

WOODLAND OAKS

Lots 1 thru 42

SANITARY SEWER CONSTRUCTION PLANS

Section 27, Township 48 North, Range 31 West

LEE'S SUMMIT, JACKSON COUNTY, MISSOURI

CONSTRUCTION AND DESIGN NOTES:

STREET & STORM SEWERS:

1 ~ STREET PAVEMENT SHALL CONSIST OF TYPE CG-2 CURBS WITH PAVEMENT PER TABLE LS-2 OF THE LEE'S SUMMIT DESIGN AND CONSTRUCTION MANUAL

RESIDENTIAL LOCAL STREET SEE BELOW FOR TYPICAL SECTION.

OPTION 1) 4" TYPE 5 ASPHALT BASE AND 2" TYPE 5 or 6 ASPHALT SURFACE OVER A 6" MoDOT TYPE 5 BASE AND A SUBGRADE MIXTURE OF 6" FLY ASH STABILIZED SUBGRADE IN ACCORDANCE WITH THE CITY OF LEE'S SUMMIT DESIGN AND CONSTRUCTION MANUAL.
OPTION 2) 4" TYPE 5 ASPHALT BASE AND 2" TYPE 5 or 6 ASPHALT SURFACE OVER 10" MoDOT TYPE 5 BASE OVERTOP A BIAXIAL GEOGRID MEETING THE REQUIREMENTS OF TABLE 2201.6-1

2 ~ STORM SEWER PIPE SHALL BE HIGH DENSITY POLYETHYLENE (HDPE) AS APPROVED BY CITY OF LEE'S SUMMIT DESIGN AND CONSTRUCTION MANUAL.

3 ~ JUNCTION BOXES SHALL BE PER CITY OF LEE'S SUMMIT STANDARD DRAWING NO. JB-1. FIELD INLETS SHALL BE PER CITY OF LEE'S SUMMIT STANDARD DRAWING FI-1. TOEWALLS SHALL BE PER CITY OF LEE'S SUMMIT DRAWING NO. SD-35. STORM MANHOLES SHALL BE PER CITY OF LEE'S SUMMIT DETAIL SD-27. ROCK LINING AND RIP RAP SHALL BE PER CITY OF LEE'S SUMMIT.

GENERAL NOTES:

1 ~ ALL CONSTRUCTION SHALL CONFORM TO THE CITY OF LEE'S SUMMIT DESIGN AND CONSTRUCTION MANUAL AS ADOPTED BY ORDINANCE 5813.

2 ~ ALL REQUIRED EASEMENTS WITHIN THE BOUNDARY OF THIS PROJECT SHALL BE PROVIDED FOR ON THE FINAL PLAT.

3 ~ ANY REQUIRED EASEMENT LOCATED OUTSIDE OF THE BOUNDARY OF THIS PROJECT SHALL BE PROVIDED FOR BY SEPARATE INSTRUMENT PRIOR TO ISSUANCE OF CONSTRUCTION PERMITS.

4 ~ THE CONTRACTOR SHALL NOTIFY THE CITY OF LEE'S SUMMIT DEVELOPMENT ENGINEERING INSPECTION AT 816.969.1200 AT LEAST 48 HOURS PRIOR TO THE COMMENCEMENT OF ANY CONSTRUCTION.

5 ~ THE CONTRACTOR SHALL NOTIFY ENGINEERING SOLUTIONS AT 816.623.9888 OF ANY CONFLICT WITH THE IMPROVEMENTS PROPOSED BY THESE PLANS AND SITE CONDITIONS.

6 ~ THE CONTRACTOR SHALL NOTIFY THE CITY ENGINEER AND OBTAIN THE APPROPRIATE BLASTING PERMITS FOR A REQUIRED BLASTING. IF BLASTING IS ALLOWED, ALL BLASTING SHALL CONFORM TO STATE REGULATIONS AND LOCAL ORDINANCES.

UTILITY COMPANIES:

THE FOLLOWING LIST OF UTILITY COMPANIES IS PROVIDED FOR INFORMATION ONLY. WE DO NOT OFFER ANY GUARANTEE OR WARRANTY THAT THIS LIST IS COMPLETE OR ACCURATE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING ALL UTILITY COMPANIES THAT MAY BE AFFECTED BY THE PROPOSED CONSTRUCTION AND VERIFYING THE ACTUAL LOCATION OF EACH UTILITY LINE. THE CONTRACTOR SHALL NOTIFY ENGINEERING SOLUTIONS AT 816.623.9888 OF ANY CONFLICT WITH PROPOSED IMPROVEMENTS.

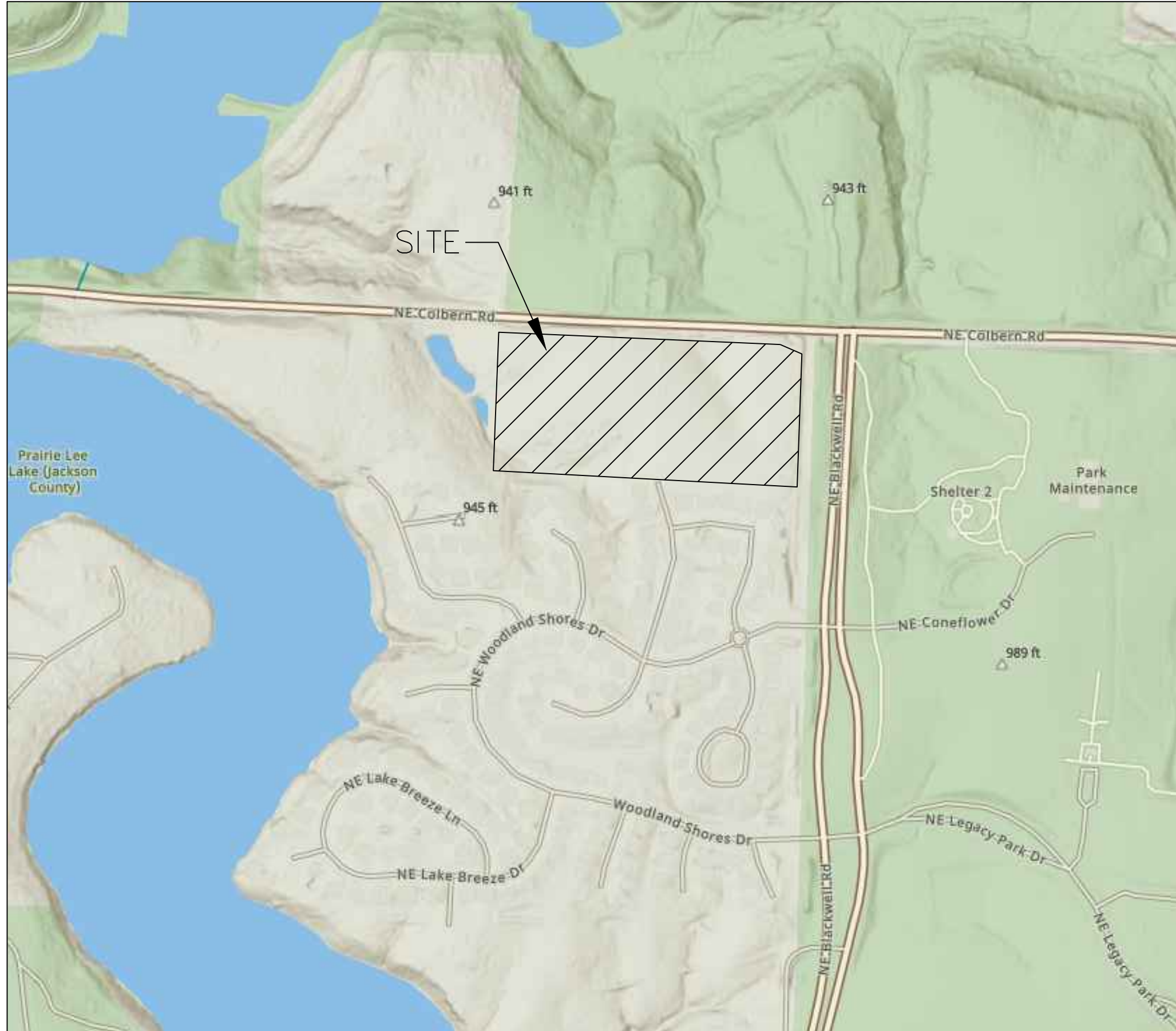
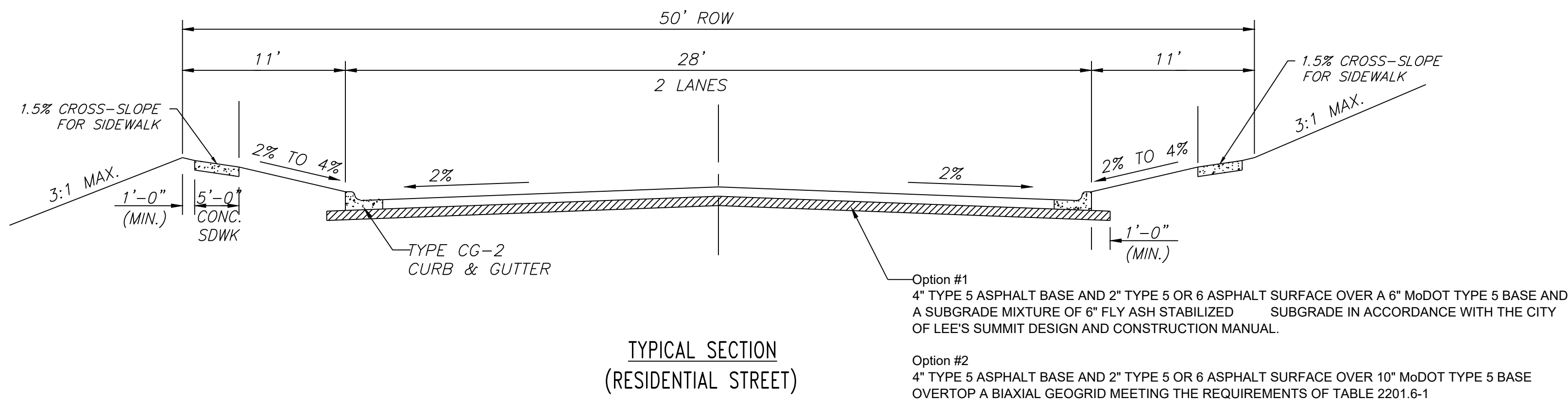
EVERGY ~ 298-1196
MISSOURI GAS ENERGY ~ 756-5261
SOUTHWESTERN BELL TELEPHONE ~ 761-5011
COMCAST CABLE ~ 795-1100
WILLIAMS PIPELINE ~ 422-6300
CITY OF LEE'S SUMMIT PUBLIC WORKS ~ 969-1800
CITY OF LEE'S SUMMIT PUBLIC WORKS INSPECTIONS ~ 969-1800
CITY OF LEE'S SUMMIT WATER UTILITIES ~ 969-1900
MISSOURI ONE CALL (DIG RITE) ~ 1-800-344-7483

OIL - GAS WELLS

ACCORDING TO EDWARD ALTON MAY JR'S ENVIRONMENTAL IMPACT STUDY OF ABANDONED OIL AND GAS WELLS IN LEE'S SUMMIT, MISSOURI IN 1995, THERE ARE NOT OIL AND GAS WELLS WITHIN 185 FEET OF THE PROPERTY AS SURVEYED HEREON.

FLOOD INFORMATION:

THE SUBJECT PROPERTY SURVEYED LIES WITHIN A FLOOD ZONE DESIGNATED ZONE (X), AREAS LOCATED OUTSIDE THE 100 YEAR FLOOD PLAIN, PER F.E.M.A. MAP, COMMUNITY PANEL NO. 29095C0419G EFFECTIVE DATE: JANUARY 20, 2017.



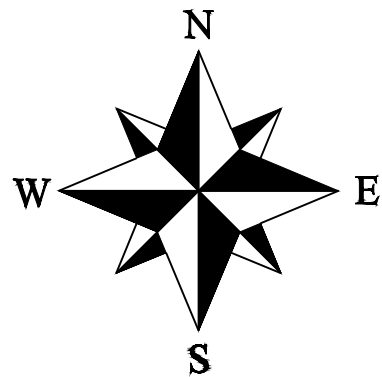
SITE LOCATION MAP

Summary of Quantities:

ITEM AND DESCRIPTION	UNIT	ESTIMATED QUANTITY
ASPHALT PAVING	S.Y.	7,187.12
CURBING	FT	4643.65
MoDOT Type 5 Base	S.Y.	7,689.66
GEOGRID	S.Y.	7,689.66
CLEARING, GRADING & GRUBBING	LS	1.00
SILT FENCE	FT	1,300.00
INLET PROTECTION	UNIT	81.00
SEEDING / MULCHING/ FERTILIZING	AC	19.51
CONST. ENTRANCE	UNIT	1.00
RIP RAP W/ FABRIC	S.Y.	57.33
STORM		
15" HDPE	FT	1,946.42
18" HDPE	FT	473.79
24" HDPE	FT	239.74
15" HDPE END SECTION / TOE WALL	LS	4.00
24" HDPE END SECTION / TOE WALL	LS	4.00
30" HDPE END SECTION / TOE WALL	LS	1.00
4' x 4' STORM FIELD INLET	EA	10.00
5' x 5' JUNCTION BOX	EA	2.00
5' x 4' STORM CURB INLET	EA	14.00
5' x 5' CONTROL STRUCTURE	EA	1.00
5' x 4' CONTROL STRUCTURE	EA	1.00

INDEX OF SHEETS:

C.001 ~ STREET & STORM COVER SHEET
C.050 ~ ESC PHASE 1 - PRE CLEARING PLAN
C.051 ~ ESC PHASE 2 - INITIAL AREA STABILIZATION PLAN
C.052 ~ ESC PHASE 3 - FINAL RESTORATION PLAN
C.053 ~ ESC - STANDARD DETAILS
C.100 ~ SITE PLAN
C.200 ~ MASTER DRAINAGE PLAN SHEET 1 OF 3 GRADING PLAN - SWPPP
C.201 ~ MASTER DRAINAGE PLAN SHEET 2 OF 3 SPOT ELEVATIONS
C.202 ~ MASTER DRAINAGE PLAN SHEET 3 OF 3 DRAINAGE AREA MAP
C.203 ~ STREET PLAN & PROFILE
C.204 ~ STREET PLAN & PROFILE
C.205 ~ STREET PLAN & PROFILE
C.206 ~ SIDEWALK AND INTERSECTION PLAN
C.300 ~ STORM SEWER GENERAL LAYOUT
C.301 ~ STORM SEWER PLAN & PROFILE
C.600 ~ CONSTRUCTION DETAILS
C.601 ~ CONSTRUCTION DETAILS



LEGEND:

B/L - BUILDING SET-BACK
C/A - COMMON AREA
D/E - DRAINAGE EASEMENT
FND. - FOUND
L/E - LANDSCAPE EASEMENT
L.N.A. - LIMITS OF NO ACCESS
R/W - RIGHT OF WAY
SAN - SANITARY SEWER LINE
S/W - SIDEWALK
U/E - UTILITY EASEMENT
W - WATER LINE
ST - STORM SEWER LINE

ENGINEER'S CERTIFICATION:

I HEREBY CERTIFY THAT THIS PROJECT HAS BEEN DESIGNED AND THESE PLANS PREPARED IN ACCORDANCE WITH THE CURRENT DESIGN CRITERIA OF THE CITY OF LEE'S SUMMIT, MISSOURI AND THE STATE OF MISSOURI. I FURTHER CERTIFY THAT THESE PLANS WERE DESIGNED IN ACCORDANCE TO AASHTO STANDARDS.

Street, Stormwater, Master Drainage Plan, and Erosion and Sediment Control

Street & Storm Cover Sheet

Construction Plans for:

WOODLAND OAKS

Lots 1 thru 42

Lee's Summit, Jackson County, Missouri

Project:

WOODLAND OAKS

LSMO

Issue Date:

February 25, 2020

Matthew J. Schlicht

MO PE 2006019708

KS PE 19071

OK PE 25226

NE PE E-14335

REVISIONS

C. 001

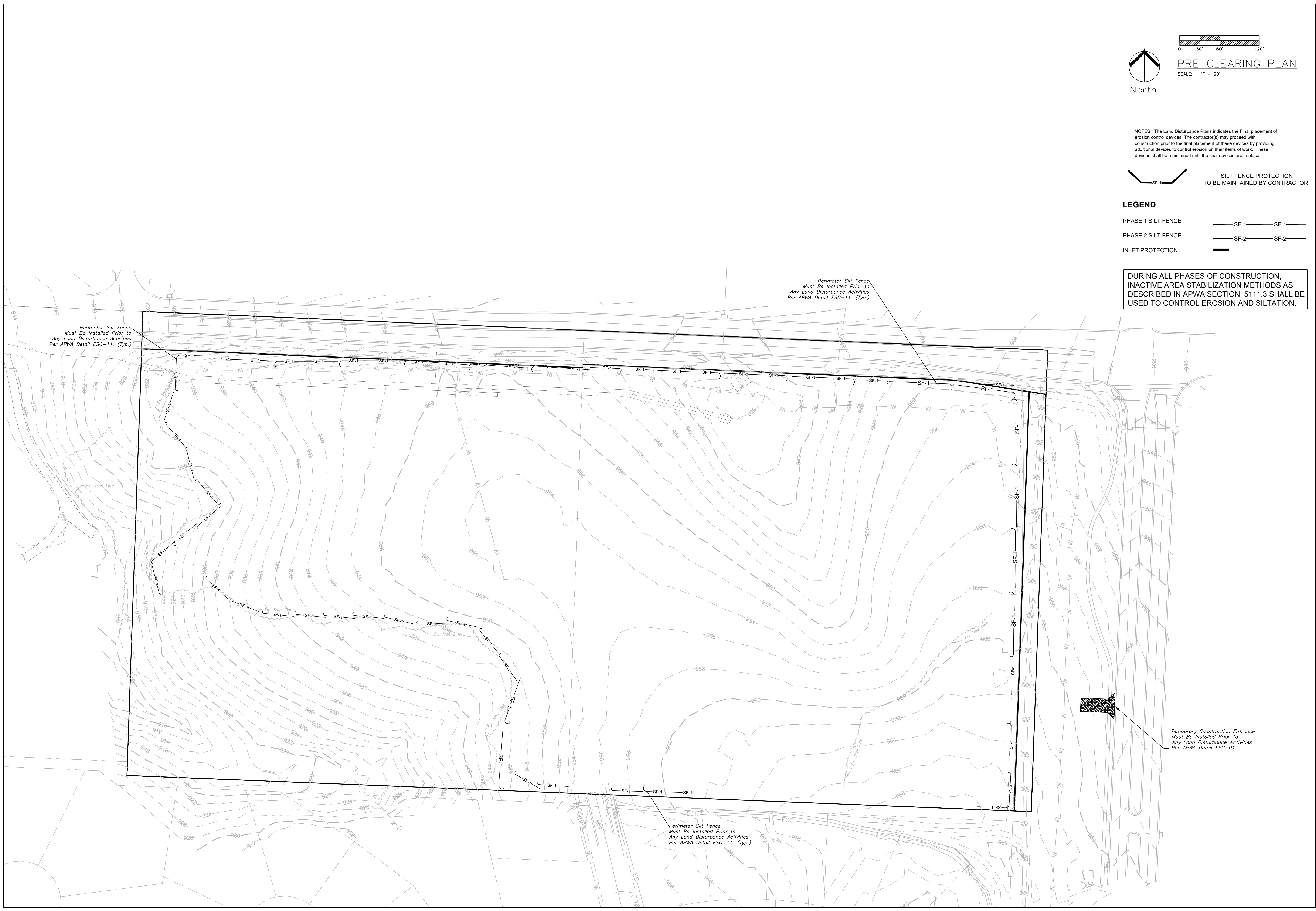
ENGINEERING
ENGINEERING & SURVEYING
SOLUTIONS

50 SE 30TH STREET
LEE'S SUMMIT, MO 64082

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Engineering 2005002186-D
Surveying 2005008319-D
Kansas
Engineering E-1685
Surveying LS-218
Oklahoma
Engineering 6254
Nebraska
Engineering CA2821

Part of the Southeast 1
Section 27, Township 48 North, Range 31 West
Lee's Summit, Jackson County, Missouri



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ESC PHASE 1 - Pre Clearing Plan

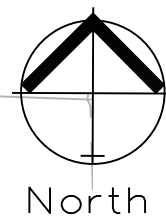
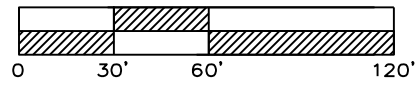
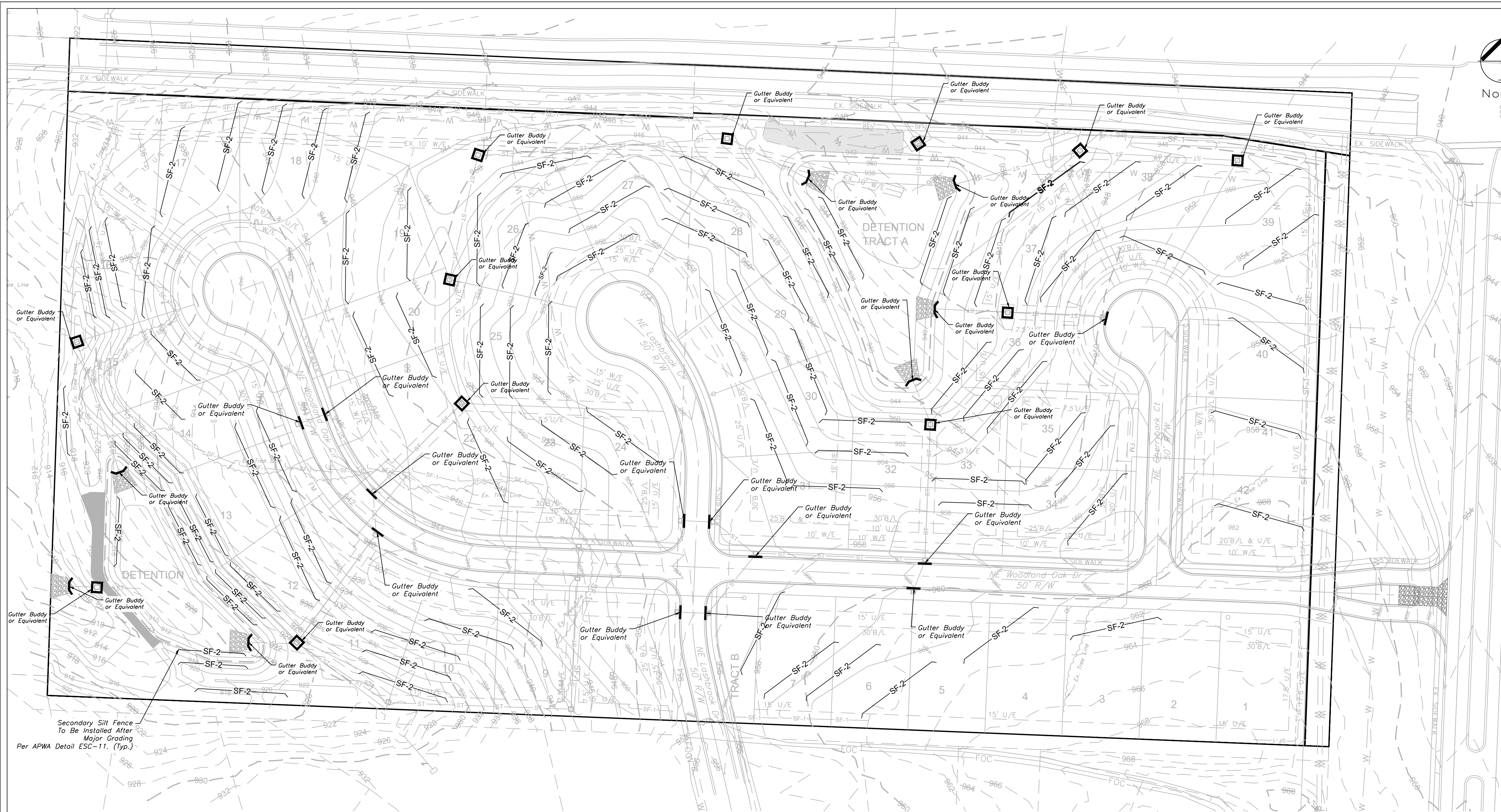
Construction Plans for:
WOODLAND OAKS
Lots 1 thru 42

Part of the Southeast 1/4
Section 27, Township 48 North, Range 31 West
Lee's Summit, Jackson County, Missouri

Matthew J. Schlicht
MO PE 2006019708
KS PE 19071
OK PE 25226
NE PE E-14335

REVISIONS

C.050



INACTIVE AREA STABELIZATION PLAN

SCALE: 1" = 60'

NOTES: The Land Disturbance Plans indicates the Final placement of erosion control devices. The contractor(s) may proceed with construction prior to the final placement of these devices by providing additional devices to control erosion on their items of work. These devices shall be maintained until the final devices are in place.



SILT FENCE PROTECTION
TO BE MAINTAINED BY CONTRACTOR

LEGEND

PHASE 1 SILT FENCE

SF-1

PHASE 2 SILT FENCE

SF-2

INLET PROTECTION

GUTTER BUDDY OR EQUIVALENT



DURING ALL PHASES OF CONSTRUCTION,
INACTIVE AREA STABILIZATION METHODS AS
DESCRIBED IN APWA SECTION 5111.3 SHALL BE
USED TO CONTROL EROSION AND SILTATION.

MAINTENANCE:

TO MAINTAIN THE EROSION AND SEDIMENT CONTROLS, THE FOLLOWING PROCEDURES WILL BE PERFORMED:
SEDIMENT CAPTURE DEVICES: SEDIMENT WILL BE REMOVED FROM THE UPSTREAM OR UPSLOPE SIDE OF THE FILTER FABRIC FENCES. WHEN THE DEPTH OF ACCUMULATED SEDIMENT REACHES ABOUT ONE-THIRD THE HEIGHT OF THE STRUCTURE.
STORM SEWER INLETS: ANY SEDIMENT IN THE STORM SEWER INLETS WILL BE REMOVED AND DISPOSED OF PROPERLY.
TEMPORARY CONTROLS: ALL TEMPORARY CONTROLS WILL BE REMOVED AFTER THE DISTURBED AREAS HAVE BEEN STABILIZED.

INSPECTION PROCEDURES:

INSPECTIONS WILL BE DONE BY THE RESPONSIBLE PERSON(S) AT LEAST ONCE EVERY WEEK AND WITHIN 24 HOURS EACH STORM EVENT PRODUCING ANY AMOUNT OF RAINFALL. AREAS THAT HAVE BEEN RESEEDED WILL BE INSPECTED REGULARLY AFTER SEED GERMINATION TO ENSURE COMPLETE COVERAGE OF EXPOSED AREAS. DISTURBED AREAS THAT HAVE NOT BEEN FINALLY STABILIZED SHALL HAVE ALL POLLUTION CONTROL MEASURES INSPECTED FOR PROPER INSTALLATION, OPERATION AND MAINTENANCE. LOCATIONS WHERE STORM WATER LEAVES THE SITE SHALL BE INSPECTED FOR EVIDENCE OF EROSION OR SEDIMENT DEPOSITION. ANY DEFICIENCIES SHALL BE NOTED IN A REPORT OF THE INSPECTION AND CORRECTED WITHIN SEVEN CALENDAR DAYS OF THE INSPECTION. THE PERMITTEE SHALL PROMPTLY NOTIFY THE SITE CONTRACTORS RESPONSIBLE FOR OPERATION AND MAINTENANCE OF POLLUTION CONTROL DEVICES OF DEFICIENCIES.

IF THE EXISTING GROUND COVER IS NATURAL GRASS, DISTURBED AREAS SHALL BE TEMPORARILY SEEDED WITH WHEAT/RYE AT A RATE OF 1.5 POUNDS PER 1000 SQUARE FEET. PERMANENT SEEDING SHALL CONSIST OF 90% IN THREE EQUAL PARTS OF THIN BLADE, TURF-TYPE, TALL FESCUE AND 10% BLUEGRASS SEED AT A RATE OF 10 POUNDS PER 1000 SQUARE FEET. BOTH TEMPORARY AND PERMANENT SEEDED AREAS SHALL BE MULCHED AND WATERED TO MAINTAIN THE PROPER MOISTURE LEVEL OF THE SOIL TO ESTABLISH GRASS. NEW GRASS SHALL BE WATERED AND MAINTAINED UNTIL IT REACHES A HEIGHT OF 3 INCHES. ANY BARE AREAS SHALL BE RESEEDED.

ALL EROSION CONTROL DEVICES SHALL BE REMOVED BY GENERAL CONTRACTOR AFTER SITE STABILIZATION IS COMPLETE AND APPROVED BY ENGINEER.

THE DEVELOPER WILL DESIGNATE A QUALIFIED PERSON OR PERSONS TO PERFORM THE FOLLOWING INSPECTIONS:

STABILIZATION MEASURES: DISTURBED AREAS AND AREAS USED FOR STORAGE OF MATERIALS THAT ARE EXPOSED TO PRECIPITATION WILL BE INSPECTED FOR EVIDENCE OF, OR THE POTENTIAL FOR, POLLUTANTS ENTERING THE DRAINAGE SYSTEM. AFTER A PORTION OF THE SITE IS FINALLY STABILIZED, INSPECTIONS WILL BE CONDUCTED AT LEAST ONCE EVERY MONTH THROUGHOUT THE LIFE OF THE PROJECT. CONTRACTOR CAN CONTACT ENGINEERING SOLUTIONS FOR COPIES OF THE INSPECTION FORM TO BE USED FOR STABILIZATION MEASURES.

STRUCTURAL CONTROLS: FILTER FABRIC FENCES AND ALL OTHER EROSION AND SEDIMENT CONTROL MEASURES IDENTIFIED IN THE PLAN WILL BE INSPECTED REGULARLY FOR PROPER POSITIONING, ANCHORING, AND EFFECTIVENESS IN TRAPPING SEDIMENTS. SEDIMENT WILL BE REMOVED FROM THE UPSTREAM OR UPSLOPE SIDE OF THE FILTER FABRIC. CONTRACTOR CAN CONTACT ENGINEERING SOLUTIONS FOR COPIES OF THE INSPECTION FORM TO BE USED FOR STABILIZATION MEASURES.

DISCHARGE POINTS: DISCHARGE POINTS OR LOCATIONS WILL BE INSPECTED TO DETERMINE WHETHER EROSION CONTROL MEASURES ARE EFFECTIVE IN PREVENTING SIGNIFICANT AMOUNTS OF POLLUTANTS FROM ENTERING RECEIVING WATERS.

CONSTRUCTION ENTRANCE: LOCATIONS WHERE VEHICLES ENTER OR EXIT THE SITE WILL BE INSPECTED FOR EVIDENCE OF OFF-SITE SEDIMENT TRACKING.

A LOG OF EACH INSPECTION SHALL BE KEPT. THE INSPECTION REPORT IS TO INCLUDE THE FOLLOWING MINIMUM INFORMATION: INSPECTOR'S NAME, DATE OF INSPECTION, OBSERVATIONS RELATIVE TO THE EFFECTIVENESS OF THE POLLUTION CONTROL DEVICES, ACTIONS TAKEN OR NECESSARY TO CORRECT DEFICIENCIES, AND LISTING OF AREAS WHERE LAND DISTURBANCE OPERATIONS HAVE PERMANENTLY OR TEMPORARILY STOPPED. THE INSPECTION REPORT SHALL BE SIGNED BY THE PERMITTEE OR BY THE PERSON PERFORMING THE INSPECTION IF DULY AUTHORIZED TO DO SO.

EROSION CONTROL DESCRIPTION:

- 1.) SILT FENCE SHALL BE PLACED AT THE PERIMETER OF THE GRADING AND AT INTERMEDIATE AREAS THROUGHOUT THE SITE AS SHOWN ON THE PLAN. INLET SEDIMENT TRAPS SHALL BE PLACED SURROUNDING ALL STORM INLETS
- 2.) INSTALL TEMPORARY CONSTRUCTION ENTRANCE AS SHOWN ON PLAN

EROSION CONTROL PROCEDURE:

- 1.) SILT FENCE AND TEMPORARY CONSTRUCTION ENTRANCE SHALL BE INSTALLED AT THE PERIMETER OF THE GRADED AREAS PRIOR TO BEGINNING OF CLEARING OR DEMOLITION OPERATIONS. THE CONTRACTOR SHALL INSTALL SILT FENCE AS SHOWN ON PLANS AS GRADING PROGRESSES.

TEMPORARY CONSTRUCTION ENTRANCE NOTES:

- A.) INSTALLATION
- 1.) AVOID LOCATING ON STEEP SLOPES OR AT CURVES ON PUBLIC STREETS. IF POSSIBLE, LOCATE WHERE PERMANENT ROADS WILL EVENTUALLY BE CONSTRUCTED
 - 2.) REMOVE ALL VEGETATION AND OTHER UNSUITABLE MATERIAL FROM THE FOUNDATION AREA, GRADE AND CROWN FOR POSITIVE DRAINAGE
 - 3.) IF SLOPE TOWARDS THE PUBLIC ROAD EXCEED 2% CONSTRUCT A 6 TO 8 INCH HIGH RIDGE WITH 3H : 1V SIDE SLOPES ACROSS THE FOUNDATION APPROXIMATELY 15 FEET FROM THE PUBLIC ROAD TO DIVERT RUNOFF AWAY FROM IT.
 - 4.) INSTALL PIPE UNDER THE ENTRANCE IF NEEDED TO MAINTAIN DRAINAGE DITCHES ALONG PUBLIC ROADS
 - 5.) PLACE STONE TO DIMENSIONS AND GRADES AS SHOWN ON PLANS. LEAVE SURFACE SMOOTH AND SLOPED FOR DRAINAGE
 - 6.) DIVERT ALL SURFACE RUNOFF AND DRAINAGE FROM THE ENTRANCE TO A SEDIMENT CONTROL DEVICE
 - 7.) IF WET CONDITIONS ARE ANTICIPATED PLACE GEOTEXTILE FABRIC ON THE GRADED FOUNDATION TO IMPROVE STABILITY
- B.) TROUBLESHOOTING
- 1.) CONSULT WITH A QUALIFIED DESIGN PROFESSIONAL IF ANY OF THE FOLLOWING OCCUR:
 - INADEQUATE RUNOFF CONTROLS TO THE EXTENT THAT SEDIMENT WASHES ONTO PUBLIC ROADS
 - INSTALL DIVERSIONS OR OTHER RUNOFF CONTROL MEASURES
 - SMALL STONE, THIN PAD, OR ABSENCE OF GEOTEXTILE FABRIC RESULTS IN RUTS AND MUDDY CONDITIONS AS STONE IS PRESSED INTO SOIL - INCREASE STONE SIZE OR PAD THICKNESS OR ADD GEOTEXTILE FABRIC
 - PAD TOO SHORT FOR HEAVY CONSTRUCTION TRAFFIC - EXTEND PAD BEYOND THE MINIMUM 50 FOOT LENGTH AS NECESSARY
- C.) INSPECTION AND MAINTENANCE
- 1.) INSPECT STONE PAD AND SEDIMENT DISPOSAL AREA WEEKLY AND AFTER ANY RAIN EVENT
 - 2.) RESHAPE PAD AS NEEDED FOR PROPER DRAINAGE AND RUNOFF CONTROL
 - 3.) TOP DRESS WITH CLEAN 2 AND 3 INCH STONE AS NEEDED
 - 4.) IMMEDIATELY REMOVE MUD OR SEDIMENT TRACKED OR WASHED ONTO PUBLIC ROADWAY. REPAIR ANY BROKEN ROAD PAVEMENT IMMEDIATELY
 - 5.) REMOVE ALL TEMPORARY ROAD MATERIALS FROM AREAS WHERE PERMANENT VEGETATION WILL BE ESTABLISHED

ESC PHASE 2 - Inactive Area Stabilization Plan

Construction Plans for:
WOODLAND OAKS

Lots 1 thru 42

Lee's Summit, Jackson County, Missouri

Project:
WOODLAND OAKS
LSMO
Issue Date:
February 25, 2020

Part of the Southeast 1
Section 27, Township 48 North, Range 31 West
Lee's Summit, Jackson County, Missouri

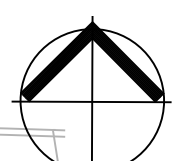
Professional Registration
Missouri
Engineering 2005002186-D
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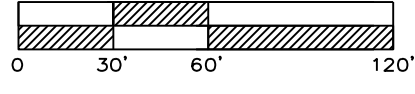
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NE PE E-14335

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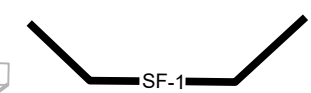
North



0 30' 60' 120'

FINAL RESTORATION PLAN

SCALE: 1" = 60'



SILT FENCE PROTECTION
TO BE MAINTAINED BY CONTRACTOR

LEGEND

PHASE 1 SILT FENCE

SF-1

PHASE 2 SILT FENCE

SF-2

INLET PROTECTION
GUTTER BUDDY OR EQUIVALENT



DURING ALL PHASES OF CONSTRUCTION, INACTIVE AREA STABILIZATION METHODS AS DESCRIBED IN APWA SECTION 5111.3 SHALL BE USED TO CONTROL EROSION AND SILTATION.

NOTES: The Land Disturbance Plans indicates the Final placement of erosion control devices. The contractor(s) may proceed with construction prior to the final placement of these devices by providing additional devices to control erosion on their items of work. These devices shall be maintained until the final devices are in place.

SEED AND MULCH NOTES:

All areas disturbed by construction activities shall be seeded and mulched. Seeding shall be done before the proposed seedbed becomes eroded, crusted over, or dried out and shall not be done when the ground is frozen, or covered with snow. The seed shall comply with the requirements of the Missouri Seed Law and the Federal Seed Act. Also, it shall contain no seed of any plant on the Federal Noxious Weed List. Other weed seeds shall not exceed one percent by weight of mix.

Seed and Fertilizer Rate:

Mix I - Rye Grass / Blue Grass	100 lbs. per Acre
Mix II - Tall Fescue / Blue Grass	195 lbs. per Acre
Lime	2000 lbs per Acre (50 lbs. per 1000 sq. ft.)
Fertilizer	800 to 1200 lbs per Acre (25 lbs per 1000 sq. ft.)

During the dates December 15th through May 31 ALL lime fertilizer, seed and mulch shall be applied to finished slopes of disturbed areas. During the months of June, July, October and November 1st through December 15th, lime fertilizer, seed and mulch shall be applied at the following rates:

Lime	- 100% of specified quantity
Fertilizer	- 75% of the specified quantity
Seed	- 50% of the specified quantity
Mulch	- 100% of the specified quantity

Mulch shall be Vegetative type, cereal straw from stalks of oats, rye, or barley, or approved equal. The straw shall be free of prohibited weed seed and relatively free of all other noxious and undesirable seed. Mulch shall be applied at the rate of 2 tons per acre, (70 to 90 lbs per 1000 sq. ft.). Mulch shall be embedded by a mulch anchoring tool or disk type roller having flat serrated disks spaced not more than 10 inches apart and cleaning scrapers shall be provided

ONCE SITE IS 90% VEGETATED ALL ESC DEVICES SHALL BE REMOVED AND ANY DISTURBED AREAS SHALL BE RESTORED

ENGINEERING SOLUTIONS

ENGINEERING & SURVEYING

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Part of the Southeast 1/4
Section 27, Township 48 North, Range 31 West
Lee's Summit, Jackson County, Missouri

Project:
WOODLAND OAKS
LSMO

Issue Date:
February 25, 2020

ESC PHASE 3 - Final Restoration Plan

Construction Plans for:
WOODLAND OAKS
Lots 1 thru 42
Lee's Summit, Jackson County, Missouri

Matthew J. Schlicht
MO PE 2006019708
KS PE 19071
OK PE 25226
NE PE E-14335

REVISIONS

C.052



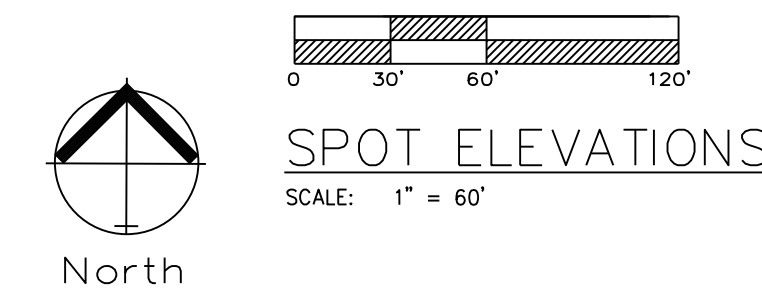
Part of the Southeast $\frac{1}{4}$
 Section 27, Township 48 North, Range 31 West
 Lee's Summit, Jackson County, Missouri

Site Plan

Construction Plans for:
WOODLAND OAKS
Lots 1 thru 42
Lee's Summit, Jackson County, MO

REVISIONS

C.100



Lot Number	Basement Type	MBOE
1	Standard	
2	Standard	
3	Standard	
4	Standard	
5	Standard	
6	Standard	
7	Standard	
8	Walkout	945.58
9	Walkout	945.58
10	Walkout	925.86
11	Walkout	925.65
12	Walkout	925.65
13	Walkout	917.4
14	Walkout	917.4
15	Walkout	919.77
16	Walkout	919.77
17	Daylight	
18	Standard	
19	Standard	945.15
20	Standard	945.14
21	Standard	947.42
22	Standard	947.42
23	Standard	
24	Standard	
25	Walkout	945.14
26	Walkout	945.15
27	Walkout	945.12
28	Walkout	943.49
29	Walkout	943.49
30	Daylight	943.49
31	Standard	
32	Walkout	943.49
33	Walkout	943.49
34	Daylight	
35	Daylight	
36	Walkout	943.49
37	Walkout	943.49
38	Daylight	947.17
39	Daylight	950.93
40	Daylight	
41	Daylight	
42	Standard	

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 Section 27, Township 48 North, Range 31 West
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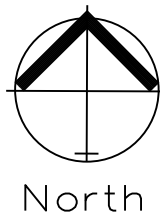
Spot Elevations

Construction Plans for:
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Lee's Summit, Jackson County, Missouri

Matthew J. Schlich
MO PE 2006019708
KS PE 19071
OK PE 25226
NE PE E-14335

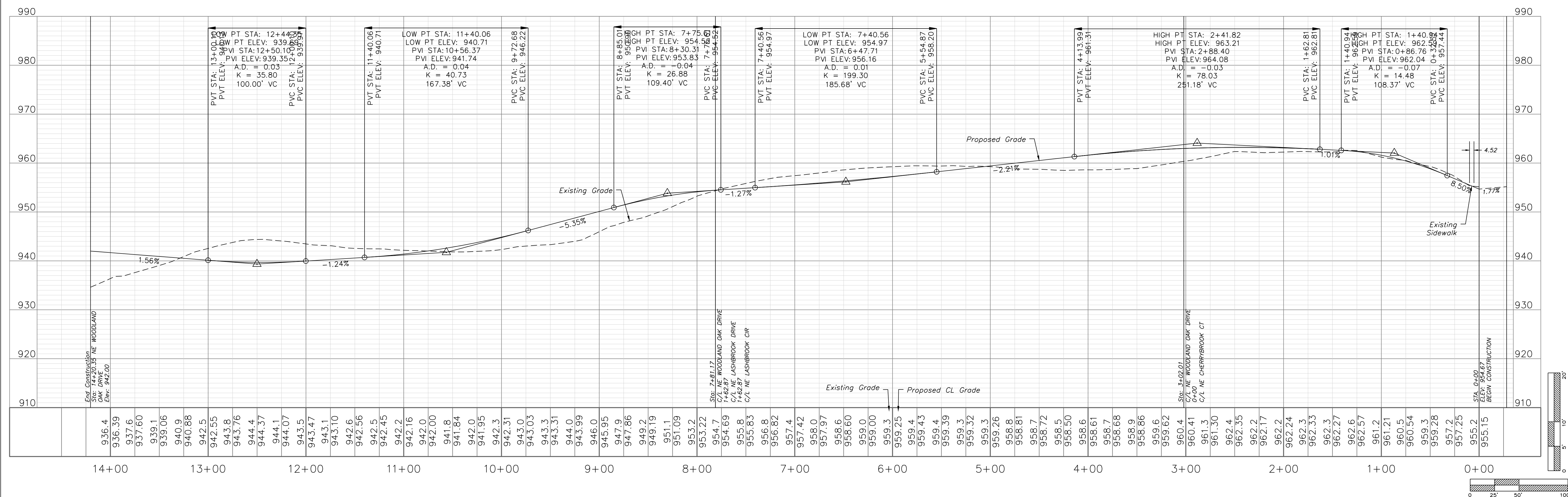
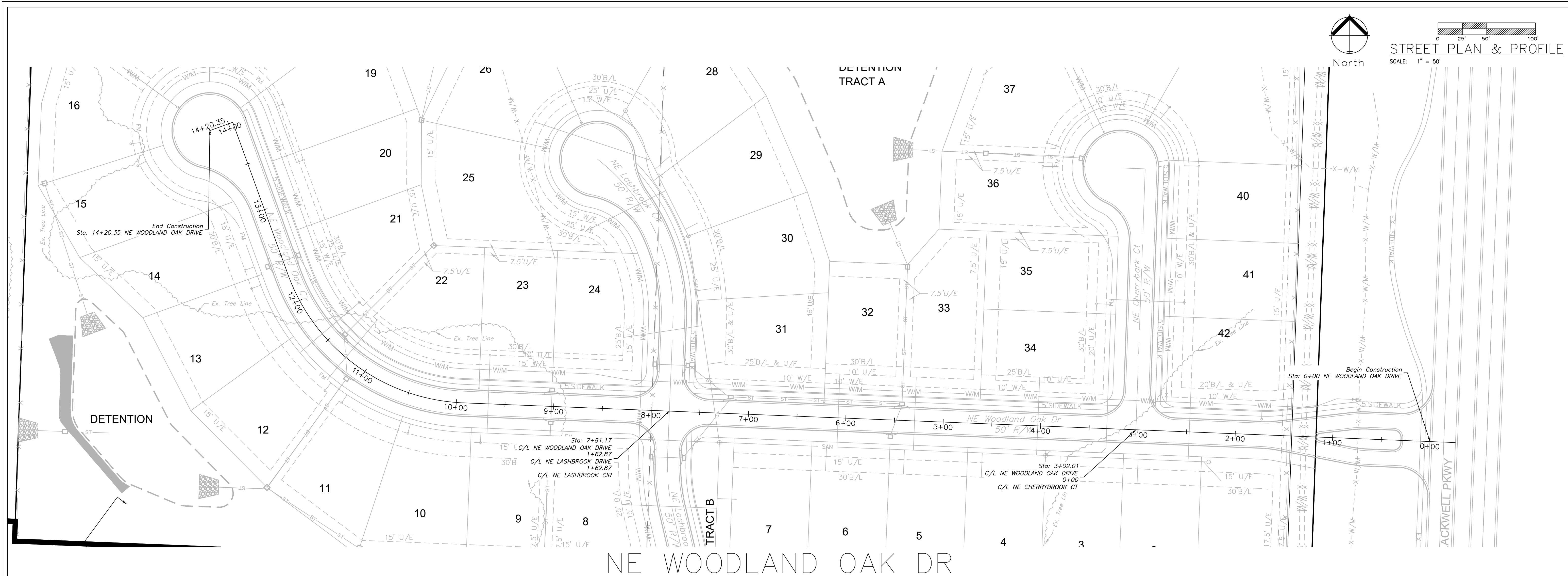
REVISIONS

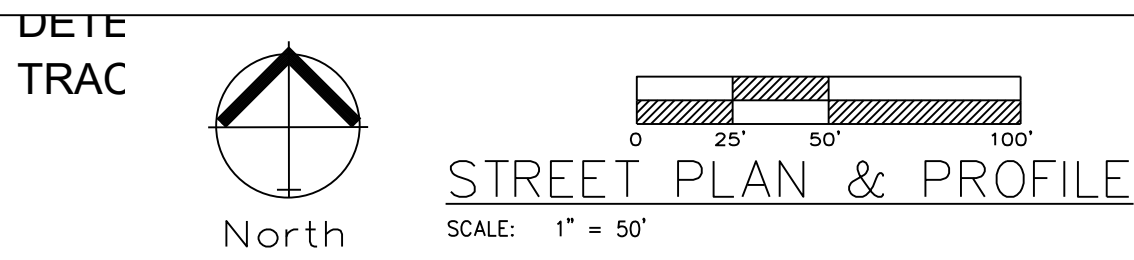
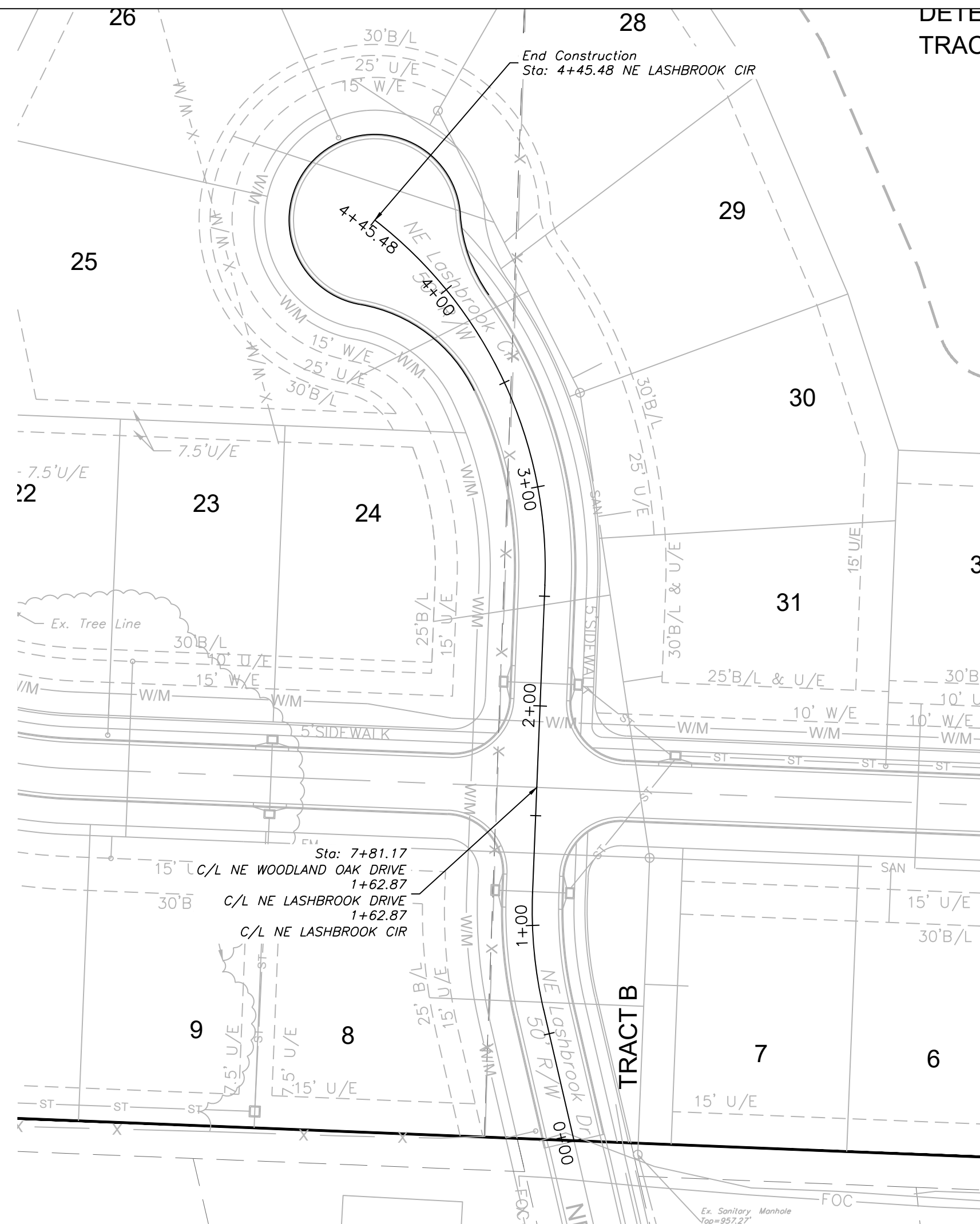
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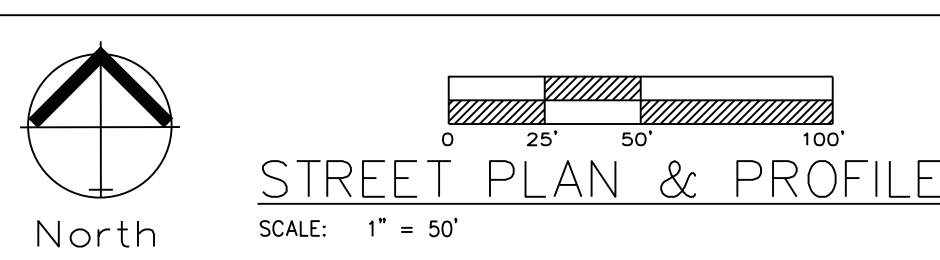
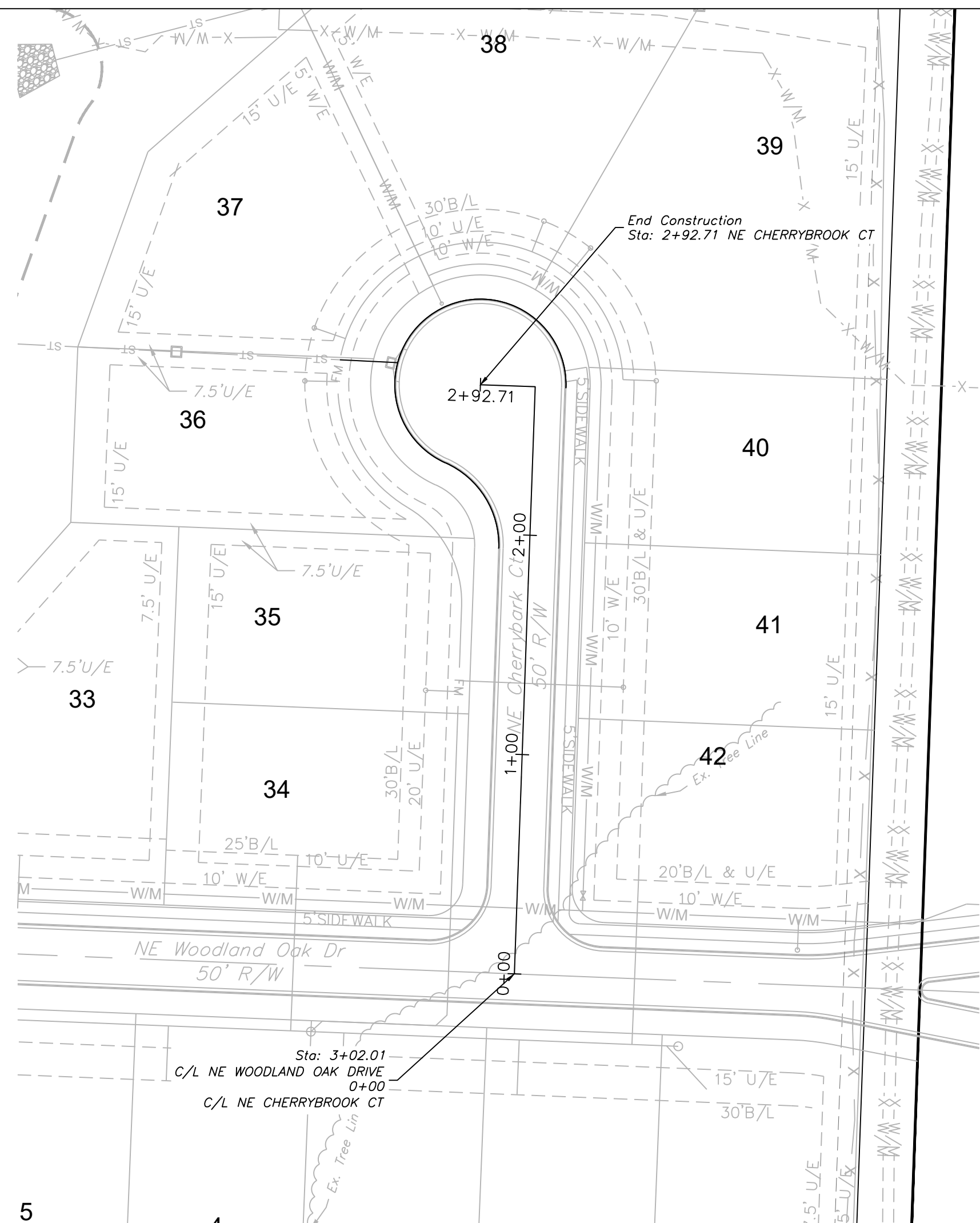
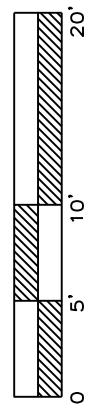
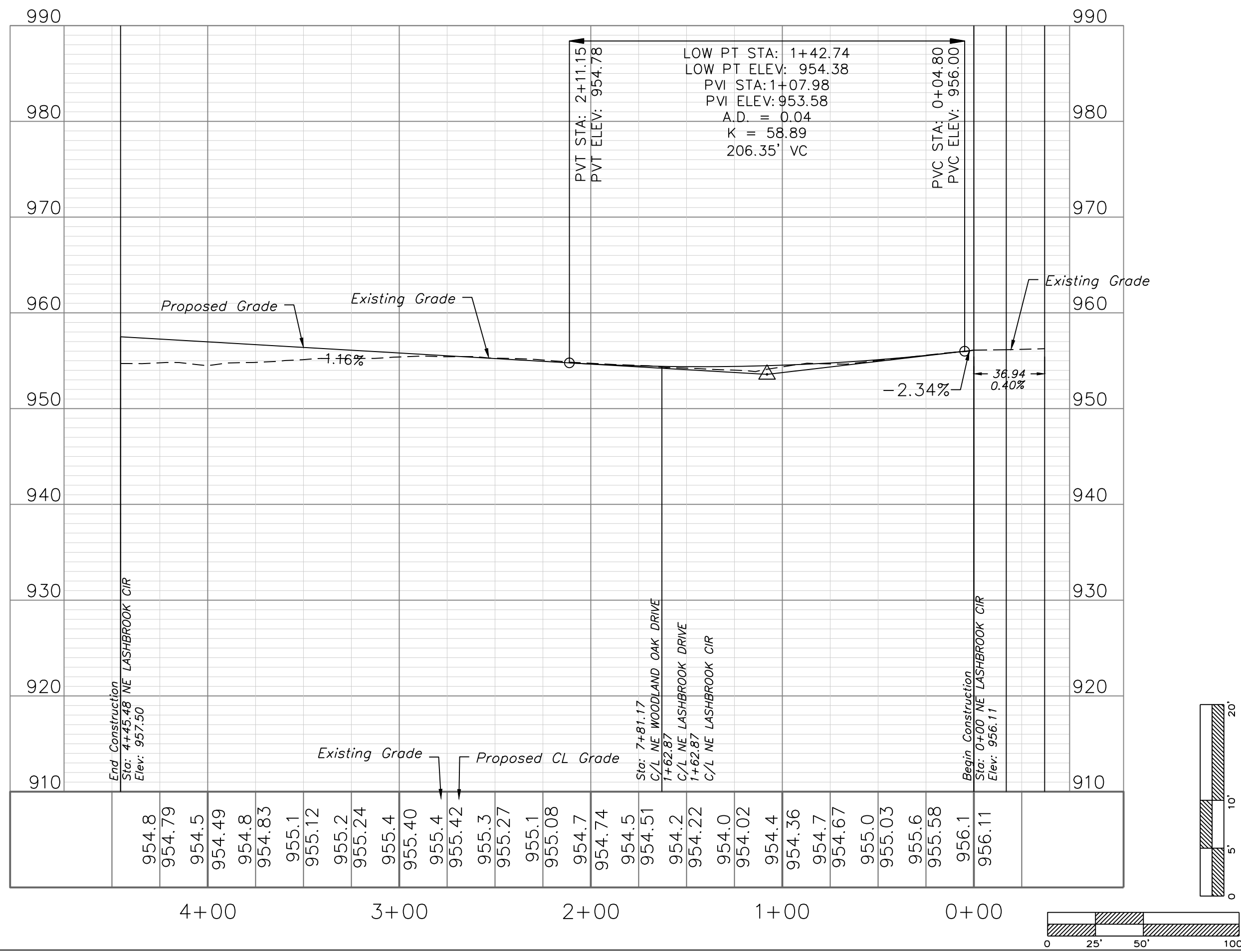
DRAINAGE
SCALE: 1" = 60'

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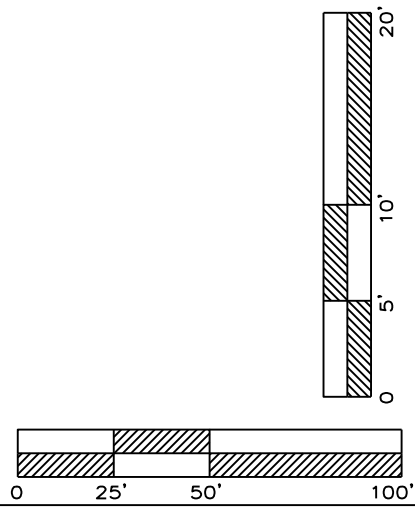
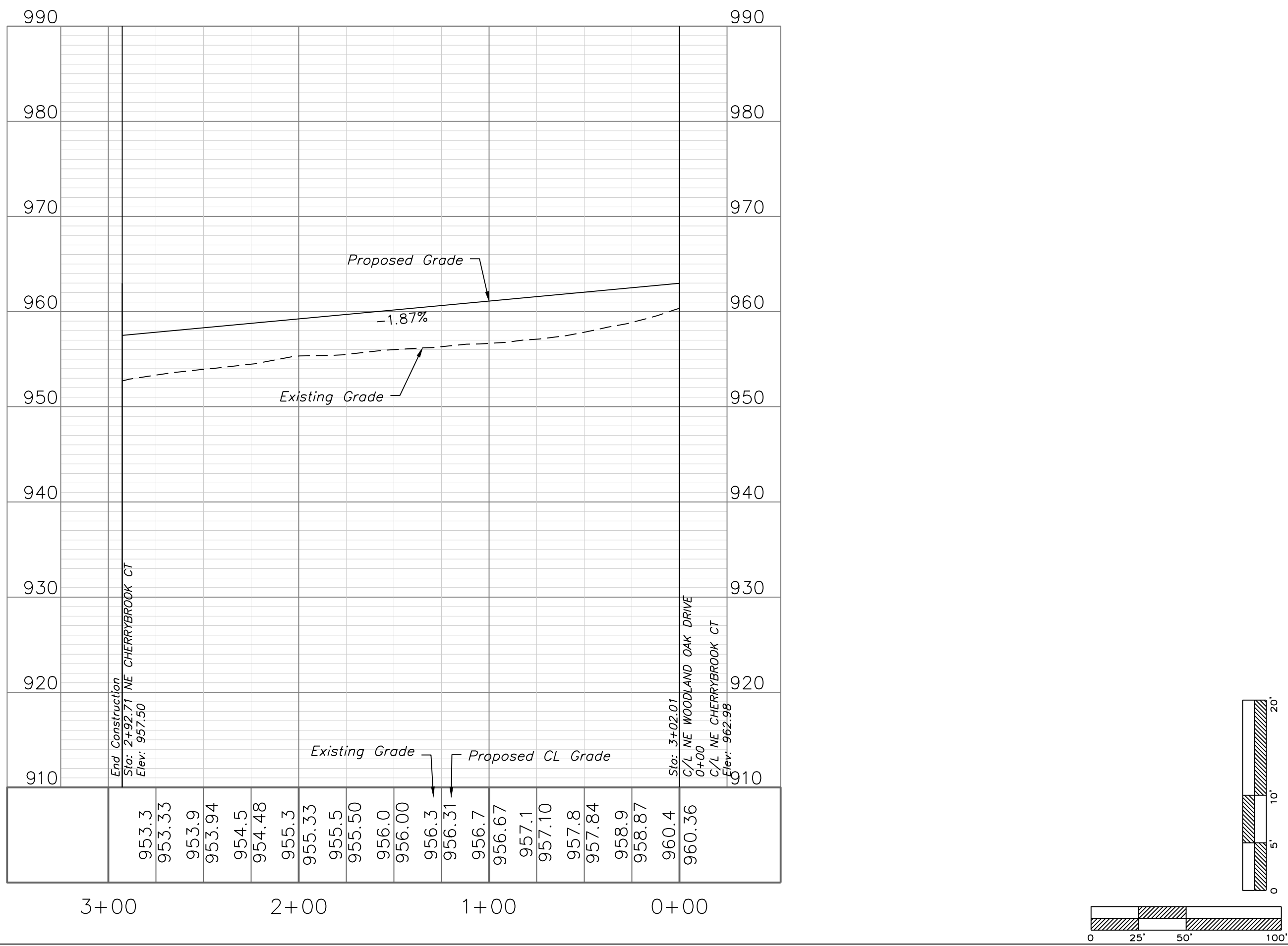




NE LASHBROOK DR



NE CHERRYBARK CT



Street Plan and Profile

Construction Plans for:
WOODLAND OAKS
Lots 1 thru 42

Lee's Summit, Jackson County, Missouri

Project:
WOODLAND OAKS
LSMO
Issue Date:
February 25, 2020

Part of the Southeast 1/4
Section 27, Township 48 North, Range 31 West
Lee's Summit, Jackson County, Missouri

Professional Registration
Missouri
Engineering 2005002186-D
Surveying 2005008319-D
Kansas
Engineering E-1685
Surveying LS-218
Oklahoma
Engineering 6284
Nebraska
Engineering CA2821

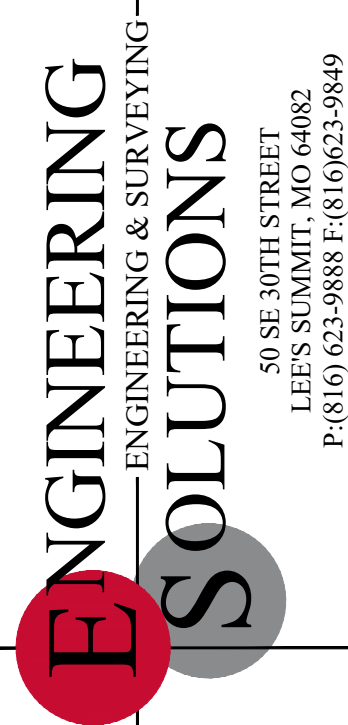
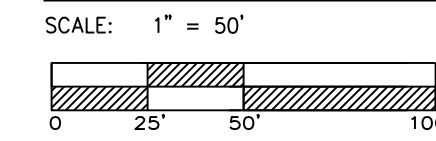
ENGINEERING SOLUTIONS
ENGINEERING & SURVEYING
50 SE 30TH STREET
LEE'S SUMMIT, MO 64082
P: (816) 623-9888 F: (816) 623-9849

Matthew J. Schlicht
MO PE 2006019708
KS PE 19071
OK PE 25226
NE PE E-14335

REVISIONS



STORM SEWER GENERAL LAYOUT



Professional Registration
Missouri
Engineering 2005002186-D
Surveying 2005008319-D
Kansas
Engineering E-1695
Surveying LS-218
Oklahoma
Engineering 6254
Nebraska
Engineering CA2821

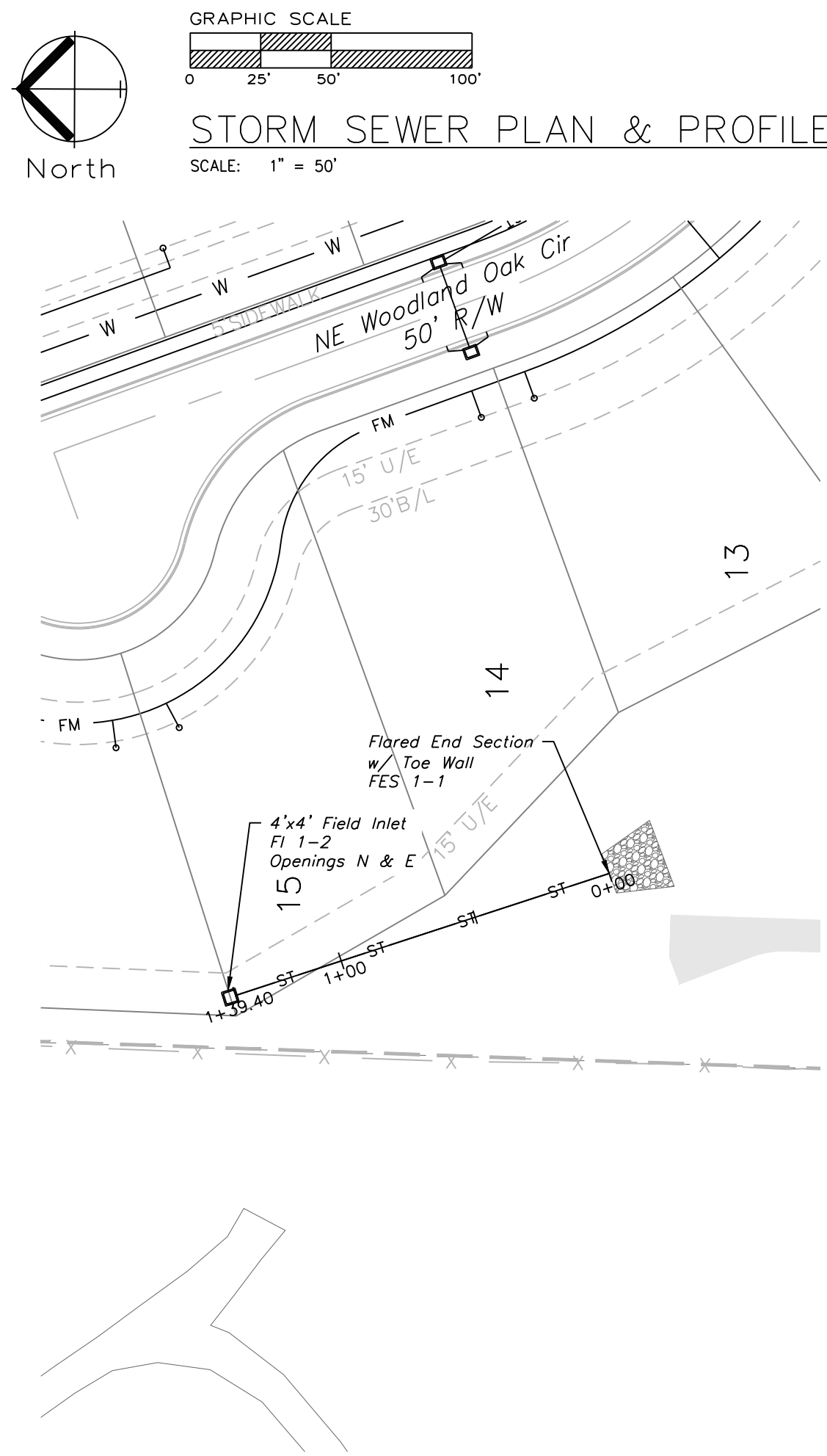
Part of the Southeast 1
Section 27, Township 48 North, Range 31 West
Lee's Summit, Jackson County, Missouri

Project:
WOODLAND OAKS
LSMO
Issue Date:
February 25, 2020

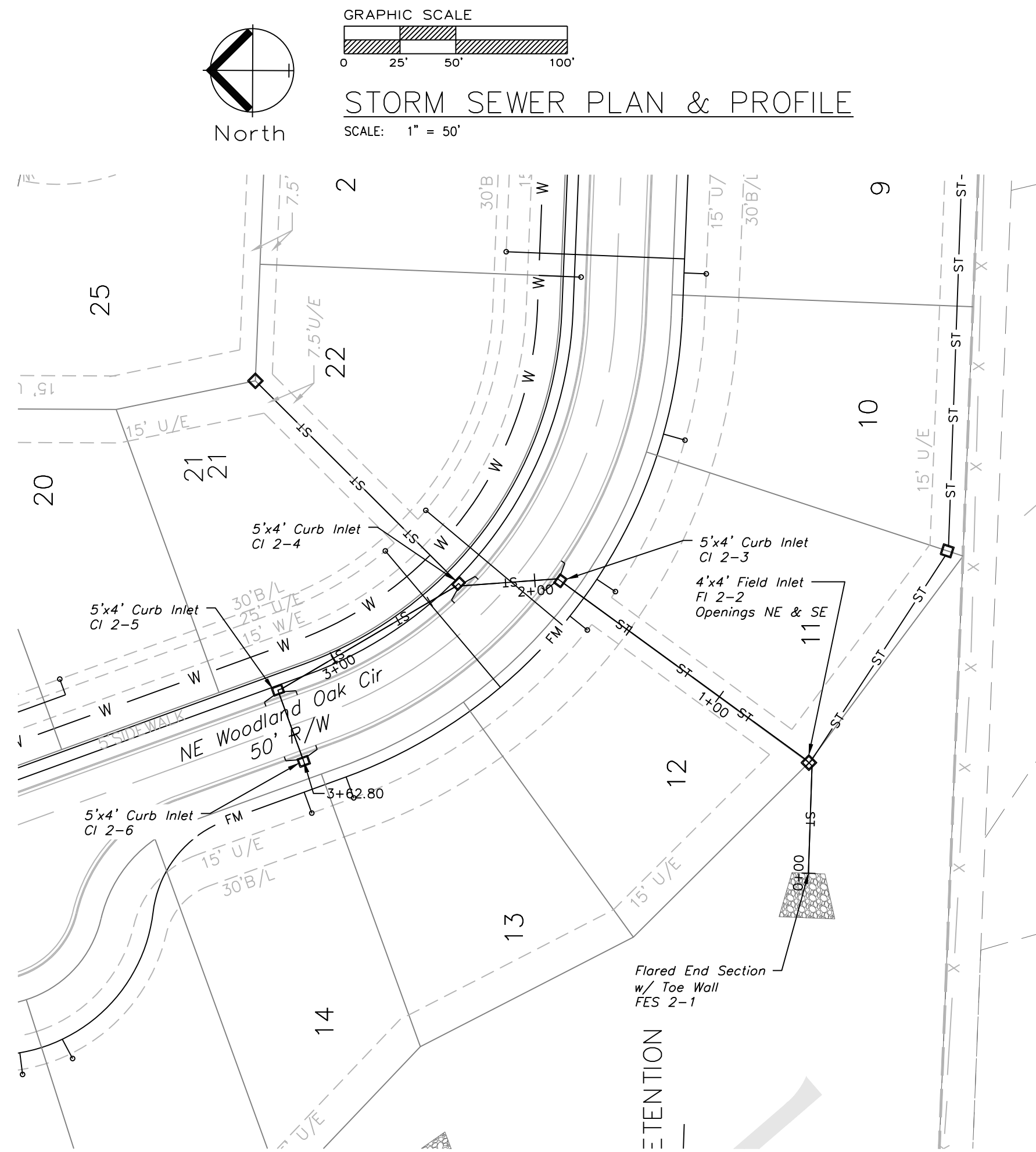
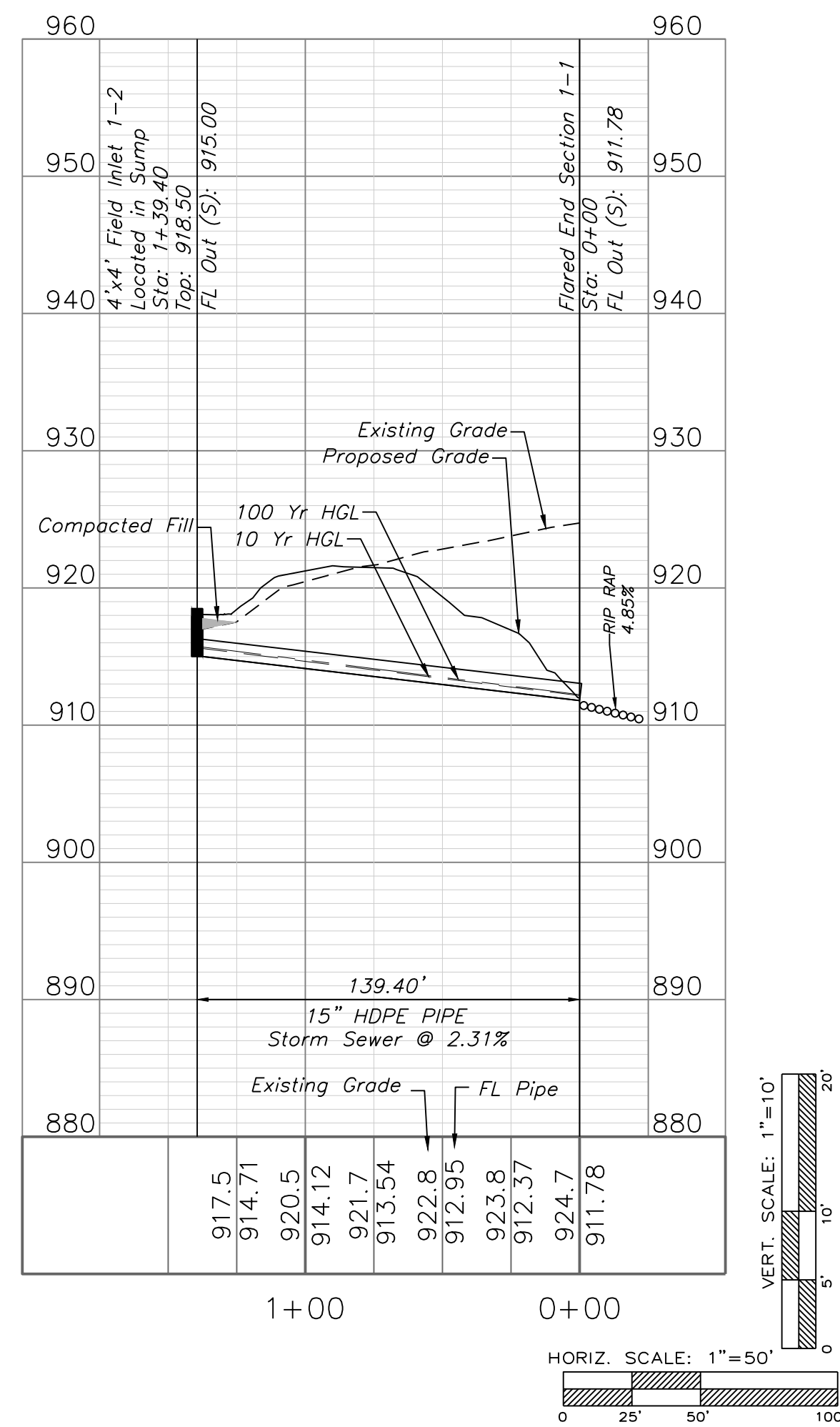
Storm Sewer General Layout
Construction Plans for:
WOODLAND OAKS
Lots 1 thru 42
Lee's Summit, Jackson County, Missouri

Matthew J. Schlicht
MO PE 2006019708
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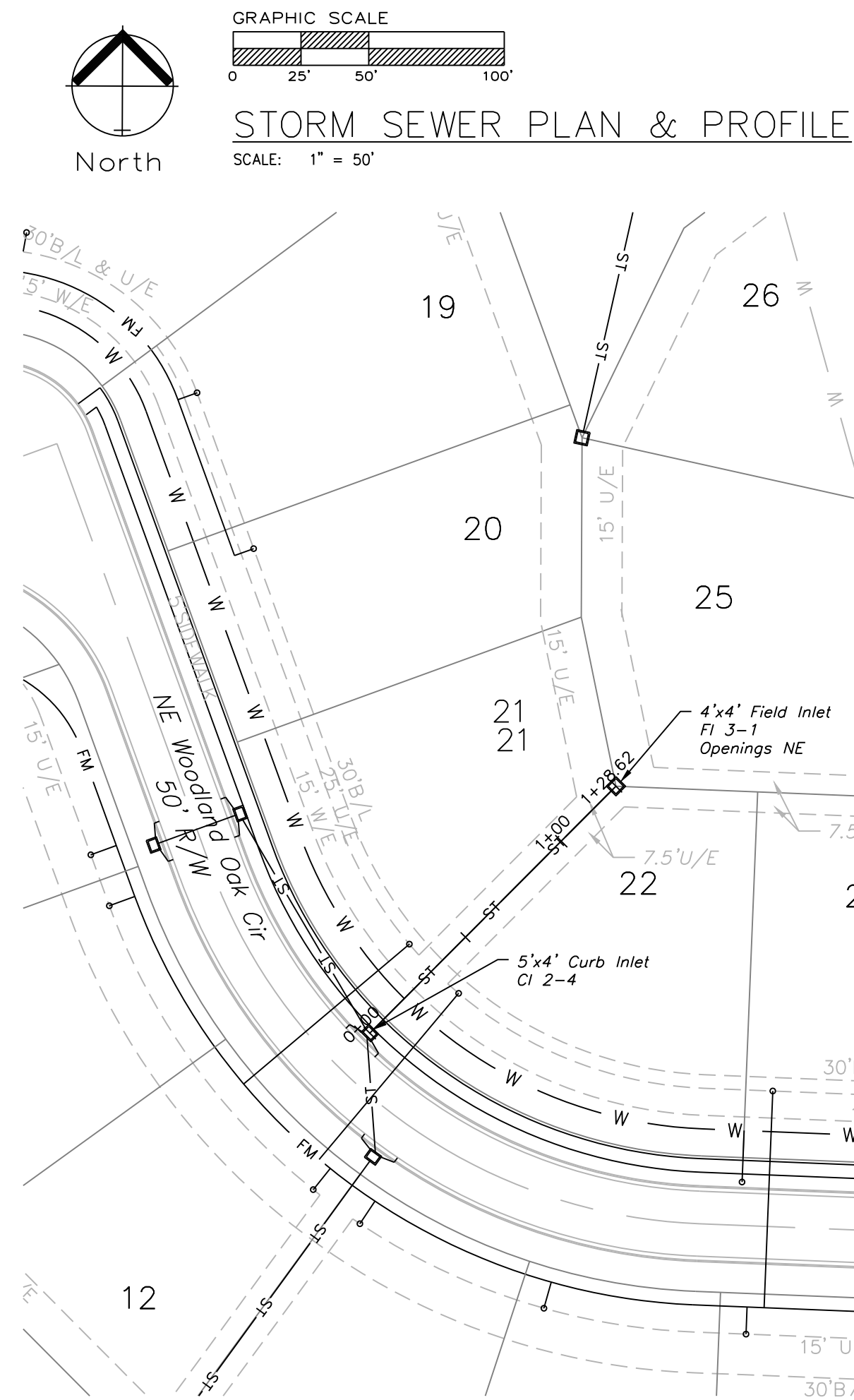
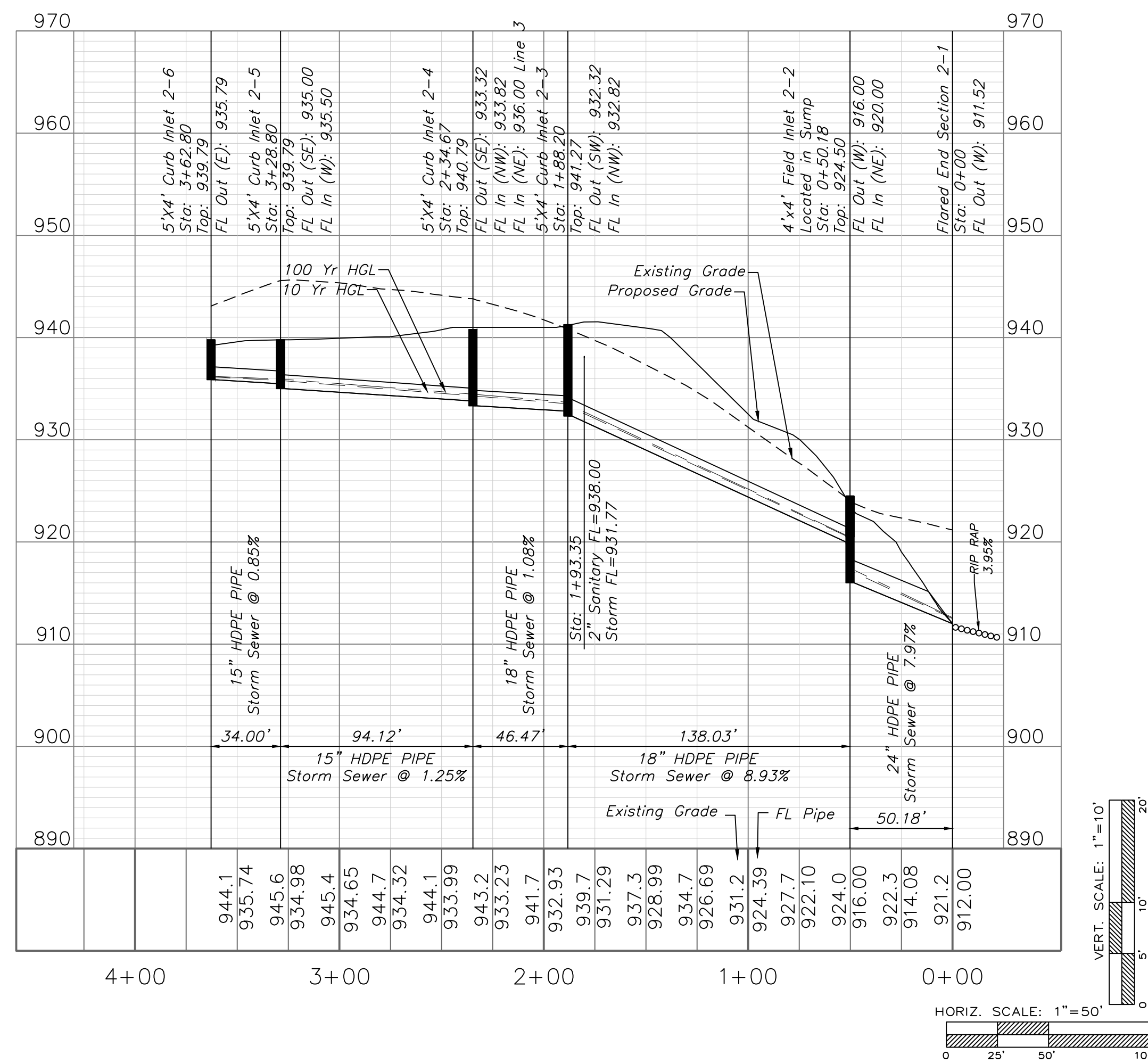
REVISIONS



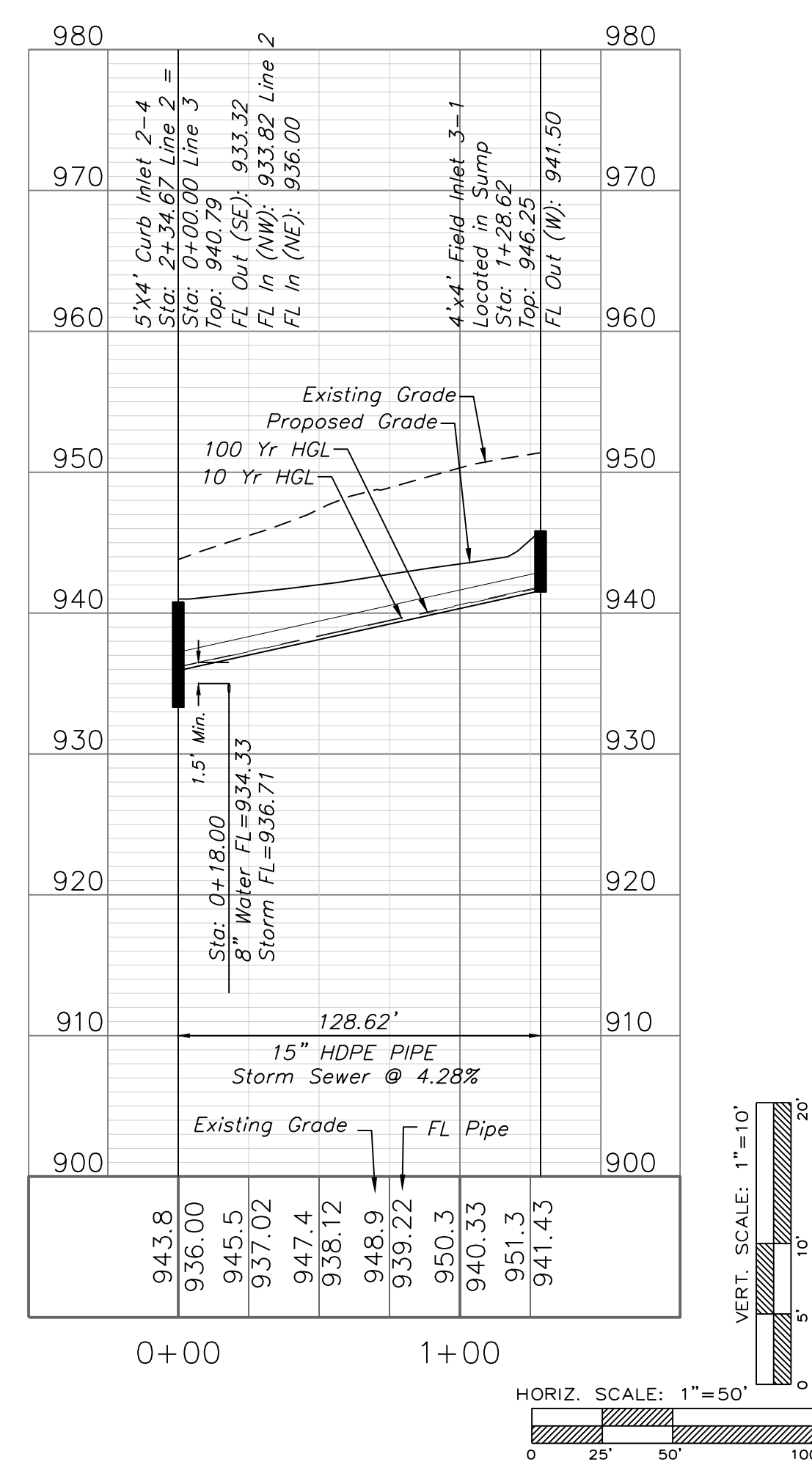
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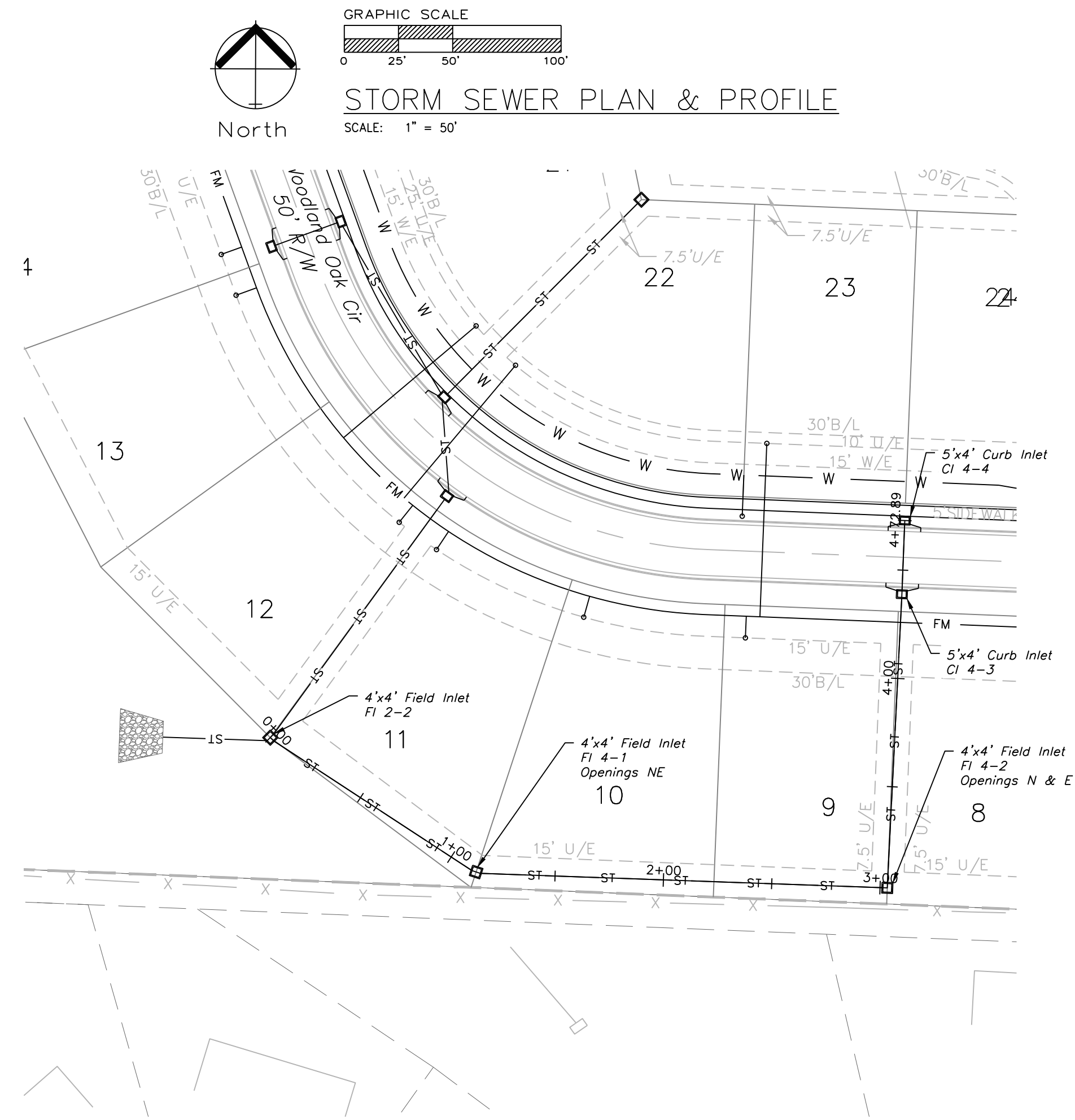


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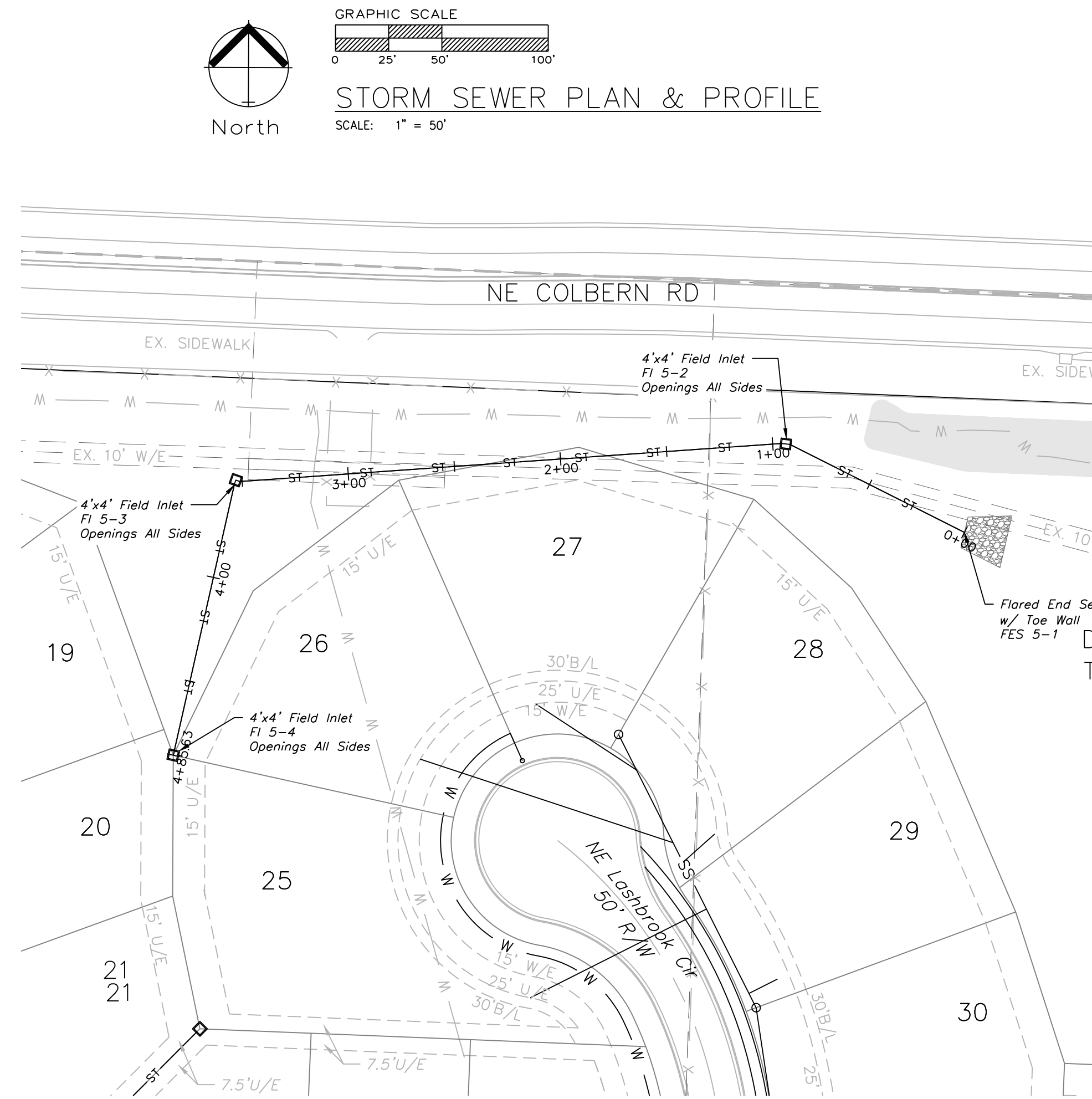
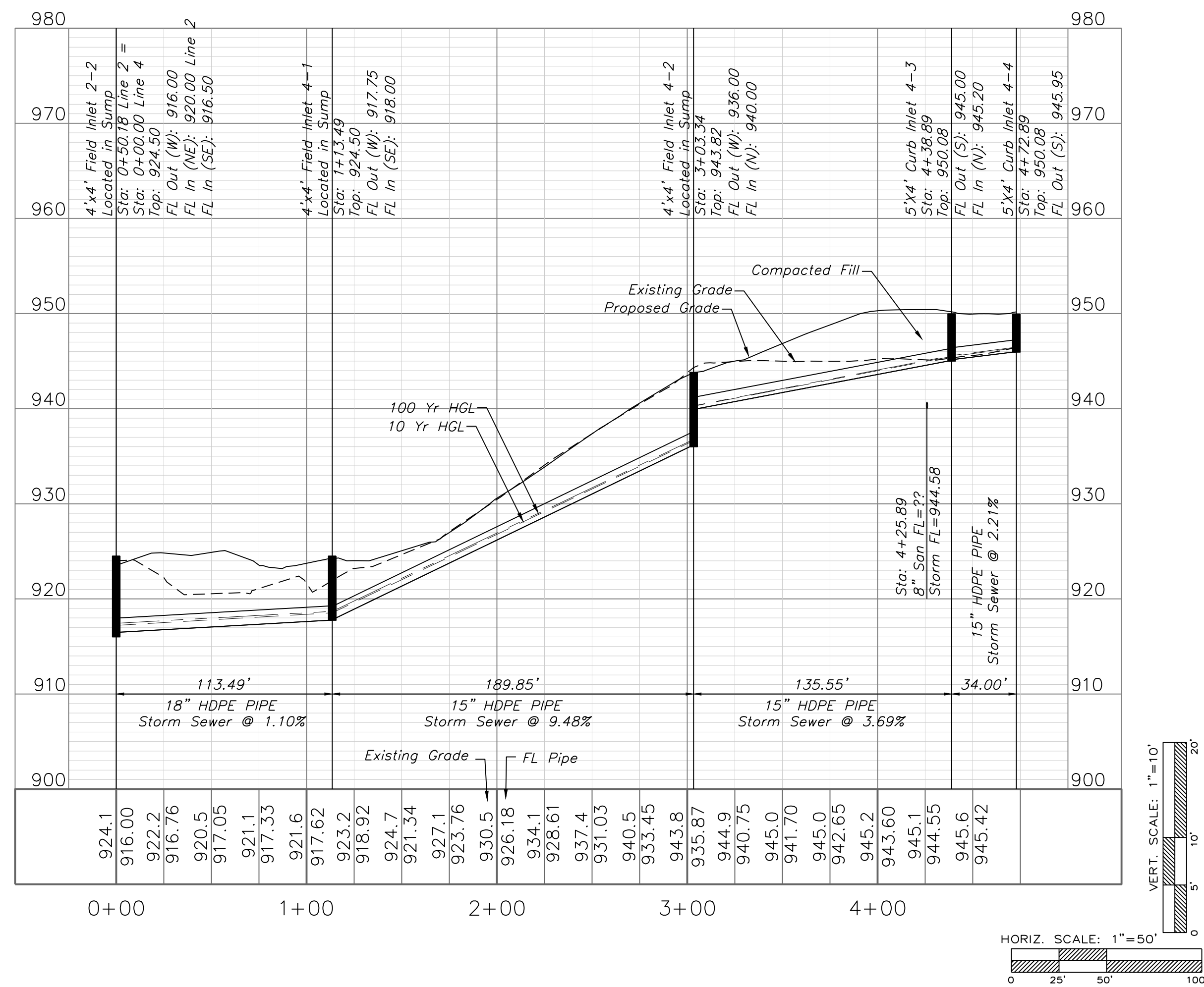


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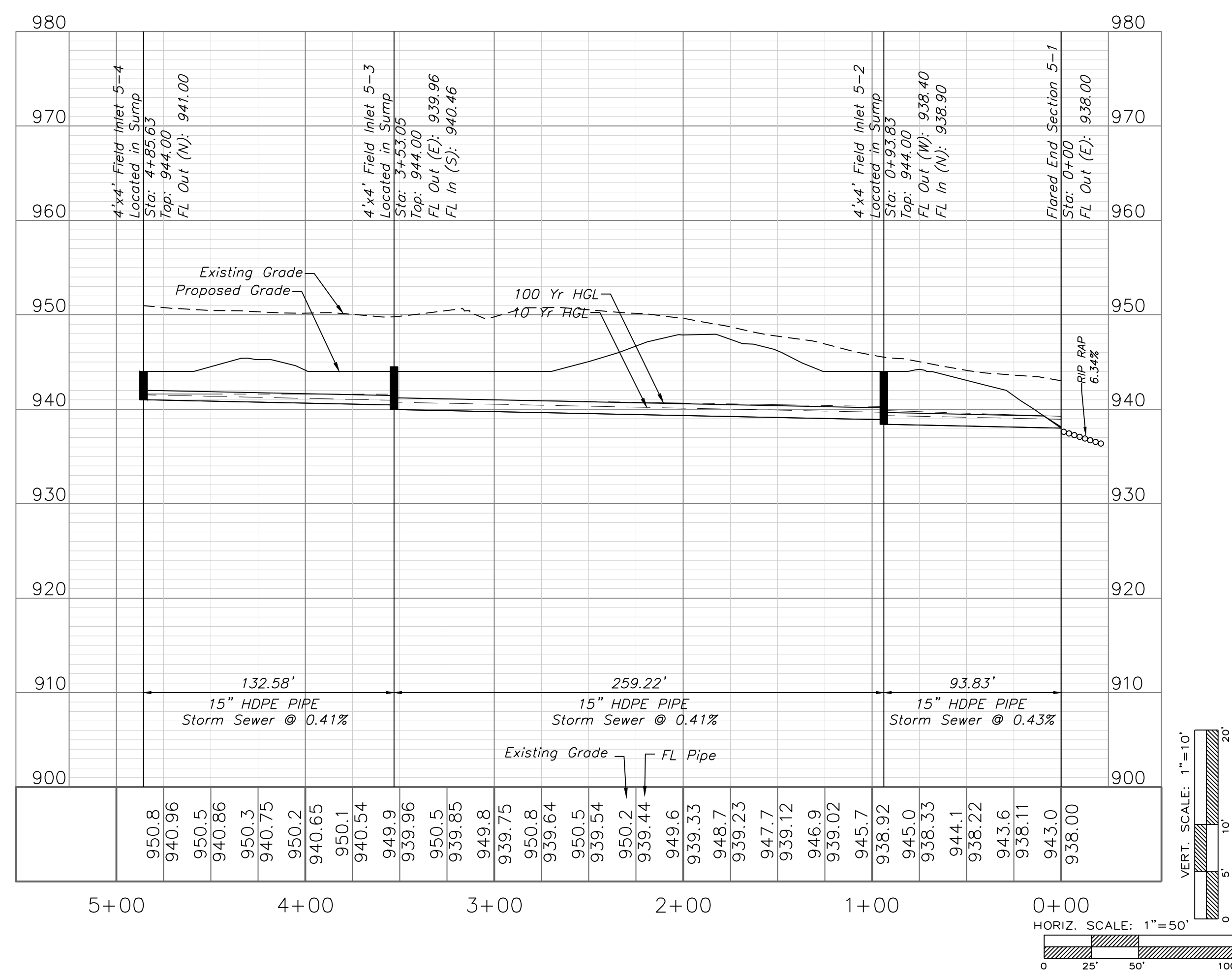


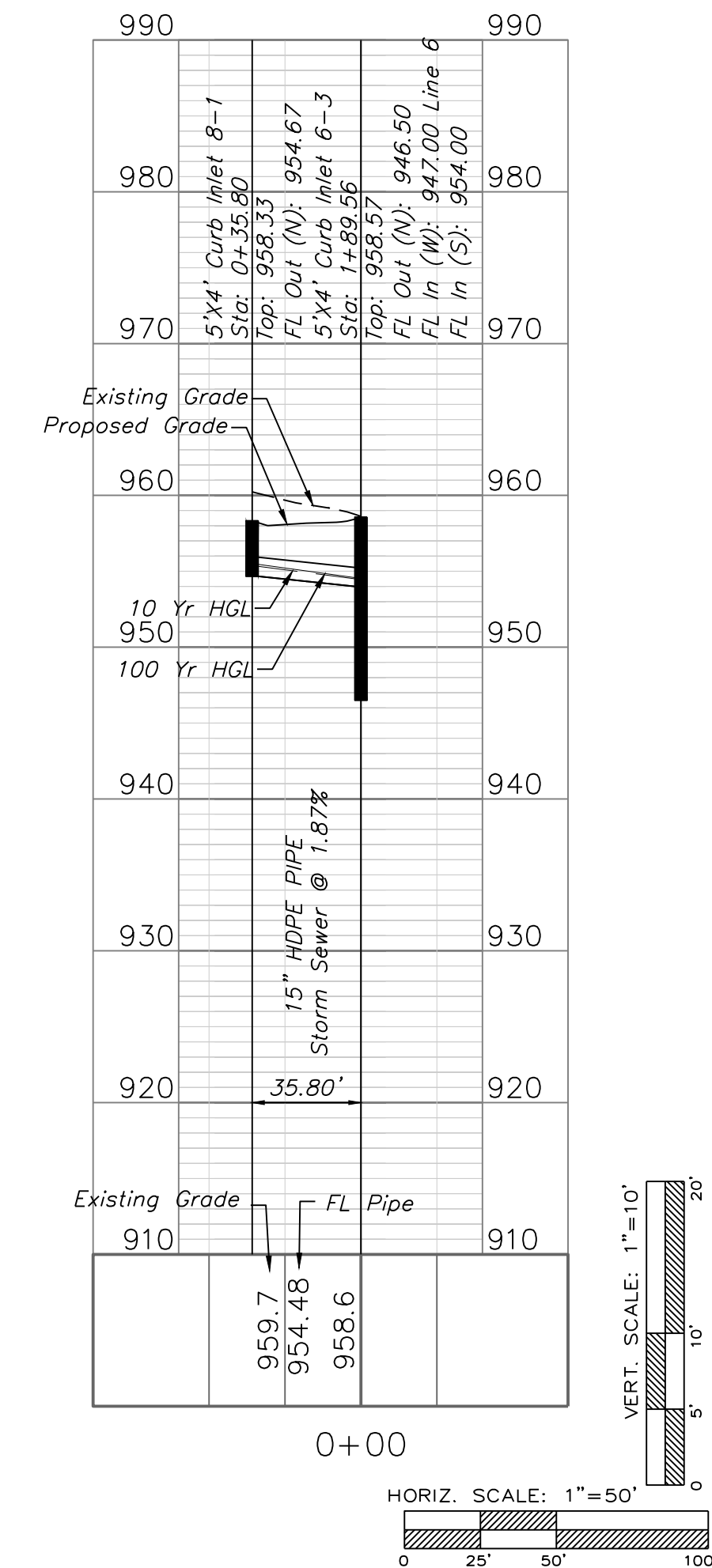
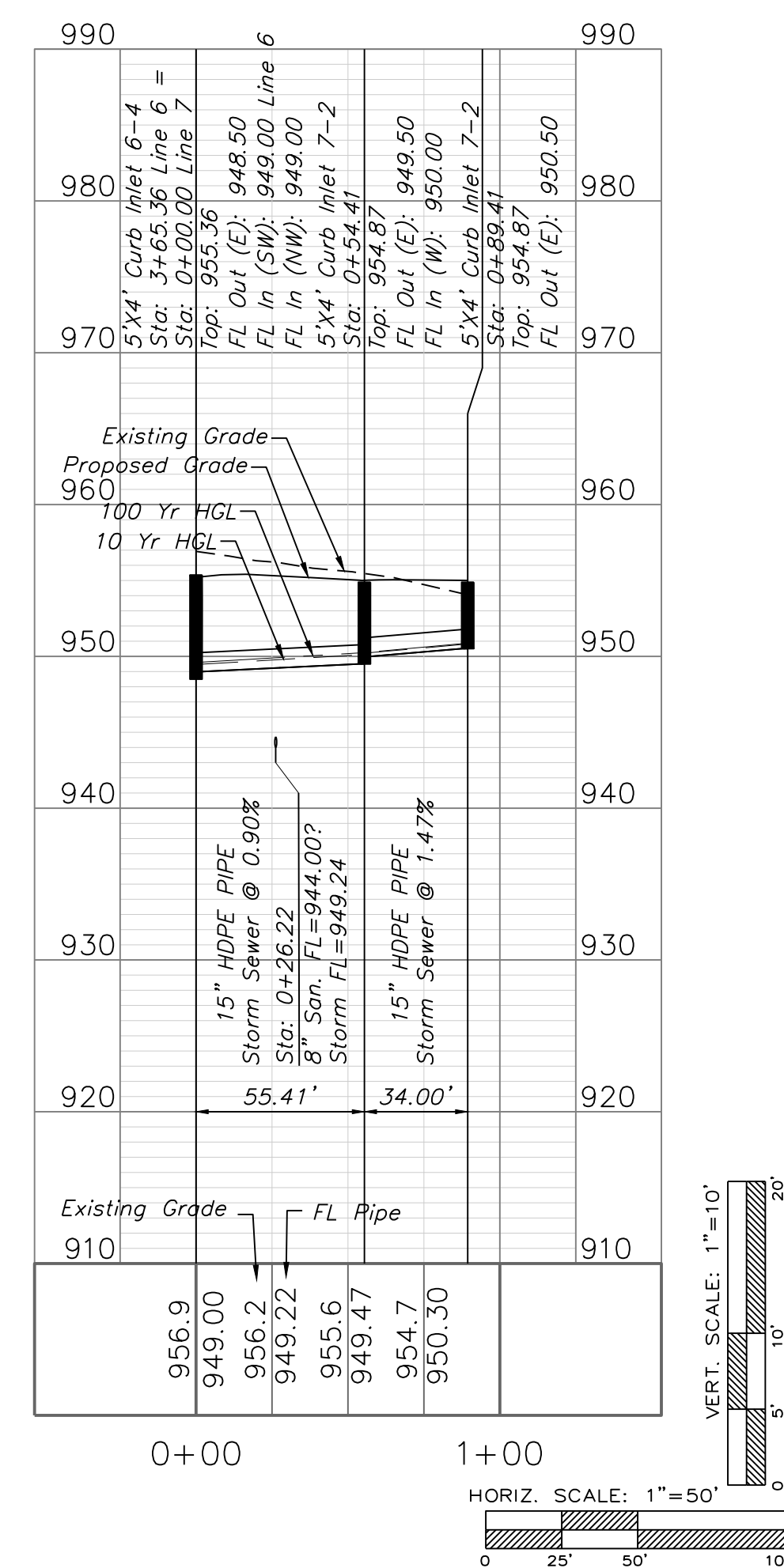
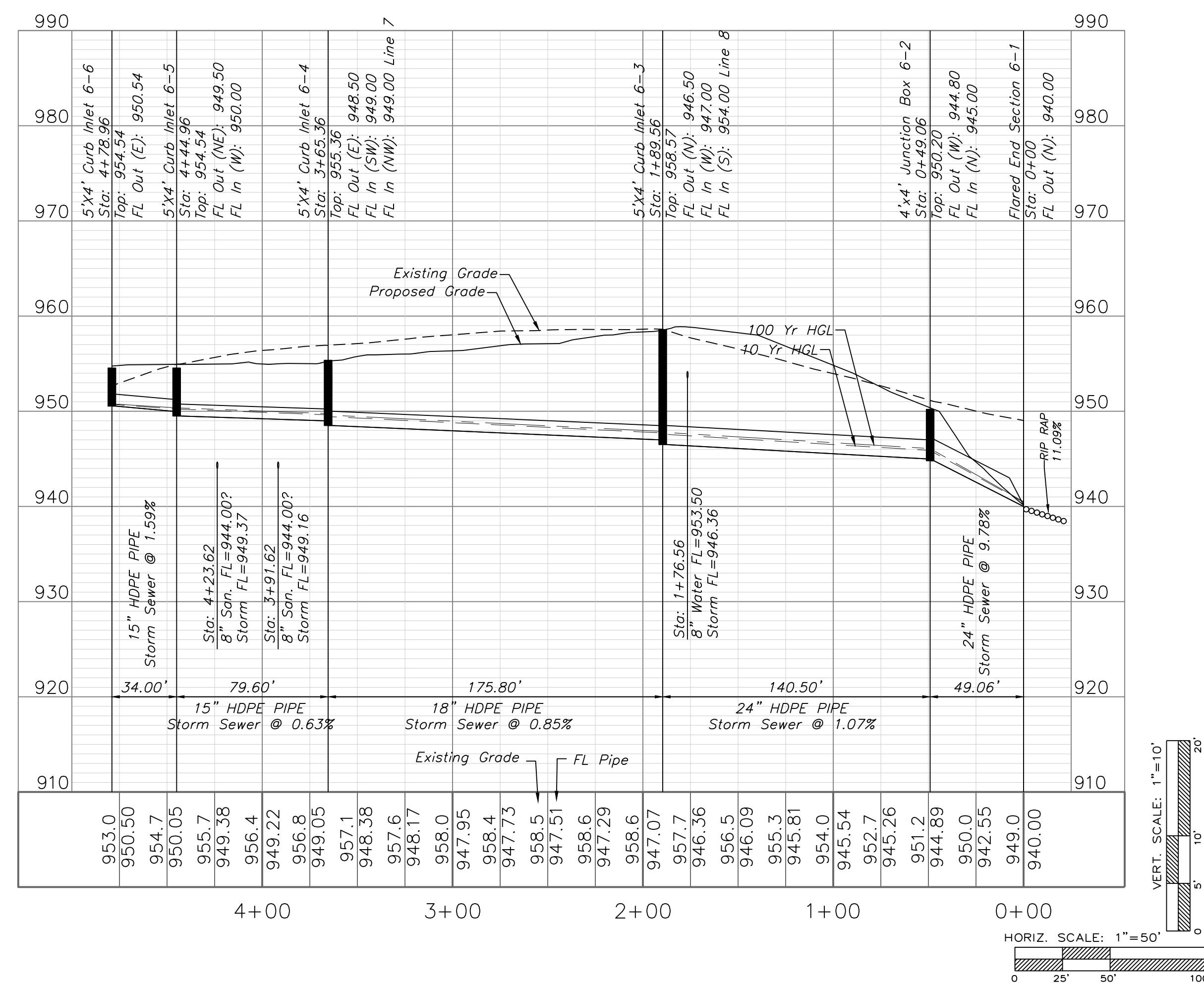
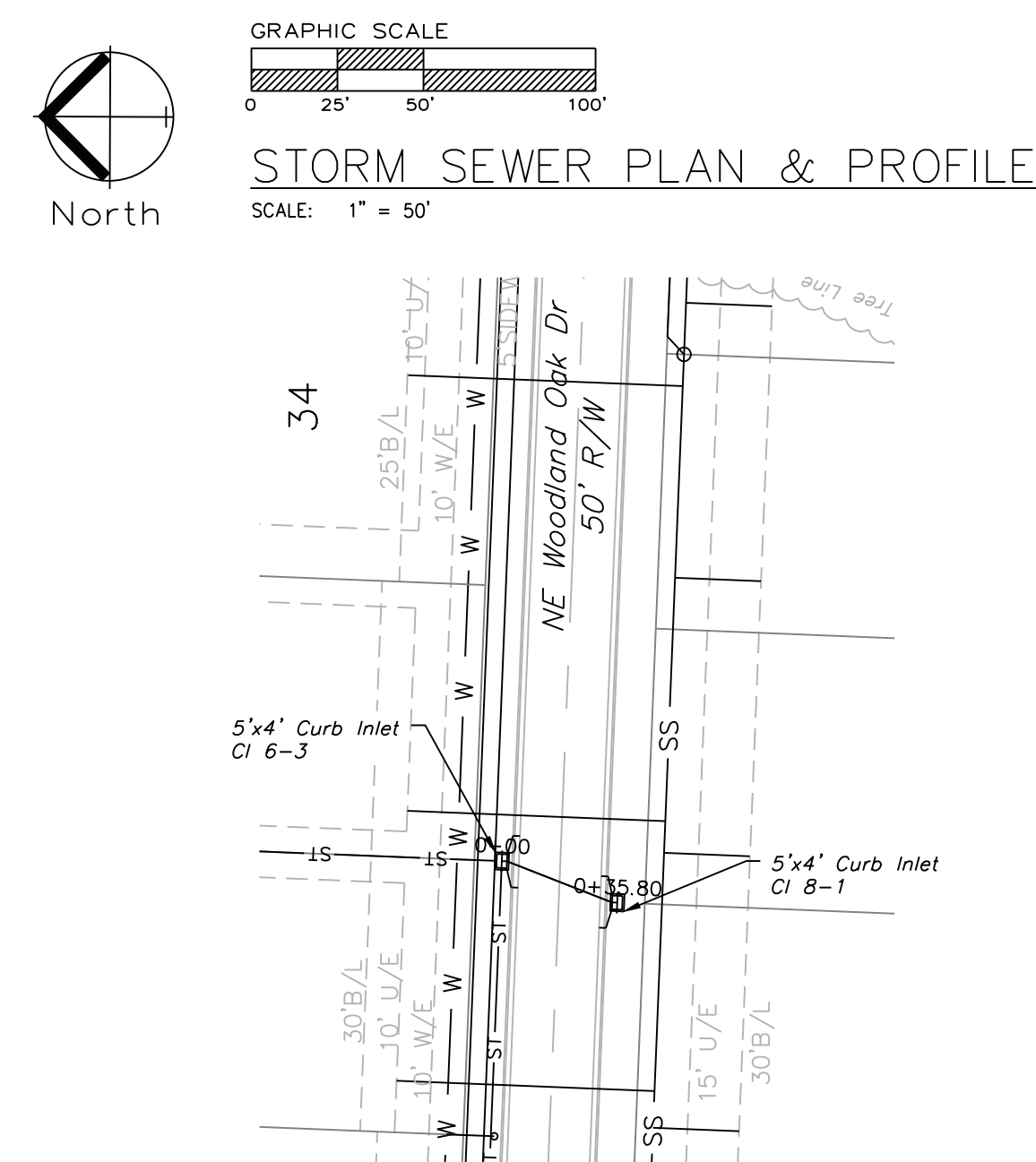
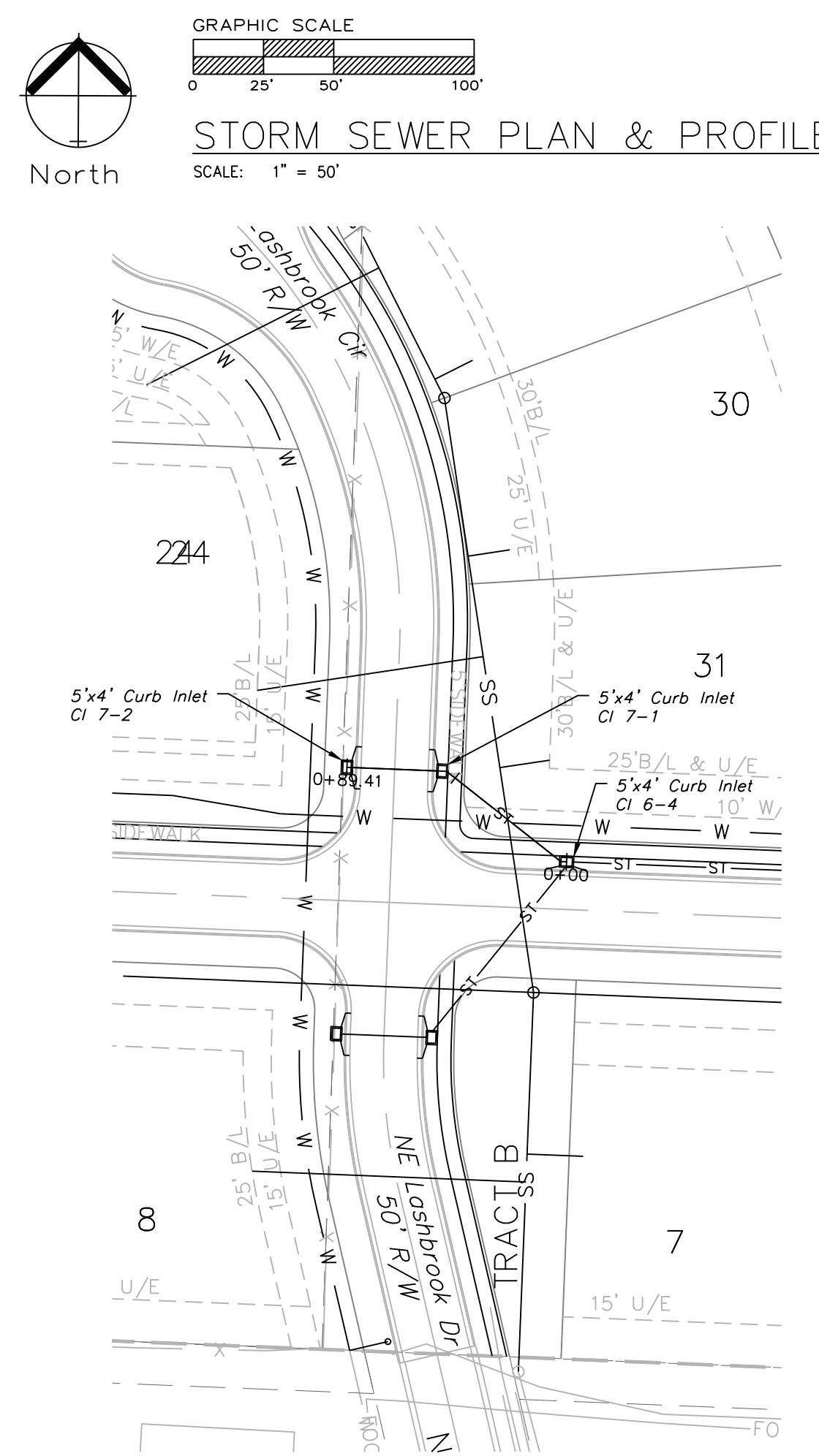
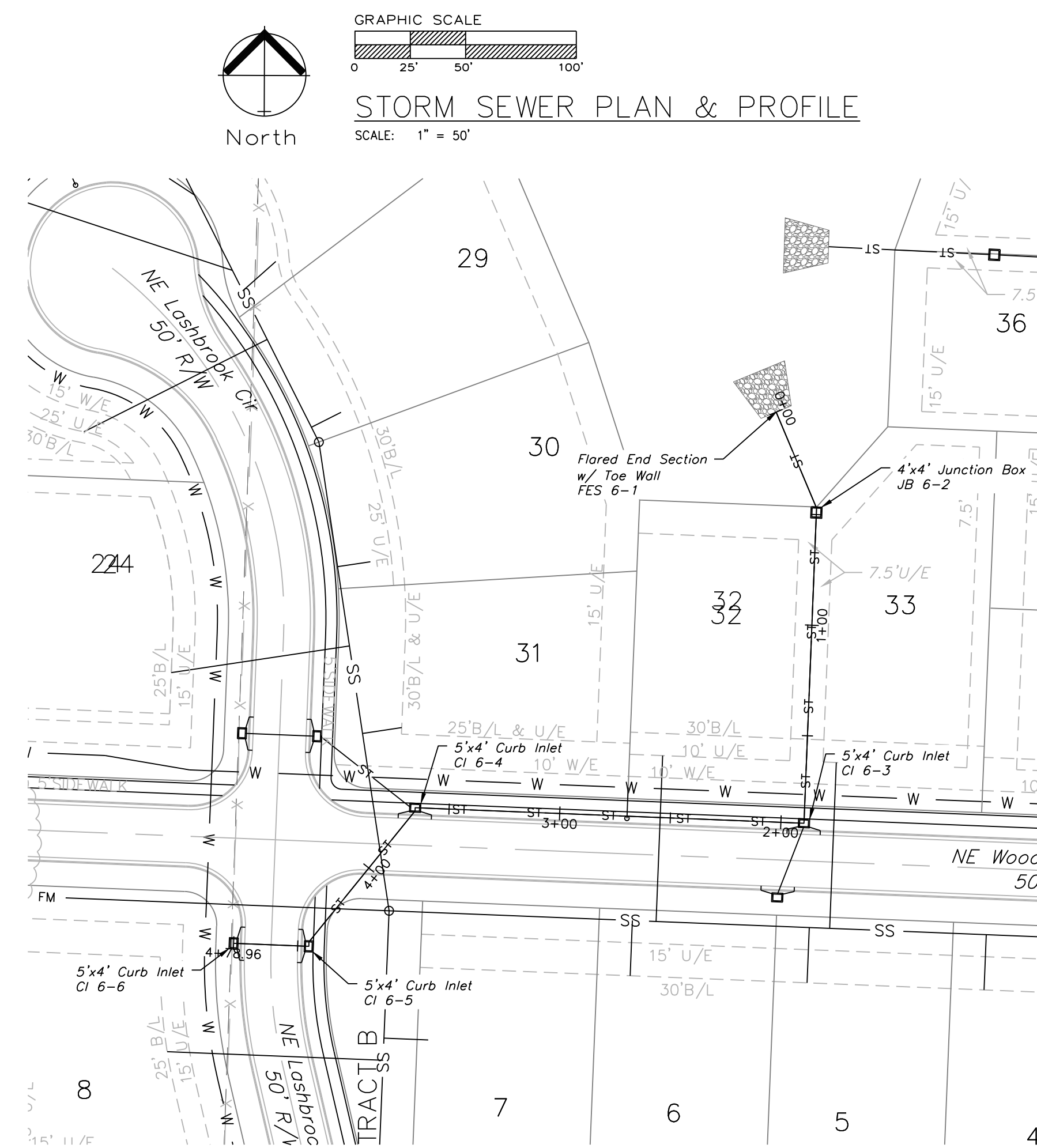


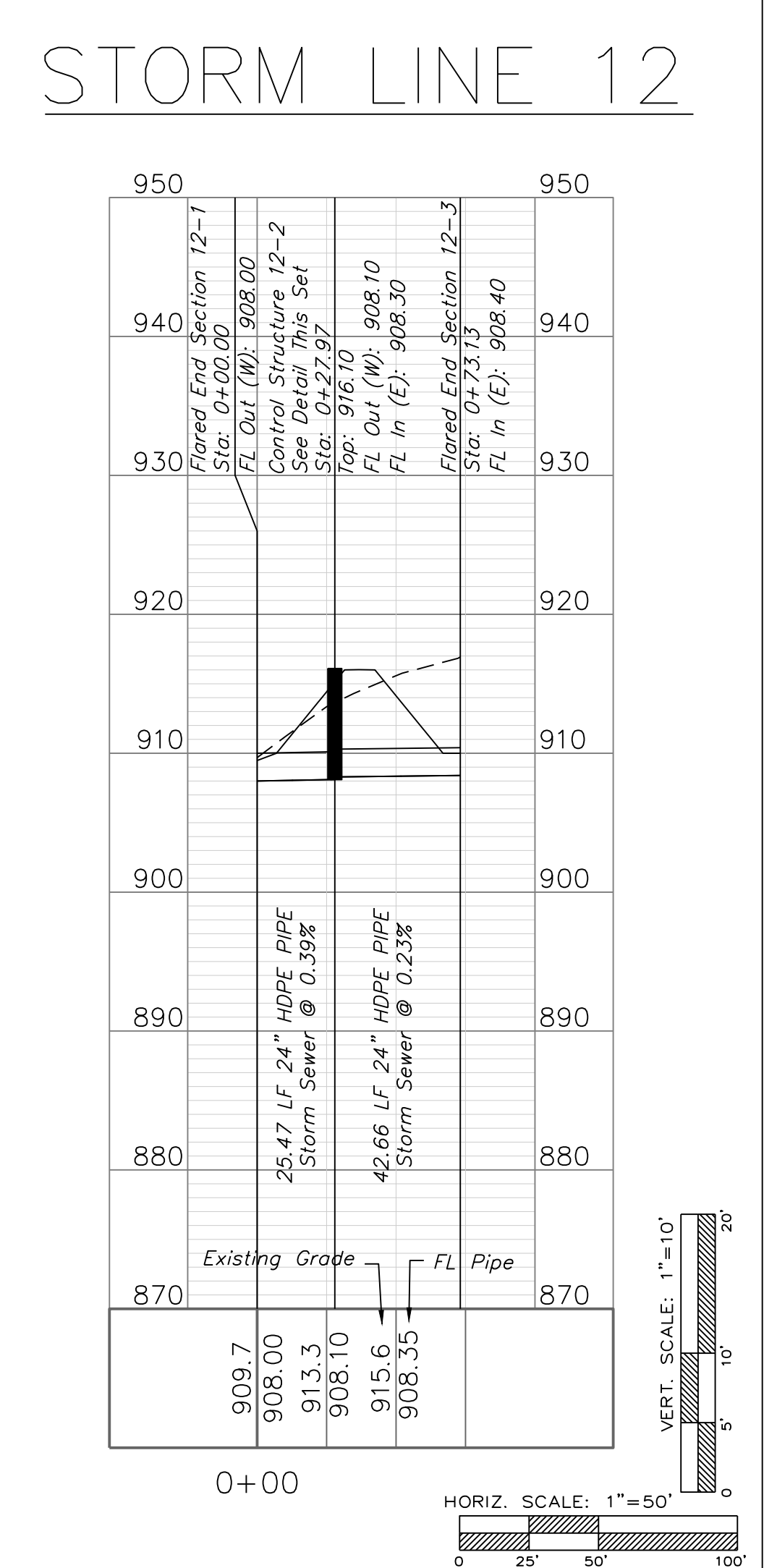
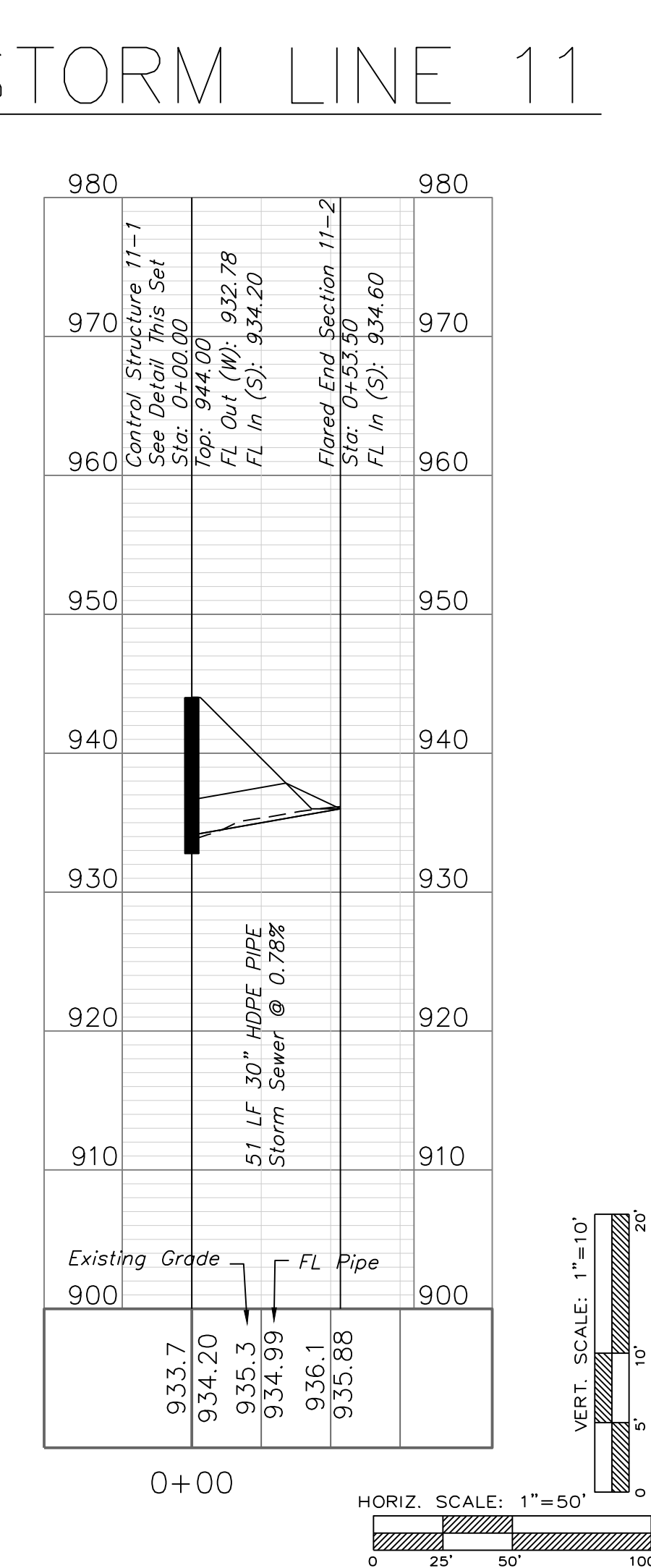
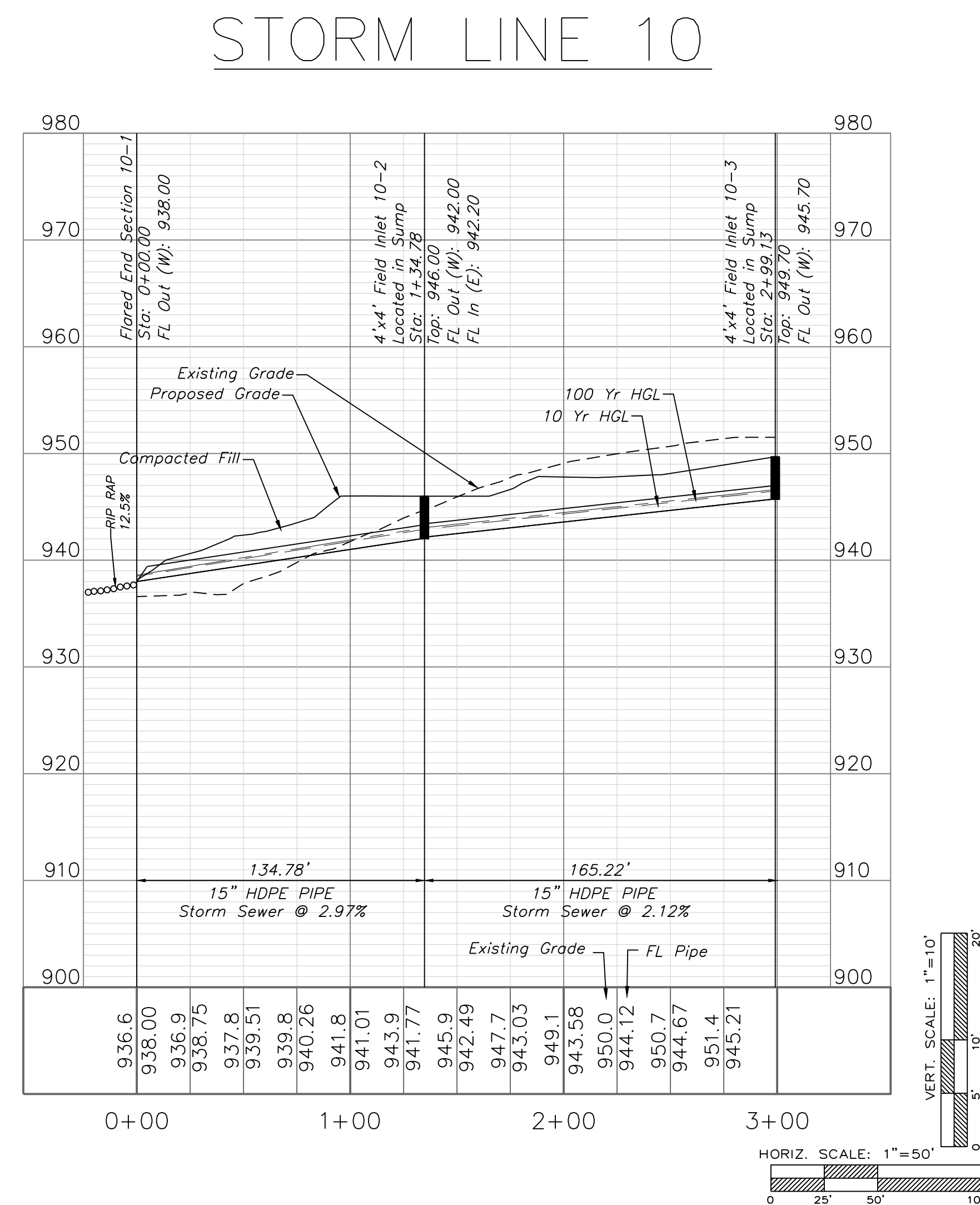
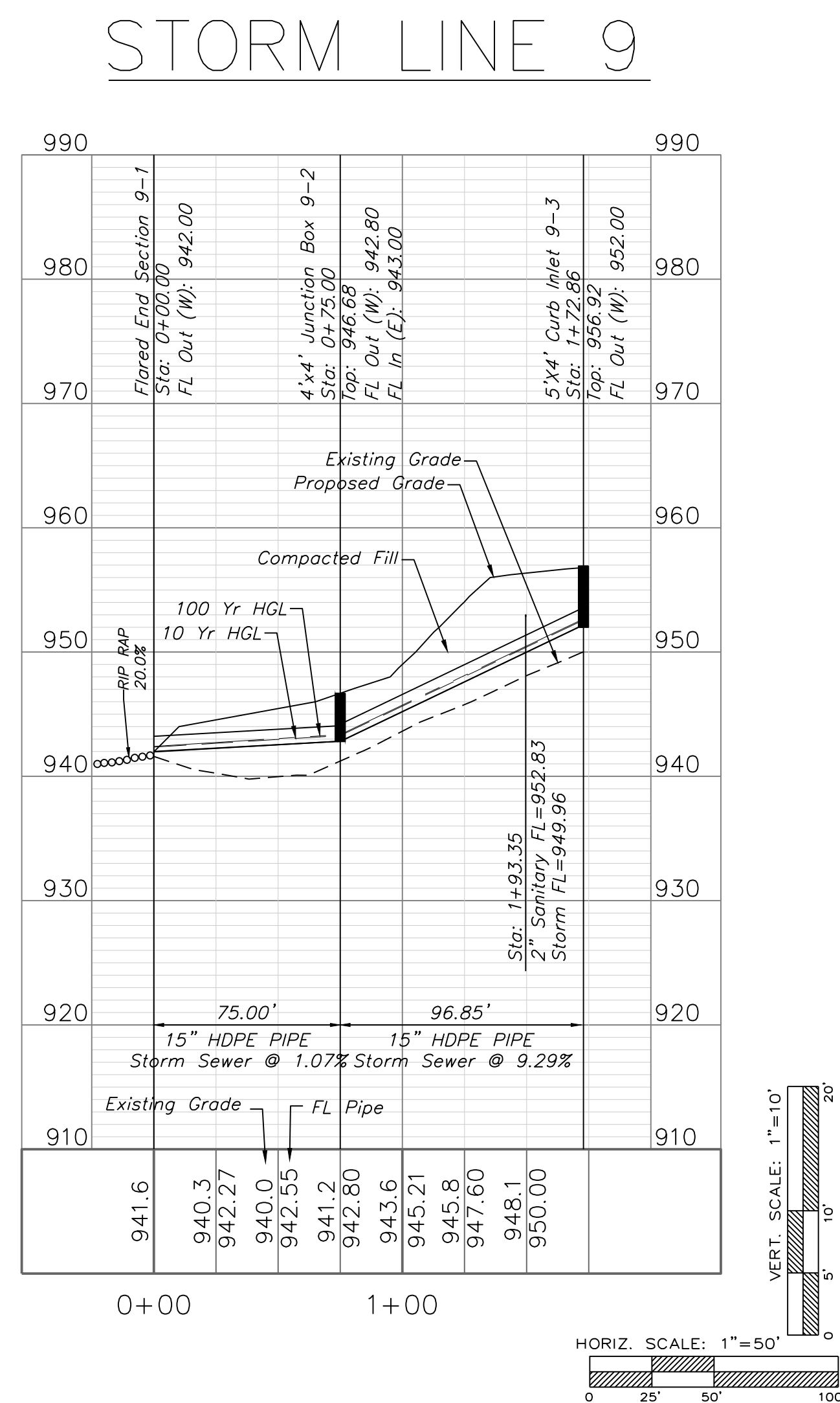
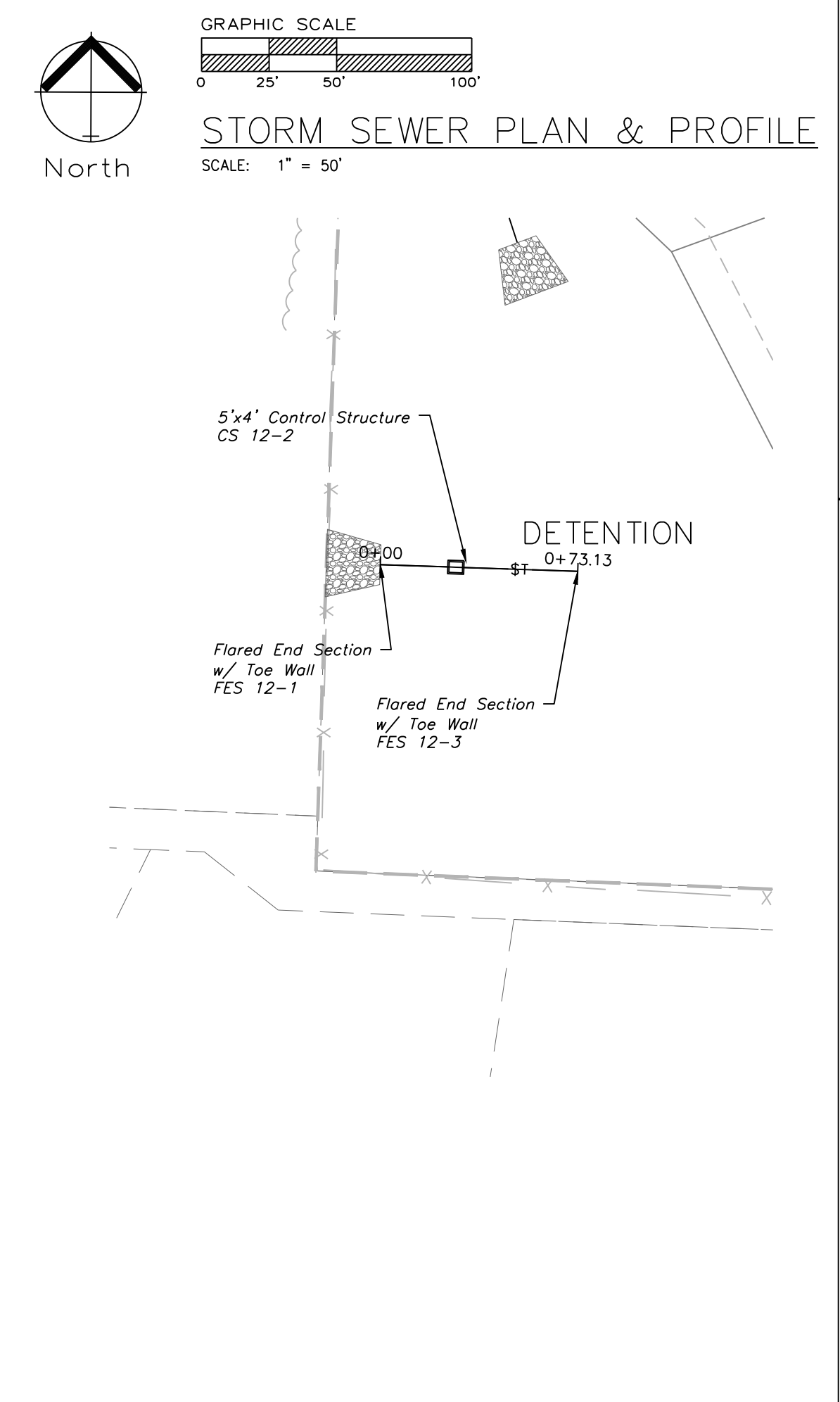
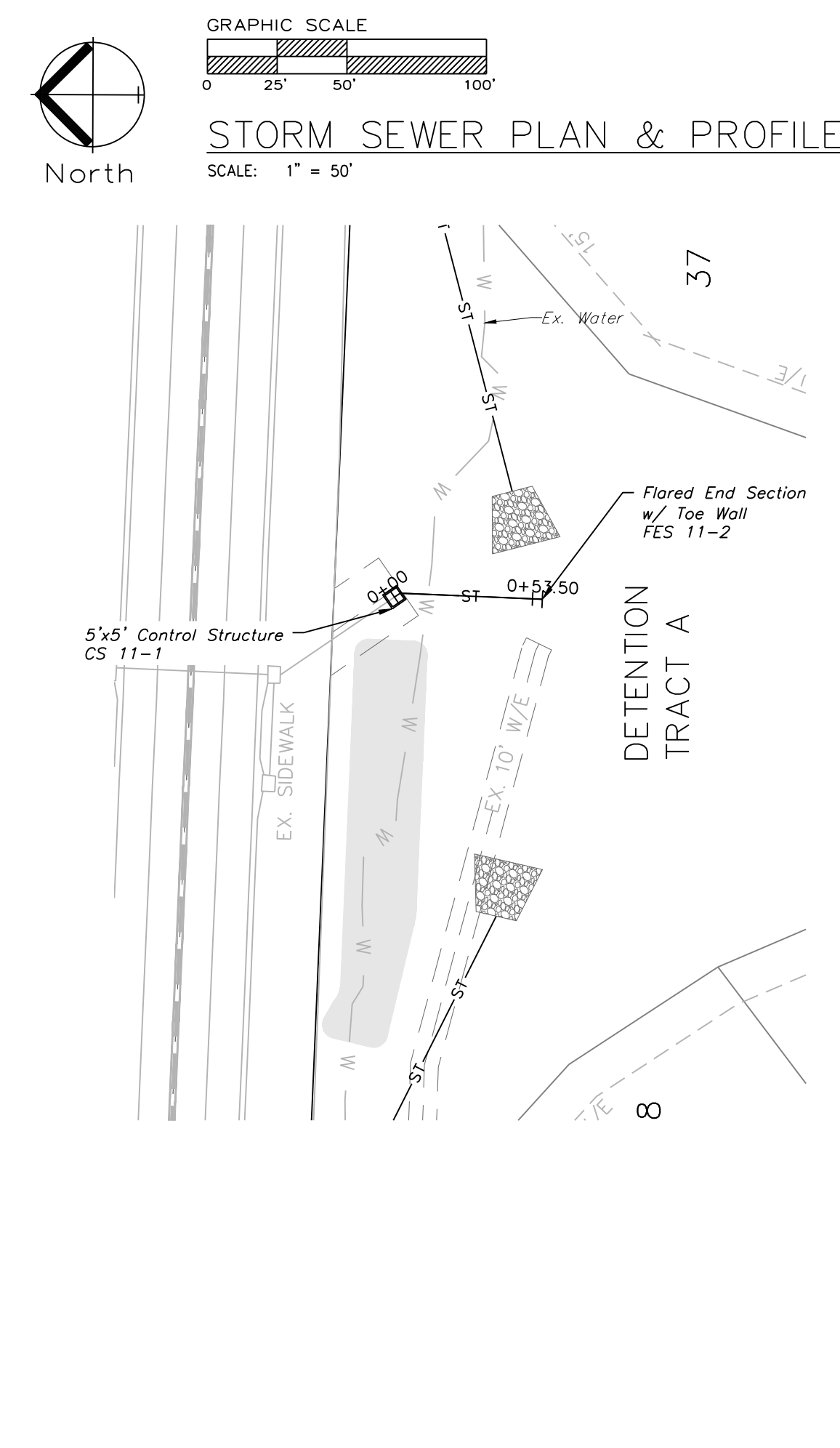
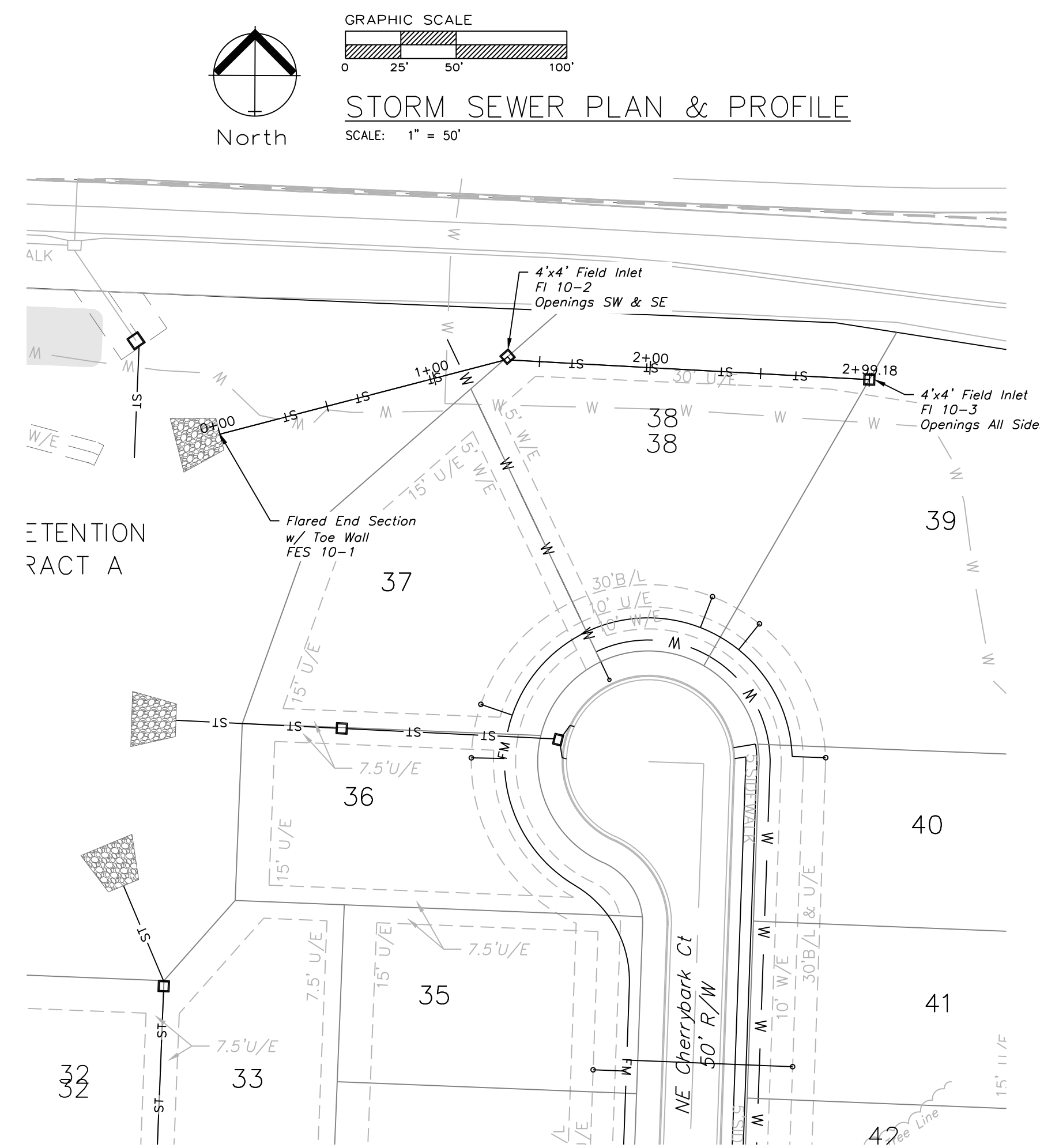
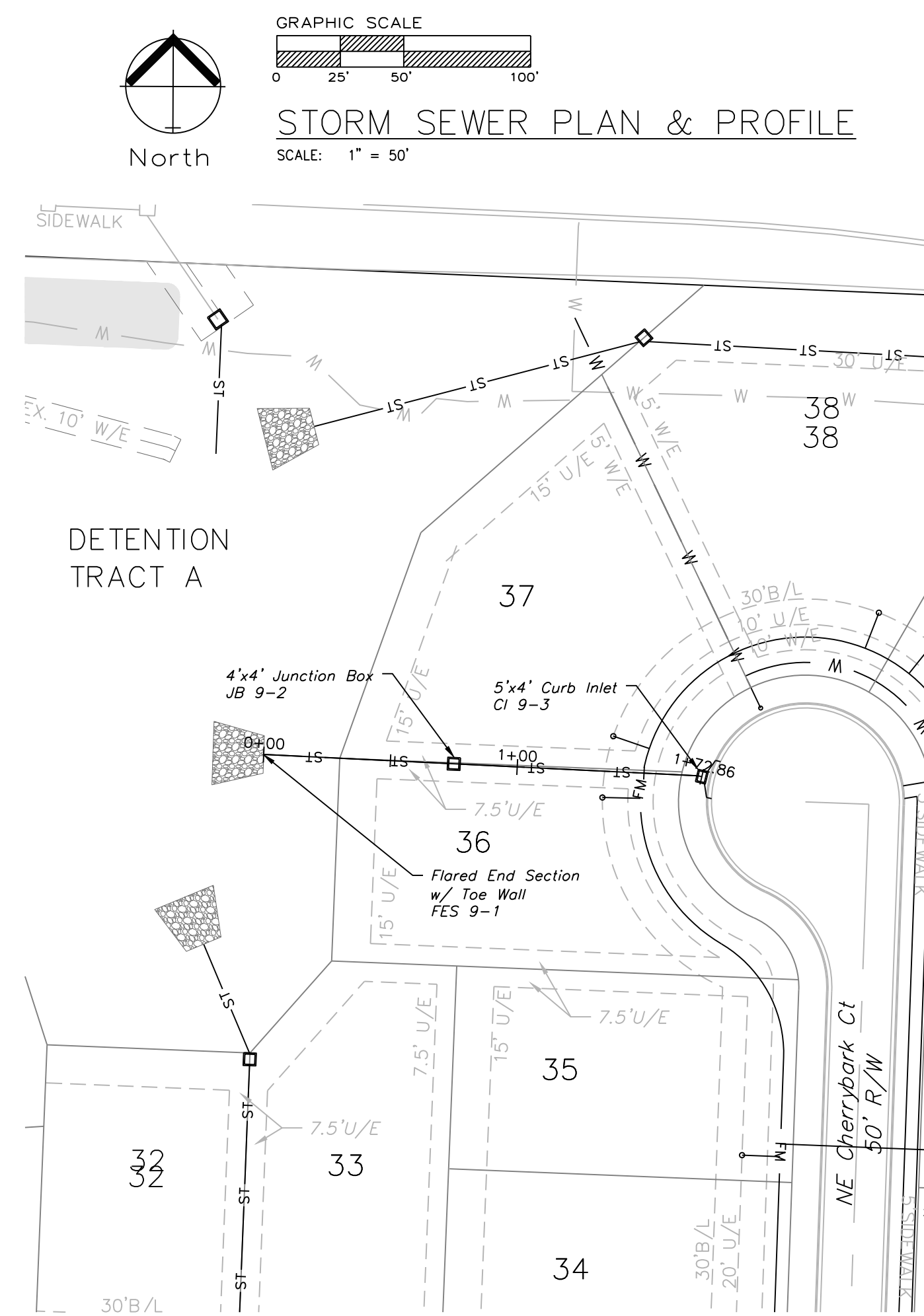
STORM LINE 4



STORM LINE 5







10-YEAR INLET																						
D.S. Str.	Str. No.	Area (ac)	InletTime (min)	Int. (in/hr)	RunoffCoeff. (C)	Q=CIA (cfs)	Q Carry-over (cfs)	QCaptured (cfs)	QBypassed (cfs)	JunctType	CurbHeight (in)	CurbLength (ft)	GutterSlope (ft/ft)	GutterWidth (ft)	CrossSlope, Sw (ft/ft)	CrossSlope, Sx (ft/ft)	InletDepth (ft)	BypassDepth (ft)	BypassSpread (ft)	GutterDepth (ft)	GutterSpread (ft)	BypassLine No.
1-1	1-2	0.77	8.80	6.29	0.51	2.47	0.00	2.47	0.00	Dp-Curb	6	8	Sag	....	0.02	0.02	0.22	n/a	n/a	0.22	10.97	Sag
2-1	2-2	0.28	5.30	7.15	0.51	1.02	0.00	1.02	0.00	Dp-Curb	6	8	Sag	....	0.02	0.02	0.12	n/a	n/a	0.12	6.09	Sag
2-2	2-3	0.12	5.90	6.99	0.51	0.43	0.12	0.30	0.25	Curb	10	5	0.038	2	0.05	0.02	0.12	0.09	1.75	0.12	2.83	2-6
2-3	2-4	0.60	6.20	6.91	0.51	2.11	1.87	0.88	3.10	Curb	10	5	0.038	2	0.05	0.02	0.22	0.21	7.29	0.22	8.13	2-5
2-4	2-5R	0.40	6.40	6.85	0.51	1.40	3.10	4.50	0.00	Curb	10	5	Sag	2	0.05	0.02	0.43	n/a	n/a	0.43	18.62	Sag
2-4	2-5L	0.55	8.10	6.44	0.51	1.81	0.00	1.81	0.00	Curb	10	5	Sag	2	0.05	0.02	0.26	n/a	n/a	0.26	10.13	Sag
2-5	2-6R	0.16	6.50	6.83	0.51	0.56	0.25	0.81	0.00	Curb	10	5	Sag	2	0.05	0.02	0.18	n/a	n/a	0.18	5.94	Sag
2-5	2-6L	0.08	6.20	6.91	0.51	0.28	0.00	0.28	0.00	Curb	10	5	Sag	2	0.05	0.02	0.12	n/a	n/a	0.12	2.93	Sag
2-4	3-1	0.19	8.80	6.29	0.51	0.61	0.00	0.61	0.00	Dp-Curb	6	4	Sag	....	0.02	0.02	0.14	n/a	n/a	0.14	6.85	Sag
2-2	4-1	0.54	6.80	6.75	0.51	1.86	0.00	1.86	0.00	Dp-Curb	6	4	Sag	....	0.02	0.02	0.29	n/a	n/a	0.29	14.41	Sag
4-1	4-2	0.32	7.60	6.56	0.51	1.07	0.00	1.07	0.00	Dp-Curb	6	4	Sag	....	0.02	0.02	0.2	n/a	n/a	0.2	9.97	Sag
4-2	4-3	0.08	5.60	7.07	0.51	0.29	0.02	0.19	0.12	Curb	10	5	0.05	2	0.05	0.02	0.09	0.06	1.26	0.09	1.80	2-3
4-3	4-4	0.37	7.00	6.70	0.51	1.26	1.26	0.65	1.87	Curb	10	5	0.05	2	0.05	0.02	0.18	0.17	5.39	0.18	6.23	2-4
5-1	5-2	0.40	6.10	6.93	0.51	1.41	0.00	1.41	0.00	Dp-Curb	6	16	Sag	....	0.02	0.02	0.1	n/a	n/a	0.1	4.76	Sag
5-2	5-3	0.61	6.30	6.88	0.51	2.14	0.00	2.14	0.00	Dp-Curb	6	16	Sag	....	0.02	0.02	0.13	n/a	n/a	0.13	6.28	Sag
5-3	5-4	0.50	6.30	6.88	0.51	1.75	0.00	1.75	0.00	Dp-Curb	6	16	Sag	....	0.02	0.02	0.11	n/a	n/a	0.11	5.50	Sag
6-1	6-2	0.00	0.00	0.00	0.51	0.00	....	....	....	MH	....	....	....	....	....	....	....	....	....	....	....	Sag
6-2	6-3	0.13	6.40	6.85	0.51	0.45	0.00	0.30	0.15	Curb	10	5	0.02	2	0.05	0.02	0.12	0.08	1.63	0.12	3.11	6-4
6-3	6-4	0.10	6.10	6.93	0.51	0.35	0.15	0.32	0.18	Curb	10	5	0.02	2	0.05	0.02	0.13	0.09	1.74	0.13	3.34	4-4
6-4	6-5R	0.70	7.60	6.56	0.51	2.34	2.23	4.57	0.00	Curb	10	5	Sag	2	0.05	0.02	0.44	n/a	n/a	0.44	18.81	Sag
6-4	6-5L	0.21	7.00	6.70	0.51	0.72	0.00	0.72	0.00	Curb	10	5	Sag	2	0.05	0.02	0.17	n/a	n/a	0.17	5.47	Sag
6-5	6-6	0.07	5.80	7.01	0.51	0.25	0.00	0.23	0.02	Curb	10	5	0.01	2	0.05	0.02	0.11	0.05	0.94	0.11	2.59	4-3
6-4	7-1R	0.17	8.20	6.42	0.51	0.56	0.00	0.37	0.19	Curb	10	5	0.014	2	0.05	0.02	0.14	0.09	1.88	0.14	3.96	4-4
6-4	7-1L	0.37	7.30	6.63	0.51	1.25	0.00	0.60	0.65	Curb	10	5	0.014	2	0.05	0.02	0.18	0.15	4.34	0.18	6.04	4-4
7-1	7-2	0.19	7.30	6.63	0.51	0.64	0.00	0.40	0.24	Curb	10	5	0.014	2	0.05	0.02	0.15	0.1	2.15	0.15	4.30	4-4
6-3	8-1	0.97	8.60	6.33	0.51	3.13	0.00	0.91	2.23	Curb	10	5	0.02	2	0.05	0.02	0.23	0.21	7.25	0.23	8.41	6-5
9-1	9-2	0.00	0.00	0.00	0.51	0.00	....	....	....	MH	....	....	....	....	....	....	....	....	....	....	....	Sag
9-2	9-3R	0.25	7.50	6.58	0.51	0.84	0.00	0.84	0.00	Curb	10	5	Sag	2	0.05	0.02	0.18	n/a	n/a	0.18	6.07	Sag
9-2	9-3L	0.19	6.70	6.78	0.51	0.66	0.00	0.66	0.00	Curb	10	5	Sag	2	0.05	0.02	0.16	n/a	n/a	0.16	5.16	Sag
10-1	10-2	0.35	6.30	6.88	0.51	1.23	0.00	1.23	0.00	Dp-Curb	6	8	Sag	....	0.02	0.02	0.14	n/a	n/a	0.14	6.88	Sag
10-2	10-3	1.26	9.70	6.10	0.51	3.92	0.00	3.92	0.00	Dp-Curb	6	16	Sag	....	0.02	0.02	0.19	n/a	n/a	0.19	9.40	Sag

10-YEAR PIPE																						
D.S. Str.	U.S. Str.	LineLength (ft)	Incr.Area (ac)	TotalArea (ac)	RunoffCoeff. (C)	IncrC x A	TotalC x A	InletTime (min)	TimeConc (min)	RnfallInt (in/hr)	TotalRunoff (cfs)	TotalFlow (cfs)	CapacFull (cfs)	Veloc (ft/s)	PipeSize (in)	PipeSlope (%)	Inv ElevDn (ft)	Inv ElevUp (ft)	HGLDn (ft)	HGLUp (ft)	Grnd/RimDn (ft)	Grnd/RimUp (ft)
1-1	1-2	139.4	0.77	0.77	0.51	0.39	0.39	8.8	8.8	6.3	2.47	2.47	12.76	6.02	15	2.31	911.78	915.00	912.15	915.63	0.00	918.50
2-1	2-2	50.18	0.28	3.69	0.51	0.14	1.88	5.3	9.6	6.1	11.52	11.52	83.02	12.16	24	7.97	912.00	916.00	912.50	917.22	0.00	924.50
2-2	2-3	138.03	0.12	2.10	0.51	0.06	1.07	5.9	9.4	6.2	6.60	6.60	40.78	11.13	18	8.93	920.00	932.32	920.41	933.31	924.50	941.27
2-3	2-4	46.47	0.60	1.98	0.51	0.31	1.01	6.2	9.3	6.2	6.25	6.25	14.16	6.48	18	1.08	932.82	933.32	933.52	934.29	941.27	940.79
2-4	2-5R	94.12	0.40	1.19	0.51	0.20	0.61	6.4	8.1	6.4	3.91	3.91	9.40	6.01	15	1.25	933.82	935.00	934.38	935.80	940.79	939.79
2-4	2-5L	1	0.55	0.55	0.51	0.28	0.28	8.1	8.1	6.4	1.81	1.81	26.54	2.90	15	10.00	935.00	935.10	935.80	935.63	939.79	939.79
2-5	2-6R	34	0.16	0.24	0.51	0.08	0.12	6.5	6.5	6.8	0.84	0.84	7.75	3.29	15	0.85	935.50	935.79	935.80	936.15	939.79	939.79
2-5	2-6L	1	0.08	0.08	0.51	0.04	0.04	6.2	6.2	6.9	0.28	0.28	26.55	1.56	15	10.00	935.79	935.89	936.15	936.10	939.79	939.79
2-4	3-1	128.62	0.19	0.19	0.51	0.10	0.10	8.8	8.8	6.3	0.61	0.61	17.36	4.63	15	4.28	936.00	941.50	936.16	941.80	940.79	946.25
2-2	4-1	113.49	0.54	1.31	0.51	0.28	0.67	6.8	8.3	6.4	4.27	4.27	14.33	4.82	18	1.10	916.50	917.75	917.22	918.54	924.50	924.50
4-1	4-2	189.85	0.32	0.77	0.51	0.16	0.39	7.6	7.6	6.6	2.57	2.57	25.85	4.55	15	9.48	918.00	936.00	918.54	936.64	924.50	944.33
4-2	4-3	135.55	0.08	0.45	0.51	0.04	0.23	5.6	7.1	6.7	1.53	1.53	16.12	5.85	15	3.69	940.00	945.00	940.26	945.49	944.33	950.08
4-3	4-4	34	0.37	0.37	0.51	0.19	0.19	7.0	7.0	6.7	1.26	1.26	12.47	4.56	15	2.21	945.20	945.95	945.49	946.39	950.08	950.08
5-1	5-2	93.83	0.40	1.51	0.51	0.20	0.77	6.1	7.8	6.5	5.01	5.01	5.48	5.06	15	0.43	938.00	938.40	938.94	939.34	0.00	944.00
5-2	5-3	259.22	0.61	1.11	0.51	0.31	0.57	6.3	6.9	6.7	3.81	3.81	5.37	4.69	15	0.41	938.90	939.96	939.68	940.75	944.00	944.00
5-3	5-4	132.58	0.50	0.50	0.51	0.26	0.26	6.3	6.3	6.9	1.75	1.75	5.36	3.74	15	0.41	940.46	941.00	940.95	941.53	944.00	944.00
6-1	6-2	49.06	0.00	2.91	0.51	0.00	1.48	0.0	9.2	6.2	9.20	9.20	91.97	12.00	24	9.78	940.00	944.80	940.43	945.88	0.00	950.20
6-2	6-3	140.5	0.13	2.91	0.51	0.07	1.48	6.4	8.9	6.3	9.31	9.31	30.38	6.15	24	1.07	945.00	946.50	945.88	947.59	950.20	958.57
6-3	6-4	175.8	0.10	1.81	0.51	0.05	0.92	6.1	8.4	6.4	5.89	5.89	12.61	6.05	18	0.85	947.00	948.50	947.72	949.44	958.57	955.36
6-4	6-5R	79.6	0.70	0.98	0.51	0.36	0.50	7.6	7.6	6.6	3.28	3.28	6.65	4.90	15	0.63	949.00	949.50	949.62	950.23	955.36	954.54
6-4	6-5L	1	0.21	0.21	0.51	0.11	0.11	7.0	7.0	6.7	0.72	0.72	26.54	1.86	15	10.00	949.50	949.60	950.23	949.93	954.54	954.54
6-5	6-6	34	0.07	0.07	0.51	0.04	0.04	5.8	5.8	7.0	0.25	0.25	10.58	1.85	15	1.59	950.00	950.54	950.23	950.73	954.54	954.54
6-4	7-1R	50	0.17	0.73	0.51	0.09	0.37	8.2	8.2	6.4	2.39	2.39	8.39	4.92	15	1.00	949.00	949.50	949.46	950.12	955.36	954.87
6-4	7-1L	1	0.37	0.56	0.51	0.19	0.29	7.3	7.5	6.6	1.88	1.88	26.54	3.39	15	10.00	949.50	949.60	950.12	950.15	954.87	954.87
7-1	7-2	34	0.19	0.19	0.51	0.10	0.10	7.3	7.3	6.6	0.64	0.64	10.18	3.65	15	1.47	950.00	950.50	950.21	950.81	954.87	954.87
6-3	8-1	35.8	0.97	0.97	0.51	0.49	0.49	8.6	8.6	6.3	3.13	3.13	11.48	6.15	15	1.87	954.00	954.67	954.45	955.38	958.57	958.33
9-1	9-2	75	0.00	0.44	0.51	0.00	0.22	0.0	7.8	6.5	1.46	1.46	8.67	4.32	15	1.07	942.00	942.80	942.35	943.28	0.00	950.86
9-2	9-3R	96.85	0.25	0.44	0.51	0.13	0.22	7.5	7.5	6.6	1.48	1.48	25.59	5.33	15	9.29	943.00	952.00	943.28	952.48	950.86	956.92
9-2	9-3L	1	0.19	0.19	0.51	0.10	0.10	6.7	6.7	6.8	0.66	0.66	26.54	2.10	15	10.00	952.00	952.10	952.48	952.42	956.92	956.92
10-1	10-2	134.78	0.35	1.61	0.51	0.18	0.82	6.3	10.2	6.0	4.92	4.92	14.46	7.93	15	2.97	938.00	942.00	938.50	942.90	0.00	946.00
10-2	10-3	165.22	1.26	1.26	0.51	0.64	0.64	9.7	9.7	6.1	3.92	3.92	12.22	5.14	15	2.12	942.20	945.70	942.90	946.50	946.00	949.70

100-YEAR INLET																						
D.S. Str.	Str. No.	Area (ac)	InletTime (min)	Int. (in/hr)	RunoffCoeff. (C)	Q =CIA (cfs)	Q Carry-over (cfs)	QCaptured (cfs)	QBypassed (cfs)	JunctType	CurbHeight (in)	CurbLength (ft)	GutterSlope (ft/ft)	GutterWidth (ft)	CrossSlope, Sw (ft/ft)	CrossSlope, Sx (ft/ft)	InletDepth (ft)	BypassDepth (ft)	BypassSpread (ft)	GutterDepth (ft)	GutterSpread (ft)	BypassLine No.
1-1	1-2	0.77	8.8	8.67	0.51	3.40	0.00	3.40	0.00	Dp-Curb	6	8	Sag	....	0.02	0.02	0.27	n/a	n/a	0.27	13.59	Sag
2-1	2-2	0.28	5.3	9.73	0.51	1.39	0.00	1.39	0.00	Dp-Curb	6	8	Sag	....	0.02	0.02	0.15	n/a	n/a	0.15	7.47	Sag
2-2	2-3	0.12	5.9	9.53	0.51	0.58	0.21	0.37	0.42	Curb	10	5	0.038	2	0.05	0.02	0.13	0.11	2.3	0.13	3.62	2-6
2-3	2-4	0.60	6.2	9.43	0.51	2.89	2.97	1.07	4.78	Curb	10	5	0.038	2	0.05	0.02	0.25	0.24	8.78	0.25	9.56	2-5
2-4	2-5R	0.40	6.4	9.36	0.51	1.91	4.78	6.69	0.00	Curb	10	5	Sag	2	0.05	0.02	0.55	n/a	n/a	0.55	24.26	Sag
2-4	2-5L	0.55	8.1	8.86	0.51	2.48	0.00	2.48	0.00	Curb	10	5	Sag	2	0.05	0.02	0.31	n/a	n/a	0.31	12.53	Sag
2-5	2-6R	0.16	6.5	9.33	0.51	0.76	0.42	1.18	0.00	Curb	10	5	Sag	2	0.05	0.02	0.21	n/a	n/a	0.21	7.64	Sag
2-5	2-6L	0.08	6.2	9.43	0.51	0.38	0.00	0.38	0.00	Curb	10	5	Sag	2	0.05	0.02	0.13	n/a	n/a	0.13	3.61	Sag
2-4	3-1	0.19	8.8	8.67	0.51	0.84	0.00	0.84	0.00	Dp-Curb	6	4	Sag	....	0.02	0.02	0.17	n/a	n/a	0.17	8.48	Sag
2-2	4-1	0.54	6.8	9.24	0.51	2.54	0.00	2.54	0.00	Dp-Curb	6	4	Sag	....	0.02	0.02	0.36	n/a	n/a	0.36	17.77	Sag
4-1	4-2	0.32	7.6	9.00	0.51	1.47	0.00	1.47	0.00	Dp-Curb	6	4	Sag	....	0.02	0.02	0.25	n/a	n/a	0.25	12.32	Sag
4-2	4-3	0.08	5.6	9.63	0.51	0.39	0.06	0.24	0.21	Curb	10	5	0.05	2	0.05	0.02	0.10	0.08	1.54	0.10	2.16	2-3
4-3	4-4	0.37	7.0	9.18	0.51	1.73	2.04	0.80	2.97	Curb	10	5	0.05	2	0.05	0.02	0.21	0.19	6.71	0.21	7.47	2-4
5-1	5-2	0.40	6.1	9.46	0.51	1.93	0.00	1.93	0.00	Dp-Curb	6	16	Sag	....	0.02	0.02	0.12	n/a	n/a	0.12	5.86	Sag
5-2	5-3	0.61	6.3	9.40	0.51	2.92	0.00	2.92	0.00	Dp-Curb	6	16	Sag	....	0.02	0.02	0.15	n/a	n/a	0.15	7.73	Sag
5-3	5-4	0.50	6.3	9.40	0.51	2.40	0.00	2.40	0.00	Dp-Curb	6	16	Sag	....	0.02	0.02	0.14	n/a	n/a	0.14	6.77	Sag
6-1	6-2	0.00	0.0	0.00	0.51	0.00	....	....	....	MH	....	....	....	....	....	....	....	....	....	....	....	Sag
6-2	6-3	0.13	6.4	9.36	0.51	0.62	0.00	0.37	0.25	Curb	10	5	0.02	2	0.05	0.02	0.14	0.1	1.97	0.14	3.80	6-4
6-3	6-4	0.10	6.1	9.46	0.51	0.48	0.25	0.41	0.33	Curb	10	5	0.02	2	0.05	0.02	0.14	0.11	2.43	0.14	4.20	4-4
6-4	6-5R	0.70	7.6	9.00	0.51	3.21	3.24	6.46	0.00	Curb	10	5	Sag	2	0.05	0.02	0.53	n/a	n/a	0.53	23.70	Sag
6-4	6-5L	0.21	7.0	9.18	0.51	0.98	0.00	0.98	0.00	Curb	10	5	Sag	2	0.05	0.02	0.20	n/a	n/a	0.20	6.75	Sag
6-5	6-6	0.07	5.8	9.56	0.51	0.34	0.00	0.28	0.06	Curb	10	5	0.01	2	0.05	0.02	0.12	0.06	1.28	0.12	3.24	4-3
6-4	7-1R	0.17	8.2	8.83	0.51	0.77	0.00	0.45	0.32	Curb	10	5	0.014	2	0.05	0.02	0.15	0.11	2.72	0.15	4.73	4-4
6-4	7-1L	0.37	7.3	9.09	0.51	1.72	0.00	0.71	1.00	Curb	10	5	0.014	2	0.05	0.02	0.20	0.17	5.43	0.20	6.99	4-4
7-1	7-2	0.19	7.3	9.09	0.51	0.88	0.00	0.49	0.39	Curb	10	5	0.014	2	0.05	0.02	0.16	0.12	3.17	0.16	5.09	4-4
6-3	8-1	0.97	8.6	8.72	0.51	4.31	0.00	1.07	3.24	Curb	10	5	0.02	2	0.05	0.02	0.25	0.23	8.54	0.25	9.63	6-5
9-1	9-2	0.00	0.0	0.00	0.51	0.00	....	....	....	MH	....	....	....	....	....	....	....	....	....	....	....	Sag
9-2	9-3R	0.25	7.5	9.03	0.51	1.15	0.00	1.15	0.00	Curb	10	5	Sag	2	0.05	0.02	0.21	n/a	n/a	0.21	7.50	Sag
9-2	9-3L	0.19	6.7	9.27	0.51	0.90	0.00	0.90	0.00	Curb	10	5	Sag	2	0.05	0.02	0.19	n/a	n/a	0.19	6.36	Sag
10-1	10-2	0.35	6.3	9.40	0.51	1.68	0.00	1.68	0.00	Dp-Curb	6	8	Sag	....	0.02	0.02	0.17	n/a	n/a	0.17	8.48	Sag
10-2	10-3	1.26	9.7	8.43	0.51	5.42	0.00	5.42	0.00	Dp-Curb	6	16	Sag	....	0.02	0.02	0.23	n/a	n/a	0.23	11.67	Sag

100-YEAR PIPE																						
D.S. Str.	U.S. Str.	LineLength	Incr.Area	TotalArea	RunoffCoeff.	IncrC x A	TotalC x A	InletTime	TimeConc	RnfallInt	TotalRunoff	TotalFlow	CapacFull	Veloc	PipeSize	PipeSlope	Inv ElevDn	Inv ElevUp	HGLDn	HGLUp	Grnd/RimDn	Grnd/RimUp
		(ft)	(ac)	(ac)	(C)			(min)	(min)	(in/hr)	(cfs)	(cfs)	(cfs)	(ft/s)	(in)	(%)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)
1-1	1-2	139.4	0.77	0.77	0.51	0.39	0.39	8.8	8.8	8.7	3.40	3.40	12.76	6.63	15	2.31	911.78	915.00	912.22	915.74	0.00	918.50
2-1	2-2	50.18	0.28	3.69	0.51	0.14	1.88	5.3	9.5	8.5	15.96	15.96	83.02	13.49	24	7.97	912.00	916.00	912.59	917.44	0.00	924.50
2-2	2-3	138.03	0.12	2.10	0.51	0.06	1.07	5.9	9.3	8.5	9.13	9.13	40.78	12.39	18	8.93	920.00	932.32	920.48	933.49	924.50	941.27
2-3	2-4	46.47	0.60	1.98	0.51	0.31	1.01	6.2	9.2	8.6	8.64	8.64	14.16	7.21	18	1.08	932.82	933.32	933.67	934.46	941.27	940.79
2-4	2-5R	94.12	0.40	1.19	0.51	0.20	0.61	6.4	8.1	8.9	5.38	5.38	9.40	6.68	15	1.25	933.82	935.00	934.50	935.94	940.79	939.79
2-4	2-5L	1	0.55	0.55	0.51	0.28	0.28	8.1	8.1	8.9	2.48	2.48	26.54	3.26	15	10.00	935.00	935.10	935.94	935.73	939.79	939.79
2-5	2-6R	34	0.16	0.24	0.51	0.08	0.12	6.5	6.5	9.3	1.14	1.14	7.75	3.06	15	0.85	935.50	935.79	935.94	936.21	939.79	939.79
2-5	2-6L	1	0.08	0.08	0.51	0.04	0.04	6.2	6.2	9.4	0.38	0.38	26.55	1.69	15	10.00	935.79	935.89	936.21	936.13	939.79	939.79
2-4	3-1	128.62	0.19	0.19	0.51	0.10	0.10	8.8	8.8	8.7	0.84	0.84	17.36	5.09	15	4.28	936.00	941.50	936.19	941.86	940.79	946.25
2-2	4-1	113.49	0.54	1.31	0.51	0.28	0.67	6.8	8.3	8.8	5.89	5.89	14.33	5.07	18	1.10	916.50	917.75	917.44	918.69	924.50	924.50
4-1	4-2	189.85	0.32	0.77	0.51	0.16	0.39	7.6	7.6	9.0	3.53	3.53	25.85	4.83	15	9.48	918.00	936.00	918.69	936.76	924.50	944.33
4-2	4-3	135.55	0.08	0.45	0.51	0.04	0.23	5.6	7.1	9.1	2.10	2.10	16.12	6.43	15	3.69	940.00	945.00	940.30	945.58	944.33	950.08
4-3	4-4	34	0.37	0.37	0.51	0.19	0.19	7.0	7.0	9.2	1.73	1.73	12.47	4.56	15	2.21	945.20	945.95	945.58	946.47	950.08	950.08
5-1	5-2	93.83	0.40	1.51	0.51	0.20	0.77	6.1	8.1	8.9	6.83	6.83	5.48	5.57	15	0.43	938.00	938.40	939.25	939.87	0.00	944.00
5-2	5-3	259.22	0.61	1.11	0.51	0.31	0.57	6.3	7.0	9.2	5.19	5.19	5.37	4.24	15	0.41	938.90	939.96	940.29	941.19	944.00	944.00
5-3	5-4	132.58	0.50	0.50	0.51	0.26	0.26	6.3	6.3	9.4	2.40	2.40	5.36	2.99	15	0.41	940.46	941.00	941.60	941.62	944.00	944.00
6-1	6-2	49.06	0.00	2.91	0.51	0.00	1.48	0.0	9.2	8.6	12.73	12.73	91.97	13.27	24	9.78	940.00	944.80	940.50	946.08	0.00	950.20
6-2	6-3	140.5	0.13	2.91	0.51	0.07	1.48	6.4	8.8	8.7	12.86	12.86	30.38	6.71	24	1.07	945.00	946.50	946.08	947.79	950.20	958.57
6-3	6-4	175.8	0.10	1.81	0.51	0.05	0.92	6.1	8.4	8.8	8.11	8.11	12.61	6.70	18	0.85	947.00	948.50	947.88	949.60	958.57	955.36
6-4	6-5R	79.6	0.70	0.98	0.51	0.36	0.50	7.6	7.6	9.0	4.50	4.50	6.65	5.41	15	0.63	949.00	949.50	949.75	950.36	955.36	954.54
6-4	6-5L	1	0.21	0.21	0.51	0.11	0.11	7.0	7.0	9.2	0.98	0.98	26.54	2.05	15	10.00	949.50	949.60	950.36	949.99	954.54	954.54
6-5	6-6	34	0.07	0.07	0.51	0.04	0.04	5.8	5.8	9.6	0.34	0.34	10.58	1.71	15	1.59	950.00	950.54	950.36	950.77	954.54	954.54
6-4	7-1R	50	0.17	0.73	0.51	0.09	0.37	8.2	8.2	8.8	3.29	3.29	8.39	5.02	15	1.00	949.00	949.50	949.60	950.23	955.36	954.87
6-4	7-1L	1	0.37	0.56	0.51	0.19	0.29	7.3	7.4	9.0	2.58	2.58	26.54	3.76	15	10.00	949.50	949.60	950.23	950.24	954.87	954.87
7-1	7-2	34	0.19	0.19	0.51	0.10	0.10	7.3	7.3	9.1	0.88	0.88	10.18	4.00	15	1.47	950.00	950.50	950.25	950.87	954.87	954.87
6-3	8-1	35.8	0.97	0.97	0.51	0.49	0.49	8.6	8.6	8.7	4.31	4.31	11.48	6.80	15	1.87	954.00	954.67	954.53	955.51	958.57	958.33
9-1	9-2	75	0.00	0.44	0.51	0.00	0.22	0.0	7.8	8.9	2.01	2.01	8.67	4.74	15	1.07	942.00	942.80	942.41	943.36	0.00	950.86
9-2	9-3R	96.85	0.25	0.44	0.51	0.13	0.22	7.5	7.5	9.0	2.03	2.03	25.59	5.28	15	9.29	943.00	952.00	943.36	952.57	950.86	956.92
9-2	9-3L	1	0.19	0.19	0.51	0.10	0.10	6.7	6.7	9.3	0.90	0.90	26.54	2.30	15	10.00	952.00	952.10	952.57	952.47	956.92	956.92
10-1	10-2	134.78	0.35	1.61	0.51	0.18	0.82	6.3	10.2	8.3	6.83	6.83	14.46	8.91	15	2.97	938.00	942.00	938.60	943.05	0.00	946.00
10-2	10-3	165.22	1.26	1.26	0.51	0.64	0.64	9.7	9.7	8.4	5.42	5.42	12.22	5.79	15	2.12	942.20	945.70	943.05	946.64	946.00	949.70

