

SECTION 2, TOWNSHIP 47 N, RANGE 32 W
IN LEE'S SUMMIT, JACKSON COUNTY, MO

ASBUILT
03-24-2022

☐ NOT FOR CONSTRUCTION

☒ REVIEWED FOR CONSTRUCTION



Part of Lot 3B, WEST VILLAGE COMMERCIAL DEVELOPMENT, LOTS 3A AND 3B, a subdivision recorded as Instrument Number 19E0018413 in Book 1182 at Page 62 in Jackson County Recorder of Deeds Office located in the Northeast and Southeast Quarter of Section 2, Township 47 North, Range 32 West of the 5th Principal Meridian in Lee's Summit, Jackson County, Missouri being bounded and described by or under the direct supervision of Jason S Roudsbaugh, P.L.S. 2002014092 as follows: Commencing at the Southeast corner of said Southeast Quarter; thence North 87°47'03" West, on the South line of said Southeast Quarter 26,633.21 feet to the Southwest corner of said Southeast Quarter; thence North 03°05'41" East, on the West line of said Southeast Quarter, 1,326.36 feet to the Southwest corner of said Lot 3B, also being the Southwest corner of the North half said Southeast Quarter, also being a point on the Easterly line of STERLING HILLS 5TH PLAT, a subdivision in said Lee's Summit recorded as Instrument Number 11273788 in Book 154 at Page 88 in said Jackson County Recorder of Deeds Office, also being the Southwest corner of proposed WOODSIDE RIDGE 1st Plat, Lots 1 thru 143 inclusive, and Tracts A, B, C, D, E, F, G and H; thence North 03°05'41" East on said West line and said Easterly line, also being the West line of said Lot 3B, also being the Westerly line of proposed WOODSIDE RIDGE 1ST PLAT, LOTS 1 thru 143 inclusive, and Tracts A, B, C, D, E, F, G and H, 389.26 feet to the Point of Beginning of the tract of land to be herein described; thence leaving said proposed Westerly line, continuing North 03°05'41" East on said West lines and said Easterly lines, 936.61 feet to the Northeast corner of said STERLING HILLS 5TH PLAT, also being a point on the Easterly line of WINTERSET WOODS - 3RD PLAT, a subdivision in said Lee's Summit recorded as Instrument Number 200310002463 in Book 174 at Page 14 in said Jackson County Recorder of Deeds Office, also being the Northwest corner of said Southeast Quarter; thence North 03°26'14" East, on the said West line of said Lot 3B, said Easterly line and West line of said Northeast Quarter, 665.72 feet to the Northwest corner of the South half of the South half of said Northeast Quarter, also being the Northwest corner of said Lot 3B, also being the Northeast corner of the South half of the South half of said Northeast Quarter, also being a point on the Southerly line of the FOREST OF BROOKRIDGE ESTATES - THIRD PLAT, LOTS 117 - 133, a subdivision in said Lee's Summit recorded as Instrument Number 1802804 in Book 144 at Page 57 in said Jackson County Recorder of Deeds Office; thence North 87°37'42" East, along said Southerly line, also along the North line of said Lot 3B, also being the North line of said South Half of said South Half of said Northeast Quarter, also being the South line of the FOREST OF BROOKRIDGE ESTATES - THIRD PLAT, LOTS 117 - 133, a distance of 1,210.45 feet to the Southeast corner of said the FOREST OF BROOKRIDGE ESTATES - THIRD PLAT LOTS 117 - 133 and to a point on said proposed Westerly line; thence South 87°37'42" East on said North line of said South Half of said South Half, said North line of said Lot 3B, and said proposed Westerly line, 574.95 feet; thence leaving said North lines, South 20°32'36" West, along said proposed Westerly line, 229.10 feet; thence Westerly, along said proposed Westerly line, on a curve to the left, having an initial tangent along the North 69°27'24" West with a radius of 428.00 feet, a central angle of 00°42'29" and an arc distance of 5.25 feet; thence South 19°50'07" West, along said proposed Westerly line 178.42 feet; thence South 85°52'23" West, along said proposed Westerly line, 130.41 feet; thence South 70°59'24" West, along said proposed Westerly line, 137.47 feet; thence South 61°49'26" West, along said proposed Westerly line, 951.56 feet; thence South 21°24'31" West, along said proposed Westerly line, 135.10 feet; thence Westerly, along said proposed Westerly line, along a curve to the left having an initial tangent bearing the North 68°35'29" West with a radius of 275.00 feet, a central angle of 12°33'32" and an arc distance of 60.28 feet; thence South 08°50'59" West, along said proposed Westerly line, 50.00 feet; thence South 22°12'04" West, along said proposed Westerly line, 173.03 feet; thence North 75°51'31" West, along said proposed Westerly line, 21.43 feet; thence South 41°11'03" West, along said proposed Westerly line, 60.06 feet; thence South 29°55'27" West, along said proposed Westerly line, 306.11 feet; thence South 85°54'26" West, along said proposed Westerly line, 236.75 feet to the Point of Beginning. Containing 1,514,368 square feet or 34.77 acres, more or less.

BMK #5 CHISELED SQUARE ON THE S.E. CORNER OF A CONCRETE PAD FOR A TRAFFIC SIGNAL BOX AT THE S.W. CORNER OF PRYOR ROAD AND O'BRIEN ROAD.

ELEVATION: 979.24

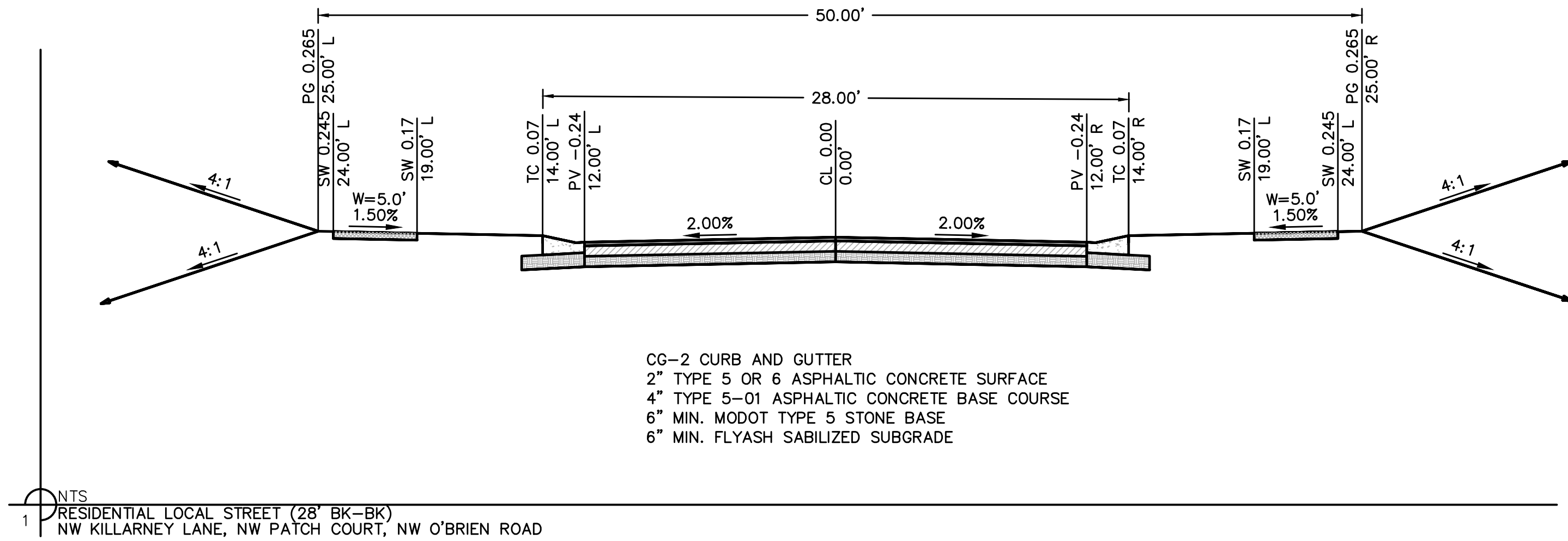
OLSSON HAS BEEN RETAINED TO PROVIDE AS-BUILT DRAWINGS FOR THIS PROJECT.


JULIE E SELLERS, P.E.
CIVIL ENGINEER
MO# 2017000367

4/12/2023
DATE

DWG: F:\2018\1001-1500\018-1140-Design\AutoCAD\Final Plans - Asbuilts\Sheets\GNCV\Street & Storm\C_TTL01_C181140.dwg
DATE: Oct 17 2022 12:36pm
USER: ssaylor

11. P.O.S= PROPOSED OPEN SPACE.



DWG: F:\2018\1001-1500\018-1140-C\40-Design\AutoCAD\Final Plans - Asbuilt\Sheets\GNV\Street & Storm\C_GEN01_C181140.dwg
DATE: Oct 17, 2022 12:36pm

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.

LEGEND	
-ECTVGH-	EXISTING CABLE TV, OVERHEAD
-ECTV-	EXISTING CABLE TV, UNDERGROUND
-CTVGH-	PROPOSED CABLE TV, OVERHEAD
-CTV-	PROPOSED CABLE TV, UNDERGROUND
-FCTVGH-	FUTURE CABLE TV, OVERHEAD
-FCTV-	FUTURE CABLE TV, UNDERGROUND
-FEOGH-	EXISTING FIBER OPTIC, OVERHEAD
-FEO-	EXISTING FIBER OPTIC, UNDERGROUND
-FOGH-	PROPOSED FIBER OPTIC, OVERHEAD
-FO-	PROPOSED FIBER OPTIC, UNDERGROUND
-FEOGH-	FUTURE FIBER OPTIC, OVERHEAD
-FEO-	FUTURE FIBER OPTIC, UNDERGROUND
-FPF-	EXISTING FIRE PROTECTION SYSTEM LINE
-FP-	PROPOSED FIRE PROTECTION SYSTEM LINE
-FFP-	FUTURE FIRE PROTECTION SYSTEM LINE
-CFL-	EXISTING FUEL LINE
-FL-	PROPOSED FUEL LINE
-FFL-	FUTURE FUEL LINE
-EG-	EXISTING NATURAL GAS LINE
-G-	PROPOSED NATURAL GAS LINE
-FG-	FUTURE NATURAL GAS LINE
-ETELGH-	EXISTING TELEPHONE LINE, OVERHEAD
-ETEL-	EXISTING TELEPHONE LINE, UNDERGROUND
-TELGH-	PROPOSED TELEPHONE LINE, OVERHEAD
-TEL-	PROPOSED TELEPHONE LINE, UNDERGROUND
-FFTELGH-	FUTURE TELEPHONE LINE, OVERHEAD
-FFTEL-	FUTURE TELEPHONE LINE, UNDERGROUND
-EEOH-	EXISTING POWER/ELECTRIC LINE, OVERHEAD
-EE-	EXISTING POWER/ELECTRIC LINE, UNDERGROUND
-EOH-	PROPOSED POWER/ELECTRIC LINE, OVERHEAD
-E-	PROPOSED POWER/ELECTRIC LINE, UNDERGROUND
-FEOH-	FUTURE POWER/ELECTRIC LINE, OVERHEAD
-FE-	FUTURE POWER/ELECTRIC LINE, UNDERGROUND
-ESS-	EXISTING SANITARY SEWER
-SS-	PROPOSED SANITARY SEWER
-FSS-	FUTURE SANITARY SEWER
-SL-	EXISTING STEAM LINE
-FSL-	PROPOSED STEAM LINE
-EST-	FUTURE STEAM LINE
-EST-	EXISTING STORM SEWER
-ST-	PROPOSED STORM SEWER
-FST-	FUTURE STORM SEWER
-EW-	EXISTING WATER LINE
-W-	PROPOSED WATER LINE
-FW-	FUTURE WATER LINE

ASBUILT
03-24-2022

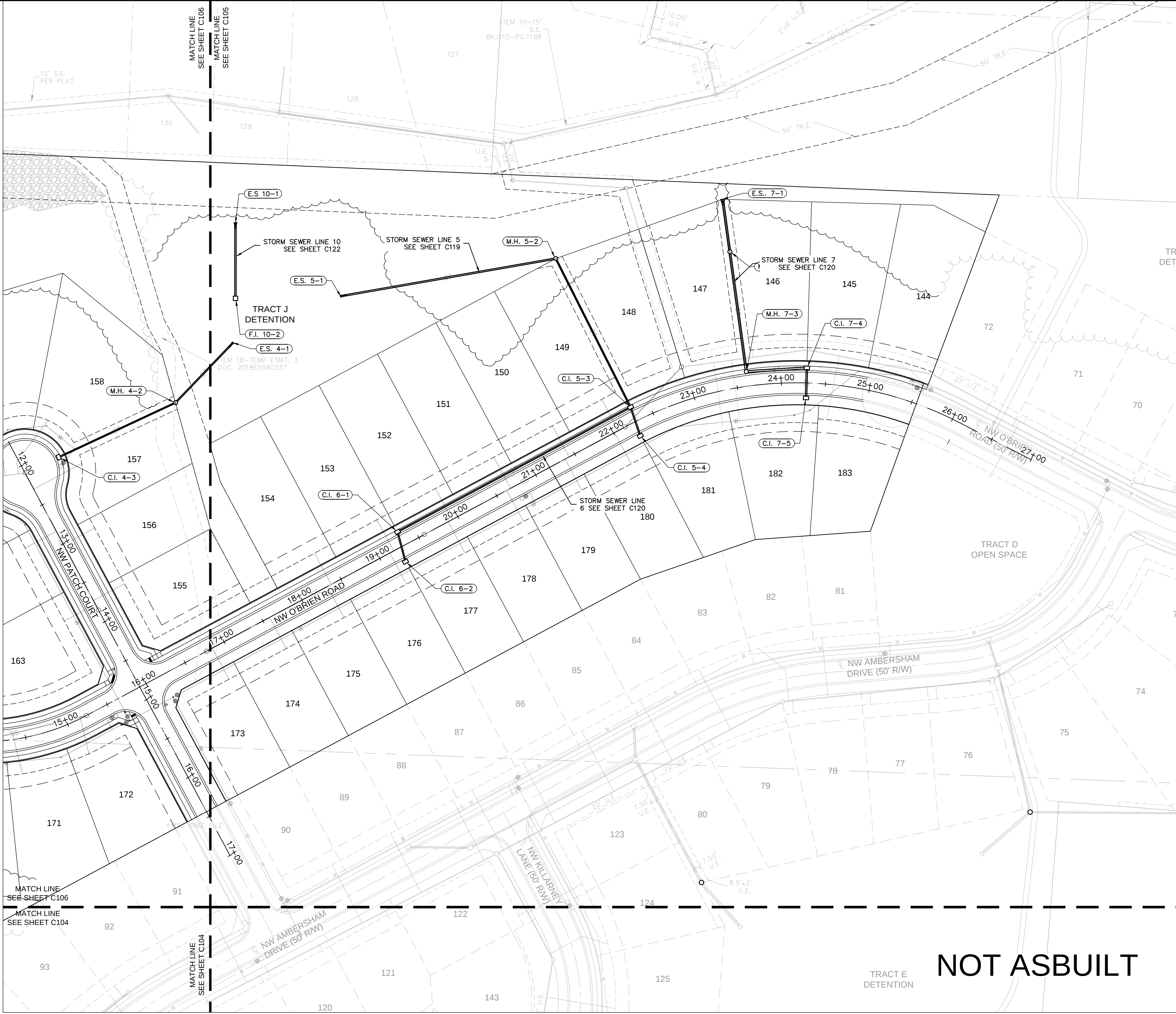
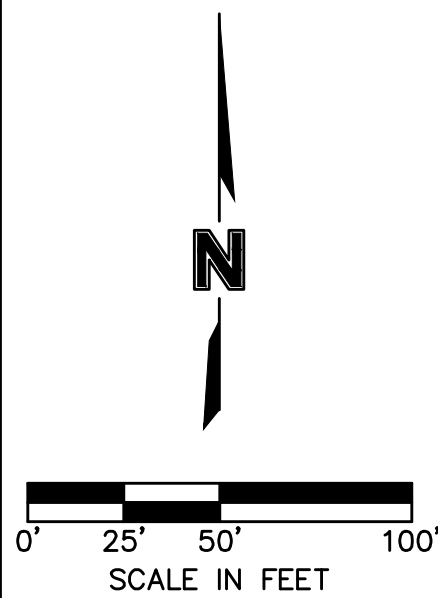
ALL NOTES REFERENCED ON THIS PLAN SHEET MAY HAVE APPLICATIONS TO EVERY FACET OF THE CONSTRUCTION PLANS. THE NOTE HEADINGS OR TITLES ARE TO BE USED AS A GENERAL GUIDE TO APPLICABLE SITUATIONS.

drawn by: _____ C.S.M. checked by: _____ S.M.S. designed by: _____ C.S.M. QA/QC by: _____ J.E.S. project no.: _____ C18-1140 date: _____ 2020.07.10		SHEET C102	
GENERAL NOTES STREET & STORM SEWER PLANS		2020	
WOODSIDE RIDGE SECOND PLAT		2020	
LEE'S SUMMIT, MO		2020	
NO. REV.		DATE	
REVISIONS DESCRIPTION		BY	
REVISIONS			
			
www.olsson.com TEL 816.361.1177 MO Certificate of Authority #001592 1301 BURLINGTON, SUITE 100 NORTH KANSAS CITY, MO 64116			

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DATE: Oct 17, 2022 12:27pm
USER: ssaylor



KEY MAP



NOT ASBUILT

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NO Conflicts of Interest as of 08/18/22
300 E. BROADWAY, SUITE 100
NORTH KANSAS CITY, MO 64116
TEL 816.861.1177
www.olson.com

STATE OF MISSOURI
JULIE ELAINE SELLERS
NUMBER PE-2017000367
4/12/2023
PROFESSIONAL ENGINEER

BY: [Signature]
NO. REV. DATE
REVISIONS DESCRIPTION

GENERAL LAYOUT
STREET & STORM SEWER PLANS
WOODSIDE RIDGE
SECOND PLAT
LEE'S SUMMIT, MO
2020

drawn by: C.S.M.
checked by: S.M.S.
designed by: C.S.M.
QA/QC by: J.E.S.
project no.: C18-1140
date: 2020.07.10

SHEET
C106

USER: ssaylor

DWG: F:\2018\1001-1500\018-1140-C\40-Design\AutoCAD\Final Plans - Asbuilt\Sheets\GNCV\Street & Storm\C_GRD02-C181140.dwg
DATE: Oct 17, 2022 12:38pm



KEY MAP

GENERAL NOTES:

1. CONTRACTOR SHALL ADHERE TO THE "DESIGN AND CONSTRUCTION MANUAL" SECTION 2100 AS ADOPTED BY THE CITY OF LEE'S SUMMIT (LATEST EDITION), FOR EXCAVATION AND EMBANKMENT WORK WITHIN THE PROPOSED RIGHT-OF-WAY.
2. AREAS OF CONSTRUCTION SHALL BE STRIPPED OF ALL VEGETATION, ORGANIC MATTER AND TOPSOIL TO A DEPTH AS RECOMMENDED BY GEOTECHNICAL ENGINEER AND OR TESTING AGENCY. SOILS REMOVED DURING SITE STRIPPING SHOULD BE EVALUATED TO DETERMINE IF PORTIONS OF THE TOPSOIL STRATUM MAY BE UTILIZED AS STRUCTURAL FILL WITHIN PAVEMENT AREAS. ANY MATERIAL NOT DEEMED AS SUITABLE FILL MATERIAL BY THE GEOTECHNICAL ENGINEER AND OR TESTING AGENCY SHALL BE REMOVED FROM THE JOB SITE BY THE CONTRACTOR AT HIS EXPENSE.
3. ALL EMBANKMENT OUTSIDE OF RIGHT-OF-WAY SHOULD BE PLACED IN CONTROLLED LIFTS HAVING A MAXIMUM LOOSE LIFT THICKNESS OF 8". EMBANKMENT SHOULD BE COMPACTED TO A MINIMUM OF 95% OF THE MATERIALS MAXIMUM DRY DENSITY AS DETERMINED BY ASTM D-698 (STANDARD PROCTOR COMPACTION). MOISTURE CONTENT OF THE FILL AT THE TIME OF COMPACTION SHALL BE WITHIN A RANGE OF -0 TO +4 PERCENT OF OPTIMUM MOISTURE CONTENT.

LEGEND	
-100-	EXISTING INDEX CONTOURS
-100	EXISTING INTERMEDIATE CONTOURS
-100	PROPOSED INDEX CONTOURS
-100	PROPOSED INTERMEDIATE CONTOURS

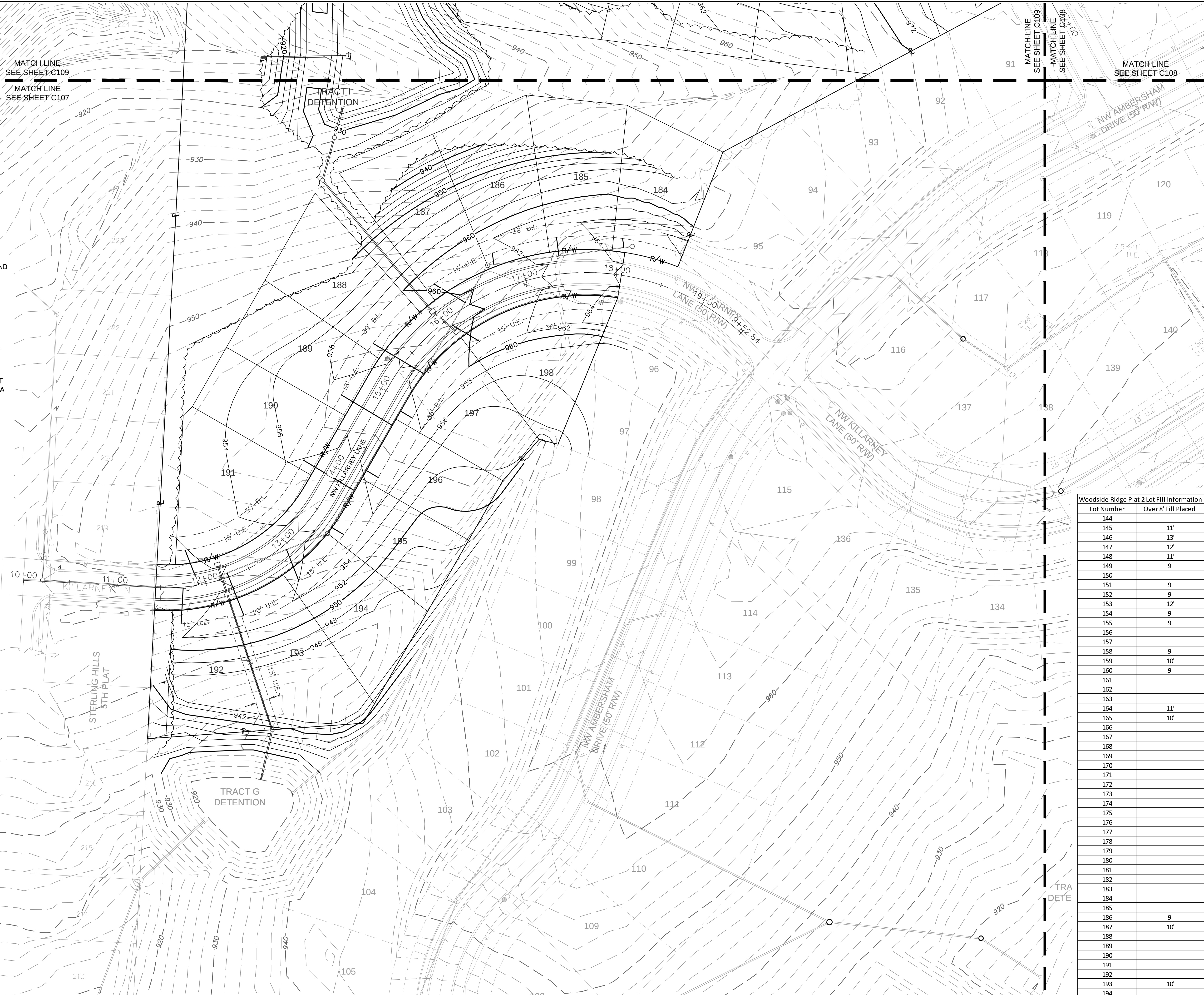
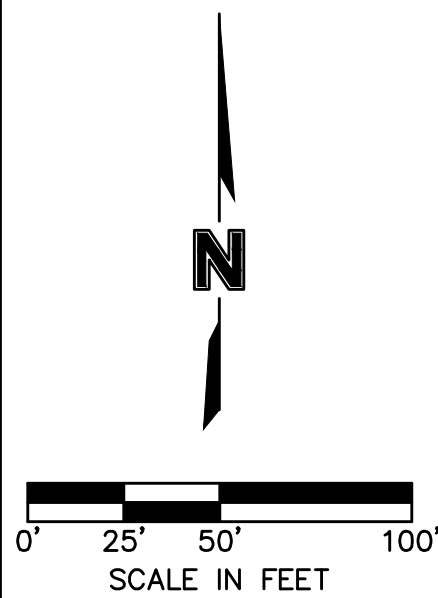
EARTHWORK QUANTITIES		
LOCATION	CUT (C.Y.)	FILL (C.Y.)
STREET	8049	7968
SITE	52613	83489
TOTAL	60662	91457

EARTHWORK QUANTITIES NOTES:

1. EARTHWORK QUANTITIES BASED ON FINISHED GRADE SURFACE AND DO NOT INCLUDE ADJUSTMENTS FOR TOPSOIL AND SHRINKAGE.
2. EARTHWORK QUANTITIES DO NOT TAKE INTO CONSIDERATION EXCAVATION, REMOVAL AND DISPOSAL OF MATERIAL DEEMED UNSUITABLE BY A GEOTECHNICAL ENGINEER. THE EARTHWORK CONTRACTOR IS RESPONSIBLE FOR EXCAVATION, REMOVAL AND DISPOSAL OF UNSUITABLE MATERIAL AND FOR REPLACING IT WITH SUITABLE MATERIAL.

THIRD PARTY TESTING REQUIRED FOR DETENTION BASIN IN TRACT E:

1. REMOVE TOPSOIL AND ORGANIC DIRT FROM THE AREA
2. PROOF ROLL TO CHECK THE SUBGRADE
- 2.1. REMOVE OR REPAIR ANY UNSTABLE AREA IN ACCORDANCE WITH THIRD-PARTY TESTER
3. PLACE 9" LOOSE LIFTS OF 9" MATERIAL WITH LL=50 AND PI=25 OR GREATER. EMBANKMENT SHOULD BE COMPACTED TO A MINIMUM OF 95% OF THE MATERIALS MAXIMUM DRY DENSITY AS DETERMINED BY ASTM D-698 (STANDARD PROCTOR COMPACTION). MOISTURE CONTENT OF THE FILL AT THE TIME OF COMPACTION SHALL BE WITHIN A RANGE OF -0 TO +4 PERCENT OF OPTIMUM MOISTURE CONTENT.



Woodside Ridge Plat 2 Lot Fill Information	
Lot Number	Over 8' Fill Placed
144	
145	11'
146	13'
147	12'
148	11'
149	9'
150	
151	9'
152	9'
153	12'
154	9'
155	9'
156	
157	
158	9'
159	10'
160	9'
161	
162	
163	
164	11'
165	10'
166	
167	
168	
169	
170	
171	
172	
173	
174	
175	
176	
177	
178	
179	
180	
181	
182	
183	
184	
185	
186	9'
187	10'
188	
189	
190	
191	
192	
193	10'
194	
195	
196	
197	
198	

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NORTH KANSAS CITY, MO 64116
TEL 816.881.1177
WWW.OLSSON.COM

STATE OF MISSOURI
JULIE ELAINE
SELLERS
NUMBER
PE-2017000367
4/12/2023
PROFESSIONAL ENGINEER

BY
NO. REV.
DATE
REVISIONS DESCRIPTION

GRADING PLAN
STREET & STORM SEWER PLANS
WOODSIDE RIDGE
SECOND PLAT
LEE'S SUMMIT, MO

2020

drawn by: C.S.M.
checked by: S.M.S.
designed by: C.S.M.
QA/QC by: J.E.S.
project no.: C18-1140
date: 2020.07.10

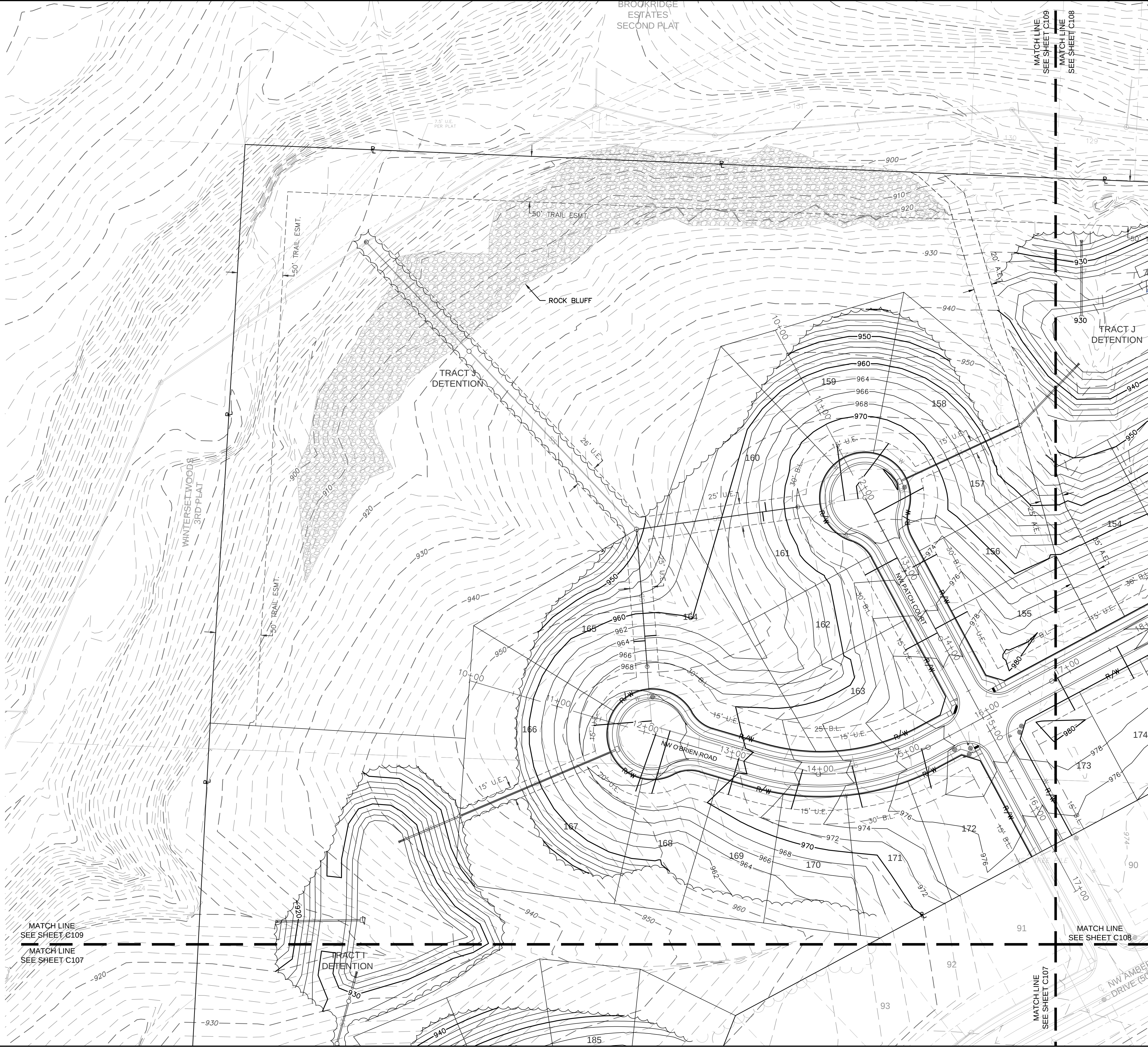
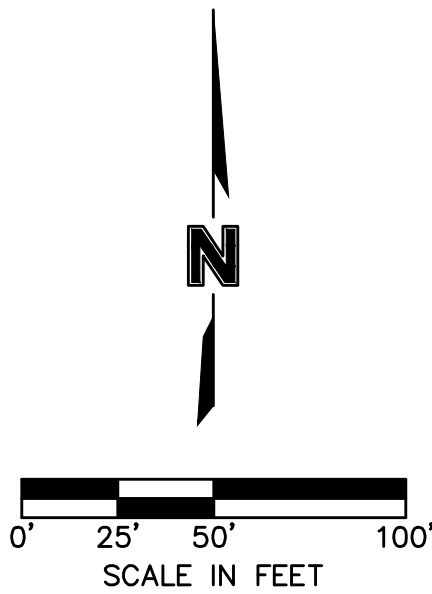
SHEET
C107



KEY MAP

Woodside Ridge Plat 2 Lot Fill Information	
Lot Number	Over 8' Fill Placed
144	
145	11'
146	13'
147	12'
148	11'
149	9'
150	
151	9'
152	9'
153	12'
154	9'
155	9'
156	
157	
158	9'
159	10'
160	9'
161	
162	
163	
164	11'
165	10'
166	
167	
168	
169	
170	
171	
172	
173	
174	
175	
176	
177	
178	
179	
180	
181	
182	
183	
184	
185	
186	9'
187	10'
188	
189	
190	
191	
192	
193	10'
194	
195	
196	
197	
198	

NOT ASBUILT



BY

NO. REV.

DATE

REVISIONS DESCRIPTION

STATE OF MISSOURI
JULIE ELAINE
SELLERS
NUMBER
PE-2017000367
4/12/2023
PROFESSIONAL ENGINEER

GRADING PLAN
STREET & STORM SEWER PLANS

WOODSIDE RIDGE
SECOND PLAT

LEE'S SUMMIT, MO

2020

REVISIONS

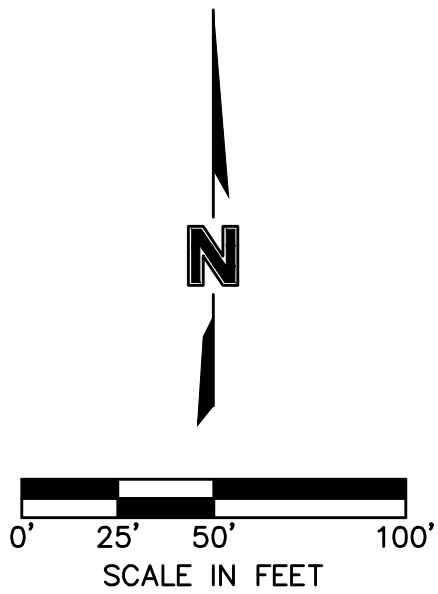
drawn by: C.S.M.
checked by: S.M.S.
designed by: C.S.M.
QA/QC by: J.E.S.
project no.: C18-1140
date: 2020.07.10

SHEET
C108



KEY MAP

Woodside Ridge Plat 2 Lot Fill Information	
Lot Number	Over 8' Fill Placed
144	
145	11'
146	13'
147	12'
148	11'
149	9'
150	
151	9'
152	9'
153	12'
154	9'
155	9'
156	
157	
158	9'
159	10'
160	9'
161	
162	
163	
164	11'
165	10'
166	
167	
168	
169	
170	
171	
172	
173	
174	
175	
176	
177	
178	
179	
180	
181	
182	
183	
184	
185	
186	9'
187	10'
188	
189	
190	
191	
192	
193	10'
194	
195	
196	
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198	



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BY

NO. REV.

DATE

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NUMBER
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4/12/2023
PROFESSIONAL ENGINEER

GRADING PLAN
STREET & STORM SEWER PLANS

WOODSIDE RIDGE
SECOND PLAT

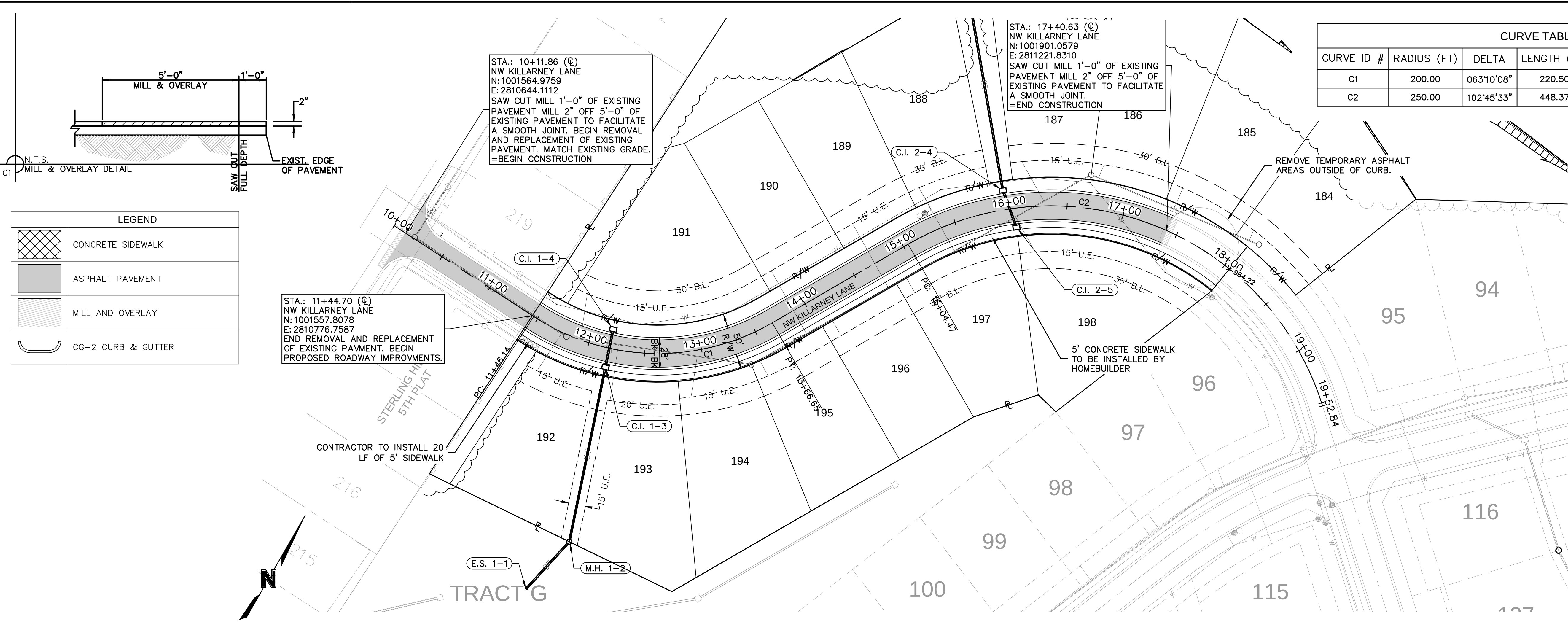
LEE'S SUMMIT, MO

2020

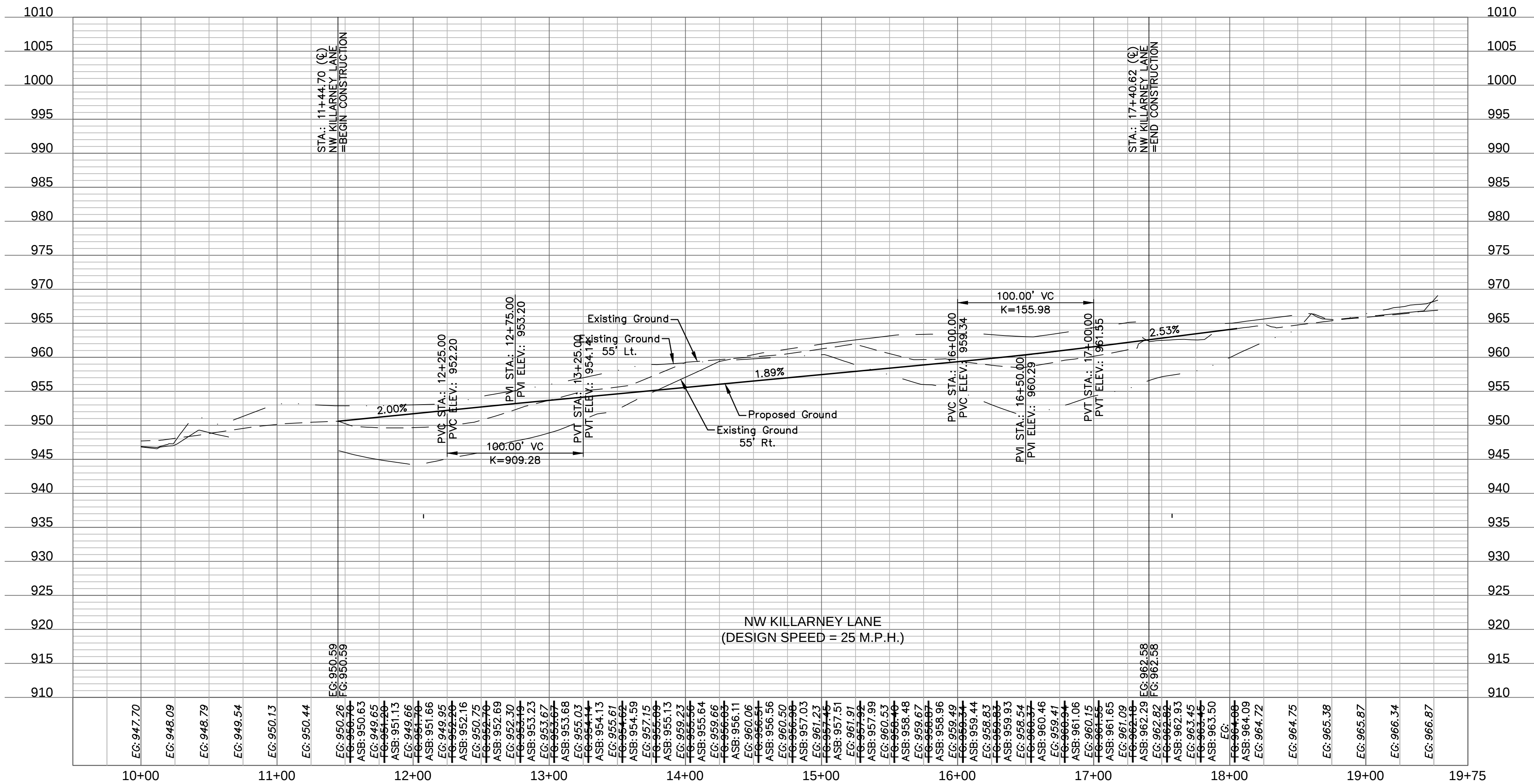
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QA/QC by: J.E.S.
project no.: C18-1140
date: 2020.07.10

SHEET
C109



CURVE TABLE					
CURVE ID #	RADIUS (FT)	DELTA	LENGTH (FT)	TANGENT (FT)	P.I. STA. (BK.)
C1	200.00	063°10'08"	220.50	122.97	12+43.68
C2	250.00	102°45'33"	448.37	312.94	16+39.90



ASBUILT
03-24-2022

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NOT A Seal of Authority of the State of Missouri
303 E. BIRKINGSTON, SUITE 100
NORTH KANSAS CITY, MO 64116
TEL. 816.861.1177
www.olsson.com

STATE OF MISSOURI
JULIE ELAINE
SELLERS
NUMBER
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4/12/2023
PROFESSIONAL ENGINEER

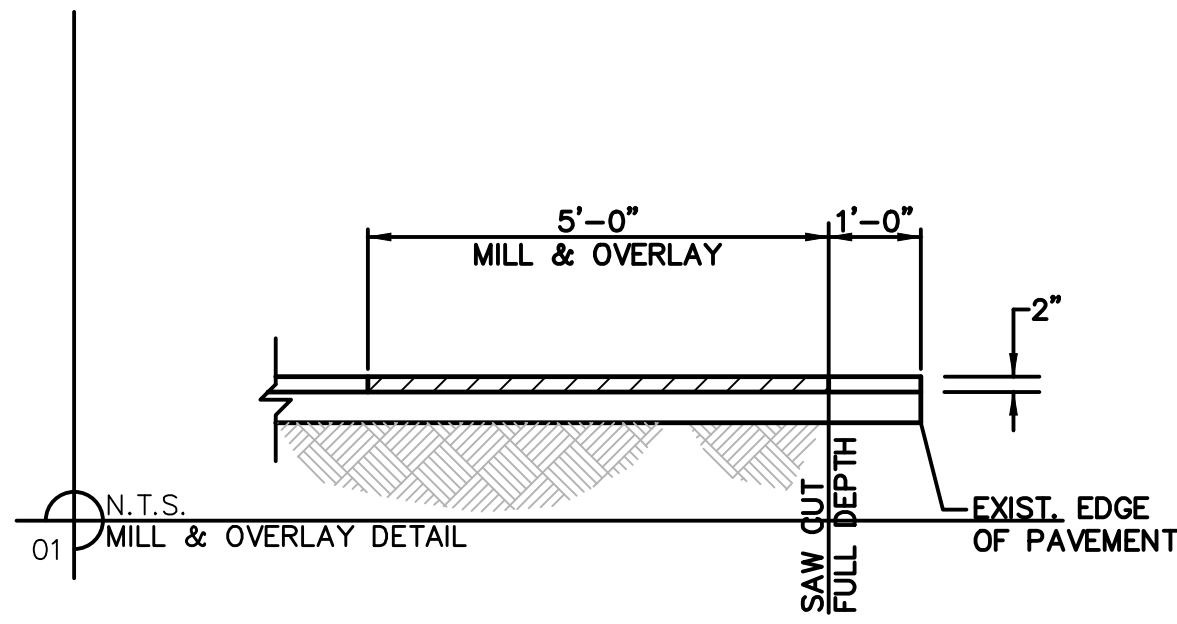
BY: _____
REVISIONS DESCRIPTION
NO. REV. _____
DATE _____

ROADWAY PLAN & PROFILE
STREET & STORM SEWER PLANS
WOODSIDE RIDGE
SECOND PLAT
LEE'S SUMMIT, MO

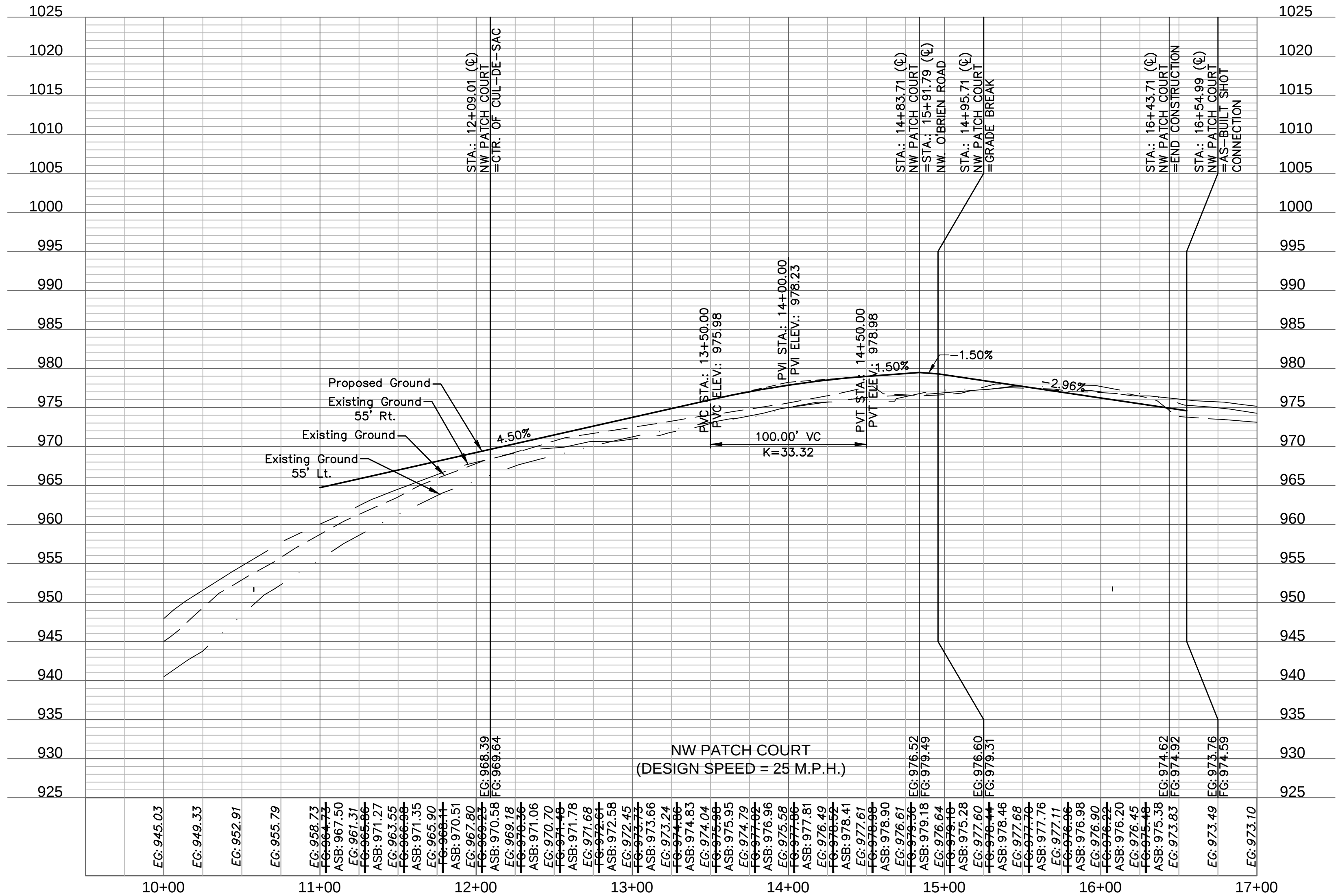
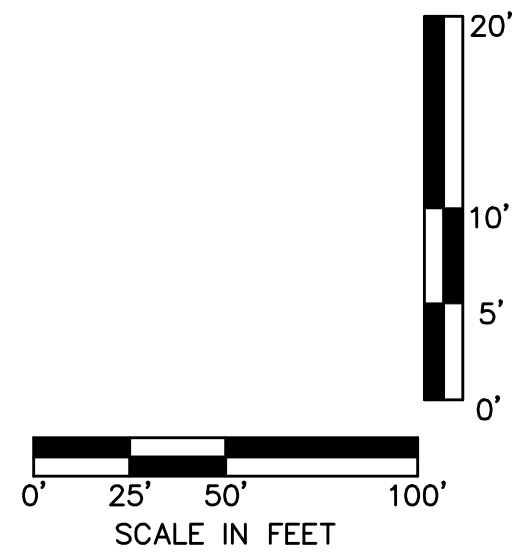
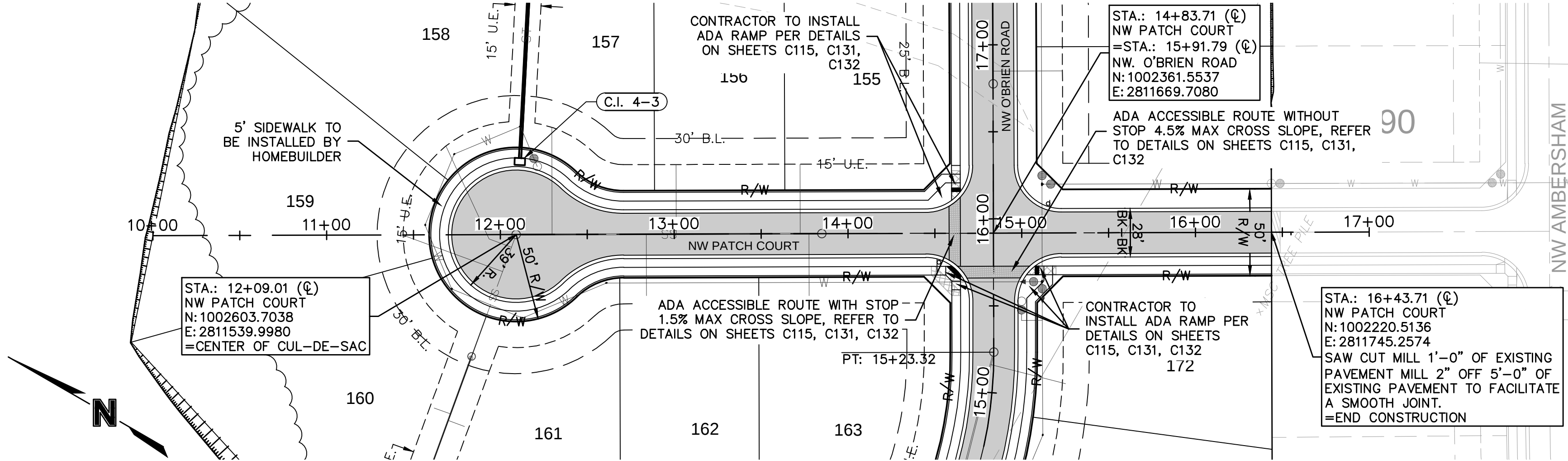
2020

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C110

drawn by: _____ C.S.M.
checked by: _____ S.M.S.
designed by: _____ C.S.M.
QA/QC by: _____ J.E.S.
project no.: C18-1140
date: 2020.07.10



LEGEND	
	CONCRETE SIDEWALK
	ASPHALT PAVEMENT
	MILL AND OVERLAY
	CG-2 CURB & GUTTER



ASBUILT
03-24-2022

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NO Conflicts of Interest at 03/18/22
303 E. BIRCH STREET, SUITE 100
NORTH KANSAS CITY, MO 64116
TEL: 816.861.1177
www.olsson.com

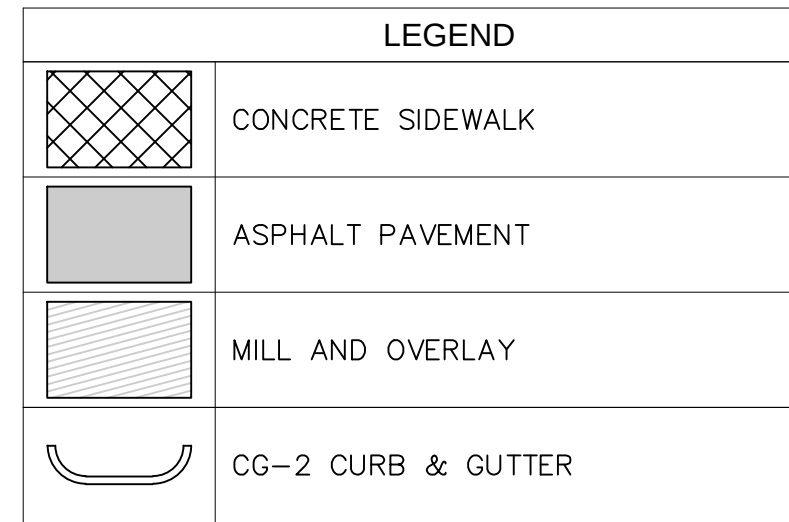
STATE OF MISSOURI
JULIE ELAINE SELLERS
NUMBER
PE-2017000367
4/12/2023
PROFESSIONAL ENGINEER

BY
NO. REV.
DATE
REVISIONS DESCRIPTION
REVISIONS

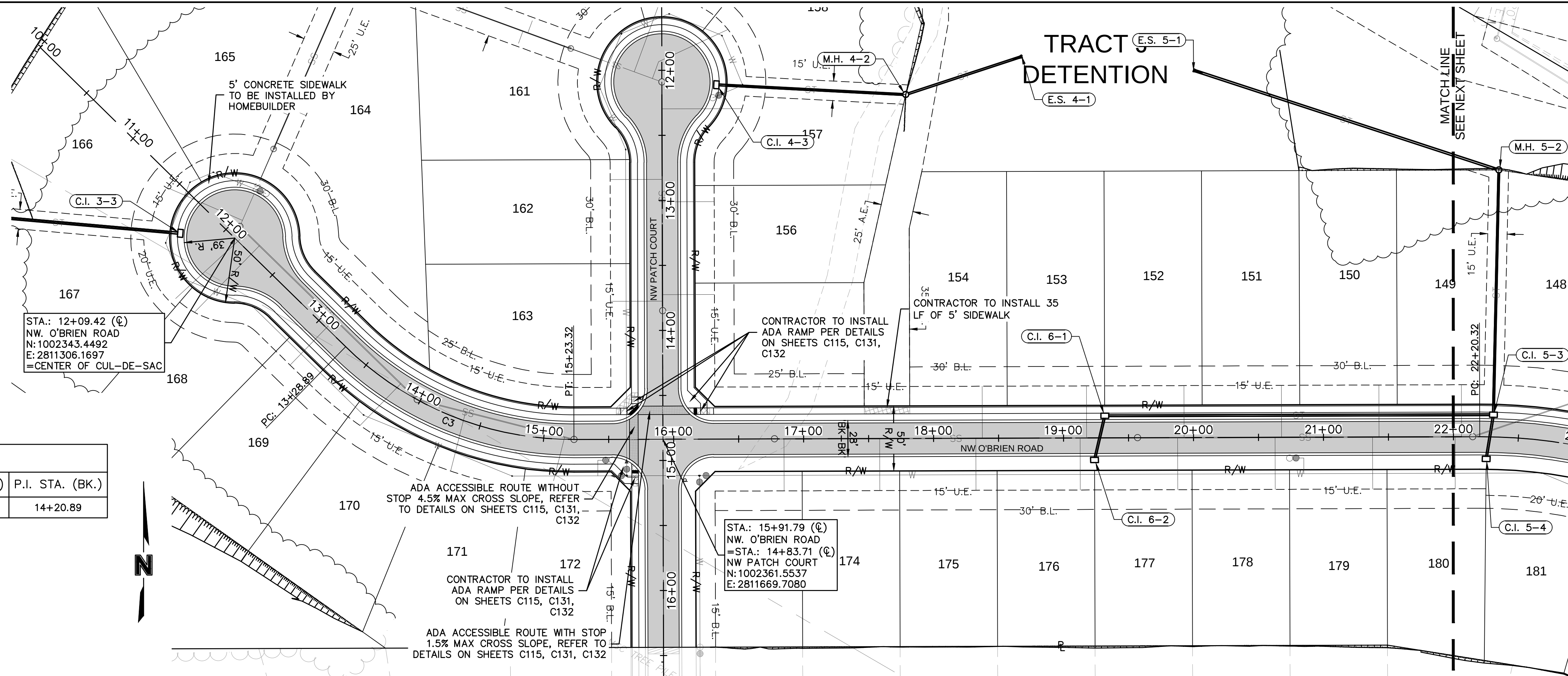
ROADWAY PLAN & PROFILE
STREET & STORM SEWER PLANS
WOODSIDE RIDGE
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2020

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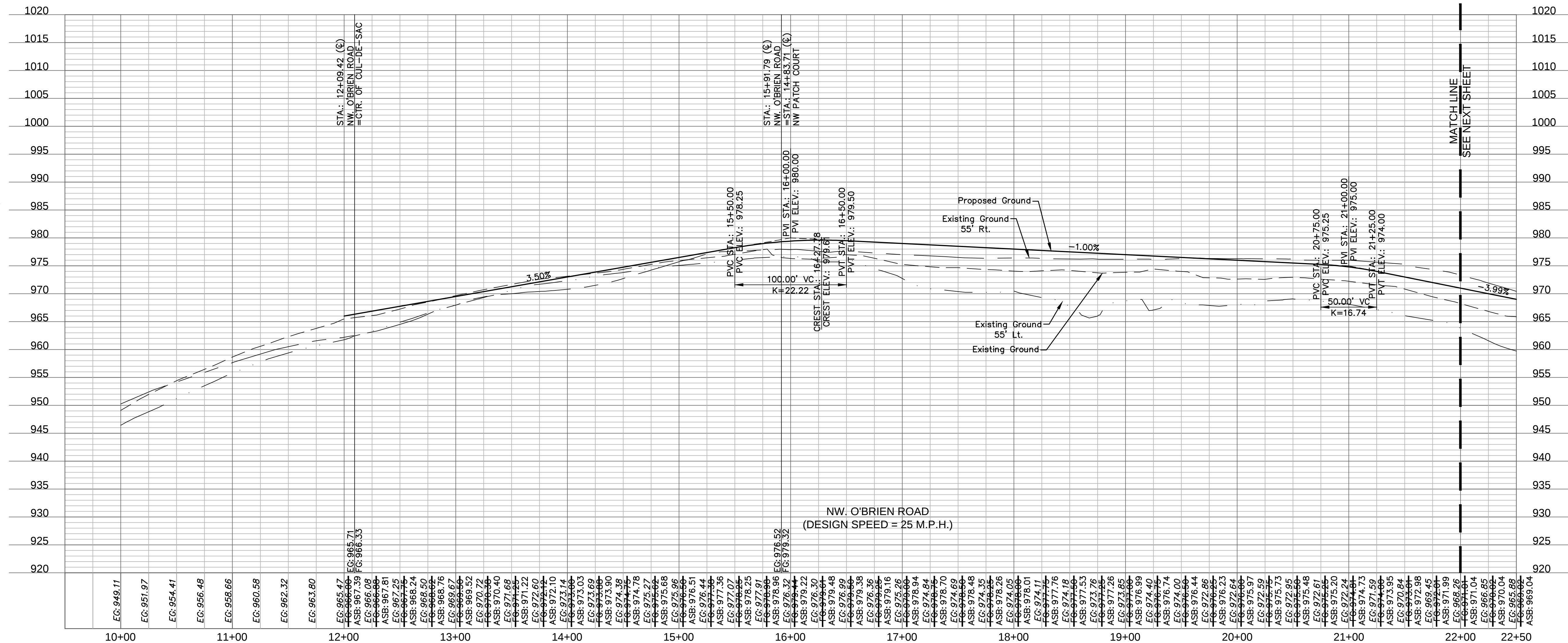
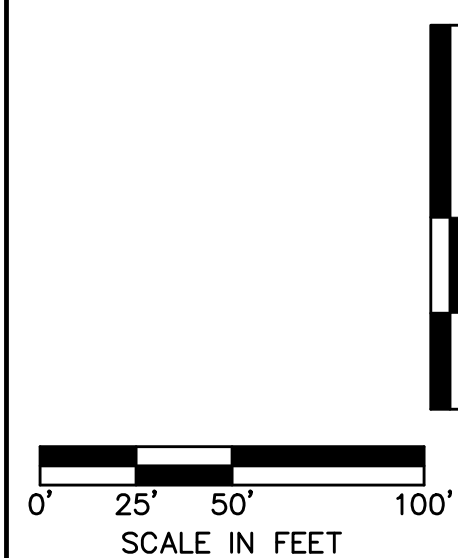
SHEET
C111



CURVE TABLE					
CURVE ID #	RADIUS (FT)	DELTA	LENGTH (FT)	TANGENT (FT)	P.I. STA. (BK.)
C3	250.00	044°33'34"	194.43	102.43	14+20.89

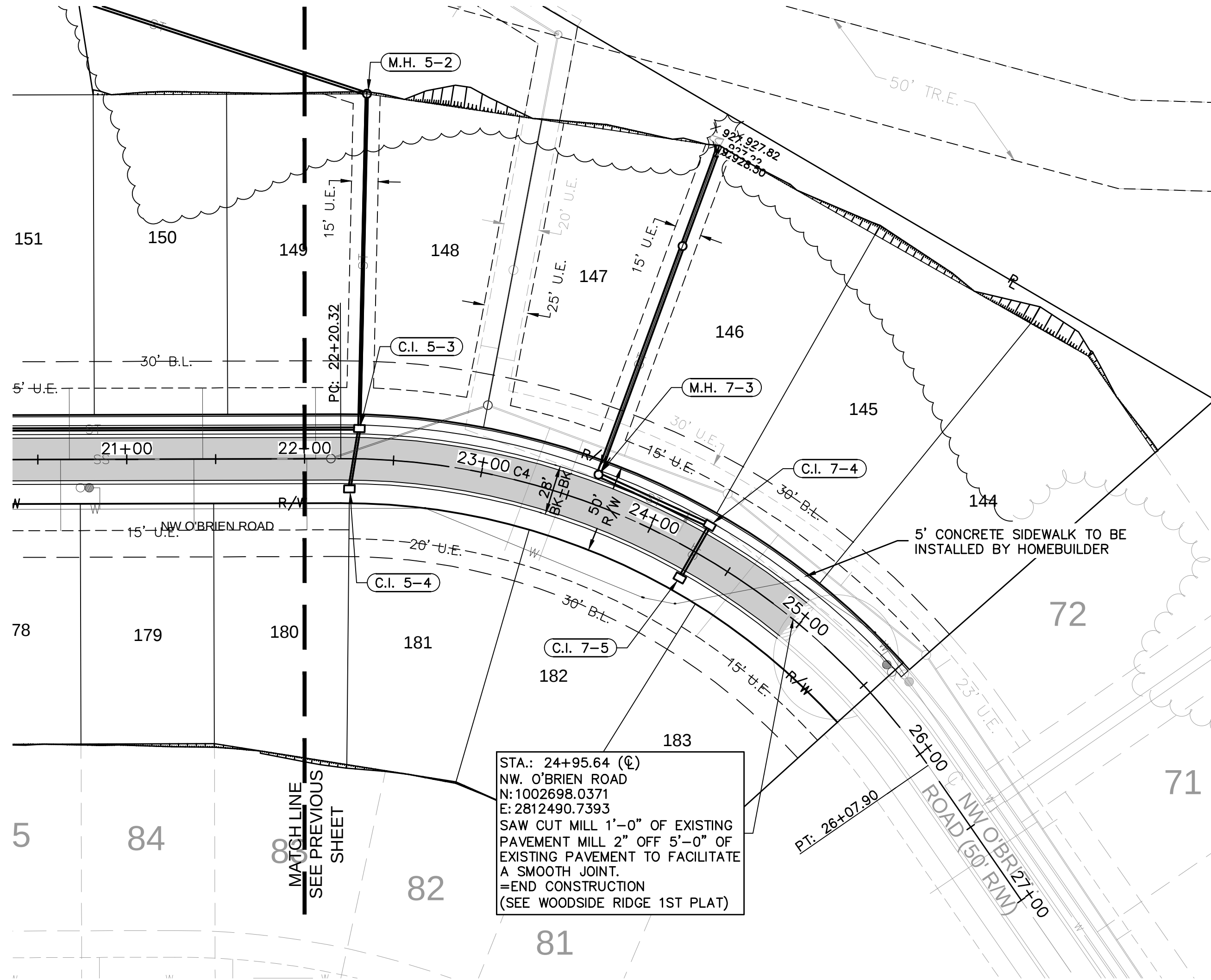
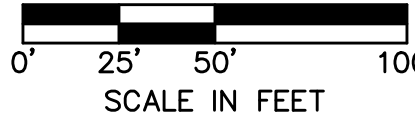


ASBUILT
03-24-2022

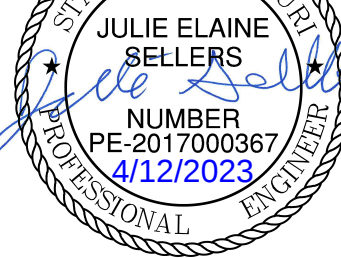




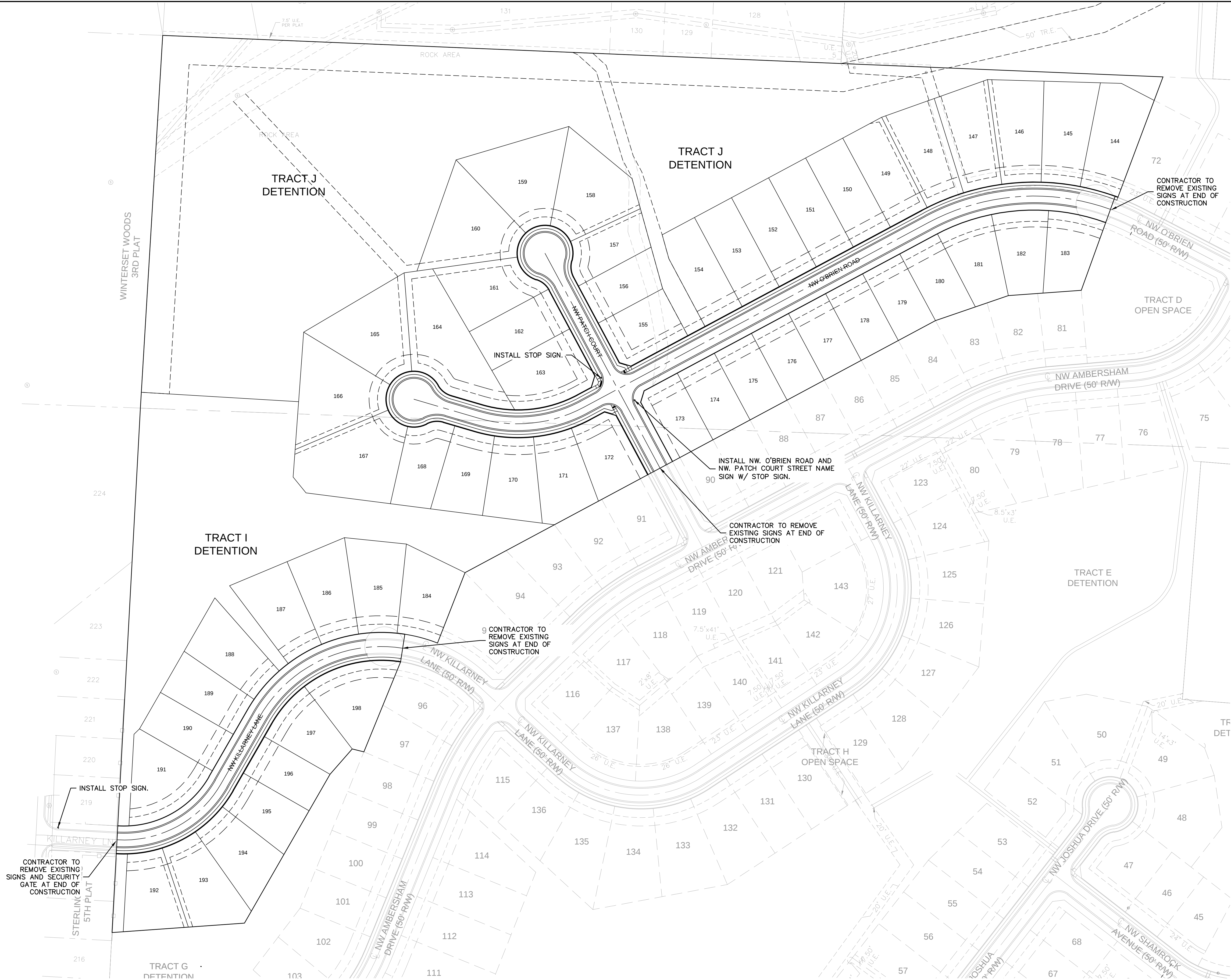
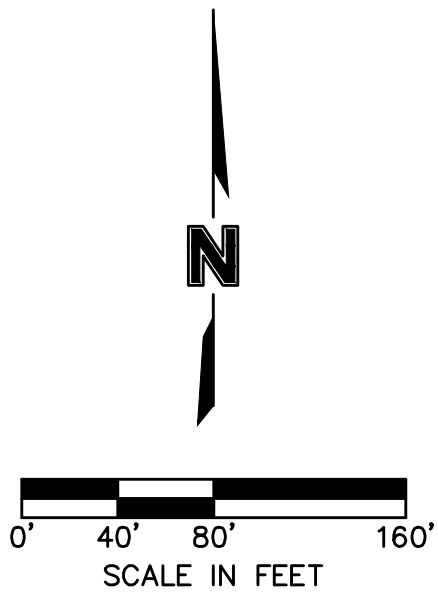
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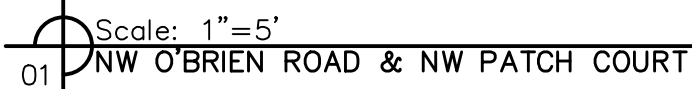


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USER: ssaylor



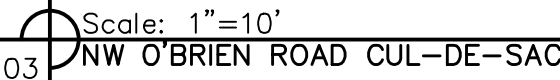
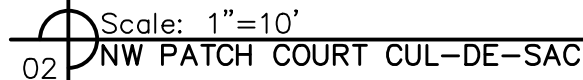
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TRAFFIC CONTROL PLAN STREET & STORM SEWER PLANS		WOODSIDE RIDGE SECOND PLAT		LEE'S SUMMIT, MO	
drawn by: _____ C.S.M.		checked by: _____ S.M.S.		designed by: _____ C.S.M.	
QA/QC by: _____ J.E.S.		project no.: C18-1140		date: 2020.07.10	
NO. REV.		DATE		REVISIONS	
BY		REVISIONS DESCRIPTION		2020	
olsson		JULIE ELAINE SELLERS NUMBER PE-2017000367 4/12/2023 PROFESSIONAL ENGINEER		www.olsson.com TEL 816.861.1177 NCE Certificate of Authority #041892 303 E. BIRCH STREET, SUITE 100 NORTH KANSAS CITY, MO 64116	



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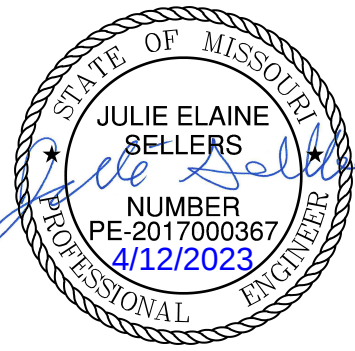
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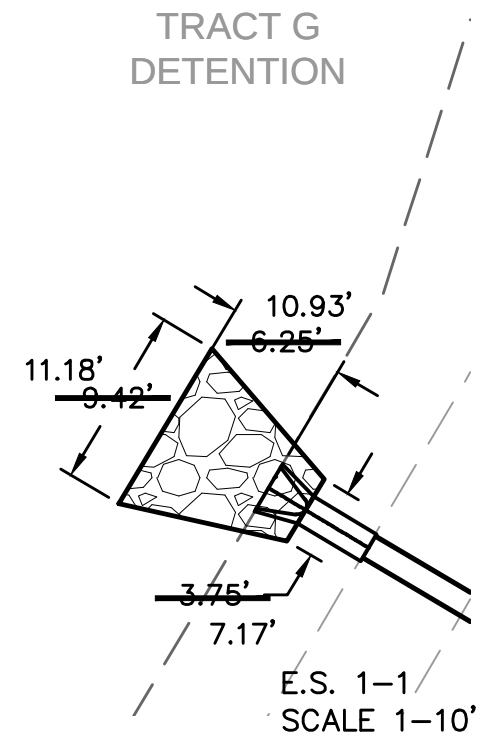


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REVISIONS

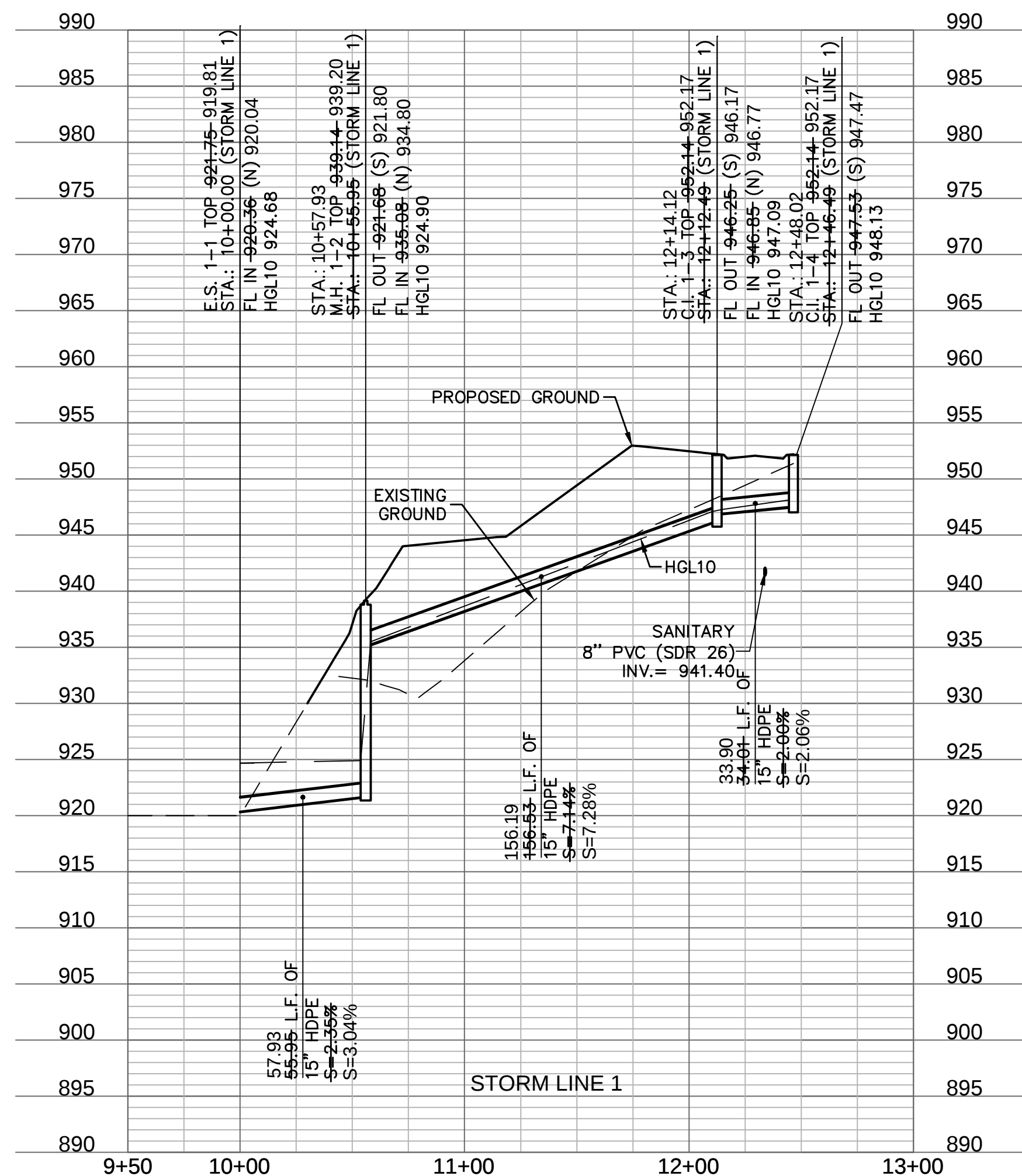
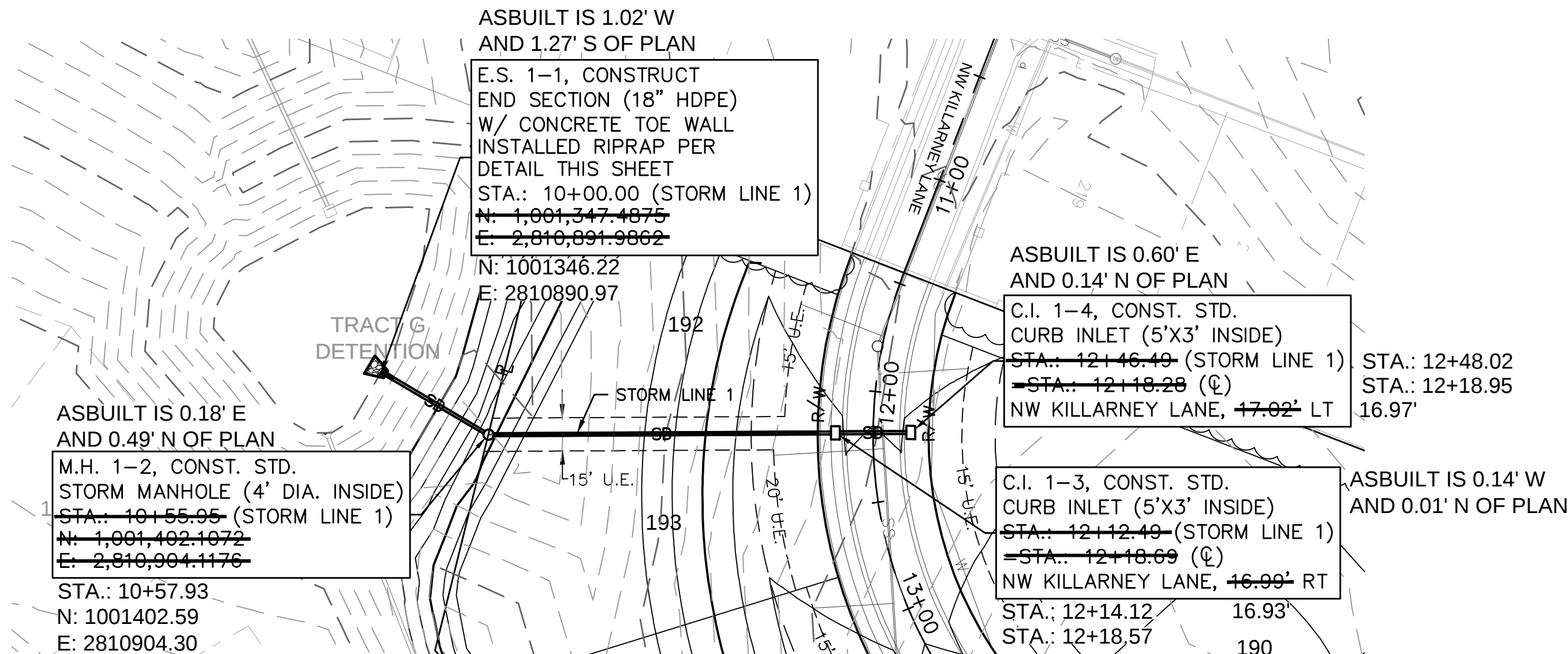




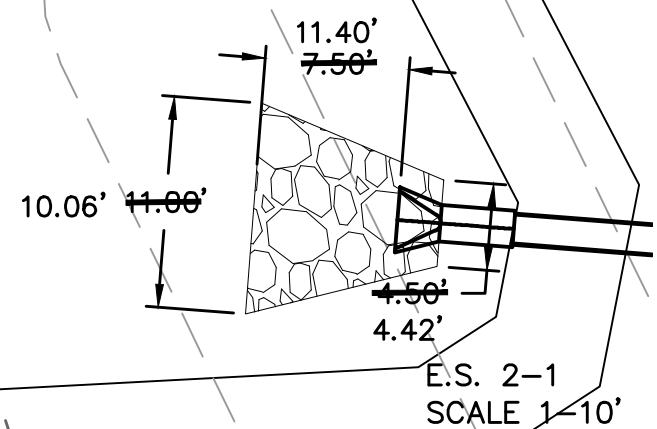
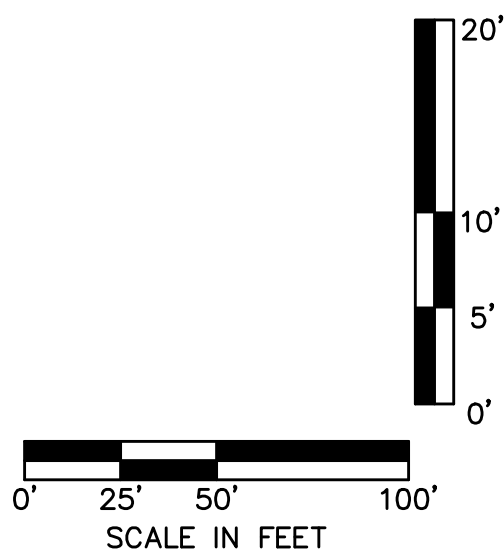
Riprap Calculations						
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E.S. 1-1	7.34	1.25	3	10	6.25	2.00

*Per Table 10.1 HEC 14-FHWA-Energy Dissipators Pg. 10-18

19.74



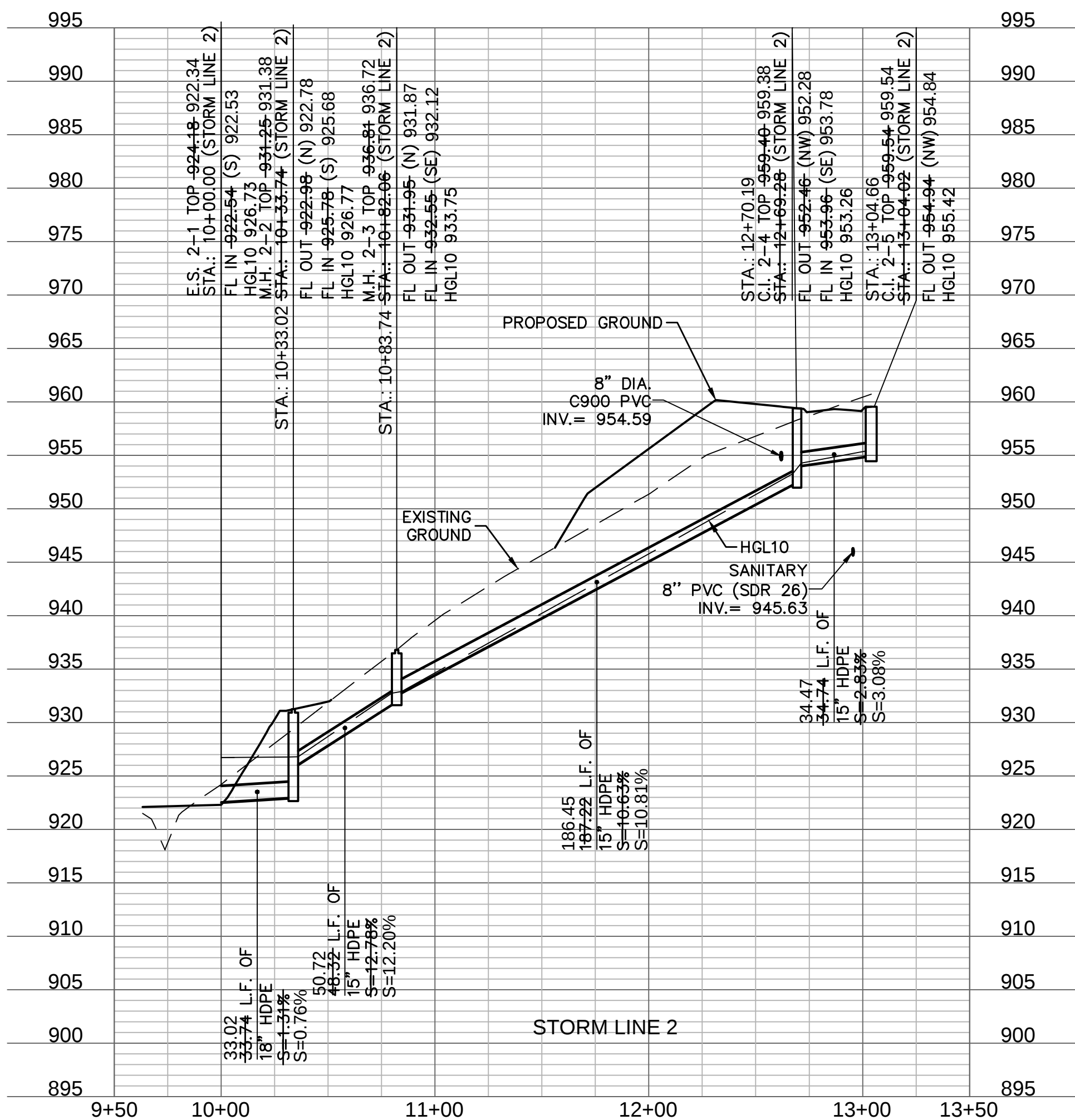
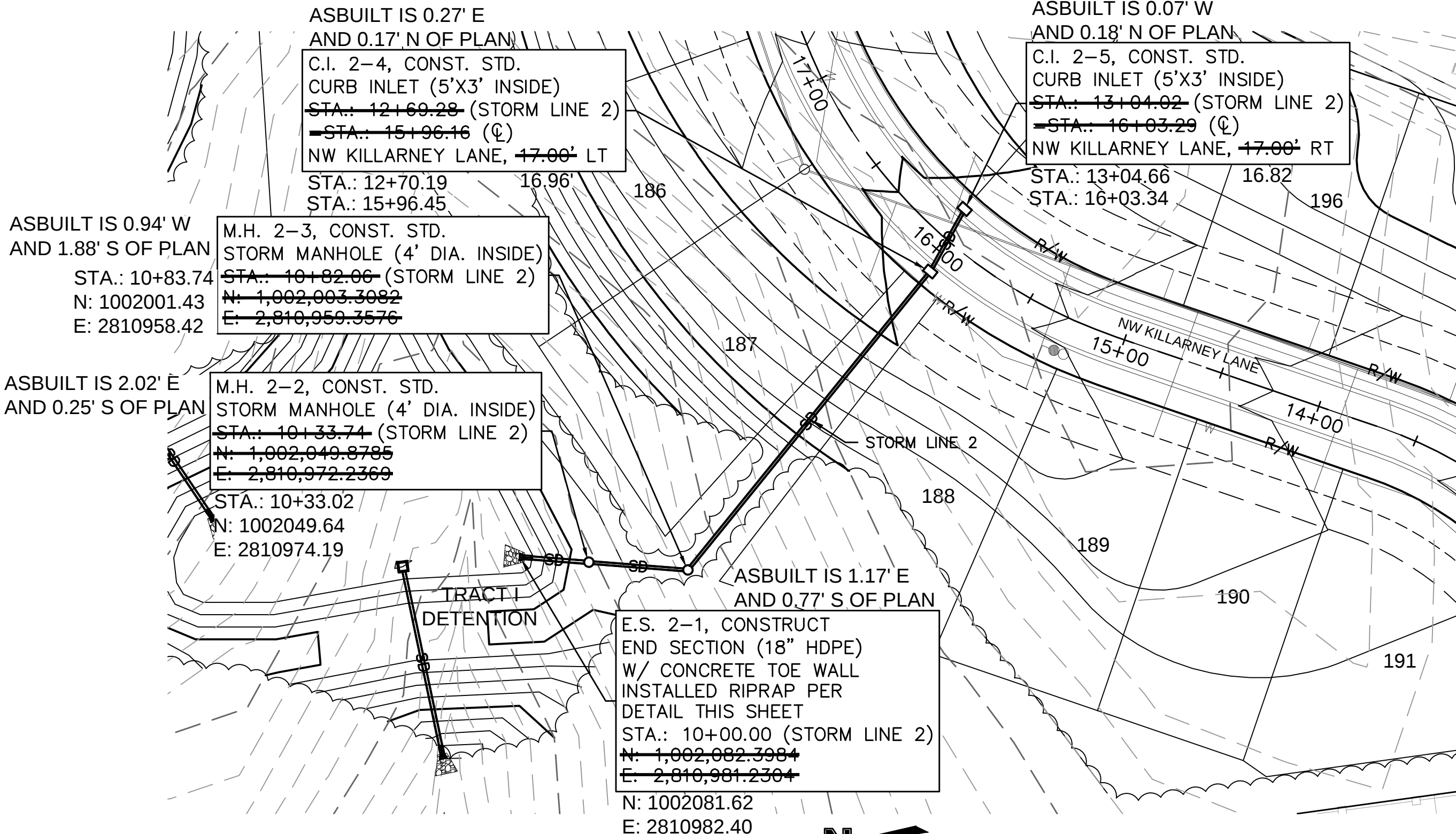
ASBUILT
03-24-2022



Riprap Calculations						
End Section	Q ₁₀₀ (cfs)	Pipe Diameter (ft)	Class*	D50* (in)	Apron Length (ft)	Apron Depth (ft)
E.S. 2-1	9.35	1.5	3	10	7.5	2.00

*Per Table 10.1 HEC 14-FHWA-Energy Dissipators Pg. 10-18

8.77



STORM SEWER PLAN & PROFILE
STREET & STORM SEWER PLANS

WOODSIDE RIDGE
SECOND PLAT

LEE'S SUMMIT, MO

2020

drawn by: C.S.M.
checked by: S.M.S.
designed by: C.S.M.
QA/QC by: J.E.S.
project no.: C18-1140
date: 2020.07.10

SHEET
C117

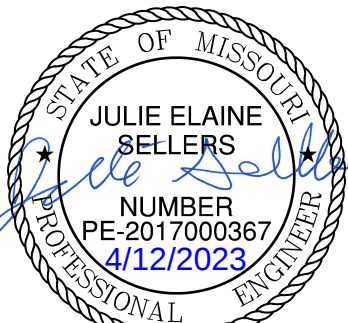
NO. REV. DATE

2 3/16/2021

REVISED PER CONTRACTOR COMMENT

REVISIONS DESCRIPTION

BY

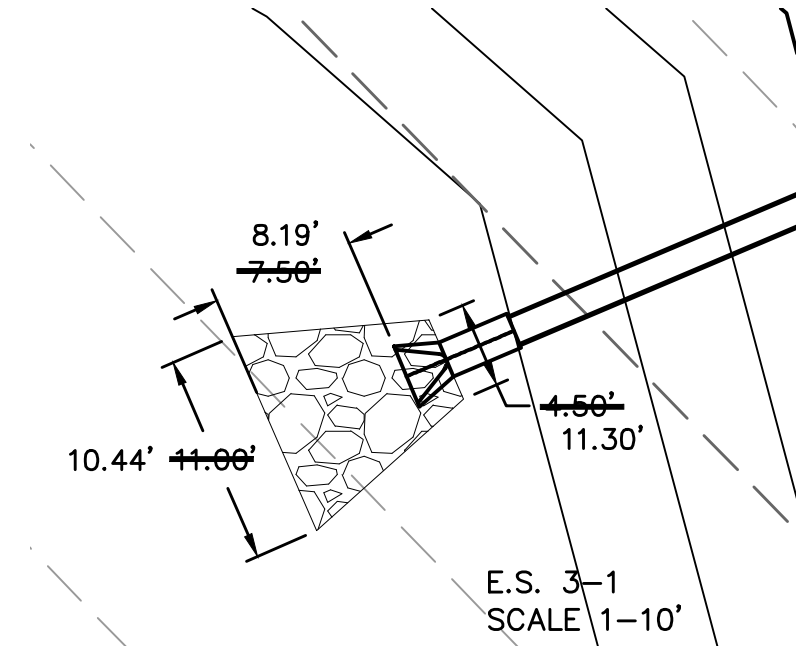


olsson

NO. 018-1140-001
300 E. MAIN STREET, SUITE 100
NORTH KANSAS CITY, MO 64116
TEL. 816.861.1177
WWW.OLSSON.COM

USER: ssaylor

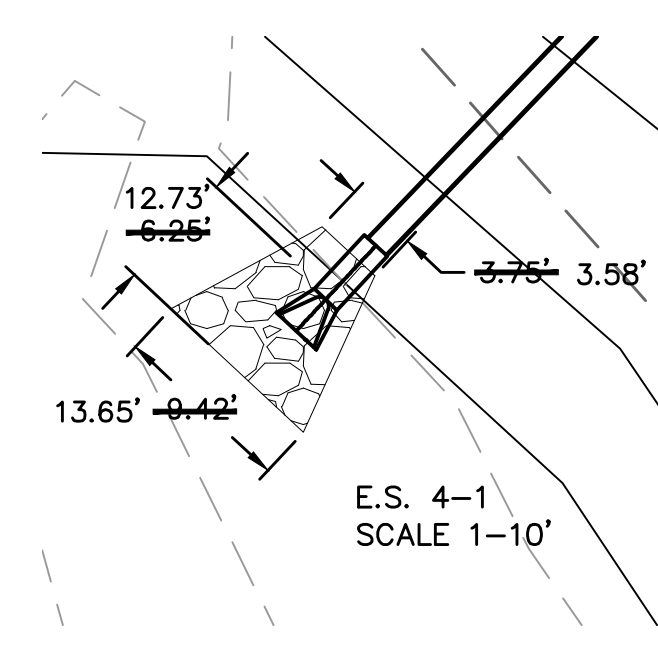
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Riprap Calculations						
End Section	Q ₁₀₀ (cfs)	Pipe Diameter (ft)	Class*	D50* (in)	Apron Length (ft)	Apron Depth (ft)
E.S. 3-1	7.83	1.5	3	10	7.5	2.00

*Per Table 10.1 HEC 14-FHWA-Energy Dissipators Pg. 10-18

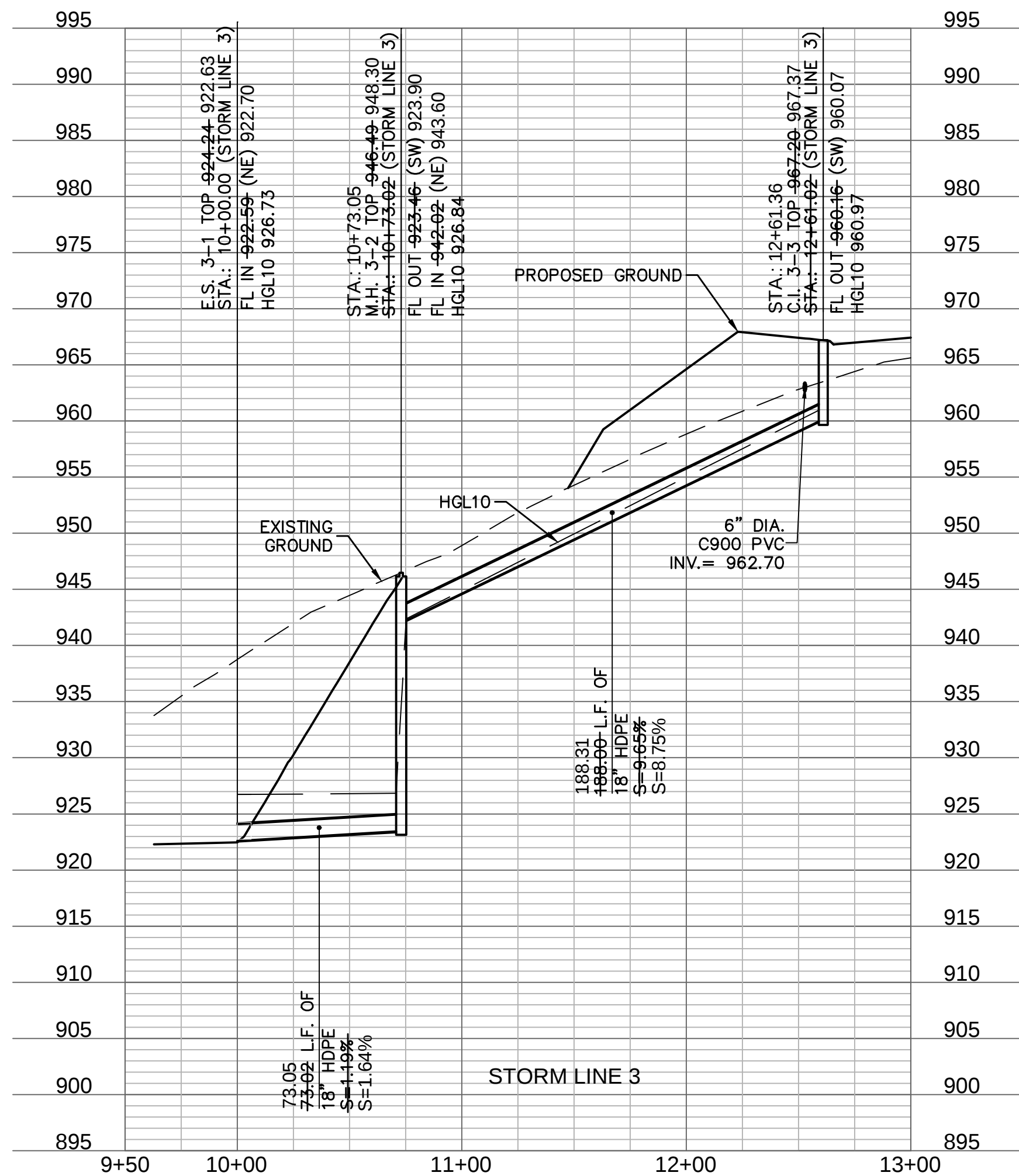
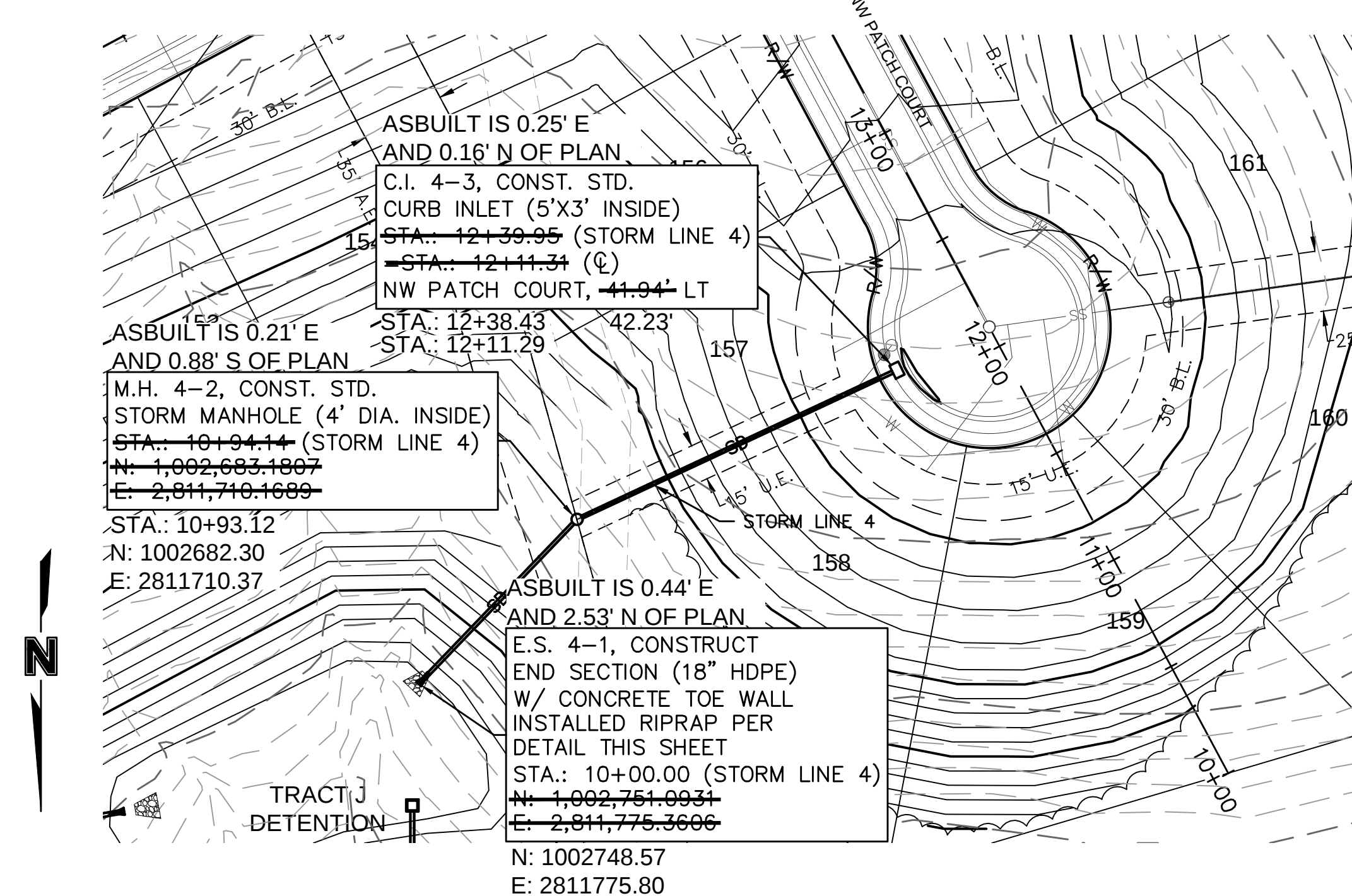
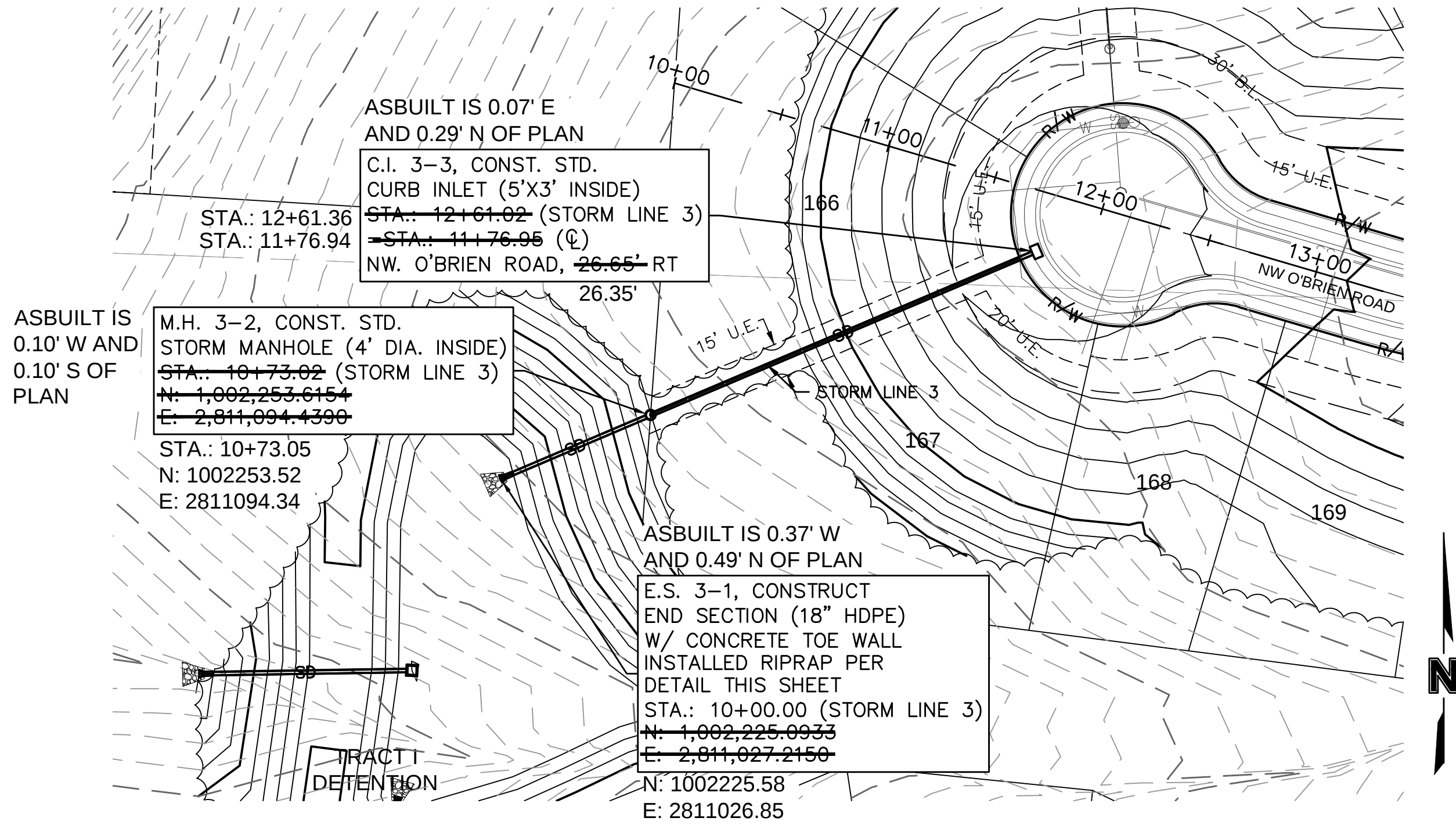
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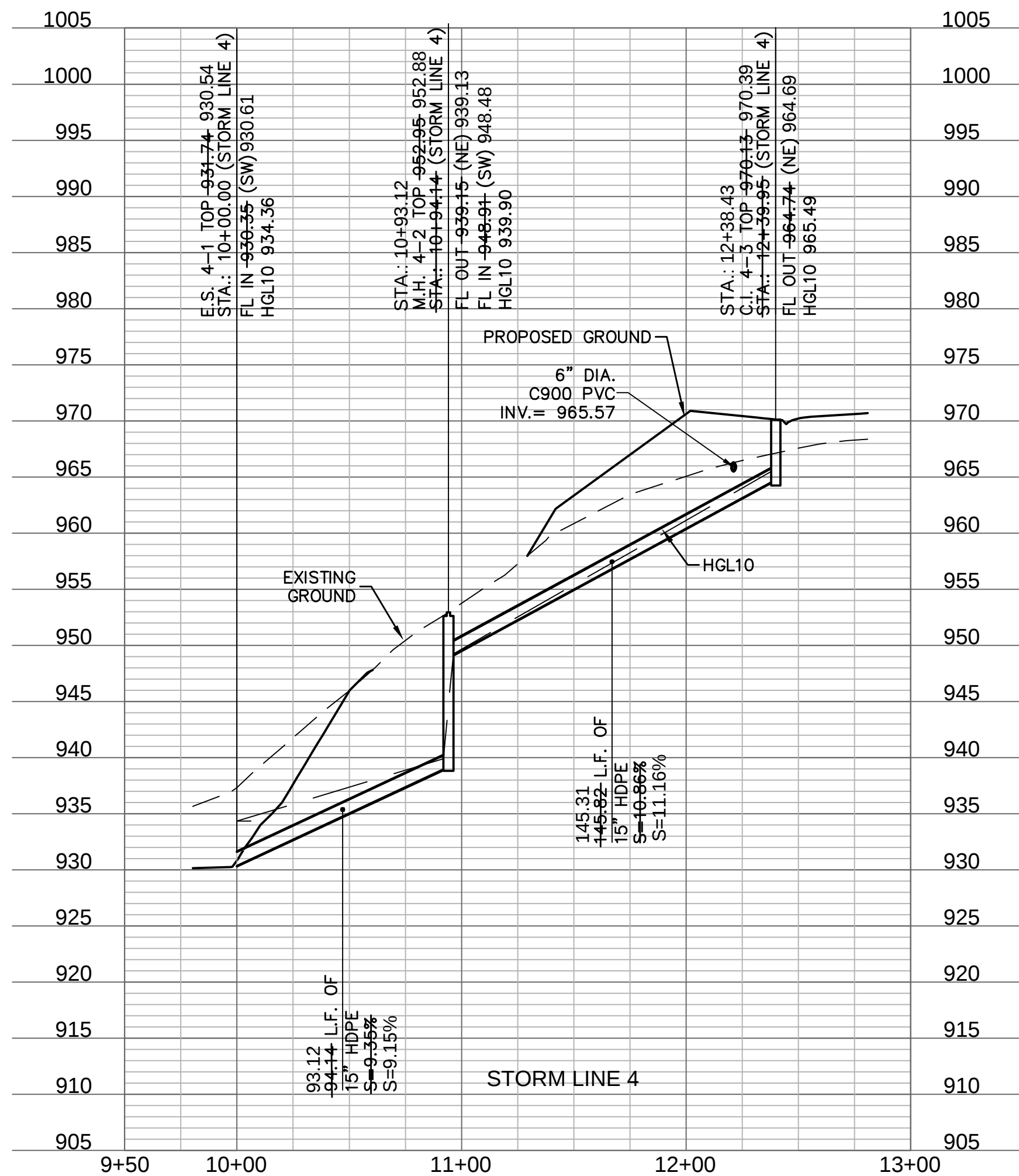
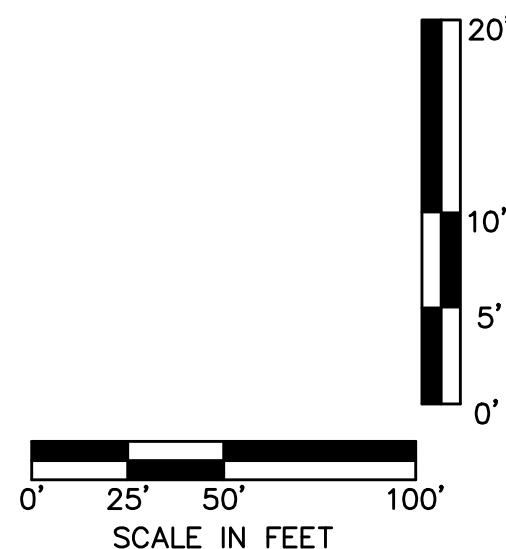
Riprap Calculations						
End Section	Q ₁₀₀ (cfs)	Pipe Diameter (ft)	Class*	D50* (in)	Apron Length (ft)	Apron Depth (ft)
E.S. 4-1	6.05	1.25	3	10	6.25	2.00

*Per Table 10.1 HEC 14-FHWA-Energy Dissipators Pg. 10-18

13.71



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03-24-2022



STORM SEWER PLAN & PROFILE
STREET & STORM SEWER PLANS

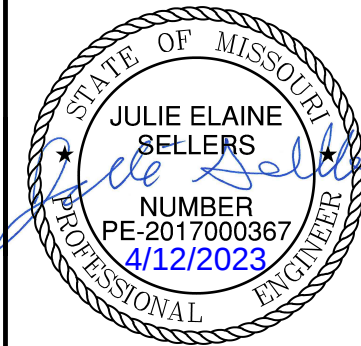
WOODSIDE RIDGE
SECOND PLAT

LEE'S SUMMIT, MO

2020

drawn by: C.S.M.
checked by: S.M.S.
designed by: C.S.M.
QA/QC by: J.E.S.
project no.: C18-1140
date: 2020.07.10

SHEET
C118

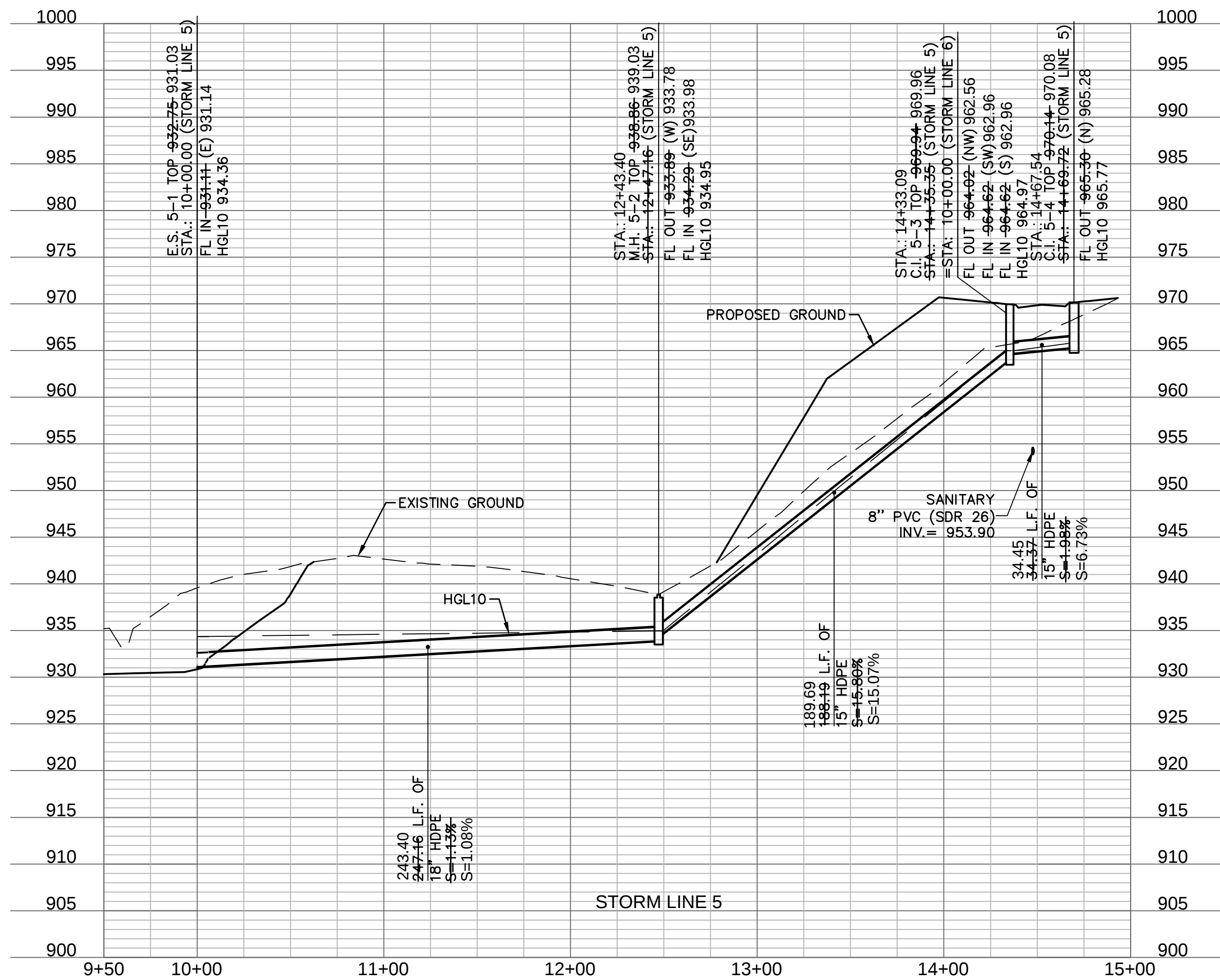
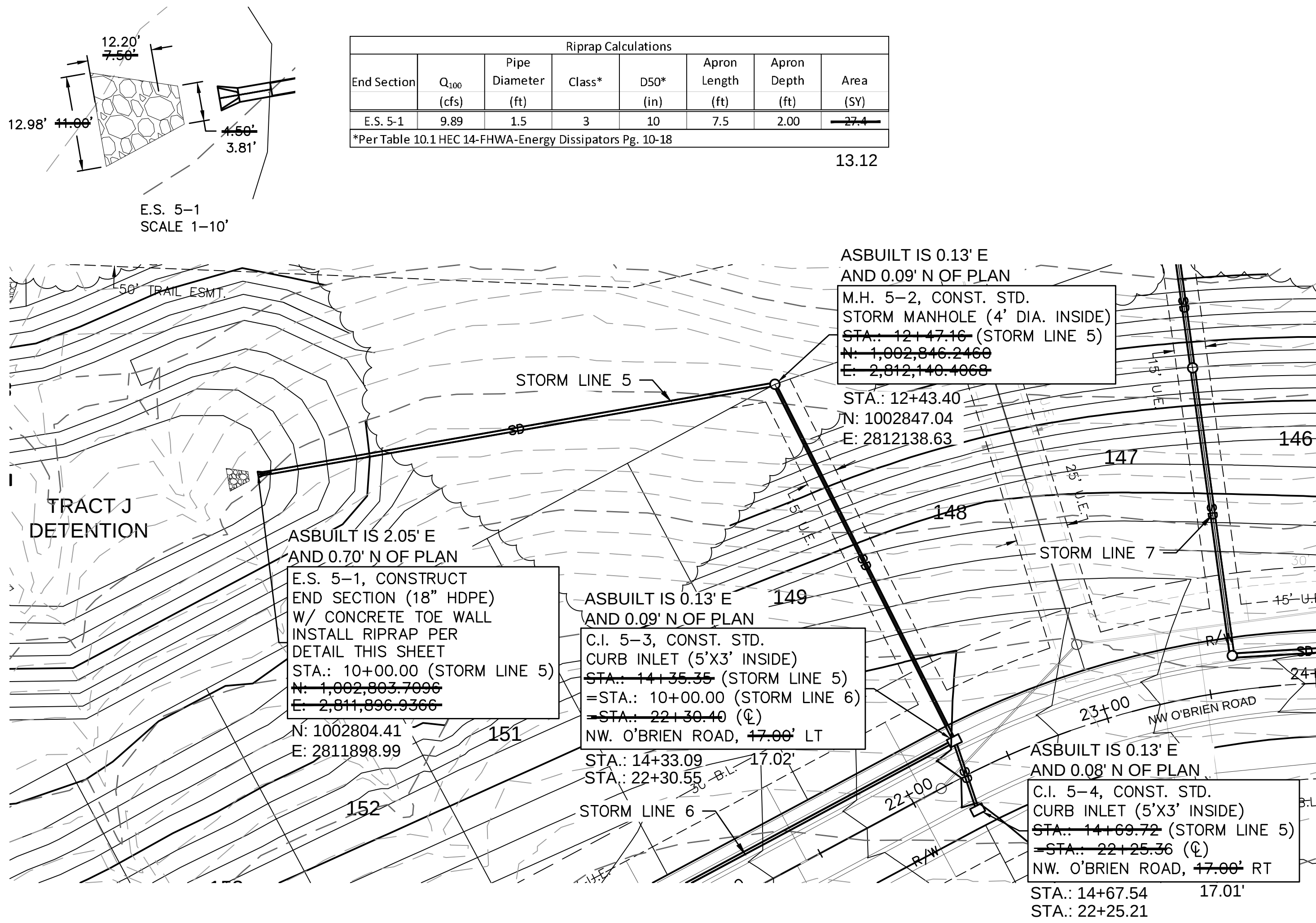


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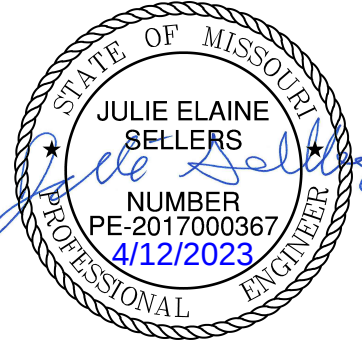
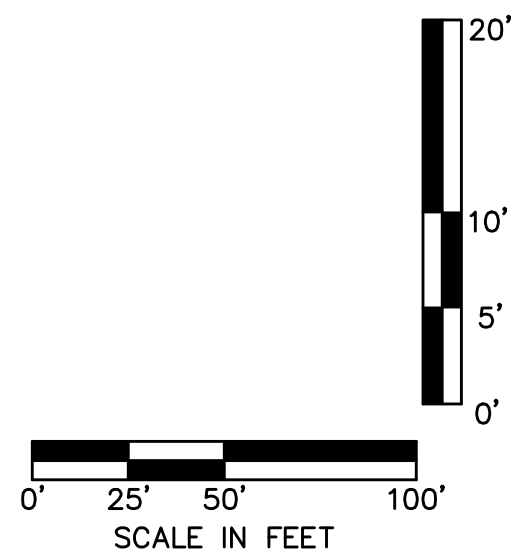
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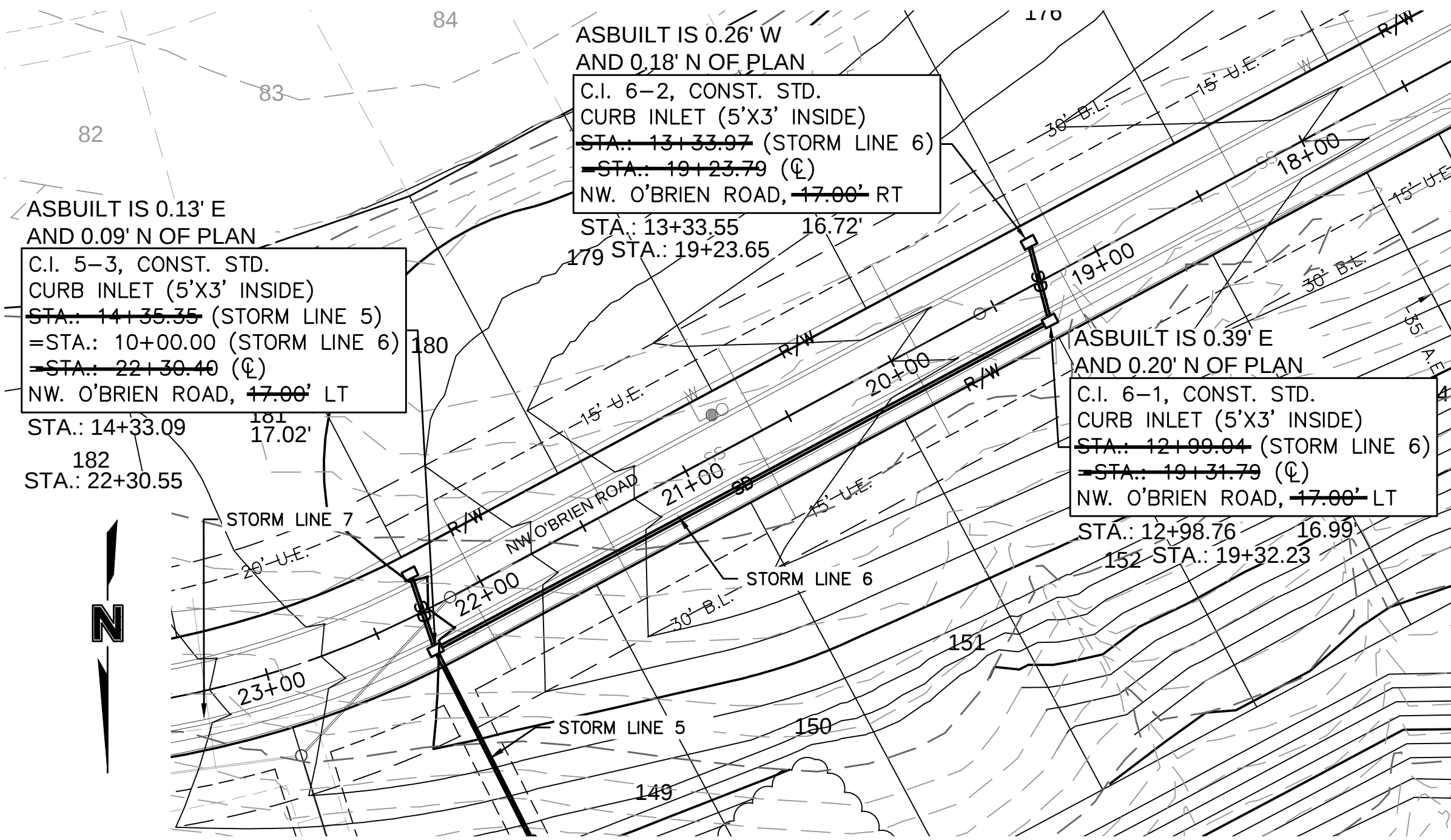
olsson

NO. 00000000 of Authority # 001892
303 RUPING STREET, SUITE 100
NORTH KANSAS CITY, MO 64116
TEL. 816.861.1177
WWW.OLSSON.COM

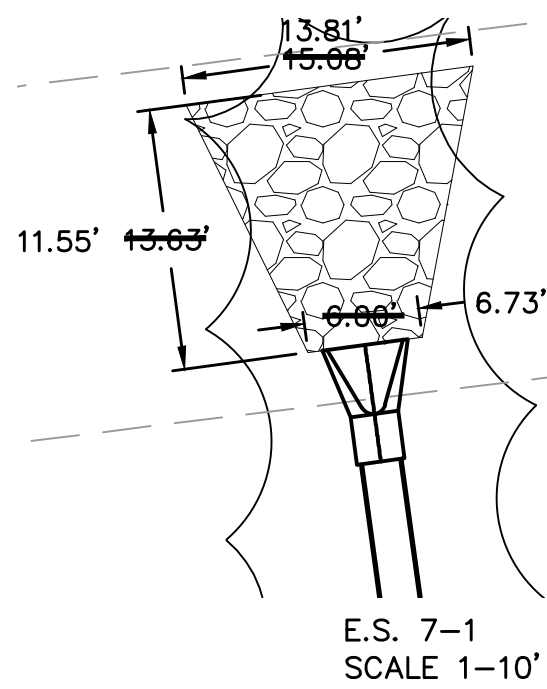


ASBUILT
03-24-2022

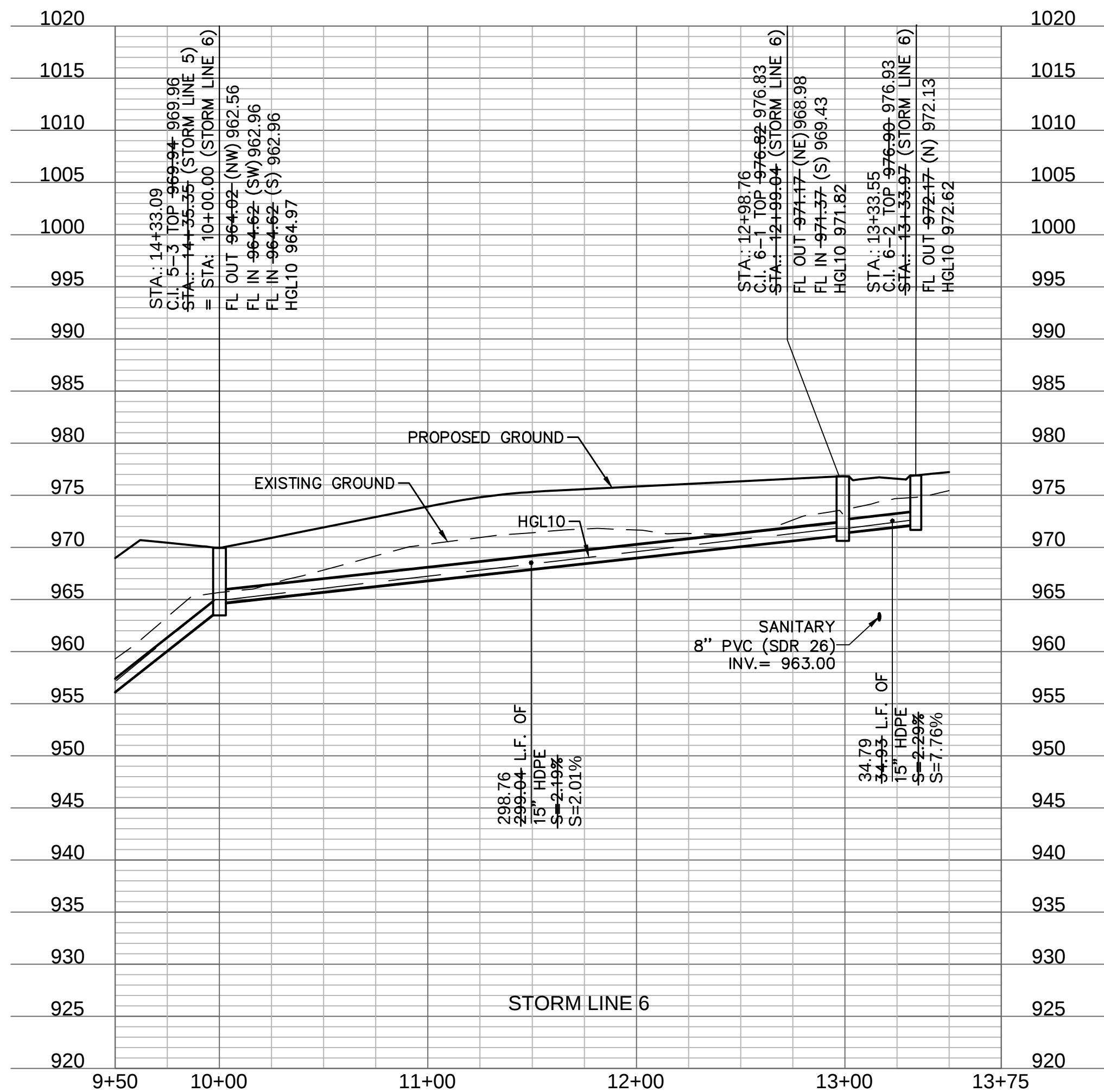
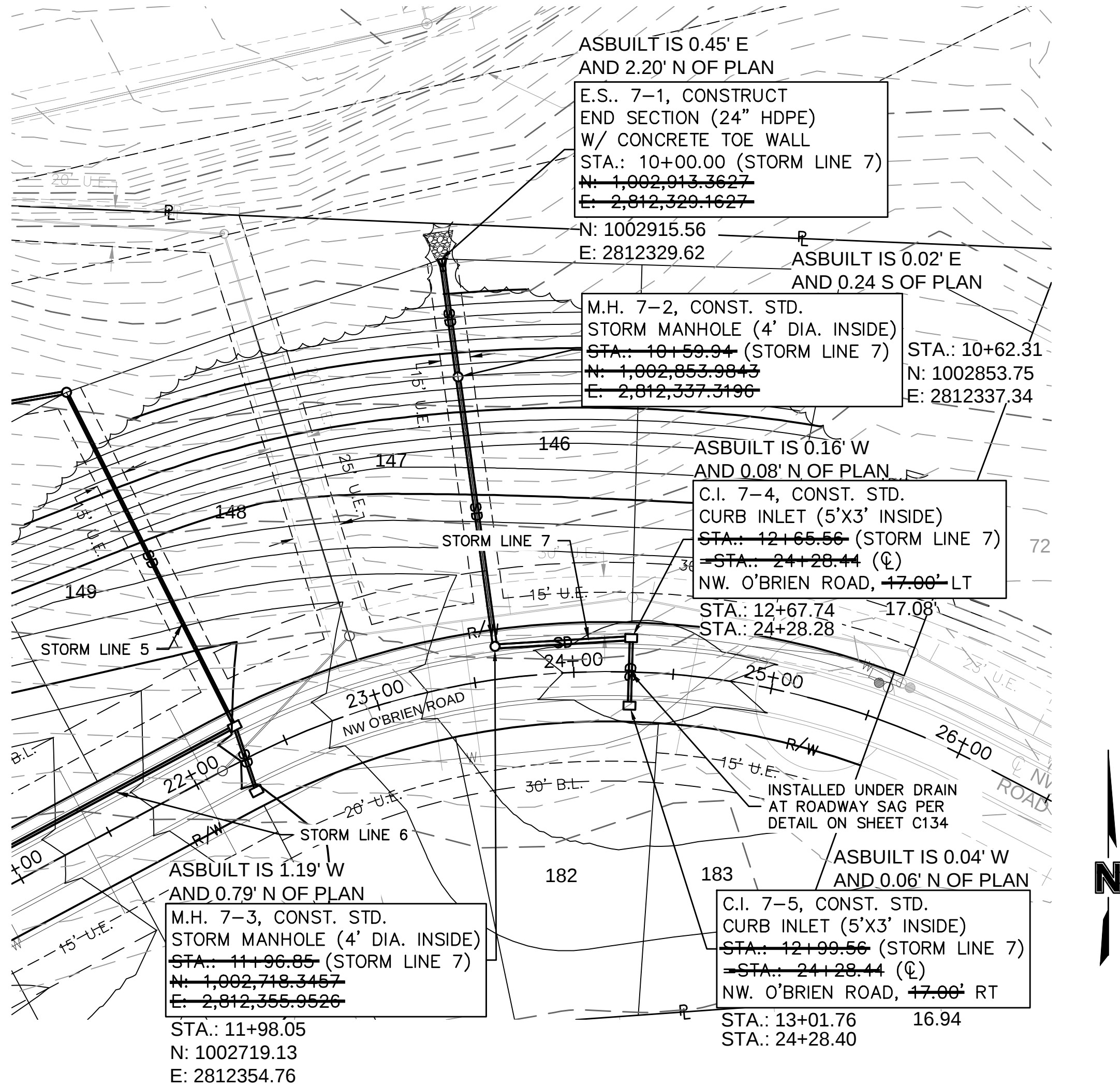




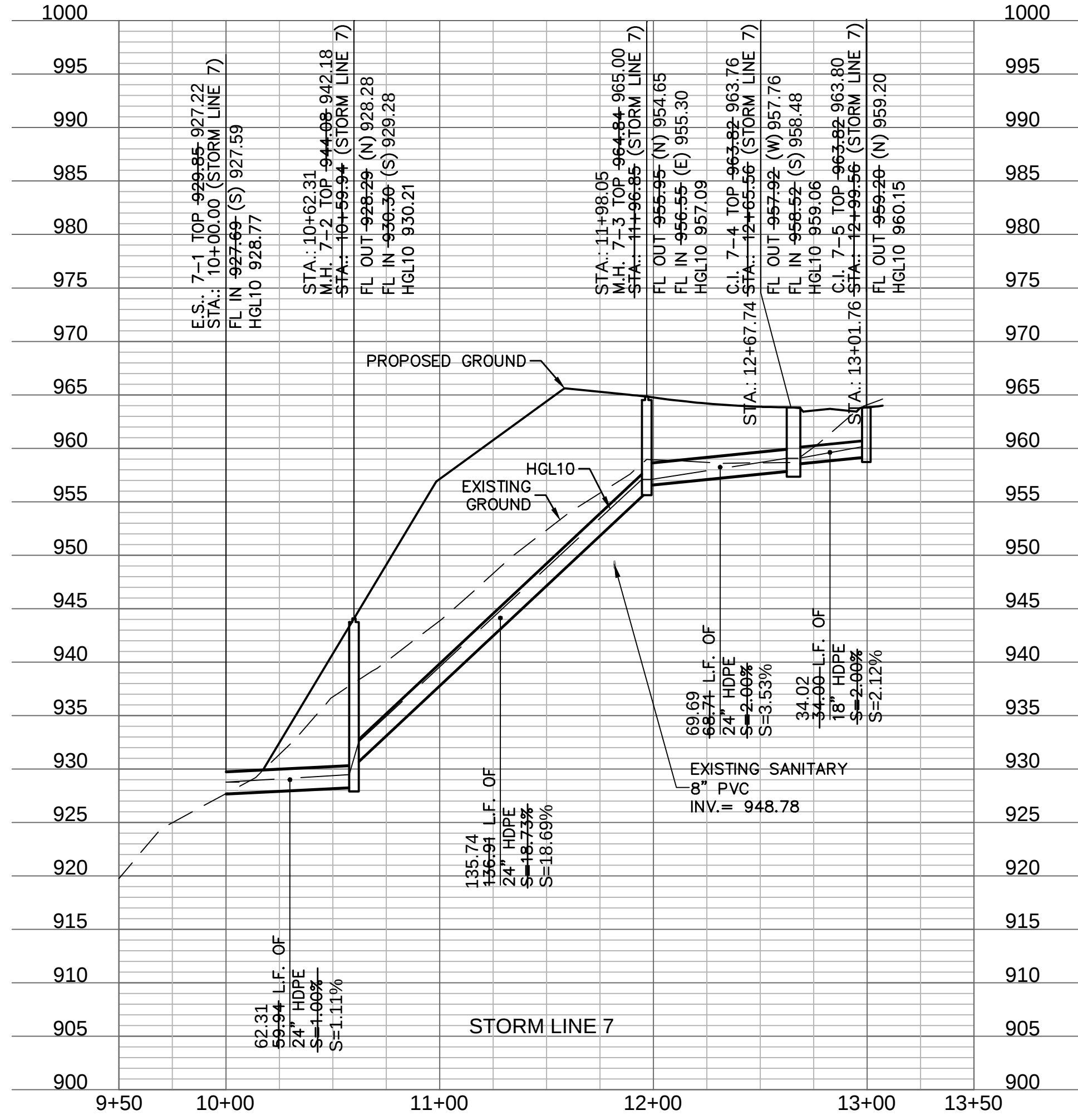
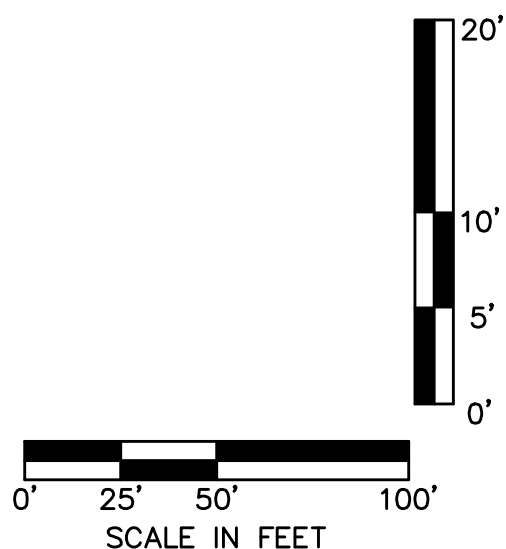
Riprap Calculations						
End Section	Q ₁₀₀ (cfs)	Pipe Diameter (ft)	Class*	D50* (in)	Apron Length (ft)	Apron Depth (ft)
E.S. 7-1	18.97	2	3	10	10	2.00
*Per Table 10.1 HEC 14-FHWA-Energy Dissipators Pg. 10-18						



12.40



ASBUILT
03-24-2022



STORM SEWER PLAN & PROFILE
STREET & STORM SEWER PLANS

WOODSIDE RIDGE
SECOND PLAT

LEE'S SUMMIT, MO

drawn by: C.S.M.
checked by: S.M.S.
designed by: C.S.M.
QA/QC by: J.E.S.
project no.: C18-1140
date: 2020.07.10

SHEET
C120

NO. REV. DATE
2 3/16/2021 REVISED PER CONTRACTOR COMMENT

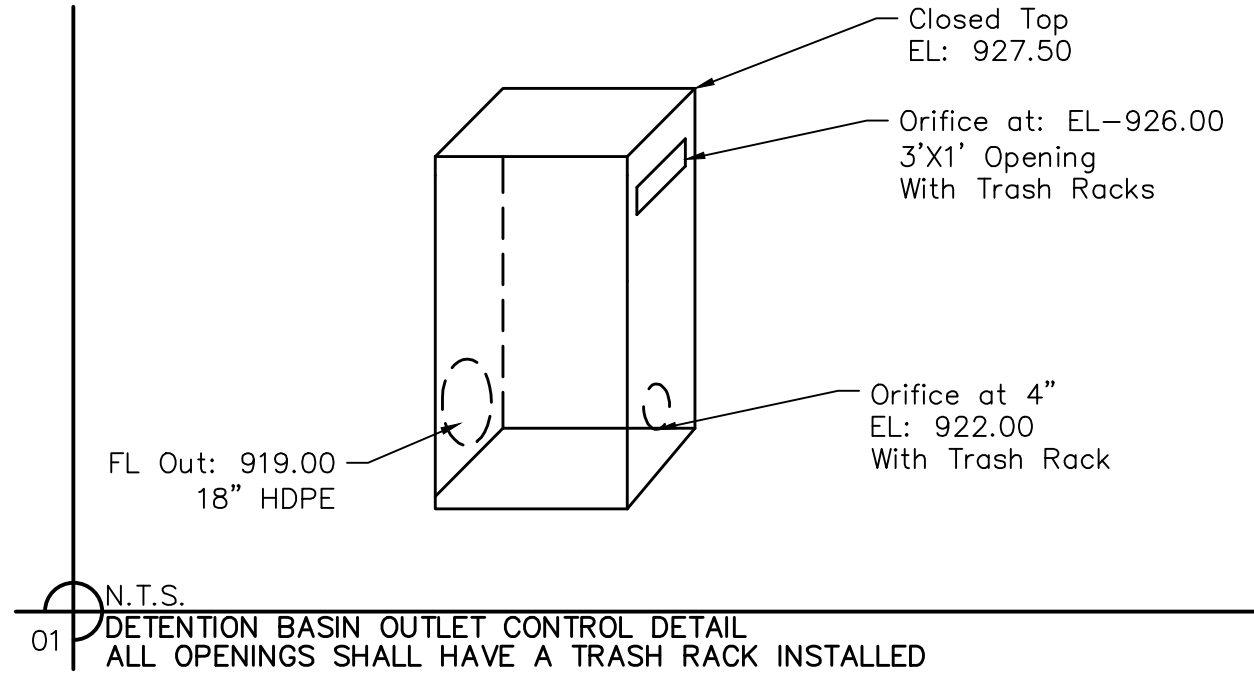
REVISIONS DESCRIPTION

BY

STATE OF MISSOURI
JULIE ELAINE
SELLERS
NUMBER
PE-2017000367
4/12/2023
PROFESSIONAL ENGINEER

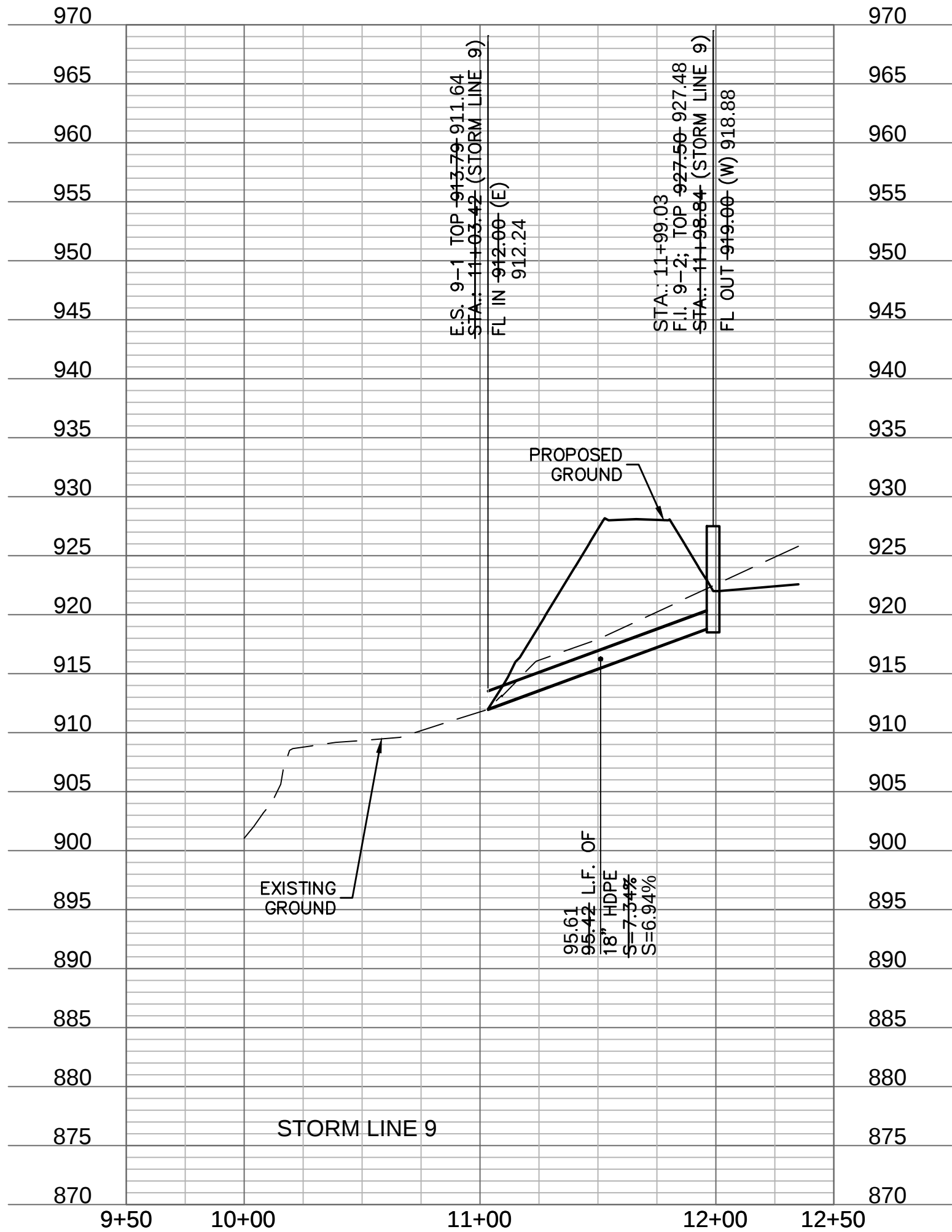
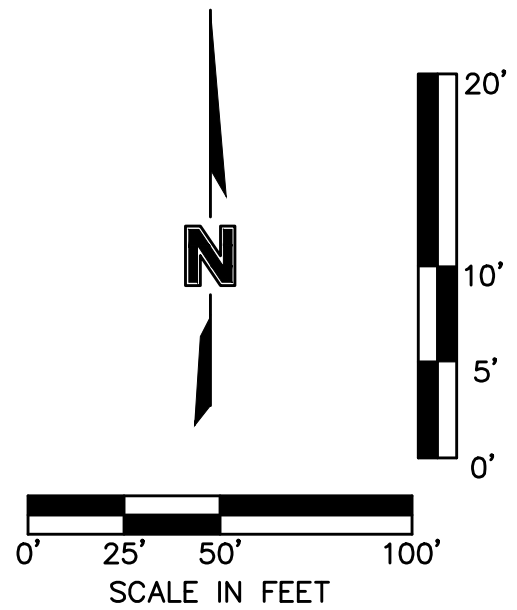
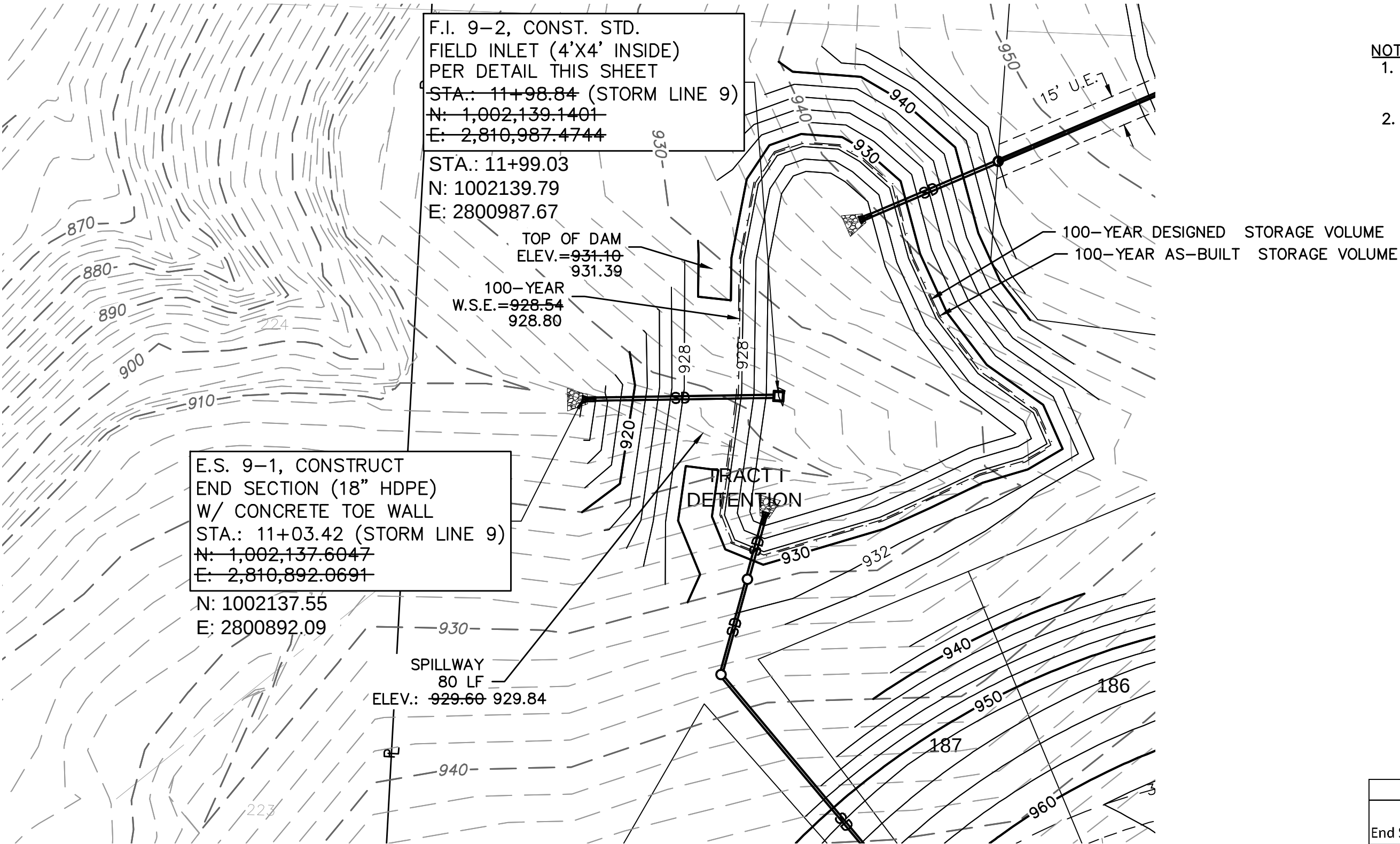
olsson

NO. 00000001 of Arkansas at 001892
300 E. MAIN STREET, SUITE 100
NORTH KANSAS CITY, MO 64116
TEL. 816.861.1177
WWW.OLSSON.COM

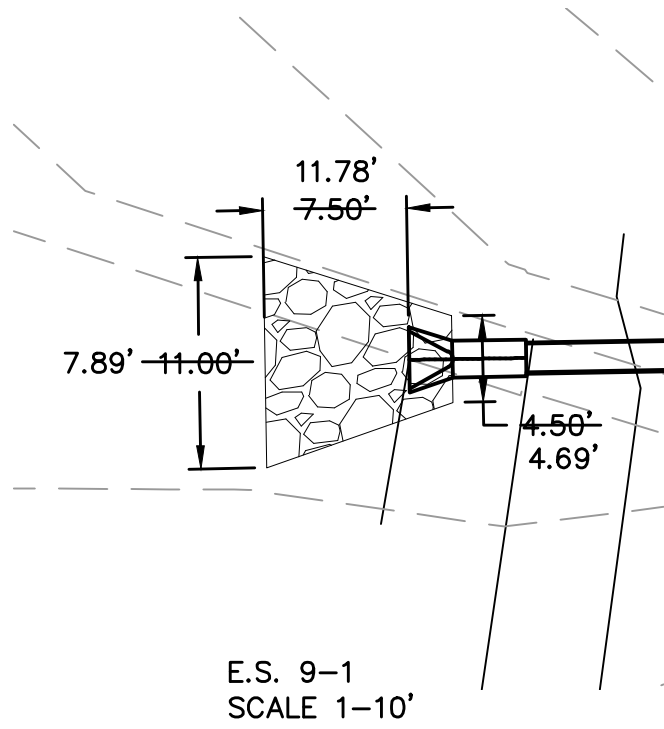


EARTHWORK QUANTITIES	
CUT (C.Y.)	FILL (C.Y.)
6,485	2,184

10yr. W.S.E.	100yr. W.S.E.
926.73	928.54



- NOTES:
1. CONTRACTOR SHALL MAINTAIN DRAINAGE DURING CONSTRUCTION AND IS RESPONSIBLE FOR ANY DEWATERING NECESSARY FOR CONSTRUCTION. DEWATERING SHALL BE SUBSIDIARY TO OTHER BID ITEMS.
 2. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS DETAILING THE STRUCTURE DIMENSIONS, INVERTS, AND STRUCTURAL REINFORCEMENT DETAILS ON THE PRINCIPAL SPILLWAY.



Riprap Calculations							
End Section	Q ₁₀₀ (cfs)	Pipe Diameter (ft)	Class*	D50* (in)	Apron Length (ft)	Apron Depth (ft)	Area (SY)
E.S. 9-1	23.91	1.5	3	10	7.5	2.00	27.4
*Per Table 10.1 HEC 14-FHWA-Energy Dissipators Pg. 10-18							23.88

ASBUILT
03-24-2022

NOTES: 1. CONTRACTOR SHALL MAINTAIN DRAINAGE DURING CONSTRUCTION AND IS RESPONSIBLE FOR ANY DEWATERING NECESSARY FOR CONSTRUCTION. DEWATERING SHALL BE SUBSIDIARY TO OTHER BID ITEMS. 2. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS DETAILING THE STRUCTURE DIMENSIONS, INVERTS, AND STRUCTURAL REINFORCEMENT DETAILS ON THE PRINCIPAL SPILLWAY.

STATE OF MISSOURI
JULIE ELAINE
SELLERS
NUMBER
PE-2017000367
4/12/2023
PROFESSIONAL ENGINEER

BY

REVISIONS DESCRIPTION

DATE

NO. REV.

DETENTION BASIN PLAN
STREET & STORM SEWER PLANS

WOODSIDE RIDGE
SECOND PLAT

LEE'S SUMMIT, MO

2020

drawn by: C.S.M.
checked by: S.M.S.
designed by: C.S.M.
QA/QC by: J.E.S.
project no.: C18-1140
date: 2020.07.10

SHEET
C121

NOTES: 1. CONTRACTOR SHALL MAINTAIN DRAINAGE DURING CONSTRUCTION AND IS RESPONSIBLE FOR ANY DEWATERING NECESSARY FOR CONSTRUCTION. DEWATERING SHALL BE SUBSIDIARY TO OTHER BID ITEMS. 2. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS DETAILING THE STRUCTURE DIMENSIONS, INVERTS, AND STRUCTURAL REINFORCEMENT DETAILS ON THE PRINCIPAL SPILLWAY.

STATE OF MISSOURI
JULIE ELAINE
SELLERS
NUMBER
PE-2017000367
4/12/2023
PROFESSIONAL ENGINEER

BY

REVISIONS DESCRIPTION

DATE

NO. REV.

DETENTION BASIN PLAN
STREET & STORM SEWER PLANS

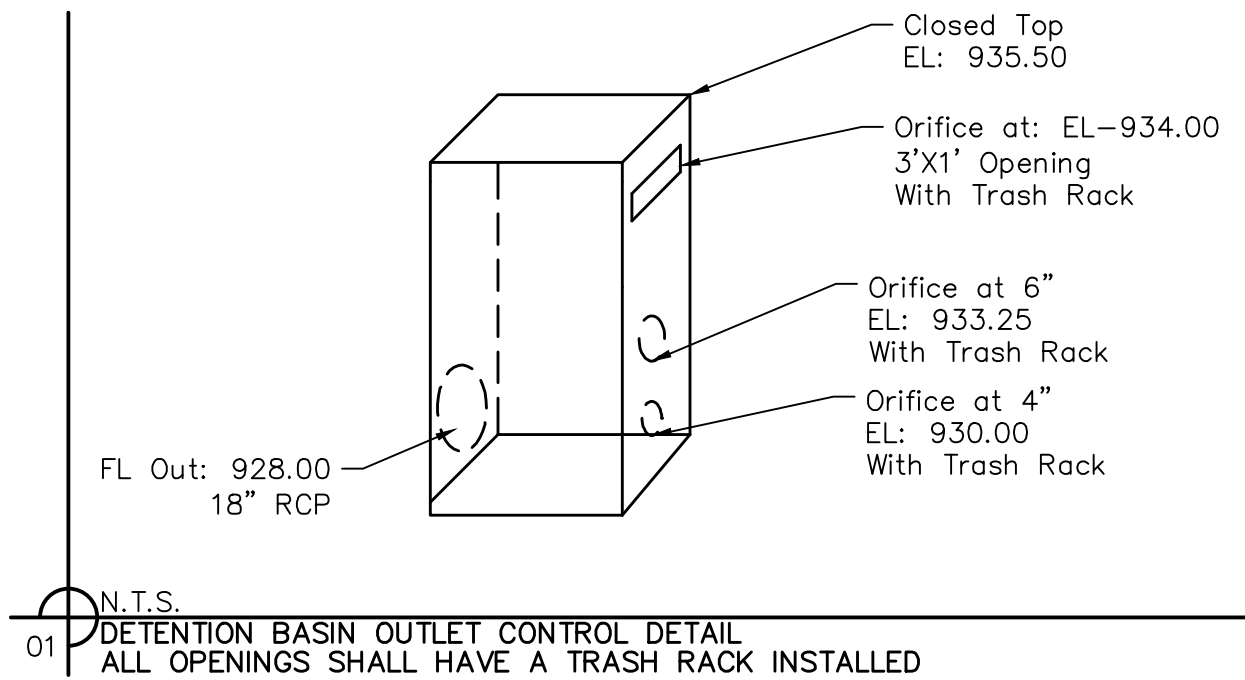
WOODSIDE RIDGE
SECOND PLAT

LEE'S SUMMIT, MO

2020

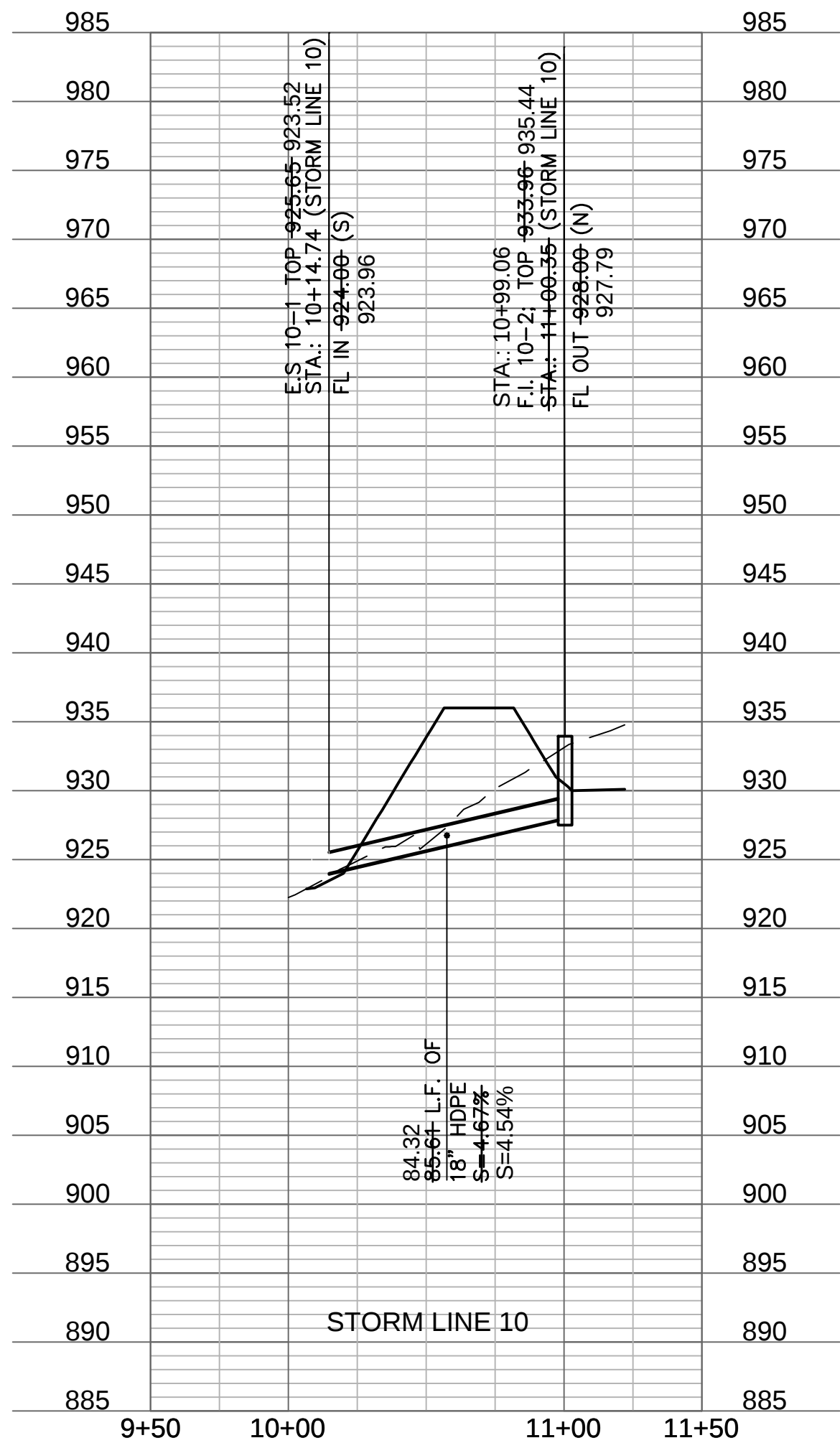
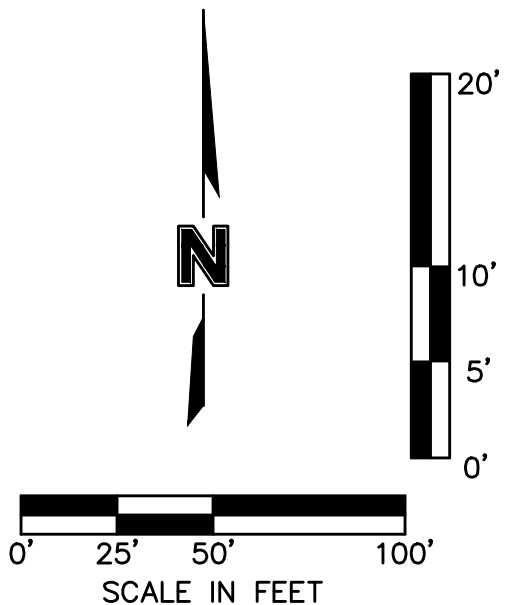
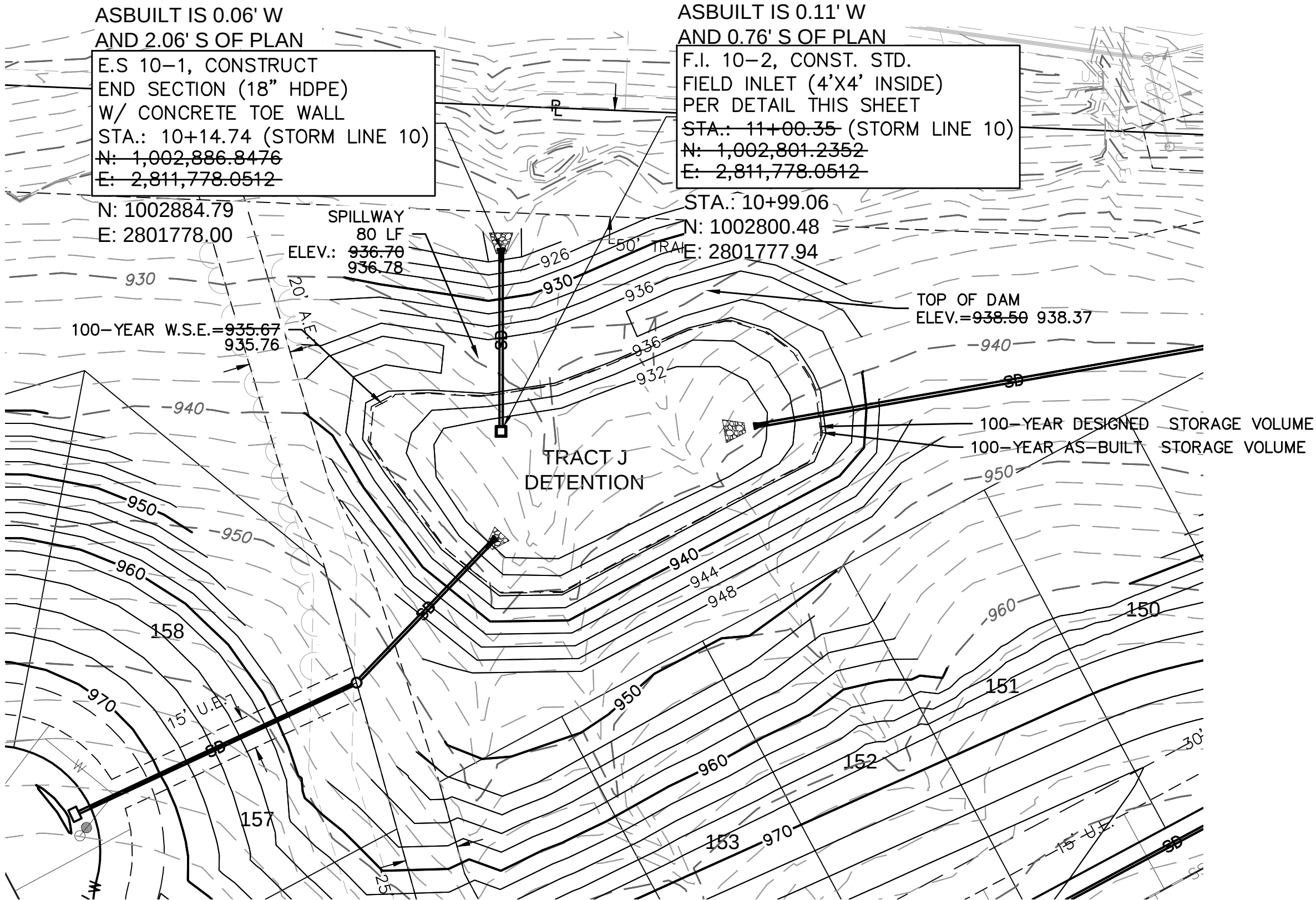
drawn by: C.S.M.
checked by: S.M.S.
designed by: C.S.M.
QA/QC by: J.E.S.
project no.: C18-1140
date: 2020.07.10

SHEET
C121

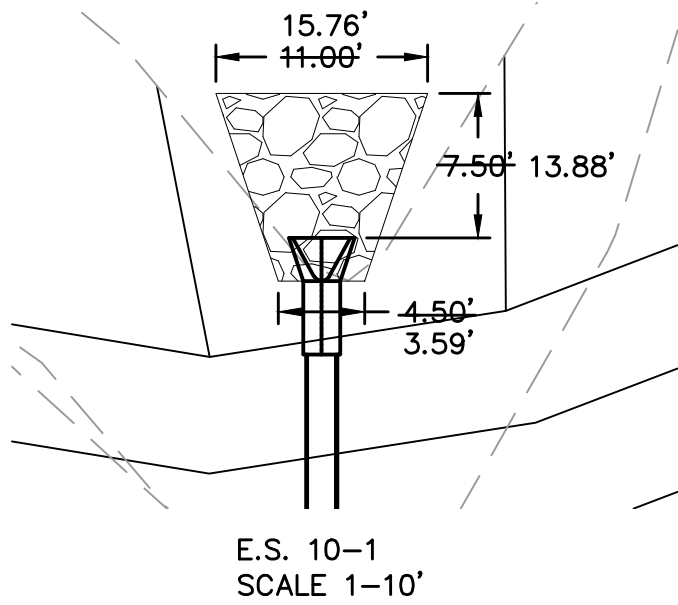


EARTHWORK QUANTITIES	
CUT (C.Y.)	FILL (C.Y.)
4,012	2,535

10yr. W.S.E.	100yr. W.S.E.
934.36	935.67



- NOTES:
1. CONTRACTOR SHALL MAINTAIN DRAINAGE DURING CONSTRUCTION AND IS RESPONSIBLE FOR ANY DEWATERING NECESSARY FOR CONSTRUCTION. DEWATERING SHALL BE SUBSIDIARY TO OTHER BID ITEMS.
 2. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS DETAILING THE STRUCTURE DIMENSIONS, INVERTS, AND STRUCTURAL REINFORCEMENT DETAILS ON THE PRINCIPAL SPILLWAY.



Riprap Calculations							
End Section	Q ₁₀₀ (cfs)	Pipe Diameter (ft)	Class*	D50* (in)	Apron Length (ft)	Apron Depth (ft)	Area (SY)
E.S. 10-1	18.41	1.5	3	10	7.5	2.00	27.4

*Per Table 10.1 HEC 14-FHWA Energy Dissipators Pg. 10-18

*Per Table 10.1 HEC 14-FHWA-Energy Dissipators Pg. 10-18

23.84

ASBUILT
03-24-2022

DETENTION BASIN PLAN
STREET & STORM SEWER PLANS

WOODSIDE RIDGE
SECOND PLAT

LEE'S SUMMIT, MO

2020

drawn by: _____ C.S.M.
checked by: _____ S.M.S.
designed by: _____ C.S.M.
QA/QC by: _____ J.E.S.
project no.: C18-1140
date: 2020.07.10

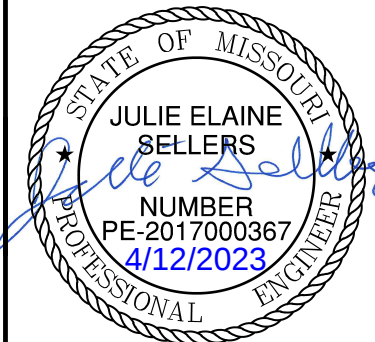
SHEET
C122

REVISIONS DESCRIPTION

BY

NO. REV. DATE

REVISIONS



olsson

NO. 00110101 of Authority # 001092
300 E. BIRCH STREET, SUITE 100
NORTH KANSAS CITY, MO 64116
TEL. 816.861.1177
WWW.OLSSON.COM

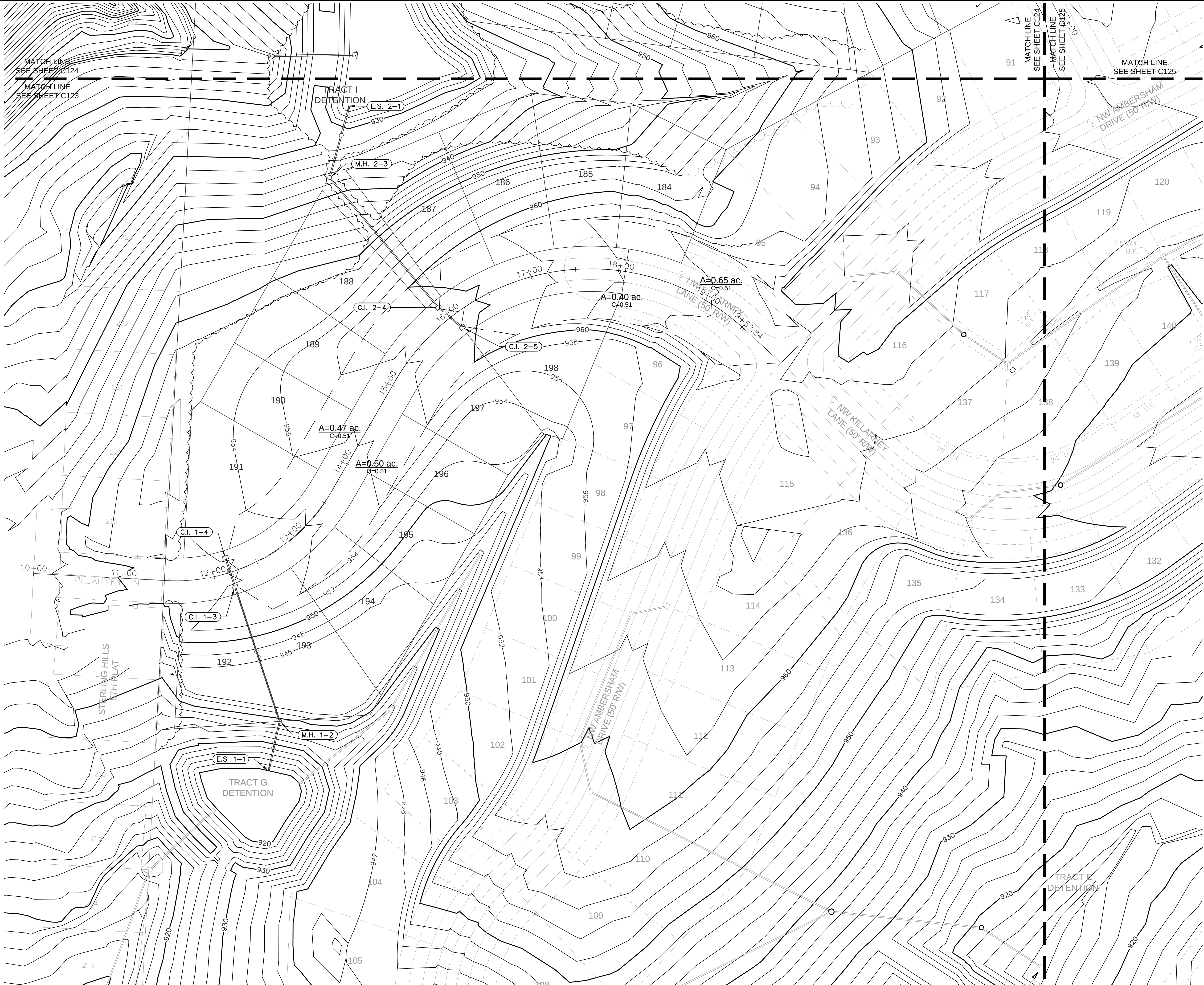
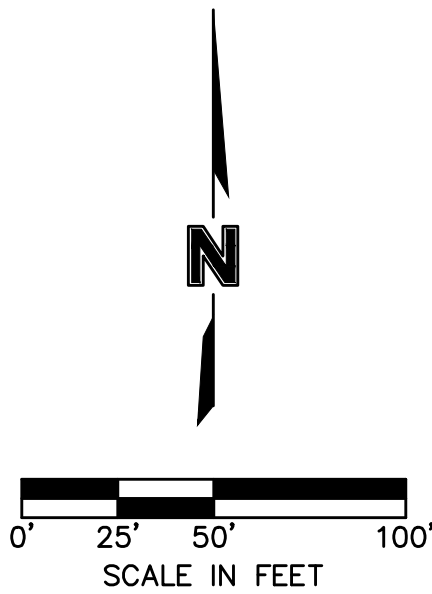


KEY MAP

LEGEND	
	FINISHED INDEX CONTOURS
	FINISHED INTERMEDIATE CONTOURS
	RIDGE LINE
	DRAINAGE AREA
	RUNOFF COEFFICIENT
	STORM STRUCTURE NUMBER

- NOTES:
1. INDIVIDUAL LOT OWNERS SHALL NOT CHANGE OR OBSTRUCT THE DRAINAGE FLOW LINES OR PATHS ON THE LOTS, AS SHOWN ON THE MASTER DRAINAGE PLAN, UNLESS SPECIFIC APPLICATION IS MADE AND APPROVED BY THE CITY ENGINEER.
 2. PLAT IS LOCATED IN ZONE X, "AREAS OUTSIDE THE 1-PERCENT ANNUAL CHANCE FLOODPLAINS, AREAS OF 1-PERCENT ANNUAL CHANCE SHEET FLOW FLOODING WHERE THE AVERAGE DEPTHS ARE LESS THAN 1 FOOT, AREAS OF 1-PERCENT ANNUAL CHANCE STREAM FLOODING WHERE THE CONTRIBUTING DRAINAGE AREA IS LESS THAN 1 SQUARE MILE, OR AREAS PROTECTED FROM THE 1-PERCENT ANNUAL CHANCE FLOOD BY LEVEES. NO BASE FLOOD ELEVATIONS OR DEPTHS ARE SHOWN WITHIN THIS ZONE"
 3. BUFFER ZONE FOR NATURAL STREAMS IS LOCATED WITHIN PLAT.
 4. MLO ELEVATIONS HAVE BEEN PROVIDED AT EACH LOT CORNER. INTERPOLATION WILL BE ALLOWED BETWEEN CORNER MBOES SHOWN ON THE MASTER DRAINAGE PLAN, DEPENDING ON THE LOCATION OF THE LOWEST OPENING ON THE PROPOSED STRUCTURE.
 5. NO BUILDING PERMITS WILL BE ISSUED UNTIL AN AS-GRADED MASTER DRAINAGE PLAN HAS BEEN SUBMITTED TO THE CITY AND APPROVED BY THE CITY.

NOT ASBUILT



olsson

NO. 00000000 of Architects at 001892
300 E. BROADWAY SUITE 100
NORTH KANSAS CITY, MO 64116
TEL. 816.861.1177
www.olson.com

STATE OF MISSOURI
JULIE ELAINE
SELLERS
NUMBER
PE-2017000367
4/12/2023
PROFESSIONAL ENGINEER

BY
NO. REV.
DATE
REVISIONS DESCRIPTION

DRAINAGE PLAN
STREET & STORM SEWER PLANS
WOODSIDE RIDGE
SECOND PLAT
LEE'S SUMMIT, MO
2020

drawn by: C.S.M.
checked by: S.M.S.
designed by: C.S.M.
QA/QC by: J.E.S.
project no.: C18-1140
date: 2020.07.10

SHEET
C123

USER: ssaylor

DWG: F:\2018\1001-1500\018-1140-C\40-Design\AutoCAD\Final Plans - Asbuilts\Sheets\GNCV\Street & Storm\C.DRN02_C181140.dwg
DATE: Oct 17, 2022 12:44pm

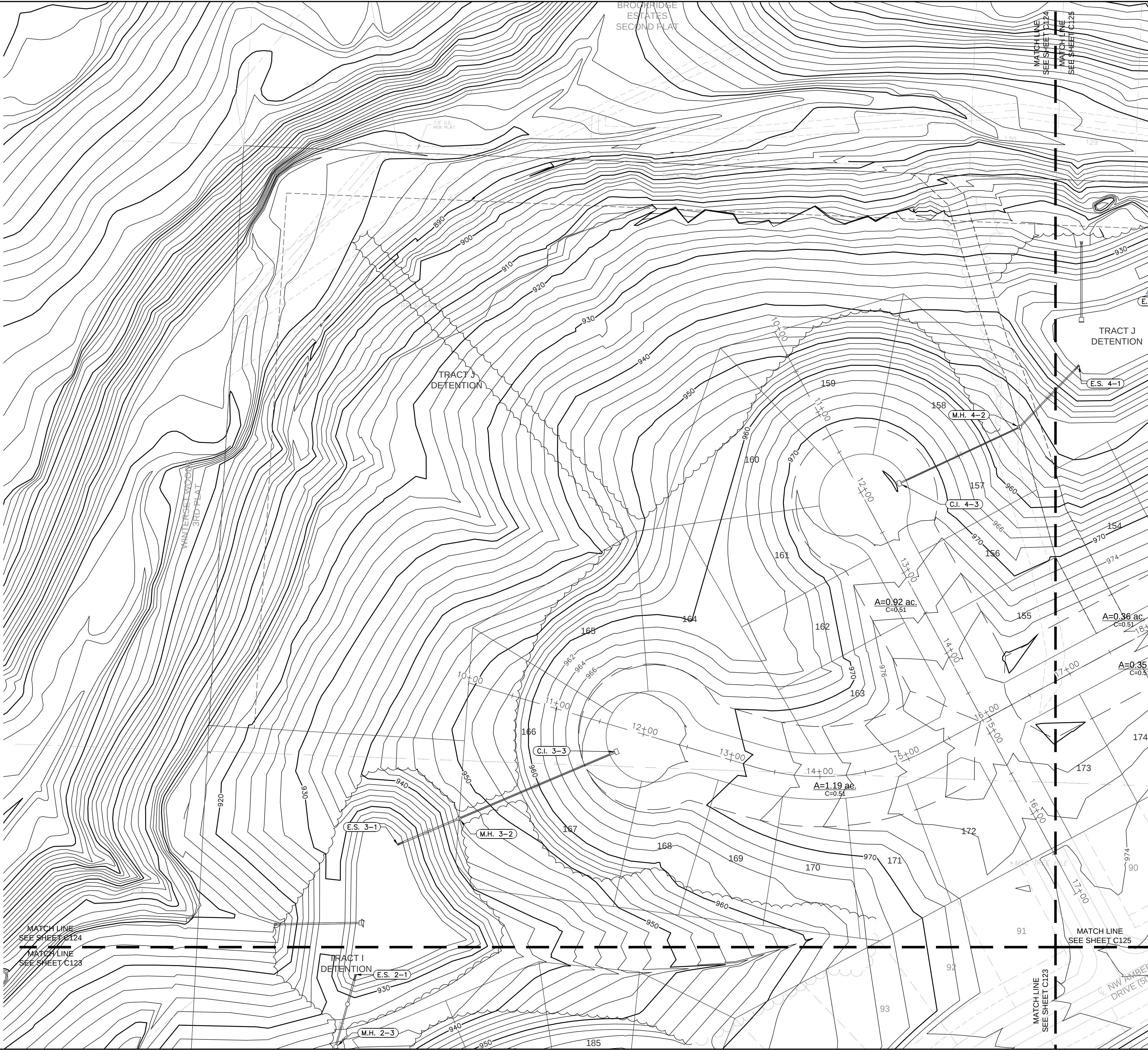
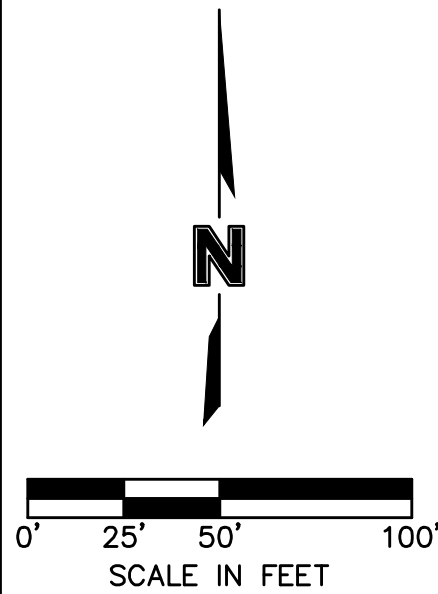


KEY MAP

LEGEND	
	FINISHED INDEX CONTOURS
	FINISHED INTERMEDIATE CONTOURS
	RIDGE LINE
	DRAINAGE AREA
	RUNOFF COEFFICIENT
	STORM STRUCTURE NUMBER

- NOTES:
1. INDIVIDUAL LOT OWNERS SHALL NOT CHANGE OR OBSTRUCT THE DRAINAGE FLOW LINES OR PATHS ON THE LOTS, AS SHOWN ON THE MASTER DRAINAGE PLAN, UNLESS SPECIFIC APPLICATION IS MADE AND APPROVED BY THE CITY ENGINEER.
 2. PLAT IS LOCATED IN ZONE X, "AREAS OUTSIDE THE 1-PERCENT ANNUAL CHANCE FLOODPLAINS, AREAS OF 1-PERCENT ANNUAL CHANCE SHEET FLOW FLOODING WHERE THE AVERAGE DEPTHS ARE LESS THAN 1 FOOT, AREAS OF 1-PERCENT ANNUAL CHANCE STREAM FLOODING WHERE THE CONTRIBUTING DRAINAGE AREA IS LESS THAN 1 SQUARE MILE, OR AREAS PROTECTED FROM THE 1-PERCENT ANNUAL CHANCE FLOOD BY LEVEES." NO BASE FLOOD ELEVATIONS OR DEPTHS ARE SHOWN WITHIN THIS ZONE"
 3. BUFFER ZONE FOR NATURAL STREAMS IS LOCATED WITHIN PLAT.
 4. MLO ELEVATIONS HAVE BEEN PROVIDED AT EACH LOT CORNER. INTERPOLATION WILL BE ALLOWED BETWEEN CORNER MBOES SHOWN ON THE MASTER DRAINAGE PLAN, DEPENDING ON THE LOCATION OF THE LOWEST OPENING ON THE PROPOSED STRUCTURE.
 5. NO BUILDING PERMITS WILL BE ISSUED UNTIL AN AS-GRADED MASTER DRAINAGE PLAN HAS BEEN SUBMITTED TO THE CITY AND APPROVED BY THE CITY.

NOT ASBUILT



BY

NO. REV.

DATE

REVISIONS DESCRIPTION

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STATE OF MISSOURI

JULIE ELAINE SELLERS

NUMBER PE-2017000367

4/12/2023

PROFESSIONAL ENGINEER

DRAINAGE PLAN

STREET & STORM SEWER PLANS

WOODSIDE RIDGE

SECOND PLAT

LEE'S SUMMIT, MO

2020

drawn by: _____ C.S.M.

checked by: _____ S.M.S.

designed by: _____ C.S.M.

QA/QC by: _____ J.E.S.

project no.: C18-1140

date: 2020.07.10

SHEET

C124

olsson

NO Conflicts of Interest at 081892
303 E. BURLINGAME ST. SUITE 100
NORTH KANSAS CITY, MO 64116
TEL. 816.861.1177
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USER: ssaylor

DWG: F:\2018\1001-1500\018-1140-C\40-Design\AutoCAD\Final Plans - Asbuilts\Sheets\GNCV\Street & Storm\C.DRN02-C181140.dwg
DATE: Oct 17, 2022 12:44pm

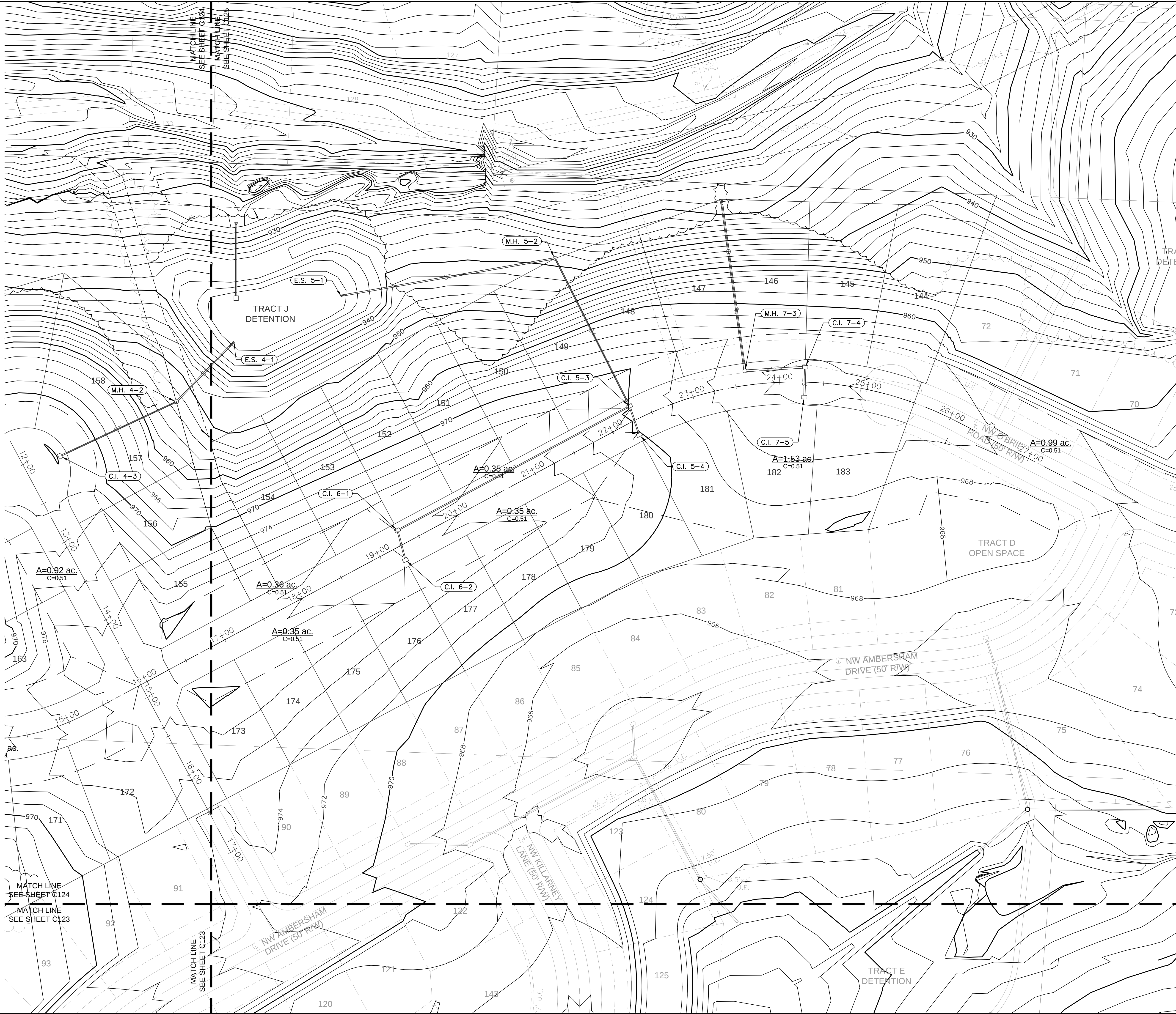
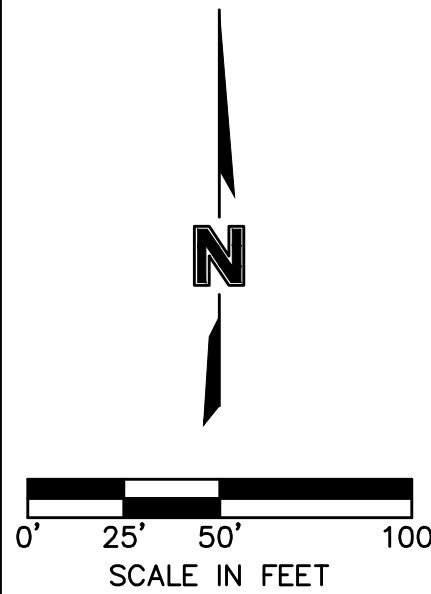


KEY MAP

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NOT ASBUILT



BY

DATE

NO. REV.

REVISIONS DESCRIPTION

2020

DRAINAGE PLAN
STREET & STORM SEWER PLANS

WOODSIDE RIDGE
SECOND PLAT

LEE'S SUMMIT, MO

drawn by: C.S.M.
checked by: S.M.S.
designed by: C.S.M.
QA/QC by: J.E.S.
project no.: C18-1140
date: 2020.07.10

SHEET
C125

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NO. 00000000 of Architects at 001892
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TEL. 816.861.1177
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Storm Sewer Design Calculation Table												
10 Year Return Frequency												
Upstream Structure	Downstream Structure	Length (ft)	Upstream Invert (ft)	Downstream Invert (ft)	Slope (%)	Diameter (in)	Manning's n	Total Flow (cfs)	Velocity (ft/s)	Capacity (cfs)	Flow Depth (ft)	Upstream Struct. HGL (ft)
M.H. 5-2	Outfall	253.96	933.89	930.00	1.53	18	0.012	5.48	3.60	14.08	1.50	934.95
C.I. 5-3	M.H. 5-2	188.19	964.02	934.29	15.80	15	0.012	5.48	6.22	27.80	0.77	964.97
C.I. 6-1	C.I. 5-3	299.05	971.17	964.62	2.19	15	0.012	2.66	5.58	10.35	0.43	971.82
C.I. 6-2	C.I. 6-1	34.93	972.17	971.37	2.29	15	0.012	1.31	3.27	10.59	0.45	972.62j
C.I. 5-4	C.I. 5-3	34.40	965.30	964.62	1.98	15	0.012	1.41	4.20	9.84	0.35	965.77
M.H. 7-2	Outfall	42.64	925.43	925.00	1.01	24	0.012	10.22	6.48	24.61	0.90	926.57
M.H. 7-3	M.H. 7-2	178.96	955.95	925.75	16.88	24	0.012	10.22	6.94	100.66	0.82	957.09
C.I. 7-4	M.H. 7-3	68.71	957.92	956.55	1.99	24	0.012	10.22	7.54	34.60	0.75	959.06
C.I. 7-5	C.I. 7-4	34.00	959.20	958.52	2.00	18	0.012	6.12	6.82	16.09	0.64	960.15
M.H. 2-2	Outfall	33.74	922.67	922.00	1.99	18	0.012	3.94	2.23	16.03	1.50	926.77
M.H. 2-3	M.H. 2-2	48.32	931.95	925.78	12.77	15	0.012	3.94	4.20	25.00	1.02	932.75j
C.I. 2-4	M.H. 2-3	187.22	952.46	932.55	10.63	15	0.012	3.94	9.33	22.81	0.35	953.26
C.I. 2-5	C.I. 2-4	34.74	954.94	953.96	2.82	15	0.012	1.50	4.99	11.75	0.30	955.42
M.H. 4-2	Outfall	91.51	939.15	930.00	10.00	15	0.012	3.45	3.65	22.12	1.25	939.90j
C.I. 4-3	M.H. 4-2	145.82	964.74	948.91	10.86	15	0.012	3.45	8.99	23.05	0.33	965.49
M.H. 1-2	Outfall	55.95	921.68	920.00	3.00	15	0.012	4.34	3.54	12.12	1.25	924.90
C.I. 1-3	M.H. 1-2	156.54	946.25	935.08	7.14	15	0.012	4.34	8.66	18.69	0.41	947.09
C.I. 1-4	C.I. 1-3	34.01	947.53	946.85	2.00	15	0.012	2.27	5.21	9.89	0.41	948.13
M.H. 3-2	Outfall	73.02	923.46	922.00	2.00	18	0.012	4.46	2.52	16.09	1.50	926.84
C.I. 3-3	M.H. 3-2	188.00	960.16	942.02	9.65	18	0.012	4.46	9.13	35.34	0.36	960.97

Inlet Design Table													
10 Year Return Frequency													
Inlet ID	Inlet Location	Peak Flow	Upstream Bypass	Total Flow	Clogging Factor	Inlet Capacity	Sag Inlet Capacity (Note 1)	Captured Flow	Bypass Flow	Inlet Efficiency (Note 2)	Gutter Depth	Gutter Spread	Ponding Depth
		(cfs)	(cfs)	(cfs)		(cfs)	(cfs)	(cfs)	(cfs)	(%)	(ft)	(ft)	(ft)
C.I. 5-3	GRADE	1.31	0.10	1.41	1.00	1.12	1.12	1.12	0.29	79.64%	0.12	5.85	...
C.I. 5-4	GRADE	1.31	0.09	1.41	1.00	1.12	1.12	1.12	0.29	79.72%	0.12	5.85	...
C.I. 6-1	GRADE	1.35	0.00	1.35	1.00	1.25	1.25	1.25	0.10	92.60%	0.15	7.46	...
C.I. 6-2	GRADE	1.31	0.00	1.31	1.00	1.22	1.22	1.22	0.09	92.83%	0.15	7.38	...
C.I. 7-4(L)	SAG	0.75	0.39	1.14	0.80	19.40	15.52	1.14	0.00	100.00%	0.14	6.76	...
C.I. 7-4(R)	SAG	2.25	0.00	2.25	0.80	19.40	15.52	2.25	0.00	100.00%	0.14	6.97	...
C.I. 7-4(B)	SAG	0.71	0.00	0.71	0.80	19.40	15.52	0.71	0.00	100.00%	...	...	...
C.I. 7-4	SAG	3.71	0.39	4.10	0.80	19.40	15.52	4.10	0.00	100.00%	...	...	...
C.I. 7-5(L)	SAG	2.25	0.38	2.63	0.80	19.40	15.52	2.63	0.00	100.00%	0.15	7.39	...
C.I. 7-5(R)	SAG	1.61	0.00	1.61	0.80	19.40	15.52	1.61	0.00	100.00%	0.15	7.71	...
C.I. 7-5(B)	SAG	1.88	0.00	1.88	0.80	19.40	15.52	1.88	0.00	100.00%	...	...	...
C.I. 7-5	SAG	5.74	0.38	6.12	0.80	19.40	15.52	6.12	0.00	100.00%	...	...	...
C.I. 4-3(L)	SAG	2.29	0.00	2.29	0.80	19.40	15.52	2.29	0.00	100.00%	0.14	7.13	...
C.I. 4-3(R)	SAG	0.53	0.00	0.53	0.80	19.40	15.52	0.53	0.00	100.00%	0.10	5.03	...
C.I. 4-3(B)	SAG	0.64	0.00	0.64	0.80	19.40	15.52	0.64	0.00	100.00%	...	...	...
C.I. 4-3	SAG	3.45	0.00	3.45	0.80	19.40	15.52	3.45	0.00	100.00%	...	...	...
C.I. 3-3(L)	SAG	1.99	0.00	1.99	0.80	19.40	15.52	1.99	0.00	100.00%	0.17	8.59	...
C.I. 3-3(R)	SAG	1.80	0.00	1.80	0.80	19.40	15.52	1.80	0.00	100.00%	0.16	7.77	...
C.I. 3-3(B)	SAG	0.68	0.00	0.68	0.80	19.40	15.52	0.68	0.00	100.00%	...	...	...
C.I. 3-3	SAG	4.46	0.00	4.46	0.80	19.40	15.52	4.46	0.00	100.00%	...	...	...
C.I. 2-4	GRADE	2.44	0.00	2.44	1.00	1.93	1.93	1.93	0.51	79.16%	0.17	8.26	...
C.I. 2-5	GRADE	1.50	0.00	1.50	1.00	1.30	1.30	1.30	0.20	86.81%	0.14	6.88	...
C.I. 1-3	GRADE	1.88	0.20	2.07	1.00	1.69	1.69	1.69	0.39	81.41%	0.15	7.69	...
C.I. 1-4	GRADE	1.76	0.51	2.27	1.00	1.81	1.81	1.81	0.46	79.80%	0.16	7.96	...
Notes:													
1. Inlet capacity at sag location has been reduced by a dogging factor of 0.80, reducing theoretical capacity to 80% capacity, as required per APWA Section 5600.													
Both theoretical capacity and reduced capacity are shown.													
2. Inlet efficiency shown in the tables is Captured Flow/Total Flow, denoting the actual percentage of flow captured after the capacity has been reduced to 80% of theoretical capacity.													

Drainage Area Design Table						
10 Year Return Frequency						
Inlet ID	Drainage Area	C	Tc	i	K	Peak Flow
	(ac)		(min)	(in/hr)		(cfs)
C.I. 5-3	0.35	0.51	5.00	7.35	1.00	1.31
C.I. 5-4	0.35	0.51	5.00	7.35	1.00	1.31
C.I. 6-1	0.36	0.51	5.00	7.35	1.00	1.35
C.I. 6-2	0.35	0.51	5.00	7.35	1.00	1.31
C.I. 7-4(L)	0.20	0.51	5.00	7.35	1.00	0.75
C.I. 7-4(R)	0.60	0.51	5.00	7.35	1.00	2.25
C.I. 7-4(B)	0.19	0.51	5.00	7.35	1.00	0.71
C.I. 7-4	0.99	0.51	5.00	7.35	1.00	3.71
C.I. 7-5(L)	0.60	0.51	5.00	7.35	1.00	2.25
C.I. 7-5(R)	0.43	0.51	5.00	7.35	1.00	1.61
C.I. 7-5(B)	0.50	0.51	5.00	7.35	1.00	1.88
C.I. 7-5	1.53	0.51	5.00	7.35	1.00	5.74
C.I. 4-3(L)	0.61	0.51	5.00	7.35	1.00	2.29
C.I. 4-3(R)	0.14	0.51	5.00	7.35	1.00	0.53
C.I. 4-3(B)	0.17	0.51	5.00	7.35	1.00	0.64
C.I. 4-3	0.92	0.51	5.00	7.35	1.00	3.45
C.I. 3-3(L)	0.53	0.51	5.00	7.35	1.00	1.99
C.I. 3-3(R)	0.48	0.51	5.00	7.35	1.00	1.80
C.I. 3-3(B)	0.18	0.51	5.00	7.35	1.00	0.68
C.I. 3-3	1.19	0.51	5.00	7.35	1.00	4.46
C.I. 2-4	0.65	0.51	5.00	7.35	1.00	2.44
C.I. 2-5	0.40	0.51	5.00	7.35	1.00	1.50
C.I. 1-3	0.50	0.51	5.00	7.35	1.00	1.88
C.I. 1-4	0.47	0.51	5.00	7.35	1.00	1.76

10 YEAR DRAINAGE TABLES
STREET & STORM SEWER PLANS

WOODSIDE RIDGE
SECOND PLAT

LEE'S SUMMIT, MO

2020

BY

NO. REV. 2

DATE 3/16/2021

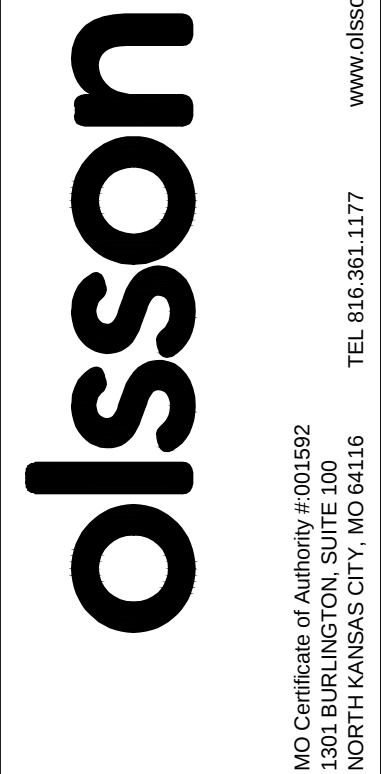
REVISIONS DESCRIPTION

REVISED PER CONTRACTOR COMMENT

REVISIONS

drawn by: C.S.M
checked by: S.M.S
designed by: C.S.M
QA/QC by: J.E.S
project no.: C18-1140
date: 2020.07.10

SHEET C126



NOT ASBUILT

Storm Sewer Design Calculation Table												
100 Year Return Frequency												
Upstream Structure	Downstream Structure	Length (ft)	Upstream Invert (ft)	Downstream Invert (ft)	Slope (%)	Diameter (in)	Manning's n	Total Flow (cfs)	Velocity (ft/s)	Capacity (cfs)	Flow Depth (ft)	Upstream Struct. HGL (ft)
M.H. 5-2	Outfall	253.96	933.89	930.00	1.53	18	0.012	9.89	5.60	14.08	1.50	937.59
C.I. 5-3	M.H. 5-2	188.19	964.02	934.29	15.80	15	0.012	9.89	8.15	27.80	1.25	965.20 j
C.I. 6-1	C.I. 5-3	299.05	971.17	964.62	2.19	15	0.012	4.67	6.65	10.35	0.59	972.05
C.I. 6-2	C.I. 6-1	34.93	972.17	971.37	2.29	15	0.012	2.30	3.65	10.59	0.68	972.78 j
C.I. 5-4	C.I. 5-3	34.40	965.30	964.62	1.98	15	0.012	2.60	4.36	9.84	0.58	965.95
M.H. 7-2	Outfall	42.64	925.43	925.00	1.01	24	0.012	18.97	7.91	24.61	1.32	927.00
M.H. 7-3	M.H. 7-2	178.96	955.95	925.75	16.88	24	0.012	18.97	8.21	100.66	1.25	957.52
C.I. 7-4	M.H. 7-3	68.71	957.92	956.55	1.99	24	0.012	18.97	9.23	34.60	1.06	959.49
C.I. 7-5	C.I. 7-4	34.00	959.20	958.52	2.00	18	0.012	11.25	8.18	16.09	0.97	960.48
M.H. 2-2	Outfall	33.74	922.67	922.00	1.99	18	0.012	6.91	3.91	16.03	1.50	928.66
M.H. 2-3	M.H. 2-2	48.32	931.95	925.78	12.77	15	0.012	6.91	5.95	25.00	1.25	933.00 j
C.I. 2-4	M.H. 2-3	187.22	952.46	932.55	10.63	15	0.012	6.91	11.27	22.81	0.47	953.51
C.I. 2-5	C.I. 2-4	34.74	954.94	953.96	2.82	15	0.012	2.63	5.90	11.75	0.40	955.59
M.H. 4-2	Outfall	91.51	939.15	930.00	10.00	15	0.012	6.05	5.36	22.12	1.25	940.14 j
C.I. 4-3	M.H. 4-2	145.82	964.74	948.91	10.86	15	0.012	6.05	10.80	23.05	0.44	965.73
M.H. 1-2	Outfall	55.95	921.68	920.00	3.00	15	0.012	8.40	6.85	12.12	1.25	927.29
C.I. 1-3	M.H. 1-2	156.54	946.25	935.08	7.14	15	0.012	8.40	11.00	18.69	0.59	947.38
C.I. 1-4	C.I. 1-3	34.01	947.53	946.85	2.00	15	0.012	4.52	6.44	9.89	0.59	948.39
M.H. 3-2	Outfall	73.02	923.46	922.00	2.00	18	0.012	7.83	4.43	16.09	1.50	928.89
C.I. 3-3	M.H. 3-2	188.00	960.16	942.02	9.65	18	0.012	7.83	10.90	35.34	0.48	961.24

Inlet Design Table													
100 Year Return Frequency													
Inlet ID	Inlet Location	Peak Flow	Upstream Bypass	Total Flow	Clogging Factor	Inlet Capacity	Sag Inlet Capacity (Note 1)	Captured Flow	Bypass Flow	Inlet Efficiency (Note 2)	Gutter Depth	Gutter Spread	Ponding Depth
		(cfs)	(cfs)	(cfs)		(cfs)	(cfs)	(cfs)	(cfs)	(%)	(ft)	(ft)	(ft)
C.I. 5-3	GRADE	2.30	0.31	2.62	1.00	1.73	1.73	1.73	0.89	65.92%	0.15	7.38	...
C.I. 5-4	GRADE	2.30	0.30	2.60	1.00	1.72	1.72	1.72	0.88	66.09%	0.15	7.36	...
C.I. 6-1	GRADE	2.37	0.00	2.37	1.00	2.05	2.05	2.05	0.31	86.71%	0.18	9.21	...
C.I. 6-2	GRADE	2.30	0.00	2.30	1.00	2.01	2.01	2.01	0.30	87.07%	0.18	9.12	...
C.I. 7-4(L)	SAG	1.32	1.21	2.52	0.80	19.40	15.52	2.52	0.00	100.00%	0.18	9.12	...
C.I. 7-4(R)	SAG	3.95	0.00	3.95	0.80	19.40	15.52	3.95	0.00	100.00%	0.17	8.61	...
C.I. 7-4(B)	SAG	1.25	0.00	1.25	0.80	19.40	15.52	1.25	0.00	100.00%	...	...	...
C.I. 7-4	SAG	6.51	1.21	7.72	0.80	19.40	15.52	7.72	0.00	100.00%	...	...	...
C.I. 7-5(L)	SAG	3.95	1.18	5.13	0.80	19.40	15.52	5.13	0.00	100.00%	0.19	9.49	...
C.I. 7-5(R)	SAG	2.83	0.00	2.83	0.80	19.40	15.52	2.83	0.00	100.00%	0.19	9.52	...
C.I. 7-5(B)	SAG	3.29	0.00	3.29	0.80	19.40	15.52	3.29	0.00	100.00%	...	...	...
C.I. 7-5	SAG	10.07	1.18	11.25	0.80	19.40	15.52	11.25	0.00	100.00%	...	...	...
C.I. 4-3(L)	SAG	4.01	0.00	4.01	0.80	19.40	15.52	4.01	0.00	100.00%	0.18	8.80	...
C.I. 4-3(R)	SAG	0.92	0.00	0.92	0.80	19.40	15.52	0.92	0.00	100.00%	0.12	6.21	...
C.I. 4-3(B)	SAG	1.12	0.00	1.12	0.80	19.40	15.52	1.12	0.00	100.00%	...	...	...
C.I. 4-3	SAG	6.05	0.00	6.05	0.80	19.40	15.52	6.05	0.00	100.00%	...	...	...
C.I. 3-3(L)	SAG	3.49	0.00	3.49	0.80	19.40	15.52	3.49	0.00	100.00%	0.21	10.61	...
C.I. 3-3(R)	SAG	3.16	0.00	3.16	0.80	19.40	15.52	3.16	0.00	100.00%	0.19	9.60	...
C.I. 3-3(B)	SAG	1.18	0.00	1.18	0.80	19.40	15.52	1.18	0.00	100.00%	...	...	...
C.I. 3-3	SAG	7.83	0.00	7.83	0.80	19.40	15.52	7.83	0.00	100.00%	...	...	...
C.I. 2-4	GRADE	4.28	0.00	4.28	1.00	2.85	2.85	2.85	1.43	66.66%	0.20	10.19	...
C.I. 2-5	GRADE	2.63	0.00	2.63	1.00	2.04	2.04	2.04	0.59	77.68%	0.17	8.50	...
C.I. 1-3	GRADE	3.29	0.59	3.88	1.00	2.65	2.65	2.65	1.23	68.23%	0.19	9.73	...
C.I. 1-4	GRADE	3.09	1.43	4.52	1.00	2.90	2.90	2.90	1.61	64.28%	0.21	10.31	...

Notes:
1. Inlet capacity at sag location has been reduced by a clogging factor of 0.80, reducing theoretical capacity to 80% capacity, as required per APWA Section 5600. Both theoretical capacity and reduced capacity are shown.
2. Inlet efficiency shown in the tables is Captured Flow/Total Flow, denoting the actual percentage of flow captured after the capacity has been reduced to 80% of theoretical capacity.

Drainage Area Design Table						
100 Year Return Frequency						
Inlet ID	Drainage Area	C	Tc	i	K	Peak Flow
	(ac)		(min)	(in/hr)		(cfs)
C.I. 5-3	0.35	0.51	5.00	10.32	1.25	2.30
C.I. 5-4	0.35	0.51	5.00	10.32	1.25	2.30
C.I. 6-1	0.36	0.51	5.00	10.32	1.25	2.37
C.I. 6-2	0.35	0.51	5.00	10.32	1.25	2.30
C.I. 7-4(L)	0.20	0.51	5.00	10.32	1.25	1.32
C.I. 7-4(R)	0.60	0.51	5.00	10.32	1.25	3.95
C.I. 7-4(B)	0.19	0.51	5.00	10.32	1.25	1.25
C.I. 7-4	0.99	0.51	5.00	10.32	1.25	6.51
C.I. 7-5(L)	0.60	0.51	5.00	10.32	1.25	3.95
C.I. 7-5(R)	0.43	0.51	5.00	10.32	1.25	2.83
C.I. 7-5(B)	0.50	0.51	5.00	10.32	1.25	3.29
C.I. 7-5	1.53	0.51	5.00	10.32	1.25	10.07
C.I. 4-3(L)	0.61	0.51	5.00	10.32	1.25	4.01
C.I. 4-3(R)	0.14	0.51	5.00	10.32	1.25	0.92
C.I. 4-3(B)	0.17	0.51	5.00	10.32	1.25	1.12
C.I. 4-3	0.92	0.51	5.00	10.32	1.25	6.05
C.I. 3-3(L)	0.53	0.51	5.00	10.32	1.25	3.49
C.I. 3-3(R)	0.48	0.51	5.00	10.32	1.25	3.16
C.I. 3-3(B)	0.18	0.51	5.00	10.32	1.25	1.18
C.I. 3-3	1.19	0.51	5.00	10.32	1.25	7.83
C.I. 2-4	0.65	0.51	5.00	10.32	1.25	4.28
C.I. 2-5	0.40	0.51	5.00	10.32	1.25	2.63
C.I. 1-3	0.50	0.51	5.00	10.32	1.25	3.29
C.I. 1-4	0.47	0.51	5.00	10.32	1.25	3.09

100 YEAR DRAINAGE TABLES
STREET & STORM SEWER PLANS

WOODSIDE RIDGE
SECOND PLAT

LEE'S SUMMIT, MO

2020

BY

NO. REV. 2

DATE 3/16/2021

REVISIONS DESCRIPTION

REVISED PER CONTRACTOR COMMENT

REVISIONS

drawn by: _____ C.S.M
checked by: _____ S.M.S
designed by: _____ C.S.M
QA/QC by: _____ J.E.S
project no.: C18-1140
date: 2020.07.10

SHEET C127

olsson

Professional Engineer
JULIE ELAINE SELLERS
NUMBER PE-2017000367
4/12/2023

NO. Certificate of Authority # 001692
303 E. BURNING STAR BLVD. SUITE 100
NORTH KANSAS CITY, MO 64116
TEL. 816.881.1177
www.olsson.com

NOT ASBUILT

USER: ssaylor

DWG: F:\2018\1001-1500\018-1140-C\40-Design\AutoCAD\Final Plans - Asbuilt\Sheets\GNCV\Street & Storm\C-MDR02-C181140.dwg
DATE: Apr 12, 2023 8:43am



KEY MAP

NOTES:
1. INDIVIDUAL LOT OWNERS SHALL NOT CHANGE OR OBSTRUCT THE DRAINAGE FLOW LINES OR PATHS ON THE LOTS, AS SHOWN ON THE MASTER DRAINAGE PLAN, UNLESS SPECIFIC APPLICATION IS MADE AND APPROVED BY THE CITY ENGINEER.

2. PLAT IS LOCATED IN ZONE X, "AREAS OUTSIDE THE 1-PERCENT ANNUAL CHANCE FLOODPLAINS, AREAS OF 1-PERCENT ANNUAL CHANCE SHEET FLOW FLOODING WHERE THE AVERAGE DEPTHS ARE LESS THAN 1 FOOT, AREAS OF 1-PERCENT ANNUAL CHANCE STREAM FLOODING WHERE THE CONTRIBUTING DRAINAGE AREA IS LESS THAN 1 SQUARE MILE, OR AREAS PROTECTED FROM THE 1-PERCENT ANNUAL CHANCE FLOOD BY LEVEES. NO BASE FLOOD ELEVATIONS OR DEPTHS ARE SHOWN WITHIN THIS ZONE"

3. BUFFER ZONE FOR NATURAL STREAMS IS LOCATED WITHIN PLAT.

4. MBOE ELEVATIONS HAVE BEEN PROVIDED AT EACH LOT CORNER. INTERPOLATION WILL BE ALLOWED BETWEEN CORNER MBOES SHOWN ON THE MASTER DRAINAGE PLAN, DEPENDING ON THE LOCATION OF THE LOWEST OPENING ON THE PROPOSED STRUCTURE.

5. NO BUILDING PERMITS WILL BE ISSUED UNTIL AN AS-GRADED MASTER DRAINAGE PLAN HAS BEEN SUBMITTED TO THE CITY AND APPROVED BY THE CITY.

RMBOE - REAR MINIMUM BUILDING OPENING ELEVATION
FMBOE - FRONT MINIMUM BUILDING OPENING ELEVATION

LOT TYPES:
S - STANDARD
D - DAYLIGHT
W - WALKOUT

BASIN C1 DETENTION (TRACT I):
100-YEAR W.S.E. (NON-CLOGGED): 928.54
CLOGGED CONDITION (ALL FLOW THROUGH EMERGENCY SPILLWAY): 929.60

BASIN C1 DETENTION (TRACT J):
100-YEAR W.S.E. (NON-CLOGGED): 935.67
CLOGGED CONDITION (ALL FLOW THROUGH EMERGENCY SPILLWAY): 936.70

LEGEND	
	FINISHED INDEX CONTOURS
	FINISHED INTERMEDIATE CONTOURS

ASBUILT
03-24-2022

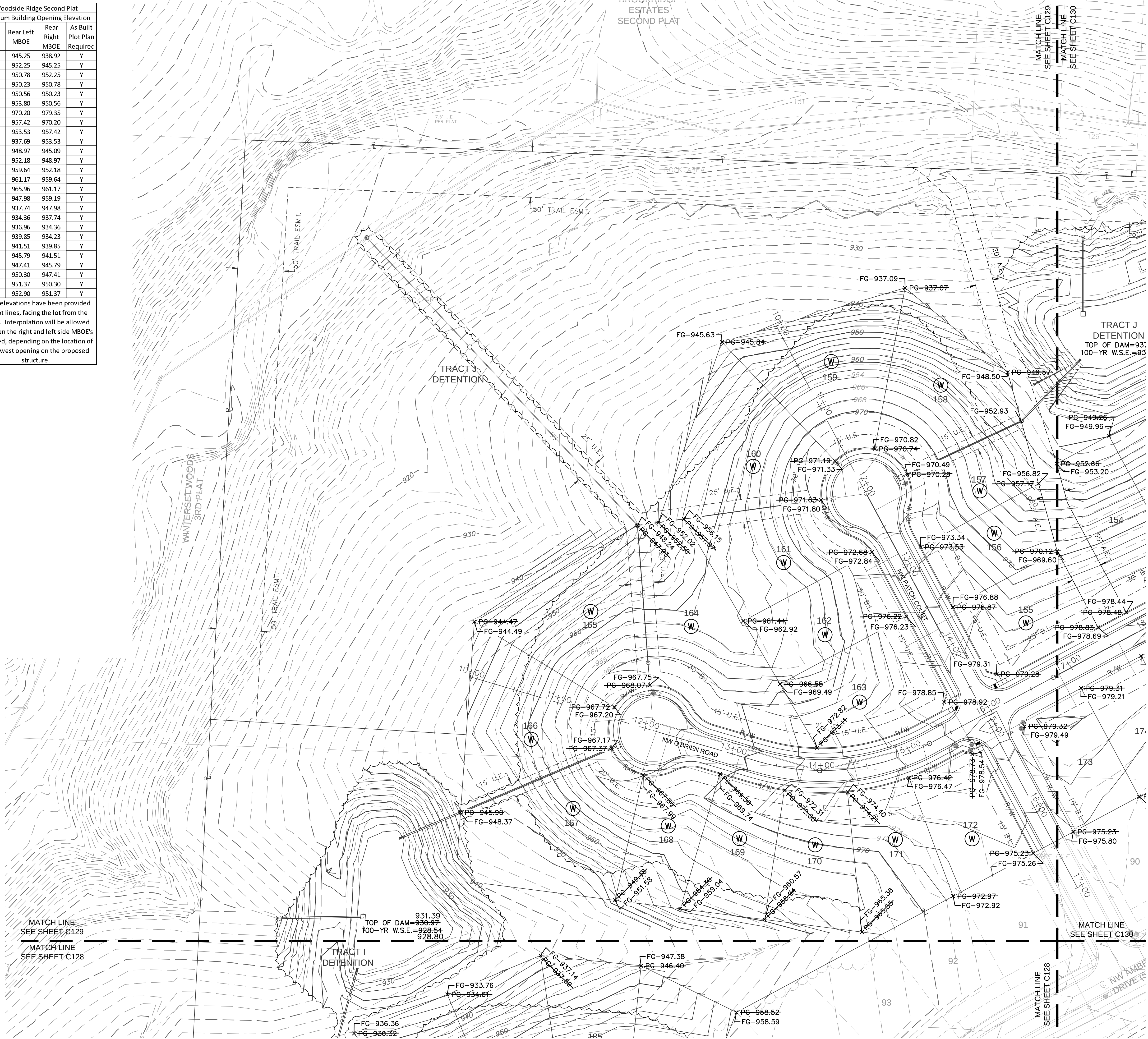
*ASBUILT NOTE: ADDITIONAL FILL WAS USED ON SITE TO RAISE PORTIONS OF THE REAR LOTS IN THE NORTHWEST



0 25' 50' 100'
SCALE IN FEET

Woodside Ridge Second Plat Minimum Building Opening Elevation			
Lot	Rear Left MBOE	Rear Right MBOE	As Built Plot Plan Required
149	945.25	938.92	Y
150	952.25	945.25	Y
151	950.78	952.25	Y
152	950.23	950.78	Y
153	950.56	950.23	Y
154	953.80	950.56	Y
155	970.20	979.35	Y
156	957.42	970.20	Y
157	953.53	957.42	Y
158	937.69	953.53	Y
166	948.97	945.09	Y
167	952.18	948.97	Y
168	959.64	952.18	Y
169	961.17	959.64	Y
170	965.96	961.17	Y
184	947.98	959.19	Y
185	937.74	947.98	Y
186	934.36	937.74	Y
187	936.96	934.36	Y
192	939.85	934.23	Y
193	941.51	939.85	Y
194	945.79	941.51	Y
195	947.41	945.79	Y
196	950.30	947.41	Y
197	951.37	950.30	Y
198	952.90	951.37	Y

MBOE elevations have been provided per lot lines, facing the lot from the street. Interpolation will be allowed between the right and left side MBOE's provided, depending on the location of the lowest opening on the proposed structure.



BY

NO. REV.

DATE

7/10/2020

1

REVISIONS DESCRIPTION

REVISED PER CITY COMMENTS

REVISIONS

MASTER DRAINAGE PLAN
STREET & STORM SEWER PLANS

WOODSIDE RIDGE
SECOND PLAT

LEE'S SUMMIT, MO

drawn by: C.S.M.
checked by: S.M.S.
designed by: C.S.M.
QA/QC by: J.E.S.
project no.: C18-1140
date: 2020.07.10

SHEET
C129

STATE OF MISSOURI
JULIE ELAINE SELLERS
NUMBER
PE-2017000367
4/12/2023
PROFESSIONAL ENGINEER

NOT A VALIDATION OF ANYTHING BUT THE
303 E. BURNING STAR BLVD., SUITE 100
NORTH KANSAS CITY, MO 64116
TEL. 816.861.1177
WWW.OLSSON.COM

olsson



KEY MAP

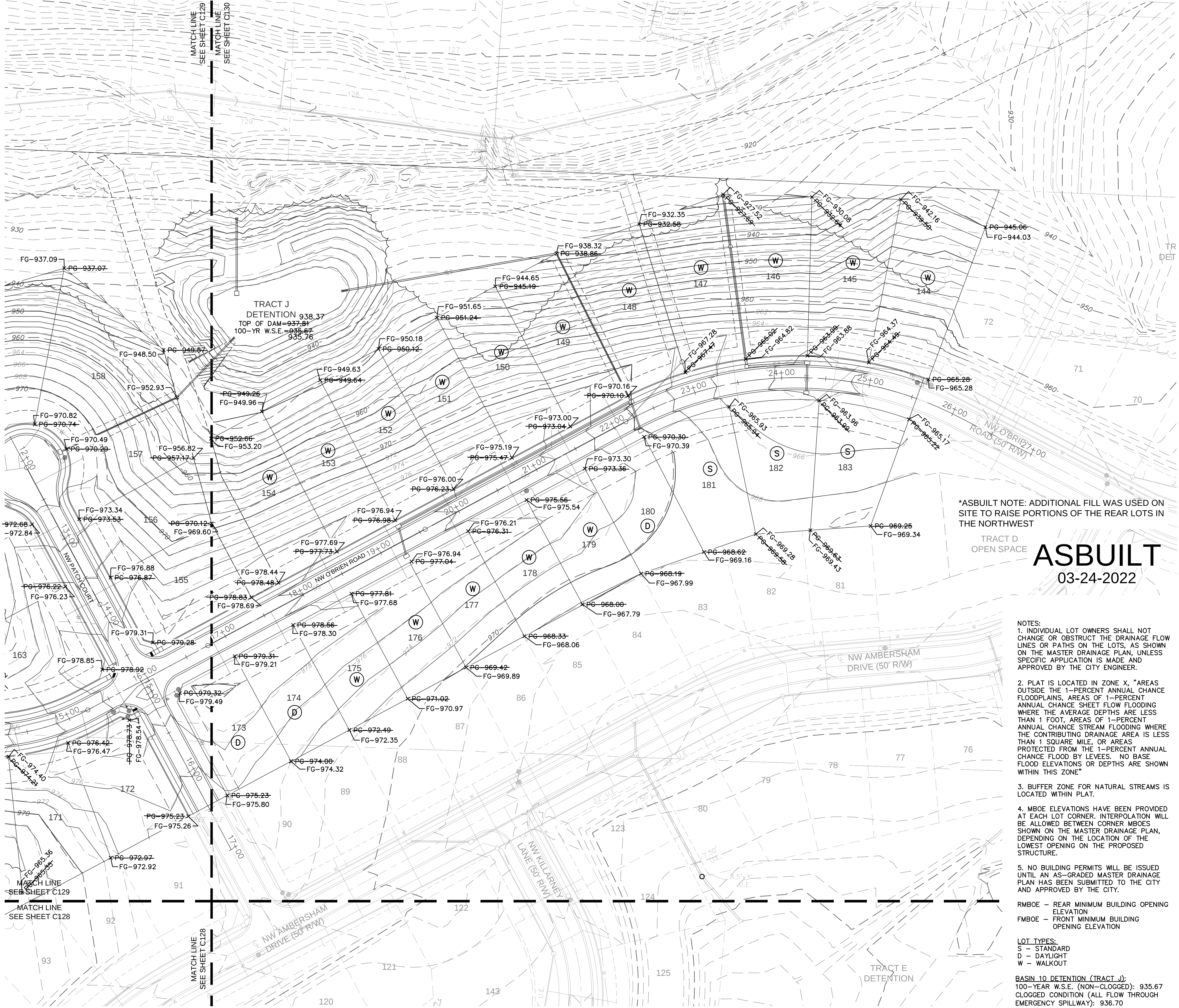
Woodside Ridge Second Plat				
Minimum Building Opening Elevation				
Lot	Rear Left MBOE	Rear Right MBOE	As Built Plot Plan	Required
149	945.25	938.92	Y	
150	952.25	945.25	Y	
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152	950.23	950.78	Y	
153	950.56	950.23	Y	
154	953.80	950.56	Y	
155	970.20	979.35	Y	
156	957.42	970.20	Y	
157	953.53	957.42	Y	
158	937.69	953.53	Y	
166	948.97	945.09	Y	
167	952.18	948.97	Y	
168	959.64	952.18	Y	
169	961.17	959.64	Y	
170	965.96	961.17	Y	
184	947.98	959.19	Y	
185	937.74	947.98	Y	
186	934.36	937.74	Y	
187	936.96	934.36	Y	
192	939.85	934.23	Y	
193	941.51	939.85	Y	
194	945.79	941.51	Y	
195	947.41	945.79	Y	
196	950.30	947.41	Y	
197	951.37	950.30	Y	
198	952.90	951.37	Y	

MBOE elevations have been provided per lot lines, facing the lot from the street. Interpolation will be allowed between the right and left side MBOE's provided, depending on the location of the lowest opening on the proposed structure.

LEGEND	
100	FINISHED INDEX CONTOURS
100	FINISHED INTERMEDIATE CONTOURS



0 25' 50' 100'
SCALE IN FEET



*ASBUILT NOTE: ADDITIONAL FILL WAS USED ON SITE TO RAISE PORTIONS OF THE REAR LOTS IN THE NORTHWEST

TRACT D
OPEN SPACE
ASBUILT
03-24-2022

- NOTES:
- INDIVIDUAL LOT OWNERS SHALL NOT CHANGE OR OBSTRUCT THE DRAINAGE FLOW LINES OR PATHS ON THE LOTS, AS SHOWN ON THE MASTER DRAINAGE PLAN, UNLESS SPECIFIC APPLICATION IS MADE AND APPROVED BY THE CITY ENGINEER.
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 - BUFFER ZONE FOR NATURAL STREAMS IS LOCATED WITHIN PLAT.
 - MBOE ELEVATIONS HAVE BEEN PROVIDED AT EACH LOT CORNER. INTERPOLATION WILL BE ALLOWED BETWEEN CORNER MBOE'S SHOWN ON THE MASTER DRAINAGE PLAN, DEPENDING ON THE LOCATION OF THE LOWEST OPENING ON THE PROPOSED STRUCTURE.
 - NO BUILDING PERMITS WILL BE ISSUED UNTIL AN AS-GRADED MASTER DRAINAGE PLAN HAS BEEN SUBMITTED TO THE CITY AND APPROVED BY THE CITY.
- RMBOE - REAR MINIMUM BUILDING OPENING ELEVATION
FMBOE - FRONT MINIMUM BUILDING OPENING ELEVATION
- LOT TYPES:
S - STANDARD
D - DAYLIGHT
W - WALKOUT
- BASIN 10 DETENTION (TRACT J):
100-YEAR W.S.E. (NON-CLOGGED): 935.67
CLOGGED CONDITION (ALL FLOW THROUGH EMERGENCY SPILLWAY): 936.70

BY

NO. REV.

DATE

REVISIONS DESCRIPTION

REVISED PER CITY COMMENTS

1

7/10/2020

MASTER DRAINAGE PLAN
STREET & STORM SEWER PLANS

WOODSIDE RIDGE
SECOND PLAT

LEE'S SUMMIT, MO

2020

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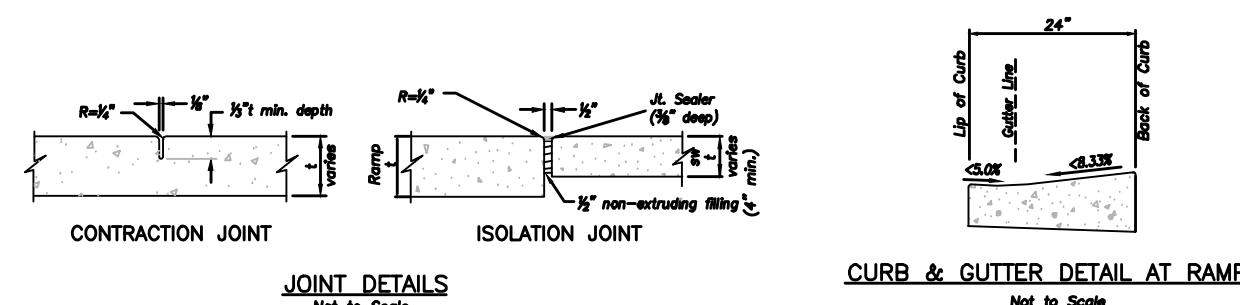
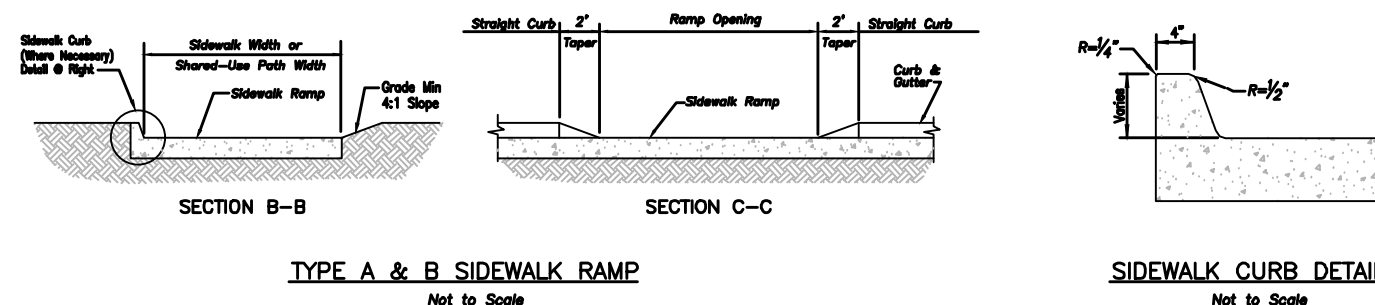
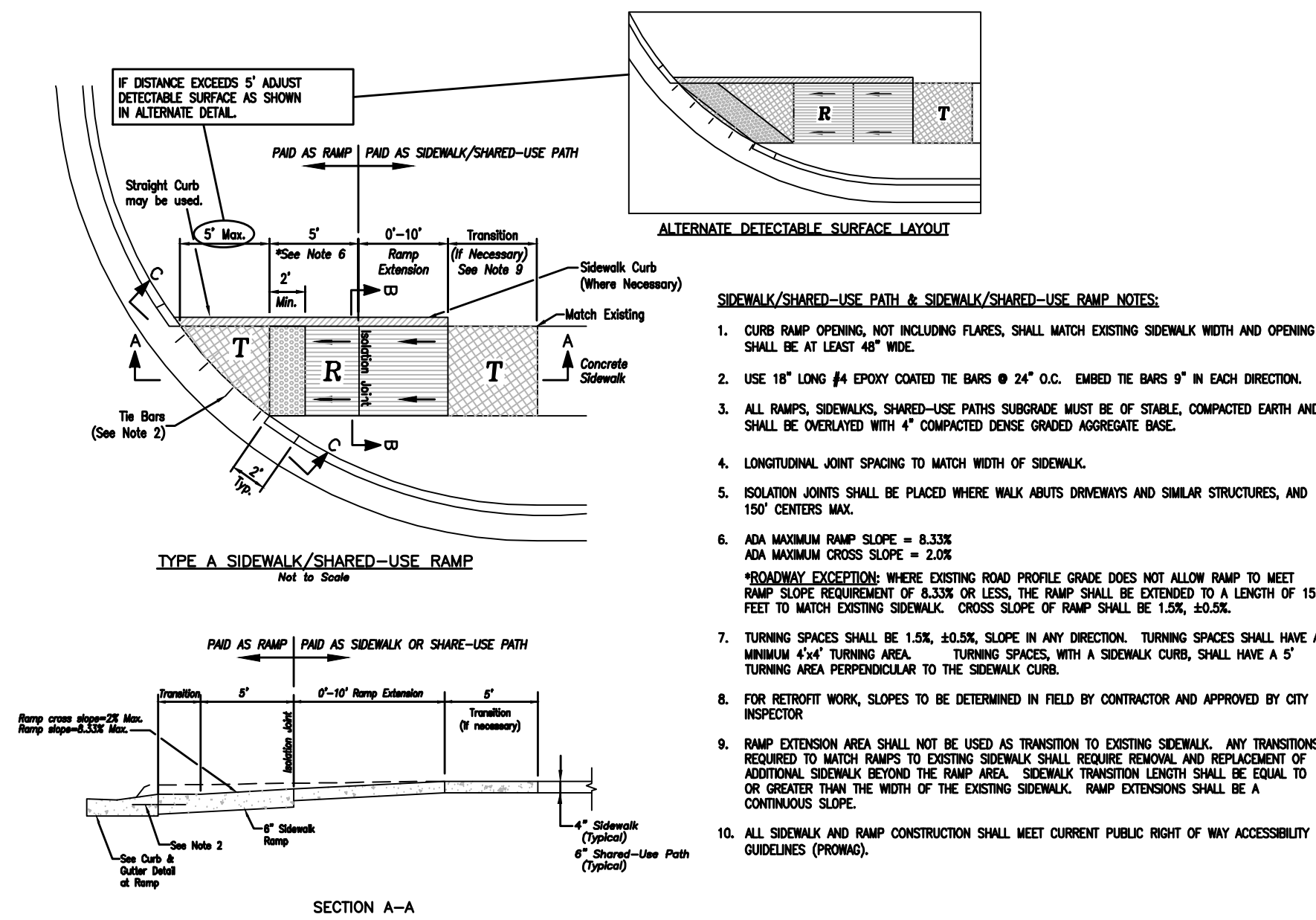
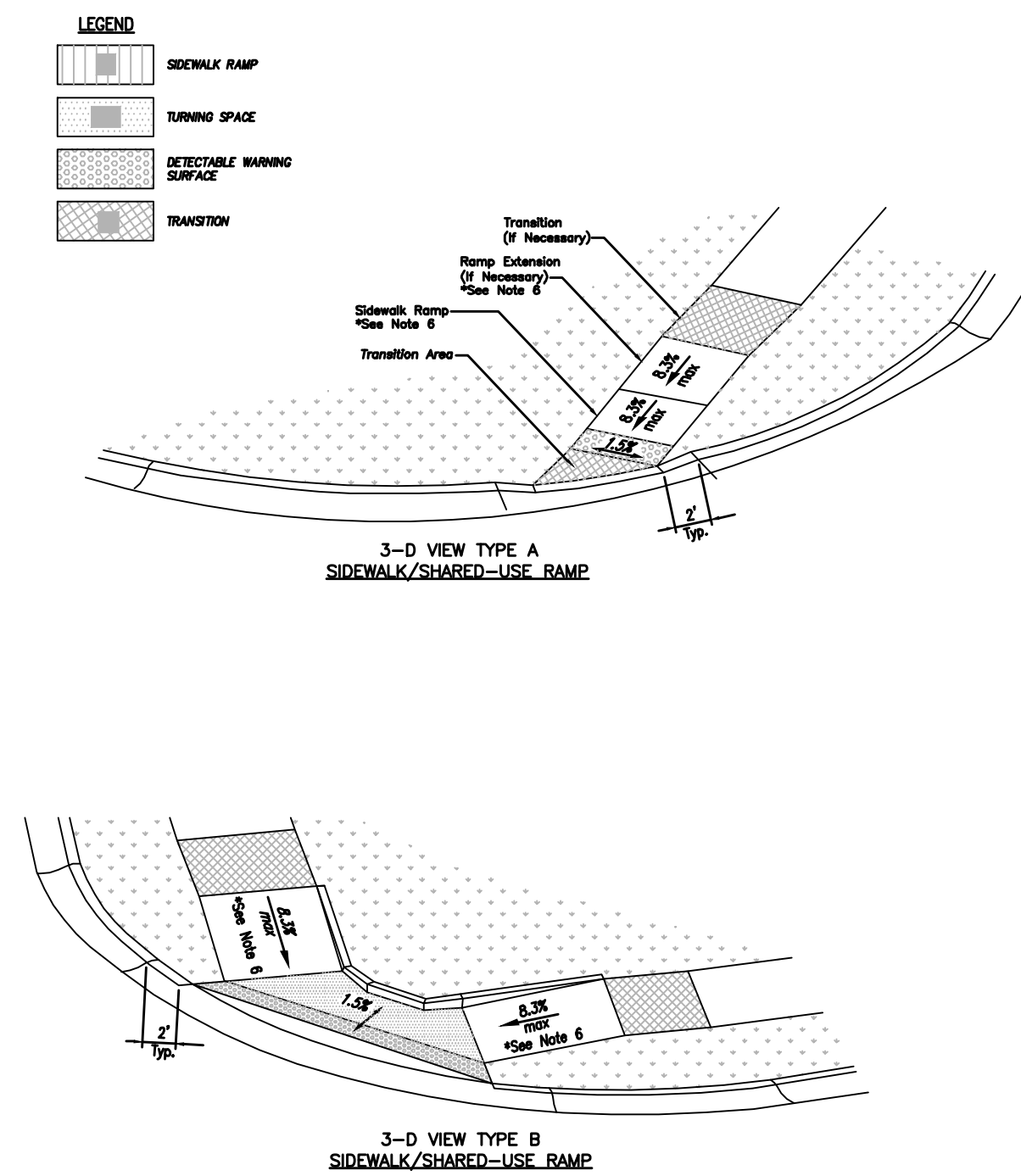
STATE OF MISSOURI
JULIE ELAINE
SELLERS
NUMBER
PE-2017000367
4/12/2023
PROFESSIONAL ENGINEER

NOT A SEAL OF ANY STATE
303 E. MAIN STREET, SUITE 100
NORTH KANSAS CITY, MO 64116
TEL. 816.861.1177
WWW.OLSSON.COM

drawn by: C.S.M.
checked by: S.M.S.
designed by: C.S.M.
QA/QC by: J.E.S.
project no.: C18-1140
date: 2020.07.10

SHEET
C130

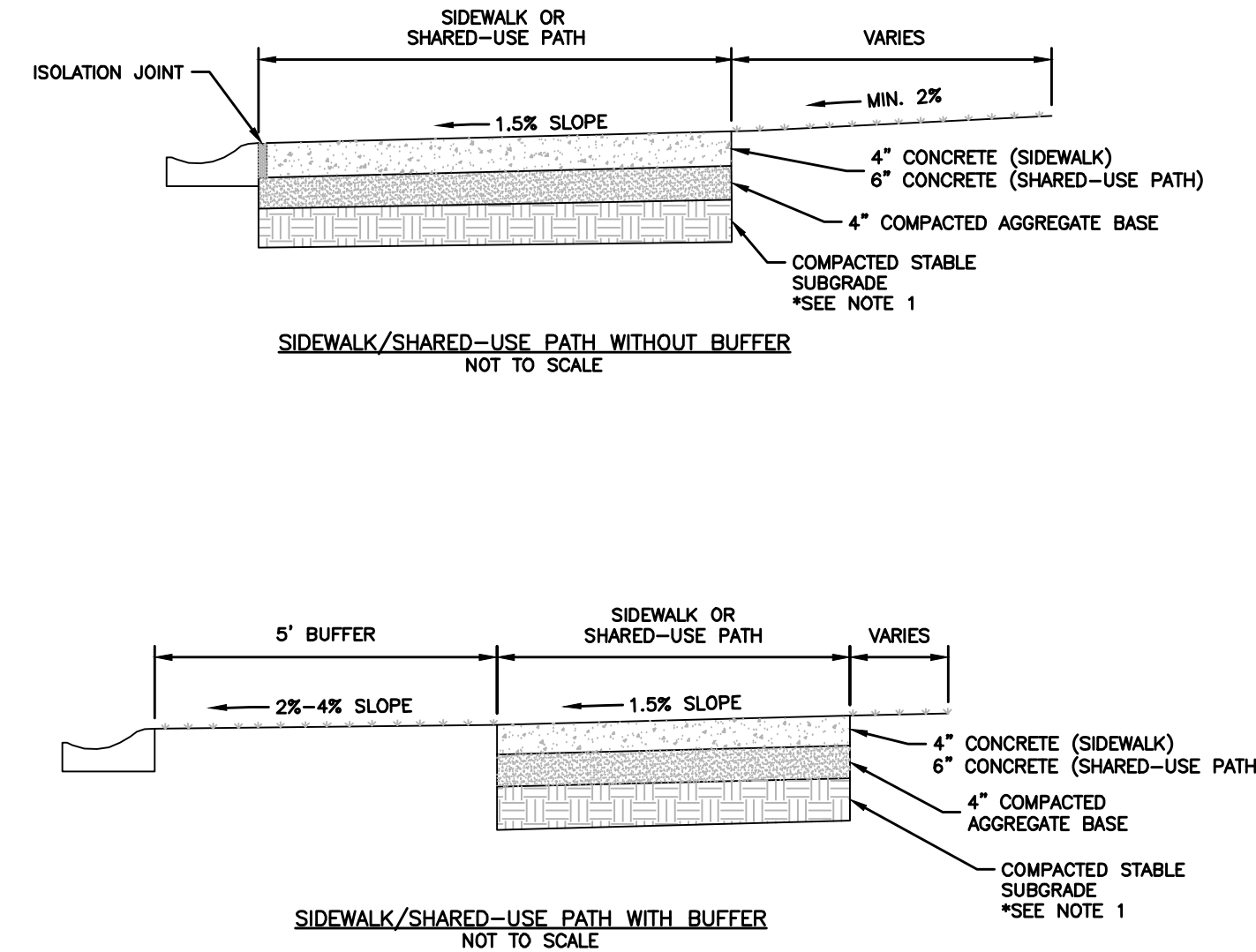
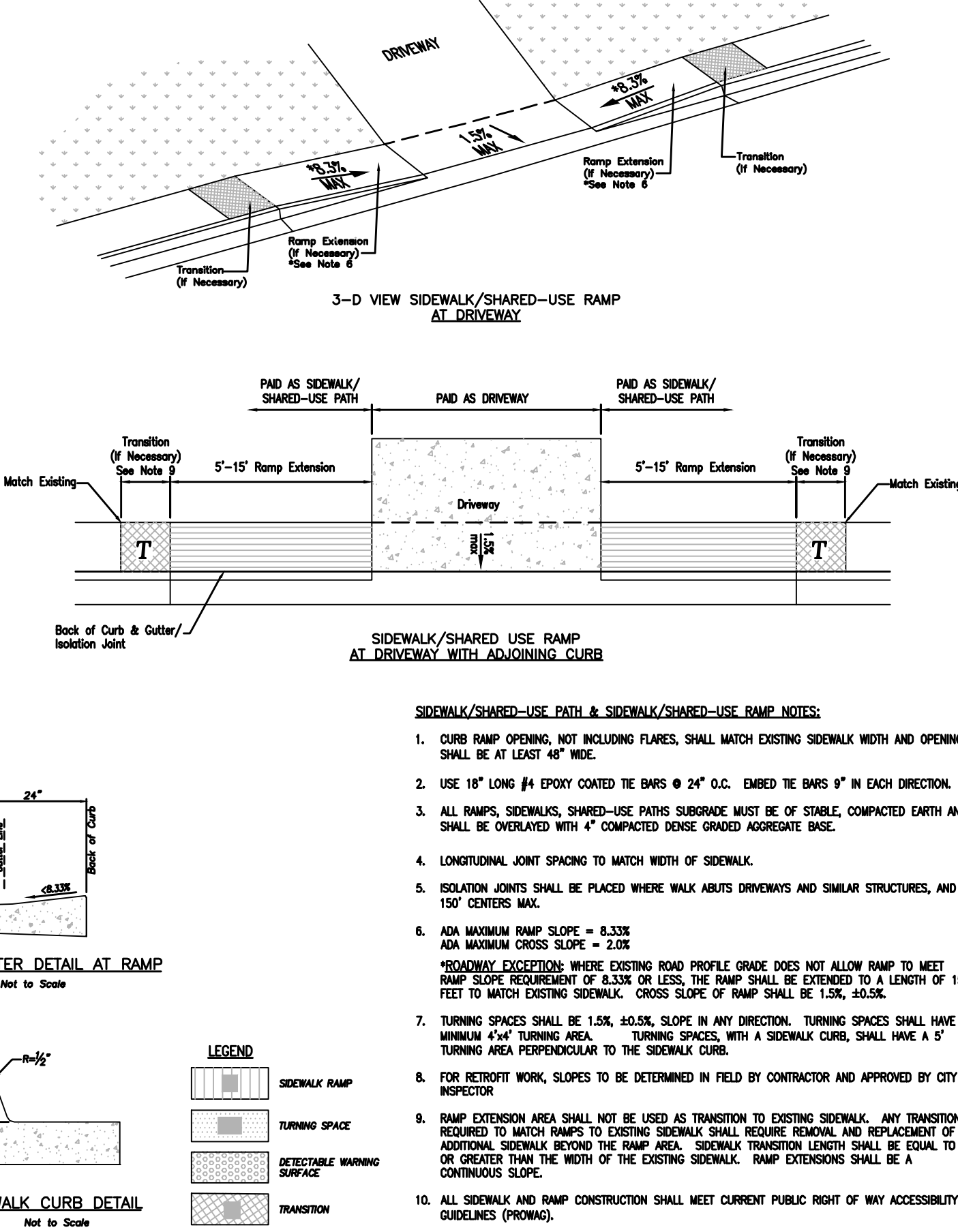
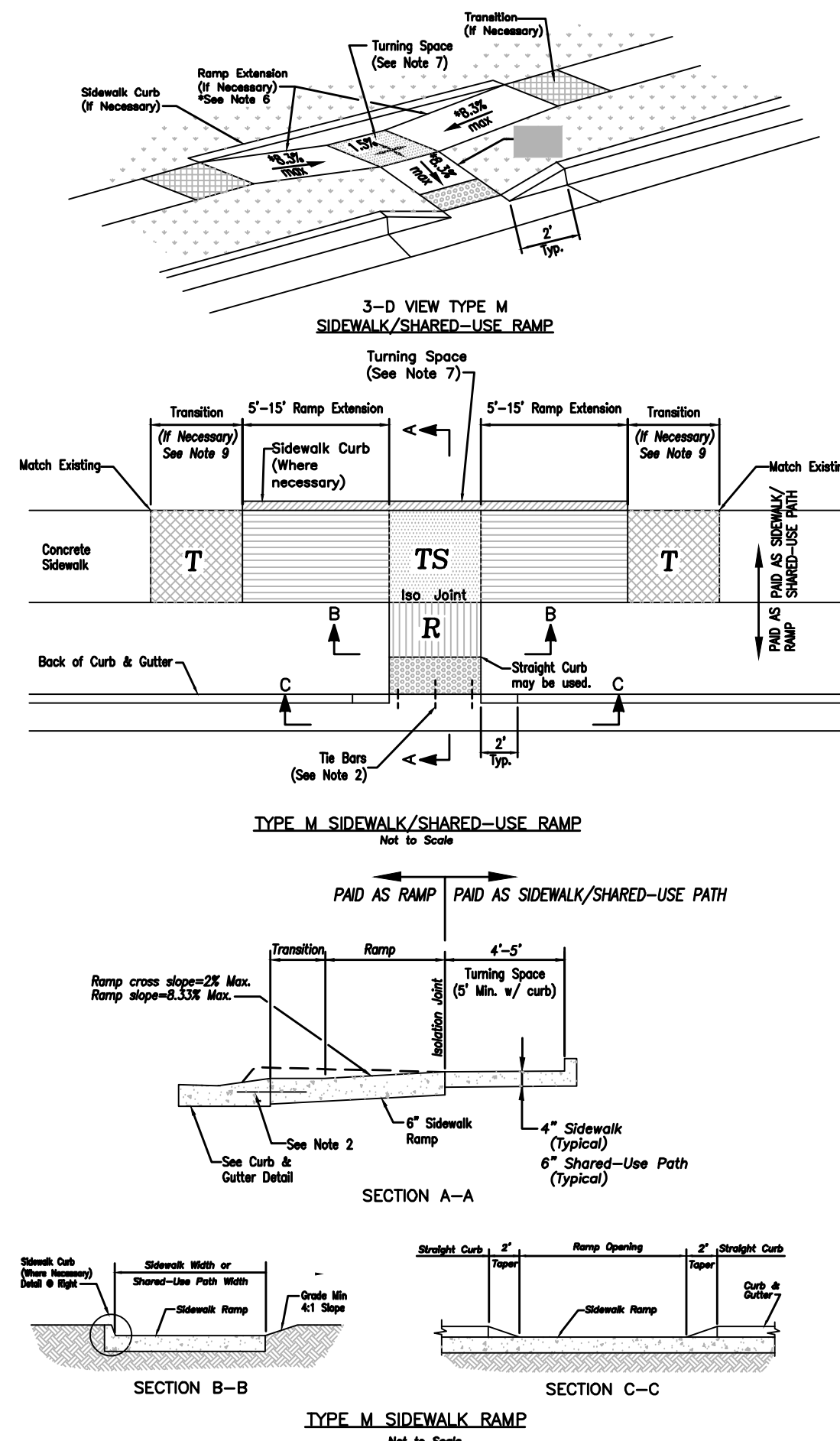
01 N.T.S.
ADA RAMP RETROFIT DETAIL (A)



REFER TO SHEETS C110 AND C111
FOR RAMP SLOPE AND DIMENSION.
DETAILS ARE GUIDELINES AS TO HOW
RAMPS SHALL BE CONSTRUCTED.

NOT ASBUILT

02 N.T.S.
ADA RAMP RETROFIT DETAIL (B)

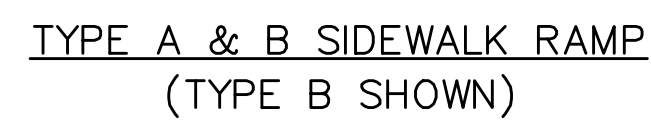


- GENERAL NOTES:
- SUBGRADE MUST BE OF STABLE, COMPACTED EARTH AND SHALL BE OVERLAYED WITH 4" GRADED AGGREGATE BASE.
 - 1.5% CROSS SLOPE MUST BE MAINTAINED THROUGH DRIVEWAYS.
 - KOMBE 4K CONCRETE MIX SHALL BE REQUIRED FOR ALL SIDEWALKS AND SHARED-USE PATHS OR AS APPROVED BY THE CITY INSPECTOR.
 - ALL SIDEWALKS SHALL MEET CURRENT PUBLIC RIGHT OF WAY ACCESSIBILITY GUIDELINES (PROWAG).
 - AN EXPANSION JOINT SHALL BE PLACED AT A MAXIMUM OF 150 FT. CONSTRUCTION JOINTS SHALL BE PLACED THE SAME WIDTH OF SIDEWALK, BUT NO GREATER THAN 10 FT.
 - SHARED-USE PATH WIDTH SHALL BE 10 FT. WIDE.
 - SIDEWALK FINISHING (NO PICTURE FRAMING) AS DIRECTED BY CITY INSPECTOR.
 - WHITE CURING COMPOUND MUST BE APPLIED UNIFORMLY TO THE CONCRETE SURFACE IMMEDIATELY AFTER FINAL FINISHING.

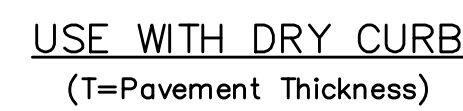
03 N.T.S.
SIDEWALK/SHARED-USE PATH DETAIL



01 N.T.S.
SECTION B-B

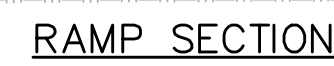


02 N.T.S.
SECTION C-C



* 0.5% minimum positive slope in gutter line shall be maintained through transition from standard curb to ramp curb

03 N.T.S. STREET CURB DETAIL AT RAMP



04 N.T.S. DETECTABLE WARNING PLATE INSTALLATION DETAIL

[illegible]

ADA DETAIL SHEET STREET & STORM SEWER PLANS	2020
WOODSIDE RIDGE SECOND PLAT	LEE'S SUMMIT, MO

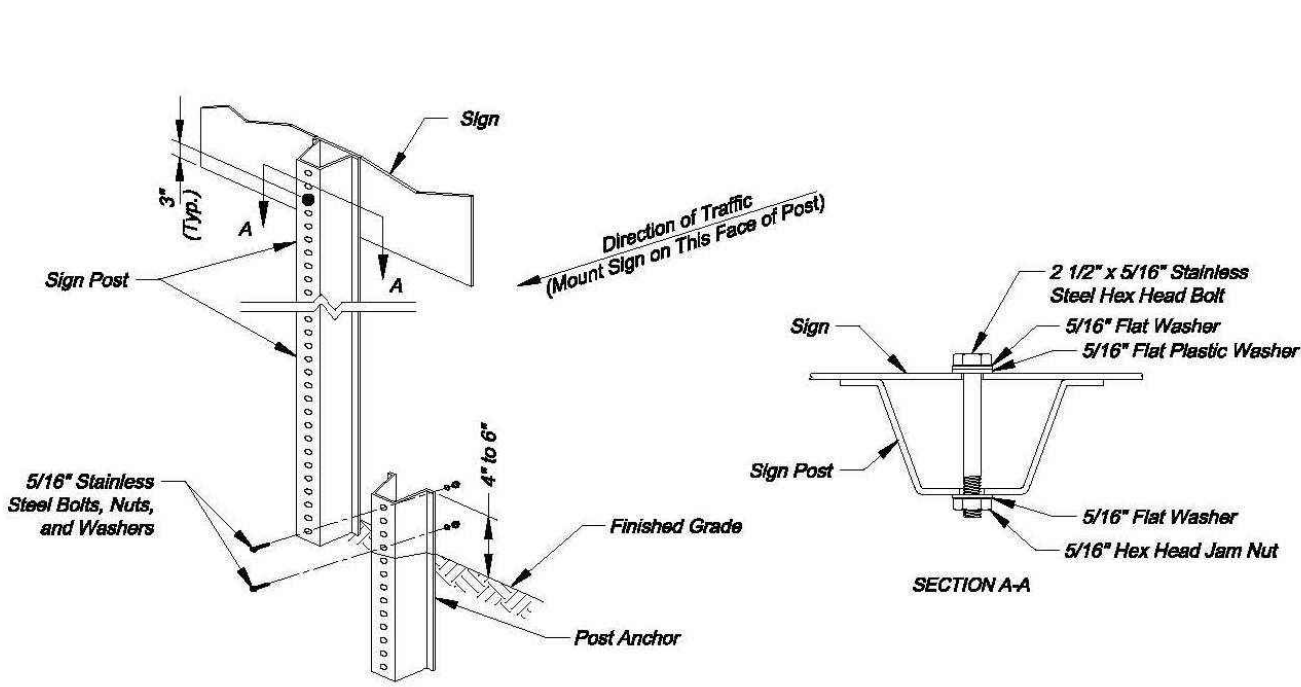
drawn by: C.S.M
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designed by: C.S.M
QA/QC by: J.E.S
project no.: C18-1140
date: 2020.07.10

SHEET
C132

olsson

MO Certificate of Authority #001592
1301 BURLINGTON, SUITE 100
NORTH KANSAS CITY, MO 64116
TEL 816.361.1177
www.olsson.com

NOT ASBUILT



U-STEEL POST DETAILS

- U-STEEL POST NOTES:**
1. Splice shall be positioned entirely between finished grade line and 16" above finished grade line. Only one splice will be allowed per post.
 2. U-Steel post shall be 3 to 6 ft, galvanized according to ASTM A123.
 3. U-Steel post can be used for installation of signs with an area of less than 2.5 square feet.
 4. All posts shall be embedded a minimum of 3 feet.

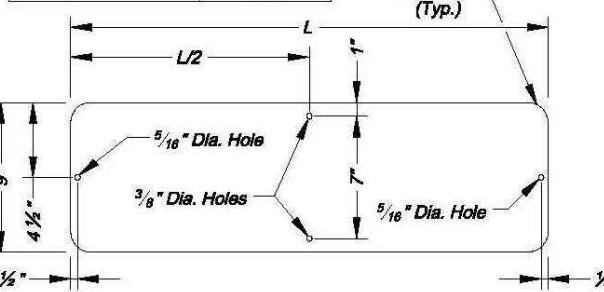


STRAP TYPE SIGN SUPPORT DETAILS

- METAL POLE SIGN MOUNTING NOTES:**
1. Signs on metal poles shall be attached with two brackets and stainless steel bands.
 2. Holes in sign for attachment to the mounting brackets shall be offset a minimum of 2 inches from the edge of the sign.
 3. Holes in sign shall be located such that the sign is level.
 4. All strap, bracket, and seal materials should be Type 201 stainless steel.

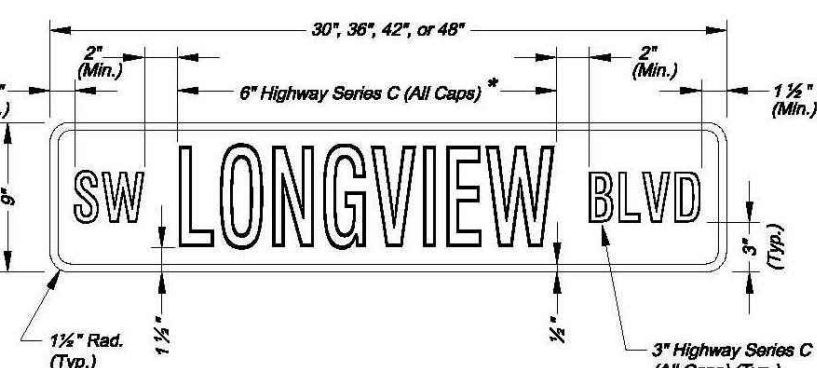
STANDARD ABBREVIATION LISTS

Named Streets		Numbered Streets	
Avenue	AVE	First	ST
Boulevard	BLVD	Second	ND
Circle	CIR	Third	RD
Creek	CR	Fourth to Tenth	TH
Court	CT		
Crossing	XING		
Drive	DR		
Highway	HWY		
Lane	LN		
Parkway	PKWY		
Piece	PL		
Road	RD		
Street	ST		
Terrace	TER		
Trail	TRL		
Way	WAY		

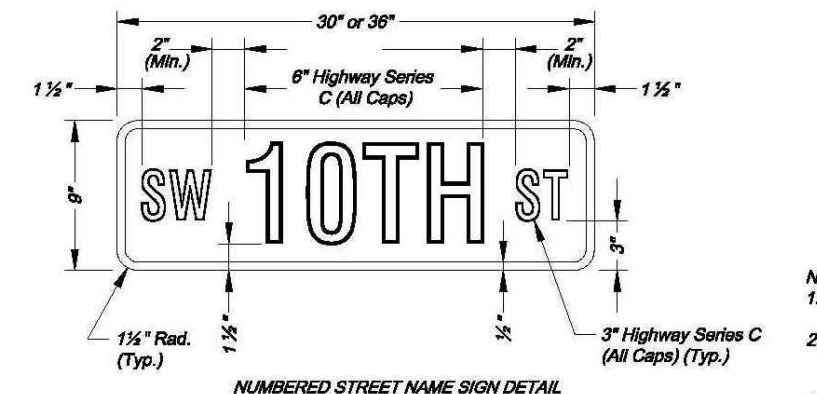


STREET NAME SIGN BLANK DETAILS

For Mounting on Square Steel Posts



* Use Highway Series B (All Caps) in lieu of series C if necessary to fit text on a 36" sign blank.

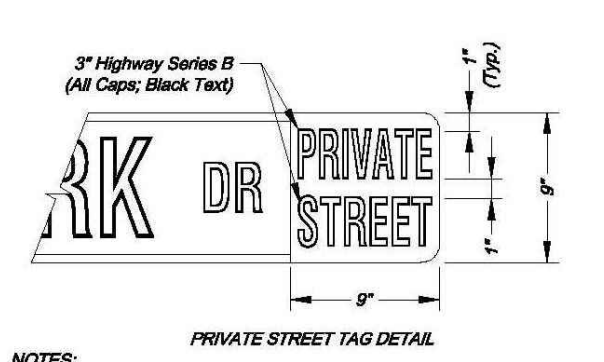
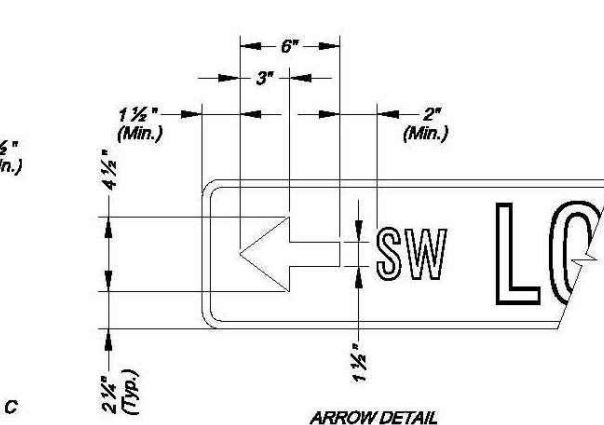


STREET NAME SIGN FACE DETAILS

STREET NAME SIGN QUANTITIES

Sign Designation	Sign Size	Sign Area (Sq. Ft.)	Number	Quantity (Sq. Ft.)
D3-1 (SP-1)	9" x 9"	Sq. Ft.	1	1
D3-1 (SP-2)	9" x 9"	Sq. Ft.	1	1
D3-1 (SP-3)	9" x 9"	Sq. Ft.	1	1
D3-1 (SP-4)	9" x 9"	Sq. Ft.	1	1
D3-1 (SP-5)	9" x 9"	Sq. Ft.	1	1
D3-1 (SP-6)	9" x 9"	Sq. Ft.	1	1

PROJECT SIGN DETAILS

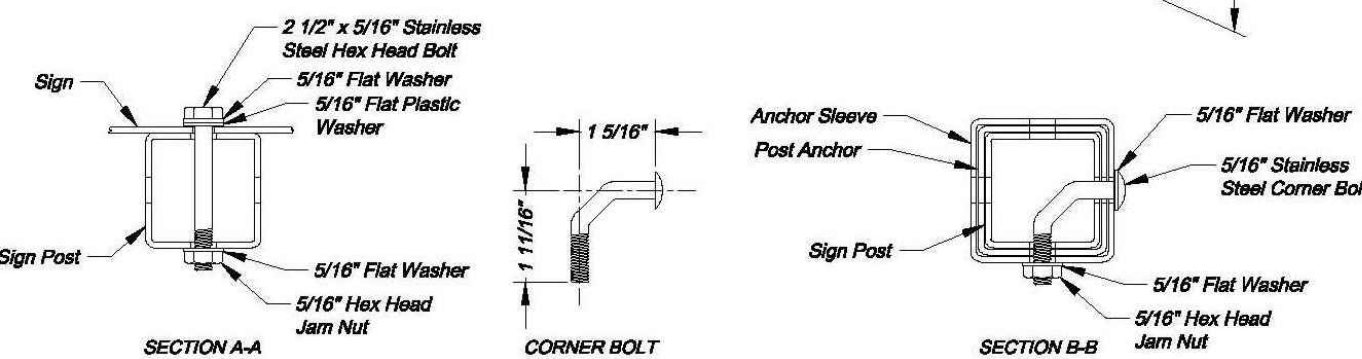


- NOTES:**
1. For all street name signs, the legend shall be white and the background shall be green.
 2. Arrows shall be added to street name signs where the name of a street changes at an intersection. Street name signs with arrows are to be installed on each side of the intersection to indicate the change in name. Arrows shall be white.
 3. The "PRIVATE STREET" tag should be added to the end of street name signs to indicate where a street that is outside the right-of-way intersects a public street. The background for the "PRIVATE STREET" tag shall be yellow.

- PERMANENT SIGNING GENERAL NOTES:**
1. All signing shall be in accordance with the latest edition of the Manual on Uniform Traffic Control Devices (MUTCD).
 2. The Contractor is responsible for avoiding any and all utilities when installing sign posts, whether the utility is indicated on the plans or not.
 3. All workmanship and materials shall be subject to the inspection and approval of the Public Works Department of the City of Lee's Summit.
 4. The Contractor shall submit the location of all sign posts to be installed. The City Inspector shall inspect the staking prior to installation.
 5. Signs shown to be installed on the side of metal poles shall be mounted with stainless steel straps or wing brackets as detailed. No signs are to be installed on wood poles. See Traffic Signal Standard Drawings for the installation of signs on mast arms.
 6. All post mounted signs shall be installed with breakaway anchors according to the Standard Drawings.
 7. All existing signs will be used in place during construction and protected from damage unless otherwise indicated in the plans. If the Contractor damages any existing sign or posts during construction, the Contractor will be required to replace the damaged materials with new signs or posts of the same type and size at the Contractor's expense. The Contractor shall be responsible for removing and storing any signs that are to be reinstalled on the project. All equipment shall be maintained in good condition.
 8. Existing permanent signs and posts removed by the Contractor for construction purposes which are not to be reinstalled shall be delivered to the City's Public Works Maintenance Facility (1671 SE Hamblen Road). The Contractor shall be responsible for removing and storing equipment in good condition and is fully responsible for the equipment until it is delivered.
 9. All Stop, Yield, or street name signs shall be maintained in a conspicuous location for the driving public. All Stop and Yield signs removed for construction purposes can be temporarily erected in reflectorized drums (no less than 7 feet above the pavement surface) until they can be reinstalled. Any temporary Stop or Yield sign installation to be left in place overnight will require prior approval from the City Inspector.

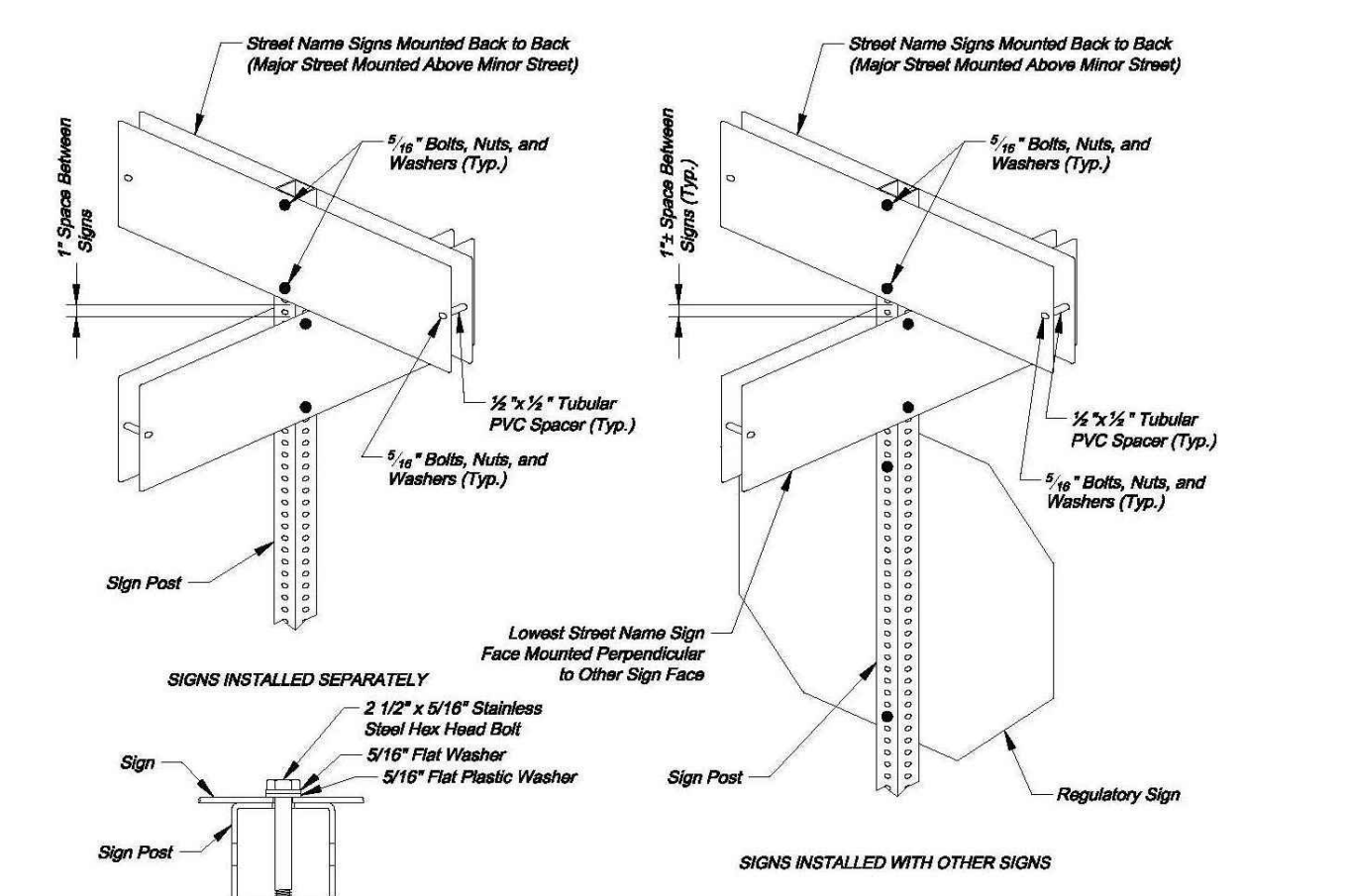
SQUARE STEEL POST INSTALLATION SEQUENCE:

1. Sign post anchor driven partially into the ground using a drive cap with a sledge or power equipment.
2. Anchor sleeve slipped over anchor and drive into the ground together with the sign post anchor.
3. Insert sign post into the post anchor and bolt in place.

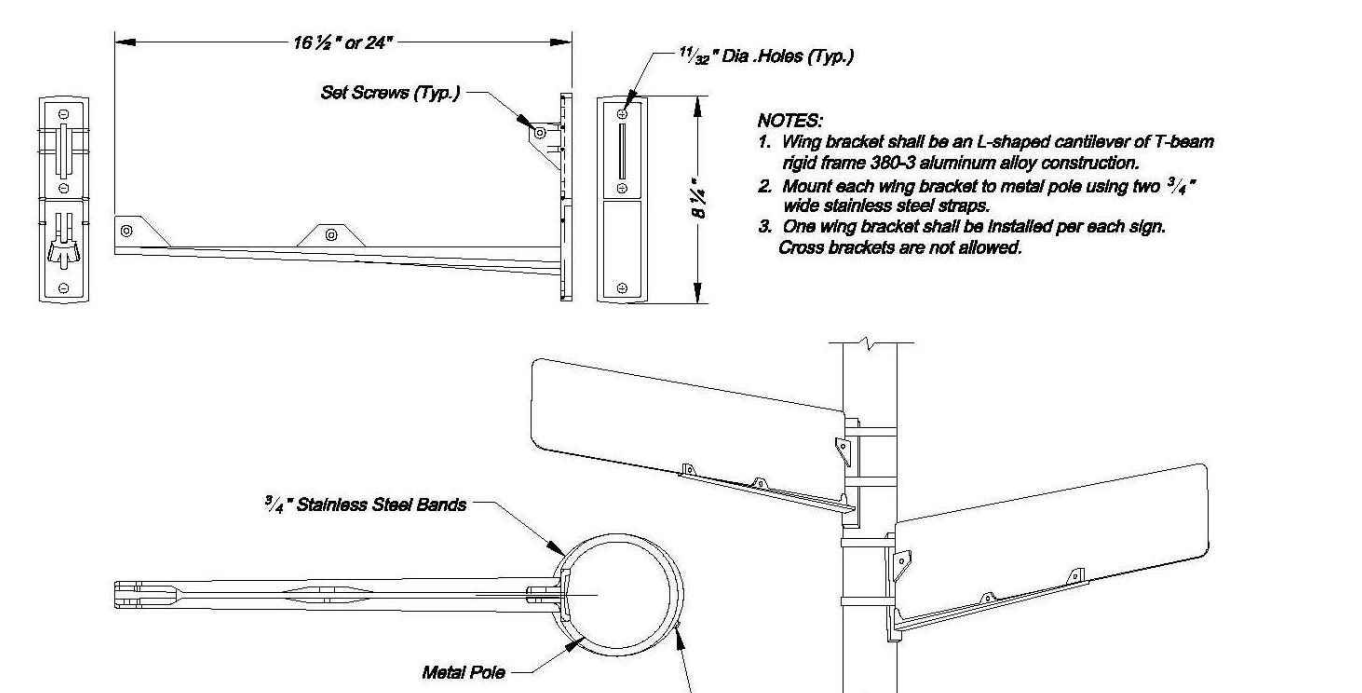


SQUARE STEEL POST DETAILS

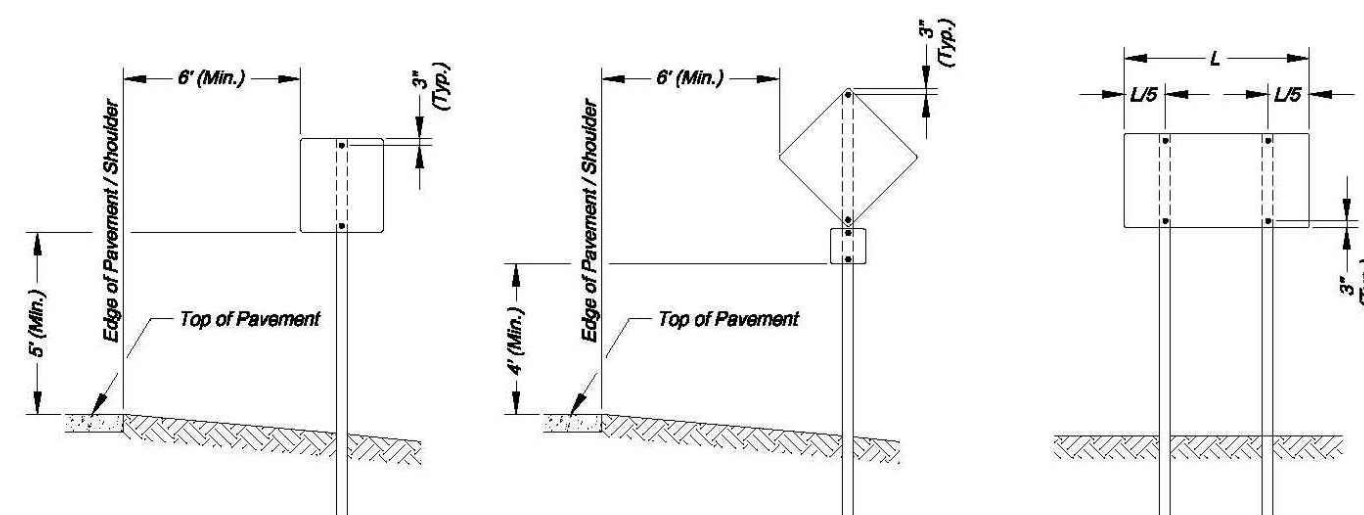
- SQUARE STEEL POST NOTES:**
1. Square steel sign posts and break-away anchor shall consist of the following materials:
Sign Post - 14 Ga. 2" x 2" Square Steel Post
Post Anchor - 12 Ga. 2 1/2" x 2 1/2" x 36" Square Steel Post
Anchor Sleeve - 12 Ga. 2 1/2" x 2 1/2" x 18" Square Steel Post
 2. 14 Gauge posts must meet a certified minimum yield strength of 80,000 psi.
 3. In all installations the first hole above the finished grade line on the sign post, anchor, and anchor sleeve must be in line for the insertion of the corner bolt.
 4. The maximum area for one sign post is 9.0 square feet. A sign or combination of signs with an area greater than 9.0 square feet will require two posts. Also, signs with a width greater than 36" (not including 36" x 36" diamond shaped signs) will require two posts.



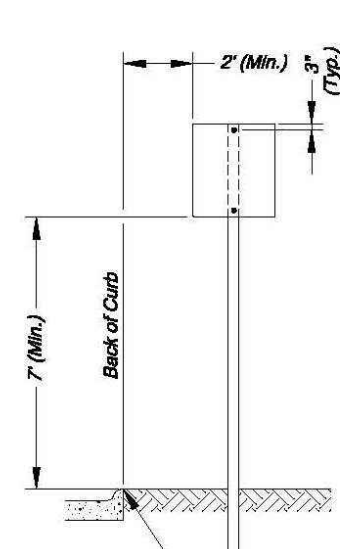
SQUARE STEEL POST MOUNTING DETAILS



WING BRACKET MOUNTING DETAILS

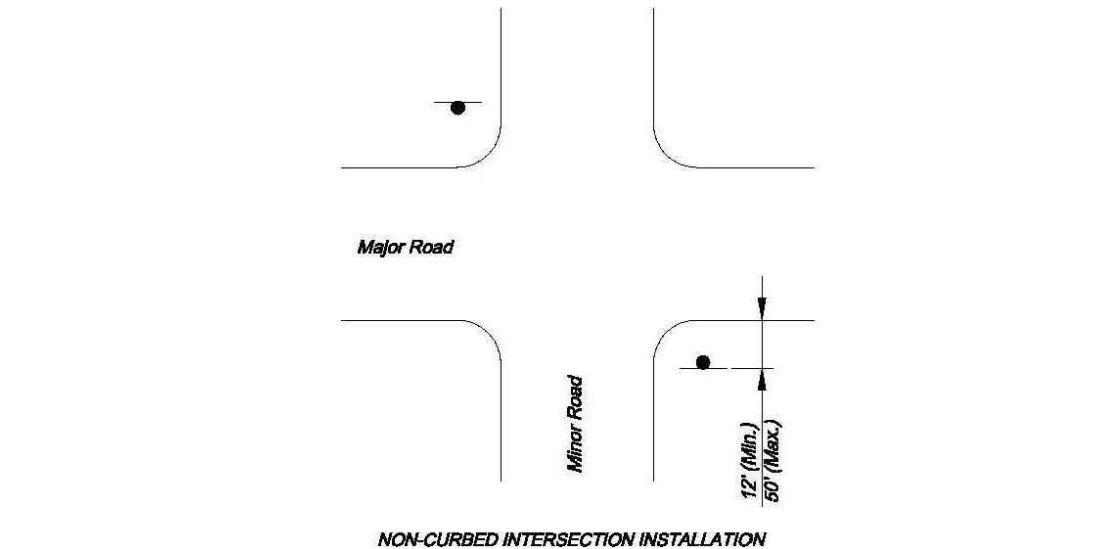


SIGN INSTALLATION FOR NON-CURBED STREET

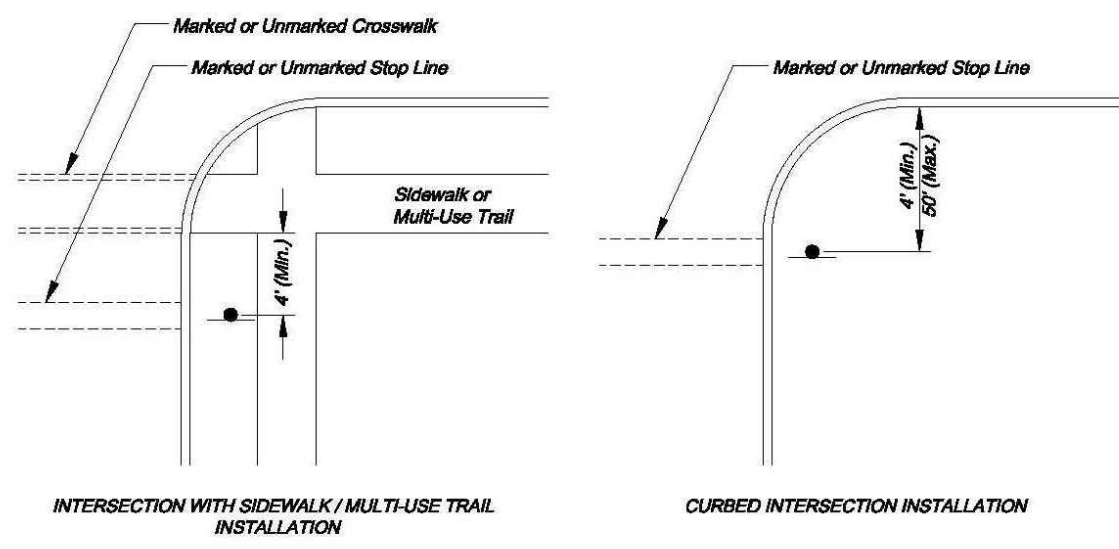


SIGN INSTALLATION FOR CURBED STREET

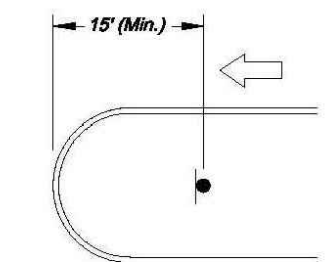
- SIGN MOUNTING DETAILS**
- * The height to the bottom of a sign when it is located in a pedestrian walkway or extends into a walkway shall be a minimum of 80 inches above the walkway.
- NOTE:**
1. Generally, the sign mounting height should not be more than 1' greater than the minimum mounting height.



NON-CURBED INTERSECTION INSTALLATION



CONTROL SIGN LOCATION



MEDIAN SIGN LOCATION

- NOTES:**
1. A 4" P.V.C. sleeve shall be installed in new concrete medians at each location where a sign is to be installed.
 2. For existing concrete medians, a 4" hole shall be bored into the concrete.

olsson

NO Conflict of Interest at 03/09/22
303 E. BIRLING ST. SUITE 100
NORTH KANSAS CITY, MO 64116
TEL: 816.851.1177
www.olsson.com

STATE OF MISSOURI
JULIE ELAINE
SELLERS
NUMBER
PE-2017000367
4/12/2023
PROFESSIONAL ENGINEER

BY
REVISIONS DESCRIPTION
NO. REV. DATE
2020

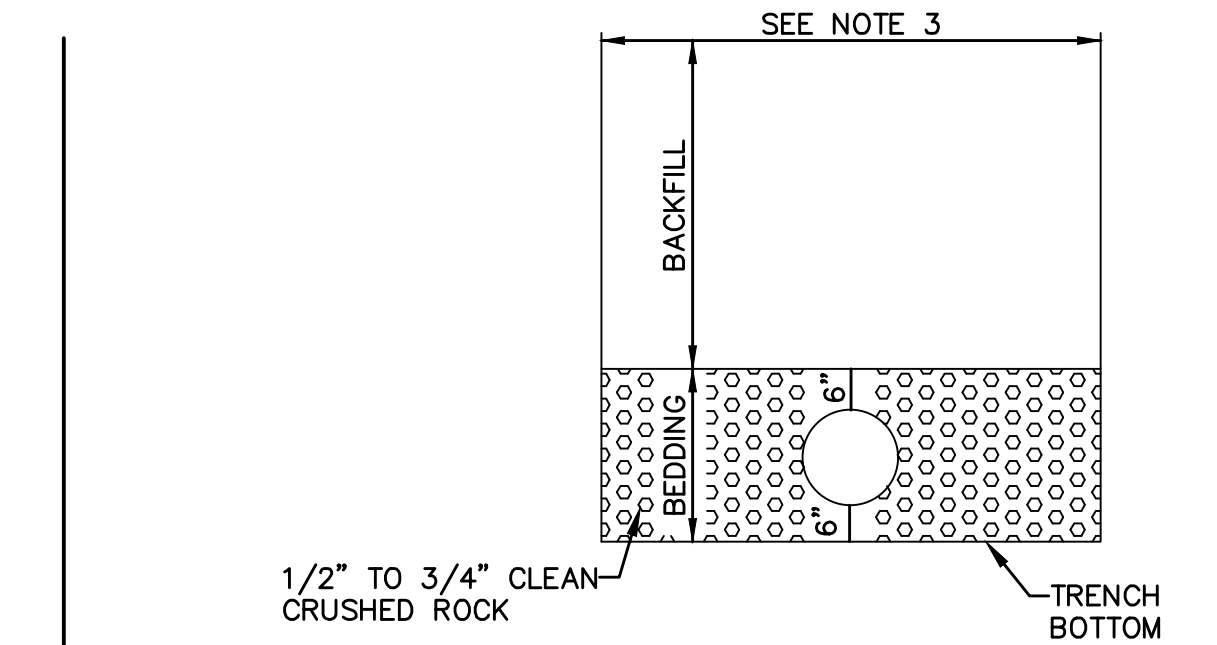
SINGAGE DETAIL SHEET
STREET & STORM SEWER PLANS
WOODSIDE RIDGE
SECOND PLAT
LEE'S SUMMIT, MO

drawn by: C.S.M.
checked by: S.M.S.
designed by: C.S.M.
QA/QC by: J.E.S.
project no.: C18-1140
date: 2020.07.10

SHEET
C133

NOT ASBUILT

DWG: F:\2018\1001-1500\018-1140-C\40-Design\AutoCAD\Final Plans - Asbuilts\Sheets\GNCV\Street & Storm\C.DTL01_C181140.dwg
DATE: Oct 17, 2022 12:45pm
USER: ssaylor



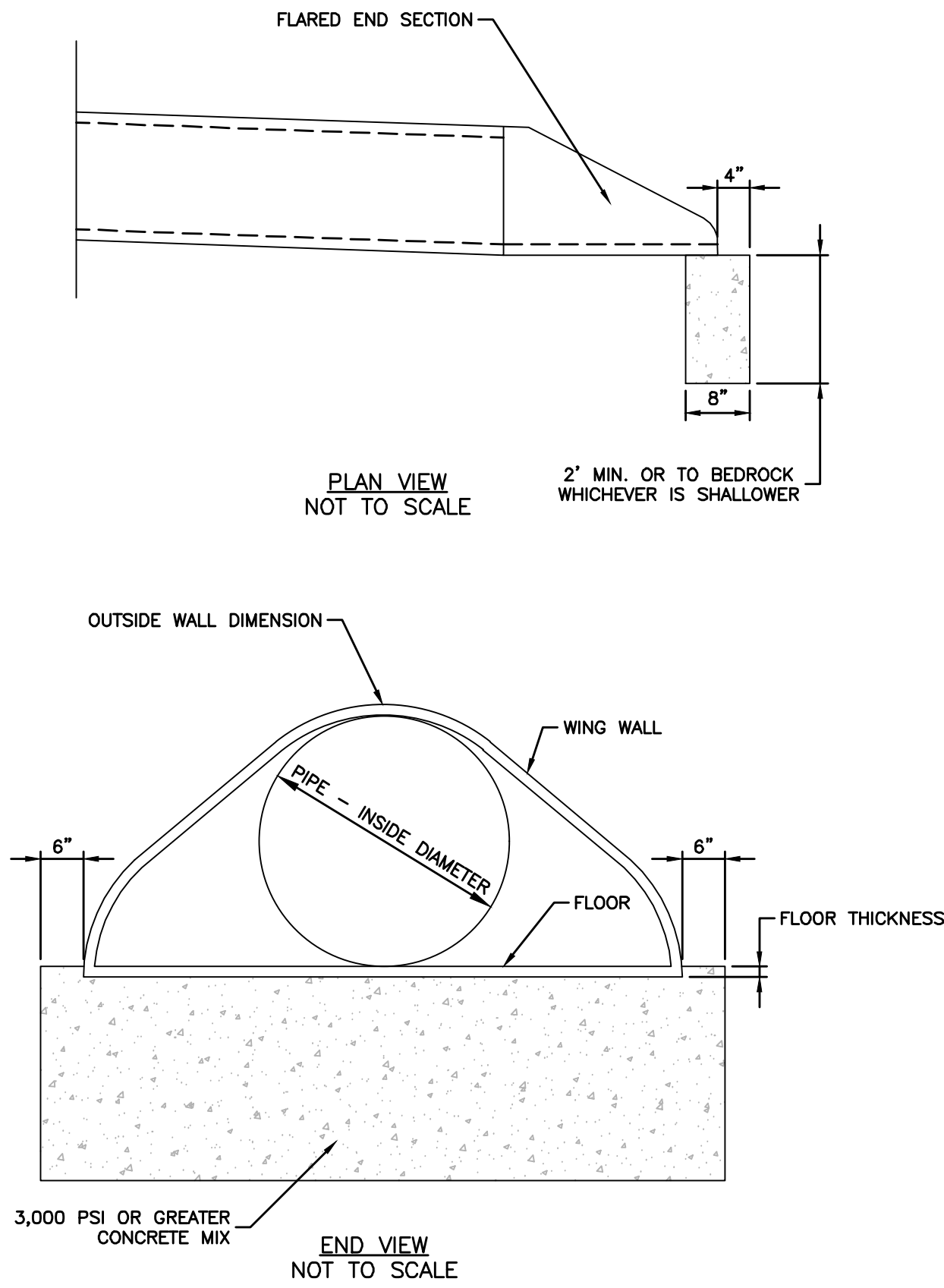
TYPICAL SECTION FOR PLASTIC PIPE
(IN ROCK OR SOIL)

1. BACKFILL SHALL BE JOB EXCAVATED MATERIAL FREE FROM DEBRIS AND STONES COMPACTED TO 90% OF MAXIMUM DENSITY AT OPTIMUM MOISTURE CONTENT AS DETERMINED BY ASTM D698 FOR BACKFILL UNDER PAVEMENT (EXISTING OR PROPOSED).

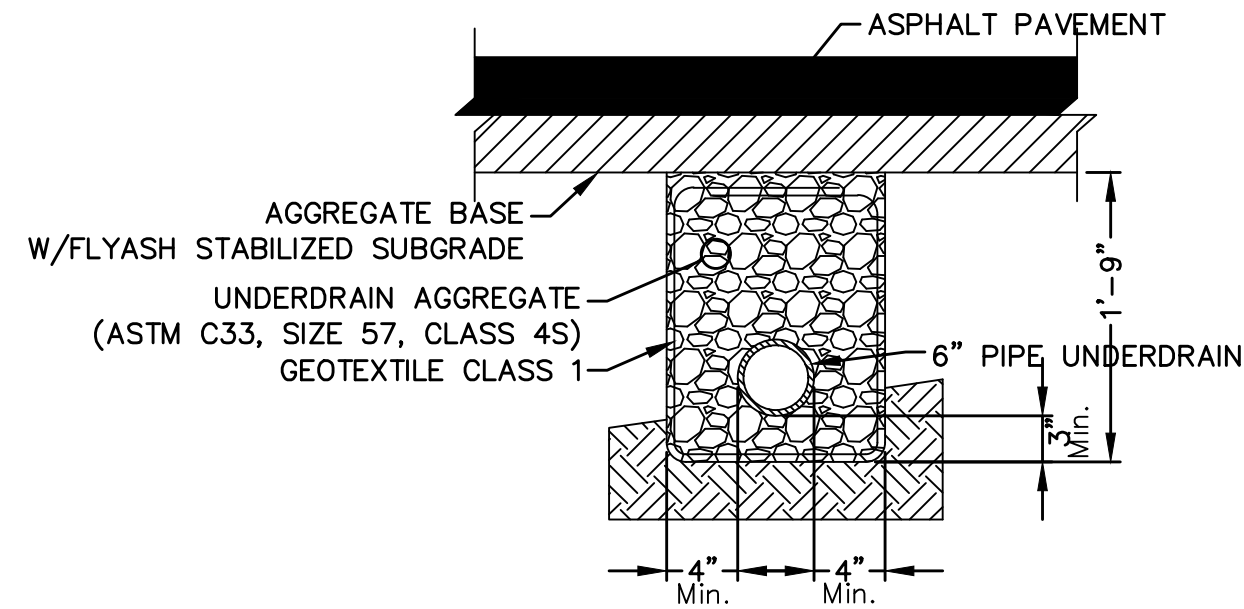
2. TRENCH BANKS MAY BE CUT BACK ON SLOPES IN ACCORDANCE WITH CURRENT OSHA REGULATIONS, BUT ONLY IN AREAS WHERE THE INCREASED TRENCH WIDTH WILL NOT INTERFERE WITH SURFACE FEATURES. SLOPES MUST NOT EXTEND BELOW TOP OF BEDDING.

3. MINIMUM AND MAXIMUM WIDTHS SHALL BE IN ACCORDANCE WITH PIPE MANUFACTURER'S RECOMMENDATION AS APPROVED ON ENGINEERING PLANS.

01 N.T.S.
UNDERGROUND PIPE INSTALLATION FROM STORM SEWER LINES



03 N.T.S.
FLARED END SECTION SUPPORT DETAIL



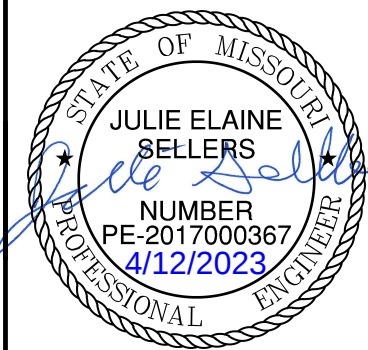
NOTES:

- Where Pipe Underdrains are used, all Underdrain Outlet Pipes shall be solid wall with watertight joints. All Outlets Pipes shall be tied into the nearest storm sewer inlets at roadway sag locations as indicated in the street profile.
- All Underdrain Pipes shall be installed at a minimum slope of 1%.
- Underdrain Pipe shall be installed with the perforations placed down.
- Blanket Underdrain Aggregate, Pipe Underdrain Aggregate, Pipe Underdrain, Edge Underdrain and Outlet Pipe shall conform to City of Lee's Summit Specifications.
- Overlap geotextile at top of trench a minimum of 12".

05 N.T.S.
PIPE UNDERDRAIN LATERAL

olsson

NO. 1001 of Authority of 001892
301 E. BIRKING ST. SUITE 100
NORTH KANSAS CITY, MO 64116
TEL. 816.381.1177
WWW.OLSSON.COM



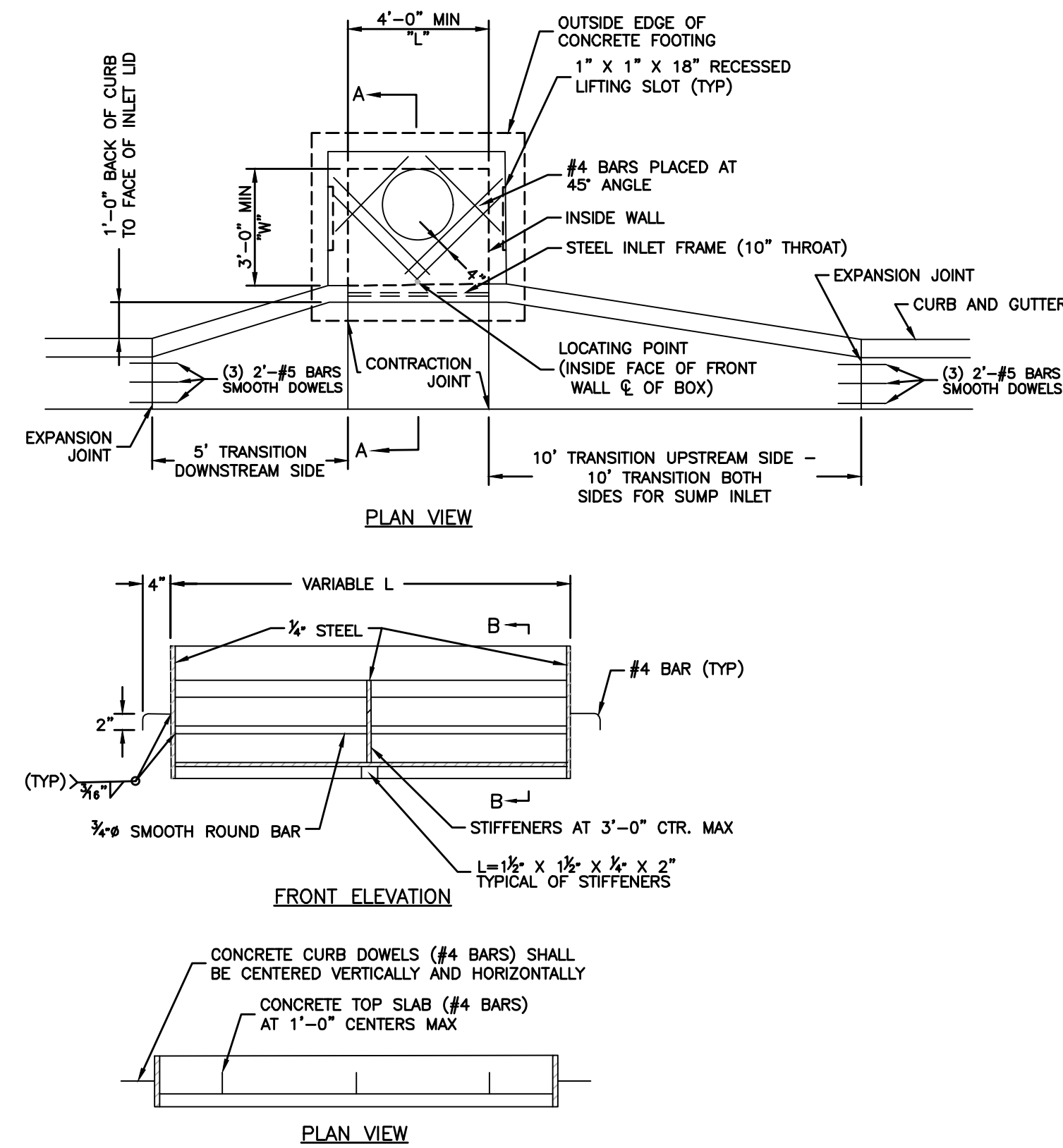
NO. REV.	DATE	REVISIONS DESCRIPTION	BY

STORM DETAIL SHEET STREET & STORM SEWER PLANS	2020
WOODSIDE RIDGE SECOND PLAT	
LEE'S SUMMIT, MO	

drawn by: _____ C.S.M.
checked by: _____ S.M.S.
designed by: _____ C.S.M.
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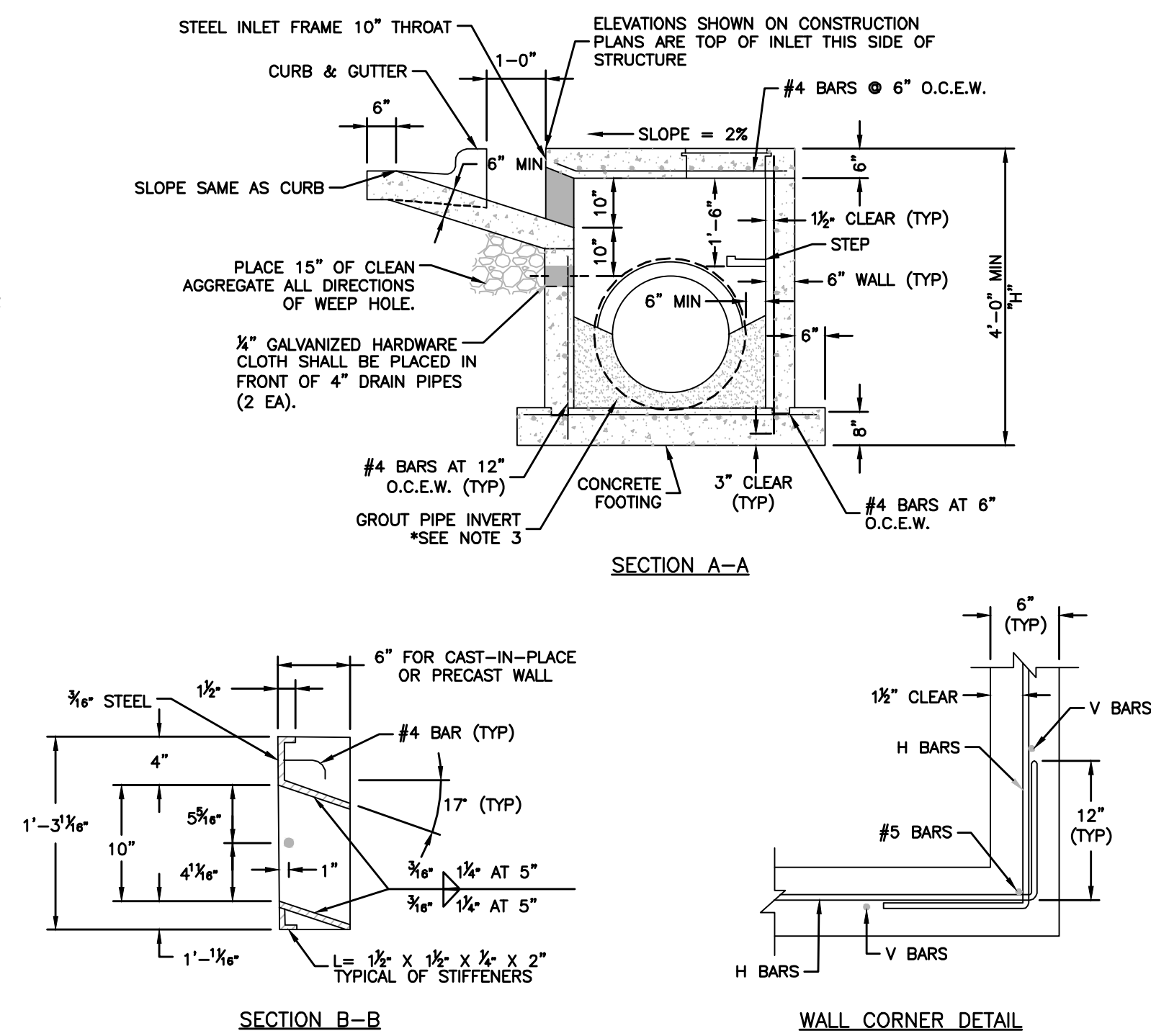
SHEET
C134

NOT ASBUILT



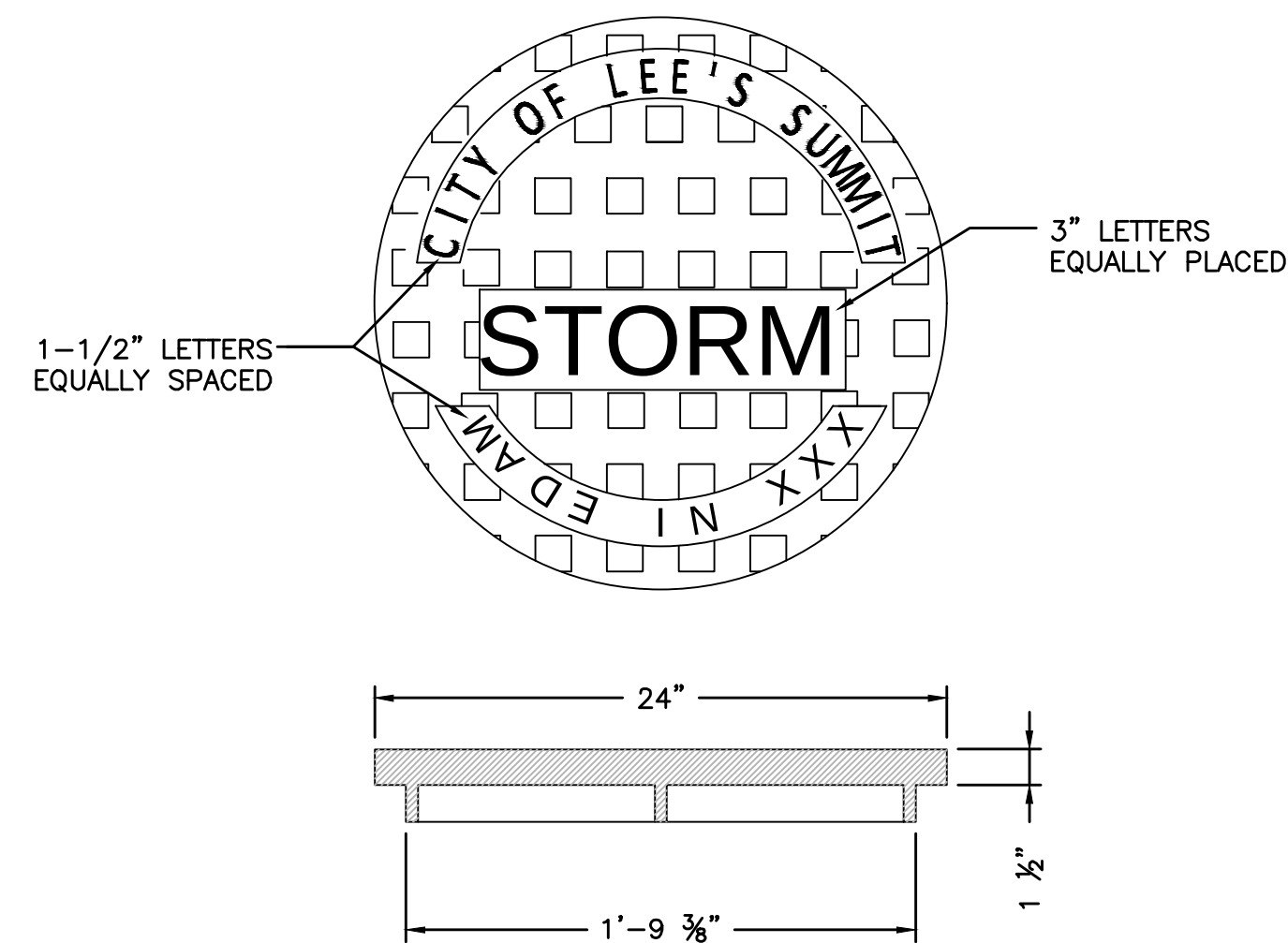
STEEL FRAME NOTES:

1. ALL WELDS SHALL BE PERFORMED IN ACCORDANCE WITH APPROPRIATE AWS SPECIFICATIONS AND PROCEDURES.
2. ALL WELDS ON EXPOSED SURFACES SHALL BE DRESSED SO AS TO PROVIDE A PLEASING FINISHED APPEARANCE.
3. THE ENTIRE FRAME SHALL BE PAINTED A SINGLE COAT OF CHEM-PRIME #37H-78 PRIMER (GRAY) OR EQUAL.



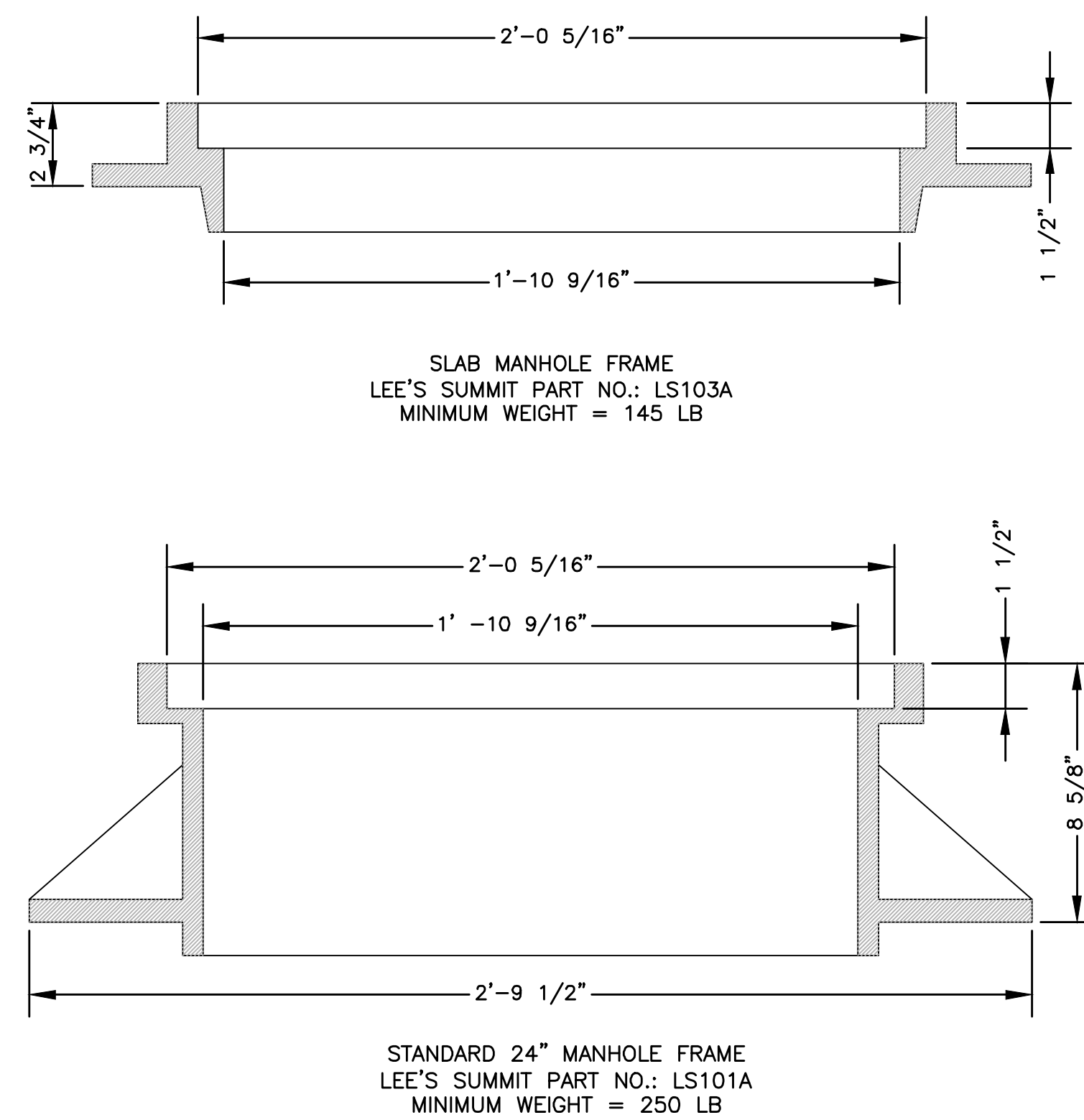
GENERAL NOTES:

1. THE FIRST DIMENSION LISTED IN THE CONSTRUCTION NOTES IS THE "L" DIMENSION.
2. THE SECOND DIMENSION IS THE "W" DIMENSION.
3. ELEVATIONS LISTED ON THE PROJECT PLANS ARE LISTED AT THE INSIDE FACE OF THE WALL.
4. FLOOR OF INLET GROUDED AND SHAPED TO MATCH PIPE INVERT TO PROVIDE SMOOTH FLOW.
5. LOCATE MH RING AND COVER ON BELL WALL IF POSSIBLE.
6. STEPS SHALL BE SPACED AT 1'-4" O.C. VERTICALLY ON BELL WALL IF POSSIBLE.
7. PRECAST LIFTS SHALL BE FINISHED WITH 3/4" CHAMFERED EDGES.
8. ON-GRADE INLETS SHALL CONFORM TO THE STREET GRADE AND GUMP INLETS SHALL BE LEVEL.
9. PRECAST LIDS SHALL BE PINNED, SEALED WITH NON-SHRINKABLE JOINT AND REMOVABLE FOR FUTURE MAINTENANCE.
10. LIFTING RINGS SHALL BE REMOVED AND SEALED WITH NON-SHRINKABLE GROUT
11. FOR RING AND COVER SEE THE STORMWATER APPROVED PRODUCT LIST.



STANDARD 24" MANHOLE COVER
MINIMUM WEIGHT = 160 LB
NOTE: PICK HOLES NOT SHOWN

*COVER AND FRAME MODEL INFORMATION REFER TO
THE STORMWATER APPROVED PRODUCT LIST.



*COVER AND FRAME MODEL INFORMATION REFER TO THE STORMWATER APPROVED PRODUCTS LIST.

NOT ASBUILT