



May 29, 2024
AVO 37449.004

Ms. Ramie Hammonds
Development Services Director/Building Official
City of Sanger
201 Bolivar Street
P.O. Box 1729
Sanger, Texas 76266

Re: Sanger Circle Phase 7 Preliminary Plat -Review #1

Dear Ms. Hammonds,

Halff Associates, Inc. was requested by the City of Sanger to review the Preliminary Plat for Sanger Circle Phase 7. The submittal was prepared by Middleton and Associates, LLC and was dated May 15, 2024.

We have completed our review and offer the following comments:

Please address comments on attached markups and provide annotated responses on markups. Please note, not all comments are written on letter since some comments are easier to show and explain on the markups. Please annotate markup with responses.

Cover

1. For clarity remove numbers as they are not used as identifiers on the sheets

Preliminary Plat Comments

1. Provide an additional drainage easement for the proposed swale shown in the grading plan.

Grading Plan/Grading Details Comments

1. Flume invert does not match the contours.
2. For clarity, be consistent with the naming convention of the flume in the detail and profile.

Storm Drain Detail Comments

1. Provide a Y inlet detail

Sanitary Sewer Plan and Profiles Comments

1. Line 1 does not meet TCEQ standards for water crossings. Specify how TCEQ will be met.

Ms. Ramie Hammonds

July 14, 2023

Page 2 of 2

If you have any questions or need additional information, please do not hesitate to call me at (214) 937-3928.

Sincerely,

A handwritten signature in black ink, appearing to read "Jamie Akomer".

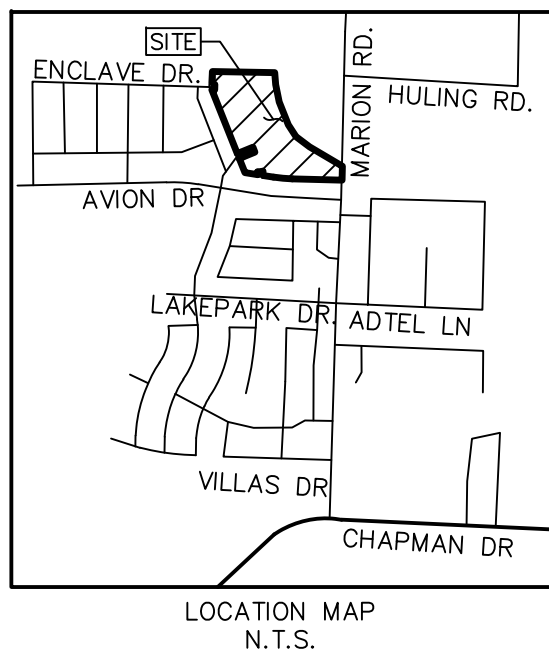
Jamie Akomer, PE, PMP
HALFF ASSOCIATES, INC.

Firm No. 0312

Attachments: Plat markups

CONSTRUCTION PLANS FOR
PAVING, GRADING, EROSION CONTROL,
STORM DRAINAGE, WATER & SANITARY SEWER

SANGER CIRCLE, PHASE 7
CITY OF SANGER, TEXAS



PROJECT DIRECTORY

SURVEYOR
JOHN COWAN & ASSOCIATES, INC.
10147 CR 135
FLINT, TEXAS 75762
903-581-2238

OWNER — DEVELOPER:
SANGER LAND DEVELOPMENT LLC
101 FOREST BEND DRIVE
COPPELL, TEXAS 75019
JONATHAN WANG
214-316-2256

GEOTECHNICAL ENGINEER:
FARGO CONSULTANTS, INC.
2324 FABENS ROAD
DALLAS, TEXAS 75229
214-352-4100

SECOND SUBMITTAL
5-15-24
FOR REVIEW ONLY

COVER
FPT1 PRELIMINARY PLAT
FPT2 PRELIMINARY PLAT
NOTE1 GENERAL CONSTRUCTION NOTES

PAVING PLAN & PROFILES
P1 ENCLAVE DRIVE STA. 16+51.90-21+50
P2 THISTLE DRIVE STA. 21+50-27+50
P3 THISTLE DRIVE STA. 27+50-END
P4 BRIDLE PATH STA. 3+09.00-END
P5 OLIVIA LANE STA. 1+67.36-END
P6 FIRELANE DEMOLITION PLAN

PAVING DETAILS
DT-P1 PAVING DETAILS

LOT GRADING PLANS
G1 LOT GRADING PLAN
G2 LOT GRADING PLAN

LOT GRADING DETAILS
DT-GR1 GRADING DETAILS

EROSION CONTROL PLAN
ERO1 EROSION CONTROL PLAN
ERO2 EROSION CONTROL DETAILS
ERO3 EROSION CONTROL DETAILS

DRAINAGE
DAM1 DRAINAGE AREA MAP — EX. CONDITIONS
DAM2 DRAINAGE AREA MAP — DEVELOPED
CALC1 DRAINAGE AREA & INLET CALCS.
CALC2 HYDRAULIC CALCS.

STORM DRAIN PLAN & PROFILE
ST-ALL OVERALL STORM DRAIN PLAN
ST1 ST LINE A & B
ST2 ST LINE C & C4
ST3 ST LINE E
ST4 ST LINE D

STORM DRAIN DETAILS
DT-ST1 STORM DRAIN DETAILS
DT-ST2 STORM DRAIN DETAILS

SANITARY SEWER PLAN & PROFILE
SS-ALL OVERALL SEWER PLAN
SS1 SS LINE 1 STA. 4+33-9+00
SS2 SS LINE 1 STA. 9+00-END
SS3 SS LINE 2
SS4 SS LINE 3
SS5 SS LINE 8
SS6 SS LINE 6

SEWER DETAILS
DT-SS1 SEWER DETAILS

WATER PLAN
W-ALL OVERALL WATER PLAN
W1 WATER PLAN
W2 WATER PLAN

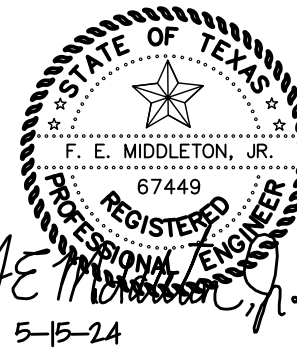
WATER DETAILS
DT-W1 WATER DETAILS
DT-W2 WATER DETAILS

SIDEWALK, STREET LIGHT, & SIGNAGE PLAN
WALK1



THE CONTRACTOR SHALL USE THE CITY OF SANGER'S STANDARD CONSTRUCTION DETAILS FOR THIS PROJECT.

CAUTION!!! UNDERGROUND UTILITIES!!!
EXISTING UTILITIES AND UNDERGROUND FACILITIES INDICATED ON THESE PLANS HAVE BEEN LOCATED FROM REFERENCE INFORMATION SUPPLIED BY VARIOUS OWNERS OF THE FACILITIES. THE ENGINEER DOES NOT ACCEPT THE RESPONSIBILITY FOR THE UTILITY LOCATIONS SHOWN. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY BOTH HORIZONTALLY AND VERTICALLY THE LOCATION OF ALL EXISTING UTILITIES AND UNDERGROUND FACILITIES PRIOR TO CONSTRUCTION, TO TAKE NECESSARY PRECAUTIONS IN ORDER TO PROTECT ALL FACILITIES ENCOUNTERED, AND TO NOTIFY THE ENGINEER PROMPTLY OF ALL CONFLICTS OF THE WORK WITH EXISTING FACILITIES. THE CONTRACTOR SHALL PRESERVE AND PROTECT ALL EXISTING UTILITIES FROM DAMAGE DURING CONSTRUCTION. ANY DAMAGE BY THE CONTRACTOR TO EXISTING UTILITIES SHALL BE REPAIRED BY THE CONTRACTOR AT HIS EXPENSE. CONTACT ALL POSSIBLE UTILITY AND UNDERGROUND FACILITY OWNERS.

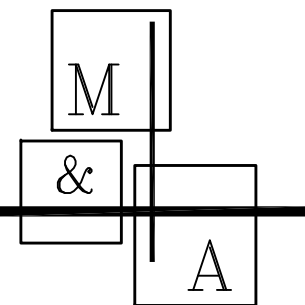


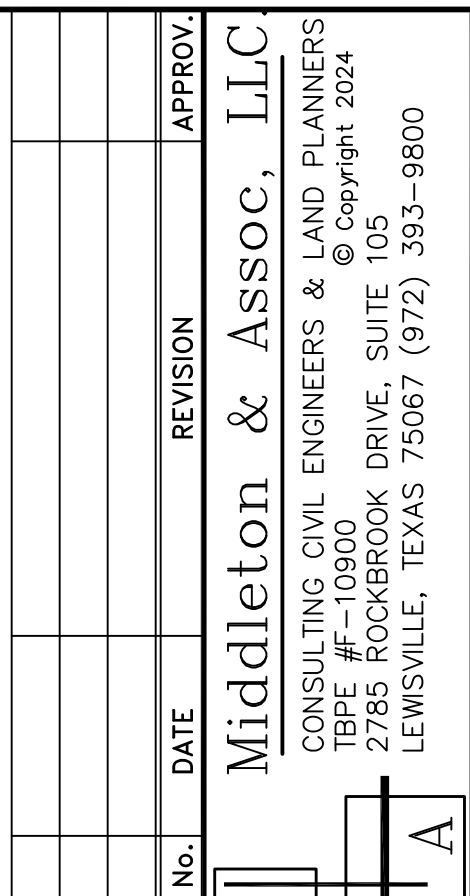
THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY FLOYD E. MIDDLETON, JR., PE REGISTRATION #67449 ON 5-15-24. ANY ALTERATION OF A SEALED DOCUMENT WITHOUT PROPER NOTIFICATION TO THE RESPONSIBLE ENGINEER IS AN OFFENSE UNDER THE TEXAS ENGINEERING PRACTICE ACT.

PROJECT ENGINEER:

Middleton & Associates, LLC.

CONSULTING CIVIL ENGINEERS & LAND PLANNERS
TBPE #F-10900 © Copyright 2024
2785 ROCKBROOK DRIVE, SUITE 105
LEWISVILLE, TEXAS 75067 (972) 393-9800





JOHN COWAN & ASSOCIATES, INC.
10147 CR 135 FLINT, TEXAS 75762 PH: (903) 581-2238
WWW.TXSURVEYS.COM
FIRM REGISTRATION CERTIFICATION NO. 10025500

14-908 AC. 63 RES. LOTS - 1 HOA LOT
3.138 AC. RIGHT-OF-WAY DEDICATION
REUBEN BEBEE SURVEY, ABST. NO. 29
CITY OF SANGER, DENTON COUNTY, TEXAS

FPT1

STATE OF TEXAS
COUNTY OF DENTON

BEGINNING at a ½" iron rod (set) for the Northeast terminus of Imperial Drive as shown on the plot of Sanger Circle, Phase 6B, recorded in DCCFN 2022-196, in the North line of the above mentioned 223.35 acre tract, in the South line of the STC Group Miller, LLC 202.69 acre tract recorded in DCCFN 2021-00195695;

THENCE southerly and generally with a fence, with the East line of the 223.35 acre tract, the West line of the 9.297 acre tract as follows:

South 04 deg. 47 min. 03 sec. East a distance of 112.59 ft. to a fence corner (found) for corner,

South 11 deg. 23 min. 10 sec. East a distance of 163.10 ft. to a x-tie fence corner (found) for corner,

South 21 deg. 46 min. 43 sec. East a distance of 229.34 ft. to a 3" bois d'arc fence corner (found) for corner,

South 32 deg. 44 min. 55 sec. East a distance of 131.51 ft. to a 15" twin bois d'arc tree for corner,

South 52 deg. 50 min. 26 sec. East a distance of 158.27 ft. to a 12" triple bois d'arc tree for corner,

and South 59 deg. 39 min. 33 sec. East a distance of 353.99 ft. to a mag nail (set) for an angle corner of the 223.35 acre tract, the South corner of the 9.297 acre tract, near the centerline of Marion Road;

THENCE North 88 deg. 35 min. 48 sec. West with the North line of the 0.152 acre right of way, at 39.97 ft. pass a ½" iron rod (found) for the Northwest of same, the Northeast corner of Block B of Sanger Circle, Phase 6A, and continue a total distance of 462.87 ft. to a ½" iron rod (found) for corner at the p.c. of a curve to the right;

THENCE North 80 deg. 58 min. 56 sec. West with the North line of Block B, a distance of 96.57 ft. to a ½" iron rod (set) for corner in the East right of way of Olivia Lane and a curve to the left;

THENCE South 82 deg. 09 min. 16 sec. West with the North terminus of Oliva Lane, a distance of 50.00 ft. to a 1/2" iron rod (set) for corner at the Northwest terminus of same, in a curve to the right;

THENCE with the Northeast line of Block C, North 80 deg. 57 min. 30 sec. West a distance of 121.87 ft. to a $\frac{1}{2}$ " iron rod (set) for and angle corner and North 21 deg. 42 min. 05 sec. West a distance of 139.82 ft. to a $\frac{1}{2}$ " iron rod (set) for the North corner of Block C, in the Southeast right of way of Bridle Path, in a curve to the right;

THENCE North 68 deg. 18 min. 20 sec. East with the Southeast right of way of Bridle Path, a distance of 125.76 ft. to a ½" iron rod (set) for corner at the Southeast terminus of same;

THENCE South 68 deg. 18 min. 20 sec. West with the Northwest right of way of Bridal Path, a distance of 125.76 ft. to a 1/2" iron rod (set) for corner at the p.c. of a curve to the left;

THENCE North 21 deg. 42 min. 05 sec. West with the East line of Block F, a distance of 639.54 ft. to a ½" iron rod (found) for the Northeast corner of same, in the South right of way of Imperial Drive;

THENCE northerly with the East right of way of Imperial Drive as follows:
 North 01 deg. 02 min. 27 sec. East with a distance of 50.00 ft. to a ½" iron rod (set) for corner,
 North 88 deg. 57 min. 33 sec. West a distance of 8.93 ft. to a ½" iron rod (set) for corner,
 North 43 deg. 57 min. 33 sec. West a distance of 21.21 ft. to a ½" iron rod (set) for corner,
 and North 01 deg. 02 min. 27 sec. East a distance of 105.00 ft. to the place of beginning, containing 14,908 acres or 649,410 square feet of land.

STATE OF TEXAS
COUNTY OF DENTON

I HEREBY CERTIFY THAT THIS PLAT IS TRUE AND CORRECT AND WAS PREPARED FROM AN ACTUAL SURVEY OF THE PROPERTY MADE ON THE GROUND UNDER MY SUPERVISION.



REGISTERED PUBLIC LAND SURVEYOR TEXAS R.P.L.S. NO. 5515 DATE

THAT, Jonathan Wang acting herein by and through its duly authorized officer, does hereby adopt this plat designating the hereinabove described property as SANGER CIRCLE, PHASE 7, on addition to the City of Sanger, Texas, and to be known as SANGER CIRCLE, PHASE 7, and to be subject to the jurisdiction and control of all liens and encumbrances, all streets, thoroughfares, alleys, fire lanes, drive aisles, parks, and watercourses, and to the public use forever easements for sidewalks, storm drainage facilities, utilities and other public uses, and to the jurisdiction and control of all laws, ordinances, rules, regulations, subdivision regulations and other City codes and do hereby bind ourselves, our heirs, successors and assigns to warrant and to forever defend the title on the land so dedicated. Further, the undersigned hereby covenants and warrants that the property shall be used for the purposes intended and shall be maintained in good condition at all times in accordance with City codes and regulations. No buildings, fences, trees, shrubs, or other improvements or growths shall be constructed or placed upon, over, or under the property so dedicated except in accordance with the laws, ordinances, rules, regulations of the City of Sanger. The City of Sanger and public utility entities shall have the right to access and maintain all respective easements without the necessity at any time of procuring permission from the owner of the property.

_____, Owner

_____, Title and Company

State of Texas
County of Denton

Before me, the undersigned authority, on this day personally appeared, known to me to be the person whose name is subscribed to the foregoing instrument, and acknowledged to me that he/she executed the same for the purposes and considerations therein expressed and in the capacity therein stated.

Given under my hand and seal of office this ____ day of _____, 2024.

Notary Public in and for the State of Texas

Print Notary's Name

My Commission Expires _____

Preliminary Plat for Review Purposes Only

Approved for Preparation of Final Plat

City of Sanger, TX Date _____
Planning & Zoning Commission

Date: 5-15-24
Dwg Scale: Hor. 1"=60'
Vert.
Dwg File: 0118001FPT.DWG
Project No. 0118001

FPT2

BENCHMARK 3
PK NAIL SET AT THE SOUTHWEST CORNER OF
THE INTERSECTION OF OLIVIA LN. & A
FIRELANE. 8' NORTHEAST OF THE HANDICAP
RAMP. ELEVATION = 701.85

BENCHMARK 6
PK NAIL SET AT THE SOUTHWEST CORNER OF
THE INTERSECTION OF ENCLAVE DR. & ZINO
LN. 8' NORTHEAST OF THE HANDICAP RAMP.
ELEVATION = 705.38

- LEGEND
- Flow Arrows
 - TC XX.X
Top of Curb
 - TP XX.X
Top of Pavement
 - TW XX.X
Top of Wall
 - BW XX.X
Bottom of Wall
 - G XX.X
Ground Elev.
 - X to XX.X
Ex. Top of Curb
 - Grade Break Line
 - Ex. Storm Sewer
 - Prop. Storm Sewer
 - Prop. Curb Inlet
 - Exist. Contours
 - Prop. Contours
 - Low Point
 - High Point
 - Indicates side of lot where
driveway must be located
due to grade differential.
 - Exposed Grade Beam
 - Prop. Retaining Wall

BRAD MARTIN
DOC. NO. 97-0060200
LOT 4, BLOCK ONE
ABNEY ACRES
CAB. M, PG. 84
P.R.D.C.T.

STC GROUP, MILLER, LLC
DOC. NO. 20-0195665
P.R.D.C.T.

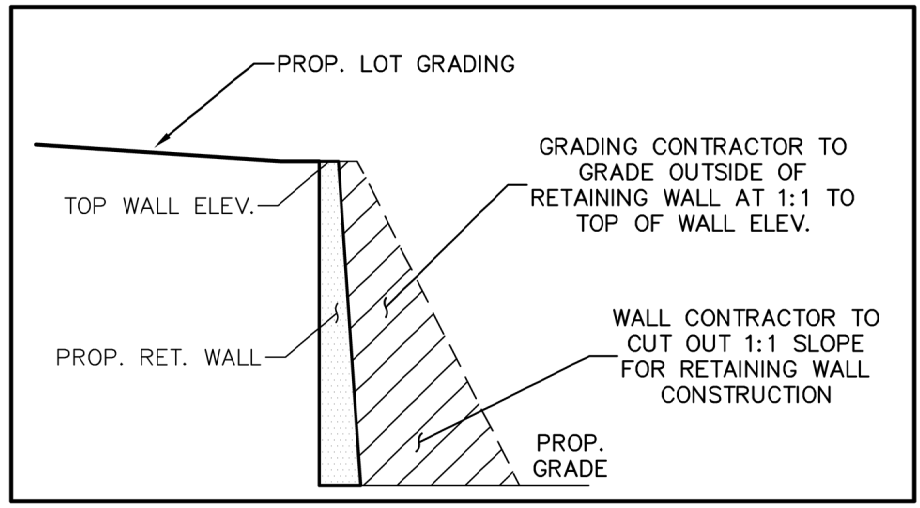
SANGER CIRCLE
PHASE 6B
DOC. NO. 2022-196
O.R.D.C.T.

LOU & PAGE COOPER
VOL. 1005, PG. 253
D.R.D.C.T.

Elevation does not
match contours.
Reconcile.

Flume 1? (profile
name)

CONSTRUCT 6" B-FLUME
400 L.F. @ 1.0%



- NOTE:
- FOR RETAINING WALL OVER 2' CONTRACTOR SHALL FURNISH A STRUCTURAL DESIGN FOR ALL WALLS, SIGNED AND SEALED BY A PROFESSIONAL ENGINEER.
 - NO RETAINING WALLS, INCLUDING FOOTINGS, SHALL BE PLACED IN A RIGHT-OF-WAY, EASEMENT OR OVERLAPPING RESIDENTIAL PROPERTY LINES.

THESE CONSTRUCTION PLANS WERE PREPARED UNDER THE
SUPERVISION OF THE PROFESSIONAL ENGINEER,
REGISTERED PROFESSIONAL ENGINEER NO. 67449.

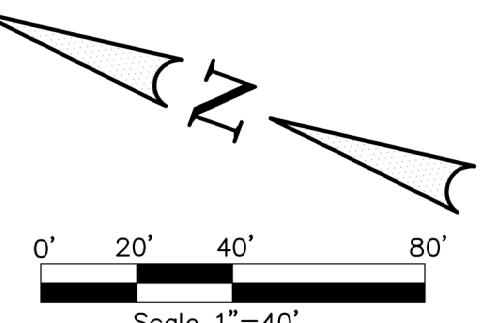
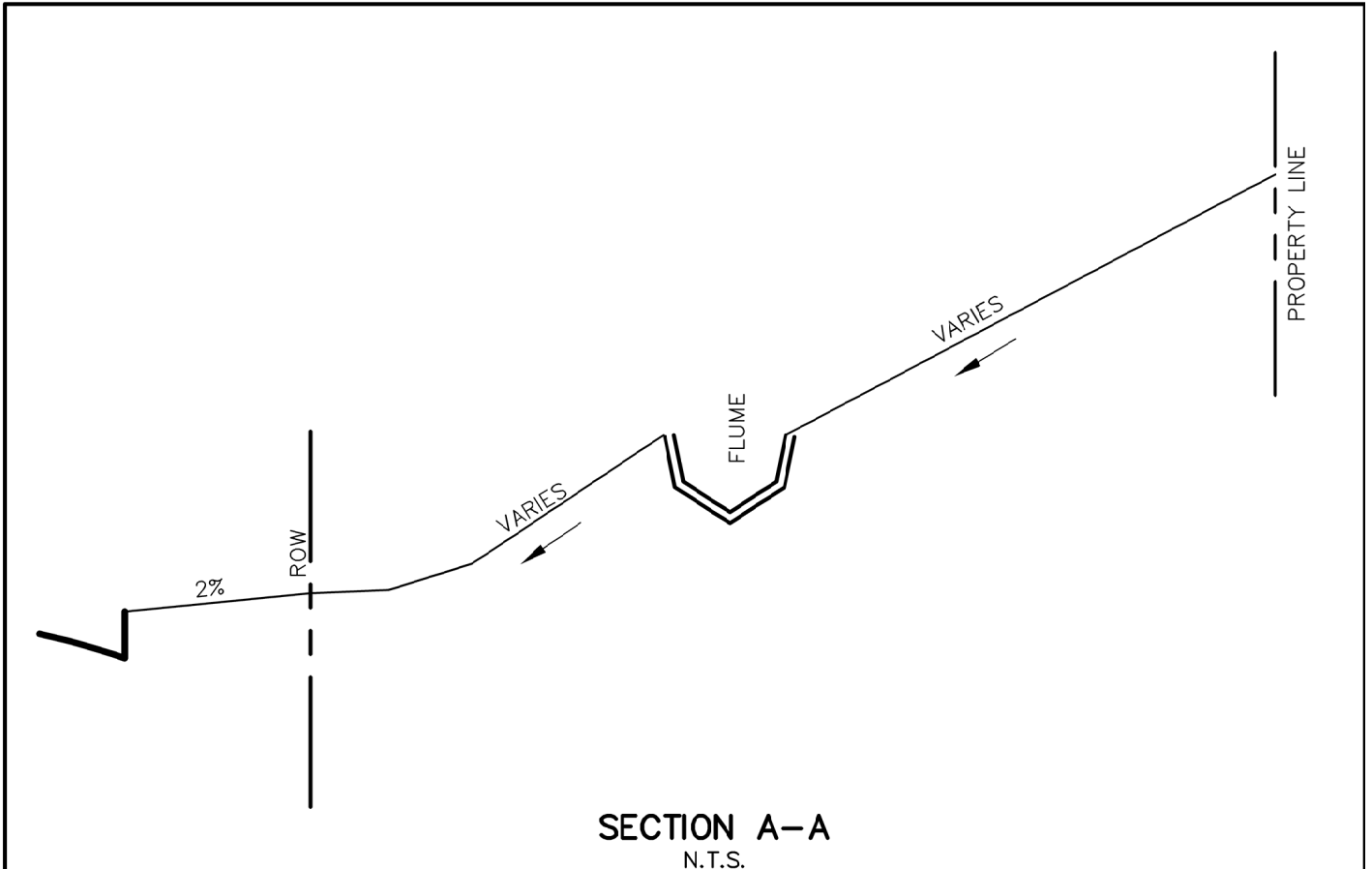


SANGER CIRCLE, PHASE 7
CITY OF SANGER
DENTON COUNTY, TEXAS
TRIEND DEVELOPMENT LP
101 FOREST BEND DRIVE
CORPELL, TEXAS 75019
JONATHAN WANG - 214-316-2256

LOT GRADING PLAN

Date: 5-15-24
Dwg Scale: Hor. 1"=40'
Vert. 1"=10'
Dwg File: 0118001GRD.DWG
Project No. 0118001

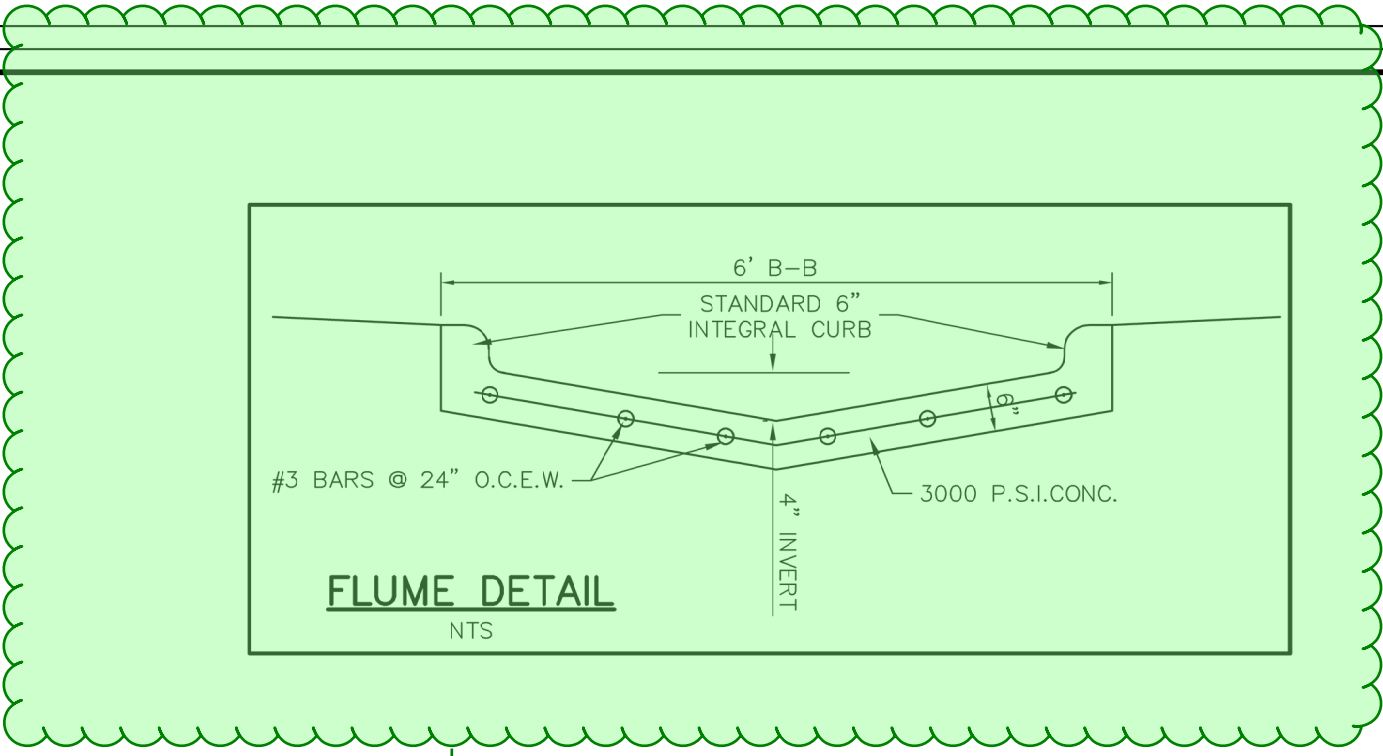
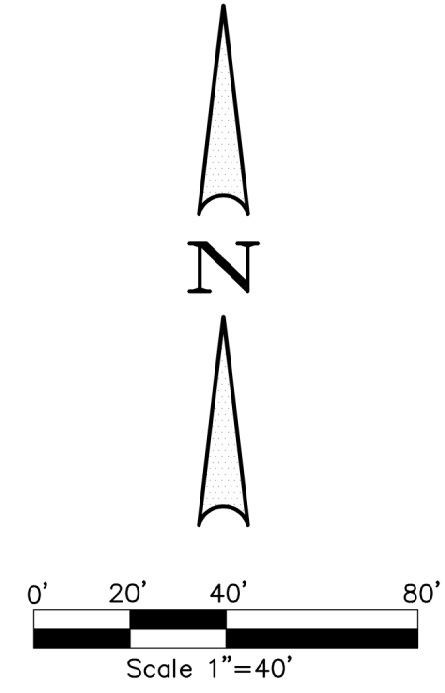
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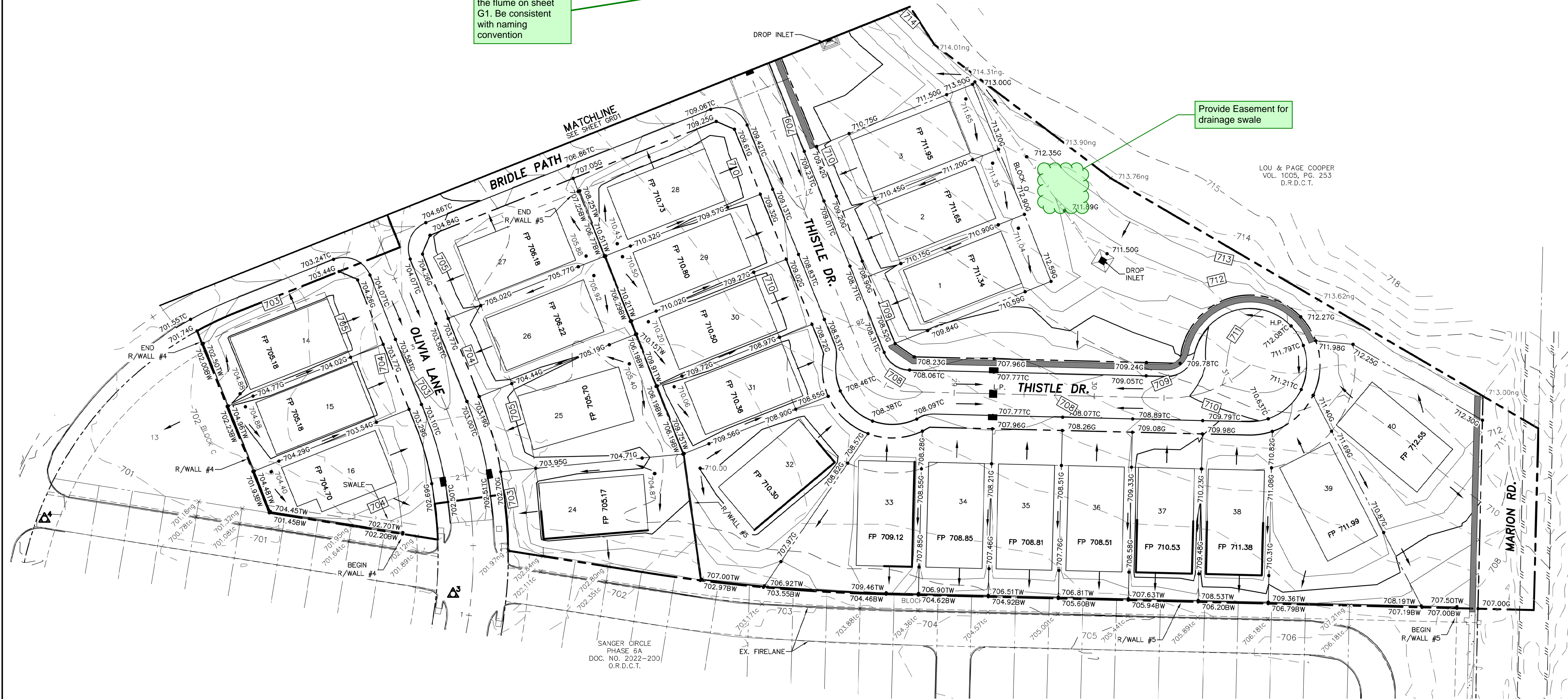
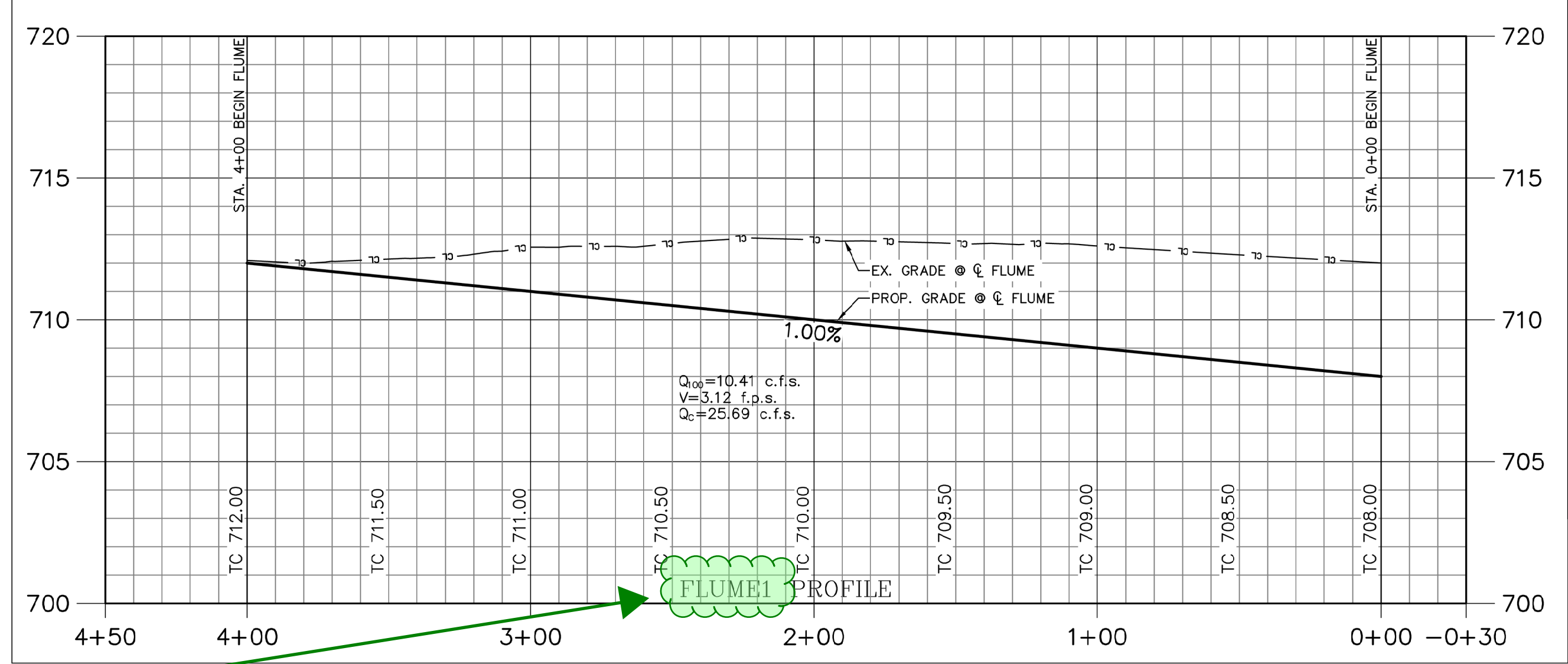
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ELEVATION = 705.38

- LEGEND
- Flow Arrows
 - TC XX.X Top of Curb
 - TP XX.X Top of Pavement
 - TW XX.X Top of Wall
 - BW XX.X Bottom of Wall
 - G XX.X Ground Elev.
 - X to XX.X Ex. Top of Curb
 - Grade Break Line
 - Ex. Storm Sewer
 - Prop. Storm Sewer
 - Prop. Curb Inlet
 - -660- --- Exist. Contours
 - -550- --- Prop. Contours
 - L.P. Low Point
 - H.P. High Point
 - * Indicates side of lot where driveway must be located due to grade differential.
 - Exposed Grade Beam
 - Prop. Retaining Wall



Verify that this is the
detail and profile for
the flume on sheet
G1. Be consistent
with naming
convention



Provide Easement for
drainage swale

LOU & PAGE COOPER
VOL. 1005, PG. 253
D.R.D.C.T.

THESE CONSTRUCTION PLANS WERE PREPARED UNDER THE
SUPERVISION OF THE PROFESSIONAL ENGINEER
REGISTERED PROFESSIONAL ENGINEER NO. 67449.

DATE 5-15-24

REVISION

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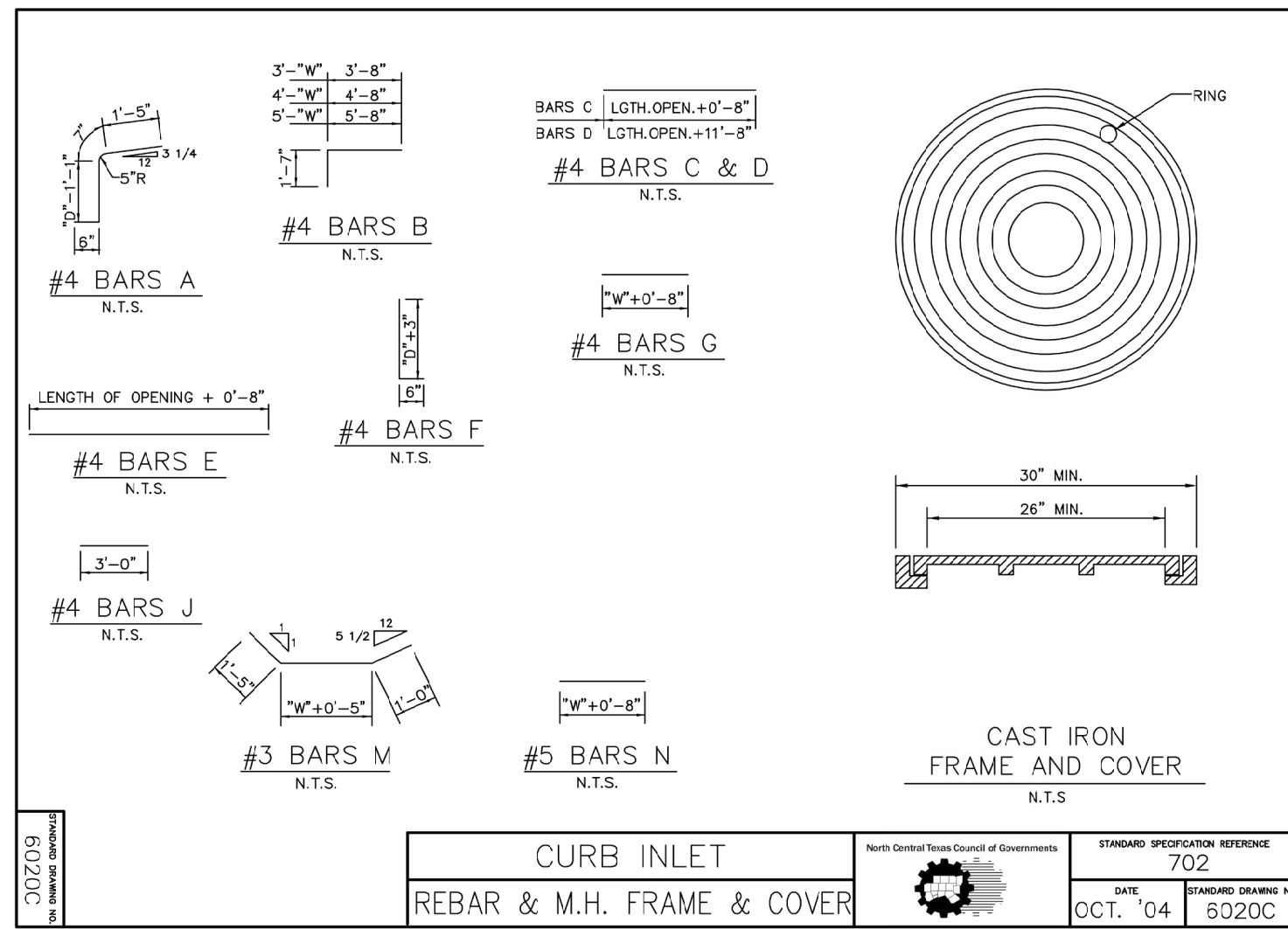
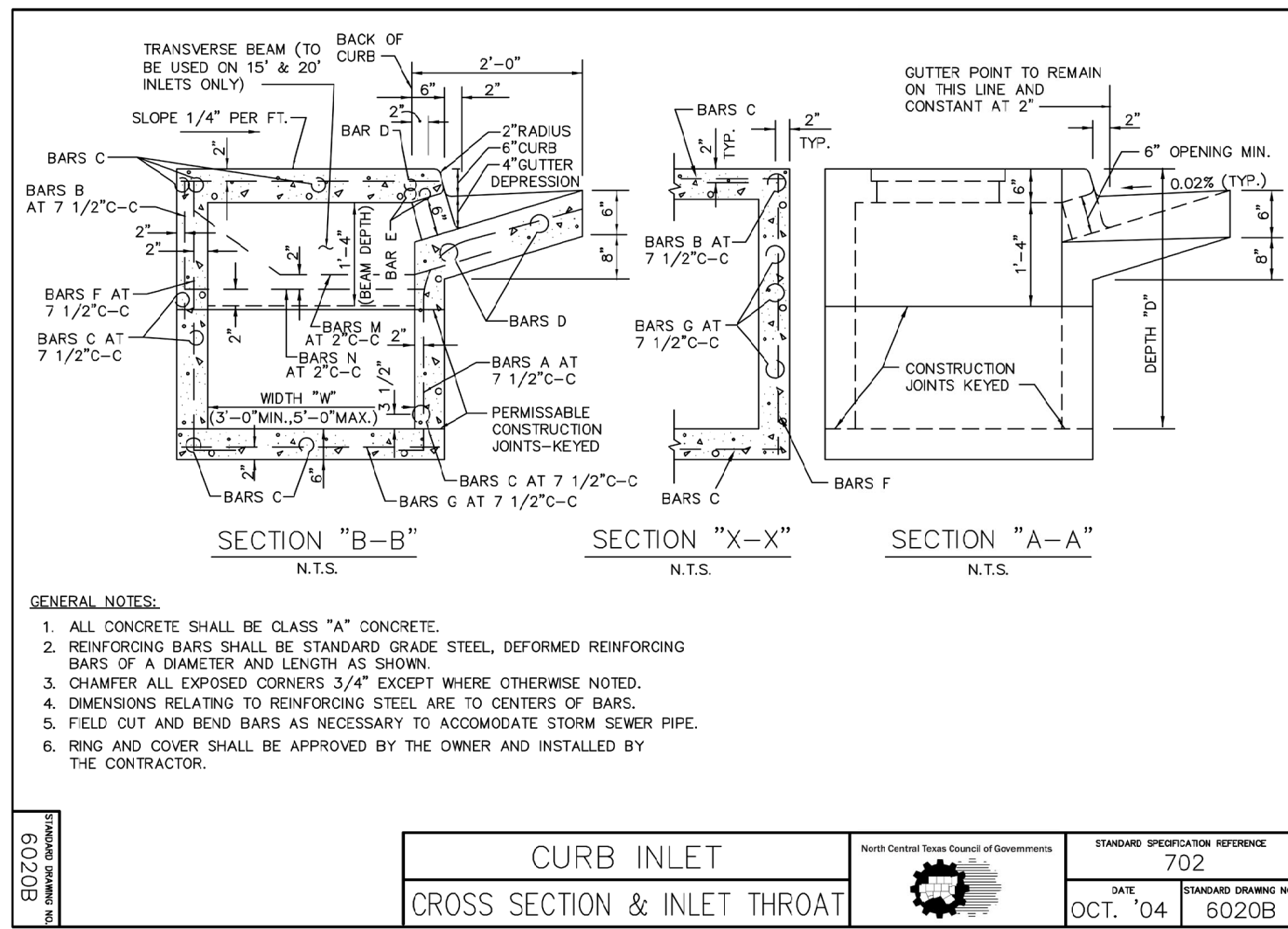
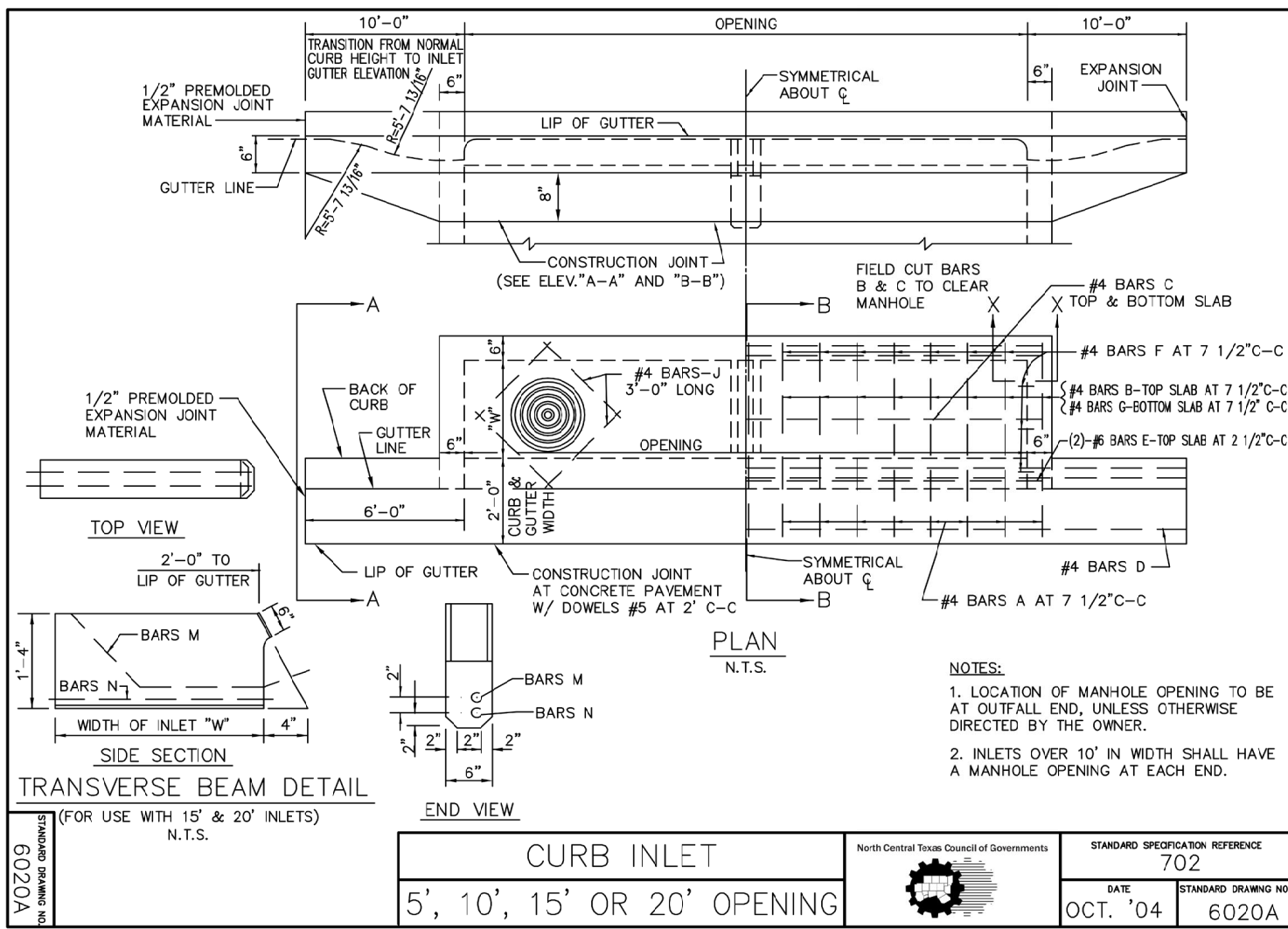
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APPROV.

No.

DATE

REVISION



DEPTH "D"		OPENING LENGTH "L" = 5 ft										OPENING LENGTH "L" = 10 ft										OPENING LENGTH "L" = 15 ft										OPENING LENGTH "L" = 20 ft									
		Widths "W"										Widths "W"										Widths "W"										Widths "W"									
		3'0" 4'0" 5'0"										3'0" 4'0" 5'0"										3'0" 4'0" 5'0"										3'0" 4'0" 5'0"									
BARS	BARS	BARS	BARS	BARS	BARS	BARS	BARS	BARS	BARS	BARS	BARS	BARS	BARS	BARS	BARS	BARS	BARS	BARS	BARS	BARS	BARS	BARS	BARS	BARS	BARS	BARS	BARS	BARS	BARS	BARS	BARS	BARS	BARS	BARS	BARS	BARS	BARS	BARS			
C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI	AJ	AK	AL	AM					
3'-6"	17	3	2	4	20	24	28	10	10	20	28	32	36	10	10	20	28	32	36	40	44	28	36	40	44	48	52	54	34	44	48	52	54	34	44	48	52	54			
3'-9"	18	3	2	4	20	24	28	10	10	20	28	32	36	10	10	20	28	32	36	40	44	28	36	40	44	48	52	54	34	44	48	52	54	34	44	48	52	54			
4'-0"	19	3	2	4	20	24	28	10	10	20	28	32	36	10	10	20	28	32	36	40	44	28	36	40	44	48	52	54	34	44	48	52	54	34	44	48	52	54			
4'-3"	19	3	2	4	20	24	28	10	10	20	28	32	36	10	10	20	28	32	36	40	44	28	36	40	44	48	52	54	34	44	48	52	54	34	44	48	52	54			
4'-6"	21	3	2	4	20	24	28	10	10	20	28	32	36	10	10	20	28	32	36	40	44	28	36	40	44	48	52	54	34	44	48	52	54	34	44	48	52	54			
4'-9"	21	3	2	4	20	24	28	10	10	20	28	32	36	10	10	20	28	32	36	40	44	28	36	40	44	48	52	54	34	44	48	52	54	34	44	48	52	54			
5'-0"	21	3	2	4	20	24	28	10	10	20	28	32	36	10	10	20	28	32	36	40	44	28	36	40	44	48	52	54	34	44	48	52	54	34	44	48	52	54			
5'-3"	23	3	2	4	20	24	28	10	10	20	28	32	36	10	10	20	28	32	36	40	44	28	36	40	44	48	52	54	34	44	48	52	54	34	44	48	52	54			
5'-6"	23	3	2	4	20	24	28	10	10	20	28	32	36	10	10	20	28	32	36	40	44	28	36	40	44	48	52	54	34	44	48	52	54	34	44	48	52	54			
5'-9"	25	3	2	4	20	24	28	10	10	20	28	32	36	10	10	20	28	32	36	40	44	28	36	40	44	48	52	54	34	44	48	52	54	34	44	48	52	54			
6'-0"	25	3	2	4	20	24	28	10	10	20	28	32	36	10	10	20	28	32	36	40	44	28	36	40	44	48	52	54	34	44	48	52	54	34	44	48	52	54			
6'-3"	26	3	2	4	20	24	28	10	10	20	28	32	36	10	10	20	28	32	36	40	44	28	36	40	44	48	52	54	34	44	48	52	54	34	44	48	52	54			
6'-6"	27	3	2	4	20	24	28	10	10	20	28	32	36	10	10	20	28	32	36	40	44	28	36	40	44	48	52	54	34	44	48	52	54	34	44	48	52	54			
6'-9"	27	3	2	4	20	24	28	10	10	20	28	32	36	10	10	20	28	32	36	40	44	28	36	40	44	48	52	54	34	44	48	52	54	34	44	48	52	54			
7'-0"	28	3	2	4	20	24	28	10	10	20	28	32	36	10	10	20	28	32	36	40	44	28	36	40	44	48	52	54	34	44	48	52	54	34	44	48	52	54			
7'-3"	28	3	2	4	20	24	28	10	10	20	28	32	36	10	10	20	28	32	36	40	44	28	36	40	44	48	52	54	34	44	48	52	54	34	44	48	52	54			
7'-6"	30	3	2	4	20	24	28	10	10	20	28	32	36	10	10	20	28	32	36	40	44	28	36	40	44	48	52	54	34	44	48	52	54	34	44	48	52	54			
7'-9"	31	3	2	4	20	24	28	10	10	20	28	32	36	10	10	20	28	32	36	40	44	28	36	40	44	48	52	54	34	44	48	52	54	34	44	48	52	54			
8'-0"	31	3	2	4	20	24	28	10	10	20	28	32	36	10	10	20	28	32	36	40	44	28	36	40	44	48	52	54	34	44	48	52	54	34	44	48	52	54			
8'-3"	32	3	2	4	20	24	28	10	10	20	28	32	36	10	10	20	28	32	36	40	44	28	36	40	44	48	52	54	34	44	48	52	54	34	44	48	52	54			
8'-6"	33	3	2	4	20	24	28	10	10	20	28	32	36	10	10	20	28	32	36	40	44	28	36	40	44	48	52	54	34	44	48	52	54	34	44	48	52	54			
8'-9"	34	3	2	4	20	24	28	10	10	20	28	32	36	10	10	20	28	32	36	40	44	28	36	40	44	48	52	54	34	44	48	52	54	34	44	48	52	54			
9'-0"	35	3	2	4	20	24	28	10	10	20	28	32	36	10	10	20	28	32	36	40	44	28	36	40	44	48	52	54	34	44	48	52	54	34	44	48	52	54			
9'-3"	36	3	2	4	20	24	28	10	10	20	28	32	36	10	10	20	28	32	36	40	44	28	36	40	44	48	52	54	34	44	48	52	54	34	44	48	52	54			
9'-6"	37	3	2	4	20	24	28	10	10	20	28	32	36	10	10	20	28	32	36	40	44	28	36	40	44	48	52	54	34	44	48	52	54	34	44	48	52	54			
10'-0"	38	3	2	4	20	24	28	10	10	20	28	32	36	10	10	20	28	32	36	40	44	28	36	40	44	48	52	54	34	44	48	52	54	34	44	48	52	54			

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DEPTH "D"		SUMMARY OF QUANTITIES FOR CURB INLETS										SUMMARY OF QUANTITIES FOR CURB INLETS										SUMMARY OF QUANTITIES FOR CURB INLETS										SUMMARY OF QUANTITIES FOR CURB INLETS									
		5'-0" OPENING					10'-0" OPENING					15'-0" OPENING					20'-0" OPENING					25'-0" OPENING					30'-0" OPENING														
		CONC	STEEL	CONC	STEEL	CONC	STEEL	CONC	STEEL	CONC	STEEL	CONC	STEEL	CONC	STEEL	CONC	STEEL	CONC	STEEL	CONC	STEEL	CONC	STEEL	CONC	STEEL	CONC	STEEL	CONC	STEEL	CONC	STEEL	CONC	STEEL	CONC	STEEL	CONC	STEEL				
3'-6"	17	2.62	3.06	2.95	3.32	3.28	3.73	4.12	4.29	4.64	5.21	5.20	5.64	5.68	6.47	6.43	7.01	7.30	7.73	7.20	7.46	8.11	8.09	8.63	8.78	9.33	9.33	9.78	9.78	10.33	10.33	10.78	10.78	11.23	11.23	11.68	11.68				
3'-9"	18	2.70	3.09	3.04	3.41	3.36	3.73	4.25	4.44	4.78	5.36	5.34	5.79	5.87	6.67	6.58	7.41	7.30	7.96	7.42	7.74	8.34	8.33	8.87	8.97	9.52	9.52	10.07	10.07	10.52	10.52	10.97	10.97	11.42	11.42	11.87	11.87				
4'-0"	19	2.78	3.28	3.14	3.64	3.48	3.99	4.38	4.58	4.92	5.65	5.49	6.10	6.05	7.18	6.77	7.76	7.49	8.35	7.64	8.09	8.58	8.58	9.12	9.22	9.77	9.77	10.22	10.22	10.67	10.67	11.12	11.12	11.57	11.57	12.02	12.02				
4'-3"	19	2.87	3.34	3.23	3.70	3.59	4.08	4.51	4.78	5.08	5.81	5.64	6.19	6.22	7.29	6.93	7.87	7.69	8.47	7.87	8.32	8.81	8.81	9.35	9.45	9.99	9.99	10.44	10.44	10.89	10.89	11.34	11.34	11.79	11.79	12.24	12.24				
4'-6"	21	2.95	3.56	3.32	3.94	3.66	4.31	4.64	4.88	5.20	6.07	5.79	6.56	6.40	7.70	7.14	8.30	7.88	8.91	8.09	8.73	9.04	10.43	9.99	11.11	11.11	11.65	11.65	12.10	12.10	12.55	12.55	13.00	13.00	13.45	13.45	13.90	13.90			
4'-9"	21	3.03	3.61	3.41	4.10	3.78	4.38	4.77	5.06	5.34	6.16	5.84	6.65	6.57	7.80	7.32	8.41	8.07	9.03	8.31	8.88	9.27	10.56	10.23	11.29	11.29	11.83	11.83	12.28	12.28	12.73	12.73	13.18	13.18	13.63	13.63	14.08	14.08			
4'-12"	23	3.12	3.67	3.51	4.16	3.96	4.55	4.94	5.24	5.47	6.46	6.14	6.97	6.74	8.15	7.57	8.79	8.53	9.62	8.71	9.28	9.66	10.95	10.61	11.67	11.67	12.12	12.12	12.57	12.57	13.02	13.02	13.47	13.47	13.92	13.92					
5'-0"	23	3.22	3.83	3.60	4.25	4.05	5.03	5.60	5.81	6.02	6.91	6.52	7.41	7.23	8.67	7.99	8.90	8.64	9.69	8.86	9.44	9.78	11.07	10.73	11.79	11.79	12.24	12.24	12.69	12.69	13.14	13.14	13.59	13.59	14.04	14.04					
5'-6"	28	3.39	3.89	3.69	4.40	4.20	5.16	5.68	5.85	6.07	6.36	7.11	6.71	8.17	8.37	8.78	9.01	8.60	9.65	8.86	9.38	9.68	10.97	10.63	11.69	11.69	12.14	12.14	12.59	12.59	13.04	13.04	13.49	13.49	13.94	13.94					
5'-9"	33	3.57	4.05	3.78	4.51	4.20	4.95	5.33	5.69	6.00	6.53	6.44	7.28	7.14	8.77	8.61	9.65	9.01	8.65	9.65	10.07	9.92	11.02	11.02	11.47	11.47	11.92	11.92	12.37	12.37	12.82	12.82	13.27	13.27	13.72	13.72					
6'-0"	33	3.63	4.15	3.83	4.60	4.34	5.04	5.50	5.86	6.17	6.72	6.72	7.77	7.62	8.97	8.82	9.75	9.05	9.05	10.02	9.92	11.04	11.04	11.49	11.49	11.94	11.94	12.39	12.39	12.84	12.84	13.29	13.29	13.74	13.74	14.19	14.19				
6'-3"	35	3.75	4.25	3.97	4.70	4.41	5.15	5.65	6.01	6.31	7.18	6.83	7.73	7.63	9.08	8.84	9.75	9.24	9.24	10.46	10.36	11.47	11.47	11.92	11.92	12.37	12.37	12.82	12.82	13.27	13.27	13.72	13.72	14.17	14.17						
6'-6"	36	3.82	4.37	4.06	4.86	4.51	5.32	5.68	6.01	6.31	7.39	6.97	7.97	7.81	9.35	8.92	10.05	9.43	10.43	10.57	11.68	11.68	12.13	12.13	12.58	12.58	13.03	13.03	13.48	13.48	13.93	13.93	14.38	14.38	14.83	14.83					
6'-9"	38	3.91	4.44	4.12	4.95	4.64	5.48	5.88	6.15	6.45	7.67	7.12	8.09	7.88	9.45	8.81	10.05	9.43	10.56	10.68	11.80	11.80	12.25	12.25	12.70	12.70	13.15	13.15	13.60	13.60	14.05	14.05	14.50	14.50	14.95	14.95					
7'-0"	40	4.06	4.60	4.25	5.01	4.71	5.60	5.94	6.16	6.59	7.97	7.27	8.27	8.16	9.81	9.05	10.53	9.82	11.26	11.30	12.37	12.37	12.82	12.82	13.27	13.27	13.72	13.72	14.17	14.17	14.62	14.62	15.07	15.07	15.52	15.52					
7'-3"	40	4.16	4.65	4.34	5.16	4.81	5.67	6.06	6.24	6.72	8.28	7.42	8.48	8.33	9.92	9.18	10.65	10.10	11.38	11.03	12.49	12.49	12.94	12.94	13.39	13.39	13.84	13.84	14.29	14.29	14.74	14.74	15.19	15.19	15.64	15.64					
7'-6"	41	4.25	4.73	4.52	5.29	4.92	5.84	6.22	6.40	6.88	8.50	7.64	8.68	8.53	10.16	9.36	10.82	10.23	11.63	11.07	12.59	12.59	13.04	13.04	13.49	13.49	13.94	13.94	14.39	14.39	14.84	14.84	15.29	15.29	15.74	15.74					
7'-9"	43	4.03	4.91	4.52	5.62	5.02	5.97	6.36	6.62	7.00	8.26	7.71	8.90	8.75	10.15	9.44	11.04	10.48	11.93	11.37	12.82	12.82	13.27	13.27	13.72	13.72	14.17	14.17	14.62	14.62	15.07	15.07	15.52	15.52	15.97	15.97					
8'-0"	41	4.12	4.96	4.56	5.62	5.04	6.02	6.40	6.70	7.14	8.54	7.86	8.99	8.86	10.31	9.73	11.09	10.60	12.05	11.20	13.25	13.25	13.70	13.70	14.15	14.15	14.60	14.60	15.05	15.05	15.50	15.50	15.95	15.95	16.40	16.40					
8'-3"	42	4.04	5.04	4.59	5.22	4.83	6.19	7.56	7.26	7.81	8.88	8.51	9.54	9.34	10.69	9.92	11.49	10.80	12.42	11.55	13.21	13.21	13.66	13.66	14.11	14.11	14.56	14.56	15.01	15.01	15.46	15.46	15.91	15.91	16.36	16.36					
8'-6"	43	4.13	5.44	4.76	5.32	4.91	6.36	7.72	7.42	7.97	9.04	8.67	9.69	9.44	10.97	10.16	11.79	11.07	12.72	11.85	13.51	13.51	13.96	13.96	14.41	14.41	14.86	14.86	15.31	15.31	15.76	15.76	16.21	16.21	16.66	16.66					
8'-9"	43	4.18	5.28	4.80	5.86	5.42	6.43	6.84	7.18	7.58	8.88	8.51	9.54	9.39	11.19	10.29	11.91	11.28	12.80	11.87	14.01	13.07	14.22	14.22	14.67	14.67	15.12	15.12	15.57	15.57	16.02	16.02	16.47	16.47	16.92	16.92					
9'-0"	44	4.45	5.49	4.96	6.05	5.53	6.64	6.97	7.42	7.90	9.16	8.46	9.85	9.56	11.48	10.47	12.31	11.38	13.03	12.09	14.47	13.53	14.68	14.68	15.13	15.13	15.58	15.58	16.03	16.03	16.48	16.48	16.93	16.93	17.38	17.38					
9'-3"	45	4.53	5.64	5.07	6.16	5.63	6.74	7.10	7.58	8.06	9.30	8.56	10.00	9.74	11.66	10.60	12.49	11.57	13.36	12.43	14.85	13.91	15.06	15.06	15.51	15.51	15.96	15.96	16.41	16.41	16.86	16.86	17.31	17.31	17.76	17.76					
9'-6"	46	4.68	5.17	5.30	6.73	6.93	7.23	7.88	7.97	9.05	10.75	10.22	9.92	11.55	10.64	12.80	11.77	13.65	12.53	14.65	13.65	15.25	15.25	15.70	15.70	16.15	16.15	16.60	16.60	17.05	17.05	17.50	17.50	17.95	17.95						
9'-9"	48	4.78	5.82	5.36	6.45	5.93	7.08	7.49	8.00	8.11	9.74	9.05	10.48	10.27	12.27	11.21	13.10	12.19	13.98	12.96	14.86	13.86	15.26	15.26	15.71	15.71	16.16	16.16	16.61	16.61	17.06	17.06	17.51	17.51	17.96	17.96					

NOTE:

1. THE FOLLOWING DIMENSIONS OF INLETS SHOWN IN ABOVE TABLES ARE IN INCREMENTS OF 3 INCHES BUT ANY DEPTHS OTHER THAN THOSE SHOWN ABOVE MAY BE USED WHEREVER DEMAND NECESSARY. QUANTITIES FOR THESE DEPTHS FALLING WITHIN THE LIMITS OF THE TABLE MAY BE FOUND BY INTERPOLATION.

CONC INLET

NOTED FOR THE PURPOSE OF THIS PROJECT

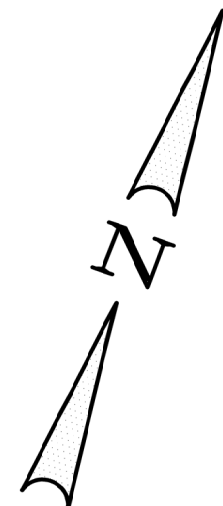
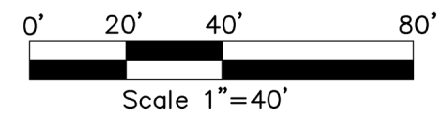
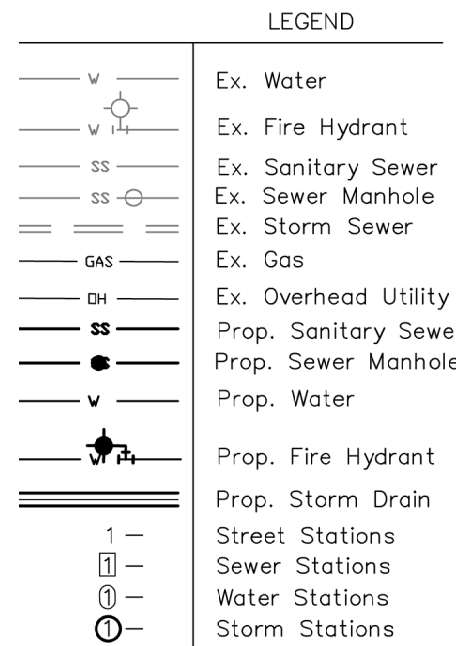
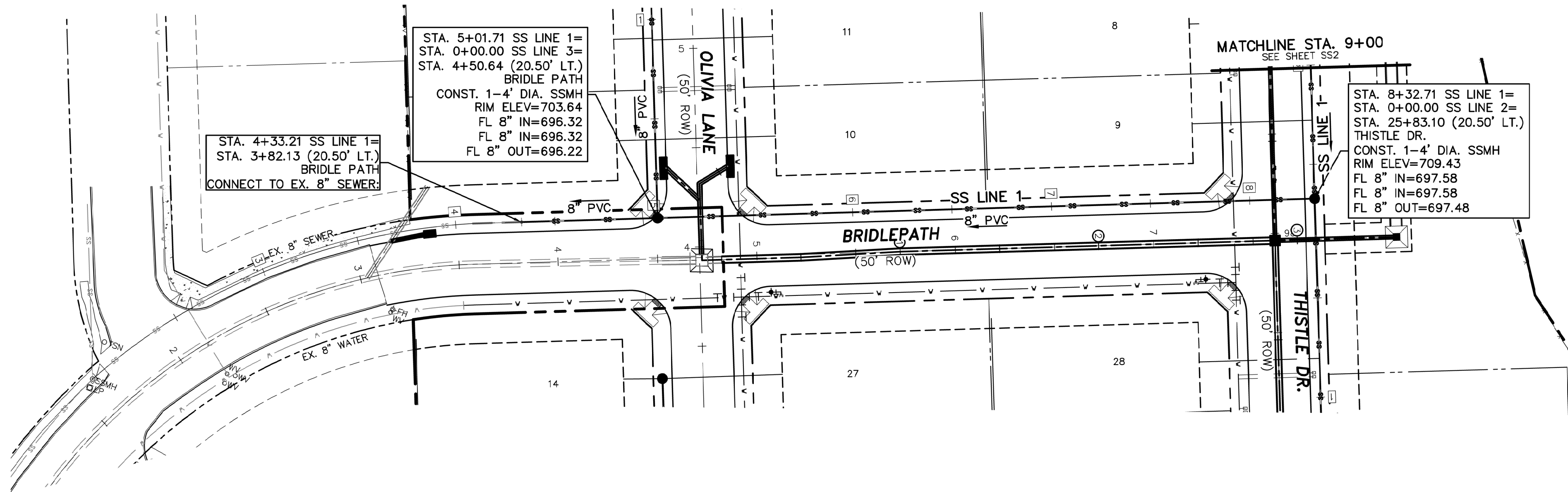
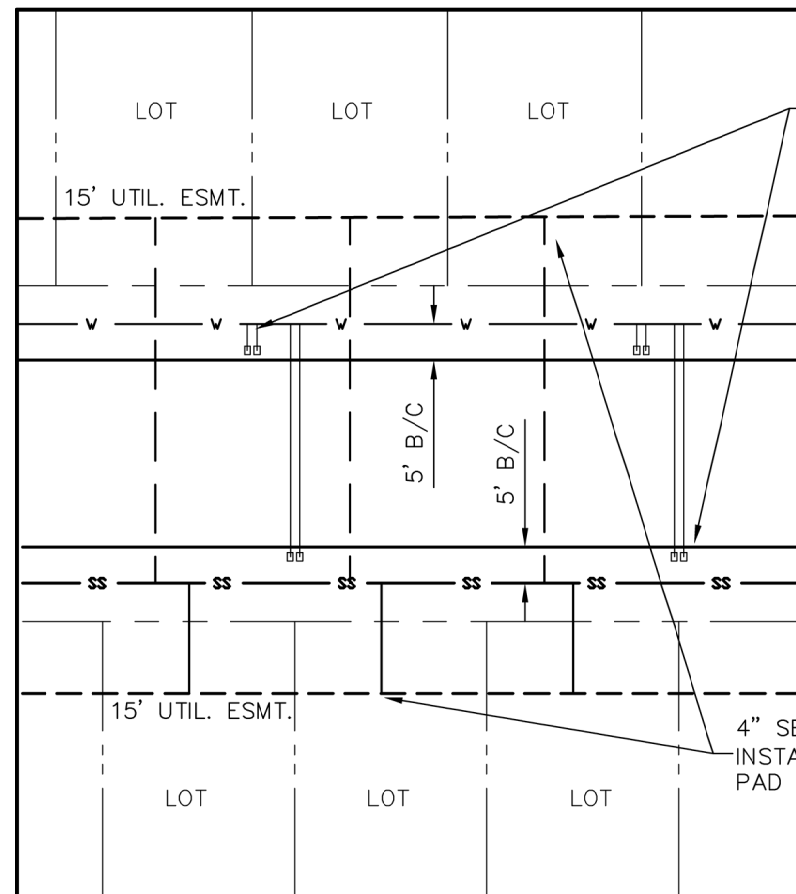
SUMMARY OF QUANTITIES

DATE

10/20/2024

PROJECT NO.

60201



BENCHMARK 3
PK NAIL SET AT THE SOUTHWEST CORNER OF THE INTERSECTION OF OLIVIA LN. & A FIRELANE. 8' NORTHEAST OF THE HANDICAP RAMP. ELEVATION = 701.85

BENCHMARK 6
PK NAIL SET AT THE SOUTHWEST CORNER OF THE INTERSECTION OF ENCLAVE DR. & ZINO LN. 8' NORTHEAST OF THE HANDICAP RAMP. ELEVATION = 705.38

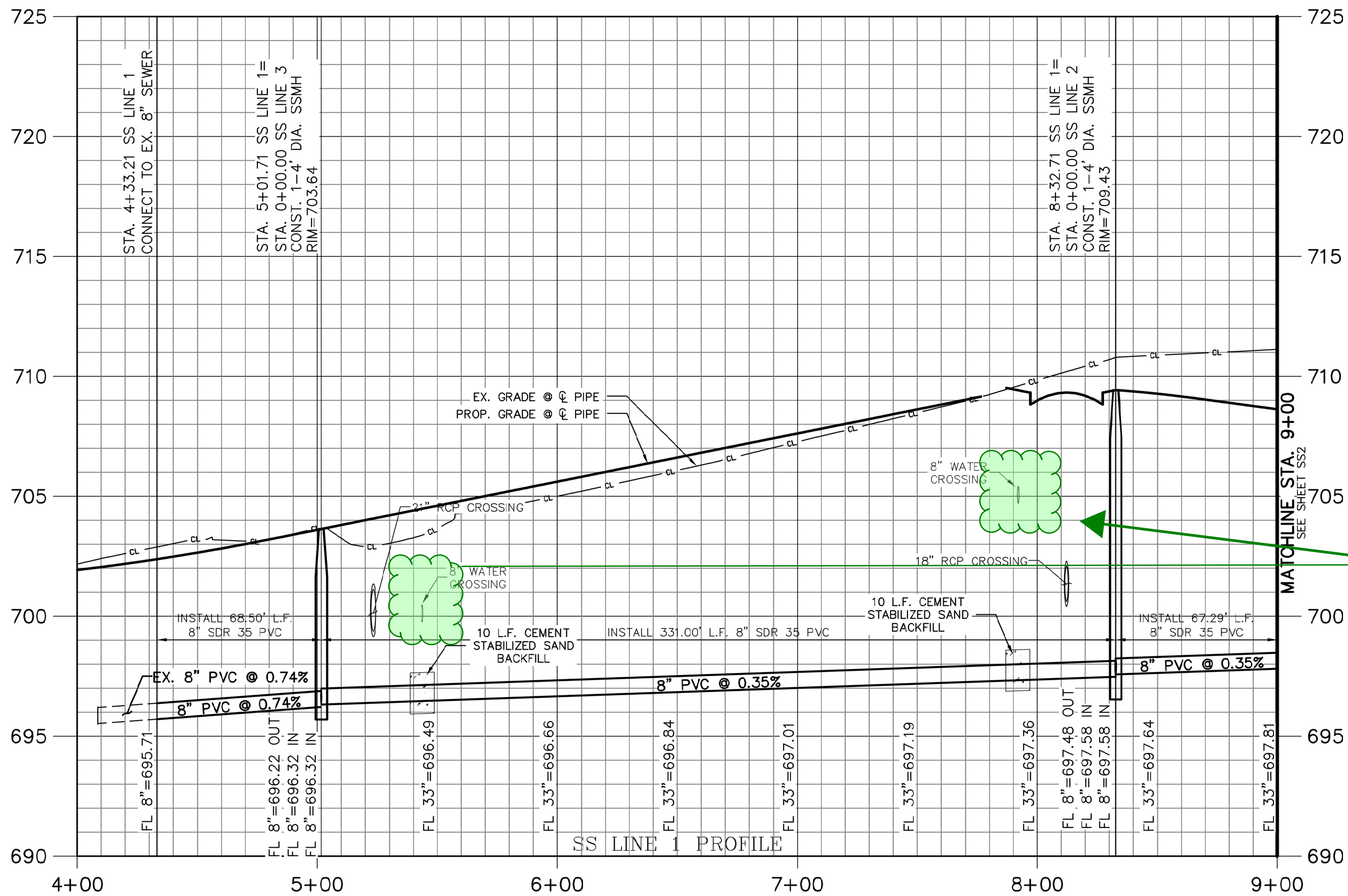
TCEQ "CHAPTER 217 DESIGN CRITERIA FOR DOMESTIC WASTE WATER SYSTEM"
TABLE C.1

CASE
CROSSING PIPES WITHIN NINE FEET, WHERE THE COLLECTION SYSTEM PIPE IS ABOVE THE WATER SUPPLY PIPE.

PROTECTION REQUIREMENT
ENCASED IN A CASING PIPE ACCORDING TO PARAGRAPH (5)(A) OF THIS SUBSECTION -OR- CONSTRUCTED USING 150 PSI PRESSURE CLASS PIPE ACCORDING TO PARAGRAPH (5)(B) OF THIS SUBSECTION.

CROSSING PIPES WITHIN NINE FEET, WHERE THE COLLECTION SYSTEM PIPE IS BELOW THE WATER SUPPLY PIPE.

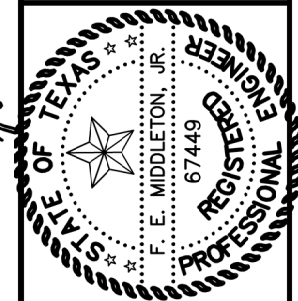
CONSTRUCTED USING 150 PSI PRESSURE CLASS PIPE ACCORDING TO PARAGRAPH (7)(A) OF THIS SUBSECTION.



Water crossings do not meet TCEQ standard of minimum 9' clearance

THESE CONSTRUCTION PLANS WERE PREPARED UNDER THE CLOSE PERSONAL SUPERVISION OF
REGISTERED PROFESSIONAL ENGINEER NO. 67449
J. E. Middleton, Jr.

5-15-24



SANGER CIRCLE, PHASE 7
CITY OF SANGER
DENTON COUNTY, TEXAS

TRIOND DEVELOPMENT LP
101 FOREST BEND DRIVE
COPPELL, TEXAS 75019

JONATHAN WANG - 214-316-2256

SANITARY SEWER PLAN
SS LINE 1 STA. 4+33 - 9+00

Date: 5-15-24
Dwg Scale: Hor. 1"=40'
Vert. 1"=4'
Dwg File: 011800UTIL.DWG
Project No. 0118001

SS1