

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

LEGAL DESCRIPTION

ALL THAT PART OF THE SOUTHWEST QUARTER OF SECTION 24, TOWNSHIP 47 NORTH, RANGE 32 WEST OF THE FIFTH PRINCIPAL MERIDIAN IN THE CITY OF LEE'S SUMMIT, JACKSON COUNTY, MISSOURI DESCRIBED AS FOLLOWS: COMMENCING AT THE NORTHWEST QUARTER OF SAID SOUTHWEST QUARTER, THENCE SOUTH 87 DEGREES 40 MINUTES 43 SECONDS EAST, ALONG THE NORTH LINE OF SAID SOUTHWEST QUARTER, A DISTANCE OF 50.00 FEET TO THE EAST RIGHT OF WAY LINE OF SOUTHWEST PRYOR ROAD ALSO BEING THE POINT OF BEGINNING OF TRACT OF LAND HEREIN TO BE DESCRIBED; THENCE SOUTH 87 DEGREES 40 MINUTES 43 SECONDS EAST, ALONG THE NORTH LINE OF SAID SOUTHWEST QUARTER, A DISTANCE OF 784.91 FEET; THENCE SOUTH 04 DEGREES 23 MINUTES 24 SECONDS EAST, A DISTANCE OF 474.64 FEET TO THE NORTHWEST CORNER OF LOT 18, WHISPERING WOODS FIRST PLAT, A SUBDIVISION OF LAND IN THE CITY OF LEE'S SUMMIT, JACKSON COUNTY, MISSOURI; THENCE SOUTH 22 DEGREES 10 MINUTES 28 SECONDS WEST ALONG THE WEST LINE OF SAID LOT 18, A DISTANCE OF 149.00 FEET TO THE NORTH LINE OF TRACT A, OF SAID WHISPERING WOODS FIRST PLAT, THENCE NORTH 67 DEGREES 49 MINUTES 32 SECONDS WEST ALONG THE NORTH LINE OF SAID TRACT A, A DISTANCE OF 89.36 FEET; THENCE NORTHWESTERLY ALONG A CURVE TO THE LEFT BEING TANGENT TO THE LAST DESCRIBED COURSE, HAVING A RADIUS OF 370.00 FEET, AN ARC LENGTH OF 75.53 FEET TO THE NORTHWEST CORNER OF SAID TRACT A; THENCE SOUTH 27 DEGREES 01 MINUTES 10 SECONDS WEST, ALONG THE WEST LINE OF SAID TRACT A, A DISTANCE OF 121.71 FEET; THENCE CONTINUING ALONG SAID WEST LINE SOUTH 03 DEGREES 00 MINUTES 53 SECONDS WEST, A DISTANCE OF 246.06 FEET; THENCE CONTINUING ALONG SAID WEST LINE SOUTH 09 DEGREES 24 MINUTES 42 SECONDS WEST, A DISTANCE OF 177.20 FEET; THENCE CONTINUING ALONG SAID WEST LINE SOUTH 50 DEGREES 12 MINUTES 48 SECONDS WEST, A DISTANCE OF 178.11 FEET; THENCE CONTINUING ALONG SAID WEST LINE SOUTH 11 DEGREES 36 MINUTES 15 SECONDS WEST, A DISTANCE OF 224.87 FEET; THENCE NORTH 90 DEGREES 00 MINUTES 00 SECONDS WEST, ALONG THE NORTH LINE OF SAID TRACT A, A DISTANCE OF 399.87 FEET TO THE EAST RIGHT OF WAY LINE OF SOUTHWEST PRYOR ROAD; THENCE NORTH 02 DEGREES 45 MINUTES 31 SECONDS EAST, ALONG SAID EAST RIGHT OF WAY LINE, A DISTANCE OF 596.60 FEET; THENCE CONTINUING ALONG SAID RIGHT OF WAY NORTH 07 DEGREES 19 MINUTES 57 SECONDS EAST, A DISTANCE OF 69.01 FEET; THENCE CONTINUING ALONG SAID RIGHT OF WAY NORTH 02 DEGREES 45 MINUTES 31 SECONDS EAST, A DISTANCE OF 187.45 FEET; THENCE CONTINUING ALONG SAID RIGHT OF WAY NORTH 57 DEGREES 50 MINUTES 40 SECONDS EAST, A DISTANCE OF 54.00 FEET; THENCE CONTINUING ALONG SAID RIGHT OF WAY NORTH 03 DEGREES 01 MINUTES 16 SECONDS EAST, A DISTANCE OF 80.00 FEET; THENCE CONTINUING ALONG SAID RIGHT OF WAY NORTH 57 DEGREES 06 MINUTES 44 SECONDS WEST, A DISTANCE OF 57.98 FEET; THENCE CONTINUING ALONG SAID RIGHT OF WAY NORTH 02 DEGREES 45 MINUTES 31 SECONDS EAST, A DISTANCE OF 460.17 FEET TO THE POINT OF BEGINNING.

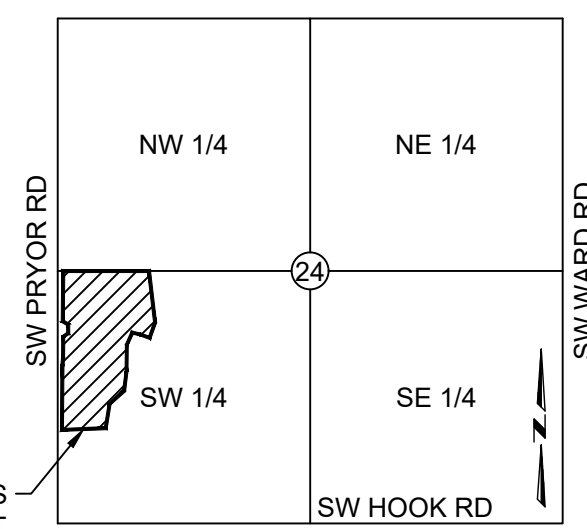
SAID TRACT CONTAINS 925,199.53 SQUARE FEET OR 21.24 ACRES MORE OR LESS.

PROJECT BENCHMARK

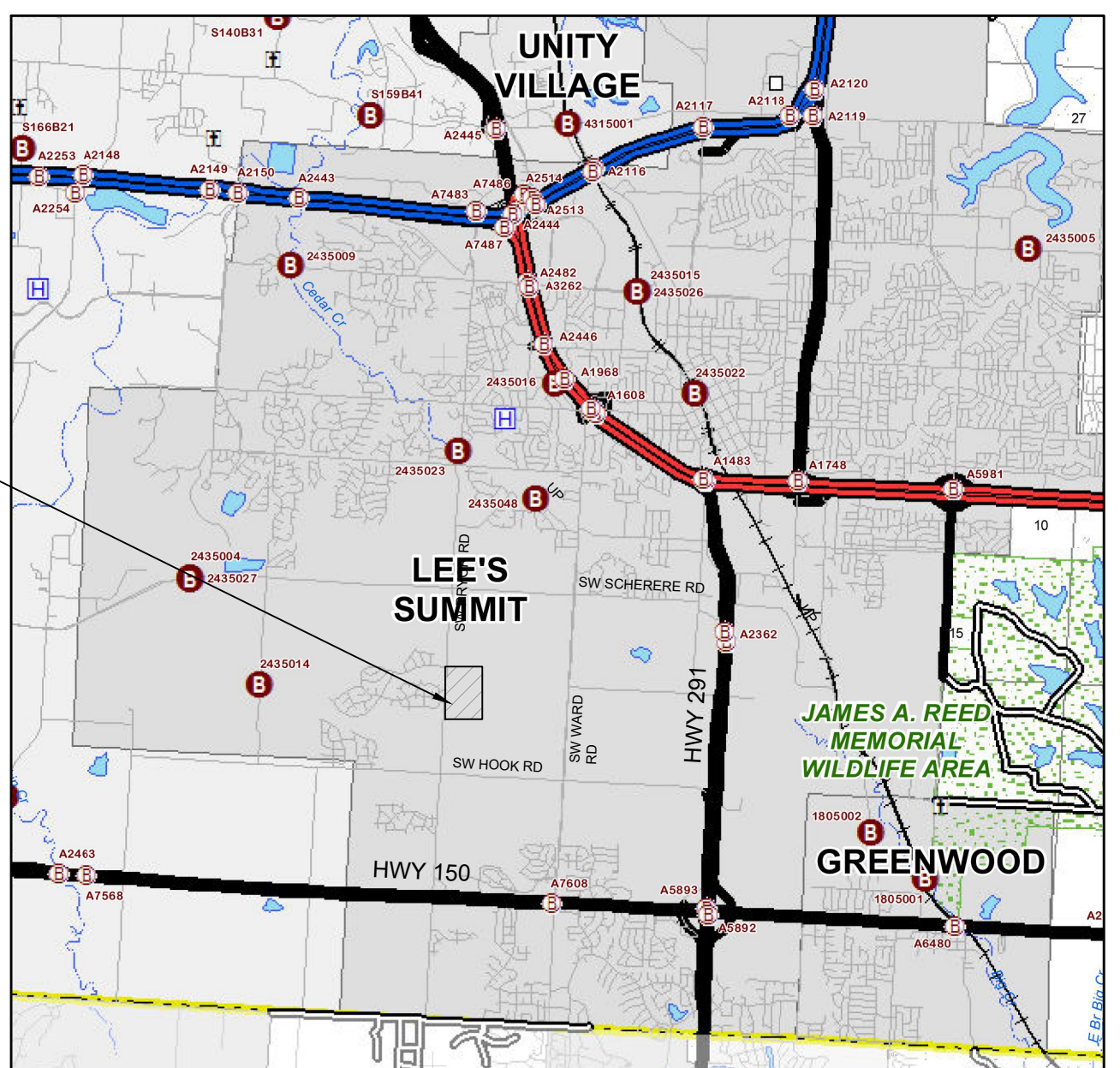
ELEV. 950.79 FT (NAVD 1988 DATUM)

MISSOURI DEPARTMENT OF NATURAL RESOURCES GRS ALUMINUM DISK STAMPED "JA-50" LOCATED NEAR THE INTERSECTION OF SW SCHERER PKWY & SW SAMPSON RD.

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
SECTION 24-47N-32W
(N.T.S.)



LOCATION MAP
N.T.S.

SUMMARY OF QUANTITIES

ITEM	UNIT	PLAN	AS-BUILT
Public Earthwork (CUT 13,427 CY / FILL 128,300 CY)	CY	114,873	
2" Asphaltic Concrete Surface	SY	8074	
4" Type 5 Asphaltic Concrete Base	SY	6088	
5.5" Type 5 Asphaltic Concrete Base	SY	3550	
CG-2 Curb & Gutter	LF	3230	
CG-1 Curb & Gutter	LF	1460	
5' Wide Concrete Sidewalk	SY	686	
10' Wide Asphalt Trail	SY	610	
5'x3' Curb Inlet	EA	14	
4'x4' Field Inlet	EA	5	
4'x4' Basin Outfall Structure	EA	1	
30" HDPE	LF	241	
30" RCP	LF	394	
24" HDPE	LF	1069	
18" HDPE	LF	257	
18" RCP	LF	34	
15" HDPE	LF	452	
15" RCP	LF	179	
30" F.E.S	EA	2	
24" F.E.S	EA	2	
18" F.E.S	EA	1	
Rip-Rap	SY	45	
ADA Curb Ramps	EA	11	
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.

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APPROVED:

City Engineer

Date

DEVELOPER:

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

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1-800-344-7483

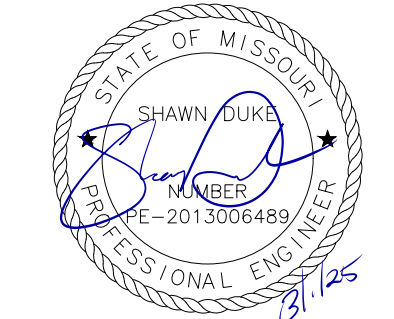
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1		1/21/25	MT

Engineer: SD
Checked By: SD
Technician: JS

Scale: 1"= N/A
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Pg: 1

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SHAWN DUKE - ENGINEER
MO PE#2013006489

WHISPERING WOODS 3RD PLAT
STREET & STORM SEWER PLANS

TITLE SHEET

LEE'S SUMMIT, MO

802 FRANCIS STREET
ST. JOSEPH, MO 64501
816-364-5222

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Project No: 1200485.11

Sheet 1

EROSION CONTROL NOTES:

A MISSOURI STATE OPERATING PERMIT FOR STORM WATER DISCHARGE IS REQUIRED IF CONSTRUCTION ACTIVITY DISTURBS ONE ACRE OR MORE IN ACCORDANCE WITH THE MISSOURI DEPARTMENT OF NATURAL RESOURCES' REGULATION (10 CSR 20-6.200). COMPLIANCE WITH THE STORMWATER POLLUTION PREVENTION PLAN IS REQUIRED IN THIS INSTANCE. A CONSTRUCTION PERMIT FOR LAND DISTURBANCE WILL BE SECURED FROM THE MISSOURI DEPARTMENT OF NATURAL RESOURCES AND PROVIDED TO THE CONTRACTOR.

SLOPES ARE TO BE LEFT IN A ROUGHENED CONDITION DURING GRADING.

CURB INLET SEDIMENTATION FILTERS ARE TO BE INSTALLED AROUND CURB INLETS WHERE SEDIMENTATION IS A CONCERN. (SEE SWPP FOR DETAILS)

INLET PROTECTION SHALL BE INSTALLED IMMEDIATELY FOLLOWING INSTALLATION OF STORM INLETS & REMAIN IN PLACE UNTIL GROUND COVER HAS BEEN ESTABLISHED.

EROSION CONTROL MEASURES SHALL BE CONSTRUCTED PRIOR TO BEGINNING GRADING OPERATIONS WHERE POSSIBLE. ALL REMAINING EROSION CONTROL MEASURES SHALL BE CONSTRUCTED IMMEDIATELY FOLLOWING GRADING OPERATIONS.

THE SITE IS TO BE SEEDED AND MULCHED AND TEMPORARY EROSION CONTROL MEASURES ARE TO REMAIN IN PLACE UNTIL GROUND COVER HAS BEEN ESTABLISHED.

SEDIMENT IS TO BE REMOVED FROM STORM WATER DRAINAGE SYSTEMS INCLUDING THE DETENTION BASIN.

ROCK LINING IS TO BE INSTALLED AT AREAS OF CONCENTRATED FLOW (I.E. CULVERT OUTLETS).

ROCK LINING SHALL BE TYPE 2 ROCK DITCH LINER ACCORDING TO MISSOURI STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION SEC. 609.60. ALL NECESSARY STEPS SHALL BE TAKEN TO PREVENT SEDIMENT AND SOIL EROSION FROM BEING TRANSPORTED ONTO ADJACENT PROPERTY AND INTO STREAMS, LAKES, PONDS, OR OTHER AREAS.

CONTRACTOR SHALL INSPECT EROSION CONTROL MEASURES AT LEAST ONCE A WEEK AND AFTER EACH RAINFALL. ANY REQUIRED REPAIRS SHOULD BE MADE IMMEDIATELY.

ADDITIONAL EROSION CONTROL MEASURES MAY BE NEEDED IF UNFORESEEN EROSION PROBLEMS ARISE OR IF THE SUBMITTED PLAN DOES NOT FUNCTION AS INTENDED.

A. EROSION PROTECTION

1. CODE COMPLIANCE: THE CONTRACTOR SHALL COMPLY WITH SOIL EROSION CONTROL REQUIREMENTS OF THE MISSOURI CODE, THE MISSOURI DEPARTMENT OF NATURAL RESOURCES NPDES PERMIT, AND LOCAL ORDINANCE. THE CONTRACTOR SHALL TAKE ALL NECESSARY MEASUREMENTS TO PROTECT AGAINST EROSION AND DUST POLLUTION ON THIS PROJECT SITE AND ALL OFF-SITE BORROW OR DEPOSIT AREAS DURING PERFORMANCE OR AS A RESULT OF PERFORMANCE.

2. DAMAGE CLAIMS: THE CONTRACTOR WILL HOLD THE OWNER, ARCHITECT AND ENGINEER HARMLESS FROM ANY AND ALL CLAIMS OF ANY TYPE WHATSOEVER RESULTING FROM DAMAGES TO ADJOINING PUBLIC OR PRIVATE PROPERTY, INCLUDING REASONABLE ATTORNEY FEES INCURRED TO OWNER. FURTHER, IF THE CONTRACTOR FAILS TO TAKE NECESSARY STEPS TO PROMPTLY REMOVE EARTH SEDIMENTATION OR DEBRIS WHICH COMES ONTO ADJOINING PUBLIC OR PRIVATE PROPERTY, THE OWNER MAY, BUT NEED NOT, REMOVE SUCH ITEMS AND DEDUCT THE COST THEREOF FROM AMOUNTS DUE TO THE CONTRACTOR.

3. ALL AREAS DISTURBED BY CONSTRUCTION ON THIS PROJECT WILL BE SUBJECT TO CURRENT REGULATORY REQUIREMENTS AND THESE STANDARDS.

B. STORM WATER DISCHARGE PERMIT:

1. THIS PROJECT REQUIRES A LAND DISTURBANCE PERMIT FROM THE MISSOURI DEPARTMENT OF NATURAL RESOURCES, AS REQUIRED BY THE ENVIRONMENTAL PROTECTION COMMISSION (EPC). THE OWNER SHALL OBTAIN THE PERMIT. THE GENERAL CONTRACTOR AND ALL SUBCONTRACTORS SHALL BE RESPONSIBLE FOR COMPLIANCE AND FULFILLING ALL REQUIREMENTS OF THE PERMIT INCLUDING THE STORM WATER POLLUTION PREVENTION PLAN.

2. ALL DOCUMENTS RELATED TO THE STORM WATER DISCHARGE PERMIT SHALL BE KEPT ON SITE AT ALL TIMES AND MUST BE PRESENTED TO THE MISSOURI DNR UPON REQUEST WHICH INCLUDE THE NOTICE OF INTENT, PROOF OF PUBLICATION, POLLUTION PREVENTION PLAN, PROJECT INSPECTION DIARY, AND OTHER ITEMS. FAILURE TO COMPLY WITH THE DISCHARGE REQUIREMENTS IS IN VIOLATION OF THE CLEAN WATER ACT AND THE CODE OF MISSOURI.

3. UPON FINAL STABILIZATION OF THE DISTURBED AREA, A "NOTICE OF DISCONTINUATION" MUST BE FILED BY THE OWNER WITH THE MISSOURI DNR. ALL PLANS, INSPECTION REPORTS, AND OTHER DOCUMENTS MUST BE RETAINED FOR A PERIOD OF THREE YEARS AFTER PROJECT COMPLETION. THE CONTRACTOR SHALL RETAIN RECORD COPY AND PROVIDE ORIGINAL DOCUMENTS TO THE OWNER UPON ISSUANCE OF THE NOTICE OF DISCONTINUATION.

POLLUTION PREVENTION PLAN:

1. SITE DESCRIPTION: THIS PROJECT IS FOR THE CONSTRUCTION OF ROUGH GRADING FOR COMMERCIAL DEVELOPMENT. THE ENTIRE PROJECT COVERS APPROXIMATELY 1.70 ACRES. THE ESTIMATED AVERAGE RUNOFF COEFFICIENT WILL BE 0.80 RUNOFF FROM THIS PROJECT SITE AND WILL BE ROUTED THROUGH THE EXISTING CITY STORM SEWER.

2. POTENTIAL SOURCES OF POLLUTION FOR THIS PROJECT RELATE TO SILTS, SEDIMENT, AND OTHER MATERIALS WHICH MAY BE TRANSPORTED FROM THE CONSTRUCTION SITE AS THE RESULT OF A STORM EVENT.

3. RESPONSIBILITY: THIS POLLUTION PREVENTION PLAN ILLUSTRATES GENERAL MEASURES TO BE TAKEN FOR COMPLIANCE WITH THE PERMIT. ALL MITIGATION MEASURES REQUIRED, AS A RESULT OF ACTIVITIES, ARE THE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR SHALL TAKE ALL ACTIONS NECESSARY FOR INSTALLATION OF CONTROL MEASURES FOR COMPLIANCE WITH PERMIT REQUIREMENTS.

4. CONTROLS: THE CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLIANCE AND FULFILLING ALL THE REQUIREMENTS OF THE GENERAL PERMIT INCLUDING, BUT NOT LIMITED TO, THE FOLLOWING:

a. THE CONTRACTOR SHALL PROTECT ADJOINING PROPERTY INCLUDING PUBLIC UTILITIES, SANITARY AND STORM DRAINAGE SYSTEMS, AND STREETS FROM ANY DAMAGE RESULTING FROM MOVEMENT OF EARTH OR OTHER DEBRIS FROM PROJECT SITE. REPAIR ANY DAMAGE IMMEDIATELY AT NO ADDITIONAL COST.

b. THE CONTRACTOR SHALL PREVENT ACCUMULATION OF EARTH, SILTATION, OR DEBRIS ON ADJOINING PUBLIC OR PRIVATE PROPERTY FROM PROJECT SITE. REMOVE ANY ACCUMULATION OF EARTH OR DEBRIS IMMEDIATELY AND TAKE REMEDIAL ACTIONS FOR PREVENTION.

c. PRIOR TO SITE CLEARING AND GRADING OPERATIONS, CONTRACTOR SHALL INSTALL SILT FENCE ALONG THE PERIMETER OF THE PROJECT DOWNSTREAM OF DISTURBING ACTIVITIES AS REQUIRED AND AS SHOWN ON THE PLANS.

d. THE CONTRACTOR SHALL PRESERVE EXISTING VEGETATION IN AREAS NOT NEEDED FOR CONSTRUCTION.

GENERAL NOTES:

1. REFER TO THE CURRENT VERSION OF THE CITY OF LEE'S SUMMIT DESIGN AND CONSTRUCTION (D&C) MANUAL FOR CONSTRUCTION OF THESE PLANS.

2. ALL WORKMANSHIP AND MATERIALS SHALL BE SUBJECT TO THE INSPECTION AND APPROVAL OF THE ENGINEERING DEPARTMENT OF THE CITY OF LEE'S SUMMIT, MISSOURI.

3. LINEAL FOOT MEASUREMENTS SHOWN ON THESE PLANS ARE HORIZONTAL MEASUREMENTS, NOT SLOPE MEASUREMENTS. ALL PAYMENTS SHALL BE MADE ON HORIZONTAL MEASUREMENTS.

4. NO GEOLOGICAL INVESTIGATION WAS PERFORMED ON THIS PROJECT.

5. THE UTILITY LOCATIONS SHOWN ON THESE PLANS ARE TAKEN FROM UTILITY COMPANY RECORDS AND ARE APPROXIMATE ONLY. THEY DO NOT CONSTITUTE ACTUAL FIELD LOCATIONS. THE CONTRACTOR SHALL VERIFY THE LOCATION AND DEPTH OF ALL UTILITIES PRIOR TO CONSTRUCTION.

6. CLEARING AND GRUBBING OPERATIONS AND DISPOSAL OF ALL DEBRIS THEREFROM SHALL BE PERFORMED BY THE CONTRACTOR IN STRICT ACCORDANCE WITH ALL STATE AND LOCAL CODES AND ORDINANCES.

7. ALL WASTE MATERIAL SHALL BE DISPOSED OF AT A LOCATION TO BE SELECTED BY THE OWNER OR HIS AUTHORIZED REPRESENTATIVE, SUCH LOCATION TO BE ON THE SITE.

8. THE CONTRACTOR SHALL CONTROL THE EROSION AND SILTATION DURING ALL PHASES OF CONSTRUCTION, HE SHALL KEEP THE STREETS CLEAN OF MUD AND DEBRIS AND FOLLOW THE EROSION CONTROL PLAN PREPARED BY THE DESIGN ENGINEER.

9. ALL EXISTING MANHOLES, CATCH BASINS, UTILITY VALVES AND METER PITS TO BE ADJUSTED OR REBUILT TO GRADE AS REQUIRED.

10. SUBGRADE SOIL FOR ALL CONCRETE STRUCTURES, REGARDLESS OF THE TYPE OR LOCATION, SHALL BE FIRM, DENSE AND THOROUGHLY COMPACTED AND CONSOLIDATED; SHALL BE FROM MUD AND MUD; AND SHALL BE SUFFICIENTLY STABLE TO REMAIN FIRM AND INTACT UNDER THE FEET OF THE WORKMAN OR MACHINERY ENGAGED IN SUBGRADE, LAYING REINFORCING STEEL, AND DEPOSITING CONCRETE THEREON. IN ALL CASES WHERE SUBSOIL IS MUCKY OR WORKS INTO MUD OR MUCK DURING SUCH OPERATION, A SEAL COURSE OF EITHER CONCRETE OR ROCK SHALL BE PLACED BELOW SUBGRADE TO PROVIDE A FIRM BASE FOR WORKING AND FOR PLACING THE FLOOR SLAB.

11. A MINIMUM HORIZONTAL DISTANCE OF TEN (10') SHALL BE MAINTAINED BETWEEN PARALLEL WATER AND SANITARY SEWER LINES. AT ANY POINT WHERE SANITARY SEWER LINES CROSS WATER MAIN, THE SANITARY SEWER SHALL BE CONSTRUCTED OF CAST IRON PIPE OR PIPE ENCASED IN CONCRETE FOR A DISTANCE OF TEN FEET (10') IN EACH DIRECTION FROM THE CROSSING UNLESS THE WATER IS A MINIMUM OF EIGHTEEN INCHES (18") ABOVE THE TOP OF THE SANITARY SEWER LINE.

12. CONTRACTOR SHALL PROVIDE TESTING AND INSPECTION PER SECTION 2200 - PAVING MAINS CITY OF LEE'S SUMMIT, MISSOURI STANDARD SPECIFICATIONS.

13. DEVELOPMENT PLANS ARE APPROVED INITIALLY FOR ONE (1) YEAR, AFTER WHICH THEY AUTOMATICALLY BECOME VOID AND MUST BE UPDATED AND APPROVED BY THE CITY ENGINEER BEFORE ANY CONSTRUCTION WILL BE PERMITTED.

14. ALL SANITARY SEWER STUBS SHALL BE SURVEYED AND STAKED ON SITE BEFORE THE CONSTRUCTION OF SANITARY SERVICE STUBS.

15. THE CITY OF LEE'S SUMMIT PLAN REVIEW IS ONLY FOR GENERAL CONFORMANCE WITH THE CITY OF LEE'S SUMMIT DESIGN CRITERIA AND THE CITY CODE. THE CITY IS NOT RESPONSIBLE FOR THE ACCURACY AND ADEQUACY OF THE DESIGN, OR DIMENSIONS AND ELEVATIONS WHICH SHALL BE CONFINED AND CORRELATED AT THE JOB SITE. THE CITY OF LEE'S SUMMIT THROUGH APPROVAL OF THIS DOCUMENT ASSUMES NO RESPONSIBILITY OTHER THAN AS STATED ABOVE FOR THE COMPLETENESS AND/OR ACCURACY OF THIS DOCUMENT.

16. THE CONTRACTOR SHALL HAVE ONE (1) SIGNED COPY OF THE PLANS (APPROVED BY THE CITY OF LEE'S SUMMIT) AND ONE (1) COPY OF THE APPROPRIATE CONSTRUCTION STANDARDS AND SPECIFICATIONS AT THE JOB SITE AT ALL TIMES.

17. CONSTRUCTION OF THE IMPROVEMENTS SHOWN OR IMPLIED BY THIS SET OF DRAWINGS SHALL NOT BE INITIATED OR ANY PART THEREOF UNDERTAKEN UNTIL THE CITY ENGINEER IS NOTIFIED OF SUCH INTENT AND ALL REQUIRED AND PROPERLY EXECUTED BONDS AND PERMIT FEES ARE RECEIVED AND APPROVED BY THE CITY ENGINEER.

18. ALL STUB LINES SHALL BE LAID ON 2.00% MINIMUM GRADE UNLESS APPROVED OTHERWISE.

19. CONTRACTOR SHALL NOT BE ALLOWED TO WORK ON SATURDAYS, SUNDAYS, OR HOLIDAYS WITHOUT PRIOR APPROVAL OF THE CITY ENGINEER.

20. RELOCATION OF ANY WATER LINE, SEWER LINE OR SERVICE LINE THEREOF REQUIRED FOR THE CONSTRUCTION OF THIS PROJECT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL BE AT HIS EXPENSE.

21. THE CONTRACTOR SHALL INSTALL AND PROPERLY MAINTAIN A MECHANICAL PLUG AT ALL CONNECTION POINTS WITH EXISTING LINES UNTIL SUCH TIME THAT THE NEW LINE IS TESTED AND APPROVED.

22. THE CONTRACTOR SHALL CONSTRUCT MANHOLES PLACING ECCENTRIC CONE SECTION IN SUCH A MANNER THAT MANHOLE COVERS ARE ADJACENT TO THE PROPOSED SIDEWALKS. IN LOCATIONS WHERE MANHOLES ARE NOT NEAR PROPOSED SIDEWALKS THE MANHOLE COVERS SHALL GENERALLY BE PLACED ON THE UPSTREAM SIDE OF THE MANHOLES WHENEVER POSSIBLE.

23. STUB LINES, LOCATIONS, AND MINIMUM BASEMENT FLOOR ELEVATIONS ARE LOCATED IN THE TABLE LABELED "TABLE OF SERVICE LOCATIONS".

24. CONSTRUCTION PERMITS WILL NOT BE ISSUED UNTIL THE CITY OF LEE'S SUMMIT RECEIVES A SEWER EXTENSION PERMIT FROM MDNR.

25. ALL AREAS WHERE UTILITIES ARE TO BE INSTALLED IN FILL SHALL BE COMPACTED TO 95% TO 18 INCHES ABOVE THE LINE THEN EXCAVATED FOR CONSTRUCTION OF THE LINE.

26. THE CONTRACTOR WILL BE RESPONSIBLE FOR TESTING OF MANHOLES AND PIPES TO THE CITY OF LEE'S SUMMIT DESIGN & CONSTRUCTION MANUAL REQUIREMENTS.

27. THE DEVELOPER WILL BE RESPONSIBLE FOR PERFORMING PRESSURE TESTING ON EVERY SECTION OF THE SANITARY LINES, PRESSURE TESTING ON EVERY MANHOLE, AND RUNNING A MANDREL THROUGH EVERY SECTION OF SANITARY SEWER LINE TO TEST FOR ALIGNMENT. TESTING CRITERIA WILL BE IN ACCORDANCE WITH CITY OF LEE'S SUMMIT DESIGN & CONSTRUCTION MANUAL SPECIFICATIONS.

28. ALL UTILITY STREET CROSSINGS SHALL BE BACKFILLED WITH FLOWABLE FILL, OR AB-3. IF CONTRACTOR CHOOSES TO USE OTHER SUITABLE MATERIALS, EXTENSIVE SOIL TESTING REQUIREMENTS WILL BE REQUIRED.

29. THE SPECIAL FLOW HAZARD AREA (SFHA) AND REGULATORY FLOOD WAY DEPICTED IN THESE PLANS ARE PER FEMA'S NATURAL FLOOD HAZARD LAYER (NFHL) OBTAINED FROM WWW.FEMA.GOV. NFIP INFORMATION SHOWN ARE REPRESENTATIVE OF FEMA'S FLOOD INSURANCE RATE MAP (FIRM) MAP NUMBER 29095C0531G; EFFECTIVE DATE JANUARY 20, 2017.

30. NO FILL MATERIAL SHALL BE PLACED WITHIN THE FEMA IDENTIFIED FLOODWAY. NO CONSTRUCTION SHALL BE PERFORMED WITHIN THE FLOODWAY UNLESS DEPICTED ON THESE PLANS OR OTHER PLANS APPROVED BY THE CITY OF LEE'S SUMMIT, MO.

PROJECT NOTES:

1. GRADING CONTRACTOR SHALL BE RESPONSIBLE FOR THE CONTROL OF EROSION AND SILTATION DURING ALL PHASES OF CONSTRUCTION.

2. PRIOR TO ORDERING PRECAST STRUCTURES: SHOP DRAWINGS SHALL BE SUBMITTED TO THE DESIGN ENGINEER FOR APPROVAL. UPON APPROVAL THESE SHALL BE SUBMITTED TO THE CITY OF LEE'S SUMMIT FOR REVIEW.

3. MANHOLE TOP ELEVATIONS DESIGNATED AS "FIELD VERIFY" (F.V.) ARE LOCATED OUTSIDE THE STREET RIGHT-OF-WAY OR IN AREAS OF UNDETERMINED GRADING. CONTRACTORS ORDERING PRECAST MANHOLES SHALL BE RESPONSIBLE FOR ADJUSTMENT REQUIRED IN THE FIELD AT NO ADDITIONAL COST TO THE OWNER. THE CONTRACTOR SHALL FIELD VERIFY THE TOP ELEVATIONS PRIOR TO ORDERING PRECAST MANHOLES.

4. ALL WATER LINES, SANITARY SEWER LINES, AND STORM WATER DRAINAGE CROSSINGS SHALL BE IN PLACE OR A CASING PIPE PROVIDED FOR FUTURE INSTALLATION PRIOR TO BASE AND SURFACE ASPHALT COURSES.

5. SIDEWALKS ARE SHOWN FOR INFORMATIONAL PURPOSES ONLY UNLESS OTHERWISE NOTES. HOWEVER, THE CONTRACTOR SHALL BE RESPONSIBLE FOR HANDICAP RAMP CONSTRUCTION IN CURBS.

6. SITE TOPOGRAPHY TAKEN FROM SURVEY COMPLETED BY R.L. BUFORD & ASSOCIATES. CONTRACTOR TO VERIFY EXISTING CONDITIONS OF THE SITE THAT MAY NOT BE REPRESENTATIVE OF CONSTRUCTION PLANS.

BY	DATE	REVISION	SD	SD	Scale:	1"= N/A	
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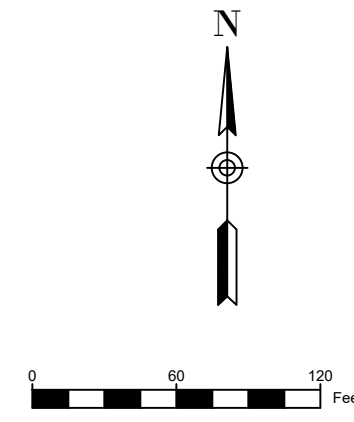
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WHISPERING WOODS 3RD PLAT
STREET & STORM SEWER PLANS
GENERAL NOTES
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Sheet 2



MARK	REVISION	DATE	BY
1	REVISION PER CITY COMMENTS	1/21/25	MT

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WHISPERING WOODS 3RD PLAT
STREET & STORM SEWER PLANS
 SITE LAYOUT





LEGEND:

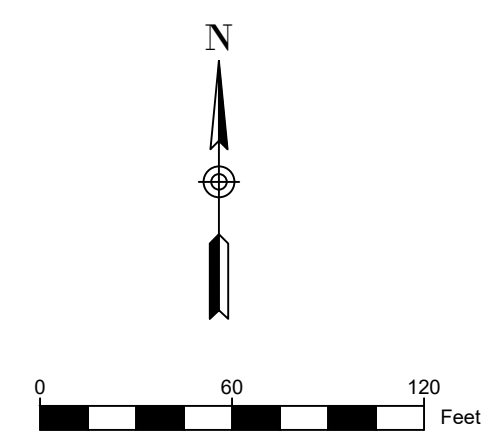
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716	= PROPOSED CONTOUR
PG	= PROPOSED GRADE
EG	= EXISTING GRADE

GRADING PLAN - GENERAL NOTES

- A. UTILITY WARNING:
THE UTILITIES SHOWN HAVE BEEN LOCATED FROM FIELD SURVEY INFORMATION AND/OR RECORDS OBTAINED. THE SURVEYOR MAKES NO GUARANTEE THAT THE UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. THE SURVEY FURTHER DOES NOT WARRANT THAT THE UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED.
- 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)
51	960.75
52	959.79
53	959.46
54	959.14
55	958.59
56	958.21
57	957.38
58	956.69
72	966.16
73	963.34
74	962.67
75	962.00
76	962.00

LOT	LOT TYPE
51	WO
52	WO
53	WO
54	WO
55	WO
56	WO
57	WO
58	WO
59	WO
60	DL
61	STD
62	STD
63	STD
64	STD
65	STD
66	STD
67	STD
68	STD
69	STD
70	STD
71	STD
72	WO
73	WO
74	WO
75	WO
76	WO
77	DL
78	STD
79	STD
80	STD



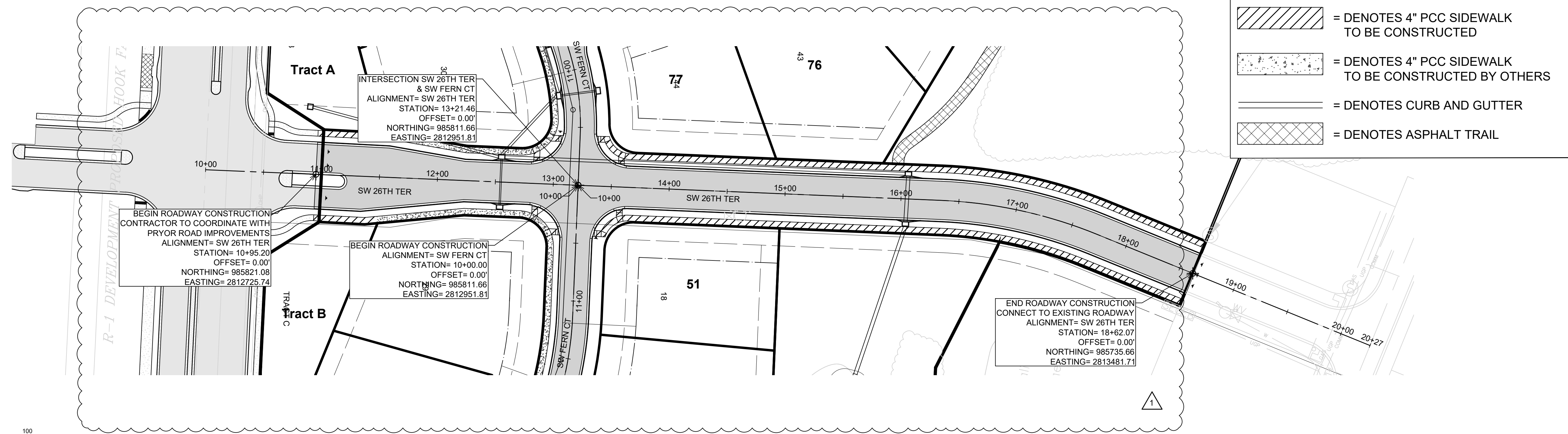
MARK	REVISION	DATE	BY
Engineer: SD	Checked By: SD	Scale: 1"= 60'	
Technician: JS	Date: 3-18-21	Field Bk:	Pg:



SHAWN DUKE - ENGINEER
MO PE#2013006489

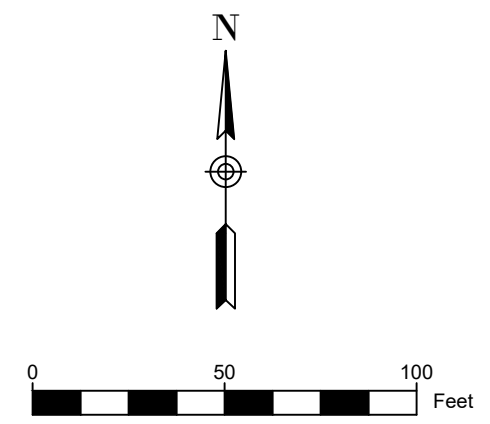
WHISPERING WOODS 3RD PLAT
 STREET & STORM SEWER PLANS
 MASTER DRAINAGE PLAN
 LEES SUMMIT, MO
SNYDER & ASSOCIATES
 ENGINEERS & PLANNERS, INC.
 802 FRANCIS STREET
 ST. JOSEPH, MO 64501
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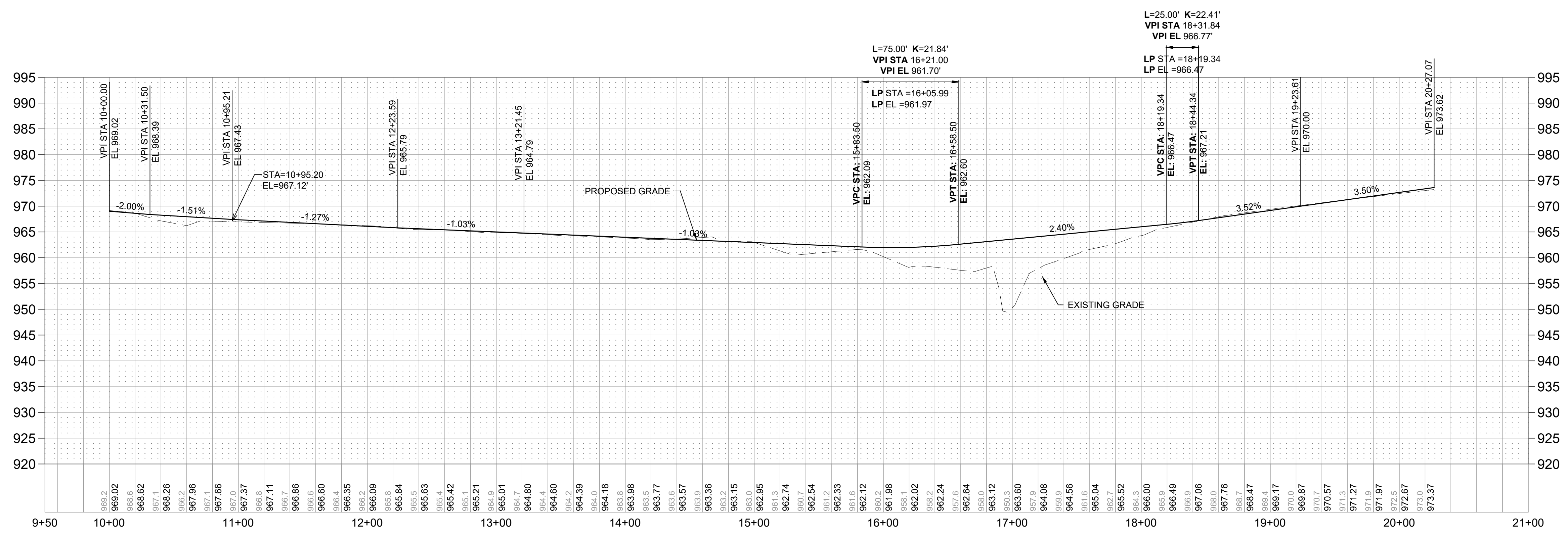


LEGEND:

- = DENOTES ASPHALT PAVEMENT
- = DENOTES 4\"/>



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

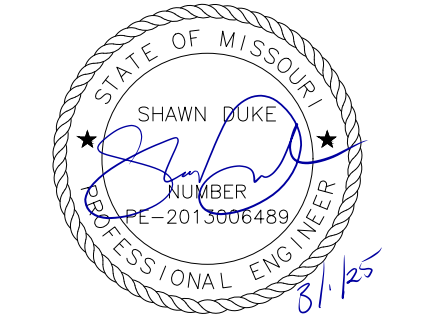


SW 26TH TERRACE
 RESIDENTIAL COLLECTOR
 (DESIGN SPEED=30MPH)

MARK	REVISION	DATE	BY
1	REVISION PER CITY COMMENTS	1/21/25	MT

Engineer: SD Checked By: SD Scale: 1"= 50'
 Technician: JS Date: 3-18-21 Field Bk: Pg: 5

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 Missouri State Certificate of Authority #200606544



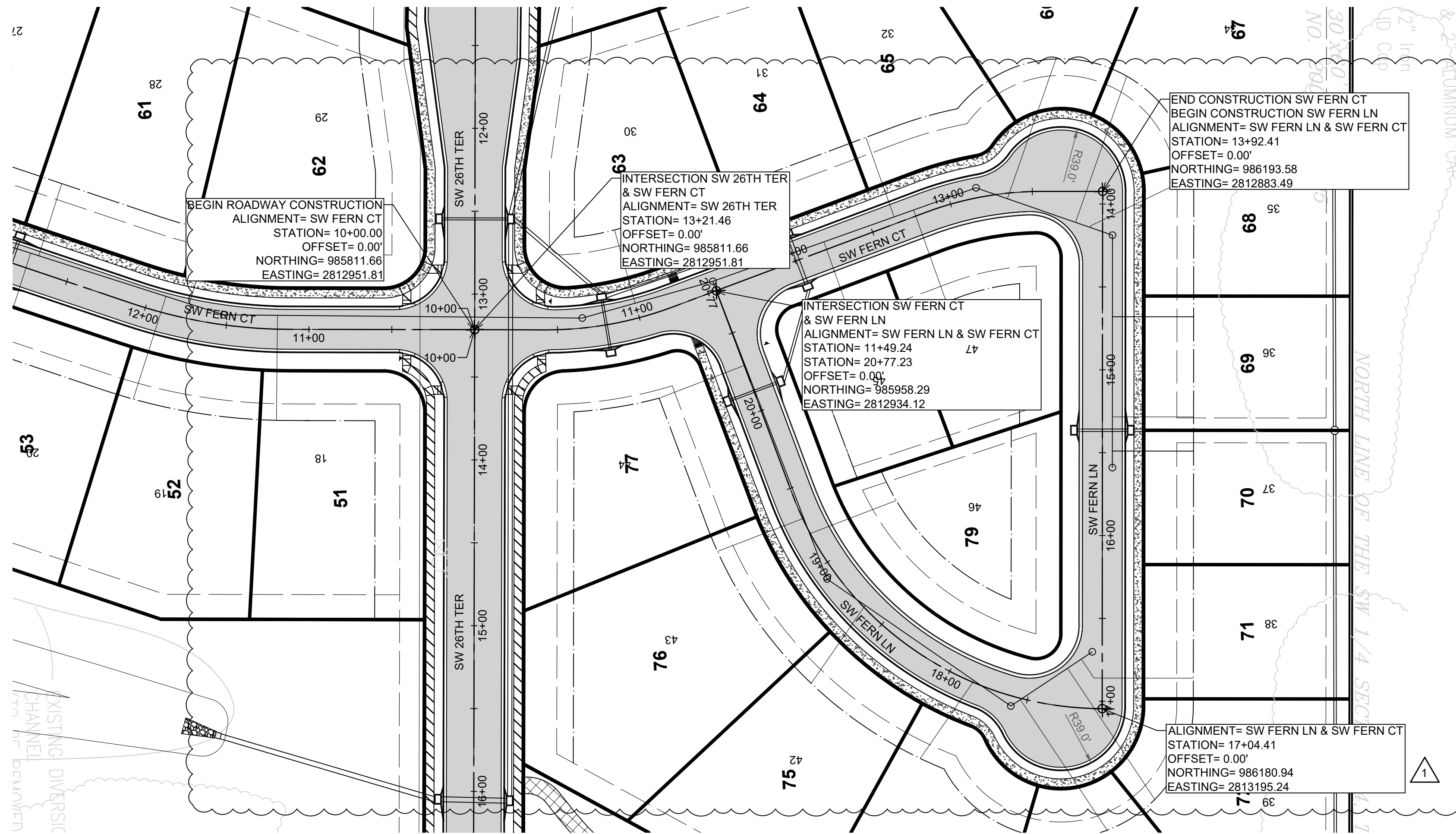
SHAWN DUKE - ENGINEER
 MO PE#2013006489

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 STREET & STORM SEWER PLANS
 STREET PLAN & PROFILE
SNYDER & ASSOCIATES
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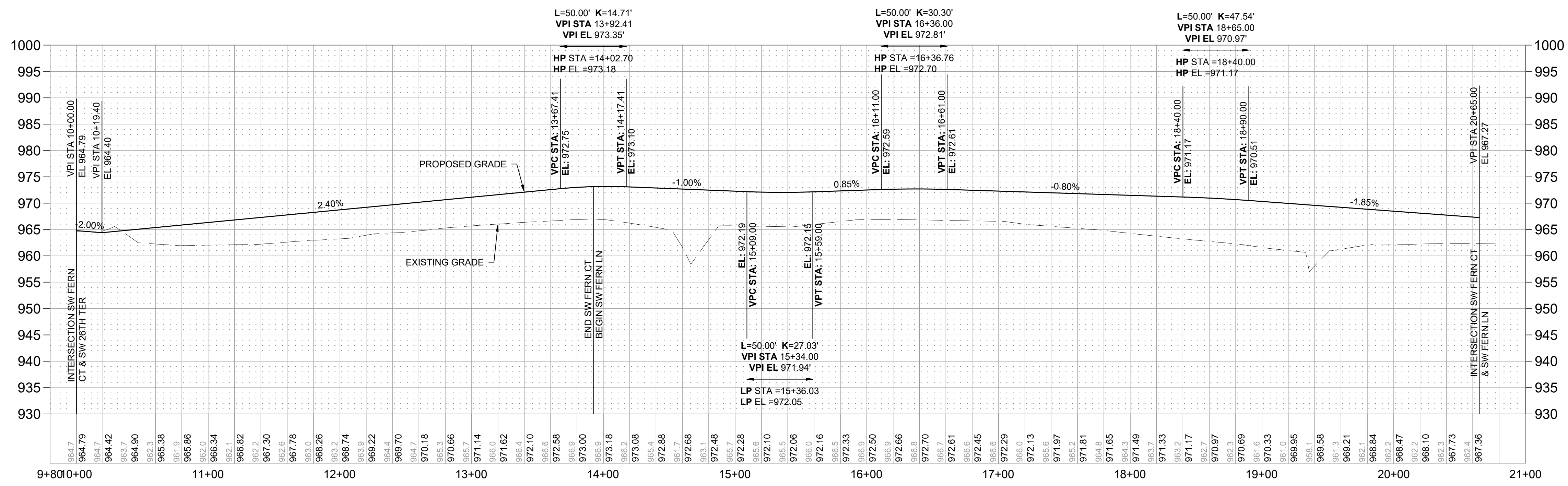
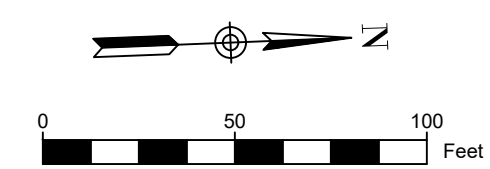
Project No: 1200485.11



LEGEND:

- [Solid Grey] = DENOTES ASPHALT PAVEMENT
- [Diagonal Hatching] = DENOTES 4" PCC SIDEWALK TO BE CONSTRUCTED
- [Stippled] = DENOTES 4" PCC SIDEWALK TO BE CONSTRUCTED BY OTHERS
- [Double Line] = DENOTES CURB AND GUTTER
- [Cross-hatched] = DENOTES ASPHALT TRAIL

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



SW FERN CT & SW FERN LN
 RESIDENTIAL LOCAL
 (DESIGN SPEED=25MPH)

MARK	REVISION	DATE	BY
1	REVISION PER CITY COMMENTS	1/21/25	MT

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

SHAWN DUKE - ENGINEER
 MO PE#2013006489

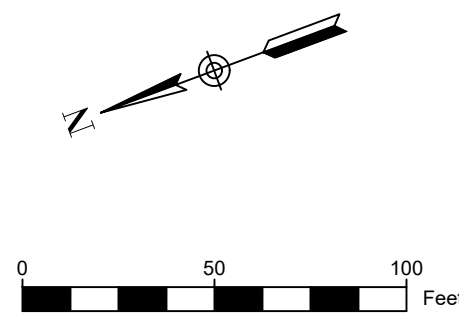
WHISPERING WOODS 3RD PLAT
 STREET & STORM SEWER PLANS
 STREET PLAN & PROFILE

LEE'S SUMMIT, MO

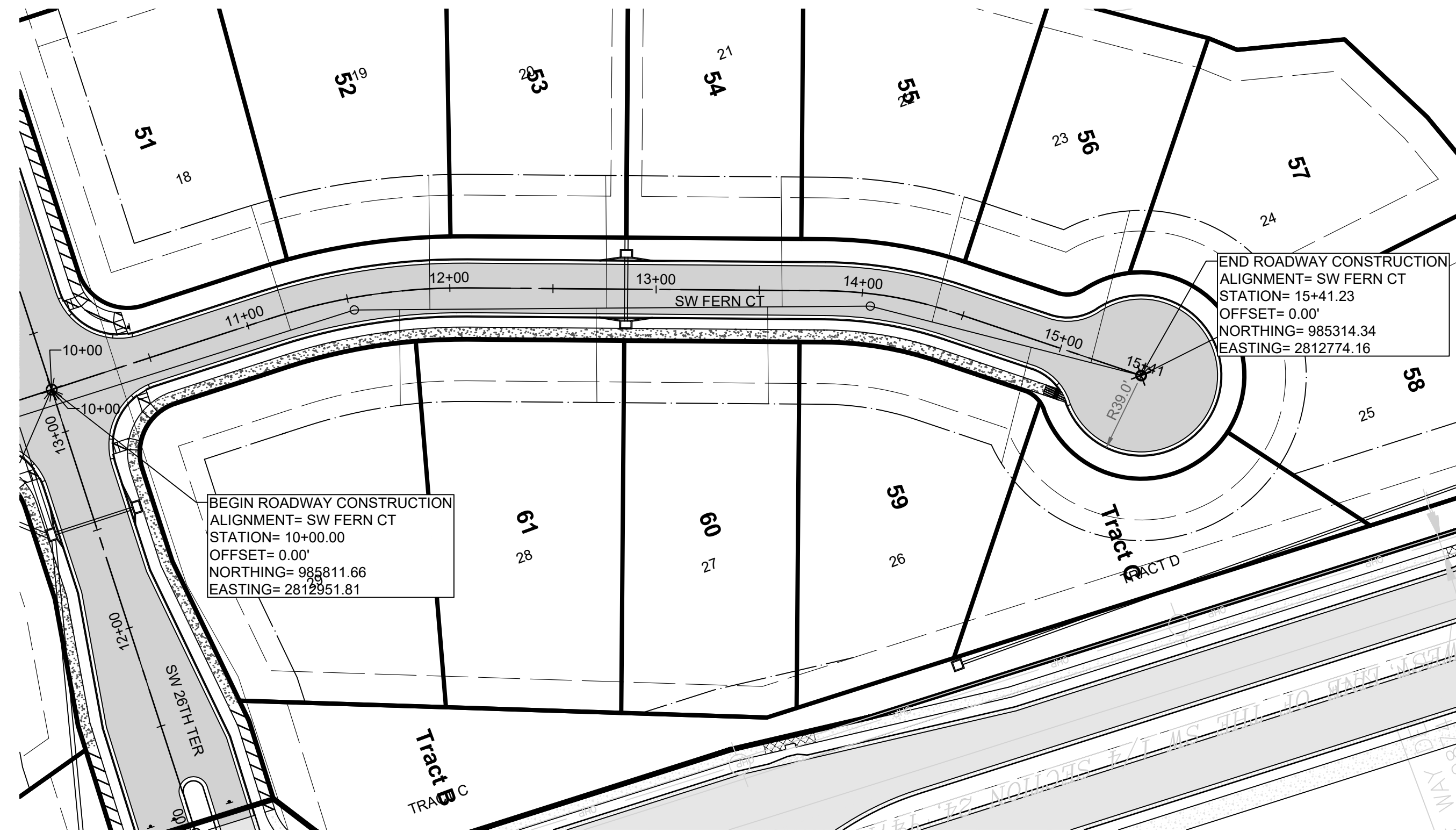
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 ST. JOSEPH, MO 64501
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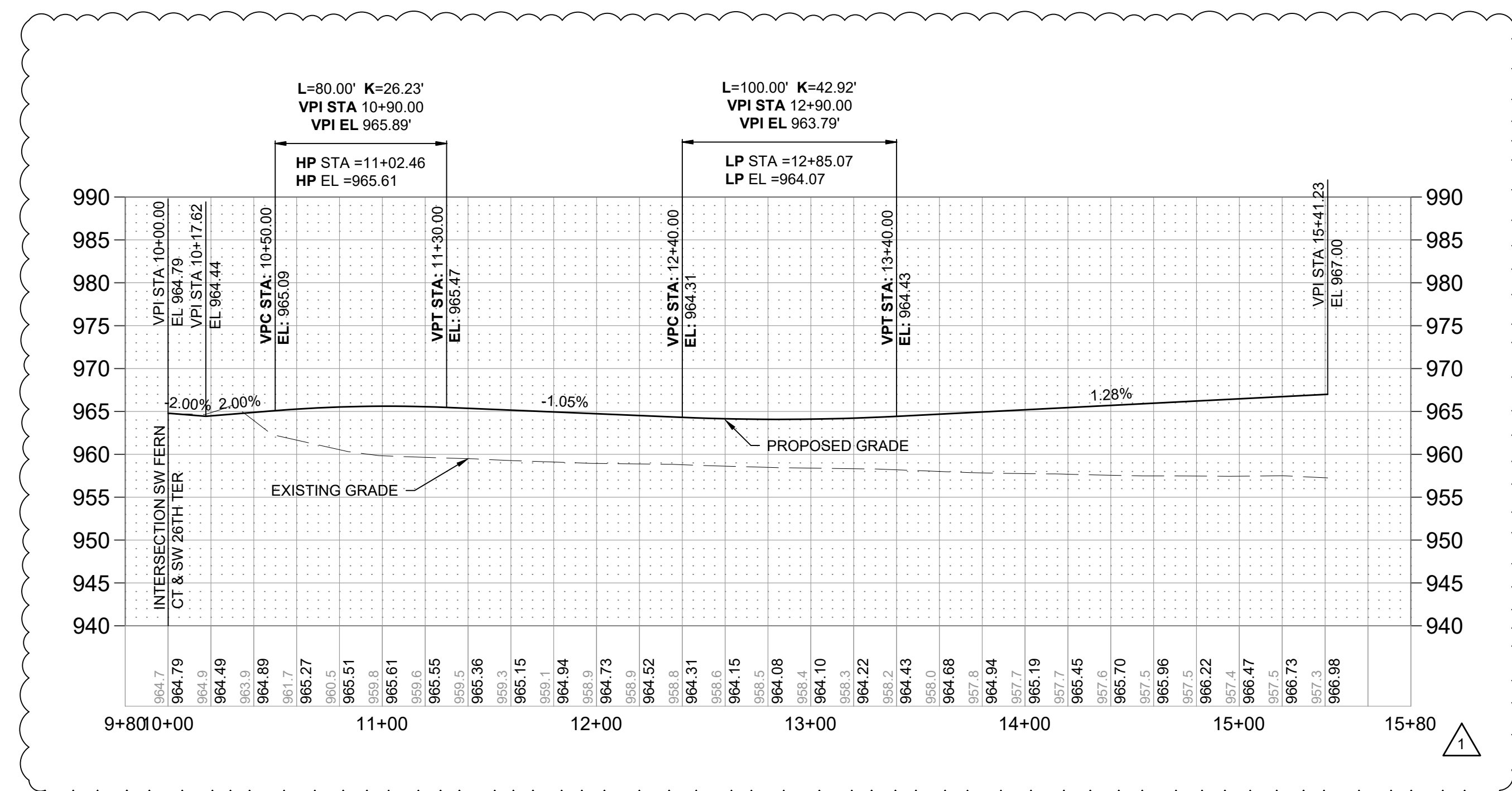


NOTE:
ONLY SIDEWALK RAMPS TO BE CONSTRUCTED WITH ROAD CONSTRUCTION.
REMAINING SIDEWALK TO BE CONSTRUCTED WITH HOUSE CONSTRUCTION.



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

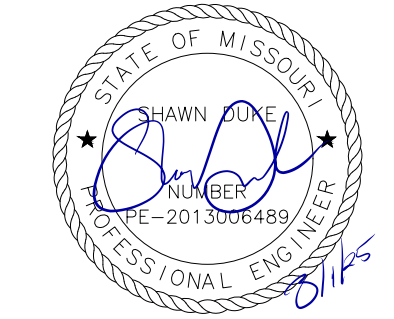


SW FERN COURT
RESIDENTIAL LOCAL
(DESIGN SPEED=25MPH)

MARK	REVISION PER CITY COMMENTS	DATE	BY
1		1/21/25	MT

Engineer: SD Checked By: SD Scale: 1"= 50'
Technician: JS Date: 3-18-21 Field Bk: Pg: 7

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Missouri State Certificate of Authority #200606544

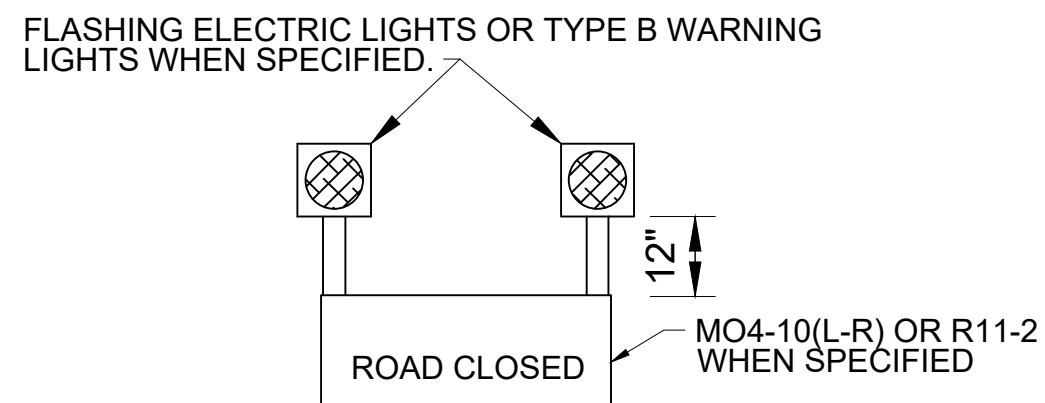


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MO PE#2013006489

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816-364-5222

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STREET & STORM SEWER PLANS
STREET PLAN & PROFILE
SNYDER & ASSOCIATES
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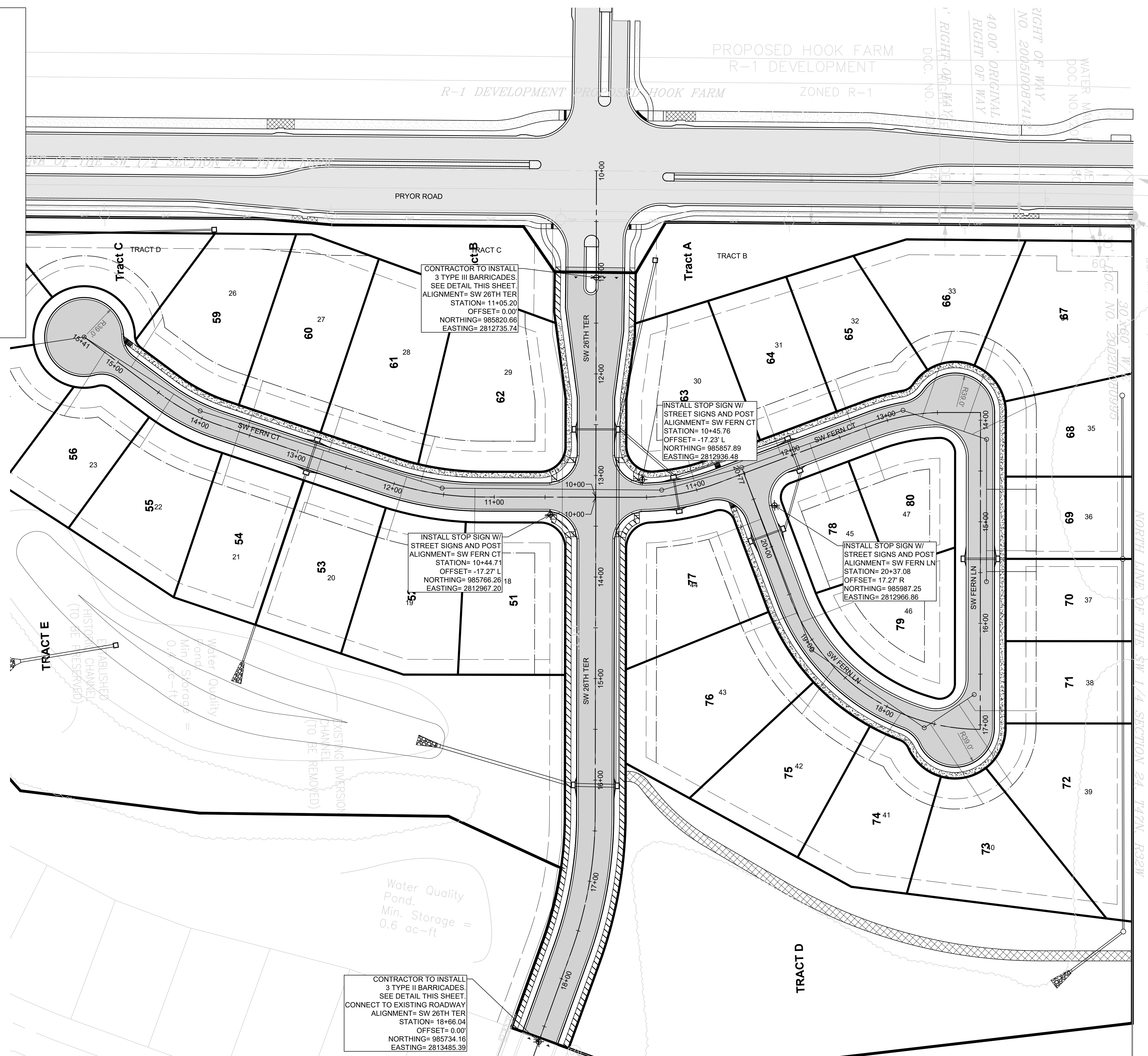
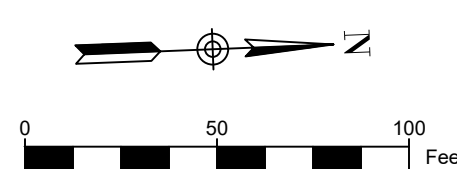


TYPE III BARRICADE
N.T.S.

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

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



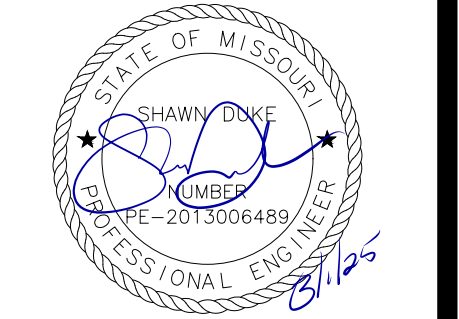
CONTRACTOR TO INSTALL
3 TYPE II BARRICADES.
SEE DETAIL THIS SHEET.
CONNECT TO EXISTING ROADWAY
ALIGNMENT= SW 26TH TER
STATION= 18+66.04
OFFSET= 0.00'
NORTHING= 985734.16
EASTING= 2813485.39

INSTALL STOP SIGN W/
STREET SIGNS AND POST
ALIGNMENT= SW FERN CT
STATION= 10+44.71
OFFSET= -17.27' L
NORTHING= 985766.26
EASTING= 2812967.20

INSTALL STOP SIGN W/
STREET SIGNS AND POST
ALIGNMENT= SW FERN CT
STATION= 10+45.76
OFFSET= -17.23' L
NORTHING= 985857.89
EASTING= 2812936.48

INSTALL STOP SIGN W/
STREET SIGNS AND POST
ALIGNMENT= SW FERN LN
STATION= 20+37.08
OFFSET= 17.27' R
NORTHING= 985987.25
EASTING= 2812966.86

MARK	REVISION	DATE	BY
Engineer: SD	Checked By: SD	Scale: 1"= 60'	
Technician: JS	Date: 3-18-21	Field Bk:	



SHAWN DUKE - ENGINEER
MO PE#2013006489

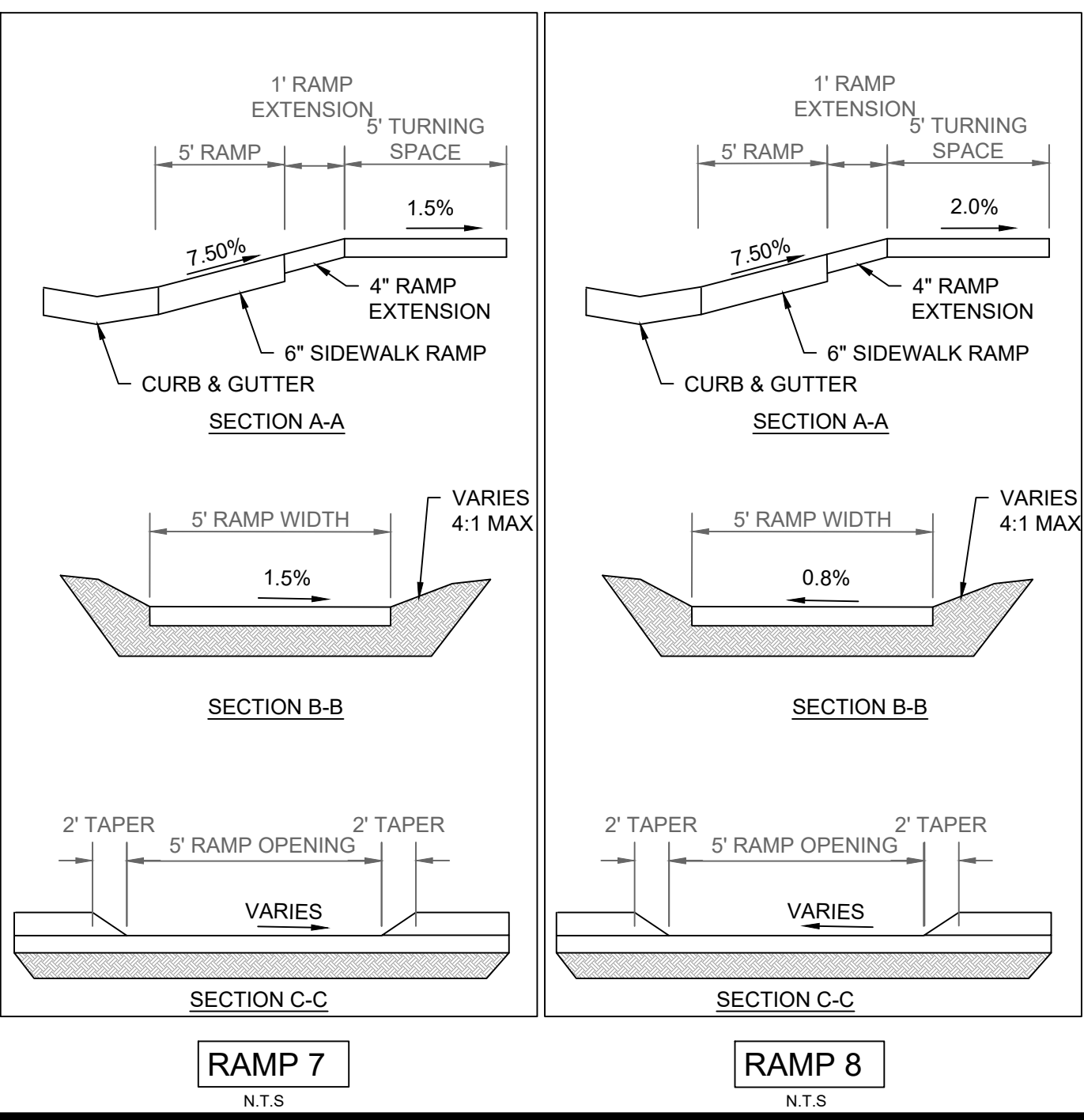
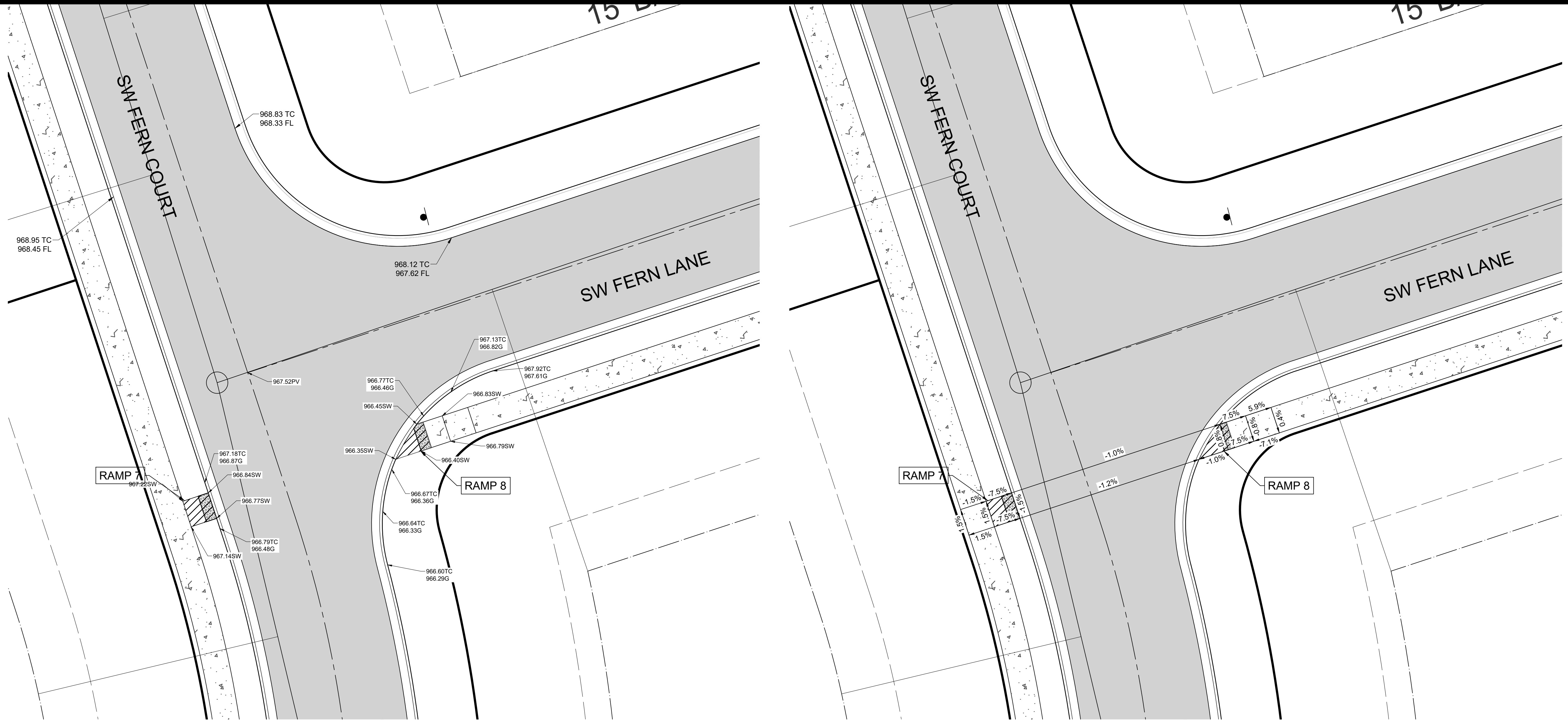
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ST. JOSEPH, MO 64501
816-364-5222

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STREET & STORM SEWER PLANS
ROADWAY SIGNAGE PLAN
SNYDER & ASSOCIATES
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Project No: 1200485.11

Sheet 8



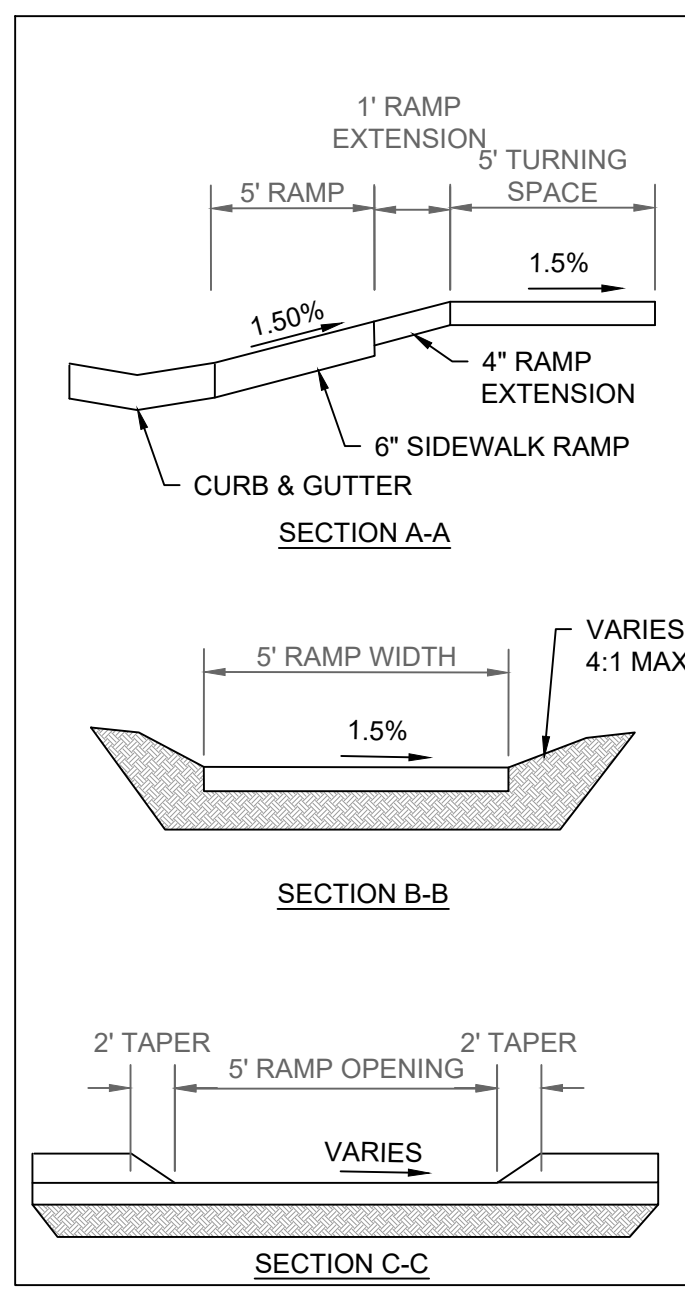
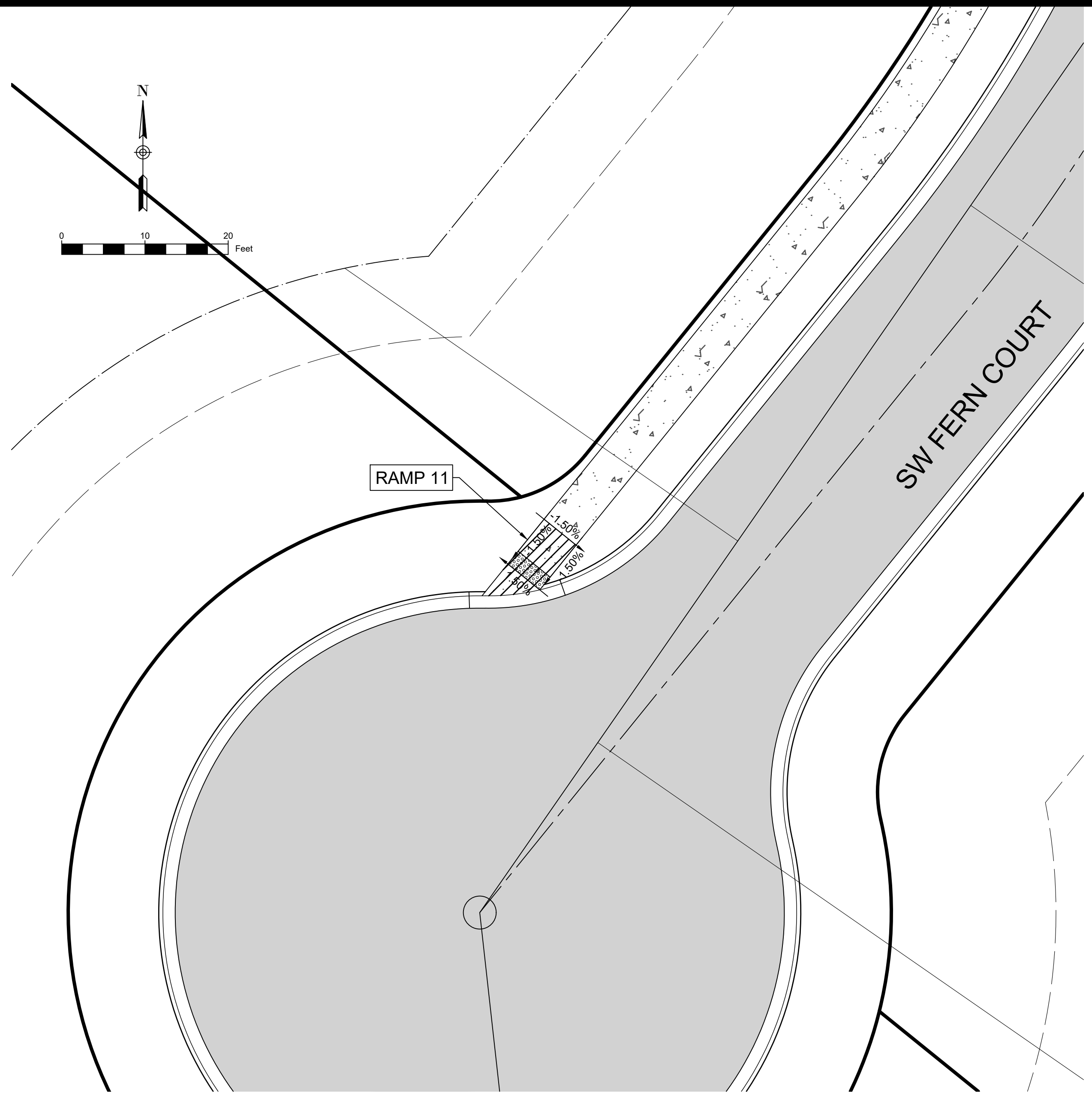
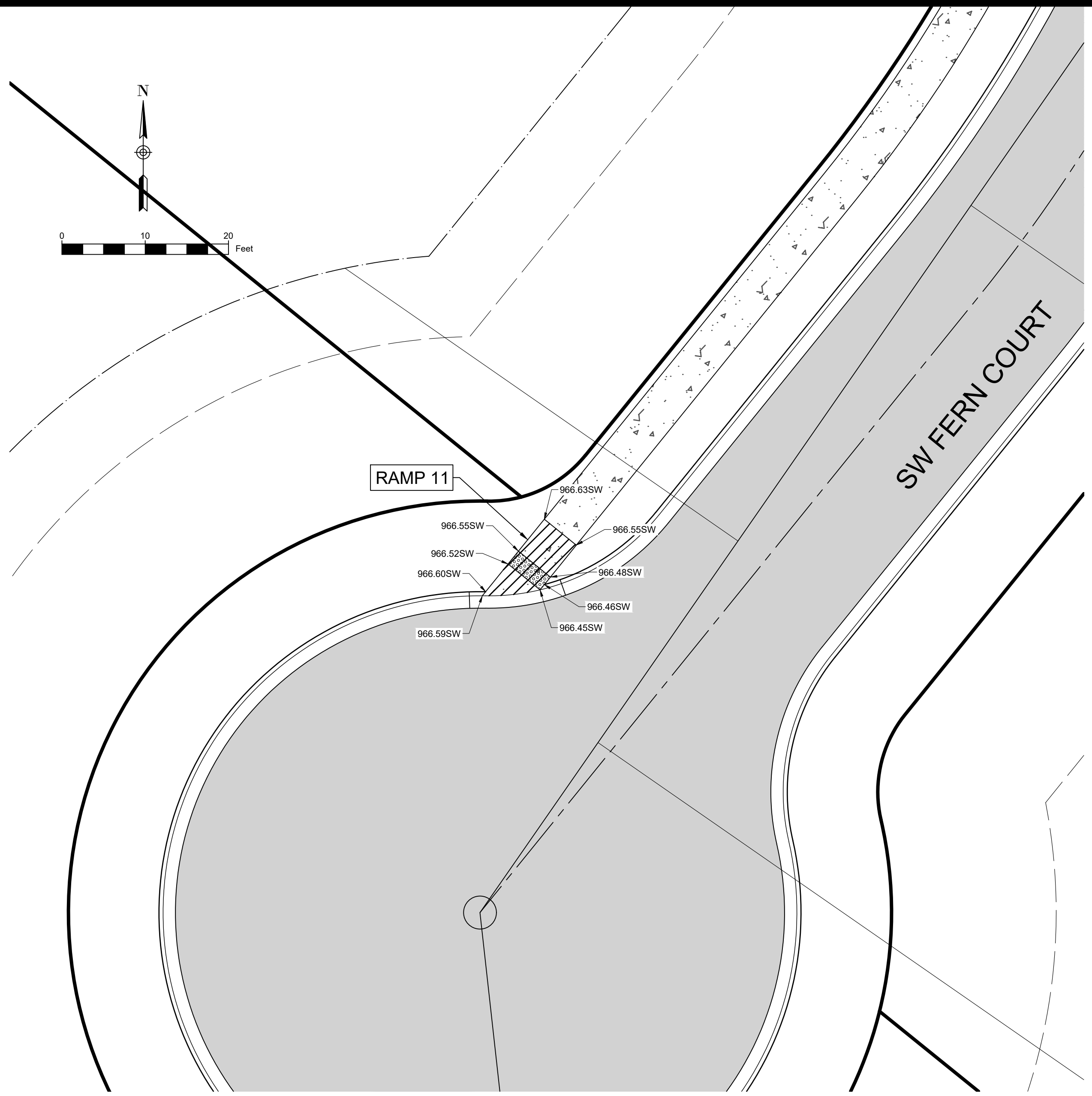
MARK	REVISION	DATE	BY
Engineer: SD	Checked By: SD	Scale: 1"= 10'	
Technician: JS	Date: 3-18-21	Field Bk:	

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MO PE#2013006489

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INTERSECTION DETAILS
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RAMP 11
N.T.S.

MARK	REVISION	DATE	BY
Engineer: SD	Checked By: SD	Scale: 1"= 10'	
Technician: JS	Date: 3-18-21	Field Bk:	

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MO PE#2013006489

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INTERSECTION DETAILS
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N: 985333.4395
E: 2813078.6931

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

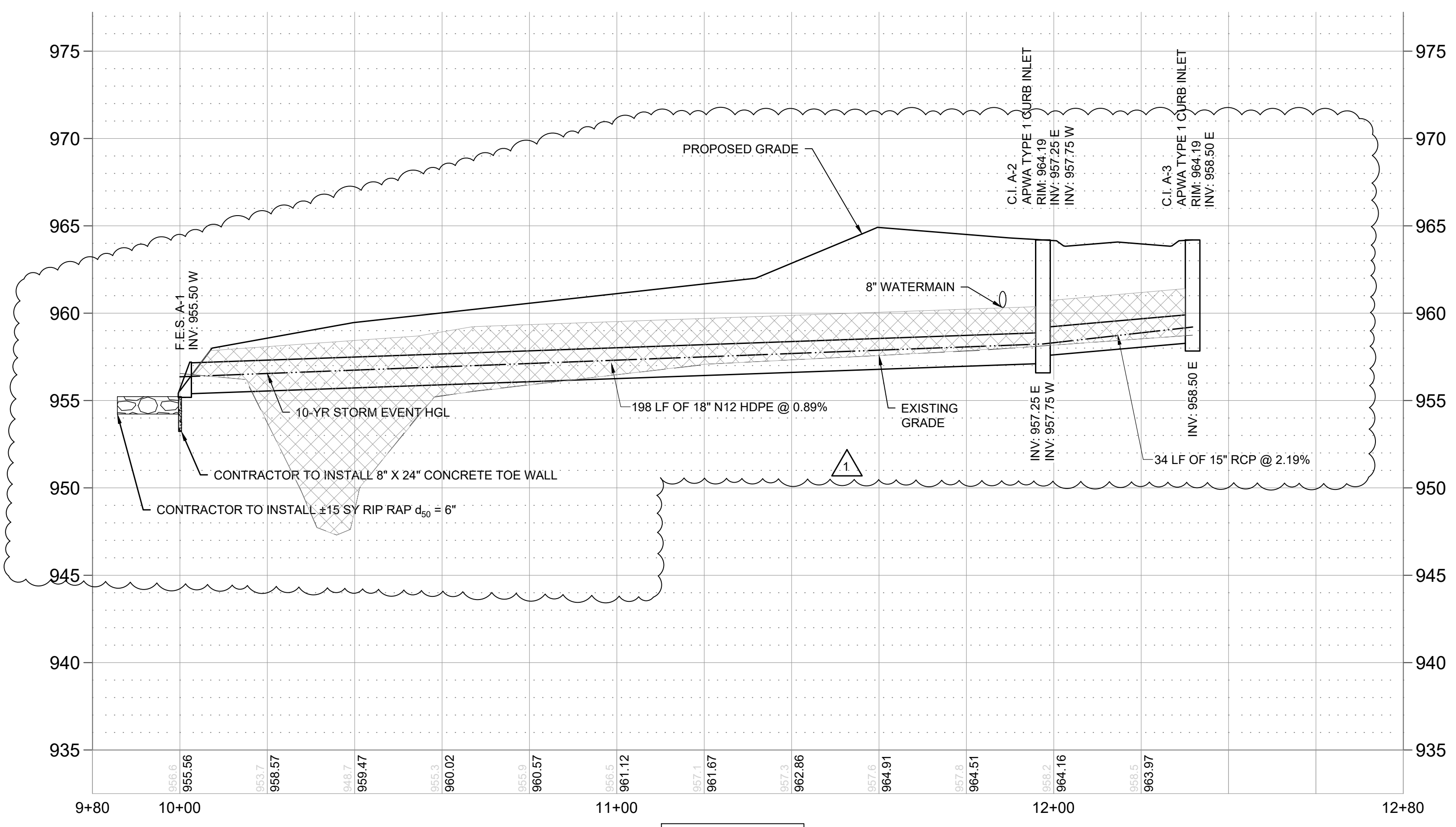
C.I. A-2
N: 985527.6352
E: 2812916.3712

C.I. A-3
N: 985539.8301
E: 2812884.3658



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

NOTE:
CONTRACTOR SHALL FILL & COMPACT TO 95% STANDARD DENSITY TO A POINT 18" MINIMUM ABOVE TOP OF PIPE PRIOR TO EXCAVATION FOR THE PIPE.
FILL MATERIAL =

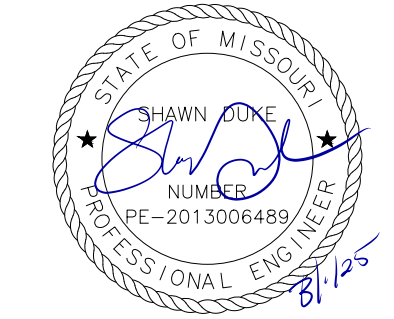


STORM LINE A

MARK	REVISION PER CITY COMMENTS	DATE	BY
1		1/21/25	MT

Engineer: SD Checked By: SD Scale: 1"= 20'
Technician: JS Date: 3-18-21 Field Bk: Pg: 13

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Missouri State Certificate of Authority #200606544

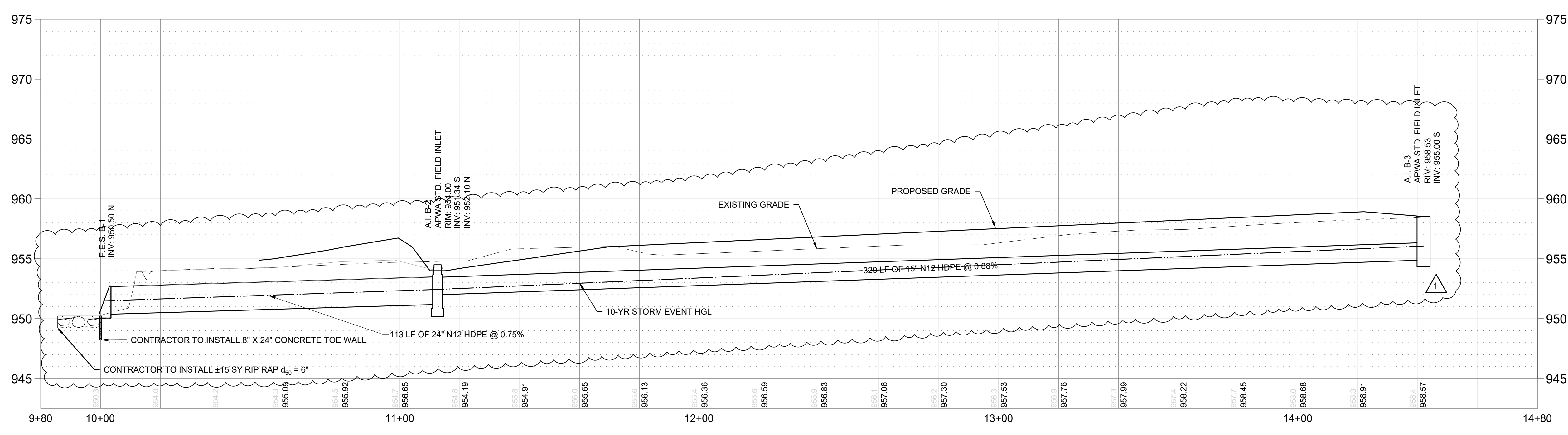
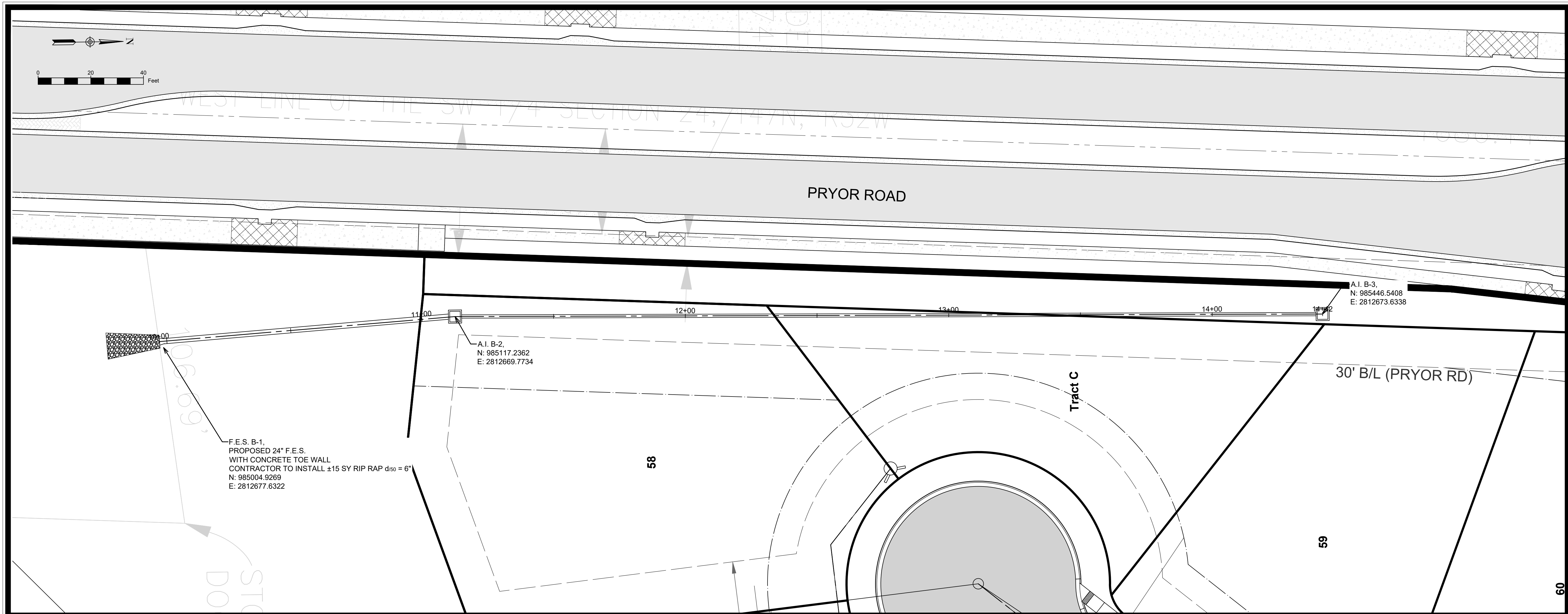


SHAWN DUKE - ENGINEER
MO PE#2013006489

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STREET & STORM SEWER PLANS
STORM PLAN & PROFILE
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STORM LINE B

MARK	REVISION PER CITY COMMENTS	DATE	BY
1		1/21/25	MT

Engineer: SD
Checked By: SD
Scale: 1" = 20'

Technician: JS
Date: 3-18-21
Field Bk: Pg: 14

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Missouri State Certificate of Authority #200606544

SHAWN DUKE - ENGINEER
MO PE#2013006489

STATE OF MISSOURI
SHAWN DUKE
ENGINEER
NO. 2013006489
PE-2013006489

WHISPERING WOODS 3RD PLAT
STREET & STORM SEWER PLANS

STORM PLAN & PROFILE

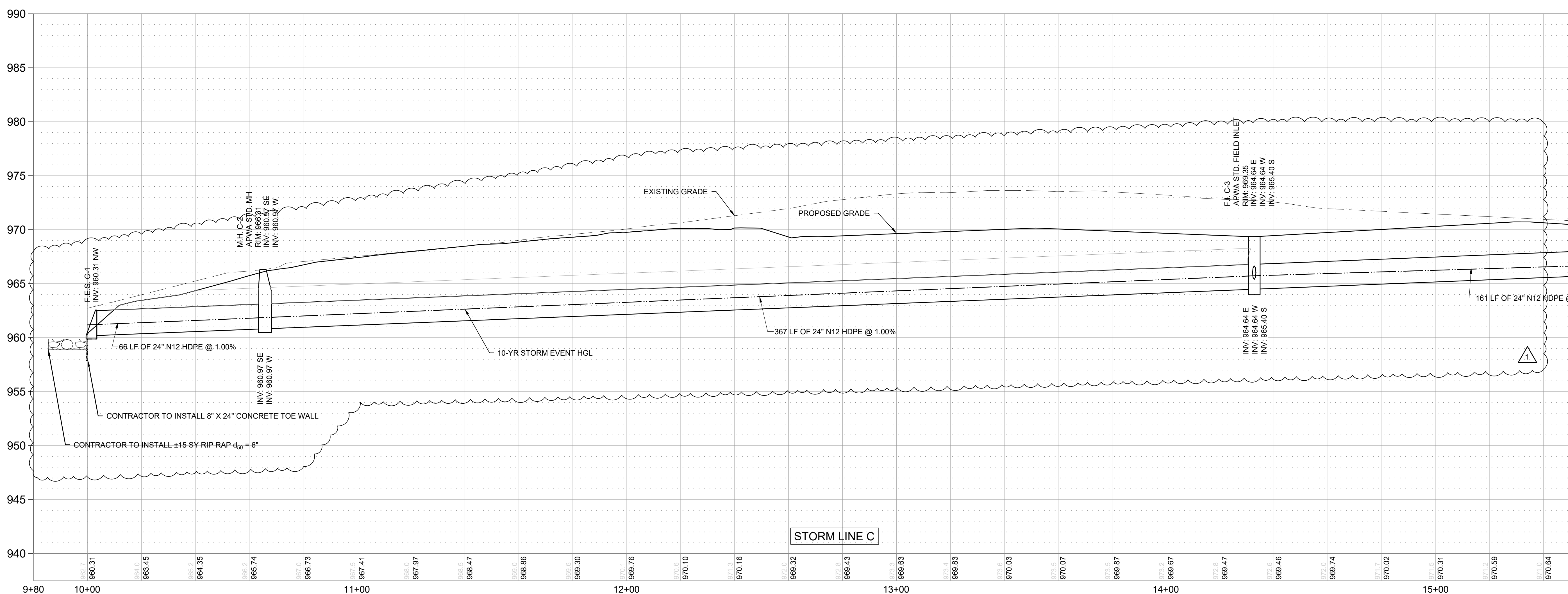
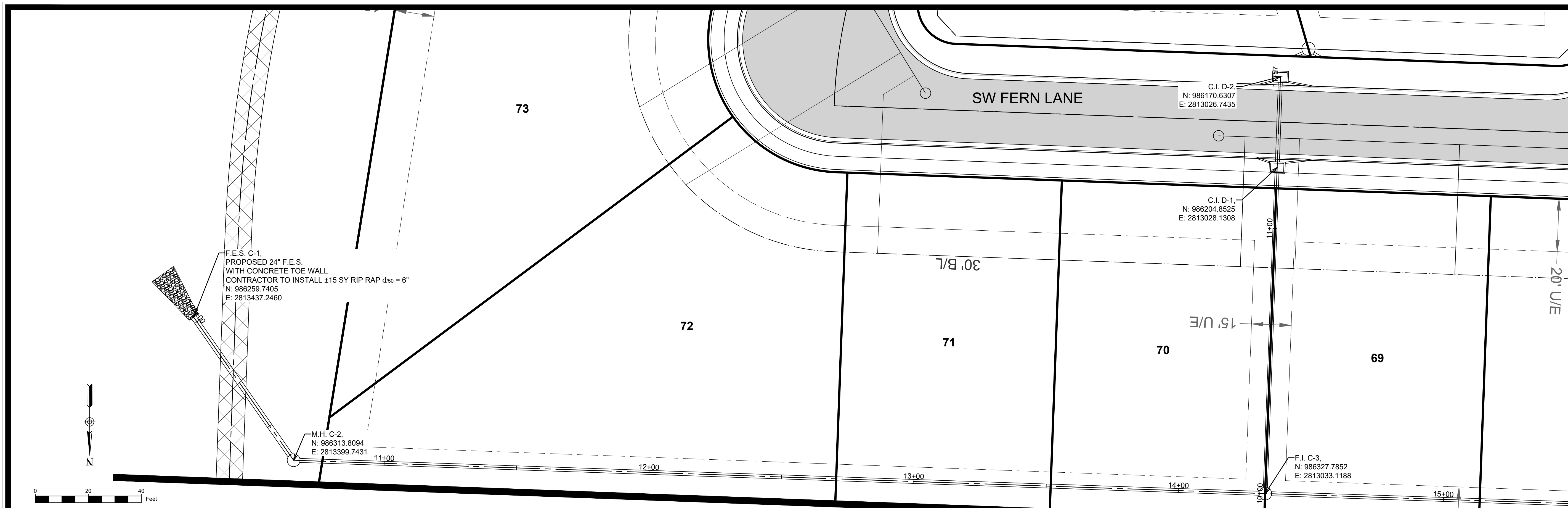
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ST. JOSEPH, MO 64501
816-364-5222

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MARK	REVISION	PER CITY COMMENTS	DATE	BY
1	SD	Checked By: JS	1/21/25	MT
	SD	Date: 3-18-21	1/21/25	MT
	JS	Scale: 1"=20'	1/21/25	MT
	JS	Field Bk:	1/21/25	MT

Engineer: JS
Technician: JS
Scale: 1"=20'
Field Bk: Pg: 15

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Missouri State Certificate of Authority #200606544



**WHISPERING WOODS 3RD PLAT
STREET & STORM SEWER PLANS**

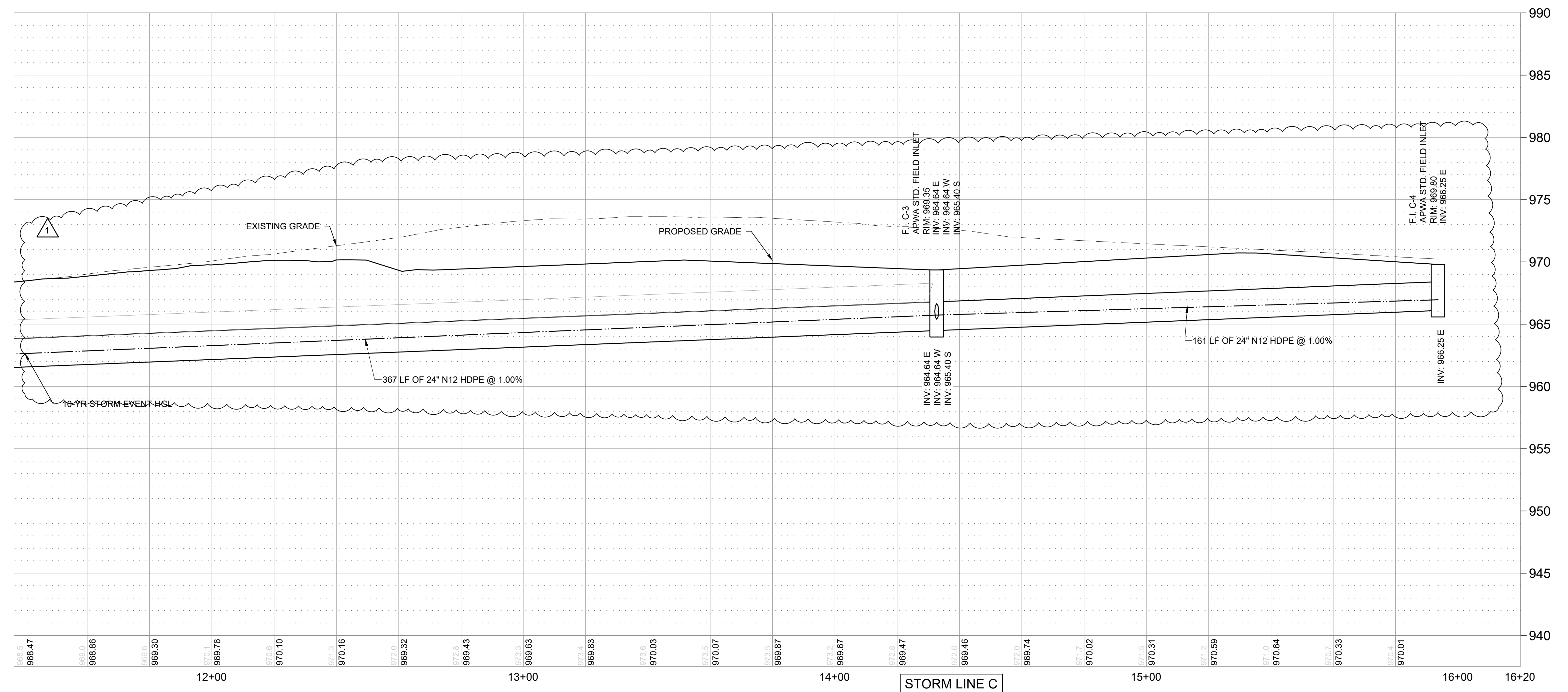
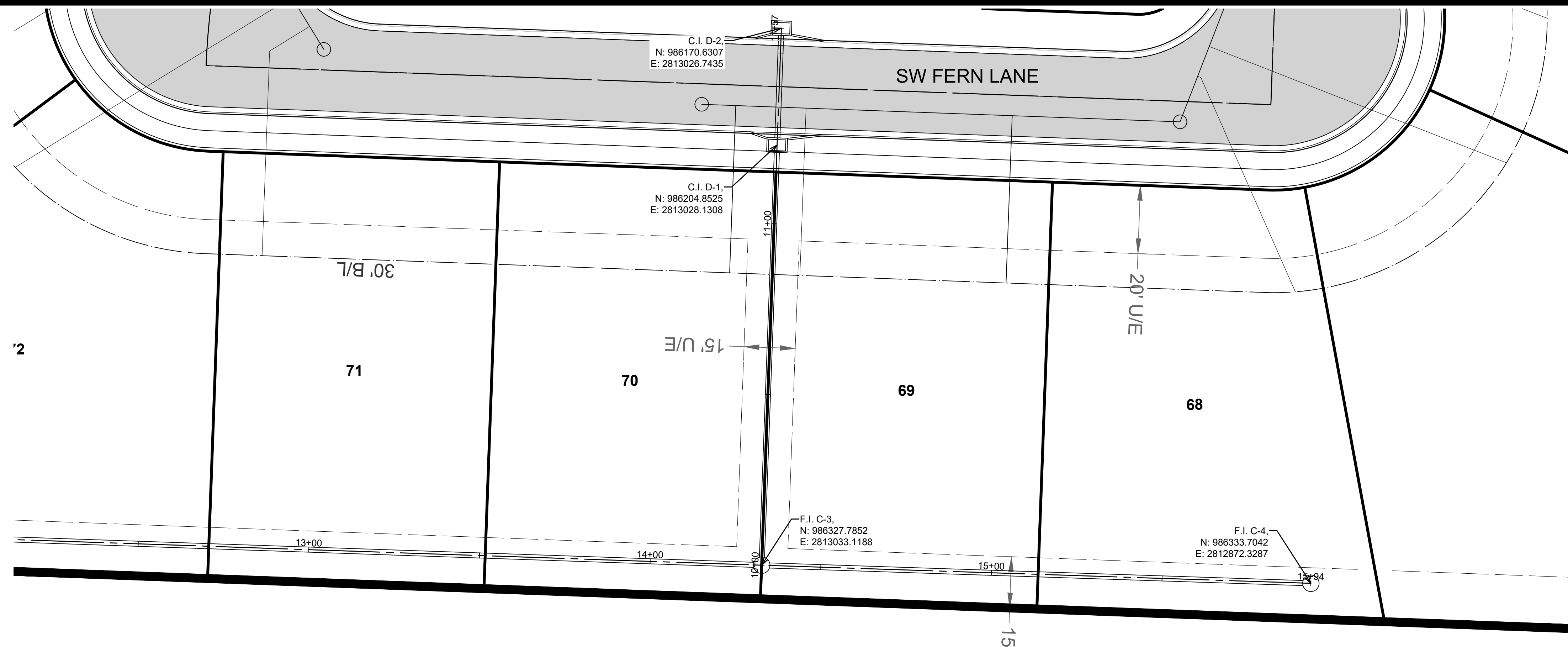
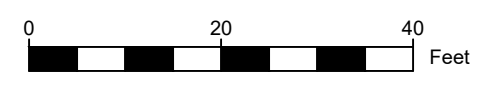
STORM PLAN & PROFILE

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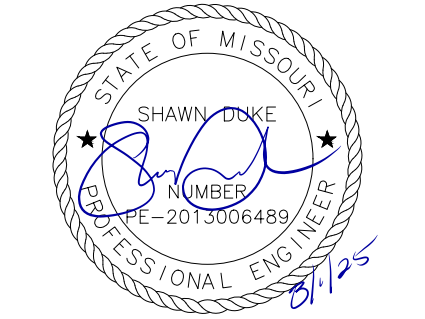


STORM LINE C

MARK	REVISION	DATE	BY
1	REVISION PER CITY COMMENTS	1/21/25	MT

Engineer: SD Checked By: SD Scale: 1"= 20'
 Technician: JS Date: 3-18-21 Field Bk: Pg: 16

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SHAWN DUKE - ENGINEER
 MO PE#2013006489

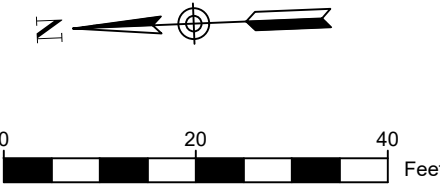
LEE'S SUMMIT, MO
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WHISPERING WOODS 3RD PLAT
 STREET & STORM SEWER PLANS

STORM PLAN & PROFILE

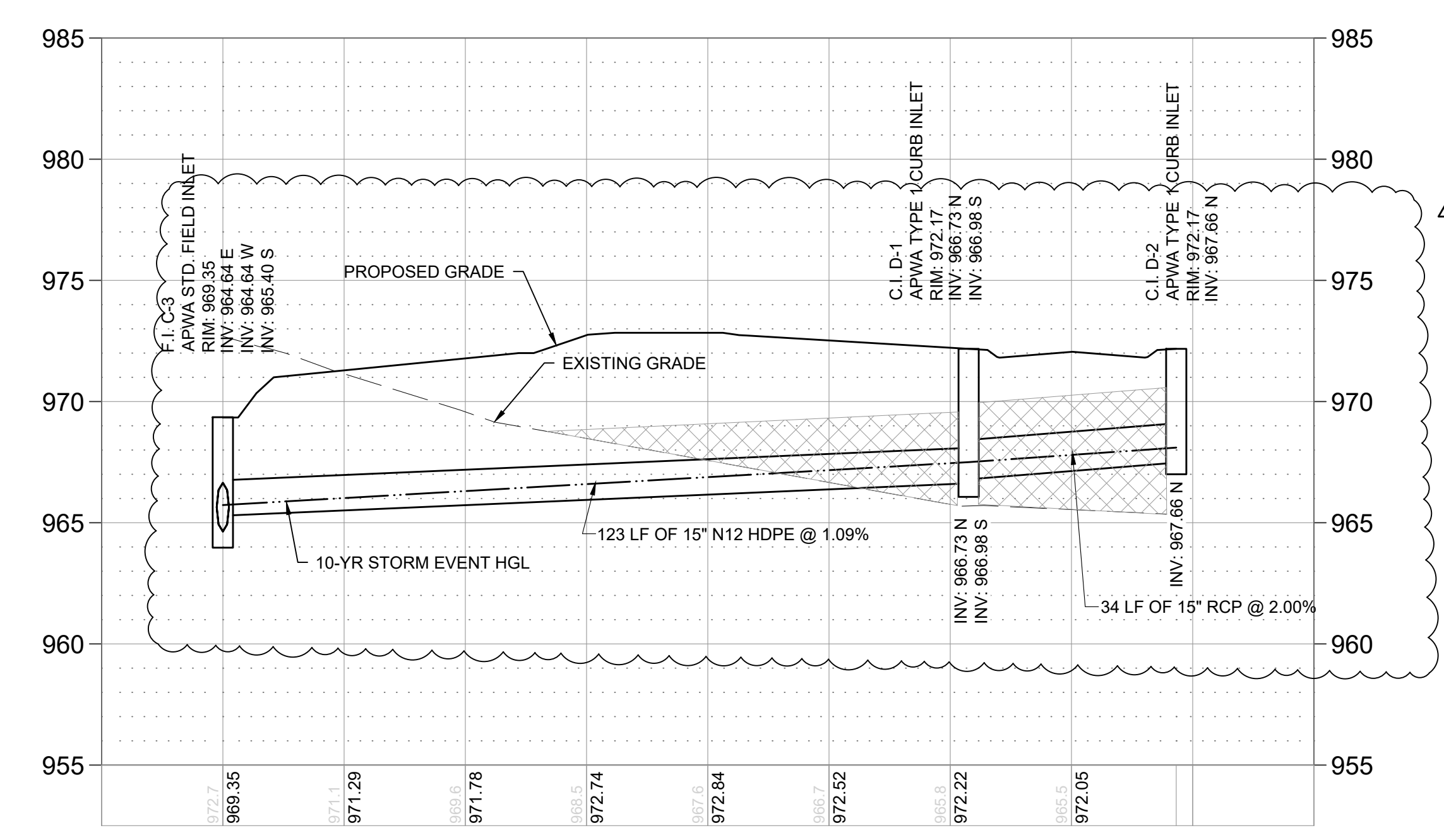
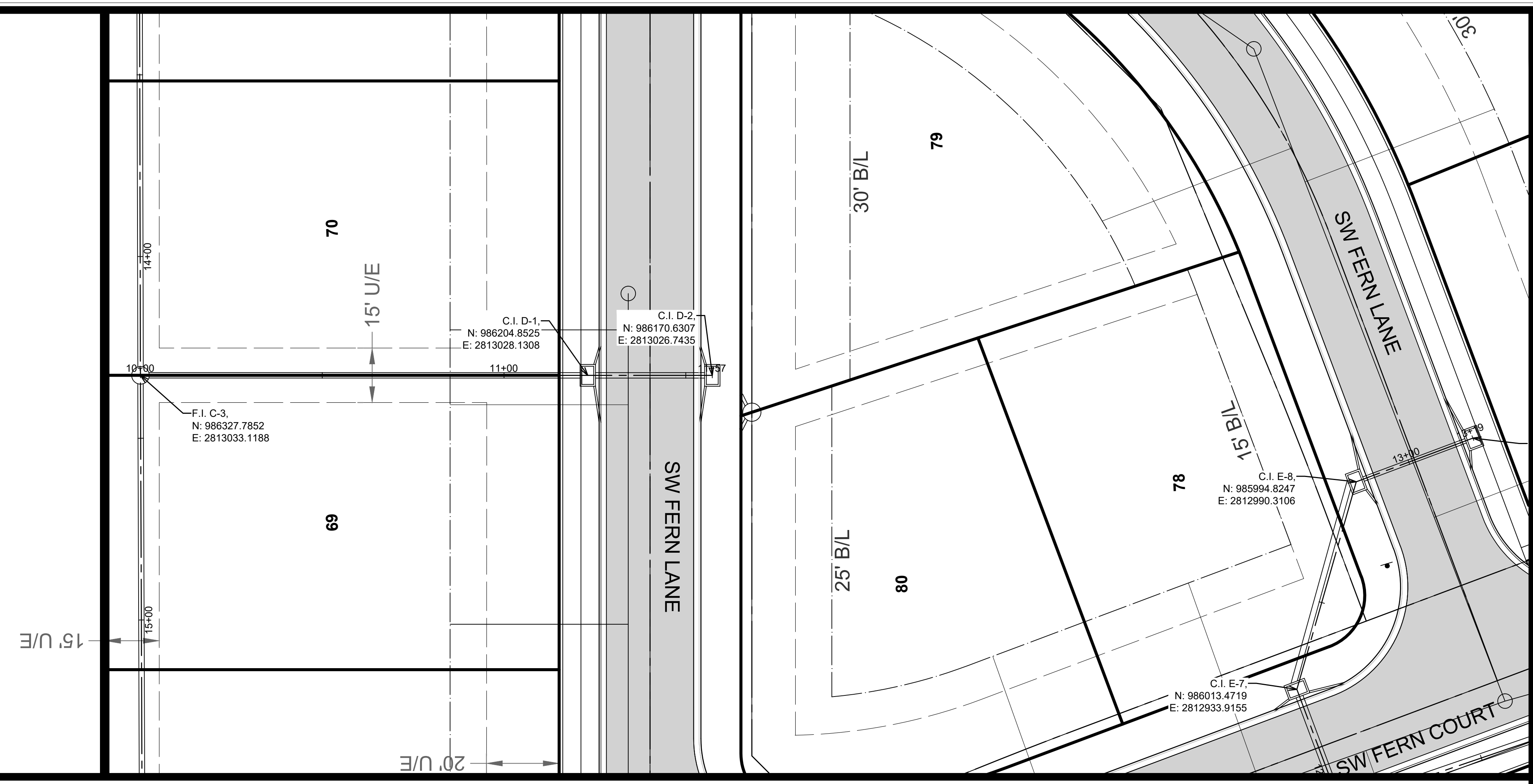
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NOTE:
CONTRACTOR SHALL FILL & COMPACT TO 95% STANDARD DENSITY TO A POINT 18" MINIMUM ABOVE TOP OF PIPE PRIOR TO EXCAVATION FOR THE PIPE.

FILL MATERIAL =



STORM LINE D

MARK	REVISION	DATE	BY
1	REVISION PER CITY COMMENTS	1/21/25	MT

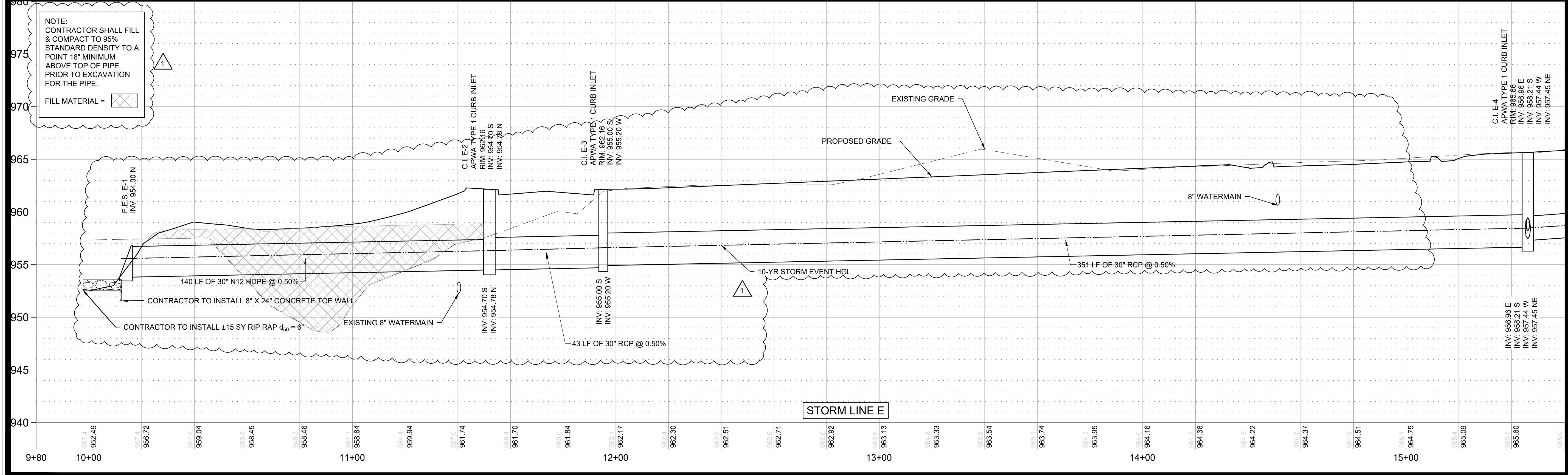
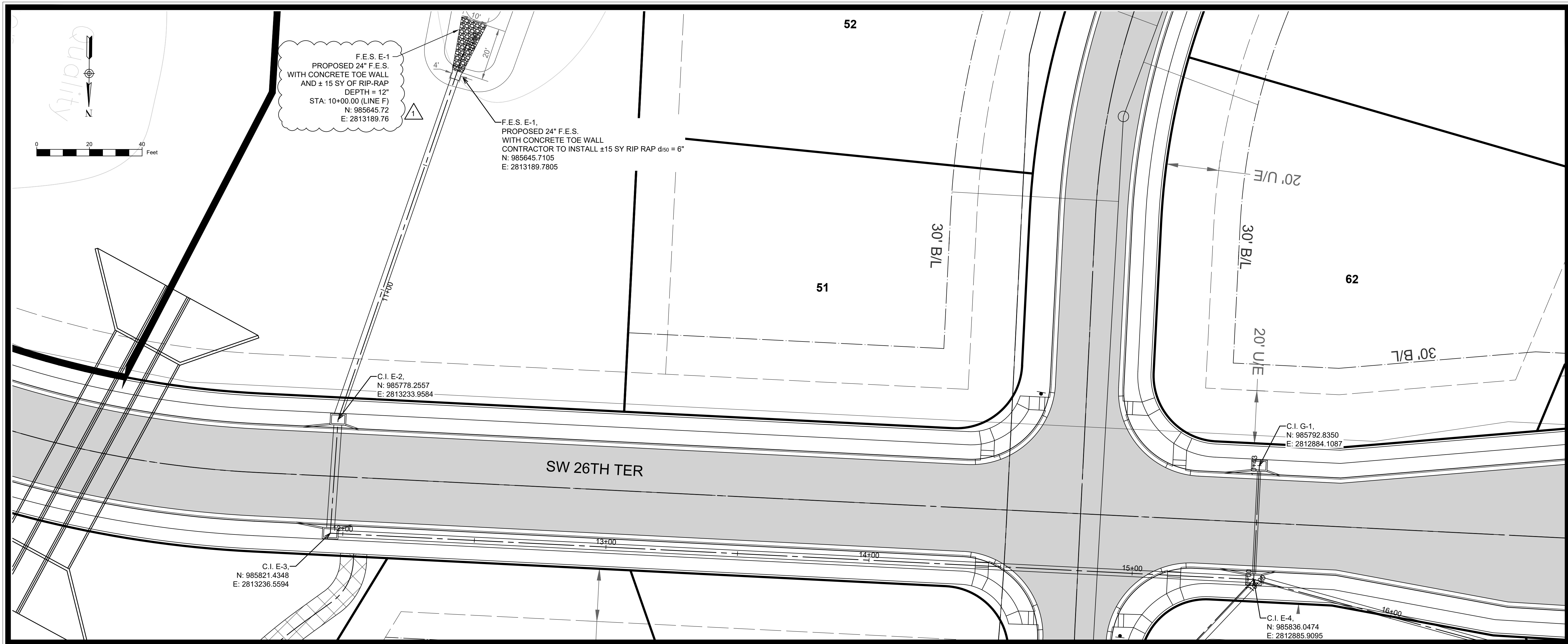
Engineer: SD Checked By: SD Scale: 1"= 20'
 Technician: JS Date: 3-18-21 Field Bk: Pg: 17

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MO PE#2013006489

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MARK	REVISION	DATE	BY
1	REVISION PER CITY COMMENTS	1/21/25	MT

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

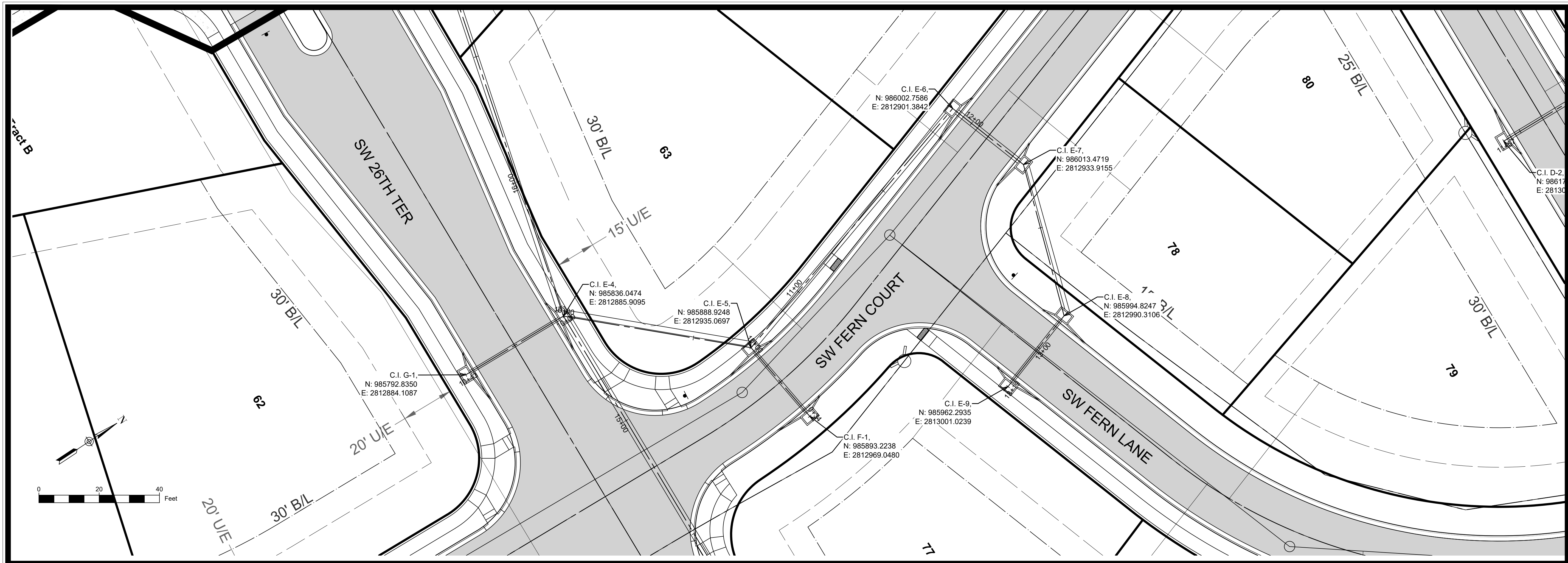
SHAWN DUKE - ENGINEER
 MO PE#2013006489

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 802 FRANCIS STREET
 ST. JOSEPH, MO 64501
 816-364-5222

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 STREET & STORM SEWER PLANS
 STORM PLAN & PROFILE
SNYDER & ASSOCIATES
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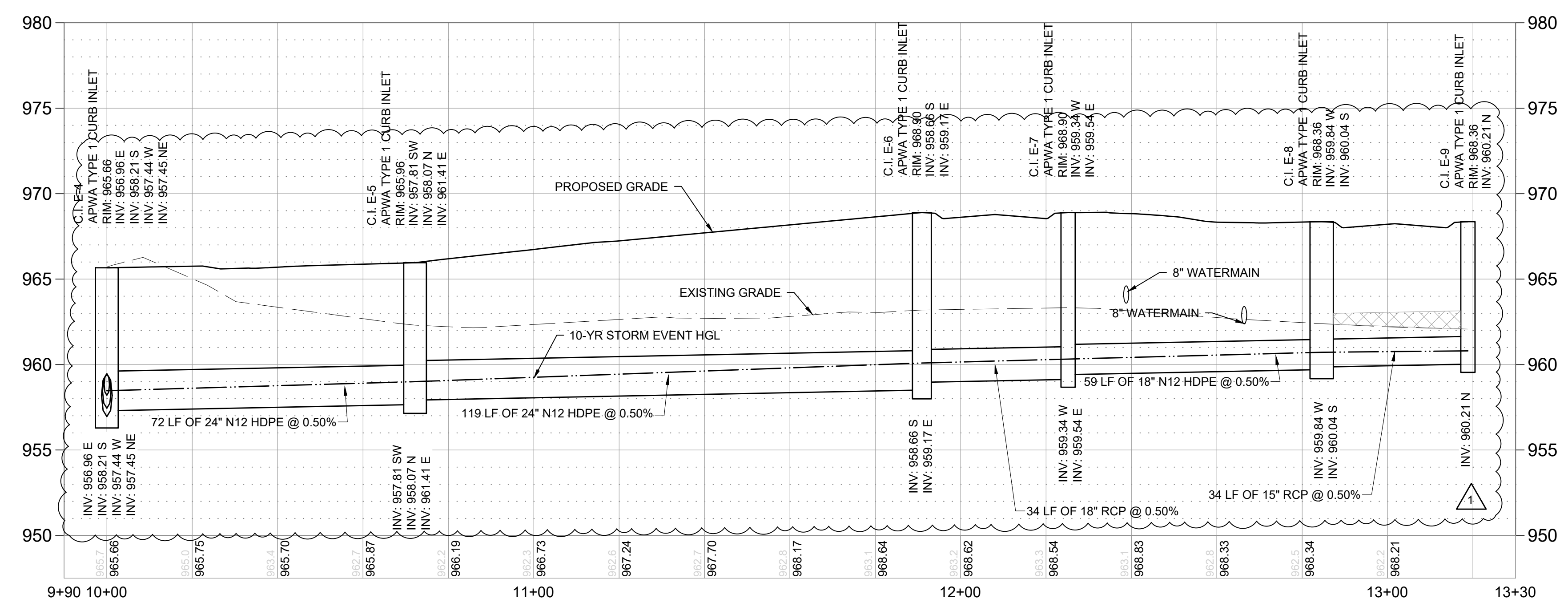
SNYDER & ASSOCIATES

Project No: 1200485.11
 Sheet 18



NOTE:
 CONTRACTOR SHALL FILL & COMPACT TO 95% STANDARD DENSITY TO A POINT 18" MINIMUM ABOVE TOP OF PIPE PRIOR TO EXCAVATION FOR THE PIPE.

FILL MATERIAL =



STORM LINE E

MT	REVISION PER CITY COMMENTS	DATE	BY
1/21/25 <td></td> <td></td> <td></td>			

Engineer: SD
 Checked By: SD
 Date: 3-18-21
 Scale: 1"=20'
 Field Bk: 19

SHAWN DUKE - ENGINEER
 MO PE#2013006489

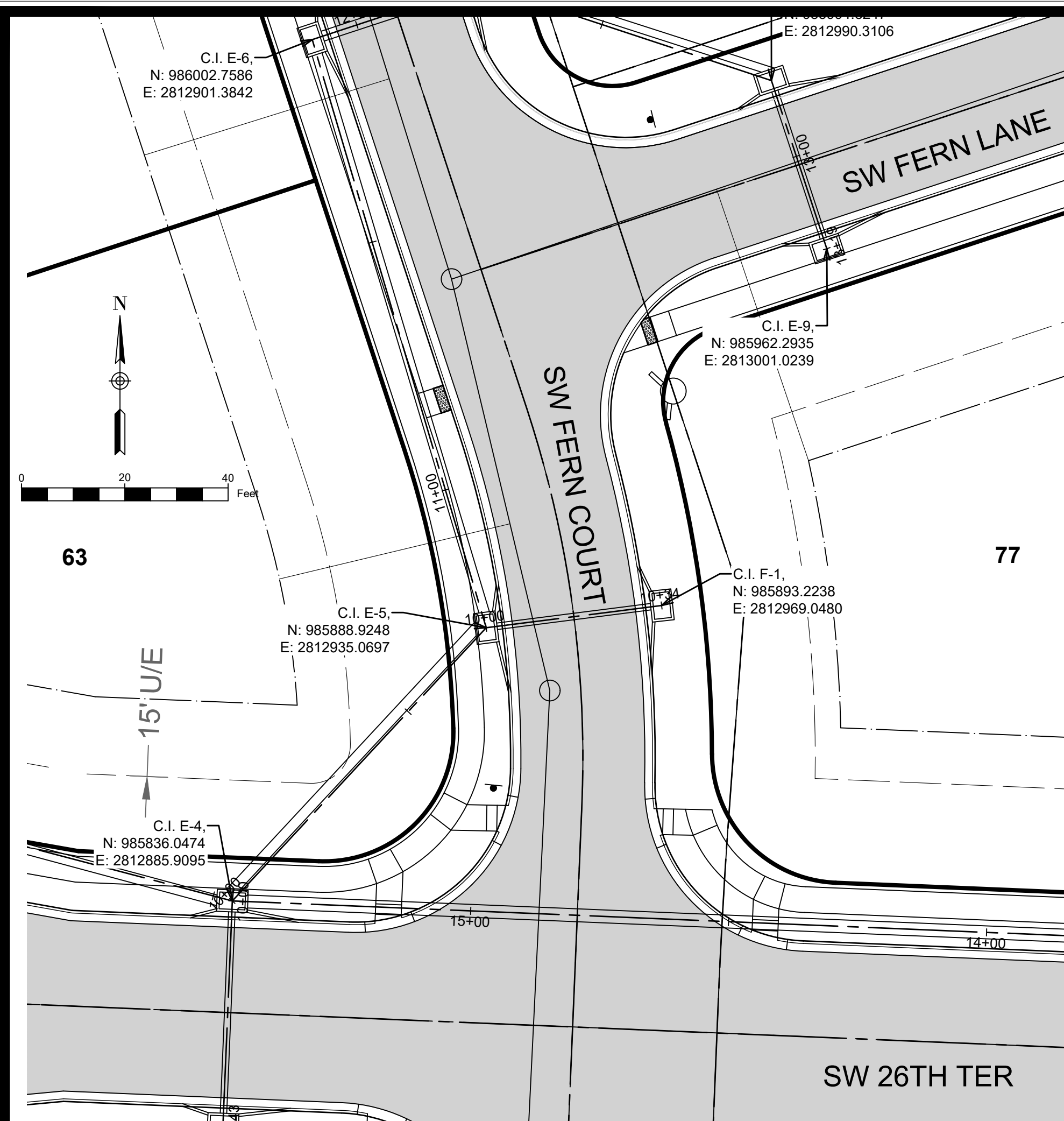
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 802 FRANCIS STREET
 ST. JOSEPH, MO 64501
 816-364-5222

WHISPERING WOODS 3RD PLAT
 STREET & STORM SEWER PLANS

STORM PLAN & PROFILE

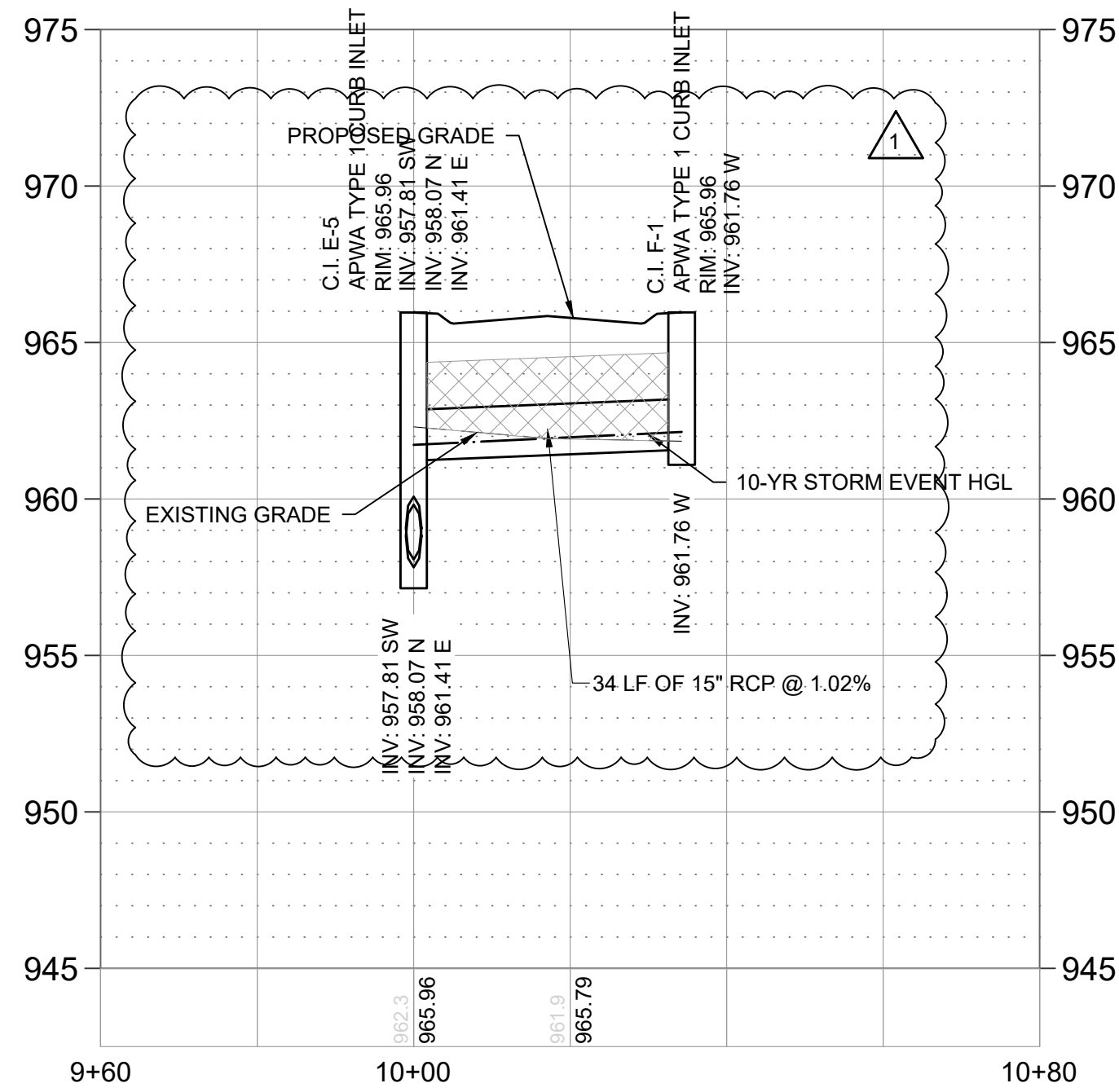
SNYDER & ASSOCIATES
 ENGINEERS & PLANNERS, INC.
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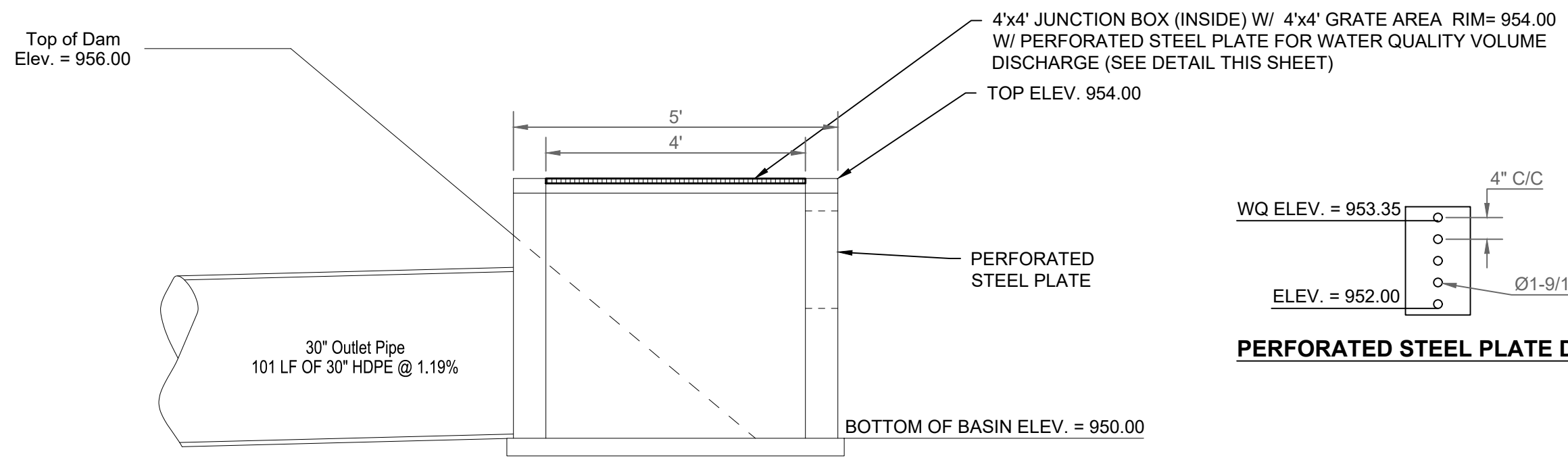
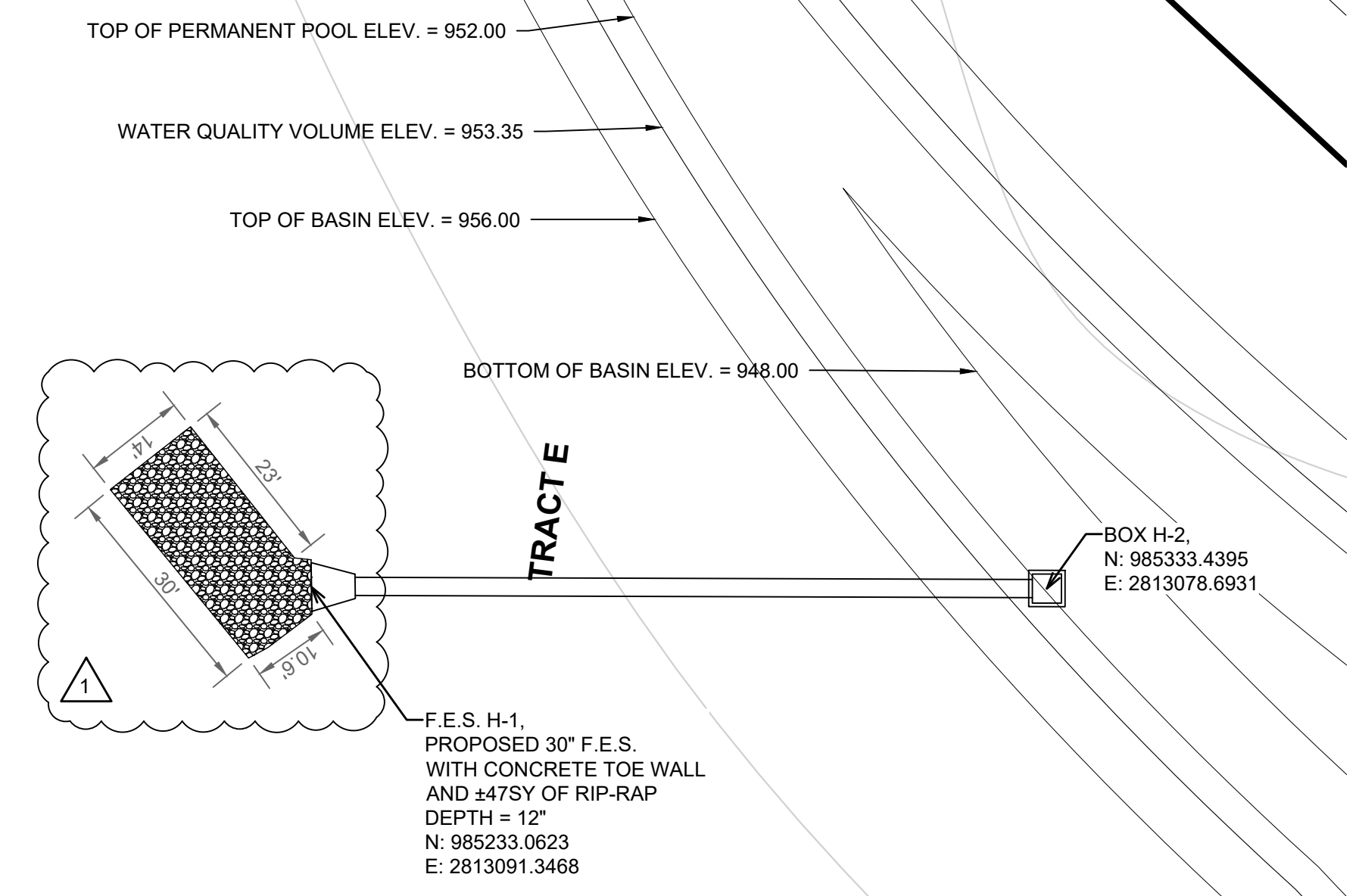


NOTE:
CONTRACTOR SHALL FILL & COMPACT TO 95% STANDARD DENSITY TO A POINT 18" MINIMUM ABOVE TOP OF PIPE PRIOR TO EXCAVATION FOR THE PIPE.

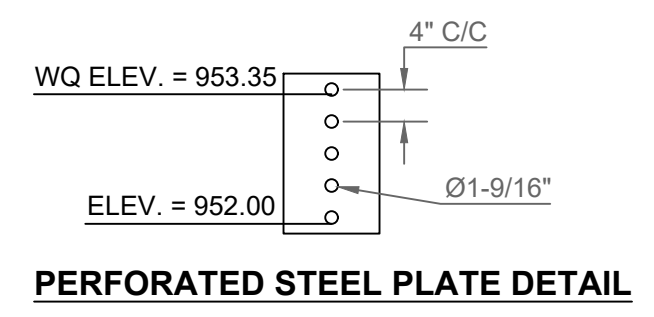
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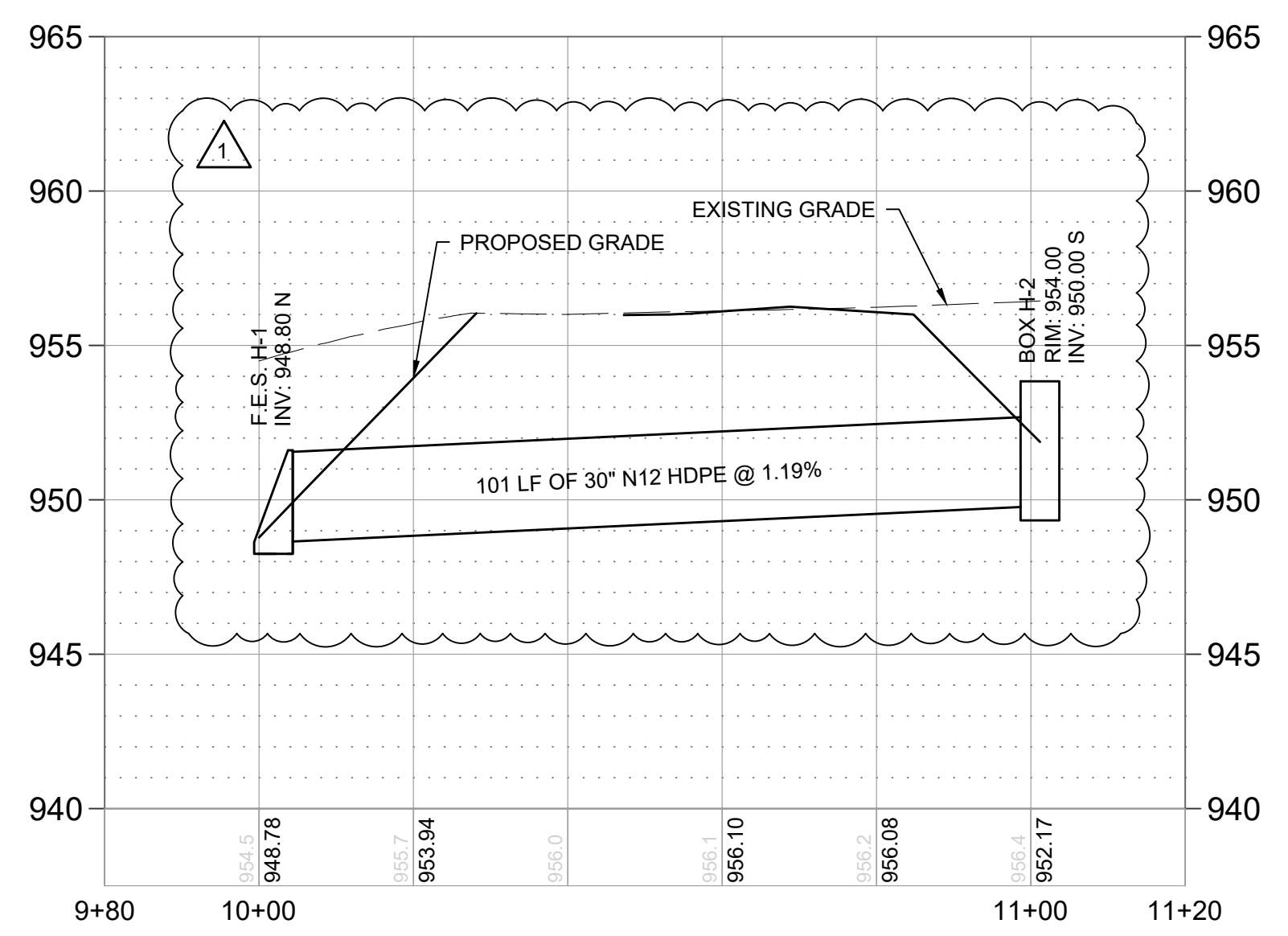
STORM LINE F



DETENTION BASIN OUTFALL DETAIL



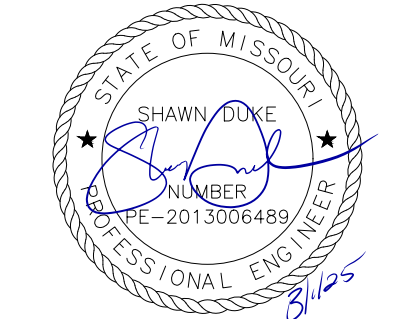
PERFORATED STEEL PLATE DETAIL



STORM LINE H

MARK	REVISION	DATE	BY
1	REVISION PER CITY COMMENTS	1/21/25	MT

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



SHAWN DUKE - ENGINEER
MO PE#2013006489

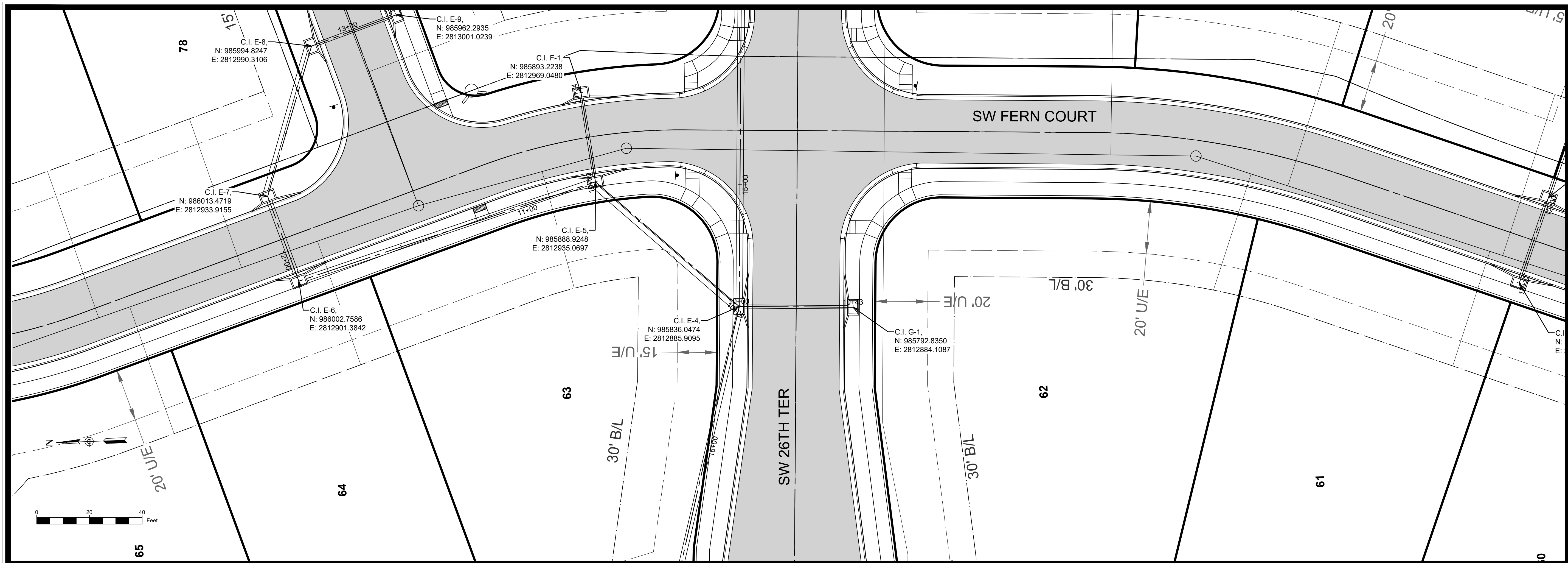
LEE'S SUMMIT, MO
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WHISPERING WOODS 3RD PLAT
STREET & STORM SEWER PLANS
STORM PLAN & PROFILE
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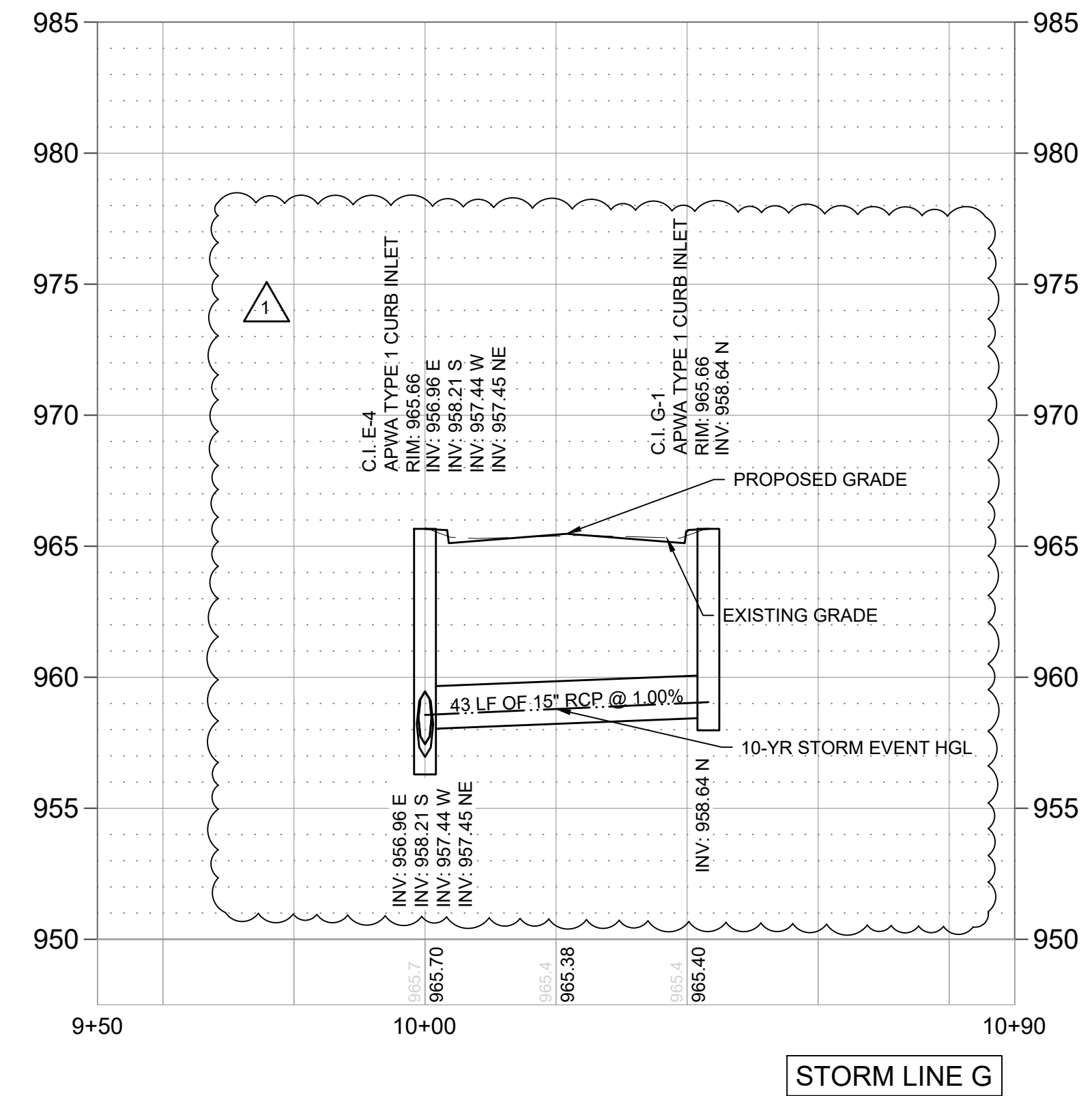
Project No: 1200485.11

Sheet 20



NOTE:
CONTRACTOR SHALL FILL & COMPACT TO 95% STANDARD DENSITY TO A POINT 18" MINIMUM ABOVE TOP OF PIPE PRIOR TO EXCAVATION FOR THE PIPE.

FILL MATERIAL =



MARK	REVISION	DATE	BY
1	REVISION PER CITY COMMENTS	1/21/25	MT

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

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Missouri State Certificate of Authority #200606544

STATE OF MISSOURI
SHAWN DUKE
REGISTERED PROFESSIONAL ENGINEER
NO. 2013006489

SHAWN DUKE - ENGINEER
MO PE#2013006489

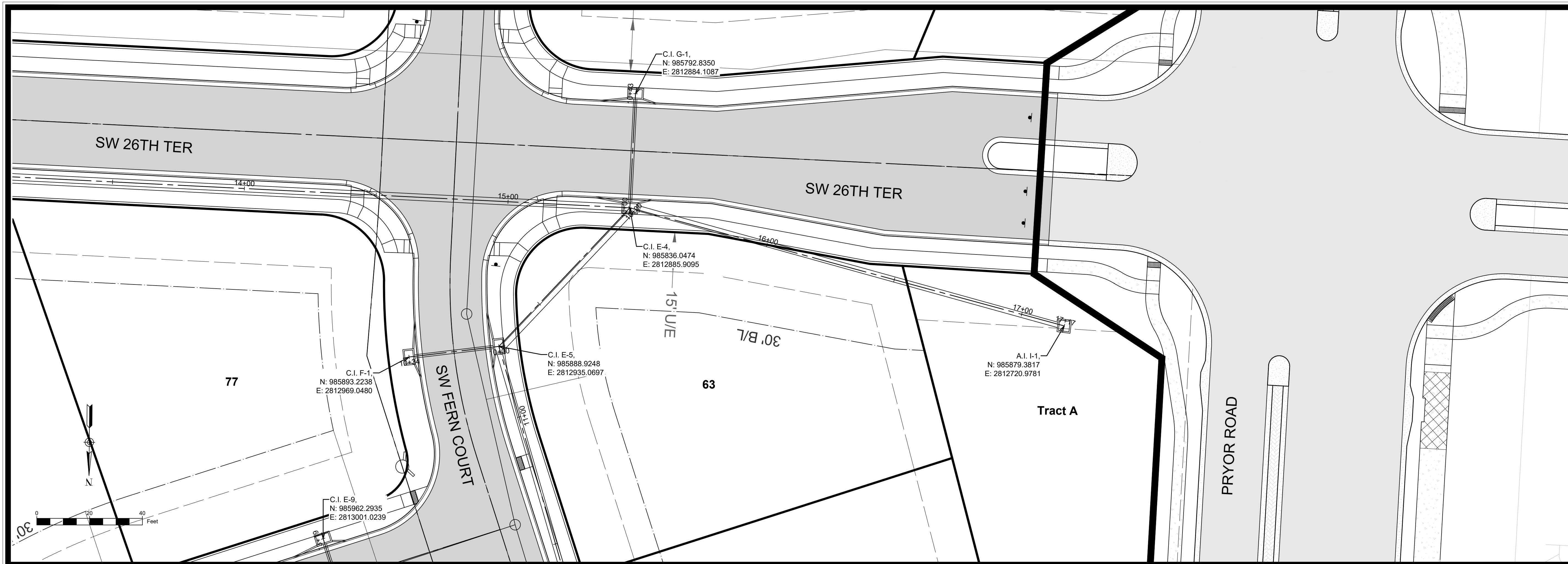
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816-364-5222

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STREET & STORM SEWER PLANS

STORM PLAN & PROFILE

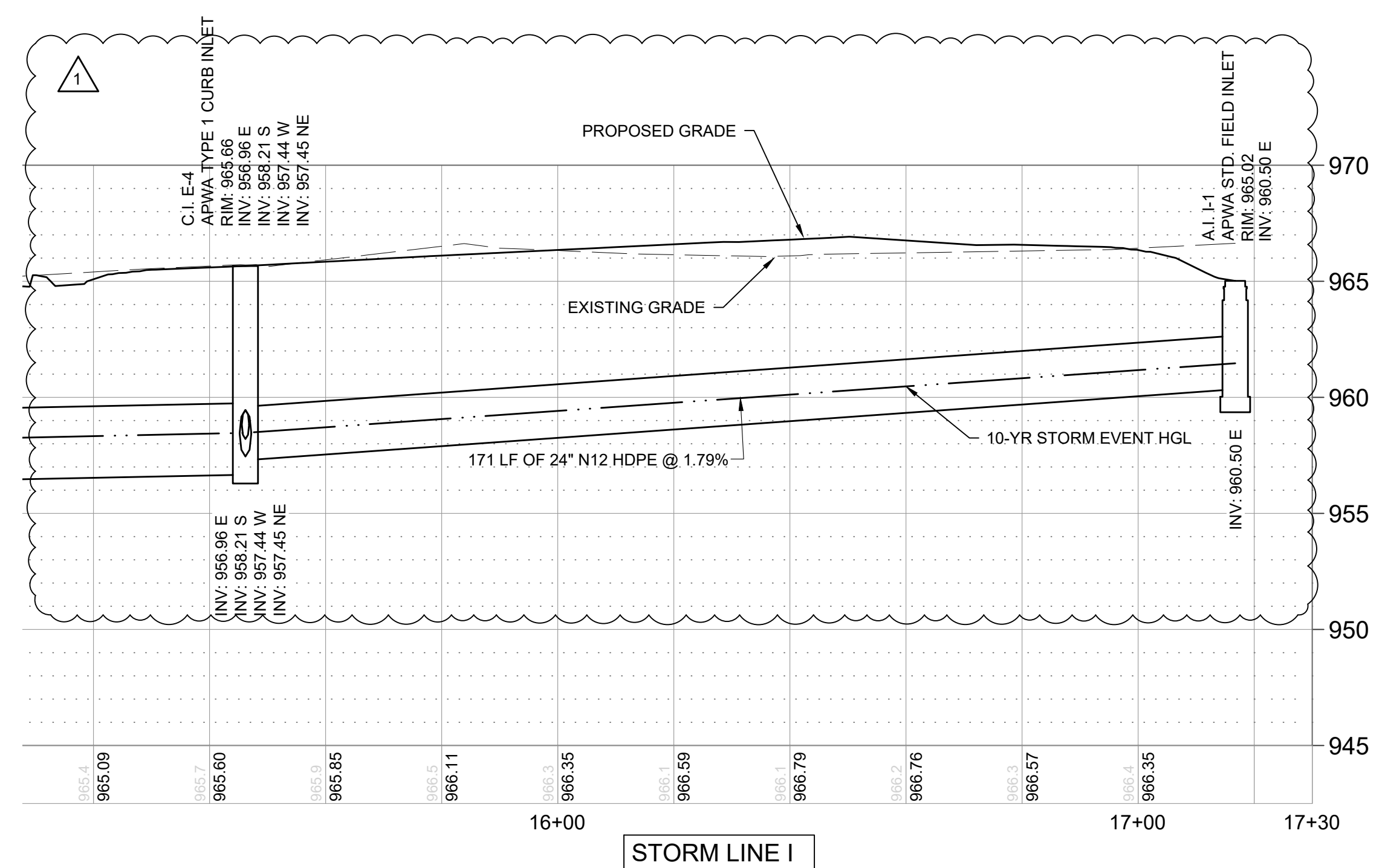
SNYDER & ASSOCIATES
ENGINEERS & PLANNERS, INC.
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NOTE:
 CONTRACTOR SHALL FILL & COMPACT TO 95% STANDARD DENSITY TO A POINT 18" MINIMUM ABOVE TOP OF PIPE PRIOR TO EXCAVATION FOR THE PIPE.

FILL MATERIAL =



STORM LINE I

MARK	REVISION	DATE	BY
1	REVISION PER CITY COMMENTS	1/21/25	MT

Engineer: SD Checked By: SD Scale: 1"= 20'
 Technician: JS Date: 3-18-21 Field Bk: Pg: 22

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 Missouri State Certificate of Authority #200606544



SHAWN DUKE - ENGINEER
 MO PE#2013006489

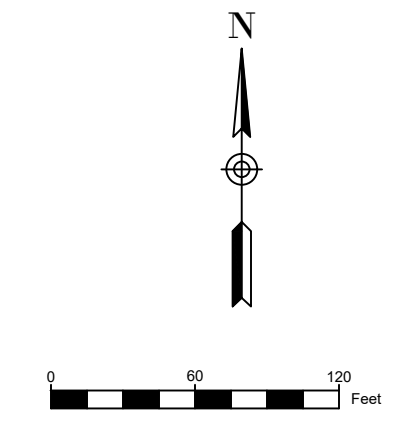
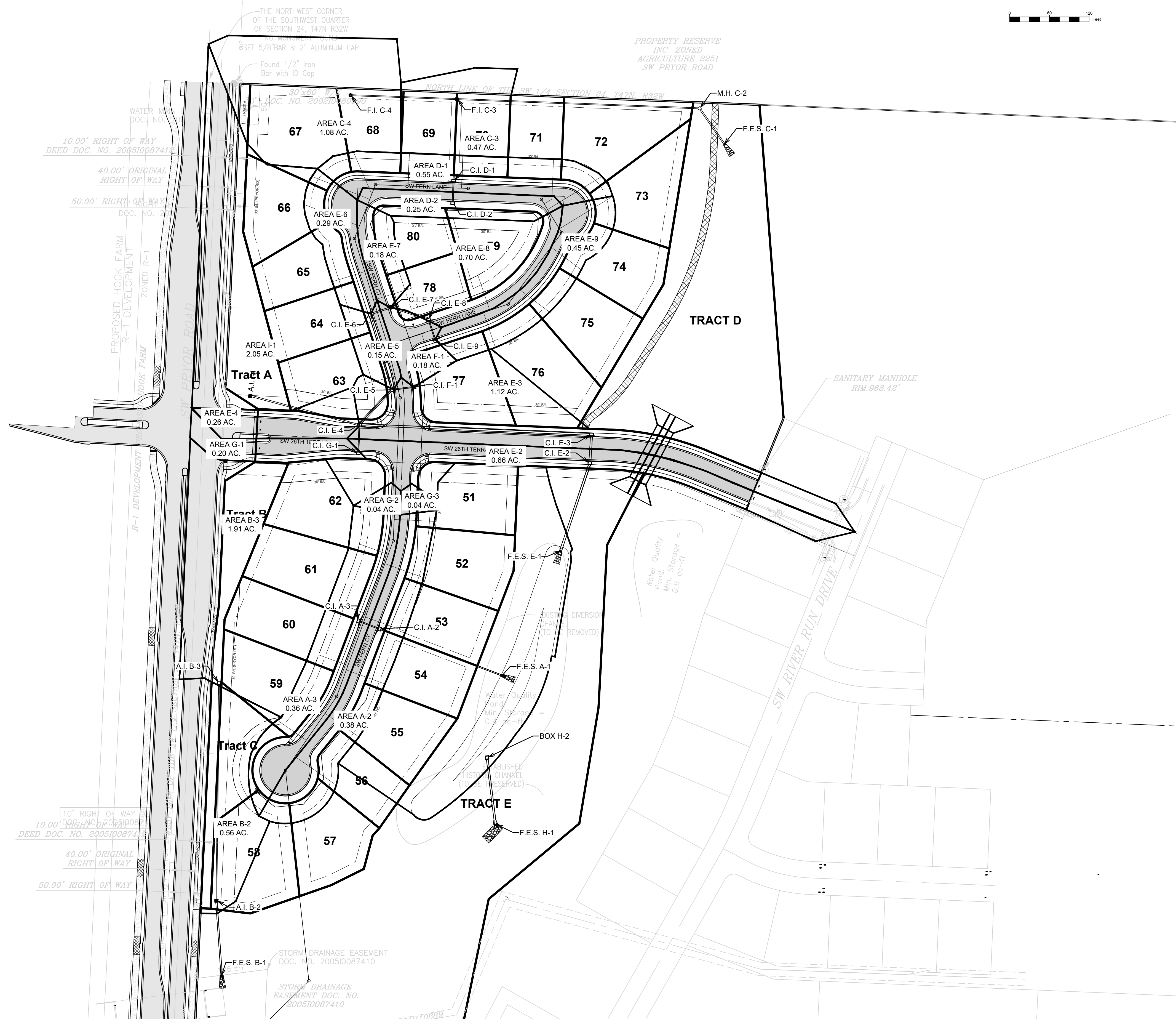
LEE'S SUMMIT, MO
 802 FRANCIS STREET
 ST. JOSEPH, MO 64501
 816-364-5222

WHISPERING WOODS 3RD PLAT
 STREET & STORM SEWER PLANS

STORM PLAN & PROFILE

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MARK	REVISION	DATE	BY
Engineer: SD	Checked By: SD	Scale: 1"= 60'	
Technician: JS	Date: 3-18-20	Field Bk:	

SHAWN DUKE - ENGINEER
 MO PE#2013006489

LEE'S SUMMIT, MO
 802 FRANCIS STREET
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**WHISPERING WOODS 3RD PLAT
 STREET & STORM SEWER PLANS**
 DRAINAGE AREAS
SNYDER & ASSOCIATES
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10 YEAR STORM

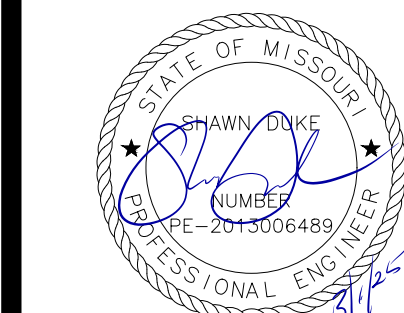
Label	Start Node	System Drainage Area (acres)	Invert (Start) (ft)	Stop Node	Invert (Stop) (ft)	Length (User Defined) (ft)	Slope (Calculated) (ft/ft)	Section Type	Diameter (in)	Flow (cfs)	Velocity (ft/s)	Capacity (Full Flow) (cfs)	Flow / Capacity (Design) (%)	Hydraulic Grade Line (In) (ft)	Hydraulic Grade Line (Out) (ft)	System Intensity (in/h)	Manning's n
A-3 - A-2	CI A-3	0.68	958.50	CI A-2	957.75	32	0.023	Circle	15	3.09	7.12	9.89	31.30	959.21	958.24	7.392	0.013
A-2 - A-1	CI A-2	1.36	957.25	FESA-1	955.50	198	0.009	Circle	18	6.13	5.89	9.87	62.10	958.21	956.36	9.324	0.013
G-1 - E-4	CI G-1	0.28	958.64	CI E-4	958.21	43	0.010	Circle	15	1.10	3.93	6.46	17.10	959.05	958.56	7.400	0.013
E-4 - E-3	CI E-4	4.36	956.96	CI E-3	955.20	351	0.005	Circle	30	17.53	6.19	29.04	60.40	958.38	956.60	6.972	0.013
E-3 - E-2	CI E-3	5.48	955.00	CI E-2	954.78	43	0.005	Circle	36	21.81	6.60	47.71	45.70	956.50	956.33	6.739	0.013
E-2 - E-1	CI E-2	6.14	954.70	FESE-1	954.00	140	0.005	Circle	36	25.52	6.80	47.16	54.10	956.33	955.57	6.711	0.013
E-5 - E-4	CI E-5	1.95	957.81	CI E-4	957.45	72	0.005	Circle	24	8.31	5.14	16.00	52.00	958.84	958.47	7.048	0.013
F-1 - E-5	CI F-1	0.18	961.76	CI E-5	961.41	34	0.010	Circle	15	0.95	3.81	6.55	14.50	962.14	961.73	7.400	0.013
E-6 - E-5	CI E-6	1.62	958.66	CI E-5	958.07	119	0.005	Circle	24	6.91	4.89	15.93	43.40	959.59	958.99	7.205	0.013
E-7 - E-6	CI E-7	1.33	959.03	CI E-6	958.86	34	0.005	Circle	18	5.64	4.62	7.43	75.90	960.32	960.09	7.253	0.013
E-8 - E-7	CI E-8	1.15	959.53	CI E-7	959.23	59	0.005	Circle	18	4.88	4.51	7.49	65.10	960.72	960.39	7.339	0.013
E-9 - E-8	CI E-9	0.45	960.20	CI E-8	960.03	34	0.005	Circle	15	2.05	3.62	4.57	44.80	960.80	960.72	7.400	0.013
D-2 - D-1	CI D-2	0.25	967.66	CI D-1	966.98	34	0.020	Circle	15	1.25	5.21	9.14	13.70	968.10	967.50	7.400	0.013
D-1 - C-4	CI D-1	0.80	966.73	FI C-3	965.40	123	0.011	Circle	15	3.61	5.57	6.72	53.70	967.50	966.05	7.357	0.013
C-4 - C-3	FI C-4	1.08	966.25	FI C-3	964.64	161	0.010	Circle	24	4.10	5.47	22.62	18.10	966.96	965.73	7.400	0.013
C-2 - C-1	MHC-2	2.35	960.97	FESC-1	960.31	66	0.010	Circle	24	8.91	6.77	22.62	39.40	962.04	961.18	6.911	0.013
I-1 - E-4	AI I-1	1.87	960.50	CI E-4	957.44	171	0.018	Circle	24	7.92	7.99	30.26	24.90	961.47	958.12	7.400	0.013
B-2 - B-1	MHB-2	2.46	951.34	FESB-1	950.50	113	0.007	Circle	24	9.44	6.16	19.50	48.40	952.44	951.48	7.052	0.013
B-3 - B-2	AI B-3	1.91	955.00	MHB-2	951.34	329	0.009	Circle	18	7.69	6.17	9.86	77.90	956.07	953.10	7.400	0.013
C-3 - C-2	FI C-3	2.35	964.64	MHC-2	960.97	367	0.010	Circle	24	9.29	6.85	22.62	41.10	965.73	961.86	7.208	0.013

100 YEAR STORM

Label	Start Node	System Drainage Area (acres)	Invert (Start) (ft)	Stop Node	Invert (Stop) (ft)	Length (User Defined) (ft)	Slope (Calculated) (ft/ft)	Section Type	Diameter (in)	Flow (cfs)	Velocity (ft/s)	Capacity (Full Flow) (cfs)	Flow / Capacity (Design) (%)	Hydraulic Grade Line (In) (ft)	Hydraulic Grade Line (Out) (ft)	System Intensity (in/h)	Manning's n
A-3 - A-2	CI A-3	0.68	958.50	CI A-2	957.75	32	0.023	Circle	15	4.26	7.76	9.89	43.10	959.34	958.35	10.200	0.013
A-2 - A-1	CI A-2	1.36	957.25	FESA-1	955.50	198	0.009	Circle	18	8.46	6.28	9.87	85.70	958.38	956.57	11.184	0.013
G-1 - E-4	CI G-1	0.28	958.64	CI E-4	958.21	43	0.010	Circle	15	1.52	4.30	6.46	23.60	959.13	958.75	10.204	0.013
E-4 - E-3	CI E-4	4.36	956.96	CI E-3	955.20	351	0.005	Circle	30	25.11	6.66	29.04	86.40	958.75	956.91	9.985	0.013
E-3 - E-2	CI E-3	5.48	955.00	CI E-2	954.78	43	0.005	Circle	36	31.21	7.19	47.71	65.40	956.81	956.68	9.641	0.013
E-2 - E-1	CI E-2	6.14	954.70	FESE-1	954.00	140	0.005	Circle	36	36.52	7.37	47.16	77.40	956.68	955.97	9.602	0.013
E-5 - E-4	CI E-5	1.95	957.81	CI E-4	957.45	72	0.005	Circle	24	11.84	5.57	16.00	74.00	959.09	958.75	10.035	0.013
F-1 - E-5	CI F-1	0.18	961.76	CI E-5	961.41	34	0.010	Circle	15	1.31	4.17	6.55	20.00	962.21	961.79	10.204	0.013
E-6 - E-5	CI E-6	1.62	958.66	CI E-5	958.07	119	0.005	Circle	24	9.69	5.32	15.93	60.80	959.79	959.18	10.110	0.013
E-7 - E-6	CI E-7	1.33	959.03	CI E-6	958.86	34	0.005	Circle	18	7.88	4.74	7.43	106.10	960.58	960.26	10.134	0.013
E-8 - E-7	CI E-8	1.15	959.53	CI E-7	959.23	59	0.005	Circle	18	6.76	4.80	7.49	90.30	960.95	960.58	10.175	0.013
E-9 - E-8	CI E-9	0.45	960.20	CI E-8	960.03	34	0.005	Circle	15	2.82	3.92	4.57	61.80	961.00	960.95	10.204	0.013
D-2 - D-1	CI D-2	0.25	967.66	CI D-1	966.98	34	0.020	Circle	15	1.72	5.72	9.14	18.90	968.18	967.64	10.204	0.013
D-1 - C-4	CI D-1	0.80	966.73	FI C-3	965.40	123	0.011	Circle	15	4.99	5.99	6.72	74.40	967.64	966.20	10.184	0.013
C-4 - C-3	FI C-4	1.08	966.25	FI C-3	964.64	161	0.010	Circle	24	5.66	5.99	22.62	25.00	967.09	965.94	10.204	0.013
C-2 - C-1	MHC-2	2.35	960.97	FESC-1	960.31	66	0.010	Circle	24	12.76	7.42	22.62	56.40	962.26	961.39	9.903	0.013
I-1 - E-4	AI I-1	1.87	960.50	CI E-4	957.44	171	0.018	Circle	24	10.38	8.73	30.26	34.30	961.65	958.75	10.204	0.013
B-2 - B-1	MHB-2	2.46	951.34	FESB-1	950.50	113	0.007	Circle	24	13.43	6.69	19.50	68.80	952.66	951.72	10.027	0.013
B-3 - B-2	AI B-3	1.91	955.00	MHB-2	951.34	329	0.009	Circle	18	10.60	6.19	9.86	107.50	956.39	953.35	10.204	0.013
C-3 - C-2	FI C-3	2.35	964.64	MHC-2	960.97	367	0.010	Circle	24	13.03	7.46	22.62	57.60	965.94	962.06	10.114	0.013

INLET SPREAD TABLE

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	5.30
D-1L	0.12	0.51	7.35	0.4	0.56	0.012	2	0.6	4.82
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



SHAWN DUKE - ENGINEER
MO PE#2013006489

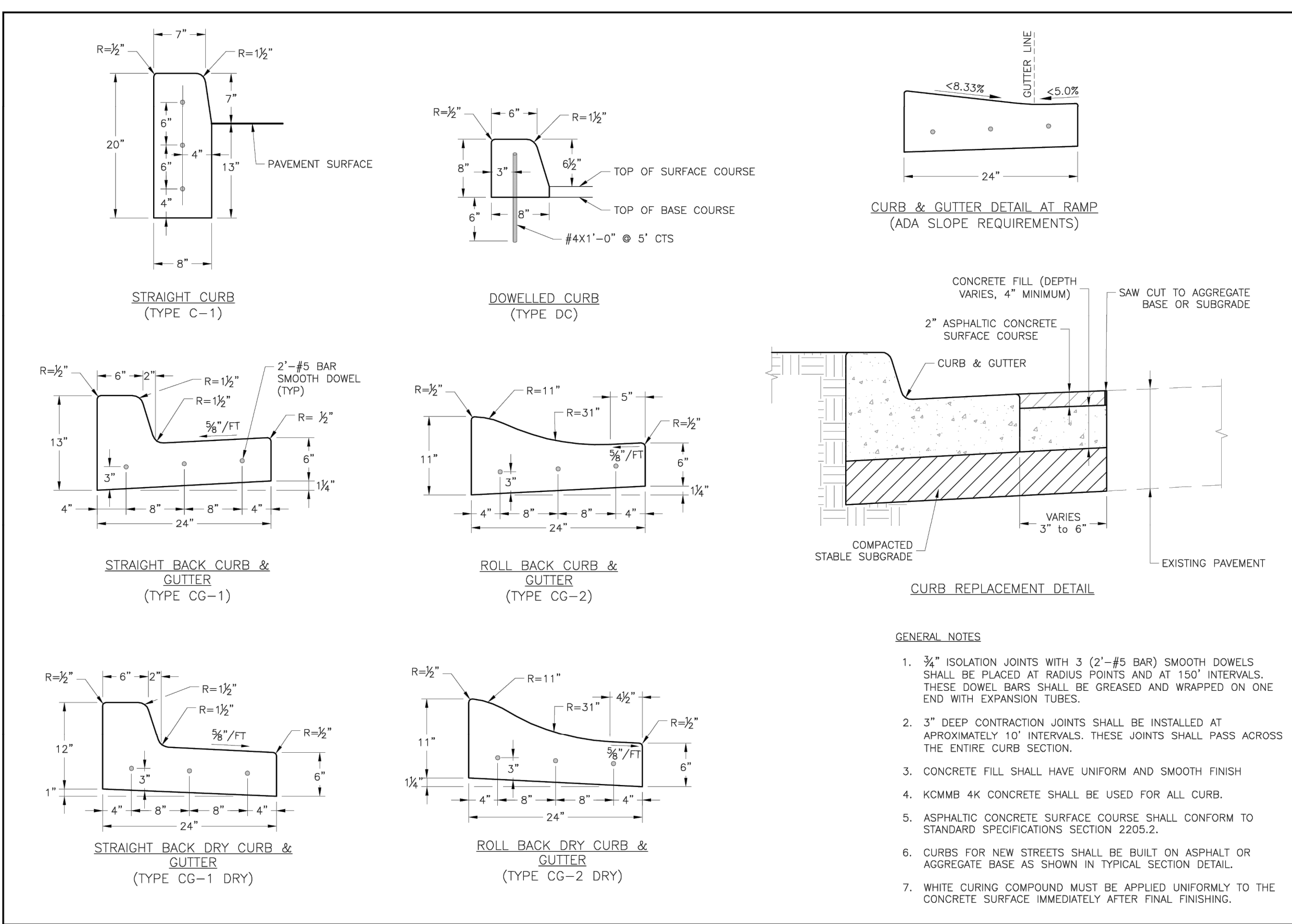
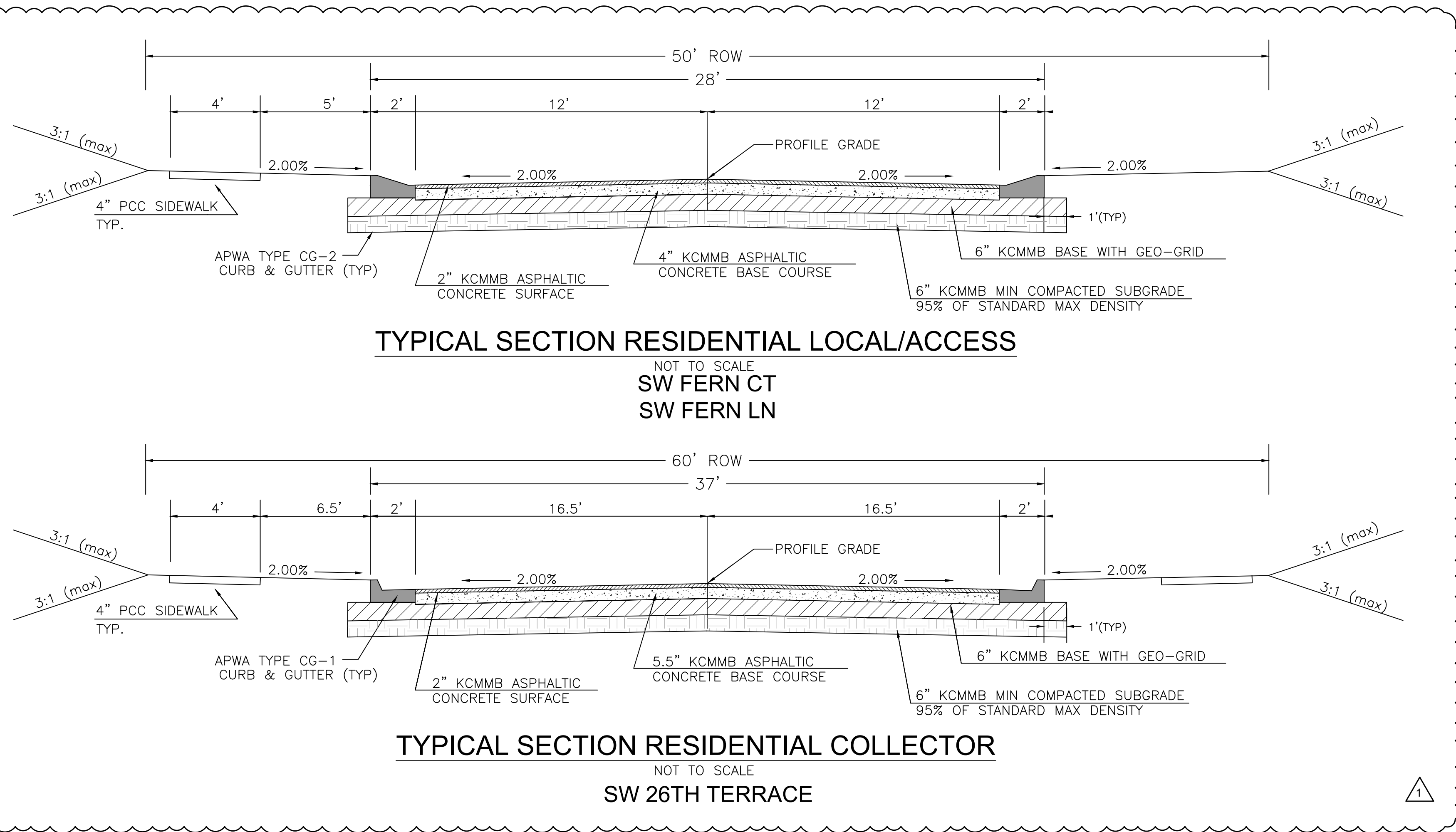
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WHISPERING WOODS 3RD PLAT
STREET & STORM SEWER PLANS
DRAINAGE TABLES
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Project No: 1200485.11

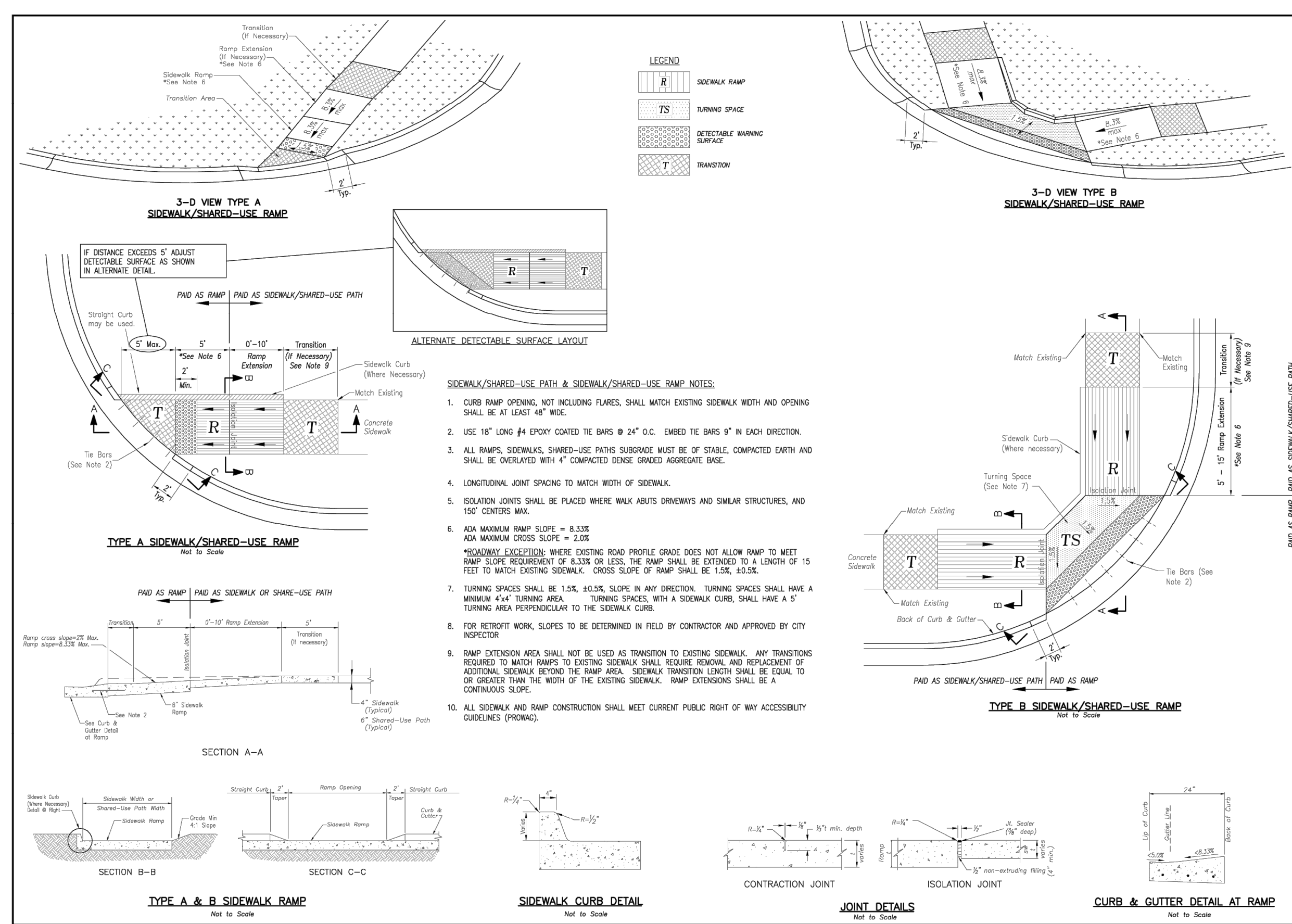
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1	REVISION PER CITY COMMENTS	1/21/25	MT
	Checked By: SD	Scale: 1"= N/A	
	Date: 3-02-21	Field Bk:	
Engineer: JS			Pg: 24
Technician: JS			Sheet
Snyder & Associates Engineers & Planners, Inc.			24
Missouri State Certificate of Authority #200000544			



LEE'S SUMMIT MISSOURI
 PUBLIC WORKS ENGINEERING DIVISION | 2205 S. GREEN STREET | LEE'S SUMMIT, MO 64063

STANDARD DETAILS
 CITY OF LEE'S SUMMIT, MO
 LEE'S SUMMIT, JACKSON COUNTY, MO
 CURB & GUTTER DETAIL

Drawn By: MRF
 Checked By: JLS
 Date: 06/17/24
 Proj #: GEN-4



LEE'S SUMMIT MISSOURI
 PUBLIC WORKS ENGINEERING DIVISION | 2205 S. GREEN STREET | LEE'S SUMMIT, MO 64063

STANDARD DETAILS
 CITY OF LEE'S SUMMIT, MO
 LEE'S SUMMIT, JACKSON COUNTY, MO
 ADA RAMP RETROFIT DETAIL

Drawn By: MRF
 Checked By: JLS
 Date: 06/17/24
 Proj #: GEN-3A

WHISPERING WOODS 3RD PLAT STREET & STORM SEWER PLANS

STREET & STORM DETAILS

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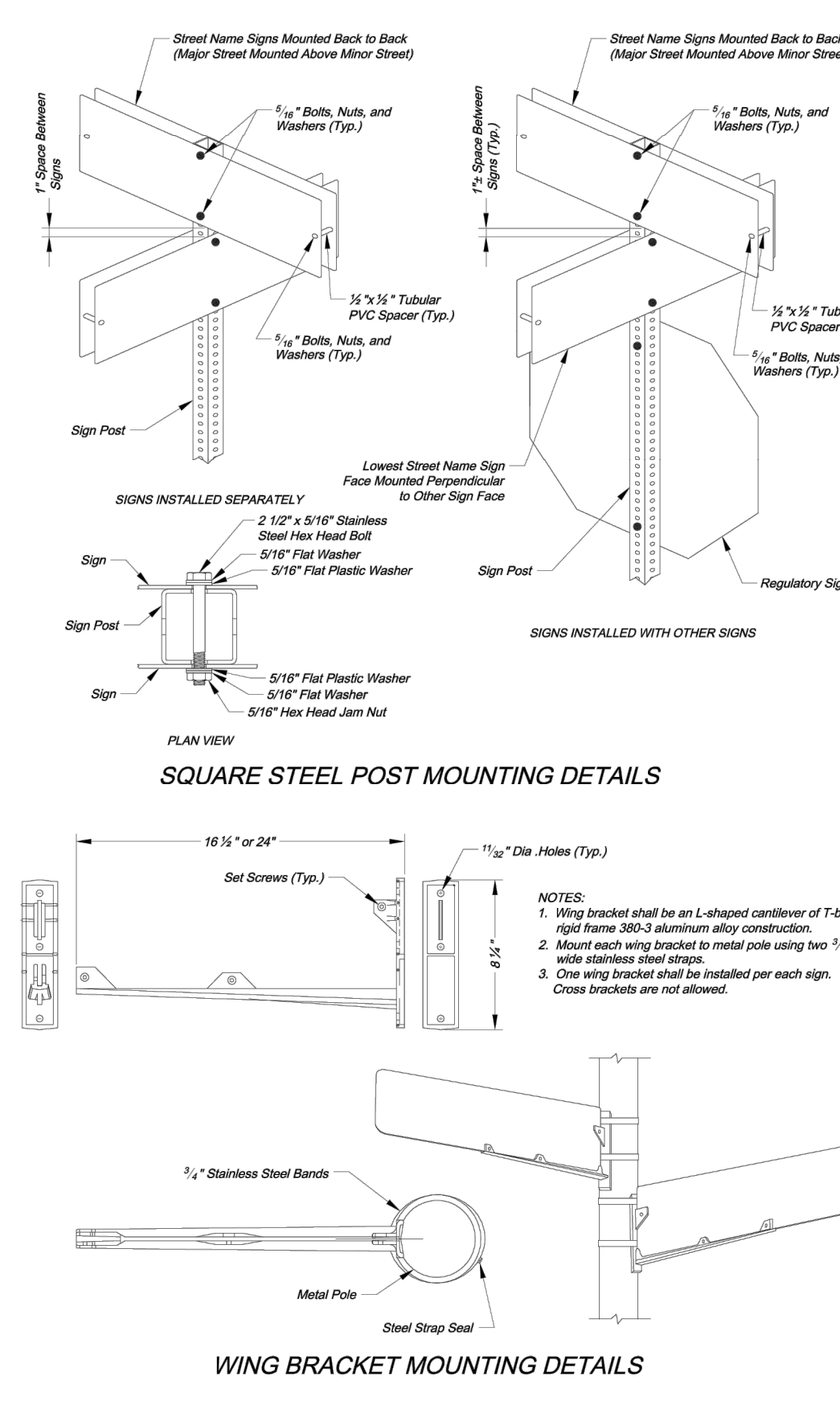
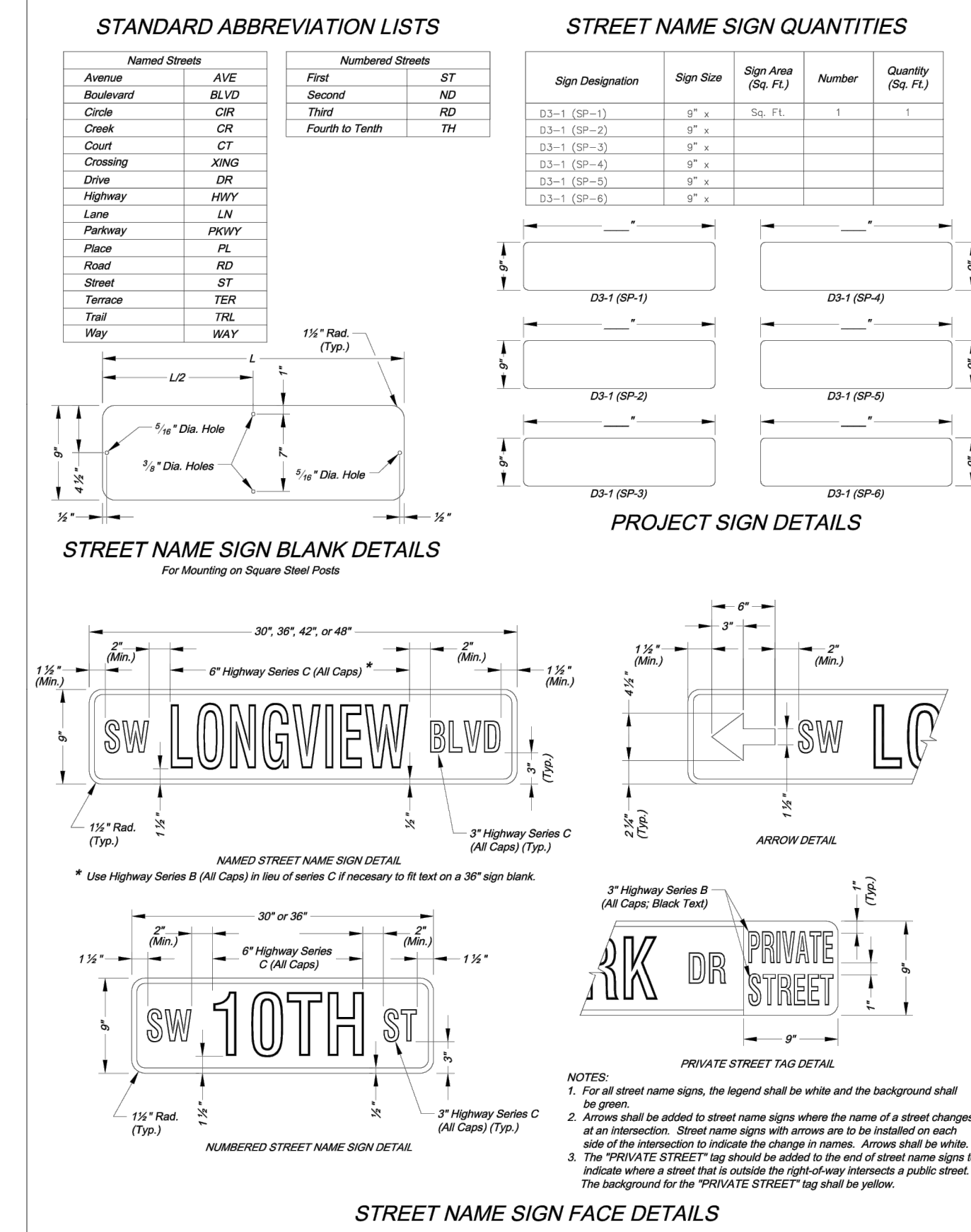
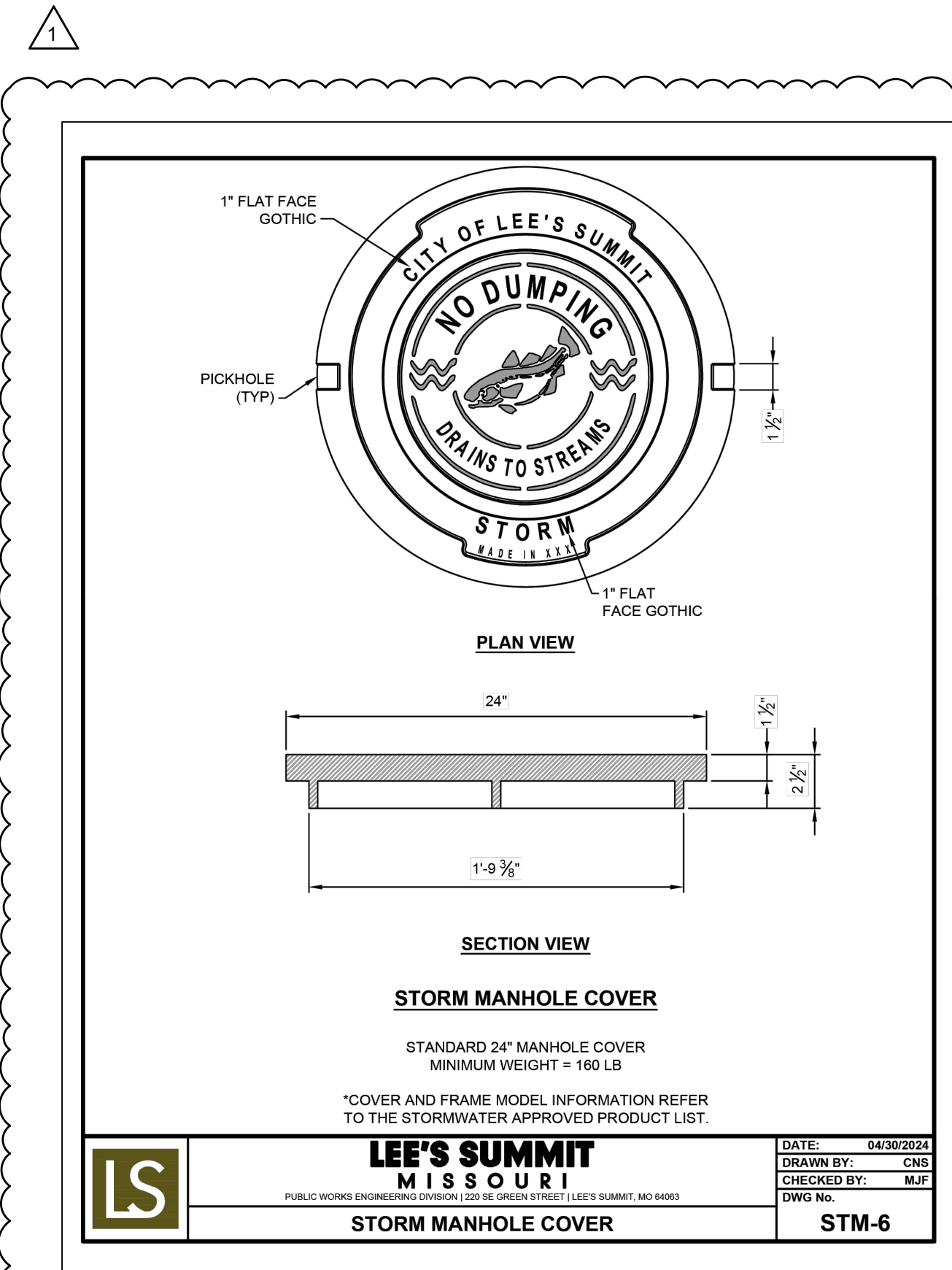
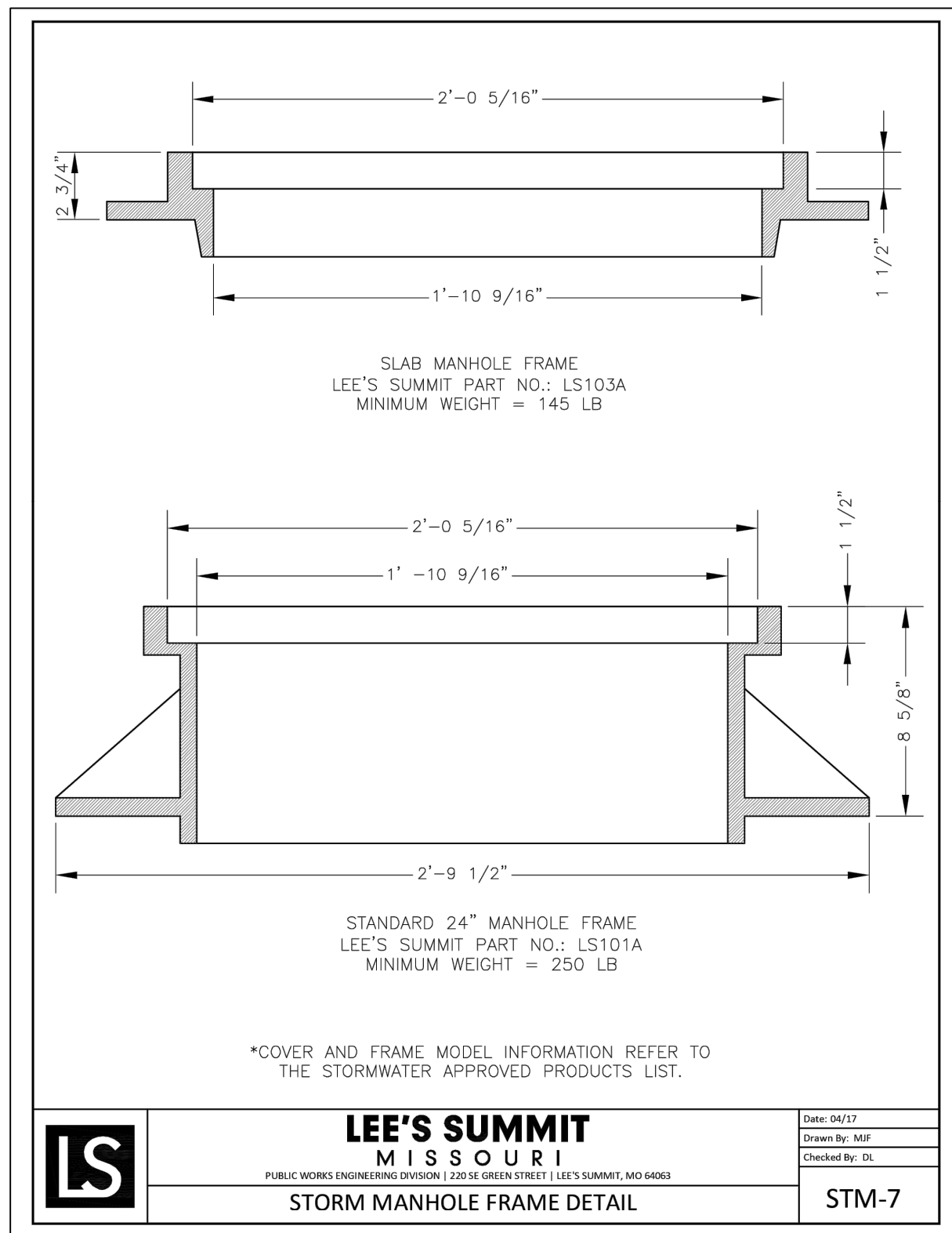
Project No: 1200485.11
 Sheet 25

REVISION PER CITY COMMENTS	DATE	BY
1	1/21/25	MT
MARK	REVISION	
Engineer: SD	Checked By: SD	Scale: 1"= N/A
Technician: JS	Date: 3-02-21	Field Bk:
Pg: 25		

Snyder & Associates Engineers & Planners, Inc.
 Missouri State Certificate of Authority #2006006544

SHAWN DUKE - ENGINEER
 MO PE#2013006489

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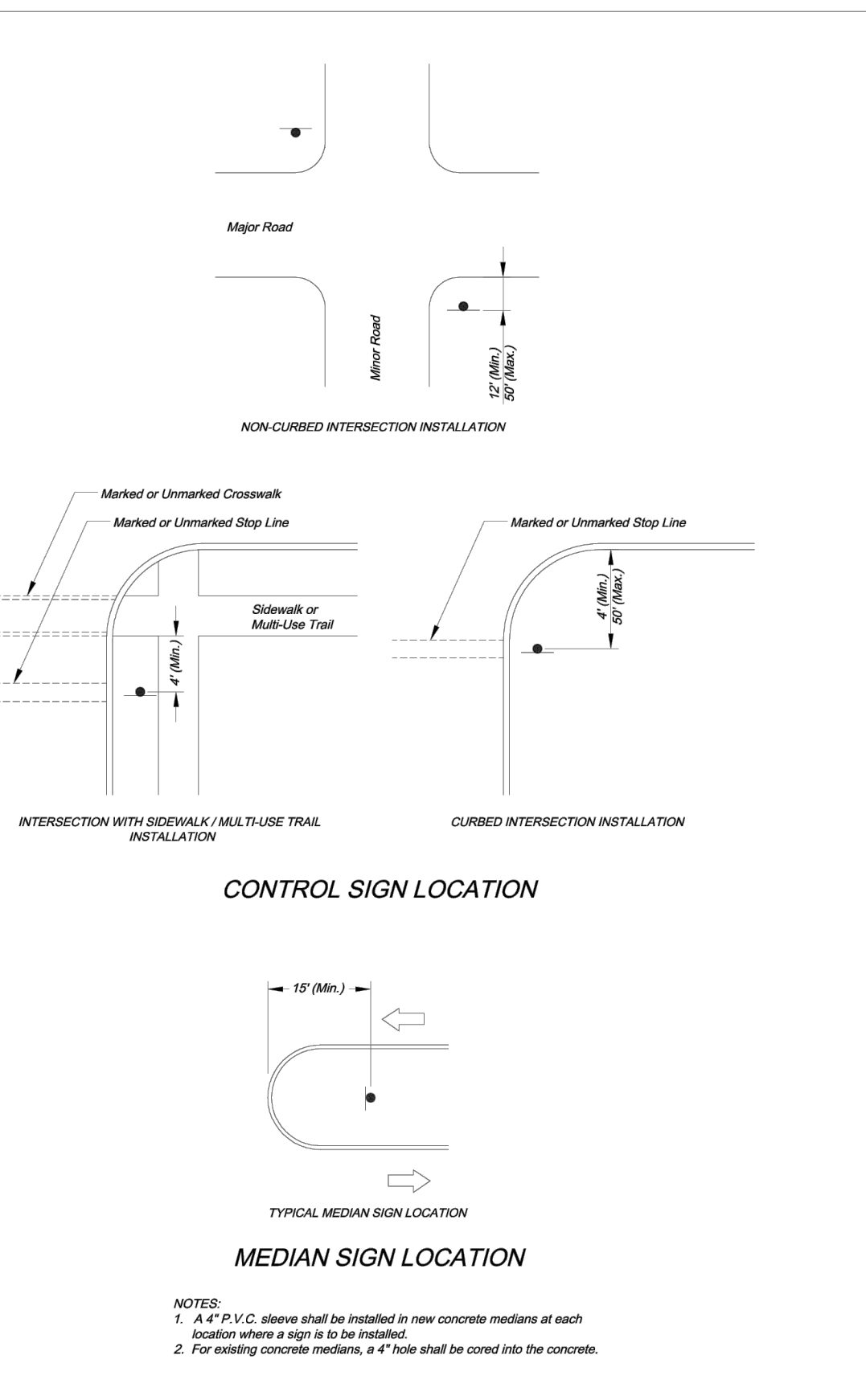
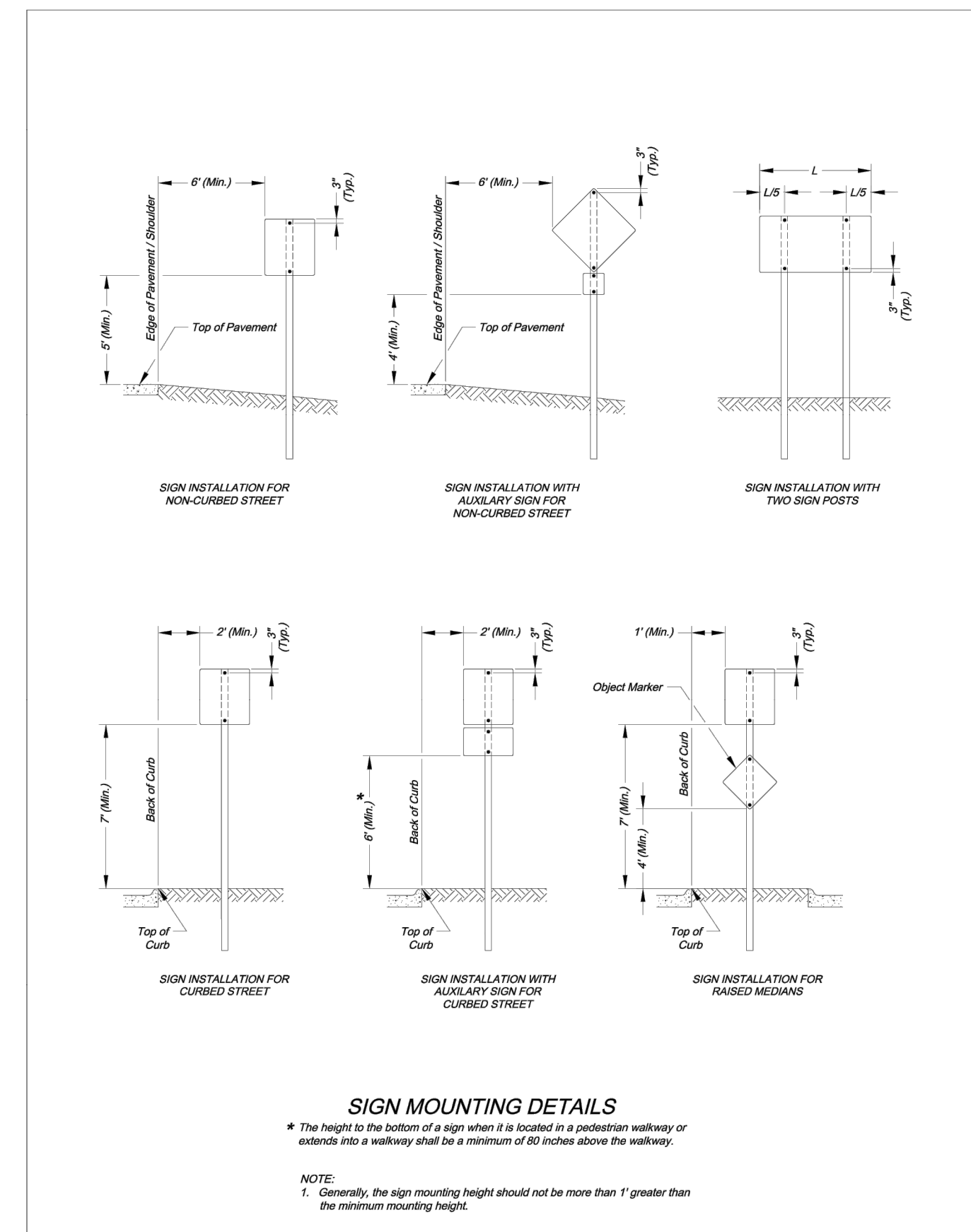
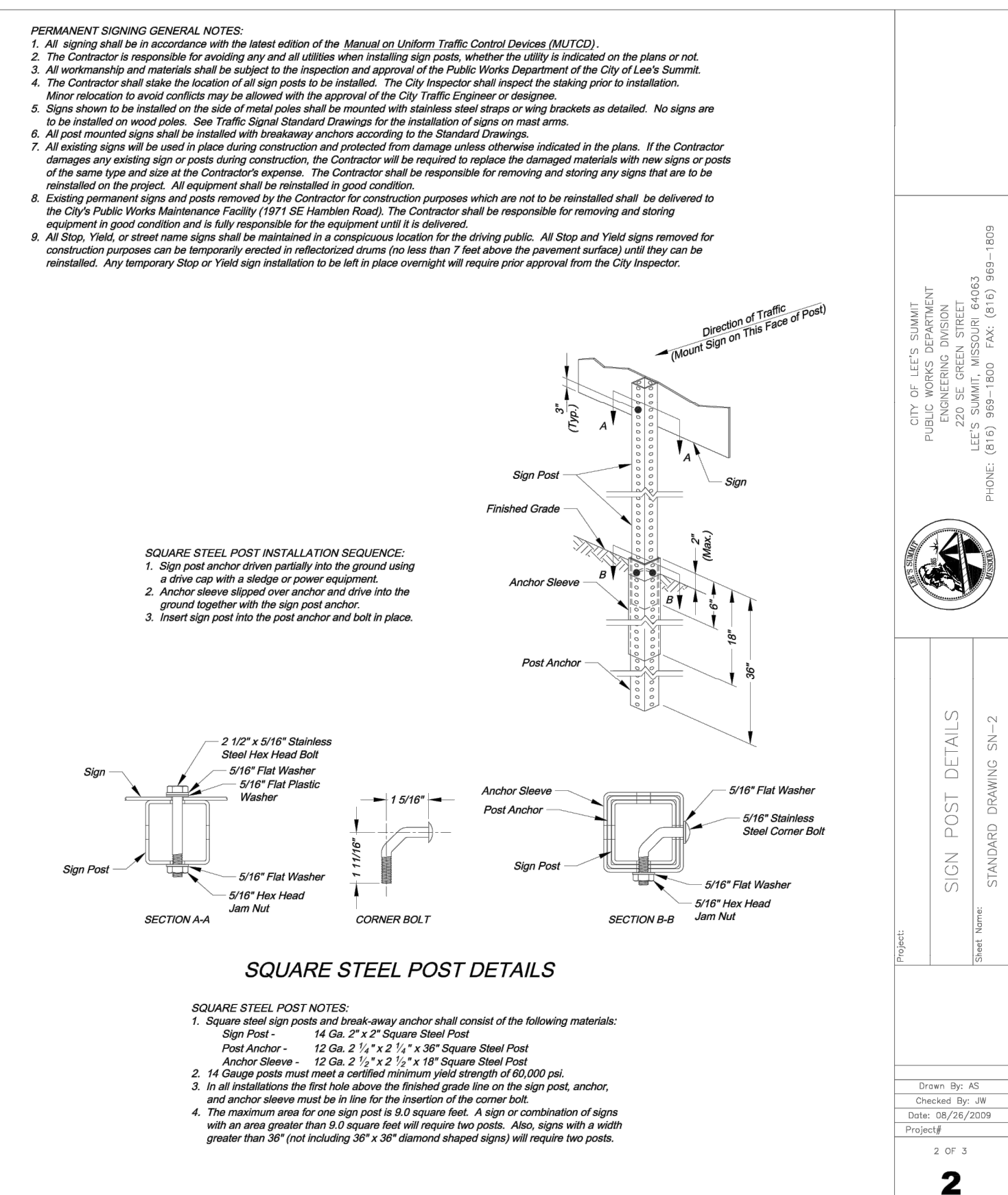
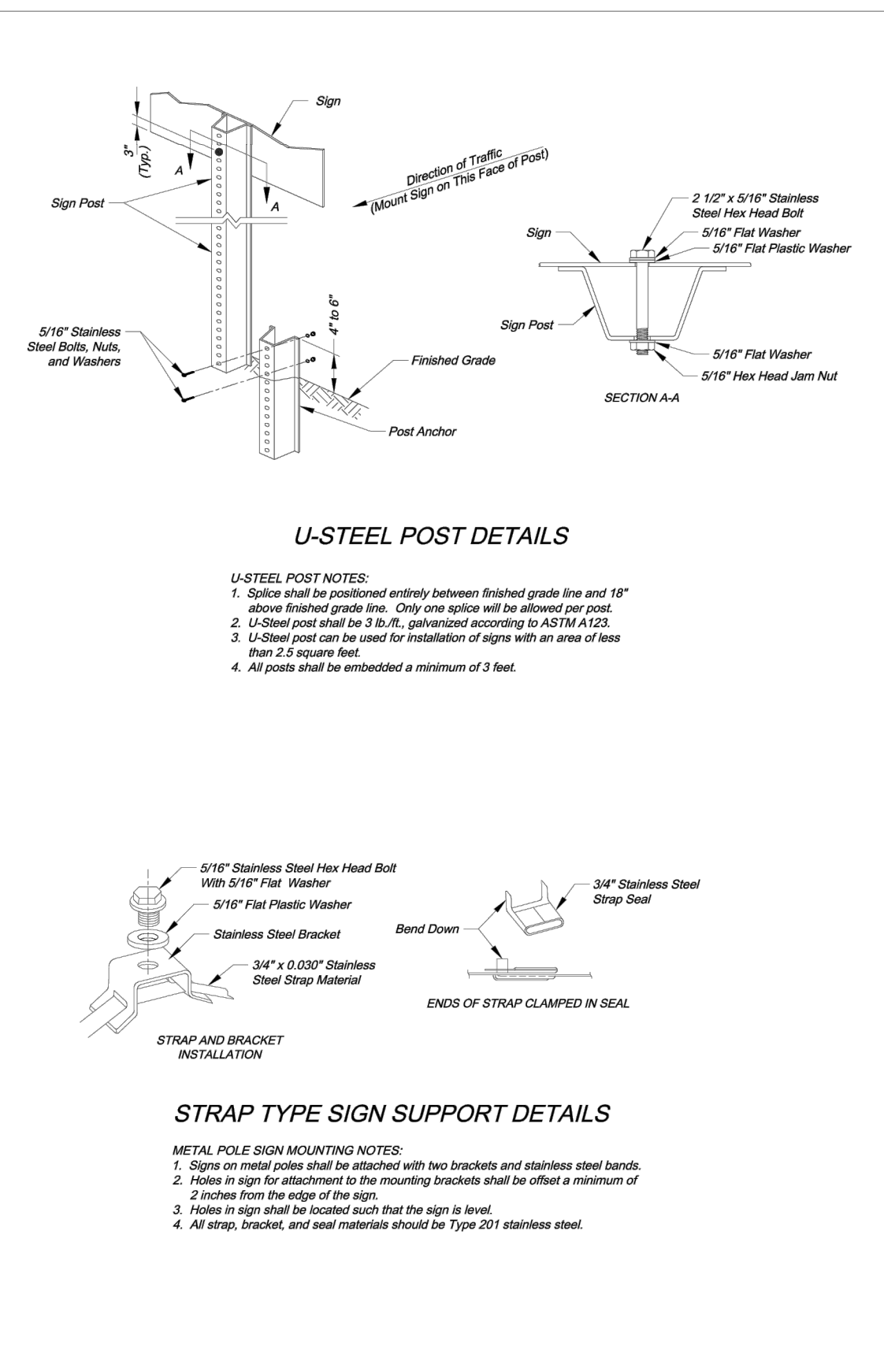


CITY OF LEE'S SUMMIT
PUBLIC WORKS ENGINEERING DIVISION
ENGINEERING DIVISION
LEE'S SUMMIT, MISSOURI 64083
PHONE: (816) 868-1800 FAX: (816) 868-1809

STREET NAME SIGN DETAILS
Sheet Name: STANDARD DRAWING SN-3

Drawn By: AS
Checked By: JM
Date: 08/25/2009
Project#

3 OF 3
3



CITY OF LEE'S SUMMIT
PUBLIC WORKS ENGINEERING DIVISION
ENGINEERING DIVISION
LEE'S SUMMIT, MISSOURI 64083
PHONE: (816) 868-1800 FAX: (816) 868-1809

SIGN MOUNTING DETAILS
Sheet Name: STANDARD DRAWING SN-1

Drawn By: AS
Checked By: JM
Date: 08/25/2009
Project#

1 OF 3
1

REVISION PER CITY COMMENTS	DATE	BY
1	1/2/25	MT
MARK	REVISION	DATE
Engineer: SD	Checked By: SD	Scale: 1"= N/A
Technician: JS	Date: 7-28-20	Field Bk:

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Sheet **26**

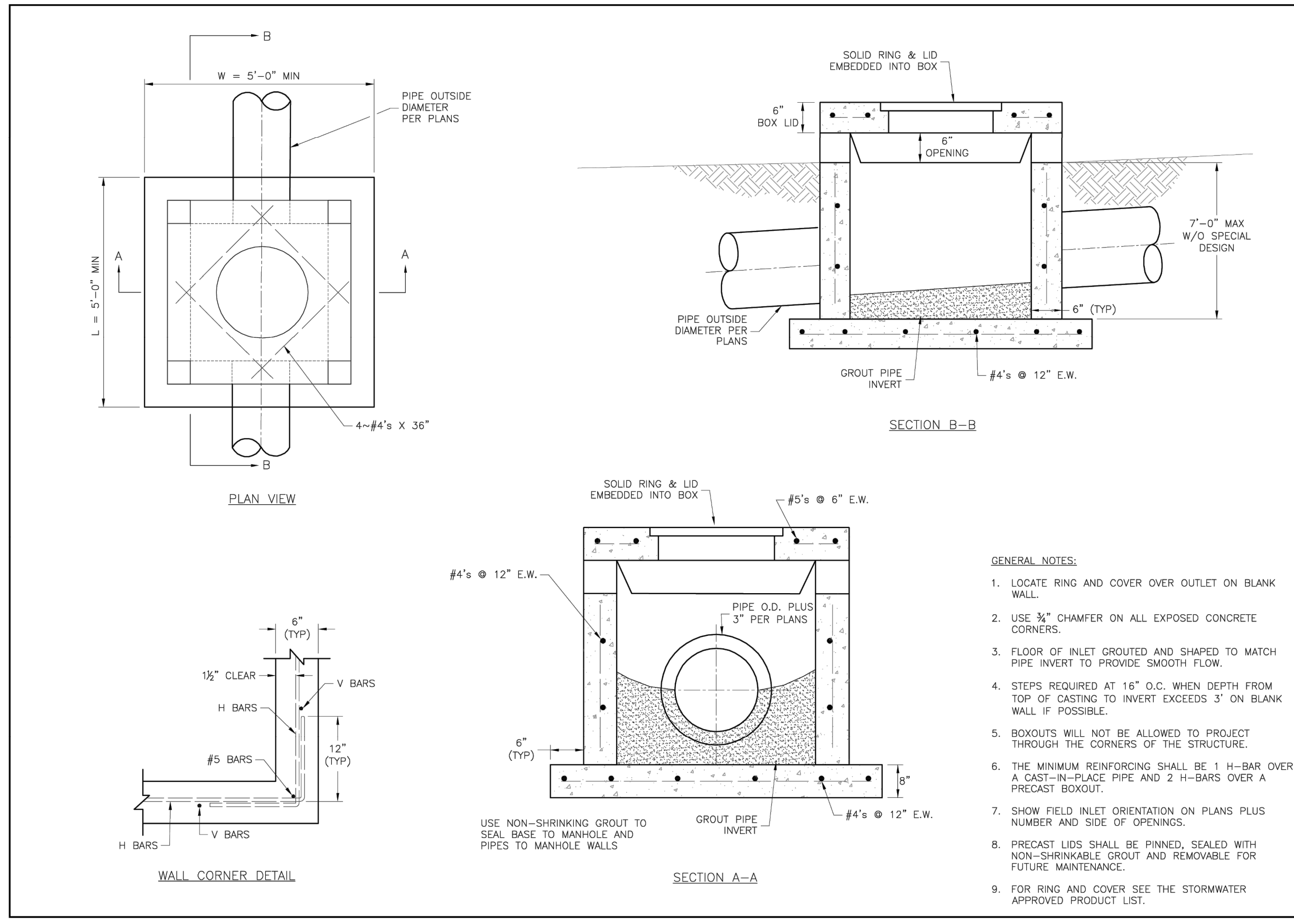


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WHISPERING WOODS 3RD PLAT
STREET & STORM SEWER PLANS
STREET & STORM DETAILS
SNYDER & ASSOCIATES
ENGINEERS & PLANNERS, INC.

SNYDER & ASSOCIATES

Project No: 1200485.11
Sheet **26**



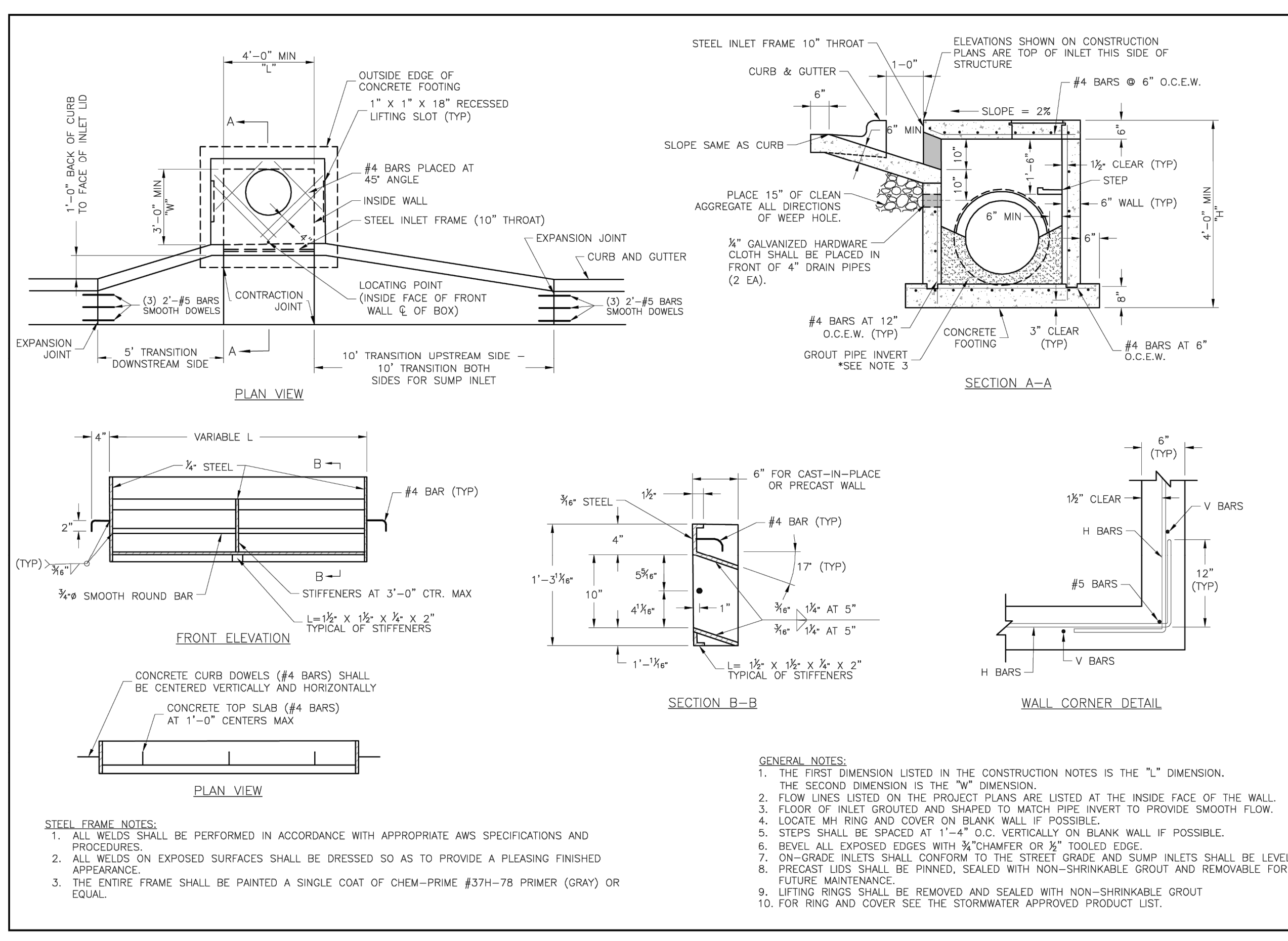
LEE'S SUMMIT MISSOURI
 PUBLIC WORKS ENGINEERING DIVISION 1200 S. GREEN STREET, LEE'S SUMMIT, MO 64063

STANDARD DETAILS
 CITY OF LEE'S SUMMIT, MO
 LEE'S SUMMIT, JACKSON COUNTY, MO

FIELD INLET DETAIL

Drawn By: MAF
 Checked By: DS
 Date: 06/13/2013
 Pkg. #:

STM-2



LEE'S SUMMIT MISSOURI
 PUBLIC WORKS ENGINEERING DIVISION 1200 S. GREEN STREET, LEE'S SUMMIT, MO 64063

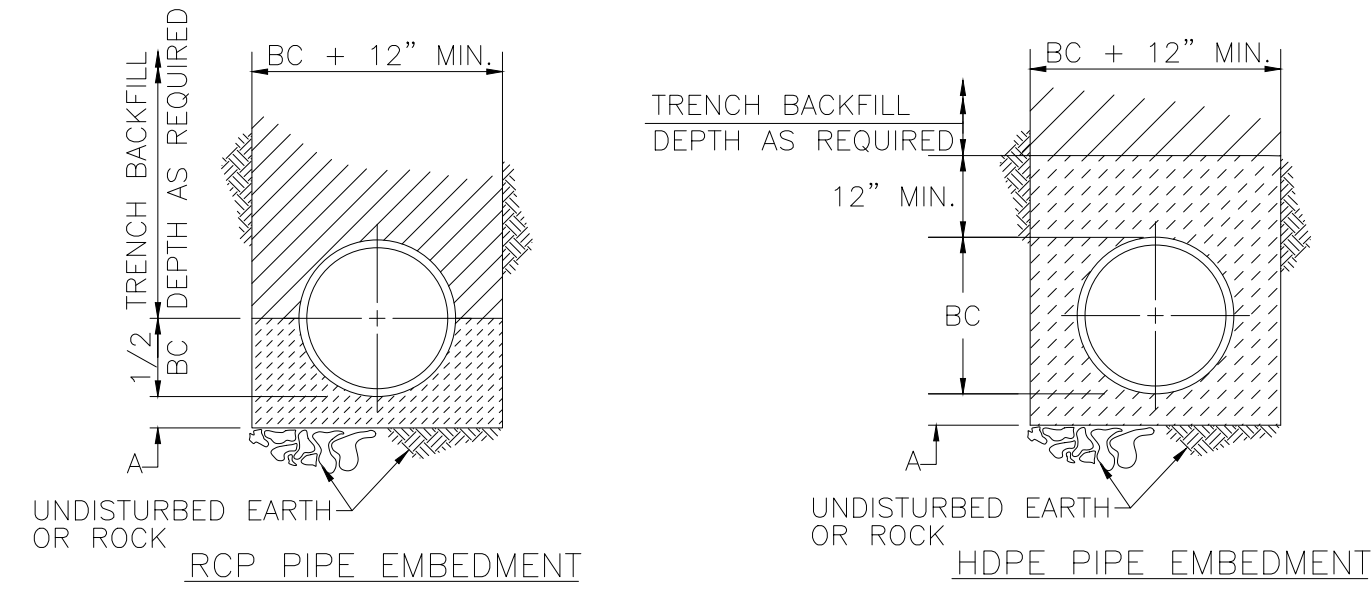
STANDARD DETAILS
 CITY OF LEE'S SUMMIT, MO
 LEE'S SUMMIT, JACKSON COUNTY, MO

CURB INLET DETAIL

Drawn By: MAF
 Checked By: DS
 Date: 06/13/2013
 Pkg. #:

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'	
		PVC; ASTM D 2680 (TRUSS); 8"-15"			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
(diagonal lines)	TRENCH BACKFILL (TYPE 1)
(cross-hatch)	TAMPED GRANULAR BACKFILL (TYPE 3)
(dots)	GRANULAR BEDDING
(solid grey)	CONCRETE
(dashed)	CLEAN CRUSHED STONE

TABLE OF EMBEDMENT DEPTHS BELOW PIPE

D	A	
	MIN SOIL	MIN ROCK
0"-27"	4"	6"
30"-60"	6"	9"
66"-UP	8"	12"

- PIPE EMBEDMENT NOTES:
- GRANULAR BEDDING SHALL BE CRUSHED ROCK OR PEA GRAVEL WITH NOT LESS THAN 95% PASSING 3/4" (95% PASSING 1" FOR 30" AND LARGER PIPE) AND NOT LESS THAN 95% RETAINED ON A 3/8"; TO BE PLACED IN NOT MORE THAN 6" LAYERS AND COMPACTED BY SLICING WITH A SHOVEL OR VIBRATING.
 - 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.
 - TRENCH BACKFILL (TYPE 1) SHALL BE FINELY DIVIDED MATERIAL FREE FROM DEBRIS AND STONES, COMPACTED TO 95% MAXIMUM DENSITY.
 - CLEAN CRUSHED STONE SHALL BE GRANULAR MATERIAL CONFORMING TO THE GRADATION REQUIREMENTS OF SECTION 1005.1.4.1 OF THE LATEST ISSUE OF THE MISSOURI STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION.
 - WHEN PROPOSED MAIN IS UNDER PAVEMENT CONTRACTOR TO BACKFILL WITH COMPACTED AGGREGATE TO PAVEMENT SUBGRADE.

STORM PIPE EMBEDMENT DETAILS

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Engineer: SD	Checked By: SD	Scale: 1"= N/A	
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Sheet **27**

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 MO PE#2013006489

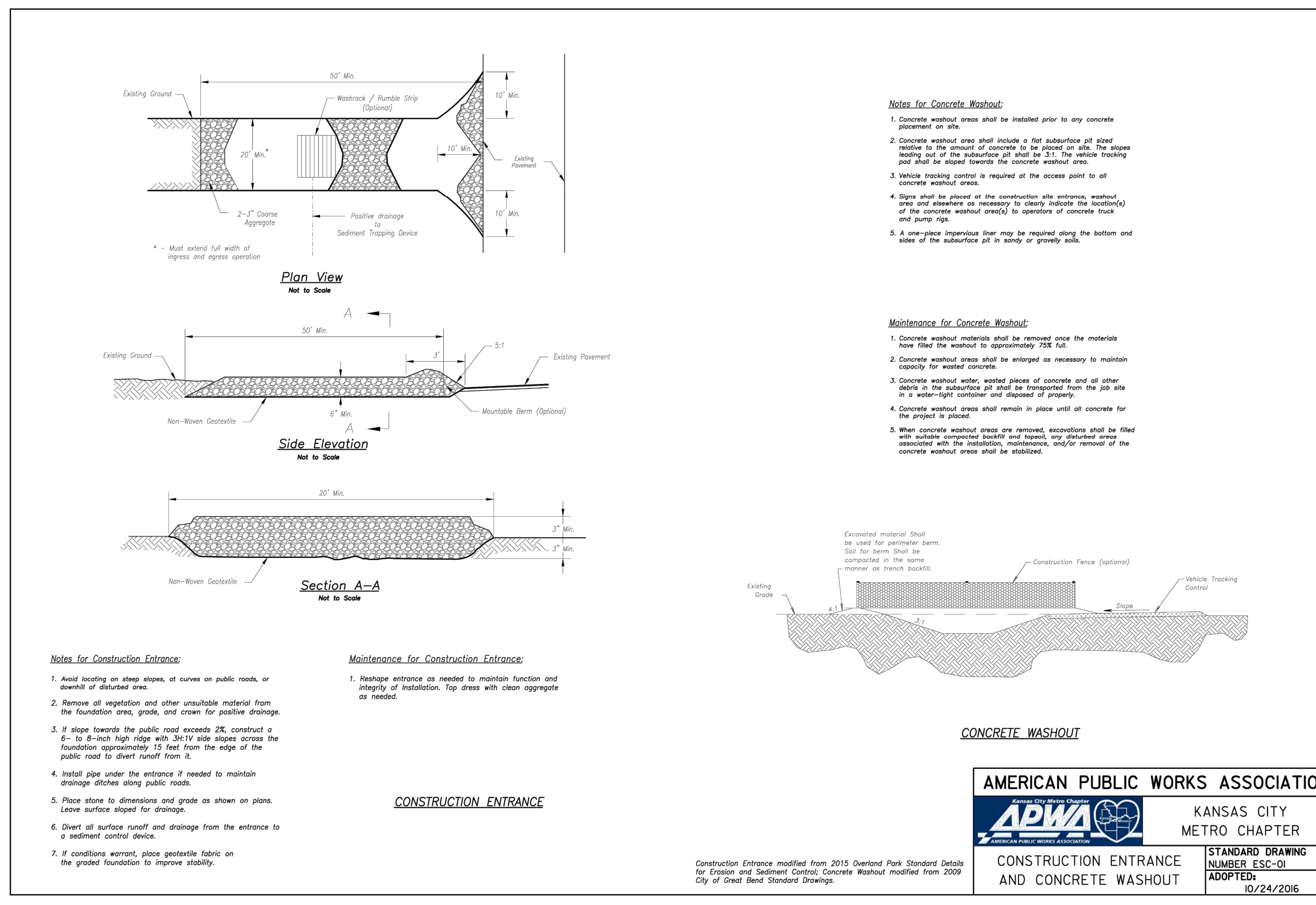
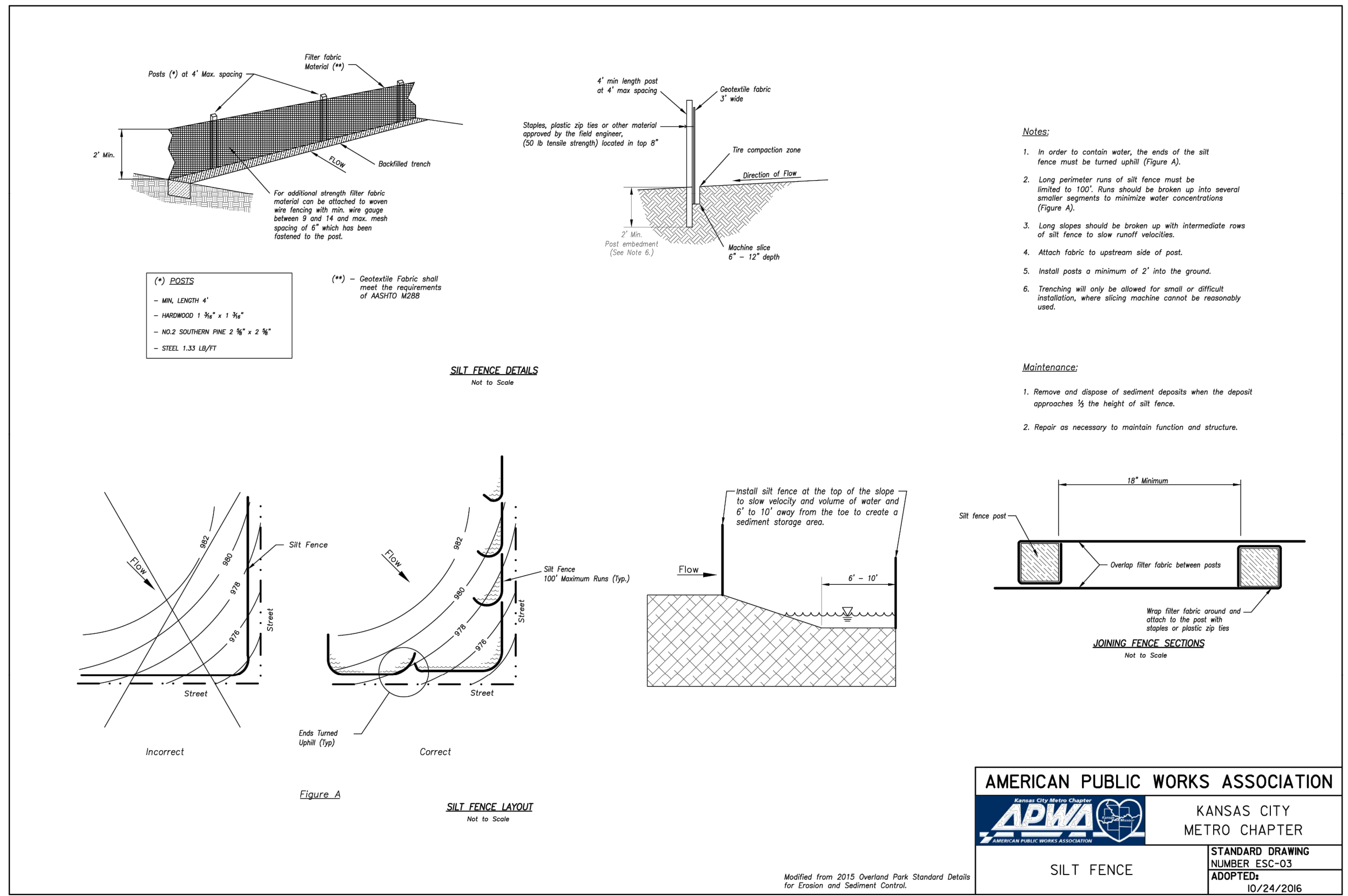
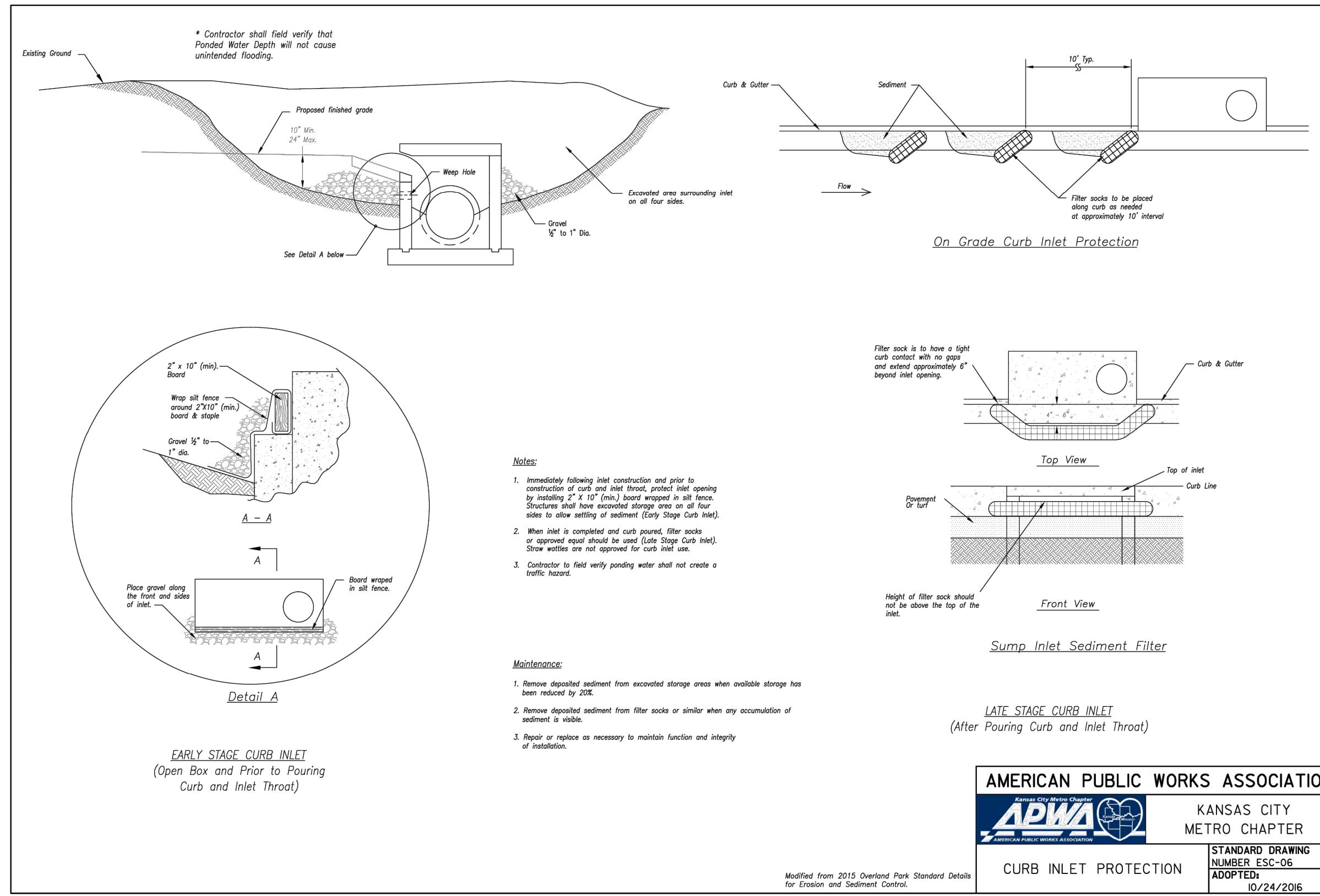
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STREET & STORM DETAILS

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SHAWN DUKE - ENGINEER
MO PE#2013006489

AMERICAN PUBLIC WORKS ASSOCIATION

KANSAS CITY METRO CHAPTER

STANDARD DRAWING NUMBER ESC-03 ADOPTED 10/24/2016

WHISPERING WOODS 3RD PLAT STREET & STORM SEWER PLANS

EROSION CONTROL DETAILS

LEE'S SUMMIT, MO

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