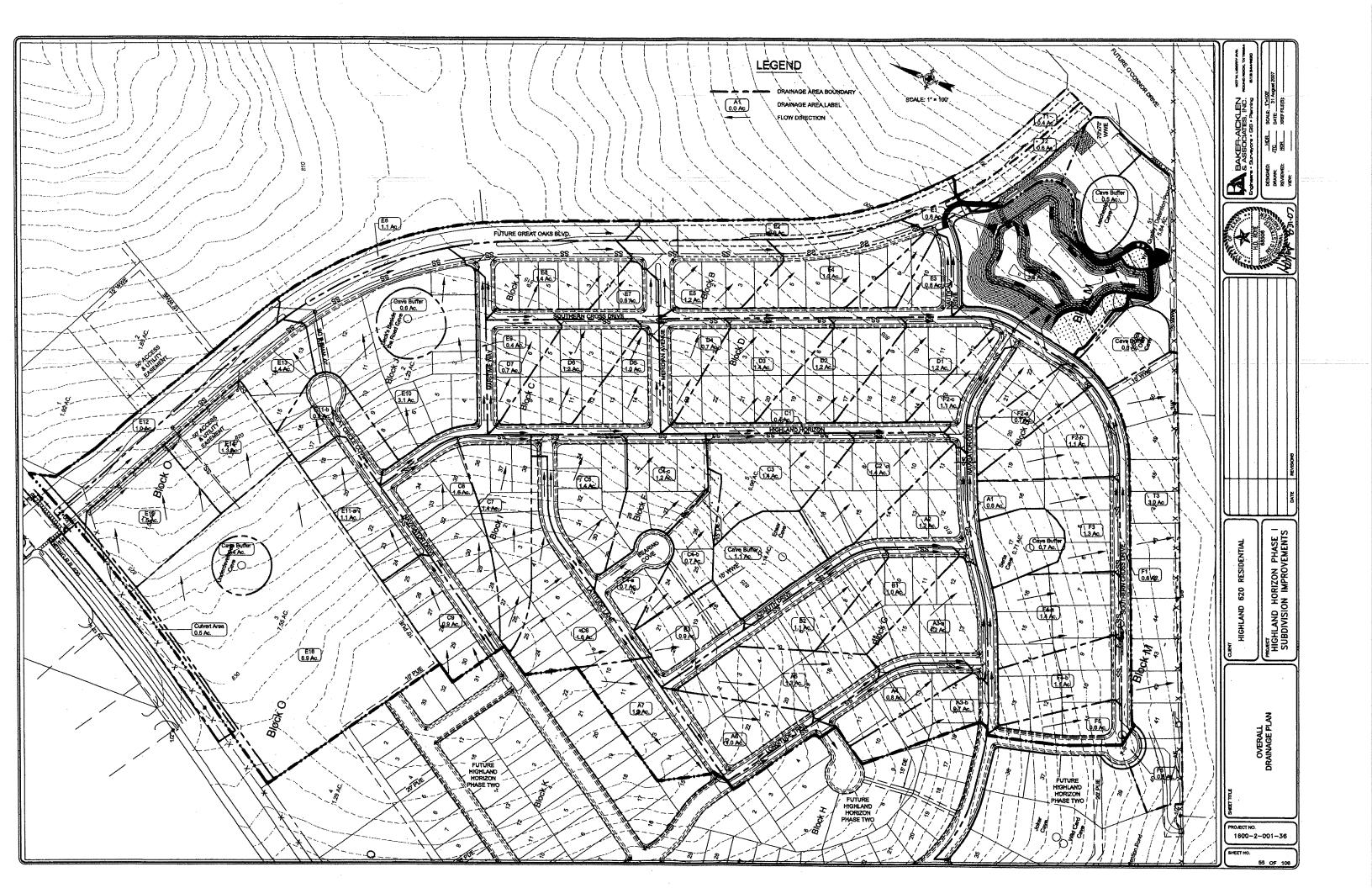
#### **ATTACHMENT B: Narrative of Proposed Modification**

The Round Rock Commercial project proposes modifications to the approved ±94.50-acre Highland Horizon Phase I Subdivision Improvements WPAP located at 30.492389, -97.725798, south of the intersection of N FM 620 and Great Oaks Dr in Round Rock, Williamson County, Texas. The commercial development proposes an 8000 SF building intended for medical and retail use with associated parking and utility improvements.

The ±1.573-acre tract proposes modifications to the total impervious cover of the original approved WPAP for Highland Horizon Phase I Subdivision Improvements. A commercial development consisting of one building, utility, storm, and parking improvements is to be constructed on this ±1.573-acre tract within the Highland Horizon Phase I Subdivision Improvements development. The original impervious cover approved with the current WPAP is 24.197 acres. The proposed modification includes ±0.76-acres of impervious cover which results in a total of 24.96 acres of impervious cover. 0.76 acres of impervious cover is within the limits of the original WPAP for our site area.



#### ATTACHMENT C: Current Site Plan of the Approved Project



# Kimley » Horn

# SECTION 5: WATER POLLUTION ABATEMENT PLAN APPLICATION

## **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.

- 3. Estimated projected population: N/A
- 4. The amount and type of impervious cover expected after construction are shown below:

**Table 1 - Impervious Cover Table** 

| Impervious Cover of Proposed Project | Sq. Ft.   | Sq. Ft./Acre | Acres |
|--------------------------------------|-----------|--------------|-------|
| Structures/Rooftops                  | 8000      | ÷ 43,560 =   | 0.18  |
| Parking                              | 22,272.73 | ÷ 43,560 =   | 0.51  |
| Other paved surfaces                 | 2,741.06  | ÷ 43,560 =   | 0.06  |
| Total Impervious<br>Cover            | 33,013.79 | ÷ 43,560 =   | 0.76  |

Total Impervious Cover 0.76 ÷ Total Acreage 1.573 X 100 = 48.32 % Impervious Cover

- 5. X Attachment A Factors Affecting Surface Water Quality. A detailed description of all factors that could affect surface water and groundwater quality that addresses ultimate land use is attached.
- 6. X Only inert materials as defined by 30 TAC §330.2 will be used as fill material.

#### For Road Projects Only

| Co  | mplete questions 7 - 12 if this application is exclusively for a road project.  |
|-----|---|
| 7.  | Type of project:  |
|     | TXDOT road project.  NA County road or roads built to county specifications.  NA City thoroughfare or roads to be dedicated to a municipality.  NA Street or road providing access to private driveways.      |
| 8.  | Type of pavement or road surface to be used:  |
|     | Concrete  N/A Asphaltic concrete pavement  N/A Other:   |
| 9.  | Length of Right of Way (R.O.W.): feet.  |
|     | Width of R.O.W.: $\frac{N/A}{A}$ feet.<br>L x W = $\frac{N/A}{A}$ Ft <sup>2</sup> ÷ 43,560 Ft <sup>2</sup> /Acre = $\frac{N/A}{A}$ acres.   |
| 10. | Length of pavement area: N/A feet.  |
|     | Width of pavement area: $_{N/A}$ feet.<br>L x W = $_{N/A}$ Ft $^2$ ÷ 43,560 Ft $^2$ /Acre = $_{N/A}$ acres.<br>Pavement area $_{N/A}$ acres ÷ R.O.W. area $_{N/A}$ acres x 100 = $_{N/A}$ % impervious cover. |
| 11. | N/A A rest stop will be included in this project.   |
|     | N/A 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: |  |  |  |  |  |
|--|--|--|--|--|--|
|  | % DomesticGallons/day Gallons/day Gallons/day Gallons/day Gallons/day  |  |  |  |  |
| 15.  | . Wastewater will be disposed of by:   |  |  |  |  |
|  | On-Site Sewage Facility (OSSF/Septic Tank):  |  |  |  |  |
|  | <ul> <li>□ 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.</li> <li>□ 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.</li> </ul> |  |  |  |  |
|  | X Sewage Collection System (Sewer Lines):  |  |  |  |  |
|  | <ul> <li>Private service laterals from the wastewater generating facilities will be connected to an existing SCS.</li> <li>Private service laterals from the wastewater generating facilities will be connected to a proposed SCS.</li> </ul>  |  |  |  |  |
|  | <ul> <li>The SCS was previously submitted on</li> <li>The SCS was submitted with this application.</li> <li>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.</li> </ul>   |  |  |  |  |

| The sewage collection system will convey the wastewater to the (name) Treatment Plant. The treatment facility is:   |
|---|
| Existing. Proposed.   |
| 16. All private service laterals will be inspected as required in 30 TAC §213.5.  |
| Site Plan Requirements  |
| Items 17 – 28 must be included on the Site Plan.  |
| 17. $\square$ The Site Plan must have a minimum scale of 1" = 400'.   |
| Site Plan Scale: 1" = <u>20</u> '.  |
| 18. 100-year floodplain boundaries:   |
| <ul> <li>Some part(s) of the project site is located within the 100-year floodplain. The floodplain is shown and labeled.</li> <li>No part of the project site is located within the 100-year floodplain.</li> <li>The 100-year floodplain boundaries are based on the following specific (including date of material) sources(s):</li> </ul> |
| 19. X The layout of the development is shown with existing and finished contours at appropriate, but not greater than ten-foot contour intervals. Lots, recreation centers, buildings, roads, open space, etc. are shown on the plan.   |
| The layout of the development is shown with existing contours at appropriate, but not greater than ten-foot intervals. Finished topographic contours will not differ from the existing topographic configuration and are not shown. Lots, recreation centers, buildings, roads, open space, etc. are shown on the site plan.                  |
| 20. All known wells (oil, water, unplugged, capped and/or abandoned, test holes, etc.):   |
| There are (#) wells present on the project site and the locations are shown and labeled. (Check all of the following that apply)  |
| <ul> <li>The wells are not in use and have been properly abandoned.</li> <li>The wells are not in use and will be properly abandoned.</li> <li>The wells are in use and comply with 16 TAC §76.</li> </ul>  |
| X There are no wells or test holes of any kind known to exist on the project site.  |
| 21. Geologic or manmade features which are on the site:   |
| <ul> <li>All sensitive geologic or manmade features identified in the Geologic Assessment are shown and labeled.</li> <li>No sensitive geologic or manmade features were identified in the Geologic Assessment.</li> <li>Attachment D - Exception to the Required Geologic Assessment. A request and</li> </ul>                               |
| justification for an exception to a portion of the Geologic Assessment is attached.   |

| 22. X The drainage patterns and approximate slopes anticipate  | d after major grading activities |
|--|----------------------------------|
| 23. $\overline{X}$ Areas of soil disturbance and areas which will not be distu                       | urbed.                           |
| 24. X Locations of major structural and nonstructural controls. permanent best management practices. | These are the temporary and      |
| 25. $\overline{X}$ Locations where soil stabilization practices are expected t                       | o occur.                         |
| 26. 🗌 Surface waters (including wetlands).   |                                  |
| X N/A  |                                  |
| 27. Locations where stormwater discharges to surface water occur.                                    | or sensitive features are to     |
| X There will be no discharges to surface water or sensitive f  | eatures.                         |
| 28. X Legal boundaries of the site are shown.  |                                  |

#### **Administrative Information**

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



#### **ATTACHMENT A:** Factors Affecting Surface Water Quality

No Industrial associated activity discharges are expected for this proposed commercial development site. Surface water quality can be affected by disturbance during construction and by development after construction. Soil disturbance form clearing and grubbing and cut / fill operations can lead to discharge of sediment unless adequate temporary erosion control measures are in place. For this project, the use of silt fence and construction entrances will prevent sediment form leaving the sire. Siltation collected by the control measures will be cleaned from fences, berms, etc. on a routine schedule.

During construction, surface water quality may also be affected by a spill of hydrocarbons or other hazardous substances used in construction. The most likely instances of a spill of hydrocarbons or hazardous substances are:

- a) Refueling construction equipment.
- b) Oil and grease from the asphalt pavement and vehicle traffic.
- c) Performing operator-level maintenance, including adding petroleum, oils, or lubricants.
- d) Normal silt build-up
- e) Unscheduled or emergency repairs, such as hydraulic fluid leaks.
- f) Trash with becomes loose from subdivision residents.
- g) Fertilizers used in the landscaping around the apartment buildings.

Every effort will be taken to be cautious and prevent spills. In the event of a fuel or hazardous substance spill as defined by the Reportable Quantities Table 1 (page 3) of the TCEQ's Small-Business Handbook for Spill Response (RG-285, June 1997), the contractor is required to clean up the spill and notify the TCEQ as required in RG-285. During business hours report spills to the TCEQ's Austin Regional Office at (512) 339-2929, after business hours call 1-800-832-8224, the Environmental Response Hotline or (512) 463-7727, the TCEQ Spill Reporting Hotline, which is also answered 24 hours a day. After construction is complete, impervious cover for the tract of land is the major reason for degradation of water quality. Impervious cover includes the building foundations, street pavement and concrete sidewalks. Oil and fuel discharge from vehicles is anticipated. The permanent BMP proposed with the New Hope – West Phase commercial development will help mitigate these occurrences.



#### **ATTACHMENT B: Volume and Character of Stormwater**

#### **EXISTING HYDROLOGIC CONDITIONS ANALYSIS**

The drainage analysis of the existing site conditions was performed with Rational Method using Atlas 14 rainfall data. The site has two existing on-site drainage areas which outfalls at two point of analysis (POA-1 & POA-2). There is also two offsite drainage areas which outfall at POA-1 and POA-2. Runoff from the existing drainage areas EX-1 and OFF-1 flows from the south west side of the property to the south east (POA-1). Runoff from the existing drainage areas EX-2 and OFF-2 flow from the south west corner of the property to the north east (POA-2).

The approach taken for the existing conditions of this site is to maintain the design peak flows to assure the downstream storm infrastructure can adequately convey the runoff and that the major point of confluence is not adversely affected. Table 4.1 below summarizes the existing drainage areas and the runoff produced for each storm event.

**EXISTING CONDITIONS** PEAK FLOWS AT POA DRAINAGE **IMPERVIOUS** AREA (AC.) COVER (MIN) (CFS) (CFS) CN CN (CFS) (CFS) 1.37 0.13 98.00 81.66 7.58 FX-2 0.12 0.00 80.00 98.00 80.00 5.00 0.27 0.55 0.76 1.15 OFF-1 0.16 0.00 80.00 98.00 5.00 0.36 0.73 1.01 80.00 OFF-2 0.11 0.00 98.00 80.00 5.00 0.69 1.06

Table 4.1 Existing Drainage Areas Summary

#### PROPOSED HYDROLOGIC CONDITIONS ANALYSIS

The drainage analysis of the existing site conditions was performed with the Rational Method using Atlas 14 rainfall data. The proposed drainage areas consider the additional impervious cover added in the proposed development. The proposed drainage areas generally follow the same drainage paths as existing conditions. The existing and proposed drainage areas were analyzed at their respective points of analysis. In all analyzed storm events, 2-year, 10-year, 25-year and 100-year, no point of analysis increased in peak run-off in the developed condition.

The time of concentrations were calculated for sheet flow, shallow concentrated flow, and channel flow. Rainfall data taken from the Atlas 14 Rainfall depth revisions and IDF Curves Memorandum were used to define the 2, 10, 25, and 100-year rainfall events.

Proposed drainage areas correspond to their respective existing drainage areas by number. For example, POA-1 is outfalling to the same point-of-analysis (POA-1) as EX-1.



 Table 4.2
 Proposed Drainage Areas Summary

| PROPOSED CONDITIONS |               |                     |            |                  |                |             |             | PEAK FLOV    | WS AT POA    |               |
|---------------------|---------------|---------------------|------------|------------------|----------------|-------------|-------------|--------------|--------------|---------------|
| DRAINAGE<br>AREA    | AREA<br>(AC.) | IMPERVIOUS<br>COVER | BASE<br>CN | IMPERVIOUS<br>CN | WEIGHTED<br>CN | TC<br>(MIN) | Q2<br>(CFS) | Q10<br>(CFS) | Q25<br>(CFS) | Q100<br>(CFS) |
| POA-1               | 1.57          | 0.76                | 80.00      | 98.00            | 88.71          | 5.00        | 4.54        | 8.23         | 10.96        | 16.02         |
| OFF-1               | 0.16          | 0.00                | 80.00      | 98.00            | 80.00          | 5.00        | 0.36        | 0.73         | 1.01         | 1.54          |
| OFF-2               | 0.11          | 0.00                | 80.00      | 98.00            | 80.00          | 5.00        | 0.24        | 0.50         | 0.69         | 1.06          |



## **ATTACHMENT C:** Suitability Letter From Authorized Agent

An authorized suitability letter from Williamson County is not applicable to this project because no OSSFs are proposed.



## ATTACHMENT D: Exception to the Required Geologic Assessment

A geologic assessment is provided with this report. An exception is not required.

# Kimley » Horn

SECTION 6: 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:

| executive director approval. The application was prepared by:  |  |  |  |  |
|--|--|--|--|--|
| Print Name of Customer/Agent: Ryan McKay   |  |  |  |  |
| Date: <u>08/16</u> /2024   |  |  |  |  |
| Signature of Customer/Agent:   |  |  |  |  |
| 13-Mil   |  |  |  |  |
| Regulated Entity Name: Round Rock Commercial   |  |  |  |  |
| 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.
- X Fuels and hazardous substances will not be stored on the site.
- 2. X 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. MA 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. X 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. X Attachment C Sequence of Major Activities. A description of the sequence of major activities which will disturb soils for major portions of the site (grubbing, excavation, grading, utilities, and infrastructure installation) is attached.
  - X For each activity described, an estimate (in acres) of the total area of the site to be disturbed by each activity is given.
  - X 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. X 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. X Attachment D – Temporary Best Management Practices and Measures. TBMPs and measures will prevent pollution of surface water, groundwater, and stormwater. The construction-phase BMPs for erosion and sediment controls have been designed to retain sediment on site to the extent practicable. The following information is attached:

|     |   | <ul> <li>X A description of how BMPs and measures will prevent pollution of surface water, groundwater or stormwater that originates upgradient from the site and flows across the site.</li> <li>X A description of how BMPs and measures will prevent pollution of surface water or groundwater that originates on-site or flows off site, including pollution caused by contaminated stormwater runoff from the site.</li> <li>X A description of how BMPs and measures will prevent pollutants from entering surface streams, sensitive features, or the aquifer.</li> <li>X A description of how, to the maximum extent practicable, BMPs and measures will maintain flow to naturally-occurring sensitive features identified in either the geologic assessment, TCEQ inspections, or during excavation, blasting, or</li> </ul>   |
|-----|---|--|
| 8.  | X | construction.  The temporary sealing of a naturally-occurring sensitive feature which accepts recharge to the Edwards Aquifer as a temporary pollution abatement measure during active construction should be avoided.   |
|     |   | Attachment E - Request to Temporarily Seal a Feature. A request to temporarily seal a feature is attached. The request includes justification as to why no reasonable and practicable alternative exists for each feature.  X There will be no temporary sealing of naturally-occurring sensitive features on the site.  |
| 9.  | X | <b>Attachment F - Structural Practices</b> . A description of the structural practices that will be used to divert flows away from exposed soils, to store flows, or to otherwise limit runoff discharge of pollutants from exposed areas of the site is attached. Placement of structural practices in floodplains has been avoided.  |
| 10. | X | <b>Attachment G - Drainage Area Map</b> . A drainage area map supporting the following requirements is attached:   |
|     |   | <ul> <li>For areas that will have more than 10 acres within a common drainage area disturbed at one time, a sediment basin will be provided.</li> <li>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.</li> <li>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.</li> <li>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.</li> </ul> |

- X There are no areas greater than 10 acres within a common drainage area that will be disturbed at one time. Erosion and sediment controls other than sediment basins or sediment traps within each disturbed drainage area will be used.
- 11. Attachment H Temporary Sediment Pond(s) Plans and Calculations. Temporary sediment pond or basin construction plans and design calculations for a proposed temporary BMP or measure have been prepared by or under the direct supervision of a Texas Licensed Professional Engineer. All construction plans and design information must be signed, sealed, and dated by the Texas Licensed Professional Engineer. Construction plans for the proposed temporary BMPs and measures are attached.
  - X N/A
- 12. X Attachment I Inspection and Maintenance for BMPs. A plan for the inspection of each temporary BMP(s) and measure(s) and for their timely maintenance, repairs, and, if necessary, retrofit is attached. A description of the documentation procedures, recordkeeping practices, and inspection frequency are included in the plan and are specific to the site and/or BMP.
- 13. X All control measures must be properly selected, installed, and maintained in accordance with the manufacturer's specifications and good engineering practices. If periodic inspections by the applicant or the executive director, or other information indicate a control has been used inappropriately, or incorrectly, the applicant must replace or modify the control for site situations.
- 14. X If sediment escapes the construction site, off-site accumulations of sediment must be removed at a frequency sufficient to minimize offsite impacts to water quality (e.g., fugitive sediment in street being washed into surface streams or sensitive features by the next rain).
- 15. X Sediment must be removed from sediment traps or sedimentation ponds not later than when design capacity has been reduced by 50%. A permanent stake will be provided that can indicate when the sediment occupies 50% of the basin volume.
- 16. X Litter, construction debris, and construction chemicals exposed to stormwater shall be prevented from becoming a pollutant source for stormwater discharges (e.g., screening outfalls, picked up daily).

#### Soil Stabilization Practices

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

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

- 18. X Records must be kept at the site of the dates when major grading activities occur, the dates when construction activities temporarily or permanently cease on a portion of the site, and the dates when stabilization measures are initiated.
- 19. X Stabilization practices must be initiated as soon as practicable where construction activities have temporarily or permanently ceased.

#### **Administrative Information**

- 20. X All structural controls will be inspected and maintained according to the submitted and approved operation and maintenance plan for the project.
- 21. X If any geologic or manmade features, such as caves, faults, sinkholes, etc., are discovered, all regulated activities near the feature will be immediately suspended. The appropriate TCEQ Regional Office shall be immediately notified. Regulated activities must cease and not continue until the TCEQ has reviewed and approved the methods proposed to protect the aquifer from any adverse impacts.
- 22. 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**

- Minot spills typically involve small quantities of oil, gasoline, paint, etc. which can be controlled by the first responder at the discovery 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, cleanup 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 (254)751-0335 (Waco) between 8 AM and 5PM. 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 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 Source 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 sire 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 adjoing 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, sandm 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 (0.02 Acres)
- 2. Installation of Temporary BMPs (1.54 Acres)
- 3. Initiate Grubbing and Topsoil Stripping of Site (0.99 Acres)
- 4. Rough Subgrade Preparation (earthwork, grading, street and drainage excavation and embankment) (0.99 Acres)
- 5. Wet and Dry Utility Construction (0.18 Acres)
- 6. Final Subgrade Preparation (0.18Acres)
- 7. Instillation of Base Materials (0.18 Acres)
- 8. Paving Activities (0.51Acres)
- 9. Site cleanup and Removal of Temporary BMPs (<u>1.54</u> Acres) Maximum total construction time is not expected to exceed 12 months.



# **ATTACHMENT D:** Temporary Best Management Practices And Measures

As shown in the erosion and sediment control plan, to protect surface streams during construction activities, silt fence and triangular filter dike will be placed on the downslope along the property line where construction activities end. In addition, a construction entrance will be utilized to filter stormwater through the rock material and inlet protection will be placed at installed inlets.



## **ATTACHMENT E:** Request to Temporarily Seal a Feature

The existing karst feature on site is not proposed to be sealed with this development.



## **ATTACHMENT F - Structural Practices**

The plan for temporary structural controls on this site includes placing silt fence and triangular filter dike at the down slope of the site that will collect sediment prior to exiting the site. For continued effective use, the silt fence and triangular filter dike will need to be cleaned out when appropriate.



## **ATTACHMENT G:** Drainage Area Map

Refer to Existing and Proposed Drainage Area Maps in Construction Plans.



## ATTACHMENT H: Temporary Sediment Pond(s) Plans and Calculations

| This attachment is not applicable. There will be no temporary sediment pond or basin provided on site. |  |
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#### **ATTACHMENT I: Inspection and Maintenance for BMPs**

#### A. Inspection Schedule

- 1. All disturbed areas, as well as all erosion and sediment control devices, will be inspected according to one of the following schedules:
  - a) at least every seven (7) calendar days and within 24 hours after a rainfall of 0.25" or greater, or
  - b) every seven (7) days on the same day of the week each week, regardless of whether or not there has been a rainfall event since the previous inspection.
- 2. Inspections will occur on the schedule provided in this plan and any changes made to the schedule must adhere to the following:
  - a) the schedule can change a maximum of one time each month,
  - b) the schedule change must be implemented at the beginning of a calendar month, and
  - c) the reason for the schedule change must be documented in this plan (an inspection schedule form is located below).

#### **B.** Inspection Reports

- 1. Completed inspection reports (see below) will include the following information:
  - a) scope of the inspection,
  - b) date of the inspection,
  - c) name(s) of personnel making the inspection,
  - d) reference to qualifications of inspection personnel,
  - e) observed major construction activities, and
  - f) actions taken as a result of the inspection.
- 2. All disturbed areas (on and off-site), areas for material storage locations where vehicles enter or exit the site, and all of the erosion and sediment controls that were identified as part this plan must be inspected. The inspection report must state whether the site was in compliance or identify any incidents of non-compliance. The report will be signed by the qualified inspector in accordance with the TPDES general permit and filed in this plan. A sample Inspection Report is included below along with an Inspector Qualification Form. All reports and inspections required by the general construction permit will be completed by a duly authorized representative.
- 3. 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. If existing BMPs are modified or if additional BMPs are necessary, an implementation schedule must be described in this plan, and wherever possible, those changes implemented before the next storm event or as soon as practicable. A list of maintenance guidelines are included below.



4. Inspection reports will be kept in the Operator's file, along with this plan, for at least three years from the date that the NOT is submitted to the TCEQ for the construction site.

#### C. Final Stabilization

Final stabilization of the construction site has been achieved when all soil disturbing activities at the site have been completed, and a uniform (e.g., evenly distributed, without large bare areas) perennial vegetative cover with a density of 70 percent of the native background vegetative cover for the area has been established on all unpaved areas and areas not covered by permanent structures. If a vegetative cover cannot be established, equivalent permanent stabilization measures (such as riprap, gabions, or geotextiles) can be employed. When these conditions have been met, BMPs can be removed from the construction area.



## **Inspector Qualifications\***

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

<sup>\*</sup>Personnel conducting inspections must be knowledgeable of the general permit, familiar with the construction site, and knowledgeable of the SWP3 for the site.



#### INSPECTION SCHEDULE

Inspections must be conducted:

- Option 1 at least once every 7 calendar days and within 24 hours of the end of a storm event of 0.25 inch or greater
- Option 2 at least once every 7 calendar days, regardless of whether or not there has been a rainfall event since the previous inspection.

Any changes to the schedule are conducted in accordance with the following:

- the schedule is 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 below.

| Date | Schedule Option | Reason for Schedule Change |
|------|-----------------|----------------------------|
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# Construction Site SWP3 Inspection Report

|        | □ Complies         |     |
|--------|--------------------|-----|
| Status | □ Warning          | No. |
| St     | □ Project Shutdown |     |

|      | On- | Site            | Up-to-date |                 |  |
|------|-----|-----------------|------------|-----------------|--|
| SWP3 | Yes | No <sup>1</sup> | Yes        | No <sup>2</sup> |  |
| S    |     |                 |            |                 |  |

| _            | Project: | Date:                                  |  |
|--------------|----------|--|--|
| al<br>tion   | Address: | Inspector:                             |  |
| nera<br>mati |          | Qualifications: see Appendix E of SWP3 |  |
| Ge<br>for    |          | Weather Conditions:                    |  |
| ت            | Owner:   | Contractor:                            |  |

| ВМР | BN<br>In U | BMP Maint.<br>In Use Req'd |                  | int.<br>gʻd | Comments |  |
|-----|------------|----------------------------|------------------|-------------|----------|--|
|     |            | No                         | Yes <sup>2</sup> | No          |          |  |
|     |            |                            |                  |             |          |  |
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<sup>&</sup>lt;sup>1</sup>The SWP3 must be retained on-site at the construction site or, if the site is inactive or does not have an on-site location to store the plan, a notice must be posted describing the location of the SWP3.

<sup>&</sup>lt;sup>2</sup>Items marked in this column need to be addressed in the Actions to be Taken table.



| ACTIONS TO BE TAKEN   | RESPONSIBLE PERSON(S)  | DUE DATE  | DATE<br>COMPLETED   | INITIALS                                 |
|---|--|---|---|--|
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|   |  |   |   |  |
| NOTE: These reports will be least three years. A copy of the  |  |   |   |  |
| CERTIFICATION STATEMEL<br>attachments were prepared u<br>to assure that qualified perso<br>on my inquiry of the person of<br>responsible for gathering the<br>and belief, true, accurate, and<br>false information, including the | under my direction or supe<br>nnel properly gathered an<br>or persons who manage th<br>information, the information<br>d complete. I am aware th | ervision in accorda<br>ad evaluated the in<br>he system, or thos<br>on submitted is, to<br>hat there are sign | ance with a syster<br>nformation submit<br>e persons directly<br>o the best of my k<br>ificant penalties fo | tted. Based<br>nowledge<br>or submitting |
| Name:   | _  |   |   |  |
| Address:  |  |   |   |  |
| Telephone:  |  |   |   |  |
| Site Location:  |  |   |   |  |
| Inspector Signature:  |  |   | Date:   |  |



#### **MAINTENANCE GUIDELINES**

- 1. Below are some maintenance practices to be used to maintain erosion and sediment controls:
  - All control measures will be inspected according to the schedule identified in Appendix E.
  - 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.
    - o Drainage swale will be inspected and repaired as necessary.
    - o 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.
    - o 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.
- 2. 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.
  - Any necessary revisions to the SWP3 as a result of the inspection 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 SWP3 and wherever possible those changes implemented before the next storm event.
  - Personnel selected for inspection and maintenance responsibilities must be knowledgeable of the general permit, familiar with the construction site, and knowledgeable of the SWP3 for the site.



#### ATTACHMENT J: Schedule of Interim and permanent Soil Stabilization

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

- 1. Seeding: Disturbed areas subject to erosion shall be stabilized by seeding and watering 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:

- 1. 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.
- 2. 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.
- 3. 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.
- 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 stormwater controls. Following an inspection, deficiencies should be corrected no later than seven (7) calendar days after the inspection.

# Kimley » Horn

## SECTION 7: PERMANENT STORMWATER SECTION

## **Permanent Stormwater Section**

**Texas Commission on Environmental Quality** 

Print Name of Customer/Agent Rvan McKav

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:

|     | terraine or eastorner///gent  |
|-----|---|
| Da  | te: <u>08/16</u> /2024  |
| Sig | nature of Customer/Agent  |
|     | 13-Mil  |
| Re  | gulated Entity Name: Round Rock Commercial  |
| Pe  | ermanent Best Management Practices (BMPs)   |
|     | rmanent best management practices and measures that will be used during and after astruction is completed.  |
| 1.  | Permanent BMPs and measures must be implemented to control the discharge of pollution from regulated activities after the completion of construction.   |
|     | X N/A   |
| 2.  | These practices and measures have been designed, and will be constructed, operated, and maintained to insure that 80% of the incremental increase in the annual mass loading of total suspended solids (TSS) from the site caused by the regulated activity is removed. These quantities have been calculated in accordance with technical guidance prepared or accepted by the executive director. |
|     | ☐ The TCEQ Technical Guidance Manual (TGM) was used to design permanent BMPs  |

and measures for this site.

|    | A technical guidance other than the TCEQ TGM was used to design permanent BMPs and measures for this site. The complete citation for the technical guidance that was used is:  |
|----|--|
|    | X 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.  |
|    | X 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.   |
|    | <ul> <li>The site will be used for low density single-family residential development and has 20% or less impervious cover.</li> <li>The site will be used for low density single-family residential development but has more than 20% impervious cover.</li> </ul>   |
|    | X 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 multifamily 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. |
|    | <ul> <li>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.</li> <li>The site will be used for multi-family residential developments, schools, or small business sites but has more than 20% impervious cover.</li> <li>The site will not be used for multi-family residential developments, schools, or small business sites.</li> </ul>  |
| 6. | X Attachment B - BMPs for Upgradient Stormwater.   |

|     |   | <ul> <li>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.</li> <li>No surface water, groundwater or stormwater originates upgradient from the site and flows across the site, and an explanation is attached.</li> <li>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.</li> </ul> |
|-----|---|---|
| 7.  |   | Attachment C - BMPs for On-site Stormwater.   |
|     |   | <ul> <li>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.</li> <li>X 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.</li> </ul>   |
| 8.  |   | <b>Attachment D - BMPs for Surface Streams</b> . 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.  |
|     | X | N/A   |
| 9.  | X | 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.  |
|     |   | <ul> <li>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.</li> <li>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.</li> </ul>  |
| 10. | X | <b>Attachment F - Construction Plans</b> . 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:   |
|     |   | <ul> <li>□ Design calculations (TSS removal calculations)</li> <li>□ TCEQ construction notes</li> <li>□ All geologic features</li> <li>□ All proposed structural BMP(s) plans and specifications</li> </ul>   |
|     | X | 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 ar measures is attached. The plan includes all of the following:   |
|---|
| <ul><li>Prepared and certified by the engineer designing the permanent BMPs and measures</li><li>Signed by the owner or responsible party</li></ul>   |
| <ul> <li>Procedures for documenting inspections, maintenance, repairs, and, if necessary retrofit</li> <li>A discussion of record keeping procedures</li> </ul>   |
| X N/A   |
| 12. Attachment H - Pilot-Scale Field Testing Plan. Pilot studies for BMPs that are not recognized by the Executive Director require prior approval from the TCEQ. A plan for pilot-scale field testing is attached.   |
| X N/A   |
| 13. Attachment I -Measures for Minimizing Surface Stream Contamination. A description of the measures that will be used to avoid or minimize surface stream contamination and changes in the way in which water enters a stream as a result of the construction and development is attached. The measures address increased stream flashing, the creation of stronger flows and in-stream velocities, and other in-stream effects caused by the regulated activity, which increase erosion that results in water quality degradation.                       |
| X N/A   |
| Responsibility for Maintenance of Permanent BMP(s)  |
| Responsibility for maintenance of best management practices and measures after construction is complete.  |
| 14. X The applicant is responsible for maintaining the permanent BMPs after construction until such time as the maintenance obligation is either assumed in writing by another entity having ownership or control of the property (such as without limitation, an owner's association, a new property owner or lessee, a district, or municipality) or the ownership of the property is transferred to the entity. Such entity shall then be responsible for maintenance until another entity assumes such obligations in writing ownership is transferred. |
| □ N/A   |
| 15. X A copy of the transfer of responsibility must be filed with the executive director at the appropriate regional office within 30 days of the transfer if the site is for use as a multiple single-family residential development, a multi-family residential development or a non-residential development such as commercial, industrial, institutional, schools and other sites where regulated activities occur.   |
| □ N/A   |



# ATTACHMENT A: 20% or Less Impervious Cover Declaration

This site will not be used for multi-family residential developments, schools, or small business sites. Over 20% impervious cover is proposed.



# **ATTACHMENT B: BMPs for Upgradient Stormwater**

There are two upgradient drainage areas which sheet flow across the site that will be captured by the proposed storm system improvements. The proposed storm system on site connects to an existing storm main along Jena Marie Way which conveys storm runoff from the site and adjacent lots to the existing regional pond.



## **ATTACHMENT C:** BMPs for On-site Stormwater

No permanent BMPs are proposed for this project. An existing regional detention pond will be utilized to prevent surface water or groundwater that originates from on-site flows, including pollution cause by contaminated stormwater runoff.



# **ATTACHMENT D: BMPs for Surface Streams**

There are no existing surface streams or sensitive features on site.



# **ATTACHMENT E:** Request to Seal Features

There is no request to seal features that could divert flow from a naturally-occurring sensitive feature on site



# **ATTACHMENT F: Construction Plans**

## **GENERAL PLAN NOTES:**

- 1. ALL RESPONSIBILITY FOR THE ADEQUACY OF THESE PLANS REMAINS WITH THE REGISTERED PROFESSIONAL ENGINEER WHO PREPARED THEM. IN REVIEWING THESE PLANS, BRUSHY CREEK MUNICIPAL UTILITY DISTRICT
- FIRM PANEL NO. 48491C0630F, WILLIAMSON COUNTY, TEXAS AND UNINCORPORATED AREAS (EFFECTIVE DATE DECEMBER 20, 2019)
- WATER AND WASTEWATER SERVICE WILL BE PROVIDED BY BRUSHY CREEK MUD. CONDITIONED UPON ALL FEES AND CHARGES ARE PAID.
- THERE ARE NO NATURAL SLOPES ON THIS SITE IN EXCESS OF 15%.
- NO STRUCTURES CAN BE BUILT WITHIN WATER & WASTEWATER
- RELEASE OF THIS APPLICATION DOES NOT CONSTITUTE A VERIFICATION OF ALL DATA, INFORMATION AND CALCULATIONS SUPPLIED BY THE APPLICANT.
- AS PART OF THIS SITE PLAN, THE STORM WATER POLLUTION PREVENTION PLAN (SWPPP) IS REQUIRED TO BE ON SITE AT ALL TIMES.
- THIS SITE IS LOCATED IN THE EDWARDS AQUIFER RECHARGE ZONE

LOT 3 HIGHLAND HORIZON PHASE IV REPLAT

# **LISTS OF CONTACTS:**

WATER & SANITARY SEWER BRUSHY CREEK MUD KELLY YOUNG 16318 GREAT OAKS DR ROUND ROCK, TX 78681 PH. (512) 255-7871

FIRE SAM BASS FIRE DEPARTMENT - ESD#2 ELECTRIC ONCOR 16248 GREAT OAKS DR ROUND ROCK, TX 78681 PH. (512) 255-0100

LINDA BARGAR 5613 AVENUE F AUSTIN, TX 78751 PH. (512) 465-1134 LBARGAR@TXGAS.COM

TEXAS GAS SERVICE

200 NORTH ECTOR DR

EULES, TEXAS 76039

PH. (817) 355-7057

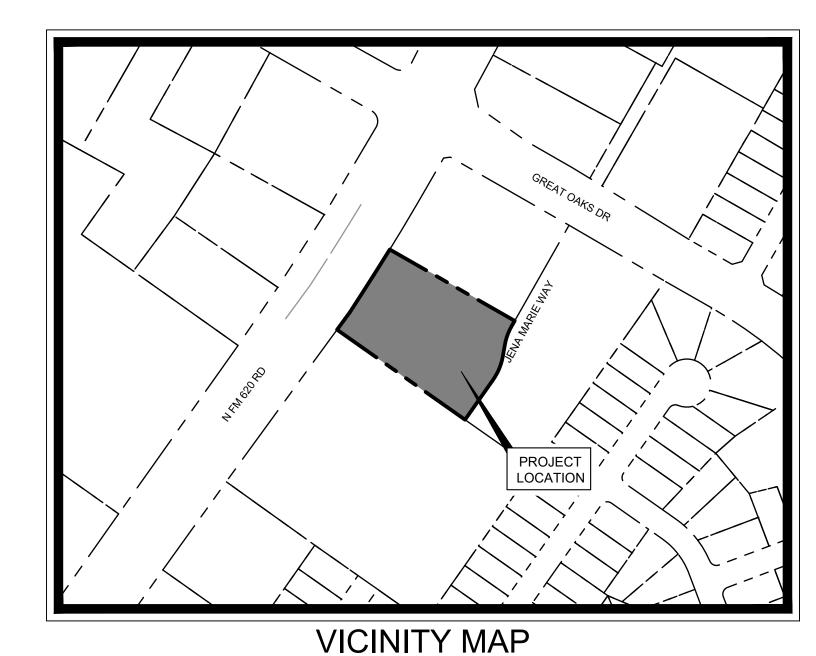
SURVEYOR BLEW & ASSOCIATES ROBERT J. WINNICKI 1050 TEXAS TRAIL, SUITE 400 GRAPEVINE, TX 76051 PH. (817) 591-7720 SURVEY@BLEWINC.COM

CERTIFICATE OF REGISTRATION #928

# CIVIL SITE DEVELOPMENT PLANS FOR

# ROUND ROCK COMMERCIAL

THE ENGINEER OF RECORD IS SOLELY RESPONSIBLE FOR THE COMPLETENESS, ACCURACY AND ADEQUACY OF HIS/HER SUBMITTAL, WHETHER OR NOT THE APPLICATION IS REVIEWED FOR CODE COMPLIANCE 120 JENA MARIE WARRIED WAS 140 JENA WAS 140 JE



OWNER/DEVELOPER NAME AND ADDRESS: AG ROUND ROCK RE HOLDINGS, LLC

SUBDIVISION CASE NO.

**ZONING CASE NO.:** 

ZONING: ETJ

PREVIOUS RELATED SITE DEVELOPMENT CASE NO.: N/A

WATERSHED: LAKE CREEK

PRESSURE ZONE: NORTH

PERMIT NUMBER: 2024-1465-COC

SUBMITTAL DATE: AUGUST 2024

# **SHEET INDEX**

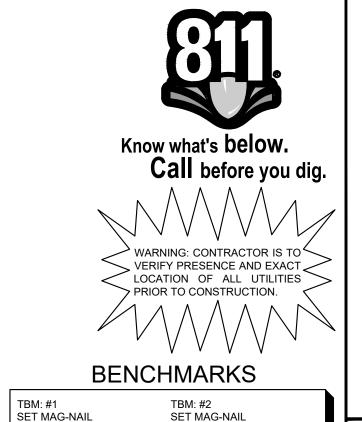
| SHEET NO. | DESCRIPTION                       |
|-----------|-----------------------------------|
| 1         | COVER SHEET                       |
| 2         | FINAL PLAT (1 OF 2)               |
| 3         | FINAL PLAT (2 OF 2)               |
| 4         | GENERAL NOTES                     |
| 5         | KIMLEY-HORN GENERAL NOTES         |
| 6         | EXISTING CONDITIONS AND DEMO PLAN |
| 7         | EROSION CONTROL PLAN              |
| 8         | EXISTING DRAINAGE AREA MAP        |
| 9         | PROPOSED DRAINAGE AREA MAP        |
| 10        | OVERALL SITE PLAN                 |
| 11        | PAVING PLAN                       |
| 12        | FIRE PROTECTION PLAN              |
| 13        | GRADING PLAN                      |
| 14        | OVERALL UTILITY PLAN              |
| 15        | OVERALL STORM PLAN                |
| 16        | STORM DRAIN DETAILS               |
| 17        | PAVING DETAILS                    |
| 18        | UTILITY DETAILS (1 OF 3)          |
| 19        | UTILITY DETAILS (2 OF 3)          |
| 20        | UTILITY DETAILS (3 OF 3)          |
| 21        | EROSION CONTROL DETAILS           |

# AUGUST 2024

BRUSHY CREEK MUD REVIEWED FOR COMPLIANCE WITH COUNTY REQUIREMENTS (WCSR 2021B): WILLIAMSON COUNT

|     |             | REVI   | SIONS/CC                                 | RRECTIONS                                | <u> </u>                                |  |                |
|-----|-------------|--|--|--|---|--|----------------|
| NO. | DESCRIPTION | REVISE (R)<br>VOID (V)<br>ADD (A)<br>SHEET NO.'S | TOTAL<br>NO.<br>SHEETS<br>IN PLAN<br>SET | NET<br>CHANGE<br>IMP. COVER<br>(SQ. FT.) | TOTAL SITE<br>IMP. COVER<br>(SQ. FT.)/% | WILLIAMSON<br>COUNTY<br>APPROVAL<br>DATE | DATE<br>IMAGED |
|     |             |  |  |  |   |  |                |
|     |             |  |  |  |   |  |                |
|     |             |  |  |  |   |  |                |
|     |             |  |  |  |   |  |                |
|     |             |  |  |  |   |  |                |
|     |             |  |  |  |   |  |                |

I CERTIFY THAT THESE ENGINEERING DOCUMENTS ARE COMPLETE, ACCURATE AND ADEQUATE FOR THE INTENDED PURPOSES, INCLUDING CONSTRUCTION, BUT ARE NOT AUTHORIZED FOR CONSTRUCTION PRIOR TO FORMAL CITY APPROVAL.

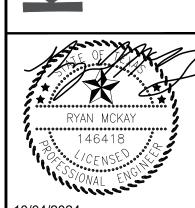


NORTHING: 10152286.99

EASTING: 3117680.68

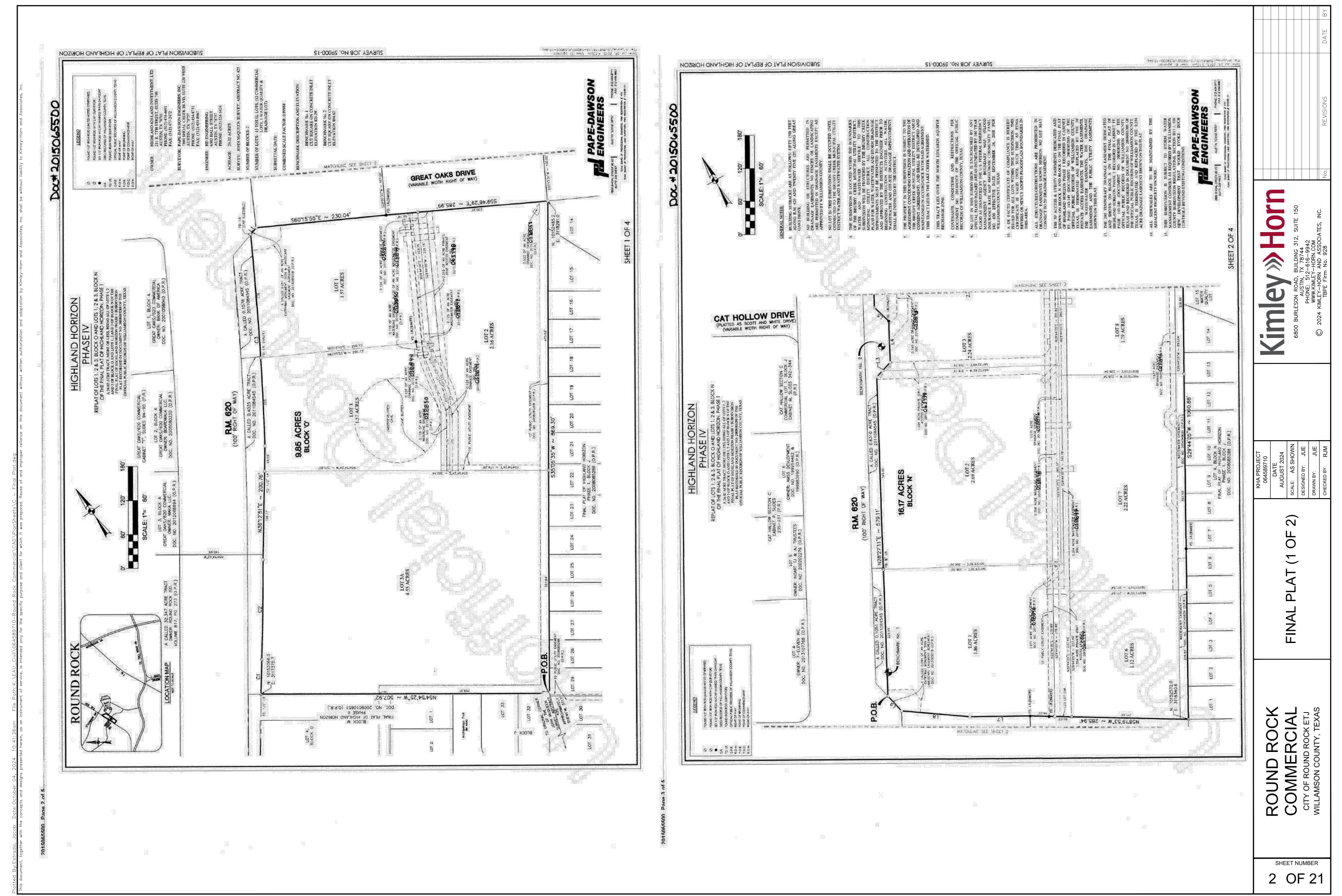
ELEVATION: 832.66'

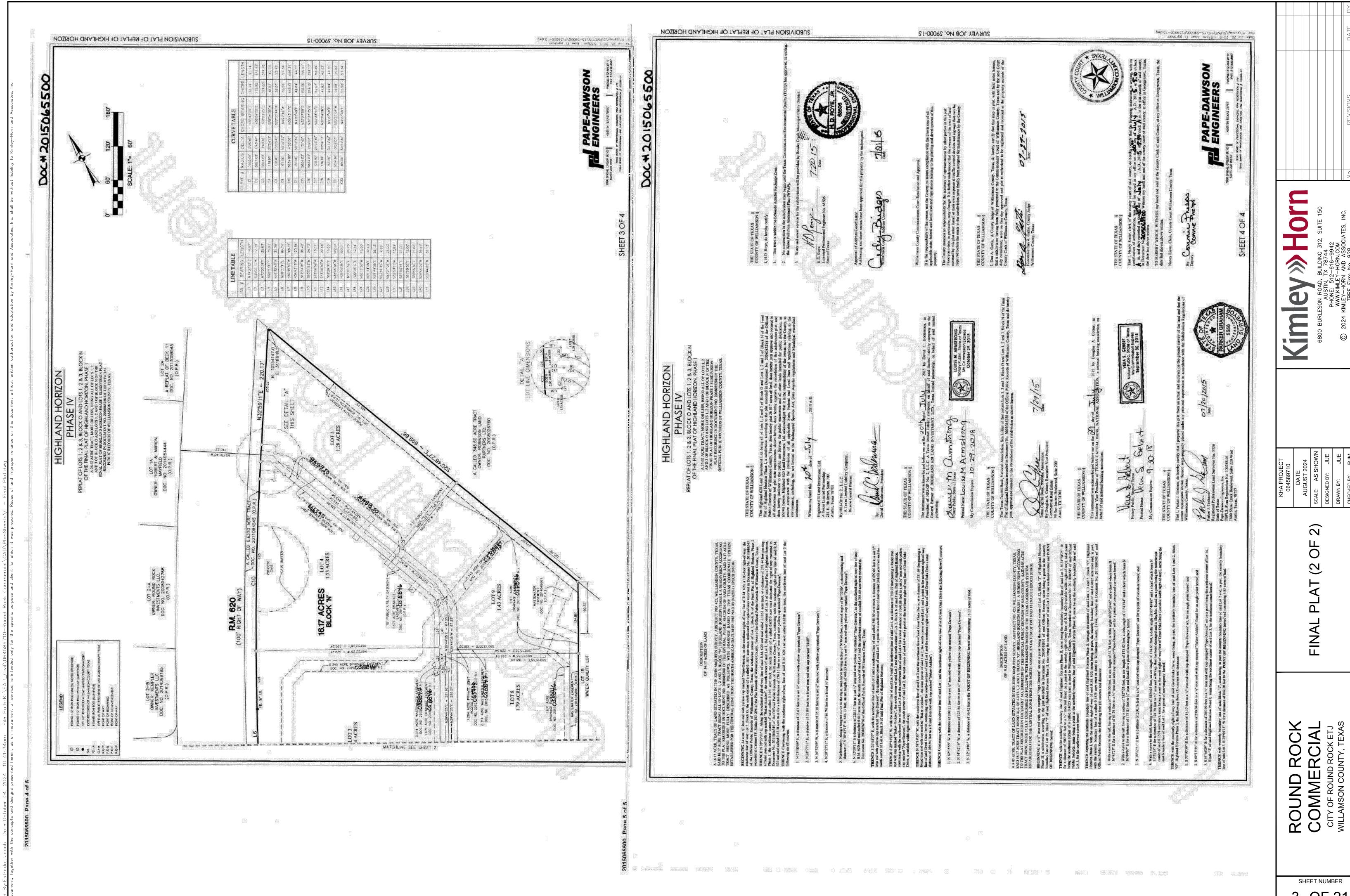
SET MAG-NAIL NORTHING: 10152232.83 EASTING: 3117882.32 ELEVATION: 829.33'



SHEE COVER

SHEET NUMBER





3 OF 21 2024-1465-COC

2

FINAL PLAT (2 OF

# WILLIAMSON COUNTY SUBDIVISION REGULATIONS

- SECTION B4 CONSTRUCTION GENERAL
- B4.1 A PRECONSTRUCTION MEETING SHALL BE SCHEDULED PRIOR TO THE START OF CONSTRUCTION. THE DESIGN ENGINEER, OWNER, CONTRACTOR, SUBCONTRACTORS, AND COUNTY ENGINEER SHALL ATTEND THIS MEETING. ALL ROADS ARE TO BE CONSTRUCTED IN ACCORDANCE WITH THE CONSTRUCTION DOCUMENTS AS APPROVED BY THE COUNTY ENGINEER AND IN ACCORDANCE WITH THE SPECIFICATIONS FOUND IN THE CURRENT VERSION OF THE "TEXAS DEPARTMENT OF TRANSPORTATION MANUAL STANDARD SPECIFICATIONS FOR CONSTRUCTION OF HIGHWAYS, STREETS, AND BRIDGES" UNLESS OTHERWISE STATED ON THE CONSTRUCTION DOCUMENTS APPROVED BY THE COUNTY ENGINEER.
- B4.2 ALL MATERIALS SHALL BE SAMPLED AND TESTED BY AN INDEPENDENT TESTING LABORATORY IN ACCORDANCE WITH THE CONSTRUCTION DOCUMENTS APPROVED BY THE COUNTY ENGINEER. THE OWNER SHALL PAY FOR ALL TESTING SERVICES AND SHALL FURNISH THE COUNTY ENGINEER WITH CERTIFIED COPIES OF THESE TEST RESULTS. THE COUNTY ENGINEER MUST APPROVE THE TEST RESULTS PRIOR TO CONSTRUCTING THE NEXT COURSE OF THE ROADWAY STRUCTURE. ANY MATERIAL WHICH DOES NOT MEET THE MINIMUM REQUIRED TEST SPECIFICATIONS SHALL BE REMOVED AND RECOMPACTED OR REPLACED UNLESS ALTERNATIVE REMEDIAL ACTION IS APPROVED IN WRITING FROM
- B4.3 EXCEPT FOR ELECTRICAL LINES, ALL UNDERGROUND NONFERROUS UTILITIES WITHIN A RIGHT-OF-WAY OR EASEMENT MUST BE ACCOMPANIED BY FERROUS METAL LINES TO AID IN TRACING THE LOCATION OF SAID UTILITIES THROUGH THE USE OF A METAL DETECTOR. B4.4 ALL PAVEMENTS ARE TO BE DESIGNED BY A REGISTERED PROFESSIONAL ENGINEER. THE
- DESIGN SHALL BE BASED ON A 20-YEAR DESIGN LIFE AND IN CONJUNCTION WITH RECOMMENDATIONS BASED UPON A SOILS REPORT OF SAMPLES TAKEN ALONG THE PROPOSED ROADWAYS. TEST BORINGS SHALL BE PLACED AT A MAXIMUM SPACING OF 500 FEET OR OTHER SAMPLING FREQUENCY APPROVED BY THE COUNTY ENGINEER BASED ON RECOMMENDATIONS PROVIDED BY THE GEOTECHNICAL ENGINEER. BORINGS SHALL BE TO A DEPTH OF TEN FT OR, IF SOLID ROCK IS ENCOUNTERED, ONE FT BELOW NON-FRACTURED ROCK. THE SOILS REPORT AND PAVEMENT DESIGN WILLIAMSON COUNTY, TEXAS - SUBDIVISION REGULATIONS PAGE 38 SHALL BE SUBMITTED TO THE COUNTY ENGINEER FOR REVIEW. THE PAVEMENT DESIGN MUST BE APPROVED BY TE COUNTY ENGINEER PRIOR TO OR CONCURRENTLY WITH THE REVIEW AND APPROVAL OF THE CONSTRUCTION PLANS.IN ADDITION TO THE BASIS OF THE PAVEMENT DESIGN, THE SOILS REPORT SHALL CONTAIN THE RESULTS OF SAMPLED ND TESTED SUBGRADE FOR PLASTICITY INDEX.

# SECTION B5 - SUBGRADE

- B5.1 THE PREPARATION OF THE SUBGRADE SHALL FOLLOW GOOD ENGINEERING PRACTICES AS DIRECTED BY THE COUNTY ENGINEER IN CONJUNCTION WITH RECOMMENDATIONS OUTLINED IN THE GEOTECHNICAL REPORT. WHEN THE PLASTICITY INDEX (PI) IS GREATER THAN 20, A SUFFICIENT AMOUNT OF LIME SHALL BE ADDED AS DESCRIBED IN ITEM 260 OF THE CURRENT EDITION OF THE TXDOT STANDARD SPECIFICATIONS FOR CONSTRUCTION UNTIL THE PI IS LESS THAN 20. IF THE ADDITION OF LIME AS DESCRIBED IN ITEM 260 IS NOT FEASIBLE. AN ALTERNATE STABILIZING DESIGN SHALL BE PROPOSED AND SUBMITTED TO THE COUNTY ENGINEER FOR APPROVAL. THE SUBGRADE SHALL BE PREPARED AND COMPACTED TO ACHIEVE A DRY DENSITY PER TXDOT ITEM 132. IN ADDITION, PROOF ROLLING MAY BE REQUIRED BY THE COUNTY ENGINEER.
- B5.2 IF LIME IS NECESSARY, THEN A SUFFICIENT AMOUNT OF LIME SHALL BE ADDED, AS DESCRIBED IN ITEM 260 OF THE CURRENT EDITION OF THE TXDOT STANDARD SPECIFICATIONS FOR CONSTRUCTION TO PROPERLY STABILIZE SUBGRADE. THE USE OF HYDRATED LIME OR LIME SLURRY IS APPROVED; HOWEVER, THE USE OF PELLETIZED LIME B5.3 PRIOR TO LIME STABILIZATION, A SULFATE TEST OF IN SITU SOILS SHALL BE PERFORMED
- BY DEVELOPER TO CONFIRM THE APPROPRIATE MEANS AND METHODS OF STABILIZATION. PROVIDE SULFATE TEST TO COUNTY ENGINEER PRIOR TO STABILIZATION. B5.4 ANY VARIATION TO THE COUNTY'S STABILIZATION REQUIREMENTS MUST BE APPROVED BY
- THE COUNTY ENGINEER. B5.5 THE SUBGRADE SHALL BE PREPARED AND COMPACTED TO ACHIEVE A DRY DENSITY PER
- TXDOT ITEM 132. IN ADDITION, PROOF ROLLING MAY BE REQUIRED BY THE COUNTY
- B5.6 THE SUBGRADE SHALL BE INSPECTED AND APPROVED BY AN INDEPENDENT TESTING LABORATORY AND A CERTIFIED COPY OF ALL INSPECTION REPORTS FURNISHED TO THE COUNTY ENGINEER. THE COUNTY ENGINEER MUST APPROVE THE REPORT PRIOR TO APPLICATION OF THE BASE MATERIAL. ALL DENSITY TEST REPORTS SHALL INCLUDE A COPY OF THE WORK SHEET SHOWING THE PERCENTAGE OF THE MAXIMUM DRY (PROCTOR) DENSITY THE NUMBER
- AND LOCATION OF ALL SUBGRADE TESTS SHALL BE DETERMINED BY THE COUNTY

# SECTION B6 - BASE MATERIAL

B6.1 BASE MATERIAL SHALL CONFORM TO ITEM 247 OF THE CURRENT EDITION OF THE TXDOT STANDARD SPECIFICATIONS FOR CONSTRUCTION, "FLEXIBLE BASE". THE BASE MATERIAL SHALL BE TYPE A GRADE 4, OR AS APPROVED BY THE COUNTY ENGINEER. GRADE MATERIAL SHALL CONFORM TO THE REQUIREMENTS OF TABLE B6.1 BELOW:

# TABLE B6.1: GRADATION SPECIFICATION FOR TY A, GRADE 4

| MASTER GRADATION SIEVE SIZE | CUMULATIVE % RETAINED |
|-----------------------------|-----------------------|
| 2.5"                        | -                     |
| 1.75"                       | 0                     |
| 7/8"                        | 10%-35%               |
| 3/8"                        | 30%-65%               |
| #4                          | 45%-75%               |
| #40                         | 70%-90%               |
| #200                        | 87%-95%               |

- B6.2 EACH LAYER OF BASE COURSE SHALL BE TESTED FOR IN-PLACE DRY DENSITY AND MEASURED FOR COMPACTED THICKNESS. THE NUMBER AND LOCATION OF ALL BASE TEST
- SAMPLES SHALL BE DETERMINED BY THE COUNTY ENGINEER B6.3 THE BASE SHALL BE PREPARED AND COMPACTED TO ACHIEVE A MINIMUM OF 100% OF THE MAXIMUM (PROCTOR) DRY DENSITY OR AS APPROVED BY THE COUNTY ENGINEER UPON RECOMMENDATION BY THE TESTING LABORATORY. THE MAXIMUM LIFT SHALL NOT EXCEED SIX INCHES. THE BASE MUST BE INSPECTED AND APPROVED BY AN INDEPENDENT TESTING LABORATORY AND A CERTIFIED COPY OF THE TEST RESULTS FURNISHED TO THE COUNTY ENGINEER FOR APPROVAL. PRIOR TO THE PLACEMENT OF THE FIRST LIFT OF BASE, THE STOCKPILE SHALL BE TESTED FOR THE SPECIFICATIONS FOUND IN ITEM 247 TABLE 1 AND THE RESULT FURNISHED TO THE COUNTY ENGINEER FOR APPROVAL.

# **SECTION B7 - BITUMINOUS PAVEMENT**

- B7.1 URBAN ROADS REQUIRE A MINIMUM 2 INCH WEARING SURFACE OF HMAC TYPE D. THE MIX SHALL BE FROM A TXDOT CERTIFIED PLANT AND THE MIX DESIGN SHALL BE SUBMITTED
- TO THE COUNTY ENGINEER FOR APPROVAL PRIOR TO PLACEMENT OF THE MATERIAL. B7.2 IF PROVIDING MIXTURE TYPE C OR D, USE PERFORMANCE GRADE (PG) BINDER 70-22. PROVIDE PG BINDER THAT DOES NOT CONTAIN RECYCLED ENGINE OIL BOTTOMS (REOBS) OR POLY PHOSPHORIC ACID (PPA). RECYCLED ASPHALT PAVEMENT (RAP) IS NOT PERMITTED FOR USE AS A COMPONENT OF THE HMACP. THE CONTRACTOR IS ALSO NOT PERMITTED THE USE RECYCLED ASPHALT SHINGLES (RAS) AS A COMPONENT OF THE
- B7.3 IF PROVIDING MIXTURE TYPE B, USE PG BINDER 64-22. PROVIDE PG BINDERS THAT DO NOT CONTAIN REOBS OR PPA. FOR SUBSURFACE COURSE TYPE B, THE USE OF TWENTY PERCENT (20%) RAP IS PERMITTED IN THE MIX DESIGN. THE CONTRACTOR IS NOT PERMITTED TO USE RAS AS A COMPONENT OF THE HMACP. WILLIAMSON COUNTY, TEXAS -
- SUBDIVISION REGULATIONS PAGE 40 B7.4 TARGET LABORATORY MOLDED DENSITY IS 96.5% FOR ALL MIXTURES WITHOUT RAP AND WHEN USING A TEXAS GYRATORY COMPACTOR (TGC) FOR DESIGNING THE MIXTURE. WHEN USING SUPERPAVE GYRATORY COMPACTOR (SGC) TO DESIGN MIXTURES, SUBMIT
- THE SGC MIX DESIGN TO THE ENGINEER FOR APPROVAL. B7.5 ALL MIXTURES MUST MEET THE HAMBURG REQUIREMENT AS STATED IN THE TABLE

| HIGH-TEMPERATURE |             | HAMBURG WHEEL TEST REQUIREMENTS*                      |
|------------------|-------------|---|
| BINDER GRADE     | TEST METHOD | MINIMUM # OF PASSES ♥ 0.5" RUT DEPTH,<br>TESTED ♥122F |
| PG 64 OR LOWER   | TEX-242-F   | 7,000   |
| PG 70            | TEX-242-F   | 15,000  |
| PG 76 OR HIGHER  | TEX-242-F   | 20,000  |

- \* THE COUNTY ENGINEER MAY ACCEPT HAMBURG WHEEL TEST RESULTS FOR PRODUCTION AND PLACEMENT IF NO MORE THAN 10F THE 5 MOST RECENT TESTS IS BELOW THE SPECIFIED NUMBER OF PASSES AND THE FAILING TEST IS NO MORE THAN 2,000 PASSES BELOW THE SPECIFIED NUMBER OF PASSES.
- B7.6 SUBMIT ANY PROPOSED ADJUSTMENTS OR CHANGES TO A JOB MIX FORMULA TO THE
- B7.7 UNLESS OTHERWISE APPROVED, PROVIDE TYPE B MIXTURES THAT HAVE NO LESS THAN 4.5% ASPHALT BINDER, AND TY C AND D MIXTURES WITH NO LESS THAN 4.7% BINDER.

COUNTY ENGINEER BEFORE PRODUCTION OF THE NEW JOB MIX FORMULA.

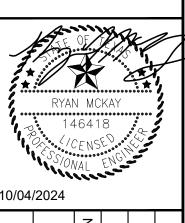
- B7.8 FOR MIXTURE DESIGN VERIFICATION, PROVIDE THE ENGINEER WITH TWO 5-GALLON BUCKETS OF EACH AGGREGATE STOCKPILE TO BE USED ON THE PROJECT AND THREE GALLONS OF EACH PG BINDER TO BE USED ON THE PROJECT. ALSO PROVIDE SUFFICIENT QUANTITIES OF ANY OTHER ADDITIVES THAT WILL BE USED IN THE HMA MIXTURE. THIS MUST BE DONE PRIOR TO APPROVAL OF THE MIX DESIGN, UNLESS ALREADY PERFORMED WITHIN A ONF-YEAR TIME PERIOD
- B7.9 PRIOR TO ALLOWING PRODUCTION OF THE TRIAL BATCH, THE ENGINEER WILL USE THE MATERIALS PROVIDED BY THE CONTRACTOR TO PERFORM THE FOLLOWING TESTS TO VERIFY THE HMA MIXTURE DESIGN.
- INDIRECT TENSILE TEST IN ACCORDANCE WITH TEX-226-F
- HAMBURG WHEEL TEST IN ACCORDANCE WITH TEX-242-F OVERLAY TEST IN ACCORDANCE WITH TEX-248-F
- CANTABRO TEST IN ACCORDANCE WITH TEX-245-F
- FOR MIXTURES DESIGNED WITH A TEXAS GYRATORY COMPACTOR (TGC), THE ENGINEER MAY REQUIRE THAT THE TARGET LABORATORY MOLDED DENSITY BE RAISED TO NO MORE THAN 97.5% OR MAY LOWER THE DESIGN NUMBER OF GYRATIONS TO NO LESS THAN 35 FOR MIXTURES DESIGNED WITH AN SGC IF ANY OF THE FOLLOWING CONDITIONS EXIST.
- THE INDIRECT TENSILE TEST RESULTS IN A VALUE GREATER THAN 200 PSI
- THE HAMBURG WHEEL TEST RESULTS IN A VALUE LESS THAN 3.0 MM THE OVERLAY TEST RESULTS IN A VALUE LESS THAN 100 CYCLES
- THE CANTABRO TEST RESULTS IN A VALUE OF MORE THAN 20% LOSS
- IN LIEU OF, OR IN ADDITION TO EVALUATING THE MIXTURE DESIGN PRIOR TO ALLOWING A TRIAL BATCH TO BE PRODUCED, THE ENGINEER MAY ALSO EVALUATE THE MIXTURE PRODUCED DURING THE TRIAL BATCH FOR COMPLIANCE WITH THE 4 TESTS LISTED ABOVE. WILLIAMSON COUNTY, TEXAS - SUBDIVISION REGULATIONS PAGE 41
- B7.10 CONTRACTOR'S QUALITY CONTROL (CQC) TEST REPORTS SHALL BE SUBMITTED TO THE COUNTY ENGINEER ON A DAILY BASIS. AS A MINIMUM, DAILY CQC TESTING ON THE PRODUCED MIX SHALL INCLUDE: SIEVE ANALYSIS TEX-200-F. ASPHALT CONTENT TEX-236-F, HVEEM STABILITY TEX-208-F, LABORATORY COMPACTED DENSITY TEX-207-F, AND MAXIMUM SPECIFIC GRAVITY TEX-227-F. THE NUMBER AND LOCATION OF ALL HMAC TESTS SHALL BE DETERMINED BY THE COUNTY ENGINEER WITH A MINIMUM OF THREE, 6-INCH DIAMETER FIELD CORES SECURED AND TESTED BY THE CONTRACTOR FROM EACH DAY'S PAVING. EACH HMAC COURSE SHALL BE TESTED FOR IN-PLACE DENSITY, BITUMINOUS CONTENT AND AGGREGATE GRADATION, AND SHALL BE MEASURED FOR COMPACTED THICKNESS. THE NUMBER AND LOCATION OF ALL HMAC TEST SAMPLES SHALL BE DETERMINED BY THE COUNTY ENGINEER.
- 1 RURAL ROADS MAY USE FITHER THE SPECIFICATIONS FOUND IN SECTION B7.1 OR A TWO-COURSE SURFACE IN ACCORDANCE WITH ITEM 316, TREATMENT WEARING SURFACE, OF THE CURRENT EDITION OF THE TXDOT STANDARD SPECIFICATIONS FOR CONSTRUCTION. THE TYPE AND RATE OF ASPHALT AND AGGREGATE SHALL BE INDICATED ON THE PLANS AS A BASIS OF ESTIMATE AND SHALL BE DETERMINED AT THE PRECONSTRUCTION CONFERENCE. AGGREGATE USED IN THE MIX SHALL BE ON THE TXDOT QUALITY MONITORING SCHEDULE. AGGREGATE SHALL BE TYPE B GRADE 4. GRADATION TESTS SHALL BE REQUIRED FOR EACH 300 CUBIC YARDS OF MATERIAL PLACED WITH A MINIMUM OF TWO TESTS PER EACH GRADE PER EACH PROJECT. TEST RESULTS SHALL BE REVIEWED BY THE COUNTY ENGINEER PRIOR TO APPLICATION OF THE MATERIAL.

# SECTION B8 - CONCRETE PAVEMENT

B8.1 IN LIEU OF BITUMINOUS PAVEMENT, PORTLAND CEMENT CONCRETE PAVEMENT MAY BE USED. IN SUCH CASES, THE PAVEMENT THICKNESS SHALL BE A MINIMUM OF 9 INCHES OF CONCRETE, AND SHALL BE JOINTED AND REINFORCED IN ACCORDANCE WITH THE DETAIL INCLUDED IN APPENDIX J. THE MIX SHALL BE FROM A TXDOT CERTIFIED PLANT. THE MIX DESIGN SHALL BE SUBMITTED TO THE COUNTY ENGINEER FOR APPROVAL PRIOR TO PLACEMENT OF THE MATERIAL.

# SECTION B9 - CONCRETE - GENERAL

- B9.1 UNLESS OTHERWISE SPECIFIED, CONCRETE SHALL BE IN ACCORDANCE WITH ITEM 421 OF THE CURRENT EDITION OF THE TXDOT STANDARD SPECIFICATIONS FOR CONSTRUCTION AND BE PLACED IN ACCORDANCE WITH THE APPLICABLE ITEM.
- B9.2 ALL CONCRETE SHALL BE TESTED FOR COMPRESSIVE STRENGTH. ONE SET OF THREE CONCRETE TEST CYLINDERS SHALL BE MOLDED FOR EVERY 50 CUBIC YARDS OF CONCRETE PLACED FOR EACH CLASS OF CONCRETE PER DAY, OR AT ANY OTHER INTERVAL AS DETERMINED BY THE COUNTY ENGINEER. A SLUMP TEST SHALL BE REQUIRED WITH EACH SET OF TEST CYLINDERS. ONE CYLINDER SHALL BE TESTED FOR COMPRESSIVE STRENGTH AT AN AGE OF SEVEN DAYS AND THE REMAINING TWO CYLINDERS SHALL BE TESTED AT 28 DAYS OF AGE.



GENERAL

COUND

SHEET NUMBER 4 OF 21 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

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

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. 8 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

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,

LINES. CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE LOCAL, STATE, FEDERAL AND UTILITY OWNER REGULATIONS PERTAINING

GEOTECHNICAL REPORT AND ADDENDA, PROJECT AND CITY SPECIFICATIONS, AND SPECIAL CONDITIONS, COPIES OF ANY REQUIRED CONSTRUCTION PERMITS FROSION 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

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

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 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 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.

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 4. ALL EROSION CONTROL DEVICES ARE TO BE INSTALLED IN ACCORDANCE WITH THE APPROVED PLANS AND SPECIFICATIONS FOR THE

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.

5. CONTRACTOR IS SOLELY RESPONSIBLE FOR INSTALLATION, IMPLEMENTATION, MAINTENANCE, AND EFFECTIVENESS OF ALL EROSION

B. THE EROSION CONTROL DEVICES SHALL REMAIN IN PLACE UNTIL THE AREA IT PROTECTS HAS BEEN PERMANENTLY STABILIZED. 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

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 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.

STORM WATER DISCHARGE AUTHORIZATION

. 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) 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). 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.

DISCREPANCY.

. 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.

. ASBESTOS BUILDING INSPECTION REPORT(S) PROVIDED BY THE OWNER, c. GEOTECHNICAL REPORT PROVIDED BY THE OWNER.

CONTRACTOR SHALL OBTAIN ANY REQUIRED GRADING PERMITS FROM THE CITY.

CONSTRUCTED MEETS THE PROJECT REQUIREMENTS AND CITY SPECIFICATIONS.

GRADE CONTROL POINTS RELATED TO EARTHWORK.

d. OTHER REPORTS THAT ARE APPLICABLE AND AVAILABLE. 5 CONTRACTOR SHALL CONTACT THE OWNER TO VERIEV 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.

. 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.

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.

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 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

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 3. NO REPRESENTATIONS OF EARTHWORK QUANTITIES OR SITE BALANCE ARE MADE BY THESE PLANS. THE CONTRACTOR SHALL

PROVIDE THEIR OWN EARTHWORK CALCULATION TO DETERMINE THEIR CONTRACT QUANTITIES AND COST. ANY SIGNIFICANT VARIANCE FROM A BALANCED SITE SHALL BE IMMEDIATELY BROUGHT TO THE ATTENTION OF THE CIVIL ENGINEER. 9. ALL GRADING AND EARTHWORK SHALL COMPLY WITH THE PROJECT'S FINAL GEOTECHNICAL REPORT (OR LATEST EDITION), INCLUDING 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 12.BEFORE ANY EARTHWORK IS PERFORMED, THE CONTRACTOR SHALL STAKE OUT AND MARK THE LIMITS OF THE PROJECT'S PROPERTY LINE AND SITE IMPROVEMENTS. THE CONTRACTOR SHALL PROVIDE ALL NECESSARY ENGINEERING AND SURVEYING FOR LINE AND

13. CONTRACTOR TO DISPOSE OF ALL EXCESS EXCAVATION MATERIALS IN A MANNER THAT ADHERES TO LOCAL, STATE AND FEDERAL LAWS AND REGULATIONS. THE CONTRACTOR SHALL KEEP A RECORD OF WHERE EXCESS EXCAVATION WAS DISPOSED, ALONG WITH 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

20.CONTRACTOR IS RESPONSIBLE FOR ALL SOILS TESTING AND CERTIFICATION, UNLESS SPECIFIED OTHERWISE BY OWNER. ALL SOILS TESTING SHALL BE COORDINATED WITH THE APPROPRIATE CITY INSPECTOR AND SHALL COMPLY WITH CITY STANDARD SPECIFICATIONS AND THE GEOTECHNICAL REPORT. SOILS TESTING SHALL BE PERFORMED BY AN APPROVED INDEPENDENT AGENCY FOR TESTING SOILS. THE OWNER SHALL APPROVE THE AGENCY NOMINATED BY THE CONTRACTOR FOR SOILS TESTING. 21.ALL COPIES OF SOILS TEST RESULTS SHALL BE SENT TO THE OWNER, ENGINEER AND ARCHITECT DIRECTLY FROM THE TESTING

22.IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO SHOW, BY THE STANDARD TESTING PROCEDURES OF THE SOILS, THAT THE WORK

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 SURGRADE 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 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. DIRT ONTO OFF-SITE ROADWAYS. ALL SEDIMENT AND DIRT FROM THE SITE THAT IS DEPOSITED ONTO AN OFF-SITE ROADWAY SHALL BE 2. 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. RETAINING WALL ENGINEER SHALL CONSULT THESE PLANS AND THE GEOTECHNICAL REPORT FOR POTENTIAL CONFLICTS.

> 1. ALL PAVING MATERIALS AND CONSTRUCTION SHALL BE IN ACCORDANCE WITH THESE PLANS. THE CITY STANDARD DETAILS AND SPECIFICATIONS, THE FINAL GEOTECHNICAL REPORT AND ALL ISSUED ADDENDA, AND COMMONLY ACCEPTED CONSTRUCTION STANDARDS. THE CITY SPECIFICATIONS SHALL GOVERN WHERE OTHER SPECIFICATIONS DO NOT EXIST. IN CASE OF 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 FIRÉLANE 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

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 PAVFMENT

22.UNLESS THE PLANS SPECIFICALLY DICTATE TO THE CONTRARY. ON-SITE AND OTHER DIRECTIONAL SIGNS SHALL BE ORIENTED SC 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 EVCS EXCESSIVE SLOPES ARE ENCOUNTERED. NO CONTRACTOR CHANGE ORDERS WILL BE ACCEPTED FOR ADA AND TAS SLOPE COMPLIANCE ISSUES.

21.FIRE LANES SHALL BE MARKED AND LABELED AS A FIRELANE PER CITY STANDARDS

. 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 KH

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 LAT 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

17. THE CONTRACTOR SHALL KEEP TRENCHES FREE FROM WATER.

ANY PONDS THAT ARE INTENDED TO HOLD WATER INDEFINITELY SHALL BE CONSTRUCTED WATERTIGHT 2. FOR ANY PONDS INTENDED TO HOLD WATER INDEFINITELY: THE CONTRACTOR SHALL REFER TO THE GEOTECHNICAL REPORT 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

OPEN TRENCHES SHALL BE ALLOWED OVERNIGHT WITHOUT PRIOR WRITTEN APPROVAL OF THE CITY.

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

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

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

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. © COPYRIGHT 2017 KIMLEY-HORN AND ASSOCIATES, INC., ALL RIGHTS RESERVED

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 TOFO 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

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

INTERVALS, OR AS REQUIRED BY THE APPLICABLE PLUMBING CODE. CLEAN-OUTS REQUIRED IN PAVEMENT OR SIDEWALKS SHALL

ENGINEER IN THE STATE OF TEXAS, TO THE CITY PRIOR TO CONSTRUCTION. CONTRACTOR IS RESPONSIBLE FOR MAINTAINING TRENCI 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:** ARFA INI FT AMERICANS WITH DISABILITIES ACT AWWA AMERICAN WATER WORKS ASSOCIATION BACK TO BACK BEGIN CURVE BACK OF CURB BEGIN CURB RETURN BEST MANAGEMENT PRACTICE BACK OF CURB **BVCE** BEGIN VERTICAL CURVE ELEVATION **BVCS** BEGIN VERTICAL CURVE STATION **BOTTOM OF WALL** CFS CUBIC FEET PER SECOND **CURB INLET** CITY. TOWN, OR OTHER APPLICABLE LOCAL GOVERNMENT JURISDICTION CITY CENTERLINE CENTERLINE CONC CONCRETE CUBIC YARD DRAINAGE EASEMENT DEMO DEMOLITION DECOMPOSED GRANITE DROP INLET DOMESTIC DTL DETAIL EACH END CURVE END CURB RETURN EXISTING GROUND **ELEVATION** ELEC ELECTRICAL / ELECTRICITY **ELEVATION** UNITES STATES ENVIRONMENTAL PROTECTION AGENCY EASEMENT END VERTICAL CURVE ELEVATION EVCE END VERTICAL CURVE STATION EX. EXISTING F-F FACE TO FACE FINISHED GROUND FIRE HYDRANT FLOW LINE FACE OF CURB FFFT GRATE INLET

HYDRAULIC GRADE LINE IRRIGATION KIMLEY-HORN AND ASSOCIATES, INC LINEAR FEET LANDSCAPE MATCH EXISTING ELEVATION MANHOLE MINUTE / MINIMUM

NOTICE OF INTENT, REF. TCEQ GENERAL PERMIT NOTICE OF TERMINATION, REF. TCEQ GENERAL PERMIT NTS NOT TO SCALE ON CENTER OFFSFT OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION POINT OF CURVATURE PORTLAND CEMENT CONCRETE / POINT OF COMPOUND CURVATURE

PROPOSED GRADE LINE POINT OF INFLECTION PROPOSED POINT OF REVERSE CURVATURE POUNDS PER SQUARE INCH POINT OF TANGENCY POLYVINYL CHLORIDE POINT OF VERTICAL INFLECTION PAVEMENT REINFORCED CONCRETE PIPE ROW RIGHT OF WAY

SQUARE FEET SANITARY SEWER SANITARY SEWER MANHOLE STA STATION STD STANDARD SQUARE YARD

> ARCHITECTURAL BARRIERS TEXAS ACCESSIBILITY STANDARDS TOP OF CURB **TCEQ** TEXAS COMMISSION OF ENVIRONMENTAL QUALITY TEXAS DEPARTMENT OF TRANSPORTATION TXMUTCD TEXAS MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES

TOP OF WALL TYPICAL VERTICAL CURVE WATER EASEMEN WYE INLET WATER WASTEWATER

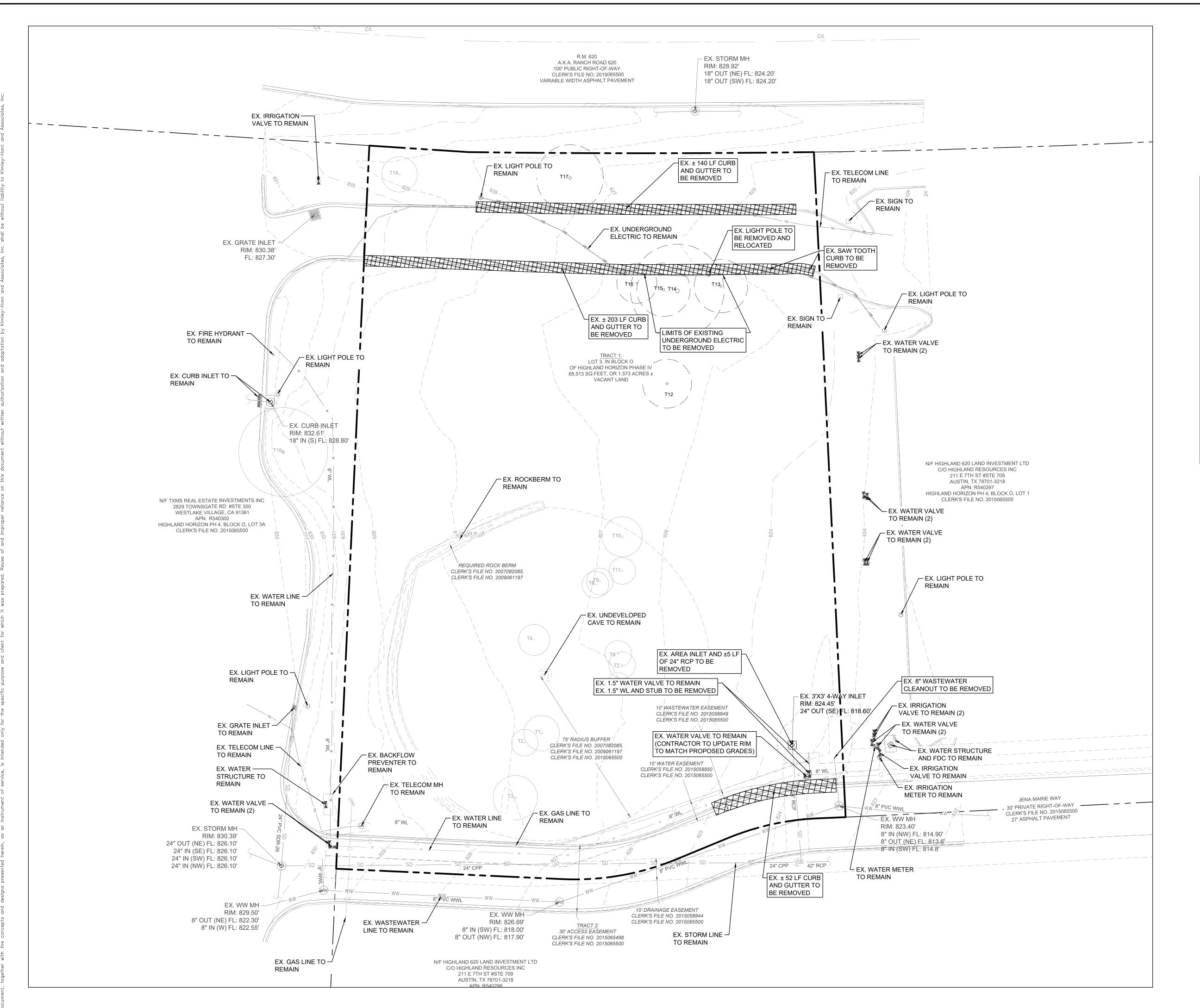
(FIRM) ECS SOUTHWEST, LP (PROJ./REPORT #) 17:6596 (DATE) 06/18/2024

THESE PLAN AND GENERAL NOTES REFER TO: GEOTECHNICAL ENGINEERING REPORT

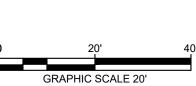
INCLUDING ALL REVISIONS AND ADDENDA TO THIS REPORT THAT MAY HAVE BEEN RELEASED AFTER THE NOTED DATE.

SHEET NUMBER

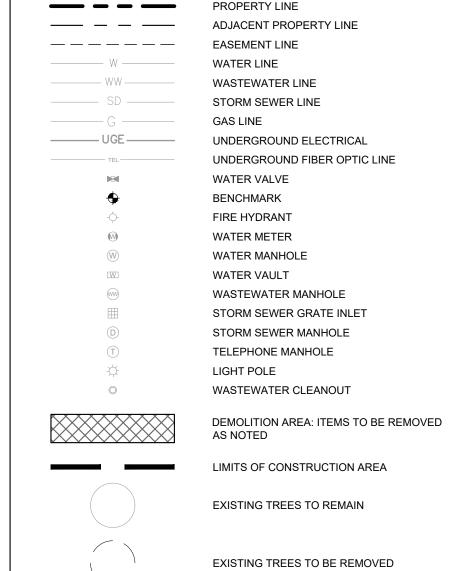
RYAN MCKAY 0/04/2024







# LEGEND



| TAG       | TRUNK | TREETYPE   |
|-----------|-------|------------|
| T1        | 8"    | OAK        |
| T2        | 6"    | OAK        |
| T3        | 10"   | OAK        |
| T4        | 7''   | OAK        |
| T5        | 6"    | OAK        |
| T6        | 5"    | OAK        |
| <b>T7</b> | 6''   | OAK        |
| T8        | 6''   | OAK        |
| T9        | 6''   | OAK        |
| T10       | 9''   | OAK        |
| T11       | 6''   | OAK        |
| T12       | 11"   | OAK        |
| T13       | 12"   | OAKOLUSTER |
| T14       | 21"   | OAK        |
| T15       | 12"   | OAK        |
| T16       | 9''   | OAKOLUSTER |
| T17       | 15"   | OAK        |
| T18       | 8''   | OAKOLUSTER |
| T19       | 20''  | OAK        |
|           |       |            |



BENCHMARKS

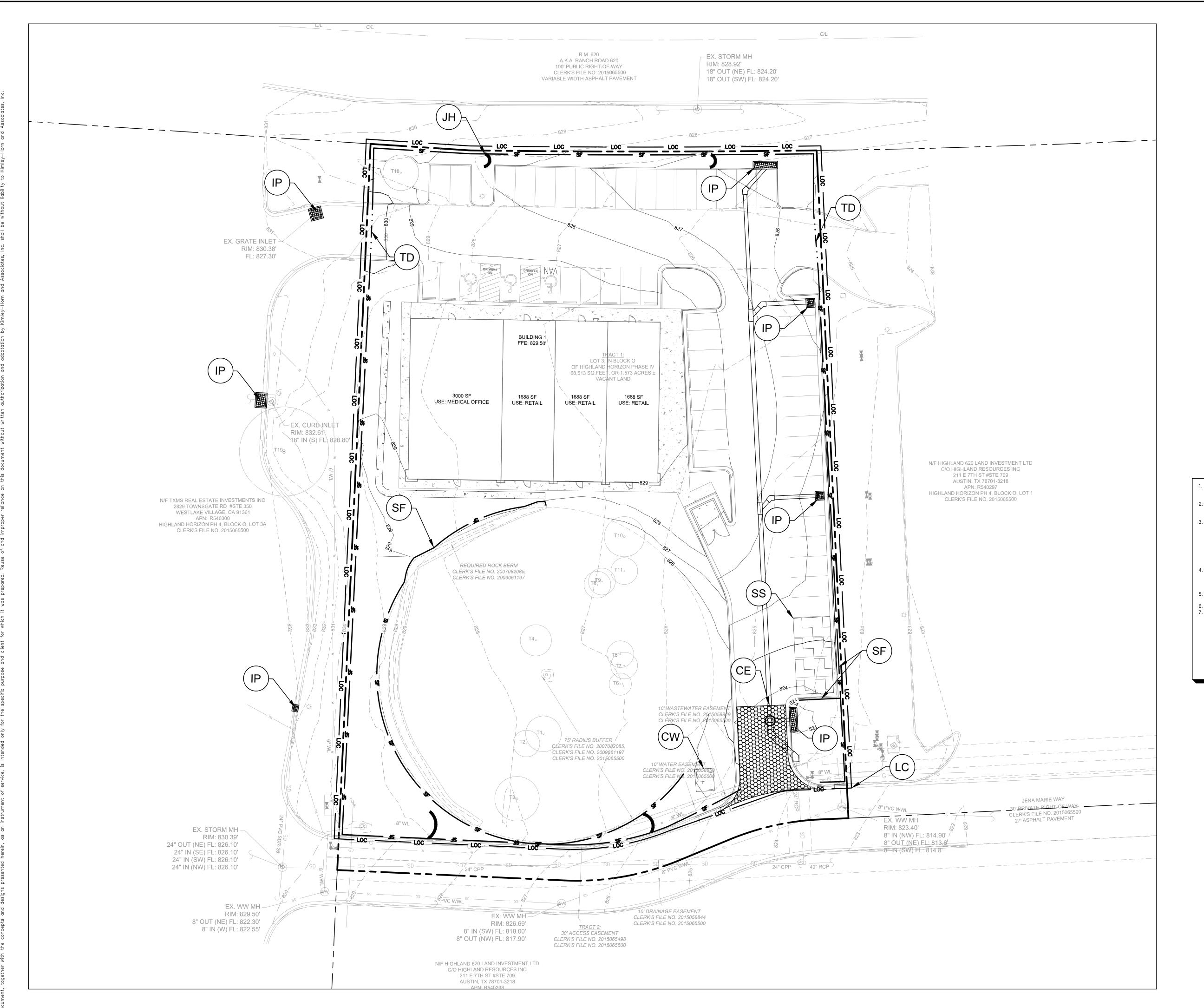
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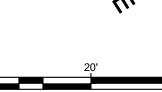
SHEET NUMBER 6 OF 21

10/04/2024

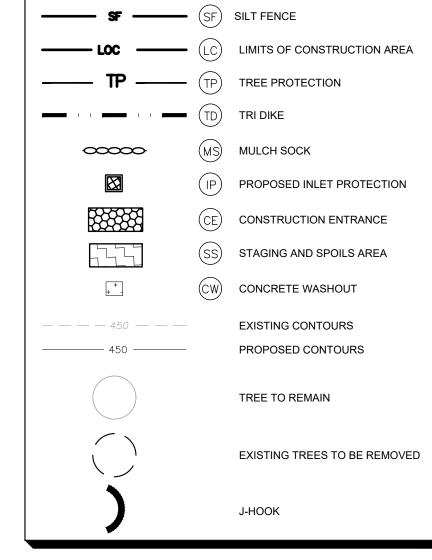
XISTING CONDITIONS AND DEMO PLAN







# LEGEND



# NOTES

1. CONTRACTOR IS SOLELY RESPONSIBLE FOR IMPLEMENTATION, MAINTENANCE, AND EFFECTIVENESS OF ALL SWPPP CONTROLS - CONTROLS SHOWN ON THIS SITE MAP ARE SUGGESTED CONTROLS ONLY. CONTRACTOR SHALL RECORD INSTALLATION, MAINTENANCE OR MODIFICATION,

AND REMOVAL DATES FOR EACH BMP EMPLOYED (WHETHER CALLED OUT ON ORIGINAL SWPPP OR NOT) DIRECTLY ON THE SITE MAP. TEMPORARY AND PERMANENT STABILIZATION PRACTICES AND BMP'S SHALL BE INSTALLED AT THE EARLIEST POSSIBLE TIME DURING THE CONSTRUCTION SEQUENCE. AS AN EXAMPLE, PERIMETER SILT FENCE SHALL BE INSTALLED BEFORE COMMENCEMENT OF ANY GRADING ACTIVITIES. OTHER BMP'S SHALL BE INSTALLED AS SOON AS PRACTICABLE AND SHALL BE MAINTAINED UNTIL FINAL SITE STABILIZATION IS ATTAINED. CONTRACTOR SHALL ALSO REFERENCE CIVIL AND LANDSCAPE PLANS SINCE PERMANENT STABILIZATION IS PROVIDED BY

BMP'S HAVE BEEN LOCATED AS INDICATED ON THIS PLAN IN ACCORDANCE WITH GENERALLY ACCEPTED ENGINEERING PRACTICES IN ORDER TO MINIMIZE SEDIMENT TRANSFER. FOR EXAMPLE: SILT FENCES LOCATED AT TOE OF SLOPE AND INLET PROTECTION FOR INLETS RECEIVING SEDIMENT FROM SITE RUN-OFF 5. ADDITIONAL EROSION AND SEDIMENTATION CONTROLS MAY BE REQUIRED BY DURING CONSTRUCTION.

THE SEQUENCE OF CONSTRUCTION SHOWN ABOVE 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 PHASIN 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.



10/04/2024

LANDSCAPING, THE BUILDING(S), AND SITE PAVING.

6. REFERENCE EROSION CONTROL NOTES AND DETAILS ON SHEET 21.



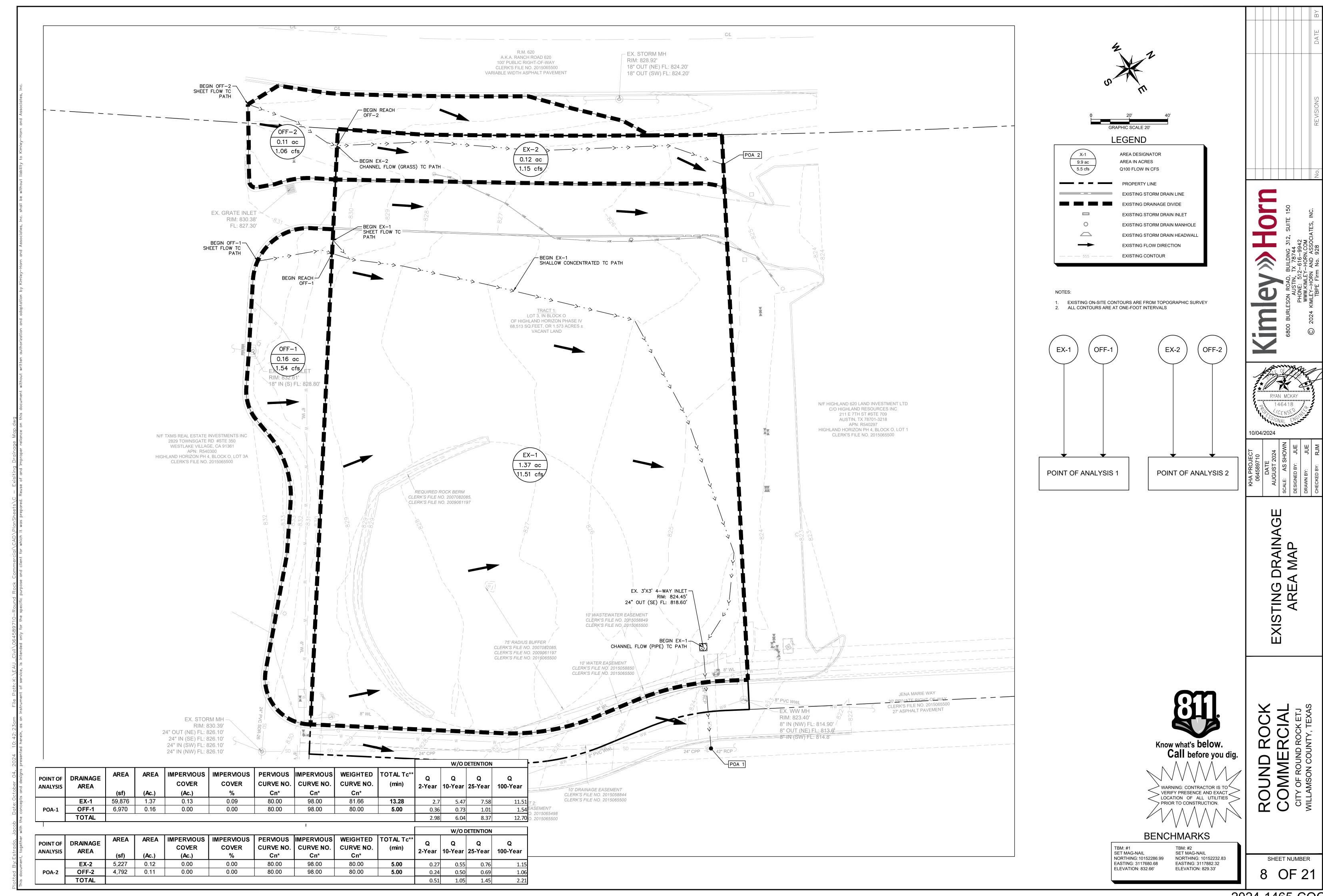
WARNING: CONTRACTOR IS TO
VERIFY PRESENCE AND EXACT
LOCATION OF ALL UTILITIES
PRIOR TO CONSTRUCTION.

BENCHMARKS

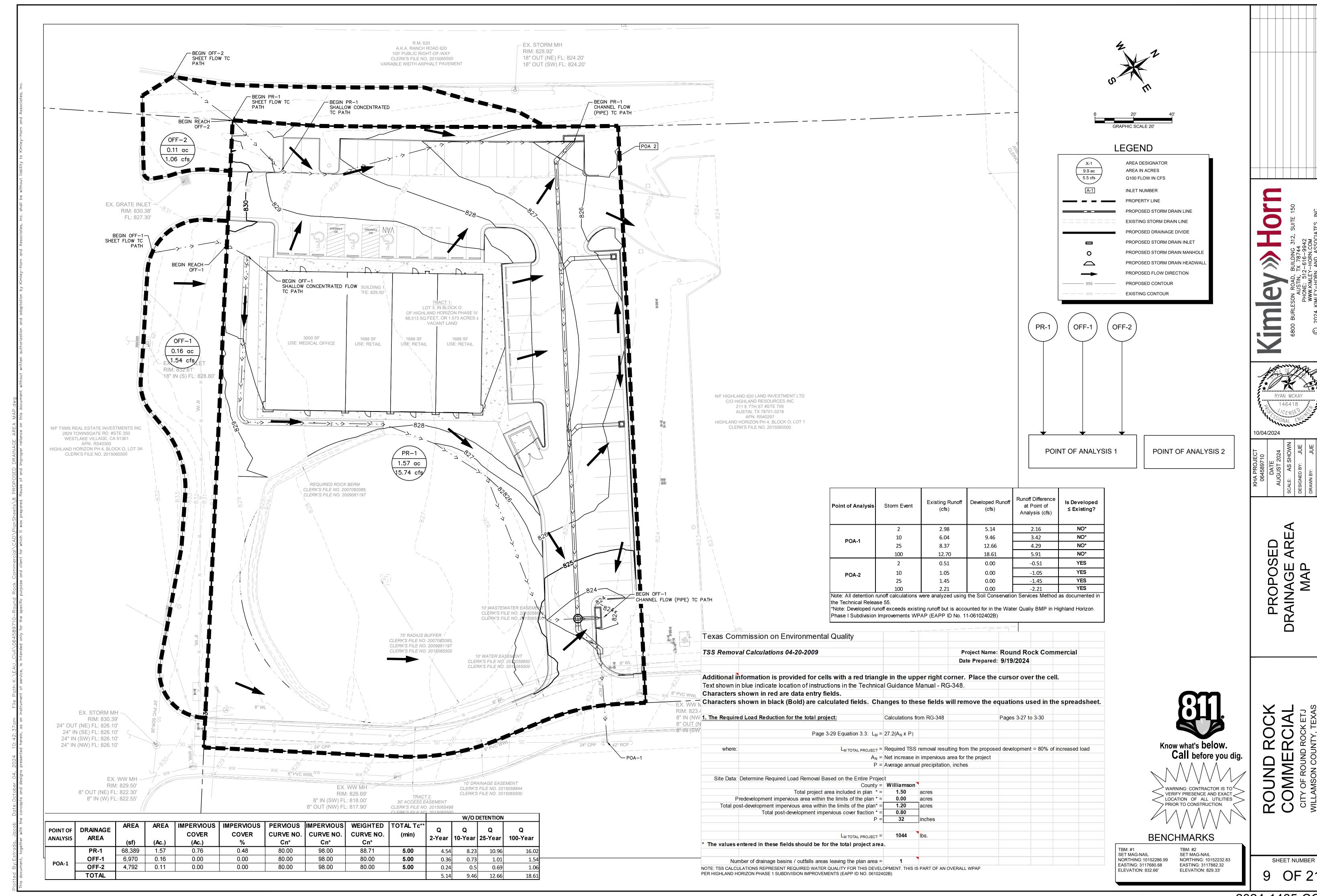
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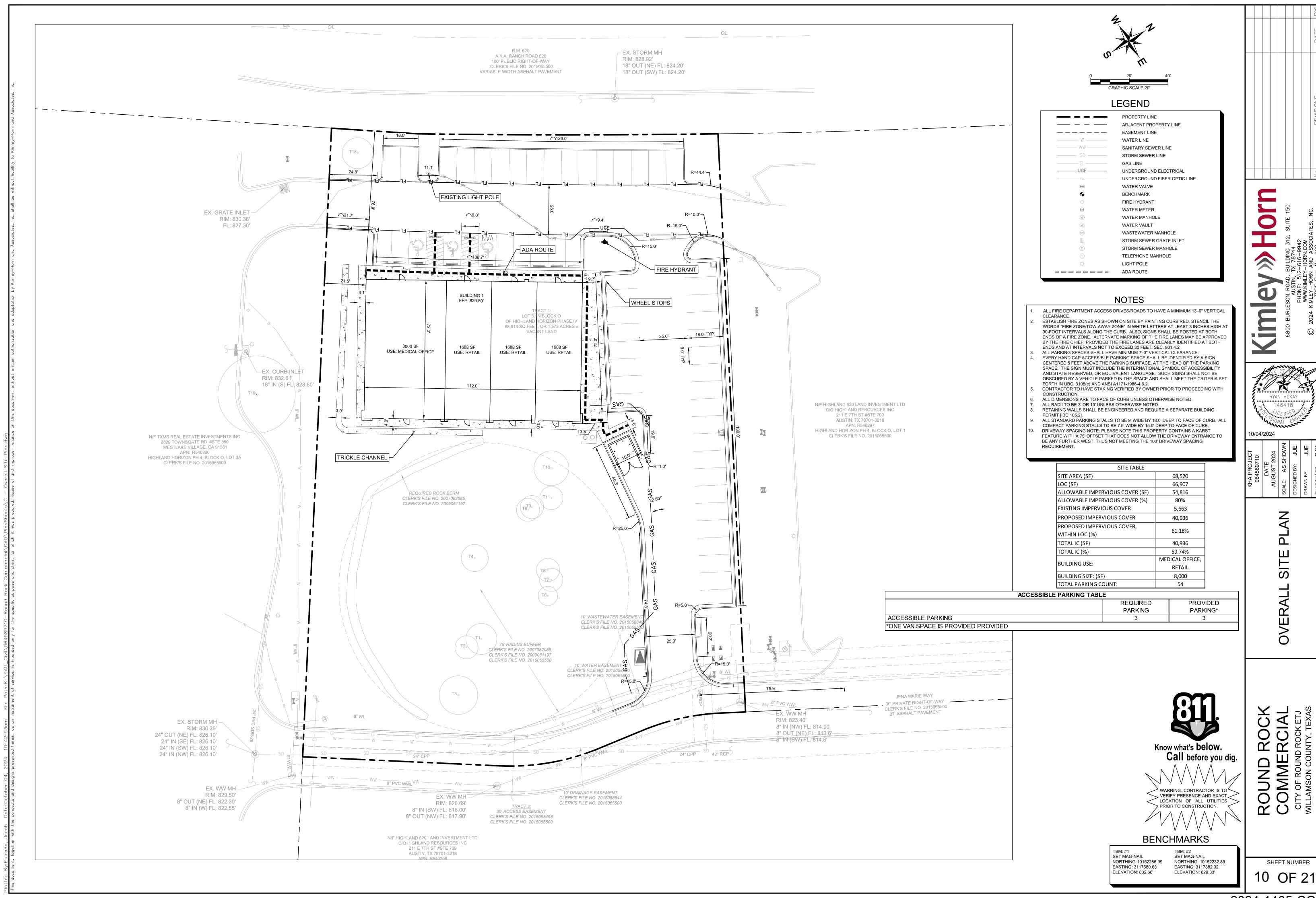
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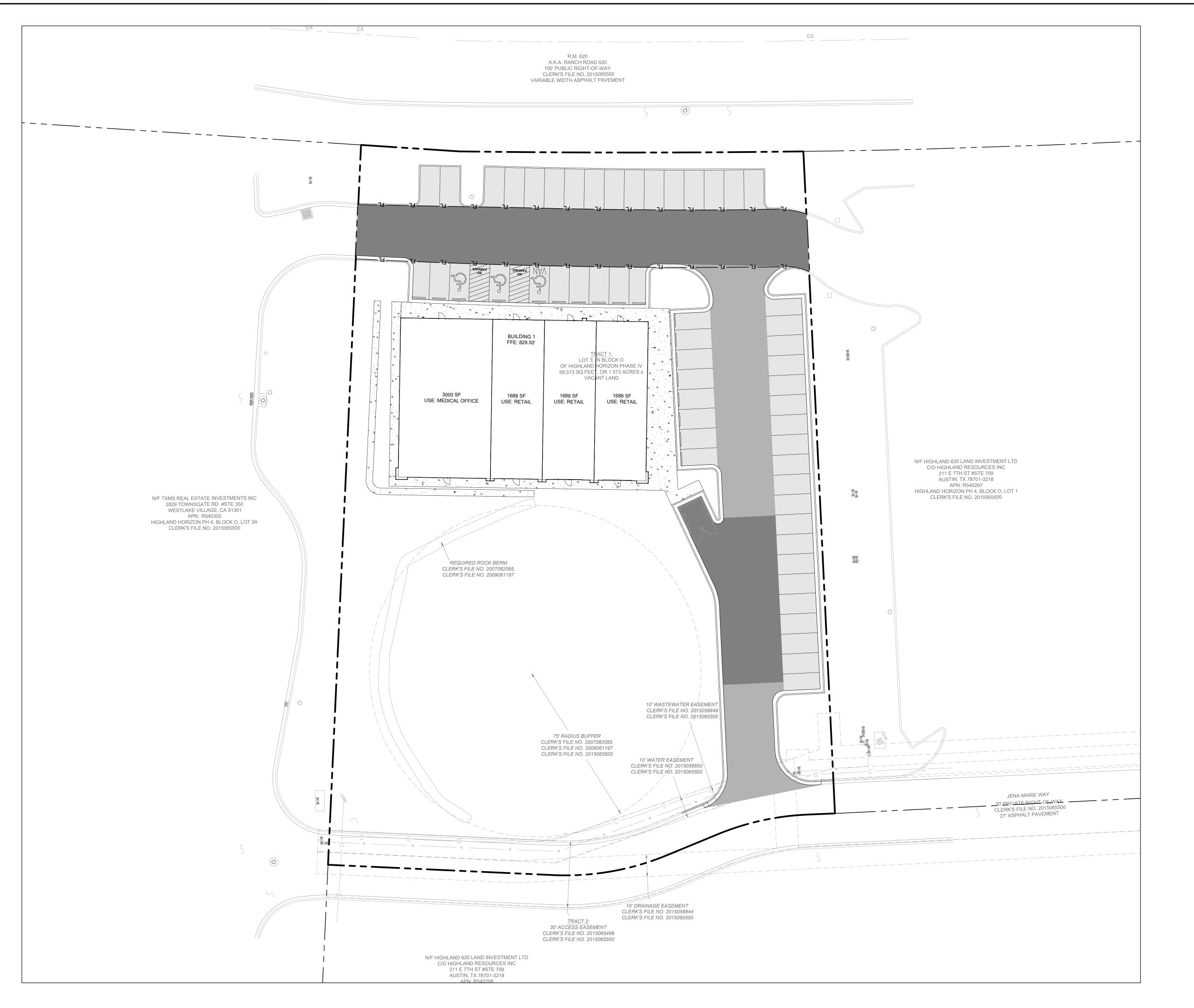
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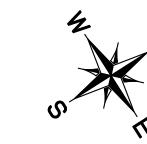


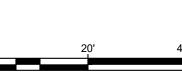
2024-1465-COC









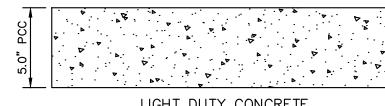


LEGEND

PROPERTY LINE

FL PROPOSED FIRE LANE SIDEWALK PAVEMENT HEAVY DUTY PAVEMENT MEDIUM DUTY PAVEMENT LIGHT DUTY PAVEMENT

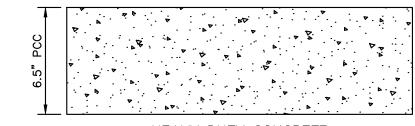
> REFER TO GEOTECHNICAL REPORT BY ECSSOUTHWEST, LLP GEOTECH PROJECT NO. <u>17:6596</u> DATED: <u>06/18/2024</u>



LIGHT DUTY CONCRETE
PAVEMENT SECTION
REFER TO GEOTECH PROJECT NO. 17:6596



MODERATE DUTY CONCRETE PAVEMENT SECTION
REFER TO GEOTECH PROJECT NO. 17:6596



HEAVY DUTY CONCRETE
PAVEMENT SECTION
REFER TO GEOTECH PROJECT NO. 17:6596



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

BENCHMARKS

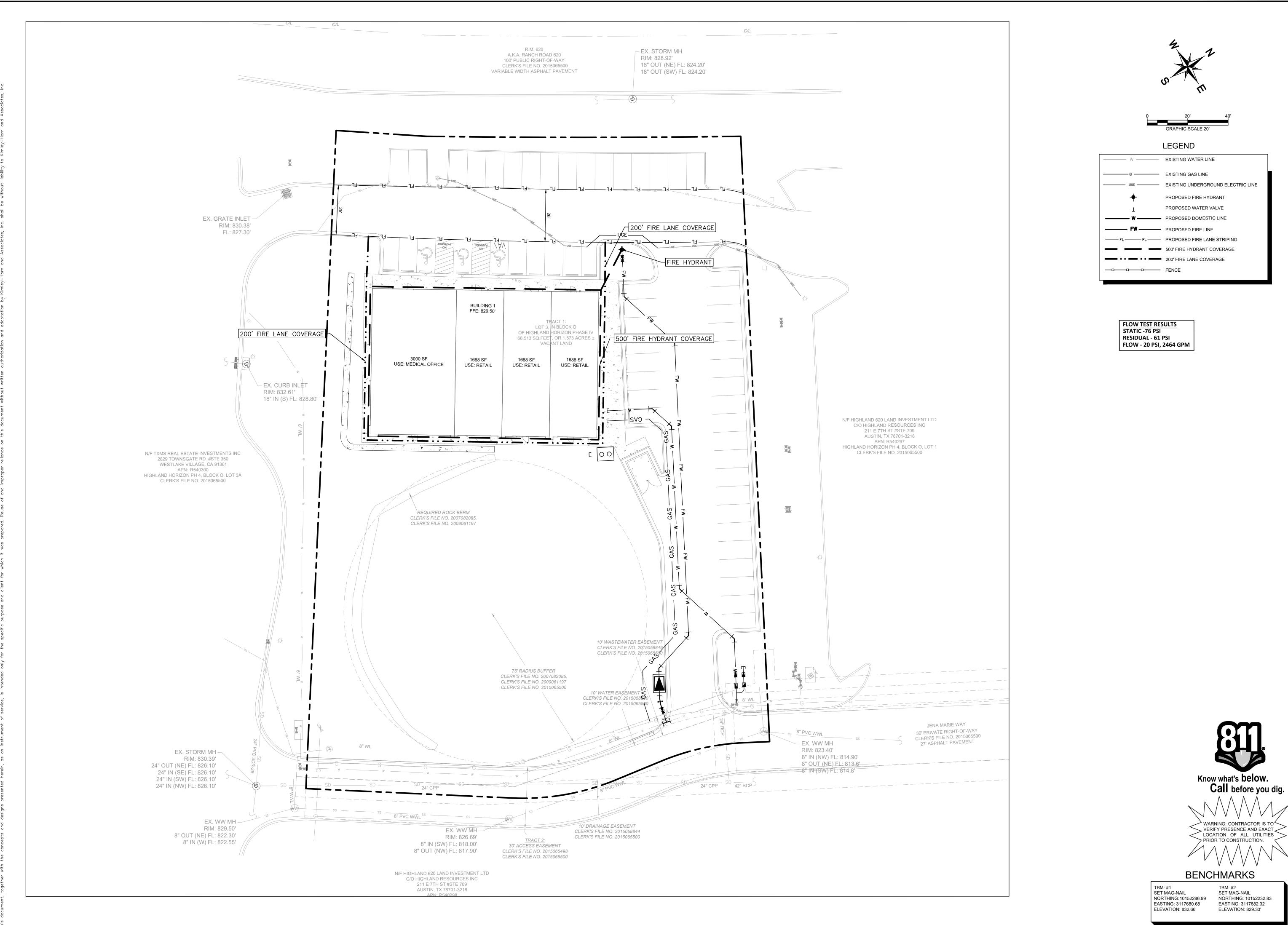
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ELEVATION: 832.66' ELEVATION: 829.33'

SHEET NUMBER 11 OF 21

RYAN MCKAY

**PAVING** 

10/04/2024

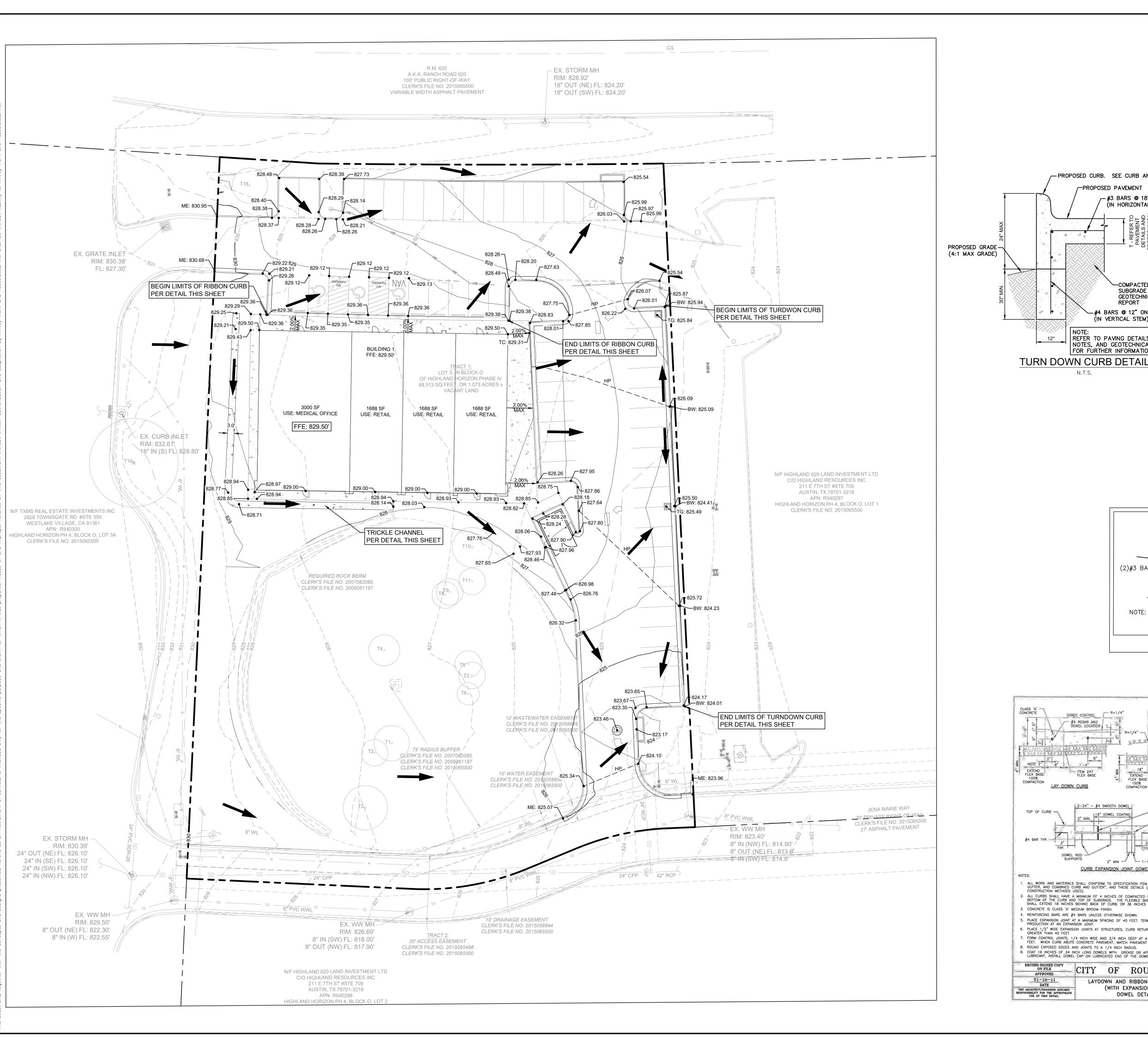


EXISTING UNDERGROUND ELECTRIC LINE

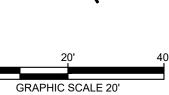
10/04/2024

PROTE( PLAN

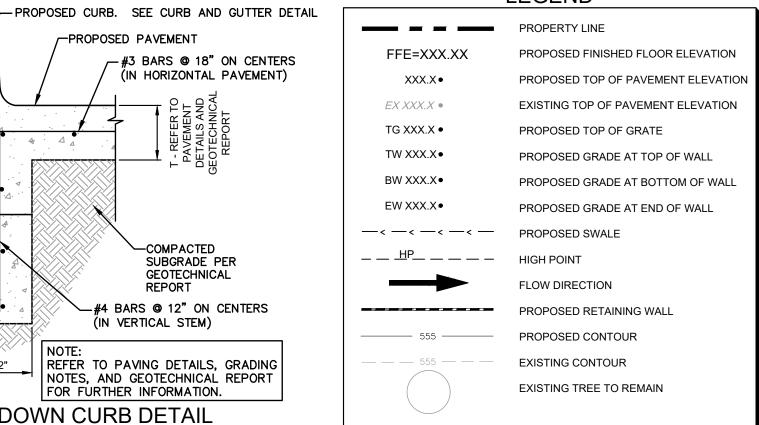
SHEET NUMBER 12 OF 21





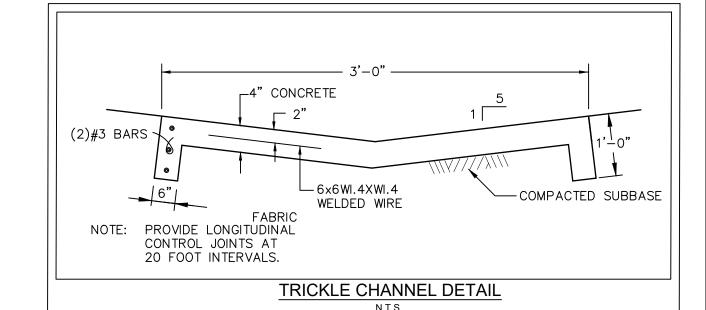


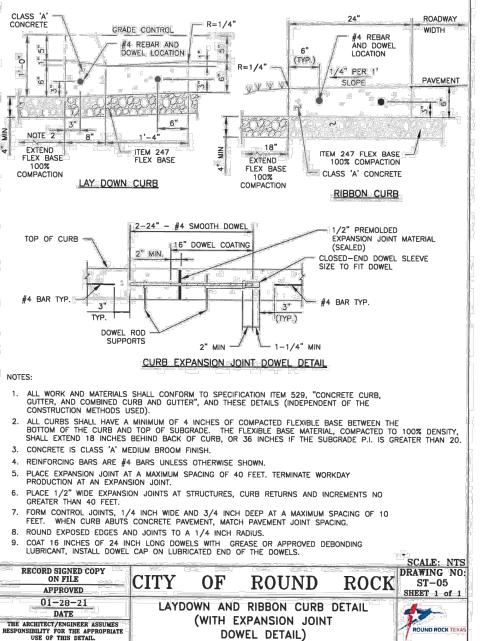
# LEGEND



# NOTES

- ALL PROPOSED ELEVATIONS ARE TOP OF PAVEMENT OR NATURAL GROUND UNLESS OTHERWISE NOTED. ALL TOP OF WALL ELEVATIONS ARE TO TOP OF GRADE AT WALL.
- ALL BOTTOM OF WALL ELEVATIONS ARE TO BOTTOM OF GRADE AT WALL. 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. MAINTAIN EXISTING GRADE IN TREE WELLS. CONTRACTOR TO ENSURE POSITIVE DRAINAGE TO AREA INLETS.





-PROPOSED PAVEMENT

-#3 BARS @ 18" ON CENTERS

(IN HORIZONTAL PAVEMENT)

-COMPACTED

SUBGRADE PER

GEOTECHNICAL

#4 BARS @ 12" ON CENTERS

(IN VERTICAL STEM)

REFER TO PAVING DETAILS, GRADING

NOTES, AND GEOTECHNICAL REPORT

FOR FURTHER INFORMATION.

N.T.S.



BENCHMARKS

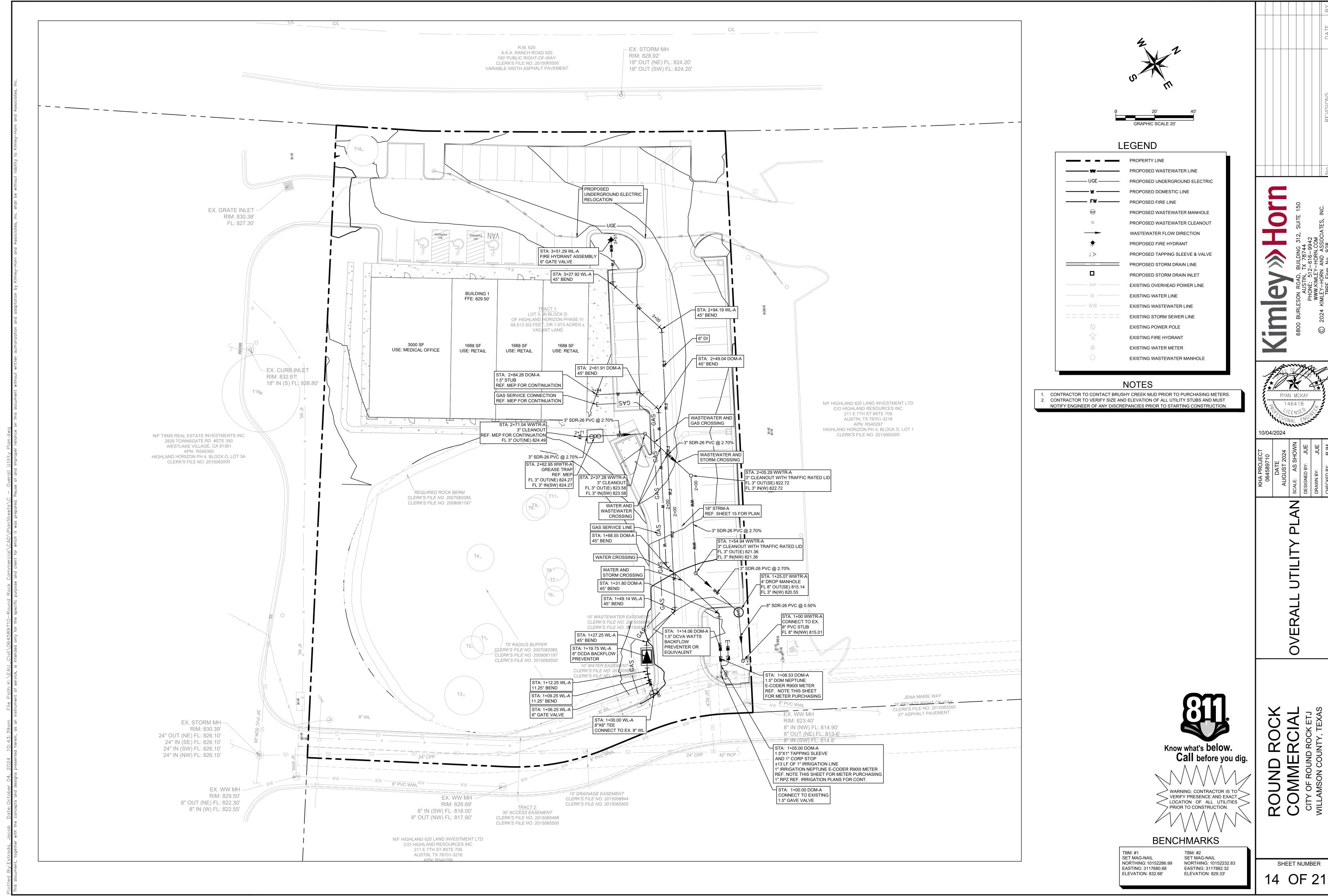
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RYAN MCKAY

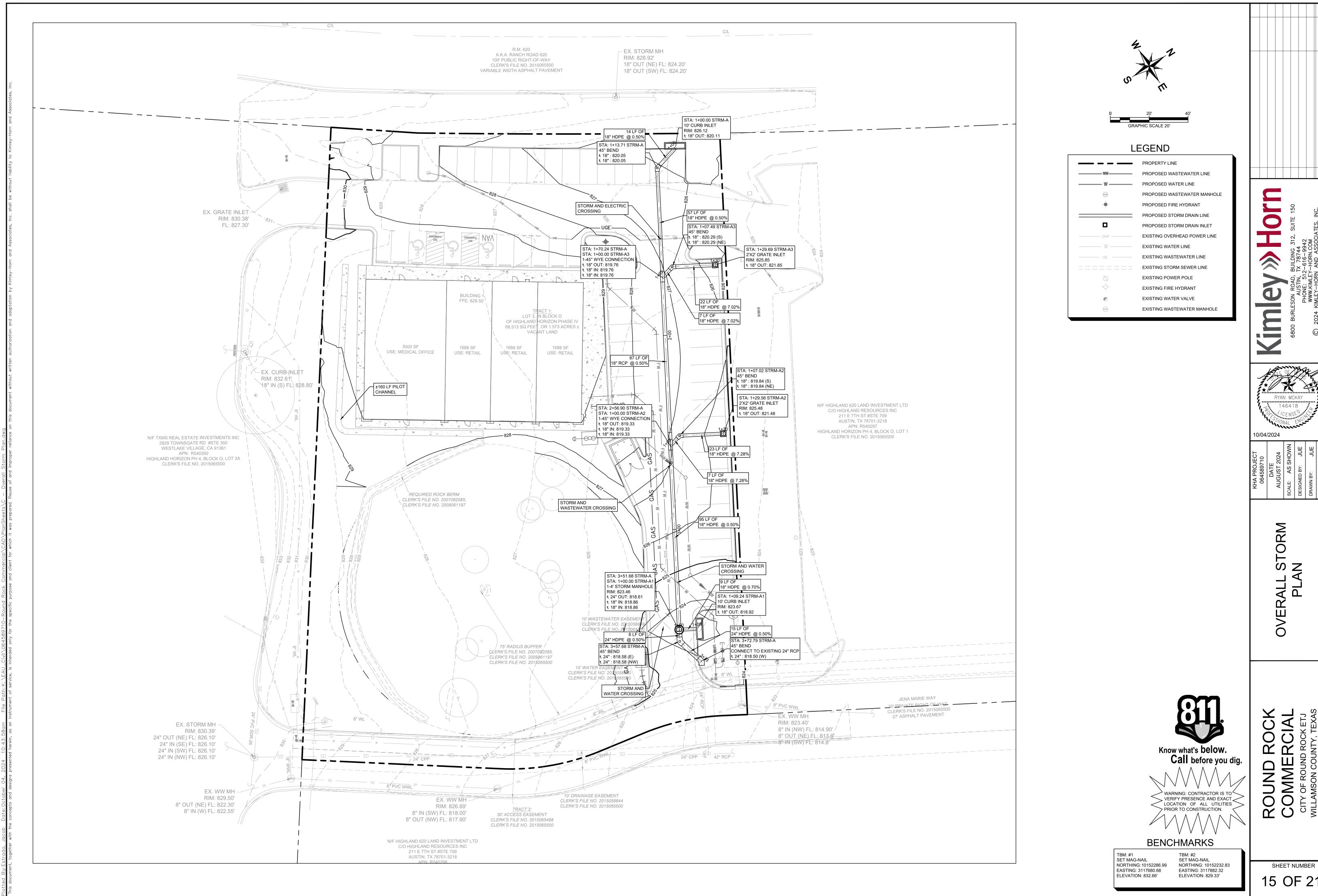
GRADING

10/04/2024

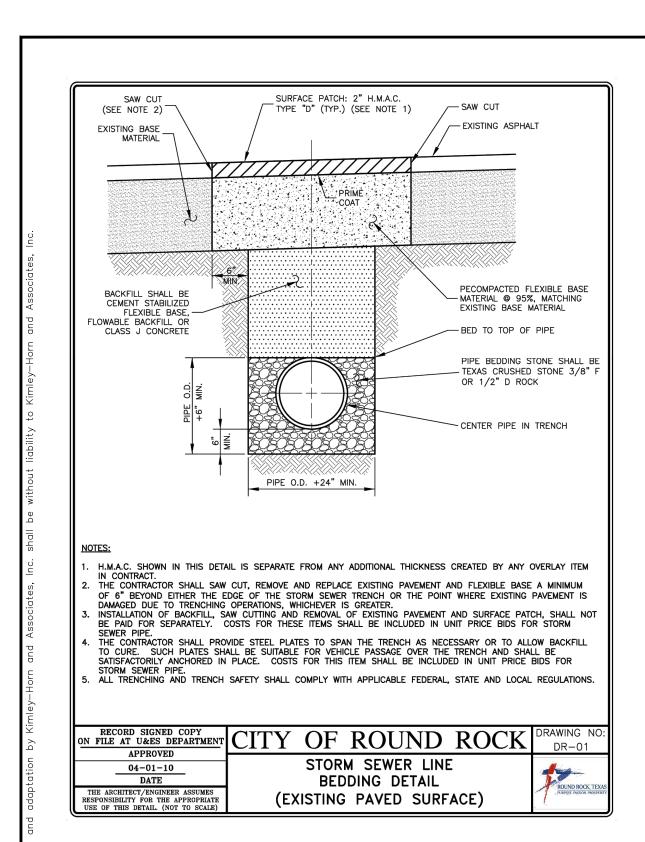
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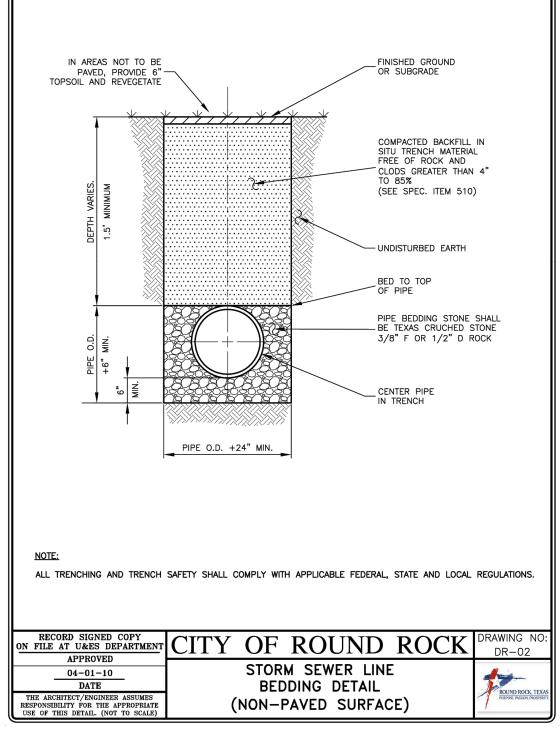


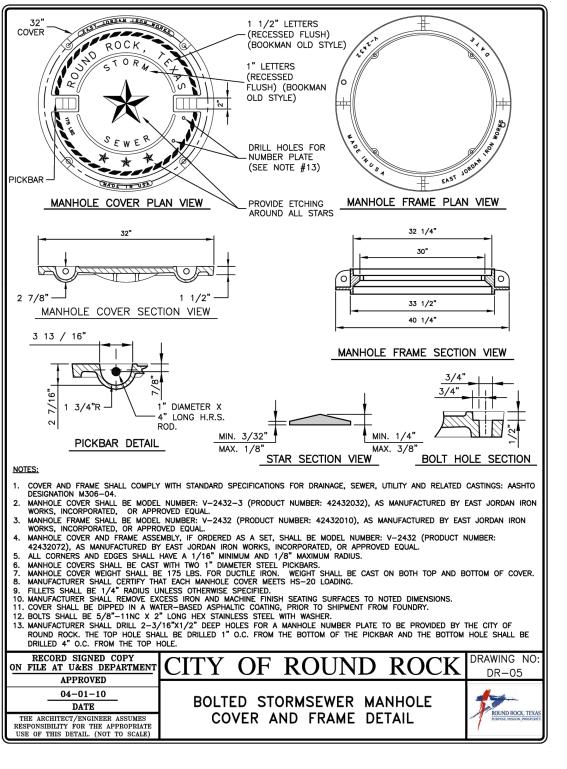
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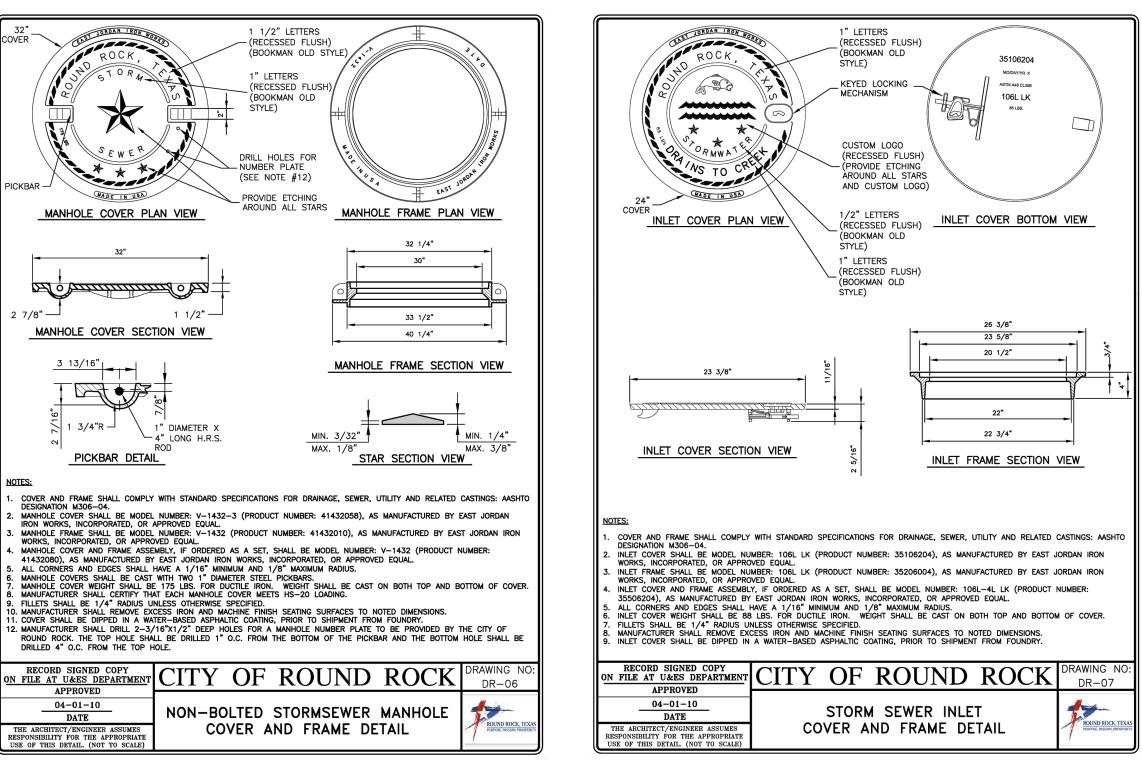


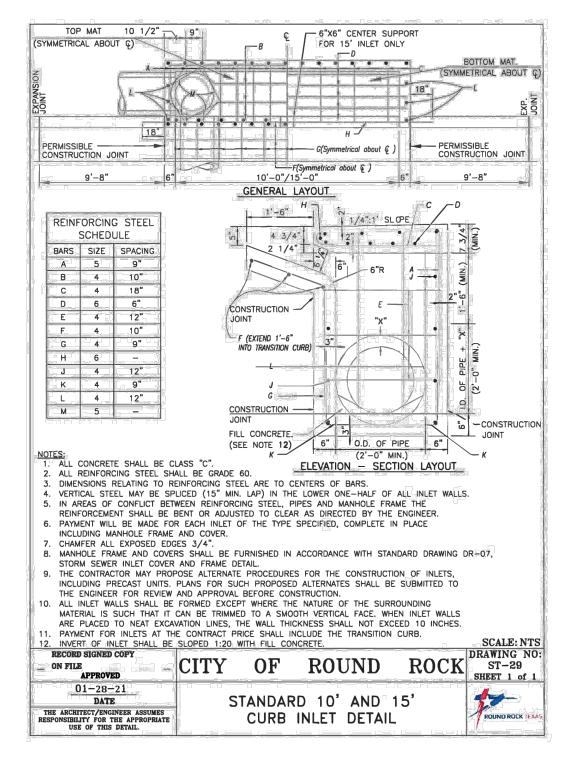
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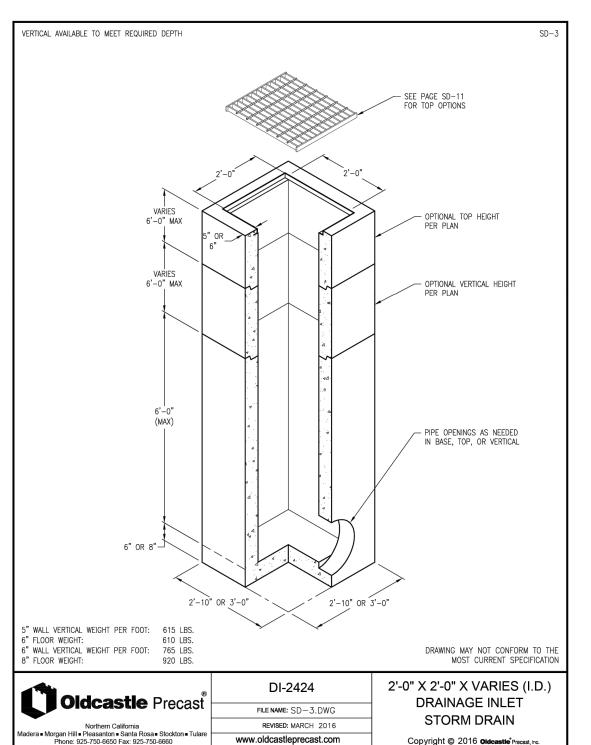




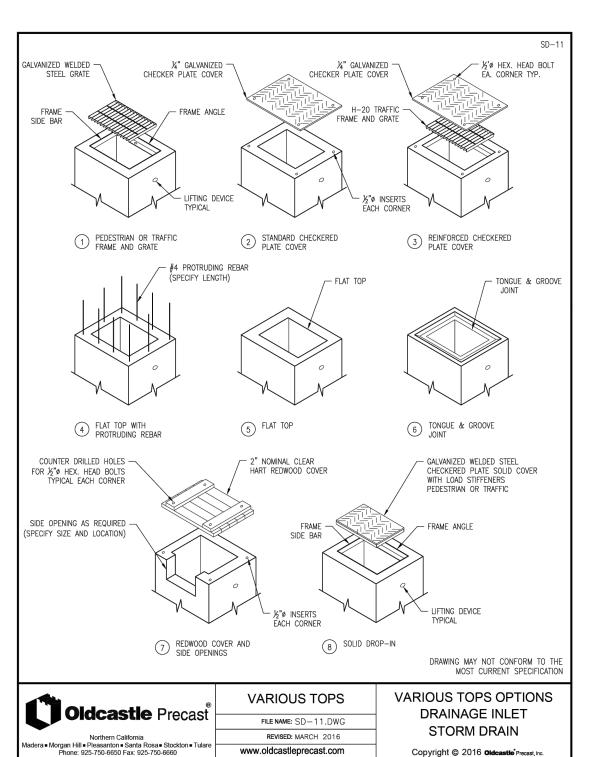


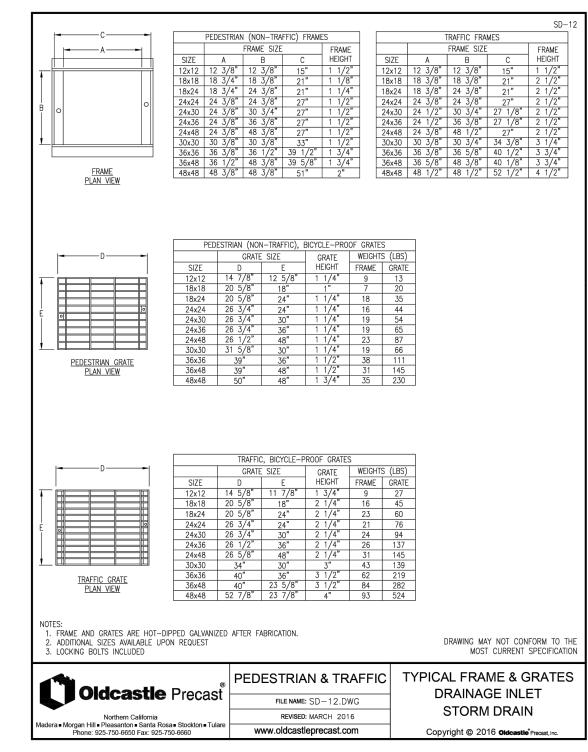






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(BOOKMAN OLD STY

(RECESSED FLUSH)

(BOOKMAN OLD

1" LETTERS

NUMBER PLATE

(SEE NOTE #12)

PROVIDE ETCHING

ON FILE AT U&ES DEPARTMENT CITY OF ROUND ROCK DR-06

NON-BOLTED STORMSEWER MANHOLE

COVER AND FRAME DETAIL

AROUND ALL STARS

MANHOLE FRAME PLAN VIEW

33 1/2"

40 1/4"

MANHOLE FRAME SECTION VIEW

STAR SECTION VIEW"

MADE IN USA

MANHOLE COVER PLAN VIEW

A CAMMINION OF STATE OF STATE

MANHOLE COVER SECTION VIEW

PICKBAR DETAIL

1" DIAMETER >

─ 4" LONG H.R.S.

3 13/16"

1 3/4"R —

04-01-10
DATE
THE ARCHITECT/ENGINEER ASSUMES

2 7/8"—





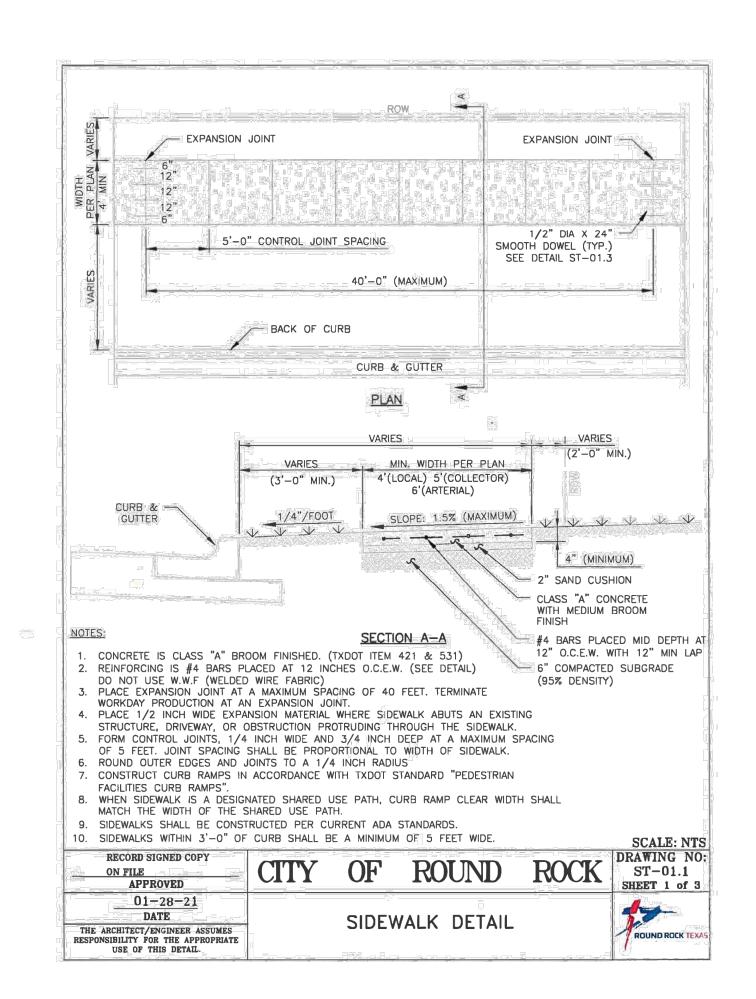
RYAN MCKAY

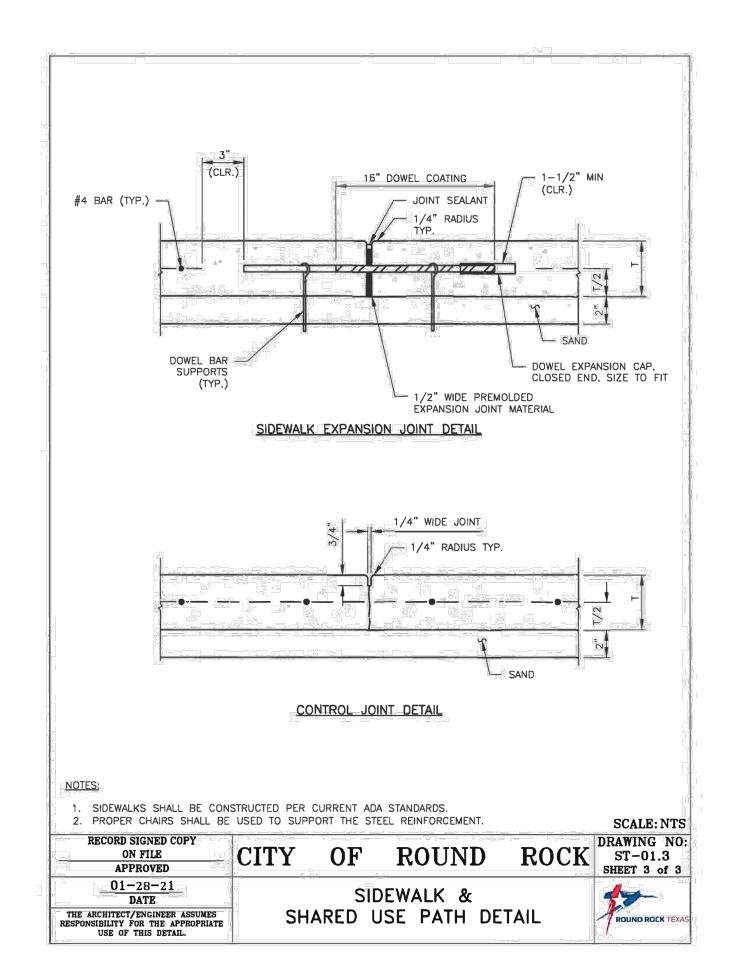
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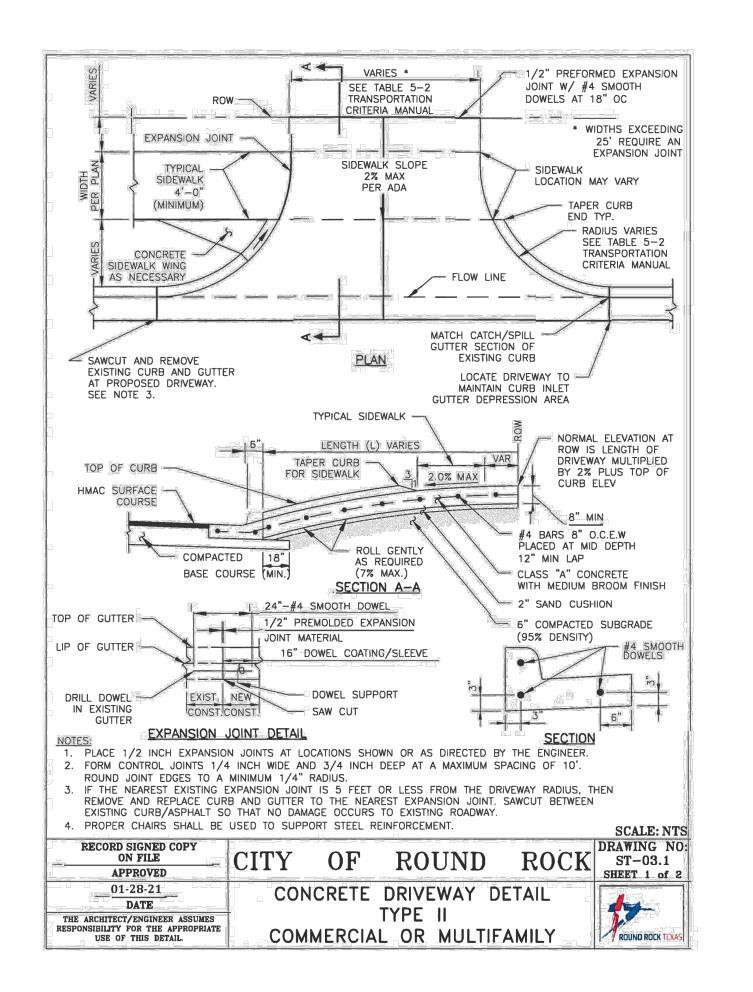
10/04/2024

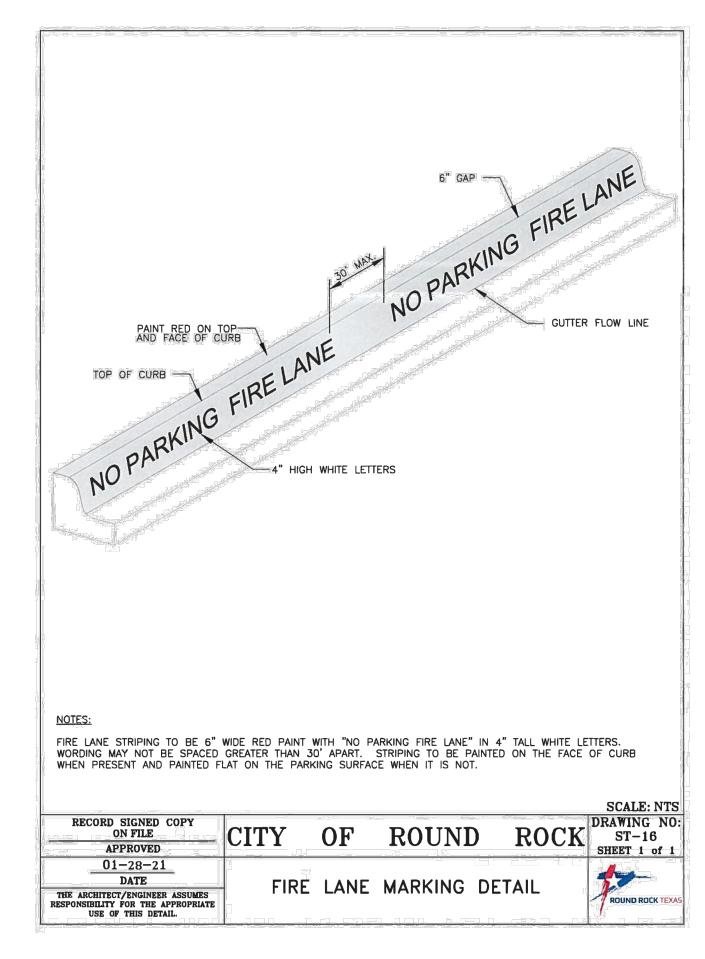
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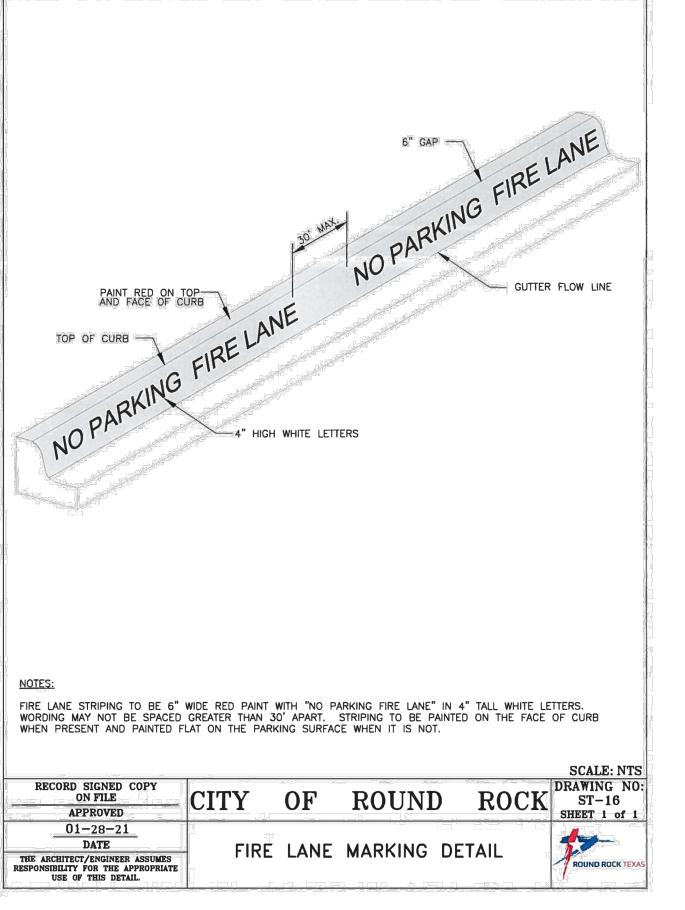
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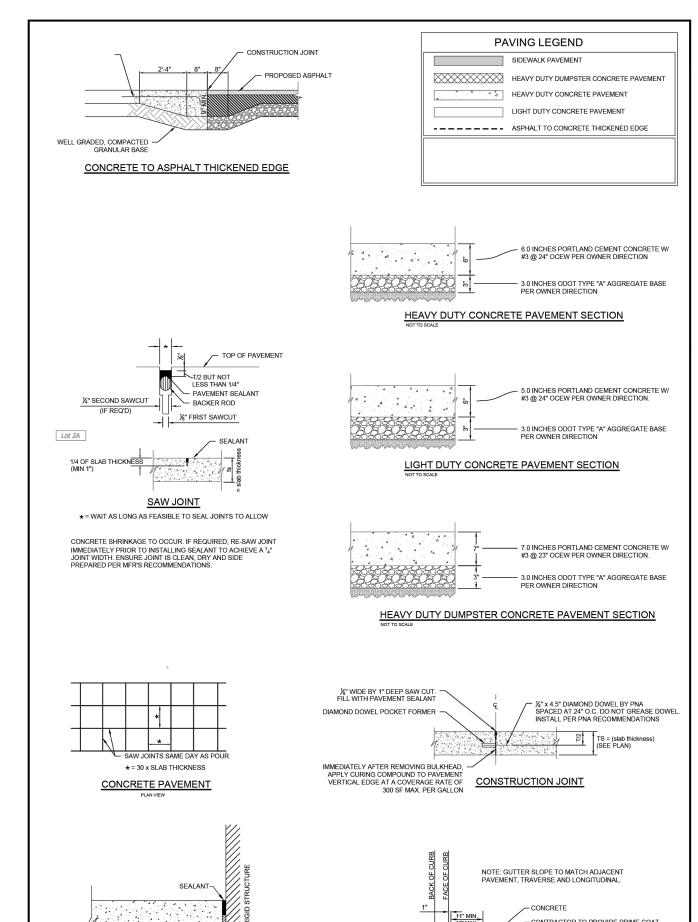












CURB & GUTTER DETAIL

PROVIDE ISOLATION JOINT WHERE CONCRETE PAVEMENT ABUTS A RIGID STRUCTURE

ISOLATION JOINT

GRAY STANDARD **TYPICAL** PAVING

**DETAILS** 

4

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A

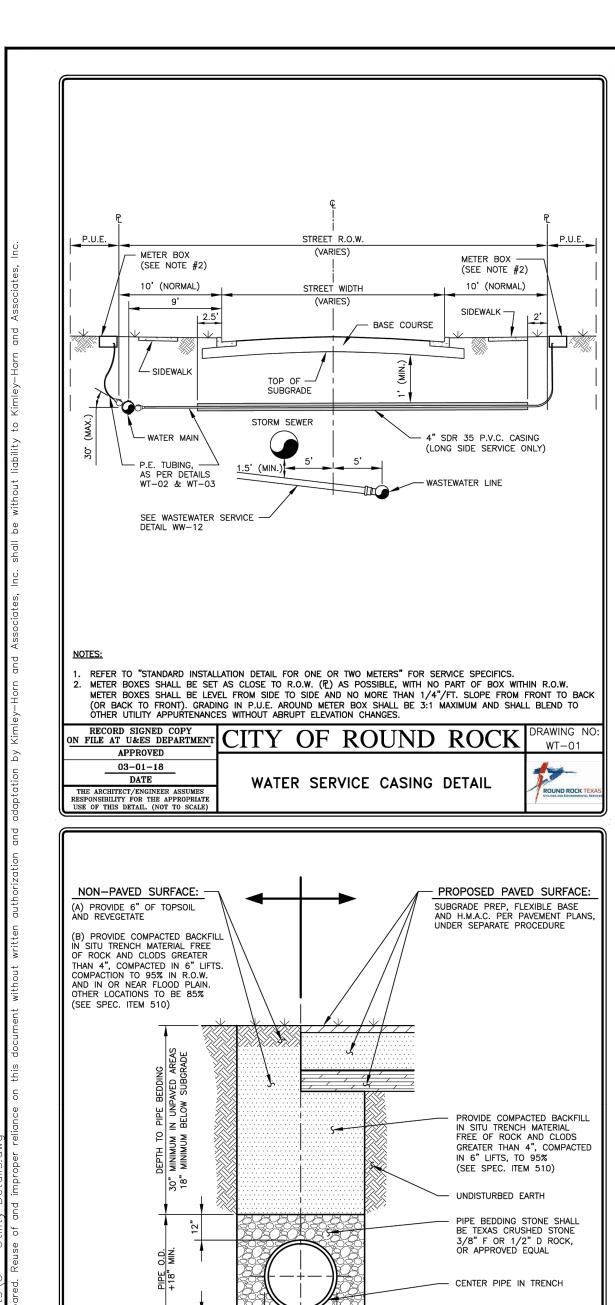


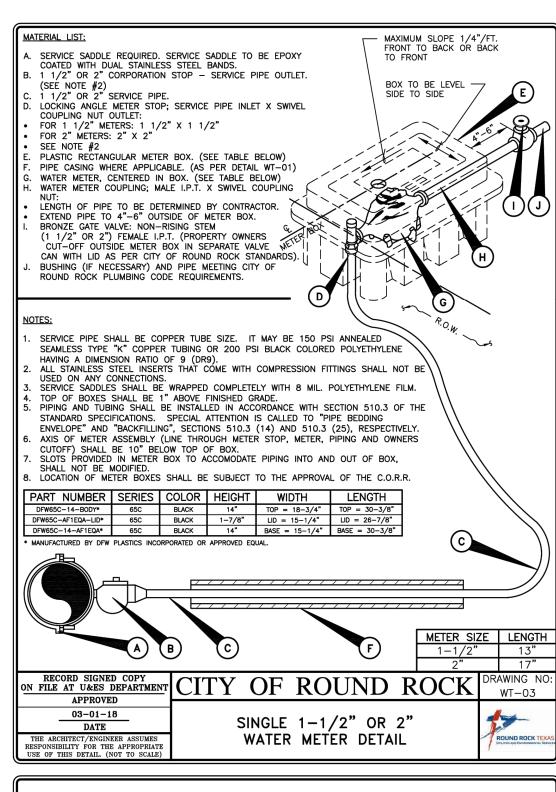
RYAN MCKAY 146418

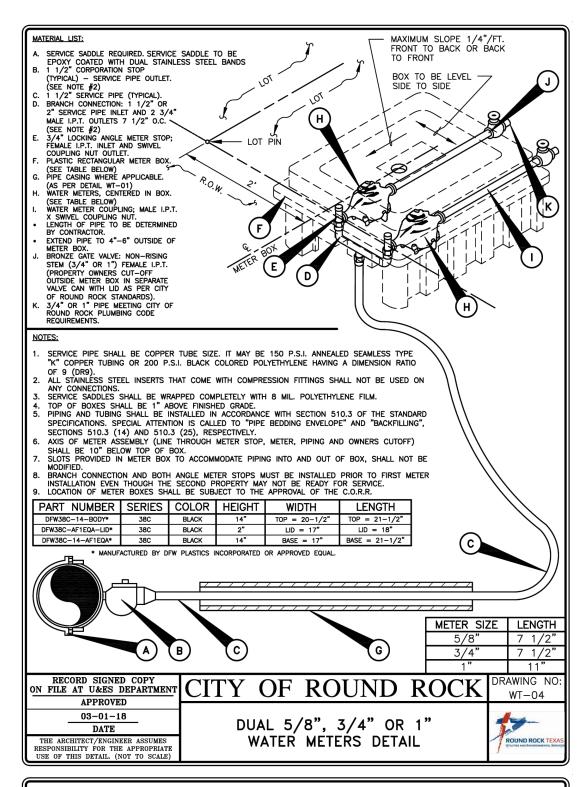
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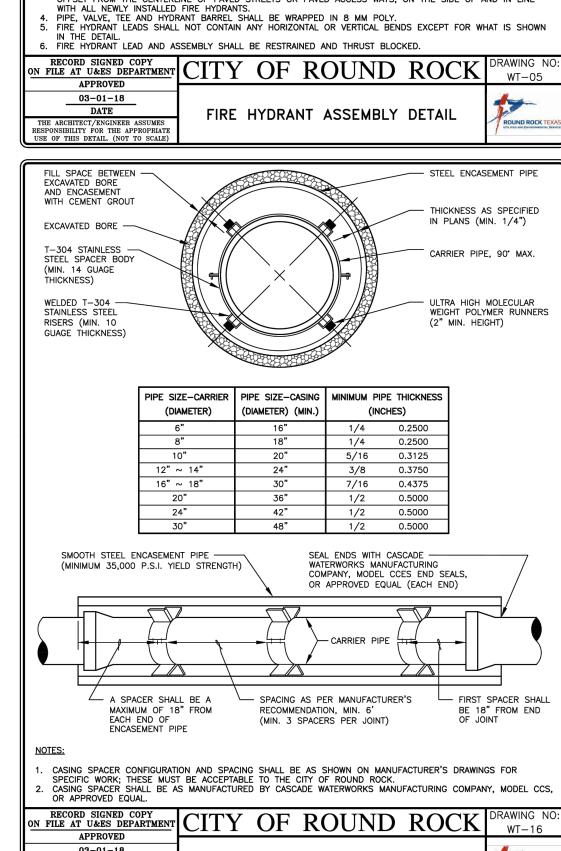
ROUND ROCK
COMMERCIAL
CITY OF ROUND ROCK ETJ
WILLAMSON COUNTY, TEXAS

SHEET NUMBER 17 OF 21



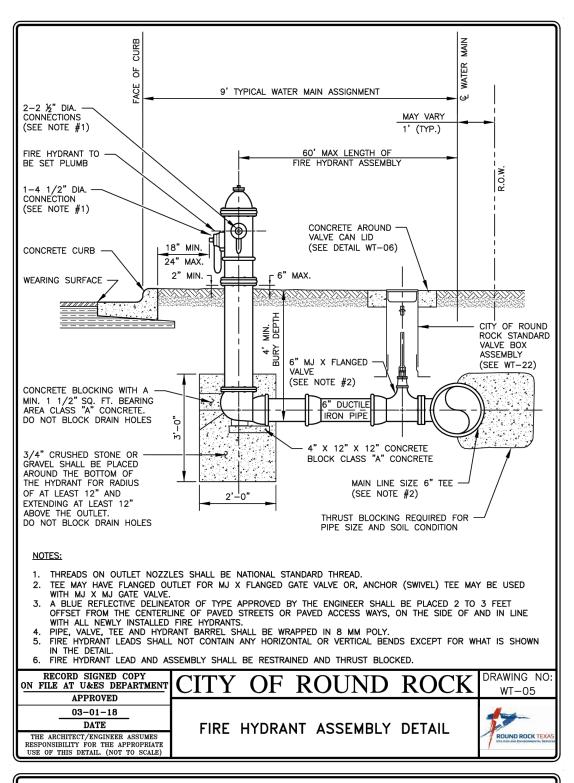


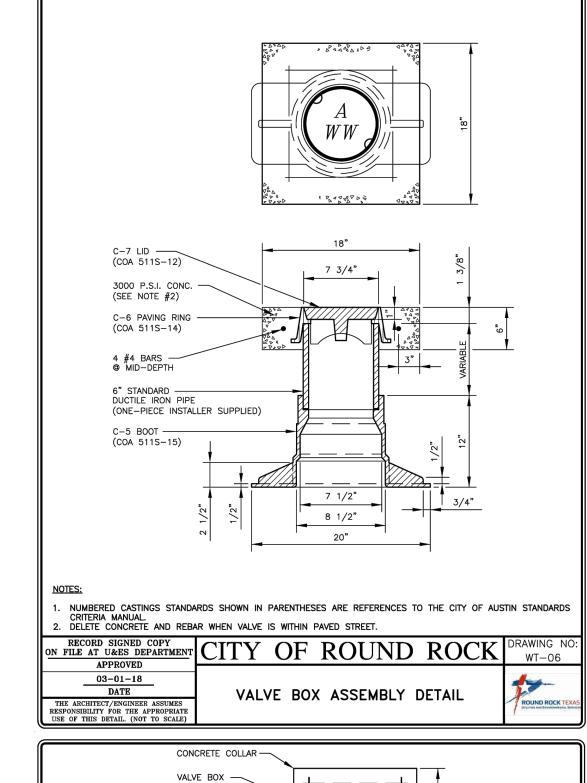


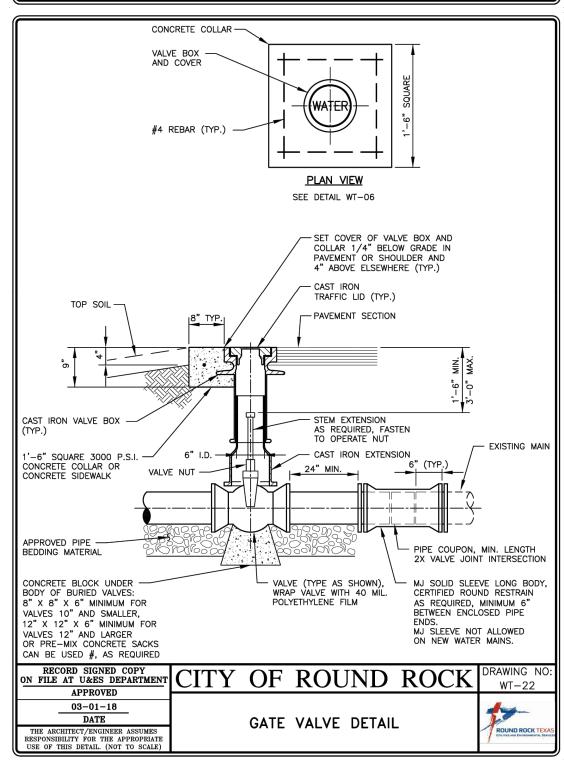


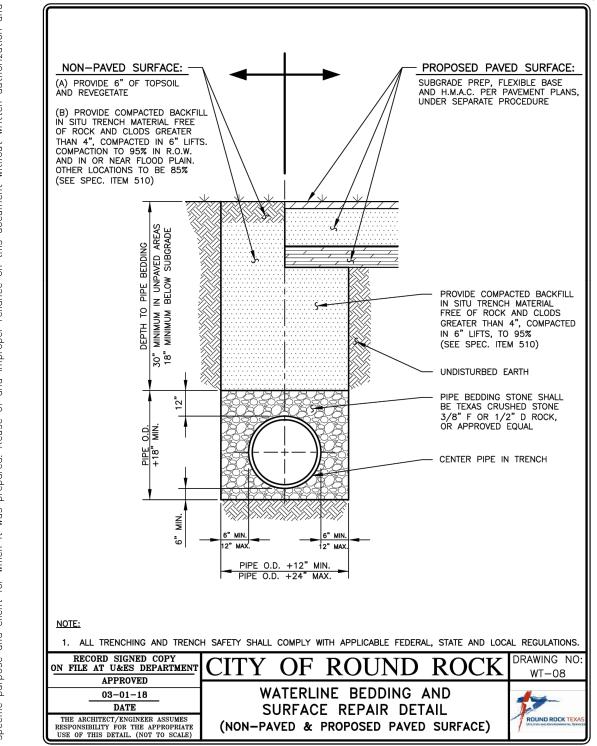
PIPE ENCASEMENT DETAIL

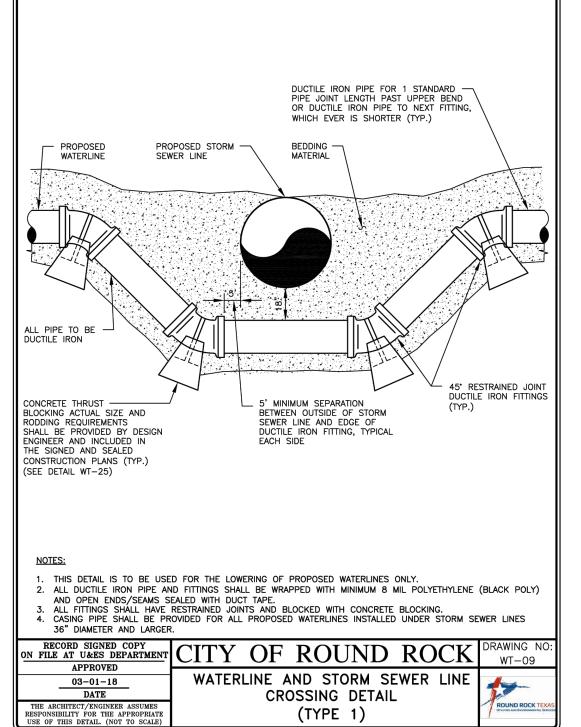
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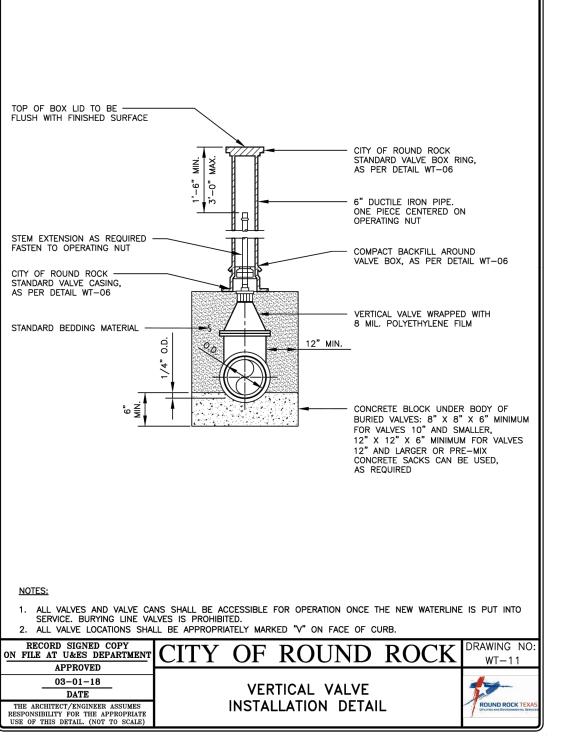


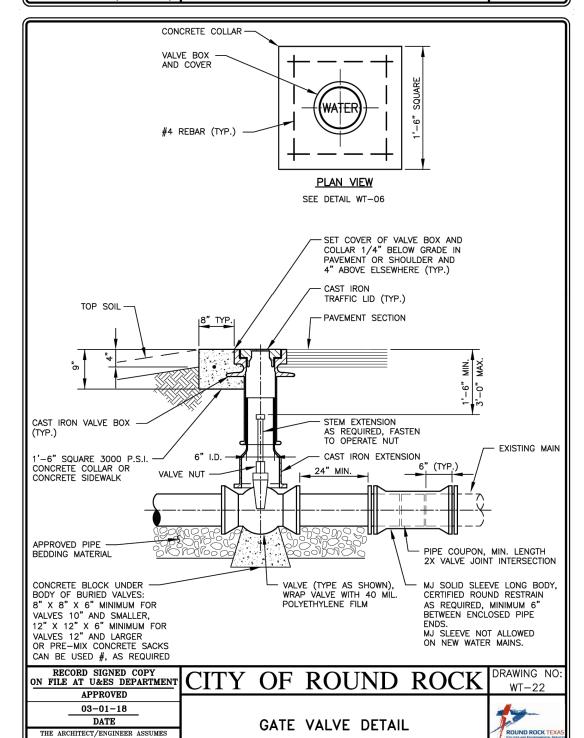












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RYAN MCKAY

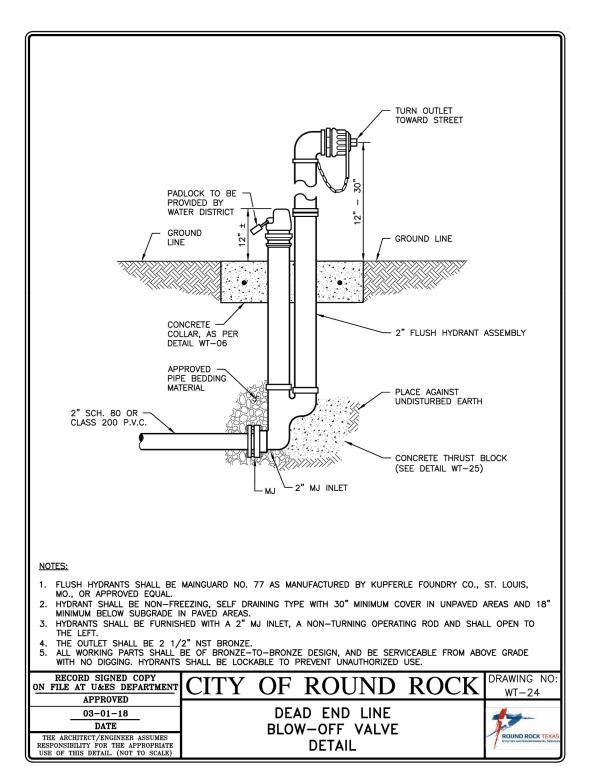
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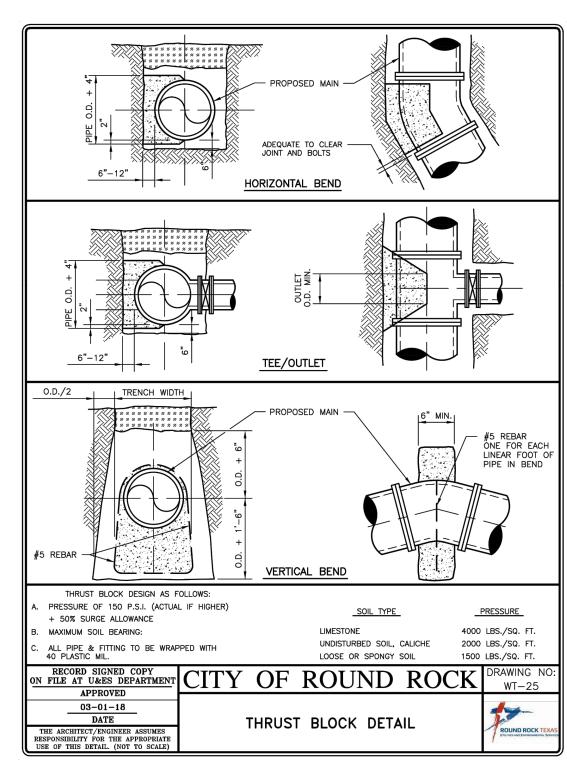
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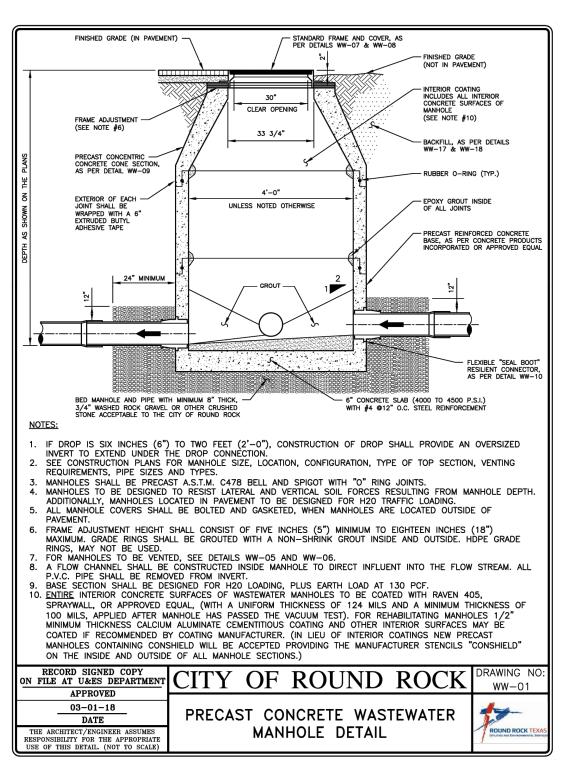
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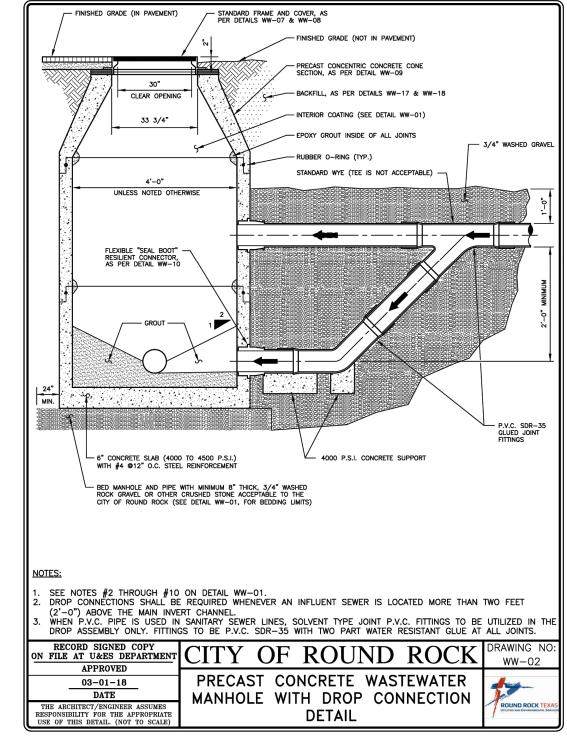
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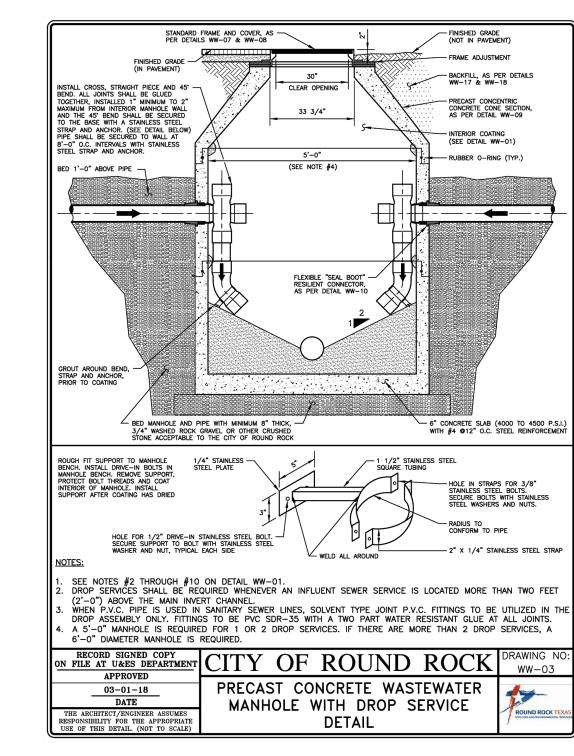
SHEET NUMBER 18 OF 21

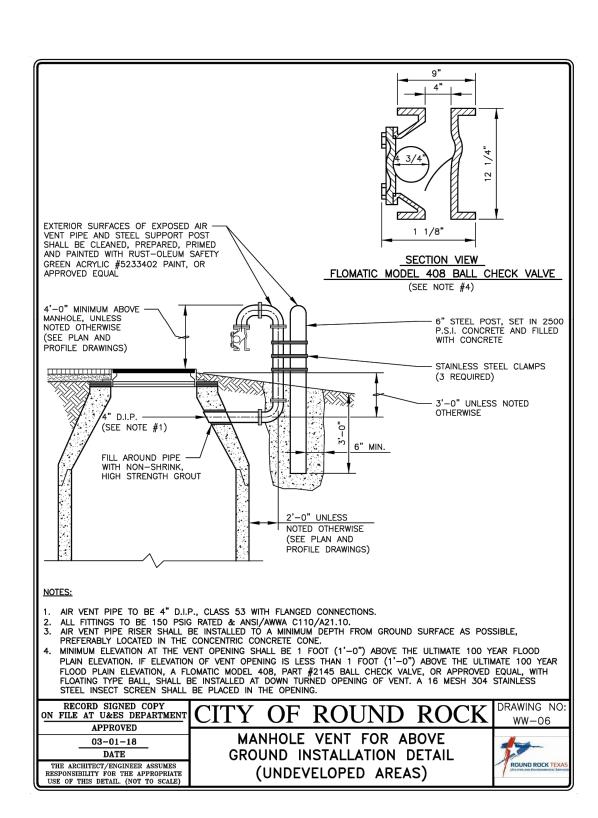


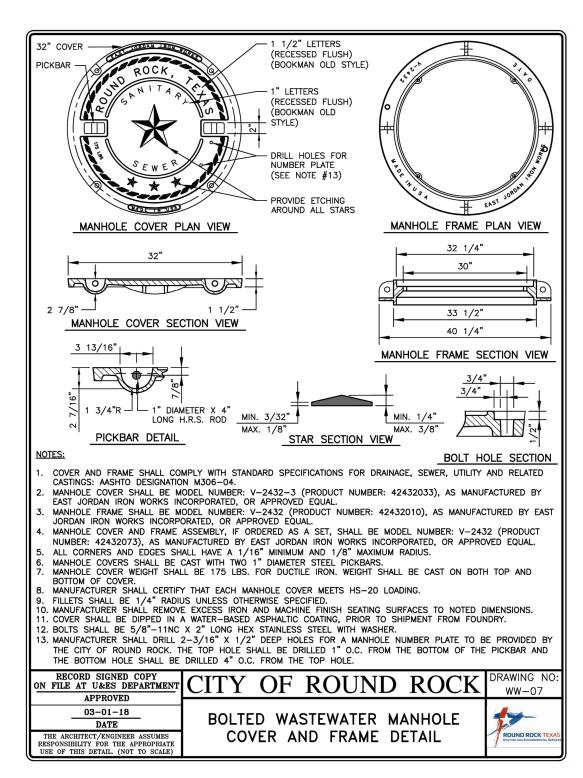


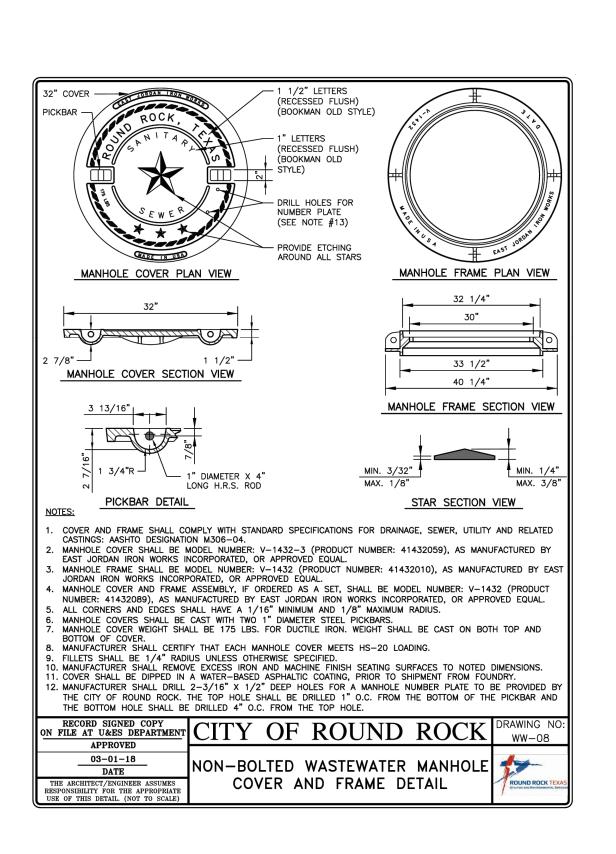


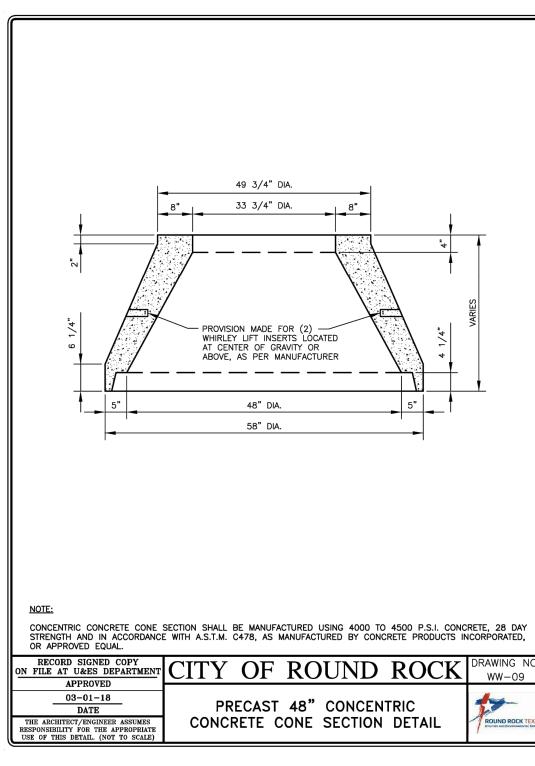


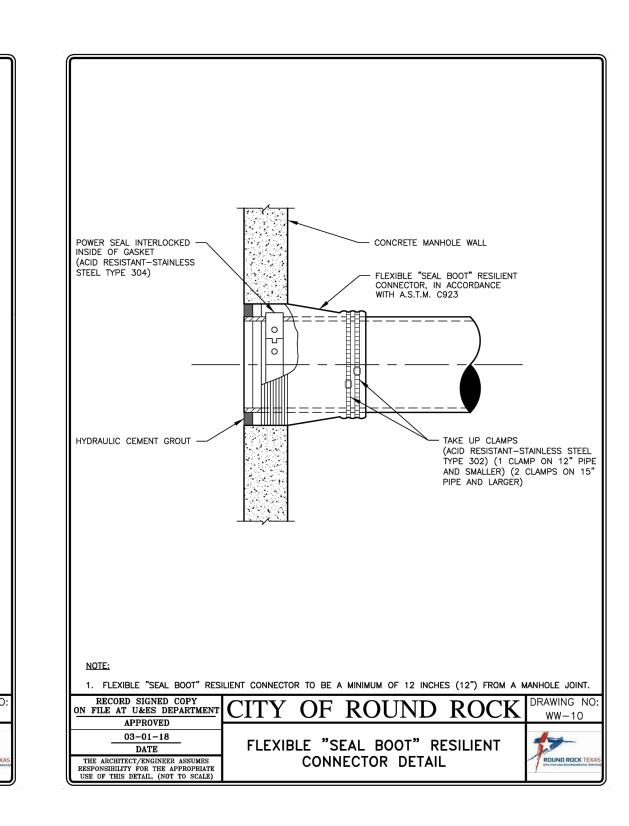










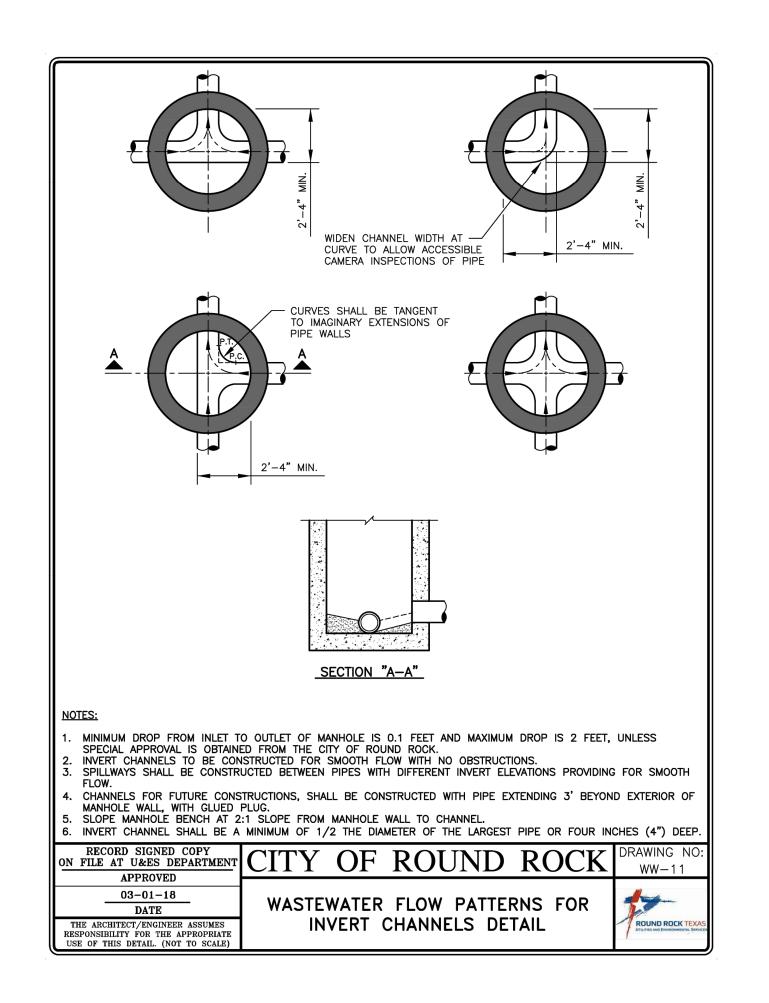


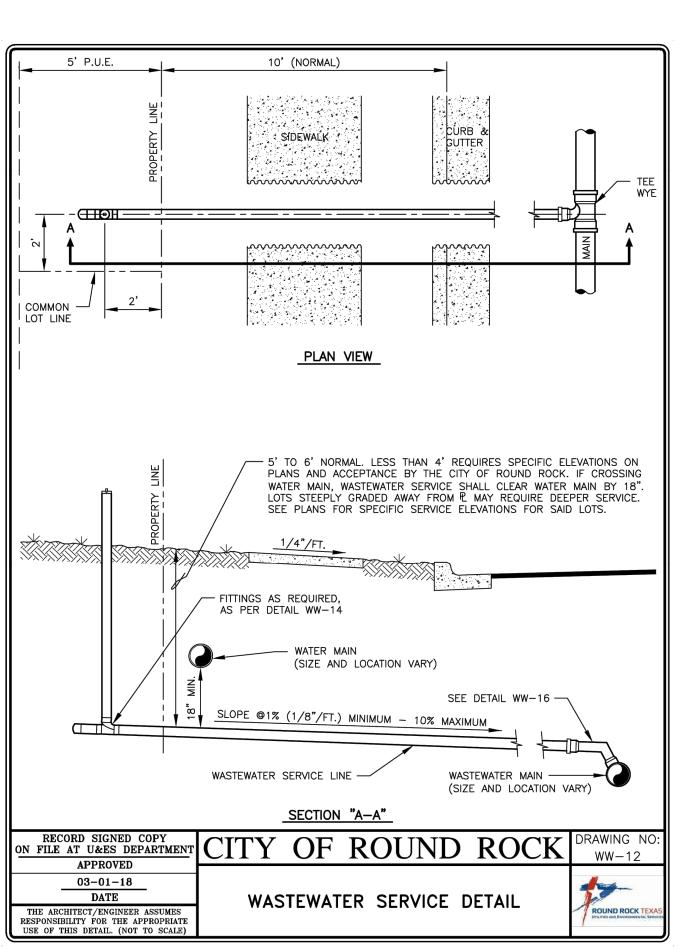


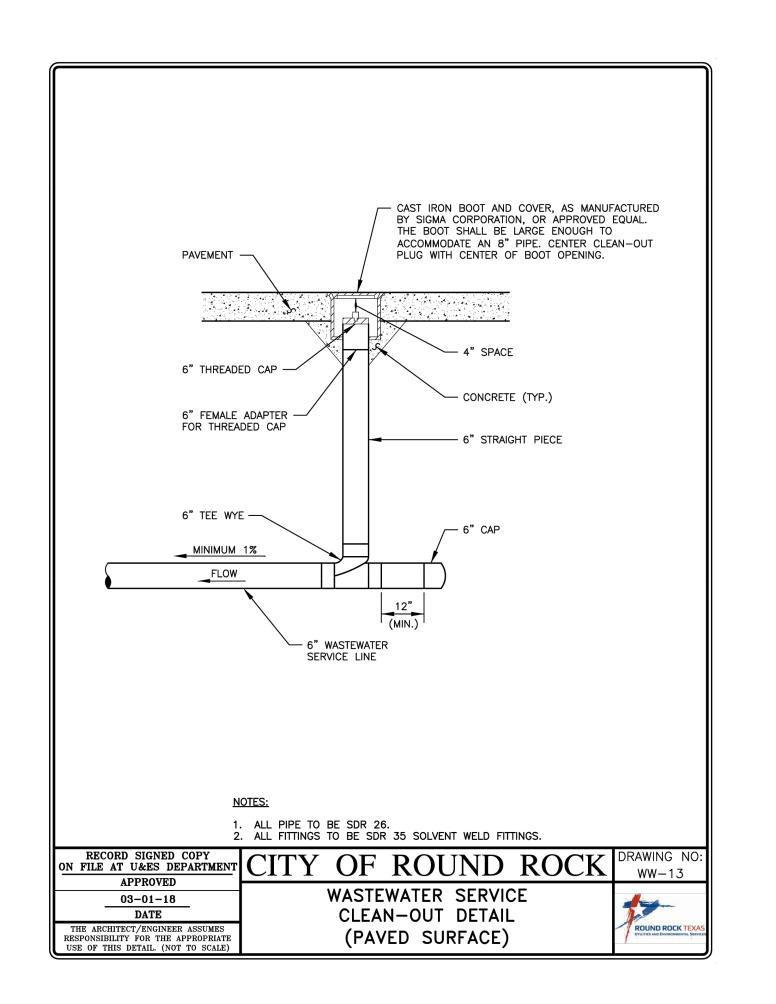
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LLAMSON COUNTY, TEXAS

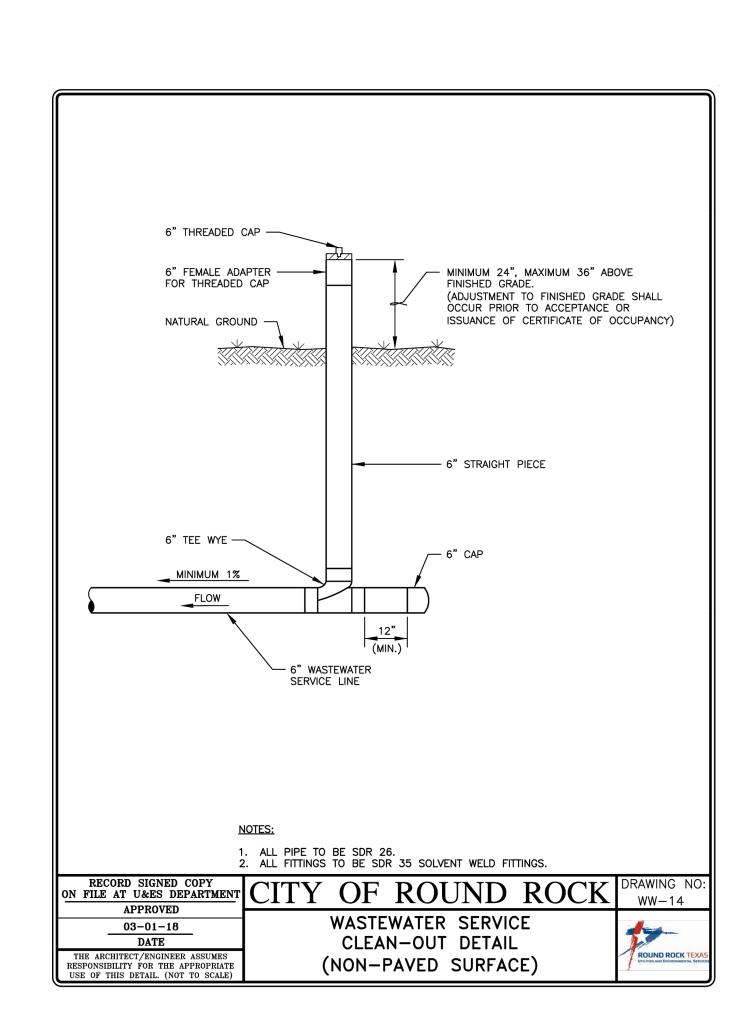
SHEET NUMBER

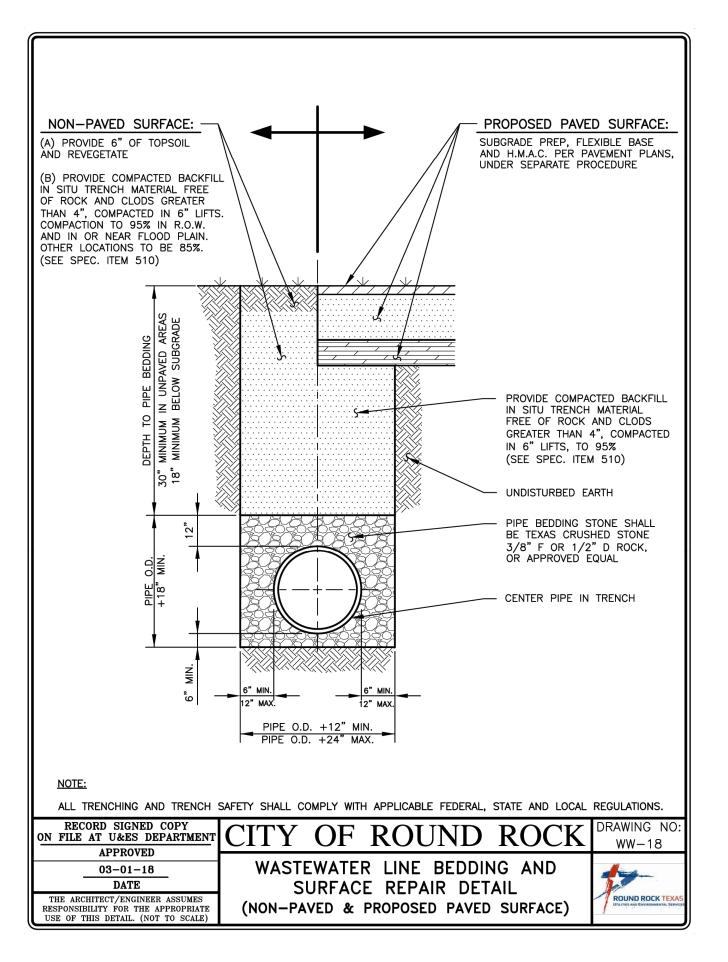
19 OF 21

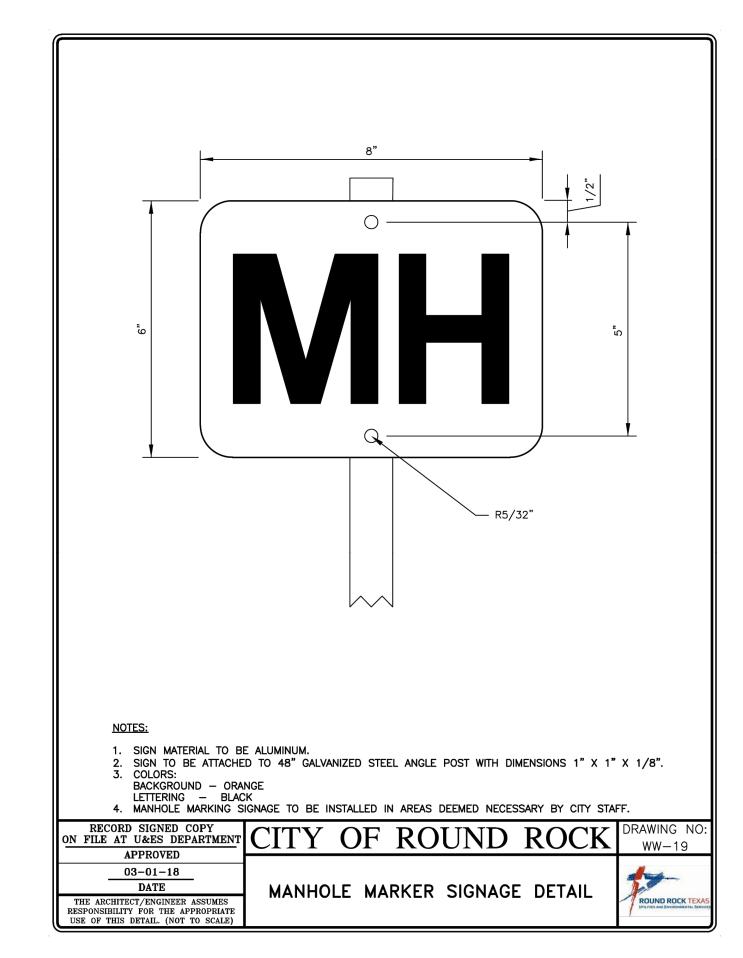


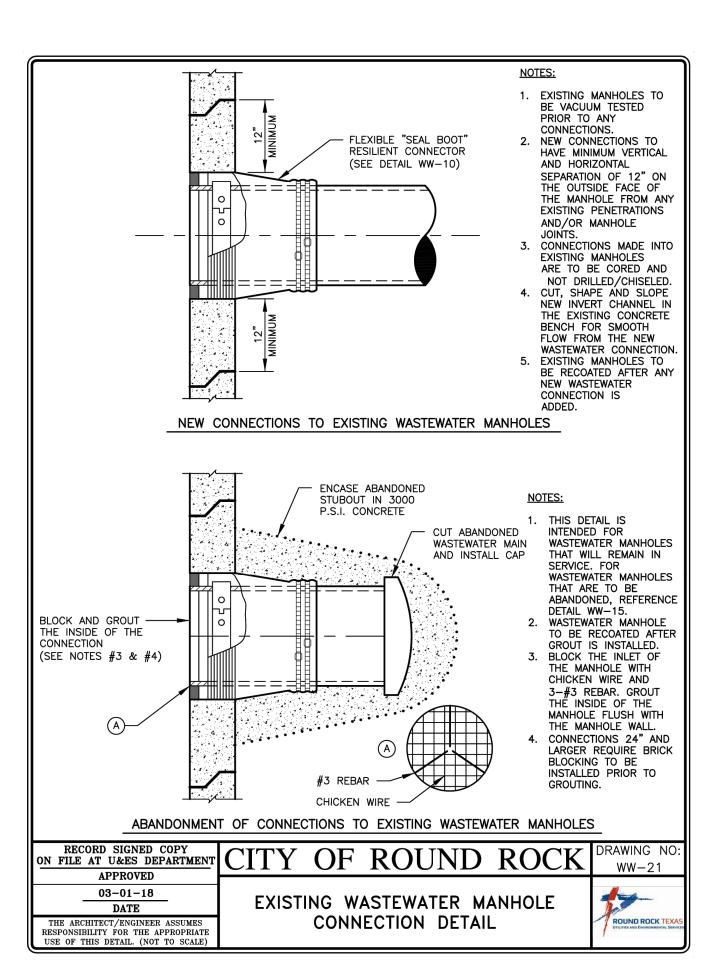




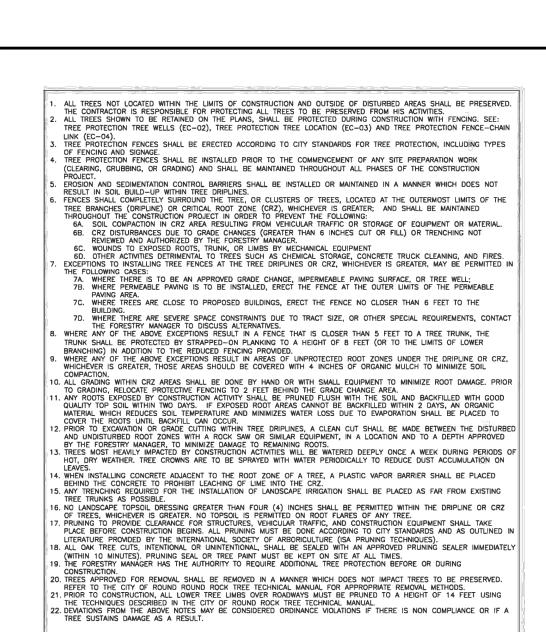


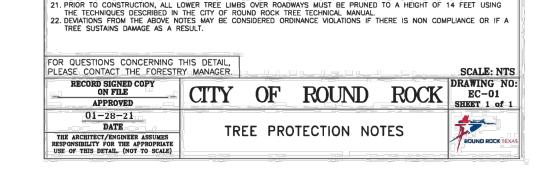


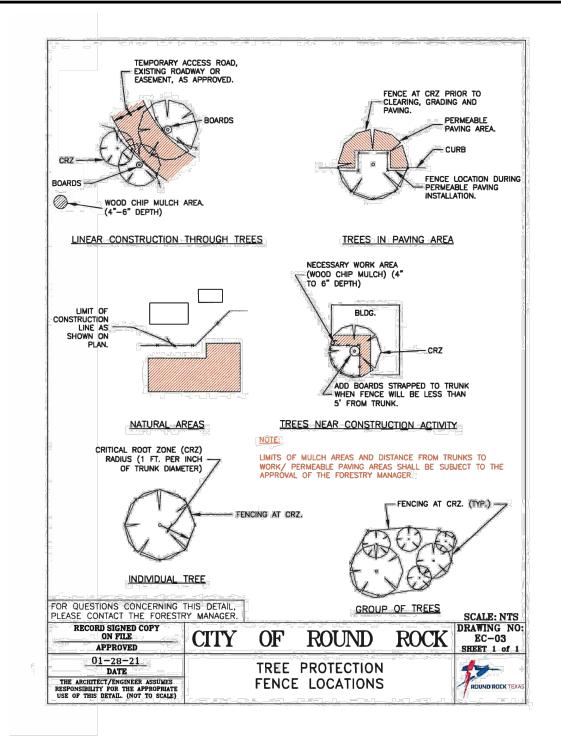


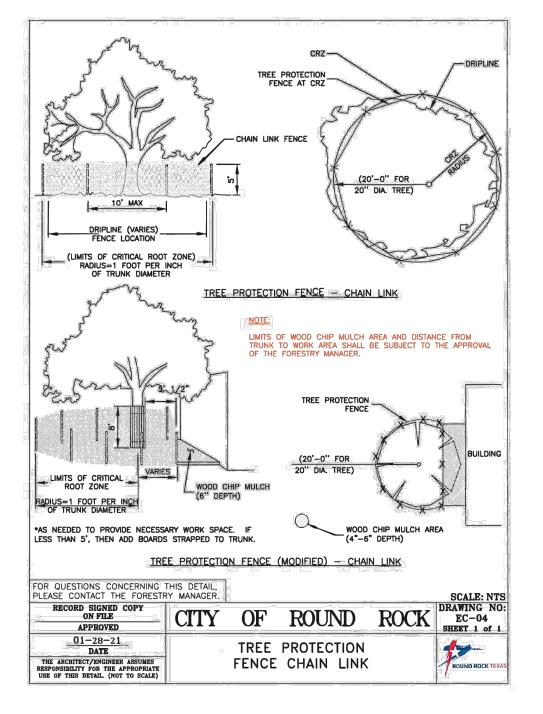


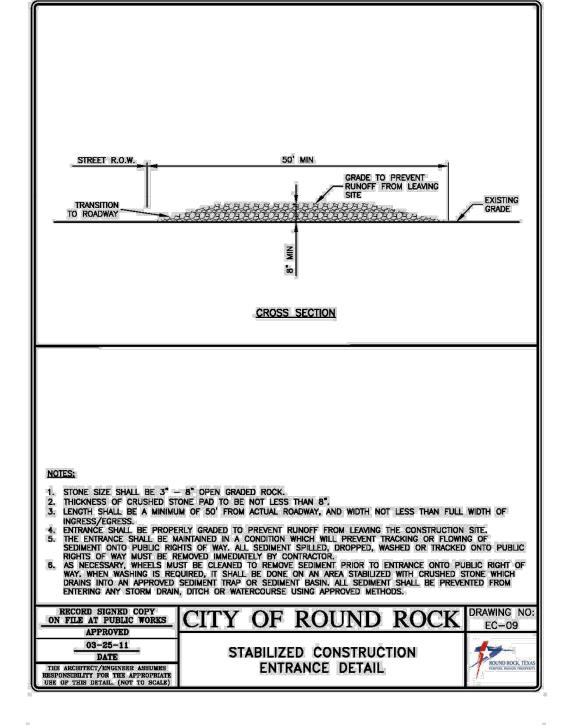


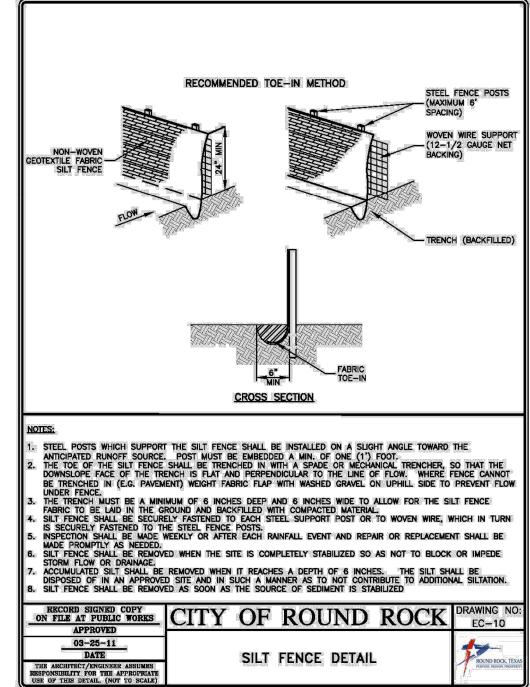


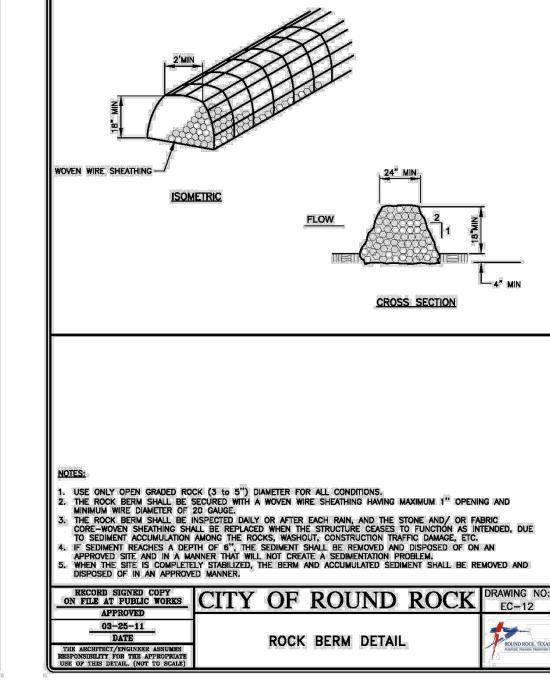


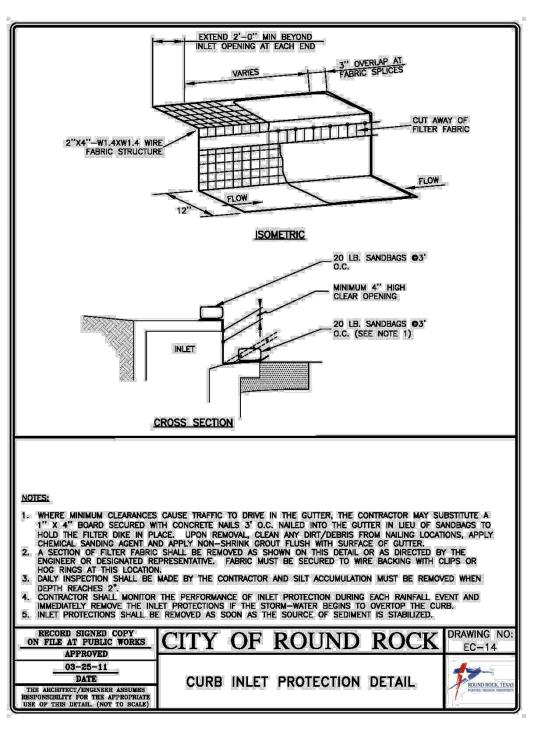


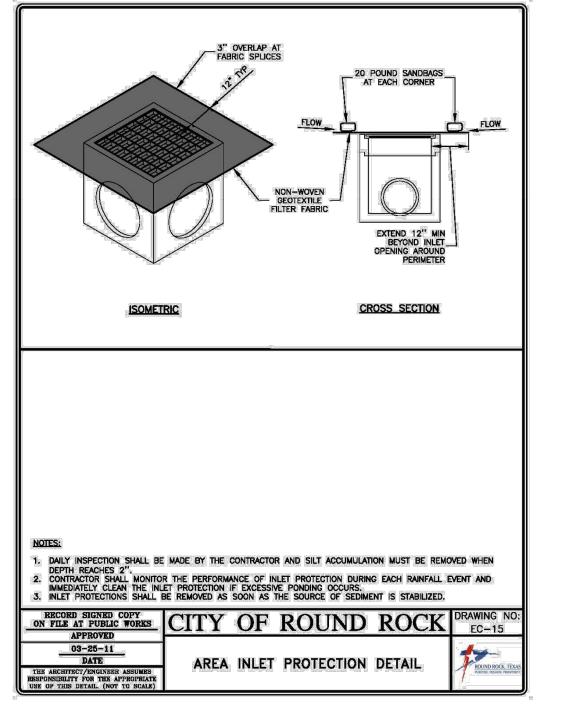


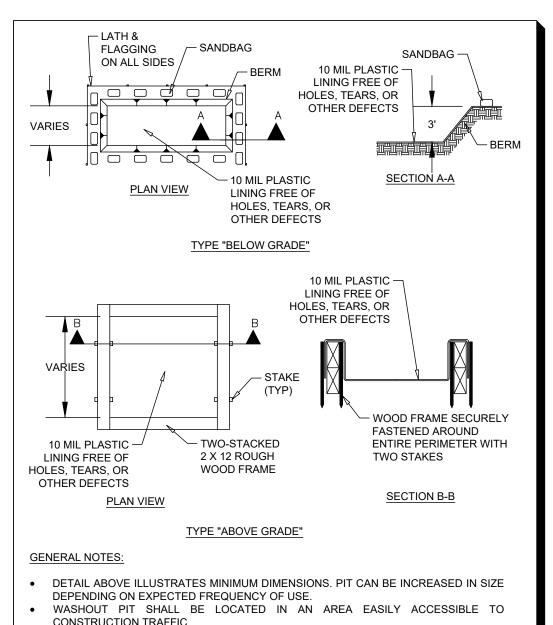












WASHOUT PIT SHALL NOT BE LOCATED IN AREAS SUBJECT TO INUNDATION FROM STORM WATER RUNOFF AND AT LEAST 50 FEET FROM SENSITIVE FEATURES, STORM

©W CONCRETE TRUCK WASHOUT PIT

DRAINS, OPEN DITCHES, STREETS, OR STREAMS.

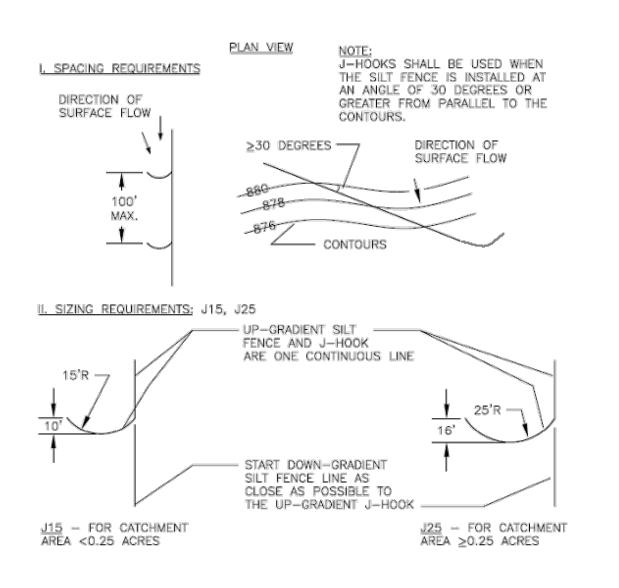


Figure C-16 Schematic J-hook Placement

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10/04/2024

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21 OF 21



ATTACHMENT G: Inspection, Maintenance, Repair and Retrofit Plan

|  | Maintenance Pl  | e I Subdivision Improvements   |
|--|---|--|
| PROJECT NAME<br>ADDRESS                                    | Hightand horraon 1110   |  |
| CITY, STATE ZIP  | Round Rock, TX 78664  |  |
| WET BASIN - Routin   |   |  |
| Mowing:  | year.   | nt and emergency spillway shall be mowed at least twice a  |
| Inspections:   | following wet weather<br>subsidence, erosion, l<br>barrels and outlet sh<br>slopes shall be check | eakage, cracking and tree growth. Emergency spiritury, mould be checked for clogging and general condition. Side ed for stability.   |
|  |   | ns shall be made to evaluate and replace dead or displaced acks, voids and undermining shall be repaired to prevent rees and roots shall be removed to prevent growth, which could ge. |
| Debris and<br>Litter Removal:                              | regular mowing operat   |  |
| Erosion Control  | side slopes, rip-rap erosion damage.  | hall be taken including regrading and revegetation if basin<br>, emergency spillway and embankment suffer any slumping or  |
| Nuisance Contr   | ol:Control of insects, w<br>prevent public nuisar<br>for these items.                             | reeds, odors and algae will be implemented where required to<br>nce concerns. The facility shall be evaluated semi-annually  |
| WET BASIN - Non-R  | outine Maintenance  |  |
| Structural<br>Repairs and<br>Replacement:                  | Inlet/outlet and ri<br>evident. Non-corro<br>collars should be uti                                | iser works shall be replaced if deterioration becomes<br>give replacement pipes such as PVC and use of anti-seep<br>llized.  |
|  | Sediment Accumul  | ated sediment in the sediment forebays shall be removed from   |
| the<br>Removal:  | facility every two implemented at least proper functioning of                                     | years. Dredging of the permanent pool shall be<br>every 15 years or when accumulation of sediment impair<br>the outlet structure.  |
| Harvesting:  | periodically and the  | resent in the pond or its fringes, it can be harvested clippings removed to provide export of nutrients and prevening with decaying organic matter.                                    |
| and rainfall even<br>shall be noted a<br>shall be made ava | nts. Results of inspect<br>long with inspection per<br>milable for review by TN                   |  |
| Local Authority  | guidelines and specifica  |  |
| An amended copy of in the following                        | of this document will be information.   | provided to the TNRCC within thirty (30) days of any change  |
| Responsible Party  | y for Maintenance   | Mr. David Bodenman, Highland Six Twenty Residential, Inc.  |
| Address  |   | 211 East 7 <sup>th</sup> Street, Ste. 709  |
| City, State Zip  |   | Austin, Texas 78701  |

Page 9 of 10

Telephone Number

Signature of Responsible Party



# ATTACHMENT H: Pilot-Scale Field Testing Plan

A plan for pilot-scale field testing is not required for this project.



# **ATTACHMENT I:** Measures for Minimizing Surface Stream Contamination

Surface streams do not exist on site. All disturbed areas wil be re-vegetated as soon as practical.

Kimley » Horn

# SECTION 8: ADDITIONAL FORMS

|   | Hi  | SHLAND             | 620: PH    | ASEL           |                          |   |  | ***************************************                           |     |
|---|---|--------------------|------------|----------------|--------------------------|---|--|---|-----|
|   |   | January            |            |                |                          |   |  |   | • … |
| т   |   | yangay             | 23, 200    | ·              | <del></del>              |   |  |   |     |
|   |   | ļ                  |            |                |                          |   | ,<br>,   |   |     |
| EXIS TING   | CONDITIONS  |                    |            | į              |                          |   |  |   |     |
| Distrige<br>Area                                      | Description   | Acres              | N.C.       | BCS CH         | T,                       | òı  | ۰. ۵.,   | 0,  | Ì   |
| Total 1   | Total Area in Hydrologic Apalysis area  | 73.5 ac            | 0%         | . E2.0         | 422mm                    | 76.5 cm   | 173.5 ch   | 342 4 ch  | -   |
|   |   |                    |            |                |                          |   |  |   |     |
| DEVELOP   | ED CONDITIONS   |                    |            | :              | ķ                        |   | [  |   |     |
|   | ED CONDITIONS   | Acrospe            | \$ 1.C.    | acs ch         | 7.                       | Q   | . 0,   | O <sub>res</sub>  |     |
| Drainage<br>Araa                                      |   | Acreege<br>60.5 ac | \$ 1.C.    | 8CS CH<br>87.9 | 7.                       |   | . 0 <sub>8</sub>                                       |   |     |
| Drainage<br>Araa                                      | Description   |                    |            | i              | 1                        | 122 5 ch  |  |   |     |
| Drainage<br>Araa                                      | Description Main substallar area to Pond  | 65.5 ac            | 44%        | 87.0           | 17.3 m/a                 | 122 5 ch  | 250.3 ch   | 458 9 ch<br>23.79 ch  |     |
| Drainage<br>Aras                                      | Description  Main skind-from area to Pond  Open steeps at With Description Pond Area  | 65.5 ac<br>42 ac   | 44%        | 87.0           | 17.3 m/a                 | 122 5 ch  | 250.3 ch<br>12.87 ch                                   | 458 9 ch<br>23.79 ch  |     |
| Drainage<br>Area<br>1<br>3<br>Pend Islaw              | Description Main subshiption area to Pand Open video at VVO Describor Pand Area Continent trystoproprie to be food  | 65.5 ac<br>42 ac   | 44%        | 67.9<br>64.6   | 17.3 min<br>27.1 min     | 122.5 ch<br>8.76 ch<br>127.8 ch                                 | 250.3 ch<br>12.87 ch<br>200.7 ch                       | 458 P ch<br>23.79 ch<br>478 3 ch                                  |     |
| Drainage<br>Area<br>1<br>3<br>Pend Islaw              | Description Main subshiption area to Pand Open video at VVO Describor Pand Area Continent trystoproprie to be food  | 65.5 ac<br>42 ac   | 44%        | 67.9<br>64.6   | 17.3 min<br>27.1 min     | 122.8 ch<br>8.76 ch<br>127.8 ch<br>46.7 ch<br>790.32            | 250.3 ch<br>12.87 ch<br>200.7 ch<br>140.6 ch           | 458 P ch<br>21.79 ch<br>478 3 ch<br>292 8 ch                      |     |
| Drainage<br>Area<br>1<br>3<br>Pend Irlaw<br>Vrst Pond | Description  Main subdission area to Pond  Dear source at VYG Describon Pond A rea  Contrined trycographs also Fond  Contrined Sover routed through Pland | 65.5 ac<br>42.ac   | 64%<br>25% | 64.6<br>Max, V | 17.3 min<br>27.1 min<br> | 122 8 ch<br>8.76 ch<br>127.8 ch<br>48.7 ch<br>790.32<br>2.78 ch | 250.3 ch<br>12.87 ch<br>200.7 ch<br>140.6 ch<br>792.56 | 458 P ch<br>23,79 ch<br>476 3 ch<br>292 8 ch<br>794 86<br>8.78 ch | -   |

|               | TCAM                      | ou no      | iii au   | TLET F       | -raur      |          | 47101     | ~            |               |         |
|---------------|---------------------------|------------|----------|--------------|------------|----------|-----------|--------------|---------------|---------|
|               | T ( EIV)                  |            |          |              |            |          | AHOT      | ·            |               |         |
|               |                           | n          |          | 1 620:       |            | ٠        |           |              |               |         |
| • • • • • • • |                           | ****       |          | 23/200       | I          |          |           |              |               |         |
|               |                           |            |          |              |            |          |           | ··· ·· †     |               |         |
|               | Ortice O                  | roet No. 1 |          |              | Welr Ho.   |          | ···       |              |               |         |
|               | Contraction<br>Clar Of Or | Emetion    | 780.63   |              | Wat Eleo   |          | 768.50    |              |               |         |
|               | to diffe                  |            |          |              | Wat Larg   |          | 575<br>31 |              |               |         |
|               | m.m.r.                    | T          |          |              |            |          |           |              |               |         |
|               |                           | det No. 2  |          |              | Dyllin ay  | No. 2    |           |              |               |         |
|               | Cartarion<br>Cartarion    |            | 1000     |              | Spirmey E  | le-ation | 785<br>25 |              |               |         |
|               | No of Bar                 |            |          |              | Scattery L | Charge   | fi        |              |               |         |
|               |                           |            |          |              |            |          |           |              |               |         |
|               |                           | thet No. 5 |          |              | Watt No.   |          |           |              |               |         |
|               | Certains<br>Certains      |            | 1000     |              | West Elect | CO1      | 1000      |              | *** ***       |         |
|               | No. of Ber                |            |          |              | West Cou   | ciera    |           |              |               |         |
|               |                           |            |          |              |            |          |           |              |               |         |
| _             | -                         | <b>—</b>   |          |              | Orthorn    | lozal    |           |              |               |         |
| Stage         | Bev.                      | Ortos 1    | Office 2 | Critica 3    | Wait 1     | Web 2    | Web 3     | Tebi         | 1             |         |
| 0.0           | 794.08                    | 0,00       | 0.00     | 0.00         | 0.00       | 0.00     | 0.00      | 0.00         |               |         |
| 0.20          | 789.38                    | 0.00       | 0.00     | 0.00         | 0.00       | 0.00     | 0.00      | 0.00         |               |         |
| 0.44          | 198.50                    | 6.00       | 0.00     | 0.00         | 0.00       | 0.00     | 6.00      | 6.00         | PPE           |         |
| 0.70          | 799.75                    | 0.17       | 0.00     | 000          | 0.00       | 0.00     | 6.00      | 0.17         |               |         |
| 1.45          | 797.00                    | 0.00       | 0.00     | 900          | 0.00       | 0.00     | 6.00      | 0.80         |               |         |
| 1.05          | 781.50<br>786.00          | 122        | 0.00     | 4.00<br>4.00 | 0.00       | 0.00     | 0.00      | 1.30         |               |         |
| 2.45          | 788.50                    | 217        | 0.00     | 0.00         | 0.00       | 0.00     | 0.00      | 1.82         |               |         |
| 295           | 789.00                    | 244        | 600      | 8.00         | 630        | 0.00     | 0.00      | 21/          | WOS           | *****   |
| 14            | 700.00                    | 216        | 000      | 600          | 17 80      | 0.00     | 0.00      | 20.67        |               |         |
| 385           | 790.00                    | 299        | 0.00     | 0.00         | 32.75      | 0.00     | 0.00      | 25.72        |               | ******* |
| 4.26          | 790.12                    | 214        | 0.00     | 0,00         | 43.50      | 0.00     | 0.00      | 4.72         | 371           |         |
| 4.45          | 790.00                    | 3 22       | 0.00     | 000          | 50.42      | 0.00     | 0.00      | \$3.64       | ~7.1          |         |
| 4 95          | 791.00                    | 140        | 0.00     | 0.00         | 70.46      | 0.00     | 0.00      | 73.30        |               |         |
| 5 43          | 795.90                    | 3.63       | 0.00     | 0.00         | 62.62      | 0.00     | 0.00      | <b>34.25</b> |               |         |
| 5 95          | 792.00                    | 3 82       | 0.00     | 8.00         | 11672      | 0.00     | 0.00      | 120.54       |               |         |
| 8.45          | 782.80                    | 4.00       | 0.00     | 6.00         | 142.60     | 0.00     | 6.00      | 149.60       |               |         |
| 6.51          | 732.FR                    | 402        | 0.00     | 0.00         | 145.61     | 0.00     | 68        | (48.63       | 10-Yr         |         |
| 6.95          | 797.00                    | 4.17       | 0.00     | 0.00         | 170.19     | 0.00     | 0.00      | 174.23       |               |         |
| 1,45          | 191 50                    | 4.34       | 0.00     | 0.00         | 150 20     | 0.00     | 68        | 300 63       | L             |         |
| 7.05          | 791.00                    | 4.90       | 0.00     | 0.00         | 229.92     | 0.00     | 0.00      | 234.42       |               |         |
| 8.45          | 794.60                    | 4 66       | 0.00     | 0.00         | 281.97     | 6.00     | 0.00      | 248.43       |               |         |
| 884           | 794.00                    | 4.77       | 0.00     | 0.00         | 267.00     | 000      | 600       | 292.43       | 100 Yr        |         |
| 8 95          | 795.00                    | 4.90       | 0.00     | 0.00         | 205.30     | 0.00     | 0.00      | 309.20       |               |         |
| 9 40          | 798.00                    | 300        | 0.00     | 9.00         | 330 12     | 27.40    | 0.00      | MEA?         |               |         |
| *10           | 170.00                    | 3.00       | 1 0.00   | W.00         | 1 3 d 12   | 77.50    | 0.00      | 64.71        | ļ             |         |
|               |                           | ·          |          |              | ;          | i        |           |              | <del>!-</del> |         |

|           |                   |             |                        | Mg           | hland 620               | : Phase i        |                 |            |                                       |
|-----------|-------------------|-------------|------------------------|--------------|-------------------------|------------------|-----------------|------------|---------------------------------------|
|           |                   | ,           |                        | T            | 1/23/20                 | 07               |                 |            | i                                     |
| Elevation | Avea              | Arise (sc.) | reservented<br>Yorkern | Total Volume | Low Lord<br>Ordine Flow | Wate \$1<br>Flow | Weir #2<br>Flow | Total Flow | Controlletts                          |
| 743.00    | 32572 st          | C75.44.     | C ex                   | 0 d          | 0.00                    | 0.00             | 0.00            | 8.00       | 1                                     |
| 784 00    | 30975 ef          | 0.85 Ac.    | 34774 et               | 34774 ct     | 600                     | 0.00             | 8.00            | 6.00       | 1                                     |
| 785.00    | 41517 62          | 0.95 Ac.    | 39266 cf               | 74020 cf     | 900                     | 0.00             | 0.00            | 6,00       | 1                                     |
| 785.50    | 43043 sf          | 1.01 As.    | 21340 cf               | - 95360 t/   | 0.00                    | 0.00             | 0.00            | 6.00       | <del> </del>                          |
| 786.00    | \$2100 st         | 1.20 Ac.    | 23967 cf               | 11.8346 c?   | 0.00                    | 0.00             | 0.00            | 000        | 1                                     |
| 780,50    | \$783 <b>6</b> el | 1.37 As.    | 27405 et               | HIREST of    | 6.00                    | 0.00             | 0.00            | 0.00       | Permanent Pool Elevation = 786.5      |
| 787,00    | 59296 st          | 1.30 Ac.    | 29204 cf               | 170115 cf    | 0.00                    | 0.00             | 0.00            | 0.69       | · · · · · · · · · · · · · · · · · · · |
| 788,00    | 62279 eJ          | 1.43 Ac.    | 00789 cf               | 235904 cl    | 1.82                    | 0.00             | 0.00            | 1.82       |                                       |
| 788.50    | 43411 st          | 1.45 Ac.    | 31502 of               | 389436 ef    | 217                     | 0.00             | 0.00            | 217        | WQV Residon = 788 50                  |
| OG 664    | 06342 11          | 1.50 Ac.    | 32284 0                | 300/14 cf    | 246                     | 6.30             | 0.00            | \$.79      | T                                     |
| 790.00    | 86489 67          | 1 57 Ac.    | 08716 cf               | 367600 et    | 2.00                    | 32.75            | 0.00            | 35.74      | 1                                     |
| 790.32    | 69524 st          | 1.50 Ac.    | , Z2082 cf             | 369712 cf    | 2.14                    | 43.59            | 0.00            | 44.72      | 2-Yr. Storm E-ext                     |
| 791.00    | 71724 st          | 1.85 Ac.    | 4000 d                 | 437736 ct    | 341                     | 70,46            | 0.00            | 73.20      |                                       |
| T82.00    | 70778 sl          | 1.77 Ac.    | 74328 cf               | 512082 cf    | 3.82                    | 11972            | 0.00            | 120.54     |                                       |
| 712.95    | 78157 sf          | 1.82 As     | 43704 cf               | \$66700 ct   | 400                     | 145 61           | 0.00            | 141.63     | 10-Ys. Storm Event                    |
| 793.00    | 80908 sf          | 1.86 Ac.    | 35215 et               | 500061 of    | 6.17                    | 170.18           | 3.00            | 174.33     | 1                                     |
| 794.00    | 85430 sf          | 1.95 Ac.    | 83174 cf               | 674136 cl    | 4.50                    | 229.92           | 0.00            | 254.42     | ·                                     |
| 79L99     | 80542 sf          | 2 08 Au.    | 779/1 cl               | . 752060 cf  | 4.77                    | 297.86           | 0.00            | 292.63     | 100-Yr. Story Evert                   |
| 795.00    | 90181 sf          | 2.07 Ac     | 9009 of                | 761955 cl    | 4 50                    | 205 30           | 9.00            | 300 20     | 1                                     |
| 799.00    | 95678 sf          | 2.20 Ac.    | \$2910 cf              | 854873 cf    | 6.00                    | 390.12           | 77 50           | 64671      |                                       |

| -  | ME AREA:   |   | 65.5 ec.   |  | 0 1023 Sq. Mi  | to Post)   | PROPOS  | -COH   | #TIONS)  |  |
|--|--|---|--|--|--|--|---|--|--|--|
| CH Calculetions  |  |   |  |  |  |  |   |  |  |  |
| Land Ut  |  |   | Area   |  | \$C3.5   |  |   |  | OIE  | Ac x QH  |
|  |  | <b>398.1</b> 0  | 55.8 ac.   | C48 (C   | arrates St   | er C'erl and   | EeB .   | Type   | #6 6   | 4840,0544  |
| Cumming at   |  | B.200   |  | Çus K  | (Echant st   | City) and  | E-da  |  | *****  |  |
|  | ta dicon   | (recentable   | ar may   |  | (Eckyari etc   | ry clay)<br>ry Clay) and   |   | 0  | 94.4   | 67024  |
|  | TOT  |   | 20 sc.   |  | Echart sk  | ry c367)   |   | 0  | Ac z CN s  | 245.44<br>5754.7343  |
|  |  |   |  |  |  |  | TOTAL   |  | TE CH K-   | \$7.5  |
| Time of Operator atton (   | Calculato  | 04 [TR-00   | Ł  |  |  |  |   |  |  |  |
| i  | Upper<br>Elec  | Lower<br>Elec.  | Chiterion (4.)   | 6'op=  | Material   | Managing's   | P <sub>1</sub>                                      | P <sub>k</sub>   | v  | Travel Time  |
| Sheet Flow   | 834.5  | 832.5   | 100  | 2.00%  | (Pres.   | 0.24   | 41  |  |  | 12 6 min   |
| Storageone<br>Storageone   | 632<br>824.5   | 629<br>790  | 1700   | 2.03%  | - post   | 0 013  |   | 0.67   | 20 b4<br>125 tps   | 2.5 min.   |
|  |  |   |  |  |  |  |   |  | OTAL T,  | 17.2 mln.  |
|  | +  |   |  |  |  |  |   |  |  |  |
|  |  |   |  |  |  |  |   |  |  |  |
| DRAXWO   | F AATA   |   | ,  | (регорозия   | Onet Oaks  | rive edeth   | PROPOS  |  | *****************  |  |
|  | L AMER   |   | 1.0 sc.  |  | ( Ne. Wilce   Ort)<br>(0.0015 5q Mi  | •, ,   |   |  |  |  |
|  |  |   |  |  |  |  |   |  |  |  |
| CH Celcutations: i   | i  |   | Ama  |  | PC3 6  | olla.  |   | Hydro<br>Type  | Cu.  | Be - 0   |
|  |  |   |  | Gall ett.  | argatown Starry  |  | Febrari   |  | CHI  | Ac. x Cit  |
|  | D ventued  |   | 10=  | story cla  | y), and Erit (E  | Avent-Rock   | Outcrop)  | D  | 644  | 91.4790  |
| · · · · · ·  | 101  | al area   | 1.0 mc.  |  |  | -  | TOTAL   |  | Ac x CH =  | 91,47<br>94.4  |
| Title of Concentration   | Calculate  | ms (1 A-51  |  |  |  |  |   |  |  |  |
|  | Upper<br>Elex  | Lower   | Distance   | filips<br>(%)  | Meterial   | Manning's  | P,  | A  | ν  | Travel Torse   |
| Sheet Flow   | 800.2  | 800   | (R.)   | 200%   | gress  | 0.24   | 4.1   |  |  | 20 min.  |
| Shaforr Concentrated   | 799 5  | 790   | 600  | 1.90%  | pered  | ===  | -   |  | 28 ps  | 3.0 min.   |
|  |  |   |  |  |  |  |   | - '  | VINE To W  | EO MIO.  |
|  |  |   |  |  |  |  |   |  |  |  |
|  |  |   |  |  | ;  |  |   |  |  | <u> </u>   |
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|  |  |   |  |  |  | []   |   |  |  |  |
|  |  |   |  | - 3  | Balkar-Ale<br>Laborateist<br>Laborateist   | i feet   |   |  |  |  |
|  |  |   |  |  | 1  | +  |   |  |  |  |
|  |  |   |  |  | <u> </u>   |  |   |  |  |  |
| DRAHAG   |  |   | 3  |  | Point Area   |  | (PROPOS   | TED CON  | DITIONS)   |  |
| 707  | AL ANSA:   |   | 42 45  |  | © 0085 3q, M   | 1  |   | -  |  |  |
| CR Celculations  |  |   |  |  | <u> </u>   |  |   |  |  |  |
| LandU  |  |   | Area   |  | 9CS 5  | iofs   |   | Hydra<br>Type  | CNE  | Ac. s CH   |
| Greenbelt panel (CEF )   | street (C  | 25% LC.)  | 12.55  | Gra Gr   | orgatowa Stary<br>by L and Eric (E   | Chey), EeB   | (Eckrent  | D  | 64.5   | 250.90   |
|  | for  | AL AREA   | 42 tc  |  |  |  |   |  | Ao x CH =  | 350.93   |
| <u> </u>   |  |   |  | ļ  | <del> </del>   |  | TOTAL   | COMPO  | ETE CH H-  | \$1.5  |
| This of Concentration  |  |   |  |  |  |  |   | ļ  |  |  |
|  | Upper<br>Elec  | Lawer<br>Elev   | (t.)   | (%)  | Macertel   | Manning's<br>W   | P <sub>2</sub>                                      | R.   | . v  | Tre-of Tirre   |
| Sheet Flow   | 794  | 797.5   | 290  | 2.32%  | netural  | 0.24   | . 41  | <del>-</del>   | OTAL T, .  | 27 ( min.<br>27.4 min.   |
|  |  |   | ļ  |  |  |  |   | -  |  |  |
|  |  |   |  |  | <u> </u>   |  |   | -  |  |  |
|  |  | <del> </del>  |  | Control  | L  | 1  |   |  |  |  |
|  | ge arba:<br>Al arba:   |   | 1.0 ac   | (2003VF)   | (0.0047 Sq. M  | ing Pond)  | (PROPO  | 7 CON  | CITICACE)  |  |
|  |  |   |  | <del> </del>   | 1200-104   | <del>'—</del>  |   | <del>}</del>   |  | 1  |
| CH Calculatione  | 1  |   |  | <b>_</b>   |  |  |   |  | 1  |  |
|  |  |   |  | <u> </u>   | 1  |  | ļ   | 14.4   |  |  |
| Land   | 34   |   | Area   |  | 5CS:   |  |   | Hydra<br>Type  | CHI  | Ac. z CH   |
|  | 20% LC   |   | 3.0 ac.  | Osb (Ge  |  |  | (Eclosof<br>Outcop)                                 | Type   | E. 1   | 248.96   |
| Lardi  | 20% LC   | (lote enty)   | 3.0 ac.  | GsB (Ge<br>story s)  | SCS:   |  | !   | D<br>TOTAL   | ELE<br>AC X CH =   | 244.96<br>246.98   |
| Land U<br>Single-landy (   | 20% LC   | AL AREA   | 3.0 ac.  | GsB (Ge<br>story s)  |  |  | !   | D<br>TOTAL   | E. 1   | 248.96   |
| Lardi  | 20% LC<br>TO<br>TO<br>Calculat<br>Upper  | OTE (TR-8   | 3.0 sc.<br>, 3.6 so.<br>5)   | Stops  | organious Stor<br>ey), and EvE (E  | Clay), East<br>extract Rock<br>Namings   | TOTAL   | D TOTAL COSTPO   | EX E   | 244.96<br>246.98<br>83.8   |
| Sarge Sarah (g   | 20% LC<br>TO<br>Calculate<br>Upper<br>Elec   | ons (TR-8<br>Lover<br>Ehr.  | 3.0 sc.<br>, 3.6 sc.<br>5)<br>Distance<br>(t.)   | Stops<br>(%)   | orgalova Store<br>syl, and E/E E<br>Vacanti  | Clay), EsB<br>et rare Rock<br>Namery<br>Warnings   | TOTAL<br>P2   | Type<br>D<br>TOTA<br>COMPO                                       | ELE<br>AC X CH =   | 248.90<br>246.90<br>93.8<br>Travel Tente   |
| Land U<br>Single-landy (   | 20% LC<br>TO<br>Calculate<br>Upper<br>Elec   | OTE (TR-8   | 3.0 sc.<br>, 3.6 so.<br>5)   | Stops  | organious Stor<br>ey), and EvE (E  | Clay), East<br>extract Rock<br>Namings   | TOTAL   | Type D TOTAL COMPO   | ES.E<br>LAC.X CHI-<br>BITE CHI.In  | 248.96<br>246.96<br>93.8<br>Travel Terra<br>8.5 min.<br>0.7 min.   |
| Sarge Sarah (g   | 20% LC<br>TO<br>Calculate<br>Upper<br>Elec   | OTTS (TR-8<br>Lower<br>Ehr.   | 3.0 ac.<br>3.6 ac.<br>5)<br>Distance<br>(t.)   | Stops<br>(%)<br>2.50%  | Vacaral  | Clay), EsB<br>et rare Rock<br>Namery<br>Warnings   | TOTAL<br>P2   | Type D TOTAL COMPO   | EZ E   | 244.95<br>246.96<br>93.8<br>Travel Tarte<br>8.5 min.   |
| Sarge Sarah (g   | 20% LC<br>TO<br>Calculate<br>Upper<br>Elec   | OTTS (TR-8<br>Lower<br>Ehr.   | 3.0 ac.<br>3.6 ac.<br>5)<br>Distance<br>(t.)   | Stops<br>(%)<br>2.50%  | Vacaral  | Clay), EsB<br>et rare Rock<br>Namery<br>Warnings   | TOTAL<br>P2   | Type D TOTAL COMPO   | ES.E<br>LAC.X CHI-<br>BITE CHI.In  | 248.96<br>246.96<br>93.8<br>Travel Terra<br>8.5 min.<br>0.7 min.   |
| Sarge Sarah (g   | 20% LC<br>TO<br>Calculate<br>Upper<br>Elec   | OTTS (TR-8<br>Lower<br>Ehr.   | 3.0 ac.<br>3.6 ac.<br>5)<br>Distance<br>(t.)   | Stops<br>(%)<br>2.50%  | Vacaral  | Clay), EsB<br>et rare Rock<br>Namery<br>Warnings   | TOTAL<br>P2   | Type D TOTAL COMPO   | ES.E<br>LAC.X CHI-<br>BITE CHI.In  | 248.96<br>246.96<br>93.8<br>Travel Terra<br>8.5 min.<br>0.7 min.   |
| Sarge Sarah (g   | 20% LC<br>TO<br>Calculate<br>Upper<br>Elec   | OTTS (TR-8<br>Lower<br>Ehr.   | 3.0 ac.<br>3.6 ac.<br>5)<br>Distance<br>(t.)   | Stops<br>(%)<br>2.50%  | Vacaral  | Clay), EsB<br>et rare Rock<br>Namery<br>Warnings   | TOTAL<br>P2   | Type D TOTAL COMPO   | ES.E<br>LAC.X CHI-<br>BITE CHI.In  | 248.96<br>246.96<br>93.8<br>Travel Terra<br>8.5 min.<br>0.7 min.   |
| Sarge Sarah (g   | 20% LC<br>TO<br>Calculate<br>Upper<br>Elec   | OTTS (TR-8<br>Lower<br>Ehr.   | 3.0 ac.<br>3.6 ac.<br>5)<br>Distance<br>(t.)   | Stops<br>(%)<br>2.50%  | Vacaral  | Clay), EsB<br>et rare Rock<br>Namery<br>Warnings   | TOTAL<br>P2   | Type D TOTAL COMPO   | ES.E<br>LAC.X CHI-<br>BITE CHI.In  | 248.96<br>246.96<br>93.8<br>Travel Terra<br>8.5 min.<br>0.7 min.   |
| Sarge Sarah (g   | 20% LC<br>TO<br>Calculate<br>Upper<br>Elec   | OTTS (TR-8<br>Lower<br>Ehr.   | 3.0 ac.<br>3.6 ac.<br>5)<br>Distance<br>(t.)   | Stops<br>(%)<br>2.50%  | Vacaral  | Clay), EsB<br>et rare Rock<br>Namery<br>Warnings   | TOTAL<br>P2   | Type D TOTAL COMPO   | ES.E<br>LAC.X CHI-<br>BITE CHI.In  | 248.96<br>246.96<br>93.8<br>Travel Terra<br>8.5 min.<br>0.7 min.   |
| Sarge Sarah (g   | 20% LC<br>TO<br>Calculate<br>Upper<br>Elec   | OTTS (TR-8<br>Lower<br>Ehr.   | 3.0 ac.<br>3.6 ac.<br>5)<br>Distance<br>(t.)   | Stops<br>(%)<br>2.50%  | Vacaral  | Clay), EsB<br>et rare Rock<br>Namery<br>Warnings   | TOTAL<br>P2   | Type D TOTAL COMPO   | ES.E<br>LAC.X CHI-<br>BITE CHI.In  | 248.96<br>246.96<br>93.8<br>Travel Terra<br>8.5 min.<br>0.7 min.   |
| Sarge Sarah (g   | 20% LC<br>TO<br>Calculate<br>Upper<br>Elec   | OTTS (TR-8<br>Lower<br>Ehr.   | 3.0 ac.<br>3.6 ac.<br>5)<br>Distance<br>(t.)   | Stops<br>(%)<br>2.50%  | Vacaral  | Clay), EsB<br>et rare Rock<br>Namery<br>Warnings   | TOTAL<br>P2   | Type D TOTAL COMPO   | ES.E<br>LAC.X CHI-<br>BITE CHI.In  | 248.96<br>246.96<br>93.8<br>Travel Terra<br>8.5 min.<br>0.7 min.   |
| Sarge Sarah (g   | 20% LC<br>TO<br>Calculate<br>Upper<br>Elec   | OTTS (TR-8<br>Lower<br>Ehr.   | 3.0 ac.<br>3.6 ac.<br>5)<br>Distance<br>(t.)   | Stops (5) 2.50% (1.22%   | organical Stormer, and EVE p   | Clay), Esse<br>characterists<br>Narrings<br>10<br>24   | TOTAL<br>P2   | Type D TOTAL COMPO   | ES.E<br>LAC.X CHI-<br>BITE CHI.In  | 248.96<br>246.96<br>93.8<br>Travel Terra<br>8.5 min.<br>0.7 min.   |
| Sarge Sarah (g   | 20% LC<br>TO<br>Calculate<br>Upper<br>Elec   | OTTS (TR-8<br>Lower<br>Ehr.   | 3.0 ac.<br>3.6 ac.<br>5)<br>Distance<br>(t.)   | Stops (5) 2.50% (1.22%   | Vacaral  | Clay), Esse<br>characterists<br>Narrings<br>10<br>24   | TOTAL<br>P2   | Type D TOTAL COMPO   | ES.E<br>LAC.X CHI-<br>BITE CHI.In  | 248.96<br>246.96<br>93.8<br>Travel Terra<br>8.5 min.<br>0.7 min.   |
| Sarge Sarah (g   | 20% LC<br>TO<br>Calculate<br>Upper<br>Elec   | OTTS (TR-8<br>Lower<br>Ehr.   | 3.0 ac.<br>3.6 ac.<br>5)<br>Distance<br>(t.)   | Stops (5) 2.50% (1.22%   | organical Stormer, and EVE p   | Clay), Esse<br>characterists<br>Narrings<br>10<br>24   | TOTAL<br>P2   | Type D TOTAL COMPO   | ES.E<br>LAC.X CHI-<br>BITE CHI.In  | 248.96<br>246.96<br>93.8<br>Travel Terra<br>8.5 min.<br>0.7 min.   |
| Land U Singularity ( Singulari | 2 core Lo<br>To'<br>Ca lesseete<br>Upper<br>Earc<br>601<br>800   | IAL AREA OFFICIAL STATE OF THE | 30 sc.   | 5tpa<br>(5)<br>(2.50%<br>1.29%   | Vateral  Vateral  Grade - Arol  According to the second of | Chry, Edit State Rock  | P <sub>2</sub> 41                                   | Type D TOTAl COMPO   | EXT AK X CITY OF THE COLOR OF T | 248.96<br>246.96<br>93.8<br>Travel Terra<br>8.5 min.<br>0.7 min.   |
| Land U Single landy g | 20% LC<br>TO<br>Calculate<br>Upper<br>Elec   | IAL AREA OFFICIAL STATE OF THE | 3.0 ac.<br>3.6 ac.<br>5)<br>Distance<br>(t.)   | 5 tops (%) 2.50% (%) 1.25%   | organical Stormer, and EVE p   | Chry, Esta Act to the  | TOTAL<br>P2   | Type D TOTAl COMPO   | EXT AK X CITY OF THE COLOR OF T | 248.96<br>246.96<br>93.8<br>Travel Terra<br>8.5 min.<br>0.7 min.   |
| Land U Single landy g Single landy g Single landy g Single landy g Single landy   | 2 20% LC TO Chicketer Lippe Elec ect ect ect colors | IAL AREA OFFICIAL STATE OF THE | 30 sc.   | 5 tops (%) 2.50% (%) 1.25%   | Wateral  Wateral  Grad   | Chry, Esta Act to the  | P <sub>2</sub> 41                                   | Type D TOTAl COMPO   | EXT AK X CITY OF THE COLOR OF T | 248.96<br>246.96<br>93.8<br>Travel Terra<br>8.5 min.<br>0.7 min.   |
| Land U Single landy g | Sove LC  Colleged  Colleged  Exc  Exc  Exc  Exc  Exc  Exc  Exc  Ex   | IAL AREA OFFICIAL STATE OF THE | 30 sc.   | 5 tops (%) 2.50% (%) 1.25%   | Wateral  Wateral  Grad   | Chryl, Seib skiner Reck  | P <sub>2</sub> 41                                   | Type D TOTAL   | A A CATACON AND AND AND AND AND AND AND AND AND AN   | 265 90 90 93.5<br>To-d Trind Trind 15 90 90 90 93.5<br>S.5 risk, 0.7 risk, 15 91 91 91 91 91 91 91 91 91 91 91 91 91   |
| Exact Use of Concessions  Short Pay  The of Concession  Short Pay  The Concession  Concession  Concession  Concession  Concession  Lord  Lord  | S 20% LC  CO Leviert  Upper Esec  E00  O AREA  AL ARSA   | IAL AREJ<br>Corn (TR-6<br>Enr.<br>&co<br>700  | 30 sc  | 810ps<br>(N)<br>1250x<br>1.295x  | Ustered great grea | Chryl, Faith Chine Rock I Share | P <sub>2</sub> 41 41 55 650578                      | Type D TOTAL COMPO   | ES AKICHI GERMANIA ANI CONTROL OF AN | 24.50 36.50 50.5 50.5 50.5 50.5 50.5 50.5 50.5   |
| Eard University of Concentration  Short Pay  Share Pay  | 2 core LC  Co losseste  Upper Elec  co co  c | IAL AREJ OMN (TR-0 Env. 400 799   | 30 sec. 350  | Stops  | unphilos Brown services and Edit Services and Ed | Chryl, Faith Chine Rock I Share | P <sub>2</sub> 41 41 55 650578                      | Type D TOTAL TOTAL Re        | EST ARECHE   | 24.50 34.50 35.5 35.5 35.5 35.5 35.5 35.5 35.5 3   |
| Singularity ( Si | 2 core LC  Co losseste  Upper Elec  co co  c | IAL AREJ OMN (TR-0 Env. 400 799   | 30 sec. 350  | Stops  | Ustered great grea | Chryl, Faith Chine Rock I Share | P <sub>2</sub> P <sub>3</sub> P <sub>4</sub> GEOSTR | Type  D  TOTAL  COMPO  PR  R  I  I  I  I  I  I  I  I  I  I  I  I | ES AKICHI GERMANIA ANI CONTROL OF AN | 24.50 36.50 50.5 50.5 50.5 50.5 50.5 50.5 50.5   |
| Land U Single-landy () Cit Concentration  Underlands () Land ()  | 2 OVE LC TO Colleged to Upper Elec Eo   | ors (TR4)   | 30 sc 55 (Cistorics City City City City City City City City  | Stops  | Ustered great grea | Chryl, Faith Chine Rock I Share | P <sub>2</sub> P <sub>3</sub> P <sub>4</sub> GEOSTR | Type  D  TOTAL  COMPO  PR  R  Hylin  Type  D  TOTAL  Type        | AS CITY OF THE COLOR OF T   | 264 50 345 50 34 |
| Exact Use of Demonstration  Short Pay The tor Concerned of the Concerned o | 2 SON LC TO TO Calcolate Upper Enc   | ALARES  | 30 sc  | Super   Supe | Ustered great grea | Chry, Esill Strand Resident St | Ps 41   | Type D TOTAL COMPO Rs  | AS CITY OF THE COLOR OF T   | 24.50 30.5 30.5 30.5 30.5 30.5 30.5 30.5 3   |
| Exact Use of Demonstration  Short Pay The tor Concerned of the Concerned o | Colembra Col | ALAREM  | 3.0 sc 3. | Brops   129%   | unpalone Strong of the Control of th | Chip), Exilo is not float.  Marrings 1 0 24 0 24 0 24 0 24 0 24 0 24 0 24 0  | P2 A1           | Type  D  TOTAL  COMPO  PR  R  Hylin  Type  D  TOTAL  Type        | ESS AS YOUR STREET OF THE CHIPMENT OF THE CHIP | 264 50 345 50 50 50 50 50 50 50 50 50 50 50 50 50  |

| TSS Removal t      | selon on Environmental Quality   |                                    | )              |  | į                                     |   |               |                    | t:           |
|--------------------|--|------------------------------------|----------------|--|---------------------------------------|---|---------------|--------------------|--------------|
|                    | alcutation = 05-09-2004  |                                    |                |  |                                       | L   |               |                    |              |
| Designed the case  | HOMLAND 820; Phase I pond  | i                                  | <del>:</del> - |  |                                       |   |               |                    | ┾.           |
| Data Propered:     | IN 2000s   | ļ                                  | t              | ***************************************                              |                                       |   |               |                    | +-           |
|                    |  | ļ                                  | ·              |  | · · · · · · · · · · · · · · · · · · · |   |               |                    |              |
| L. Tim December 1  | ed Nederlen from Fra total system  | Celculations E                     | om RG-346      | Pages 3-17 to 3-30   | 1                                     | .,  |               |                    | -            |
|                    | ****   |                                    | 4              |  | ·                                     |   |               |                    |              |
|                    | Page 3-29 Equation 3.3 L <sub>H</sub> s  | 27.274 P.                          |                |  | <u></u>                               |   |               |                    | ٠.           |
|                    | EM-  | August 135                         | rencomi        |  |                                       |   |               |                    |              |
|                    | A.*  | feet increme i                     | 1 Impersions   | grow for alle  |                                       |   |               |                    | ١.           |
|                    | P*   | Visite active                      | proprieto      | n Inches   | 1                                     |   |               |                    | •••          |
| Shi Orac           | Determine Parquined Load Removal Bassed on the Entire Projec   | á                                  | <del> </del>   | ·  |                                       | <u></u>                                   | <del></del>   | ļ                  | ***          |
|                    | Churty #   | william man                        | ļ              | [  | L                                     |   |               |                    | Ľ            |
| į,                 | Total project area included in plan " a<br>adequal operator area within the limbs of the plan " a  | 73.50                              | BC/94          |  | i                                     |   | İ             |                    | 1            |
| Total po           | development improvious urse within the limbs of the plant of   | 21.40                              | acres          |  |                                       |   |               | * ** '             | ٠.           |
|                    | edevelopment impervious area within the limbs of the pier of<br>development impervious area when the limbs of the pier of<br>Total post development imperious cover section of   | 22                                 | resea          |  |                                       |   |               |                    | Γ            |
|                    |  |                                    | Target         | <del> </del>   |                                       |   |               |                    | 4            |
|                    | Total Le required for this plan #  | 27731                              | - Ca           |  | <del></del>                           | ****                                      |               |                    | ٠ إ          |
| 1                  |  | 1                                  |                |  |                                       | :   |               |                    | 1            |
| Nun                | ber of drainage bears / cuttets areas leaving the plan area *  | 1                                  |                |  |                                       |   |               |                    | Ť            |
|                    |  |                                    |                |  | 7                                     |   |               |                    | 1.           |
| Colonia topos for  | Da familia Lord Secretor   | ļ                                  |                |  | ·                                     |   |               |                    | į"           |
|                    | Drainage Bests / Owtail Area No. *   | ļ                                  | ·              | <u> </u>   | ·                                     | i   |               |                    | ÷.           |
|                    |  | •                                  |                |  |                                       |   |               |                    | Ľ.           |
|                    | Page 3.29 Equation 3.3. Ly *   | 77.2(Ag t P)                       |                |  |                                       |   |               |                    | ï            |
| where              | ing  | Received 156                       | record         | <del>ļ</del>   |                                       | ļ   | <del></del>   |                    | <del>-</del> |
|                    | A <sub>4</sub> ×   | Not increase                       | imperious      | grae for pile  | i                                     | 0.1                                       |               | :                  | İ.           |
|                    | Pa   | Average a roun                     | process and    | e rches  | 1                                     |   | •             |                    | Ľ            |
|                    | Marriane Required Load Removal Based on the Entire Project   |                                    | <del></del>    | · · · · · · · · · · · · · · · · · · ·                                | <del></del>                           | ļ   |               |                    | -            |
|                    |  | ,                                  |                |  | ·                                     |   | i             |                    | †            |
|                    | Total drainage basis / coded area * =  | 12.60                              | BCDM           | <u> </u>   |                                       |   | ·             |                    |              |
| Post dendo         | Cost reprises you with drivery base / code are   | 31.43                              | 20704<br>20704 | <del></del>  | i ·                                   |   | ļ <b></b>     | {- · · · · · · · · | ٠.           |
| Post-developer     | Total changes beaut outside area   | 1 043                              | 1              | A  | ·                                     |   |               |                    | •            |
|                    | P  | 20                                 | Parties.       |  |                                       |   |               |                    |              |
|                    |  | 27731                              |                |  |                                       |   |               |                    | 7.           |
|                    |  |                                    | <del> </del> - |  | <del></del>                           |   | ļ             |                    | 2            |
| Lindorn by Dr      | meson Bredt, and Belief the Granes BUT Code by this S  | 1537                               | <u> </u>       |  | BMP Code:                             | BUP TH                                    | *             |                    | :_           |
|                    |  | 48                                 | actro labor    |  | AC.                                   | :<br>************************************ | وستنده        | <u>L</u> -         | ļ.           |
|                    | Piccond MAP = Remove efficiency =  | <b>1</b> 1                         | percent        | 1  | BR                                    | Bonter                                    | c Cartixoga ( | <del></del> -      | ÷            |
|                    |  |                                    | i              | 1  | C                                     | Corners                                   | ted Wetters   |                    | Ì            |
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|                    | C <sub>B</sub> = TBS Load serviced by the population BMP =   | \${10F4                            | PH.            | ş  | ··                                    | i   |               |                    | <u>.</u> .   |
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|                    | Chi-site Writer Charley Volume   |                                    | cubic heat     | t  | ·                                     | ; - ·                                     |               |                    | 1.           |
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|                    | Of ste are drawing to GMP a  | *                                  | 4095           |  | <del></del>                           |   |               |                    | L            |
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|                    | Off-ske Water Quality Volume =   | 12303                              | cubic foot     |  |                                       | ļ   |               |                    | †            |
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FOREBAY STORAGE: 81,990 C.F.

HIGHLAND HORIZON PHASE I SUBDIVISION IMPROVEMENTS PROJECT NO. 1600-2-001-36

### **Agent Authorization Form**

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

| 1               | Denver Green                        |  |
|-----------------|-------------------------------------|--|
|                 | Print Name                          |  |
|                 | Manager                             |  |
|                 | Title - Owner/President/Other       |  |
| of              | AG Round Rock RE Holdings, LLC      |  |
| 01              | Corporation/Partnership/Entity Name |  |
| have authorized | Ryan Mckay                          |  |
|                 | Print Name of Agent/Engineer        |  |
| of Kimle        | y-Horn and Associates Inc           |  |
|                 | 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:

- 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.
- 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.
- Āpplication 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.
- 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:

| P- 4-                             | 7/30/2024   |                           |
|-----------------------------------|---|---------------------------|
| Applicant's Signature             | Date  |                           |
|                                   |   |                           |
| THE STATE OF Oklahoma §           |   |                           |
| County of Oklahoma §              |   |                           |
| to me to be the person whose name | nority, on this day personally appeared<br>ne is subscribed to the foregoing instru<br>e purpose and consideration therein ex | ment, and acknowledged to |
| GIVEN under my hand and seal of   | office on this 30th day of July   | 2024_                     |
| IN SE CUMINA                      | NOTARY PUBLIC   |                           |

Denise Cuomo

Typed or Printed Name of Notary

MY COMMISSION EXPIRES:

# **Owner Authorization Form**

Texas Commission on Environmental Quality for Required Signature Edwards Aquifer Protection Program Relating to 30 TAC Chapter 213 Effective June 1, 1999

# Land Owner Authorization Highland leso Land Investment, Utd. , Kachel Tasobs of Land Owner Name (Legal Entity or Individual) am the owner of the property located at S10949 - HIGHLAND HORIZON PH 4, BLOCK O, Lot 3, ACRES 1.57 Legal description of the property referenced in the application and am duly authorized in accordance with §213.4(c)(2) and §213.4(d)(1) or §213.23(c)(2) and §213.23(d) relating to the right to submit an application, signatory authority, and proof of authorized signatory. I do hereby authorize AG Round Rock RE Holdings, LLC Applicant Name (Legal Entity or Individual) to conduct submission of TCEQ Core Data Form Description of the proposed regulated activities at 16225 N RM 620 Rd Austin, TX 78717 Precise location of the authorized regulated activities Land Owner Acknowledgement

Is ultimately responsible for compliance with the approved or conditionally approved Edwards Aquifer protection plan and any special conditions of the approved plan through all phases of plan implementation even if the responsibility for compliance and the right to possess and control the property referenced in the application has been contractually assumed by another legal entity. I further understand that any failure to comply with any condition of the executive director's approval is a violation is subject to administrative rule or orders and penalties as provided under §213.10 (relating to Enforcement). Such violation may also be subject to civil penalties and injunction.

I understand that Highland (LD) Land (NVL) Mutt, Utd.

Land Owner Name (Legal Entity or Individual)

| Land Owner Signature  Land Owner Signature  THE STATE OF § TEXIS            | Alu (102) Date   |
|---|--|
|   | s subscribed to the foregoing instrument, and e for the purpose and consideration therein expressed. |
| MACEY PHANAE BUQUOI Notary ID #134373097 My Commission Expires May 22, 2027 | NOTARY PUBLIC  Watery Buguor  Typed or Printed Name of Notary  MY COMMISSION EXPIRES: WW 22. 2023    |
| Attached: (Mark all that apply)   |  |
| Lease Agreement   |  |
| Signed Contract   |  |
| Deed Recorded Easement  |  |
| Other legally binding document  |  |

# Applicant Acknowledgement

| I, Denver Green   | of  | AG Round Rock RE Holdings, LLC  |
|---|---|---|
| Applicant Signatory   |   | Applicant Name (Legal Entity or Individual)   |
| acknowledge that  | Highland 620 Land Investm   | nent, LTD.  |
|   | Land Owner Name (Legal  | Entity or Individual)   |
| has provided AG F   | Round Rock RE Holdings, LLC   |   |
|   | Applicant Name (Legal E   | £ (5)   |
|   | ess and control the property refe<br>AG Round Rock RE Holdings,   | renced in the Edwards Aquifer protection plan.<br>, LLC   |
|   | Applicant Name (Legal   | l Entity or Individual)   |
| Aquifer protection pla<br>implementation. I ful<br>director's approval is | an and any special conditions of the real | proved or conditionally approved Edwards he approved plan through all phases of plan comply with any condition of the executive rative rule or orders and penalties as provided on may also be subject to civil penalties and |
| Applicant Sig   | nature  |   |
|   |   | 9/17/24   |
| Applicant Signature   | 'lalaria  | Date  |
| THE STATE OF § OK   |   |   |
| County of § Oklas   | noma  |   |
| known to me to be th  | e person whose name is subscribe  | rsonally appeared <u>Denver Green</u> ed to the foregoing instrument, and purpose and consideration therein expressed.  |
| GIVEN under my hand   | d and seal of office on this 17 o   | day of <u>Suptember, 2024</u> NOTARY PUBLIC   |
|   |   | N. Mora an  |
|   |   | Typed or Printed Name of Notary   |
|   |   | MY COMMISSION EXPIRES: 12/11/24   |
|   |   |   |



# **Application Fee Form**

### **Texas Commission on Environmental Quality** Name of Proposed Regulated Entity: Round Rock Commercial Regulated Entity Location: 12360 Market Dr, Oklahoma City, Oklahoma 73114 Name of Customer: AG Round Rock RE Holdings, LLC Contact Person: Grey Reed Phone: (214)725-4886 Customer Reference Number (if issued):CN N/A Regulated Entity Reference Number (if issued):RN 105093744 **Austin Regional Office (3373)** Travis X Williamson Havs San Antonio Regional Office (3362) Medina Uvalde Bexar Comal Kinney Application fees must be paid by check, certified check, or money order, payable to the Texas Commission on Environmental Quality. Your canceled check will serve as your receipt. This form must be submitted with your fee payment. This payment is being submitted to: Austin Regional Office San Antonio Regional Office Mailed to: TCEQ - Cashier Overnight Delivery to: TCEQ - Cashier 12100 Park 35 Circle **Revenues Section** Mail Code 214 Building A, 3rd Floor P.O. Box 13088 Austin, TX 78753 Austin, TX 78711-3088 (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 \$ 4,000 1.573 Acres Plan: Non-residential \$ Sewage Collection System L.F. Lift Stations without sewer lines Acres \$

| Piping System(  | s)(only) |      |               | Each | \$ |
|-----------------|----------|------|---------------|------|----|
| Exception       |          |      |               | Each | \$ |
| Extension of Ti | me       |      |               | Each | \$ |
| Signature:      | The May  | Date | e: 08/16/2024 |      |    |

Tanks

\$

Underground or Aboveground Storage Tank Facility

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

Organized Sewage Collection Systems and Modifications

| Project                   | Cost per Linear<br>Foot | Minimum Fee-<br>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<br>Piping System | Minimum Fee-<br>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 |

ZIP + 4

20. Fax Number (if applicable)

73114

Greyreed@ashtongray.com

17. E-Mail Address (if applicable)



Address:

City

16. Country Mailing Information (if outside USA)

18. Telephone Number (214)725-4886

Oklahoma City

# **TCEQ Core Data Form**

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

| 1. Reason for Submission (If other is checked   | d please describe in space provided.)  |              |                                     |                                    |                         |                |
|---|--|--------------|-------------------------------------|------------------------------------|-------------------------|----------------|
| New Permit, Registration or Authorization   | (Core Data Form should be submitted wi   | th the progr | am application.)                    |                                    |                         |                |
| Renewal (Core Data Form should be submi   | itted with the renewal form)   | Ot           | her                                 |                                    |                         |                |
| 2. Customer Reference Number (if issued) Follow this link to search   |  |              | ulated Entity Re                    | ference                            | Number (if is           | sued)          |
| cn N/A  | for CN or RN numbers in  |              |                                     |                                    |                         |                |
| ECTION II: Customer   | <u>Information</u>   |              |                                     |                                    |                         |                |
| 4. General Customer Information   | 5. Effective Date for Customer Inf   | ormation (   | Jpdates (mm/dd/                     | <sup>/</sup> yyyy)                 |                         | 8/3/24         |
| ✓ New Customer  | l<br>Jpdate to Customer Information<br>xas Secretary of State or Texas Comptroll           |              | ge in Regulated En<br>Accounts)     | tity Owne                          | ership                  | 1              |
| The Customer Name submitted here may<br>(SOS) or Texas Comptroller of Public Accou                              |  | what is cu   | rrent and active                    | with th                            | ne Texas Secre          | etary of State |
| 5. Customer Legal Name (If an individual, pri   | int last name first: eg: Doe, John)  |              | If new Customer,                    | enter pre                          | evious Custome          | r below:       |
| AG Round Rock RE Holdin   | gs, LLC  |              |                                     |                                    |                         |                |
| 7. TX SOS/CPA Filing Number   | 8. TX State Tax ID (11 digits)   |              | 9. Federal Tax                      | ID                                 | 10. DUNS N              | lumber (if     |
|   | 32096327955  | (9 digits)   |                                     |                                    | applicable)             |                |
| 005669747   | 1 3711Uh 377Uhh  |              |                                     |                                    |                         |                |
| 805663717   | 32090321933  |              | 99-44301                            | 10                                 |                         |                |
|   |  | ☐ Individ    |                                     | 1                                  | ership: 🔲 Gene          | eral 🔲 Limited |
| 11. Type of Customer: Corpora   | tion   |              |                                     | Partne                             | ership:                 | eral 🗌 Limited |
| L1. Type of Customer: Corpora   | tion   |              | ual                                 | Partne                             | her: LLC                |                |
| L1. Type of Customer: Corpora Government: City County Federal L2. Number of Employees                           | tion Local State Other   |              | ual<br>oprietorship                 | Partne                             | her: LLC                |                |
| 11. Type of Customer: Corpora Government: City County Federal  12. Number of Employees  0-20 21-100 101-250 251 | tion  Local State Other  -500 501 and higher   | Sole Pr      | ual oprietorship 13. Independe  Yes | Partne Otl Otl Otl No              | her: LLC<br>ned and Ope |                |
| 11. Type of Customer: Corpora  Government: City County Federal   12. Number of Employees                        | tion  Local State Other  -500 501 and higher  it relates to the Regulated Entity listed on | Sole Pr      | ual oprietorship 13. Independe  Yes | Partne  Oth  Oth  No  f the follow | her: LLC<br>ned and Ope |                |

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19. Extension or Code

OK

State

| ( ) - |   | STICAL TITL Described of Fort | _ |       |
|-------|---|-------------------------------|---|-------|
|       | ( | ) -                           |   | ( ) - |

# **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.)   |  |                     |                        |        |                        |             |          |                |                  |         |  |
| Round Rock Commercial  |  |                     |                        |        |                        |             |          |                |                  |         |  |
| 23. Street Address of the Regulated Entity:  | 16225 N RM 620   |                     |                        |        |                        |             |          |                |                  |         |  |
| (No PO Boxes)  | City   | Austin              | State                  | T      | X                      | ZIP         | 787      | '17            | ZIP + 4          |         |  |
| 24. County   | Williamson   |                     |                        |        |                        |             |          |                |                  |         |  |
|  |  | If no Stree         | et Address is provi    | ded, f | ields 25               | 5-28 are re | equired. |                |                  |         |  |
| 25. Description to Physical Location:  | South  | n of the Grea       | t Oaks Dr an           | d N    | FM 6                   | 620 inte    | ersect   | ion            |                  |         |  |
| 26. Nearest City   | . Nearest City   |                     |                        |        |                        | State       |          |                | Nearest ZIP Code |         |  |
| Round Rock   |  |                     |                        |        | TX                     |             |          |                | 78717            |         |  |
|  | Williamson  If no Street Address is provided, fields 25-28 are required.  South of the Great Oaks Dr and N FM 620 intersection  I Location:  South of the Great Oaks Dr and N FM 620 intersection  TX 78717  E/Longitude are required and may be added/updated to meet TCEQ Core Data Standards. (Geocoding of the Physical Address may be supply coordinates where none have been provided or to gain accuracy).  Itude (N) In Decimal:  30.492304  28. Longitude (W) In Decimal:  97.725845  Minutes  Seconds  Degrees  Minutes  Seconds  19.725845  Address may be 19.725845  Seconds  29.725845  Address may be 19.725845  Seconds  Seconds  29.725845  Address may be 19.725845  Seconds  Seconds  29.725845  Address may be 19.725845  Seconds  29.725845  Address may be 19.725845  Seconds  Seconds  29.725845  Address may be 19.725845  Seconds  Seconds  29.725845  Address may be 19.725845  Seconds  Seconds  Seconds  29.725845  Seconds  Seconds  29.725845  Seconds                       |                        |        |                        |             |          |                |                  |         |  |
| 27. Latitude (N) In Decimal:   |  | 30.49230            | 30.492304              |        | 28. Longitude (W) In I |             |          | ecimal: -97.72 |                  | 25845   |  |
| Degrees  | Minutes  |                     | Seconds                |        | Degree                 | S           |          | Minutes        |                  | Seconds |  |
| 30   |  |                     |                        |        | 97                     |             |          |                |                  |         |  |
| 29. Primary SIC Code (4 digits)  | /5 or 6 digite)  |                     |                        |        |                        | CS Code     |          |                |                  |         |  |
| 6552   | SIC Code 30. Secondary SIC Code 31. Primary NAICS Code (5 or 6 digits) (5 or 6 digits) (5 or 6 digits)   |                     |                        |        |                        |             |          |                |                  |         |  |
| 33. What is the Primary B  | usiness o  | of this entity? (Do | o not repeat the SIC o | r NAIC | S descrip              | otion.)     |          | <b>,</b>       |                  |         |  |
| Land de  |  |                     |                        |        |                        |             |          |                |                  |         |  |
| 34. Mailing  | 12360 Market dr  |                     |                        |        |                        |             |          |                |                  |         |  |
| Address:   | City   | Oklahoma (          | City State             | O      | K                      | ZIP         | 731      | 14             | ZIP + 4          |         |  |
| 35. E-Mail Address: Greyreed@ashtongray.com  |  |                     |                        |        |                        |             | 1        |                |                  |         |  |
| 36. Telephone Number 37. Extension or Code 38. Fax Number (if applicable)  |  |                     |                        |        |                        |             |          |                |                  |         |  |
| ( ) - 214-725  | -4886  |                     |                        |        |                        | (           | ) -      |                |                  |         |  |
|  |  |                     |                        |        |                        |             |          |                |                  |         |  |

**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.

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| ☐ Dam Safety          | ☐ Districts              | L Edwards Aquifer        | Emissions Inventory Air | ☐ Industrial Hazardous Waste |  |  |
|-----------------------|--------------------------|--------------------------|-------------------------|------------------------------|--|--|
|                       |                          |                          |                         |                              |  |  |
| Municipal Solid Waste | New Source<br>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:            | Ryan McKay |               |                | 41. Title:         | Civil Engineer        |  |
|----------------------|------------|---------------|----------------|--------------------|-----------------------|--|
| 42. Telephone Number |            | 43. Ext./Code | 44. Fax Number | 45. E-Mail Address |                       |  |
| (512 )518-4875       |            |               | ( ) -          | ryan.m             | nckay@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:         | AG Round Rock RE Holdings, LLC Job Title: Devel                                  |                      |        |       | lopment Director |  |  |
|------------------|--|----------------------|--------|-------|------------------|--|--|
| Name (In Print): | Grey Reed  |                      |        |       | (214) 725-4886   |  |  |
| Signature:       | Grey Reed Digitally signed by Gre DN: C=US, E=greyree Reed Date: 2024.08.16 14:1 | d@ashtongray.com, CN | l=Grey | Date: | 8/16/24          |  |  |

TCEQ-10400 (11/22) Page 3 of 3