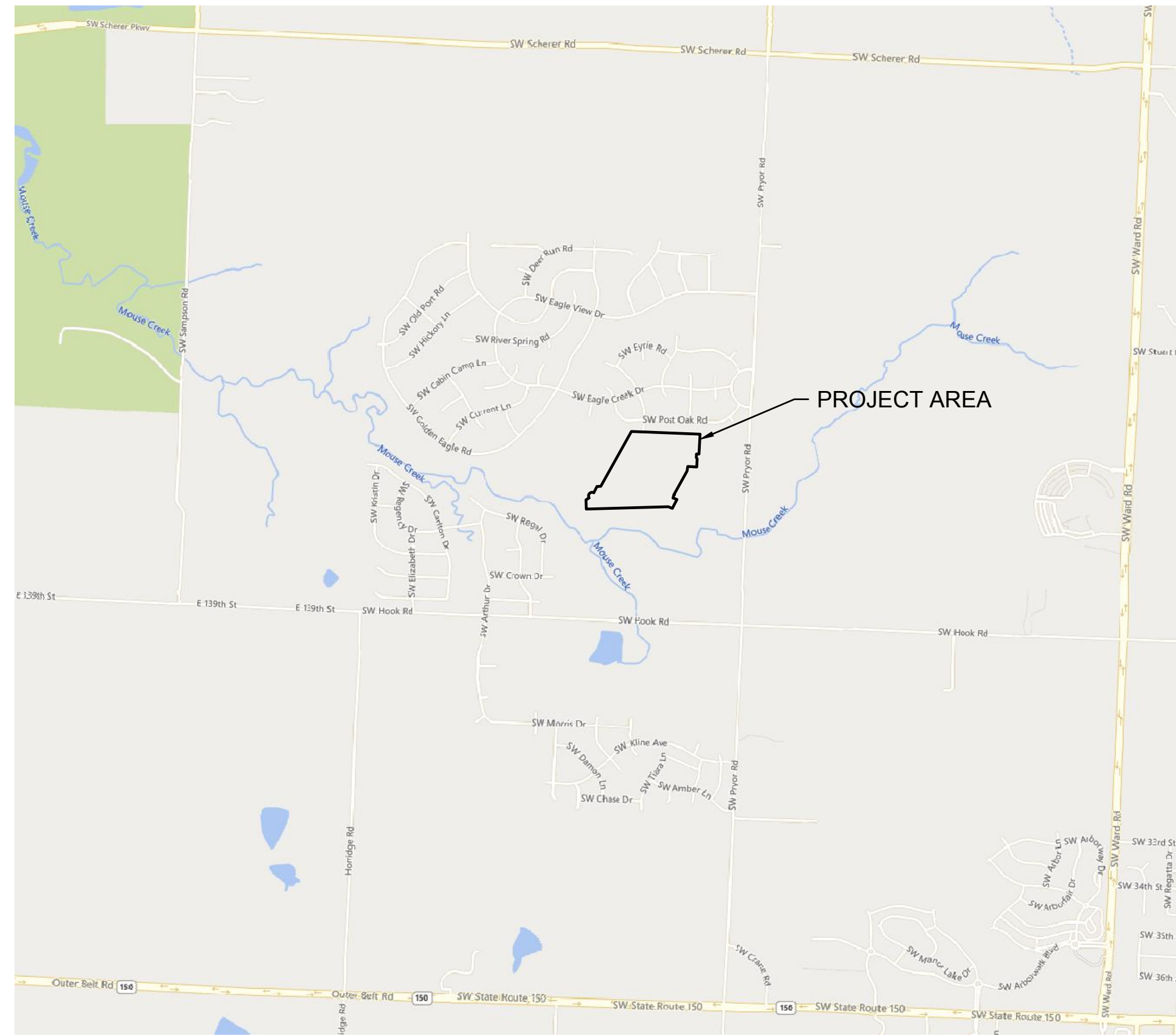
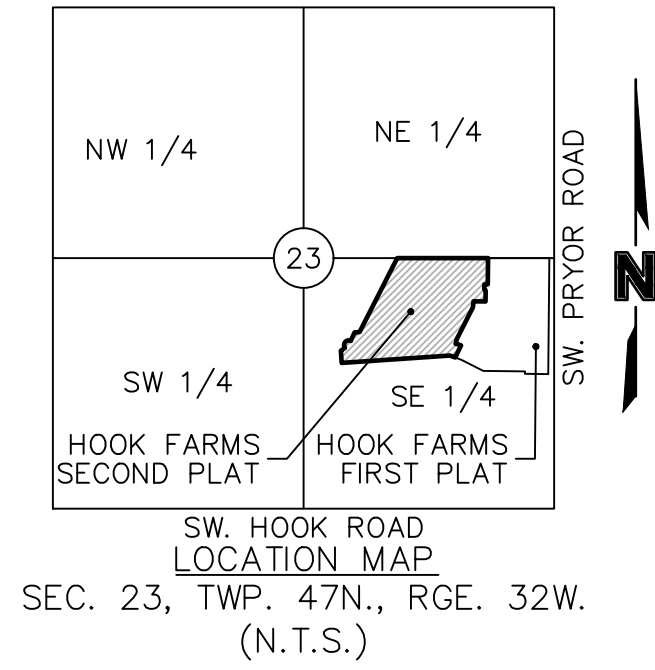


HOOK FARMS SECOND PLAT STREET & STORM SEWER PLANS

SECTION 23, TOWNSHIP 47 N, RANGE 32 W
IN LEE'S SUMMIT, JACKSON COUNTY, MO



PROPERTY DESCRIPTION

A TRACT OF LAND IN THE SOUTHEAST QUARTER OF SECTION 23, 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. ROUDEBUSH, P.L.S. 2002014092 AS FOLLOWS: COMMENCING AT THE SOUTHEAST CORNER OF SAID SOUTHEAST QUARTER; THENCE NORTH 02°45'34" EAST, ON THE EAST LINE OF SAID SOUTHEAST QUARTER, 2,635.08 FEET TO THE NORTHEAST CORNER OF SAID SOUTHEAST QUARTER; THENCE NORTH 87°45'24" WEST, ON THE NORTH LINE OF SAID SOUTHEAST QUARTER, 50.00 FEET TO THE SOUTHEAST CORNER OF LOT 3, EAGLE CREEK-FIRST PLAT, A SUBDIVISION IN SAID LEE'S SUMMIT RECORDED AS INSTRUMENT NUMBER 110409 IN BOOK 165 AT PAGE 01 IN JACKSON COUNTY RECORDER OF DEEDS OFFICE, ALSO BEING THE NORTHWEST CORNER OF PROPOSED HOOK FARMS FIRST PLAT; THENCE CONTINUING NORTH 87°45'24" WEST ON SAID NORTH LINE, ALSO BEING THE PROPOSED NORTH LINE OF SAID PROPOSED HOOK FARMS FIRST PLAT, ALSO BEING THE SOUTH LINE OF SAID EAGLE CREEK-FIRST PLAT, 643.83 FEET TO THE POINT OF BEGINNING OF THE TRACT OF LAND TO BE HEREIN DESCRIBED; THENCE LEAVING SAID NORTH AND SOUTH LINES, SOUTH 02°59'10" WEST, ALONG THE PROPOSED WESTERLY LINE OF PROPOSED HOOK FARMS FIRST PLAT, 277.38 FEET; THENCE NORTH 87°00'50" WEST, ALONG SAID PROPOSED WESTERLY LINE, 36.00 FEET; THENCE SOUTH 02°59'10" WEST, ALONG SAID PROPOSED WESTERLY LINE, 50.00 FEET; THENCE SOUTH 42°00'50" EAST, ALONG SAID PROPOSED WESTERLY LINE, 19.80 FEET; THENCE SOUTH 02°59'10" WEST, ALONG SAID PROPOSED WESTERLY LINE, 116.00 FEET; THENCE NORTH 87°00'50" WEST, ALONG SAID PROPOSED WESTERLY LINE, 126.12 FEET; THENCE SOUTH 07°19'52" WEST, ALONG SAID PROPOSED WESTERLY LINE, 64.17 FEET; THENCE SOUTH 29°10'47" WEST, ALONG SAID PROPOSED WESTERLY LINE, 375.17 FEET; THENCE SOUTH 15°20'56" WEST, ALONG SAID PROPOSED WESTERLY LINE, 50.00 FEET; THENCE ALONG SAID PROPOSED WESTERLY LINE, EASTERLY ALONG A CURVE TO THE RIGHT HAVING AN INITIAL TANGENT BEARING OF SOUTH 74°39'04" EAST WITH A RADIUS OF 275.00 FEET, A CENTRAL ANGLE OF 11°57'16" AND AN ARC DISTANCE OF 57.38 FEET; THENCE SOUTH 27°18'12" WEST, ALONG SAID PROPOSED WESTERLY LINE, 138.17 FEET; THENCE LEAVING SAID PROPOSED WESTERLY LINE, NORTH 67°11'53" WEST, 61.05 FEET; THENCE SOUTH 88°21'16" WEST, 1,139.83 FEET; THENCE NORTH 01°38'44" WEST, 128.09 FEET; THENCE NORTH 57°02'58" EAST, 49.90 FEET; THENCE NORTHEASTERLY ALONG A CURVE TO THE RIGHT HAVING AN INITIAL TANGENT BEARING OF NORTH 32°57'02" WEST WITH A RADIUS OF 50.00 FEET, A CENTRAL ANGLE OF 150°22'53" AND AN ARC DISTANCE OF 131.23 FEET; THENCE NORTH 27°25'51" EAST, 98.75 FEET; THENCE NORTH 88°21'16" EAST, 52.12 FEET; THENCE NORTH 29°10'47" EAST, 873.51 FEET TO A POINT ON SAID NORTH LINE OF SAID SOUTHEAST QUARTER, ALSO BEING THE SOUTH LINE OF EAGLE CREEK-SECOND PLAT, A SUBDIVISION IN SAID LEE'S SUMMIT RECORDED AS INSTRUMENT NUMBER 200100058889 IN BOOK 165 AT PAGE 09 IN SAID JACKSON COUNTY RECORDER OF DEEDS OFFICE; THENCE SOUTH 87°45'24" EAST, ON SAID NORTH LINE AND SAID SOUTH LINE, 682.19 FEET TO THE SOUTHEAST CORNER OF SAID EAGLE CREEK-SECOND PLAT, ALSO BEING THE SOUTHWEST CORNER OF SAID EAGLE CREEK-FIRST PLAT; THENCE SOUTH 87°45'24" EAST ON SAID NORTH LINE, AND SAID SOUTH LINE OF EAGLE CREEK-FIRST PLAT, 273.64 FEET TO THE POINT OF BEGINNING. CONTAINING 1,157,274 SQUARE FEET OR 26.57 ACRES, MORE OR LESS.

BENCHMARK

JA-74
ELEVATION: 1058.10
N: 978461-2779
E: 2809447-9650
DESCRIPTION: KC METRO ALUMINUM GRS DISK SET IN CONCRETE. THE STATION IS STAMPED JA-74, 1988, AND PROJECTS ABOUT 1 INCH

NUMBER	TITLE
C101	TITLE SHEET
C102	GENERAL NOTES
C103	GENERAL LAYOUT
C104	TYPICAL SECTIONS
C105	GRADING PLAN (FOR REFERENCE)
C106	GRADING PLAN (FOR REFERENCE)
C107	SWALE 1 PLAN & PROFILE
C108	SWALE 2 PLAN & PROFILE
C109	SWALE 2 PLAN & PROFILE
C110	ROADWAY PLAN & PROFILE (SW HOOK FARM DRIVE)
C111	ROADWAY PLAN & PROFILE (SW HOOK FARM DRIVE)
C112	ROADWAY PLAN & PROFILE (SW HOOK FARM DRIVE)
C113	ROADWAY PLAN & PROFILE (SW WHEATFIELD COURT)
C114	ROADWAY PLAN & PROFILE (SW WHEATFIELD COURT)
C115	ROADWAY PLAN & PROFILE (SW TRACKER LANE)
C116	ROADWAY PLAN & PROFILE (SW TRACKER LANE)
C117	ROADWAY PLAN & PROFILE (SW TRACKER LANE)
C118	ROADWAY PLAN & PROFILE (SW FARMHOUSE ROAD)
C119	ROADWAY PLAN & PROFILE (SW FIREFLY LANE)
C120	ROADWAY PLAN & PROFILE (SW FIREFLY LANE)
C121	ROADWAY PLAN & PROFILE (SW BARLEY FIELD DRIVE)
C122	ROADWAY PLAN & PROFILE (SW BARLEY FIELD DRIVE)
C123	TRAFFIC CONTROL PLAN
C124	SW TRACKER LANE & SW HOOK FARM DRIVE
C125	SW FIREFLY LANE & SW HOOK FARM DRIVE
C126	SW BARLEY FIELD DRIVE & SW HOOK FARM DRIVE
C127	SW FARMHOUSE ROAD & SW TRACKER LANE
C128	SW WHEATFIELD COURT & SW TRACKER LANE
C129	SW FIREFLY LANE & SW WHEATFIELD COURT
C130	SW BARLEY FIELD DRIVE & SW WHEATFIELD COURT
C131	SW HOOK FARM DRIVE CUL-DE-SAC
C132	STORM SEWER PLAN & PROFILE (LINE 1)
C133	STORM SEWER PLAN & PROFILE (LINE 1)
C134	STORM SEWER PLAN & PROFILE (LINE 2)
C135	STORM SEWER PLAN & PROFILE (LINE 2)
C136	STORM SEWER PLAN & PROFILE (LINES 3 & 4)
C137	STORM SEWER PLAN & PROFILE (LINES 5 & 7)
C138	STORM SEWER PLAN & PROFILE (LINE 6)
C139	STORM SEWER PLAN & PROFILE (LINE 8)
C140	STORM SEWER PLAN & PROFILE (LINE 9)
C141	STORM SEWER PLAN & PROFILE (LINE 10)
C142	STORM SEWER PLAN & PROFILE (LINES 11 & 12)
C143	WATER QUALITY BASIN PLAN
C144	MASTER DRAINAGE PLAN
C145	DRAINAGE PLAN
C146	DRAINAGE TABLES
C147	DRAINAGE TABLES
C148	DETAIL SHEET
C149	DETAIL SHEET
C150	DETAIL SHEET

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

Julie E. Sellers
JULIE E. SELLERS, P.E.
CIVIL ENGINEER
MO # PE-2017000367
10/11/22
DATE

AS BUILT

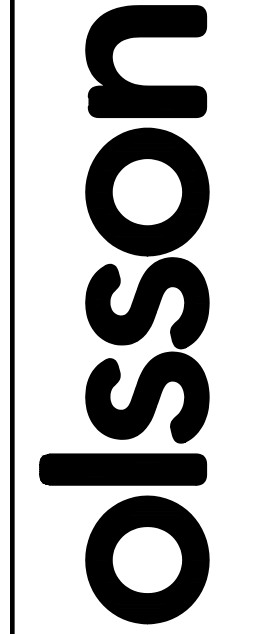
DATE SURVEYED: 2022-05-26
I HEREBY CERTIFY THAT THE CONDITIONS SHOWN ARE CORRECT AND THE SEWER ARE ACCEPTABLY LOCATED WITHIN EXISTING EASEMENTS OR RIGHT OF WAYS.

PROJECT TEAM & UTILITY CONTACT LIST	
OWNER / DEVELOPER HUNT MIDWEST REAL ESTATE DEVELOPMENT, INC. 8300 NE UNDERGROUND DRIVE KANSAS CITY, MO 64161 CONTACT: AARON SCHMIDT PHONE: 816.455.2500	UTILITY SERVICE NUMBERS NAME: LEE'S SUMMIT PUBLIC WORKS PHONE: 816-969-1800 NAME: LEE'S SUMMIT WATER & SERVICES DEPARTMENT PHONE: 816-969-1940 NAME: SPIRE (MGE) PHONE: 314-342-0500 NAME: AT&T PHONE: 800-286-8313 NAME: EVERGY PHONE: 816-471-5275 NAME: SPECTRUM (TWC) PHONE: 877-772-2253 NAME: GOOGLE FIBER PHONE: 877-454-6959
ENGINEER OLSSON 1301 BURLINGTON, SUITE 100 NORTH KANSAS CITY, MO 64116 CONTACT: JULIE E. SELLERS, P.E. PHONE: 816.361.1177 EMAIL: JSSELLERS@OLSSON.COM	
SURVEYOR OLSSON 1301 BURLINGTON, SUITE 100 NORTH KANSAS CITY, MO 64116 CONTACT: JASON ROUDEBUSH, P.L.S. PHONE: 816.361.1177 EMAIL: JROUDEBOUSH@OLSSON.COM	


NOT FOR CONSTRUCTION

REVIEWED FOR CONSTRUCTION





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Missouri Certificate of Authority #001592
1301 Burlington Street
North Kansas City, MO 64116
TEL 816.361.1177
FAX 816.361.1888
www.olsson.com



REV. NO.	DATE	REVISIONS DESCRIPTION
1	03-23-2021	REVISED PER CITY COMMENTS
2	04-16-2021	REVISED PER CITY COMMENTS
3	09-30-2021	CHANGES TO APPROVED PLANS

TITLE SHEET
STREET & STORM SEWER PLANS

HOOK FARMS
SECOND PLAT

REVISIONS

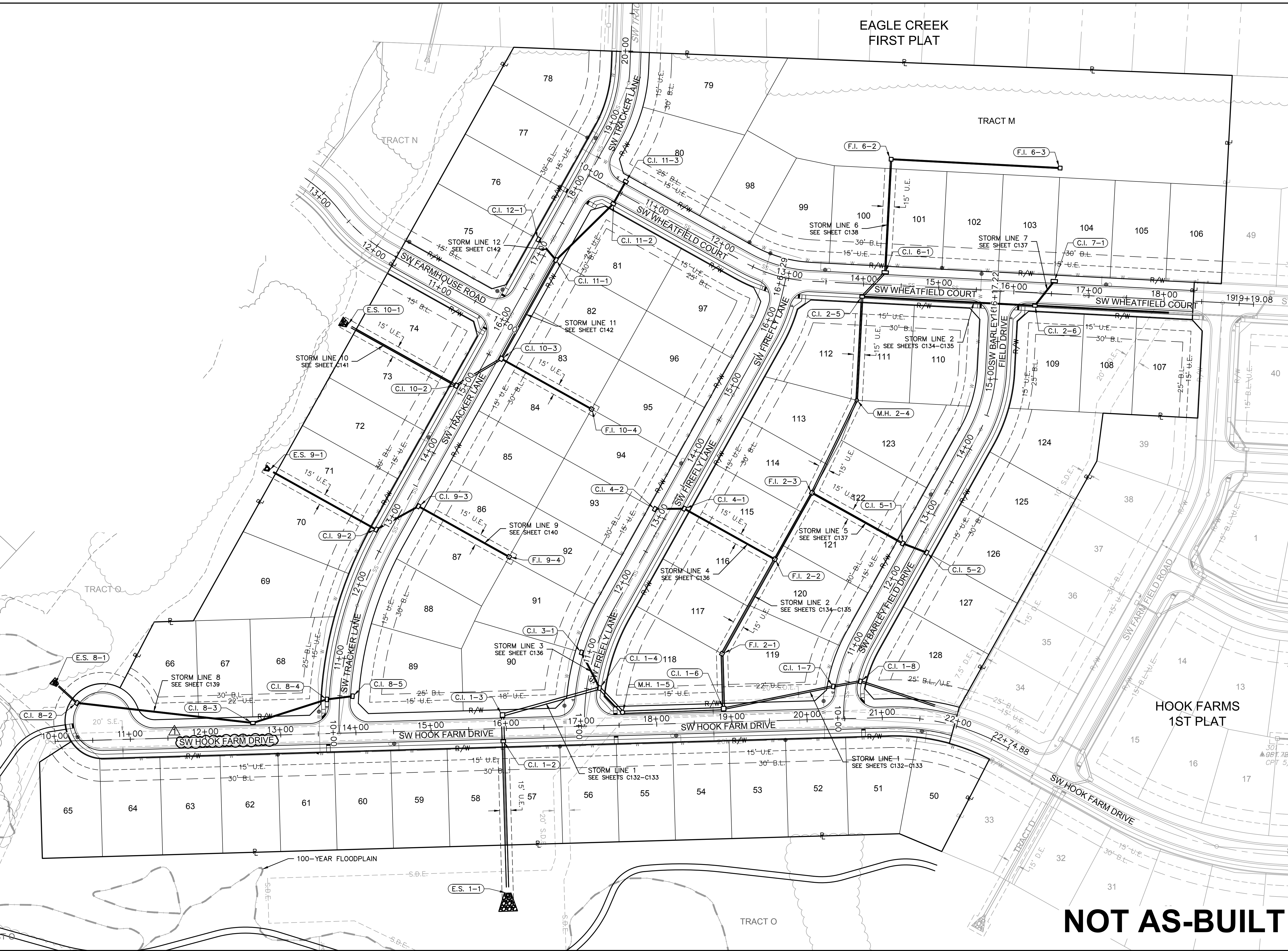
LEE'S SUMMIT, MO

2021

drawn by: B.M.W./A.A.
 checked by: B.M.W./A.A.
 designed by: J.E.S.
 QA/QC by: J.E.S.
 project no.: B19-4081
 date: 01-08-2021

SHEET
C101

DWG: F:\2019\4001-4500\019-4061-BV40-Design\AutoCAD\Asbuilt\Sheets\GNCV\Street & Storm Plans\C_GEN01_B194061.dwg USER: ssolyor
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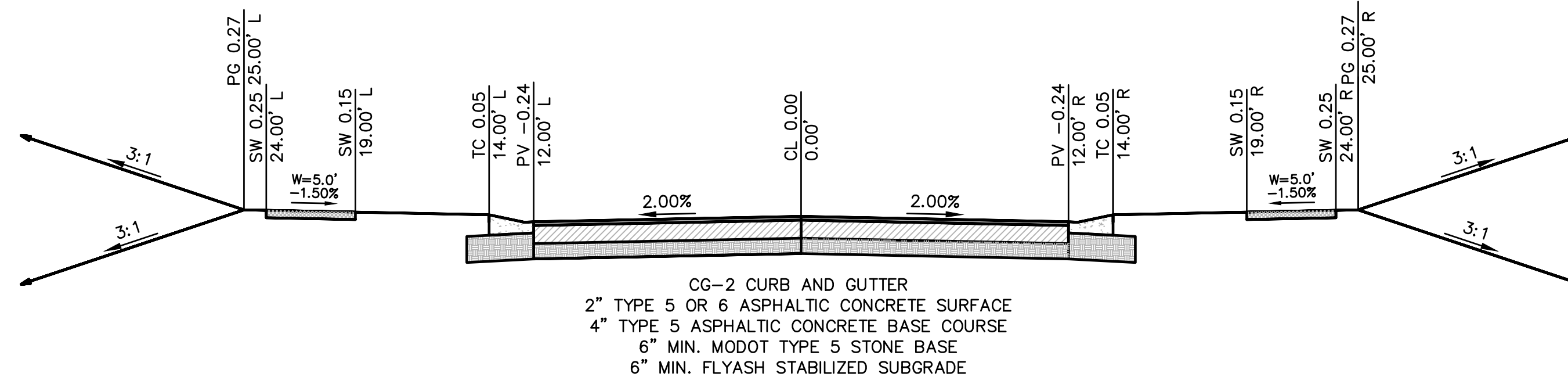
GENERAL LAYOUT
 STREET & STORM SEWER PLANS

HOOK FARMS
 SECOND PLAT

LEE'S SUMMIT, MO 2021

drawn by: B.M.W./A.A.
 checked by: B.M.W./A.A.
 designed by: B.M.W./A.A.
 QA/QC by: J.E.S.
 project no.: B19-4061
 date: 01-08-2021

REVISIONS

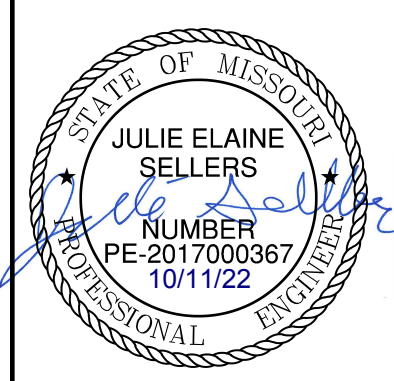


TYPICAL ROADWAY SECTION
 CG-2 CURB AND GUTTER
 2" TYPE 5 OR 6 ASPHALTIC CONCRETE SURFACE
 4" TYPE 5 ASPHALTIC CONCRETE BASE COURSE
 6" MIN. MODOT TYPE 5 STONE BASE
 6" MIN. FLYASH STABILIZED SUBGRADE
 SW HOOK FARM DRIVE, SW TRACKER LANE, SW FIREFLY LANE
 SW BARLEY FIELD DRIVE, SW WHEATFIELD COURT, SW FARMHOUSE ROAD
 N.T.S.

NOT AS-BUILT

TYPICAL SECTIONS STREET & STORM SEWER PLANS		REVISIONS DESCRIPTION REVISED PER CITY COMMENTS REVISED PER CITY COMMENTS CHANGES TO APPROVED PLANS	DATE 03-23-2021 04-16-2021 09-30-2021	BY
REV. NO. 1 2 3	DATE 03-23-2021 04-16-2021 09-30-2021	REVISIONS DESCRIPTION REVISED PER CITY COMMENTS REVISED PER CITY COMMENTS CHANGES TO APPROVED PLANS	DATE 03-23-2021 04-16-2021 09-30-2021	BY
HOOK FARMS SECOND PLAT		REVISIONS		2021
LEE'S SUMMIT, MO		2021		2021
SHEET C104		2021		2021

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REV. NO.	DATE	REVISIONS DESCRIPTION	BY
1	03-23-2021	REVISED PER CITY COMMENTS	
2	04-16-2021	REVISED PER CITY COMMENTS	
3	09-30-2021	CHANGES TO APPROVED PLANS	

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.

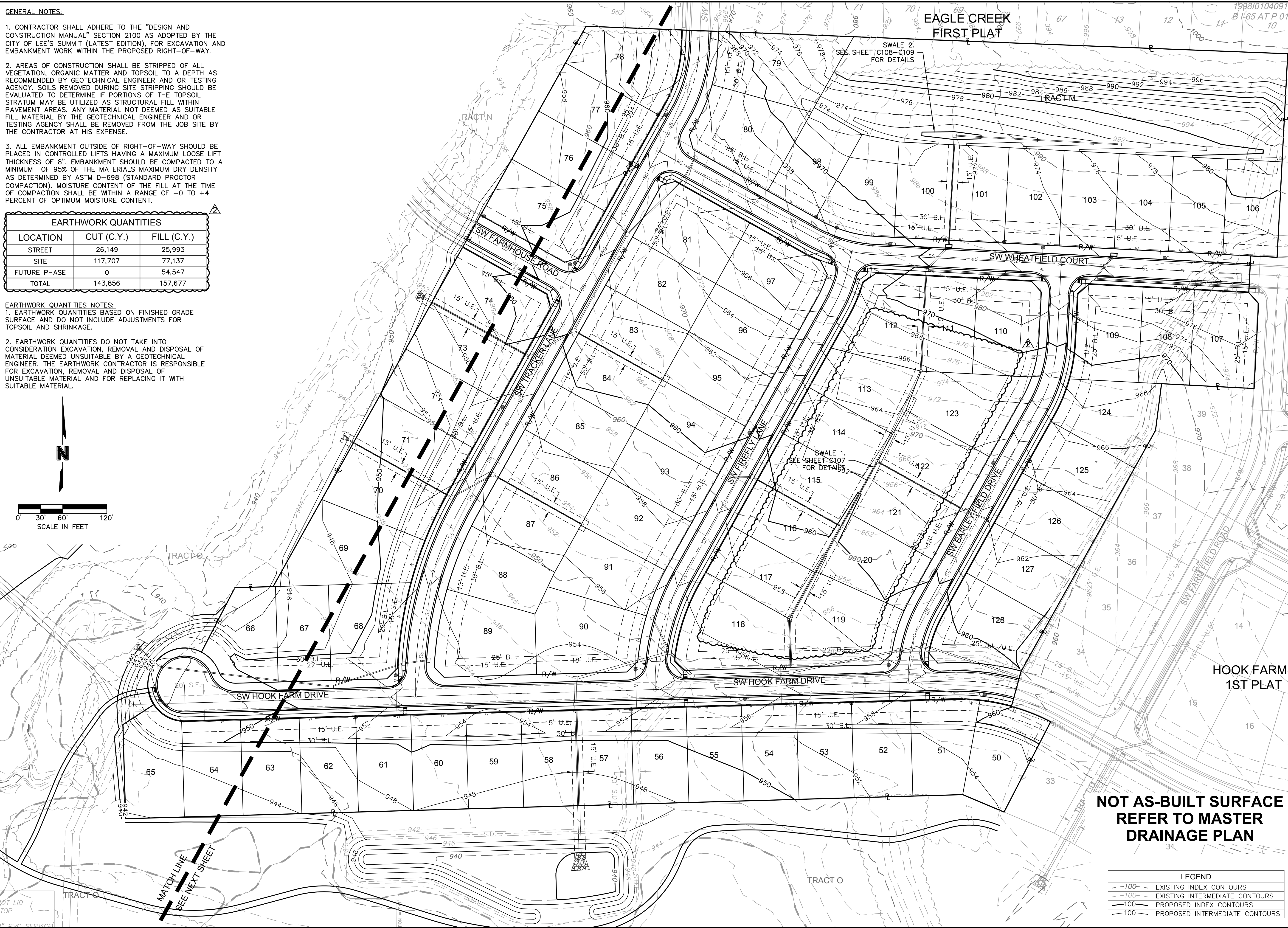
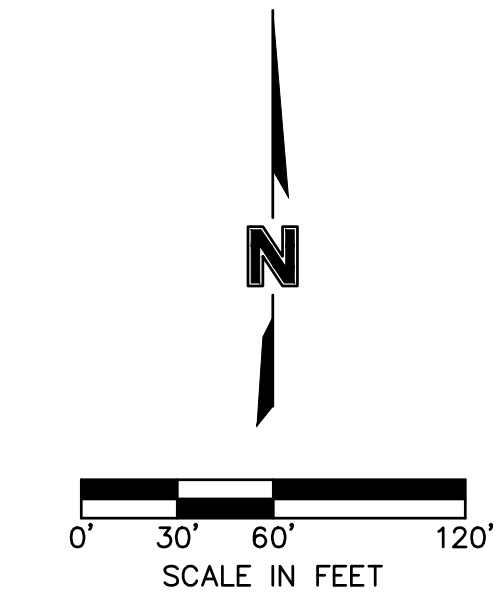
EARTHWORK QUANTITIES		
LOCATION	CUT (C.Y.)	FILL (C.Y.)
STREET	26,149	25,993
SITE	117,707	77,137
FUTURE PHASE	0	54,547
TOTAL	143,856	157,677

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.

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 C_PBDY_B194061
 C_PBASE_B194061



**NOT AS-BUILT SURFACE
REFER TO MASTER
DRAINAGE PLAN**

LEGEND

	EXISTING INDEX CONTOURS
	EXISTING INTERMEDIATE CONTOURS
	PROPOSED INDEX CONTOURS
	PROPOSED INTERMEDIATE CONTOURS

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STATE OF MISSOURI
 JULIE ELAINE SELLERS
 PE 2017000367
 10/11/22

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1	03-23-2021	REVISED PER CITY COMMENTS
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GRADING PLAN (FOR REFERENCE)
 STREET & STORM SEWER PLANS

HOOK FARMS
 SECOND PLAT

LEE'S SUMMIT, MO

2021

drawn by: B.M.W./A.A.
 checked by: B.M.W./A.A.
 designed by: B.M.W./A.A.
 QA/QC by: J.E.S.
 project no.: B19-4061
 date: 01-08-2021

**SHEET
C105**

GENERAL NOTES:

- 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.
- 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.
- 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.

FUTURE PHASE EARTHWORK CONTRIBUTIONS	
LOCATION	FILL (C.Y.)
HOOK FARMS 2ND PLAT	40,727
RETREAT AT HOOK FARMS 2ND PLAT	9,872
EXCESS	3,948

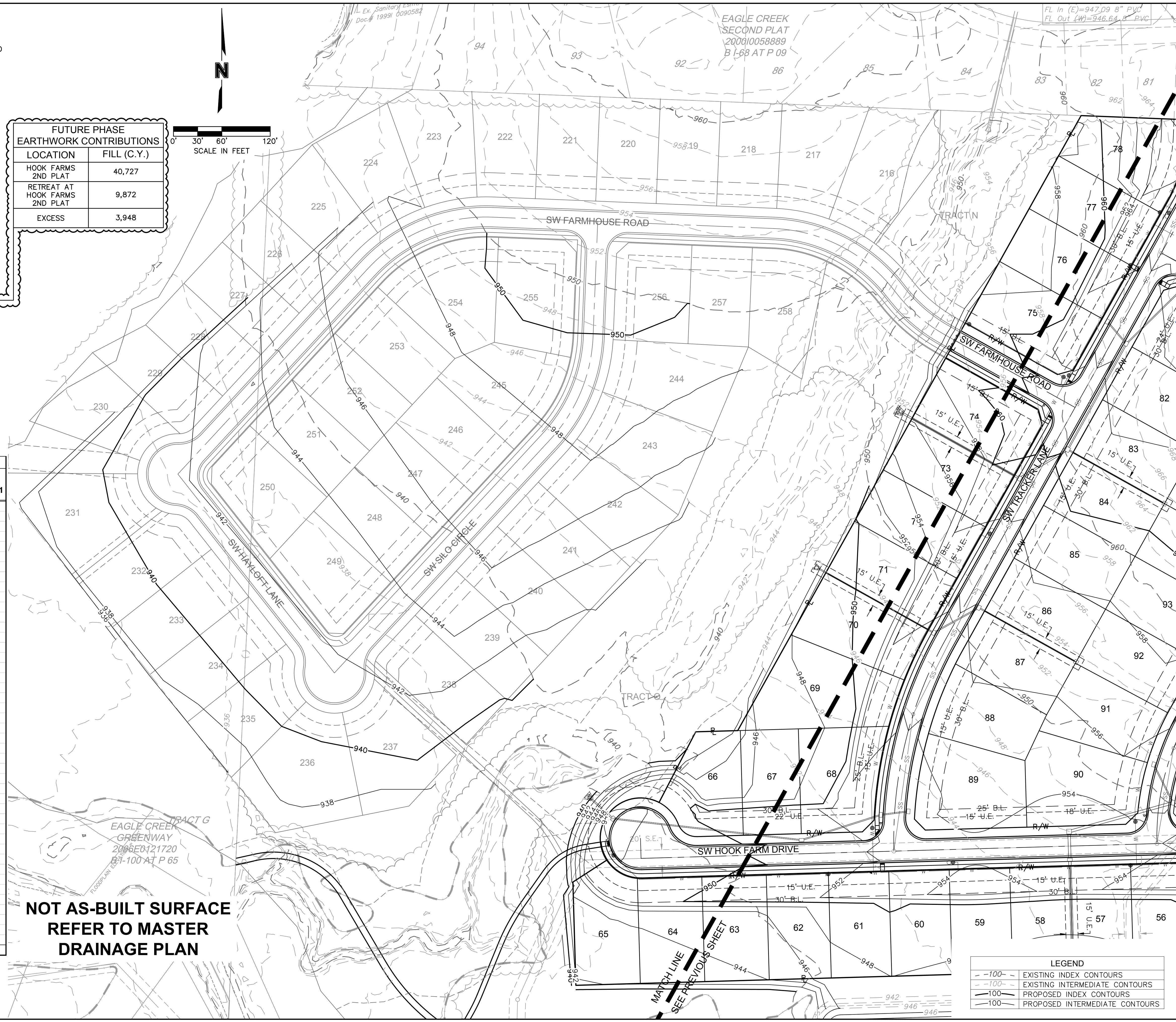
EARTHWORK QUANTITIES		
LOCATION	CUT (C.Y.)	FILL (C.Y.)
STREET	26,149	25,993
SITE	117,707	77,137
FUTURE PHASE	0	54,547
TOTAL	143,856	157,677

- EARTHWORK QUANTITIES NOTES:**
- EARTHWORK QUANTITIES BASED ON FINISHED GRADE SURFACE AND DO NOT INCLUDE ADJUSTMENTS FOR TOPSOIL AND SHRINKAGE.
 - 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.

LOT FILL INFORMATION			
LOT NUMBER	MAX DEPTH OF FILL (OVER 2' PLACED)	FILL PLACED ON EXISTING SLOPES > 5:1	PROPOSED SLOPES > 3:1
50	5.5'		
51	4.8'		
52	4.9'		
53	5.2'		
54	7.5'		
55	8.2'		
56	9.7'	X	
57	8.7'	X	
58	10.7'		
59	11.6'		
60	11.6'		
61	11.4'		
62	11.1'		
63	11.0'		
64	10.8'		
65	10.8'		
66	9.8'		
67	10.0'		
68	11.2'		
69	10.7'		
70	9.1'		
71	8.3'		
72	7.1'		
73	5.9'		
74	5.7'		
75	4.7'		
76	3.5'		
77	2.9'		
78	3.1'		
84	2.5'		
85	3.5'		
86	5.8'		
87	6.8'		
88	8.6'		
89	10.3'		
90	8.2'		
91	6.1'		
92	4.3'		
107	8.1'	X	
108	7.8'	X	
118	7.3'	X	
119	7.5'	X	
120	2.7'		
128	8.4'	X	

X Indicates condition applies to lot

**NOT AS-BUILT SURFACE
REFER TO MASTER
DRAINAGE PLAN**



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

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 C_PBNBY_B194061
 C_FBASE_B194061

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 TEL 816.361.1177
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STATE OF MISSOURI
 JULIE ELAINE
 SELLERS
 NUMBER
 PE-2017000367
 10/11/22
 PROFESSIONAL ENGINEER

REV. NO.	DATE	DESCRIPTION
1	03-23-2021	REVISED PER CITY COMMENTS
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3	09-30-2021	CHANGES TO APPROVED PLANS

GRADING PLAN (FOR REFERENCE)
 STREET & STORM SEWER PLANS

2021

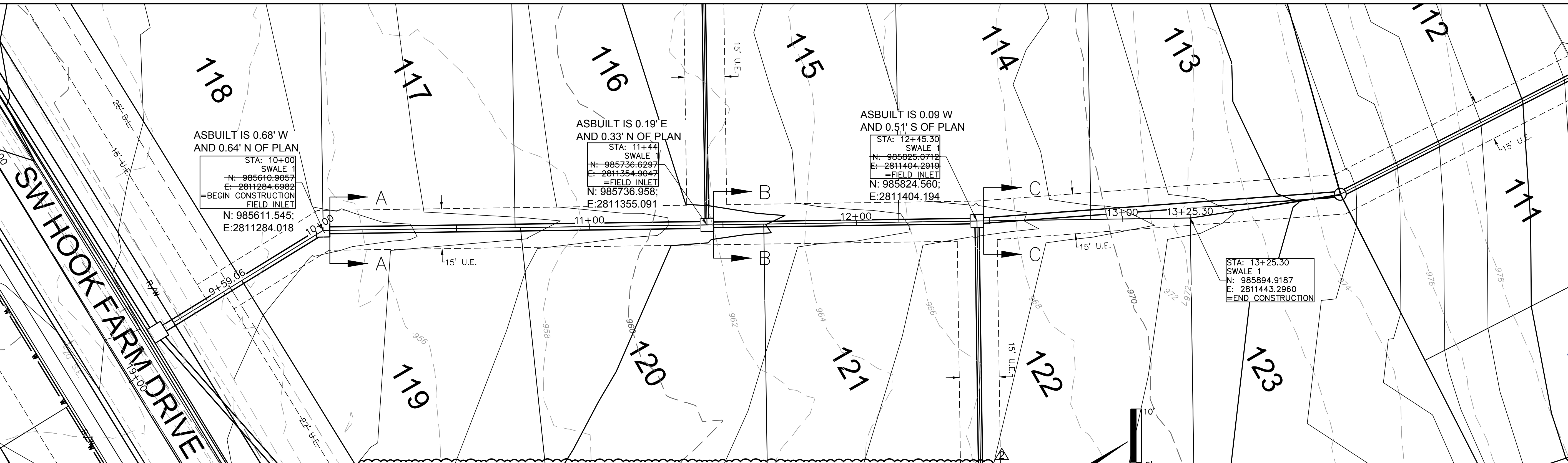
HOOK FARMS
 SECOND PLAT

LEE'S SUMMIT, MO

drawn by:	B.M.W./A.A.
checked by:	B.M.W.
designed by:	B.M.W./A.A.
QA/QC by:	J.E.S.
project no.:	B19-4061
date:	01-08-2021

SHEET C106

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ASBUILT IS 0.68' W
AND 0.64' N OF PLAN
 STA: 10+00.00
 SWALE 1
 N: 985610.9057
 E: 2811284.6982
 =BEGIN CONSTRUCTION
 FIELD INLET
 N: 985611.545;
 E: 2811284.018

ASBUILT IS 0.19' E
AND 0.33' N OF PLAN
 STA: 11+44.00
 SWALE 2
 N: 985736.6297
 E: 2811354.9047
 =FIELD INLET
 N: 985736.958;
 E: 2811355.091

ASBUILT IS 0.09 W
AND 0.51' S OF PLAN
 STA: 12+45.30
 SWALE 3
 N: 985825.0712
 E: 2811404.2919
 =FIELD INLET
 N: 985824.560;
 E: 2811404.194

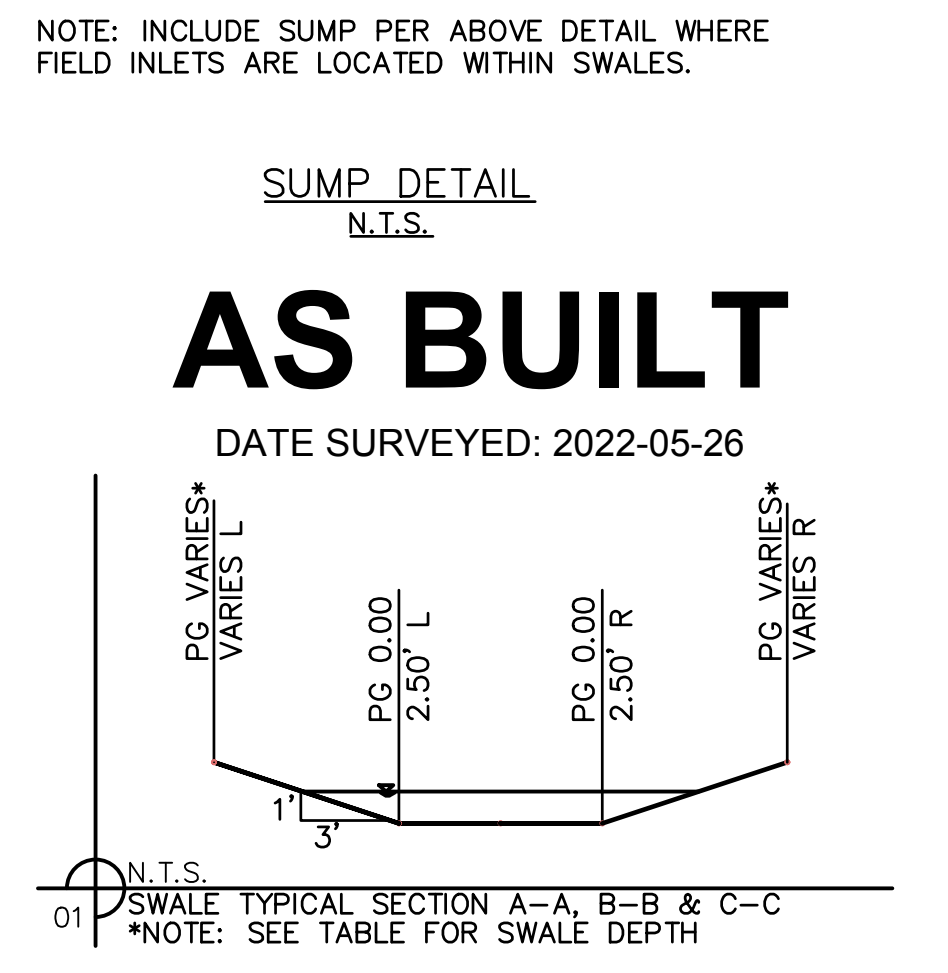
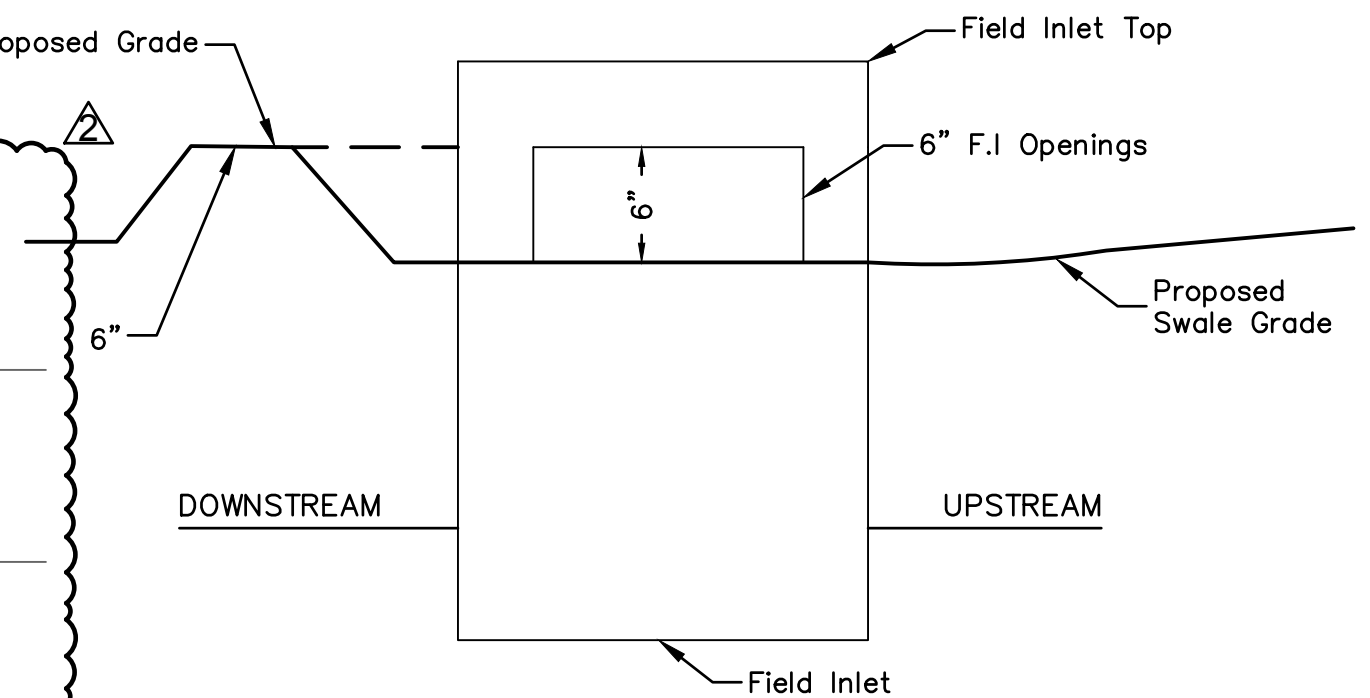
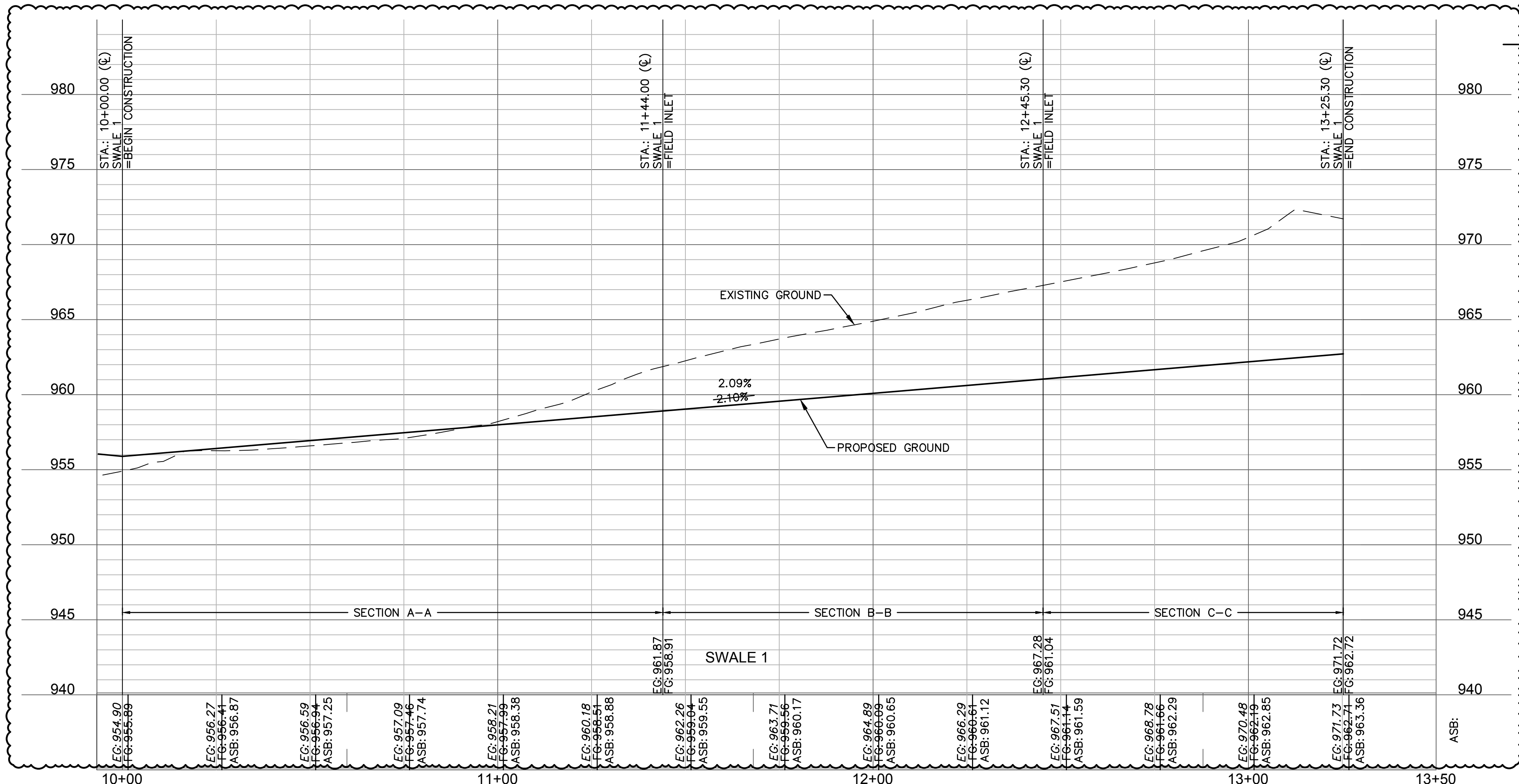
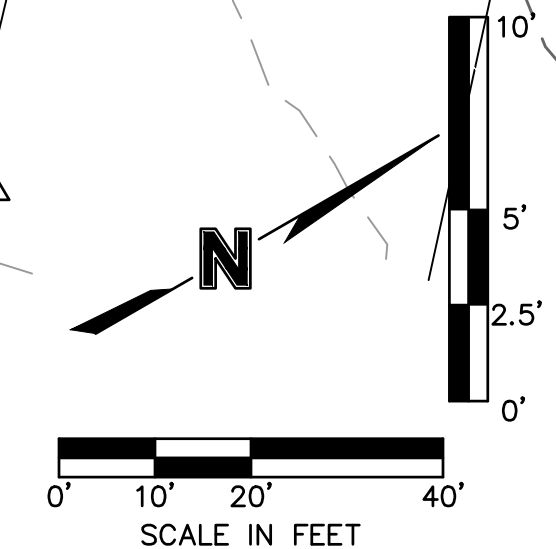
STA: 13+25.30
 SWALE 1
 N: 985894.9187
 E: 2811443.2960
 =END CONSTRUCTION

Swale Drainage Area Table (100 year Return Frequency)

Section	Drainage Area (ac.)	C	Tc (min)	i (in/hr)	K	Peak Flow (cfs)
A-A	0.89	0.51	11	8.06	1.25	4.56
B-B	0.49	0.51	12	5.73	2.25	3.21
C-C	0.86	0.51	5	8.27	1.25	4.52

Swale Design Table (100 Year Return Frequency)

SECTION	Section Data					Flow Data								
	Mannings Coefficient	Channel Slope (%)	Swale Depth (ft)	Left Side Slope (H:V)	Right Side Slope (H:V)	Bottom Width (ft)	Discharge (cfs)	Water Depth (ft)	Flow Area (ft ²)	Velocity (ft/sec)	Wetted Perimeter (ft)	Top Width (ft)	Specific Energy (ft)	Shear Stress (lbs/ft ²)
A-A	0.03	2.10%	1.29	3:1	3:1	5.00	4.56	0.29	1.70	2.68	6.83	6.74	0.40	0.33
B-B	0.03	2.10%	1.23	3:1	3:1	5.00	3.21	0.23	1.31	2.45	6.45	6.38	0.32	0.27
C-C	0.03	2.10%	1.28	3:1	3:1	5.00	4.52	0.28	1.64	2.76	6.77	6.68	0.40	0.32



SWALE GRADING NOTES:
 1. CONTRACTOR SHALL CONSTRUCT SWALES WITH MINIMUM SLOPE, WIDTH AND DEPTH AS SHOWN IN THE SWALE DESIGN TABLES.
 2. AS-BUILT SURVEY IS REQUIRED/APPROVED BY CITY FOR ALL SWALES AND PRIOR TO APPROVAL FOR ANY BUILDING FOUNDATION PERMIT. CONTRACTOR SHALL BE REQUIRED TO REGRADE SWALES AT CONTRACTOR'S EXPENSE IF ABOVE REQUIREMENTS ARE NOT MET.

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1	03-23-2021	REVISED PER CITY COMMENTS
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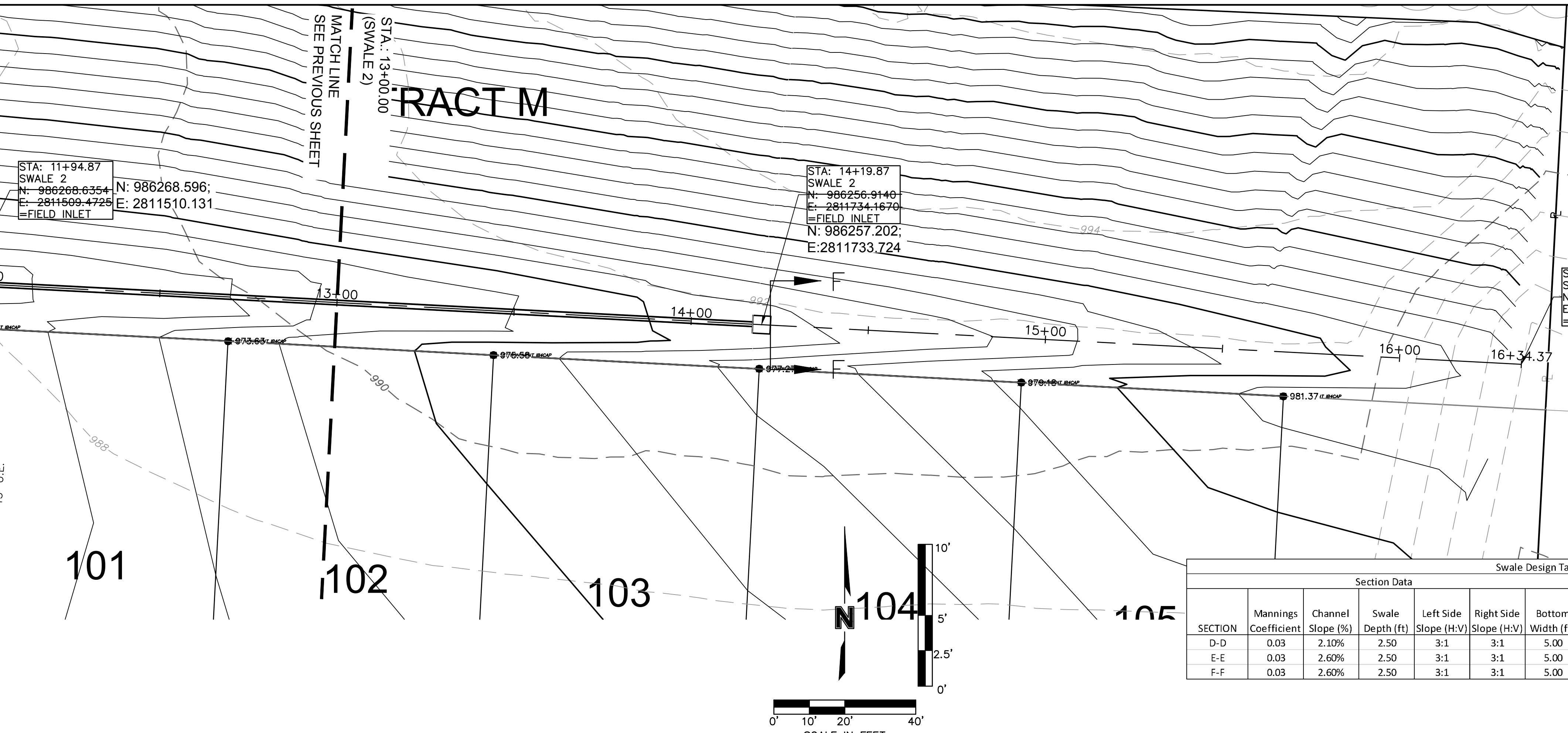
SWALE 1 PLAN & PROFILE
 STREET & STORM SEWER PLANS
 HOOK FARMS
 SECOND PLAT
 LEES SUMMIT, MO

REVISIONS
 2021

drawn by:	B.M.W./A.A.
checked by:	B.M.W.
designed by:	B.M.W./A.A.
QA/QC by:	J.E.S.
project no.:	B19-4061
date:	01-08-2021

SHEET C107

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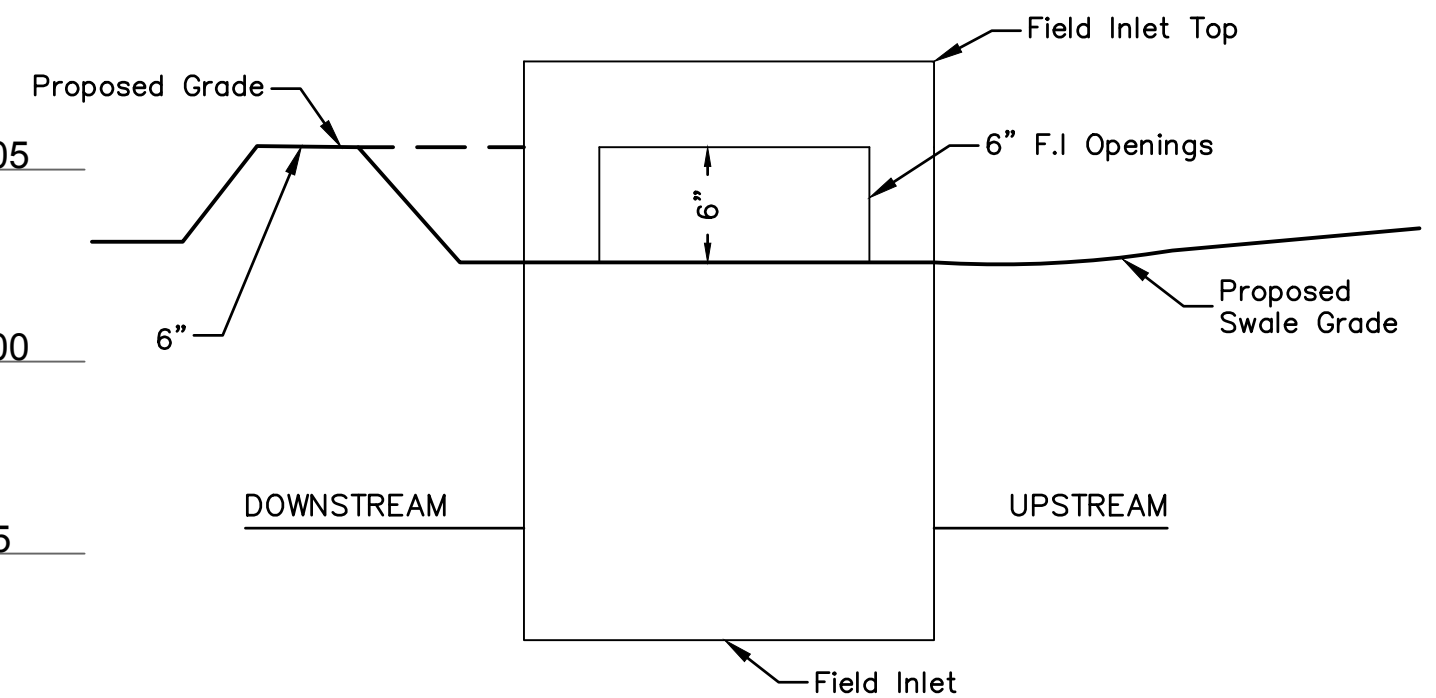
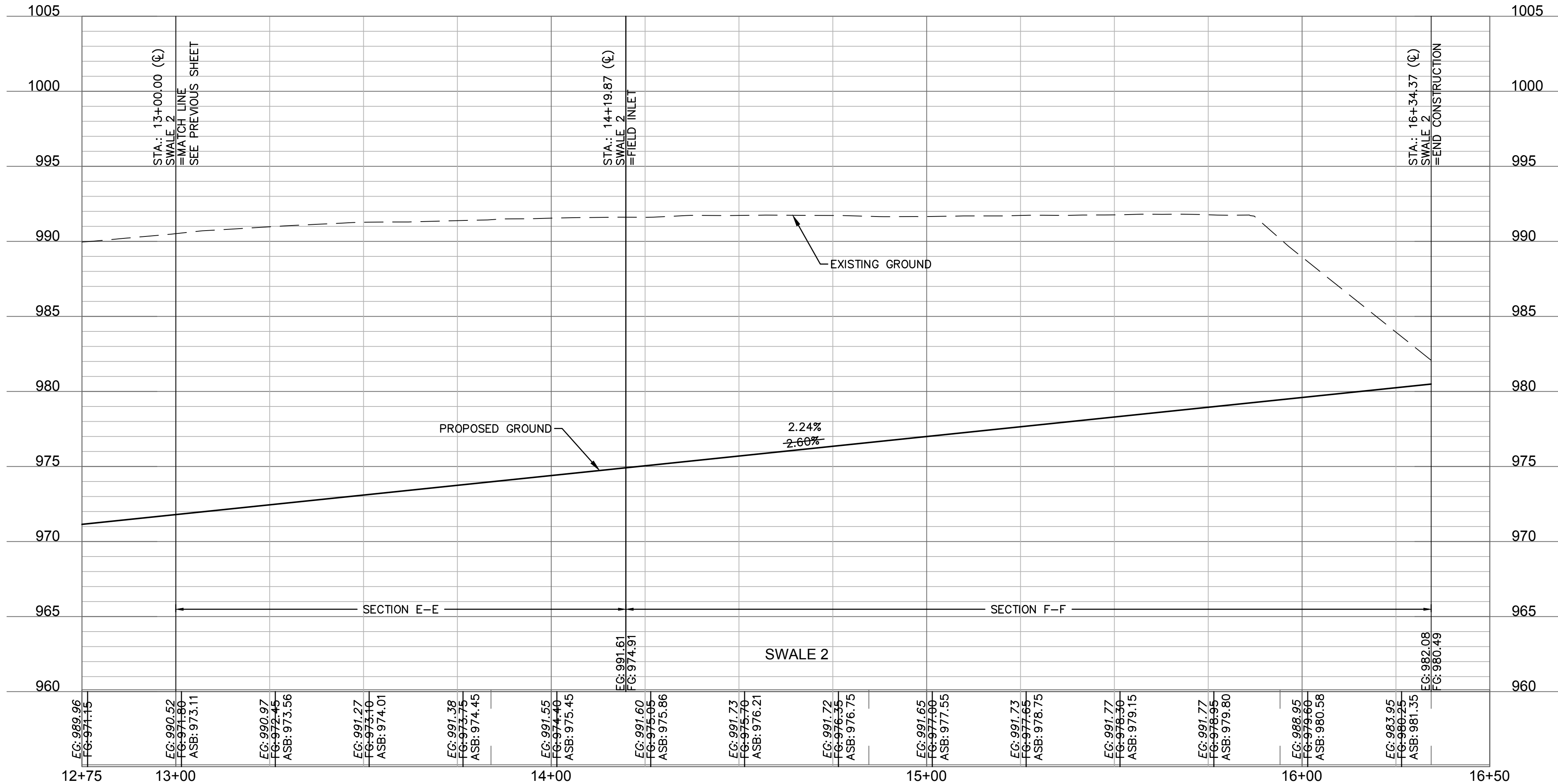
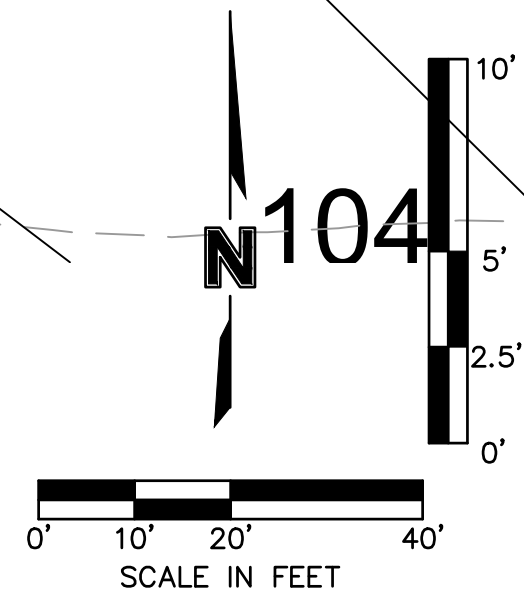


Swale Drainage Area Table (100 year Return Frequency)

Section	Drainage Area (ac.)	C	Tc (min)	i (in/hr)	K	Peak Flow (cfs)
D-D	1.02	0.51	5	8.27	1.25	5.37
E-E	1.30	0.51	5	4.60	2.25	6.88
F-F	1.29	0.51	5	3.18	3.25	6.78

Swale Design Table (100 Year Return Frequency)

SECTION	Section Data					Flow Data								
	Mannings Coefficient	Channel Slope (%)	Swale Depth (ft)	Left Side Slope (H:V)	Right Side Slope (H:V)	Bottom Width (ft)	Discharge (cfs)	Water Depth (ft)	Flow Area (ft ²)	Velocity (ft/sec)	Wetted Perimeter (ft)	Top Width (ft)	Specific Energy (ft)	Shear Stress (lbs/ft ²)
D-D	0.03	2.10%	2.50	3:1	3:1	5.00	5.37	0.31	1.84	2.92	6.96	6.86	0.44	0.35
E-E	0.03	2.60%	2.50	3:1	3:1	5.00	6.88	0.34	2.05	3.36	7.15	7.04	0.52	0.46
F-F	0.03	2.60%	2.50	3:1	3:1	5.00	6.78	0.34	2.05	3.31	7.15	7.04	0.52	0.46

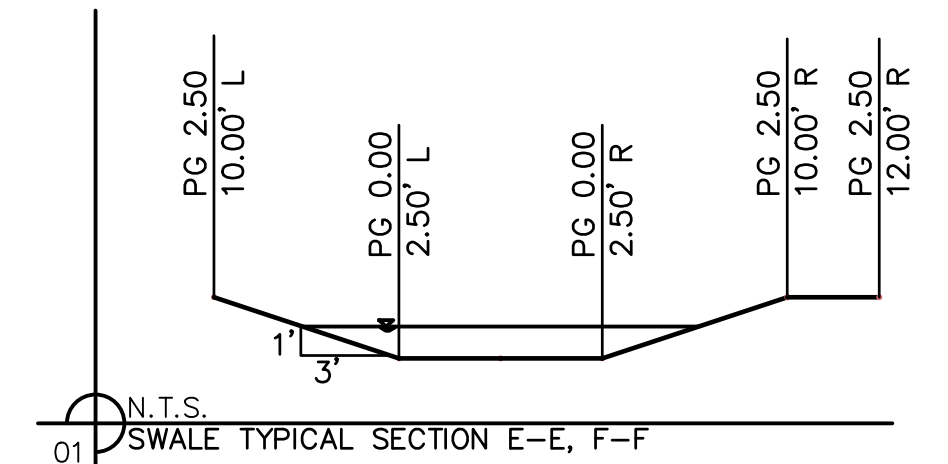


NOTE: INCLUDE SUMP PER ABOVE DETAIL WHERE FIELD INLETS ARE LOCATED WITHIN SWALES.

SUMP DETAIL
N.T.S.

AS BUILT

DATE SURVEYED: 2022-05-26



SWALE GRADING NOTES:

- CONTRACTOR SHALL CONSTRUCT SWALES WITH MINIMUM SLOPE, WIDTH AND DEPTH AS SHOWN IN THE SWALE DESIGN TABLES.
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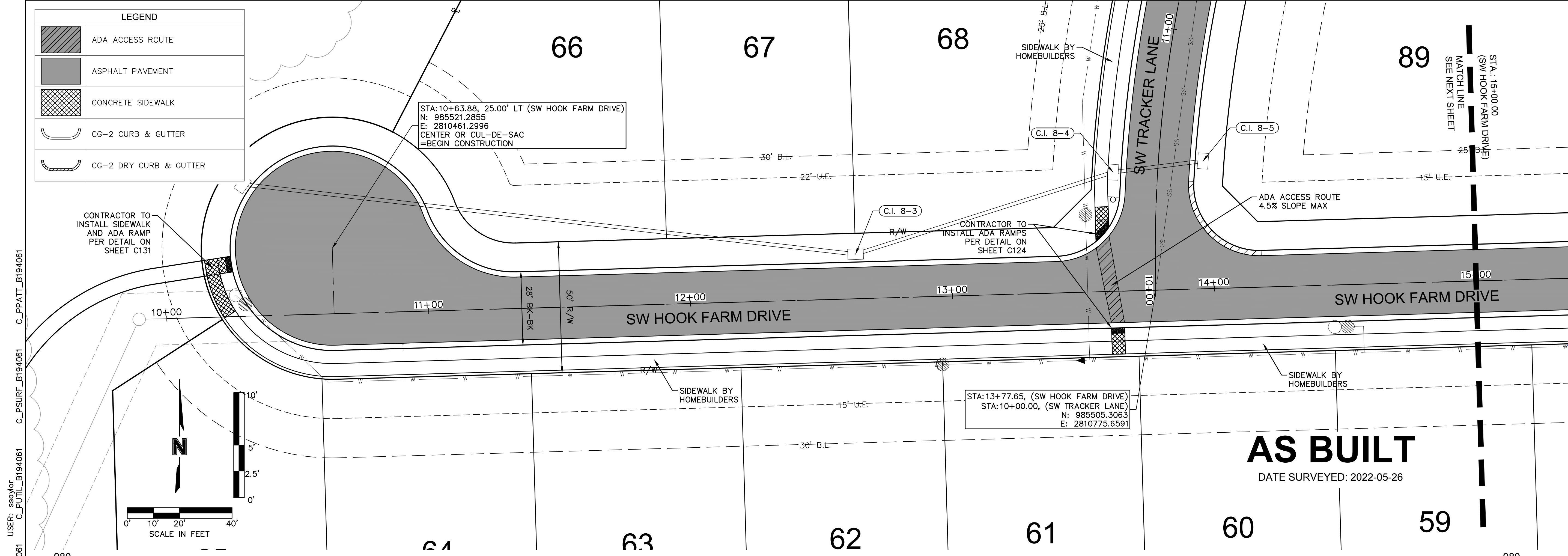
SWALE 2 PLAN & PROFILE
 STREET & STORM SEWER PLANS

HOOK FARMS
 SECOND PLAT

REVISIONS

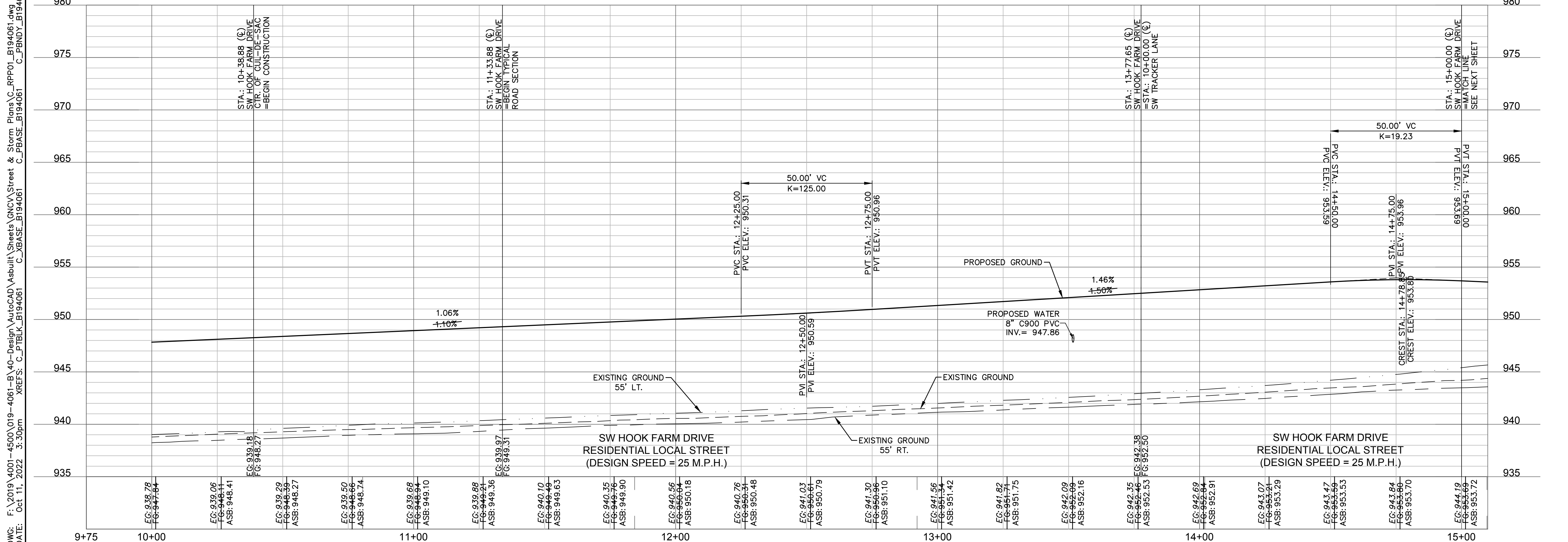
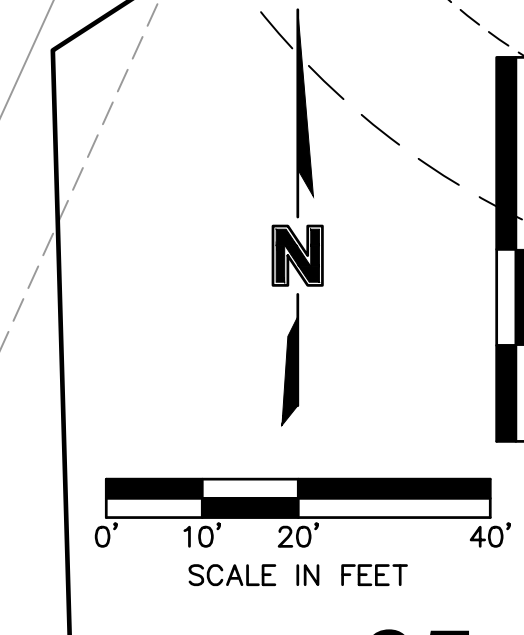
LEES SUMMIT, MO

SHEET
 C109



LEGEND

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	ASPHALT PAVEMENT
	CONCRETE SIDEWALK
	CG-2 CURB & GUTTER
	CG-2 DRY CURB & GUTTER



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 NUMBER PE-2017000367
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 PROFESSIONAL ENGINEER

REV. NO.	DATE	REVISIONS DESCRIPTION
1	03-23-2021	REVISED PER CITY COMMENTS
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ROADWAY PLAN & PROFILE (SW HOOK FARM DRIVE)
 STREET & STORM SEWER PLANS

2021

REVISIONS

HOOK FARMS
 SECOND PLAT

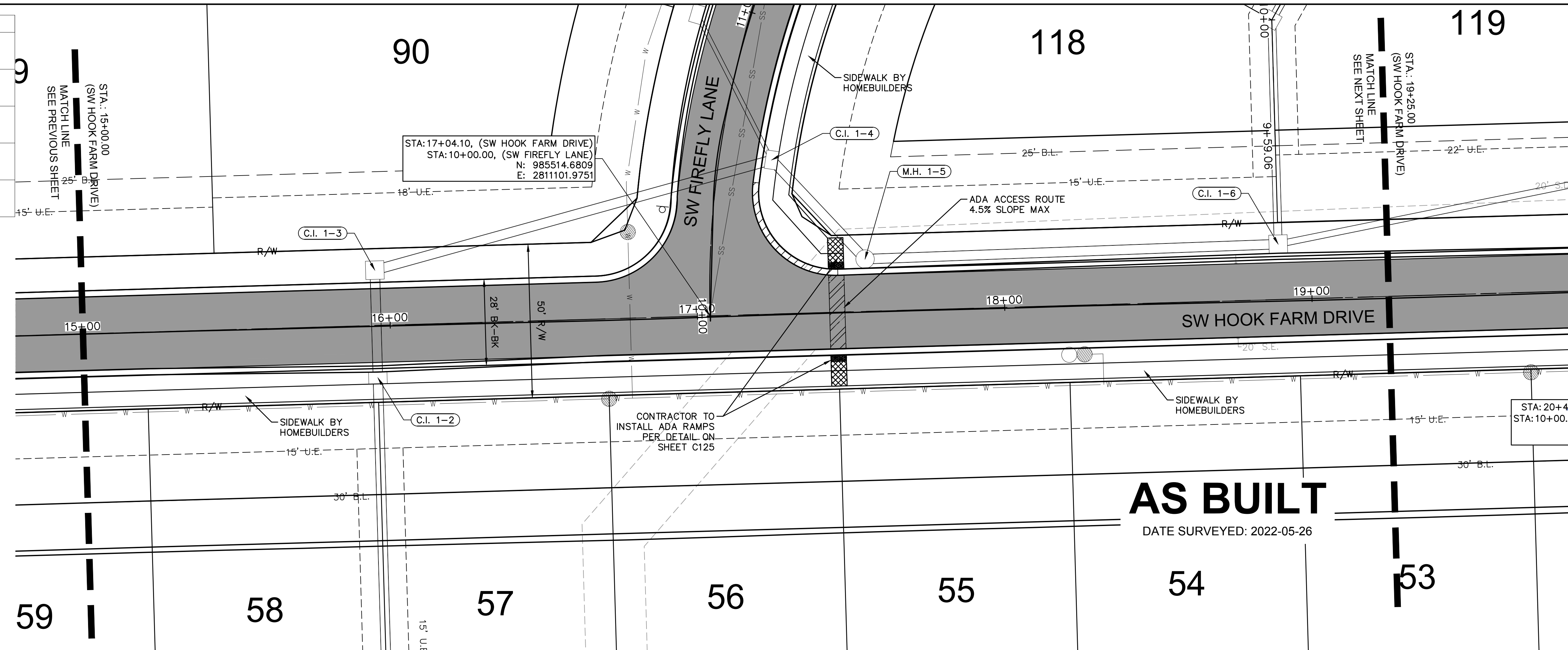
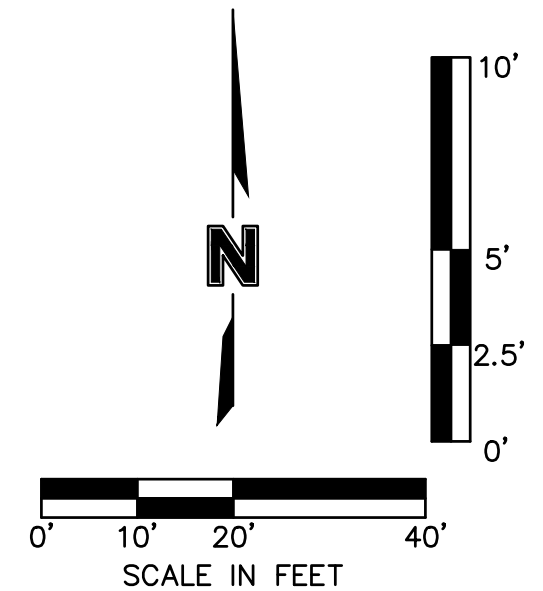
LEE'S SUMMIT, MO

drawn by: B.M.W./A.A.
 checked by: B.M.W./A.A.
 designed by: B.M.W./A.A.
 QA/QC by: B.M.W./A.A.
 project no.: B19-4061
 date: 01-08-2021

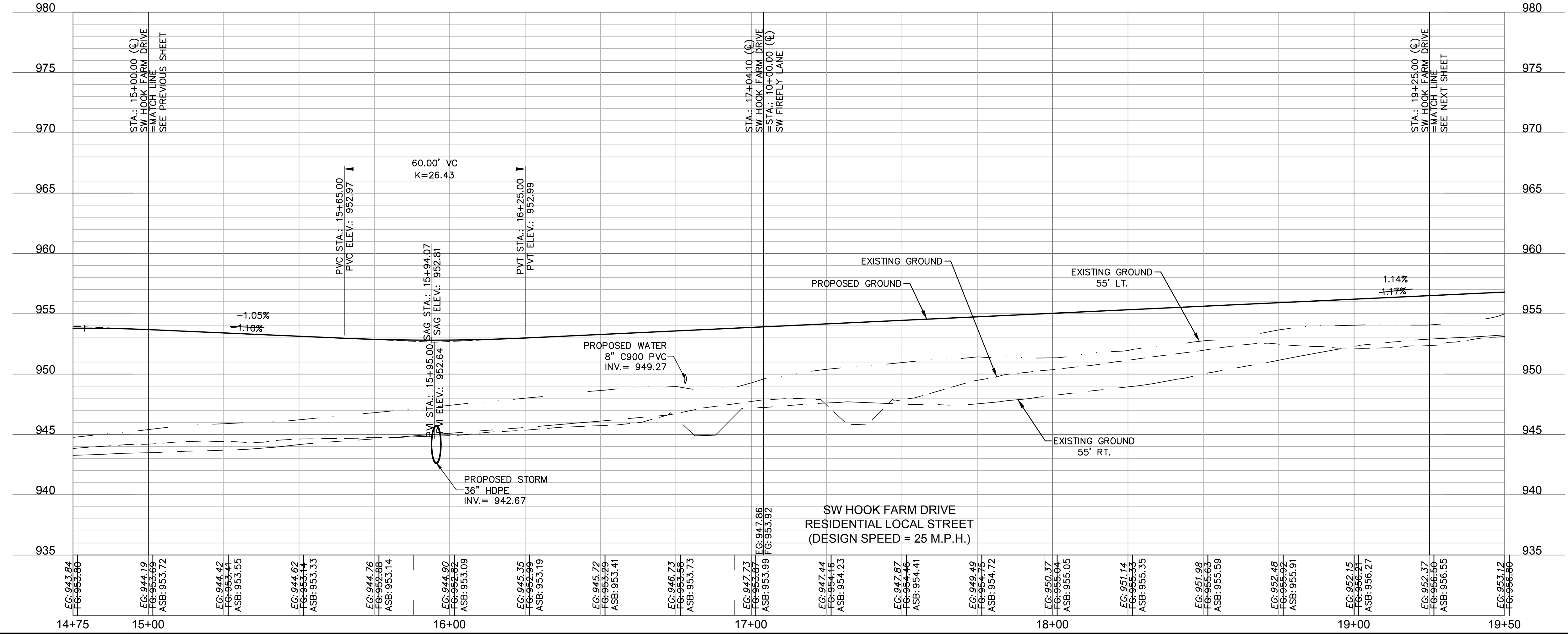
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LEGEND	
	ADA ACCESS ROUTE
	ASPHALT PAVEMENT
	CONCRETE SIDEWALK
	CG-2 CURB & GUTTER
	CG-2 DRY CURB & GUTTER



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 DATE SURVEYED: 2022-05-26



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ROADWAY PLAN & PROFILE (SW HOOK FARM DRIVE)
 STREET & STORM SEWER PLANS

HOOK FARMS
 SECOND PLAT

LEE'S SUMMIT, MO

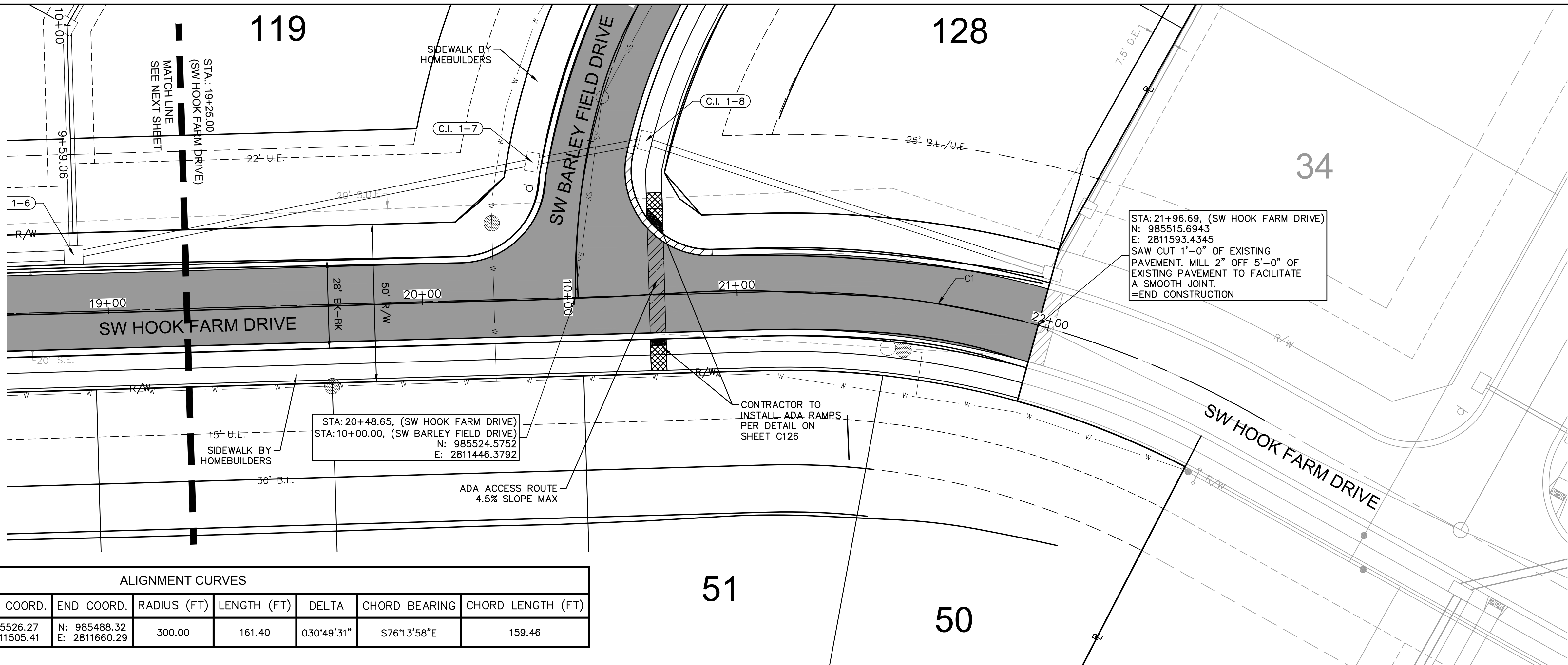
2021

REVISIONS

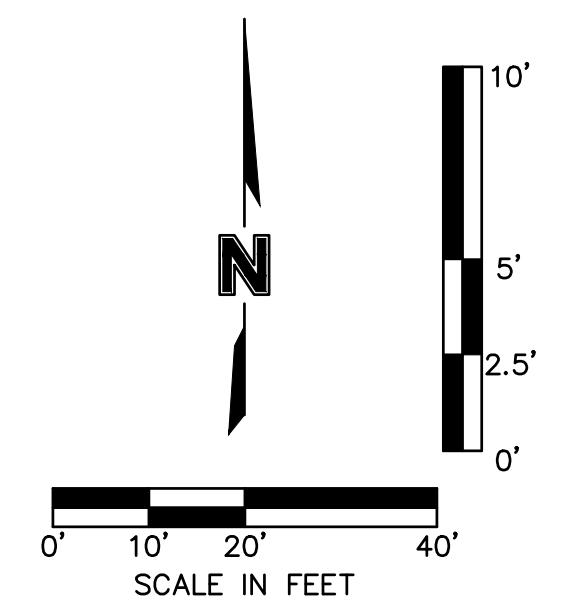
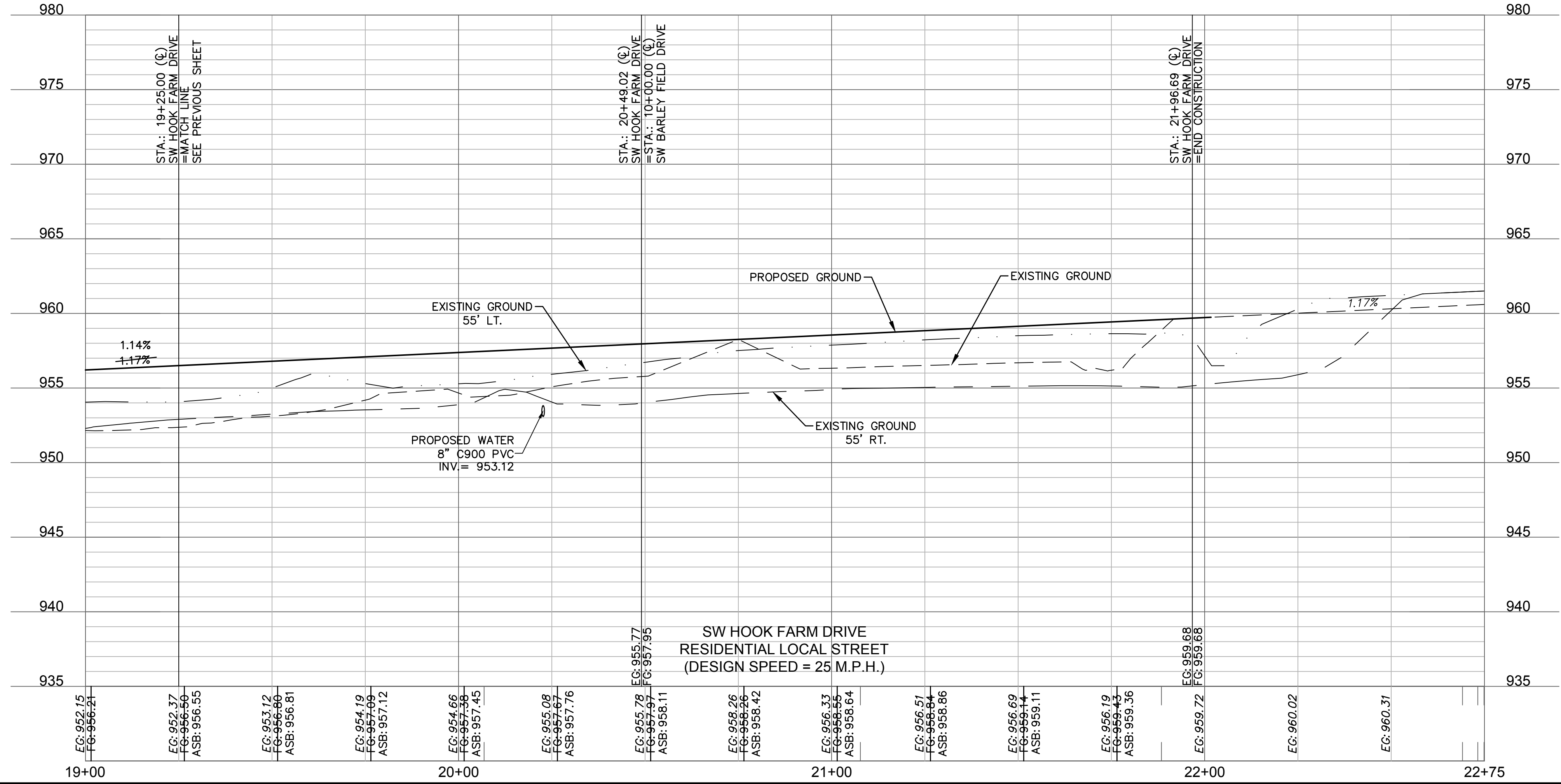
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LEGEND	
	ADA ACCESS ROUTE
	MILL & OVERLAY
	ASPHALT PAVEMENT
	CONCRETE SIDEWALK
	CG-2 CURB & GUTTER
	CG-2 DRY CURB & GUTTER



ALIGNMENT CURVES								
CURVE ID #	STATION RANGE	START COORD.	END COORD.	RADIUS (FT)	LENGTH (FT)	DELTA	CHORD BEARING	CHORD LENGTH (FT)
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 DATE SURVEYED: 2022-05-26

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ROADWAY PLAN & PROFILE (SW HOOK FARM DRIVE)
 STREET & STORM SEWER PLANS

HOOK FARMS
 SECOND PLAT

LEE'S SUMMIT, MO

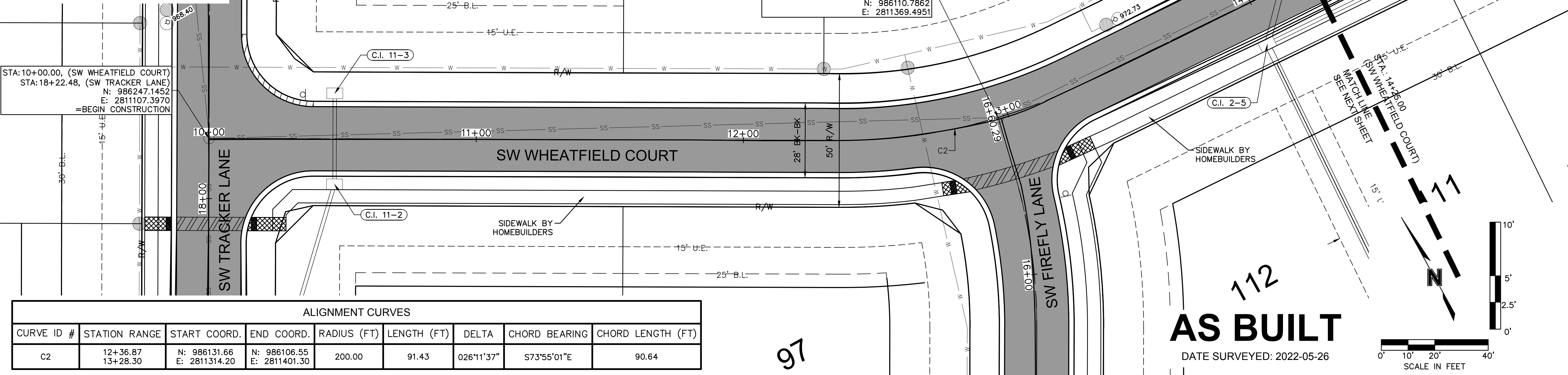
2021

REVISIONS

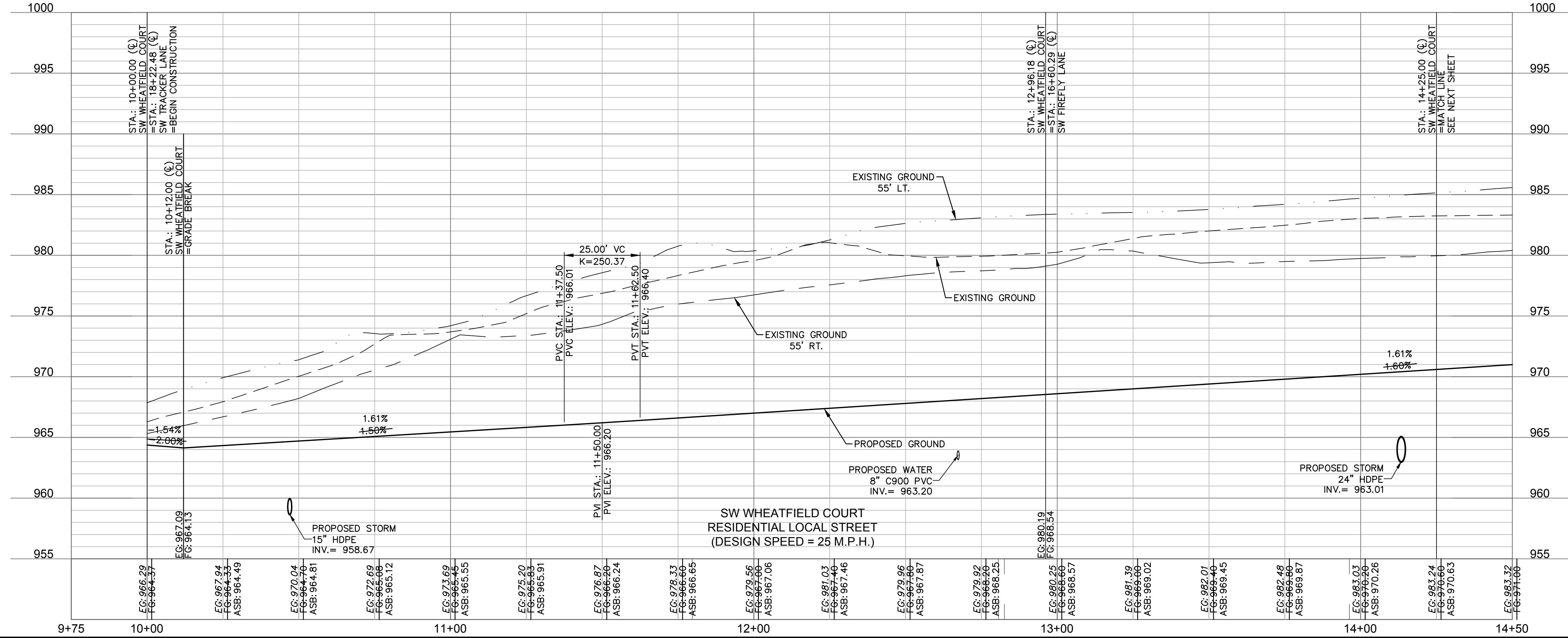
drawn by: B.M.W./A.A.
 checked by: B.M.W./A.A.
 designed by: B.M.W./A.A.
 QA/QC by: J.E.S.
 project no.: B19-4061
 date: 01-08-2021

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 DATE: Oct 11, 2022 3:30pm XREFS: C_PTBK_B194061 C_XBASE_B194061 C_PBDY_B194061 C_PATT_B194061 C_PSURF_B194061 C_PUTIL_B194061 USER: ssoylor

LEGEND	
	ADA ACCESS ROUTE
	ASPHALT PAVEMENT
	CONCRETE SIDEWALK
	CG-2 CURB & GUTTER
	CG-2 DRY CURB & GUTTER



ALIGNMENT CURVES								
CURVE ID #	STATION RANGE	START COORD.	END COORD.	RADIUS (FT)	LENGTH (FT)	DELTA	CHORD BEARING	CHORD LENGTH (FT)
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ROADWAY PLAN & PROFILE (SW WHEATFIELD COURT)
 STREET & STORM SEWER PLANS

HOOK FARMS
 SECOND PLAT

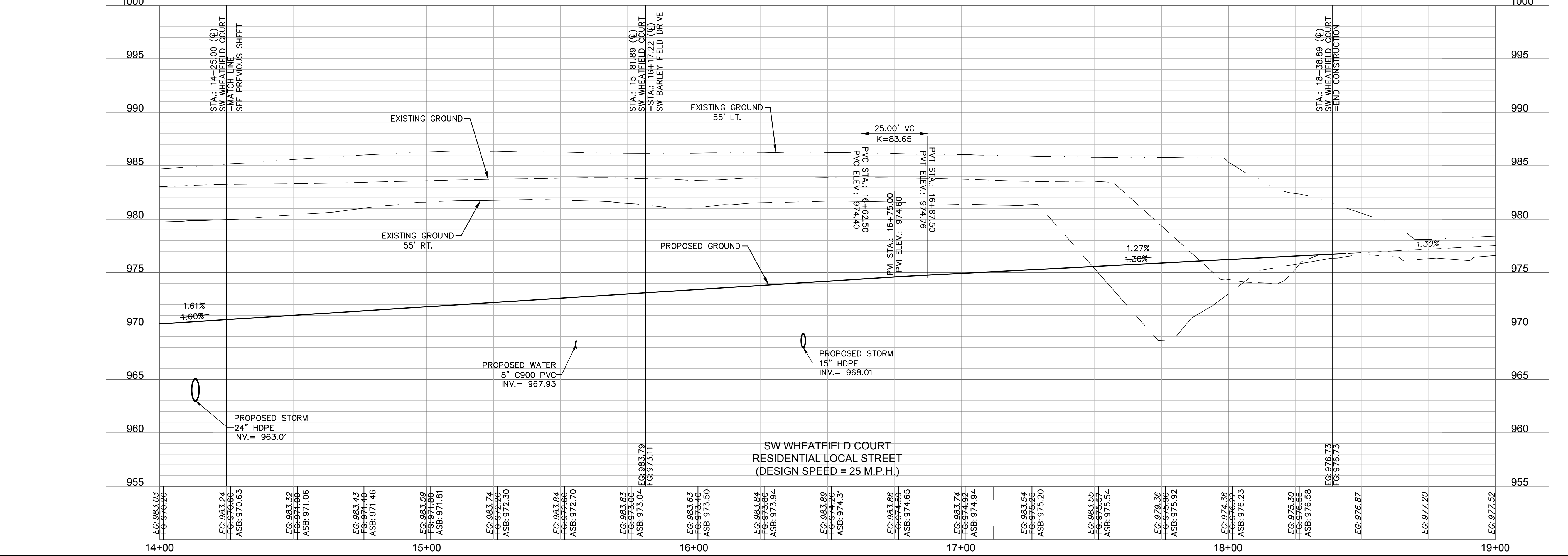
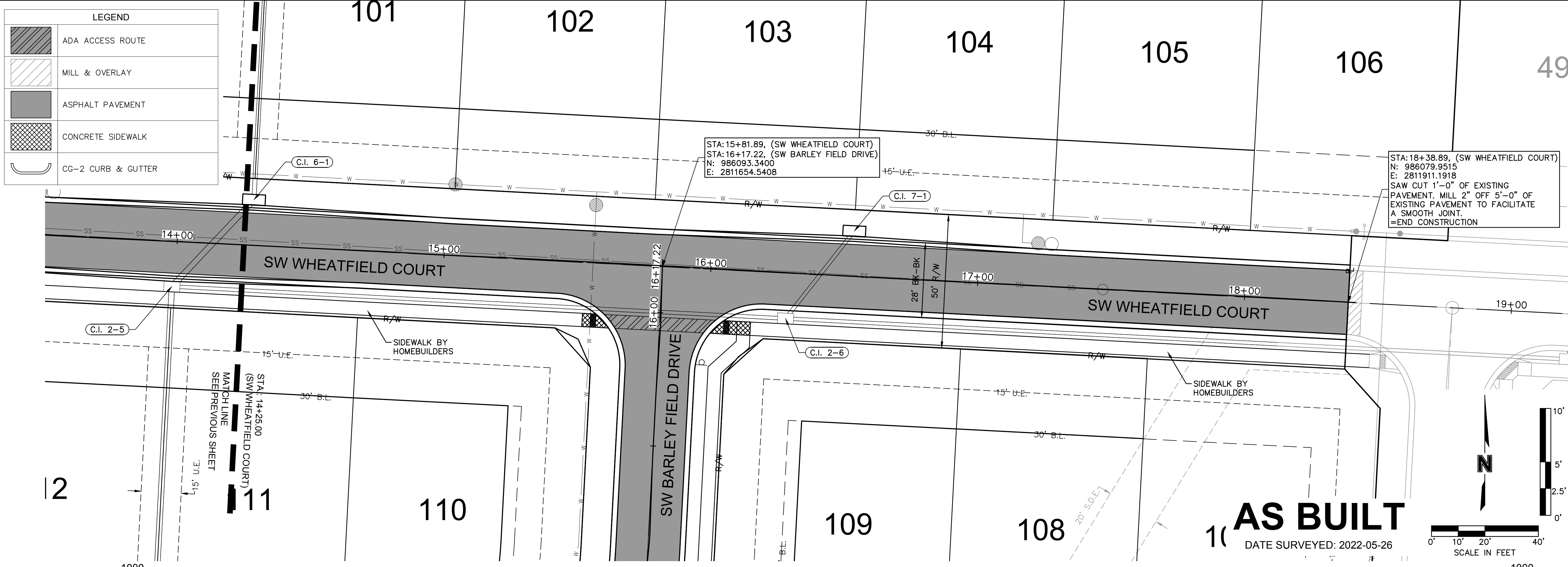
LEE'S SUMMIT, MO

2021

REVISIONS

drawn by: B.M.W./A.A.
 checked by: B.M.W.
 designed by: B.M.W./A.A.
 QA/QC by: B.M.W./A.A.
 project no.: B19-4061
 date: 01-08-2021

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LEGEND

- ADA ACCESS ROUTE
- MILL & OVERLAY
- ASPHALT PAVEMENT
- CONCRETE SIDEWALK
- CG-2 CURB & GUTTER

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ROADWAY PLAN & PROFILE (SW WHEATFIELD COURT)
 STREET & STORM SEWER PLANS

HOOK FARMS
 SECOND PLAT

LEE'S SUMMIT, MO

BY

DATE SURVEYED: 2022-05-26

AS BUILT

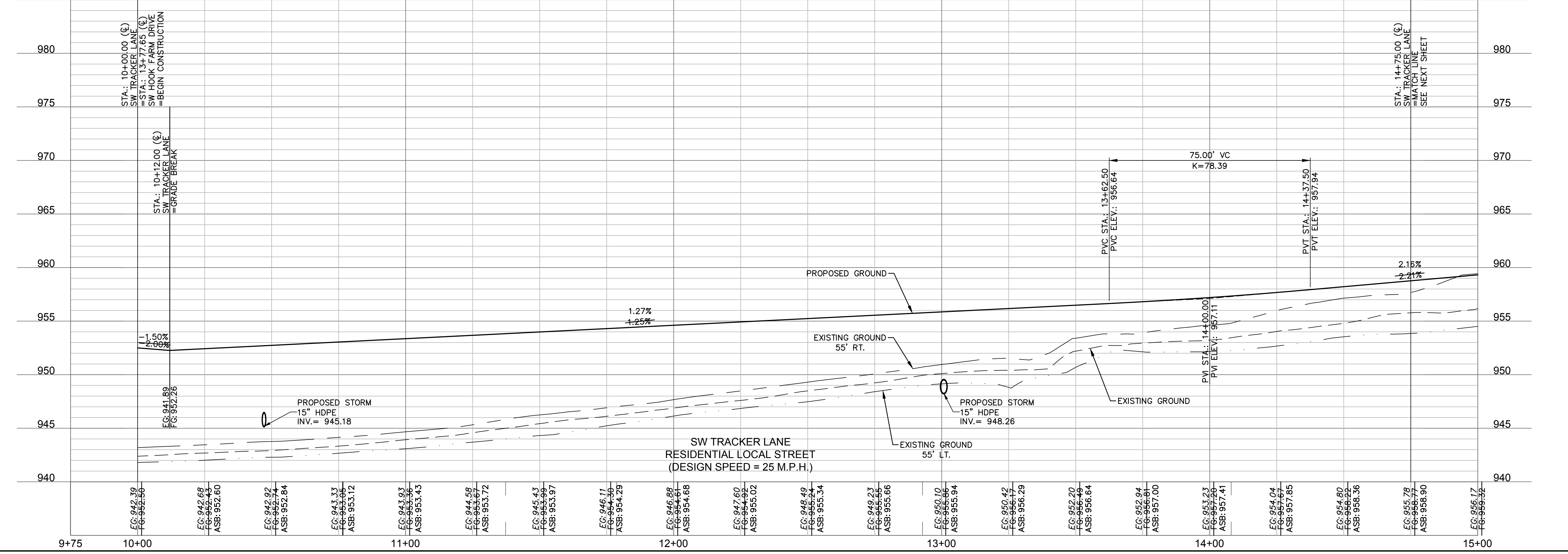
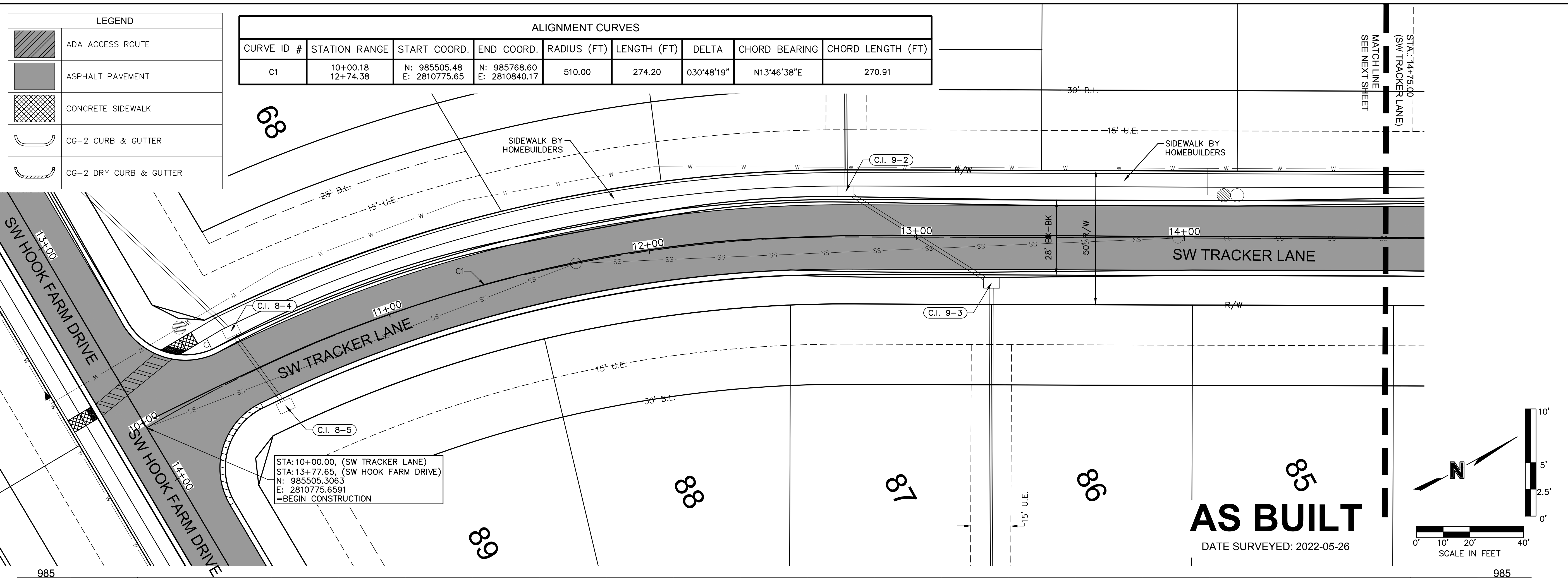
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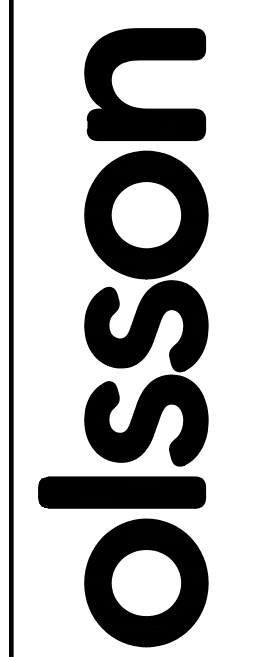
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SHEET C114

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3	09-30-2021	CHANGES TO APPROVED PLANS	

ROADWAY PLAN & PROFILE (SW TRACKER LANE)
 STREET & STORM SEWER PLANS

HOOK FARMS
 SECOND PLAT

LEE'S SUMMIT, MO

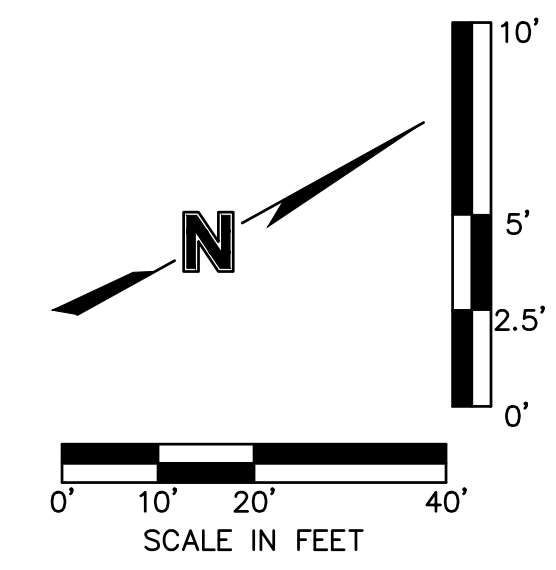
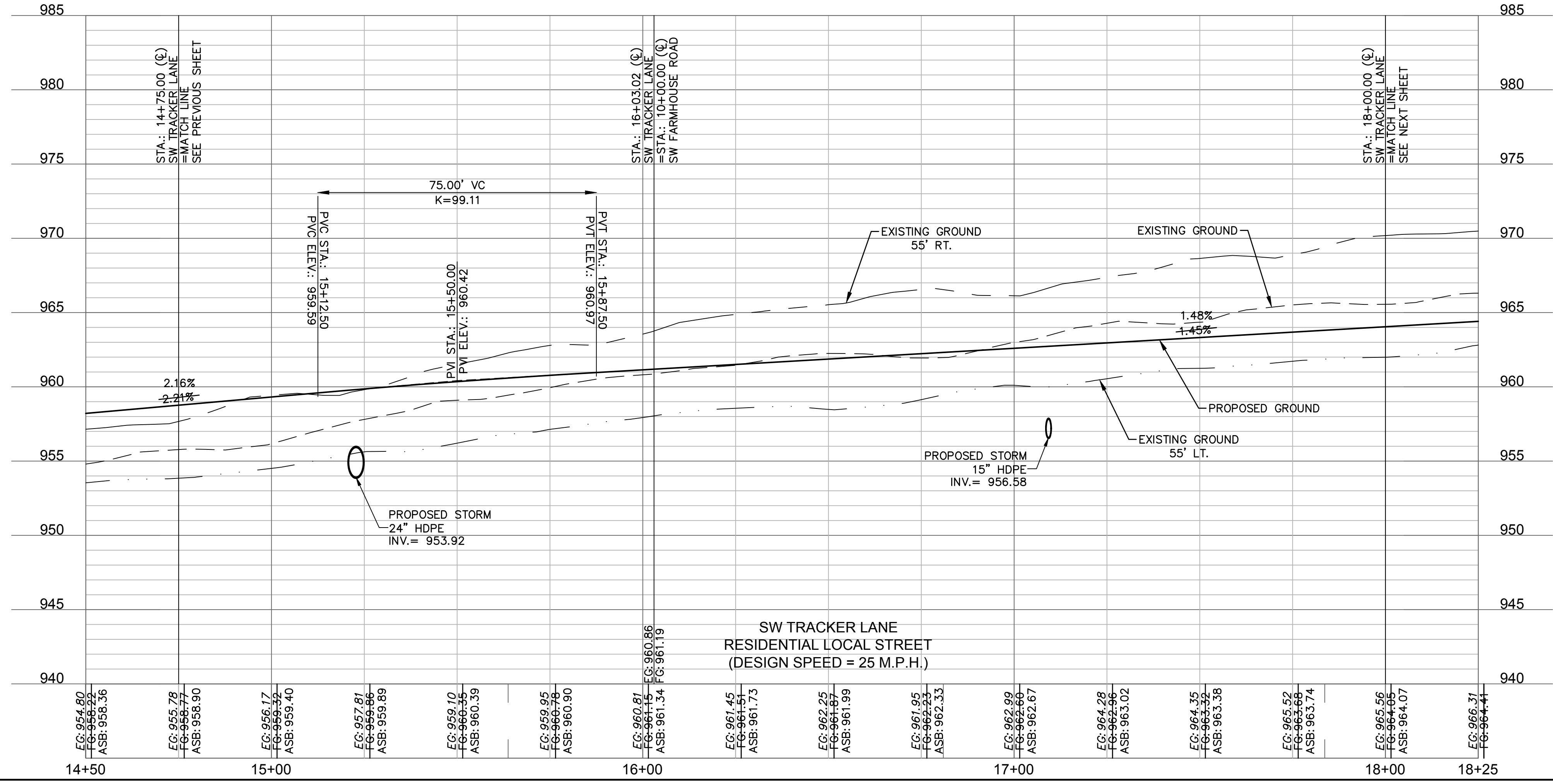
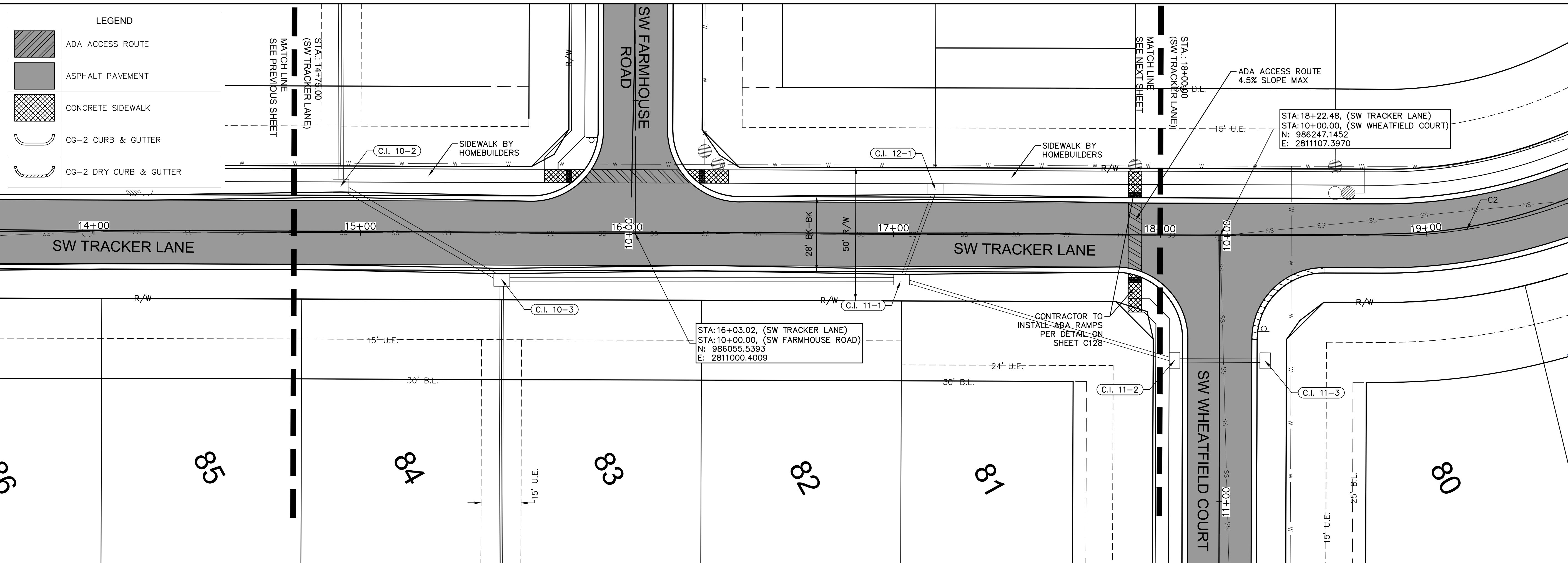
2021

REVISIONS

drawn by: B.M.W./A.A.
 checked by: B.M.W./A.A.
 designed by: B.M.W./A.A.
 project no.: B19-4061
 date: 01-08-2021

SHEET
C115

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 C_XBASE_B194061



AS BUILT
 DATE SURVEYED: 2022-05-26

LEGEND

	ADA ACCESS ROUTE
	ASPHALT PAVEMENT
	CONCRETE SIDEWALK
	CG-2 CURB & GUTTER
	CG-2 DRY CURB & GUTTER

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3	09-30-2021	CHANGES TO APPROVED PLANS

REVISIONS

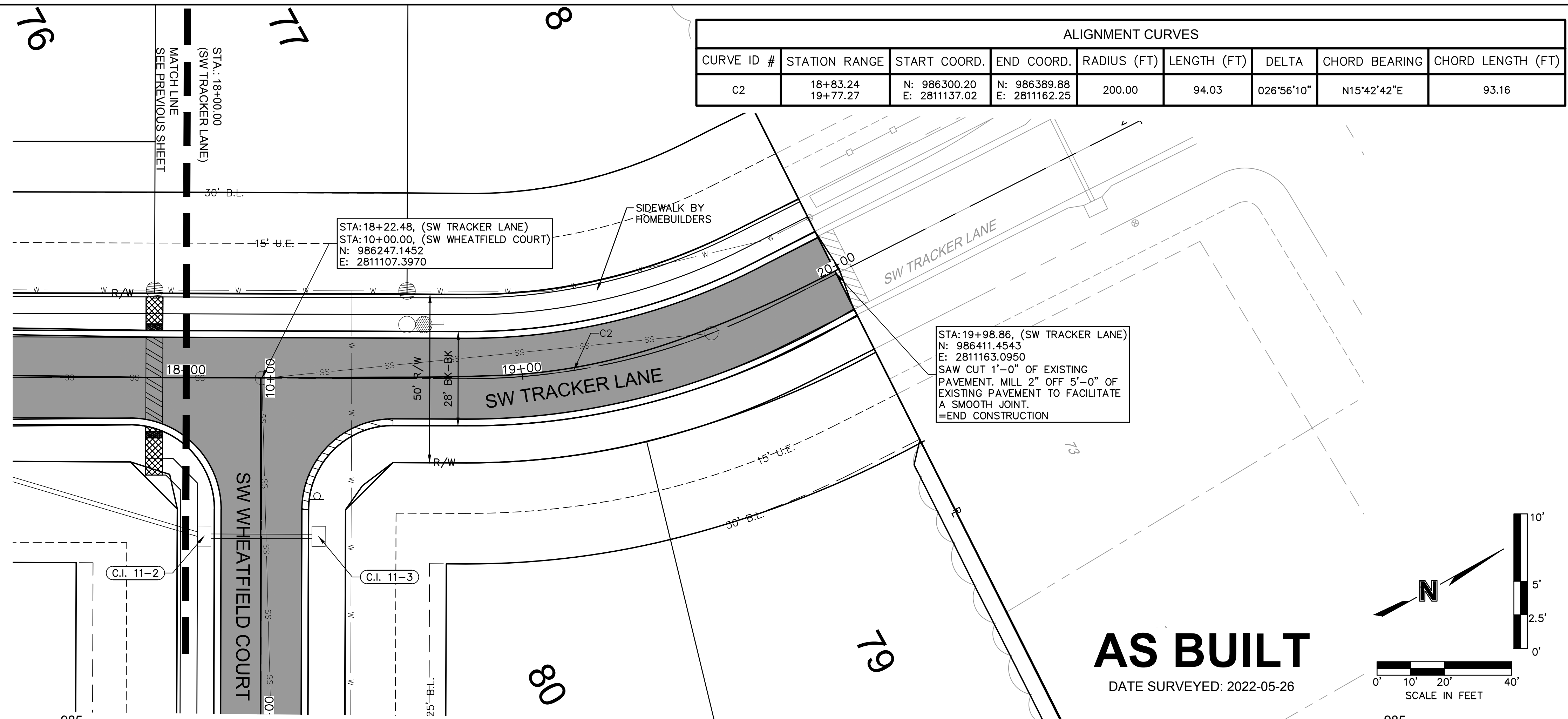
ROADWAY PLAN & PROFILE (SW TRACKER LANE) STREET & STORM SEWER PLANS	HOOK FARMS SECOND PLAT
LEE'S SUMMIT, MO	

drawn by: B.M.W./A.A.
 checked by: B.M.W./A.A.
 designed by: B.M.W./A.A.
 QA/QC by: J.E.S.
 project no.: B19-4061
 date: 01-08-2021

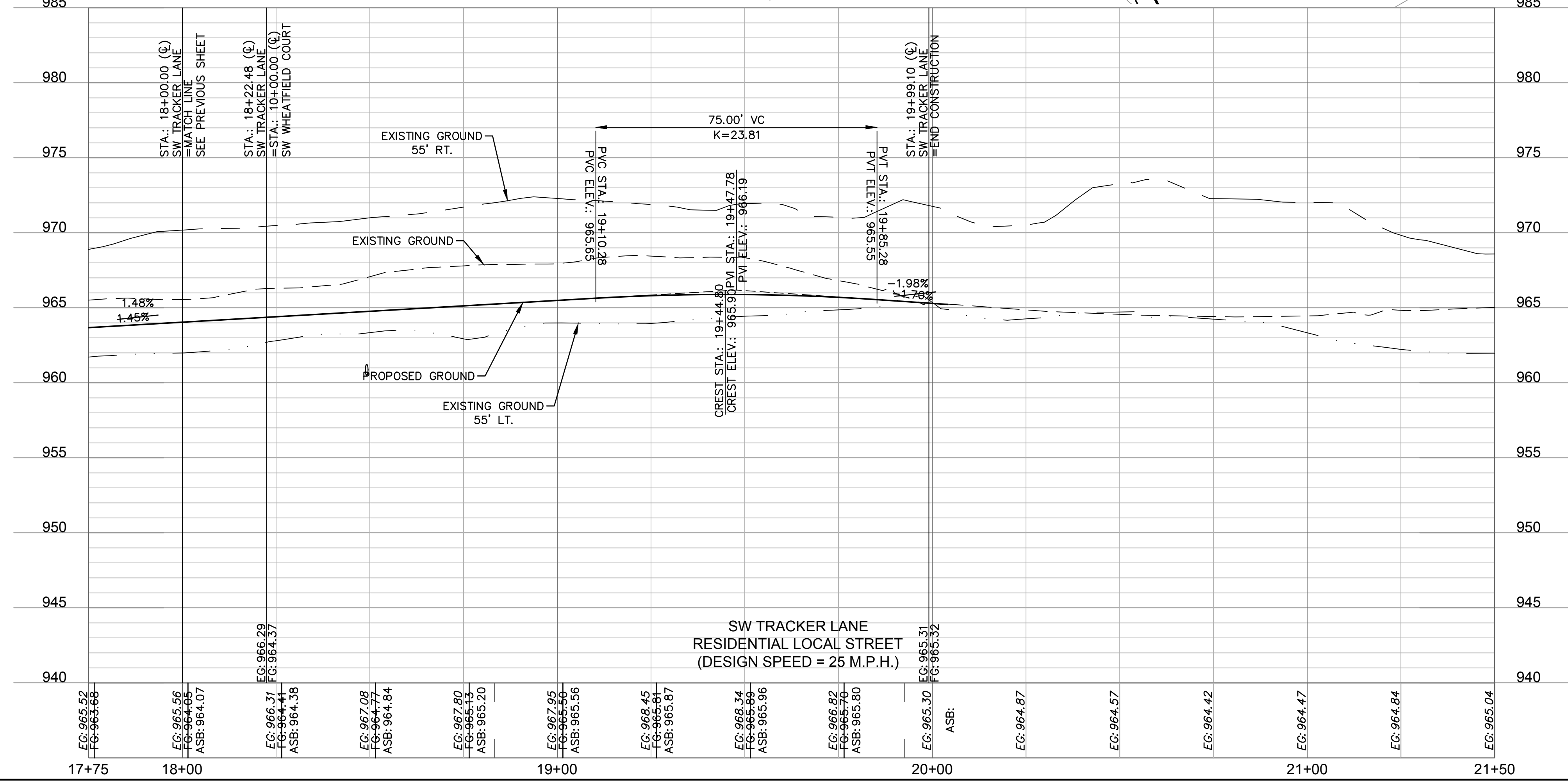
SHEET C116

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LEGEND	
	ADA ACCESS ROUTE
	MILL & OVERLAY
	ASPHALT PAVEMENT
	CONCRETE SIDEWALK
	CG-2 CURB & GUTTER
	CG-2 DRY CURB & GUTTER



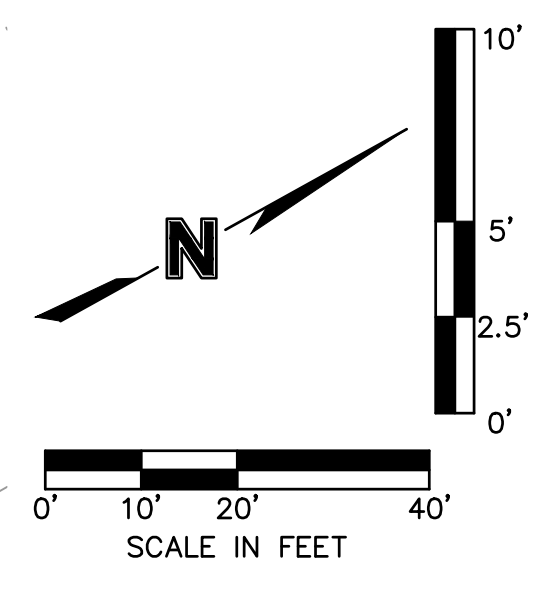
ALIGNMENT CURVES								
CURVE ID #	STATION RANGE	START COORD.	END COORD.	RADIUS (FT)	LENGTH (FT)	DELTA	CHORD BEARING	CHORD LENGTH (FT)
C2	18+83.24 19+77.27	N: 986300.20 E: 2811137.02	N: 986389.88 E: 2811162.25	200.00	94.03	026°56'10"	N15°42'42"E	93.16



STA: 19+98.86, (SW TRACKER LANE)
 N: 986411.4543
 E: 2811163.0950
 SAW CUT 1'-0" OF EXISTING PAVEMENT. MILL 2" OFF 5'-0" OF EXISTING PAVEMENT TO FACILITATE A SMOOTH JOINT.
 =END CONSTRUCTION

STA: 18+22.48, (SW TRACKER LANE)
 STA: 10+00.00, (SW WHEATFIELD COURT)
 N: 986247.1452
 E: 2811107.3970

AS BUILT
 DATE SURVEYED: 2022-05-26



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STATE OF MISSOURI
 JULIE ELAINE SELLERS
 PROFESSIONAL ENGINEER
 NUMBER PE-2017000367
 10/11/22

REV. NO.	DATE	REVISIONS DESCRIPTION	BY
1	03-23-2021	REVISED PER CITY COMMENTS	
2	04-16-2021	REVISED PER CITY COMMENTS	
3	09-30-2021	CHANGES TO APPROVED PLANS	

ROADWAY PLAN & PROFILE (SW TRACKER LANE)
 STREET & STORM SEWER PLANS

HOOK FARMS
 SECOND PLAT

LEE'S SUMMIT, MO

2021

REVISIONS

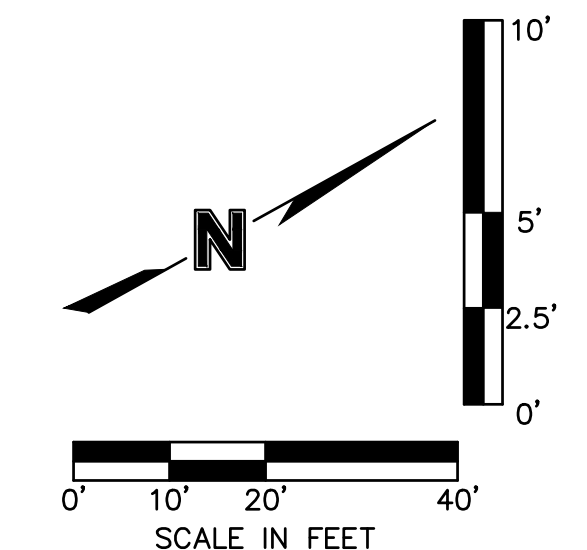
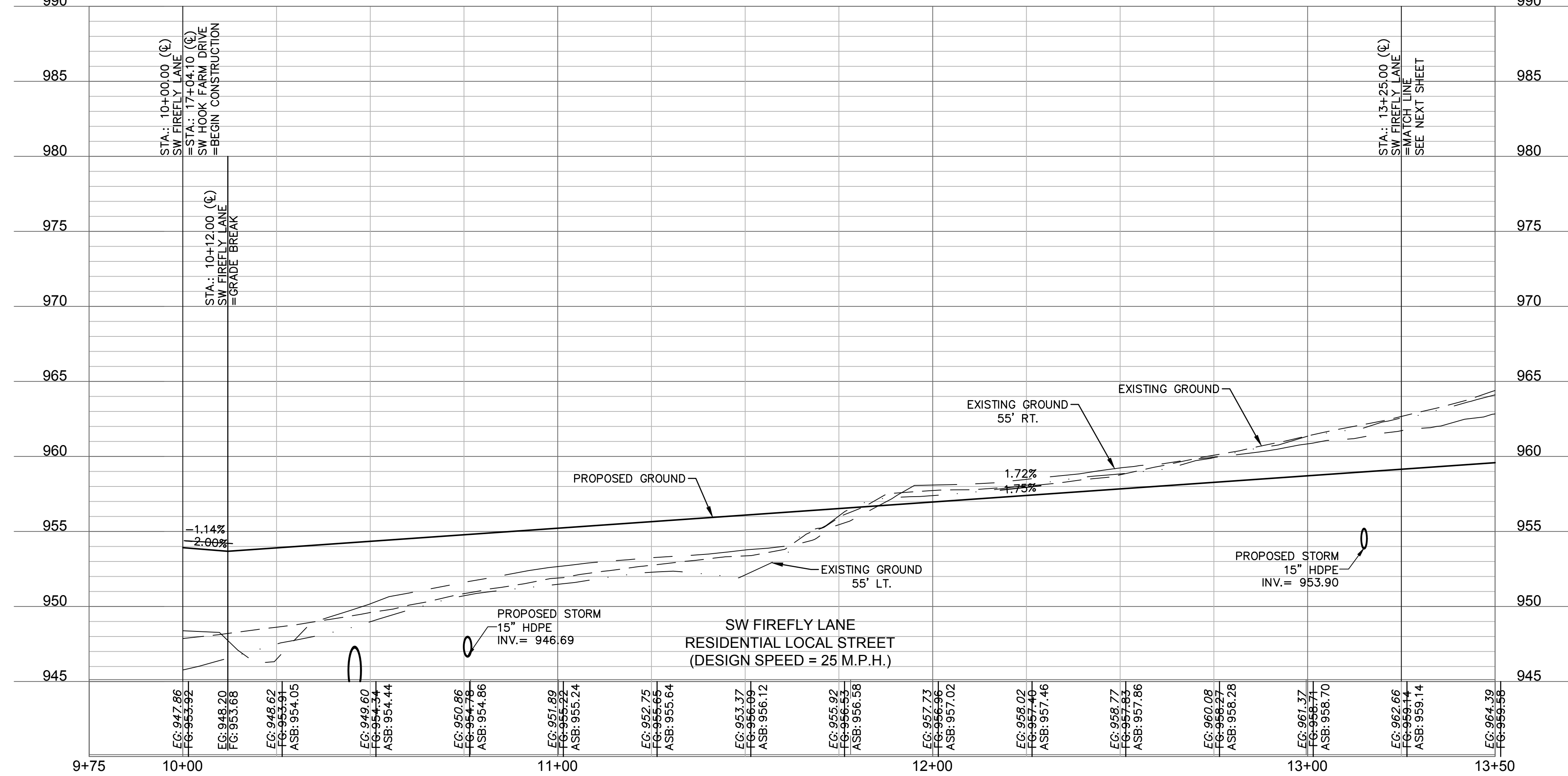
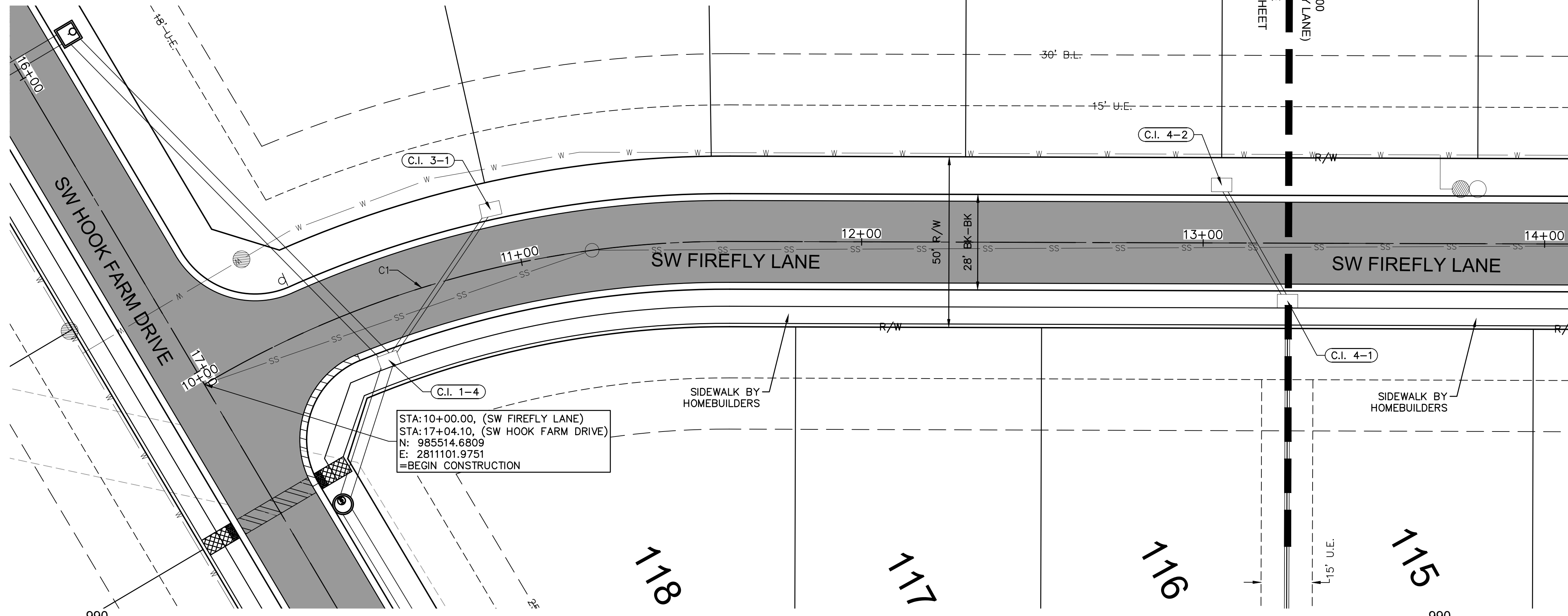
drawn by: B.M.W./A.A.
 checked by: B.M.W./A.A.
 designed by: B.M.W./A.A.
 QA/QC by: J.E.S.
 project no.: B19-4061
 date: 01-08-2021

SHEET C117

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 USER: ssoylor
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LEGEND	
	ADA ACCESS ROUTE
	ASPHALT PAVEMENT
	CONCRETE SIDEWALK
	CG-2 CURB & GUTTER
	CG-2 DRY CURB & GUTTER

ALIGNMENT CURVES								
CURVE ID #	STATION RANGE	START COORD.	END COORD.	RADIUS (FT)	LENGTH (FT)	DELTA	CHORD BEARING	CHORD LENGTH (FT)
C1	10+39.03 11+61.40	N: 985553.66 E: 2811103.39	N: 985669.56 E: 2811139.92	300.00	122.37	023°22'17"	N17°29'39"E	121.53



AS BUILT
 DATE SURVEYED: 2022-05-26

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STATE OF MISSOURI
 JULIE ELAINE SELLERS
 PROFESSIONAL ENGINEER
 NUMBER PE-2017000367
 10/11/22

REV. NO.	DATE	REVISIONS DESCRIPTION
1	03-23-2021	REVISED PER CITY COMMENTS
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3	09-30-2021	CHANGES TO APPROVED PLANS

ROADWAY PLAN & PROFILE (SW FIREFLY LANE)
 STREET & STORM SEWER PLANS
 HOOK FARMS
 SECOND PLAT

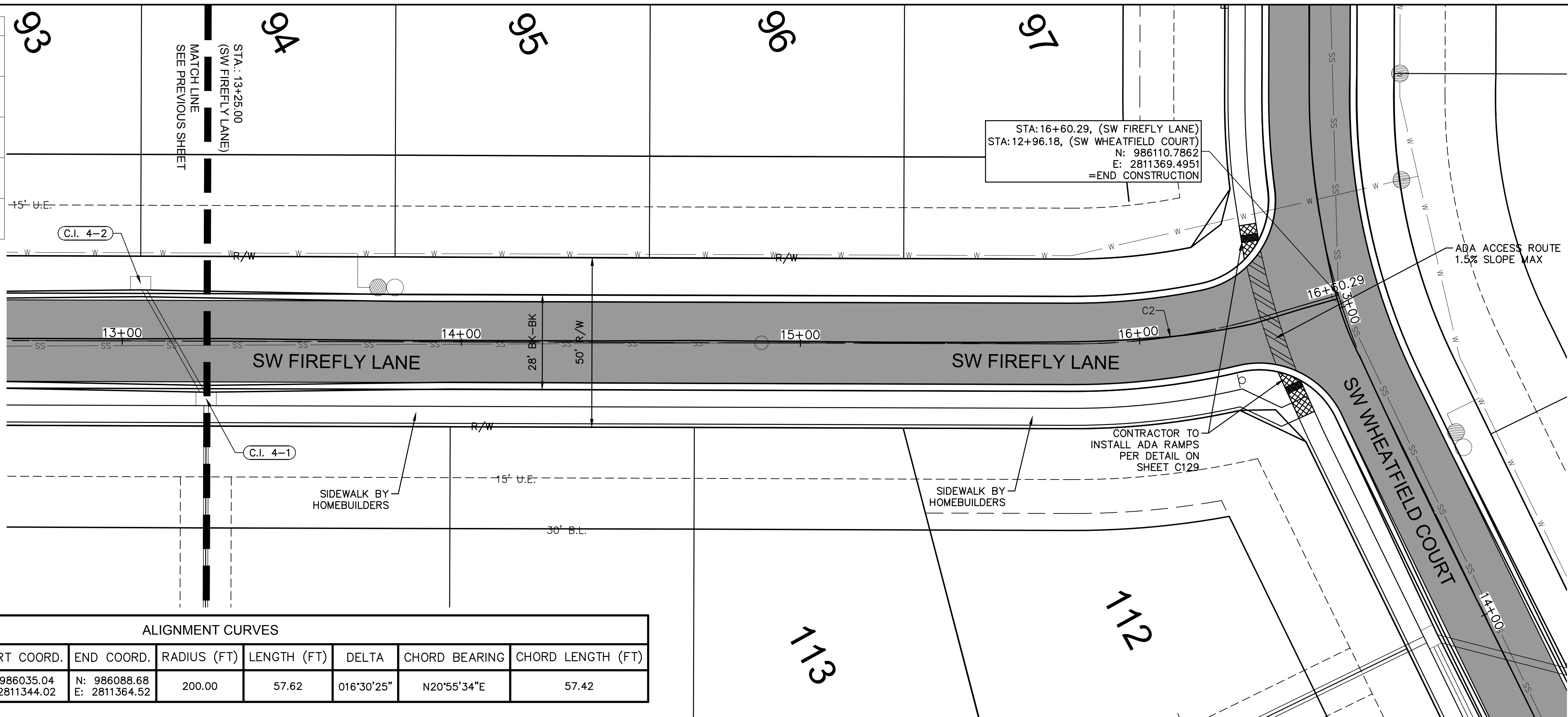
2021
 REVISIONS
 LEE'S SUMMIT, MO

drawn by: B.M.W./A.A.
 checked by: B.M.W./A.A.
 designed by: B.M.W./A.A.
 QA/QC by: E.S.
 project no.: B19-4061
 date: 01-08-2021

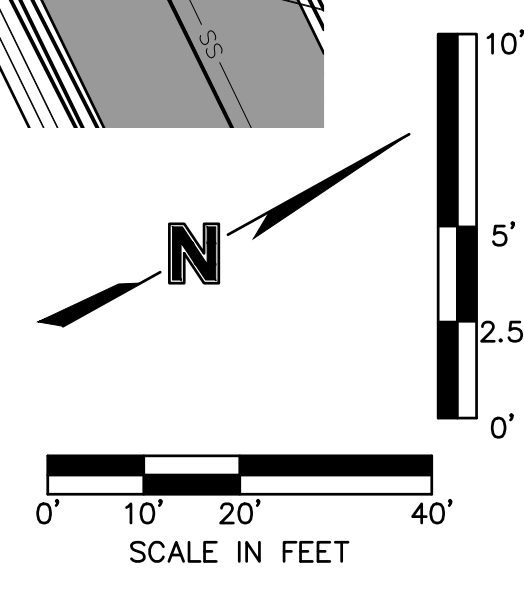
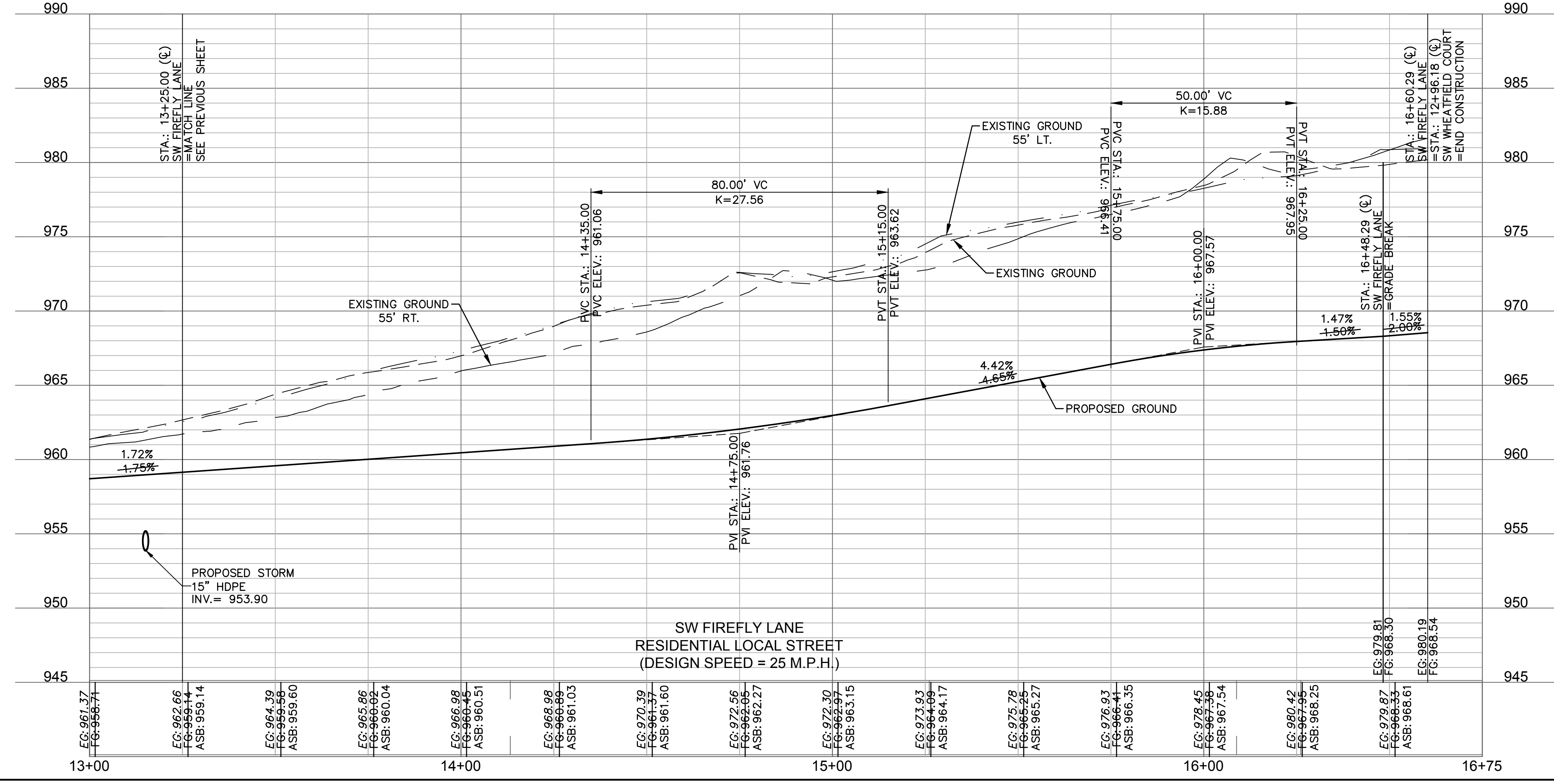
SHEET
C119

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 USER: ssoylor
 C_PUTIL_B194061 C_PBASE_B194061 C_PPSURF_B194061 C_PPATT_B194061

LEGEND	
	ADA ACCESS ROUTE
	ASPHALT PAVEMENT
	CONCRETE SIDEWALK
	CG-2 CURB & GUTTER
	CG-2 DRY CURB & GUTTER



ALIGNMENT CURVES								
CURVE ID #	STATION RANGE	START COORD.	END COORD.	RADIUS (FT)	LENGTH (FT)	DELTA	CHORD BEARING	CHORD LENGTH (FT)
C2	15+80.01 16+37.63	N: 986035.04 E: 2811344.02	N: 986088.68 E: 2811364.52	200.00	57.62	016°30'25"	N20°55'34"E	57.42



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 DATE SURVEYED: 2022-05-26

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STATE OF MISSOURI
 JULIE ELAINE SELLERS
 PE 2017000367
 10/11/22
 PROFESSIONAL ENGINEER

REV. NO.	DATE	REVISIONS DESCRIPTION	BY
1	03-23-2021	REVISED PER CITY COMMENTS	
2	04-16-2021	REVISED PER CITY COMMENTS	
3	09-30-2021	CHANGES TO APPROVED PLANS	

ROADWAY PLAN & PROFILE (SW FIREFLY LANE)
 STREET & STORM SEWER PLANS

HOOK FARMS
 SECOND PLAT

2021

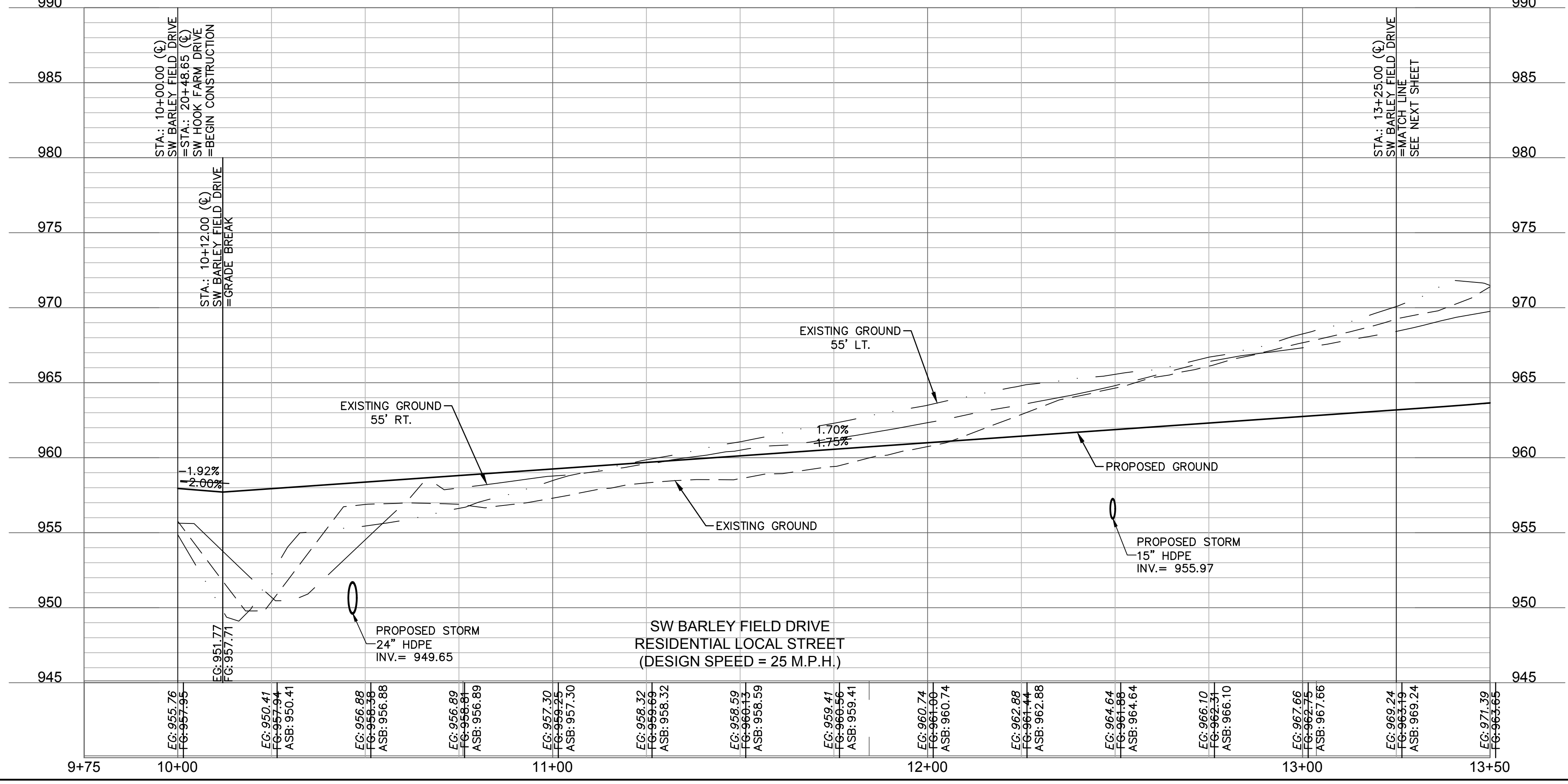
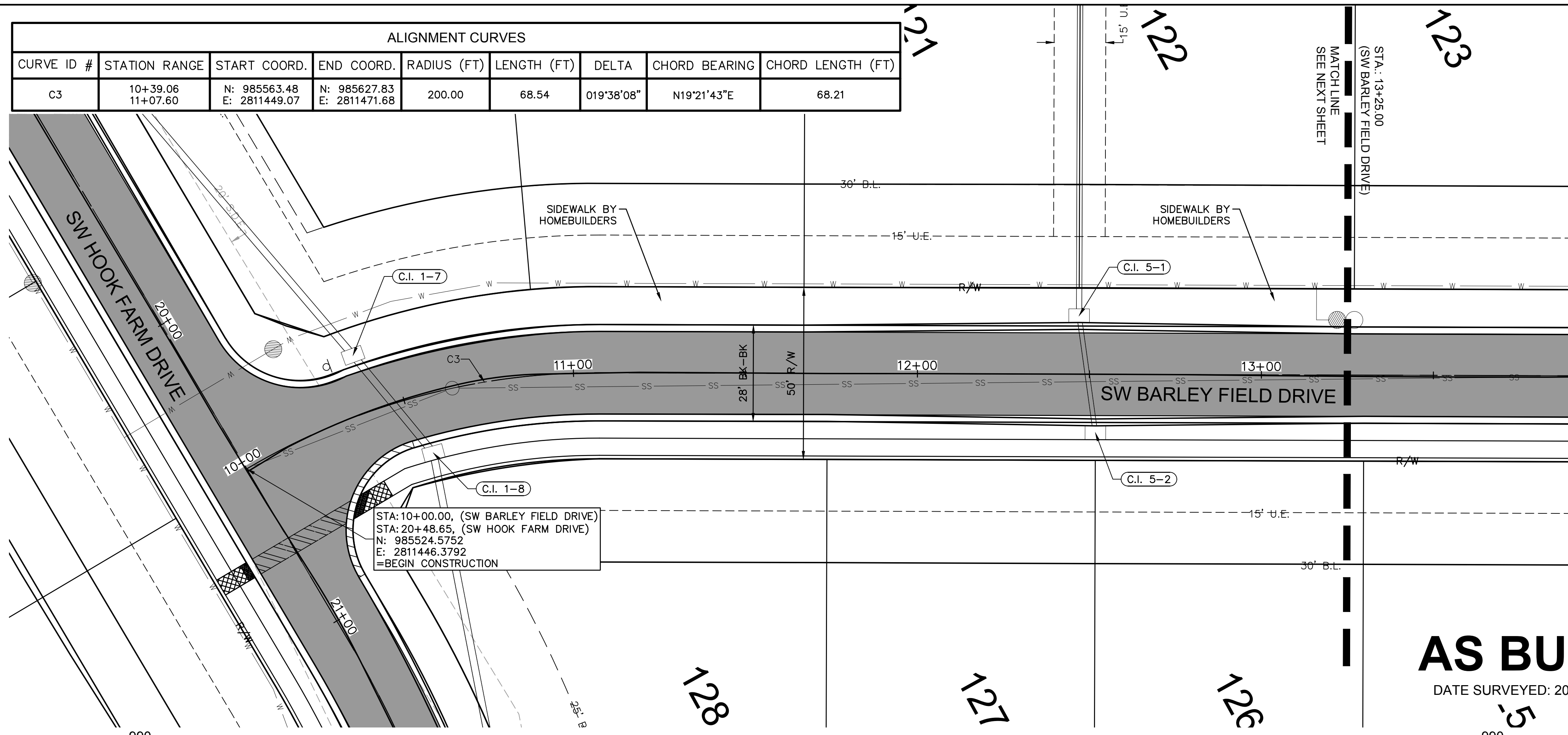
LEES SUMMIT, MO

drawn by: B.M.W./A.A.
 checked by: B.M.W./A.A.
 designed by: B.M.W./A.A.
 QA/QC by: J.E.S.
 project no.: B19-4061
 date: 01-08-2021

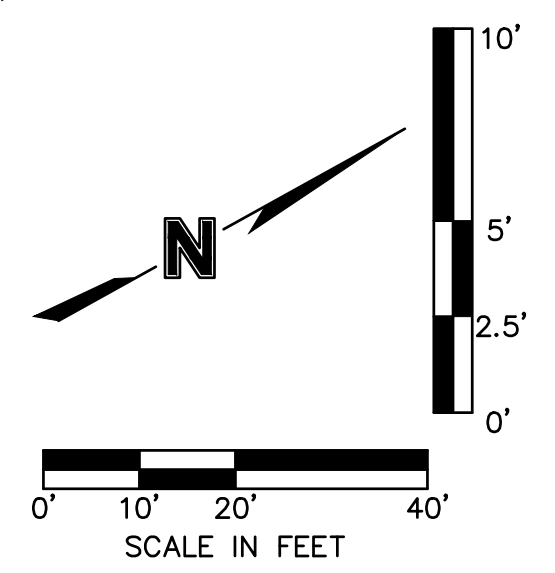
SHEET
C120

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LEGEND	
	ADA ACCESS ROUTE
	ASPHALT PAVEMENT
	CONCRETE SIDEWALK
	CG-2 CURB & GUTTER
	CG-2 DRY CURB & GUTTER



AS BUILT
 DATE SURVEYED: 2022-05-26



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REVISIONS

REV. NO.	DATE	REVISIONS DESCRIPTION
1	03-23-2021	REVISED PER CITY COMMENTS
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3	09-30-2021	CHANGES TO APPROVED PLANS

ROADWAY PLAN & PROFILE (SW BARLEY FIELD DRIVE)
 STREET & STORM SEWER PLANS

2021

HOOK FARMS
 SECOND PLAT

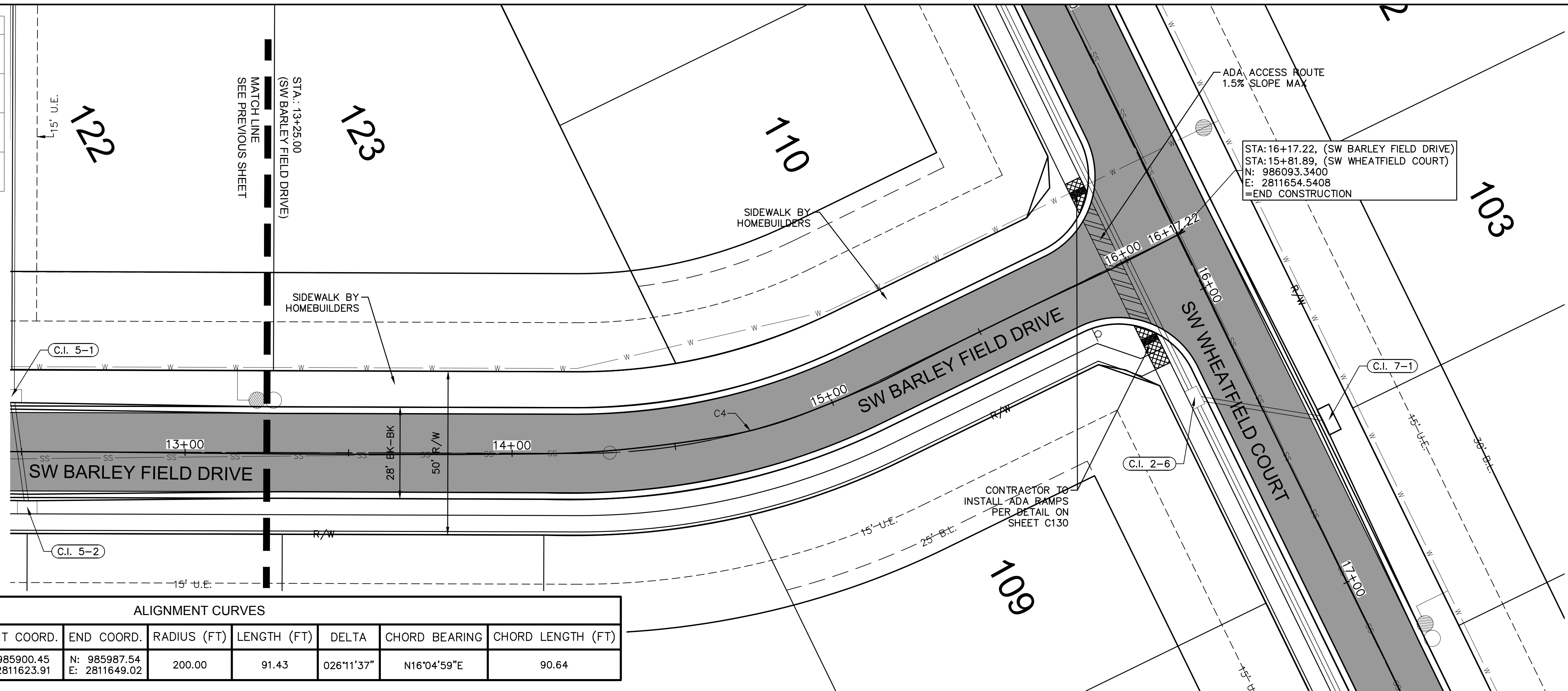
LEE'S SUMMIT, MO

drawn by: B.M.W./A.A.
 checked by: B.M.W./A.A.
 designed by: B.M.W./A.A.
 QA/QC by: B.M.W./A.A.
 project no.: B19-4061
 date: 01-08-2021

SHEET
 C121

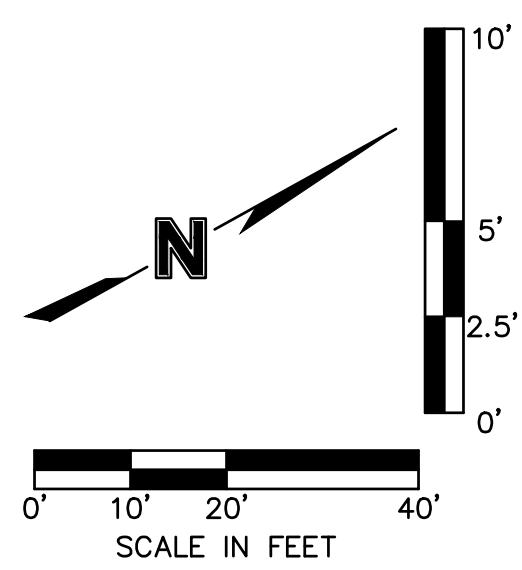
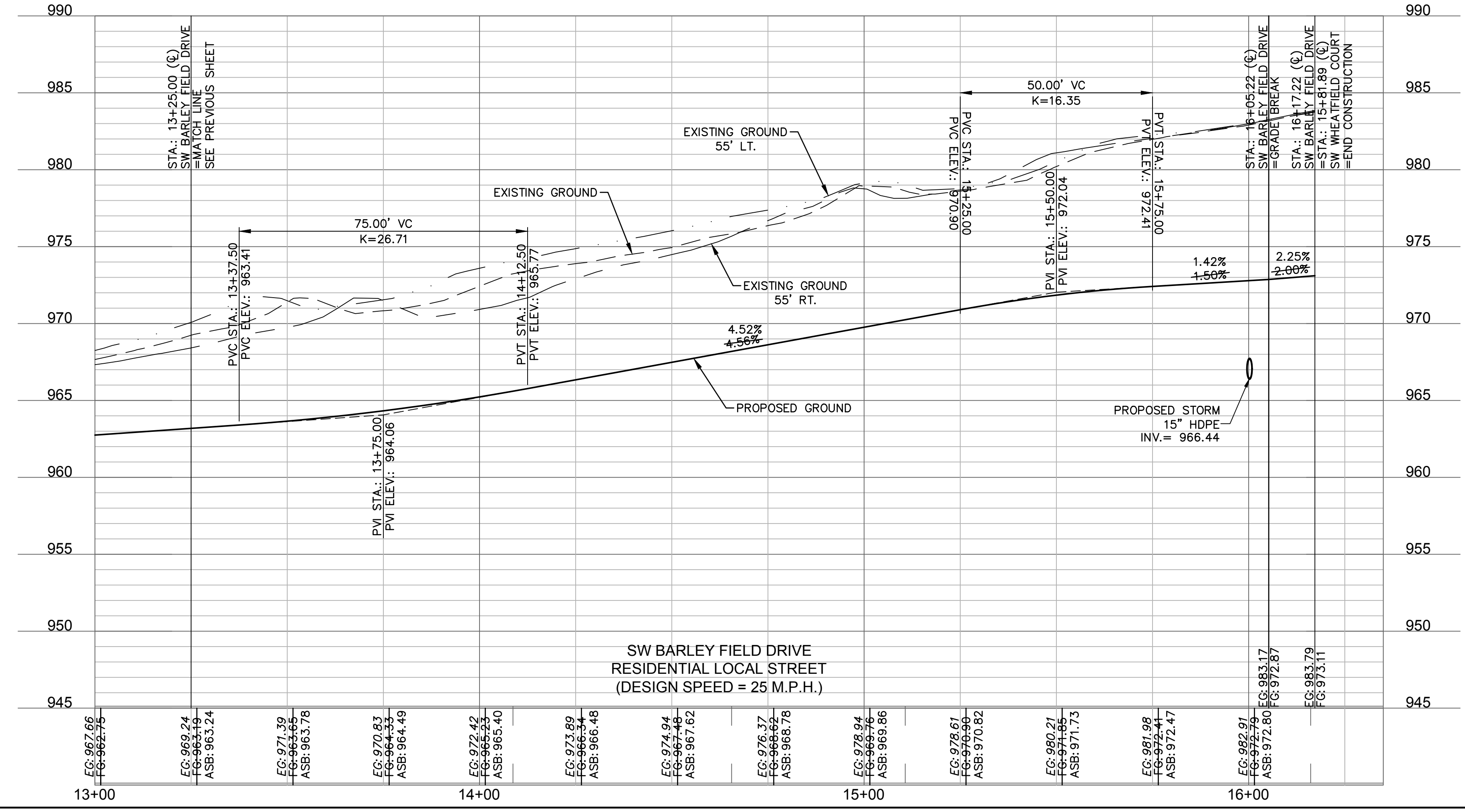
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LEGEND	
	ADA ACCESS ROUTE
	ASPHALT PAVEMENT
	CONCRETE SIDEWALK
	CG-2 CURB & GUTTER



STA: 16+17.22, (SW BARLEY FIELD DRIVE)
 STA: 15+81.89, (SW WHEATFIELD COURT)
 N: 986093.3400
 E: 2811654.5408
 =END CONSTRUCTION

ALIGNMENT CURVES								
CURVE ID #	STATION RANGE	START COORD.	END COORD.	RADIUS (FT)	LENGTH (FT)	DELTA	CHORD BEARING	CHORD LENGTH (FT)
C4	14+19.84 15+11.28	N: 985900.45 E: 2811623.91	N: 985987.54 E: 2811649.02	200.00	91.43	026°11'37"	N16°04'59"E	90.64



AS BUILT
 DATE SURVEYED: 2022-05-26

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STATE OF MISSOURI
 JULIE ELAINE SELLERS
 PE-2017000367
 10/11/22

REV. NO.	DATE	REVISIONS DESCRIPTION	BY
1	03-23-2021	REVISED PER CITY COMMENTS	
2	04-16-2021	REVISED PER CITY COMMENTS	
3	09-30-2021	CHANGES TO APPROVED PLANS	

ROADWAY PLAN & PROFILE (SW BARLEY FIELD DRIVE)
 STREET & STORM SEWER PLANS

2021

REVISIONS

HOOK FARMS
 SECOND PLAT

LEE'S SUMMIT, MO

drawn by: B.M.W./A.A.
 checked by: B.M.W./A.A.
 designed by: B.M.W./A.A.
 QA/QC by: B.M.W./A.A.
 project no.: B19-4061
 date: 01-08-2021

SHEET
 C122

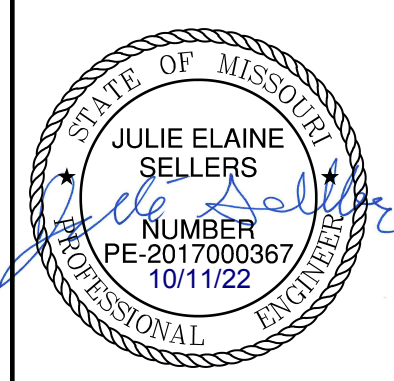
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 USER: ssoy/or
 XREFS: C_PTBK_B194061 C_XBASE_B194061 C_PBASE_B194061 C_PSTRM_B194061 C_PATT_B194061 C_PSURF_B194061 C_PBOUNDY_B194061

- INTERSECTION AND ADA DETAIL NOTES:
1. ALL ADA CURB RAMPS SHALL BE BUILT PER CURRENT MUNICIPALITY ADOPTED ADA STANDARDS.
 2. CURB RAMP FLARES SHALL NOT BE STEEPER THAN 1:10 MAX SLOPES.
 3. LANDING SHALL BE PROVIDED WHERE INDICATED ON PLAN SHEET OR BY PROWAG STANDARDS. LANDING SHALL BE 4'X4' MINIMUM.
 4. RAMP RUNS SHALL HAVE A MAXIMUM RUNNING SLOPE OF 1:12 UNLESS THE RAMP LENGTH IS OVER 15 FEET, THEN THE SLOPE CAN BE GREATER AS INDICATED IN DETAILS TO REACH STREET GRADES.
 5. LANDINGS SHALL HAVE A MAXIMUM SLOPE OF 2% IN ANY DIRECTION.
 6. CROSS SLOPE FOR RAMPS AND SIDEWALK SHALL NOT EXCEED 2%.
 7. AFTER CURBS HAVE BEEN CONSTRUCTED, AND BEFORE ASPHALT OR CONCRETE PAVEMENT IS POURED, CURBS SHOULD BE MEASURED WITH A LEVEL TO ENSURE CURB ALONG ADA RAMPS AND LANDINGS WILL MEET ADA REQUIREMENTS.
 8. ADA RAMP CONSTRUCTION WILL BE INSPECTED THOROUGHLY BY THE CITY INSPECTOR. CONTRACTOR SHALL BE REQUIRED TO RECONSTRUCT RAMPS, CURBS AND/OR PAVEMENT AT CONTRACTOR'S EXPENSE IF ADA RAMPS AND LANDINGS CANNOT MEET THE ADA REQUIREMENTS, PER APPROVED PLAN OR APPROVED ALTERNATIVE.
 9. CURVE DATA IS FOR BACK OF CURB.

LEGEND	
TC-	TOP OF CURB
PV-	TOP OF PAVEMENT
SW-	SIDEWALK
L	LANDING AREA
R	RAMP AREA
T	TRANSITION AREA
	ADA ACCESS ROUTE
	CG-2 CURB & GUTTER
	CG-2 DRY CURB & GUTTER
	ADA RAMP (CONSTRUCTED BY CONTRACTOR)

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REV. NO.	DATE	REVISIONS DESCRIPTION
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2	04-16-2021	REVISED PER CITY COMMENTS
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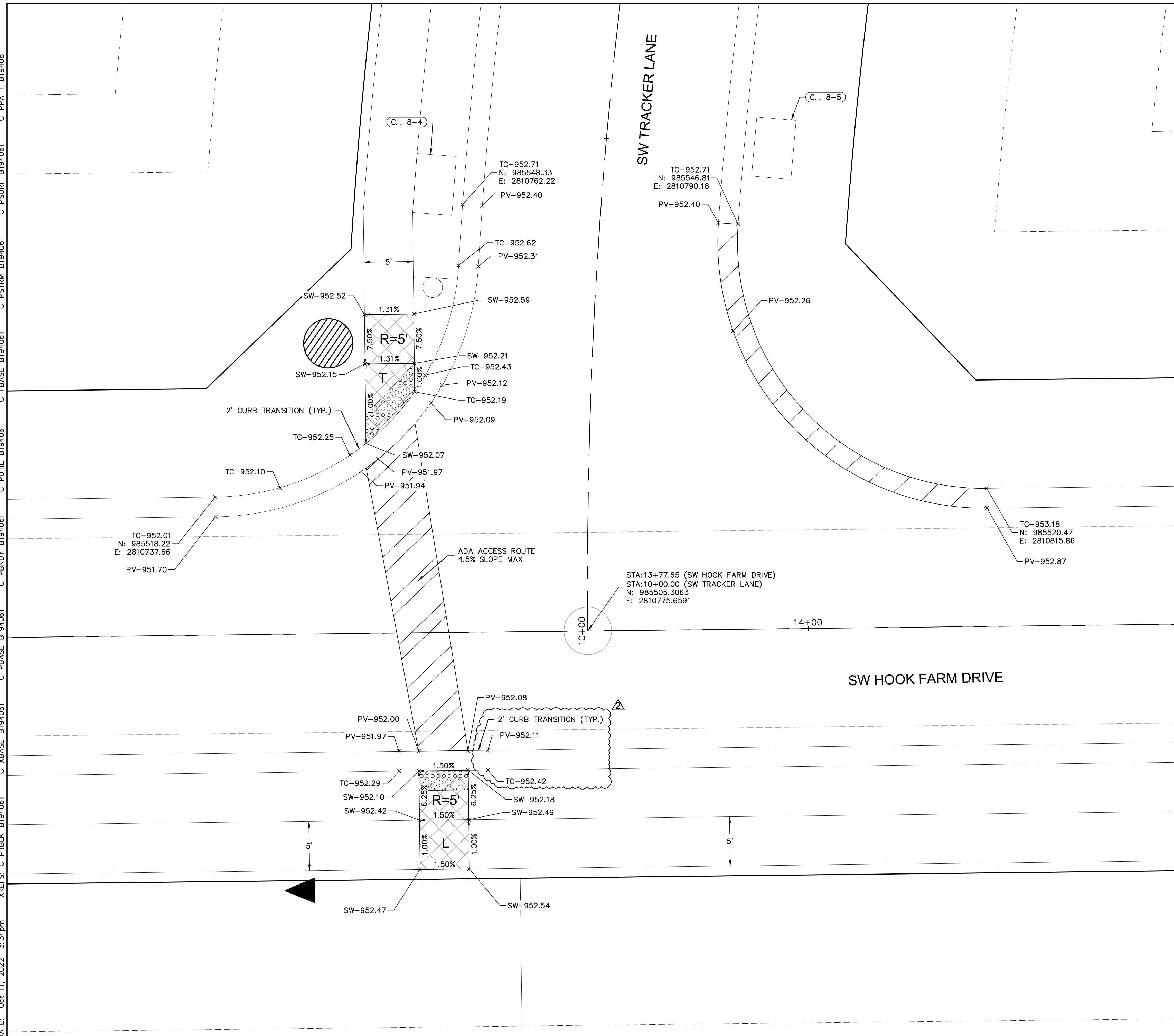
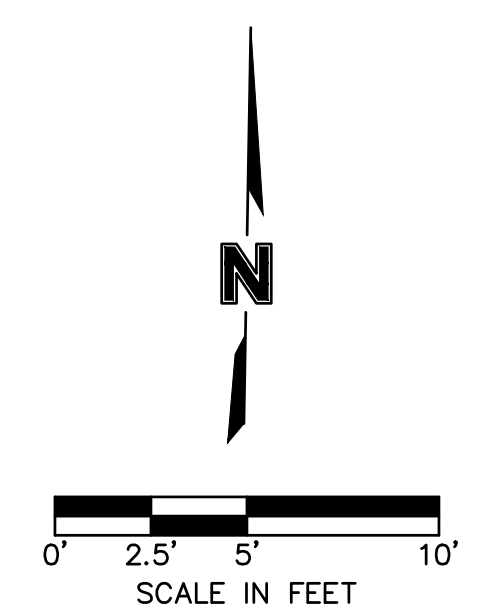
SW TRACKER LANE & SW HOOK FARM DRIVE
 STREET & STORM SEWER PLANS

HOOK FARMS
 SECOND PLAT

LEE'S SUMMIT, MO 2021

drawn by: B.M.W./A.A.
 checked by: B.M.W./A.A.
 designed by: J.E.S.
 QA/QC by: B.M.W./A.A.
 project no.: B19-4061
 date: 01-08-2021

NOT AS-BUILT



REVISIONS

DWG: F:\2019\4001-4500\019-4061-BV40-Design\AutoCAD\Asbuit\Sheets\GNCV\Street & Storm Plans\C_INT01_B194061.dwg
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CURB DATA:
 R=25.00'
 $\Delta=083^{\circ}23'38''$
 L=36.39'
 $CB=N46^{\circ}39'27''E$
 CH=33.26'

SW HOOK FARM DRIVE

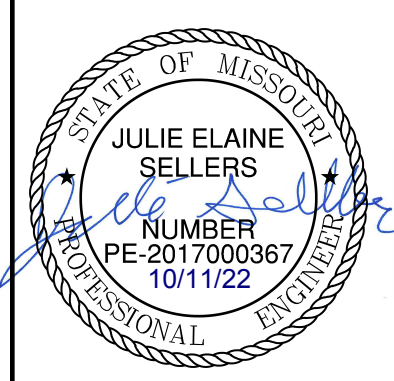
SW FIREFLY LANE

- INTERSECTION AND ADA DETAIL NOTES:
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 5. LANDINGS SHALL HAVE A MAXIMUM SLOPE OF 2% IN ANY DIRECTION.
 6. CROSS SLOPE FOR RAMPS AND SIDEWALK SHALL NOT EXCEED 2%.
 7. AFTER CURBS HAVE BEEN CONSTRUCTED, AND BEFORE ASPHALT OR CONCRETE PAVEMENT IS POURED, CURBS SHOULD BE MEASURED WITH A LEVEL TO ENSURE CURB ALONG ADA RAMPS AND LANDINGS WILL MEET ADA REQUIREMENTS.
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 9. CURVE DATA IS FOR BACK OF CURB.

LEGEND	
TC-	TOP OF CURB
PV-	TOP OF PAVEMENT
SW-	SIDEWALK
L	LANDING AREA
R	RAMP AREA
T	TRANSITION AREA
	ADA ACCESS ROUTE
	CG-2 CURB & GUTTER
	CG-2 DRY CURB & GUTTER
	ADA RAMP (CONSTRUCTED BY CONTRACTOR)

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SW FIREFLY LANE & SW HOOK FARM DRIVE
 STREET & STORM SEWER PLANS

HOOK FARMS
 SECOND PLAT

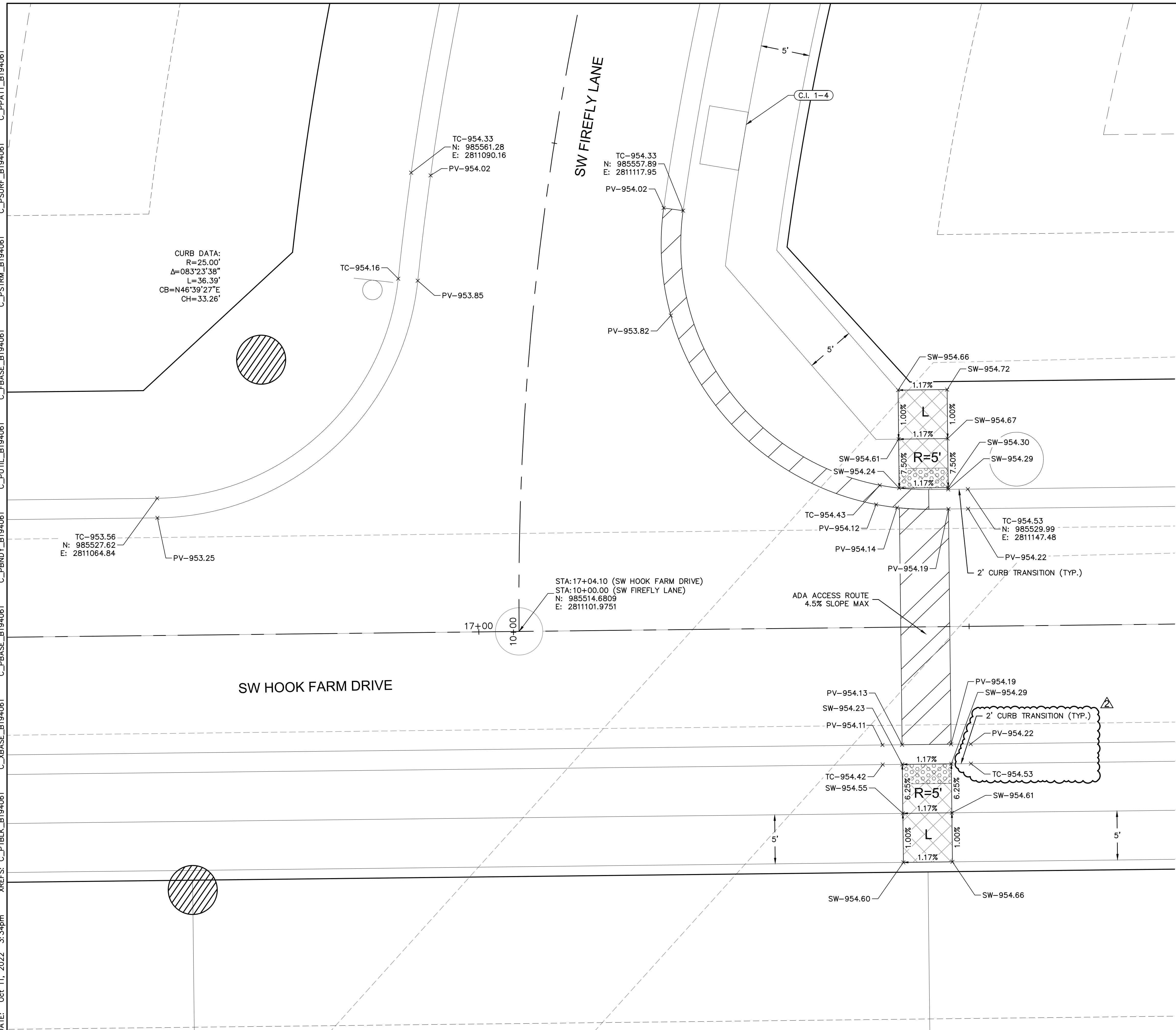
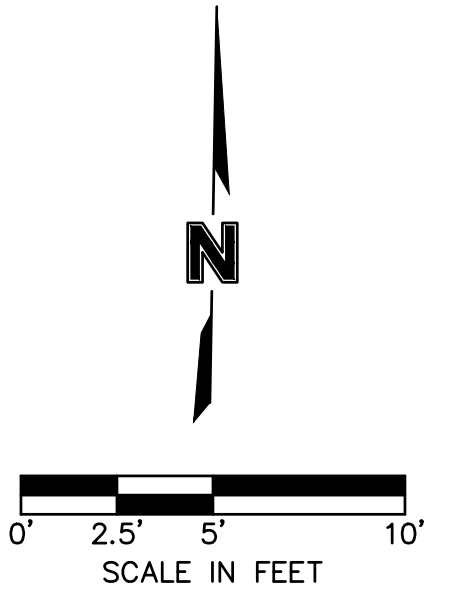
LEE'S SUMMIT, MO

2021

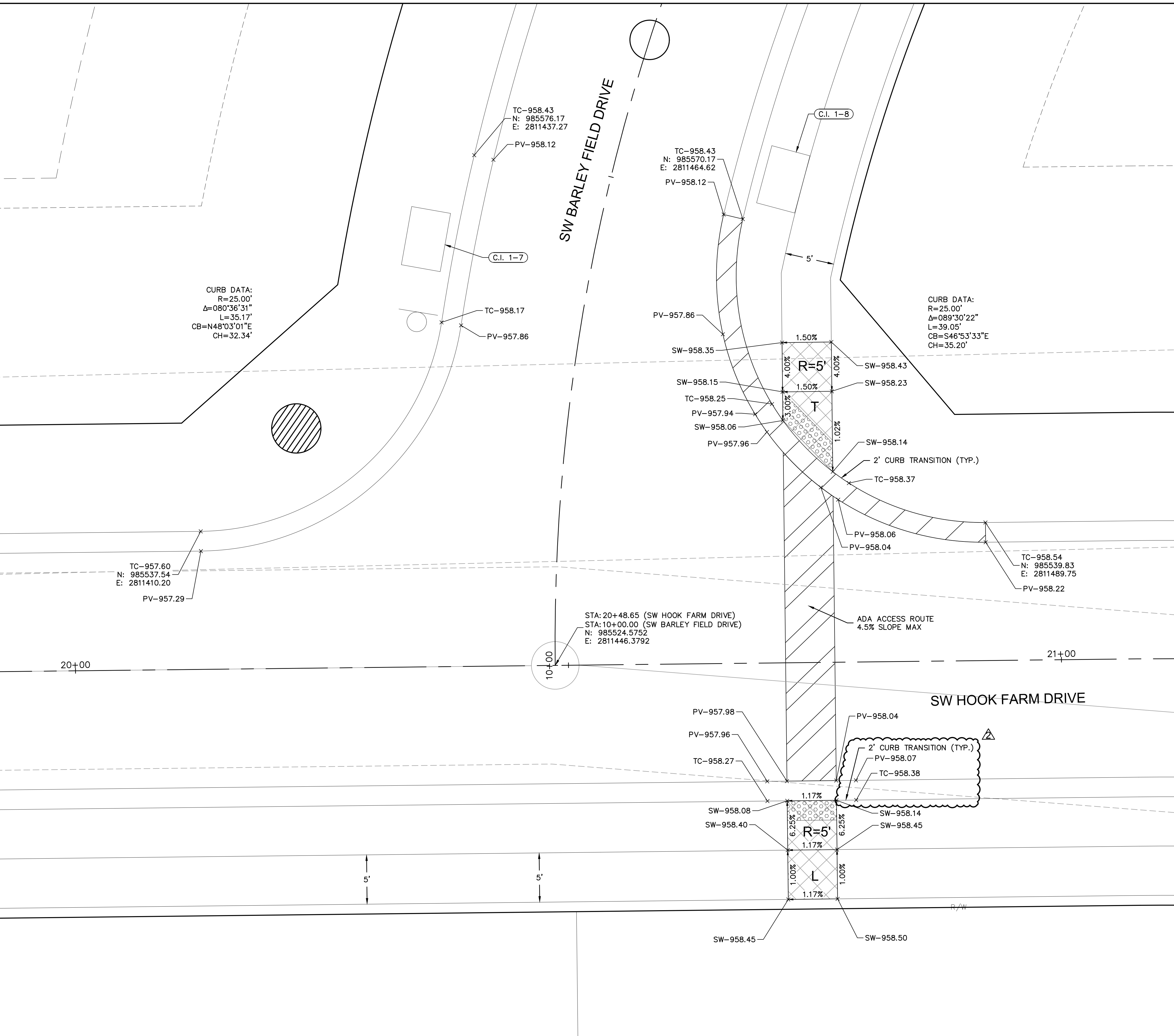
REVISIONS

drawn by: B.M.W./A.A.
 checked by: B.M.W./A.A.
 designed by: J.E.S.
 QA/QC by: B.M.W./A.A.
 project no.: B19-4061
 date: 01-08-2021

NOT AS-BUILT



DWG: F:\2019\4001-4500\019-4061-BV40-Design\AutoCAD\Asbuit\Sheets\GNCV\Street & Storm Plans\C_INT01_B194061.dwg
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 USER: ssoyor
 C_PSTRM_B194061 C_PBASE_B194061 C_PUTIL_B194061 C_PBNDRY_B194061 C_PATT_B194061 C_PSURF_B194061



CURB DATA:
 R=25.00'
 $\Delta=080^{\circ}36'31''$
 L=35.17'
 CB=N48^{\circ}03'01''E
 CH=32.34'

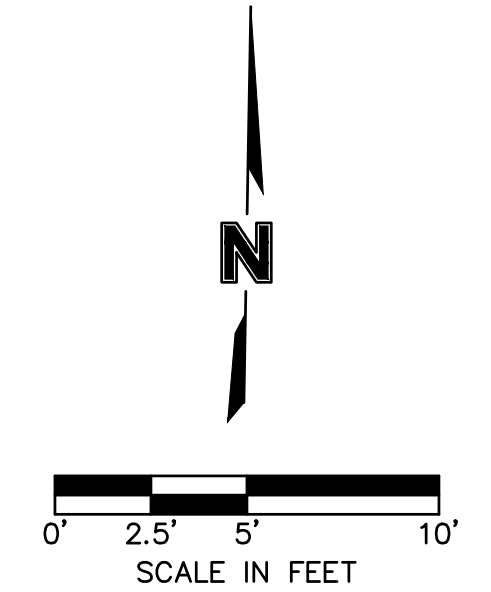
CURB DATA:
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 $\Delta=089^{\circ}30'22''$
 L=39.05'
 CB=S46^{\circ}53'33''E
 CH=35.20'

STA: 20+48.65 (SW HOOK FARM DRIVE)
 STA: 10+00.00 (SW BARLEY FIELD DRIVE)
 N: 985524.5752
 E: 2811446.3792

- INTERSECTION AND ADA DETAIL NOTES:
1. ALL ADA CURB RAMPS SHALL BE BUILT PER CURRENT MUNICIPALITY ADOPTED ADA STANDARDS.
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 4. LANDINGS SHALL HAVE A MAXIMUM SLOPE OF 2% IN ANY DIRECTION.
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 7. CURVE DATA IS FOR BACK OF CURB.

LEGEND	
TC-	TOP OF CURB
PV-	TOP OF PAVEMENT
SW-	SIDEWALK
L	LANDING AREA
R	RAMP AREA
T	TRANSITION AREA
	ADA ACCESS ROUTE
	CG-2 CURB & GUTTER
	CG-2 DRY CURB & GUTTER
	ADA RAMP (CONSTRUCTED BY CONTRACTOR)

NOT AS-BUILT



SW BARLEY FIELD DRIVE & SW HOOK FARM DRIVE STREET & STORM SEWER PLANS

HOOK FARMS SECOND PLAT

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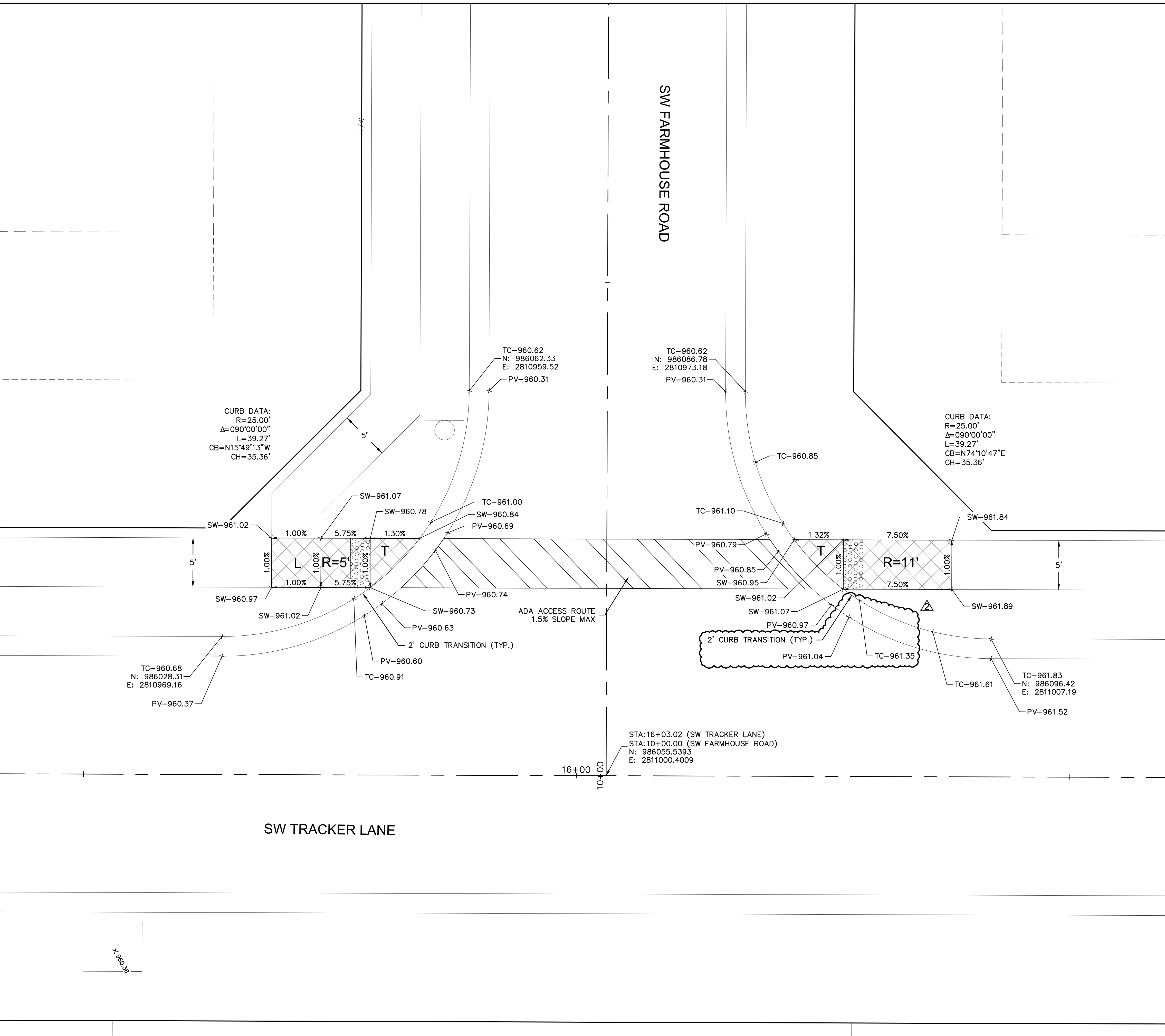
REVISIONS

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2	04-16-2021	REVISED PER CITY COMMENTS
3	09-30-2021	CHANGES TO APPROVED PLANS

drawn by: B.M.W./A.A.
 checked by: B.M.W./A.A.
 designed by: B.M.W./A.A.
 QA/QC by: J.E.S.
 project no.: B19-4061
 date: 01-08-2021

SHEET
C126

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CURB DATA:
 R=25.00'
 $\Delta=090^{\circ}00'00''$
 L=39.27'
 CB=N15°49'13"W
 CH=35.36'

CURB DATA:
 R=25.00'
 $\Delta=090^{\circ}00'00''$
 L=39.27'
 CB=N74°10'47"E
 CH=35.36'

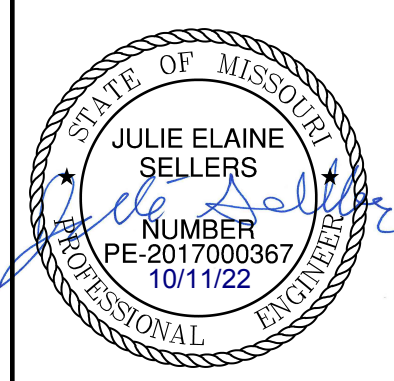
STA: 16+03.02 (SW TRACKER LANE)
 STA: 10+00.00 (SW FARMHOUSE ROAD)
 N: 986055.5393
 E: 2811000.4009

- INTERSECTION AND ADA DETAIL NOTES:
1. ALL ADA CURB RAMP SHALL BE BUILT PER CURRENT MUNICIPALITY ADOPTED ADA STANDARDS.
 2. CURB RAMP FLARES SHALL NOT BE STEEPER THAN 1:10 MAX SLOPES.
 3. LANDING SHALL BE PROVIDED WHERE INDICATED ON PLAN SHEET OR BY PROWAG STANDARDS. LANDING SHALL BE 4'X4' MINIMUM. RAMP RUNS SHALL HAVE A MAXIMUM RUNNING SLOPE OF 1:12 UNLESS THE RAMP LENGTH IS OVER 15 FEET, THEN THE SLOPE CAN BE GREATER AS INDICATED IN DETAILS TO REACH STREET GRADES.
 4. LANDINGS SHALL HAVE A MAXIMUM SLOPE OF 2% IN ANY DIRECTION.
 5. CROSS SLOPE FOR RAMPS AND SIDEWALK SHALL NOT EXCEED 2%.
 6. AFTER CURBS HAVE BEEN CONSTRUCTED, AND BEFORE ASPHALT OR CONCRETE PAVEMENT IS POURED, CURBS SHOULD BE MEASURED WITH A LEVEL TO ENSURE CURBS ALONG ADA RAMPS AND LANDINGS WILL MEET ADA REQUIREMENTS.
 7. ADA RAMP CONSTRUCTION WILL BE INSPECTED THOROUGHLY BY THE CITY INSPECTOR. CONTRACTOR SHALL BE REQUIRED TO RECONSTRUCT RAMPS, CURBS AND/OR PAVEMENT AT CONTRACTOR'S EXPENSE IF ADA RAMPS AND LANDINGS CANNOT MEET THE ADA REQUIREMENTS, PER APPROVED PLAN OR APPROVED ALTERNATIVE.
 8. CURVE DATA IS FOR BACK OF CURB.

LEGEND	
TC-	TOP OF CURB
PV-	TOP OF PAVEMENT
SW-	SIDEWALK
L	LANDING AREA
R	RAMP AREA
T	TRANSITION AREA
	ADA ACCESS ROUTE
	CG-2 CURB & GUTTER
	CG-2 DRY CURB & GUTTER
	ADA RAMP (CONSTRUCTED BY CONTRACTOR)

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REV. NO.	DATE	REVISIONS DESCRIPTION
1	03-23-2021	REVISED PER CITY COMMENTS
2	04-16-2021	REVISED PER CITY COMMENTS
3	09-30-2021	CHANGES TO APPROVED PLANS

SW FARMHOUSE ROAD & SW TRACKER LANE
 STREET & STORM SEWER PLANS

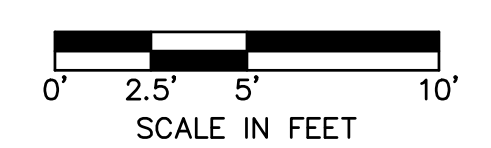
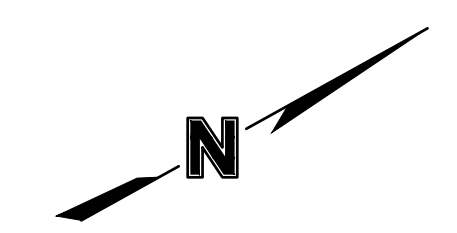
HOOK FARMS
 SECOND PLAT

2021

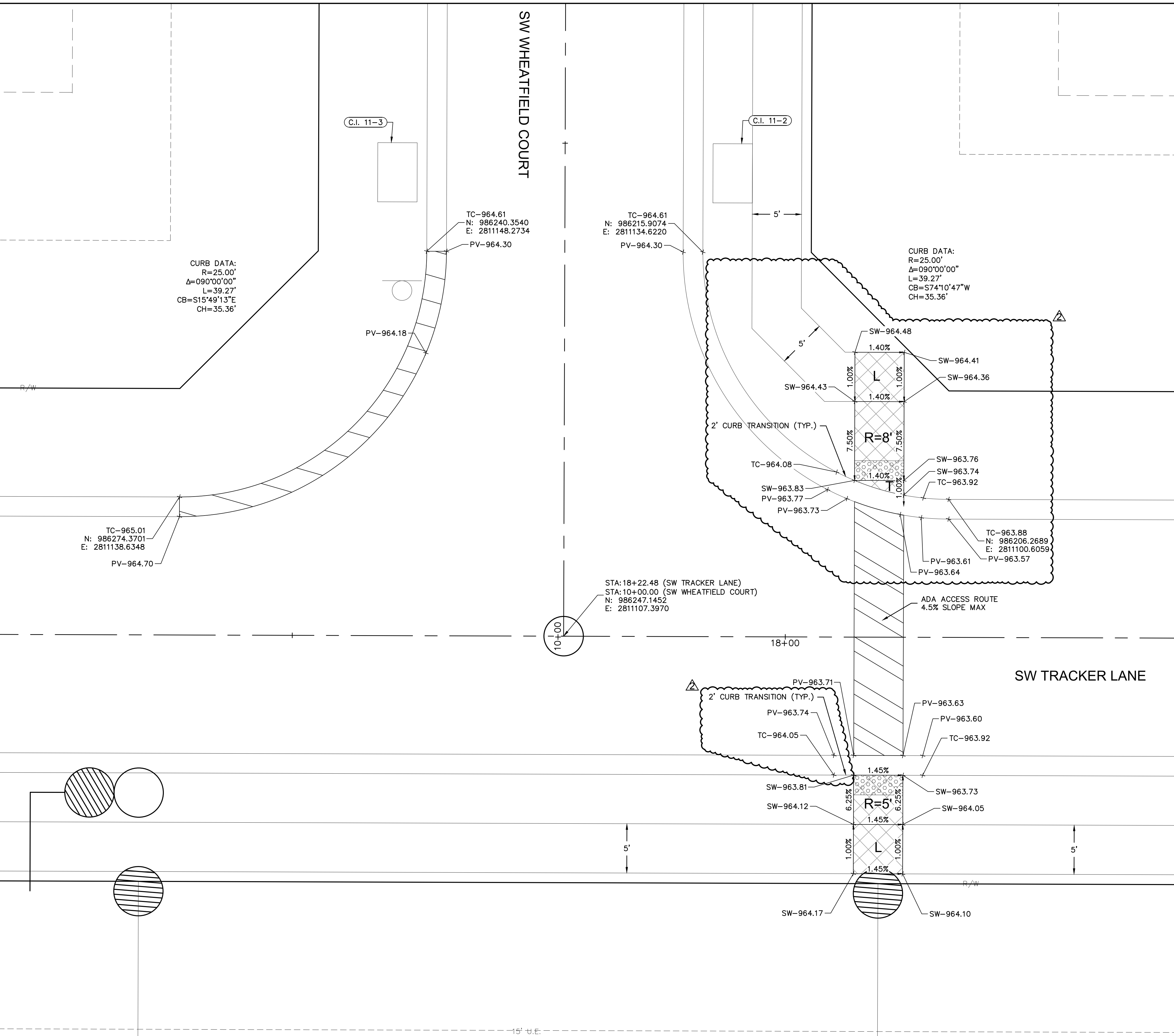
LEE'S SUMMIT, MO

drawn by: B.M.W./A.A.
 checked by: B.M.W./A.A.
 designed by: J.E.S.
 QA/QC by: J.E.S.
 project no.: B19-4061
 date: 01-08-2021

NOT AS-BUILT



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TC-	TOP OF CURB
PV-	TOP OF PAVEMENT
SW-	SIDEWALK
L	LANDING AREA
R	RAMP AREA
T	TRANSITION AREA
	ADA ACCESS ROUTE
	CG-2 CURB & GUTTER
	CG-2 DRY CURB & GUTTER
	ADA RAMP (CONSTRUCTED BY CONTRACTOR)

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REV. NO.	DATE	REVISIONS DESCRIPTION	BY
1	03-23-2021	REVISED PER CITY COMMENTS	
2	04-16-2021	REVISED PER CITY COMMENTS	
3	09-30-2021	CHANGES TO APPROVED PLANS	

SW WHEATFIELD COURT & SW TRACKER LANE
 STREET & STORM SEWER PLANS

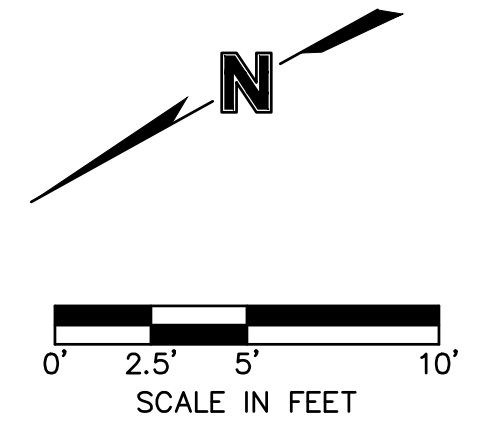
HOOK FARMS
 SECOND PLAT

2021

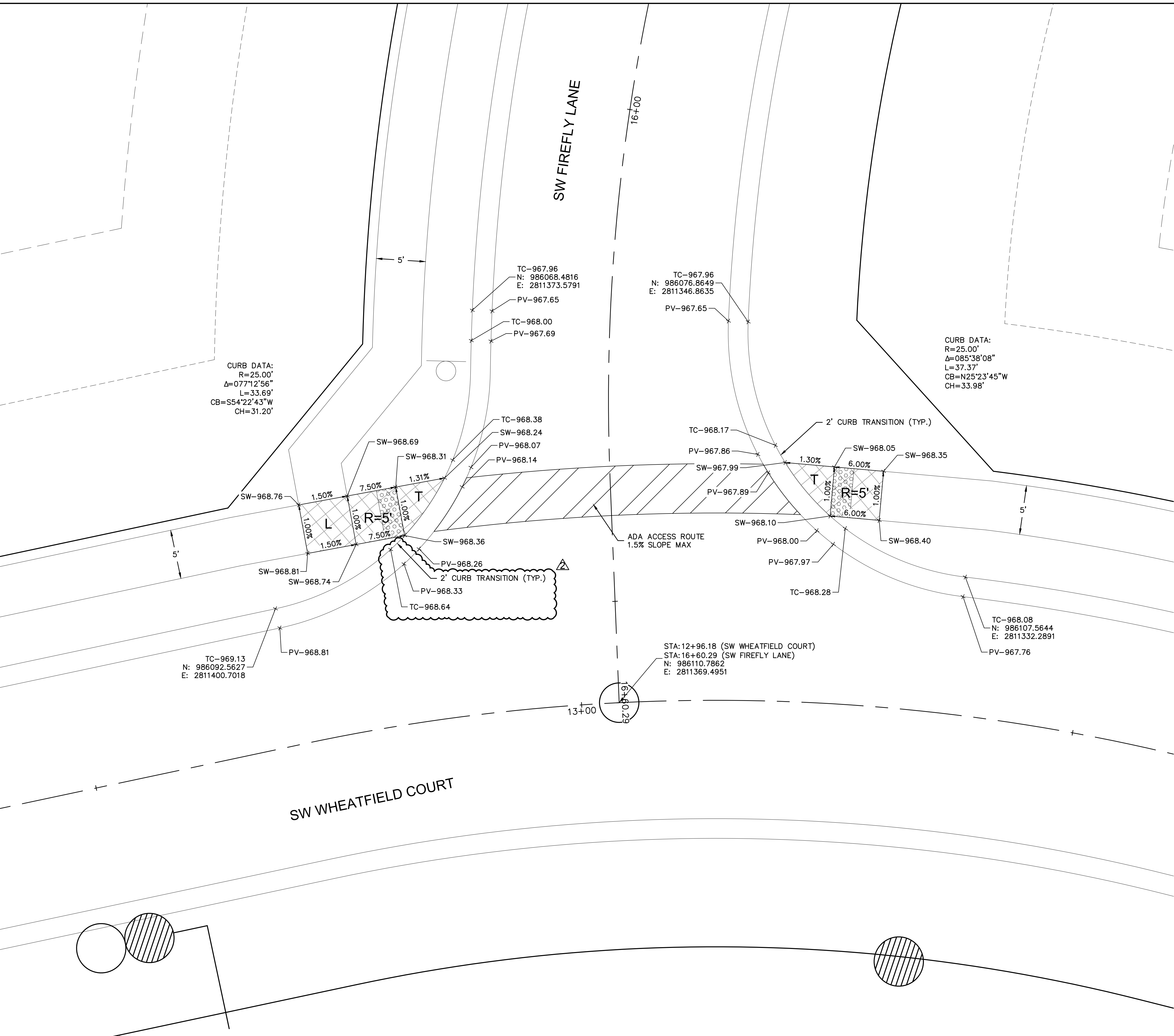
LEE'S SUMMIT, MO

drawn by: B.M.W./A.A.
 checked by: B.M.W./A.A.
 designed by: J.E.S.
 QA/QC by: J.E.S.
 project no.: B19-4061
 date: 01-08-2021

NOT AS-BUILT



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CURB DATA:
 R=25.00'
 $\Delta=077^{\circ}12'56''$
 L=33.69'
 CB=S54°22'43"W
 CH=31.20'

CURB DATA:
 R=25.00'
 $\Delta=085^{\circ}38'08''$
 L=37.37'
 CB=N25°23'45"W
 CH=33.98'

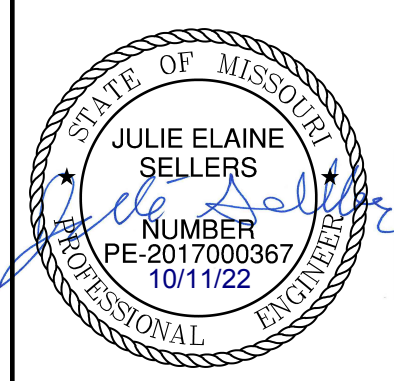
STA: 12+96.18 (SW WHEATFIELD COURT)
 STA: 16+60.29 (SW FIREFLY LANE)
 N: 986110.7862
 E: 2811369.4951

- INTERSECTION AND ADA DETAIL NOTES:
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 5. LANDINGS SHALL HAVE A MAXIMUM SLOPE OF 2% IN ANY DIRECTION.
 6. CROSS SLOPE FOR RAMPS AND SIDEWALK SHALL NOT EXCEED 2%.
 7. AFTER CURBS HAVE BEEN CONSTRUCTED, AND BEFORE ASPHALT OR CONCRETE PAVEMENT IS POURED, CURBS SHOULD BE MEASURED WITH A LEVEL TO ENSURE CURBS ALONG ADA RAMPS AND LANDINGS WILL MEET ADA REQUIREMENTS.
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PV--	TOP OF PAVEMENT
SW--	SIDEWALK
L	LANDING AREA
R	RAMP AREA
T	TRANSITION AREA
	ADA ACCESS ROUTE
	CG-2 CURB & GUTTER
	CG-2 DRY CURB & GUTTER
	ADA RAMP (CONSTRUCTED BY CONTRACTOR)

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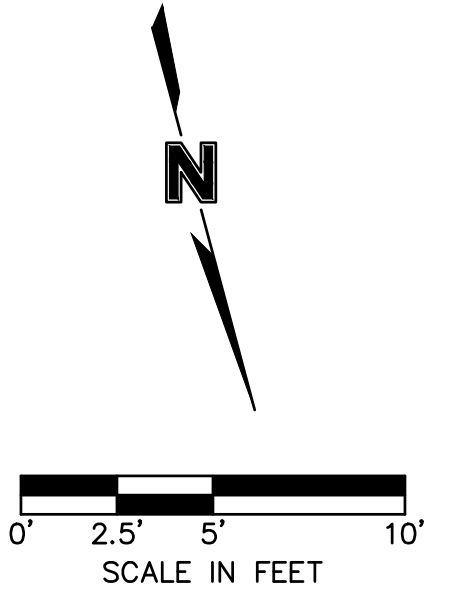


REV. NO.	DATE	REVISIONS DESCRIPTION
1	03-23-2021	REVISED PER CITY COMMENTS
2	04-16-2021	REVISED PER CITY COMMENTS
3	09-30-2021	CHANGES TO APPROVED PLANS

SW FIREFLY LANE & SW WHEATFIELD COURT STREET & STORM SEWER PLANS	BY
HOOK FARMS SECOND PLAT	
LEE'S SUMMIT, MO	2021

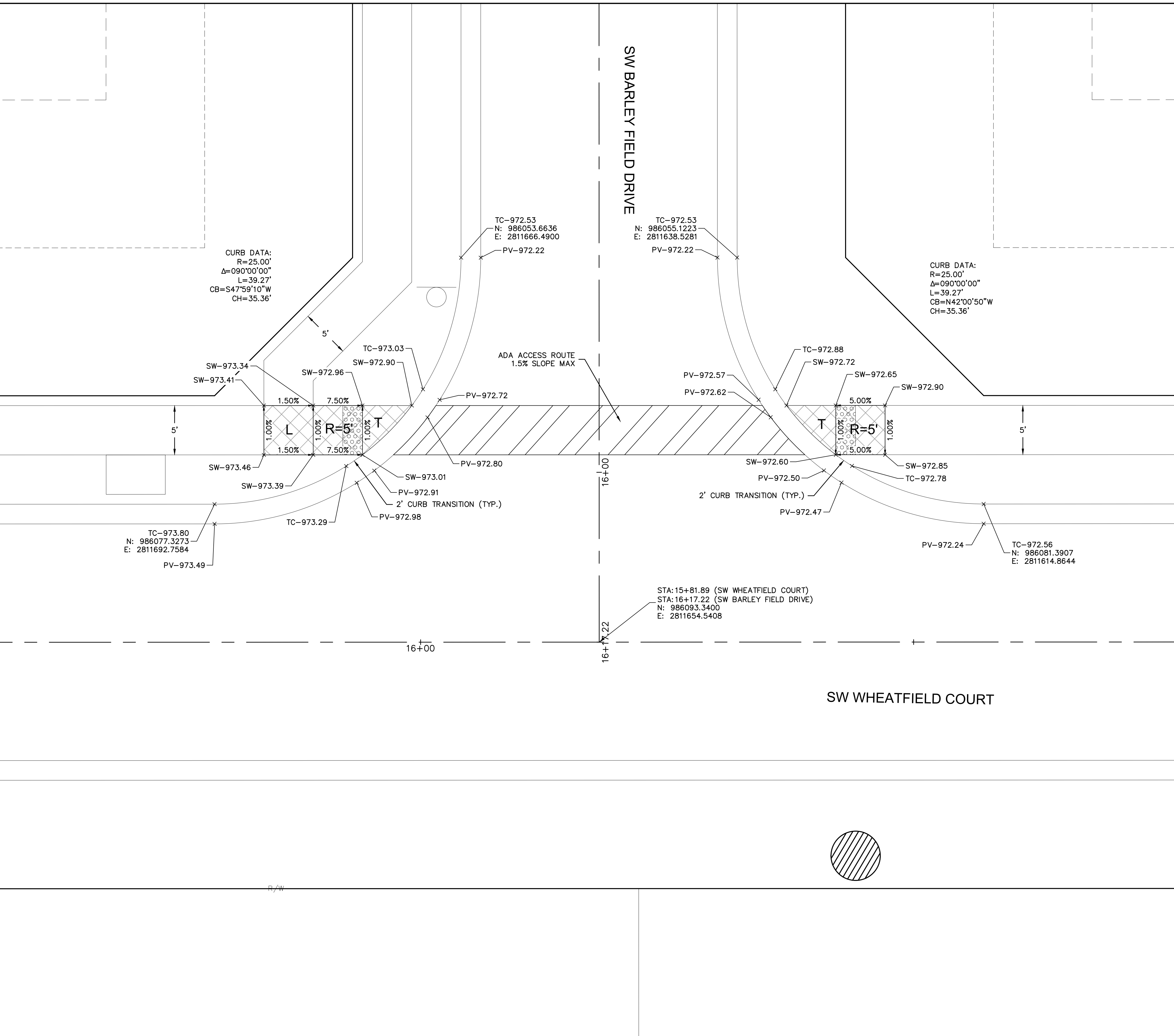
drawn by: B.M.W./A.A.
 checked by: B.M.W./A.A.
 designed by: J.E.S.
 QA/QC by: J.E.S.
 project no.: B19-4061
 date: 01-08-2021

NOT AS-BUILT



SHEET C129

DWG: F:\2019\4001-4500\019-4061-BV40-Design\AutoCAD\Asbuit\Sheets\GNCV\Street & Storm Plans\C_INT02_B194061.dwg
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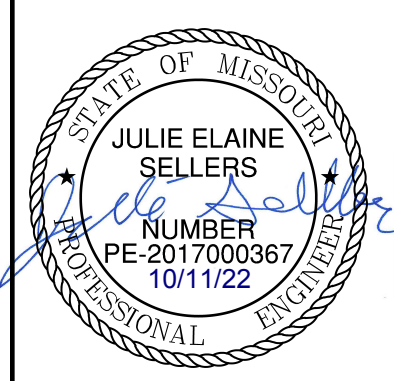


- INTERSECTION AND ADA DETAIL NOTES:
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	ADA ACCESS ROUTE
	CG-2 CURB & GUTTER
	CG-2 DRY CURB & GUTTER
	ADA RAMP (CONSTRUCTED BY CONTRACTOR)

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REV. NO.	DATE	REVISIONS DESCRIPTION	BY
1	03-23-2021	REVISED PER CITY COMMENTS	
2	04-16-2021	REVISED PER CITY COMMENTS	
3	09-30-2021	CHANGES TO APPROVED PLANS	

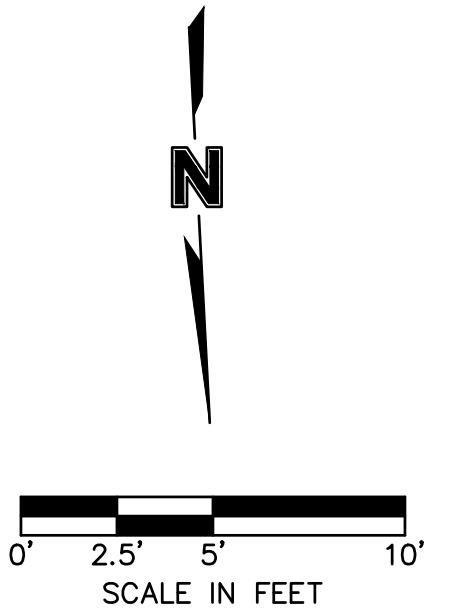
SW BARLEY FIELD DRIVE & SW WHEATFIELD COURT STREET & STORM SEWER PLANS

HOOK FARMS SECOND PLAT

LEE'S SUMMIT, MO 2021

drawn by: B.M.W./A.A.
 checked by: B.M.W.
 designed by: B.M.W./A.A.
 QA/QC by: J.E.S.
 project no.: B19-4061
 date: 01-08-2021

NOT AS-BUILT



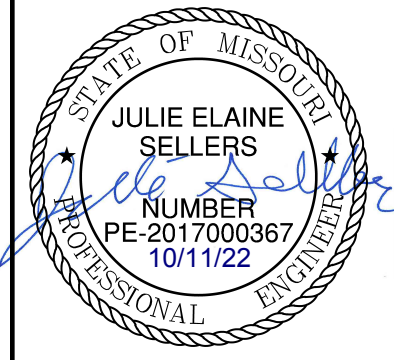
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CURB DATA:
 R=39.00'
 $\Delta=251^{\circ}04'31''$
 L=170.90'
 CB=S33°53'32"W
 CH=63.47'

CURB DATA:
 R=35.00'
 $\Delta=071^{\circ}04'31''$
 L=43.42'
 CB=S56°06'28"E
 CH=40.69'

- INTERSECTION AND ADA DETAIL NOTES:
1. ALL ADA CURB RAMPS SHALL BE BUILT PER CURRENT MUNICIPALITY ADOPTED ADA STANDARDS.
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SW-	SIDEWALK
L	LANDING AREA
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T	TRANSITION AREA
	ADA RAMP & CONCRETE SIDEWALK (CONSTRUCTED BY CONTRACTOR)
	ADA ACCESS ROUTE
	CG-2 CURB & GUTTER



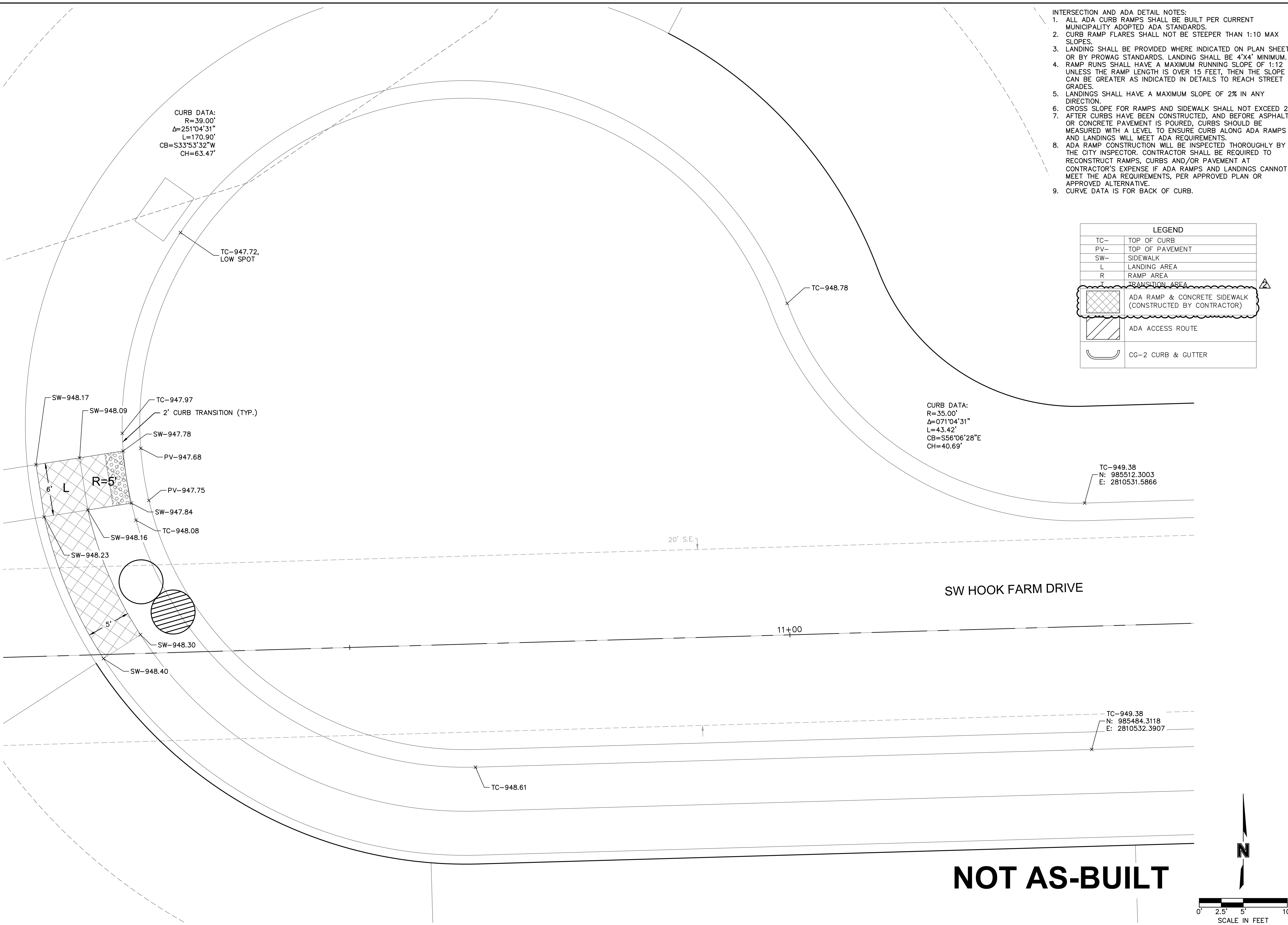
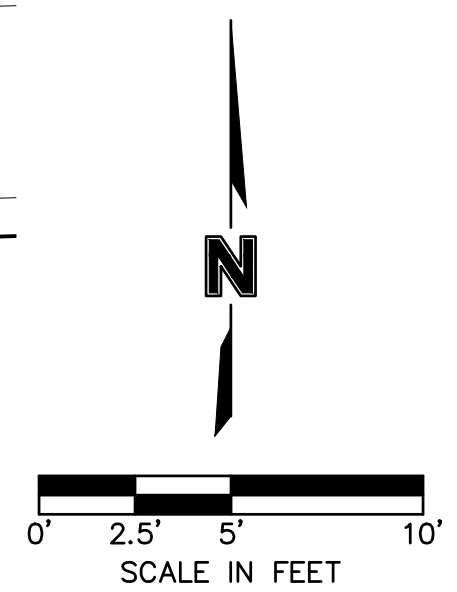
REV. NO.	DATE	REVISIONS DESCRIPTION	BY
1	03-23-2021	REVISED PER CITY COMMENTS	
2	04-16-2021	REVISED PER CITY COMMENTS	
3	09-30-2021	CHANGES TO APPROVED PLANS	

SW HOOK FARM DRIVE CUL-DE-SAC STREET & STORM SEWER PLANS
 HOOK FARMS SECOND PLAT
 2021

drawn by: B.M.W./A.A.
 checked by: B.M.W./A.A.
 designed by: J.E.S.
 QA/QC by: B.M.W./A.A.
 project no.: B19-4061
 date: 01-08-2021

SHEET C131

NOT AS-BUILT



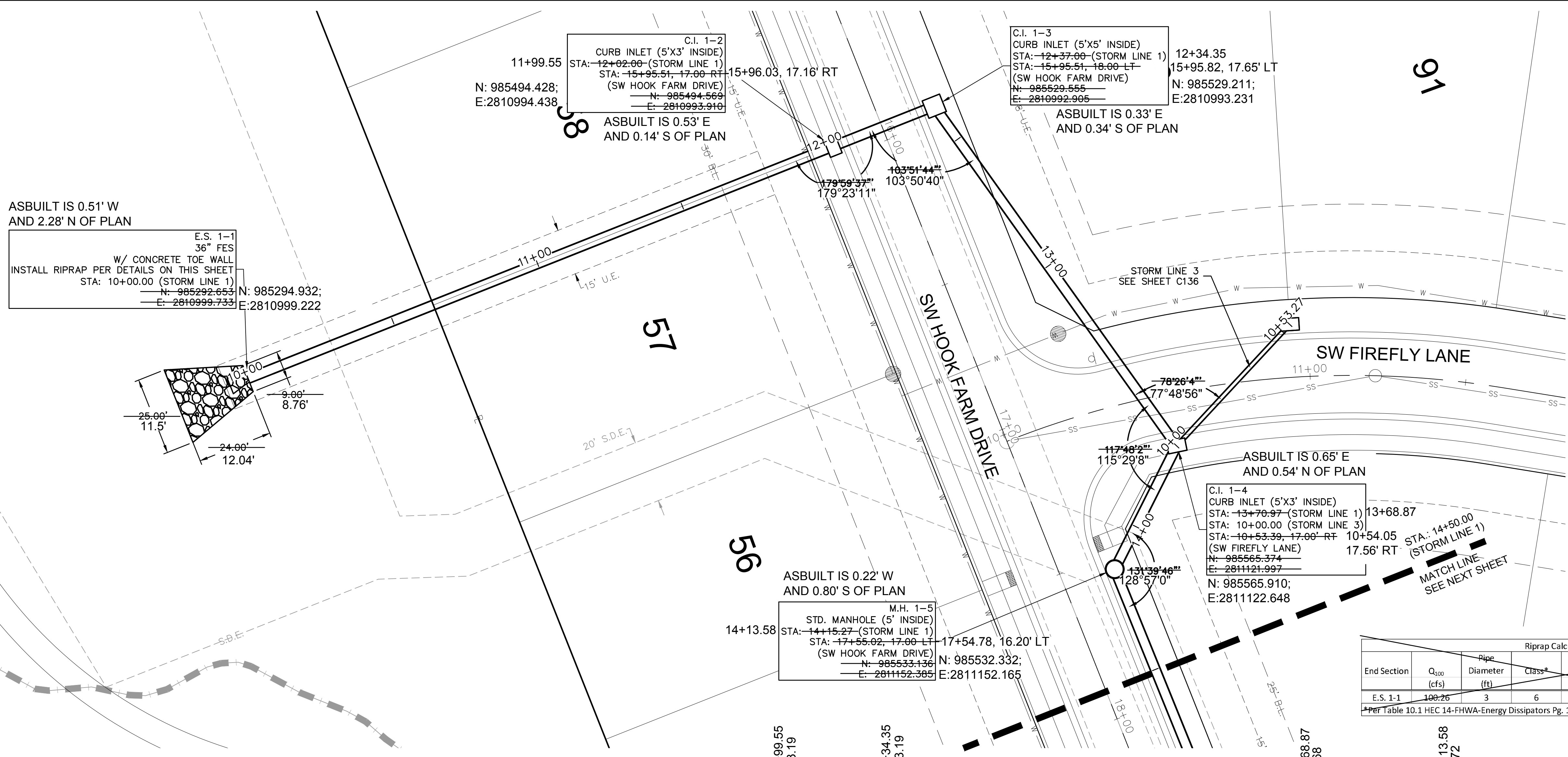
REVISIONS

LEE'S SUMMIT, MO

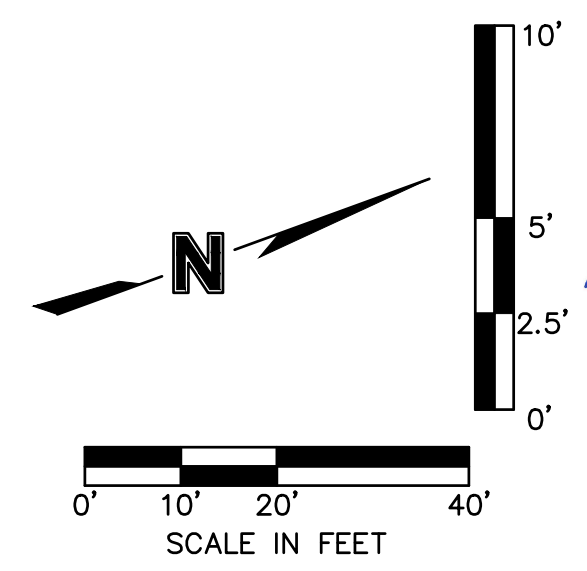
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DWG: F:\2019\4001-4500\019-4061-BV40-Design\AutoCAD\Asbuilt\Sheets\GNCV\Street & Storm Plans\C_STM01_B194061.dwg
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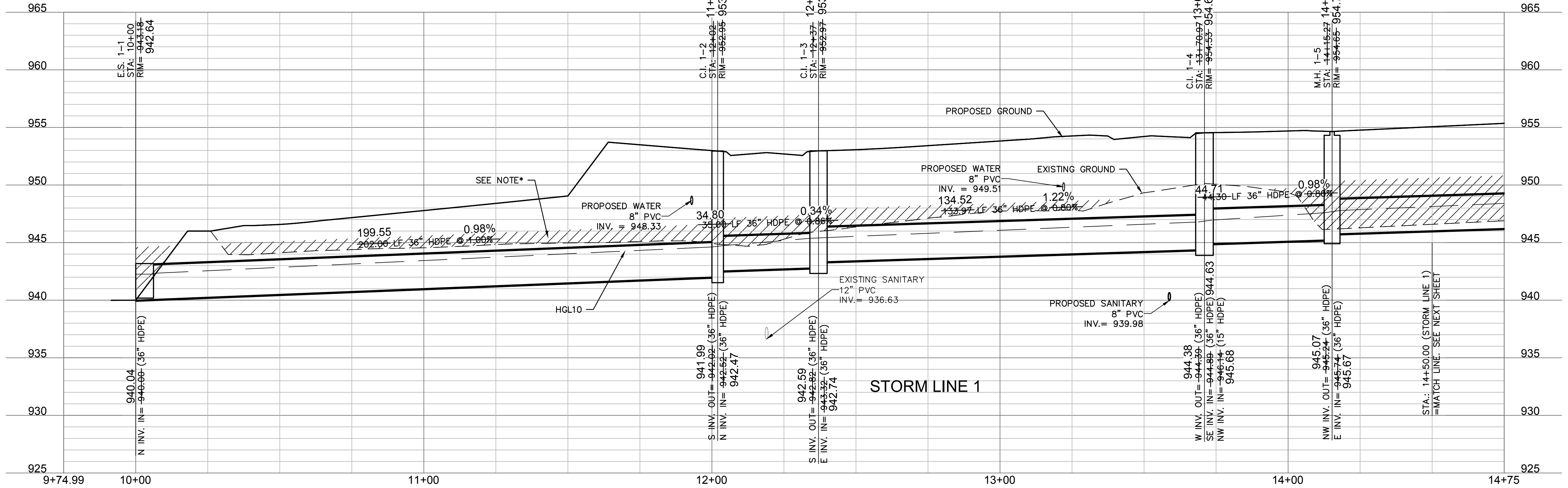


AS BUILT
 DATE SURVEYED: 2022-05-26



Riprap Calculations							
End Section	Q ₁₀₀ (cfs)	Riprap Diameter (ft)	Class*	D50* (in)	Apron Length (ft)	Apron Depth (ft)	Area (SY)
E.S. 1-1	100.26	3	6	22	24	3.67	45.3

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



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 FAX 816.361.1888
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JULIE ELAINE SELLERS
 MISSOURI PROFESSIONAL ENGINEER
 NUMBER PE-2017000367
 10/11/22

BY: _____
 DATE: _____

REV. NO.	DATE	REVISIONS DESCRIPTION
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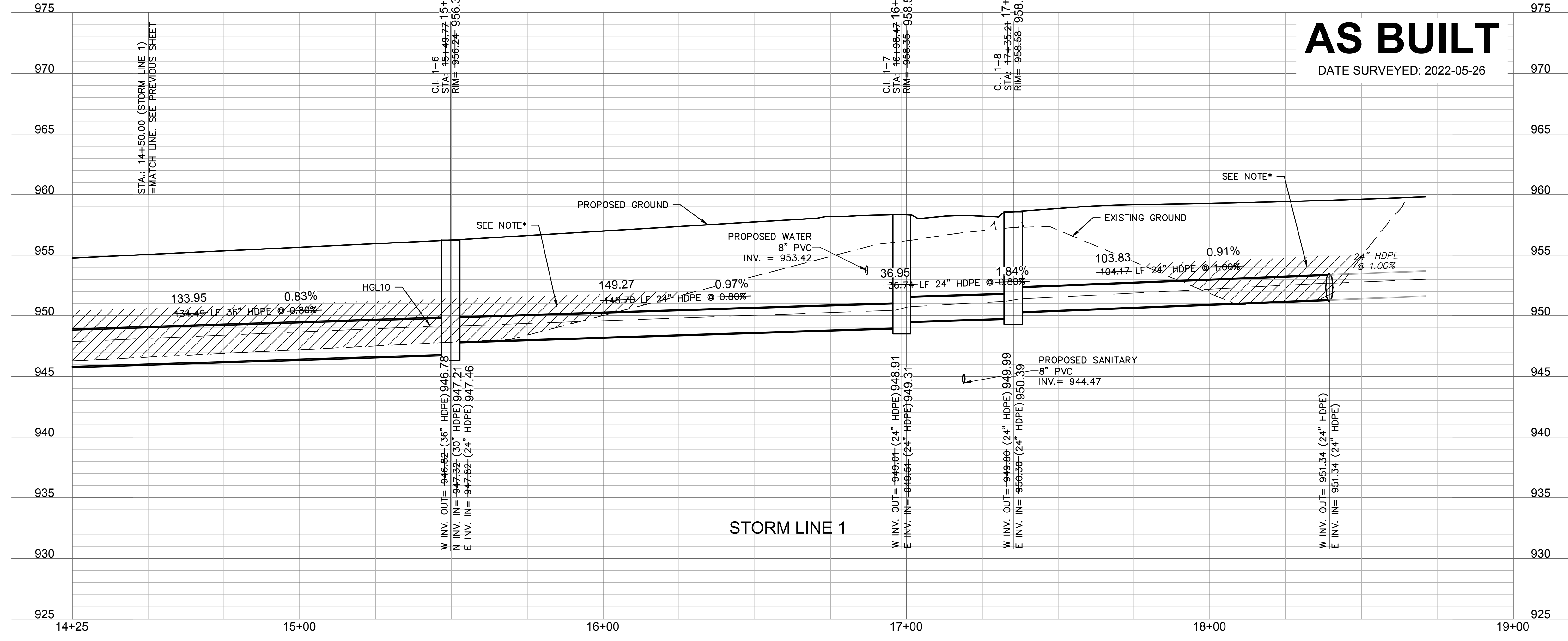
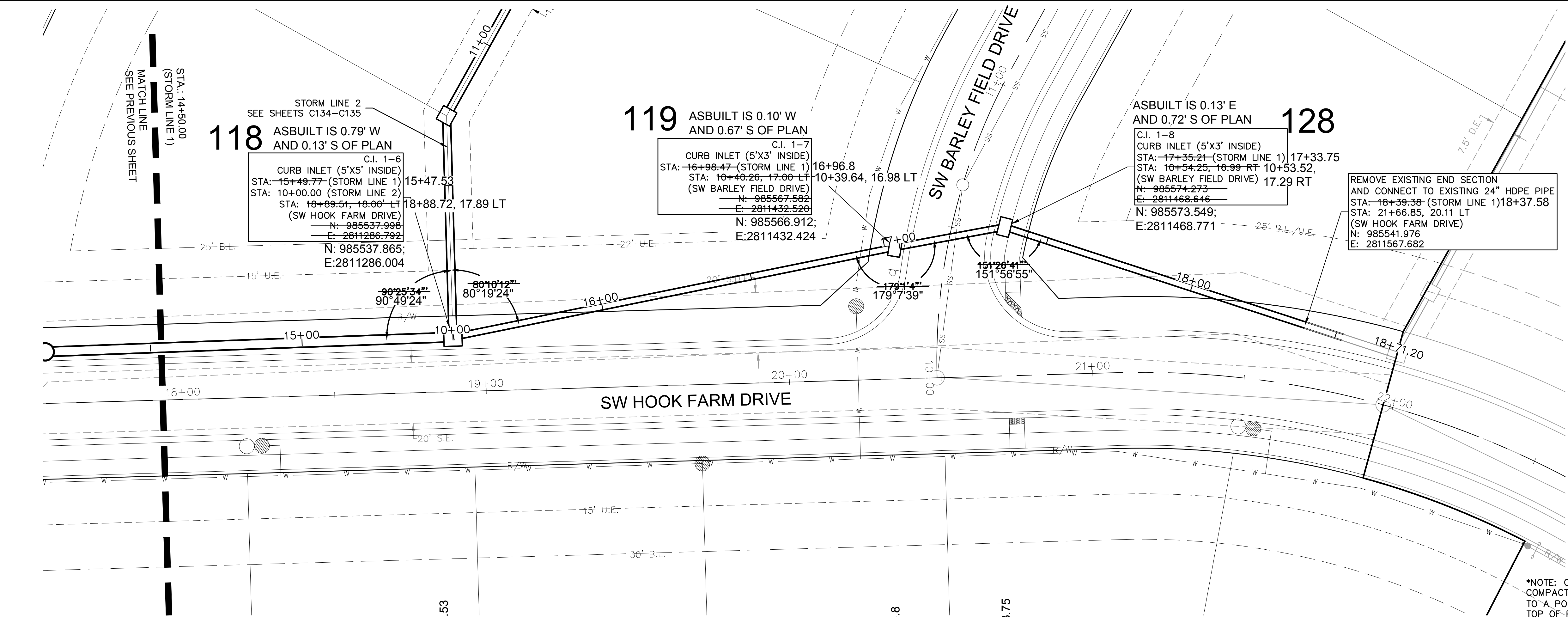
STORM SEWER PLAN & PROFILE (LINE 1)
 STREET & STORM SEWER PLANS
 HOOK FARMS
 SECOND PLAT
 2021

LEE'S SUMMIT, MO

drawn by: B.M.W./A.A.
 checked by: B.M.W.
 designed by: B.M.W./A.A.
 QA/QC by: J.E.S.
 project no.: B19-4061
 date: 01-08-2021

SHEET C132

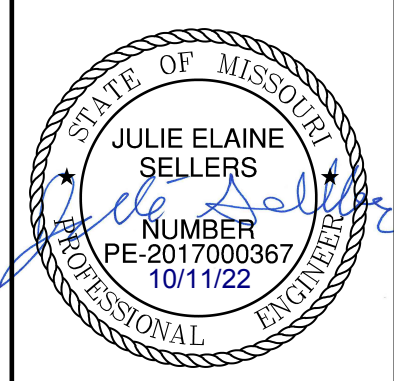
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 C_PSTRM_B194061
 C_PTBK_B194061
 C_PBNY_B194061
 C_PBSE_B194061



AS BUILT
 DATE SURVEYED: 2022-05-26

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

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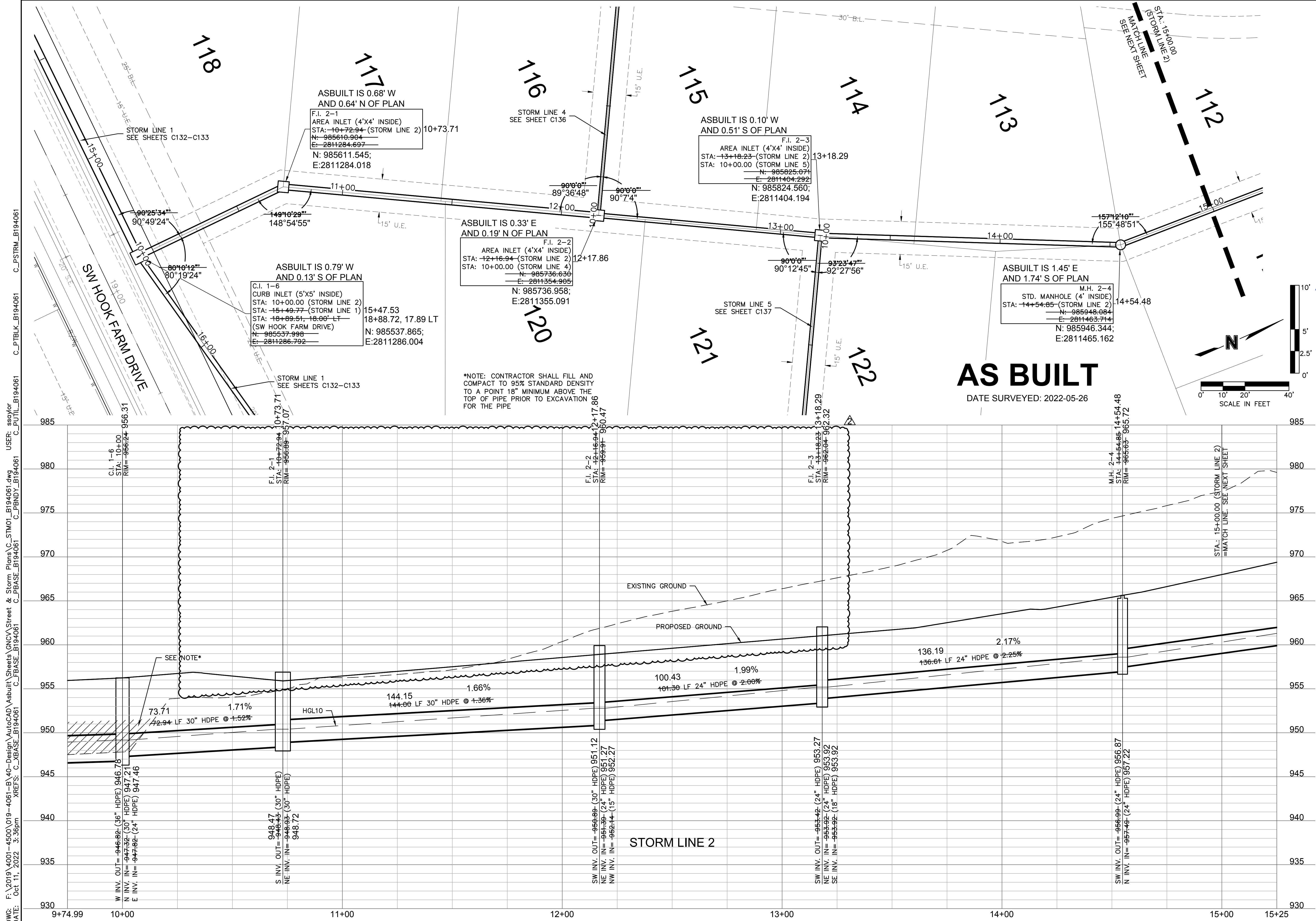


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STORM SEWER PLAN & PROFILE (LINE 1)
 STREET & STORM SEWER PLANS
 HOOK FARMS
 SECOND PLAT
 LEES SUMMIT, MO
 2021

drawn by: B.M.W./A.A.
 checked by: B.M.W.
 designed by: B.M.W./A.A.
 QA/QC by: J.E.S.
 project no.: B19-4061
 date: 01-09-2021

SHEET
 C133



DWG: F:\2019\4001-4500\019-4061-BX-40-Design\AutoCAD\Asbuilt\Sheets\GNCV\Street & Storm Plans\C_STM01_B194061.dwg
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 USER: ssoylor
 C_PSTRM_B194061
 C_PBLK_B194061
 C_PNDY_B194061
 C_PBASE_B194061

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STATE OF MISSOURI
 JULIE ELAINE SELLERS
 PROFESSIONAL ENGINEER
 NUMBER PE-2017000367
 10/11/22

REV. NO.	DATE	REVISIONS DESCRIPTION
1	03-23-2021	REVISED PER CITY COMMENTS
2	04-16-2021	REVISED PER CITY COMMENTS
3	09-30-2021	CHANGES TO APPROVED PLANS

STORM SEWER PLAN & PROFILE (LINE 2)
 STREET & STORM SEWER PLANS

HOOK FARMS
 SECOND PLAT

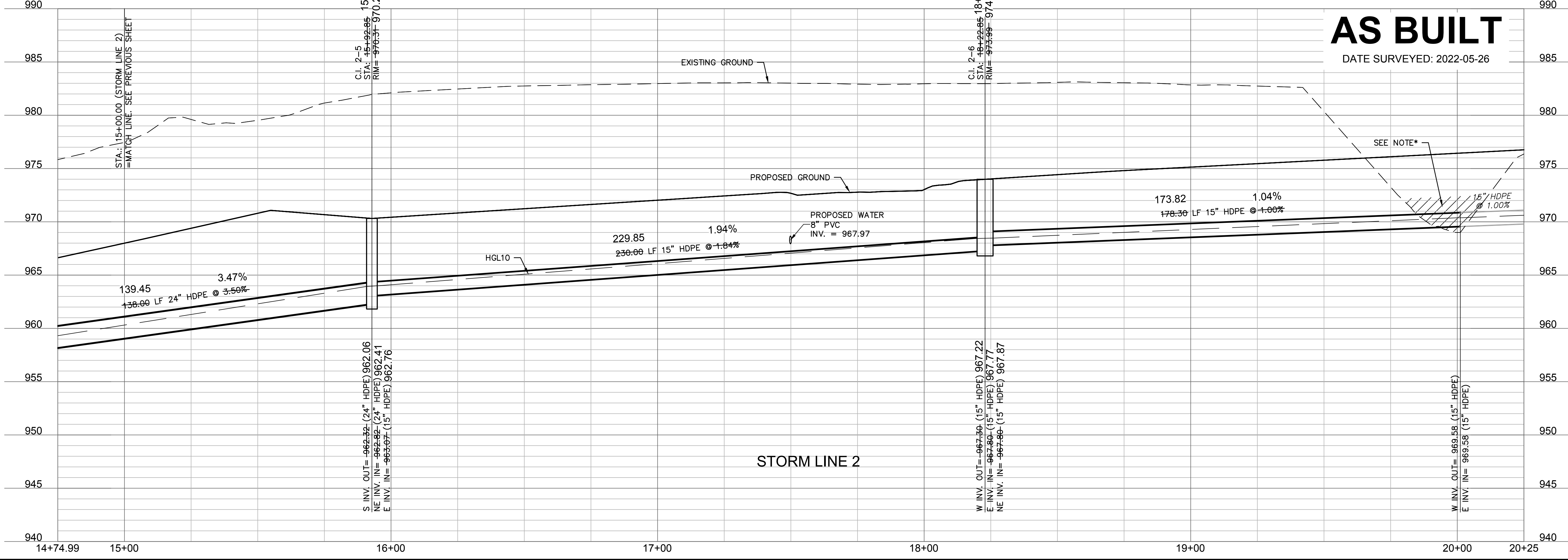
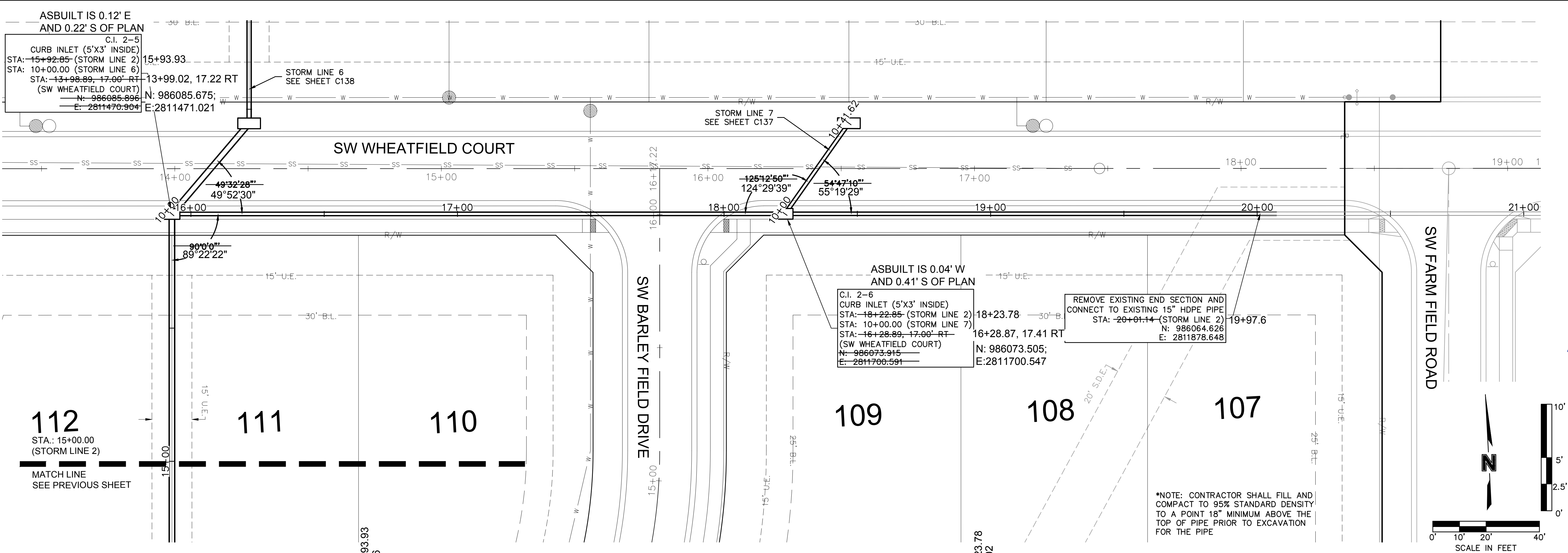
LEE'S SUMMIT, MO

2021

REVISIONS

drawn by: B.M.W./A.A.
 checked by: B.M.W.
 designed by: B.M.W./A.A.
 QA/QC by: J.E.S.
 project no.: B19-4061
 date: 01-09-2021

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BY

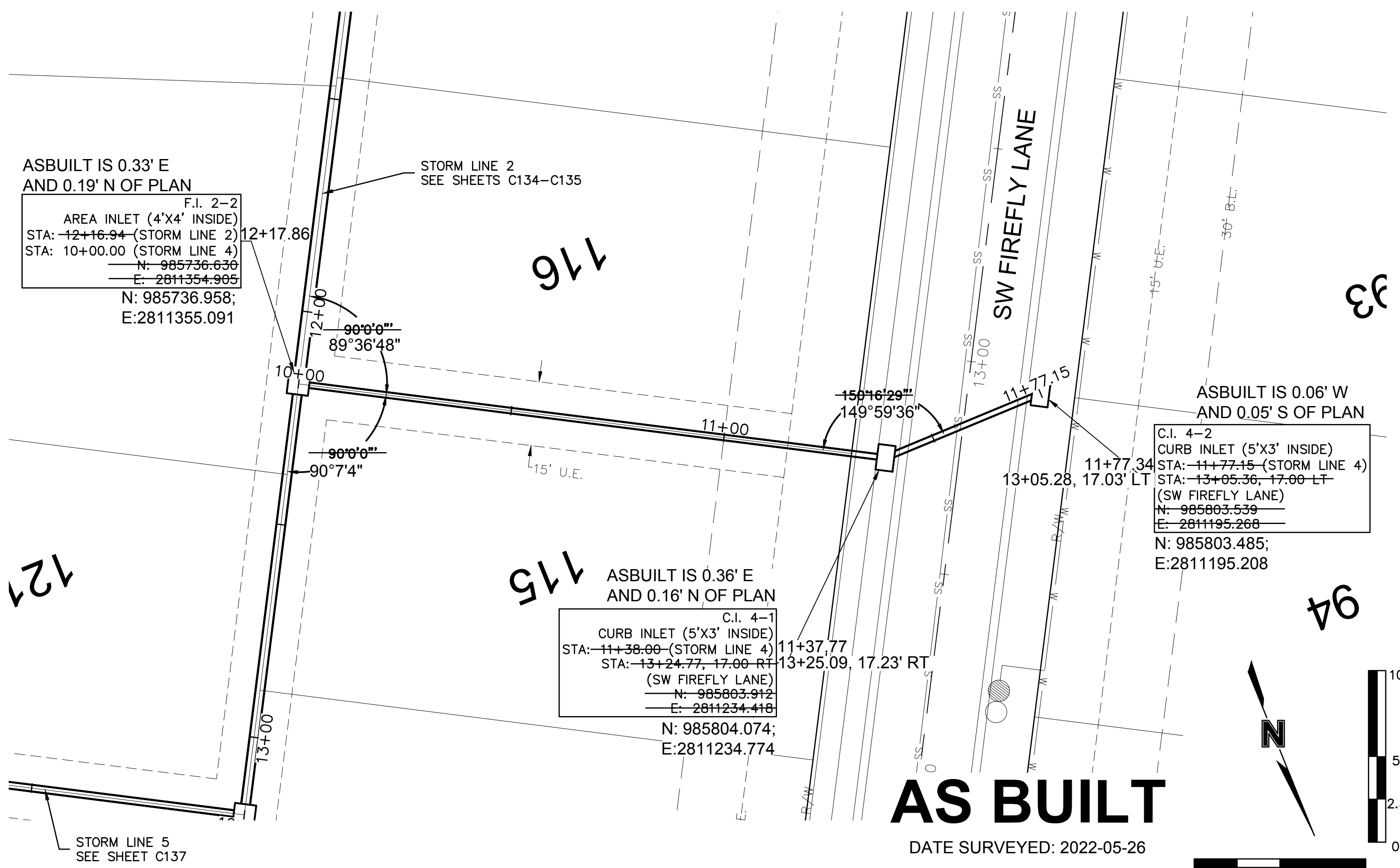
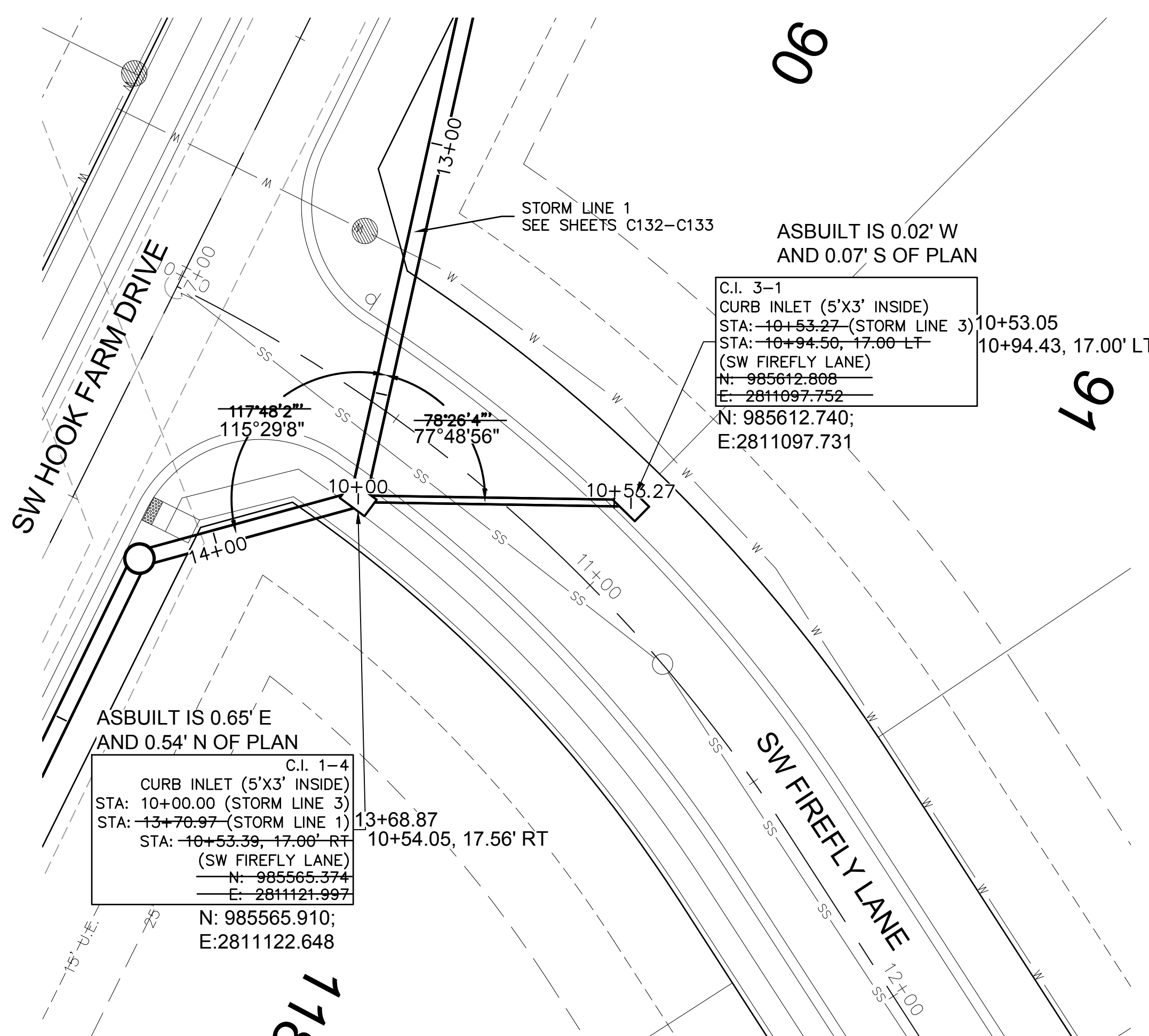
STORM SEWER PLAN & PROFILE (LINE 2)
 STREET & STORM SEWER PLANS
 HOOK FARMS
 SECOND PLAT
 LEE'S SUMMIT, MO

2021

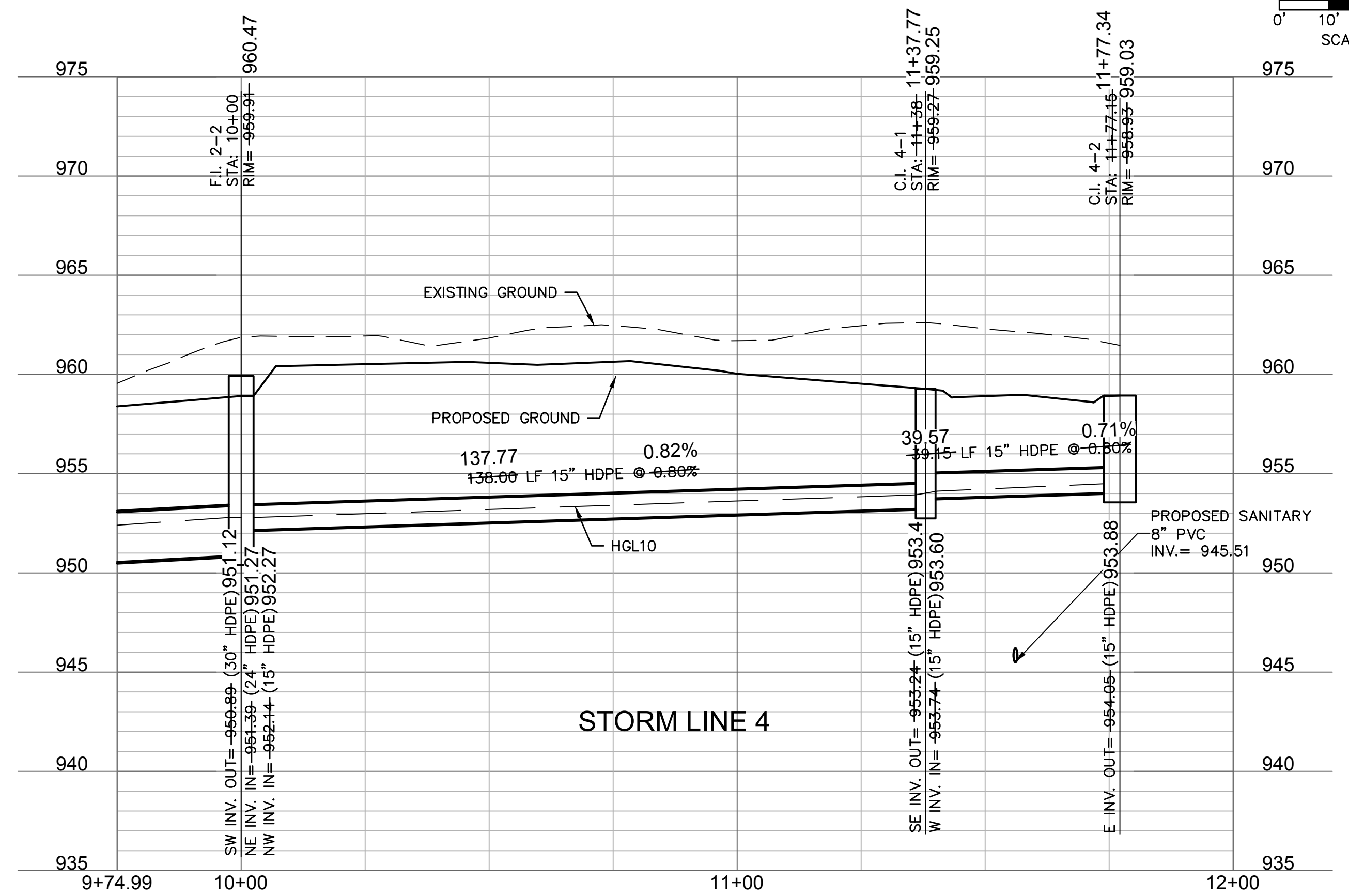
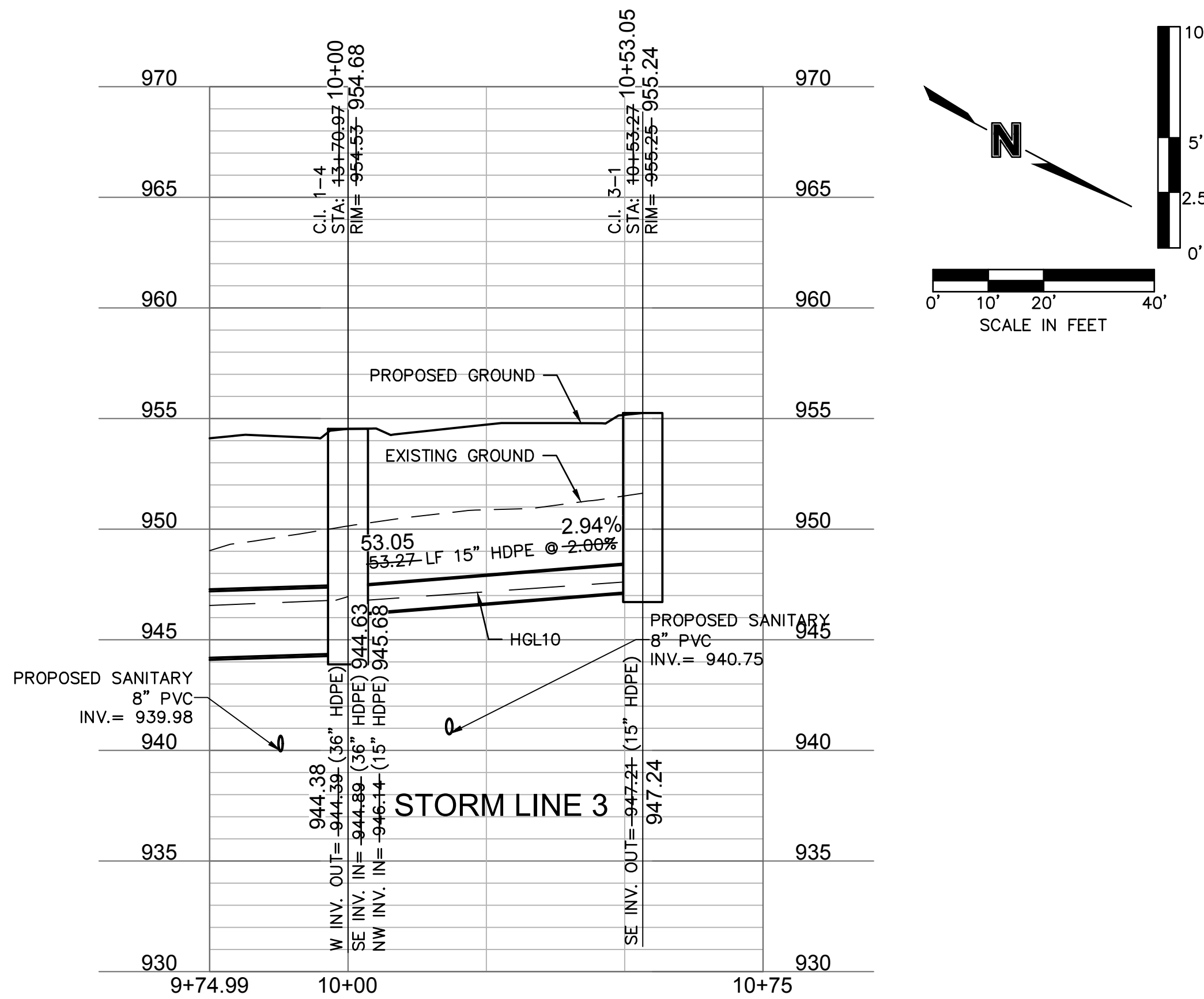
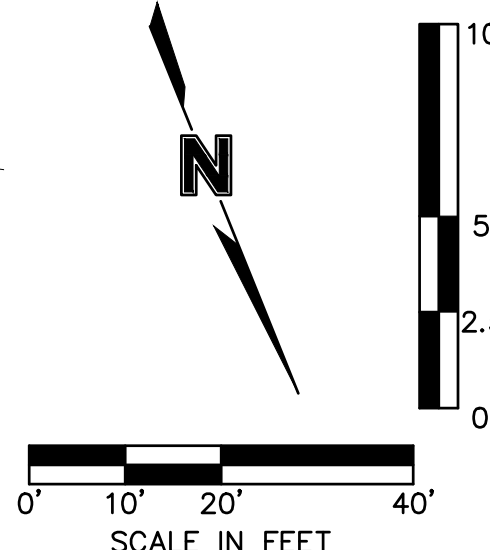
drawn by: B.M.W./A.A.
 checked by: B.M.W.
 designed by: B.M.W./A.A.
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 project no.: B19-4061
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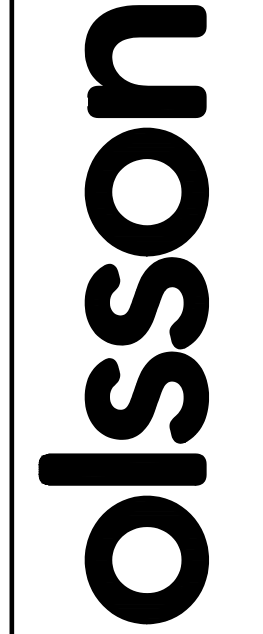
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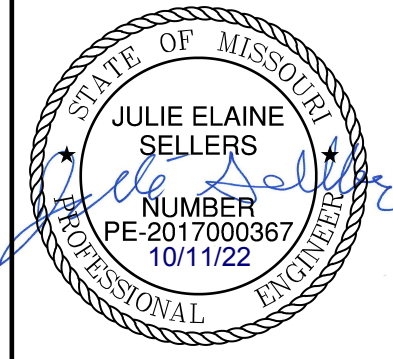


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STORM SEWER PLAN & PROFILE (LINES 3 & 4)
 STREET & STORM SEWER PLANS
 HOOK FARMS
 SECOND PLAT

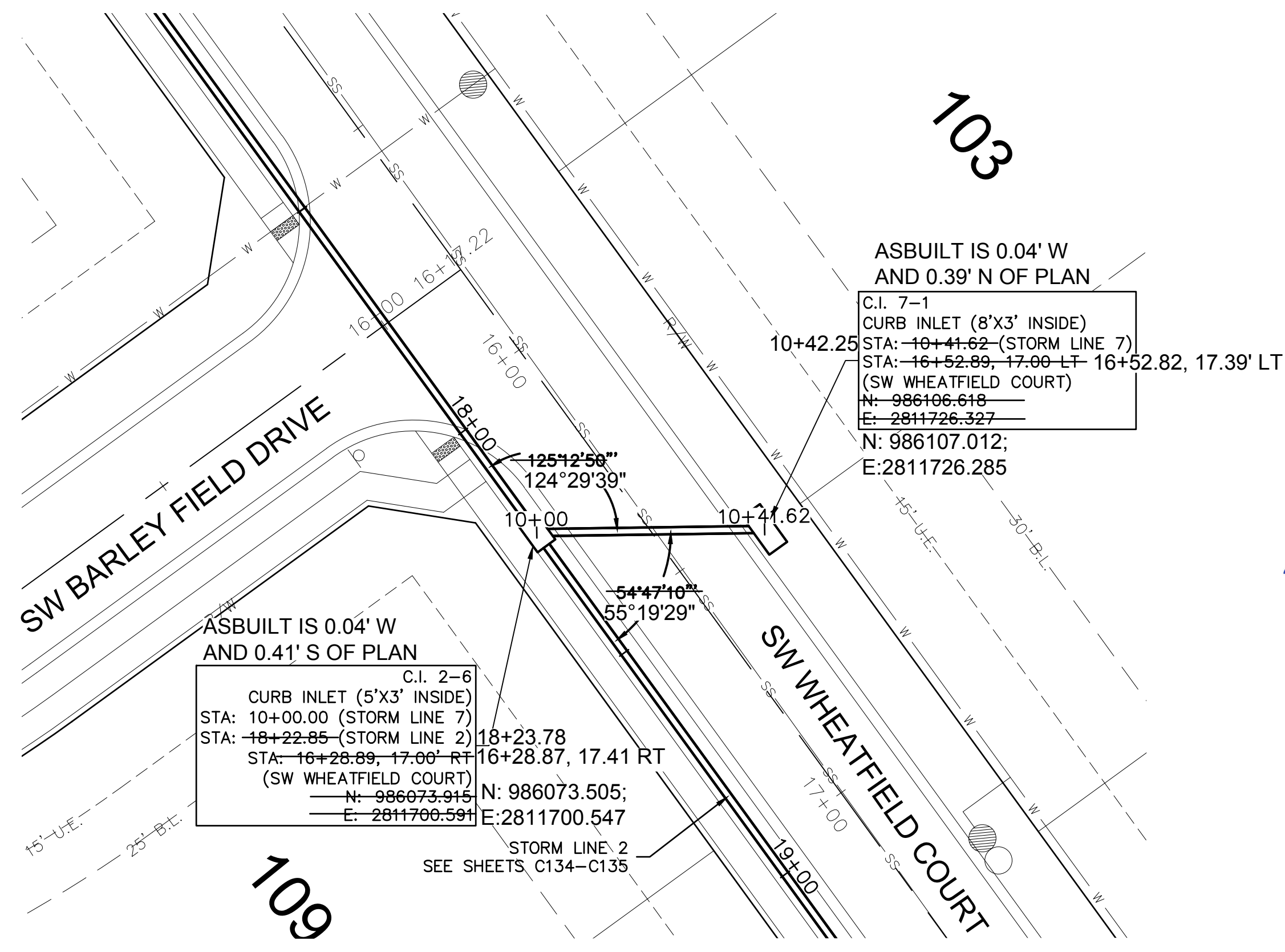
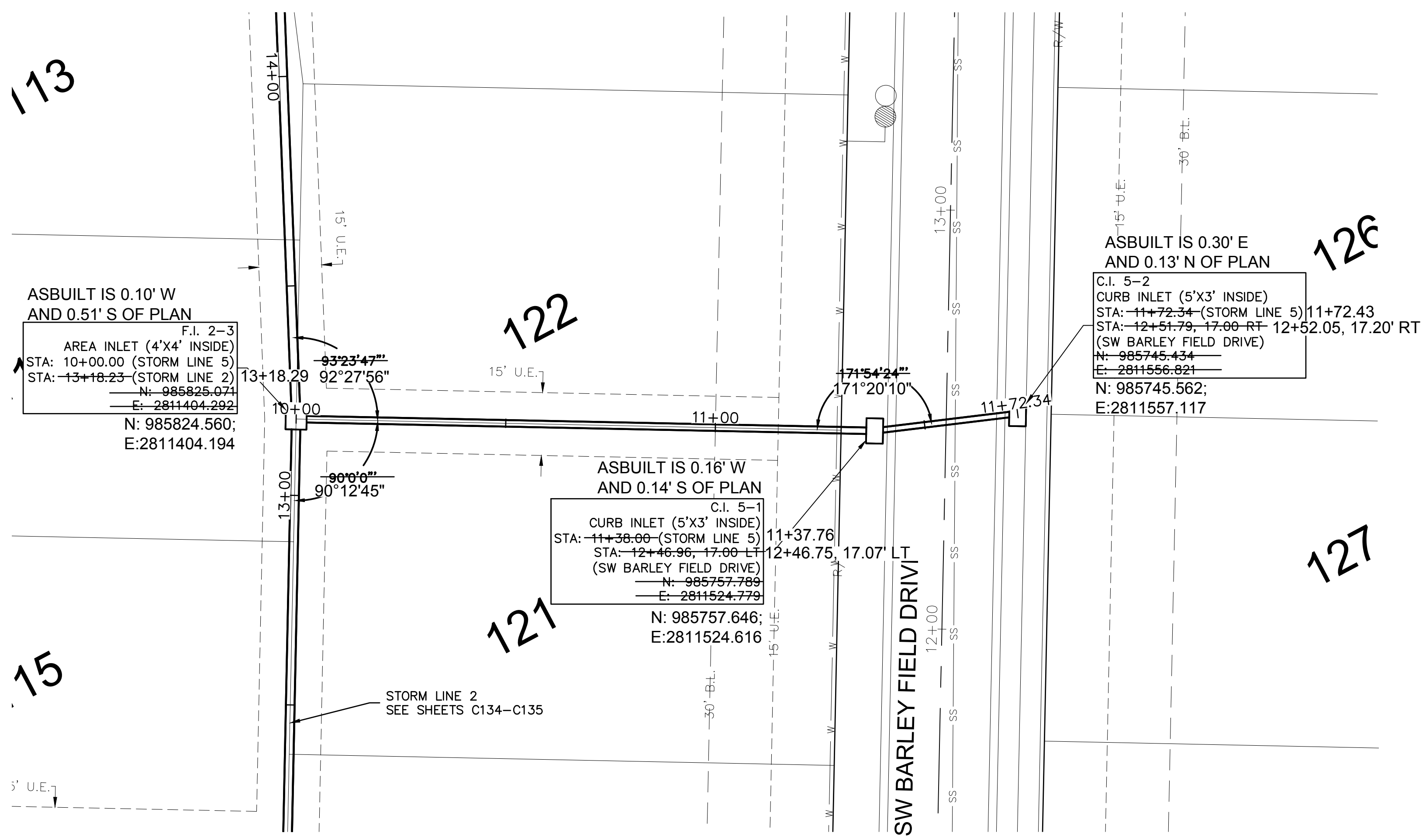
2021

REVISIONS

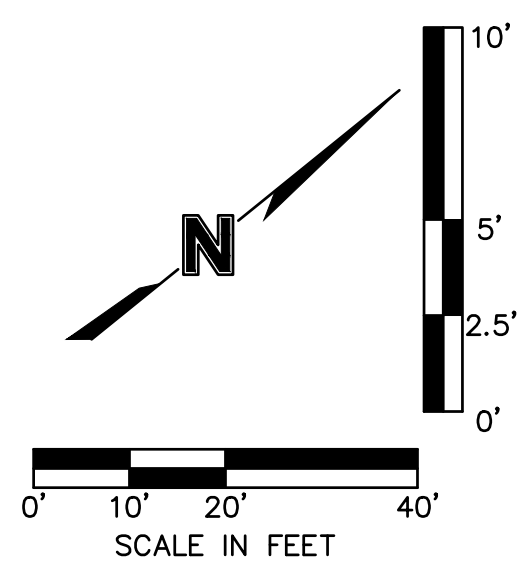
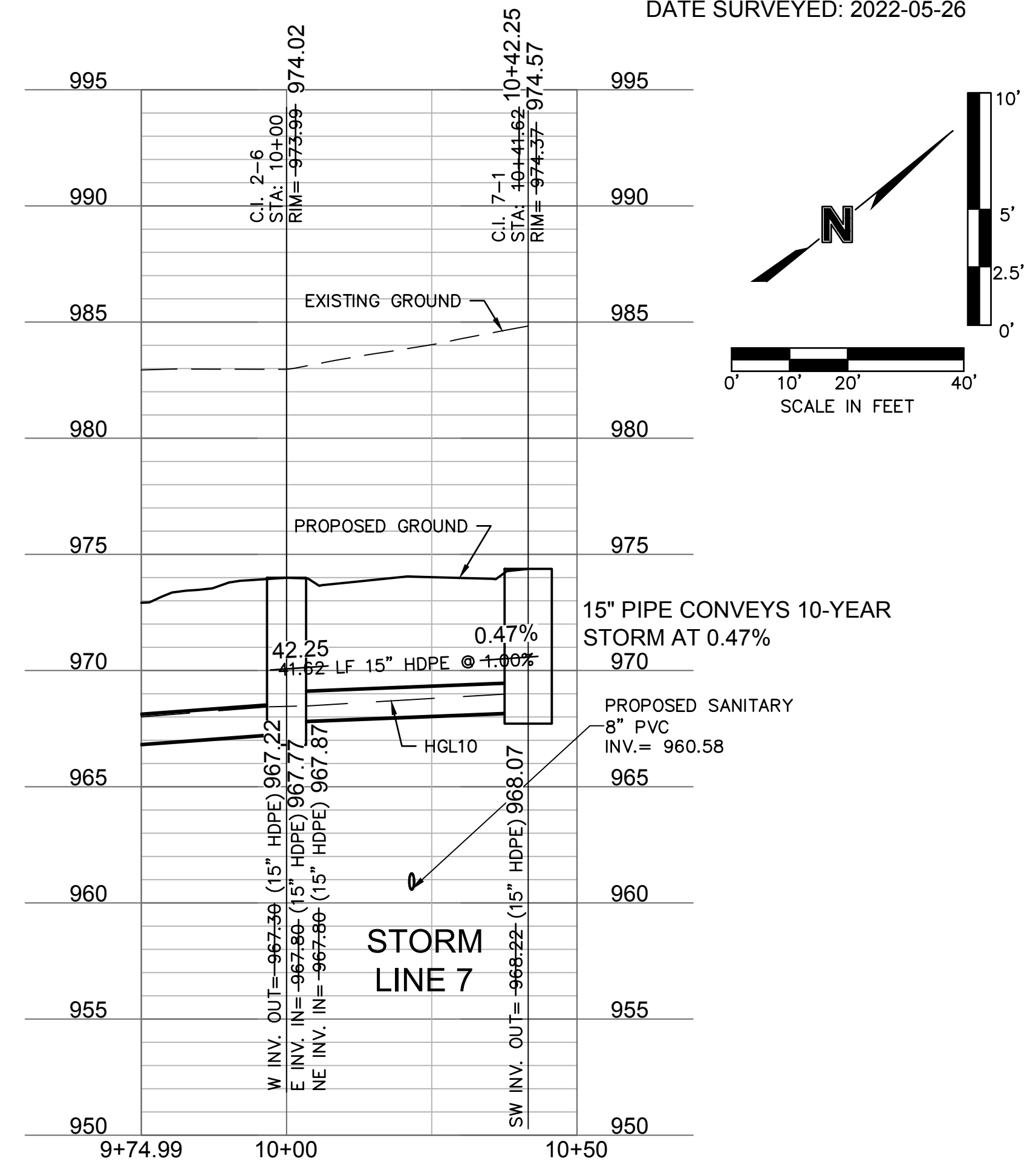
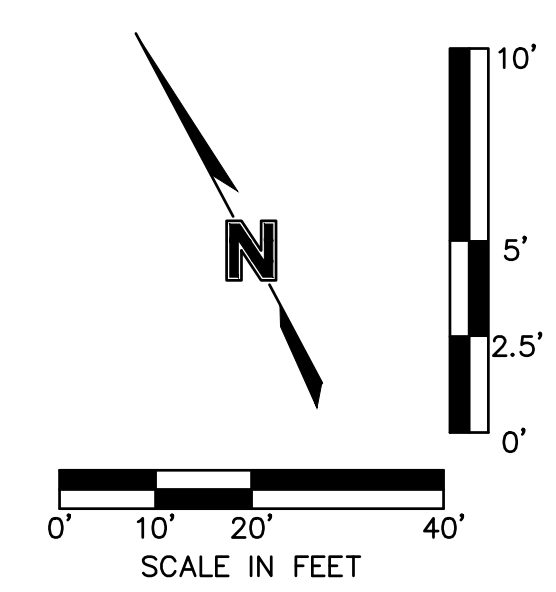
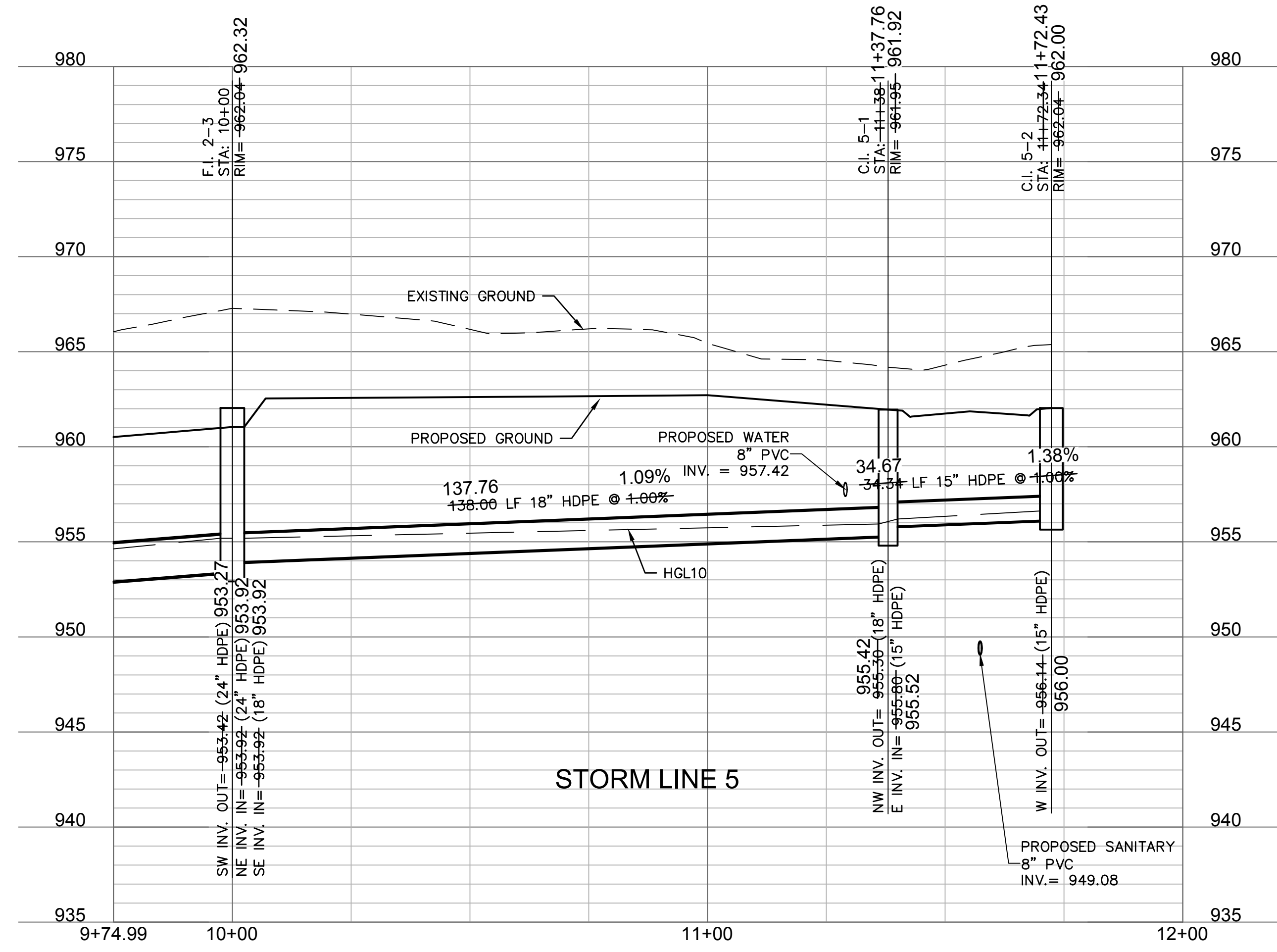
drawn by: B.M.W./A.A.
 checked by: B.M.W./A.A.
 designed by: B.M.W./A.A.
 QA/QC by: J.E.S.
 project no.: B19-4061
 date: 01-09-2021

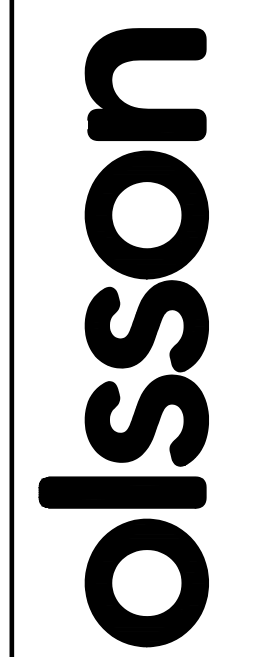
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 C_PUTIL_B194061
 C_PBASE_B194061
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 LICENSE NUMBER
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BY _____

DATE _____

REVISIONS

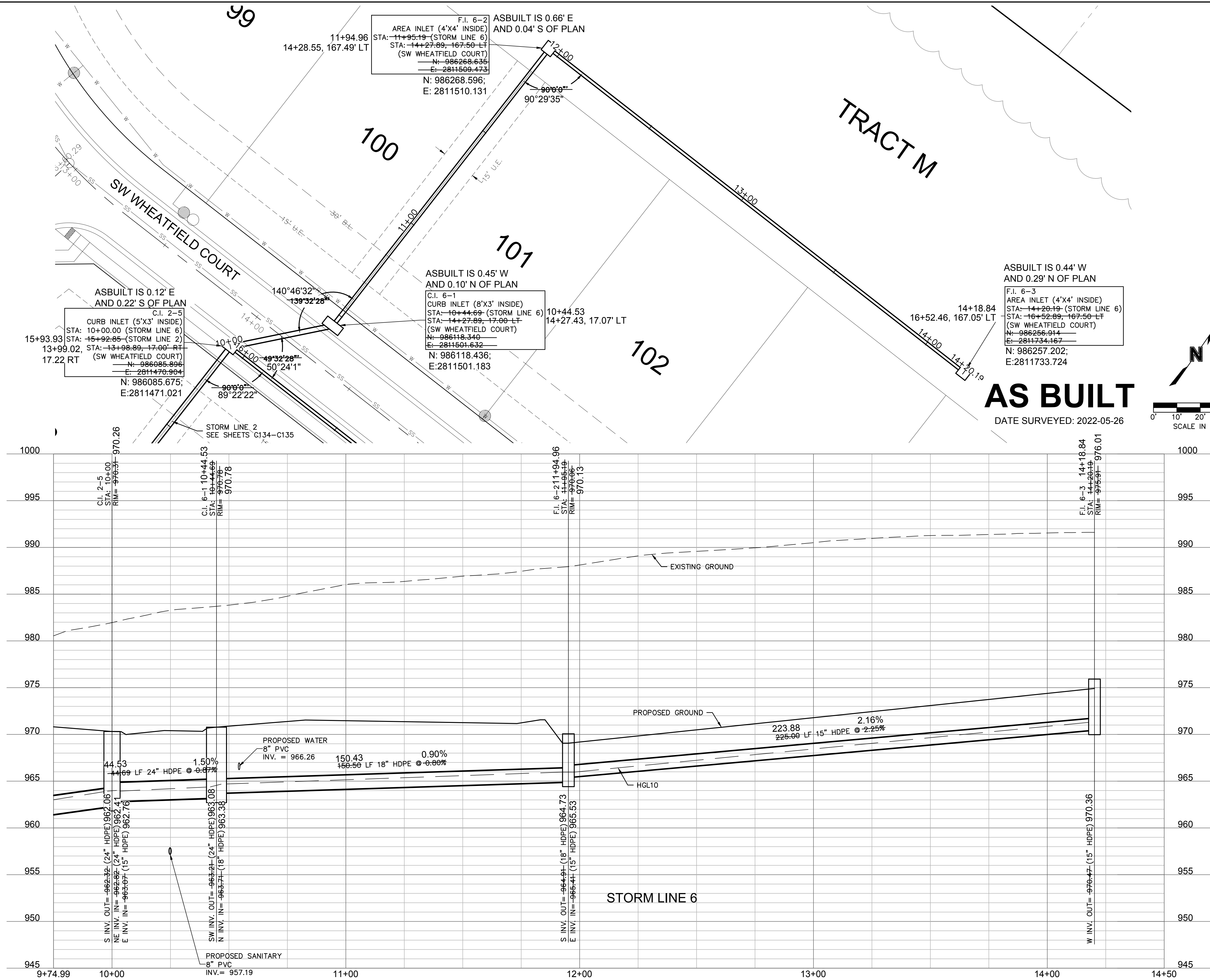
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STORM SEWER PLAN & PROFILE (LINES 5 & 7)
 STREET & STORM SEWER PLANS
 HOOK FARMS
 SECOND PLAT
 LEE'S SUMMIT, MO

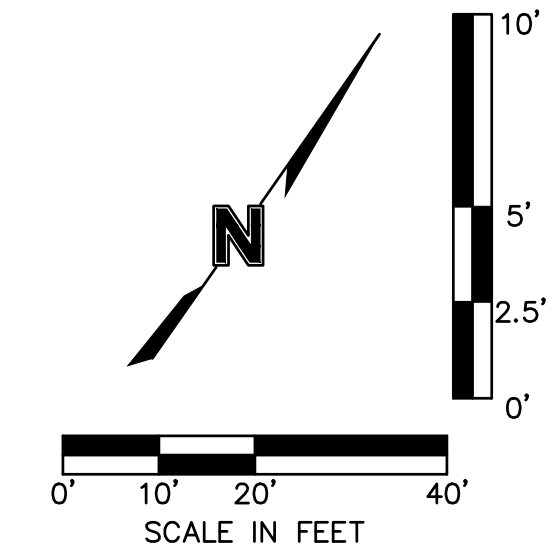
drawn by: B.M.W./A.A.
 checked by: B.M.W.
 designed by: B.M.W./A.A.
 QA/QC by: J.E.S.
 project no.: B19-4061
 date: 01-09-2021

SHEET
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DWG: F:\2019\4001-4500\019-4061-BV40-Design\AutoCAD\Asbuilt\Sheets\GNCV\Street & Storm Plans\C_STM02_B194061.dwg
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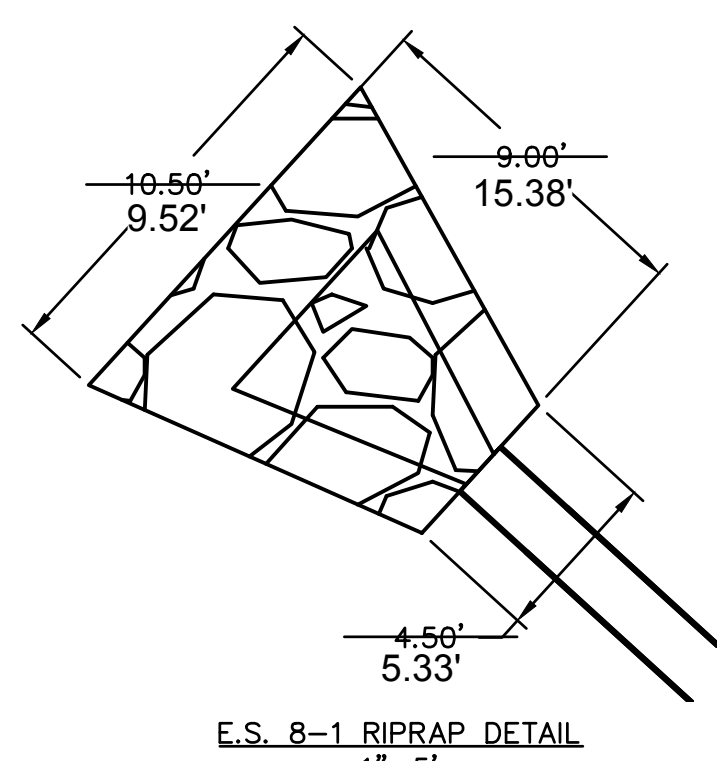
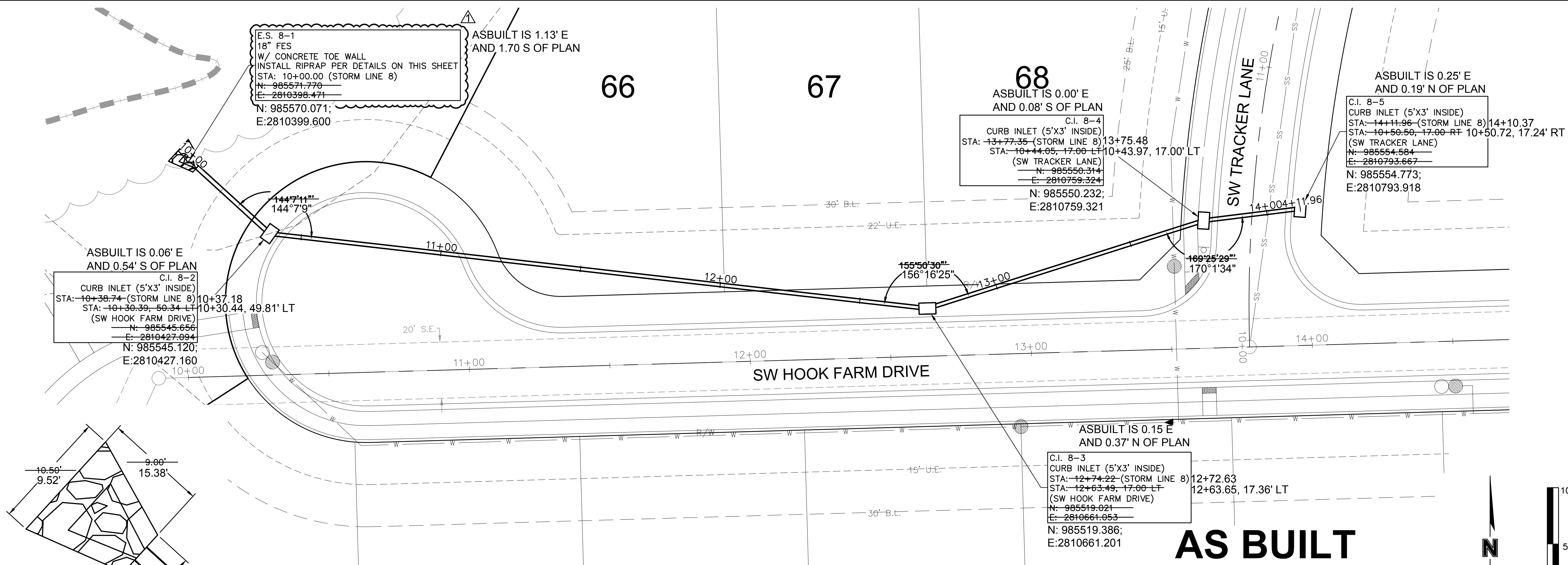
REV. NO.	DATE	REVISIONS DESCRIPTION
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3	09-30-2021	CHANGES TO APPROVED PLANS

STORM SEWER PLAN & PROFILE (LINE 6)
 STREET & STORM SEWER PLANS
 HOOK FARMS
 SECOND PLAT
 LEE'S SUMMIT, MO
 2021

drawn by: B.M.W./A.A.
 checked by: B.M.W.
 designed by: B.M.W./A.A.
 QA/QC by: J.E.S.
 project no.: B19-4061
 date: 01-09-2021

SHEET
 C138

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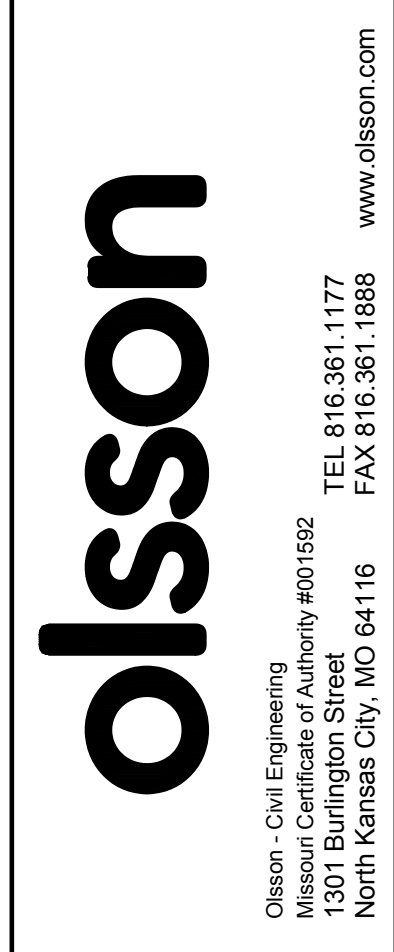
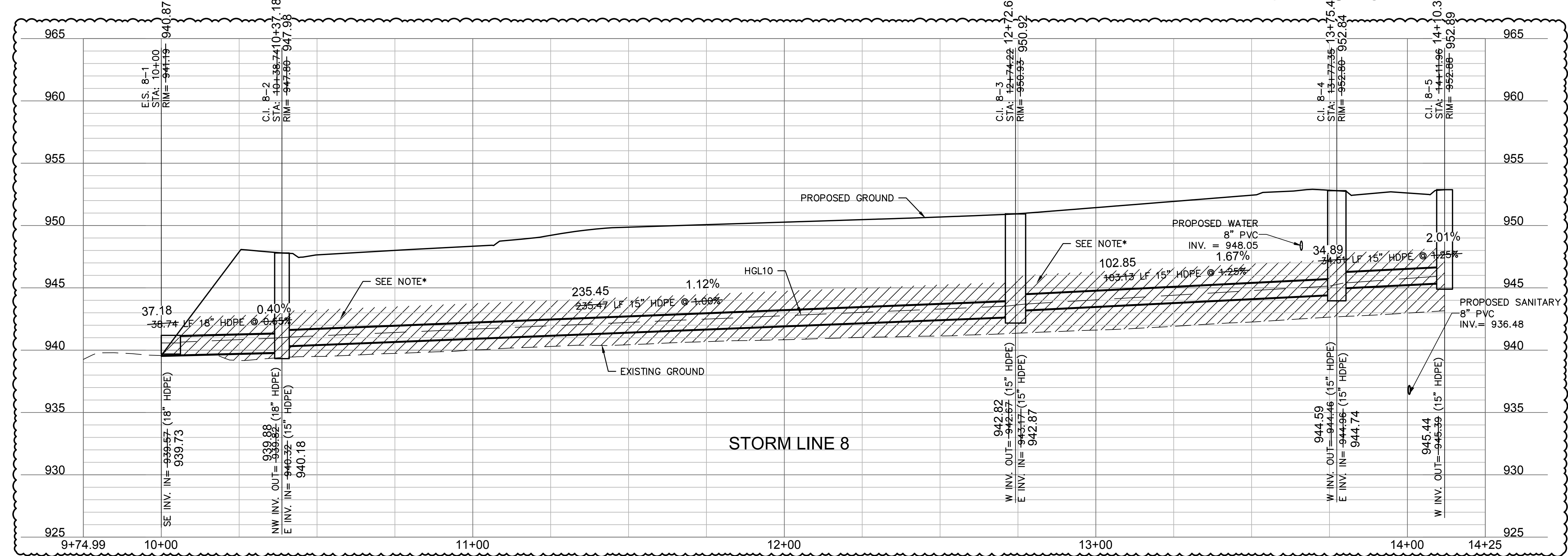
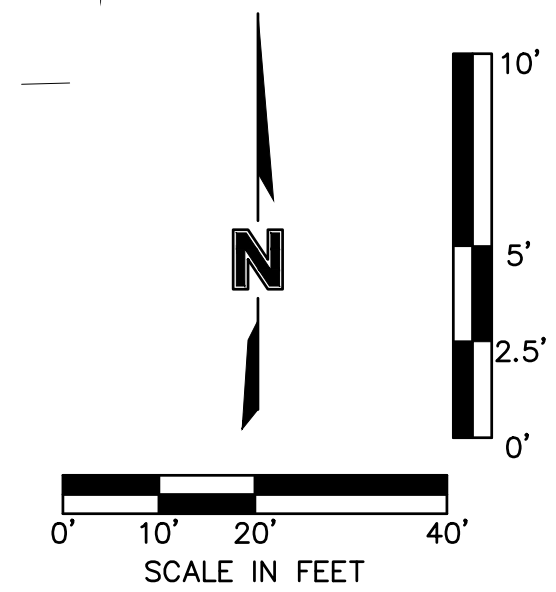


End Section	Q ₁₀₀ (cfs)	Pipe Diameter (ft)	Class*	D50* (mm)	Apron Length (ft)	Apron Depth (ft)	Area (Sq)
E.S. 8-1	17.4	1.5	4	14	9	2.57	7.5

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

AS BUILT
DATE SURVEYED: 2022-05-26

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



REV. NO.	DATE	REVISIONS DESCRIPTION	BY
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2	04-16-2021	REVISED PER CITY COMMENTS	
3	09-30-2021	CHANGES TO APPROVED PLANS	

STORM SEWER PLAN & PROFILE (LINE 8)
 STREET & STORM SEWER PLANS

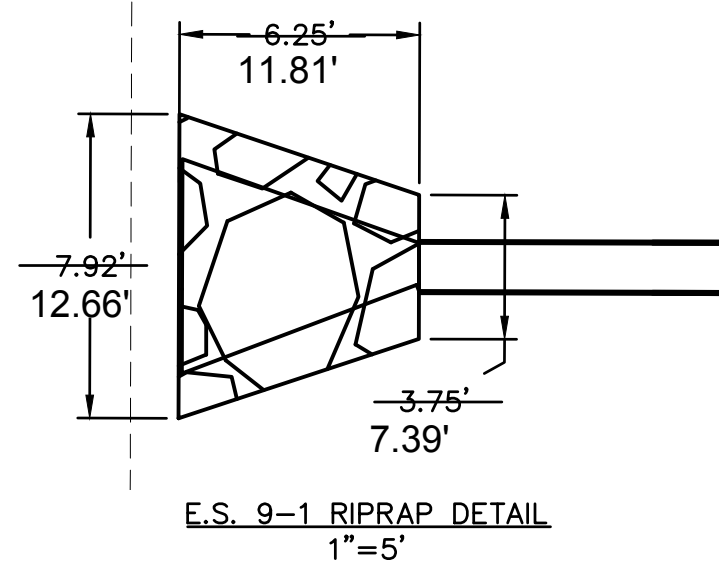
HOOK FARMS
 SECOND PLAT

LEE'S SUMMIT, MO

2021

drawn by: B.M.W./A.A.
 checked by: B.M.W.
 designed by: B.M.W./A.A.
 QA/QC by: J.E.S.
 project no.: B19-4061
 date: 01-09-2021

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ASBUILT IS 3.45' E AND 2.19' S OF PLAN
 E.S. 9-1
 15" FES
 W/ CONCRETE TOE WALL
 INSTALL RIPRAP PER DETAILS ON THIS SHEET
 STA: 10+00.00 (STORM LINE 9)
 STA: 12+73.74, 179.45 LT-12+73.57, 175.37' LT
 (SW TRACKER LANE) N: 985853.150;
 N: 985855.338 E: 2810683.677
 E: 2810686.522

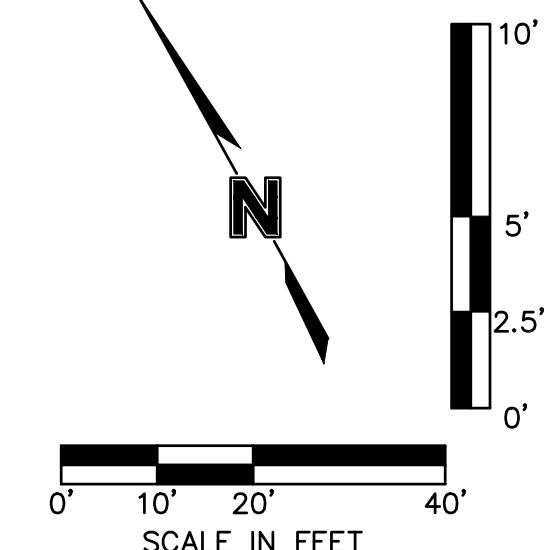
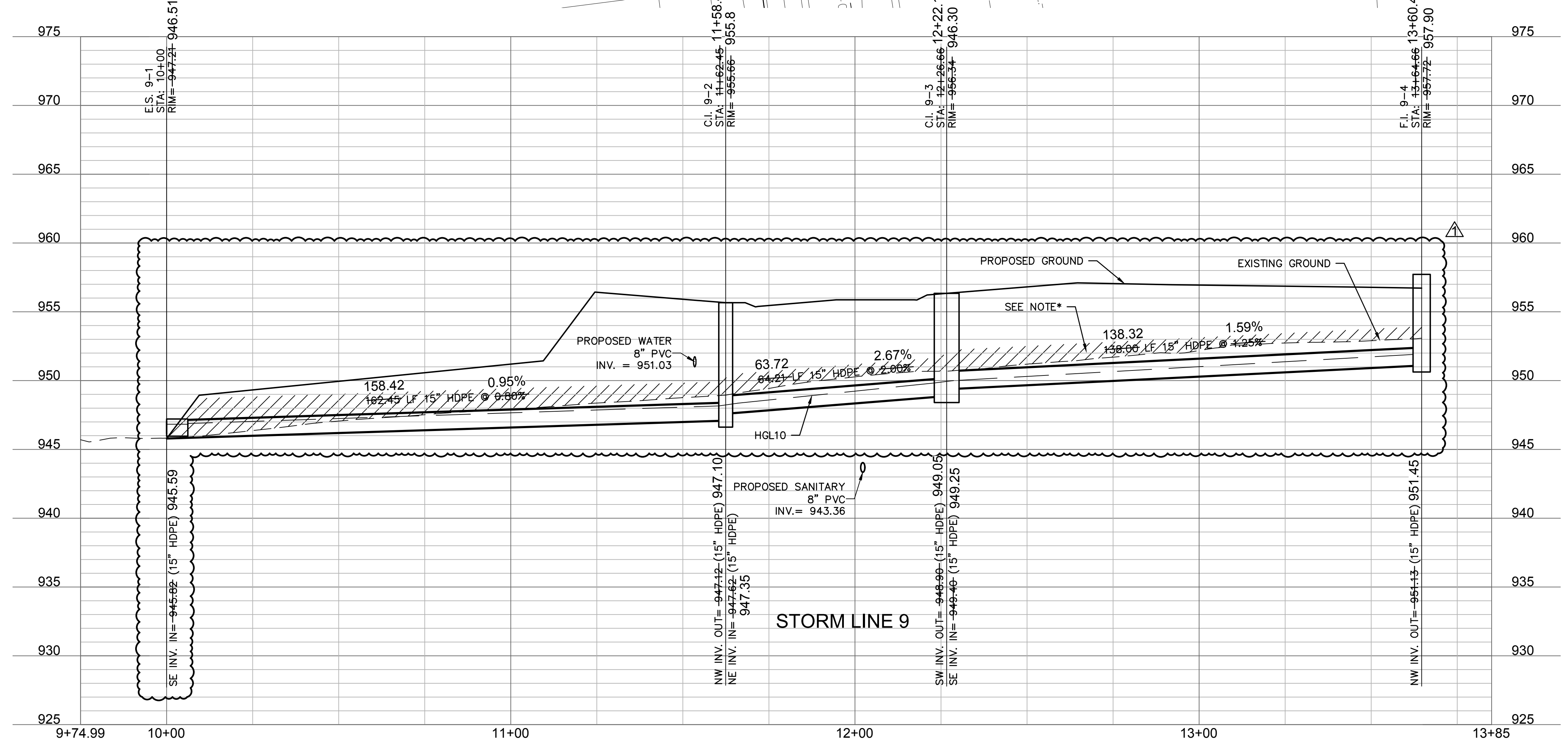
ASBUILT IS 0.13' E AND 0.12' N OF PLAN
 C.I. 9-2
 CURB INLET (5'X3' INSIDE)
 STA: 11+62.45 (STORM LINE 9)
 STA: 12+73.56, 17.00 LT
 (SW TRACKER LANE)
 N: 985776.154
 E: 2810824.917
 N: 985776.272;
 E: 2810825.043

ASBUILT IS 0.26' W AND 0.21' S OF PLAN
 C.I. 9-3
 CURB INLET (5'X3' INSIDE)
 STA: 12+26.66 (STORM LINE 9) 12+22.14
 STA: 13+28.01, 17.00 RT- 13+27.70, 16.88' RT
 (SW TRACKER LANE)
 N: 985807.139
 E: 2810801.161
 N: 985806.927;
 E: 2810880.900

ASBUILT IS 0.11' W AND 0.59' S OF PLAN
 F.I. 9-4
 AREA INLET (4'X4' INSIDE)
 STA: 13+64.66 (STORM LINE 9) 13+60.46
 STA: 13+28.01, 155.00 RT
 (SW TRACKER LANE)
 N: 985739.857
 E: 2811001.648
 N: 985739.268;
 E: 2811001.543

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	11.2	1.25	3	10	22.12	2.00	20.2

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



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

AS BUILT
 DATE SURVEYED: 2022-05-26

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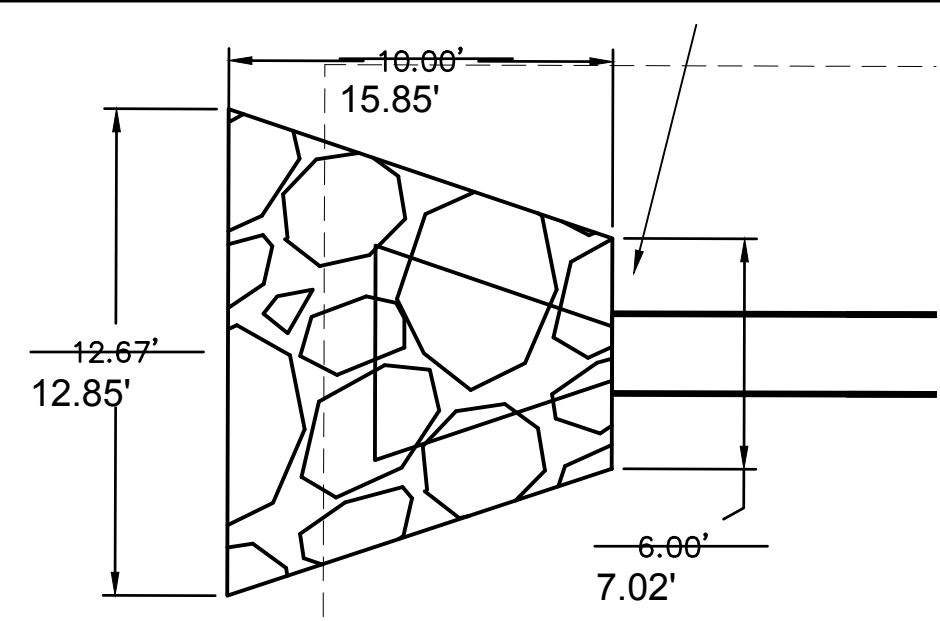
STORM SEWER PLAN & PROFILE (LINE 9)
 STREET & STORM SEWER PLANS
 HOOK FARMS
 SECOND PLAT
 LEE'S SUMMIT, MO

drawn by: B.M.W./A.A.
 checked by: B.M.W.
 designed by: B.M.W./A.A.
 QA/QC by: J.E.S.
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2021

SHEET
 C140

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E.S. 10-1 RIPRAP DETAIL
1"=5'

ASBUILT IS 2.99' E AND 1.74' S OF PLAN
 E.S. 10-1
 24" FES
 W/ CONCRETE TOE WALL
 INSTALL RIPRAP PER DETAILS ON THIS SHEET
 STA: 10+00.00 (STORM LINE 10)
 STA: 11+92.52, 182.97 LT- 14+92.46, 179.50' LT
 (SW TRACKER LANE) N: 986046.527;
 N: 986046.268 E: 2810789.774
 E: 2810786.786

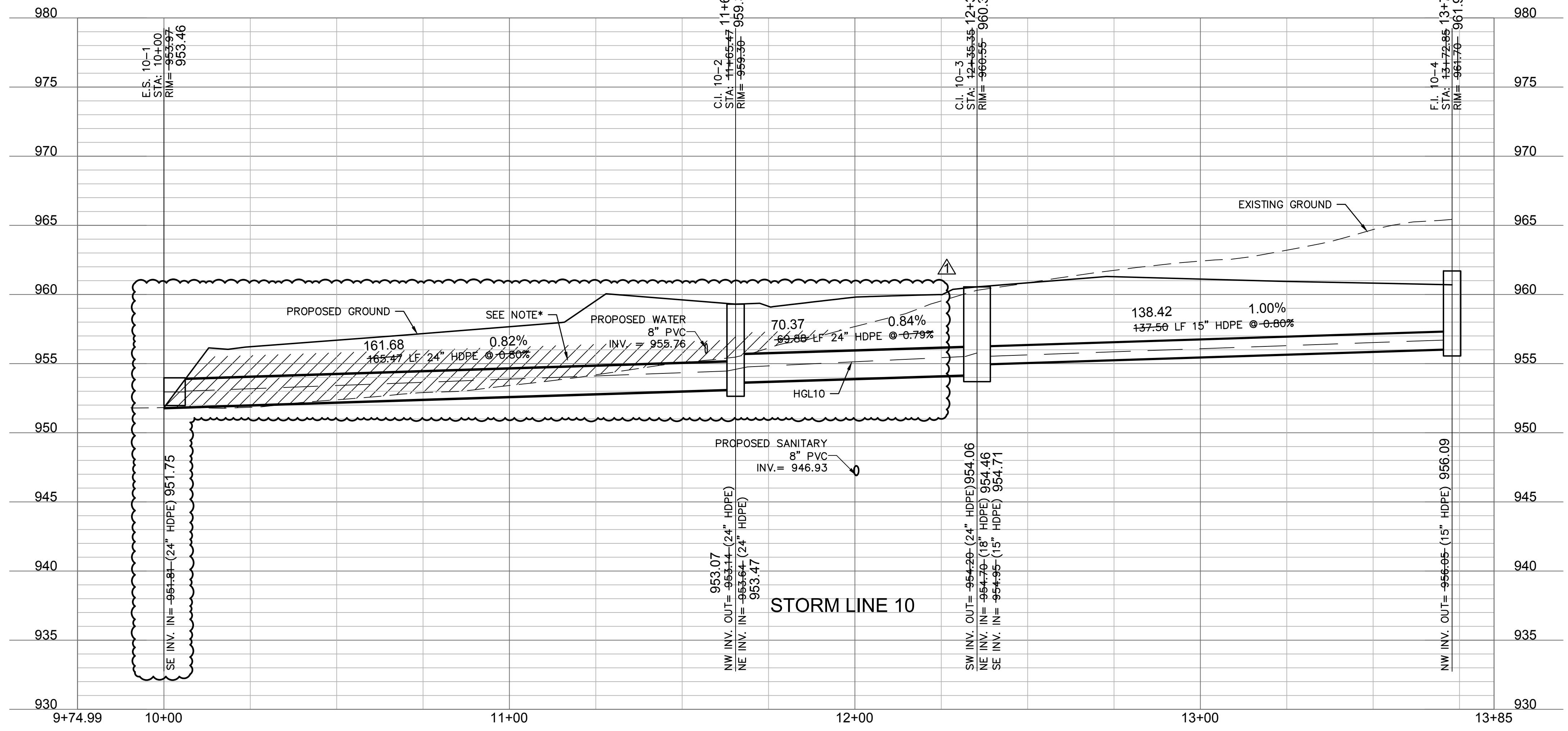
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 C.I. 10-2
 CURB INLET (5'x4' INSIDE)
 STA: 11+65.47 (STORM LINE 10)
 STA: 14+92.52, 17.50' LT
 (SW TRACKER LANE)
 N: 985967.595
 E: 2810931.247
 N: 985967.871;
 E: 2810931.037

ASBUILT IS 0.49' E AND 0.05' N OF PLAN
 C.I. 10-3
 CURB INLET (5'x4' INSIDE)
 STA: 12+35.35 (STORM LINE 10)
 STA: 10+00.00 (STORM LINE 11)
 STA: 15+53.01, 17.50' RT- 15+53.29, 17.91' RT
 (SW TRACKER LANE)
 N: 986003.342
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 N: 986003.389;
 E: 2810991.790

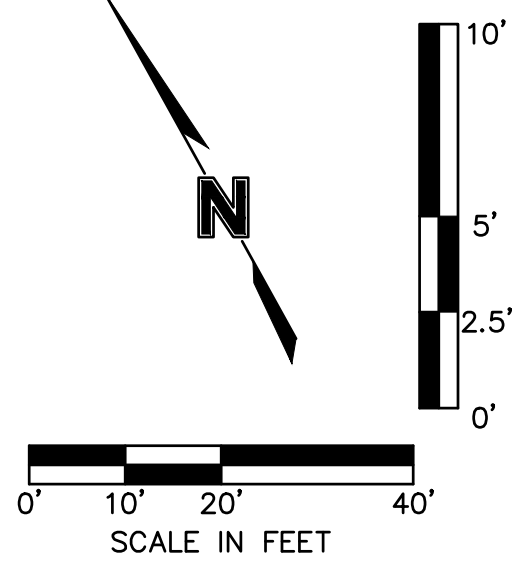
ASBUILT IS 1.07' E AND 0.80' S OF PLAN
 F.I. 10-4
 AREA INLET (4'x4' INSIDE)
 STA: 13+72.85 (STORM LINE 10)
 STA: 15+53.01, 155.00' RT- 15+52.83, 156.32' RT
 (SW TRACKER LANE)
 N: 985936.363
 E: 2811111.347
 N: 985935.500;
 E: 2811112.413

End Section	Q ₁₀₀ (cfs)	Pipe Diameter (ft)	Class*	D50* (ft)	Apron Length (ft)	Apron Depth (ft)	Area (SY)
E.S. 10-1	21.85	2	3	10	10	2.00	10.4

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



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



AS BUILT
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STORM SEWER PLAN & PROFILE (LINE 10)
 STREET & STORM SEWER PLANS

HOOK FARMS
 SECOND PLAT

2021

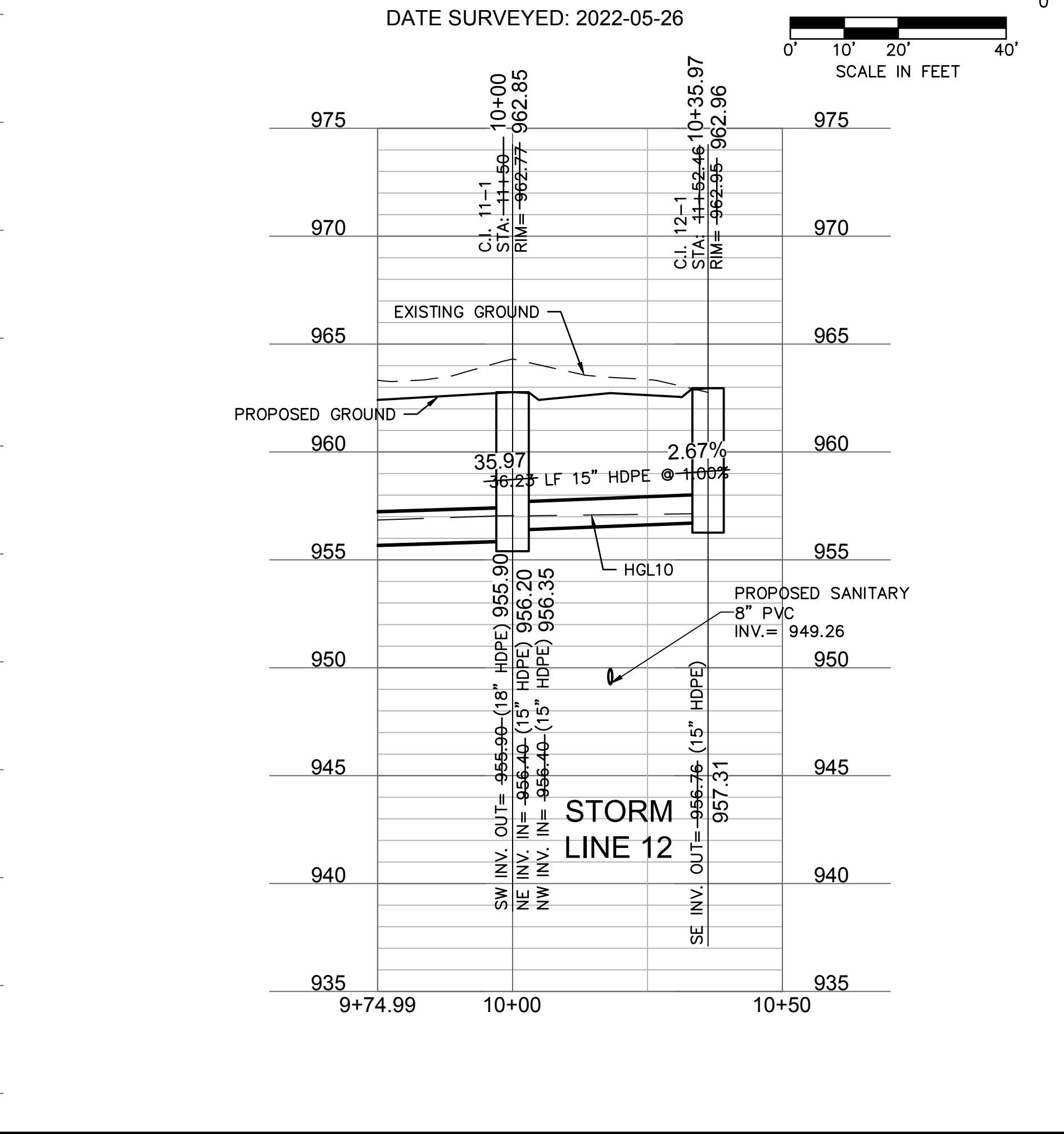
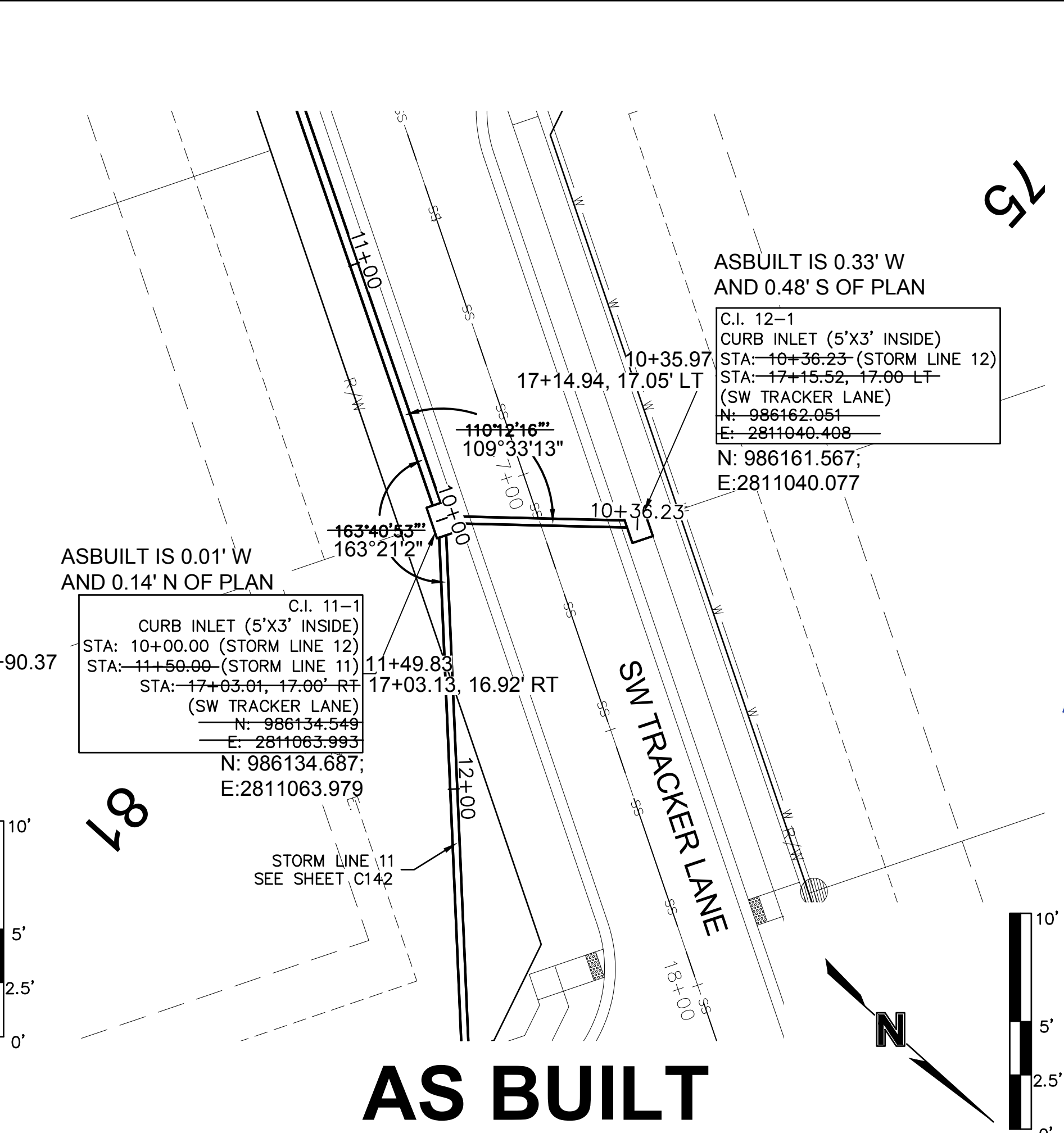
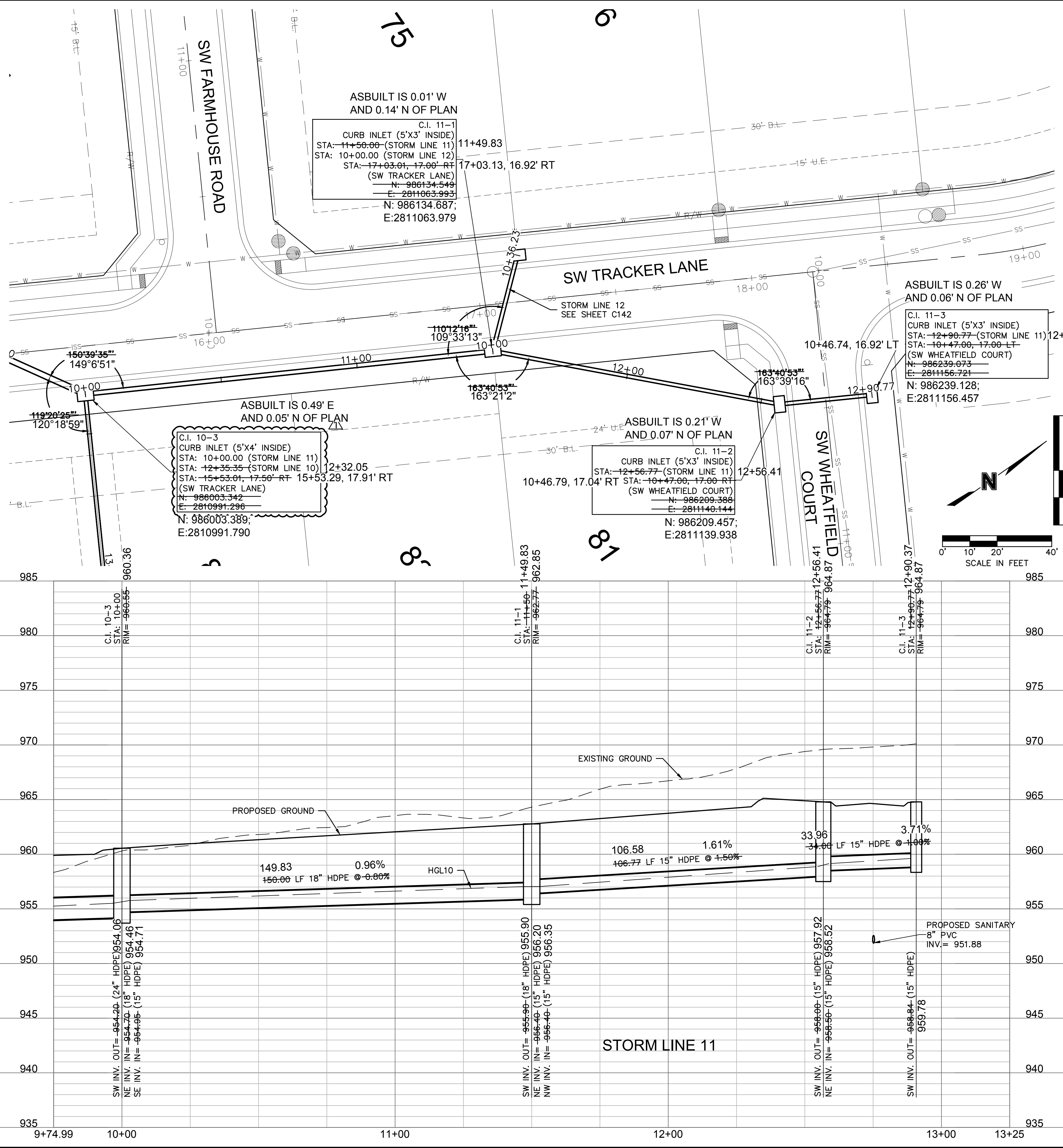
LEE'S SUMMIT, MO

REVISIONS

drawn by: B.M.W./A.A.
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 QA/QC by: J.E.S.
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SHEET
 C141

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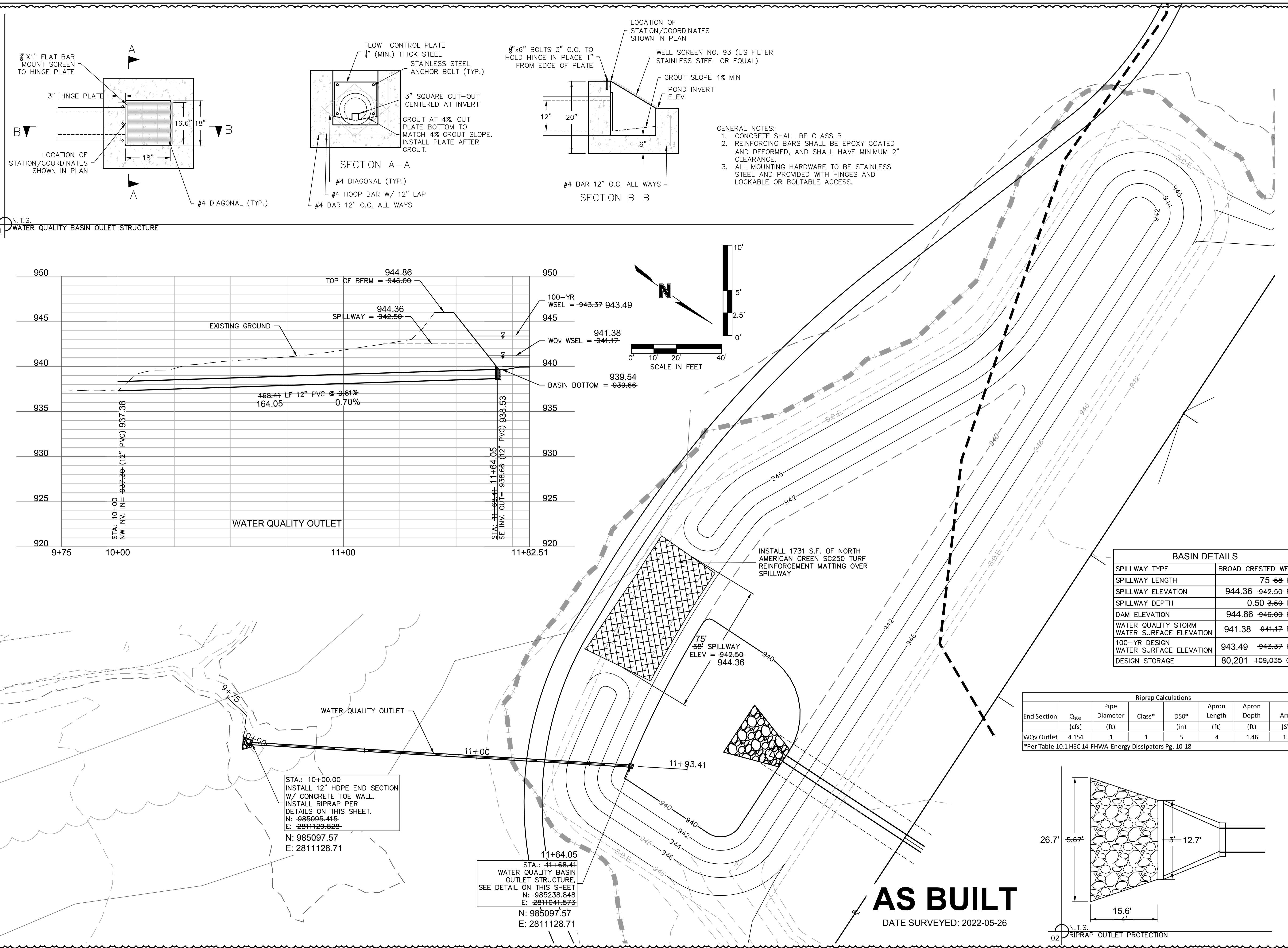
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STORM SEWER PLAN & PROFILE (LINES 11 & 12)
 STREET & STORM SEWER PLANS
 HOOK FARMS SECOND PLAT
 LEE'S SUMMIT, MO 2021

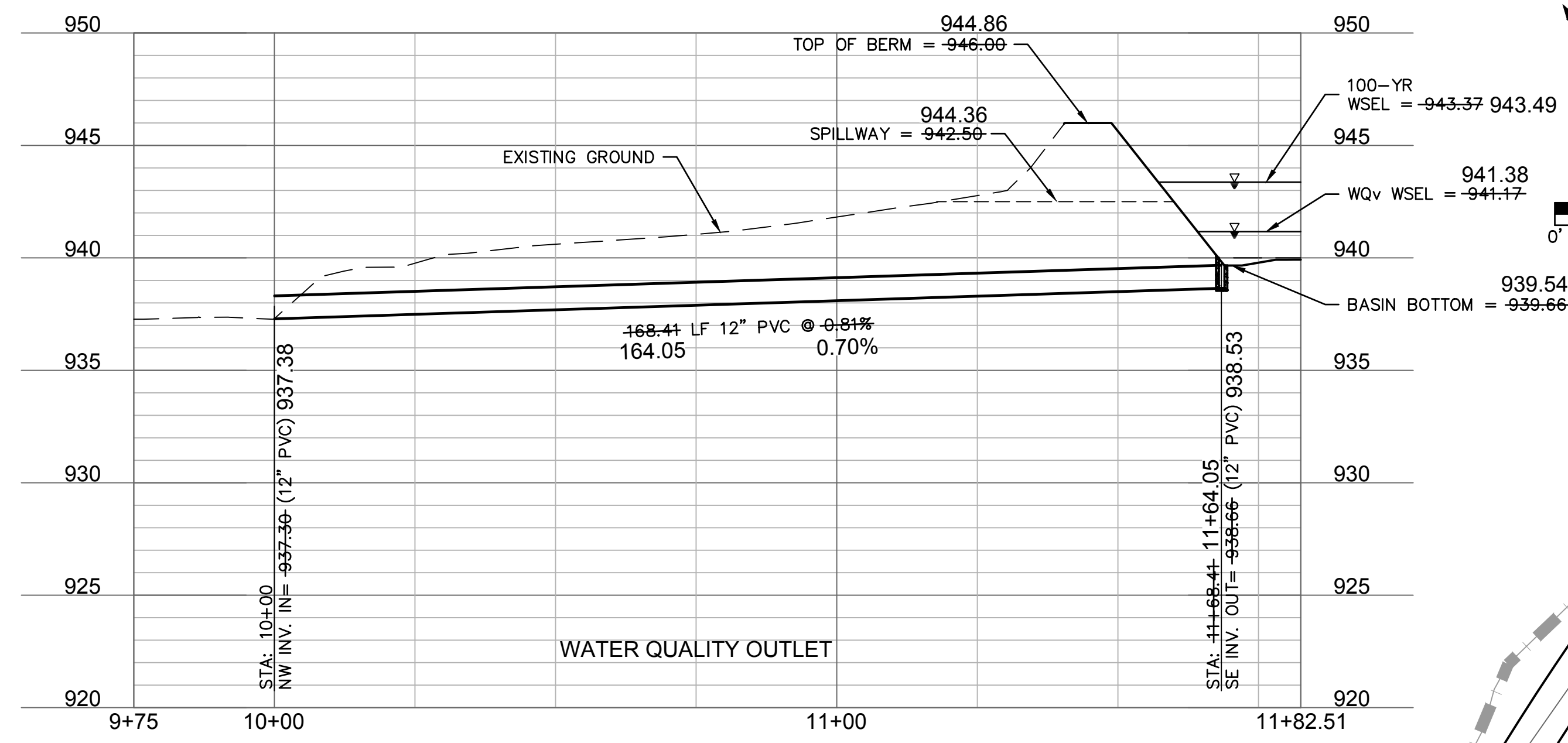
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 date: 01-08-2021

SHEET C142

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 C_PNDY_B194061
 C_PUTIL_B194061



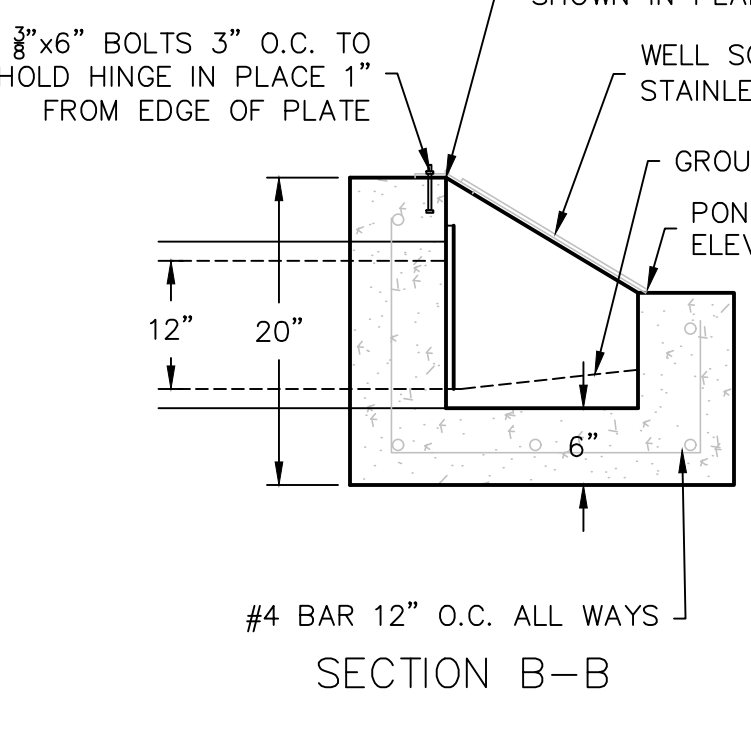
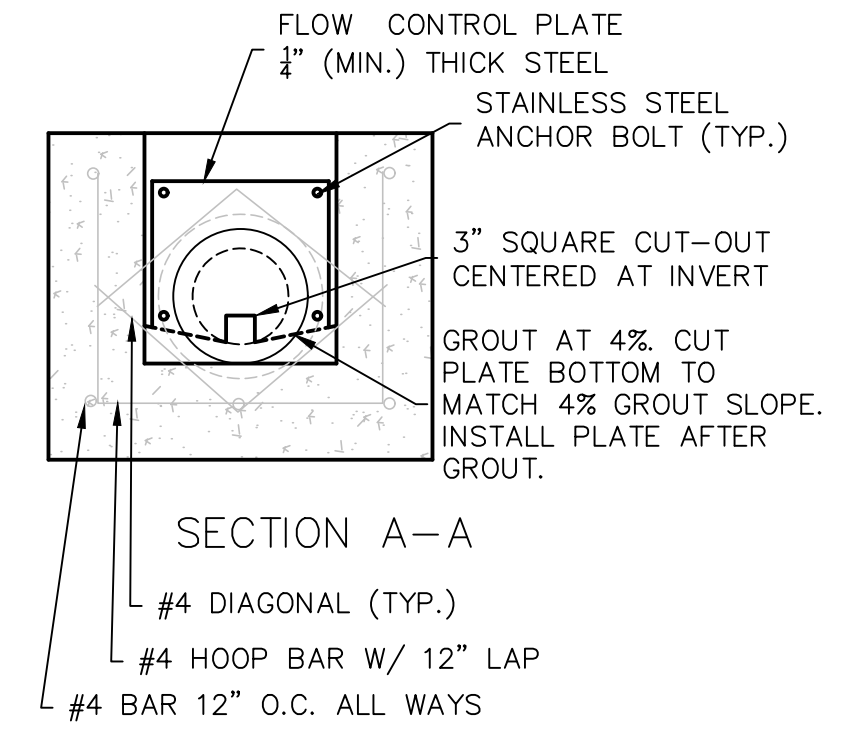
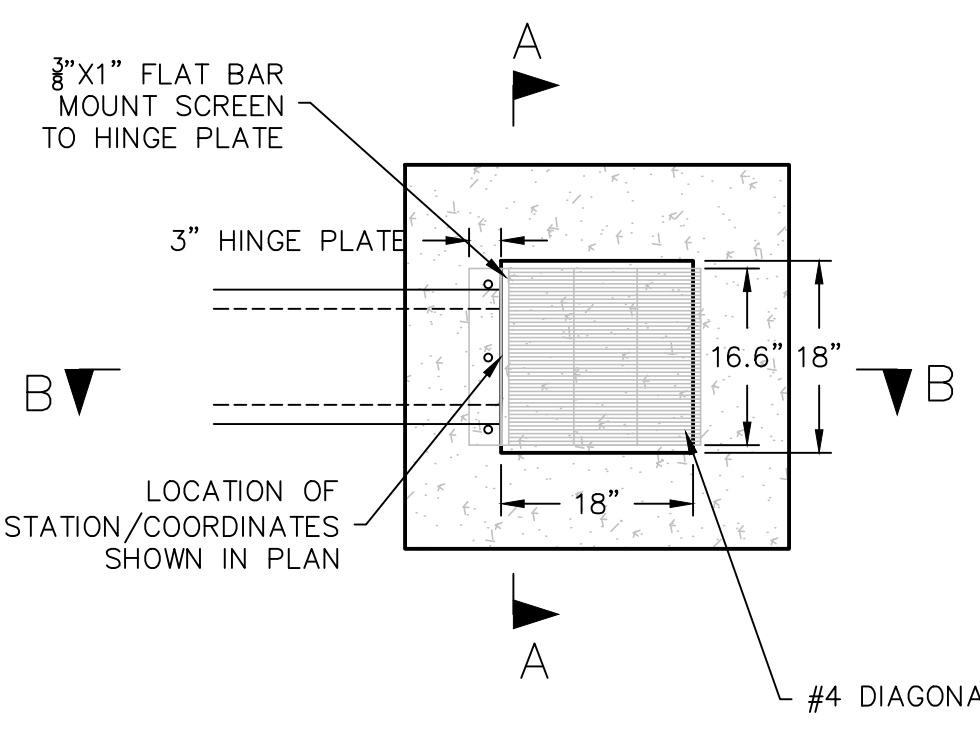
01 WATER QUALITY BASIN OULET STRUCTURE



WATER QUALITY OULET

STA.: 10+00.00
 INSTALL 12" HDPE END SECTION
 W/ CONCRETE TOE WALL.
 INSTALL RIPRAP PER
 DETAILS ON THIS SHEET.
 N: 985095.415
 E: 2811129.828
 N: 985097.57
 E: 2811128.71

STA.: 11+68.44
 WATER QUALITY BASIN
 OULET STRUCTURE.
 SEE DETAIL ON THIS SHEET
 N: 985236.848
 E: 2811041.573
 N: 985097.57
 E: 2811128.71

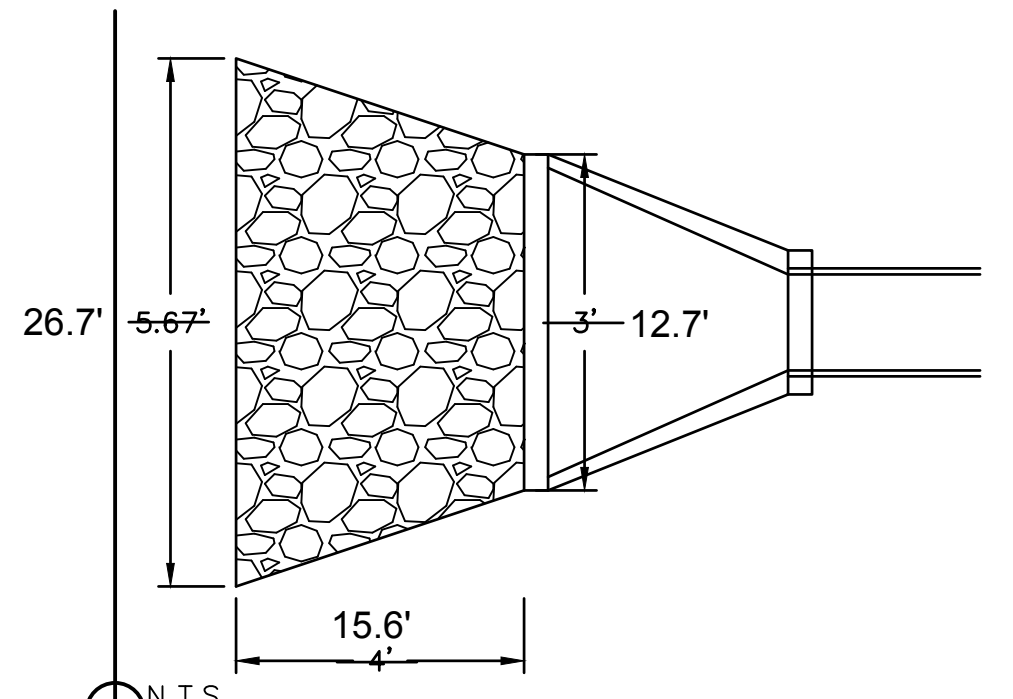


- GENERAL NOTES:
1. CONCRETE SHALL BE CLASS B
 2. REINFORCING BARS SHALL BE EPOXY COATED AND DEFORMED, AND SHALL HAVE MINIMUM 2" CLEARANCE.
 3. ALL MOUNTING HARDWARE TO BE STAINLESS STEEL AND PROVIDED WITH HINGES AND LOCKABLE OR BOLTABLE ACCESS.

BASIN DETAILS	
SPILLWAY TYPE	BROAD CRESTED WEIR
SPILLWAY LENGTH	75.58 FT
SPILLWAY ELEVATION	944.36 942.50 FT
SPILLWAY DEPTH	0.50 3.50 FT
DAM ELEVATION	944.86 946.00 FT
WATER QUALITY STORM WATER SURFACE ELEVATION	941.38 941.17 FT
100-YR DESIGN WATER SURFACE ELEVATION	943.49 943.37 FT
DESIGN STORAGE	80,201 109,035 CF

Riprap Calculations							
End Section	Q ₁₀₀ (cfs)	Pipe Diameter (ft)	Class*	D50* (in)	Apron Length (ft)	Apron Depth (ft)	Area (SY)
WQv Outlet	4.154	1	1	5	4	1.46	1.9

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



02 RIPRAP OULET PROTECTION

AS BUILT
 DATE SURVEYED: 2022-05-26

olsson
 Olsson - Civil Engineering
 Missouri Certificate of Authority #001592
 1301 Burlington Street
 North Kansas City, MO 64116
 TEL 816.361.1177
 FAX 816.361.1888
 www.olsson.com

STATE OF MISSOURI
 JULIE ELAINE SELLERS
 PROFESSIONAL ENGINEER
 NUMBER PE-2017000367
 10/11/22

REV. NO.	DATE	REVISIONS DESCRIPTION
1	03-23-2021	REVISED PER CITY COMMENTS
2	04-16-2021	REVISED PER CITY COMMENTS
3	09-30-2021	CHANGES TO APPROVED PLANS

WATER QUALITY BASIN PLAN
 STREET & STORM SEWER PLANS
 HOOK FARMS
 SECOND PLAT
 LEE'S SUMMIT, MO
 2021

DWG: F:\2019\4001-4500\019-4061-BV40-Design\AutoCAD\Asbuilt\Sheets\GNCV\Street & Storm Plans\C_DRN01_B194061.dwg
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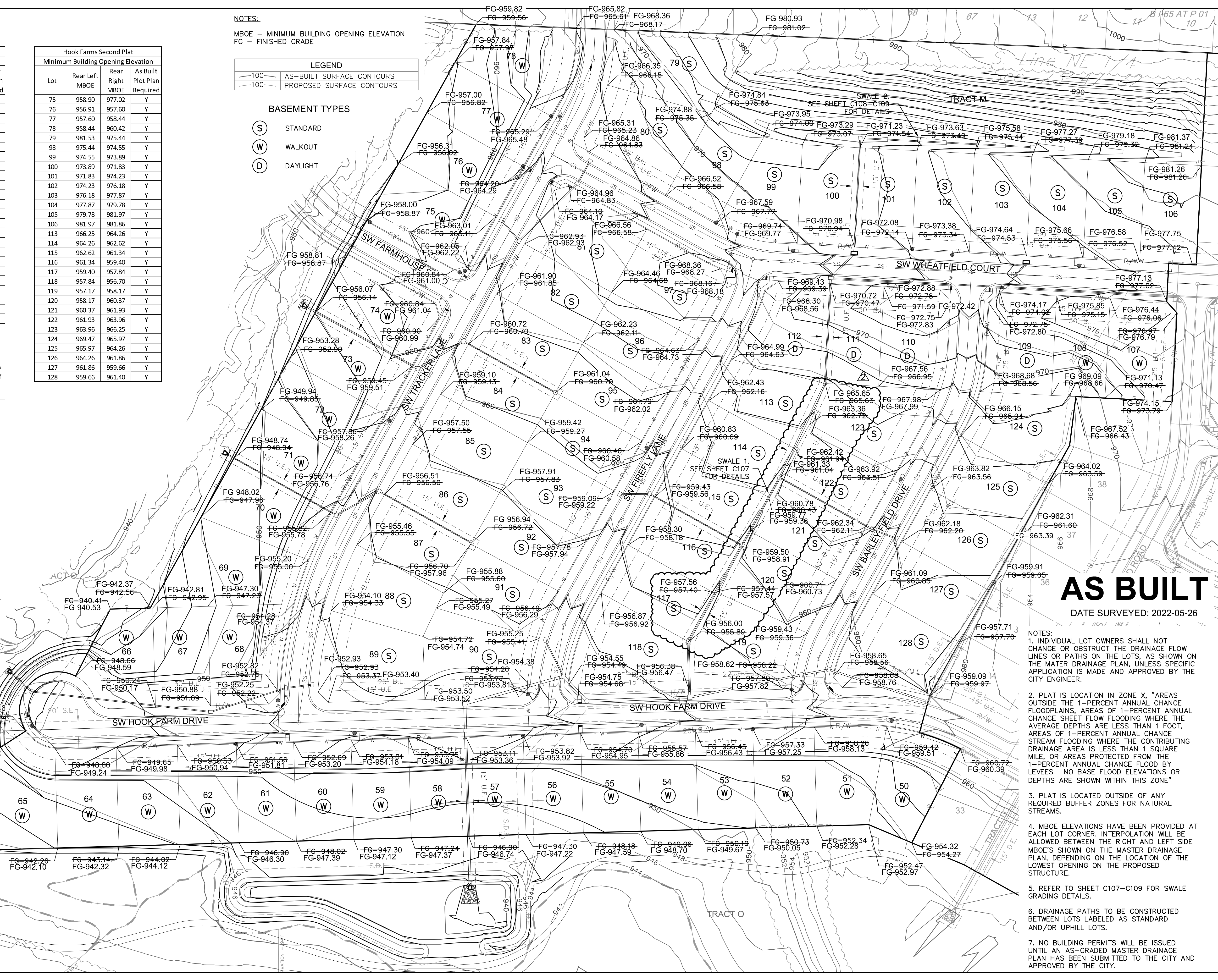
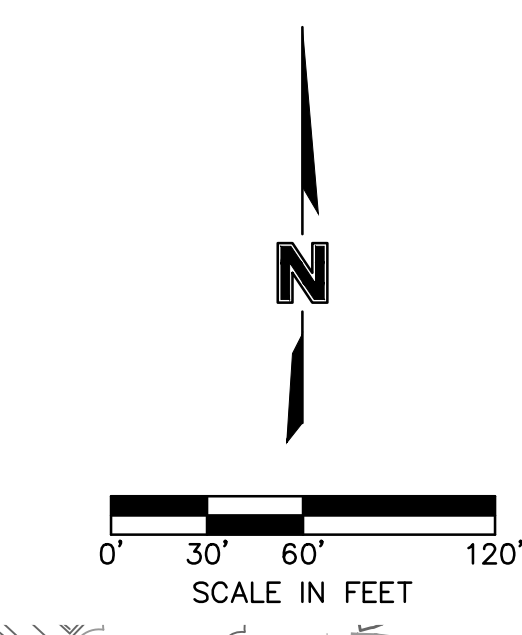
Hook Farms Second Plat			
Lot	Rear Left MBOE	Rear Right MBOE	As Built Plot Plan Required
50	954.92	953.57	Y
51	953.57	952.88	Y
52	952.88	950.65	Y
53	950.65	950.27	Y
54	950.27	949.30	Y
55	949.30	948.19	Y
56	948.19	947.82	Y
57	947.82	947.35	Y
58	947.34	947.97	Y
59	947.97	947.72	Y
60	947.72	947.99	Y
61	947.99	946.90	Y
62	946.90	944.72	Y
63	944.72	942.92	Y
64	942.92	942.70	Y
65	973.63	940.82	Y
66	941.13	943.41	Y
67	943.41	947.90	Y
68	947.90	954.22	Y
69	943.41	948.62	Y
70	948.62	949.34	Y
71	949.34	950.54	Y
72	950.54	953.88	Y
73	953.88	956.67	Y
74	977.02	959.59	Y

Hook Farms Second Plat			
Lot	Rear Left MBOE	Rear Right MBOE	As Built Plot Plan Required
75	958.90	977.02	Y
76	956.91	957.60	Y
77	957.60	958.44	Y
78	958.44	960.42	Y
79	981.53	975.44	Y
98	975.44	974.55	Y
99	974.55	973.89	Y
100	973.89	971.83	Y
101	971.83	974.23	Y
102	974.23	976.18	Y
103	976.18	977.87	Y
104	977.87	979.78	Y
105	979.78	981.97	Y
106	981.97	981.86	Y
113	966.25	964.26	Y
114	964.26	962.62	Y
115	962.62	961.34	Y
116	961.34	959.40	Y
117	959.40	957.84	Y
118	957.84	956.70	Y
119	957.17	958.17	Y
120	958.17	960.37	Y
121	960.37	961.93	Y
122	961.93	963.96	Y
123	963.96	966.25	Y
124	969.47	965.97	Y
125	965.97	964.26	Y
126	964.26	961.86	Y
127	961.86	959.66	Y
128	959.66	961.40	Y

NOTES:
 MBOE - MINIMUM BUILDING OPENING ELEVATION
 FG - FINISHED GRADE

LEGEND
 -100 AS-BUILT SURFACE CONTOURS
 -100 PROPOSED SURFACE CONTOURS

BASEMENT TYPES
 (S) STANDARD
 (W) WALKOUT
 (D) DAYLIGHT



AS BUILT
 DATE SURVEYED: 2022-05-26

- 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.
 - PLAT IS LOCATION 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 BASH FLOOD ELEVATIONS OR DEPTHS ARE SHOWN WITHIN THIS ZONE"
 - PLAT IS LOCATED OUTSIDE OF ANY REQUIRED BUFFER ZONES FOR NATURAL STREAMS.
 - MBOE ELEVATIONS HAVE BEEN PROVIDED AT EACH LOT CORNER. INTERPOLATION WILL BE ALLOWED BETWEEN THE RIGHT AND LEFT SIDE MBOE'S SHOWN ON THE MASTER DRAINAGE PLAN, DEPENDING ON THE LOCATION OF THE LOWEST OPENING ON THE PROPOSED STRUCTURE.
 - REFER TO SHEET C107-C109 FOR SWALE GRADING DETAILS.
 - DRAINAGE PATHS TO BE CONSTRUCTED BETWEEN LOTS LABELED AS STANDARD AND/OR UPHILL LOTS.
 - NO BUILDING PERMITS WILL BE ISSUED UNTIL AN AS-GRADED MASTER DRAINAGE PLAN HAS BEEN SUBMITTED TO THE CITY AND APPROVED BY THE CITY.

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 North Kansas City, MO 64116
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JULIE ELAINE SELLERS
 LICENSE NUMBER
 PE-2017000367
 10/11/22
 PROFESSIONAL ENGINEER

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1	03-23-2021	REVISED PER CITY COMMENTS
2	04-16-2021	CHANGES TO APPROVED PLANS
3	09-30-2021	CHANGES TO APPROVED PLANS

MASTER DRAINAGE PLAN
 STREET & STORM SEWER PLANS

HOOK FARMS
 SECOND PLAT

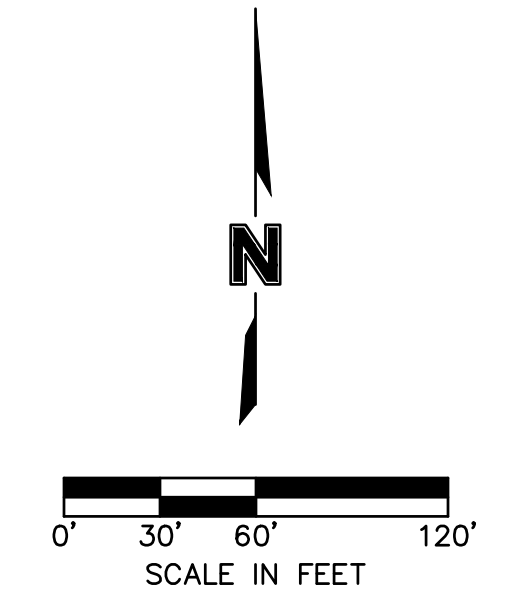
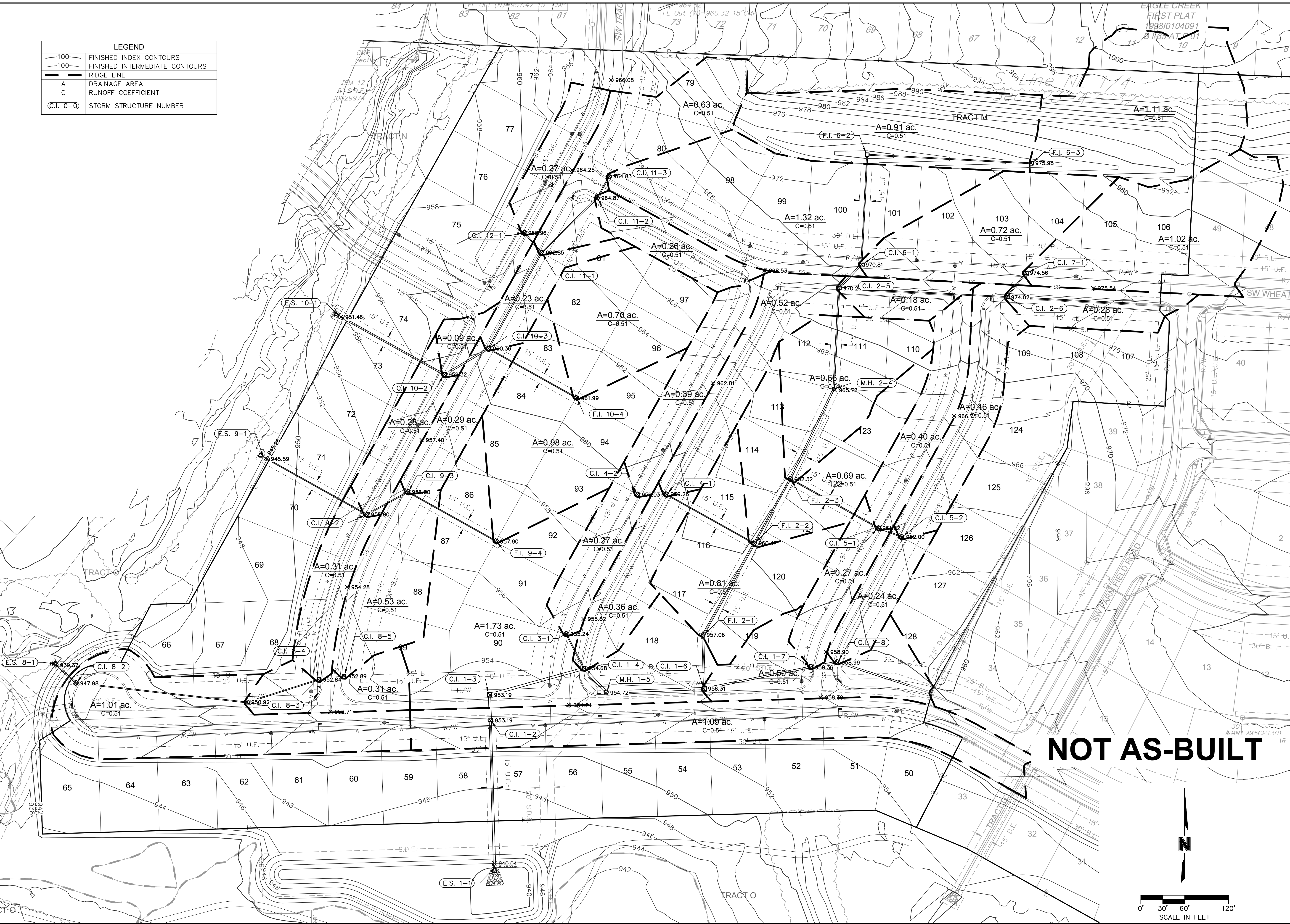
REVISIONS
 2021

drawn by: B.M.W./A.A.
 checked by: B.M.W./A.A.
 designed by: B.M.W./A.A.
 QA/QC by: J.E.S.
 project no.: B19-4061
 date: 01-08-2021

SHEET
 C144

DWG: F:\2019\4001-4500\019-4061-BV40-Design\AutoCAD\Asbuilt\Sheets\GNCV\Street & Storm Plans\C_DRN02_B194061.dwg
 DATE: Oct 11, 2022 3:40pm
 USER: ssoy/or
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 C_PTBLK_B194061
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 C_PBDY_B194061

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



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 Missouri Certificate of Authority #001592
 1301 Burlington Street
 North Kansas City, MO 64116
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STATE OF MISSOURI
 JULIE ELAINE SELLERS
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BY

REVISIONS

2021

LEE'S SUMMIT, MO

drawn by: B.M.W./A.A.
 checked by: B.M.W./A.A.
 designed by: B.M.W./A.A.
 QA/QC by: J.E.S.
 project no.: B19-4061
 date: 01-08-2021

DRAINAGE PLAN
 STREET & STORM SEWER PLANS
 HOOK FARMS
 SECOND PLAT

SHEET
 C145

10 Year Return Frequency						
Inlet ID	Captured Flow (cfs)	Bypass Flow (cfs)	Inlet Efficiency (Note 2) (%)	Gutter Depth (ft)	Gutter Spread (ft)	Ponding Depth (ft)
C.I. 1-2(L)	3.36	0.00	100.00%	0.20	10.20	...
C.I. 1-2(R)	0.23	0.00	100.00%	0.07	3.74	...
C.I. 1-2	4.19	0.00	100.00%	...	...	...
C.I. 1-3(L)	0.34	0.00	100.00%	0.09	4.36	...
C.I. 1-3(R)	2.74	0.00	100.00%	0.19	9.44	...
C.I. 1-3	7.20	0.00	100.00%	...	...	...
C.I. 1-4	1.43	0.24	85.63%	0.14	7.21	...
C.I. 1-6	1.94	0.32	85.85%	0.18	8.79	...
C.I. 1-7	1.08	0.13	89.48%	0.13	6.36	...
C.I. 1-8	1.05	0.12	89.77%	0.13	6.28	...
F.I. 2-1	3.04	0.00	100.00%	...	...	0.15
F.I. 2-2	2.59	0.00	100.00%	...	...	0.13
F.I. 2-3	2.48	0.00	100.00%	...	...	0.13
C.I. 2-5	0.64	0.03	95.13%	0.11	5.27	...
C.I. 2-6	0.97	0.08	91.95%	0.12	6.22	...
C.I. 3-1	1.08	0.11	90.54%	0.13	6.47	...
C.I. 4-1	1.66	0.32	83.66%	0.16	7.76	...
C.I. 4-2	1.28	0.18	87.85%	0.14	6.92	...
C.I. 5-1	1.34	0.20	87.27%	0.14	7.05	...
C.I. 5-2	1.54	0.27	85.02%	0.15	7.50	...
C.I. 6-1	3.22	0.90	78.18%	0.21	10.38	...
F.I. 6-2	3.41	0.00	100.00%	...	...	0.16
F.I. 6-3	4.16	0.00	100.00%	...	...	0.18
C.I. 7-1	3.80	1.42	72.80%	0.23	11.35	...
C.I. 8-2(L)	2.06	0.00	100.00%	0.15	7.65	...
C.I. 8-2(R)	0.99	0.00	100.00%	0.13	6.25	...
C.I. 8-2	3.99	0.00	100.00%	...	...	...
C.I. 8-3	1.51	0.17	89.96%	0.16	7.96	...
C.I. 8-4	1.10	0.14	88.79%	0.13	6.37	...
C.I. 8-5	1.86	0.38	83.08%	0.17	8.31	...
C.I. 9-2	0.98	0.08	92.39%	0.13	6.34	...
C.I. 9-3	1.59	0.25	86.30%	0.16	7.76	...
F.I. 9-4	3.68	0.00	100.00%	...	...	0.17
C.I. 10-2	0.33	0.01	97.51%	0.08	3.88	...
C.I. 10-3	1.85	0.41	81.75%	0.16	8.20	...
F.I. 10-4	2.63	0.00	100.00%	...	...	0.14
C.I. 11-1	3.20	1.41	69.52%	0.22	11.03	...
C.I. 11-2	0.91	0.07	92.93%	0.12	6.12	...
C.I. 11-3	3.67	2.18	62.75%	0.24	11.98	...
C.I. 12-1	0.94	0.07	92.82%	0.12	6.25	...
F.I. 9-4	3.68	0.00	100.00%	...	...	0.17
C.I. 10-2	0.33	0.01	97.51%	0.08	3.88	...
C.I. 10-3	1.85	0.41	81.75%	0.16	8.20	...
F.I. 10-4	2.63	0.00	100.00%	...	...	0.14
C.I. 11-1	3.20	1.41	69.52%	0.22	11.03	...
C.I. 11-2	0.91	0.07	92.93%	0.12	6.12	...
C.I. 11-3	3.67	2.18	62.75%	0.24	11.98	...
C.I. 12-1	0.94	0.07	92.82%	0.12	6.25	...

Drainage Area Design Table						
10 Year Return Frequency						
Inlet ID	Drainage Area (ac)	C	Tc (min)	i (in/hr)	K	Peak Flow (cfs)
C.I. 1-2(L)	0.87	0.51	5.00	7.35	1.00	3.26
C.I. 1-2(R)	0.06	0.51	5.00	7.35	1.00	0.23
C.I. 1-2(B)	0.16	0.51	5.00	7.35	1.00	0.60
C.I. 1-2	1.09	0.51	5.00	7.35	1.00	4.09
C.I. 1-3(L)	0.09	0.51	5.00	7.35	1.00	0.34
C.I. 1-3(R)	0.55	0.51	5.00	7.35	1.00	2.06
C.I. 1-3(B)	1.10	0.51	5.00	7.35	1.00	4.13
C.I. 1-3	1.74	0.51	5.00	7.35	1.00	6.53
C.I. 1-4	0.36	0.51	5.00	7.35	1.00	1.35
C.I. 1-6	0.50	0.51	5.00	7.35	1.00	1.88
C.I. 1-7	0.27	0.51	5.00	7.35	1.00	1.01
C.I. 1-8	0.24	0.51	5.00	7.35	1.00	0.90
F.I. 2-1	0.81	0.51	5.00	7.35	1.00	3.04
F.I. 2-2	0.69	0.51	5.00	7.35	1.00	2.59
F.I. 2-3	0.66	0.51	5.00	7.35	1.00	2.48
C.I. 2-5	0.18	0.51	5.00	7.35	1.00	0.68
C.I. 2-6	0.28	0.51	5.00	7.35	1.00	1.05
C.I. 3-1	0.27	0.51	5.00	7.35	1.00	1.01
C.I. 4-1	0.52	0.51	5.00	7.35	1.00	1.95
C.I. 4-2	0.39	0.51	5.00	7.35	1.00	1.46
C.I. 5-1	0.40	0.51	5.00	7.35	1.00	1.50
C.I. 5-2	0.46	0.51	5.00	7.35	1.00	1.73
C.I. 6-1	0.72	0.51	5.00	7.35	1.00	2.70
F.I. 6-2	0.91	0.51	5.00	7.35	1.00	3.41
F.I. 6-3	1.11	0.51	5.00	7.35	1.00	4.16
C.I. 7-1	1.02	0.51	5.00	7.35	1.00	3.83
C.I. 8-2(L)	0.55	0.51	5.00	7.35	1.00	2.06
C.I. 8-2(R)	0.22	0.51	5.00	7.35	1.00	0.83
C.I. 8-2(B)	0.25	0.51	5.00	7.35	1.00	0.94
C.I. 8-2	1.02	0.51	5.00	7.35	1.00	3.83
C.I. 8-3	0.31	0.51	5.00	7.35	1.00	1.16
C.I. 8-4	0.31	0.51	5.00	7.35	1.00	1.16
C.I. 8-5	0.53	0.51	5.00	7.35	1.00	1.99
C.I. 9-2	0.28	0.51	5.00	7.35	1.00	1.05
C.I. 9-3	0.38	0.51	5.00	7.35	1.00	1.43
F.I. 9-4	0.98	0.51	5.00	7.35	1.00	3.68
C.I. 10-2	0.09	0.51	5.00	7.35	1.00	0.34
C.I. 10-3	0.23	0.51	5.00	7.35	1.00	0.86
F.I. 10-4	0.70	0.51	5.00	7.35	1.00	2.63
C.I. 11-1	0.63	0.51	5.00	7.35	1.00	2.36
C.I. 11-2	0.26	0.51	5.00	7.35	1.00	0.98
C.I. 11-3	1.32	0.51	5.00	7.35	1.00	4.95
C.I. 12-1	0.27	0.51	5.00	7.35	1.00	1.01

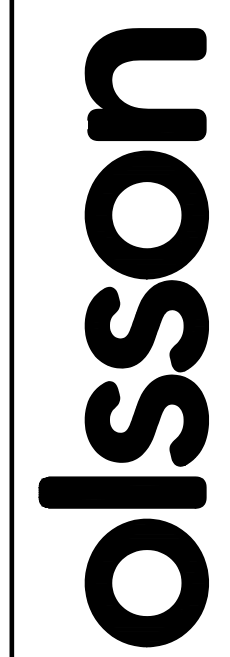
Storm Sewer Design Calculation Table													
10 Year Return Frequency													
Upstream Structure	Downstream Structure	Length (ft)	Upstream Invert (ft)	Downstream Invert (ft)	Slope (%)	Diameter (in)	Manning's n	Total Flow (cfs)	Velocity (ft/s)	Capacity (cfs)	Flow Depth (ft)	Upstream Struct. HGL (ft)	Upstream Top Elev. (ft)
C.I. 1-2	E.S. 1-1	202.00	942.02	940.00	1.00	36	0.012	65.27	10.82	72.25	2.23	944.61	952.95
C.I. 1-3	C.I. 1-2	35.00	942.83	942.52	0.86	36	0.012	61.08	10.33	68.99	2.19	945.35	952.95
C.I. 1-4	C.I. 1-3	133.97	944.39	943.32	0.80	36	0.012	53.88	9.58	64.51	2.10	946.77	954.53
M.H. 1-5	C.I. 1-4	44.30	945.24	944.89	0.79	36	0.012	51.37	9.41	64.22	2.03	947.57	954.65
C.I. 1-6	M.H. 1-5	134.49	946.82	945.74	0.80	36	0.012	51.37	9.44	64.75	2.02	949.15	956.22
C.I. 1-7	C.I. 1-6	148.70	949.01	947.82	0.80	24	0.012	16.30	7.01	21.91	1.33	950.46	958.22
C.I. 1-8	C.I. 1-7	36.74	949.80	949.51	0.79	24	0.012	15.22	6.97	21.77	1.23	951.21	958.58
NULL ON LINE 1	C.I. 1-8	104.17	951.34	950.30	1.00	24	0.012	14.17	7.17	24.48	1.09	952.69	953.52
F.I. 2-1	C.I. 1-6	72.94	948.43	947.32	1.52	30	0.012	34.08	8.46	54.44	1.85	950.41	956.89
F.I. 2-2	F.I. 2-1	144.00	950.89	948.93	1.36	30	0.012	30.54	8.99	51.83	1.46	952.77	959.91
F.I. 2-3	F.I. 2-2	101.30	953.42	951.39	2.00	24	0.012	25.01	9.67	34.69	1.38	955.18	962.04
M.H. 2-4	F.I. 2-3	136.61	956.99	953.92	2.25	24	0.012	19.65	8.37	36.73	1.26	958.58	965.63
C.I. 2-5	M.H. 2-4	138.00	962.32	957.49	3.50	24	0.012	19.65	9.27	45.84	1.09	963.91	970.31
C.I. 2-6	C.I. 2-5	230.00	967.30	963.07	1.84	15	0.012	8.72	8.09	9.49	0.94	968.44	973.99
NULL ON LINE 2	C.I. 2-6	178.30	969.58	967.80	1.00	15	0.012	3.95	5.30	6.99	0.67	970.38	970.95
C.I. 3-1	C.I. 1-4	53.27	947.21	946.14	2.01	15	0.012	1.08	2.42	9.91	0.63	947.62	955.25
C.I. 4-1	F.I. 2-2	138.00	953.24	952.14	0.80	15	0.012	2.94	4.48	6.25	0.63	953.93	959.27
C.I. 4-2	C.I. 4-1	39.15	954.05	953.74	0.79	15	0.012	1.28	3.62	6.22	0.38	954.50	958.93
C.I. 5-1	F.I. 2-3	138.00	955.30	953.92	1.00	18	0.012	2.88	2.89	11.38	1.26	955.94	961.95
C.I. 5-2	C.I. 5-1	34.34	956.14	955.80	0.99	15	0.012	1.54	4.00	6.96	0.40	956.63	962.04
C.I. 6-1	C.I. 2-5	44.69	963.21	962.82	0.87	24	0.012	10.29	5.69	22.89	1.09	964.36	970.78
F.I. 6-2	C.I. 6-1	150.50	964.91	963.71	0.80	18	0.012	7.57	5.97	10.16	0.96	965.97	970.06
F.I. 6-3	F.I. 6-2	225.00	970.47	965.41	2.25	15	0.012	4.16	6.45	10.49	0.55	971.29	975.91
C.I. 7-1	C.I. 2-6	41.62	968.22	967.80	1.01	15	0.012	3.80	5.25	7.83	0.66	969.04	974.37
C.I. 8-2	E.S. 8-1	38.74	939.82	939.57	0.65	18	0.012	8.46	5.88	9.14	1.13	940.97	946.73
C.I. 8-3	C.I. 8-2	235.47	942.67	940.32	1.00	15	0.012	4.47	4.98	6.99	0.86	943.53	950.92
C.I. 8-4	C.I. 8-3	103.13	944.46	943.17	1.25	15	0.012	2.96	5.09	7.82	0.53	945.15	952.80
C.I. 8-5	C.I. 8-4	34.61	945.39	944.96	1.24	15	0.012	1.86	4.43	7.80	0.42	945.93	952.88
C.I. 9-2	E.S. 9-1	162.45	947.12	945.82	0.80	15	0.012	5.73	5.70	6.26	0.94	948.09	955.66
C.I. 9-3	C.I. 9-2	64.21	948.90	947.62	1.99	15	0.012	4.75	6.55	9.88	0.61	949.78	956.35
F.I. 9-4	C.I. 9-3	138.00	951.13	949.40	1.25	15	0.012	3.68	5.44	7.83	0.60	951.90	957.72
C.I. 10-2	E.S. 10-1	165.47	953.14	951.81	0.80	24	0.012	13.10	6.67	21.93	1.11	954.44	959.29
C.I. 10-3	C.I. 10-2	69.88	954.20	953.64	0.79	24	0.012	12.77	6.63	22.01	1.09	955.48	960.55
F.I. 10-4	C.I. 10-3	137.50	956.05	954.95	0.80	15	0.012	2.63	4.48	6.25	0.57	956.70	961.70
C.I. 11-1	C.I. 10-3	150.00	955.90	954.70	0.80	18	0.012	8.72	6.26	10.18	1.07	957.04	962.77
C.I. 11-2	C.I. 11-1	106.77	958.00	956.40	1.50	15	0.012	4.58	6.07	8.56	0.65	958.87	964.79
C.I. 11-3	C.I. 11-2	34.00	958.84	958.50	1.00	15	0.012	3.67	5.19	7.00	0.64	959.61	964.79
C.I. 12-1	C.I. 11-1	36.23	956.76	956.40	0.99	15	0.012	0.94	2.23				

Inlet Design Table						
100 Year Return Frequency						
Inlet ID	Captured Flow	Bypass Flow	Inlet Efficiency	Gutter Depth	Gutter Spread	Ponding Depth
	(cfs)	(cfs)	(%)	(ft)	(ft)	(ft)
C.I. 1-2(L)	6.19	0.00	100.00%	0.26	12.82	...
C.I. 1-2(R)	0.39	0.00	100.00%	0.09	4.62	...
C.I. 1-2	7.63	0.00	100.00%	...	...	...
C.I. 1-3(L)	0.59	0.00	100.00%	0.11	5.38	...
C.I. 1-3(R)	6.36	0.00	100.00%	0.26	12.96	...
C.I. 1-3	14.19	0.00	100.00%	...	...	...
C.I. 1-4	2.44	0.89	73.20%	0.19	9.34	...
C.I. 1-6	3.55	1.43	71.29%	0.24	11.81	...
C.I. 1-7	1.90	0.48	79.74%	0.16	8.20	...
C.I. 1-8	1.92	0.50	79.31%	0.17	8.25	...
F.I. 2-1	5.33	0.00	100.00%	...	...	0.22
F.I. 2-2	4.54	0.00	100.00%	...	...	0.19
F.I. 2-3	4.34	0.00	100.00%	...	...	0.19
C.I. 2-5	1.08	0.11	90.84%	0.13	6.50	...
C.I. 2-6	1.58	0.26	85.66%	0.15	7.68	...
C.I. 3-1	1.89	0.42	81.80%	0.17	8.30	...
C.I. 4-1	2.57	0.96	72.69%	0.19	9.63	...
C.I. 4-2	2.03	0.53	79.27%	0.17	8.55	...
C.I. 5-1	2.14	0.60	78.02%	0.18	8.76	...
C.I. 5-2	2.44	0.85	74.25%	0.19	9.38	...
C.I. 6-1	5.35	4.17	56.23%	0.28	14.21	...
F.I. 6-2	5.99	0.00	100.00%	...	...	0.23
F.I. 6-3	7.30	0.00	100.00%	...	...	0.27
C.I. 7-1	5.55	4.78	53.73%	0.29	14.65	...
C.I. 8-2(L)	3.62	0.00	100.00%	0.19	9.45	...
C.I. 8-2(R)	2.87	0.00	100.00%	0.19	9.30	...
C.I. 8-2	8.13	0.00	100.00%	...	...	...
C.I. 8-3	3.64	1.42	71.92%	0.24	12.02	...
C.I. 8-4	1.83	0.46	79.78%	0.16	8.02	...
C.I. 8-5	3.80	2.55	59.83%	0.25	12.28	...
C.I. 9-2	1.62	0.26	86.25%	0.16	7.85	...
C.I. 9-3	4.00	2.86	58.28%	0.25	12.72	...
F.I. 9-4	6.45	0.00	100.00%	...	...	0.25
C.I. 10-2	0.56	0.03	94.87%	0.10	4.79	...
C.I. 10-3	4.19	4.36	49.04%	0.27	13.48	...
F.I. 10-4	4.61	0.00	100.00%	...	...	0.20
C.I. 11-1	5.09	7.04	41.98%	0.32	15.85	...
C.I. 11-2	1.49	0.22	87.24%	0.15	7.56	...
C.I. 11-3	5.08	7.77	39.56%	0.32	16.10	...
C.I. 12-1	1.55	0.23	87.07%	0.15	7.71	...


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. 1-2(L)	0.87	0.51	5.00	10.32	1.25	5.73
C.I. 1-2(R)	0.06	0.51	5.00	10.32	1.25	0.39
C.I. 1-2(B)	0.16	0.51	5.00	10.32	1.25	1.05
C.I. 1-2	1.09	0.51	5.00	10.32	1.25	7.17
C.I. 1-3(L)	0.09	0.51	5.00	10.32	1.25	0.59
C.I. 1-3(R)	0.55	0.51	5.00	10.32	1.25	3.62
C.I. 1-3(B)	1.10	0.51	5.00	10.32	1.25	7.24
C.I. 1-3	1.74	0.51	5.00	10.32	1.25	11.45
C.I. 1-4	0.36	0.51	5.00	10.32	1.25	2.37
C.I. 1-6	0.50	0.51	5.00	10.32	1.25	3.29
C.I. 1-7	0.27	0.51	5.00	10.32	1.25	1.78
C.I. 1-8	0.24	0.51	5.00	10.32	1.25	1.58
F.I. 2-1	0.81	0.51	5.00	10.32	1.25	5.33
F.I. 2-2	0.69	0.51	5.00	10.32	1.25	4.54
F.I. 2-3	0.66	0.51	5.00	10.32	1.25	4.34
C.I. 2-5	0.18	0.51	5.00	10.32	1.25	1.18
C.I. 2-6	0.28	0.51	5.00	10.32	1.25	1.84
C.I. 3-1	0.27	0.51	5.00	10.32	1.25	1.78
C.I. 4-1	0.52	0.51	5.00	10.32	1.25	3.42
C.I. 4-2	0.39	0.51	5.00	10.32	1.25	2.57
C.I. 5-1	0.40	0.51	5.00	10.32	1.25	2.63
C.I. 5-2	0.46	0.51	5.00	10.32	1.25	3.03
C.I. 6-1	0.72	0.51	5.00	10.32	1.25	4.74
F.I. 6-2	0.91	0.51	5.00	10.32	1.25	5.99
F.I. 6-3	1.11	0.51	5.00	10.32	1.25	7.30
C.I. 7-1	1.02	0.51	5.00	10.32	1.25	6.71
C.I. 8-2(L)	0.55	0.51	5.00	10.32	1.25	3.62
C.I. 8-2(R)	0.22	0.51	5.00	10.32	1.25	1.45
C.I. 8-2(B)	0.25	0.51	5.00	10.32	1.25	1.65
C.I. 8-2	1.02	0.51	5.00	10.32	1.25	6.71
C.I. 8-3	0.31	0.51	5.00	10.32	1.25	2.04
C.I. 8-4	0.31	0.51	5.00	10.32	1.25	2.04
C.I. 8-5	0.53	0.51	5.00	10.32	1.25	3.49
C.I. 9-2	0.28	0.51	5.00	10.32	1.25	1.84
C.I. 9-3	0.38	0.51	5.00	10.32	1.25	2.50
F.I. 9-4	0.98	0.51	5.00	10.32	1.25	6.45
C.I. 10-2	0.09	0.51	5.00	10.32	1.25	0.59
C.I. 10-3	0.23	0.51	5.00	10.32	1.25	1.51
F.I. 10-4	0.70	0.51	5.00	10.32	1.25	4.61
C.I. 11-1	0.63	0.51	5.00	10.32	1.25	4.15
C.I. 11-2	0.26	0.51	5.00	10.32	1.25	1.71
C.I. 11-3	1.32	0.51	5.00	10.32	1.25	8.69
C.I. 12-1	0.27	0.51	5.00	10.32	1.25	1.78

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)	Upstream Top Elev. (ft)
C.I. 1-2	E.S. 1-1	202.00	942.02	940.00	1.00	36	0.012	100.26	14.26	72.25	2.90	946.61	952.95
C.I. 1-3	C.I. 1-2	35.00	942.83	942.52	0.66	36	0.012	92.63	13.11	66.99	3.06	946.11	952.95
C.I. 1-4	C.I. 1-3	133.97	944.39	943.32	0.80	36	0.012	78.44	11.10	64.51	3.00	950.76	954.53
M.H. 1-5	C.I. 1-4	44.30	945.24	944.89	0.79	36	0.012	74.11	10.49	64.22	3.00	951.99	954.65
C.I. 1-6	M.H. 1-5	134.49	946.82	945.74	0.80	36	0.012	74.11	10.49	64.75	3.00	954.09	956.22
C.I. 1-7	C.I. 1-6	148.70	949.01	947.82	0.80	24	0.012	17.99	5.73	21.91	2.00	955.58	958.22
C.I. 1-8	C.I. 1-7	36.74	949.80	949.51	0.79	24	0.012	16.09	5.12	21.77	2.00	955.89	958.58
NULL ON LINE 1	C.I. 1-8	104.17	951.34	950.30	1.00	24	0.012	14.17	4.51	24.48	2.00	956.36	953.52
F.I. 2-1	C.I. 1-6	948.43	947.32	1.52	30	0.012	54.19	11.04	54.44	2.50	956.33	956.89	
F.I. 2-2	F.I. 2-1	144.00	950.89	948.93	1.36	30	0.012	48.00	9.78	51.83	2.50	958.21	959.91
F.I. 2-3	F.I. 2-2	101.30	953.42	951.39	2.00	24	0.012	38.86	12.37	34.69	2.00	961.35	962.04
M.H. 2-4	F.I. 2-3	136.61	956.99	953.92	2.25	24	0.012	29.94	9.53	36.73	2.00	964.35	965.63
C.I. 2-5	M.H. 2-4	138.00	962.32	957.49	3.50	24	0.012	29.94	9.53	45.84	2.00	966.83	970.31
C.I. 2-6	C.I. 2-5	230.00	967.30	963.07	1.84	15	0.012	11.08	9.03	9.49	1.25	973.17	973.99
NULL ON LINE 2	C.I. 2-6	178.30	969.58	967.80	1.00	15	0.012	3.95	3.22	6.99	1.25	974.24	970.95
C.I. 3-1	C.I. 1-4	53.27	947.21	946.14	2.01	15	0.012	1.89	1.54	9.91	1.25	951.57	955.25
C.I. 4-1	F.I. 2-2	138.00	953.24	952.14	0.80	15	0.012	4.60	3.75	6.25	1.25	959.40	959.27
C.I. 4-2	C.I. 4-1	39.15	954.05	953.74	0.79	15	0.012	2.03	1.65	6.22	1.25	959.50	958.93
C.I. 5-1	F.I. 2-3	138.00	955.30	953.92	1.00	18	0.012	4.58	2.59	11.38	1.50	962.53	961.95
C.I. 5-2	C.I. 5-1	34.34	956.14	955.80	0.99	15	0.012	2.44	1.99	6.96	1.25	962.60	962.04
C.I. 6-1	C.I. 2-5	44.69	963.21	962.82	0.87	24	0.012	17.78	5.66	22.89	2.00	967.63	970.78
F.I. 6-2	C.I. 6-1	150.50	964.91	963.71	0.80	18	0.012	13.29	7.52	10.16	1.50	971.03	970.06
F.I. 6-3	F.I. 6-2	225.00	970.47	965.41	2.25	15	0.012	7.30	5.95	10.49	1.25	972.39	975.91
C.I. 7-1	C.I. 2-6	41.62	968.22	967.80	1.01	15	0.012	5.55	4.52	7.03	1.25	973.94	974.37
C.I. 8-2	E.S. 8-1	38.74	939.82	939.57	0.65	18	0.012	17.40	9.91	9.14	1.44	941.90	946.73
C.I. 8-3	C.I. 8-2	235.47	942.67	940.32	1.00	15	0.012	9.27	7.55	6.99	1.25	946.64	950.92
C.I. 8-4	C.I. 8-3	103.13	944.46	943.17	1.25	15	0.012	5.63	4.59	7.82	1.25	947.57	952.80
C.I. 8-5	C.I. 8-4	34.61	945.39	944.96	1.24	15	0.012	3.80	3.10	7.80	1.25	947.77	952.88
C.I. 9-2	E.S. 9-1	162.45	947.12	945.82	0.80	15	0.012	11.20	9.13	6.26	1.25	952.40	955.66
C.I. 9-3	C.I. 9-2	64.21	948.90	947.62	1.99	15	0.012	9.58	7.81	9.88	1.25	954.12	956.35
F.I. 9-4	C.I. 9-3	138.00	951.13	949.40	1.25	15	0.012	6.45	5.26	7.83	1.25	956.73	957.72
C.I. 10-2	E.S. 10-1	165.47	953.14	951.81	0.80	24	0.012	21.85	7.88	21.93	1.63	954.81	959.29
C.I. 10-3	C.I. 10-2	69.88	954.20	953.64	0.79	24	0.012	21.29	7.83	22.01	1.58	955.85	960.55
F.I. 10-4	C.I. 10-3	137.50	956.05	954.95	0.80	15	0.012	4.61	4.90	6.25	0.92	956.92	961.70
C.I. 11-1	C.I. 10-3	150.00	955.90	954.70	0.80	18	0.012	13.21	7.48	10.18	1.50	958.22	962.77
C.I. 11-2	C.I. 11-1	106.77	958.00	956.40	1.50	15	0.012	6.57	5.35	8.56	1.25	959.51	964.79
C.I. 11-3	C.I. 11-2	34.00	958.84	958.50	1.00	15	0.012	5.08	4.80	7.00	1.15	959.75	964.79
C.I. 12-1	C.I. 11-1	36.23	956.76	956.40	0.99	15	0.012	1.55	1.26	6.97	1.25	958.59	962.95

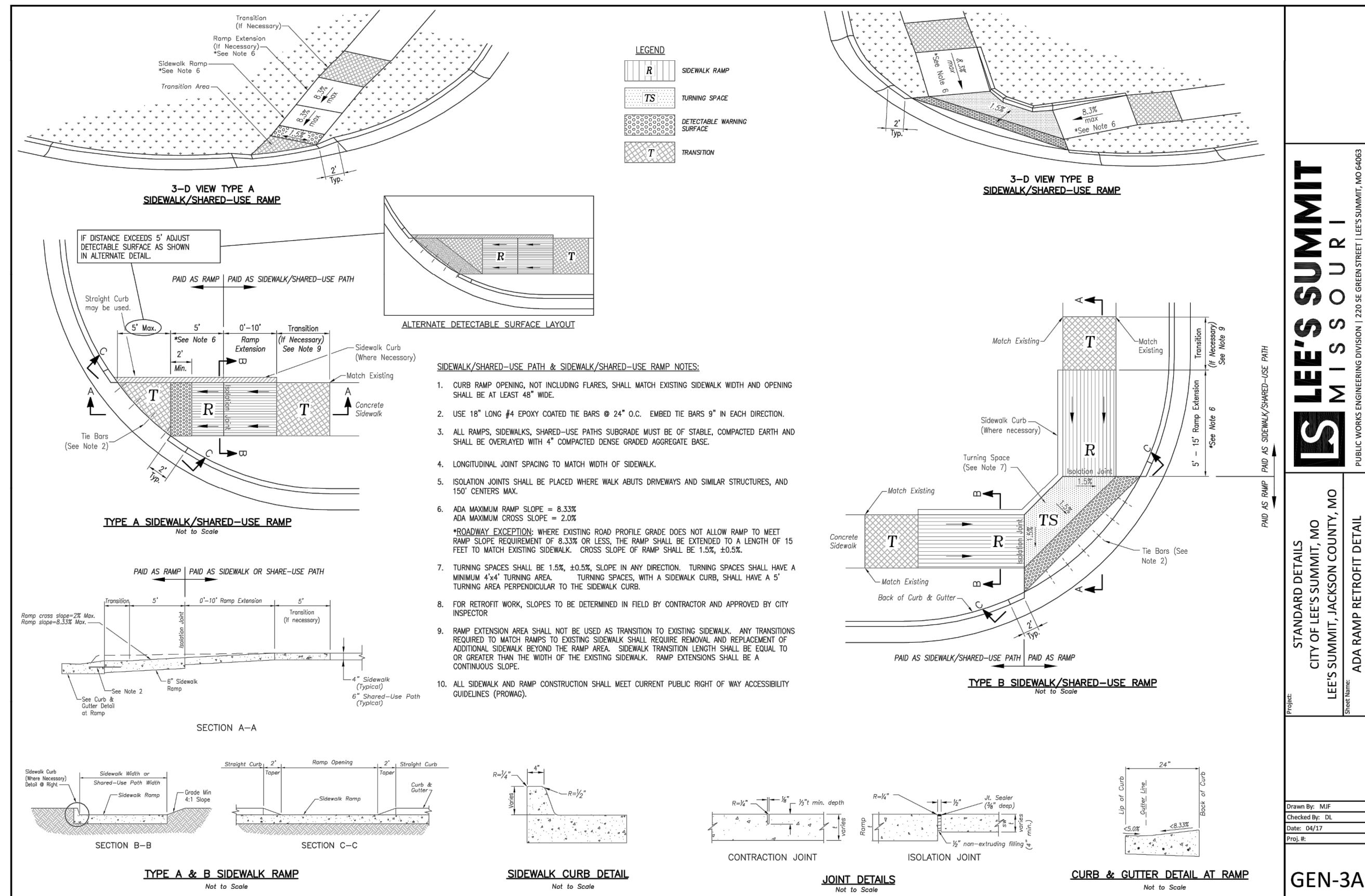
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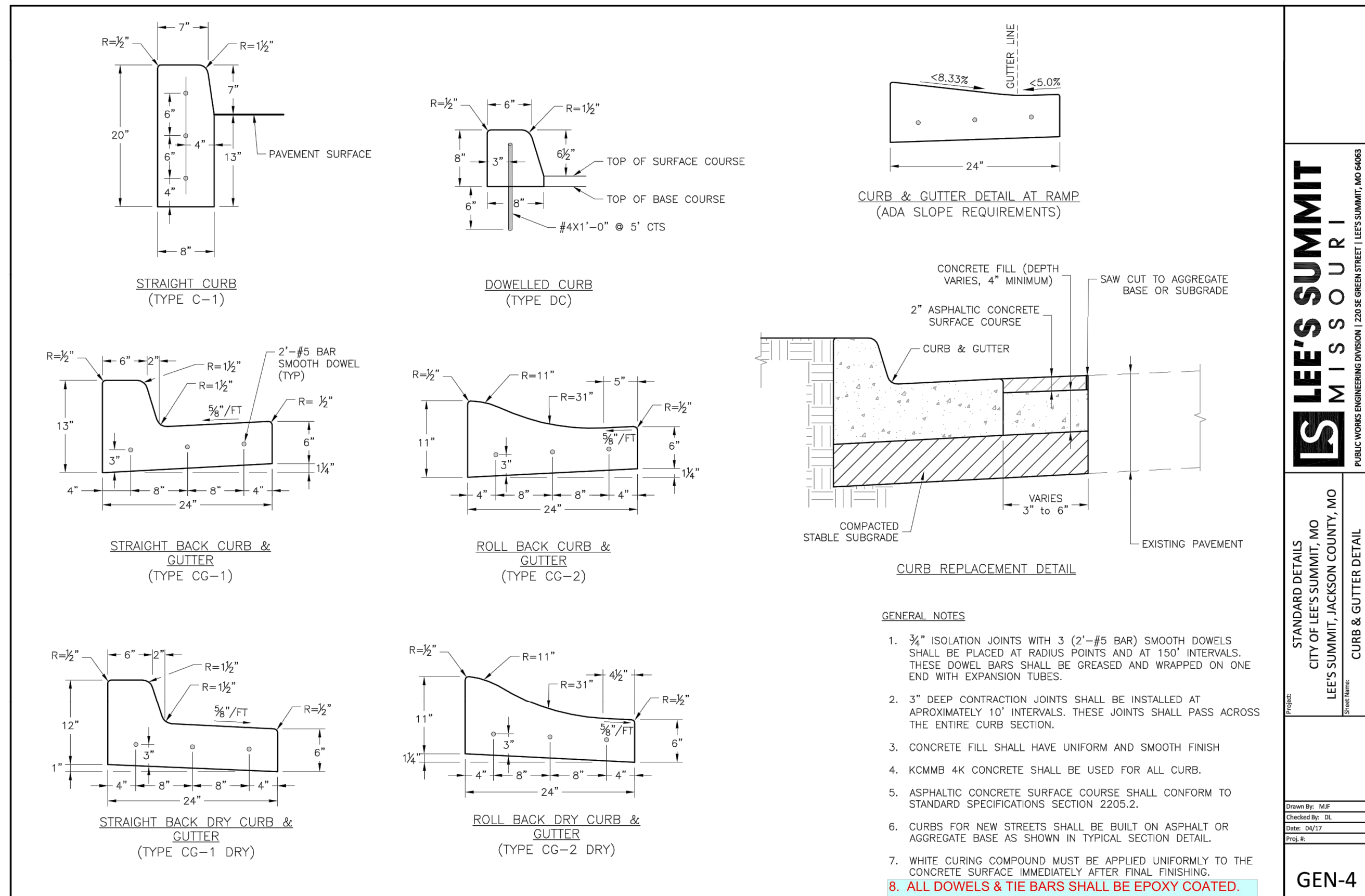


LEE'S SUMMIT MISSOURI
 PUBLIC WORKS ENGINEERING DIVISION | 220 S. GREEN STREET | LEE'S SUMMIT, MO 64083

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

Drawn By: MJP
 Checked By: JES
 Date: 08/17
 Proj. #: GEN-3A

GEN-3A

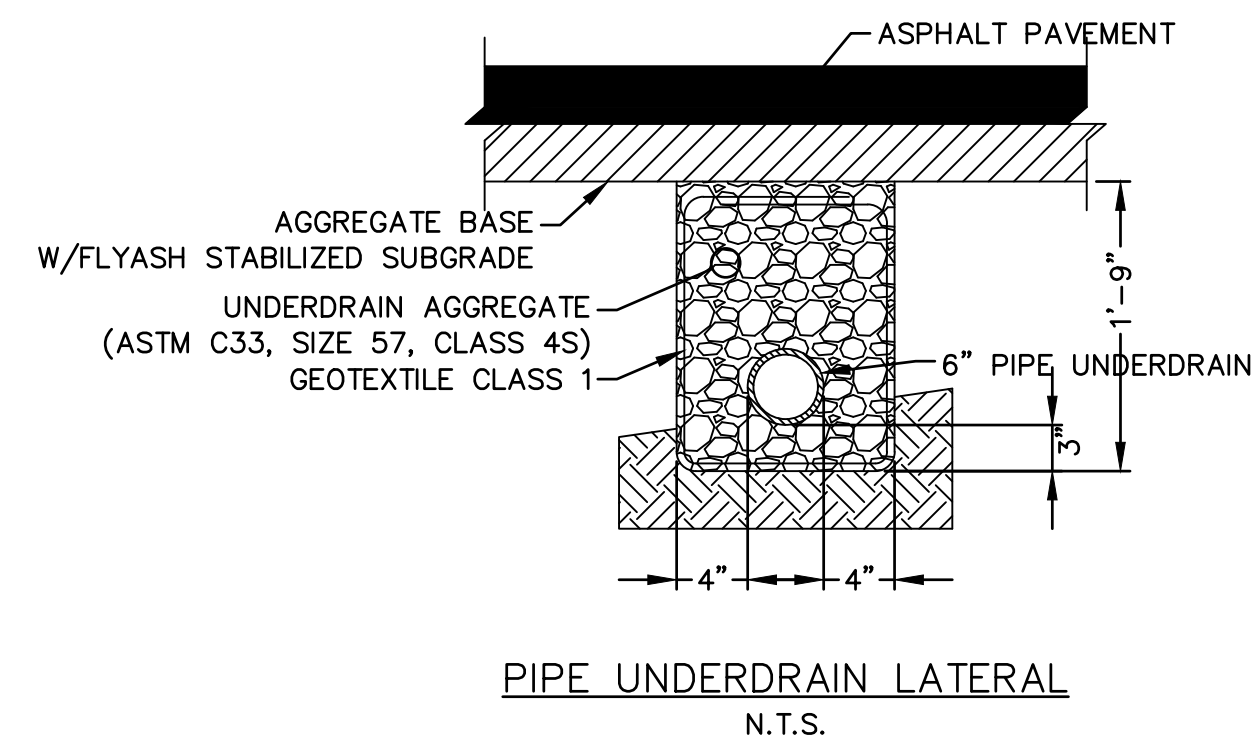
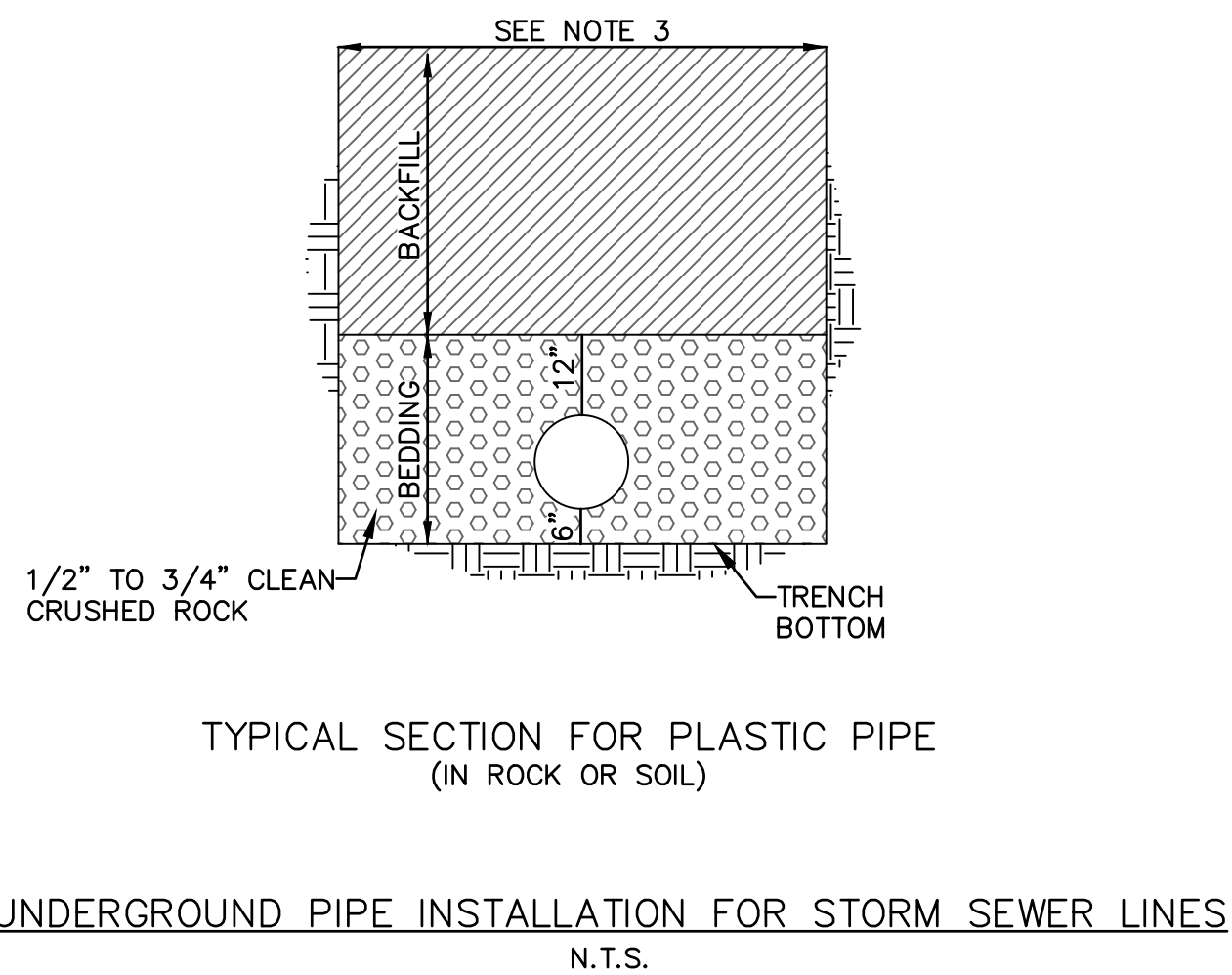
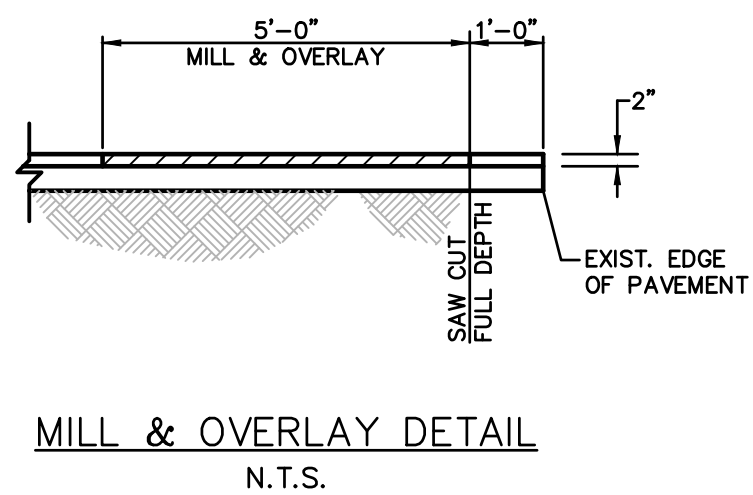


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 PUBLIC WORKS ENGINEERING DIVISION | 220 S. GREEN STREET | LEE'S SUMMIT, MO 64083

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

Drawn By: MJP
 Checked By: JES
 Date: 08/17
 Proj. #: GEN-4

GEN-4



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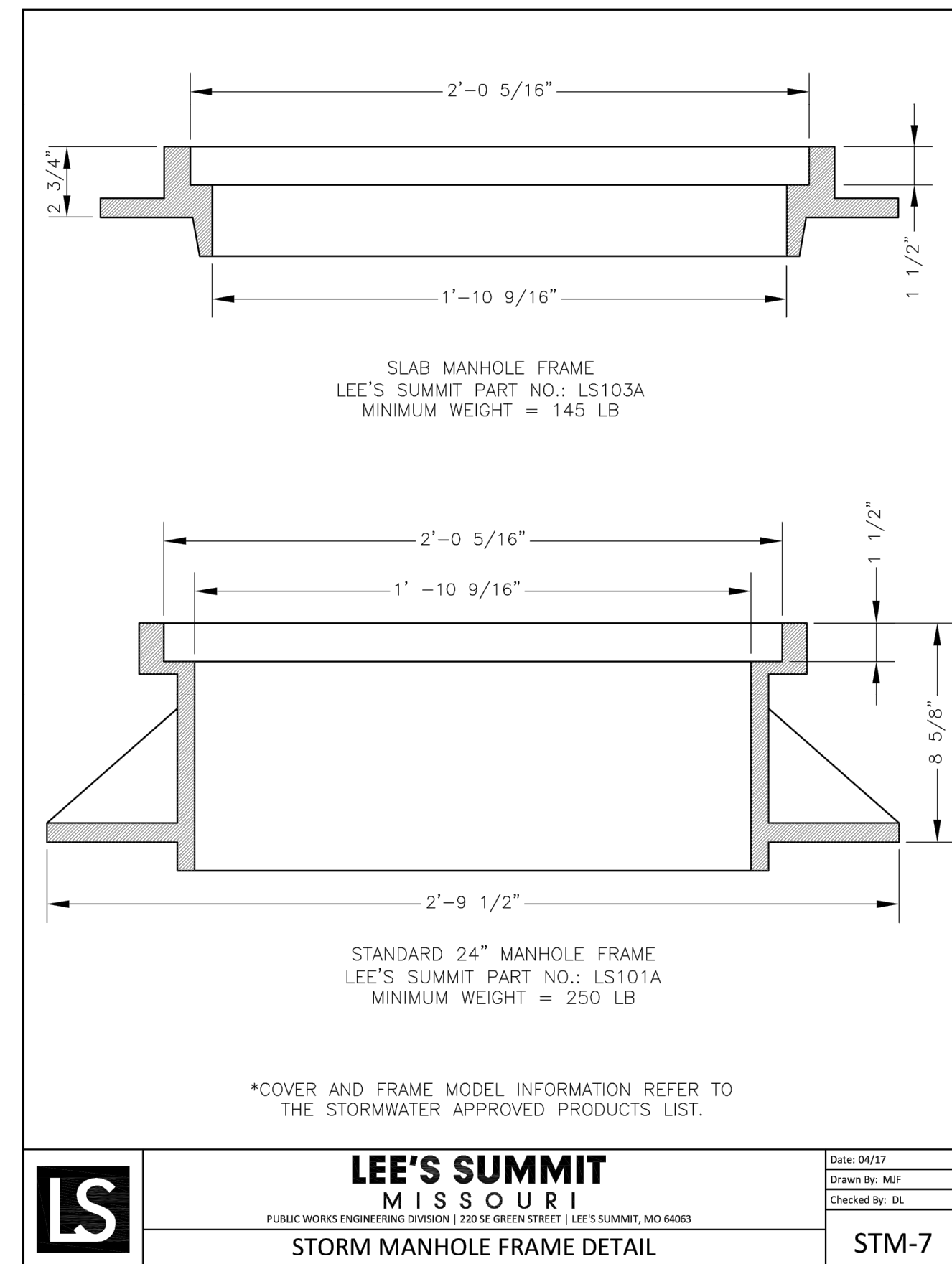
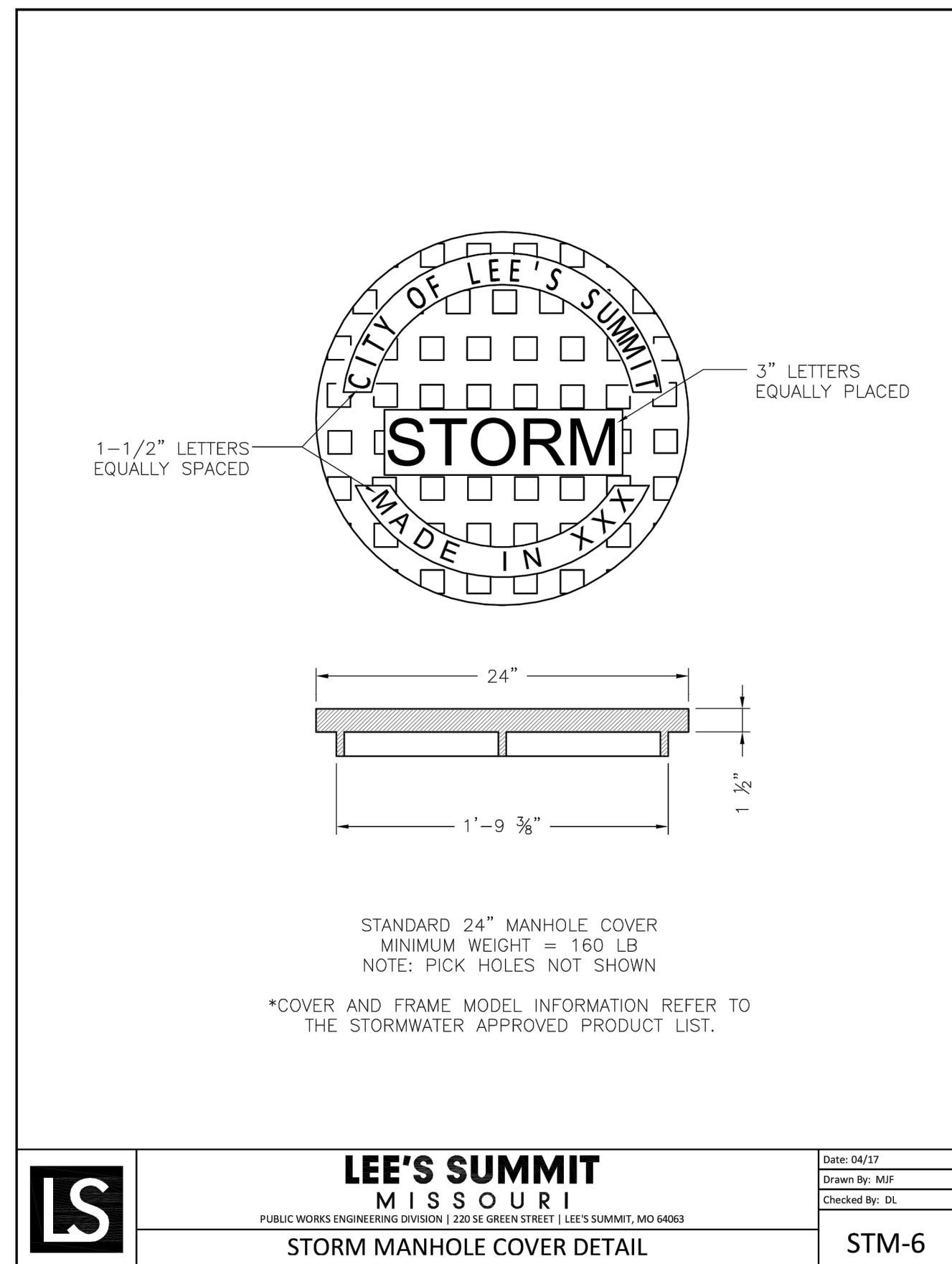
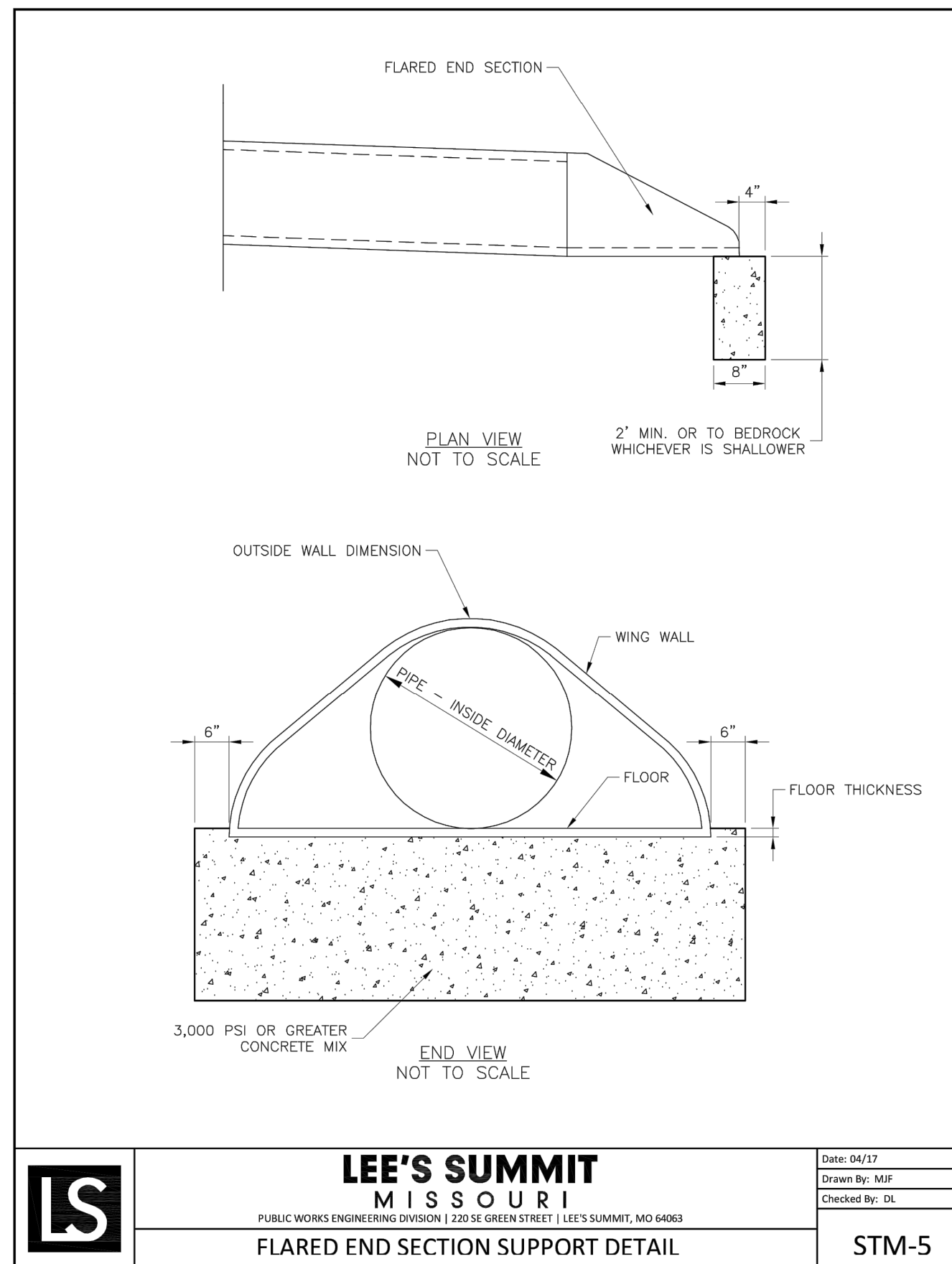
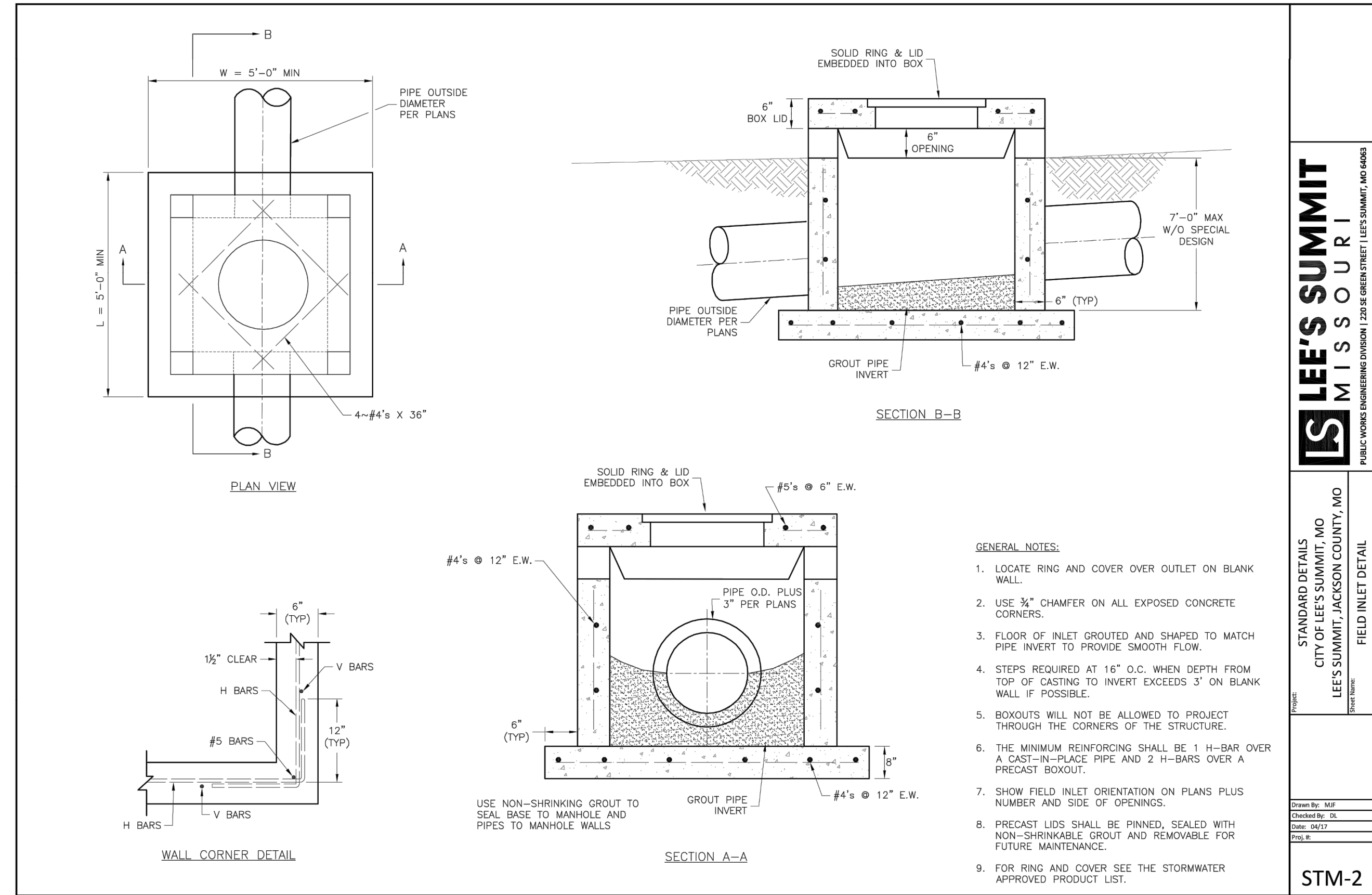
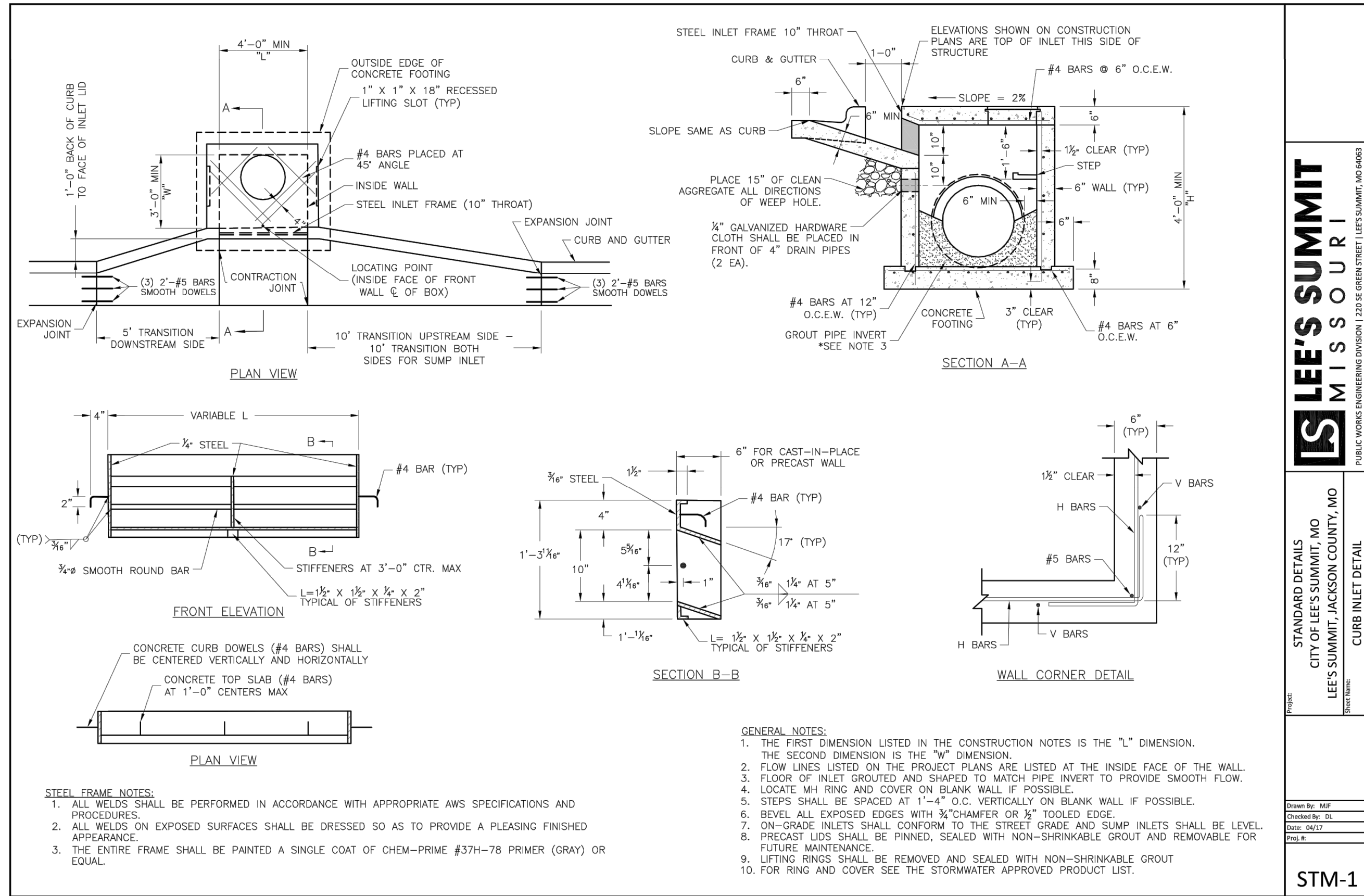
REV. NO.	DATE	REVISIONS DESCRIPTION
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2	04-16-2021	REVISED PER CITY COMMENTS
3	09-30-2021	CHANGES TO APPROVED PLANS

DETAIL SHEET
 STREET & STORM SEWER PLANS
 HOOK FARMS
 SECOND PLAT
 LEE'S SUMMIT, MO
 2021

drawn by: B.M.W./A.A.
 checked by: B.M.W.
 designed by: B.M.W./A.A.
 QA/QC by: J.E.S.
 project no.: B19-4061
 date: 01-08-2021

SHEET
 C148

olsson
 Olsson - Civil Engineering
 Missouri Certificate of Authority #001592
 1301 Burlington Street
 North Kansas City, MO 64116
 TEL 816.361.1177
 FAX 816.361.1888
 www.olson.com



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

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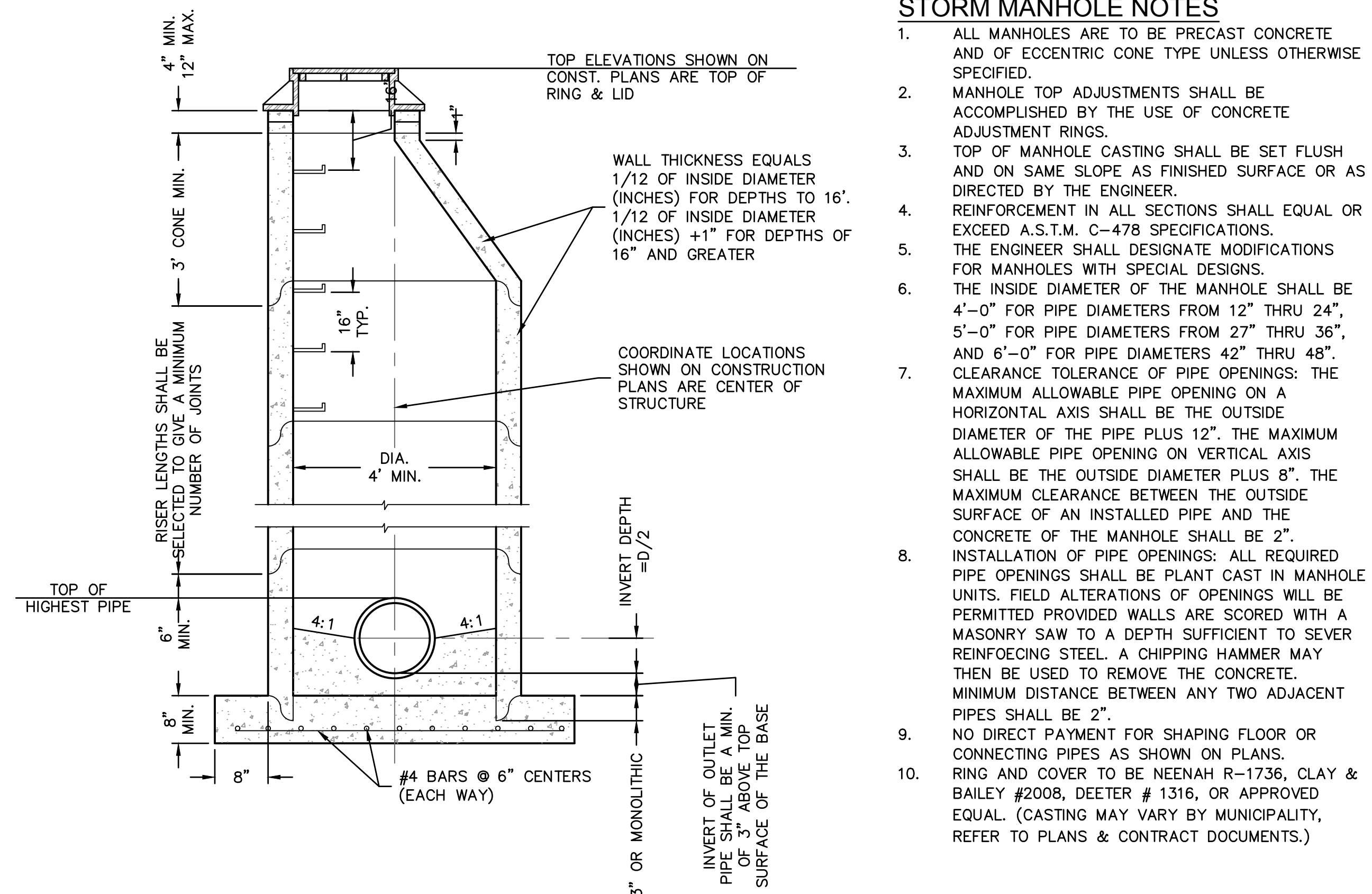
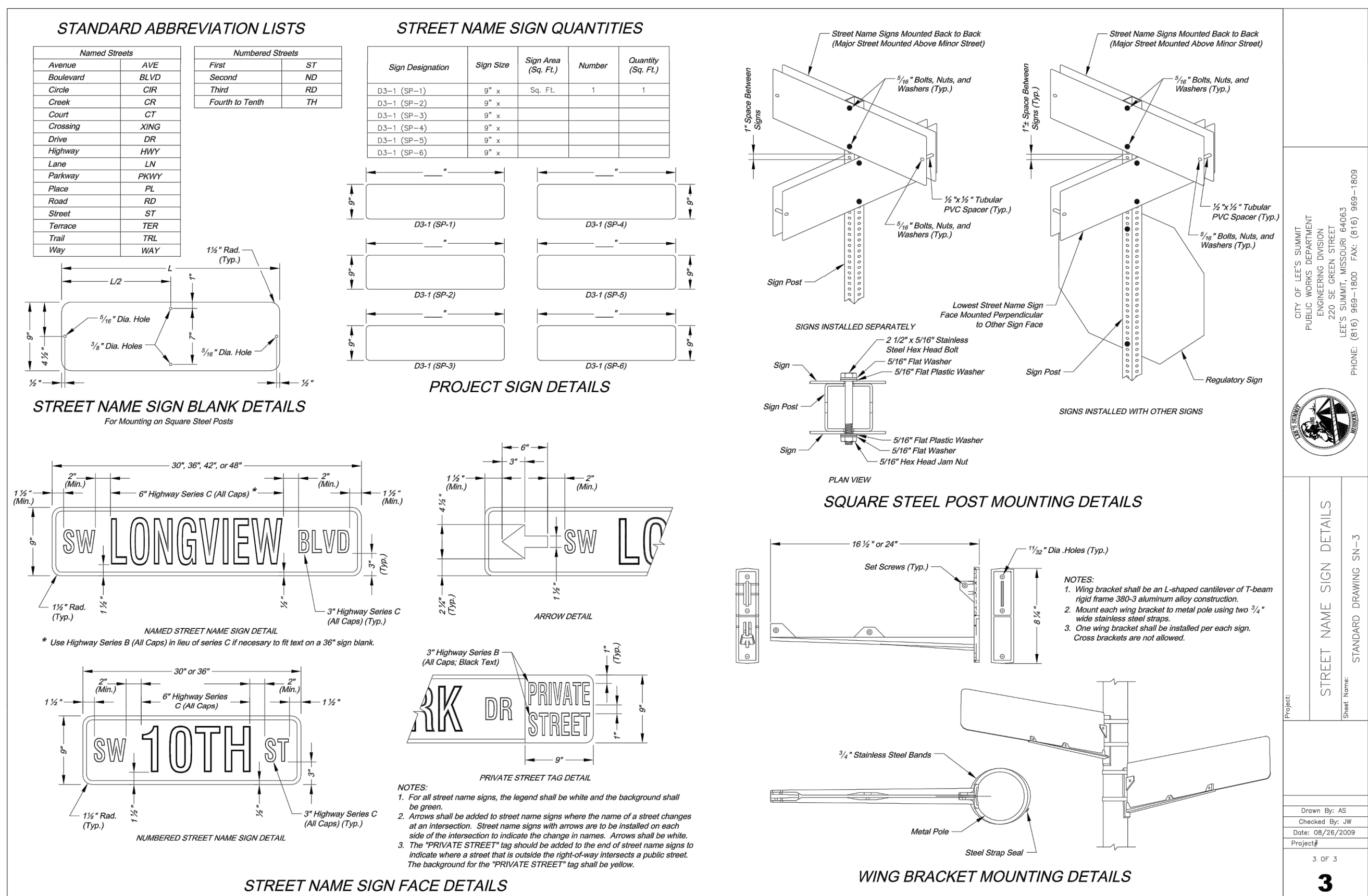
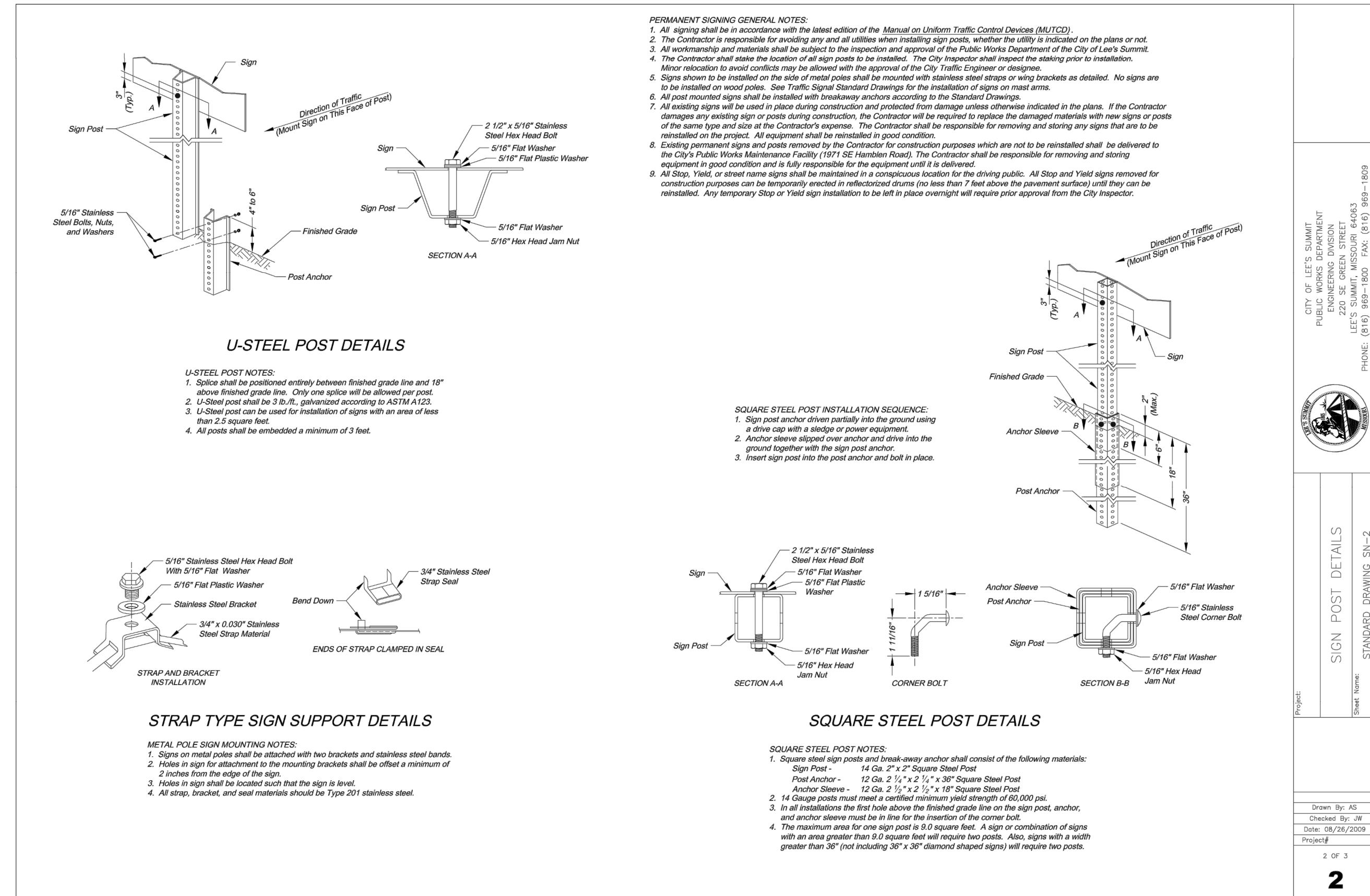
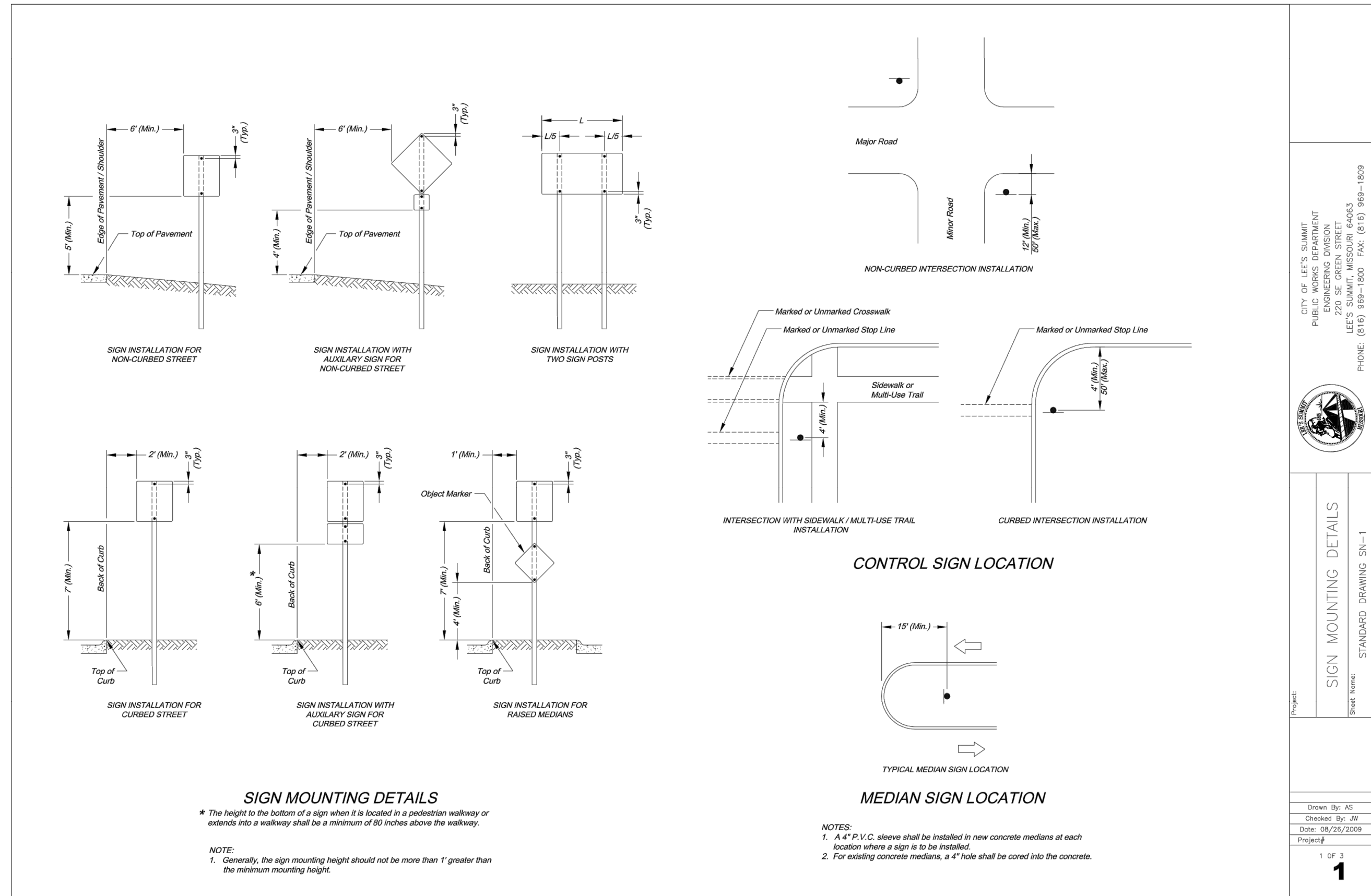
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HOOK FARMS
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LEE'S SUMMIT, MO

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STORM MANHOLE NOTES

- ALL MANHOLES ARE TO BE PRECAST CONCRETE AND OF ECCENTRIC CONE TYPE UNLESS OTHERWISE SPECIFIED.
- MANHOLE TOP ADJUSTMENTS SHALL BE ACCOMPLISHED BY THE USE OF CONCRETE ADJUSTMENT RINGS.
- TOP OF MANHOLE CASTING SHALL BE SET FLUSH AND ON SAME SLOPE AS FINISHED SURFACE OR AS DIRECTED BY THE ENGINEER.
- REINFORCEMENT IN ALL SECTIONS SHALL EQUAL OR EXCEED A.S.T.M. C-478 SPECIFICATIONS.
- THE ENGINEER SHALL DESIGNATE MODIFICATIONS FOR MANHOLES WITH SPECIAL DESIGNS.
- THE INSIDE DIAMETER OF THE MANHOLE SHALL BE 4'-0" FOR PIPE DIAMETERS FROM 12" THRU 24", 5'-0" FOR PIPE DIAMETERS FROM 27" THRU 36", AND 6'-0" FOR PIPE DIAMETERS 42" THRU 48".
- CLEARANCE TOLERANCE OF PIPE OPENINGS: THE MAXIMUM ALLOWABLE PIPE OPENING ON A HORIZONTAL AXIS SHALL BE THE OUTSIDE DIAMETER OF THE PIPE PLUS 12". THE MAXIMUM ALLOWABLE PIPE OPENING ON VERTICAL AXIS SHALL BE THE OUTSIDE DIAMETER PLUS 8". THE MAXIMUM CLEARANCE BETWEEN THE OUTSIDE SURFACE OF AN INSTALLED PIPE AND THE CONCRETE OF THE MANHOLE SHALL BE 2".
- INSTALLATION OF PIPE OPENINGS: ALL REQUIRED PIPE OPENINGS SHALL BE PLANT CAST IN MANHOLE UNITS. FIELD ALTERATIONS OF OPENINGS WILL BE PERMITTED PROVIDED WALLS ARE SCORED WITH A MASONRY SAW TO A DEPTH SUFFICIENT TO SEVER REINFORCING STEEL. A CHIPPING HAMMER MAY THEN BE USED TO REMOVE THE CONCRETE. MINIMUM DISTANCE BETWEEN ANY TWO ADJACENT PIPES SHALL BE 2".
- NO DIRECT PAYMENT FOR SHAPING FLOOR OR CONNECTING PIPES AS SHOWN ON PLANS.
- RING AND COVER TO BE NEENAH R-1736, CLAY & BAILEY #2008, DEETER # 1316, OR APPROVED EQUAL. (CASTING MAY VARY BY MUNICIPALITY, REFER TO PLANS & CONTRACT DOCUMENTS.)

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JULIE ELAINE SELLERS
 MISSOURI PROFESSIONAL ENGINEER
 NUMBER PE-2017000367
 10/11/22

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