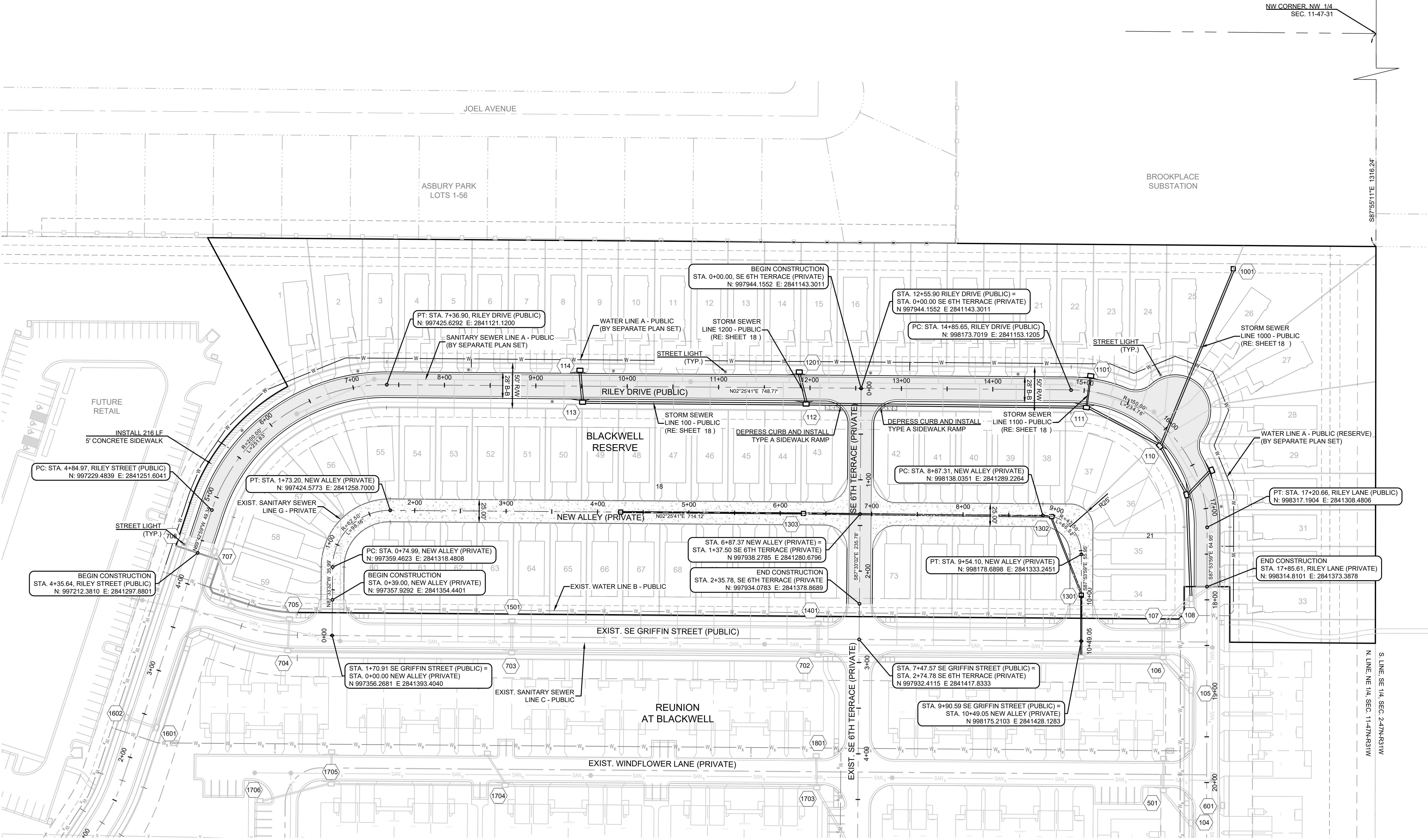


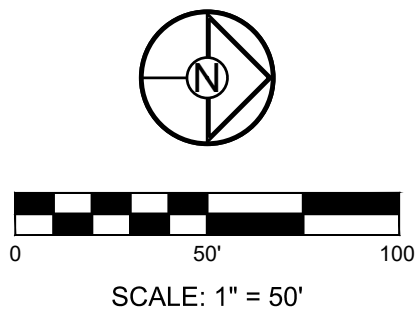


SIDEWALK NOTE:
SIDEWALKS AT BUILDINGS WILL BE INSTALLED BY OTHERS,
UNLESS NOTED OTHERWISE.

- NOTES:**
- ALL CONSTRUCTION ON THIS PROJECT SHALL CONFORM TO THE CITY OF LEE'S SUMMIT TECHNICAL SPECIFICATIONS.
 - THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL EXISTING UTILITY LOCATIONS PRIOR TO EXCAVATION.

MO GRS BENCHMARK:
STATION NAME - JA-90
KC METRO ALUMINUM GRS DISK SET IN CONCRETE STAMPED "JA-90, 1988"
LOCATED NEAR THE INTERSECTION OF LANGSFORD ROAD AND OLD
LANGSFORD ROAD, 43 FEET SOUTHEAST OF THE CENTER OF LANGSFORD
ROAD AND 32 FEET NORTH OF THE CENTER OF OLD LANGSFORD ROAD.
N:1001052.8503, E:2845604.8272
ELEV. 997.045

PROJECT BENCHMARK:
"SQUARE" CUT IN TOP OF CONCRETE STORM MANHOLE
STORM MANHOLE IS LOCATED APPROX. 130 FEET EAST OF THE
INTERSECTION OF SE JOEL AVE & BLUE PARKWAY AND 26 FEET SOUTH
OF THE CENTERLINE OF BLUE PARKWAY.
N:996874.9690, E:2840937.1365
ELEV. 1005.719



PREPARED BY:

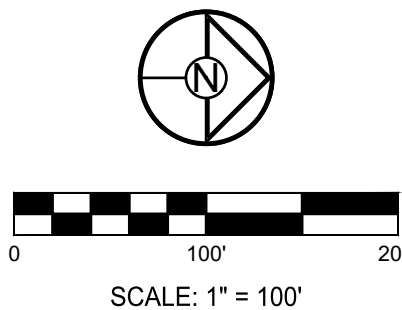
SCHLAGEL & ASSOCIATES, P.A.

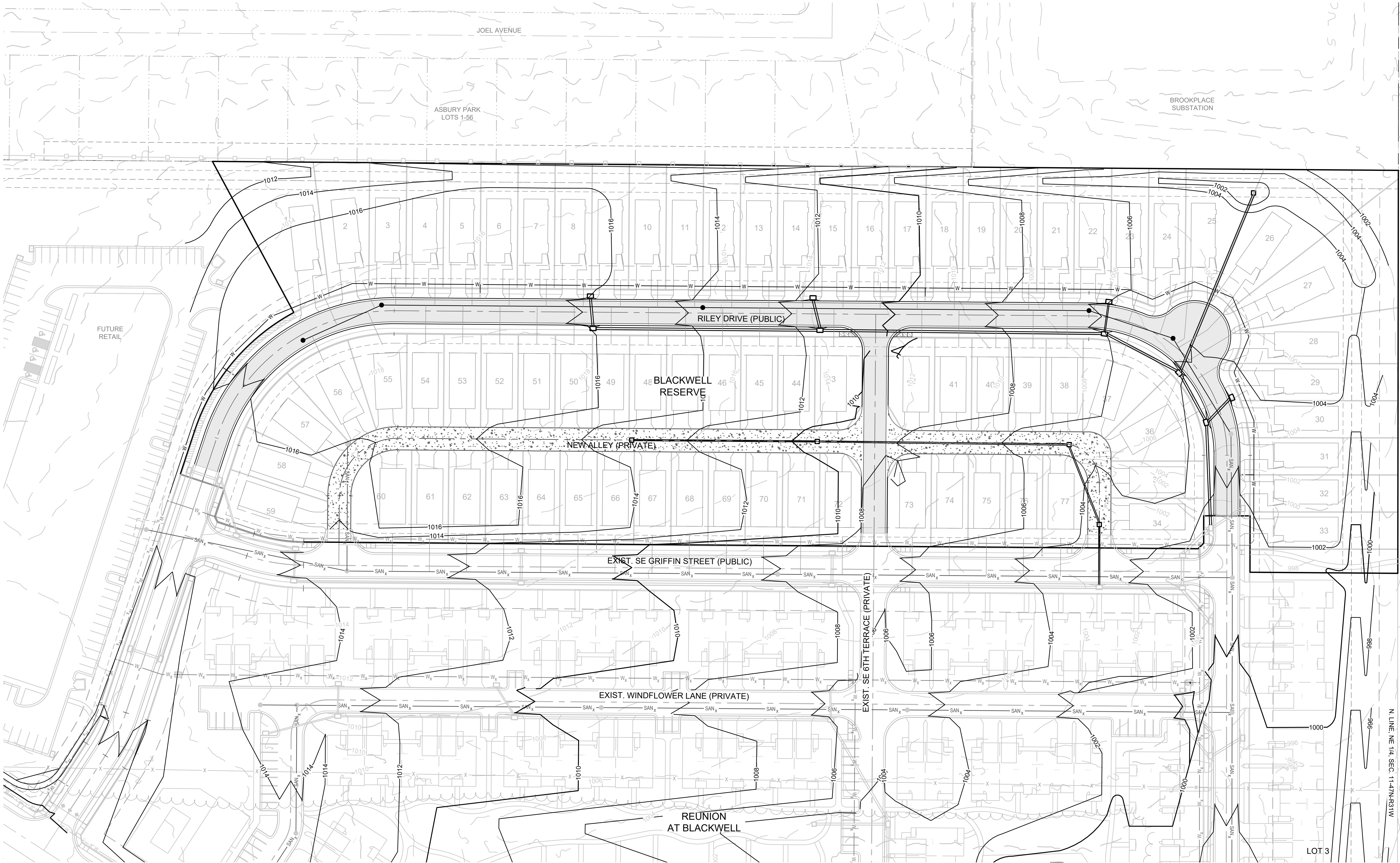
**BLACKWELL RESERVE
STREET AND STORM SEWER PLANS**
SE SHENANDOAH DRIVE LEE'S SUMMIT, MO

REVISION DATE	DESCRIPTION
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GENERAL LAYOUT

SHEET



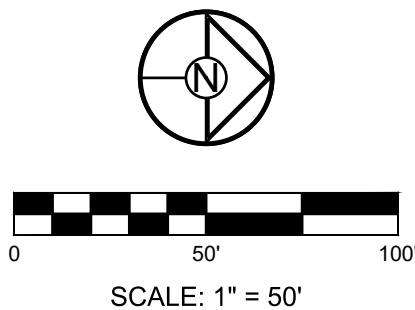


GRADING LEGEND:
--- 1000 --- EXISTING CONTOUR
—— 1000 —— PROPOSED CONTOUR (FINISHED GRADE)

- NOTES:**
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N:1001052.8503, E:2845604.8272
ELEV. 997.045

PROJECT BENCHMARK:
"SQUARE" CUT IN TOP OF CONCRETE STORM MANHOLE IS LOCATED APPROX. 130 FEET EAST OF THE INTERSECTION OF SE JOEL AVE & BLUE PARKWAY AND 26 FEET SOUTH OF THE CENTERLINE OF BLUE PARKWAY.
N:996874.9690, E:2840937.1365
ELEV. 1005.719



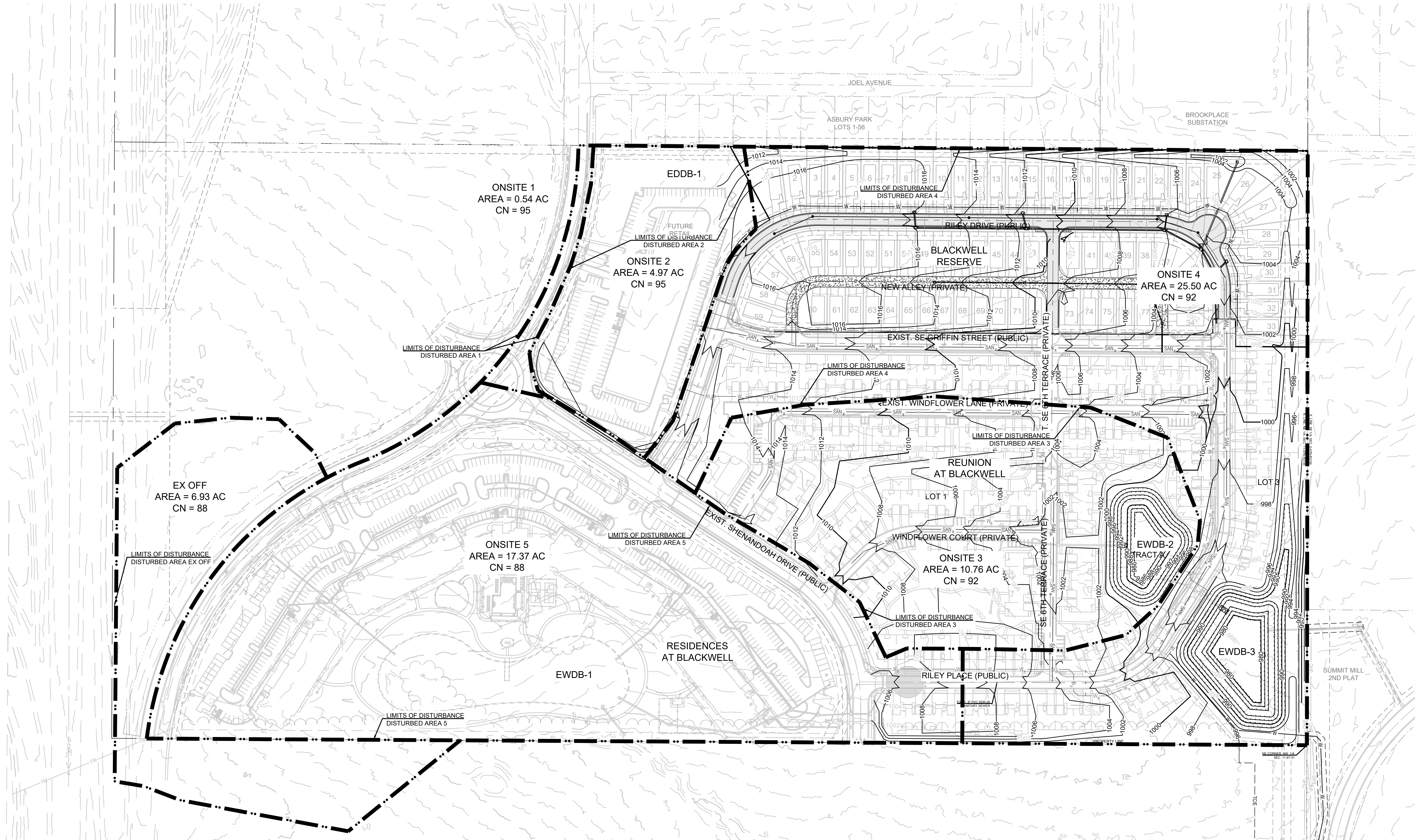
**BLACKWELL RESERVE
STREET AND STORM SEWER PLANS**

SE SHENANDOAH DRIVE LEE'S SUMMIT, MO

REVISION DATE	DESCRIPTION
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DRAWN BY:	TRC
CHECKED BY:	MAB
DATE PREPARED:	03/03/2023
PROJ. NUMBER:	22-263
GRADING PLAN	
SHEET	
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I:\PROJECTS\2022\22-0633\0 Design\3.0 DWG Plans\6.0 SS\22-063 SS - GRD.dwg, 5 OVERALL DRAINAGE MAP, 11



GRADING LEGEND:

- 1000 --- EXISTING CONTOUR
—— 1000 —— PROPOSED CONTOUR
(FINISHED GRADE)

NOTES:

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- THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL EXISTING UTILITY LOCATIONS PRIOR TO EXCAVATION.

MO GRS BENCHMARK:

STATION NAME - JA-90

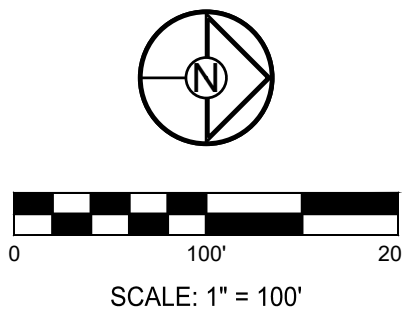
KC METRO ALUMINUM GRS DISK SET IN CONCRETE STAMPED "JA-90, 1988"
LOCATED NEAR THE INTERSECTION OF LANGSFORD ROAD AND OLD
LANGSFORD ROAD, 43 FEET SOUTHEAST OF THE CENTER OF LANGSFORD
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N:1001052.8503, E:2845604.8272

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N:996874.9690, E:2840937.1365

ELEV. 1005.719



**BLACKWELL RESERVE
STREET AND STORM SEWER PLANS**

SE SHENANDOAH DRIVE LEE'S SUMMIT, MO

REVISION DATE	DESCRIPTION
11/11/2022	1. INITIAL DESIGN
12/15/2022	2. REVISED DESIGN
01/10/2023	3. REVISED DESIGN
02/03/2023	4. REVISED DESIGN
03/03/2023	5. REVISED DESIGN
04/03/2023	6. REVISED DESIGN
05/03/2023	7. REVISED DESIGN
06/03/2023	8. REVISED DESIGN
07/03/2023	9. REVISED DESIGN
08/03/2023	10. REVISED DESIGN
09/03/2023	11. REVISED DESIGN
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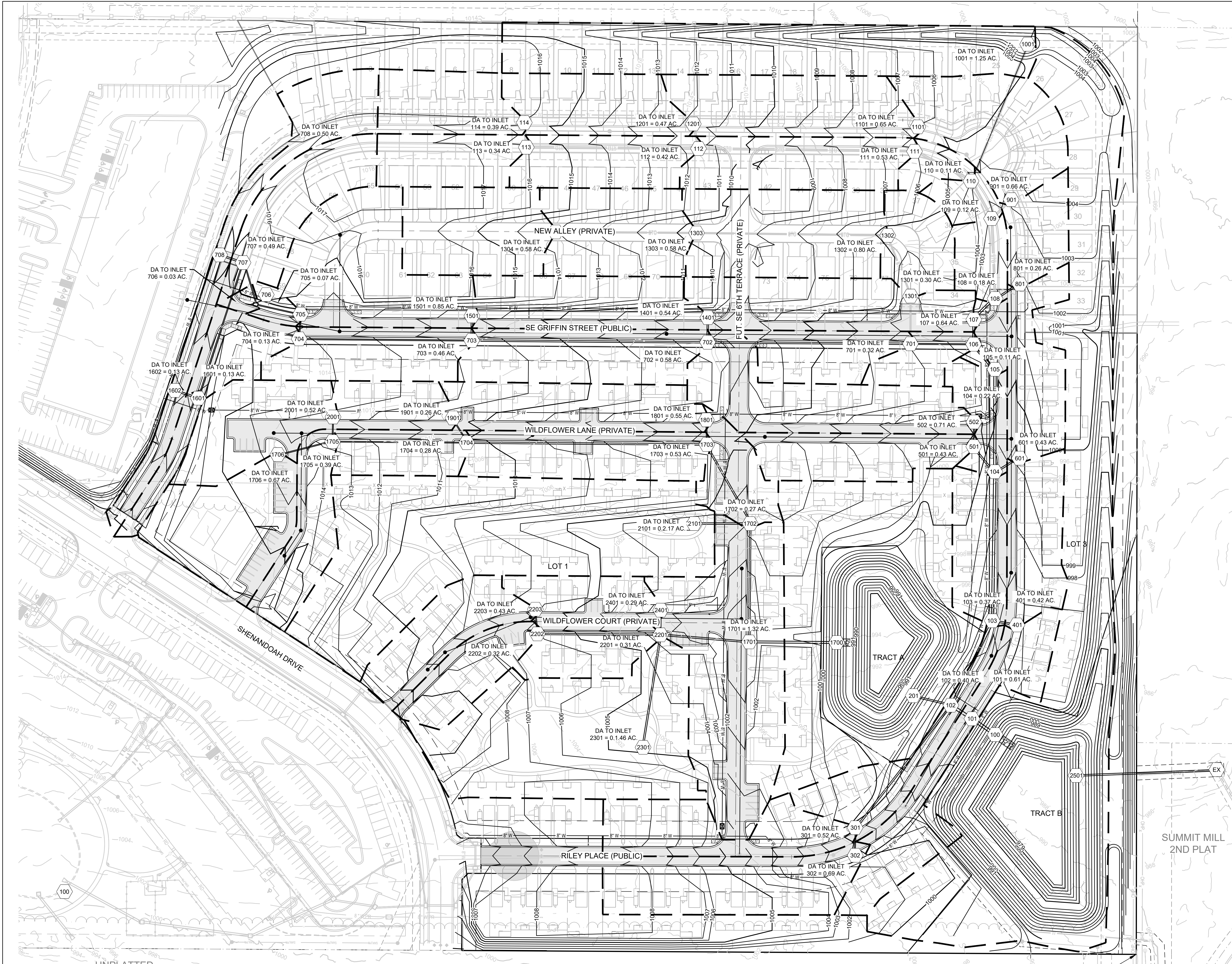
**OVERALL
DRAINAGE MAP**

SHEET

5

PREPARED BY:

SCHLAGEL & ASSOCIATES, P.A.



PREPARED BY:

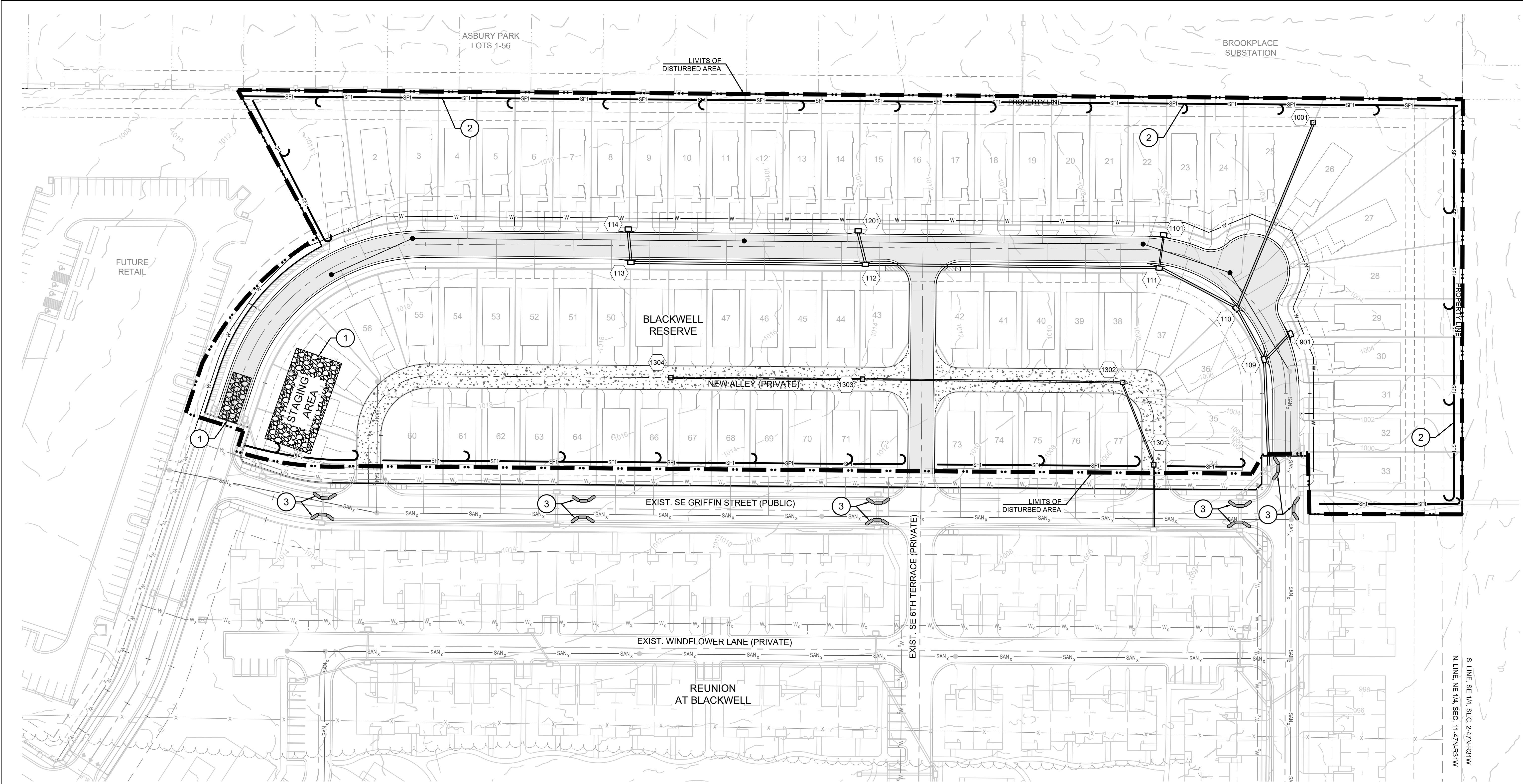
SCHLAGEL & ASSOCIATES, P.A.

BLACKWELL RESERVE
STREET AND STORM SEWER PLANS
SE SHENANDOAH DRIVE LEE'S SUMMIT, MO

REVISION DATE	DESCRIPTION
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DRAWN BY: ###	CHECKED BY: ###	DATE PREPARED: 03/03/2023	PROJ. NUMBER: 22-593
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DRAINAGE MAP



EROSION AND SEDIMENT CONTROL STAGING CHART					
PROJECT STAGE		BMP PLAN REF. NO	BMP DESCRIPTION	REMOVE AFTER STAGE	NOTES:
PRE-CLEARING PHASE	A - PRIOR TO LAND DISTURBANCE	1	CONSTRUCTION ENTRANCE & STAGING AREA	D	MAINTAIN, REPAIR, OR REPLACE AS NECESSARY
		2	SILT FENCE (PRIOR TO CONSTRUCTION)	E	PLACE WHERE INDICATED, REPAIR OR REPLACE AS NECESSARY AND REMOVE ONLY WHEN GRADED AREAS HAVE SUFFICIENT GROUND COVER ESTABLISHED
		3	EXISTING INLET PROTECTION (GRAVEL CURB INLET SEDIMENT TRAP)	E	PLACE WHERE INDICATED, REPAIR OR REPLACE AS NECESSARY AND REMOVE ONLY WHEN GRADED AREAS HAVE SUFFICIENT GROUND COVER ESTABLISHED
CONSTRUCTION PHASE	B - MASS GRADING	4	SILT FENCE (DURING CONSTRUCTION)	E	PLACE WHERE INDICATED, REPAIR OR REPLACE AS NECESSARY AND REMOVE ONLY WHEN GRADED AREAS HAVE SUFFICIENT GROUND COVER ESTABLISHED
		5	SEDIMENT BASIN	E	RE: RESIDENCES AT BLACKWELL LAND DISTURBANCE PLANS, MAINTAIN, REPAIR OR REPLACE AS REQUIRED.
		6	ROCK DITCH CHECK	E	PLACE WHERE INDICATED, REPAIR OR REPLACE AS NECESSARY AND REMOVE ONLY WHEN GRADED AREAS HAVE SUFFICIENT GROUND COVER ESTABLISHED
FINAL STABILIZATION PHASE	C - UTILITY CONSTRUCTION	7	CONCRETE WASHOUT AREA	E	MAINTAIN, REPAIR, OR REPLACE AS NECESSARY
	D - AFTER PAVING OPERATIONS	8	INLET PROTECTION (SILT FENCE)	D/E	PLACE SILT FENCE AROUND ALL STORM SEWER STRUCTURES / YARD AREA STORM STRUCTURES TO HAVE SILT FENCE REMOVED ONLY WHEN GRADED AREAS HAVE SUFFICIENT GROUND COVER ESTABLISHED
		9	INLET PROTECTION (GRAVEL FILTER BAGS)	E	BOARDS SHALL BE PLACED IN FRONT OF INLET OPENING FROM THE TIME SILT FENCE IS REMOVED UNTIL SUCH TIME THAT THE CURB / THROAT IS POURED. PLACE GRAVEL FILTER BAGS AT THE OPENING OF ALL CURB INLETS IMMEDIATELY AFTER THE INLET THROATS ARE POURED
	E - UNTIL CLOSURE OF LAND DISTURBANCE PERMIT	10	SEEDING AND MULCHING	E	ALL DISTURBED AREAS AFTER 14 DAYS OF CONSTRUCTION INACTIVITY ADDITIONAL SEDIMENT AND EROSION CONTROL MEASURES MAY BE REQUIRED ANY TIME CURRENT MEASURES ARE FOUND TO BE INEFFECTIVE.

LEGEND

TEMP. CONSTRUCTION ENTRANCE AND STAGING AREA

CONCRETE WASHOUT AREA

ROCK DITCH CHECK

BMP PLAN REF. NO.

SILT FENCE FOR INLET PROTECTION PRIOR TO STRUCTURE TOP

SUPER SEDIMENT SILT FENCE (PRIOR TO LAND DISTURBANCE)

SILT FENCE (PRIOR TO LAND DISTURBANCE)

SILT FENCE (DURING CONSTRUCTION)

LIMITS OF DISTURBANCE

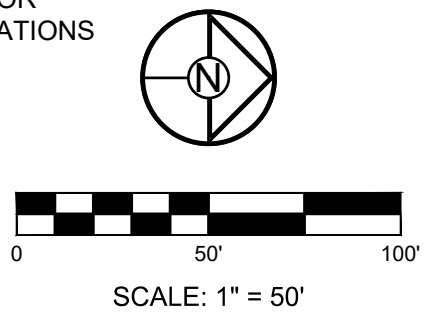
EXISTING CONTOURS

PROPOSED CONTOURS

GRAVEL FILTER FOR STORM SEWER STRUCTURES ONLY

- DISTURBED AREA = 11.49 A.C.**
- SITE SPECIFIC NOTES:**
 - THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL EXISTING UTILITY LOCATIONS PRIOR TO EXCAVATION.
 - THERE ARE NO WETLANDS, NATURAL OR ARTIFICIAL WATER STORAGE DETENTION AREAS IN THE PROJECT AREA.
 - NO PART OF THE PROJECT LIES WITHIN THE 100 YEAR FLOOD PLAIN PER FEMA FLOOD INSURANCE RATE MAP NUMBERS 29095C0441G, 29095C0445G, 29095C0437G AND 29095C0439G DATED JANUARY 20TH, 2017.
 - ALL EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE IMPLEMENTED ACCORDING TO THE BMP STAGING CHART.
 - ADDITIONAL EROSION CONTROL MAY BE REQUIRED BY THE CITY ENGINEER AT ANY TIME EXISTING MEASURES ARE FOUND TO BE INEFFECTIVE OR PROBLEMATIC AREAS ARE NOTED IN THE FIELD.
 - STABILIZATION OF DISTURBED AREAS MUST, AT A MINIMUM, BE INITIATED IMMEDIATELY WHENEVER ANY CLEARING, GRADING, EXCAVATING, OR OTHER SOIL DISTURBING ACTIVITIES HAVE PERMANENTLY CEASED ON ANY PORTION OF THE SITE, OR TEMPORARILY CEASED ON ANY PORTION OF THE SITE AND WILL NOT RESUME FOR A PERIOD EXCEEDING 14 CALENDAR DAYS. THE DISTURBED AREAS SHALL BE PROTECTED FROM EROSION BY STABILIZING THE AREA WITH MULCH OR OTHER SIMILARLY EFFECTIVE SOIL STABILIZING BMPs. INITIAL STABILIZATION ACTIVITIES MUST BE COMPLETED WITHIN 14 DAYS AFTER SOIL DISTURBING ACTIVITIES CEASE.
 - ALL PERIMETER SILT FENCE, EARTH DIKES, SEDIMENT BASINS, AND ROCK CONSTRUCTION ENTRANCES WILL BE INSTALLED BEFORE GRADING OPERATIONS BEGIN.
 - SILT FENCE AND EARTH DIKES THAT ARE PLACED BEFORE GRADING BEGINS WILL BE MAINTAINED BY THE GRADING CONTRACTOR.
 - AREAS WITHIN PUBLIC RIGHT-OF-WAY SHALL BE SODDED IMMEDIATELY AFTER CONSTRUCTION IS COMPLETE.

- NOTES:
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 - THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL EXISTING UTILITY LOCATIONS PRIOR TO EXCAVATION.

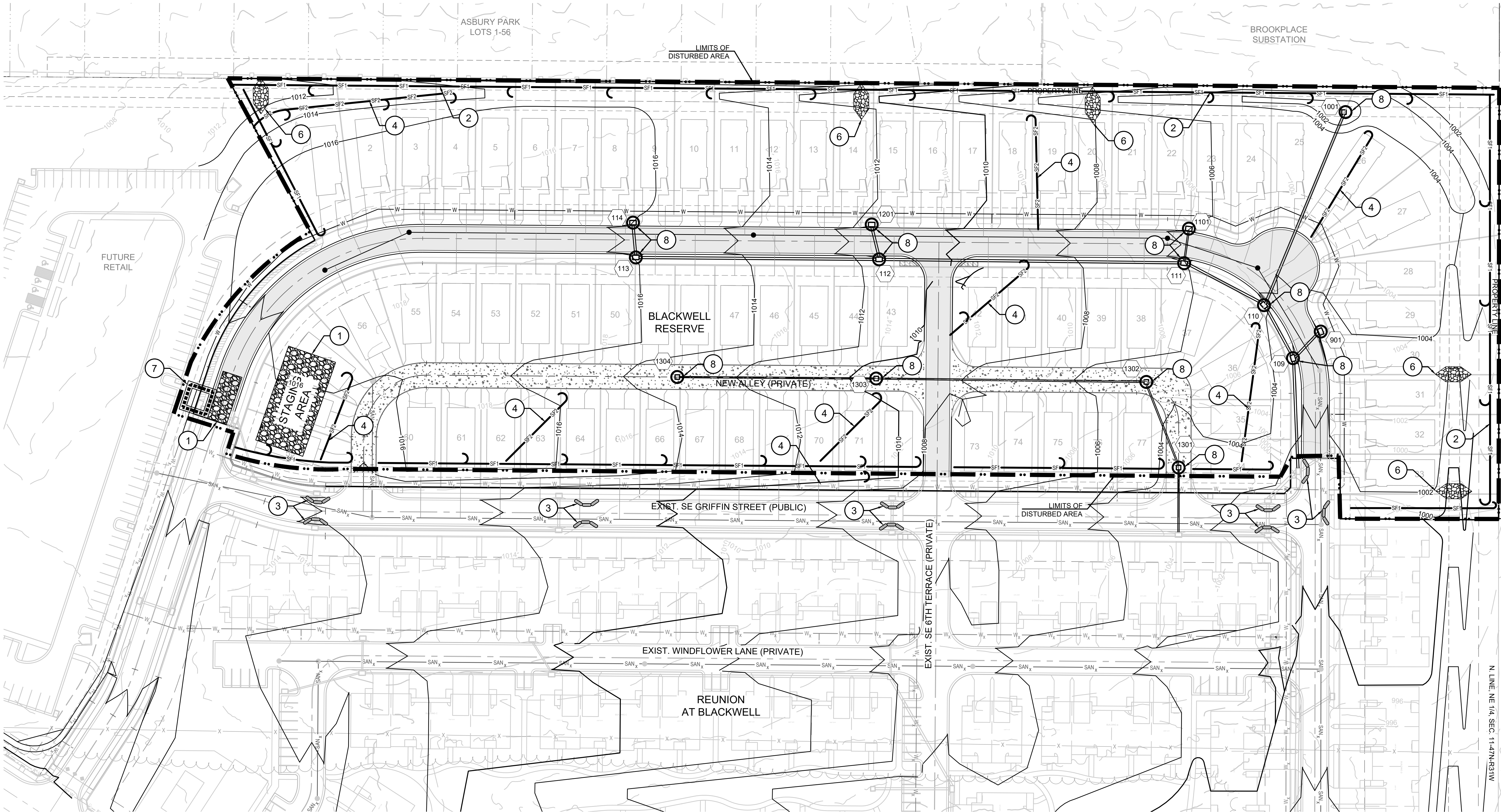


PREPARED BY:

SCHLAGEL & ASSOCIATES, P.A.

BLACKWELL RESERVE
STREET AND STORM SEWER PLANS
SE SHENANDOAH DRIVE LEE'S SUMMIT, MO

PRE-CONSTRUCTION EROSION CONTROL PLAN		SHEET 7
DRAWN BY:	TRC	
CHECKED BY:	MAB	
DATE PREPARED:	09/03/2023	
PROJ. NUMBER:	22-008	
REVISION DATE:		
DESCRIPTION:		



EROSION NOTE:

SEE SHEET 7 FOR EROSION CONTROL STAGING CHART, LEGEND AND SITE SPECIFIC NOTES.

MO GRS BENCHMARK:

STATION NAME - JA-90

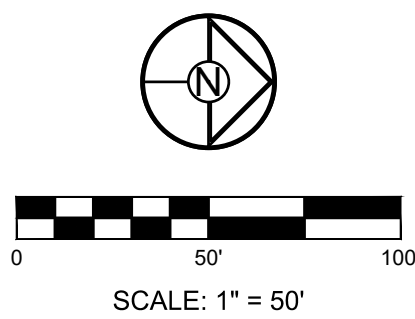
KC METRO ALUMINUM GRS DISK SET IN CONCRETE STAMPED "JA-90, 1988" LOCATED NEAR THE INTERSECTION OF LANGSFORD ROAD AND OLD LANGSFORD ROAD, 43 FEET SOUTHEAST OF THE CENTER OF LANGSFORD ROAD AND 32 FEET NORTH OF THE CENTER OF OLD LANGSFORD ROAD. N:1001052.8503, E:2845604.8272

ELEV. 997.045

PROJECT BENCHMARK:

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ELEV. 1005.719



BLACKWELL RESERVE
STREET AND STORM SEWER PLANS

SE SHENANDOAH DRIVE LEE'S SUMMIT, MO

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EROSION
CONTROL PLAN

SHEET

8

PREPARED BY:

SCHLAGEL & ASSOCIATES, P.A.

SCHLAGEL

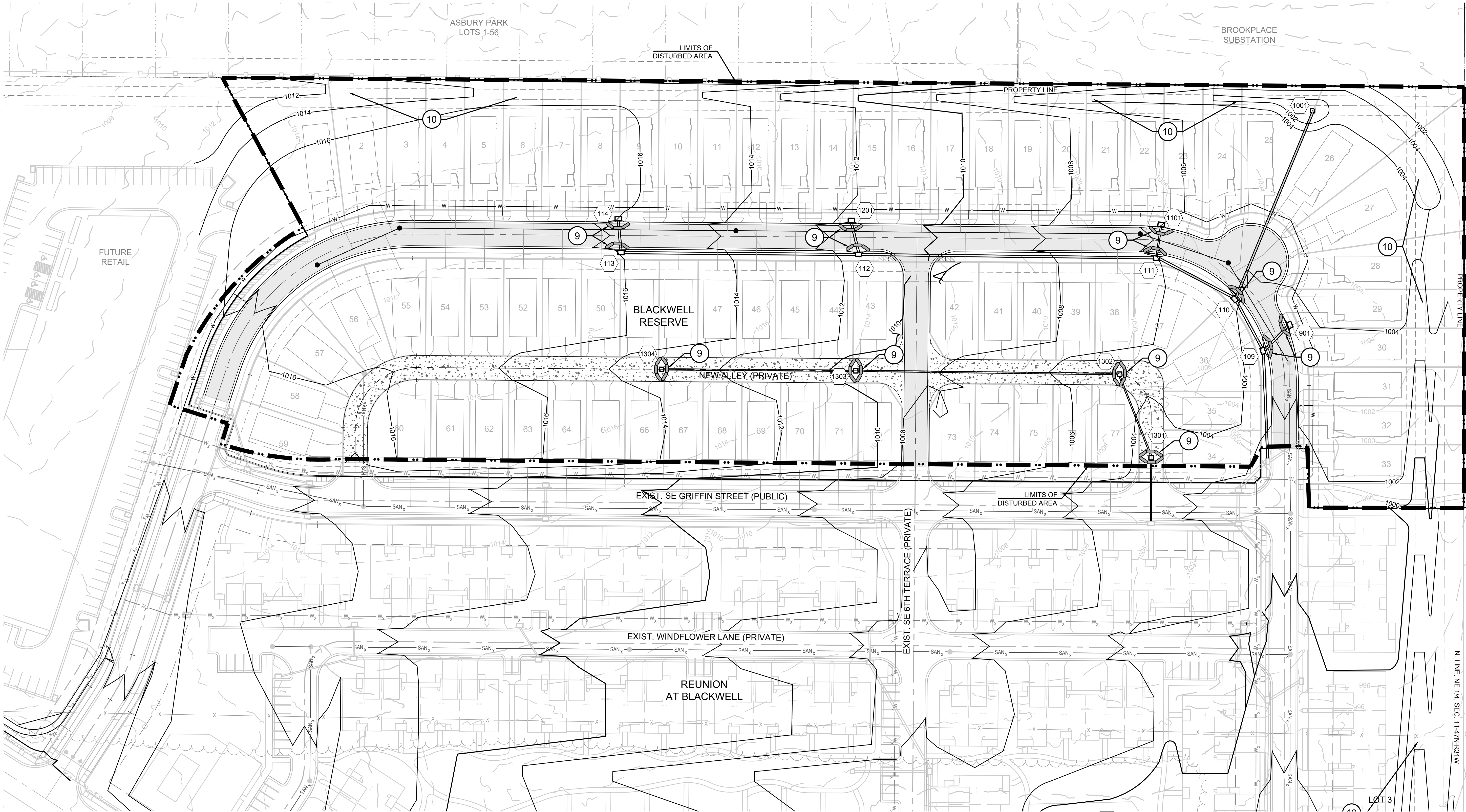
ENGINEERS

PLANNERS

SURVEYORS

LANDSCAPE ARCHITECTS

14920 West 107th Street • Lenexa, Kansas 66215
(913) 492-5158 • Fax: (913) 492-8400
WWW.SCHLAGELASSOCIATES.COM
Missouri State Certificate of Authority
#E2002003600-F #LAC2001005237 #LS2002008659-F



EROSION NOTE:

SEE SHEET 7 FOR EROSION CONTROL STAGING CHART, LEGEND AND SITE SPECIFIC NOTES.

MO GRS BENCHMARK:

STATION NAME - JA-90

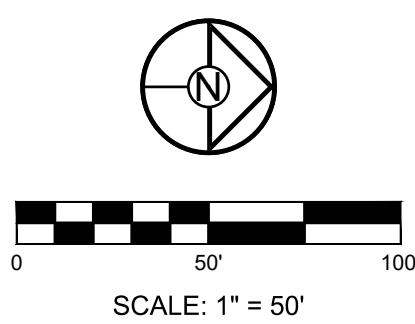
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ELEV. 997.045

PROJECT BENCHMARK:

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ELEV. 1005.719



BLACKWELL RESERVE
STREET AND STORM SEWER PLANS

SE SHENANDOAH DRIVE LEE'S SUMMIT, MO

POST-CONSTRUCTION
EROSION
CONTROL PLAN

SHEET

9

PREPARED BY:

SCHLAGEL & ASSOCIATES, P.A.

SCHLAGEL

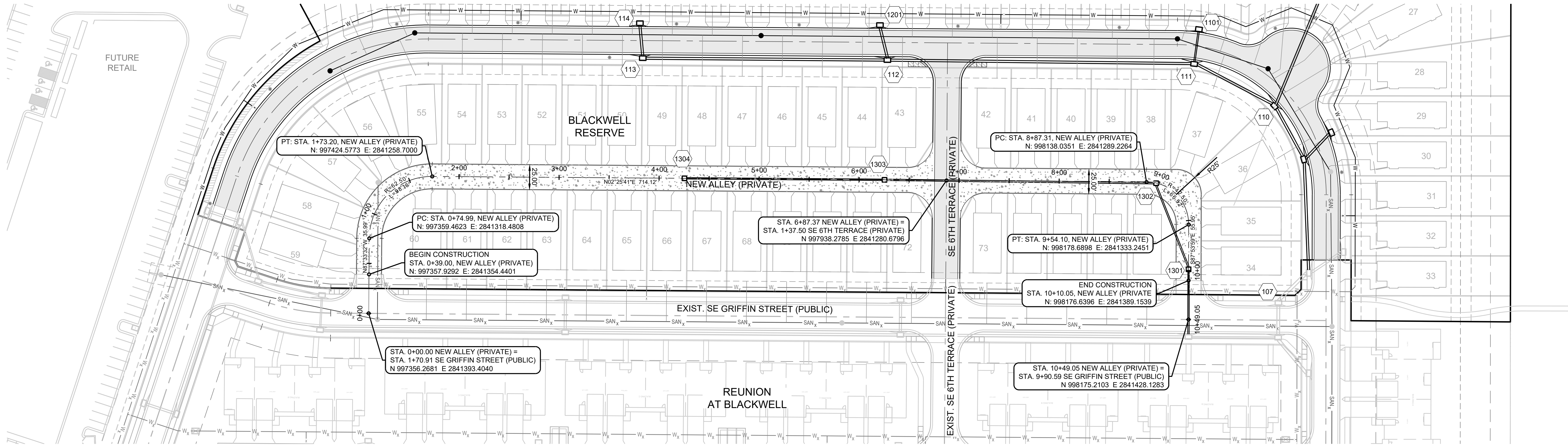
ENGINEERS

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STREET NOTES:

1. ALL STREET CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE CITY OF LEE'S SUMMIT DESIGN AND CONSTRUCTION MANUAL. ALL APPLICABLE AASHTO STANDARDS HAVE BEEN MET.
2. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL EXISTING UTILITY LOCATIONS PRIOR TO EXCAVATION.
3. ALL INSPECTION OF STREET CONSTRUCTION TO BE PERFORMED BY THE CITY OF LEE'S SUMMIT DEVELOPMENT ENGINEERING.
4. CURB RETURN RADII SHALL BE 25' AT BACK OF CURB UNLESS OTHERWISE NOTED.
5. SUBGRADE TO BE COMPACTED TO 95% STANDARD PROCTOR DENSITY.
6. ASSUMED DESIGN SPEED = 25 MPH (RESIDENTIAL LOCAL).
7. MINIMUM STOPPING SIGHT DISTANCE = 155 FEET.
8. MINIMUM K SAG CURVE = 26 (14 WITH LIGHTING), CREST CURVE = 12.
9. GRADE INTERSECTIONS TO DRAIN AS SHOWN.
10. SSD = STOPPING SIGHT DISTANCE.
11. ALL ADA SIDEWALK RAMPS SHALL BE CONSTRUCTED BY THE DEVELOPER WITH THE PUBLIC INFRASTRUCTURE.

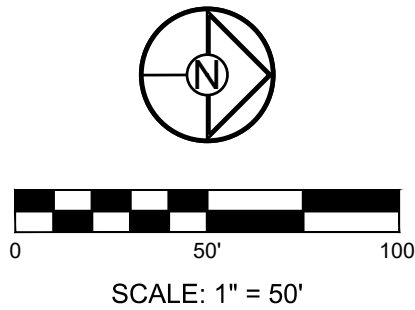
SIDEWALK NOTE:
SIDEWALKS AT BUILDINGS WILL BE INSTALLED BY OTHERS,
UNLESS NOTED OTHERWISE.

MO GRS BENCHMARK:

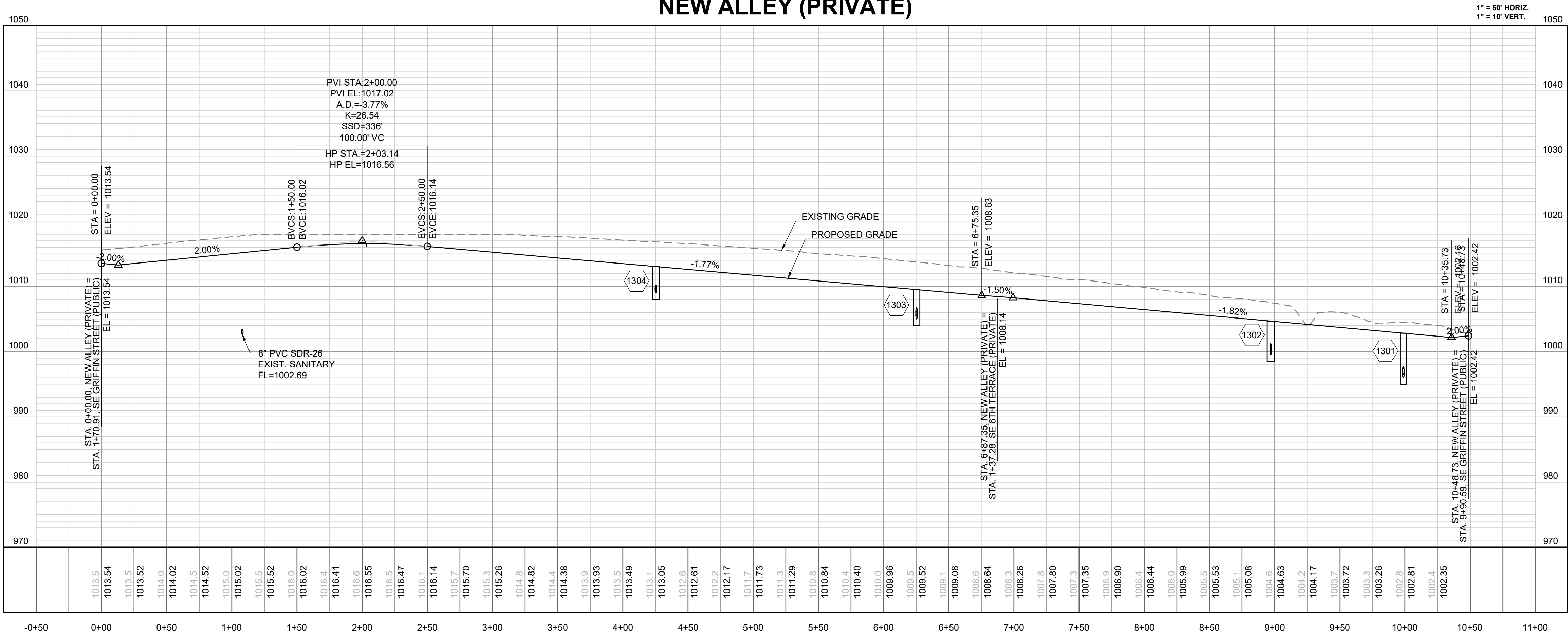
STATION NAME - JA-90
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N:996874.9690, E:2840937.1365
ELEV. 1005.719



NEW ALLEY (PRIVATE)

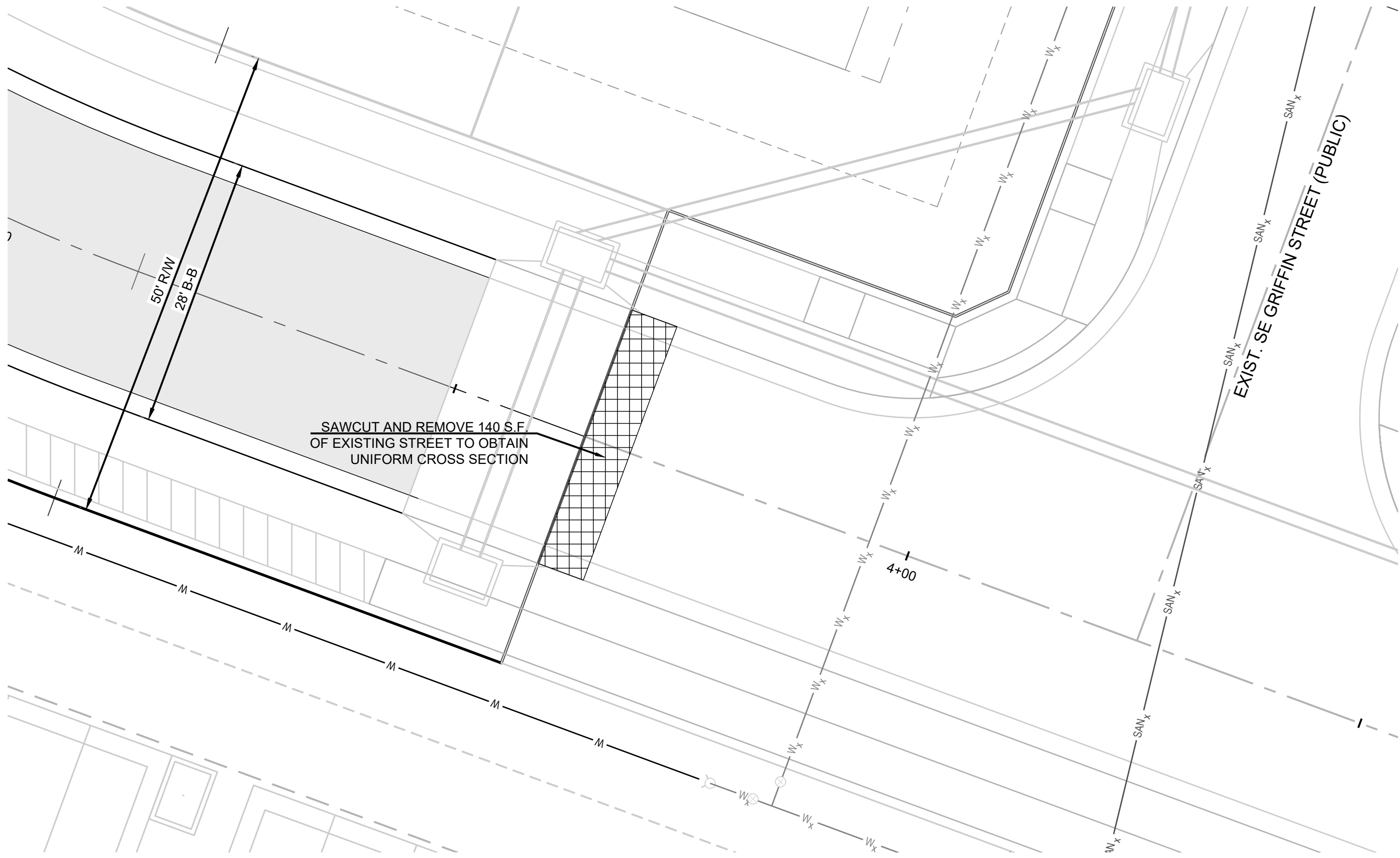


PREPARED BY:

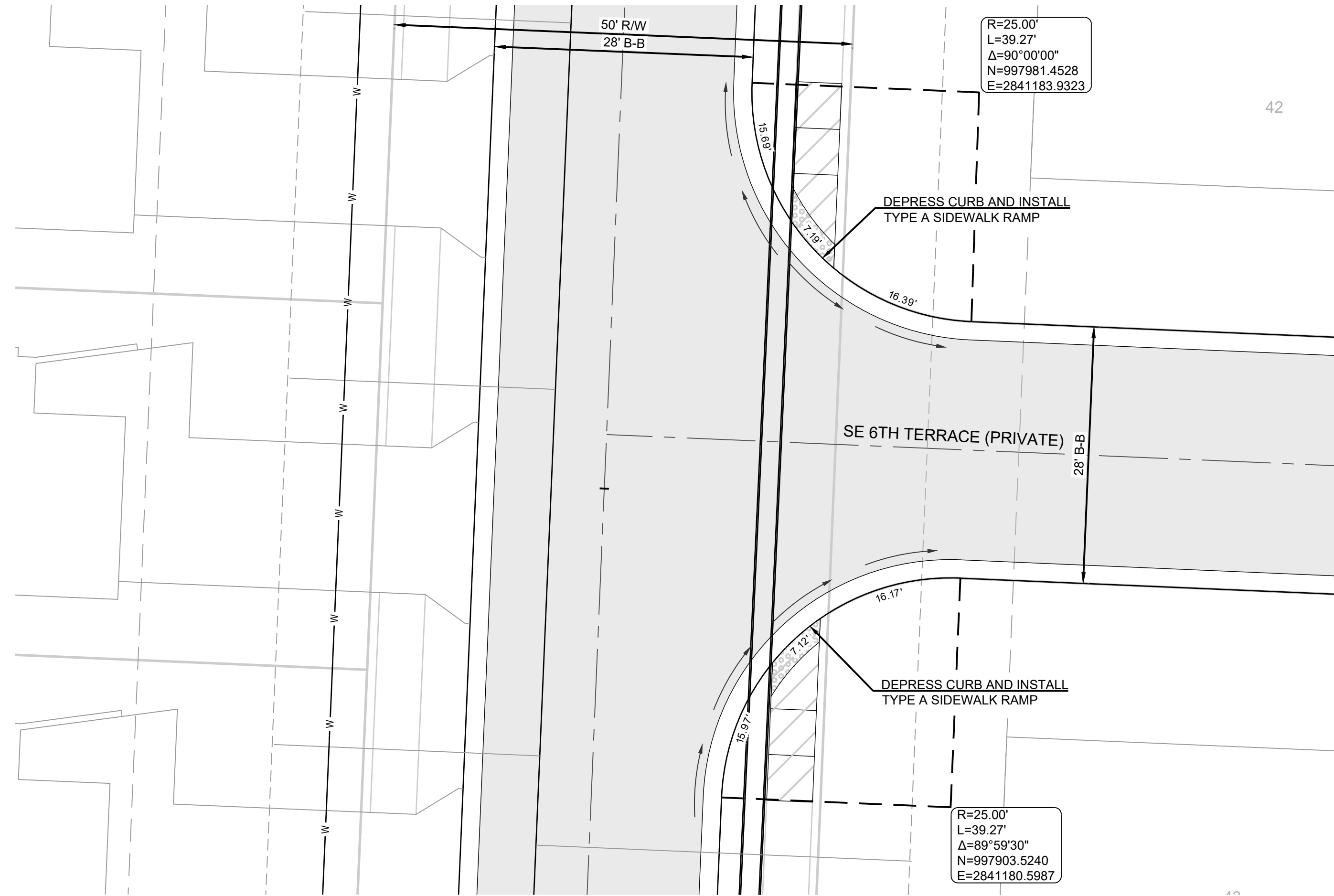
SCHLAGEL & ASSOCIATES, P.A.

BLACKWELL RESERVE
STREET AND STORM SEWER PLANS
SE SHENANDOAH DRIVE LEE'S SUMMIT, MO

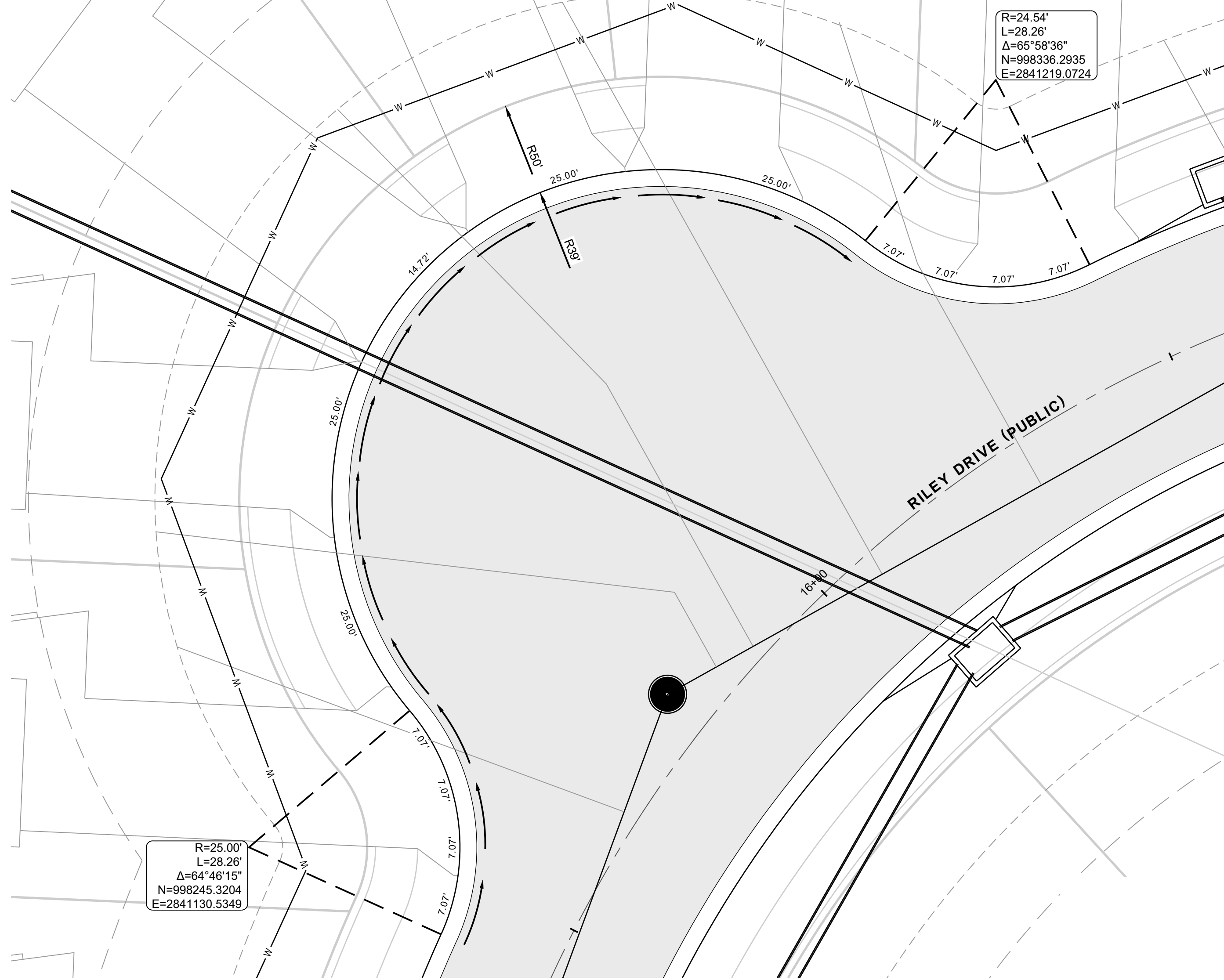
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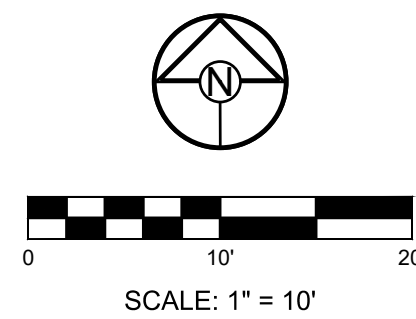
RILEY STREET (PUBLIC) & EXIST. RILEY STREET (PUBLIC)



RILEY STREET (PUBLIC) & SE 6TH TERRACE (PRIVATE)



RILEY DRIVE (PUBLIC)



PREPARED BY:

SCHLAGEL & ASSOCIATES, P.A.

BLACKWELL RESERVE
STREET AND STORM SEWER PLANS
SE SHENANDOAH DRIVE LEE'S SUMMIT, MO

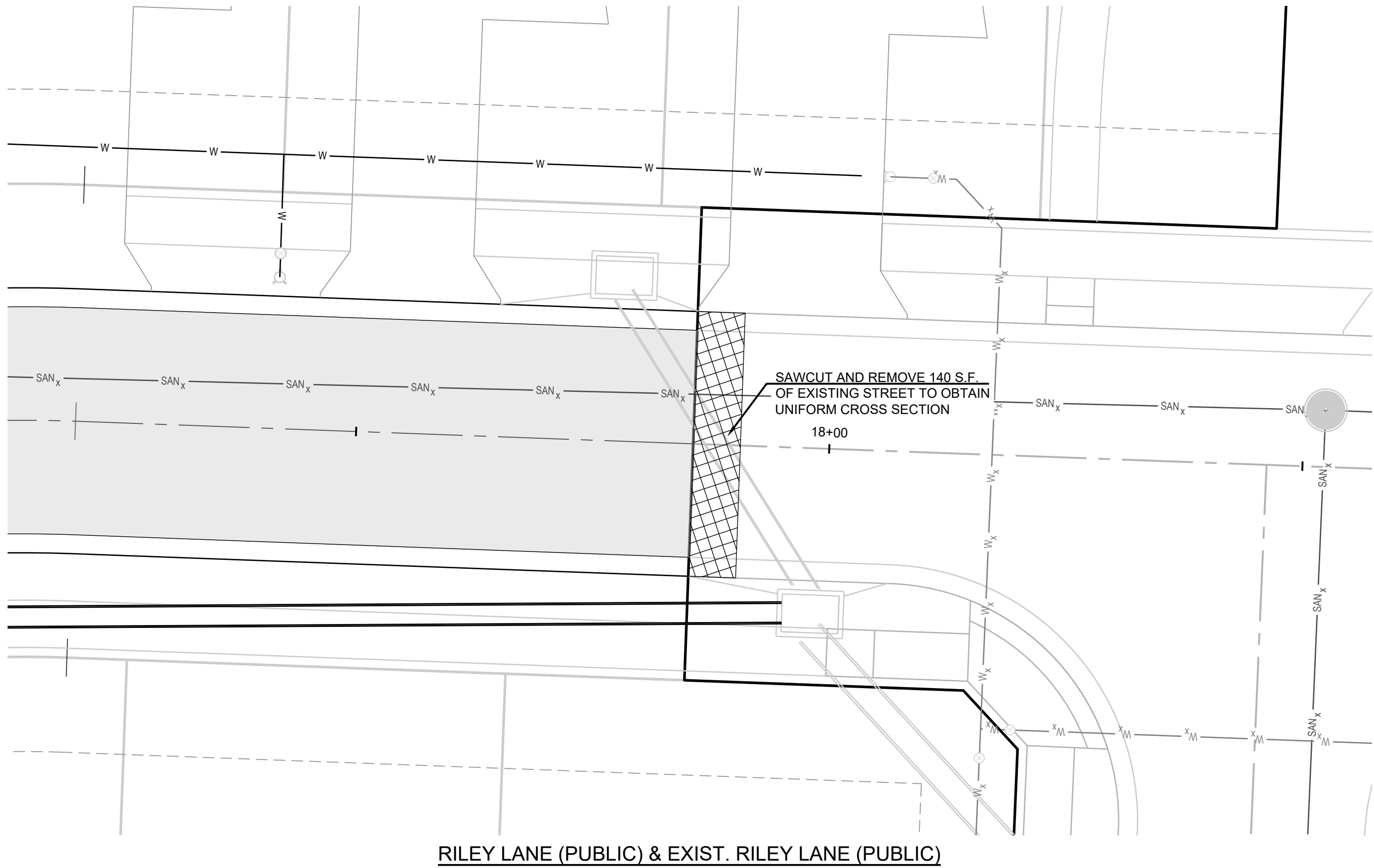
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DRAWN BY:	TRC
CHECKED BY:	MAB
DATE PREPARED:	03/03/2023
PROJ. NUMBER:	22-593

INTERSECTION
DETAILS

SHEET

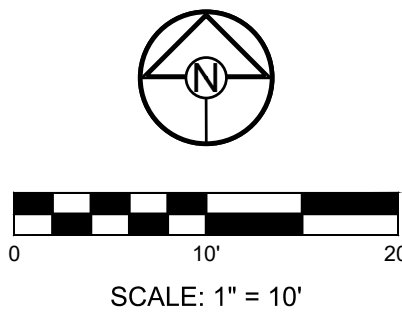
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RILEY LANE (PUBLIC) & EXIST. RILEY LANE (PUBLIC)



SE 6TH TERRACE (PRIVATE) & EXIST. SE 6TH TERRACE (PRIVATE)



INTERSECTION DETAILS		SHEET	
BLACKWELL RESERVE STREET AND STORM SEWER PLANS		14	
SE SHENANDOAH DRIVE LEE'S SUMMIT, MO			
DRAWN BY:	TRC	REVISION DATE	DESCRIPTION
CHECKED BY:	MAB	1	
DATE PREPARED:	03/03/2023	2	
PROJ. NUMBER:	22-593	3	
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PREPARED BY:

SCHLAGEL & ASSOCIATES, P.A.

ENGINEERS

PLANNERS

SURVEYORS

LANDSCAPE ARCHITECTS

SCHLAGEL

14920 West 107th Street • Lenexa, Kansas 66215

(913) 492-5158 • Fax: (913) 492-8400

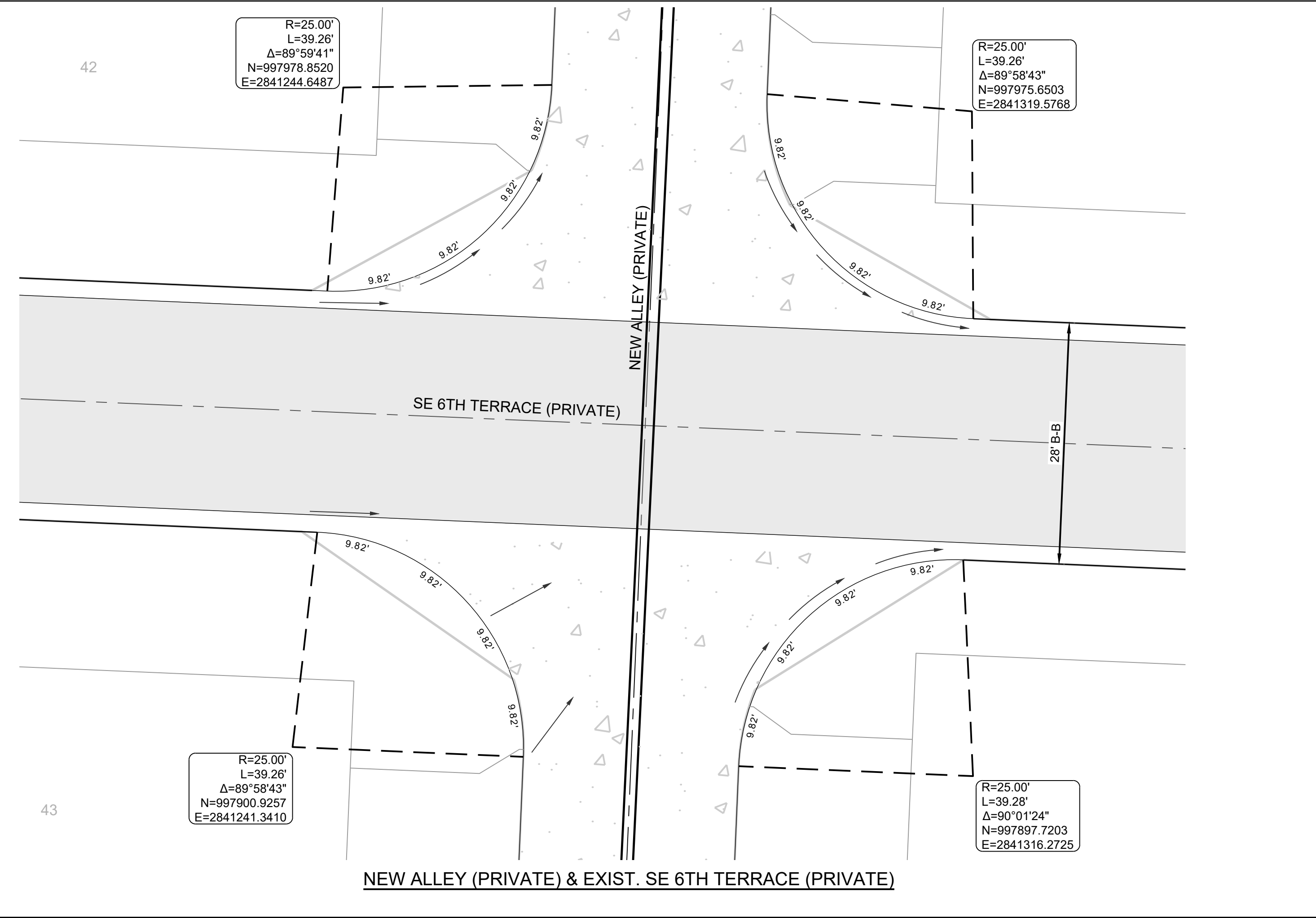
WWW.SCHLAGELASSOCIATES.COM

Missouri State Certificates of Authority

#E2002003690-F #LAC2001005237 #LS2002008659-F



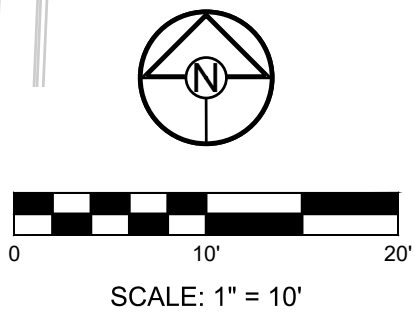
NEW ALLEY (PRIVATE) & EXIST. SE GRIFFIN STREET (PUBLIC)



NEW ALLEY (PRIVATE) & EXIST. SE 6TH TERRACE (PRIVATE)



NEW ALLEY (PRIVATE) & EXIST. SE GRIFFIN STREET (PUBLIC)



SCHLAGEL

ENGINEERS

PLANNERS SURVEYORS LANDSCAPE ARCHITECTS

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Missouri State Certificates of Authority
#E2002003609-F #LAC2001005237 #LS200200859-F

PREPARED BY:

SCHLAGEL & ASSOCIATES, P.A.

BLACKWELL RESERVE

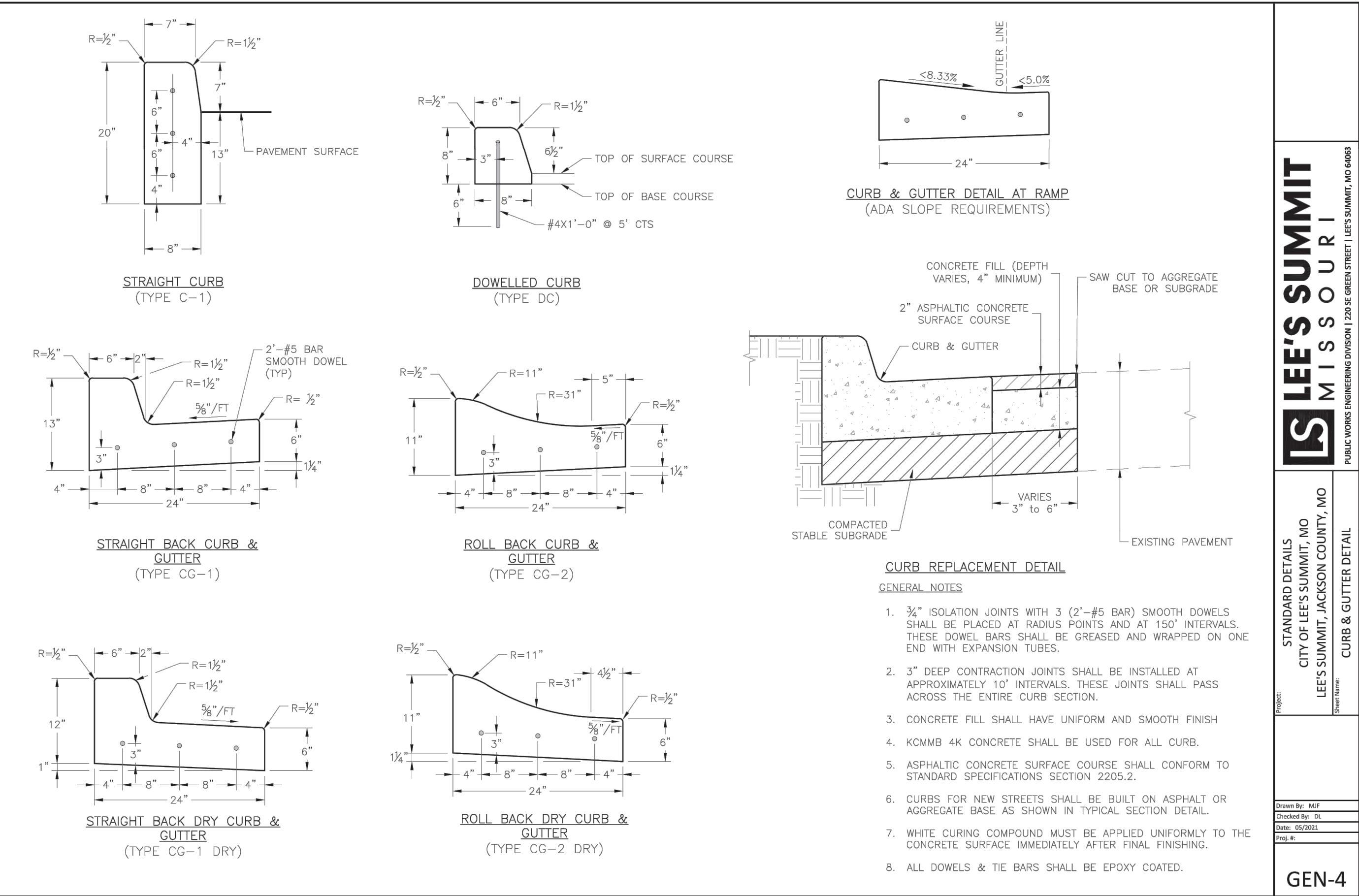
STREET AND STORM SEWER PLANS

SE SHENANDOAH DRIVE LEE'S SUMMIT, MO

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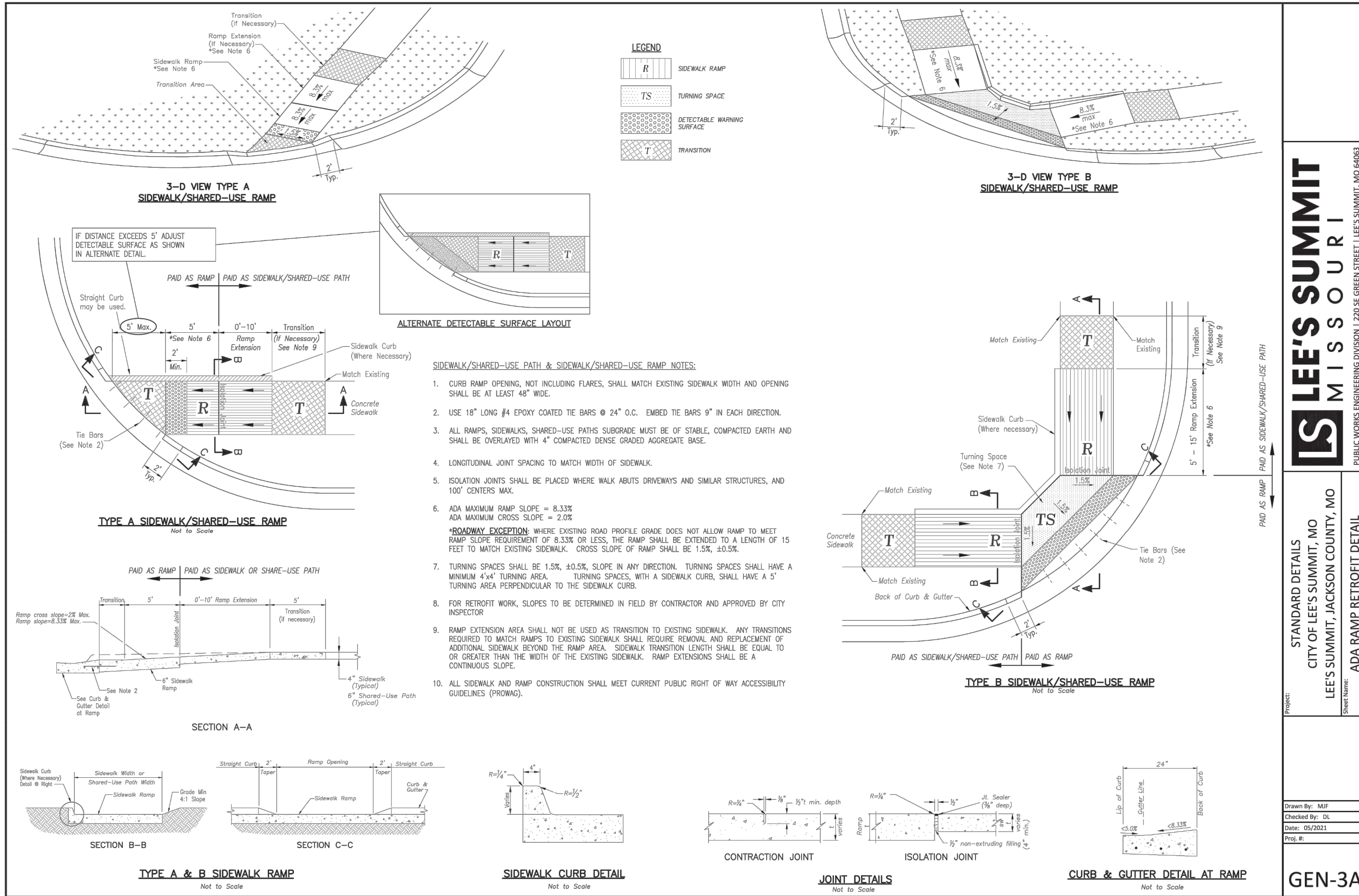
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PROJ. NUMBER:	22-593

INTERSECTION
DETAILS



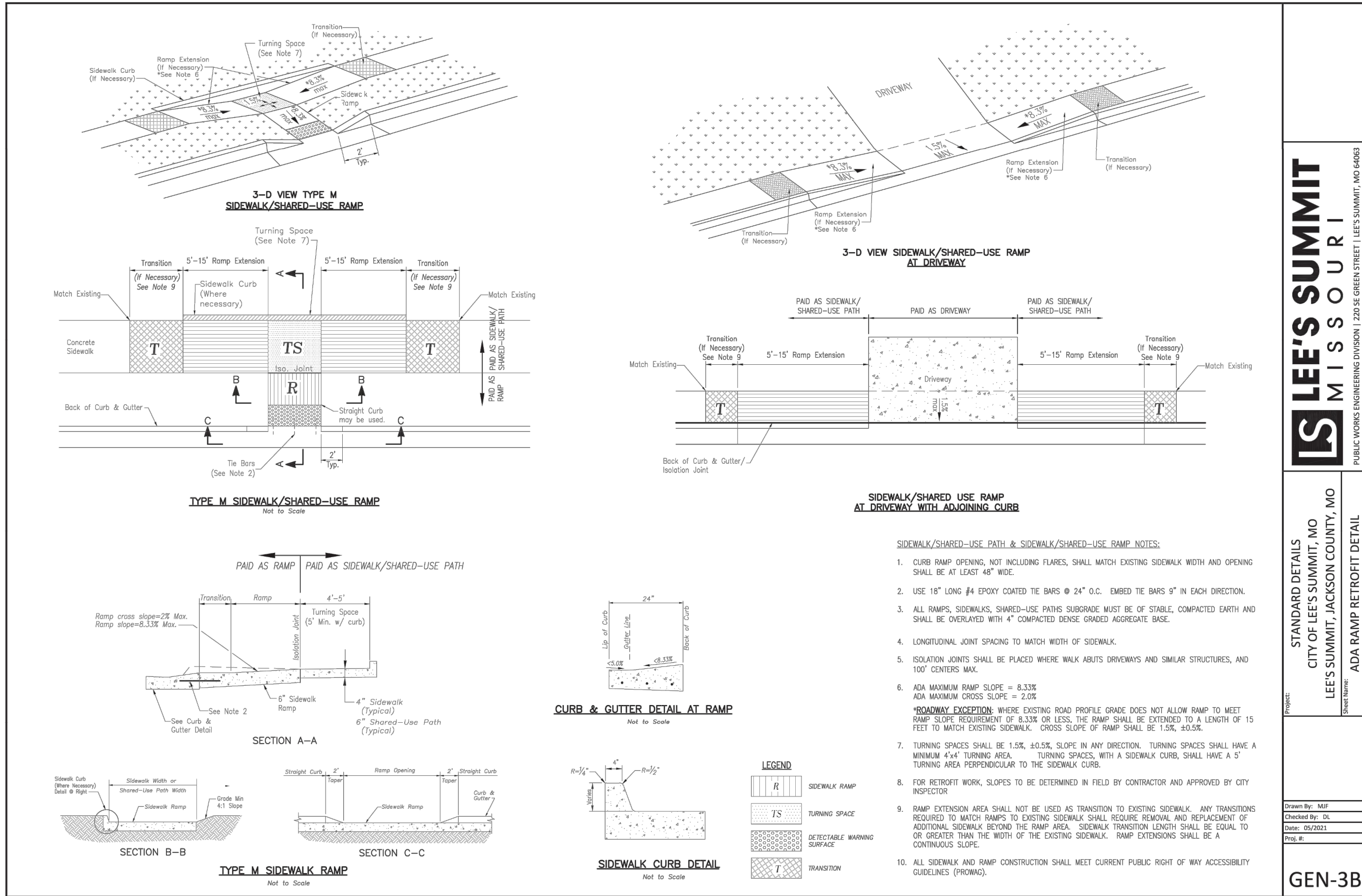
STANDARD DETAILS
CITY OF LEE'S SUMMIT, MO
LEE'S SUMMIT, JACKSON COUNTY, MO
CURB & GUTTER DETAIL

GEN-4



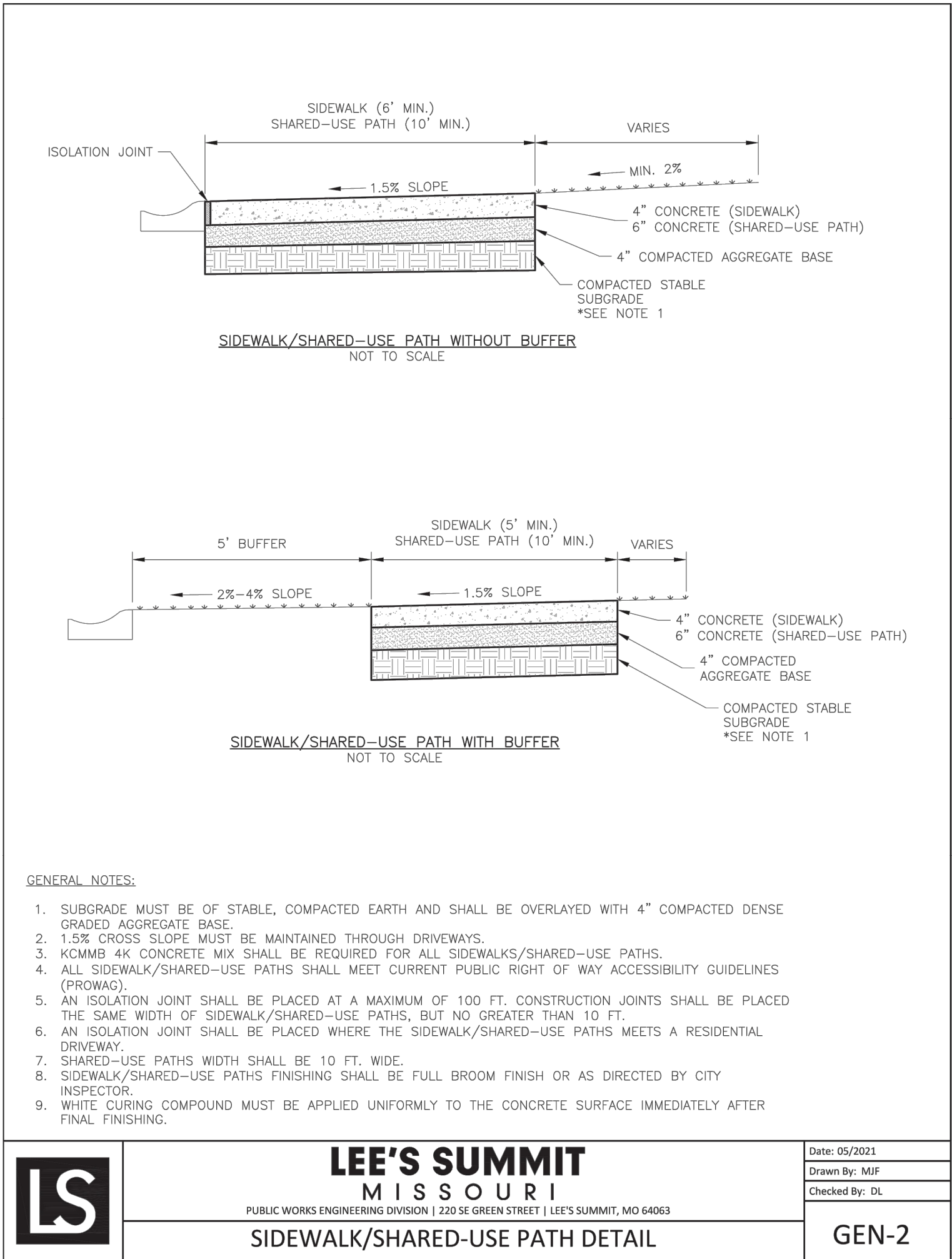
STANDARD DETAILS
CITY OF LEE'S SUMMIT, MO
LEE'S SUMMIT, JACKSON COUNTY, MO
ADA RAMP RETROFIT DETAIL

GEN-3A



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

GEN-3B

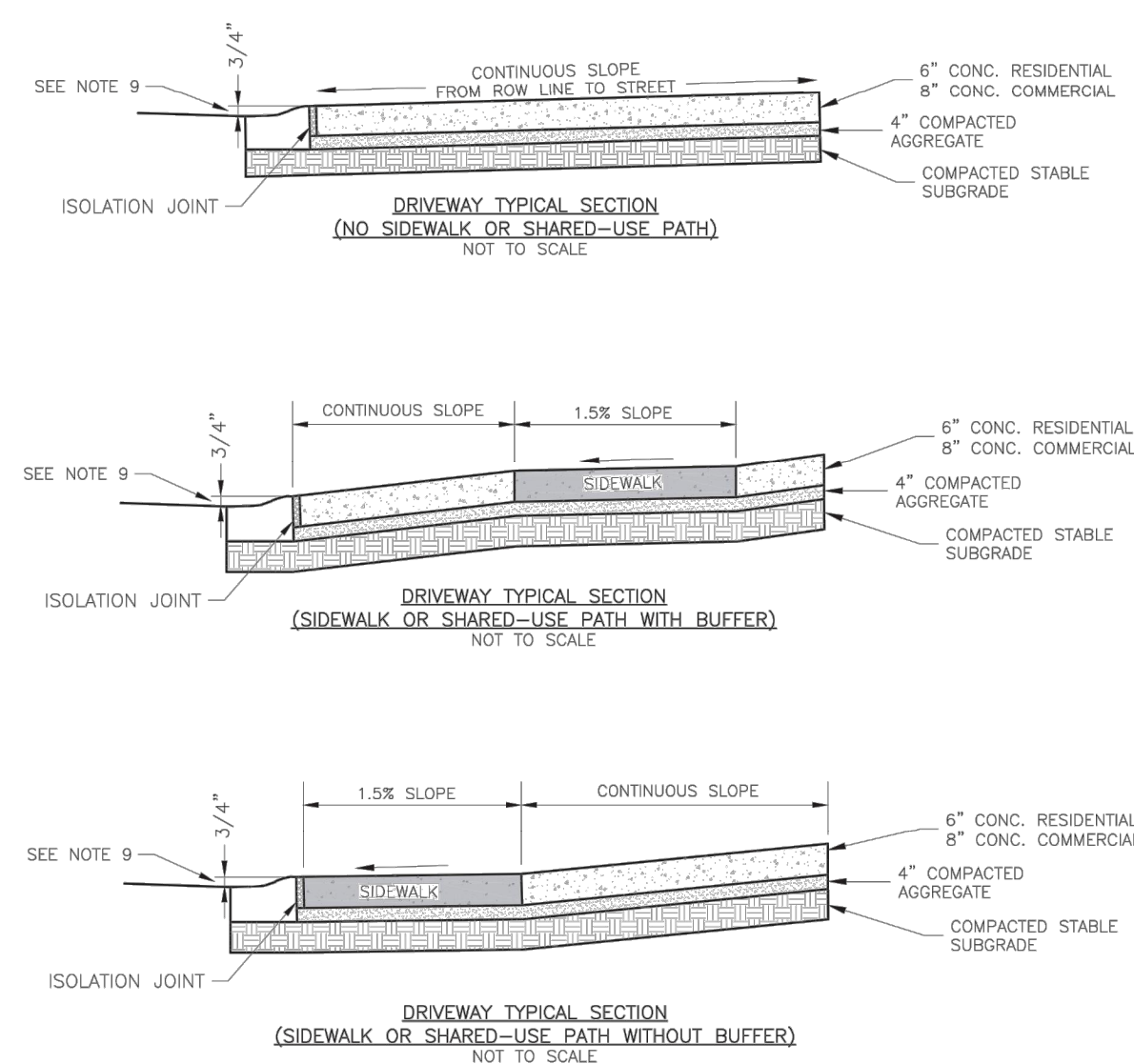
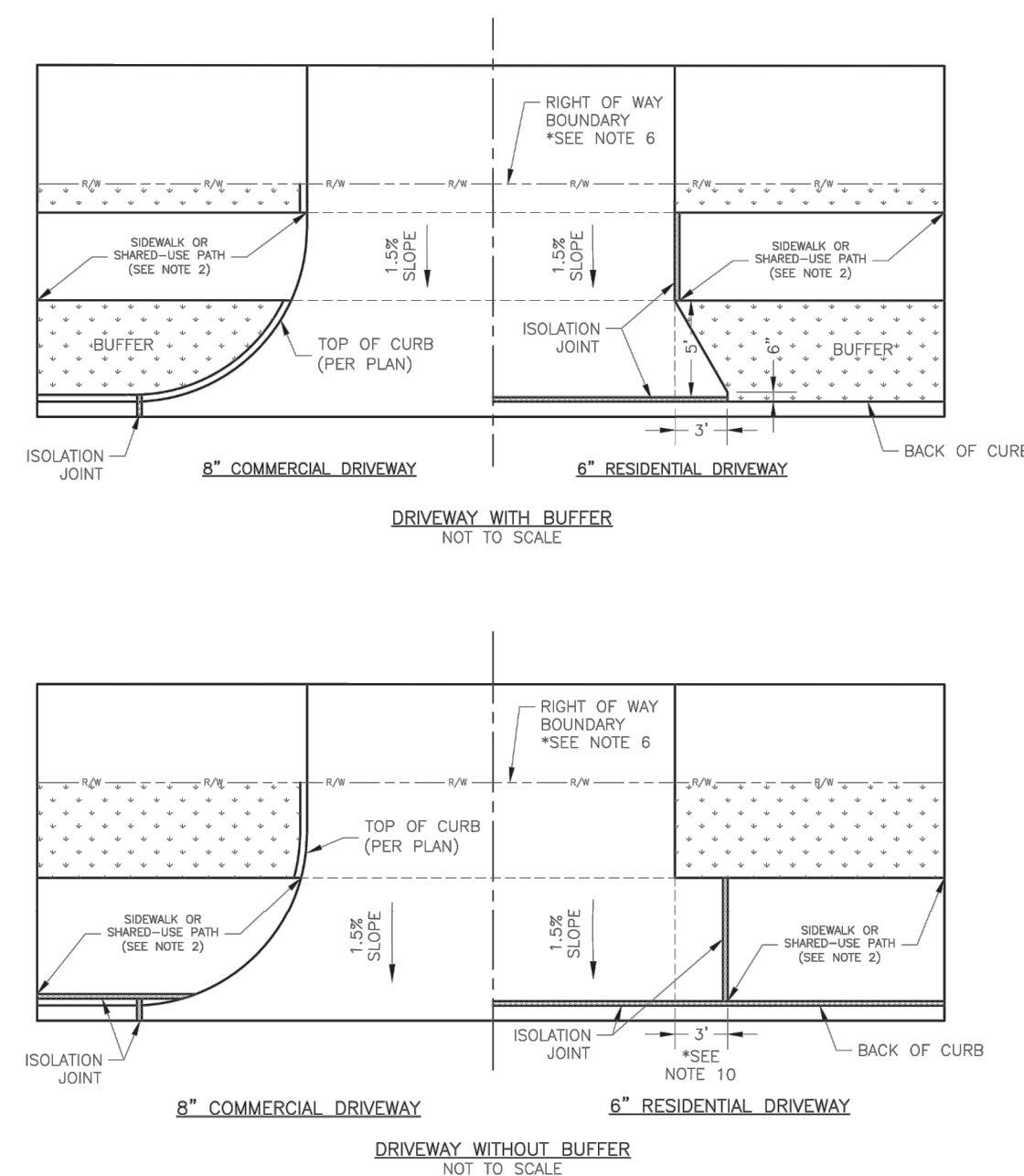


LEE'S SUMMIT
MISSOURI
PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063

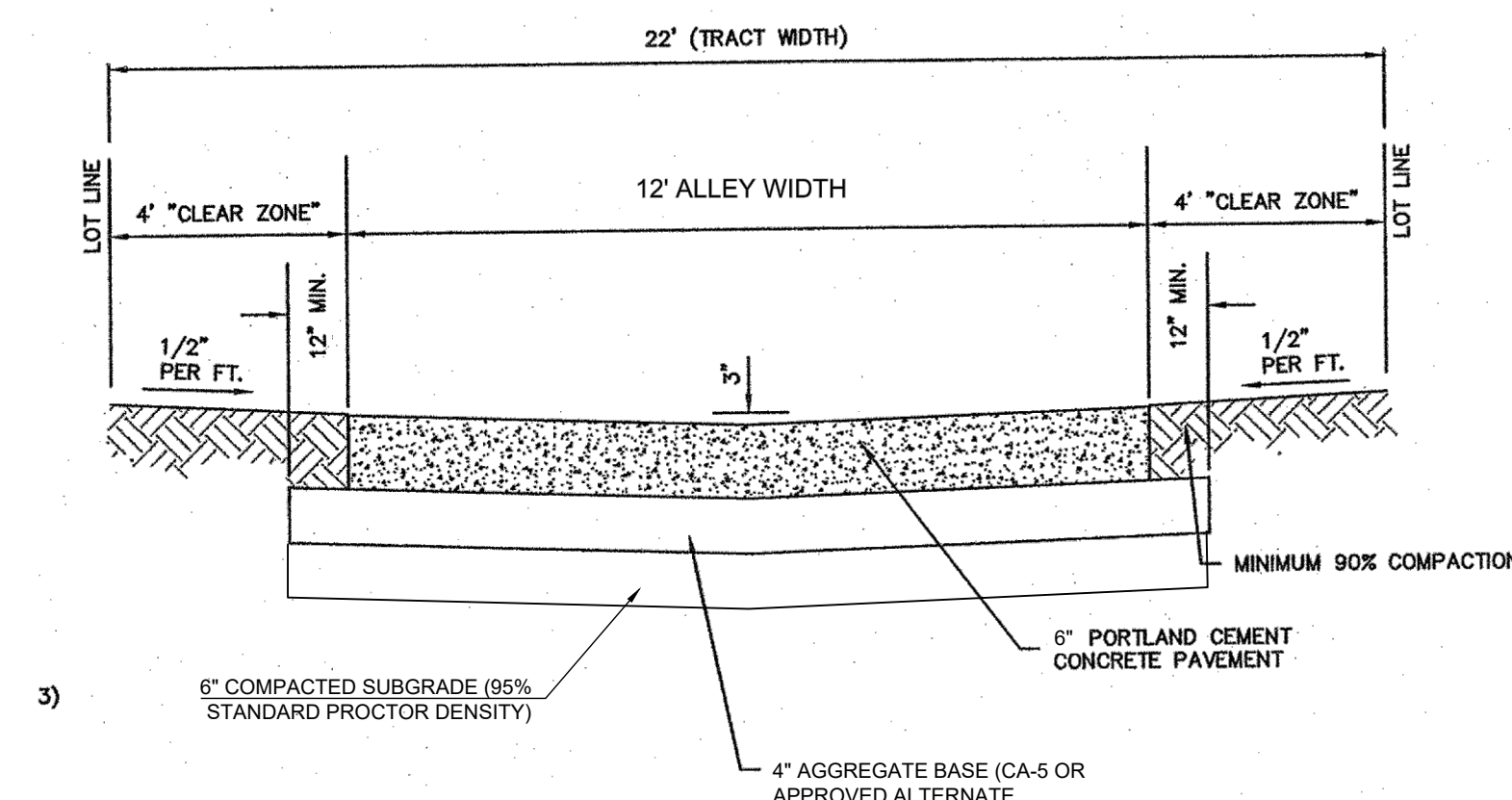
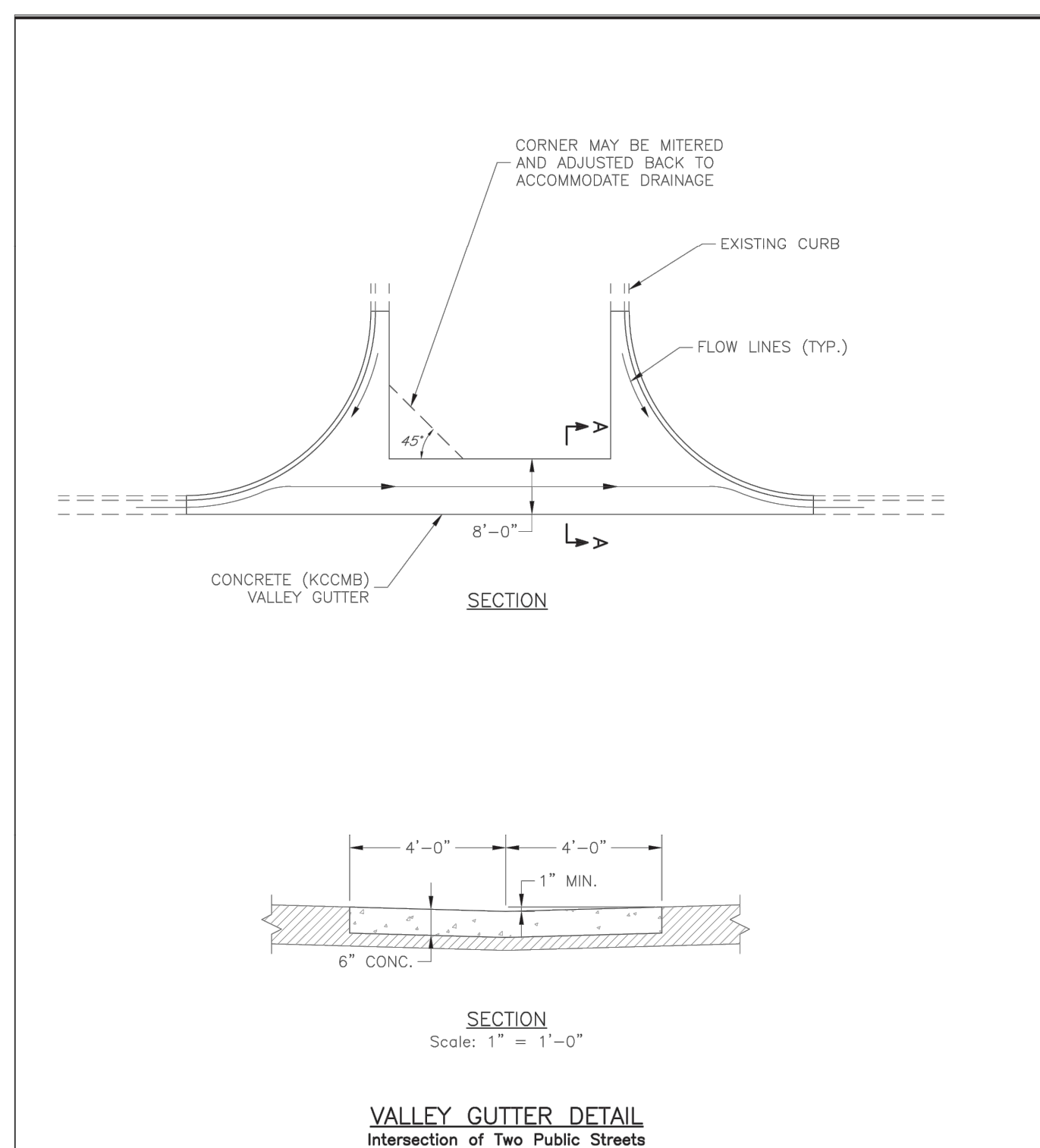
GEN-2

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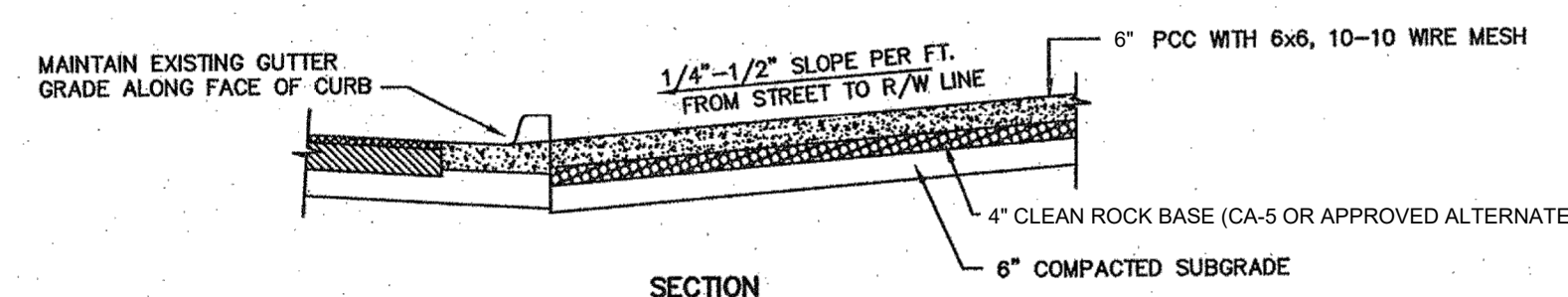
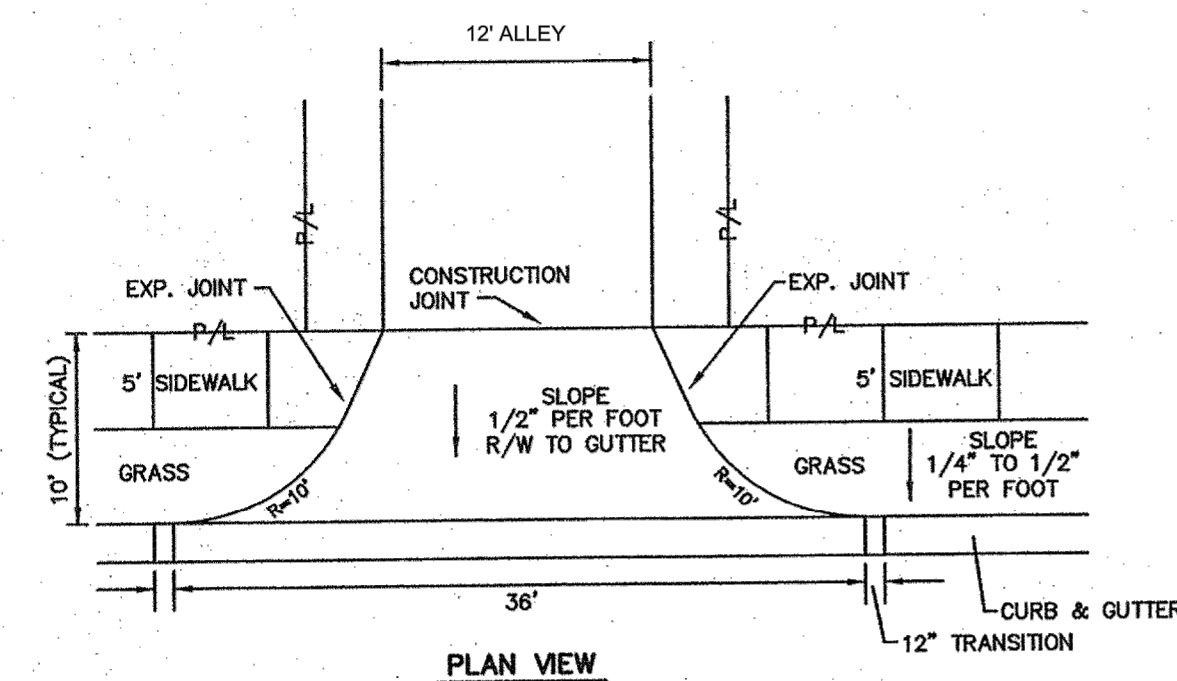


1. GENERAL NOTES
2. SUBGRADE SHALL BE STABLE, COMPACTED FIRM AND SHALL BE OVERLAYED WITH 4" COMPACTED DENSE GRADED AGGREGATE BASE.
3. ALL DRIVE APPROACHES SHALL MEET CURRENT PUBLIC RIGHT OF WAY ACCESSIBILITY GUIDELINES (PROWAG) FOR DRIVE APPROACHES.
4. REQUIREMENTS WHEN SIDEWALK IS REQUIRED (SEE ADA RAMP RETROFIT DATE GEN-38, SIDEWALKS/SHARED USE PATH RAMP AT DRIVE APPROACHES)
5. JUMP AT BACK OF CURB LINE SHALL BE AN ISOLATION JOINT FOR RESIDENTIAL DRIVEWAYS.
6. SIDEWALKS SHALL BE CONCRETE OR COMPAK MIX WITH 4% FIBER. SIDEWALKS MAY BE REQUIRED FOR ALL CURBS.
7. COMMERCIAL DRIVEWAYS, IN THE PUBLIC RIGHT OF WAY, SHALL BE COMPAK 4X4 CONCRETE MIX WITH 4% FIBER.
8. SIDEWALKS SHALL BE CONCRETE OR COMPAK MIX WITH 4% FIBER. OTHER CONCRETE MIXES NOT RECOMMENDED. OTHER CONCRETE MIXES NOT TO BE APPROVED BY CITY INSPECTOR.
9. JUMP SHALL BE INSTALLED AT THE RIGHT OF WAY BOUNDARY FOR PROPERTY DELINEATION.
10. WHITE CURBING COMPOUND MUST BE APPLIED UNIFORMLY TO THE CONCRETE SURFACE IMMEDIATELY AFTER FINAL FINISHING.
11. SIDEWALKS SHALL BE CONCRETE OR COMPAK MIX WITH 4% FIBER. SIDEWALKS SHALL BE CONCRETE OR COMPAK MIX WITH 4% FIBER.
12. SIDEWALKS ADDING CURB SHALL BE 6" THICK, EXTENDING 3' FROM THE DRIVEWAY.
13. SIDEWALKS ADDING CURB SHALL BE 6" THICK, EXTENDING 3' FROM THE DRIVEWAY.



NOTES

1. COMPACTION JOINTS TO BE SAWED AT INTERVALS OF 20 FEET MAXIMUM. JOINTS SHALL BE FILLED WITH BITUMINOUS COMPOUND IMMEDIATELY FOLLOWING SAWING.
2. DOWELED EXPANSION JOINTS SHALL BE LOCATED EVERY 100 FEET MAXIMUM.
3. REINFORCE CONCRETE WITH 6x6x6 WOVEN WIRE MESH.
4. USE ADDITIONAL REINFORCEMENT AROUND DRAINAGE STRUCTURES AS NECESSARY.

LS LEE'S SUMMIT
MISSOURI

PROJECT: STANDARD DETAILS
CITY OF LEE'S SUMMIT, MO
LEE'S SUMMIT, JACKSON COUNTY, MO
Project Name:

GEN-1

PREPARED BY:

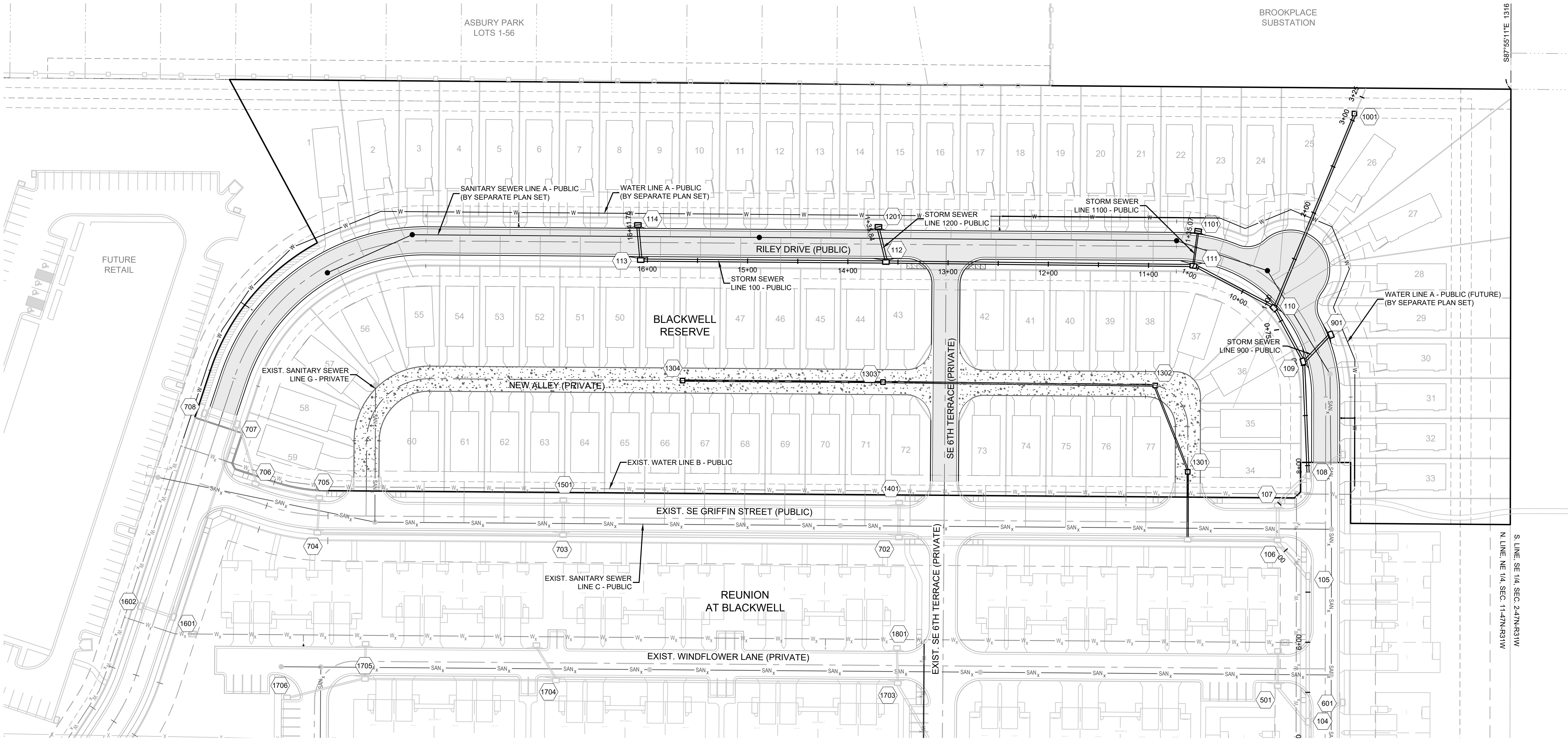
SCHLAGEL & ASSOCIATES, P.A.

BLACKWELL RESERVE
STREET AND STORM SEWER PLANS

REVISION DATE	DESCRIPTION
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7/1	22-093

STREET DETAILS

SHEET
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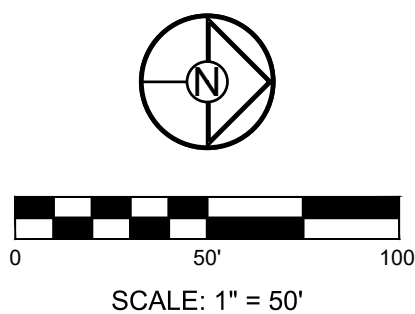
Storm Sewer Construction Notes	
Structure	Notes
109	STA ???, ??? INSTALL 6 X 4 CURB INLET N 998295.8027 E 2841271.9796
110	STA 9+64.67, LINE 100 INSTALL 6 X 4 CURB INLET N 998268.4964 E 2841217.7404
111	STA 10+55.32, LINE 100 INSTALL 6 X 4 CURB INLET N 998189.7687 E 2841172.7919
112	STA 13+62.03, LINE 100 INSTALL 6 X 4 CURB INLET N 997883.4033 E 2841158.2175
113	STA 16+06.63, LINE 100 INSTALL 6 X 4 CURB INLET N 997639.0338 E 2841147.7641
114	STA 16+41.76, LINE 100 INSTALL 6 X 4 CURB INLET N 997637.4132 E 2841112.6641

Storm Sewer Construction Notes	
Structure	Notes
901	STA 0+38.65 INSTALL 6 X 4 CURB INLET N 998324.6108 E 2841246.2188
1001	STA 3+07.03, LINE 1000 INSTALL 4 X 4 AREA INLET N 998355.6970 E 2841026.5189
1101	STA 1+35.07, LINE 1100 INSTALL 6 X 4 CURB INLET N 998195.7323 E 2841138.2365
1201	STA 1+35.84, LINE 1200 INSTALL 6 X 4 CURB INLET N 997877.1874 E 2841122.9204
1301	STA ???, LINE 1300 INSTALL 4 X 4 AREA INLET N 998177.0512 E 2841377.9295
1302	STA ???, LINE 1300 INSTALL 4 X 4 AREA INLET N 998147.6085 E 2841290.7423

Storm Sewer Construction Notes	
Structure	Notes
1303	STA ???, LINE 1300 INSTALL 4 X 4 AREA INLET N 997876.3091 E 2841277.8309
1304	STA 0+96.87, LINE 1300 INSTALL 4 X 4 AREA INLET N 997676.4887 E 2841269.3582

NOTES:

- ALL CONSTRUCTION ON THIS PROJECT SHALL CONFORM TO THE CITY OF LEE'S SUMMIT TECHNICAL SPECIFICATIONS.
- THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL EXISTING UTILITY LOCATIONS PRIOR TO EXCAVATION.



PREPARED BY:

SCHLAGEL & ASSOCIATES, P.A.

**BLACKWELL RESERVE
STREET AND STORM SEWER PLANS**
SE SHENANDOAH DRIVE LEE'S SUMMIT, MO

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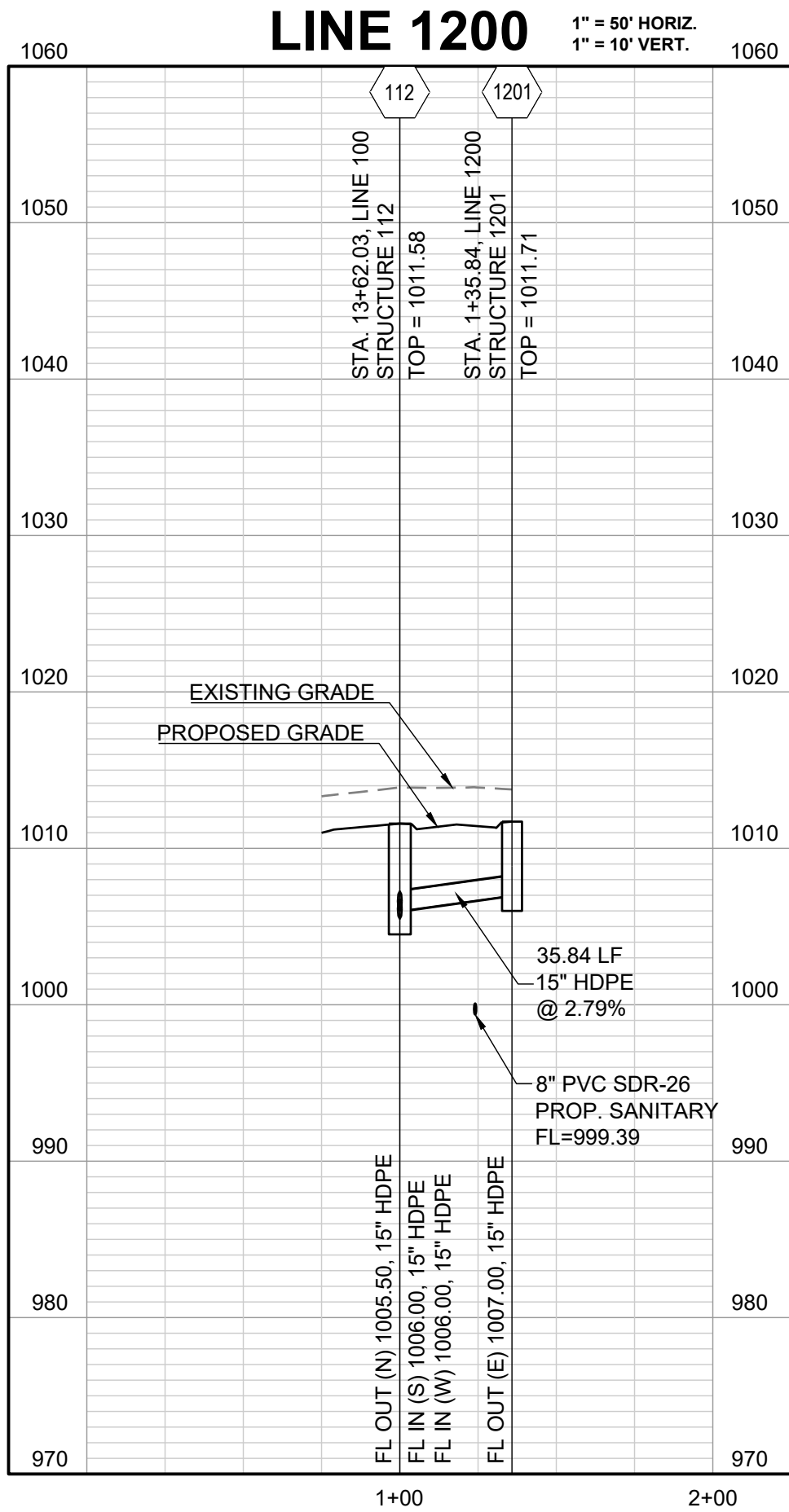
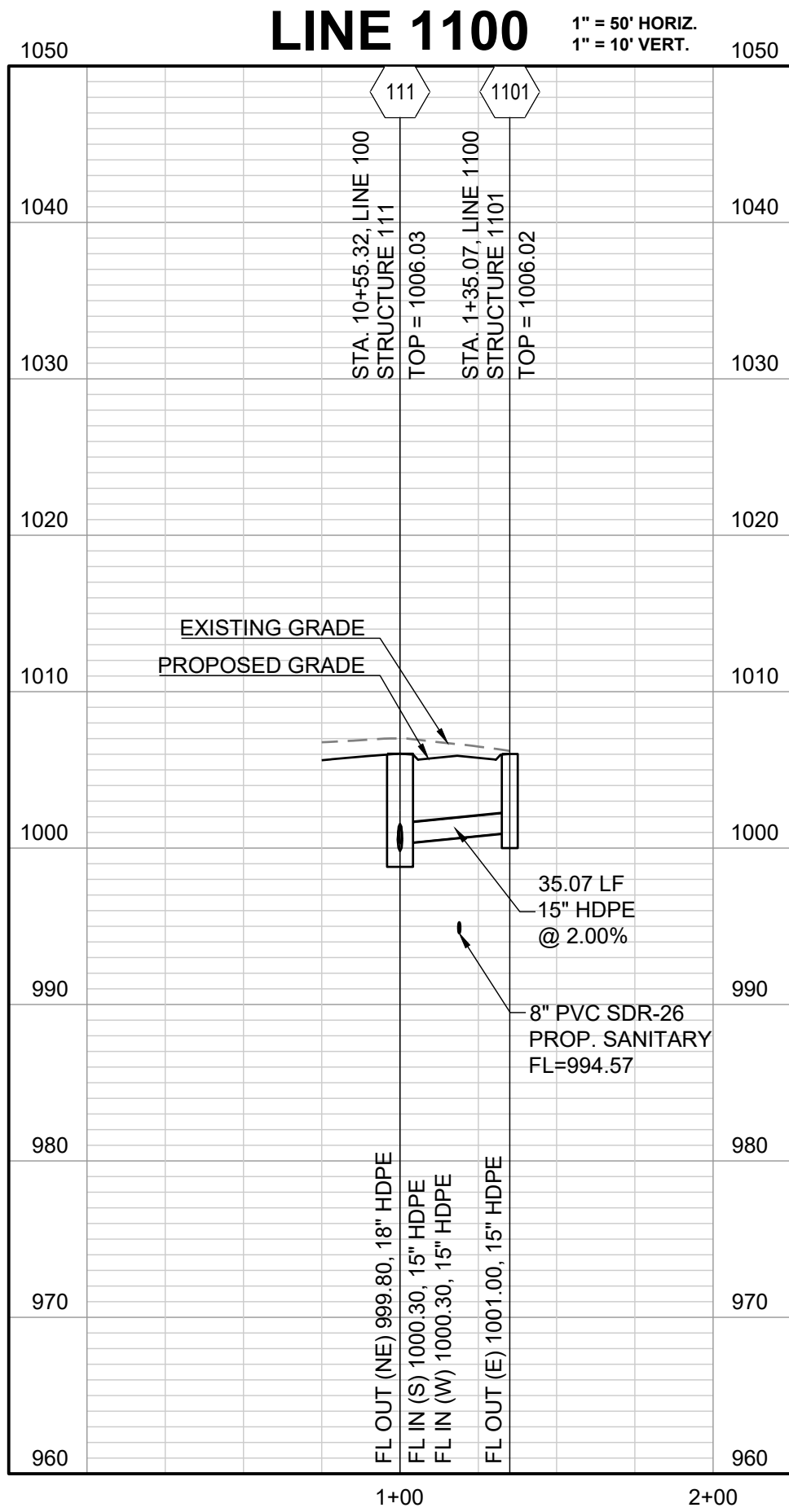
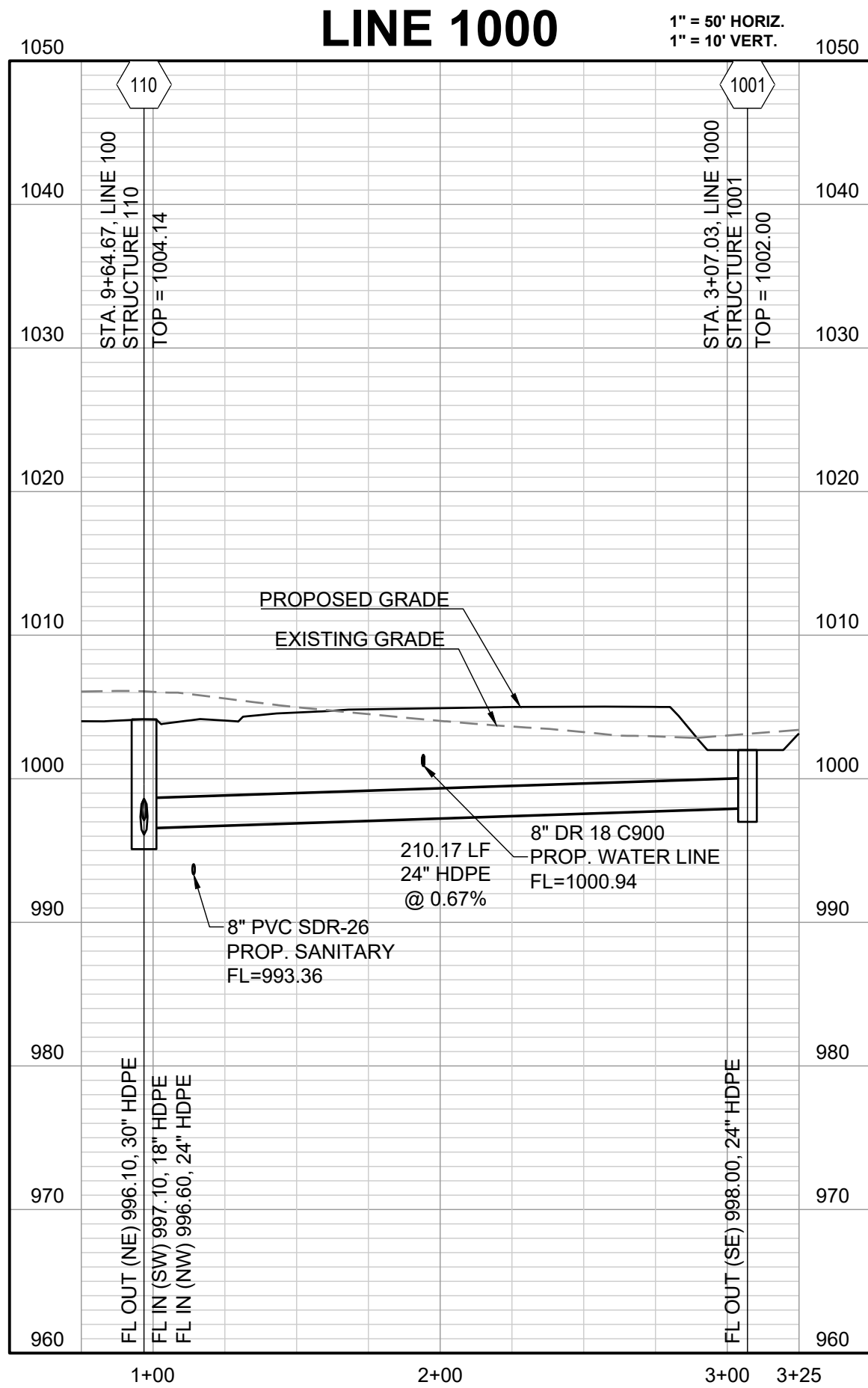
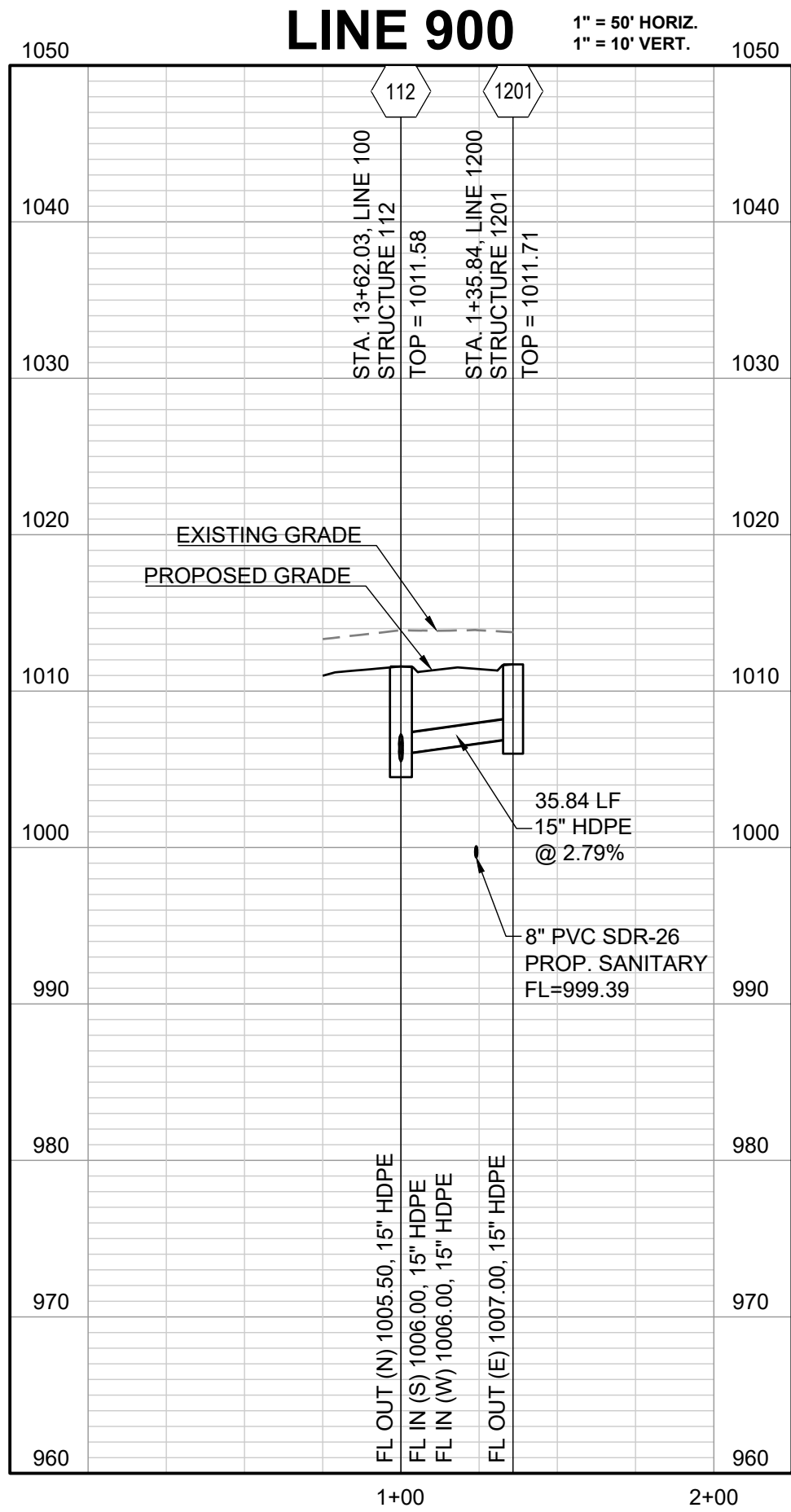
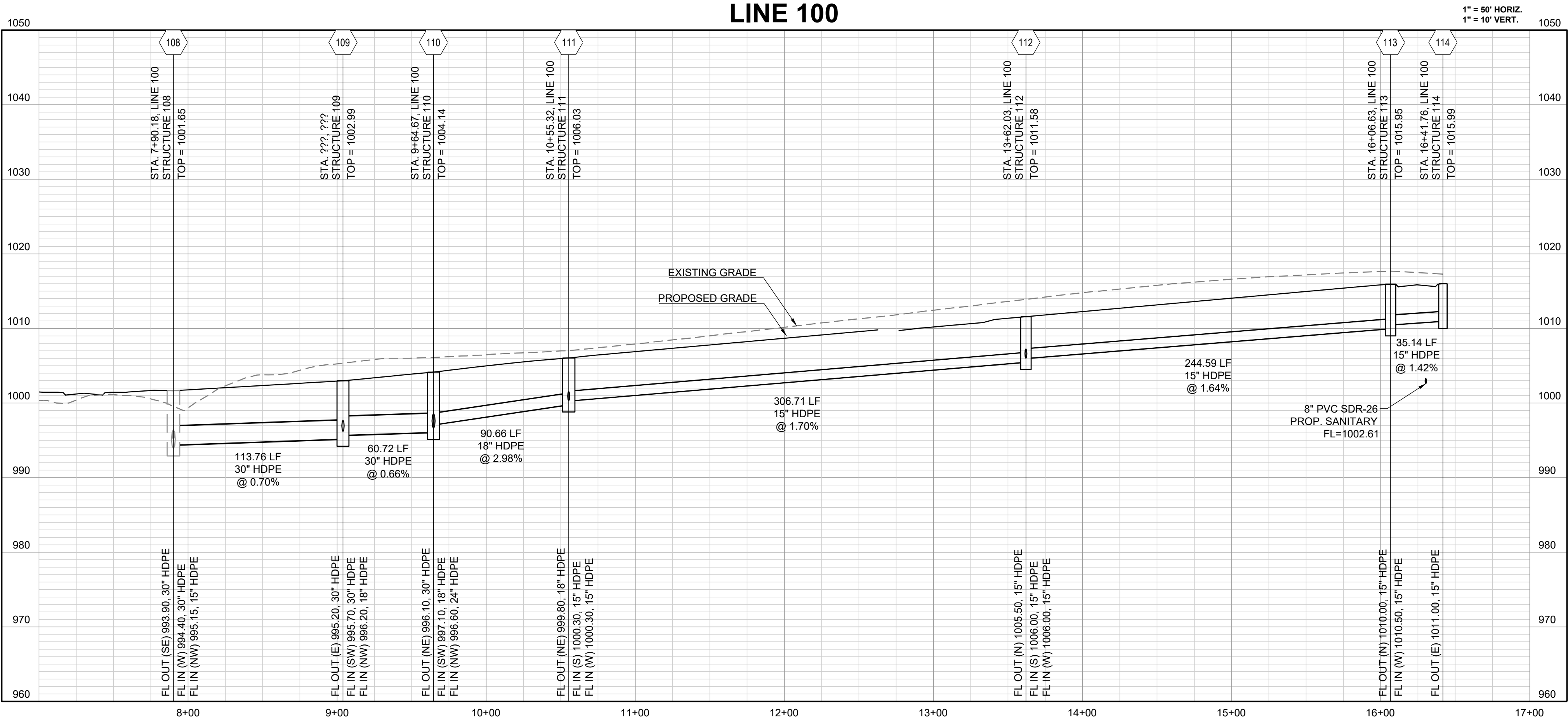
STORM PLAN

SHEET

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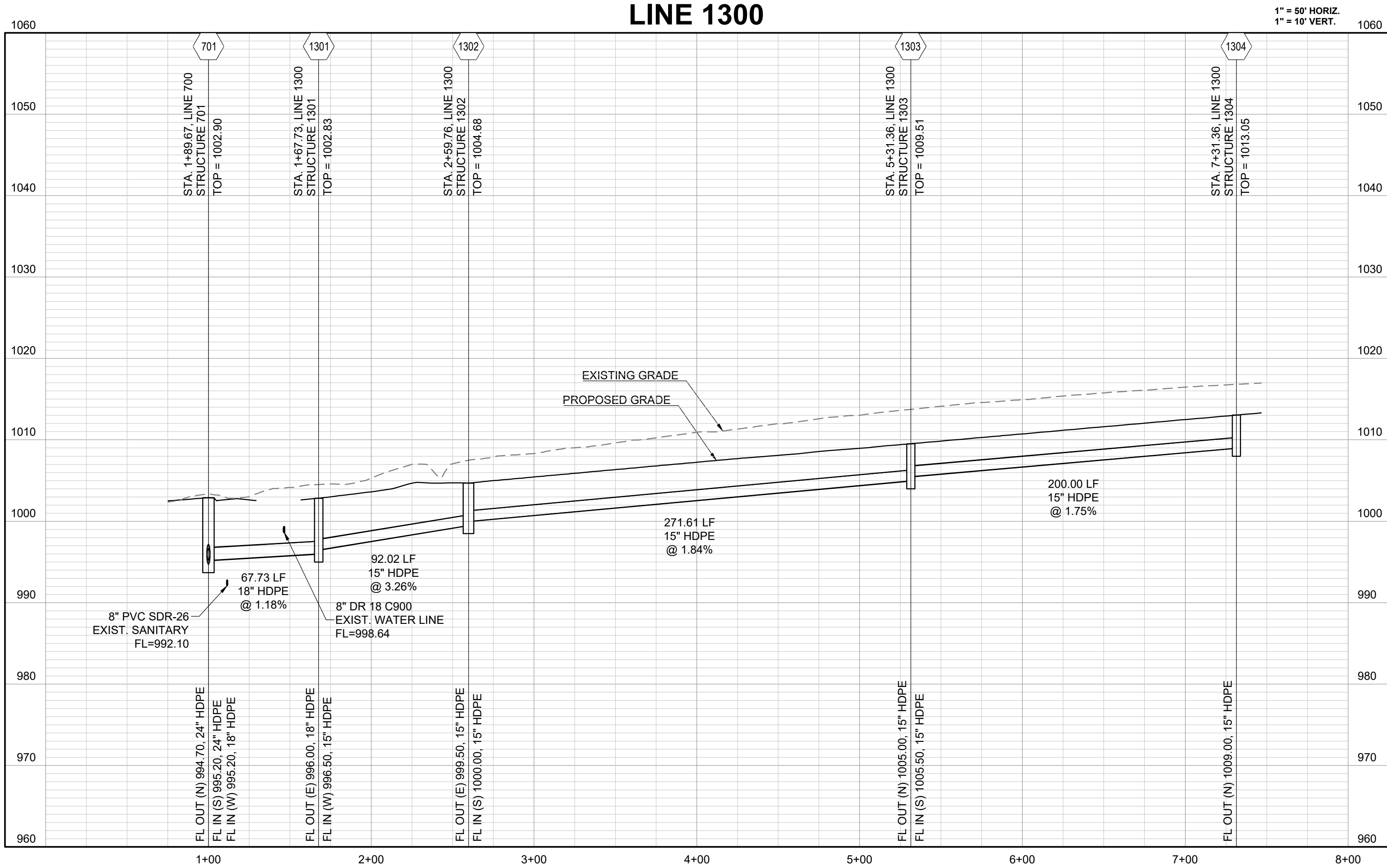
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"F" Factor:		1.00																										
Runoff Calculations																												
In#	Area (acres)	"C" Value	Cumul. Area (acres)	Cumul. Cx/A	Tc	Intensity	Runoff To Inlet	Cumul. Runoff	Pipe Cap.	Pipe Vel.	Up Piped Inlet 1	Up Piped Inlet 2	Up Area (acres)	Up Cx/A	Pipe Properties									Drop In Inlet	FL Up	FL Down	Inlet Top	HGL Elev.
															Up Inlet	Down Inlet	Pipe Type	"n"	Pipe Size	Length	Slope %							
LINE 100																												
101	0.61	0.66	22.48	14.84	8.6	9.00	4.53	166.95	102.25	10.63			0.00	0.00	101	100	HDPE	0.012	42	40.00	0.88	DS TAILWATER @ STR #100			986.00	991.78		
102	0.40	0.66	21.87	14.43	8.6	9.02	2.98	162.74	101.08	10.51	201	301	3.52	2.32	102	101	HDPE	0.012	42	35.00	0.86	0.50	985.35	985.00	995.37	994.78		
103	0.37	0.66	17.95	11.85	8.3	9.10	2.78	134.74	87.20	9.06	401		0.42	0.28	103	102	HDPE	0.012	42	133.83	0.64	0.50	987.51	986.65	986.60	989.35		
104	0.22	0.66	17.16	11.33	8.0	9.22	1.67	136.58	88.55	9.20	501	601	1.15	1.04	104	103	HDPE	0.012	42	211.67	0.66	0.50	989.41	988.95	988.91	1001.07		
105	0.11	0.66	15.37	10.14	7.7	9.31	0.84	117.99	70.80	10.02			0.00	0.00	105	104	HDPE	0.012	36	145.31	0.96	0.50	991.30	989.91	1000.55	1004.99		
106	0.18	0.66	15.26	10.07	7.6	9.33	1.39	117.46	74.74	10.57	701		6.62	4.37	106	105	HDPE	0.012	36	46.74	1.07	0.50	992.30	991.80	1001.44	1003.93		
107	0.64	0.66	8.46	5.58	6.9	9.57	5.05	66.80	41.21	8.39			0.00	0.00	107	106	HDPE	0.012	30	35.00	0.86	0.50	993.10	992.80	1001.44	1003.67		
108	0.18	0.66	7.82	5.16	6.9	9.60	1.43	61.96	37.44	7.63	801		0.26	0.17	108	107	HDPE	0.012	30	42.40	0.71	0.50	993.90	993.60	1001.65	1003.50		
109	0.12	0.66	7.38	4.87	6.6	9.69	0.96	59.03	37.18	7.57	901		0.66	0.44	109	108	HDPE	0.012	30	113.76	0.70	0.50	995.20	994.40	1002.99	1004.78		
110	0.11	0.66	6.60	4.36	6.5	9.75	0.88	53.07	36.10	7.35	1001		3.69	2.44	110	109	HDPE	0.012	30	60.72	0.66	1.00	996.10	995.70	1004.14	1004.77		
111	0.53	0.66	2.80	1.85	6.3	9.80	4.28	22.63	19.64	11.12	1101		0.65	0.43	111	110	HDPE	0.012	18	90.66	2.98	0.50	999.80	997.10	1006.03	1009.09		
112	0.42	0.66	1.62	1.07	5.6	10.06	3.49	13.45	9.12	7.44	1201		0.47	0.31	112	111	HDPE	0.012	15	306.71	1.70	0.50	1005.52	1000.30	1011.58	1018.29		
113	0.34	0.66	0.73	0.48	5.1	10.29	2.89	6.20	8.96	7.30			0.00	0.00	113	112	HDPE	0.012	15	244.59	1.64	0.50	1010.03	1006.02	1015.95	1013.70		
114	0.39	0.66	0.39	0.26	5.0	10.32	3.32	3.32	8.34	6.80			0.00	0.00	114	113	HDPE	0.012	15	35.14	1.42	N/A	1011.03	1010.53	1015.99	1013.84		
LINE 200																												
201	2.31	0.66	2.31	1.52	5.0	10.32	19.67	19.67	17.74																			

RUNOFF CALCULATIONS											INLET DESIGN							GUTTER DESIGN				
INLET #	COMPOSITE "C"	AREA	INLET Tc	INTENSITY	RUNOFF	UPSTREAM INLET	UPSTREAM INLET	UPSTREAM INLET	UPSTREAM INLET	BYPASS FROM UPSTREAM INLET	TOTAL RUNOFF	STREET GRADE	STREET CROSS SLOPE	CURB TYPE	INLET LENGTH	EFFECTIVE LENGTH 80% CAP	INLET INTERCEPTION	BYPASS TO DOWNSTREAM INLET	STREET GRADE	STREET CROSS SLOPE	DEPTH AT CURB	SPREAD OF FLOW
LINE 1																						
101	0.66	0.61	5	7.35	2.96	302	401			1.31	4.27	SUMP	2.00	A	6	4.8	13.44	0.00	SUMP	2.00	< 0.21	< 12
102	0.66	0.40	5	7.35	1.94	103	301			0.82	2.76	SUMP	2.00	A	6	4.8	13.44	0.00	SUMP	2.00	< 0.21	< 12
103	0.66	0.37	5	7.35	1.79	104				0.23	2.03	1.20	2.00	A	6	6	1.81	0.22	1.20	2.00	0.18	9.27
104	0.66	0.22	5	7.35	1.07	501	502			1.02	2.08	1.20	2.00	A	6	6	1.85	0.23	1.20	2.00	0.18	9.36
105	0.66	0.11	5	7.35	0.53	106	107	108		0.86	1.39	1.20	2.00	A	6	6	1.29	0.10	1.20	2.00	0.15	8.11
106	0.66	0.18	5	7.35	0.87	701				0.12	1.00	1.20	2.00	A	6	6	0.95	0.05	1.20	2.00	0.13	7.22
107	0.66	0.64	5	7.35	3.10	1401				0.68	3.78	1.20	2.00	A	6	6	3.00	0.77	1.20	2.00	0.22	11.57
108	0.66	0.18	5	7.35	0.87	109				0.02	0.89	1.20	2.00	A	6	6	0.85	0.03	1.20	2.00	0.13	6.93
109	0.66	0.12	5	7.35	0.58	110				0.08	0.66	1.21	2.00	A	6	6	0.64	0.02	1.21	2.00	0.11	6.25
110	0.66	0.11	5	7.35	0.53	111				0.58	1.11	1.66	2.00	A	6	6	1.03	0.08	1.66	2.00	0.13	7.08
111	0.66	0.53	5	7.35	2.57	112				0.34	2.91	1.66	2.00	A	6	6	2.33	0.58	1.66	2.00	0.19	9.94
112	0.66	0.42	5	7.35	2.04	113				0.18	2.22	1.66	2.00	A	6	6	1.88	0.34	1.66	2.00	0.17	9.03
113	0.66	0.34	5	7.35	1.65					0.00	1.65	1.66	2.00	A	6	6	1.47	0.18	1.66	2.00	0.15	8.13
114	0.66	0.39	5	7.35	1.89					0.00	1.89	1.64	2.00	A	6	6	1.65	0.24	1.64	2.00	0.16	8.55
LINE 3																						
301	0.66	0.52	5	7.35	2.52					0.00	2.52	2.70	2.00	A	6	6	1.92	0.60	2.70	2.00	0.16	8.67
302	0.66	0.69	5	7.35	3.35					0.00	3.35	2.70	2.00	A	6	6	2.33	1.02	2.70	2.00	0.18	9.59
LINE 4																						
401	0.66	0.42	5	7.35	2.04	601				0.30	2.34	1.20	2.00	A	6	6	2.04	0.30	1.20	2.00	0.18	9.75
LINE 5																						
501	0.66	0.43	5	7.35	2.09					0.00	2.09	1.09	2.00	A	6	6	1.87	0.22	1.09	2.00	0.18	9.52
502	0.66	0.71	5	7.35	3.44	702				0.52	3.97	1.09	2.00	A	6	6	3.17	0.80	1.09	2.00	0.23	11.98
LINE 6																						
601	0.66	0.43	5	7.35	2.09	801				0.27	2.35	1.20	2.00	A	6	6	2.05	0.30	1.20	2.00	0.19	9.77
LINE 7																						
701	0.66	0.32	5	7.35	1.55					0.00	1.55	1.20	2.00	A	6	6	1.43	0.12	1.20	2.00	0.16	8.43
702	0.66	0.58	5	7.35	2.81	703				0.28	3.10	1.19	2.00	A	6	6	2.58	0.52	1.19	2.00	0.21	10.80
703	0.66	0.46	5	7.35	2.23	704				0.08	2.31	1.19	2.00	A	6	6	2.02	0.29	1.19	2.00	0.18	9.72
704	0.66	0.26	5	7.35	1.26	1601				0.02	1.28	1.19	2.00	A	6	6	1.20	0.08	1.19	2.00	0.15	7.88
705	0.66	0.07	5	7.35	0.34					0.00	0.34	1.19	2.00	A	6	6	0.34	0.00	1.19	2.00	0.09	4.99
706	0.66	0.03	5	7.35	0.15					0.00	0.15	1.19	2.00	A	6	6	0.15	0.00	1.19	2.00	0.07	3.77
707	0.66	0.49	5	7.35	2.38	1601				0.02	2.39	SUMP	2.00	A	6	4.8	13.44	0.00	SUMP	2.00	< 0.21	< 12
707	0.66	0.50	5	7.35	2.43					0.00	2.43	SUMP	2.00	A	6	4.8	13.44	0.00	SUMP	2.00	< 0.21	< 12
LINE 8																						
801	0.66	0.26	5	7.35	1.26	901				0.95	2.21	1.20	2.00	A	6	6	1.95	0.27	1.20	2.00	0.18	9.56
LINE 9																						
901	0.66	0.66	5	7.35	3.20	1101				0.86	4.07	1.33	2.00	A	6	6	3.11	0.95	1.33	2.00	0.22	11.66
LINE 11																						
1101	0.66	0.65	5	7.35	3.15	1201				0.44	3.59	1.66	2.00	A	6	6	2.73	0.86	1.66	2.00	0.20	10.72
LINE 12																						
1201	0.66	0.47	5	7.35	2.28	114				0.24	2.52	1.66	2.00	A	6	6	2.09	0.44	1.66	2.00	0.18	9.45
LINE 14																						
1401	0.66	0.54	5	7.35	2.62	1501				0.91	3.53	1.19	2.00	A	6	6	2.86	0.68	1.19	2.00	0.22	11.31
LINE 15																						
1501	0.66	0.85	5	7.35	4.12	705				0.00	4.13	1.19	2.00	A	6	6	3.21	0.91	1.19	2.00	0.23	11.96
LINE 16																						
1601	0.66	0.13	5	7.35	0.63					0.00	0.63	1.33	2.00	A	6	6	0.61	0.02	1.33	2.00	0.11	6.05
1602	0.66	0.13	5	7.35	0.63					0.00	0.63	1.33	2.00	A	7	7	0.62	0.01	1.33	2.00	0.11	6.05
LINE 17																						
1701	0.66	1.32	5	7.35	6.40	1702	2201	2401		0.16	6.56	SUMP	1.50	A	6	4.8	13.44	0.00	SUMP	1.50	< 0.21	< 12
1702	0.66	0.27	5	7.35	1.31	1703	1801			0.43	1.74	1.20	1.50	A	6	6	1.58	0.16	1.20	1.50	0.17	11.54
1703	0.66	0.53	5	7.35	2.57	1704				0.14	2.71	1.33	2.00	A	6	6	2.28	0.43	1.33	2.00	0.19	10.08
1704	0.66	0.28	5	7.35	1.36	1705				0.21	1.57	1.33	2.00	A	6	6	1.43	0.14	1.33	2.00	0.16	8.30
1705	0.66	0.39	5	7.35	1.89	1706				0.00	1.89	1.33	2.00	A	6	6	1.69	0.21	1.33	2.00	0.17	8.88
1706	0.66	0.67	5	7.35	3.25					0.00	3.25	SUMP	2.00	B	6	4.8	12.00	0.00	SUMP	2.00	< 0.21	< 12
LINE 18																						
1801	0.66	0.55	5	7.35	2.67	1901				0.00	2.67	1.33	2.00	A	6	6	2.25	0.42	1.33	2.00	0.19	10.03
LINE 19																						
1901	0.66	0.26	5	7.35	1.26	2001				0.00	1.26	1.33	2.00	A	6	6	1.18	0.09	1.33	2.00	0.14	7.70
LINE 20																						
2001	0.66	0.52	5	7.35	2.52					0.00	2.52	1.33	2.00	A	6	6	2.15	0.37	1.33	2.00	0.19	9.83
LINE 22																						
2201	0.66	0.31	5	7.35	1.50	2202				0.00	1.50	1.99	2.00	A	6	6	1.33	0.17	1.99	2.00	0.14	7.63
2202	0.66	0.32	5	7.35	1.55					0.00	1.55	1.99	2.00	A	6	6	1.37	0.19	1.99	2.00	0.14	7.71
2203	0.66	0.43	5	7.35	2.09					0.00	2.09	1.99	2.00	A	6	6	1.75	0.34	1.99	2.00	0.16	8.56
LINE 24																						
2401	0.66	0.29	5	7.35	1.41	2203				0.00	1.41	1.99	2.00	A	6	6	1.26	0.15	1.99	2.00	0.14	7.45



REVISION DATE	DESCRIPTION
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DRAWN BY:	TRC
CHECKED BY:	MAB
DATE PREPARED:	03/03/2023
PROJ. NUMBER:	22-593



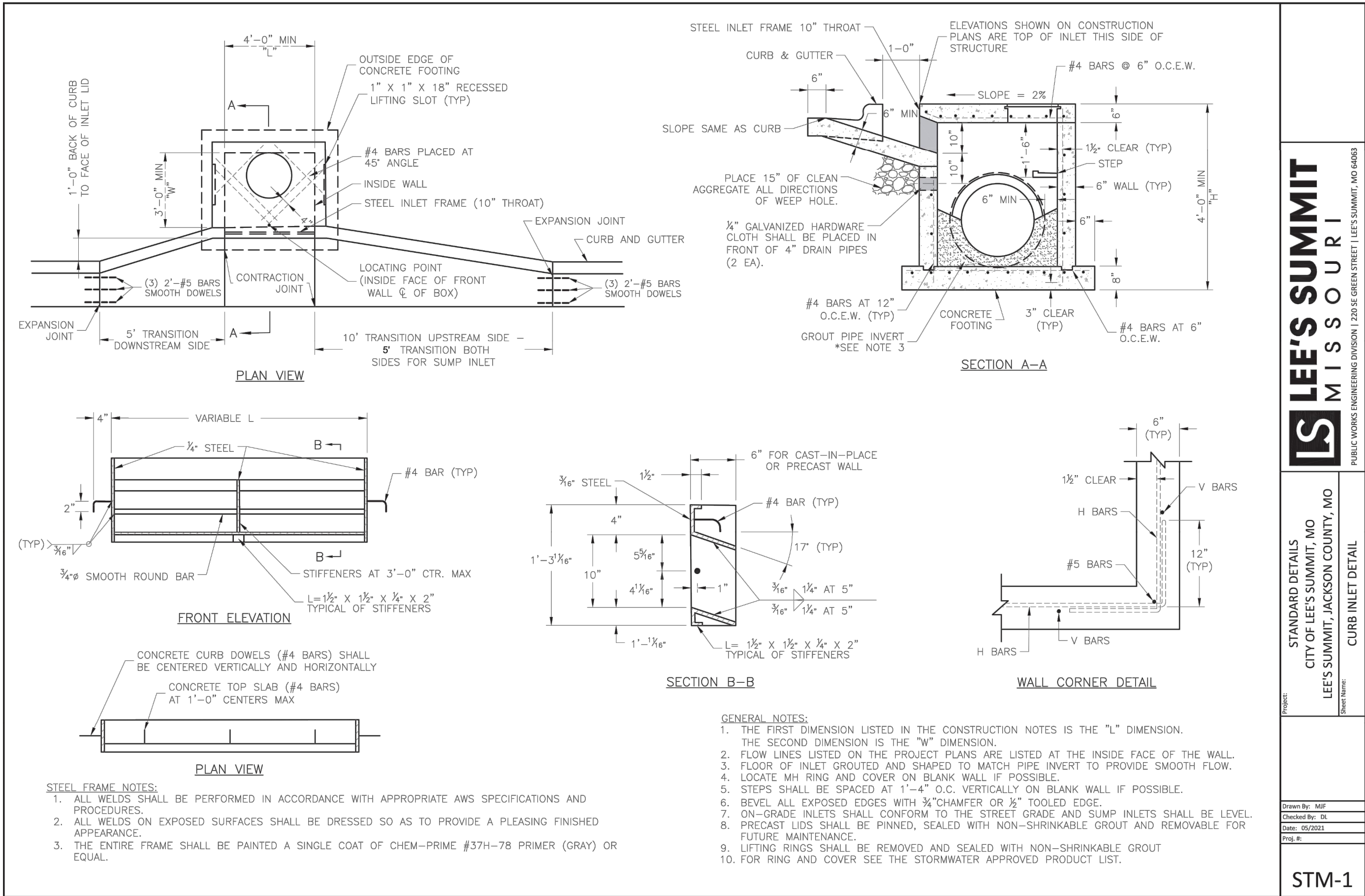
PREPARED BY:

SCHLAGEL & ASSOCIATES, P.A.

BLACKWELL RESERVE
STREET AND STORM SEWER PLANS
SE SHENANDOAH DRIVE LEE'S SUMMIT, MO

DRAWN BY:	REVISION DATE	DESCRIPTION
TRC	1	
CHECKED BY:	2	
MAB	3	
DATE PREPARED:	4	
03/03/2023	5	
PROJ. NUMBER:	6	
22-593	7	
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STORM
PROFILES



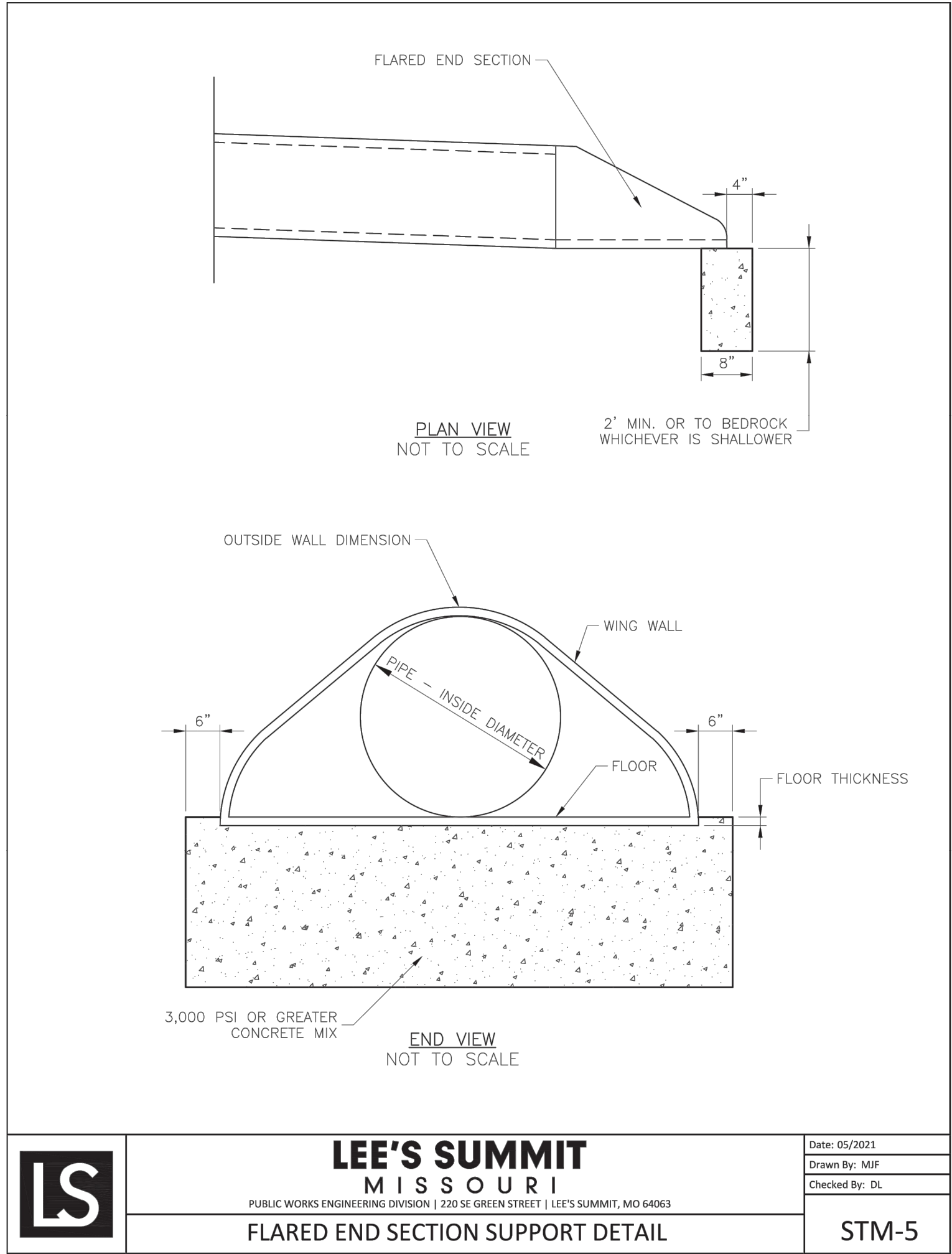
LEE'S SUMMIT MISSOURI

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

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

Project: Curb Inlet Detail
Sheet: STM-1

Drawn By: MIF
Checked By: DL
Date: 05/2021
Proj. #: 22-593



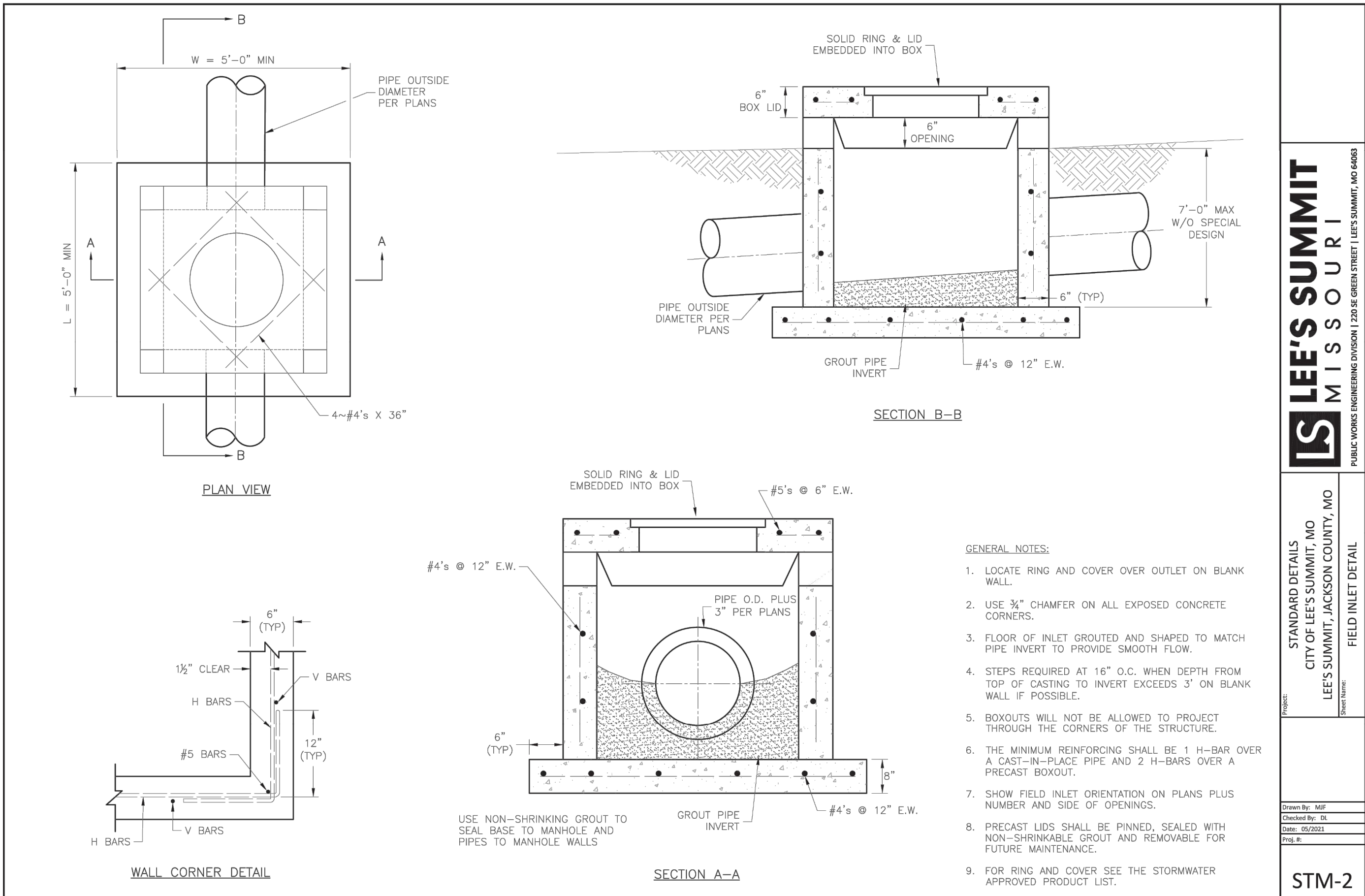
LEE'S SUMMIT MISSOURI

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

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

Project: Flared End Section Support Detail
Sheet: STM-5

Drawn By: MIF
Checked By: DL
Date: 05/2021
Proj. #: 22-593



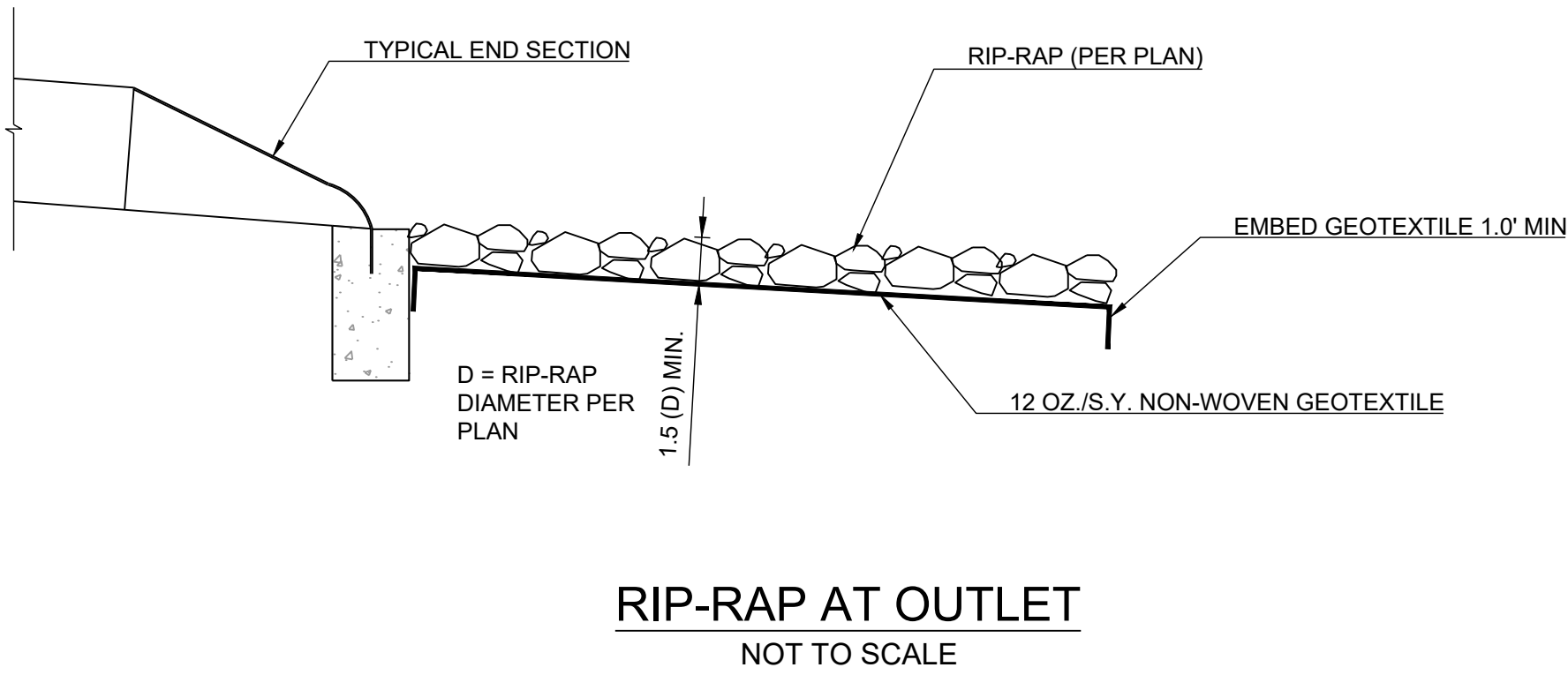
LEE'S SUMMIT MISSOURI

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

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

Project: Field Inlet Detail
Sheet: STM-2

Drawn By: MIF
Checked By: DL
Date: 05/2021
Proj. #: 22-593



LEE'S SUMMIT MISSOURI

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

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

Project: Rip-Rap at Outlet
Sheet: STM-3

Drawn By: MIF
Checked By: DL
Date: 05/2021
Proj. #: 22-593

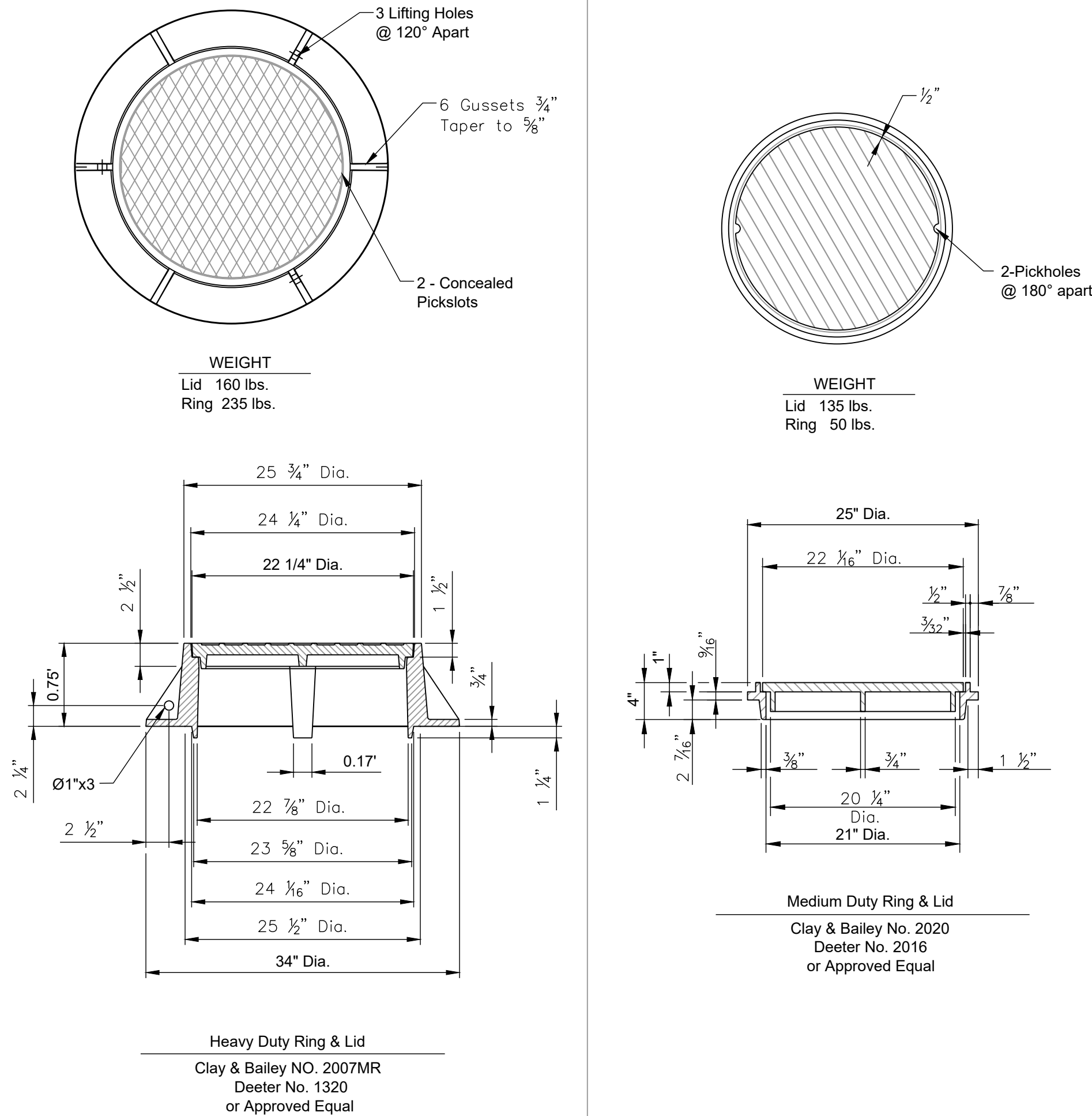
PREPARED BY:

SCHLAGEL & ASSOCIATES, P.A.

BLACKWELL RESERVE
STREET AND STORM SEWER PLANS
SE SHENANDOAH DRIVE LEE'S SUMMIT, MO

REVISION	DATE	DESCRIPTION
1	05/2021	ISSUED FOR PERMIT
2	05/2021	REVISED FOR COMMENTS
3	05/2021	REVISED FOR COMMENTS
4	05/2021	REVISED FOR COMMENTS
5	05/2021	REVISED FOR COMMENTS
6	05/2021	REVISED FOR COMMENTS
7	05/2021	REVISED FOR COMMENTS
8	05/2021	REVISED FOR COMMENTS

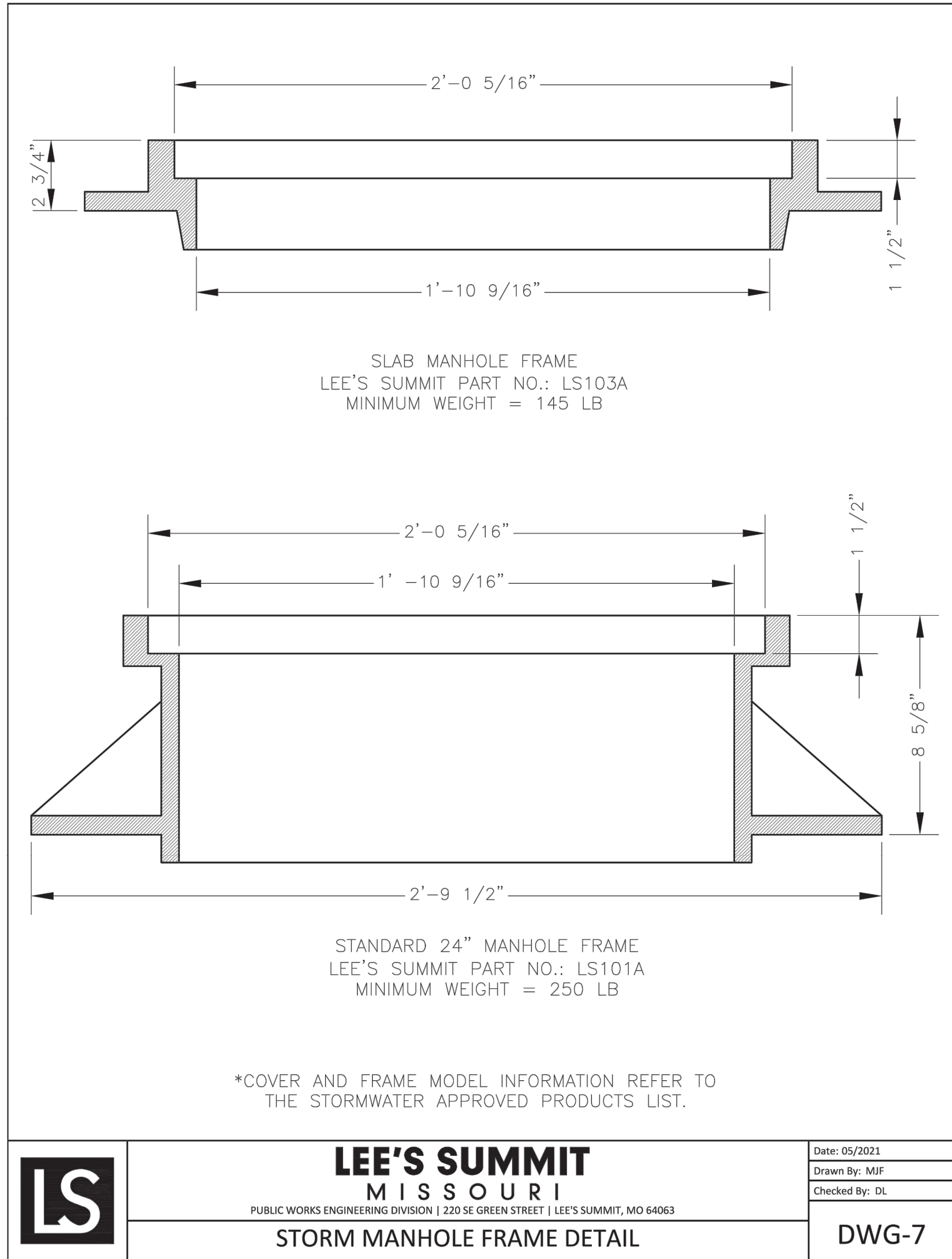
STORM DETAILS



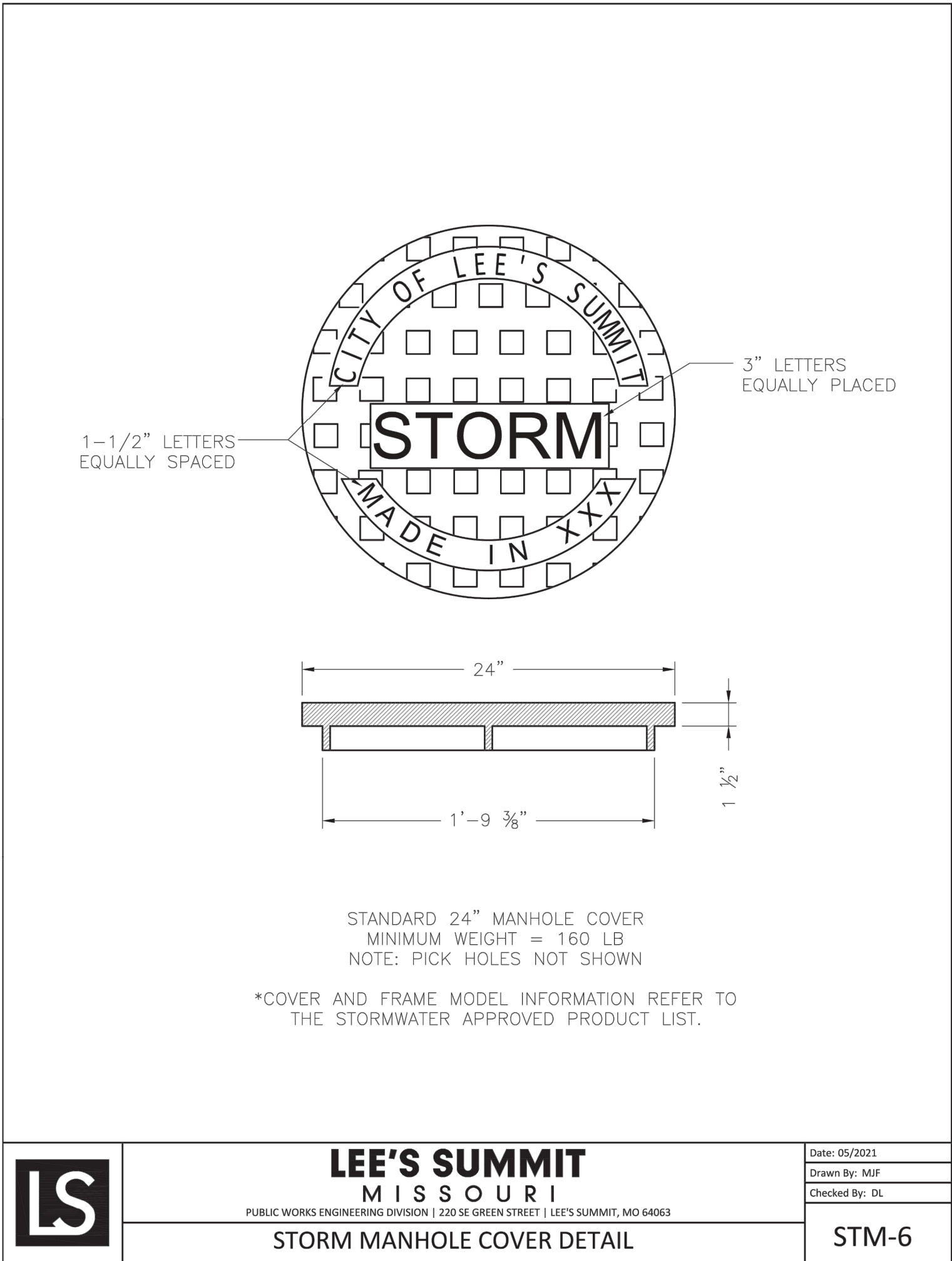
Manhole Cover Notes:

1. Raised surfaces shall be cast as non-skid finish.
2. Horizontal bearing surfaces shall be machined.
3. Mud ring is optional.
4. Paint is optional unless specified.

PRIVATE STORM RING AND COVER DETAIL



PUBLIC STORM RING AND COVER DETAIL



PREPARED BY:

SCHLAGEL & ASSOCIATES, P.A.

BLACKWELL RESERVE
STREET AND STORM SEWER PLANS
SE SHENANDOAH DRIVE LEE'S SUMMIT, MO

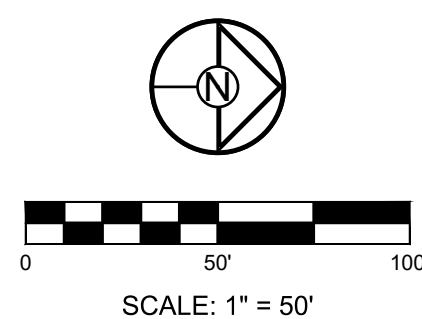
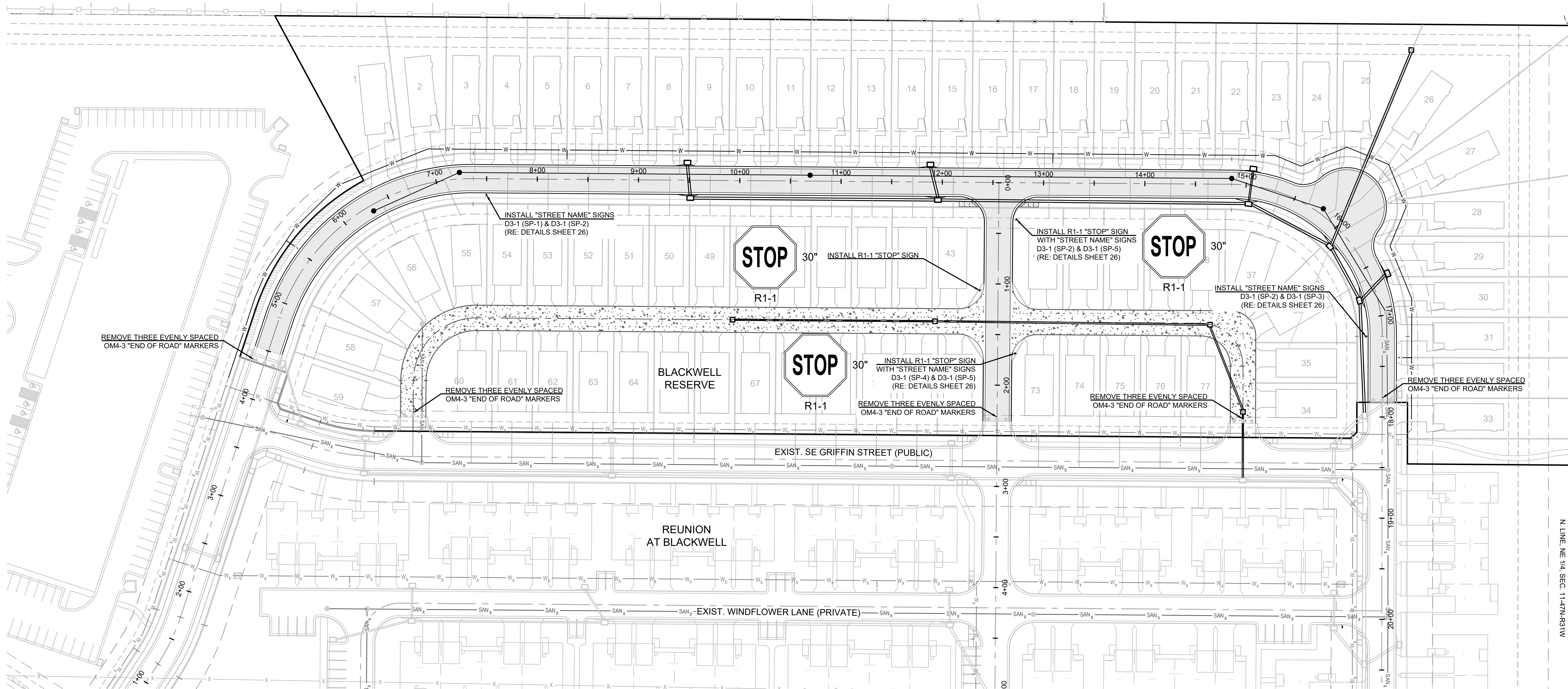
REVISION DATE	DESCRIPTION
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DRAWN BY:	TRC
CHECKED BY:	MAB
DATE PREPARED:	03/03/2023
PROJ. NUMBER:	22-593

STORM DETAILS

SHEET

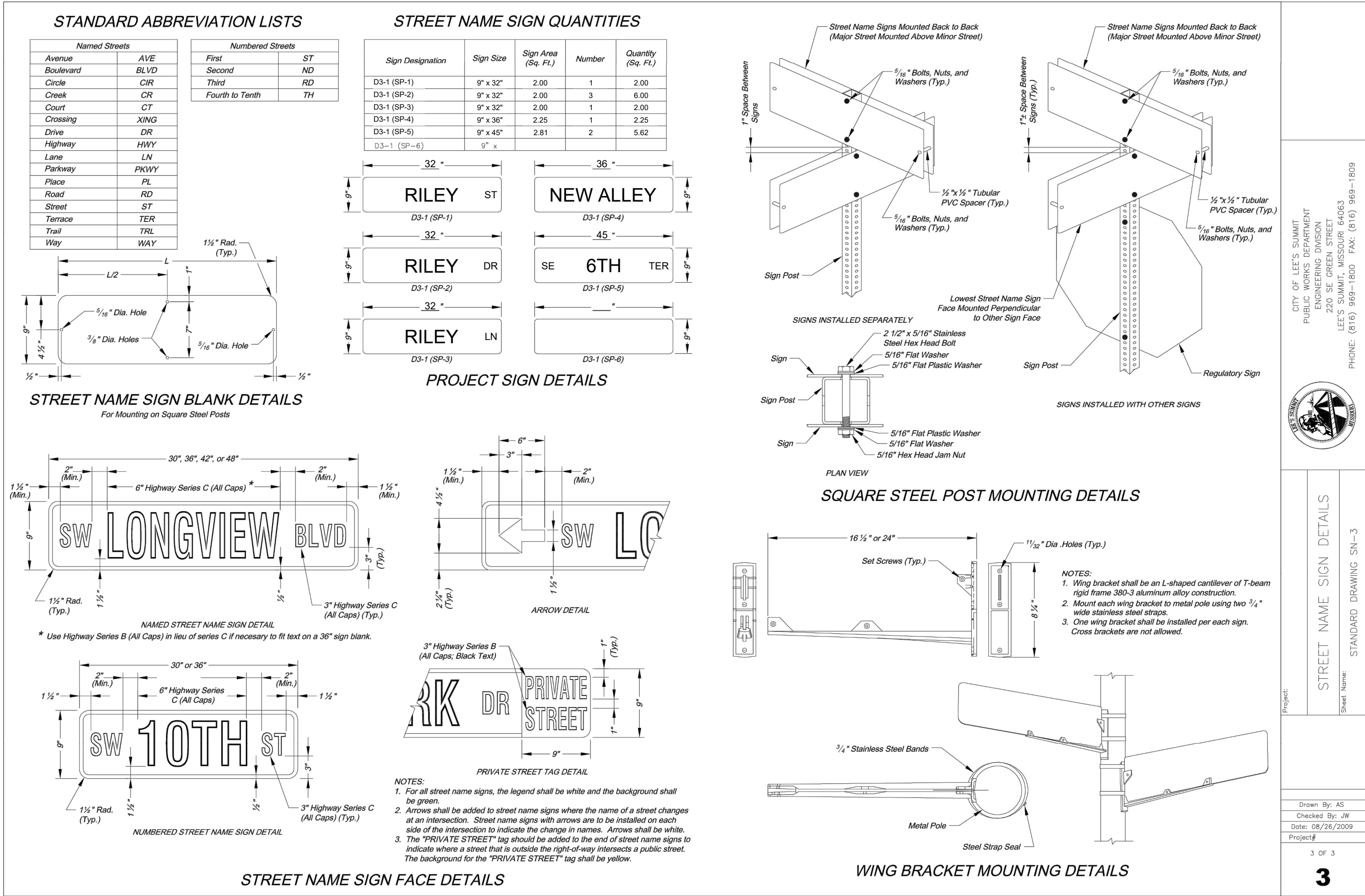
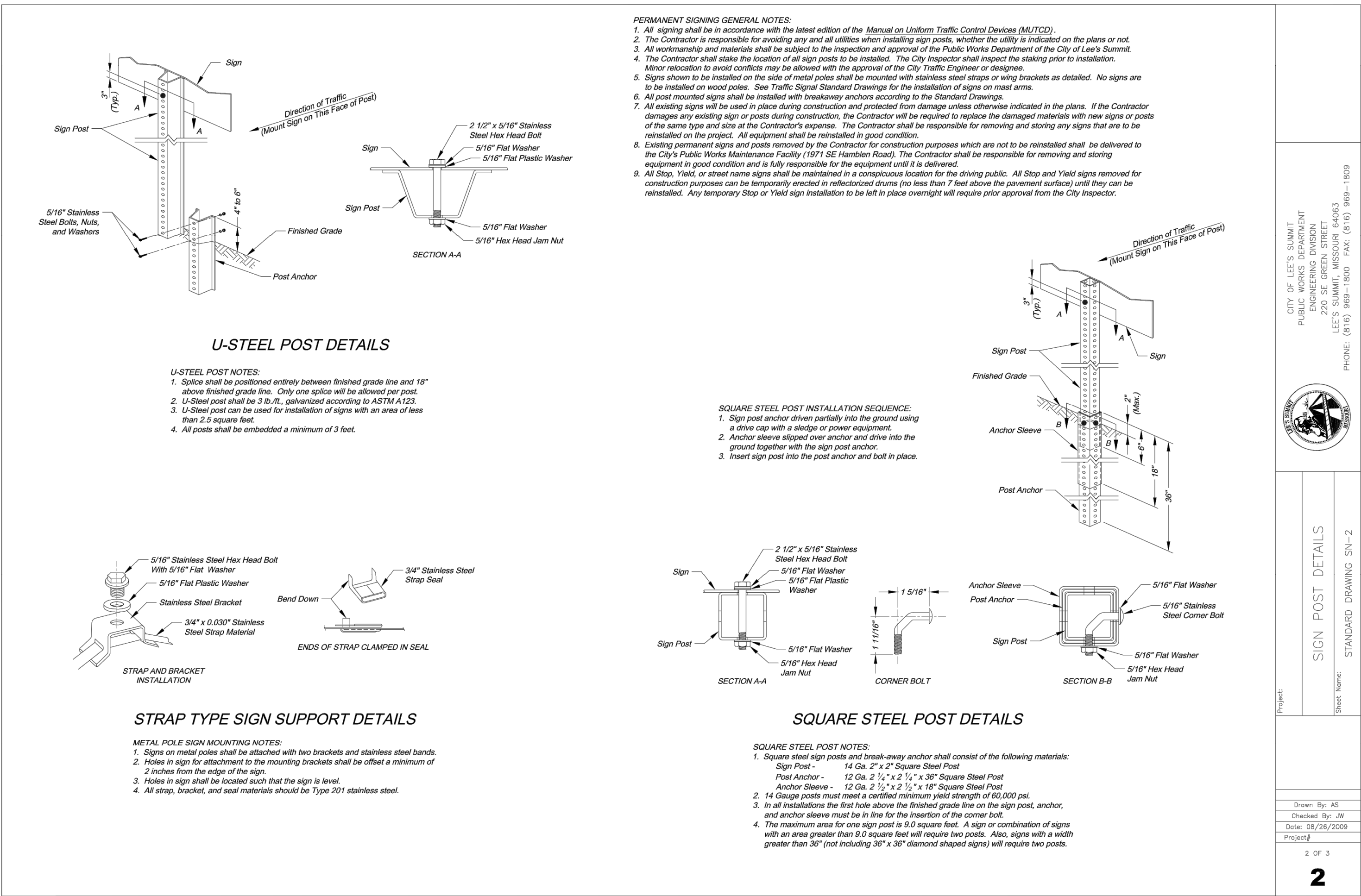
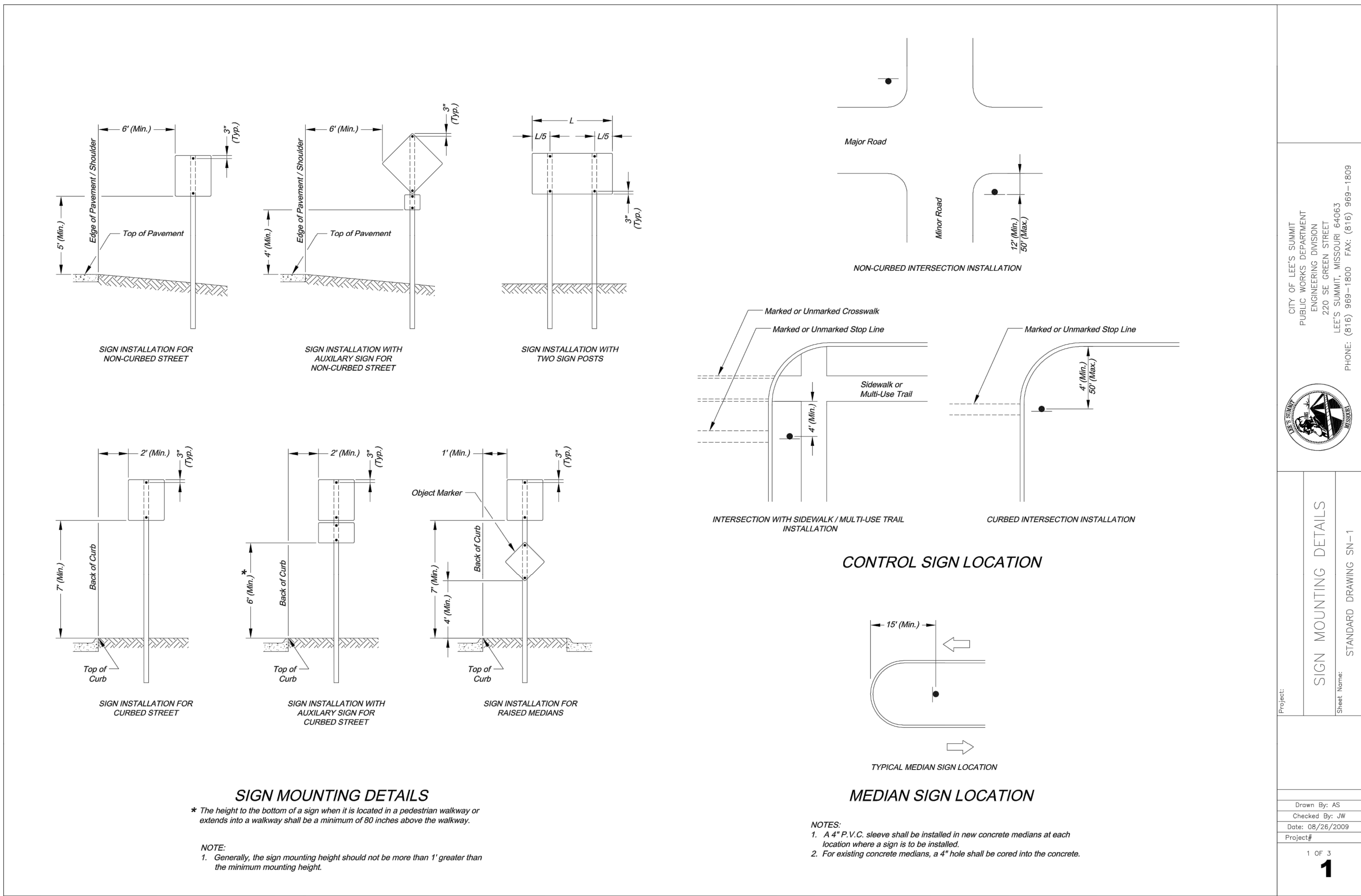
24



BLACKWELL RESERVE
STREET AND STORM SEWER PLANS
SE SHENANDOAH DRIVE LEE'S SUMMIT, MO

REVISION	DATE	DESCRIPTION
1	03/03/2023	ISSUED FOR PERMIT
2	03/03/2023	REVISED TO ADD STORM SEWER LINES
3	03/03/2023	REVISED TO ADD 'STOP' SIGN LOCATIONS
4	03/03/2023	REVISED TO ADD 'STREET NAME' SIGN LOCATIONS
5	03/03/2023	REVISED TO ADD 'END OF ROAD' MARKER REMOVAL LOCATIONS
6	03/03/2023	REVISED TO ADD 'STOP' SIGN LOCATIONS
7	03/03/2023	REVISED TO ADD 'STREET NAME' SIGN LOCATIONS
8	03/03/2023	REVISED TO ADD 'END OF ROAD' MARKER REMOVAL LOCATIONS
9	03/03/2023	REVISED TO ADD 'STOP' SIGN LOCATIONS
10	03/03/2023	REVISED TO ADD 'STREET NAME' SIGN LOCATIONS

STREET SIGN
PLAN



PREPARED BY:

SCHLAGEL & ASSOCIATES, P.A.

BLACKWELL RESERVE
STREET AND STORM SEWER PLANS

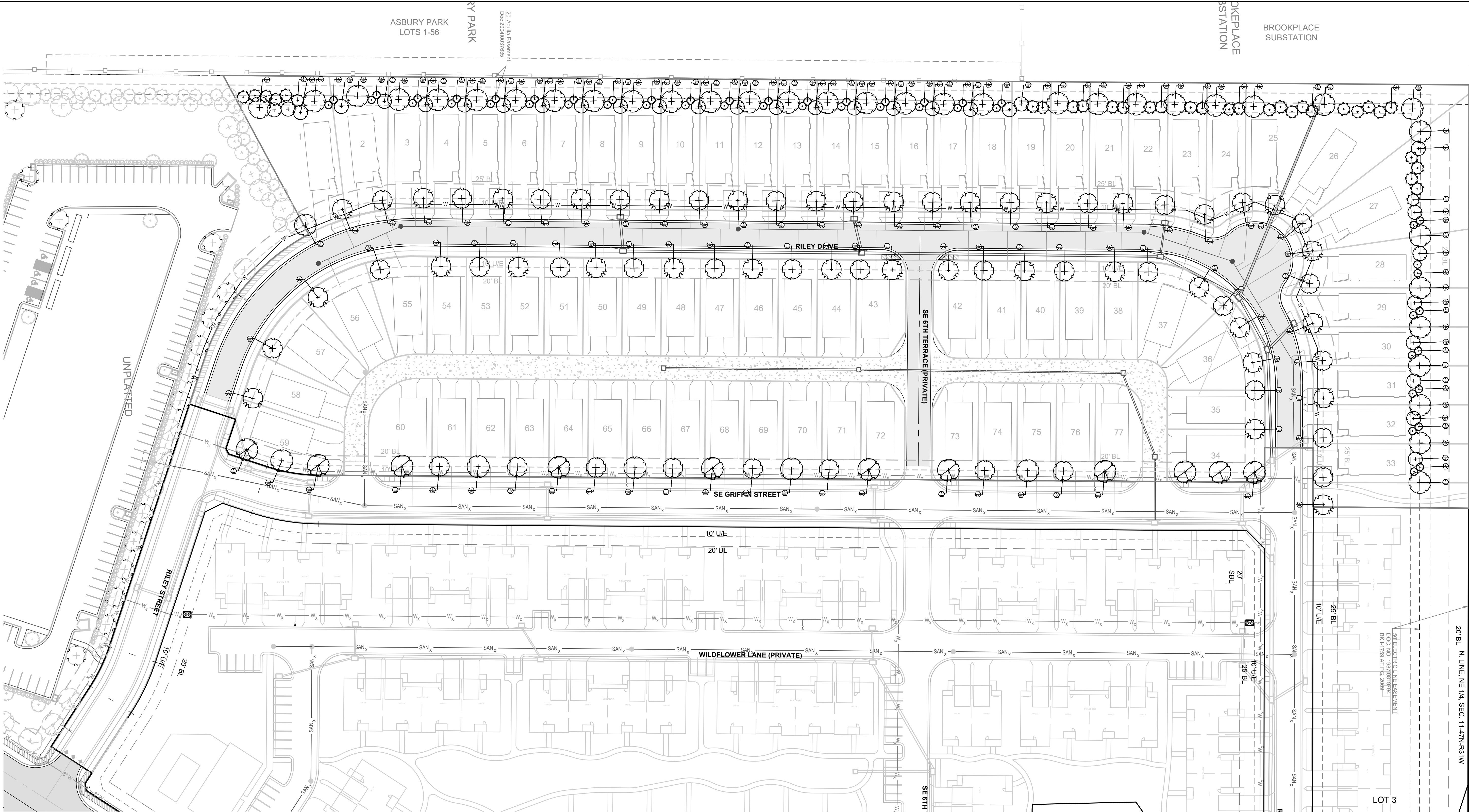
SE SHENANDOAH DRIVE LEE'S SUMMIT, MO

REVISION DATE	DESCRIPTION
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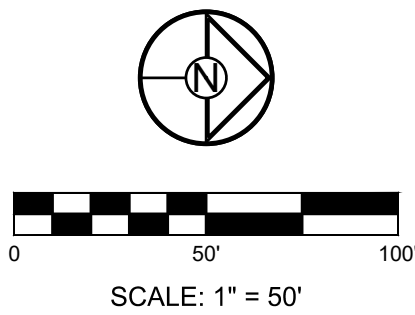
STREET SIGN
DETAILS

SHEET

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SHADE TREES			
	11 EA.	Acer miyabei 'Morton'	State Street Miyabe Maple
	33 EA.	Acer truncatum 'Warrenrd'	Pacific Sunset Maple
	5 EA.	Ginkgo biloba "Princeton Sentry"	Princeton Sentry Ginkgo
	35 EA.	Quercus rubra	Red Oak
	1 EA.	Quercus shumardii	Shumard Oak
	38 EA.	Ulmus x Frontier	Frontier Elm
ORNAMENTAL TREES			
	30 EA.	Amelanchier canadensis	Shadblow Serviceberry
EVERGREEN TREES			
	50 EA.	Juniperus chinensis 'Keteleeri'	Keteleeri Juniper
	33 EA.	Juniperus virginiana 'Canaertii'	Canaert Juniper



SCHLAGEL

ENGINEERS PLANNERS SURVEYORS LANDSCAPE ARCHITECTS

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Missouri State Certificate of Authority
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PREPARED BY:

SCHLAGEL & ASSOCIATES, P.A.

BLACKWELL RESERVE

STREET AND STORM SEWER PLANS

SE SHENANDOAH DRIVE LEE'S SUMMIT, MO

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LANDSCAPE PLAN