

Civil Engineering Plans for the Construction of WATER, PAVING & DRAINAGE IMPROVEMENTS

To Serve

LAKEVIEW DOWNS EQUISTRIAN ESTATES

CITY OF LUCAS

COLLIN COUNTY, TEXAS

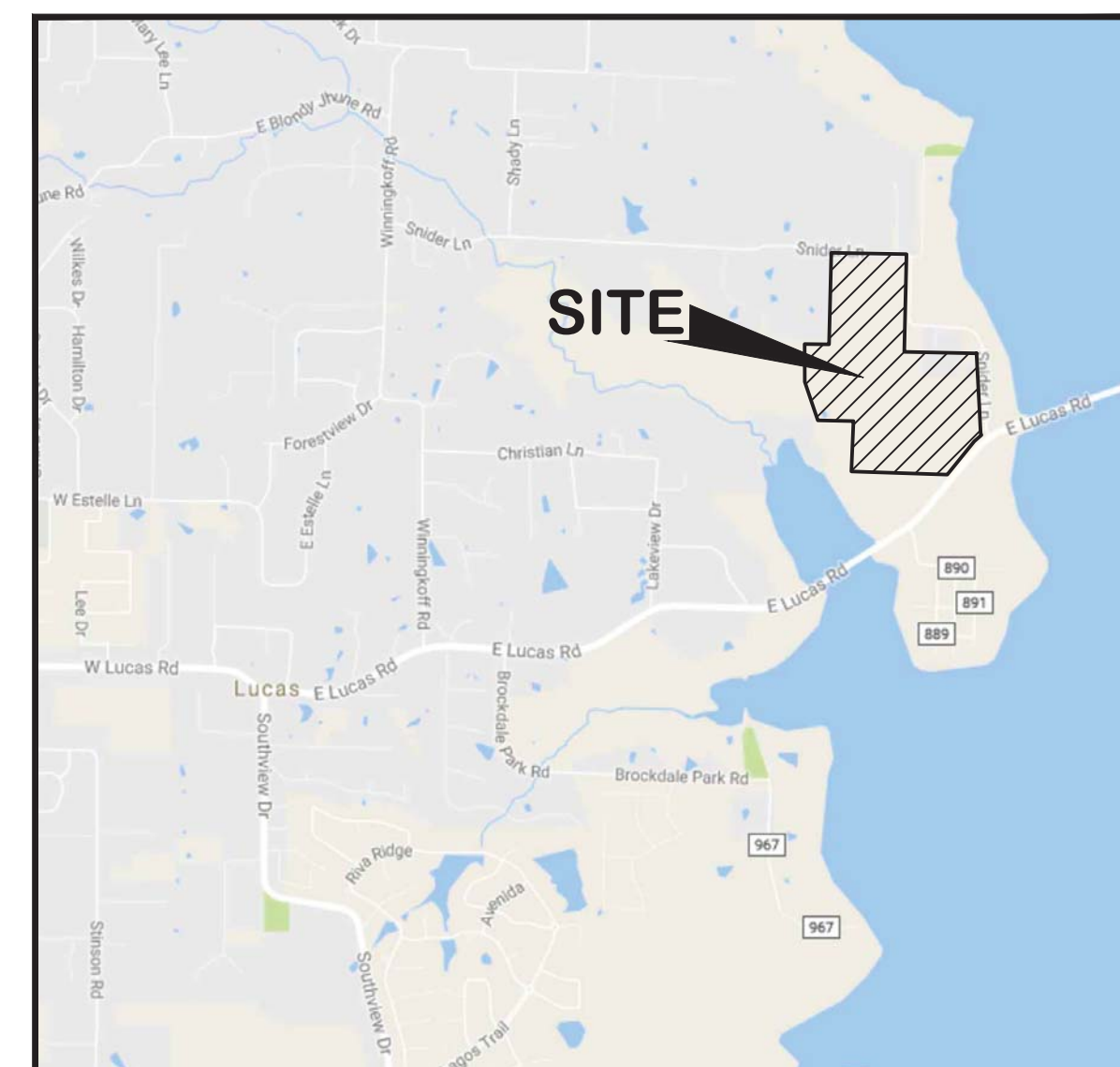
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RECORD DRAWING

THIS DRAWING REPRESENTS
THE CONSTRUCTED STATE OF THIS PROJECT
ACCORDING TO AVAILABLE INFORMATION
FURNISHED TO THE ENGINEER
BY THE CONTRACTOR OR OWNER
AFTER CONSTRUCTION

BY: *Jason Trafton*
DATE: 11.14.2019



VICINITY MAP
(NOT TO SCALE)

11.14.2019

PROPERTY OWNER
LIBERTY BANKERS
1605 LBJ Freeway
Suite 710
Dallas, TX 75234
469.522.4458
Contact: Allen Scharton

ENGINEER
ION DESIGN GROUP, LLC F-6701
7075 Twin Hills Ave
Suite 350
Dallas, TX 75231
214.370.3470 Ph
Contact: Bryan Klein

SURVEYOR
MILLER SURVEYING, INC.
430 Mid Cities Blvd.
Hurst, TX 76054
817.577.1052 Ph
817.577.0972 Fx
Contact: Jason Rawlings




Ion Design Group

7075 Twin Hills Ave
Suite 350
Dallas, Texas 75231
Firm TX F6701
214.370.3470 Ph

The seal appearing on this document was authorized by JASON TRAFTON, P.E., on 11.14.2019 alteration of a sealed document without proper notification to the responsible engineer is an offense under the Texas Engineering Practice Act.

GENERAL NOTES:

- 1. It is the CONTRACTOR's responsibility to maintain neat and accurate plans of record.
2. The CONTRACTOR is responsible for maintaining adequate site drainage throughout the duration of this project.
3. The CONTRACTOR is responsible for obtaining all necessary permits and approvals before construction begins.
4. The CONTRACTOR shall replace all fence removed during construction in as good as or better condition than before construction.
5. The CONTRACTOR shall take all necessary precautions to ensure that electric power and telephone poles are either moved to a safe location by the affected utility company or not disturbed during construction.
6. The CONTRACTOR shall restore all property including driveways, public streets, sidewalks, public utilities, franchise utilities, private utilities, and all other improvements removed or damaged inside and outside the project limits during construction to as good as or better condition than before construction.
7. The information shown on these drawings concerning type and location of underground and other utilities is not guaranteed to be accurate or all-inclusive.
8. The CONTRACTOR shall not place fill or waste material on any private property without prior written permission from the ENGINEER.
9. All streets within the scope of the Contract shall be kept accessible to fire trucks, ambulances and other emergency vehicles.
10. The CONTRACTOR shall be responsible for public safety during the duration of construction.
11. Filter fabric fence for erosion control shall be provided in accordance with specifications and as shown on the plans and in accordance with the EPA regulations.
12. The CONTRACTOR shall use the public right-of-ways and existing utility easements for access to the job site.
13. The CONTRACTOR shall select the subcontractor to be utilized for testing and lab work.
14. The CONTRACTOR shall keep excavated trenches free of groundwater during construction.
15. The CONTRACTOR shall provide means for adequately controlling and avoiding soil erosion during construction.
16. All disturbed earth areas are to be finish graded to original or proposed contours.
17. No existing sprinkler/irrigations systems have been shown on the plans; however, they may exist in certain areas.
18. The CONTRACTOR shall maintain adequate sanitary facilities for use by workers throughout construction.
19. The CONTRACTOR shall conform to the Occupational Safety and Health Administration's (OSHA) standards for trench safety that are in effect during the period of construction.
20. All materials and workmanship shall conform to the City of Lucas Standards and Specifications and the North Central Texas Council of Government (NCTCOG) Standards and Specifications, except as noted.
21. No existing trees larger than 4" caliper shall be removed without approval of the City of Lucas.
22. CONTRACTOR shall provide all necessary construction staking.
23. CONTRACTOR's working hours shall be in accordance with the provisions of the current City Ordinance governing hours of construction work in the City.
24. The CONTRACTOR shall assume responsibility for protection of public utilities in the construction of this project.

GENERAL NOTES CONT'D.:

- 25. Driveways that are disturbed during construction shall be restored to as good as or better condition than they were prior to construction and materials utilized to restore the driveway shall be the same material as what the driveway is presently made of.
26. The CONTRACTOR shall phase his daily work schedule so that all driveway crossings are to be complete prior to the end of the day.
27. The CONTRACTOR is responsible for keeping streets, parking areas, sidewalks, etc., adjacent to the project free of mud and debris from construction.
28. The City of Lucas Public Works Department is to be notified 48 hours (2 working days) prior to any construction of paving in rights-of-way and easements.
29. Arrangements for construction water shall be made through the City of Lucas.
30. All locations of underground utility lines are approximate.
31. Construction sites shall be secure at all times.
32. As part of bid item, "EROSION CONTROL", the CONTRACTOR shall be responsible for implementing any and all erosion control measures as needed to control runoff of siltation from the project site.
33. Hydromulch or block sodding shall be installed to match surrounding areas where the ground is disturbed in the construction area.
34. If any conflicts with other utilities occur during the construction activities, the CONTRACTOR shall immediately notify the City's representative and shall make adjustments as necessary with City's concurrence.
35. Locations of pipelines shown on he plans are approximate and are to the best knowledge of the engineer.
36. There is no separate pay resulting from any of the work required as a result of the requirements included in these general notes.

GENERAL TRAFFIC CONTROL NOTES

- 1. All traffic control design and implementation shall be completed by the CONTRACTOR and be completed in accordance with the standard TXDOT details provided herein.
2. All temporary signs, markings, cones, channelizing devices, warning lights and barricades shall be in accordance with the current State of Texas Manual on Uniform Traffic Control Devices (MUTCD).
3. Type "A" warning lights shall be placed on all advance warning signs.
4. Any existing conflicting markings shall be removed prior to shifting traffic.
5. All temporary pavement markings required during construction shall be of the removable type.
6. The spacing of signs and channelization devices may be adjusted to fit the geometric conditions encountered, such as driveways, intersecting roadways, vertical and horizontal alignment, etc.
7. Advance warning signs shall not be displayed more than forty-eight (48) hours before physical construction begins.
8. Use of barricades, portable barrier rails, vertical panels, and drums shall be limited to the immediate areas of construction where a hazard is present.
9. The posted speed for warning signage is to be determined at the site by the City of Lucas.
10. Reduced speed warning signage should be placed prior to and at regular intervals within the construction zone.
11. As part of the bid item, "Construction Barricading/Signing/Traffic Control," the CONTRACTOR is required to submit a traffic control plan for construction a minimum of 3 days prior to changes in traffic handling or movement.
12. The CONTRACTOR shall accommodate existing traffic during construction and shall maintain at least one open lane of traffic at all times.
13. CONTRACTOR shall be required to place temporary pavement markings and/or buttons as needed to maintain traffic in a safe and efficient manner after removal of existing markings.

ENGINEER'S GENERAL NOTES

- ENGINEER'S GENERAL NOTES DO NOT SUPERSEDE THE CITY'S NOTES AND STANDARDS.
APPROVED PLANS AND DIGITAL CAD FILES
1. No construction activity shall commence prior to ENGINEER receiving Final City-Approved Civil Engineering Design Plans (PLANS).
2. Prior to commencement of construction, OWNER shall provide any company or individual responsible for constructing and/or overseeing improvements (CONTRACTOR) with digital CAD files of PLANS.
3. CONTRACTOR shall not commence construction prior to obtaining digital CAD files of PLANS from OWNER.
4. PLANS are considered a set comprised of ALL sheets.
SURVEY
5. PLANS are prepared utilizing field survey information provided by Miller Surveying, Inc. dated July 8, 2016.
STANDARDS & METHODS
6. ENGINEER has prepared PLANS under the guidance and standards provided by the City.
7. CONTRACTOR shall be responsible for all materials and methods of construction conforming to the City's standards.
PLANS DISCREPANCIES, CONFLICTS OR QUESTIONS
8. It is the intent of the ENGINEER that PLANS provide a design for complete installation of designed improvements.
9. In the event CONTRACTOR locates conflicts in PLANS or between PLANS and applicable standards and/or methods.
PUBLIC UTILITIES AND ADA
10. Information on locations, elevations, and dimensions of existing public utilities (water, sanitary sewer, and storm sewer) on PLANS was obtained by ENGINEER from available governmental records.
FRANCHISE UTILITIES
12. PLANS do not include installation and/or relocation of franchise utilities (phone, electric, gas, cable, fiber optic, etc.)
CONSTRUCTION AND RECORD SET OF PLANS
13. Prior to commencing construction, CONTRACTOR shall verify congruency of PLANS with Landscape, Architectural and other plans.
14. CONTRACTOR shall verify acceptance of variances between City standards (or other standards) and proposed improvements, prior to commencing construction.
15. CONTRACTOR shall verify type and placement of all street signs per City and/or local standards.
16. No field changes or deviations from PLANS shall be made without prior approval of ENGINEER and City.
17. Upon completion of construction, CONTRACTOR shall retain the services of a licensed surveyor to provide a survey of all installed improvements (including building pad elevations) and provide ENGINEER digital CAD files reflecting surveyed information and noting of all deviations or variations from PLANS.

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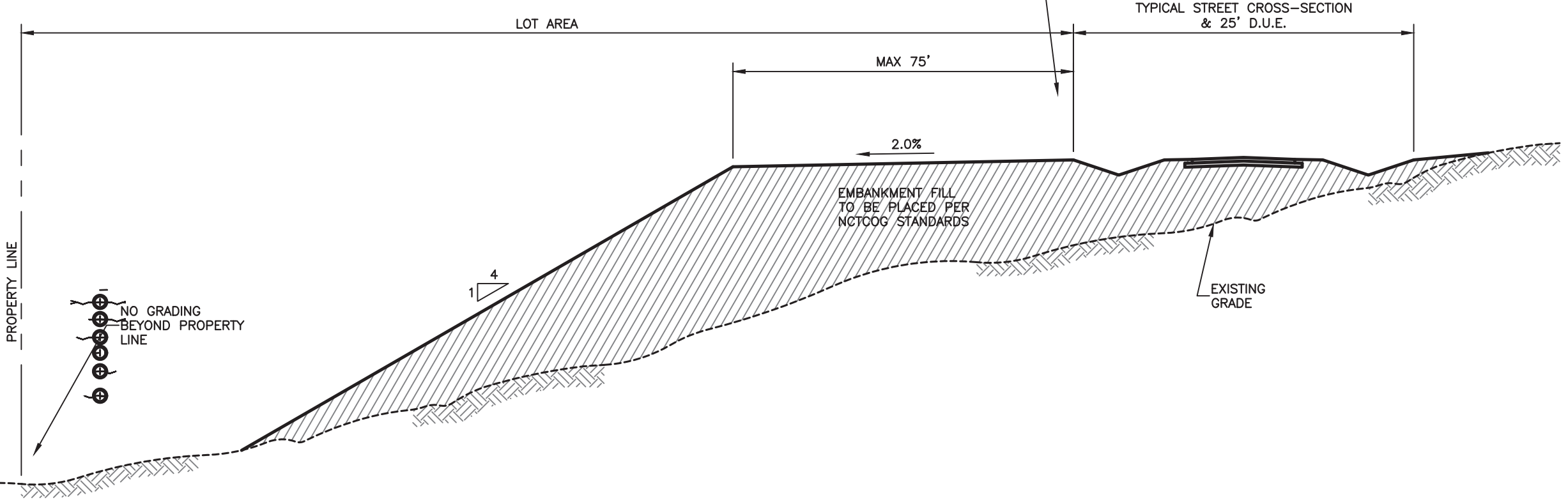
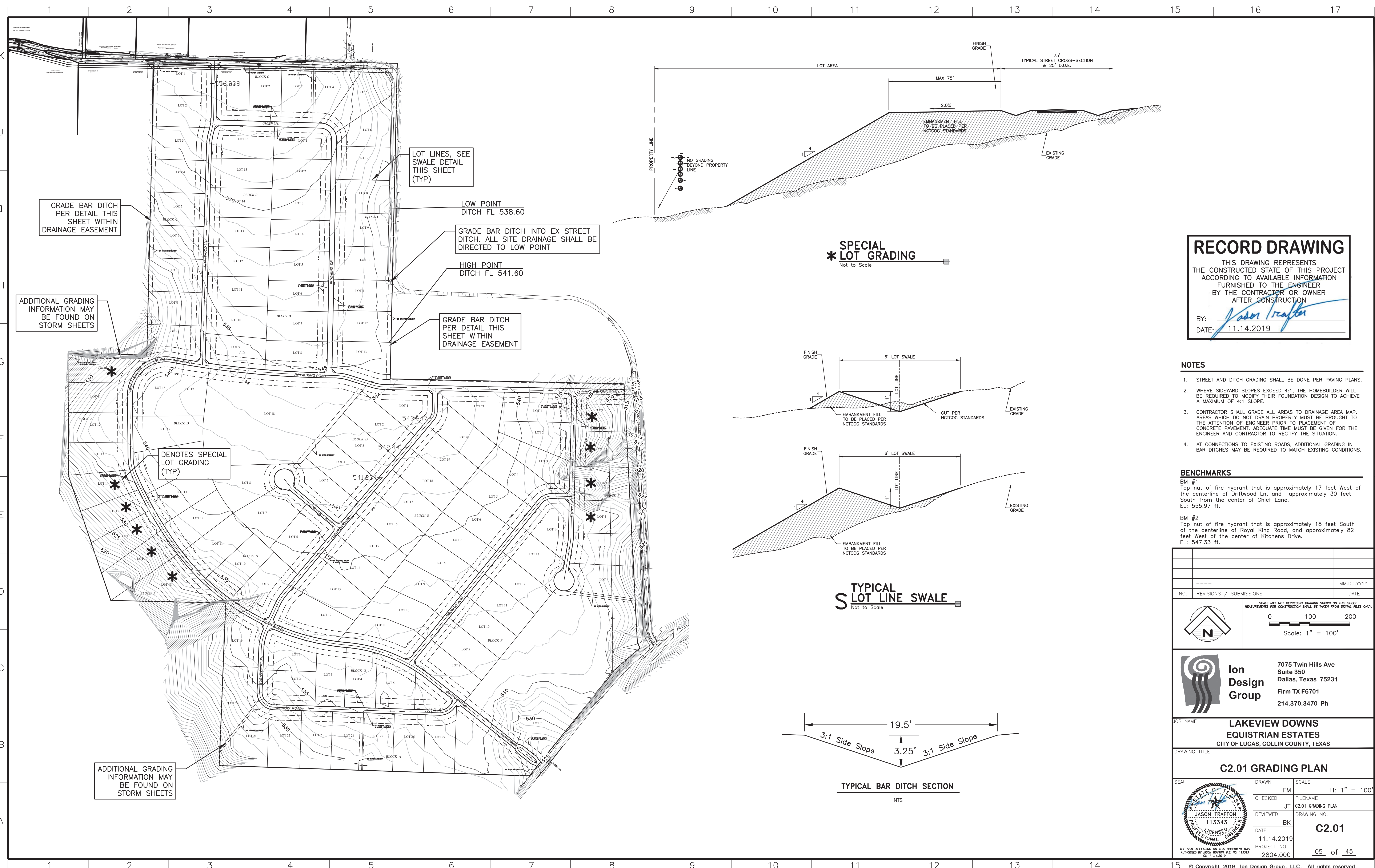
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Ion Design Group logo and contact information: 7075 Twin Hills Ave Suite 350 Dallas, Texas 75231 Firm TX F6701 214.370.3470 Ph

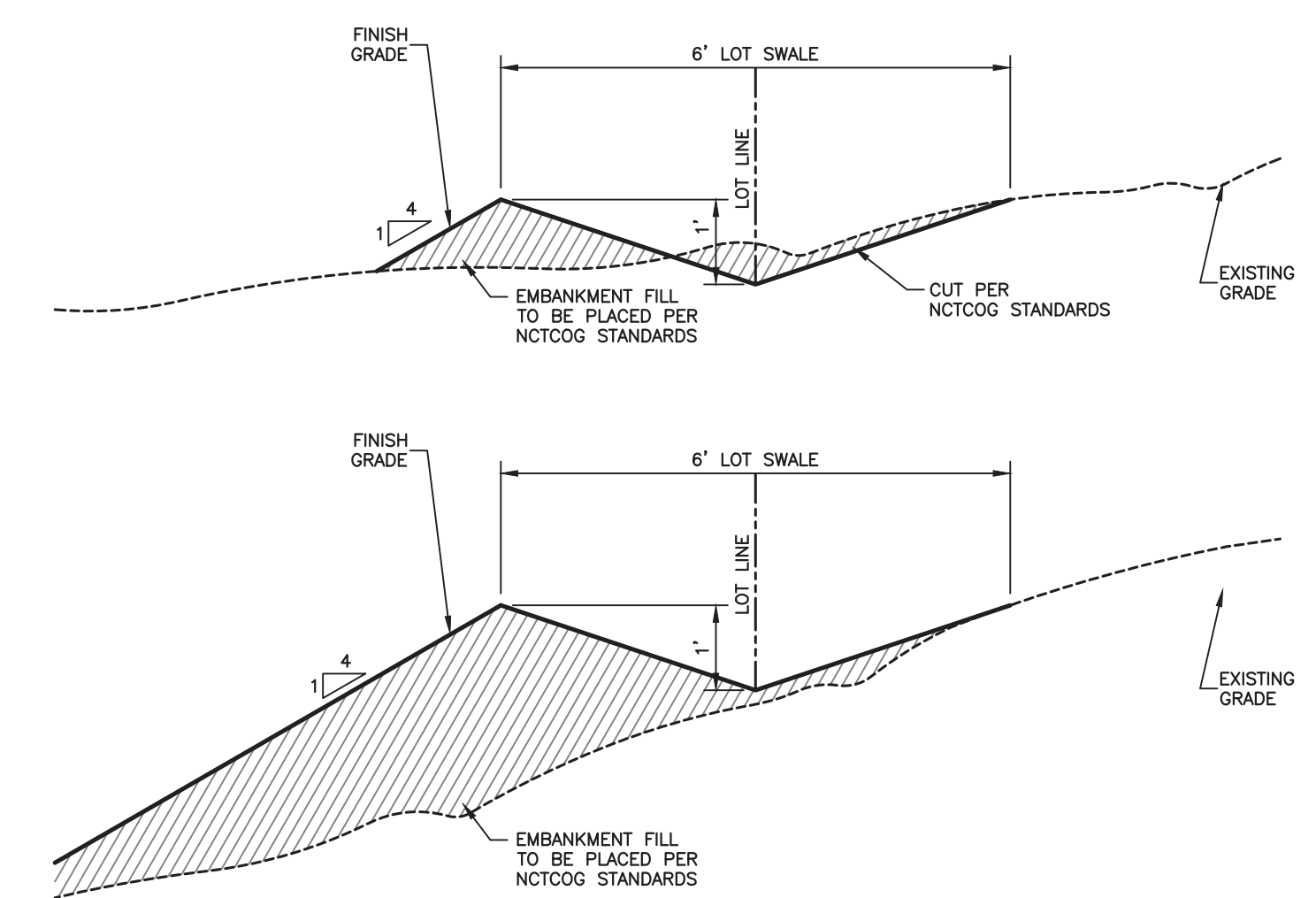
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Job name: LAKEVIEW DOWNS EQUESTRIAN ESTATES CITY OF LUCAS, COLLIN COUNTY, TEXAS. Drawing title: C1.01 GENERAL NOTES. Includes a professional seal for Jason Trafton, Professional Engineer, License No. 113343, State of Texas, dated 05.22.2017.

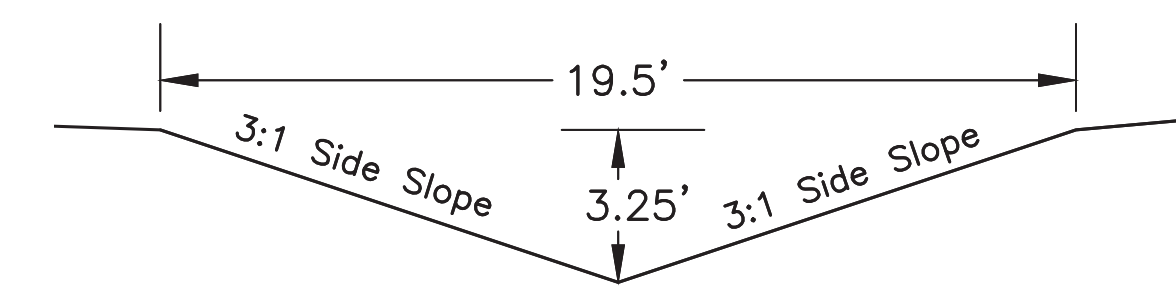
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SPECIAL LOT GRADING
 Not to Scale



TYPICAL LOT LINE SWALE
 Not to Scale



TYPICAL BAR DITCH SECTION
 NTS

RECORD DRAWING


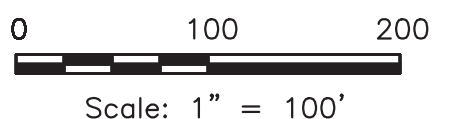

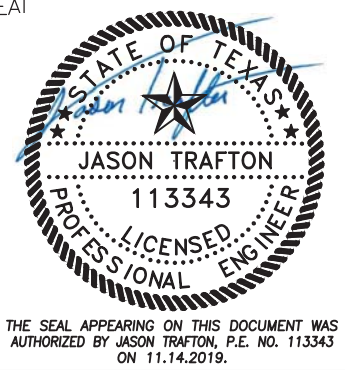
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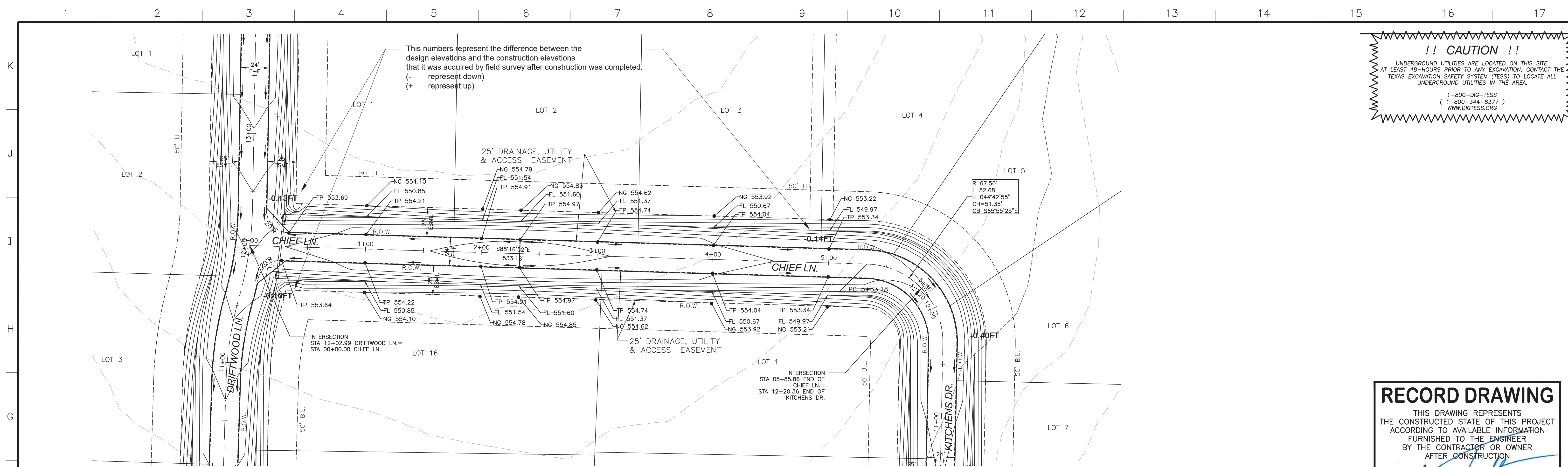
BY: *Jason Trafton*

DATE: 11.14.2019

- NOTES**
- STREET AND DITCH GRADING SHALL BE DONE PER PAVING PLANS.
 - WHERE SIDESLOPE SLOPES EXCEED 4:1, THE HOMEOWNER WILL BE REQUIRED TO MODIFY THEIR FOUNDATION DESIGN TO ACHIEVE A MAXIMUM OF 4:1 SLOPE.
 - CONTRACTOR SHALL GRADE ALL AREAS TO DRAINAGE AREA MAP. AREAS WHICH DO NOT DRAIN PROPERLY MUST BE BROUGHT TO THE ATTENTION OF ENGINEER PRIOR TO PLACEMENT OF CONCRETE PAVEMENT. ADEQUATE TIME MUST BE GIVEN FOR THE ENGINEER AND CONTRACTOR TO RECTIFY THE SITUATION.
 - AT CONNECTIONS TO EXISTING ROADS, ADDITIONAL GRADING IN BAR DITCHES MAY BE REQUIRED TO MATCH EXISTING CONDITIONS.

- BENCHMARKS**
- BM #1
 Top nut of fire hydrant that is approximately 17 feet West of the centerline of Driftwood Ln, and approximately 30 feet South from the center of Chief Lane.
 EL: 555.97 ft.
- BM #2
 Top nut of fire hydrant that is approximately 18 feet South of the centerline of Royal King Road, and approximately 82 feet West of the center of Kitchens Drive.
 EL: 547.33 ft.

NO. REVISIONS / SUBMISSIONS		DATE
		MM.DD.YYYY
  Scale: 1" = 100'		
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JOB NAME: LAKEVIEW DOWNS EQUISTRIAN ESTATES CITY OF LUCAS, COLLIN COUNTY, TEXAS		
DRAWING TITLE: C2.01 GRADING PLAN		
SEAL: 	DRAWN: FM CHECKED: JT REVIEWED: BK DATE: 11.14.2019 PROJECT NO.: 2804.000	SCALE: H: 1" = 100' FILENAME: C2.01 GRADING PLAN DRAWING NO.: C2.01 C2.01 05 of 45



!! CAUTION !!

UNDERGROUND UTILITIES ARE LOCATED ON THIS SITE. AT LEAST 48-HOURS PRIOR TO ANY EXCAVATION, CONTACT THE TEXAS EXCAVATION SAFETY SYSTEM (TESS) TO LOCATE ALL UNDERGROUND UTILITIES IN THE AREA.

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 WWW.DIGTESS.ORG

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BY: *Jason Trafton*

DATE: 11.14.2019

CHIEF LN.

Scale: H: 1"=40 V: 1"=4'

BENCHMARKS

BM #1
 Top nut of fire hydrant that is approximately 17 feet West of the centerline of Driftwood Ln, and approximately 30 feet South from the center of Chief Lane.
 EL: 555.97 ft.

BM #2
 Top nut of fire hydrant that is approximately 18 feet South of the centerline of Royal King Road, and approximately 82 feet West of the center of Kitchens Drive.
 EL: 547.33 ft.

NO.	REVISIONS / SUBMISSIONS	DATE

Scale: 1" = 40'
 Vertical: 1" = 4'

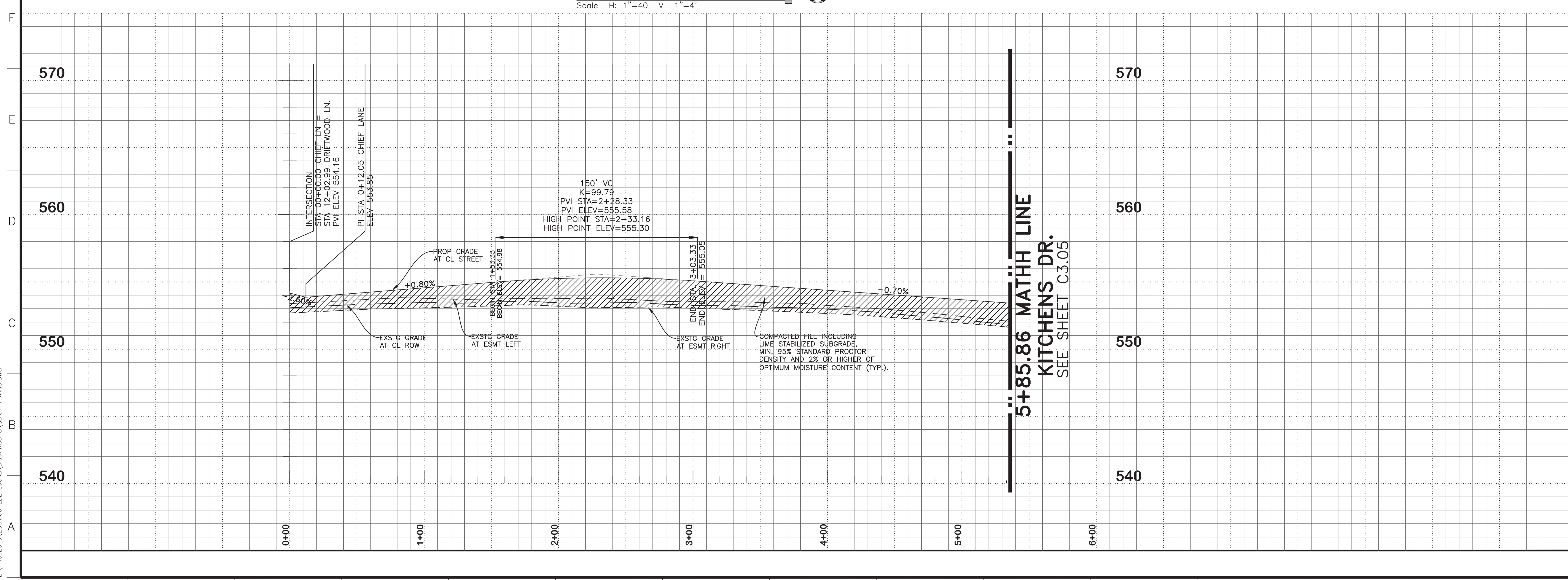
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 Dallas, Texas 75231
 Firm TX F6701
 214.370.3470 Ph

LAKEVIEW DOWNS EQUISTRIAN ESTATES
 CITY OF LUCAS, COLLIN COUNTY, TEXAS

C3.01 CHIEF LANE
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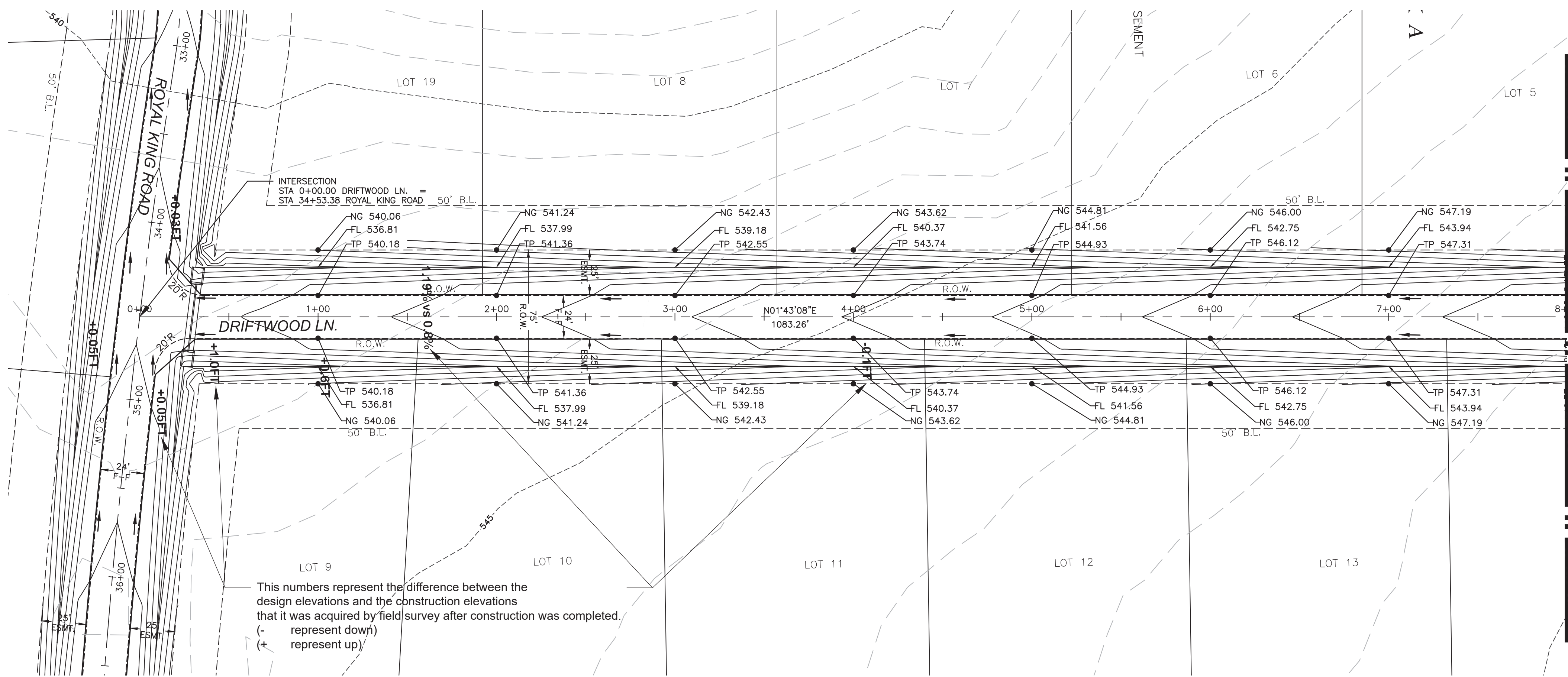
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1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17

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This numbers represent the difference between the design elevations and the construction elevations that it was acquired by field survey after construction was completed.
 (- represent down)
 (+ represent up)

DRIFTWOOD LN.
 Scale: H: 1"=40 V: 1"=4'

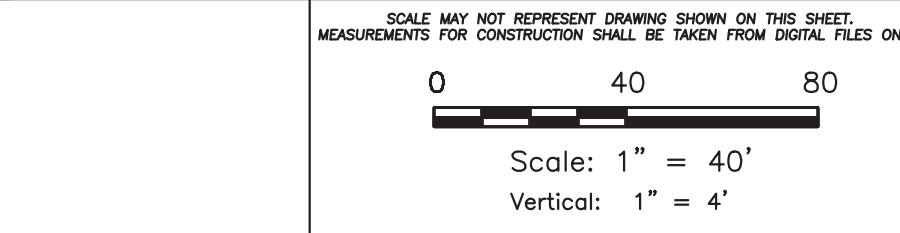
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8+00.00 MATCH LINE
 SEE SHEET C3.03

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 DATE: 11.14.2019

BENCHMARKS
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 BM #2
 Top nut of fire hydrant that is approximately 18 feet South of the centerline of Royal King Road, and approximately 82 feet West of the center of Kitchens Drive.
 EL: 547.33 ft.

NO.	REVISIONS / SUBMISSIONS	DATE
		MM.DD.YYYY



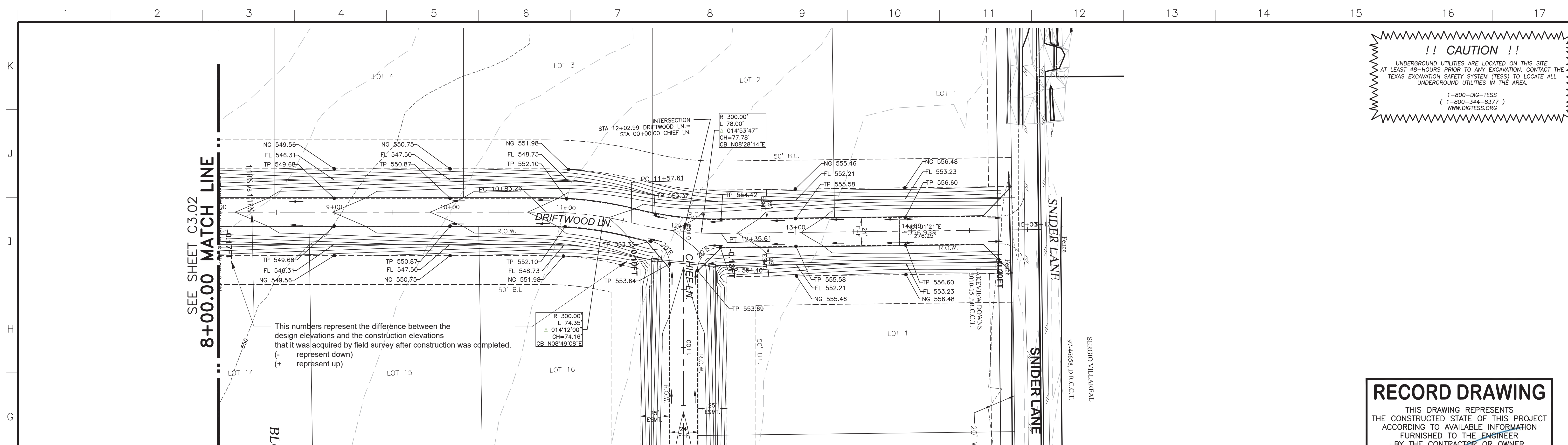
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 CITY OF LUCAS, COLLIN COUNTY, TEXAS

C3.02 DRIFTWOOD LANE

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PROJECT NO.	2804.000	07 of 45

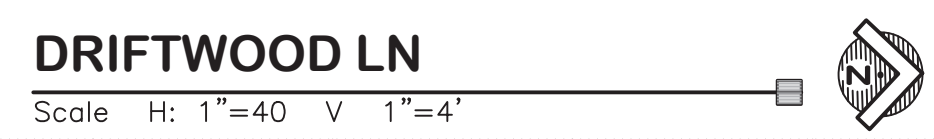
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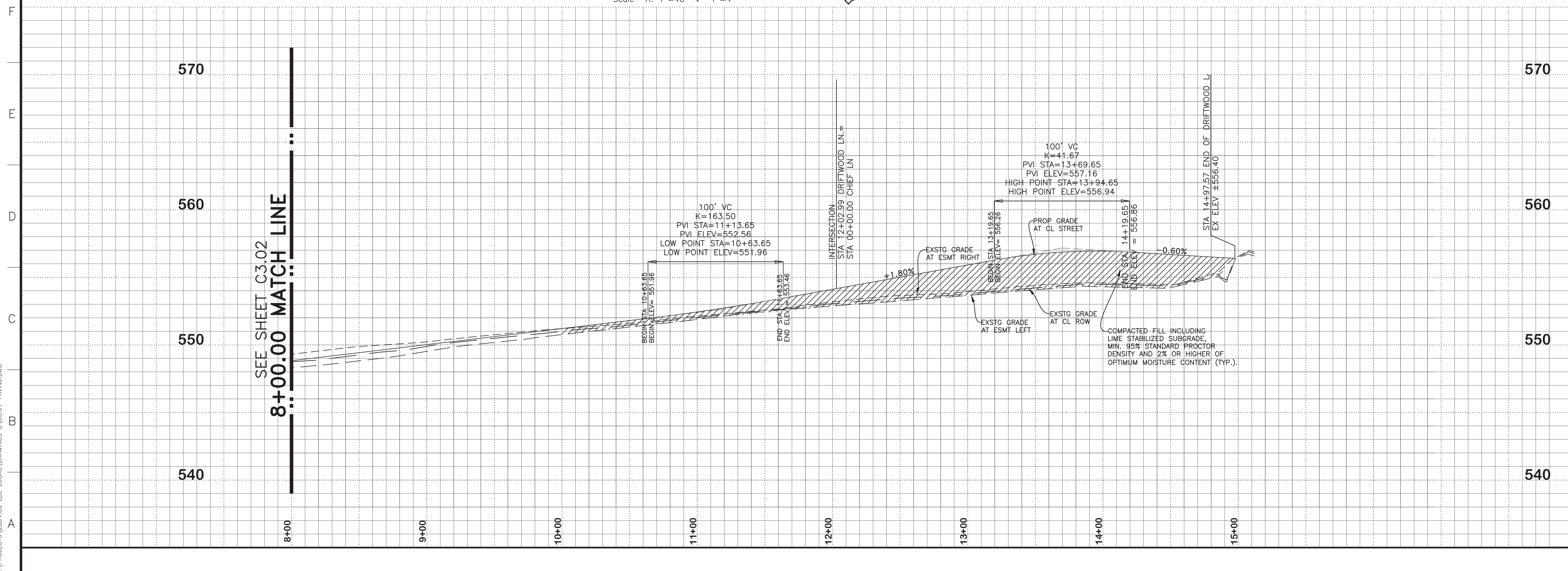
SEE SHEET C3.02
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This numbers represent the difference between the design elevations and the construction elevations that it was acquired by field survey after construction was completed.
 (- represent down)
 (+ represent up)

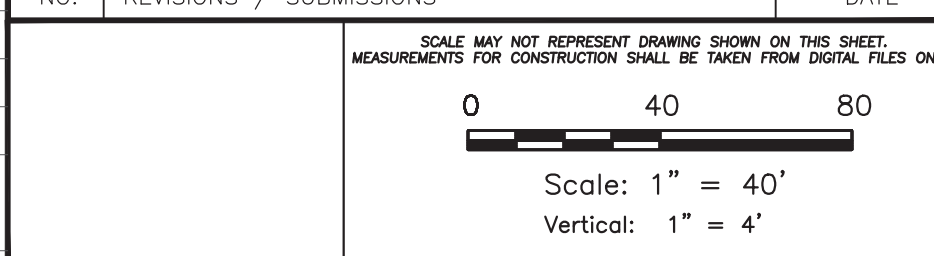


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BENCHMARKS
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 Top nut of fire hydrant that is approximately 17 feet West of the centerline of Driftwood Ln, and approximately 30 feet South from the center of Chief Lane. EL: 555.97 ft.
 BM #2
 Top nut of fire hydrant that is approximately 18 feet South of the centerline of Royal King Road, and approximately 82 feet West of the center of Kitchens Drive. EL: 547.33 ft.



NO.	REVISIONS / SUBMISSIONS	DATE



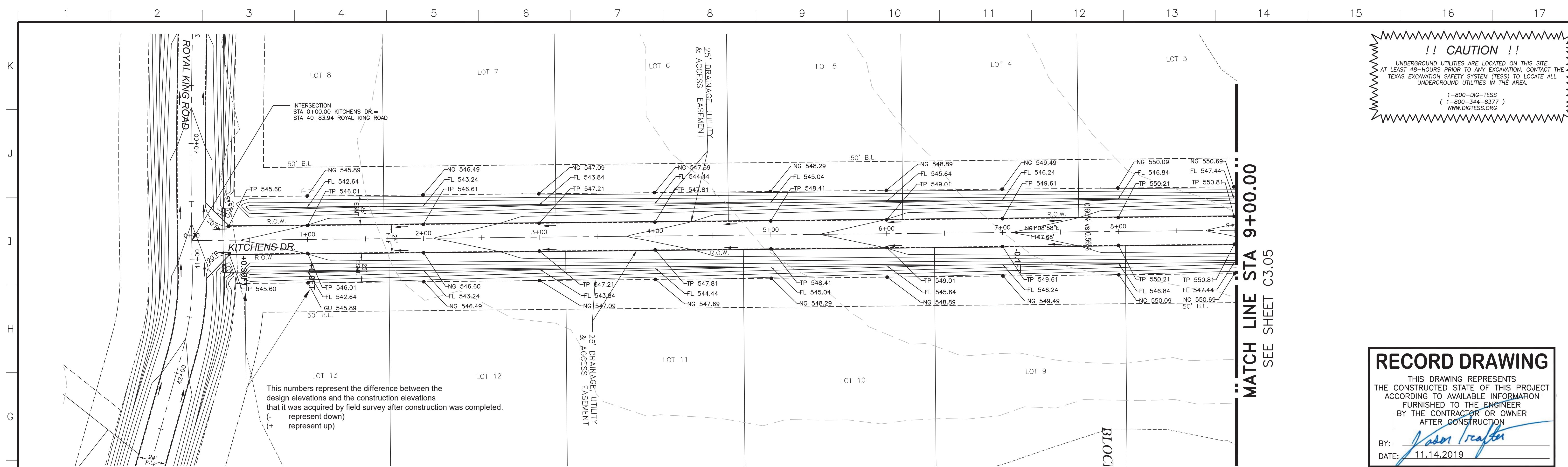
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LAKEVIEW DOWNS
 EQUESTRIAN ESTATES
 CITY OF LUCAS, COLLIN COUNTY, TEXAS

C3.03 DRIFTWOOD LANE

SEAL	DRAWN	SCALE
	FM	H: 1" = 40'
	CHECKED	FILENAME
	REVIEWED	DRAWING NO.
	DATE	C3.03
PROJECT NO.	2804.000	08 of 45

LAYOUT: C3.03 DRIFTWOOD LANE PLOTTED: Tuesday, December 17, 2019 10:27:54 AM BY: BRYAN-15A PLOT SCALE: 1:1 SAVED: 11/14/2019 2:15PM BY: BRYAN-15A
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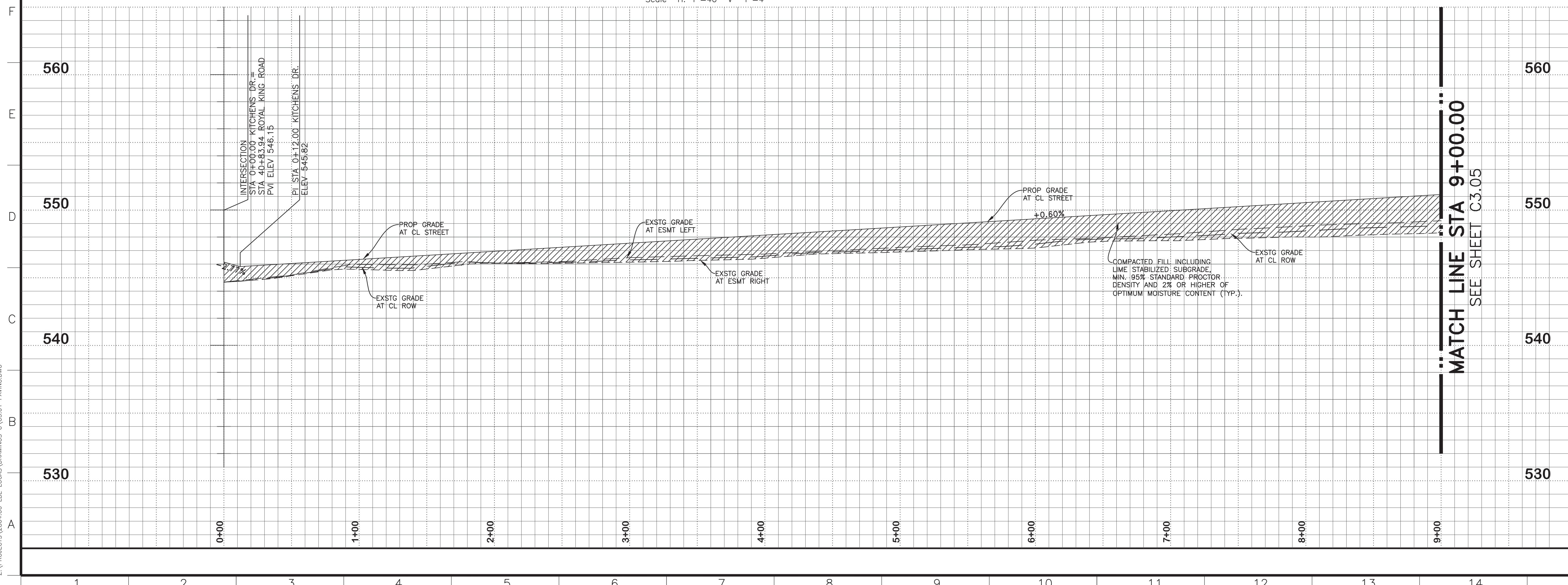
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 BY: *Jason Trafton*
 DATE: 11.14.2019

KITCHENS DR.
 Scale: H: 1"=40 V: 1"=4'

This numbers represent the difference between the design elevations and the construction elevations that it was acquired by field survey after construction was completed.
 (- represent down)
 (+ represent up)

MATCH LINE STA 9+00.00
 SEE SHEET C3.05



6" CONCRETE PAVING - STREET

BENCHMARKS
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 EL: 547.33 ft.

NO.	REVISIONS / SUBMISSIONS	DATE

SCALE MAY NOT REPRESENT DRAWING SHOWN ON THIS SHEET. MEASUREMENTS FOR CONSTRUCTION SHALL BE TAKEN FROM DIGITAL FILES ONLY.
 0 40 80
 Scale: 1" = 40'
 Vertical: 1" = 4'

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 Firm TX F6701
 214.370.3470 Ph

LAKEVIEW DOWNS
 EQUESTRIAN ESTATES
 CITY OF LUCAS, COLLIN COUNTY, TEXAS

C3.04 KITCHENS DR.

SEAL	DRAWN	SCALE
	FM	H: 1" = 40'
	CHECKED	FILENAME
	REVIEWED	DRAWING NO.
	DATE	PROJECT NO.

C3.04
 11.07.2018
 2804.000 09 of 45

LAYOUT: C3.04 KITCHENS DR. PLOTTED: Tuesday, December 17, 2019 10:28:14 AM BY: BRYAN-LSA PLT SCALE: 1:11 SAVED: 11/14/2019 2:13PM BY: BRYAN-LSA
 Z:\PROJECTS\2804.00 LBL LUCAS\DRAWINGS\C3.01 PAVING.DWG

This numbers represent the difference between the design elevations and the construction elevations that it was acquired by field survey after construction was completed.
 (- represent down)
 (+ represent up)

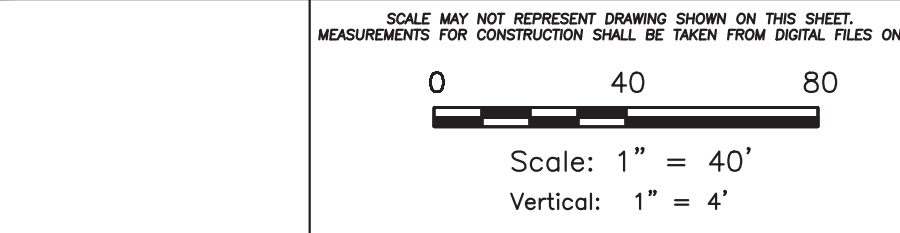
This numbers represent the difference between the design elevations and the construction elevations that it was acquired by field survey after construction was completed.
 (- represent down)
 (+ represent up)

!! CAUTION !!
 UNDERGROUND UTILITIES ARE LOCATED ON THIS SITE. AT LEAST 48-HOURS PRIOR TO ANY EXCAVATION, CONTACT THE TEXAS EXCAVATION SAFETY SYSTEM (TESS) TO LOCATE ALL UNDERGROUND UTILITIES IN THE AREA.
 1-800-DIG-TESS
 (1-800-344-8377)
 WWW.DIGTESS.ORG

RECORD DRAWING
 THIS DRAWING REPRESENTS THE CONSTRUCTED STATE OF THIS PROJECT ACCORDING TO AVAILABLE INFORMATION FURNISHED TO THE ENGINEER BY THE CONTRACTOR OR OWNER AFTER CONSTRUCTION.
 BY: *Jason Trafton*
 DATE: 11.14.2019

BENCHMARKS
 BM #1
 Top nut of fire hydrant that is approximately 17 feet West of the centerline of Driftwood Ln, and approximately 30 feet South from the center of Chief Lane.
 EL: 555.97 ft.
 BM #2
 Top nut of fire hydrant that is approximately 18 feet South of the centerline of Royal King Road, and approximately 82 feet West of the center of Kitchens Drive.
 EL: 547.33 ft.

NO.	REVISIONS / SUBMISSIONS	DATE
		MM.DD.YYYY



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 Suite 350
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 Firm TX F6701
 214.370.3470 Ph

LAKEVIEW DOWNS
 EQUESTRIAN ESTATES
 CITY OF LUCAS, COLLIN COUNTY, TEXAS

C3.05 KITCHENS DR. & NORMAN CT.

SEAL	DRAWN	SCALE
	FM	H: 1" = 40'
	CHECKED	FILENAME
	REVIEWED	DRAWING NO.
	DATE	C3.05
	PROJECT NO.	10 of 45

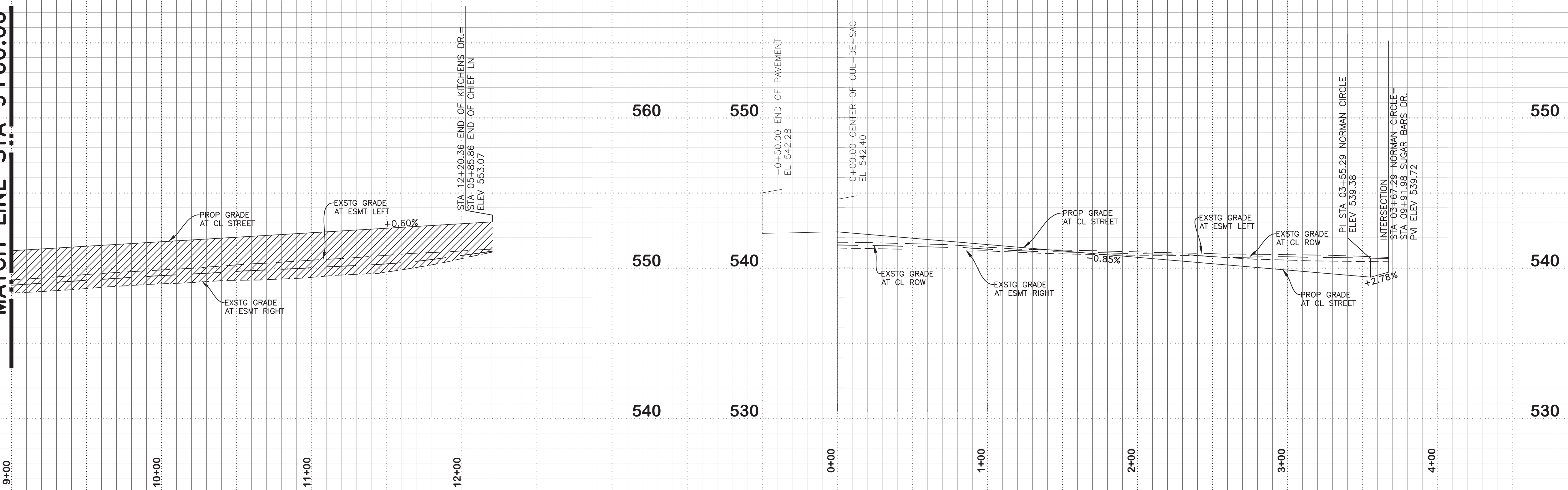
THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY JASON TRAFTON, P.E. NO. 113343 ON 11/14/2019.

SEE SHEET C3.04
MATCH LINE STA 9+00.00

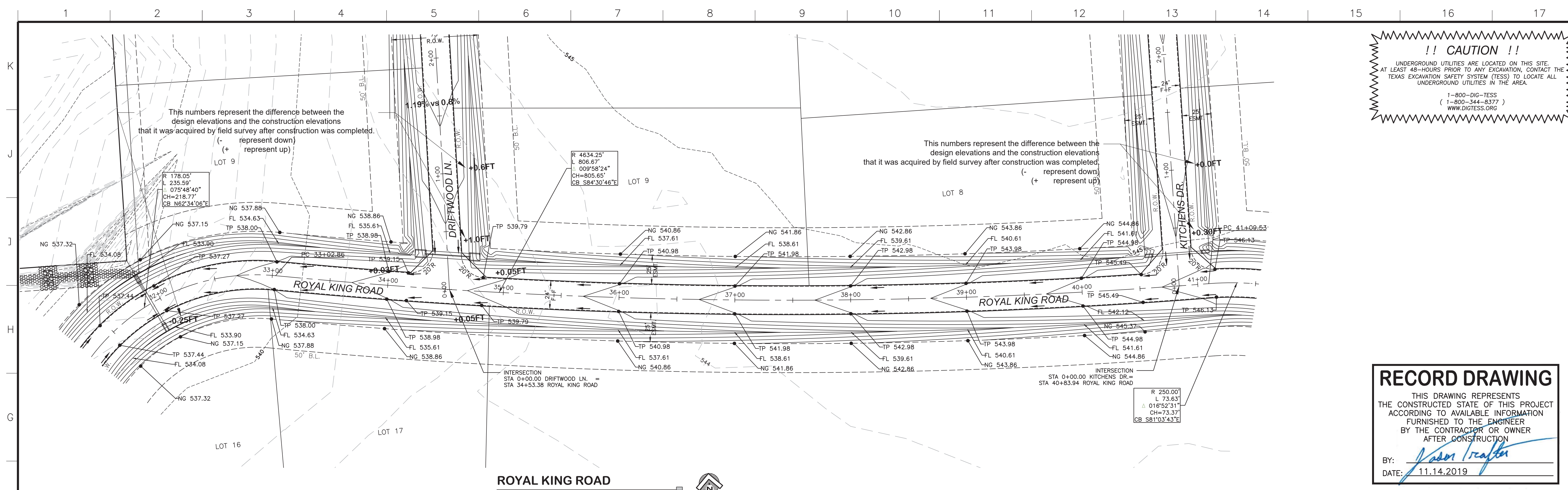
SEE SHEET C3.04
MATCH LINE STA 9+00.00

KITCHENS DR.
 Scale: H: 1"=40 V: 1"=4'

NORMAN COURT
 Scale: H: 1"=40 V: 1"=4'



LAYOUT: C:\CS\KITCHENS DR. & NORMAN CT. PLOTTED: Tuesday, December 17, 2019 10:28:42 AM BY: BRYAN-USA PLOT SCALE: 1:11 SAVED: 11/14/2019 2:13PM BY: BRYAN-USA Z:\PROJECTS\2804.00 LBL LUCAS\DRAWINGS\C3.01 PAVING.DWG



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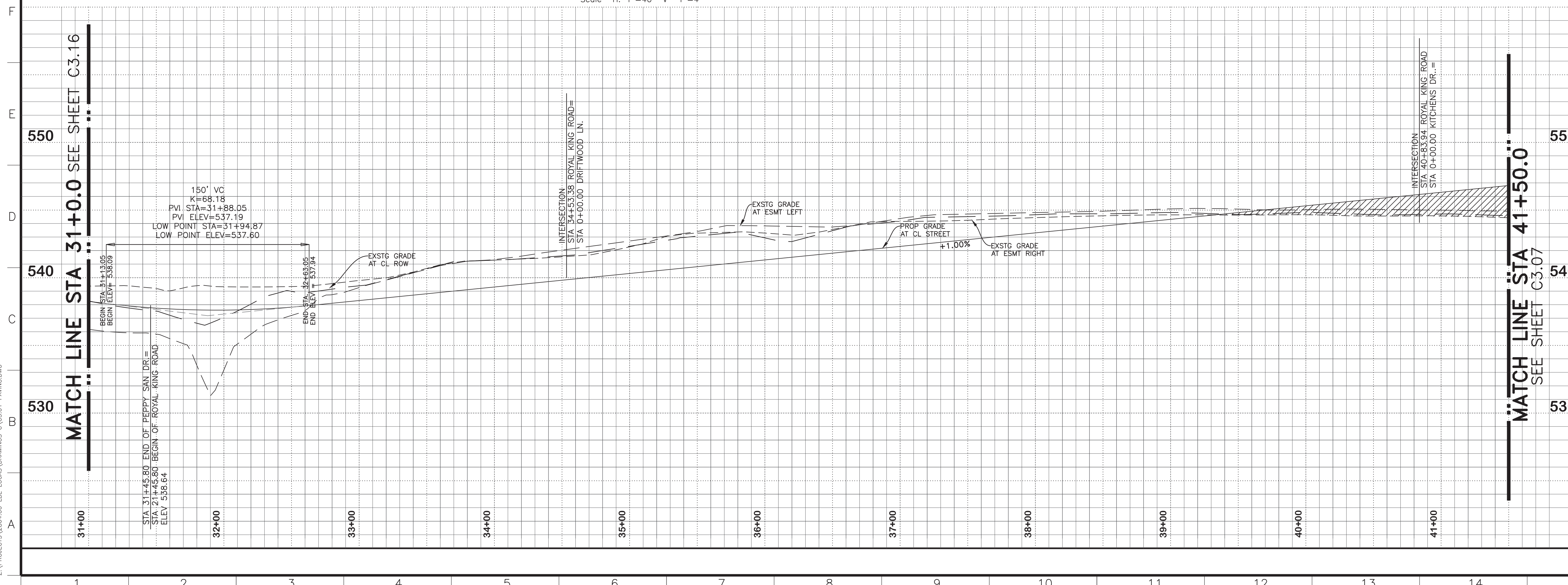
1-800-DIG-TESS
(1-800-344-8377)
WWW.DIGTESS.ORG

RECORD DRAWING

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BY: *Jason Trafton*

DATE: 11.14.2019



BENCHMARKS

BM #1
Top nut of fire hydrant that is approximately 17 feet West of the centerline of Driftwood Ln, and approximately 30 feet South from the center of Chief Lane.
EL: 555.97 ft.

BM #2
Top nut of fire hydrant that is approximately 18 feet South of the centerline of Royal King Road, and approximately 82 feet West of the center of Kitchens Drive.
EL: 547.33 ft.

NO.	REVISIONS / SUBMISSIONS	DATE

Scale: 1" = 40'
Vertical: 1" = 4'

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**LAKEVIEW DOWNS
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CITY OF LUCAS, COLLIN COUNTY, TEXAS**

**C3.06 ROYAL KING ROAD
STATION 00+00.00 TO STATION 6+88.00**

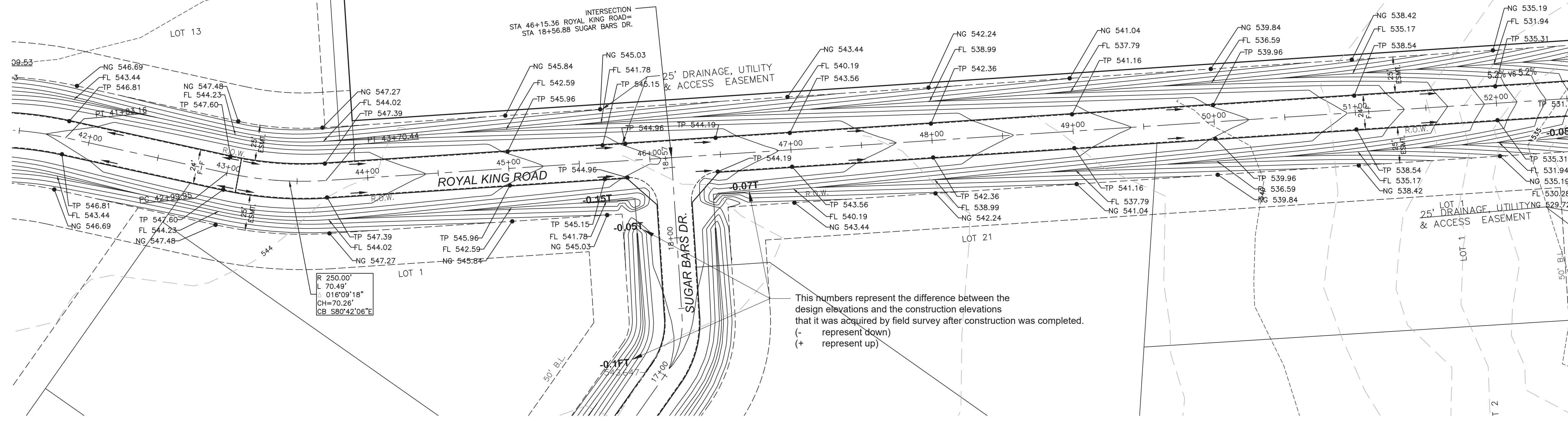
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LAYOUT: C3.06 ROYAL KING ROAD PLOTTED: Tuesday, December 17, 2019 10:28:59 AM BY: BRYAN-LSA FILE SCALE: 1:1.1 SAVED: 11/14/2019 2:13PM BY: BRYAN-LSA
Z:\PROJECTS\2804.00 LBL LUCAS\DRAWINGS\C3.01 PAVING.DWG

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 (+ represent up)

ROYAL KING ROAD
 Scale: H: 1"=40 V 1"=4'

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 EL: 547.33 ft.

NO.	REVISIONS / SUBMISSIONS	DATE

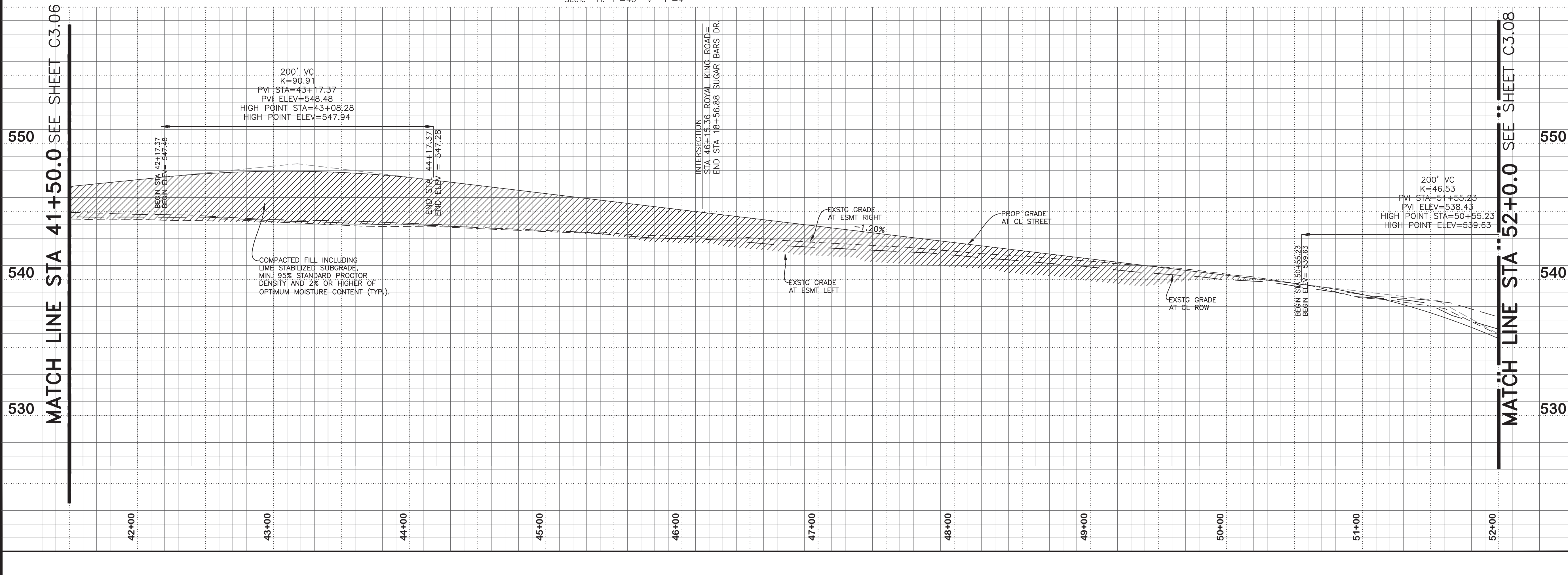
Scale: 1" = 40'
 Vertical: 1" = 4'

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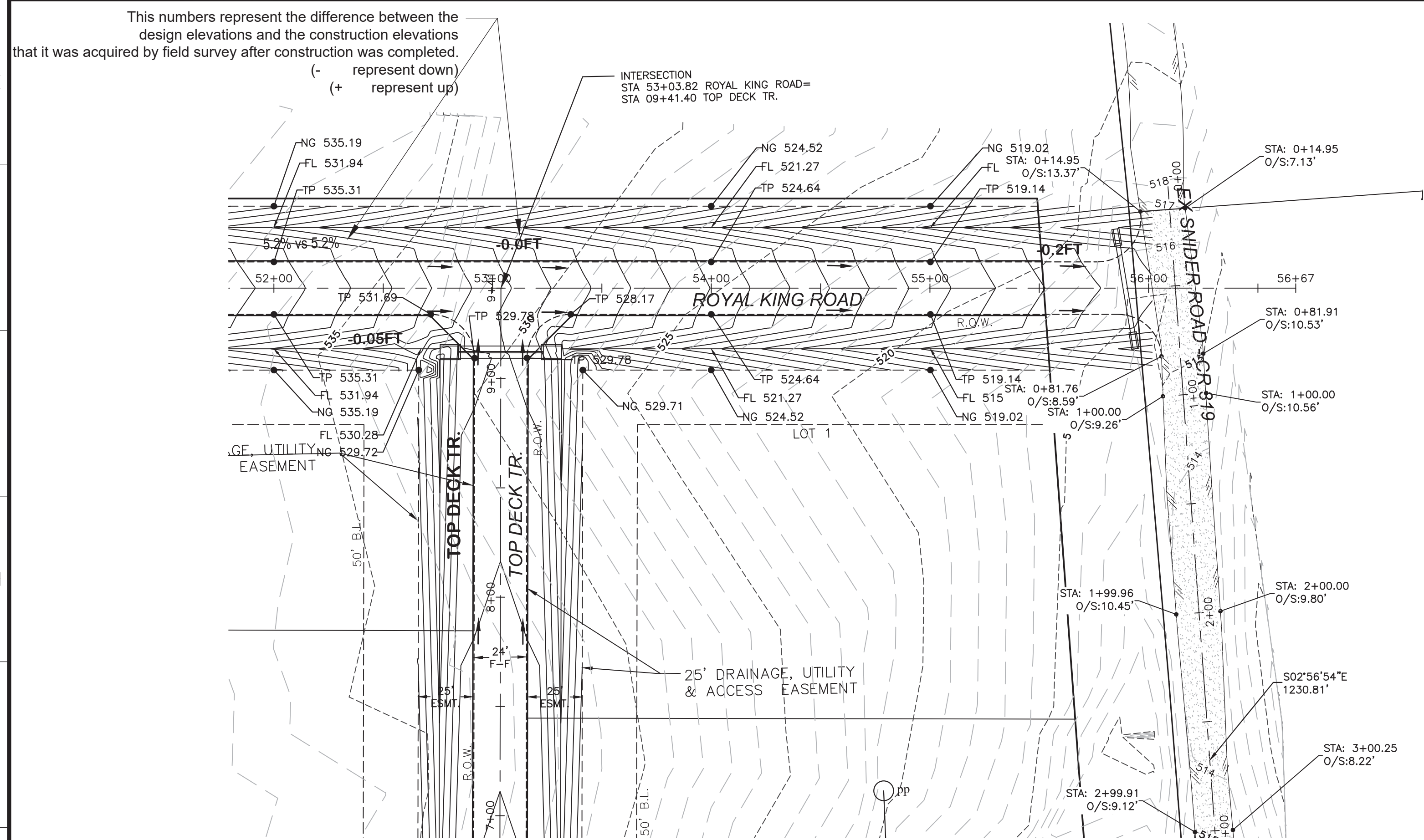
LAKEVIEW DOWNS EQUISTRAN ESTATES
 CITY OF LUCAS, COLLIN COUNTY, TEXAS

C3.07 ROYAL KING ROAD
 STATION 00+00.00 TO STATION 6+88.00

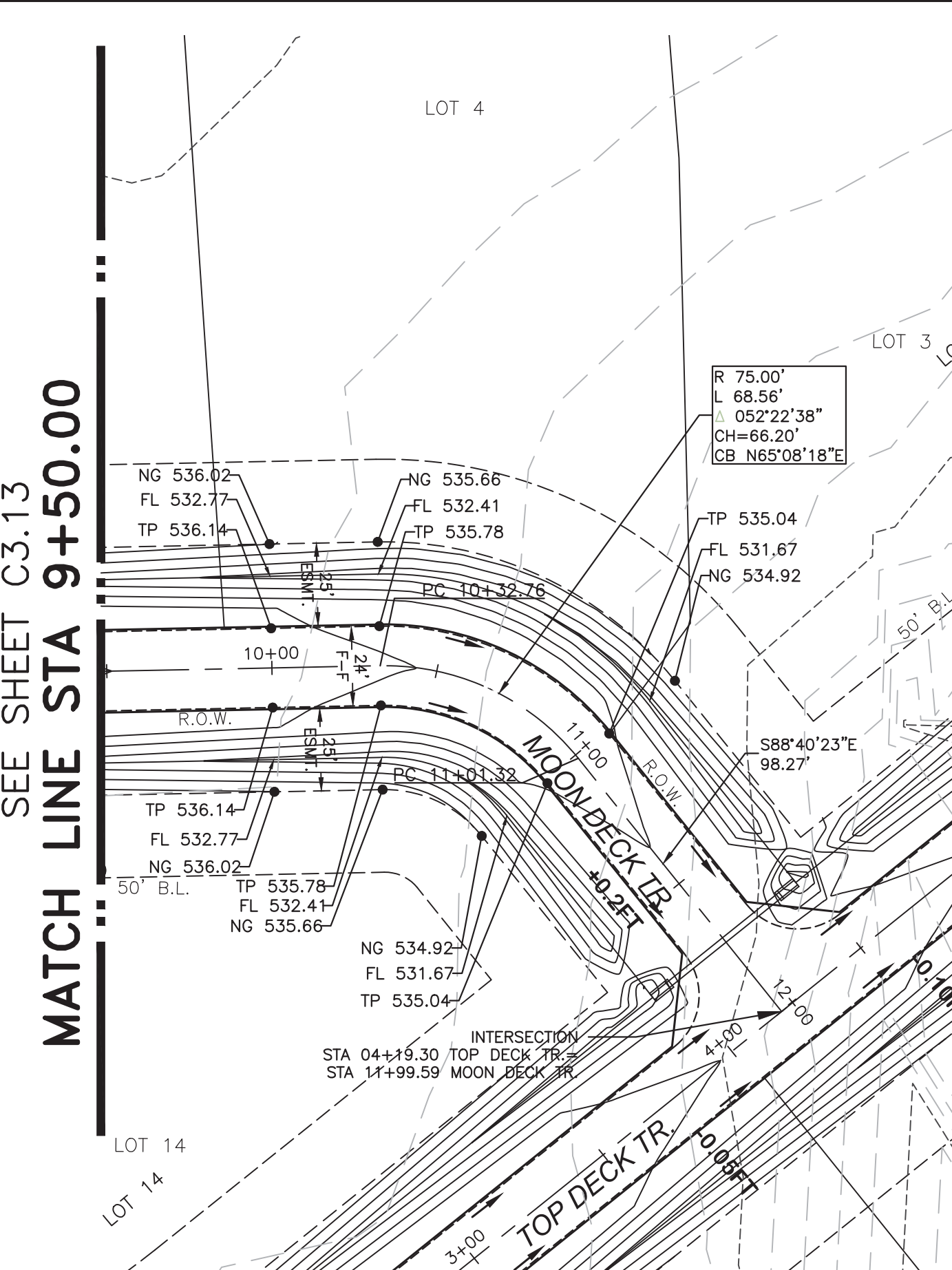
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LAYOUT: C3.07 ROYAL KING ROAD PLOTTED: Tuesday, December 17, 2019 10:29:20 AM BY: BRYAN-LSA
 Z:\PROJECTS\2804.00 LBL LUCAS\DRAWINGS\C3.01 PAVING.DWG



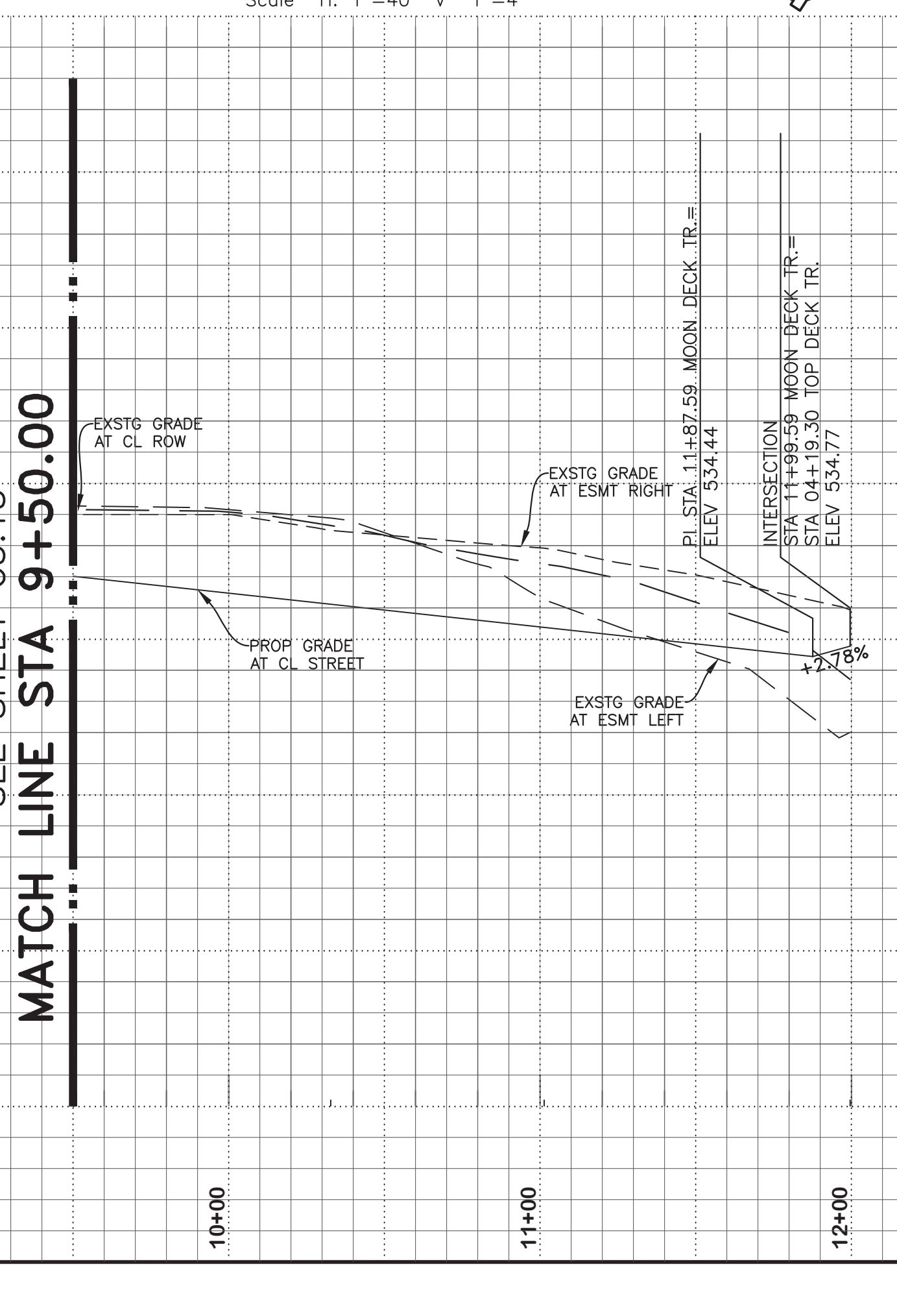
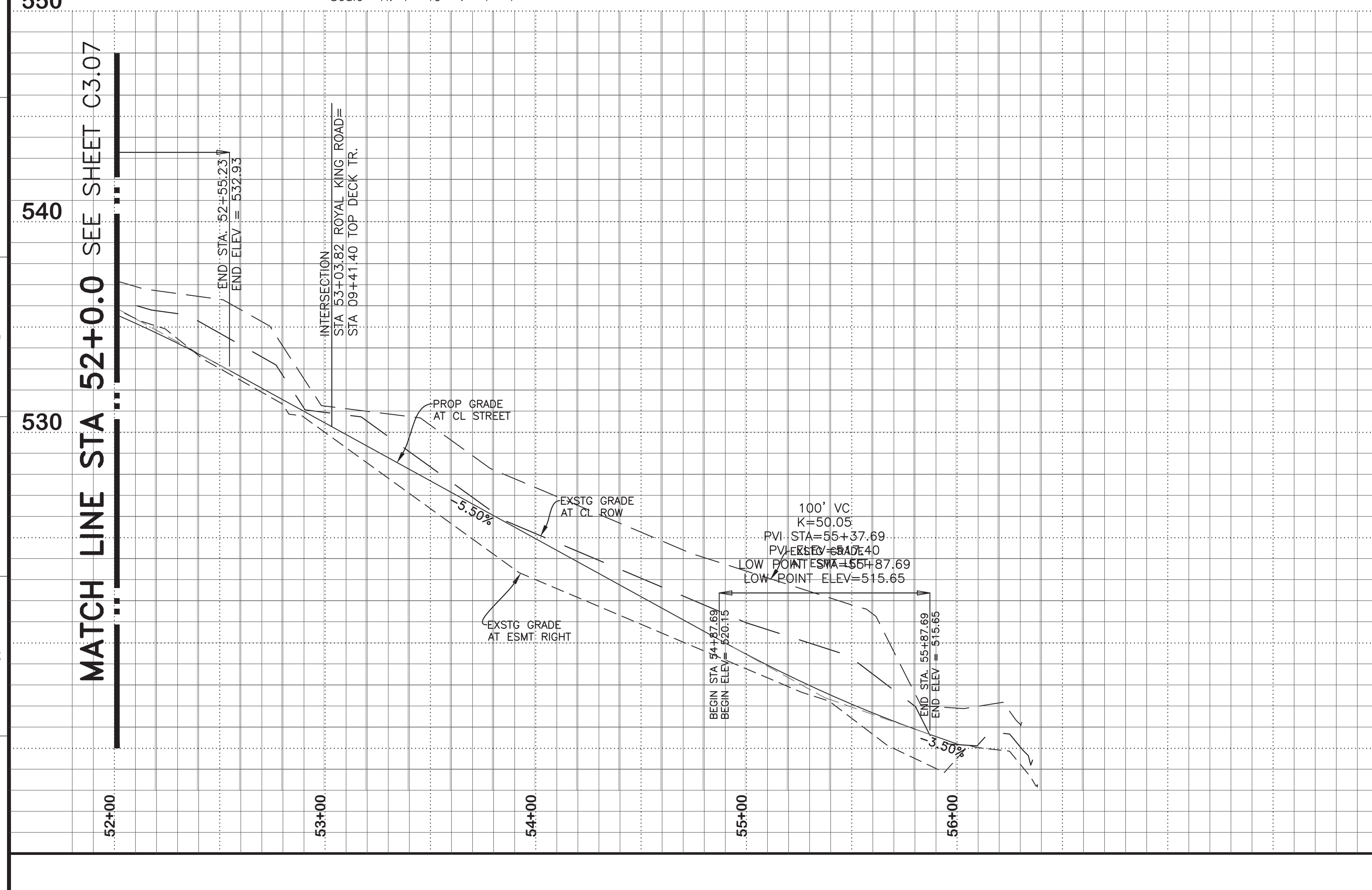
ROYAL KING ROAD
Scale: H: 1"=40' V: 1"=4'



MOON DECK TR.
Scale: H: 1"=40' V: 1"=4'

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BY: *Jason Trafton*
DATE: 11.14.2019



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EL: 547.33 ft.

NO.	REVISIONS / SUBMISSIONS	DATE

Scale: 1" = 40'
Vertical: 1" = 4'

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**LAKEVIEW DOWNS
EQUISTRAN ESTATES
CITY OF LUCAS, COLLIN COUNTY, TEXAS**

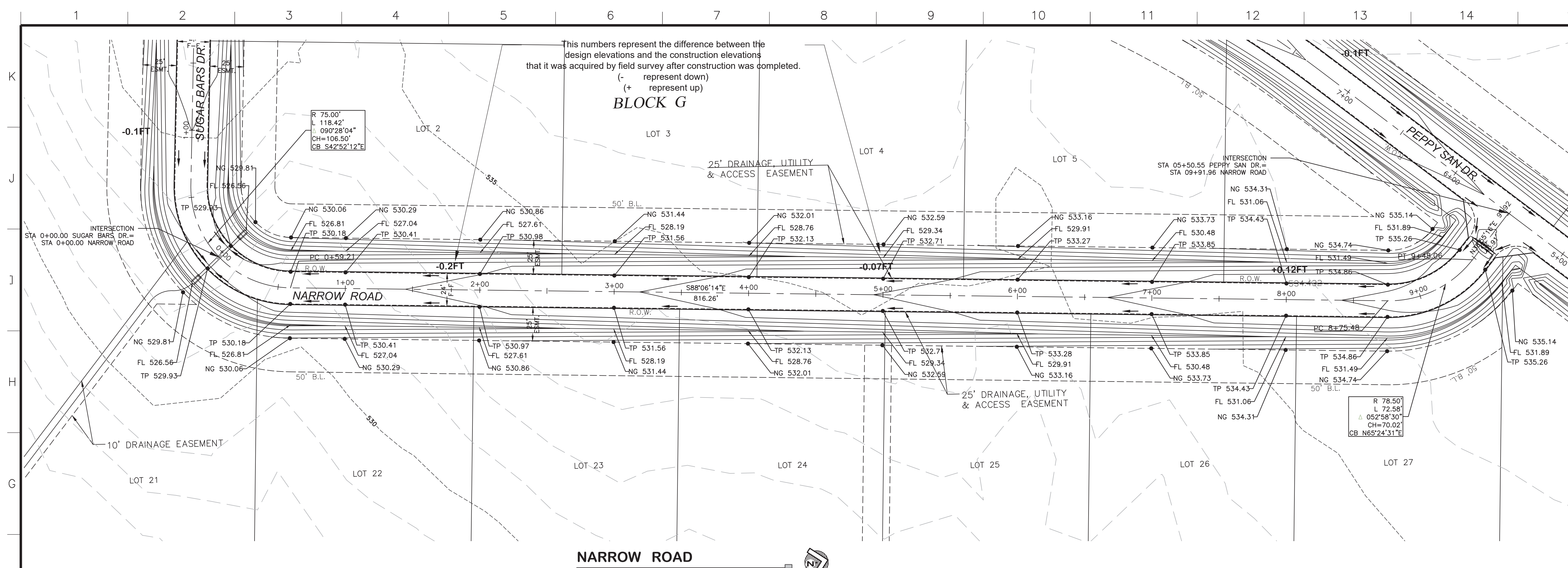
**C3.08 ROYAL KING ROAD
STATION 00+00.00 TO STATION 6+88.00**

	DRAWN: FM CHECKED: JT REVIEWED: BK DATE: 11.07.2018 PROJECT NO.: 2804.000	SCALE: H: 1" = 40' FILENAME: C3.08 ROYAL KING ROAD DRAWING NO.: C3.08 13 of 45
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LAYOUT: C3.08 ROYAL KING ROAD PLOTTED: Tuesday, December 17, 2019 10:29:43 AM BY: BRYAN-LSA FILE SCALE: 1:1. SAVED: 11/14/2019 2:13PM BY: BRYAN-LSA
Z:\PROJECTS\2804.00 LBL LUCAS\DRAWINGS\C3.01 PAVING.DWG

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 (+ represent up)
BLOCK G

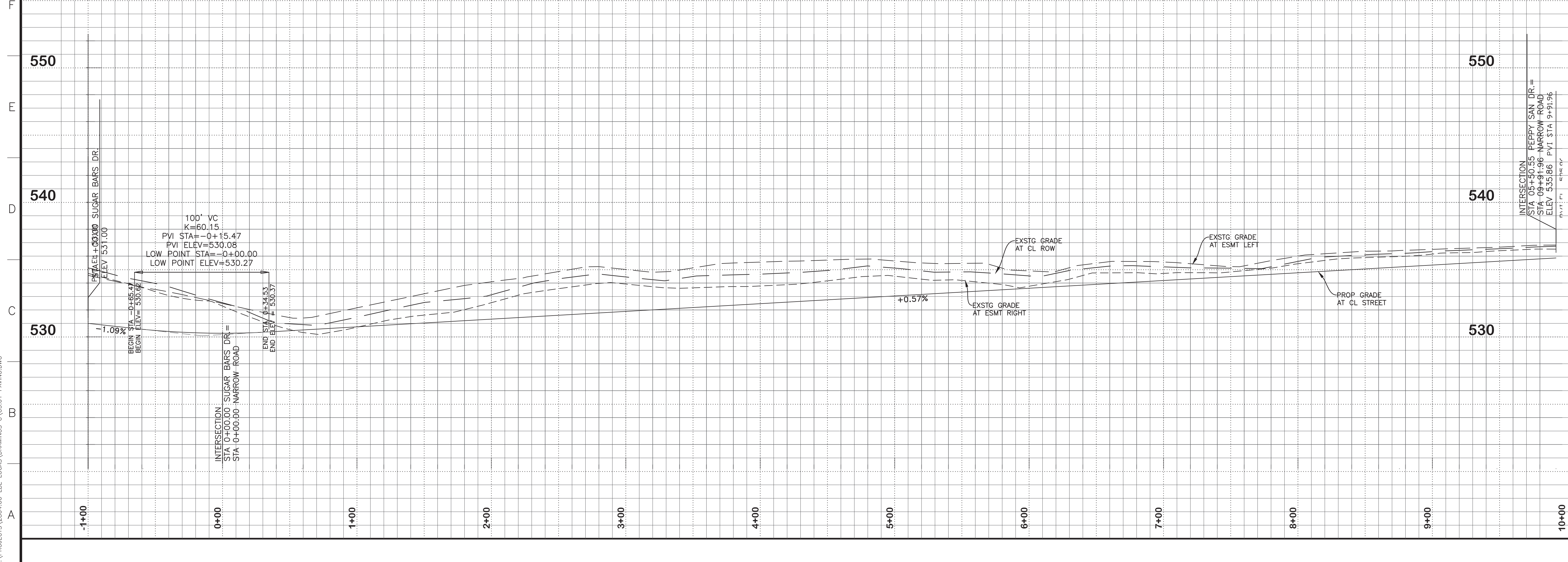
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NARROW ROAD
 Scale: H: 1"=40 V 1"=4'

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NO.	REVISIONS / SUBMISSIONS	DATE

Scale: 1" = 40'
 Vertical: 1" = 4'

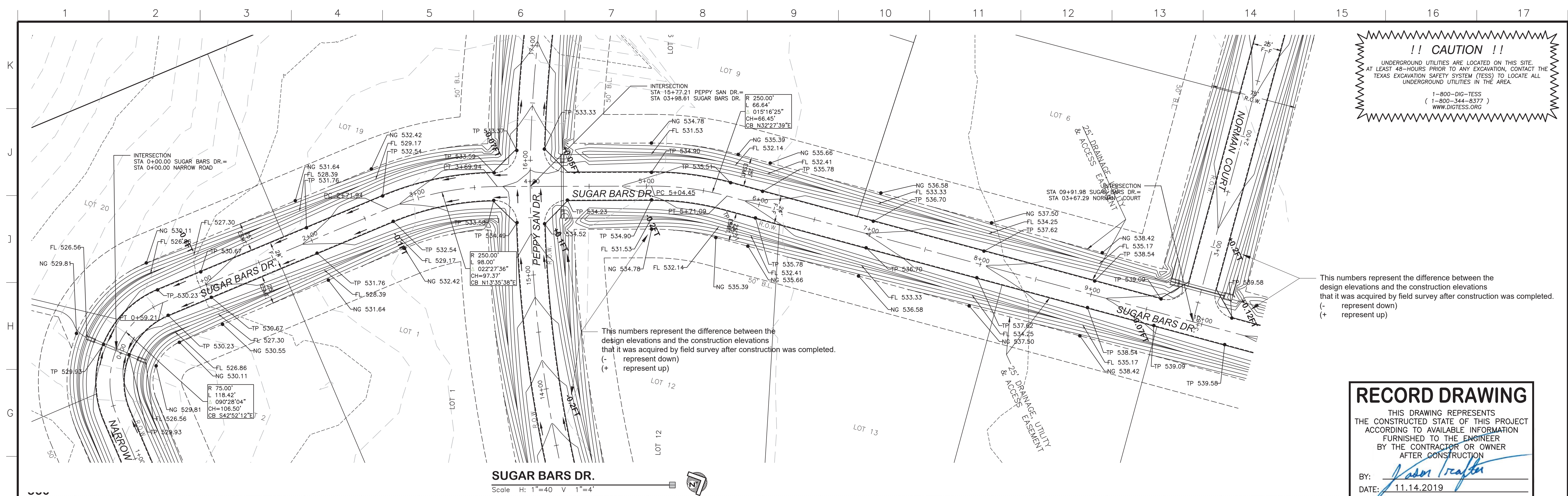
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 Firm TX F6701
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 EQUESTRIAN ESTATES
 CITY OF LUCAS, COLLIN COUNTY, TEXAS**

**C3.09 NARROW ROAD
 STATION 00+00.00 TO STATION 6+88.00**

SEAL	DRAWN: FM	SCALE: H: 1" = 40'
CHECKED: JT	FILENAME: C3.09 NARROW ROAD	
REVIEWED: BK	DRAWING NO.: 113343	
DATE: 11.07.2018	C3.09	
PROJECT NO.: 2804.000	14 of 45	

LAYOUT: C3.09 NARROW ROAD PLOTTED: Tuesday, December 17, 2019 10:30:00 AM BY: BRYAN-ISA PLOT SCALE: 1:1 SAVED: 11/14/2019 2:13PM BY: BRYAN-ISA
 Z:\PROJECTS\2804.00 LBL LUCAS\DRAWINGS\C3.01 PAVING.DWG



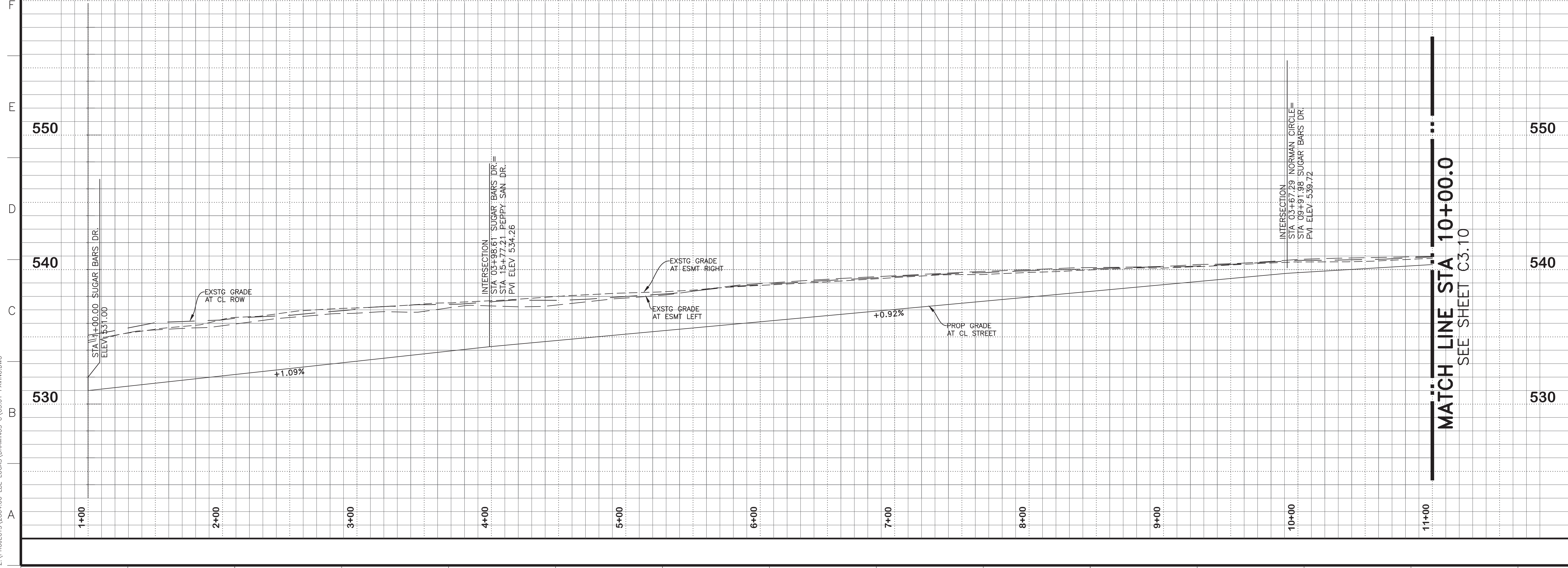
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SUGAR BARS DR.
 Scale: H: 1"=40 V 1"=4'

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NO.	REVISIONS / SUBMISSIONS	DATE

MM.DD.YYYY

Scale: 1" = 40'
 Vertical: 1" = 4'

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 Firm TX F6701
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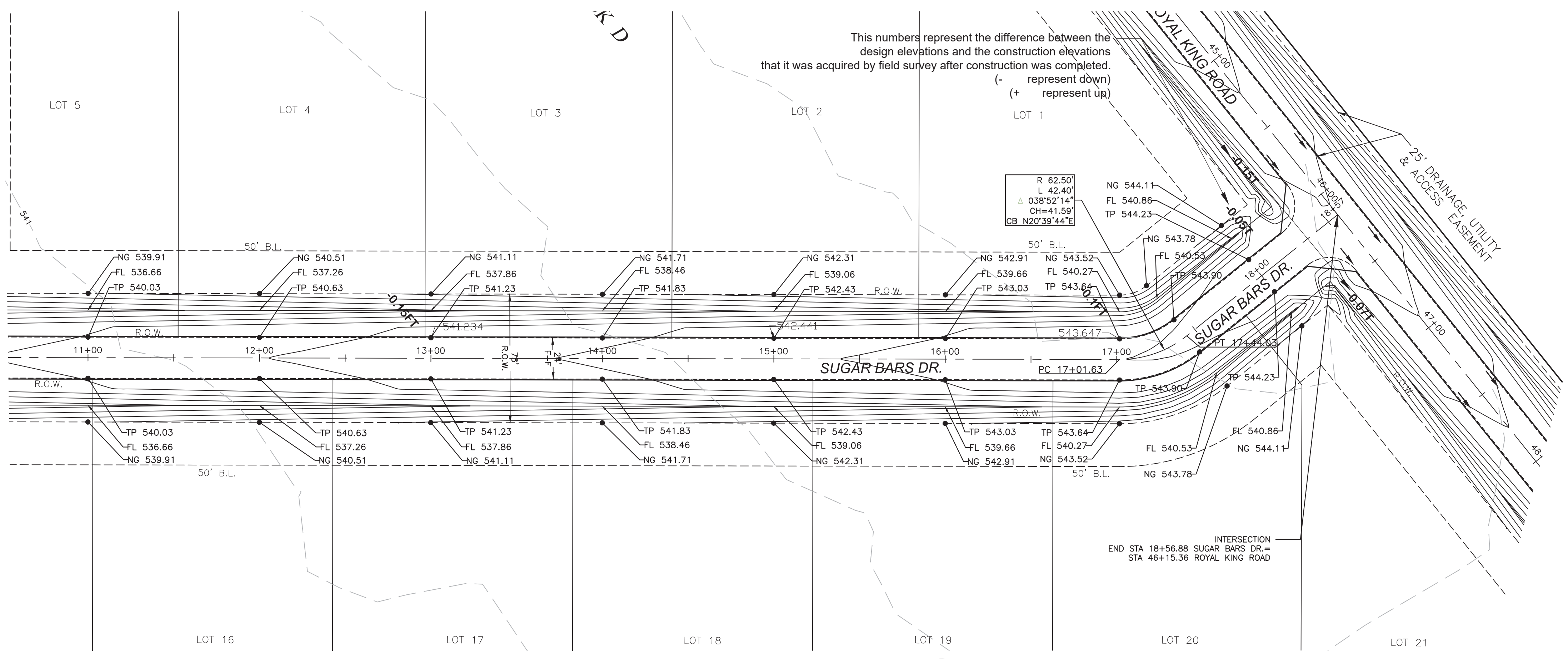
LAKEVIEW DOWNS EQUISTRAN ESTATES
 CITY OF LUCAS, COLLIN COUNTY, TEXAS

	DRAWN: FM SCALE: H: 1" = 40' CHECKED: JT FILENAME: C3.10 SUGAR BARS DR. REVIEWED: BK DRAWING NO.: C3.10 DATE: 11.07.2018 PROJECT NO.: 2804.000
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LAYOUT: C3.10 SUGAR BARS DR. PLOTTED: Tuesday, December 17, 2019 10:30:20 AM BY: BRYAN-LSA PLOT SCALE: 1:1 SAVED: 11/14/2019 2:13PM BY: BRYAN-LSA
 Z:\PROJECTS\2804.00 LBL LUCAS\DRAWINGS\C3.101 PAVING.DWG

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SUGAR BARS DR.
Scale: H: 1"=40 V: 1"=4'

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EL: 547.33 ft.

NO.	REVISIONS / SUBMISSIONS	DATE
		MM.DD.YYYY

SCALE MAY NOT REPRESENT DRAWING SHOWN ON THIS SHEET. MEASUREMENTS FOR CONSTRUCTION SHALL BE TAKEN FROM DIGITAL FILES ONLY.

0 40 80
Scale: 1" = 40'
Vertical: 1" = 4'

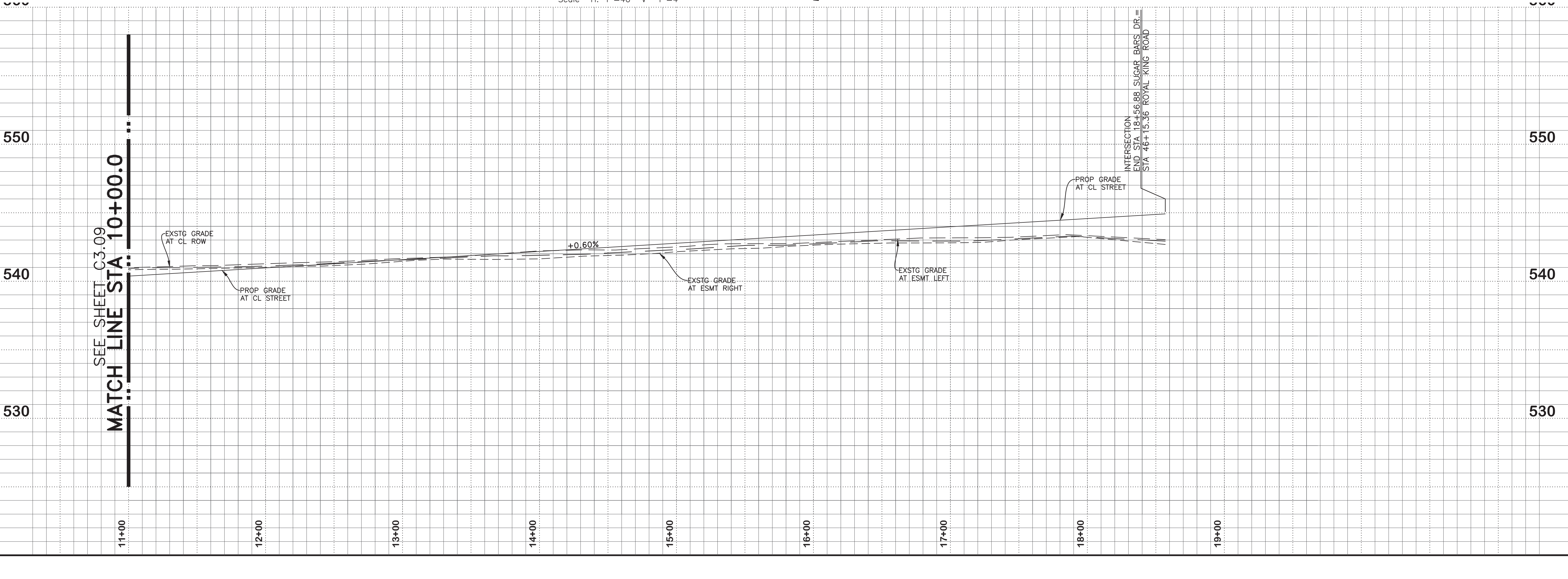
Ion Design Group
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Suite 350
Dallas, Texas 75231
Firm TX F6701
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LAKEVIEW DOWNS EQUISTRIAN ESTATES
CITY OF LUCAS, COLLIN COUNTY, TEXAS

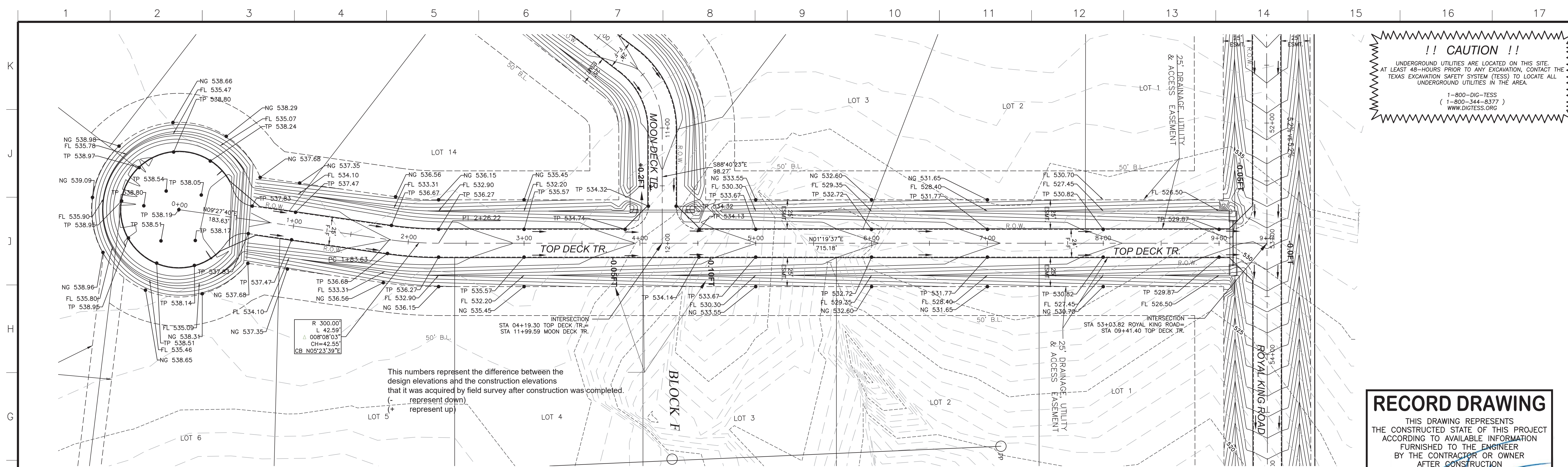
C3.11 SUGAR BARS DR.
STATION 00+00.00 TO STATION 6+88.00

	DRAWN: FM CHECKED: JT REVIEWED: BK DATE: 11.07.2018 PROJECT NO.: 2804.000	SCALE: H: 1" = 40' FILENAME: C3.11 SUGAR BARS DR. DRAWING NO.: C3.11 16 of 45
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SEE SHEET C3.09
MATCH LINE STA 10+00.0



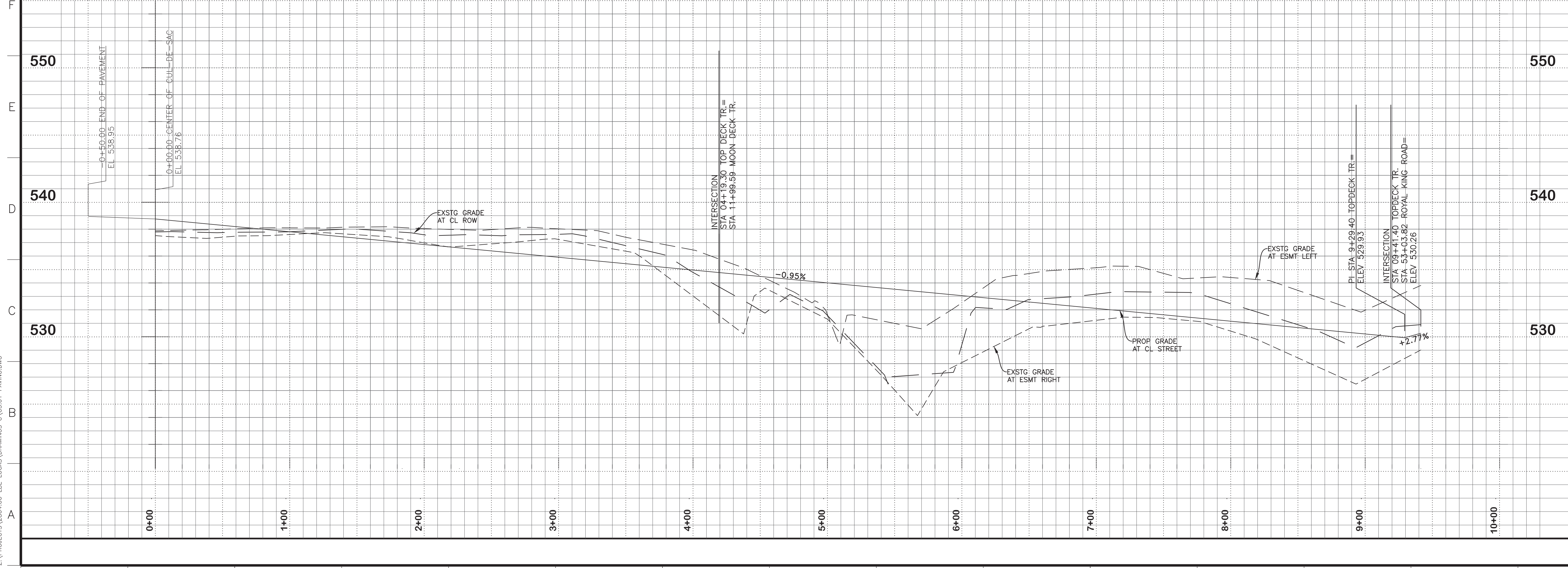
LAYOUT: C3.11 SUGAR BARS DR. PLOTTED: Tuesday, December 17, 2019 10:30:38 AM BY: BRYAN-USA PLOT SCALE: 1:1 SAVED: 11/14/2019 2:13PM BY: BRYAN-USA
Z:\PROJECTS\2804.00 LBL LUCAS\DRAWINGS\C3.01 PAVING.DWG



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 BY: *Jason Trafton*
 DATE: 11.14.2019

TOP DECK TRAIL
 Scale: H: 1"=40 V: 1"=4'



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NO.	REVISIONS / SUBMISSIONS	DATE

Scale: 1" = 40'
 Vertical: 1" = 4'

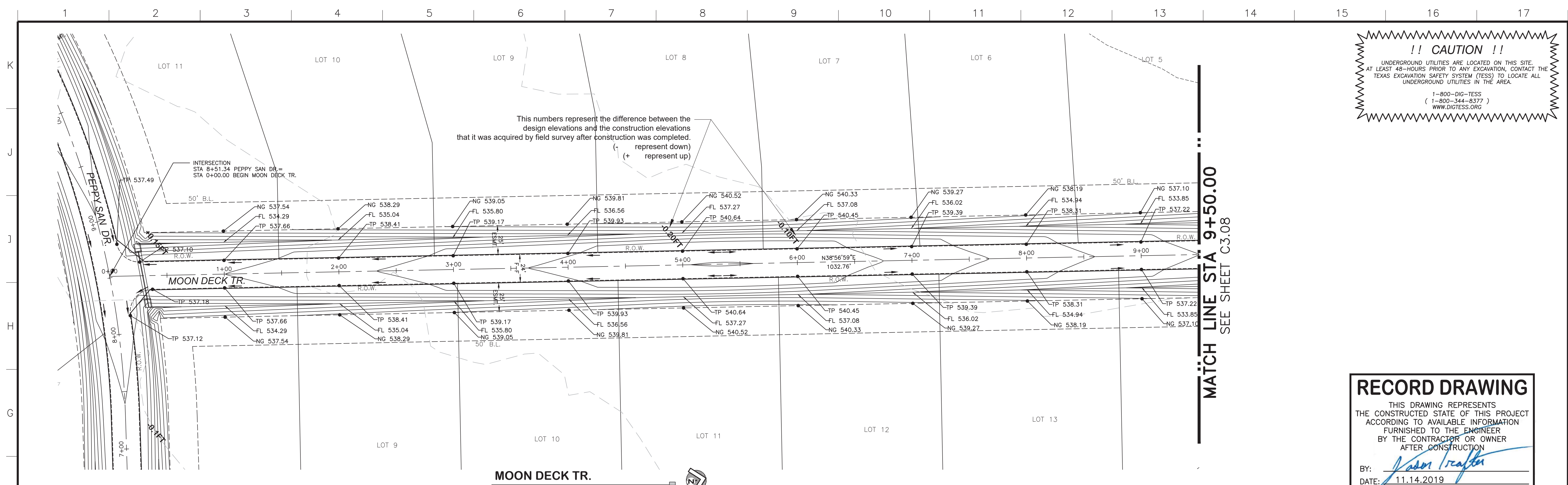
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 Firm TX F6701
 214.370.3470 Ph

LAKEVIEW DOWNS EQUSTRIAN ESTATES
 CITY OF LUCAS, COLLIN COUNTY, TEXAS

C3.12 TOP DECK TR.
 STATION 00+00.00 TO STATION 6+88.00

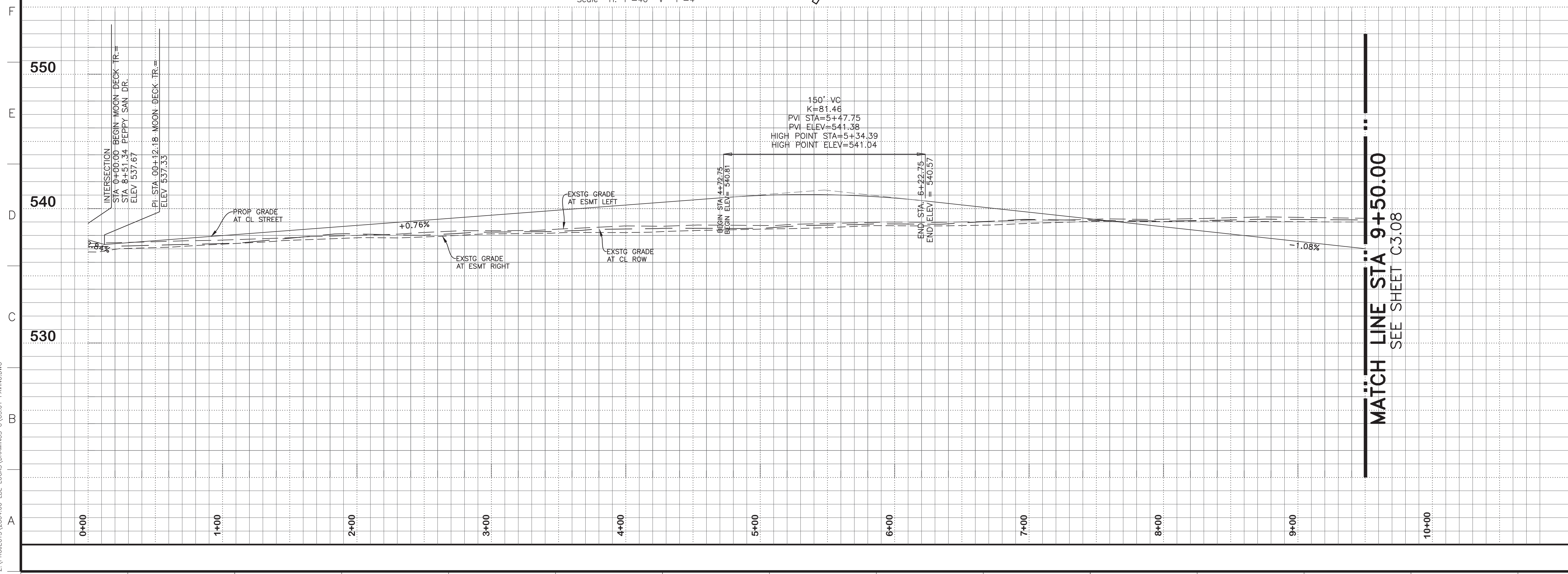
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CHECKED: JT	FILENAME: C3.12 TOP DECK TR.	
REVIEWED: BK	DRAWING NO.:	
DATE: 11.07.2018	C3.12	
PROJECT NO. 2804.000	17 of 45	

LAYOUT: C3.12 TOP DECK TR. PLOTTED: Tuesday, December 17, 2019 10:30:05 AM BY: BRYAN-USA. PLOT SCALE: 1:1. SAVED: 11/14/2019 2:13PM BY: BRYAN-15A
 Z:\PROJECTS\2804.00 LBL LUCAS\DRAWINGS\C3.01 PAVING.DWG



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RECORD DRAWING
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 BY THE CONTRACTOR OR OWNER
 AFTER CONSTRUCTION
 BY: *Jason Trafton*
 DATE: 11.14.2019



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NO.	REVISIONS / SUBMISSIONS	DATE

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0 40 80
 Scale: 1" = 40'
 Vertical: 1" = 4'

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**LAKEVIEW DOWNS
 EQUESTRIAN ESTATES
 CITY OF LUCAS, COLLIN COUNTY, TEXAS**

**C3.13 MOON DECK TR.
 STATION 00+00.00 TO STATION 6+88.00**

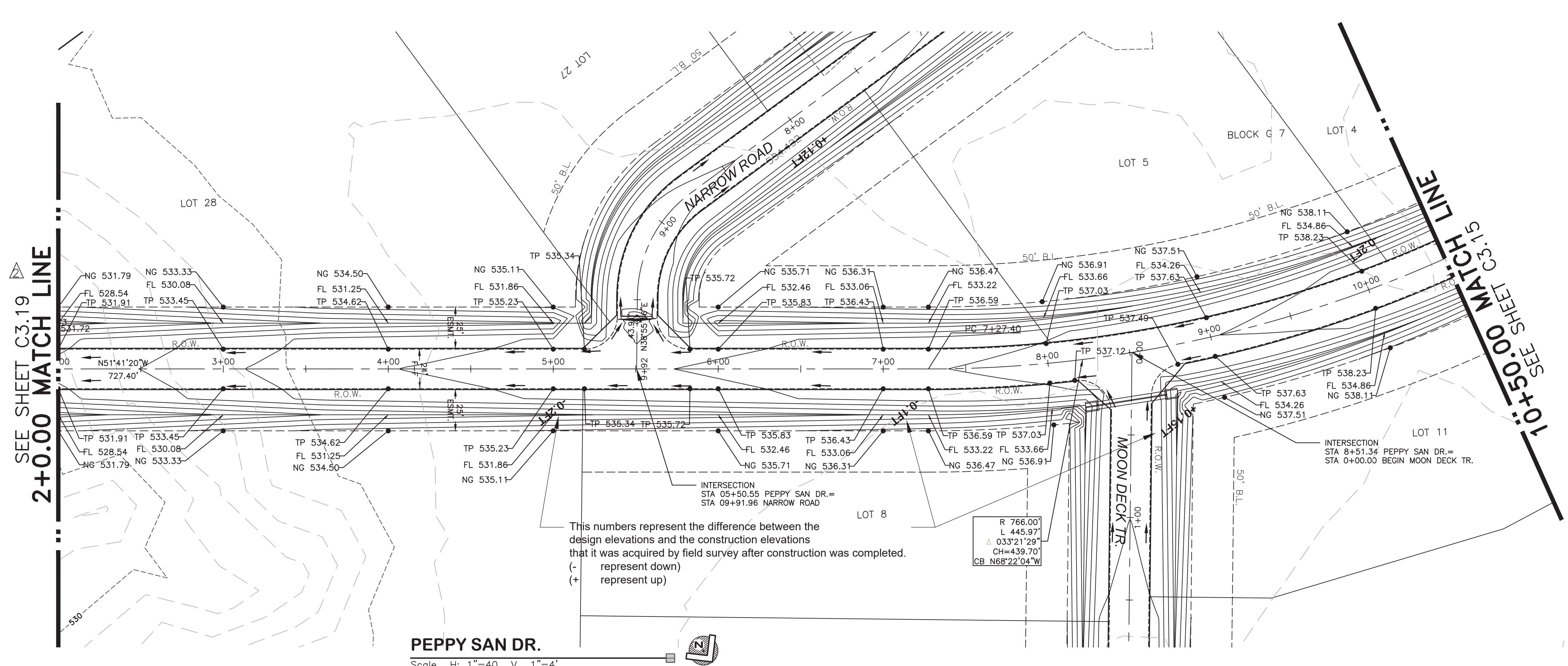
SEAL	DRAWN	SCALE
	FM	H: 1" = 40'
CHECKED	FILENAME	
REVIEWED	DRAWING NO.	
DATE		
PROJECT NO.		

C3.13
 11.07.2018
 2804.000

LAYOUT: C3.13 MOON DECK TR. PLOTTED: Tuesday, December 17, 2019 10:31:12 AM BY: BRYAN-15A PLOT SCALE: 1:1 SAVED: 11/14/2019 2:13PM BY: BRYAN-15A
 Z:\PROJECTS\2804.00 LBL LUCAS\DRAWINGS\C3.01 PAVING.DWG

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SEE SHEET C3.19
2+0.00 MATCH LINE

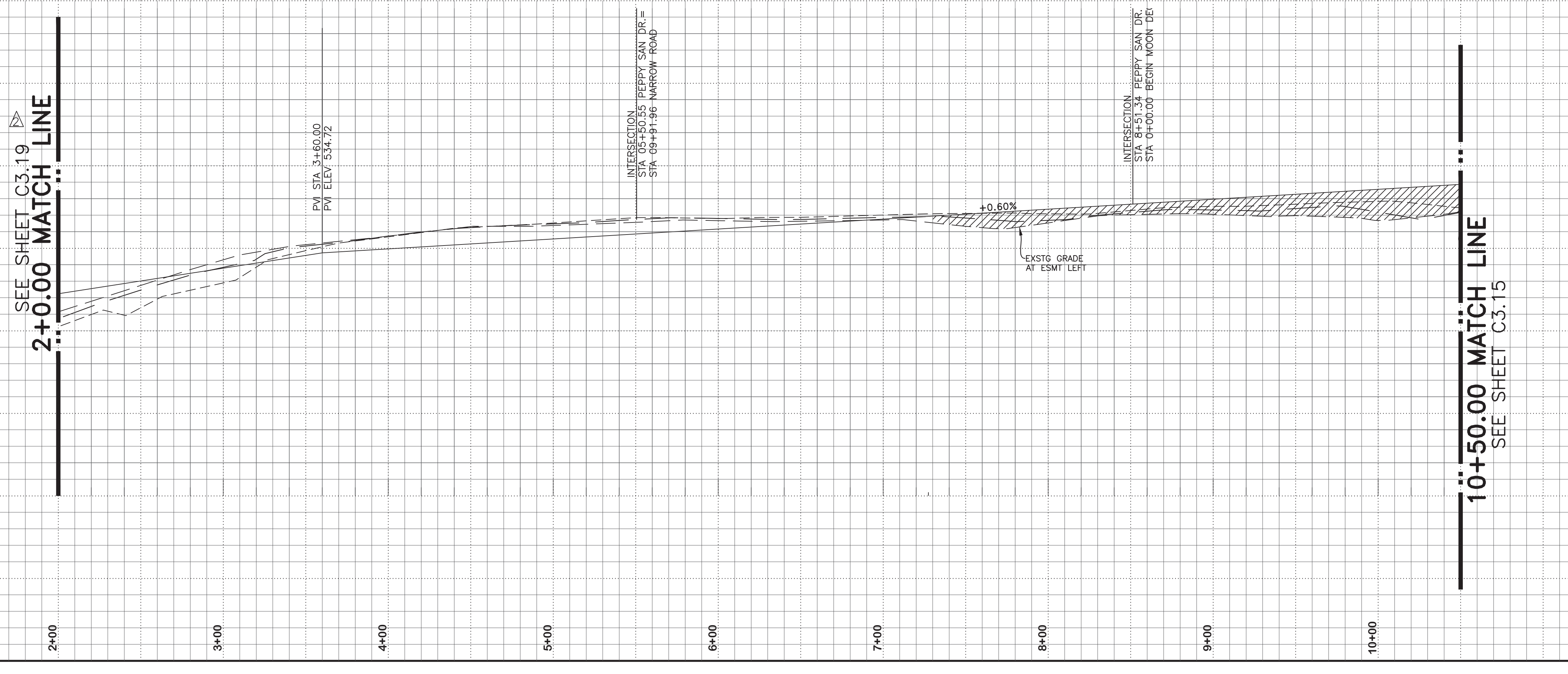
10+50.00 MATCH LINE
 SEE SHEET C3.15

PEPPY SAN DR.
 Scale: H: 1"=40' V: 1"=4'

This numbers represent the difference between the design elevations and the construction elevations that it was acquired by field survey after construction was completed.
 (- represent down)
 (+ represent up)

R 766.00'
 L 445.97'
 Δ 033°21'29"
 CH=439.70'
 CB N68°22'04"W

RECORD DRAWING
 THIS DRAWING REPRESENTS THE CONSTRUCTED STATE OF THIS PROJECT ACCORDING TO AVAILABLE INFORMATION FURNISHED TO THE ENGINEER BY THE CONTRACTOR OR OWNER AFTER CONSTRUCTION.
 BY: *Jason Trafton*
 DATE: 11.14.2019



SEE SHEET C3.19
2+0.00 MATCH LINE

10+50.00 MATCH LINE
 SEE SHEET C3.15

BENCHMARKS
 BM #1
 Top nut of fire hydrant that is approximately 17 feet West of the centerline of Driftwood Ln, and approximately 30 feet South from the center of Chief Lane.
 EL: 555.97 ft.
 BM #2
 Top nut of fire hydrant that is approximately 18 feet South of the centerline of Royal King Road, and approximately 82 feet West of the center of Kitchens Drive.
 EL: 547.33 ft.

NO.	REVISIONS / SUBMISSIONS	DATE
△	ADDED NEW SHEET	11.22.2018
△	REMOVED GUARDRAIL FENCE	11.01.2017

SCALE MAY NOT REPRESENT DRAWING SHOWN ON THIS SHEET.
 MEASUREMENTS FOR CONSTRUCTION SHALL BE TAKEN FROM DIGITAL FILES ONLY.
 0 40 80
 Scale: 1" = 40'
 Vertical: 1" = 4'

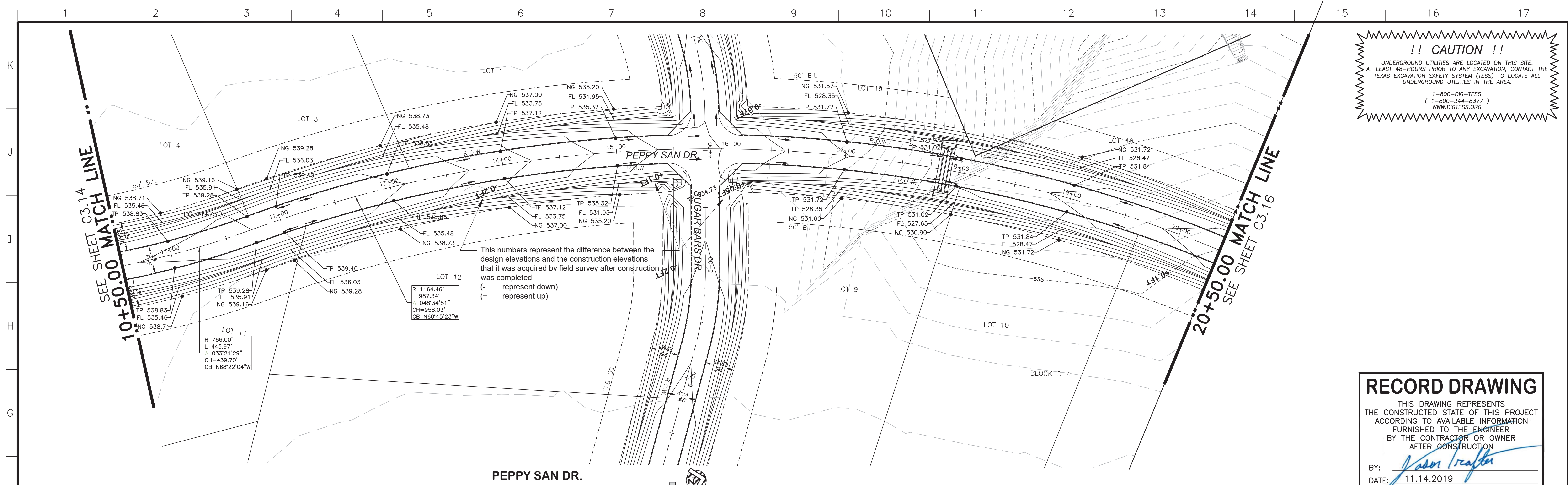
Ion Design Group
 7075 Twin Hills Ave
 Suite 350
 Dallas, Texas 75231
 Firm TX F6701
 214.370.3470 Ph

JOB NAME: **LAKEVIEW DOWNS EQUESTRIAN ESTATES**
 CITY OF LUCAS, COLLIN COUNTY, TEXAS

DRAWING TITLE: **C3.14 PEPPY SAN DR.**
 STATION 00+00.00 TO STATION 6+88.00

SEAL	DRAWN	SCALE
	FM	H: 1" = 40'
	CHECKED	FILENAME
	REVIEWED	C3.14 PEPPY SAN DR.
	BK	DRAWING NO.
DATE	C3.14	
PROJECT NO.	2804.000	19 of 45

LAYOUT: C3.14 PEPPY SAN DR. PLOTTED: Tuesday, December 17, 2019 10:31:27 AM BY: BRYAN-ISA FILE SCALE: 1:1 SAVED: 11/14/2019 2:13PM BY: BRYAN-ISA
 Z:\PROJECTS\2804.00 LBL LUCAS\DRAWINGS\C3.01 PAVING.DWG

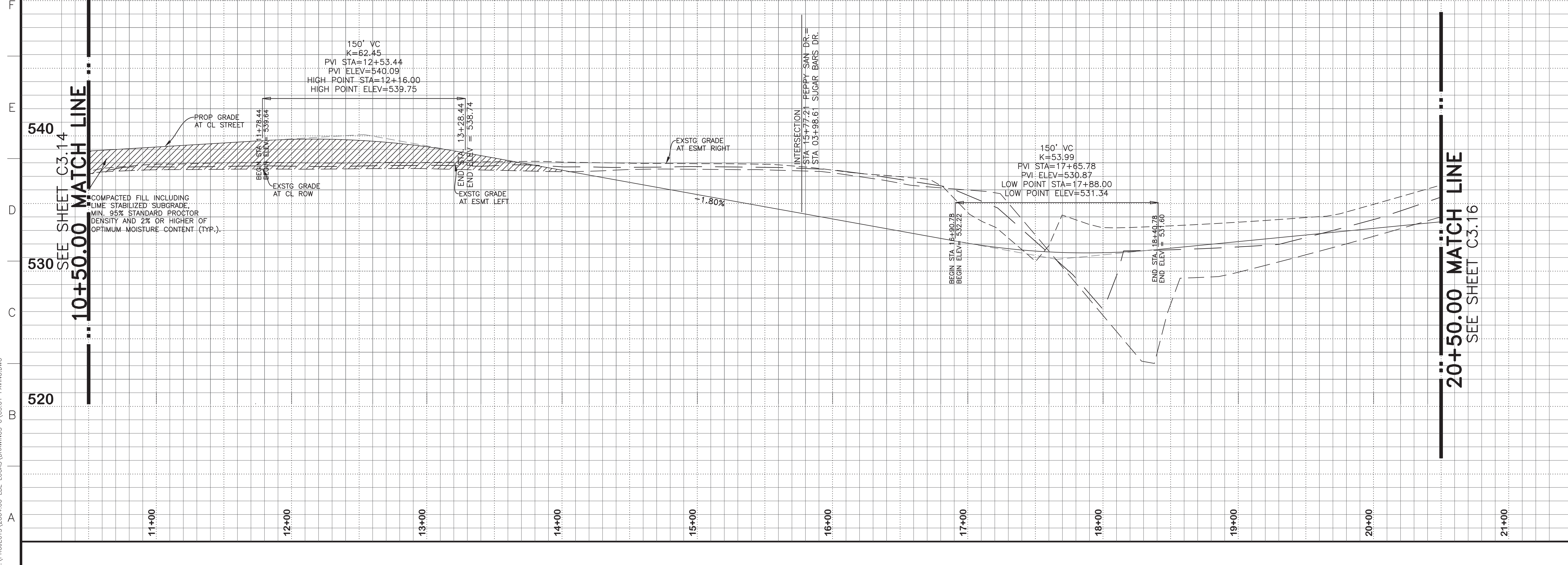


!! CAUTION !!
 UNDERGROUND UTILITIES ARE LOCATED ON THIS SITE. AT LEAST 48-HOURS PRIOR TO ANY EXCAVATION, CONTACT THE TEXAS EXCAVATION SAFETY SYSTEM (TESS) TO LOCATE ALL UNDERGROUND UTILITIES IN THE AREA.
 1-800-DIG-TESS
 (1-800-344-8377)
 WWW.DIGTESS.ORG

RECORD DRAWING
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 BY: *Jason Trafton*
 DATE: 11.14.2019

PEPPY SAN DR.
 Scale: H: 1"=40 V: 1"=4'

BENCHMARKS
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 EL: 547.33 ft.



NO.	REVISIONS / SUBMISSIONS	DATE
		MM.DD.YYYY

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0 40 80
 Scale: 1" = 40'
 Vertical: 1" = 4'

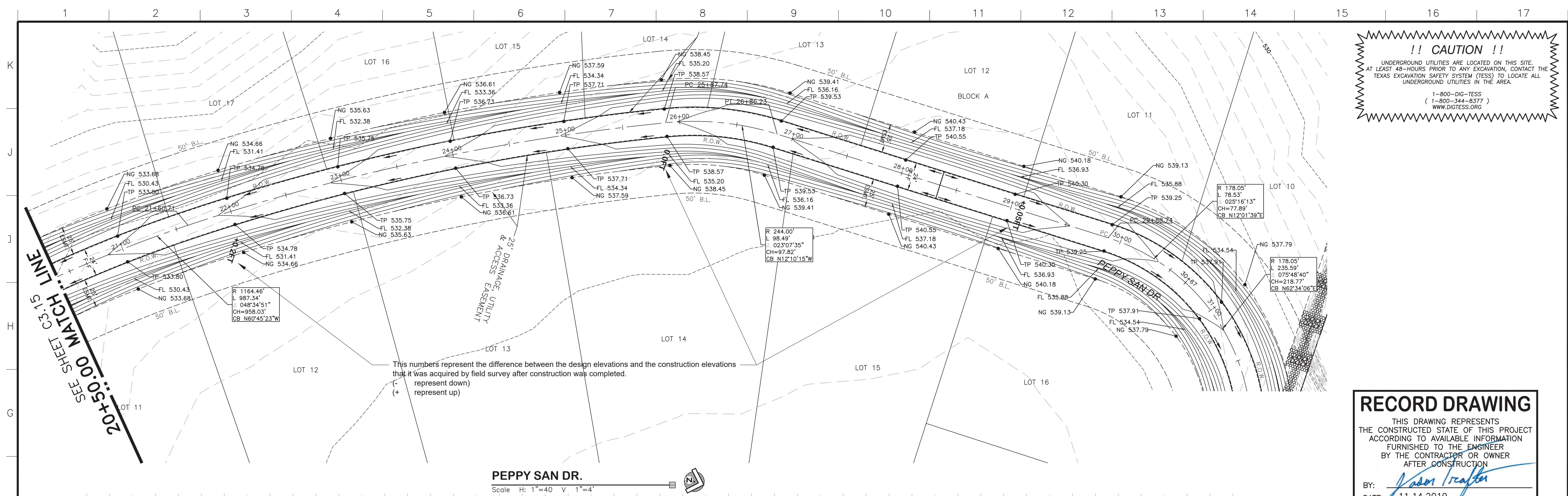
Ion Design Group
 7075 Twin Hills Ave
 Suite 350
 Dallas, Texas 75231
 Firm TX F6701
 214.370.3470 Ph

JOB NAME: **LAKEVIEW DOWNS EQUISTRIAN ESTATES CITY OF LUCAS, COLLIN COUNTY, TEXAS**

DRAWING TITLE: **C3.15 PEPPY SAN DR. STATION 00+00.00 TO STATION 6+88.00**

SEAL	DRAWN	SCALE
	FM	H: 1" = 40'
	CHECKED	FILENAME
	REVIEWED	C3.15 PEPPY SAN DR.
	BK	DRAWING NO.
DATE	C3.15	
PROJECT NO.	2804.000	20 of 45

LAYOUT: C3.15 PEPPY SAN DR. PLOTTED: Tuesday, December 17, 2019 10:31:41 AM BY: BRYAN-ISA FILE SCALE: 1:1 SAVED: 11/14/2019 2:13PM BY: BRYAN-ISA Z:\PROJECTS\2804.00 LBL LUCAS\DRAWINGS\C3.01 PAVING.DWG



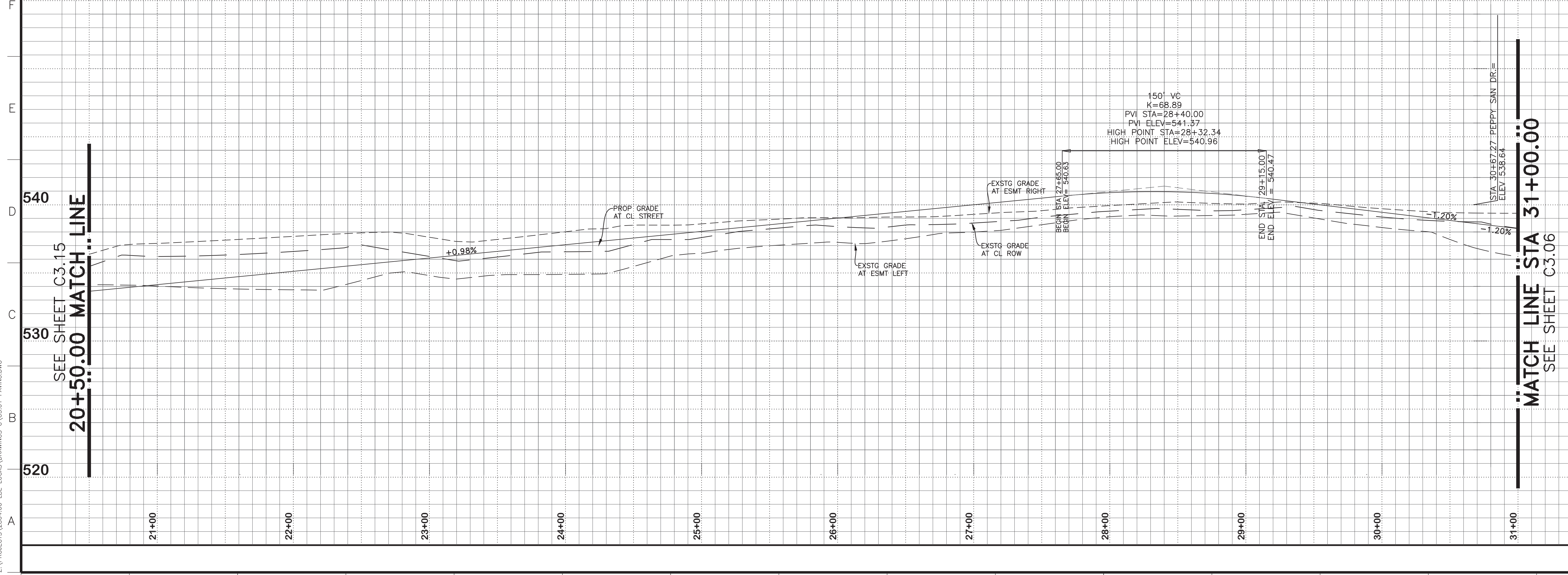
!! CAUTION !!
 UNDERGROUND UTILITIES ARE LOCATED ON THIS SITE. AT LEAST 48-HOURS PRIOR TO ANY EXCAVATION, CONTACT THE TEXAS EXCAVATION SAFETY SYSTEM (TESS) TO LOCATE ALL UNDERGROUND UTILITIES IN THE AREA.
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 (- represent down)
 (+ represent up)

PEPPY SAN DR.
 Scale: H: 1"=40 V: 1"=4'

RECORD DRAWING
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NO.	REVISIONS / SUBMISSIONS	DATE

MM.DD.YYYY

Scale: 1" = 40'
 Vertical: 1" = 4'

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LAKEVIEW DOWNS EQUSTRIAN ESTATES
 CITY OF LUCAS, COLLIN COUNTY, TEXAS

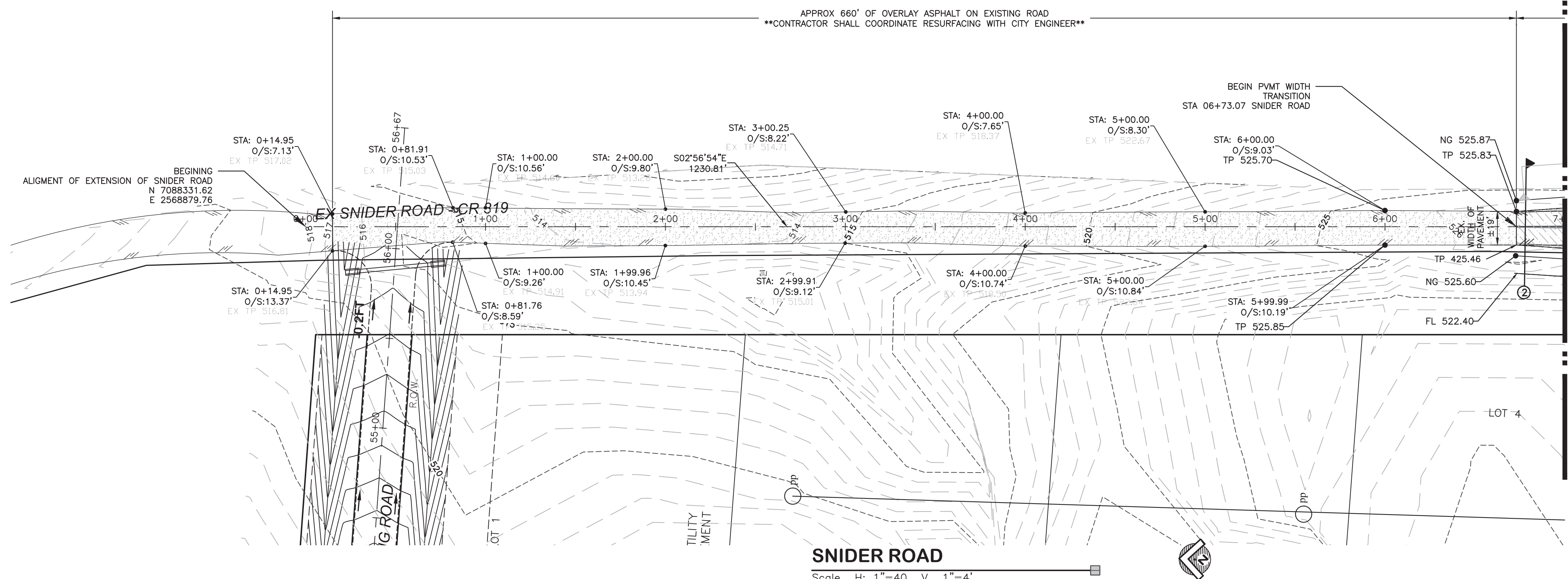
	DRAWN: FM SCALE: H: 1" = 40' CHECKED: JT FILENAME: C3.16 PEPPY SAN DR. REVIEWED: BK DRAWING NO.: C3.16 DATE: 11.07.2018 PROJECT NO.: 2804.000 21 of 45
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LAYOUT: C3.16 PEPPY SAN DR. PLOTTED: Tuesday, December 17, 2019 10:32:00 AM BY: BRYAN-ISA RLT SCALE: 1:1 SAVED: 11/14/2019 2:13PM BY: BRYAN-ISA Z:\PROJECTS\2804.00 LBL LUCAS\DRAWINGS\C3.01 PAVING.DWG

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17

K
J
I
H
G
F
E
D
C
B
A

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 (1-800-344-8377)
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7+00.00 MATCH LINE
 SEE SHEET C3.18

RECORD DRAWING
 THIS DRAWING REPRESENTS
 THE CONSTRUCTED STATE OF THIS PROJECT
 ACCORDING TO AVAILABLE INFORMATION
 FURNISHED TO THE ENGINEER
 BY THE CONTRACTOR OR OWNER
 AFTER CONSTRUCTION
 BY: *Jason Trafton*
 DATE: 11.14.2019

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 EL: 547.33 ft.

NO.	REVISIONS / SUBMISSIONS	DATE
		MM.DD.YYYY

Scale: 1" = 40'
 Vertical: 1" = 4'

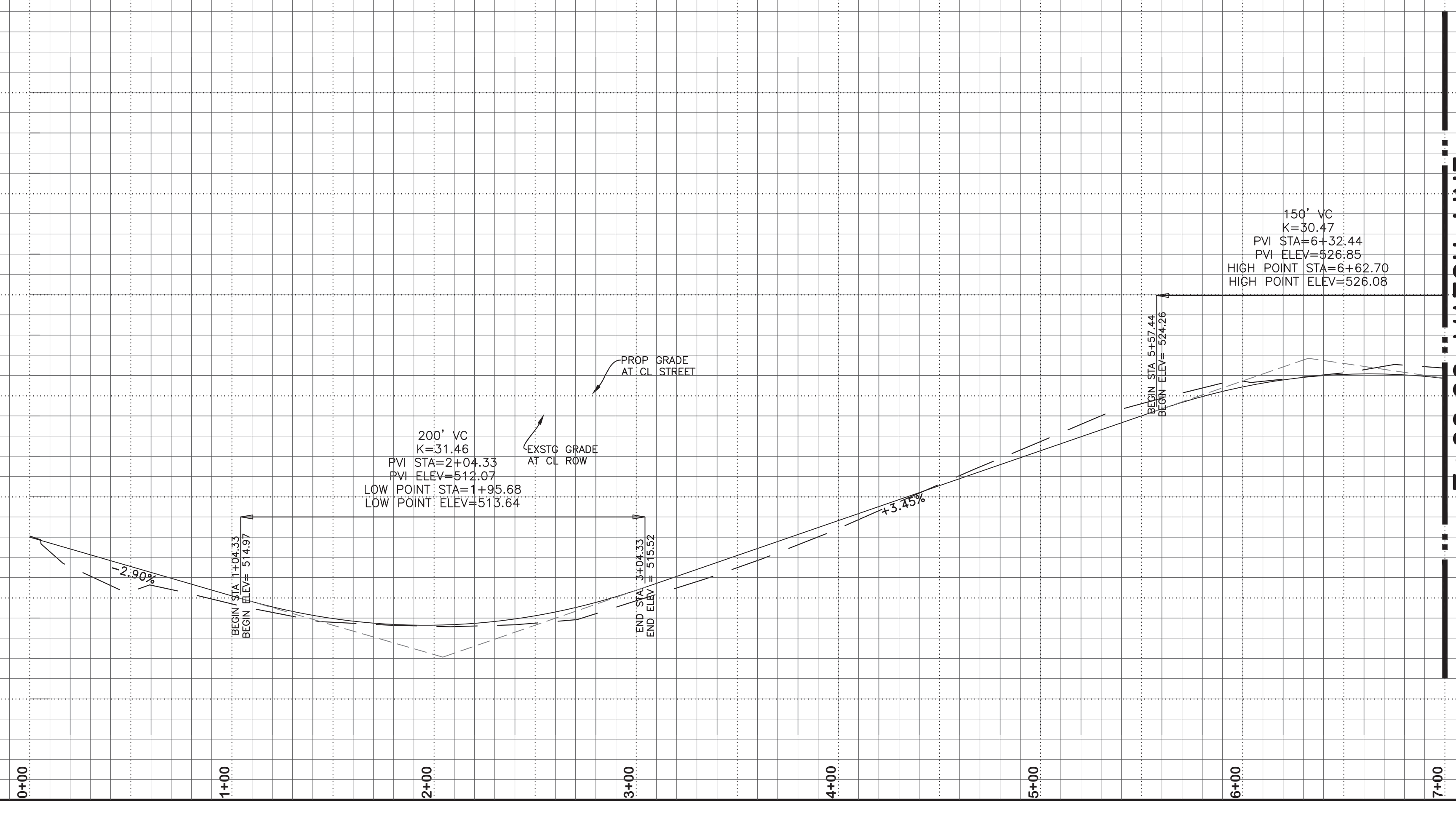
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 7075 Twin Hills Ave
 Suite 350
 Dallas, Texas 75231
 Firm TX F6701
 214.370.3470 Ph

LAKEVIEW DOWNS
 EQUESTRIAN ESTATES
 CITY OF LUCAS, COLLIN COUNTY, TEXAS

C3.17 SNIDER ROAD EXTENSION
 FROM 0+00.00 TO 7+00.00

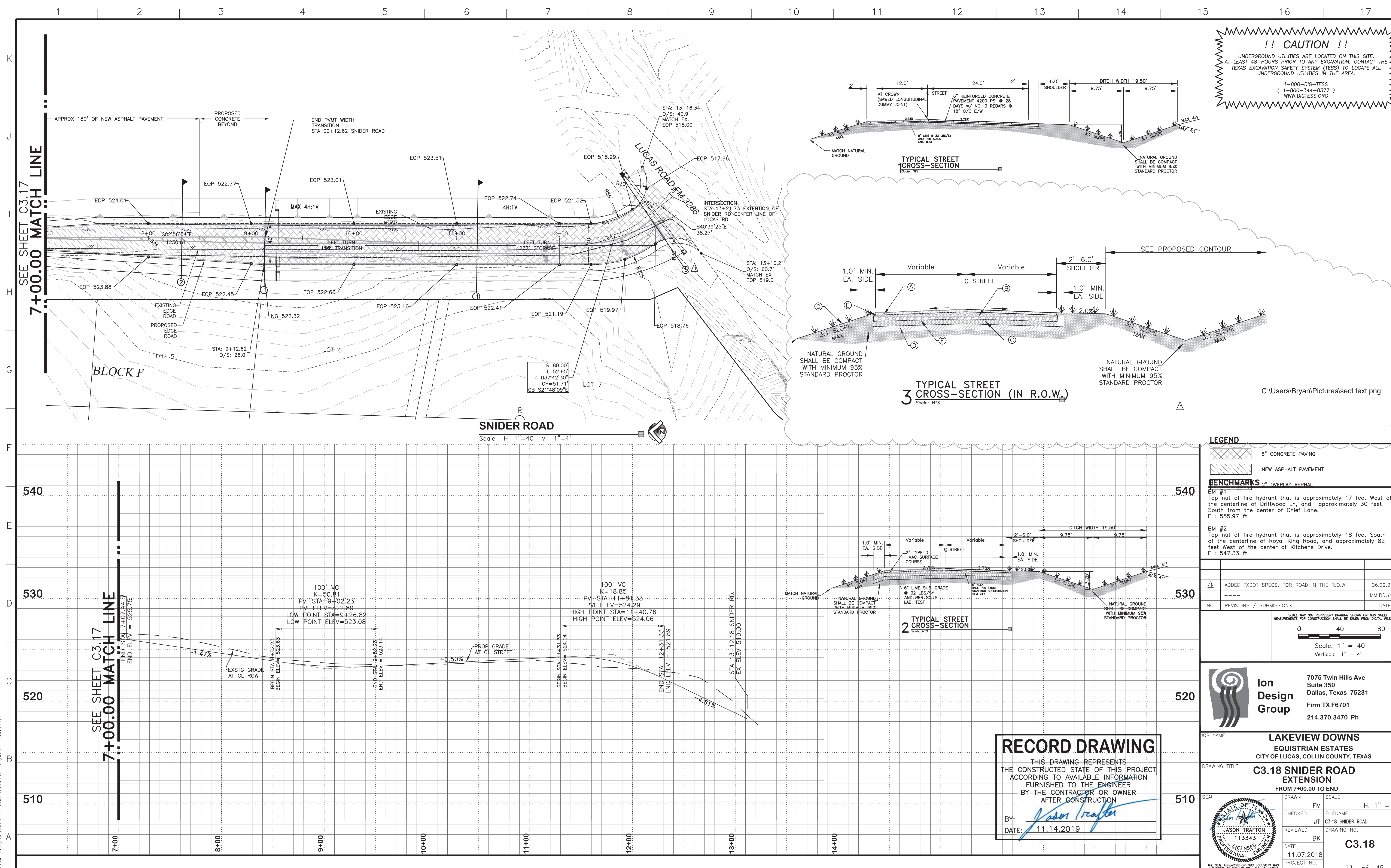
SEAL	DRAWN	SCALE
	FM	H: 1" = 40'
CHECKED	FILENAME	
REVIEWED	DRAWING NO.	
DATE		
PROJECT NO.		

C3.17
 22 of 45

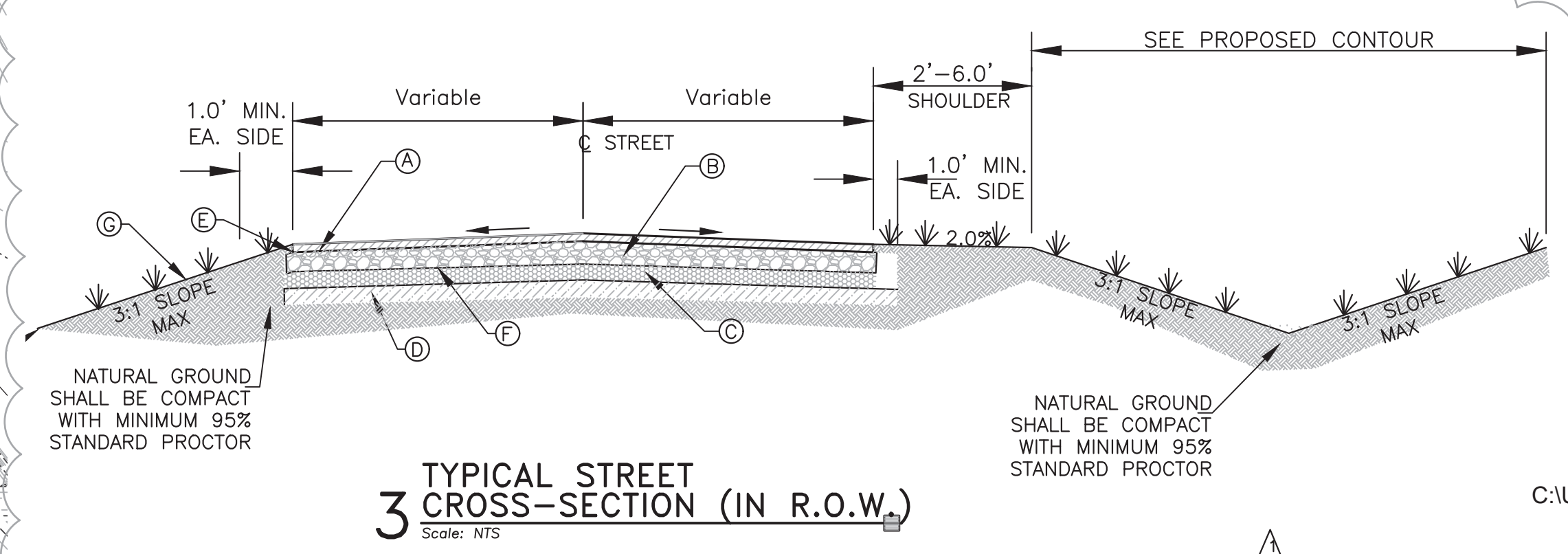
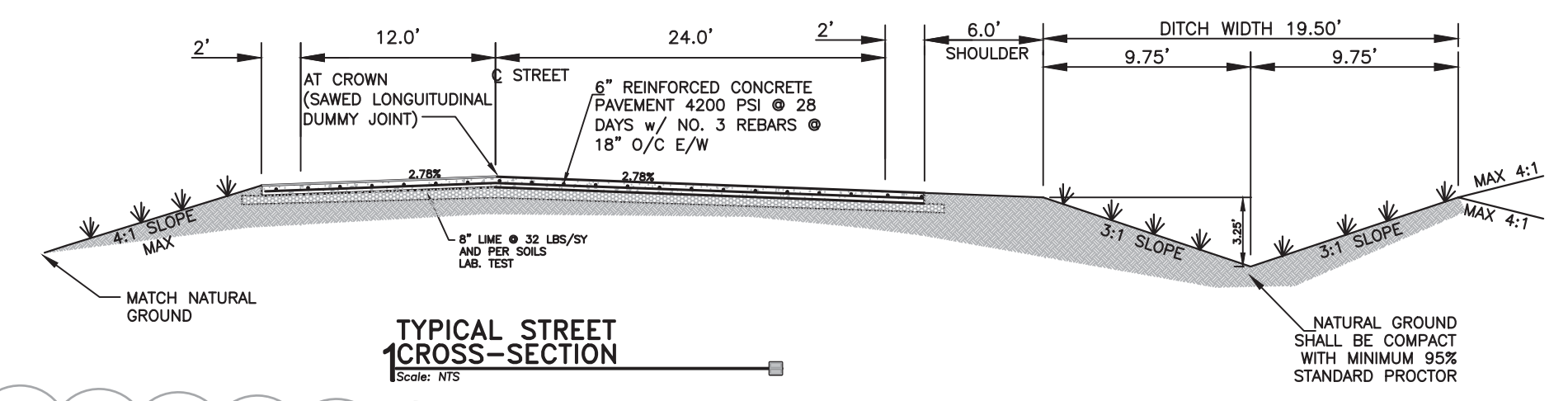


7+00.00 MATCH LINE
 SEE SHEET C3.18

LAYOUT: C3.17 SNIDER ROAD PLOTTED: Tuesday, December 17, 2019 10:32:21 AM BY: BRYAN-15A PLOT SCALE: 1:1 SAVED: 11/14/2019 2:13PM BY: BRYAN-15A
 Z:\PROJECTS\2804.00 LBL LUCAS\DRAWINGS\C3.01 PAVING.DWG



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 (1-800-344-8377)
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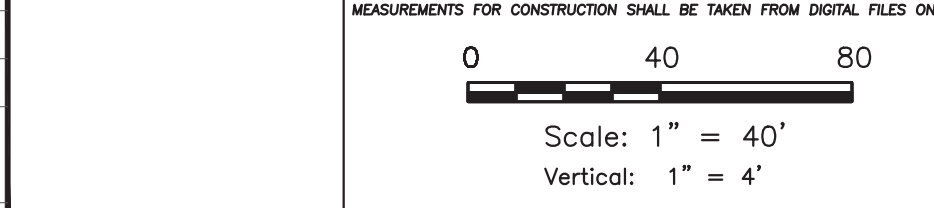


SNIDER ROAD
 Scale: H: 1"=40 V 1"=4'

LEGEND

- 6" CONCRETE PAVING
- NEW ASPHALT PAVEMENT
- BENCHMARKS 2" OVERLAY ASPHALT**
- BM #1: Top nut of fire hydrant that is approximately 17 feet West of the centerline of Driftwood Ln, and approximately 30 feet South from the center of Chief Lane. EL: 555.97 ft.
- BM #2: Top nut of fire hydrant that is approximately 18 feet South of the centerline of Royal King Road, and approximately 82 feet West of the center of Kitchens Drive. EL: 547.33 ft.

NO.	REVISIONS / SUBMISSIONS	DATE
1	ADDED TXDOT SPECS. FOR ROAD IN THE R.O.W.	06.29.2018
2		MM.DD.YYYY



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 Firm TX F6701
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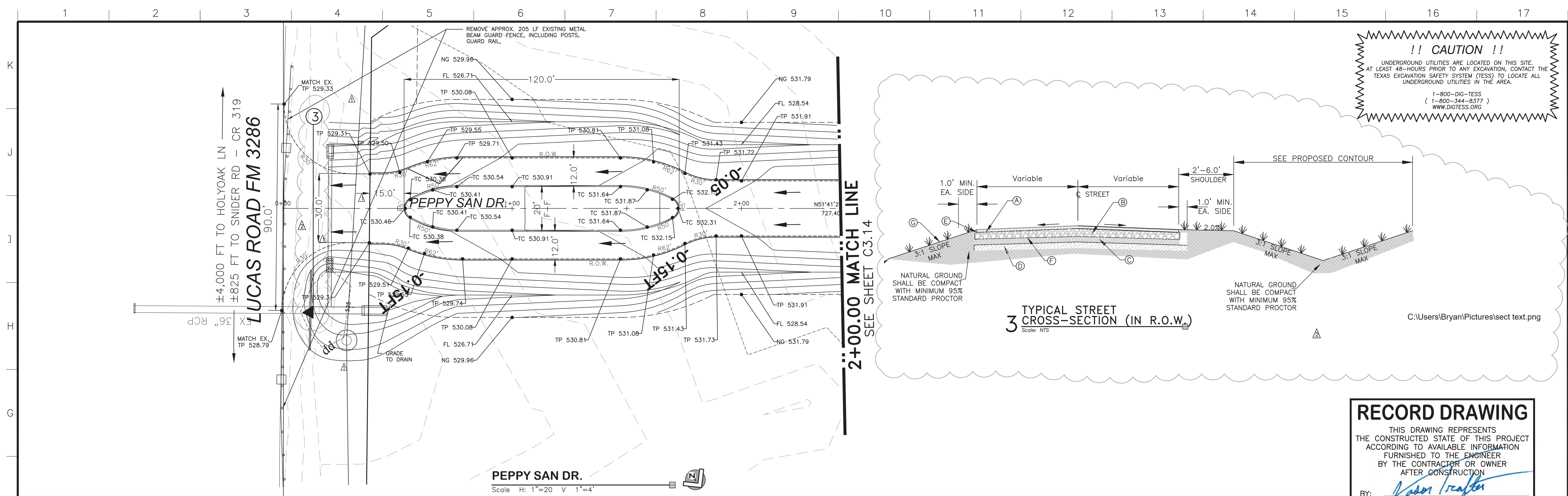
LAKEVIEW DOWNS
 EQUESTRIAN ESTATES
 CITY OF LUCAS, COLLIN COUNTY, TEXAS

C3.18 SNIDER ROAD EXTENSION
 FROM 7+00.00 TO END

	DRAWN: FM CHECKED: JT REVIEWED: BK DATE: 11.07.2018 PROJECT NO.: 2804.000	SCALE: H: 1" = 40' FILENAME: C3.18 SNIDER ROAD DRAWING NO.: C3.18 23 of 45
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RECORD DRAWING
 THIS DRAWING REPRESENTS THE CONSTRUCTED STATE OF THIS PROJECT ACCORDING TO AVAILABLE INFORMATION FURNISHED TO THE ENGINEER BY THE CONTRACTOR OR OWNER AFTER CONSTRUCTION.
 BY: Jason Trafton
 DATE: 11.14.2019

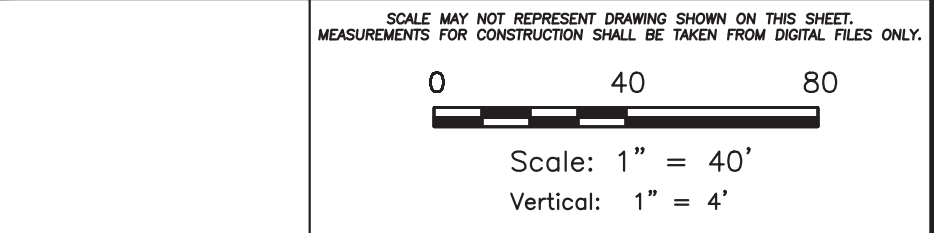
LAYOUT: C3.18 SNIDER ROAD PLOTTED: Tuesday, December 17, 2019 10:32:51 AM BY: BRYAN-ISA PLOT SCALE: 1:1 SAVED: 11/14/2019 2:13PM BY: BRYAN-ISA Z:\PROJECTS\2804.00 LBL LUCAS\DRAWINGS\C3.01 PAVING.DWG



RECORD DRAWING
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 BY: *Jason Trafton*
 DATE: 11.14.2019

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 EL: 547.33 ft.

NO.	REVISIONS / SUBMISSIONS	DATE
△	ADDED TxDOT SPECS. FOR ROAD IN THE R.O.W.	06.29.2018
△	WIDER ENTRANCE	03.28.2018



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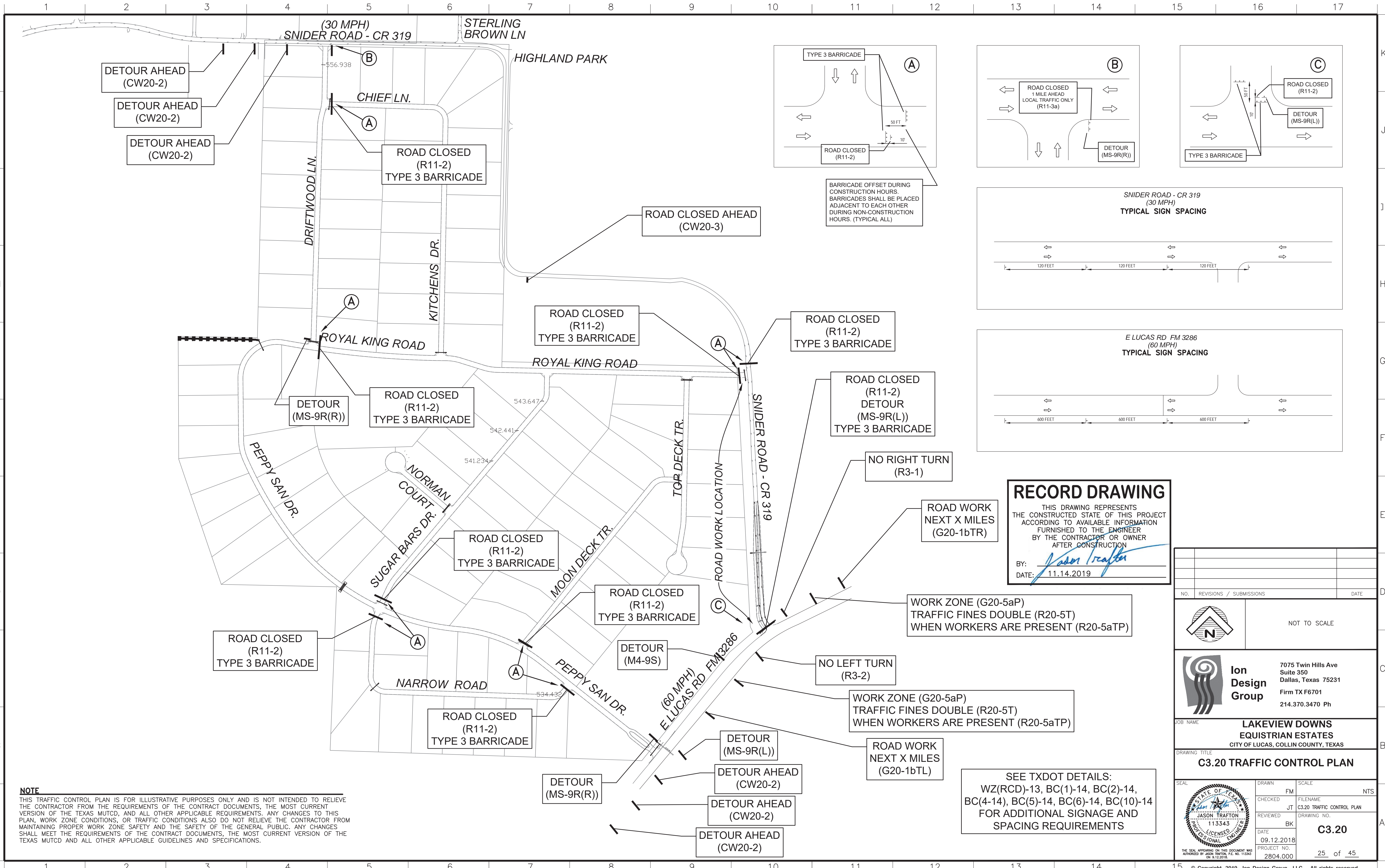
LAKEVIEW DOWNS EQUISTRAN ESTATES
 CITY OF LUCAS, COLLIN COUNTY, TEXAS

C3.19 PEPPY SAN DR.
 STATION 00+00.00 TO STATION 2+00.00

	DRAWN	SCALE	H: 1" = 40'
	CHECKED	FILENAME	
	REVIEWED	DRAWING NO.	
	DATE		
	PROJECT NO.		
			24 of 45

LAYOUT: C3.19 PEPPY SAN DR. PLOTTED: Tuesday, December 17, 2019 10:33:38 AM BY: BRYAN-ISA FILE SCALE: 1:1 SAVED: 11/14/2019 2:13PM BY: BRYAN-ISA
 Z:\PROJECTS\2804.00 LBL LUCAS\DRAWINGS\C3.01 PAVING.DWG

LAYOUT: C3.20 TRAFFIC CONTROL PLAN PLOTTED: Tuesday, December 17, 2019 10:34:06 AM BY: BRYAN-15A PLOT SCALE: 1:1 SAVED: 11/14/2019 2:13PM BY: BRYAN-15A
 Z:\PROJECTS\2804-00 LBL LUCAS\DRAWINGS\C\3.01 PAVING.DWG



NO.	REVISIONS / SUBMISSIONS	DATE

NO. TO SCALE

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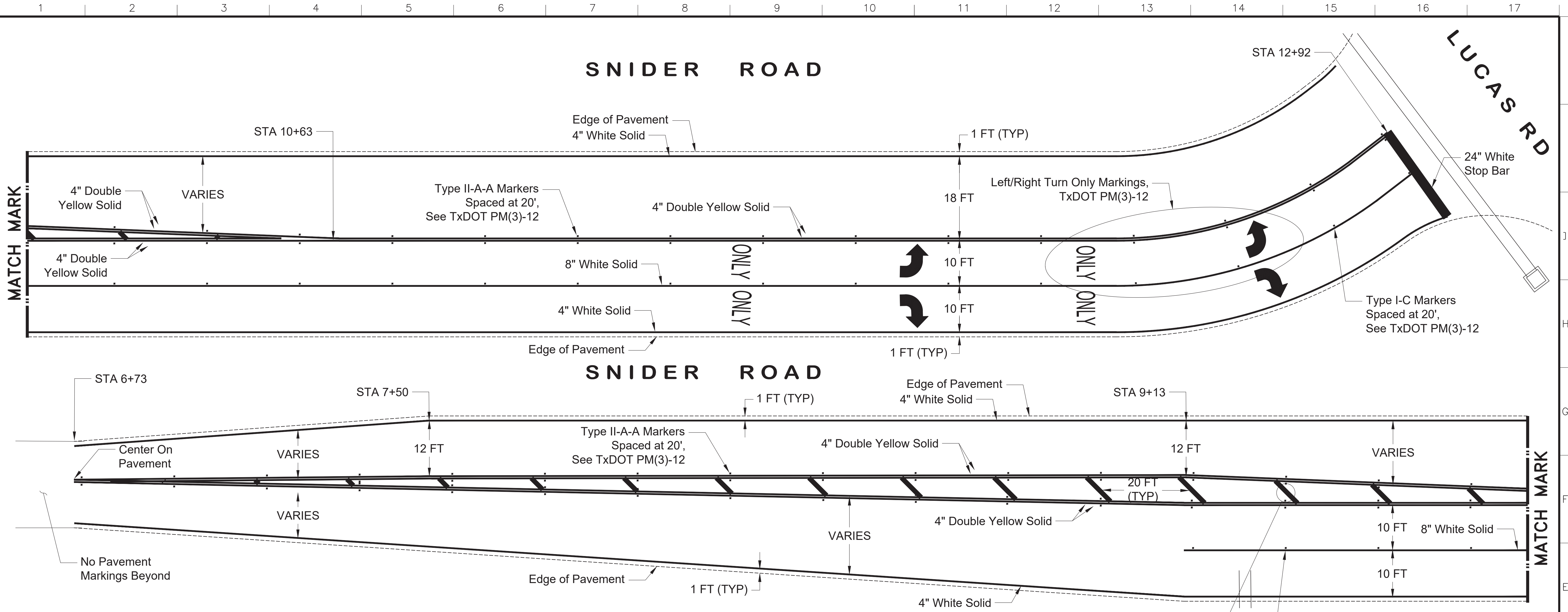
JOB NAME: **LAKEVIEW DOWNS EQUESTRIAN ESTATES**
 CITY OF LUCAS, COLLIN COUNTY, TEXAS

DRAWING TITLE: **C3.20 TRAFFIC CONTROL PLAN**

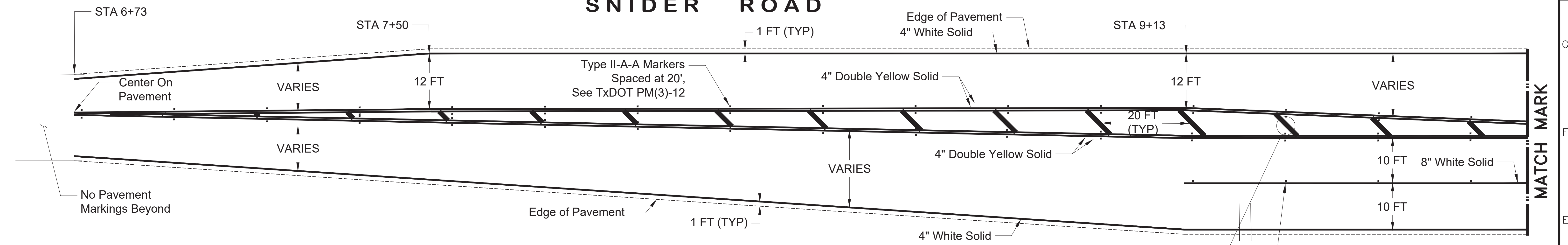
SEAL	DRAWN: FM	SCALE: NTS
	CHECKED: JT	FILENAME: C3.20 TRAFFIC CONTROL PLAN
	REVIEWED: BK	DRAWING NO.:
DATE: 09.12.2018	PROJECT NO.:	C3.20
2804.000		25 of 45

SNIDER ROAD

LUCAS RD



SNIDER ROAD


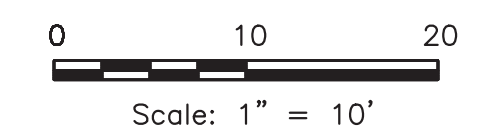




NOTES
 1. ALL PAVEMENT MARKINGS SHALL UTILIZE THE LATEST VERSION OF TXDOT'S PAVEMENT MARKING HANDBOOK. SEE TXDOT DETAIL PM(3)-12 FOR TYPICAL TWO-LANE HIGHWAY INTERSECTION WITH LEFT TURN BAYS. TRANSITION AND STORAGE LENGTH ARE STATIONED ON THIS SHEET.

24" Yellow Solid,
 See Figure 3D-4.D TMUTCD
 and TxDOT PM(1)-12

Type I-C Markers
 Spaced at 20',
 See TxDOT PM(3)-12

RECORD DRAWING
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 BY: *Jason Trafton*
 DATE: 11.14.2019

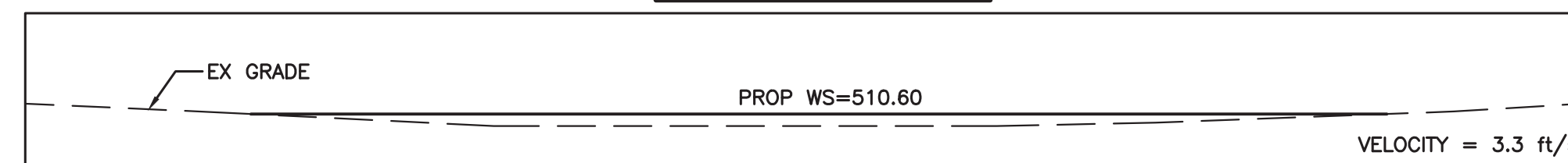
NO. REVISIONS / SUBMISSIONS		DATE
 		
 Ion Design Group		7075 Twin Hills Ave Suite 350 Dallas, Texas 75231 Firm TX F6701 214.370.3470 Ph
JOB NAME: LAKEVIEW DOWNS		
EQUISTRIAN ESTATES CITY OF LUCAS, COLLIN COUNTY, TEXAS		
DRAWING TITLE: C3.21 PVMT MARKING PLAN		
SEAL 	DRAWN: FM CHECKED: JT REVIEWED: BK DATE: 12.07.2018 PROJECT NO.: 2804.000	SCALE: H: 1" = 10' FILENAME: C3.21 PVMT MARKING PLAN DRAWING NO.: C3.21 PROJECT NO.: 2804.000 26 of 45

LAYOUT: C3.21 PVMT MARKING PLAN PLOTTED: Tuesday, December 17, 2019 10:34:44 AM BY: BRYAN-USA PLOT SCALE: 1:1
 Z:\PROJECTS\2804.00 LBL LUCAS\DRAWINGS\C3.21 PAVING.DWG

LOT CULVERT SIZE REQUIREMENTS

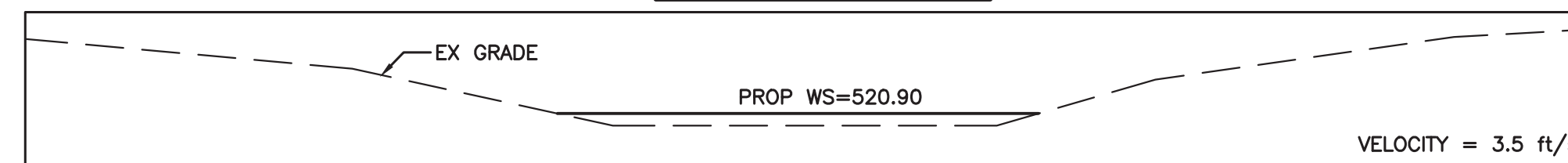
Block	1	2	3	4	5	6	7
Lot	Driveway Culvert Min (in)	Lot	Driveway Culvert Min (in)	Lot	Driveway Culvert Min (in)	Lot	Driveway Culvert Min (in)
1	18	1	18	1	18	1	24
2	18	2	18	2	18	2	24
3	18	3	21	3	18	3	21
4	18	4	24	4	18	4	30
5	18	5	24	5	18	5	30
6	18	6	27	6	18	6	21
7	21	7	27	7	21	7	24
8	21	8	30	8	21	8	18
9	21	9	27	9	21	9	18
10	21	10	27	10	21	10	18
11	18	11	27	11	18	11	18
12	18	12	27	12	18	12	18
13	18	13	24	13	18	13	18
14	18	14	24	14	18	14	18
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22	21	22	18	22	21	18	18
23	21	23	18	23	21	18	18
24	18	24	18	24	18	18	18
25	18	25	18	25	18	18	18
26	18	26	18	26	18	18	18
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28	18	28	18	28	18	18	18

SECTION A-A



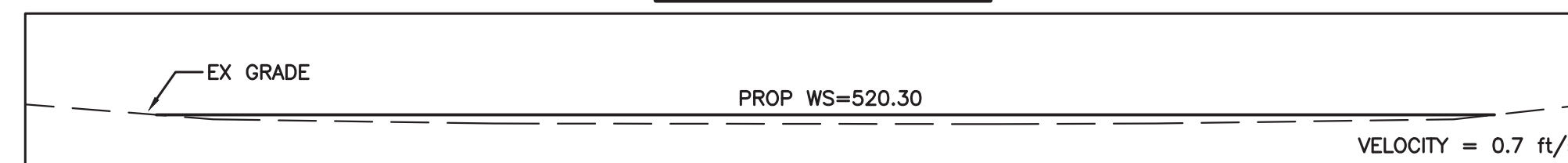
THE Q100 FOR THIS SWALE IS 138.06 CFS. THIS EXISTING DRAINAGE CHANNEL IS ON A 1.8% SLOPE. THE DEPTH OF FLOW WILL NOT EXCEED 1 FT. THE CAPACITY OF THE EXISTING CHANNEL @ SECTION A-A HAS NOT BEEN EXCEEDED.

SECTION B-B



THE Q100 FOR THIS SWALE IS 132.86 CFS. THIS EXISTING DRAINAGE CHANNEL IS ON A 5.1% SLOPE. THE DEPTH OF FLOW WILL NOT EXCEED 1 FT. THE CAPACITY OF THE EXISTING CHANNEL @ SECTION A-A HAS NOT BEEN EXCEEDED.

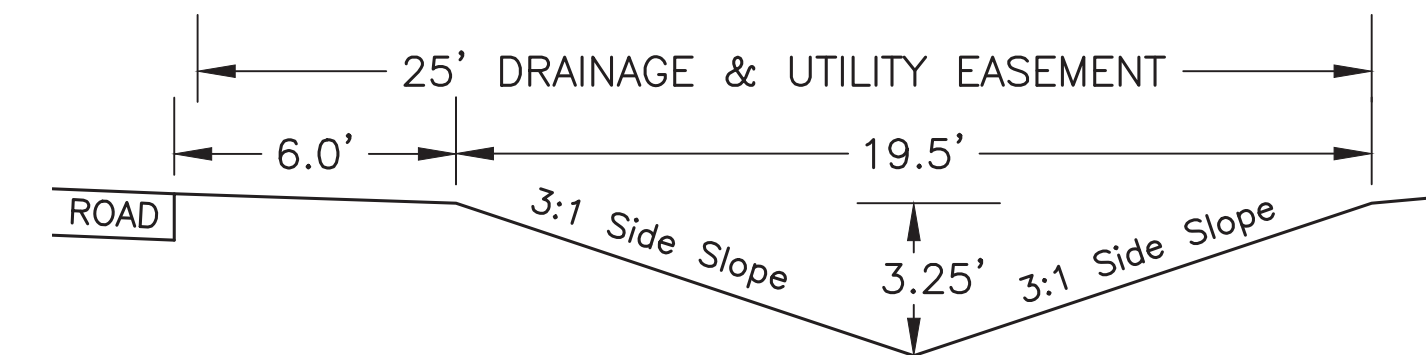
SECTION C-C



THE Q100 FOR THIS SWALE IS 74.82 CFS. THIS EXISTING DRAINAGE CHANNEL IS ON A 4.9% SLOPE. THE DEPTH OF FLOW WILL NOT EXCEED 1 FT. THE CAPACITY OF THE EXISTING CHANNEL @ SECTION A-A HAS NOT BEEN EXCEEDED.

BAR DITCH CAPACITIES

Slope (%)	Capacity (cfs)
0.50%	148.11
0.60%	162.25
0.70%	175.25
0.80%	187.35
0.90%	198.71
1.00%	209.46
1.10%	219.68
1.20%	229.45
1.30%	238.82
1.40%	247.84
1.50%	256.54
2.00%	296.22
5.00%	468.37



DRAINAGE AREA TABLE

Drainage Area No.	Area (acres)	C*	C	CA	Tc (min)	I 25 (in/hr)	Q 25 (cfs)	I 100 (in/hr)	Q 100 (cfs)	Pre-Q 100 (cfs)	Drains To
A1	1.19	0.30	0.45	0.53	10	7.29	3.90	8.74	4.67	3.12	18" Culvert & Drains To A3
A2	3.30	0.30	0.45	1.49	10	7.29	10.84	8.74	12.99	8.66	21" Culvert & Drains To A3
A3	17.48	0.30	0.45	7.87	10	7.29	57.35	8.74	68.76	45.84	2-30" Culverts & Drains To A5
A4	2.90	0.30	0.47	1.36	10	7.29	9.94	8.74	11.92	7.62	24" Culvert & Drains To A5
A5	10.10	0.30	0.45	4.54	10	7.29	33.13	8.74	39.72	26.48	6" Wye Inlet & Drains To A6
A6	9.13	0.30	0.45	4.11	10	7.29	29.97	8.74	35.93	23.95	Sheet Flow To West
B1	7.53	0.30	0.51	3.82	10	7.29	27.84	8.74	33.38	19.74	2-24" Culverts & Drains To B3
B2	3.65	0.30	0.45	1.64	10	7.29	11.98	8.74	14.36	9.57	21" Culvert & Drains To B3
B3	17.56	0.30	0.53	9.25	10	7.29	67.46	8.74	80.87	46.03	4-30" Culverts & Drains To B4
B4	1.08	0.30	0.45	0.49	10	7.29	3.54	8.74	4.25	2.83	Drains To Southwest
C1	2.70	0.30	0.45	1.22	10	7.29	8.87	8.74	10.63	7.09	21" Culvert & Drains To C2
C2	12.78	0.30	0.45	5.75	10	7.29	41.91	8.74	50.25	33.50	2-30" Culverts & Drains To C4
C3	3.77	0.30	0.45	1.70	10	7.29	12.37	8.74	14.84	9.89	24" Culvert & Drains To C4
C4	5.25	0.30	0.45	2.36	10	7.29	17.23	8.74	20.66	13.77	Ex. 42" Culvert
D1	6.31	0.30	0.45	2.84	10	7.29	20.70	8.74	24.81	16.54	24" Culvert & Drains To D2
D2	1.21	0.30	0.45	0.55	10	7.29	3.97	8.74	4.76	3.18	2" Wye Inlet & Drains To D3
D3	11.50	0.30	0.45	5.18	10	7.29	37.73	8.74	45.24	30.16	Sheet Flow To South
E1	8.20	0.30	0.45	3.69	10	7.29	26.90	8.74	32.25	21.50	2-24" Culverts & Drains To E3
E2	1.97	0.30	0.45	0.89	10	7.29	6.46	8.74	7.75	5.17	18" Culvert & Drains To E3
E3a	5.11	0.30	0.45	2.30	10	7.29	16.75	8.74	20.08	13.39	Drains To E3b
E3b	7.19	0.30	0.30	2.16	10	7.29	15.72	8.74	18.85	18.85	36" Culvert Expansion
F1	10.25	0.30	0.45	4.61	10	7.29	33.64	8.74	40.33	26.89	Sheet Flow To Ex Ditch
G1	3.76	0.30	0.54	2.02	10	7.29	14.74	8.74	17.68	9.85	24" Culvert & Drains To East
H1	2.55	0.30	0.90	2.29	10	7.29	16.72	8.74	20.04	6.68	30" Culvert & Drains To NE

- NOTES:
- THIS ASTERISK * REPRESENTS A PRE-DEVELOPED RUN-OFF CONDITION.
 - ALL DRAINAGE INTENSITIES WERE OBTAINED FROM THE CITY OF ALLEN DRAINAGE DESIGN MANUAL.
 - DRAINAGE AREAS E3, G1, AND H1 HAVE A COMPOSITE OR HIGHER "C" VALUE DETERMINED FROM A HIGHER RUN-OFF CO-EFFICIENT FOR LOT 7 TO BE 0.90.
 - DRAINAGE AREAS A4, B1, AND B3 HAVE A COMPOSITE OR HIGHER "C" VALUE DETERMINED FROM A HIGHER RUN-OFF CO-EFFICIENT FOR EQUESTRIAN CENTER TO BE 0.75.

RATIONAL METHOD
 Q ~ Flow (cfs)
 C ~ Runoff Coefficient
 I ~ Intensity (in/hr)
 A ~ Drainage Area (Acres)

RECORD DRAWING
 THIS DRAWING REPRESENTS THE CONSTRUCTED STATE OF THIS PROJECT ACCORDING TO AVAILABLE INFORMATION FURNISHED TO THE ENGINEER BY THE CONTRACTOR OR OWNER AFTER CONSTRUCTION.
 BY: *Jason Trafton*
 DATE: 11.14.2019

LEGEND

- 760--- EXISTING 1' INTERVAL CONTOUR
- (760) PROPOSED 1' INTERVAL CONTOUR
- (A1.1) DRAINAGE AREA I.D.
- (1.00 ac) DRAINAGE AREA ACREAGE
- LIMITS OF DRAINAGE AREA
- ← GENERAL DIRECTION OF FLOW

BENCHMARKS

BM #1
 Top nut of fire hydrant that is approximately 17 feet West of the centerline of Driftwood Ln, and approximately 30 feet South from the center of Chief Lane.
 EL: 555.97 ft.

BM #2
 Top nut of fire hydrant that is approximately 18 feet South of the centerline of Royal King Road, and approximately 82 feet West of the center of Kitchens Drive.
 EL: 547.33 ft.

NO.	REVISIONS / SUBMISSIONS	DATE
1	EXISTING CULVERT EXTENSION AND FL ADJUSTMENTS	11.01.2017

Scale: 1" = 100'

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LAKEVIEW DOWNS EQUSTRIAN ESTATES
 CITY OF LUCAS, COLLIN COUNTY, TEXAS

C4.01 DRAINAGE AREA MAP

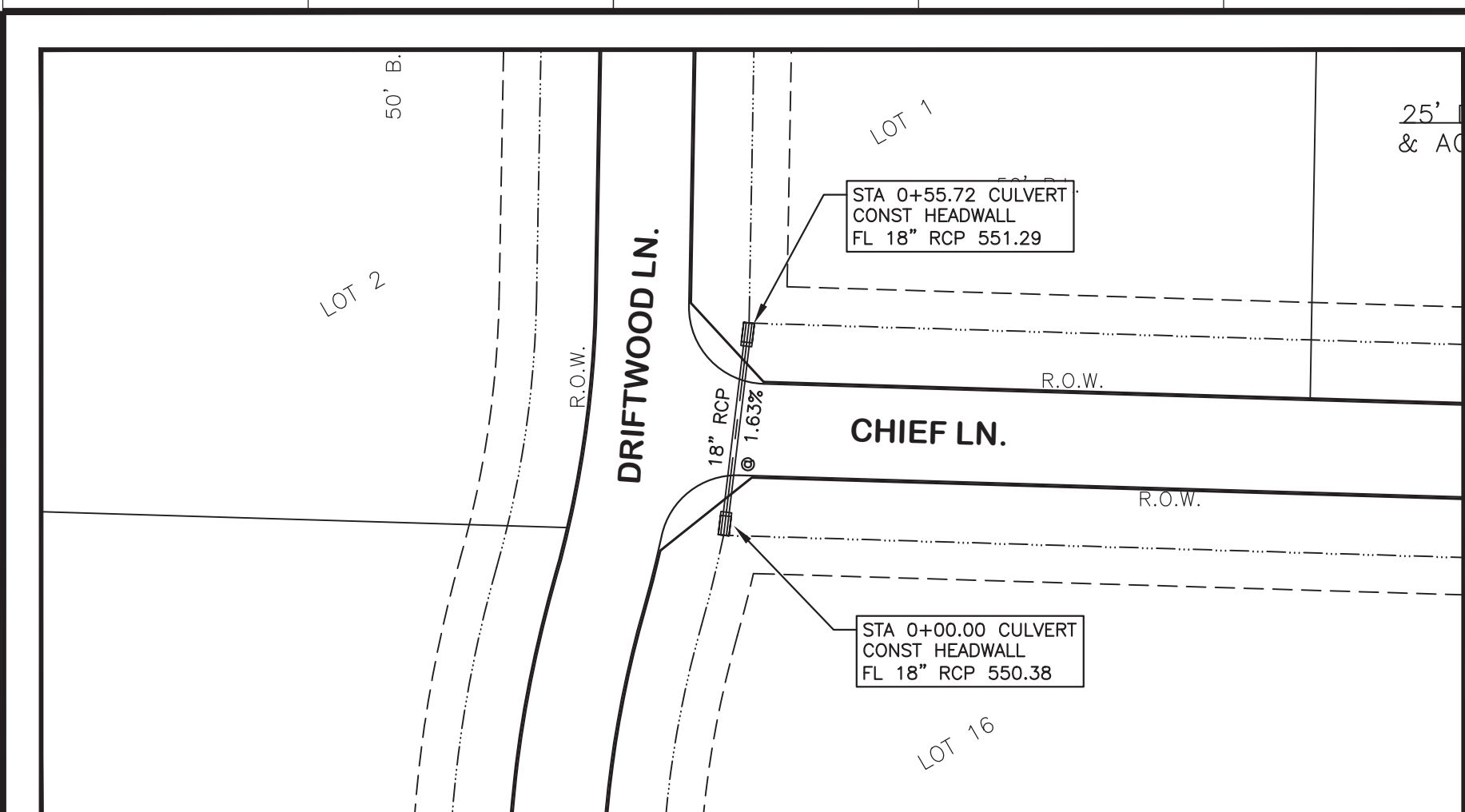
SEALED:

DRAWN: SCALE: H: 1" = 100'
 CHECKED: FILENAME: C4.01 DRAINAGE AREA MAP
 REVIEWED: DRAWING NO.:
 DATE: 11.14.2019
 PROJECT NO.: 2804.000
 SHEET NO.: 27 of 45

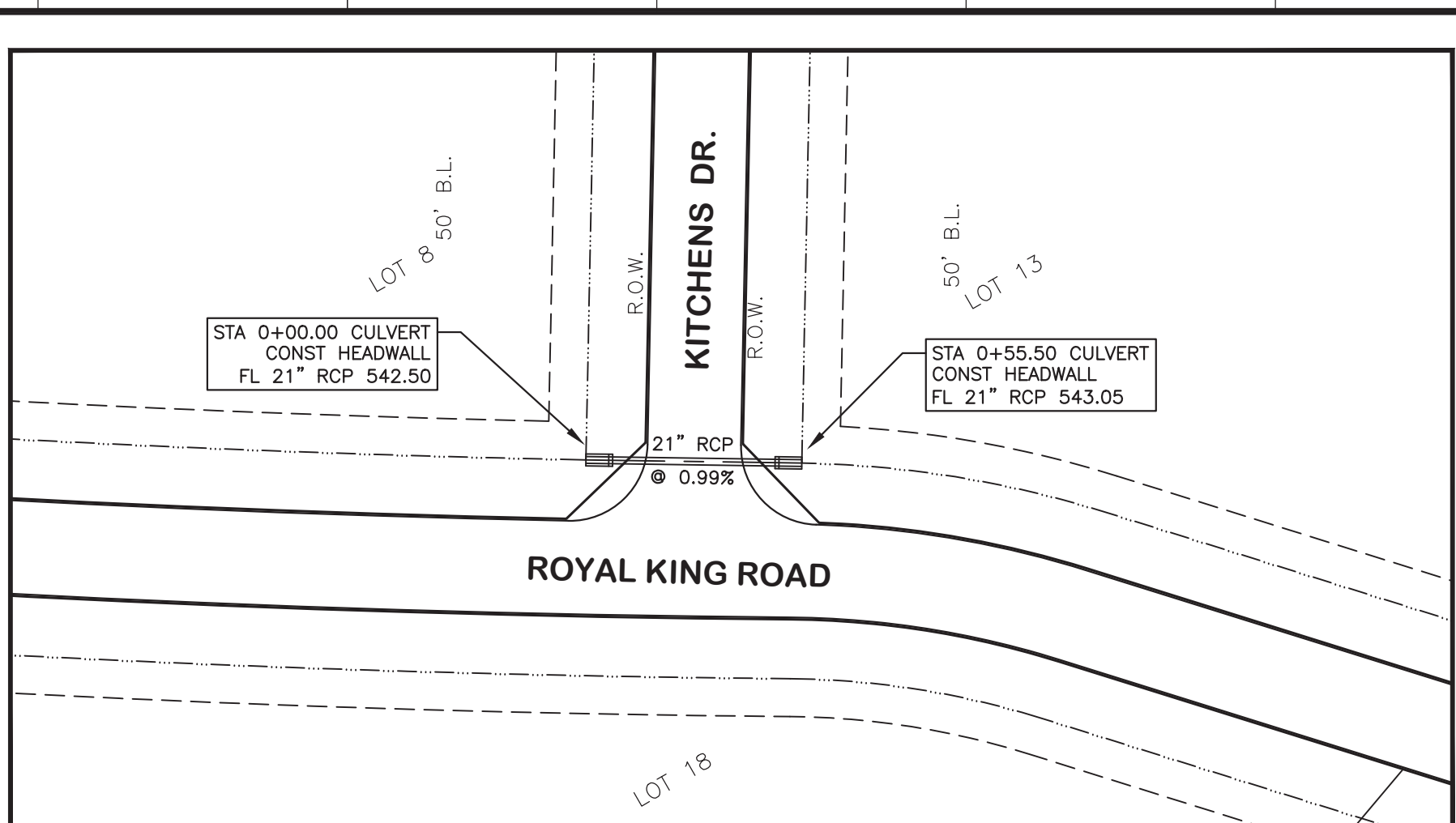
LAYOUT: C4.01 DRAINAGE AREA MAP PLOTTED: Tuesday, December 17, 2019 10:35:20 AM BY: BRYAN-ISA PLOT SCALE: 1:1 SAVED: 12/11/2019 11:23AM BY: BRYAN-ISA
 Z:\PROJECTS\2804.00 LBL LUCAS\DRAWINGS\C4.01 STORM.DWG

LAYOUT: C4.02 STORM SEWER PLAN PLOTTED: Tuesday, December 17, 2019 10:35:44 AM BY: BRYAN-ISA PLOT SCALE: 1:1 SAVED: 12/11/2019 11:23AM BY: BRYAN-ISA
 Z:\PROJECTS\2804.000 LBL LUCAS\DRAWINGS\C4.02 STORM.DWG

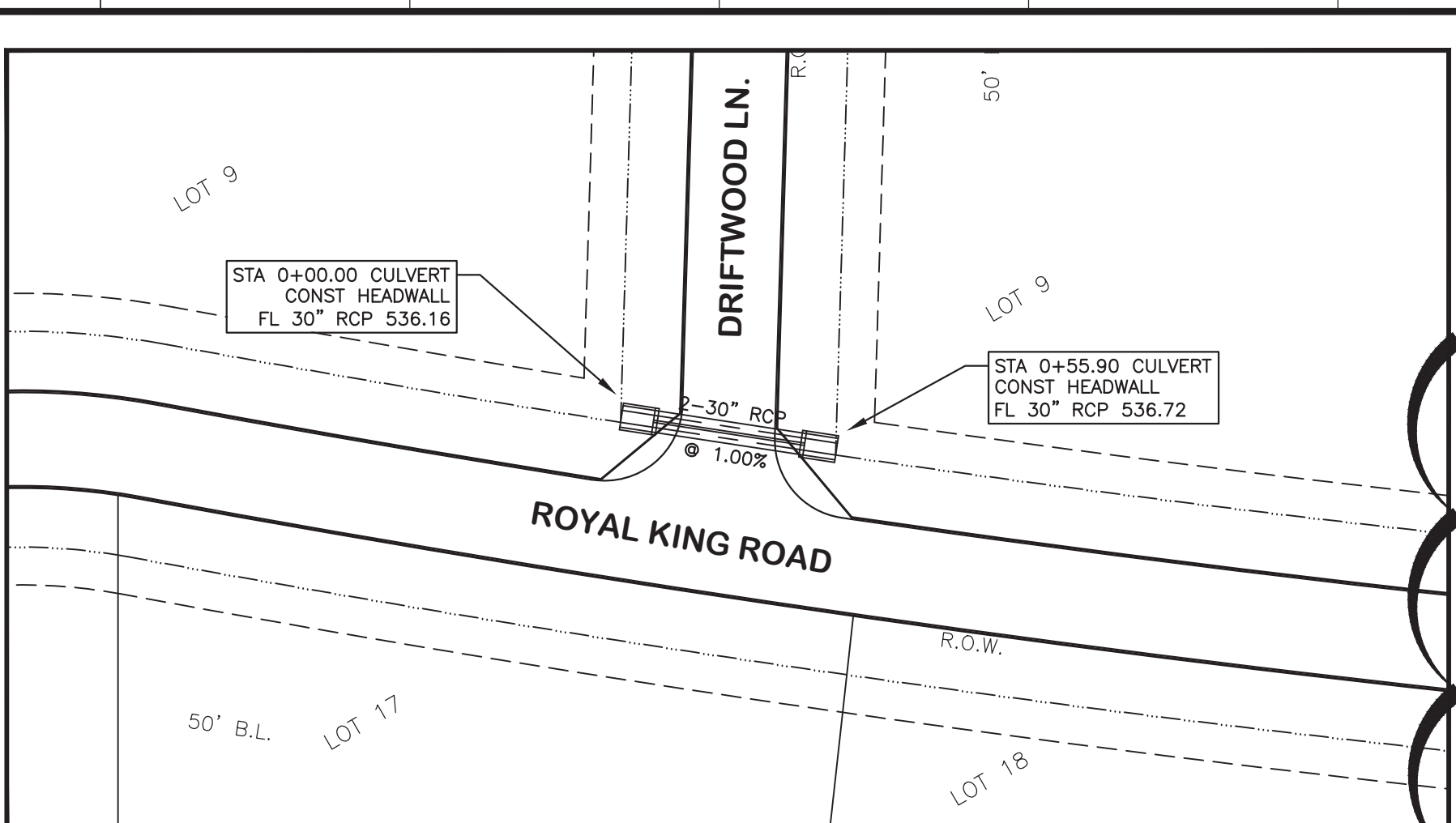
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17



Q₁₀₀ = 4.67 cfs
 Q_{cap} = 13.42 cfs
 s = 0.0020 ft/ft
 v = 2.64 fps
 V_{HEAD} = 0.11 ft



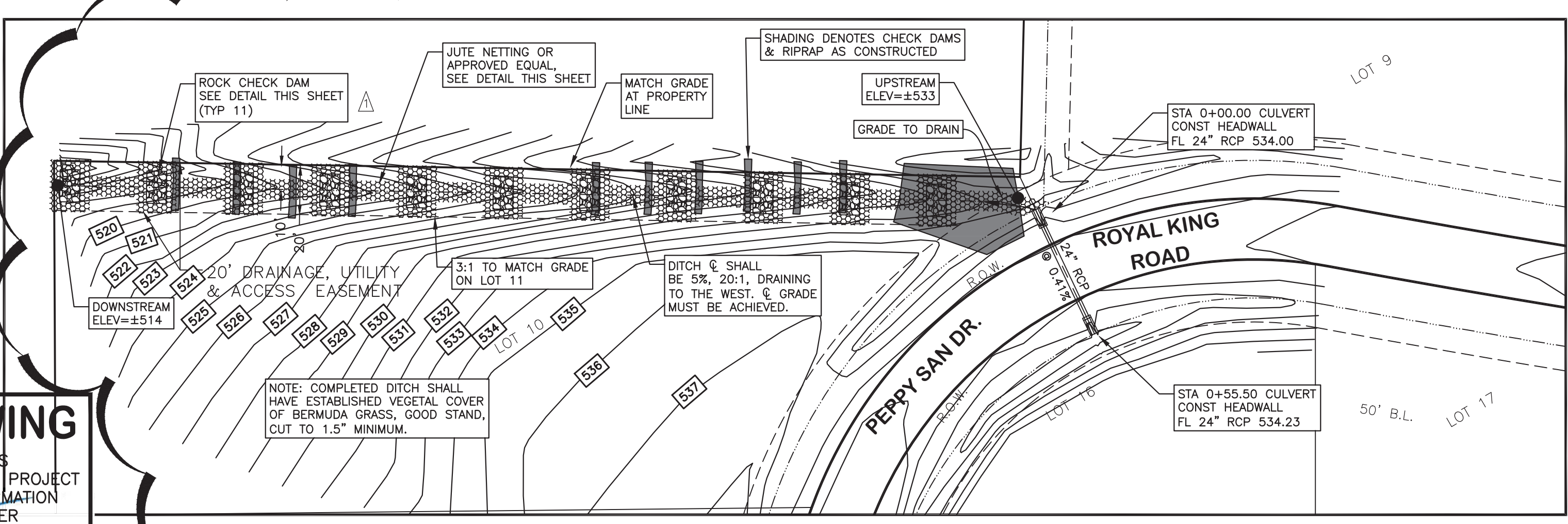
Q₁₀₀ = 12.99 cfs
 Q_{cap} = 15.77 cfs
 s = 0.0067 ft/ft
 v = 5.40 fps
 V_{HEAD} = 0.45 ft



Q₁₀₀ = 77.20 cfs
 Q_{cap} = 82.11 cfs
 s = 0.0354 ft/ft
 v = 7.86 fps
 V_{HEAD} = 0.96 ft

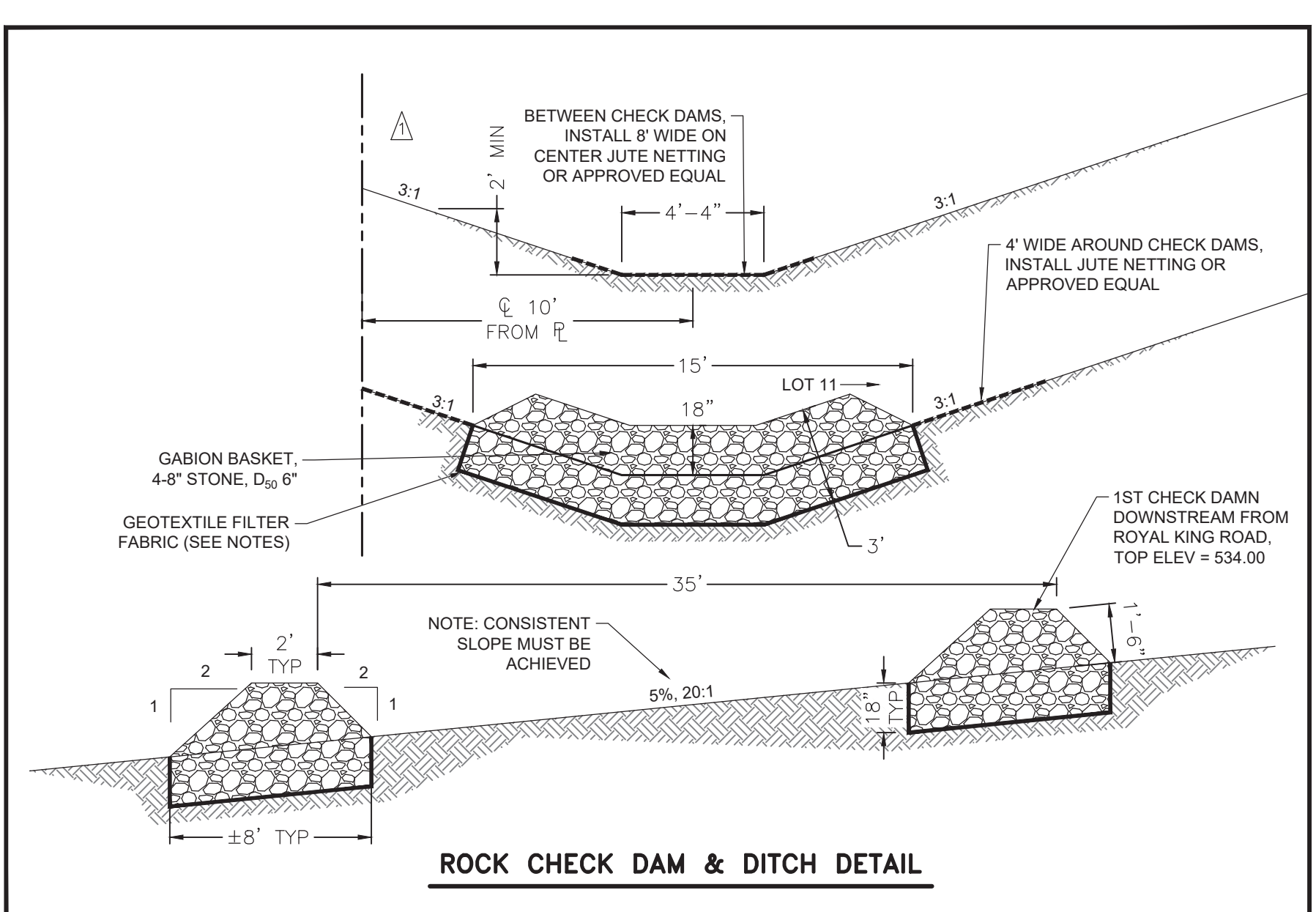
!! CAUTION !!
 UNDERGROUND UTILITIES ARE LOCATED ON THIS SITE. AT LEAST 48-HOURS PRIOR TO ANY EXCAVATION, CONTACT THE TEXAS EXCAVATION SAFETY SYSTEM (TESS) TO LOCATE ALL UNDERGROUND UTILITIES IN THE AREA.
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- CHECK DAM NOTES**
- Typically, the dam height should be between 9 inches and 36 inches, depending on the material of which they are made. The height of the check dam shall always be less than one-fourth the depth of the channel. Dam height as shown on detail.
 - Dams should be spaced such that the top of the downstream dam is at the same elevation as the toe of the upstream dam. On channel grades flatter than 0.4 percent, check dams should be placed at a distance that allows small pools to form between each check dam.
 - The top of the side of the check dam shall be a minimum of 12 inches higher than the middle of the dam. In addition, the side of the dam shall be embedded a minimum of 18 inches into the side of the drainage ditch, swale or channel to minimize the potential for flows to erode around the side of the dam.
 - Larger flows (greater than 2-year, 24-hour design storm) must pass the check dam without causing excessive upstream flooding.
 - Check dams should be used in conjunction with other sediment reduction techniques prior to releasing flow offsite.
 - Use geotextile filter fabric under check dams of 12 inches in height or greater. The fabric shall meet the following minimum criteria:
 - Tensile Strength, ASTM D4632 Test Method for Grab Breaking Load and Elongation of Geotextiles, 250-lbs.
 - Puncture Rating, ASTM D4833 Test Method for Index Puncture Resistance of Geotextiles, Geomembranes, and Related Products, 135-lbs.
 - Mullen Burst Rating, ASTM D3786 Standard Test Method for Hydraulic Bursting Strength of Textile Fabrics-Diaphragm Bursting Strength Test Method, 400-psi.
 - Apparent Opening Size, ASTM D4751 Test Method for Determining Apparent Opening Size of a Geotextile, U.S. Sieve No. 20 (max).
 - Loose, unconfined soil, wood chips, compost, and other material that can float or be transported by runoff shall not be used to construct check dams.
 - Stone shall be well graded with stone size ranging from 3 to 6 inches in diameter for a check dam height of 24 inches or less. The stone size range for check dams greater than 24 inches is 4 to 8 inches in diameter. Utilize gabion baskets as noted.
 - Rock check dams shall have a minimum top width of 2 feet with side slopes of 2:1 or flatter.



Q₁₀₀ = 100.00 cfs
 Q_{cap} = 223.00 cfs
 s = 0.0500 ft/ft
 v = 8.19 fps
 V_{HEAD} = 1.04 ft

Q₁₀₀ = 11.92 cfs
 Q_{cap} = 14.56 cfs
 s = 0.0028 ft/ft
 v = 3.79 fps
 V_{HEAD} = 0.22 ft

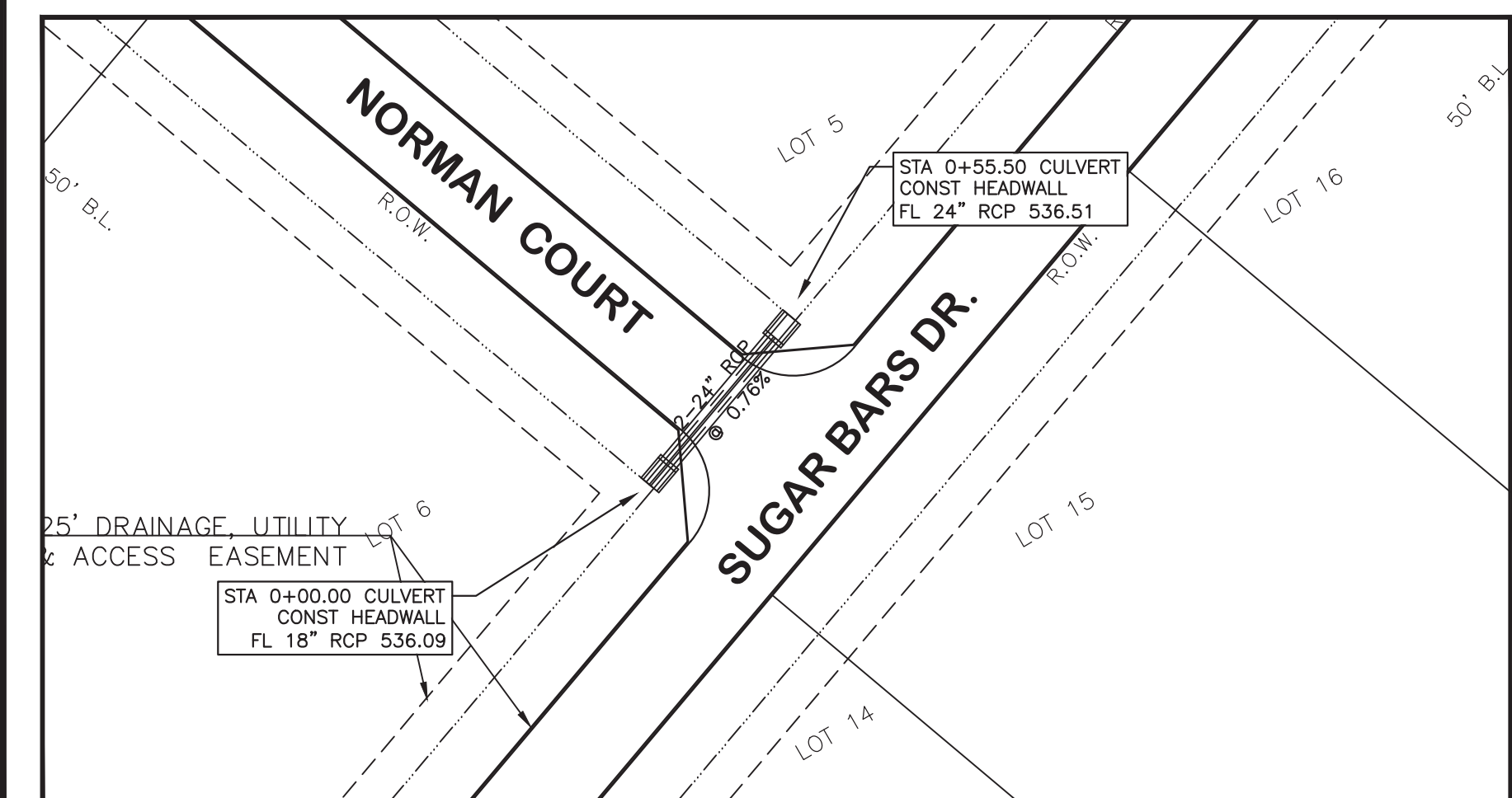


ROCK CHECK DAM & DITCH DETAIL

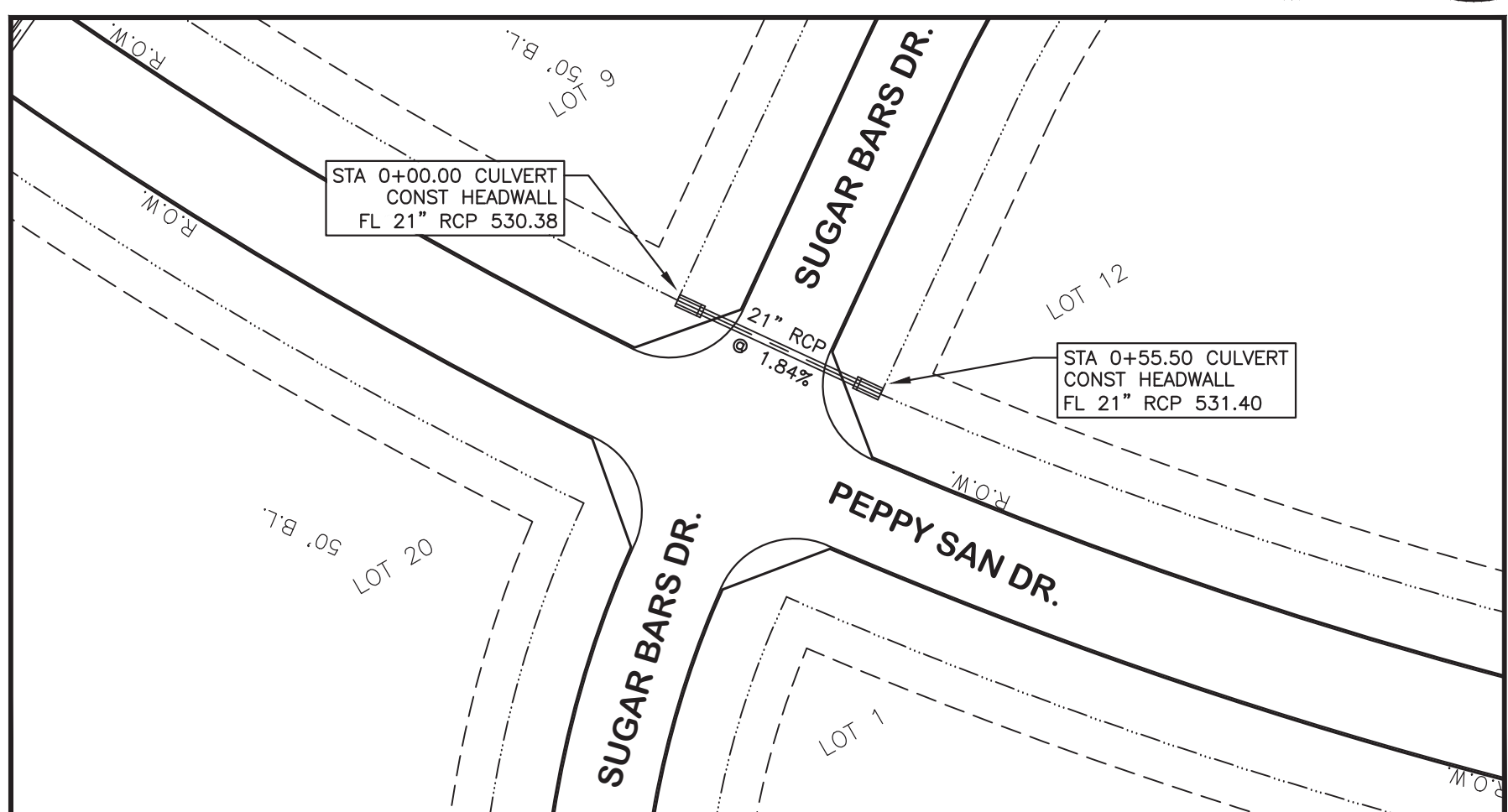
LEGEND

	FLOW ARROW
	EXISTING STORM DRAIN
	PROPOSED STORM DRAIN
	EXISTING CONTOUR
	PROPOSED CONTOUR

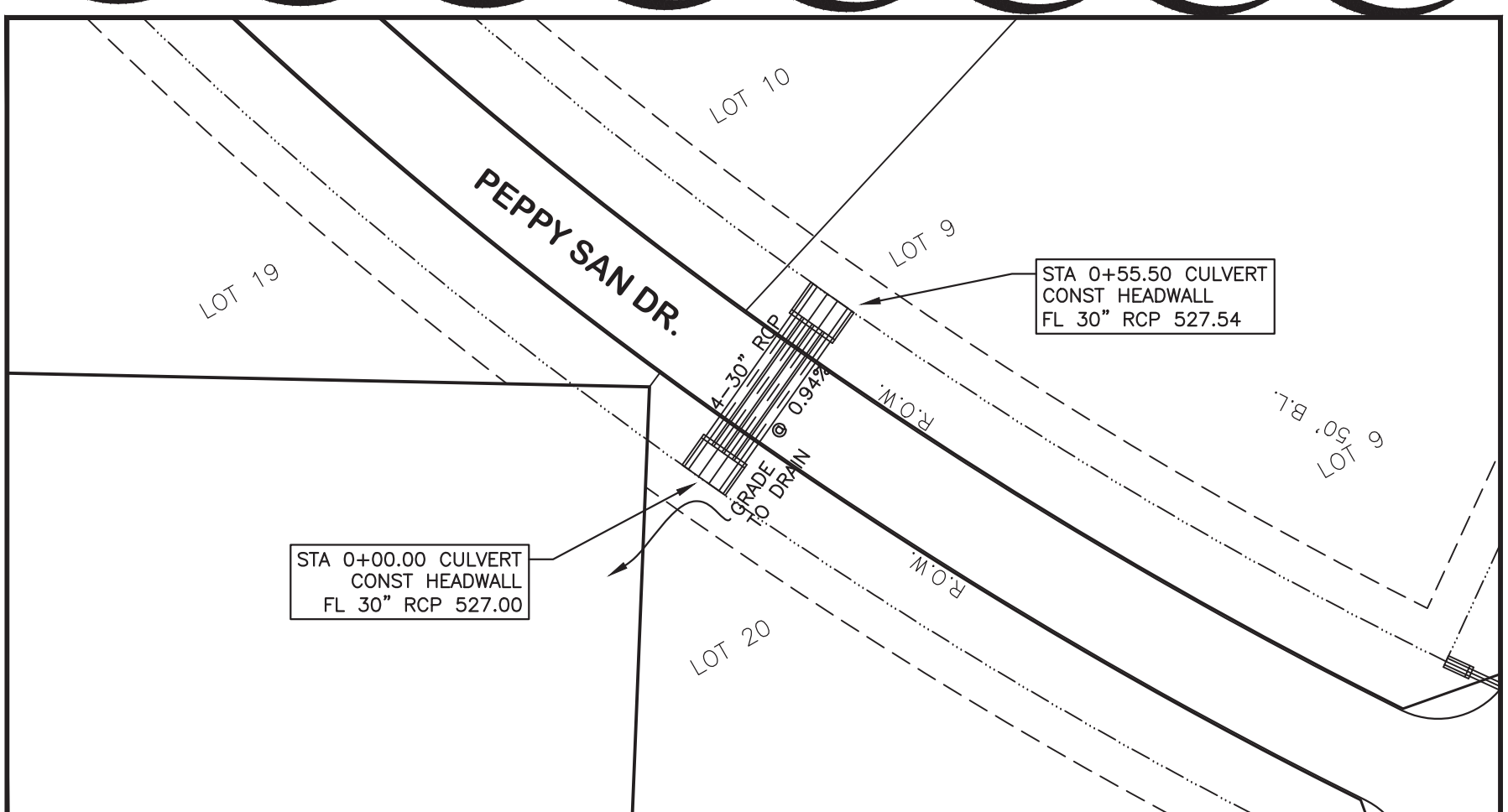
RECORD DRAWING
 THIS DRAWING REPRESENTS THE CONSTRUCTED STATE OF THIS PROJECT ACCORDING TO AVAILABLE INFORMATION FURNISHED TO THE ENGINEER BY THE CONTRACTOR OR OWNER AFTER CONSTRUCTION.
 BY: *Jason Trafton*
 DATE: 11.14.2019



Q₁₀₀ = 33.38 cfs
 Q_{cap} = 39.36 cfs
 s = 0.0218 ft/ft
 v = 5.31 fps
 V_{HEAD} = 0.44 ft



Q₁₀₀ = 14.36 cfs
 Q_{cap} = 21.48 cfs
 s = 0.0082 ft/ft
 v = 5.97 fps
 V_{HEAD} = 0.55 ft



Q₁₀₀ = 128.61 cfs
 Q_{cap} = 161.84 cfs
 s = 0.0983 ft/ft
 v = 6.55 fps
 V_{HEAD} = 0.67 ft

1	CHECK DAM, DITCH DESIGN UPDATE	07.09.2019
NO.	REVISIONS / SUBMISSIONS	DATE

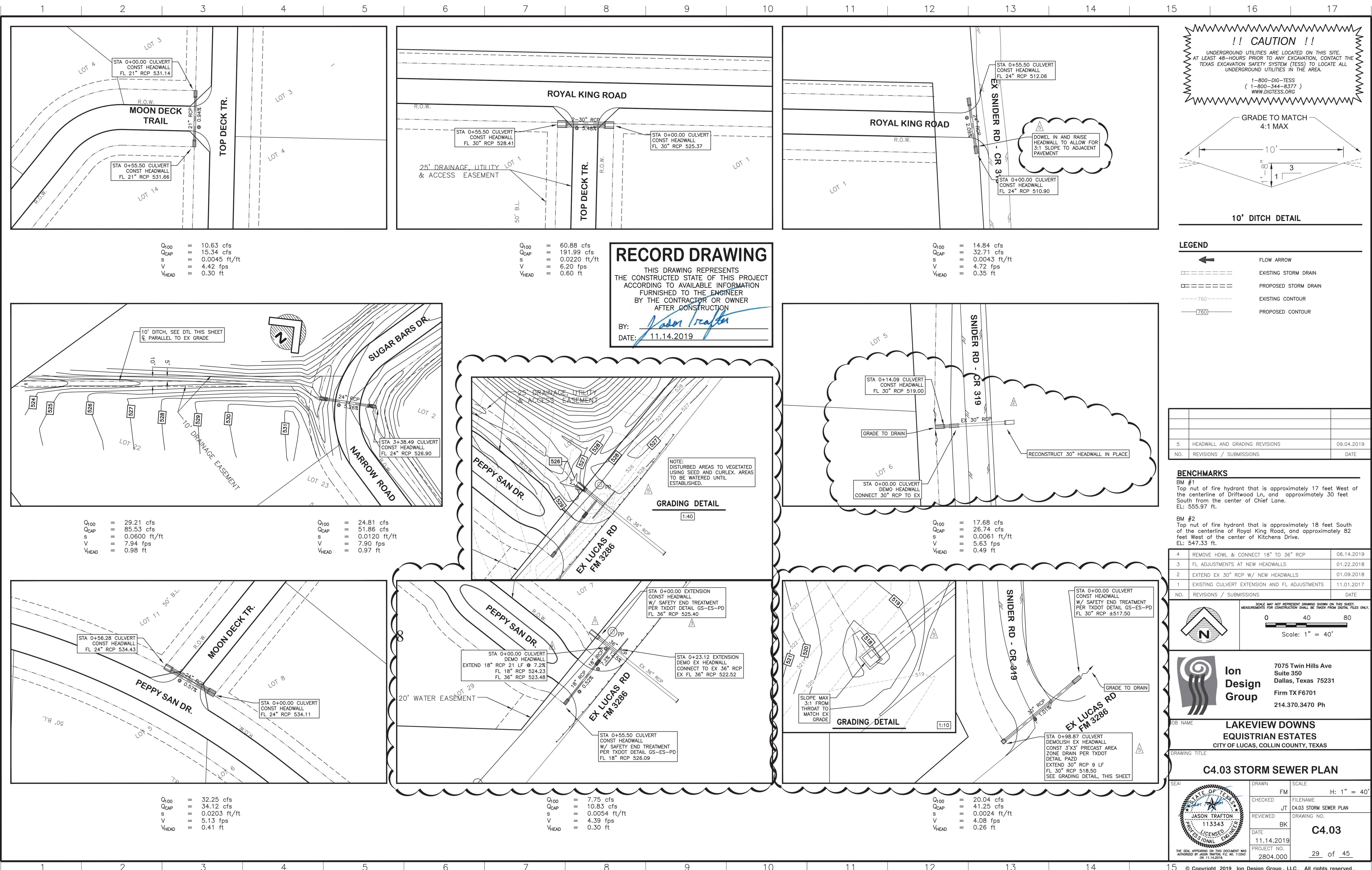
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LAKEVIEW DOWNS EQUSTRIAN ESTATES
 CITY OF LUCAS, COLLIN COUNTY, TEXAS

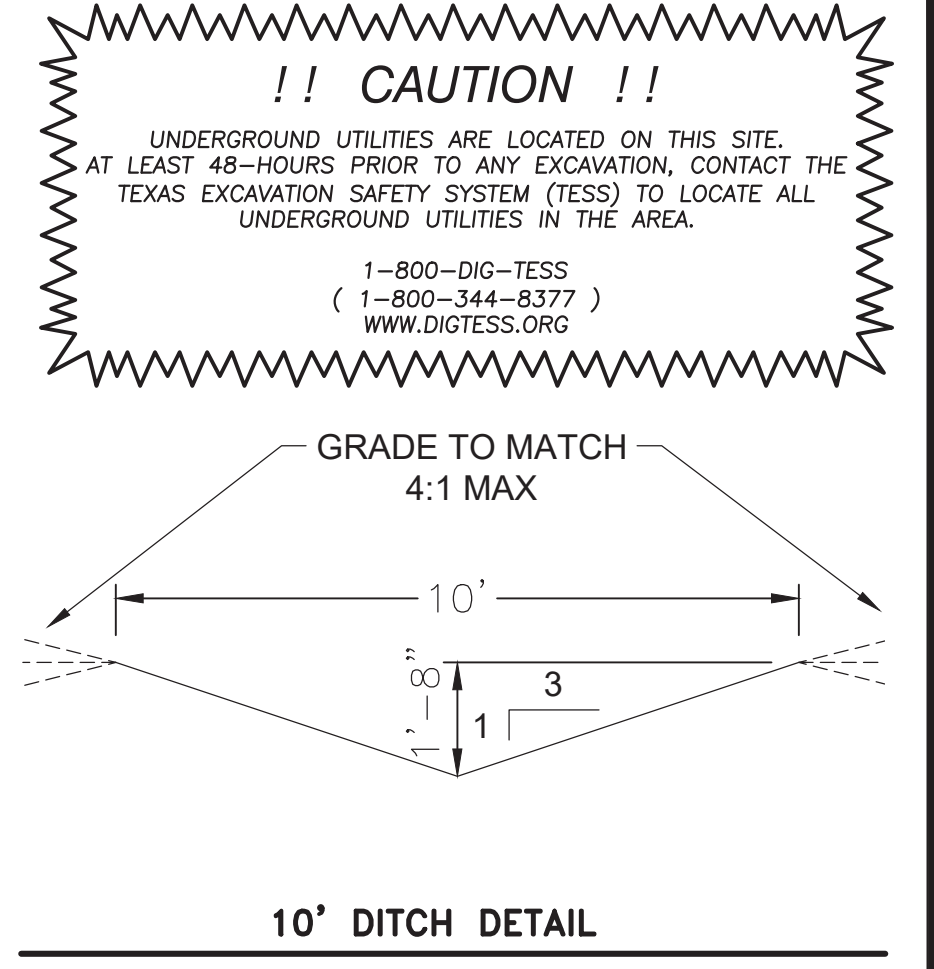
C4.02 STORM SEWER PLAN

SEAL	DRAWN	SCALE
	FM	H: 1" = 40'
CHECKED	FILENAME	
JT	C4.02 STORM SEWER PLAN	
REVIEWED	DRAWING NO.	
BK	C4.02	
DATE	PROJECT NO.	
11.13.2019	2804.000	
11.14.2019	2804.000	28 of 45

LAYOUT: C4.03 STORM SEWER PLAN PLOTTED: Tuesday, December 17, 2019 10:36:08 AM BY: BRYAN-ISA PLOT SCALE: 1:1 SAVED: 12/17/2019 11:22AM BY: BRYAN-ISA
 Z:\PROJECTS\2804.000 LBL LUCAS\DRAWINGS\C4.03 STORM.DWG



RECORD DRAWING
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 BY: *Jason Trafton*
 DATE: 11.14.2019



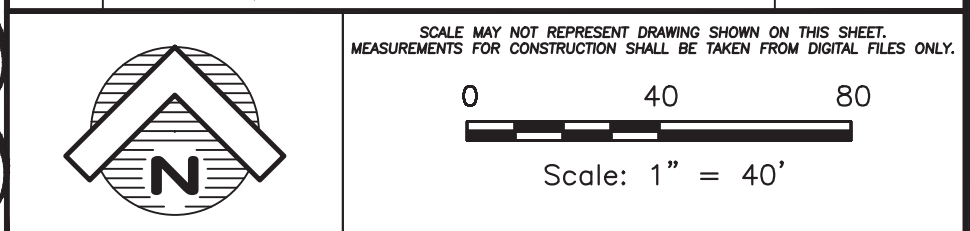
LEGEND

	FLOW ARROW
	EXISTING STORM DRAIN
	PROPOSED STORM DRAIN
	EXISTING CONTOUR
	PROPOSED CONTOUR

NO.	REVISIONS / SUBMISSIONS	DATE
5	HEADWALL AND GRADING REVISIONS	09.04.2019

BENCHMARKS
 BM #1
 Top nut of fire hydrant that is approximately 17 feet west of the centerline of Driftwood Ln, and approximately 30 feet South from the center of Chief Lane.
 EL: 555.97 ft.
 BM #2
 Top nut of fire hydrant that is approximately 18 feet South of the centerline of Royal King Road, and approximately 82 feet West of the center of Kitchens Drive.
 EL: 547.33 ft.

NO.	REVISIONS / SUBMISSIONS	DATE
4	REMOVE HDWL & CONNECT 18" TO 36" RCP	06.14.2019
3	FL ADJUSTMENTS AT NEW HEADWALLS	01.22.2018
2	EXTEND EX 30" RCP W/ NEW HEADWALLS	01.09.2018
1	EXISTING CULVERT EXTENSION AND FL ADJUSTMENTS	11.01.2017



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JOB NAME: **LAKEVIEW DOWNS EQUESTRIAN ESTATES**
 CITY OF LUCAS, COLLIN COUNTY, TEXAS

DRAWING TITLE: **C4.03 STORM SEWER PLAN**

DATE	BY	SCALE
11.14.2019	JT	H: 1" = 40'
11.13.2019	BK	
11.14.2019	BK	

PROJECT NO: **2804.000**
 SHEET NO: **29 of 45**

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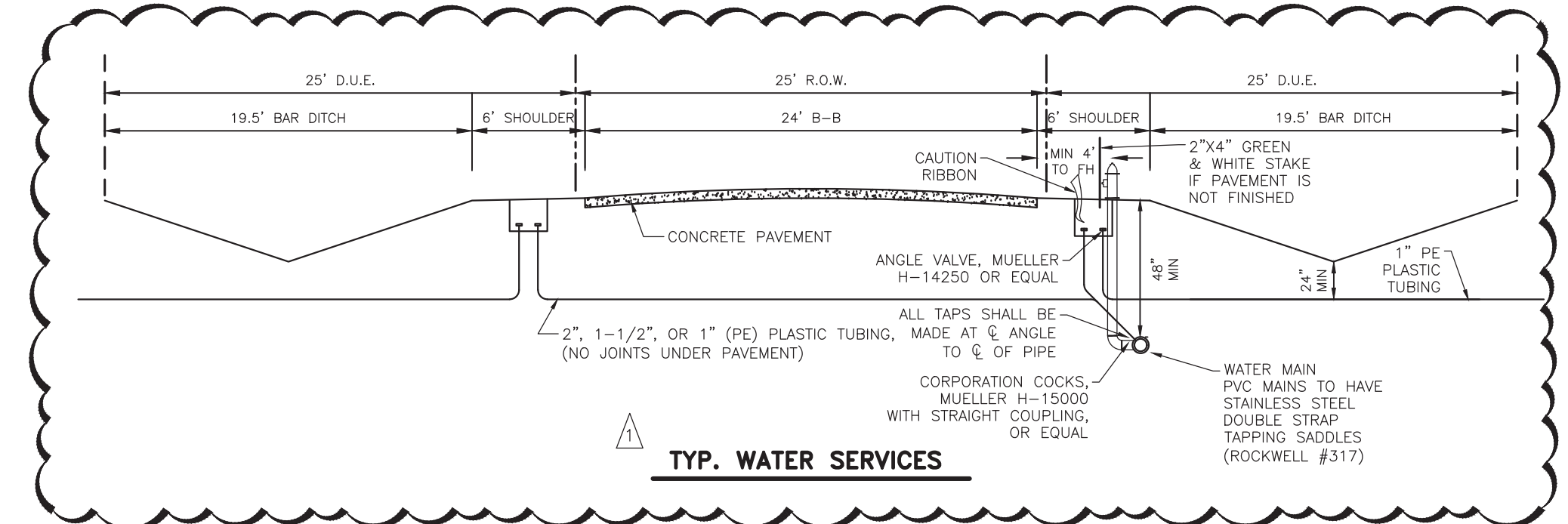
LAYOUT: C5.01 UTILITY PLAN, PLOTTED: Tuesday, December 17, 2019, 10:26:27 AM BY: BRYAN-ISA, PLOT SCALE: 1:1, SAVED: 11/14/2019 2:14PM BY: BRYAN-ISA
 Z:\PROJECTS\2804-00-LEB_LUCAS\DRAWINGS\C5.01 UTILITY PLAN.DWG

!! CAUTION !!

UNDERGROUND UTILITIES ARE LOCATED ON THIS SITE.
 AT LEAST 48-HOURS PRIOR TO ANY EXCAVATION, CONTACT THE
 TEXAS EXCAVATION SAFETY SYSTEM (TESS) TO LOCATE ALL
 UNDERGROUND UTILITIES IN THE AREA.
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NORTH CENTRAL TEXAS COUNCIL OF GOVERNMENTS NOTES

1. All materials, construction, testing and workmanship shall conform to the North Central Texas Council of Governments Standard Specifications for Public Works Construction (Third Addition 1998)
2. All water mains 12" and smaller shall have a minimum cover of 48" and shall be PVC A.W.W.A C900 DR-14, Class 200 water pipe. The pipe shall be "green" in color and the embedment with a minimum of Class "B+". Detectable metallic tape (Blue - "Caution Buried Water Line Below" or approved equal) shall be installed above all water mains to a max depth of 12" below finished grade (after compaction). All water mains shall be trace wired.
3. All tapping sleeves and valves shall be full body ductile iron. Fittings shall be of the mechanical joint type or slip joint, and shall be Class D, or Class 250 on sizes 12" and smaller in accordance with A.W.W.A Specification C-110-64 and C-11-64. All fittings shall be restrained by the use of Mega-Lugs or approved equal and concrete thrust blocking. Brass fittings by Ford or approved equal.
4. Concrete blocking shall be provided on water mains at all tees, wyes, bends, crosses and fire hydrants per NCTCOG Standards. All concrete for blocking shall be a minimum 2000 psi. Polyethylene wrap shall be installed around all ductile iron fittings and valves.
5. All fire hydrants shall conform to A.W.W.A standard specifications for fire hydrants for ordinary water works service, C-502. Fire hydrants shall have a 5/8" minimum valve opening and a barrel with approximately 7" inside diameter. All hydrants shall be equipped with a breakaway flange. Use Waterous or approved equal.
6. A blue Stimsonite fire-lite reflector shall be placed in the center of the street opposite each fire hydrant.
7. Unless otherwise approved by the City, all water valves shall be Resilient Seat Valves (RSV) and valve boxes shall be American Flow Control's Trench Adapter with a cast iron lid. After the final cleanup and alignment has been completed, the contractor shall pour a reinforced concrete block around all valve boxes so that they are flush with the final grade.
8. All residential water services shall be as follows: A) The location shall be near the mid-point of the front lot line unless otherwise shown on plans. The water service shall be a minimum of 1" nominal diameter continuous 200 psi rated polyethylene tubing. Sand embedment shall be used around the pipe and corporation stop. The contractor shall tie detectable blue metallic tape to the water service meter setter and shall leave a minimum of 36" of tape exposed after backfill and paving is complete. B) A 1-inch meter box, approved by the City, shall be installed inside the twenty-five foot waterline easement.
9. Any plumbing installed outside the R.O.W or an easement shall be installed by a licensed plumber and inspected by Building Inspection.
10. All water lines shall be sterilized and pressure tested to 200 psi for a 3-hour continuous period. All testing and sterilization shall meet or exceed NCTCOG specifications.
11. The contractor shall be responsible for providing "as-built" plans to the design engineer of record showing the location of water and sanitary sewer services and valves by distances to lot lines. This information shall be placed and marked on "as-built" plans by the engineer of record. Copies of these "as-built" plans shall be furnished to the City as required.
12. All lots must utilize an alternative type of On-Site Sewage Facility (OSSF). OSSF permit will be required. State-mandated set backs pertaining to OSSF's shall be adhered to. Final lot grading is required prior to installation or operation of OSSF.



RECORD DRAWING

THIS DRAWING REPRESENTS
 THE CONSTRUCTED STATE OF THIS PROJECT
 ACCORDING TO AVAILABLE INFORMATION
 FURNISHED TO THE ENGINEER
 BY THE CONTRACTOR OR OWNER
 AFTER CONSTRUCTION

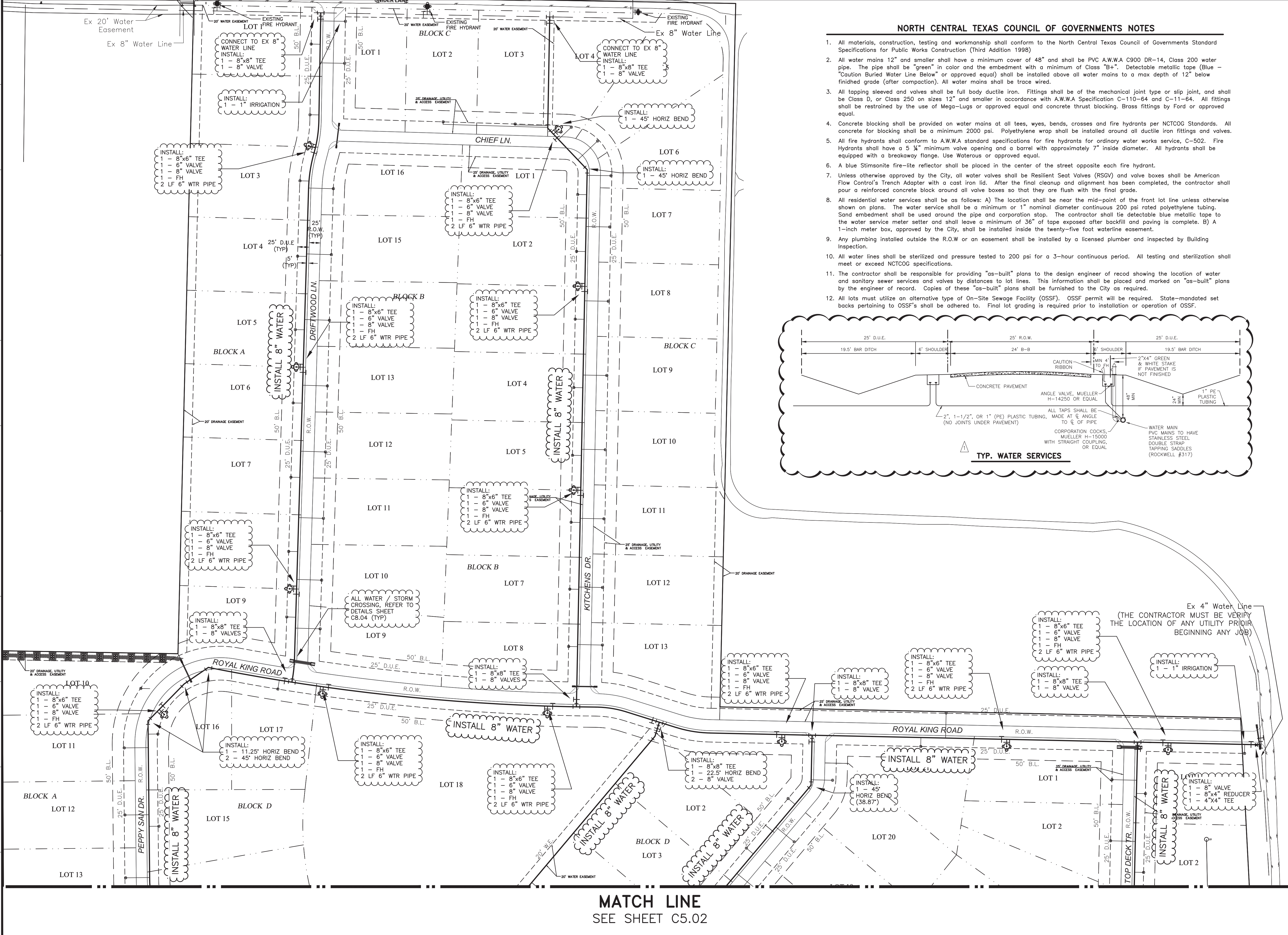
BY: *Jason Trafton*
 DATE: 11.14.2019

BENCHMARKS

BM #1
 Top nut of fire hydrant that is approximately 17 feet West of the centerline of Driftwood Ln, and approximately 30 feet South from the center of Chief Lane.
 EL: 555.97 ft.

BM #2
 Top nut of fire hydrant that is approximately 18 feet South of the centerline of Royal King Road, and approximately 82 feet West of the center of Kitchens Drive.
 EL: 547.33 ft.

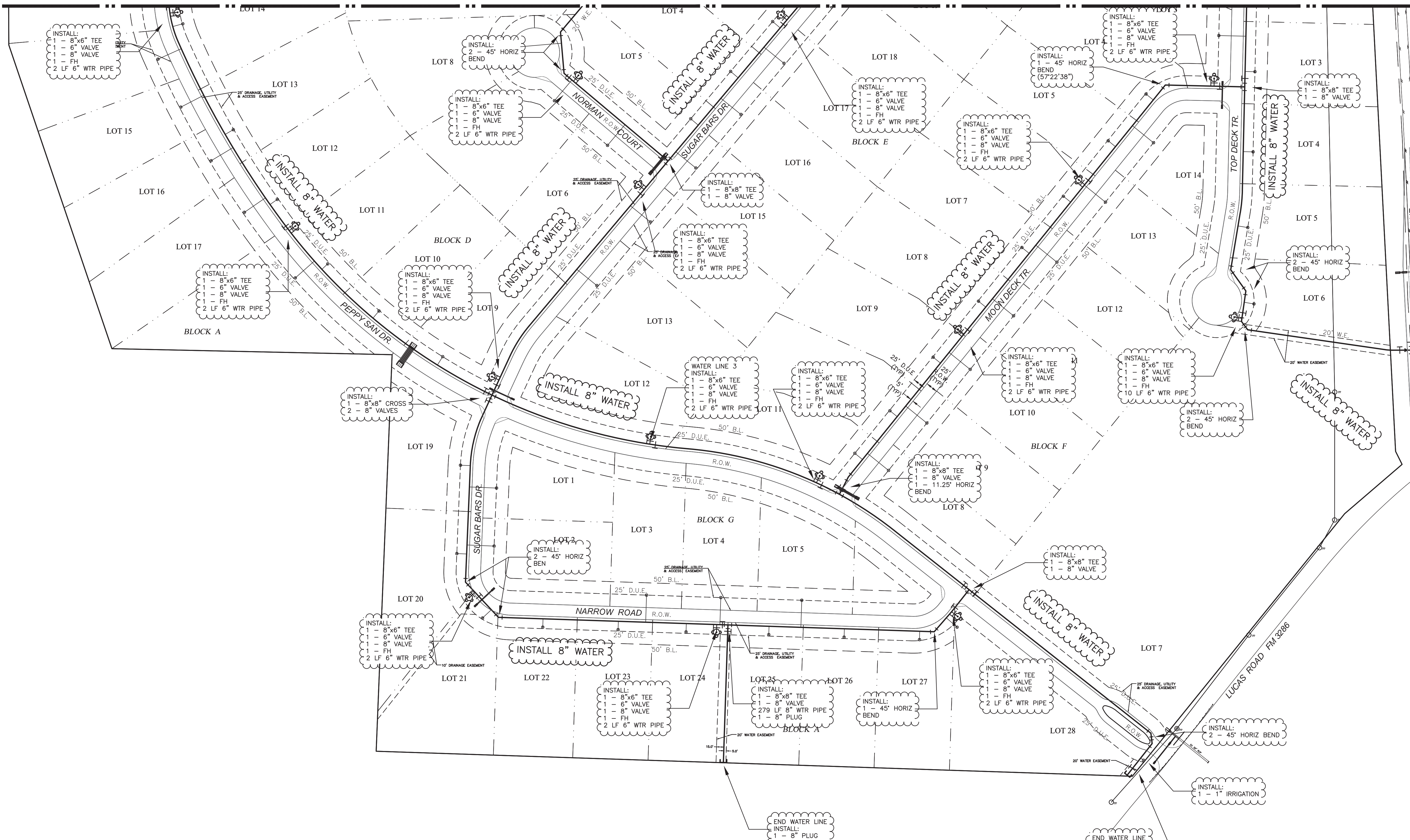
	SCALE MAY NOT REPRESENT DRAWING SHOWN ON THIS SHEET. MEASUREMENTS FOR CONSTRUCTION SHALL BE TAKEN FROM DIGITAL FILES ONLY. Scale: 1" = 100'
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LAKEVIEW DOWNS EQUINE ESTATES CITY OF LUCAS, COLLIN COUNTY, TEXAS	
C5.01 UTILITY PLAN	
DRAWN: FM CHECKED: JT REVIEWED: BK DATE: 11.14.2019 PROJECT NO.: 2804.000	SCALE: H: 1" = 100' FILENAME: C5.01 UTILITY PLAN DRAWING NO.: C5.01 30 of 45



MATCH LINE
 SEE SHEET C5.02

SEE SHEET C5.01
MATCH LINE

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(1-800-344-8377)
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CONNECT TO EX 4" WATER LINE
INSTALL:
1 - 8" VALVE
1 - 8"x4" REDUCER
1 - 4"x4" TEE

Ex 4" Water Line
(THE CONTRACTOR MUST VERIFY THE LOCATION OF ANY UTILITIES PRIOR TO BEGINNING ANY JOB)

BENCHMARKS
BM #1
Top nut of fire hydrant that is approximately 17 feet West of the centerline of Driftwood Ln, and approximately 30 feet South from the center of Chief Lane.
EL: 555.97 ft.
BM #2
Top nut of fire hydrant that is approximately 18 feet South of the centerline of Royal King Road, and approximately 82 feet West of the center of Kitchens Drive.
EL: 547.33 ft.

NO.	REVISIONS / SUBMISSIONS	DATE

MM.DD.YYYY

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0 100 200
Scale: 1" = 100'

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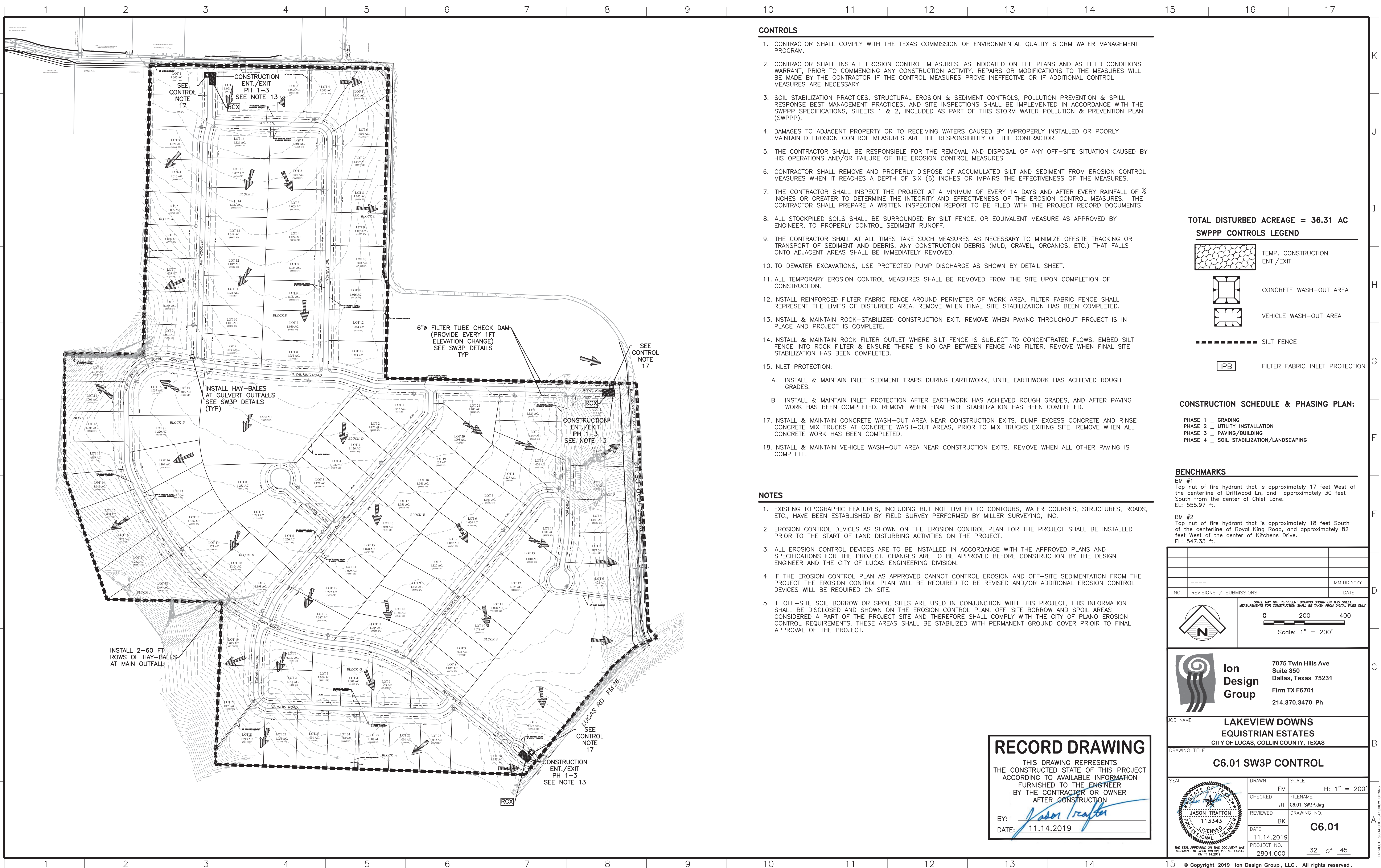
**LAKEVIEW DOWNS
EQUISTRAN ESTATES**
CITY OF LUCAS, COLLIN COUNTY, TEXAS

RECORD DRAWING
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BY: *Jason Trafton*
DATE: 11.14.2019

SEAL	DRAWN	SCALE
	FM	H: 1" = 100'
CHECKED	FILENAME	C5.02 UTILITY PLAN
REVIEWED	DRAWING NO.	
DATE	PROJECT NO.	C5.02
11.14.2019	2804.000	
PROJECT NO.	31 of 45	
2804.000		

LAYOUT: C5.02 UTILITY PLAN PLOTTED: Tuesday, December 17, 2019, 10:26:37 AM BY: BRYAN-15A.PLT SCALE: 1:1 SAVED: 11/14/2019 2:14PM BY: BRYAN-15A Z:\PROJECTS\2804.00 LBL LUCAS\DRAWINGS\C5.02 UTILITY PLAN.DWG

LAYOUT: C6.01 SW3P CONTROL PLOTTED: Tuesday, December 17, 2019 10:37:00 AM BY: BRYAN-15A PLT SCALE: 1:11 SAVED: 11/14/2019 2:16PM BY: BRYAN-15A
Z:\PROJECTS\2804.00 LBL LUCAS\DRAWINGS\C6.01 SW3P.DWG

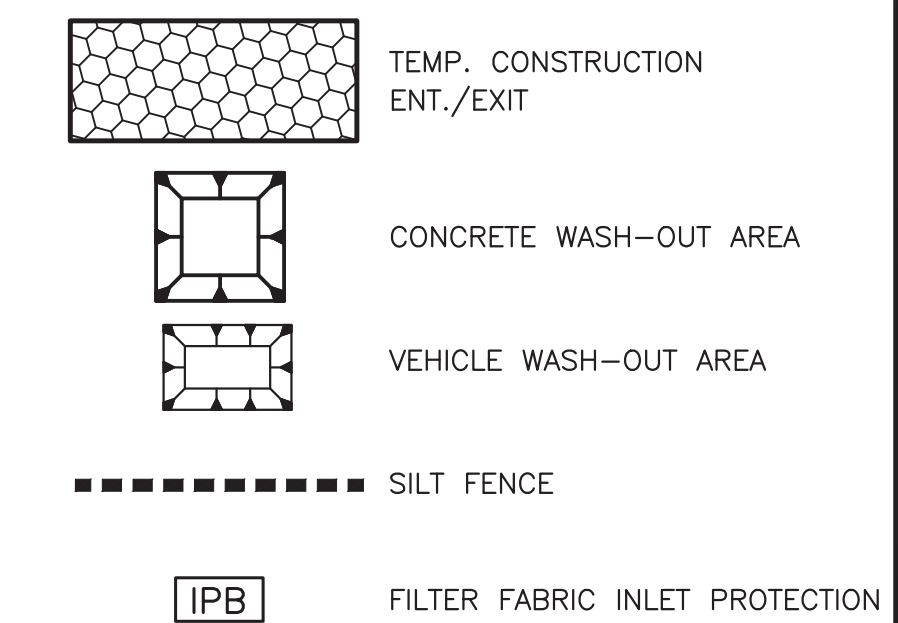


CONTROLS

- CONTRACTOR SHALL COMPLY WITH THE TEXAS COMMISSION OF ENVIRONMENTAL QUALITY STORM WATER MANAGEMENT PROGRAM.
- CONTRACTOR SHALL INSTALL EROSION CONTROL MEASURES, AS INDICATED ON THE PLANS AND AS FIELD CONDITIONS WARRANT, PRIOR TO COMMENCING ANY CONSTRUCTION ACTIVITY. REPAIRS OR MODIFICATIONS TO THE MEASURES WILL BE MADE BY THE CONTRACTOR IF THE CONTROL MEASURES PROVE INEFFECTIVE OR IF ADDITIONAL CONTROL MEASURES ARE NECESSARY.
- SOIL STABILIZATION PRACTICES, STRUCTURAL EROSION & SEDIMENT CONTROLS, POLLUTION PREVENTION & SPILL RESPONSE BEST MANAGEMENT PRACTICES, AND SITE INSPECTIONS SHALL BE IMPLEMENTED IN ACCORDANCE WITH THE SWPPP SPECIFICATIONS, SHEETS 1 & 2, INCLUDED AS PART OF THIS STORM WATER POLLUTION & PREVENTION PLAN (SWPPP).
- DAMAGES TO ADJACENT PROPERTY OR TO RECEIVING WATERS CAUSED BY IMPROPERLY INSTALLED OR POORLY MAINTAINED EROSION CONTROL MEASURES ARE THE RESPONSIBILITY OF THE CONTRACTOR.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REMOVAL AND DISPOSAL OF ANY OFF-SITE SITUATION CAUSED BY HIS OPERATIONS AND/OR FAILURE OF THE EROSION CONTROL MEASURES.
- CONTRACTOR SHALL REMOVE AND PROPERLY DISPOSE OF ACCUMULATED SILT AND SEDIMENT FROM EROSION CONTROL MEASURES WHEN IT REACHES A DEPTH OF SIX (6) INCHES OR IMPAIRS THE EFFECTIVENESS OF THE MEASURES.
- THE CONTRACTOR SHALL INSPECT THE PROJECT AT A MINIMUM OF EVERY 14 DAYS AND AFTER EVERY RAINFALL OF 1/2 INCHES OR GREATER TO DETERMINE THE INTEGRITY AND EFFECTIVENESS OF THE EROSION CONTROL MEASURES. THE CONTRACTOR SHALL PREPARE A WRITTEN INSPECTION REPORT TO BE FILED WITH THE PROJECT RECORD DOCUMENTS.
- ALL STOCKPILED SOILS SHALL BE SURROUNDED BY SILT FENCE, OR EQUIVALENT MEASURE AS APPROVED BY ENGINEER, TO PROPERLY CONTROL SEDIMENT RUNOFF.
- THE CONTRACTOR SHALL AT ALL TIMES TAKE SUCH MEASURES AS NECESSARY TO MINIMIZE OFFSITE TRACKING OR TRANSPORT OF SEDIMENT AND DEBRIS. ANY CONSTRUCTION DEBRIS (MUD, GRAVEL, ORGANICS, ETC.) THAT FALLS ONTO ADJACENT AREAS SHALL BE IMMEDIATELY REMOVED.
- TO DEWATER EXCAVATIONS, USE PROTECTED PUMP DISCHARGE AS SHOWN BY DETAIL SHEET.
- ALL TEMPORARY EROSION CONTROL MEASURES SHALL BE REMOVED FROM THE SITE UPON COMPLETION OF CONSTRUCTION.
- INSTALL REINFORCED FILTER FABRIC FENCE AROUND PERIMETER OF WORK AREA. FILTER FABRIC FENCE SHALL REPRESENT THE LIMITS OF DISTURBED AREA. REMOVE WHEN FINAL SITE STABILIZATION HAS BEEN COMPLETED.
- INSTALL & MAINTAIN ROCK-STABILIZED CONSTRUCTION EXIT. REMOVE WHEN PAVING THROUGHOUT PROJECT IS IN PLACE AND PROJECT IS COMPLETE.
- INSTALL & MAINTAIN ROCK FILTER OUTLET WHERE SILT FENCE IS SUBJECT TO CONCENTRATED FLOWS. EMBED SILT FENCE INTO ROCK FILTER & ENSURE THERE IS NO GAP BETWEEN FENCE AND FILTER. REMOVE WHEN FINAL SITE STABILIZATION HAS BEEN COMPLETED.
- INLET PROTECTION:
 - INSTALL & MAINTAIN INLET SEDIMENT TRAPS DURING EARTHWORK, UNTIL EARTHWORK HAS ACHIEVED ROUGH GRADES.
 - INSTALL & MAINTAIN INLET PROTECTION AFTER EARTHWORK HAS ACHIEVED ROUGH GRADES, AND AFTER PAVING WORK HAS BEEN COMPLETED. REMOVE WHEN FINAL SITE STABILIZATION HAS BEEN COMPLETED.
- INSTALL & MAINTAIN CONCRETE WASH-OUT AREA NEAR CONSTRUCTION EXITS. DUMP EXCESS CONCRETE AND RINSE CONCRETE MIX TRUCKS AT CONCRETE WASH-OUT AREAS, PRIOR TO MIX TRUCKS EXITING SITE. REMOVE WHEN ALL CONCRETE WORK HAS BEEN COMPLETED.
- INSTALL & MAINTAIN VEHICLE WASH-OUT AREA NEAR CONSTRUCTION EXITS. REMOVE WHEN ALL OTHER PAVING IS COMPLETE.

TOTAL DISTURBED ACREAGE = 36.31 AC

SWPPP CONTROLS LEGEND



CONSTRUCTION SCHEDULE & PHASING PLAN:

- PHASE 1 - GRADING
- PHASE 2 - UTILITY INSTALLATION
- PHASE 3 - PAVING/BUILDING
- PHASE 4 - SOIL STABILIZATION/LANDSCAPING

BENCHMARKS

BM #1
Top nut of fire hydrant that is approximately 17 feet West of the centerline of Driftwood Ln, and approximately 30 feet South from the center of Chief Lane.
EL: 555.97 ft.

BM #2
Top nut of fire hydrant that is approximately 18 feet South of the centerline of Royal King Road, and approximately 82 feet West of the center of Kitchens Drive.
EL: 547.33 ft.

NOTES

- EXISTING TOPOGRAPHIC FEATURES, INCLUDING BUT NOT LIMITED TO CONTOURS, WATER COURSES, STRUCTURES, ROADS, ETC., HAVE BEEN ESTABLISHED BY FIELD SURVEY PERFORMED BY MILLER SURVEYING, INC.
- EROSION CONTROL DEVICES AS SHOWN ON THE EROSION CONTROL PLAN FOR THE PROJECT SHALL BE INSTALLED PRIOR TO THE START OF LAND DISTURBING ACTIVITIES ON THE PROJECT.
- ALL EROSION CONTROL DEVICES ARE TO BE INSTALLED IN ACCORDANCE WITH THE APPROVED PLANS AND SPECIFICATIONS FOR THE PROJECT. CHANGES ARE TO BE APPROVED BEFORE CONSTRUCTION BY THE DESIGN ENGINEER AND THE CITY OF LUCAS ENGINEERING DIVISION.
- IF THE EROSION CONTROL PLAN AS APPROVED CANNOT CONTROL EROSION AND OFF-SITE SEDIMENTATION FROM THE PROJECT THE EROSION CONTROL PLAN WILL BE REQUIRED TO BE REVISED AND/OR ADDITIONAL EROSION CONTROL DEVICES WILL BE REQUIRED ON SITE.
- IF OFF-SITE SOIL BORROW OR SPOIL SITES ARE USED IN CONJUNCTION WITH THIS PROJECT, THIS INFORMATION SHALL BE DISCLOSED AND SHOWN ON THE EROSION CONTROL PLAN. OFF-SITE BORROW AND SPOIL AREAS CONSIDERED A PART OF THE PROJECT SITE AND THEREFORE SHALL COMPLY WITH THE CITY OF PLANO EROSION CONTROL REQUIREMENTS. THESE AREAS SHALL BE STABILIZED WITH PERMANENT GROUND COVER PRIOR TO FINAL APPROVAL OF THE PROJECT.

NO.	REVISIONS / SUBMISSIONS	DATE
		MM.DD.YYYY

SCALE MAY NOT REPRESENT DRAWING SHOWN ON THIS SHEET. MEASUREMENTS FOR CONSTRUCTION SHALL BE TAKEN FROM DIGITAL FILES ONLY.

0 200 400
Scale: 1" = 200'

Ion Design Group
7075 Twin Hills Ave
Suite 350
Dallas, Texas 75231
Firm TX F6701
214.370.3470 Ph

JOB NAME: **LAKEVIEW DOWNS EQUISTRIAN ESTATES**
CITY OF LUCAS, COLLIN COUNTY, TEXAS

DRAWING TITLE: **C6.01 SW3P CONTROL**

	DRAWN: FM	SCALE: H: 1" = 200'
	CHECKED: JT	FILENAME: C6.01 SW3P.dwg
	REVIEWED: BK	DRAWING NO.: 113343
	DATE: 11.14.2019	PROJECT NO.: 2804.000

PROJECT NO.: 2804.000

RECORD DRAWING

THIS DRAWING REPRESENTS THE CONSTRUCTED STATE OF THIS PROJECT ACCORDING TO AVAILABLE INFORMATION FURNISHED TO THE ENGINEER BY THE CONTRACTOR OR OWNER AFTER CONSTRUCTION

BY: *Jason Trafton*
DATE: 11.14.2019

LIBERTY BANKERS
 1605 LBJ Freeway, Suite 710
 Dallas, TX 75234
 Phone: 469.522.4458

Construction Site SWPPP Compliance Inspection Report

Project Name: _____ Project No.: _____
 Contractor: _____ Date of Inspection: _____
 Inspection Conducted by: _____
Printed Name Signature
 Qualifications of the Inspector: _____
 Report prepared by: (Circle One) Contractor Owner
 Type of Inspection: (Circle One) 7 Day Inspection 14 Day Inspection After-Rain Event Inspection

Inspection Issue	Y	N	N/A	Comments
Are copies of inspection reports included with the SWPPP?				
Is an NPDES permit, for all permittees, posted at the construction entrance?				
Is a copy of the SWPPP Certification with the SWPPP?				
Are there any signs of discharge leaving the site?				
Any BMP's in need of repair and/or maintenance?				
Are all BMP's functioning as intended?				
Any additional BMP's required?				
Are stabilized entrance / exits preventing street contamination?				
Are any hazardous materials being exposed to storm water runoff?				
Have there been any reportable spills of hazardous materials?				
If SWPPP controls or practices have been modified, has the SWPPP been updated?				
Have all areas of the site not covered by impervious materials achieved the required coverage?				
Are all soil-disturbing activities complete?				
Has a Notice of Termination (NOT) been filed?				

PAGE 1 OF 2

LIBERTY BANKERS
 1605 LBJ Freeway, Suite 710
 Dallas, TX 75234
 Phone: 469.522.4458

Construction Site SWPPP Compliance Inspection Report

Project Name: _____ Project No.: _____
 Contractor: _____ Date of Inspection: _____

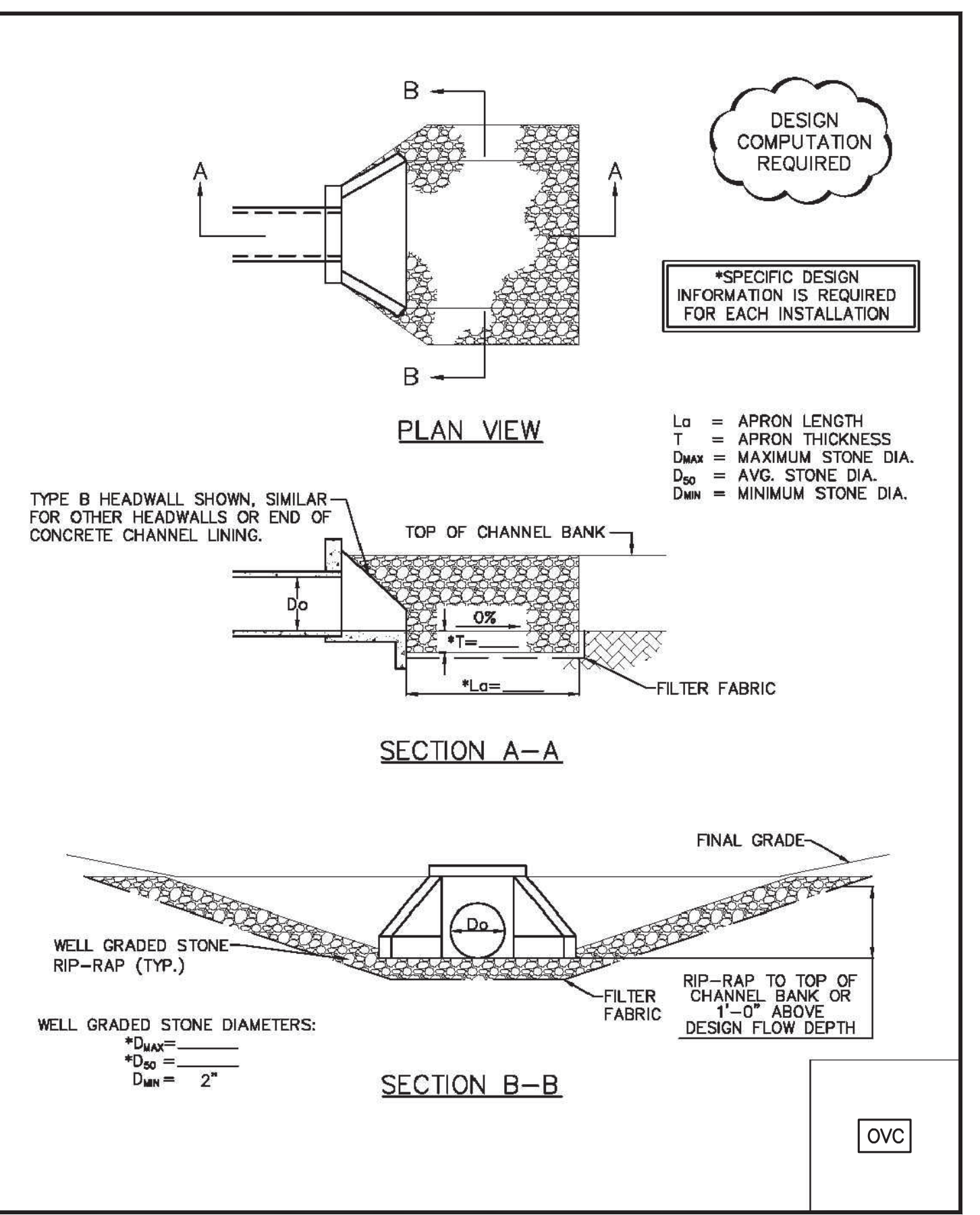
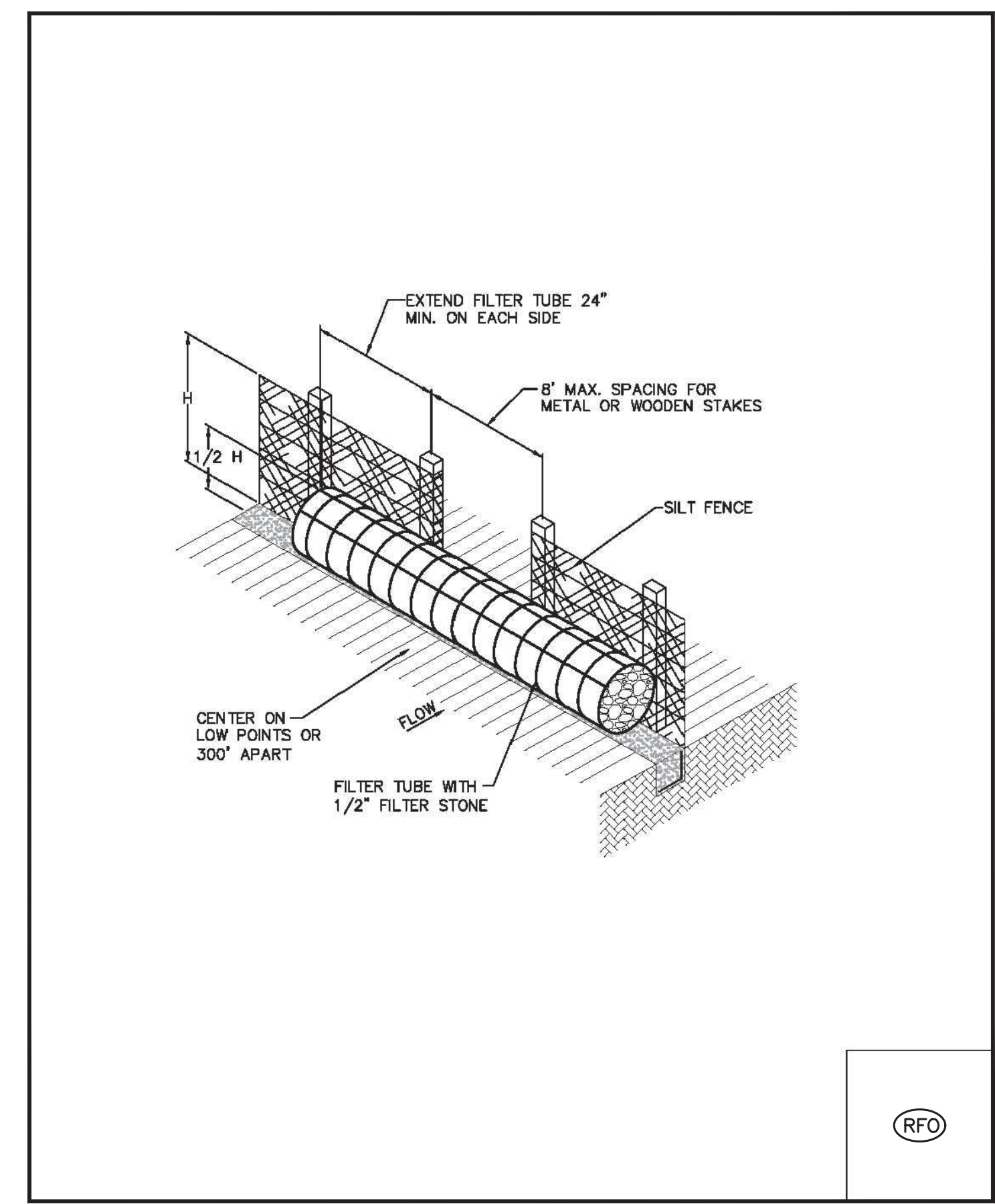
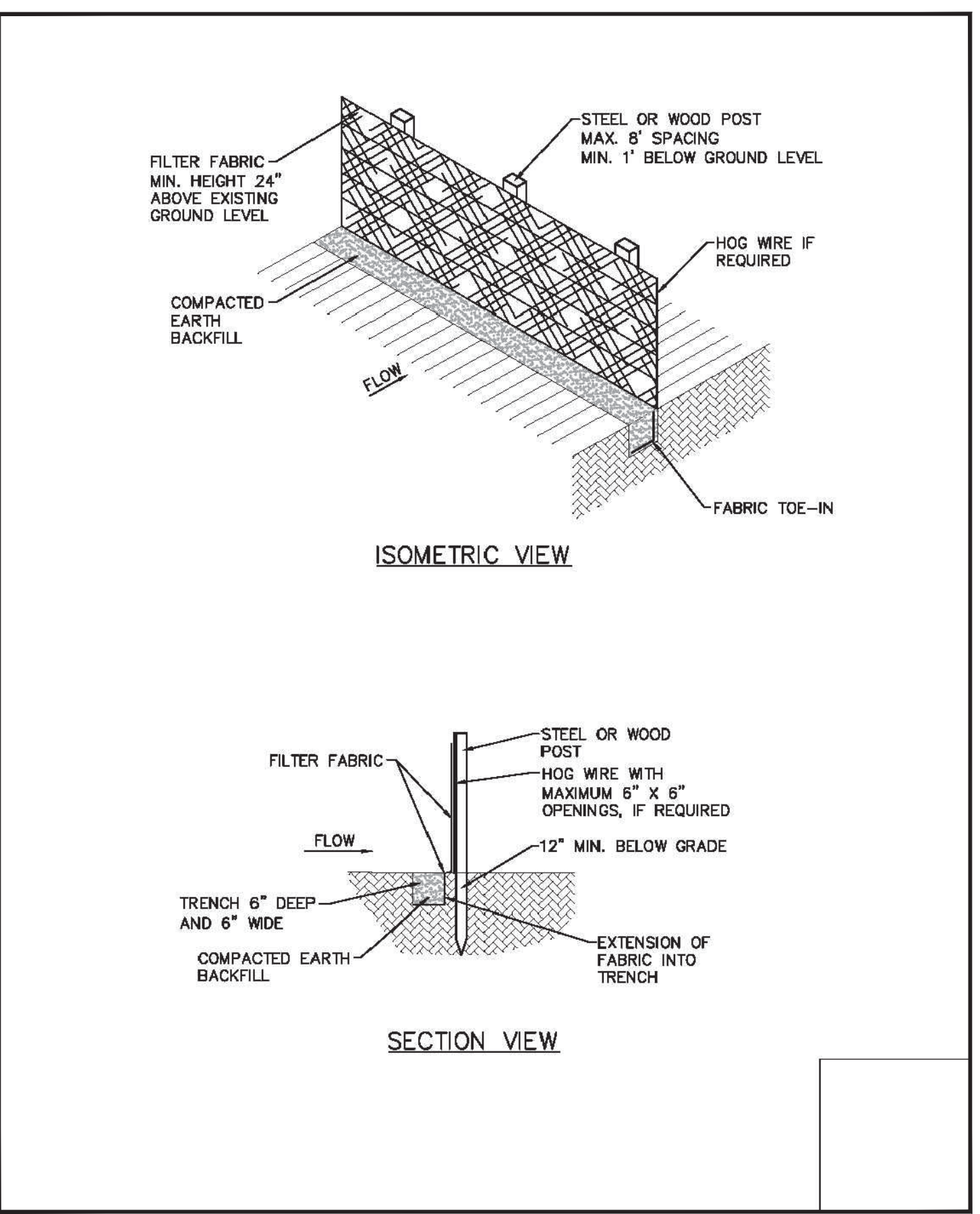
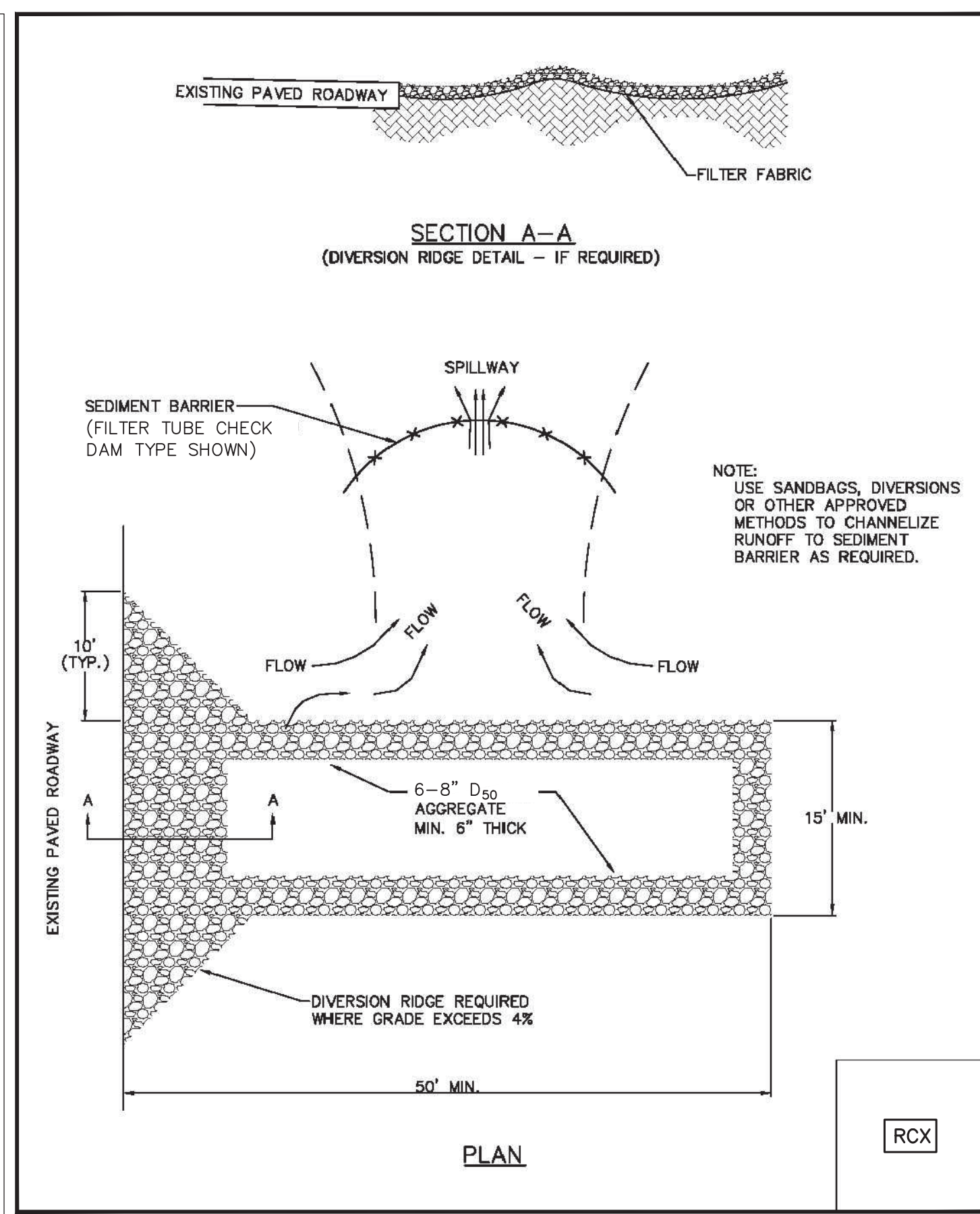
NOTE: All items of non-compliance shall be repaired/installed within seven (7) calendar days of inspection. Repairs/installation shall be completed immediately, if storm conditions are imminent.



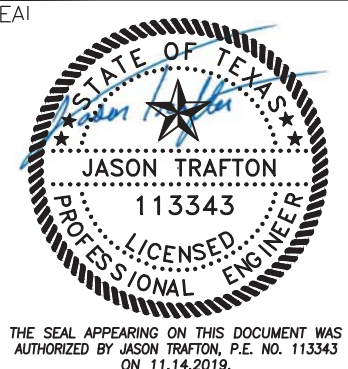
Note incidents of non-compliance: _____

*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 ensure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations. *

Signature: _____ Date: _____
 Printed Name: _____
 Title: _____

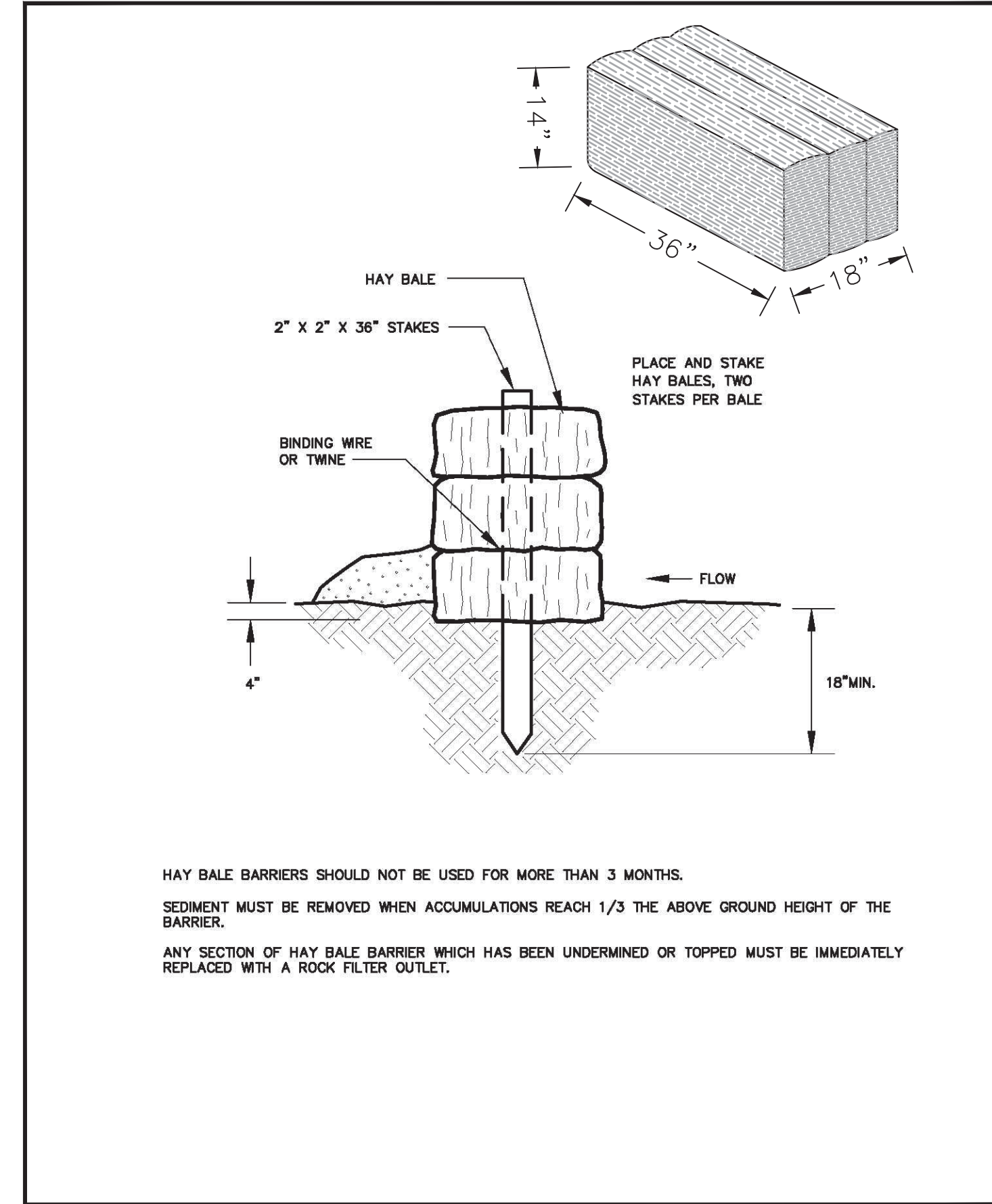
PAGE 2 OF 2



NO. REVISIONS / SUBMISSIONS		DATE
		
		7075 Twin Hills Ave Suite 350 Dallas, Texas 75231 Firm TX F6701 214.370.3470 Ph
JOB NAME		LAKEVIEW DOWNS EQUSTRIAN ESTATES CITY OF LUCAS, COLLIN COUNTY, TEXAS
DRAWING TITLE		C6.02 SW3P DETAILS
SEAL	DRAWN	SCALE
	CHECKED	FM
	REVIEWED	JT
	DATE	11.14.2019
	PROJECT NO.	2804.000
THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY JASON TRAFTON, P.E. NO. 113343 ON 11/14/2019.		FILENAME C6.01 SW3P.dwg DRAWING NO. C6.02 33 of 45

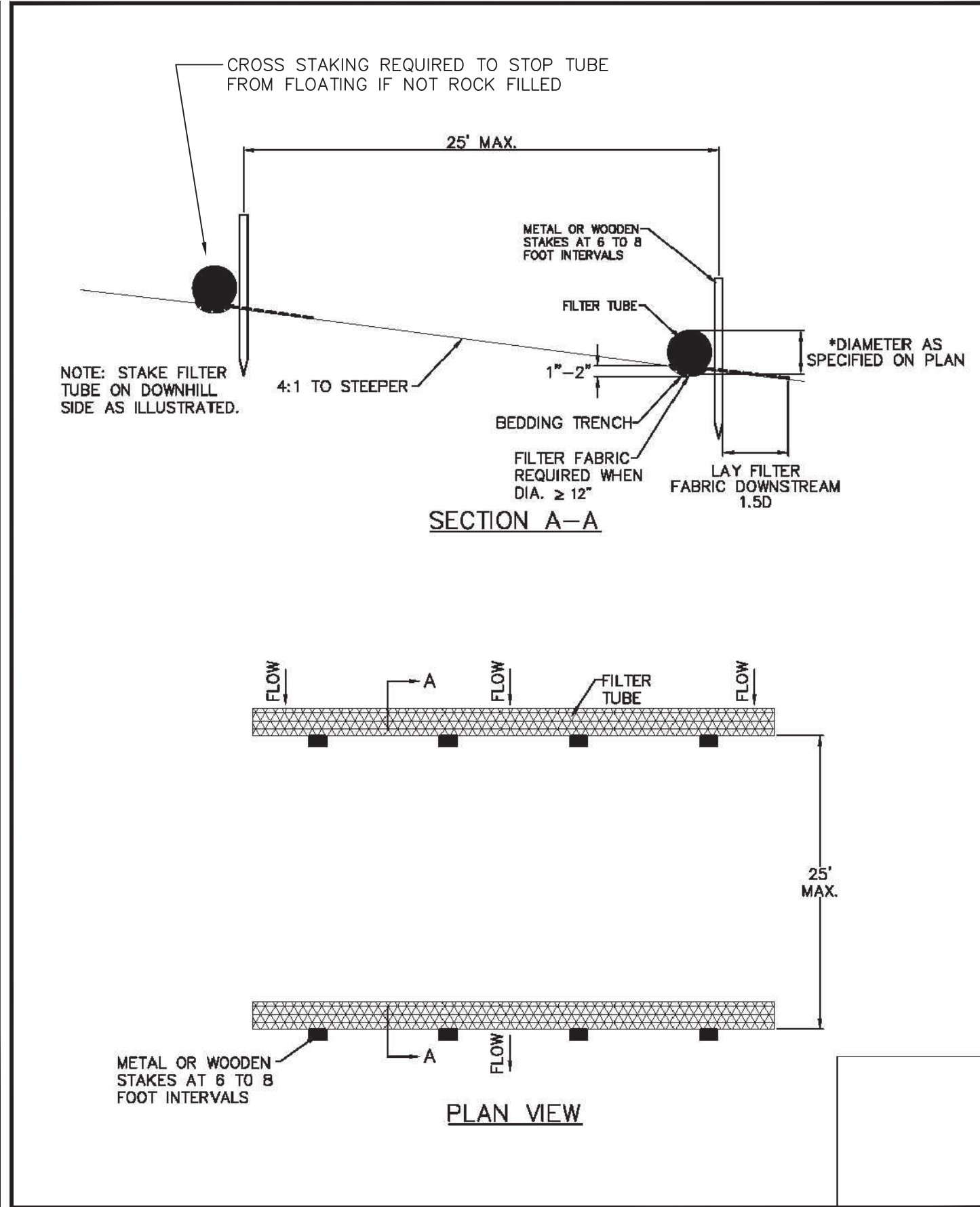
RECORD DRAWING
 THIS DRAWING REPRESENTS THE CONSTRUCTED STATE OF THIS PROJECT ACCORDING TO AVAILABLE INFORMATION FURNISHED TO THE ENGINEER BY THE CONTRACTOR OR OWNER AFTER CONSTRUCTION.
 BY: *Jason Trafton*
 DATE: 11.14.2019

LAYOUT: C6.02 SW3P DETAILS PLOTTED: Tuesday, December 17, 2019 10:37:04 AM BY: BRYAN-ISA PLOT SCALE: 1:1 SAVED: 11/14/2019 2:16PM BY: BRYAN-ISA Z:\PROJECTS\2804.00 LBL LUCAS\DRAWINGS\C\6.01 SW3P.DWG



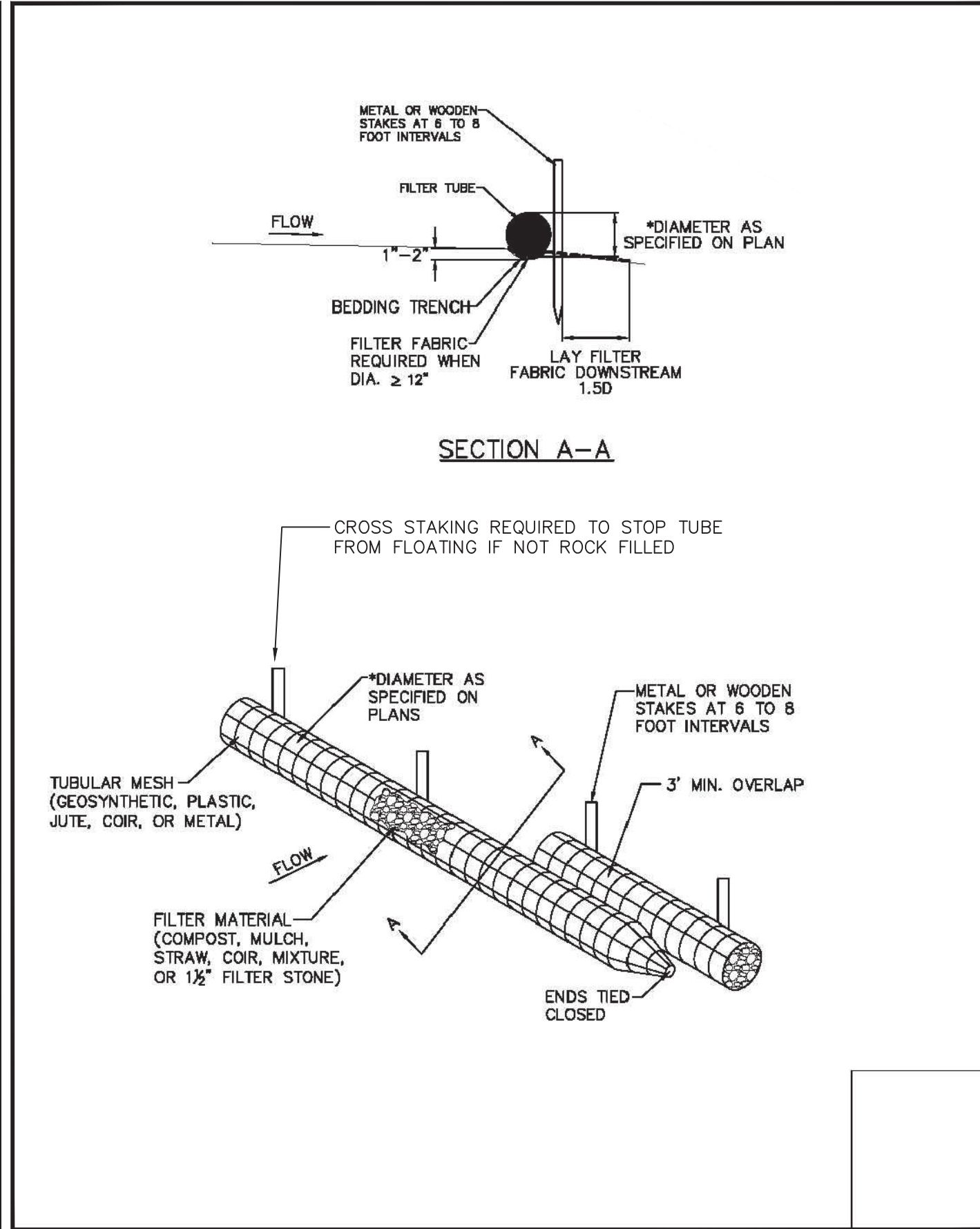
FILTER TUBE SLOPE PROTECTION

Scale: NTS



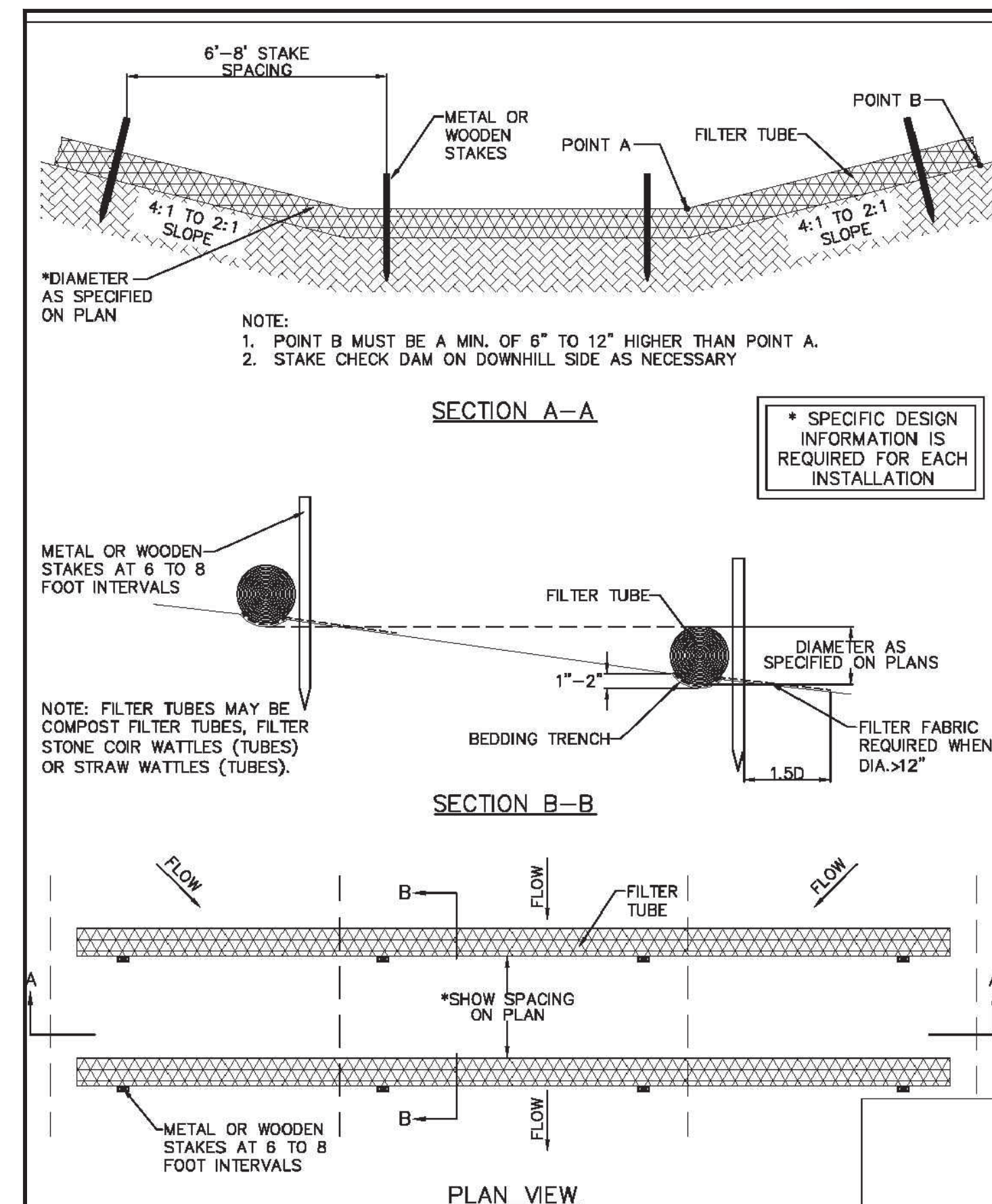
FILTER TUBE SLOPE PROTECTION

Scale: NTS



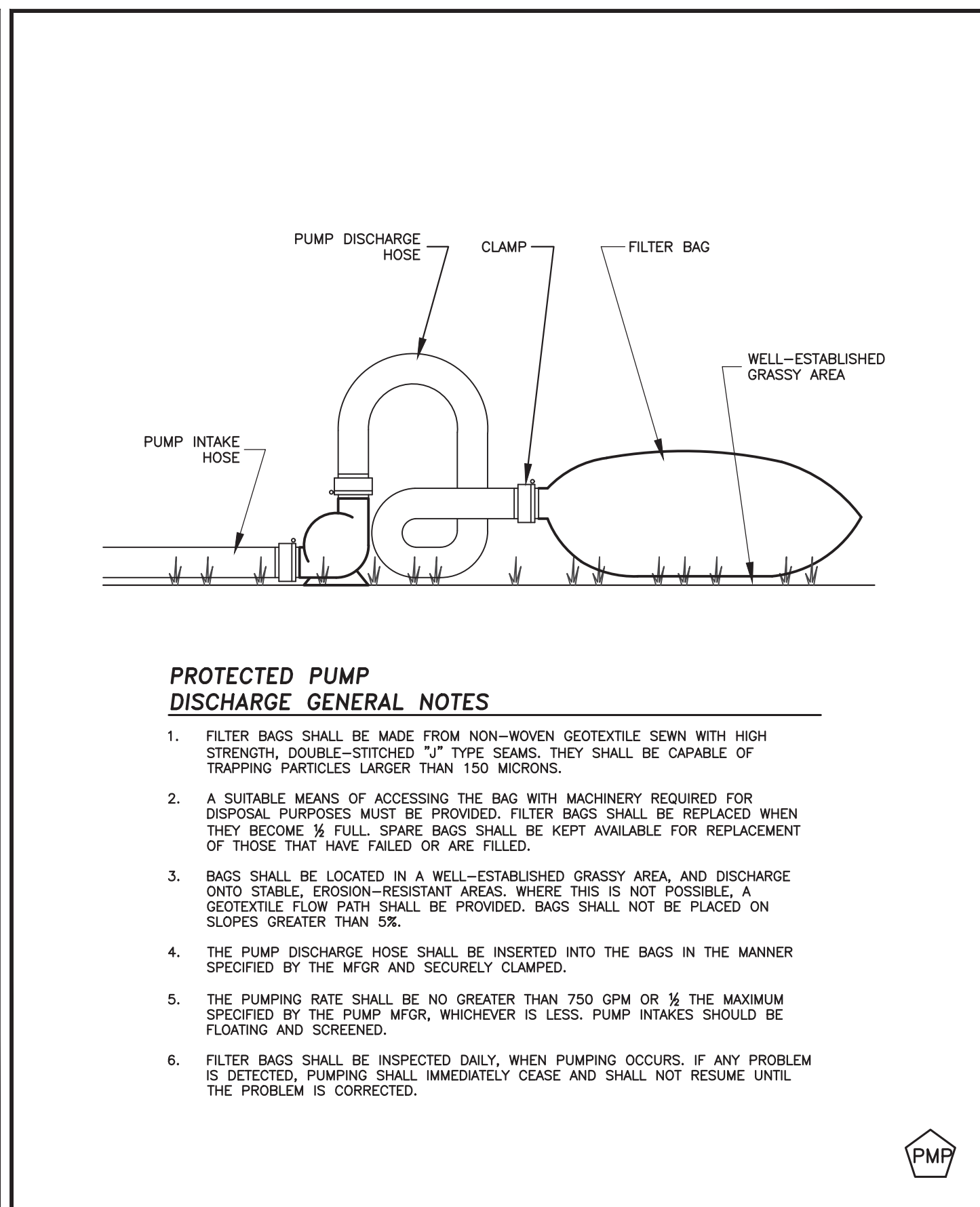
FILTER TUBE DETAIL

Scale: NTS



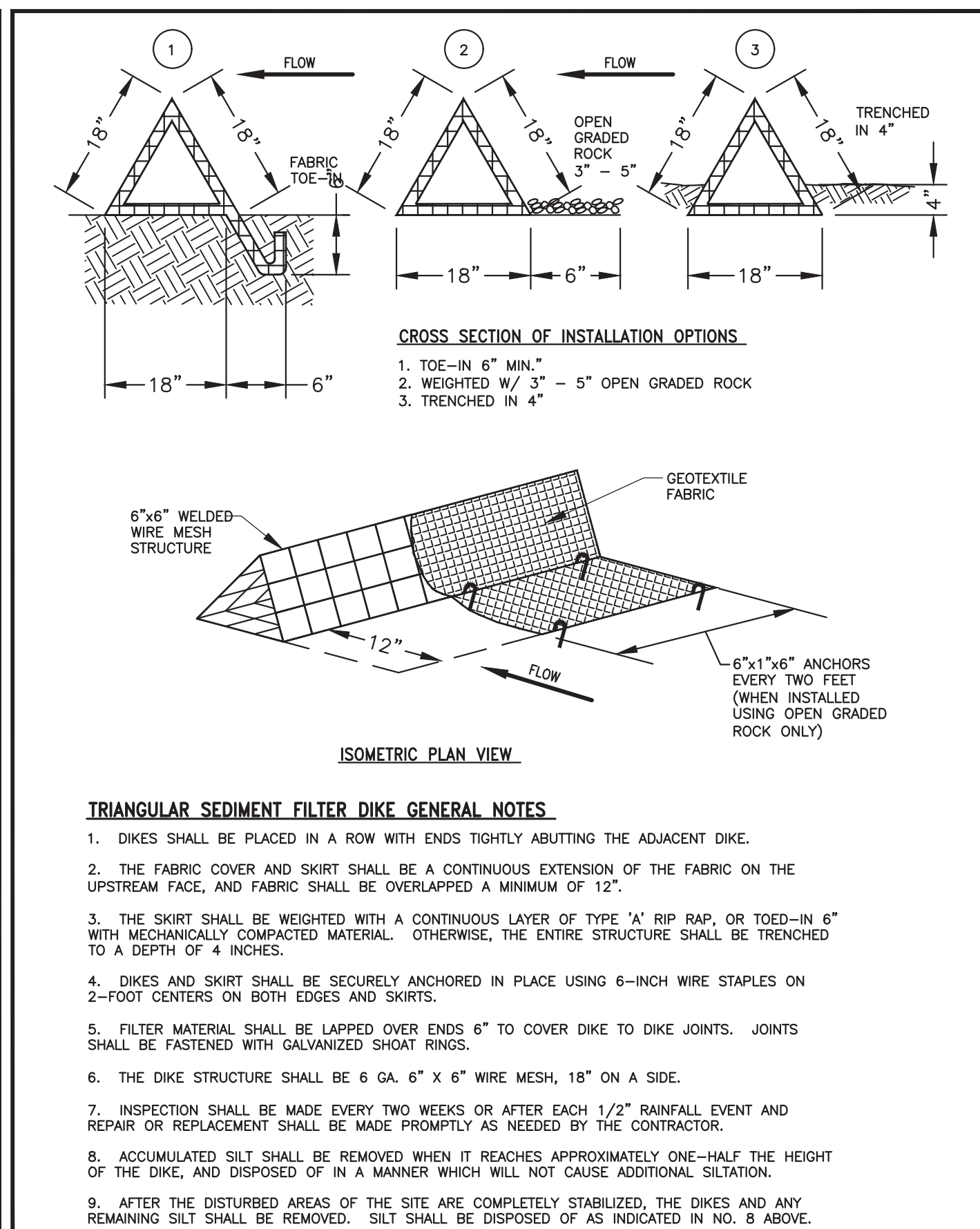
FILTER TUBE CHECK DAM

Scale: NTS



PROTECTED PUMP DISCHARGE (OPTIONAL)

Scale: NTS



FILTER FABRIC INLET PROTECTION (OPTIONAL)

Scale: NTS

RECORD DRAWING

THIS DRAWING REPRESENTS THE CONSTRUCTED STATE OF THIS PROJECT ACCORDING TO AVAILABLE INFORMATION FURNISHED TO THE ENGINEER BY THE CONTRACTOR OR OWNER AFTER CONSTRUCTION

BY: *Jason Trafton*
DATE: 11.14.2019

NO.	REVISIONS / SUBMISSIONS	MM.DD.YYYY	DATE
		LAKEVIEW DOWNS EQUISTRAN ESTATES CITY OF LUCAS, COLLIN COUNTY, TEXAS	
C6.03 SW3P DETAILS		7075 Twin Hills Ave Suite 350 Dallas, Texas 75231 Firm TX F6701 214.370.3470 Ph	
DRAWN: FM CHECKED: JT REVIEWED: BK		SCALE: FILENAME: C6.01 SW3P.dwg DRAWING NO.: C6.03	
DATE: 11.14.2019 PROJECT NO.: 2804.000		34 of 45	

Part VI. Retention of Records

The permittee must retain the following records for a minimum period of three (3) years from the date that a NOI is submitted as required by Part II.F.3. For activities in which an NOI is not required, records shall be retained for a minimum period of three (3) years from the date that the operator terminates coverage under Section II.F.3. of this permit. Records include:

- 1. A copy of the SWP;
2. All reports and actions required by this permit, including a copy of the construction site notice;
3. All data used to complete the NOI, if an NOI is required for coverage under this general permit; and
4. All records of submittal of forms submitted to the operator of any MSA receiving the discharge and to the secondary operator of a large construction site, if applicable.

Part VII. Standard Permit Conditions

1. The permittee has a duty to comply with all permit conditions. Failure to comply with any permit condition is a violation of the permit and statutes under which it was issued, and is grounds for enforcement action, for terminating, revoking, or denying coverage under this general permit, or for requiring a discharger to apply for and obtain an individual TPDES permit.

2. Authorization under this general permit may be suspended or revoked for cause. Filing a notice of planned changes or anticipated non-compliance by the permittee does not stay any permit condition. The permittee must furnish to the executive director, upon request and within a reasonable time, any information necessary for the executive director to determine whether cause exists for revoking, suspending, or terminating authorization under this permit. Additionally, the permittee must provide to the executive director, upon request, copies of all records that the permittee is required to maintain as a condition of this general permit.

3. It is not a defense for a discharger in an enforcement action that it would have been necessary to halt or reduce the permitted activity to maintain compliance with the permit conditions.

4. Inspection and entry shall be allowed under TWC Chapters 26-28, Texas Health and Safety Code §§361.032-361.033 and 361.037, and 40 CFR §122.41(i). The statement in TWC §26.014 that commission entry of a facility shall occur according to an establishment's rules and regulations concerning safety, internal security, and fire protection is not grounds for denial or restriction of entry to any part of the facility or site, but merely describes the commission's duty to observe appropriate rules and regulations during an inspection.

5. The discharger is subject to administrative, civil, and criminal penalties, as applicable, under TWC Chapter 7 for violations including but not limited to the following:

(a) negligently or knowingly violating the federal CWA §§301, 302, 306, 307, 308, 318, or 405, or any condition or limitation implementing any sections in a permit issued under CWA §402, or any requirement imposed in a pretreatment program approved under CWA §402(c)(3) or 402(d)(5);

(b) knowingly making any false statement, representation, or certification in any record or other document submitted or required to be maintained under a permit, including monitoring reports or reports of compliance or non-compliance; and

(c) knowingly violating §303 of the federal CWA, and placing another person in imminent danger of death or serious bodily injury.

6. All reports and other information requested by the executive director must be signed by the person and in the manner required by 30 TAC §305.128 (relating to Signatories to Reports).

7. Authorization under this general permit does not convey property or water rights of any sort and does not grant any exclusive privilege.

8. The permittee shall take all reasonable steps to minimize or prevent any discharge in violation of this permit that has a reasonable likelihood of adversely affecting human health or the environment.

9. The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions of this permit. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems which are installed by a permittee only when the operation is necessary to achieve compliance with the conditions of the permit.

10. The permittee shall comply with the reporting requirements in 40 CFR §122.41(i), as applicable.

Part VIII. Fees

1. A fee of must be submitted along with the NOI:

(a) \$325 if submitting a paper NOI, or

(b) \$225 if submitting an NOI electronically.

2. Fees are due upon submission of the NOI. An NOI will not be declared administratively complete unless the associated fee has been paid in full.

3. No separate annual fees will be assessed for this general permit.

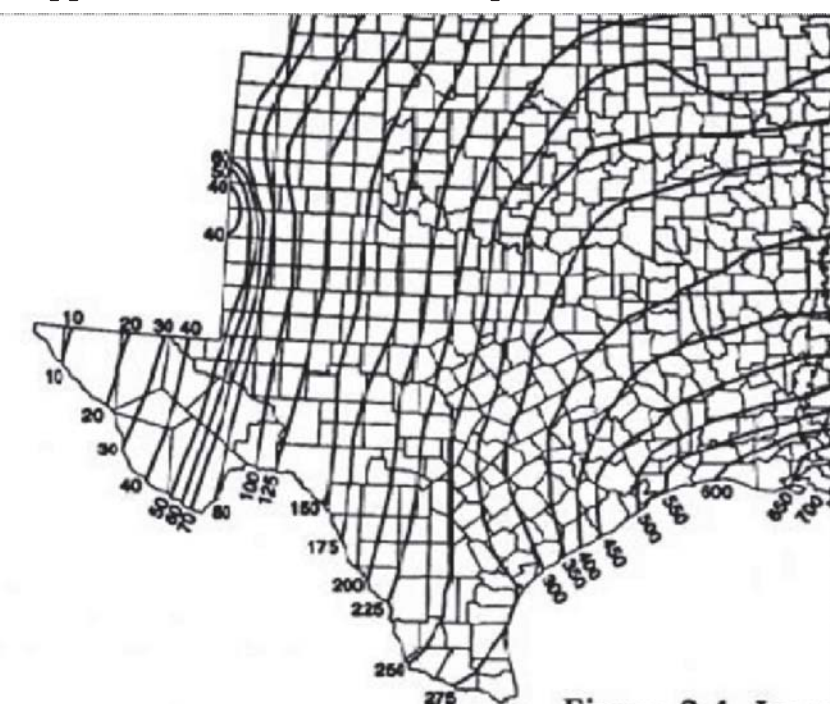
4. The Water Quality Annual Fee has been incorporated into the NOI fees as described above.

Appendix A: Automatic Authorization

Periods of Low Erosion Potential by County - Eligible Date Ranges

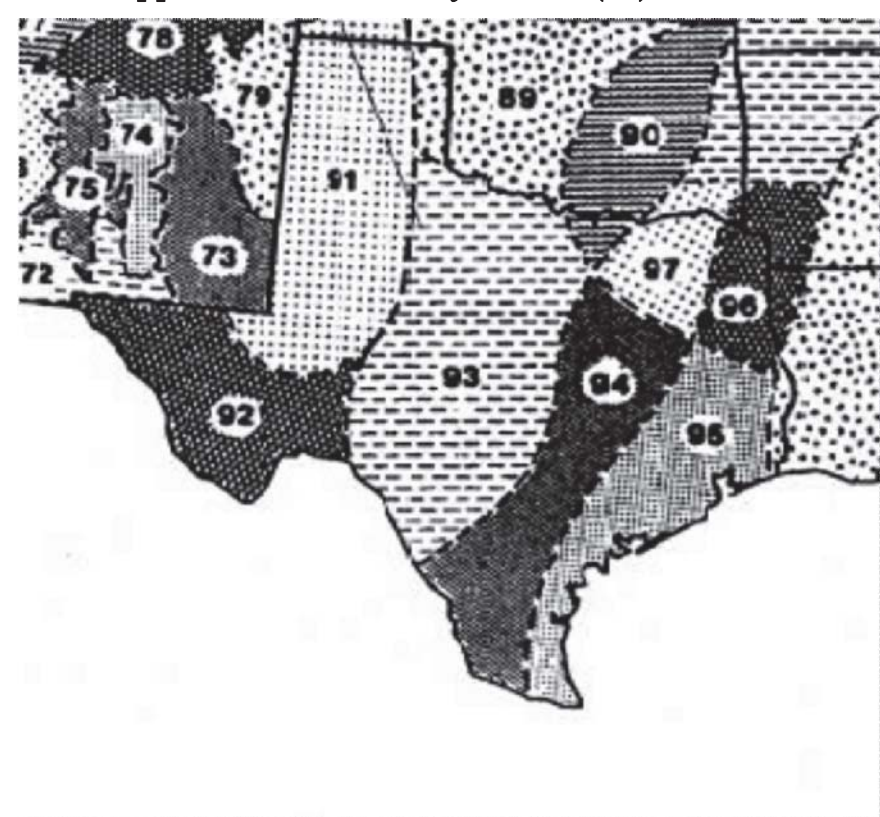
- Andrews: Nov. 15 - Apr. 30
Archer: Dec. 15 - Feb. 14
Armstrong: Nov. 15 - Apr. 30
Bailey: Nov. 1 - Apr. 30, or Nov. 15 - May 14
Bayler: Dec. 15 - Feb. 14
Borden: Nov. 15 - Apr. 30
Brewster: Nov. 15 - Apr. 30
Briscoe: Nov. 15 - Apr. 30
Brown: Dec. 15 - Feb. 14
Callahan: Dec. 15 - Feb. 14
Carson: Nov. 15 - Apr. 30
Castro: Nov. 15 - Apr. 30
Childress: Dec. 15 - Feb. 14
Cochran: Nov. 1 - Apr. 30, or Nov. 15 - May 14
Coke: Dec. 15 - Feb. 14
Coleman: Dec. 15 - Feb. 14
Collingsworth: Jan. 1 - Mar. 30, or Dec. 1 - Feb. 28
Concho: Dec. 15 - Feb. 14
Cottle: Dec. 15 - Feb. 14
Crane: Nov. 15 - Apr. 30
Crockett: Nov. 15 - Jan. 14, or Feb. 1 - Mar. 30
Crosby: Nov. 15 - Apr. 30
Culberson: Nov. 1 - Apr. 14
Dallas: Nov. 1 - Apr. 14, or Nov. 15 - Apr. 30
Dawson: Nov. 15 - Apr. 30
Deaf Smith: Nov. 15 - Apr. 30
Dickens: Nov. 15 - Jan. 14, or Feb. 1 - Mar. 30
Dimmit: Dec. 15 - Feb. 14
Donley: Jan. 1 - Mar. 30, or Dec. 1 - Feb. 28
Eastland: Dec. 15 - Feb. 14
Ector: Nov. 15 - Apr. 30
Edwards: Dec. 15 - Feb. 14
El Paso: Jan. 1 - Jul. 14, or May 15 -
Jul. 31, or Jun. 1 - Aug. 14, or Jun. 15 -Sept. 14, or Jul. 1 - Oct. 14, or Jul. 15 - Oct. 31, or Aug. 1 - Apr. 30, or Aug. 15 -
May 14, or Sept. 1 - May 30, or Oct. 1 -
Jun. 14, or Nov. 1 - Jun. 30, or Nov. 15 - Jul. 14
Fisher: Dec. 15 - Feb. 14
Foard: Dec. 15 - Feb. 14
Gaines: Nov. 15 - Apr. 30
Garza: Nov. 15 - Apr. 30
Glasscock: Nov. 15 - Apr. 30
Hale: Nov. 15 - Apr. 30
Hall: Feb. 1 - Mar. 30
Hansford: Nov. 15 - Apr. 30
Hardeman: Dec. 15 - Feb. 14
Hartley: Nov. 15 - Apr. 30
Haskell: Dec. 15 - Feb. 14
Hockley: Nov. 1 - Apr. 14, or Nov. 15 - Apr. 30
Howard: Nov. 15 - Apr. 30
Hudspeth: Nov. 1 - May 14
Hutchinson: Nov. 15 - Apr. 30
Irion: Dec. 15 - Feb. 14
Jeff Davis: Nov. 1 - Apr. 30 or Nov. 15 - May 14
Jones: Dec. 15 - Feb. 14
Kent: Nov. 15 - Jan. 14 or Feb. 1 - Mar. 30
Kerr: Dec. 15 - Feb. 14
Kimble: Dec. 15 - Feb. 14
King: Dec. 15 - Feb. 14
Kinney: Dec. 15 - Feb. 14

Appendix C: Isoerodent Map



Adapted from Chapter 2 of USDA Agriculture Handbook 703: Predicting Soil Erosion by Water: A Guide to Conservation Planning with the Revised Universal Soil Loss Equation (RUSLE). U.S. Department of Agriculture, Agricultural Research Service

Appendix B: Erosivity Index (EI) Zones in Texas



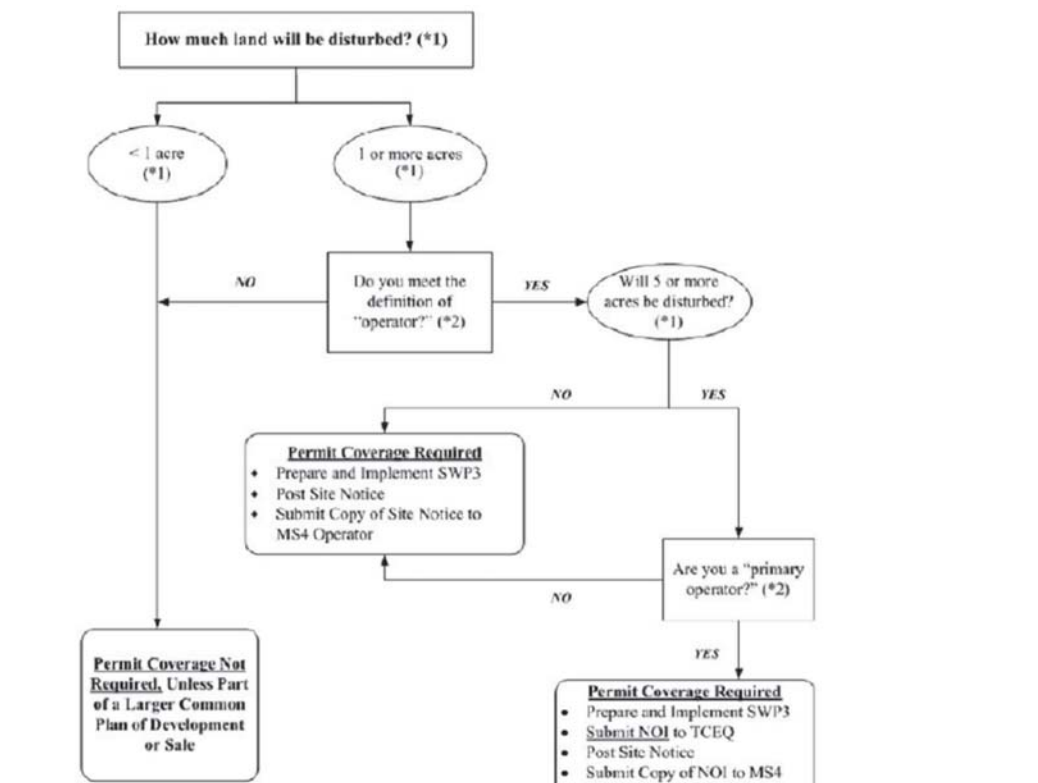
Adapted from Chapter 2 of USDA Agriculture Handbook 703: Predicting Soil Erosion by Water: A Guide to Conservation Planning with the Revised Universal Soil Loss Equation (RUSLE). U.S. Department of Agriculture, Agricultural Research Service

Table with columns for Periods (1/1 to 12/31) and rows for EI# (89 to 106). Each cell contains a numerical value representing erosion potential.

* Each period begins on the date listed in the table above and lasts until the day before the following period.
* The final period begins on december 11 and ends on december 31.

Table adapted from Chapter 2 of USDA Agriculture Handbook 703: Predicting Soil Erosion by Water: A Guide to Conservation Planning with the Revised Universal Soil Loss Equation (RUSLE). U.S. Department of Agriculture, Agricultural Research Service

LAYOUT: C6.09 SW3P GENERAL PERMIT 3 PLOTTED: Tuesday, December 17, 2019 10:37:39 AM BY: BRYAN-ISA RIT SCALE: 1:1 SAVED: 11/14/2019 2:16PM BY: BRYAN-ISA

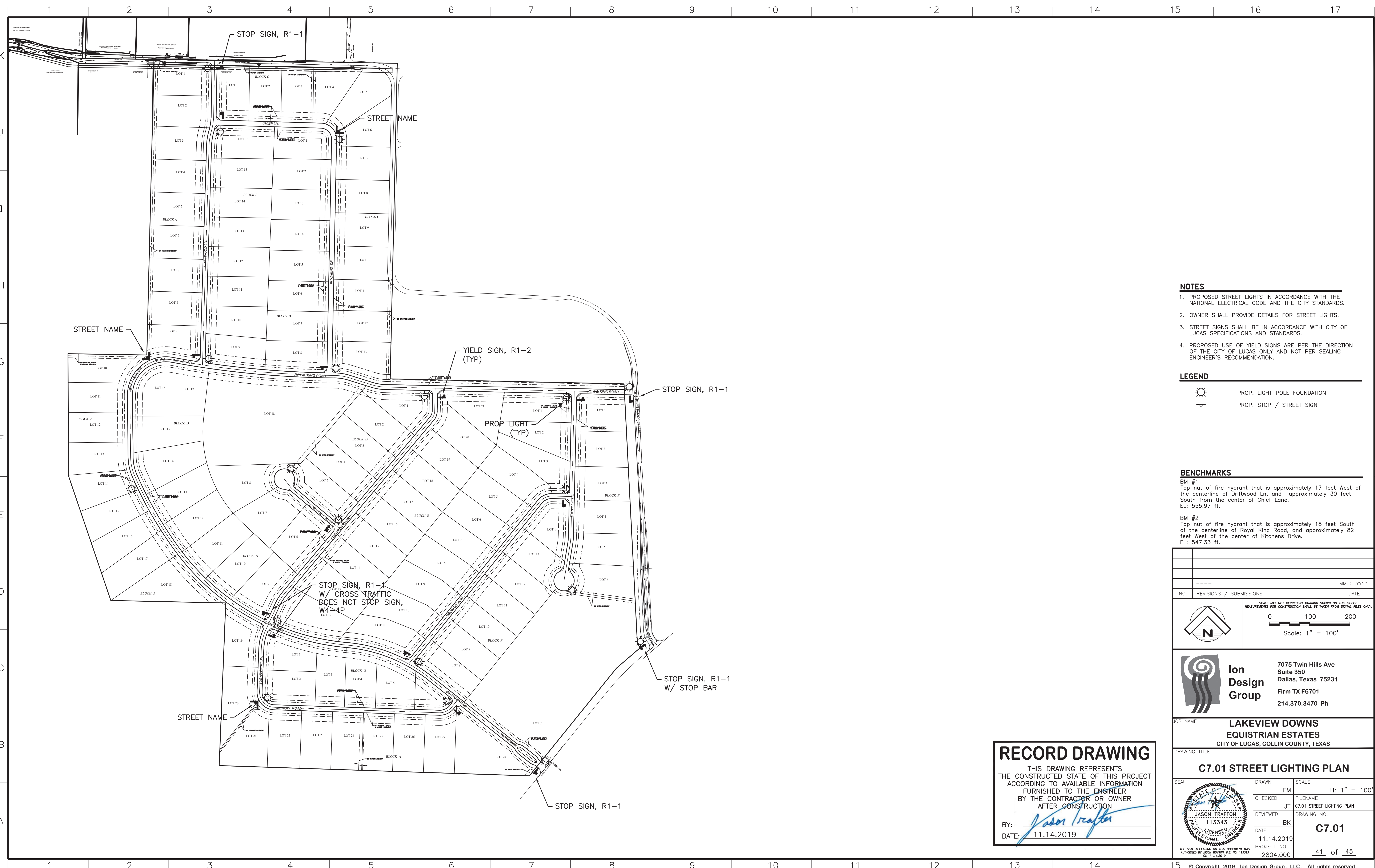


(*) To determine the size of the construction project, use the size of the entire area to be disturbed, and include the size of the larger common plan development or subdivision project if the project is part of a larger project under Part I.D., 'Definitions.' For an explanation of 'common plan development or subdivision,' refer to the definition for 'common plan development or subdivision' in Part I.D., Section 8. of this permit.

RECORD DRAWING stamp with text: THIS DRAWING REPRESENTS THE CONSTRUCTED STATE OF THIS PROJECT ACCORDING TO AVAILABLE INFORMATION FURNISHED TO THE ENGINEER BY THE CONTRACTOR OR OWNER AFTER CONSTRUCTION. Includes signature of Jason Trafton and date 11.14.2019.

Project information block including: NO. REVISIONS / SUBMISSIONS, DATE, Ion Design Group logo and address (7075 Twin Hills Ave, Suite 350, Dallas, Texas 75231), Job Name (LAKEVIEW DOWNS EQUESTRIAN ESTATES), Drawing Title (C6.09 SW3P GENERAL PERMIT 3), and a table for drawing details (DRAWN, CHECKED, REVIEWED, DATE, SCALE, FILENAME, DRAWING NO., PROJECT NO.).

LAYOUT: C7.01 STREET LIGHTING PLAN PLOTTED: Tuesday, December 17, 2019 10:38:03 AM BY: BRYAN-ISA PLOT SCALE: 1:11 SAVED: 11/14/2019 2:16PM BY: BRYAN-ISA
 Z:\PROJECTS\2804.000 LBL LUCAS\DRAWINGS\C7.01 STREET LIGHTING.DWG

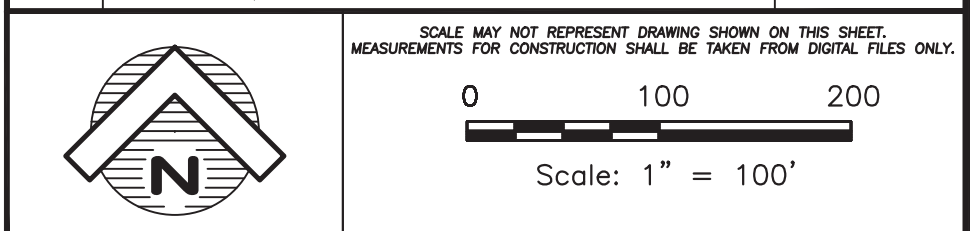


- NOTES**
1. PROPOSED STREET LIGHTS IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE AND THE CITY STANDARDS.
 2. OWNER SHALL PROVIDE DETAILS FOR STREET LIGHTS.
 3. STREET SIGNS SHALL BE IN ACCORDANCE WITH CITY OF LUCAS SPECIFICATIONS AND STANDARDS.
 4. PROPOSED USE OF YIELD SIGNS ARE PER THE DIRECTION OF THE CITY OF LUCAS ONLY AND NOT PER SEALING ENGINEER'S RECOMMENDATION.

- LEGEND**
- PROP. LIGHT POLE FOUNDATION
 - PROP. STOP / STREET SIGN

- BENCHMARKS**
- BM #1
 Top nut of fire hydrant that is approximately 17 feet West of the centerline of Driftwood Ln, and approximately 30 feet South from the center of Chief Lane.
 EL: 555.97 ft.
- BM #2
 Top nut of fire hydrant that is approximately 18 feet South of the centerline of Royal King Road, and approximately 82 feet West of the center of Kitchens Drive.
 EL: 547.33 ft.

NO.	REVISIONS / SUBMISSIONS	DATE
		MM.DD.YYYY



Ion Design Group

7075 Twin Hills Ave
 Suite 350
 Dallas, Texas 75231
 Firm TX F6701
 214.370.3470 Ph

JOB NAME: **LAKEVIEW DOWNS EQUSTRIAN ESTATES**
 CITY OF LUCAS, COLLIN COUNTY, TEXAS

C7.01 STREET LIGHTING PLAN

SEAL	DRAWN	SCALE
	FM	H: 1" = 100'
	CHECKED	FILENAME
	JT	C7.01 STREET LIGHTING PLAN
	REVIEWED	DRAWING NO.
BK	C7.01	
DATE	PROJECT NO.	
11.14.2019	2804.000	41 of 45

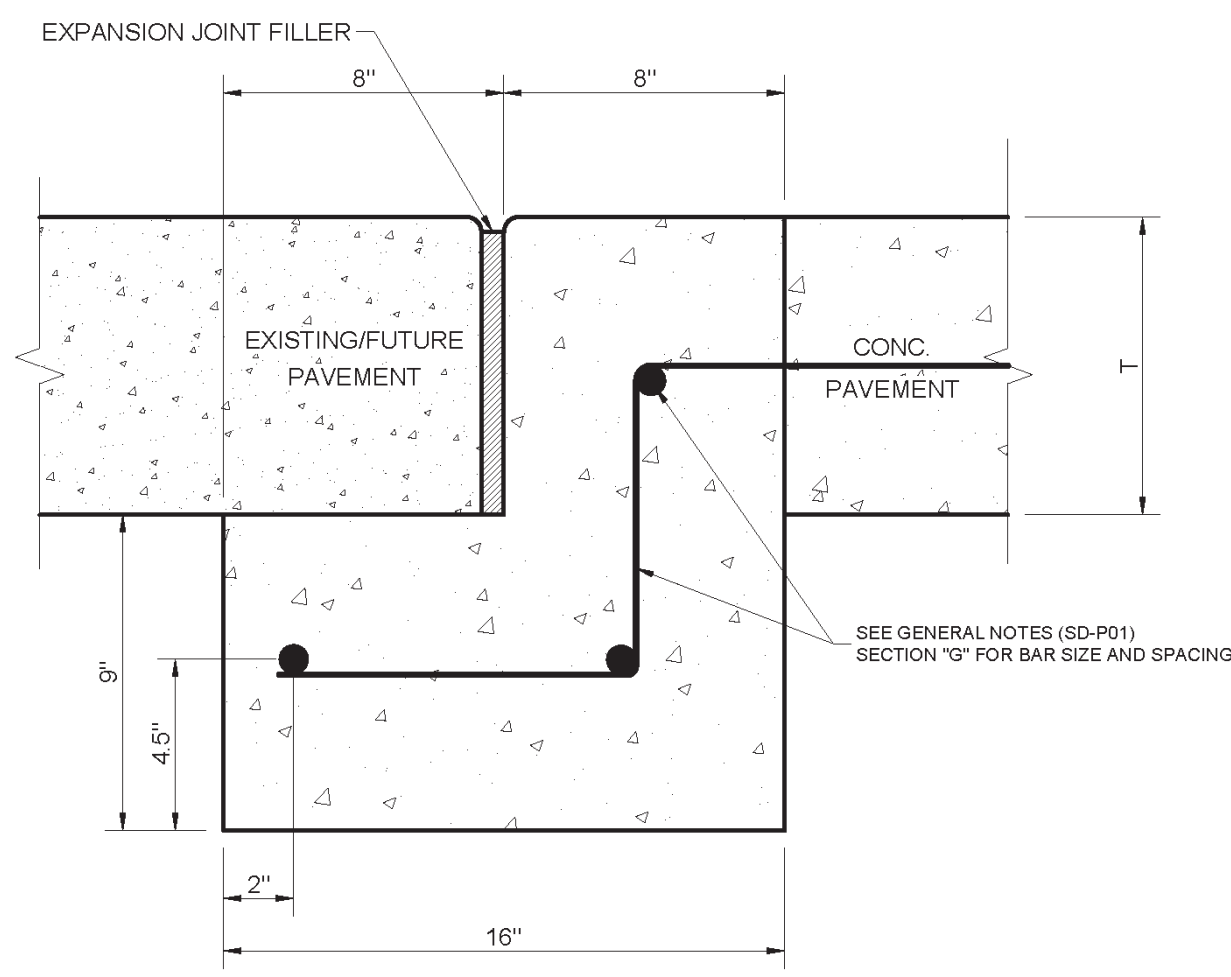
RECORD DRAWING

THIS DRAWING REPRESENTS THE CONSTRUCTED STATE OF THIS PROJECT ACCORDING TO AVAILABLE INFORMATION FURNISHED TO THE ENGINEER BY THE CONTRACTOR OR OWNER AFTER CONSTRUCTION

BY: *Jason Trafton*
 DATE: 11.14.2019

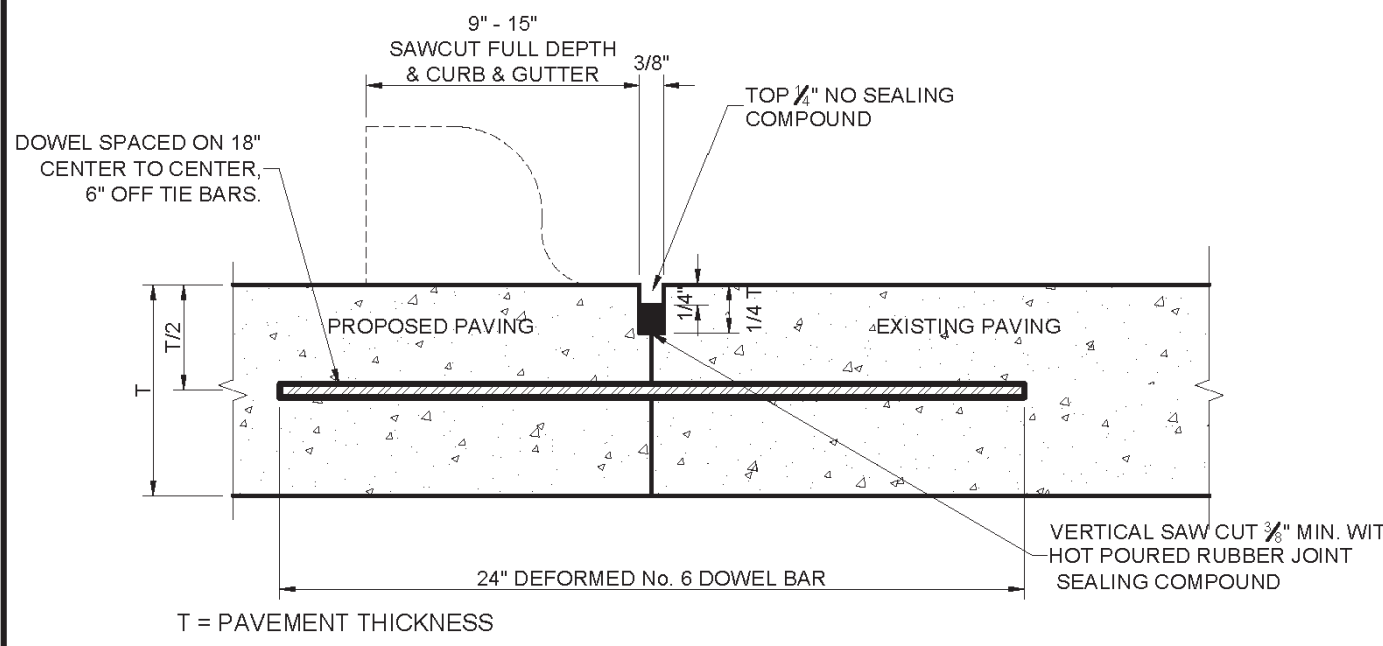
GENERAL NOTES

- A. GENERAL:**
PAVEMENT THICKNESS IS AS SHOWN IN ITEM G. SUBGRADE DESIGN SHALL CONFORM TO CITY OF ALLEN DEPARTMENT OF ENGINEERING REQUIREMENTS IN ITEM C AND SHALL EXTEND 12" MIN. BEHIND THE BACK OF CURB.
- B. REINFORCED CONCRETE PAVEMENT:**
1. CONCRETE STRENGTH SHALL BE SHOWN IN ITEM G (NCTCOG LATEST EDITION).
2. ALL CURBS SHALL BE INTEGRAL WITH PAVEMENT AND SHALL BE OF THE SAME STRENGTH AS CONCRETE PAVEMENT.
3. DETAIL AND ARRANGEMENT OF PAVEMENT JOINTS SHALL BE AS SHOWN ON SHEET SD-P04 AND SD-P05.
4. BAR LAPS SHALL BE THIRTY DIAMETERS.
- C. SUBGRADE:**
SUBGRADE UNDER ALL PAVEMENT SHALL BE 6" THICK AND SHALL BE STABILIZED WITH AT LEAST 30 LBS/SY HYDRATED LIME COMPACTED TO A DENSITY NOT LESS THAN 95%. LABORATORY TEST MUST BE SUBMITTED TO THE ENGINEERING DEPARTMENT FOR APPROVAL TO DETERMINE AMOUNT OF LIME REQUIRED. LABORATORY TEST MAY BE WAIVED PROVIDED AT LEAST 36 LBS OF LIME/SY IS USED. SEE ITEM 4.6.4 SPECIAL PROVISIONS.
- D. BAR CHAIRS OR AN APPROVED DEVICE SHALL BE FURNISHED.**
- E. NO TRAFFIC ON FINISHED SUBGRADE SHALL BE PERMITTED AFTER REINFORCING STEEL IS INSTALLED ABOVE GRADE. NO TRAFFIC SHALL BE PERMITTED BEFORE OR DURING THE PLACING OF CONCRETE.**
- F. CROSS SLOPE OF STRAIGHT CROWN STREETS SHALL BE 2% UNLESS APPROVED BY CITY ENGINEER. (SEE SD-P03). ALL SIDEWALK CROSS SLOPE SHALL BE 1% MINIMUM AND IN NO CASE SHALL NOT EXCEED 2%. (ZERO TOLERANCE) TO MEET ACCESSIBILITY REQUIREMENTS.**
- G. PAVEMENT THICKNESS AND STRENGTHS SHALL BE AS FOLLOWS:**
M8D - 9" CLASS "C" W/ #4 REBAR (4/8") ON 12" CENTERS EACH WAY
M8D - 9" CLASS "C" W/ #4 REBAR (4/8") ON 12" CENTERS EACH WAY
M4D - 9" CLASS "C" W/ #4 REBAR (4/8") ON 12" CENTERS EACH WAY
C4D - 7" CLASS "C" W/ #4 REBAR (4/8") ON 12" CENTERS EACH WAY
C2U - 7" CLASS "C" W/ #4 REBAR (4/8") ON 12" CENTERS EACH WAY
R2U - 6" CLASS "C" W/ #3 REBAR (3/8") ON 12" CENTERS EACH WAY
FIRE LANES - 6" CLASS "C" W/ #3 REBAR (3/8") ON 12" CENTERS EACH WAY
SIDEWALKS & BFRs - 4" CLASS "C" W/ #3 REBAR (3/8") ON 12" CENTERS EACH WAY
DRIVE APPROACH - 6" CLASS "C" W/ #3 REBAR (3/8") ON 12" CENTERS EACH WAY
ALLEY - 4", 6" & 8" CLASS "C" W/ #3 REBAR (3/8") ON 12" CENTERS EACH WAY
- H. CLASS "C" CONCRETE SHALL BE 3600 PSI COMP AS DEFINED BY NCTCOG.**
- I. ALL MEDIANS AND PARKWAYS SHALL BE PROVIDED WITH BERMUDA GROUND COVER.**
- J. ONCE A CURB ABUTTING A THOROUGHFARE HAS BEEN SAWCUT AND REMOVED, THE CONTRACTOR MUST REPLACE THE CONCRETE WITH A NEW POUR (I.E. DRIVEWAY) WITHIN 14 CALENDAR DAYS. LIQUIDATED DAMAGES WILL BE ASSESSED AT \$500 PER DAY FOR EACH CALENDAR DAY IN EXCESS OF 14 CALENDAR DAYS. PAYMENT SHALL BE MADE PRIOR TO ACCEPTANCE OR ISSUANCE OF A CERTIFICATE OF OCCUPANCY.**



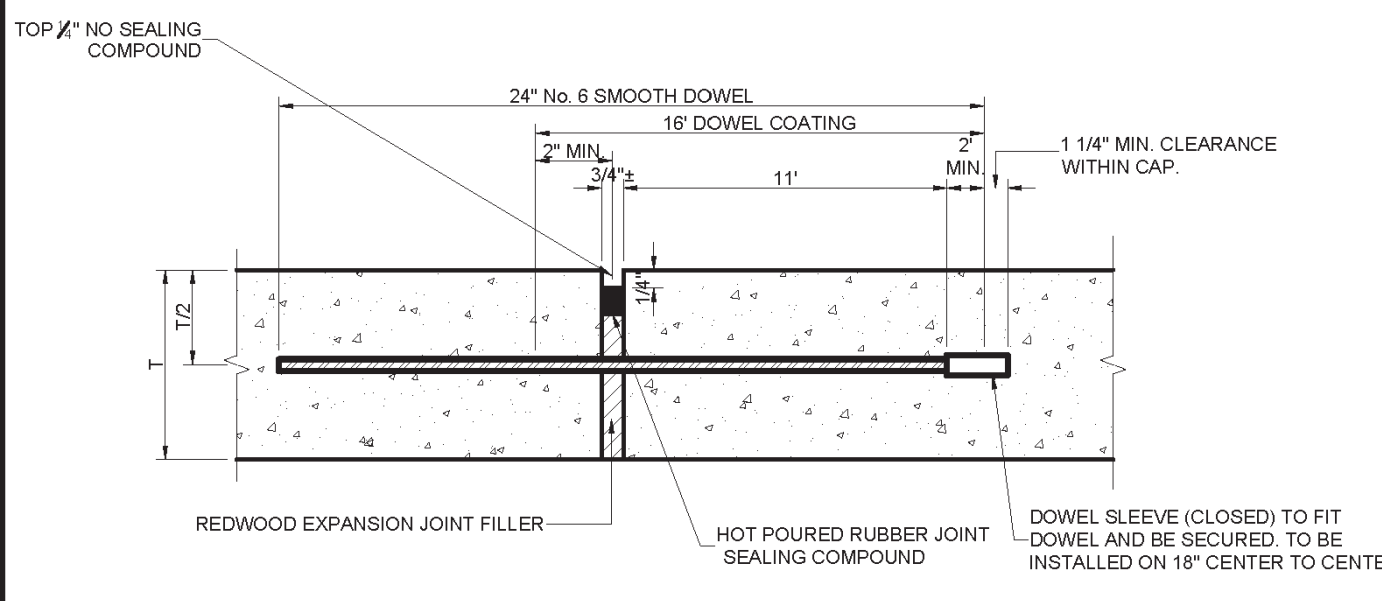
STREET HEADER
SCALE N.T.S.

PAVEMENT BARS TO BE BENT DOWN INTO HEADER.
HEADER AND PAVEMENT TO BE MONOLITHIC.



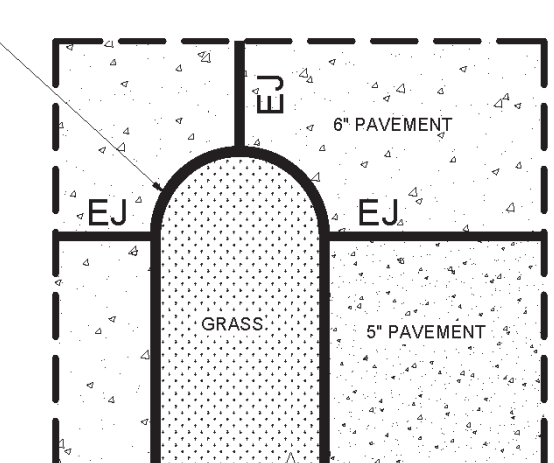
CONCRETE BUTT JOINT
(6" PAVEMENT THICKNESS)

- NOTES:**
- LONGITUDINAL BUTT CONSTRUCTION MAY BE UTILIZED IN PLACE OF LONGITUDINAL HINGED (KEYWAY) JOINT AT CONTRACTORS OPTION.
 - DOWEL BARS SHALL BE DRILLED INTO PAVEMENT HORIZONTALLY BY USE OF A MECHANICAL RIG, UNLESS OTHERWISE APPROVED BY ENGINEER.
 - PUSHING DOWEL BARS INTO GREEN CONCRETE IS NOT ACCEPTABLE.
 - SAWCUT WATER SHALL BE VACUUMED AND DISPOSED PROPERLY.
 - NO SAWCUT SHALL BE WITHIN 30" OF AN EXISTING JOINT, OTHERWISE REMOVE PAVEMENT TO NEAREST JOINT.



TRANSVERSE EXPANSION JOINT
(SPACED 600 FT. MAXIMUM, LOCATE AT INTERSECTIONS)
T = PAVEMENT THICKNESS

- NOTES:**
- DOWELS AND REINFORCING BARS SHALL BE SUPPORTED BY AN APPROVED DEVICE & MUST BE TIED OR CHAIRED ON EACH SIDE.
 - EXPANSION JOINTS SHALL BE PLACED TRANSVERSELY IN PROPOSED PAVEMENT WHERE THICKNESS CHANGES, SUCH AS BETWEEN 5'-6".
 - EXPANSION JOINTS SHALL BE PLACED AT ALL END POINTS OF RADI.
 - HOT Poured RUBBER SEALING COMPOUND SHALL BE PLACED THROUGH RAISED CURB.



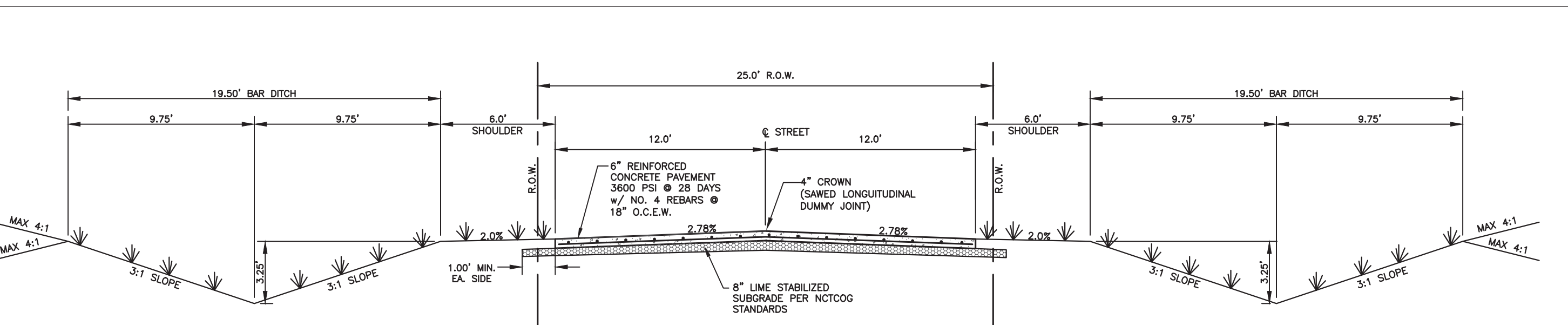
PARKING LOT EXAMPLE

CITY OF ALLEN DEPARTMENT OF ENGINEERING	GENERAL NOTES	STANDARD CONSTRUCTION DETAILS PAVING		
		DATE: MAY 1991	REV DATE: FEB 2017	SHEET: SD-P01

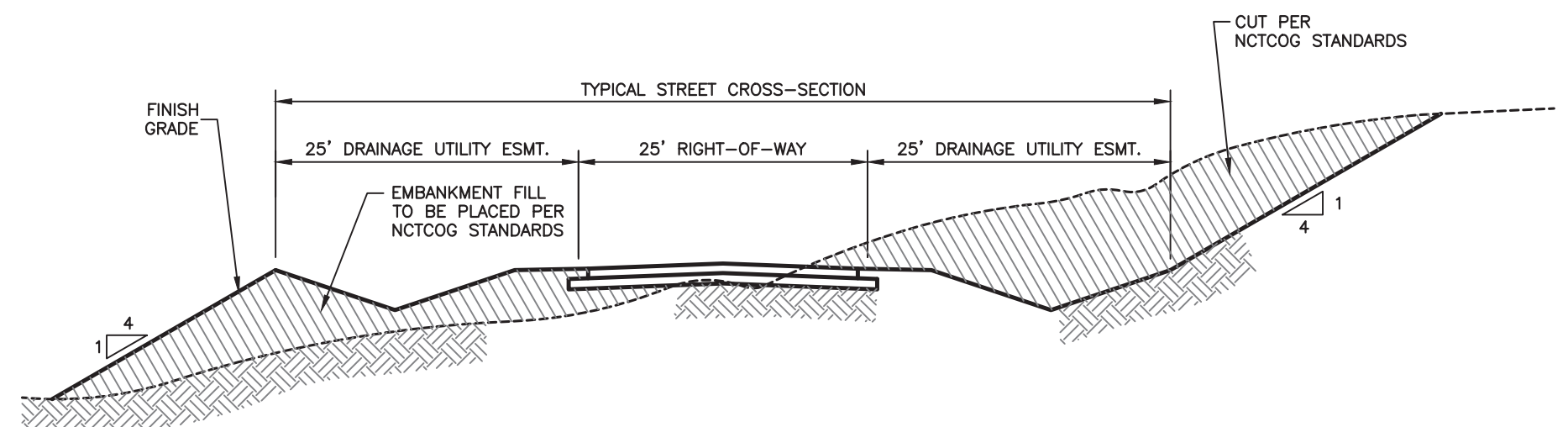
STREET HEADER	STANDARD CONSTRUCTION DETAILS PAVING		
	DATE: MAY 1991	REV DATE: FEB 2017	SHEET: SD-P21

CONCRETE BUTT JOINT	STANDARD CONSTRUCTION DETAILS PAVING		
	DATE: MAY 1991	REV DATE: MAY 2017	SHEET: SD-P25

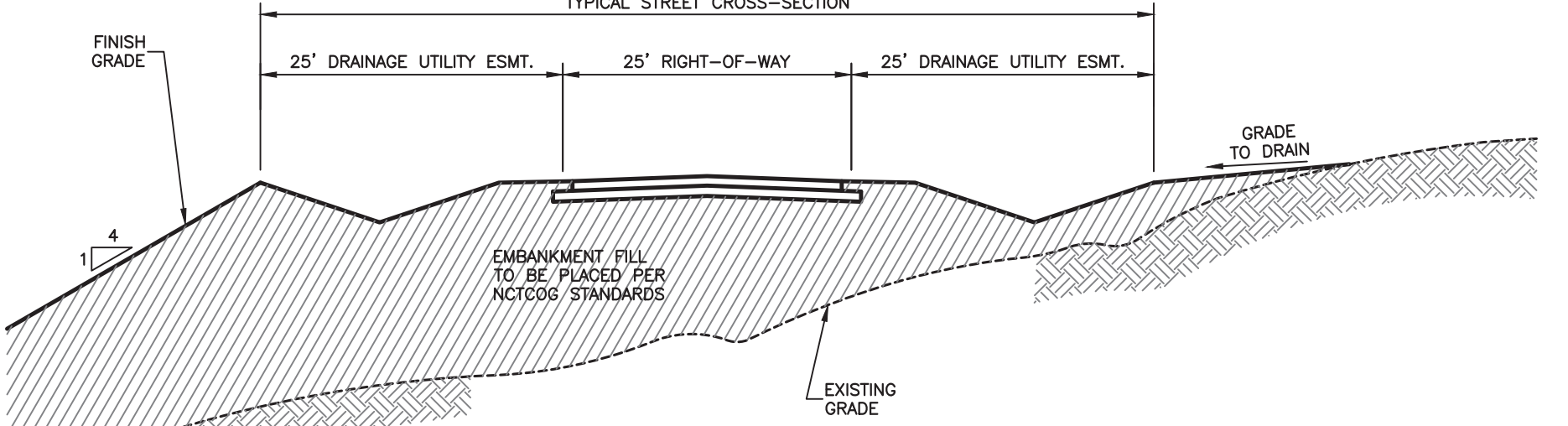
TRANSVERSE EXPANSION JOINT	STANDARD CONSTRUCTION DETAILS PAVING		
	DATE: JAN 2001	REV DATE: MARCH 2016	SHEET: SD-P26



TYPICAL STREET CROSS-SECTION
Scale: N.T.S.



TYPICAL CUT CROSS SECTION
Not to Scale



TYPICAL FILL CROSS SECTION
Not to Scale

GENERAL NOTES

- All work shall be done in accordance with the Standard Specifications for Public Works Construction for the City of Lucas and the North Central Texas Council of Governments (NCTCOG).
- Existing utilities have been shown in the plans according to City records. The contractor shall contact all utility companies to verify location prior to construction. The contractor, at the contractor's sole expense, shall replace any damage to any existing utility.
- The contractor shall be required to submit all required Bonds, Certificates of Insurance and pay all inspection fees prior to beginning construction.
- Any removed material shall be properly disposed of off-site at an appropriate dump location for each material type.
- The contractor shall prepare and submit a Traffic Control Plan to the project inspector prior to causing any obstruction to traffic on any street.
- An approved white pigmented curing compound shall be applied to the surface of the pavement as soon as it has been poured and finished.
- All reinforced steel shall be deformed bars. Reinforcing steel shall be placed with the center of the outside layer of bars a minimum of 2" from the edge of the concrete. Where reinforcing bars are spliced, a 30 diameter lap shall be used.
- The contractor shall install supporting chairs for reinforcing steel in a one square yard spacing minimum.
- All Construction Materials, Methods and Placement not detailed above shall meet or exceed the Standard Specifications in use by the City of Lucas as referenced by the Standard Specifications of the North Central Texas Council of Governments.
- If sub-surface water flowage (i.e. springs, fissures, etc.) is detected, a licensed geotechnical engineer or other qualified licensed professional is to be retained to resolve the situation.
- On concrete streets, all inlets shall be separated from the pavement and curb by boxing out around inlet. Expansion joint Material shall extend completely through curb and slab. Manhole castings within the pavement limits shall be boxed in like manner. When a joint falls within 5' of (or contacts) inlets, manholes or other structures, shorten one or more panels either side of opening to permit joint to fall on round structures and/or, between, corners of rectangular structures.
- Type A, C and E joints to be placed at a maximum 15' spacing
- Omni-flex joint sealer, or approved equal, and pre-fabricated bends and wyes shall be used on all pipe connections and junctions.
- Prior to final acceptance the developer must provide survey data showing drainage channels and swales are built in accordance with the construction plans.

RECORD DRAWING

THIS DRAWING REPRESENTS THE CONSTRUCTED STATE OF THIS PROJECT ACCORDING TO AVAILABLE INFORMATION FURNISHED TO THE ENGINEER BY THE CONTRACTOR OR OWNER AFTER CONSTRUCTION

BY: *Jason Trafton*
DATE: 11.14.2019

NO.	REVISIONS / SUBMISSIONS	DATE

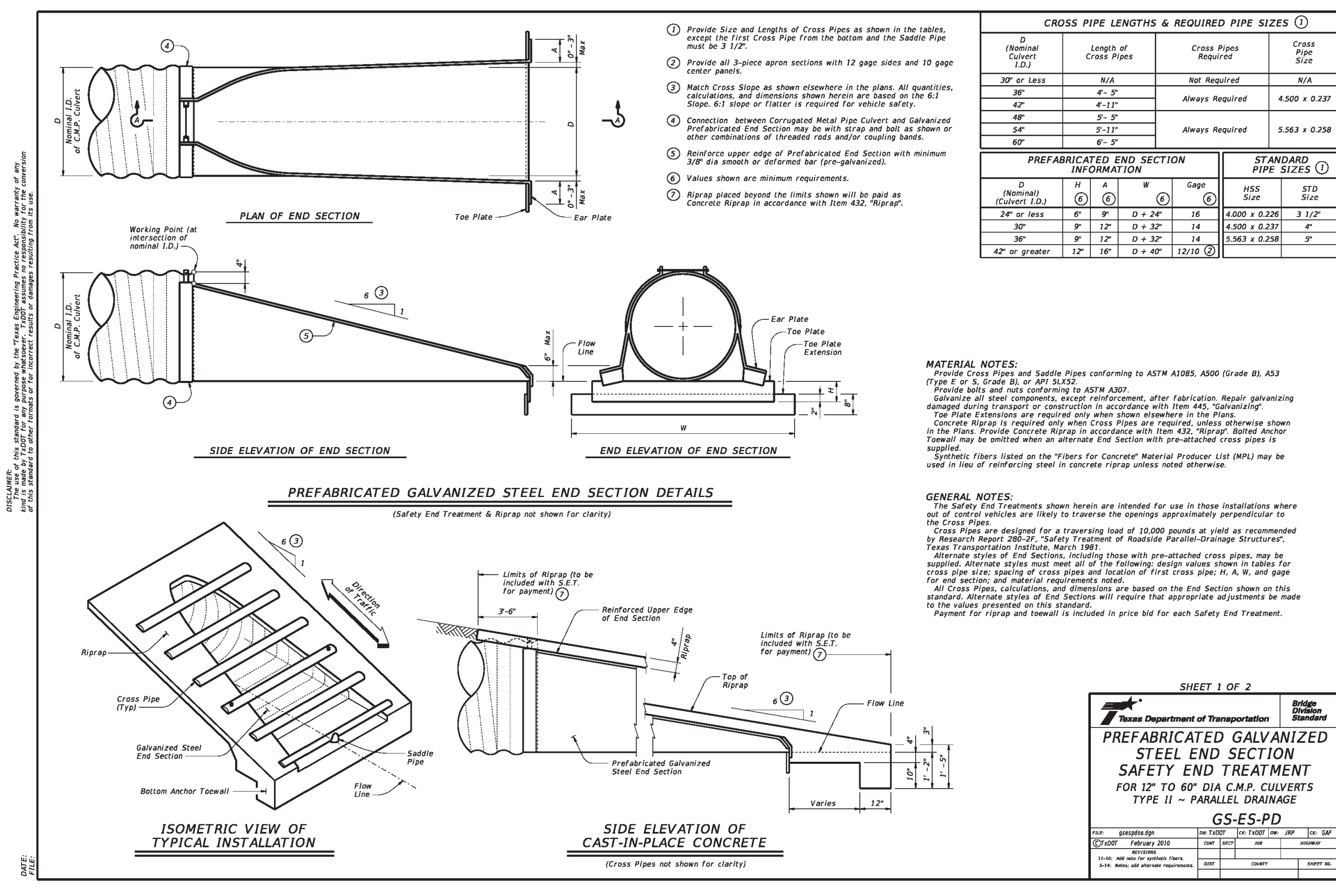
Ion Design Group
7075 Twin Hills Ave
Suite 350
Dallas, Texas 75231
Firm TX F6701
214.370.3470 Ph

LAKEVIEW DOWNS
CITY OF LUCAS, COLLIN COUNTY, TEXAS

C8.01 STANDARD DETAILS

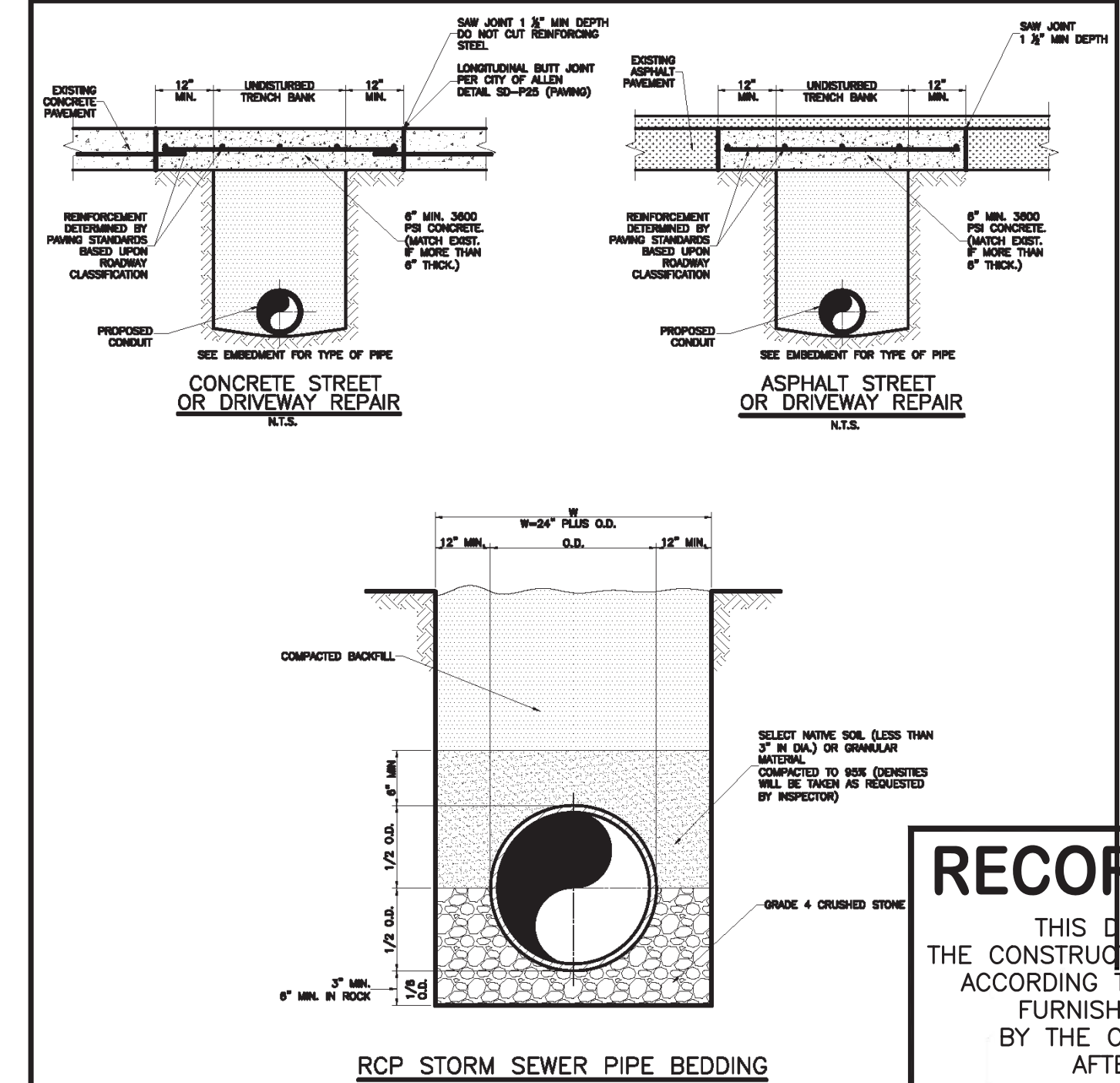
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CHECKED: JT	FILENAME: C8.01 STANDARD DETAILS	DRAWING NO.:
REVIEWED: BK	DATE: 11.14.2019	PROJECT NO.: 2804.000
		C8.01 42 of 45

LAYOUT: C8.01 STANDARD DETAILS PLOTTED: Tuesday, December 17, 2019 10:38:13 AM BY: BRYAN-LSA, PLT SCALE: 1:1. SAVED: 11/14/2019 2:17PM BY: BRYAN-LSA PROJECTS\2804.00 LBL LUCAS\DRAWINGS\C8.01 STANDARD DETAILS.DWG



GENERAL NOTES

- ALL CONCRETE DRAINAGE STRUCTURES SHALL HAVE A MINIMUM COMPRESSED STRENGTH OF 3600 P.S.I.
- ALL CRUSHED STONE SHALL BE 3/4", PASSING #4 SIEVE.
- ALL FIELD JOINTS WILL BE APPROVED BY THE CITY ENGINEER IF NECESSARY. FIELD JOINTS SHALL BE WIPED ON THE INSIDE AND OUTSIDE TO PROVIDE FOR SMOOTH FLOW OF WATER.
- RANNECK COMPOUND OR APPROVED EQUAL SHALL BE USED FOR JOINT SEALS.
- ALL STORM SEWER PIPE SHALL BE CAMERA INSPECTED AFTER THE INSTALLATION OF ALL UTILITIES AND PRIOR TO FINAL ACCEPTANCE OF THE PROJECT.
- ALL INLETS AND JUNCTION BOXES WITHIN THE CITY R.O.W. WILL BE CAST-IN-PLACE, UNLESS APPROVED BY CITY ENGINEER.

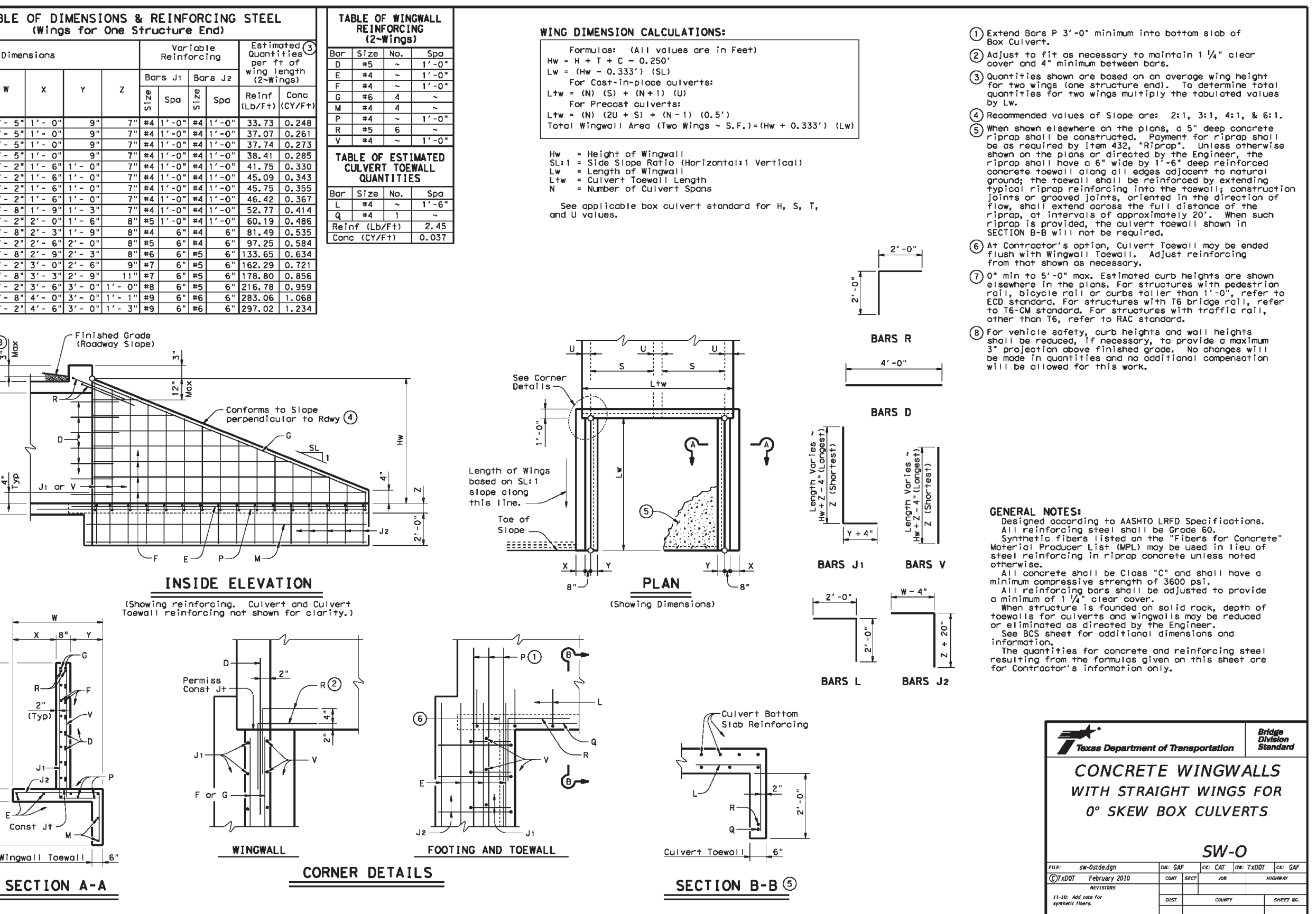
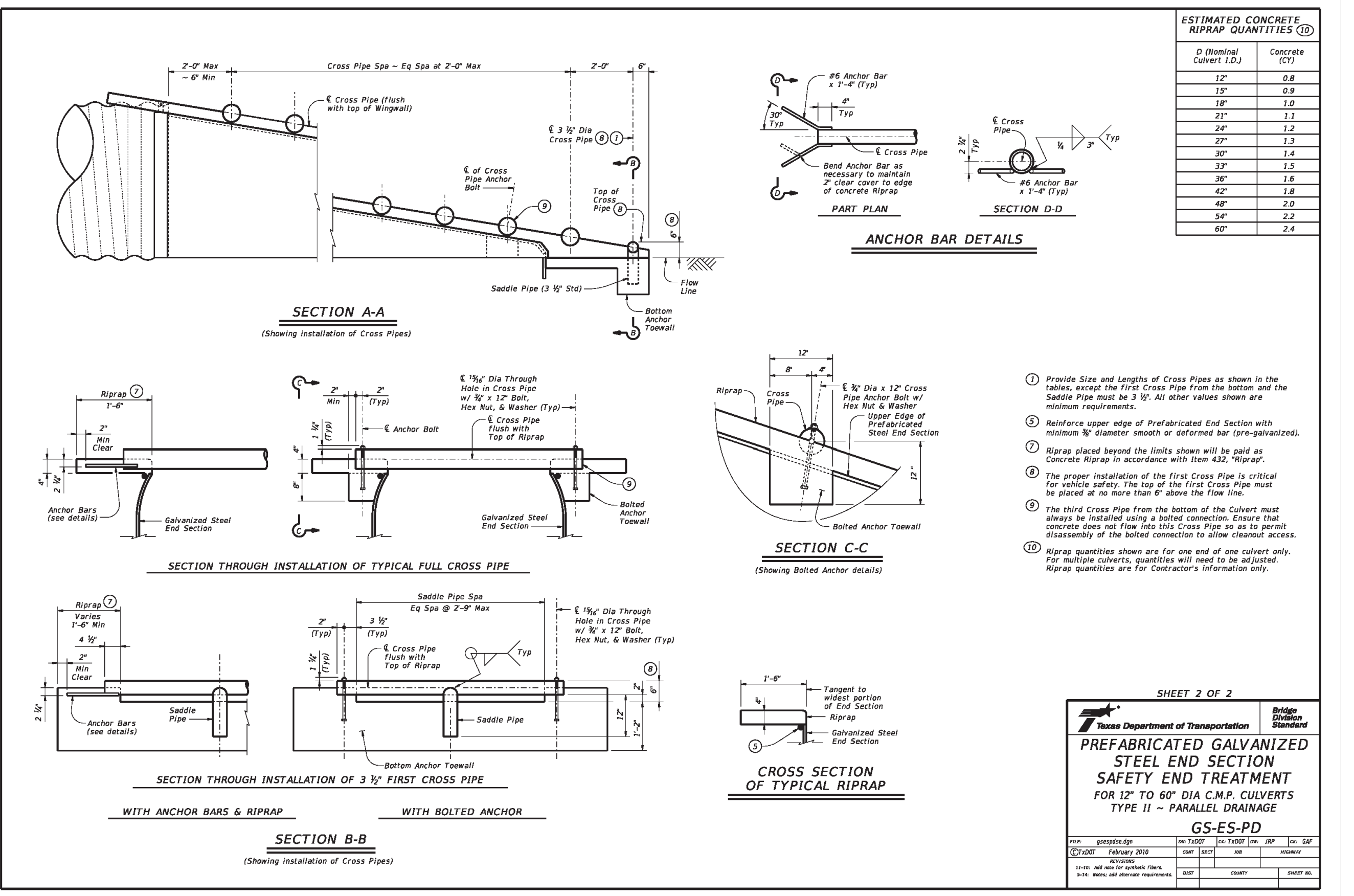


NOTE:

DEPTH OF TRENCH BELOW PIPE:

- 3" MIN. FOR 27" PIPE & SMALLER
- 4" MIN. FOR 30" TO 60" PIPE
- 6" MIN. FOR 66" PIPE & LARGER

GENERAL NOTES	STANDARD CONSTRUCTION DETAILS
	STORM DRAINAGE
	CONCRETE STREET REPAIR ASPHALT STREET REPAIR PIPE BEDDING
	STORM DRAINAGE
DATE: MAY 1981	REV DATE: MAY 2017
	SHEET: SD-01
	SHEET: SD-02



NOTES

- CONCRETE WINGWALLS WITH STRAIGHT WINGS DETAIL ON THIS SHEET IS REFERRED TO ON THESE PLANS AS "HEADWALL". ADDITIONALLY, THIS DETAIL IS NOT LIMITED TO BOX CULVERTS FOR THIS PROJECT AND SHALL BE USED FOR PIPE CULVERTS.

NO.	REVISIONS / SUBMISSIONS	DATE
---	---	MM.DD.YYYY

Ion Design Group

7075 Twin Hills Ave
 Suite 350
 Dallas, Texas 75231

Firm TX F6701
 214.370.3470 Ph

LAKEVIEW DOWNS
 CITY OF LUCAS, COLLIN COUNTY, TEXAS

C8.02 STANDARD DETAILS

JASON TRAFTON
 LICENSED PROFESSIONAL ENGINEER
 113343

DATE: 11.14.2019
 PROJECT NO.: 2804.000

SCALE: C8.02 STANDARD DETAILS
 DRAWING NO.: C8.02
 43 of 45

GENERAL NOTES

POLYVINYL CHLORIDE (P.V.C.) WATER PIPE

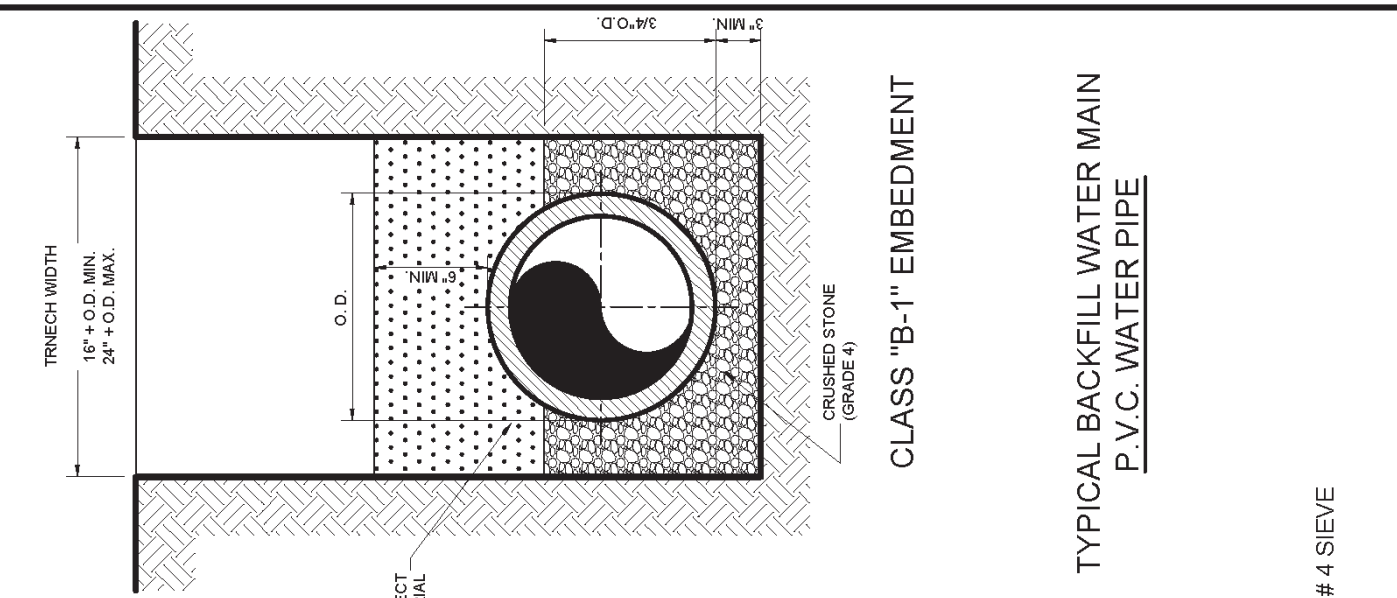
- UNPLASTICIZED POLYVINYL CHLORIDE (P.V.C.) WATER PIPE SHALL MEET OR EXCEED REQUIREMENTS OF AWWA C300. P.V.C. PIPE WITH CAST IRON OUTSIDE DIMENSIONS PIPE SHALL BE LISTED BY UNDERWRITERS LABORATORIES AND SHALL BE APPROVED FOR USE IN CITIES AND TOWNS OF THE STATE OF TEXAS BY THE STATE BOARD INSURANCE.
- P.V.C. WATER PIPE SHALL BE FURNISHED WITH A LOCKED-IN OR DUAL-DUROMETER RUBBER RING AT EACH JOINT AND AN INTEGRAL THICKENED BELL AS A PART OF EACH JOINT. THE PIPE CLASS SHALL BE A MINIMUM CLASS DR 14 FOR 6" PIPE AND CLASS 150 DR 18 FOR 8" AND LARGER PIPE. LAYING LENGTHS SHALL BE 220 FEET. PIPE AND FITTINGS MUST BE ASSEMBLED WITH NON TOXIC LUBRICANT.
- ALL FIRE MAINS SHALL BE CLASS DR14.
- FITTINGS FOR P.V.C. WATER PIPE SHALL BE GRAY IRON OR DUCTILE IRON OF MECHANICAL JOINT TYPE AND SHALL BE CLASS 250 IN ACCORDANCE WITH AWWA C110-77 (ANSI A21 10).
- UNLESS OTHERWISE SPECIFIED ON PLANS OR SHOWN IN PROFILES, P.V.C. WATER PIPE SHALL BE INSTALLED TO CLEAR ALL UTILITY LINES.
- DOUBLE STRAPPED BRONZE SADDLES SHALL BE USED FOR MAKING 2" OR SMALLER TAPS.

SPECIFICATIONS FOR WATER PIPE

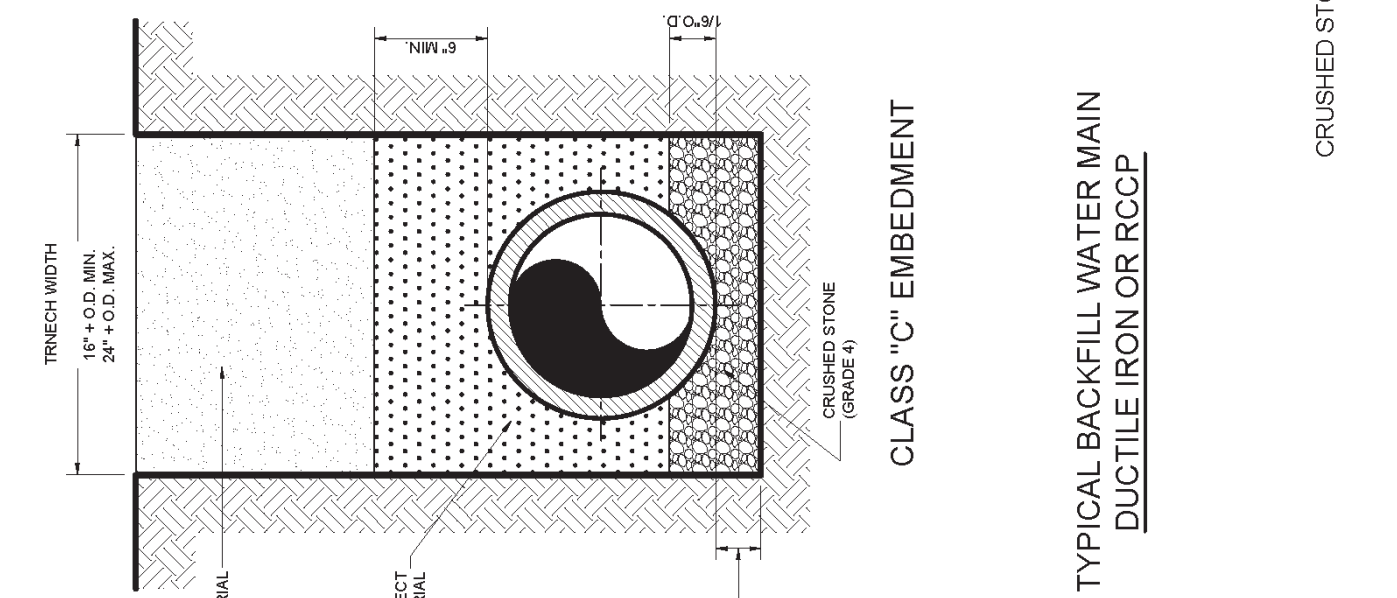
- ALL WATER LINES SHALL BE AS SPECIFIED IN THE STANDARD SPECIFICATIONS AND SPECIAL PROVISIONS.
- ALL CAST IRON FITTINGS SHALL BE MECHANICAL JOINT FOR D.I. PIPE OR MECHANICAL JOINT FOR P.V.C. WATER PIPE.
- ALL WATER MAINS SHALL HAVE THE FOLLOWING MINIMUM COVER OR SUFFICIENT COVER TO CLEAR OTHER UTILITIES.
 6" AND SMALLER = 42"
 8" = 48"
 10" AND 12" = 54" TO 60"
- REMOVE ALL BLEEDER LINES UPON COMPLETION OF TESTING.
- ALL WATER MAINS SHALL BE PURGED BY THE "POLY PIG" METHOD.
- ALL DUCTILE IRON OR CAST IRON PIPE AND OR FITTINGS SHALL BE POLY-WRAPPED.
- WHERE CONFLICTS OCCUR WARP WATER LINE AROUND INLETS TO OBTAIN 1" MIN. CLEARANCE.
- WATERLINES SHALL BE TESTED BOTH BACTERIOLOGICALLY AND HYDROSTATICALLY. WATER TO CHARGE AND BLEED THE LINES SHALL BE METERED BY THE CONTRACTOR AT HIS EXPENSE, SO AS TO ACCURATELY DOCUMENT WATER USED.

GENERAL NOTES

STANDARD CONSTRUCTION DETAILS WATER		
DATE:	REV DATE:	SHEET:
DEC. 1992	AUG. 2006	SD-W01



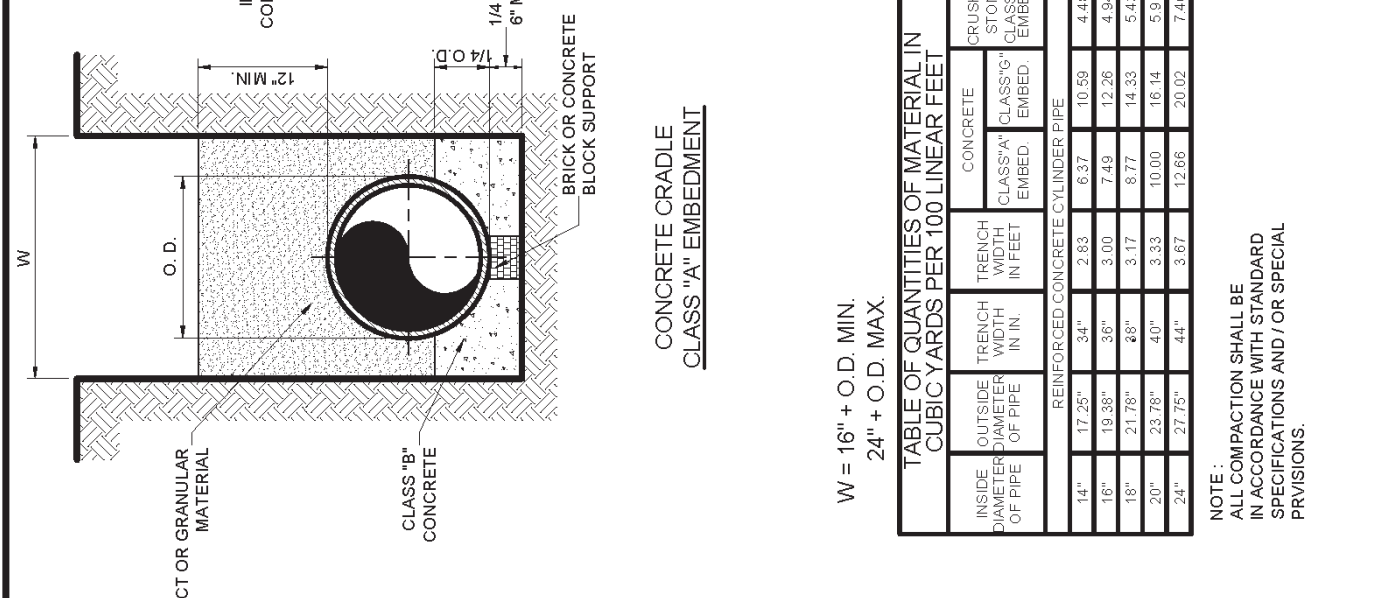
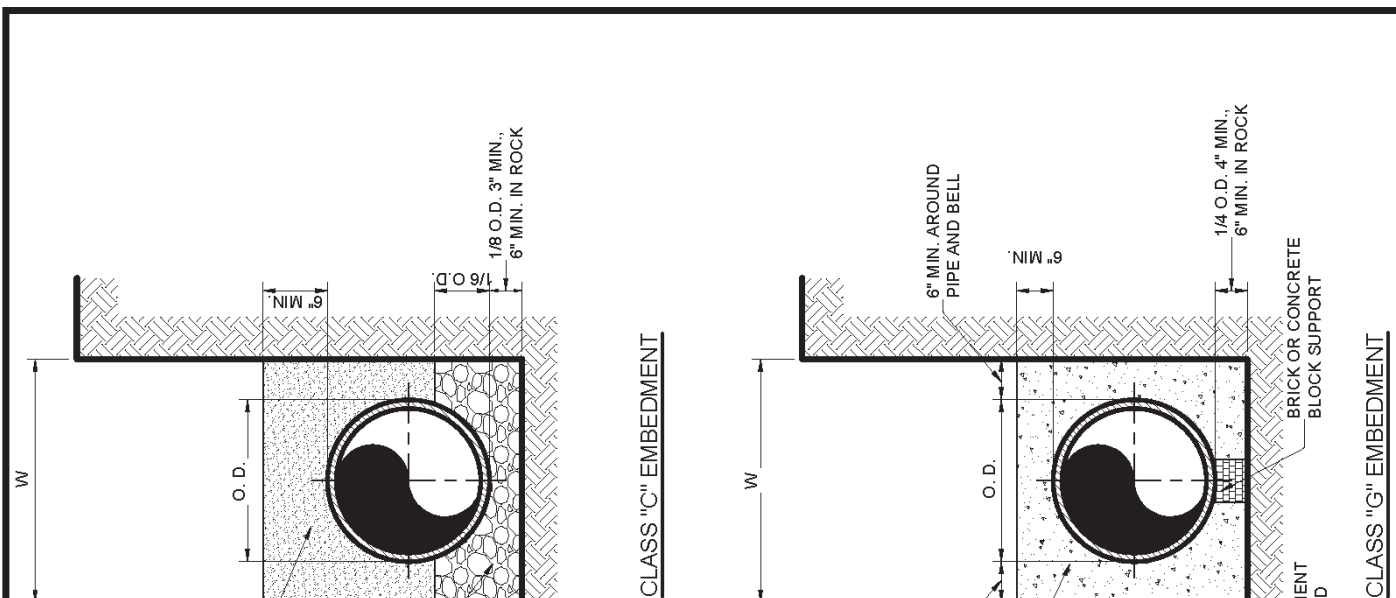
TYPICAL BACKFILL WATER MAIN P.V.C. WATER PIPE



TYPICAL BACKFILL WATER MAIN DUCTILE IRON OR RCP

WATER MAIN BACKFILL

STANDARD CONSTRUCTION DETAILS WATER		
DATE:	REV DATE:	SHEET:
MAY 1991	AUG. 2006	SD-W05

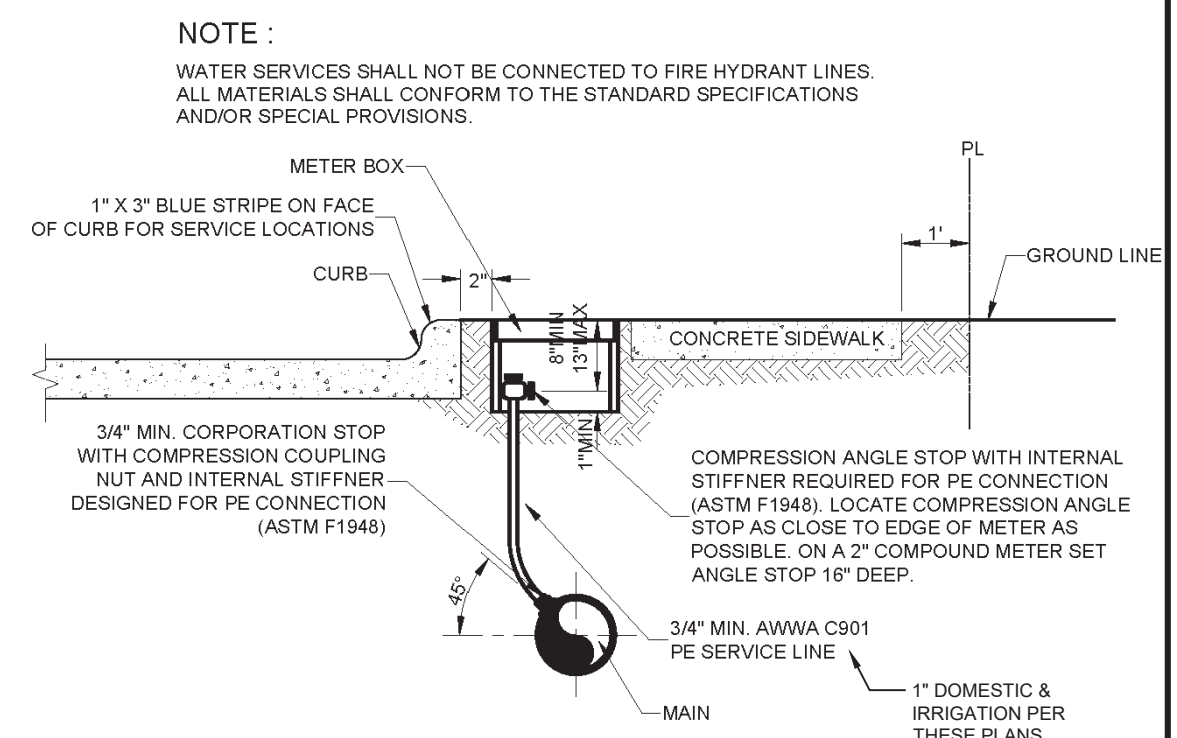


EMBEDMENT DETAILS

STANDARD CONSTRUCTION DETAILS WATER		
DATE:	REV DATE:	SHEET:
MAY 1991	AUG. 2006	SD-W06

TABLE OF TOLERANCES FOR WATER MAIN		TABLE OF TOLERANCES FOR VALVE BOX	
TYPE OF MATERIAL	MAXIMUM TOLERANCE	TYPE OF MATERIAL	MAXIMUM TOLERANCE
CONCRETE	± 1/8"	CONCRETE	± 1/8"
STEEL	± 1/16"	STEEL	± 1/16"
CAST IRON	± 1/16"	CAST IRON	± 1/16"
BRASS	± 1/16"	BRASS	± 1/16"
COPPER	± 1/16"	COPPER	± 1/16"
GLASS	± 1/16"	GLASS	± 1/16"
PLASTIC	± 1/16"	PLASTIC	± 1/16"
PAINT	± 1/16"	PAINT	± 1/16"
WELD	± 1/16"	WELD	± 1/16"
PIPE	± 1/16"	PIPE	± 1/16"
VALVE	± 1/16"	VALVE	± 1/16"
FITTING	± 1/16"	FITTING	± 1/16"
FLANGE	± 1/16"	FLANGE	± 1/16"
GASKET	± 1/16"	GASKET	± 1/16"
SEAL	± 1/16"	SEAL	± 1/16"
WASHER	± 1/16"	WASHER	± 1/16"
NUT	± 1/16"	NUT	± 1/16"
BOLT	± 1/16"	BOLT	± 1/16"
SCREW	± 1/16"	SCREW	± 1/16"
ANCHOR	± 1/16"	ANCHOR	± 1/16"
FASTENER	± 1/16"	FASTENER	± 1/16"
WELD	± 1/16"	WELD	± 1/16"
PIPE	± 1/16"	PIPE	± 1/16"
VALVE	± 1/16"	VALVE	± 1/16"
FITTING	± 1/16"	FITTING	± 1/16"
FLANGE	± 1/16"	FLANGE	± 1/16"
GASKET	± 1/16"	GASKET	± 1/16"
SEAL	± 1/16"	SEAL	± 1/16"
WASHER	± 1/16"	WASHER	± 1/16"
NUT	± 1/16"	NUT	± 1/16"
BOLT	± 1/16"	BOLT	± 1/16"
SCREW	± 1/16"	SCREW	± 1/16"
ANCHOR	± 1/16"	ANCHOR	± 1/16"
FASTENER	± 1/16"	FASTENER	± 1/16"

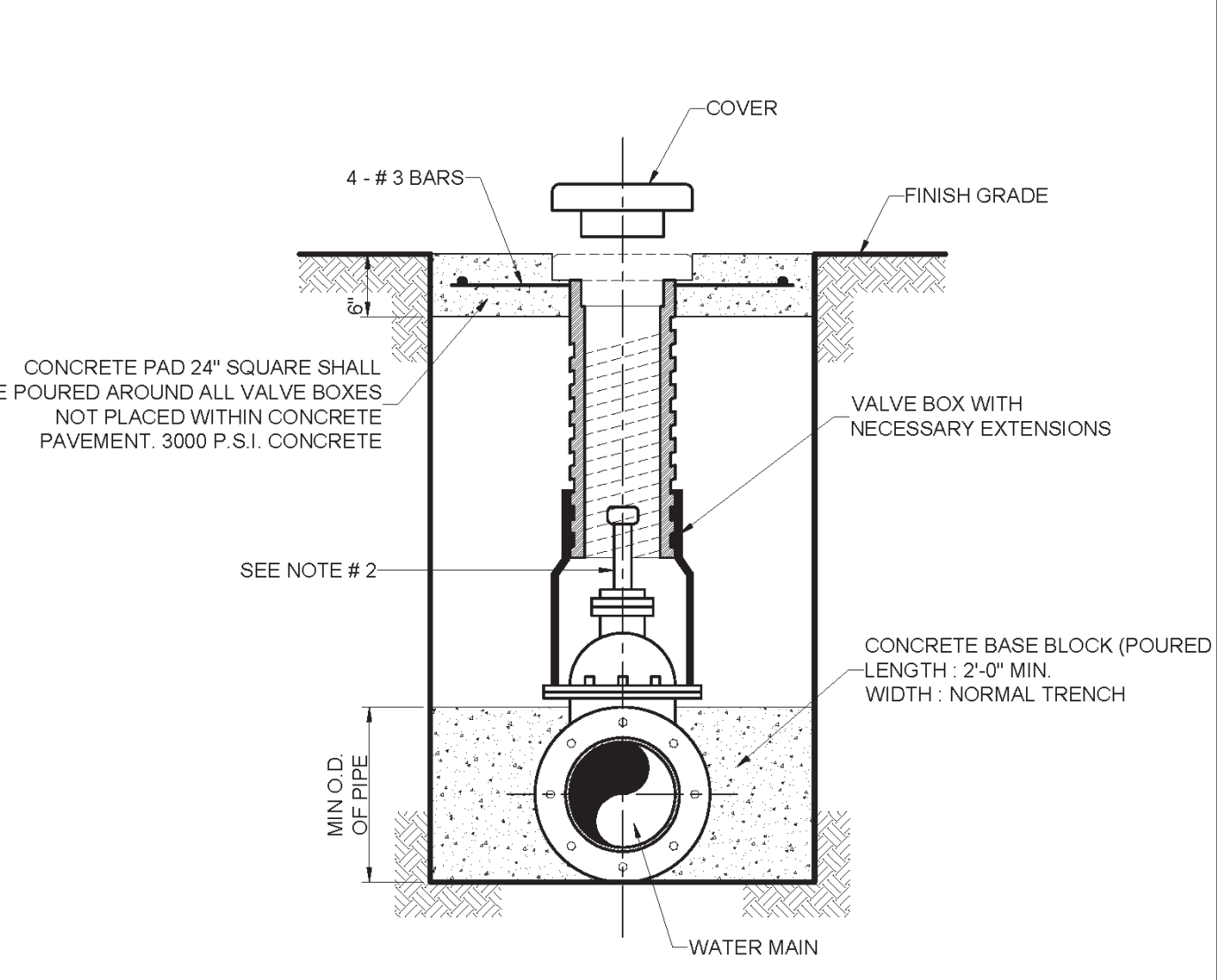
NOTE: MANUFACTURER SHALL BE IN ACCORDANCE WITH STANDARD SPECIFICATIONS AND SPECIAL PROVISIONS.



TYPICAL SERVICE CONNECTION WITH METER BOX

SERVICE CONNECTION WITH METER BOX

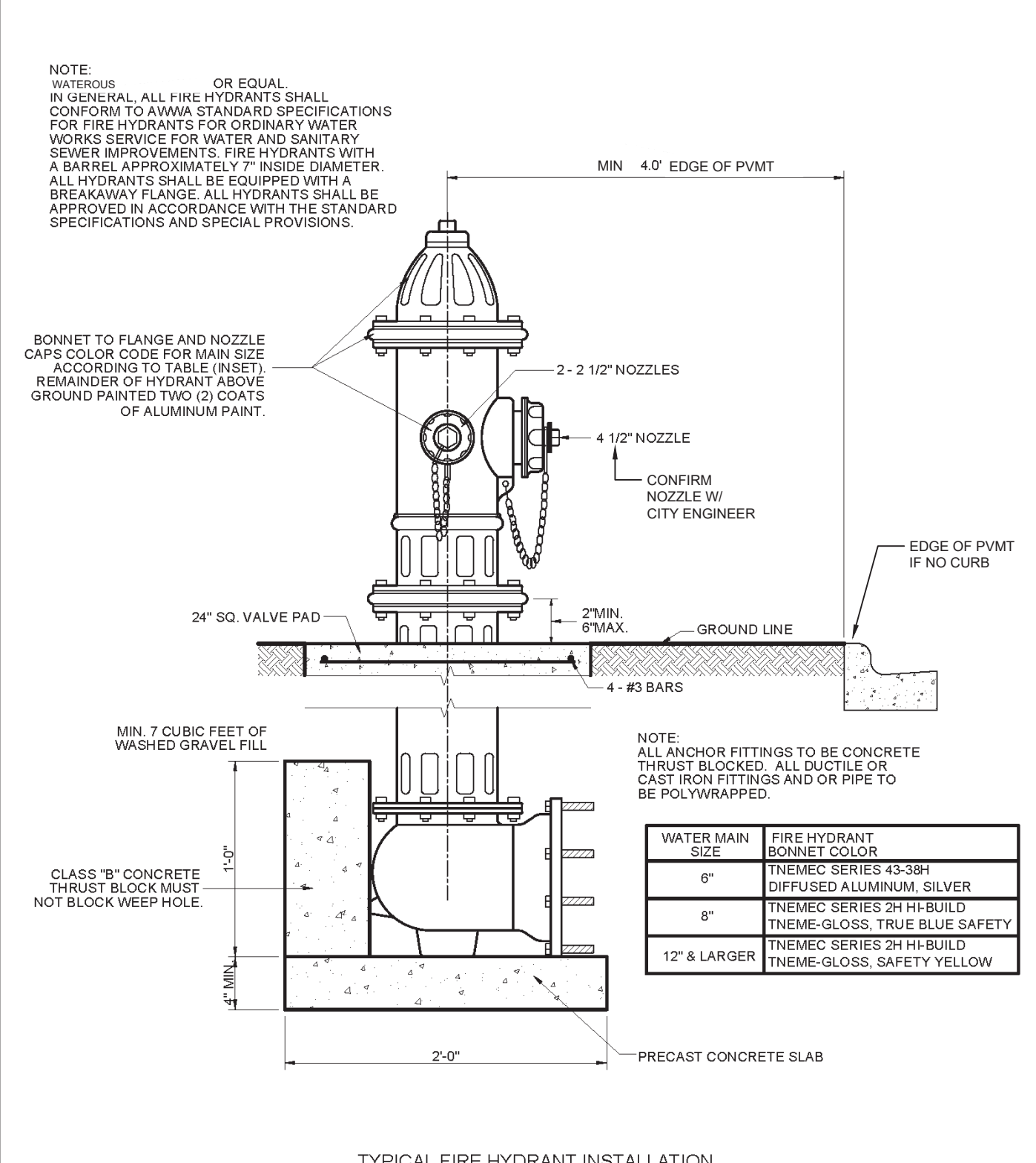
STANDARD CONSTRUCTION DETAILS WATER		
DATE:	REV DATE:	SHEET:
MAY 1991	AUG. 2006	SD-W21



TYPICAL VALVE SETTING & BOX

VALVE SETTING & BOX

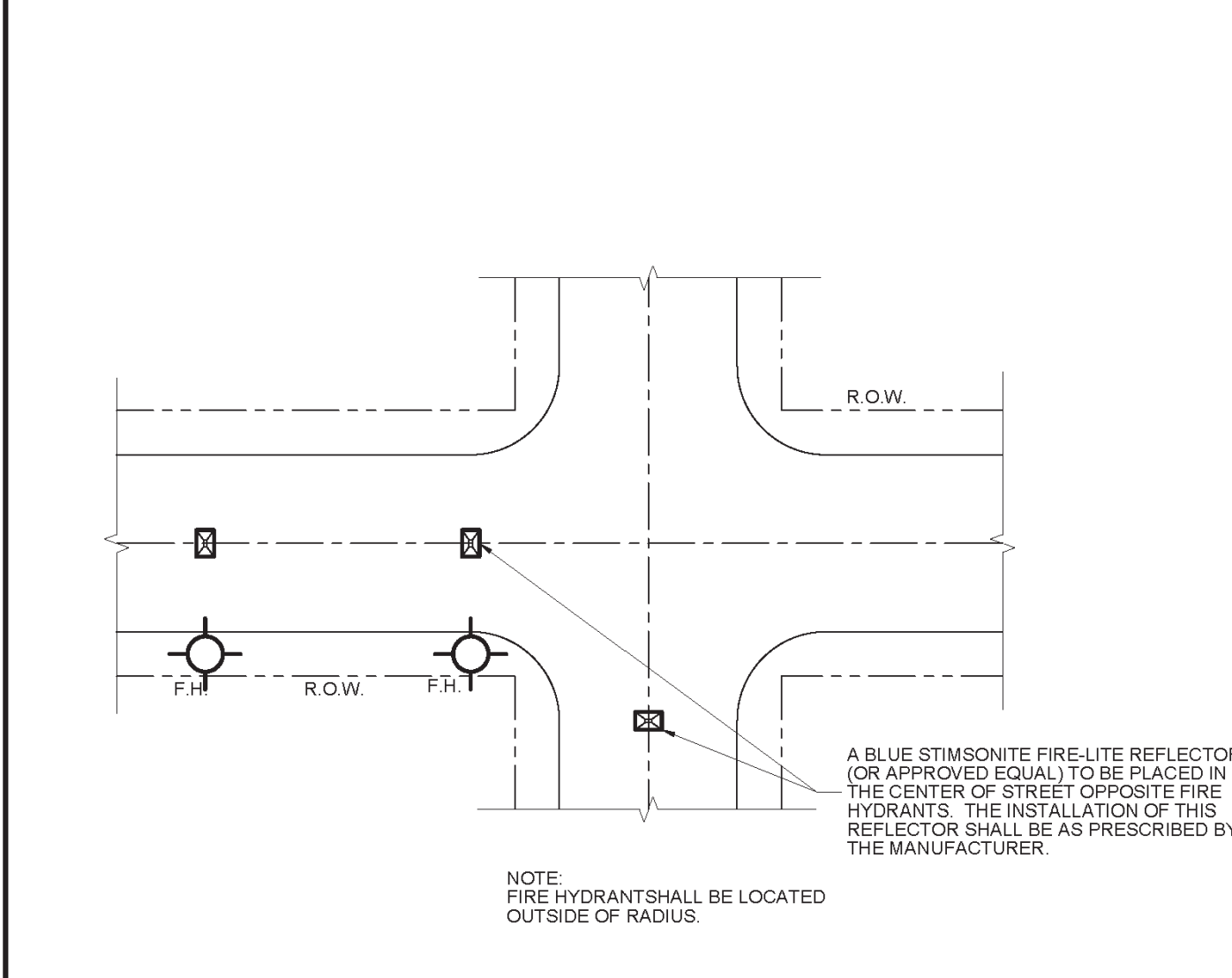
STANDARD CONSTRUCTION DETAILS WATER		
DATE:	REV DATE:	SHEET:
MAY 1991	JUNE 2006	SD-W10



TYPICAL FIRE HYDRANT INSTALLATION

FIRE HYDRANT INSTALLATION

STANDARD CONSTRUCTION DETAILS WATER		
DATE:	REV DATE:	SHEET:
MAY 1991	MAY 2007	SD-W17



TYPICAL FIRE HYDRANT REFLECTOR INSTALLATION

FIRE HYDRANT REFLECTOR INSTALLATION

STANDARD CONSTRUCTION DETAILS WATER		
DATE:	REV DATE:	SHEET:
MAY 1991	AUG. 2006	SD-W19

RECORD DRAWING

THIS DRAWING REPRESENTS THE CONSTRUCTED STATE OF THIS PROJECT ACCORDING TO AVAILABLE INFORMATION FURNISHED TO THE ENGINEER BY THE CONTRACTOR OR OWNER AFTER CONSTRUCTION

BY: *Jason Trafton*

DATE: 11.14.2019

NO.	REVISIONS / SUBMISSIONS	DATE

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7075 Twin Hills Ave
Suite 350
Dallas, Texas 75231

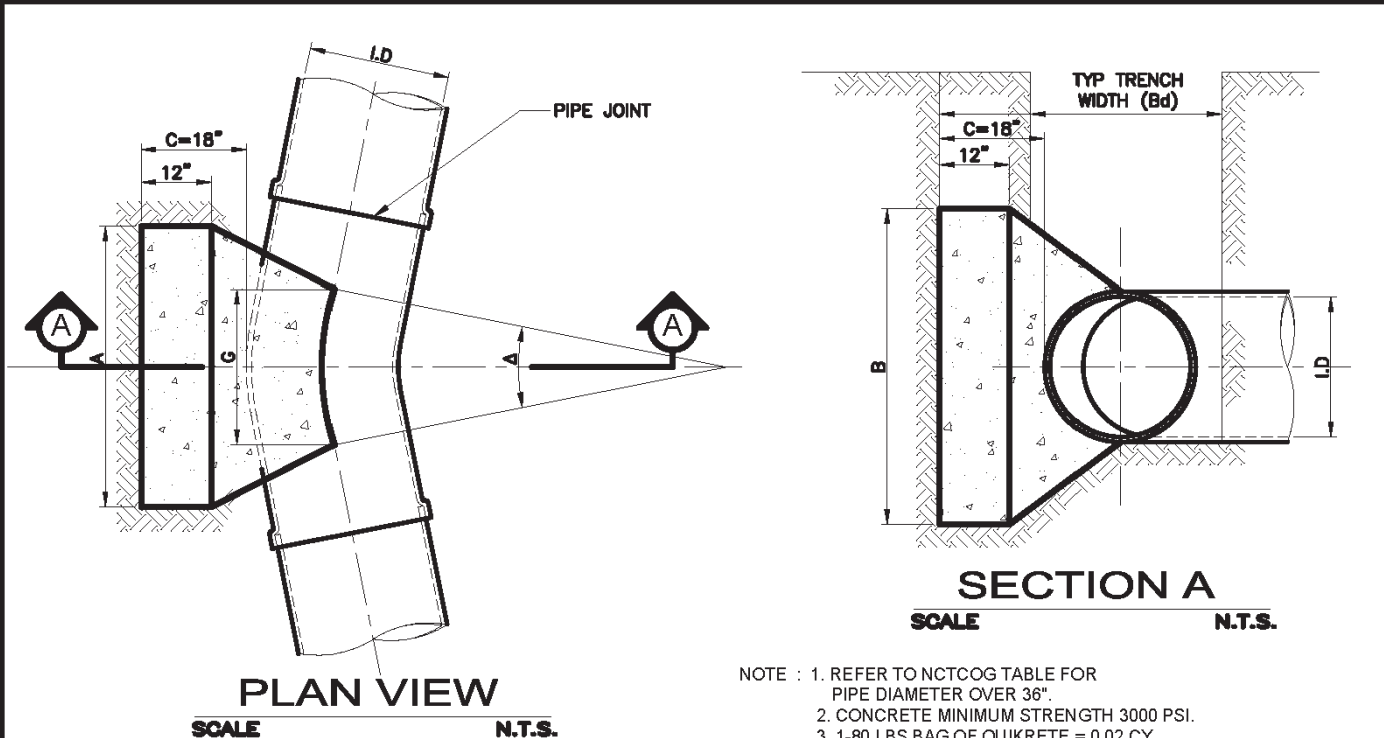
Firm TX F6701
214.370.3470 Ph

JOB NAME: **LAKEVIEW DOWNS**
CITY OF LUCAS, COLLIN COUNTY, TEXAS

DRAWING TITLE: **C8.03 STANDARD DETAILS**

SEAL	DATE	SCALE
	11.14.2019	44 of 45
	PROJECT NO.	
	2804.000	

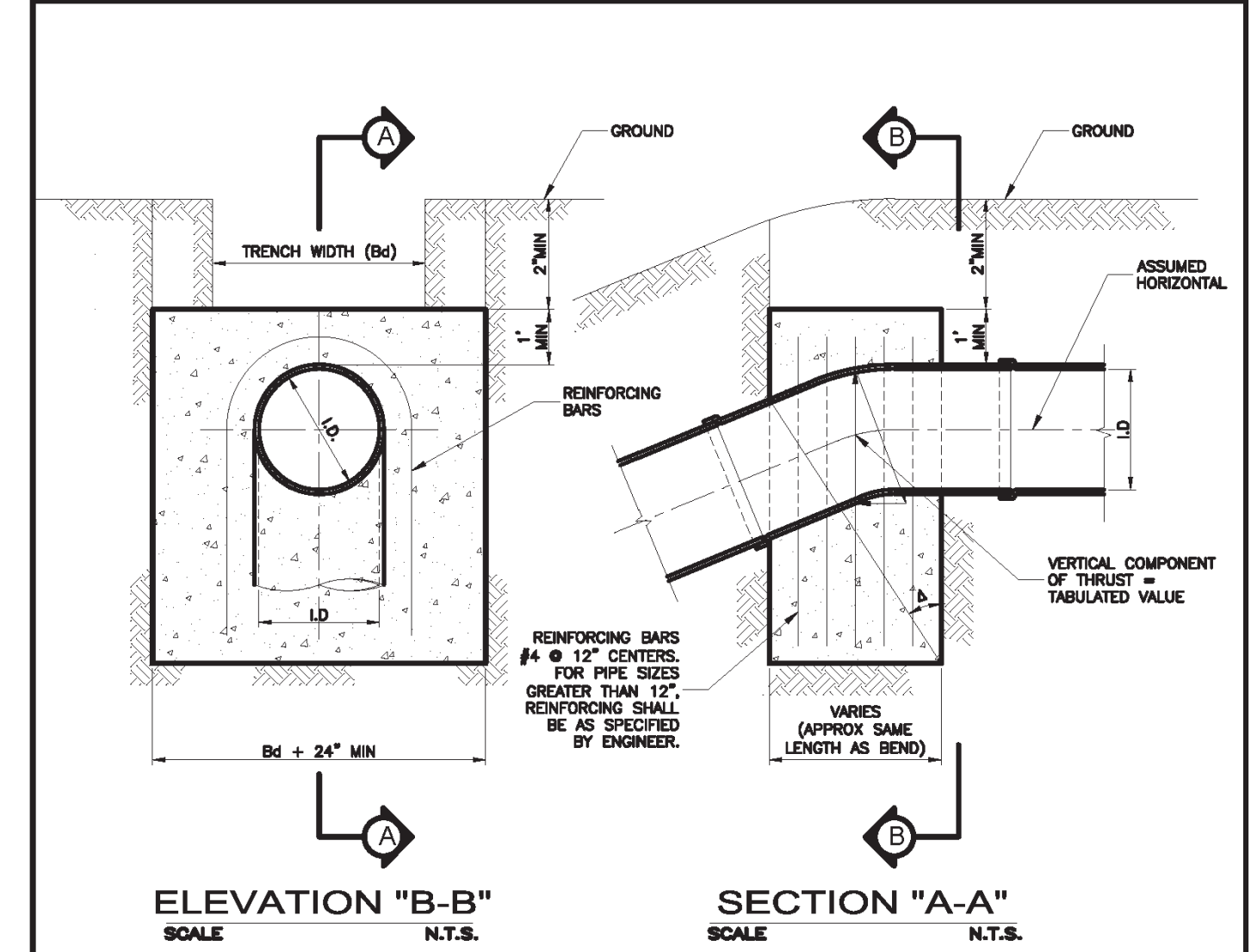
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Z:\PROJECTS\2804.00 LBL LUCAS\DRAWINGS\C8.01 STANDARD DETAILS.DWG



NOTE: 1. REFER TO NCTCOG TABLE FOR PIPE DIAMETER OVER 36\"/>

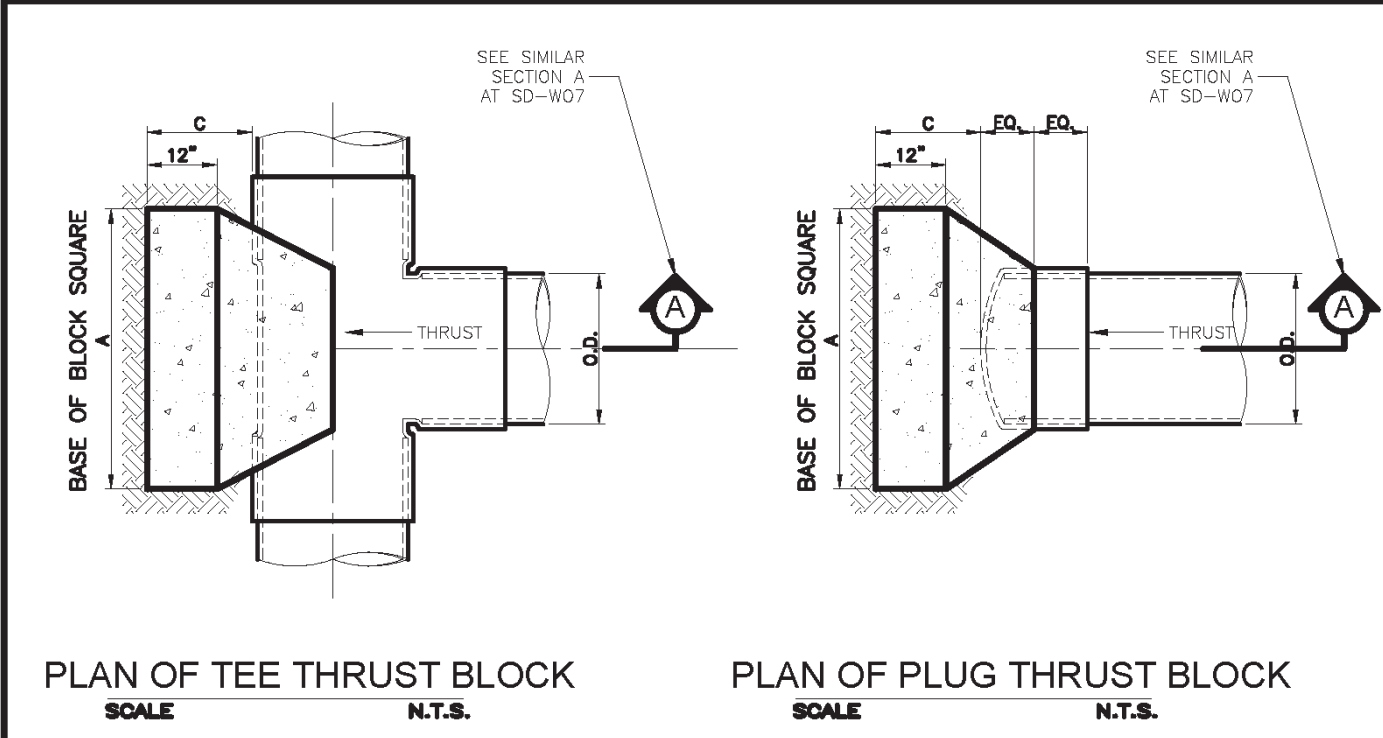
I.D. (IN.)	G (FT.)	THRUST (TONS)	EARTH				ROCK				
			A (FT.)	B (FT.)	VOL. (C.Y.)	A (FT.)	B (FT.)	VOL. (C.Y.)			
4.68	0.4	1.0	1.0	1.5	0.1	1.0	1.0	0.1	1.0	1.0	0.1
10.12	0.6	2.2	1.5	1.5	0.1	1.0	1.5	0.1	1.5	1.5	0.1
15.10	0.8	5.0	2.0	2.5	0.3	1.5	2.0	0.2	2.0	2.5	0.3
20	0.9	6.2	2.0	3.5	0.4	1.5	3.0	0.3	2.0	3.0	0.4
24	1.1	8.9	3.0	3.5	0.5	1.5	3.0	0.5	2.0	3.0	0.5
30	1.4	10.4	3.0	3.5	0.6	2.0	3.5	0.4	3.0	4.0	0.8
36	1.7	15.0	3.5	4.5	0.8	2.0	4.0	0.5	3.5	4.5	0.8

HORIZONTAL THRUST BLOCK AT PIPE BEND
DATE: MAY 1991 REV DATE: OCT. 2015 SHEET: SD-W67



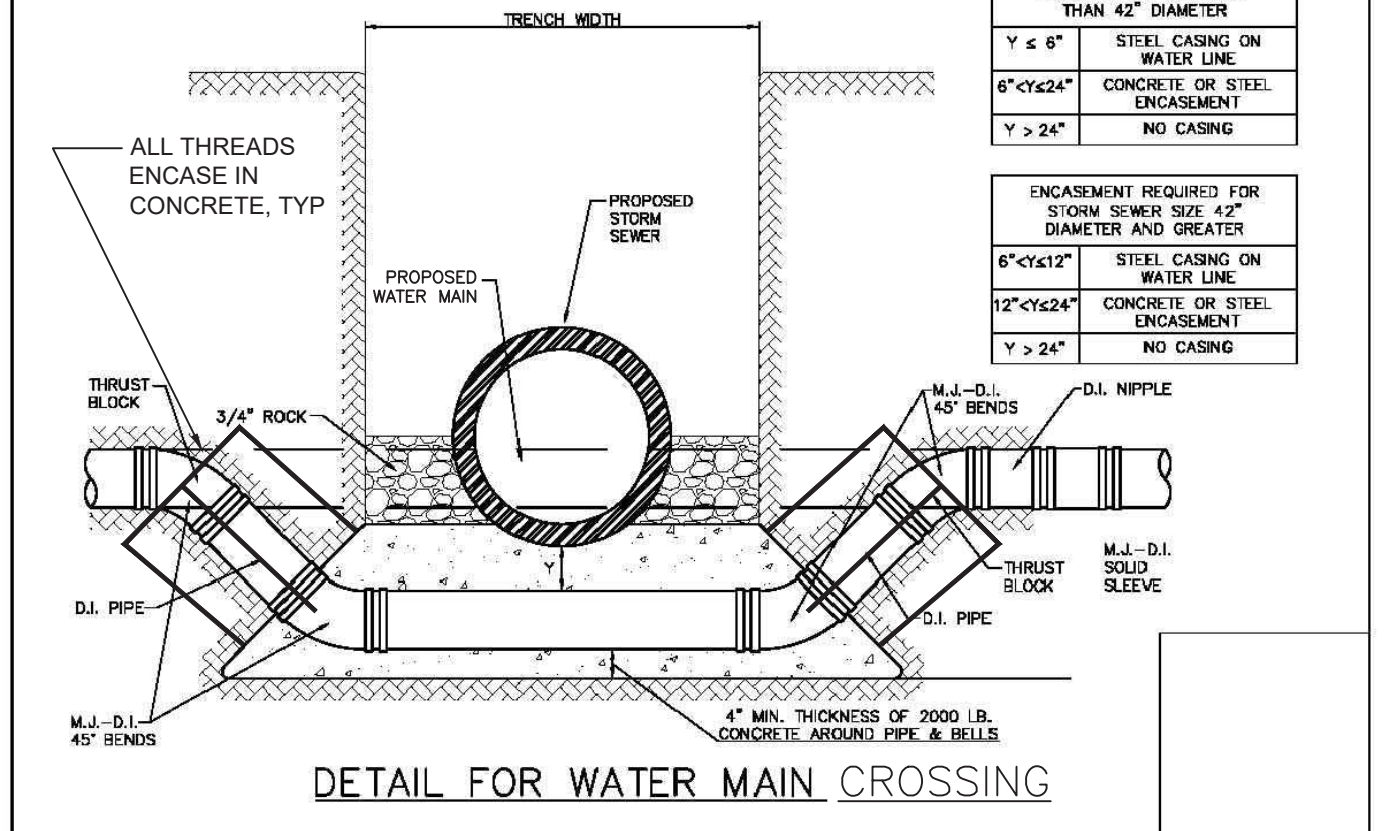
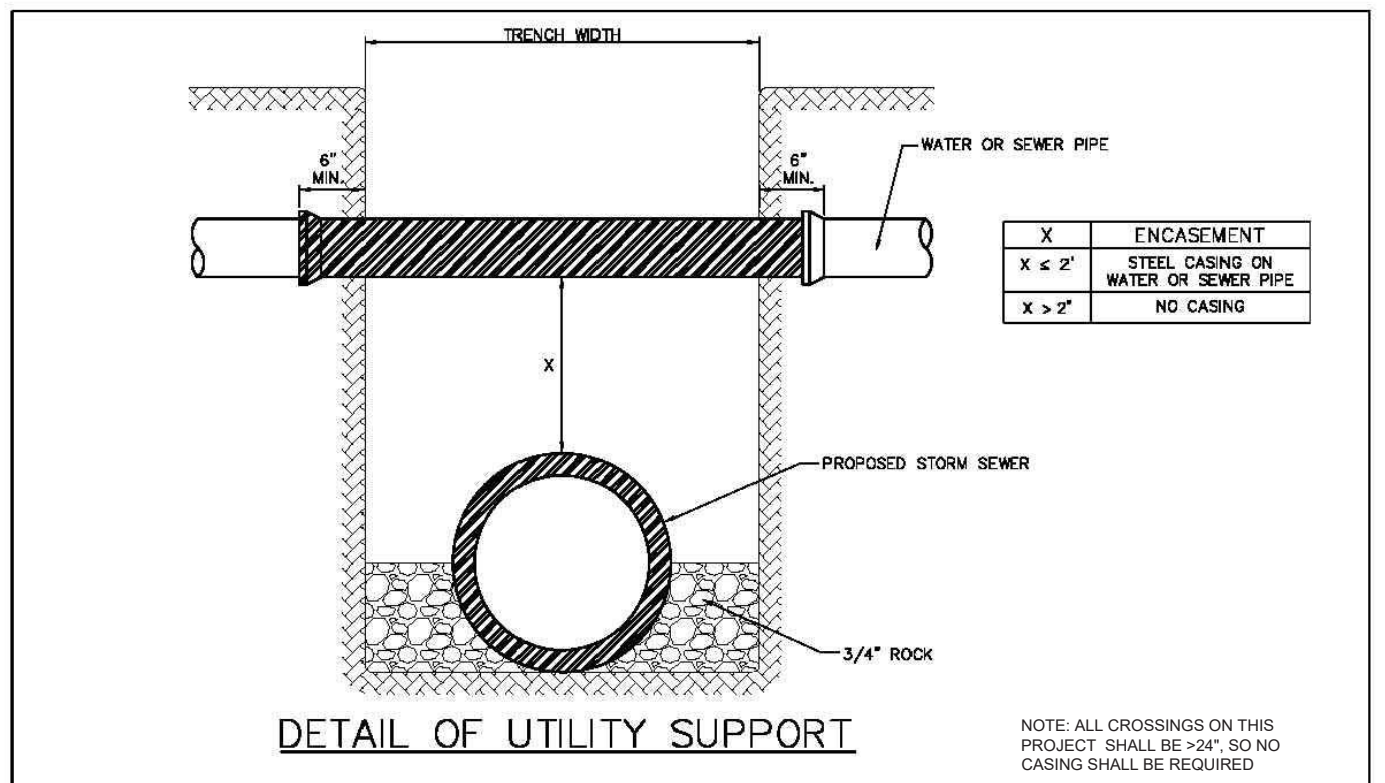
I.D. (IN.)	THRUST (TONS)	VOL. (C.Y.)	EARTH		ROCK		
			A (FT.)	B (FT.)	A (FT.)	B (FT.)	
4.68	0.8	2.0	1.5	1.5	0.1	1.0	0.1
10.12	1.1	4.4	2.0	2.5	0.3	1.5	0.1
15.10	1.6	9.9	3.0	3.5	0.6	2.0	0.3
20	1.9	12.3	3.5	3.5	0.7	2.0	0.4
24	2.2	17.7	4.0	4.5	1.0	3.0	0.5
30	2.7	20.7	5.0	4.5	1.5	3.0	0.8
36	3.3	29.8	5.5	5.5	2.0	4.0	1.0

VERTICAL THRUST BLOCK AT PIPE BEND
DATE: OCT 2015 REV DATE: SHEET: SD-W67A

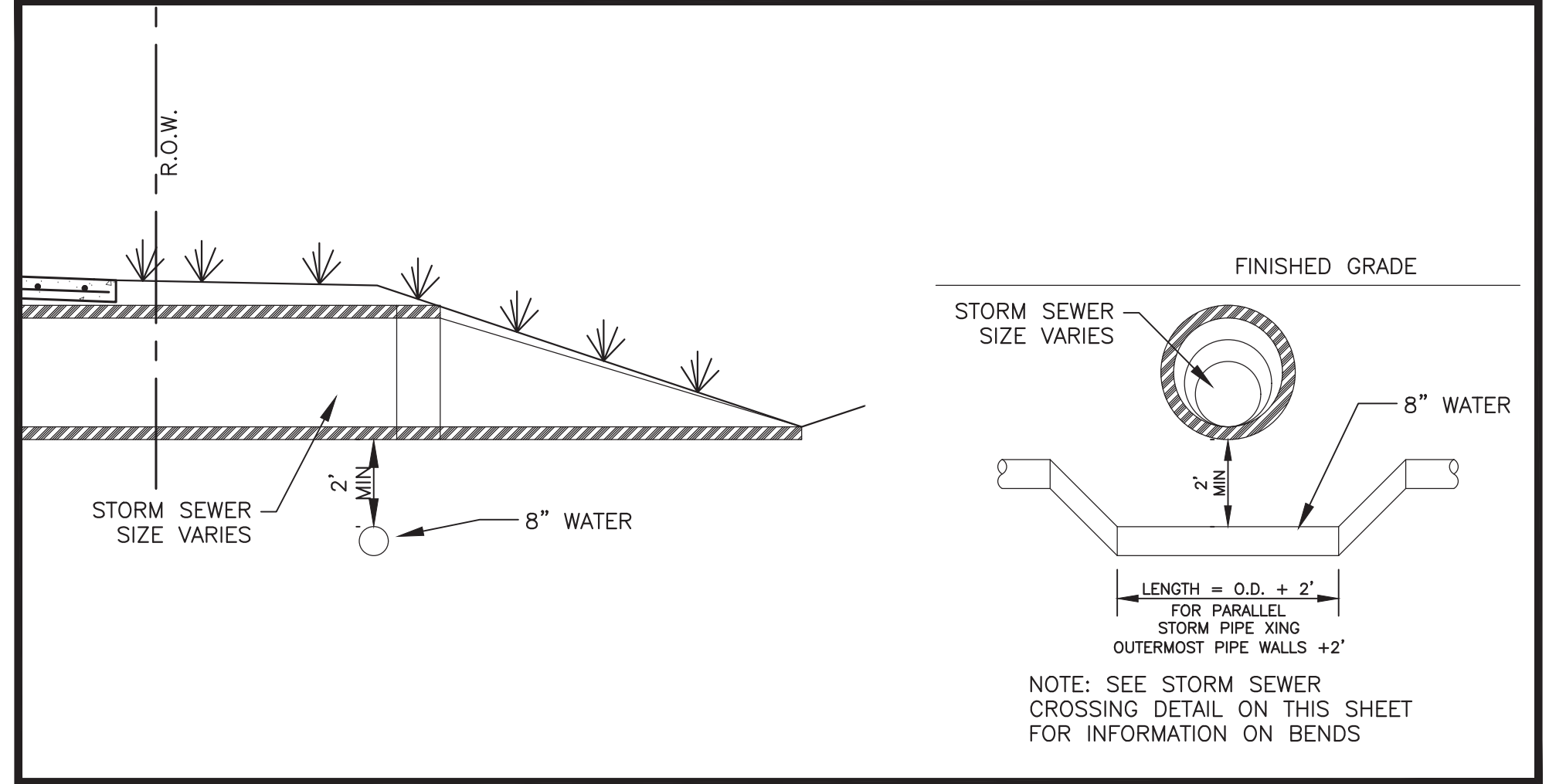


I.D. (IN.)	C (FT.)	THRUST (TONS)	EARTH		ROCK	
			A (FT.)	VOL. (C.Y.)	A (FT.)	VOL. (C.Y.)
4.68	1.5	5.1	2.5	0.3	2.0	0.2
10.12	1.5	11.3	3.5	0.6	2.5	0.3
16.18	2.0	25.5	5.5	1.6	4.0	0.9
20	2.0	31.5	6.0	1.9	4.0	0.9
24	2.5	45.2	7.0	3.1	5.0	1.7
30	3.0	53.0	7.5	4.1	5.5	2.4
36	4.0	76.3	9.0	7.3	6.5	4.2

HORIZONTAL THRUST BLOCK AT TEES AND PLUGS
DATE: MAY 1991 REV DATE: OCT. 2015 SHEET: SD-W68



STORM SEWER CROSSING DETAILS
DATE: 10/15/18 SHEET: SD03



WATER / STORM CROSSING DETAIL
Scale: NTS

NO.	REVISIONS / SUBMISSIONS	DATE
---	---	MM.DD.YYYY

Ion Design Group
7075 Twin Hills Ave
Suite 350
Dallas, Texas 75231
Firm TX F6701
214.370.3470 Ph

JOB NAME: LAKEVIEW DOWNS
CITY OF LUCAS, COLLIN COUNTY, TEXAS

DRAWING TITLE: C8.04 STANDARD DETAILS

RECORD DRAWING
THIS DRAWING REPRESENTS THE CONSTRUCTED STATE OF THIS PROJECT ACCORDING TO AVAILABLE INFORMATION FURNISHED TO THE ENGINEER BY THE CONTRACTOR OR OWNER AFTER CONSTRUCTION.
BY: Jason Trafton
DATE: 11.14.2019

SEAL	DRAWN	SCALE
	FM	FILENAME
	JT	C8.04 STANDARD DETAILS
	BK	DRAWING NO.
		C8.04
		45 of 45

LAYOUT: C8.04 STANDARD DETAILS PLOTTED: Tuesday, December 17, 2019 10:38:30 AM BY: BRYAN-USA PLT SCALE: 1:11 SAVED: 11/14/2019 2:17PM BY: BRYAN-USA Z:\PROJECTS\2804-00 LBL LUCAS\DRAWINGS\C8.01 STANDARD DETAILS.DWG