

STREET AND DRAINAGE CONSTRUCTION PLANS

- C0 - CITY OF BOERNE GENERAL NOTES
- C1 - ULTIMATE MASTER DRAINAGE PLAN
- C2 - ULTIMATE MASTER DRAINAGE PLAN - RATIONAL METHOD CALCULATIONS
- C3 - STREET PLAN & PROFILE - RUSTIC BARN LANE
- C4 - STREET PLAN & PROFILE - RUSTIC BARN LANE
- C5 - STREET PLAN & PROFILE - WHITE BARN COVE
- C6 - STREET PLAN & PROFILE - TROTTING HORSE
- C7 - STREET PLAN & PROFILE - OLD RIDGE LANE
- C8 - STREET PLAN & PROFILE - PONY BEND
- C9 - STREET PLAN & PROFILE - RUSTIC GROVE
- C10 - STREET PLAN & PROFILE - RUSTIC GROVE
- C11 - STREET PLAN & PROFILE - ACORN CIRCLE
- C12 - STREET PLAN & PROFILE - ACORN CIRCLE
- C13 - STREET PLAN & PROFILE - WINDMILL BREEZE
- C14 - STREET PLAN & PROFILE - WINDING WINDMILL
- C15 - STREET PLAN & PROFILE - WINDING WINDMILL
- C16 - STREET PLAN & PROFILE - FARMING GROVE
- C17 - TRAFFIC SIGNAGE PLAN
- * C18 - CITY OF BOERNE STANDARD STREET DETAILS
- C19 - DRAIN PLAN & PROFILE - DRAIN '2-A'
- C20 - DRAIN PLAN & PROFILE - DRAIN '2-A'
- C21 - DRAIN PLAN & PROFILE - DRAIN '2-B' & '2-H'
- C22 - DRAIN PLAN & PROFILE - DRAIN '2-C'
- C23 - DRAIN PLAN & PROFILE - DRAIN '2-C'
- C24 - DRAIN PLAN & PROFILE - DRAIN '2-C'
- C25 - DRAIN PLAN & PROFILE - DRAIN '2-D' & '2-E'
- C26 - DRAIN PLAN & PROFILE - DRAIN '2-F' & '2-G'
- C27 - DRAIN PLAN & PROFILE - DRAIN '2-I'
- * C28 - CURB INLET DETAILS
- * C29 - SAFETY END TREATMENT DETAILS
- C30 - DRAINAGE DETAILS
- C31 - BATCH DETENTION POND PLAN - NORTHEAST POND
- C32 - BATCH DETENTION POND PLAN - NORTHEAST POND
- C33 - BATCH DETENTION POND PLAN - NORTHEAST POND

SANITARY SEWER CONSTRUCTION PLANS

- C34 - OVERALL SANITARY SEWER PLAN
- C35 - OVERALL SANITARY SEWER PLAN
- C36 - SANITARY SEWER GENERAL NOTES
- C37 - SANITARY SEWER PLAN & PROFILE LINE "A"
- C38 - SANITARY SEWER PLAN & PROFILE LINE "A"
- C39 - SANITARY SEWER PLAN & PROFILE LINE "A"
- C40 - SANITARY SEWER PLAN & PROFILE LINE "E"
- C41 - SANITARY SEWER PLAN & PROFILE LINE "F"
- C42 - SANITARY SEWER PLAN & PROFILE LINE "G"
- C43 - SANITARY SEWER PLAN & PROFILE LINE "I"
- C44 - SANITARY SEWER PLAN & PROFILE LINE "I"
- C45 - SANITARY SEWER PLAN & PROFILE LINE "H" & "J" & "K"
- * C46 - SANITARY SEWER STANDARD DETAILS

WATER DISTRIBUTION CONSTRUCTION PLANS

- C47 - WATER DISTRIBUTION PLAN
- C48 - WATER DISTRIBUTION PLAN
- C49 - WATER DISTRIBUTION PLAN
- C50 - 16" OVERSIZE WATER PLAN & PROFILE
- C51 - 16" OVERSIZE WATER PLAN & PROFILE
- * C52 - WATER DISTRIBUTION STANDARD DETAILS

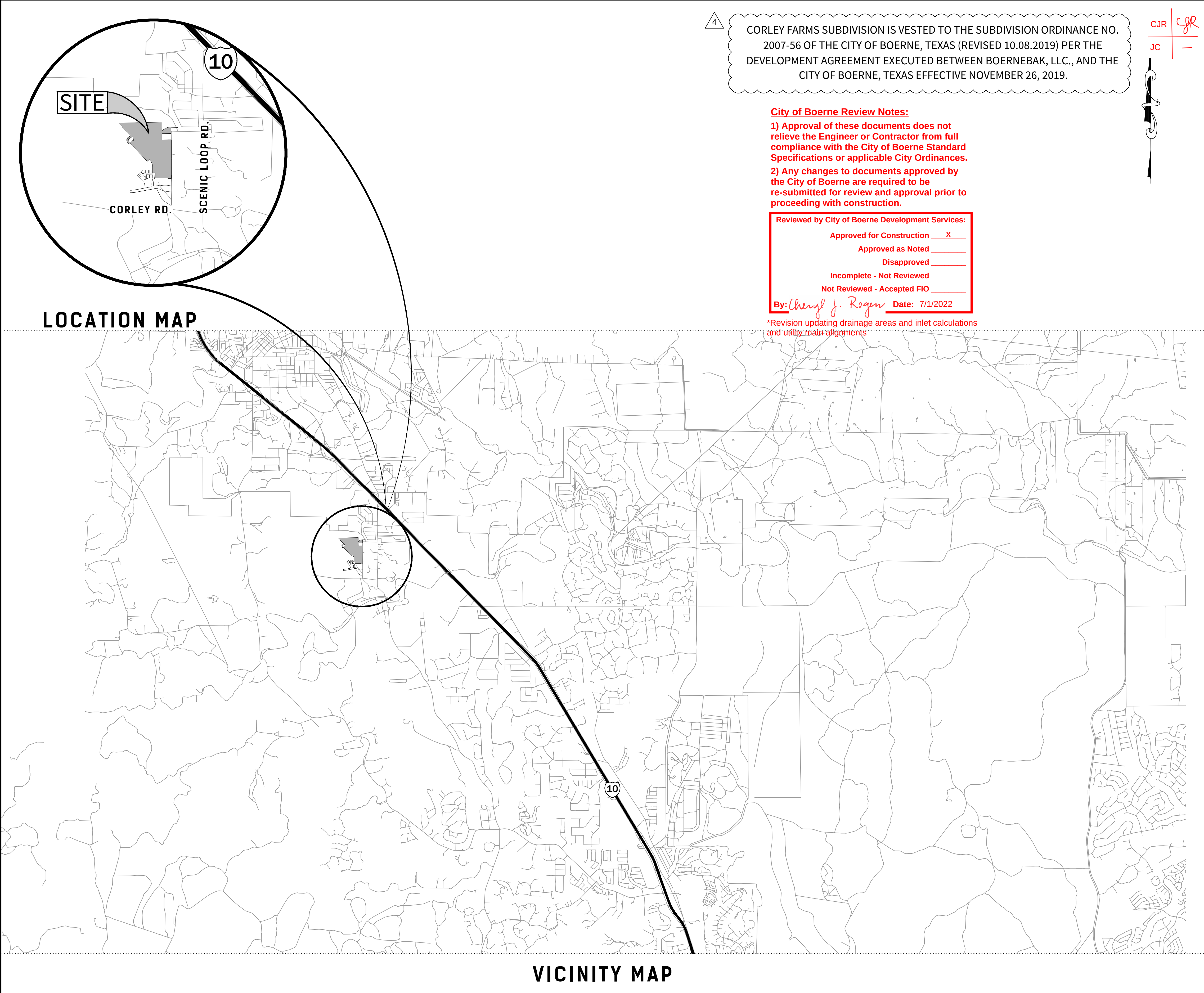
GAS DISTRIBUTION CONSTRUCTION PLANS

- C53 - NATURAL GAS DISTRIBUTION PLAN
- C54 - NATURAL GAS DISTRIBUTION PLAN
- * C55 - NATURAL GAS DISTRIBUTION PLAN DETAILS

MISCELLANEOUS CONSTRUCTION PLANS

- C56 - UTILITY LAYOUT PLAN
- C57 - UTILITY LAYOUT PLAN
- C58 - UTILITY LAYOUT PLAN
- C59 - STORM WATER POLLUTION PREVENTION PLAN
- C60 - STORM WATER POLLUTION PREVENTION PLAN

* STANDARD DETAILS ADOPTED FOR THIS CONSTRUCTION SET.



4

CORLEY FARMS SUBDIVISION IS VESTED TO THE SUBDIVISION ORDINANCE NO. 2007-56 OF THE CITY OF BOERNE, TEXAS (REVISED 10.08.2019) PER THE DEVELOPMENT AGREEMENT EXECUTED BETWEEN BOERNEBAK, LLC., AND THE CITY OF BOERNE, TEXAS EFFECTIVE NOVEMBER 26, 2019.

CJR
JC

CJR

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City of Boerne Review Notes:

- 1) Approval of these documents does not relieve the Engineer or Contractor from full compliance with the City of Boerne Standard Specifications or applicable City Ordinances.
- 2) Any changes to documents approved by the City of Boerne are required to be re-submitted for review and approval prior to proceeding with construction.

Reviewed by City of Boerne Development Services:

Approved for Construction ☒ X

Approved as Noted ☐

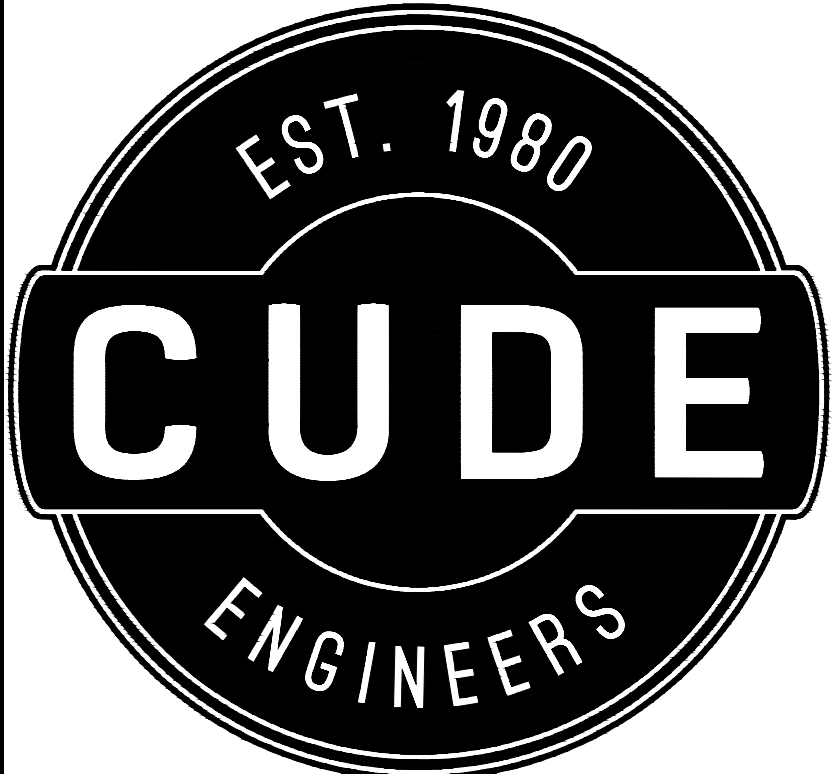
Disapproved ☐

Incomplete - Not Reviewed ☐

Not Reviewed - Accepted FIO ☐

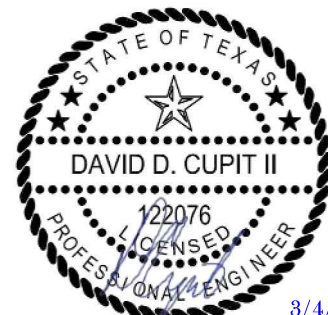
By: Cheryl J. Rogn Date: 7/1/2022

*Revision updating drainage areas and inlet calculations and utility main alignments



CORLEY FARMS
UNIT 2

CONSTRUCTION PLANS



CUDE ENGINEERS
TBPE No. 455
TBPLS No. 10048500



DEVELOPER:

PULTE HOMES OF TEXAS, L.P.
CONTACT PERSON: FELIPE GONZALEZ
1718 DRY CREEK WAY, SUITE 120
SAN ANTONIO, TX 78259
TEL: (210) 496-1985
FAX: (210) 496-0449

4122 Pond Hill Road, Suite 101

San Antonio, Texas 78231

P:(210) 681.2951 F: (210) 523.7112

DRAWN BY
C3

DATE
03/22/2022

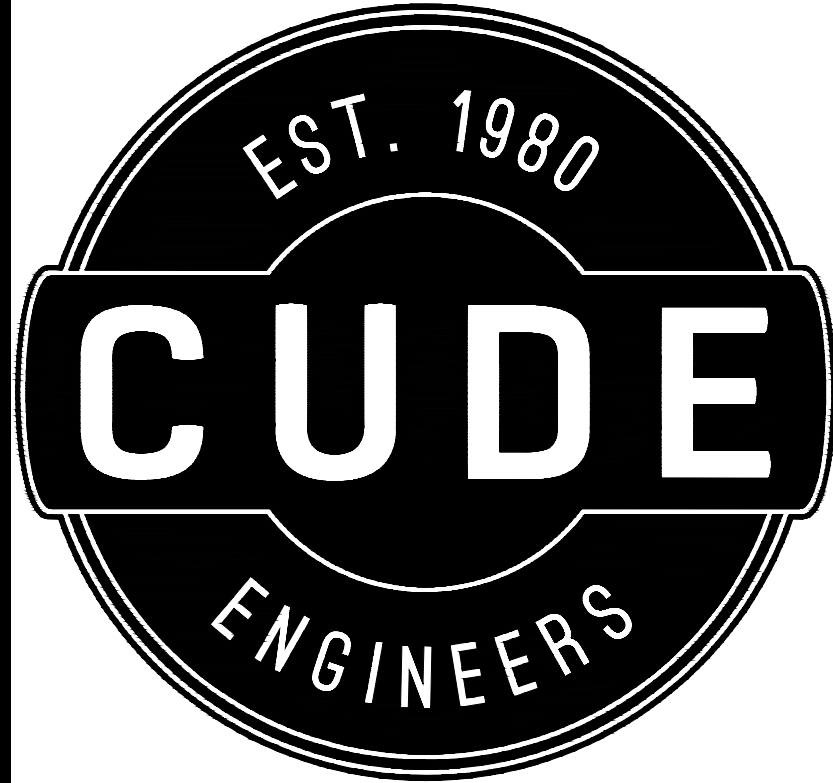
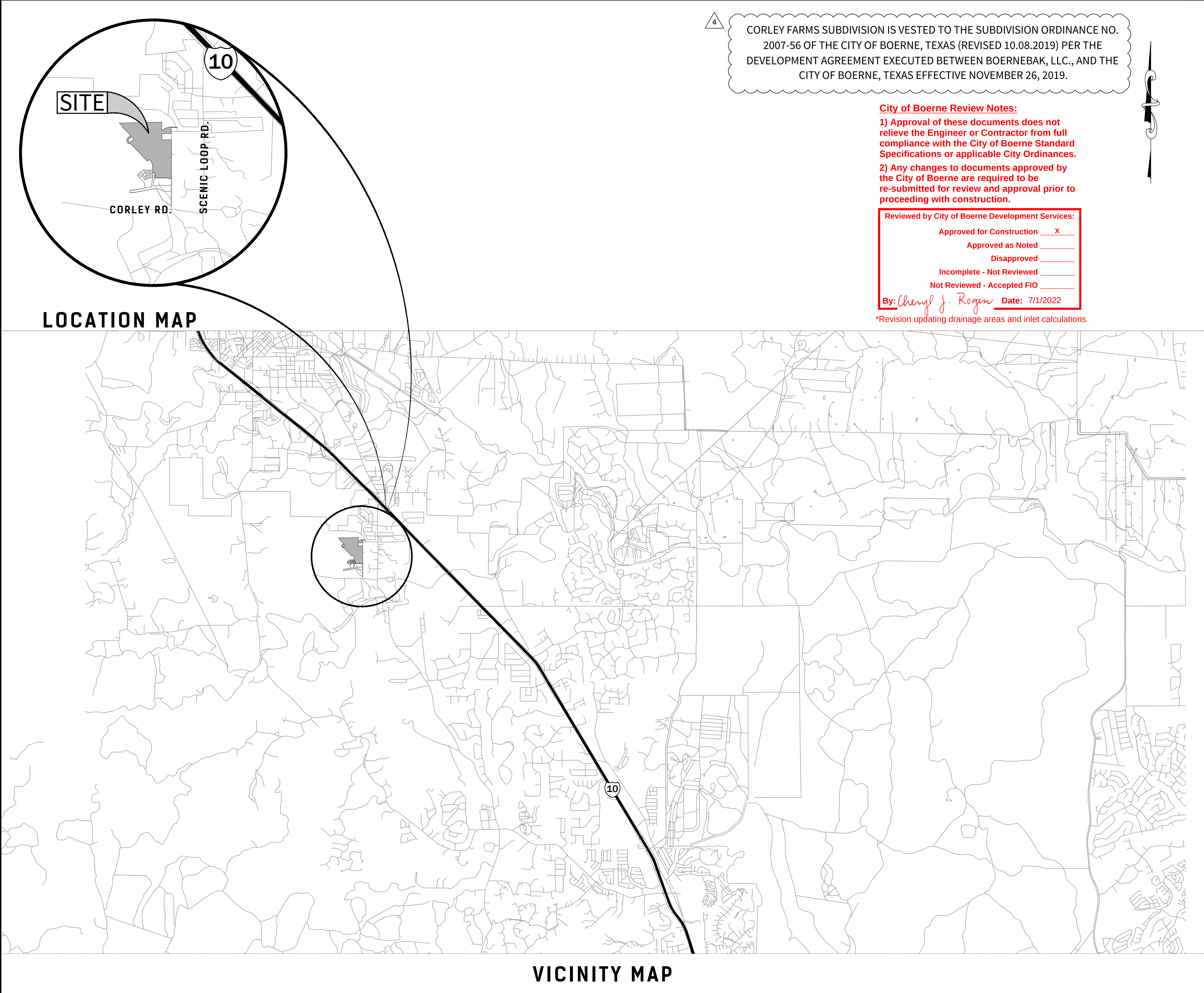
CHECKED BY
JC/DDC

PROJECT NO.
03481.005

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★ STANDARD DETAILS ADOPTED FOR THIS CONSTRUCTION SET.



CORLEY FARMS
UNIT 2

STREET AND DRAINAGE
CONSTRUCTION PLANS



DEVELOPER:

PULTE HOMES OF TEXAS, L.P.
CONTACT PERSON: FELIPE GONZALEZ
1718 DRY CREEK WAY, SUITE 120
SAN ANTONIO, TX 78259
TEL: (210) 496-1985
FAX: (210) 496-0449

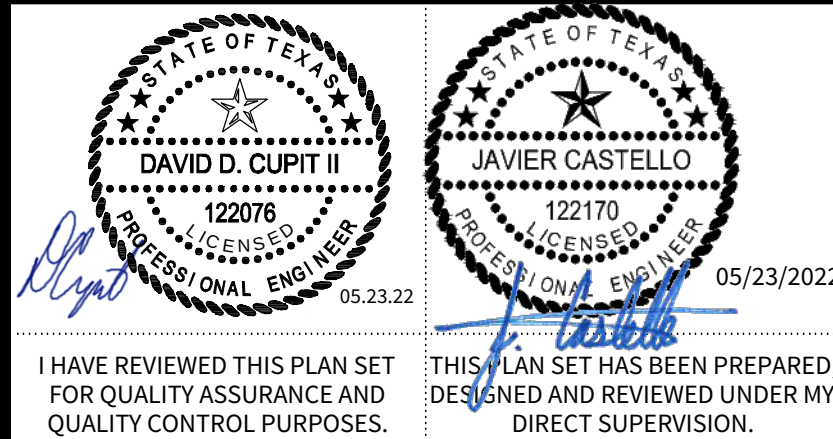
4122 Pond Hill Road, Suite 101
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P:(210) 681.2951 F: (210) 523.7112

DRAWN BY
C3

CHECKED BY
JC/DDC

DATE
05/19/2022

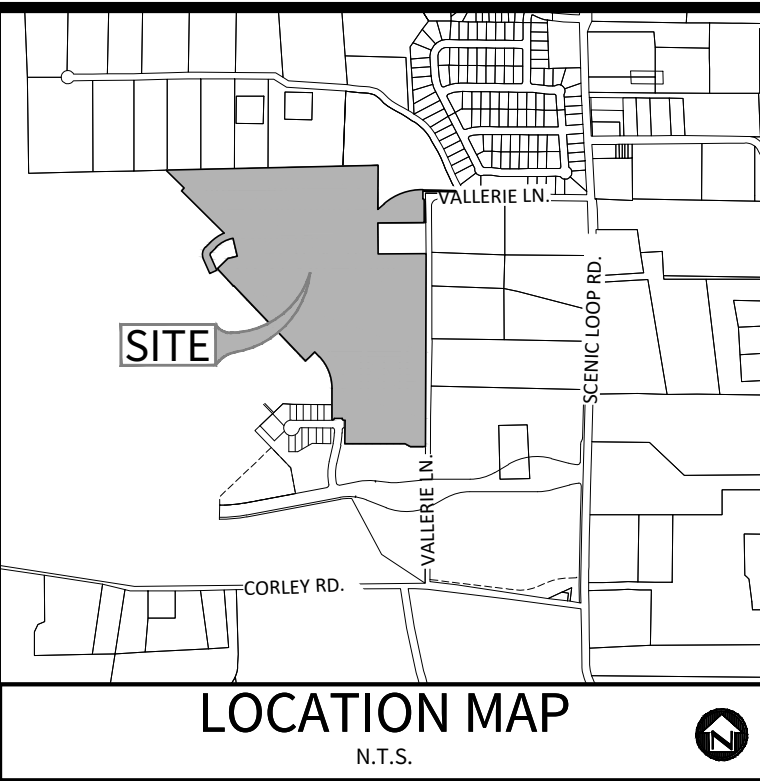
PROJECT NO.
03481.005



I HAVE REVIEWED THIS PLAN SET FOR QUALITY ASSURANCE AND QUALITY CONTROL PURPOSES.

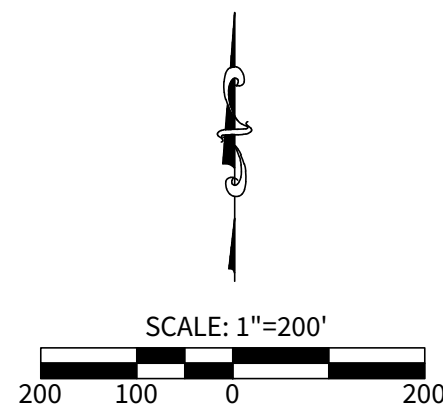
THIS PLAN SET HAS BEEN PREPARED, DESIGNED AND REVIEWED UNDER MY DIRECT SUPERVISION.

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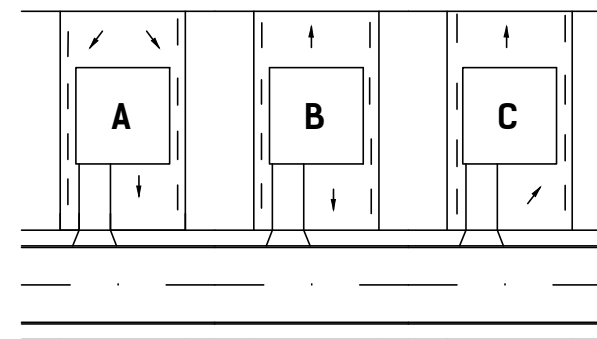
OWNER/DEVELOPER:
PULTE HOMES OF TEXAS, L.P.
CONTACT PERSON: FELIPE GONZALEZ
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CIVIL ENGINEER:
M.W. CUDE ENGINEERS, L.L.C.
CONTACT PERSON: DAVID D. CUPIT II, P.E.
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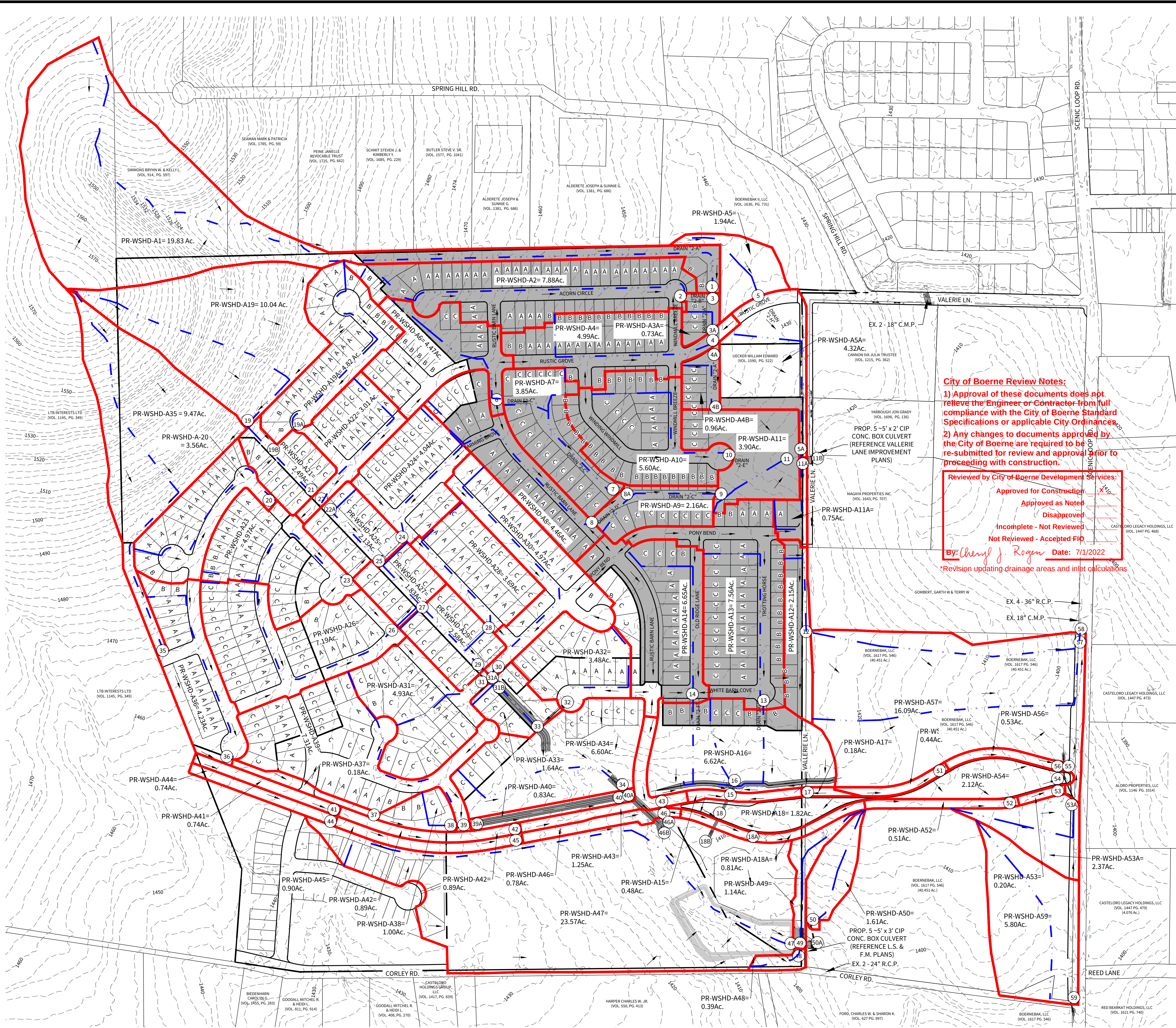


LEGEND

UNIT BOUNDARY
DRAINAGE AREA BOUNDARY
Tc FLOW PATH
ACCUMULATION POINT
FLOW ARROWS



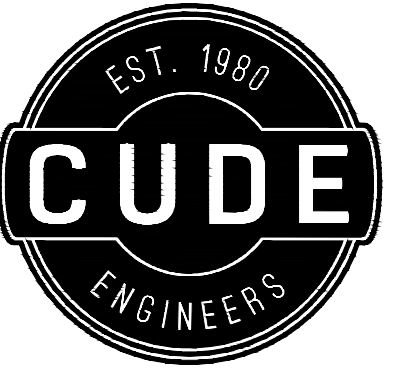
TYPICAL LOT SITE PLAN
N.T.S.



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Reviewed by City of Boerne Development Services:
Approved for Construction
Approved as Noted
Disapproved
Incomplete - Not Reviewed
Not Reviewed - Accepted FID

By: Cheryl J. Rogan Date: 7/11/2022
*Revision updating drainage areas and inlet calculations



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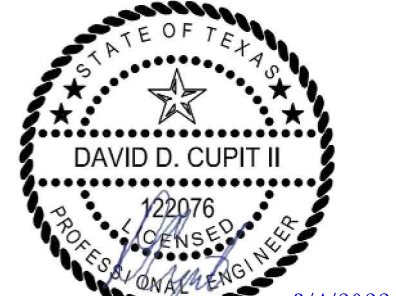
CORLEY FARMS UNIT 2

ULTIMATE MASTER DRAINAGE PLAN

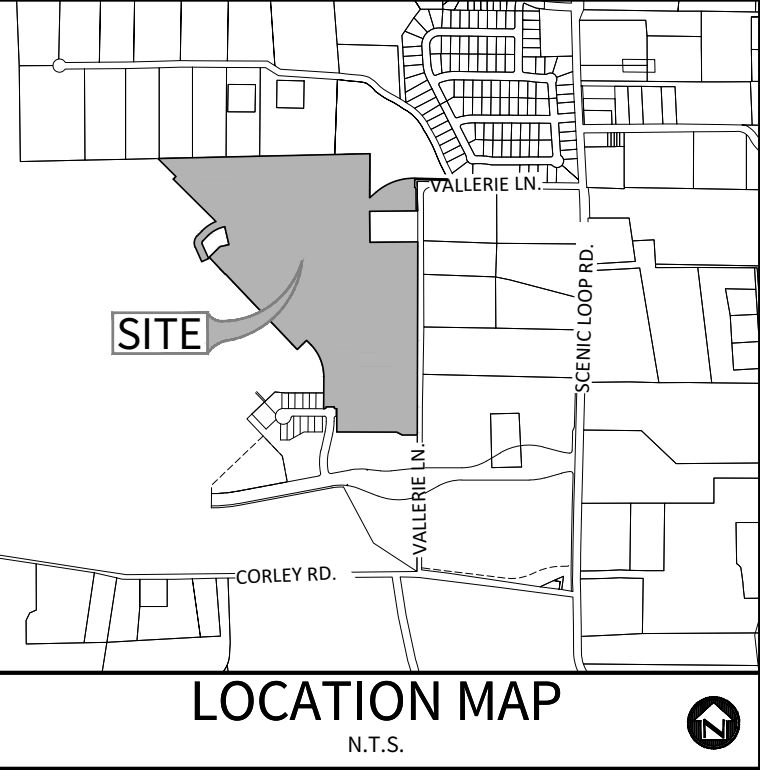
DATE
03/03/2022
PROJECT NO.
03481.005
DRAWN BY
C3
CHECKED BY
XV/JC/DDC

REVISIONS

- 1.
- 2.
- 3.
4. 2021-11-12 - ADDED STREET NAMES
- 5.
- 6.
- 7.
- 8.
- 9.



CUDE ENGINEERS
TBPE No. 455
TBPLS No. 10048500



OWNER/DEVELOPER:

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Project Name: Corley Farms Calculation Summary for Time of Concentrations & Ultimate Flow, "U"															Precipitation Area Atlas 14 = PA1												
HYDROLOGY							Sheet Flow Tc Computations					Shallow Conc. Tc Computations				Concentrated Tc Computations			Overall	INTENSITY				Q FLOW			
Drainage Shed/ Computation point	Area (Ac.)	AREA OF ACCUMULATION (Ac.)	Rational Shed Area (Ac.)	C	25 Year Cf = 1.1 C* Cf	100 Year Cf = 1.25 C* Cf	Length < 300'	Manning's Roughness Coefficient (n)	Slope	Time of Concentration	Length	Manning's Roughness Coefficient (n)	Slope	Time of Concentration	Length	Velocity (fps)	Time of Concentration	Time of Concentration (min)	I5	I25	I100	Q5	Q25	Q100	Drainage Shed/ Computation Point		
A1/1	19.83	A1	19.83	0.66	0.73	0.83	300.00	0.2	2.57%	8.91	253.00	0.2	2.57%	5.26	3145.00	6	8.74	22.91	4.33	6.06	7.65	56.67	87.24	125.15	A1/1		
A2/2	7.88	A2	7.88	0.66	0.73	0.83	300.00	0.3	2.83%	12.74	50.00	0.2	2.50%	1.05	1255.00	6	3.49	17.28	4.99	7.00	8.84	25.95	40.05	57.47	A2/2		
-/3	0.00	A1+A2	27.71	0.66	0.73	0.83	300.00	0.2	2.57%	8.91	253.00	0.2	2.57%	5.26	3145.00	6	8.74	22.91	4.33	6.06	7.65	79.19	121.91	174.88	-/3		
A3A/-	0.73	A3A	0.73	0.66	0.73	0.83	120.00	0.3	2.68%	5.24	0.00		0.00%		95.00	6	0.26	5.50	7.75	10.93	13.90	3.73	5.79	8.37	A3A/-		
-/3A	0.00	A1+A3A	28.44	0.66	0.73	0.83	300.00	0.2	2.57%	8.91	253.00	0.2	2.57%	5.26	3145.00	6	8.74	22.91	4.33	6.06	7.65	81.28	125.12	179.49	-/3A		
A4/4	4.99	A4	4.99	0.66	0.73	0.83	192.00	0.3	1.00%	13.71					701.00	6	1.95	15.66	5.23	7.33	9.25	17.22	26.55	38.08	A4/4		
-/4A	0.00	A1+A4	33.43	0.66	0.73	0.83	300.00	0.2	2.57%	8.91	253.00	0.2	2.57%	5.26	3145.00	6	8.74	22.91	4.33	6.06	7.65	95.54	147.08	210.99	-/4A		
A4B/-	0.96	A4B	0.96	0.66	0.73	0.83	120.00	0.3	2.08%	5.94					195.00	6	0.54	6.48	7.40	10.42	13.24	4.69	7.26	10.49	A4B/-		
-/4B	0.00	A1+A4B	34.39	0.66	0.73	0.83	300.00	0.2	2.57%	8.91	253.00	0.2	2.57%	5.26	3145.00	6	8.74	22.91	4.33	6.06	7.65	98.28	151.30	217.04	-/4B		
A5/5	1.94	A5	1.94	0.66	0.73	0.83	300.00	0.2	2.61%	8.84	126.00	0.15	2.23%	2.11				10.95	6.12	8.61	10.89	7.84	12.13	17.43	A5/5		
A5A/-	4.32	A5A	4.32	0.66	0.73	0.83	300.00	0.3	2.00%	15.15					515.00	6	1.43	16.58	5.09	7.15	9.02	14.51	22.42	32.15	A5A/-		
-/5A	0.00	A5+A5A	6.26	0.66	0.73	0.83	300.00	0.3	2.00%	15.15					515.00	6	1.43	16.58	5.09	7.15	9.02	21.03	32.50	46.58	-/5A		
A6/6	4.47	A6	4.47	0.66	0.73	0.83	300.00	0.3	4.51%	10.09	252.00	0.2	3.90%	4.25	290.00	6	0.69	15.04	5.31	7.43	9.39	15.67	24.11	34.63	A6/6		
A7/-	3.85	A7	3.85	0.66	0.73	0.83	255.00	0.3	2.00%	12.88					527.00	6	1.46	14.34	5.44	7.63	9.64	13.82	21.33	30.62	A7/-		
-/7	0.00	A6+A7	8.32	0.66	0.73	0.83	300.00	0.3	4.51%	10.09	252.00	0.2	3.90%	4.25	290.00	6	0.69	15.04	5.31	7.43	9.39	29.16	44.88	64.45	-/7		
A8/8	4.46	A8	4.46	0.66	0.73	0.83	278.00	0.3	3.20%	11.10					765.00	6	2.13	13.23	5.65	7.93	10.03	16.63	25.68	36.91	A8/8		
-/8A	0.00	A6+A8	12.78	0.66	0.73	0.83	300.00	0.3	4.51%	10.09	252.00	0.2	3.90%	4.25	290.00	6	0.69	15.04	5.31	7.43	9.39	44.79	68.94	99.00	-/8A		
A9/-	2.16	A9	2.16	0.66	0.73	0.83	209.00	0.3	2.00%	10.56					376.00	6	1.04	11.60	5.98	8.40	10.63	8.53	13.17	18.94	A9/-		
-/9	0.00	A6+A9	14.94	0.66	0.73	0.83	300.00	0.3	4.51%	10.09	252.00	0.2	3.90%	4.25	290.00	6	0.69	15.04	5.31	7.43	9.39	52.36	80.59	115.74	-/9		
A10/10	5.60	A10	5.60	0.66	0.73	0.83	300.00	0.2	2.32%	9.38	50.00	0.3	2.84%	1.48	510.00	6	1.42	12.28	5.83	8.20	10.37	21.55	33.34	47.91	A10/10		
A11/-	3.90	A11	3.90	0.66	0.73	0.83	121.00	0.3	2.50%	5.47	280.00	0.1	0.50%	6.60				12.07	5.88	8.26	10.45	15.14	23.39	33.62	A11/-		
-/11	0.00	A1+A4B, A6+A11	58.83	0.66	0.73	0.83	300.00	0.2	2.57%	8.91	253.00	0.2	2.57%	5.26	3145.00	6	8.74	22.91	4.33	6.06	7.65	168.12*	258.83*	371.29*	-/11		
A11A/11A	0.75	A11A	0.75	0.66	0.73	0.83	131.00	0.3	1.50%	7.64					425.00	6	1.18	8.82	6.65	9.36	11.87	3.29	5.10	7.34	A11A/11A		
-/11B	0.00	A1-A11A	59.58	0.66	0.73	0.83	300.00	0.2	2.57%	8.91	253.00	0.2	2.57%	5.26	3145.00	6	8.74	22.91	4.33	6.06	7.65	170.27*	262.13*	376.02*	-/11B		
A12/12	2.15	A12	2.15	0.66	0.73	0.83	87.00	0.3	1.00%	6.21					749	10.56	13.42	6.21	7.49	10.56	13.42	10.63	16.48	23.80	A12/12		
A13/13	7.56	A13	7.56	0.66	0.73	0.83	251.00	0.3	1.20%	16.37					660.00	6	1.83	18.20	4.86	6.82	8.61	24.25	37.43	53.70	A13/13		
A14/14	6.65	A14	6.65	0.66	0.73	0.83	300.00	0.2	1.50%	11.66					590.00	6	1.64	13.30	5.64	7.91	10.00	24.75	38.19	54.86	A14/14		
A15/15	0.48	A15	0.48	0.66	0.73	0.83	36.00	0.2	2.00%	1.21					286.00	6	0.79	2.01	9.01	12.71	16.24	2.85	4.43	6.43	A15/15		
A16/-	6.62	A16	6.62	0.66	0.73	0.83	300.00	0.3	1.59%	16.99	103.00	0.2	1.59%	2.72				19.72	4.67	6.56	8.27	20.40	31.53	45.17	A16/-		
-/16	0.00	A13+A16	21.31	0.66	0.73	0.83	251.00	0.3	1.20%	16.37					660.00	6	1.83	18.20	4.86	6.82	8.61	68.35	105.51	151.37	-/16		
A17/17	0.18	A17	0.18	0.66	0.73	0.83	36.00	0.2	2.00%	1.21								1.21	9.29	13.11	16.77	1.10	1.71	2.49	A17/17		
A18/-	1.82	A18	1.82	0.66	0.73	0.83	180.00	0.2	1.07%	8.29					260.00	6	0.72	9.01	6.60	9.29	11.77	7.93	12.28	17.67	A18/-		
-/18	0.00	A17+A18	2.00	0.66	0.73	0.83	180.00	0.2	1.07%	8.29					260.00	6	0.72	9.01	6.60	9.29	11.77	8.71	13.49	19.42	-/18		
A18A/18A	0.81	A18A	0.81	0.66	0.73	0.83	35.00	0.2	2.00%	1.18					150.00	6	0.42	1.60	9.16	12.92	16.51	4.90	7.60	11.03	A18A/18A		
-/18B	0.00	A13+A18A	24.12	0.66	0.73	0.83	251.00	0.3	1.20%	16.37					660.00	6	1.83	18.20	4.86	6.82	8.61	77.37	119.43	171.33	-/18B		
A19/19	10.04	A19	10.04	0.44	0.48	0.55	200.00	0.2	2.83%	5.66	871.00	0.2	9.74%	9.30	280.00	6	0.81	15.77	5.21	7.31	9.23	23.02	35.52	50.97	A19/19		
A19A/19A	4.58	A19A	4.58	0.66	0.73	0.83	137.00	0.3	2.38%	6.34					913.00	6	2.54	8.88	6.64	9.34	11.83	20.07	31.06	44.70	A19A/19A		
-/19B	0.00	A19+A19A	14.62	0.51	0.56	0.64	200.00	0.2	2.83%	5.66	871.00	0.2	9.74%	9.30	280.00	6	0.81	15.77	5.21	7.31	9.23	38.85	59.96	86.03	-/19B		
A20/20	3.56	A20	3.56	0.66	0.73	0.83	126.00	0.3	2.50%	5.69					801.00	6	2.23	7.92	6.92	9.74	12.35	16.26	25.17	36.27	A20/20		
A21/-	2.49	A21	2.49	0.66	0.73	0.83	135.00	0.3	3.12%	5.46					274.00	6	0.76	6.22	7.49	10.56	13.41	12.31	19.09	27.55	A21/-		
-/21	0.00	A19+A21	20.67	0.55	0.61	0.69																					

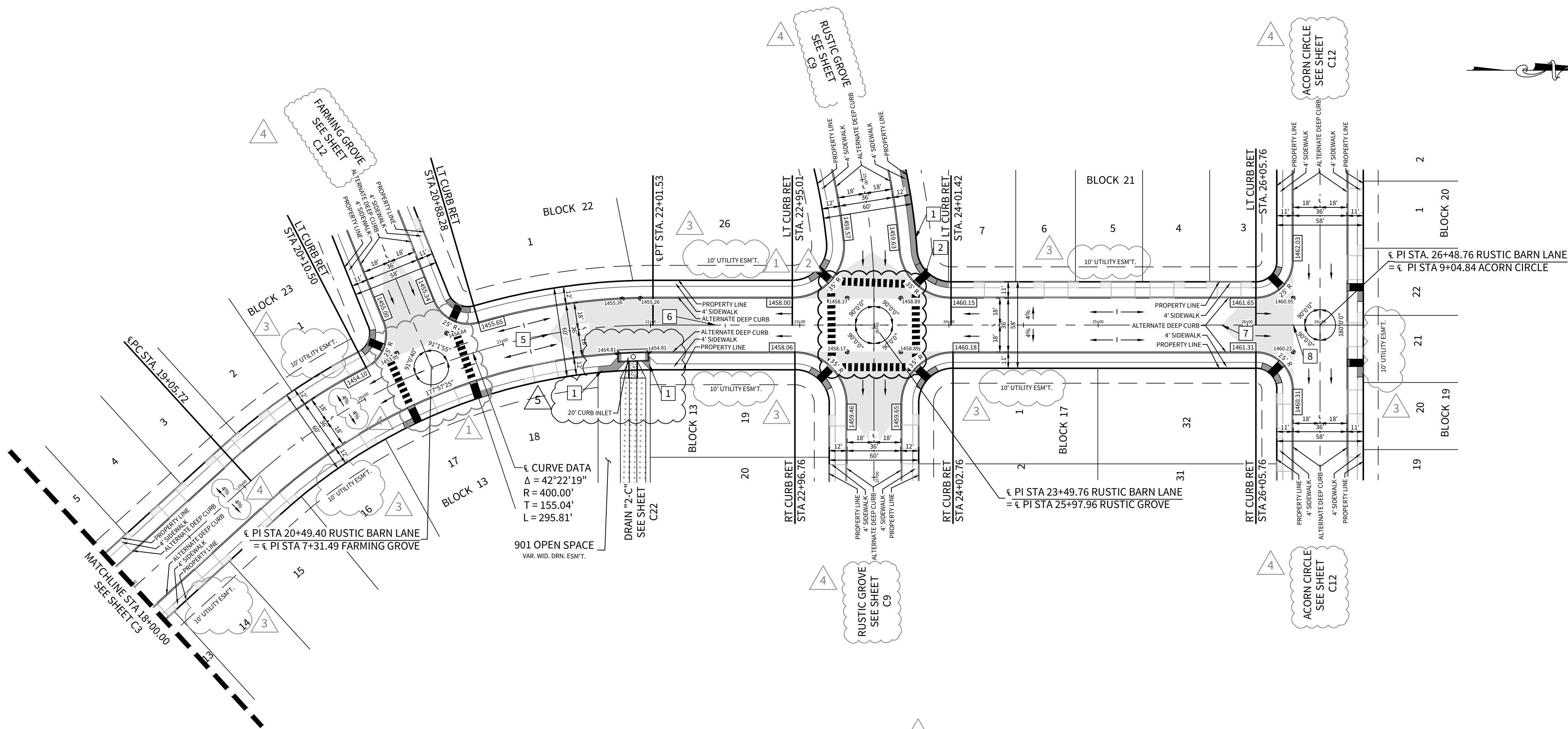
KEYNOTES:

- 1 SIDEWALK TO BE INSTALLED WITH INFRASTRUCTURE (INDICATED AS "1")
- 2 ADA RAMP TO BE INSTALLED WITH INFRASTRUCTURE
- 3 BEGIN WASHOUT STA. 6+89.75
- 4 END WASHOUT STA. 7+37.75
- 5 BEGIN WASHOUT STA. 21+31.75
- 6 END WASHOUT STA. 22+43.46
- 7 BEGIN WASHOUT STA. 25+82.76
- 8 END WASHOUT STA. 26+30.76

NOTE: ALTERNATE DEEP CURB SHALL BE INSTALLED ALONG THE FRONTAGE OF ALL RESIDENTIAL LOTS

LEGEND:

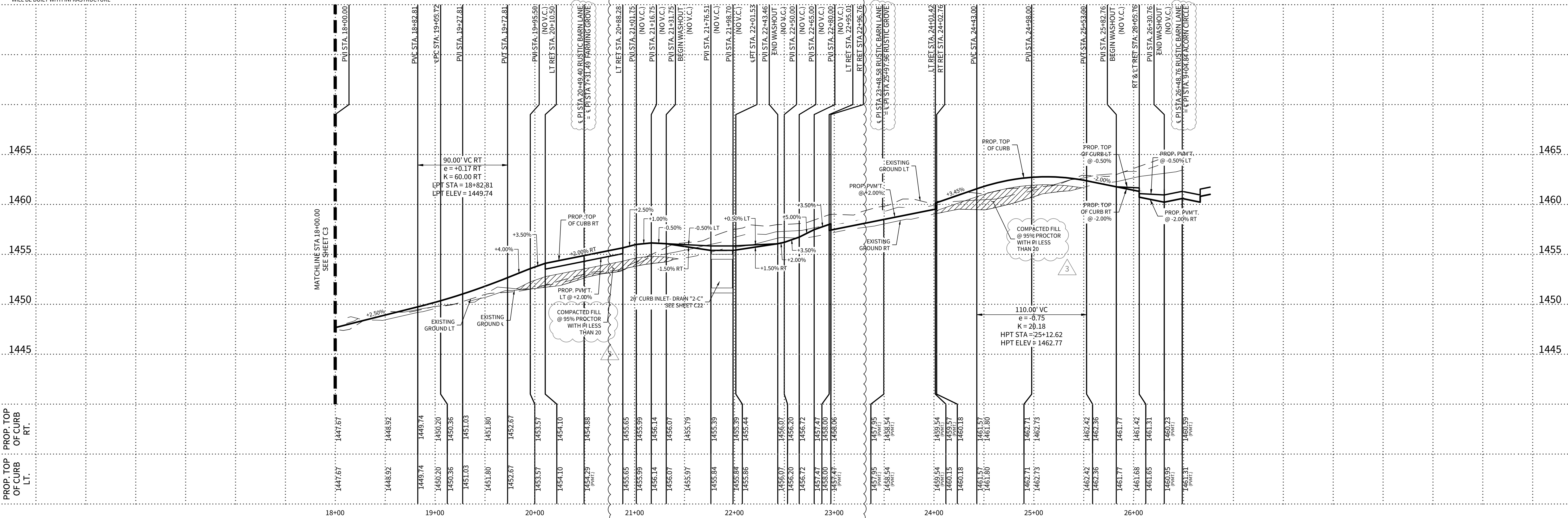
- PROPOSED DRIVEWAY
 - STREET WASHOUT - SEE DETAIL SHEET C18
 - SIDEWALK TO BE CONSTRUCTED WITH INFRASTRUCTURE
 - ADA SIDEWALK CURB RAMP - SEE DETAIL SHEET C18
- ONLY ADA RAMP WITH A 900 SERIES OPEN SPACE WILL BE BUILT WITH INFRASTRUCTURE



RUSTIC BARN LANE

STA. 18+00.00 TO STA. 26+48.76

HORIZONTAL SCALE: 1" = 50'
VERTICAL SCALE: 1" = 5'



City of Boerne Review Notes:

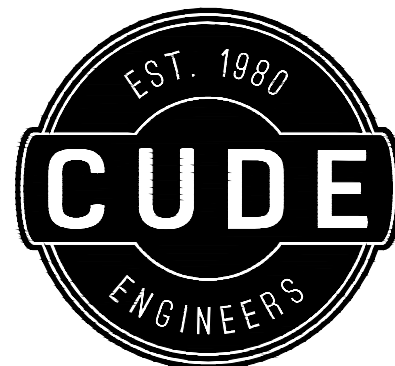
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- Not Reviewed - Accepted FIO ☐

By: Cheryl J. Rogan Date: 7/1/2022

*Revision updating drainage areas and inlet calculations



4122 Pond Hill Road, Suite 101
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CORLEY FARMS
UNIT 2

STREET PLAN & PROFILE - RUSTIC BARN LANE

DATE

03/03/2022

PROJECT NO.

03481.005

DRAWN BY

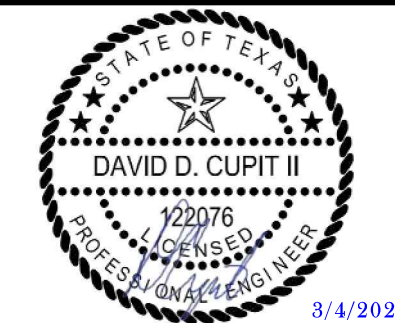
C3

CHECKED BY

XV/JC/DDC

REVISIONS

1. 2021-06-08 - REVISED STREET NAME, ADDED ADA CROSSWALK PAVT., STRIPING.
2. 2021-06-23 - ADDED ADA CROSSWALK PAVT., STRIPING, REVISED STREET NAME.
3. 2021-10-07 - CITY OF BOERNE COMMENTS.
4. 2021-11-12 - ADDED STREET NAMES.
5. 2022-03-04 - CURB INLET UPDATE.
- 6.
- 7.
- 8.
- 9.



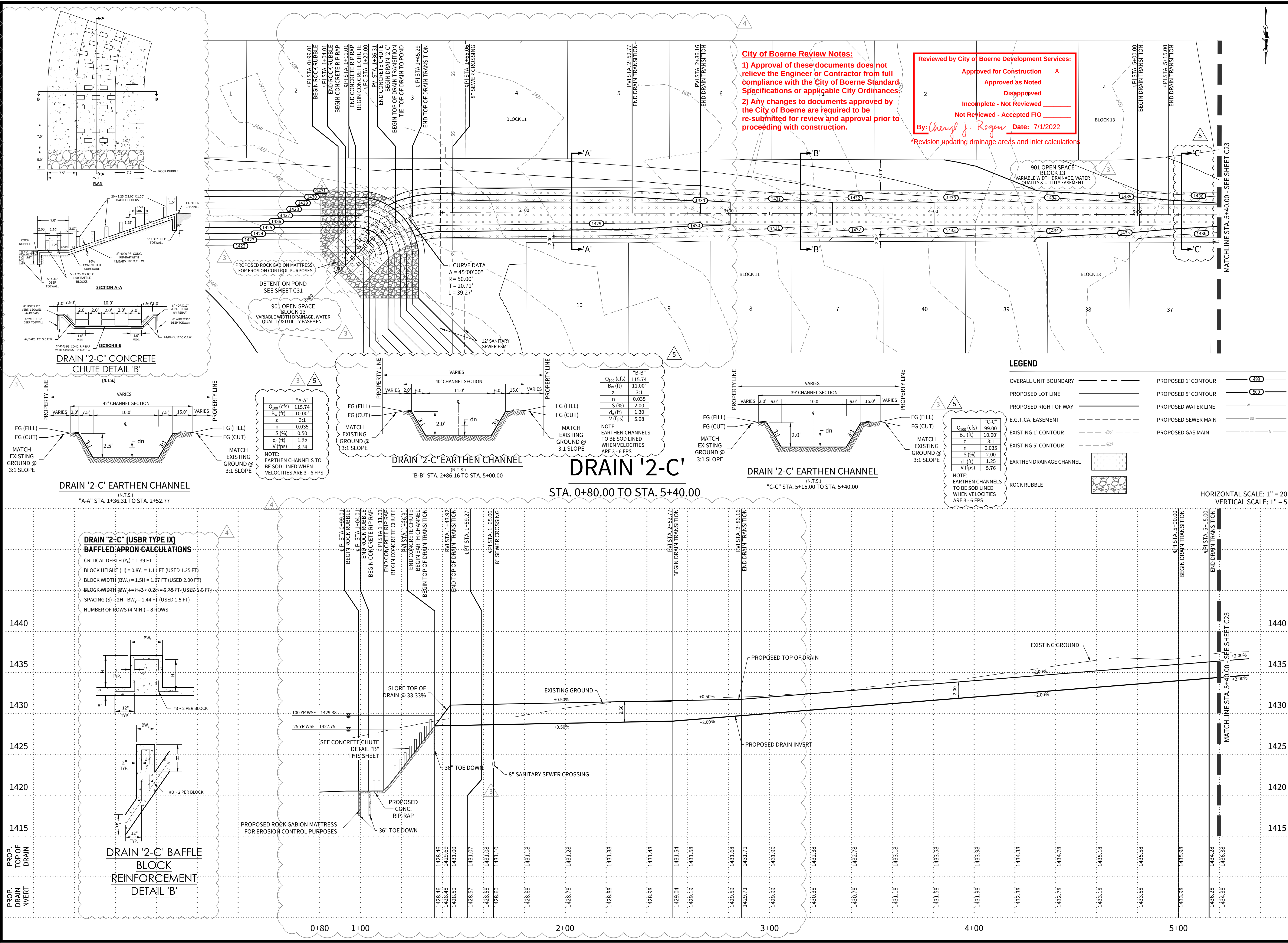
CUDE ENGINEERS

TBPE No. 455

TBPLS No. 10048500

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By: Cheryl J. Rogan Date: 7/1/2022
*Revision updating drainage areas and inlet calculations

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CORLEY FARMS
UNIT 2

DRAIN PLAN & PROFILE - DRAIN '2-C'

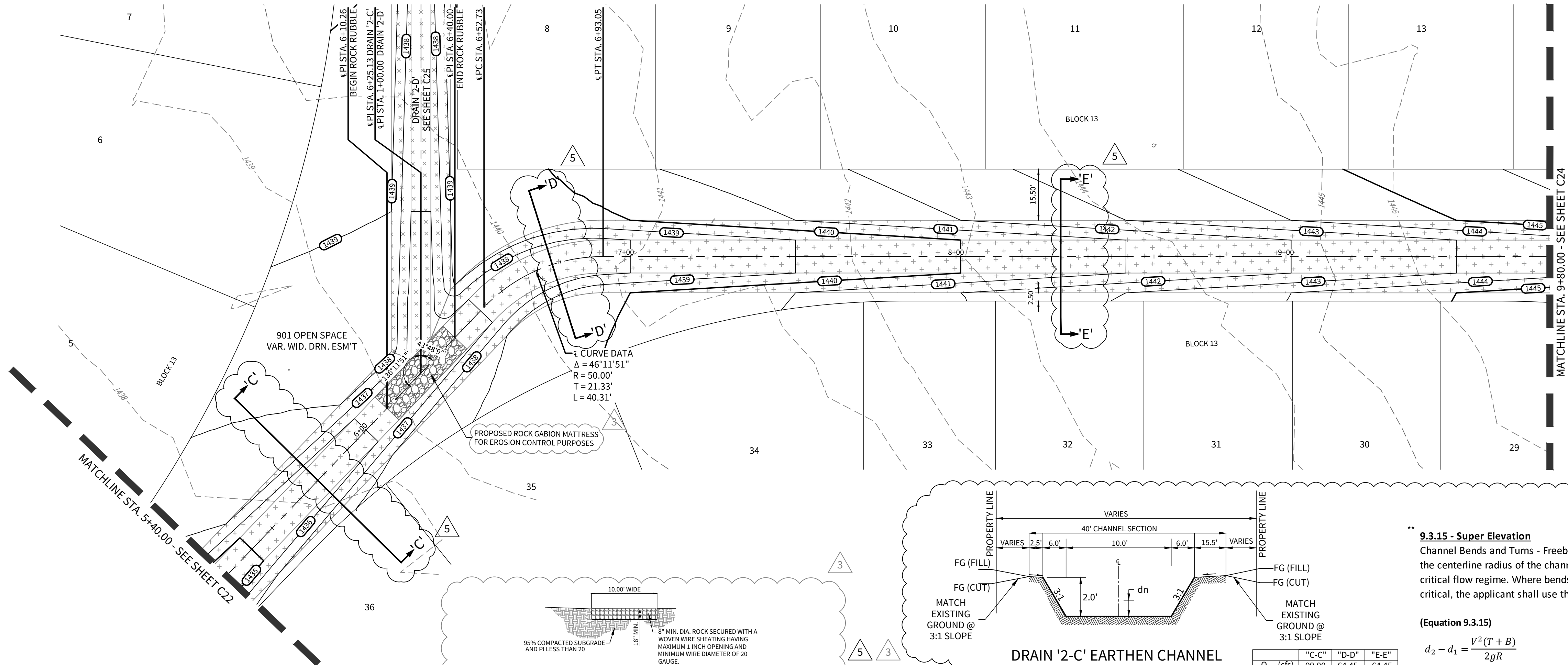
DATE	03/03/2022
PROJECT NO.	03481.005
DRAWN BY	C3
CHECKED BY	XV/JC/DDC
REVISIONS	1. 2. 3. 2021-10-07 - CITY OF BOERNE COMMENTS 4. 2021-11-12 - INCREASED GABION MATTRESS LIMITS 5. 2022-03-03 - DRAINAGE UPDATES 6. 7. 8. 9.

DAVID D. CUPIT II
122076
LICENSED PROFESSIONAL ENGINEER
3/4/2022
CUDE ENGINEERS
TBPE No. 455
TBPLS No. 10048500

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22 OF 33

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LEGEND

OVERALL UNIT BOUNDARY	---
PROPOSED LOT LINE	---
PROPOSED RIGHT OF WAY	---
E.G.T.C.A. EASEMENT	---
EXISTING 1' CONTOUR	---
EXISTING 5' CONTOUR	---
PROPOSED 1' CONTOUR	---
PROPOSED 5' CONTOUR	---
PROPOSED WATER LINE	---
PROPOSED SEWER MAIN	---
PROPOSED GAS MAIN	---
EARTHEN DRAINAGE CHANNEL	---
ROCK RUBBLE	---

GABION STYLE ROCK EROSION CONTROL MATRESS DETAIL
NOTE: GABION MATRESS TO BE FREE OF GEO-TEXTILE FABRIC LINING.
(N.T.S.)

DRAIN '2-C' EARTHEN CHANNEL

(N.T.S.)
"C-C" STA. 5+40.00 TO STA. 6+10.26
"D-D" STA. 6+52.73 TO STA. 6+93.05

	"C-C"	"D-D"	"E-E"
Q ₁₀₀ (cfs)	99.00	64.45	64.45
B _w (ft)	10.00'	10.00'	10.00'
z	3:1	3:1	3:1
n	0.035	0.035	0.035
S (%)	2.00	2.00	2.00
d _s (ft)	1.25	*1.50	0.98
V (fps)	5.76	5.08	5.08

NOTE:
EARTHEN CHANNELS TO
BE SOD LINED WHEN
VELOCITIES ARE 3 - 6 FPS

9.3.15 - Super Elevation

Channel Bends and Turns - Freeboard. Allowance for extra freeboard shall be made when the centerline radius of the channel is less than three (3) times the bottom width or for super-critical flow regime. Where bends or high velocities are involved and the flow regime is sub-critical, the applicant shall use the following formula for computing the extra freeboard:

(Equation 9.3.15)

$$d_2 - d_1 = \frac{V^2(T + B)}{2gR}$$

d₁ = depth of flow at the inside of the bend in feet.

d₂ = depth of flow at the outside of the bend in feet.

B = bottom width of the channel in feet.

V = the average approach velocity in the channel in feet per second.

T = width of flow at the water surface in feet.

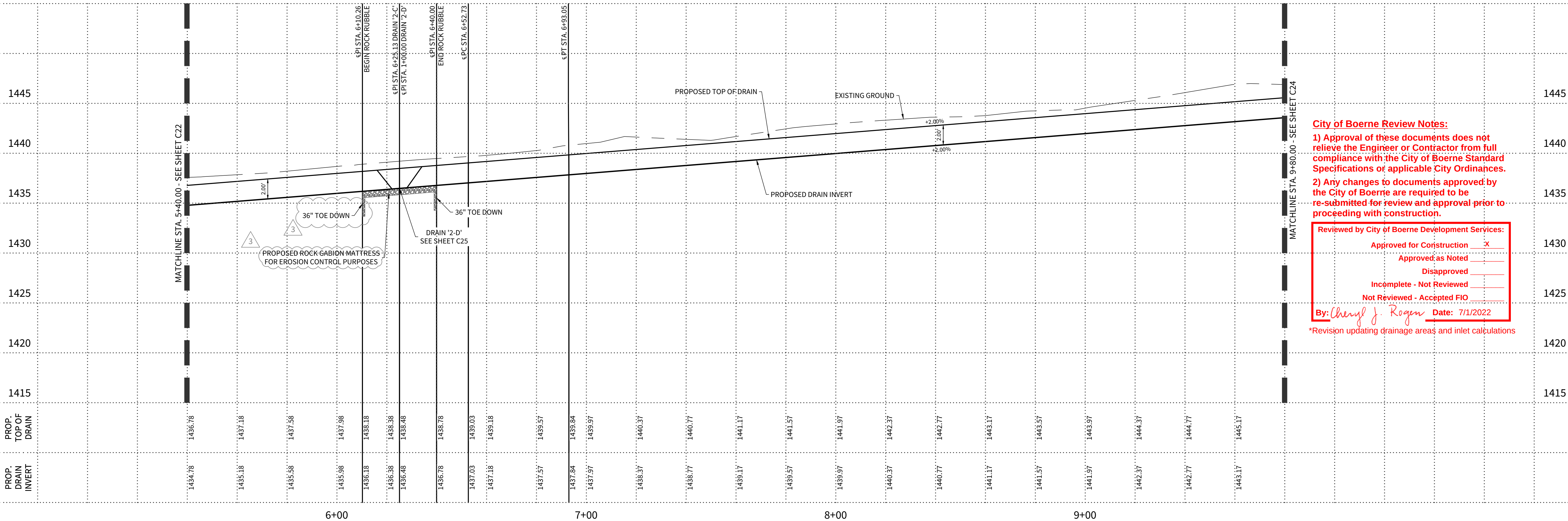
g = 32.2 feet/second squared.

R = the center line radius of the turn or bend in feet.

HORIZONTAL SCALE: 1" = 20'
VERTICAL SCALE: 1" = 5'

DRAIN '2-C'

STA. 5+40.00 TO STA. 9+80.00



City of Boerne Review Notes:

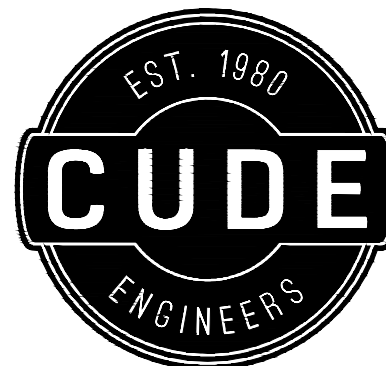
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Not Reviewed - Accepted FIO ☐

By: Cheryl J. Rogen Date: 7/1/2022

*Revision updating drainage areas and inlet calculations



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CORLEY FARMS UNIT 2

DRAIN PLAN & PROFILE - DRAIN '2-C'

DATE
03/03/2022

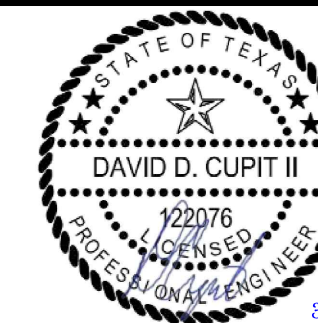
PROJECT NO.
03481.005

DRAWN BY
C3

CHECKED BY
XV/JC/DDC

REVISIONS

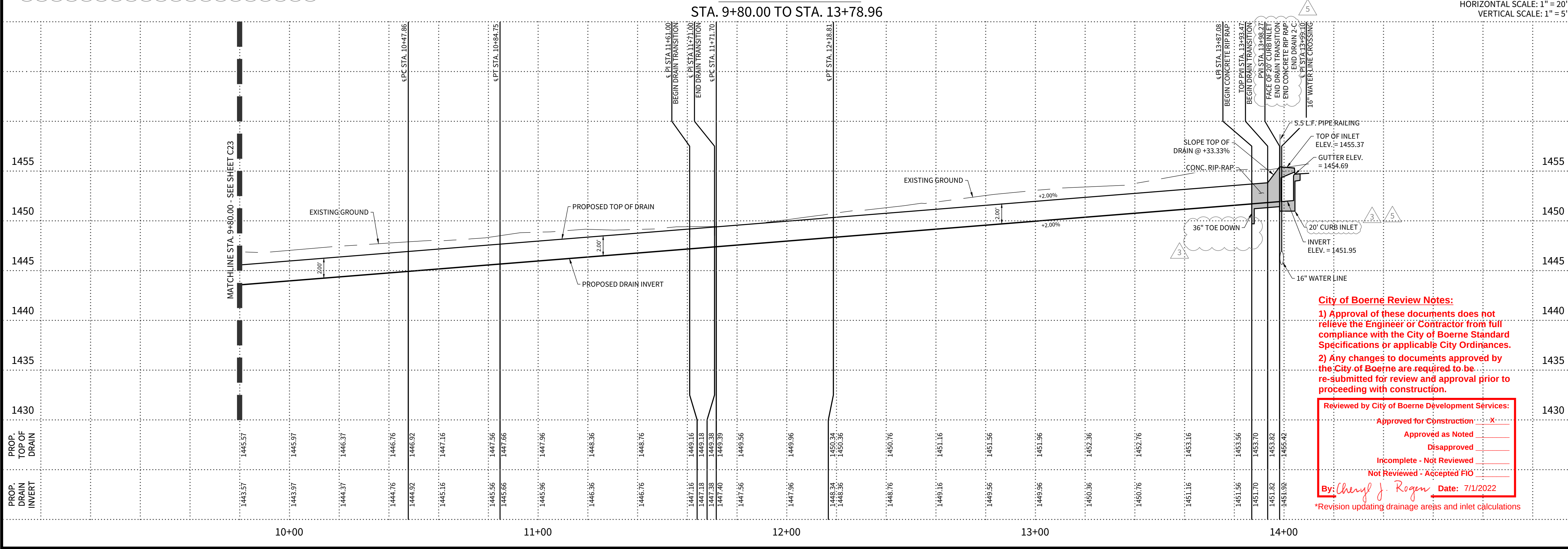
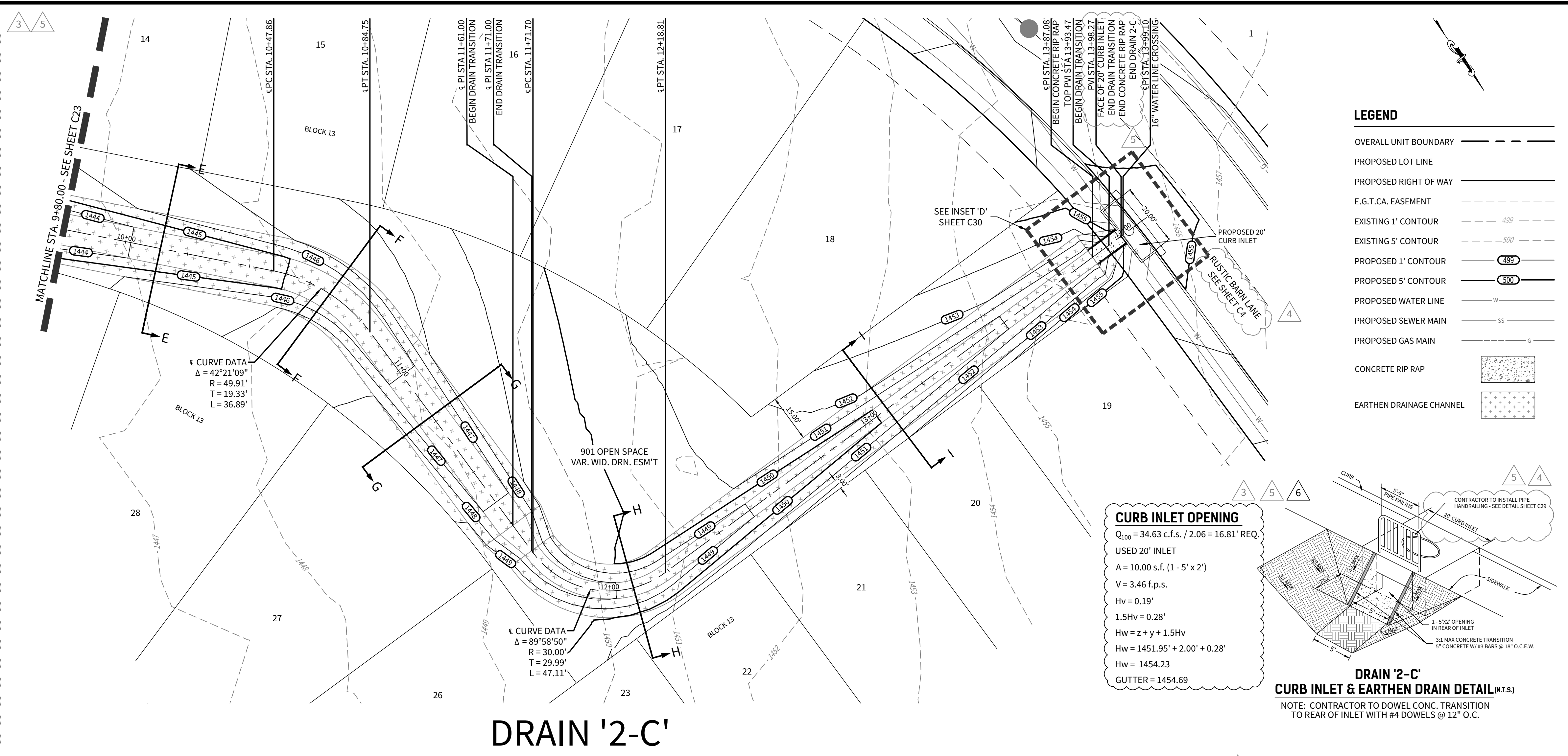
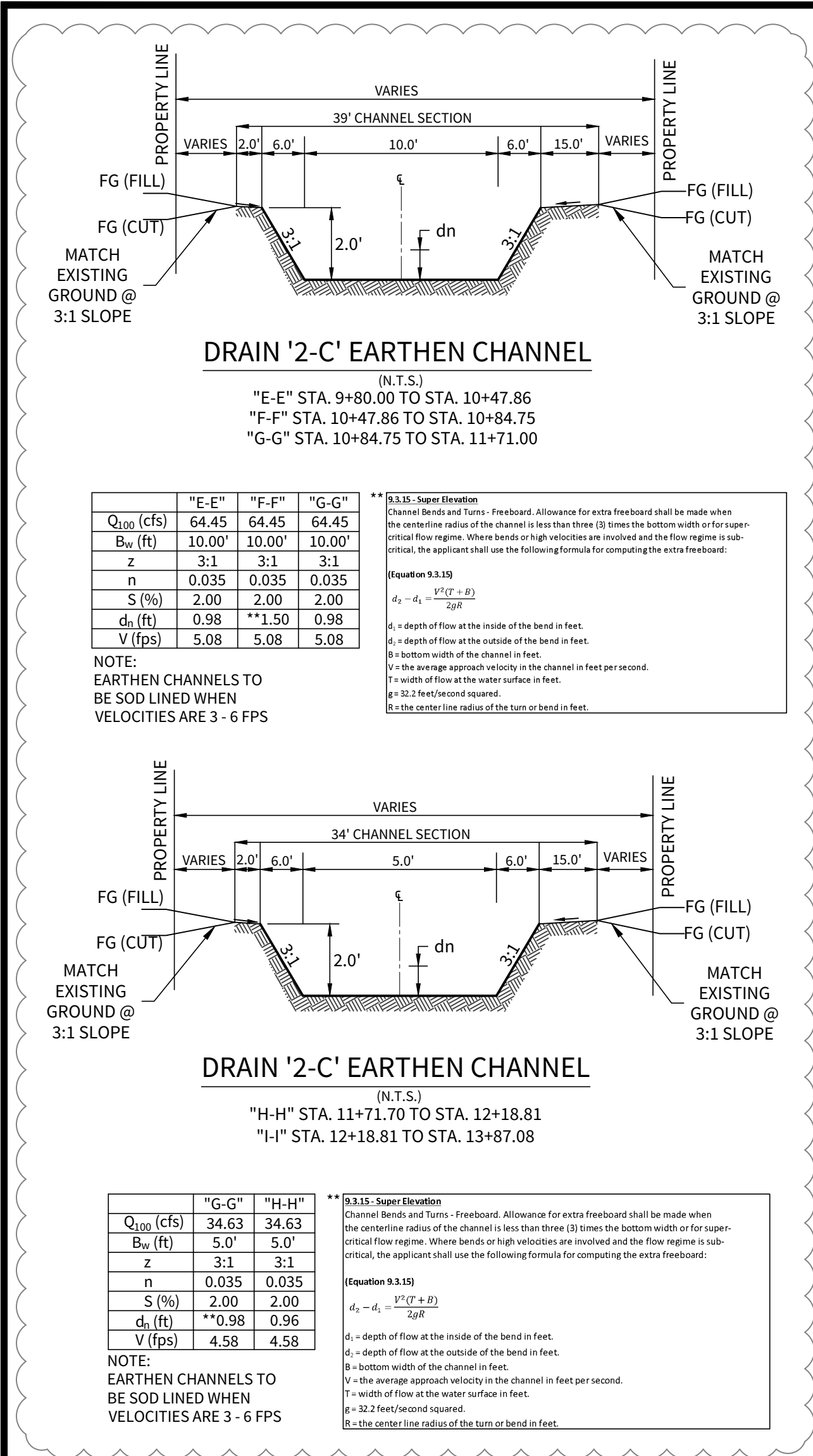
- 1.
- 2.
3. 2021-10-07 - CITY OF BOERNE COMMENTS
4. 2021-11-12 - CITY OF BOERNE COMMENTS
5. 2022-03-03 - DRAINAGE UPDATES
- 6.
- 7.
- 8.
- 9.



CUDE ENGINEERS
TBPE No. 455
TBPLS No. 10048500

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EST. 1980

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CORLEY FARMS

UNIT 2

DRAIN PLAN & PROFILE - DRAIN '2-C'

DATE
05/19/2022

PROJECT NO.
03481.005

DRAWN BY
C3

CHECKED BY
XV/JC/DDC

REVISIONS

- 2021-06-23 - REVISED CURB INLET VELOCITY.
-
- 2021-10-07 - CITY OF BOERNE COMMENTS
- 2021-11-12 - CITY OF BOERNE COMMENTS
- 2022-03-03 - DRAINAGE UPDATES
- 2022-05-19 - C&B COMMENTS
-
-
-
-

CITY OF BOERNE REVIEW NOTES:

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Incomplete - Not Reviewed: ☐

Not Reviewed - Accepted FIO: ☐

By: *Cheryl J. Rogan* Date: 7/12/2022

*Revision updating drainage areas and inlet calculations

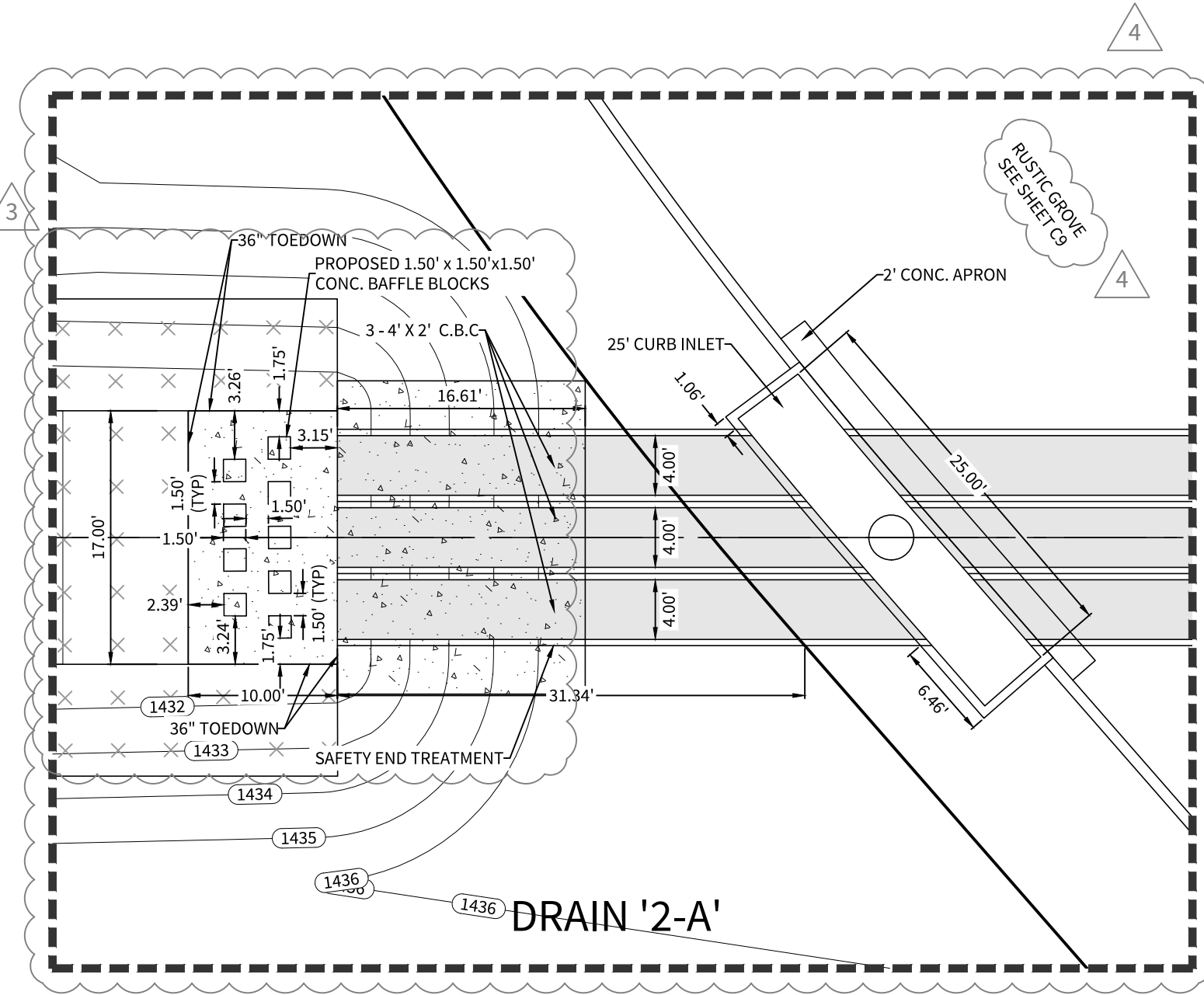
JAVIER CASTELLO
122170
PROFESSIONAL ENGINEER
05/23/2022

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TBPE No. 455
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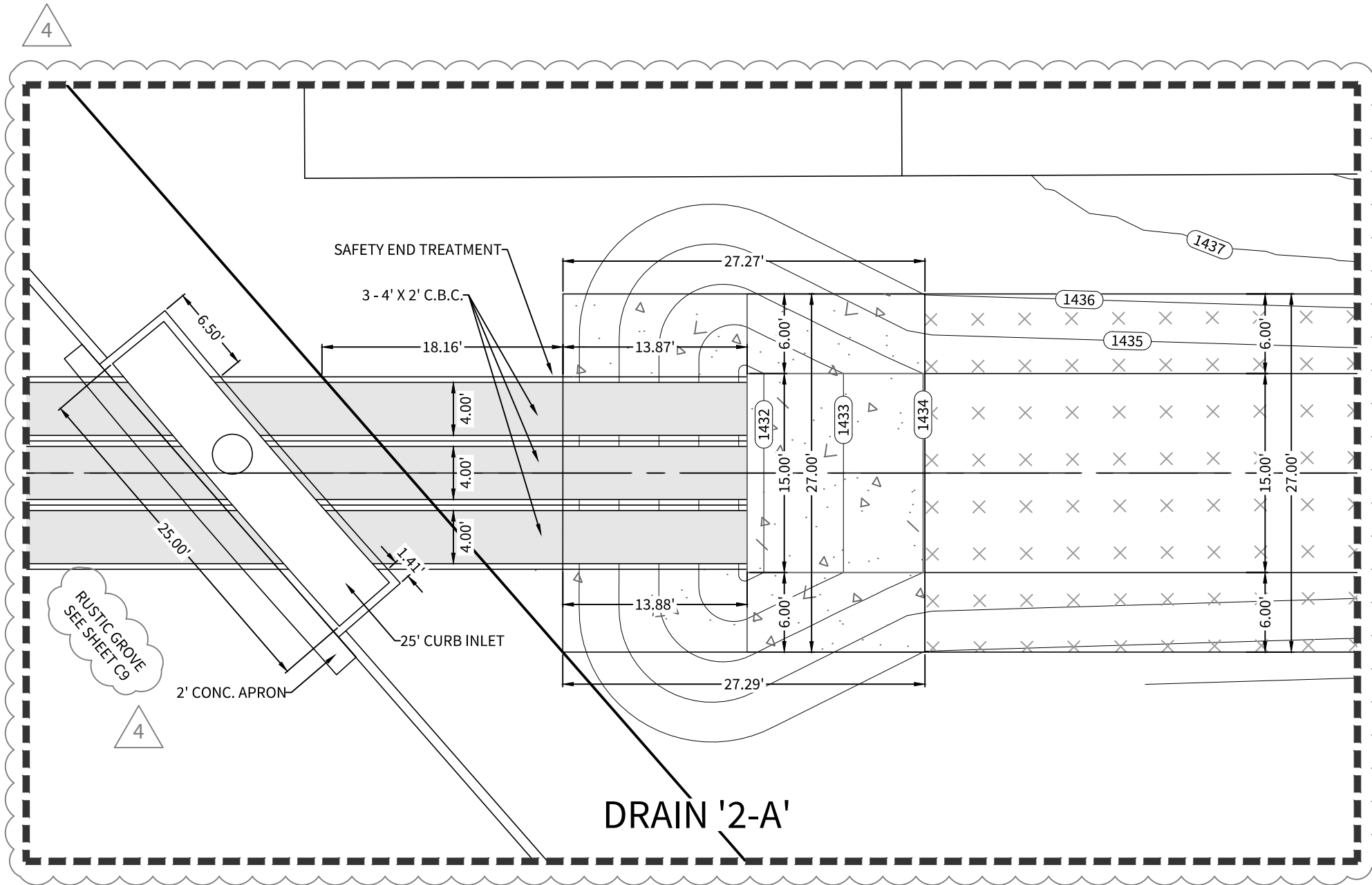
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24 OF 33

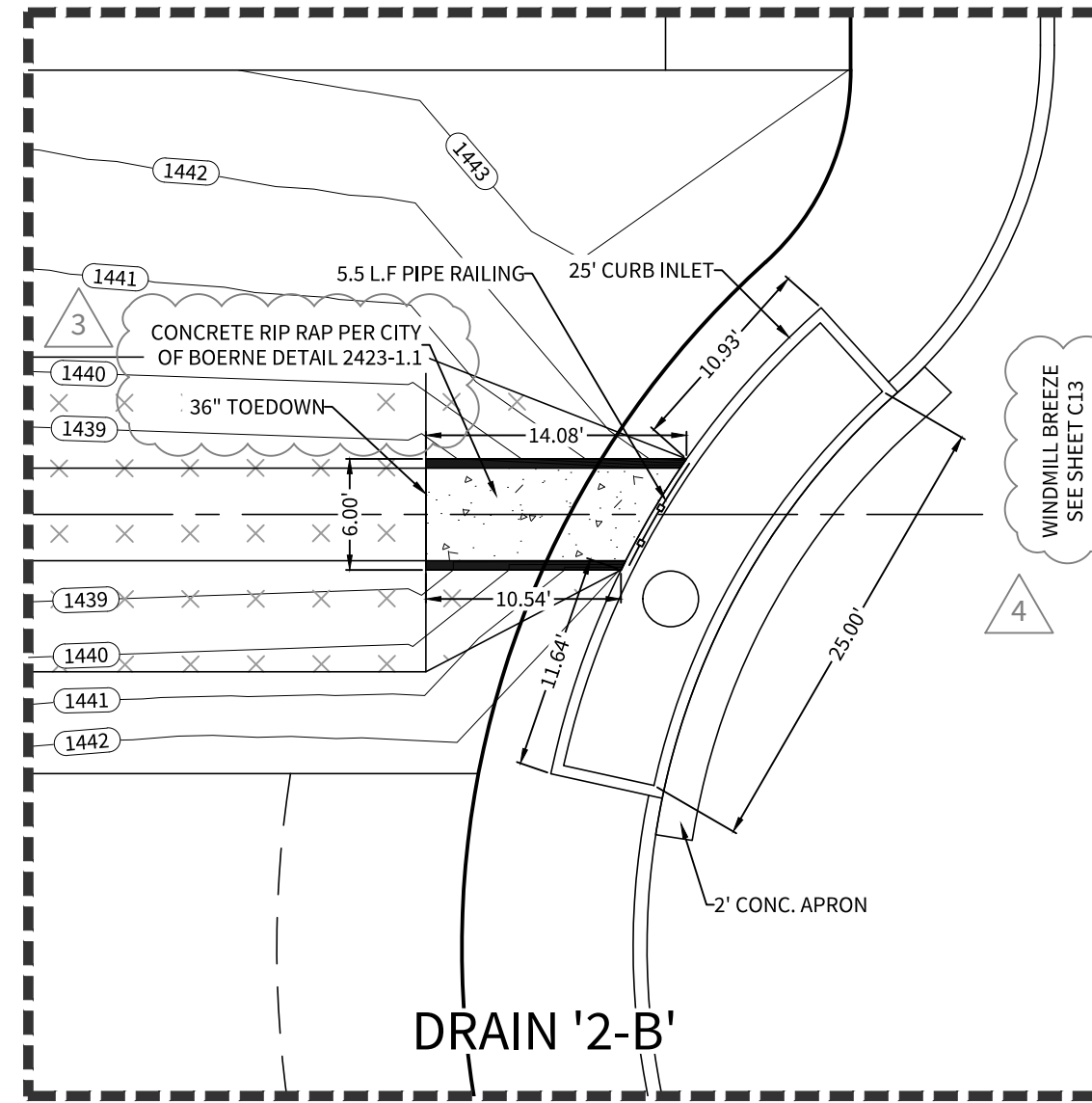
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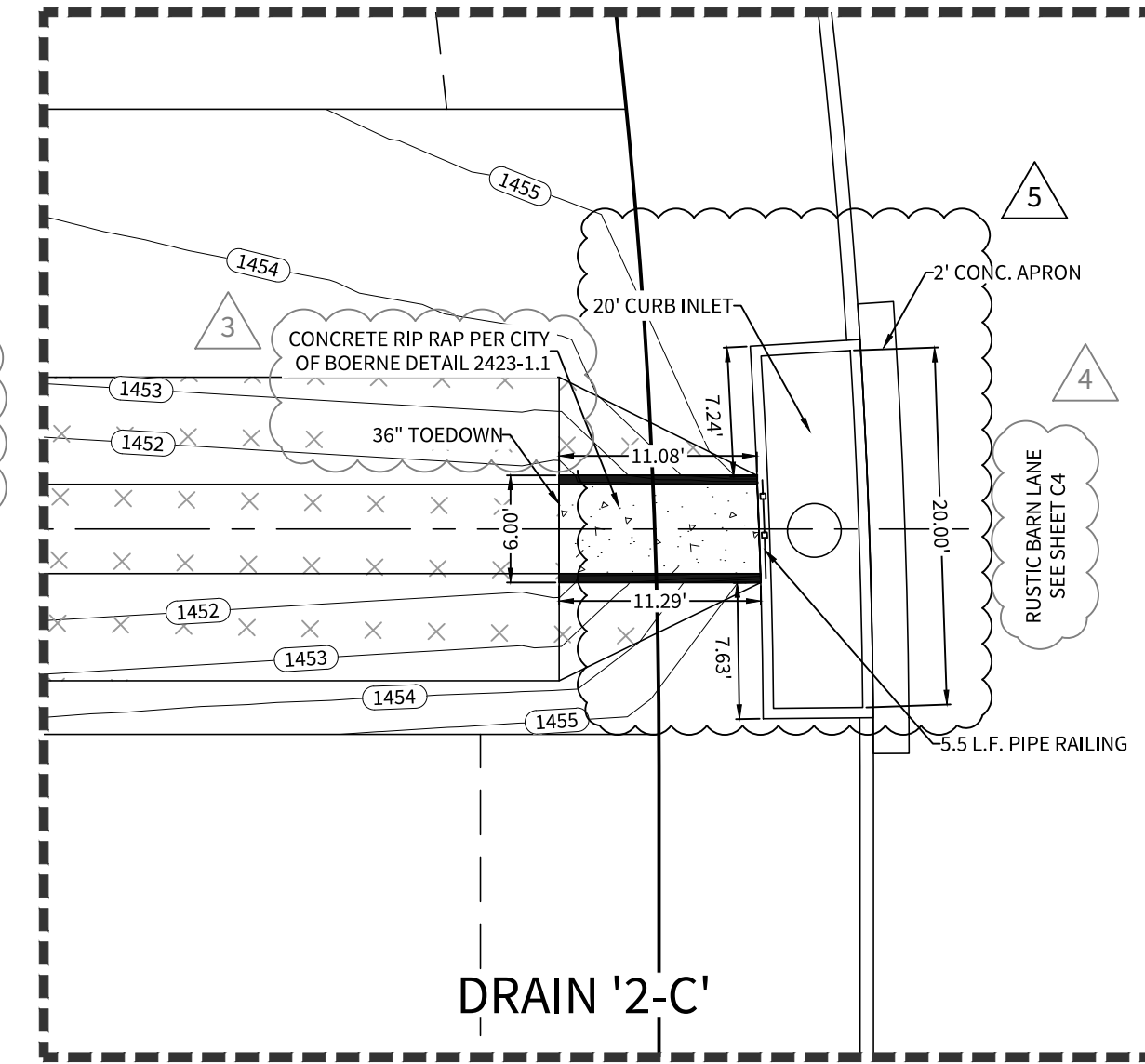
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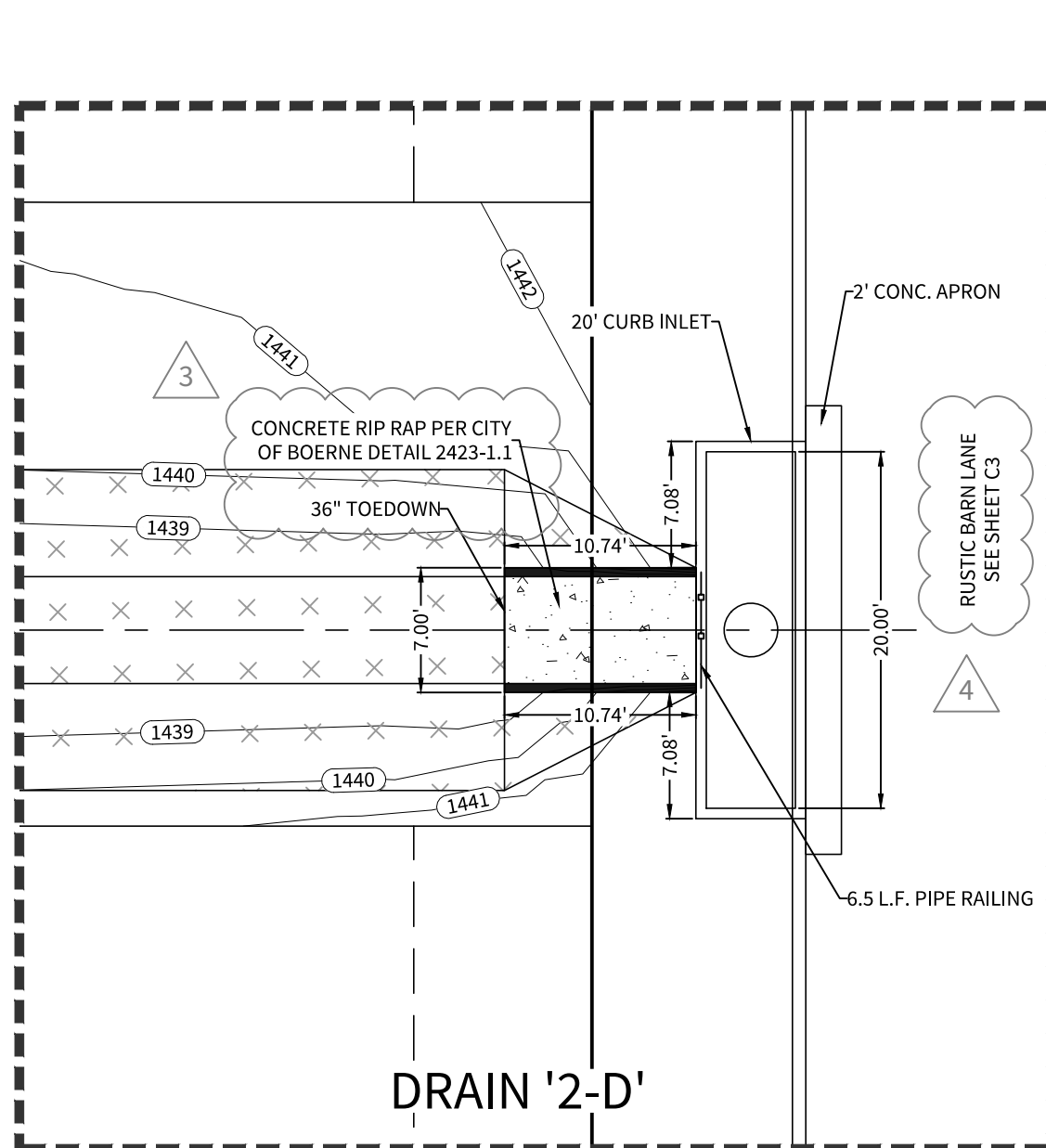
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SCALE: 1"=10'



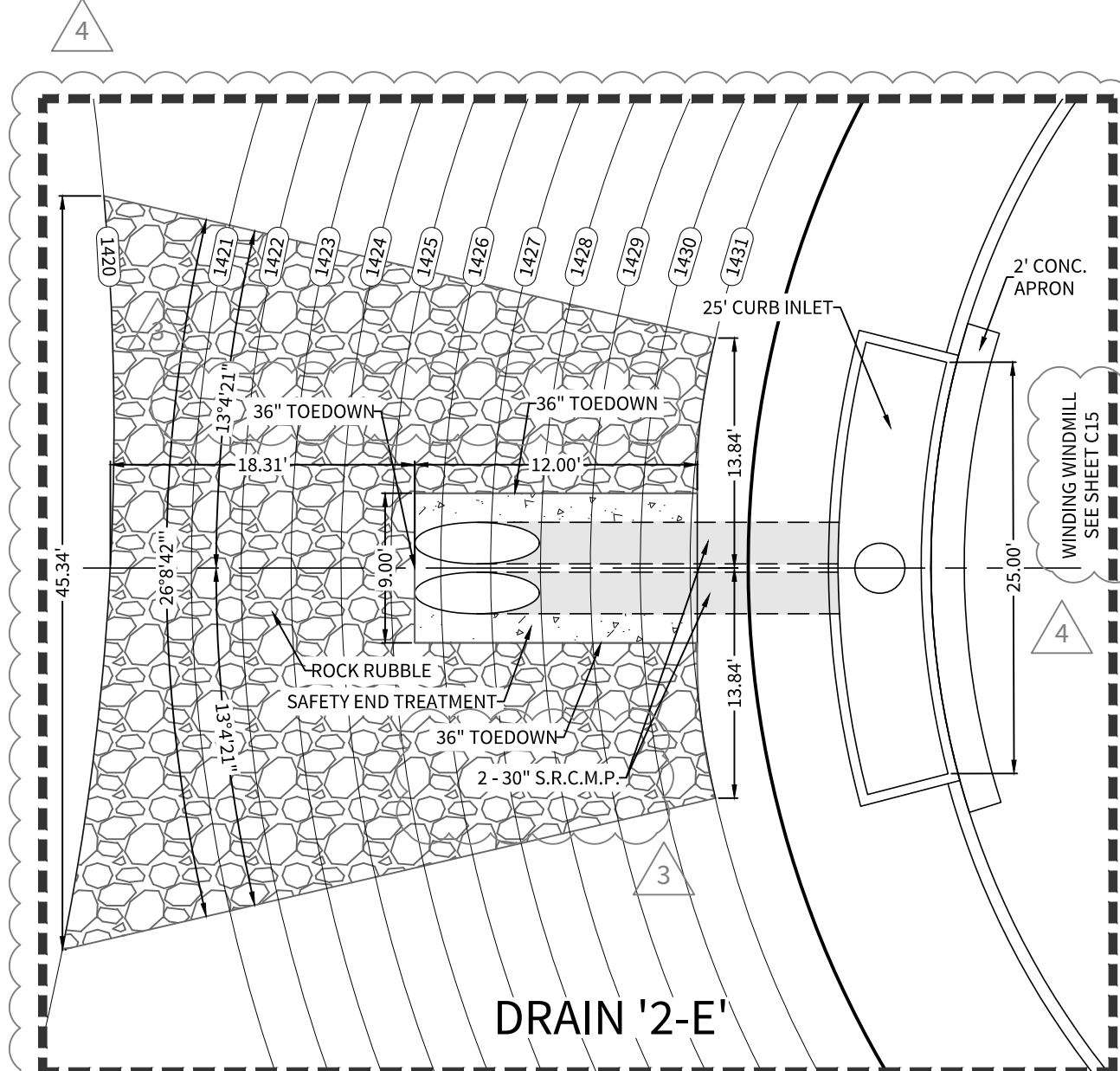
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SCALE: 1"=10'



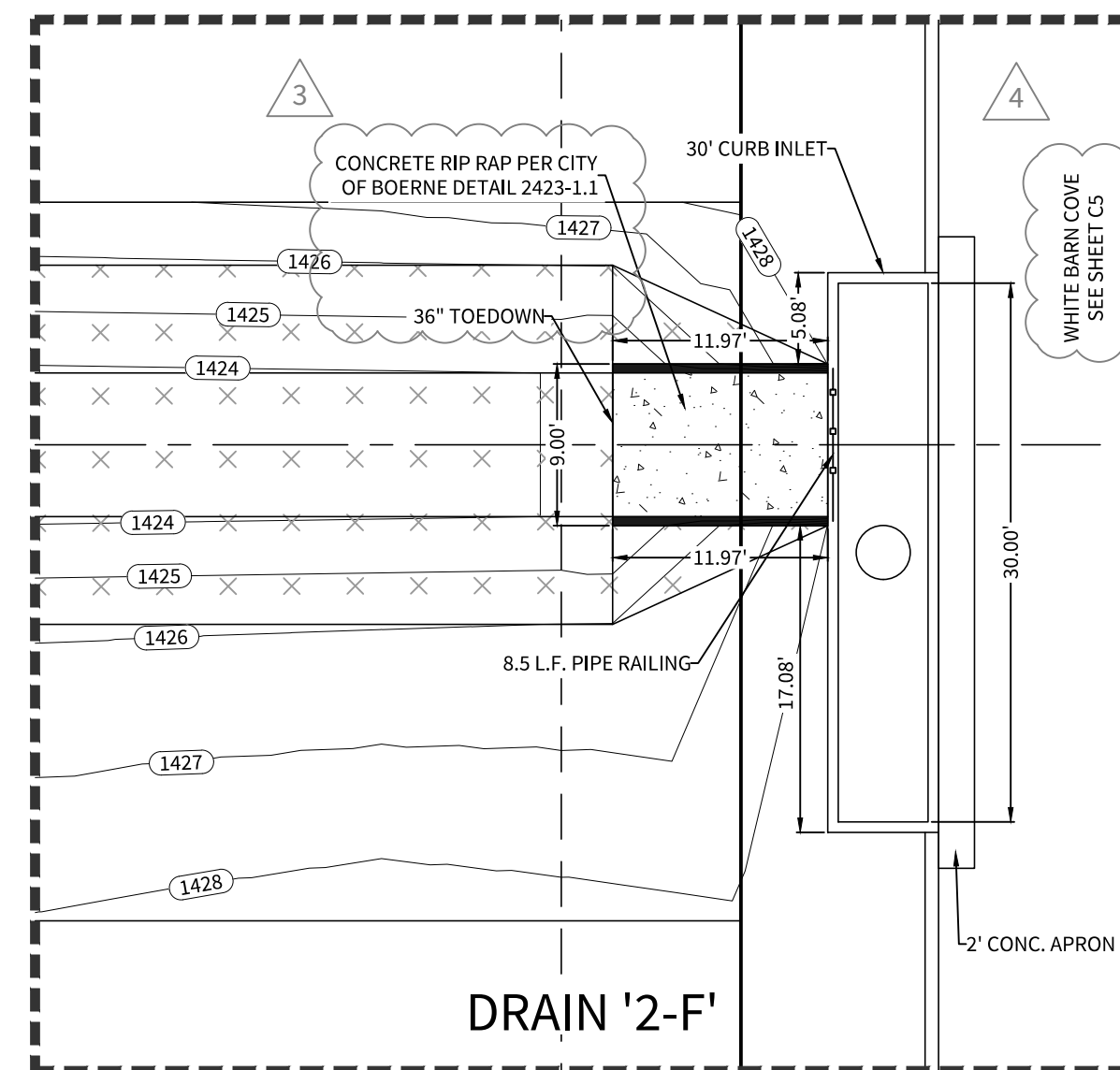
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SCALE: 1"=10'



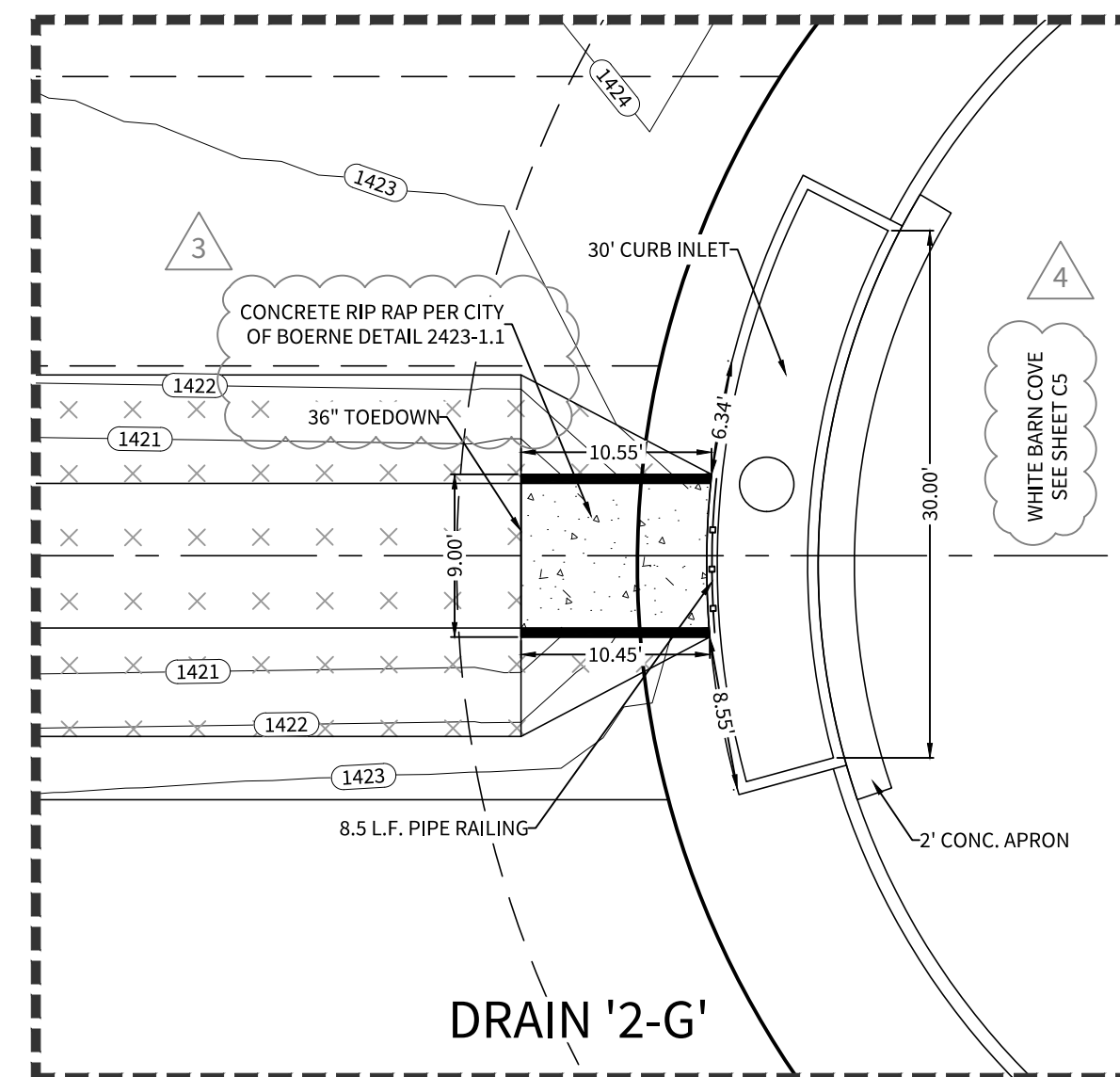
INSET 'E' - SHEET C25
SCALE: 1"=10'



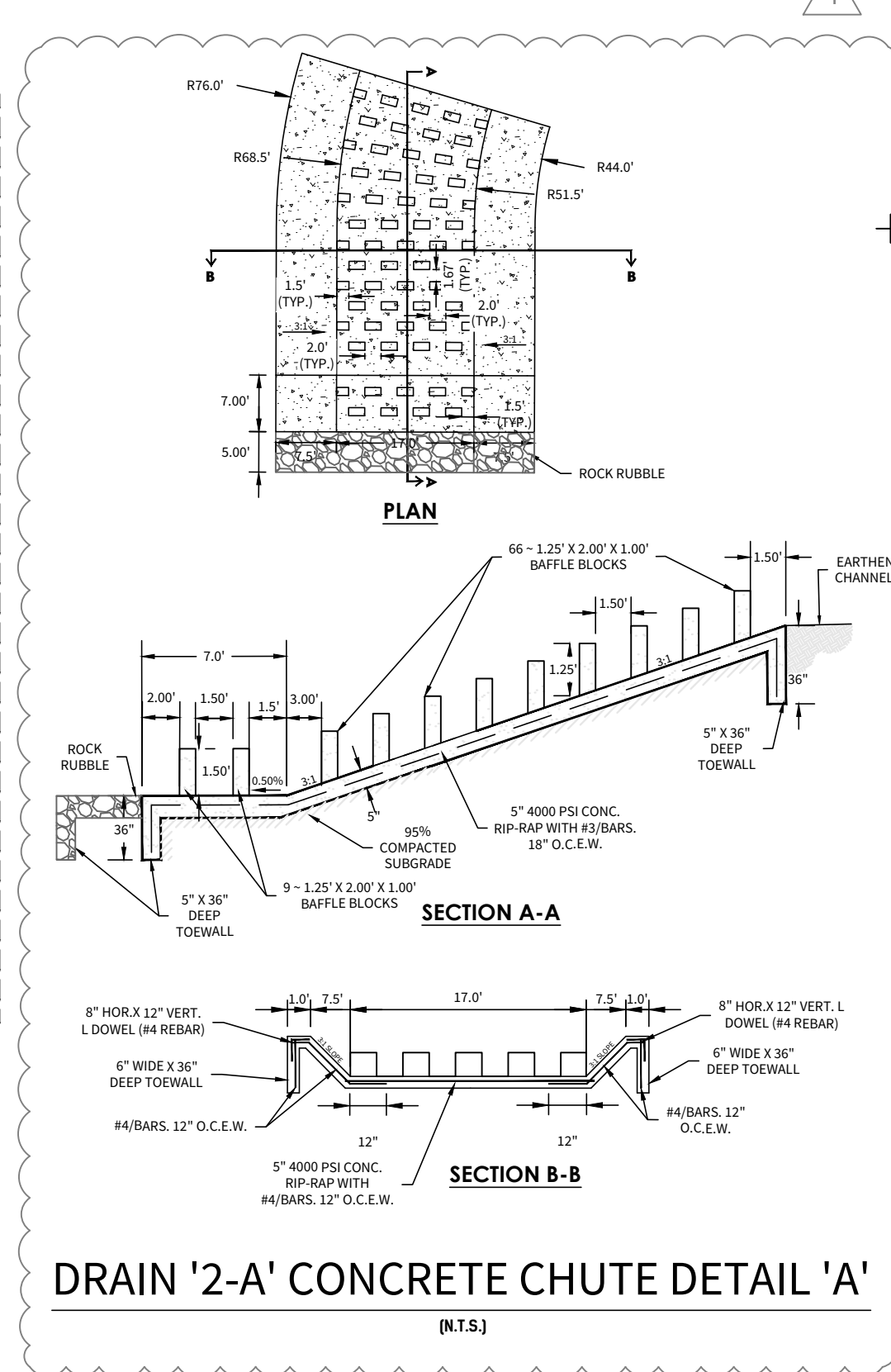
INSET 'F' - SHEET C25
SCALE: 1"=10'



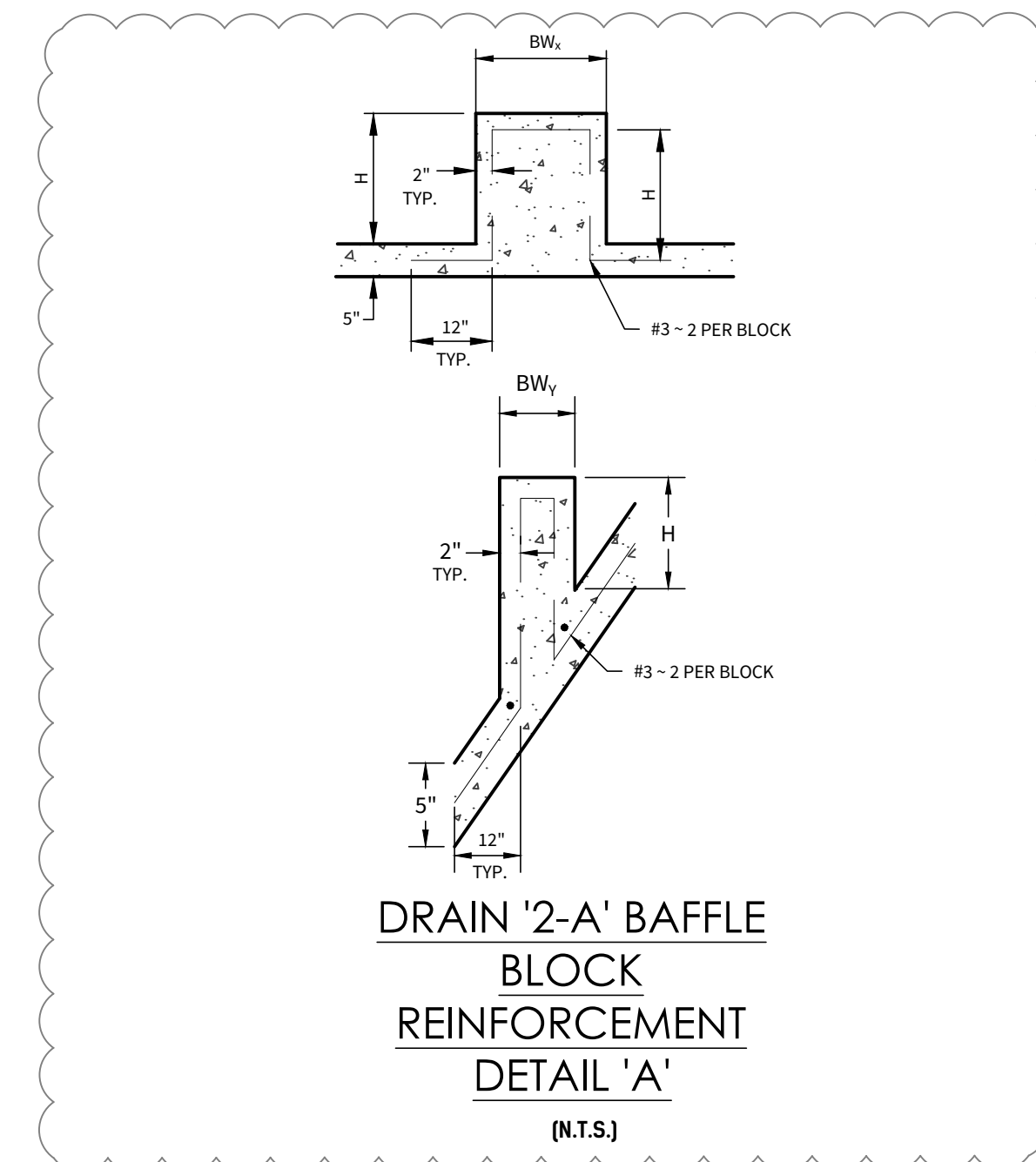
INSET 'G' - SHEET C26
SCALE: 1"=10'



INSET 'H' - SHEET C26
SCALE: 1"=10'



Drain '2-A' Concrete Chute Detail 'A'
(N.T.S.)



Drain '2-A' Baffle
Block
Reinforcement
Detail 'A'
(N.T.S.)

City of Boerne Review Notes:

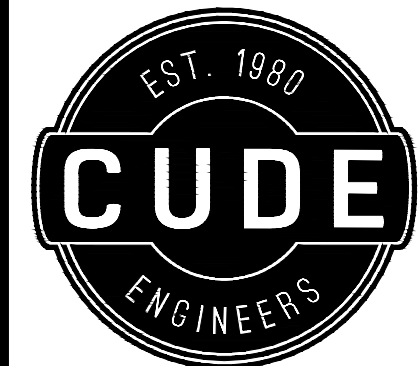
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By: Cheryl J. Rogan Date: 7/1/2022

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CORLEY FARMS
UNIT 2

DRAINAGE DETAILS

DATE
03/22/2022
PROJECT NO.
03481.005
DRAWN BY
C3
CHECKED BY
XV/JC/DDC

REVISIONS	
1.	
2.	
3.	2021-10-07 - CITY OF BOERNE COMMENTS
4.	2021-11-12 - CITY OF BOERNE COMMENTS
5.	2022-03-04 - REVISED INLET SIZE
6.	
7.	
8.	
9.	



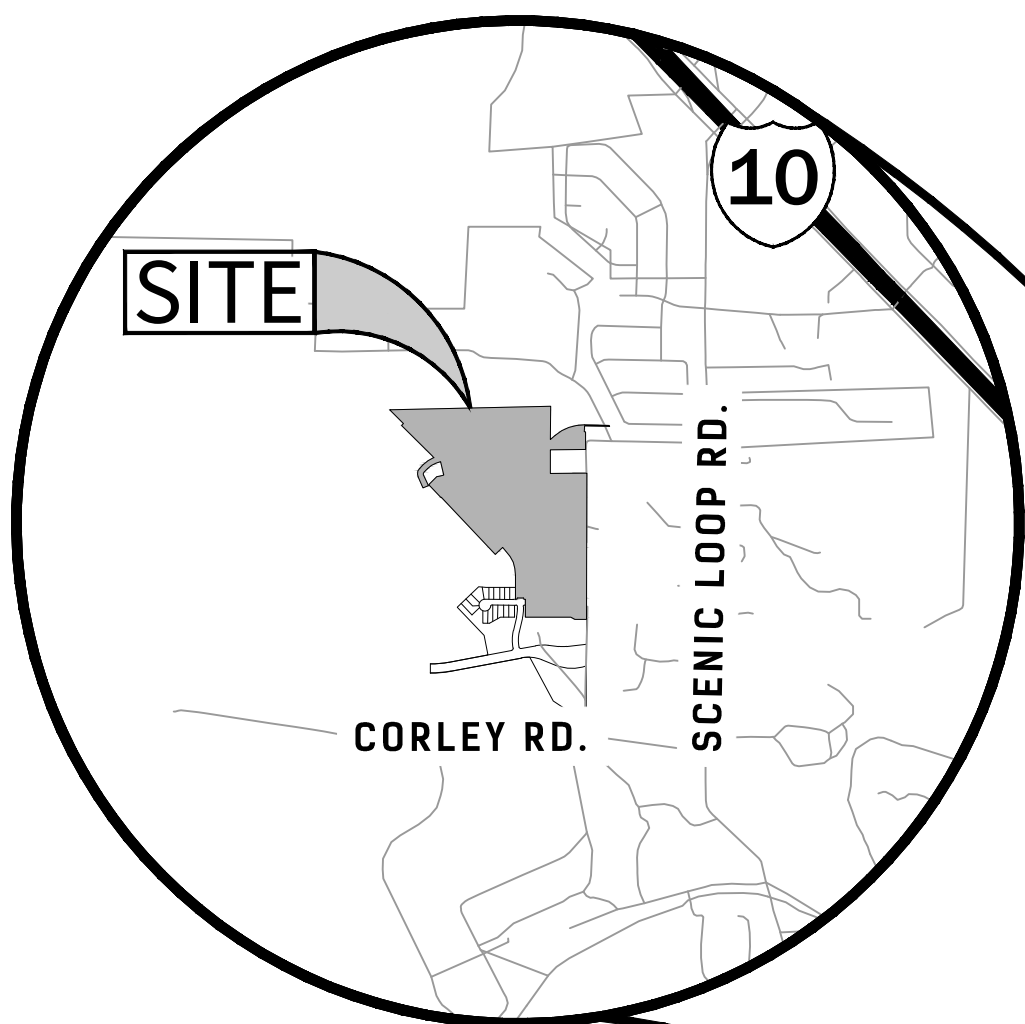
CUDE ENGINEERS
TBPE No. 455
TBPLS No. 10048500

C30

SEWER DISTRIBUTION CONSTRUCTION PLANS

- C34 - OVERALL SANITARY SEWER PLAN
- C35 - OVERALL SANITARY SEWER PLAN
- C36 - SANITARY SEWER GENERAL NOTES
- C37 - SANITARY SEWER PLAN & PROFILE LINE "A"
- C38 - SANITARY SEWER PLAN & PROFILE LINE "A"
- C39 - SANITARY SEWER PLAN & PROFILE LINE "A"
- C40 - SANITARY SEWER PLAN & PROFILE LINE "E"
- C41 - SANITARY SEWER PLAN & PROFILE LINE "F"
- C42 - SANITARY SEWER PLAN & PROFILE LINE "G"
- C43 - SANITARY SEWER PLAN & PROFILE LINE "I"
- C44 - SANITARY SEWER PLAN & PROFILE LINE "I"
- C45 - SANITARY SEWER PLAN & PROFILE LINE "H" & "J" & "K"
- ★ C46 - SANITARY SEWER STANDARD DETAILS

★ STANDARD DETAILS ADOPTED FOR THIS CONSTRUCTION SET.



LOCATION MAP



VICINITY MAP

4
CORLEY FARMS SUBDIVISION IS VESTED TO THE SUBDIVISION ORDINANCE NO. 2007-56 OF THE CITY OF BOERNE, TEXAS (REVISED 10.08.2019) PER THE DEVELOPMENT AGREEMENT EXECUTED BETWEEN BOERNEBAK, LLC., AND THE CITY OF BOERNE, TEXAS EFFECTIVE NOVEMBER 26, 2019.

City of Boerne Review Notes:

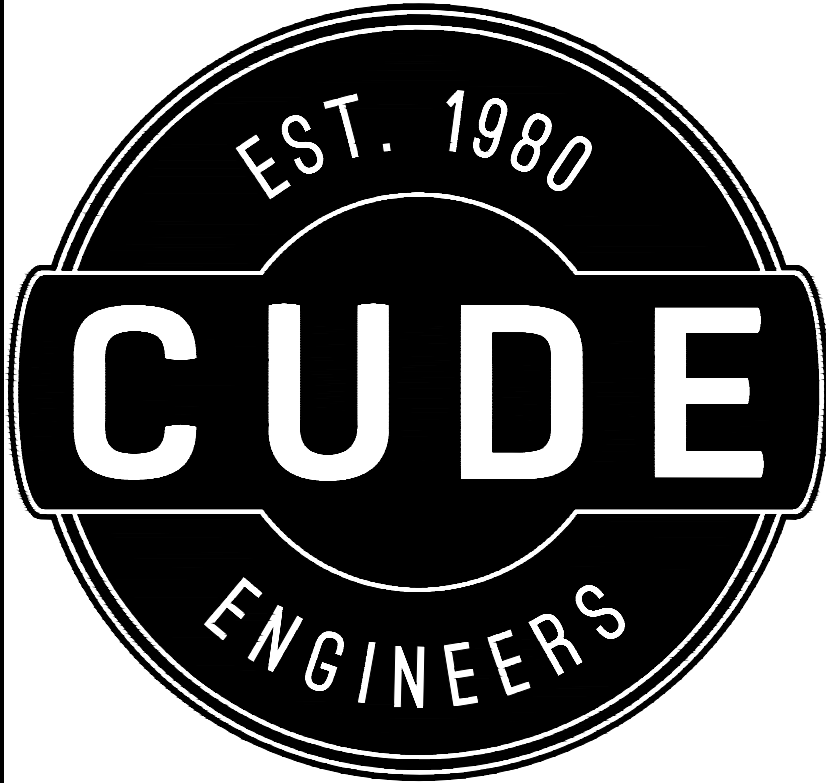
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Reviewed by City of Boerne Development Services:

- Approved for Construction ☒ X
- Approved as Noted ☐
- Disapproved ☐
- Incomplete - Not Reviewed ☐
- Not Reviewed - Accepted FIO ☐

By: Cheryl J. Rogan Date: 7/1/2022

*Revision updating sewer main alignment



CORLEY FARMS
UNIT 2
SEWER DISTRIBUTION
CONSTRUCTION PLANS



DEVELOPER:

PULTE HOMES OF TEXAS, L.P.
CONTACT PERSON: FELIPE GONZALEZ
1718 DRY CREEK WAY, SUITE 120
SAN ANTONIO, TX 78259
TEL: (210) 496-1985
FAX: (210) 496-0449

4122 Pond Hill Road, Suite 101

San Antonio, Texas 78231

P:(210) 681.2951 F: (210) 523.7112

DRAWN BY
C3

DATE
05/19/2022

CHECKED BY
JC/DDC

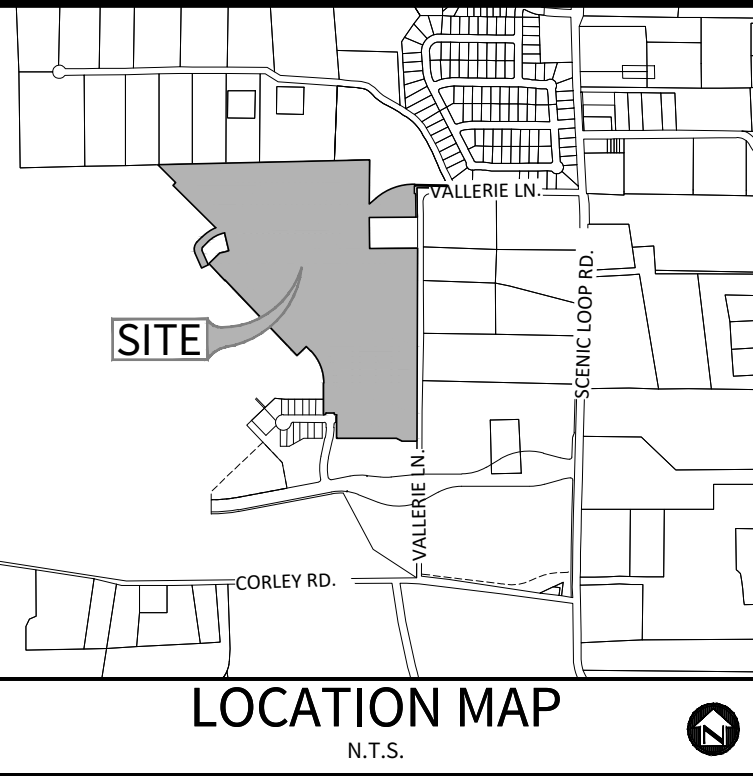
PROJECT NO.
03481.005



I HAVE REVIEWED THIS PLAN SET FOR QUALITY ASSURANCE AND QUALITY CONTROL PURPOSES.

THIS PLAN SET HAS BEEN PREPARED, DESIGNED AND REVIEWED UNDER MY DIRECT SUPERVISION.

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TEL: (210) 496-1985
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CIVIL ENGINEER:

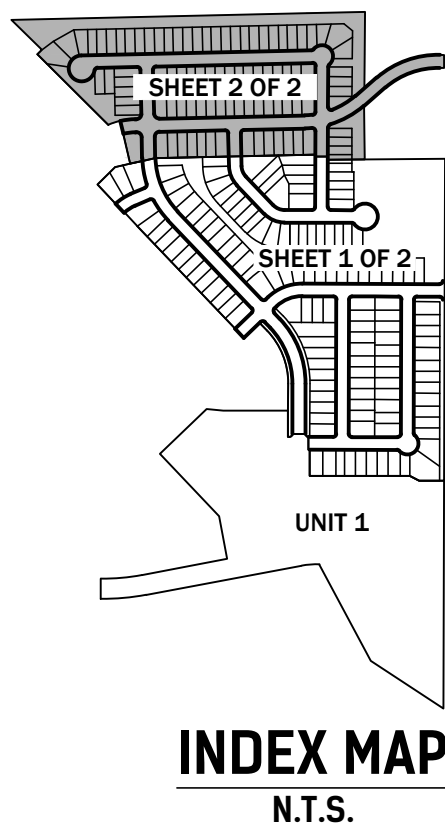
M.W. CUDE ENGINEERS, L.L.C.
CONTACT PERSON: DAVID D. CUPIT II, P.E.
4122 POND HILL ROAD, SUITE 101
SAN ANTONIO, TX 78231
TEL: (210) 681-2951
FAX: (210) 523-7112

BENCHMARK BM-1

BENCHMARK TO BE SET BY ENGINEER PRIOR TO CONSTRUCTION.

SEWER/WATER LINE CROSSINGS	
LINE	STATION
"A"	16+91.32
"A"	26+16.47
"A"	28+78.28
"A"	30+08.45
"A"	31+28.67
"A"	35+63.48
"A"	46+67.12
"A"	49+16.07
"C"	03+55.00
"E"	08+73.49
"H"	02+04.37
"H"	06+22.53
"H"	06+45.27
"H"	13+89.68
"J"	1+22.98
"K"	2+27.39

SEWER/GAS LINE CROSSINGS	
"A"	31+75.32
"A"	36+13.77
"E"	01+21.00
"F"	01+23.91
"F"	09+21.64
"H"	01+25.00



CAUTION!!

EXISTING UTILITIES ARE WITHIN THE LIMITS OF CONSTRUCTION. CONTRACTORS SHALL EXERCISE EXTRA CARE IN DIGGING ANY TRENCH FOR PROPOSED UTILITIES. THE CONTRACTOR SHALL BE RESPONSIBLE TO COORDINATE, VERIFY THE EXACT LOCATION & IDENTIFY AREA OF CONFLICTS WITH EXISTING UTILITIES AND SHALL NOTIFY THE ENGINEER IF CONFLICT IS FOUND.

CAUTION!!

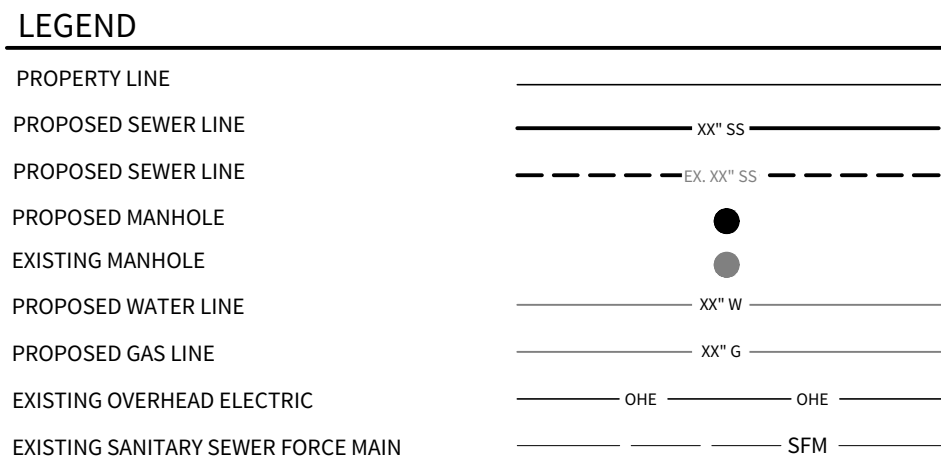
THE CONTRACTOR SHALL BE AWARE THAT OVERHEAD ELECTRIC LINES EXIST WITHIN THE VICINITY OF THE SITE. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO HAVE THESE UTILITIES LOCATED PRIOR TO COMMENCING CONSTRUCTION. THE CONTRACTOR SHALL USE EXTREME CAUTION WHEN WORKING IN THIS AREA. ANY DAMAGE DONE TO THESE EXISTING FACILITIES WILL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO REPAIR.

TRENCH EXCAVATION PROTECTION

CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR STRUCTURAL DESIGN/GEOTECHNICAL/SAFETY/EQUIPMENT CONSULTANT, IF ANY, SHALL REVIEW THESE PLANS AND AVAILABLE GEOTECHNICAL INFORMATION AND THE ANTICIPATED INSTALLATION SITE(S) WITHIN THE PROJECT WORK AREA IN ORDER TO IMPLEMENT CONTRACTOR'S TRENCH EXCAVATION SAFETY PROTECTION SYSTEMS, PROGRAMS AND/OR PROCEDURES FOR THE PROJECT DESCRIBED IN THE CONTRACT DOCUMENTS. THE CONTRACTOR'S IMPLEMENTATION OF THESE SYSTEMS, PROGRAMS AND/OR PROCEDURES SHALL PROVIDE FOR ADEQUATE TRENCH EXCAVATION SAFETY PROTECTION THAT COMPLY WITH AS A MINIMUM, OSHA STANDARDS FOR TRENCH EXCAVATIONS. SPECIFICALLY, CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR SAFETY CONSULTANT SHALL IMPLEMENT A TRENCH SAFETY PROGRAM IN ACCORDANCE WITH OSHA STANDARDS GOVERNING THE PRESENCE AND ACTIVITIES OF INDIVIDUALS WORKING IN AND AROUND TRENCH EXCAVATION.

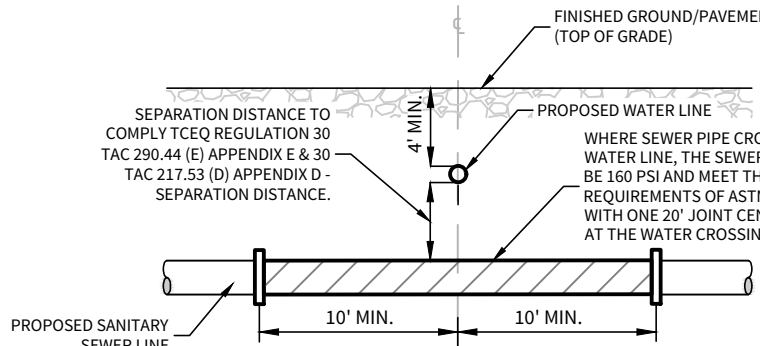
NOTES:

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2. ALL SANITARY SEWER PIPE SHALL BE SDR-26 PVC PIPE MEETING ASTM SPECIFICATION D-3034.
3. MANHOLE OPENING INCREASED TO 30" AS PER TAC CHAPTER 217.55.
4. REFERENCE STREET DETAIL SHEET AND GEOTECHNICAL ENGINEERING REPORT FOR PAVEMENT DESIGN INFORMATION.
5. ALL EXCAVATED MATERIAL SHALL BE PLACED ON THE UPGRADIENT SIDE OF THE SEWER TRENCH THIS ALLOWING THE TRENCH TO INTERCEPT ANY SILT CONTAMINATED RUNOFF.
6. ALL LATERALS SHALL BE INSTALLED AT A MINIMUM 2.0% SLOPE UNLESS OTHERWISE NOTED.
7. BENCHMARK TO BE SET BY ENGINEER PRIOR TO THE START OF CONSTRUCTION.
8. ALL SEWER LATERALS TO BE INSTALLED WITH A MINIMUM 150 PSI PRESSURE RATED PIPE AND EMBEDDED IN CEMENT STABILIZED SAND AT ALL WATER MAIN AND LATERAL SERVICE CROSSINGS PER 30 TAC CHAPTER 290.44(e).
9. CONTRACTOR TO INSTALL A 2" X 4" LUMBER ON EACH SEWER LATERAL LOCATION AND PAINT IT IN GREEN.

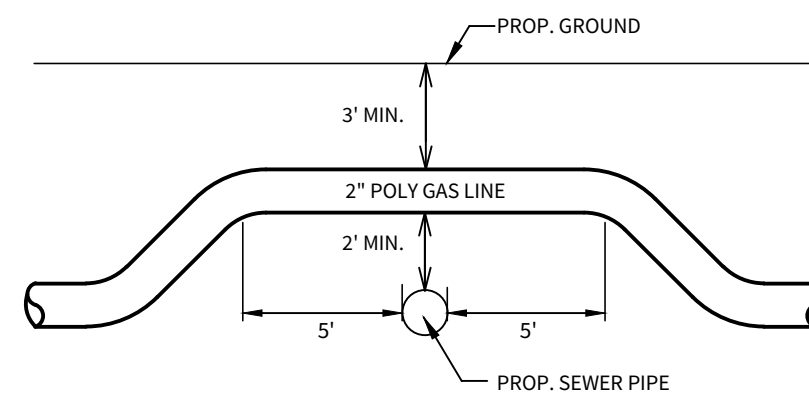


KEYNOTES

- 1 20' OVERHEAD ELECTRIC EASEMENT
- 2 12' SANITARY SEWER EASEMENT
- 3 16' SANITARY SEWER EASEMENT



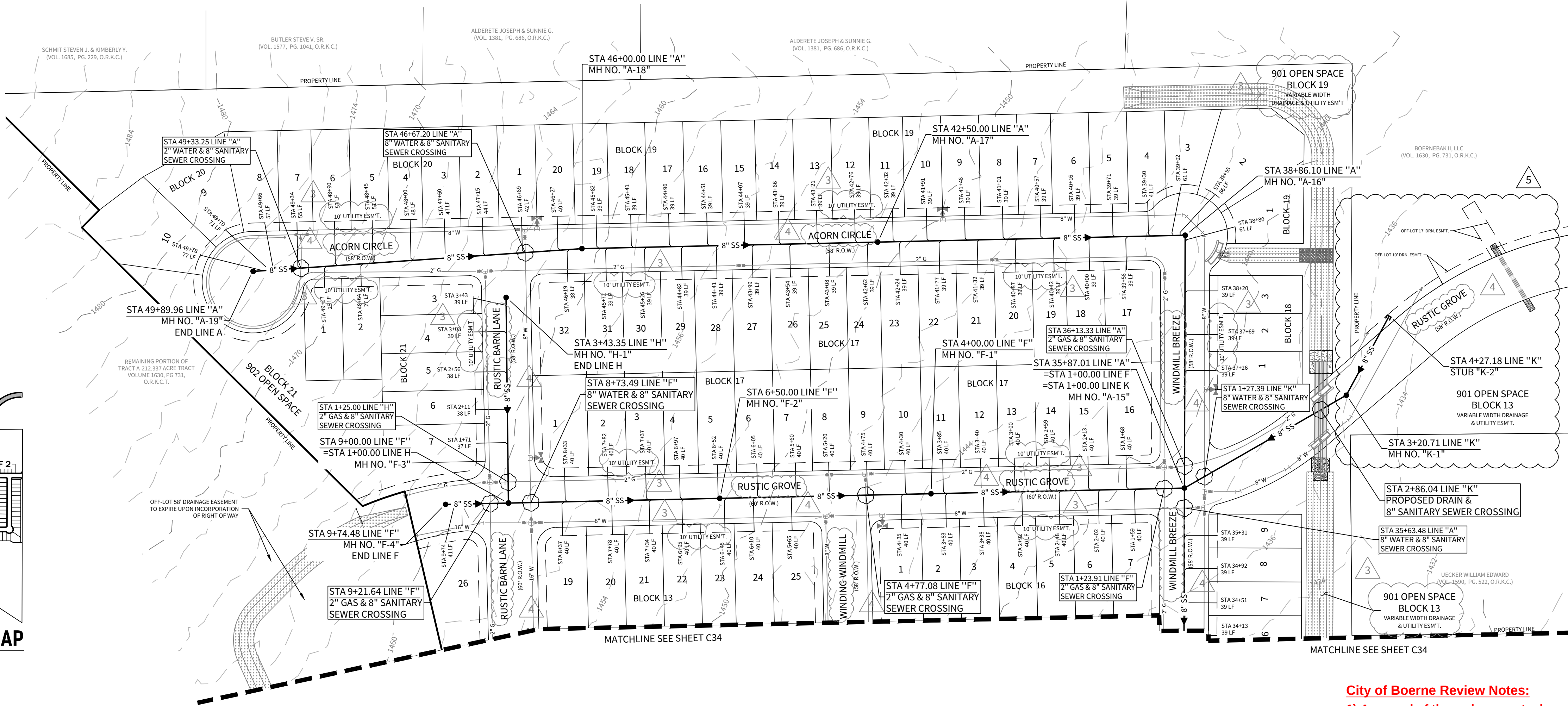
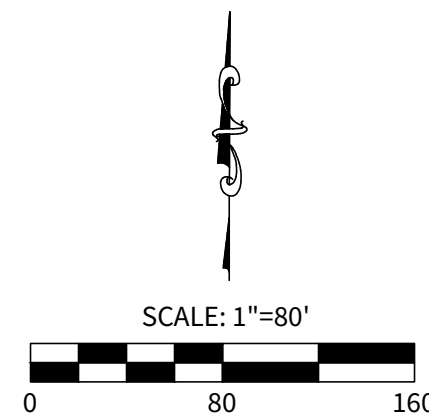
TYPICAL SANITARY SEWER/ WATER CROSSING DETAIL
N.T.S.



SEWER / GAS CROSSINGS DETAIL

SIDE VIEW (THIS DETAIL IS VERTICAL ONLY, NOT HORIZONTAL.)
(N.T.S.)

NOTE: VERTICAL BEND IS NOT NEEDED WHEN SEWER IS DEEPER THAN 7'

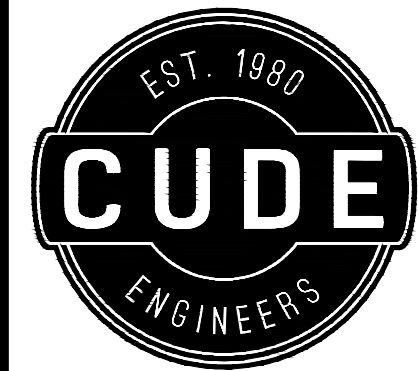


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By: Cheryl J. Rogan	Date: 7/1/2022

*Revision updating sewer main alignment



4122 Pond Hill Road, Suite 101
San Antonio, Texas 78231
P:(210) 681.2951 F:(210) 523.7112

CORLEY FARMS UNIT 2

OVERALL SANITARY SEWER PLAN

DATE

03/03/2022

PROJECT NO.

03481.005

DRAWN BY

C3

CHECKED BY

XV/JC/DDC

REVISIONS

- 1.
- 2.
3. 2021-10-07 - CITY OF BOERNE COMMENTS
4. 2021-11-12 - ADDED STREET NAMES
5. 2022-03-04 - SANITARY SEWER MAIN EXTENSION
- 6.
- 7.
- 8.
- 9.



CUDE ENGINEERS

TBPE No. 455
TBPLS No. 10048500

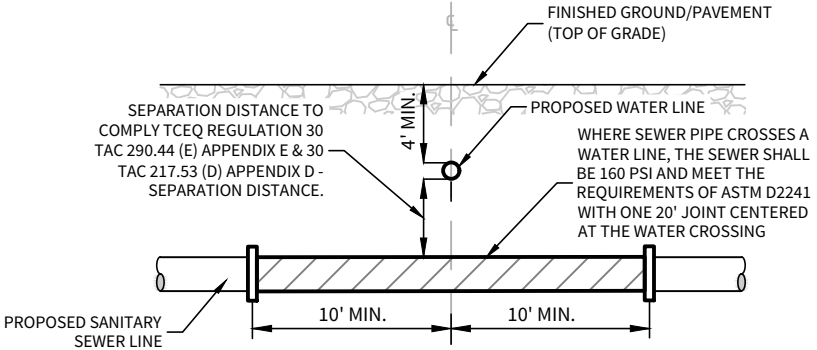
C35

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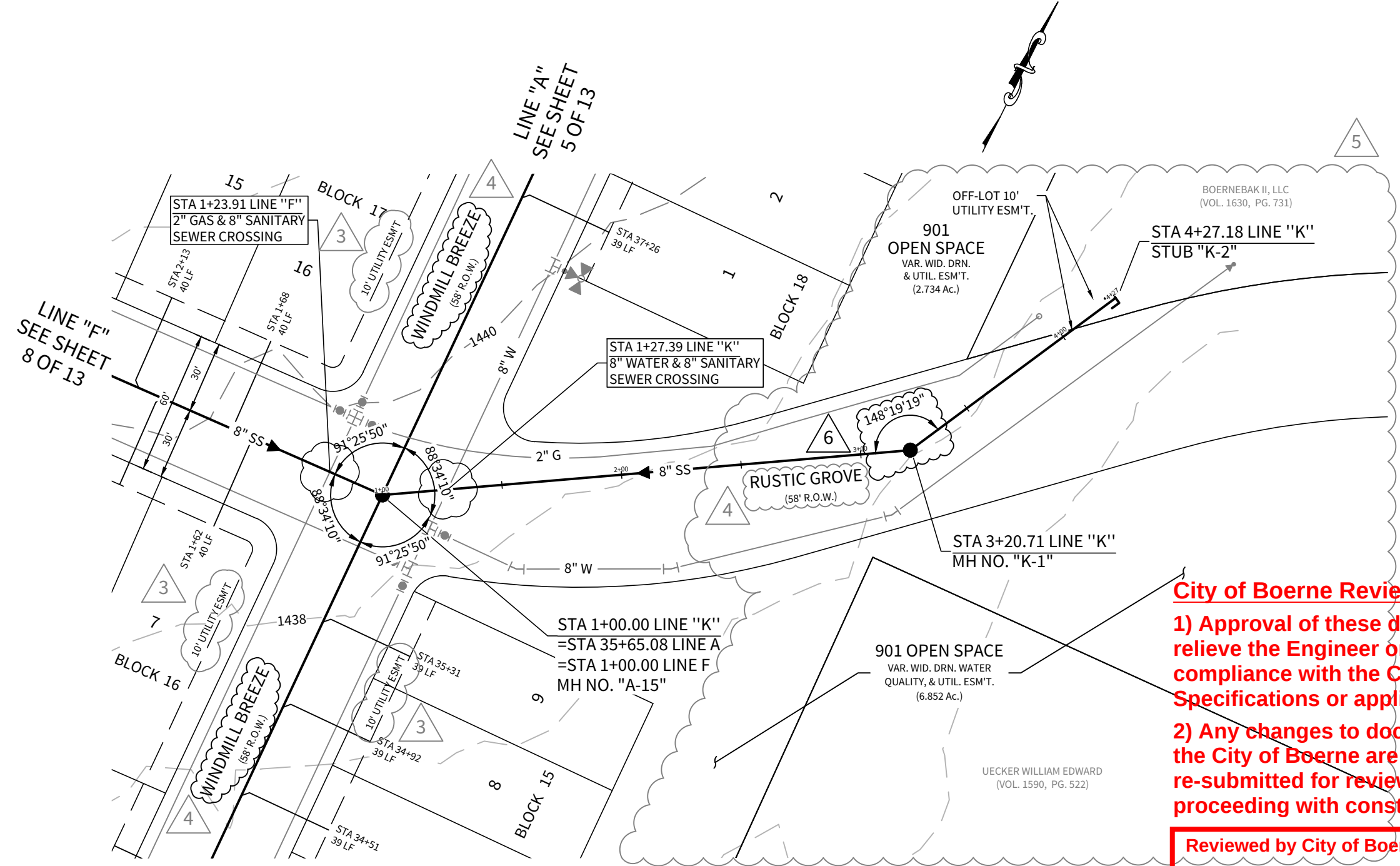
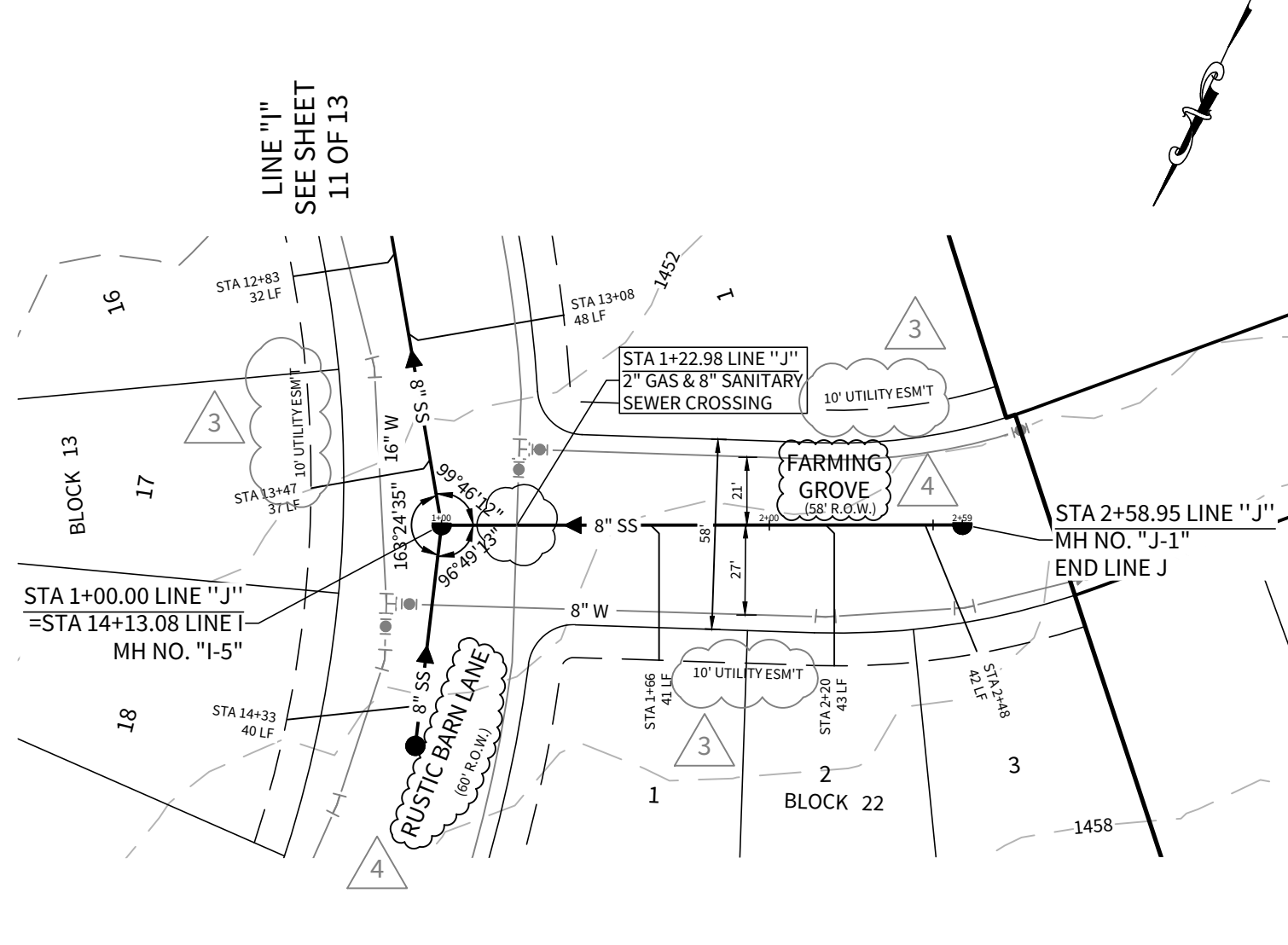
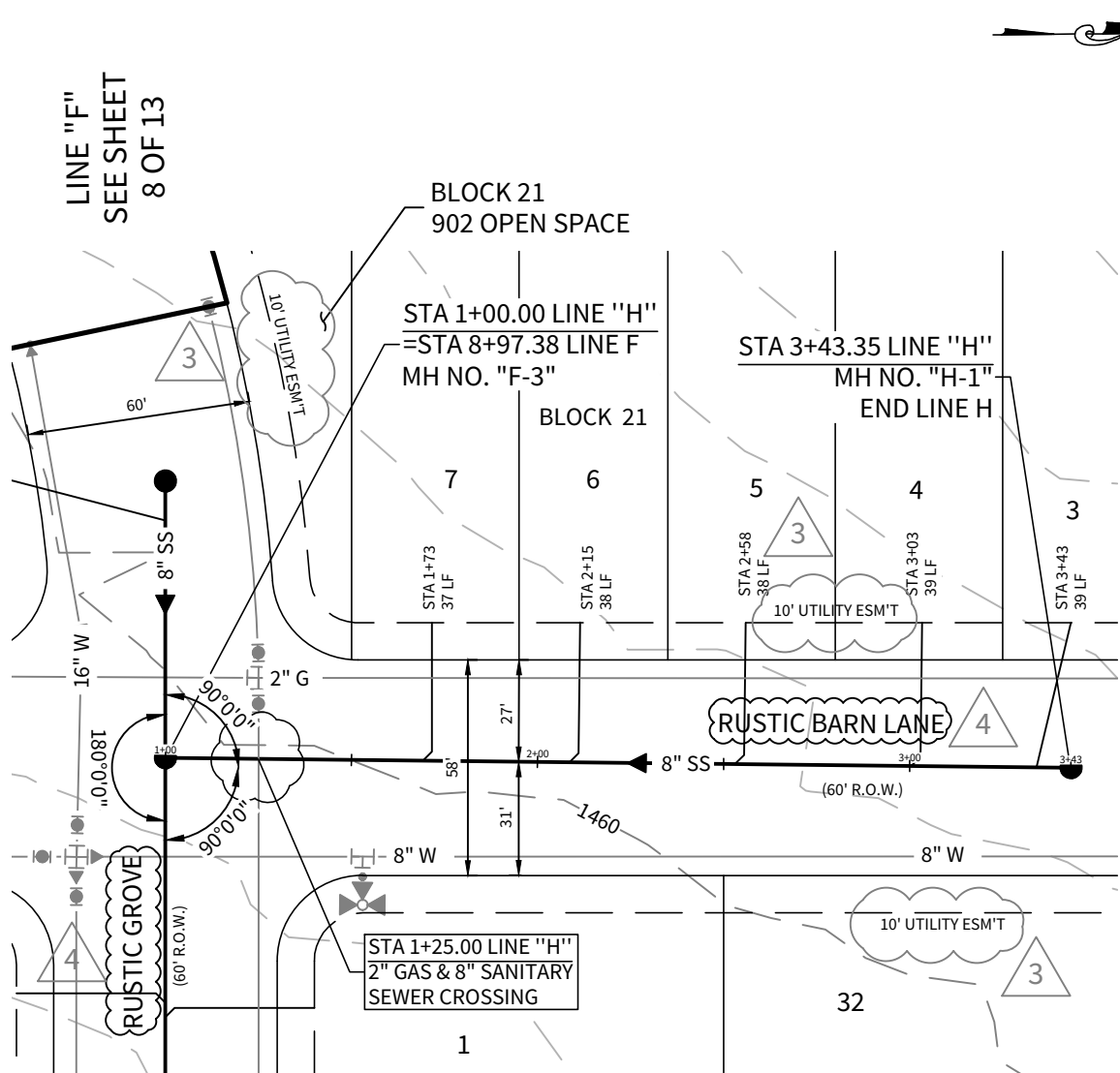
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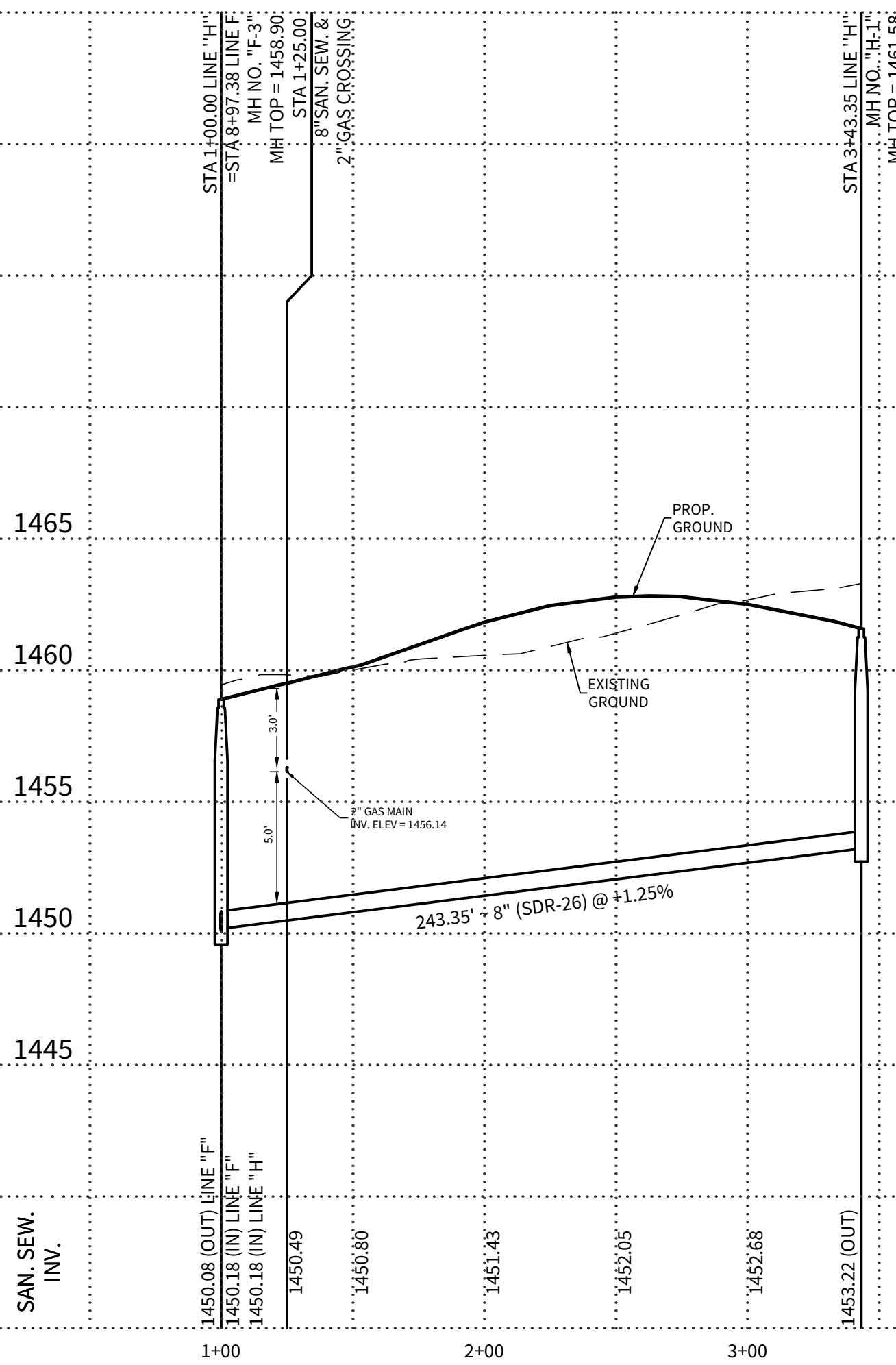
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Not Reviewed - Accepted FIO _____
By: *Cheryl J. Rogan* Date: 7/1/2022

*Revision updating sewer main alignment

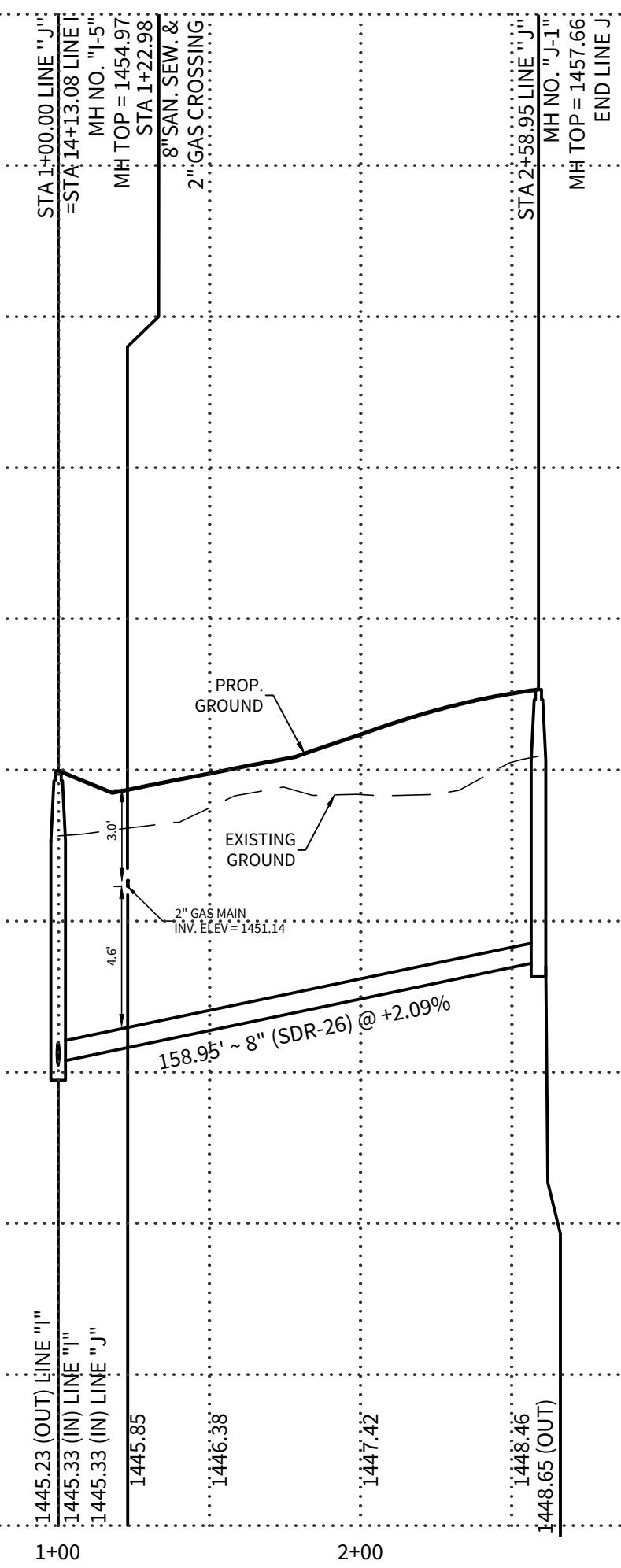
LINE "H"

STA. 1+00.00 TO STA. 3+43.35



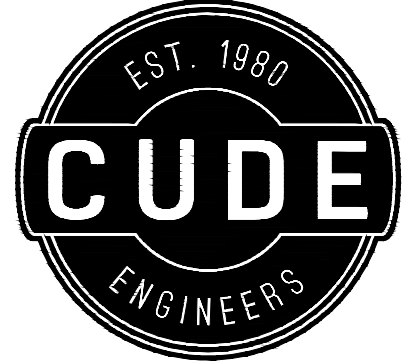
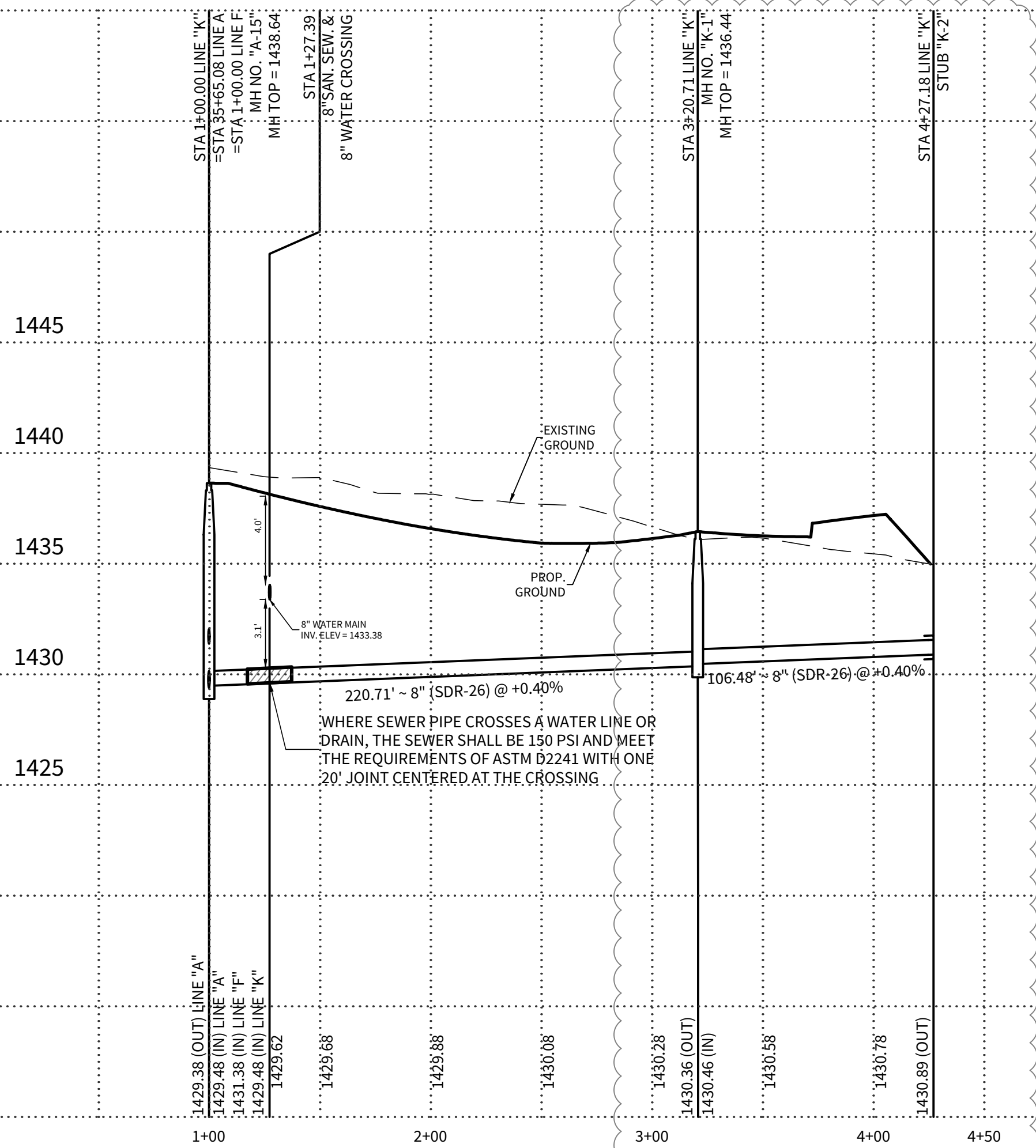
LINE "J"

STA. 1+00.00 TO STA. 2+58.95



LINE "K"

STA. 1+00.00 TO STA. 4+27.18



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San Antonio, Texas 78231
P:(210) 681.2951 F:(210) 523.7112

CORLEY FARMS
UNIT 2

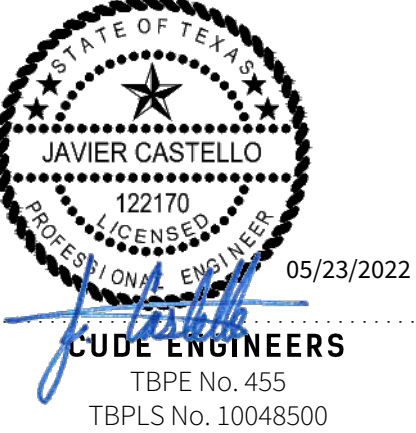
SANITARY SEWER PLAN & PROFILE LINE "H" & "J" & "K"

DATE
05/19/2022
PROJECT NO.
03481.005

DRAWN BY
C3
CHECKED BY
XV/JC/DDC

REVISIONS

- 1.
- 2.
3. 2021-08-26 - CITY OF BOERNE COMMENTS
4. 2021-11-12 - ADDED STREET NAMES
5. 2022-03-31 - SANITARY SEWER MAIN EXTENSION
6. 2022-05-19 - CUB COMMENTS
- 7.
- 8.
- 9.

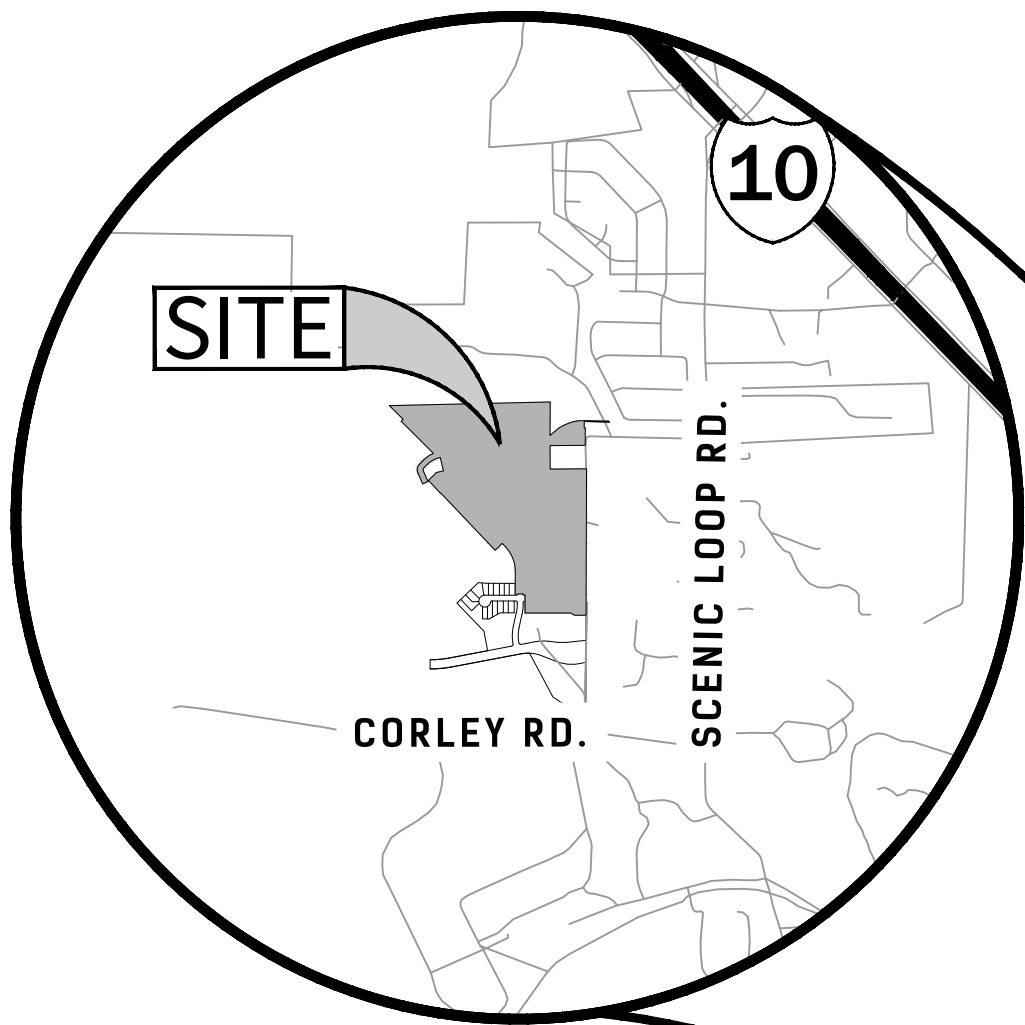


C45

WATER DISTRIBUTION CONSTRUCTION PLANS

- C47 - WATER DISTRIBUTION PLAN
- C48 - WATER DISTRIBUTION PLAN
- C49 - WATER DISTRIBUTION PLAN
- C50 - 16" OVERSIZE WATER PLAN & PROFILE
- C51 - 16" OVERSIZE WATER PLAN & PROFILE
- ★ C52 - WATER DISTRIBUTION STANDARD DETAILS

★ STANDARD DETAILS ADOPTED FOR THIS CONSTRUCTION SET.



LOCATION MAP



VICINITY MAP

4
CORLEY FARMS SUBDIVISION IS VESTED TO THE SUBDIVISION ORDINANCE NO. 2007-56 OF THE CITY OF BOERNE, TEXAS (REVISED 10.08.2019) PER THE DEVELOPMENT AGREEMENT EXECUTED BETWEEN BOERNEBAK, LLC., AND THE CITY OF BOERNE, TEXAS EFFECTIVE NOVEMBER 26, 2019.

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Approved as Noted ☐

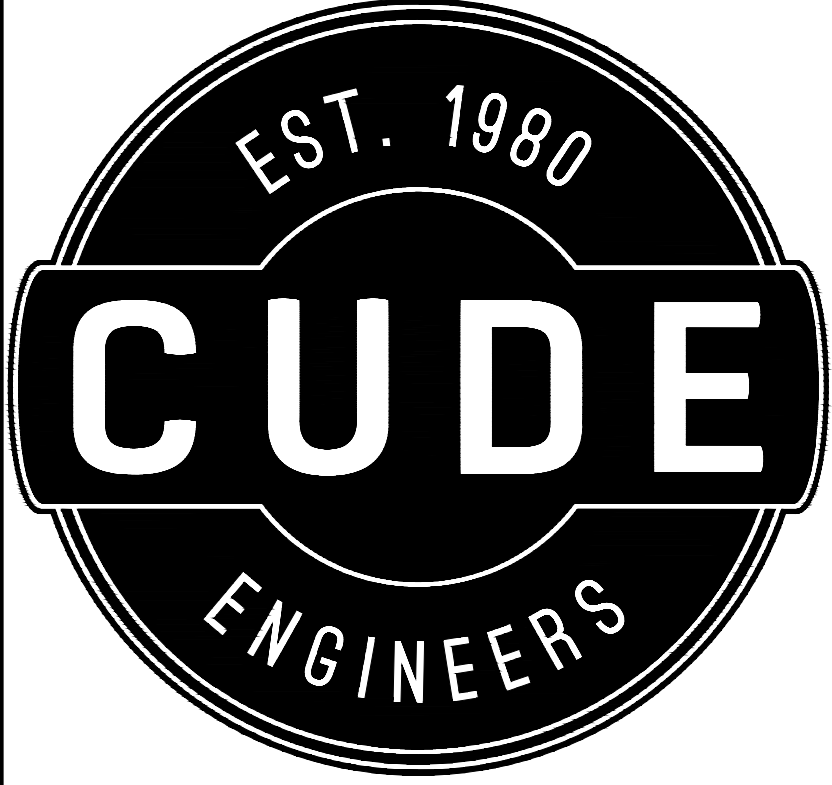
Disapproved ☐

Incomplete - Not Reviewed ☐

Not Reviewed - Accepted FIO ☐

By: Cheryl J. Rogen Date: 7/1/2022

*Revision updating water main alignment



CORLEY FARMS
UNIT 2
WATER DISTRIBUTION
CONSTRUCTION PLANS

PRESSURE ZONE 12			
Developer's Name PULTE HOMES OF TEXAS, L.P.			
Developer's Address 1718 DRY CREEKWAY, SUITE 120			
City SAN ANTONIO	State TEXAS	Zip 78259	
Phone # (210) 496-1985	Fax # (210) 496-0449		
SAWS Block Map # XXX-XXX	Total EDUs 235	Total Acreage 55.166	
Total Linear Footage of Pipe 16" W - 1777 L.F. / 18" W - 7202 L.F. / 24" W - 752 L.F. Plat No. N/A (CORLEY FARMS UNIT 2 PLAT)			
Number of Lots 225	SAWS Job No. 21-XXXX		



DEVELOPER:

PULTE HOMES OF TEXAS, L.P.
CONTACT PERSON: FELIPE GONZALEZ
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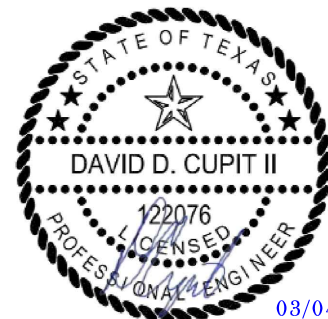
P:(210) 681.2951 F: (210) 523.7112

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C3

DATE
03/22/2022

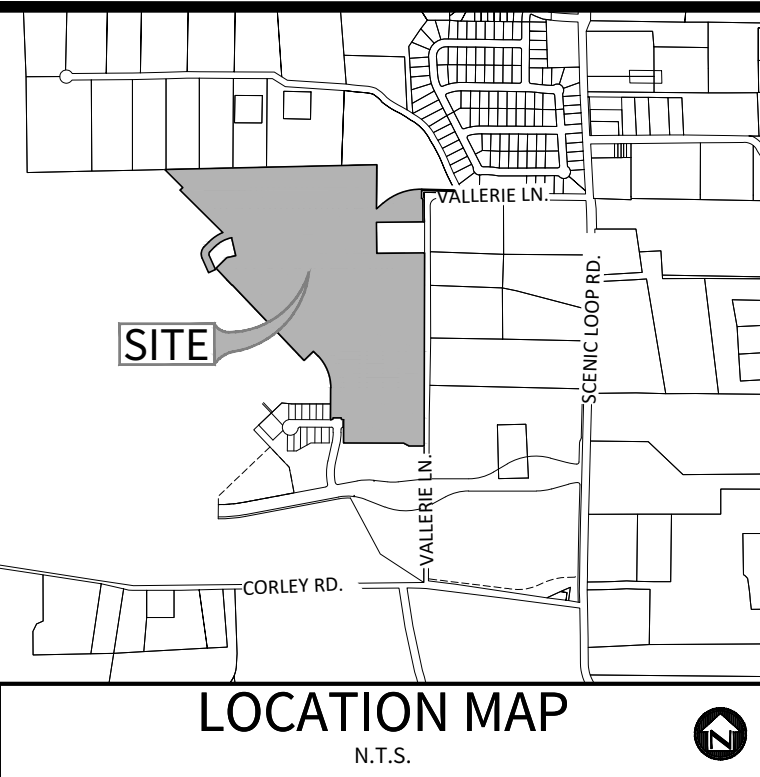
CHECKED BY
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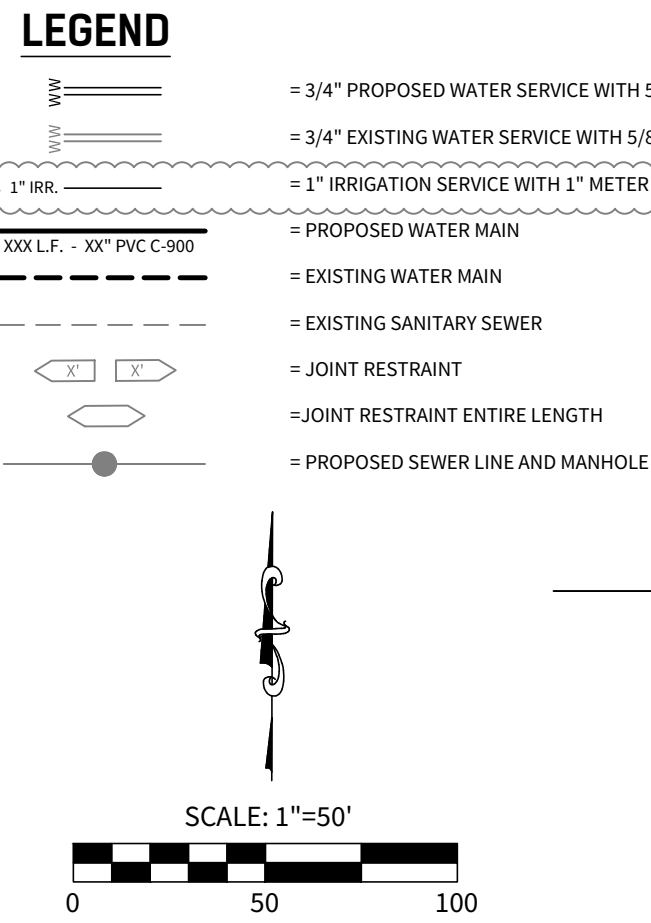
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TBPLS No. 10048500

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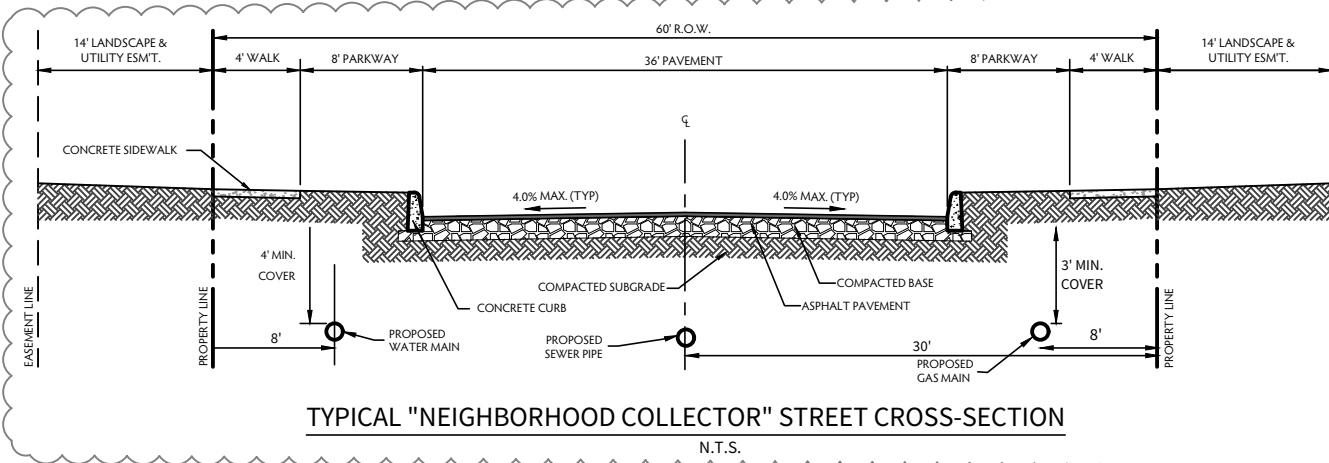
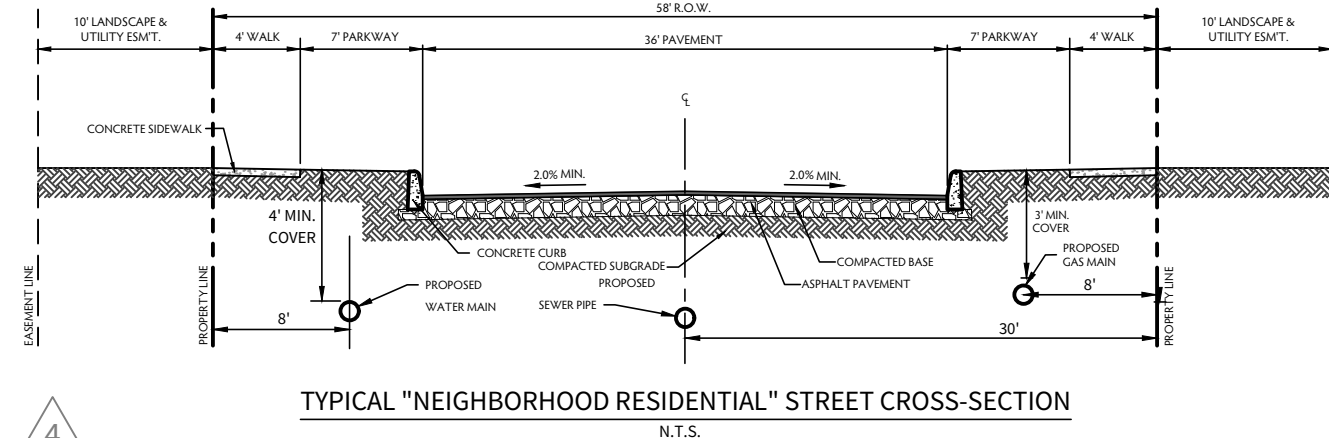
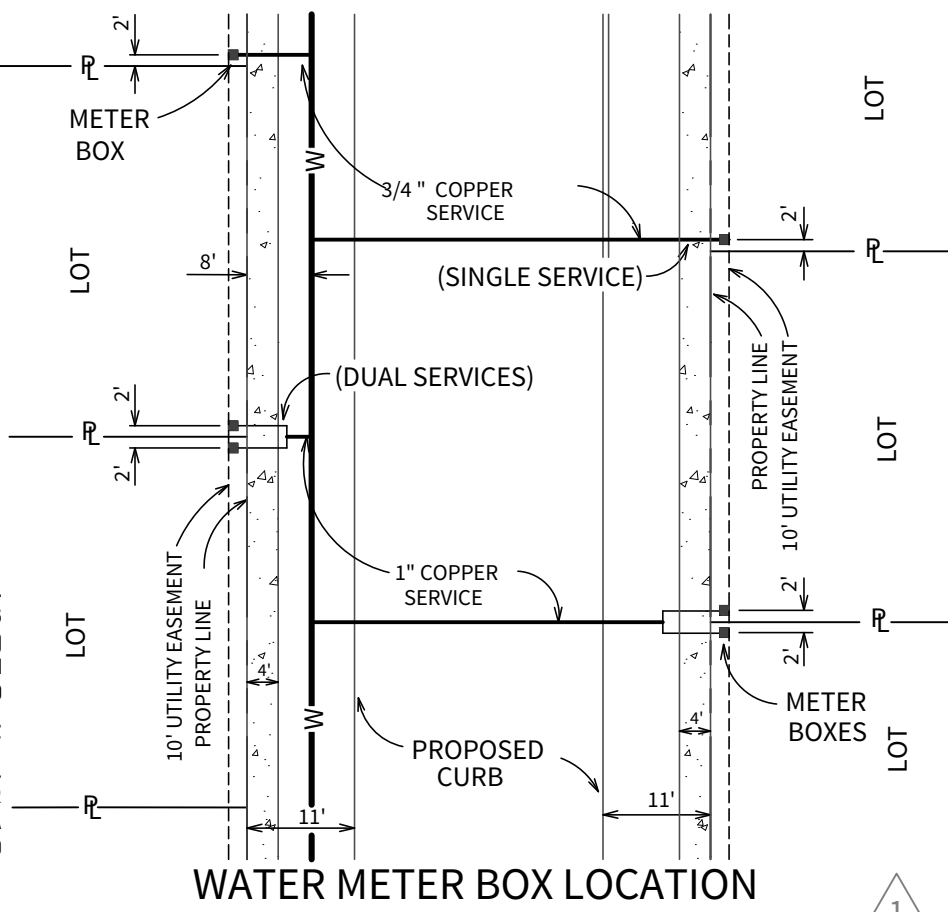
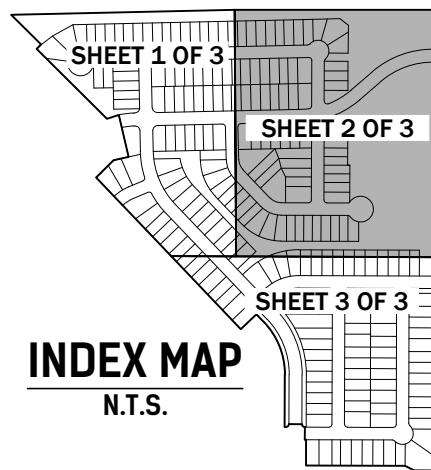


THRUST BLOCKING NOTE

ANCHORAGE/THRUST BLOCKING AND JOINT RESTRAINTS SHALL BE DONE IN ACCORDANCE WITH SAWS STANDARDS AND SPECIFICATIONS FOR CONSTRUCTION (ITEM NO. 839)

TRENCH EXCAVATION PROTECTION

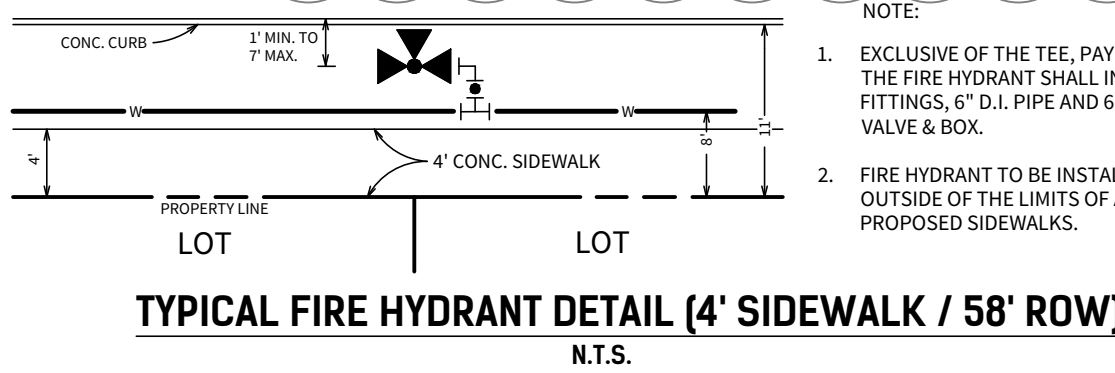
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SAWS CONSTRUCTION NOTES COUNTER PERMIT AND GENERAL CONSTRUCTION PERMIT REVISED JULY 2017

GENERAL SECTION

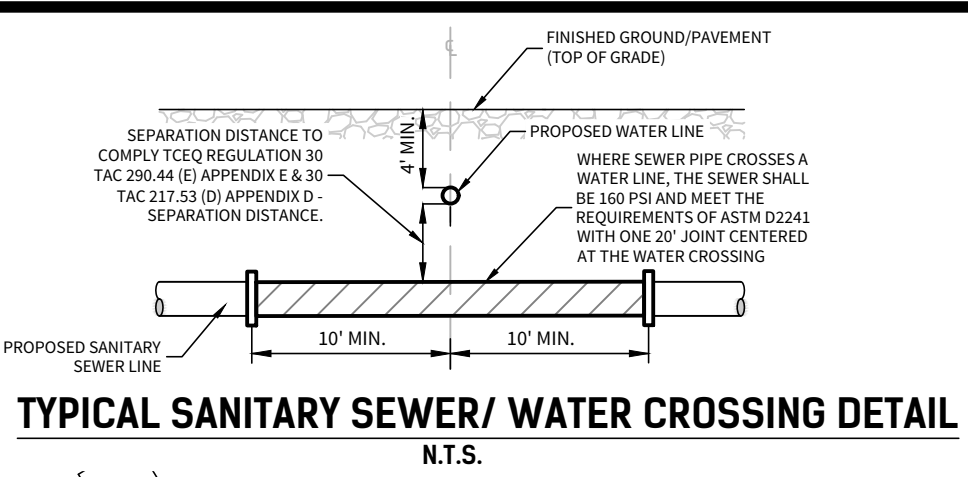
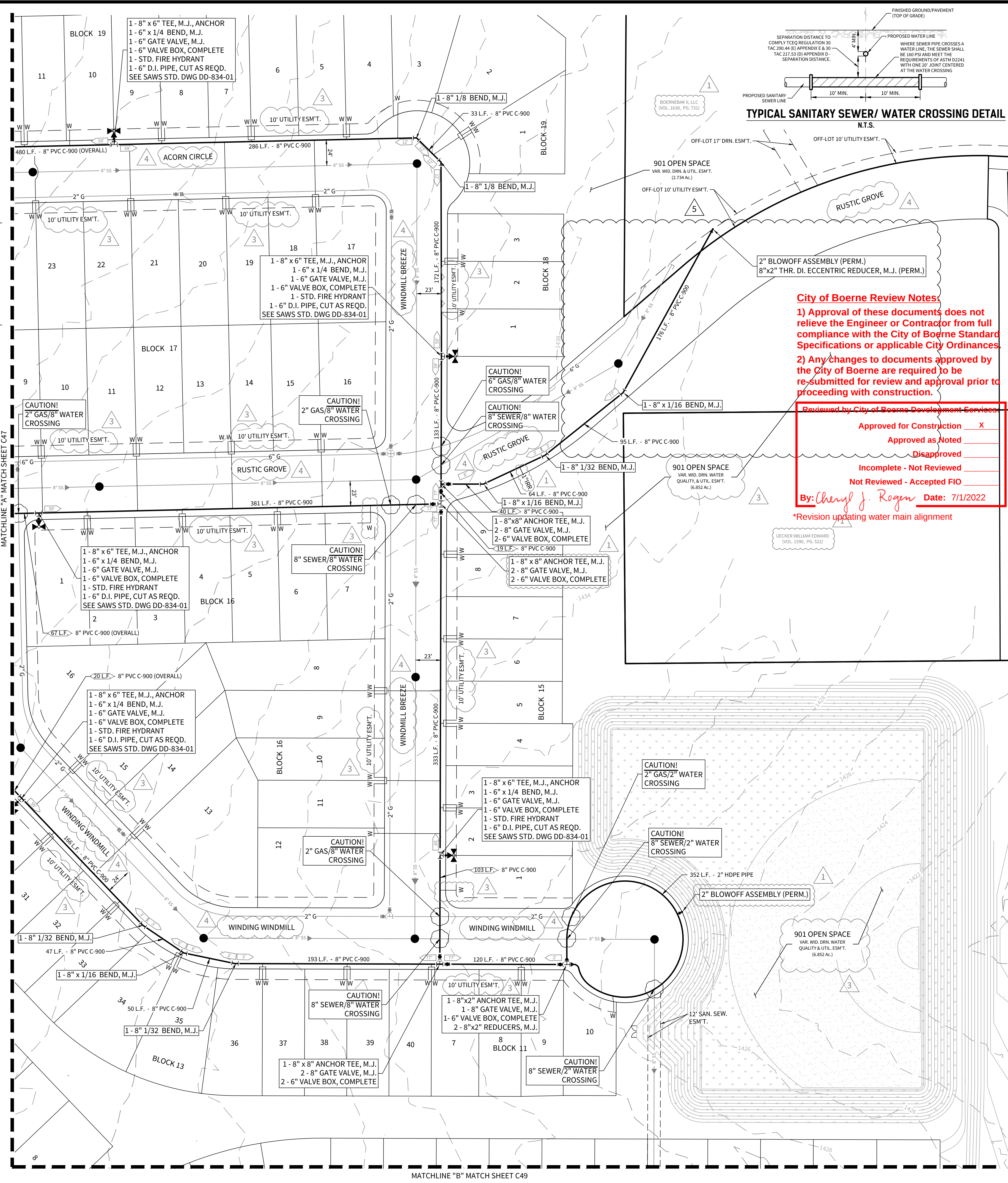
1. All materials and construction procedures within the scope of this contract shall be approved by the San Antonio Water System (SAWS) and comply with the Plans, Specifications, General Conditions and with the following as applicable:
 - A. Current Texas Commission on Environmental Quality (TCEQ) "Design Criteria for Domestic Wastewater System", Texas Administrative Code (TAC) Title 30 Part 1 Chapter 217 and "Public Drinking Water", TAC Title 30 Part 1 Chapter 290.
 - B. Current TxDOT "Standard Specifications for Construction of Highways, Streets and Drainage".
 - C. Current "San Antonio Water System Standard Specifications for Water and Sanitary Sewer Construction".
 - D. Current City of San Antonio "Standard Specifications for Public Works Construction".
 - E. Current City of San Antonio "Utility Excavation Criteria Manual" (UECM).
2. The Contractor shall not proceed with any pipe installation work until they obtain a copy of the approved Counter Permit or General Construction Permit (GCP) from the consultant and has been notified by SAWS Construction Inspection Division to proceed with the work and has arranged a meeting with the inspector and consultant for the work requirements. Work completed by the contractor without an approved Counter Permit and/or a GCP will be subject to removal and replacement at the expense of the contractor and/or the developer.
3. The Contractor shall obtain the SAWS Standard Details from the SAWS website, http://www.saws.org/business_center/specs. Unless otherwise noted within the design plans.
4. The Contractor is to make arrangements with the SAWS Construction Inspection Division at 233-2973, on notification procedures that will be used to notify affected home residents and/or property owners 48 hours prior to beginning any work.
5. Location and depth of existing utilities and service laterals shown on the plans are understood to be approximate. Actual locations and depths must be field verified by the Contractor at least 1 week prior to construction. It shall be the Contractor's responsibility to locate utility service lines as required for construction and to protect them during construction at no cost to SAWS.
6. The Contractor shall verify the exact location of underground utilities and drainage structures at least 1-2 weeks prior to construction whether shown on plans or not. Please allow up to 7 business days for locates requesting pipe location markers on SAWS facilities. The following contact information are supplied for verification purposes:
SAWS Utility Locates: <http://www.saws.org/Service/Locates>
COSEA Drainage (210) 207-0724 or (210) 207-6026
COSEA Traffic Signal Operations (210) 206-8480
COSEA Traffic Signal Damages (210) 207-3951
Texas State Wide One Call Locator 1-800-545-6005 or 811
7. The Contractor shall be responsible for restoring existing fences, curbs, streets, driveways, sidewalks, landscaping and structures to its original or better condition if damages are made as a result of the project's construction.
8. All work in Texas Department of Transportation (TxDOT) and/or Bexar County right-of-way shall be done in accordance with respective construction specifications and permit requirements.
9. The Contractor shall comply with City of San Antonio or other governing municipality's tree ordinances when excavating near trees.
10. The Contractor shall not place any waste materials in the 100-year Flood Plain without first obtaining an approved Flood Plain Permit.
11. Holiday Work: Contractors will not be allowed to perform SAWS work on SAWS recognized holidays. Request should be sent to costworkreq@saws.org.
12. Weekend Work: Contractors are required to notify the SAWS Inspection Construction Department 48 hours in advance to request weekend work. Request should be sent to costworkreq@saws.org.
13. Any and all SAWS utility work installed without holiday/weekend approval will be subject to be uncovered for proper inspection.
14. Compaction note (Item 804): The contractor shall be responsible for meeting the compaction requirements on all trench backfill and for paying for the tests performed by a third party. Compaction tests will be done at one location point randomly selected, or as indicated by the SAWS Inspector and/or the test administrator, per each 12-inch loose lift per 400 linear feet at a minimum. This project will not be accepted and finalized by SAWS without this inspection being met and verified by providing all necessary documented test results.
15. A copy of all testing reports shall be forwarded to SAWS Construction Inspection Division. Water Section



WATER SECTION

1. Prior to tie-ins, any shutdowns of existing mains of any size must be coordinated with the SAWS Construction Inspection Division at least one week in advance of the shutdown. The Contractor must also provide a sequence of work as related to the tie-ins; this is at no additional cost to SAWS or the project and it is the responsibility of the Contractor to sequence the work accordingly. For water mains 12" or higher: SAWS Emergency Operations Center (210) 233-2014
2. Asbestos Cement (AC) pipe, also known as transite pipe which is known to contain asbestoscontaining material (ACM), may be located within the project limits. Special waste management procedures and health and safety requirements will be applicable when removal and/or disturbance of this pipe occurs. Such work is to be made under Special Specification Item No. 3000, "Special Specification for Handling Asbestos Cement Pipe".
3. Valve removal: Where the contractor is to abandon a water main, the control valve located on the abandoning branch will be removed and replaced with a cap/plug. (NSPI)
4. Suitable anchorage/thrust blocking or joint restraint shall be provided at all of the following main locations: dead ends, plugs, caps, tees, crosses, valves, and bends, in accordance with the Standard Drawings DD-839 Series and Item No. 839, in the SAWS Standard Specifications for Construction.
5. All valves shall read "open right".
6. PRVs Required: Contractor to verify that no portion of the tract is below ground elevation of XXXX feet where the static pressure will normally exceed 80 PSI. At all such locations where the ground level is below XXXX feet, the Developer or Builder shall install at each lot, on the customer's side of the meter, an approved type pressure regulator in conformance with the Plumbing Code of the City of San Antonio. No dual services allowed for any lots) if "PRV" is required for such lot(s), only single service connections shall be allowed. *Note: A pressure regulator is also known as a pressure reducing valve (PRV).
7. Pipe Disinfection with Dry HTH for Projects less than 800 linear feet. (Item No. 847.3): Mains shall be disinfected with dry HTH where shown in the contract documents or as directed by the Inspector, and shall not exceed a total length of 800 feet. This method of disinfection will also be followed for main repairs. The Contractor shall utilize all appropriate safety measure to protect his personnel during disinfection operations.
8. Backflow Prevention Devices:
All irrigation services within residential areas are required to have backflow prevention devices. All commercial backflow prevention devices must be approved by SAWS prior to installation.
9. Final connection to the existing water main shall not be made until the water main has been pressure tested, chlorinated, and SAWS has released the main for tie-in and use.
10. All meters shall be 5/8" unless otherwise noted.
11. All pipes shall be C-900, CLASS 235 DR 18, unless otherwise noted.

PRESSURE ZONE 12					
Developer's Name					
Developer's Address					
City					
State					
Zip					
Phone #					
SAWS Block Map #					
Total EOU's					
Total Linear Footage of Pipe					
Number of Lots					
SAWS Job No.					



City of Boerne Review Notes:
1) Approval of these documents does not relieve the Engineer or Contractor from full compliance with the City of Boerne Standard Specifications or applicable City Ordinances.
2) Any changes to documents approved by the City of Boerne are required to be re-submitted for review and approval prior to proceeding with construction.
Reviewed by City of Boerne Development Services
Approved for Construction ☒ X
Approved as Noted ☐
Disapproved ☐
Incomplete - Not Reviewed ☐
Not Reviewed - Accepted FIO ☐
By: Cheryl J. Rogan Date: 7/1/2022
*Revision updating water main alignment

4122 Pond Hill Road, Suite 101
San Antonio, Texas 78231
P:(210) 681.2951 F:(210) 523.7112

CORLEY FARMS UNIT 2

WATER DISTRIBUTION PLAN

DATE	03/03/2022
PROJECT NO.	03481.005
DRAWN BY	C3
CHECKED BY	JV/JC/DCC
REVISIONS	1. 2021-06-30 - SAWS COMMENTS 2. 3. 2021-10-07 - CITY OF BOERNE COMMENTS 4. 2021-11-12 - ADDED STREET NAMES 5. 2022-03-04 - WATER MAIN EXTENSION 6. 7. 8. 9.

CUDE ENGINEERS
TBPE No. 455
TBPLS No. 10048500

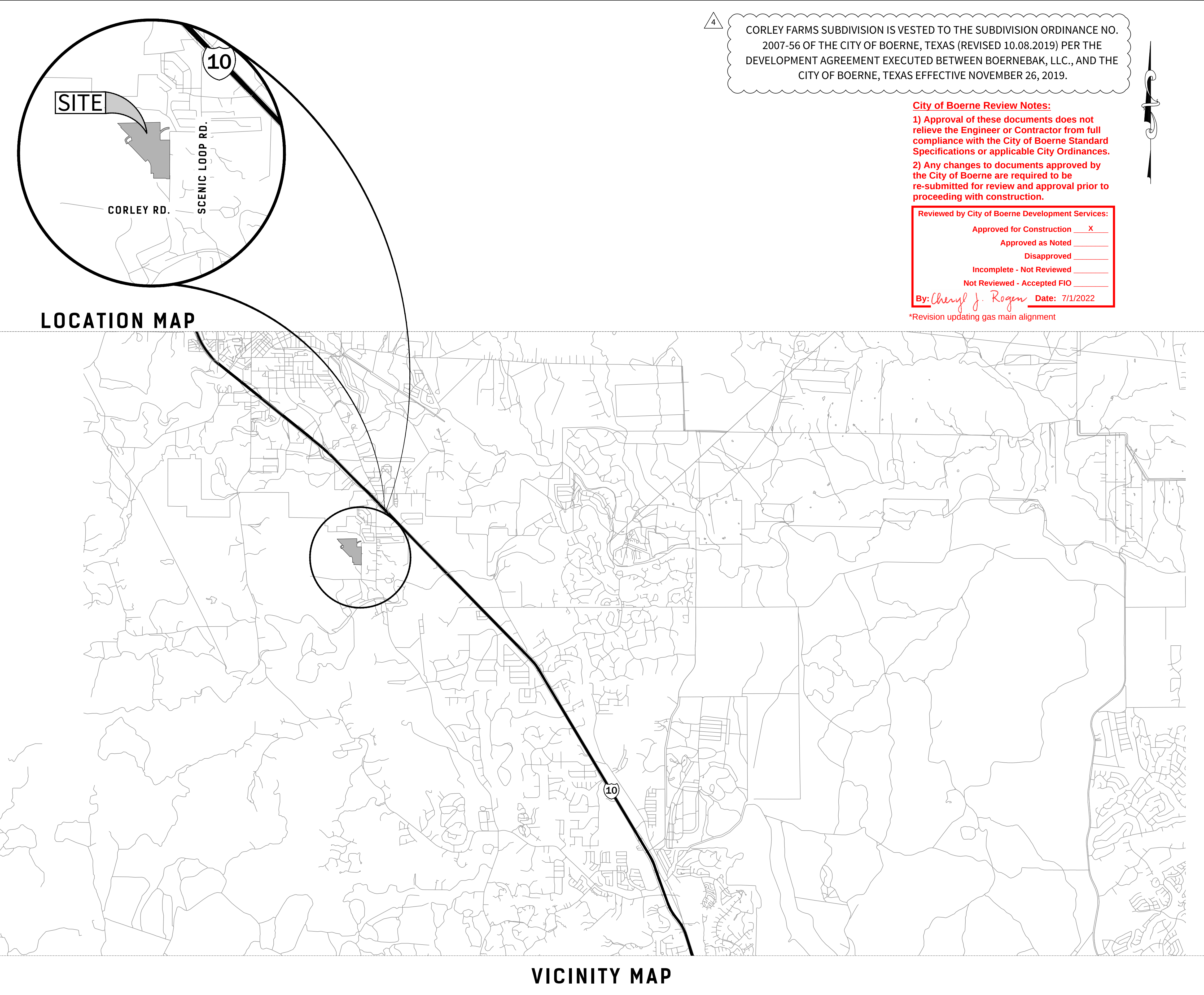
C48

2 OF 6

NATURAL GAS DISTRIBUTION CONSTRUCTION PLANS

- C53 - NATURAL GAS DISTRIBUTION PLAN
- C54 - NATURAL GAS DISTRIBUTION PLAN
- C55 - NATURAL GAS DISTRIBUTION PLAN DETAILS

★ STANDARD DETAILS ADOPTED FOR THIS CONSTRUCTION SET.



4

CORLEY FARMS SUBDIVISION IS VESTED TO THE SUBDIVISION ORDINANCE NO. 2007-56 OF THE CITY OF BOERNE, TEXAS (REVISED 10.08.2019) PER THE DEVELOPMENT AGREEMENT EXECUTED BETWEEN BOERNEBAK, LLC., AND THE CITY OF BOERNE, TEXAS EFFECTIVE NOVEMBER 26, 2019.

City of Boerne Review Notes:

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Reviewed by City of Boerne Development Services:

Approved for Construction ☒ X

Approved as Noted _____

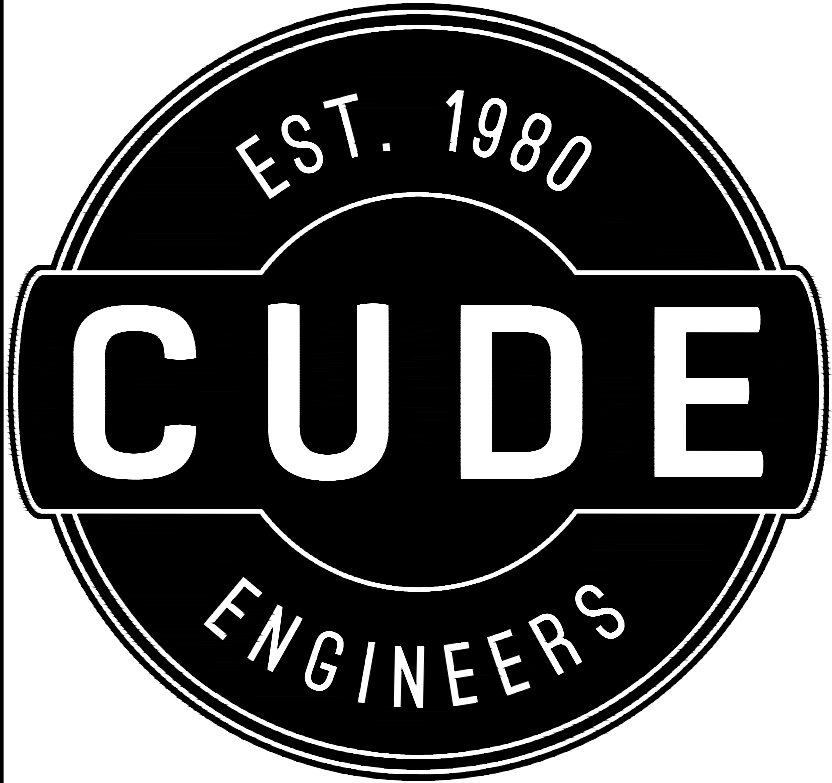
Disapproved _____

Incomplete - Not Reviewed _____

Not Reviewed - Accepted FIO _____

By: Cheryl J. Rogan Date: 7/1/2022

*Revision updating gas main alignment



CORLEY FARMS

UNIT 2

GAS DISTRIBUTION

CONSTRUCTION PLANS

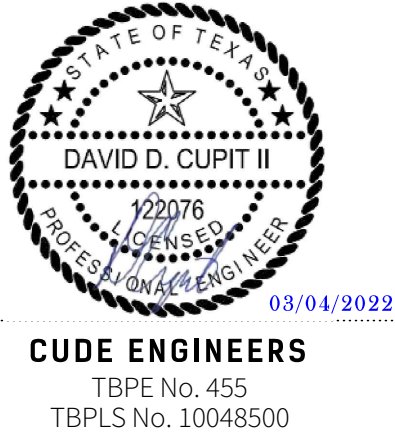


DEVELOPER:

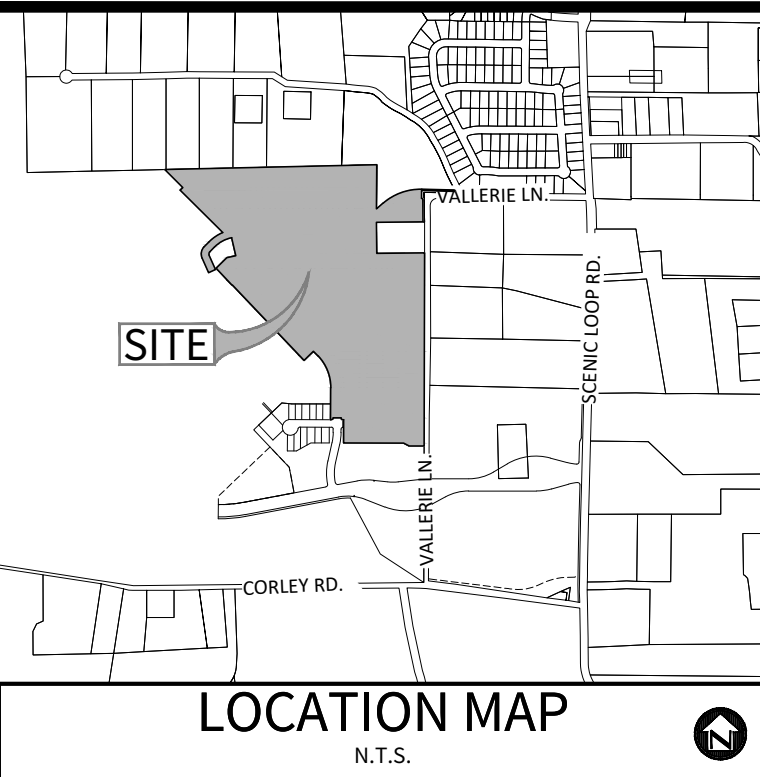
PULTE HOMES OF TEXAS, L.P.
CONTACT PERSON: FELIPE GONZALEZ
1718 DRY CREEK WAY, SUITE 120
SAN ANTONIO, TX 78259
TEL: (210) 496-1985
FAX: (210) 496-0449

4122 Pond Hill Road, Suite 101
San Antonio, Texas 78231
P:(210) 681.2951 F: (210) 523.7112

DRAWN BY C3	DATE 03/22/2022
CHECKED BY JC/DDC	PROJECT NO. 03481.005



CUDE ENGINEERS
TBPE No. 455
TBPLS No. 10048500



OWNER/DEVELOPER:
PULTE HOMES OF TEXAS, L.P.
CONTACT PERSON: FELIPE GONZALEZ
1718 DRY CREEK WAY, SUITE 120
SAN ANTONIO, TX 78259
TEL: (210) 496-1985
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CIVIL ENGINEER:
M.W. CUDE ENGINEERS, L.L.C.
CONTACT PERSON: DAVID D. CUPIT II, P.E.
4122 POND HILL ROAD, SUITE 101
SAN ANTONIO, TX 78231
TEL: (210) 681-2951
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GAS DISTRIBUTION GENERAL NOTES:

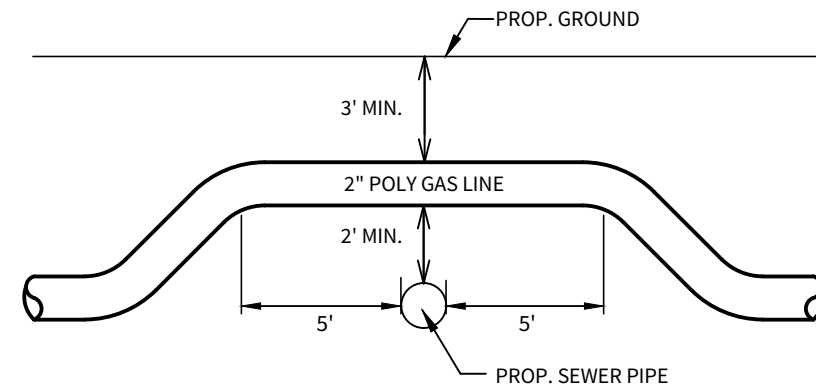
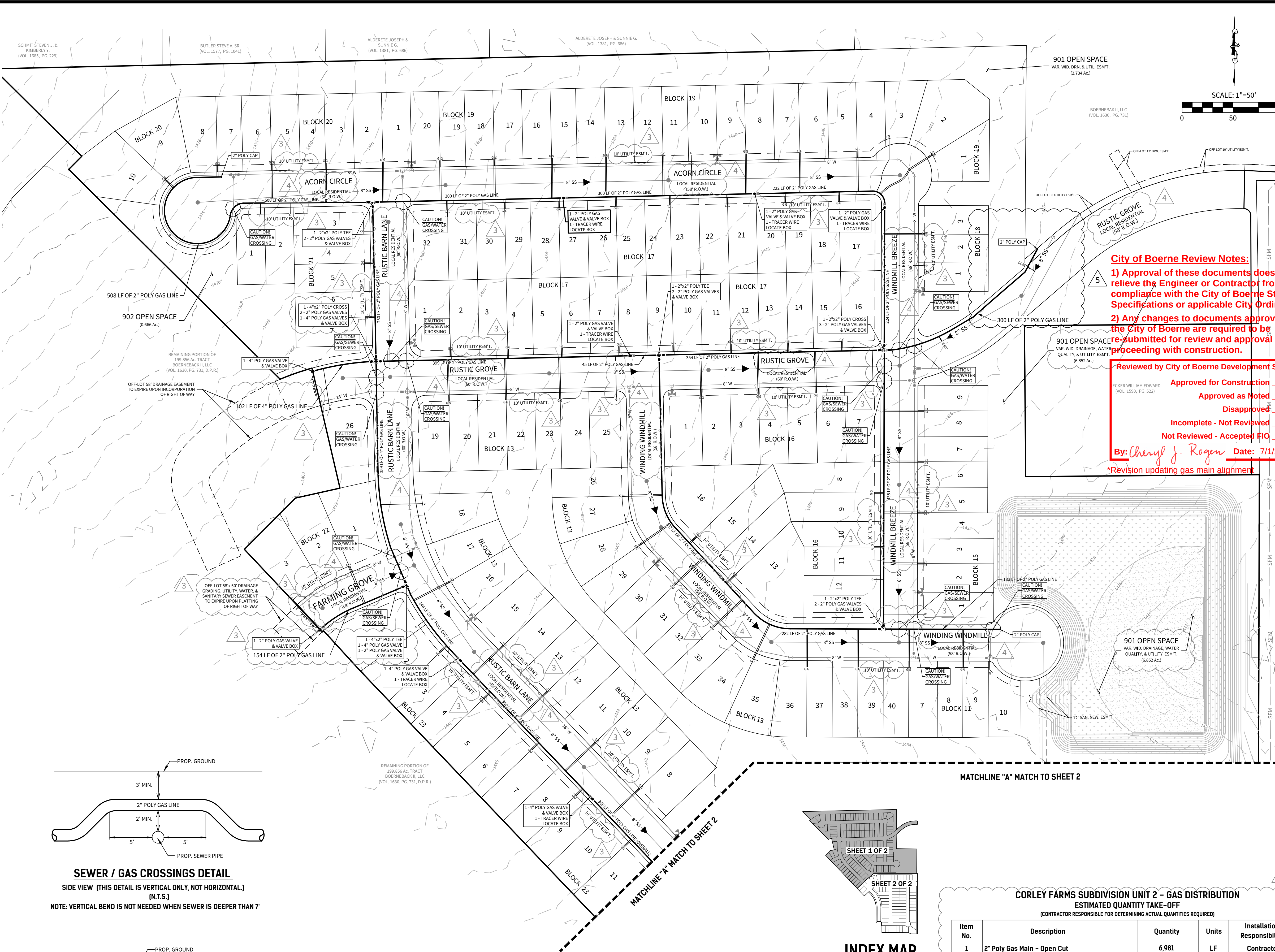
- ALL MATERIALS AND CONSTRUCTION PROCEDURES WITHIN THE SCOPE OF THIS PROJECT SHALL CONFORM TO ALL APPLICABLE CITY OF BOERNE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, LATEST EDITION, AS WELL AS OTHER SAFETY CODES AND INSPECTION PROVISIONS APPLICABLE TO THE PROJECT.
- ALL GAS DISTRIBUTION LINES SHALL BE YELLOW DR-11 POLYETHYLENE PIPE MEETING ASTM D3550, BY PERFORMANCE PIPE, DRISCOMPLEX 6500 WITH NO SUBSTITUTIONS.
- ALL MAINS SHALL BE CLEAR OF ALL FOREIGN MATERIAL BLOWN WITH DRY COMPRESSED AIR AND PRESSURED TESTED AS PER THE CITY OF BOERNE'S STANDARD SPECIFICATIONS.
- FOR PURPOSES OF RECORD DRAWINGS FOR THE CITY OF BOERNE, THE CONTRACTOR SHALL FURNISH THE ENGINEER WITH ALL THE FINAL MEASUREMENTS, TAPS, AND LENGTH OF SERVICE CONNECTIONS.
- THE LOCATIONS AND DEPTHS OF EXISTING UTILITIES SHOWN ON THESE PLANS ARE APPROXIMATE ONLY. ACTUAL LOCATIONS AND DEPTHS OF UTILITIES MUST BE VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. ANY DAMAGE TO EXISTING UTILITIES SHALL BE REPAIRED BY THE CONTRACTOR AT THEIR EXPENSE.
- ALL GARBAGE OR SPOIL MATERIAL FROM THIS WORK SHALL BE REMOVED FROM THE SITE BY THE CONTRACTOR, AT THEIR EXPENSE.
- FINAL CONNECTION TO THE EXISTING GAS MAIN SHALL NOT BE MADE UNTIL THE MAIN HAS BEEN PRESSURE TESTED AND APPROVED FOR CONNECTION BY THE CITY OF BOERNE.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR ACQUIRING ALL PERMITS, TESTS, APPROVALS AND ACCEPTANCES REQUIRED TO COMPLETE CONSTRUCTION OF THIS PROJECT.
- ALL ITEMS NOT SPECIFICALLY CALLED FOR ON THE PLANS, OR IN THE SPECIFICATIONS, BUT NECESSARY TO REASONABLY CONSTRUCT THE FACILITY OR IMPROVEMENT, SHALL BE CONSIDERED INCIDENTAL TO THE OVERALL PROJECT AND NO SEPARATE PAYMENTS WILL BE MADE FOR THESE ITEMS.
- DEPTH OF BURY FOR ALL GAS PIPING SHALL BE A MINIMUM OF 3' UNLESS OTHERWISE NOTED OR APPROVED BY THE CITY OF BOERNE.
- CONTRACTOR TO GRADE SITE TO WITHIN +/- 0.10' BEFORE THE INSTALLATION OF UTILITIES TO ENSURE PROPER COVER IS ACHIEVED.
- CONTRACTOR SHALL VERIFY THE EXACT LOCATION OF UNDERGROUND UTILITIES AND DRAINAGE STRUCTURES WHETHER SHOWN ON THE PLANS OR NOT.
- THE CONTRACTOR SHALL NOTIFY THE GOVERNMENTAL AND/OR UTILITY COMPANIES REGARDING THE LOCATION OF EXISTING FACILITIES PRIOR TO CONSTRUCTION.
- THE CONTRACTOR SHALL EXCAVATE AROUND EXISTING UTILITIES WHICH INTERSECT THE PROPOSED ALIGNMENT OF THE SERVICES AND NOTIFY THE ENGINEER OF POTENTIAL CONFLICTS PRIOR TO ANY CONSTRUCTION IN THE AREA.
- UTILITY TRENCH COMPACTION: ALL UTILITY TRENCH COMPACTION TESTS WITHIN THE STREET RIGHT-OF-WAY SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR'S GEO-TECHNICAL ENGINEER. FILL MATERIAL SHALL BE PLACED IN UNIFORM LAYERS NOT TO EXCEED EIGHT INCHES (8") THICK. EACH LAYER OF MATERIAL SHALL BE COMPACTED TO 95% MODIFIED PROCTOR ASTM D1557 AS SPECIFIED AND DESCRIBED IN ACCORDANCE WITH THE CITY OF BOERNE'S PROJECT SPECIFICATION - SECTION 02221.

NOTE:
CONSTRUCTION OF ALL FACILITIES TO BE DEDICATED TO THE PUBLIC SHALL BE PERFORMED PER THE REQUIREMENTS OF THE CITY OF BOERNE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, LATEST EDITION.

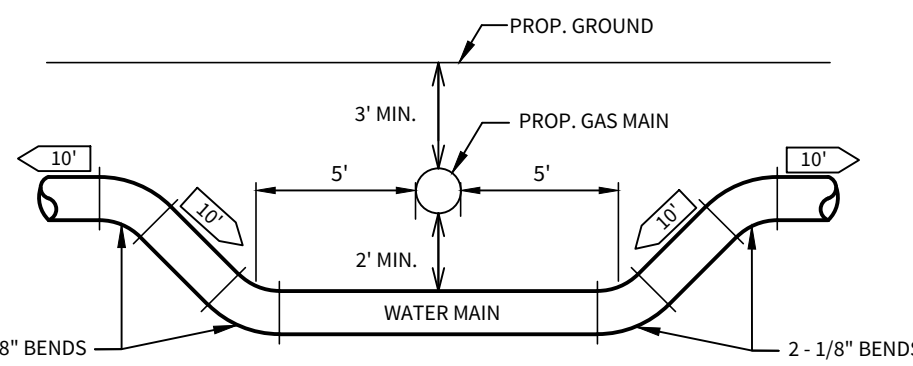
CAUTION!!
EXISTING UTILITIES ARE WITHIN THE LIMITS OF CONSTRUCTION. CONTRACTORS SHALL EXERCISE EXTRA CARE IN DIGGING ANY TRENCH FOR PROPOSED UTILITIES. THE CONTRACTOR SHALL BE RESPONSIBLE TO COORDINATE, VERIFY THE EXACT LOCATION & IDENTIFY AREA OF CONFLICTS WITH EXISTING UTILITIES AND SHALL NOTIFY THE ENGINEER IF CONFLICT IS FOUND.

CAUTION!!
THE CONTRACTOR SHALL BE AWARE THAT OVERHEAD ELECTRIC LINES EXIST WITHIN THE VICINITY OF THE SITE. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO HAVE THESE UTILITIES LOCATED PRIOR TO COMMENCING CONSTRUCTION. THE CONTRACTOR SHALL USE EXTREME CAUTION WHEN WORKING IN THIS AREA. ANY DAMAGE DONE TO THESE EXISTING FACILITIES WILL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO REPAIR.

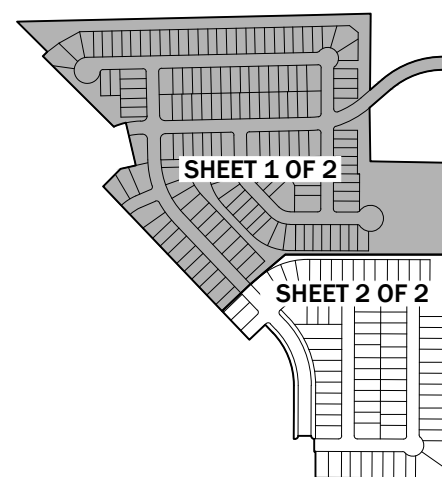
TRENCH EXCAVATION PROTECTION
CONTRACTOR AND/OR CONTRACTORS' INDEPENDENTLY RETAINED EMPLOYEE OR STRUCTURAL DESIGN/GEOTECHNICAL/SAFETY/EQUIPMENT CONSULTANT, IF ANY, SHALL REVIEW THESE PLANS AND AVAILABLE GEOTECHNICAL INFORMATION AND THE ANTICIPATED INSTALLATION SITE(S) WITHIN THE PROJECT WORK AREA IN ORDER TO IMPLEMENT CONTRACTOR'S TRENCH EXCAVATION SAFETY PROTECTION SYSTEMS, PROGRAMS AND/OR PROCEDURES FOR THE PROJECT DESCRIBED IN THE CONTRACT DOCUMENTS. THE CONTRACTOR'S IMPLEMENTATION OF THESE SYSTEMS, PROGRAMS AND/OR PROCEDURES SHALL PROVIDE FOR ADEQUATE TRENCH EXCAVATION SAFETY PROTECTION THAT COMPLY WITH AS A MINIMUM, OSHA STANDARDS FOR TRENCH EXCAVATIONS. SPECIFICALLY, CONTRACTOR AND/OR CONTRACTORS' INDEPENDENTLY RETAINED EMPLOYEE OR SAFETY CONSULTANT SHALL IMPLEMENT A TRENCH SAFETY PROGRAM IN ACCORDANCE WITH OSHA STANDARDS GOVERNING THE PRESENCE AND ACTIVITIES OF INDIVIDUALS WORKING IN AND AROUND TRENCH EXCAVATION.



SEWER / GAS CROSSINGS DETAIL
SIDE VIEW (THIS DETAIL IS VERTICAL ONLY, NOT HORIZONTAL.)
(N.T.S.)
NOTE: VERTICAL BEND IS NOT NEEDED WHEN SEWER IS DEEPER THAN 7'



WATER / GAS CROSSINGS DETAIL
SIDE VIEW (THIS DETAIL IS VERTICAL ONLY, NOT HORIZONTAL.)
(N.T.S.)



INDEX MAP
N.T.S.

CORLEY FARMS SUBDIVISION UNIT 2 - GAS DISTRIBUTION ESTIMATED QUANTITY TAKE-OFF

(CONTRACTOR RESPONSIBLE FOR DETERMINING ACTUAL QUANTITIES REQUIRED)

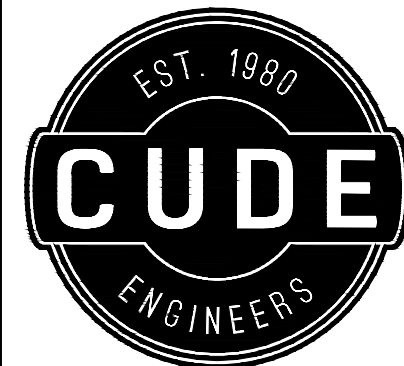
Item No.	Description	Quantity	Units	Installation Responsibility
1	2" Poly Gas Main - Open Cut	6,981	LF	Contractor
2	4" Poly Gas Main - Open Cut	1,787	LF	Contractor
3	1" Gas Service, see Gas Service Detail (Long)	134	EA	Contractor
4	1" Gas Service, see Gas Service Detail (Short)	91	EA	Contractor
5	2" Gas Valve & Box	27	EA	Contractor
6	2" x 2" Poly Tee	6	EA	Contractor
7	4" Gas Valve & Box	7	EA	Contractor
8	6" Gas Valve & Box	1	EA	Contractor
9	2" x 4" Poly Tee	1	EA	Contractor
10	2" x 6" Poly Cross	2	EA	Contractor
11	2" x 4" Poly Cross	2	EA	Contractor
12	2" x 2" Poly Cross	2	EA	Contractor
13	2" Poly Cap	4	EA	Contractor
14	2" Connection to Existing Main	2	LS	Contractor
15	Testing as required by City of Boerne	1	LS	Contractor

NOTES:

- Estimated conduit quantities shown are linear footage.
- It is the responsibility of the Contractor to verify all quantities shown hereon and to notify the Engineer of any discrepancies prior to bid submission.

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Reviewed by City of Boerne Development Services:
Approved for Construction ☒ X
Approved as Noted ☐
Disapproved ☐
Incomplete - Not Reviewed ☐
Not Reviewed - Accepted FIO ☐
By: Cheryl J. Rogan Date: 7/1/2022
*Revision updating gas main alignment



4122 Pond Hill Road, Suite 101
San Antonio, Texas 78231
P:(210) 681.2951 F:(210) 523.7112

CORLEY FARMS UNIT 2

NATURAL GAS DISTRIBUTION PLAN

DATE
03/03/2022
PROJECT NO.
03481.005
DRAWN BY
C3
CHECKED BY
XV/JC/DDC

REVISIONS

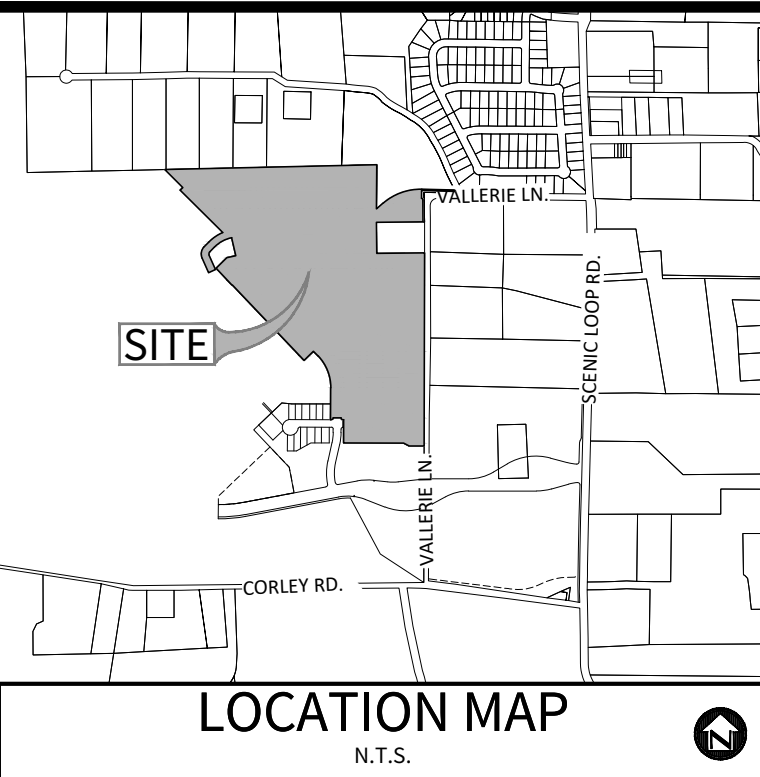
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-
- 2021-10-07 - CITY OF BOERNE COMMENTS
- 2021-11-12 - ADDED STREET NAMES
- 2022-03-04 - GAS MAIN EXTENSION
-
-
-
-
-



CUDE ENGINEERS
TBPE No. 455
TBPLS No. 10048500

C53

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OWNER/DEVELOPER:
PULTE HOMES OF TEXAS, L.P.
CONTACT PERSON: FELIPE GONZALEZ
1718 DRY CREEK WAY, SUITE 120
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TEL: (210) 496-1985
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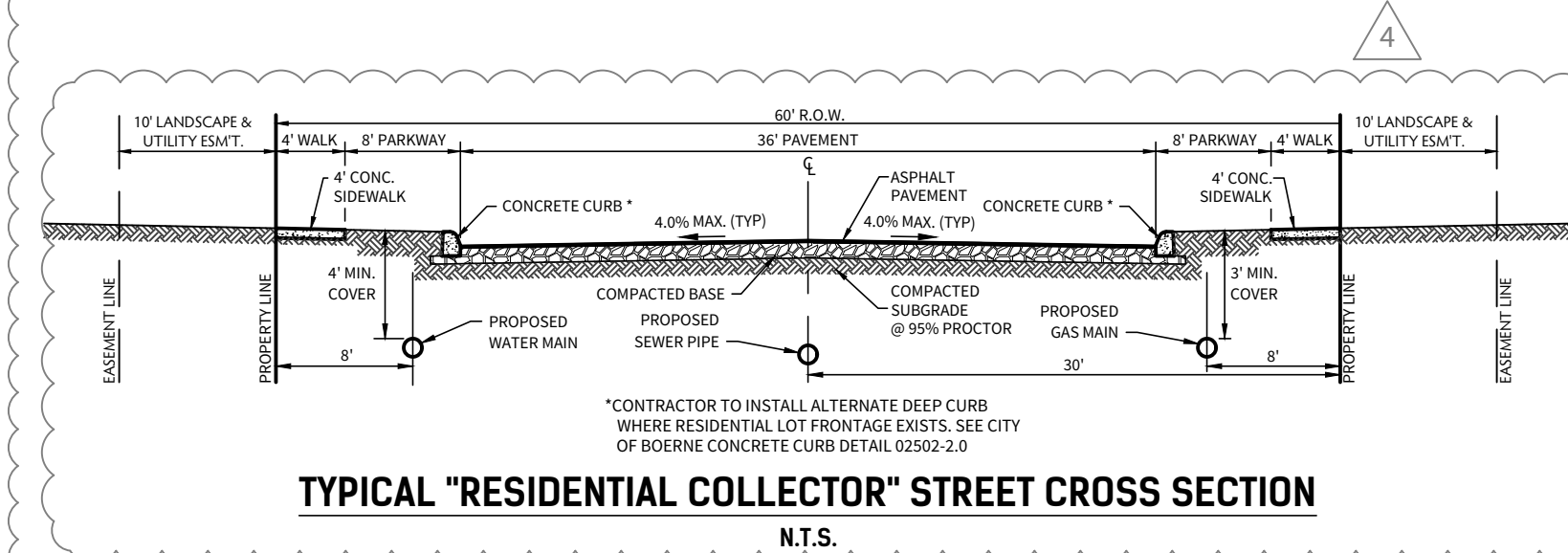
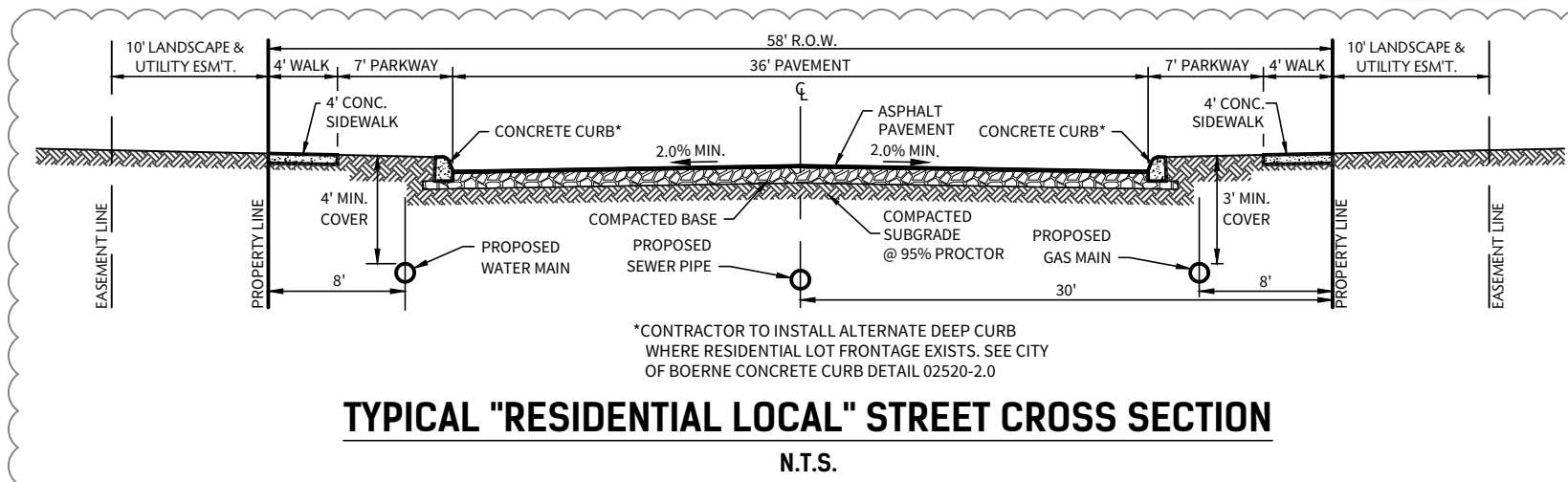
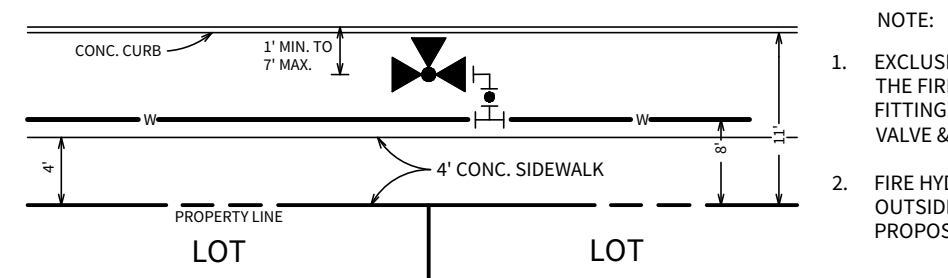
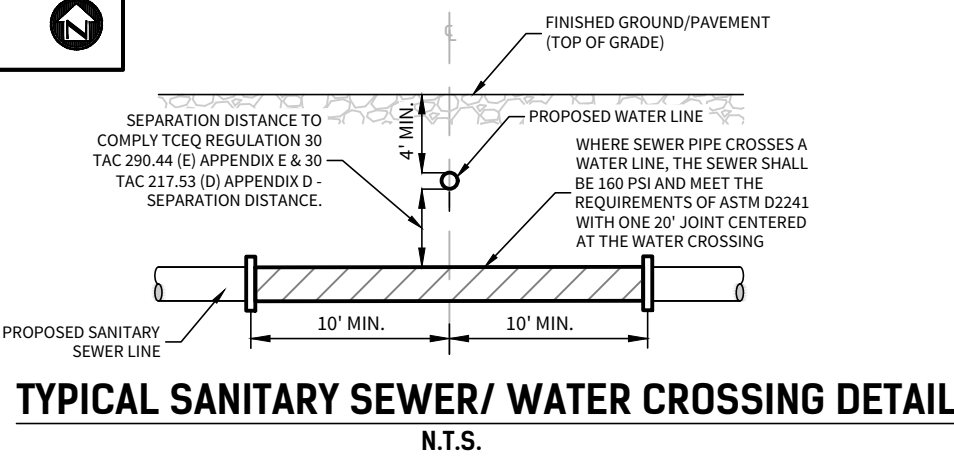
CIVIL ENGINEER:
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LEGEND

PROPERTY LINE
PROPOSED SEWER LINE
EXISTING SEWER LINE
PROPOSED WATER LINE
EXISTING WATER LINE
PROPOSED MANHOLE
EXISTING MANHOLE
PROPOSED LIGHT POLE

XX" SS
EX. XX" SS
XX" W
EX. XX" W

●
●
●



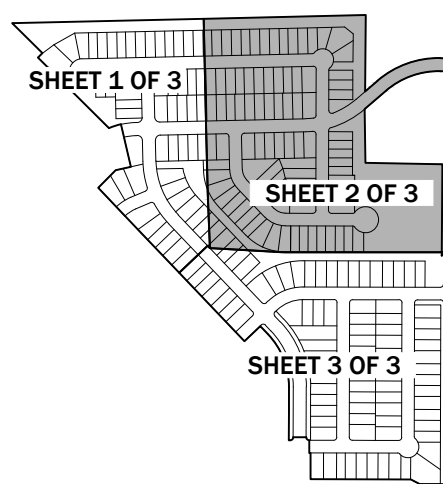
BENCHMARK BM-1
BENCHMARK TO BE SET BY ENGINEER PRIOR TO CONSTRUCTION.

- NOTES:**
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR MEETING 98% COMPACTION ON ALL TRENCH BACKFILL. COMPACTION TEST WILL BE DONE AT ONE LOCATION POINT RANDOMLY SELECTED OR AS INDICATED BY THE DISTRICT INSPECTOR. PER EACH 12-INCH LOOSE LIFT PER 400 LINEAR FEET AT A MINIMUM. THIS PROJECT WILL NOT BE ACCEPTED AND FINALIZED BY THE DISTRICT WITHOUT THIS REQUIREMENT BEING MET AND VERIFIED BY PROVIDING ALL NECESSARY DOCUMENTED TEST RESULTS.
 - CONTRACTOR TO MAINTAIN A MINIMUM 1' VERTICAL SEPARATION DISTANCE BETWEEN OF THE BOTTOM PROPOSED WATER MAIN AND TOP OF PROPOSED SANITARY SEWER MAIN AT WATER AND SANITARY SEWER CROSSINGS.
 - ALL LATERALS SHALL BE INSTALLED AT A MINIMUM 2.0% SLOPE UNLESS OTHERWISE NOTED.
 - CONTRACTOR TO REFERENCE SANITARY SEWER, WATER, AND GAS PLANS FOR ALL UTILITY CROSSINGS CALLED OUT ON THIS SHEET.

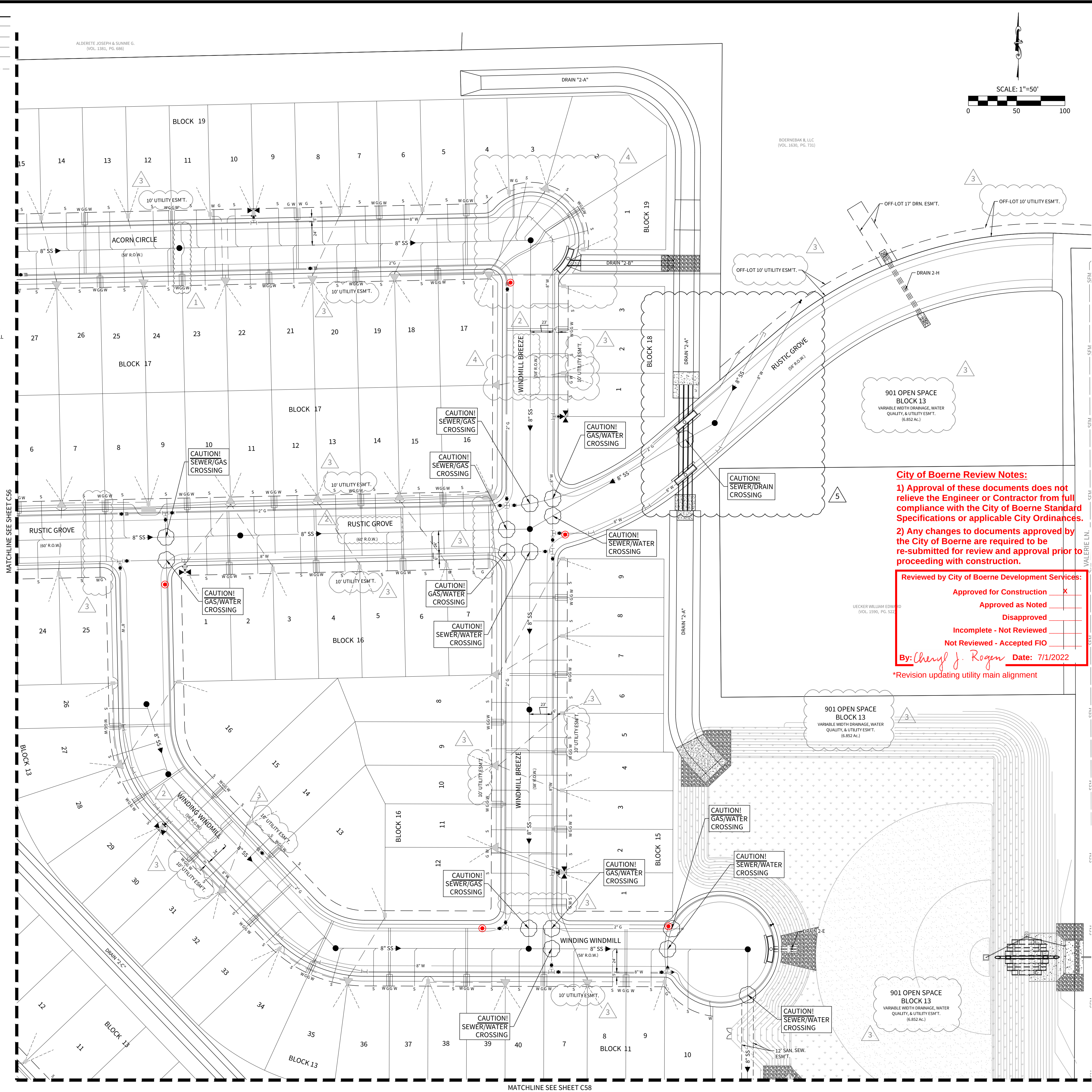
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THE CONTRACTOR SHALL BE AWARE THAT OVERHEAD ELECTRIC LINES EXIST WITHIN THE VICINITY OF THE SITE. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO HAVE THESE UTILITIES LOCATED PRIOR TO COMMENCING CONSTRUCTION. THE CONTRACTOR SHALL USE EXTREME CAUTION WHEN WORKING IN THIS AREA. ANY DAMAGE DONE TO THESE EXISTING FACILITIES WILL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO REPAIR.

TRENCH EXCAVATION PROTECTION
CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR STRUCTURAL DESIGNER/GEOTECHNICAL/SAFETY/EQUIPMENT CONSULTANT, IF ANY, SHALL REVIEW THESE PLANS AND AVAILABLE GEOTECHNICAL INFORMATION AND THE ANTICIPATED INSTALLATION SITE(S) WITHIN THE PROJECT WORK AREA IN ORDER TO IMPLEMENT CONTRACTOR'S TRENCH EXCAVATION SAFETY PROTECTION SYSTEMS, PROGRAMS AND/OR PROCEDURES FOR THE PROJECT DESCRIBED IN THE CONTRACT DOCUMENTS. THE CONTRACTOR'S IMPLEMENTATION OF THESE SYSTEMS, PROGRAMS AND/OR PROCEDURES SHALL PROVIDE FOR ADEQUATE TRENCH EXCAVATION SAFETY PROTECTION THAT COMPLY WITH AS A MINIMUM, OSHA STANDARDS FOR TRENCH EXCAVATIONS. SPECIFICALLY, CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR SAFETY CONSULTANT SHALL IMPLEMENT A TRENCH SAFETY PROGRAM IN ACCORDANCE WITH OSHA STANDARDS GOVERNING THE PRESENCE AND ACTIVITIES OF INDIVIDUALS WORKING IN AND AROUND TRENCH EXCAVATION.



INDEX MAP
N.T.S.



City of Boerne Review Notes:

1) Approval of these documents does not relieve the Engineer or Contractor from full compliance with the City of Boerne Standard Specifications or applicable City Ordinances.

2) Any changes to documents approved by the City of Boerne are required to be re-submitted for review and approval prior to proceeding with construction.

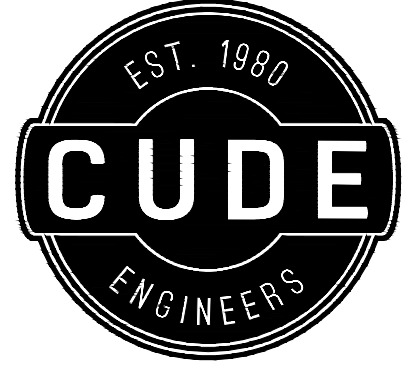
Reviewed by City of Boerne Development Services:

Approved for Construction	X
Approved as Noted	
Disapproved	
Incomplete - Not Reviewed	
Not Reviewed - Accepted FIO	

By: Cheryl J. Rogan Date: 7/1/2022

*Revision updating utility main alignment

CUDEENGINEERS.COM



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P:(210) 681.2951 F:(210) 523.7112

CORLEY FARMS
UNIT 2
UTILITY LAYOUT PLAN

DATE
03/03/2022

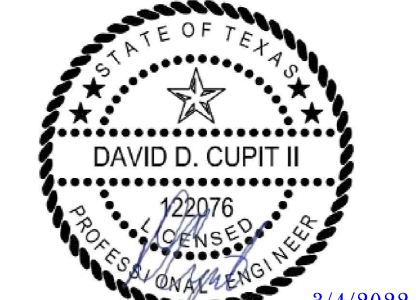
PROJECT NO.
03481.005

DRAWN BY
C3

CHECKED BY
XV/JC/DDC

REVISIONS

1.	2021-05-17 - CITY OF BOERNE COMMENTS
2.	2021-06-17 - CITY OF BOERNE COMMENTS
3.	2021-07-09 - CITY OF BOERNE COMMENTS
4.	2021-08-26 - CITY OF BOERNE COMMENTS
5.	2021-11-12 - CITY OF BOERNE COMMENTS
6.	2022-03-04 - SEWER, GAS, & WATER MAIN EXTENSION
7.	
8.	
9.	



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