HIGHLAND MEADOWS - 5TH PLAT STREET, STORM SEWER, AND EROSION CONTROL PLANS

LEE'S SUMMIT, JACKSON COUNTY, MISSOURI

SEC. 10, TWP. 47N, RNG. 32W

VICINITY MAP

SECTION 10, TOWNSHIP 47, RANGE 32 LEE'S SUMMIT, JACKSON COUNTY, MISSOURI NOT TO SCALE

LEGAL DESCRIPTION:

THE EAST HALF OF THE SOUTHEAST QUARTER OF MEADOWS FIRST PLAT, HIGHLAND MEADOWS SECOND PLAT, HIGHLANDS MEADOWS THIRD PLAT, HIGHLAND MEADOWS 4TH PLAT, SUBDIVISIONS IN LEE'S SUMMIT, JACKSON COUNTY, MISSOURI.

OIL AND GAS WELL NOTES:

PROPOSED CONSTRUCTION ACTIVITIES, PER THE MISSOURI DEPARTMENT OF NATURAL RESOURCES (MDNR) PERMITTED OIL AND GAS DATABASE, DATED



UTILITY CONTACTS:

SANITARY & WATER: CITY OF LEE'S SUMMIT JEFF THORN 220 SE GREEN STREET LEE'S SUMMIT, MO 64063 PHONE (816) 969-1900

<u>STREETS:</u> CITY OF LEE'S SUMMIT MICHAEL PARK 220 SE GREEN STREET LEE'S SUMMIT, MO 64063

PHONE (816) 969-1900

EVERGY: DOUG DAVIN 1300 SE HAMBLEN ROAD LEE'S SUMMIT, MO 64081 PHONE (816) 347-4320

PHONE (816) 969-1800

RONALD GIPFERT 500 E 8TH STREET KANSAS CITY, MO 64106 PHONE (816) 275-1550

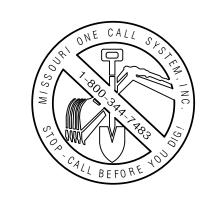
MISSOURI GAS ENERGY: RICHARD FROCK 3025 SW CLOVER DRIVE LEE'S SUMMIT, MO 64082 PHONE (816) 472-3489

FEMA FLOOD INFORMATION:

THE SITE IS LOCATED IN ZONE X, AREA OF MINIMAL FLOOD HAZARD, PER FEMA FIRM MAP 29095C0418G: EFFECTIVE DATE OF JANUARY 20, 2017. NO LETTERS OF MAP AMENDMENT OR REVISIONS ARE BEING PROPOSED.

BENCHMARK:

BM #1 N=999843.9665 E=2898946.9717 ELEV=935.04 DESCRIPTION = "JA-148" REFERENCE SYSTEM MONUMENT



STORMWATER:

CITY OF LEE'S SUMMIT PUBLIC WORKS 220 SE GREEN STREET LEE'S SUMMIT, MO 64063

SURVEY CONTROL:

WATERSHED: LITTLE BLUE RIVER

AT REFERENCE MONUMENT JA-148.

DATE: 2/26/2021

COORDINATES ARE BASED ON THE MISSOURI STATE PLANE COORDINATE SYSTEM, WEST ZONE, USING JACKSON COUNTY, MISSOURI, GEOGRAPHIC REFERENCE SYSTEM MONUMENT JA-148 (2003 ADJUSTMENT) AND ARE MODIFIED FROM GRIS COORDINATES TO GROUND COORDINATES BY

PROJECT ELEVATIONS ARE BASED ON JACKSON COUNTY, MISSOURI, GEOGRAPHIC REFERENCE SYSTEM MONUMENT JA-148 (2003 ADJUSTMENT).

UTILIZING A GRID SCALE FACTOR OF 0.9999020

"JA-148" - STANDARD KC METRO ALUMINUM GRS DISK SET IN CONCRETE FLUSH WITH THE GROUND AND STAMPED "JA-148, 2002" LOCATED ON THE NORTH SIDE OF 3RD STREET, 12.5 FEET NORTH OF A SIDEWALK AND 102.5 FEET WEST OF THE PARKING LOT EXIT OF CEDAR CREEK ELEMENTARY SCHOOL.

GENERAL NOTES:

- CONTRACTOR SHALL SATISFY THEMSELVES AS TO THE EXISTING CONDITIONS OF THE SITE AND HAVE ALL UTILITIES MARKED PRIOR TO COMMENCING CONSTRUCTION.
- 2. CONTRACTOR SHALL POTHOLE ALL CONNECTION POINTS TO EXISTING UTILITIES AND POTENTIAL UTILITY CONFLICT LOCATIONS PRIOR TO ANY CONSTRUCTION ACTIVITIES. NOTIFY ENGINEER IMMEDIATELY IF CONFLICT OR DISCREPANCY EXISTS.
- 3. CONTRACTOR SHALL PROTECT EXISTING STRUCTURES TO REMAIN FROM DAMAGE DURING DEMOLITION AND CONSTRUCTION. ANY DAMAGE SHALL BE REPAIRED / REPLACED TO PRE-CONSTRUCTION CONDITION AT CONTRACTOR'S EXPENSE.
- 4. THE CONTRACTOR SHALL CONTACT THE CITY'S DEVELOPMENT SERVICES ENGINEERING INSPECTION TO SCHEDULE A PRE-CONSTRUCTION MEETING WITH A FIELD ENGINEERING INSPECTOR PRIOR TO ANY LAND DISTURBANCE WORK AT (816) 969-1200.

SHEET INDEX: CVR - COVER SHEET

LOTS: 134-159 (26 TOTAL

CVR - COVER SHEET
CO50 — GENERAL NOTES
C101 — TYPICAL SECTIONS
C102 — GENERAL LA YOUT
C103 — 12TH STREET PLAN & PROFILE
C104 - 12TH TERR. & LONGVIEW BLVD. PLAN & PROF
C105 — STREET SIGNAGE PLAN
C106 — GRADING PLAN
C201 — DRAINAGE AREA PLAN
C2O2 — DRAINAGE CALCULATIONS
C2O3 - STORM SEWER PLAN & PROFILE
C204 - STORM SEWER PLAN & PROFILE (2)
C205 – DETENTION BASIN PLAN & PROFILÉ
C206 — MINIMUM BUILDING OPENING PLAN
C301 — PRE-CLEARING EROSION CONTROL PLAN
C302 - INTERMEDIATE EROSION CONTROL PLAN
C303 - FINAL STABILIZATION EROSION CONTROL PLAN
C401 — ADA RAMP PLAN
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C406 - MATCH EXISTING PAVEMENT DETAILS
C407 — SIGN POST & MOUNTING DETAILS
C408 — STREET NAME SIGN DETAILS
C501 — STORM SEWER DETAILS
C502 — STORM SEWER DETAILS (2)
C503 — STORM SEWER DETAILS (3)
OFOA OUDD & CIDEWALK DETAILS

- CURB & SIDEWALK DETAILS - CONSTRUCTION ENTRANCE DETAILS STEEP SLOPE PROTECTION DETAILS

- OUTLET PROTECTION DETAILS

PROJECT SPECIFICATIONS:

THE SPECIFICATIONS FOR THIS PROJECT SHALL BE THE FOLLOWING:

1. MOST CURRENT VERSION OF THE DESIGN AND CONSTRUCTION MANUAL OF THE CITY OF LEE'S SUMMIT AS ADOPTED BY ORDINANCE 5813.

THE STANDARD SPECIFICATIONS THROUGH AND INCLUDING THE LATEST AMENDMENTS SHALL BE PART OF THESE PROJECT DRAWINGS AND SPECIFICATIONS AND ARE INCORPORATED HEREIN BY REFERENCE. THE MORE STRINGENT OF THESE STANDARD SPECIFICATIONS AND THOSE PREPARED BY THE ENGINEER PREPARING THESE PLANS SHALL GOVERN.

PREPARED & SUBMITTED BY:

ANDERSON ENGINEERING INC. KANSAS CITY, MISSOURI

ZACH MYERS, P.E. MISSOURI P.E. NO. 2012009232 DATE

	REVISIONS			DR/	DRAWING INFO.
Ö.	DESCRIPTION	ВУ	DATE	BY DATE DRAWN BY:	29
1.	REVISED PER CITY COMMENTS	CC	1/15/21	GC 1/15/21 CHECK BY:	ZM
2.	REVISED PER CITY COMMENTS	CC	2/26/21	GC 2/26/21 LICENSE NO.	PE-201200923
				DATE:	12/2/2020
				ISSUED FOR:	FOR REVIEW
				JOB NUMBER:	20KC10057
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SHE



SHEET NUMBER <u>of 40</u>

DEVELOPER:

BRAD KEMPF SUMMIT HOMES KC 120 SE 30TH STREET LEE'S SUMMIT, MO 64082 BRADLEY@SUMMITHOMESKC.COM (816) 927-9711

DISTURBED AREA: 15.3 AC

CIVIL ENGINEER:

ZACH MYERS ANDERSON ENGINEERING, INC. 941 W 141ST TERR KANSAS CITY, MO 64145 ZMYERS@ANDERSONENGINEERINGINC.COM (816) 380-4821

GENERAL NOTES

- 1. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO ACQUIRE ALL STATE AND CITY PERMITS, INCLUDING PERMITS REQUIRED BY OTHER GOVERNING BODIES, REQUIRED FOR THE CONSTRUCTION OF THIS PROJECT.
- 2. PRIOR TO BEGINNING CONSTRUCTION, THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING AND NOTIFYING ALL UTILITY COMPANIES AND SHALL FIELD VERIFY ALL UTILITIES THAT MAY BE ENCOUNTERED. THE INFORMATION SHOWN ON THESE PLANS CONCERNING THE TYPE AND LOCATION OF UNDERGROUND UTILITIES IS NOT GUARANTEED TO BE ACCURATE OR COMPLETE. IN THE EVENT THAT EXISTING UTILITIES ARE CONTACTED, DISRUPTED, OR IN ANY WAY ALTERED, CONTACT THE RESPECTIVE UTILITY COMPANY IMMEDIATELY. IN CASE OF EMERGENCY, DIAL 911.
- 3. THE CONTRACTOR SHALL PROVIDE EROSION AND SILT PROTECTION AS REQUIRED DURING CONSTRUCTION AND SHALL BE RESPONSIBLE FOR KEEPING EXISTING STREET AND ADJACENT LAND FEATURES AND PROPERTY FREE OF MUD AND SILT. SEE "EROSION CONTROL PLAN" FOR MINIMUM EROSION CONTROL MEASURES REQUIRED BY THESE PLANS. EROSION CONTROLS SHALL BE INSTALLED PRIOR TO THE COMMENCEMENT OF CONSTRUCTION. ONCE CONSTRUCTION BEGINS, THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING ALL EROSION CONTROL MEASURES AND SHALL PROMPTLY REPAIR ANY AREA REQUIRING ATTENTION UNTIL SUBSTANTIAL COMPLETION.
- 4. WARRANTY/DISCLAIMER: THE DESIGNS REPRESENTED IN THESE PLANS ARE IN ACCORDANCE WITH ESTABLISHED PRACTICES OF CIVIL ENGINEERING FOR THE DESIGN FUNCTIONS AND USES INTENDED BY THE OWNER AT THIS TIME. HOWEVER, NEITHER THE ENGINEER NOR ITS PERSONNEL CAN OR DO CERTIFY THESE DESIGNS OR PLANS AS CONSTRUCTED EXCEPT IN THE SPECIFIC CASES WHERE THE ENGINEER OBSERVES AND CONTROLS THE PHYSICAL CONSTRUCTION AND THE CONTINUAL BASIS AT THE SITE.
- 5. ALL CONSTRUCTION SHALL FOLLOW THE CITY OF LEE'S SUMMIT DESIGN AND CONSTRUCTION MANUAL AS ADOPTED BY ORDINANCE 5813. WHERE DISCREPANCIES EXIST BETWEEN THESE PLANS AND THE DESIGN AND CONSTRUCTION MANUAL, THE DESIGN AND CONSTRUCTION MANUAL SHALL PREVAIL.
- 6. THE CONTRACTOR SHALL PROVIDE AT LEAST ONE (1) CHEMICALLY TREATED PORTABLE TOILET UNIT, "SATELLITE CORPORATION", OR EQUAL FOR EVERY 20 WORKMEN ON THE JOB SITE. IN NO CASE SHALL LESS THAN ONE (1) BE PROVIDED. THE UNITS(S) SHALL REMAIN ON THE SITE DURING ALL ACTIVE PHASES OF CONSTRUCTION. THE CONTRACTOR SHALL ENFORCE THE USE OF THE PUBLIC VIEW TO THE GREATEST EXTENT PRACTICABLE.
- 7. ALL AREA TO BE FILLED AND SUBGRADES UNDER PAVEMENTS SHALL BE PROOF—ROLLED WITH A LOADED, RUBBER TIRED TRUCK PRIOR TO FILL PLACEMENT OR ROADWAY PAVING OPERATIONS BEGIN. SOFT OR UNSTABLE AREA SHALL BE REMOVED AND REPLACED WITH STRUCTURAL FILL.
- 8. PRIOR TO BEGINNING CONSTRUCTION, THE CONTRACTOR SHALL OBTAIN A COPY OF AND BECOME FAMILIAR WITH THE GEOTECHNICAL REPORT BY ANDERSON ENGINEERING INC., UNLESS SPECIFICALLY NOTED ON THE PLANS. THE RECOMMENDATIONS IN THE GEOTECHNICAL REPORT ARE HEREBY INCORPORATED INTO THE PROJECT REQUIREMENTS AND SPECIFICATIONS.
- 9. THE CONTRACTOR SHALL PROVIDE ALL CONSTRUCTION LAYOUT AND STAKING FOR THIS PROJECT.
- 10. ALL PIPE LENGTHS ARE SHOWN FROM STRUCTURE CENTER TO STRUCTURE CENTER.
- 11. ALL STRUCTURE STATION AND OFFSET CALLOUTS ARE TO THE CENTER OF STRUCTURE.
- 12. ALL CURB STATIONS, OFFSETS AND ELEVATIONS ARE TO THE TOP BACK OF CURB UNLESS OTHERWISE NOTED.
- 13. ALL CONNECTIONS TO EXISTING DRAINAGE STRUCTURES SHALL BE <u>SUBSIDIARY</u> TO NEW DRAINAGE CONSTRUCTION.
- 14. IT WILL BE THE RESPONSIBILITY OF THE CONTRACTOR TO ENSURE THAT ACCESS TO ALL PROPERTIES IS AVAILABLE DURING CONSTRUCTION OF THE PROJECT.
- 15. ALL SAW CUTS SHOWN ON THE PLANS SHALL NOT BE PAID FOR DIRECTLY, BUT SHALL BE CONSIDERED <u>SUBSIDIARY</u> TO OTHER ITEMS OF THE CONTRACT. THE DEPTH OF THE CUT SHALL BE FULL DEPTH.
- 16. EXISTING CONCRETE PAVEMENT AND EXISTING BITUMINOUS PAVEMENT THAT IS REMOVED WILL BECOME THE PROPERTY OF THE CONTRACTOR & DISPOSED OF AT HIS EXPENSE.
- 17. EXISTING DRAINAGE STRUCTURES THAT ARE REMOVED, INCLUDING END SECTIONS, SHALL BECOME THE PROPERTY OF THE CONTRACTOR UNLESS OTHERWISE NOTED ON THE PLANS.
- 18. CONTRACTOR SHALL FIELD VERIFY EXISTING PIPE ELEVATIONS.
- 19. CHANNELS SHALL BE CUT AT BOX CULVERTS (UNLESS OTHERWISE NOTED) TO FLOW LINE ELEVATIONS AND TO A WIDTH OF ONE FOOT OUTSIDE OF EACH OUTSIDE WALL AND WITH SLOPES OF 2 TO 1 PRIOR TO CONSTRUCTION OF THE CULVERT.
- 20. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO COORDINATE WITH THE UTILITY OWNERS TO LOCATE AND FLAG ALL RELOCATED UNDERGROUND UTILITIES PRIOR TO EXCAVATION TO AVOID DAMAGING THE UTILITIES. THE LOCATIONS SHOWN ON THE PLANS ARE THE ORIGINAL SURVEYED LOCATION, PRIOR TO RELOCATION IN SOME CASES. THE INFORMATION SHOWN IN THESE PLANS CONCERNING TYPE AND LOCATION OF UNDERGROUND UTILITIES IS NOT GUARANTEED TO BE ACCURATE OR ALL—INCLUSIVE. THE CONTRACTOR IS RESPONSIBLE FOR CONTACTING THE UTILITY COMPANIES PROVIDED FOR FIELD LOCATION OF ALL UNDERGROUND FACILITIES PRIOR TO ANY EXCAVATION. THE CONTRACTOR SHALL COORDINATE WITH THE PROPER UTILITY OWNERS DURING CONSTRUCTION OF THE PROPOSED STORM SEWER SYSTEM TO AVOID DAMAGES TO EXISTING FACILITIES. DAMAGE TO ANY FACILITIES WILL BE PAID FOR AT THE CONTRACTOR'S EXPENSE.
- 21. ALL TREES, SHRUBS, BUSHES, AND BRUSH WITHIN THE GRADING LIMITS SHALL BE REMOVED BY THE CONTRACTOR UNLESS SPECIFICALLY INDICATED TO BE SAVED ON THE PLANS.
- 22. ALL SIGNS REMOVED BY THE CONTRACTOR SHALL BECOME PROPERTY OF THE CITY, UNLESS NOT DESIRED BY CITY. IF NOT DESIRED BY CITY, CONTRACTOR SHALL REMOVE AND DISPOSE OF SIGNS AT HIS EXPENSE.
- 23. DRAINAGE STRUCTURES WHICH ARE TO REMAIN, WHETHER EXTENDED OR NOT, SHALL BE CLEANED OUT BY THE CONTRACTOR, AS DIRECTED BY THE CITY.
- 24. CONTRACTOR SHALL ACCOMPANY A DESIGNATED CITY REPRESENTATIVE DURING A PHOTOGRAPHY & VIDEO TOUR BEFORE ANY CONSTRUCTION BEGINS TO RECORD EXISTING CONDITIONS.
- 25. THE CONTRACTOR SHALL THOROUGHLY REVIEW AND BECOME FAMILIAR WITH THE PROJECT PLANS, SPECIFICATIONS AND ANY SPECIAL CONDITIONS OF THE CONTRACT DOCUMENTS PRIOR TO BEGINNING CONSTRUCTION OF THIS PROJECT.

- 26. DRIVEWAYS, SIDEWALKS, PARKING LOTS, YARD LIGHTS, FENCES, SPRINKLER SYSTEMS, UTILITY SERVICE LINE CONNECTIONS, LANDSCAPING, SEPTIC SYSTEMS, AND OTHER AREAS OUTSIDE THE CONSTRUCTION EASEMENTS THAT ARE DAMAGED BY THE CONTRACTOR SHALL BE RESTORED AT HIS EXPENSE TO A CONDITION EQUAL TO OR BETTER THAN EXISTING BEFORE DAMAGE OCCURRED.
- 27. ALL WORK SHALL BE CONFINED WITHIN THE EASEMENTS AND/OR GRADING LIMITS AS DIRECTED BY THE ENGINEER. ALL TEMPORARY CONSTRUCTION EASEMENTS SHALL BE STAKED BY THE CONTRACTOR PRIOR TO BEGINNING OF CONSTRUCTION. ALL GRADING LIMITS SHOWN ARE APPROXIMATE AND MAY BE EXTENDED OR REDUCED AT THE DIRECTION OF THE ENGINEER.
- 28. THE CONTRACTOR SHALL PROVIDE ADEQUATE SEDIMENT AND EROSION CONTROL TO PREVENT SEDIMENT AND/OR DEBRIS FROM ENTERING STREETS OPEN TO TRAFFIC THE COMPLETED STORM SEWER SYSTEM, OR YARDS OF ADJACENT RESIDENCES AND BUSINESSES.
- 29. ALL TEMPORARY TRAFFIC CONTROL SIGNS SHALL BE FABRICATED AND INSTALLED IN ACCORDANCE WITH THE LATEST M.U.T.C.D. THE TRAFFIC CONTROL PLANS SHOWN ARE MINIMUM REQUIREMENTS ONLY AND DO NOT ATTEMPT TO ADDRESS IN DEPTH THE VARIETY OF SITUATIONS THAT MAY OCCUR ONCE CONSTRUCTION BEGINS. THE REQUIREMENTS SHOWN IN NO WAY RELIEVE THE CONTRACTOR OF HIS RESPONSIBILITY FOR SELECTING & IMPLEMENTING THE PROPER DEVICES AND PROCEDURES THAT WILL ASSURE THE SAFETY OF MOTORISTS, PEDESTRIANS, & WORKERS AT ALL TIMES.
- 30. LABOR, TOOLS, MATERIALS, AND EQUIPMENT REQUIRED FOR TEMPORARY CONNECTIONS TO MAINTAIN POSITIVE DRAINAGE DURING CONSTRUCTION SHALL BE <u>SUBSIDIARY</u> TO OTHER PAY ITEMS.
- 31. REMOVAL OF EXISTING STRUCTURES SHALL INCLUDE, BUT NOT BE LIMITED TO, THE ITEMS NOTED IN THE PLANS AND IN THE SUMMARY OF QUANTITIES. WORK SHALL BE PAID FOR UNDER BID ITEM "REMOVAL OF EXISTING STRUCTURES". CONTRACTOR WILL DISPOSE OF EXISTING STRUCTURES AT HIS EXPENSE.
- 32. THE CONTRACTOR WILL BE RESPONSIBLE FOR SUPPORTING AND PROTECTING ALL EXPOSED UTILITIES IN OPEN TRENCHES. WORK SHALL BE <u>SUBSIDIARY</u> TO OTHER PAY ITEMS.
- 33. CONTRACTOR SHALL FIELD VERIFY THE LOCATION OF THE EXISTING STORM SEWER PIPES AND ADJUST THE PROPOSED FLOWLINE ELEVATIONS, PIPE LENGTHS, AND STRUCTURES AS EACH SECTION OF THE EXISTING DRAINAGE STRUCTURE IS REMOVED AND UNCOVERED.
- 34. EXCESS MATERIAL SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR FOR DISPOSAL.
- 35. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SITE SAFETY AT ALL TIMES.
- 36. CONTRACTOR RESPONSIBLE FOR CONSTRUCTION OF ALL ADA—ACCESSIBLE RAMPS, AS WELL AS ANY SIDEWALK ADJACENT TO TRACTS OR UNPLATTED LAND, AT THE TIME OF INFRASTRUCTURE IMPROVEMENTS.
- 37. CONTRACTOR TO CONSTRUCT STORMWATER MANAGEMENT FACILITIES, SPECIFICALLY THOSE FEATURES RELATED TO DETENTION, PRIOR TO ANY LAND DISTURBANCE OF THE SITE AND PRIOR TO THE CONSTRUCTION OF ANY OTHER SITE DEVELOPMENT WORK AS NOT TO EFFECT DOWNSTREAM NEIGHBORS WITH UNDETAINED STORMWATER DISCHARGE.
- 38. AN AS-GRADED AND AS-BUILT DRAWING SHALL BE SUBMITTED TO AND REVIEWED BY THE CITY FIR THE DETENTION BASIN. THIS SHALL BE REQUIRED PRIOR TO ISSUANCE OF A CERTIFICATE OF SUBSTANTIAL COMPLETION. ALL PRECAUTIONS SHOULD BE TAKEN TO ENSURE DETENTION POND AND OUTLET STRUCTURE ARE CONSTRUCTED ACCORDING TO THE APPROVED PLANS; VOLUMES AND ELEVATIONS ARE CRITICAL FOR AS-BUILT APPROVAL. THE CITY SHALL BE PROVIDED WITH AN AS-BUILT SURVEY OF THE DETENTION, OUTLET STRUCTURE INCLUDING ALL WEIR ELEVATIONS AND STORM SYSTEM INCLUDING ALL THE INVERTS, STAMPED BY A MISSOURI LICENSED ENGINEER.

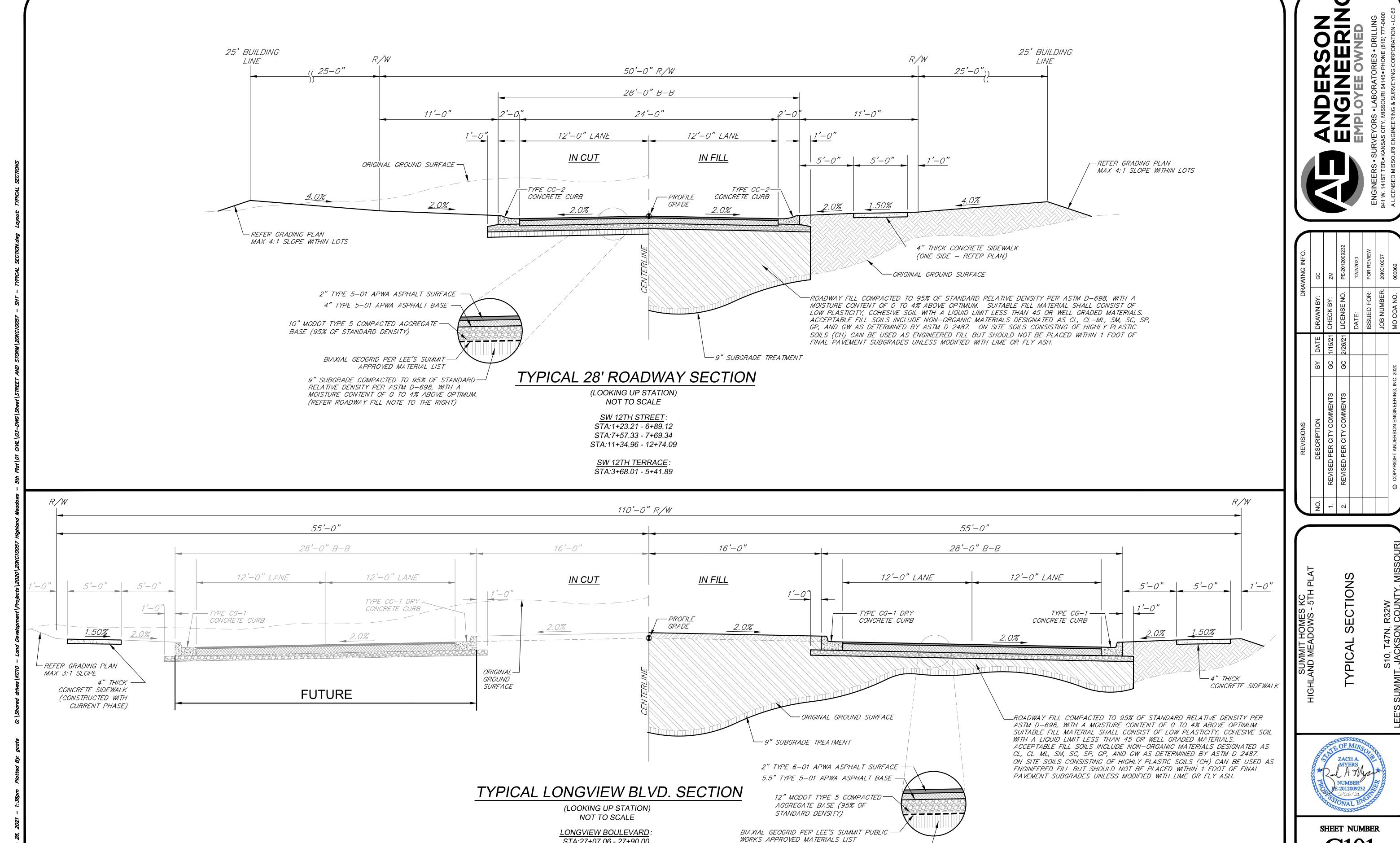


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NO.	DESCRIPTION	ВУ	DATE	DATE DRAWN BY:	29
1.	REVISED PER CITY COMMENTS	29	1/15/21	GC 1/15/21 CHECK BY:	ZM
2.	REVISED PER CITY COMMENTS	OS	2/26/21	GC 2/26/21 LICENSE NO.	PE-2012009232
				DATE:	12/2/2020
				ISSUED FOR:	FOR REVIEW
				JOB NUMBER:	20KC10057
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ENERAL NOTES



CO50
2 of 40



STA:27+07.06 - 27+90.00

9" SUBGRADE COMPACTED TO 95% OF STANDARD-RELATIVE DENSITY PER ASTM D-698, WITH A

MOISTURE CONTENT OF 0 TO 4% ABOVE OPTIMUM.

(REFER ROADWAY FILL NOTE TO THE RIGHT)

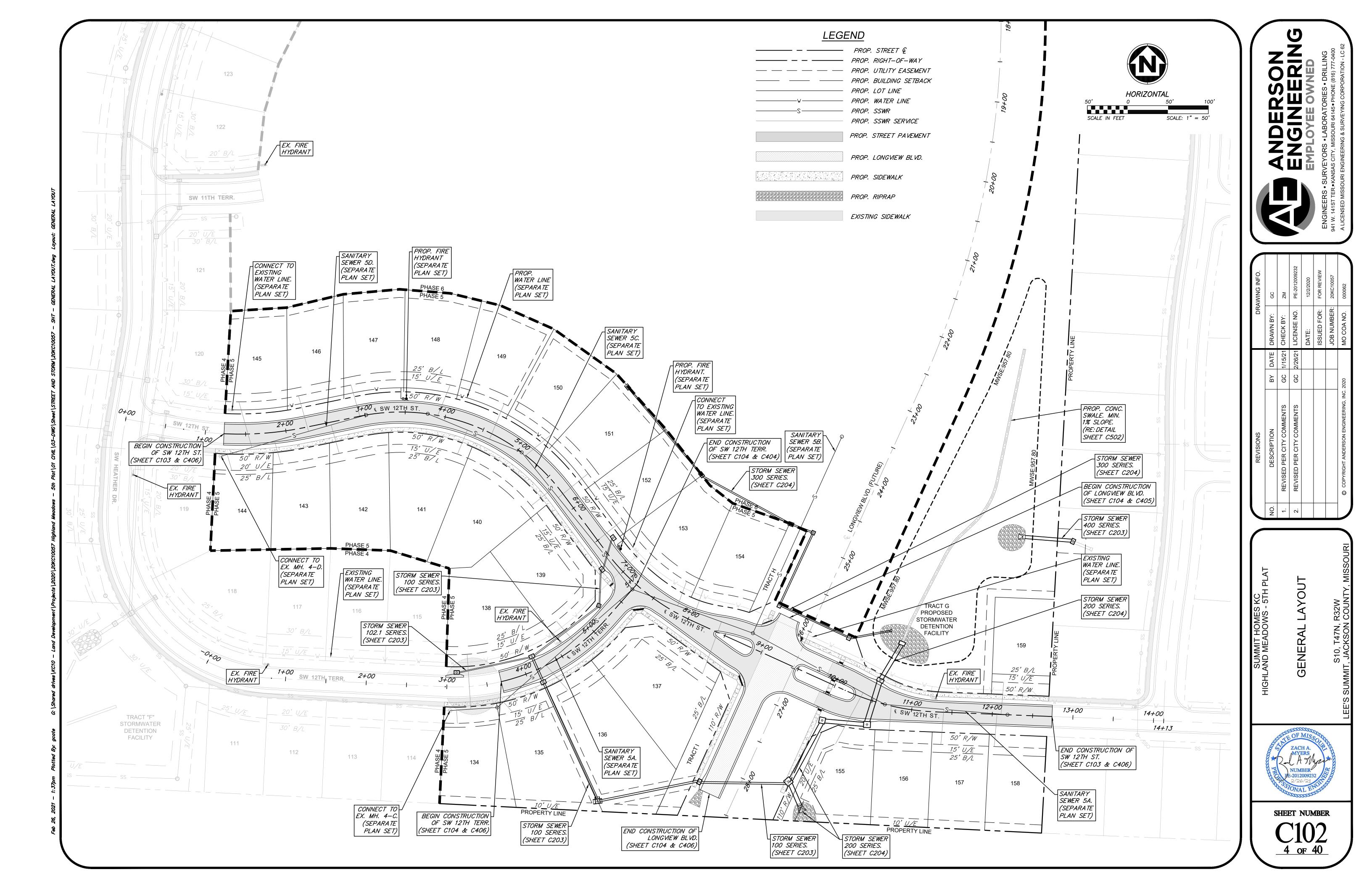


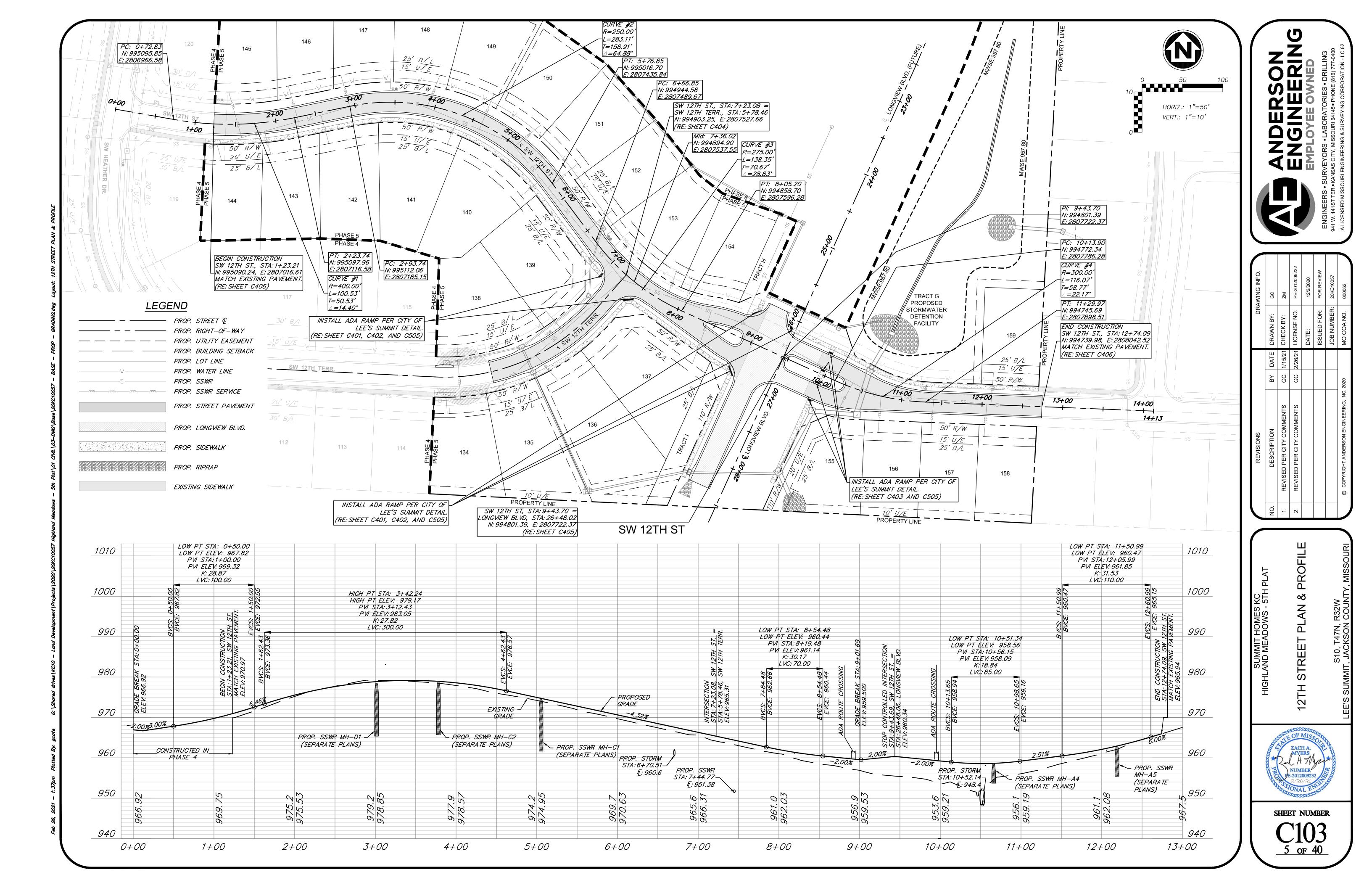
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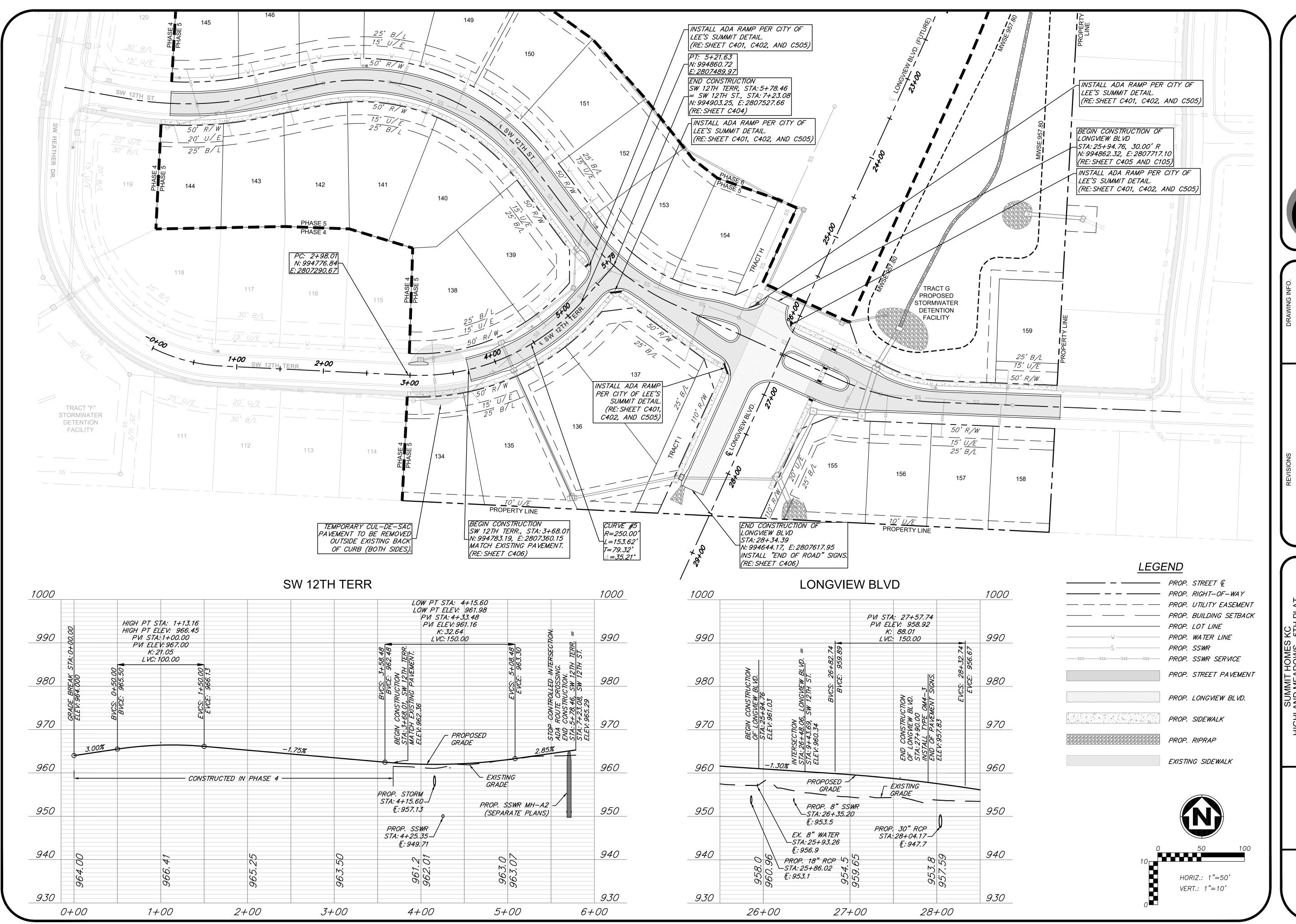
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SHEET NUMBER 3 of 40











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NO.	DESCRIPTION	ВУ	DATE	BY DATE DRAWN BY:	29
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				DATE:	12/2/20
				ISSUED FOR:	FOR RE
				JOB NUMBER:	20KC10
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2TH TERR. & LONGVIEW BLV PLAN & PROFILE

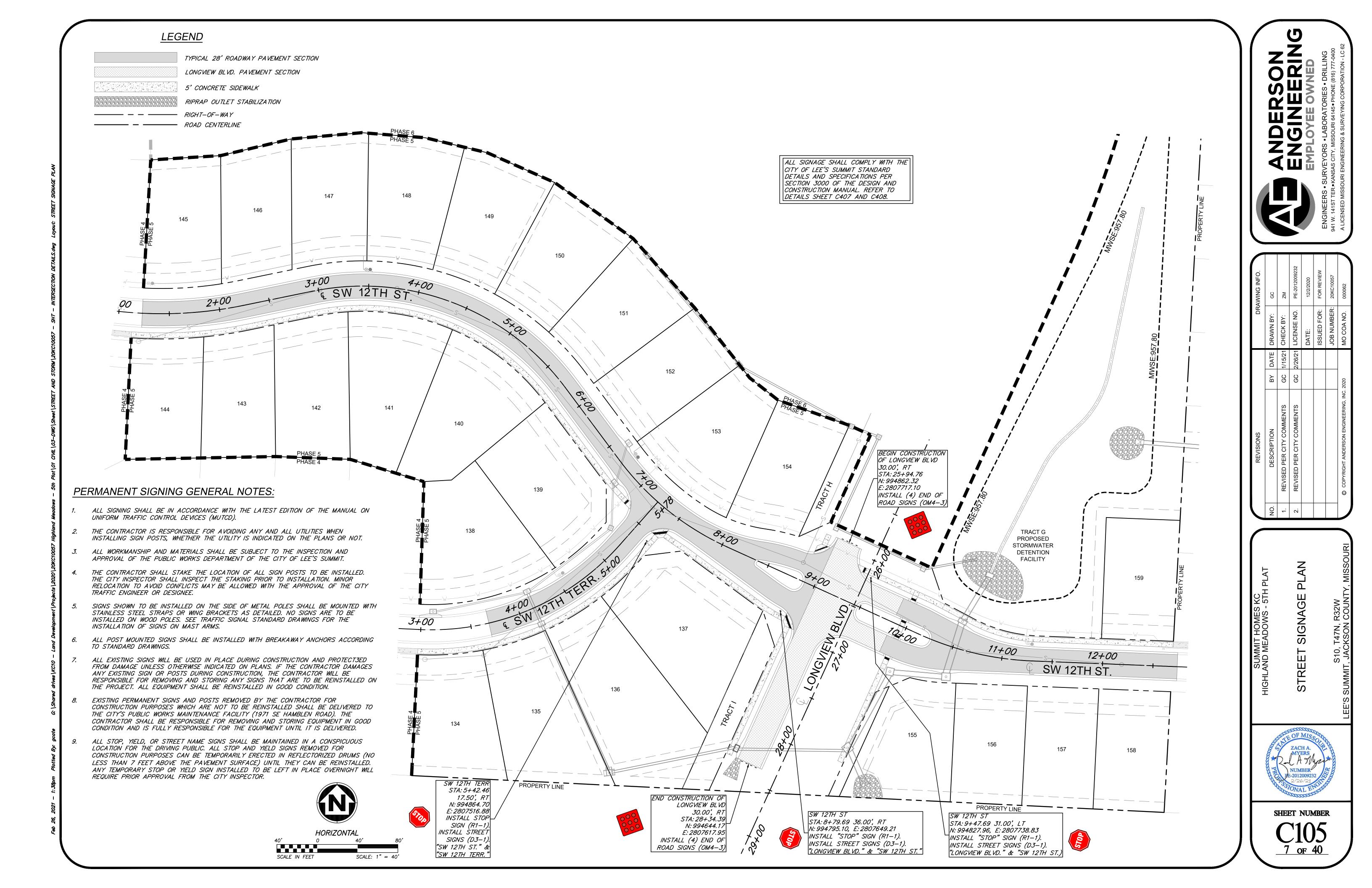
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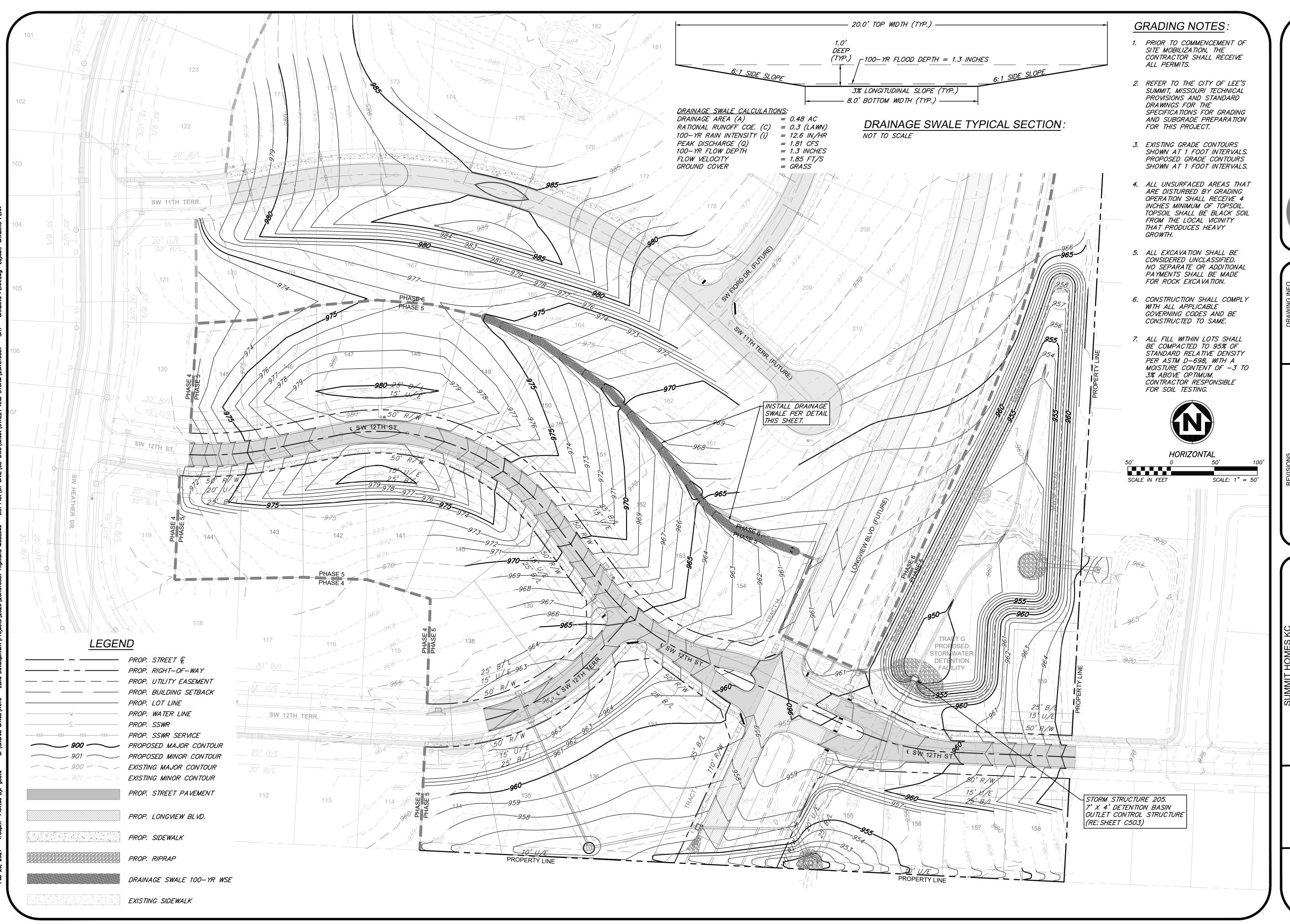


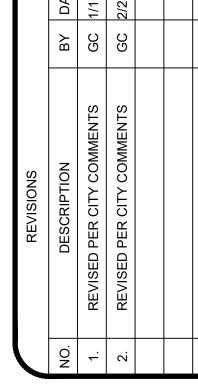
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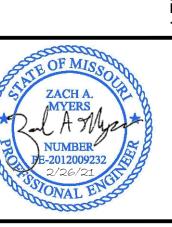






GRADING PLAN

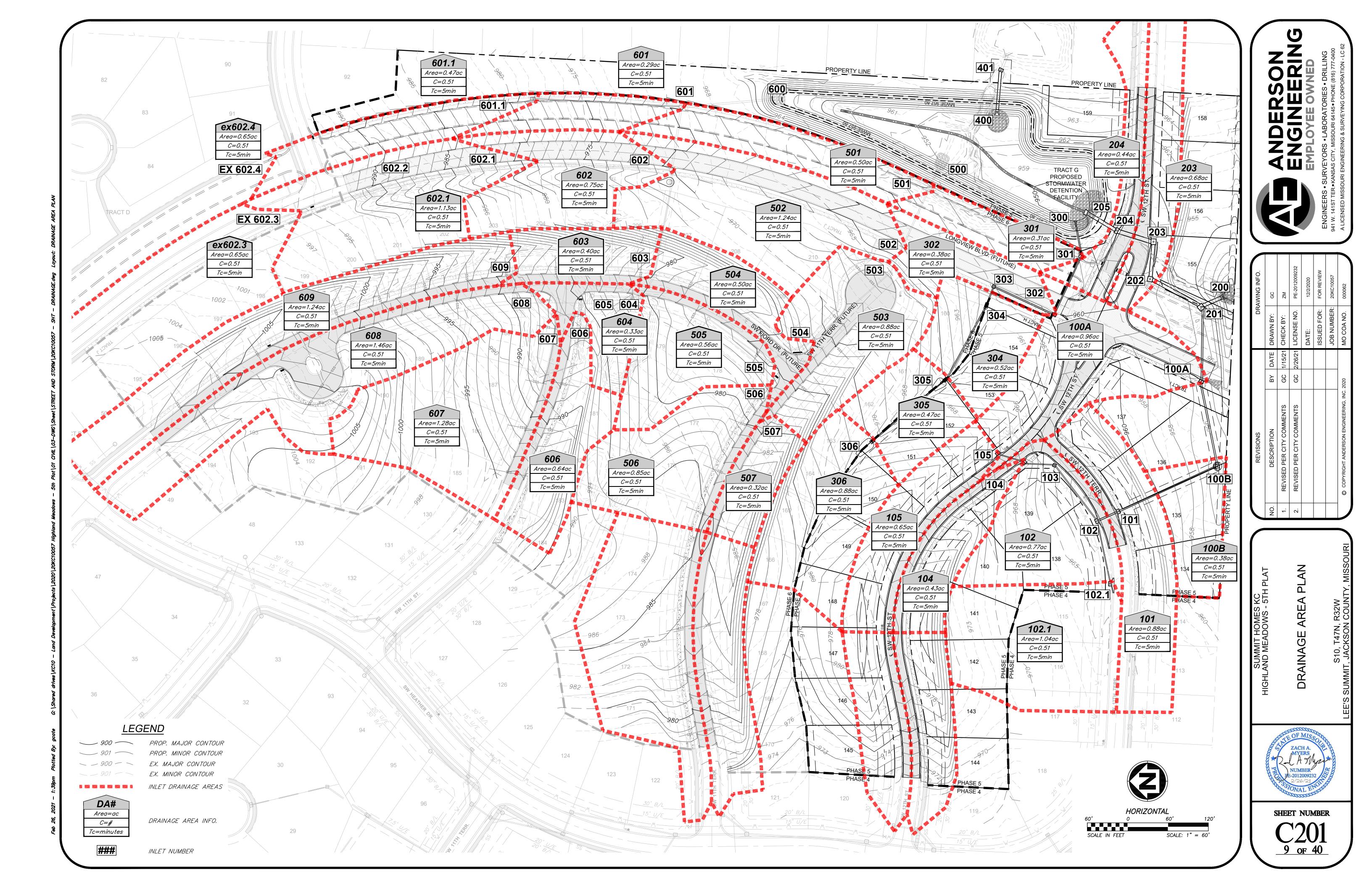
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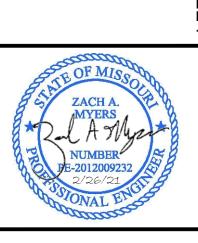
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					HYDROLOG	Υ												HYDRA	ULICS									GUT	TER/INLET	DESIGN		
Line No.	Inlet ID	Downstream Line No.	DrainageA rea	Runoff Coefficient	Local CxA	System CxA	Тс	Local Intensity	System Intensity	Incremental Flow	Total Runoff	Line No.	Line	U/S Ground Elev.	U/S Invert	D/S Invert	Length	Slope	Size	n	Capacity Full	Total Runoff	Velocity	Velocity Out	HGLUp	HGLDn	Line ID	Local Q	QBypass	Gutter Slope	Gutter Spread	Gutter Width
			(ac)	(C)			(min)	(in/hr)	(in/hr)	(cfs)	(cfs)			(ft)	(ft)	(ft)	(ft)	(%)	(in)		(cfs)	(cfs)	(ft/s)	(ft/s)	(ft)	(ft)		(cfs)	(cfs)	(%)	(ft)	(ft)
1	401	Outfall	0.00	0.00	0	0	0.0	0.00	0.00	0.00	0.00	LINE 401	401	967.50	958.15	952.20	59.49	10.00	36	0.013	210.92	0.00	9.01	9.01	960.54	954.59	LINE 401					
2	EX. DET.	1	0.00	0.00	0	0	0.0	0.00	0.00	54.51	0.00	LINE 402 (EX)	402	969.00	963.77	963.22	22.98	2.39	36	0.012	111.78	0.00	12.36	15.71	966.16	964.70	LINE 402 (EX)					
3	201	Outfall	0.00	0.00	0	0	7.7	0.00	7.06	0.00	22.43	LINE 201	201	957.83	946.93	946.77	31.01	0.50	54	0.013	141.26	22.43	9.71	9.71	950.10	949.94	LINE 201		****	****		
4	100A	3	0.96	0.51	0.49	0.49	7.2	8.34	7.26	4.09	18.92	LINE 100A	100A	956.50	948.13	947.13	110.34	0.91	30	0.013	39.04	18.92	4.03	3.86	950.29	950.10	LINE 100A	1.64	5.41	0.020	11.76	2.00
5	100B	4	0.38	0.51	0.19	0.19	6.7	8.34	7.45	1.62	15.77	LINE 100B	100B	955.00	950.55	948.63	128.30	1.50	24	0.012	29.97	15.77	5.94	5.31	951.98	950.42	LINE 100B	1.62		Sag		
6	101	5	0.88	0.51	0.45	0.45	6.2	8.34	7.72	3.75	14.85	LINE 101	101	962.13	954.29	951.05	162.07	2.00	24	0.013	31.98	14.85	8.19	9.99	955.68	952.01	LINE 101	3.75		Sag		
7	102	6	0.77	0.51	0.39	0.39	6.0	8.34	7.80	3.28	11.50	LINE 102	102	962.13	954.84	954.49	35.00	1.00	24	0.013	22.62	11.50	5.83	5.92	956.06	955.68	LINE 102	7.60	••••	Sag		
8	103	7	0.00	0.00	0	0	5.5	0.00	8.05	0.00	4.44	LINE 103	103	964.01	956.63	955.59	104.21	1.00	15	0.012	6.99	4.44	5.50	6.03	D. 100.000 H. M. 100.0000	956.31	LINE 103					
9	104	8	0.43	0.51	0.22	0.22	5.3	8.34	8.17	1.83	4.50	LINE 104	104	966.98	959.08	956.83	44.95	5.00	15	0.012	15.65	4.50	5.97	6.94	959.94	957.48	LINE 104	0.65	1.18	0.050	5.34	2.00
10	105	9	0.65	0.51	0.33	0.33	5.0	8.34	8.34	2.77	2.77	LINE 105	105	968.25	961.66	959.58	41.61	5.00	15	0.013	14.44	2.77	6.61	9.06	962.33	959.95	LINE 105	0.81	1.95	0.050	6.50	2.00
11	102.1	7	1.04	0.51	0.53	0.53	5.0	8.34	8.34	4.43	4.43	LINE 102.1	102.1		958.67	955.59	95.18	3.24	15	0.012	12.58	4.43	7.16	9.35	959.52	956.10	LINE 102.1	1.28	3.14	0.020	9.73	2.00
12	202	3	0.00	0.00	0	0	5.3	0.00	8.17	0.00	4.66	LINE 202	202	959.00	947.56	947.13	86.54	0.50	54	0.013	138.62	4.66	8.95	8.85	950.48	950.10	LINE 202					
13	203	12	0.68	0.51	0.35	0.35	5.2	8.34	8.25	2.89	4.71	LINE 203	203	959.00	948.04	947.76	55.83	0.50	54	0.013	139.27	4.71	9.28	9.50	950.96	950.56	LINE 203	2.89		Sag		
14	204	13	0.44	0.51	0.22	0.22	5.0	8.34	8.34	1.87	1.87	LINE 204	204	959.00	948.53	948.24	57.23	0.50	43 x 68	0.012	149.61	1.87	6.01	6.01		954.12	LINE 204	2.65	****	Sag		
15	205	14	0.00	0.00	0	0	0.0	0.00	0.00	94.04	0.00	LINE 205	205	958.30	949.00	948.73	53.16	0.50	54	0.013	140.16	0.00	5.91	5.91	954.64	954.52	LINE 205					
16	302	Outfall	0.31	0.51	0.16	0.16	7.6	8.34	7.09	1.32	9.25	LINE 301	301	960.84	952.42	950.58	45.96	4.00	18	0.013	21.01	9.25	6.23	6.23		951.76	LINE 301	0.54	0.78	0.050	4.50	2.00
17	303	16	0.38	0.51	0.19	0.19	7.0	8.34	7.34	1.62	8.42	LINE 302	302	960.57	953.57	952.62	95.01	1.00	24	0.013	22.62	8.42	5.34	5.54	954.60	953.60	LINE 302	0.61	1.01	0.050	5.01	2.00
18	304	17	0.00	0.00	0	0	6.6	0.00	7.52	0.00	7.17	LINE 303	303	962.04	955.55	954.07	98.87	1.50	18	0.012	13.92	7.17	6.72	7.93	956.59	954.83	LINE 303					
19	305	18	0.52	0.51	0.27	0.27	6.5	8.34	7.57	2.21	7.22	LINE 304	304	960.21	956.34	956.05	28.60	1.00	18	0.012	11.46	7.22	6.19	6.85		956.91	LINE 304	2.21		Sag		
20	306	19	0.47	0.51	0.24	0.24	5.8	8.34	7.91	2.00	5.45	LINE 305	305	964.74	959.07	956.54	126.66	2.00	18	0.012	16.08	5.45	5.14	5.35	959.97	957.38	LINE 305	2.00		Sag		
21	307	20	0.88	0.51	0.45	0.45	5.0	8.34	8.34	3.75	3.75	LINE 306	306	969.90	965.15	959.47	141.99	4.00	15	0.012	13.99	3.75	6.42	8.20	965.93	959.97	LINE 306	3.75		Sag		
100-	YEAR																															

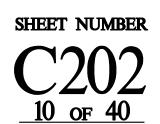
	001	20	0.00	0.01	0.70	0.70	0.0	0.04	0.04	0.70	0.70	LINE 300	000	000.00	300.10	000.17	141.00	7.00	10	0.012	10.00	0.70	0.72	0.20	000.00	555.51	EIIVE 500	0.70	****	Oag		
100-	YEAR									·																						
					HYDROLOG	SY												HYDRA	ULICS									GUT	TTER/INLET	DESIGN		
Line No.	Inlet ID	Downstream Line No.	DrainageA rea	Runoff Coefficient	Local CxA	System CxA	Тс	Local Intensity	System Intensity	Incremental Flow	Total Runoff	Line No.	Line	U/S Ground Elev.	U/S Invert	D/S Invert	Length	Slope	Size	n	Capacity Full	Total Runoff	Velocity	Velocity Out	HGLUp	HGLDn	Line ID	Local Q	QBypass	Gutter Slope	Gutter Spread	Gutter Width
			(ac)	(C)			(min)	(in/hr)	(in/hr)	(cfs)	(cfs)			(ft)	(ft)	(ft)	(ft)	(%)	(in)		(cfs)	(cfs)	(ft/s)	(ft/s)	(ft)	(ft)		(cfs)	(cfs)	(%)	(ft)	(ft)
1	401	Outfall	0.00	0.00	0	0	0.0	0.00	0.00	0.00	0.00	LINE 401	401	967.50	958.15	952.20	59.49	10.00	36	0.013	210.92	0.00	15.99	15.99	961.08	955.13	LINE 401					
2	EX. DET.	1	0.00	0.00	0	0	0.0	0.00	0.00	112.38	0.00	LINE 402 (EX)	402	969.00	963.77	963.22	22.98	2.39	36	0.012	111.78	0.00	17.01	18.02	966.70	965.69	LINE 402 (EX)					
3	201	Outfall	0.00	0.00	0	0	6.8	0.00	11.18	0.00	35.51	LINE 201	201	957.83	946.93	946.77	31.01	0.50	54	0.013	141.26	35.51	14.65	14.86	951.56	950.97	LINE 201					
4	100A	3	0.96	0.51	0.49	0.49	6.4	12.60	11.41	6.17	29.74	LINE 100A	100A	956.50	948.13	947.13	110.34	0.91	30	0.013	39.04	29.74	6.06	6.06	955.15	954.57	LINE 100A	2.07	8.95	0.020	14.05	2.00
5	100B	4	0.38	0.51	0.19	0.19	6.1	12.60	11.63	2.44	24.61	LINE 100B	100B	955.00	950.55	948.63	128.30	1.50	24	0.012	29.97	24.61	7.83	7.83	956.73	955.43	LINE 100B	2.44		Sag		
6	101	5	0.88	0.51	0.45	0.45	5.8	12.60	11.93	5.65	22.94	LINE 101	101	962.13	954.29	951.05	162.07	2.00	24	0.013	31.98	22.94	7.30	7.30	959.80	958.13	LINE 101	5.65		Sag		
7	102	6	0.77	0.51	0.39	0.39	5.7	12.60	12.02	4.95	17.71	LINE 102	102	962.13	954.84	954.49	35.00	1.00	24	0.013	22.62	17.71	5.64	5.64	960.43	960.21	LINE 102	11.99		Sag		
8	103	7	0.00	0.00	0	0	5.3	0.00	12.29	0.00	6.77	LINE 103	103	964.01	956.63	955.59	104.21	1.00	15	0.012	6.99	6.77	5.52	5.52	962.13	961.15	LINE 103					
9	104	8	0.43	0.51	0.22	0.22	5.2	12.60	12.41	2.76	6.84	LINE 104	104	966.98	959.08	956.83	44.95	5.00	15	0.012	15.65	6.84	5.57	5.57	962.93	962.50	LINE 104	0.81	1.95	0.050	6.50	2.00
10	105	9	0.65	0.51	0.33	0.33	5.0	12.60	12.60	4.18	4.18	LINE 105	105	968.25	961.66	959.58	41.61	5.00	15	0.013	14.44	4.18	3.40	3.40	963.34	963.17	LINE 105	1.00	3.17	0.050	7.82	2.00
11	102.1	7	1.04	0.51	0.53	0.53	5.0	12.60	12.60	6.68	6.68	LINE 102.1	102.1	963.94	958.67	955.59	95.18	3.24	15	0.012	12.58	6.68	5.45	5.45	962.02	961.15	LINE 102.1	1.59	5.09	0.020	11.51	2.00
12	202	3	0.00	0.00	0	0	5.2	0.00	12.46	0.00	7.12	LINE 202	202	959.00	947.56	947.13	86.54	0.50	54	0.013	138.62	7.12	12.65	12.65	955.47	954.57	LINE 202					
13	203	12	0.68	0.51	0.35	0.35	5.1	12.60	12.53	4.37	7.15	LINE 203	203	959.00		 	55.83	0.50	54	0.013	139.27	7.15	12.65	12.65	958.37	957.79	LINE 203	4.37		Sag		
14	204	13	0.44	0.51	0.22	0.22	5.0	12.60	12.60	2.83	2.83	LINE 204	204	959.00	948.53	 	57.23	0.50	43 x 68	0.012	149.61	2.83	12.34	12.34	965.04	964.54	LINE 204	4.14		Sag		
15	205	14	0.00	0.00	0	0	0.0	0.00	0.00	194.00	0.00	LINE 205	205	958.30	949.00	948.73	53.16	0.50	54	0.013	140.16	0.00	12.20	12.20	966.74	966.23	LINE 205					
16	302	Outfall	0.31	0.51	0.16	0.16	6.7	12.60	11.21	1.99	14.64	LINE 301	301	960.84	952.42	950.58	45.96	4.00	18	0.013	21.01	14.64	8.54	8.54	953.82	951.98	LINE 301	0.68	1.31	0.050	5.56	2.00
17	303	16	0.38	0.51	0.19	0.19	6.3	12.60	11.50	2.44	13.19	LINE 302	302		953.57		95.01	1.00	24	0.013	22.62	13.19	6.40	6.72	954.88	953.82	LINE 302	0.76	1.68	0.050	6.13	2.00
18	304	17	0.00	0.00	0	0	6.0	0.00	11.70	0.00	11.16	LINE 303	303	962.04	955.55	954.07	98.87	1.50	18	0.012	13.92	11.16	7.86	8.75	956.83	955.09	LINE 303					
19	305	18	0.52	0.51	0.27	0.27	6.0	12.60	11.76	3.34	11.22	LINE 304	304	960.21	956.34	956.05	28.60	1.00	18	0.012	11.46	11.22	7.19	7.39	957.62	957.25	LINE 304	3.34		Sag		
20	306	19	0.47	0.51	0.24	0.24	5.5	12.60	12.14	3.02	8.36	LINE 305	305	964.74	 	956.54	126.66	2.00	18	0.012	16.08	8.36	6.03	6.14	960.19	957.62	LINE 305	3.02		Sag		
21	307	20	0.88	0.51	0.45	0.45	5.0	12.60	12.60	5.65	5.65	LINE 306	306	969.90	965.15	959.47	141.99	4.00	15	0.012	13.99	5.65	6.66	7.74	966.11	960.19	LINE 306	5.65		Sag		<i></i>

941 W. 141ST	20KC10057	JOB NUMBER:
	FOR REVIEW	SSUED FOR:
	12/2/2020	JATE:
	PE-2012009232	LICENSE NO.
	ZM	CHECK BY:
	95	JRAWN BY:

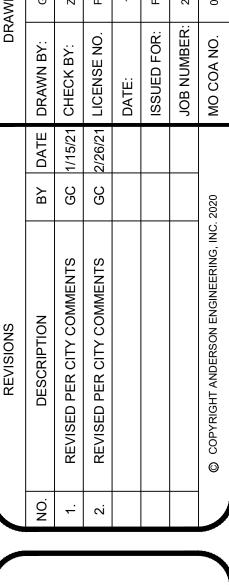
			0000	© COBYPIGHT ANDERSON ENGINEERING INC 2020	
20K	JOB NUMBER:				
FOF	ISSUED FOR:				
12/:	DATE:				
PE-:	GC 2/26/21 LICENSE NO.	2/26/21	GC	REVISED PER CITY COMMENTS	2.
ZM	GC 1/15/21 CHECK BY:	1/15/21	OS.	REVISED PER CITY COMMENTS	1.
GC	BY DATE DRAWN BY:	DATE	ВУ	DESCRIPTION	NO.
DRAWIN	'AO			REVISIONS	

DRAINAGE CALCULATIONS









STORM SEWER PLAN & PROFILE

ZACH A.
MYERS

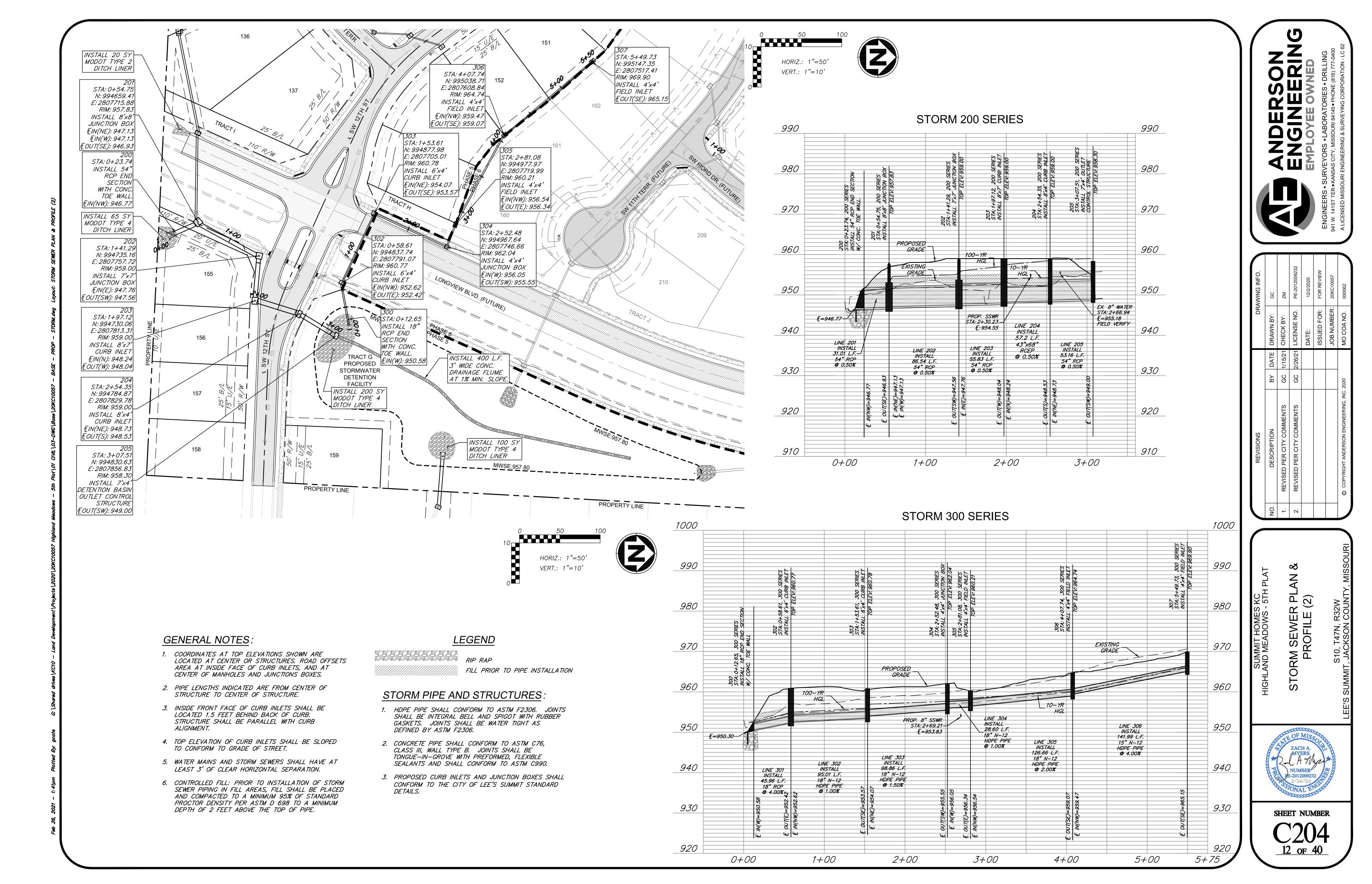
NUMBER

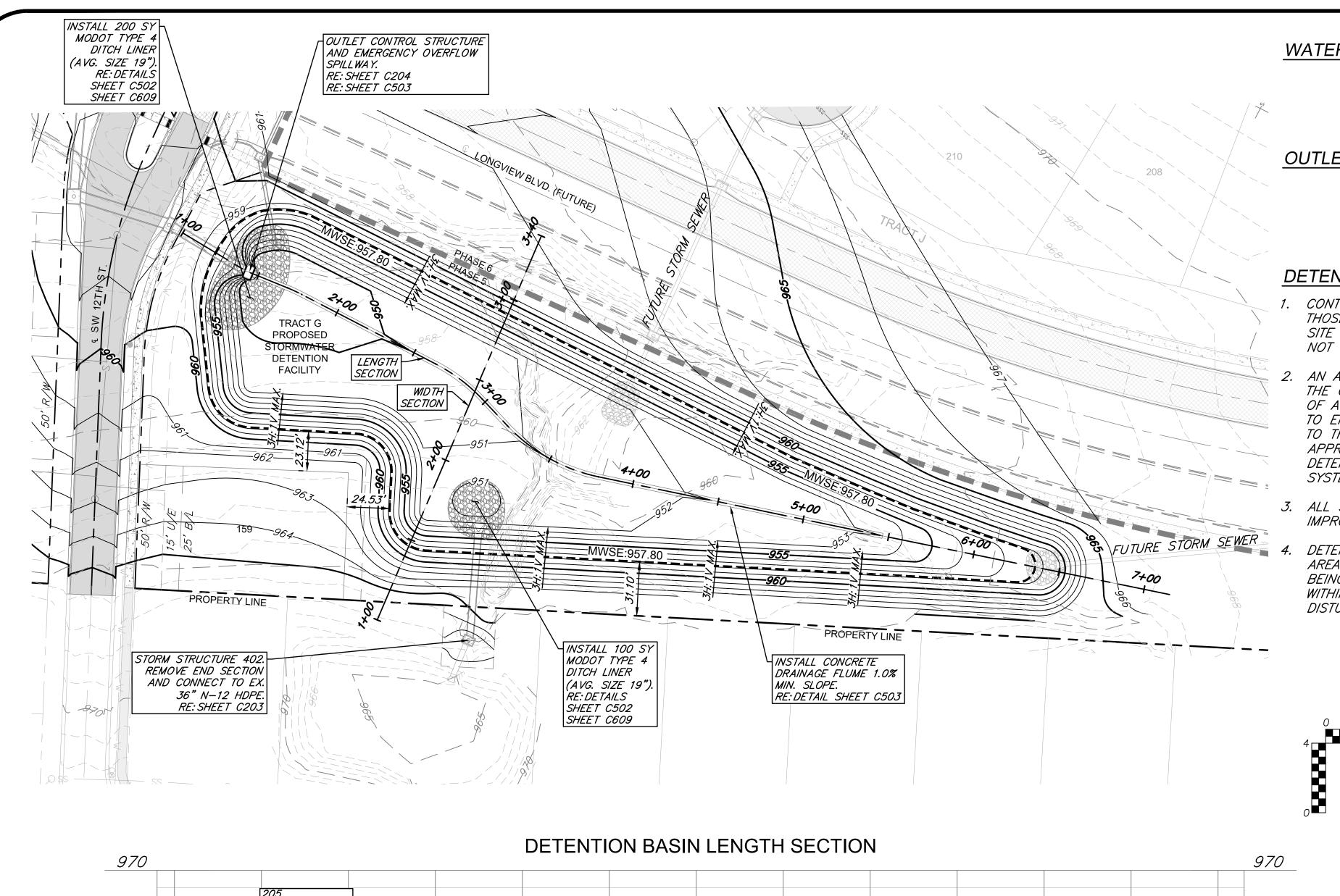
PE-2012009232

2/26/21

SSIONAL ENGINEER

C203
11 of 40





EXISTING GRADE -

MWSF: 955.57 (10-YR)

MWSF: 953.49 (2-YR)

4+00

WWSF: 957.80 (100-YR)

~ PROPOSED GRADE

6+00

5+00

STA: 1+44.17 N: 994830.63 E: 2807856.83 RIM: 958.30

EMERGENCY

OVERFLOW.

DAM: 959.00 7

960

950

940

1+00

OUTLET CONTROL STRUCTURE AND

RE: SHEET C503 FOR DETAIL. INV OUT: 949.00

1.2 FREEBOARD

2+00

MWSF: 952.06 (W_QV)

3+00

FE: 949.00 1.00% ALONG CONC. DRAINAGE FLUME

WATER SURFACE ELEVATIONS:

- 952.06 - 953.49 10-YR - 955.57 100-YR - 957.80

OUTLET DISCHARGE RATES:

– 0.08 CFS 2-YR - 23.41 CFS10-YR - 94.04 CFS 100-YR - 194.07 CFS

→ 901 → PROPOSED MINOR CONTOUR __ 900 - _ _ EXISTING MAJOR CONTOUR

LEGEND

EXISTING MINOR CONTOUR

TYPICAL 28' ROADWAY PAVEMENT SECTION

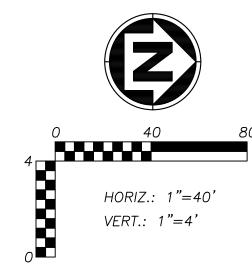
5' CONCRETE SIDEWALK

RIPRAP STABILIZATION - RIGHT-OF-WAY

- ROAD CENTERLINE

DETENTION BASIN GENERAL NOTES:

- CONTRACTOR TO CONSTRUCT STORMWATER MANAGEMENT FACILITIES, SPECIFICALLY THOSE FEATURES RELATED TO DETENTION, PRIOR TO ANY LAND DISTURBANCE OF THE SITE AND PRIOR TO THE CONSTRUCTION OF ANY OTHER SITE DEVELOPMENT WORK AS NOT TO EFFECT DOWNSTREAM NEIGHBORS WITH UNDETAINED STORMWATER DISCHARGE.
- AN AS-GRADED AND AS-BUILT DRAWING SHALL BE SUBMITTED TO AND REVIEWED BY THE CITY FOR THE DETENTION BASIN. THIS SHALL BE REQUIRED PRIOR TO ISSUANCE OF A CERTIFICATE OF SUBSTANTIAL COMPLETION. ALL PRECAUTIONS SHOULD BE TAKEN TO ENSURE DETENTION POND AND OUTLET STRUCTURE ARE CONSTRUCTED ACCORDING TO THE APPROVED PLANS; VOLUMES AND ELEVATIONS ARE CRITICAL FOR AS-BUILT APPROVAL. THE CITY SHALL BE PROVIDED WITH AN AS-BUILT SURVEY OF THE DETENTION BASIN, OUTLET STRUCTURE INCLUDING ALL WEIR ELEVATIONS AND STORM SYSTEM INCLUDING ALL THE INVERTS, STAMPED BY A MISSOURI LICENSED ENGINEER.
- 3. ALL SIDEWALK ADJACENT TO TRACTS SHALL BE CONSTRUCTED WITH PUBLIC IMPROVEMENTS, ALONG WITH ALL ADA ACCESSIBLE SIDEWALK RAMPS.
- DETENTION BASIN SHALL FUNCTION AS A SEDIMENT BASIN UNTIL ALL DISTURBED AREAS ARE ADEQUATELY STABILIZED AND DISPLACED SEDIMENTS ARE NO LONGER BEING COLLECTED IN THE BASIN. REFER TO EROSION CONTROL PLANS AND DETAILS WITHIN THIS PLAN SET, AS WELL AS, SWPPP DOCUMENTS AND MDNR LAND DISTURBANCE PERMIT FOR STATE REQUIREMENTS.

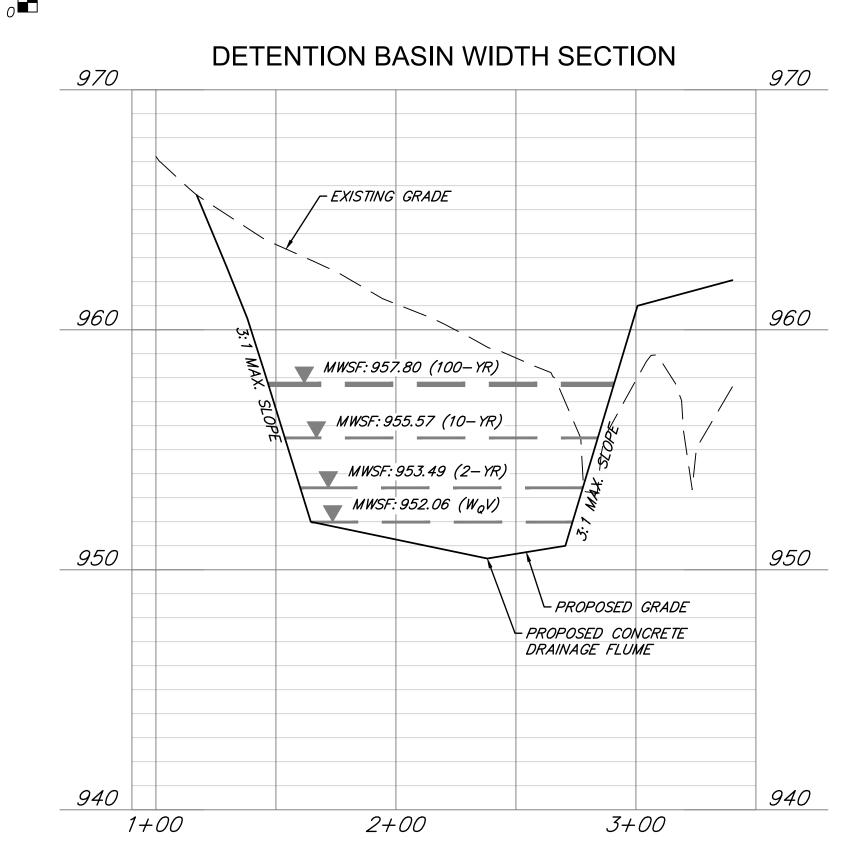


960

950

940

7+00

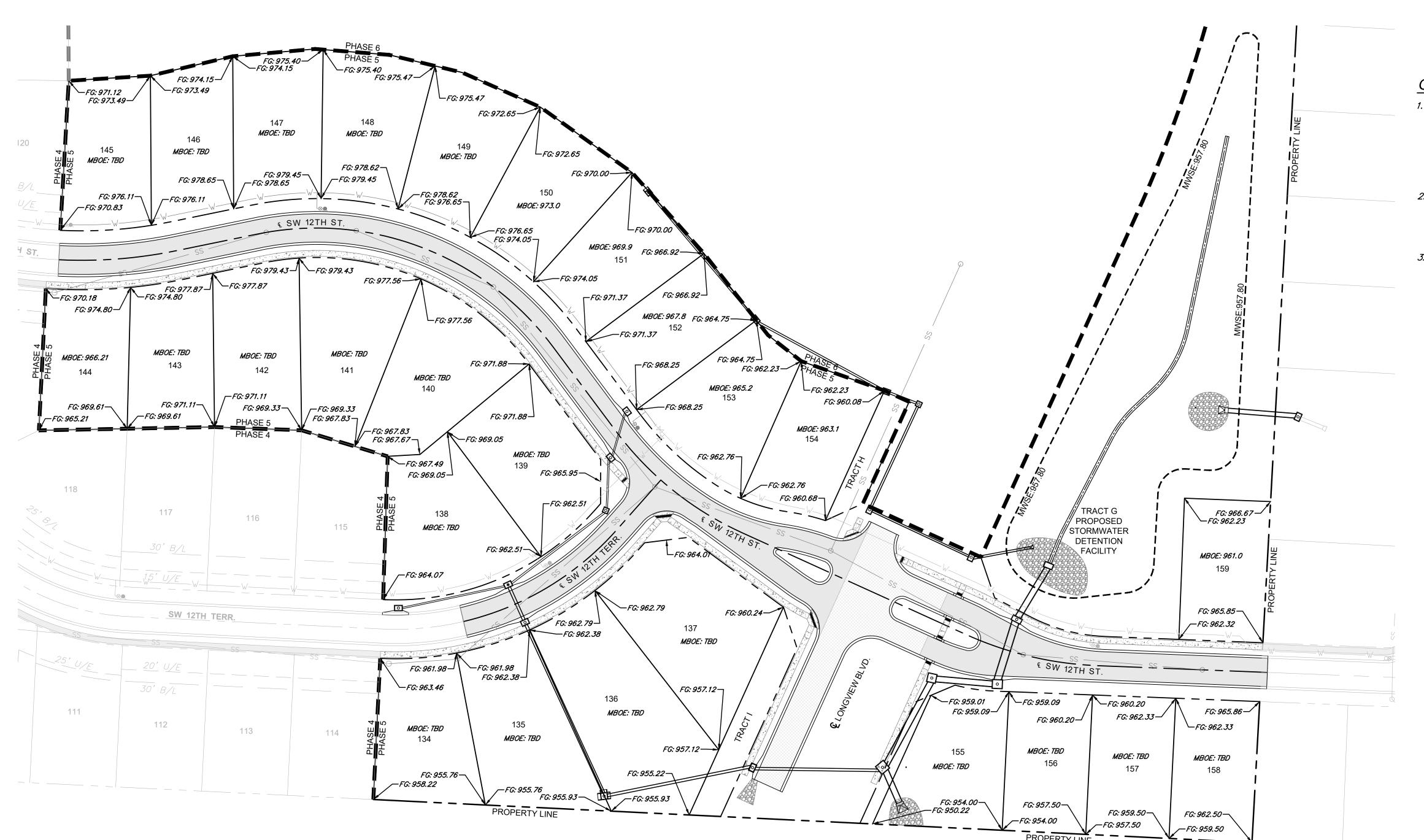


DESERVITING TIME O.	29	ZM	PE-2012009232	12/2/2020	FOR REVIEW	20KC10057	000062	
20	BY DATE DRAWN BY:	GC 1/15/21 CHECK BY:	GC 2/26/21 LICENSE NO.	DATE:	ISSUED FOR:	JOB NUMBER:	MO COA NO.	
	DATE	1/15/21	2/26/21					
	ВУ	CC	CC				2020	
REVISIONS	DESCRIPTION	REVISED PER CITY COMMENTS	REVISED PER CITY COMMENTS				© COPYRIGHT ANDERSON ENGINEERING, INC. 2020	
	NO.	1.	2.					

DETENTION BASIN PLAN & PROFILE



SHEET NUMBER 13 of 40



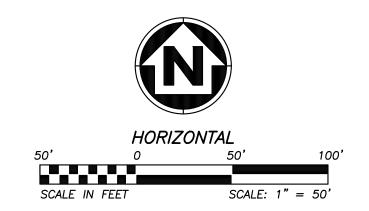
LEGEND

FG FINISH GRADE

MINIMUM BUILDING OPENING ELEVATION

GENERAL NOTES:

- 1. ALL LOTS SHALL BE ALLOWED TO HAVE WALKOUT BASEMENTS OR DAYLIGHT BASEMENTS AS DETERMINED BY HOME BUILDER AND/OR ENGINEER AT THE TIME OF PLOT PLAN AND BUILDING PERMIT APPLICATION SUBMITTAL. ALL PLOT PLANS SHALL MEET THE CITY OF LEE'S SUMMIT REQUIREMENTS AND BE SUBMITTED FOR CITY APPROVAL PRIOR TO CONSTRUCTION OF
- 2. MINIMUM BUILDING OPENING ELEVATIONS ON THIS PLAN HAVE BEEN DETERMINED BASED ON MAX. WATER SURFACE ELEVATION OF 1% DESIGN STORM PLUS (+) TWO (2) FEET, PER CITY OF LEE'S SUMMIT DESIGN AND CONSTRUCTION MANUAL SPECIFICATIONS.
- 3. FINISH GRADES ARE BASED ON MASS GRADING DESIGN FOR INSTALLATION OF PUBLIC IMPROVEMENTS. REAR LOT ELEVATIONS MAY VARY SLIGHTLY AFTER CONSTRUCTION OF HOMES, DEPENDING ON TYPE OF BASEMENT CONSTRUCTED AND OTHER UNFORESEEN FACTORS. HOMEBUILDER SHALL FOLLOW DRAINAGE PATTERNS DEPICTED IN THESE PLANS AND ENSURE PLOT PLAN MAINTAINS DRAINAGE PATTERNS SHOWN.

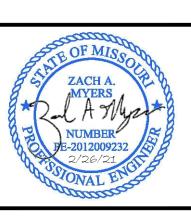




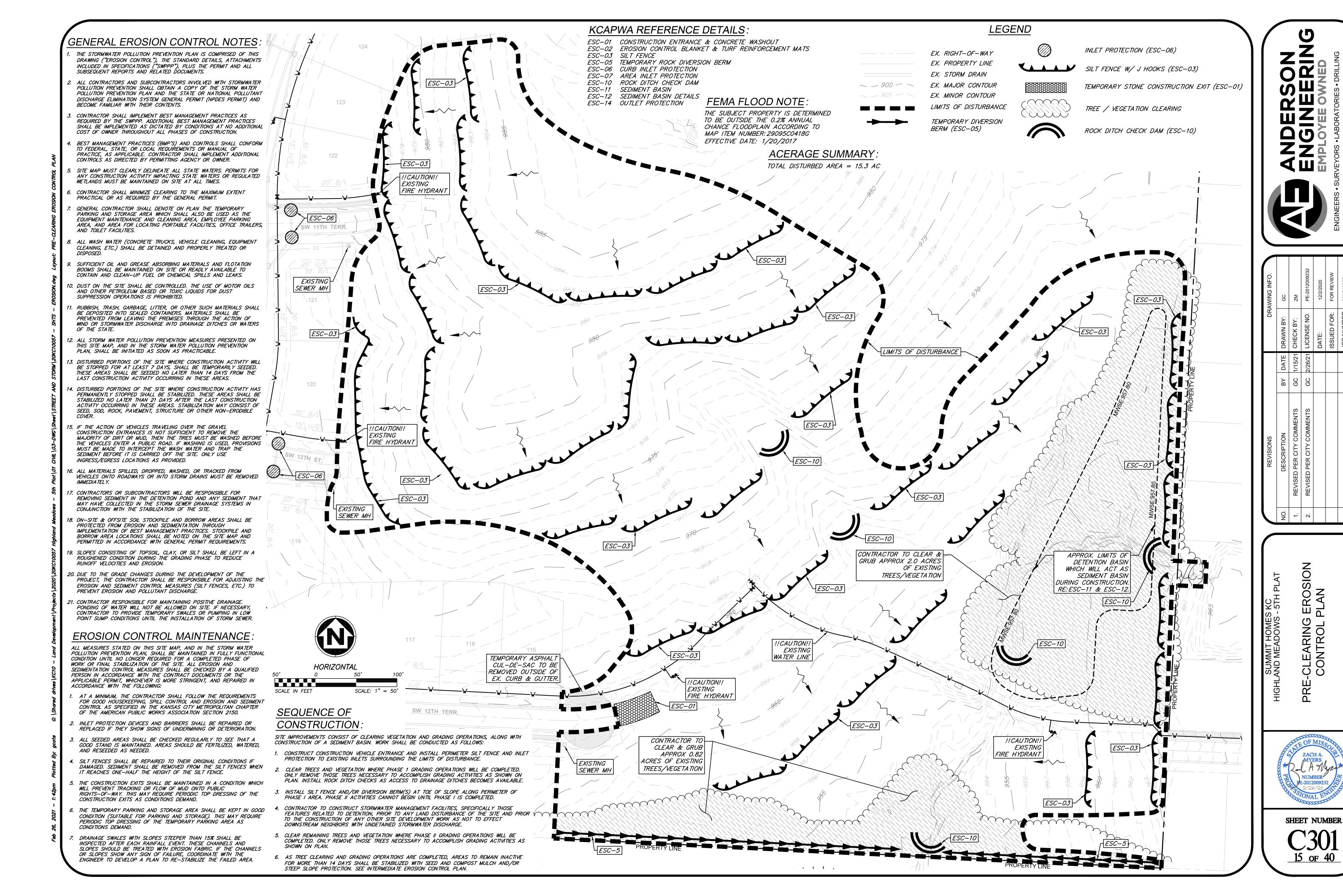


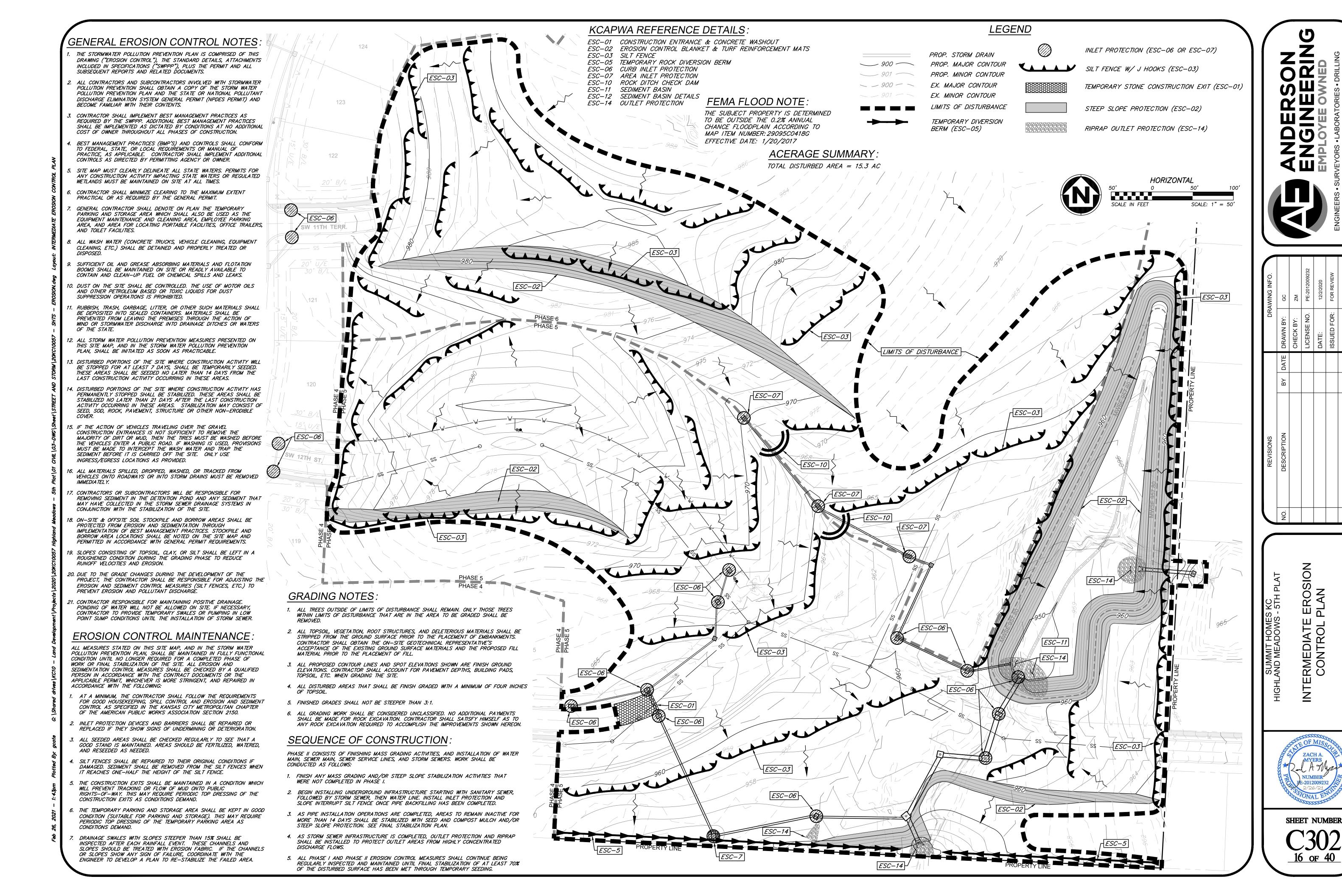
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Ö O	DESCRIPTION	BY	DATE	BY DATE DRAWN BY:	29
_ .	REVISED PER CITY COMMENTS	CC	1/15/21	GC 1/15/21 CHECK BY:	ZM
2.	REVISED PER CITY COMMENTS	ЭĐ	2/26/21	GC 2/26/21 LICENSE NO.	PE-201200
				DATE:	12/2/2020
				ISSUED FOR:	FOR REVIE
				JOB NUMBER:	20KC10057
	© COPYRIGHT ANDERSON ENGINEERING, INC. 2020	2020		MO COA NO.	000062

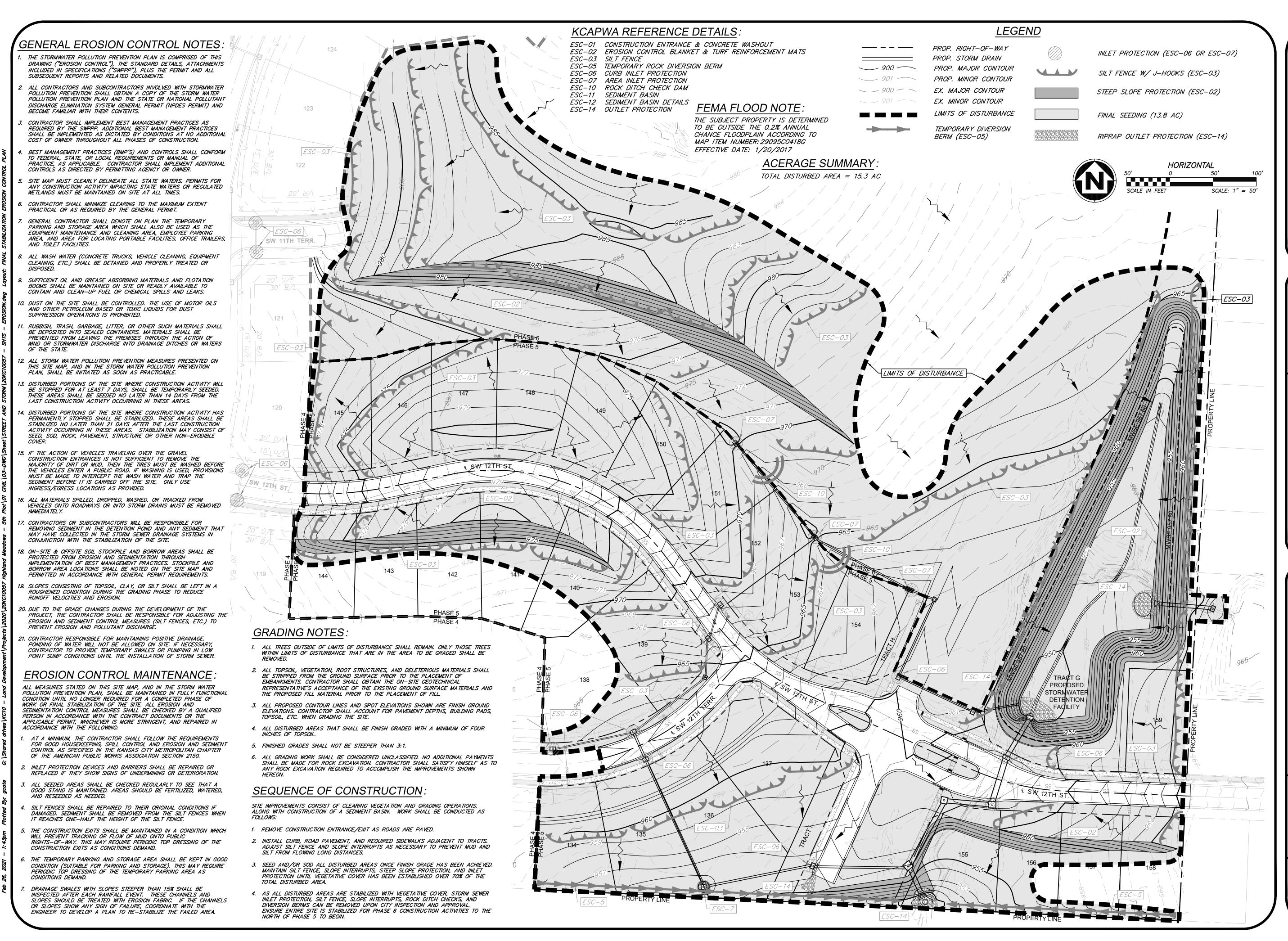
MINIMUM BUILDING OPENING PLAN



SHEET NUMBER 14 of 40







ANDERSON
ENGINEERIN
EMPLOYEE OWNED
S.SURVEYORS . LABORATORIES . DRILLING

EMP ENGINEERS • SURVEYOR

 ESCRIPTION
 BY
 DATE
 DRAWN BY:
 GC

 PER CITY COMMENTS
 GC
 1/15/21
 CHECK BY:
 ZM

 PER CITY COMMENTS
 GC
 2/26/21
 LICENSE NO.
 PE-2012009232

 DATE:
 12/2/2020

 ISSUED FOR:
 FOR REVIEW

 JOB NUMBER:
 20KC10057

AL STABILIZATION ION CONTROL PLAN

EROSION CONTR S10, T47N, R32V

ZACH A.

MYERS

NUMBER

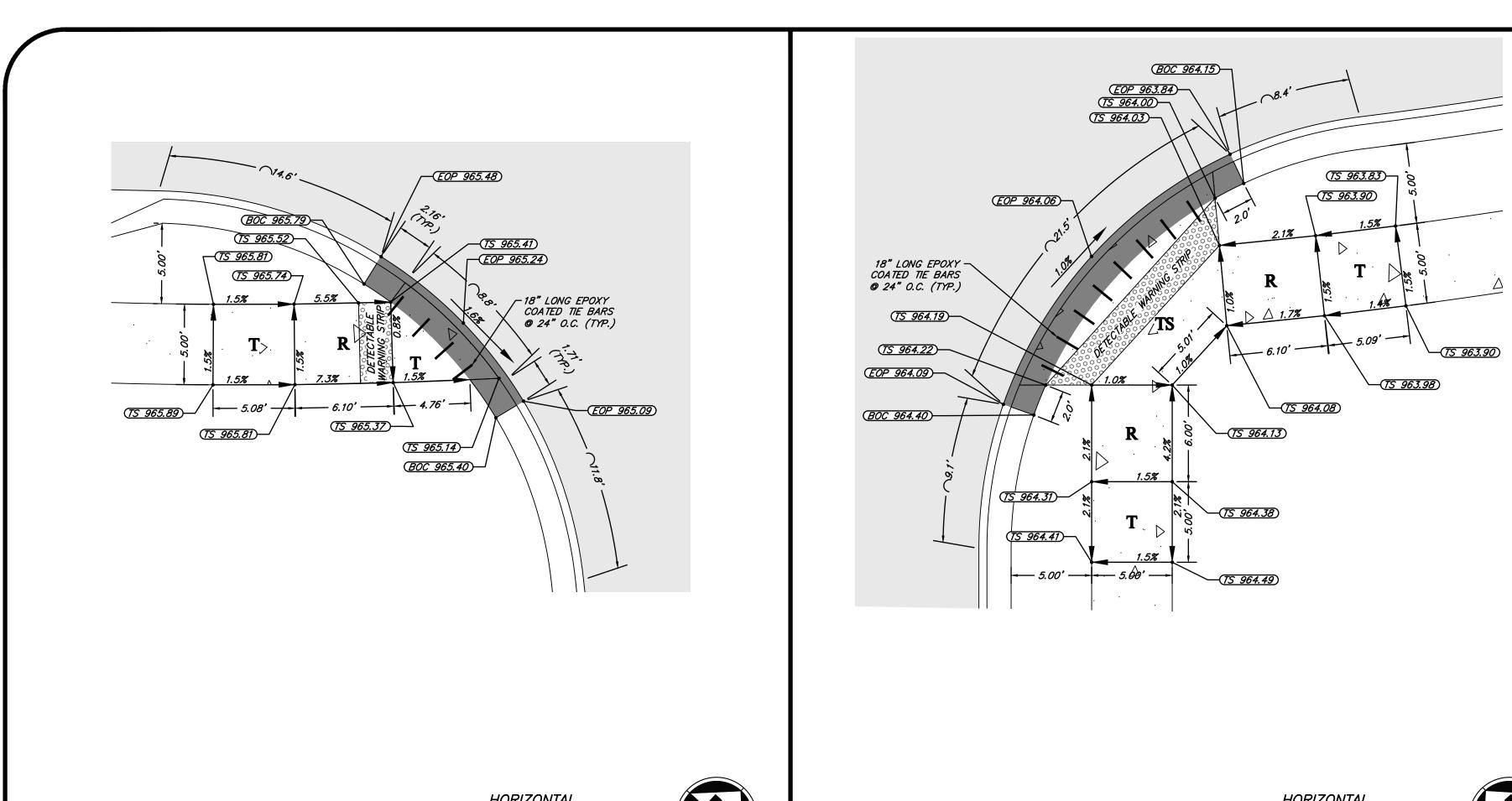
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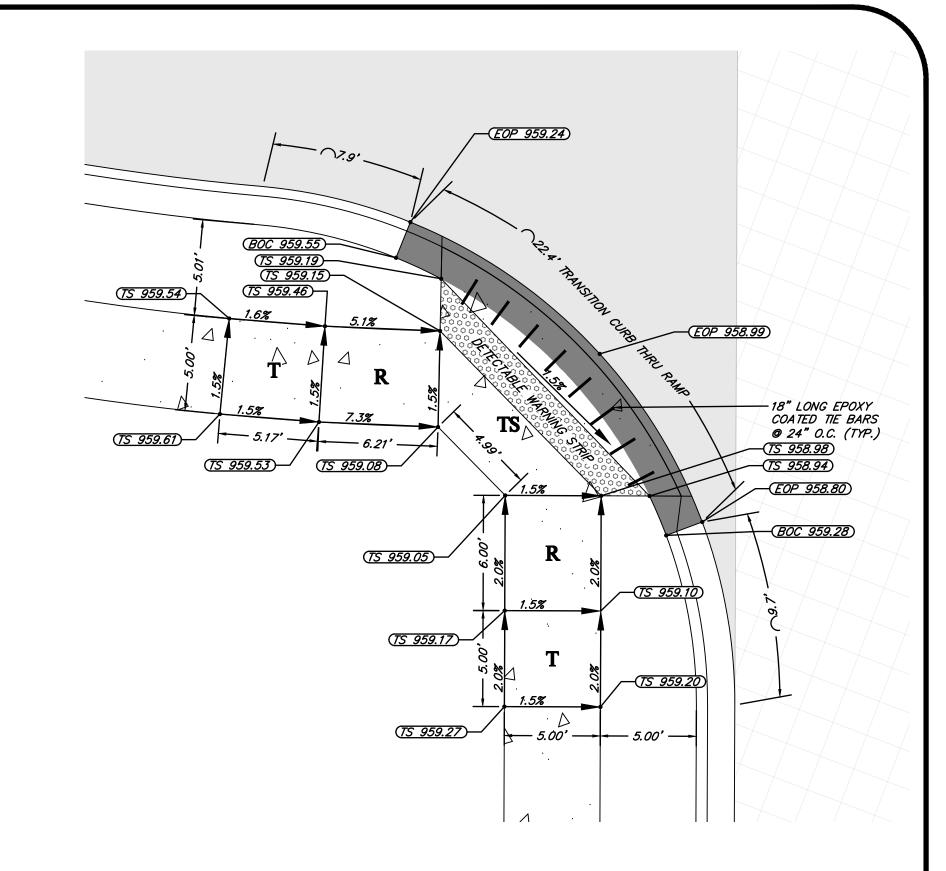
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C303

17 of 40



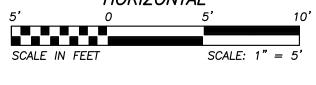


ADA RAMP #3



ADA RAMP #2

ADA RAMP #5



LEGEND

EOP = EDGE OF PAVEMENT = TOP OF SIDEWALK

= TRANSITION **TS** = TURNING SPACE $\mathbf{R} = RAMP$

DRY CURB & GUTTER

DETECTIBLE WARNING STRIP

TYPICAL 28' ROADWAY PAVEMENT SECTION

KCMMB4K CONCRETE SIDEWALK

GENERAL NOTES:

- CURB RAMP OPENING, NOT INCLUDING FLARES, 6. ADA MAXIMUM RAMP SLOPE = 8.33%, ADA SHALL MATCH EXISTING SIDEWALK WITH AN OPENING SHALL BE AT LEAST 48" WIDE. . USE 18" LONG #4 EPOXY COATED TIE BARS @
- 24" O.C. EMBED THE BARS 9" IN EACH DIRECTION. ALL RAMPS, SIDEWALKS, SHARED-USE PATHS SUBGRADE MUST BE OF STABLE, COMPACTED
- EARTH AND SHALL BE OVERLAYED WITH 4" COMPACTED DENSE GRADED AGGREGATE BASE. LONGITUDINAL JOINT SPACING TO MATCH WIDTH OF SIDEWALK.
- ISOLATION JOINTS SHALL BE PLACED WHERE WALK ABUTS DRIVEWAYS AND SIMILAR STRUCTURES, AND 150' CENTERS MAX.

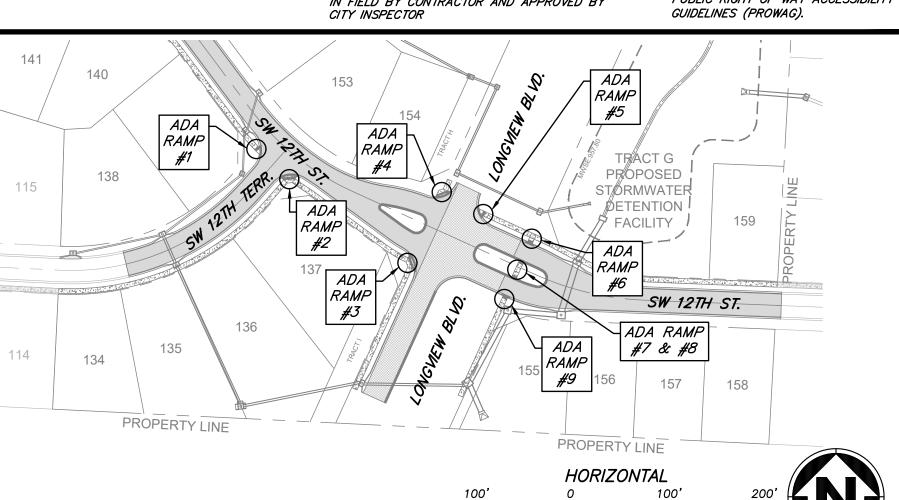
LOCATION MAP

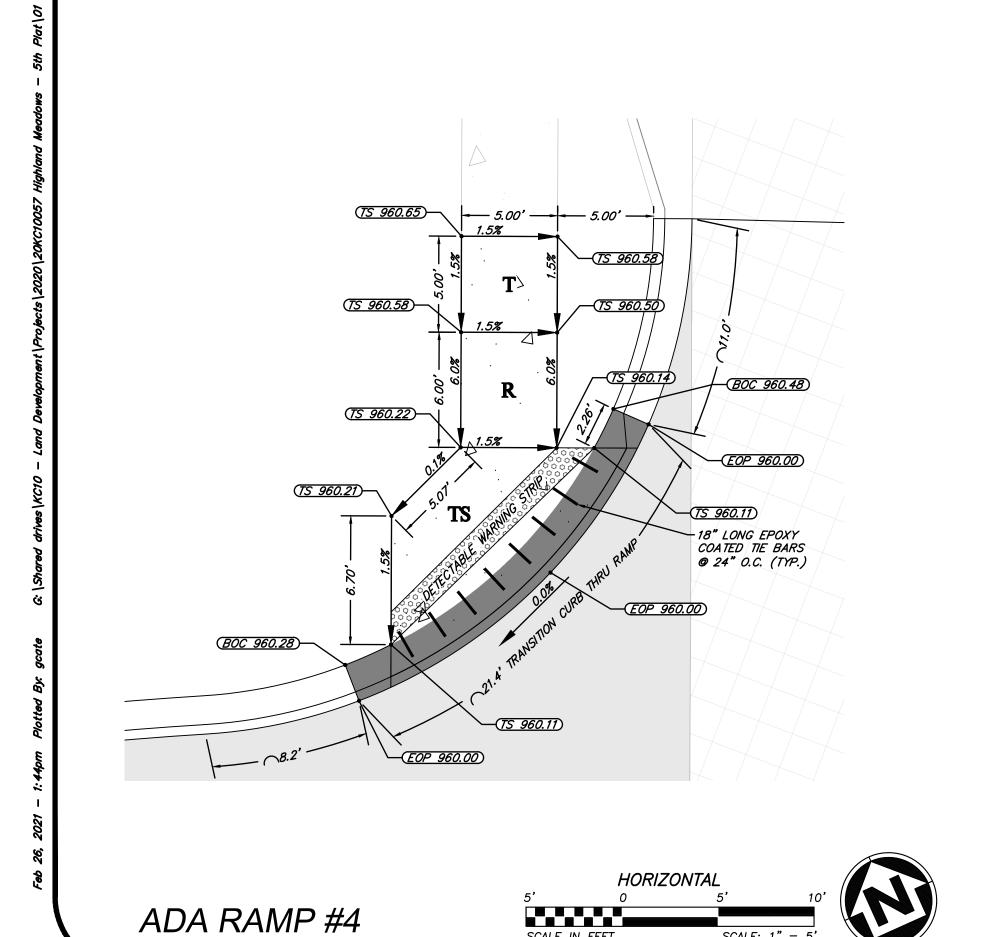
MAXIMUM CROSS SLOPE = 2.0%. *ROADWAY EXCEPTION: WHERE EXISTING ROAD PROFILE GRADE DOES NOT ALLOW RAMP TO MEET RAMP SLOPE REQUIREMENT OF 8.33% OR LESS, THE RAMP SHALL BE EXTENDED TO A LENGTH OF 15 FEET TO MATCH EXISTING SIDEWALK. CROSS SLOPE OF RAMP SHALL BE 1.5% ±0.5%. TURNING SPACES SHALL BE 1.5%, ±0.5%, SLOPE IN ANY DIRECTION. TURNING SPACES SHALL HAVE

A MINIMUM 4'x4' TURNING AREA. TURNING SPACES, WITH A SIDEWALK CURB, SHALL HAVE A 5' TURNING AREA PERPENDICULAR TO THE SIDEWALK CURB. 8. FOR RETROFIT WORK, SLOPES TO BE DETERMINED IN FIELD BY CONTRACTOR AND APPROVED BY

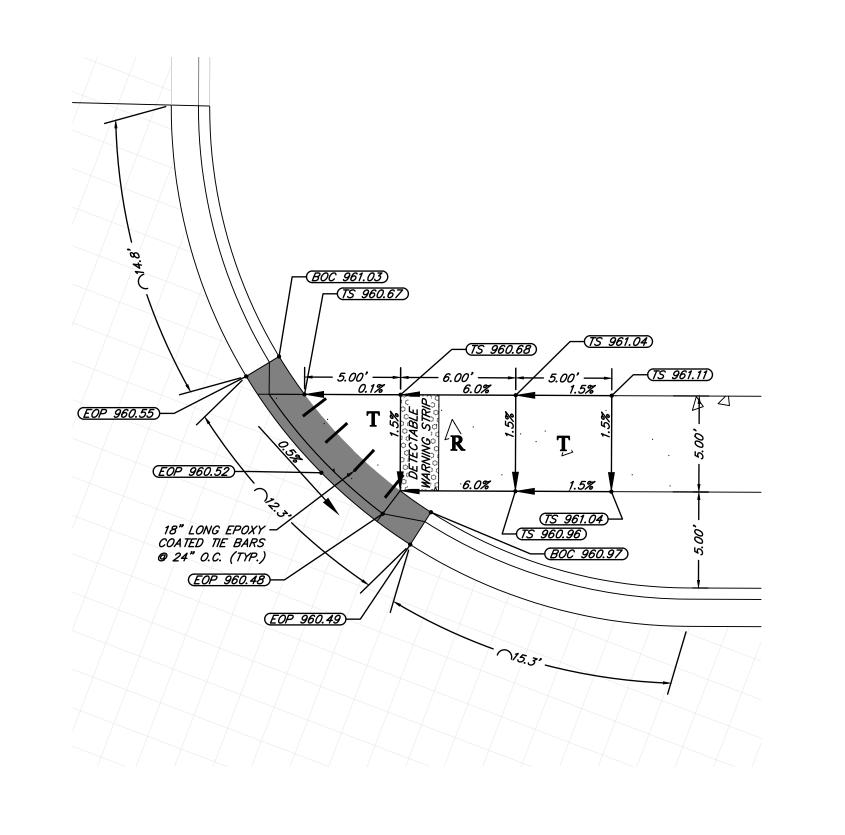
9. RAMP EXTENSION AREA SHALL NOT BE USED AS TRASITION TO EXISTING SIDEWALK. ANY TRANSITIONS REQUIRED TO MATCH RAMPS TO EXISTING SIDEWALK SHALL REQUIRE REMOVAL AND REPLACEMENT OF ADDITIONAL SIDEWALK BEYOND THE RAMP AREA. SIDEWALK TRANSITION LENGTH SHALL BE EQUAL TO OR GREATER THAN THE WIDTH OF THE EXISTING SIDEWALK. RAMP EXTENSIONS SHALL BE A

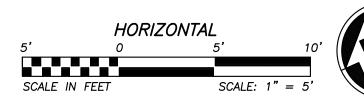
CONTINUOUS SLOPE. 10. ALL SIDEWALK AND RAMP CONSTRUCTION SHALL MEET CURRENT PUBLIC RIGHT OF WAY ACCESSIBILITY GUIDELINES (PROWAG).



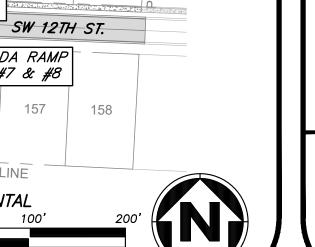


ADA RAMP #1









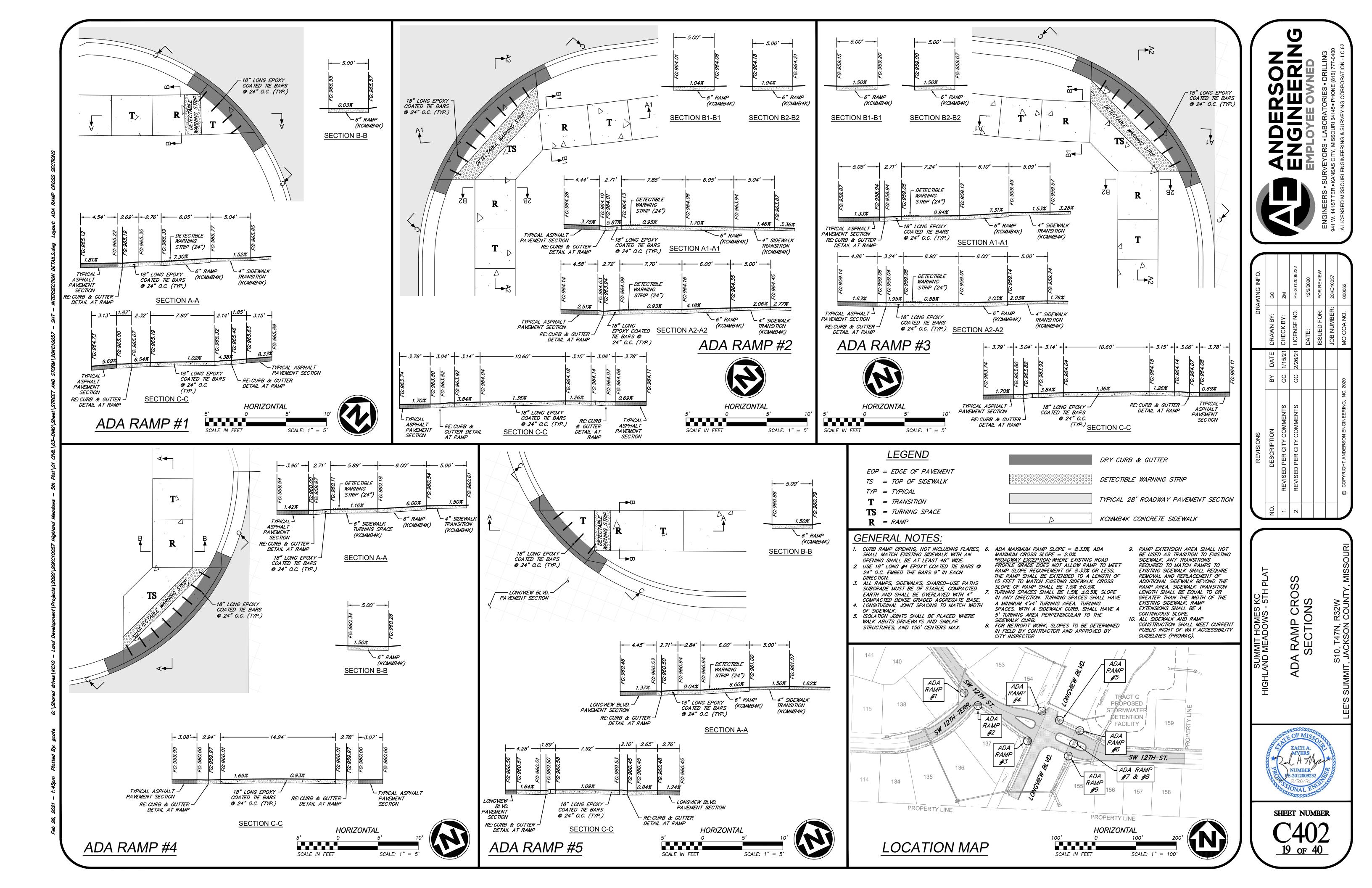
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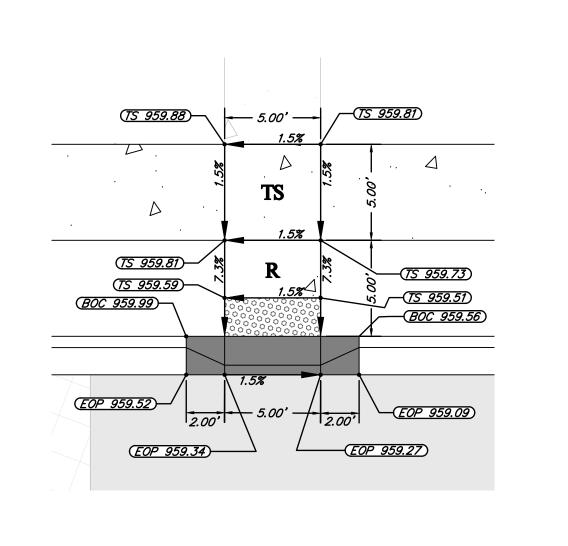
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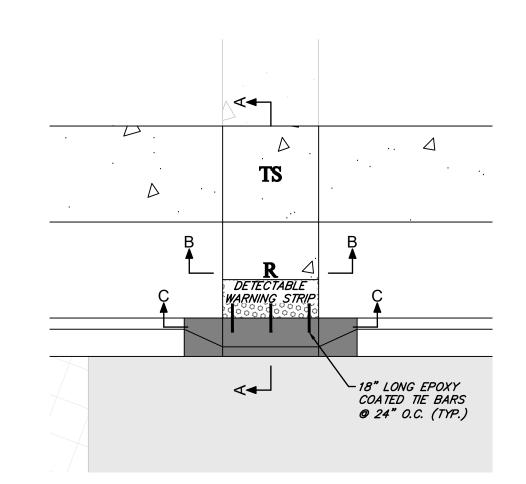


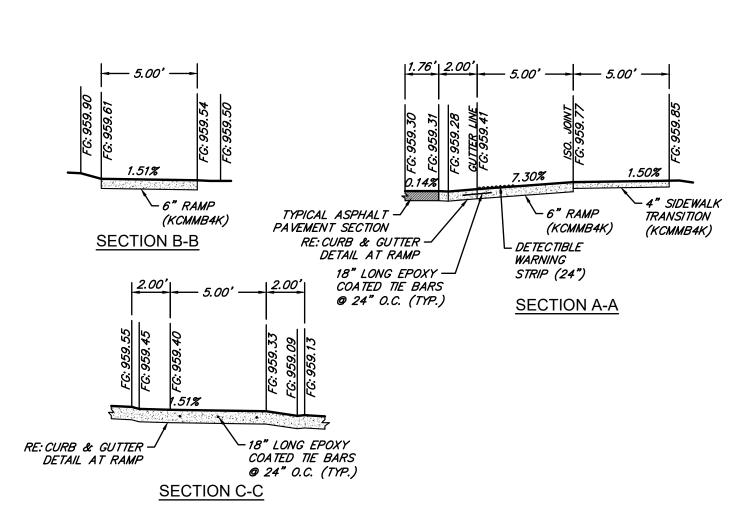
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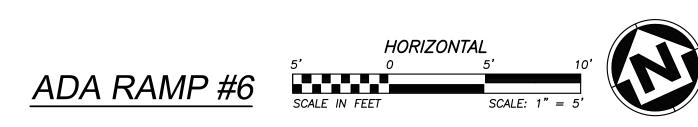
SHEET NUMBER 18 of 40

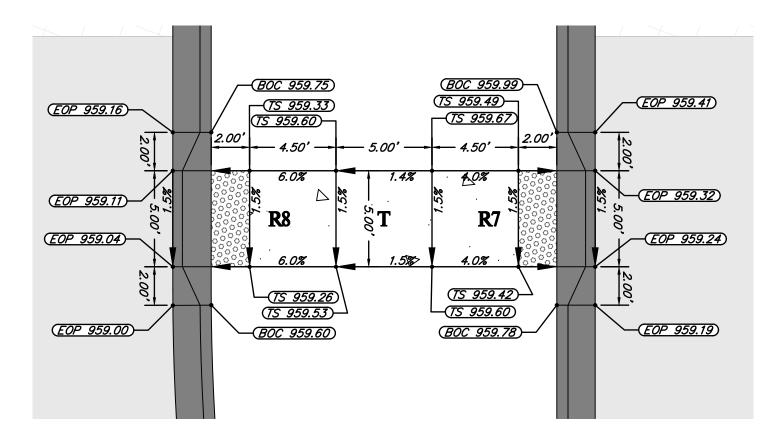


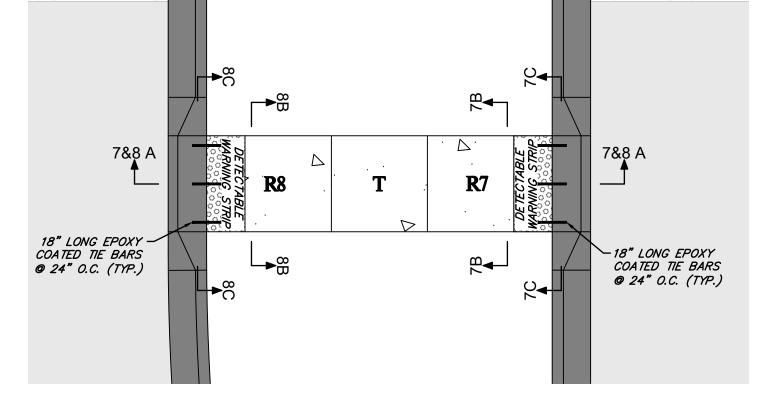


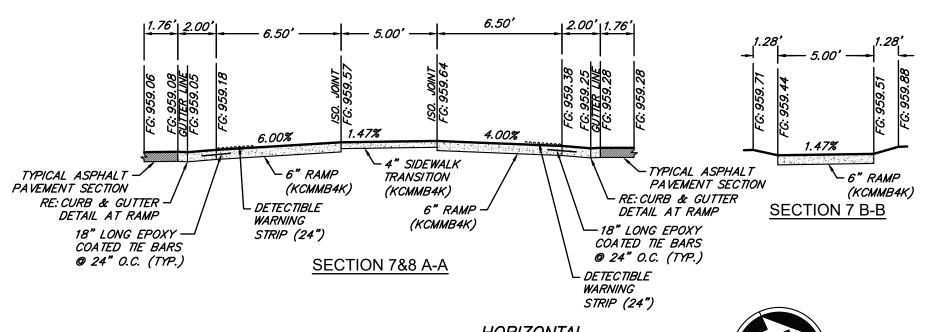


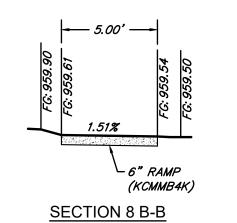


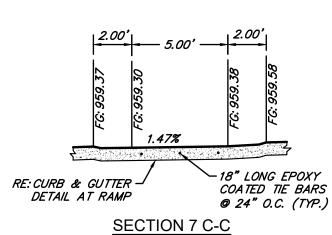


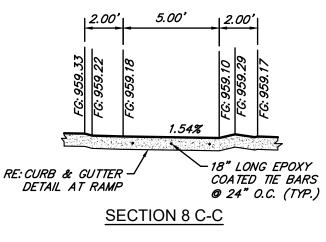




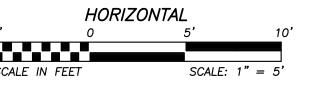












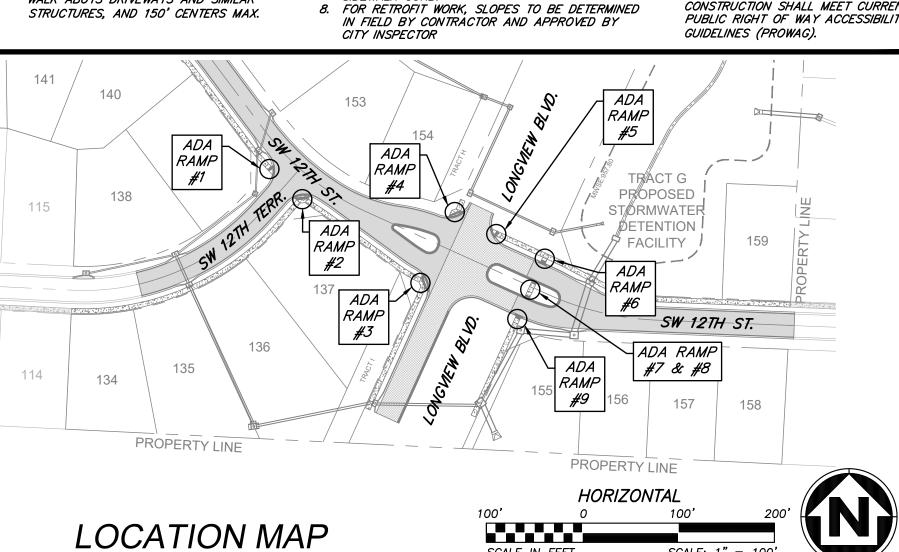


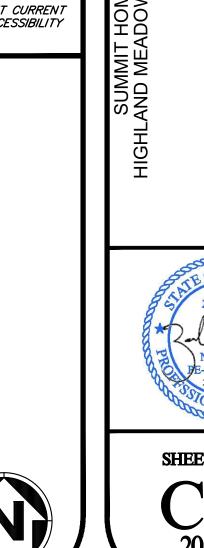
<u>LEGEND</u>		DRY CURB & GUTTER
EOP = EDGE OF PAVEMENT TS = TOP OF SIDEWALK		DETECTIBLE WARNING STRIP
$TYP = TYPICAL$ $\mathbf{T} = TRANSITION$		TYPICAL 28' ROADWAY PAVEMENT SECTION
TS = TURNING SPACE $R = RAMP$	Δ	KCMMB4K CONCRETE SIDEWALK

GENERAL NOTES:

- OPENING SHALL BE AT LEAST 48" WIDE. . USE 18" LONG #4 EPOXY COATED TIE BARS @ 24" O.C. EMBED THE BARS 9" IN EACH
- DIRECTION. ALL RAMPS, SIDEWALKS, SHARED-USE PATHS SUBGRADE MUST BE OF STABLE, COMPACTED EARTH AND SHALL BE OVERLAYED WITH 4" COMPACTED DENSE GRADED AGGREGATE BASE.
- LONGITUDINAL JOINT SPACING TO MATCH WIDTH OF SIDEWALK. ISOLATION JOINTS SHALL BE PLACED WHERE WALK ABUTS DRIVEWAYS AND SIMILAR STRUCTURES, AND 150' CENTERS MAX.
- CURB RAMP OPENING, NOT INCLUDING FLARES, 6. ADA MAXIMUM RAMP SLOPE = 8.33%, ADA
 SHALL MATCH EXISTING SIDEWALK WITH AN MAXIMUM CROSS SLOPE = 2.0%. *ROADWAY EXCEPTION: WHERE EXISTING ROAD PROFILE GRADE DOES NOT ALLOW RAMP TO MEET RAMP SLOPE REQUIREMENT OF 8.33% OR LESS, THE RAMP SHALL BE EXTENDED TO A LENGTH OF 15 FEET TO MATCH EXISTING SIDEWALK. CROSS SLOPE OF RAMP SHALL BE 1.5% ±0.5%. TURNING SPACES SHALL BE 1.5%, ±0.5%, SLOPE IN ANY DIRECTION. TURNING SPACES SHALL HAVE
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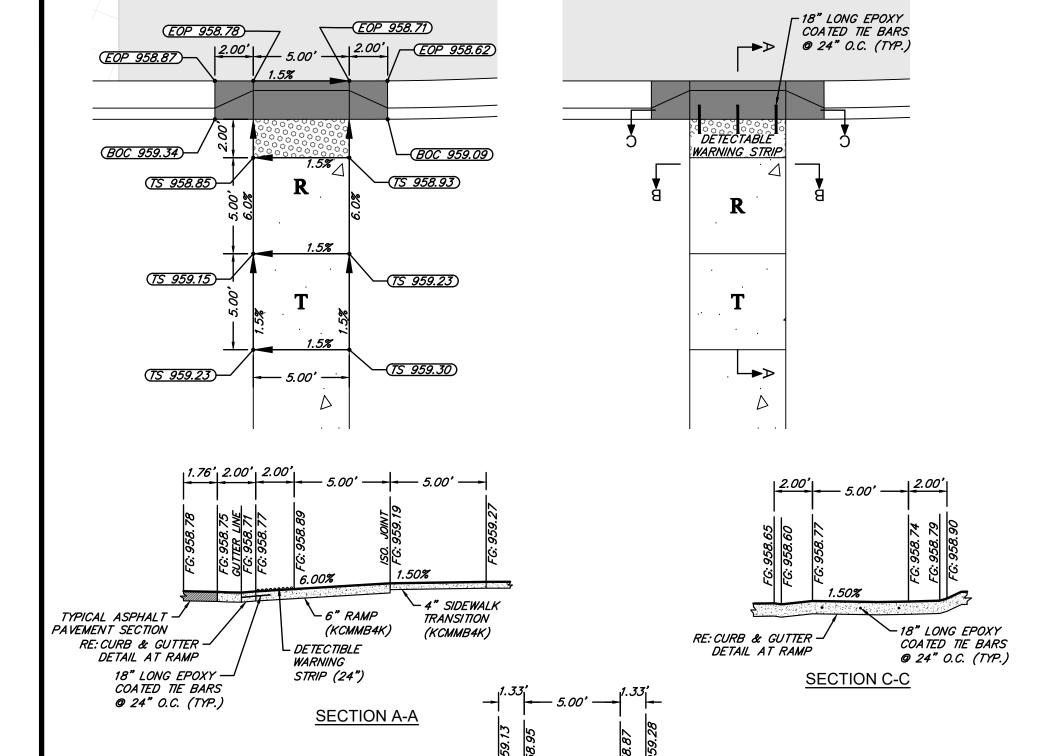
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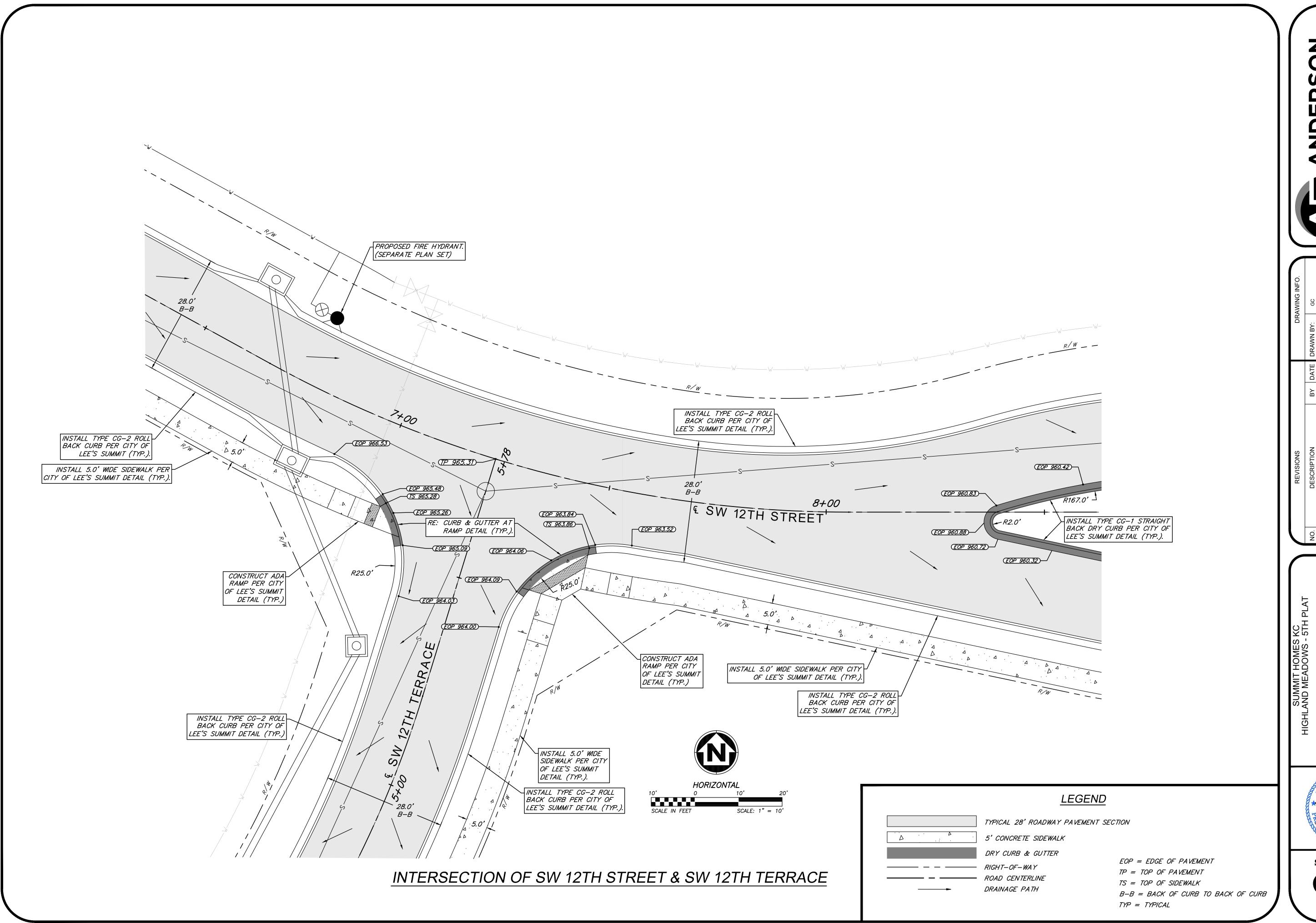
SHEET NUMBER 20 of 40



6" RAMP (KCMMB4K)

SECTION B-B

ADA RAMP #9



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941 W. 141ST TER. • KANSAS CITY, MISSOURI 64145 • PHONE (816) 777-0400

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			ISSUED FOR:	FOR REVIEW
			JOB NUMBER:	20KC10057
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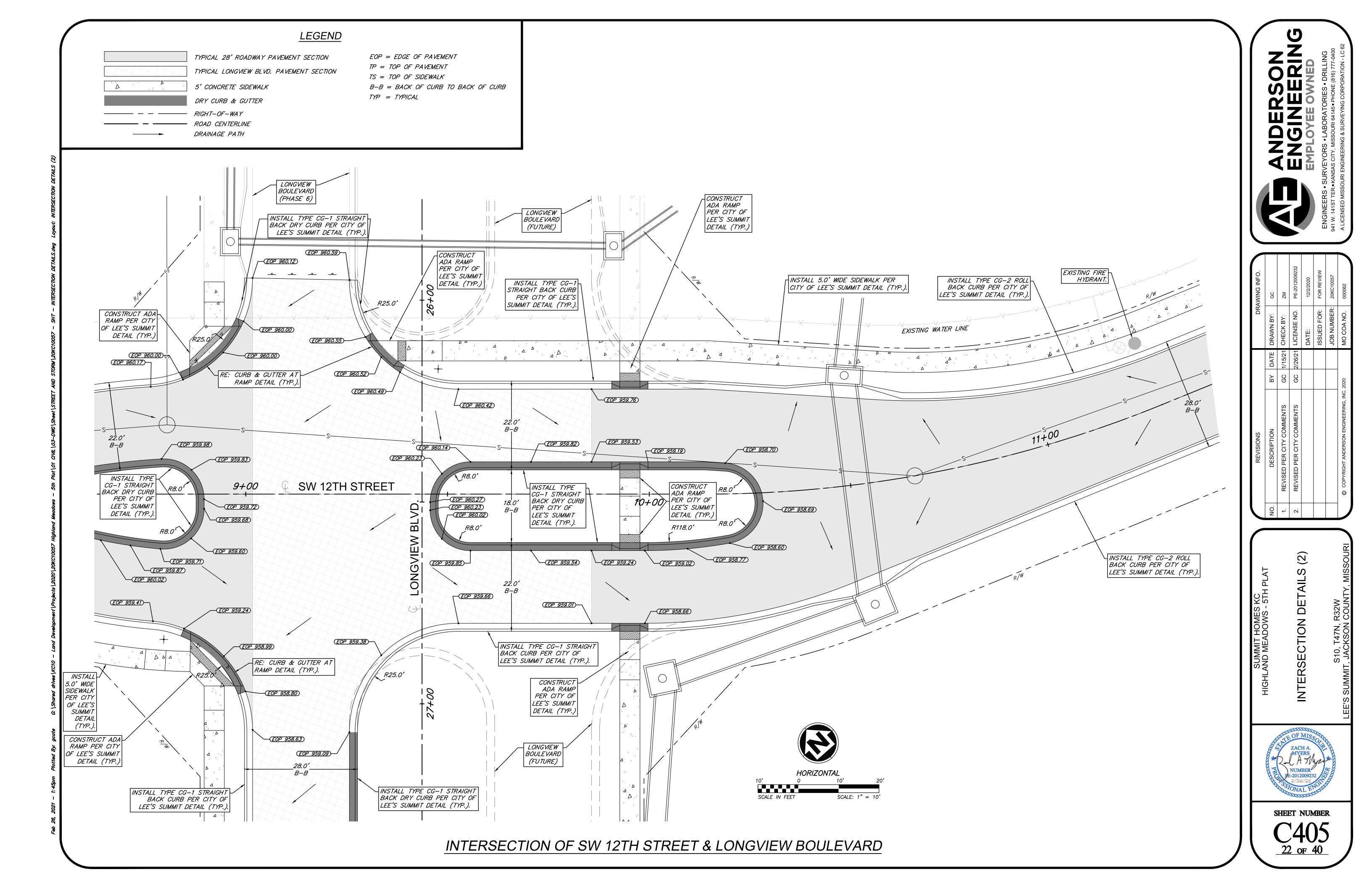
INTERSECTION DETAILS

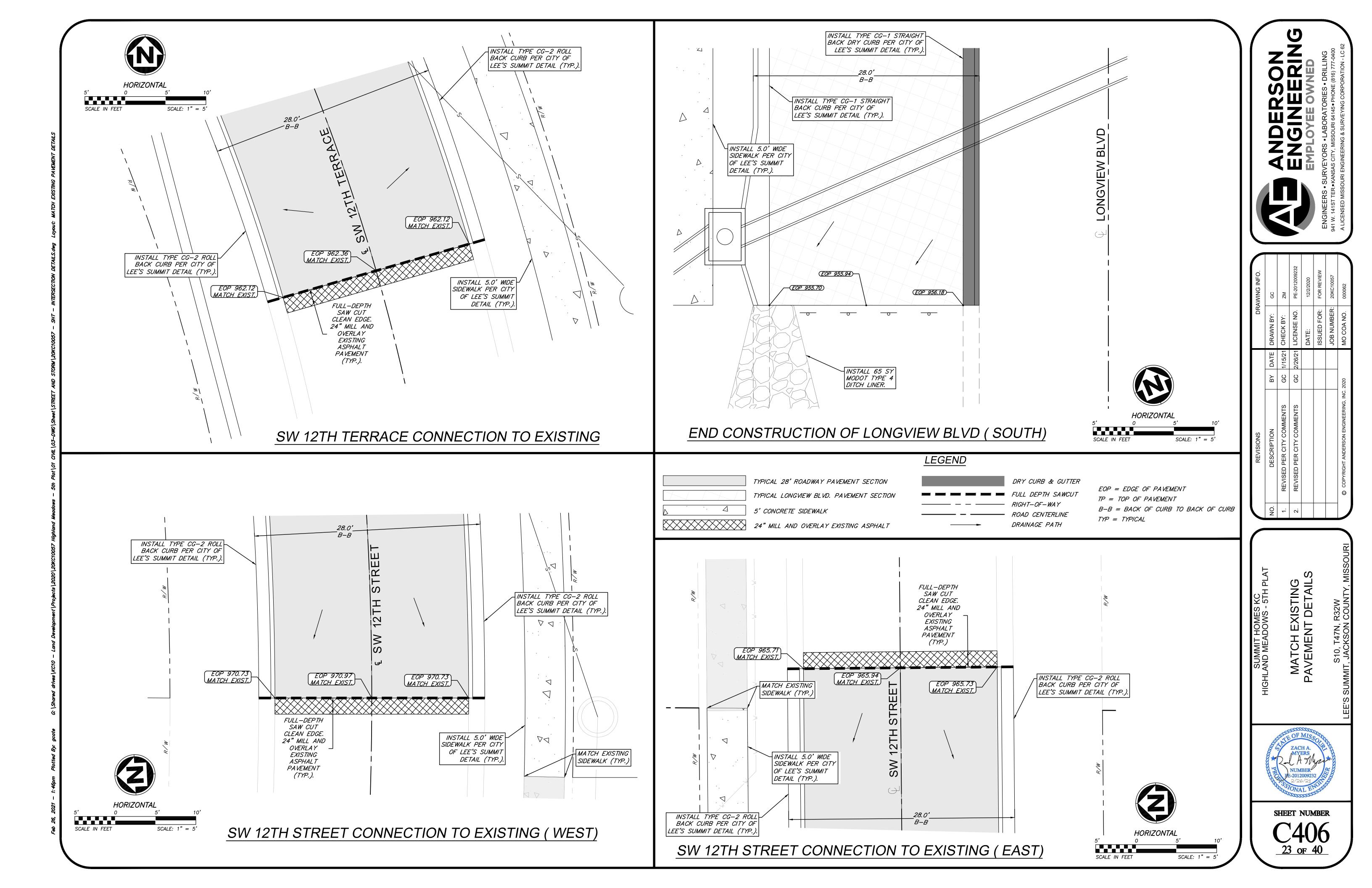


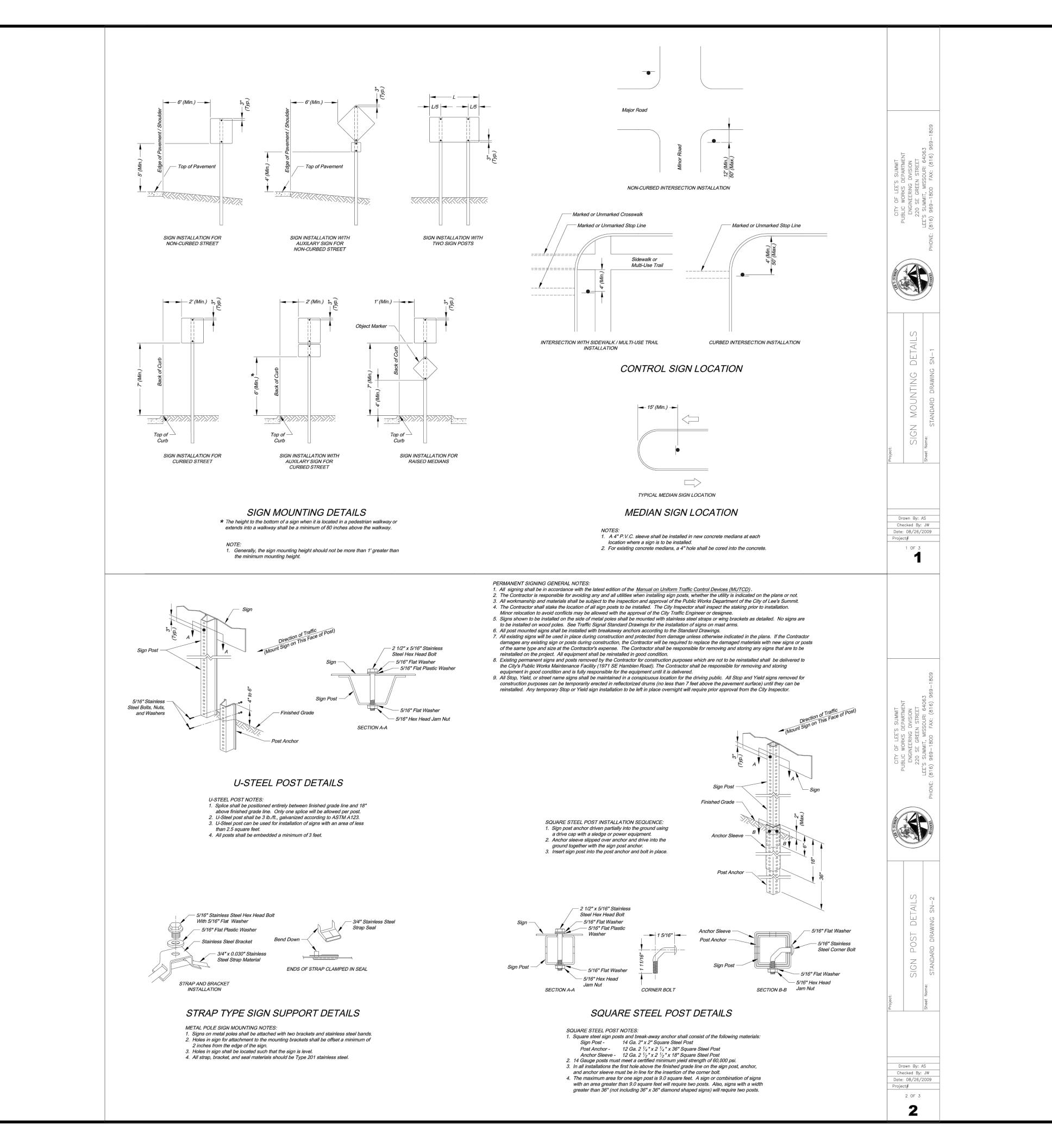
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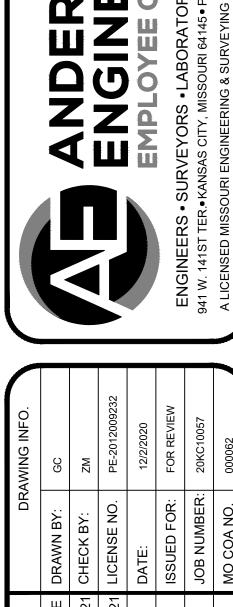
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21 OF 40







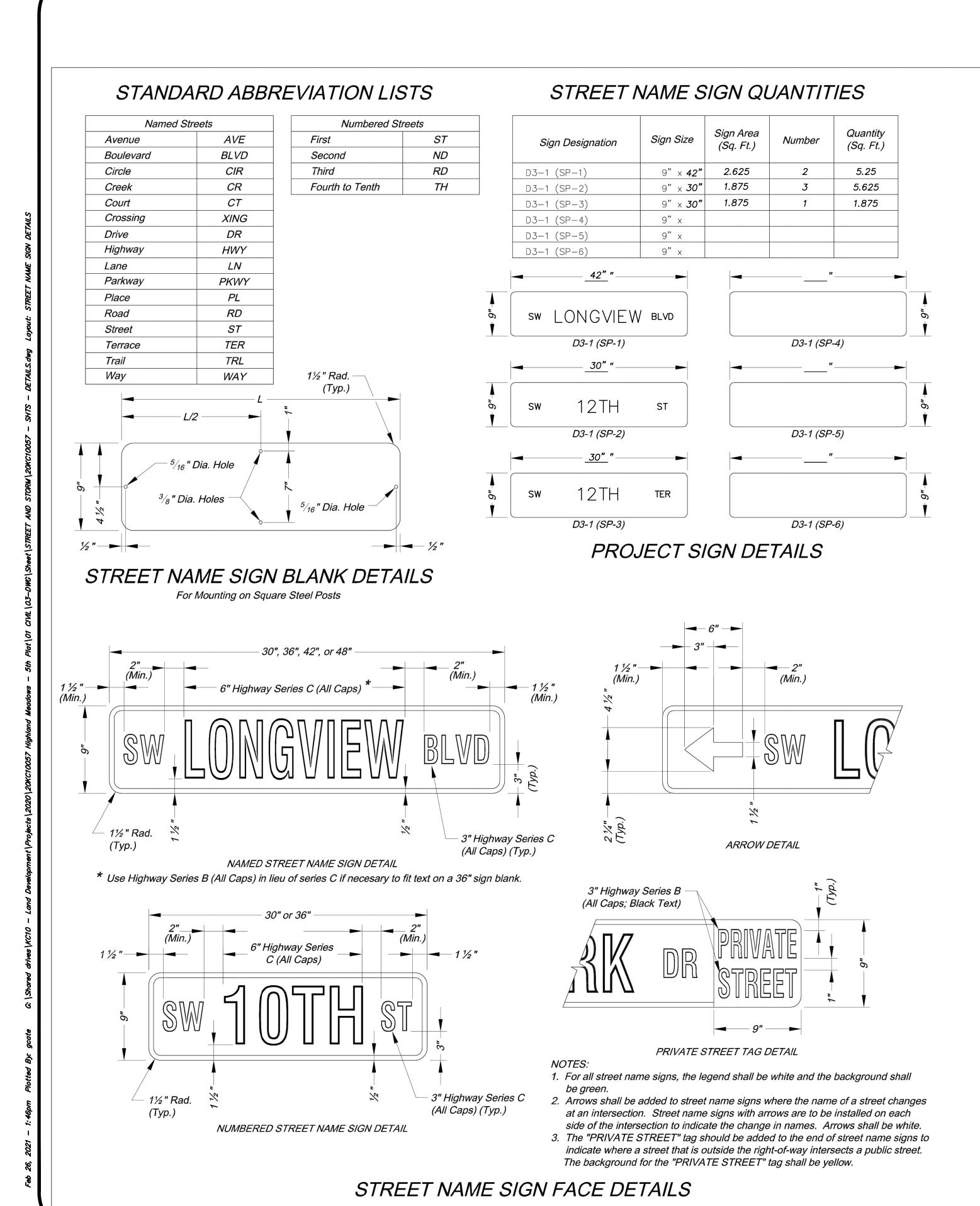


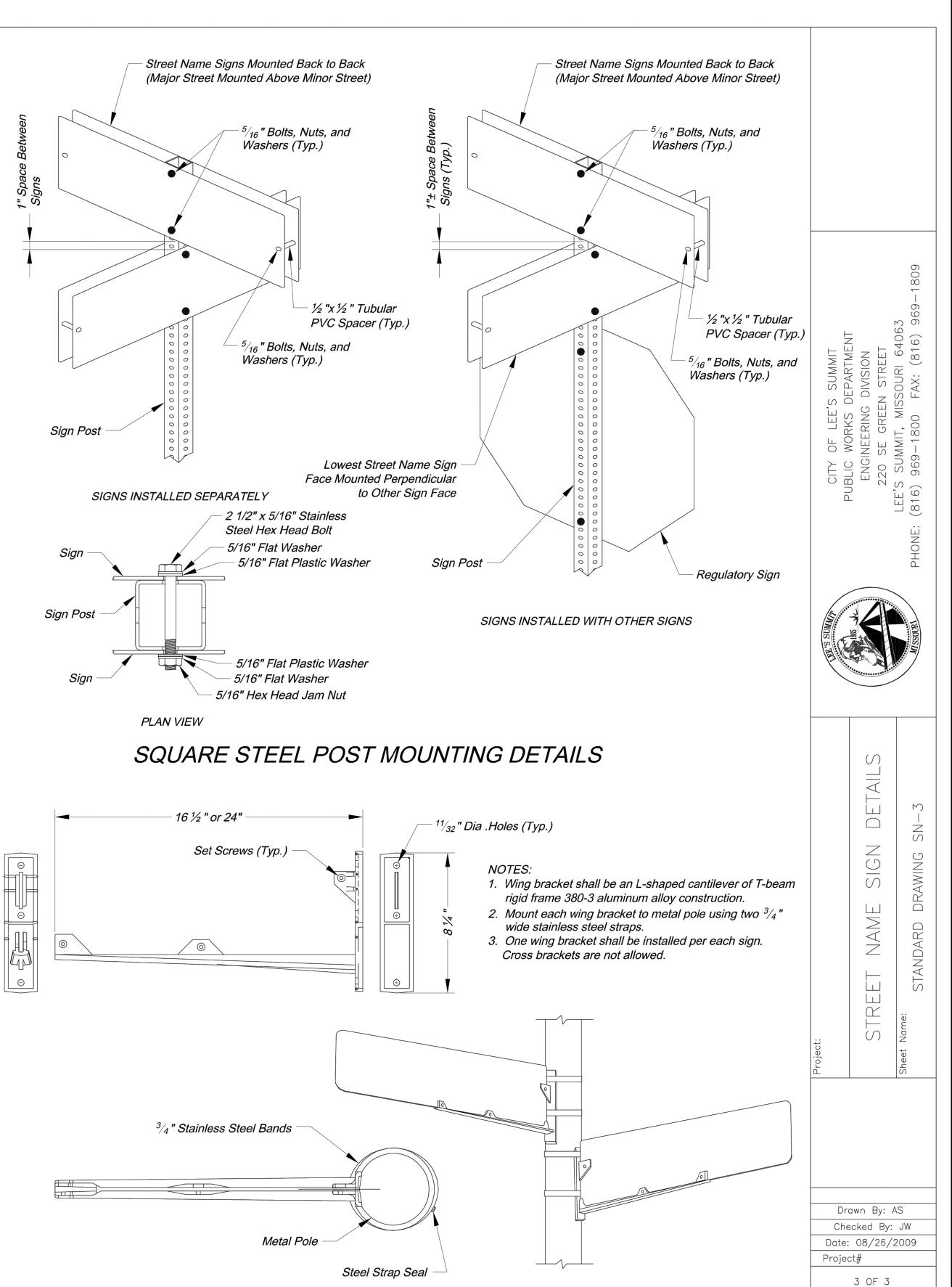
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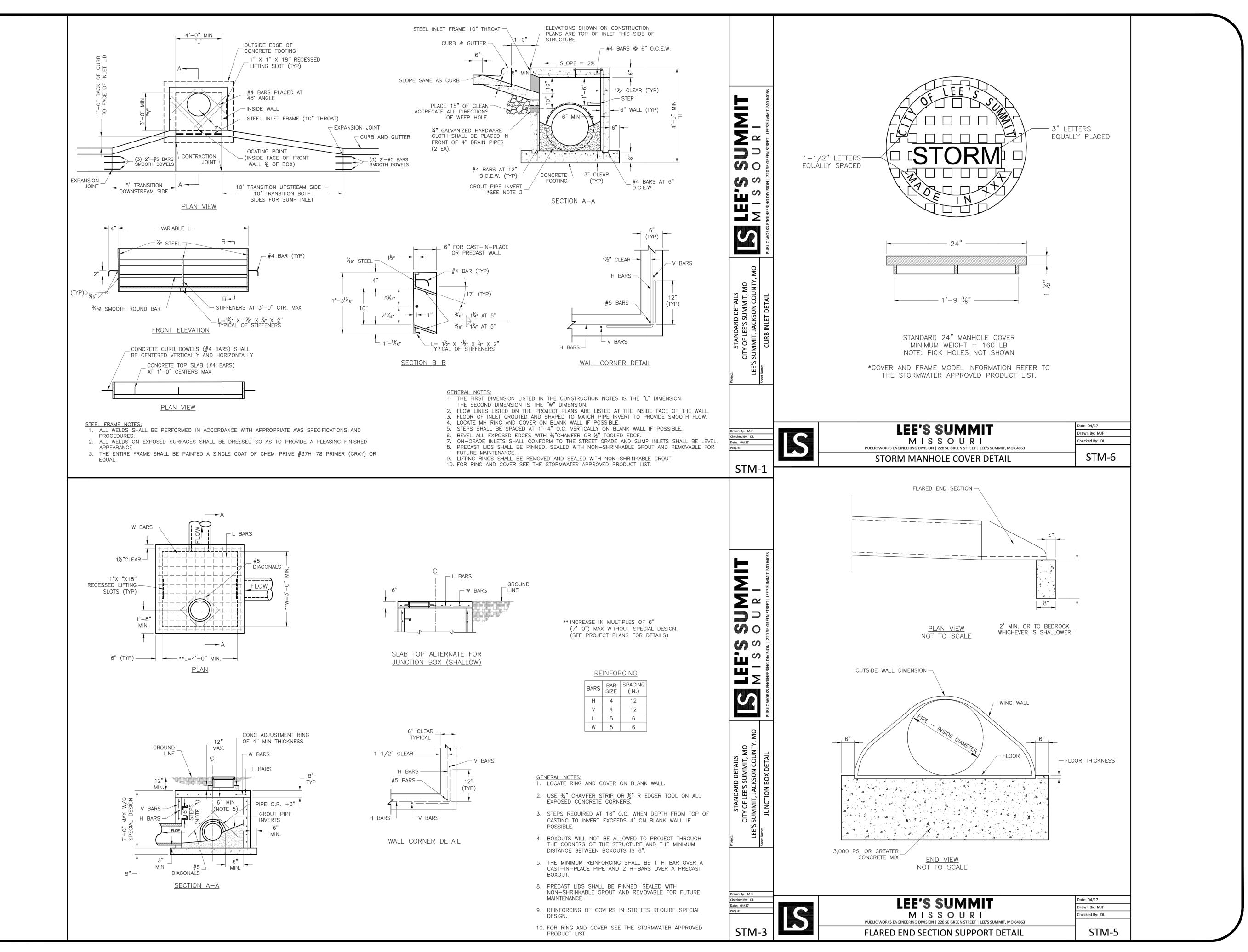
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C408

25 of 40

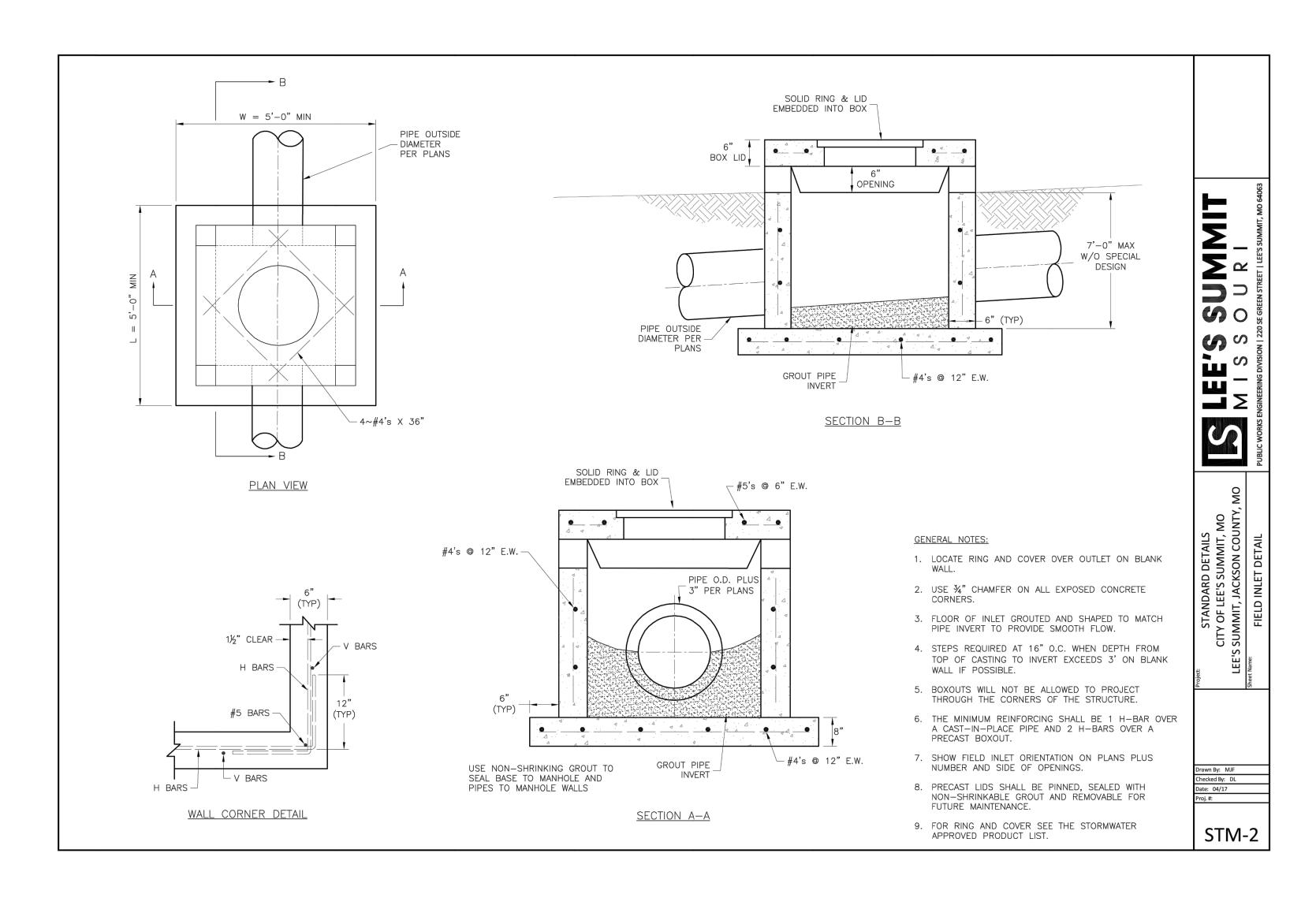


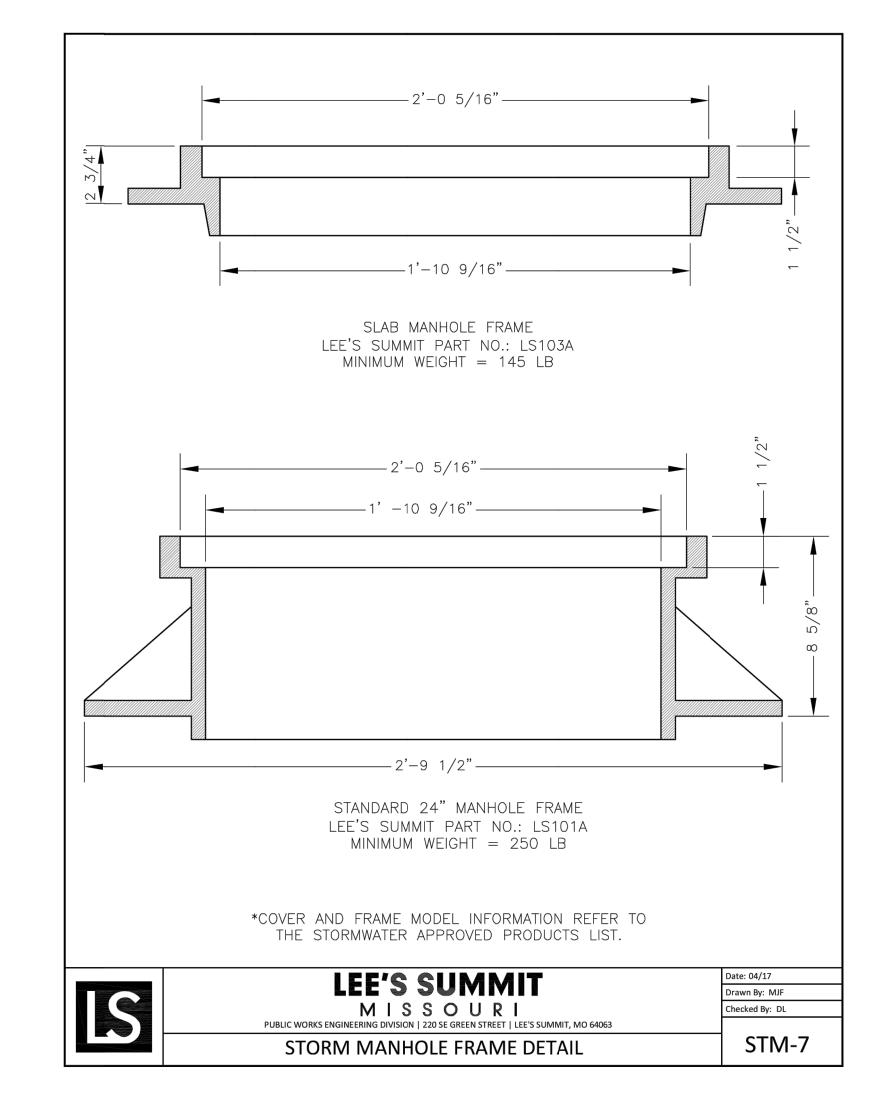
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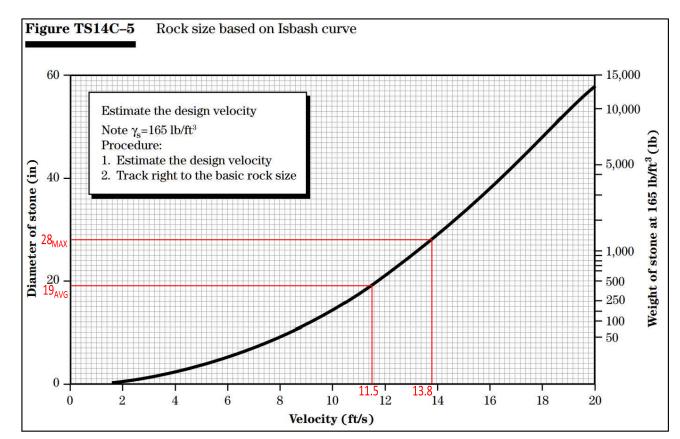
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SHEET NUMBER







MAXIMUM 10-YR OUTLET VELOCITY PER DRAINAGE CALCULATIONS (SHEET C202) ≈ 9.71 FT/S.

PER TABLE ABOVE, 9.71 FT/S x 1.2 SAFETY FACTOR = 11.5 FT/S \approx 19" AVERAGE STONE SIZE.

19" STONE ≈ MoDOT TYPE 4 DITCH LINER SPECIFICATION

"TYPE 4 ROCK DITCH LINER SHALL CONSIST OF MATERIAL WITH A PREDOMINAT ROCK SIZE OF 19 INCHES, A MAXIMUM ROCK SIZE OF 28 INCHES AND A GRADATION SUCH THAT NO MORE THAN 15% WILL BE LESS THAN 6 INCHES" PER SECTION 609.60.2.4 OF THE 2018 MISSOURI STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION. RIP-RAP NOTES

ROCK TO BE USED FOR RIP—RAP SHALL CONSIST OF INDIVIDUAL ROCK
FRAGMENTS THAT ARE DENSE, SOUND, AND RESISTANT TO ABRASION. THE
ROCK SHALL BE FREE OF CRACKS, SEAMS, AND OTHER DEFECTS THAT
WOULD TEND TO INCREASE THE DESTRUCTION OF THE INDIVIDUAL ROCK
FRAGMENTS DUE TO WATER AND FRONT ACTION. REFER APWA SECTION
2600

2. RIP—RAP SHALL HAVE A MINIMUM THICKNESS OF 24" AT ALL LOCATIONS SHOWN ON THE PLANS. RIP—RAP SHALL BE PLACED ON GEOTEXTILE FABRIC AS SHOWN IN THE DETAIL.

3. 24" THICK RIP—RAP SHALL BE WELL—GRADED (D50 = 19") AND CONFORM TO THE TABLE BELOW:

 PERCENT LIGHTER
 WEIGHT, LBS.

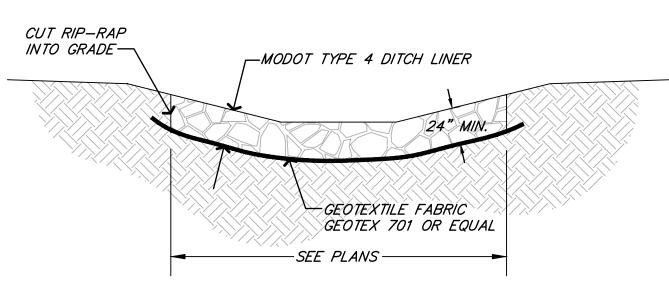
 100
 700

 85-95
 525

 30-50
 175

 0-15
 30

4. A SAMPLE OF ALL ROCK TO BE PLACED SHALL BE SET ASIDE AT A QUARRY CHOSEN BY THE CONTRACTOR AND VISUALLY INSPECTED BY THE CONTRACTOR FOR QUALITY TO ENSURE ROCK MEETS ALL REQUIREMENTS PRIOR TO DELIVERY.



<u>BEDDING</u>

1/2"-3/4" CLEAN AGGREGATE, HAND TAMPED OR MECHANICALLY
COMPACTED IN MAX. 4" LIFTS

INITIAL BACKFILL

-UNDER PAVED AREAS OR WITHIN 4' HORIZONTAL OF PAVED AREAS

1/2"-3/4" CLEAN AGGREGATE, HAND TAMPED OR MECHANICALLY

COMPACTED IN MAX. 4" LIFTS

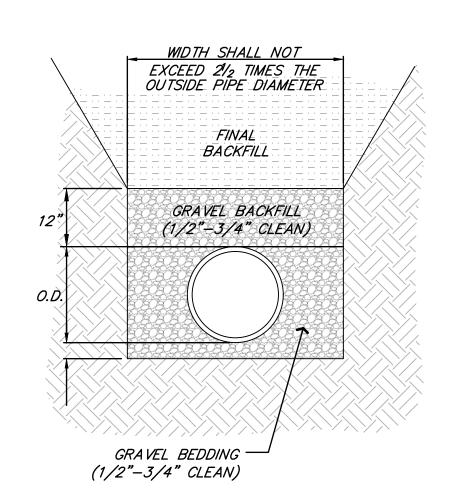
-UNDER OPEN AREAS

1/2"-3/4" CLEAN AGGREGATE, HAND TAMPED OR MECHANICALLY COMPACTED IN MAX. 4" LIFTS FINAL BACKFILL

-UNDER PAVED AREAS OR WITHIN 4' HORIZONTAL OF PAVED AREAS
ON-SITE OR IMPORTED MATERIAL FREE OF MUCK, FROZEN
MATERIAL, EXCESS MOISTURE, ORGANICS, TOPSOIL, RUBBISH,
CONSTRUCTION DEBRIS, ROCK OR BRICK LARGER THAN 8",
COMPACTED TO 95% OF STANDARD DENSITY PER ASTM D-698
-UNDER OPEN AREAS

ON-SITE OR IMPORTED MATERIAL FREE OF MUCK, FROZEN
MATERIAL, EXCESS MOISTURE, ORGANICS, TOPSOIL, RUBBISH,
CONSTRUCTION DEBRIS, ROCK OR BRICK LARGER THAN 8",
COMPACTED TO 90% OF STANDARD DENSITY PER ASTM D-698

BEDDING DEPTH	BELOW PI	PE
PIPE DIAMETER	IN SOIL	IN ROCK
24" AND LESS	4"	<i>6"</i>
27" THRU 60"	4"	9"



PIPE BEDDING DETAIL

NOT TO SCALE

ANDERSON ENGINEERING EMPLOYEE OWNED

12020 REVIEW ENGINEERS • SURVEYOR

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ORM SEWER DETAILS (

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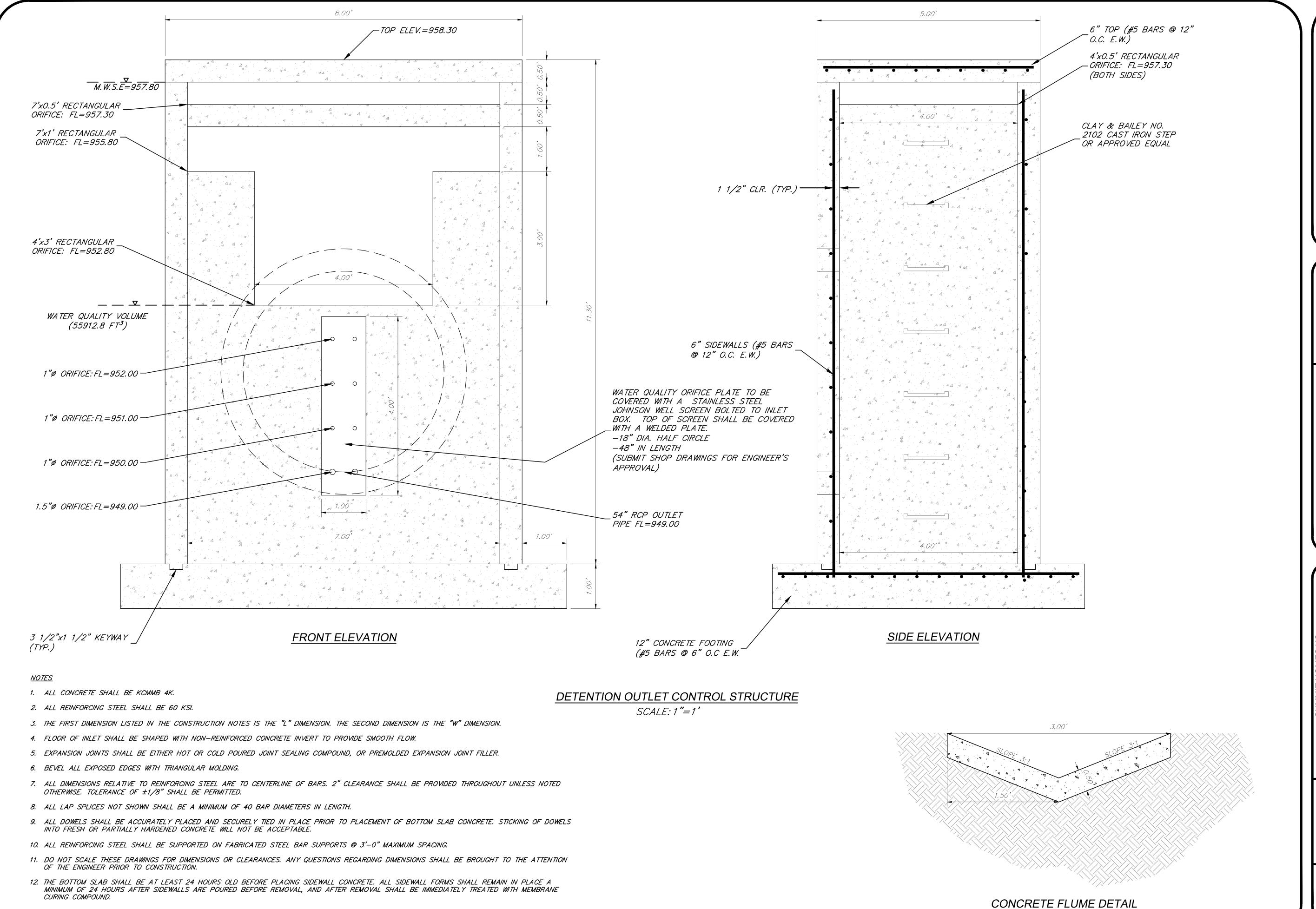
35/ONAL ENGINEER

C502 27 of 40

Feb 26, 2021 – 1:46pm Plotted By: gcate G:\Shared drives

RIPRAP DETAILS

NOT TO SCALE



13. RCP CONNECTIONS TO PRECAST STRUCTURES SHALL HAVE A MINIMUM OF 6" OF CONCRETE AROUND THE ENTIRE PIPE WITHIN 2' OF THE STRUCTURE.

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ENGINEERS - SURVEY

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NO.	DESCRIPTION	ВУ	DATE	BY DATE DRAWN BY:	GC
	REVISED PER CITY COMMENTS	CC	GC 1/15/21	CHECK BY:	ZM
	REVISED PER CITY COMMENTS	GC	2/26/21	GC 2/26/21 LICENSE NO.	PE-2012009232
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STORM SEWER DETAILS (3)

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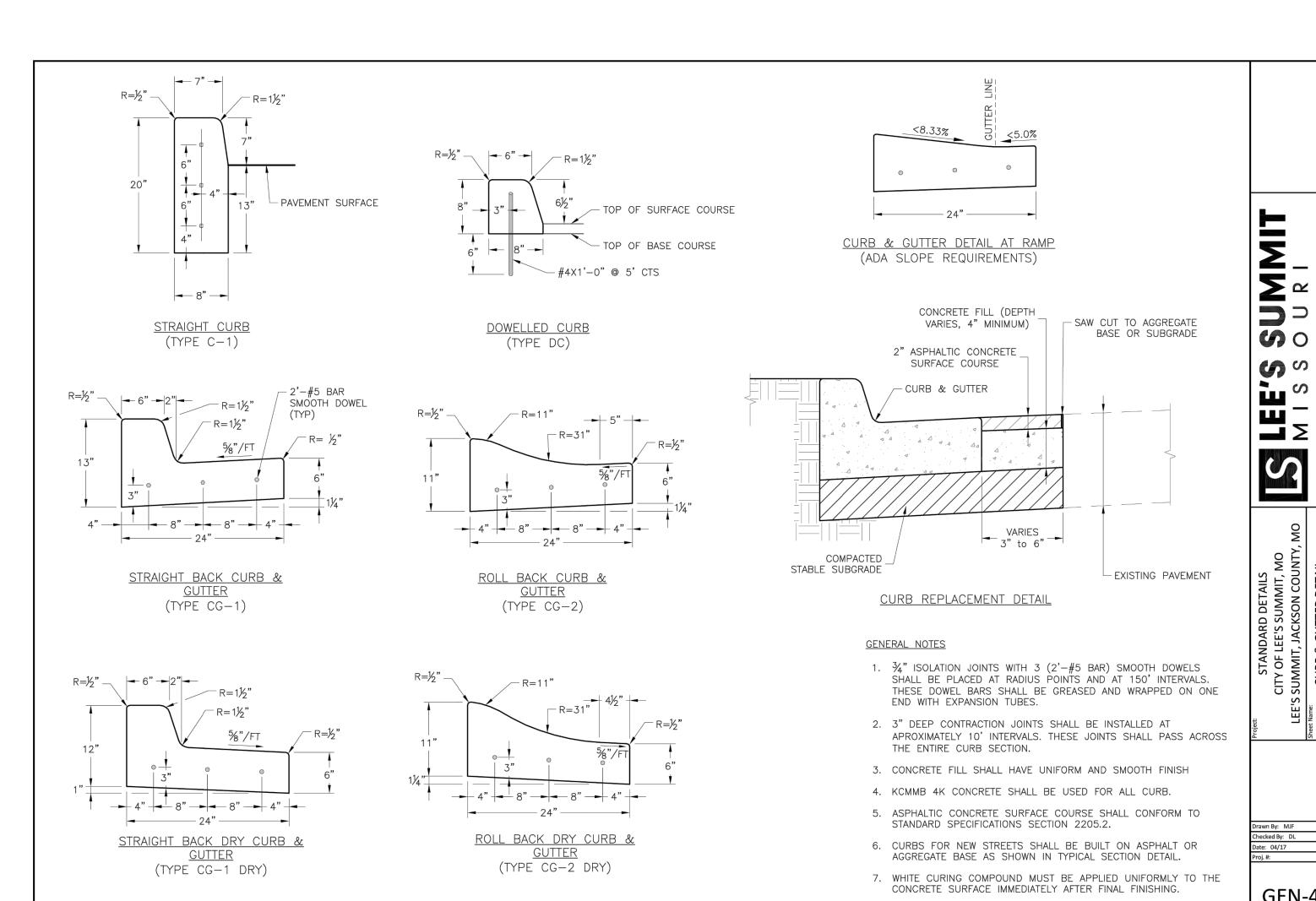
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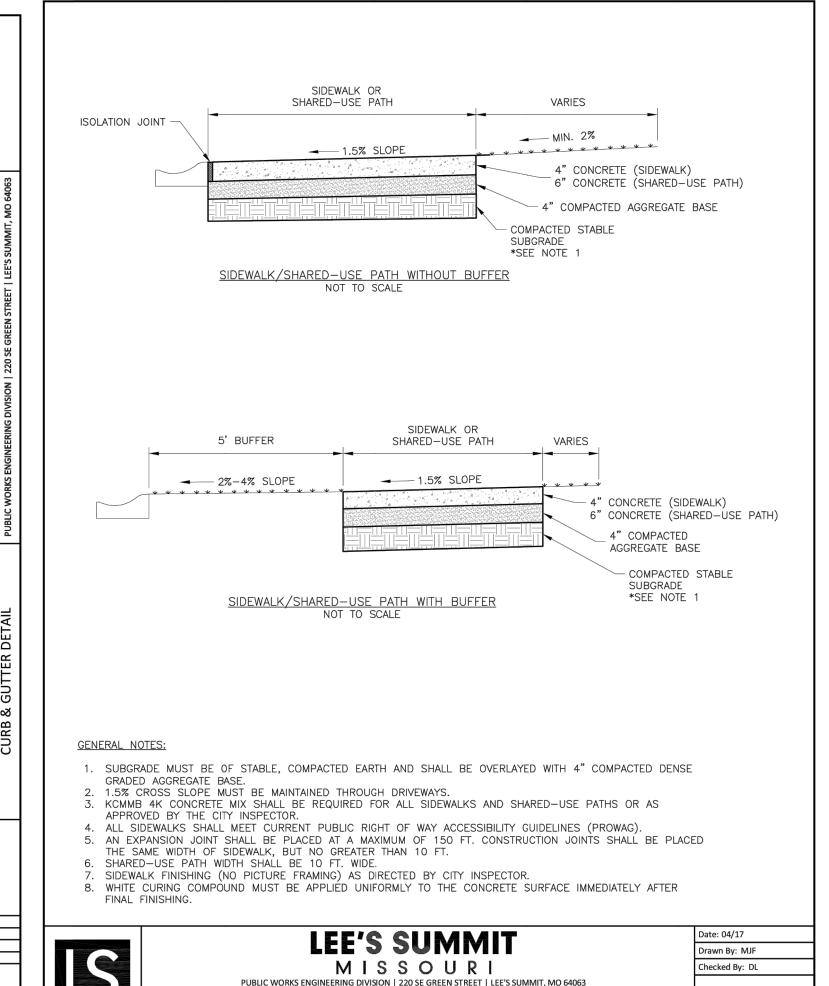
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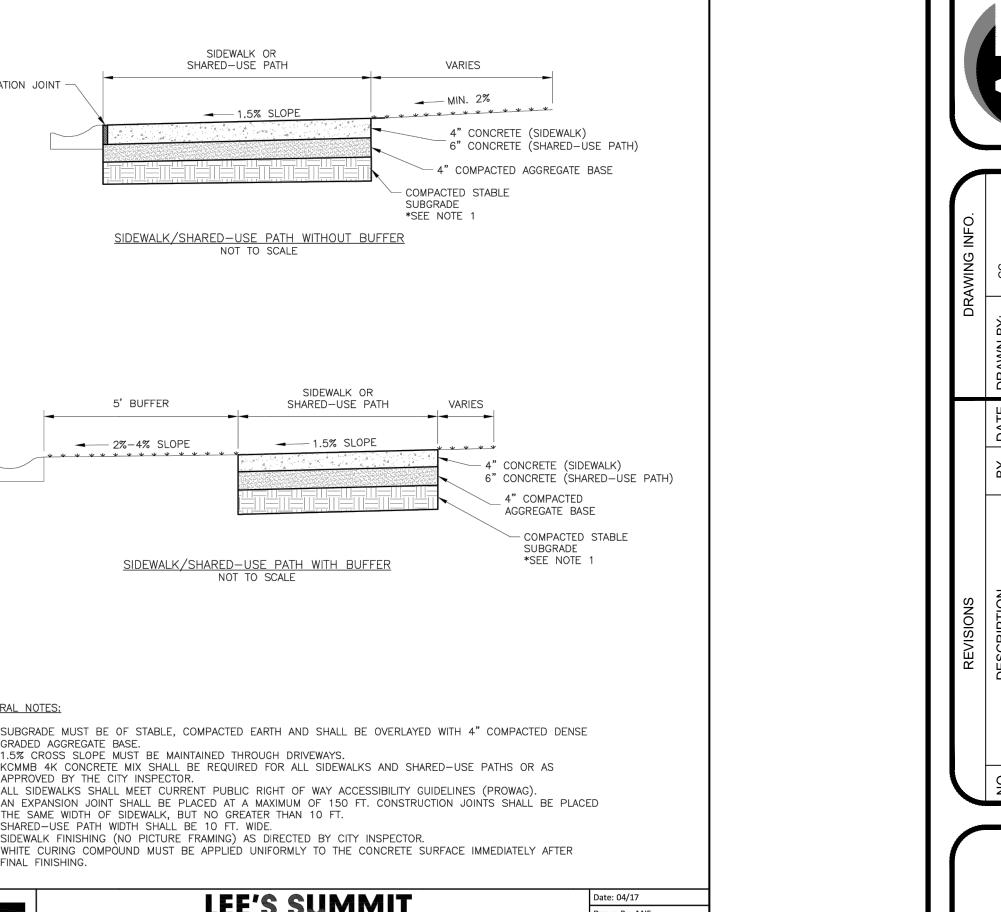
28 of 40

NOT TO SCALE

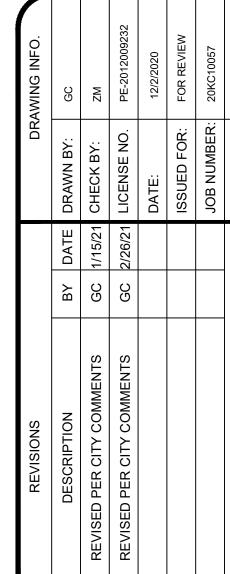




SIDEWALK/SHARED-USE PATH DETAIL



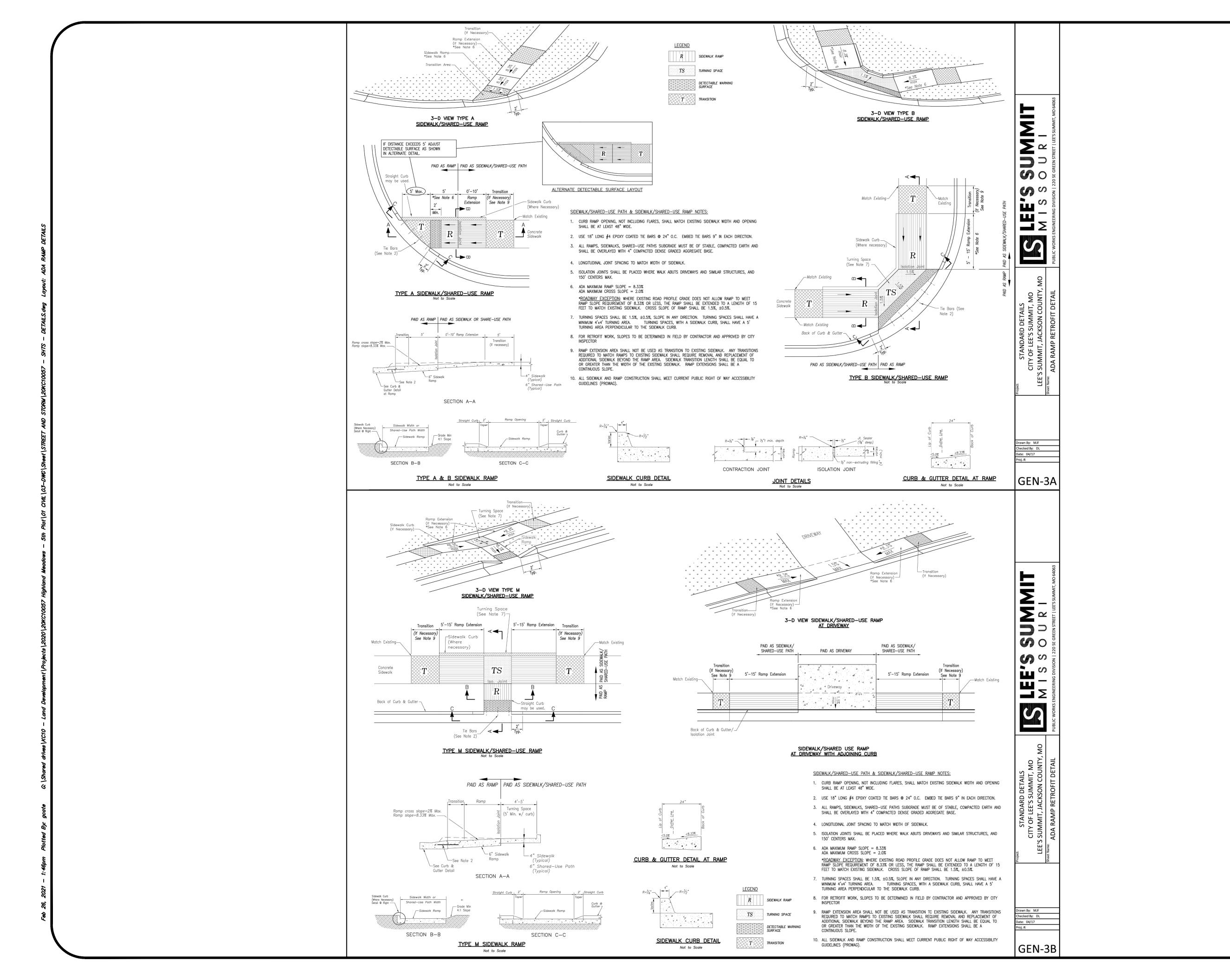
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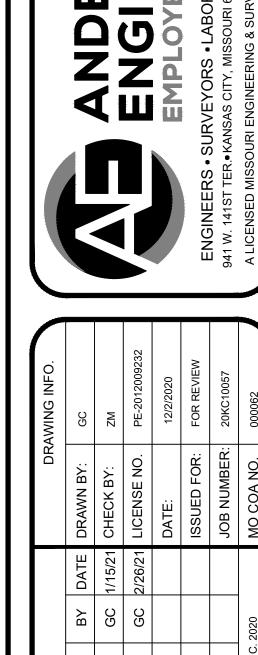


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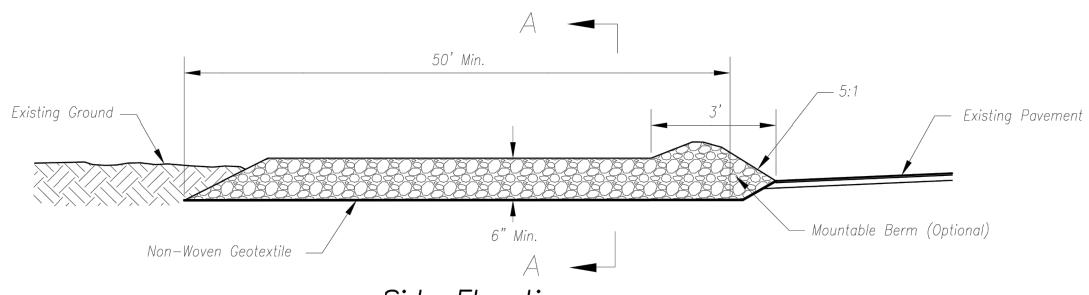
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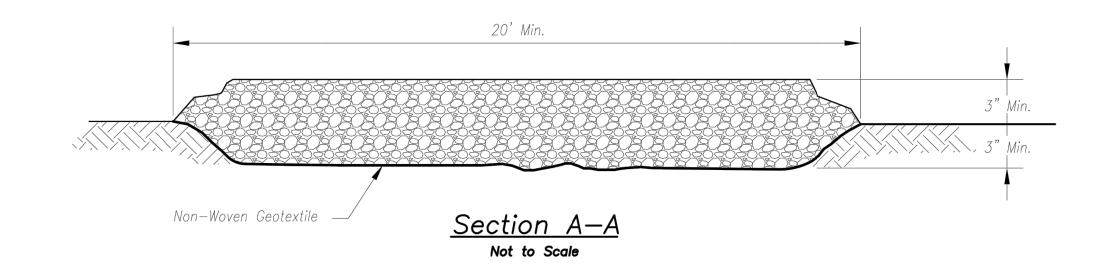


SHEET NUMBER

<u>Plan View</u>



Side Elevation Not to Scale



Notes for Construction Entrance:

- Avoid locating on steep slopes, at curves on public roads, or downhill of disturbed area.
- Remove all vegetation and other unsuitable material from the foundation area, grade, and crown for positive drainage.
- 3. If slope towards the public road exceeds 2%, construct a 6— to 8—inch high ridge with 3H:1V side slopes across the foundation approximately 15 feet from the edge of the public road to divert runoff from it.
- Install pipe under the entrance if needed to maintain drainage ditches along public roads.
- 5. Place stone to dimensions and grade as shown on plans. Leave surface sloped for drainage.
- 6. Divert all surface runoff and drainage from the entrance to a sediment control device.
- 7. If conditions warrant, place geotextile fabric on the graded foundation to improve stability.

Maintenance for Construction Entrance:

 Reshape entrance as needed to maintain function and integrity of Installation. Top dress with clean aggregate as needed.

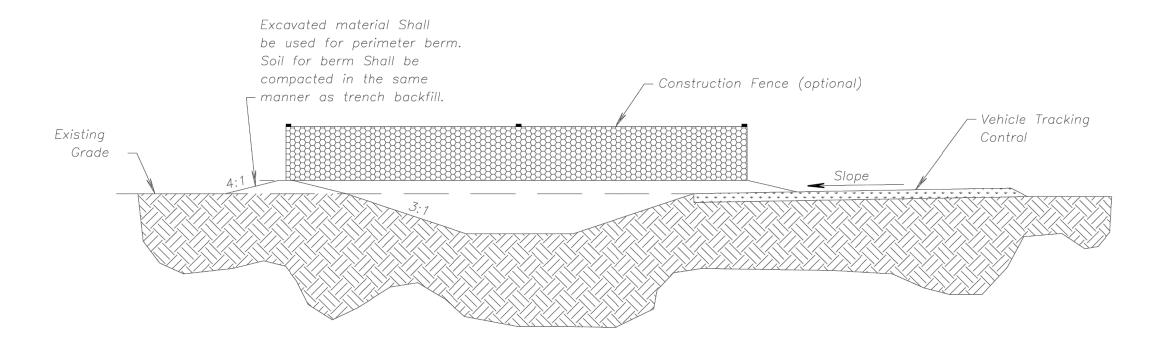
CONSTRUCTION ENTRANCE

Notes for Concrete Washout:

- 1. Concrete washout areas shall be installed prior to any concrete placement on site.
- 2. Concrete washout area shall include a flat subsurface pit sized relative to the amount of concrete to be placed on site. The slopes leading out of the subsurface pit shall be 3:1. The vehicle tracking pad shall be sloped towards the concrete washout area.
- Vehicle tracking control is required at the access point to all concrete washout areas.
- 4. Signs shall be placed at the construction site entrance, washout area and elsewhere as necessary to clearly indicate the location(s) of the concrete washout area(s) to operators of concrete truck and pump rigs.
- 5. A one-piece impervious liner may be required along the bottom and sides of the subsurface pit in sandy or gravelly soils.

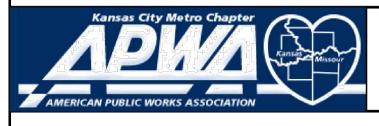
Maintenance for Concrete Washout:

- Concrete washout materials shall be removed once the materials have filled the washout to approximately 75% full.
- 2. Concrete washout areas shall be enlarged as necessary to maintain capacity for wasted concrete.
- Concrete washout water, wasted pieces of concrete and all other debris in the subsurface pit shall be transported from the job site in a water—tight container and disposed of properly.
- Concrete washout areas shall remain in place until all concrete for the project is placed.
- 5. When concrete washout areas are removed, excavations shall be filled with suitable compacted backfill and topsoil, any disturbed areas associated with the installation, maintenance, and/or removal of the concrete washout areas shall be stabilized.



CONCRETE WASHOUT

AMERICAN PUBLIC WORKS ASSOCIATION



KANSAS CITY METRO CHAPTER

CONSTRUCTION ENTRANCE
AND CONCRETE WASHOUT

STANDARD DRAWING
NUMBER ESC-0I
ADOPTED:
10/24/2016

ANDERSON ENGINEERIN EMPLOYEE OWNED



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CONSTRUCTION NTRANCE DETAILS

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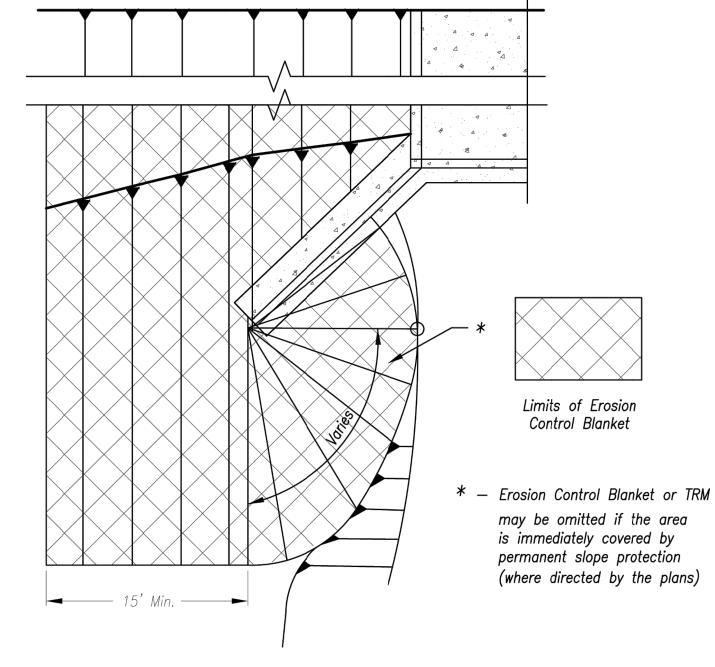
SHEET NUMBER

C601
31 of 40

Construction Entrance modified from 2015 Overland Park Standard Details for Erosion and Sediment Control; Concrete Washout modified from 2009 City of Great Bend Standard Drawings.

Installation on Slopes

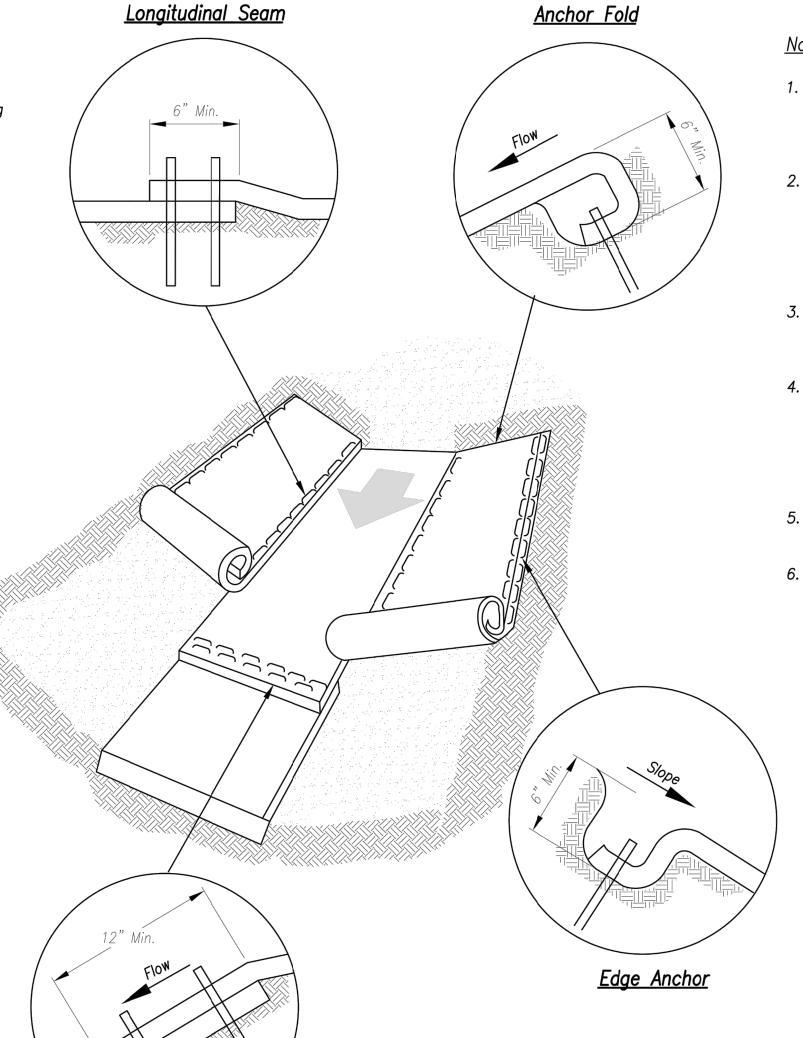
<u>Installation Around Culvert Slope</u>



<u>Partial Box Culvert Plan</u> Not to Scale

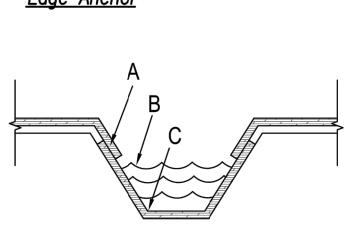
Notes for Installation on Slopes:

- 1. Erosion Control Blankets and TRMs shall be laid in the direction of the slope. In order for blanket to be in contact with the soil, lay blanket loosely, avoiding stretching.
- 2. ANCHOR SLOTS: The top of the blanket should be "slotted in" at the top of the slope and anchored in place with anchors 6 inches apart. The slots should be 6 inches wide x 6 inches deep with the blanket anchored in the bottom of the slot, then backfilled, tamped and seeded.
- 3. SPLICE SEAM: When splices are necessary, overlap end a minimum of 8 inches in direction of water flow. Stagger splice
- 4. TERMINAL FOLD: The bottom edge of the blanket shall be turned under a minimum of 4 inches, then anchored in place with anchors 9 inches apart.



Notes for Installation in Channels:

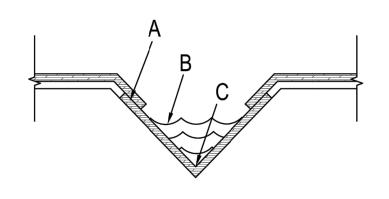
- 1. Erosion Control Blankets and TRMs shall be laid in the direction of the flow, with the first course at the centerline of channel, where applicable. In order for the mat to be in contact with the soil, lay the mat loosely, avoiding stretching.
- 2. ANCHOR FOLD: The top of the mat should be folded under, buried and secured with wood or other approved anchors placed 6 inches apart. The top edge of the mat should be buried in a slot 6 inches wide x 6 inches deep, anchored in the bottom of the slot, backfilled, and the mat folded over the top as shown in detail.
- 3. SPLICE SEAM: When splices are necessary, overlap end a minimum of 12 inches in direction of water flow. Stagger splice seams.
- 4. CHECK SLOTS: Establish check slots transverse to slope every 30 feet. The slots should be 6 inches wide x 6 inches deep. The mat shall be cut to a length 12 inches beyond the slot. The top of the downstream mat shall be slotted in, secured and buried similar to the edge anchor fold. The upstream mat shall then cover the slot and be anchored as shown.
- 5. EDGE ANCHORS: Lay outside edge of mat into trench at top of the slope and anchor.
- 6. TERMINUS: The bottom edge of the mat shall be anchored.



Trapezoidal Channel

Critical Points:

- A Overlaps and seams;
- B Projected water line;
- C Channel bottom / side slope vertices;



<u>V Channel</u>

<u>Installation in Channels</u>

Splice Seam

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KANSAS CITY METRO CHAPTER

EROSION CONTROL BLANKETS AND TURF REINFORMENT MATS ADOPTED:

STANDARD DRAWING NUMBER ESC-02

10/24/2016

Modified from 2015 Overland Park Standard Details for Erosion and Sediment Control.

STEEP SLOPE ROTECTION DETAI

SHEET NUMBER 32 of 40

4' min length post Geotextile fabric at 4' max spacing 3' wide Staples, plastic zip ties or other material approved by the field engineer, (50 lb tensile strength) located in top 8" Tire compaction zone Direction of Flow 2' Min. Post embedment Machine slice (See Note 6.) 6" — 12" depth

(*) <u>POSTS</u>

- MIN, LENGTH 4'

- HARDWOOD 1 3/6" x 1 3/6"

- NO.2 SOUTHERN PINE 2 %" x 2 %"

- STEEL 1.33 LB/FT

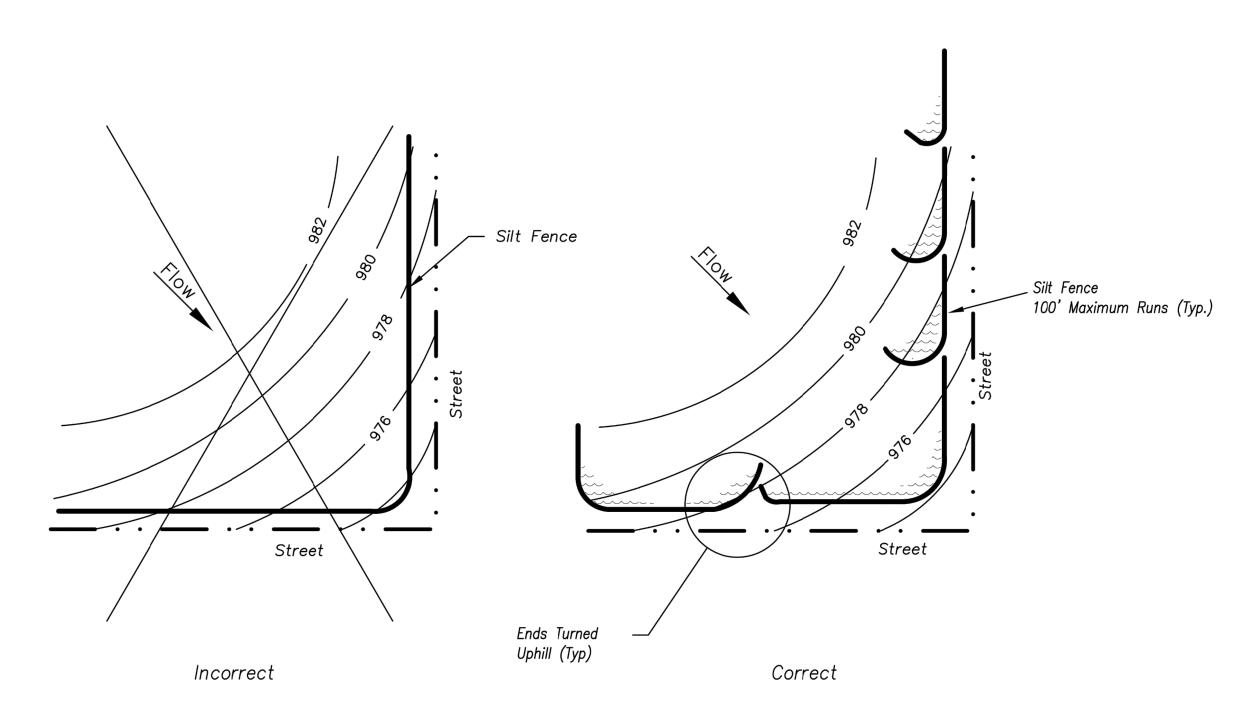
(**) — Geotextile Fabric shall meet the requirements of AASHTO M288

SILT FENCE DETAILS

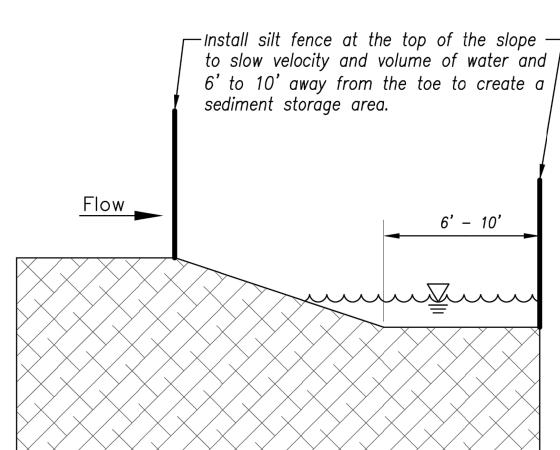
Not to Scale

SILT FENCE LAYOUT

Not to Scale



<u>Figure A</u>

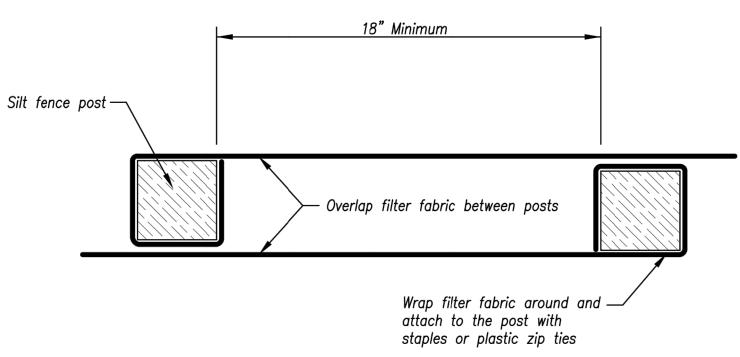


<u>Notes:</u>

- 1. In order to contain water, the ends of the silt fence must be turned uphill (Figure A).
- 2. Long perimeter runs of silt fence must be limited to 100'. Runs should be broken up into several smaller segments to minimize water concentrations (Figure A).
- Long slopes should be broken up with intermediate rows of silt fence to slow runoff velocities.
- 4. Attach fabric to upstream side of post.
- 5. Install posts a minimum of 2' into the ground.
- 6. Trenching will only be allowed for small or difficult installation, where slicing machine cannot be reasonably

<u>Maintenance:</u>

- 1. Remove and dispose of sediment deposits when the deposit approaches 1/3 the height of silt fence.
- 2. Repair as necessary to maintain function and structure.



JOINING FENCE SECTIONS

Not to Scale

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KANSAS CITY METRO CHAPTER

10/24/2016

STANDARD DRAWING NUMBER ESC-03 ADOPTED:

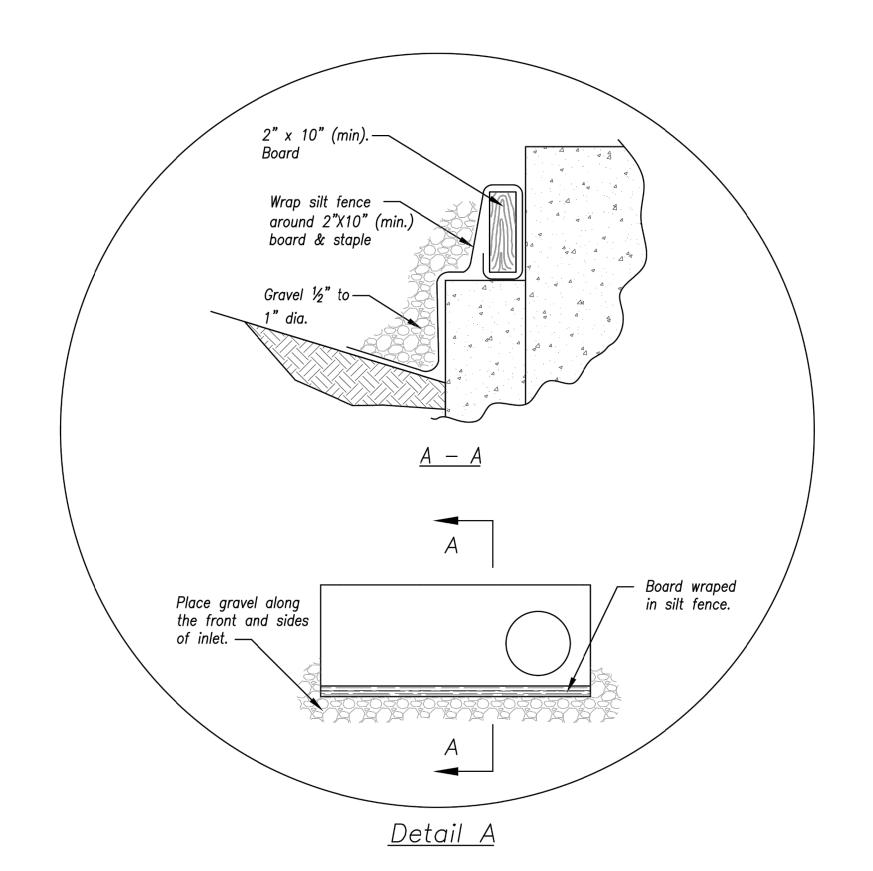
SILT FENCE

Modified from 2015 Overland Park Standard Details for Erosion and Sediment Control.

N - 4

DET, FENCE

SHEET NUMBER 33 of 40



See Detail A below

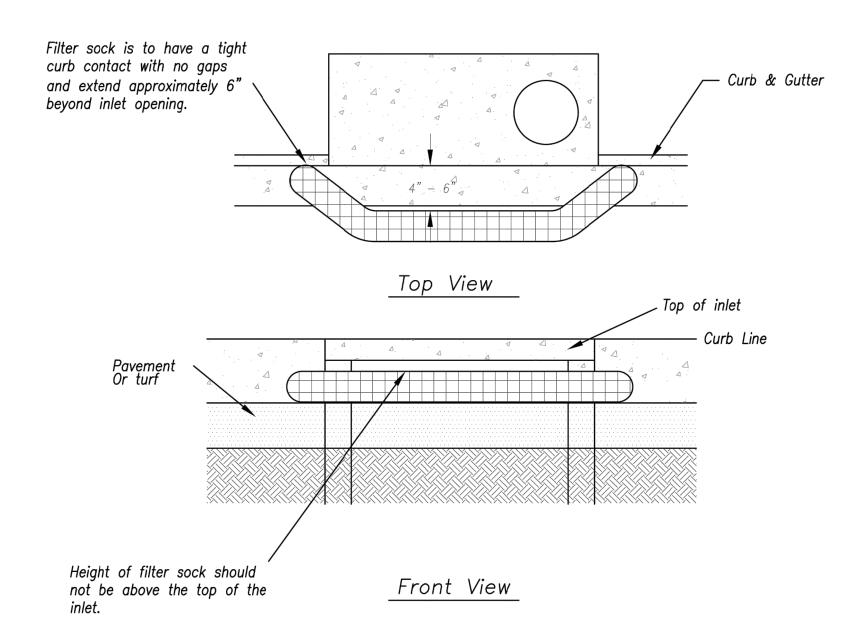
EARLY STAGE CURB INLET (Open Box and Prior to Pouring Curb and Inlet Throat)

<u>Notes:</u>

- Immediately following inlet construction and prior to construction of curb and inlet throat, protect inlet opening by installing 2" X 10" (min.) board wrapped in silt fence. Structures shall have excavated storage area on all four sides to allow settling of sediment (Early Stage Curb Inlet).
- 2. When inlet is completed and curb poured, filter socks or approved equal should be used (Late Stage Curb Inlet). Straw wattles are not approved for curb inlet use.
- Contractor to field verify ponding water shall not create a traffic hazard.

<u>Maintenance:</u>

- 1. Remove deposited sediment from excavated storage areas when available storage has been reduced by 20%.
- 2. Remove deposited sediment from filter socks or similar when any accumulation of sediment is visible.
- Repair or replace as necessary to maintain function and integrity of installation.



Sump Inlet Sediment Filter

LATE STAGE CURB INLET (After Pouring Curb and Inlet Throat)

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KANSAS CITY METRO CHAPTER

CURB INLET PROTECTION

STANDARD DRAWING NUMBER ESC-06 ADOPTED:

10/24/2016

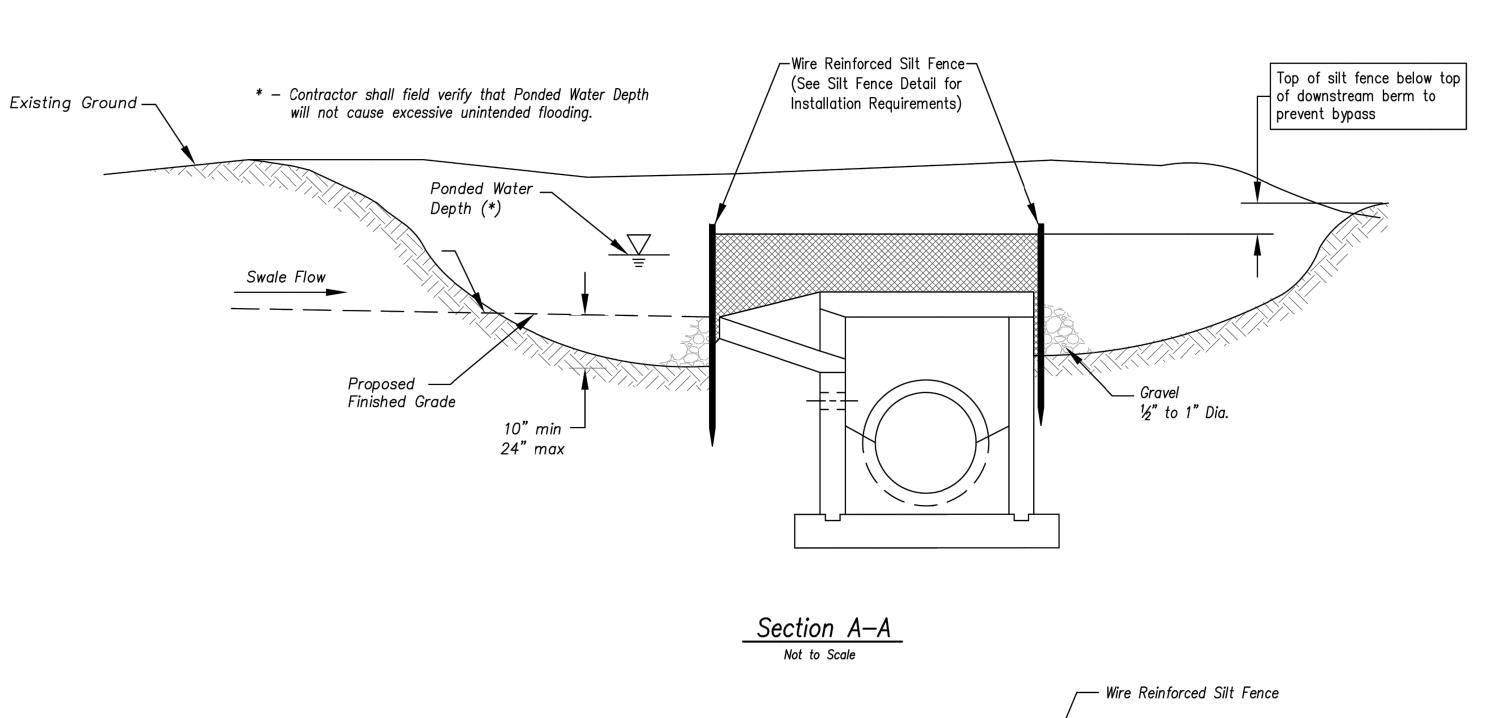
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Ö N	DESCRIPTION	ΒY	DATE	DRAWN BY:	29
1.	REVISED PER CITY COMMENTS	29	1/15/21	GC 1/15/21 CHECK BY:	ZM
2.	REVISED PER CITY COMMENTS	29	2/26/21	GC 2/26/21 LICENSE NO.	PE-201200923
				DATE:	12/2/2020
				ISSUED FOR:	FOR REVIEW
				JOB NUMBER:	20KC10057
	© COPYRIGHT ANDERSON ENGINEERING, INC. 2020	. 2020		MO COA NO.	000062

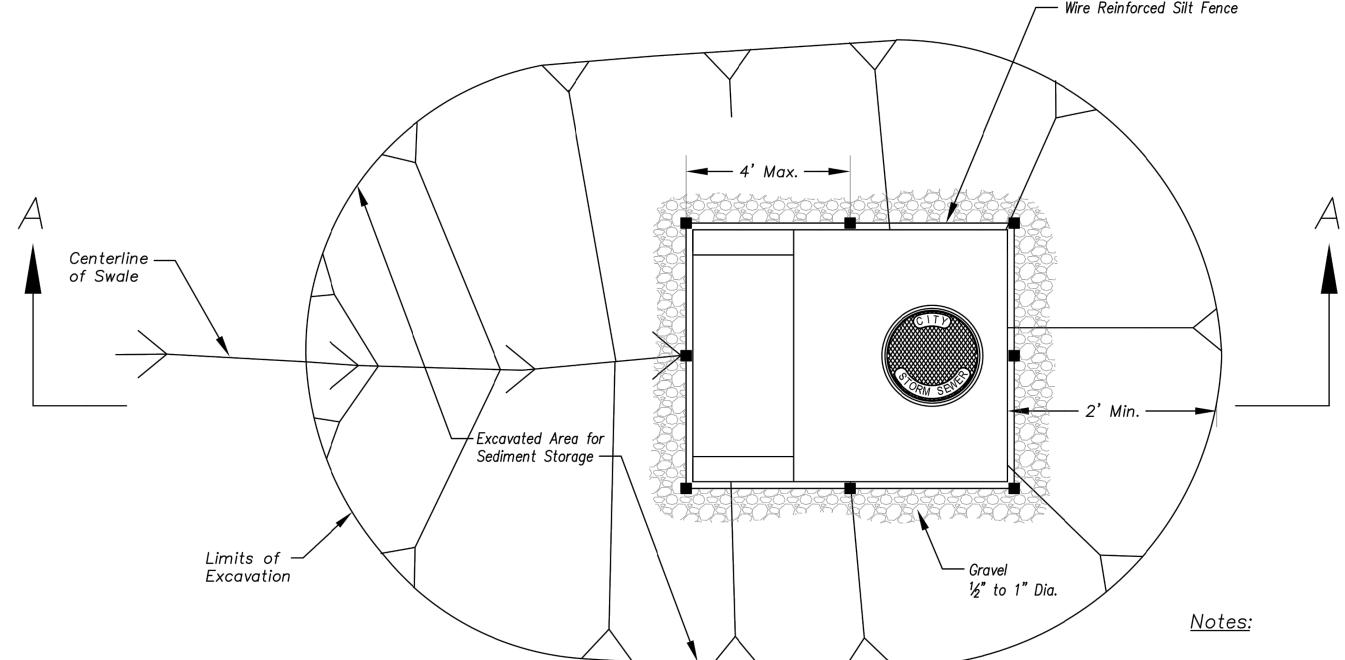
CURB INLET
PROTECTION DET,



SHEET NUMBER C604 34 of 40

Modified from 2015 Overland Park Standard Details for Erosion and Sediment Control.





EARLY STAGE AREA INLET (All open boxes and inlets not at final grade)

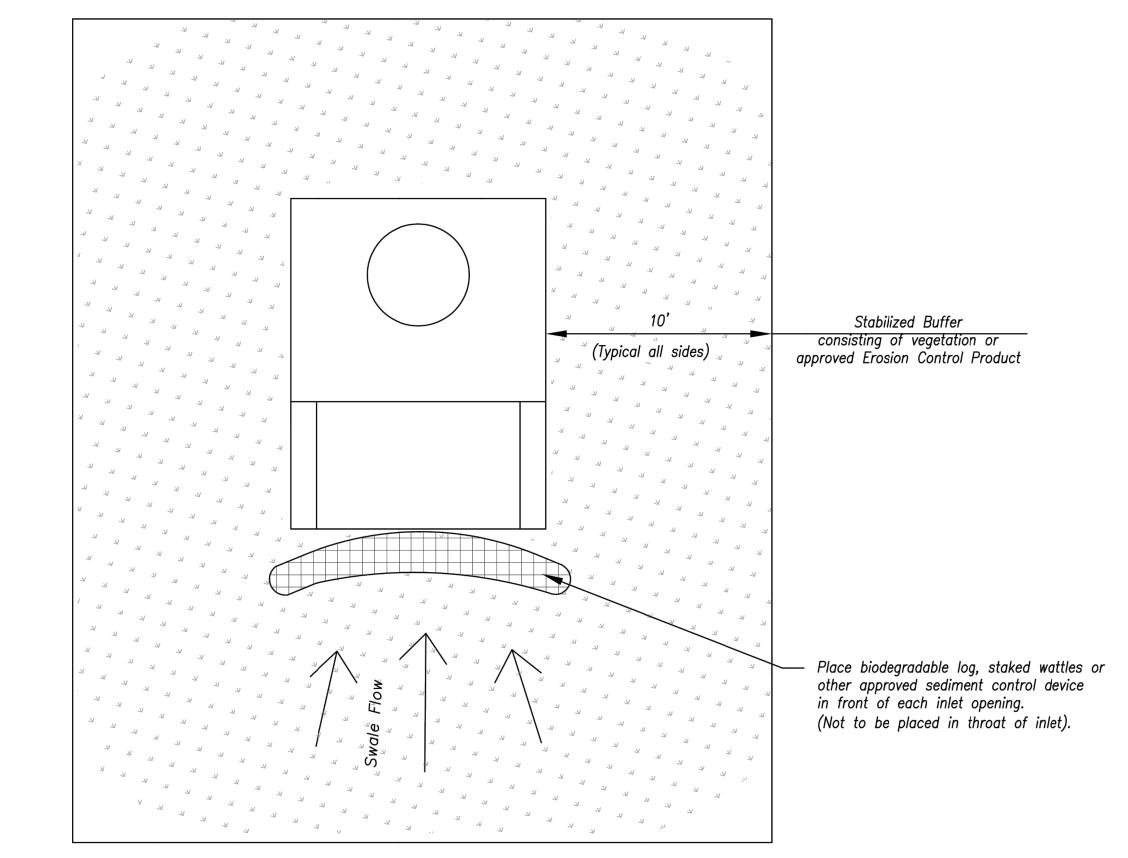
Not to Scale

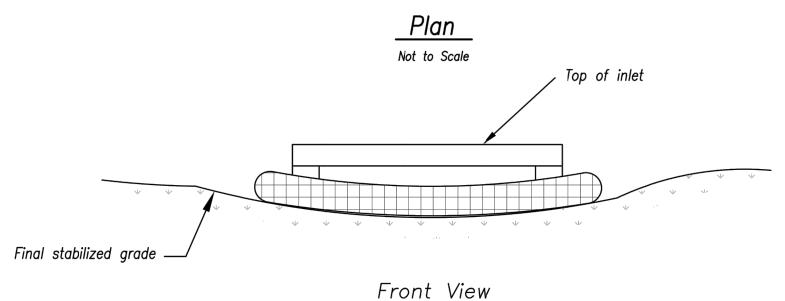
1. Early Stage Area Inlet Sediment Barrier to be installed immediately after inlet or junction box is

2. Silt fence shall remain in place until excavated area is removed and Late Stage Area Inlet is being installed.

3. Backfill excavated area ONLY after final grading of the site. Stabilization of the site is to immediately follow.

Wire reinforced silt fence may be used in place of silt fence attached to wood frame.



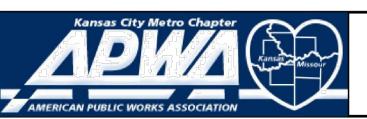


LATE STAGE AREA INLET (Area inlets at final grade and existing inlets)

<u>Maintenance:</u>

- 1. Remove deposited sediment from excavated storage areas when available storage has been reduced by 20%.
- 2. Remove deposited sediment from filter socks or similar when any accumulation of sediment is visible.
- 3. Repair or replace as necessary to maintain function and integrity of installation.





KANSAS CITY METRO CHAPTER

AREA INLET AND JUNCTION BOX PROTECTION

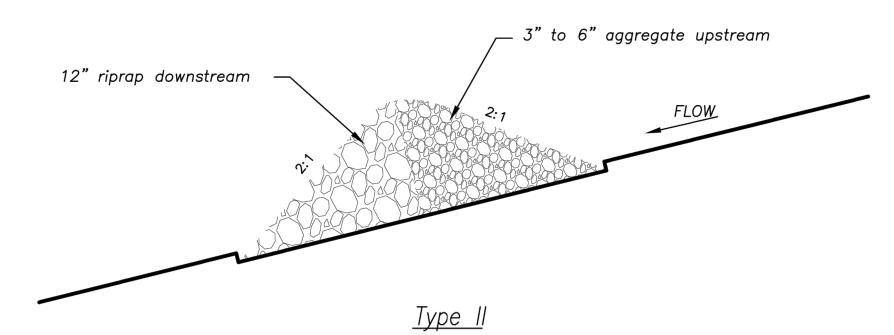
STANDARD DRAWING NUMBER ESC-07 ADOPTED: 10/24/2016

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PER CITY COMMENTS	29	2/26/21	GC 2/26/21 LICENSE NO.	PE-2012009232
			DATE:	12/2/2020
			ISSUED FOR:	FOR REVIEW
			JOB NUMBER:	20KC10057
IT ANDERSON ENGINEERING, INC. 2020	2020		MO COA NO.	000062

SHEET NUMBER 35 of 40

Modified from 2015 Overland Park Standard Details for Erosion and Sediment Control.

<u>Type</u> I (2 Acres or less of Drainage Area) Not to Scale

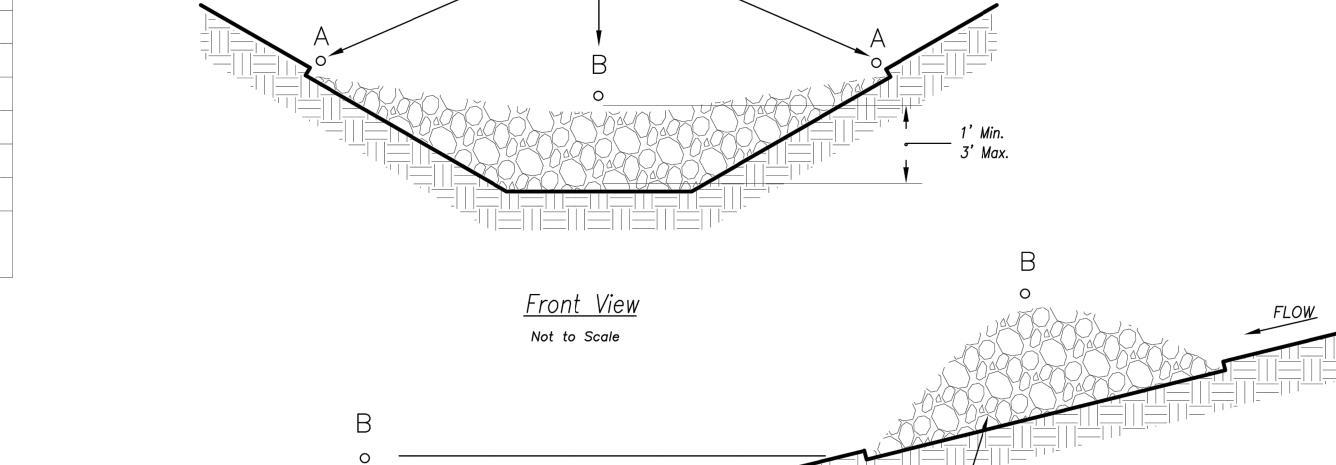


(2-10 Acres of Drainage Area)

Not to Scale

ROCK DITCH CHECK

<u>Temporary Roc</u> <u>Spa</u>	ck Ditch Check cing
Ditch Centerline Slope (%)	Spacing Interval (Feet)
5.0	60
6.0	50
7.0	43
8.0	36
9.0	33
10.0	29
Note: Use this spo Rock Ditch	



Elevation at end Points "A" must be minimum 6" higher than elevation of flow line at point "B"

Place downstream structure such that Point "B" is approximately level with the toe elevation of the upstream structure

> Spacing Between Check Dams (all types) Not to Scale

<u>Notes:</u>

- 1. Rock check dams shall be used only for drainage areas less that 10 acres unless approved by the City Engineer.
- 2. Use rock checks only in situations where the ditch slope exceeds 6%.

<u>Maintenance:</u>

- 1. Remove and dispose of sediment deposits when the deposit approaches ½ the height of the ditch check.
- 2. Replace and reshape as necessary to maintain function and integrity of installation.

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KANSAS CITY METRO CHAPTER

ROCK DITCH CHECKS

Rock keyed in 6 inch trench (typical for all locations)

STANDARD DRAWING NUMBER ESC-IO ADOPTED: 10/24/2016

SHEET NUMBER

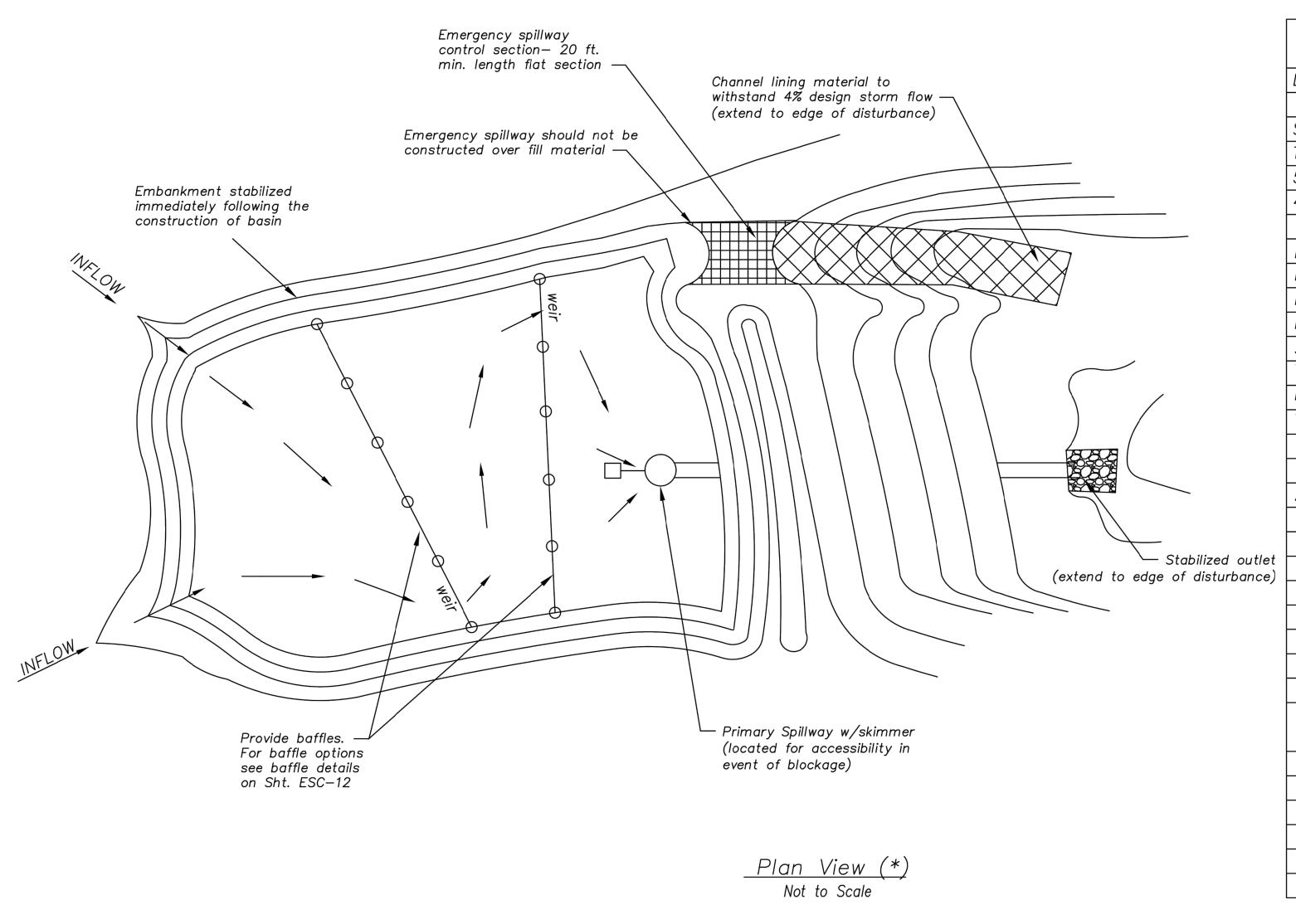
N - 2

CHECKS

ROCK DITCH

C606 <u>36 of 40</u>

Modified from 2015 Overland Park Standard Details for Erosion and Sediment Control.



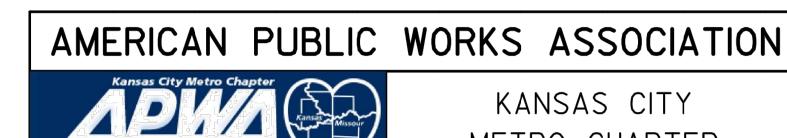
Design Item	Basin #1	Basin #2	Units	Notes
Design Rem	Dusiii # 1	Dusiii #2	Offics	140103
 Site Data:				
Tributary Drainage Area to Pond	18.87		Acres	
50% (2 yr) Design Flow	52		cfs	
4% (25 yr) Design Flow	165		cfs	
Pond Data:				
Minimum Sediment Storage Volume	2,529		cu yd	134 cy/acre required minimum
Provided Sediment Storage Volume	3,550		cu yd	
Bottom Elevation	949.00		Ft	
Sediment Cleanout Elevation	951.40		Ft	Elevation equal to 20% of original design volume
Top of Riser Elevation	954.50		Ft	Top of dry storage volume
Emergency Spillway Elevation	957.80		Ft	at or above Q—2 elevation. 1.0 ft min above principal spillway
Top of Dam Elevation	959.00		Ft	1.0 ft min above Q—25 elevation
Basin Shape Data:				
A = Area at Normal Pool	33,261		SF	
L = Length of Flow Path	505		Ft	
We = Effective Width = A/L	88.4		Ft	
Length to Width Ratio = L/We	3.7			
Principal Spillway Data:		,		
Riser Pipe dia	60		in	15" min. Size for 2 year flow minimum
Barrel Pipe dia	54		in	15" min. Size for 2 year flow minimum
Concrete Base size for Riser Pipe	1.5		CY	Size to prevent flotation. 1.25 safety factor required
Skimmer Size	6"			Designer to provide specific details and calculations per application
				to dewater in 48 to 72 hours
Emergency Spillway Data:				
Design Depth in Spillway	1	,	ft	
Design Velocity in Spillway	23.38		ft/sec	
Lining Material	CH-CL			Designer to provide specific details and calculations per application

<u>Sediment Basin Notes:</u>

- 1. Interior baffles shall be provided to reduce short—circuiting of the basin. See Sht. ESC—12 for approved baffle options.
- Emergency spillways to be located in a non-fill location when feasible and shall be lined with a non-erodible material such as Riprap or Turf Reinforcement Mat.
- 3. When directed, sediment basins shall be fenced using construction fence or other material for safety reasons and include warning signs, reading: "Danger KEEP OUT".
- 1. Check temporary sediment basins after periods of significant runoff.
- 2. Remove sediment and restore the basin to its original dimensions when sediment accumulates to 20% of the storage capacity.
- 3. Immediately repair any erosion damage to the embankment and outlets.
- 4. Repair and/or replace baffles as necessary to maintain function and integrity of installation.
- 5. Keep outlet, skimmer and pool area free of all trash and other debris.

Modified from 2015 Overland Park Standard Details

for Erosion and Sediment Control.



METRO CHAPTER

STANDARD DRAWING

NUMBER ESC-II
ADOPTED:
10/24/2016

SEDIMENT BASIN

STANDARD DRA

NUMBER ESC-II

ADOPTED:

| BY | DATE | DRAWN BY: | GC | 1/15/21 | CHECK BY: | ZM | ENGINEERS - SURVEYORS - I | CONTRIBUTE | CONTRIBUTE

NO. DESCRIPTION

1. REVISED PER CITY COMMER

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O COPYRIGHT ANDERSON ENGINE

SEDIMENT BASIN

ZACH A.

MYERS

NUMBER

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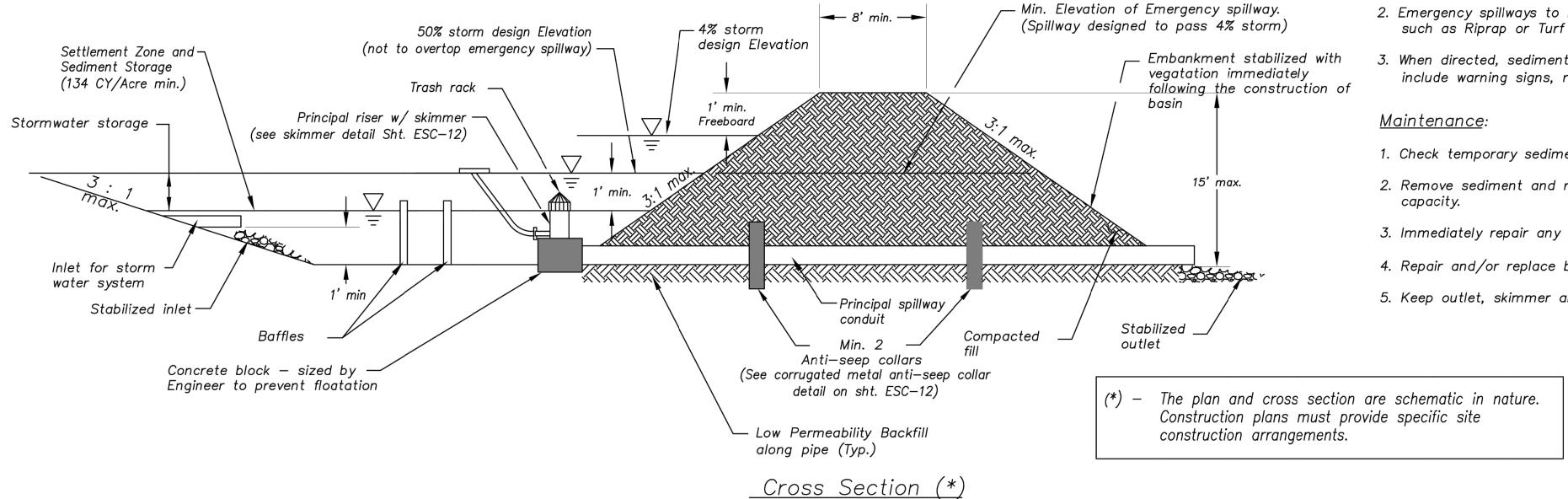
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SONAL ENGINEER

SHEET NUMBER

C607

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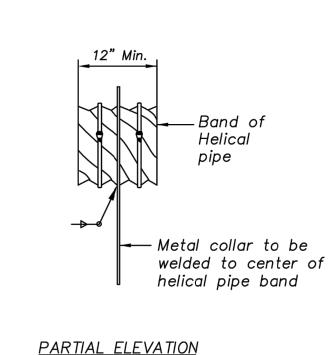


Not to Scale

SKIMMER DETAIL (Typ.) *

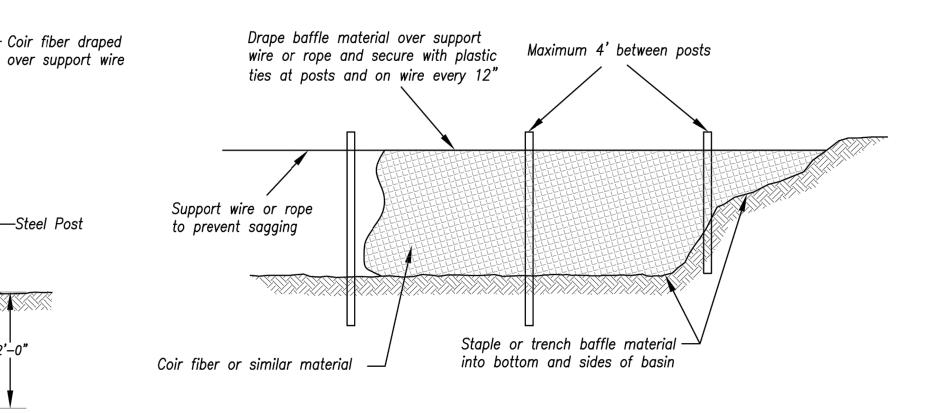
* Designer to provide specific details per application (e.g. pipe sizes, screen sizes, perforation, etc.) as required.

to outlet pipe or riser



Baffle material shall be secured to the bottom and sides of basin by trenching or using 12" landscape staples Landscape Staple

Coir fiber draped



<u> Option B - Coir Fiber Material</u>

Anti-Seepage Collar Notes:

- 1. Connections between the anti-seepage collar and the barrel must be watertight.
- 2. P = projection distance. Sized as required to achieve at least a 10% increase in seepage
- 3. 14xP = Max. spacing between collars.
- 4. Collars shall generally be placed in the middle third of the embankment, and within the saturated zone.
- 5. All materials to be in accordance with construction material specifications.
- 6. When specified on the plans, coating of collars shall be in accordance with construction material specifications.
- 7. Unassembled collars shall be marked by painting or tagging to identify matching pairs.

- 8. The lap between the two half sections and between the pipe and connecting band shall be caulked with asphalt mastic at the time of
- 9. Each collar shall be furnished with two (2) ½" diameter rods with standard tank lugs for connecting the collars to the pipe.
- 10. For bands and collars, modification of the details shown may be used providing equal water tightness is maintained and detailed drawings are Submitted and approved by the Engineer prior to delivery.
- 11. Two other types of anti-seep collars are:
- a. Corrugated metal, similar to above, except shop welded to a 4 ft. section of the pipe and connected to the pipe with connecting bands.
- b. Concrete, 6 inches thick, formed around the pipe with #3 rebar spaced 15".

BAFFLE DETAILS

Not to Scale

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KANSAS CITY METRO CHAPTER

SEDIMENT BASIN - DETAILS

STANDARD DRAWING NUMBER ESC-12 ADOPTED: 10/24/2016

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Modified from 2015 Overland Park Standard Details for Erosion and Sediment Control.

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BASIN EDIMENT

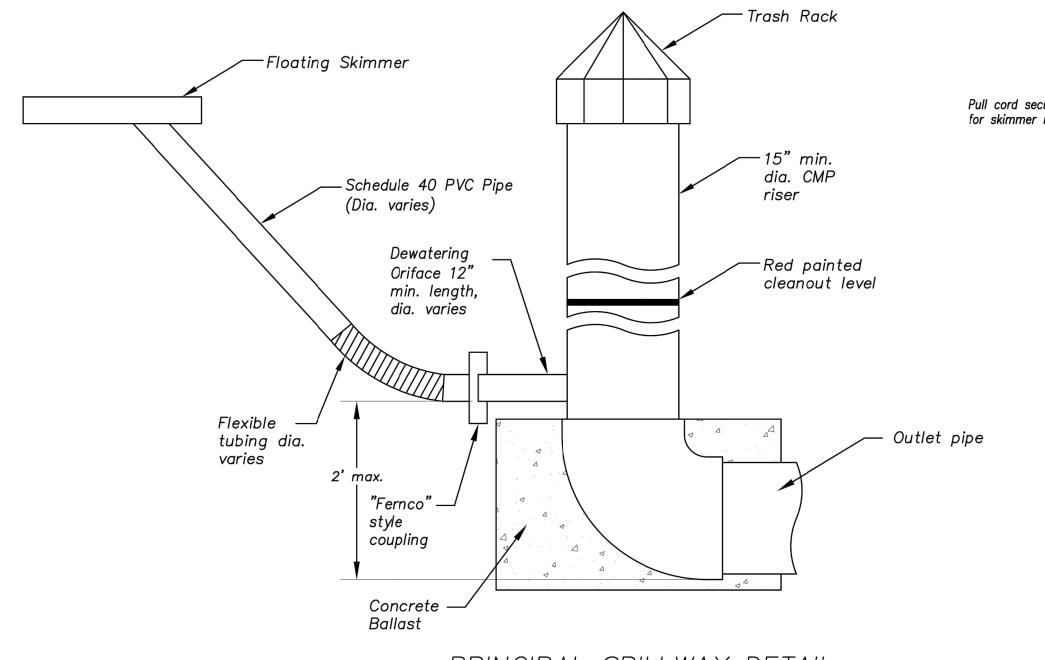
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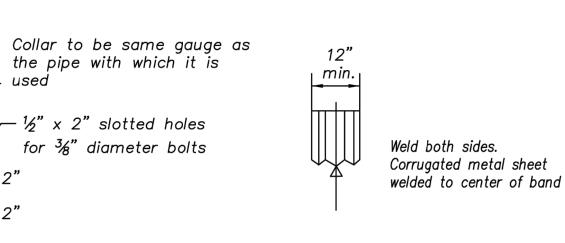
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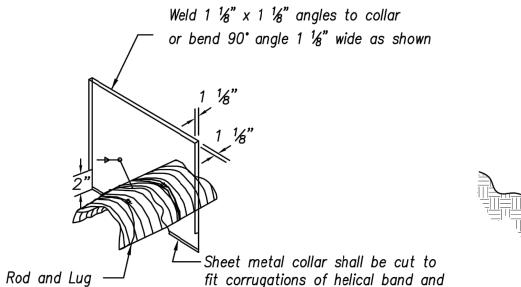
PRINCIPAL SPILLWAY DETAIL



Size and spacing of slotted openings shall be the same as shown for CM collar. Use rods and lugs to clamp bands securely

-Saturated zone

SECTION B-B



welded with continuous weld

-Slotted Holes

at 8" C.C.

ISOMETRIC VIEW

Install collar with

corrugations vertical

Continuous —

Band

∠Continuous

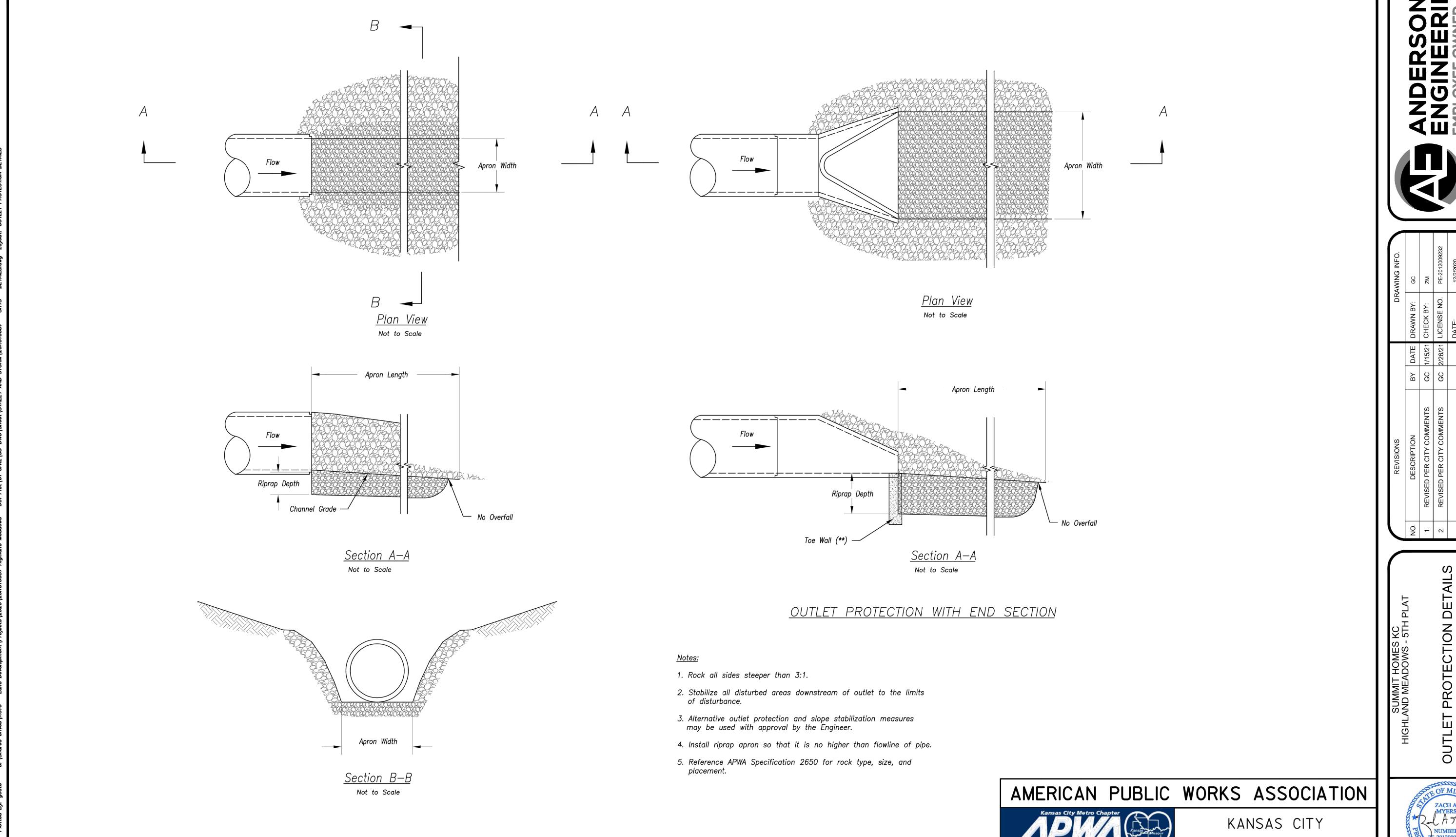
В ◀┛

Weld



CORRUGATED METAL ANTI-SEEPAGE COLLAR DETAIL

Not to Scale



OUTLET PROTECTION W/O END SECTION

Modified from 2015 Overland Park Standard Details for Erosion and Sediment Control.



METRO CHAPTER

OUTLET PROTECTION

STANDARD DRAWING NUMBER ESC-14 ADOPTED: 10/24/2016

SHEET NUMBER 39 of 40

DET

PROTECTION

TYPICAL PLAN VIEW OF DIVERSION BERM AND SLOPE DRAIN

Notes for Diversion Berm:

- 1. Slope drains are optional, but may be required by the engineer if the berm is at the top of a steep slope.
- 2. Diversion berms must be installed as a first step in the land—disturbing activity and must be functional prior to upslope land disturbance.
- 3. The berm should be adequately compacted to prevent failure.
- 4. Temporary or permanent seeding and mulch shall be applied to the berm immediately following its construction.
- Place the berm so to minimize damages by construction operations and traffic.
- The berm must discharge to a temporary sediment trap or stabilized area.
- 7. All trees, brush, stumps, obstructions and other objectionable material shall be removed and disposed of so as not to interfere with the proper functioning of diversion.
- 8. The diversion shall be excavated or shaped to line, grade and cross—section as required to meet the criteria specified herein, free of irregularities which will impede flow.
- 9. Fills shall be compacted as needed to prevent unequal settlement that would cause damage in the completed diversion. Fill shall be composed of soil which is free from excessive organic debris, rocks or other objectionable materials.

<u>Maintenance:</u>

- Berm shall be reshaped, compacted, and stabilized as necessary to maintain its function.
- 2. Breaches in the berm shall be repaired immediately.

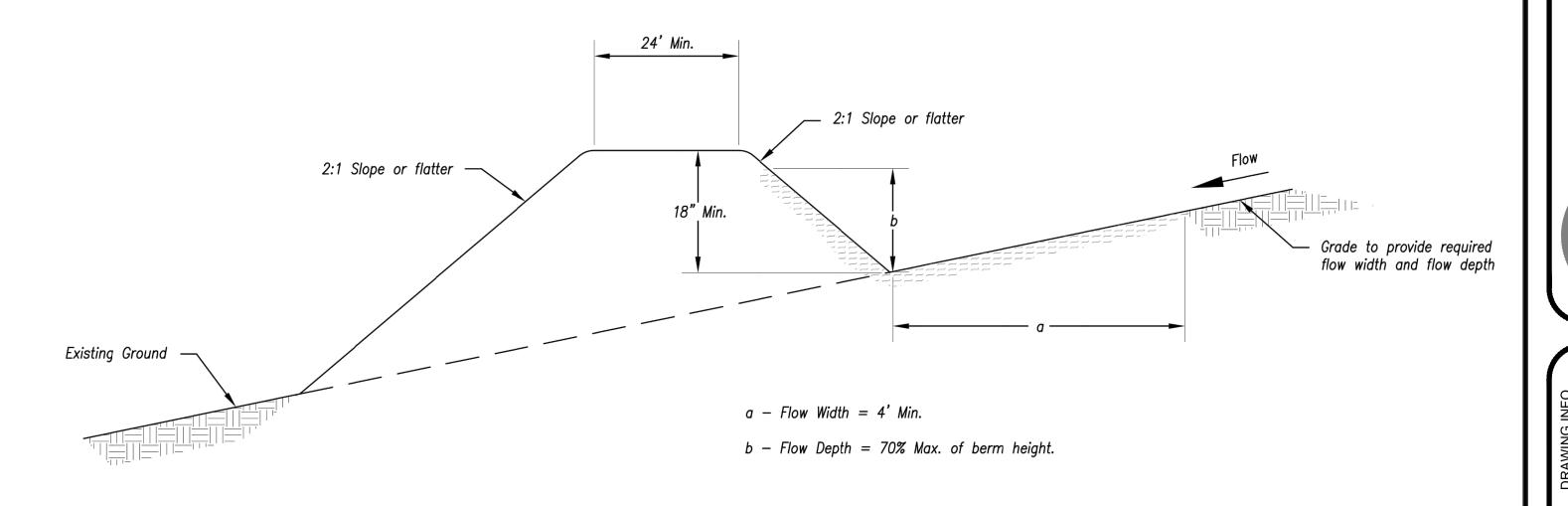
Notes for Slope Drain:

- Slope Drain and Diversion Berm may be used on either project foreslopes or project backslopes.
- 2. Discharge of Slope Drains shall be into stabilized ditch or area, or into Sediment Basin.
- 3. Pipe shall be secured in place as approved by Engineer.

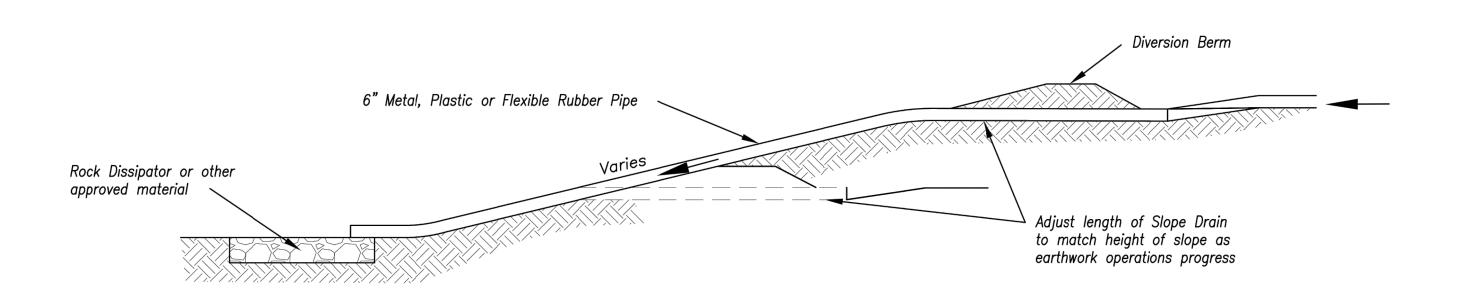
<u>Maintenance:</u>

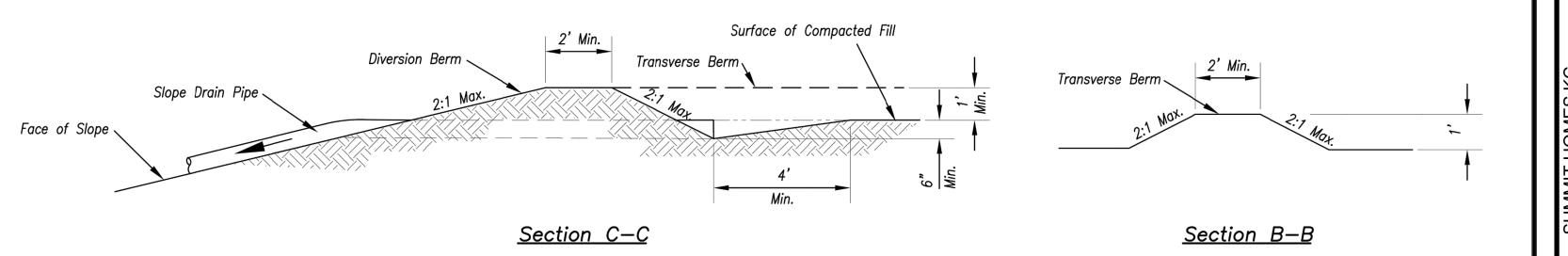
- Accumulation of any visible sediment at the inlet and outlet shall be removed promptly.
- Outlet conditions shall be repaired if scour is observed.
 Leaking or damaged section of pipe shall be repaired immediately.
- Barriers directing water to the inlet shall be monitored for continuity and effectiveness.

TYPICAL PROFILE OF DIVERSION BEAM Not to Scale



TYPICAL PROFILE OF DIVERSION BERM





TYPICAL PROFILE OF DIVERSION BERM WITH SLOPE DRAIN

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KANSAS CITY METRO CHAPTER

DIVERSION BERMS AND SLOPE DRAINS

STANDARD DRAWING
NUMBER ESC-05
ADOPTED:
10/24/2016

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ANDERSON
ENGINEERIN
EMPLOYEE OWNED
EERS.SURVEYORS.LABORATORIES.DRILLING

DESAVING INFO.	90	ZM	PE-2012009232	12/2/2020	FOR REVIEW	20KC10057	000062	
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PORARY DIVERSION BERM S10, T47N, R32W



C610
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