Contributing Zone Plan Application

4001 Brushy Creek Rd. Cedar Park, WILLIAMSON COUNTY, TEXAS

Prepared For: Christopher Walsh

Walsh Brushy Creek Ranch LP 4001 Brushy Creek Rd Cedar Park, TX 78613 (512) 917-4004

Prepared By: KIMLEY-HORN AND ASSOCIATES, INC.

5301 Southwest Parkway, Building 3, Suite 100 Austin, Texas 78746 (512) 646-2237

Firm No. 928 KHA Project No. 069274118

June 24, 2024

Table of Contents

EDWARDS AQUIFER APPLICATION COVER PAGE	Section1
CONTRIBUTING ZONE PLAN SECTION	Section 2
Contributing Zone Plan Application Page	TCEQ-10257
Road Map	Attachment A
USGS Quadrangle Map	Attachment B
Narrative of Proposed Modifications	AttachmentC
Factors Affecting Surface Water Quality	Attachment D
Volume and Character of Stormwater	Attachment E
BMPs for Upgradient Stormwater	Attachment J
BMPs for On-Site Stormwater	
BMPs for Surface Streams	
Construction Plans	Attachment M
Inspection, Maintenance, Repair and Retrofit Plan	Attachment N
Measures for Minimizing Surface Stream Contamination	Attachment
TEMPORARY STORMWATER SECTION	Section3
Temporary Stormwater Form	
Spill Response Actions	
Potential Sources of Contamination	
Sequence of Major Activities	Attachment C
Temporary Best Management Practices and Measures	Attachment D
Structural Practices	Attachment E
Drainage Area Map	Attachment F
Inspection and Maintenance for BMPs	Attachment I
Schedule of Interim and Permanent Soil Stabilization Practices	Attachment J
ADDITIONAL FORMS	Section 4
AgentAuthorizationForm	
Application Fee Form	
Core Data Form	

Our Review of Your Application

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

Administrative Review

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

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

- 2. This Edwards Aquifer Application Cover Page form (certified by the applicant or agent) must be included in the application and brought to the administrative review meeting.
- 3. Administrative reviews are scheduled with program staff who will conduct the review. Applicants or their authorized agent should call the appropriate regional office, according to the county in which the project is located, to schedule a review. The average meeting time is one hour.
- 4. In the meeting, the application is examined for administrative completeness. Deficiencies will be noted by staff and emailed or faxed to the applicant and authorized agent at the end of the meeting, or shortly after. Administrative deficiencies will cause the application to be deemed incomplete and returned.

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

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

Technical Review

- 1. When an application is deemed administratively complete, the technical review period begins. The regional office will distribute copies of the application to the identified affected city, county, and groundwater conservation district whose jurisdiction includes the subject site. These entities and the public have 30 days to provide comments on the application to the regional office. All comments received are reviewed by TCEQ.
- 2. A site assessment is usually conducted as part of the technical review, to evaluate the geologic assessment and observe existing site conditions. The site must be accessible to our staff. The site boundaries should be

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

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

Mid-Review Modifications

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

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

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

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

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

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

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

1. Regulated Entity Name: Walsh Trails Section 5 & 6				2. Regulated Entity No.:				
3. Customer Name: Christopher Walsh			4. Customer No.:					
5. Project Type: (Please circle/check one)	New	Modification			Extension		Exception	
6. Plan Type: (Please circle/check one)	WPAP CZP	scs	UST	AST	EXP	EXT	Technical Clarification	Optional Enhanced Measures
7. Land Use: (Please circle/check one)	Residentia	Non-residential		8. Site (acres):		e (acres):	73.825	
9. Application Fee:	\$6,500	10. Permanent BMP(s):			s):	Batch Detentio	n	
11. SCS (Linear Ft.):	N/A	12. AST/UST (No. Tanks):			rks):	N/A		
13. County:	Williamson	14. Watershed:				Turkey Creek – Brushy Creek		

Application Distribution

Г

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

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

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

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

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

Austin Region

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.

Benjamin L. Green, P.E.

Print Name of Customer/Authorized Agent

-22

05/28/2024

Signature of Customer/Authorized Agent

Date

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

Contributing Zone Plan Application

Texas Commission on Environmental Quality

for Regulated Activities on the Contributing Zone to the Edwards Aquifer and Relating to 30 TAC §213.24(1), 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 Contributing Zone Plan Application is hereby submitted for TCEQ review and Executive Director approval. The application was prepared by:

Print Name of Customer/Agent: Benjamin L. Green, P.E.

Date: 05/28/24

Signature of Customer/Agent:

BarR

Regulated Entity Name: <u>Walsh Trails Section 5 & 6</u>

Project Information

- 1. County: Williamson County
- 2. Stream Basin: Brazos River Basin
- 3. Groundwater Conservation District (if applicable): N/A
- 4. Customer (Applicant):

Contact Person: Christopher Walsh
Entity: Walsh Brushy Creek Ranch LP
Mailing Address: 4001 Brushy Creek RdZip: 78613City, State: Cedar Park, TXZip: 78613Telephone: (512) 917-4004Fax: _____Email Address: christopherwalshrr@hotmail.comFax: _____

TCEQ-10257 (Rev. 02-11-15)

5. Agent/Representative (If any):

Contact Person: Benjamin L. Green, P.E.Entity: Kimley-Horn and Associates, Inc.Mailing Address: 5301 Southwest Parkway, Building 3, Suite 100City, State: Austin, TXZip: 78735Telephone: 512-646-2243Fax: ____Email Address: ben.green@kimley-horn.com

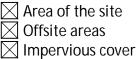
6. Project Location:

 \boxtimes The project site is located inside the city limits of <u>Cedar Park</u>.

- The project site is located outside the city limits but inside the ETJ (extra-territorial jurisdiction) of _____.
- The project site is not located within any city's limits or ETJ.
- 7. The location of the project site is described below. Sufficient detail and clarity has been provided so that the TCEQ's Regional staff can easily locate the project and site boundaries for a field investigation.

Located north of Brushy Creek Rd, adjacent to Brushy Creek to the east.

- 8. Attachment A Road Map. A road map showing directions to and the location of the project site is attached. The map clearly shows the boundary of the project site.
- 9. Attachment B USGS Quadrangle Map. A copy of the official 7 ½ minute USGS Quadrangle Map (Scale: 1" = 2000') is attached. The map(s) clearly show:
 - \boxtimes Project site boundaries.
 - USGS Quadrangle Name(s).
- 10. Attachment C Project Narrative. A detailed narrative description of the proposed project is attached. The project description is consistent throughout the application and contains, at a minimum, the following details:



- \times Permanent BMP(s)
- \square Proposed site use
- Site history
- Previous development
- $\overline{\boxtimes}$ Area(s) to be demolished
- 11. Existing project site conditions are noted below:
 - Existing commercial site
 - Existing residential site

 \boxtimes Existing paved and/or unpaved roads

Undeveloped (Cleared)

Undeveloped (Undisturbed/Not cleared)

- Other: _____
- 12. The type of project is:

\times	Residential: # of Lots: <u>147</u>
	Residential: # of Living Unit Equivalents:
	Commercial
	Inductrial

- Other:
- 13. Total project area (size of site): 73.825 Acres

Total disturbed area: 52.96 Acres

- 14. Estimated projected population: <u>N/A</u>
- 15. The amount and type of impervious cover expected after construction is complete is shown below:

Table 1 - Impervious Cover

Impervious Cover of Proposed Project	Sg. Ft.	Sq. Ft./Acre	Acres
Порозей Појест	J. T. L.	Jy. I L./ Acre	AUCS
Structures/Rooftops	844,030	÷ 43,560 =	19.38
Parking	0	÷ 43,560 =	0
Other paved surfaces	352,858	÷ 43,560 =	8.10
Total Impervious		10 = / 0	
Cover	1,196,888	÷ 43,560 =	27.48

Total Impervious Cover 27.48 ÷ Total Acreage 73.825 X 100 = 37.22% Impervious Cover

16. Attachment D - Factors Affecting Surface Water Quality. A detailed description of all factors that could affect surface water quality is attached. If applicable, this includes the location and description of any discharge associated with industrial activity other than construction.

17. 🖂 Only inert materials as defined by 30 TAC 330.2 will be used as fill material.

For Road Projects Only

Complete questions 18 - 23 if this application is exclusively for a road project.

🖂 N/A

18.	Туре	of	pro	ject:
-----	------	----	-----	-------

TXDOT road project. County road or roads built to county specifications. City thoroughfare or roads to be dedicated to a municipality. Street or road providing access to private driveways. 19. Type of pavement or road surface to be used: Concrete Asphaltic concrete pavement Other: 20. Right of Way (R.O.W.): Length of R.O.W.: _____ feet. Width of R.O.W.: feet. $L x W = ___Ft^2 \div 43,560 Ft^2/Acre = ___acres.$ 21. Pavement Area: Length of pavement area: _____ feet. Width of pavement area: feet. $L x W = Ft^2 \div 43,560 Ft^2/Acre = acres.$ Pavement area acres ÷ R.O.W. area acres x 100 = % impervious cover. 22. A rest stop will be included in this project. A rest stop will not be included in this project. 23. 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

24. Attachment E - 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 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

25. Wastewater is to be discharged in the contributing zone. Requirements under 30 TAC §213.6(c) relating to Wastewater Treatment and Disposal Systems have been satisfied.

N/A

26. Wastewater will be disposed of by:

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

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

Permanent Aboveground Storage Tanks(ASTs) ≥ 500 Gallons

Complete questions 27 - 33 if this project includes the installation of AST(s) with volume(s) greater than or equal to 500 gallons.

N/A

27. Tanks and substance stored:

Table 2 - Tanks and Substance Storage

AST Number	Size (Gallons)	Substance to be Stored	Tank Material
1			
2			
3			
4			
5			
		Tot	al x 1 5 = Gallons

Total x 1.5 = ____ Gallons

28. The AST will be placed within a containment structure that is sized to capture one and one-half (1 1/2) times the storage capacity of the system. For facilities with more than

5 of 11

one tank system, the containment structure is sized to capture one and one-half (1 1/2) times the cumulative storage capacity of all systems.

Attachment G - Alternative Secondary Containment Methods. Alternative methods for providing secondary containment are proposed. Specifications showing equivalent protection for the Edwards Aquifer are attached.

29. Inside dimensions and capacity of containment structure(s):

Length (L)(Ft.)	Width(W)(Ft.)	Height (H)(Ft.)	L x W x H = (Ft3)	Gallons

Total: _____ Gallons

30. Piping:

All piping, hoses, and dispensers will be located inside the containment structure. Some of the piping to dispensers or equipment will extend outside the containment

- structure.
-] The piping will be aboveground

The piping will be underground

- 31. The containment area must be constructed of and in a material impervious to the substance(s) being stored. The proposed containment structure will be constructed of:
- 32. Attachment H AST Containment Structure Drawings. A scaled drawing of the containment structure is attached that shows the following:

Interior dimensions (length, width, depth and wall and floor thickness).

Internal drainage to a point convenient for the collection of any spillage.

Tanks clearly labeled

Piping clearly labeled

Dispenser clearly labeled

33. Any spills must be directed to a point convenient for collection and recovery. Spills from storage tank facilities must be removed from the controlled drainage area for disposal within 24 hours of the spill.

In the event of a spill, any spillage will be removed from the containment structure within 24 hours of the spill and disposed of properly.

In the event of a spill, any spillage will be drained from the containment structure through a drain and valve within 24 hours of the spill and disposed of properly. The drain and valve system are shown in detail on the scaled drawing.

Site Plan Requirements

Items 34 - 46 must be included on the Site Plan.

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

Site Plan Scale: 1" = <u>150</u>'.

35. 100-year floodplain boundaries:

Some part(s) of the project site is located within the 100-year floodplain. The floodplain is shown and labeled.

No part of the project site is located within the 100-year floodplain.

The 100-year floodplain boundaries are based on the following specific (including date of material) sources(s): _____.

36. 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, etc. are shown on the site plan.

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

- 37. \square A drainage plan showing all paths of drainage from the site to surface streams.
- 38. 🖂 The drainage patterns and approximate slopes anticipated after major grading activities.
- 39. \square Areas of soil disturbance and areas which will not be disturbed.
- 40. 🖂 Locations of major structural and nonstructural controls. These are the temporary and permanent best management practices.

41. \square Locations where soil stabilization practices are expected to occur.

42. \boxtimes Surface waters (including wetlands).

🗌 N/A

43. \boxtimes Locations where stormwater discharges to surface water.

There will be no discharges to surface water.

44. Temporary aboveground storage tank facilities.

Temporary aboveground storage tank facilities will not be located on this site.

45. Permanent aboveground storage tank facilities.

 \square Permanent above ground storage tank facilities will not be located on this site.

46. \boxtimes Legal boundaries of the site are shown.

Permanent Best Management Practices (BMPs)

Practices and measures that will be used during and after construction is completed.

- 47. Permanent BMPs and measures must be implemented to control the discharge of pollution from regulated activities after the completion of construction.
 - 🗌 N/A
- 48. These practices and measures have been designed, and will be constructed, operated, and maintained to insure that 80% of the incremental increase in the annual mass loading of total suspended solids (TSS) from the site caused by the regulated activity is removed. These quantities have been calculated in accordance with technical guidance prepared or accepted by the executive director.
 - The TCEQ Technical Guidance Manual (TGM) was used to design permanent BMPs and measures for this site.
 - A technical guidance other than the TCEQ TGM was used to design permanent BMPs and measures for this site. The complete citation for the technical guidance that was used is: _____.

N/A

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

🗌 N/A

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

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

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

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

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

52. 🛛 Attachment J - BMPs for Upgradient Stormwater.

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

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

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

53. 🛛 Attachment K - BMPs for On-site Stormwater.

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

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

- 54. Attachment L BMPs for Surface Streams. A description of the BMPs and measures that prevent pollutants from entering surface streams is attached.
 - 🗌 N/A
- 55. Attachment M Construction Plans. Construction plans and design calculations for the proposed permanent BMPs and measures have been prepared by or under the direct supervision of a Texas Licensed Professional Engineer, and are signed, sealed, and dated. Construction plans for the proposed permanent BMPs and measures are

attached and include: Design calculations, TCEQ Construction Notes, all proposed structural plans and specifications, and appropriate details.

_____N/A

- 56. Attachment N Inspection, Maintenance, Repair and Retrofit Plan. A site and BMP specific plan for the inspection, maintenance, repair, and, if necessary, retrofit of the permanent BMPs and measures is attached. The plan fulfills all of the following:
 - Prepared and certified by the engineer designing the permanent BMPs and measures
 - \boxtimes Signed by the owner or responsible party
 - Outlines specific procedures for documenting inspections, maintenance, repairs, and, if necessary, retrofit.
 - Contains a discussion of record keeping procedures
 - □ N/A
- 57. Attachment O Pilot-Scale Field Testing Plan. Pilot studies for BMPs that are not recognized by the Executive Director require prior approval from the TCEQ. A plan for pilot-scale field testing is attached.

🖂 N/A

58. Attachment P - 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 result in water quality degradation.

N/A

Responsibility for Maintenance of Permanent BMPs and Measures after Construction is Complete.

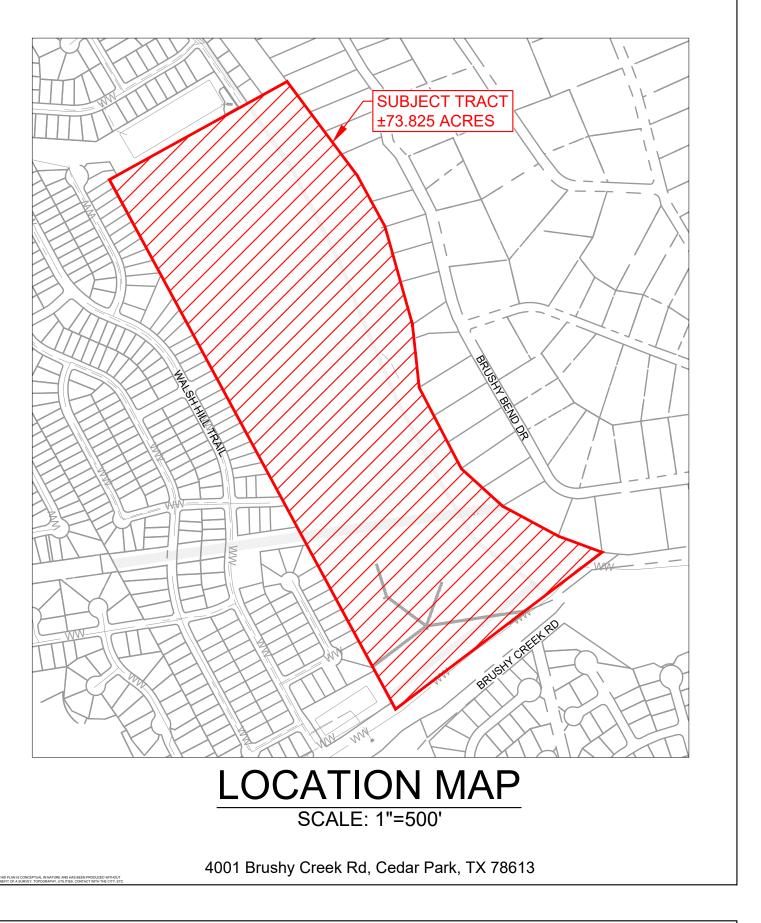
- 59. The applicant is responsible for maintaining the permanent BMPs after construction until such time as the maintenance obligation is either assumed in writing by another entity having ownership or control of the property (such as without limitation, an owner's association, a new property owner or lessee, a district, or municipality) or the ownership of the property is transferred to the entity. Such entity shall then be responsible for maintenance until another entity assumes such obligations in writing or ownership is transferred.
- 60. 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.

Administrative Information

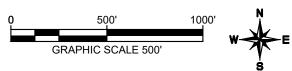
- 61. Submit one (1) original and one (1) copy of the application, plus additional copies as needed for each affected incorporated city, groundwater conservation district, and county in which the project will be located. The TCEQ will distribute the additional copies to these jurisdictions.
- 62. Any modification of this Contributing Zone Plan may require TCEQ review and Executive Director approval prior to construction, and may require submission of a revised application, with appropriate fees.
- 63. The site description, controls, maintenance, and inspection requirements for the storm water pollution prevention plan (SWPPP) developed under the EPA NPDES general permits for stormwater discharges have been submitted to fulfill paragraphs 30 TAC §213.24(1-5) of the technical report. All requirements of 30 TAC §213.24(1-5) have been met by the SWPPP document.
 - The Temporary Stormwater Section (TCEQ-0602) is included with the application.

ATTACHMENT A: Road Map



Kimley Horn 5301 Southwest Parkway, Building 2, Suite 100 Austin, Texas 78735 State of Texas Registration No. F-928

Walsh Brushy Creek Site Location Map Cedar Park, Williamson County, Texas May 2024



PLOTTED BY DWG NAME LAST SAVED

ATTACHMENT B: USGS Quadrangle Map



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



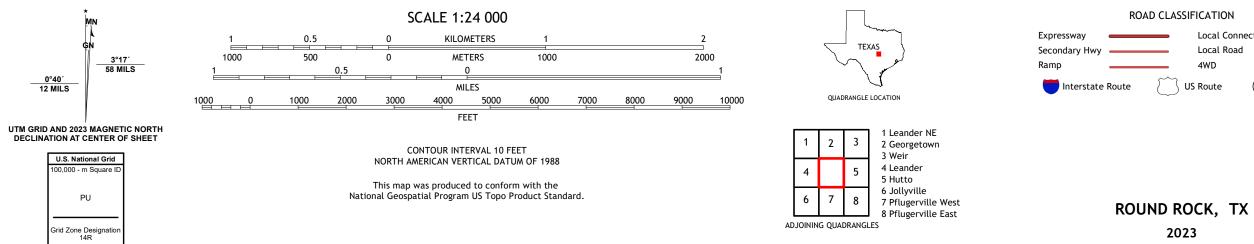




Produced by the United States Geological Survey North American Datum of 1983 (NAD83) World Geodetic System of 1984 (WGS84). Projection and 1 000-meter grid:Universal Transverse Mercator, Zone 14R This map is not a legal document. Boundaries may be generalized for this map scale. Private lands within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

Imagery.... Roads..... Names..... Hydrography..... Contours.....Boundaries.....Mu ..FWS National Wetlands Inventory Not Available Wetlands....

0°40′ 12 MILS





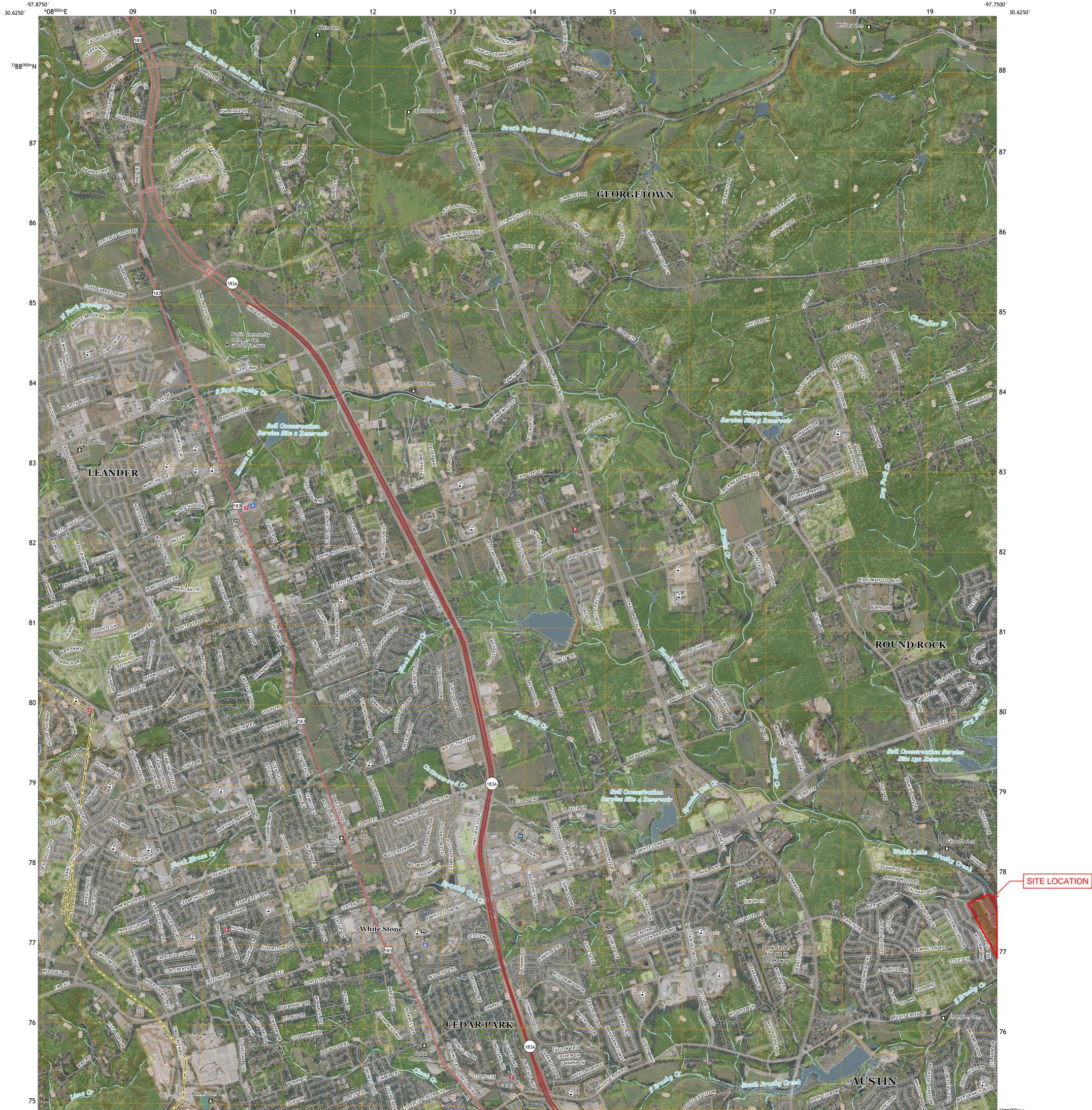




U.S. DEPARTMENT OF THE INTERIOR U.S. GEOLOGICAL SURVEY



LEANDER QUADRANGLE TEXAS 7.5-MINUTE SERIES



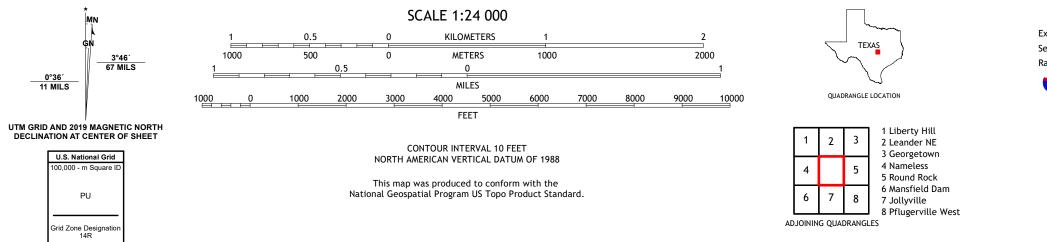
 $^{33}75^{000m}N$



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

Imagery.... Roads..... Names..... Hydrography..... Contours..... Boundaries.....Mu ..FWS National Wetlands Inventory Not Available Wetlands....

____0°36′ ____11 MILS



ROAD CLASSIFICATION Local Connector Expressway Local Road Secondary Hwy 🗕 _ Ramp 4WD _____ US Route State Route lnterstate Route



ATTACHMENT C: Narrative of Proposed Modifications

The content of this narrative is based on a 73.825-acre tract of land located in the full-purpose jurisdiction of the City of Cedar Park, TX. The property is located on the north side of Brushy Creek Rd, adjacent to Brushy Creek to the east. The developer is proposing 147 lot single family development with associated roadway, utility, and drainage improvements. The site is currently the owner's homestead with no other development.

The proposed improvements include site grading, road and home construction, stormwater networks, and associated water and wastewater utilities. The proposed impervious cover is 27.48-acres of the total 73.825-acre site. To account for the additional impervious cover, three permanent BMPs are being proposed for the site in the form of batch detention ponds.

ATTACHMENT D: Factors Affecting Surface Water Quality

No industrial associated activity discharges are expected for this proposed single family residential development site. Surface water quality can be affected by disturbance during construction and by development after construction. Soil disturbance from 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, construction entrances, and rock berms will prevent sediment from leaving the site. Siltation collected by the control measures will be cleaned from fences, berms, etc. on a routine schedule as outlined in the SWPPP and contract specifications.

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 proposed permanent BMPs on this project will help mitigate these occurrences.

ATTACHMENT E: Volume and Character of Stormwater

DETENTION TIMING STUDY



Detention Timing Study

Walsh Trails

City of Cedar Park, Texas

May 2024





TBPE Firm Registration F-928

1400 Woodloch Forest Drive, Suite 225 The Woodlands, TX 77380 Tel: (281) 475-2816

Table of Contents

Table of Contentsi
List of Tablesii
Appendicesiii
Executive Summaryiv
1.0 Introduction1
1.1 Authority1
1.2 Purpose of Study1
1.3 Location1
1.4 General Site Characteristics1
1.5 Methodology2
1.6 Results2
2.0 Topographic Information
2.1 Topographic Information
3.0 Hydrology
3.1 Methodology4
3.2 Meteorologic Models
3.3 Revised Effective Condition4
3.3.1 Drainage Areas4
3.3.2 Curve Number5
3.3.3 Impervious Cover
3.3.4 Lag Time5
3.3.5 Reaches
3.4 Proposed Condition6
3.4.1 Drainage Areas6
3.4.2 Curve Number
3.4.3 Impervious Cover
3.4.4 Lag Time
3.4.5 Reaches
3.5 Results7

List of Tables

Table 1: Atlas 14 Rainfall Depths	.4
Table 2: Revised Effective Drainage Areas	
Table 3: Revised Effective Curve Number	. 5
Table 4: Revised Effective Impervious Cover	. 5
Table 5: Revised Effective Lag Time	. 5
Table 6: 10-Year Peak Flow Summary	
Table 7: 25-Year Peak Flow Summary	.7
Table 8: 100-Year Peak Flow Summary	.7

Appendices

Appendix A	General Information Vicinity Map Annotated FEMA FIRM Panels Proposed Site Plan
Appendix B	Hydrology Effective Condition Drainage Area Map Revised Effective Condition Drainage Area Map Existing Site Impervious Cover Map Proposed Site Impervious Cover Map Longest Flow Path Map Atlas 14 Rainfall Hydrologic Calculations HEC-HMS Output

Appendix C Digital Files HEC-HMS v. 3.5

Executive Summary

Walsh Trails is an approximate 70-acre site intended for single-family development located in the City of Cedar Park, Williamson County, Texas. The project is located within the Upper Brushy Creek watershed. The subject tract is shown on the attached Vicinity Map in **Appendix A**.

The purpose of this study is to analyze the impact of the proposed development on the peak flows associated with the Upper Brushy Creek watershed. Results of the analysis show that the development of the subject tract without stormwater detention will cause no adverse impact to peak flows downstream of the tract in the 10-, 25-, and 100-year storm events.

The analysis was performed using the U.S. Army Corps of Engineers' HEC-HMS v. 3.5 hydrologic modeling software. This report describes the methodology used to perform the analysis.

1.0 Introduction

1.1 AUTHORITY

Toll Bros, Inc. (the "Client") has retained the services of Kimley-Horn and Associates, Inc. ("Kimley-Horn") to perform a Detention Timing Study for the proposed development. This report describes the hydrologic analysis performed by Kimley-Horn to determine the peak flows through the subject reach. Acting on behalf of the Client, the contacts for this study are as follows:

Hudson Stone, P.E., CFM Kimley-Horn and Associates, Inc. 1400 Woodloch Forest Drive, Ste 225 The Woodlands, Texas 77380 346.249.8378 Ben Green, P.E. Kimley-Horn and Associates, Inc. 5301 Southwest Parkway, Ste 100 Bld 2 Austin, Texas 78735 512.646.2243

1.2 PURPOSE OF STUDY

The purpose of this study is to analyze the impact of the proposed development on peak flows associated with the Upper Brushy Creek watershed and determine if stormwater detention is needed to offset increases in peak flow. This report is being submitted to the City of Cedar Park as a Detention Timing Study.

1.3 LOCATION

The subject tract is approximately 70 acres and is located in the City of Cedar Park, Williamson County, Texas. The tract is bound by Brushy Creek Road to the south and is located on the northwest corner of the confluence of South Brushy Creek with Brushy Creek. Additionally, the tract is located within the western portion of the Upper Brushy Creek watershed. The subject tract and surrounding features can be seen on the attached Vicinity Map in Appendix A.

1.4 GENERAL SITE CHARACTERISTICS

In existing conditions, approximately all of the 70-acre subject tract drains east to Brushy Creek just upstream of its confluence with South Brushy Creek. The tract is currently undeveloped with trees and short grass. Existing residential development surrounds the tract on all sides, and the proposed development also consists of residential development as shown on the Proposed Site Plan included in **Appendix A**.

The Federal Emergency Management Agency (FEMA) identifies on-site floodplain associated with Brushy Creek and South Brushy Creek as Zone AE, which are areas of studied floodplain with established regulatory flows and Base Flood Elevations (BFEs). The Annotated FEMA FIRM Panels in **Appendix A** show the subject tract in relation to the effective FEMA floodplain.

1.5 METHODOLOGY

The FEMA effective hydrologic model for the Upper Brushy Creek watershed will serve as the effective model for this analysis. The effective model includes an existing condition basin model but does not include Atlas 14 rainfall. Kimley-Horn updated the hydrologic model to include City of Cedar Park Atlas 14 rainfall. The subject tract was broken out of the effective subbasins to create a "Revised Effective" basin model. A "Proposed" condition basin model was then created to account for the proposed development. Hydrologic analysis was performed using the U.S. Army Corps of Engineers' Hydrologic Engineering Center's Hydrologic Modeling System (HEC-HMS) version 3.5. hydrologic modeling software.

1.6 RESULTS

The revised effective and proposed condition peak flows determined by this study are detailed in the following sections of this report. Results of the analysis show that the proposed development of the subject tract without on-site stormwater detention will cause no adverse impact to peak flows in the Upper Brushy Creek watershed in the 10-, 25-, and 100-year storm events.

2.0 Topographic Information

2.1 TOPOGRAPHIC INFORMATION

Kimley-Horn obtained LiDAR provided through the Texas Geographic Information Office (TxGIO) to use in this analysis. The LiDAR was flown as part of the 2021 Travis & Bexar Counties grouping at a 1-foot resolution and is consistent with the NABD88 vertical datum. The topographic information was used to determine the longest flow paths and perform time of concentration calculations. The topography is displayed on the Drainage Area Maps in **Appendix B**.

2.0 Topographic Information Kimley »Horn

3.0 Hydrology

3.1 METHODOLOGY

Kimley-Horn obtained the FEMA effective hydrologic model for the Upper Brushy Creek watershed. The effective model was developed using the U.S. Army Corps of Engineers' HEC-HMS v. 3.5. The model used the SCS Curve Number method to calculate losses and the SCS Unit Hydrograph method to calculate flows and create hydrographs. The model contains an existing condition analysis titled "UBC_Existing_All_Dams" that will be used in this study; the effective model did not include Atlas 14 rainfall.

3.2 METEOROLOGIC MODELS

Kimley-Horn added meteorologic models for the 10-, 25-, and 100-year storm events using Atlas 14 rainfall data provided by the City of Cedar Park memorandum dated 02/28/2020; sourcing is included in Appendix B. The depths used in this analysis can be seen below in Table 1.

lable 1: Atlas 14 Rainfall Depths			
Duration	10-Year (in.)	25-Year (in.)	100-Year (in.)
5-minute	0.77	0.95	1.26
15-minute	1.54	1.89	2.51
1-hour	2.84	3.50	4.65
2-hour	3.62	4.57	6.30
3-hour	4.11	5.26	7.42
6-hour	4.93	6.39	9.17
12-hour	5.68	7.36	10.55
24-hour	6.44	8.30	11.76

Table 1. Atlas 14 Painfall Donths

3.3 REVISED EFFECTIVE CONDITION

3.3.1 Drainage Areas

The effective drainage areas can be seen on the Effective Condition Drainage Area Map in Appendix B. A copy of the existing basin model was made and titled "Revised Effective" to use for the revised effective condition analysis. The subject tract is contained within five effective subbasins: "BRC 210", "BRC 220", "BRC_230", "BRC_240", and "SBR_110". However, the area proposed to be developed within the tract, approximately 59 acres of the 70-acre tract, does not include area within effective subbasin "BRC 210", so its parameters remained unchanged. The approximate 59 acres of proposed development was broken out of the effective subbasins to become a new subbasin titled "SITE". Subbasins "SBR_110", "BCR_220", "BRC 230", and "BCR 240" were updated in area to remove area from the proposed development. The Revised Effective Condition Drainage Area Map in Appendix B portrays the subbasin revisions made for this analysis. Table 2 below tabulates the updates to the drainage areas.

Table 2: Revised	Effective Drainage Areas

0		
Subbasin	Effective (ac.)	Revised Effective (ac.)
SBR_110	139.4	127.3
BRC_220	275.3	274.9
BRC_230	77.9	32.4
BRC_240	9.5	8.3
SITE	N/A	59.2
Total	502.1	502.1

3.3.2 Curve Number

The Curve Number (CN) for each subbasin remained consistent with the effective CN values. Subbasin "SITE" used a CN value of 59, which correlates to the value for subbasin "BRC_230", which contains the majority of the site in effective conditions. The CN values for each subbasin are listed below in Table 3.

Subbasin	Effective	Revised Effective
SBR_110	60	60
BRC_220	64	64
BRC_230	59	59
BRC_240	52	52
SITE	N/A	59

Table 3:	Revised	Effective	Curve	Number
	110000		Curve	1 NULLING

3.3.3 Impervious Cover

The impervious cover for subbasin "SITE" was determined using aerial imagery and engineering judgement. An Existing Site Impervious Cover Map with calculations is included in **Appendix B** denoting the areas of impervious cover in existing conditions. The impervious cover for subbasins "SBR_110", "BRC_220", "BRC_230", and "BRC_240" were updated to account for removal of portions within subbasin "SITE" that are not impervious. The impervious cover for each subbasin can be found in Table 4 below.

Table 4: Revised Effe	ctive Impervious Cover
-----------------------	------------------------

Subbasin	Effective (%)	Revised Effective (%)
SBR_110	32.9	35.56
BRC_220	44.7	44.76
BRC_230	21.8	47.18
BRC_240	11.4	13.03
SITE	N/A	3.87

3.3.4 Lag Time

The time of concentrations for subbasins "BRC_230" and "SITE" were calculated using TR-55 methodology. The Longest Flow Path Map in Appendix B depicts the path used for calculations drawn based on topographic information discussed in Section 2. Complete calculations are shown in the Hydrologic Calculations section of **Appendix B**. The remaining subbasins maintain their effective lag time value since the area changes do not alter the longest flow path. The lag times are summarized in Table 5 below.

Table 5: Revised Effective Lag Time		
Subbasin	Effective (min.)	Revised Effective (min.)
SBR_110	27.5	27.5
BRC_220	25.8	25.8
BRC_230	27.7	13.0
BRC_240	10.0	10.0
SITE	N/A	24.3

3.3.5 Reaches

Due to the revised effective drainage area updates discussed in Section 3.2.1, an additional reach was needed to convey the flow from subbasin "BRC_230" through subbasin "SITE". Therefore, Kimley-Horn added a reach named "R_SITE" using the Lag Routing Method. A flow path was drawn using topography as discussed in Section 2 and is depicted on the Revised Effective Condition Drainage Area Map in **Appendix B**. The lag time was calculated assuming a velocity of 4 ft/sec, which correlates to the assumed velocity of Open Channel Flow from the time of concentration calculations.

3.4 PROPOSED CONDITION

3.4.1 Drainage Areas

A copy of the Revised Effective basin model discussed in Section 3.2 was made and titled "Proposed" to use for the proposed condition analysis. The drainage areas in proposed conditions are consistent with that of revised effective conditions. The areas can be seen in Table 2 above.

3.4.2 Curve Number

The CN values in proposed conditions are consistent with that of revised effective conditions. The CN values can be seen in Table 3 above.

3.4.3 Impervious Cover

The impervious cover values in proposed conditions, except for subbasin "SITE", are consistent with that of revised effective conditions. The impervious values can be seen in Table 4 above. The impervious cover value for subbasin "SITE" was updated 30.32% to account for the proposed residential development. This value is a weighted average of the proposed development as 40% impervious and undeveloped areas as 0% impervious. Kimley-Horn assigned the 40% impervious value based on engineering judgement for proposed lots of approximately 10,000 square feet or 0.23 acres. The assigned impervious percentage generally correlates to TR-55 methodology, which assigns 0.25-acre lots as 38% impervious. A Proposed Site Impervious Cover Map is included in **Appendix B** detailing the 40% impervious areas, which aligns with the Proposed Site Plan included in **Appendix A**.

3.4.4 Lag Time

The lag times in proposed conditions, except for subbasin "SITE", are consistent with that of revised effective conditions. The lag times can be seen in Table 5 above. To account for the proposed development, the following updates were made to the TR-55 time of concentration calculations for subbasin "SITE":

- Sheet Flow Manning's "n" value was lowered from 0.40 to 0.15 to represent the change in cover from "woods, light underbrush" to the residential development's "short grass prairie"
- Shallow Concentrated Flow was changed from an "Unpaved" to a "Paved" condition
- Open Channel Flow velocity was increased from 4 ft/s to 6 ft/s to account for flow within confined, smooth stormwater infrastructure compared to the existing grass and tree-lined terrain
- Sheet Flow and Shallow Concentrated Flow lengths were decreased and Open Channel Flow length was increased

Complete calculations are included in the Hydrologic Calculations section of Appendix B.

3.4.5 Reaches

In proposed conditions, the same reach, "R_SITE", was modeled using the Lag Routing Method. The velocity was increased to 6 ft/sec, which correlates to the assumed velocity of Open Channel Flow in the proposed time of concentration calculations for subbasin "SITE".

3.5 RESULTS

The resulting peak flows from the effective, revised effective, and proposed condition analyses are tabulated below in Tables 6-8. HEC-HMS junctions included can be seen on the Drainage Area Map in **Appendix B**. Tables 6-8 include results up to junction "J_BRC_260", which is approximately 9,000 feet downstream of the subject tract. Results of the analysis show that the proposed residential development without on-site detention will cause no rise in peak flow for the 10-, 25-, and 100-year storm events. An on-site water quality pond will serve the 2-year event. Therefore, the proposed development will cause no adverse impact to the Upper Brushy Creek watershed or downstream properties if developed without on-site detention. Digital Files for the hydrologic model are included in **Appendix C**.

HEC-HMS Junction	Effective (cfs)	Revised Effective (cfs)	Revised Effective – Effective (cfs)	Proposed (cfs)	Proposed – Revised Effective (cfs)
J_BRC_210	5,146	8,816	3,670	8,816	0
J_BRC_240B	5,158	8,844	3,686	8,844	0
J_BRC_230_210	5,170	8,863	3,693	8,863	0
J_BRC_240	5,167	8,863	3,696	8,863	0
J_SBR_110	1,840	3,115	1,275	3,115	0
J_BRC_240_&_SBR_110	5,609*	9,486	3,877	9,485	-1
J_BRC_250	5,668	9,584	3,916	9,584	0
J_BRC_260	5,751	9,705	3,954	9,705	0

Table 6: 10-Year Peak Flow Summary

Table 7: 25-Year Peak Flow Summary

HEC-HMS Junction	Effective (cfs)	Revised Effective (cfs)	Revised Effective – Effective (cfs)	Proposed (cfs)	Proposed – Revised Effective (cfs)								
J_BRC_210	7,668	14,080	6,412	14,080	0								
J_BRC_240B	7,711	14,145	6,434	14,145	0								
J_BRC_230_210	7,730	14,178	6,448	14,176	-2								
J_BRC_240	7,721	14,179	6,458	14,177	-2								
J_SBR_110	2,539	4,397	1,858	4,397	0								
J_BRC_240_&_SBR_110	8,348*	15,245	6,897	15,242	-3								
J_BRC_250	8,422	15,420	6,998	15,418	-2								
J_BRC_260	8,544	15,653	7,109	15,650	-3								

Table 8: 100-Year Peak Flow Summary

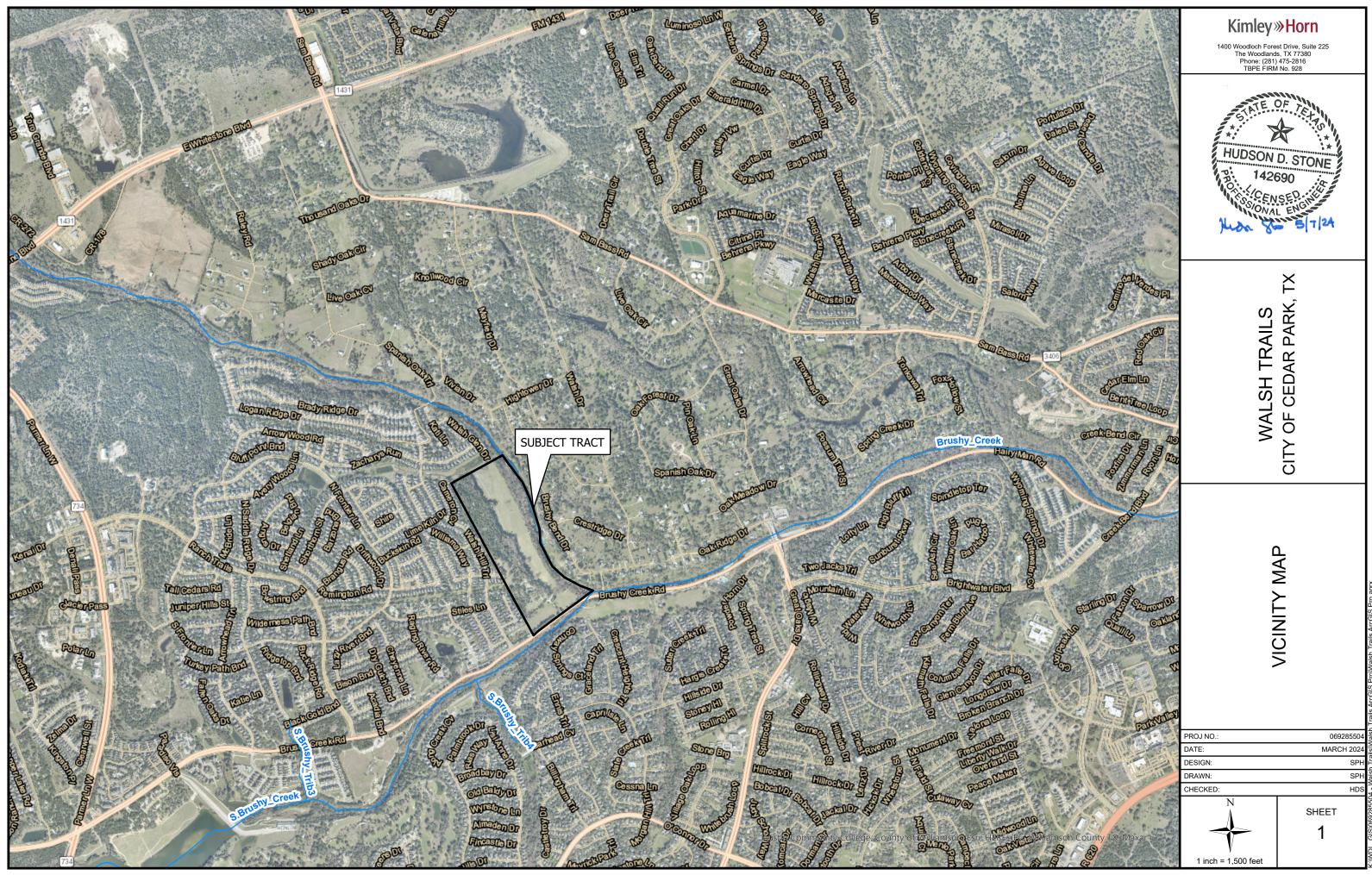
HEC-HMS Junction	Effective (cfs)	Revised Effective (cfs)	Revised Effective – Effective (cfs)	Proposed (cfs)	Proposed – Revised Effective (cfs)
J_BRC_210	13,055	25,441	12,386	25,441	0
J_BRC_240B	13,137	25,603	12,466	25,603	0
J_BRC_230_210	13,170	25,683	12,513	25,667	-16
J_BRC_240	13,165	25,686	12,521	25,670	-16
J_SBR_110	3,914	6,686	2,772	6,686	0
J_BRC_240_&_SBR_110	14,213*	27,942	13,729	27,925	-17
J_BRC_250	14,401	28,350	13,949	28,333	-17
J_BRC_260	14,633	28,920	14,287	28,903	-17

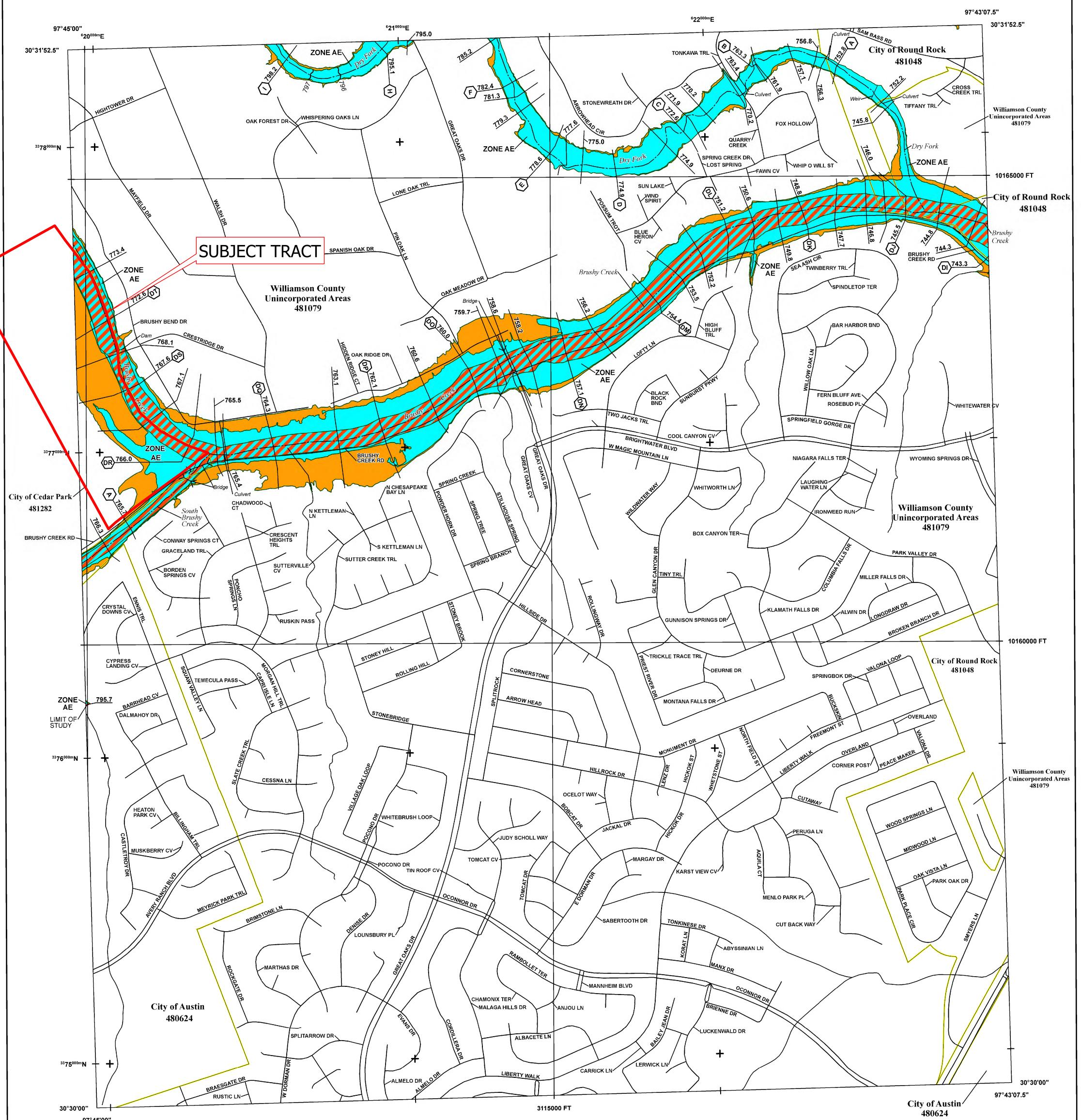
*Corresponds to effective FEMA FIS Report



Appendix A General Information

Vicinity Map Annotated FEMA FIRM Panels Proposed Site Plan





FLOOD HAZARD INFORMATION

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT THE INFORMATION DEPICTED ON THIS MAP AND SUPPORTING **DOCUMENTATION ARE ALSO AVAILABLE IN DIGITAL FORMAT AT** HTTPS://MSC.FEMA.GOV obtained directly from the website. /ithout Base Flood Elevation (BFE) Zone A, V, A99 listed above. With BFE or Depth Zone AE, AO, AH, VE, AR SPECIAL FLOOD **HAZARD AREAS** Regulatory Floodway Flood Insurance Program at 1-800-638-6620. 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage Department, dated 2014 and 2017. areas of less than one square mile Zone X Future Conditions 1% Annual Chance Flood Hazard Zone X **OTHER AREAS OF** Area with Reduced Flood Risk due to Levee FLOOD HAZARD See Notes Zone X **NO SCREEN** Areas of Minimal Flood Hazard Zone X OTHER Area of Undetermined Flood Hazard Zone D AREAS Channel, Culvert or Storm Sewer GENERAL STRUCTURES Levee, Dike or Floodwall <u>18.2</u> Cross Sections with 1% Annual Chance $\langle E \rangle$ <u>17.5</u> Water Surface Elevation (BFE)

(8)---- Coastal Transect —--- Coastal Transect Baseline

- – Profile Baseline
- Hydrographic Feature
- ~~ 513 ~~ Base Flood Elevation Line (BFE)
- Limit of Study OTHER Jurisdiction Boundary FEATURES

NOTES TO USERS

For information and questions about this Flood Insurance Rate Map (FIRM), available products associated with this FIRM, including historic versions, the current map date for each FIRM panel, how to order products, or the National Flood Insurance Program (NFIP) in general, please call the FEMA Map Information eXchange at 1-877-FEMA-MAP (1-877-336-2627) or visit the FEMA Flood Map Service Center website at https://msc.fema.gov. Available products may include previously issued Letters of Map Change, a Flood Insurance Study Report, and/or digital versions of this map. Many of these products can be ordered or

Communities annexing land on adjacent FIRM panels must obtain a current copy of the adjacent panel as well as the current FIRM Index. These may be ordered directly from the Flood Map Service Center at the number

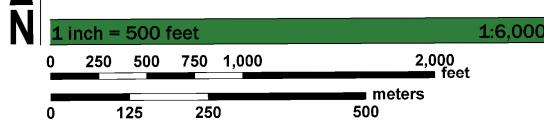
For community and countywide map dates refer to the Flood Insurance Study Report for this jurisdiction.

To determine if flood insurance is available in this community, contact your Insurance agent or call the National

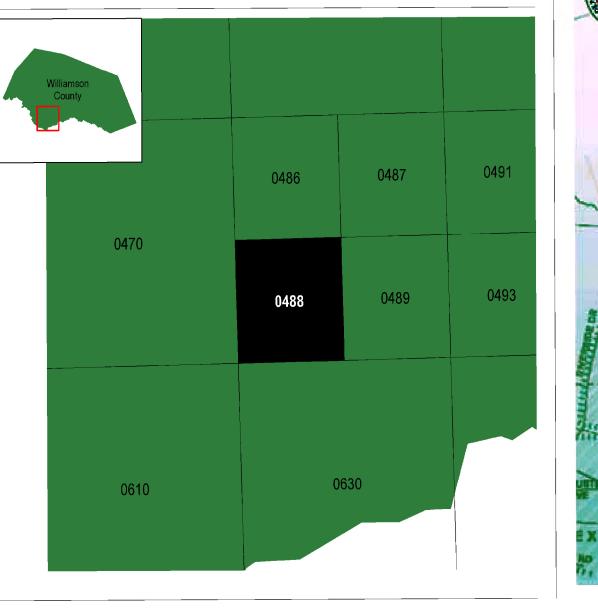
Base map information shown on this FIRM was derived from digital data obtained from Texas Natural Resource Information Systems (TNRIS), dated 2000; United States Census Bureau, dated 2015; United States Geological Survey, dated 2005; and the Williamson County Geographic Information Systems (GIS)

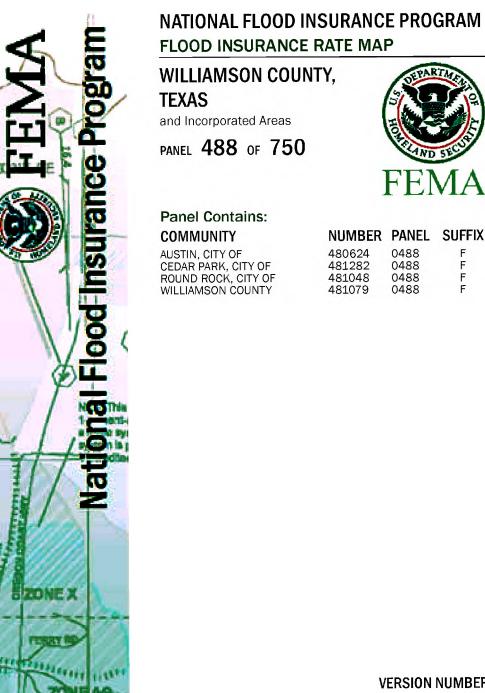
SCALE

Map Projection: Texas State Plane Central (FIPS ZONE 4203); North American Datum 1983; Western Hemisphere; Vertical Datum: NAVD 88



PANEL LOCATOR





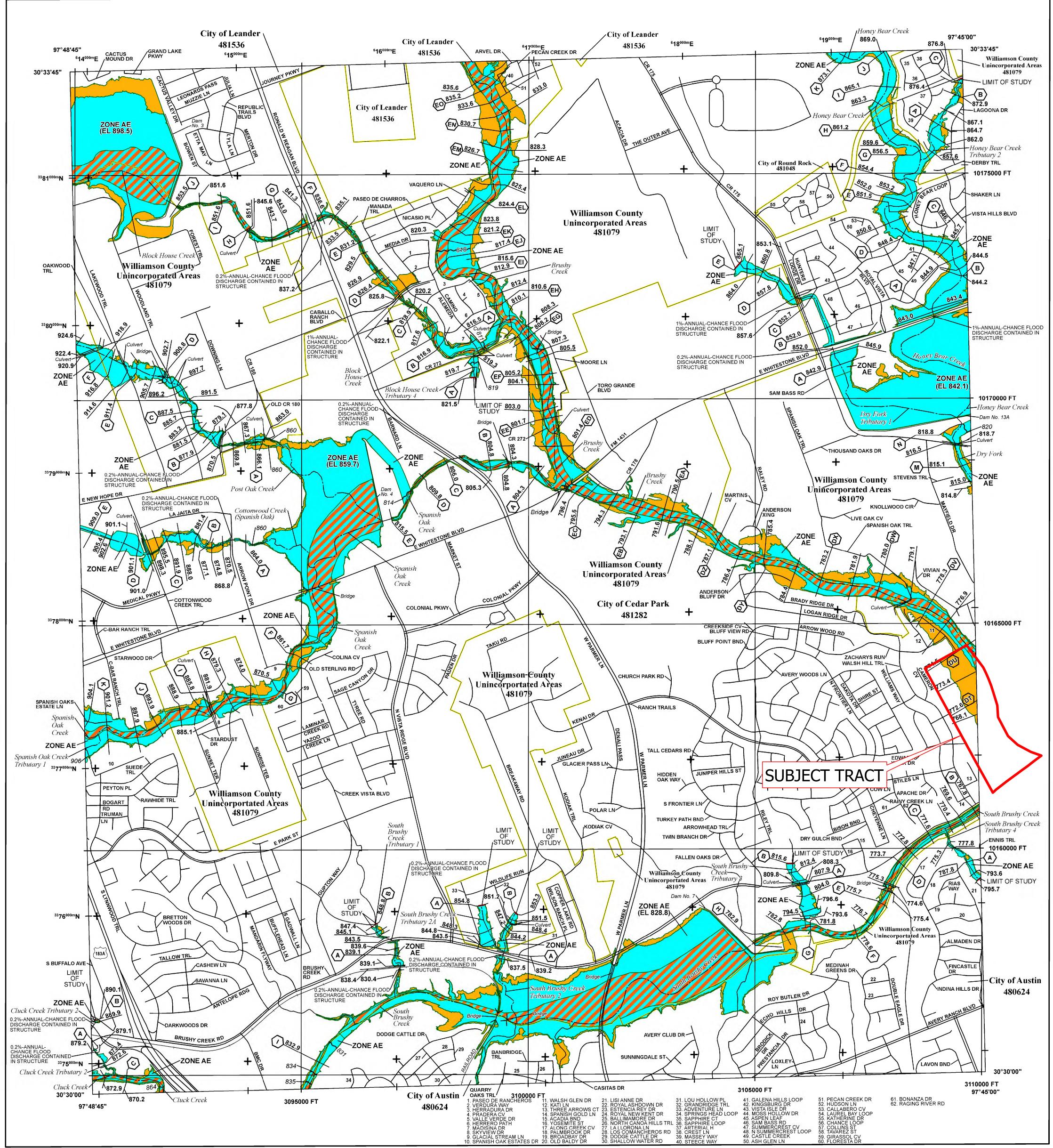


CEDAR PARK, CITY OF ROUND ROCK, CITY OF

NUMBER PANEL SUFFIX 480624 0488 481282 0488 481048 0488 481079 0488

> VERSION NUMBER 2.3.3.3 MAP NUMBER 48491C0488F

MAP REVISED **DECEMBER 20, 2019**

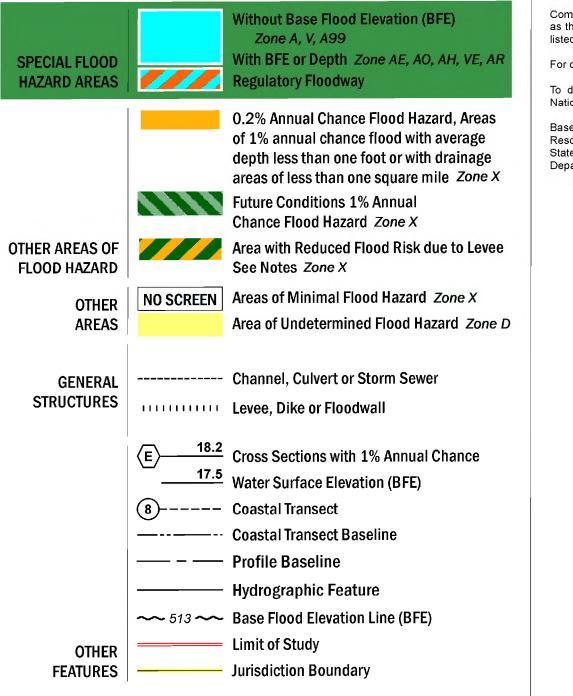


59. GIRASSOL CV 60. FLORESTA DR

50. ASH GLEN LN



SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT THE INFORMATION DEPICTED ON THIS MAP AND SUPPORTING DOCUMENTATION ARE ALSO AVAILABLE IN DIGITAL FORMAT AT HTTPS://MSC.FEMA.GOV



NOTES TO USERS

For information and questions about this Flood Insurance Rate Map (FIRM), available products associated with this FIRM, including historic versions, the current map date for each FIRM panel, how to order products, or the National Flood Insurance Program (NFIP) in general, please call the FEMA Map Information eXchange at 1-877-FEMA-MAP (1-877-336-2627) or visit the FEMA Flood Map Service Center website at https://msc.fema.gov. Available products may include previously issued Letters of Map Change, a Flood Insurance Study Report, and/or digital versions of this map. Many of these products can be ordered or obtained directly from the website.

Communities annexing land on adjacent FIRM panels must obtain a current copy of the adjacent panel as well as the current FIRM Index. These may be ordered directly from the Flood Map Service Center at the number listed above.

For community and countywide map dates refer to the Flood Insurance Study Report for this jurisdiction.

To determine if flood insurance is available in this community, contact your Insurance agent or call the National Flood Insurance Program at 1-800-638-6620.

Base map information shown on this FIRM was derived from digital data obtained from Texas Natural Resource Information Systems (TNRIS), dated 2000; United States Census Bureau, dated 2015; United States Geological Survey, dated 2005; and the Williamson County Geographic Information Systems (GIS) Department, dated 2014 and 2017.

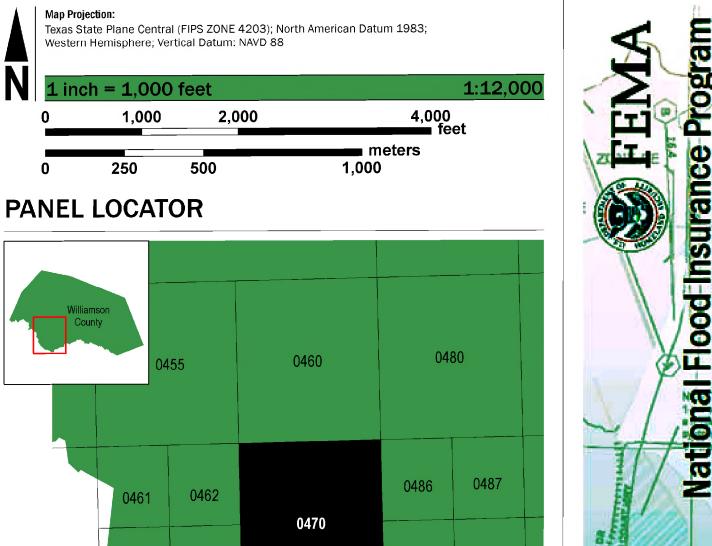


0463

0605

0464

. GLACIAL STREAM LN 19 . SPANISH OAK ESTATES DR 20

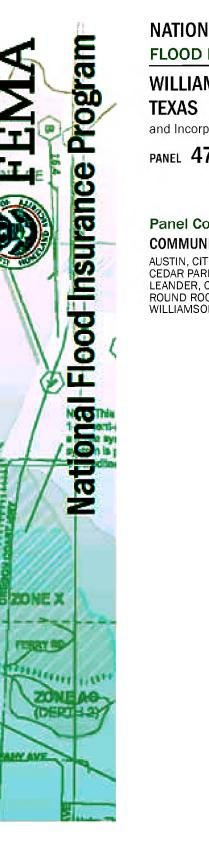


0610

0488

0489

0630



NATIONAL FLOOD INSURANCE PROGRAM FLOOD INSURANCE RATE MAP



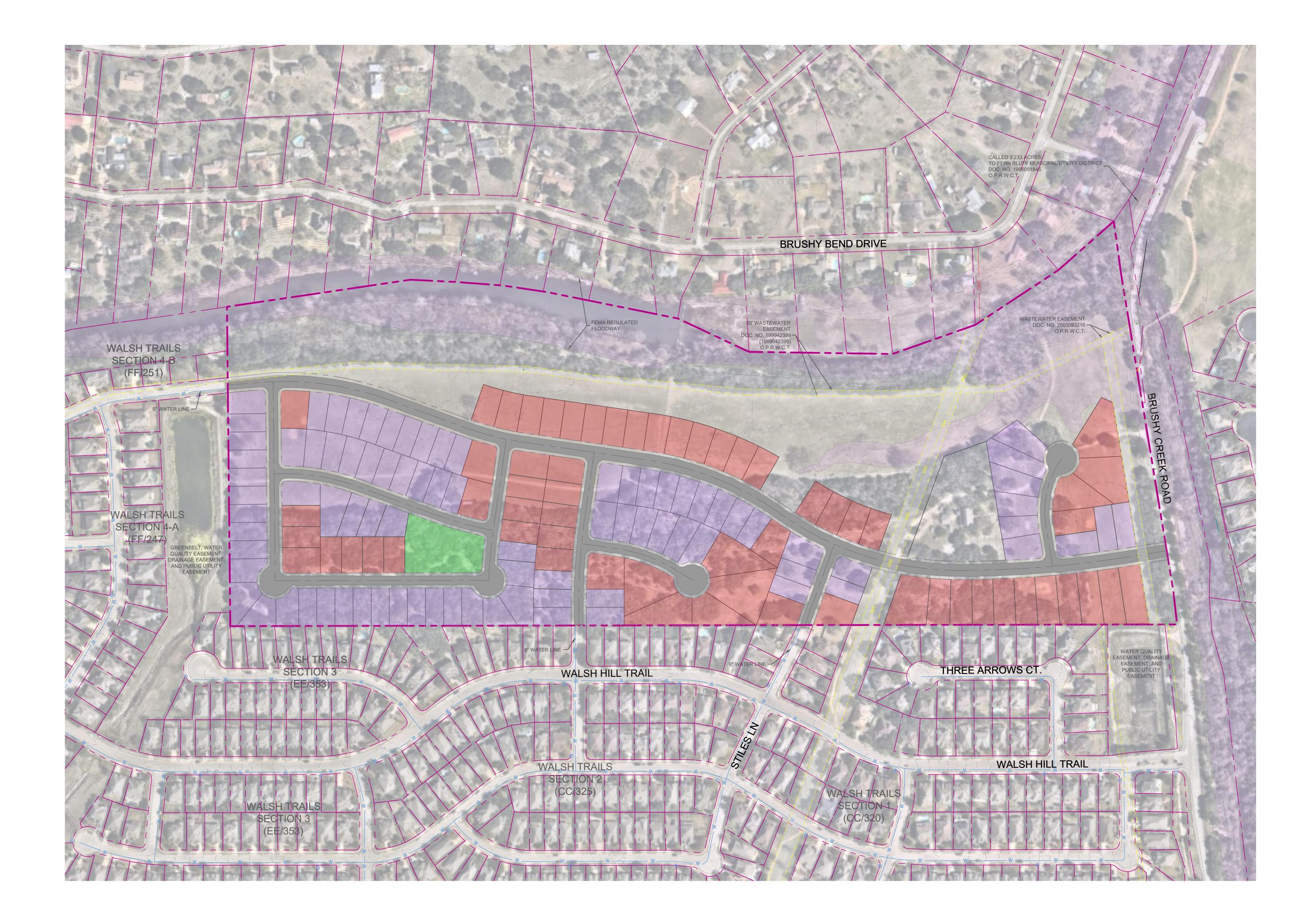
Panel Contains:

COMMUNITY AUSTIN, CITY OF CEDAR PARK, CITY OF LEANDER, CITY OF ROUND ROCK, CITY OF WILLIAMSON COUNTY

NUMBER PANEL SUFFIX 480624 0470 481282 0470 481536 0470 481048 0470 481079 0470

> VERSION NUMBER 2.3.3.3 MAP NUMBER 48491C0470F MAP REVISED

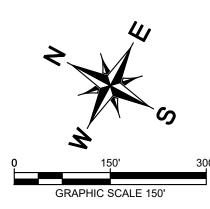
DECEMBER 20, 2019



WALSH BRUSHY CREEK LAND PLAN EXHIBIT Cedar Park, Texas September 23

> K-\SAU_CIVIL_RESOURCES\BEN'S TEAM\NO PROJ\WALSH\CAD\EXHIBITS\PLANSHEETS\LAND PLAN EXHIBIT.DWG 9/11/2023 2:34 PM

DWG NAME LAST SAVED



LEGEND

	PROPERTY LINE
ww	EXISTING WASTEWATER LINE
W	EXISTING WATER LINE
()	EXISTING WASTEWATER MANHOLE
=======	EXISTING STORM DRAIN LINE
<u>+</u> -	EXISTING FIRE HYDRANT
	EXISTING STORM DRAIN INLET
OHE	EXISTING OVERHEAD POWERLINE
Ø	EXISTING POWER POLE
	FEMA 100-YEAR FLOODPLAIN

OVE	OVERALL LOT COUNT											
LOT TYPE	COUNT	COLOR										
60'	85											
70'	61											



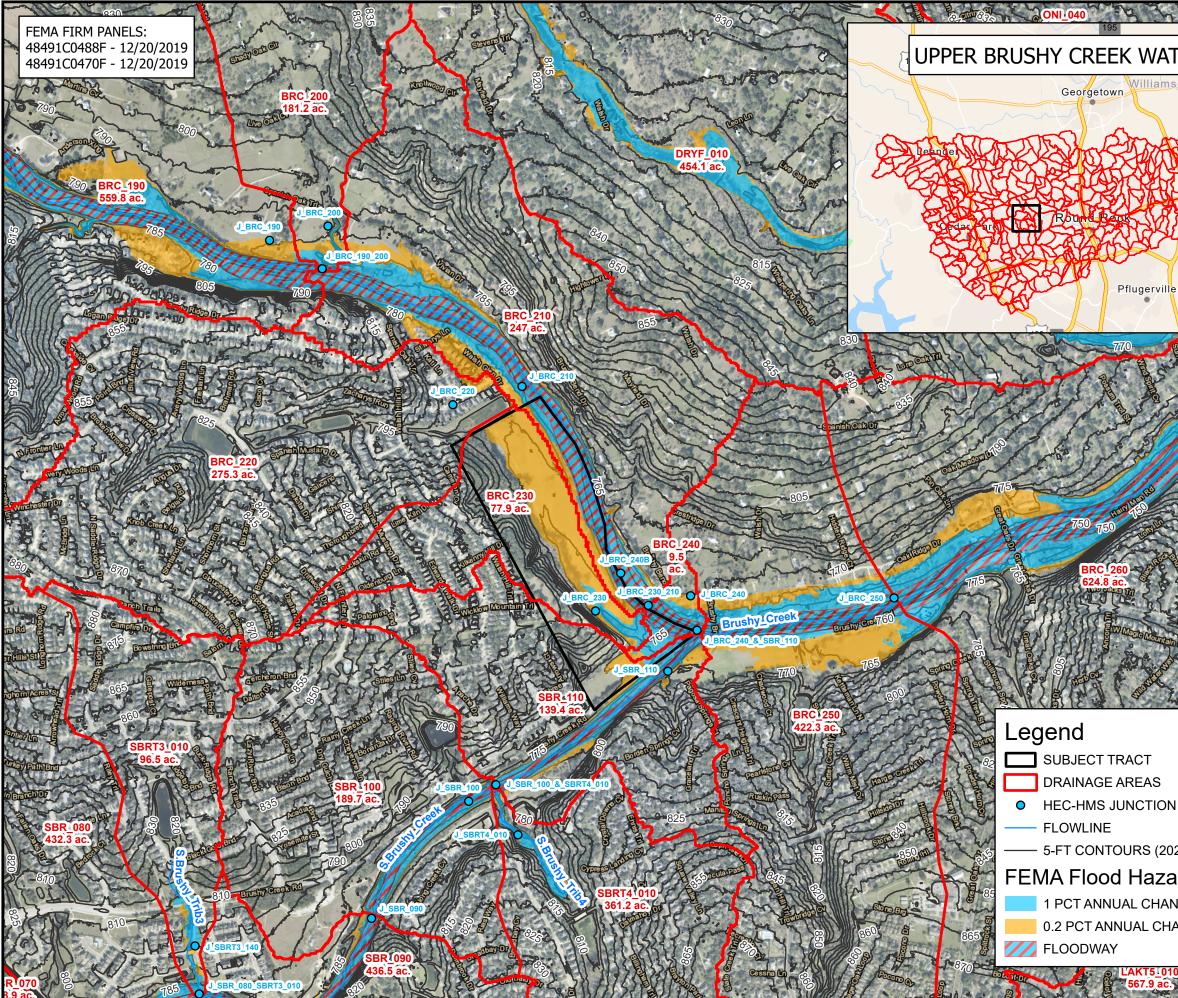
OUT THE BENEFIT OF A

5301 SOUTHWEST PARKWAY BUILDING 2, SUITE 100 AUSTIN, TEXAS 78746 512-646-2237 State of Texas Registration No. F-928

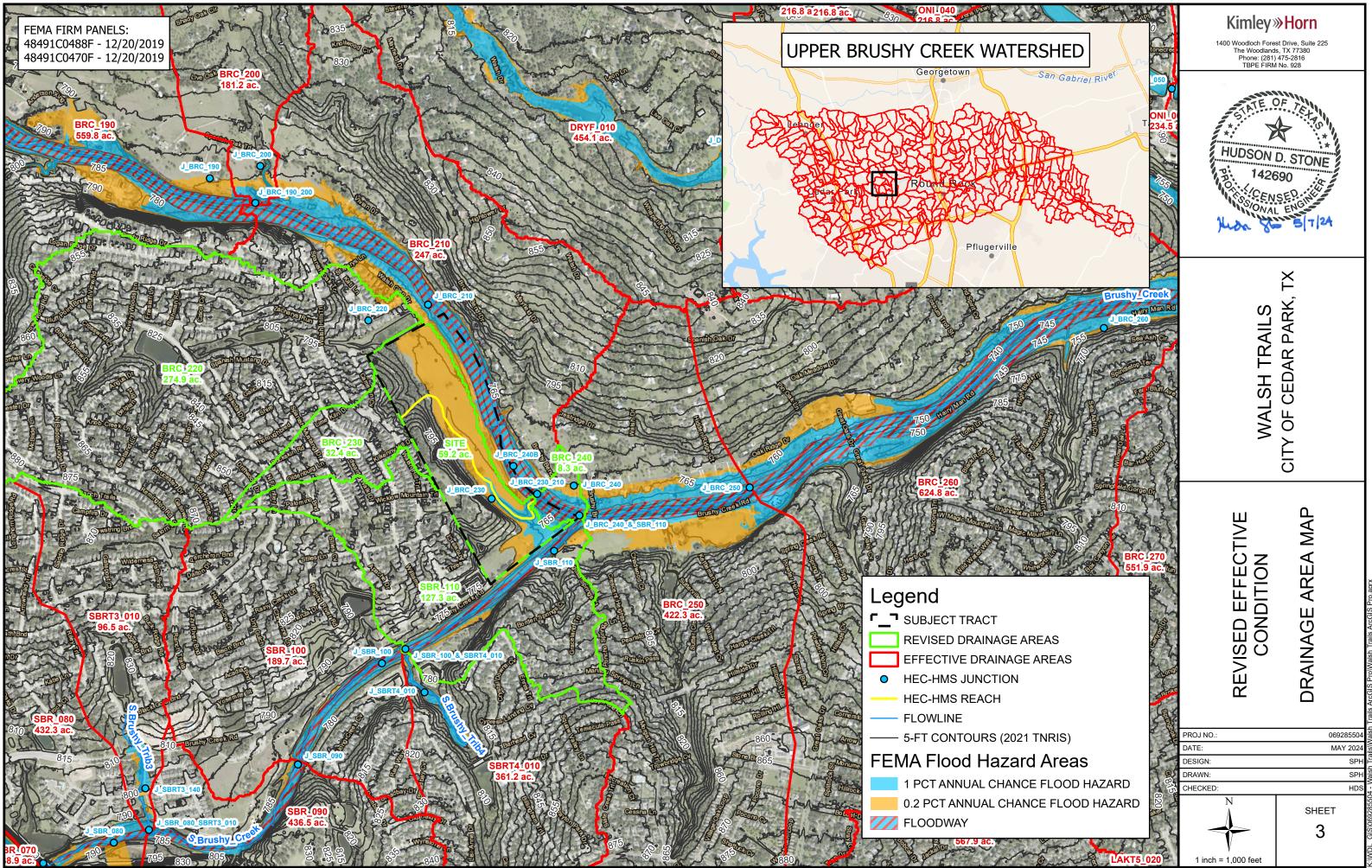
NOTE: THIS PLAN IS CONCEPTUAL IN NATURE AND HAS BEEN PROD SURVEY, TOPOGRAPHY, UTILITIES, CONTACT WITH THE CITY, ETC.

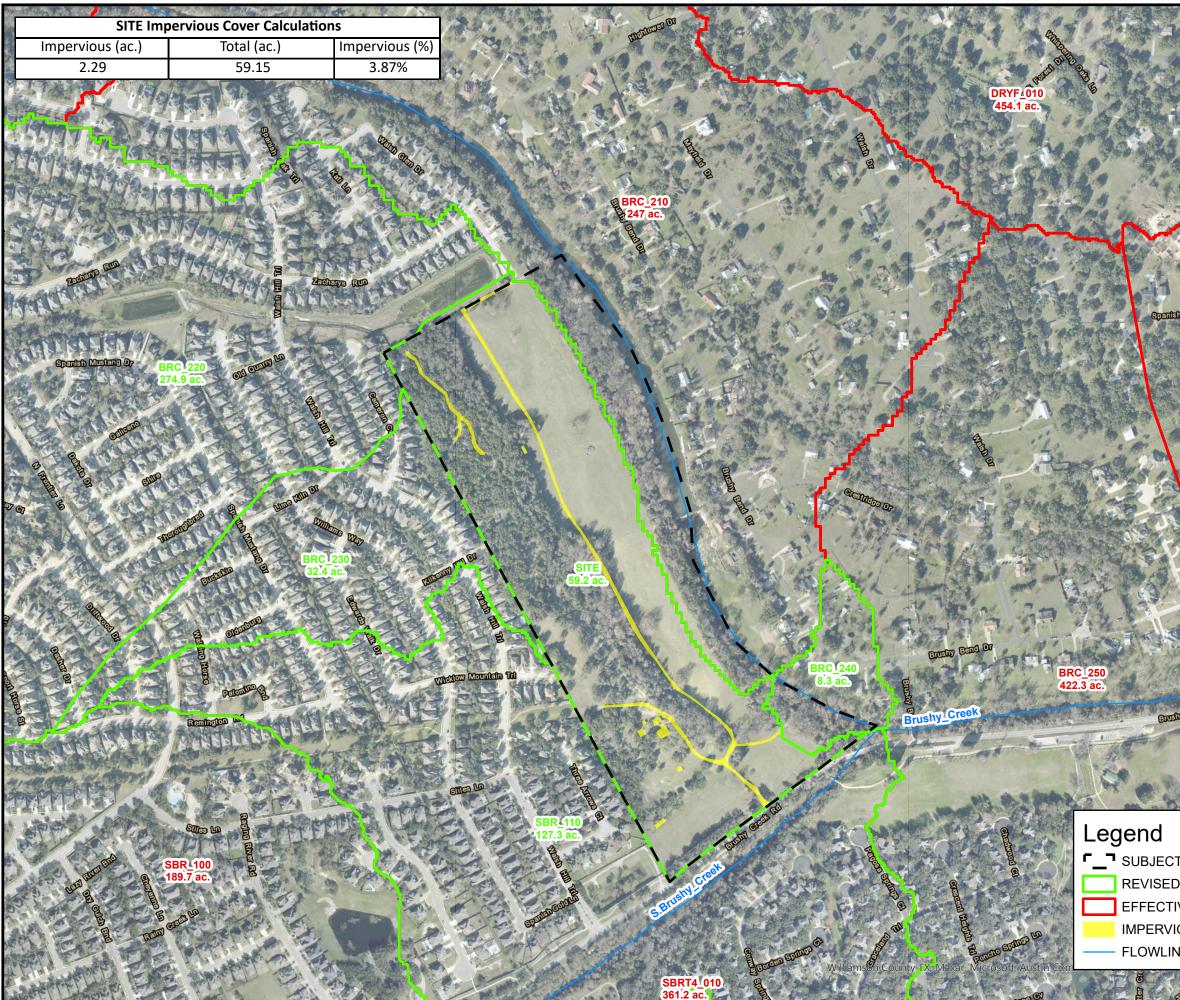
Appendix B Hydrology

Effective Condition Drainage Area Map Revised Effective Condition Drainage Area Map Existing Site Impervious Cover Map Proposed Site Impervious Cover Map Longest Flow Path Map Atlas 14 Rainfall Hydrologic Calculations HEC-HMS Output

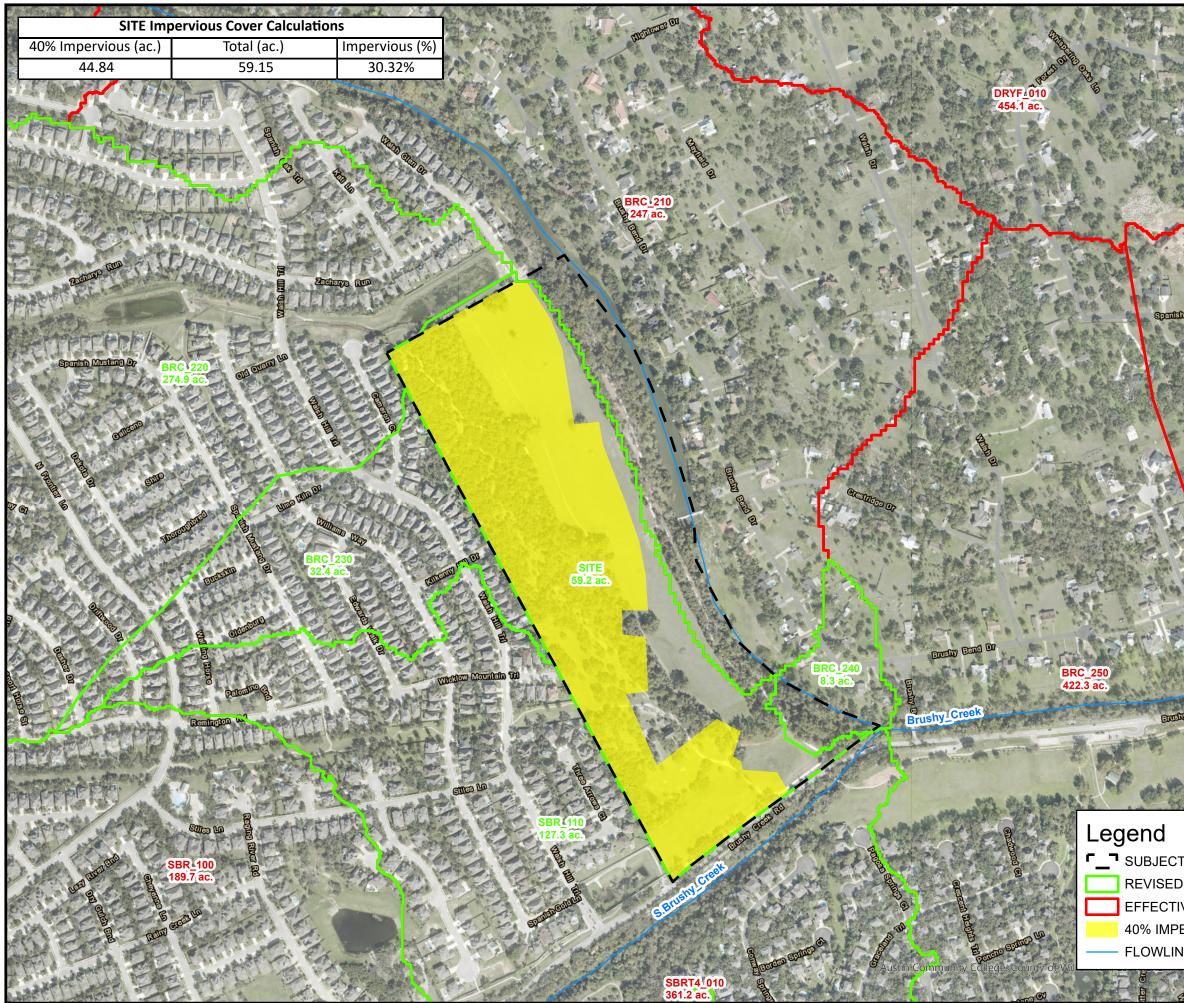


24 199	Kimley »Horn
TERSHED	1400 Woodloch Forest Drive, Suite 225 The Woodlands, TX 77380 Phone: (281) 475-2816 TBPE FIRM No. 928
	HUDSON D. STONE B: 142690
730 730 730 730	WALSH TRAILS CITY OF CEDAR PARK, TX
A A A A A A A A A A A A A A A A A A A	EFFECTIVE CONDITION DRAINAGE AREA MAP
21 TNRIS)	PROJ NO.: 069285504 DATE: MARCH 2024
ard Areas	DESIGN: SPH DRAWN: SPH
NCE FLOOD HAZARD	CHECKED: HDS
ANCE FLOOD HAZARD	
B AN AN COMMENT	1 inch = 1,000 feet

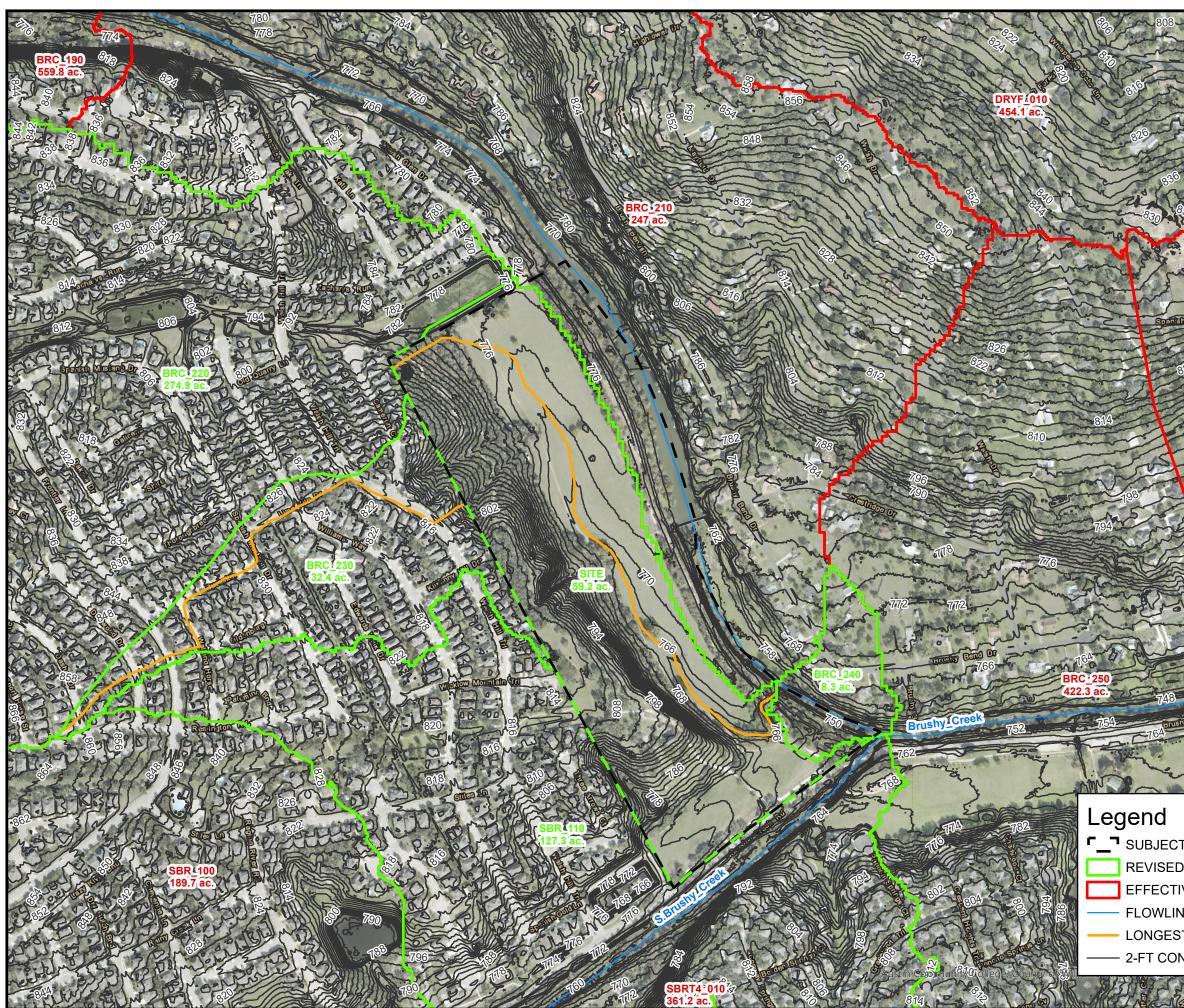




				1
	St	Kimley	Horn	
and a second	1	1400 Woodloch Fore	st Drive, Suite 225	
Contraction and	an fill	The Woodland Phone: (281) TBPE FIRM	475-2816	
and the second	1	7.5.,		
DRYF_020 332.4 ac.	-	STE C	OF THE	
The Berg Man	Mar &	STALL.	A SET AN	
ALL CONTRACTOR	No.		A	
ton on	3 700	HUDSON	D STONE	
Man H	The La	12: 142	590	
		Non-sice	CED	
	and the	SSIONA	D. STONE	
1. 2 10 11	C.	Hida St	5 7 24	
THE F	N.			
ab Ceak Dr	i li		~	
	»···		× F	
	Stat.	6	Ϋ́	
TAL TAIN	the.		AR	
the second			<u>с</u>	
BRC_260	9		AR	
624.8 ac.	S OCT	L I	Ő	
N 80 144	1	ဟ	CE	
a ve a stat		AL	Щ	
	1	MALSH TRAILS	∪ ≻	
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	K.		É	
Frank Cont. 14	1000		0	
Con Standy	1 SAN		<u>م</u>	
And the second second	mis		Ā	
· Sal mitt Low	S all		2	
	the of	Щ		
	1	EXISTING SITE	Ž	
13- 200 - 37	S.S.	נט חיז	00	
and a second	Prove and	N Z	6	
da clore wh			Ŭ,	
		<u>S</u>	<u>O</u>	
min and the	r p		~	
A Bast Start	Pour		ц Ш	
	ISI III		۲ L	
	an D		2	
TTDAOT		PROJ NO.:	0692	85504
	5	DATE:	MARCH	
D DRAINAGE AREAS	1	DESIGN: DRAWN:		SPH SPH
IVE DRAINAGE AREAS		CHECKED:		HDS
IOUS AREA	E	N A	SHEET	
NE	E		4	
A	5	V	т 	
8	E AR	1 inch = 500 feet		



		Kimley	Horn	
	Not the	۔ 1400 Woodloch Fore The Woodland	st Drive, Suite 225 s, TX 77380	
		Phone: (281) TBPE FIRM		
DRYF_020 332.4 ac.		ATE C	OF TEN	
	-	\$5	A	
	n TED	HUDSON		
and the second	2.	1426 17: 1426	590 is i	
THE BULLE	The	1420 00 00 00 00 00 00 00 00 00 00 00 00 0	SED	
		Hion S	5 7 24	
Service and	a. a			
sh Oak Dr	14		×	
	a the	-	ζ, Τ.	
	and and	L S L	AR	
and the state of the	and and	MALSH TRAILS	с Ч	
BRC_260 624.8 ac.	Ano		DAF	
A Part Part	-	ר אַ <mark>י</mark>	CE	
- + +	10	VAL	ОГ	
and an all the second	A	>	Σ	
the state of the state	堂!		Ö	
TO BOOM	A CAN		AP	
			MA	
C. P Law Constant	(mar)	PROPOSED SITE	Ŕ	
Contraction of the	1	I S I	JVI:	
A CAR			ы С	
the crock fiel		O S O	N	
		OP	Ō	
mail the	R	Ц Ц	N N	
1997 ANR-16	CULCER B		ЫЧ	
	DIII DI		Σ	
T TRACT	1	PROJ NO.: DATE:		85504 2024
D DRAINAGE AREAS	The second	DESIGN:		SPH
IVE DRAINAGE AREAS	24	DRAWN: CHECKED:		SPH HDS
PERVIOUS AREA	T	N A	SHEET	
NE	臣		5	
8	ton to	∛ 1 inch = 500 feet		



808	02 .24	Kimley			
812	100 ×	1400 Woodloch Fore The Woodland Phone: (281) TBPE FIRM	s, TX 77380 475-2816		
DRYF_020 332.4 ac.	12	ATE	OF TE		
830	A ST	*	\mathbf{A}	+35+1	
R20		HUDSON	D. ST	ONE	
		0	090	NE	
and the second second		ALDON A	L ENC	7/24	
- Alerand	- and				
n oar Dr	and a		, TX		
820 808		WALSH TRAILS	ARK		
BRC1260		IRA	R P.		
802 624.8 ac.	Va	LHS	EDA		
51117		(ALS	DF C		
		S	₹		
	in the second second		Ö		
		(5	1AP		
7,58		REVISED EXISTING	ONGEST FLOW PATH M		
746	2	(IST	PA ⁻		
760 80	153) E)	NO_		
764	ar	SEI	ST FI		
2 million	2	KEVI	GEO		
	-	Ľ	LON		
	806	PROJ NO.:			85504
D DRAINAGE AREAS IVE DRAINAGE AREAS	810	DATE: DESIGN:		APRIL	SPH
NE	R	DRAWN: CHECKED:			SPH HDS
ST FLOW PATHS	820	N	c	HEET	
NTOURS (2021 TNRIS)	020			6	
A 828	222	V		0	
B P ST S P P	834	1 inch = 500 feet			

Atlas 14 Rainfall Depth Revisions and IDF Curves February 28, 2020 Page 2 of 4

Rainfall Depths

NOAA has provided Atlas 14 precipitation frequency estimates for the state of Texas on their website (<u>https://hdsc.nws.noaa.gov/hdsc/pfds/</u>). This includes a series of rasters that document precipitation-frequency estimates in inches for a range of storm durations and average recurrence intervals. For this analysis, FNI used the partial-duration rasters covering storm durations between 5 minutes and 24 hours and for average recurrence intervals from 1 to 500 years. Figure 1 shows Cedar Park's city limits and ETJ along with contours representing the Atlas 14 100-year 24-hour depth. The 100-year 24-hour depth generally ranges from 11.6 inches at the north edge to 12.0 inches at the south.

FNI used ArcMap's Zonal Statistics tool to average the NWS partial-duration precipitation frequency rasters across the entirety of the City of Cedar Park's city limits and ETJ. The tool provides a minimum, maximum, range, mean, and standard deviation of each precipitation-frequency estimate raster across Cedar Park's city limits and ETJ. The tool only considers raster cells whose centers lie within the city limits and ETJ. In order to improve resolution around the perimeter, FNI first resampled each raster from a cell size of approximately 0.5 mi to a cell size of approximately 0.05 mi.

The mean value for each precipitation-frequency estimate (e.g., the 100-year 24-hour storm) represents the mean rainfall depth within Cedar Park's city limits and ETJ. The range and standard deviation values show the level of variation and indicates how closely the mean value represents the actual values within the city limits and ETJ.

The recommended rainfall depths are shown in Table 1 below. Table 2 provides the range and standard deviation of depths for select durations and recurrence intervals. The Table 2 results indicate that the mean values selected generally match the underlying Atlas 14 values across the city within ±2%. This holds true across a range of durations and recurrence intervals.

	Rainfall Depth (in.) by Average Recurrence Interval												
Duration	1-yr	2-yr	5-yr	10-yr	25-yr	50-yr	100-yr	200-yr	500-yr				
5 min	0.42	0.51	0.65	0.77	0.95	1.10	1.26	1.43	1.66				
10 min	0.68	0.82	1.04	1.23	1.52	1.76	2.02	2.28	2.63				
15 min	0.85	1.03	1.30	1.54	1.89	2.19	2.51	2.84	3.29				
30 min	1.21	1.45	1.82	2.15	2.64	3.04	3.48	3.95	4.61				
60 min	1.56	1.90	2.39	2.84	3.50	4.05	4.65	5.32	6.28				
2 hr	1.86	2.32	2.99	3.62	4.57	5.38	6.30	7.34	8.88				
3 hr	2.01	2.57	3.35	4.11	5.26	6.27	7.42	8.74	10.71				
6 hr	2.31	3.01	3.98	4.93	6.39	7.67	9.17	10.90	13.51				
12 hr	2.67	3.47	4.58	5.68	7.36	8.83	10.55	12.55	15.59				
24 hr	3.07	3.96	5.23	6.44	8.30	9.90	11.76	13.95	17.30				

Deinfell Denth (in) has Assessed Decomposed in

Table 1. Recommended Atlas 14 Rainfall Depths

TIME OF CON REVISED EFF TR-55 Method	ECTIVE			E														
	SHEET F	LOW					SHALLO	W CONCE	NTRATED	FLOW				OPEN C	HANNEL	. FLOW	TOTAL	
	Tc = (0.42(nL)^0.8)/(P2^0.5)(s^0.4) 2-year/24-hr Rainfall Depth (in.) = <u>3.96</u>						Tc = L / 60*V							Tc = L / 60*V				
Basin	Length	Elev ₁	Elev ₂	Slope	Manning's	T_{c1}	Length	Elev ₂	Elev ₃	Slope	Condition	V_{avg}	T_{c2}	Length	V_{avg}	T _{c3}	T _{cTOTAL} *	T _{lag}
	(ft)			(ft/ft)	"n"	(min)	(ft)			(ft/ft)	TR-55 Fig. 3-1	(ft/s)	(min)	(ft)	(ft/s)	(min)	(min)	0.6*T _c (min)
SITE	100	792.9	788.4	0.0450	0.400	14.0	2004	788.4	768.1	0.0101	Unpaved	1.62	20.6	1422	4.00	5.93	40.4	24.3
BRC_230	100	863.5	860.5	0.0300	0.150	7.5	765	860.5	843.5	0.0222	Unpaved	2.41	5.3	2115	4.00	8.81	21.6	13.0

	CONCEN SED CONI ethodolog	DITIONS		FIME														
	SHEET F	LOW					SHALLO		NTRATED	FLOW				OPEN CI	HANNEL	FLOW	TOTAL	
	Tc = (0.42 2-year/24				3.96		Tc = L / 60*V							Tc = L / 6	60*V			
Basin	Length	Elev ₁	Elev ₂	Slope	Manning's	T _{c1}	Length	Elev ₂	Elev ₃	Slope	Condition	V_{avg}	T _{c2}	Length	V_{avg}	T _{c3}	T _{cTOTAL} *	T _{lag}
	(ft)			(ft/ft)	"n"	(min)	(ft)			(ft/ft)	TR-55 Fig. 3-1	(ft/s)	(min)	(ft)	(ft/s)	(min)	(min)	0.6*T _c (min)
SITE	50	792.9	790.7	0.0450	0.150	3.7	200	790.7	788.6	0.0101	Paved	2.04	1.6	3276	6.00	9.10	14.4	8.6

Effective FEMA FIS Report

Table 9: Summary of Discharges (continued)

			Peak Discharge (cfs)					
Flooding Source	Location	Drainage Area (Square Miles)	10% Annual Chance	4% Annual Chance	2% Annual Chance	1% Annual Chance Existing	1% Annual Chance Future	0.2% Annual Chance
Brushy Creek ¹	At County Route 129	184.33	24,342	*	35,703	42,426	*	61,247
Brushy Creek	At County Road 137	168.53	19,819	28,232	36,948	47,039	54,492	77,078
Brushy Creek	At confluence of Brushy Creek Tributary 9	166.69	19,839	28,112	36,870	46,891	54,278	76,639
Brushy Creek	At confluence of Brushy Creek Tributary 7	163.56	19,472	27,685	36,256	46,091	53,371	75,604
Brushy Creek	At confluence of Dam 18 Tributary	160.42	18,623	26,407	34,584	43,975	51,142	72,407
Brushy Creek	At confluence of Brushy Creek Tributary 5	155.11	18,162	25,713	33,728	42,871	50,034	70,500
Brushy Creek	At confluence of McNutt Creek	152.55	17,954	25,417	33,344	42,363	49,528	69,750
Brushy Creek	At confluence of Chandler Branch	138.82	16,151	22,825	29,958	37,874	44,373	62,200
Brushy Creek	At confluence of Dry Branch	112.61	12,481	17,557	23,429	29,854	35,992	50,730
Brushy Creek	At confluence of Lake Creek	106.62	10,210	15,130	20,276	25,942	32,908	46,128
Brushy Creek	At confluence of Onion Branch	77.42	7,861	11,625	15,401	19,682	23,506	31,843
Brushy Creek	At confluence of Dry Fork	68.19	5,995	8,877	11,990	15,202	18,397	25,011
Brushy Creek	At confluence of South Brushy	61.35	5,609	8,348	11,218	14,213	17,115	23,341
Brushy Creek	At confluence of Spanish Oak Creek	39.61	4,922	7,338	9,851	12,451	14,875	20,331

Corresponds to J_BRC_240_&_SBR_110

- • ×

Project: UBC-HOME 5

Simulation Run: A14-010YR-REV

Start of Run: 01Jan2000, 00:00 End of Run: 04Jan2000, 00:00 Compute Time: 07May2024, 13:29:10 Basin Model: Revised Effective Meteorologic Model: A14-010YR Control Specifications: 3 Day Run - 1 Minute

Show Elements: Initial Selection 🗸 Volume Units: 💿 IN 🕜 AC-FT Sorting: Hydrologic 🗸

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
J_BRC_210	42.3890654	8816	01Jan2000, 14:24	1.87
J_BRC_240B	42.7749854	8844	01Jan2000, 14:29	1.87
J_BRC_230_210	42.9180164	8863	01Jan2000, 14:29	1.88
J_BRC_240	42.9309934	8863	01Jan2000, 14:29	1.88
J_SBR_110	18.4211787	3115	01Jan2000, 12:41	1.14
J_BRC_240_&_SBR	61.3521721	94 <mark>86</mark>	01Jan2000, 14:27	1.66
J_BRC_250	62.0120821	9584	01Jan2000, 14:31	1.68
J_BRC_260	62.9883463	9705	01Jan2000, 14:43	1.71

Project: UBC-HOME Simulation Run: A14-025YR-REV

Start of Run: 01Jan2000, 00:00 End of Run: 04Jan2000, 00:00 Compute Time: 07May2024, 13:34:07

Basin Model: Revised Effective Meteorologic Model: A14-025YR Control Specifications: 3 Day Run - 1 Minute

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
J_BRC_210	42.3890654	14080	01Jan2000, 14:09	2.64
J_BRC_240B	42.7749854	14145	01Jan2000, 14:13	2.65
J_BRC_230_210	42.9180164	14178	01Jan2000, 14:13	2.66
J_BRC_240	42.9309934	14179	01Jan2000, 14:13	2.66
J_SBR_110	18.4211787	4397	01Jan2000, 12:40	1.41
J_BRC_240_&_SBR	61.3521721	15245	01Jan2000, 14:10	2.28
J_BRC_250	62.0120821	15420	01Jan2000, 14:12	2.32
J_BRC_260	62.9883463	15653	01Jan2000, 14:24	2.36

62.0120821

62.9883463

J_BRC_250

J_BRC_260

	Project: UBC-HOM	E Simulation F	Run: A14-100YR-REV	
End of Run:	01Jan2000, 00:00 04Jan2000, 00:00 :: 07May2024, 13:4 al Selection V) Meteoro	logic Model: A14-10 Specifications: 3 Day F	
Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
J_BRC_210	42.3890654	25441	01Jan2000, 13:48	4.94
J_BRC_240B	42.7749854	25603	01Jan2000, 13:51	4.96
J_BRC_230_210	42.9180164	25683	01Jan2000, 13:51	4.97
J_BRC_240	42.9309934	25686	01Jan2000, 13:52	4.97
J_SBR_110	18.4211787	6686	01Jan2000, 12:38	3.86
J_BRC_240_&_SBR	. 61.3521721	27942	01Jan2000, 13:49	4.64

28350

28920

01Jan2000, 13:51

01Jan2000, 13:59

X

4.68

4.74

Project: UBC-HOME Simulation Run: A14-010YR-PROP

Start of Run: 01Jan2000, 00:00 End of Run: 04Jan2000, 00:00 Compute Time: 07May2024, 13:07:25 Basin Model: Proposed Meteorologic Model: A14-010YR Control Specifications: 3 Day Run - 1 Minute

Volume Units: () IN () AC-FT Sorting: Hydrologic ~ Show Elements: Initial Selection < Hydrologic Drainage Area Peak Discharge Time of Peak Volume Element (CFS) (IN) (MI2) J BRC 210 42.3890654 8816 01Jan2000, 14:24 1.87 J BRC 240B 42.7749854 8844 01Jan2000, 14:29 1.87 01Jan2000, 14:29 J_BRC_230_210 42.9180164 8863 1.88 J_BRC_240 01Jan2000, 14:29 42,9309934 8863 1.88 1.14 J_SBR_110 18,4211787 3115 01Jan2000, 12:41 J_BRC_240_&_SBR_... 01Jan2000, 14:27 61.3521721 9485 1.66 J_BRC_250 62.0120821 9584 01Jan2000, 14:31 1.68 J_BRC_260 62,9883463 01Jan2000, 14:43 1.72 9705

Project: UBC-HOME Simu

Simulation Run: A14-025YR-PROP

Start of Run: 01Jan2000, 00:00 End of Run: 04Jan2000, 00:00 Compute Time: 07May2024, 13:18:19

Basin Model: Proposed Meteorologic Model: A14-025YR Control Specifications: 3 Day Run - 1 Minute

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
J_BRC_210	42.3890654	14080	01Jan2000, 14:09	2.64
J_BRC_240B	42.7749854	14145	01Jan2000, 14:13	2.65
J_BRC_230_210	42.9180164	14176	01Jan2000, 14:13	2.66
J_BRC_240	42.9309934	14177	01Jan2000, 14:13	2.66
J_SBR_110	18.4211787	4397	01Jan2000, 12:40	1.41
J_BRC_240_&_SBR	61.3521721	15242	01Jan2000, 14:10	2.28
J_BRC_250	62.0120821	15418	01Jan2000, 14:12	2.32
J BRC 260	62.9883463	15650	01Jan2000, 14:24	2.37

	X
--	---

Project: UBC-HOME Simulation Run: A14-100YR-PROP

Start of Run: 01Jan2000, 00:00 End of Run: 04Jan2000, 00:00 Compute Time: 07May2024, 13:24:35 Basin Model:ProposedMeteorologic Model:A14-100YRControl Specifications:3 Day Run - 1 Minute

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
J_BRC_210	42.3890654	25441	01Jan2000, 13:48	4.94
J_BRC_240B	42.7749854	25603	01Jan2000, 13:51	<mark>4.</mark> 96
J_BRC_230_210	42.9180164	25667	01Jan2000, 13:51	4.97
J_BRC_240	42.9309934	25670	01Jan2000, 13:52	4.97
J_SBR_110	18.4211787	6686	01Jan2000, 12:38	<mark>3.8</mark> 6
J_BRC_240_&_SBR	61.3521721	27925	01Jan2000, 13:49	4.64
J_BRC_250	62.0120821	28333	01Jan2000, 13:51	4.68
J_BRC_260	62.9883463	28903	01Jan2000, 13:59	4.74

Kimley »Horn

ATTACHMENT J: BMPs for Upgradient Stormwater

There is surface water, groundwater or stormwater originating upgradient from the site and flowing across the site.

Kimley »Horn

ATTACHMENT K: BMPs for On-site Stormwater

There is approximately 52.96-acres from the site that are involved in the single-family development. This area is split up into three drainage areas which includes both the upgradient and on-site stormwater, therefore both appendix J and K are discussed in this section.

According to a TCEQ RG-348 addendum dated January 20, 2017, a batch detention basin is an extended detention basin modified to operate as a batch reactor. A valve on the first detention basin outlet is used to capture the produced runoff for a fixed amount of time and then release it. As in an extended detention basin, the batch detention basin is primarily used to remove particulate pollutants and to reduce maximum runoff rates associated with development to their pre-development levels. Batch detention basins have superior water quality performance than traditional extended detention basins and achieve a total suspended solids (TSS) removal efficiency of 91%. (Middleton et al., 2006).

See calculations below from the TCEQ provided template spreadsheet:

Texas Commission on Environmental Quality				Ber Dans
TSS Removal Calculations 04-20-2009			Project Name: Walsh Trails Section 5 & 6 Date Prepared: 5/9/2024	STATE OF TELAS
Additional information is provided for cells with a red triangle in Text shown in blue indicate location of instructions in the Technical G Characters shown in red are data entry fields. Characters shown in black (Bold) are calculated fields. Change	uidance Man	ual - RG-34	18.	BENJAMIN L. GREEN
1. The Required Load Reduction for the total project:	alculations from	RG-348	Pages 3-27 to 3-30	DEINJAMIIN L. GREEN
Page 3-29 Equation 3.3: L _M = 27			g	132190
				OR KICENSEN
	equired TSS rer et increase in im		from the proposed development = 80% of increased load for the project	S'S/ONAL ENGL
P = Av	verage annual p	recipitation, in	ches	06/24/2024
Site Data: Determine Required Load Removal Based on the Entire Project County =	Williamson			
Total project area included in plan * = Predevelopment impervious area within the limits of the plan * =	52.96 5.49	acres		
Total post-development impervious area within the limits of the plan* =	31.78	acres		
Total post-development impervious cover fraction * = P =	0.60	inches		
_	22879	lbs.		
LM TOTAL PROJECT = * The values entered in these fields should be for the total project area.	22019	IDS.		
Number of drainage basins / outfalls areas leaving the plan area =	3			
2. Drainage Basin Parameters (This information should be provided for each t	asin):			
Drainage Basin/Outfall Area No. =	1			
Total drainage basin/outfall area =	13.29	acres		
Predevelopment impervious area within drainage basin/outfall area = Post-development impervious area within drainage basin/outfall area =	1.85 7.97	acres acres		
Post-development impervious fraction within drainage basin/outfall area = L _{M THIS BASIN} =	0.60 5330	lbs.		
	5550	IDS.		
3. Indicate the proposed BMP Code for this basin.				
Proposed BMP = B Removal efficiency =	atch Detention 91	percent		
			Aqualogic Cartridge Filter Bioretention Contech StormFilter Constructed Wetland Extended Detention Grassy Swale Retention / Irrigation	
			Sand Filter Stormceptor Vegetated Filter Strips Vortechs Wet Basin Wet Vault	
4. Calculate Maximum TSS Load Removed (L_R) for this Drainage Basin by the	selected BMP	<u>Гуре.</u>		
RG-348 Page 3-33 Equation 3.7: L _R = (E	MP efficiency)	c P x (A ₁ x 34.	6 + A _P x 0.54)	
			he BMP catchment area	
A _P = Pe	ervious area ren	naining in the	⊧ BMP catchment area 3MP catchment area tchment area by the proposed BMP	
A _C =	13.29	acres		
$A_1 =$	7.97	acres		
A _P = L _R =	5.32 8118	acres Ibs		
5. Calculate Fraction of Annual Runoff to Treat the drainage basin / outfall area Desired L _{M THS BASIN} =	<u>1</u> 6400	lbs.		
F =	0.79	103.		
6. Calculate Capture Volume required by the BMP Type for this drainage basin	n / outfall area.		Calculations from RG-348 Pages 3-34 to 3-36	
Rainfall Depth =	1.04	inches		
Post Development Runoff Coefficient = On-site Water Quality Volume =	0.42 21088	cubic feet		
C	alculations from	RG-348	Pages 3-36 to 3-37	
Off-site area draining to BMP =	3.08	acres		
Off-site Impervious cover draining to BMP = Impervious fraction of off-site area =	1.85 0.60	acres		
Off-site Runoff Coefficient = Off-site Water Quality Volume =	0.42 4887	cubic feet		
		SUDIC TEEL		
Storage for Sediment = Total Capture Volume (required water quality volume(s) x 1.20) =	5195 31171	cubic feet		

Texas Commission on Environmental Quality TSS Removal Calculations 04-20-2009 Project Name: Walsh Trails Section 5 & 6 OF TE Date Prepared: 5/9/2024 Additional information is provided for cells with a red triangle in the upper right corner. Place the cursor over the cell. Text shown in blue indicate location of instructions in the Technical Guidance Manual - RG-348. Characters shown in red are data entry fields. Characters shown in black (Bold) are calculated fields. Changes to these fields will remove the equations used in the spreadsheet. BENJAMIN L. GREEN 1. The Required Load Reduction for the total project: Calculations from RG-348 Pages 3-27 to 3-30 132190 Page 3-29 Equation 3.3: $L_M = 27.2(A_N \times P)$ 0 where L_{M TOTAL PROJECT} = Required TSS removal resulting from the proposed development = 80% of increased load A_N = Net increase in impervious area for the project P = Average annual precipitation, inches 06/24/202 Site Data: Determine Required Load Removal Based on the Entire Project County = Williamson Total project area included in plan * = 52.96 acres Predevelopment impervious area within the limits of the plan Total post-development impervious area within the limits of the plan 5.49 acres acres Total post-development impervious cover fraction 0.60 P nches L_{M TOTAL PROJECT} = 22879 lbs * The values entered in these fields should be for the total project area Number of drainage basins / outfalls areas leaving the plan area = 3 2. Drainage Basin Parameters (This information should be provided for each basin): Drainage Basin/Outfall Area No. = 2 Total drainage basin/outfall area = 15.07 acres Predevelopment impervious area within drainage basin/outfall area = Post-development impervious area within drainage basin/outfall area = 1.05 acres acres Post-development impervious fraction within drainage basin/outfall area = 0.60 $L_{M THIS BASIN} =$ 6956 lbs 3. Indicate the proposed BMP Code for this basin. Proposed BMP = Batch Detention Removal efficiency = 91 percent Aqualogic Cartridge Filter Bioretention Contech StormFilter Constructed Wetland Extended Detention Grassy Swale Retention / Irrigation Sand Filter Stormceptor Vegetated Filter Strips Vortechs Wet Basin Wet Vault 4. Calculate Maximum TSS Load Removed (L_R) for this Drainage Basin by the selected BMP Type. RG-348 Page 3-33 Equation 3.7: L_R = (BMP efficiency) x P x (A₁ x 34.6 + A_P x 0.54) A_c = Total On-Site drainage area in the BMP catchment area where: AI = Impervious area proposed in the BMP catchment area A_P = Pervious area remaining in the BMP catchment area L_R = TSS Load removed from this catchment area by the proposed BMP $A_{c} =$ 15.07 acres A, = 9.04 acres 6.03 $A_p =$ acres L_R = 9205 lbs 5. Calculate Fraction of Annual Runoff to Treat the drainage basin / outfall area Desired L_{M THIS BASIN} = 7000 lbs. F = 0.76 6. Calculate Capture Volume required by the BMP Type for this drainage basin / outfall area. Calculations from RG-348 Pages 3-34 to 3-36 Rainfall Depth = 0 94 inches Post Development Runoff Coefficient = On-site Water Quality Volume = 0.42 21706 cubic feet Calculations from RG-348 Pages 3-36 to 3-37 Off-site area draining to BMP = Off-site Impervious cover draining to BMP = Impervious fraction of off-site area = Off-site Runoff Coefficient = 3 79 acres 2.26 acres 0.60 0.42 Off-site Water Quality Volume = 5424 cubic feet Storage for Sediment = 5426 Total Capture Volume (required water quality volume(s) x 1.20) = 32556 cubic feet

ŁĄS

Texas Commission on Environmental Quality TSS Removal Calculations 04-20-2009 Project Name: Walsh Trails Section 5 & 6 OF TE Date Prepared: 5/9/2024 Additional information is provided for cells with a red triangle in the upper right corner. Place the cursor over the cell. Text shown in blue indicate location of instructions in the Technical Guidance Manual - RG-348. Characters shown in red are data entry fields. Characters shown in black (Bold) are calculated fields. Changes to these fields will remove the equations used in the spreadsheet. BENJAMIN L. GREEN 1. The Required Load Reduction for the total project: Calculations from RG-348 Pages 3-27 to 3-30 132190 Page 3-29 Equation 3.3: $L_M = 27.2(A_N \times P)$ -0 where L_{M TOTAL PROJECT} = Required TSS removal resulting from the proposed development = 80% of increased load A_N = Net increase in impervious area for the project 'NAI P = Average annual precipitation, inches 06/24/202 Site Data: Determine Required Load Removal Based on the Entire Project County = Williamson Total project area included in plan * = 52.96 acres Predevelopment impervious area within the limits of the plan Total post-development impervious area within the limits of the plan 5.49 acres acres Total post-development impervious cover fraction 0.60 P nches L_{M TOTAL PROJECT} = 22879 lbs * The values entered in these fields should be for the total project area Number of drainage basins / outfalls areas leaving the plan area = 3 2. Drainage Basin Parameters (This information should be provided for each basin): Drainage Basin/Outfall Area No. = 3 24.61 Total drainage basin/outfall area = acres Predevelopment impervious area within drainage basin/outfall area = Post-development impervious area within drainage basin/outfall area = 2.59 acres acres Post-development impervious fraction within drainage basin/outfall area = 0.60 $L_{M THIS BASIN} =$ 10598 lbs 3. Indicate the proposed BMP Code for this basin. Proposed BMP = Batch Detention Removal efficiency = 91 percent Aqualogic Cartridge Filter Bioretention Contech StormFilter Constructed Wetland Extended Detention Grassy Swale Retention / Irrigation Sand Filter Stormceptor Vegetated Filter Strips Vortechs Wet Basin Wet Vault 4. Calculate Maximum TSS Load Removed (L_R) for this Drainage Basin by the selected BMP Type. RG-348 Page 3-33 Equation 3.7: L_R = (BMP efficiency) x P x (A₁ x 34.6 + A_P x 0.54) A_c = Total On-Site drainage area in the BMP catchment area where: AI = Impervious area proposed in the BMP catchment area A_P = Pervious area remaining in the BMP catchment area L_R = TSS Load removed from this catchment area by the proposed BMP $A_{c} =$ 24 61 acres A, = 14.77 acres 9.84 $A_p =$ acres 15032 lbs L_R = 5. Calculate Fraction of Annual Runoff to Treat the drainage basin / outfall area Desired L_{M THIS BASIN} = 10750 lbs F = 0.72 6. Calculate Capture Volume required by the BMP Type for this drainage basin / outfall area. Calculations from RG-348 Pages 3-34 to 3-36 Rainfall Depth = 0.83 inches Post Development Runoff Coefficient = On-site Water Quality Volume = 0.42 cubic feet 31241 Calculations from RG-348 Pages 3-36 to 3-37 Off-site area draining to BMP = Off-site Impervious cover draining to BMP = Impervious fraction of off-site area = Off-site Runoff Coefficient = 4 47 acres 2.68 0.60 acres 0.42 Off-site Water Quality Volume = 5674 cubic feet Storage for Sediment = 7383

ŁĄS

Total Capture Volume (required water quality volume(s) x 1.20) = 44298 cubic feet

Kimley »Horn

ATTACHMENT L: BMPs for Surface Streams

As shown in the erosion and sediment control plan, to protect surface streams during construction activities silt fence will be placed on the downslope along the property line where construction activities end. In addition, a construction entrance will be utilitized to filter stormwater through the rock material, inlet protection will be placed at installed inlets and rock berms will be placed at headwalls to protect the surface streams further from any sediment that does make it through the other BMP controls.

Kimley **»Horn**

ATTACHMENT M: Construction Plans

SUBMITTAL LOG 1ST SUBMITTAL (90%) MAY 13, 2024 2ND SUBMITTAL (90%) JUNE 24, 2024

LEGAL DESCRIPTION AW0179 DILLARD, J.H., ACRES 70.2655 AW0179 DILLARD, J.H., ACRES 3.5595

WATERSHED STATUS THIS SITE IS LOCATED IN THE TURKEY CREEK-BRUSHY CREEK WATERSHED IN THE SAN GABRIEL RIVER SUB-BASIN OF THE BRAZOS RIVER BASIN

TABS PROJECT NUMBER TABS2024018335

TCEQ EDWARDS AQUIFER PROTECTION PLAN ID

GENERAL PLAN NOTES:

- 1. CONTRACTOR WILL FOLLOW CITY OF CEDAR PARK AND CITY OF AUSTIN CURRENT CONSTRUCTION SPECIFICATIONS.
- 2. ALL RESPONSIBILITY FOR THE ADEQUACY OF THESE PLANS REMAINS WITH THE REGISTERED PROFESSIONAL ENGINEER WHO PREPARED THEM. IN REVIEWING THESE PLANS THE CITY OF CEDAR PARK MUST RELY UPON THE ADEQUACY OF THE WORK OF THE DESIGN ENGINEER.
- A PORTION OF THIS SITE IS LOCATED WITHIN THE 100YR FLOOD PLAIN, AS DESCRIBED IN FEMA FIRM PANELS NO. 48491C0470F AND NO. 48491C0488F, DATED DECEMBER 20, 2019, WILLIAMSON COUNTY, TX.
- 4. THERE ARE NO KNOWN CRITICAL ENVIRONMENTAL FEATURES ON THIS SITE
- NO STRUCTURES CAN BE BUILT WITHIN WATER & WASTEWATER 5. EASEMENTS.
- CONTRACTOR SHALL REMOVE ALL DEBRIS, FIX ALL RUTS, AND FINAL GRADE ALL DISTURBED AREAS. THE CONTRACTOR SHALL NOT BURY OR SOD/SEED OVER DEBRIS OR SILT FENCE, ETC. TILL SUBGRADE TO 6" DEPTH OR INSTALL AT LEAST 6" OF SCREENED TOP SOIL (NOT GRADED CLAY, BASE MATERIAL OR SAND) PRIOR TO VEGETATING.
- THIS PROJECT IS SUBJECT TO TCEQ'S TPDES SWPPP REGULATIONS PER TEXAS WATER CODE CHAPTER 26. IF NOT ALREADY DONE, HAVE A TX PE CPESC, OR QPSWPPP DEVELOP/AMEND A PROJECT-SPECIFIC SWPPP AND SEEK APPLICABLE TPDES PERMIT TXR150000 COVERAGE IMMEDIATELY PER TXR150000 PARTS I-III AND CITY CODE SECTION 86.529(B)(2) OR 86.529(C)(3). A HARD-COPY OF THE SWPPP, INCLUDING FULL-SIZE MAP, MUST BE AVAILABLE AT THE PRE-CON MEETING, KEPT ONSITE, AND UPDATED TO MATCH SITE CONDITIONS DURING THE PROJECT.

CITY OF CEDAR PARK COUNCIL MEMBERS MAYOR - JIM PENNIMAN-MORIN PLACE 1 - BOBBI HUTCHINSON PLACE 2 - MEL KIRKLAND PLACE 3 - ANNE DUFFY PLACE 4 - ERIC BOYCE PLACE 5 - KEVIN HARRIS PLACE 6 - HEATHER JEFTS

> _CHRISTOPHER WALSH_ OWNER: ADDRESS: _4001 BRUSHY CREEK RD_ CEDAR PARK, TX, 78613 PHONE: _512-917-4004_ ACREAGE: 73.825 SURVEY: _AW0179 DILLARD J.H. NUMBER OF LOTS & PROPOSED USE: _147 SINGLE FAMILY, 2 PARKLAND, 3 OPEN SPACE DATE: 06/24/2024 SURVEYOR: _KIMLEY-HORN PHONE: 512-418-1771 ENGINEER: ____BEN GREEN__ PHONE: ___512-646-2243__

OWNER:

WALSH BRUSHY CREEK RANCH LP 4001 BRUSHY CREEK RD CEDAR PARK, TX 78731 ATTN: CHRISTOPHER WALSH

ENGINEER KIMLEY-HORN 5301 SOUTHWEST PARKWAY BUILDING 2, SUITE 100 AUSTIN, TX 78735 PH: (512) 646-2243 ATTN: BENJAMIN GREEN



AUSTIN, TEXAS 78735 CERTIFICATE OF REGISTRATION #928 SURVEY KIMLEY-HORN AND ASSOCIATES 10814 JOLLYVILLE ROAD **BUILDING IV, SUITE 200** AUSTIN, TEXAS 78759 PH: (512) 418-1771

ELECTRIC PROVIDER: PEDERNALES ELECTRIC COOP, INC. PO BOX 1 JOHNSON CITY, TEXAS 78636 PH: (877) 372-0391

WATER CITY OF CEDAR PARK 450 CYPRESS CREEK RD CEDAR PARK, TEXAS 78613 PH: (512) 401-5300

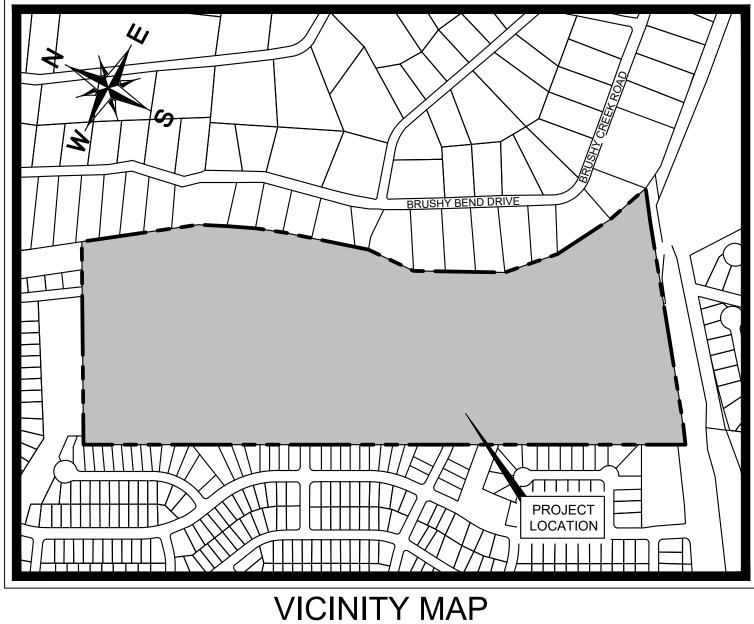
WASTEWATER: CITY OF CEDAR PARK 450 CYPRESS CREEK RD CEDAR PARK, TEXAS 78613 PH: (512) 401-5300

CITY OF CEDAR PARK ENGINEERING DEPARTMENT

CITY OF CEDAR PARK LANDSCAPE

SUBDIVISION CONSTRUCTION PLANS FOR WALSH TRAILS **SECTION 5 AND 6**

CITY OF CEDAR PARK WILLIAMSON COUNTY, TEXAS 2024-1-SI



SCALE: 1" = 500'

JUNE 2024

CITY OF CEDAR PARK PUBLIC WORKS

DATE

DATE

DATE

SHEET INDEX

SHEET	DESCRIPTION
NO.	
1 2	COVER SHEET GENERAL NOTES
3	KIMLEY-HORN GENERAL NOTES
4	FINAL PLAT
5	EXISTING CONDITIONS & DEMO PLAN
6	EROSION CONTROL PLAN
7	TREE PLAN
8	
9 10	OVERALL STREET LAYOUT PLAN STREET P&P - WALSH GLEN DRIVE (SHEET 1 OF 4)
10	STREET P&P - WALSH GLEN DRIVE (SHEET 2 OF 4)
12	STREET P&P - WALSH GLEN DRIVE (SHEET 3 OF 4)
13	STREET P&P - WALSH GLEN DRIVE (SHEET 4 OF 4)
14	STREET P&P - PATRICK STREET
15	STREET P&P - LISTOWEL DRIVE
16	STREET P&P - ALDERNEY ROAD
17	
18	
19 20	STREET P&P - KINVARA COVE STREET P&P - WICKLOW MOUNTAIN TRAIL
20	STREET P&P - KERRY COURT
22	BRUSHY CREEK ROAD IMPROVEMENTS
23	GRADING PLAN (SHEET 1 OF 3)
24	GRADING PLAN (SHEET 2 OF 3)
25	GRADING PLAN (SHEET 3 OF 3)
26	
27 28	INLET CALCULATIONS OVERALL STORM PLAN
20	STORM P&P - LINE A
30	STORM P&P - LINES A1 A2
31	STORM P&P - LINES B B1
32	STORM P&P - LINES B2 B3
33	STORM P&P - LINES B4 B5
34	STORM P&P - LINE C
35 36	STORM P&P - LINE D STORM P&P - LINES D1 D2 D3
30	STORM P&P - LINES DT D2 D3
38	STORM P&P - LINES E1 F
39	STORM P&P - LINES F1 F2 F3
40	STORM P&P - LINE G
41	STORM P&P - LINES G1 G2 G3
42	STORM P&P - LINES H H1
43	WQ POND - A
44	WQ POND - B WQ POND - C
45	WATER QUALITY CALCULATIONS
47	WATER QUALITY DETAILS
48	OVERALL WATER PLAN
49	WATER P&P - LINE A (SHEET 1 OF 4)
50	WATER P&P - LINE A (SHEET 2 OF 4)
51 52	WATER P&P - LINE A (SHEET 3 OF 4) WATER P&P - LINE A (SHEET 4 OF 4)
52	WATER P&P - LINE A (SHEET 4 OF 4) WATER P&P - LINE B (SHEET 1 OF 3)
54	WATER P&P - LINE B (SHEET 2 OF 3)
55	WATER P&P - LINE B (SHEET 3 OF 3)
56	WATER P&P - LINE C
57	WATER P&P - LINE D
58	WATER P&P - LINE E
59	WATER P&P - LINE F WATER P&P - LINES G & H
60 61	OVERALL WASTEWATER PLAN
62	WASTEWATER P&P - LINE A (SHEET 1 OF 2)
63	WASTEWATER P&P - LINE A (SHEET 2 OF 2)
64	WASTEWATER P&P - LINE B
65	WASTEWATER P&P - LINE C (SHEET 1 OF 2)
66	WASTEWATER P&P - LINE C (SHEET 2 OF 2)
67	WASTEWATER P&P - LINE D

		REVIS	SIONS/CC	RRECTIONS)		
NO.	DESCRIPTION	REVISE (R) VOID (V) ADD (A) SHEET NO.'S	TOTAL NO. SHEETS IN PLAN SET	NET CHANGE IMP. COVER (SQ. FT.)	TOTAL SITE IMP. COVER (SQ. FT.)/%	CITY OF CEDAR PARK APPROVAL DATE	DATE IMAGED
	*						

68	WASTEWATER P&P - LINE E
69	WASTEWATER P&P - LINE F
70	WASTEWATER P&P - LINE G
71	WASTEWATER P&P - LINE H
72	WASTEWATER P&P - LINE I (SHEET 1 OF 2)
73	WASTEWATER P&P - LINE I (SHEET 2 OF 2)
74	WASTEWATER P&P - LINE J
75	WASTEWATER P&P - LINE K (SHEET 1 OF 2)
76	WASTEWATER P&P - LINE K (SHEET 2 OF 2)
77	WASTEWATER P&P - LINE L
78	TYPICAL UTILITY SECTION
79	TRAFFIC CONTROL PLAN
80	SIDEWALK PLAN
81	STREET LIGHT & SIGN PLAN
82	STREET LIGHT & SIGN PLAN DETAILS
83	PAVING DETAILS
84	PAVING DETAILS
85	PAVING DETAILS
86	STORM DRAIN DETAILS
87	UTILITY DETAILS
88	UTILITY DETAILS
89	EROSION CONTROL DETAILS

BENCHMARKS

PRIOR TO CONSTRUCTION.

OF WALSH GLEN DRIVE AND ZACHARYS RUN.

N: 10164408.66'

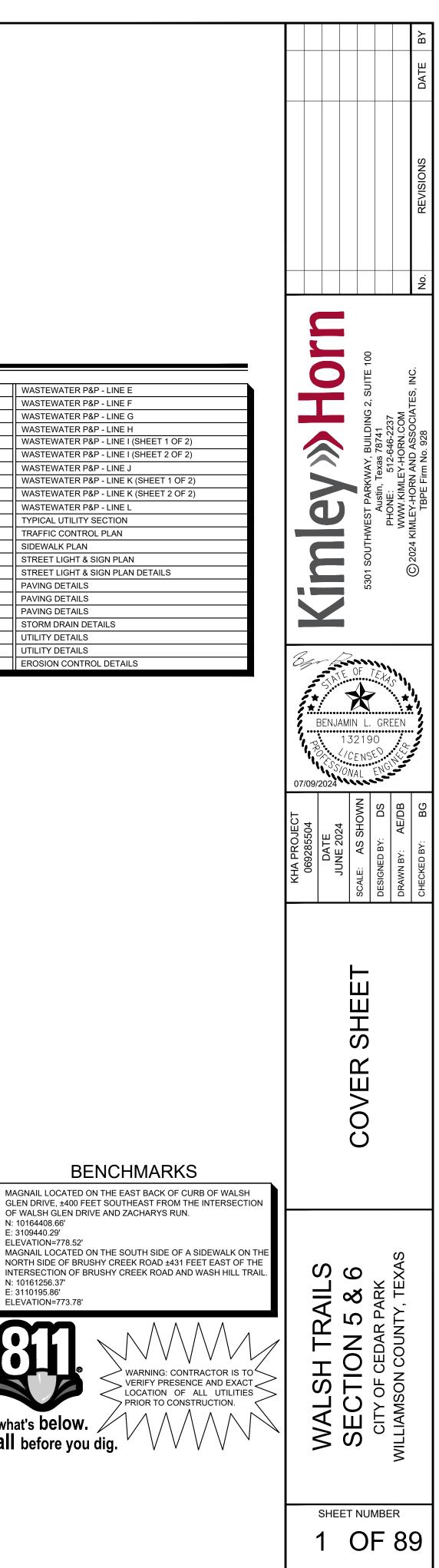
N: 10161256.37'

ELEVATION=773.78

Know what's below.

E: 3110195.86'

E: 3109440.29' ELEVATION=778.52'



2024-1-SI

GENERAL NOTES:

1. GENERAL CONTRACTOR SHALL CALL FOR ALL UTILITY LOCATES PRIOR TO ANY CONSTRUCTION. CONTRACTOR SHALL DELINEATE AREAS OF EXCAVATION USING WHITE PAINT (WHITE LINING) IN ACCORDANCE WITH 16 TAC 18.3. WATER & WASTEWATER OWNED BY THE CITY OF CEDAR PARK CAN BE LOCATED BY CALLING TEXAS 811 AT 1800-344-8377. ALLOW THREE BUSINESS DAYS FOR UTILITY LOCATES BY THE CITY OF CEDAR PARK.

2. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST CITY OF AUSTIN STANDARD SPECIFICATIONS. CITY OF AUSTIN STANDARDS SHALL BE USED UNLESS OTHERWISE NOTED.

3. DESIGN PROCEDURES SHALL BE IN GENERAL COMPLIANCE WITH THE CITY OF AUSTIN DRAINAGE CRITERIA MANUAL, ALL VARIANCES TO THE MANUAL ARE LISTED BELOW: N/A

4. BENCHMARKS SHOULD BE TIED TO THE CITY OF CEDAR PARK BENCHMARKS AND BE CORRECTLY "GEO-REFERENCED" TO STATE PLANE COORDINATES. A LIST OF THE CITY'S BENCHMARKS CAN BE FOUND AT:

HTTP://WWW CEDARPARKTEXAS GOV/INDEX ASPX?PAGE=793

5. PRIOR TO ISSUANCE OF A CERTIFICATE OF OCCUPANCY FOR A SITE DEVELOPMENT PERMIT, THE RIGHT OF WAY BETWEEN THE PROPERTY LINE AND EDGE OF PAVEMENT / BACK OF CURB SHALL BE REVEGETATED ACCORDING TO COA SPECIFICATION 602S AND 606S. PRIOR TO CITY ACCEPTANCE OF SUBDIVISION IMPROVEMENTS ALL GRADED AND DISTURBED AREAS SHALL BE RE-VEGETATED IN ACCORDANCE WITH THE CITY OF AUSTIN SPECIFICATION ITEM #604 NATIVE SEEDING UNLESS NON- NATIVE IS SPECIFICALLY APPROVED.

6. THE CONTRACTOR SHALL PROVIDE THE CITY OF CEDAR PARK COPIES OF ALL TEST RESULTS PRIOR TO ACCEPTANCE OF SUBDIVISION IMPROVEMENTS

7. CITY, OWNER, ENGINEER, CONTRACTOR, REPRESENTATIVES OF ALL UTILITY COMPANIES, AND A REPRESENTATIVE FROM THE TESTING LAB SHALL ATTEND PRE-CONSTRUCTION CONFERENCE PRIOR TO START OF CONSTRUCTION. THE CONTRACTOR SHALL SCHEDULE THE MEETING WITH THE CITY OF CEDAR PARK ENGINEERING DEPARTMENT A MINIMUM OF 48 HOURS PRIOR TO THIS PRE-CONSTRUCTION MEETING (512-401-5000). FINAL CONSTRUCTION PLANS SHALL BE DELIVERED TO ENGINEERING A MINIMUM OF SEVEN BUSINESS DAYS PRIOR TO REQUESTING A PRE-CONSTRUCTION MEETING.

8. EXCESS SOIL SHALL BE REMOVED AT THE CONTRACTOR'S EXPENSE. NOTIFY THE CITY OF CEDAR PARK IF THE DISPOSAL SITE IS INSIDE THE CITY'S JURISDICTIONAL BOUNDARIES. BURNING IS PROHIBITED.

10. ANY CHANGES OR REVISIONS TO THESE PLANS MUST FIRST BE SUBMITTED TO THE CITY BY THE DESIGN ENGINEER FOR REVIEW AND WRITTEN APPROVAL PRIOR TO CONSTRUCTION OF THE REVISION. ALL CHANGES AND

REVISIONS MADE TO THE DESIGN OF UTILITIES OR IMPACTS UTILITIES SHALL USE REVISION CLOUDS TO HIGHLIGHT ALL REVISIONS OR CHANGES WITH EACH SUBMITTAL. REVISION TRIANGLES SHALL BE USED TO MARK REVISIONS.

ALL CLOUDS AND TRIANGLE MARKERS FROM PREVIOUS REVISIONS MAY BE REMOVED. REVISION INFORMATION

SHALL BE UPDATED IN THE APPROPRIATE AREAS OF THE TITLE BLOCK. 11. MINIMUM SETBACK REQUIREMENTS FOR EXISTING AND NEWLY PLANTED TREES FROM THE EDGE OF PAVEMENT TO CONFORM TO THE REQUIREMENTS AS SHOWN IN TABLE 6-1 OF THE CITY OF AUSTIN'S TRANSPORTATION CRITERIA MANUAL.

12. THE CONTRACTOR WILL REIMBURSE THE CITY FOR ALL COST INCURRED AS A RESULT OF ANY DAMAGE TO ANY CITY UTILITY OR ANY INFRASTRUCTURE WITHIN THE RIGHT-OF-WAY BY THE CONTRACTOR, REGARDLESS OF THESE PLANS. 13. AN ENGINEER'S CONCURRENCE LETTER AND ELECTRONIC 22"X34" RECORD DRAWINGS SHALL BE SUBMITTED TO

THE ENGINEERING DEPARTMENT PRIOR TO THE ISSUANCE OF CERTIFICATE OF OCCUPANCY OR SUBDIVISION ACCEPTANCE. THE ENGINEER AND CONTRACTOR SHALL VERIFY THAT ALL FINAL REVISIONS AND CHANGES HAVE BEEN MADE TO RECORD DRAWINGS PRIOR TO CITY SUBMITTAL. RECORD CONSTRUCTION DRAWINGS, INCLUDING ROADWAY AND ALL UTILITIES, SHALL BE PROVIDED TO THE CITY IN AUTOCAD ". DWG" FILES AND ".PDF" FORMAT ON A CD OR DVD. LINE WEIGHTS, LINE TYPES AND TEXT SIZE SHALL BE SUCH THAT IF HALF-SIZE PRINTS (11"X 17") WERE PRODUCED, THE PLANS WOULD STILL BE LEGIBLE. ALL REQUIRED DIGITAL FILES SHALL CONTAIN A MINIMUM OF TWO (2) CONTROL POINTS REFERENCED TO THE STATE PLANE GRID COORDINATE SYSTEM -TEXAS CENTRAL ZONE (4203), IN US FEET AND SHALL INCLUDE ROTATION INFORMATION AND SCALE FACTOR

REQUIRED TO REDUCE SURFACE COORDINATES TO GRID COORDINATES IN US FEET. 14. THE CITY OF CEDAR PARK HAS NOT REVIEWED THESE PLANS FOR COMPLIANCE WITH THE AMERICANS WITH

DISABILITIES ACT. IT IS THE RESPONSIBILITY OF THE OWNER TO PROVIDE COMPLIANCE WITH ALL LEGISLATION RELATED TO ACCESSIBILITY WITHIN THE LIMITS OF CONSTRUCTION SHOWN IN THESE PLANS 15. ALL RESPONSIBILITY FOR THE ADEQUACY OF THESE PLANS REMAINS WITH THE ENGINEER WHO

PREPARED THEM. IN REVIEWING THESE PLANS, THE CITY OF CEDAR PARK MUST RELY ON THE ADEQUACY OF THE WORK OF THE DESIGN ENGINEER.

16. NO BLASTING IS ALLOWED ON THIS PROJECT.

17. A TRAFFIC CONTROL PLAN, IN ACCORDANCE WITH THE TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, SHALL BE SUBMITTED TO THE CITY FOR REVIEW AND APPROVAL PRIOR TO ANY PARTIAL OR COMPLETE ROADWAY CLOSURES. TRAFFIC CONTROL PLANS SHALL BE SITE SPECIFIC AND SEAL BY A REGISTERED PROFESSIONAL ENGINEER. 18 THE CONTRACTOR SHALL KEEP THE SITE CLEAN AND MAINTAINED AT ALL TIMES TO THE SATISFACTION OF THE CITY THE

SUBDIVISION WILL NOT BE ACCEPTED (OR CERTIFICATE OF OCCUPANCY ISSUED) UNTIL THE SITE HAS BEEN CLEANED TO THE SATISFACTION OF THE CITY. 19. SIGNS ARE NOT PERMITTED IN PUBLIC UTILITY EASEMENTS, SET BACKS OR DRAINAGE EASEMENTS.

20. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO INSPECT TEMPORARY EROSION CONTROLS ON A DAILY BASIS. ADJUST THE CONTROLS AND/OR REMOVE ANY SEDIMENT BUILDUP AS NECESSARY. A STOP WORK ORDER AND/OR FINE MAY BE IMPOSED IF THE EROSION CONTROLS ARE NOT MAINTAINED

21. A FINAL CERTIFICATE OF OCCUPANCY WILL NOT BE ISSUED ON COMMERCIAL SITES UNTIL ALL DISTURBED AREAS HAVE BEEN RE-VEGETATED. SUBSTANTIAL GRASS COVER, AS DETERMINED BY ENGINEERING DEPARTMENT, MUST BE ACHIEVED PRIOR TO THE ISSUANCE OF A FINAL CERTIFICATE OF OCCUPANCY. ALL EROSION CONTROLS MUST REMAIN IN PLACE AND MAINTAINED UNTIL ALL DISTURBED AREAS HAVE BEEN RE-VEGETATED TO THE ACCEPTANCE OF THE CITY OF CEDAR PARK ENGINEERING DEPARTMENT. PRIOR TO ISSUANCE OF A CERTIFICATE OF OCCUPANCY FOR A SITE DEVELOPMENT PERMIT. THE RIGHT OF WAY BETWEEN THE PROPERTY LINE AND EDGE OF PAVEMENT / BACK OF CURB SHALL BE REVEGETATED ACCORDING TO COA SPECIFICATION 602S AND

22. CONTRACTOR WILL BE RESPONSIBLE FOR KEEPING ROADS AND DRIVES ADJACENT TO AND NEAR THE SITE FREE FROM SOIL. SEDIMENT AND DEBRIS, CONTRACTOR WILL NOT REMOVE SOIL, SEDIMENT OR DEBRIS FROM ANY AREA OR VEHICLE BY MEANS OF WATER ONLY SHOVELING AND SWEEPING WILL BE ALLOWED. CONTRACTOR WILL BE RESPONSIBLE FOR DUST CONTROL FROM THE SITE, FAILURE TO COMPLY WITH THIS REQUIREMENT MAY RESULT IN A STOP WORK ORDER OR A FINE. 23. ALL WET UTILITIES SHALL BE INSTALLED AND ALL DENSITIES MUST HAVE PASSED INSPECTION(S) PRIOR TO THE INSTALLATION

OF DRY UTILITIES. A MINIMUM OF SEVEN DAYS OF CURE TIME IS REQUIRED FOR HMAC PRIOR TO THE INTRODUCTION OF

VEHICULAR TRAFFIC TO ANY STREETS

25. PRIOR TO PLAN APPROVAL, THE ENGINEER SHALL SUBMIT TO THE ENGINEERING DEPARTMENT DOCUMENTATION OF SUBDIVISION/SITE REGISTRATION WITH THE TEXAS DEPARTMENT OF LICENSING AND REGULATIONS (TDLR) AND PROVIDE DOCUMENTATION OF REVIEW AND COMPLIANCE OF THE SUBDIVISION/SITE CONSTRUCTION PLANS WITH TEXAS ARCHITECTURAL BARRIERS ACT (TABA)

26. PRIOR TO SUBDIVISION/SITE ACCEPTANCE, THE ENGINEER/DEVELOPER-OWNER SHALL SUBMIT TO THE ENGINEERING DEPARTMENT DOCUMENTATION THAT THE SUBDIVISION/SITE WAS INSPECTED BY TDLR OR A REGISTERED ACCESSIBILITY SPECIALIST (RAS) AND THE SUBDIVISION/SITE IS IN COMPLIANCE WITH THE REQUIREMENTS OF THE TABA.

27. ALL CONSTRUCTION AND CONSTRUCTION RELATED ACTIVITIES SHALL BE PERFORMED MONDAY THRU FRIDAY FROM 7:00 A.M. TO 6:00 P.M. HOWEVER, CONSTRUCTION ACTIVITIES WITHIN ONE HUNDRED FEET (100') OF A DWELLING OR DWELLING UNIT SHALL BE PERFORMED BETWEEN THE HOURS OF 8:00 A.M. AND 6:00 P.M. OTHERWISE ALL CONSTRUCTION AND CONSTRUCTION RELATED ACTIVITIES SHALL CONFORM TO CITY OF CEDAR PARK CODE OF ORDINANCES, SPECIFICALLY ARTICLE 8.08.

28. APPROVAL FOR CONSTRUCTION ACTIVITIES PERFORMED ON OWNER'S HOLIDAYS, AND/OR SATURDAYS, OUTSIDE OF MONDAY THROUGH FRIDAY 8 AM TO 5 PM, OR IN EXCESS OF 8 HOURS PER DAY SHALL BE OBTAINED IN WRITING 48 HOURS IN ADVANCE, AND INSPECTION FEES AT 1.5 TIMES THE HOURLY INSPECTION RATE SHALL BE

BILLED DIRECTLY TO THE CONTRACTOR. THERE SHALL BE NO CONSTRUCTION OR CONSTRUCTION RELATED ACTIVITIES PERFORMED ON SUNDAY. THE CITY RESERVES THE RIGHT TO REQUIRE THE CONTRACTOR TO UNCOVER ALL WORK PERFORMED WITHOUT CITY INSPECTION.

29. ALL POLES TO BE APPROVED BY CITY AND PEC, NO CONDUIT SHALL BE INSTALLED DOWN LOT LINES / BETWEEN HOMES, ALL CONDUIT SHALL BE LOCATED IN THE PUBLIC ROW OR IN AN EASEMENT ADJACENT TO AND PARALLEL TO THE PUBLIC ROW. 30. DRY UTILITIES SHALL BE INSTALLED AFTER SUBGRADE IS CUT AND BEFORE FIRST COURSE BASE. NO TRENCHING OF COMPACTED BASE. IF NECESSARY DRY UTILITIES INSTALLED AFTER FIRST COURSE BASE SHALL BE BORED ACROSS THE FULL WIDTH

OF THE ROW. 31. NO PONDING OF WATER SHALL BE ALLOWED TO COLLECT ON OR NEAR THE INTERSECTION OF PRIVATE DRIVEWAY(S) AND A PUBLIC STREET. RECONSTRUCTION OF THE DRIVEWAY APPROACH SHALL BE AT THE CONTRACTOR'S EXPENSE.

32. All DRIVEWAY APPROACHES SHALL HAVE A UNIFORM TWO PERCENT SLOPE WITHIN THE ROW UNLESS

APPROVED IN WRITING BY THE ENGINEERING DEPARTMENT. 33. CONTRACTORS ON SITE SHALL HAVE AN APPROVED SET OF PLANS AT ALL TIMES. FAILURE TO HAVE AN APPROVED SET MAY

RESULT IN A STOP WORK ORDER. 34. CONTRACTOR TO CLEAR FIVE FEET BEYOND ALL RIGHT OF WAY TO PREVENT FUTURE VEGETATIVE GROWTH INTO THE SIDEWALK AREAS.

35. THERE SHALL BE NO WATER OR WASTEWATER APPURTENANCES, INCLUDING BUT NOT LIMITED TO, VALVES, FITTINGS, METERS, CLEAN-OUTS, MANHOLES, OR VAULTS IN ANY DRIVEWAY, SIDEWALK, TRAFFIC OR PEDESTRIAN BASIS. 36. SIDEWALKS SHALL NOT USE CURB INLETS AS A PARTIAL WALKING SURFACE. SIDEWALKS SHALL NOT USE TRAFFIC CONTROL BOXES, METER OR CHECK VALVE VAULTS, COMMUNICATION VAULTS, OR OTHER BURIED OR PARTIALLY BURIED INFRASTRUCTURE AS A VEHICULAR OR PEDESTRIAN SURFACE. .

STREET NOTES:

1. NO TRENCHING OF COMPACTED BASE WILL BE ALLOWED. A PENALTY AND/OR FINE MAY BE IMPOSED TO THE GENERAL CONTRACTOR IF TRENCHING OF COMPACTED BASE OCCURS WITHOUT CITY APPROVAL,

REGARDLESS OF WHO PERFORMED THE TRENCHING. 2. ALL SIDEWALKS SHALL COMPLY WITH THE AMERICANS WITH DISABILITIES ACT. THE CITY OF CEDAR PARK HAS NOT REVIEWED THESE PLANS FOR COMPLIANCE WITH THE AMERICANS WITH DISABILITIES ACT, OR

ANY OTHER ACCESSIBILITY LEGISLATION, AND DOES NOT WARRANTY OR APPROVE THESE PLANS FOR ANY ACCESSIBILITY STANDARDS. 3. STREET BARRICADES SHALL BE INSTALLED ON ALL DEAD END STREETS AND AS NECESSARY DURING

CONSTRUCTION TO MAINTAIN JOB SAFETY.

4. ANY DAMAGE CAUSED TO EXISTING PAVEMENT, CURBS, SIDEWALKS, RAMPS, ETC., SHALL BE REPAIRED BY THE CONTRACTOR TO THE SATISFACTION OF THE CITY PRIOR TO ACCEPTANCE OF THE

SUBDIVISION. 5. AT INTERSECTIONS, WHICH HAVE VALLEY DRAINAGE, THE CROWN TO THE INTERSECTING STREET WILL BE

CULMINATED AT A DISTANCE OF 40 FT. FROM THE INTERSECTING CURB LINE UNLESS OTHERWISE NOTED. 6. THE SUBGRADE MATERIAL WAS TESTED BY (ALPHA TESTING, 4740 PERRIN CREEK SUITE 480, SAN ANTONIO, TX 78217, 210-249-2100) ON 10/20/2023 THE PAVEMENT SECTIONS WERE DESIGNED ACCORDINGLY. THE PAVEMENT SECTIONS ARE TO BE CONSTRUCTED AS FOLLOWS:

7. DENSITY TESTING OF COMPACTED SUBGRADE MATERIAL, FIRST COURSE AND SECOND COURSE COMPACTED BASE, SHALL BE MADE AT 500 FOOT INTERVALS.

8. ALL DENSITY TESTING IS THE RESPONSIBILITY OF THE OWNER OR CONTRACTOR AND SHALL BE WITNESSED BY THE CITY OF CEDAR PARK'S PROJECT REPRESENTATIVE. THE CONTRACTOR IS TO NOTIFY THE CITY 48 HOURS PRIOR TO SCHEDULED DENSITY TESTING

9. TRAFFIC CONTROL SIGNS AND PAVEMENT MARKINGS SHALL BE IN ACCORDANCE WITH THE TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES AND INSTALLED AS DIRECTED BY THE CITY OF CEDAR PARK PRIOR TO CITY ACCEPTANCE OF THE SUBDIVISION.

RETAINING WALL OR SOME OTHER FORM OF SLOPE PROTECTION APPROVED BY THE CITY SHALL BE PLACED IN A LOCATION ACCEPTABLE TO THE CITY

ATTEND A PRE-PAVING CONFERENCE PRIOR TO THE START OF HMAC PAVING. THE CONTRACTOR SHALL GIVE THE CITY A MINIMUM OF 48 HOURS NOTICE PRIOR TO THIS MEETING (512-401-5000). 12. THE CONTRACTOR OR OWNER IS RESPONSIBLE FOR CONDUCTING TESTS ON ASPHALT PAVEMENT IN ACCORDANCE WITH THE REQUIREMENTS SET FORTH IN THE CITY OF AUSTIN STANDARD SPECIFICATION NO. 340. ANY RE-TESTING OF THE ASPHALT PAVEMENT SHALL BE CONDUCTED UNDER THE SUPERVISION OF THE ENGINEER AND THE CITY OF CEDAR PARK. RE-TESTING OF THE ASPHALT PAVEMENT SHALL BE LIMITED TO ONE RETEST PER PROJECT

13. ALL PAVEMENT MARKINGS AND SIGNAGE SHALL COMPLY WITH MUTCD STANDARDS. STREET NAME LETTER SIZING SHALL BE IN ACCORDANCE WITH MUTCDTABLE2D-2.PAVEMENT MARKINGS SHALL BE THERMOPLASTIC UNLESS OTHERWISE NOTED.

14. ALL STREET NAME SIGNS SHALL BE HIGH INTENSITY RETRO GRADE. INTERSECTING PUBLIC ROADWAY OR FROM AN INTERSECTING PRIVATE DRIVEWAY. SIGHT LINES ARE TO BE MAINTAINED AS DISTANCE REQUIREMENTS OR FENCING REGULATIONS IS A VIOLATION OF THE CITY'S ORDINANCE AND MAY BE PUNISHABLE PURSUANT TO SECTION 1.01.009 OF CITY CODE.

TO BE APPROVED BY THE CITY, PRIOR TO BASE PLACEMENT ALL CURRENT TRIAXIAL TEST REPORTS FOR THE PROPOSED STOCKPILES ARE TO BE SUBMITTED TO THE CITY'S PROJECT REPRESENTATIVE FOR REVIEW AND APPROVAL. MAINTAINED COMPLIANT WITH TABLE 1-1 OF THE AUSTIN TRANSPORTATION CRITERIA MANUAL. UTILITIES DETERMINED BY THE DIRECTOR OF ENGINEERING TO BE PLACED WITHIN REQUIRED SIGHT LINES MAY BE REQUIRED TO BE RELOCATED AT THE EXPENSE OF THE CONTRACTOR PRIOR TO THE CITY ISSUING A CERTIFICATE OF OCCUPANCY OR PRIOR TO THE CITY'S ACCEPTANCE OF THE PROJECT IMPROVEMENTS.

18. ALL LANE CLOSURES SHALL OCCUR ONLY BETWEEN THE HOURS OF 9 AM AND 4 PM. ANY NIGHT TIME LANE CLOSURES REQUIRE APPROVAL BY THE DIRECTOR OF ENGINEERING AND SHALL OCCUR BETWEEN THE HOURS OF 8 PM AND 6 AM. LANE CLOSURES OBSERVED BY CITY DURING THE PEAK HOURS OF 6 AM TO 9 AM, OR 4 PM TO 8 PM WILL BE SUBJECT TO FINE PER CHAPTER 1 OF CITY ORDINANCE, AND/OR SUBSEQUENT ISSUANCE OF WORK STOPPAGE.

19. IMPROVEMENTS THAT INCLUDE RECONSTRUCTION OF AN EXISTING TYPE II DRIVEWAY SHALL BE DONE IN A MANNER WHICH RETAINS OPERATIONS OF NOT LESS THAN HALF OF THE DRIVEWAY AT ALL TIMES. FULL CLOSURE OF SUCH DRIVEWAY CAN BE CONSIDERED WITH WRITTEN AUTHORIZATION RETAINED BY THE CONTRACTOR FROM THE PROPERTY OWNER(S) OR ACCESS EASEMENT RIGHT HOLDER(S) OF THE DRIVEWAY ALLOWING FULL CLOSURE OF THE DRIVEWAY 20. TREES MUST NOT OVERHANG WITHIN 10' VERTICALLY OF A SIDEWALK, OR 18' VERTICALLY OF A

WASTEWATER NOTES:

ROADWAY OR DRIVEWAY.

1. REFER TO THE CITY OF CEDAR PARK PUBLIC WORKS UTILITY POLICY AND SPECIFICATIONS MANUAL. MANHOLE FRAMES AND COVERS AND WATER VALVE BOXES SHALL BE RAISED TO FINISHED PAVEMENT GRADE AT THE OWNER'S EXPENSE BY THE CONTRACTOR WITH THE CITY APPROVAL, ALL UTILITY ADJUSTMENTS SHALL BE COMPLETED PRIOR TO FINAL PAVING CONSTRUCTION. 3. THE LOCATION OF ANY EXISTING UTILITY LINES SHOWN ON THESE PLANS MAY NOT BE ACCURATE. ANY

DAMAGE TO EXISTING UTILITY LINES, BOTH KNOWN AND UNKNOWN, SHALL BE REPAIRED AT THE EXPENSE OF THE CONTRACTOR. THE CONTRACTOR SHALL LOCATE ALL UTILITIES PRIOR TO BIDDING THE PROJECT. ALL IRON PIPE AND FITTINGS SHALL BE WRAPPED WITH AT LEAST 8 MIL. POLYETHYLENE WRAP.

COVER SPECIFICATIONS. ALL STREETS ARE TO BE CUT TO SUBGRADE PRIOR TO INSTALLATION OF WATER MAINS OR CUTS WILL BE ISSUED BY THE ENGINEER 6. WHERE 48-INCHES OF COVER BELOW SUBGRADE CANNOT BE ACHIEVED FOR WASTEWATER SERVICE LINES

ALTERNATE MATERIALS MAY BE USED. A MINIMUM OF 36-INCHES OF COVER BELOW SUBGRADE SHALL BE ACHIEVED. ANY WASTEWATER SERVICE LINE WITH COVER BETWEEN 36-INCH AND 48- INCHES SHALL BE SDR-26 PVC PRESSURE PIPE

PRESSURE PIPE OR C-900. 8. PIPE MATERIALS TO BE USED FOR CONSTRUCTION OF UTILITY LINES:

WASTEWATER - PVC SDR-26 (NOTE: IF USING PVC, SDR-26 IS REQUIRED, SDR-35 WW IS NOT ALLOWED. FORCEMAINS

SHALL BE EPOXY LINED DUCTILE IRON) 9. ALL SANITARY SEWERS, EXCLUDING SERVICE LINES, SHALL BE MANDREL TESTED PER TCEQ (TEXAS COMMISSION ON ENVIRONMENTAL QUALITY) CRITERIA. A MANDREL TEST WILL NOT BE PERFORMED UNTIL BACKFILL HAS BEEN IN PLACE FOR A MINIMUM OF 30 DAYS. WORKS DEPARTMENT UTILITY POLICY AND STANDARD SPECIFICATIONS MANUAL APPENDIX E: REQUIREMENTS FOR VIDEO INSPECTION OF WASTEWATER LINES AT THE CONTRACTOR'S EXPENSE. NO

SEPARATE PAY UNLESS NOTED ON THE BID FORM 11. ALL SANITARY SEWERS, INCLUDING SERVICE LINES, SHALL BE AIR TESTED PER CITY OF AUSTIN STANDARD SPECIFICATIONS.

12. DENSITY TESTING OF COMPACTED BACKFILL SHALL BE MADE AT A RATE OF ONE TEST PER TWO FOOT LIFTS PER 500 FEET OF INSTALLED PIPE.

INSPECTION IS REQUIRED FOR ALL TESTING OF WATER AND WASTEWATER LINES. TOP) OF THE PIPE IS WITHIN 18 INCHES OF THE TOP (OR BOTTOM) OF THE UTILITY STRUCTURE, THE PIPE SHALL BE ENCASED WITH CONCRETE FOR A DISTANCE OF AT LEAST 1 FT. ON EITHER SIDE OF THE

REQUIRED FOR DUCTILE IRON (THICKNESS CLASS 50), AWWA C-900 (SDR- 18) 150 PSI RATED PVC IN SIZES TO 12 INCHES OR AWWA C-905 (SDR-25) 165 PSI RATED PVC IN SIZES LARGER THAN 12 INCHES. CONCRETE ENCASEMENT SHALL CONFORM TO C.O.A. STANDARD DETAIL 505-1. 15. THE ALLOWABLE (MAXIMUM) ADJUSTMENT FOR A MANHOLE SHALL BE 12" (INCHES) OR LESS.

16. WHERE A SEWER LINE CROSSES A WATER LINE, THE SEWER LINE SHALL BE ONE 20 FT. JOINT OF 150 PSI RATED PVC CENTERED ON CROSSING.

17. ALL MANHOLE AND INLET COVERS SHALL READ "CITY OF CEDAR PARK". 18. CONTRACTOR TO NOTIFY, AND OBTAIN APPROVAL FROM, THE CITY OF CEDAR PARK 48 HOURS PRIOR TO CONNECTING TO EXISTING CITY UTILITIES.

19. ALL PIPE BEDDING MATERIAL SHALL CONFORM TO CITY OF AUSTIN STANDARD SPECIFICATIONS. 20. UNLESS OTHERWISE SPECIFIED BY THE ENGINEER ALL CONCRETE IS TO BE CLASS "A" (5 SACK, 3000 PSI ~ 28-DAYS), AND ALL REINFORCING STEEL TO BE ASTM A615 60.

21. ALL WASTEWATER MANHOLES TO BE COATED WITH ORGANIC MATERIALS AND PROCEDURES LISTED IN CITY OF AUSTIN QUALIFIED PRODUCTS LIST NO. WW-511 (WW-511A AND WW-511B ARE NOT ALLOWED UNLESS MANHOLE IS BEING STRUCTURALLY REHABILITATED WITH APPROVAL BY PUBLIC WORKS). ALL MANHOLES WILL BE PRE-COATED OR COATED AFTER TESTING.

22. POLYBRID COATINGS ON WASTEWATER MANHOLES WILL NOT BE ALLOWED. ANY OTHER PRODUCT APPEARING ON THE COA SPL WW-511 IS ACCEPTABLE.

SPECIFICATIONS LISTED IN NOTE 24. ALL MANHOLES WILL BE VACUUM TESTED ONLY.

25. TRACER TAPE AND MARKING TAPE SHALL BE INSTALLED ON ALL WATER AND WASTEWATER MAINS IN ACCORDANCE WITH CITY OF AUSTIN STANDARDS, REGARDLESS OF THE TYPE OF PIPE. 26. ALL PRESSURE PIPE SHALL HAVE MECHANICAL RESTRAINT AND CONCRETE THRUST BLOCKING AT ALL VALVES, BENDS, TEES, PLUGS, AND OTHER FITTINGS.

WATER NOTES:

1. REFER TO THE CITY OF CEDAR PARK PUBLIC WORKS UTILITY POLICY AND SPECIFICATIONS MANUAL. SHALL BE WELDED ON EACH END TO THE CITY'S SATISFACTION. 3. FIRE HYDRANT LEADS TO BE DUCTILE IRON, CLASS 350, AND INSTALLED PER CITY OF AUSTIN STANDARD SPECIFICATIONS AND DETAIL.

FSTABLISHING THE ELEVATION OF THE BURY LINE. 6. PIPE MATERIALS TO BE USED FOR CONSTRUCTION OF UTILITY LINES:

WATER - PVC C900 DR-14. COPPER PIPE AND FITTINGS ARE NOT PERMITTED WITHIN THE RIGHT-OF-WAY. MINIMUM DR-14 12" DIA AND SMALLER. MINIMUM CLASS 250 DI LARGER THAN 12" DIA.

7. APPROVED 5 ¼" FIRE HYDRANTS:

- AMERICAN FLOW CONTROL, B84B
- MUELLER COMPANY, SUPER CENTURION 250

CLOW MEDALLION HYDRANT

REQUIREMENTS FOR PRIVATE FIRE HYDRANTS (BEHIND DOUBLE CHECK BACKFLOW PREVENTION ASSEMBLY): MUST BE IN ACCORDANCE WITH CITY OF AUSTIN SPECIFICATIONS. ALL FIRE HYDRANTS MUST MEET CITY OF CEDAR PARK THREAD SPECIFICATIONS (NATIONAL THREAD)

BLUE REFLECTOR MARKERS SHALL BE LOCATED ON THE CENTERLINE OF THE PAVEMENT ACROSS FROM ALL FIRE HYDRANTS. PAVEMENT MARKERS AT INTERSECTIONS SHALL BE FOUR-SIDED. 8. SHOULD A TAPPING SADDLE BE APPROVED BY PUBLIC WORKS, THE SADDLE SHALL BE SMITH-BLAIR 662

28-DAYS), AND ALI FOR ALTERNATE PROVIDERS SHALL BE MADE TO THE CITY OF CEDAR PARK PUBLIC WORKS. NO TAP EXCEEDING 9. CONTRAC AND INLETS TO P 2" IN DIAMETER WILL BE APPROVED. COLLECTION SYS 9. ALL WATER LINES, INCLUDING SERVICE LINES, SHALL BE PRESSURE AND LEAK TESTED PER CITY OF AUSTIN 10. INSTALL CC STANDARD SPECIFICATIONS AND WITNESSED BY THE CITY OF CEDAR PARK REPRESENTATIVE. ALL TESTING 11. ALL CURB I IS TO BE THE RESPONSIBILITY OF THE CONTRACTOR, AND THE CONTRACTOR MAY BE REQUIRED TO RE-TEST 10. SLOPE OF NATURAL GROUND ADJACENT TO THE RIGHT-OF-WAY SHALL NOT EXCEED 3:1. IF A 3:1 SLOPE IS NOT POSSIBLE, A LINES IF THE TESTING IS NOT WITNESSED BY THE CITY. CONTRACTOR MUST NOTIFY THE CITY OF CEDAR PARK SEQUENCE OF CC 48 HOURS PRIOR TO ANY TESTING. INITIAL WATER LINE DISINFECTION MUST MEET A CHLORINE RESIDUAL OF 50PPM, AND A CHLORINE RESIDUAL OF 25 PPM AFTER A 24 HOUR DETENTION PERIOD. SECTIONS THAT ARE 11. THE CITY, ENGINEER, CONTRACTOR, AND A REPRESENTATIVE FROM THE ASPHALT TESTING LAB SHALL THE FOLLOWING 20 – 30 FEET CAN USE GRANULAR OR TABLET DISINFECTION, BUT ANYTHING BEYOND THAT MUST BE LIQUID PROVIDE ANY ADD DISINFECTION TO EVENLY CLEAN THE PIPE. 10. ALL WATER LINES SHALL BE STERILIZED AND BACTERIOLOGICALLY TESTED IN ACCORDANCE WITH CITY OF AUSTIN STANDARDS. THE CONTRACTOR IS RESPONSIBLE FOR STERILIZATION AND THE CITY OF CEDAR PARK IS 1. TEMPORAR RESPONSIBLE FOR SUBMITTING BACTERIOLOGICAL SAMPLES TO THE STATE. PUBLIC WORKS WILL REQUIRE A APPROVED SITE CONTRACTOR SPECIALIZED IN DISINFECTION FOR LARGE DIAMETER LINES OR CRITICAL INFRASTRUCTURE, SEDIMENTATION SUBSIDIARY TO PIPE INSTALLATION. REQUIRED TO BE 11. DENSITY TESTING OF COMPACTED BACKFILL SHALL BE MADE AT A RATE OF ONE TEST PER TWO FOOT LIFTS PER 500 FEET OF MEASURES. INSTALLED PIPE. 2. THE GENER 12. CONTRACTOR TO OBTAIN A WATER METER FROM THE CITY OF CEDAR PARK FOR ANY WATER THAT MAY BE TO THE SCHEDUL REQUIRED DURING CONSTRUCTION. (512-401-5000) 3. THE GENER 13. ALL WATER METER BOXES SHALL BE FORD GULF METER BOX WITH LOCKING LID. POLLUTION PREV 15. NO FENCING OR WALL IS ALLOWED TO BE CONSTRUCTED SO THAT IT OBSTRUCTS THE SIGHT LINES OF DRIVERS FROM AN • SINGLE G-148-233 SEDIMENTATION • DUAL DG-148-243 AND REVISED CO DESCRIBED IN CITY CODE SECTION 14.05.007. INSTALLING A FENCE OR WALL WHICH DOES NOT COMPLY WITH THE CITY'S SIGHT EROSION PLAN. 1" METER YL111 - 444 • 1 ½" – 2" METER 1730-R (LID) & 1730-12 (BOX)/ACCEPTABLE BOXES FOR THIS SIZE OF METER 4. ROUGH G 14. MANHOLE FRAMES AND COVERS AND WATER VALVE BOXES SHALL BE RAISED TO FINISHED PAVEMENT GRADE, WHEN IN OR A TEMPORAR PUBLIC STREETS, AT THE OWNER'S EXPENSE BY THE CONTRACTOR WITH CITY INSPECTION. ALL UTILITY ADJUSTMENTS SHALL BE EXCAVATION THA 16. TEMPORARY ROCK CRUSHING OPERATIONS ARE NOT ALLOWED. ALL SOURCES FOR FLEXIBLE BASE MATERIAL ARE REQUIRED COMPLETED PRIOR TO FINAL PAVING CONSTRUCTION OUTLET AND AN 15. THE LOCATION OF ANY EXISTING UTILITY LINES SHOWN ON THESE PLANS IS THE BEST AVAILABLE AND MAY NOT BE ACCURATE. CRITERIA MANUA ANY DAMAGE TO EXISTING UTILITY LINES, BOTH KNOWN AND UNKNOWN, SHALL BE REPAIRED MAINTAINED THR 17. UTILITY SERVICE BOXES OR OTHER UTILITY FACILITIES SHALL NOT BE INSTALLED WITHIN AREAS DETERMINED TO BE REQUIRED AT THE EXPENSE OF THE CONTRACTOR. QUALITY POND(S SIGHT LINES OF TWO INTERSECTING PUBLIC STREETS OR WITHIN SIGHT LINES OF A PRIVATE DRIVEWAY, SIGHT LINES ARE TO BE 16. ALL IRON PIPE AND FITTINGS SHALL BE WRAPPED WITH AT LEAST 8 MIL. POLYETHYLENE WRAP. 5. TEMPORAF 17. ALL WATER MAINS, WASTEWATER MAINS AND SERVICE LINES SHALL MEET CITY OF AUSTIN ACCORDANCE W SPECIFICATIONS FOR MINIMUM COVER REQUIREMENTS. ALL STREETS ARE TO BE CUT TO SUBGRADE PRIOR TO POLLUTION PREV INSTALLATION OF WATER MAINS OR CUTS WILL BE ISSUED BY THE ENGINEER. BEGIN SITE 18. CITY TO BE GIVEN 48 HOURS NOTICE PRIOR TO ALL TESTING OF WATER AND WASTEWATER LINES. CITY UNDERGR INSPECTION IS REQUIRED FOR ALL TESTING OF WATER AND WASTEWATER LINES. 8FIRE DEPA 8. 19. WHERE A WATER OR WASTEWATER LINE CROSSES ABOVE (OR BELOW) A STORM SEWER STRUCTURE AND THE BOTTOM (OR 9. VERTICAL TOP) OF THE PIPE IS WITHIN 18 INCHES OF THE TOP (OR BOTTOM) OF THE UTILITY STRUCTURE. FIRE MARSHAL. THE PIPE SHALL BE ENCASED WITH CONCRETE FOR A DISTANCE OF AT LEAST 1 FT. ON EITHER SIDE OF THE 10 PERMANENT DITCH LINE OF THE UTILITY STRUCTURE OR THE STORM SEWER. CONCRETE INSTALLED PRIOR ENCASEMENT WILL NOT BE REQUIRED FOR DUCTILE IRON (THICKNESS CLASS 50), AWWA C-900 (SDR- 18) 11. COMPLETE 150 PSI RATED PVC IN SIZES TO 12 INCHES OR AWWA C-905 (SDR-25) 165 PSI RATED PVC IN SIZES LARGER LANDSCAPING. THAN 12 INCHES. CONCRETE ENCASEMENT SHALL CONFORM TO C.O.A. STANDARD DETAIL 505-1. 12. UPON COM 20. CONTRACTOR TO NOTIFY THE CITY OF CEDAR PARK 48 HOURS PRIOR TO CONNECTING TO EXISTING ENGINEER SHALL UTILITIES. SIGNATURE, AND 21. ALL PIPE BEDDING MATERIAL SHALL CONFORM TO CITY OF AUSTIN STANDARD SPECIFICATIONS. COMPLETE AND 22. TRACER TAPE SHALL BE INSTALLED ON ALL WATER AND WASTEWATER MAINS REGARDLESS OF THE TYPE OF PIPE OR DEPTH A FINAL INSPECTION OF PIPE INSTALLED. 13. UPON COM 23. UNLESS OTHERWISE SPECIFIED BY THE ENGINEER ALL CONCRETE IS TO BE CLASS "A" (5 SACK, 3000 PSI ~ SUBMIT A LETTER 28-DAYS), AND ALL REINFORCING STEEL TO BE ASTM A615 60. COMPLETE AND I 24. THE CITY CONSIDERS PROTECTION OF ITS WATER SYSTEM PARAMOUNT TO CONSTRUCTION ACTIVITIES. CITY PERSONNEL A FINAL INSPECTI WILL OPERATE, OR AUTHORIZE THE CONTRACTOR TO OPERATE, ALL WATER VALVES THAT WILL PASS THROUGH THE CITY'S POTABLE 14. AFTER A FI WATER. THE CONTRACTOR MAY NOT OPERATE ANY WATER VALVE, EXISTING REMOVE THE TEN OR PROPOSED, THAT WILL ALLOW WATER FROM THE CITY'S WATER SYSTEM TO FLOW TO A PROPOSED OR NECESSARY FINA EXISTING WATER SYSTEM WITHOUT THE EXPRESS CONSENT OF THE CITY. NOTIFY THE CITY TWO BUSINESS OF THE WATER Q DAYS IN ADVANCE OF ANY REQUEST TO OPERATE A WATER VALVE. THE GENERAL CONTRACTOR MAY BE FINED \$500 OR MORE, INCLUDING ADDITIONAL THEFT OF WATER FINES, IF A WATER VALVE IS OPERATED IN AN UNAUTHORIZED MANNER, REGARDLESS OF WHO OPERATED THE VALVE. ALL WATER MAINS, WASTEWATER MAINS AND SERVICE LINES SHALL MEET CITY OF AUSTIN MINIMUM 25. ALL WATER VALVES OVER 24" IN SIZE SHALL HAVE A BY-PASS LINE AND VALVE INSTALLED. BY-PASS VALVES AND LINES ARE SUBSIDIARY TO THE COST OF THE VALVE UNLESS SPECIFICALLY IDENTIFIED ON THE BID FORM. 26. ALL WATER VALVES, INCLUDING THOSE OVER 12" IN SIZE, SHALL BE GATE VALVES. EDWARDS AQUI "CONSTRUCTION A DOUBLE CHECK BACKELOW DEVICE IN A VAULT SHALL BE INSTALLED AT THE PROPERTY LINE ON ALL PRIVATE FIRE LINES A DETECTOR WATER METER WILL BE INSTALLED ON THIS BACKFLOW DEVICE, AND IT MUST BE A SENSUS SRII 3/4" METER WITH AMI CONDITIONAL A RADIO READ CAPABILITY. THE CITY WILL PROVIDE THIS METER. RULES OR CON PLEASE REFERENCE THE CITY OF CEDAR PARK DOUBLE CHECK BACKFLOW PREVENTION ASSEMBLY DETAIL. COMPLIANCE W 7. GASKETED PVC SEWER MAIN FITTINGS SHALL BE USED TO CONNECT SDR-35 PVC TO SDR-26 PVC 217, AS WELL A 28. ALL POTABLE WATER SYSTEM COMPONENTS INSTALLED AFTER JANUARY 4. 2014. SHALL BE "LEAD FREE" ADDITIONALLY. ACCORDING TO THE UNITED STATES SAFE DRINKING WATER ACT. THE ONLY COMPONENTS EXEMPT FROM THE ED. THE CO THIS REQUIREMENT ARE FIRE HYDRANTS. COMPONENTS THAT ARE NOT CLEARLY IDENTIFIED BY THE THAT RESULT C MANUFACTURER AS MEETING THIS REQUIREMENT BY MARKING, OR ON THE PRODUCT PACKAGING, OR BY WATERS. THE F PRE-APPROVED SUBMITTAL, WILL BE REJECTED FOR USE, A NSF CERTIFICATION WILL BE ADEQUATE IF THE RESPONSIBLE F CERTIFICATION HAS NOT EXPIRED AS OF JANUARY 4, 2014 AND REMAINS UNEXPIRED AT THE TIME OF WELL AS ALL CO CONSTRUCTION. IMPLEMENTATIO 29. ALL PRESSURE PIPE SHALL HAVE MECHANICAL RESTRAINT AND CONCRETE THRUST BLOCKING AT ALL CONTRADICTIC VALVES, BENDS, TEES, PLUGS, AND OTHER FITTINGS. 10. ALL WASTEWATER LINES 10" AND LARGER SHALL BE VIDEO INSPECTED IN ACCORDANCE WITH CITY OF CEDAR PARK PUBLIC SUBJECT TO AL TO ENFORCEM STREET AND DRAINAGE NOTES FOLLOWING/LIS ALL SIDEWALKS SHALL COMPLY WITH THE AMERICANS WITH DISABILITIES ACT. THE CITY OF LEANDER HAS NOT REVIEWED PART OF TITLE THESE PLANS FOR COMPLIANCE WITH THE AMERICANS WITH DISABILITIES ACT, OR ANY OTHER ACCESSIBILITY LEGISLATION, AND DOES NOT WARRANTY OR APPROVE THESE PLANS FOR ANY ACCESSIBILITY STANDARDS PRIOR TO ACCEPTANCE THE ENGINEER SHALL SUBMIT DOCUMENTATION THAT THE IMPROVEMENTS WERE INSPECTED BY 1. A WRITTEN TDLR OR A REGISTERED ACCESSIBLITY SPECIALIST (RAS) AND ARE IN COMPLIANCE WITH THE REQUIREMENTS OF THE TABA. PRIOR TO CONTRACTOR SHALL PROVIDE QUALITY TESTING FOR ALL INFRASTRUCTURES TO BE ACCEPTED AND MAINTAINED BY THE CITY INCLUDE: 13. CITY SHALL BE GIVEN 48 HOURS NOTICE PRIOR TO ALL TESTING OF WATER AND WASTEWATER LINES. CITY OF LEANDER AFTER COMPLETION. THE CONTRACTOR SHALL NOTIFY THE CITY OF LEANDER ENGINEERING DEPARTMENT AT 528-2700 NO LESS THAN 48 HOURS PRIOR TO ANY TESTING. 14. WHERE A WATER OR WASTEWATER LINE CROSSES ABOVE (OR BELOW) A STORM SEWER STRUCTURE AND THE BOTTOM (OR 4. BACKFILL BEHIND THE CURB SHALL BE COMPACTED TO OBTAIN A MINIMUM OF 95% MAXIMUM DENSITY TO WITHIN 6" OF TOP OF CURB. MATERIAL USED SHALL BE PRIMARILY GRANULAR WITH NO ROCKS LARGER THAN 6" IN THE GREATEST DIMENSION. THE ALL CONT REMAINING 6" SHALL BE CLEAN TOPSOIL FREE FROM ALL CLODS AND SUITABLE FOR SUSTAINING PLANT LIFE PROVIDED DITCH LINE OF THE UTILITY STRUCTURE OR THE STORM SEWER. CONCRETE ENCASEMENT WILL NOT BE 5. A MINIMUM OF 6" OF TOPSOIL SHALL BE PLACED BETWEEN THE CURB AND RIGHT-OF-WAY AND IN ALL DRAINAGE CHANNELS INDICATING EXCEPT CHANNELS CUT IN STABLE ROCK. ACTIVITIES 6. DEPTH OF COVER FOR ALL CROSSINGS UNDER PAVEMENT, INCLUDING GAS, ELECTRIC TELEPHONE, CABLE TV, ETC., SHALL BE SITE. A MINIMUM OF 36" BELOW SUBGRADE. 3. NO HAZARI 7. STREET RIGHT-OF-WAY SHALL BE GRADED AT A SLOPE OF 1/4" PER FOOT TOWARD THE CURB UNLESS OTHERWISE INDICATED. SOURCE, D HOWEVER, IN NO CASE SHALL THE WIDTH OF RIGHT-OF-WAY AT 1/4" PER FOOT SLOPE BE LESS THAN 10 FEET UNLESS A SPECIFIC 4. PRIOR TO REQUEST FOR AN ALTERNATE GRADING SCHEME IS MADE TO AND ACCEPTED BY THE CITY OF LEANDER PUBLIC WORKS CONTROL DEPARTMENT MANUFAC 8. BARRICADES BUILT TO THE CITY OF LEANDER STANDARDS SHALL BE ERECTED ON ALL DEAD-END STREETS AND AS NECESSARY DURING CONSTRUCTION TO MAINTAIN JOB AND PUBLIC SAFETY. INCORREC CONTROL 9. ALL REINFORCED CONCRETE PIPE SHALL BE MINIMUM CLASS III OF TONGUE AND GROOVE OR O-RING JOINT DESIGN. 5. ANY SEDIN 10. THE CONTRACTOR IS TO NOTIFY THE ENGINEERING INSPECTOR 48 HOURS PRIOR TO THE FOLLOWING TESTING: PROOF BEFORE T ROLLING SUB-GRADE AND EVERY LIFT OF ROADWAY EMBANKMENT. IN-PLACE DENSITY TESTING OF EVERY BASE COURSE, AND ETC. ASPHALT CORES. ALL OF THIS TESTING MUST BE WITNESSED BY A CITY OF LEANDER REPRESENTATIVE. 6. SEDIMENT 11. THE CONTRACTOR MUST PROVIDE A PNEUMATIC TRUCK PER TXDOT SPEC FOR PROOF ROLLING. OF THE BAS 12. AT INTERSECTIONS WHICH HAVE VALLEY DRAINAGE, THE CROWNS OF THE INTERSECTING STREETS WILL CULMINATE IN A 7. LITTER, C DISTANCE OF 40 FEET FROM INTERSECTING CURB LINE UNLESS OTHERWISE NOTED. PREVENTE 13. AT THE INTERSECTION OF TWO 44' STREETS OR LARGER, THE CROWNS OF THE INTERSECTING STREETS WILL CULMINATE IN A DISTANCE OF 40 FEET FROM INTERSECTING CURB LINE UNLESS OTHERWISE NOTED. 8. ALL EXCA 14. A CURB LAYDOWN IS REQUIRED AT ALL POINTS WHERE THE PROPOSED SIDEWALK INTERSECTS THE CURB. 9. IF PORTION 15. ALL STRIPING, WITH THE EXCEPTION OF STOP BARS, CROSS WALKS, WORDS AND ARROWS, IS TO BE TYPE II (WATER BASED). STABILIZA 23. ALL PENETRATIONS OF EXISTING WASTEWATER MANHOLES ARE REQUIRED TO BE RE-COATED IN ACCORDANCE WITH THE STOP BARS, CROSS WALKS, WORDS AND ARROWS REQUIRE TYPE I THERMOPLASTIC. INACTIVITY 16. MANHOLE FRAMES, COVERS, VALVES, CLEAN-OUTS, ETC. SHALL BE RAISED TO GRADE PRIOR TO FINAL PAVEMENT DROUGHT CONSTRUCTION. SHALL BE 17. CONTRACTOR SHALL NOTIFY THE LEANDER ENGINEERING DEPARTMENT AT 528-2700 AT LEAST 48 HOURS PRIOR TO THE 10. THE FOLLO INSTALLATION OF ANY DRAINAGE FACILITY WITHIN A DRAINAGE EASEMENT OR STREET ROW. THE METHOD OF PLACEMENT AND COMPACTION OF BACKFILL IN THE CITY'S ROW MUST BE APPROVED PRIOR TO THE START OF BACKFILL OPERATIONS. 18. A STOP BAR SHALL BE PLACED AT ALL STOP SIGN LOCATIONS. 19. A MINIMUM OF SEVEN DAYS OF CURE TIME IS REQUIRED FOR HMAC PRIOR TO THE INTRODUCTION OF PUBLIC VEHICULAR TRAFFIC TO ANY STREETS. 20. THE GEOTECHNICAL ENGINEER SHALL INSPECT THE SUBGRADE FOR COMPLIANCE WITH THE DESIGN ASSUMPTIONS MADE 2. THE TOP OF VALVE STEMS SHALL BE AT LEAST 18", AND NO MORE THAN 36", BELOW FINISHED BASIS. VALVE STEM RISERS DURING PREPARATION OF THE SOILS REPORT. ANY ADJUSTMENTS THAT ARE REQUIRED SHALL BE MADE THROUGH REVISIONS OF THE CONSTRUCTION PLANS. 21. GEOTECHNICAL INVESTIGATION INFORMATION AND PAVEMENT RECOMMENDATIONS WERE PROVIDED BY GORRONDONA ENGINEERING SERVICES, INC. PAVEMENT RECOMMENDATIONS ARE AS FOLLOWS: 4. PRIOR TO INSTALLATION OF FIRE HYDRANTS, THE ENGINEER WILL PROVIDE THE CONTRACTOR ONE (1) CUT FROMA HUB PIN, STORM SEWER NOTES: THE ENGINEER SHALL PROVIDE CUTS FOR ALL WATER LINES AT ALL STORM SEWER CROSSINGS TO THE CITY OFCEDAR PARK. 1. MANHOLE FRAMES AND COVERS AND WATER VALVE BOXES SHALL BE RAISED TO FINISHED PAVEMENT GRADE AT THE OWNER'S EXPENSE BY THE CONTRACTOR WITH CITY INSPECTION. ALL UTILITY ADJUSTMENTS SHALL BE COMPLETED PRIOR TO FINAL PAVING CONSTRUCTION. CONTRACTOR SHALL BACKFILL AROUND MANHOLES AND JUNCTION BOXES WITH CLASS A CONCRETE. 2. ALL MANHOLE LIDS SHALL BE 32" OR LARGER, UNLESS EXPRESSLY APPROVED IN WRITING BY THE

STAINLESS STEEL TAPPING SLEEVES WITH ALL STAINLESS HARDWARE, OR APPROVED EQUAL. REQUESTS

ENGINEERING DEPARTMENT.

3. THE LOCATION OF ANY EXISTING UTILITY LINES SHOWN ON THESE PLANS IS THE BEST AVAILABLE AND MAY NOT BE ACCURATE. ANY DAMAGE TO EXISTING UTILITY LINES, BOTH KNOWN AND UNKNOWN, SHALL BE

REPAIRED AT THE EXPENSE OF THE CONTRACTOR. 4. PIPE MATERIALS TO BE USED FOR CONSTRUCTION OF UTILITY LINES: UNLESS OTHERWISE SPECIFIED BY THE ENGINEER, ALL STORM SEWER RCP SHALL BE CLASS III. CORRUGATED METAL PIPE IS NOT PERMITTED.

5. ALL MANHOLE AND INLET COVERS SHALL READ "CITY OF CEDAR PARK".

SITE; -THE D 11. THE HOLDE APPROVAL A. ANY

> STRUC FENCE

B. ANY C ORIGI

C. ANY CI D. ANY DE

ZONE

6. CONTRACTOR TO NOTIFY THE CITY OF CEDAR PARK 48 HOURS PRIOR TO CONNECTING TO EXISTING

UTILITIES.

7. ALL PIPE BEDDING MATERIAL SHALL CONFORM TO CITY OF AUSTIN STANDARD SPECIFICATIONS. 8. UNLESS OTHERWISE SPECIFIED BY THE ENGINEER ALL CONCRETE IS TO BE CLASS "A" (5 SACK, 3000 PSI ~

), AND ALL REINFORCING STEEL TO BE ASTM A615 60. DNTRACTOR TO INSTALL AND MAINTAIN GEO-TEXTILE FABRIC BARRIER (INLET PROTECTION) AROUND STORM SEWER LEADS ETS TO PREVENT SILT AND OTHER MATERIAL FROM ENTERING THE STORM SEWER TION SYSTEM.	DATE
STALL CONCRETE SAFETY END TREATMENTS TO ALL CULVERTS AND ENDS OF DRAINAGE PIPE. IL CURB INLETS SHALL HAVE AN ALMETEK 4" DISC "NO DUMPING DRAINS TO WATERWAY" MARKER	
CE OF CONSTRUCTION NOTES:	
ANY ADDITIONAL DETAILS APPROPRIATE FOR THE PARTICULAR DEVELOPMENT.	ONS
EMPORARY EROSION AND SEDIMENTATION CONTROLS ARE TO BE INSTALLED AS INDICATED ON THE ED SITE PLAN OR SUBDIVISION CONSTRUCTION PLAN AND IN ACCORDANCE WITH THE EROSION ITATION CONTROL PLAN (ESC) AND STORMWATER POLLUTION PREVENTION PLAN (SWPPP) THAT IS ED TO BE POSTED ON THE SITE. INSTALL TREE PROTECTION AND INITIATE TREE MITIGATION ES.	REVISIONS
IE GENERAL CONTRACTOR MUST CONTACT THE CITY INSPECTOR AT 512-401-5000, 72 HOURS PRIOR SCHEDULED DATE OF THE REQUIRED ON-SITE PRECONSTRUCTION MEETING. IE GENERAL CONTRACTOR WILL FOLLOW THE EROSION SEDIMENTATION CONTROL PLAN (ESC) AND STORM WATER ON PREVENTION PLAN (SWPPP) POSTED ON THE SITE. TEMPORARY EROSION AND ITATION CONTROLS WILL BE REVISED, IF NEEDED, TO COMPLY WITH CITY INSPECTORS' DIRECTIVES, 'ISED CONSTRUCTION SCHEDULE RELATIVE TO THE WATER QUALITY PLAN REQUIREMENTS AND THE	<u> </u>
I PLAN. DUGH GRADE THE POND(S) AT 100% PROPOSED CAPACITY. EITHER THE PERMANENT OUTLET STRUCTURE MPGRARY OUTLET MUST BE CONSTRUCTED PRIOR TO DEVELOPMENT OF EMBANKMENT OR TION THAT LEADS TO PONDING CONDITIONS. THE OUTLET SYSTEM MUST CONSIST OF A SUMP PIT AND AN EMERGENCY SPILLWAY MEETING THE REQUIREMENTS OF THE CITY OF AUSTIN DRAINAGE A MANUAL, AS REQUIRED. THE OUTLET SYSTEM SHALL BE PROTECTED FROM EROSION AND SHALL BE UED THROUGHOUT THE COURSE OF CONSTRUCTION UNTIL INSTALLATION OF THE PERMANENT WATER POND(S). IMPORARY EROSION AND SEDIMENTATION CONTROL PLAN (ESC) AND STORM WATER DN PREVENTION PLAN (SWPPP) POSTED ON THE SITE. GIN SITE CLEARING/CONSTRUCTION (OR DEMOLITION) ACTIVITIES. IDERGROUND UTILITIES WILL BE INSTALLED, INCLUDING FIRE HYDRANTS. IRE DEPARTMENT ACCESS WILL BE INSTALLED WHERE REQUIRED BY APPROVED SITE PLAN. ISTICAL CONSTRUCTION MAY OCCUR AFTER THE PRE-VERTICAL INSPECTION HAS BEEN CLEARED BY THE SSHAL. IANEM WATER QUALITY PONDS OR CONTROLS WILL BE CLEANED OUT AND FILTER MEDIA WILL BE ED PRIOR TO/CONCURRENTLY WITH REVEGETATION OF SITE. DMPLETE CONSTRUCTION AND START REVEGETATION OF A PROJECT SITE, THE DESIGN RE SHALL SUBMIT AN ENGINEER'S LETTER OF CONCURRENCE BEARING THE ENGINEER'S SEAL, RE, AND DATE TO THE CITY INDICATING THAT CONSTRUCTION, INCLUDING REVEGETATION, IS TE AND IN SUBSTANTIAL COMPLIANCE WITH THE APPROVED PLANS. AFTER RECEIVING THIS LETTER, NSPECTION WILL BE SCHEDULED BY THE CITY INSPECTOR.	Sant Southwest Parkway, Building 2, Suite 100 Austin, Texas 78741 PHONE: 512-646-2237 WWW.KIMLEY-HORN.COM © 2024 KIMLEY-HORN.AND ASSOCIATES, INC. TBPE Firm No. 928
NSPECTION WILL BE SCHEDULED BY THE CITY INSPECTOR. TER A FINAL INSPECTION HAS BEEN CONDUCTED BY THE CITY INSPECTOR AND WITH APPROVAL FROM THE CITY INSPECTOR, THE TEMPORARY EROSION AND SEDIMENTATION CONTROLS AND COMPLETE ANY ARY FINAL REVEGETATION RESULTING FROM REMOVAL OF THE CONTROLS. CONDUCT ANY MAINTENANCE AND REHABILITATION VATER QUALITY PONDS OR CONTROLS.	By from
TEXAS COMMISSION ON ENVIRONMENTAL QUALITY CONTRIBUTING ZONE PLAN GENERAL CONSTRUCTION NOTES	BENJAMIN L. GREEN
DS AQUIFER PROTECTION PROGRAM CONSTRUCTION NOTES - LEGAL DISCLAIMER: THE FOLLOWING/LISTED RUCTION NOTES" ARE INTENDED TO BE ADVISORY IN NATURE ONLY AND DO NOT CONSTITUTE AN APPROVAL OR ONAL APPROVAL BY THE EXECUTIVE DIRECTOR (ED), NOR DO THEY CONSTITUTE A COMPREHENSIVE LISTING OF OR CONDITIONS TO BE FOLLOWED DURING CONSTRUCTION. FURTHER ACTIONS MAY BE REQUIRED TO ACHIEVE ANCE WITH TCEQ REGULATIONS FOUND IN TITLE 30, TEXAS ADMINISTRATIVE CODE (TAC), CHAPTERS 213 AND WELL AS LOCAL ORDINANCES AND REGULATIONS PROVIDING FOR THE PROTECTION OF WATER QUALITY. NALLY, NOTHING CONTAINED IN THE FOLLOWING/LISTED "CONSTRUCTION NOTES" RESTRICTS THE POWERS OF THE COMMISSION OR ANY OTHER GOVERNMENTAL ENTITY TO PREVENT, CORRECT, OR CURTAIL ACTIVITIES SULT OR MAY RESULT IN POLLUTION OF THE EDWARDS AQUIFER OR HYDROLOGICALLY CONNECTED SURFACE THE HOLDER OF ANY EDWARDS AQUIFER PROTECTION PLAN CONTAINING "CONSTRUCTION NOTES" IS STILL ISIBLE FOR COMPLIANCE WITH TITLE 30, TAC, CHAPTERS 213 OR ANY OTHER APPLICABLE TCEQ REGULATION, AS ALL CONDITIONS OF AN EDWARDS AQUIFER PROTECTION PLAN THROUGH ALL PHASES OF PLAN ENTATION. FAILURE TO COMPLY WITH ANY CONDITION OF THE ED'S APPROVAL, WHETHER OR NOT IN DICTION OF ANY "CONSTRUCTION NOTES," IS A VIOLATION OF TCEQ REGULATIONS AND ANY VIOLATION IS T TO ADMINISTRATIVE RULES, ORDERS, AND PENALTIES AS PROVIDED UNDER TITLE 30, TAC § 213.10 (RELATING DICTION OF ANY "CONSTRUCTION NOTES," IS A VIOLATION OF TCEQ REGULATIONS AND ANY VIOLATION IS T TO ADMINISTRATIVE RULES, ORDERS, AND PENALTIES AS PROVIDED UNDER TITLE 30, TAC § 213.10 (RELATING DIRCEMENT). SUCH VIOLATIONS MAY ALSO BE SUBJECT TO CIVIL PENALTIES AND INJUNCTION. THE VING/LISTED "CONSTRUCTION NOTES" IN NO WAY REPRESENT AN APPROVED EXCEPTION BY THE ED TO ANY "TITLE 30 TAC, CHAPTERS 213 AND 217, OR ANY OTHER TCEQ APPLICABLE REGULATION	KHA PROJECT KHA PROJECT 069285504 069285504 069285504 069285504 010NE 2024 DATE JUNE 2024 JUNE 2024 JUNE 2024 Scale: AS SHOWN DESIGNED BY: DS DRAWN BY: AE/DB CHECKED BY: DS
VRITTEN NOTICE OF CONSTRUCTION MUST BE SUBMITTED TO THE TCEQ REGIONAL OFFICE AT LEAST 48 HOURS OR TO THE START OF ANY GROUND DISTURBANCE OR CONSTRUCTION ACTIVITIES. THIS NOTICE MUST FLUDE: -THE NAME OF THE APPROVED PROJECT; -THE ACTIVITY START DATE; AND -THE CONTACT INFORMATION OF THE PRIME CONTRACTOR. CONTRACTORS CONDUCTING REGULATED ACTIVITIES ASSOCIATED WITH THIS PROJECT SHOULD BE DVIDED WITH COMPLETE COPIES OF THE APPROVED CONTRIBUTING ZONE PLAN (CZP) AND THE TCEQ LETTER ICATING THE SPECIFIC CONDITIONS OF ITS APPROVAL. DURING THE COURSE OF THESE REGULATED	NOTES
TIVITIES, THE CONTRACTOR(S) SHOULD KEEP COPIES OF THE APPROVED PLAN AND APPROVAL LETTER ON- E. HAZARDOUS SUBSTANCE STORAGE TANK SHALL BE INSTALLED WITHIN 150 FEET OF A WATER SUPPLY URCE, DISTRIBUTION SYSTEM, WELL, OR SENSITIVE FEATURE. OR TO BEGINNING ANY CONSTRUCTION ACTIVITY, ALL TEMPORARY EROSION AND SEDIMENTATION (E&S) NTROL MEASURES MUST BE PROPERLY INSTALLED AND MAINTAINED IN ACCORDANCE WITH THE NUFACTURERS SPECIFICATIONS. IF INSPECTIONS INDICATE A CONTROL HAS BEEN USED INAPPROPRIATELY, OR ORRECTLY, THE APPLICANT MUST REPLACE OR MODIFY THE CONTROL FOR SITE SITUATIONS. THESE NTROLS MUST REMAIN IN PLACE UNTIL THE DISTURBED AREAS HAVE BEEN PERMANENTLY STABILIZED. Y SEDIMENT THAT ESCAPES THE CONSTRUCTION SITE MUST BE COLLECTED AND PROPERLY DISPOSED OF FORE THE NEXT RAIN EVENT TO ENSURE IT IS NOT WASHED INTO SURFACE STREAMS, SENSITIVE FEATURES, C.	GENERAL
DIMENT MUST BE REMOVED FROM THE SEDIMENT TRAPS OR SEDIMENTATION BASINS WHEN IT OCCUPIES 50% THE BASIN'S DESIGN CAPACITY. TER, CONSTRUCTION DEBRIS, AND CONSTRUCTION CHEMICALS EXPOSED TO STORMWATER SHALL BE EVENTED FROM BEING DISCHARGED OFFSITE. . EXCAVATED MATERIAL THAT WILL BE STORED ON-SITE MUST HAVE PROPER E&S CONTROLS. PORTIONS OF THE SITE WILL HAVE A CEASE IN CONSTRUCTION ACTIVITY LASTING LONGER THAN 14 DAYS, SOIL	
 BILIZATION IN THOSE AREAS SHALL BE INITIATED AS SOON AS POSSIBLE PRIOR TO THE 14TH DAY OF CTIVITY. IF ACTIVITY WILL RESUME PRIOR TO THE 21ST DAY, STABILIZATION MEASURES ARE NOT REQUIRED. IF OUGHT CONDITIONS OR INCLEMENT WEATHER PREVENT ACTION BY THE 14TH DAY, STABILIZATION MEASURES ALL BE INITIATED AS SOON AS POSSIBLE. FOLLOWING RECORDS SHOULD BE MAINTAINED AND MADE AVAILABLE TO THE TCEQ UPON REQUEST: -THE DATES WHEN MAJOR GRADING ACTIVITIES OCCUR; THE DATES WHEN CONSTRUCTION ACTIVITIES TEMPORARILY OR PERMANENTLY CEASE ON A PORTION OF THE SITE; AND THE DATES WHEN STABILIZATION MEASURES ARE INITIATED. HOLDER OF ANY APPROVED CZP MUST NOTIFY THE APPROPRIATE REGIONAL OFFICE IN WRITING AND OBTAIN PROVAL FROM THE EXECUTIVE DIRECTOR PRIOR TO INITIATING ANY OF THE FOLLOWING: ANY PHYSICAL OR OPERATIONAL MODIFICATION OF ANY BEST MANAGEMENT PRACTICES (BMPS) OR STRUCTURE(S), INCLUDING BUT NOT LIMITED TO TEMPORARY OR PERMANENT PONDS, DAMS, BERMS, SILT FENCES, AND DIVERSIONARY STRUCTURES; ANY CHANGE IN THE NATURE OR CHARACTER OF THE REGULATED ACTIVITY FROM THAT WHICH WAS ORIGINALLY APPROVED; ANY CHANGE THAT WOULD SIGNIFICANTLY IMPACT THE ABILITY TO PREVENT POLLUTION OF THE EDWARDS AQUIFER; OR ANY DEVELOPMENT OF LAND PREVIOUSLY IDENTIFIED AS UNDEVELOPED IN THE APPROVED CONTRIBUTING ZONE PLAN. 	WALSH TRAILS SECTION 5 & 6 CITY OF CEDAR PARK WILLIAMSON COUNTY, TEXAS
	SHEET NUMBER
	2024-1-SI

- OVERAL ALL CONSTRUCTION AND MATERIALS SHALL BE IN ACCORDANCE WITH THESE PLANS, CITY (OR TOWN) STANDARD DETAILS AND SPECIFICATIONS, THE FINAL GEOTECHNICAL REPORT AND ALL ISSUED ADDENDA, AND COMMONLY ACCEPTED CONSTRUCTION STANDARDS, THE CITY SPECIFICATIONS SHALL GOVERN WHERE OTHER SPECIFICATIONS DO NOT EXIST. IN CASE OF CONFLICTING SPECIFICATIONS OR DETAILS, THE MORE RESTRICTIVE SPECIFICATION AND DETAIL SHALL BE FOLLOWED. 2. THE CONTRACTOR SHALL COMPLY WITH CITY (OR TOWN) "GENERAL NOTES" FOR CONSTRUCTION, IF EXISTING AND REQUIRED BY THE
- CITY. FOR INSTANCES WHERE THEY CONFLICT WITH THESE KH GENERAL NOTES, THEN THE MORE RESTRICTIVE SHALL APPLY. 3. THE CONTRACTOR SHALL FURNISH ALL MATERIAL AND LABOR TO CONSTRUCT THE FACILITY AS SHOWN AND DESCRIBED IN THE CONSTRUCTION DOCUMENTS IN ACCORDANCE WITH THE APPROPRIATE AUTHORITIES' SPECIFICATIONS AND REQUIREMENTS.
- 4. THE CONTRACTOR SHALL VISIT THE SITE PRIOR TO BIDDING TO DETERMINE EXISTING CONDITIONS. 5. THE EXISTING CONDITIONS SHOWN ON THESE PLANS WERE PROVIDED BY THE TOPOGRAPHIC SURVEY PREPARED BY THE PROJECT
- SURVEYOR, AND ARE BASED ON THE BENCHMARKS SHOWN. THE CONTRACTOR SHALL REFERENCE THE SAME BENCHMARKS. 6. THE CONTRACTOR SHALL REVIEW AND VERIFY THE EXISTING TOPOGRAPHIC SURVEY SHOWN ON THE PLANS REPRESENTS EXISTING FIELD CONDITIONS PRIOR TO CONSTRUCTION. AND SHALL REPORT ANY DISCREPANCIES FOUND TO THE OWNER AND ENGINEER
- IMMEDIATELY 7. IF THE CONTRACTOR DOES NOT ACCEPT THE EXISTING TOPOGRAPHIC SURVEY AS SHOWN ON THE PLANS, WITHOUT EXCEPTION, THEN WITH CITY SPECIFICATIONS. CONTRACTOR SHALL ENSURE TH 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 17, WHEN WASHING OF VEHICLES IS REQUIRED TO REMOVE SEDI APPROVAL OF THE ARCHITECT, ENGINEER, AND IF APPLICABLE THE CITY AND OWNER. NO CONSIDERATION WILL BE GIVEN TO CHANGE STABILIZED WITH CRUSHED STONE THAT DRAINS INTO AN APPLICABLE THE CITY AND OWNER. NO CONSIDERATION WILL BE GIVEN TO CHANGE STABILIZED WITH CRUSHED STONE THAT DRAINS INTO AN APPLICABLE THE CITY AND OWNER. ORDERS FOR WHICH THE CITY, ENGINEER, AND OWNER WERE NOT CONTACTED PRIOR TO CONSTRUCTION OF THE AFFECTED ITEM. 18. CONTRACTOR SHALL INSTALL A TEMPORARY SEDIMENT BASIN
- 11. CONTRACTOR SHALL THOROUGHLY CHECK COORDINATION OF CIVIL, LANDSCAPE, MEP, ARCHITECTURAL, AND OTHER PLANS PRIOR TO ACRES, PER TCEQ AND CITY STANDARDS. IF NO ENGINEERING COMMENCING CONSTRUCTION. OWNER/ENGINEER SHALL BE NOTIFIED OF ANY DISCREPANCY PRIOR TO COMMENCING WITH CONSTRUCTION 12.IT IS THE CONTRACTOR'S RESPONSIBILITY TO CONTACT THE VARIOUS UTILITY COMPANIES WHICH MAY HAVE BURIED OR AERIAL UTILITIES WITHIN OR NEAR THE CONSTRUCTION AREA BEFORE COMMENCING WORK TO HAVE THEM LOCATE THEIR EXISTING UTILITIES ONTO A ROADWAY, THE AGGREGATE PAD MUST BE WASHED D
- 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. 21. TEMPORARY SEEDING OR OTHER APPROVED STABILIZATION S
- 14. CONTRACTOR SHALL USE EXTREME CAUTION AS THE SITE CONTAINS VARIOUS KNOWN AND UNKNOWN PUBLIC AND PRIVATE UTILITIES. AREA, UNLESS ADDITIONAL CONSTRUCTION IN THE AREA IS EX 15. THE LOCATIONS, ELEVATIONS, DEPTH, AND DIMENSIONS OF EXISTING UTILITIES SHOWN ON THE PLANS WERE OBTAINED FROM AVAILABLE LITH ITY 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 23. UPON COMPLETION OF FINE GRADING, ALL SURFACES OF DIST 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 STORM WATER DISCHARGE AUTHORIZATION:
- THESE PLANS. 17. CONTRACTOR SHALL ARRANGE FOR OR PROVIDE, AT ITS EXPENSE, ALL GAS, TELECOMMUNICATIONS, CABLE, OVERHEAD AND UNDERGROUND POWER LINE, AND UTILITY POLE ADJUSTMENTS NEEDED. 18 CONTRACTOR IS RESPONSIBLE FOR COORDINATING INSTALLATION OF FRANCHISE UTILITIES THAT ARE NECESSARY FOR ON-SITE AND 3. THE CONTRACTOR SHALL ENSURE THAT ALL PRIMARY OPERAT
- 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 ALL PRIMARY OPERATORS SHALL PROVIDE A COPY OF THE SIG 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, SWING4, CONTRACTOR SHALL BE RESPONSIBLE FOR THE IMPLEMENTATION OF THE OPERATIONS IN THE VICINITY OF EXISTING UTILITIES OR STRUCTURES. IF IT IS NECESSARY TO SHORE, BRACE, SWING4, CONTRACTOR SHALL BE RESPONSIBLE FOR THE IMPLEMENTATION OF THE OPERATIONS IN THE VICINITY OF EXISTING UTILITIES OR STRUCTURES. IF IT IS NECESSARY TO SHORE, BRACE, SWING4, CONTRACTOR SHALL BE RESPONSIBLE FOR THE IMPLEMENTATION OF THE OPERATIONS IN THE VICINITY OF EXISTING UTILITIES OR STRUCTURES. IF IT IS NECESSARY TO SHORE, BRACE, SWING4, CONTRACTOR SHALL BE RESPONSIBLE FOR THE IMPLEMENTATION OF THE OPERATION OF THE OPERATION OF THE OPERATION OF THE OPERATION. OR RELOCATE A UTILITY, THE UTILITY COMPANY OR DEPARTMENT AFFECTED SHALL BE CONTACTED BY THE CONTRACTOR AND THEIR APPLICABLE, INCLUDING POSTING SITE NOTICE, INSPECTIONS, 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 5. ALL CONTRACTORS AND SUBCONTRACTORS PROVIDING SERV TO THE POLES. THE COST OF BRACING POLES WILL BE BORNE BY THE CONTRACTOR, WITH NO SEPARATE PAY ITEM FOR THIS WORK. CERTIFICATION STATEMENT ACKNOWLEDGING THEIR RESPONSE THE COST IS INCIDENTAL TO THE PAY ITEM. 21.CONTRACTOR SHALL USE ALL NECESSARY SAFETY PRECAUTIONS TO AVOID CONTACT WITH OVERHEAD AND UNDERGROUND POWER
- LINES. CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE LOCAL, STATE, FEDERAL AND UTILITY OWNER REGULATIONS PERTAINING 7. A NOTICE OF TERMINATION (NOT) SHALL BE SUBMITTED TO TO TO WORK SETBACKS FROM POWER LINES. 22. THE CONTRACTOR SHALL BE RESPONSIBLE TO OBTAIN ALL REQUIRED CONSTRUCTION PERMITS, APPROVALS, AND BONDS PRIOR TO
- CONSTRUCTION. 23. THE CONTRACTOR SHALL HAVE AVAILABLE AT THE JOB SITE AT ALL TIMES A COPY OF THE CONTRACT DOCUMENTS INCLUDING PLANS, GEOTECHNICAL REPORT AND ADDENDA, PROJECT AND CITY SPECIFICATIONS, AND SPECIAL CONDITIONS, COPIES OF ANY REQUIRED
- CONSTRUCTION PERMITS EROSION CONTROL PLANS SWPPP AND INSPECTION REPORTS 24 ALL SHOP DRAWINGS AND OTHER DOCUMENTS THAT REQUIRE ENGINEER REVIEW SHALL BE SUBMITTED BY THE CONTRACTOR SUFFICIENTLY IN ADVANCE OF CONSTRUCTION OF THAT ITEM. SO THAT NO LESS THAN 10 BUSINESS DAYS FOR REVIEW AND RESPONSE THIS PRELIMINARY DEMOLITION PLAN SIMPLY INDICATES THE
- IS AVAILABLE 25.ALL NECESSARY INSPECTIONS AND/OR CERTIFICATIONS REQUIRED BY CODES, JURISDICTIONAL AGENCIES, AND/OR UTILITY SERVICE 2. KH DOES NOT WARRANT OR REPRESENT THAT THE PLAN, WHIC 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 PROCESS FOR THE REMOVAL OF THEIR FACILITIES. ONLY AND ARE NOT TO SCALE. CONTRACTOR SHALL COORDINATE FINAL SIZES AND LOCATIONS WITH APPROPRIATE CITY INSPECTOR. 3. THIS PLAN IS INTENDED TO GIVE A GENERAL GUIDE TO THE CO 29. THE SCOPE OF WORK FOR THE CIVIL IMPROVEMENTS SHOWN ON THESE PLANS TERMINATES 5-FEET FROM THE BUILDING. REFERENCE THE SITE IN A STATE SUITABLE FOR THE CONSTRUCTION OF 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 THEA. ENVIRONMENTAL SITE ASSESSMENT PROVIDED BY THE OWNE BUILDING DESIGN WAS ONGOING. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR CONFIRMING THE FINAL CORRECT VERSION OF THEC. GEOTECHNICAL REPORT PROVIDED BY THE OWNER. BUILDING FOOTPRINT WITH THE ARCHITECT AND STRUCTURAL ENGINEER PRIOR TO LAYOUT DIMENSIONS AND/OR COORDINATES d OTHER REPORTS THAT ARE APPLICABLE AND AVAILABLE SHOWN ON THESE PLANS WERE BASED ON THE ABOVE STATED ARCHITECTURAL FOOTPRINT, AND ARE THEREFORE A PRELIMINARY 5, CONTRACTOR SHALL CONTACT THE OWNER TO VERIEV WHET LOCATION OF THE BUILDING THE CONTRACTOR IS SOLED RESPONSIBLE TO VERIEV WHAT PART OF THE BUILDING THE ARCHITECT'S REPORTS HAVE BEEN PREPARED AND TO OBTAIN/REVIEW/AND 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 C 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 GRADIN
- AGENCY 35.IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO SHOW, BY THE STANDARD TESTING PROCEDURES OF THE MATERIALS, THAT THE INCLUDING GRADES AND DIMENSIONS BEFORE START OF CONSI 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 2. CONTRACTOR SHALL OBTAIN ANY REQUIRED GRADING PERMI GEOTECHNICAL REPORT'S RECOMMENDATION FOR SUBGRADE PREPARATION SPECIFIC TO FLATWORK ADJACENT TO THE PROPOSED 3. UNLESS OTHERWISE NOTED, PROPOSED CONTOURS AND SPC
- 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 BE4. PROPOSED SPOT ELEVATIONS AND CONTOURS OUTSIDE THE
- 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 6. ALL FINISHED GRADES SHALL TRANSITION UNIFORMLY BETWEI 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 EXISTING9. ALL GRADING AND EARTHWORK SHALL COMPLY WITH THE PRO
- 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 WASTE RESULTING FROM SITE CLEARING AND GRUBBING SHAI SAFETY REQUIREMENTS IN ACCORDANCE WITH CITY, STATE, AND FEDERAL REQUIREMENTS, INCLUDING OSHA FOR ALL TRENCHES. NO CONTRACTOR AT NO ADDITIONAL EXPENSE. 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 12. BEFORE ANY EARTHWORK IS PERFORMED, THE CONTRACTOR EMPLOYEES, AGENTS OR REPRESENTATIVES IN THE PERFORMANCE OF THE WORK. THE ENGINEER'S SEAL HEREON DOES NOT EXTEND LINE AND SITE IMPROVEMENTS. THE CONTRACTOR SHALL PRO TO ANY SUCH SAFETY SYSTEM. THE CONTRACTOR SHALL BE RESPONSIBLE FOR IMPLEMENTATION OF ALL REQUIRED SAFETY PROCEDURES AND PROGRAMS. 47. SIGNS RELATED TO SITE OPERATION OR SAFETY ARE NOT INCLUDED IN THESE PLANS.
- 48.CONTRACTOR OFFICE AND STAGING AREA SHALL BE AGREED ON BY THE OWNER AND CONTRACTOR PRIOR TO BEGINNING OF CONSTRUCTION. CONTRACTOR IS RESPONSIBLE FOR ALL PERMITTING REQUIREMENTS FOR THE CONSTRUCTION OFFICE, TRAILER, STORAGE, AND STAGING OPERATIONS AND LOCATIONS. 49.LIGHT POLES, SIGNS, AND OTHER OBSTRUCTIONS SHALL NOT BE PLACED IN ACCESSIBLE ROUTES.
- 50.ALL SIGNS, PAVEMENT MARKINGS, AND OTHER TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE "TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES". 51. TOP RIM ELEVATIONS OF ALL EXISTING AND PROPOSED MANHOLES SHALL BE COORDINATED WITH TOP OF PAVEMENT OR FINISHED
- GRADE AND SHALL BE ADJUSTED TO BE FLUSH WITH THE ACTUAL FINISHED GRADE AT THE TIME OF PAVING. 52. CONTRACTOR SHALL ADJUST ALL EXISTING AND PROPOSED VALVES, FIRE HYDRANTS, AND OTHER UTILITY APPURTENANCES TO MATCH18. REFER TO DIMENSION CONTROL PLAN, AND PLAT FOR HORIZOI ACTUAL FINISHED GRADES AT THE TIME OF PAVING. 53. THE CONTRACTOR IS RESPONSIBLE FOR CONSTRUCTION SEQUENCING AND PHASING, AND SHALL CONTACT THE APPROPRIATE CITY ENGINEER'S SPECIFICATIONS. THE FILL MATERIAL TO BE USED
- 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 20. CONTRACTOR IS RESPONSIBLE FOR ALL SOILS TESTING AND THE START OF CONSTRUCTION. AND THEN THE IMPLEMENTATION OF THE PLAN. 55. CONTRACTOR SHALL KEEP A NEAT AND ACCURATE RECORD OF CONSTRUCTION, INCLUDING ANY DEVIATIONS OR VARIANCES FROM THE PLANS
- 56. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING AS-BUILT PLANS TO THE ENGINEER AND CITY IDENTIFYING ALL DEVIATIONS21. ALL COPIES OF SOILS TEST RESULTS SHALL BE SENT TO THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING AS-BUILT PLANS TO THE ENGINEER AND CITY IDENTIFYING ALL DEVIATIONS21. ALL COPIES OF SOILS TEST RESULTS SHALL BE SENT TO THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING AS-BUILT PLANS TO THE ENGINEER AND CITY IDENTIFYING ALL DEVIATIONS21. ALL COPIES OF SOILS TEST RESULTS SHALL BE SENT TO THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING AS-BUILT PLANS TO THE ENGINEER AND CITY IDENTIFYING ALL DEVIATIONS21. ALL COPIES OF SOILS TEST RESULTS SHALL BE SENT TO THE CONTRACTOR SHALL BE SENT TO THE SENT TO THE SENT SHALL BE SENT TO THE SENT TO THE SENT SHALL BE SENT SHALL BE SENT TO THE SENT SHALL BE SENT SHALL AND VARIATIONS FROM THESE PLANS MADE DURING CONSTRUCTION.
- THE CONTRACTOR SHALL COMPLY WITH ALL LOCAL, STATE, AND FEDERAL EROSION CONTROL AND WATER QUALITY REQUIREMENTS, 23. THE SCOPE OF WORK FOR CIVIL IMPROVEMENT SHOWN ON TH LAWS, AND ORDINANCES THAT APPLY TO THE CONSTRUCTION SITE LAND DISTURBANCE. 2. CONTRACTOR SHALL COMPLY WITH THE REQUIREMENTS OF THE "TCEQ GENERAL PERMIT TO DISCHARGE UNDER THE TEXAS
- POLLUTANT DISCHARGE ELIMINATION SYSTEM TXR 150000". 3. EROSION CONTROL DEVICES SHOWN ON THE EROSION CONTROL PLAN FOR THE PROJECT SHALL BE INSTALLED PRIOR TO THE START OF LAND DISTURBANCE
- 4. ALL EROSION CONTROL DEVICES ARE TO BE INSTALLED IN ACCORDANCE WITH THE APPROVED PLANS AND SPECIFICATIONS FOR THE PROJECT.
- 5. CONTRACTOR IS SOLELY RESPONSIBLE FOR INSTALLATION, IMPLEMENTATION, MAINTENANCE, AND EFFECTIVENESS OF ALL EROSION CONTROL DEVICES, BEST MANAGEMENT PRACTICES (BMPS), AND FOR UPDATING THE EROSION CONTROL PLAN DURING
- CONSTRUCTION AS FIELD CONDITIONS CHANGE. 6. CONTRACTOR SHALL DOCUMENT THE DATES OF INSTALLATION, MAINTENANCE OR MODIFICATION, AND REMOVAL FOR EACH BMP EMPLOYED IN THE STORM WATER POLLUTION PREVENTION PLAN (SWPPP) IF APPLICABLE.
- 7. AS STORM SEWER INLETS ARE INSTALLED ON-SITE, TEMPORARY EROSION CONTROL DEVICES SHALL BE INSTALLED AT EACH INLET PER NEEDED FOR GRADING OPERATIONS AND TO ACCOMMODATE APPROVED DETAILS. 8. THE EROSION CONTROL DEVICES SHALL REMAIN IN PLACE UNTIL THE AREA IT PROTECTS HAS BEEN PERMANENTLY STABILIZED.

- 9. CONTRACTOR SHALL PROVIDE ADEQUATE EROSION CONTROL 10. CONTRACTOR SHALL OBSERVE THE EFFECTIVENESS OF THE MODIFICATIONS AS NEEDED TO PREVENT SEDIMENT FROM LEA EFFECTIVELY CONTROL EROSION AND PREVENT SEDIMENTATI NOTIFY THE ENGINEER.
- 11. OFF-SITE SOIL BORROW, SPOIL, AND STORAGE AREAS (IF APPI ALSO COMPLY WITH THE EROSION CONTROL REQUIREMENTS I CONTROL EROSION AND SEDIMENTATION AND THE ESTABLISH FINAL APPROVAL OF THE PROJECT. CONTRACTOR IS RESPONS
- INCLUDE BMPS FOR ANY OFF-SITE THAT ARE NOT ANTICIPATED 12. ALL STAGING, STOCKPILES, SPOIL, AND STORAGE SHALL BE LO QUALITY. PROTECTIVE MEASURES SHALL BE PROVIDED IF NE ENCIRCLING THE AREA WITH AN APPROPRIATE BARRIER.
- 13. CONTRACTORS SHALL INSPECT ALL EROSION CONTROL DEVIC WEEKLY AND WITHIN 24 HOURS OF ALL RAINFALL EVENTS OF (THE SWPPP BOOKLET IF APPLICABLE, TO VERIFY THAT THE DE 14. CONTRACTOR SHALL CONSTRUCT A STABILIZED CONSTRUCTION
- ALL TIMES FOR ALL INGRESS/EGRESS. 15. SITE ENTRY AND EXITS SHALL BE MAINTAINED IN A CONDITION DIRT ONTO OFF-SITE ROADWAYS ALL SEDIMENT AND DIRT FR
- REMOVED IMMEDIATELY. 16. THE CONTRACTOR IS RESPONSIBLE FOR REMOVING ALL SILT RESULT OF THE CONSTRUCTION AS REQUESTED BY OWNER
- OFF-SITE ROADWAYS.
- PLANS, THEN THE CONTRACTOR SHALL ARRANGE FOR AN APP 19. ALL FINES IMPOSED FOR SEDIMENT OR DIRT DISCHARGED FRO
- 20. WHEN SEDIMENT OR DIRT HAS CLOGGED THE CONSTRUCTION NOT BE ALLOWED TO DRAIN DIRECTLY OFF SITE WITHOUT FIRS
- PERIODIC RE-GRADING OR NEW STONE MAY BE REQUIRED TO
- 22.CONTRACTOR SHALL FOLLOW GOOD HOUSEKEEPING PRACTI MATERIAL, AND TRASH AS CONSTRUCTION PROGRESSES.
- ACHIEVED WHEN THE AREA IS EITHER COVERED BY PERMANE PAVEMENT, OR A UNIFORM PERENNIAL VEGETATIVE COVER 24.AT THE CONCLUSION OF THE PROJECT, ALL INLETS, DRAIN PIP
- CONSTRUCTION SHALL BE DREDGED, AND THE SEDIMENT GEN ACCORDANCE WITH APPLICABLE REGULATIONS

CONTRACTOR SHALL COMPLY WITH ALL TCEQ AND EPA STOR

- 2. CONTRACTOR SHALL COMPLY WITH THE REQUIREMENTS OF POLLUTANT DISCHARGE ELIMINATION SYSTEM TXR 150000.
- COMMENCING CONSTRUCTION (IF APPLICABLE), OR IF UTILIZIN RECEIVING DISCHARGE FROM THE SITE.
- BY THE TCEO AND EPA (E.G. NOI) 6. A COPY OF THE SWPPP, INCLUDING NOI, SITE NOTICE, CONTRA THE CITY BY THE CONTRACTOR AND SHALL BE RETAINED ON-DISTURBING ACTIVITIES AT THE SITE HAVE BEEN COMPLETED
- UNPAVED AREAS AND AREAS NOT COVERED BY STRUCTURES OPERATOR HAS OBTAINED ALTERNATIVE AUTHORIZATION UNI THE OPERATOR OF ANY MS4 RECEIVING DISCHARGE FROM TH

1. KH IS NOT RESPONSIBLE FOR THE MEANS AND METHODS EMP AND REMOVED FROM THE SITE

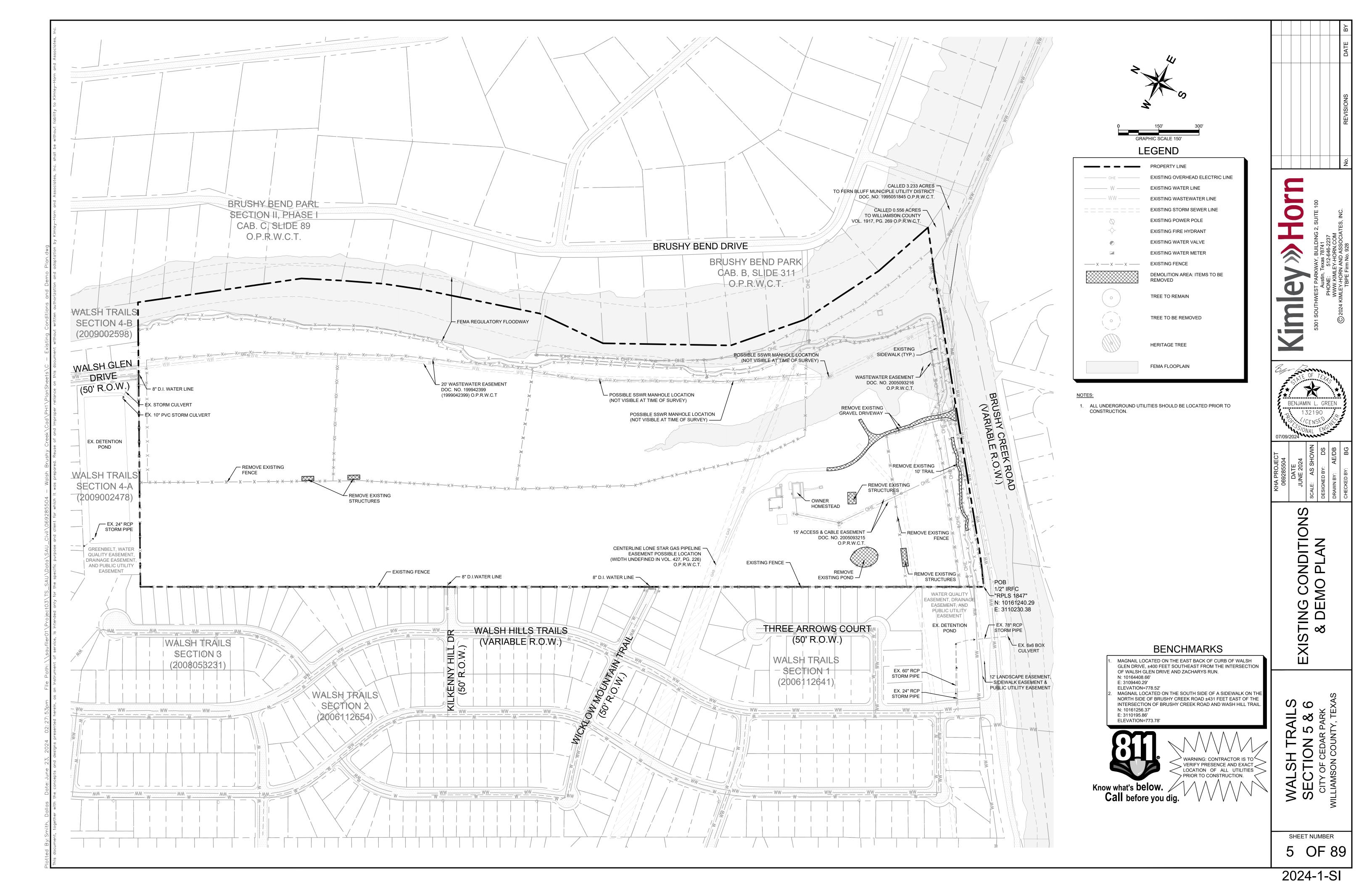
- PROVIDED BY OTHERS SHOWS ALL IMPROVEMENTS AND UTIL ACCURATELY OR THAT THE UTILITIES SHOWN CAN BE REMON RECONNAISSANCE TO SCOPE ITS WORK AND TO CONFIRM WI
- IMPROVEMENTS UTILITIES ETC TO ACCOMPLISH THIS GOAL 4. CONTRACTOR IS STRONGLY CAUTIONED TO REVIEW THE FOLL IMPLEMENTING THE DEMOLITION PLAN
- STARTING ANY WORK ON THE SITE
- 6 CONTRACTOR SHALL COMPLY WITH ALL LOCAL STATE AND FL THE SITE AND THE DISPOSAL OF THE DEMOLISHED MATERIAL THE SITE DETERMINE THE APPLICABLE REGULATIONS RECEIV 7 KH DOES NOT REPRESENT THAT THE REPORTS AND SURVEYS
- SHOWING ALL ITEMS THAT WILL NEED TO BE DEMOLISHED AND SUBEACE DAVEMENT INDICATED MAY OVERI AV OTHER HIDD FOUNDATIONS OR WALLS, THAT ARE ALSO TO BE REMOVED
- THE CONTRACTOR AND GRADING SUBCONTRACTOR SHALL VI
- ANY DISCREPANCIES
- SURFACE. IN LOCATIONS ALONG A CURB LINE, ADD 6-INCHES (FI EVATION
- 5. PROPOSED CONTOURS ARE APPROXIMATE. PROPOSED SPOT DISCREPANCY
- 7 CONTOURS AND SPOT GRADES SHOWN ARE ELEVATIONS OF OPERATIONS, THE CONTRACTOR SHALL PROVIDE AN APPROPI PAVEMENT, SIDEWALK, TOPSOIL, MULCH, STONE, LANDSCAPIN CONTRIBUTE TO THE TOP OF FINISHED GRADE. FOR EXAMPLE PAVEMENT SECTION
- 8. NO REPRESENTATIONS OF EARTHWORK QUANTITIES OR SITE PROVIDE THEIR OWN EARTHWORK CALCULATION TO DETERMIN VARIANCE FROM A BALANCED SITE SHALL BE IMMEDIATELY BF
- SUBSEQUENT ADDENDA. 10. ALL EXCAVATION IS UNCLASSIFIED AND SHALL INCLUDE ALL M
- 11. EROSION CONTROL DEVICES SHOWN ON THE EROSION CONT OF GRADING. REFERENCE EROSION CONTROL PLAN, DETAILS, REQUIREMENTS.
- GRADE CONTROL POINTS RELATED TO EARTHWORK. 13. CONTRACTOR TO DISPOSE OF ALL EXCESS EXCAVATION MATE LAWS AND REGULATIONS. THE CONTRACTOR SHALL KEEP A R
- THE RECEIVING LANDOWNER'S APPROVAL TO DO SO. 14. CONTRACTOR IS RESPONSIBLE FOR REMOVAL AND REPLACEN
- SHALL REFER TO LANDSCAPE ARCHITECTURE PLANS FOR SPE 15. CONTRACTOR SHALL MAINTAIN ADEQUATE SITE DRAINAGE DU DITCHES OR CULVERTS FREE OF OBSTRUCTIONS AT ALL TIME
- 16.NO EARTHWORK FILL SHALL BE PLACED IN ANY EXISTING DRA REASON OR ANY LENGTH OF TIME, UNLESS THESE PLANS SPE
- 17. TEMPORARY CULVERTS MAY BE REQUIRED IN SOME LOCATION 19. THE CONTRACTOR SHALL CLEAR AND GRUB THE SITE AND PLA
- PLACEMENT TESTING SHALL BE COORDINATED WITH THE APPROPRIATE CIT SPECIFICATIONS AND THE GEOTECHNICAL REPORT. SOILS TE
- FOR TESTING SOILS. THE OWNER SHALL APPROVE THE AGENO AGENCY. 22.IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO SHOW, BY
- CONSTRUCTED MEETS THE PROJECT REQUIREMENTS AND CIT
- SHALL REFER TO THE GEOTECHNICAL REPORT AND STRUCTURE IN THE BUILDING PAD
- 24.DUE TO THE POTENTIAL FOR DIFFERENTIAL SOIL MOVEMENT GEOTECHNICAL REPORT'S RECOMMENDATION FOR SUBGRAD BUILDING. THE OWNER AND CONTRACTOR ARE ADVISED TO C
- FLATWORK ADJACENT TO THE BUILDING, IF NONE IS CURRENT 25.CONTRACTOR SHALL ENSURE THAT SUFFICIENT POSITIVE SLC OF THE PROPOSED BUILDING(S) DURING GRADING OPERATION
- THIS WILL NOT BE ACHIEVED, THE CONTRACTOR SHALL CONTA 26.THE CONTRACTOR SHALL TAKE ALL AVAILABLE PRECAUTIONS SPRINKLING WATER, OR BY OTHER MEANS APPROVED BY THE
- 27.CONTRACTOR SHALL COORDINATE WITH THE UTILITY COMPAN THESE PLANS. CONTRACTOR SHALL REFER TO THE GENERAL INFORMATION.

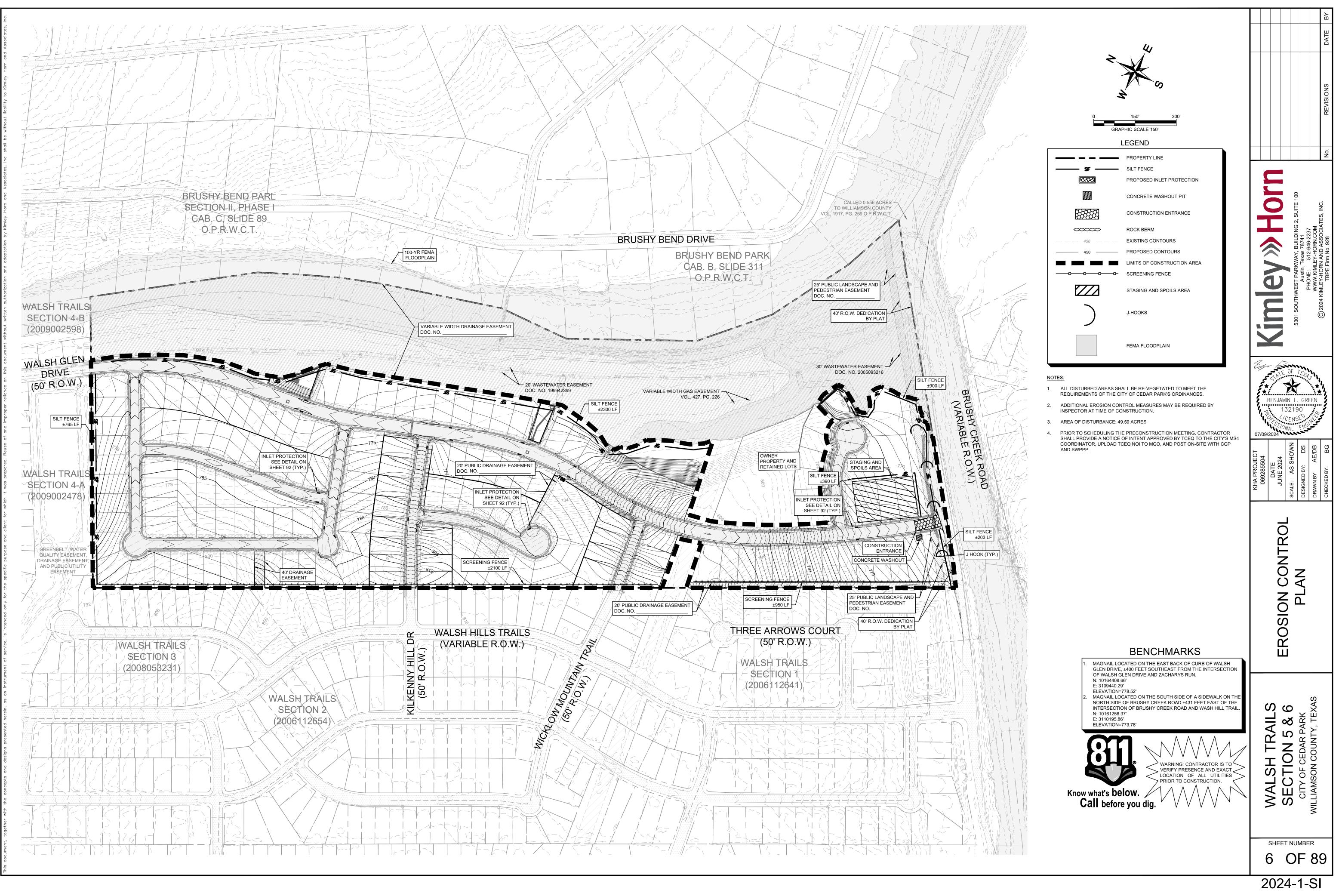
EROSION CONTROL DEVICES AND MAKE FIELD ADJUSTMENTS AND AVING THE SITE. IF THE EROSION CONTROL DEVICES DO NOT 2 ION FROM WASHING OFF THE SITE, THEN THE CONTRACTOR SHALL	28.EXISTING TREE LOCATIONS SHOWN ON THESE PLANS ARE APPROXIMATE. CONTRACTOR SHALL REPORT ANY DISCREPANCIES FOUND IN THE FIELD THAT AFFECT 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	NECESSARY, BY USE SUBSIDIARY TO THE 16. THE CONTRACTOR IS SHALL REPAIR ALL D SANITARY SEWER SE 17. VALVE ADJUSTMENT
FOR THIS PROJECT. THIS INCLUDES THE INSTALLATION OF BMP'S TO IMENT OF PERMANENT GROUND COVER ON DISTURBED AREAS PRIOR TO 3 SIBLE FOR MODIFYING THE SWPPP AND EROSION CONTROL PLAN TO D OR SHOWN ON THE EROSION CONTROL PLAN. OCATED SUCH THAT THEY WILL NOT ADVERSELY AFFECT STORM WATER	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.	PAVEMENT. 18. THE ENDS OF ALL EX WORK SHALL BE CON 19. ALL FIRE HYDRANTS THRUST BLOCKED TO 20. CONTRACTOR SHALL
0.5 INCHES OR GREATER, AND KEEP A RECORD OF THIS INSPECTION IN EVICES AND EROSION CONTROL PLAN ARE FUNCTIONING PROPERLY. ON ENTRANCE AT ALL PRIMARY POINTS OF ACCESS IN ACCORDANCE	EXISTING TREES SHALL BE PRESERVED WHENEVER POSSIBLE AND GRADING IMPACT TO THEM HELD TO A MINIMUM. 44. AFTER PLACEMENT OF SUBGRADE AND PRIOR TO PLACEMENT OF PAVEMENT, CONTRACTOR SHALL TEST AND OBSERVE PAVEMENT AREAS FOR EVIDENCE OF PONDING AND INADEQUATE SLOPE FOR DRAINAGE. ALL AREAS SHALL ADEQUATELY DRAIN TOWARDS THE INTENDED STRUCTURE TO CONVEY STORMWATER RUNOFF. CONTRACTOR SHALL IMMEDIATELY NOTIFY OWNER AND ENGINEER IF ANY AREAS OF POOR DRAINAGE ARE DISCOVERED. 55.CONTRACTOR FIELD ADJUSTMENT OF PROPOSED SPOT GRADES IS ALLOWED, IF THE APPROVAL OF THE CIVIL ENGINEER IS OBTAINED.	SHALL COMPLY WITH
ROM THE SITE THAT IS DEPOSITED ONTO AN OFF-SITE ROADWAY SHALL BE $\overline{1}$	 RETAINING WALLS: 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. RETAINING WALL TYPE OR SYSTEM SHALL BE SELECTED BY THE OWNER. 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. 	 a. ALL WATERLINES SH SHALL COORDINATE b. WASTEWATER LINES REQUIRED PROCEDU INSPECTION SHALL E 24. CONTRACTOR SHALL MARKER DECALS SH
PROVED SEDIMENT TRAP BMP. FOR ANY ON-SITE DRAINAGE AREAS THAT ARE GREATER THAN 10 G DESIGN HAS BEEN PROVIDED FOR A SEDIMENTATION BASIN ON THESE PROPRIATE DESIGN TO BE PROVIDED. OM THE SITE SHALL BE PAID BY THE RESPONSIBLE CONTRACTOR.	A LICENSED ENGINEER AND ARE NOT PART OF THIS PLAN SET. 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. PAVING: ALL PAVING MATERIALS AND CONSTRUCTION SHALL BE IN ACCORDANCE WITH THESE PLANS, THE CITY STANDARD DETAILS AND	SHALL COMPLY WITH 25.DUCTILE IRON PIPE S SINGLE LAYER OF 8-I 26.WATERLINES SHALL 27.CONTRACTOR SHALL INTERVALS, OR AS R
XPECTED WITHIN 21 DAYS OF THE LAST DISTURBANCE.	 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. ALL PRIVATE ON-SITE PAVING AND PAVING SUBGRADE SHALL COMPLY WITH THE PROJECT'S FINAL GEOTECHNICAL REPORT (OR LATEST EDITION), INCLUDING ALL ADDENDA. ALL FIRELANE PAVING AND PAVING SUBGRADE SHALL COMPLY WITH CITY STANDARDS AND DETAILS. IF THESE ARE DIFFERENT THAN THERE IN THE DETAILS. IF THESE ARE DIFFERENT THAN 	29. THE CONTRACTOR IS ENGINEER IN THE ST
ENT IMPERVIOUS STRUCTURES, SUCH AS BUILDINGS, SIDEWALK, PE, CHANNELS, DRAINAGEWAYS AND BORROW DITCHES AFFECTED BY THE NERATED BY THE PROJECT SHALL BE REMOVED AND DISPOSED IN	THOSE IN THE GEOTECHNICAL REPORT, THEN THE MORE RESTRICTIVE SHALL BE FOLLOWED. ALL PUBLIC PAVING AND PAVING SUBGRADE SHALL COMPLY WITH CITY STANDARD CONSTRUCTION DETAILS AND SPECIFICATIONS. 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. IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO SHOW, BY THE STANDARD TESTING PROCEDURES OF THE PAVING AND PAVING	SAFETY REQUIREME OPEN TRENCHES SH E30. THE CONTRACTOR S
7 M WATER POLLUTION PREVENTION REQUIREMENTS. THE TCEQ GENERAL PERMIT TO DISCHARGE UNDER THE TEXAS TORS SUBMIT A NOI TO TCEQ AT LEAST SEVEN DAYS PRIOR TO	SUBGRADE, THAT THE WORK CONSTRUCTED MEETS THE PROJECT REQUIREMENTS AND CITY SPECIFICATIONS. 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. B. CURB RAMPS ALONG PUBLIC STREETS AND IN THE PUBLIC RIGHT-OF-WAY SHALL BE CONSTRUCTED BASED ON THE CITY STANDARD	ABBREVIATION A AR ADA AM AWWA AM
TION OF THE STORM WATER POLLUTION PREVENTION PLAN (SWPPP) IF 1 5, DOCUMENTATION, AND SUBMISSION OF ANY INFORMATION REQUIRED	CONSTRUCTION DETAIL AND SPECIFICATIONS. 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. 0. ALL ACCESSIBLE RAMPS, CURB RAMPS, STRIPING, AND PAVEMENT MARKINGS SHALL CONFORM TO ADA AND TAS STANDARDS, LATEST EDITION. 1. 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.	B-B BA BC BE BC BA BCR BE BMP BE BOC BA
ISIBILITIES AS SPECIFIED IN THE SWPPP. 1 ACTOR CERTIFICATIONS, AND ANY REVISIONS, SHALL BE SUBMITTED TO 1 SITE DURING CONSTRUCTION. EQ BY ANY PRIMARY OPERATOR WITHIN 30 DAYS AFTER ALL SOIL AND A UNIFORM VEGETATIVE COVER HAS BEEN ESTABLISHED ON ALL 1, A TRANSFER OF OPERATIONAL CONTROL HAS OCCURRED, OR THE 1	 CONTRACTOR SHALL CONSTRUCT PROPOSED PAVEMENT TO MATCH EXISTING PAVEMENT WITH A SMOOTH, FLUSH, CONNECTION. 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. REFER TO GEOTECHNICAL REPORT FOR PAVING JOINT LAYOUT PLAN REQUIREMENTS FOR PRIVATE PAVEMENT. REFER TO CITY STANDARD DETAILS AND SPECIFICATIONS FOR JOINT LAYOUT PLAN REQUIREMENTS FOR PUBLIC PAVEMENT. 	BVCE BE BVCS BE BW BO CFS CU CITY CII GC
IE SITE. 1 2 PLOYED BY THE CONTRACTOR TO IMPLEMENT THIS DEMOLITION PLAN. 1 KNOWN OBJECTS ON THE SUBJECT TRACT THAT ARE TO BE DEMOLISHED 2	 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. ALL JOINTS SHALL EXTEND THROUGH THE CURB. THE MINIMUM LENGTH OF OFFSET JOINTS AT RADIUS POINTS SHALL BE 2 FEET. CONTRACTOR SHALL SUBMIT A JOINTING PLAN TO THE ENGINEER AND OWNER PRIOR TO BEGINNING ANY OF THE PAVING WORK. ALL SAWCUTS SHALL BE FULL DEPTH FOR PAVEMENT REMOVAL AND CONNECTION TO EXISTING PAVEMENT. FIRE LANES SHALL BE MARKED AND LABELED AS A FIRELANE PER CITY STANDARDS. 	C/L CE CL CE CONC CO CY CU DEMO DE DG DE DTL DE
ITIES, THAT THE IMPROVEMENTS AND UTILITIES ARE SHOWN (ED. THE CONTRACTOR IS RESPONSIBLE FOR PERFORMING ITS OWN SITE 2 (TH THE OWNERS OF IMPROVEMENTS AND UTILITIES THE ABILITY AND 2000 DONTRACTOR, NOTHING MORE. THE GOAL OF THE DEMOLITION IS TO LEAVE	 22.UNLESS THE PLANS SPECIFICALLY DICTATE TO THE CONTRARY, ON-SITE AND OTHER DIRECTIONAL SIGNS SHALL BE ORIENTED SO THEY ARE READILY VISIBLE TO THE ONCOMING TRAFFIC FOR WHICH THEY ARE INTENDED. 23.CONTRACTOR IS RESPONSIBLE FOR INSTALLING NECESSARY CONDUIT FOR LIGHTING, IRRIGATION, ETC. PRIOR TO PLACEMENT OF PAVEMENT. ALL CONSTRUCTION DOCUMENTS (CIVIL, MEP, LANDSCAPE, IRRIGATION, AND ARCHITECT) SHALL BE CONSULTED. 24.BEFORE PLACING PAVEMENT, CONTRACTOR SHALL VERIFY THAT SUITABLE ACCESSIBLE PEDESTRIAN ROUTES (PER ADA, TAS, AND FHA) EXIST TO AND FROM EVERY DOOR AND ALONG SIDEWALKS, ACCESSIBLE PARKING SPACES, ACCESS AISLES, AND ACCESSIBLE PAVEMENT TO AND FROM EVERY DOOR AND ALONG SIDEWALKS, ACCESSIBLE PARKING SPACES, ACCESS AISLES, AND ACCESSIBLE 	EA EA EC EN ECR EN EG EX EL ELE
HE PROPOSED DEVELOPMENT. REMOVAL OR PRESERVATION OF ARE THE RESPONSIBILITY OF THE CONTRACTOR. LOWING REPORTS DESCRIBING SITE CONDITIONS PRIOR TO BIDDING AND R, HE OWNER,	ROUTES. IN NO CASE SHALL AN ACCESSIBLE RAMP SLOPE EXCEED 1 VERTICAL TO 12 HORIZONTAL. IN NO CASE SHALL SIDEWALK CROSS SLOPE EXCEED 2.0 PERCENT. IN NO CASE SHALL LONGITUDINAL SIDEWALK SLOPE EXCEED 5.0 PERCENT. ACCESSIBLE PARKING SPACES AND ACCESS AISLES SHALL NOT EXCEED 2.0 PERCENT SLOPE IN ANY DIRECTION. 25.CONTRACTOR SHALL TAKE FIELD SLOPE MEASUREMENTS ON FINISHED SUBGRADE AND FORM BOARDS PRIOR TO PLACING PAVEMENT TO VERIFY THAT ADA/TAS SLOPE REQUIREMENTS ARE PROVIDED. CONTRACTOR SHALL CONTACT ENGINEER PRIOR TO PAVING IF ANY EXCESSIVE SLOPES ARE ENCOUNTERED. NO CONTRACTOR CHANGE ORDERS WILL BE ACCEPTED FOR ADA AND TAS SLOPE COMPLIANCE ISSUES.	ELEV EN EPA UN AG ESMT EA EVCE EN
D COMPLY WITH THE RECOMMENDATION OF SUCH STUDIES PRIOR TO EDERAL REGULATIONS REGARDING THE DEMOLITION OF OBJECTS ON S OFF-SITE. IT IS THE CONTRACTOR'S SOLE RESPONSIBILITY TO REVIEW	 STORM DRAINAGE: ALL STORM SEWER MATERIALS AND CONSTRUCTION SHALL COMPLY WITH CITY STANDARD CONSTRUCTION DETAILS AND SPECIFICATIONS. THE SITE UTILITY CONTRACTOR SHALL PROVIDE ALL MATERIALS AND APPURTENANCES NECESSARY FOR COMPLETE INSTALLATION OF THE STORM SEWER. 	EVCS EN EX. EX F-F FA FG FIN FH FIF FL FL
REFERENCED ABOVE ARE ACCURATE, COMPLETE, OR COMPREHENSIVE D REMOVED. N STRUCTURES, SUCH AS ADDITIONAL LAYERS OF PAVEMENT,	 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. THE CONTRACTOR SHALL VERIFY AND COORDINATE ALL DIMENSIONS SHOWN, INCLUDING THE HORIZONTAL AND VERTICAL LOCATION OF CURB INLETS AND GRATE INLETS AND ALL UTILITIES CROSSING THE STORM SEWER. FLOW LINE, TOP-OF-CURB, RIM, THROAT, AND GRATE ELEVATIONS OF PROPOSED INLETS SHALL BE VERIFIED WITH THE GRADING PLAN AND FIELD CONDITIONS PRIOR TO THEIR INSTALLATION. 	FOC FA FT FE HGL HY KH KIM KHA KIM LAT LA
ISTRUCTION. THE CIVIL ENGINEER SHALL BE NOTIFIED IMMEDIATELY OF TS FROM THE CITY. DT ELEVATIONS SHOWN IN PAVED AREA REFLECT TOP OF PAVEMENT	 AND FIELD CONDITIONS PRIOR TO THEIR INSTALLATION. 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. ALL PRIVATE STORM SEWER CONSTRUCTION, PIPE, STRUCTURES, AND FITTINGS SHALL ADHERE TO THE APPLICABLE PLUMBING CODE. CONTRACTOR SHALL ARRANGE FOR REQUIRED CITY INSPECTIONS. 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. 	LF LIN LT LEI MAX MA ME MA MH MA MIN MII
PAVEMENT ARE TO TOP OF FINISHED GRADE. ELEVATIONS AND DESIGNATED GRADIENT ARE TO BE USED IN CASE OF 1	 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. WHERE COVER EXCEEDS 20-FEET OR IS LESS THAN 2-FEET, CLASS IV RCP SHALL BE USED. 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. 	E NO NU NOI NO NOT NO PE NTS NO
IG, RIP-RAP AND ALL OTHER SURFACE MATERIALS THAT WILL 1 E, THE LIMITS OF EARTHWORK IN PAVED AREAS IS THE BOTTOM OF THE 1 1	 2. THE CONTRACTOR SHALL PROVIDE CONSTRUCTION SURVEYING FOR ALL STORM SEWER LINES. 3. EMBEDMENT FOR ALL STORM SEWER LINES, PUBLIC OR PRIVATE, SHALL BE PER CITY STANDARD DETAILS. 4. ALL WYE CONNECTIONS AND PIPE BENDS ARE TO BE PREFABRICATED AND INSTALLED PER MANUFACTURERS SPECIFICATIONS. 5. USE 4 FOOT JOINTS WITH BEVELED ENDS IF RADIUS OF STORM SEWER IS LESS THAN 100 FEET. 6. 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 	100 10
IATERIALS ENCOUNTERED. UNUSABLE EXCAVATED MATERIAL AND ALL ALL BE REMOVED FROM THE SITE AND APPROPRIATELY DISPOSED BY THE F ROL PLAN FOR THE PROJECT SHALL BE INSTALLED PRIOR TO THE START	. 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	PGL PR PI PO PROP PR PRC PO PSI PO PT PO
R SHALL STAKE OUT AND MARK THE LIMITS OF THE PROJECT'S PROPERTY DVIDE ALL NECESSARY ENGINEERING AND SURVEYING FOR LINE AND	 POND LINER SPECIFICATIONS. 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. 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. ANY GRAVEL OR OTHER PERVIOUS EMBEDMENT AROUND PIPES OR OUTFALL STRUCTURES NEAR THE POND SHALL BE ELIMINATED FOR AT LEAST 20-FEET FROM THE POND SO NO ROUTE FOR WATER TO LEAK THROUGH THE EMBEDMENT MATERIAL IS PROVIDED. BACKFILL 	PVC PO PVI PO PVMT PA RCP RE ROW RIC
ECIFICATIONS AND REQUIREMENTS FOR TOPSOIL. IRING ALL PHASES OF CONSTRUCTION, INCLUDING MAINTAINING EXISTING	IN THESE AREAS SHALL BE OF IMPERVIOUS MATERIAL. 5. 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.	SF SQ SS SA
NS TO CONVEY RUN-OFF. ONTAL DIMENSIONS. ACE, COMPACT, AND CONDITION FILL PER THE PROJECT GEOTECHNICAL O SHALL BE APPROVED BY THE GEOTECHNICAL ENGINEER PRIOR TO CERTIFICATION, UNLESS SPECIFIED OTHERWISE BY OWNER. ALL SOILS	 NATER AND WASTEWATER: ALL WATER AND WASTEWATER MATERIALS AND CONSTRUCTION SHALL COMPLY WITH CITY STANDARD CONSTRUCTION DETAILS AND SPECIFICATIONS. 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 	
CY NOMINATED BY THE CONTRACTOR FOR SOILS TESTING. OWNER, ENGINEER AND ARCHITECT DIRECTLY FROM THE TESTING THE STANDARD TESTING PROCEDURES OF THE SOILS, THAT THE WORK	CONSTRUCTION, AND SHALL NOTIFY THE ENGINEER OF ANY CONFLICTS DISCOVERED. CONTRACTOR SHALL VERIFY AND COORDINATE ALL DIMENSIONS SHOWN, INCLUDING THE HORIZONTAL AND VERTICAL LOCATION OF ALL UTILITY SERVICES ENTERING THE BUILDING. THE CONTRACTOR SHALL FIELD VERIFY THE ELEVATION OF ALL UTILITY CROSSINGS PRIOR TO THE INSTALLATION OF ANY PIPE. THE SITE UTILITY CONTRACTOR SHALL PROVIDE ALL MATERIALS AND APPURTENANCES NECESSARY FOR COMPLETE INSTALLATION OF THE WATER AND WASTEWATER IMPROVEMENTS. ALL PUBLIC WATER AND WASTEWATER CONSTRUCTION, PIPE, STRUCTURES, AND FITTINGS SHALL ADHERE TO CITY PUBLIC WORKS	
HESE PLANS TERMINATES 5-FEET FROM THE BUILDING. CONTRACTOR RAL PLANS AND SPECIFICATIONS FILL, CONDITIONING, AND PREPARATION 7 ADJACENT TO THE BUILDING, THE CONTRACTOR SHALL ADHERE TO E PREPARATION SPECIFIC TO FLATWORK ADJACENT TO THE PROPOSED OBTAIN A GEOTECHNICAL ENGINEER RECOMMENDATION SPECIFIC TO	 STANDARD DETAILS AND SPECIFICATIONS. CONTRACTOR SHALL ARRANGE FOR REQUIRED CITY INSPECTIONS. ALL PRIVATE WATER AND WASTEWATER CONSTRUCTION, PIPE, STRUCTURES, AND FITTINGS SHALL ADHERE TO THE APPLICABLE PLUMBING CODE. CONTRACTOR SHALL ARRANGE FOR REQUIRED CITY INSPECTIONS. 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. 	
DPE AWAY FROM THE BUILDING PAD IS ACHIEVED FOR ENTIRE PERIMETER 1 NS AND IN THE FINAL CONDITION. IF THE CONTRACTOR OBSERVES THAT ACT THE ENGINEER TO REVIEW THE LOCATION. 1 TO CONTROL DUST. CONTRACTOR SHALL CONTROL DUST BY 1	 EMBEDMENT FOR ALL WATER AND WASTEWATER LINES, PUBLIC OR PRIVATE, SHALL BE PER CITY STANDARD DETAILS. 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. CONTRACTOR SHALL PROVIDE CONSTRUCTION SURVEYING FOR ALL WATER AND WASTEWATER LINES. ALL WATER AND WASTEWATER SERVICES SHALL TERMINATE 5-FEET OUTSIDE THE BUILDING, UNLESS NOTED OTHERWISE. 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. 	:
PROPOSED GRADE, INCLUDING THE UNKNOWN UTILITIES NOT SHOWN ON 1 L NOTES "OVERALL" SECTION THESE PLANS FOR ADDITIONAL	4. CONTRACTOR SHALL SEQUENCE WATER AND WASTEWATER CONSTRUCTION TO AVOID INTERRUPTION OF SERVICE TO SURROUNDING PROPERTIES. 5. CONTRACTOR SHALL MAINTAIN MYATER SERVICE AND WASTEWATER SERVICE TO AND CUSTOMERS.	

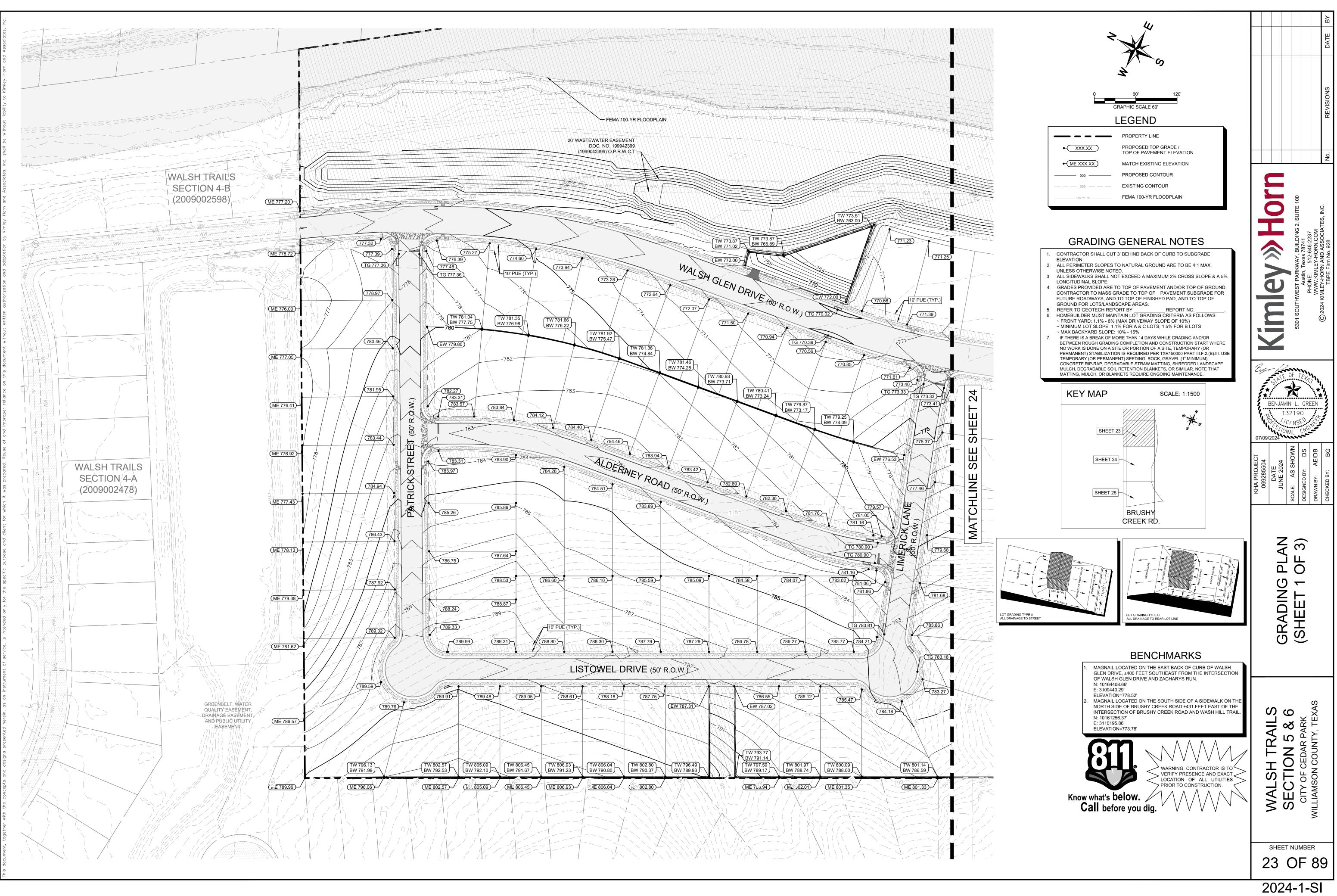
, BY USE OF TEMPORARY METHODS APPROVED BY TH TO THE PROJECT AND NO ADDITIONAL COMPENSATION	ON SHALL BE ALLO	WÉD.	
ACTOR IS RESPONSIBLE TO PROTECT ALL WATER AND IR ALL DAMAGED LINES IMMEDIATELY. ALL REPAIRS (EWER SERVICES ARE SUBSIDIARY TO THE WORK, AND STMENTS SHALL BE CONSTRUCTED SUCH THAT THE (OF EXISTING WATE NO ADDITIONAL C	R MAINS, WATER SERVICES, SEWER MAINS, AND COMPENSATION SHALL BE ALLOWED.	DATE
F ALL EXISTING WATER MAINS THAT ARE CUT, BUT NO L BE CONSIDERED AS A SUBSIDIARY COST TO THE PR	DT REMOVED, SHAI	L BE PLUGGED AND ABANDONED IN PLACE. THIS	
DRANTS, VALVES, TEES, BENDS, WYES, REDUCERS, F DCKED TO CITY STANDARDS.	ITTINGS, AND END	S SHALL BE MECHANICALLY RESTRAINED AND/OR	
OR SHALL INSTALL A FULL SEGMENT OF WATER OR WA GREATER THAN 9-FEET FROM THE CROSSING. NGS AND LOCATIONS WHERE WASTEWATER IS LESS 1			SNG
SHALL COMPLY WITH TCEQ CHAPTER 217.53. NG AND LOCATIONS WHERE WATER IS LESS THAN 9-F PLY WITH TCEQ CHAPTER 290.44.			EVISIONS
AND WASTEWATER SHALL BE TESTED IN ACCORDANC ONS. AT A MINIMUM, THIS SHALL CONSIST OF THE FO INES SHALL BE HYDROSTATICALLY TESTED AND CHL(OLLOWING:	BEING PLACED INTO SERVICE. CONTRACTOR	
RDINATE WITH THE CITY FOR THEIR REQUIRED PROCE ER LINES AND MANHOLES SHALL BE PRESSURE TESTE ROCEDURES AND SHALL ALSO COMPLY WITH TCEQ R	ED. CONTRACTOR	SHALL COORDINATE WITH THE CITY FOR THEIR	
SHALL BE PERFORMED AND PROVIDED TO THE CITY / OR SHALL INSTALL DETECTABLE WIRING OR MARKING CALS SHALL BE LABELED "CAUTION - WATER LINE", OR	TAPE A MINIMUM C	OF 12" ABOVE WATER AND WASTEWATER LINES.	oʻ Z
PLY WITH CITY STANDARDS, AND SHALL BE INCLUDED IN PIPE SHALL BE PROTECTED FROM CORROSION BY ER OF 8-MIL. ALL DUCTILE IRON JOINTS SHALL BE BON	A LOW-DENSITY PO		
S SHALL BE INSTALLED AT NO LESS THAN THE MINIMU OR SHALL PROVIDE CLEAN-OUTS FOR PRIVATE SANITA OR AS REQUIRED BY THE APPLICABLE PLUMBING COL	M COVER REQUIR	AT ALL CHANGES IN DIRECTION AND 100-FOOT	E [°]
RON COVERS FLUSH WITH FINISHED GRADE. R SHALL PROVIDE BACKWATER VALVES FOR PLUMBII ATION OF FIXTURE UNIT IS BELOW THE ELEVATION OI	NG FIXTURES AS R	EQUIRED BY THE APPLICABLE PLUMBING CODE (E.G.	
ER). CONTRACTOR SHALL REVIEW BOTH MEP AND CI ACTOR IS RESPONSIBLE FOR OBTAINING AND SUBMIT THE STATE OF TEXAS, TO THE CITY PRIOR TO CONS	VIL PLANS TO CON TING A TRENCH SA	FIRM WHERE THESE ARE REQUIRED. FETY PLAN, PREPARED BY A PROFESSIONAL	
UIREMENTS IN ACCORDANCE WITH CITY, STATE, AND CHES SHALL BE ALLOWED OVERNIGHT WITHOUT PRIO ACTOR SHALL KEEP TRENCHES FREE FROM WATER.	FEDERAL REQUIR	EMENTS, INCLUDING OSHA FOR ALL TRENCHES. NO	
ACTOR SHALL REP TREINCHES FREE FROM WATER.			, BUILDING 2, s 78741 2-646-2237 HORN.COM D ASSOCIATE Vo. 928
EVIATIONS AND DEFINITIONS:	SSMH	SANITARY SEWER MANHOLE	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
AREA AMERICANS WITH DISABILITIES ACT	STA STD SY	STATION STANDARD SQUARE YARD	n, Te MLE ORN
AMERICANS WITH DISABILITIES ACT A AMERICAN WATER WORKS ASSOCIATION BACK TO BACK	TAS	ARCHITECTURAL BARRIERS TEXAS ACCESSIBILITY STANDARDS	Aus Aus Aus Aus Aus Aus TBI
BEGIN CURVE BACK OF CURB BEGIN CURB RETURN	TC TCEQ TEMP	TOP OF CURB TEXAS COMMISSION OF ENVIRONMENTAL QUALITY TEMPORARY	SOUTHWEST PA Austi PHONE: WWW.KI TBP
BEST MANAGEMENT PRACTICE BACK OF CURB	TEMP TXDOT TXMUTCD	TEMPORARY TEXAS DEPARTMENT OF TRANSPORTATION TEXAS MANUAL OF UNIFORM TRAFFIC CONTROL	1 SOUTH
BEGIN VERTICAL CURVE ELEVATION BEGIN VERTICAL CURVE STATION BOTTOM OF WALL	TW TYP	DEVICES TOP OF WALL	2301 5301
CUBIC FEET PER SECOND CITY, TOWN, OR OTHER APPLICABLE LOCAL	VC WTR	TYPICAL VERTICAL CURVE WATER	
GOVERNMENT JURISDICTION CENTERLINE CENTERLINE	WW	WASTEWATER	
CONCRETE CUBIC YARD			BE FOR TRUE
DEMOLITION DECOMPOSED GRANITE DETAIL			
EACH END CURVE			BENJAMIN L. GREEN
END CURB RETURN EXISTING GROUND ELEVATION			132190 72
ELECTRICAL / ELECTRICITY ELEVATION			SSIONAL ENG
UNITES STATES ENVIRONMENTAL PROTECTION AGENCY EASEMENT			07/09/2024
END VERTICAL CURVE ELEVATION END VERTICAL CURVE STATION			JECT 504 504 SHOWN DS AE/DB BG
EXISTING FACE TO FACE FINISHED GROUND			− ↓
FIRE HYDRANT FLOW LINE FACE OF CURB			KHA PR 06928 06928 JUNE SCALE: A: DESIGNED B DRAWN BY: CHECKED B
FEET HYDRAULIC GRADE LINE			KI BESIC DRAV CHEC
KIMLEY-HORN AND ASSOCIATES, INC. KIMLEY-HORN AND ASSOCIATES, INC. LATERAL			
LINEAR FEET LEFT			S
MAXIMUM MATCH EXISTING ELEVATION MANHOLE			I I
MINUTE / MINIMUM NUMBER NOTICE OF INTENT, REF. TOFO, CENERAL DERMI	Ŧ		DTE
NOTICE OF INTENT, REF. TCEQ GENERAL PERMI NOTICE OF TERMINATION, REF. TCEQ GENERAL PERMIT	I		₽Ž
NOT TO SCALE ON CENTER OFFSET			
OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION			Ц Ц Ц
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			
RIGHT OF WAY RIGHT SQUARE FEET			
SANITARY SEWER			AS AS
			L S S O L S
			H TR ION 5 CEDAR N COUNT
			WALSI SECTI CITY OF WILLIAMSON
			≥
			SHEET NUMBER
			3 OF 89
			2024-1-SI

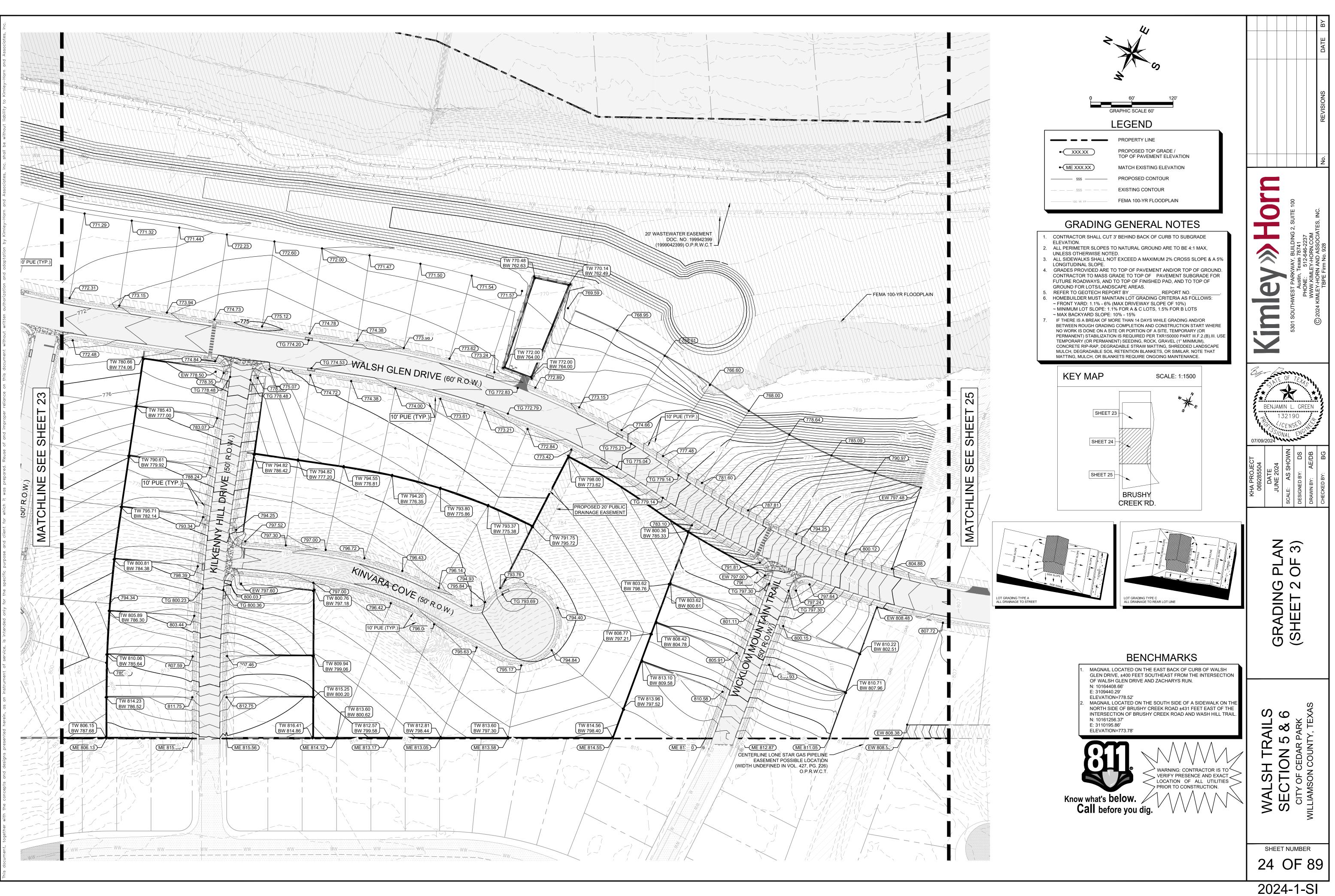
RESERVED FOR FINAL PLAT

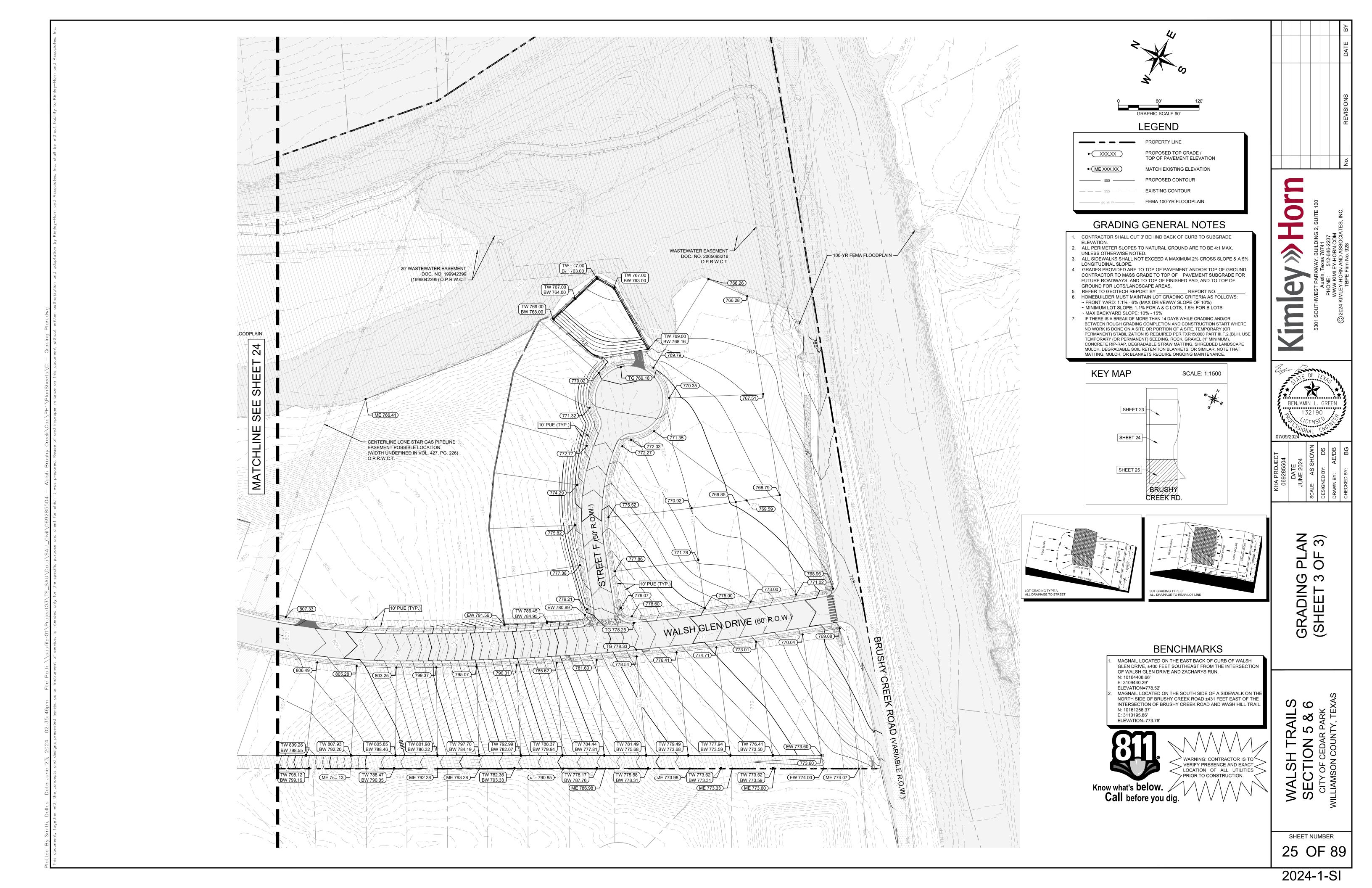
					DATE BY
					REVISIONS
					No.
Kimlev »> Horn		5301 SOUTHWEST PARKWAY, BUILDING 2, SUITE 100	Ausun, lexas / 8/41 PHONE: 512-646-2237	WWW.KIMLEY-HORN.COM	C 2024 NIMLET-FOUN AND ASSOCIATES, INC. TBPE Firm No. 928
BENJAMIN L. GREEN 132190 07/09/2024					
KHA PROJECT 069285504 DATE	SCALE: AS SHOWN		DESIGNED BY: US	DRAWN BY: AE/DB	снескер ву: BG
FINAL PLAT					
WALSH TRAILS	SECTION 5 & 6		ULLY UF CEDAR PARK	WILLIAMSON COUNTY, TEXAS	
she 4	ET N			R 8	9
202	24	-1	-,	SI	

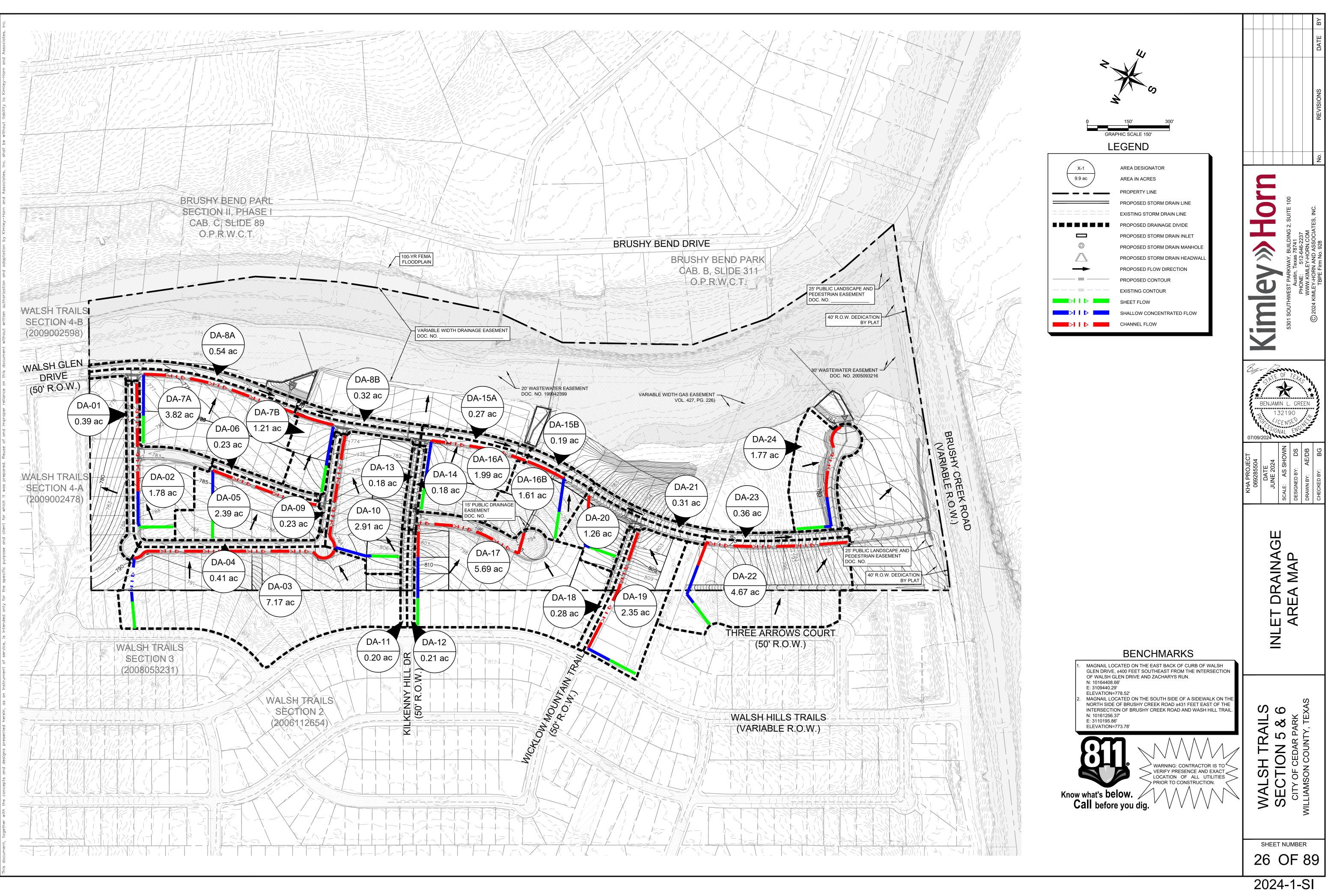












Kimley Worn

Inlet Peak Flow Calculations - Rational Method

Inlet

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

21

22

23

24

Q = CiA Hydrologic Runoff Coefficients Formulas: Q = Peak Runoff (cfs) 2 yr 10 yr 25 yr 100 yr *Impervious C (Concrete)* 0.75 0.83 0.88 0.97 C = Weighted Runoff Coefficient a 45. Grass, 75%+ Cover, 2-7% slopes 0.37 0.43 0.46 0.53 b 9.3 i = Rainfall intensity (in/hr) A = Drainage Area (acres) с 0.3 RUNOFF COEFFICIENT (C) RAINFALL INTENSITY (1) Impervious С Тс Drainage С 1 Area С 1 1 С Area (Acres) % I.C. (sf) Cover (Acres) 2-Year 10-Year 25-Year 100-Year (min) 2-Year 10-Year 25-Year 100-Area 5.00 15.63 9.41 11.79 15 0.74 0.79 0.871 17048 0.39 0.30 77% 0.66 DA-01 DA-02 77587 1.78 1.09 61% 0.60 0.67 0.72 0.799 20.58 11.66 5.38 6.81 7.17 51% 0.64 0.68 0.756 21.63 11.50 5.24 6.64 DA-03 312270 3.68 0.56 17736 0.74 0.79 0.873 5.00 15.63 9.41 11.79 15 0.41 0.32 78% 0.67 DA-04 103974 2.39 0.32 13% 0.52 0.589 16.93 12.28 5.93 7.49 0.42 0.48 DA-05 DA-06 10029 0.23 0.19 81% 0.68 0.75 0.80 0.887 5.00 15.63 9.41 11.79 1 166570 3.82 0.19 0.48 0.552 16.58 12.35 7.56 5% 0.39 5.99 DA-7A 0.45 52633 1.21 0.19 15% 0.53 0.598 12.70 13.17 6.77 8.52 1 DA-7B 0.43 0.49 0.79 0.879 5.00 DA-8A 23591 0.54 0.43 79% 0.67 0.75 15.63 9.41 11.79 1 0.80 0.888 5.00 DA-8B 13911 0.32 0.26 81% 0.68 0.76 15.63 9.41 11.79 1 9841 0.77 0.81 0.900 5.00 15.63 11.79 1 0.23 0.19 84% 0.69 9.41 DA-09 0.64 0.68 0.761 11.53 DA-10 126911 2.91 1.53 52% 0.57 13.46 7.06 8.87 8776 0.20 0.16 79% 0.67 0.75 0.79 0.879 5.00 15.63 9.41 11.79 15 DA-11 9318 0.21 0.16 75% 0.73 0.77 0.859 5.00 15.63 11.79 1 DA-12 0.65 9.41 7852 0.75 0.79 0.879 5.00 DA-13 0.18 0.14 79% 0.67 15.63 9.41 11.79 1 0.80 0.881 5.00 7852 0.14 80% 0.67 15.63 11.79 15 0.18 0.75 9.41 DA-14 11697 0.27 0.23 84% 0.57 0.64 0.69 0.766 5.00 15.63 9.41 11.79 1 DA-15A 5.00 DA-15B 8113 0.19 0.15 83% 0.68 0.76 0.81 0.894 15.63 9.41 11.79 1 0.65 0.69 0.771 10.33 7.38 9.28 12 86780 1.09 55% 13.78 1.99 0.58 DA-16A

	<	III. YERRANDING	m		ey))))		0	r	n	
--	---	-----------------	---	--	----	------	--	---	---	---	--

0.50

0.57

0.67

0.53

0.54

0.69

0.56

0.71

base on FHWA HEC-22, 3rd Edition Chapter 4 "Pavement Drainage"

Q _w /Q)			
	• •	. 1	

0.57 0.61

0.65 0.69

0.63 0.67

0.79 0.83

0.75

0.61

0.76

0.60 0.67 0.71

0.60

0.79

0.64

0.65

0.81

0.682

0.767

0.879

0.718

0.726

0.895

0.747

0.921

0.797

inlet length (100% flow intercept)

- depth at normal cross-slope

Constant Values	
C _w (constant)	2.3
K _u (constant)	0.56
K _t (constant)	0.6
C _o (constant)	0.67
S _x (cross-slope)	2.00%
Manning's Coefficient (n)	0.013

ON-GRADE CURB INLETS (25-YR)																	
ON-GRADE CORB INLETS (25-YR) Inlet Characteristics Street Drainage Inlet Drainage																	
	I													let Diamage			
Inlet#	Drainage	Q	Q _{pass}	\mathbf{Q}_{total}	Inlet	W	а	SL	Т	d	Sw	Eo	S _e	LT	Efficiency	Q _{intercept}	Q _{pass}
	Area	(cfs)	(cfs)	(cfs)	Length	(ft)	(in)	-L	(ft)	(in)	- ••	-0	-e	(ft)	,	(cfs)	(cfs)
1	DA-01	3.62	0.00	3.62	10	1.5	7.27	2.62%	9.07	2.18	42.39%	0.79	35.6%	8.70	100.0%	3.62	0.00
2	DA-02	8.69	0.00	8.69	10	1.5	7.27	2.62%	12.59	3.02	42.39%	0.63	28.7%	14.29	88.5%	7.69	1.00
3	DA-03	32.13	0.00	32.13	10	1.5	7.27	2.34%	20.99	5.04	42.39%	0.37	17.5%	32.17	48.8%	15.69	16.44
4	DA-04	3.78	0.00	3.78	10	1.5	7.27	2.85%	9.07	2.18	42.39%	0.79	35.6%	9.08	100.0%	3.78	0.00
5	DA-05	3.78	0.00	3.78	10	1.5	7.27	0.09%	17.33	4.16	42.39%	0.46	21.4%	4.37	100.0%	3.78	0.00
6	DA-06	9.22	0.00	9.22	10	1.5	7.27	0.09%	24.21	5.81	42.39%	0.31	15.0%	7.87	100.0%	9.22	0.00
9	DA-09	2.17	0.00	2.17	10	1.5	7.27	2.86%	7.35	1.76	42.39%	0.87	38.9%	6.82	100.0%	2.17	0.00
10	DA-10	17.59	0.00	17.59	10	1.5	7.27	2.86%	16.13	3.87	42.39%	0.50	23.0%	22.52	65.2%	11.48	6.12
11	DA-11	1.89	0.00	1.89	10	1.5	7.27	7.35%	5.85	1.40	42.39%	0.93	41.5%	8.22	100.0%	1.89	0.00
12	DA-12	1.95	0.00	1.95	10	1.5	7.27	7.35%	5.93	1.42	42.39%	0.93	41.3%	8.36	100.0%	1.95	0.00
13	DA-13	1.69	0.00	1.69	10	1.5	7.27	6.65%	5.71	1.37	42.39%	0.94	41.6%	7.59	100.0%	1.69	0.00
14	DA-14	1.69	0.00	1.69	10	1.5	7.27	6.65%	5.72	1.37	42.39%	0.94	41.6%	7.60	100.0%	1.69	0.00
17	DA-17	25.64	0.00	25.64	10	1.5	7.27	1.93%	20.00	4.80	42.39%	0.39	18.5%	26.76	56.9%	14.60	11.05
18	DA-18	2.59	0.00	2.59	10	1.5	7.27	8.09%	6.47	1.55	42.39%	0.91	40.5%	9.81	100.0%	2.59	0.00
19	DA-19	10.00	0.00	10.00	10	1.5	7.27	8.09%	10.74	2.58	42.39%	0.71	32.2%	19.83	71.7%	7.17	2.83
20	DA-20	7.56	2.83	10.39	10	1.5	7.27	5.04%	11.90	2.86	42.39%	0.66	30.0%	18.27	76.0%	7.90	2.49
21	DA-21	2.97	0.00	2.97	10	1.5	7.27	5.04%	7.44	1.79	42.39%	0.87	38.8%	9.25	100.0%	2.97	0.00
22	DA-22	21.91	0.00	21.91	10	1.5	7.27	6.13%	15.18	3.64	42.39%	0.53	24.4%	29.98	51.8%	11.36	10.56
23	DA-23	3.54	0.00	3.54	10	1.5	7.27	6.13%	7.66	1.84	42.39%	0.86	38.3%	10.63	99.4%	3.52	0.02
24	DA-24	12.15	0.00	12.15	10	1.5	7.27	1.82%	15.28	3.67	42.39%	0.52	24.2%	16.32	81.9%	9.95	2.20

						INLETS (25-YR)											
			Inlet	Characteri	stics			Str	eet Draina	ige	Inlet Drainage						
Inlet#	Drainage Area	Q (cfs)	Q _{pass} (cfs)	Q _{total} (cfs)	Inlet Length	W (ft)	a (in)	h (in)	SL	T (ft)	d (in)	Q _{inlet} (cfs)	d _o (in)	d _i (in)	d (in)	T (ft)	
_	DA-7A	13.89	1.00	14.89	10	1 50	C 20	7 75	0.86%	18.98	4.55	20.20	4 10	7 72	1.24	- F - 7	Γ
/	DA-7B	5.41	0.00	5.41	10	1.50	6.39	7.75	0.86%	12.98	3.12	20.30	4.10	7.73	1.34	5.57	
8	DA-8A	5.07	0.00	5.07	10	1.50	6.39	7.75	0.86%	12.67	3.04	8.09	0.65	4.28	-2.11	-8.80	
0	DA-8B	3.02	0.00	3.02	10	1.50	0.59	1.75	0.86%	10.43	2.50	8.09	0.05	4.20	-2.11	-0.60	
15	DA-17	2.17	0.00	2.17	10	1 50	C 20	7 75	0.30%	11.23	2.69	2.04	0.15	2 70	2.01	10.97	Γ
15	DA-18	1.77	0.00	1.77	10	1.50	6.39	7.75	0.30%	10.41	2.50	3.94	0.15	3.78	-2.61	-10.87	
16	DA-19	12.75	6.12	18.87	10	1 50	6.20	7 75	0.30%	25.27	6.06	20.09	0.55	12 10	6 70	20 20	
16	DA-20	9.62	2.49	12.12	10	1.50	6.39	7.75	0.30%	21.40	5.14	30.98	9.55	13.18	6.79	28.30	

gutter depression

S۵

W

Sw

S

DA-16B

DA-17

DA-18

DA-19

DA-20

DA-21

DA-22

DA-23

DA-24

equivalent cross slope

- ratio of flow (C LT
 - effective head, orifice
 - depth at lip of curb opening

Inlet design	ı k
ariable Definitions	
Eo	

depressed width

70156

247782

12067

102474

54868

13567

203569

15691

77142

1.61

5.69

0.28

2.35

1.26

0.31

4.67

0.36

1.77

0.56

3.07

0.22

1.01

0.56

0.26

2.30

0.32

1.08

do

di

d

35%

54%

79%

43%

44%

83%

49%

89%

61%

- cross slope of depressed width
- spread or ponded width
- longitudinal slope

)rn								
Method								
c Runoff Co	efficients				IDF Coe	fficients		
10 yr	25 yr	100 yr		2 yr	10 yr	25 yr	100 yr	
0.83	0.88	0.97	a	45.24	61.25	69.96	77.31	
0.43	0.46	0.53	b b	9.339	8.352	7.941	6.832	
			с С	0.399	0.7228	0.6954	0.6524	
	RAINFALL	INTENSITY	(1)		PEAK RUN	OFF (Q)		
Тс			<u> </u>	I	Q	Q	Q	Q
(min)	2-Year	' 10-Year	' 25-Year	' 100-Year	2-Year	ح 10-Year	ع 25-Year	100-Year
			25 1001		2 1001		25 160	100 1001
5.00	15.63	9.41	11.79	15.42	4.06	2.72	3.62	5.26
20.58	11.66	5.38	6.81	8.92	12.51	6.47	8.69	12.69
21.63	11.50	5.24	6.64	8.70	46.56	23.87	32.13	47.12
5.00	15.63	9.41	11.79	15.42	4.24	2.84	3.78	5.48
16.93	12.28	5.93	7.49	9.79	12.33	6.84	9.22	13.75
5.00	15.63	9.41	11.79	15.42	2.44	1.64	2.18	3.15
16.58	12.35	5.99	7.56	9.88	18.34	10.30	13.89	20.84
12.70	13.17	6.77	8.52	11.12	6.82	4.02	5.41	8.04
5.00	15.63	9.41	11.79	15.42	5.69	3.81	5.07	7.35
5.00	15.63	9.41	11.79	15.42	3.39	2.27	3.02	4.37
5.00	15.63	9.41	11.79	15.42	2.44	1.63	2.17	3.14
11.53	13.46	7.06	8.87	11.58	22.33	13.15	17.59	25.67
5.00	15.63	9.41	11.79	15.42	2.12	1.42	1.89	2.73
5.00	15.63	9.41	11.79	15.42	2.19	1.47	1.95	2.83
5.00	15.63	9.41	11.79	15.42	1.89	1.27	1.69	2.44
5.00	15.63	9.41	11.79	15.42	1.90	1.27	1.69	2.45
5.00	15.63	9.41	11.79	15.42	2.41	1.63	2.17	3.17
5.00	15.63	9.41	11.79	15.42	1.99	1.33	1.77	2.57
10.33	13.78	7.38	9.28	12.10	15.87	9.54	12.75	18.58
8.76	14.25	7.86	9.88	12.88	11.50	7.20	9.62	14.15
22.09	11.43	5.19	6.57	8.61	37.38	19.05	25.64	37.57
5.00	15.63	9.41	11.79	15.42	2.91	1.95	2.59	3.76
21.57	11.51	5.25	6.65	8.71	14.41	7.42	10.00	14.71
10.31	13.79	7.39	9.29	12.11	9.36	5.66	7.56	11.07
5.00	15.63	9.41	11.79	15.42	3.34	2.23	2.97	4.30
19.27	11.87	5.56	7.03	9.21	30.90	16.30	21.91	32.12
5.00	15.63	9.41	11.79	15.42	3.98	2.66	3.54	5.12
9.47	14.03	7.64	9.59	12.51	14.92	9.10	12.15	17.66

Kimley»Horn																
	"Tc" Value Calculations															
	Sheet Flow Unpaved Shallow Flow Paved Shallow Flow Channel Flow Total															Total
Drainage	Area	Area	Length	Slope		Tt	Length	Slope	Tt	Length	Slope	Tt	Length	V	Tt	Тс
Area	(sf.)	(Ac.)	(ft)	(ft/ft)	n	(min)	(ft)	(ft/ft)	(min)	(ft)	(ft/ft)	(min)	(ft)	(ft/s)	(min)	(min)
DA-02	77587	1.78	100	0.0100	0.24	18.16	0	0.54	0.00	130	0.21	0.23	393	3.00	2.18	20.58
DA-03	312270	7.17	100	0.0140	0.24	15.87	150	0.0100	1.55	0	0.50	0.00	757	3.00	4.21	21.63
DA-05	103974	2.39	100	0.0220	0.24	13.25	150	0.0113	1.46	0	0.50	0.00	400	3.00	2.22	16.93
DA-7A	166570	3.82	100	0.0250	0.24	12.59	150	0.0340	0.84	0	0.50	0.00	567	3.00	3.15	16.58
DA-7B	52633	1.21	100	0.0340	0.24	11.13	143	0.0367	0.77	0	0.50	0.00	143	3.00	0.79	12.70
DA-10	126911	2.91	100	0.0610	0.24	8.81	138	0.1230	0.41	0	0.50	0.00	417	3.00	2.32	11.53
DA-16A	86780	1.99	100	0.0820	0.24	7.83	150	0.0886	0.52	0	0.50	0.00	356	3.00	1.98	10.33
DA-16B	70156	1.61	100	0.0900	0.24	7.54	122	0.0980	0.40	0	0.50	0.00	147	3.00	0.82	8.76
DA-17	247782	5.69	100	0.0100	0.24	18.16	150	0.0600	0.63	0	0.50	0.00	593	3.00	3.29	22.09
DA-19	102474	2.35	100	0.0100	0.24	18.16	88	0.0114	0.85	0	0.50	0.00	461	3.00	2.56	21.57
DA-20	54868	1.26	100	0.0630	0.24	8.70	104	0.0100	1.07	0	0.50	0.00	96	3.00	0.53	10.31
DA-22	203569	4.67	100	0.0180	0.24	14.36	150	0.0100	1.55	0	0.50	0.00	605	3.00	3.36	19.27
DA-24	77142	1.77	100	0.0960	0.24	7.35	0	0.5400	0.00	150	0.04	0.60	274	3.00	1.52	9.47

Kimley WHorr	
--------------	--

Inlet design base on FHWA HEC-22, 3rd Edition Chapter 4 "Pavement Drainage	e"
--	----

W depressed width

gutter depression

Sw

equivalent cross slope

cross slope of depressed width

- spread or ponded width
- longitudinal slope

							ON-GF	RADE CU	RB INLE	rs (100-'	YR)						
			Inlet Char	acteristics				Sti	reet Draina	ge			In	let Drainage			
Inlet #	Area (cfs) (cfs) (cfs) Length (ft)							SL	T (ft)	d (in)	S _W	Eo	S _e	L _T (ft)	Efficiency	Q _{intercept} (cfs)	
1	DA-01	5.26	0.00	5.26	10	1.5	7.27	2.62%	10.42	2.50	42.39%	0.73	32.8%	10.67	99.3%	5.22	
2	DA-02	12.69	0.00	12.69	10	1.5	7.27	2.62%	14.50	3.48	42.39%	0.55	25.4%	18.01	76.7%	9.74	
3	DA-03	47.12	0.00	47.12	10	1.5	7.27	2.34%	24.23	5.82	42.39%	0.31	15.0%	41.52	39.1%	18.43	
4	DA-04	5.48	0.00	5.48	10	1.5	7.27	2.85%	10.42	2.50	42.39%	0.73	32.8%	11.14	98.4%	5.39	
5	DA-05	13.75	0.00	13.75	10	1.5	7.27	0.09%	28.12	6.75	42.39%	0.25	12.7%	10.28	99.8%	13.73	
6	DA-06	3.15	0.00	3.15	10	1.5	7.27	0.09%	16.19	3.88	42.39%	0.49	22.9%	3.88	100.0%	3.15	
9	DA-09	3.14	0.11	3.25	10	1.5	7.27	2.86%	8.56	2.05	42.39%	0.82	36.6%	8.39	100.0%	3.25	
10	DA-10	25.67	0.00	25.67	10	1.5	7.27	2.86%	18.58	4.46	42.39%	0.42	19.9%	28.76	53.7%	13.77	
11	DA-11	2.73	0.00	2.73	10	1.5	7.27	7.35%	6.72	1.61	42.39%	0.90	40.0%	9.81	100.0%	2.73	
12	DA-12	2.83	0.00	2.83	10	1.5	7.27	7.35%	6.81	1.64	42.39%	0.89	39.9%	9.98	100.0%	2.83	
13	DA-13	2.44	0.00	2.44	10	1.5	7.27	6.65%	6.57	1.58	42.39%	0.90	40.3%	9.04	100.0%	2.44	
14	DA-14	2.45	0.00	2.45	10	1.5	7.27	6.65%	6.57	1.58	42.39%	0.90	40.3%	9.06	100.0%	2.45	
17	DA-17	37.57	0.00	37.57	10	1.5	7.27	1.93%	23.08	5.54	42.39%	0.33	15.8%	34.50	46.0%	17.28	
18	DA-18	3.76	0.00	3.76	10	1.5	7.27	8.09%	7.44	1.79	42.39%	0.87	38.8%	11.77	96.7%	3.63	
19	DA-19	14.71	0.00	14.71	10	1.5	7.27	8.09%	12.41	2.98	42.39%	0.64	29.0%	24.84	60.4%	8.89	
20	DA-20	11.07	5.94	17.01	10	1.5	7.27	5.04%	14.32	3.44	42.39%	0.56	25.7%	24.62	60.9%	10.35	
21	DA-21	4.30	0.00	4.30	10	1.5	7.27	5.04%	8.55	2.05	42.39%	0.82	36.6%	11.18	98.3%	4.22	
22	DA-22	32.12	0.00	32.12	10	1.5	7.27	6.13%	17.52	4.20	42.39%	0.45	21.2%	38.30	42.0%	13.49	
23	DA-23	5.12	0.00	5.12	10	1.5	7.27	6.13%	8.80	2.11	42.39%	0.80	36.1%	12.86	93.3%	4.77	
24	DA-24	17.66	0.00	17.66	10	1.5	7.27	1.82%	17.58	4.22	42.39%	0.45	21.1%	20.74	69.4%	12.26	

										0-YR)														
							Inlet	Character	istics				Str	eet Draina	ge	Inlet Drainage								
	Q _{pass} (cfs)	Q _{intercept} (cfs)		Inlet #	Drainage Area	Q (cfs)	Q _{pass} (cfs)	Q _{total} (cfs)	Inlet Length	W (ft)	a (in)	h (in)	SL	T (ft)	d (in)	Q _{inlet} (cfs)	d _o (in)	d _i (in)	d (in)	T (ft)	Q _{pass} (cfs)	C		
	0.00	20.30		7	DA-7A	20.84	2.95	23.79	10	1.50	6.39	7.75	0.86%	22.62	5.43	31.83	10.08	13.71	7.32	30.50	6.31			
_				/	DA-7B	8.04	0.00	8.04					0.86%	15.06	3.61							-		
	0.00	8.09	8	8	DA-8A	7.35	0.04	7.38	10	1.50	6.39	7.75	0.86%	14.59	3.50	11.76	1.38	5.00	-1.39	-5.78	0.00			
			3.09 {		DA-8B	4.37	0.00	4.37					0.86%	11.99	2.88									
	0.00	3.94		15	DA-17	3.17	0.00	3.17	10	1.50	6.39	7.75	0.30%	12.95	3.11	5.81	0.34	3.96	-2.43	-10.11	0.00			
	0.00	5.54		15	DA-18	2.57	0.08	2.64	10	1.50	0.59	1.75	0.30%	12.09	2.90	5.61	0.54	5.90	-2.45	-10.11	0.00			
	5.47	25 52		16	DA-19	18.58	11.89	30.48	10	1 50	6.39	7.75	0.30%	30.25	7.26	F1 29	26.17	29.80	23.41	97.55	25.77			
	5.47	25.52		16	DA-20	14.15	6.66	20.81	01	1.50	0.39	/./5	0.30%	26.21	6.29	51.28	20.17	29.80	25.41	97.55	25.77			

Variable Definitions

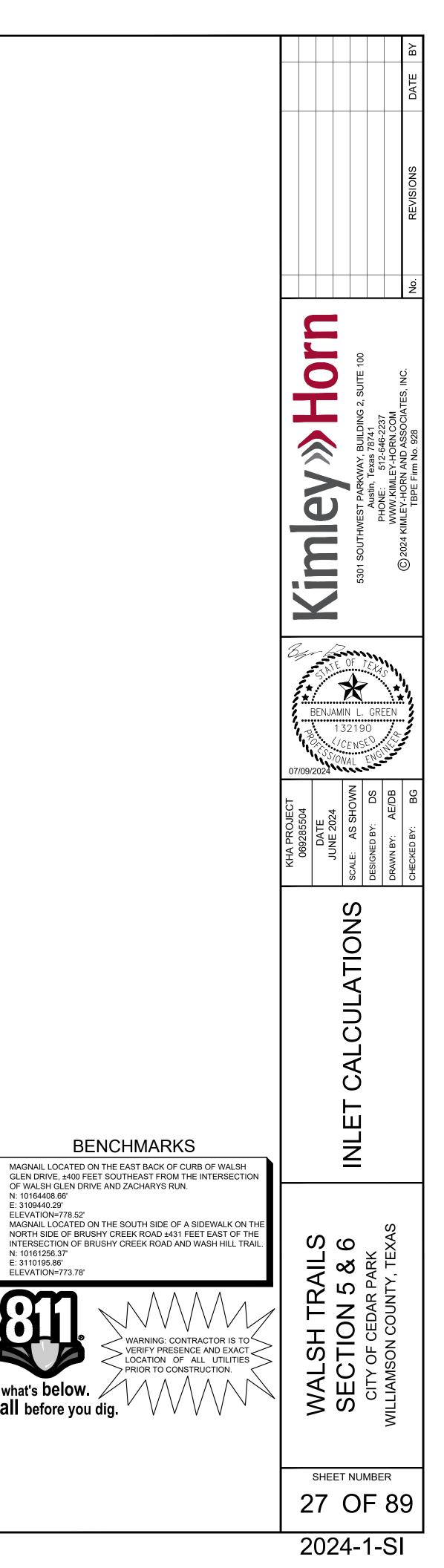
d

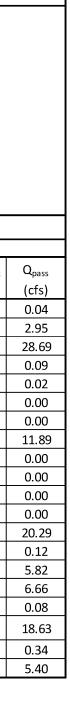
d

- ratio of flow (Q_w/Q)
- inlet length (100% flow intercept) effective head, orifice
- depth at lip of curb opening
- depth at normal cross-slope

Constant Values C_w (constant) K_u (constant) K_t (constant) C_o (constant) S_x (cross-slope) Manning's Coefficient (n)

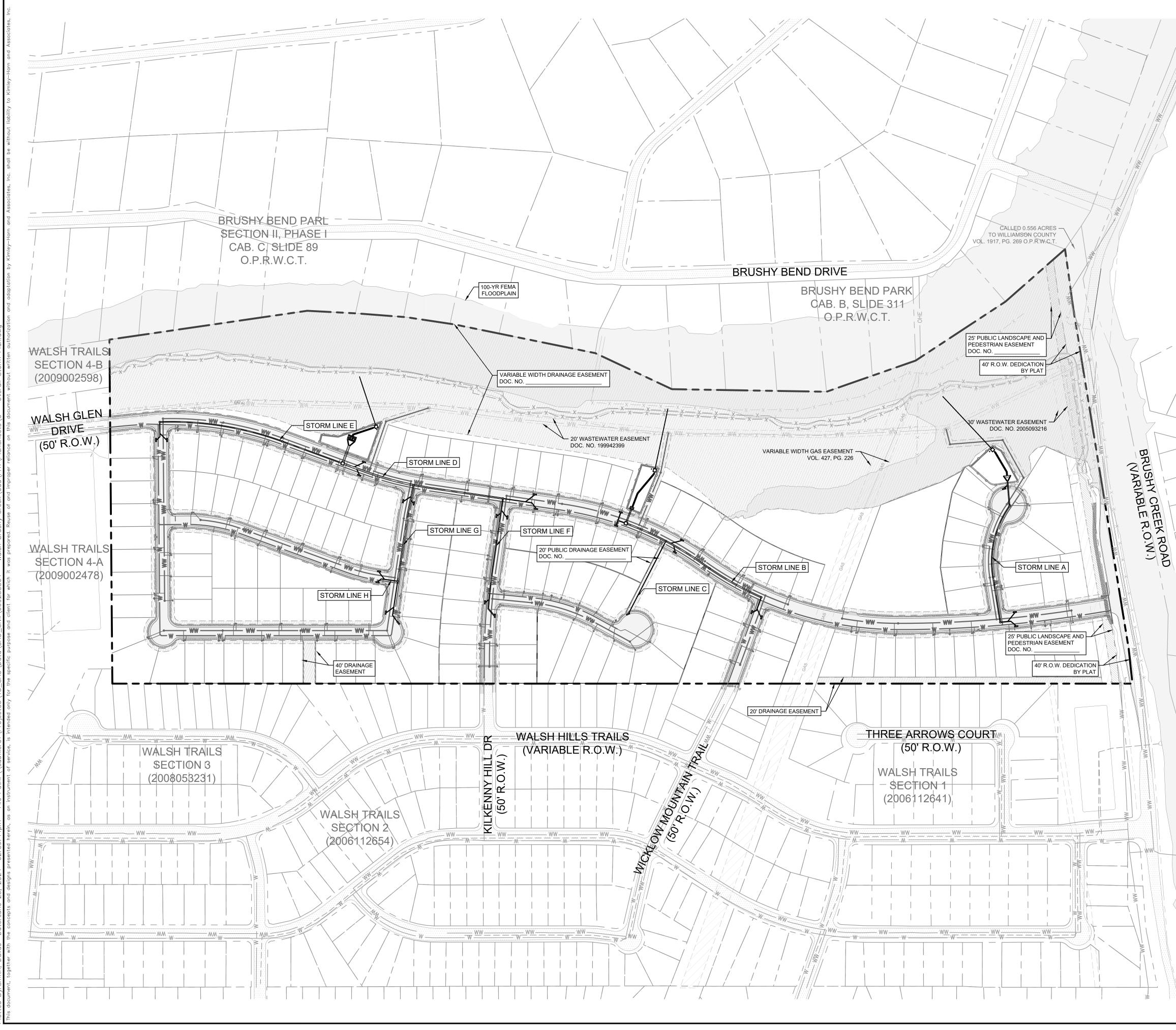
2.3	
0.56	
0.6	
0.67	
2.00%	
0.013	

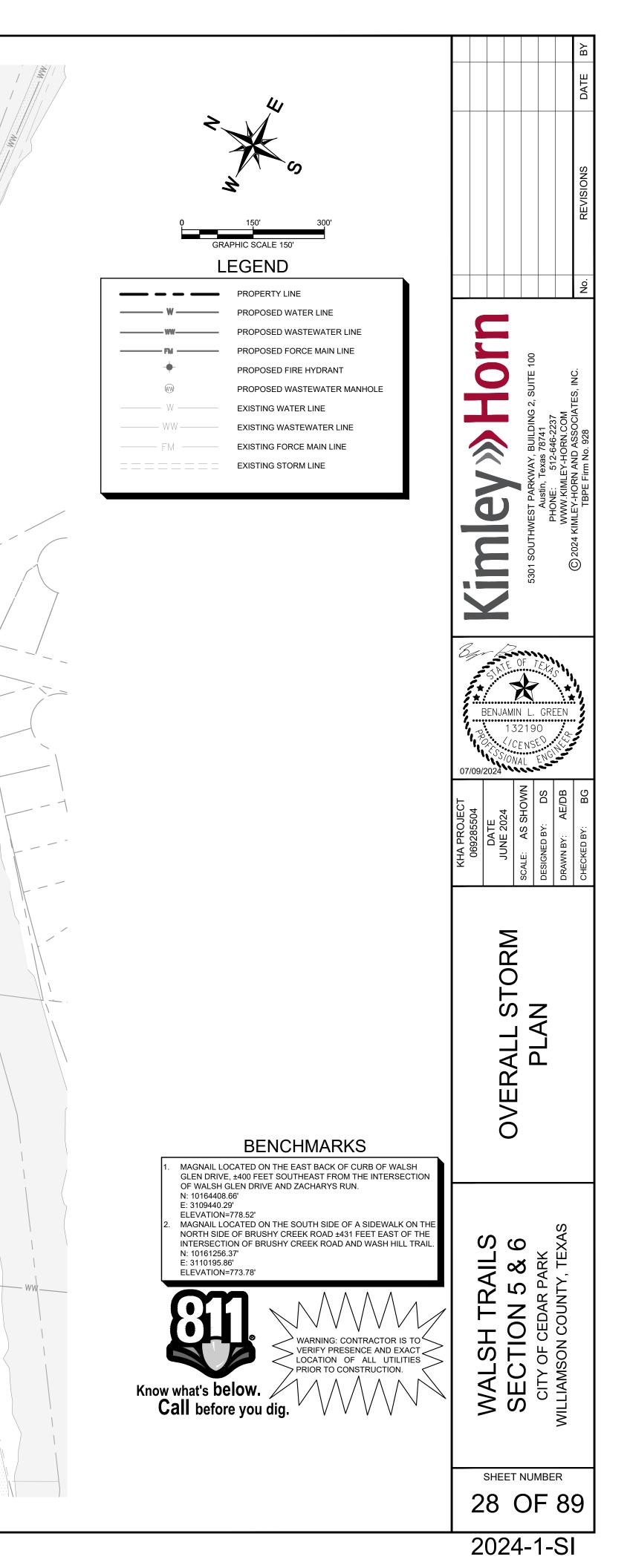


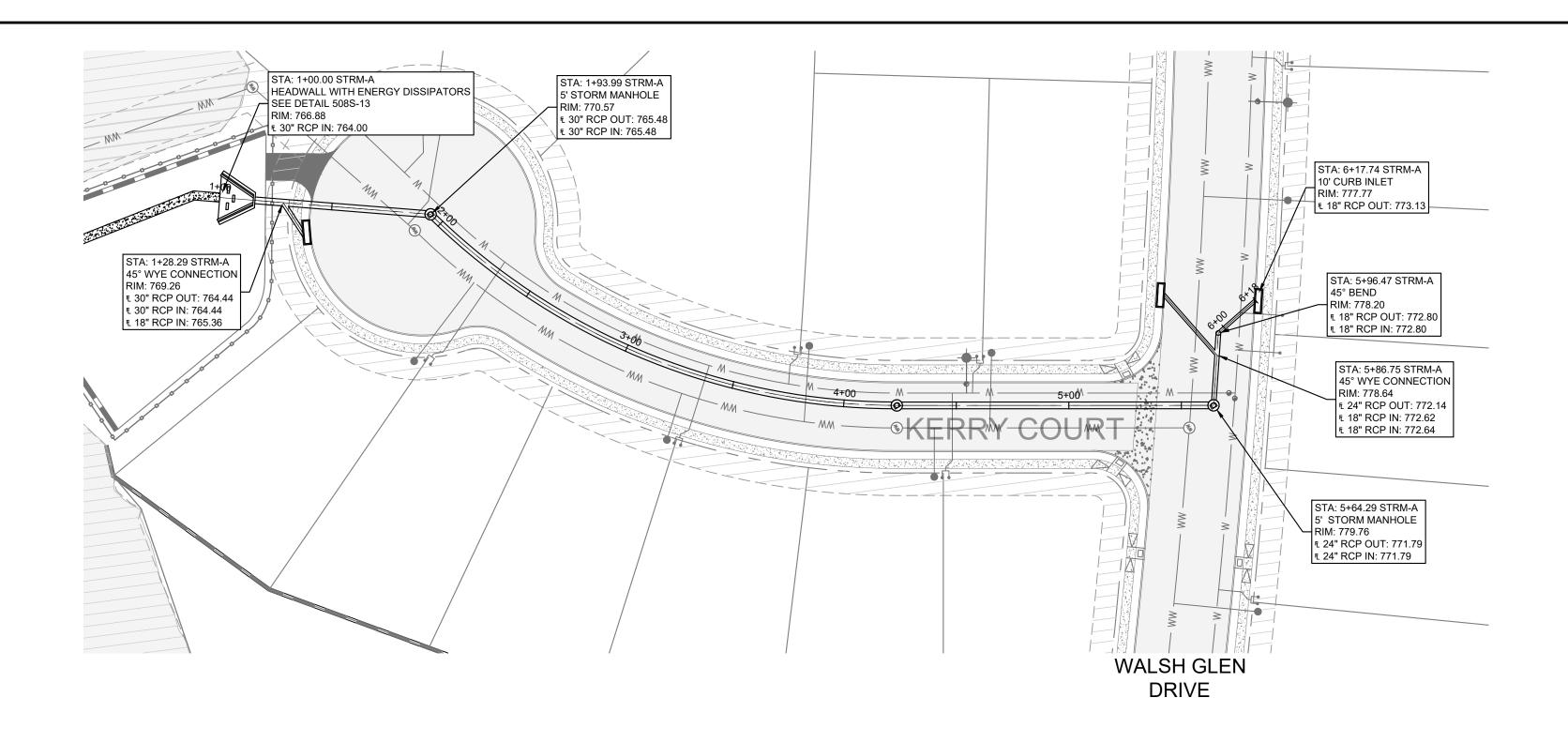


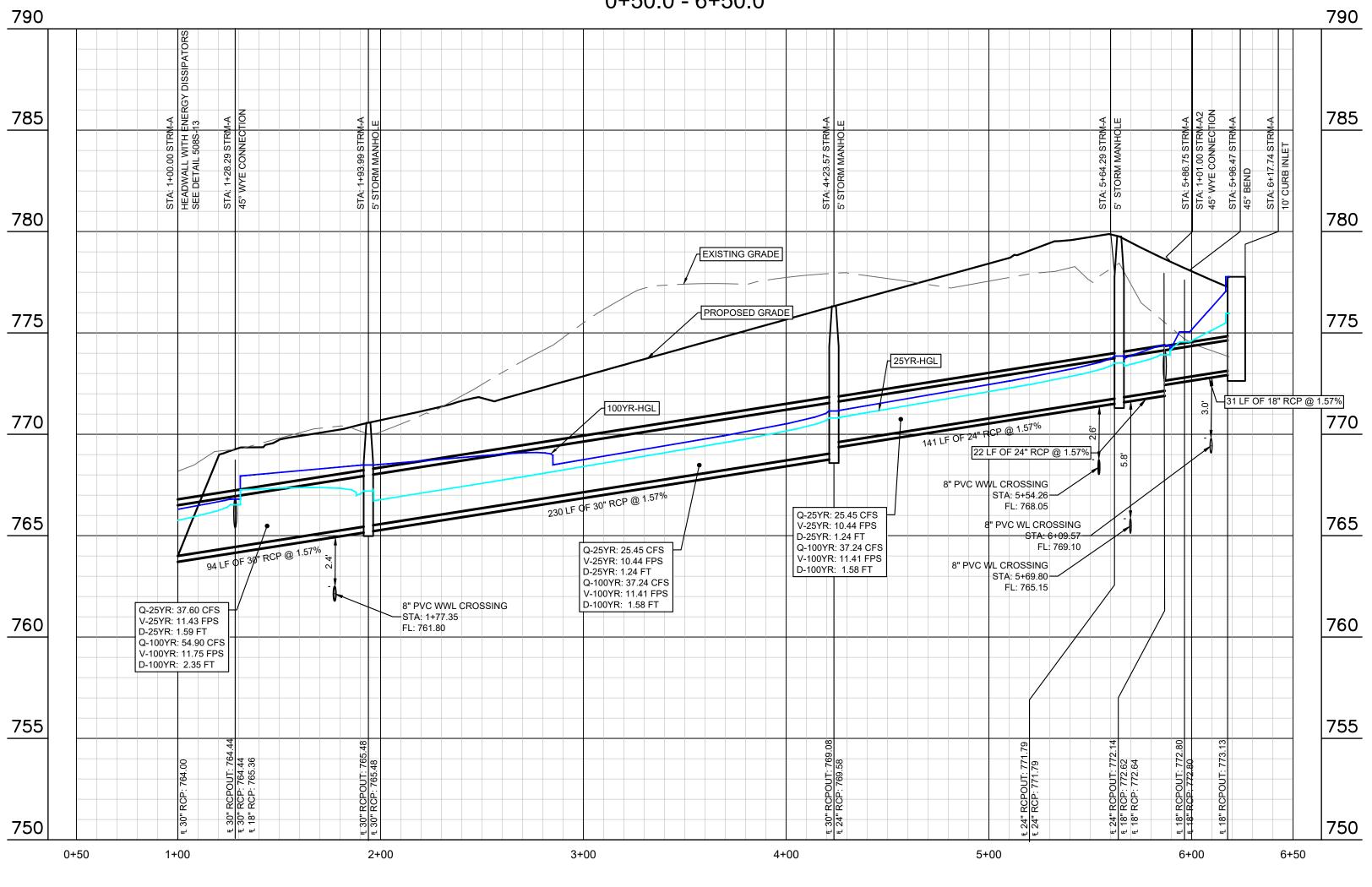
Q _{intercept} (cfs)
25.52
11.76
5.81
25.52

Know what Call

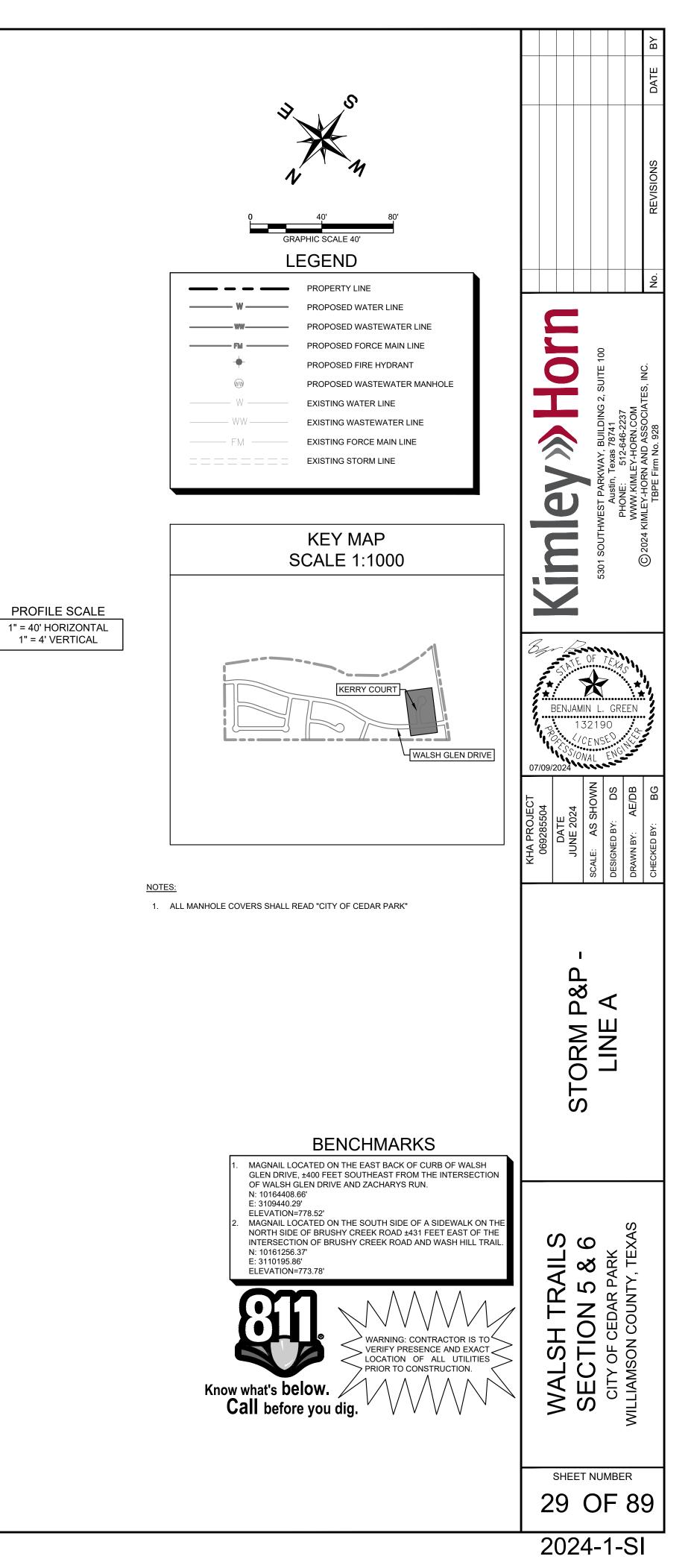


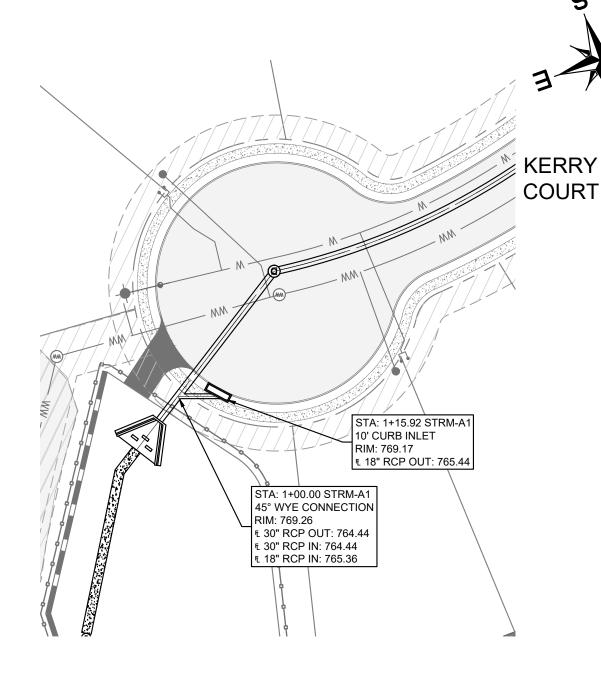


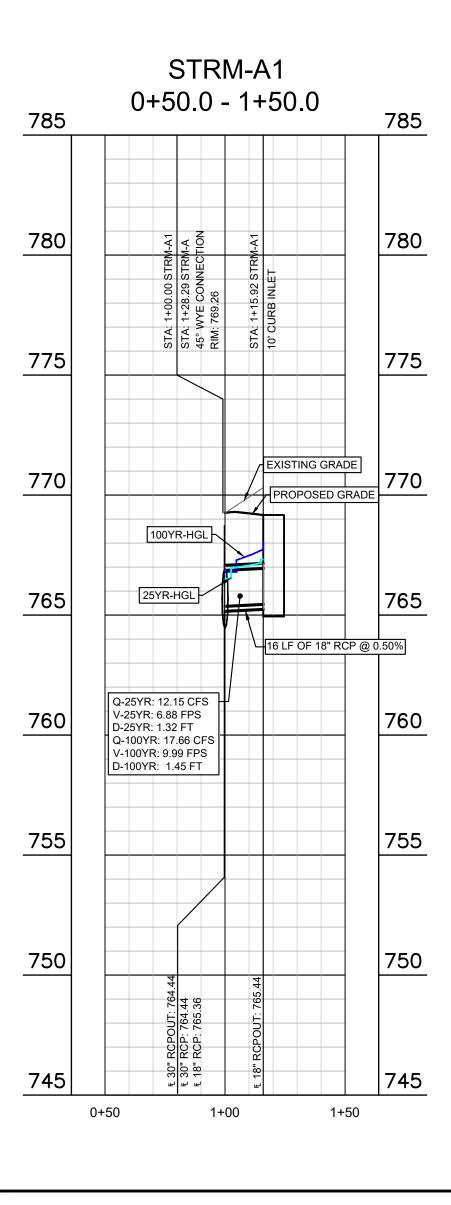




STRM-A 0+50.0 - 6+50.0

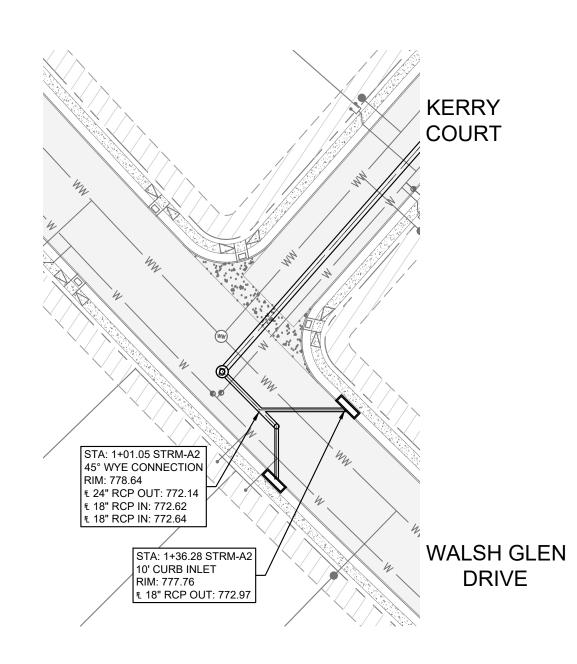


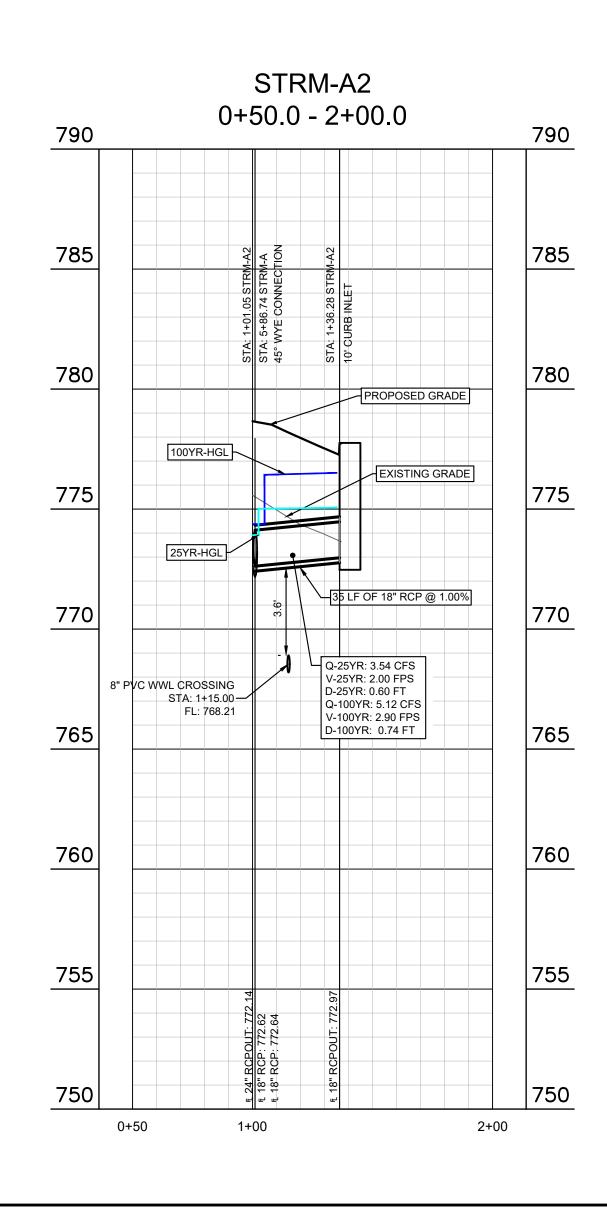


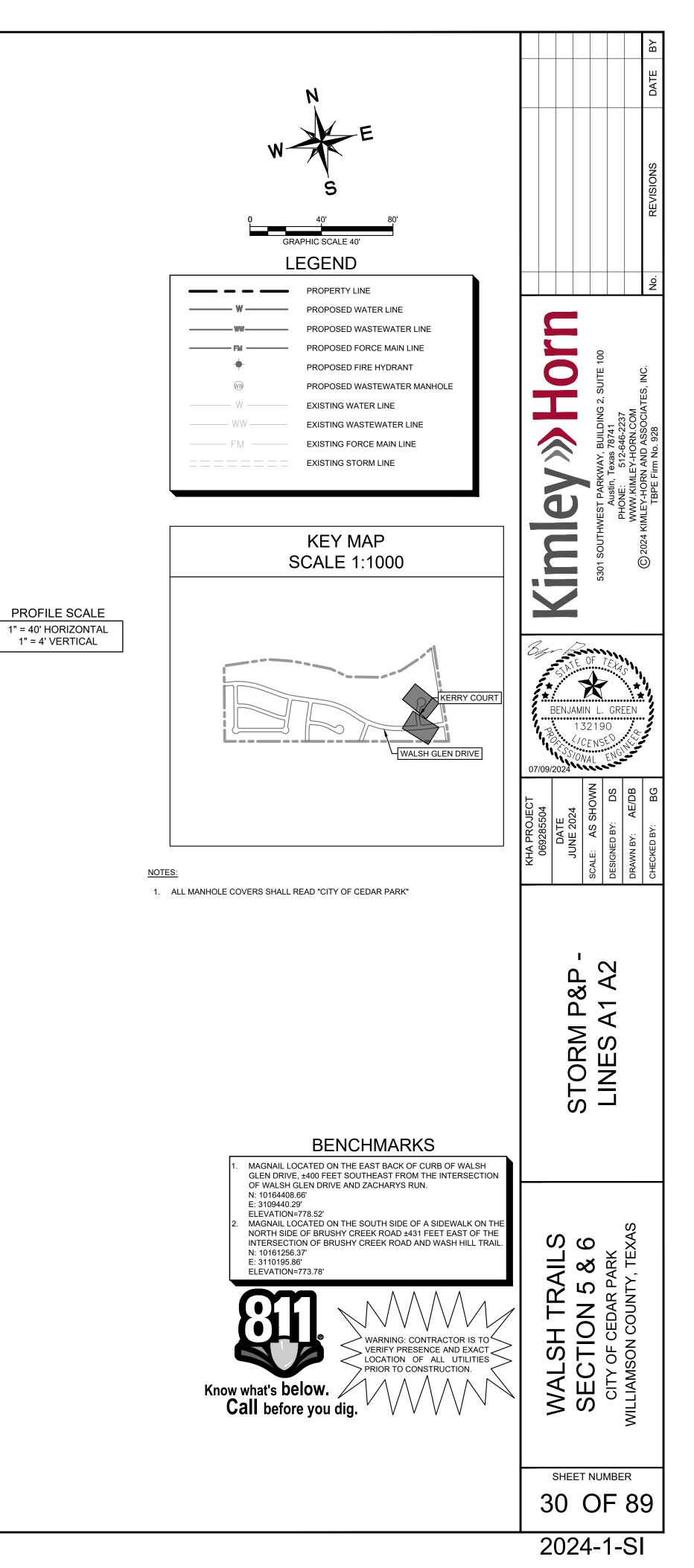


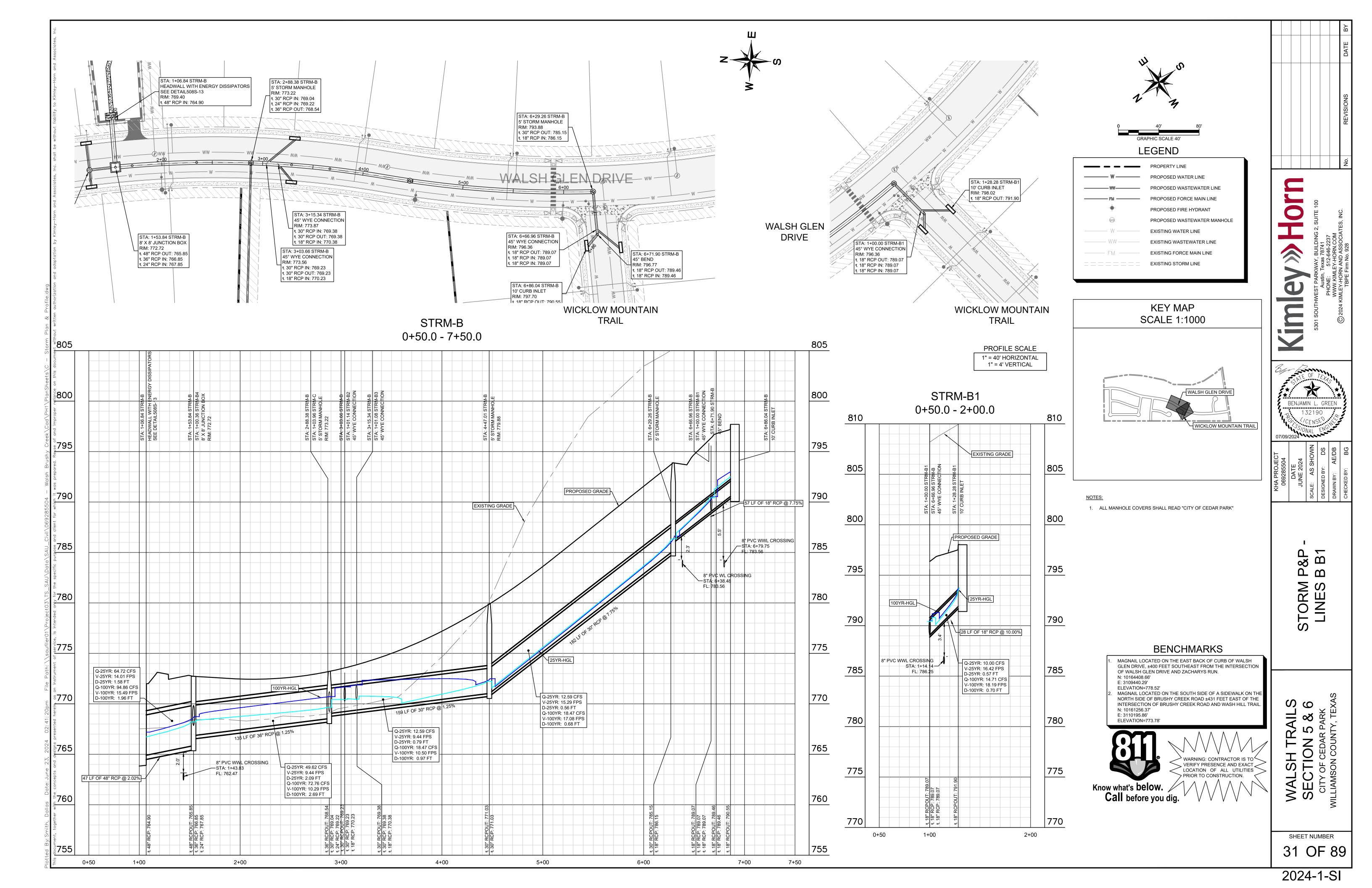


COURT

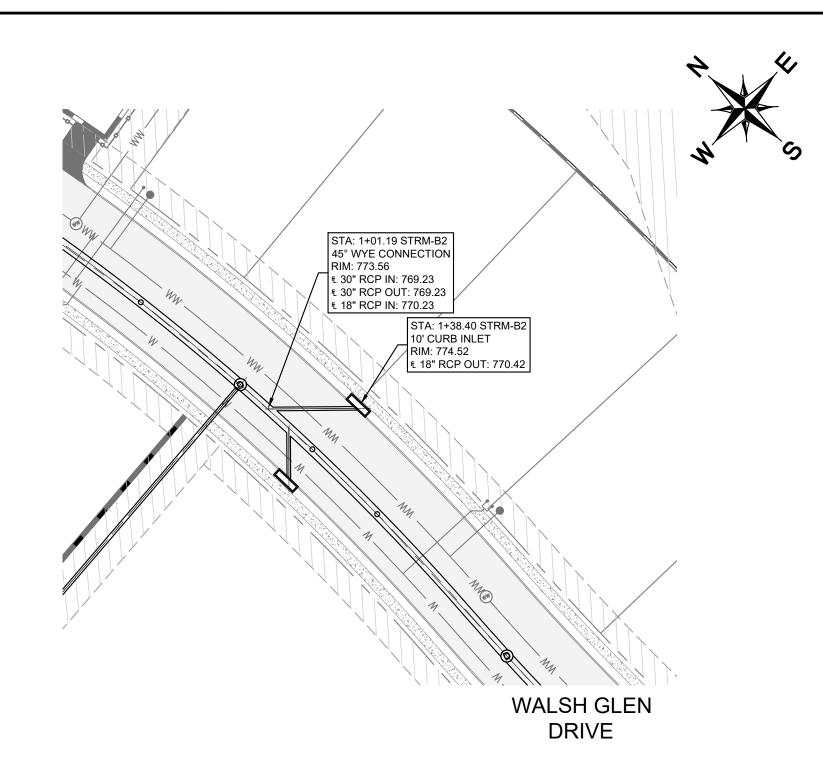


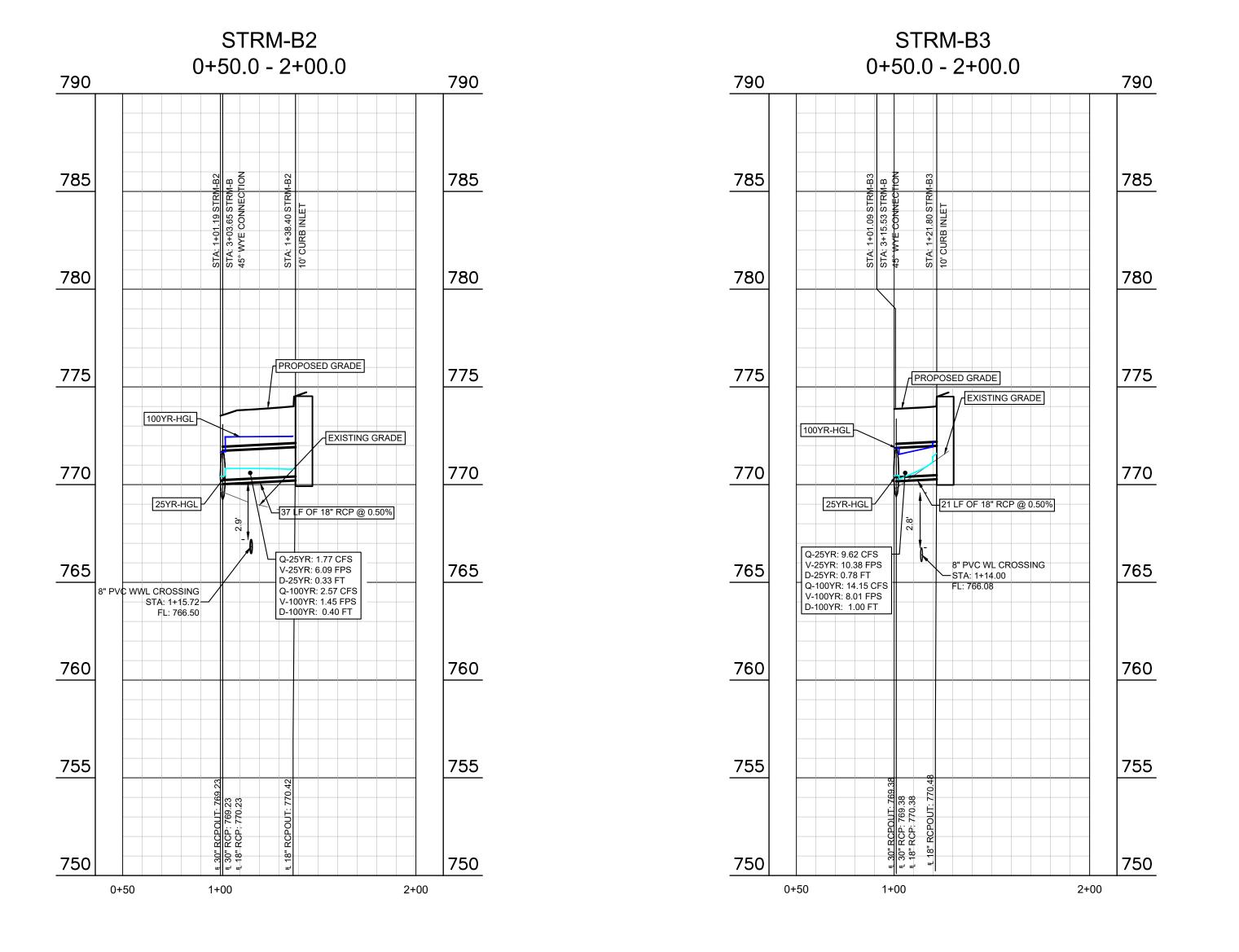


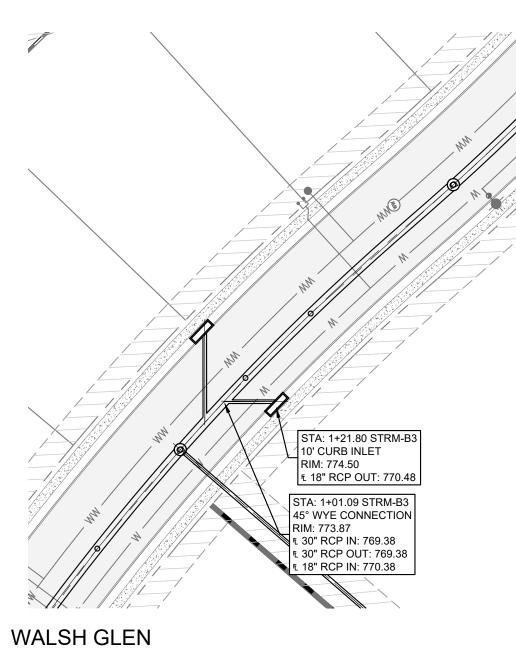




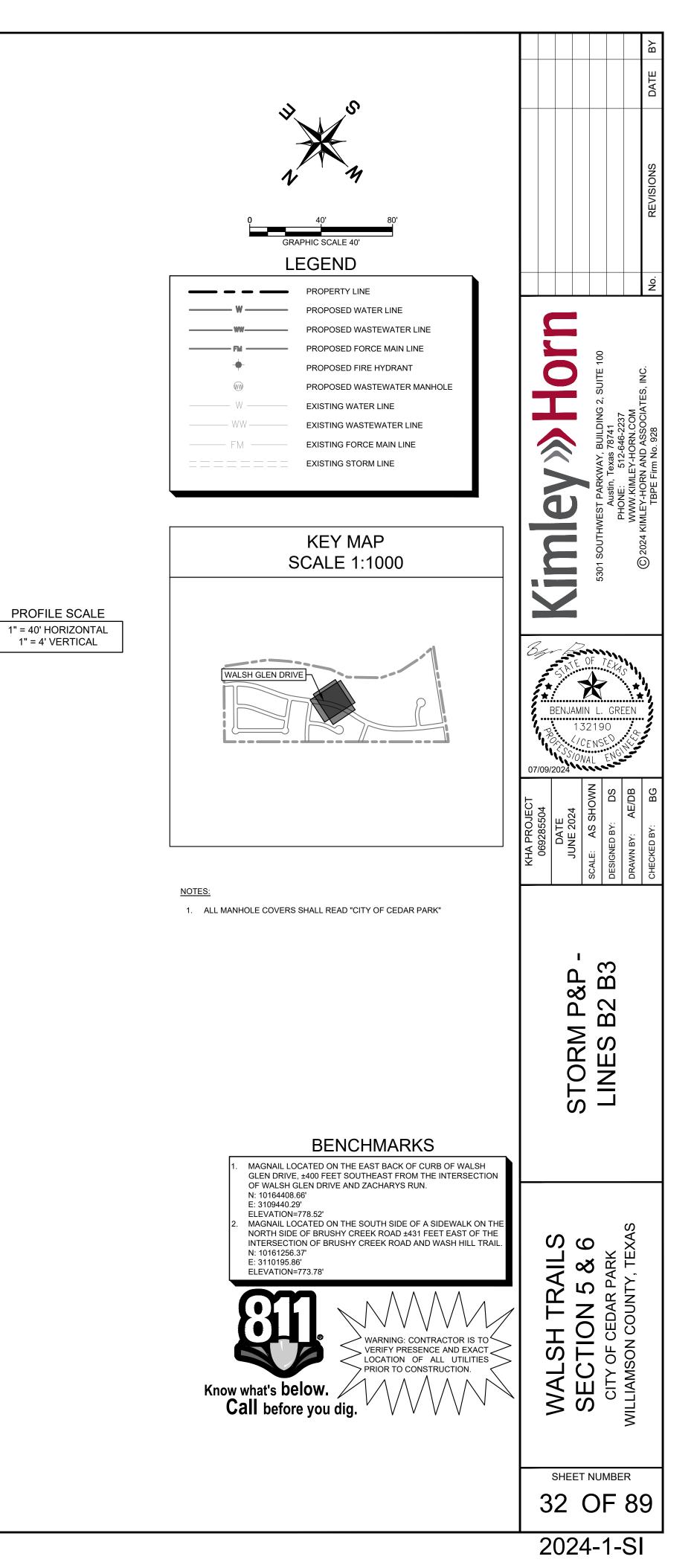


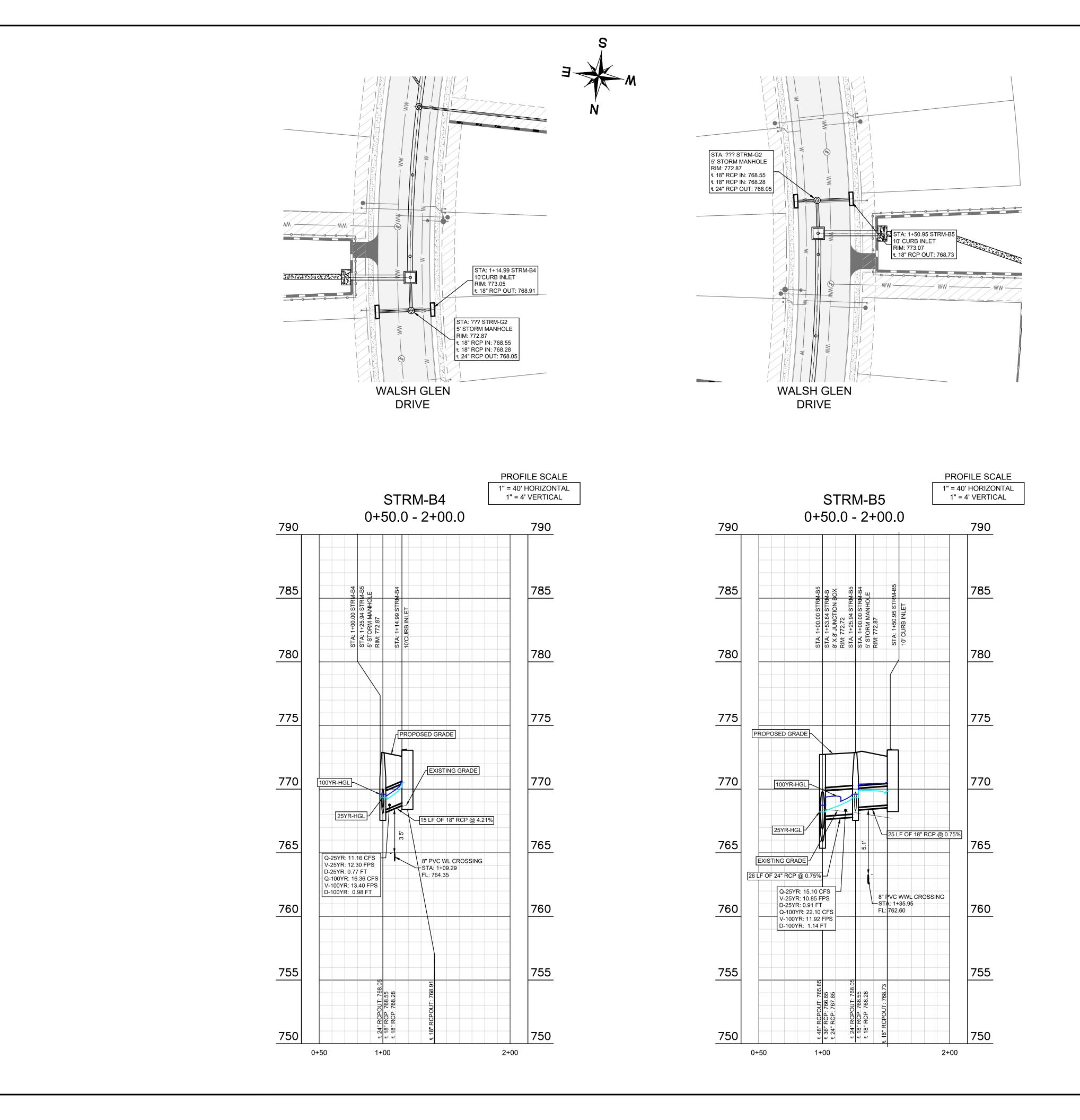


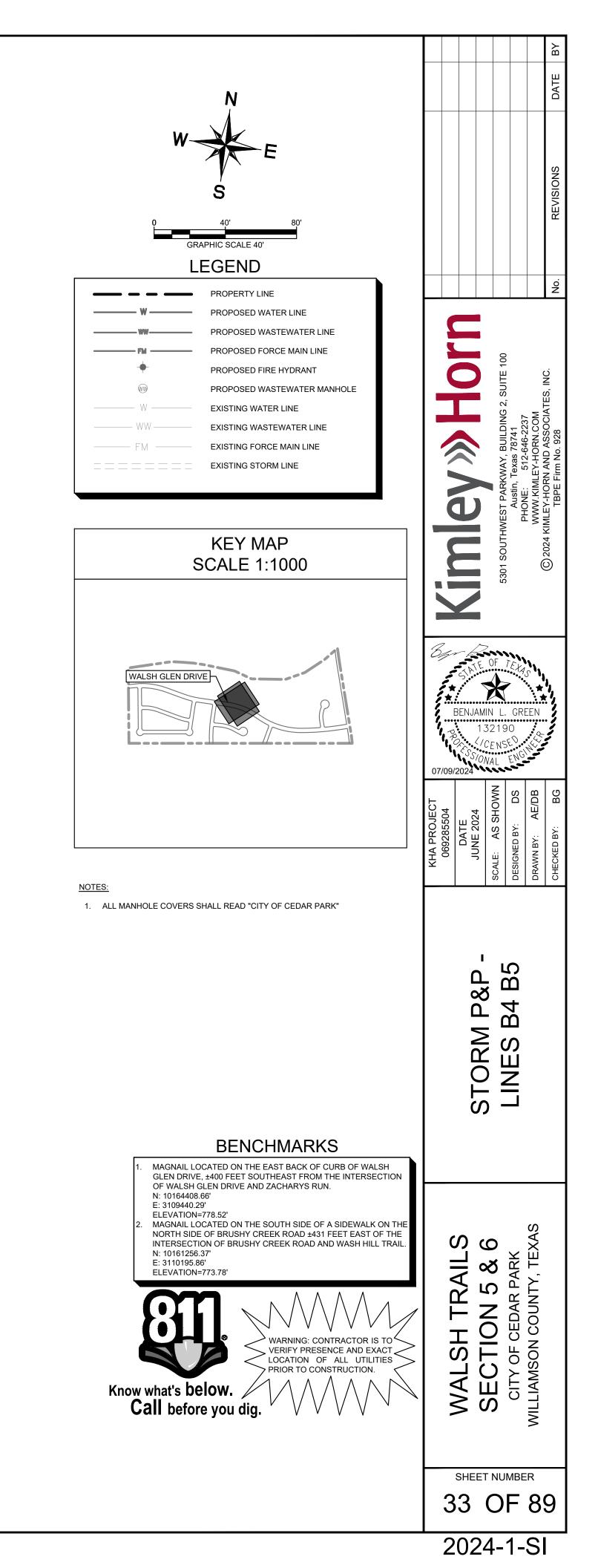


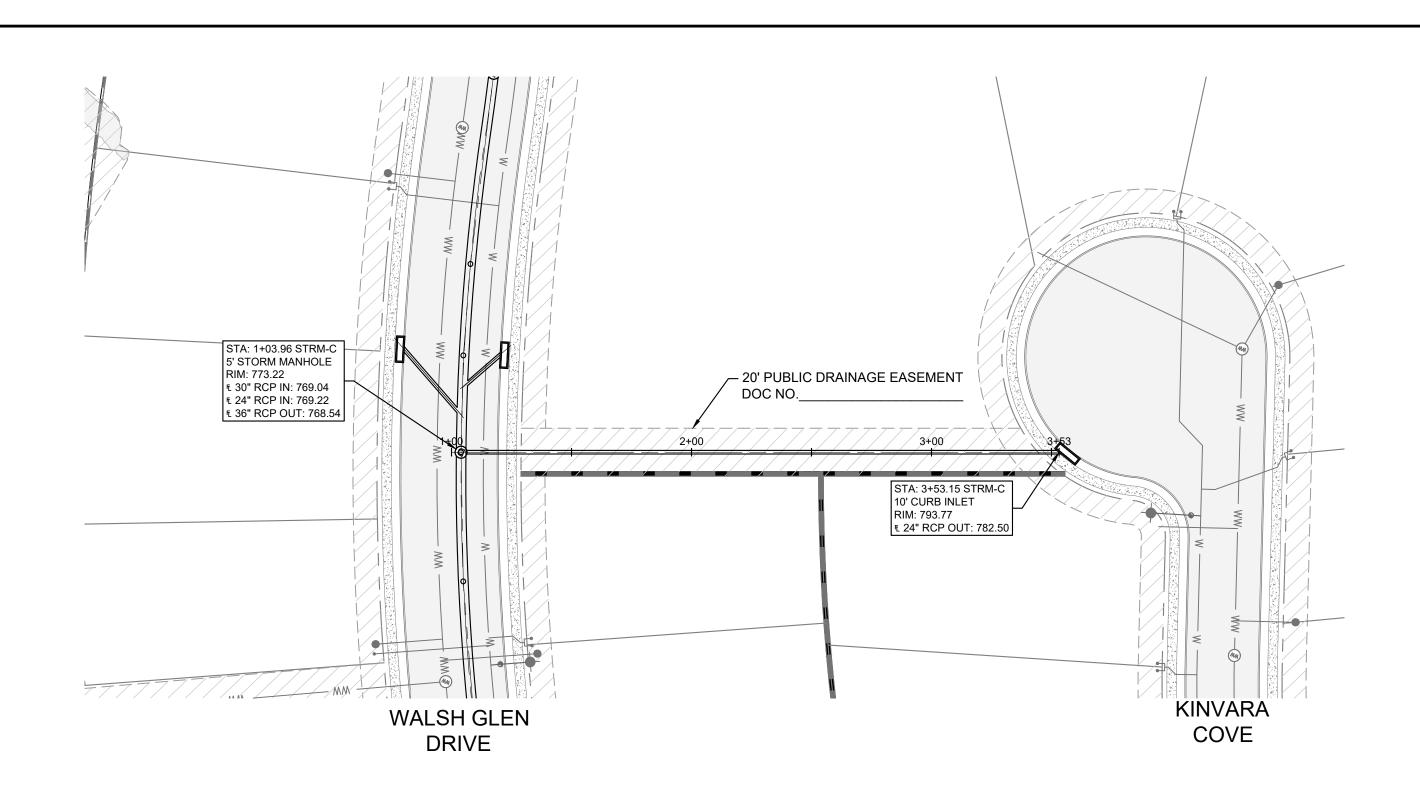


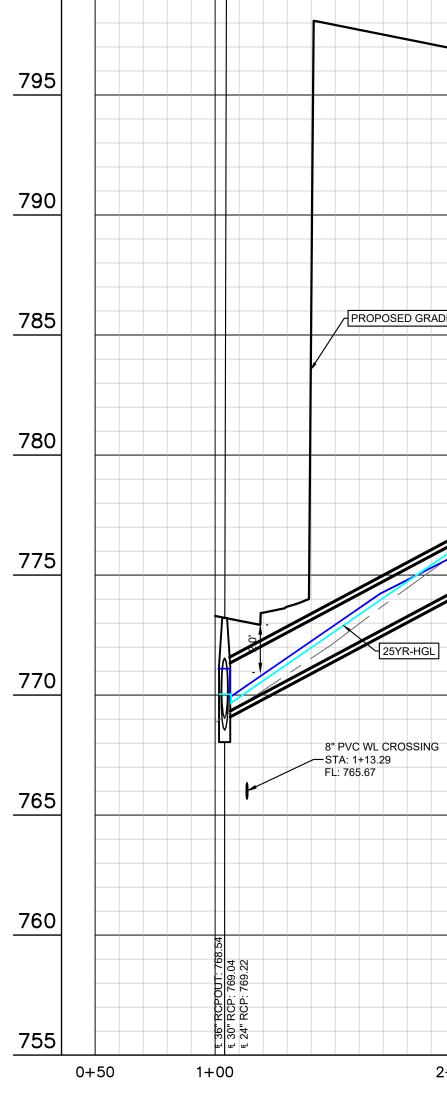
DRIVE



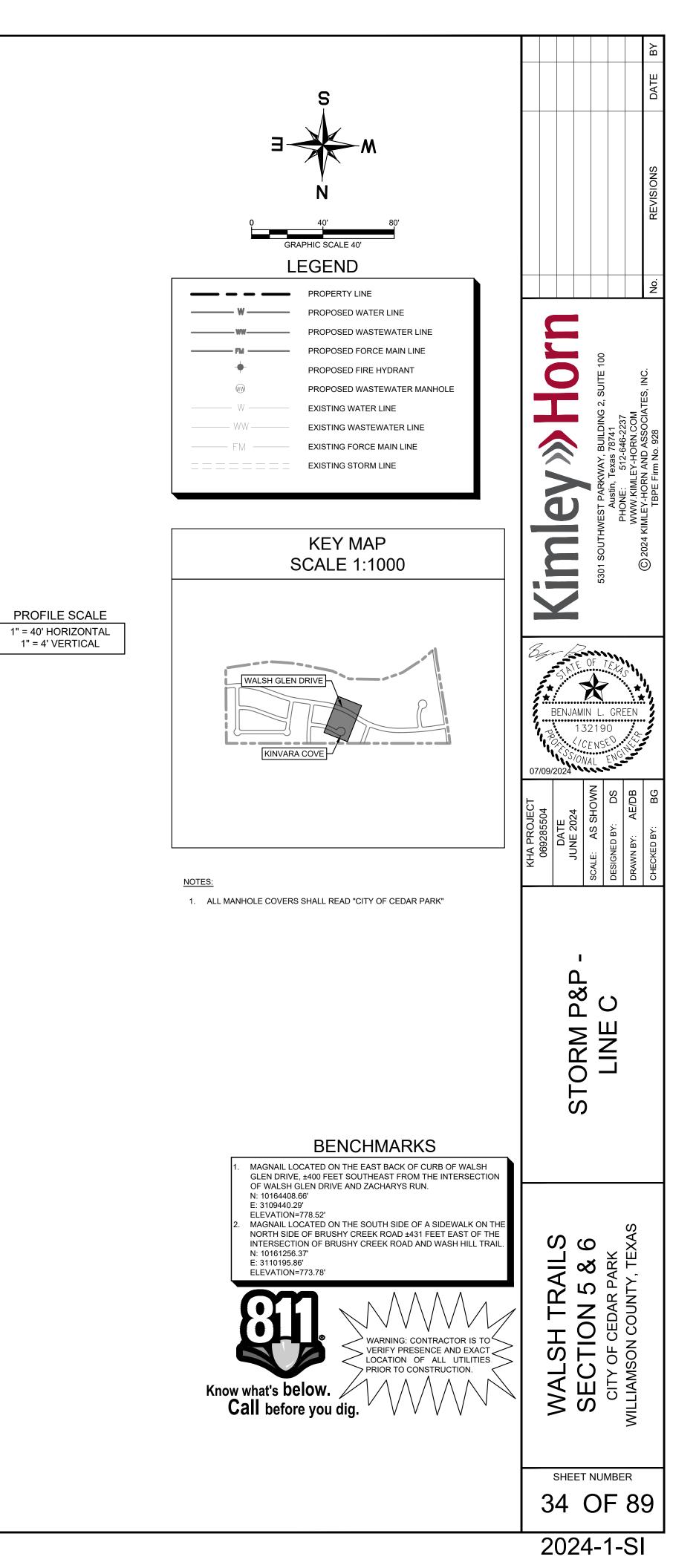


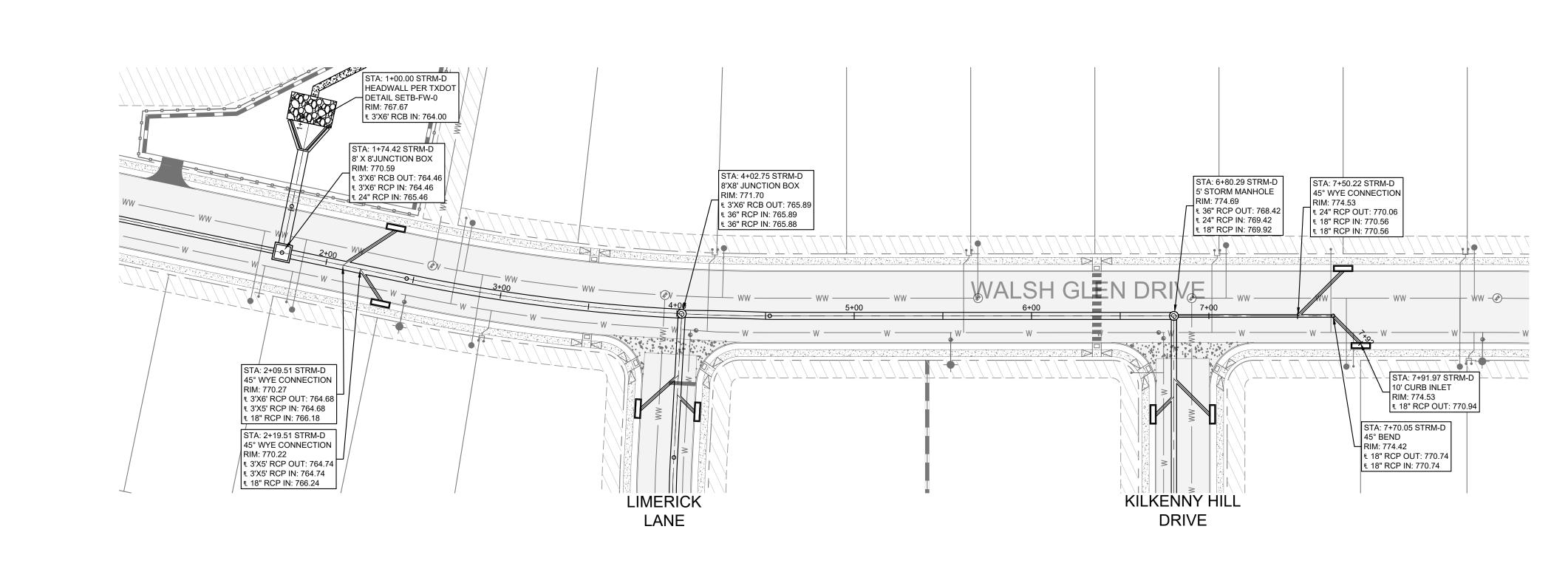


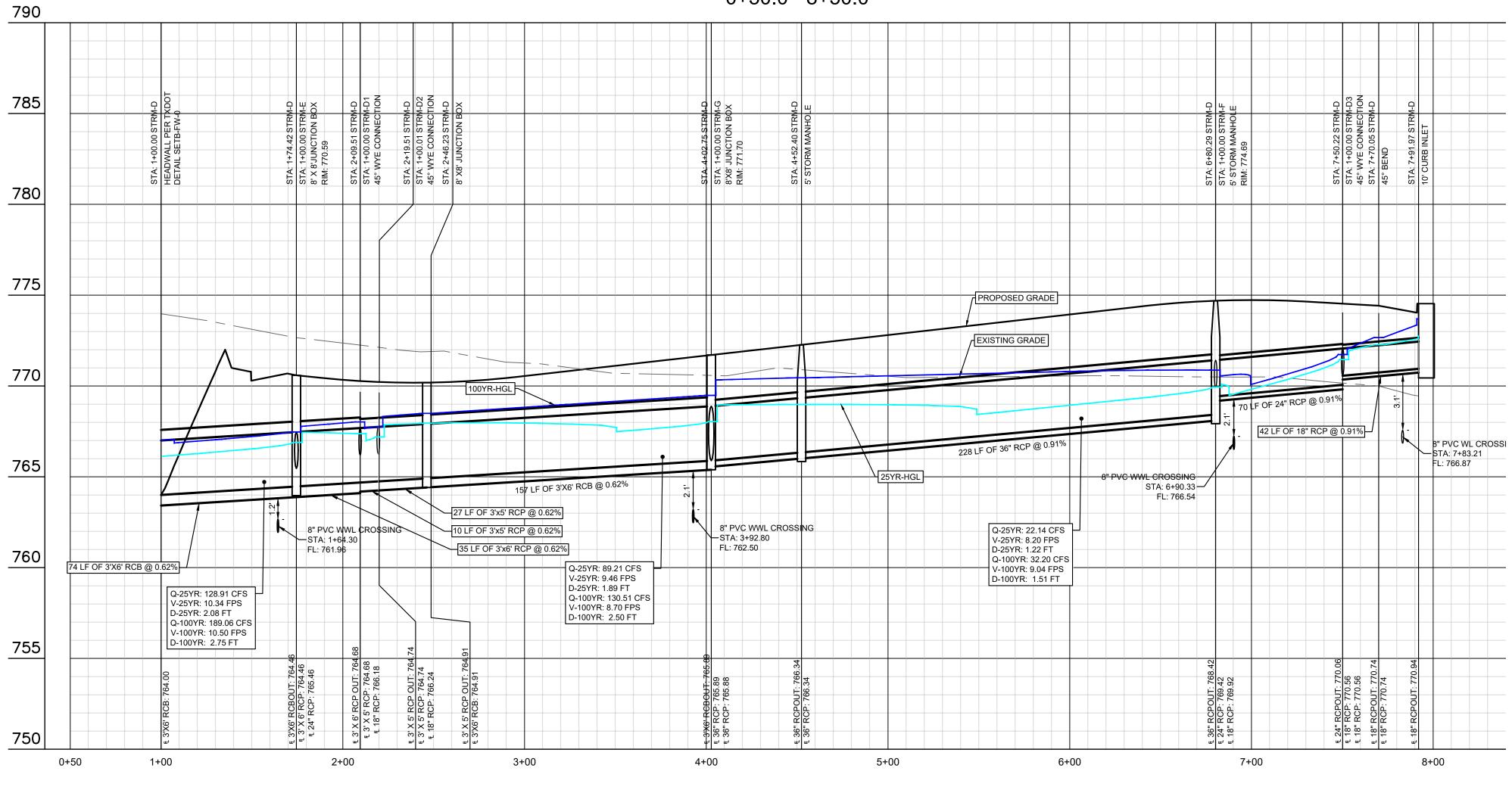




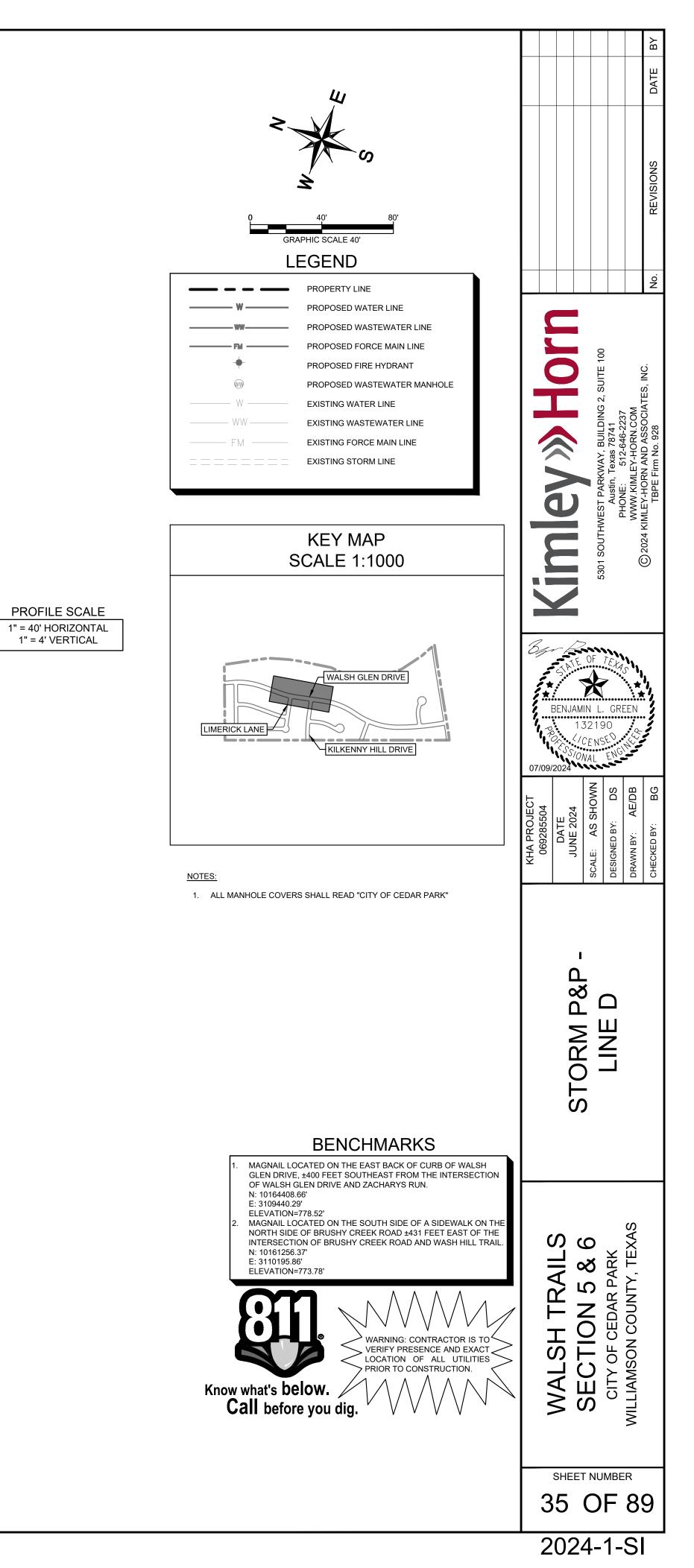
795 790 EXISTING GRADE 785 PROPOSED GRADE 780 100YR-HGL 775 Q-25YR: 25.64 CFS V-25YR: 18.10 FPS D-25YR: 0.92 FT Q-100YR: 37.57 CFS V-100YR: 19.88 FPS D-100YR: 1.16 FT YR-HGL 770 765 760 755 3+00 4+50 2+00 4+00

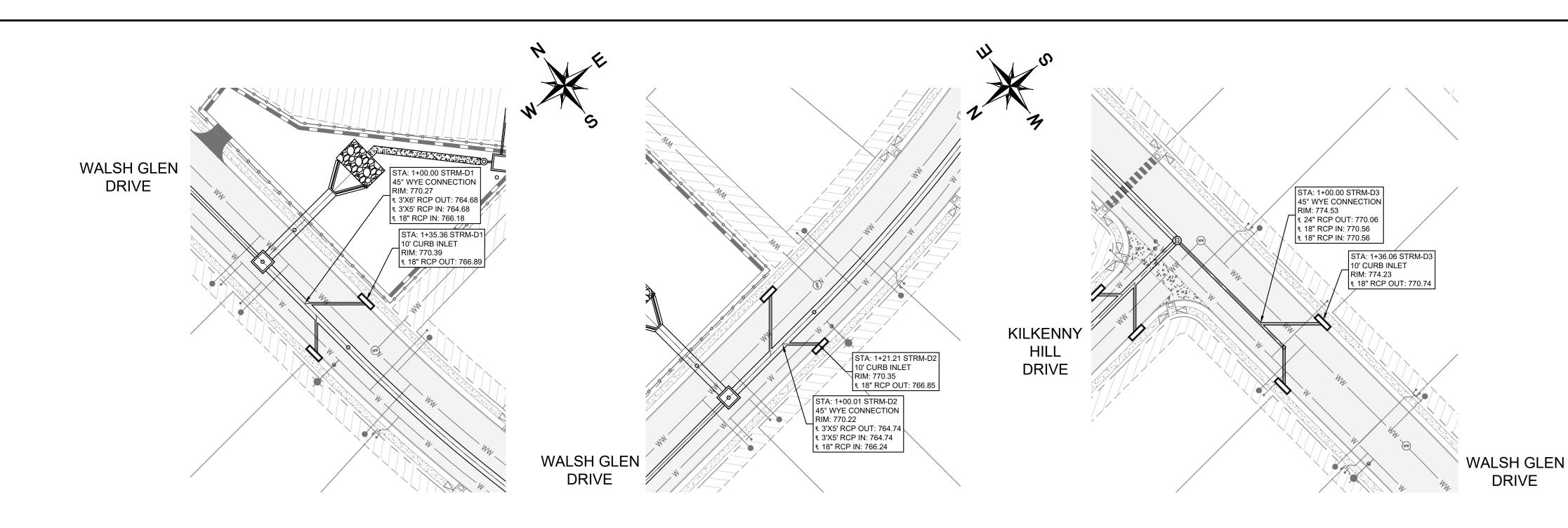


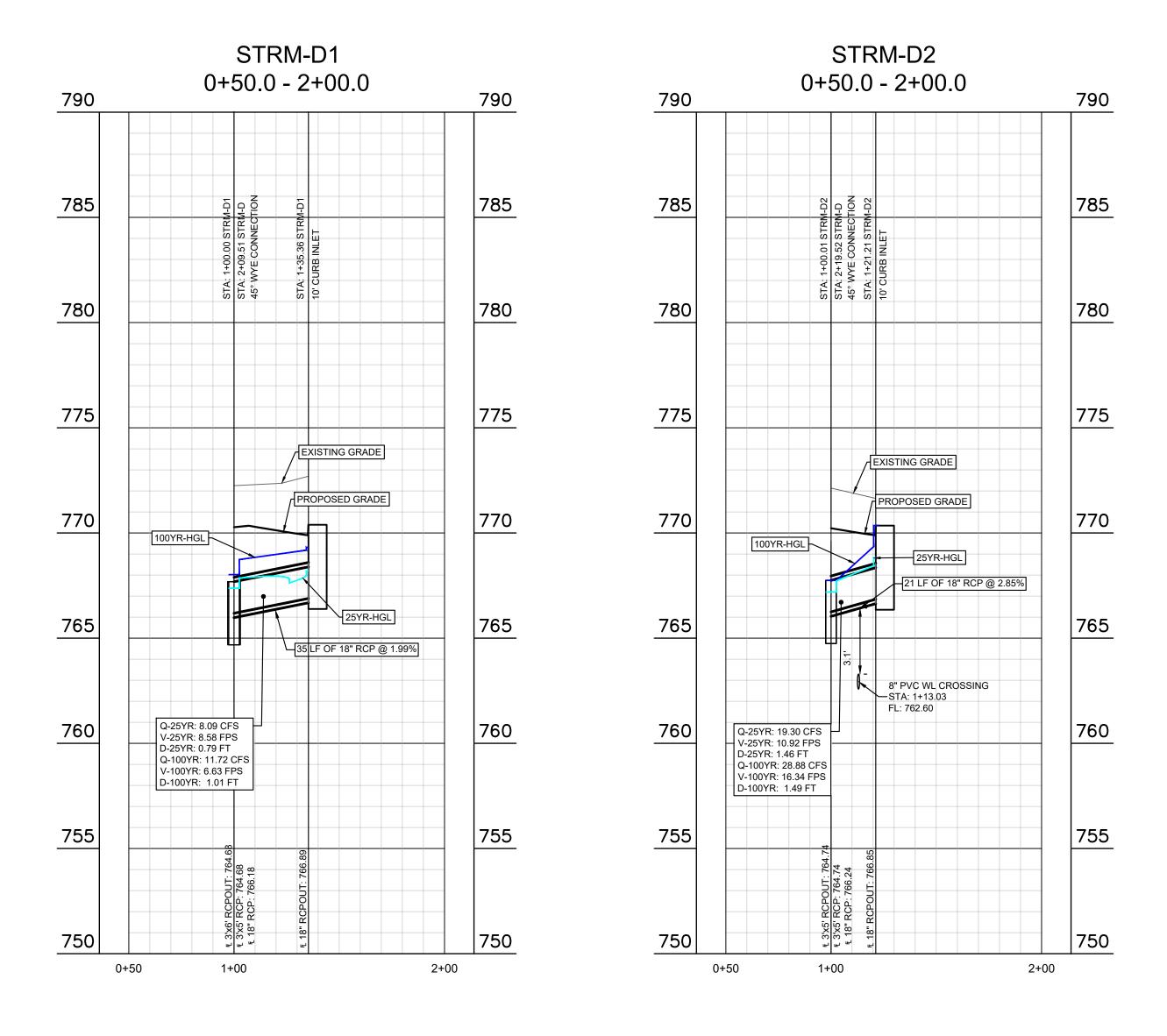




STRM-D 0+50.0 - 8+50.0

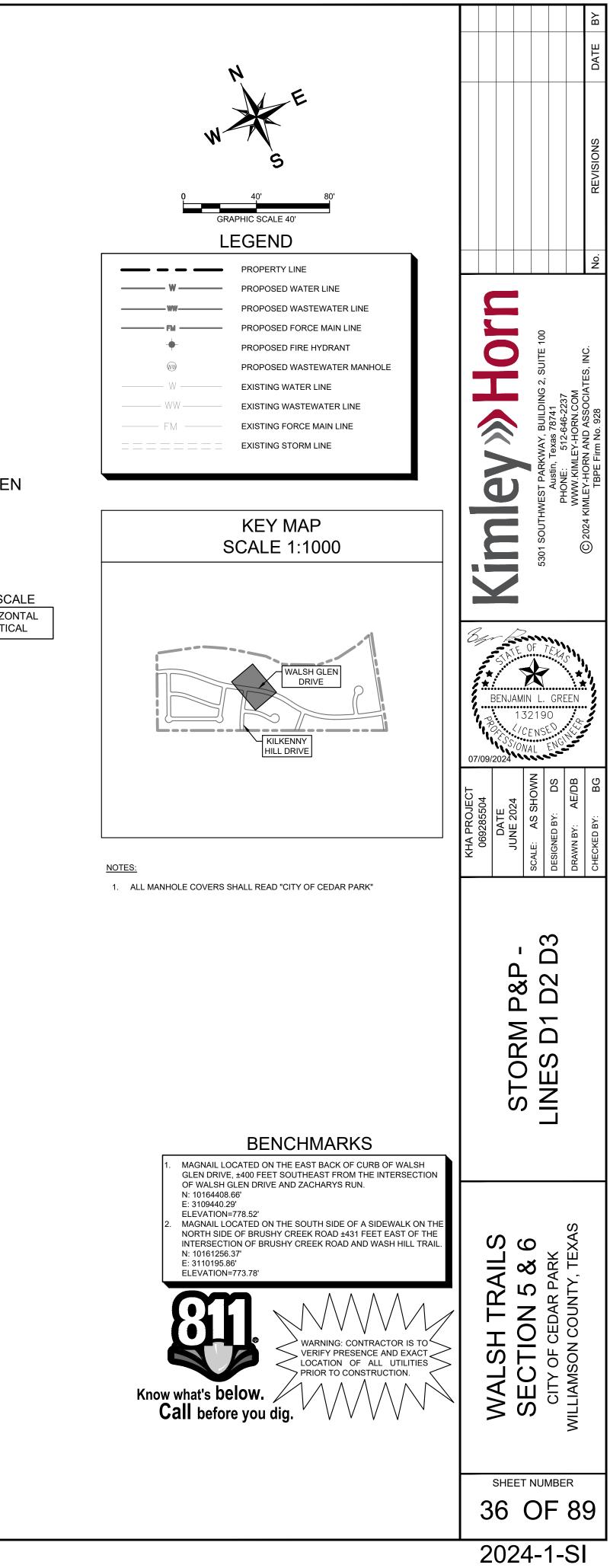


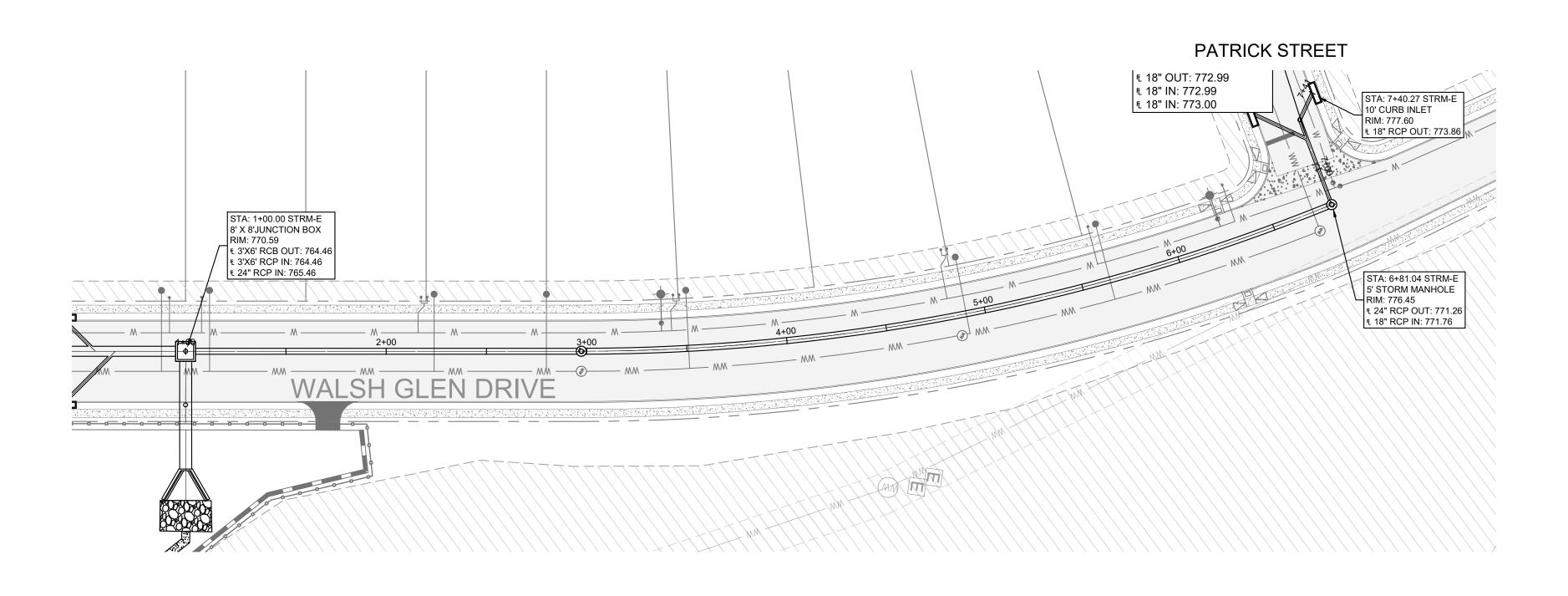


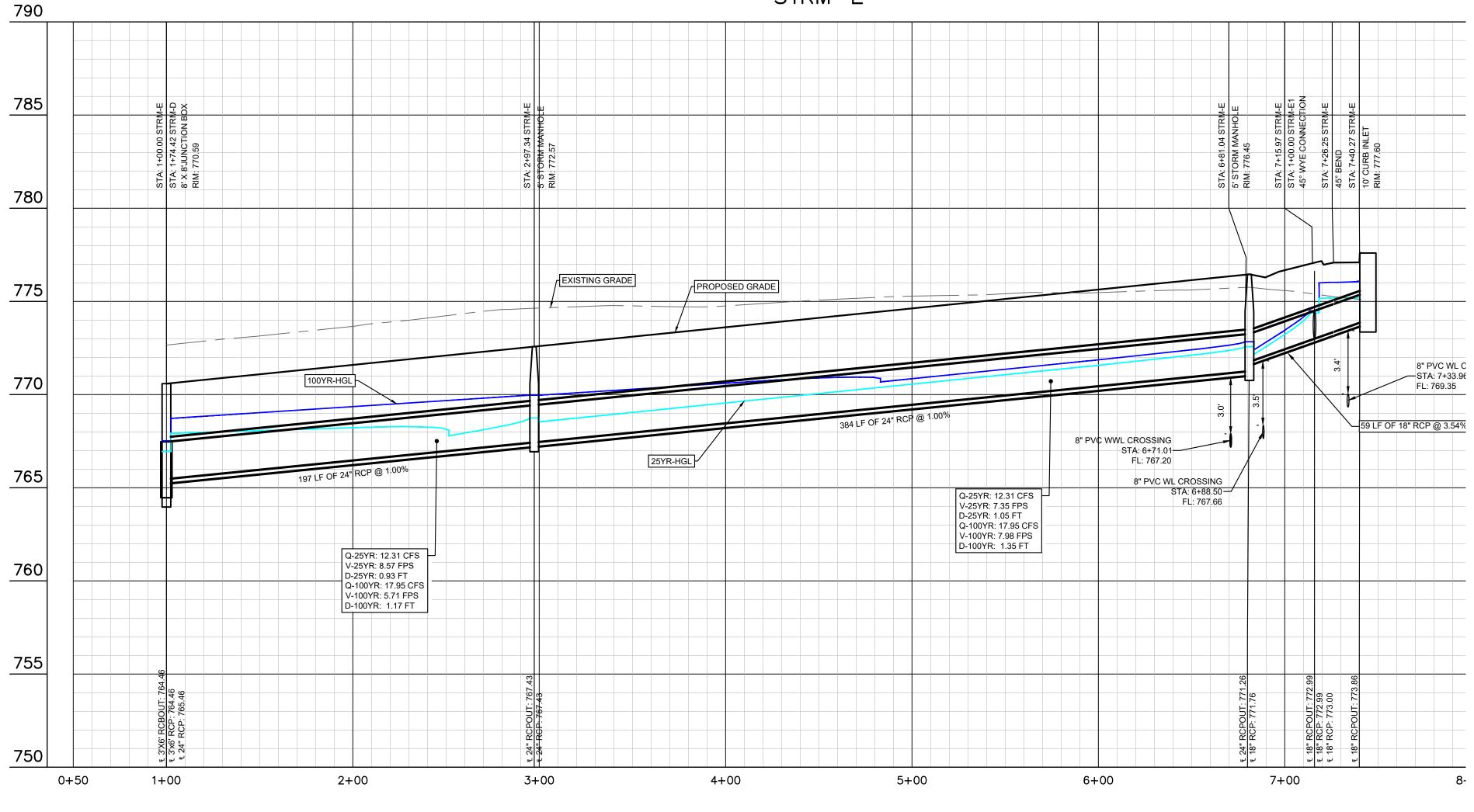


PROFILE SCALE 1" = 40' HORIZONTAL 1" = 4' VERTICAL

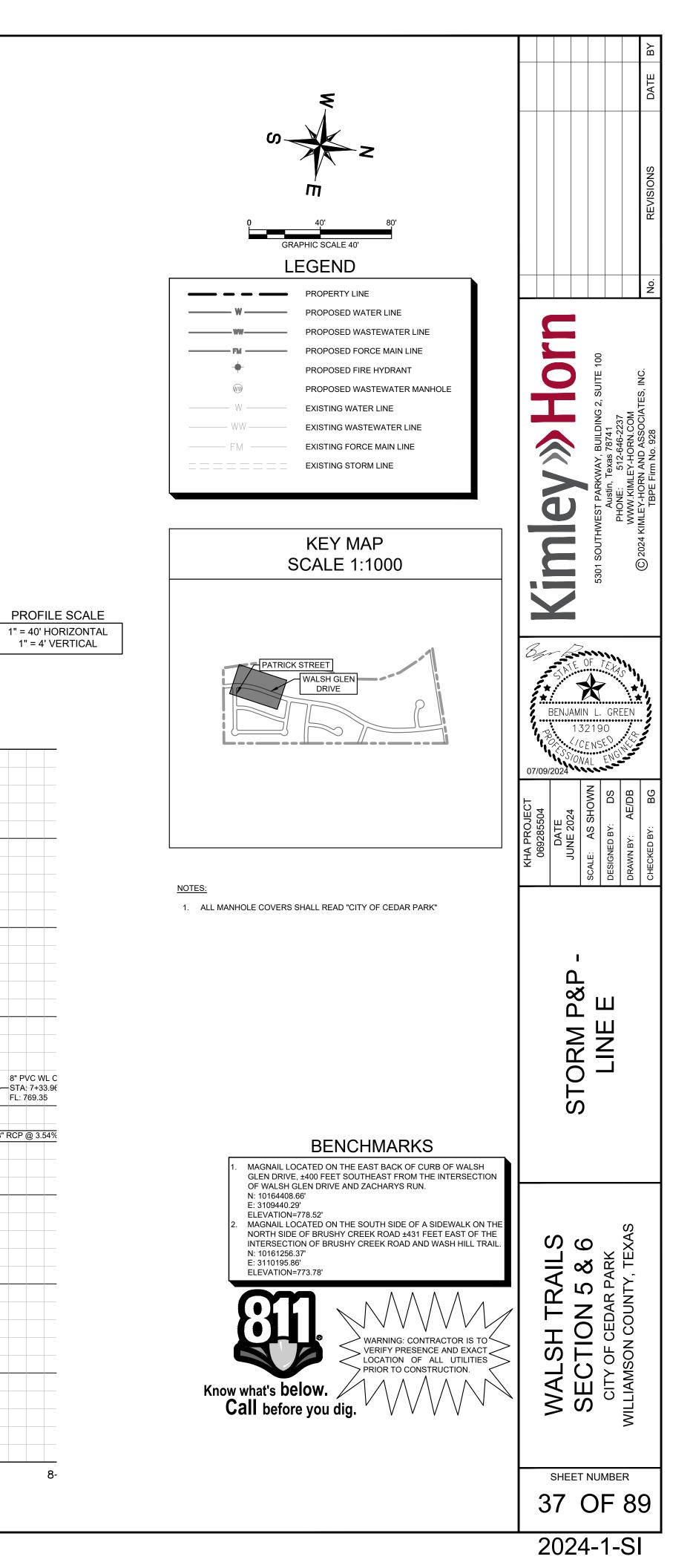
STRM-D3 0+50.0 - 2+00.0 790 790 785 785 STA: 10' C STA: STA: 45° \ 780 780 775 775 PROPOSED GRADE 100YR-HGL EXISTING GRADE 770 770 25YR-HGL 36 LF OF 18" RCP @ 0.50% 765 765 8" FVC WWL CROSSING Q-25YR: 2.17 CFS STA: 1+14.23 FL: 765.11 V-25YR: 1.23 FPS D-25YR: 1.56 FT Q-100YR: 3.14 CFS V-100YR: 1.79 FPS D-100YR: 0.68 FT 760 760 755 755 77 56 56 770. Е 24" RCPC Е 18" RCP: Е 18" RCP: 750 750 2+00 0+50 1+00

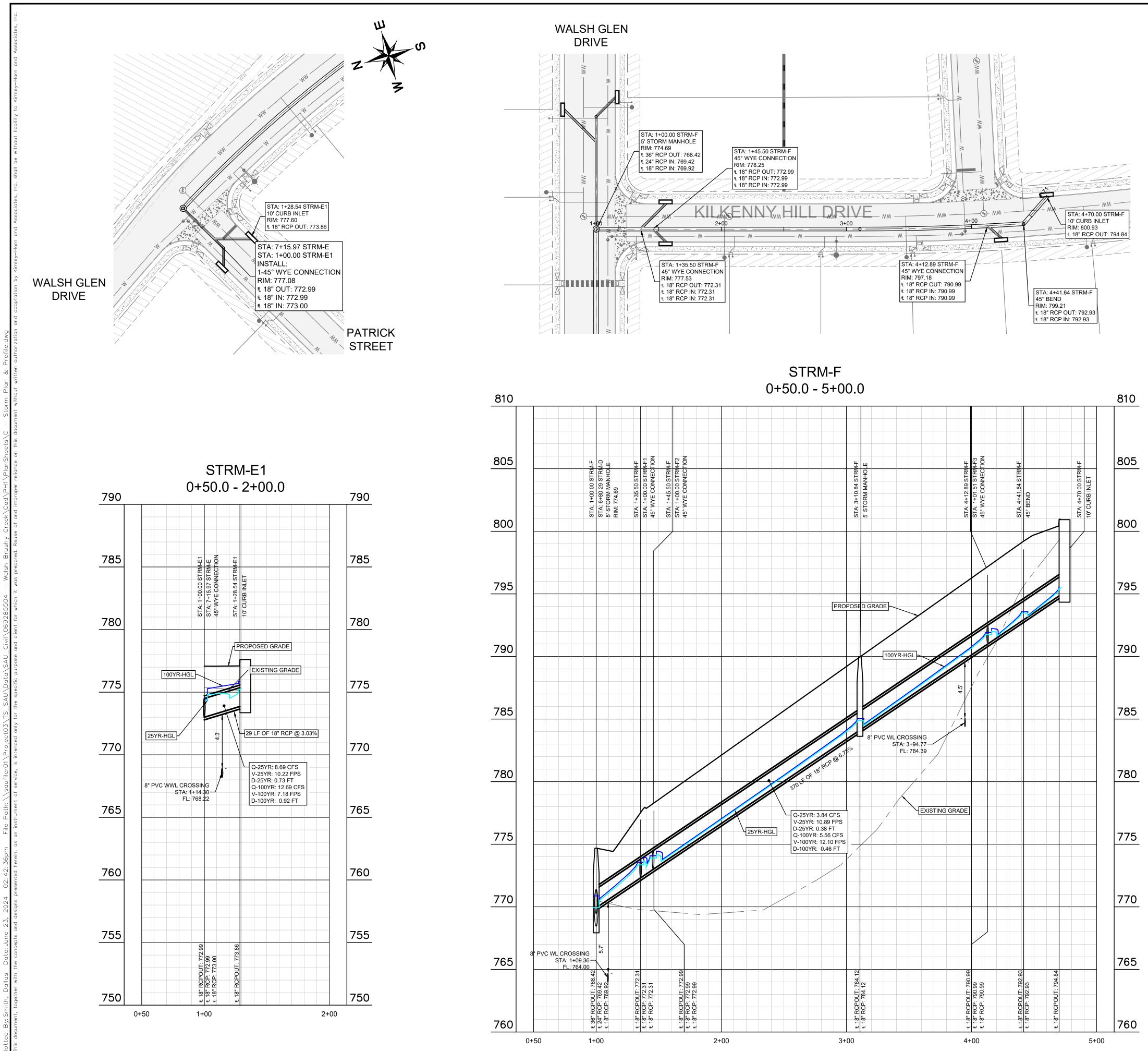


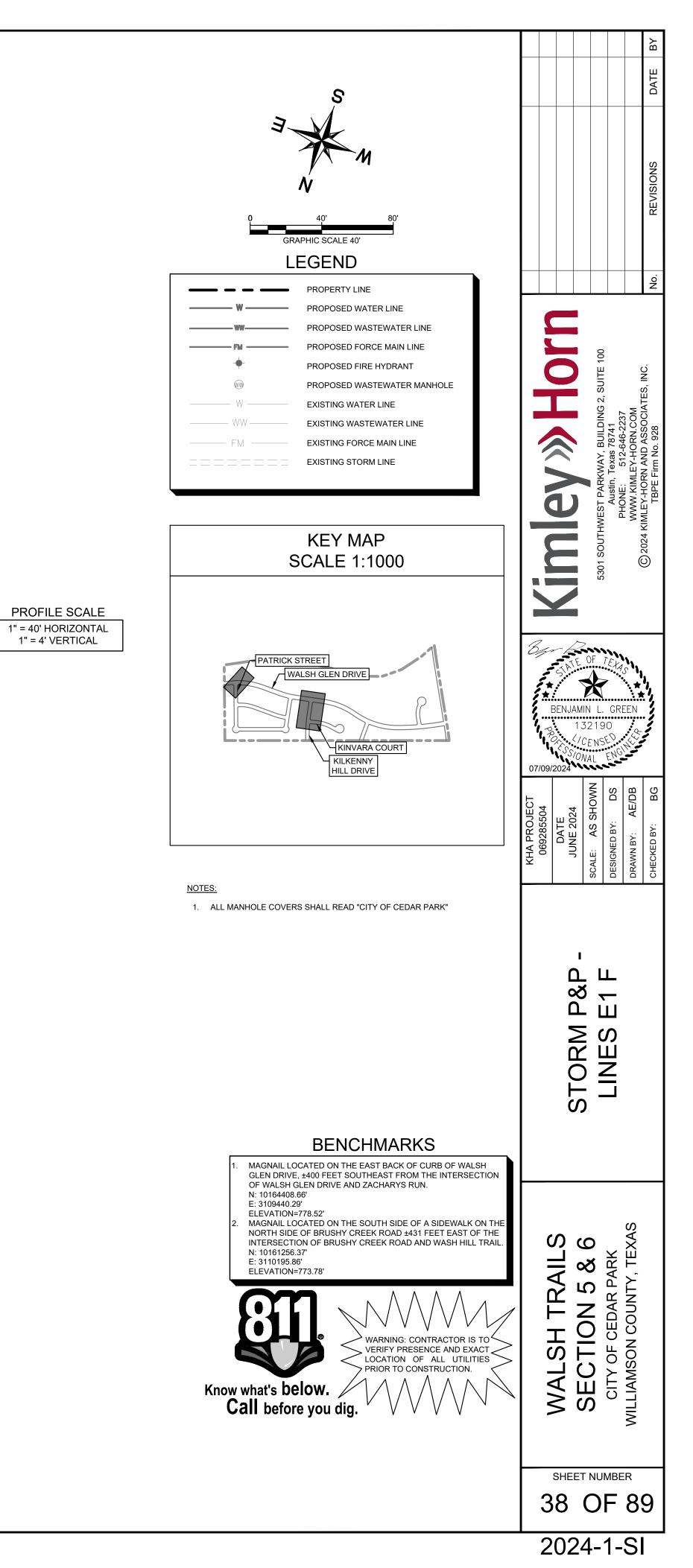


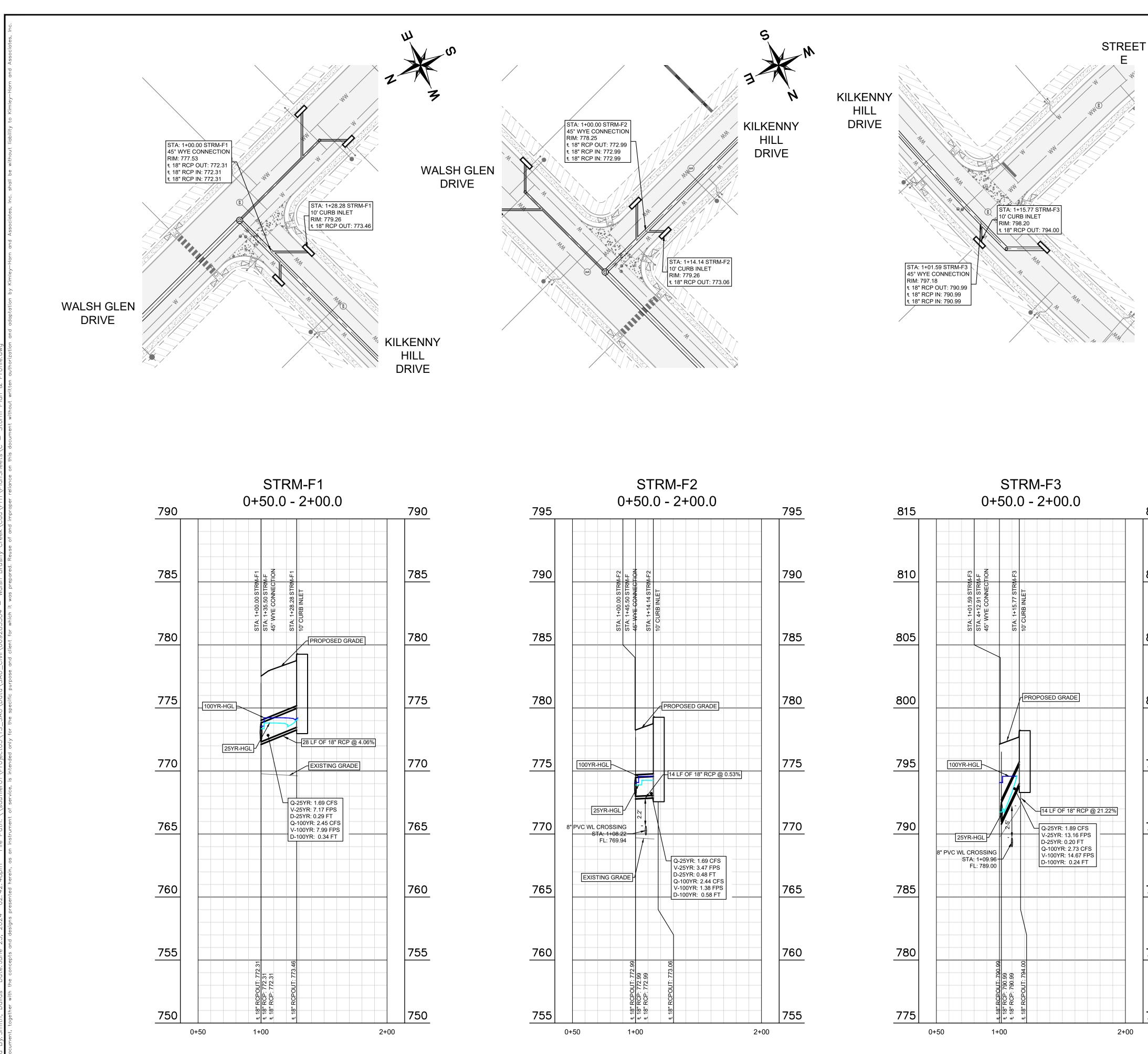


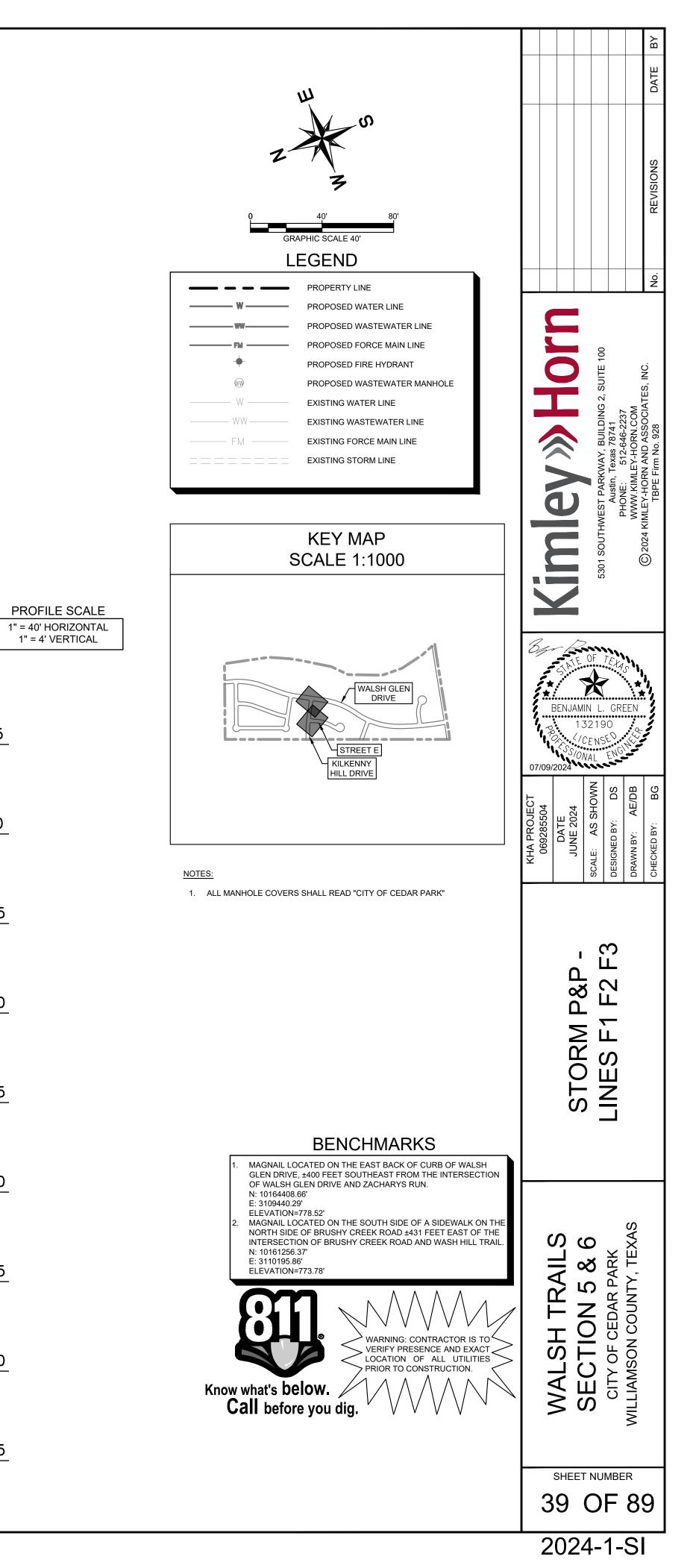
STRM-E

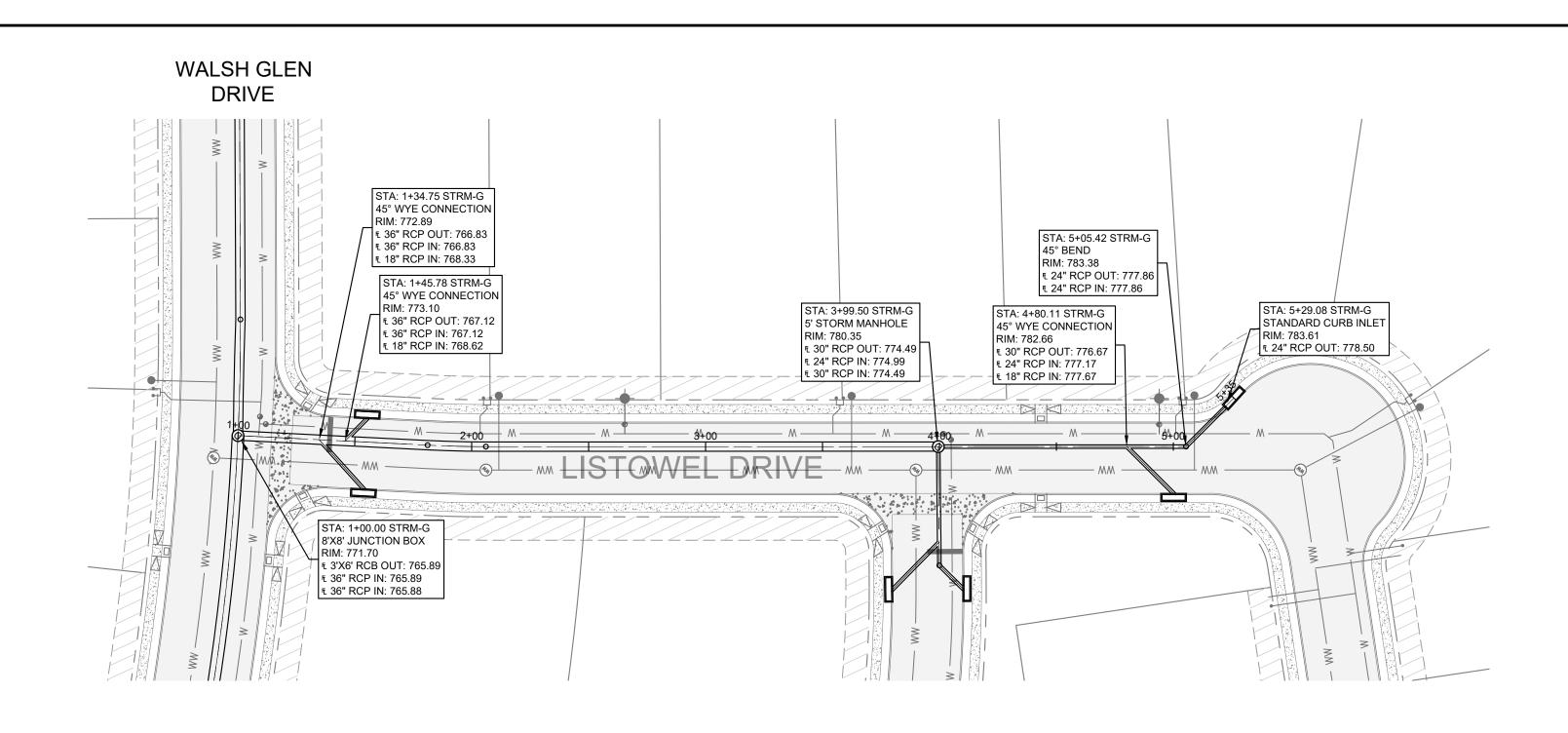


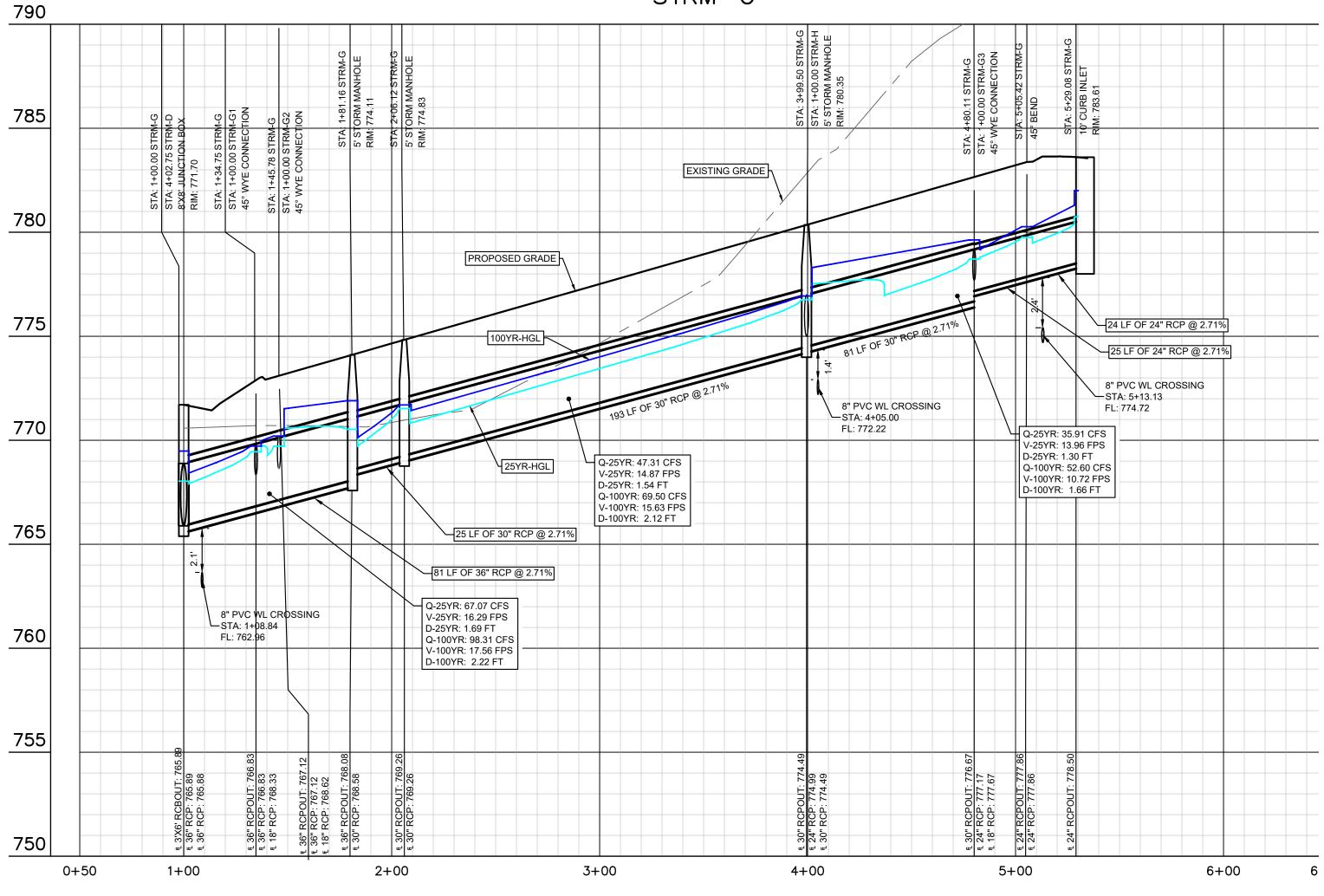






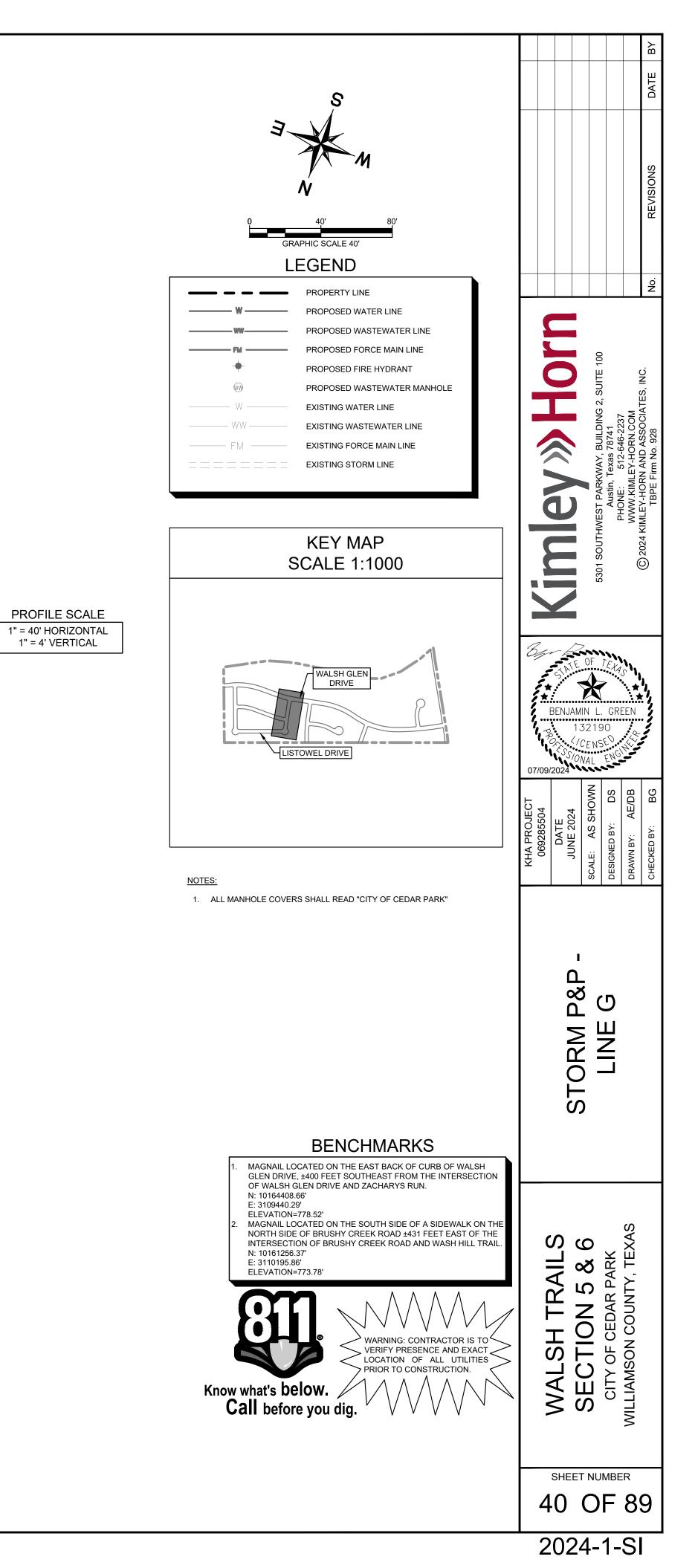


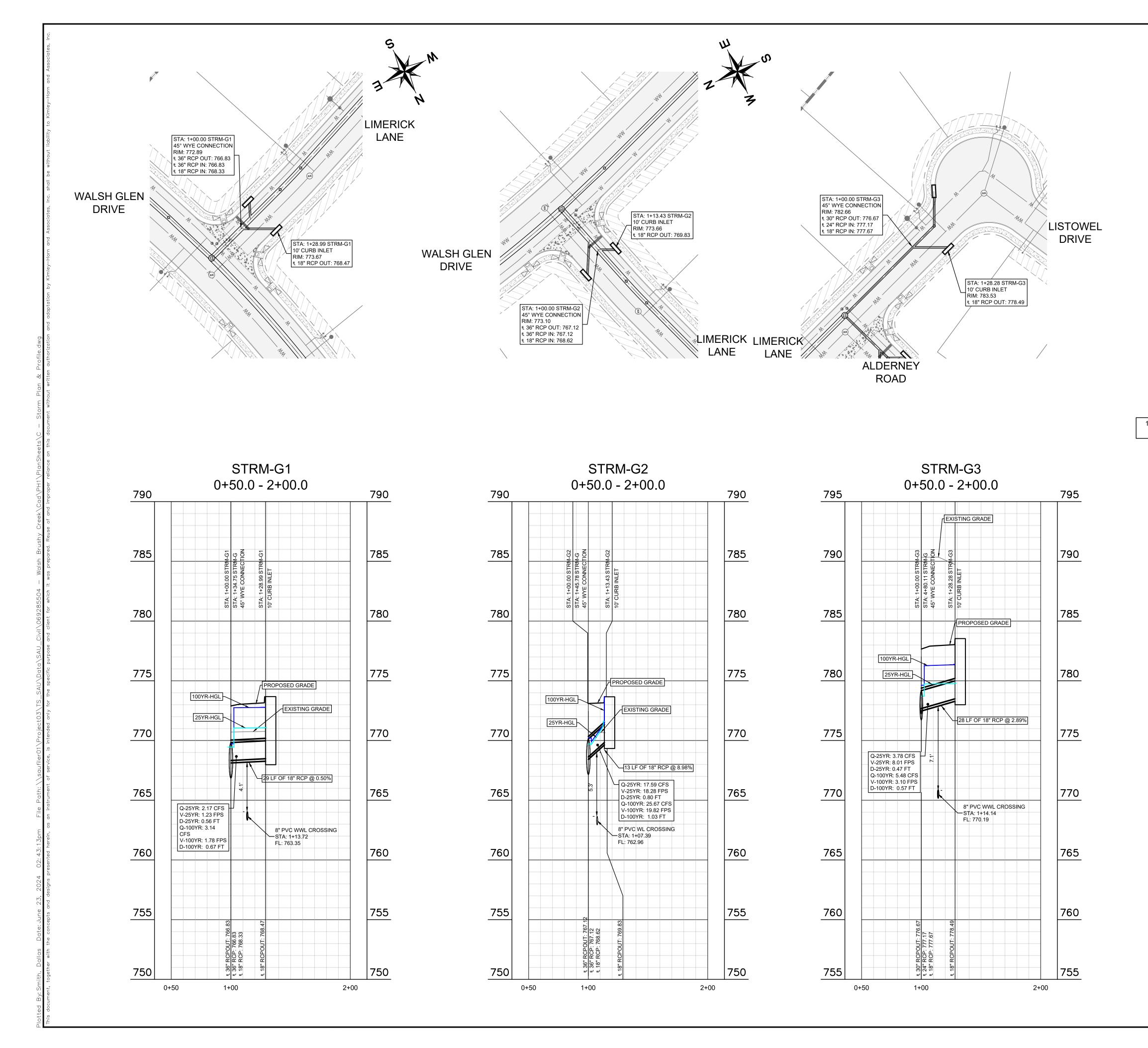


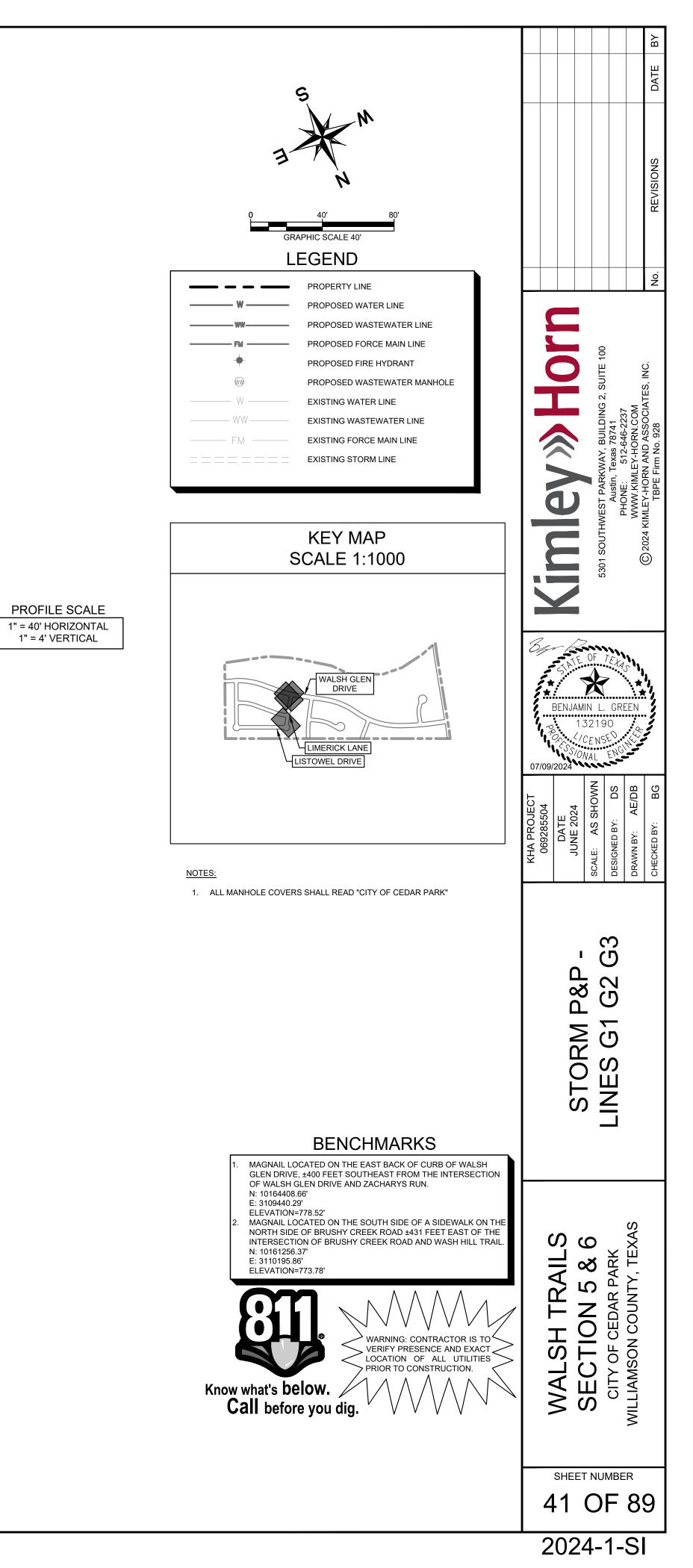


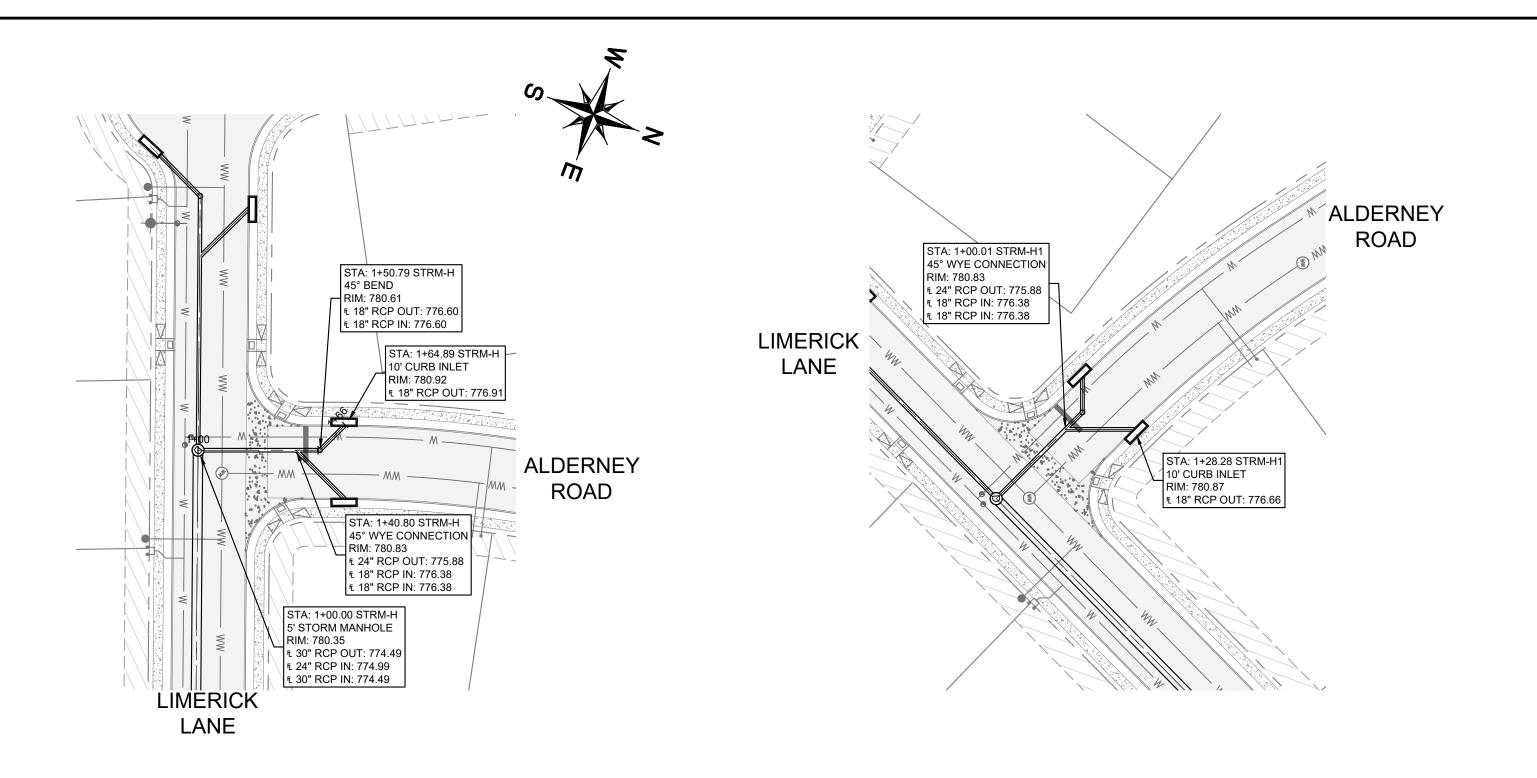


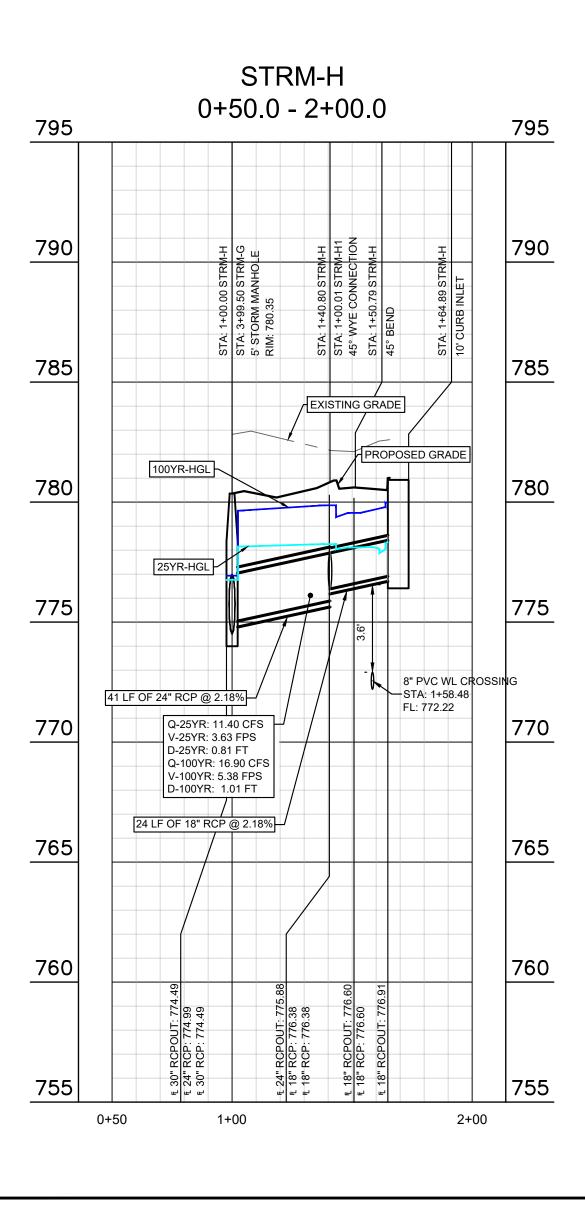


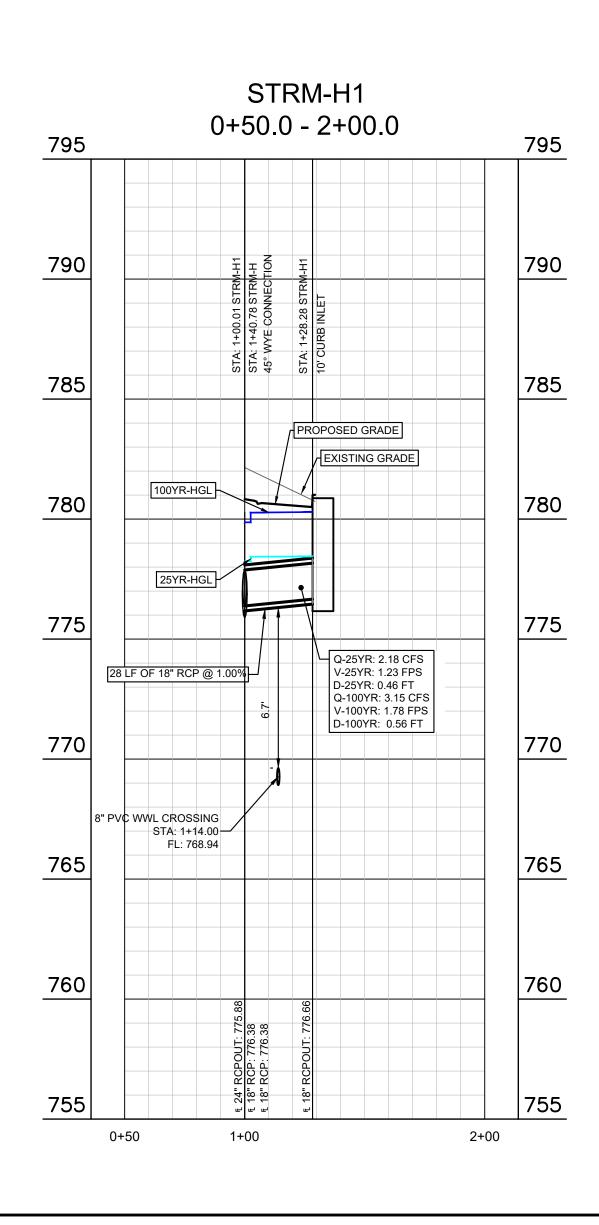


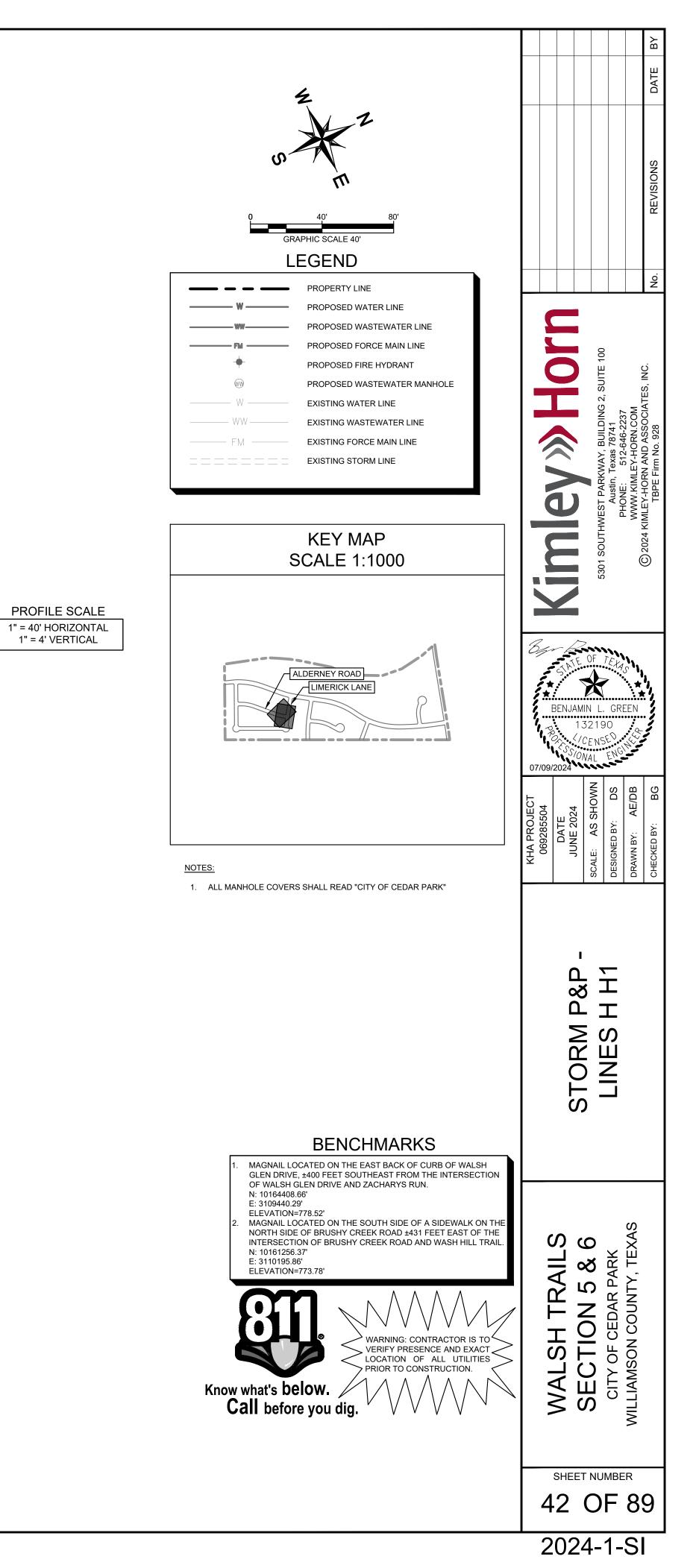


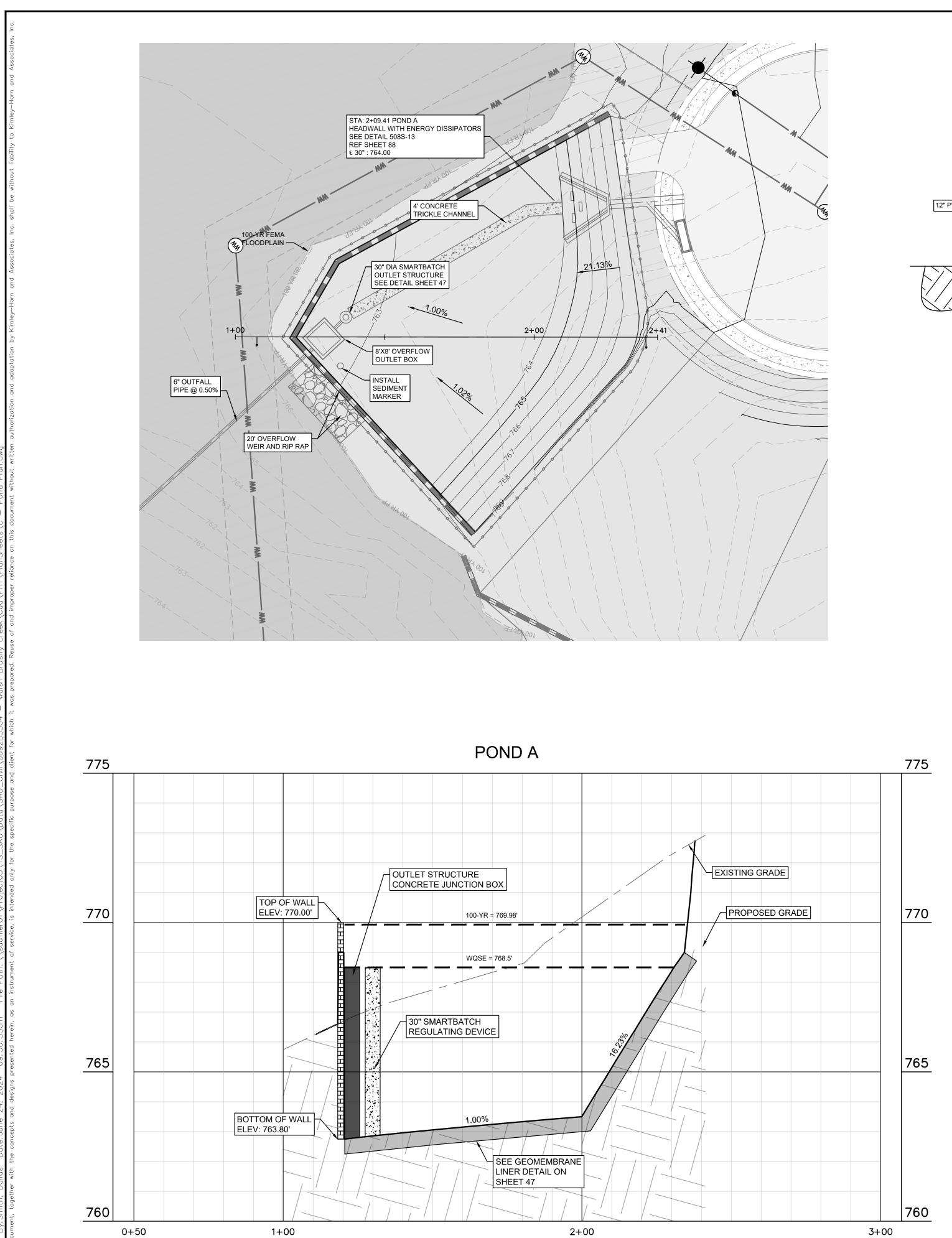




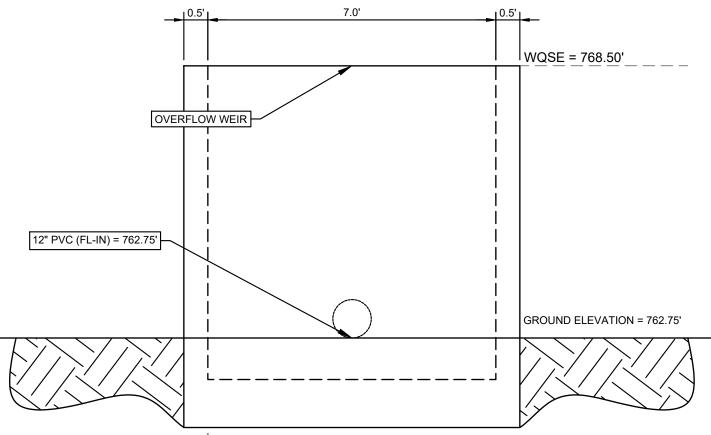


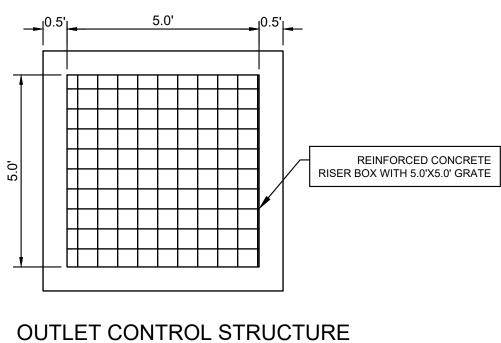








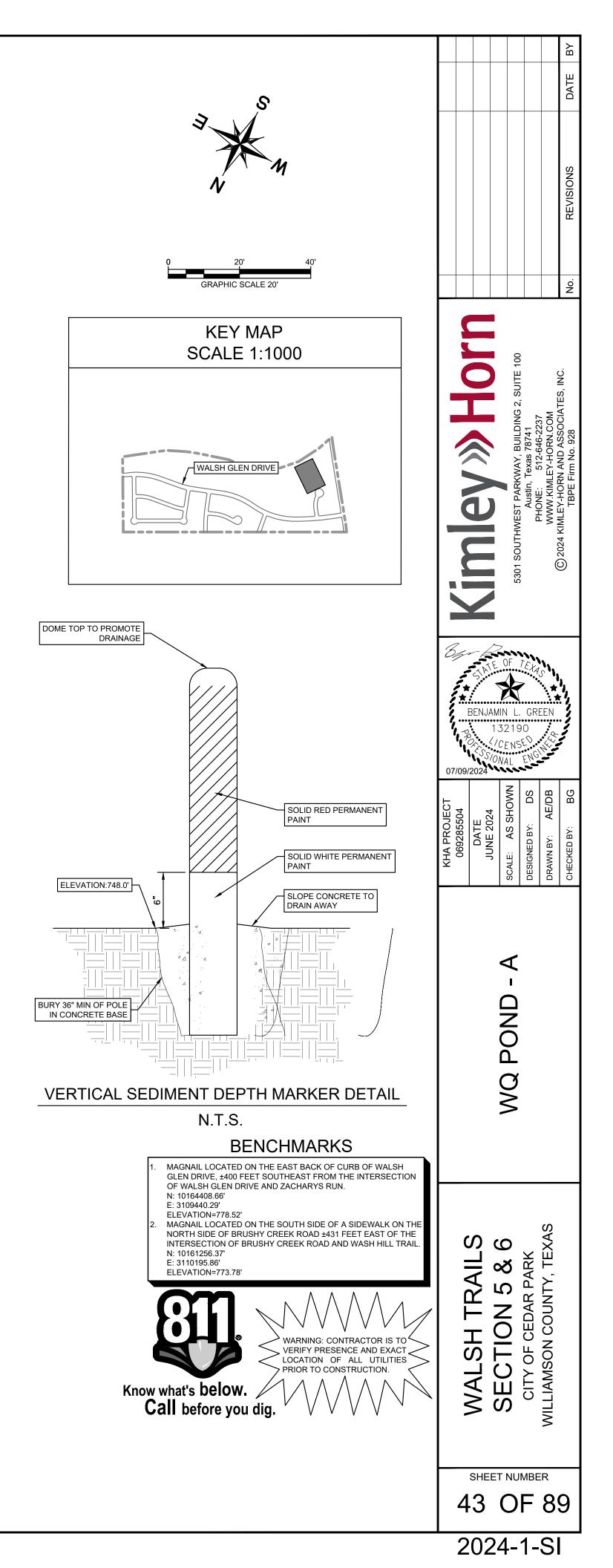


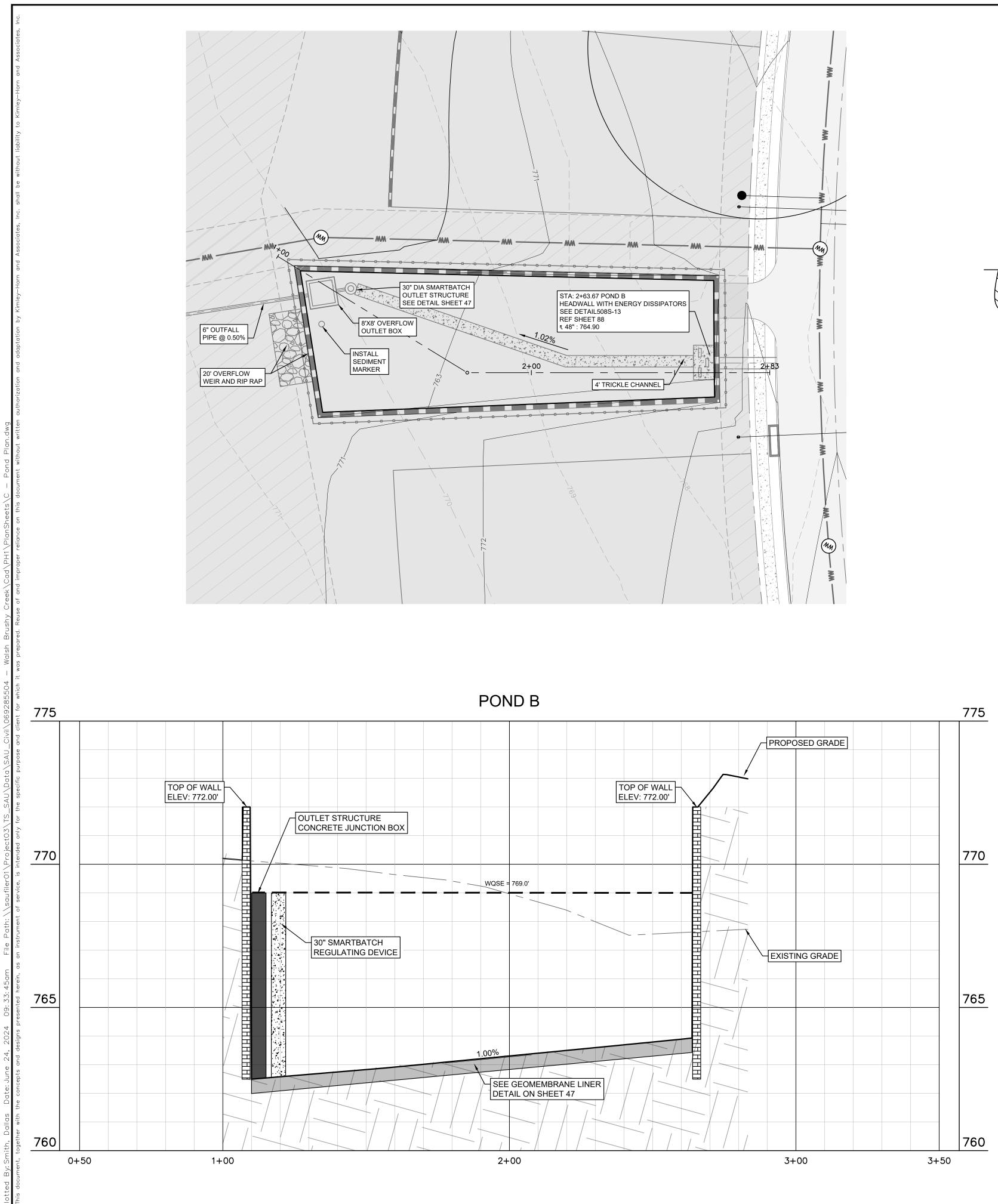


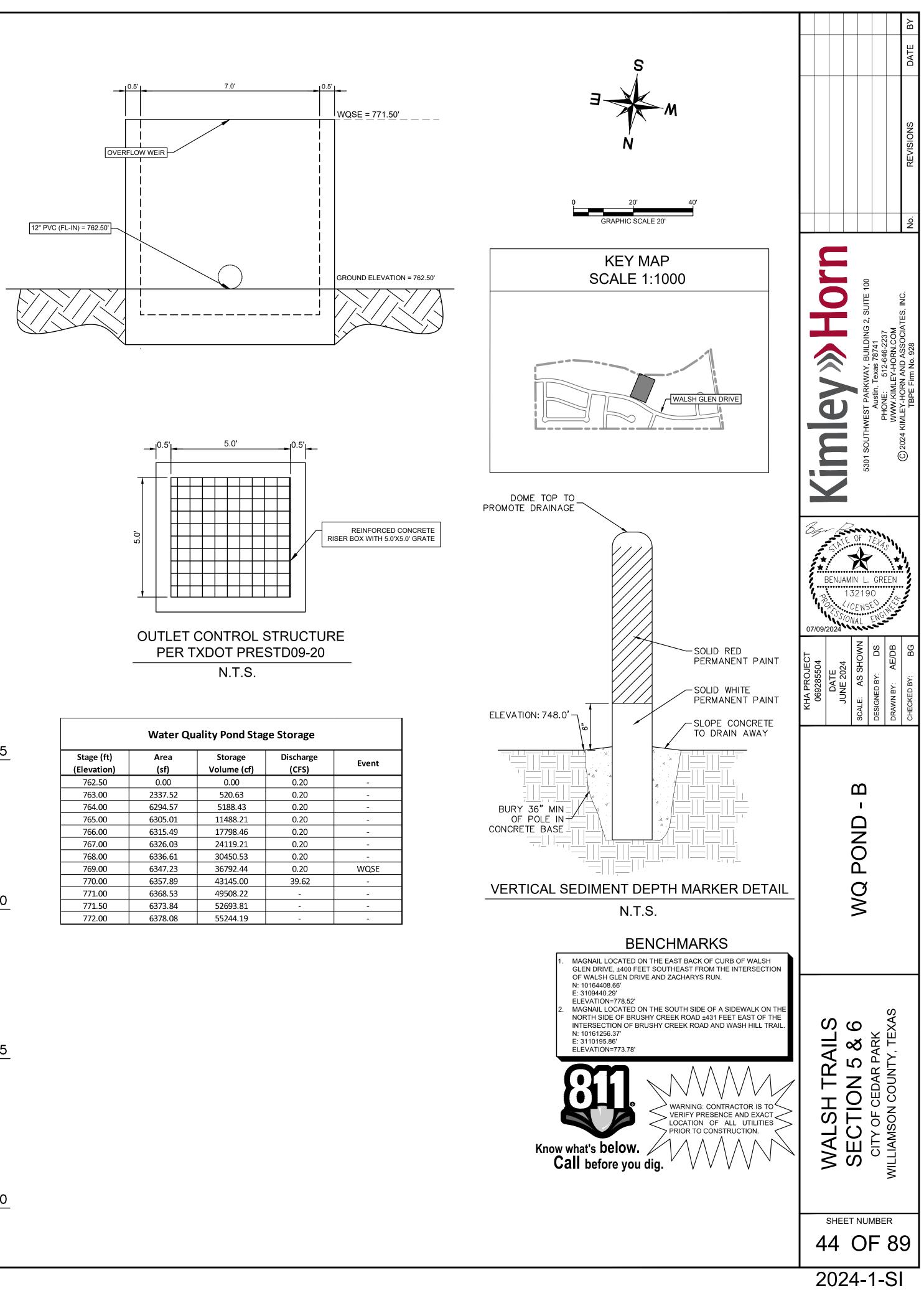
PER TXDOT PRESTD09-20

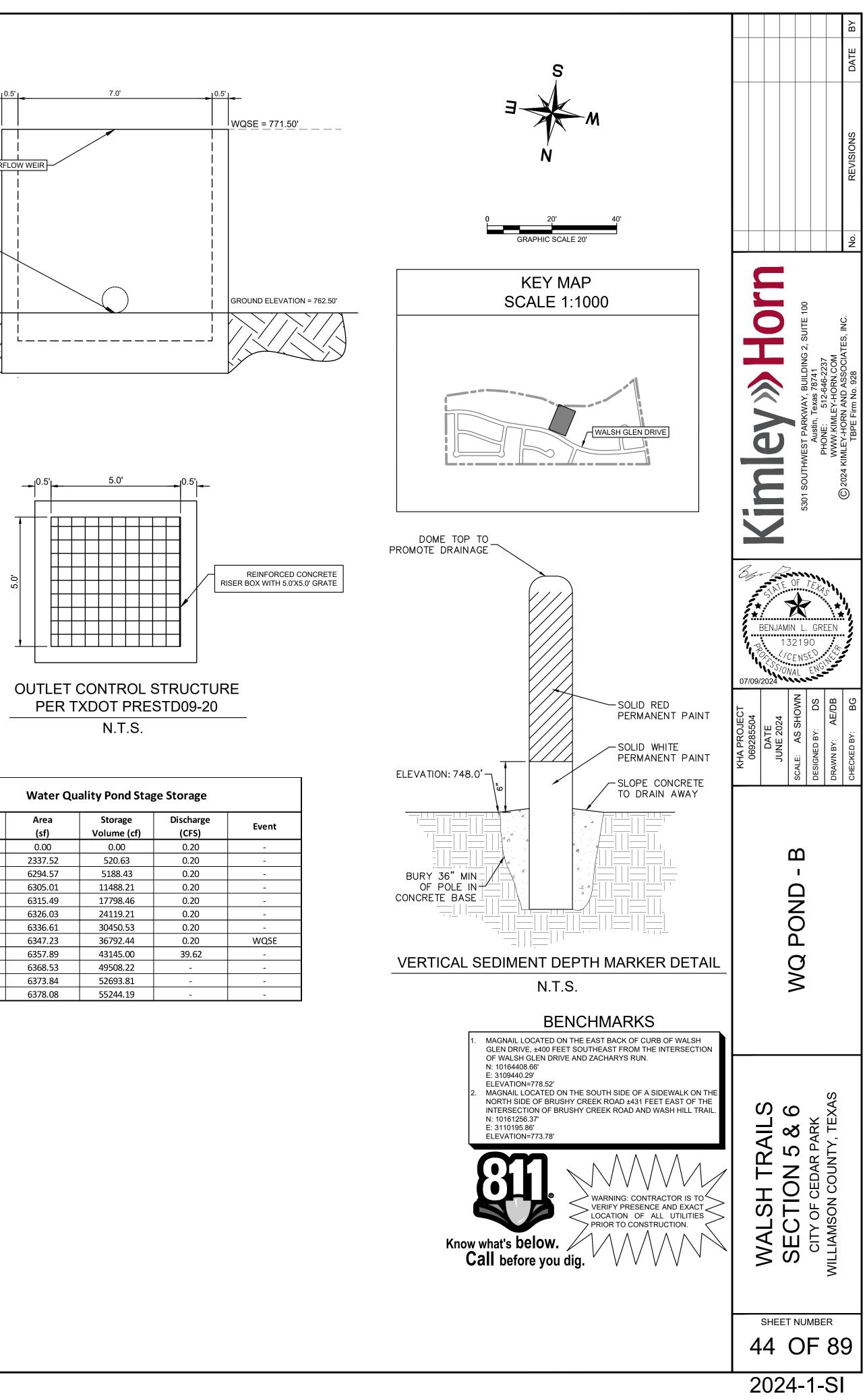
N.T.S.

Water Quality Pond Stage Storage					
Stage (ft) (Elevation)	Area (sf)	Storage Volume (cf)	Discharge (CFS)	Event	
762.75	0.00	0.00	0.20	-	
763.00	812.50	75.61	0.20	-	
764.00	5594.85	4719.70	0.20	-	
765.00	6205.80	9437.77	0.20	-	
766.00	6842.76	16577.45	0.20	-	
767.00	7506.02	23749.79	0.20	-	
768.00	8195.19	31598.44	0.20	-	
768.50	8550.70	35784.58	0.20	WQSE	
769.00	8841.25	39262.74	42.12	-	
769.98	9065.21	43581.56	97.01	100-YR	

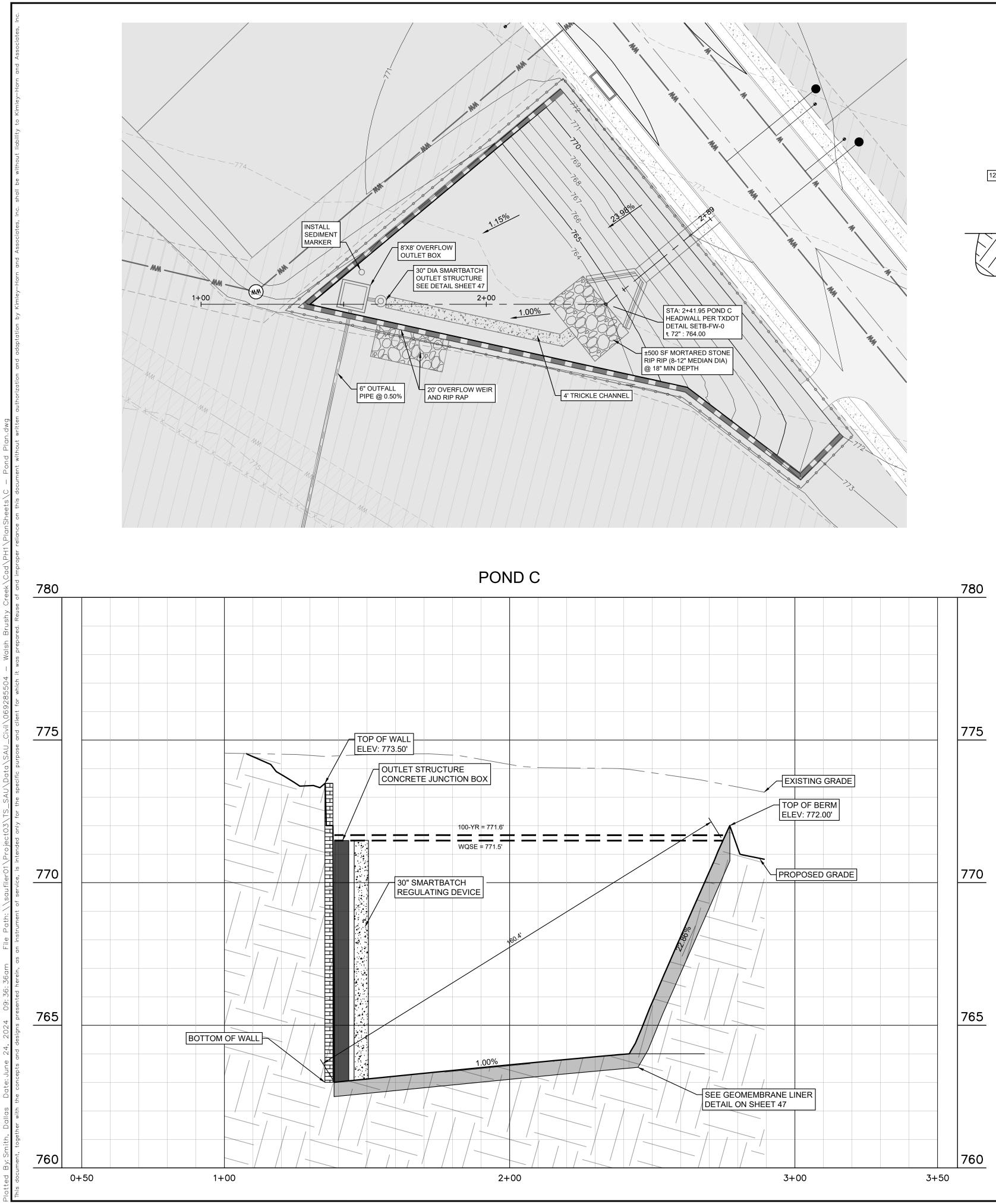


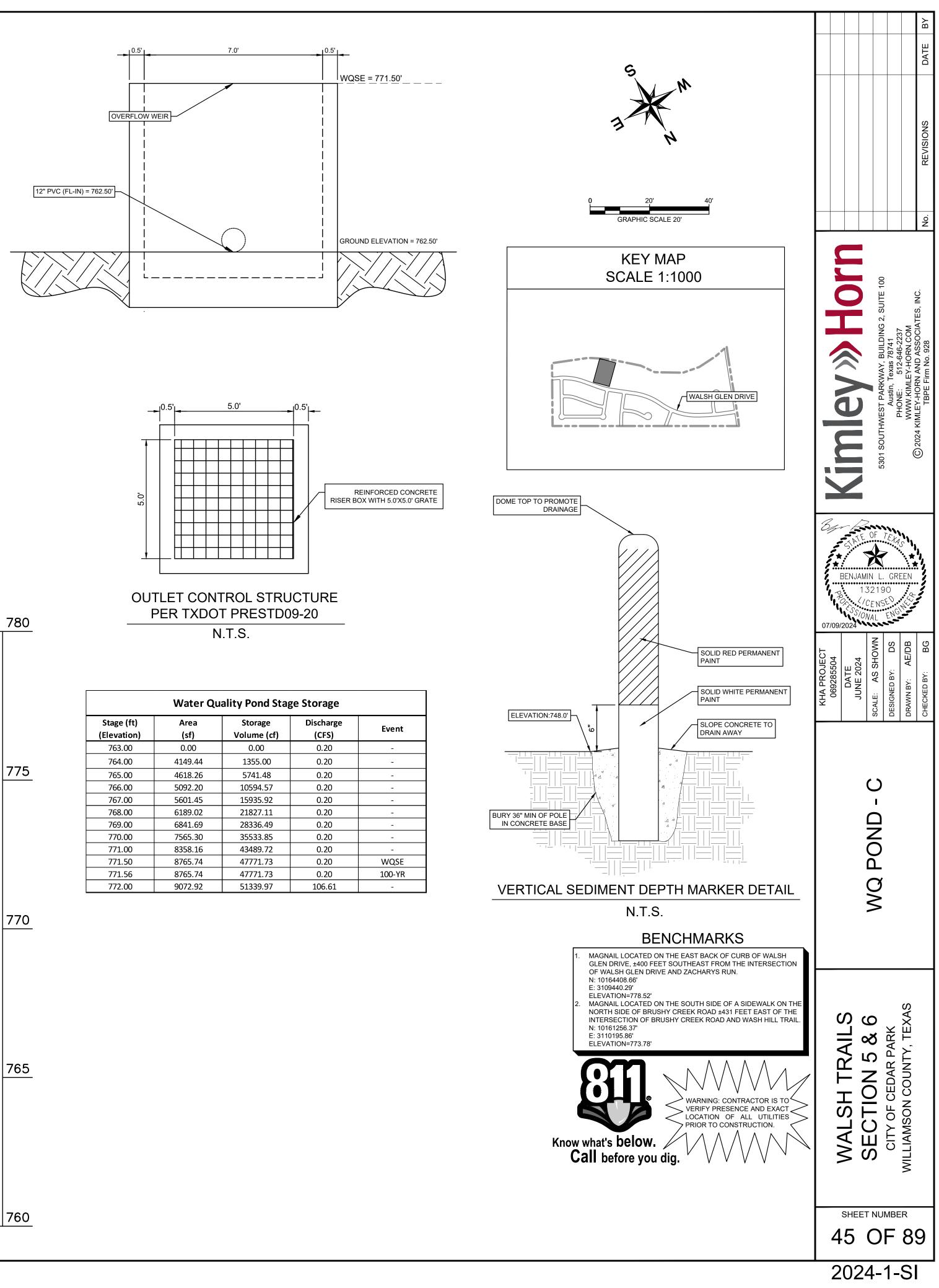


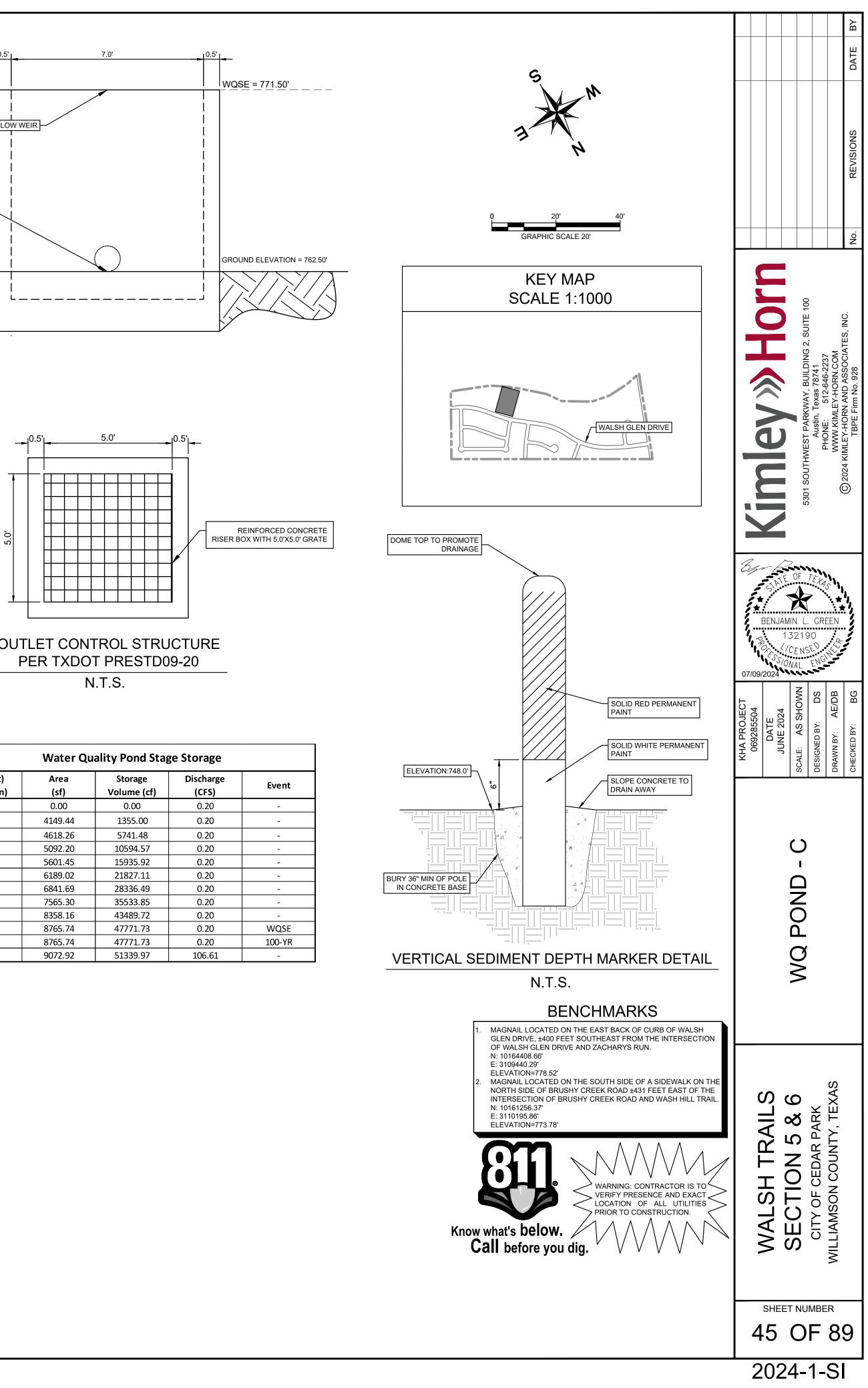




Water Quality Pond Stage Storage					
Stage (ft) (Elevation)	Area (sf)	Storage Volume (cf)	Discharge (CFS)	Event	
762.50	0.00	0.00	0.20	-	
763.00	2337.52	520.63	0.20	-	
764.00	6294.57	5188.43	0.20	-	
765.00	6305.01	11488.21	0.20	-	
766.00	6315.49	17798.46	0.20	-	
767.00	6326.03	24119.21	0.20	-	
768.00	6336.61	30450.53	0.20	-	
769.00	6347.23	36792.44	0.20	WQSE	
770.00	6357.89	43145.00	39.62	_	
771.00	6368.53	49508.22	-	_	
771.50	6373.84	52693.81	-	_	
772.00	6378.08	55244.19	-	-	







Stage (ft) (Elevation)	Area (sf)	Storage Volume (cf)	Discharge (CFS)	Event	
763.00	0.00	0.00	0.20	-	
764.00	4149.44	1355.00	0.20	-	
765.00	4618.26	5741.48	0.20	-	
766.00	5092.20	10594.57	0.20	-	
767.00	5601.45	15935.92	0.20	-	
768.00	6189.02	21827.11	0.20	-	
769.00	6841.69	28336.49	0.20	-	
770.00	7565.30	35533.85	0.20	-	
771.00	8358.16	43489.72	0.20	-	
771.50	8765.74	47771.73	0.20	WQSE	
771.56	8765.74	47771.73	0.20	100-YR	
772.00	9072.92	51339.97	106.61	-	

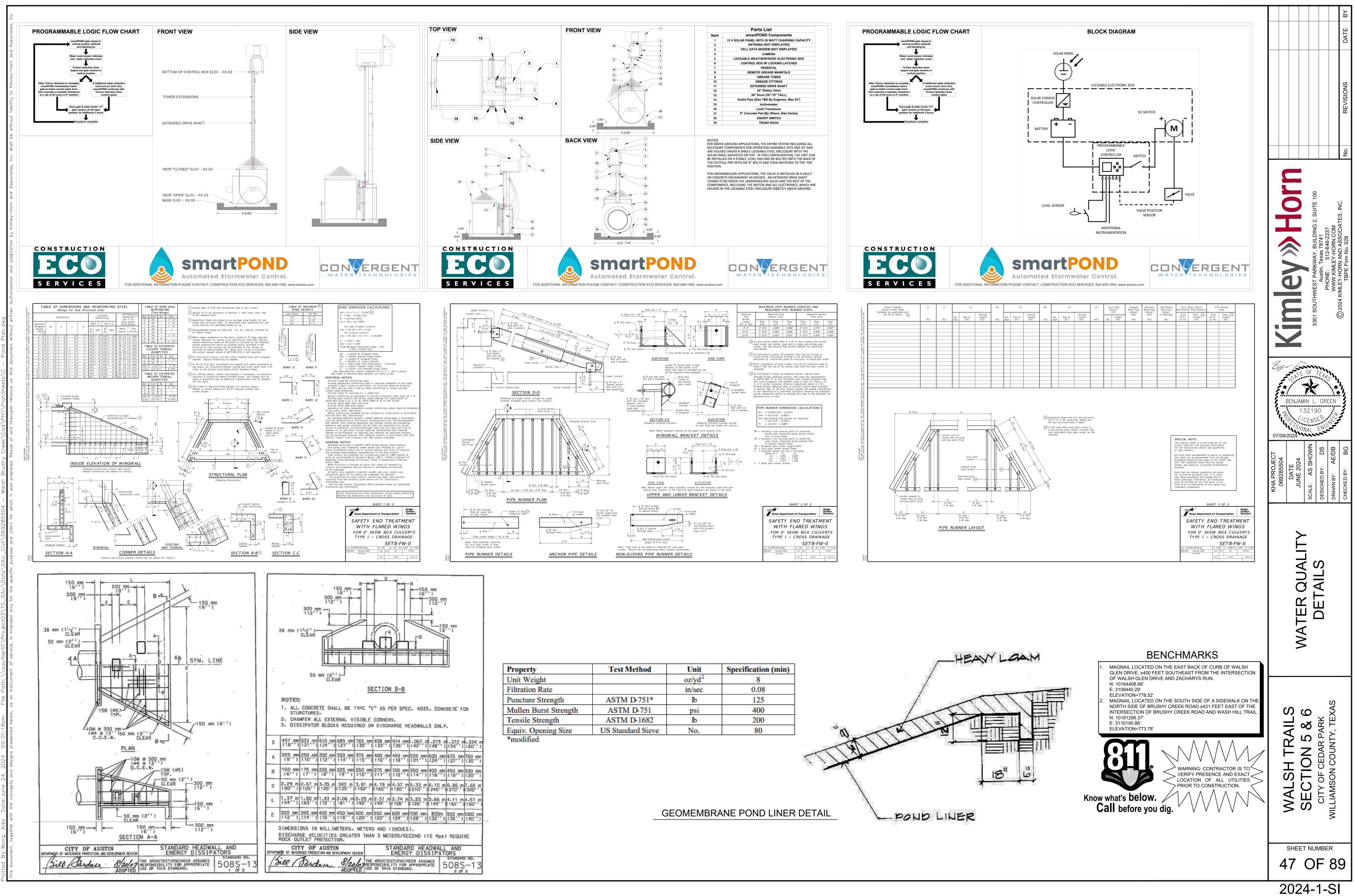
es, Inc.	WQ P	ON	DA		
Associate	Texas Commission on Environmental Quality				Texas Commission on Environr
orn and	TSS Removal Calculations 04-20-2009			Project Name: Walsh Trails Section 5 & 6 Date Prepared: 5/9/2024	TSS Removal Calculations 04-20-20
ity to Kimley–H	Additional information is provided for cells with a red triangle Text shown in blue indicate location of instructions in the Technical (Characters shown in red are data entry fields. Characters shown in black (Bold) are calculated fields. Chan	Guidance N	lanual - RG-3	ner. Place the cursor over the cell. 48.	Additional information is provided Text shown in blue indicate location of Characters shown in red are data e Characters shown in black (Bold) a
ut liabi		alculations fr		Pages 3-27 to 3-30	1. The Required Load Reduction for the to
without	Page 3-29 Equation 3.3: $L_M = 23$	7.2(A _N x P)			
ic. shall be	A _N = N	et increase ir	removal resultin n impervious are al precipitation, i		where:
ates, Ir	Site Data: Determine Required Load Removal Based on the Entire Project County =	Williamso	n •		Site Data: Determine Required Load Ren
rn and Associe	Total project area included in plan * = Predevelopment impervious area within the limits of the plan * = Total post-development impervious area within the limits of the plan* = Total post-development impervious cover fraction * = P =	52.96 5.49 31.78 0.60 32	acres acres acres inches		Total p Predevelopment impervious area Total post-development impervious are Total post-developm
imley–Ho	L _{M TOTAL PROJECT} = * The values entered in these fields should be for the total project area.	22879	Ibs.		* The values entered in these fields shoul
ion by Ki	Number of drainage basins / outfalls areas leaving the plan area =	3	•		Number of drainage basins / outfa
daptati	2. Drainage Basin Parameters (This information should be provided for ea	ach basin):			2. Drainage Basin Parameters (This inform
anda	Drainage Basin/Outfall Area No. =	1	•		Drair
authorization	Total drainage basin/outfall area = Predevelopment impervious area within drainage basin/outfall area = Post-development impervious area within drainage basin/outfall area = Post-development impervious fraction within drainage basin/outfall area = L _{M THIS BASIN} =	13.29 1.85 7.97 0.60 5330	acres acres acres Ibs.		To Predevelopment impervious area wit Post-development impervious area wit Post-development impervious fraction wit
written	3. Indicate the proposed BMP Code for this basin.				3. Indicate the proposed BMP Code for thi
per reliance on this document without	Proposed BMP = B Removal efficiency =	91	percent	Aqualogic Cartridge Filter Bioretention Contech StormFilter Constructed Wetland Extended Detention Grassy Swale Retention / Irrigation Sand Filter Stomceptor Vegetated Filter Strips Vortechs Wet Basin Wet Vault	
l improper	4. Calculate Maximum TSS Load Removed (L _R) for this Drainage Basin by RG-348 Page 3-33 Equation 3.7: L _R = (E		5. S	4 6 + A ₂ x 0 54)	4. Calculate Maximum TSS Load Remove
it was prepared. Reuse of and	where: $A_{C} = Tc$ $A_{I} = Im$ $A_{P} = P$ $L_{R} = Tc$ $A_{C} =$ $A_{I} =$ $A_{P} =$	otal On-Site o pervious are ervious area	drainage area in a proposed in th remaining in the	the BMP catchment area le BMP catchment area BMP catchment area atchment area by the proposed BMP	where:
for which i	L _R =		ius		5. Calculate Fraction of Annual Runoff to
client	5. Calculate Fraction of Annual Runoff to Treat the drainage basin / outfal Desired $L_{M THIS BASIN}$ =	6400	Ibs.		5. Calculate Macton of Annual Kullon to
e and	F =	0.79	2		
ic purpose	6. Calculate Capture Volume required by the BMP Type for this drainage	basin / outfa	all area.	Calculations from RG-348 Pages 3-34 to 3-36	6. Calculate Capture Volume required by
for the specific	Rainfall Depth = Post Development Runoff Coefficient = On-site Water Quality Volume =	1.04 0.42 21088	inches • cubic feet		Post D
ly for	c	alculations fr	om RG-348	Pages 3-36 to 3-37	
is intended only	Off-site area draining to BMP = Off-site Impervious cover draining to BMP = Impervious fraction of off-site area = Off-site Runoff Coefficient = Off-site Water Quality Volume =	3.08 1.85 0.60 0.42 4887	acres acres • cubic feet		Off-site Imp Imp
nent of service,	Storage for Sediment = Total Capture Volume (required water quality volume(s) x 1.20) =	5195 31171	cubic feet		Total Capture Volume (required wat

WQ POND B

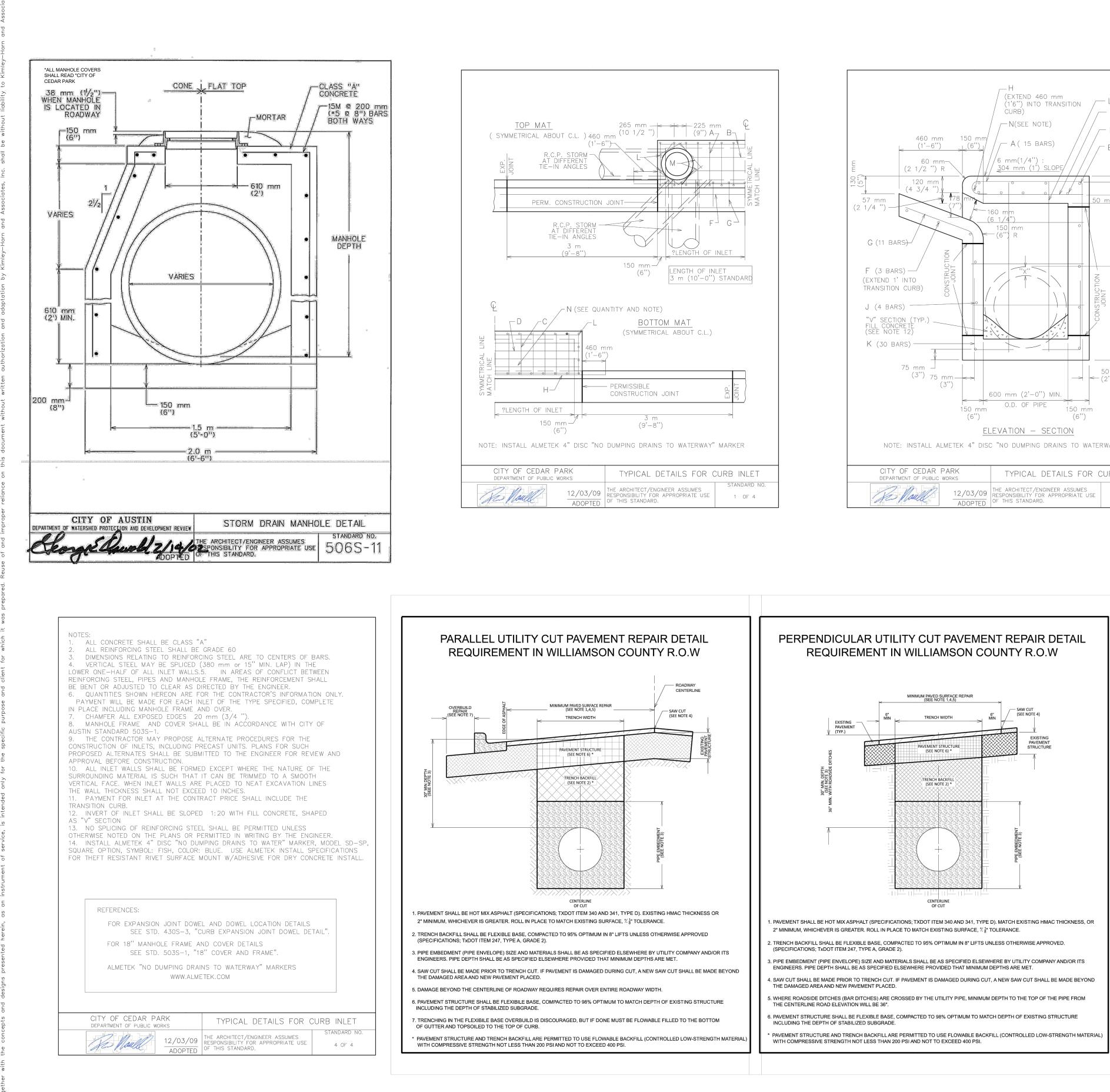
WQ POND C

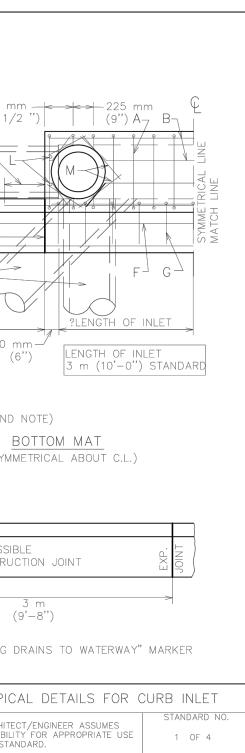
onmental Quality			Texas Commission on Environmental Quality			
0-2009		Project Name: Walsh Trails Section 5 & 6 Date Prepared: 5/9/2024	TSS Removal Calculations 04-20-2009	Project Name Date Prepared		
ed for cells with a red triangle in the upper right corner. Place the cursor over the cell. n of instructions in the Technical Guidance Manual - RG-348. ta entry fields. d) are calculated fields. Changes to these fields will remove the equations used in the spreadsheet.			Additional information is provided for cells with a red triangle in the upper right corner. Place the Text shown in blue indicate location of instructions in the Technical Guidance Manual - RG-348. Characters shown in red are data entry fields. Characters shown in black (Bold) are calculated fields. Changes to these fields will remove the e			
ne total project:	Calculations from RG-348	Pages 3-27 to 3-30	1. The Required Load Reduction for the total project:	Calculations from RG-348		
Page 3-29 Equation 3.3: $L_M = 2$	27.2(A _N x P)		Page 3-29 Equation 3.3:	$L_1 = 27.2(A_1 \times P)$		
		ing from the managed development = 000% of increased land				
$A_N = N$	Net increase in impervious ar Average annual precipitation,		where: L _{M TOTAL PRO}	J _{JECT} = Required TSS removal resulting from the propose A _N = Net increase in impervious area for the project P = Average annual precipitation, inches		
Removal Based on the Entire Project	_		Site Data: Determine Required Load Removal Based on the Entire			
otal project area included in plan * =	Williamson 52.96 acres		Total project area included in pla			
area within the limits of the plan * = s area within the limits of the plan* =	5.49 acres 31.78 acres		Predevelopment impervious area within the limits of the pl. Total post-development impervious area within the limits of the p			
opment impervious cover fraction * = P =	0.60 32 inches		Total post-development impervious cover fracti	on * = 0.60 P = 32 inches		
	22879 Ibs.			IFCT = 22879 Ibs.		
L _{M TOTAL PROJECT} = hould be for the total project area.			L _{M TOTAL PRO.} * The values entered in these fields should be for the total project	5201		
outfalls areas leaving the plan area =	3		Number of drainage basins / outfalls areas leaving the plan a	area = 3		
formation should be provided for e	each basin):		2. Drainage Basin Parameters (This information should be provide	∋d for each basin):		
Drainage Basin/Outfall Area No. =	2		Drainage Basin/Outfall Area	No. = 3		
Total drainage basin/outfall area =	15.07 acres		Total drainage basin/outfall a			
a within drainage basin/outfall area = a within drainage basin/outfall area =	1.05 acres 9.04 acres		Predevelopment impervious area within drainage basin/outfall a Post-development impervious area within drainage basin/outfall a			
within drainage basin/outfall area =	0.60 6956 ¹ lbs.		Post-development impervious fraction within drainage basin/outfall a			
L _{M THIS BASIN} =	0350 155.		L _{M THIS В}	4SIN - 10330 105.		
<u>r this basin.</u>			3. Indicate the proposed BMP Code for this basin.			
		Contech StormFilter Constructed Wetland Extended Detention Grassy Swale Retention / Irrigation Sand Filter Stormceptor Vegetated Filter Strips Vortechs Wet Basin Wet Vault				
oved (L _R) for this Drainage Basin b		-	<u>4. Calculate Maximum TSS Load Removed (L_R) for this Drainage</u>			
3-348 Page 3-33 Equation 3.7: L _R = ((BMP efficiency) x P x (A _I x	34.6 + A _P x 0.54)	RG-348 Page 3-33 Equation 3.7:	L_R = (BMP efficiency) x P x (A _I x 34.6 + A _P x 0.54)		
	Total On-Site drainage area i mpervious area proposed in		where:	A_{C} = Total On-Site drainage area in the BMP catchmer A ₁ = Impervious area proposed in the BMP catchmer		
	Pervious area remaining in th			A_P = Pervious area remaining in the BMP catchment		
L _R = 1	TSS Load removed from this	catchment area by the proposed BMP		$\rm L_{\rm R}$ = TSS Load removed from this catchment area by		
A _C =	15.07 acres			A _C = 24.61 acres		
A ₁ = A _P =	9.04 acres 6.03 acres			A ₁ = 14.77 acres A _P = 9.84 acres		
L _R =	9205 Ibs			$L_R = 15032$ Ibs		
f to Treat the drainage basin / outfa	all area		5. Calculate Fraction of Annual Runoff to Treat the drainage basir	n / outfall area		
Desired L _{M THIS BASIN} =	7000 Ibs.		Desired L _{M THIS B}	= 10750 [™] Ibs.		
F =	0.76			F = 0.72		
by the BMP Type for this drainage	e basin / outfall area. 🤇	Calculations from RG-348 Pages 3-34 to 3-36	6. Calculate Capture Volume required by the BMP Type for this d	rainage basin / outfall area. Calculations from RC		
Deinfell Denth -	0.04 inches			anth a 0.02 inches		
Rainfall Depth = st Development Runoff Coefficient = On-site Water Quality Volume =	0.94 inches 0.42 21706 cubic feet		Rainfall De Post Development Runoff Coeffici On-site Water Quality Volu	ent = 0.42		
c	Calculations from RG-348 F	Pages 3-36 to 3-37		Calculations from RG-348 Pages 3-36 to 3-37		
Off-site area draining to BMP =	3.79 acres		Off-site area draining to B	MP = 4.47 acres		
Impervious cover draining to BMP = Impervious fraction of off-site area =	2.26 acres 0.60		Off-site Impervious cover draining to B Impervious fraction of off-site a			
Off-site Runoff Coefficient = Off-site Water Quality Volume =	0.42 5424 cubic feet		Off-site Runoff Coeffic Off-site Water Quality Volu	ient = 0.42		
Storage for Sediment =	5426		Storage for Sedim	nent = 7383		
water quality volume(s) x 1.20) =	32556 cubic feet		Total Capture Volume (required water quality volume(s) x 1	.20) = 44298 cubic feet		

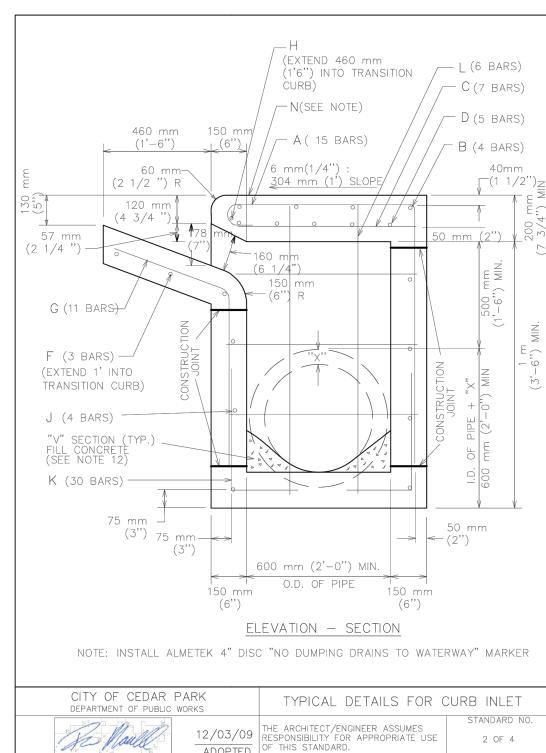




Property	Test Method	Unit	Specification (min)
Unit Weight		oz/yd ²	8
Filtration Rate		in/sec	0.08
Puncture Strength	ASTM D-751*	Ъ	125
Mullen Burst Strength	ASTM D-751	psi	400
Tensile Strength	ASTM D-1682	Ъ	200
Equiv. Opening Size	US Standard Sieve	No.	80







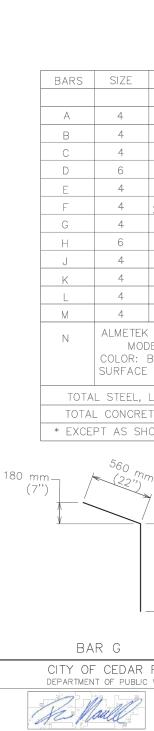
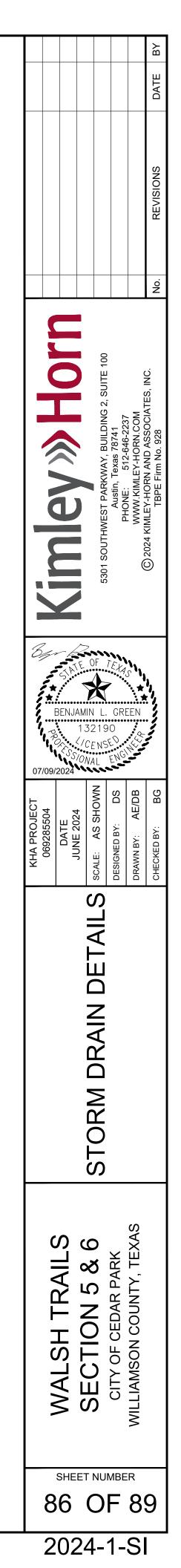
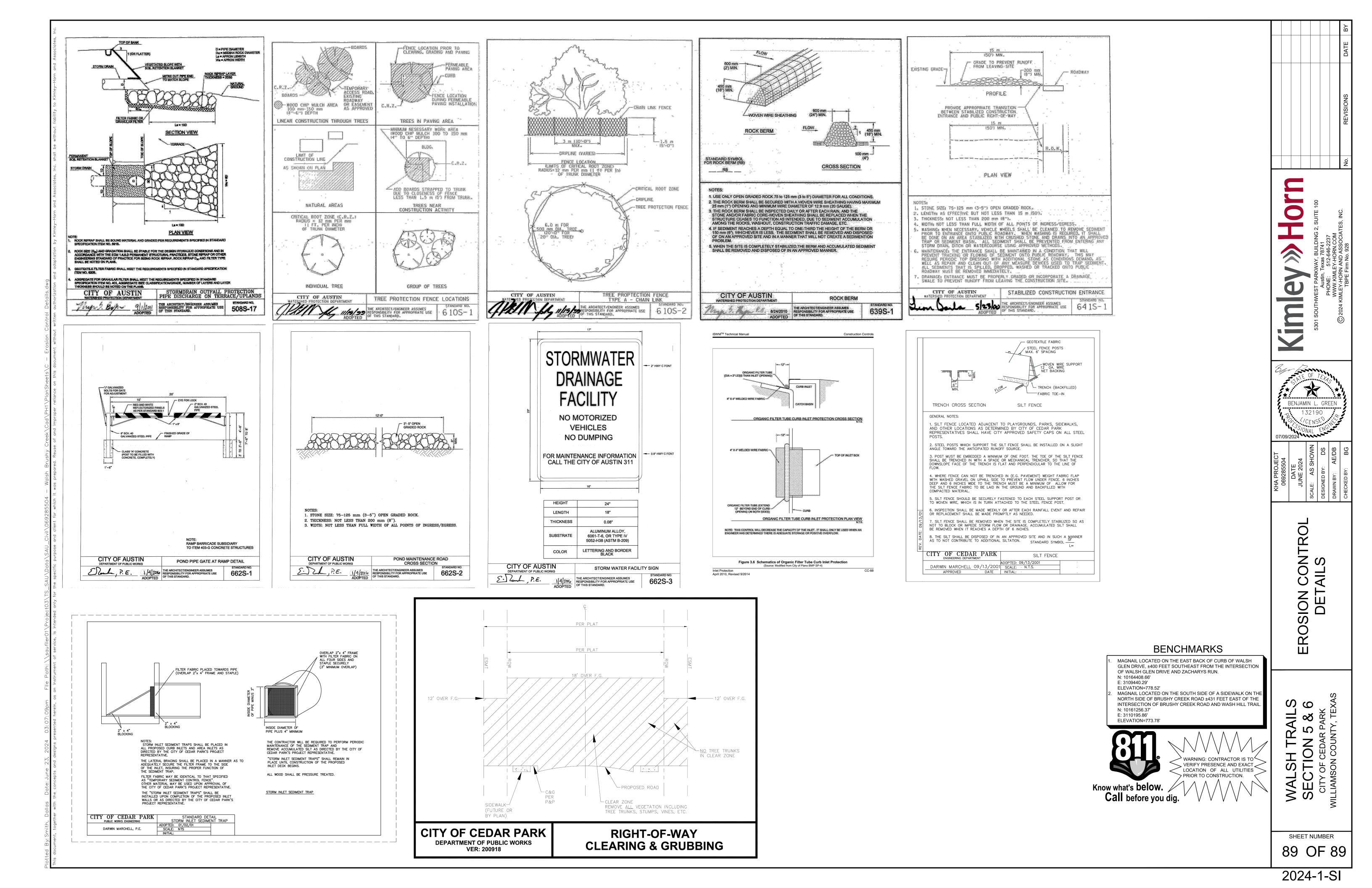


TABLE OF QUANTITIES FOR 18" OUTLET PIPE REINFORCING STEEL QUANTITIES						
SPACING	NUMBER	LENGTH	WEIGHT			
230mm (9")*	15	2 m (7'-0'')	73			
250 mm (10'')	4	3.25 m (10'-8'')	29			
460 mm (18'')	7	760 mm (2'-6'')	12			
150 mm (6'')	5	3.25 m (10'-8'')	80			
300 mm (12'')	6	760 mm (2'-6'')	10			
<u>250 mm (10'')</u>	3	4 m (13'-0'')	35			
300 mm (12")	11	1.25 m (4'-3'')	31			
_	1	4.25 m (14'-0'')	20			
300 mm (12'')	7	3.25 m (10'-8'')	50			
230 mm (9")*	30	800 mm (2'-7 1/2'')	52			
300 mm (12'')*	6	1.3 m (4'-4'')	17			
_	4	500 mm (1'-8'') AVG	4			
EL SD-SP, SQU BLUE. USE ALME	are hole tek spec	RAINS TO WATERWAY" M OPTION, SYMBOL: FISH S FOR THEFT RESISTAN R DRY CONCRETE INSTA	, t rivet			
_B.			413			
TE, C.Y. 4.06						
NWN ON PLAN						
2, -2, -2, -2, -2, -2, -2, -2, -2, -2, -	200 mm 200 mm 10 1/2 mm	750 m (2'-5 1/2 /2 ")	") MIN. 			
BAR K BAR A						
PARK works	TYPIC	CAL DETAILS FOR C				
12/03/09		ECT/ENGINEER ASSUMES ITY FOR APPROPRIATE USE NDARD.	STANDARD NO. 3 OF 4			





ATTACHMENT N: Inspection, Maintenance, Repair and Retrofit Plan

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

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

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

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

Inspection and Maintenance For BMPs

Batch detention basins may have somewhat higher maintenance requirements than an extended detention basin since they are active stormwater controls. The maintenance activities are identical to those of extended detention basins with the addition of maintenance and inspections of the automatic controller and the valve at the outlet.

Inspections. Inspections should take place a minimum of twice a year. One inspection should take place during wet weather to determine if the basin is meeting the target detention time of 12 hours and a drawdown time of no more than 48 hours. The remaining inspections should occur between storm events so that manual operation of the valve and controller can be verified. The level sensor in the basin should be inspected and any debris or sediment in the area should be removed. The outlet structure and the trash screen should be inspected for signs of clogging. Debris and sediment should be removed from the orifice and outlet(s) as described in previous sections. Debris obstructing the valve should be identified and repaired/revegetated immediately.

Mowing. The basin, basin side-slopes, and embankment of the basin must be mowed to prevent woody growth and control weeds. A mulching mower should be used, or the grass clippings should be caught and removed. Mowing should take place at least twice a year, or more frequently if vegetation exceeds 18 inches in height. More frequent mowing to maintain aesthetic appeal may be necessary in landscaped areas.

Litter and Debris Removal. Litter and debris removal should take place at least twice a year, as part of the periodic mowing operations and inspections. Debris and litter should be removed

from the surface of the basin. Particular attention should be paid to floatable debris around the outlet structure. The outlet should be checked for possible clogging or obstructions and any debris removed.

Erosion control. The basin side slopes and embankment all may periodically suffer from slumping and erosion. To correct these problems, corrective action, such as regrading and revegetation, may be necessary. Correction of erosion control should take place whenever required based on the periodic inspections.

Nuisance Control. Standing water or soggy conditions may occur in the basin. Some standing water may occur after a storm event since the valve may close with 2 to 3 inches of water in the basin. Some flow into the basin may also occur between storms due to spring flow and residential water use that enters the storm sewer system. Twice a year, the facility should be evaluated in terms of nuisance control (insects, weeds, odors, algae, etc.).

Structural Repairs and Replacement. With each inspection, any damage to structural elements of the basin (pipes, concrete drainage structures, retaining walls, etc.) should be identified and repaired immediately. An example of this type of repair can include patching of cracked concrete, sealing of voids, removal of vegetation from cracks and joints. The various inlet/outlet structures in a basin will eventually deteriorate and must be replaced.

Sediment Removal. A properly designed batch detention basin will accumulate quantities of sediment over time. The accumulated sediment can detract from the appearance of the facility and reduce the pollutant removal performance of the facility. The sediment also tends to accumulate near the outlet structure and can interfere with the level sensor operation. Sediment shall be removed from the basin at least every 5 years, when sediment depth exceeds 6 inches, when the sediment interferes with the level sensor or when the basin does not drain within 48 hours. Care should be taken not to compromise the basin lining during maintenance.

Logic Controller. The Logic Controller should be inspected as part of the twice yearly investigations. Verify that the external indicators (active, cycle in progress) are operating properly by turning the controller off and on, and by initiating a cycle by triggering the level sensor in the basin. The valve should be manually opened and closed using the open/close switch to verify valve operation and to assist in inspecting the valve for debris. The solar panel should be inspected and any dust or debris on the panel should be carefully removed. The controller and all other circuitry and wiring should be inspected for signs of corrosion, damage from insects, water leaks, or other damage. At the end of the inspection, the controller should be reset. A ladder may be required during the inspection process to access the controller box.

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

Responsible Party: Toll Brothers

1320 Arrow Point Dr, Suite 401 Mailing Address: City, State: Cedar Park, TX Zip: 78613

Telephone: <u>412-780-2312</u>

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

Opr R

Signature of Responsible Party

Date 06/24/2024

This Maintenance Plan is based on the TCEQ Edwards Aquifer Technical Guide .

Bark

By: _____Date _05/28/2024_____

Fax:

Benjamin L. Green, P.E.

ATTACHMENT P: Measures for Minimizing Surface Stream Contamination

During construction, standard erosion measures will be used as shown in the construction plans. Runoff from the construction site will be contained by a silt fence until construction is complete. Entry and exit from the site will be through a stabilized construction entrance. The proposed batch detention basin water quality pond system will minimize surface stream contamination by removing 90% of the potential pollutants.

After completion of the project, temporary erosion and sedimentation measures (silt fence and rock berm) will remain in place until vegetative cover is established. Details concerning the erosion/sedimentation protection plan can be found on the Erosion & Sedimentation Control Plans of the construction drawings attached.

Temporary Stormwater Section

Texas Commission on Environmental Quality

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

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

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

Signature

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

Print Name of Customer/Agent: Benjamin L. Green, P.E.

Date: <u>05/28/2024</u>

Signature of Customer/Agent:

Bark

Regulated Entity Name: Walsh Trails Section 5 & 6

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: <u>solvents</u>, <u>stains/paints</u>, <u>fuels</u>, <u>oils</u>, <u>grease</u>, <u>pesticides</u>, <u>fertilizer</u>, <u>sediment/total suspended solids</u>, <u>trash</u>, <u>paving</u>, <u>concrete curing compound</u>, <u>glue adhesives</u>, <u>joint compound</u>, <u>concrete/painting/brick wash</u>, <u>excavation pump out water</u>, <u>concrete</u>

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

- Aboveground storage tanks with a cumulative storage capacity of less than 250 gallons will be stored on the site for less than one (1) year.
- Aboveground storage tanks with a cumulative storage capacity between 250 gallons and 499 gallons will be stored on the site for less than one (1) year.
- Aboveground storage tanks with a cumulative storage capacity of 500 gallons or more will be stored on the site. An Aboveground Storage Tank Facility Plan application must be submitted to the appropriate regional office of the TCEQ prior to moving the tanks onto the project.

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

- 2. Attachment A Spill Response Actions. A site specific description of the measures to be taken to contain any spill of hydrocarbons or hazardous substances is attached.
- 3. Temporary aboveground storage tank systems of 250 gallons or more cumulative storage capacity must be located a minimum horizontal distance of 150 feet from any domestic, industrial, irrigation, or public water supply well, or other sensitive feature.
- 4. Attachment B Potential Sources of Contamination. A description of any activities or processes which may be a potential source of contamination affecting surface water quality is attached.

Sequence of Construction

- 5. Attachment C Sequence of Major Activities. A description of the sequence of major activities which will disturb soils for major portions of the site (grubbing, excavation, grading, utilities, and infrastructure installation) is attached.
 - For each activity described, an estimate (in acres) of the total area of the site to be disturbed by each activity is given.
 - For each activity described, include a description of appropriate temporary control measures and the general timing (or sequence) during the construction process that the measures will be implemented.
- 6. Name the receiving water(s) at or near the site which will be disturbed or which will receive discharges from disturbed areas of the project: <u>Brazos River Basin</u>

Temporary Best Management Practices (TBMPs)

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

7. X Attachment D – Temporary Best Management Practices and Measures. TBMPs and measures will prevent pollution of surface water, groundwater, and stormwater. The

construction-phase BMPs for erosion and sediment controls have been designed to retain sediment on site to the extent practicable. The following information is attached:

- A description of how BMPs and measures will prevent pollution of surface water, groundwater or stormwater that originates upgradient from the site and flows across the site.
- A description of how BMPs and measures will prevent pollution of surface water or groundwater that originates on-site or flows off site, including pollution caused by contaminated stormwater runoff from the site.
- A description of how BMPs and measures will prevent pollutants from entering surface streams, sensitive features, or the aquifer.
- A description of how, to the maximum extent practicable, BMPs and measures will maintain flow to naturally-occurring sensitive features identified in either the geologic assessment, TCEQ inspections, or during excavation, blasting, or construction.
- 8. The temporary sealing of a naturally-occurring sensitive feature which accepts recharge to the Edwards Aquifer as a temporary pollution abatement measure during active construction should be avoided.

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

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

- 9. Attachment F Structural Practices. A description of the structural practices that will be used to divert flows away from exposed soils, to store flows, or to otherwise limit runoff discharge of pollutants from exposed areas of the site is attached. Placement of structural practices in floodplains has been avoided.
- 10. Attachment G Drainage Area Map. A drainage area map supporting the following requirements is attached:

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

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

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

There are no areas greater than 10 acres within a common drainage area that will be disturbed at one time. A smaller sediment basin and/or sediment trap(s) will be

used in combination with other erosion and sediment controls within each disturbed drainage area.

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

Soil Stabilization Practices

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

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

TCEQ-0602 (Rev. 02-11-15)

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

Administrative Information

- 20. All structural controls will be inspected and maintained according to the submitted and approved operation and maintenance plan for the project.
- 21. If any geologic or manmade features, such as caves, faults, sinkholes, etc., are discovered, all regulated activities near the feature will be immediately suspended. The appropriate TCEQ Regional Office shall be immediately notified. Regulated activities must cease and not continue until the TCEQ has reviewed and approved the methods proposed to protect the aquifer from any adverse impacts.
- 22. Silt fences, diversion berms, and other temporary erosion and sediment controls will be constructed and maintained as appropriate to prevent pollutants from entering sensitive features discovered during construction.

ATTACHMENT A: Spill Response Actions

The following practices will be followed for spill prevention and cleanup:

- Manufacturers' recommended methods for spill cleanup will be maintained on-site in the material data sheets (MSDS) and site personnel will be made aware of the procedures and the location of the information and cleanup supplies.
- Materials and equipment necessary for spill cleanup will be kept in the material storage area onsite. Equipment and materials will include but not be limited to brooms, dust pans, mops, rags, gloves, goggles, kitty litter, sand, sawdust and plastic and metal trash containers specifically for this purpose.
- All spills will be cleaned up immediately after discovery.
- The spill area will be kept well ventilated and personnel will wear appropriate protective clothing to prevent injury from contact with a hazardous substance.
- Contact the MS4 Operator, TCEQ (800-832-8224), and the National Response Center (800-424-8802) to inform of any spill of toxic or hazardous material regardless of the size.

The spill prevention plan will be adjusted to include measures to prevent this type of spill from recurring and how to clean up the spill if there is another one. A description of the spill, what caused it, and the cleanup measures will also be included.

Reportable Quantities Link: <u>https://www.tceq.texas.gov/response/spills/spill_rq.html</u>

ATTACHMENT B: Potential Sources of Contamination

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 from 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, construction entrances, and rock berms will prevent sediment from leaving the site. Siltation collected by the control measures will be cleaned from fences, berms, etc. on a routine schedule as outlined in the SWPPP and contract specifications.

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 foundation, street pavement and concrete sidewalks. Oil and fuel discharge from vehicles is anticipated. The proposed permanent BMPs on this project will help mitigate these occurrences.

ATTACHMENT C: Sequence of Major Activities

SEQUENCE OF CONSTRUCTION:

- 1) INSTALL EROSION CONTROLS PER APPROVED PLANS.
 - a) This activity effects less than 0.25-arces of the site, as its mostly consentrated at the borders of the site. The erosion controls will be in place for the duration of the construction and until the permanent BMPs have been established.
- 2) HOLD PRE-CONSTRUCTION CONFERENCE.
- 3) DEMOLISH, REMOVE AND DISPOSE OF PROPERLY ALL EXISTING IMPROVEMENTS SHOWN TO BE REMOVED PER PLANS.
 - a) This activity will effect approximately 0.1-acres of the site, as approximately 1/3 of the site will remain as the existing condition. The erosion controls initially placed will be maintained through this activity.
- 4) ROUGH-CUT ALL REQUIRED OR NECESSARY PONDS. EITHER THE PERMANENT OUTLET STRUCTURE OR A TEMPORARY OUTLET MUST BE CONSTRUCTED PRIOR TO DEVELOPMENT OF ANY EMBANKMENT OR EXCAVATION THAT LEADS TO PONDING CONDITIONS. THE OUTLET SYSTEM SHALL BE PROTECTED FROM EROSION AND SHALL BE MAINTAINED THROUGHOUT THE COURSE OF CONSTRUCTION UNTIL FINAL RESTORATION IS ACHIEVED.
 - a) This activity will continue to effect the 1.0-acres of the site. This activity is preparing the site for the designed drainage condition (grading and ponds). The erosion controls initially placed will be maintained through this activity.
- 5) BEGIN CONSTRUCTION OF UNDER GROUND UTILITY, PAVING AND BUILDING, INSTALL INLET EROSION/SEDIMENTATION PROTECTION.
 - a) This activity will effect approximately 1.5-acres and the erosion controls measures initially placed will remain.
- 6) COMPLETE PERMANENT EROSION CONTROL AND SITE RESTORATION. REMOVE TEMPORARY EROSION/SEDIMENTATION CONTROLS AND TREE PROTECTION. RESTORE ANY AREAS DISTURBED DURING REMOVAL OF EROSION/SEDIMENTATION CONTROLS.
 - a) This activity will effect approximately 0.2 acres and includes placement of the permanent BMPs. The temporary BMPs will only be removed once the permanent BMPs have been established.
- 7) PROJECT ENGINEER INSPECTS JOB AND WRITES LETTER OF CONCURRENCE TO THE PERMITTING AUTHORITY, FINAL INSPECTION WILL BE SCHEDULED UPON RECEIPT OF THE LETTER.
- 8) REMOVE ALL TRASH AND DEBRIS FROM THE SITE AND DISPOSE OF LEGALLY.

ATTACHMENT D: Temporary Best Management Practices and Measures

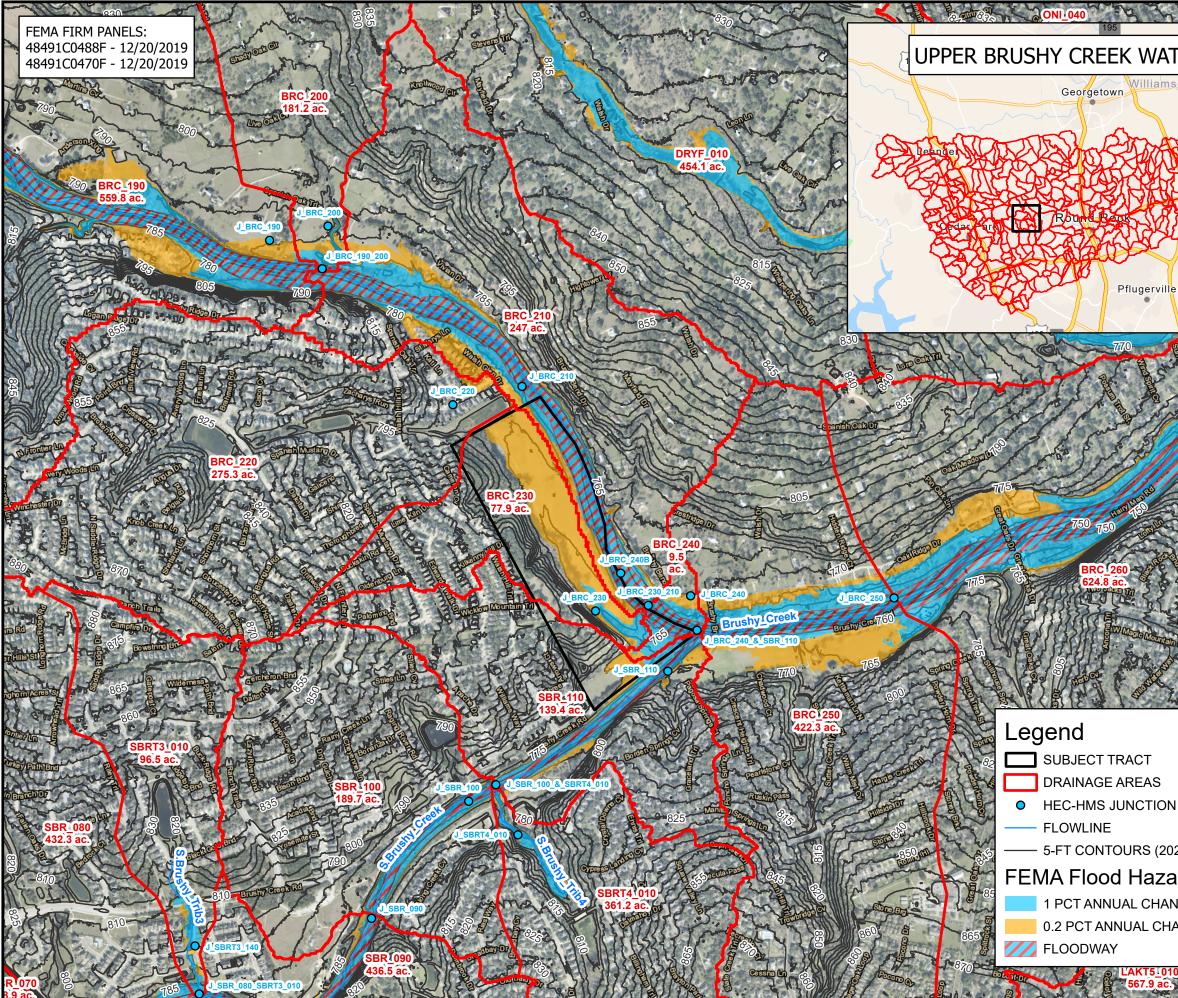
As shown in the erosion and sediment control plan, to protect surface streams during construction activities silt fence will be placed on the downslope along the property line where construction activities end. In addition, a construction entrance will be utilitized to filter stormwater through the rock material, inlet protection will be placed at installed inlets and rock berms will be placed in the drainage culvert to the east of the site to protect the surface streams further from any sediment that does make it through the other BMP controls.

ATTACHMENT E: Structural Practices

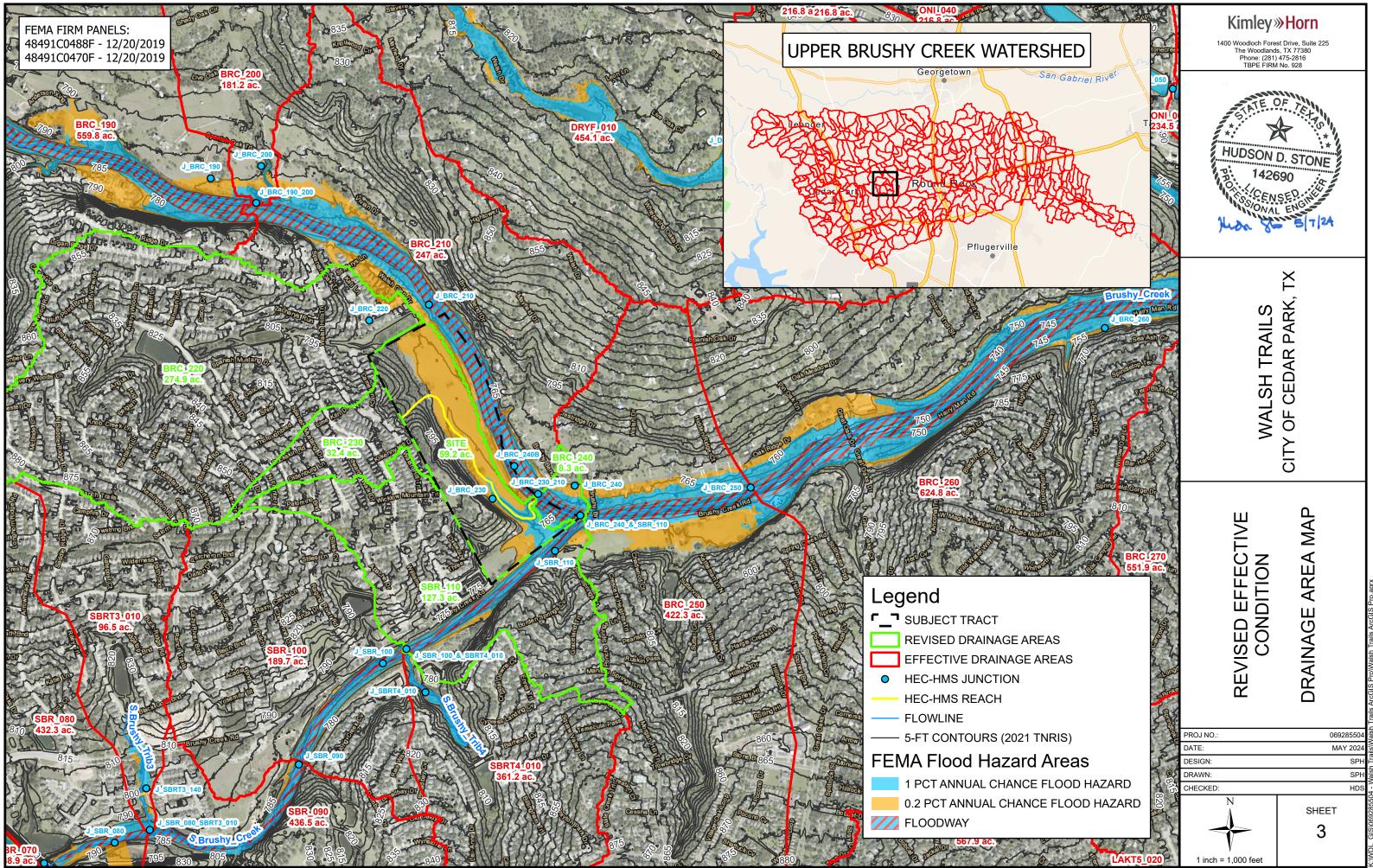
The plan for temporary structural controls on this site include placing silt fence at the down slope of the site that will collect sediment prior to entering a stream. This will allow for the sediment to be clean out for continued effective usage of the silt fence.

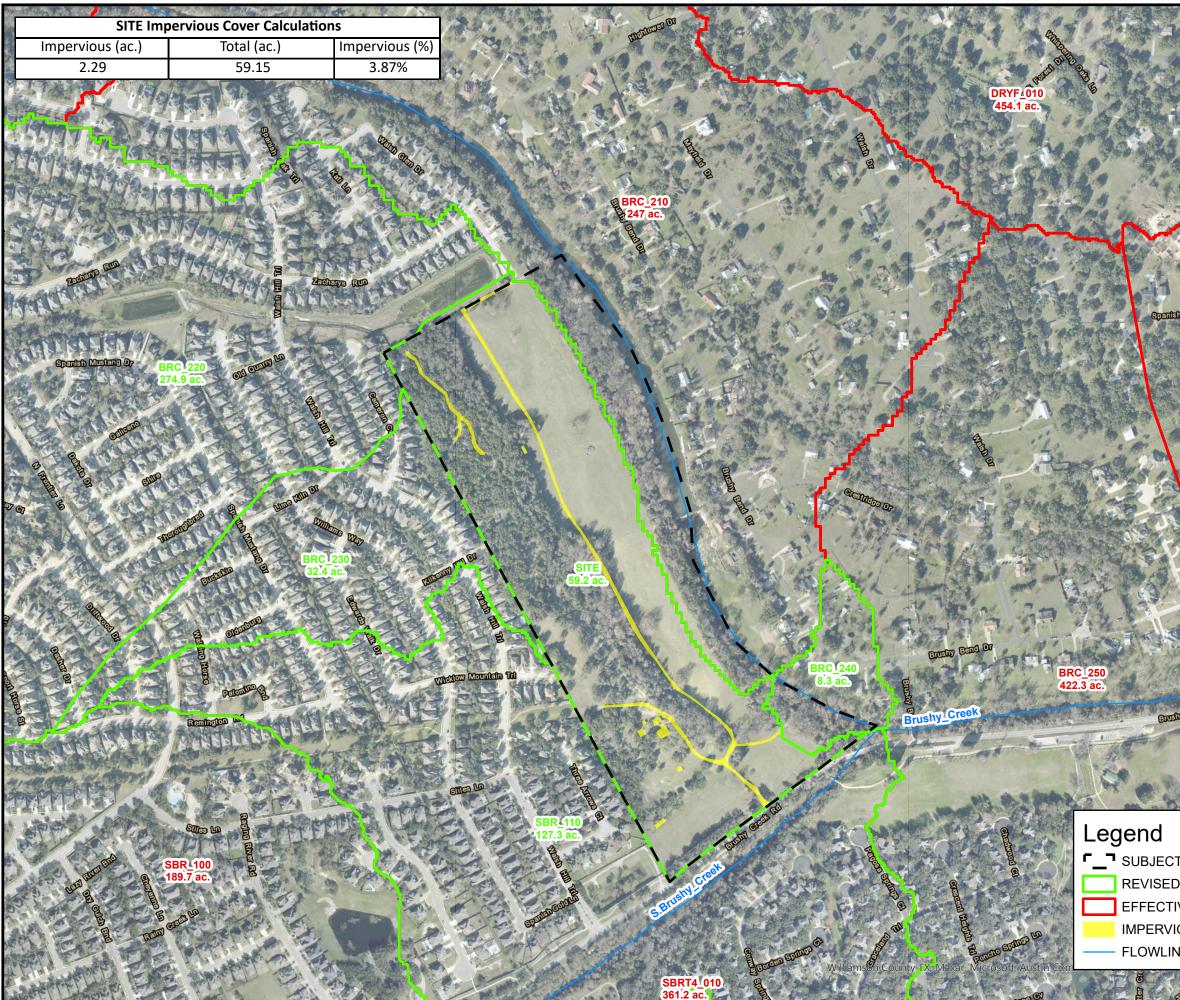
Kimley *Whorn*

ATTACHMENT F: Drainage Area Map

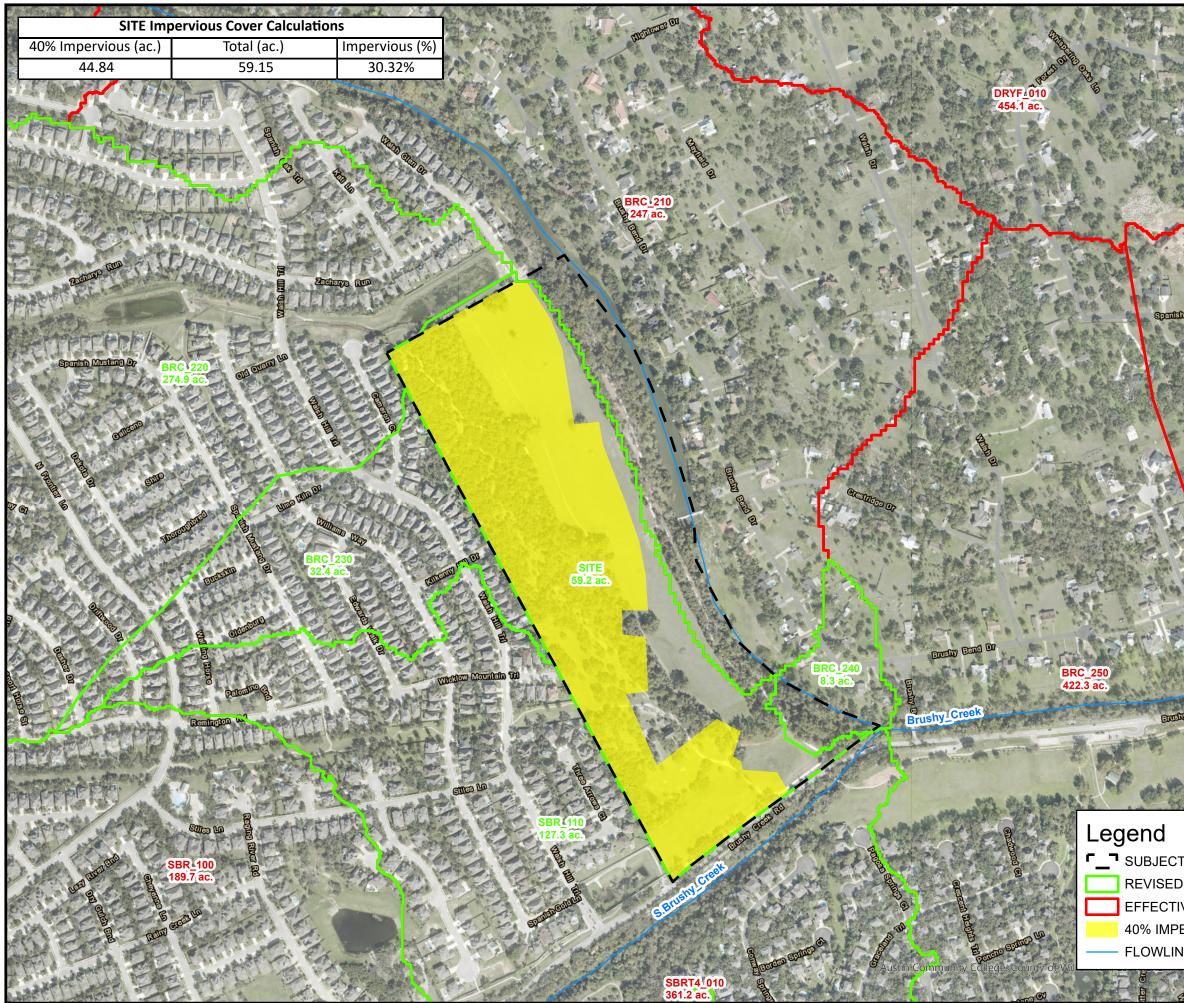


2 (190	Kimley »Horn
TERSHED	1400 Woodloch Forest Drive, Suite 225 The Woodlands, TX 77380 Phone: (281) 475-2816 TBPE FIRM No. 928
	HUDSON D. STONE B: 142690
730 730 730 730	WALSH TRAILS CITY OF CEDAR PARK, TX
A sub-	EFFECTIVE CONDITION DRAINAGE AREA MAP
21 TNRIS)	PROJ NO.: 069285504 DATE: MARCH 2024
ard Areas	DESIGN: SPH DRAWN: SPH
NCE FLOOD HAZARD	CHECKED: HDS
ANCE FLOOD HAZARD	
B AN AN COM	1 inch = 1,000 feet

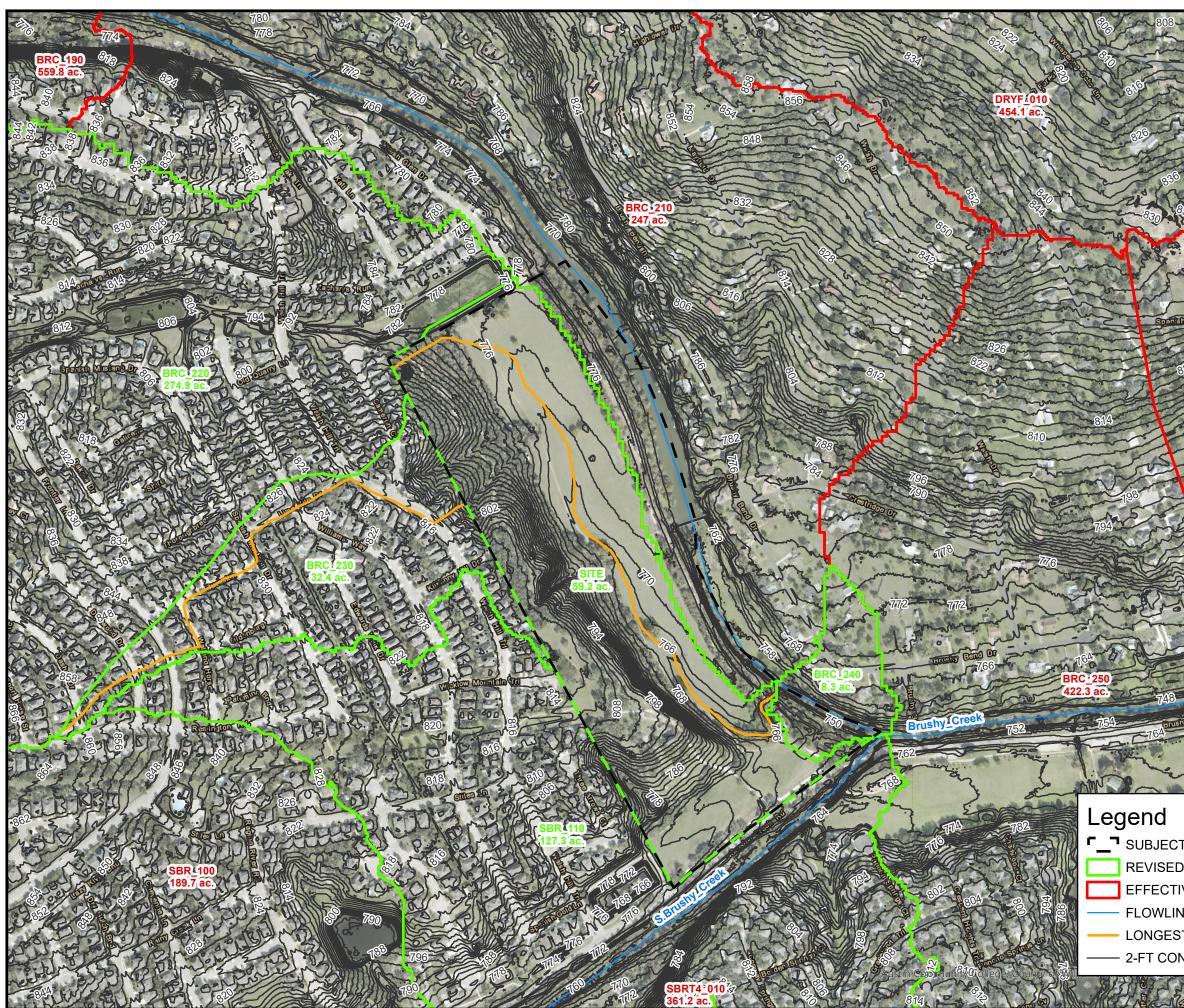




				1
	St	Kimley	Horn	
and a second	1	1400 Woodloch Fore	st Drive, Suite 225	
Contraction and	an fill	The Woodland Phone: (281) TBPE FIRM	475-2816	
and the second	1	7.5.,		
DRYF_020 332.4 ac.	-	STE C	OF THE	
The Berg Man	Mar &	STALL.	A SET AN	
ALL CONTRACTOR	No.		A	
ton on	3 700	HUDSON	D STONE	
Man H	The La	12: 142	590	
	1	Non-sice	CED	
	and the	SSIONA	D. STONE	
1. 2 10 11	C.	Hida St	5 7 24	
THE F	A.			
ab Ceak Dr	i li		~	
	»···		× F	
	Stat.	6	Ϋ́	
TAL TAIN	the.		AR	
the second			<u>с</u>	
BRC_260	9		AR	
624.8 ac.	S OCT	L I	Ő	
N 80 144	0	ဟ	CE	
a ve a stat		AL	Щ	
	1	MALSH TRAILS	∪ ≻	
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	K.		É	
Frank Cont. 14	1000		0	
Con Standy	1 SAN		<u>م</u>	
And the second second	mis		Ā	
· Sal mitt Low	S all		2	
	the of	Щ		
	1	EXISTING SITE	Ž	
13- 200 - 37	S.S.	נט חיז	00	
and a second	Prove and	N Z	6	
da clore wh			Ŭ,	
		<u>S</u>	<u>O</u>	
min and the	r p		~	
A Bas Start	Pour		ц Ш	
	ISI III		۲ L	
	an D		2	
TTDAOT		PROJ NO.:	0692	85504
	5	DATE:	MARCH	
D DRAINAGE AREAS	1	DESIGN: DRAWN:		SPH SPH
IVE DRAINAGE AREAS		CHECKED:		HDS
IOUS AREA	E	N A	SHEET	
NE	E		4	
A	5	V	т 	
8	E AR	1 inch = 500 feet		



		Kimley	Horn	
	Not the	۔ 1400 Woodloch Fore The Woodland	st Drive, Suite 225 s, TX 77380	
		Phone: (281) TBPE FIRM		
DRYF_020 332.4 ac.		ATE C	OF TEN	
	-	\$5	A	
	n TED	HUDSON		
and the second	2.	1426 17: 1426	590 is i	
THE BULLE	The	1420 00 00 00 00 00 00 00 00 00 00 00 00 0	SED	
		Hion S	5 7 24	
and the state	a. a			
sh Oak Dr	14		×	
	a the	-	ζ, Τ.	
	and and	L S L	AR	
and the state of the	and and	MALSH TRAILS	с С	
BRC_260 624.8 ac.	Ano		DAF	
A Part and	-	ר אַ <mark>י</mark>	CE	
	10	VAL	ОГ	
and an all the second	A	>	Σ	
the state of the state	堂!		Ö	
TO BOOM	A CAN		AP	
			MA	
C. P Law Constant	(mar)	PROPOSED SITE	Ŕ	
Contraction of the	1	I S I	JVE	
A CAR			ы С	
the crock fiel		O S O	N	
		OP	Ō	
mail the	R	Ц Ц	N N	
1997 ANR-16	CULCER B		ЫЧ	
	DIII DI		Σ	
T TRACT	1	PROJ NO.: DATE:		85504 2024
D DRAINAGE AREAS	The second	DESIGN:		SPH
IVE DRAINAGE AREAS	24	DRAWN: CHECKED:		SPH HDS
PERVIOUS AREA	T	N A	SHEET	
NE	臣		5	
8	ton to	∛ 1 inch = 500 feet		



808	02 .24	Kimley			
812	100 ×	1400 Woodloch Fore The Woodland Phone: (281) TBPE FIRM	s, TX 77380 475-2816		
DRYF_020 332.4 ac.	12	ATE	OF TE		
830	A ST	*	\mathbf{A}	+35+1	
R20		HUDSON	D. ST	ONE	
		0	090	NE	
and the second second		ALDON A	L ENC	7/24	
- Alerand	- and				
n oar Dr	and a		, TX		
820 808		WALSH TRAILS	ARK		
BRC1260		IRA	R P.		
802 624.8 ac.	Va	LHS	EDA		
51117		(ALS	DF C		
		S	₹		
	in the second second		Ö		
		(5	1AP		
7,58		REVISED EXISTING	ONGEST FLOW PATH M		
746	2	(IST	PA ⁻		
760 80	153) E)	NO_		
764	ar	SEI	ST FI		
2 million	2	KEVI	GEO		
	-	Ľ	LON		
	806	PROJ NO.:			85504
D DRAINAGE AREAS IVE DRAINAGE AREAS	810	DATE: DESIGN:		APRIL	SPH
NE	R	DRAWN: CHECKED:			SPH HDS
ST FLOW PATHS	820	N	c	HEET	
NTOURS (2021 TNRIS)	020			6	
A 828	222	V		0	
B P ST S P P	834	1 inch = 500 feet			

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

*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

Kimley *Whorn*

Construction Site SWP3 Inspection Report

Warning No.	
ö □ Project Shutdown	

	On-Site		Up-to	-date
SWP3	Yes No ¹		Yes	No ²
SI				

	Project:	Date:
al tion	Address:	Inspector:
na		Qualifications: see Appendix E of SWP3
Ger forr		Weather Conditions:
<u>n</u>	Owner:	Contractor:

BMP	BMP In Use		Maint. Req'd		Comments
	Yes	No	Yes ²	No	

¹The 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.

²Items 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 COMPLETED	INITIALS

NOTE: These reports will be kept on file as part of the Storm Water Pollution Prevention Plan for at least three years. A copy of the SWP3 will be kept at the site at all times during construction.

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

Name:

Address:

Telephone:

Site Location:

kimley-horn.com

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

Construction Activity Schedule

Activities	Start Date	Finish Date
1.Demolition (0.1-acres): Silt fence protection, tree protection, rock berm		
2.Rough Grading (1.0-acres): Construction entrance/exit shall be installed and all prior erosion control measures installed above to be maintained as necessary during rough grading.		
3.Utility Installation (>0.25-acres): All prior erosion control measures installed above to be maintained as necessary during utility installation, inlet protection shall be installed as storm drainage system is constructed.		
4.Building Construction (2.5-acres): All prior erosion control measures installed above to maintained as necessary during construction.		
5.Paving (~1.5-acres): All prior erosion control measures installed above to be maintained as necessary during paving and throughout the remainder of the project.		
6.Final Grading/Soil Stabilization/Landscaping (~0.8-acres): All temporary erosion control measures to be removed at the conclusion of the project once final stabilization has been achieved. All affected storm sewer inlets and post development BMPs shall be cleaned prior to site completion.		

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

*Bare soils should be seeded or otherwise stabilized within 14 calendar days after final grading or where construction activity has temporarily ceased for more than 21 days.

Agent Authorization Form

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

1	Christopher Walsh	
	Print Name	
	Authorized Signatory Title - Owner/President/Other	,
of	Walsh Brushy Creek Ranch LP	
	Corporation/Partnership/Entity Name	,
have authorized	Benjamin Green, P.E.	
	Print Name of Agent/Engineer	
of	Kimley-Horn and Associates, Inc.	
2010	Print Name of Firm	

to represent and act on the behalf of the above named Corporation, Partnership, or Entity for the purpose of preparing and submitting this plan application to the Texas Commission on Environmental Quality (TCEQ) for the review and approval consideration of regulated activities.

I also understand that:

- 1. The applicant is responsible for compliance with 30 Texas Administrative Code Chapter 213 and any condition of the TCEQ's approval letter. The TCEQ is authorized to assess administrative penalties of up to \$10,000 per day per violation.
- 2. For those submitting an application who are not the property owner, but who have the right to control and possess the property, additional authorization is required from the owner.
- 3. Application fees are due and payable at the time the application is submitted. The application fee must be sent to the TCEQ cashier or to the appropriate regional office. The application will not be considered until the correct fee is received by the commission.
- 4. A notarized copy of the Agent Authorization Form must be provided for the person preparing the application, and this form must accompany the completed application.
- 5. No person shall commence any regulated activity on the Edwards Aquifer Recharge Zone, Contributing Zone or Transition Zone until the appropriate application for the activity has been filed with and approved by the Executive Director.

SIGNATURE PAGE:

Well Applicant's Signature

30/2 Date

THE STATE OF Texas §

County of _____ Williamson §

BEFORE ME, the undersigned authority, on this day personally appeared <u>Christopher</u> Walsh to me to be the person whose name is subscribed to the foregoing instrument, and acknowledged to me that (s)he executed same for the purpose and consideration therein expressed.

GIVEN under my hand and seal of office on this <u>30</u>day of <u>May</u>, <u>20</u>24

NOTARY PUBLIC

DEREK CLARKE Notary Public, State of Texas Comm. Expires 01-10-2027 Notary ID 130421621

Herek Clarke

MY COMMISSION EXPIRES: 1-10-2027

Application Fee Form

Texas Commission on Environmental Quality Name of Proposed Regulated Entity: <u>Walsh Trails Section 5 & 6</u> Regulated Entity Location: <u>4001 Brushy Creek Rd, Cedar Park, TX 78613</u>								
Name of Customer: <u>Walsh Brushy Cr</u> Contact Person: Christopher Walsh	e: <u>512-917-4004</u>							
Customer Reference Number (if issue Regulated Entity Reference Number Austin Regional Office (3373)	ed):CN							
Hays San Antonio Regional Office (3362)	Travis	🖂 Wil	liamson					
Bexar Comal	Medina	Uva	llde					
Application fees must be paid by che Commission on Environmental Qual form must be submitted with your f	ity. Your canceled cl	neck will serve as your	receipt. This					
Austin Regional Office Mailed to: TCEQ - Cashier		an Antonio Regional Office vernight Delivery to: TCEQ - Cashier						
Revenues Section Mail Code 214		2100 Park 35 Circle uilding A, 3rd Floor						
P.O. Box 13088 Austin, TX 78711-3088	A	istin, TX 78753 12)239-0357						
Site Location (Check All That Apply):	•	12)237 0337						
Recharge Zone	Contributing Zone	Transition Zone						
Type of Plan		Size	Fee Due					
Water Pollution Abatement Plan, Co Plan: One Single Family Residential	0	Acres	\$					
Water Pollution Abatement Plan, Co Plan: Multiple Single Family Resider	ntial and Parks	73.825 Acres	\$ 6,500					
Water Pollution Abatement Plan, Co Plan: Non-residential	ontributing Zone	Acros	¢					
Sewage Collection System		Acres	\$ \$					
Lift Stations without sewer lines	Acres	\$						
Underground or Aboveground Stora	Tanks	\$						
Piping System(s)(only)	Each	\$						
Exception		Each	\$					
Extension of Time		Each	\$					
	Signa	ture:						

1 of 2

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,	< 1	\$3,000
institutional, multi-family residential, schools, and	1 < 5	\$4,000
other sites 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

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

Underground and Aboveground Storage Tank System Facility Plans and Modifications

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

Exception Requests

Project	Fee
Exception Request	\$500

Extension of Time Requests

Project	Fee
Extension of Time Request	\$150



TCEQ Core Data Form

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

SECTION I: General Information

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

SECTION II: Customer Information

4. General Customer Informat	tion 5. Effectiv	5. Effective Date for Customer Information Updates (mm/dd/yyyy)								
New Customer Update to Customer Information Change in Regulated Entity Ownership Change in Legal Name (Verifiable with the Texas Secretary of State or Texas Comptroller of Public Accounts)										
The Customer Name sub	omitted here may	be up	dated	auto	matica	ally	based	on what is cu	rrent and	active with the
Texas Secretary of State	e (SOS) or Texas	Compt	roller	of Pu	ıblic A	lccc	ounts ((CPA).		
6. Customer Legal Name (If an	n individual, print last na	me first: e	eg: Doe,	John)		<u>li</u>	f new Ci	ustomer, enter prev	ious Custome	er below:
Christopher Walsh										
7. TX SOS/CPA Filing Number	r 8. TX Stat	e Tax ID) (11 digit	s)		9	. Feder	al Tax ID (9 digits)	10. DUN	S Number (if applicable)
0801707242	320497	80391								
11. Type of Customer:	Corporation		\square	Individ	ual		Pa	irtnership: 🗖 Gene	ral 🗌 Limited	
Government: 🗆 City 🗆 County 🗖] Federal 🗌 State 🗌 Oth	er		Sole P	roprieto	orship	, □] Other:		
12. Number of Employees								pendently Owned	and Opera	ted?
	01-250 🗌 251-50	0	501 ar	id high	er		⊠ Yes	No 🗌 No		
14. Customer Role (Proposed o	or Actual) – as it relates	to the Reg	gulated	Entity li	sted on	this fo	orm. Plea	ise check one of the	following	
⊠Owner	Operator		0\	wner &	Operat	tor				
Occupational Licensee	Responsible Party		🗌 Vo	oluntar	y Clean	up A	pplicant	Other:		
4001 Brushy	V Creek Rd									
15. Mailing										
Address: City Ceda	ar Park	S	state	ΤX		ZIP	787	13	ZIP + 4	
16. Country Mailing Information	ON (if outside USA)				17. E-	Mail	Addres	S (if applicable)		
	, , , , , , , , , , , , , , , , , , ,							lshrr@hotmai	il.com	
18. Telephone Number	19. Extension or Code				20. Fax Number (<i>if applicable</i>)					
(512)917-4004										

SECTION III: Regulated Entity Information

21. General Regulated Entity Information (If 'New Regulated Entity" is selected below this form should be accompanied by a permit application)						
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 Agency 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.)						
Walsh Trails Section 5 & 6						

	4001 Walsh Brushy Creek									
23. Street Address of the Regulated Entity:	1001 11									
(No PO Boxes)							786	513	ZIP + 4	
24. County										
Enter Physical Location Description if no street address is provided.										
25. Description to Physical Location:	North side of Brushy Creek Rd, adjacent to Brushy Creek to the east									
26. Nearest City							State		Ne	arest ZIP Code
Cedar Park							ΤХ		78	613
27. Latitude (N) In Decin	nal:	30.518214		28. L	ongitude ((W) In Decimal: 97.74		97.7474	47466	
Degrees	Minutes	S	econds		Degrees Minutes			Seconds		
29. Primary SIC Code (4	digits) 30.	Secondary SIC	Code (4 digits)		Primar	y NAICS ()	Code	32. S (5 or 6	econdary N/ digits)	AICS Code
1521					2	236115				
33. What is the Primary	Business o	f this entity? (I	Do not repeat the SI	C or NA	ICS desc	cription.)				
Single-family deve	lopment									
				40)01 Bru	ishy Creel	k Rd			
34. Mailing										
Address:	City	Cedar Park	State		ТХ	ZIP		78613	ZIP + 4	
35. E-Mail Address				chris	stopher	walshrr@	hotmai	l.com		
36. Telepho	one Number 37. Extension or Code 38. Fax Number (<i>if applicable</i>)									

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

() -

Dam Safety	Districts	Edwards Aquifer	Emissions Inventory Air	Industrial Hazardous Waste
Municipal Solid Waste	New Source Review Air	OSSF 0	Petroleum Storage Tank	D PWS
Sludge	Storm Water	Title V Air	Tires	Used Oil
Voluntary Cleanup	Waste Water	Wastewater Agriculture	U Water Rights	Other:

SECTION IV: Preparer Information

(512)917-4004

40. Name:	Benjamin L.	Green, P.E.		41. Title:	Project Manager		
42. Telephone Number 43. Ext./Code 44. Fax Number			44. Fax Number	45. E-Mail	45. E-Mail Address		
(512)	646-2243		() -	ben.gree	n@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:	Kimley-Horn	Job Title:	Project Manager		
Name (In Print):	Name (In Print): Benjamin L. Green, P.E.				(512) 646- 2243
Signature:	ByrR			Date:	5/28/24