

STREET, STORM, DRAINAGE
FOR
WHISPERING WOODS 3RD PLAT
CITY OF LEE'S SUMMIT
JACKSON COUNTY, MISSOURI

LEGAL DESCRIPTION

PROPERTY DESCRIPTION
CONTAINING 234,887 SQUARE FEET OR 5.39 ACRES

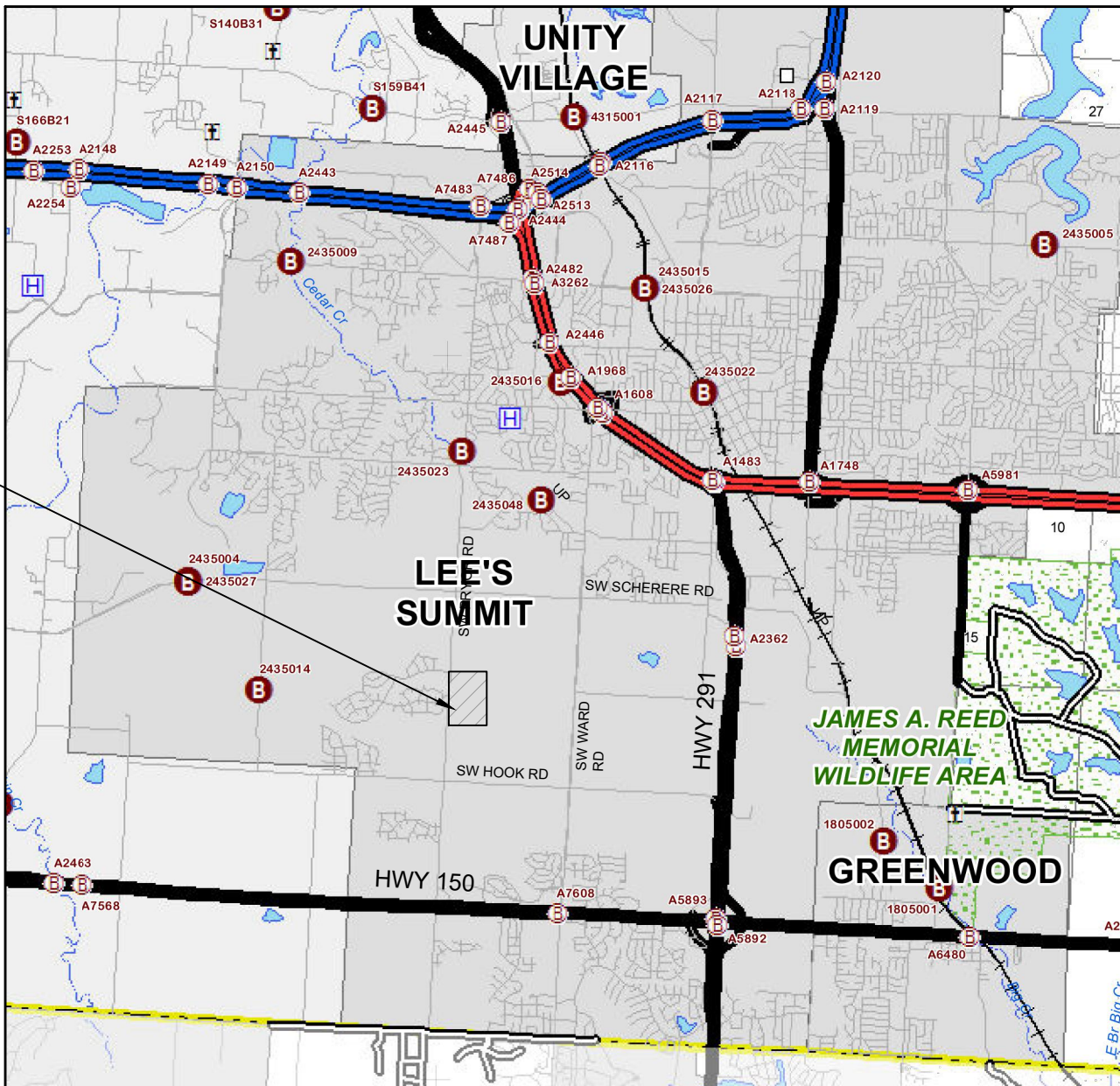
PART OF THE SOUTHWEST QUARTER OF SECTION 24, TOWNSHIP 47 NORTH, RANGE 32 WEST, LEE'S SUMMIT, JACKSON COUNTY, MISSOURI, BEING DESCRIBED AS FOLLOWS: COMMENCING AT THE SOUTHEAST CORNER OF THE NORTHEAST QUARTER OF THE SOUTHWEST QUARTER OF SAID SECTION 24; THENCE N87°38'05"W, ALONG THE SOUTH LINE OF THE NORTH HALF OF SAID SOUTHWEST QUARTER, A DISTANCE OF 572.29 FEET TO THE POINT OF BEGINNING OF THE TRACT OF LAND TO BE HEREIN DESCRIBED; THENCE N87°38'05"W, CONTINUING ALONG SAID LINE, A DISTANCE OF 819.48 FEET TO THE SOUTHEAST CORNER OF TRACT D, WHISPERING WOODS FIRST PLAT, A SUBDIVISION IN SAID LEE'S SUMMIT, JACKSON COUNTY, MISSOURI; THENCE N02°21'55"E, ALONG THE EASTERLY LINE OF SAID PLAT OF WHISPERING WOODS FIRST PLAT, A DISTANCE OF 180.00 FEET; THENCE N87°38'05"W, CONTINUING ALONG SAID LINE, A DISTANCE OF 11.45 FEET; THENCE N02°21'55"E, CONTINUING ALONG SAID LINE, A DISTANCE OF 120.00 FEET TO THE NORTHEAST CORNER OF LOT 28, SAID PLAT OF WHISPERING WOODS FIRST PLAT; THENCE S87°38'05"E, A DISTANCE OF 677.89 FEET; THENCE S02°31'15"W, A DISTANCE OF 21.63 FEET; THENCE S87°40'43"E, A DISTANCE OF 60.00 FEET; THENCE S02°31'15"W, A DISTANCE OF 73.30 FEET; THENCE SOUTHEASTERLY, ALONG A CURVE TO THE LEFT BEING TANGENT TO THE LAST DESCRIBED COURSE, HAVING A RADIUS OF 25.00 FEET, AN ARC DISTANCE OF 39.36 FEET; THENCE S87°40'43"E, A DISTANCE OF 68.28 FEET; THENCE S02°21'55"W, A DISTANCE OF 180.09 FEET TO THE POINT OF BEGINNING.

PROJECT BENCH MARK

ELEV. 1006.89 (NAVD 1988 DATUM)

MISSOURI DEPARTMENT OF NATURAL RESOURCES GRS
ALUMINUM DISK STAMPED "JA-47" LOCATED NEAR THE
INTERSECTION OF HWY 150 WITH REGGATA DRIVE AND HWY 291

PROJECT LOCATION



LOCATION MAP
N.T.S.

SUMMARY OF QUANTITIES

ITEM	UNIT	PLAN	AS-BUILT
Public Earthwork (CUT 13,898 CY / FILL 103,582 CY)	CY	89,684	
2" Asphaltic Concrete Surface	SY	13172	
4" Type 5 Asphaltic Concrete Base	SY	9323	
5.5" Type 5 Asphaltic Concrete Base	SY	3850	
CG-2 Curb & Gutter	LF	3160	
CG-1 Curb & Gutter	LF	1,755	
5' Wide Concrete Sidewalk	SY	681	
5'x3' Curb Inlet	EA	16	
4'x4' Field Inlet	EA	6	
24" HDPE	LF	1,270	
18" HDPE	LF	667	
15" HDPE	LF	482	
12" HDPE	LF	79	
24" F.E.S	EA	2	
15" F.E.S	EA	2	
12" F.E.S	EA	1	
Rip-Rap	SY	45	
ADA Curb Ramps	EA	8	
R1-1 Stop Signs	EA	3	
Street Name Signs	EA	3	

Summary of Quantities as indicated above and any quantities as shown within the plans have been provided for permitting purposes only and are not intended for use in preparation of contract documents. Quantities intended for, but not limited to, the preparation of proposals and bid documents shall be independently evaluated by the estimating party based upon the contents of these plans.

INDEX TO SHEETS

- 1 TITLE SHEET
- 2 GENERAL NOTES
- 3 SITE LAYOUT
- 4 MASTER DRAINAGE PLAN
- 5-7 STREET PLAN AND PROFILE
- 8-11 INTERSECTION DETAILS
- 12-21 STORM SEWER PLAN AND PROFILES
- 22 DRAINAGE AREAS
- 23 DRAINAGE TABLES
- 24-27 DETAILS

APPROVED:

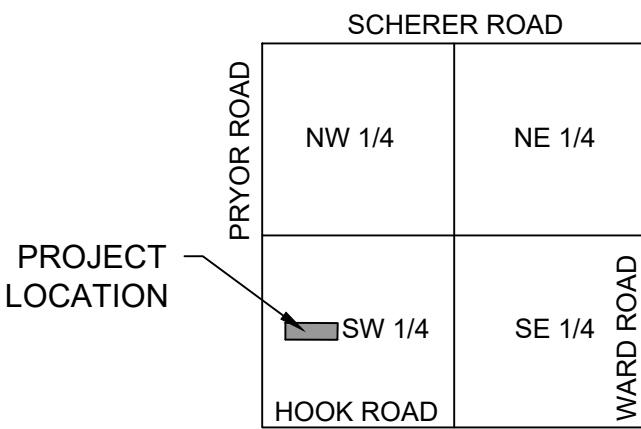
City Engineer

Date

DEVELOPER:

WHISPERING WOODS LAND, L.L.C.
803 P.C.A. ROAD
WARRENSBURG, MO 64093
AGENT: RICK FRYE
PHONE: 816.564.2230
FAX: 660.429.1801

UTILITY SERVICE NUMBERS	
SPECTRUM	886-874-2389
EVERGY	816-220-5213
SPIRE GAS	816-399-9633
LEE'S SUMMIT PUBLIC WORKS	816-969-1800
CITY PLANNING & DEVELOPMENT	816-969-1600
FIRE DEPARTMENT	816-969-1300



VICINITY MAP
N.T.S.

MARK	REVISION	DATE	BY
Engineer: SD	Checked By: SD	Scale: 1"= N/A	
Technician: JS	Date: 3-18-20	Field Bk:	Pg:
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MO PE#2013006489

WHISPERING WOODS 3RD PLAT
STREET & STORM SEWER PLANS

TITLE SHEET

LEE'S SUMMIT, MO

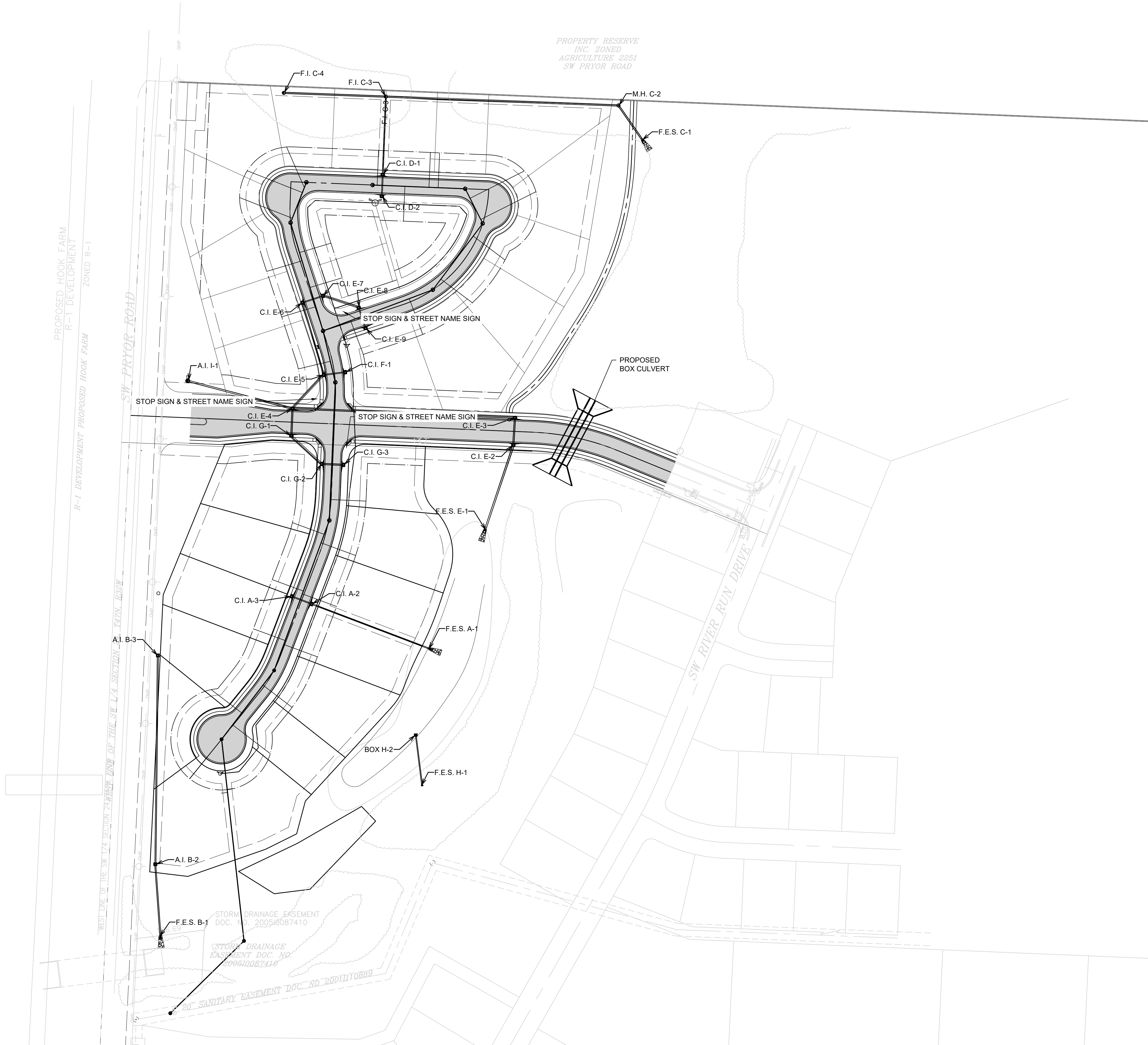
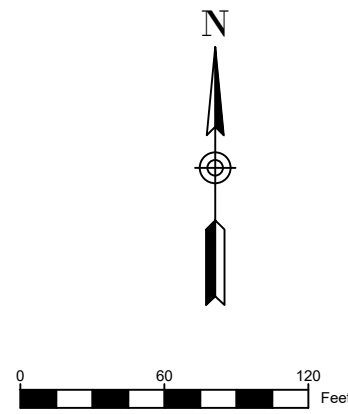
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Project No: 1200485.11

Sheet 1



MARK	REVISION	DATE	BY
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Technician: JS	Date: 3-18-21	Field Bk:	Pg:
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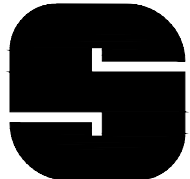
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SITE LAYOUT

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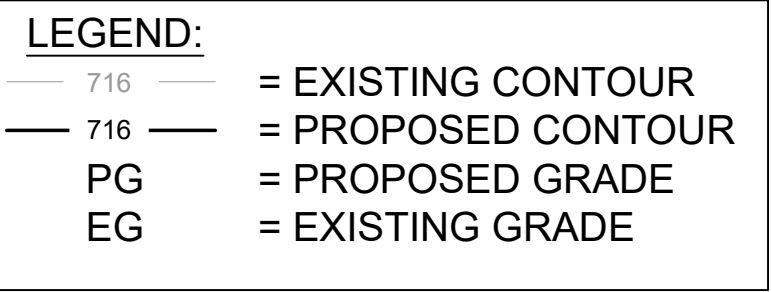
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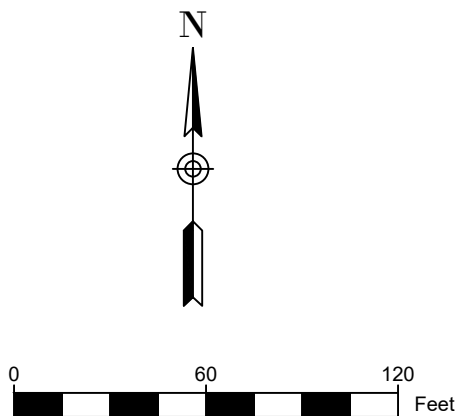
Sheet 3



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-
-
-
- B. NOTIFY UTILITY OWNERS PRIOR TO BEGINNING ANY CONSTRUCTION. CONTRACTOR IS RESPONSIBLE FOR DETERMINING EXISTENCE, EXACT LOCATION AND DEPTH OF ALL UTILITIES, AVOID DAMAGE TO UTILITIES AND SERVICES DURING CONSTRUCTION, ANY DAMAGE DUE TO THE CONTRACTOR'S CARELESSNESS SHALL BE CORRECTED AT THE CONTRACTOR'S EXPENSE. COORDINATE AND COOPERATE WITH UTILITY COMPANIES DURING CONSTRUCTION.
- C. ALL PROPOSED CONTOURS AND SPOT ELEVATIONS SHOWN ARE FINISHED GRADES AND/OR TOP OF PAVING SLAB (GUTTER), UNLESS OTHERWISE NOTED.
- D. ALL STORM SEWER PIPE LENGTHS ARE MEASURED FROM CENTER OF STRUCTURE TO CENTER OF STRUCTURE AND INCLUDE FLARED END SECTION.
- E. CONTRACTOR TO STRIP AND STOCKPILE TOPSOIL FROM ALL AREAS TO BE CUT OR FILLED. RE-SPREAD TO MINIMUM 8" DEPTH TO FINISH GRADES.
- F. THE CONTRACTOR IS RESPONSIBLE FOR CLEANING DIRT AND DEBRIS FROM STREETS, DRIVEWAYS, AND SIDEWALKS CAUSED BY CONSTRUCTION ACTIVITIES.
- G. CONTRACTOR TO VERIFY ALL UTILITY LOCATIONS AND DEPTH PRIOR TO WALL CONSTRUCTION TO DETERMINE ALL POSSIBLE CONFLICTS.

LOT	MBOE (REAR)
18	958.88
19	957.14
20	957.10
21	956.44
22	956.44
23	957.03
24	955.28
25	955.28
39	966.16
40	963.34
41	962.67
42	962.00
43	962.00

LOT	LOT TYPE
18	WO
19	WO
20	WO
21	WO
22	WO
23	WO
24	WO
25	WO
26	WO
27	DL
28	STD
29	STD
30	STD
31	STD
32	STD
33	STD
34	STD
35	STD
36	STD
37	STD
38	STD
39	WO
40	WO
41	WO
42	WO
43	WO
44	DL
45	STD
46	STD
47	STD



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WHISPERING WOODS 3RD PLAT
STREET & STORM SEWER PLANS

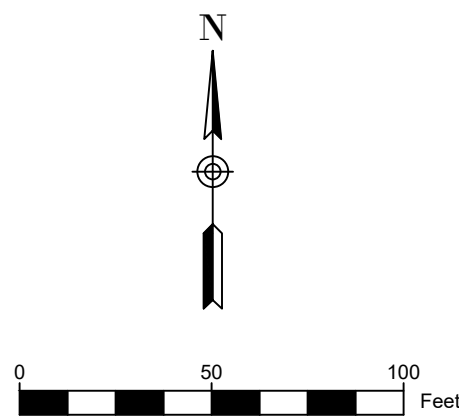
MASTER DRAINAGE PLAN

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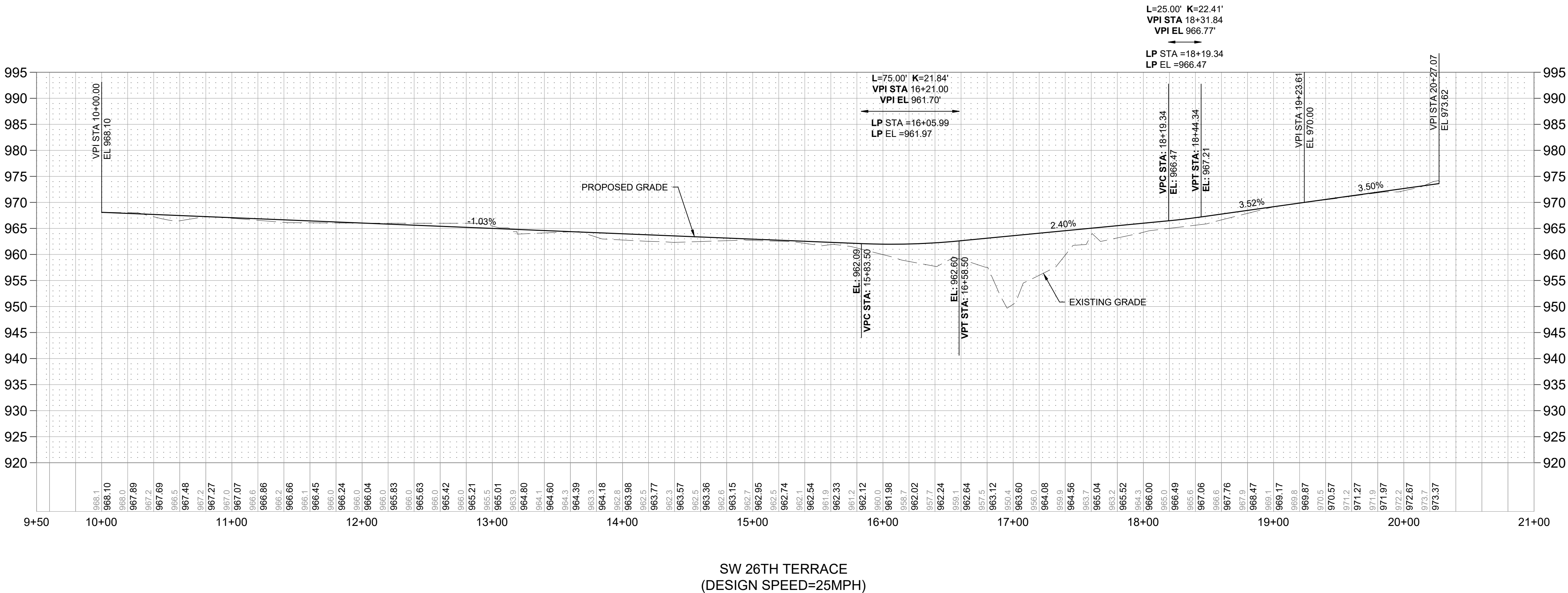
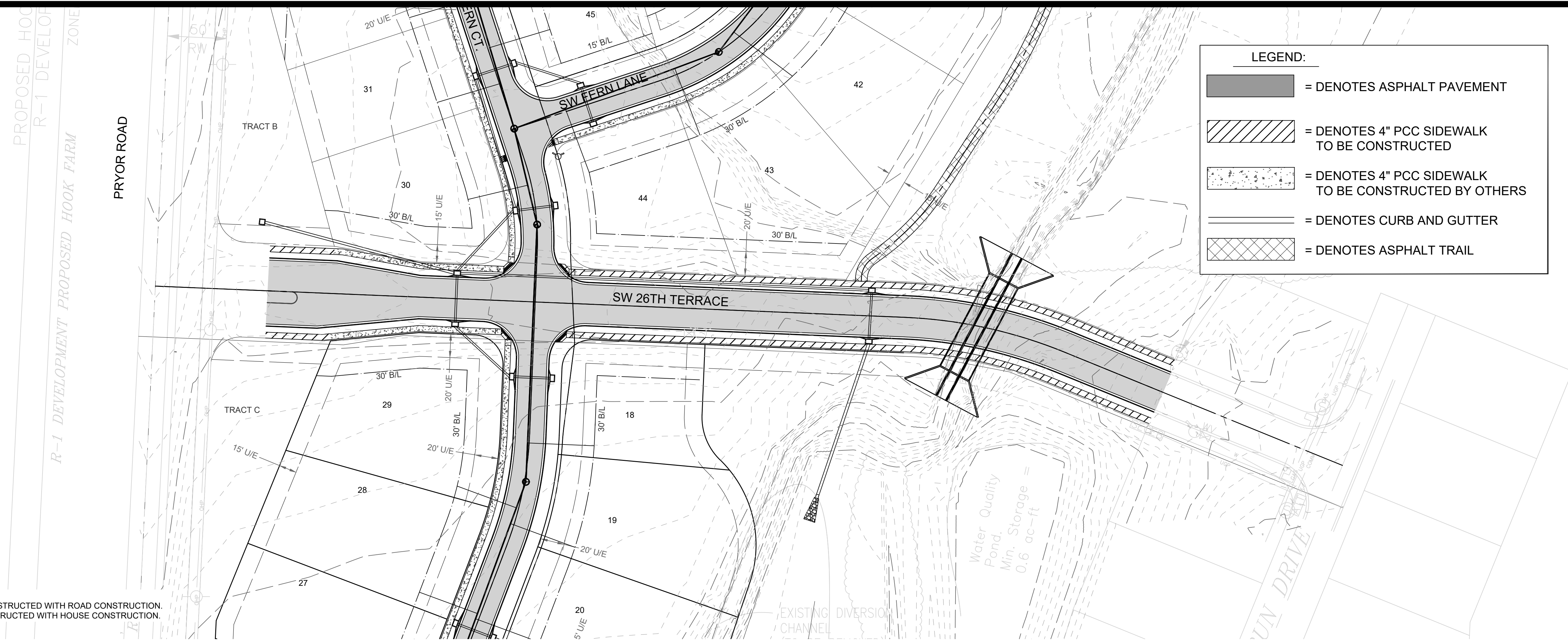


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Sheet 4



NOTE:
ONLY SIDEWALK RAMPS TO BE CONSTRUCTED WITH ROAD CONSTRUCTION.
REMAINING SIDEWALK TO BE CONSTRUCTED WITH HOUSE CONSTRUCTION.



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Engineer:	SD	Checked By: SD	Scale: 1"= 50'
Technician:	JS	Date: 3-18-21	Field Bk: Pg:
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MO PE#2013006489

STATE OF MISSOURI
SHAWN DUKE
LICENSED PROFESSIONAL ENGINEER
DATE: 2013006489

WHISPERING WOODS 3RD PLAT
STREET & STORM SEWER PLANS

STREET PLAN & PROFILE

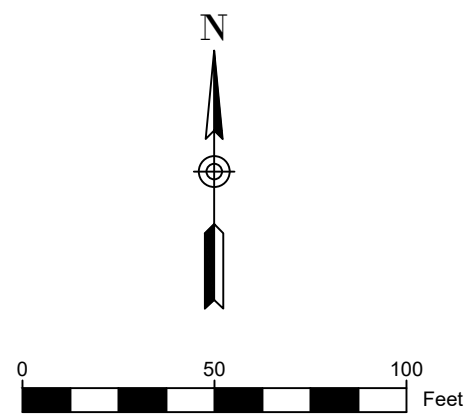
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REMAINING SIDEWALK TO BE CONSTRUCTED WITH HOUSE CONSTRUCTION.

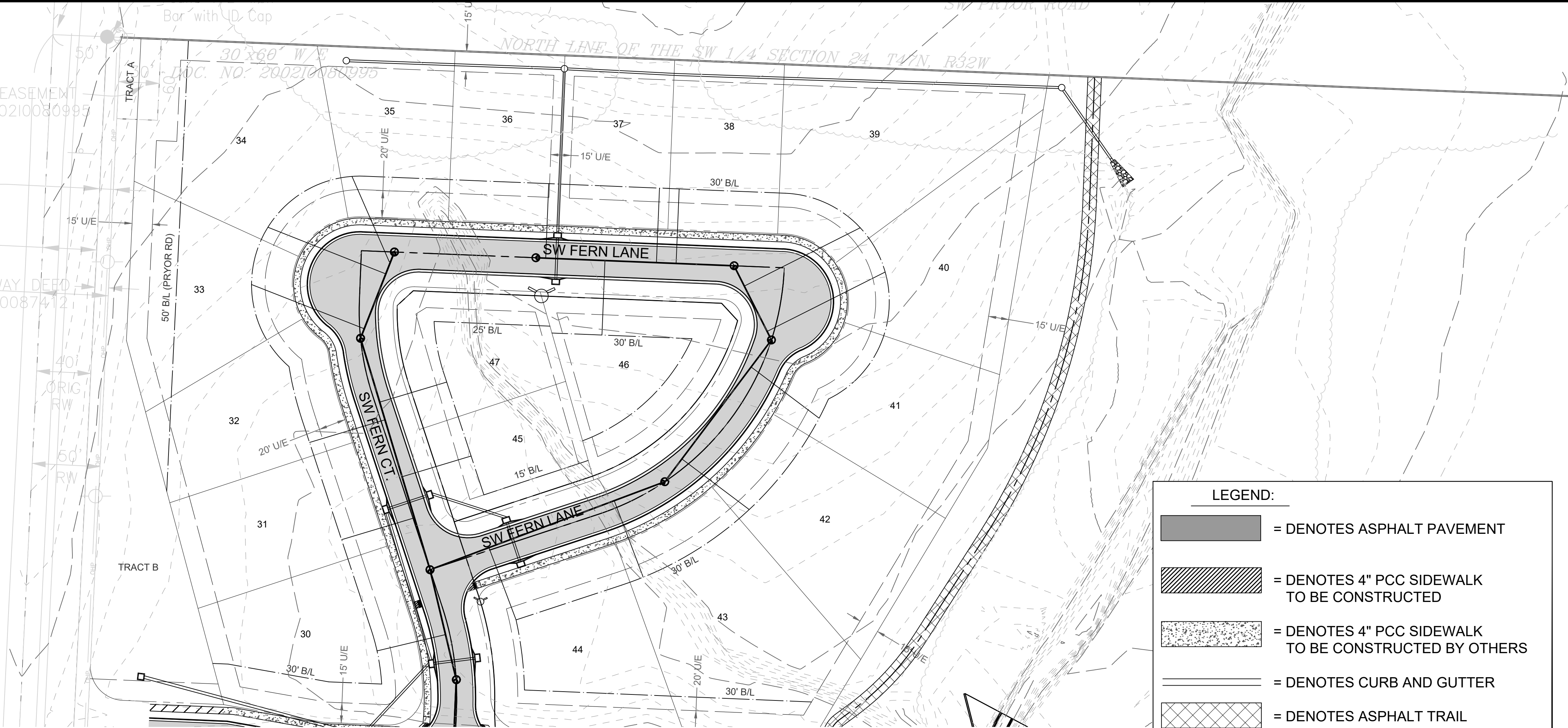
10.00' RIGHT OF WAY
DEED DOC. NO. 200510087412

40.00' ORIGINAL
RIGHT OF WAY

50.00' RIGHT OF WAY
DEED DOC. NO. 200510087412

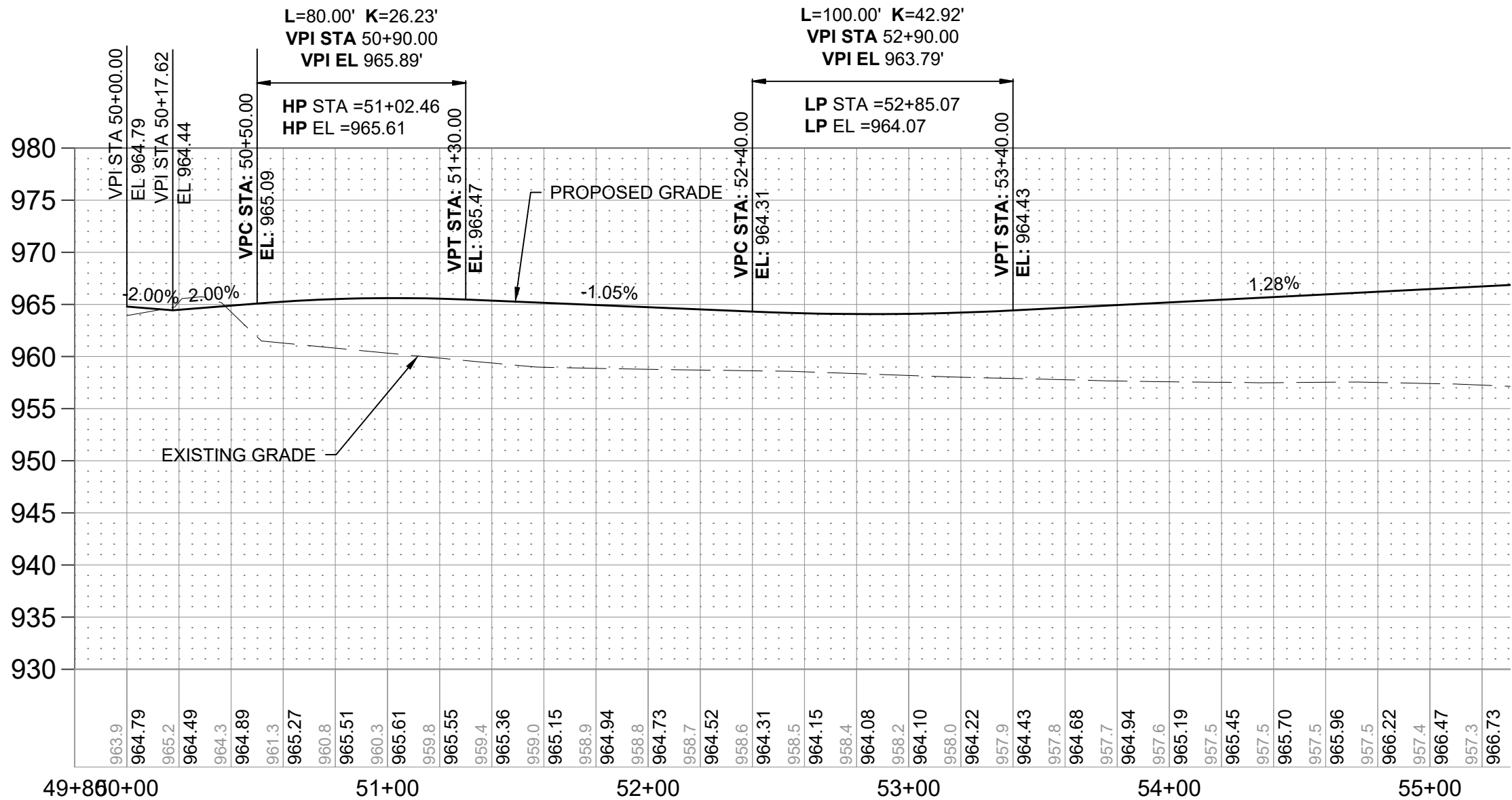
PROPOSED HOOK FARM
R-1 DEVELOPMENT
100K FARM
ZONED R-1

PRYOR ROAD



LEGEND:

- = DENOTES ASPHALT PAVEMENT
- = DENOTES 4" PCC SIDEWALK TO BE CONSTRUCTED
- = DENOTES 4" PCC SIDEWALK TO BE CONSTRUCTED BY OTHERS
- = DENOTES CURB AND GUTTER
- = DENOTES ASPHALT TRAIL



SW FERN LANE
(DESIGN SPEED=25MPH)

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Technician: JS	Date: 3-18-21	Field Bk: Pg:	
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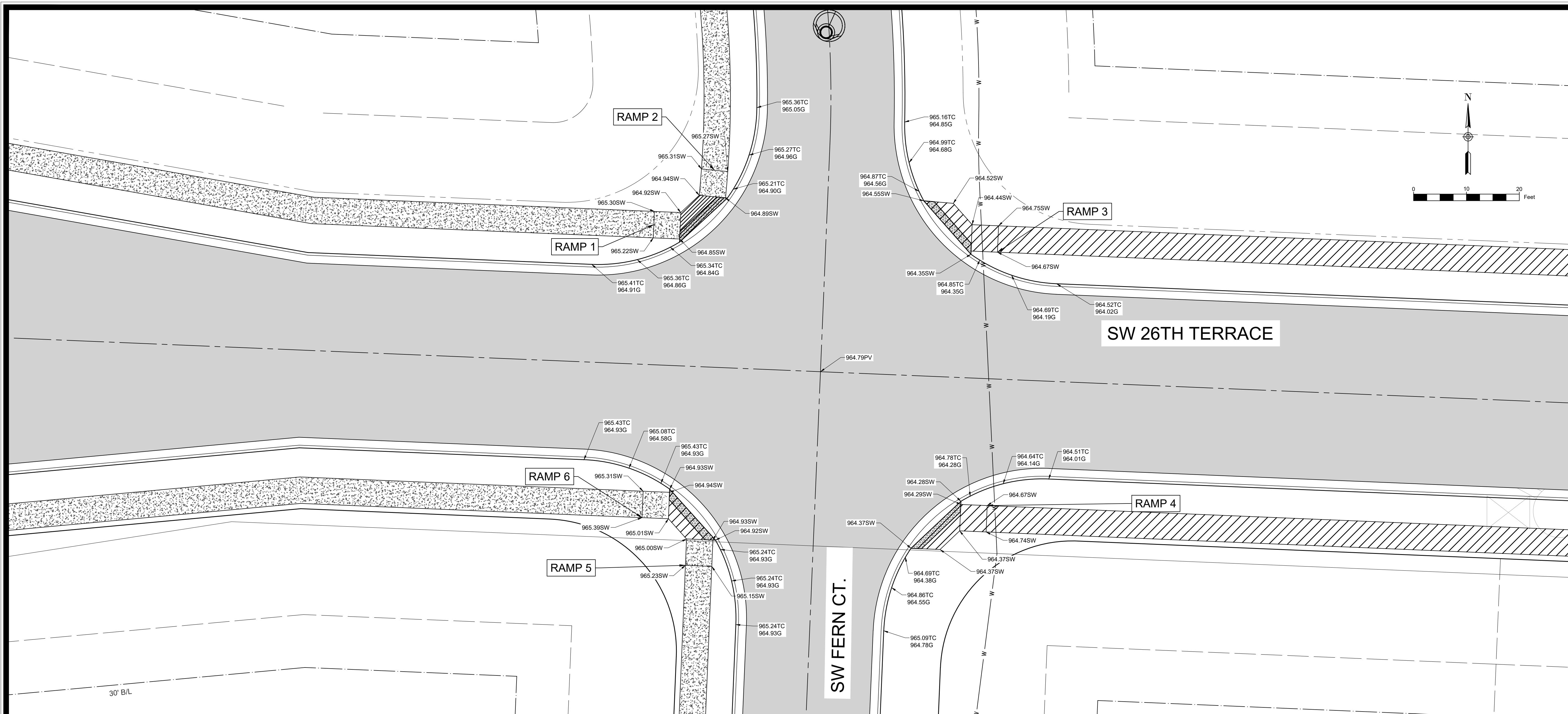
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Sheet 7



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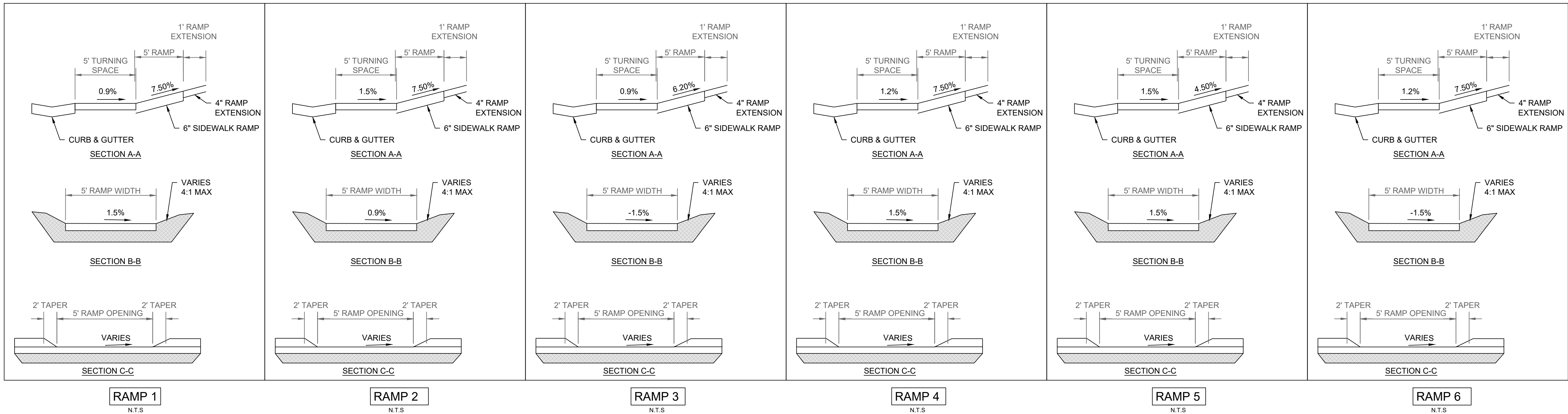
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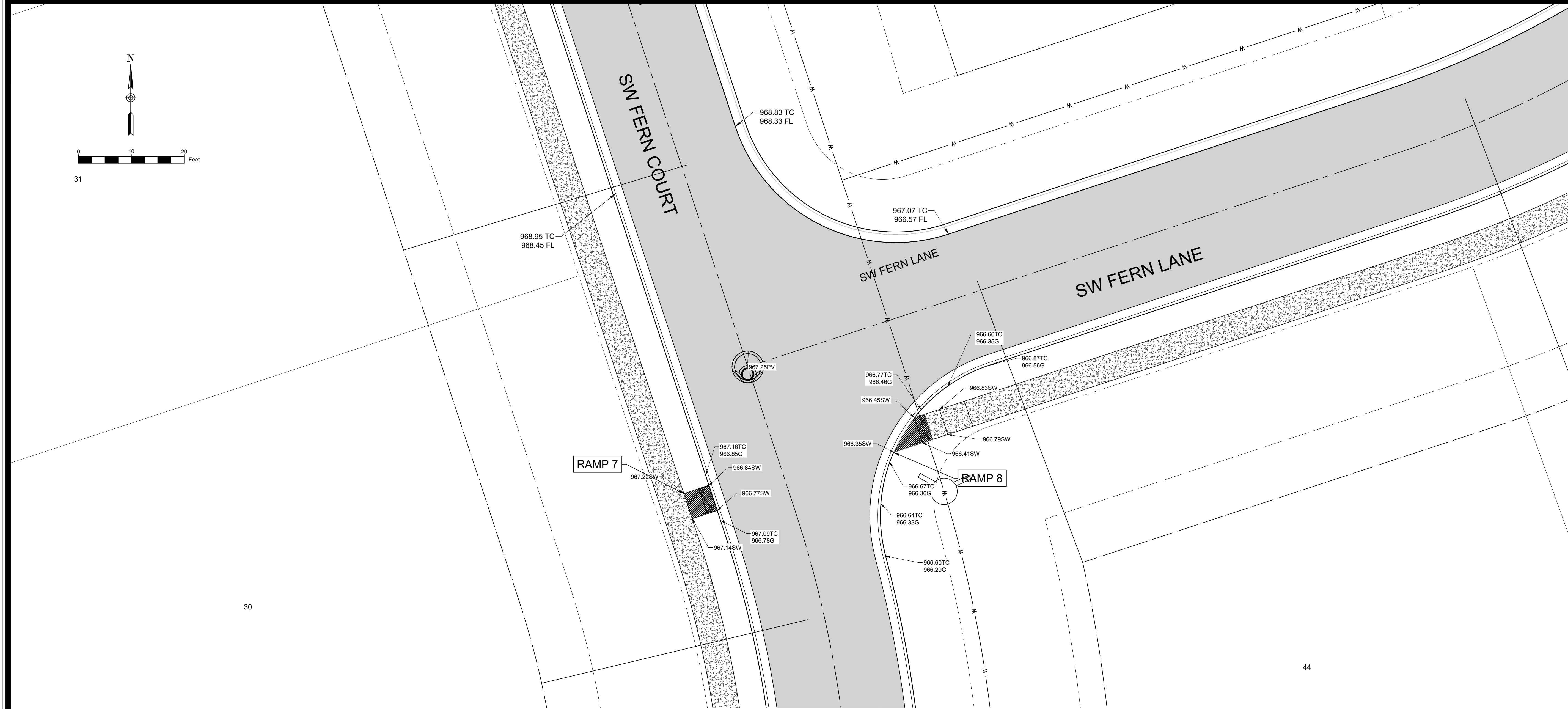
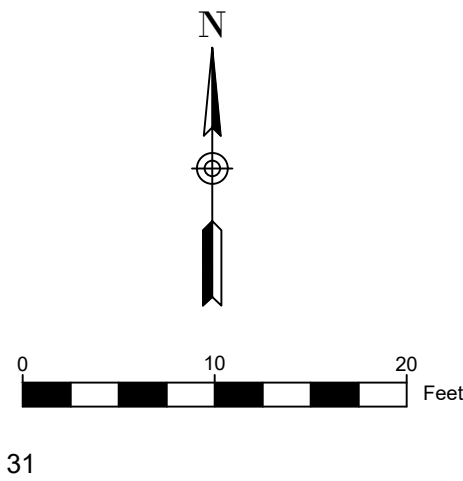
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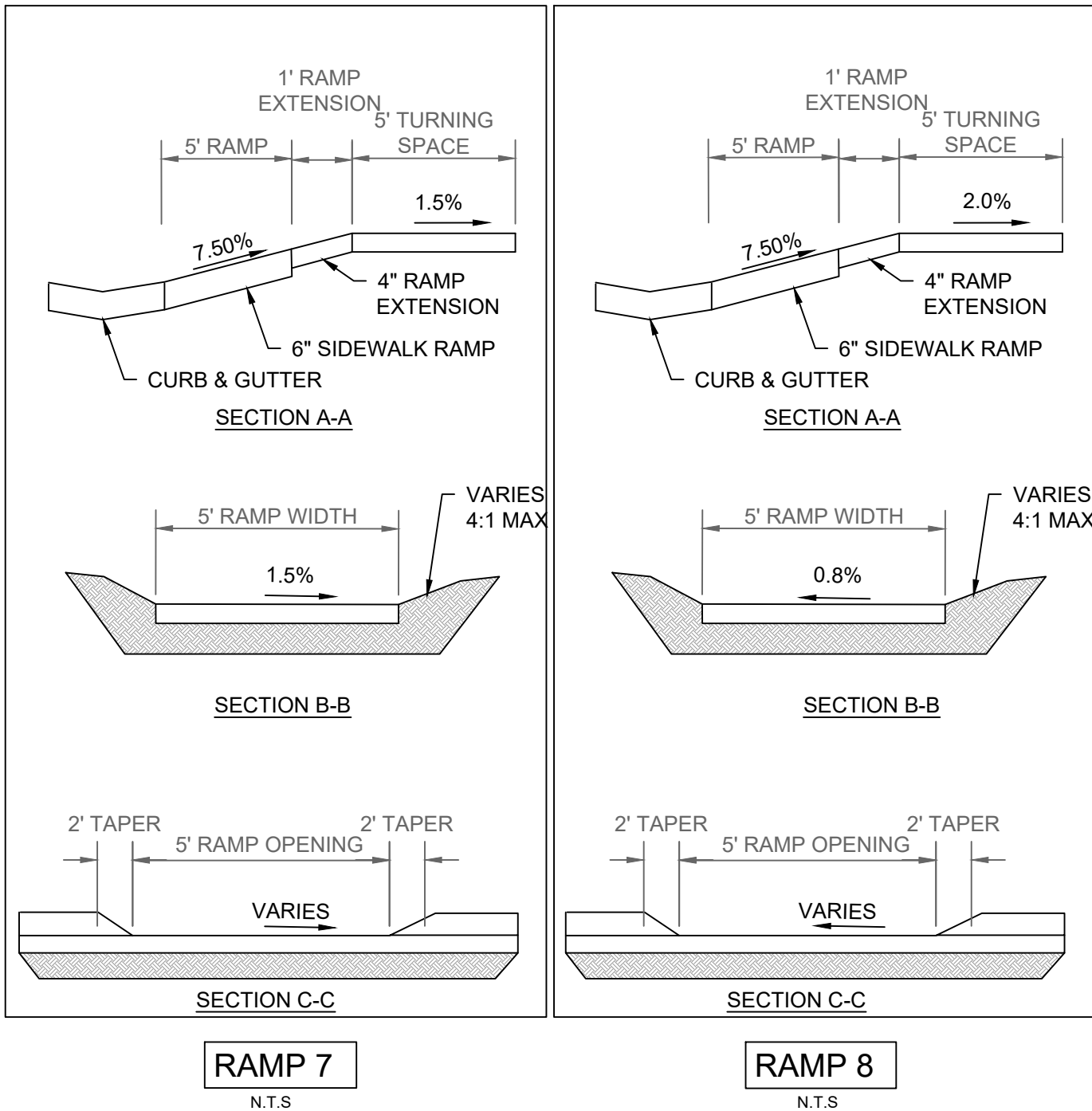
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44



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STREET & STORM SEWER PLANS

INTERSECTION DETAILS

LEE'S SUMMIT, MO

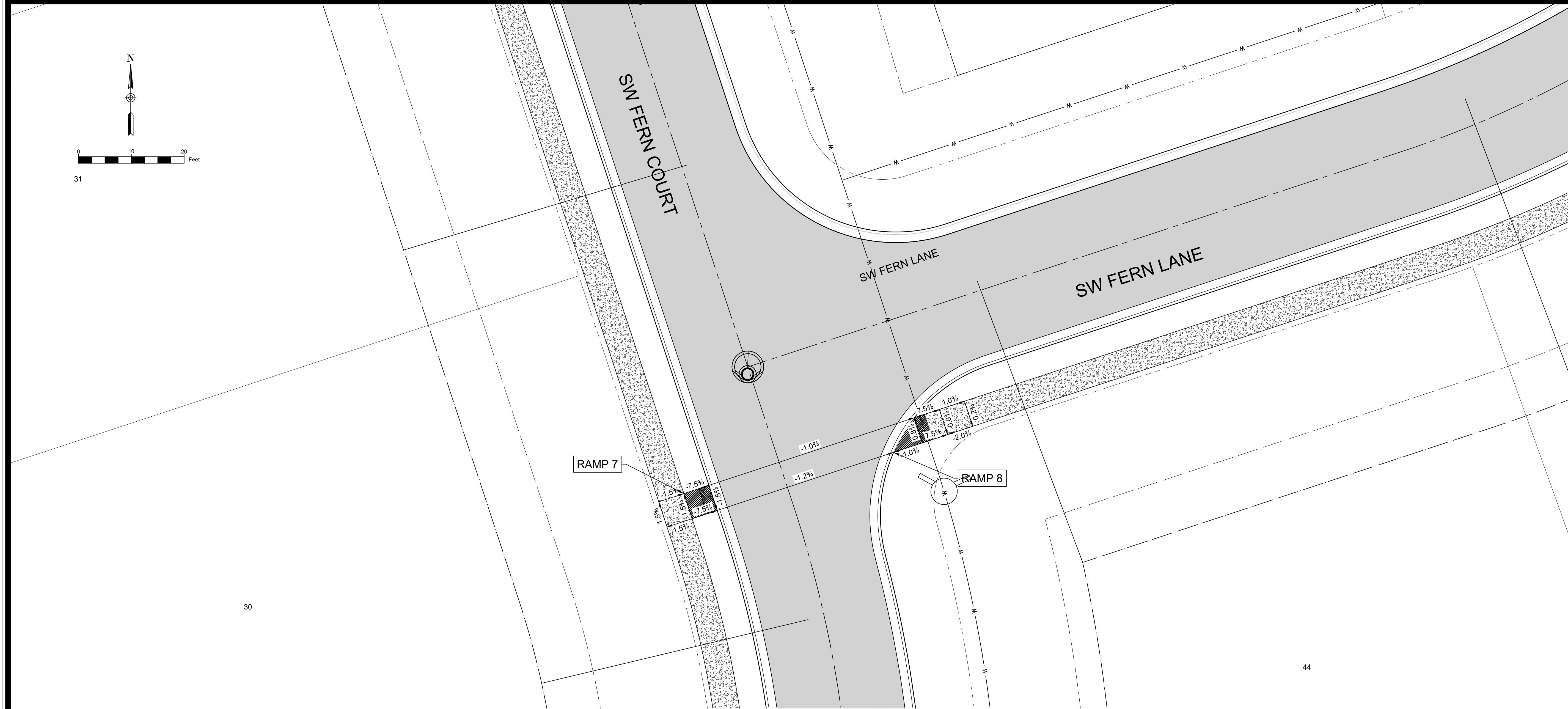
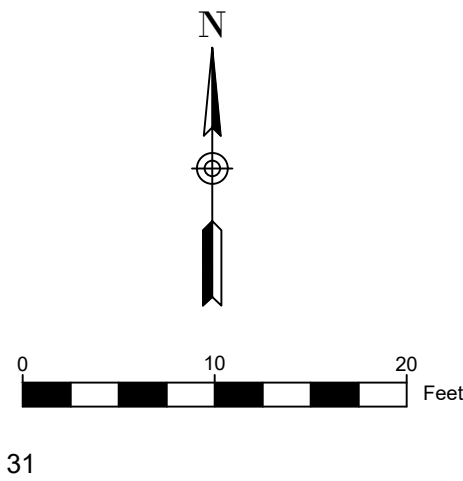
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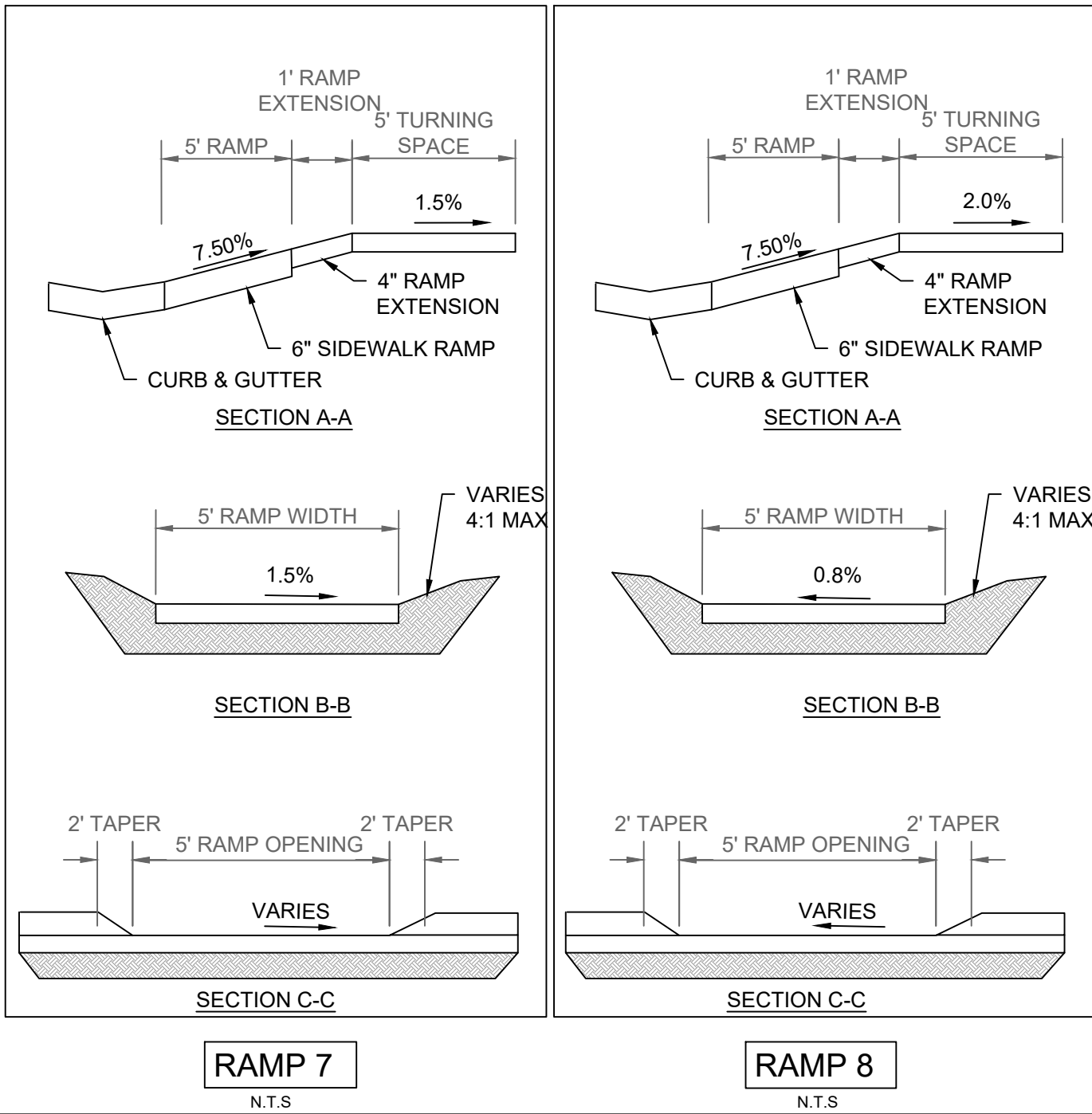
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Sheet 10



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44



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Technician: JS	Date: 3-18-21	Field Bk:	Pg:
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WHISPERING WOODS 3RD PLAT
STREET & STORM SEWER PLANS

INTERSECTION DETAILS

LEE'S SUMMIT, MO

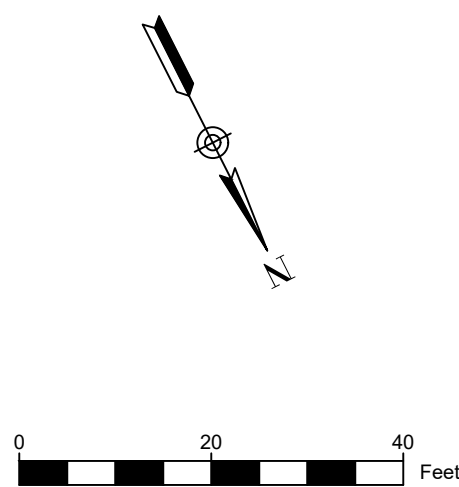
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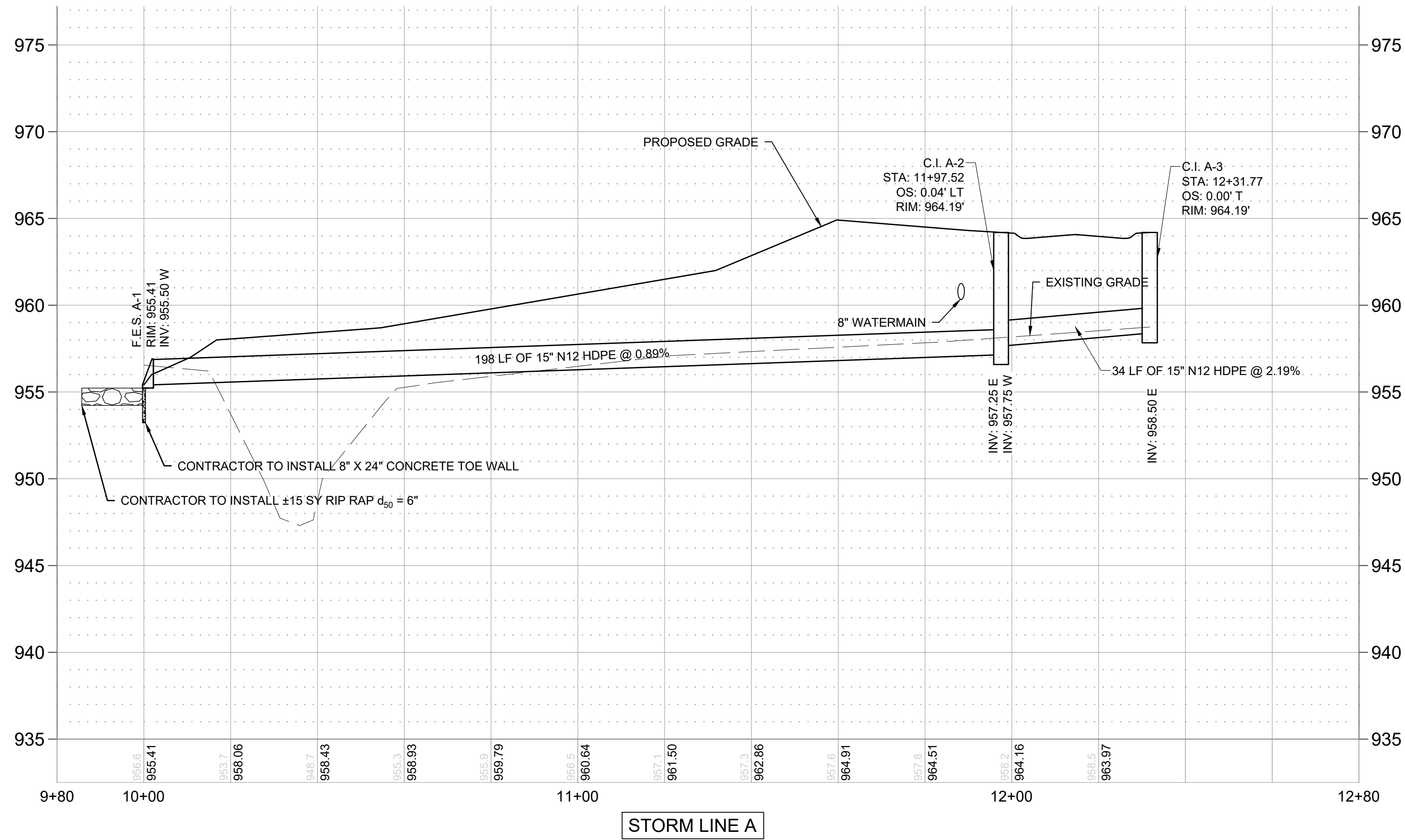
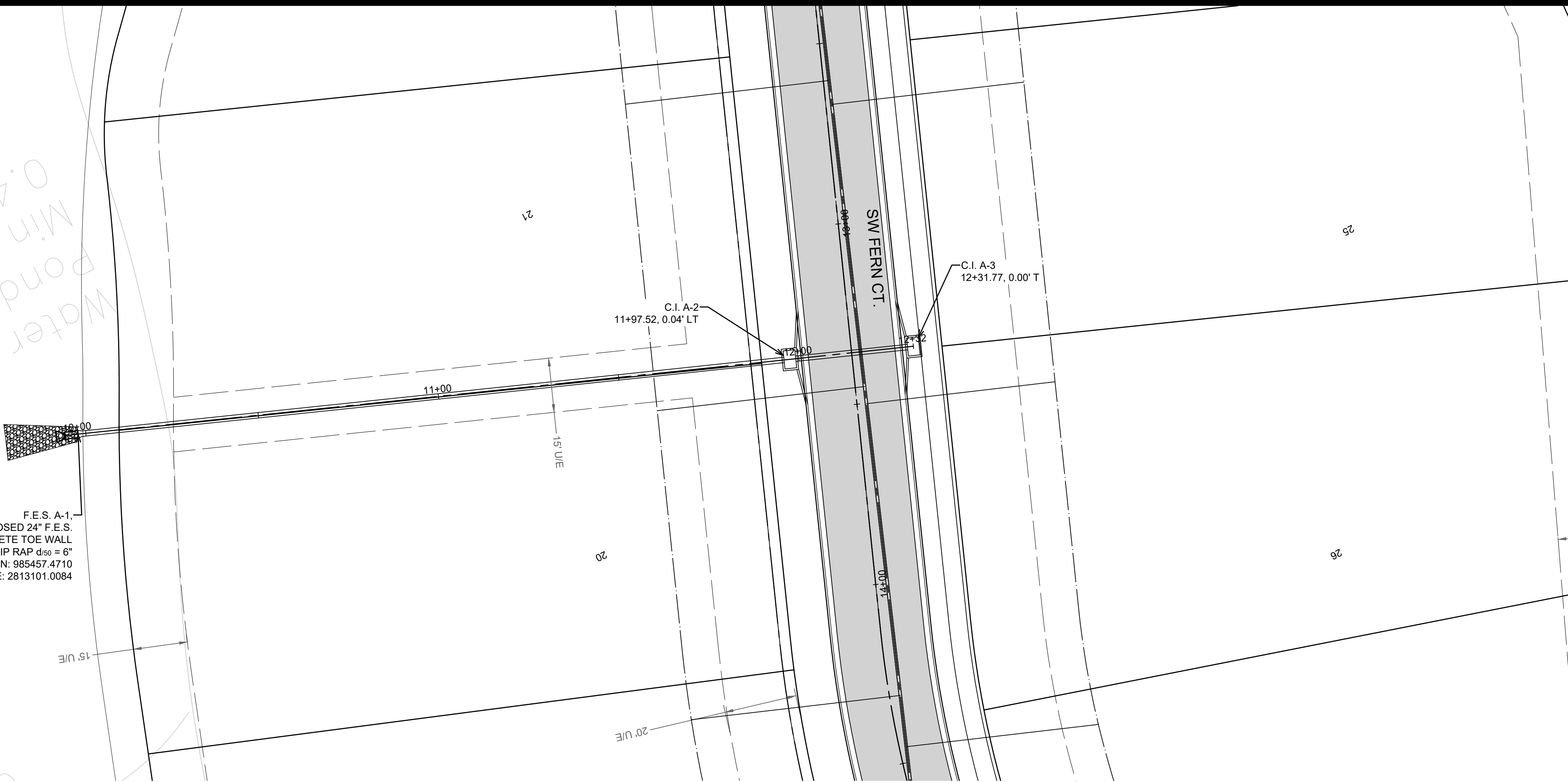
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Sheet 11



F.E.S. A-1
PROPOSED 24" F.E.S.
WITH CONCRETE TOE WALL
CONTRACTOR TO INSTALL ±15 SY RIP RAP $d_{50} = 6"$
N: 985457.4710
E: 2813101.0084



STORM LINE A

MARK	REVISION	DATE	BY
Engineer: SD	Checked By: SD	Scale: 1"= 20'	
Technician: JS	Date: 3-18-21	Field Bk:	Pg:
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MO PE#2013006489

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STREET & STORM SEWER PLANS

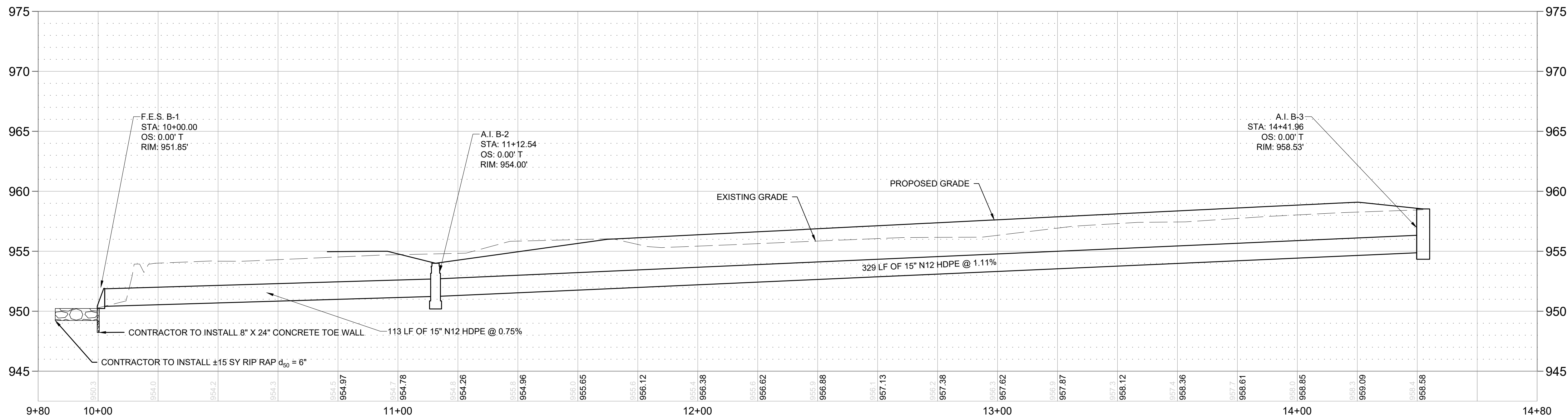
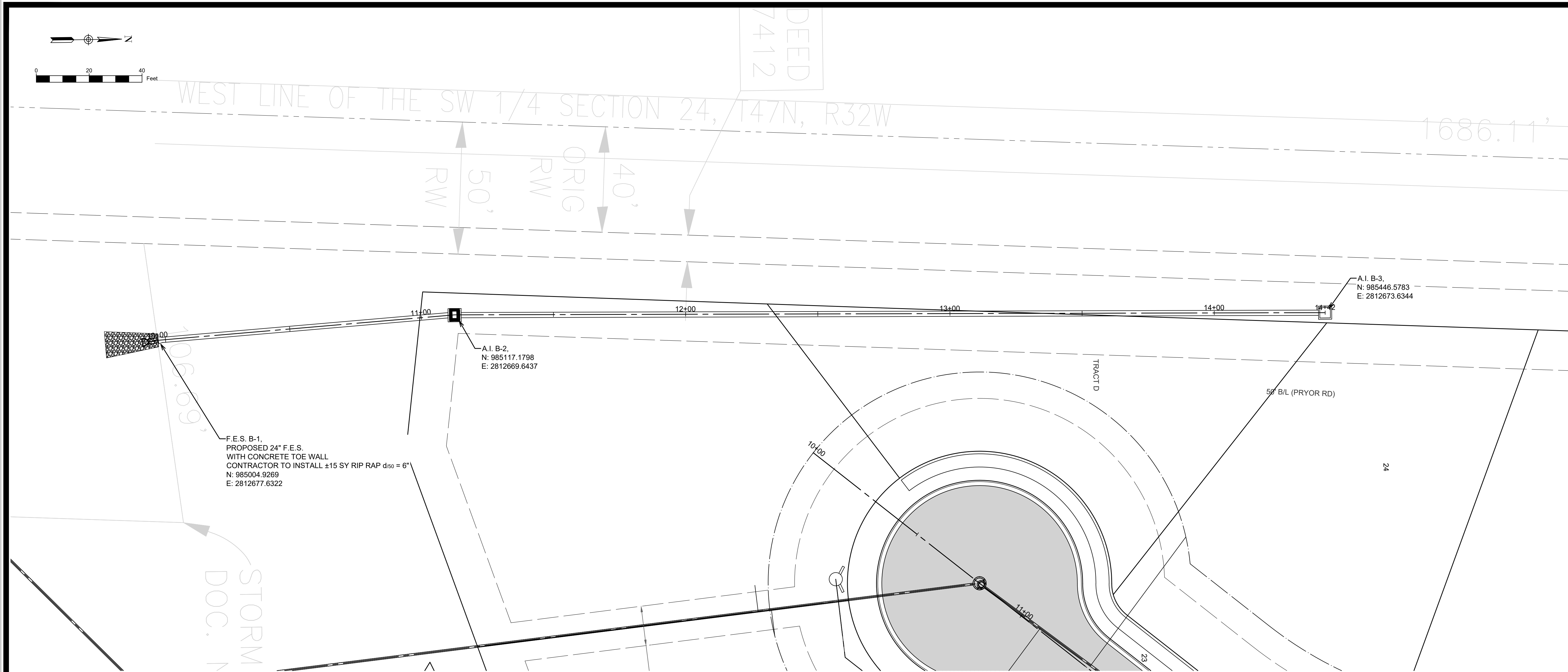
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STORM LINE B

MARK	REVISION	DATE	BY
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STREET & STORM SEWER PLANS

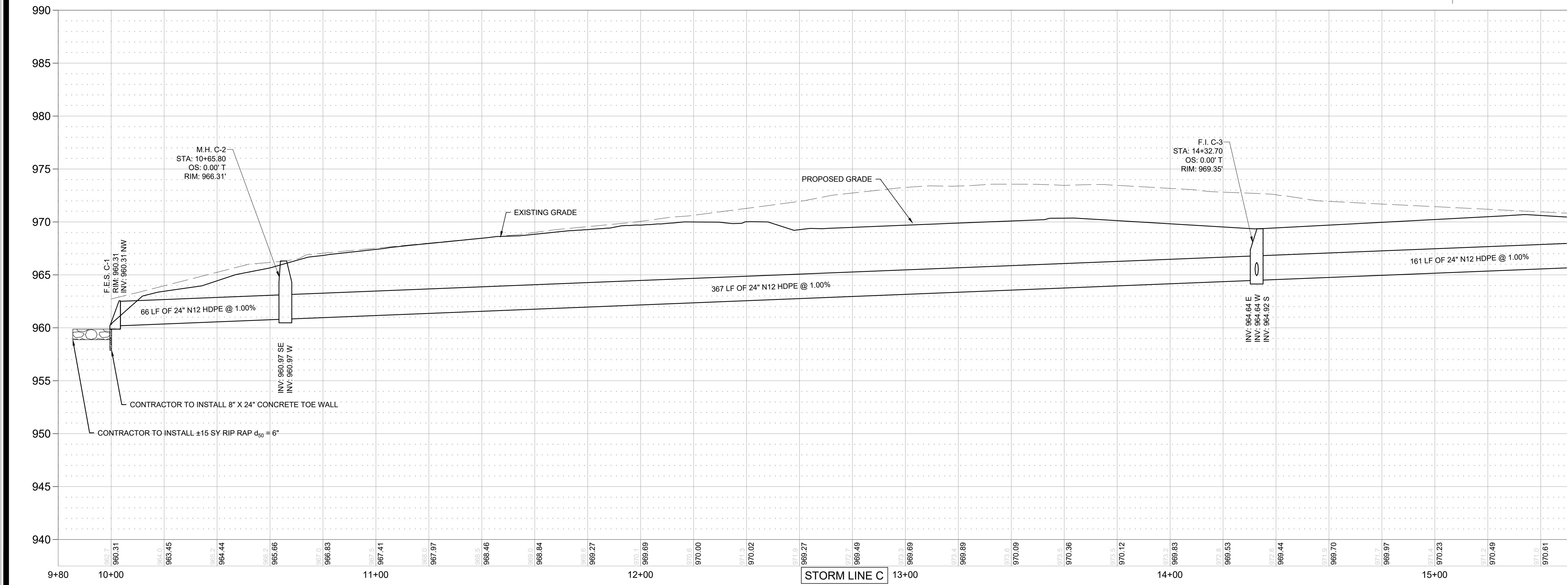
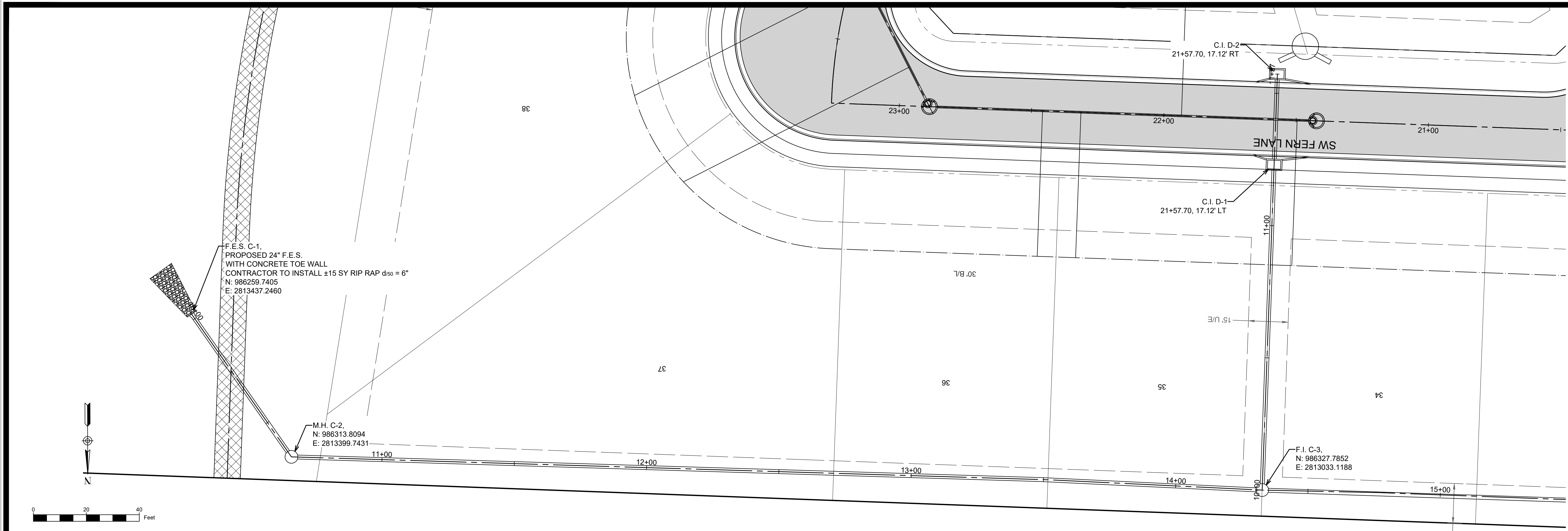
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STORM PLAN & PROFILE

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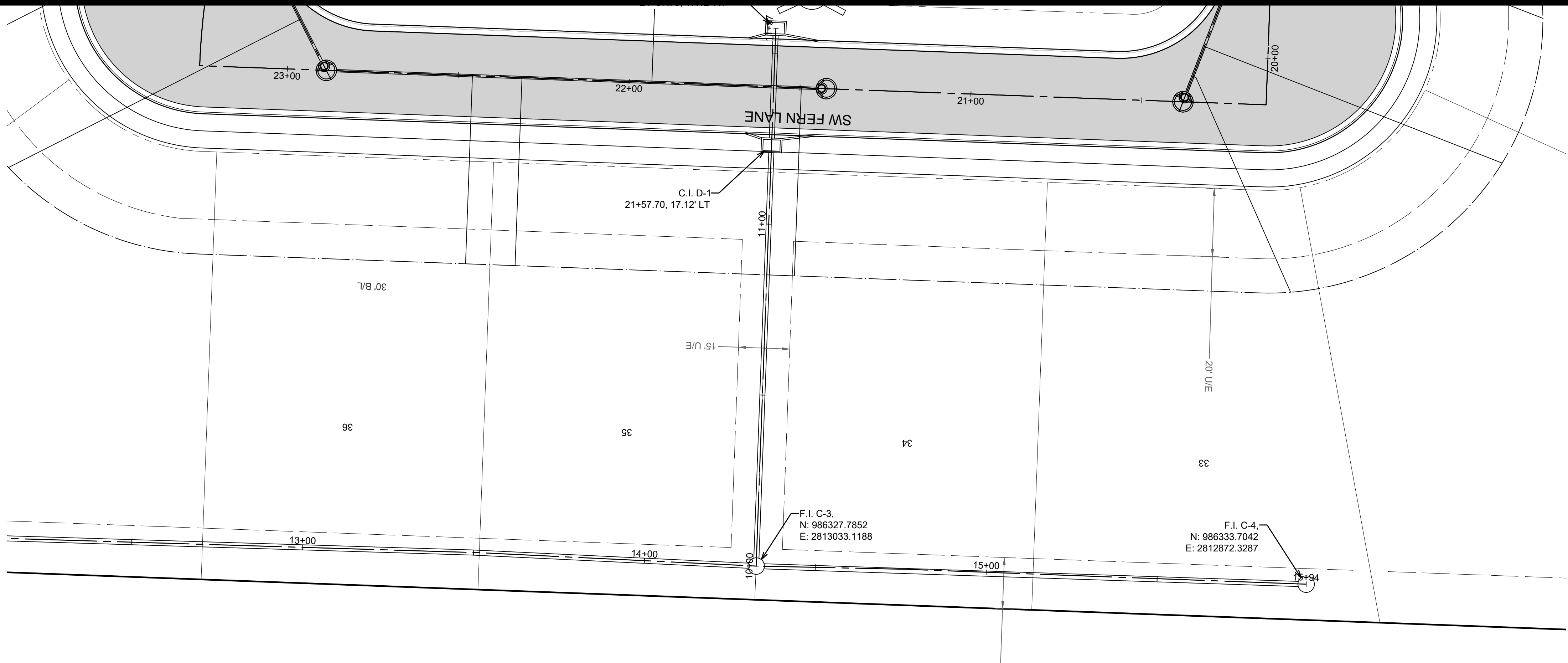
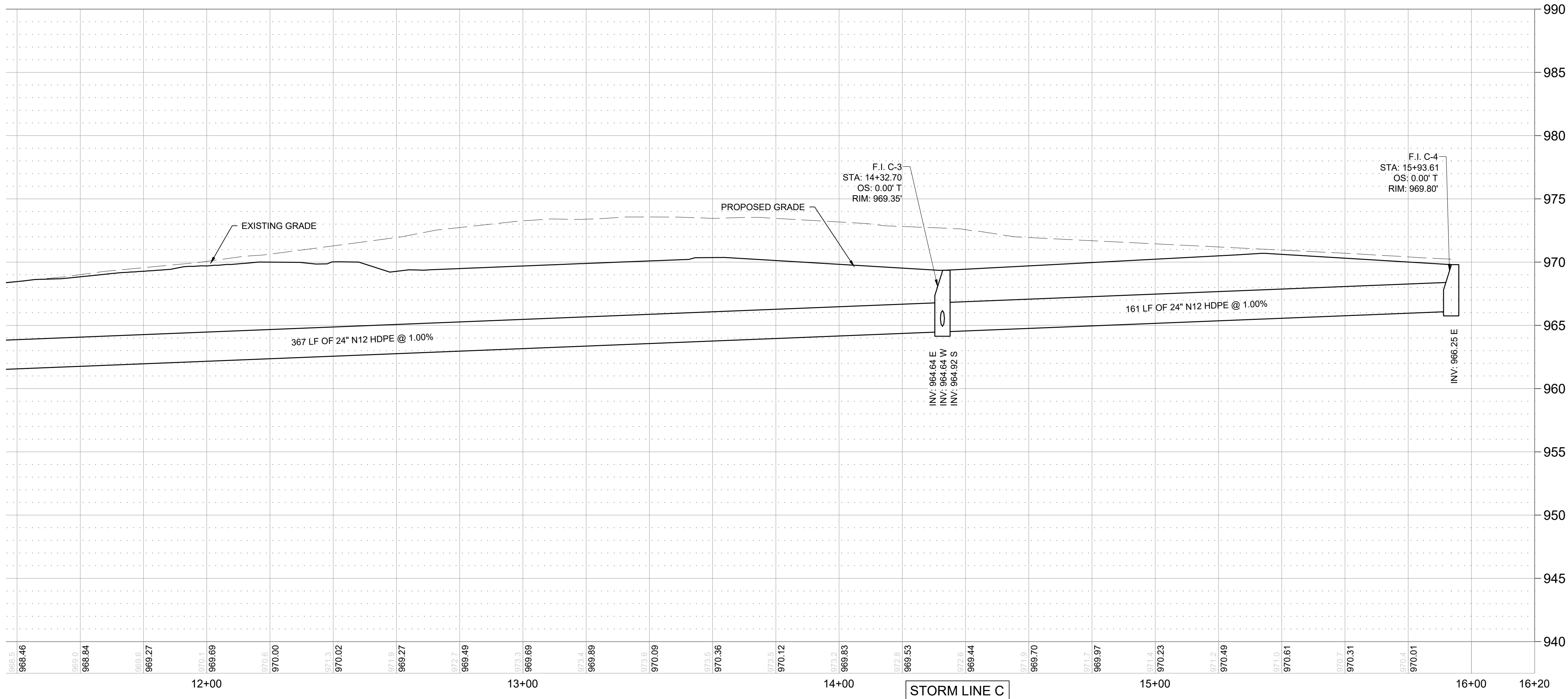
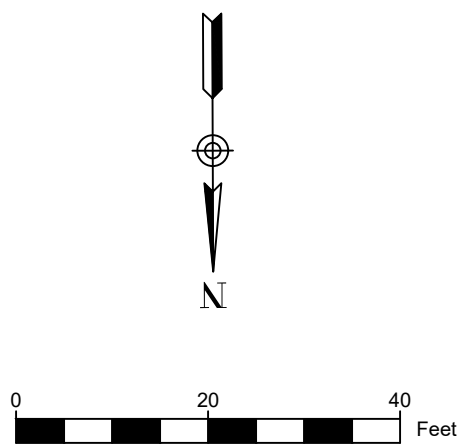
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Sheet 14



WHISPERING WOODS 3RD PLAT
STREET & STORM SEWER PLANS

STORM PLAN & PROFILE

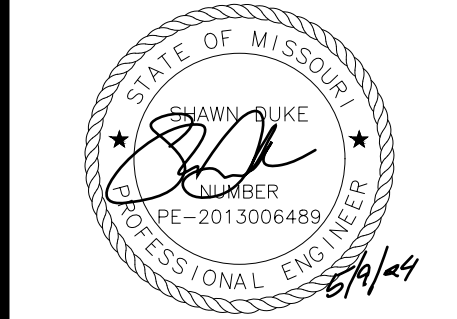
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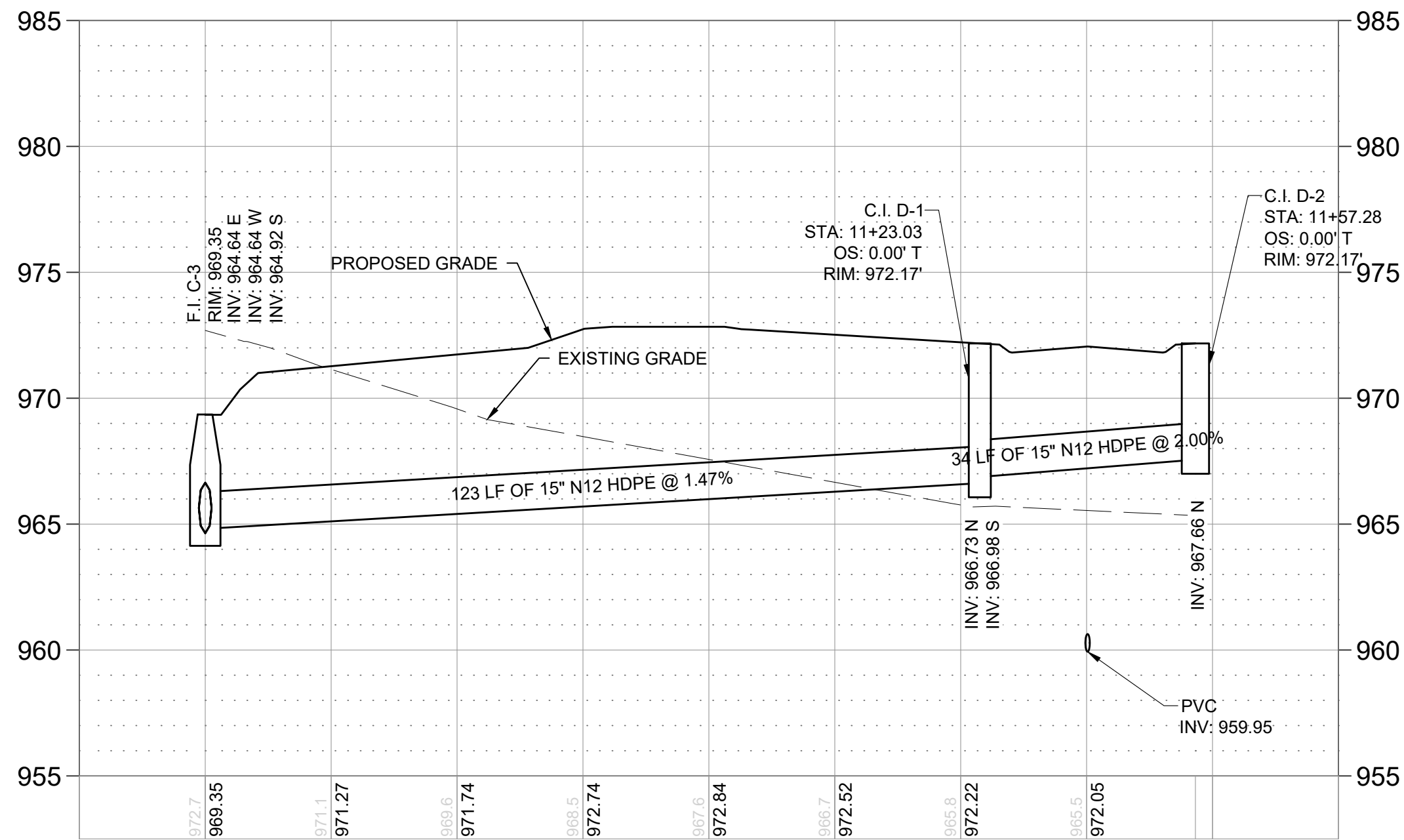
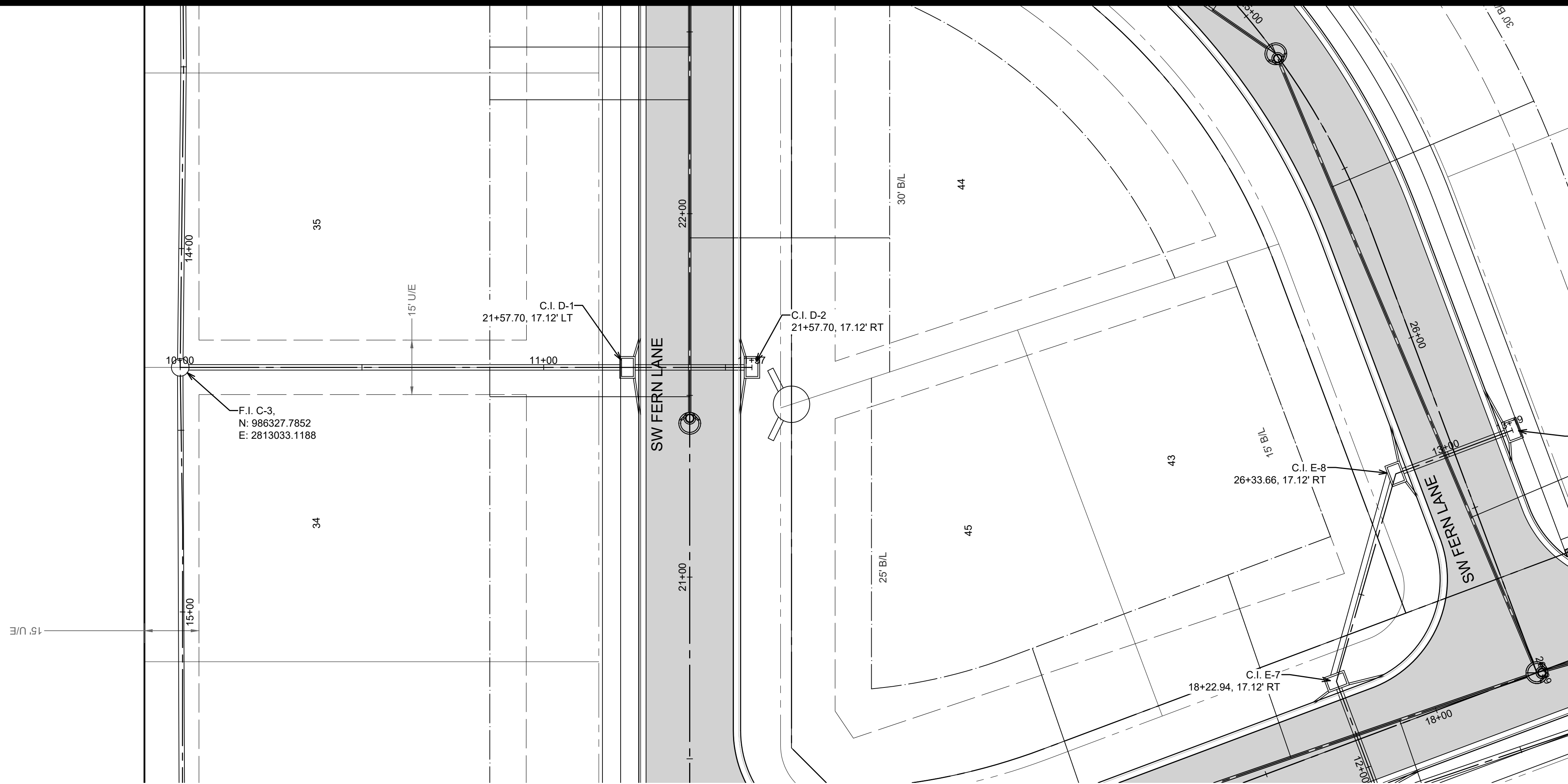
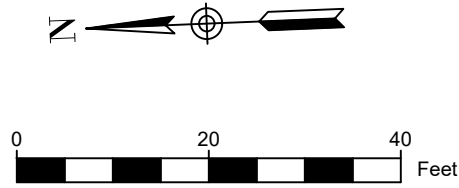
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Sheet 15



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MO PE#2013006489

MARK	REVISION	DATE	BY
Engineer: SD	Checked By: SD	Scale: 1"= 20'	
Technician: JS	Date: 3-18-21	Field Bk: Pg:	
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STORM LINE D

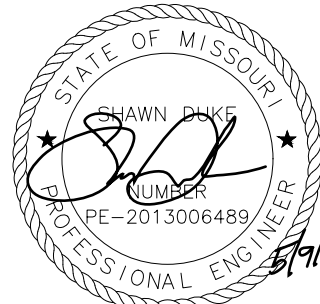
WHISPERING WOODS 3RD PLAT
STREET & STORM SEWER PLANS

STORM PLAN & PROFILE



Project No: 1200485.11

Sheet 16



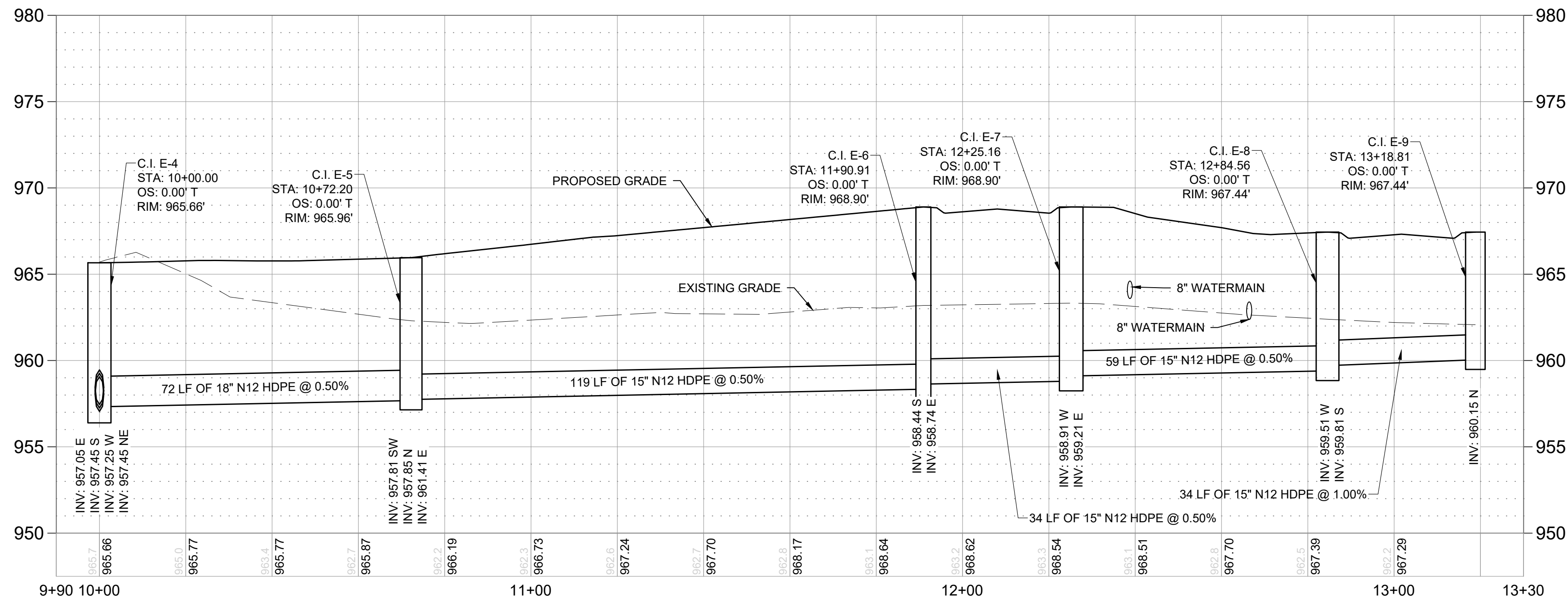
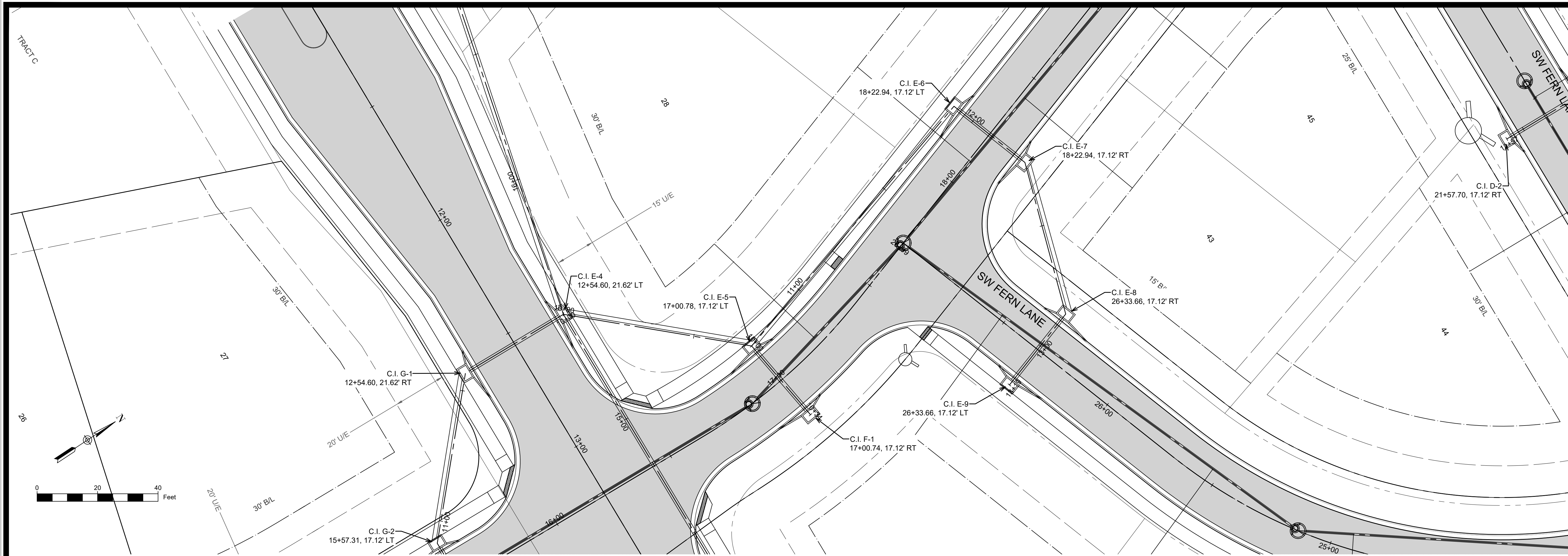
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MO PE#2013006489

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MARK	REVISION	DATE	BY
Engineer: SD	Checked By: SD	Scale: 1"= 20'	
Technician: JS	Date: 3-18-21	Field Bk:	Pg:
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STORM LINE E

MARK	REVISION	DATE	BY
Engineer: SD	Checked By: SD	Scale: 1"= 20'	
Technician: JS	Date: 3-18-21	Field Bk:	Pg:



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MO PE#2013006489

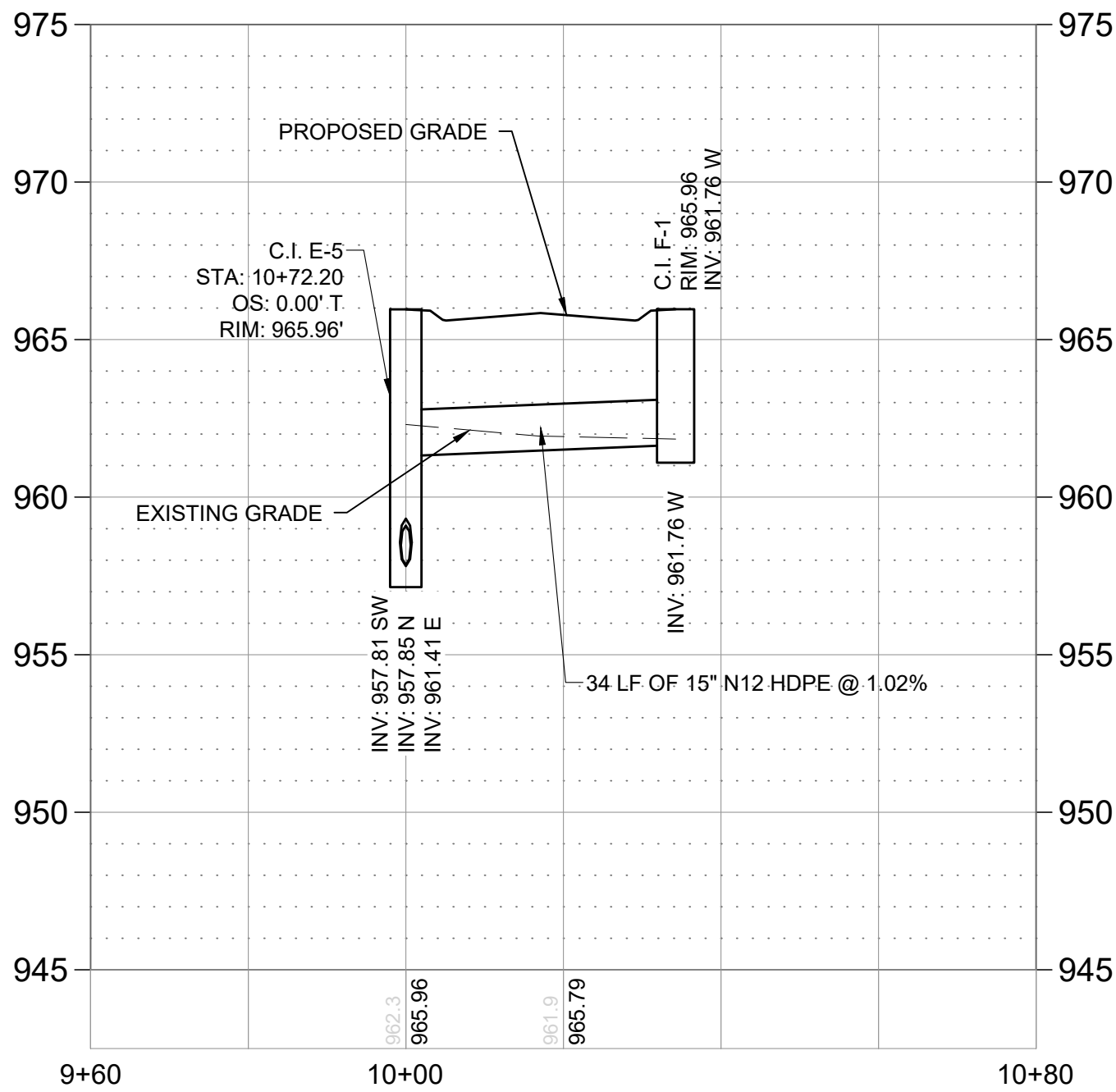
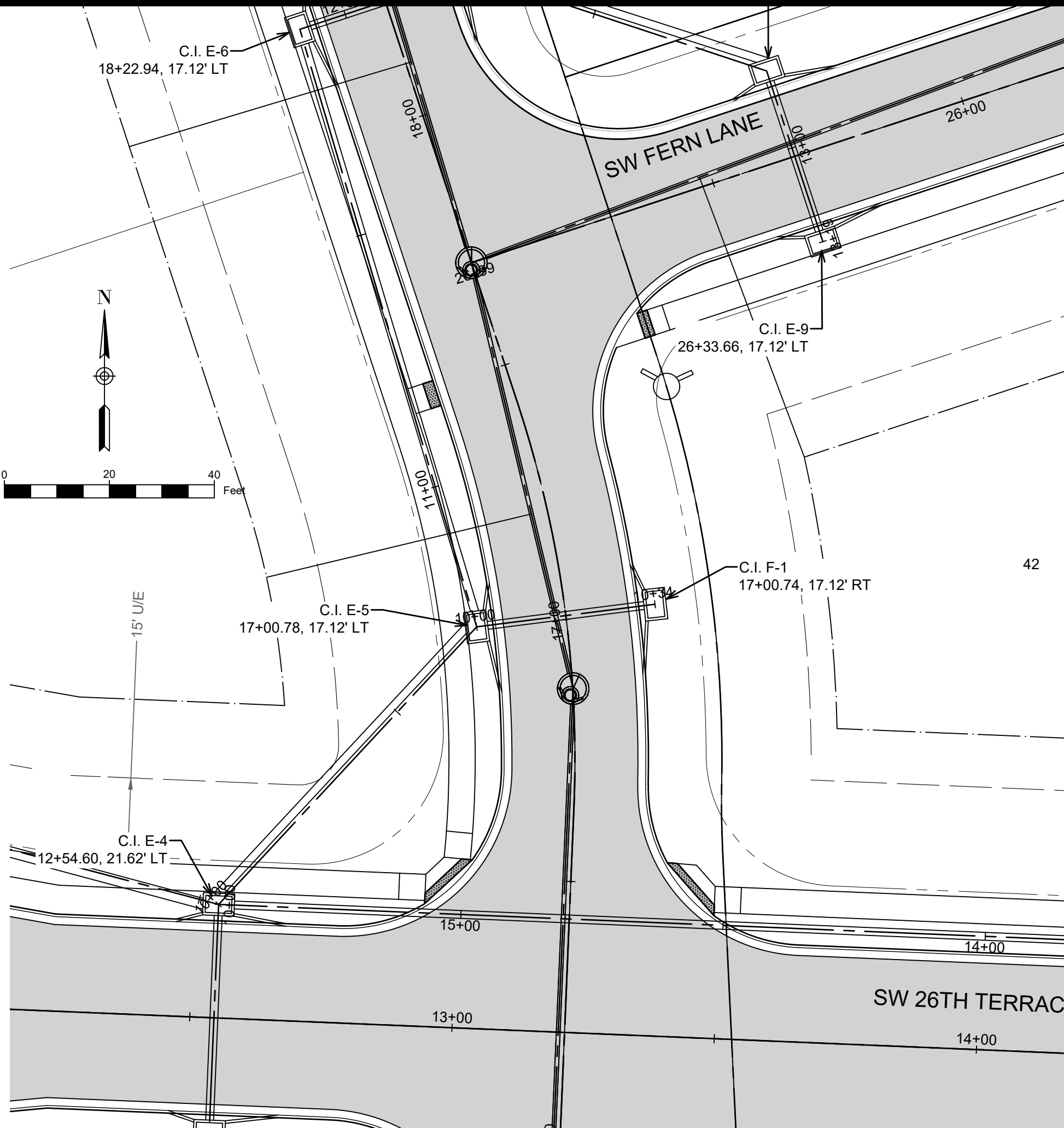
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STORM PLAN & PROFILE
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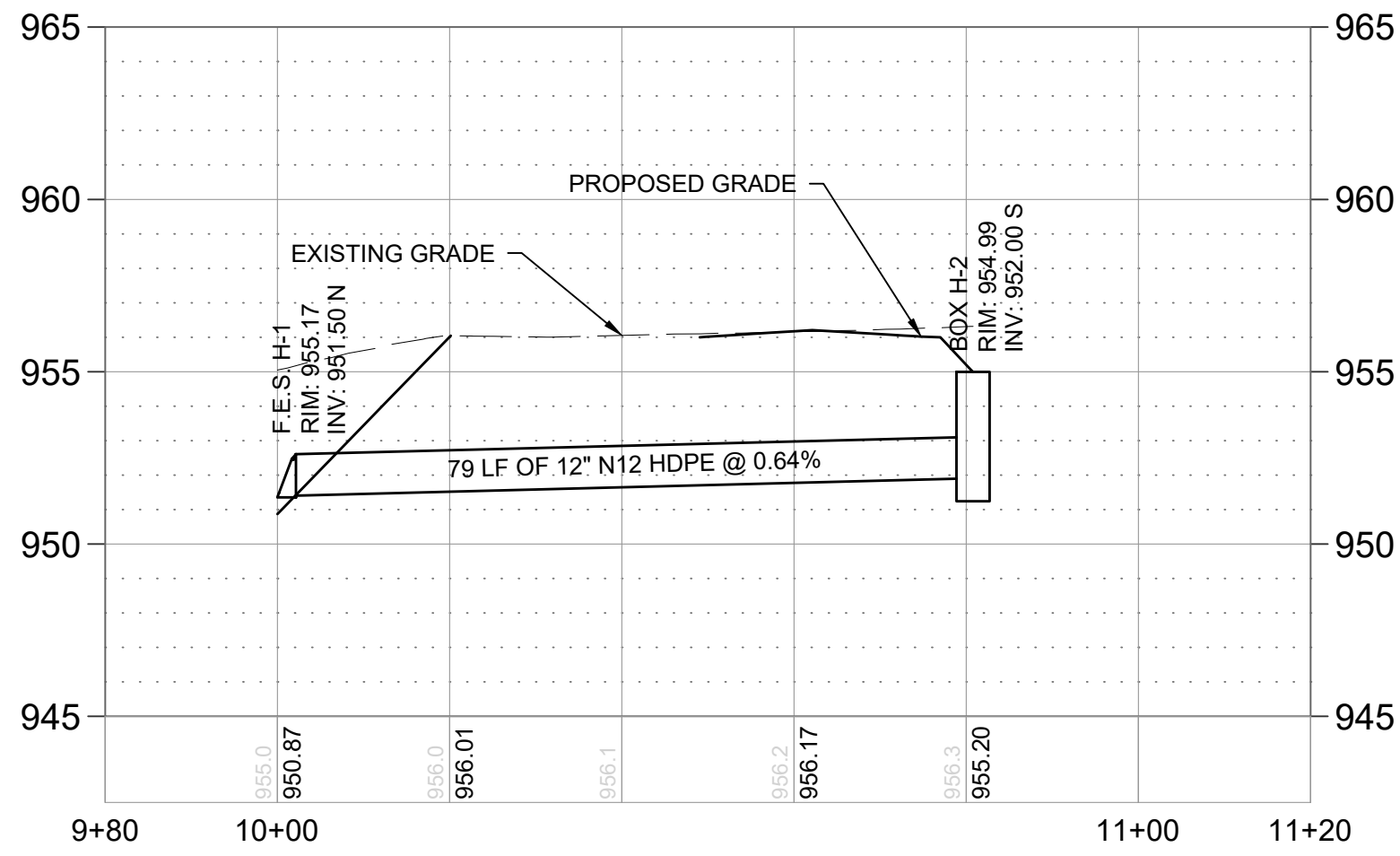
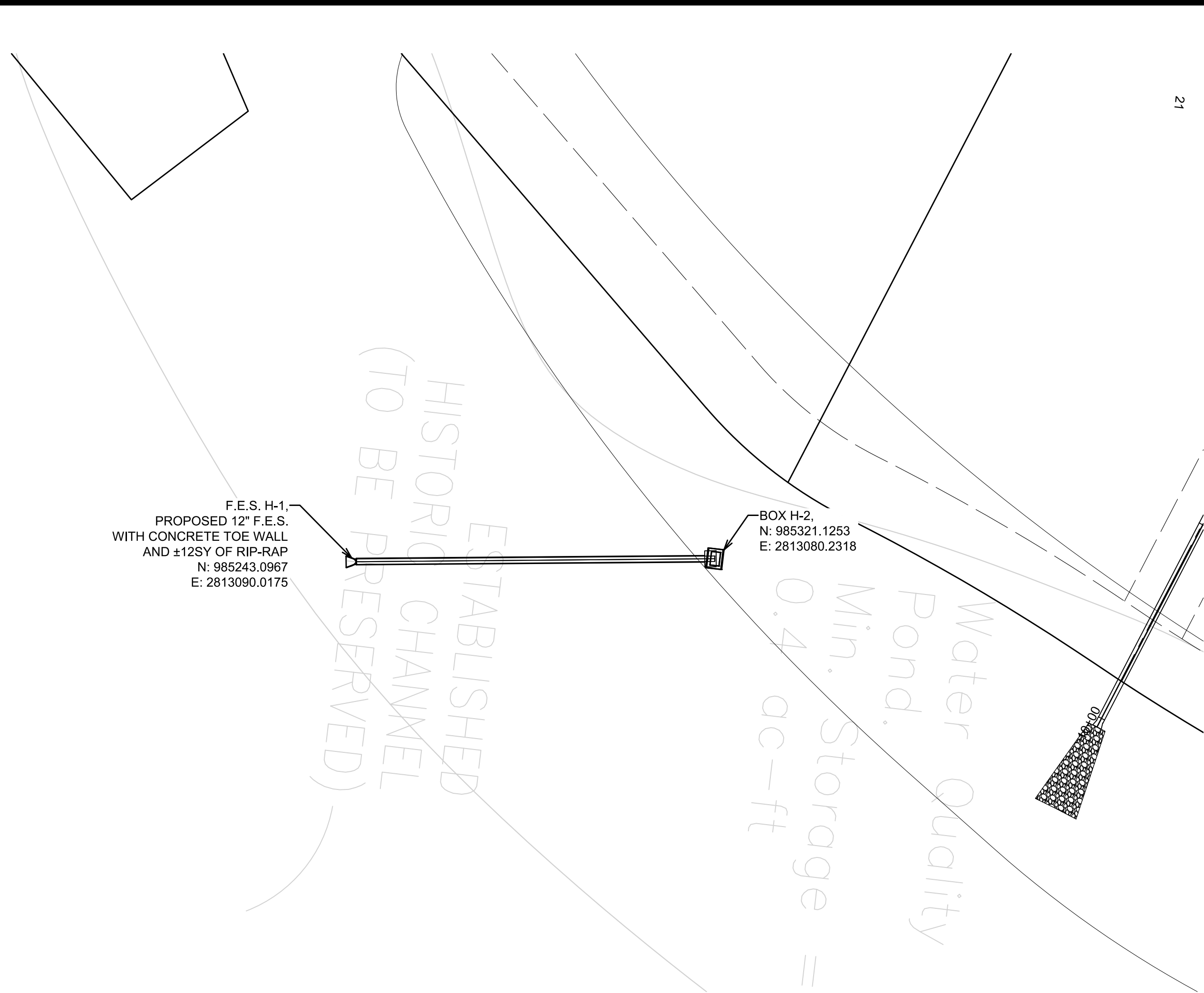


Project No: 1200485.11

Sheet 18



STORM LINE F



STORM LINE H

MARK	REVISION	DATE	BY
Engineer: SD	Checked By: SD	Scale: 1"= 20'	
Technician: JS	Date: 3-18-21	Field Bk:	
Snyder & Associates Engineers & Planners, Inc.			Sheet 19
Missouri State Certificate of Authority #200008544			



SHAWN DUKE - ENGINEER
MO PE#2013006489

WHISPERING WOODS 3RD PLAT
STREET & STORM SEWER PLANS

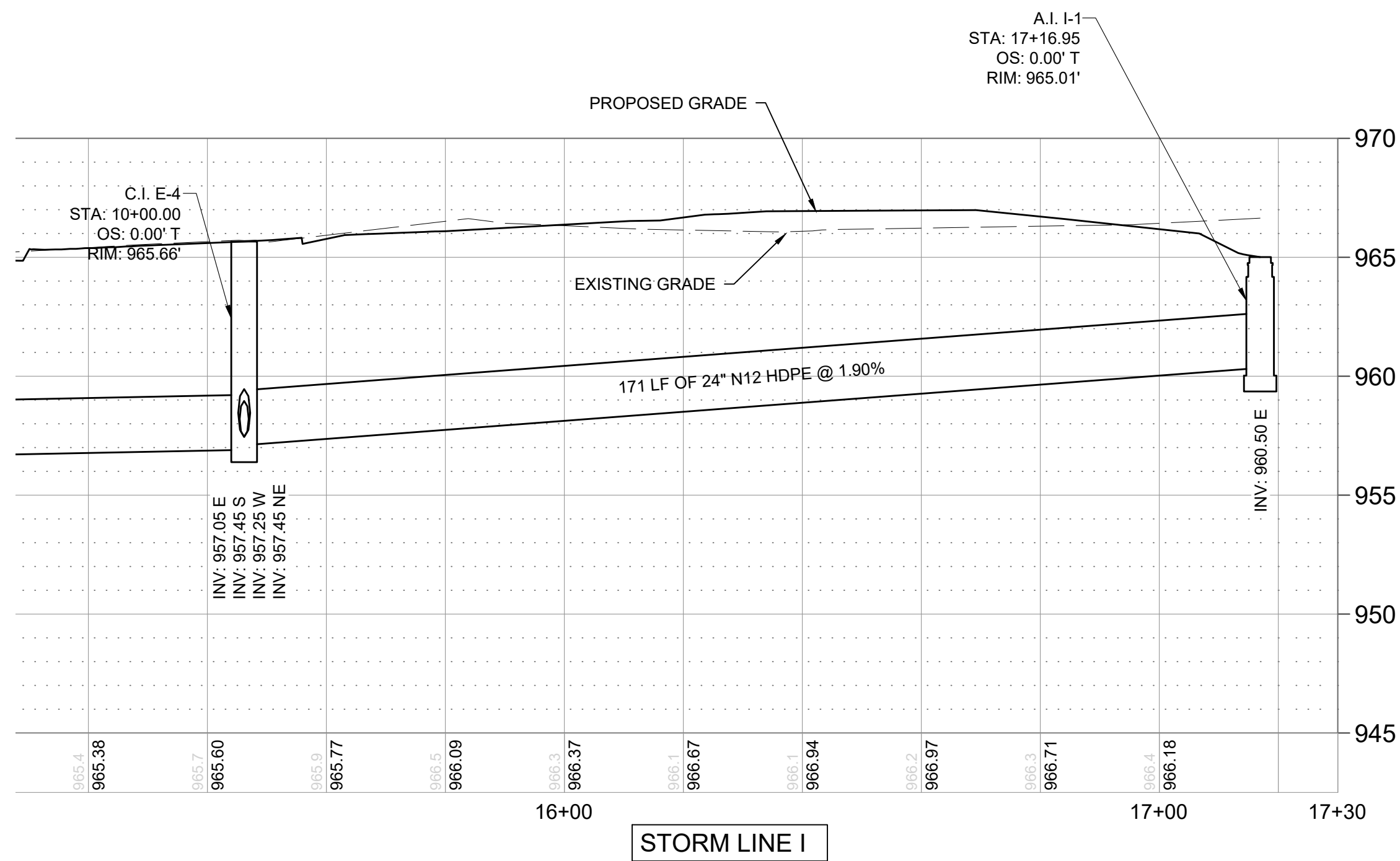
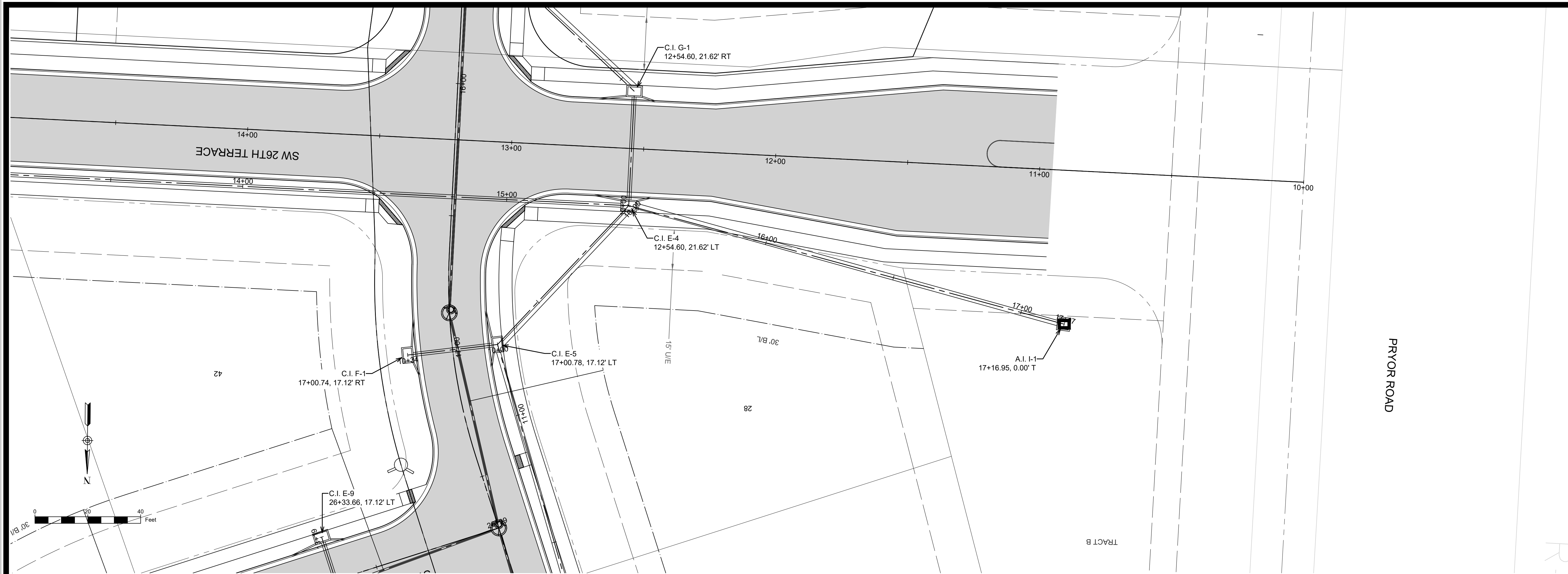
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MARK	REVISION	DATE	BY
Engineer: SD	Checked By: SD	Scale: 1"= 20'	
Technician: JS	Date: 3-18-21	Field Bk:	Pg:
Snyder & Associates Engineers & Planners, Inc.			Sheet 21
Missouri State Certificate of Authority #200008544			



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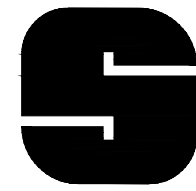
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STORM PLAN & PROFILE

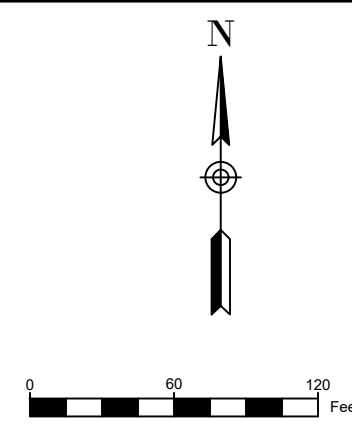
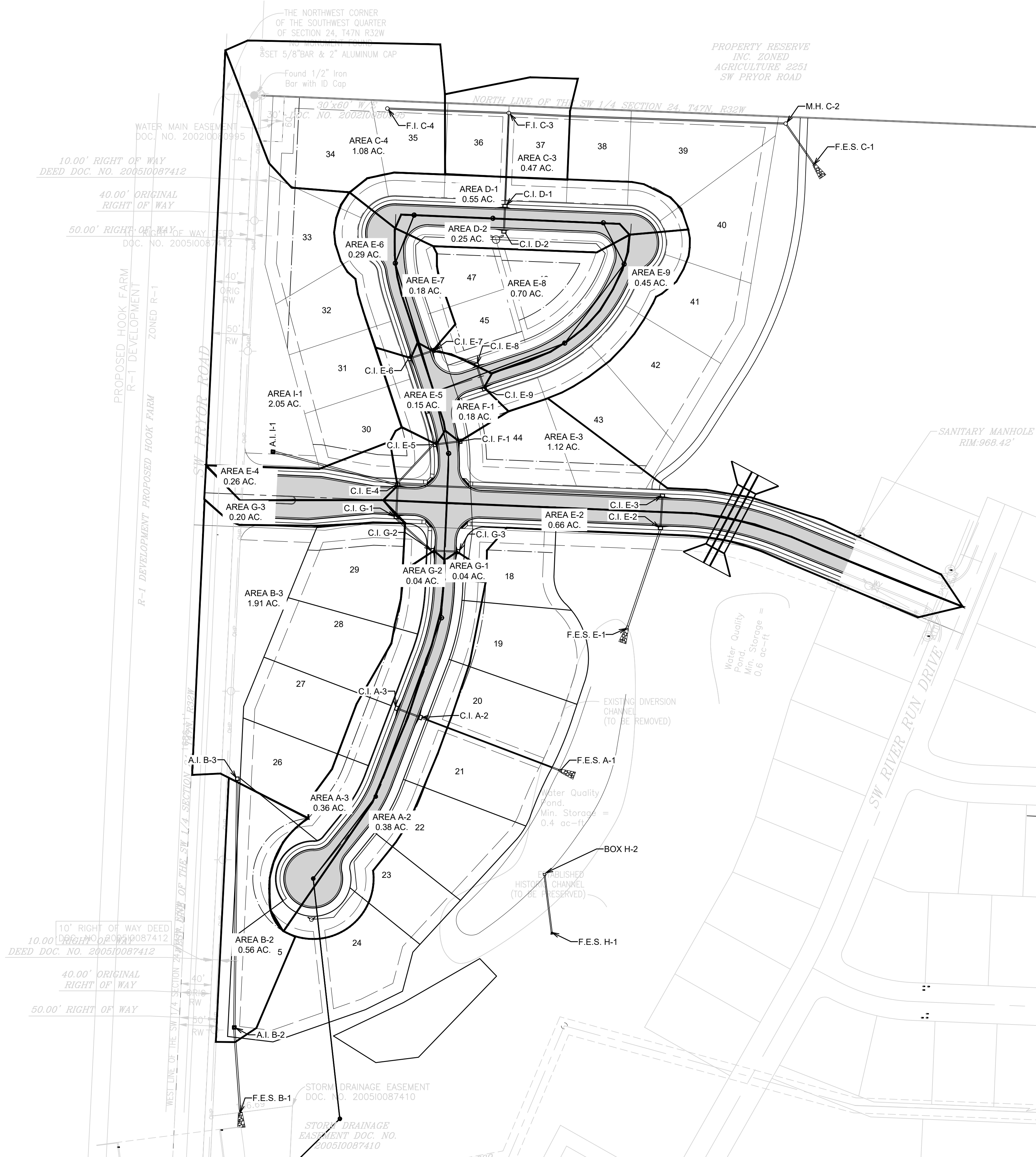
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MARK	REVISION	DATE	BY
Engineer: SD	Checked By: SD	1"= 60'	
Technician: JS	Date: 3-18-20	Field Bk:	
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Missouri State Certificate of Authority #200008544			



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WHISPERING WOODS 3RD PLAT
STREET & STORM SEWER PLANS

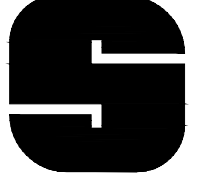
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Project No: 1200485.11

Sheet 22

10 YEAR STORM

Label	Start Node	Stop Node	Length (User Defined) (ft)	Slope (Calculated) (ft/ft)	System Intensity (in/h)	System Drainage Area (acres)	Invert (Start) (ft)	Invert (Stop) (ft)	Hydraulic Grade Line (In) (ft)	Hydraulic Grade Line (Out) (ft)	Section Type	Diameter (in)	Manning's n	Flow (cfs)	Velocity (ft/s)	Capacity (Full Flow) (cfs)	Flow / Capacity (Design) (%)
A-4 - A-3	CI A-4	CI A-3	32	0.023	7.392	0.68	958.5	957.75	959.21	958.9	Circle	15	0.013	3.09	7.12	9.89	31.3
A-3 - A-2	CI A-3	MH A-2	76	0.005	9.324	1.36	957.25	956.85	958.9	958.22	Circle	15	0.013	6.13	5	4.69	130.8
A-2 - A-1	MH A-2	FES A-1	123	0.005	9.224	1.36	956.65	956	958.22	957	Circle	15	0.013	6.13	5	4.7	130.6
G-3 - G-2	CI G-3	CI G-2	34	0.01	7.4	0.04	959.04	958.7	959.84	959.84	Circle	24	0.013	0.18	2.17	22.62	0.8
G-2 - G-1	CI G-2	CI G-1	65	0.005	7.298	0.08	958.4	958.07	959.84	959.84	Circle	24	0.013	0.37	2.12	16.12	2.3
G-1 - E-4	CI G-1	CI E-4	43	0.005	7.097	0.28	957.67	957.45	959.84	959.84	Circle	24	0.013	1.42	0.45	16.18	8.8
E-4 - E-3	CI E-4	CI E-3	351	0.005	6.667	4.36	957.05	955.3	959.84	957.83	Circle	24	0.013	17.1	5.44	15.97	107.1
E-3 - E-2	CI E-3	CI E-2	43	0.005	6.415	5.48	955.07	954.85	957.83	957.46	Circle	24	0.013	21.09	6.71	16.18	130.3
E-2 - E-1	CI E-2	FES E-1	140	0.005	6.394	6.14	954.75	954	957.46	955.74	Circle	24	0.013	24.08	7.67	16.56	145.5
E-9 - E-8	CI E-9	CI E-8	34	0.01	7.4	0.45	960.15	959.81	961.26	961.23	Circle	15	0.013	2.05	4.67	6.46	31.7
E-8 - E-7	CI E-8	CI E-7	59	0.005	7.352	1.15	959.51	959.21	961.23	960.89	Circle	15	0.013	4.89	3.98	4.61	106.1
E-7 - E-6	CI E-7	CI E-6	34	0.005	7.256	1.33	958.91	958.74	960.89	960.8	Circle	18	0.013	5.64	3.19	7.43	75.9
E-6 - E-5	CI E-6	CI E-5	119	0.005	7.186	1.62	958.44	957.85	960.8	960.28	Circle	18	0.013	6.89	3.9	7.4	93.1
E-5 - E-4	CI E-5	CI E-4	72	0.005	6.991	1.95	957.81	957.45	960.28	959.84	Circle	18	0.013	8.25	4.67	7.43	111
F-1 - E-5	CI F-1	CI E-5	34	0.01	7.4	0.18	961.76	961.41	962.14	961.73	Circle	15	0.013	0.95	3.81	6.55	14.5
D-2 - D-1	CI D-2	CI D-1	34	0.02	7.4	0.25	967.66	966.98	968.1	967.5	Circle	15	0.013	1.25	5.21	9.14	13.7
D-1 - C-4	CI D-1	FI C-3	123	0.013	7.357	0.8	966.73	965.19	967.5	965.81	Circle	15	0.013	3.61	5.89	7.23	49.9
C-4 - C-3	FI C-4	FI C-3	161	0.01	7.4	1.08	966.25	964.64	966.96	965.73	Circle	24	0.013	4.1	5.47	22.62	18.1
C-2 - C-1	MH C-2	FES C-1	66	0.01	6.923	2.35	960.97	960.31	962.04	961.19	Circle	24	0.013	8.92	6.77	22.62	39.4
B-1 - B-2	MH B-2	FES B-1	113	0.007	7.102	2.46	951.34	950.5	952.65	951.69	Circle	18	0.013	9.51	5.81	9.06	105
I-1 - E-4	AI I-1	CI E-4	165	0.018	7.4	1.87	960.5	957.45	961.47	959.84	Circle	24	0.012	7.52	8.57	33.32	22.6
B-3 - B-2	AI B-3	MH B-2	329	0.011	7.4	1.91	955	951.34	956.07	952.65	Circle	18	0.012	7.69	7.21	12	64
C-3 - C-2	FI C-3	MH C-2	367	0.01	7.208	2.35	964.64	960.97	965.73	961.82	Circle	24	0.012	9.29	7.26	24.51	37.9

100 YEAR STORM

Label	Start Node	Stop Node	Length (User Defined) (ft)	Slope (Calculated) (ft/ft)	System Intensity (in/h)	System Drainage Area (acres)	Invert (Start) (ft)	Invert (Stop) (ft)	Hydraulic Grade Line (In) (ft)	Hydraulic Grade Line (Out) (ft)	Section Type	Diameter (in)	Manning's n	Flow (cfs)	Velocity (ft/s)	Capacity (Full Flow) (cfs)	Flow / Capacity (Design) (%)
A-4 - A-3	CI A-4	CI A-3	32	0.023	10.2	0.68	958.5	957.75	960.75	960.61	Circle	15	0.013	4.26	3.48	9.89	43.1
A-3 - A-2	CI A-3	MH A-2	76	0.005	11.167	1.36	957.25	956.85	960.61	959.31	Circle	15	0.013	8.46	6.89	4.69	180.5
A-2 - A-1	MH A-2	FES A-1	123	0.005	11.13	1.36	956.65	956	959.31	957.14	Circle	15	0.013	8.46	6.89	4.7	180.2
G-3 - G-2	CI G-3	CI G-2	34	0.01	10.204	0.04	959.04	958.7	964.42	964.42	Circle	24	0.013	0.25	0.08	22.62	1.1
G-2 - G-1	CI G-2	CI G-1	65	0.005	8.363	0.08	958.4	958.07	964.42	964.42	Circle	24	0.013	0.42	0.14	16.12	2.6
G-1 - E-4	CI G-1	CI E-4	43	0.005	6.68	0.28	957.67	957.45	964.42	964.42	Circle	24	0.013	1.34	0.43	16.18	8.3
E-4 - E-3	CI E-4	CI E-3	351	0.005	6.481	4.36	957.05	955.3	964.42	960.18	Circle	24	0.013	16.63	5.29	15.97	104.1
E-3 - E-2	CI E-3	CI E-2	43	0.005	6.351	5.48	955.07	954.85	960.18	959.38	Circle	24	0.013	20.88	6.65	16.18	129.1
E-2 - E-1	CI E-2	FES E-1	140	0.005	6.339	6.14	954.75	954	959.38	955.92	Circle	24	0.013	23.88	7.6	16.56	144.2
E-9 - E-8	CI E-9	CI E-8	34	0.01	10.204	0.45	960.15	959.81	967.24	967.18	Circle	15	0.013	2.82	2.3	6.46	43.7
E-8 - E-7	CI E-8	CI E-7	59	0.005	10.154	1.15	959.51	959.21	967.18	966.53	Circle	15	0.013	6.75	5.5	4.61	146.6
E-7 - E-6	CI E-7	CI E-6	34	0.005	10.119	1.33	958.91	958.74	966.53	966.34	Circle	18	0.013	7.86	4.45	7.43	105.9
E-6 - E-5	CI E-6	CI E-5	119	0.005	10.093	1.62	958.44	957.85	966.34	965.33	Circle	18	0.013	9.67	5.47	7.4	130.8
E-5 - E-4	CI E-5	CI E-4	72	0.005	10.021	1.95	957.81	957.45	965.33	964.42	Circle	18	0.013	11.82	6.69	7.43	159.1
F-1 - E-5	CI F-1	CI E-5	34	0.01	10.204	0.18	961.76	961.41	965.34	965.33	Circle	15	0.013	1.31	1.07	6.55	20
D-2 - D-1	CI D-2	CI D-1	34	0.02	10.204	0.25	967.66	966.98	968.18	967.64	Circle	15	0.013	1.72	5.72	9.14	18.9
D-1 - C-4	CI D-1	FI C-3	123	0.013	10.184	0.8	966.73	965.19	967.64	965.95	Circle	15	0.013	4.99	6.35	7.23	69.1
C-4 - C-3	FI C-4	FI C-3	161	0.01	10.204	1.08	966.25	964.64	967.09	965.94	Circle	24	0.013	5.66	5.99	22.62	25
C-2 - C-1	MH C-2	FES C-1	66	0.01	9.921	2.35	960.97	960.31	962.26	961.39	Circle	24	0.013	12.79	7.42	22.62	56.5
B-1 - B-2	MH B-2	FES B-1	113	0.007	10.021	2.46	951.34	950.5	953.78	951.86	Circle	18	0.013	13.42	7.59	9.06	148.2
I-1 - E-4	AI I-1	CI E-4	165	0.018	10.204	1.87	960.5	957.45	964.72	964.42	Circle	24	0.012	10.38	3.3	33.32	31.2
B-3 - B-2	AI B-3	MH B-2	329	0.011	10.204	1.91	955	951.34	956.64	953.78	Circle	18	0.012	10.6	6	12	88.4
C-3 - C-2	FI C-3	MH C-2	367	0.01	10.114	2.35	964.64	960.97	965.94	962.01	Circle	24	0.012	13.03	7.92	24.51	53.2

INLET SPREAD TABLE

Drainage									
Inlet	Area Ac	Inlet C	Intensity in/h	Q cfs	Ku	n	SX %	SL %	T= Spread ft
A-2L	0.19	0.51	7.35	0.7	0.56	0.012	2	1	5.73
A-2R	0.19	0.51	7.35	0.7	0.56	0.012	2	1	5.73
A-3L	0.18	0.51	7.35	0.7	0.56	0.012	2	1	5.61
A-3R	0.18	0.51	7.35	0.7	0.56	0.012	2	1	5.61
D-1L	0.12	0.51	7.35	0.4	0.56	0.012	2	0.6	5.30
D-1R	0.12	0.51	7.35	0.4	0.56	0.012	2	1	4.82
D-2L	0.28	0.51	7.35	1.0	0.56	0.012	2	1	6.62
D-2R	0.28	0.51	7.35	1.0	0.56	0.012	2	0.6	7.29
E-2L	0.35	0.51	7.35	1.3	0.56	0.012	2	1	7.20
E-2R	0.31	0.51	7.35	1.2	0.56	0.012	2	2.4	5.84
E-3L	0.31	0.51	7.35	1.2	0.56	0.012	2	2.4	5.84
E-3R	0.81	0.51	7.35	3.0	0.56	0.012	2	1	9.86
E-4	0.26	0.51	7.35	1.0	0.56	0.012	2	1.3	6.13
E-5	0.15	0.51	7.35	0.6	0.56	0.012	2	2.8	4.32
E-6	0.29	0.51	7.35	1.1	0.56	0.012	2	2.5	5.65
E-7	1.80	0.51	7.35	6.7	0.56	0.012	2	2.5	11.21
E-8	0.70	0.51	7.35	2.6	0.56	0.012	2	2.5	7.86
E-9	0.45	0.51	7.35	1.7	0.56	0.012	2	2.5	6.66
F-1	0.18	0.51	7.35	0.7	0.56	0.012	2	2.8	4.63
G-1	0.20	0.51	7.35	0.7	0.56	0.012	2	1.3	5.56
G-2	0.04	0.51	7.35	0.1	0.56	0.012	2	1	3.19
G-3	0.04	0.51	7.35	0.1	0.56	0.012	2	1	3.19



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WHISPERING WOODS 3RD PLAT
STREET & STORM SEWER PLANS

DRAINAGE TABLES

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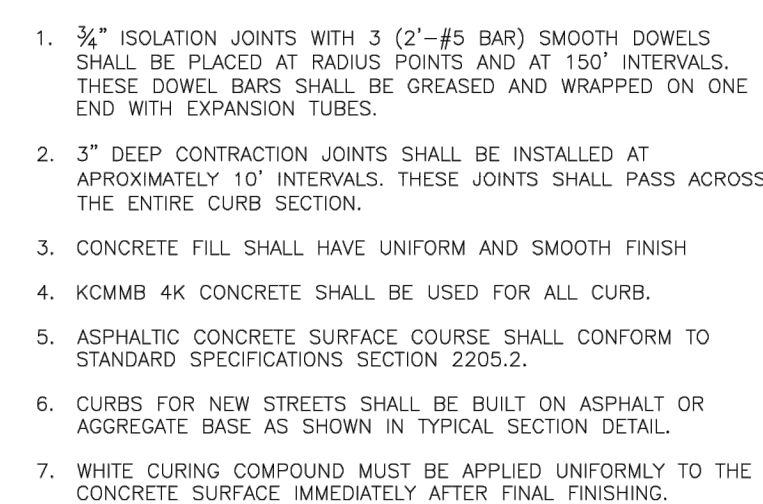
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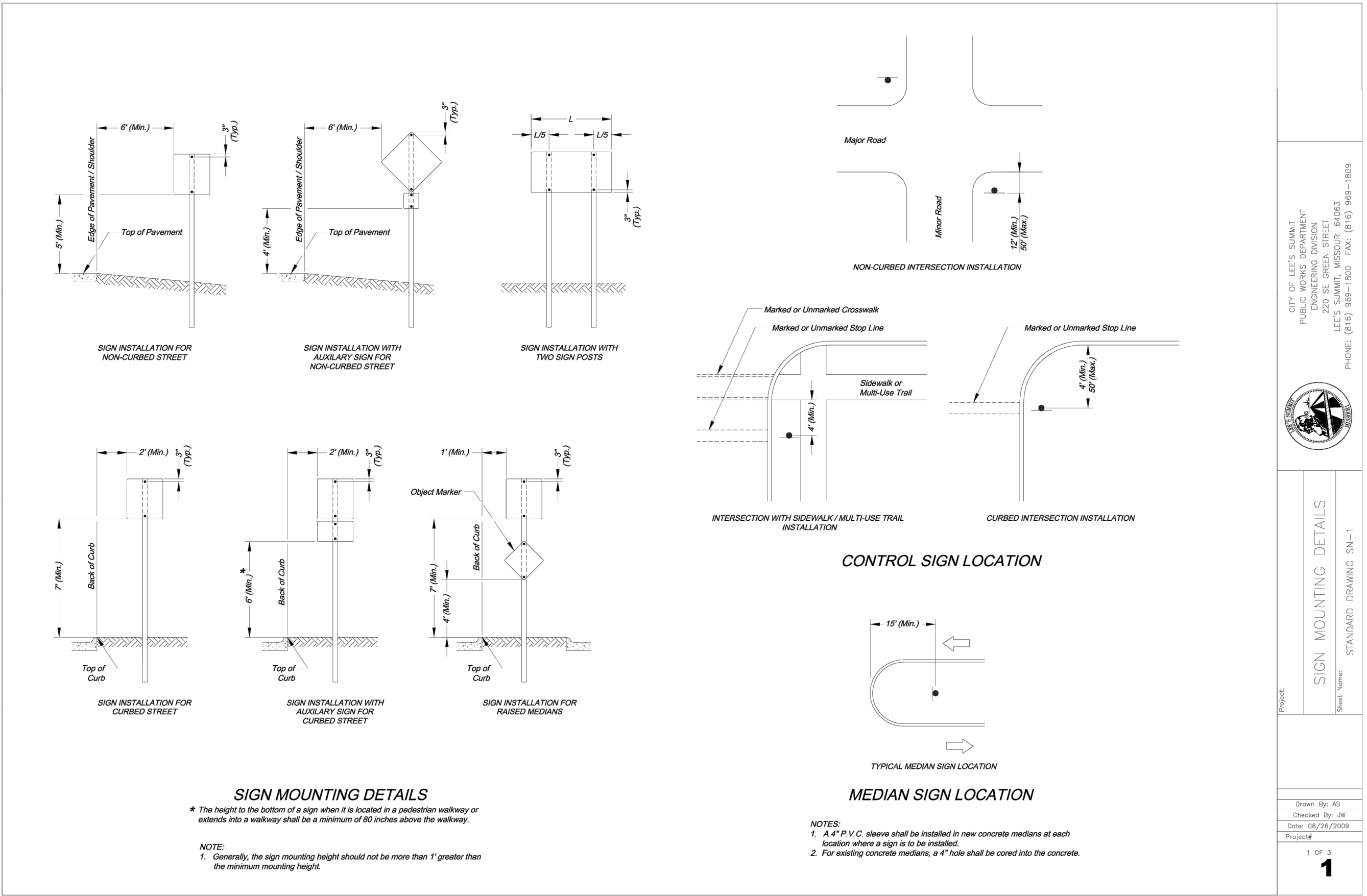
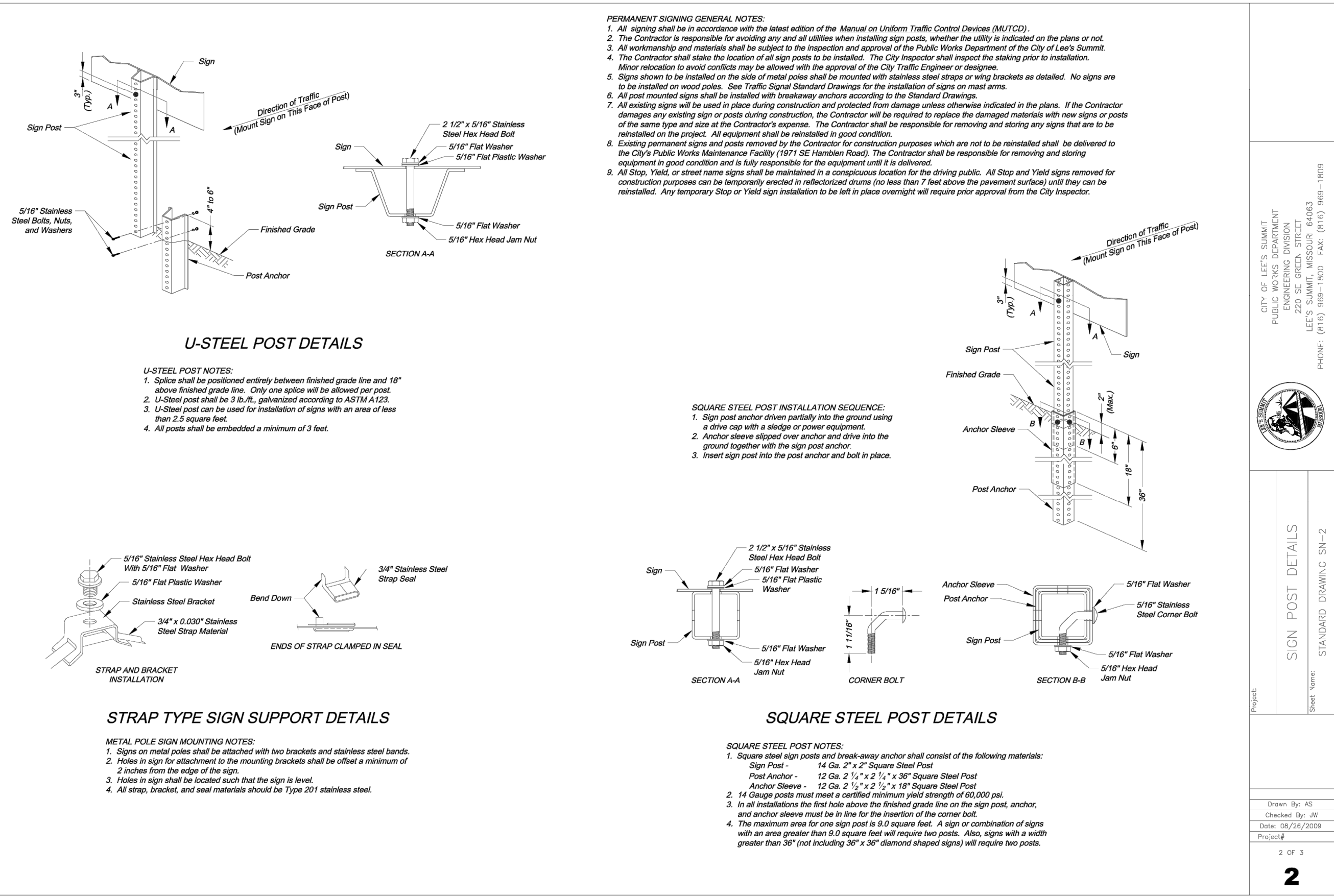
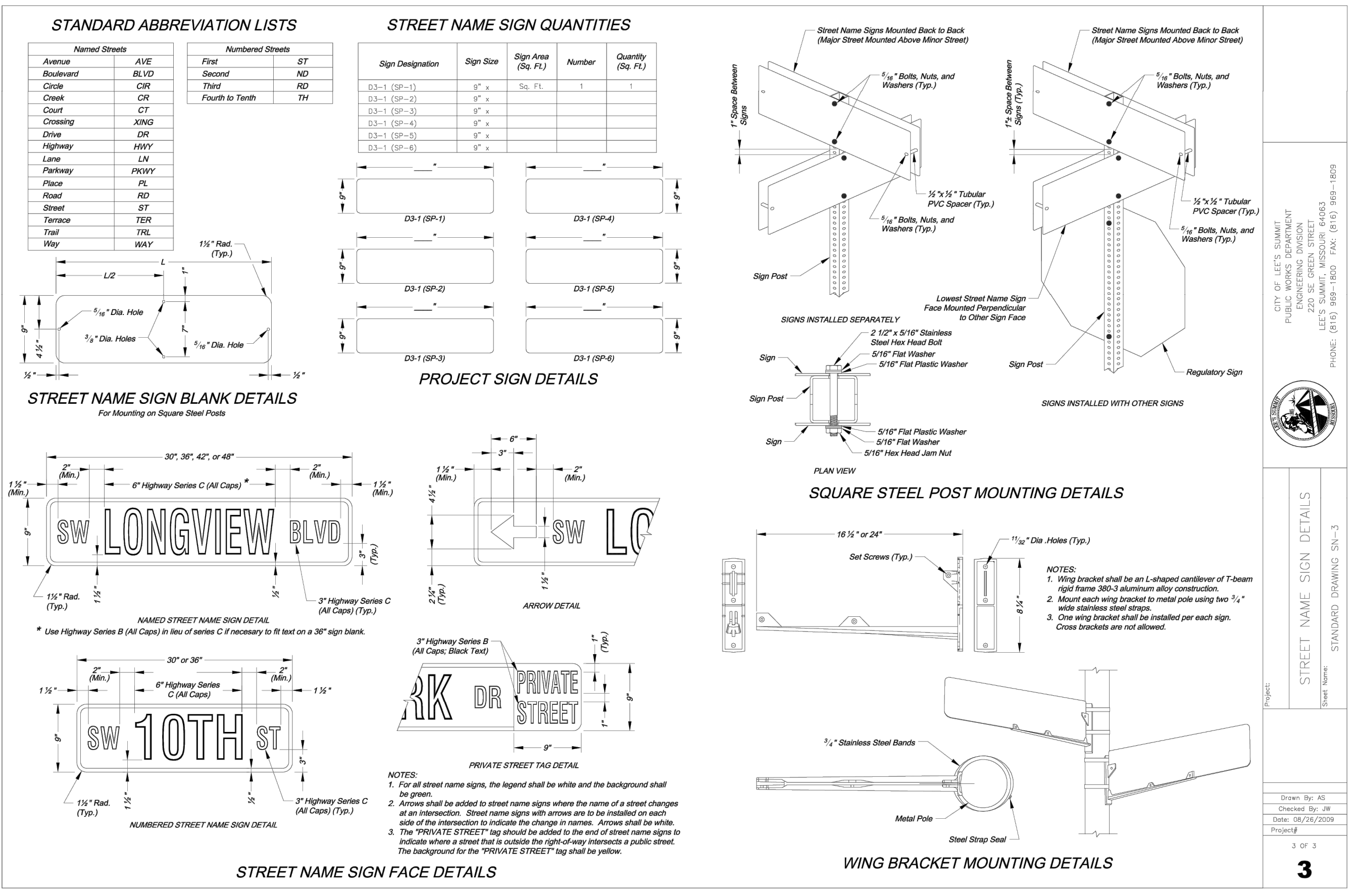
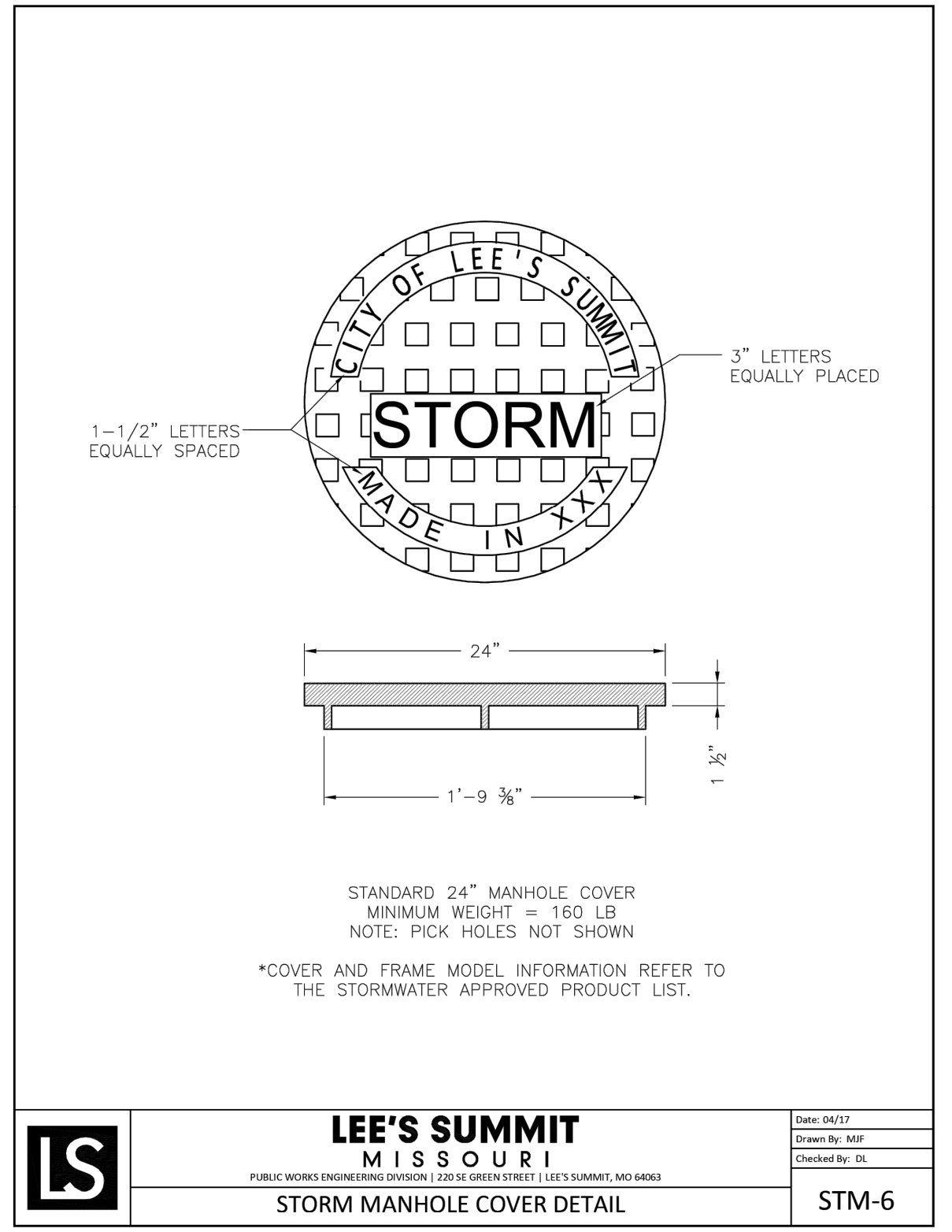
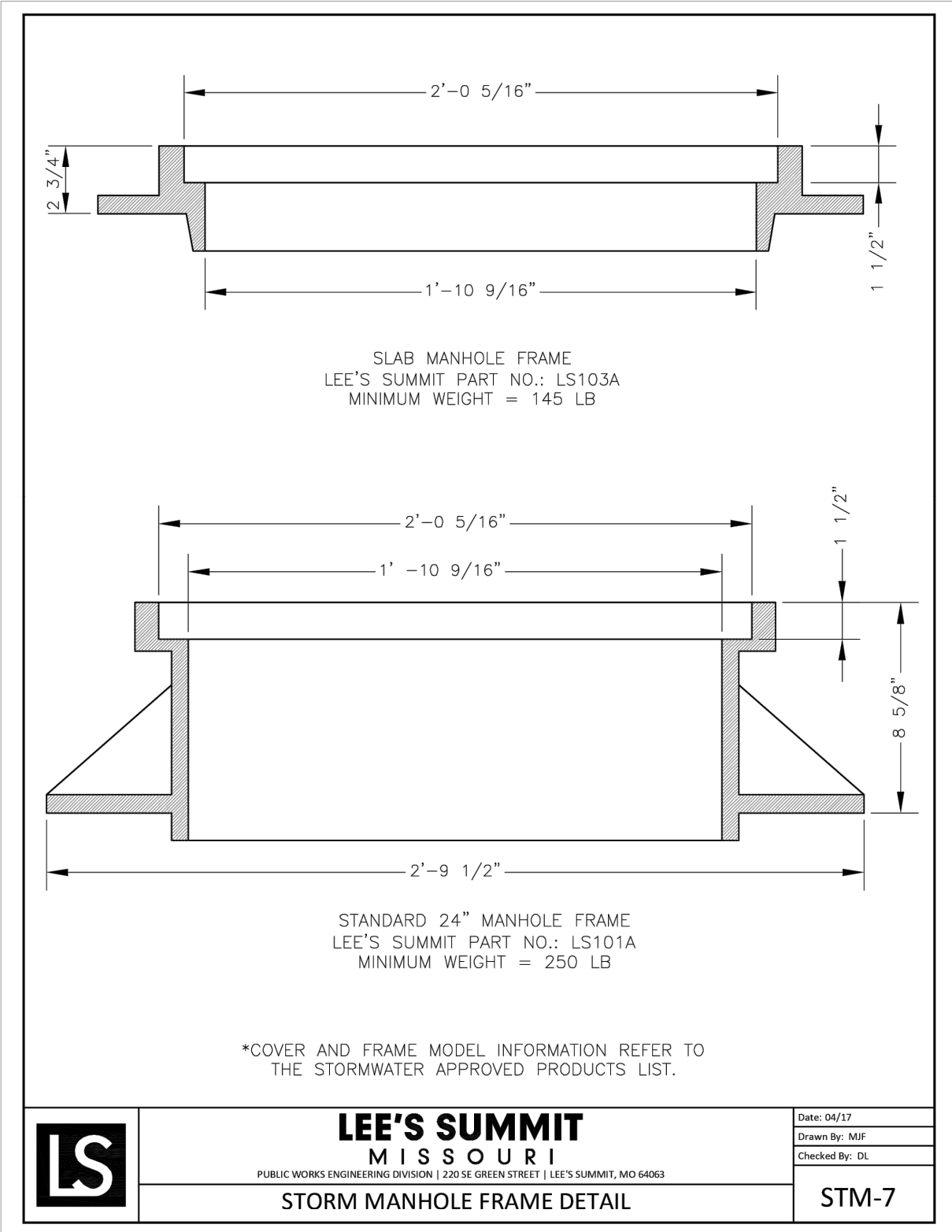
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WHISPERING WOODS 3RD PLAT
STREET & STORM SEWER PLANS

STREET & STORM DETAILS

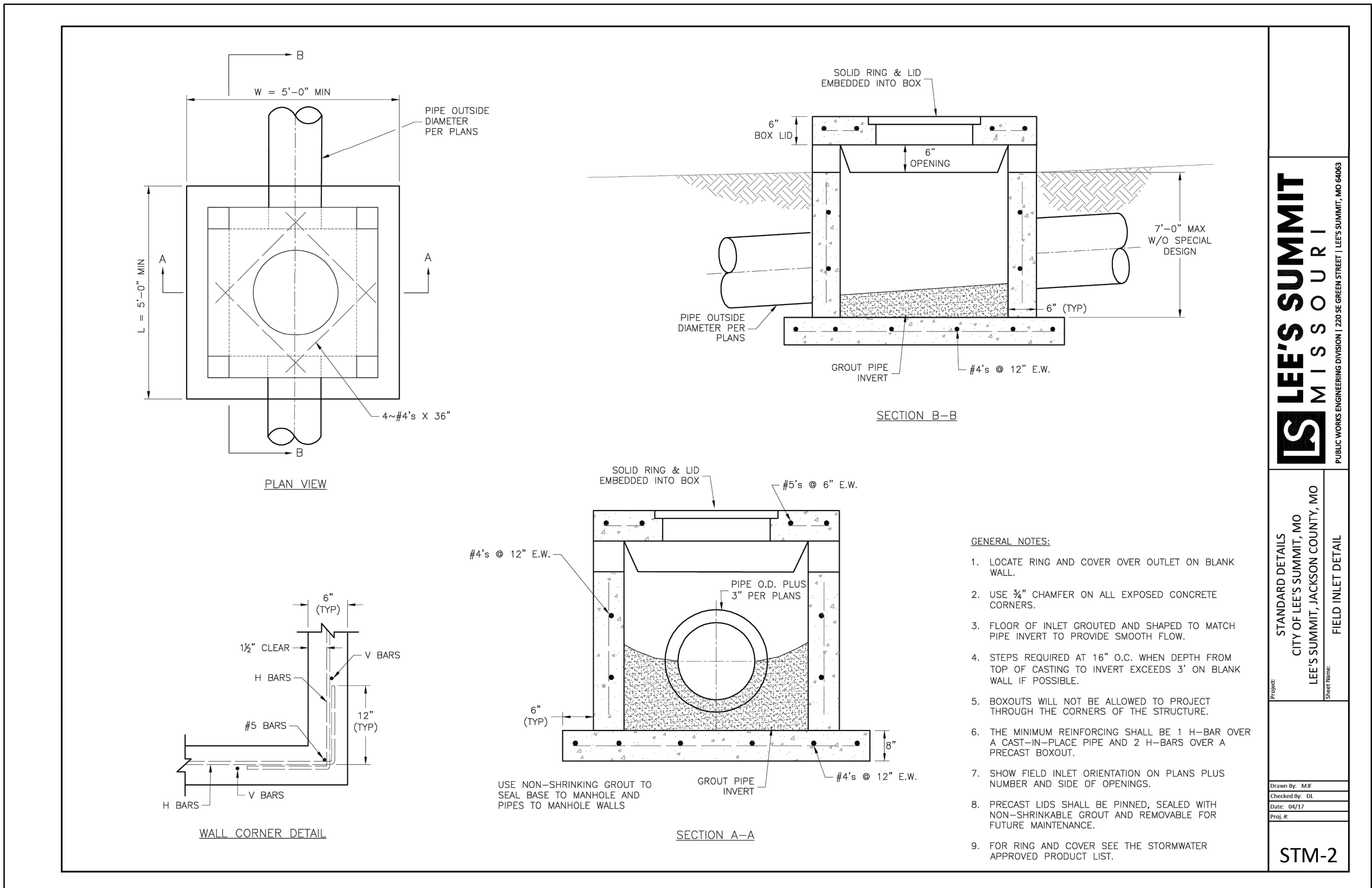
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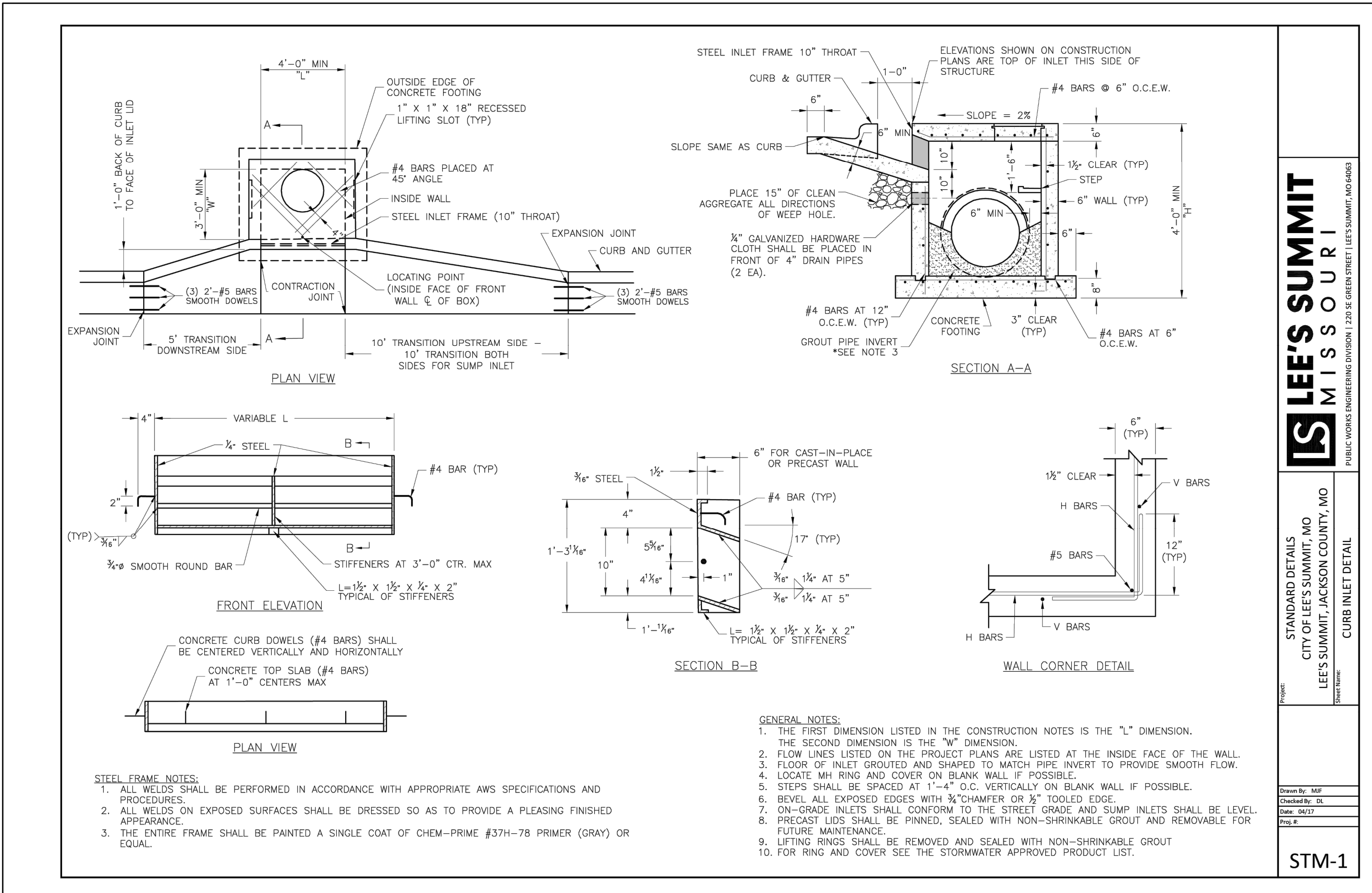


LEE'S SUMMIT
MISSOURI
PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063

STANDARD DETAILS
CITY OF LEE'S SUMMIT, MO
LEE'S SUMMIT, JACKSON COUNTY, MO
Sheet Name: FIELD INLET DETAIL

Drawn By: MAF
Checked By: DL
Date: 06/22
Proj. #: STM-2

STM-2



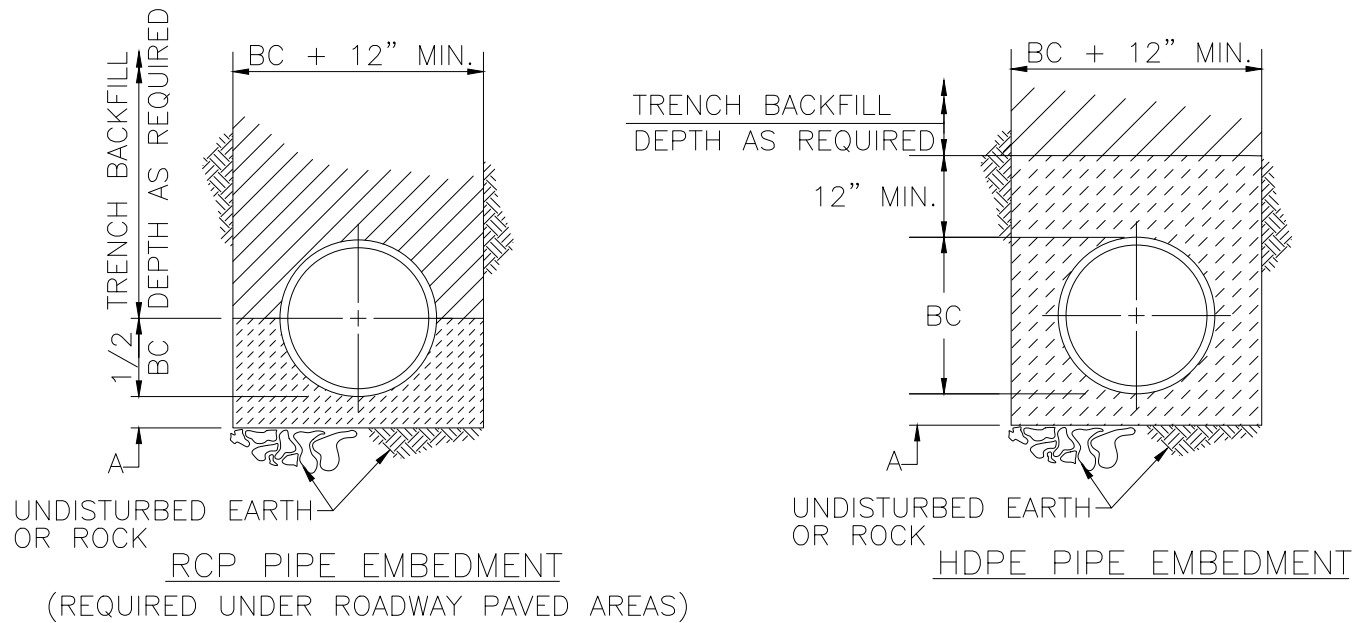
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MISSOURI
PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063

STANDARD DETAILS
CITY OF LEE'S SUMMIT, MO
LEE'S SUMMIT, JACKSON COUNTY, MO
Sheet Name: CURB INLET DETAIL

Drawn By: MAF
Checked By: DL
Date: 06/22
Proj. #: STM-1

STM-1

TYPE OF PIPE	MATERIAL	USE	ALLOWABLE DEPTH OF FILL ABOVE TOP OF PIPE			
			TYPE C EMBED.	TYPE B EMBED.	CSE EMBED.	TYPE A-1 EMBEDMENT
RIGID	PIPE STIFFNESS >651 PSI	RCP; ASTM C 76 CLASS III; 12"-24"	UP TO 8'	UP TO 10'	UP TO 10'	UP TO 10'
		RCP; ASTM C 76 CLASS III; 27"-84"	UP TO 10'	UP TO 13'	UP TO 13'	UP TO 13'
		RCP; ASTM C 76 CLASS IV; 12"-24"	UP TO 12'	UP TO 16'	UP TO 16'	UP TO 16'
		RCP; ASTM C 76 CLASS IV; 24"-27"	UP TO 16'	UP TO 23'	UP TO 23'	UP TO 23'
		RCP; ASTM C 76 CLASS V; 12"-21"	UP TO 19'	UP TO 25'	UP TO 25'	UP TO 25'
		RCP; ASTM C 76 CLASS V; 24"-84"	UP TO 30'	UP TO 40'	UP TO 40'	UP TO 40'
		DUCTILE IRON; AWWA C151 (CLASS 52); 8"-54"	UP TO 50', NO BEDDING REQUIRED			
		DUCTILE IRON; AWWA C151 (CLASS 52); 4"-64"	UP TO 50', NO BEDDING REQUIRED			
		EXTRA STRENGTH, VCP; ASTM C 700 8"-10"	UP TO 16'	UP TO 20'	UP TO 24'	UP TO 24'
		EXTRA STRENGTH, VCP; ASTM C 700 12"-21"	UP TO 12'	UP TO 15'	UP TO 18'	UP TO 18'
SEMI-RIGID	PIPE STIFFNESS 151 PSI TO 650 PSI	PVC; ASTM D 3034 (SDR 23.5); 8"-15"			UP TO 30'	UP TO 30'
		PVC; ASTM D 2680 (TRUSS); 8"-15"			UP TO 30'	UP TO 30'
		PVC; AWWA C900 (DR18); 4"-12"	WATER UP TO 30', NO BEDDING REQUIRED			
FLEXIBLE	PIPE STIFFNESS 46 PSI TO 150 PSI	PVC; AWWA C905 (DR18); 14"-24"	UP TO 30', NO BEDDING REQUIRED			
		PVC; ASTM D 3034 (SDR 35 & 26); 8"-15"				UP TO 30'
		PVC; ASTM F 679 (T-1 WALL); 18"-27"				UP TO 30'
		PVC; ASTM F 949 ; 8"-36"				UP TO 30'
		PVC; ASTM F 1803 (CLOSED PROFILE); 21"-36"				UP TO 30'
		PVC; ASTM F 949 ; 12"-36"			UP TO 30'	UP TO 30'
		HDPE; AASHTO M 294				UP TO 11'
		HPSTORM: POLYPROPYLENE AASHTO M330				UP TO 11'



LEGEND	
BC	OUTSIDE DIA. OF PIPE
D	NOMINAL PIPE SIZE
A	EMBEDMENT BELOW PIPE
	TRENCH BACKFILL (TYPE 1)
	TAMPED GRANULAR BACKFILL (TYPE 3)
	GRANULAR BEDDING
	CONCRETE
	CLEAN CRUSHED STONE

TABLE OF EMBEDMENT DEPTHS BELOW PIPE		
D	A MIN SOIL	A MIN ROCK
0"-27"	4"	6"
30"-60"	6"	9"
66"-UP	8"	12"

- PIPE EMBEDMENT NOTES:**
1. GRANULAR BEDDING SHALL BE CRUSHED ROCK OR PEA GRAVEL WITH NOT LESS THAN 95% PASSING $\frac{3}{4}$ " (95% PASSING 1" FOR 30" AND LARGER PIPE) AND NOT LESS THAN 95% RETAINED ON A $\frac{3}{8}$ "; TO BE PLACED IN NOT MORE THAN 6" LAYERS AND COMPACTED BY SLICING WITH A SHOVEL OR VIBRATING.
 2. TAMPED GRANULAR BACKFILL (TYPE 3) SHALL BE GRANULAR MATERIAL CONFORMING TO THE REQUIREMENTS OF SECTION 1007.3.1 OF THE LATEST ISSUE OF THE MISSOURI STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION.
 3. TRENCH BACKFILL (TYPE 1) SHALL BE FINELY DIVIDED MATERIAL FREE FROM DEBRIS AND STONES, COMPACTED TO 95% MAXIMUM DENSITY.
 4. CLEAN CRUSHED STONE SHALL BE GRANULAR MATERIAL CONFORMING TO THE GRADATION REQUIREMENTS OF SECTION 1007.3.1 OF THE LATEST ISSUE OF THE MISSOURI STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION.
 5. WHEN PROPOSED MAIN IS UNDER PAVEMENT CONTRACTOR TO BACKFILL WITH COMPACTED AGGREGATE TO PAVEMENT SUBGRADE.

STORM PIPE EMBEDMENT DETAILS



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WHISPERING WOODS 3RD PLAT
STREET & STORM SEWER PLANS

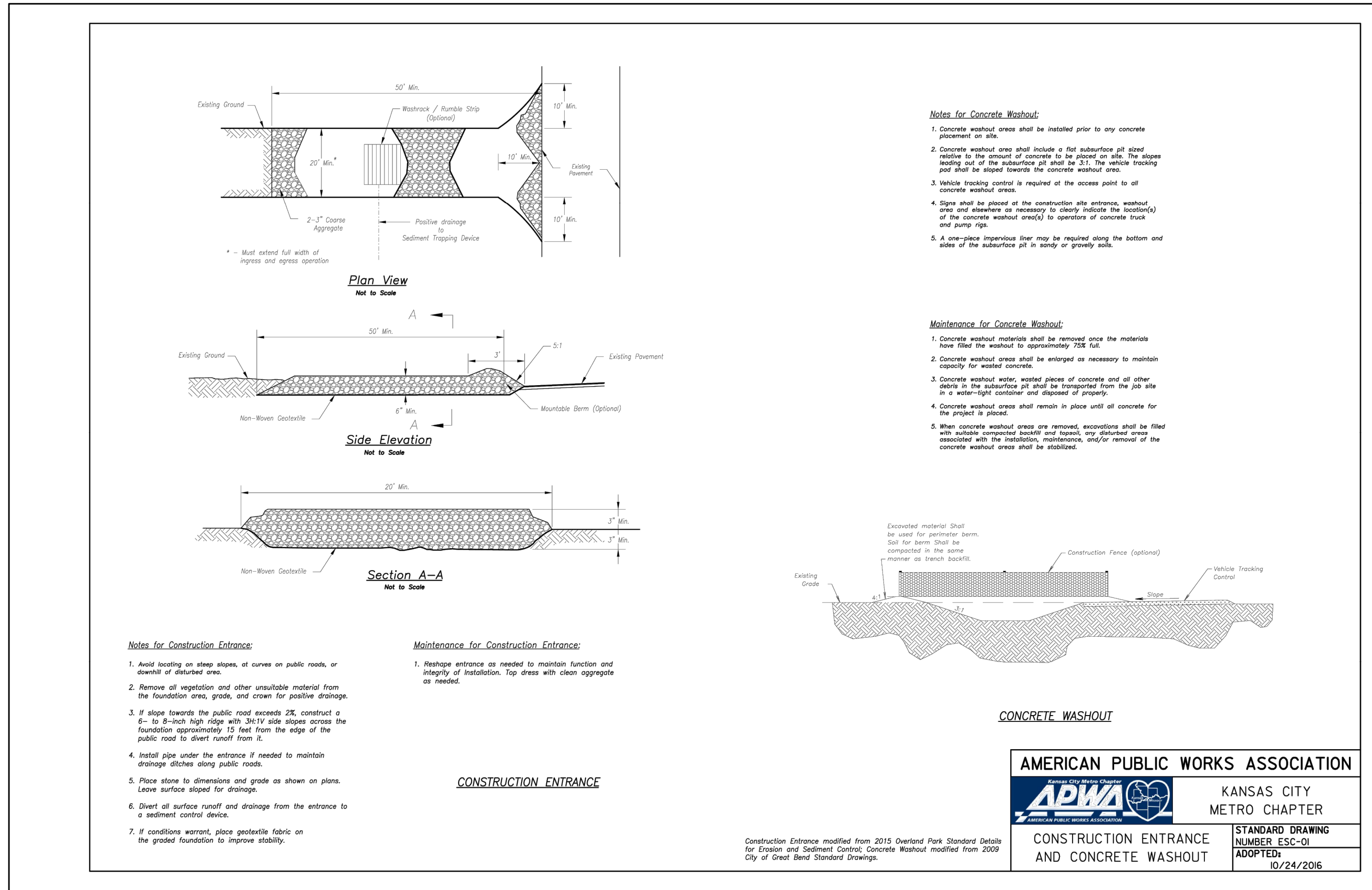
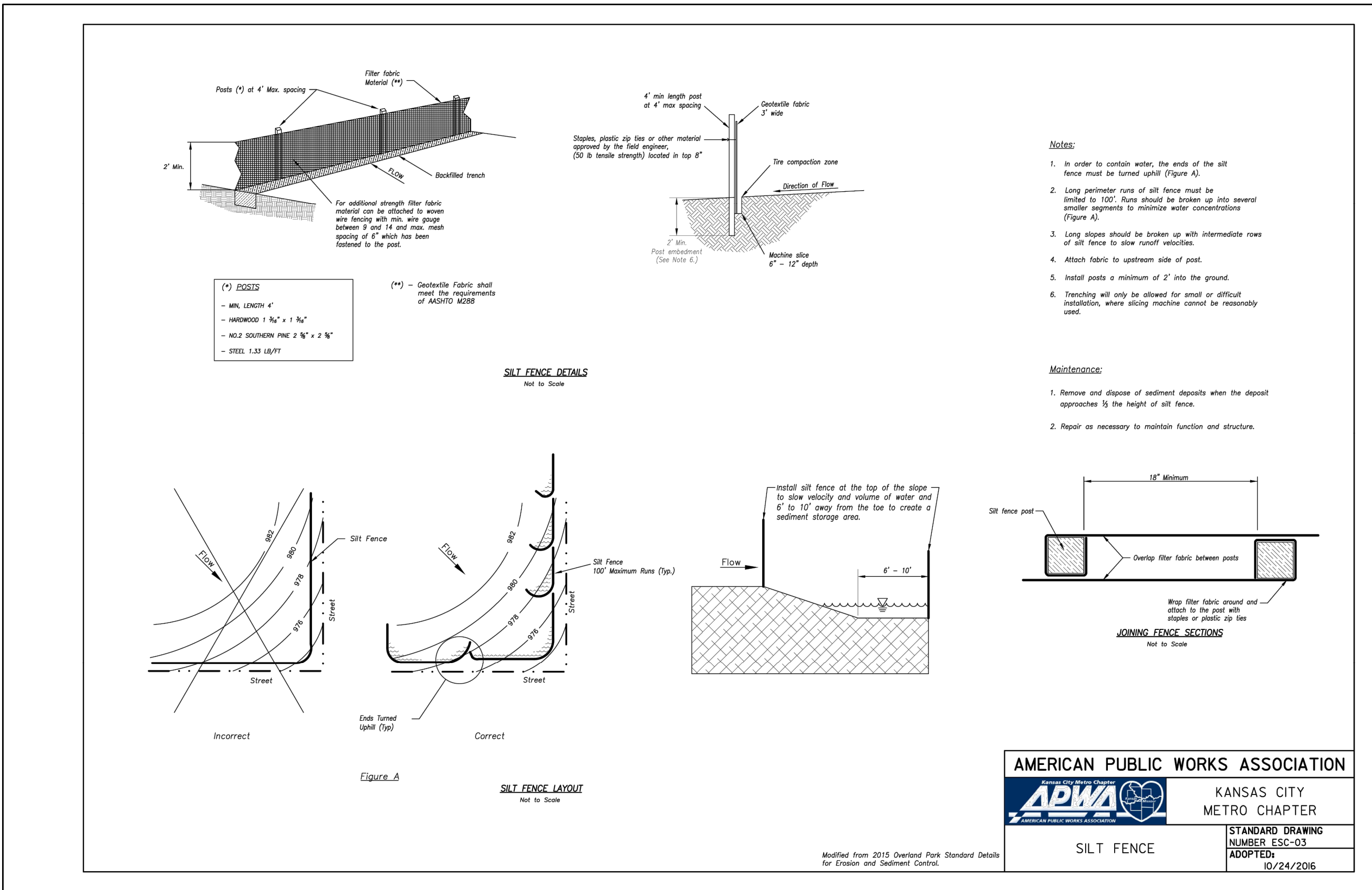
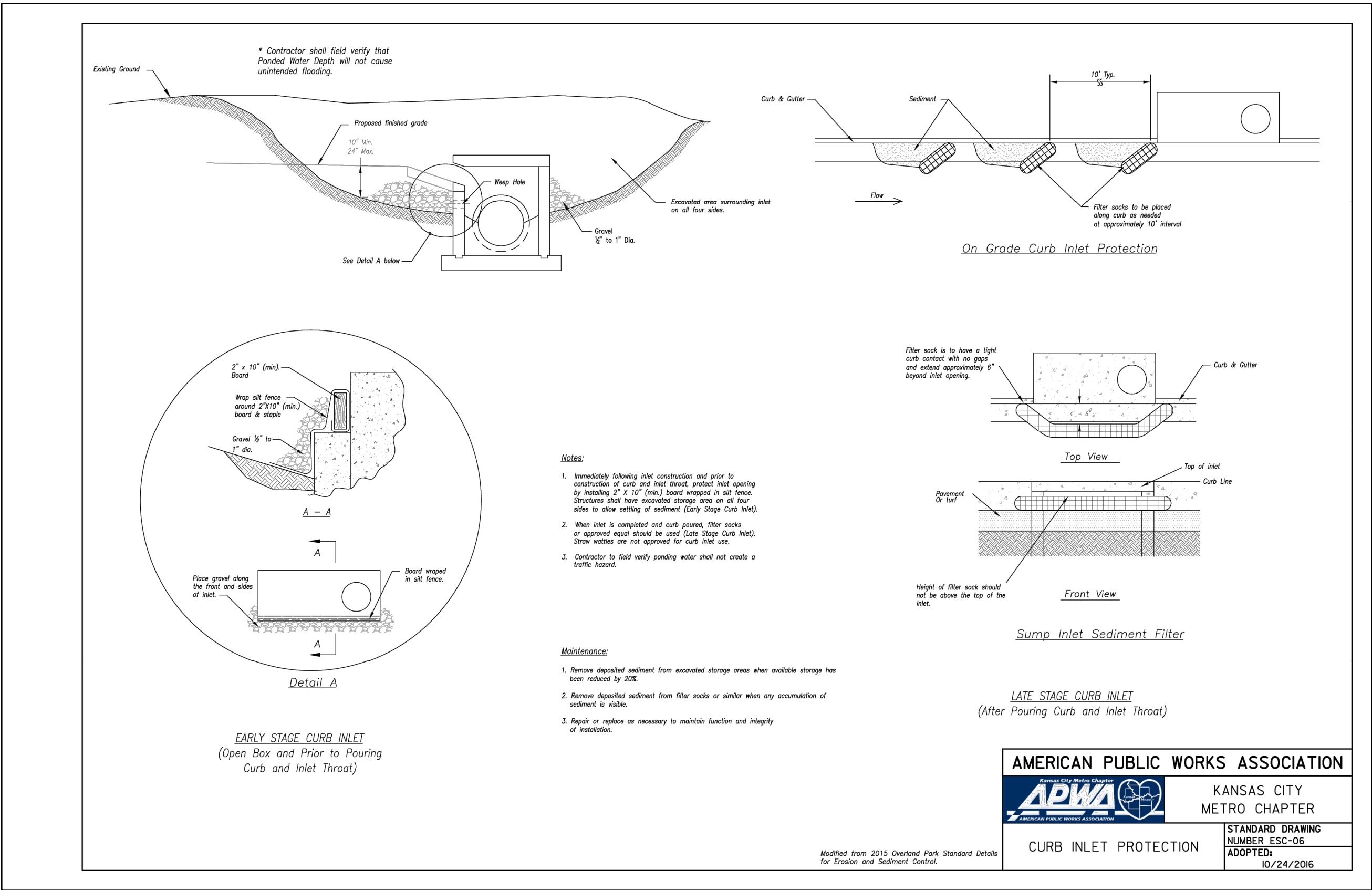
STREET & STORM DETAILS

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Sheet 26



MARK	REVISION	DATE	BY
		11/1/2016	N/A
Engineer:	SD	Checked By:	SD
Technician:	JS	Date:	7-28-20
		Field Bk:	
		Page:	27

SHAWN DUKE - ENGINEER
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WHISPERING WOODS 3RD PLAT
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EROSION CONTROL DETAILS

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