HIGHLAND MEADOWS - 5TH PLAT

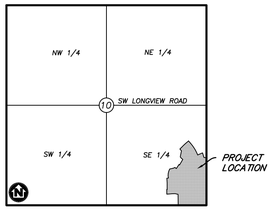
STREET AND STORM SEWER PLANS

LEE'S SUMMIT, JACKSON COUNTY, MISSOURI

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

DATE: 11/11/2020

LOTS: 134-159 (26 TOTAL)



VICINITY MAP

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

WATERSHED: LITTLE BLUE RIVER

DISTURBED AREA: 14.9 AC

LEGAL DESCRIPTION:

THE EAST HALF OF THE SOUTHEAST QUARTER OF SECTION 10, TOWNSHIP 47 NORTH, RANGE 32 WEST, EXCEPT THOSE PARTS PLATTED AS HIGHLAND MEADOWS FIRST PLAT, HIGHLAND MEADOWS SECOND PLAT , HIGHLANDS MEADOWS THIRD PLAT, HIGHLAND MEADOWS 4TH PLAT, SUBDIVISIONS IN LEE'S SUMMIT, JACKSON COUNTY, MISSOURI.

811 Know what's below. Call before you dig.

MISSOURI ONE CALL SYSTEM, INC. 1-800-344-7483 STOP CALL BEFORE YOU DIG!

UTILITY CONTACTS:

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

STORMWATER:
CITY OF LEE'S SUMMIT
GENE WILLIAMS
220 SE GREEN STREET
LEE'S SUMMIT, MO 64063
PHONE (816) 969-1900

STREETS:
CITY OF LEE'S SUMMIT
MICHAEL PARK
220 SE GREEN STREET
LEE'S SUMMIT, MO 64063
PHONE (816) 969-1900

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

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

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

SURVEY CONTROL:

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 UTILIZING A GRID SCALE FACTOR OF 0.9999020 AT REFERENCE MONUMENT JA-148.

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

"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:

1. 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.

DEVELOPER:

VINCENT WALKER
SUMMIT HOMES KC
120 SE 30TH STREET
LEE'S SUMMIT, MO 64082
VINCENT@SUMMITHOMESKC.COM
(816) 246-6700

CIVIL ENGINEER:

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

SHEET INDEX:

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, MISSOURI.
2. MOST CURRENT EDITION OF AMERICAN PUBLIC WORKS ASSOCIATION (APWA) KANSAS CITY METROPOLITAN CHAPTER "STANDARD SPECIFICATIONS AND DESIGN CRITERIA"

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. DATE
MISSOURI P.E. NO. 2012009232

APPROVED BY:

CITY OF LEE'S SUMMIT, MISSOURI

AUTHORIZING POSITION DATE

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EMPLOYEE OWNED
ENGINEERS • SURVEYORS • LABORATORIES • DRILLING
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A LICENSED MISSOURI ENGINEERING & SURVEYING CORPORATION - LC 62

REVISIONS			
NO.	DESCRIPTION	BY	DATE

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DATE:	11/11/2020
ISSUED FOR:	FOR REVIEW
JOB NUMBER:	20KC10057
MO COA NO.	000062

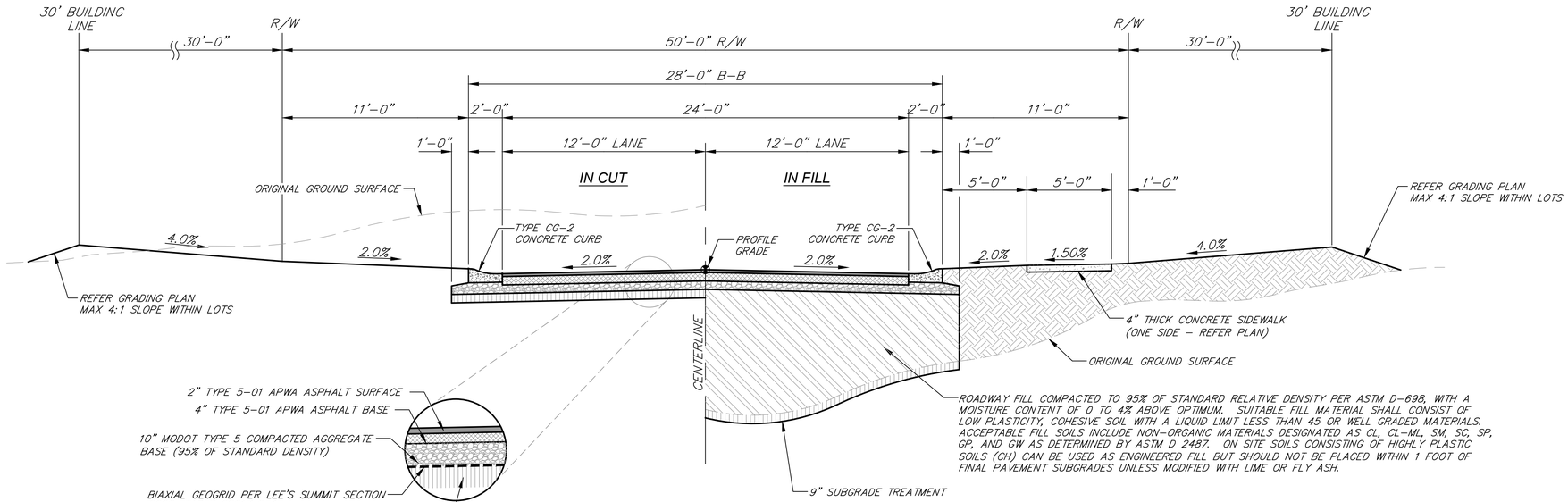
SUMMIT HOMES KC
HIGHLAND MEADOWS - 5TH PLAT

COVER SHEET

S10, T47N, R32W
LEE'S SUMMIT, JACKSON COUNTY, MISSOURI

STATE OF MISSOURI ZACH A. MYERS NUMBER PE-2012009232 11/11/20 PROFESSIONAL ENGINEER

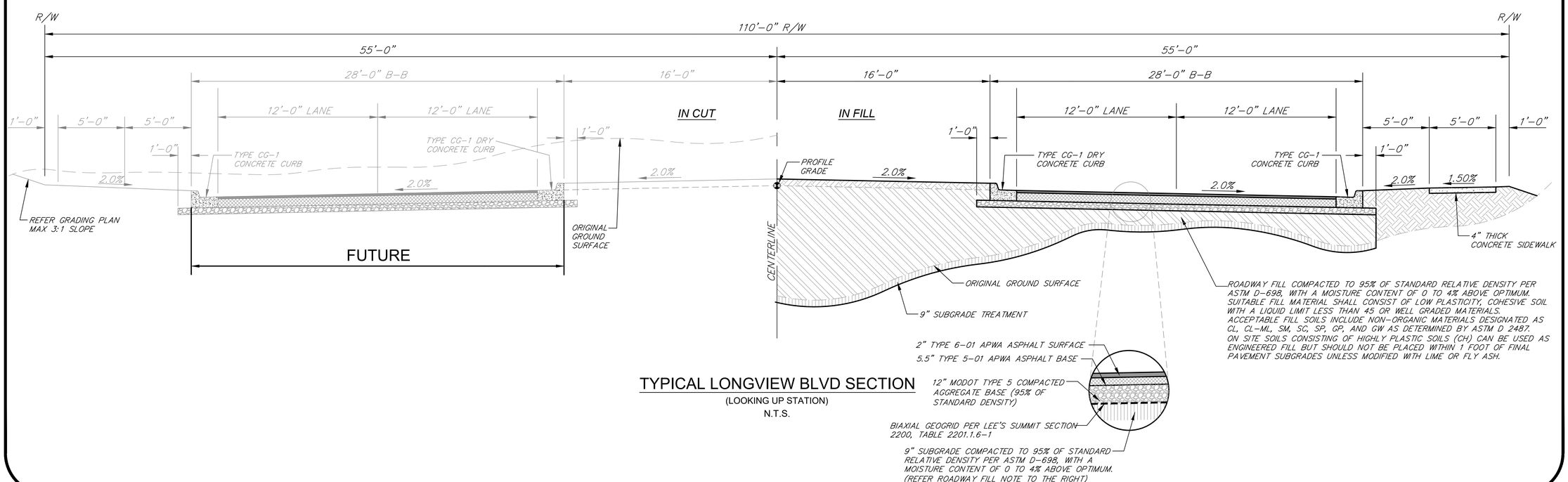
SHEET NUMBER
CVR
1 OF 26



TYPICAL 28' ROADWAY SECTION

(LOOKING UP STATION)

N.T.S.



TYPICAL LONGVIEW BLVD SECTION

(LOOKING UP STATION)

N.T.S.

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SUMMIT HOMES KC
HIGHLAND MEADOWS - 5TH PLAT

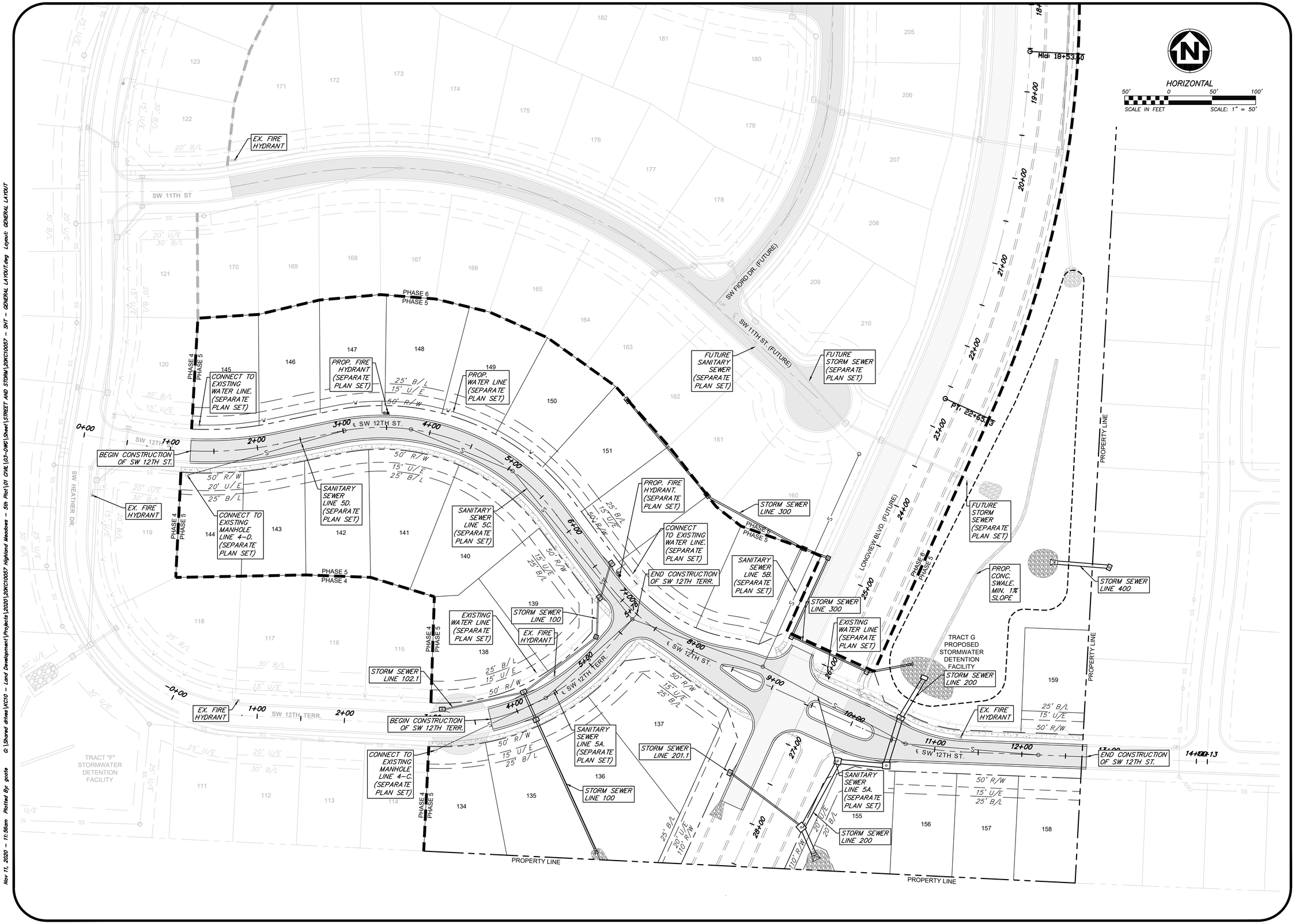
TYPICAL SECTIONS

S10, T47N, R32W
LEE'S SUMMIT, JACKSON COUNTY, MISSOURI

STATE OF MISSOURI
ZACH A. MYERS
NUMBER PE-2012009232
11/11/20
PROFESSIONAL ENGINEER

SHEET NUMBER
C101
2 OF 26

Nov 11, 2020 - 11:56am Plotted By: gcate G:\Shared drives\KC10 - Land Development\Projects\2020\20KC10057 Highland Meadows - 5th Plat\01 CIVIL\03-DWG\Sheet\STREET AND STORM\20KC10057 - SV7 - TYPICAL SECTION.dwg Layout: TYPICAL SECTIONS



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REVISIONS		
NO.	DESCRIPTION	BY	DATE

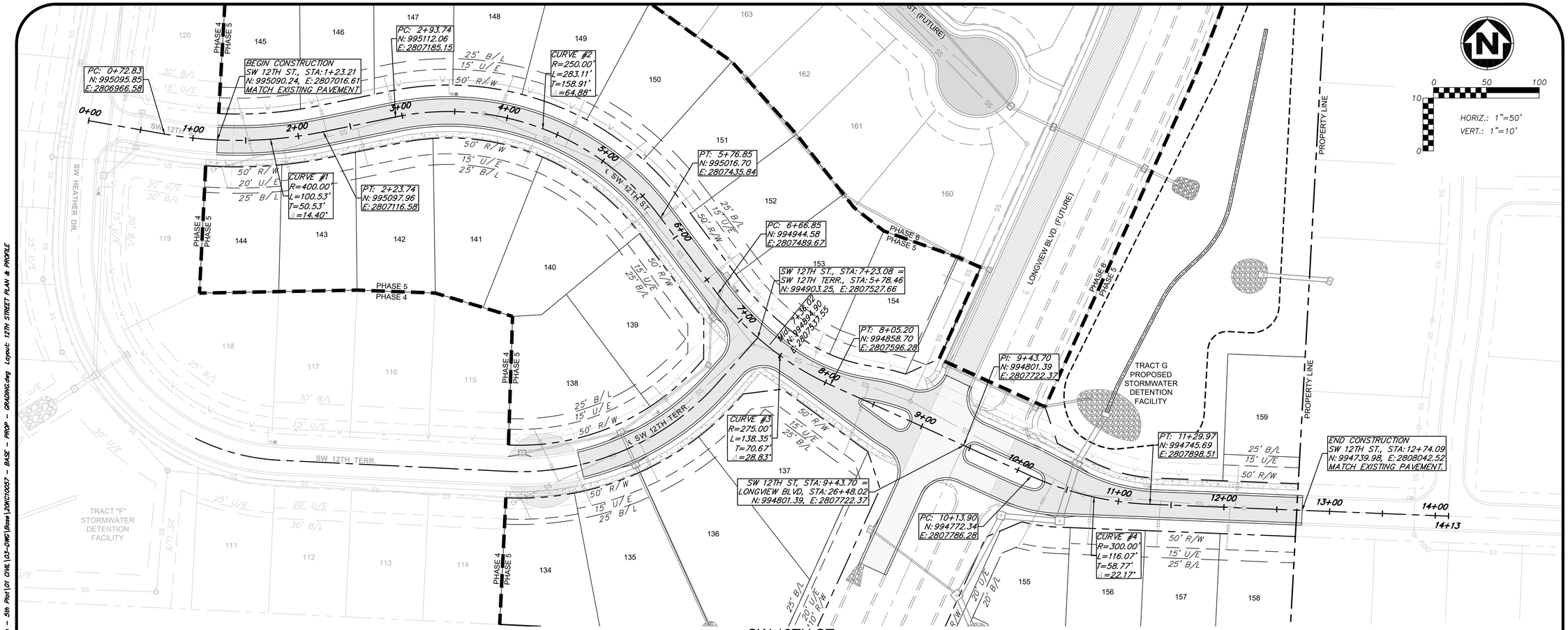
SUMMIT HOMES KC
HIGHLAND MEADOWS - 5TH PLAT

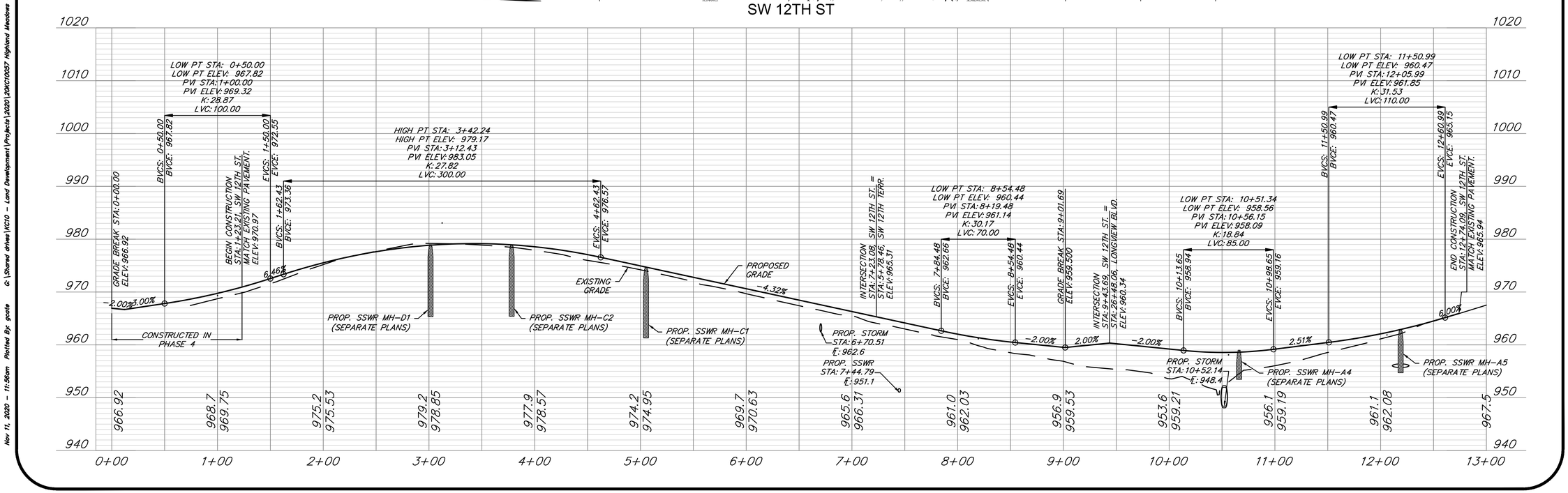
GENERAL LAYOUT

S10, T47N, R32W
LEE'S SUMMIT, JACKSON COUNTY, MISSOURI

STATE OF MISSOURI
ZACH A. MYERS
NUMBER PE-2012009232
11/11/20
PROFESSIONAL ENGINEER

SHEET NUMBER
C102
3 OF 26





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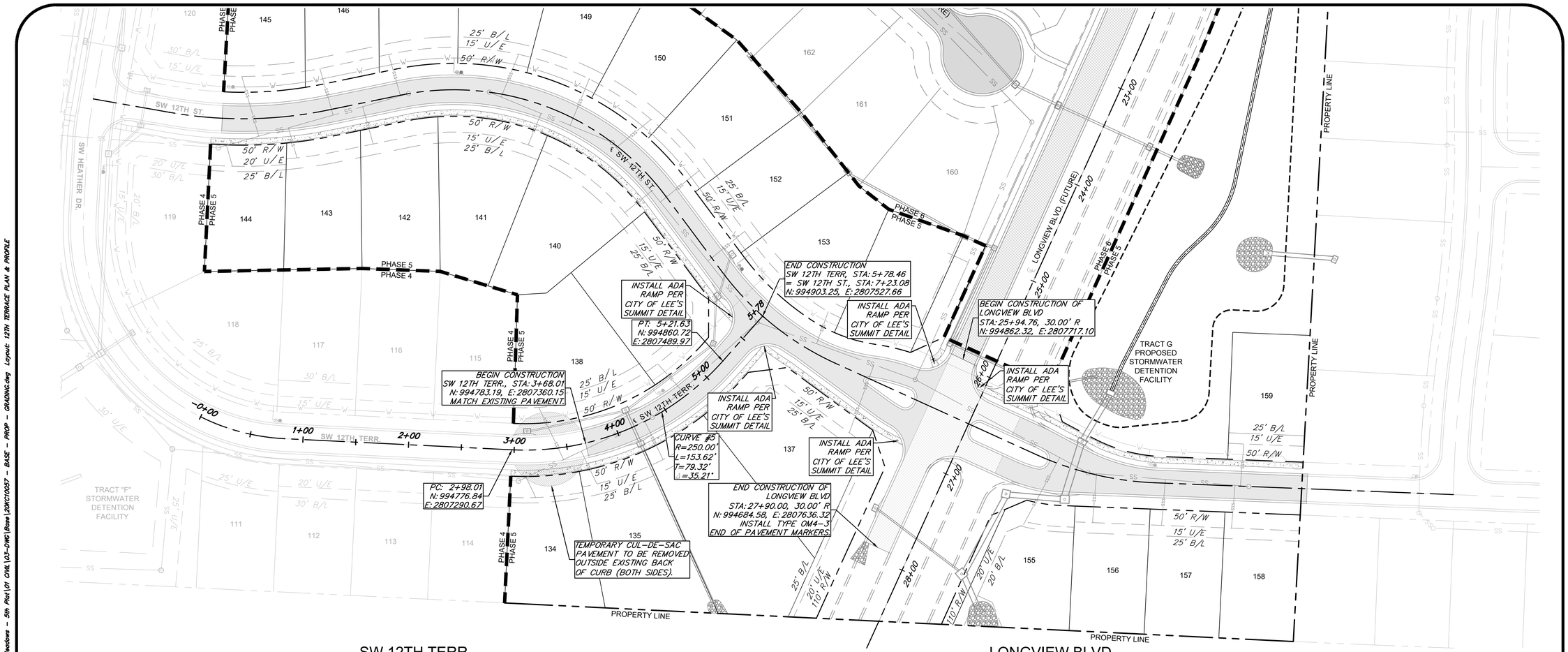
SUMMIT HOMES KC
HIGHLAND MEADOWS - 5TH PLAT

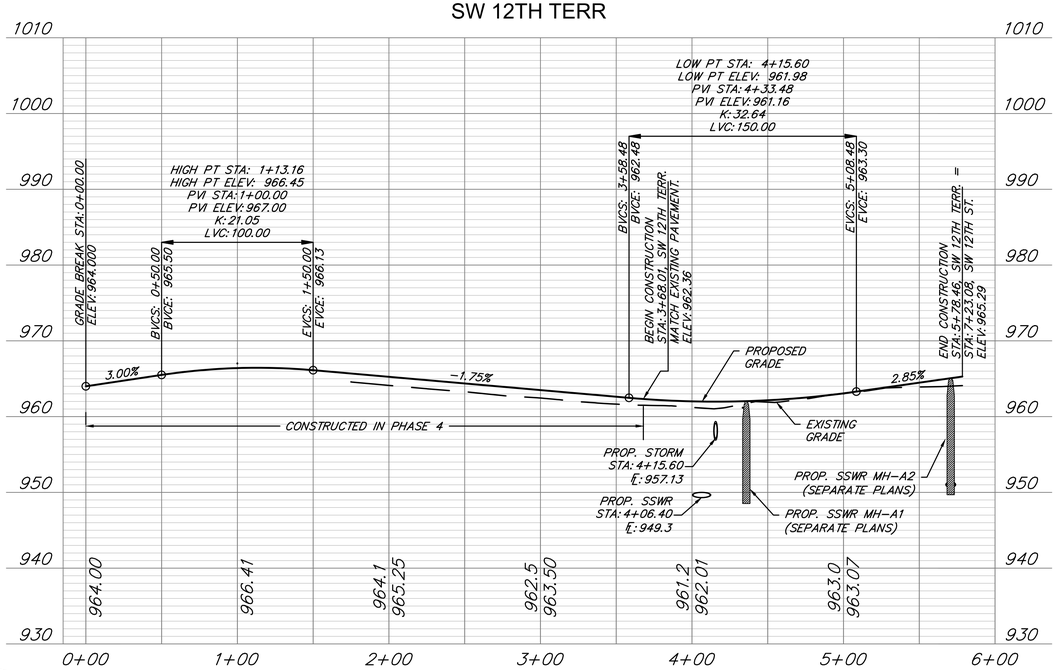
12TH STREET PLAN & PROFILE

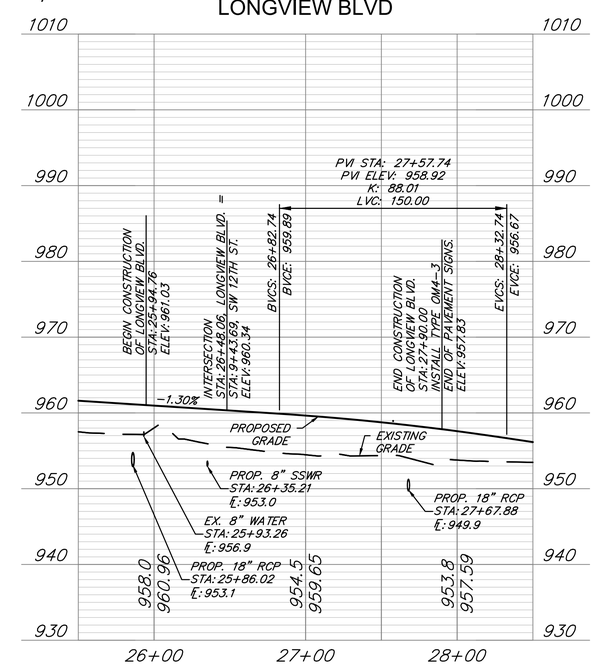
S10, T47N, R32W
LEE'S SUMMIT, JACKSON COUNTY, MISSOURI

STATE OF MISSOURI
ZACH A. MYERS
NUMBER PE-2012009232
11/11/20
PROFESSIONAL ENGINEER

SHEET NUMBER
C103
4 OF 26







HORIZ.: 1"=50'
VERT.: 1"=10'

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SUMMIT HOMES KC
HIGHLAND MEADOWS - 5TH PLAT

12TH TERRACE PLAN & PROFILE

S10, T47N, R32W
LEE'S SUMMIT, JACKSON COUNTY, MISSOURI

STATE OF MISSOURI
ZACH A. MYERS
NUMBER PE-2012009232
11/11/20
PROFESSIONAL ENGINEER

SHEET NUMBER
C104
5 OF 26

Nov 11, 2020 – 11:57am Plotted By: gcote G:\Shared drives\KC10 – Land Development\Projects\2020\20KC10057 – BASE – PROP – GRADING.dwg Layout: 12TH TERRACE PLAN & PROFILE

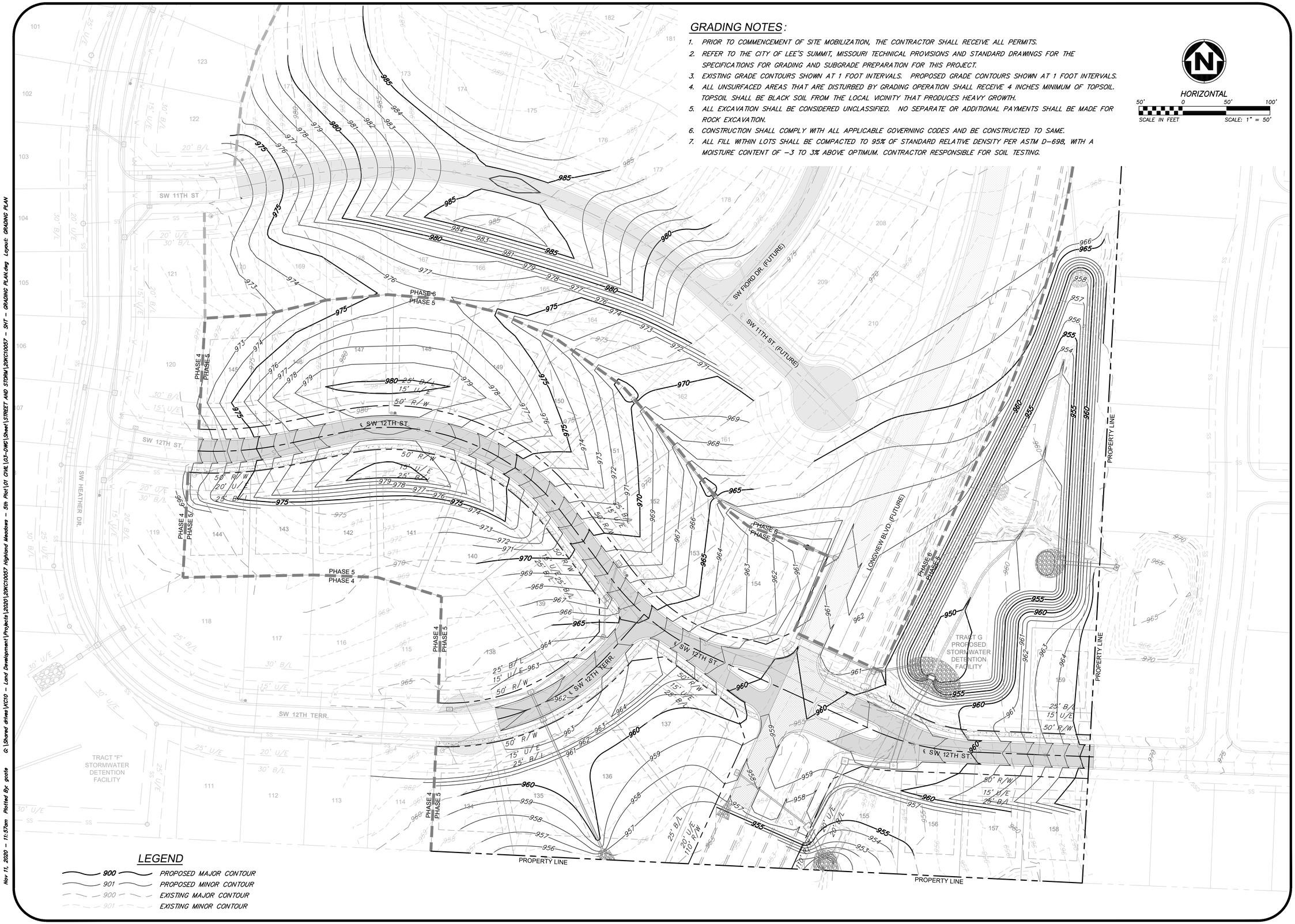
GRADING NOTES:

1. PRIOR TO COMMENCEMENT OF SITE MOBILIZATION, THE CONTRACTOR SHALL RECEIVE ALL PERMITS.
2. REFER TO THE CITY OF LEE'S SUMMIT, MISSOURI TECHNICAL PROVISIONS AND STANDARD DRAWINGS FOR THE SPECIFICATIONS FOR GRADING AND SUBGRADE PREPARATION FOR THIS PROJECT.
3. EXISTING GRADE CONTOURS SHOWN AT 1 FOOT INTERVALS. PROPOSED GRADE CONTOURS SHOWN AT 1 FOOT INTERVALS.
4. ALL UNSURFACED AREAS THAT ARE DISTURBED BY GRADING OPERATION SHALL RECEIVE 4 INCHES MINIMUM OF TOPSOIL. TOPSOIL SHALL BE BLACK SOIL FROM THE LOCAL VICINITY THAT PRODUCES HEAVY GROWTH.
5. ALL EXCAVATION SHALL BE CONSIDERED UNCLASSIFIED. NO SEPARATE OR ADDITIONAL PAYMENTS SHALL BE MADE FOR ROCK EXCAVATION.
6. CONSTRUCTION SHALL COMPLY WITH ALL APPLICABLE GOVERNING CODES AND BE CONSTRUCTED TO SAME.
7. ALL FILL WITHIN LOTS SHALL BE COMPACTED TO 95% OF STANDARD RELATIVE DENSITY PER ASTM D-698, WITH A MOISTURE CONTENT OF -3 TO 3% ABOVE OPTIMUM. CONTRACTOR RESPONSIBLE FOR SOIL TESTING.

HORIZONTAL

50' 0 50' 100'

SCALE IN FEET SCALE: 1" = 50'



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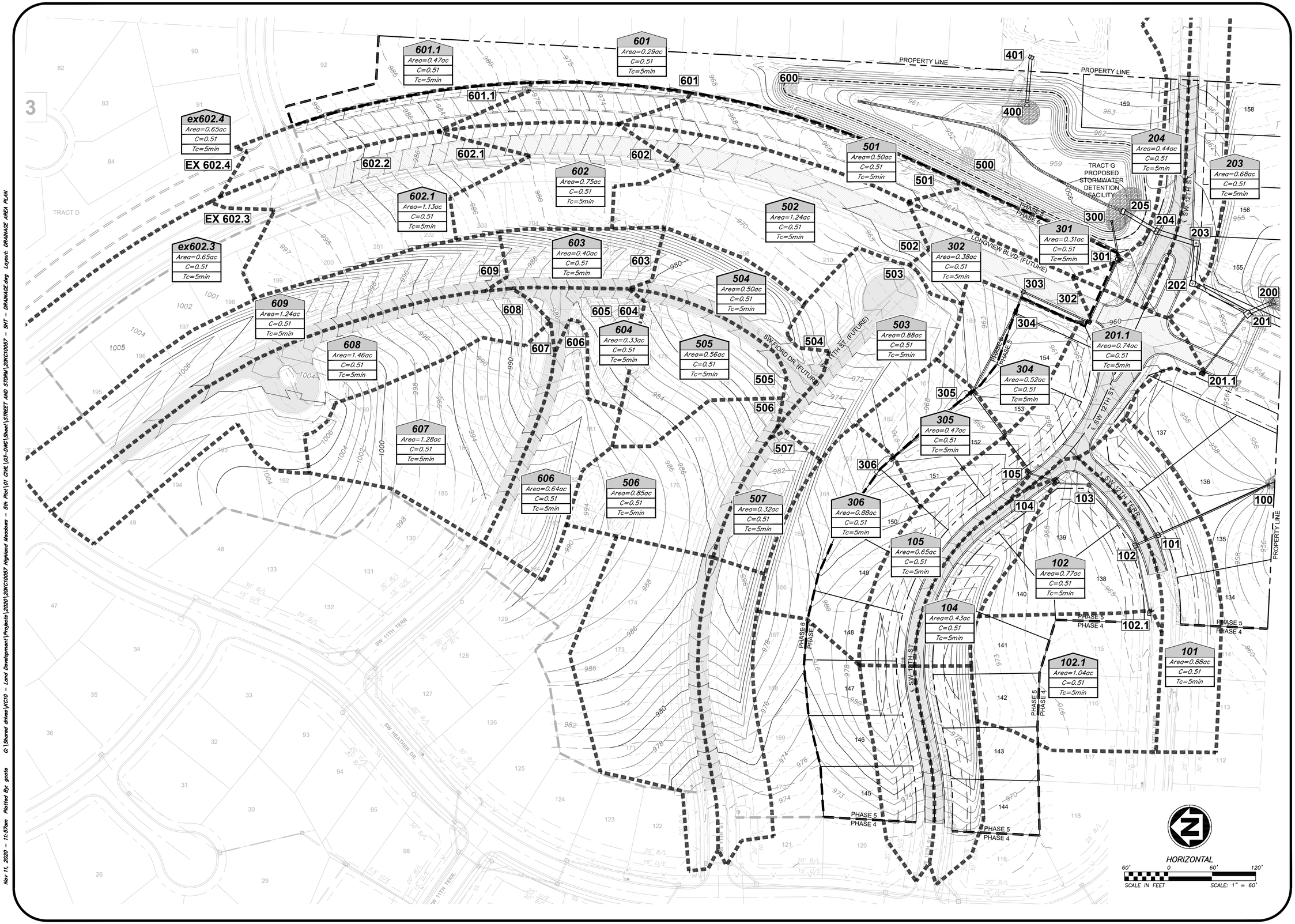
SUMMIT HOMES KC
HIGHLAND MEADOWS - 5TH PLAT

GRADING PLAN

S10, T47N, R32W
LEE'S SUMMIT, JACKSON COUNTY, MISSOURI

STATE OF MISSOURI
ZACH A. MYERS
NUMBER PE-2012009232
11/11/20
PROFESSIONAL ENGINEER

SHEET NUMBER
C105
6 OF 26



Nov 11, 2020 – 11:57am Plotted By: gcate G:\Shared drives\KC10 – Land Development\Projects\2020\20KC10057 – SVT – DRAINAGE.dwg Layout: DRAINAGE AREA PLAN

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SUMMIT HOMES KC
HIGHLAND MEADOWS - 5TH PLAT

DRAINAGE AREA PLAN

S10, T47N, R32W
LEE'S SUMMIT, JACKSON COUNTY, MISSOURI

STATE OF MISSOURI
ZACH A. MYERS
NUMBER PE-2012009232
11/11/20
PROFESSIONAL ENGINEER

SHEET NUMBER
C201
7 OF 26

STORM SEWER DRAINAGE CALCULATIONS:

10-YEAR

HYDROLOGY												HYDRAULICS															GUTTER/INLET DESIGN					
Line No.	Inlet ID	Downstream Line No.	DrainageArea	Runoff Coefficient	Local CxA	System CxA	Tc	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	101	Outfall	0.88	0.51	0.45	1.9	6.4	7.35	7.12	3.30	13.50	LINE 101	101	962.13	956.84	956.03	162.80	0.50	24	0.013	15.95	13.50	5.49	5.13	958.22	957.59	101	3.30	0.00	Sag	....	....
2	102	1	0.77	0.51	0.39	1.45	6.2	7.35	7.15	2.89	10.35	LINE 102	102	962.13	957.22	957.04	35.00	0.50	24	0.013	16.22	10.35	4.52	4.26	958.52	958.48	102	2.89	0.00	Sag	....	....
3	103	2	0.00	0.00	0	0.53	5.6	0.00	7.24	0.00	3.80	LINE 103	103	964.01	960.05	957.97	104.20	2.00	15	0.012	9.88	3.80	4.03	3.39	960.84 j	959.04	103	0.00	....	....	....	....
4	104	3	0.43	0.51	0.22	0.53	5.4	7.35	7.28	1.61	3.83	LINE 104	104	967.01	961.68	960.56	44.95	2.50	15	0.012	11.04	3.83	6.43	8.18	962.47	961.07	104	1.61	1.12	5.000	1.40	2.00
5	105	4	0.60	0.51	0.31	0.31	5.0	7.35	7.35	2.25	2.25	LINE 105	105	968.11	963.34	961.88	41.61	3.50	15	0.013	12.10	2.25	3.91	3.95	963.94	962.47	105	2.25	0.56	0.050	5.90	2.00
6	102.1	2	1.04	0.51	0.53	0.53	5.0	7.35	7.35	3.90	3.90	LINE 102.1	102.1	963.51	958.67	957.97	95.18	0.75	15	0.012	6.00	3.90	4.09	3.47	959.47 j	959.04	102.1	3.90	1.23	0.020	9.23	2.00
7	302	Outfall	0.31	0.51	0.16	1.31	7.5	7.35	6.92	1.16	9.03	LINE 301	302	960.82	953.42	951.64	44.29	4.00	18	0.013	21.05	9.03	7.51	8.87	954.58	952.48	302	1.16	0.00	0.010	6.32	2.00
8	303	7	0.38	0.51	0.19	1.15	7.2	7.35	6.98	1.42	8.01	LINE 302	303	960.60	954.57	953.62	95.00	1.00	18	0.013	10.50	8.01	6.17	6.54	955.67	954.60	303	1.42	0.09	0.010	8.02	2.00
9	304	8	0.00	0.00	0	0.95	6.8	0.00	7.05	0.00	6.72	LINE 303	304	962.00	956.05	954.57	98.86	1.50	18	0.012	13.92	6.72	5.11	4.86	957.05 j	955.67	304	0.00	....	....	....	....
10	305	9	0.52	0.51	0.27	0.95	6.6	7.35	7.07	1.95	6.74	LINE 304	305	960.27	956.34	956.05	28.60	1.00	18	0.012	11.46	6.74	5.37	5.37	957.34	957.05	305	1.95	0.00	Sag	....	....
11	306	10	0.47	0.51	0.24	0.69	5.9	7.35	7.20	1.76	4.95	LINE 305	306	964.97	959.07	956.54	126.66	2.00	18	0.012	16.08	4.95	4.95	5.14	959.93	957.34	306	1.76	0.00	Sag	....	....
12	307	11	0.88	0.51	0.45	0.45	5.0	7.35	7.35	3.30	3.30	LINE 306	307	969.98	965.15	959.47	141.99	4.00	15	0.012	13.99	3.30	6.29	8.16	965.88	959.93	307	3.30	0.00	Sag	....	....
13	402	Outfall	0.00	0.00	0	0	0.0	0.00	0.00	54.51	0.00	LINE 401	402	965.44	955.00	951.73	59.49	5.50	42	0.013	235.88	0.00	6.88	5.67	957.31	955.56	402	54.51	....	....	....	....
14	201	Outfall	0.00	0.00	0	0.95	5.8	0.00	7.22	0.00	6.85	LINE 201	201	957.24	947.13	947.00	31.01	0.42	54	0.013	127.34	6.85	6.73	6.68	951.12	951.06	201	0.00	....	....	....	....
15	202	14	0.00	0.00	0	0.57	5.3	0.00	7.30	0.00	4.17	LINE 202	202	959.11	947.56	947.13	86.54	0.50	54	0.013	138.63	4.17	6.21	6.18	951.91	951.72	202	0.00	....	....	....	....
16	203	15	0.68	0.51	0.35	0.57	5.2	0.00	7.32	0.00	4.18	LINE 203	203	959.00	948.04	947.76	55.83	0.50	54	0.013	139.26	4.18	6.18	6.18	952.61	952.48	203	0.00	0.00	Sag	....	....
17	204	16	0.44	0.51	0.22	0.22	5.0	7.35	7.35	1.65	1.65	LINE 204	204	959.00	948.53	948.24	57.20	0.50	42 x 68	0.013	133.62	1.65	6.14	6.14	954.23	954.09	204	1.65	0.00	Sag	....	....
18	205	17	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	954.65	954.53	205	94.04	....	....	....	....
19	202.1	14	0.74	0.51	0.38	0.38	5.0	7.35	7.35	2.77	2.77	LINE 202.1	202.1	958.01	950.58	949.03	102.84	1.50	15	0.013	7.93	2.77	2.26	2.26	951.91	951.72	202.1	2.77	0.41	0.010	9.38	2.00

100-YEAR

HYDROLOGY												HYDRAULICS															GUTTER/INLET DESIGN					
Line No.	Inlet ID	Downstream Line No.	DrainageArea	Runoff Coefficient	Local CxA	System CxA	Tc	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	101	Outfall	0.88	0.51	0.45	1.9	6.0	10.31	9.95	4.63	18.88	LINE 101	101	962.13	956.84	956.03	162.80	0.50	24	0.013	15.95	18.88	6.59	7.17	959.02	957.59	101	4.63	0.00	Sag	....	....
2	102	1	0.77	0.51	0.39	1.45	5.8	10.31	10.00	4.05	14.48	LINE 102	102	962.13	957.22	957.04	35.00	0.50	24	0.013	16.22	14.48	4.61	4.61	959.44	959.30	102	4.05	0.00	Sag	....	....
3	103	2	0.00	0.00	0	0.53	5.4	0.00	10.14	0.00	5.33	LINE 103	103	964.01	960.05	957.97	104.20	2.00	15	0.012	9.88	5.33	4.88	4.34	960.99 j	959.93	103	0.00	....	....	....	....
4	104	3	0.43	0.51	0.22	0.53	5.3	10.31	10.21	2.26	5.36	LINE 104	104	967.01	961.68	960.56	44.95	2.50	15	0.012	11.04	5.36	7.18	8.93	962.62	961.17	104	2.26	1.66	5.000	1.59	2.00
5	105	4	0.60	0.51	0.31	0.31	5.0	10.31	10.31	3.16	3.16	LINE 105	105	968.11	963.34	961.88	41.61	3.50	15	0.013	12.10	3.16	4.27	4.19	964.05 j	962.62	105	3.16	1.10	0.050	6.90	2.00
6	102.1	2	1.04	0.51	0.53	0.53	5.0	10.31	10.31	5.47	5.47	LINE 102.1	102.1	963.51	958.67	957.97	95.18	0.75	15	0.012	6.00	5.47	4.46	4.46	960.51	959.93	102.1	5.47	2.28	0.020	10.62	2.00
7	302	Outfall	0.31	0.51	0.16	1.31	6.8	10.31	9.65	1.63	12.60	LINE 301	302	960.82	953.42	951.64	44.29	4.00	18	0.013	21.05	12.60	9.98	12.38	954.76	952.48	302	1.63	0.00	0.010	7.37	2.00
8	303	7	0.38	0.51	0.19	1.15	6.6	10.31	9.74	2.00	11.18	LINE 302	303	960.60	954.57	953.62	95.00	1.00	18	0.013	10.50	11.18	6.69	6.69	955.91	954.97	303	2.00	0.53	0.010	9.69	2.00
9	304	8	0.00	0.00	0	0.95	6.3	0.00	9.85	0.00	9.39	LINE 303	304	962.00	956.05	954.57	98.86	1.50	18	0.012	13.92	9.39	5.32	5.32	957.63	956.96	304	0.00	....	....	....	....
10	305	9	0.52	0.51	0.27	0.95	6.2	10.31	9.88	2.73	9.42	LINE 304	305	960.27	956.34	956.05	28.60	1.00	18	0.012	11.46	9.42	5.33	5.33	958.27	958.07	305	2.73	0.00	Sag	....	....
11	306	10	0.47	0.51	0.24	0.69	5.6	10.31	10.08	2.47	6.94	LINE 305	306	964.97	959.07	956.54	126.66	2.00	18	0.012	16.08	6.94	4.68	3.93	960.09 j	958.49	306	2.47	0.00	Sag	....	....
12	307	11	0.88	0.51	0.45	0.45	5.0	10.31	10.31	4.63	4.63	LINE 306	307	969.98	965.15	959.47	141.99	4.00	15	0.012	13.99	4.63	6.36	7.64	966.02	960.09	307	4.63	0.00	Sag	....	....
13	402	Outfall	0.00	0.00	0	0	0.0	0.00	0.00	112.38	0.00	LINE 401	402	965.44	955.00	951.73	59.49	5.50	42	0.013	211.54	0.00	12.21	12.21	958.19	955.56	402	112.38	....	....	....	....
14	201	Outfall	0.00	0.00	0	0.95	5.5	0.00	10.11	0.00	9.59	LINE 201	201	957.24	947.13	947.00	31.01	0.42	54	0.013	127.34	9.59	13.14	13.48	951.63	951.06	201	0.00	....	....	....	....
15	202	14	0.00	0.00	0	0.57	5.1	0.00	10.25	0.00	5.86	LINE 202	202	959.11	947.56	947.13	86.54	0.50	54	0.013	138.63	5.86	12.57	12.57	954.69	953.80	202	0.00	....	....	....	....
16	203	15	0.68	0.51	0.35	0.57	5.1	0.00	10.28	0.00	5.87	LINE 203	203	959.00	948.04	947.76	55.83	0.50	54	0.013	139.26	5.87	12.57	12.57	957.55	956.98	203	0.00	0.00	Sag	....	....
17	204	16	0.44	0.51	0.22	0.22	5.0	10.31	10.31	2.31	2.31	LINE 204	204	959.00	948.53	948.24	57.20	0.50	42 x 68	0.013	133.62	2.31	12.61	12.61	964.27	963.65	204	2.31	0.00	Sag	....	....
18	205	17	0.00	0.00	0	0	0.0	0.00	0.00	194.07	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	966.03	965.51	205	194.07	....	....	....	....
19	202.1	14	0.74	0.51	0.38	0.38	5.0	10.31	10.31	3.89	3.89	LINE 202.1	202.1	958.01	950.58	949.03	102.84	1.50	15	0.013	7.93	3.89	3.17	3.17	954.17	953.80	202.1	3.89	1.24	0.010	11.20	2.00

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ISSUED FOR:	FOR REVIEW
JOB NUMBER:	20KC10057
MO COA NO.	000062

REVISIONS

NO.	DESCRIPTION	BY	DATE

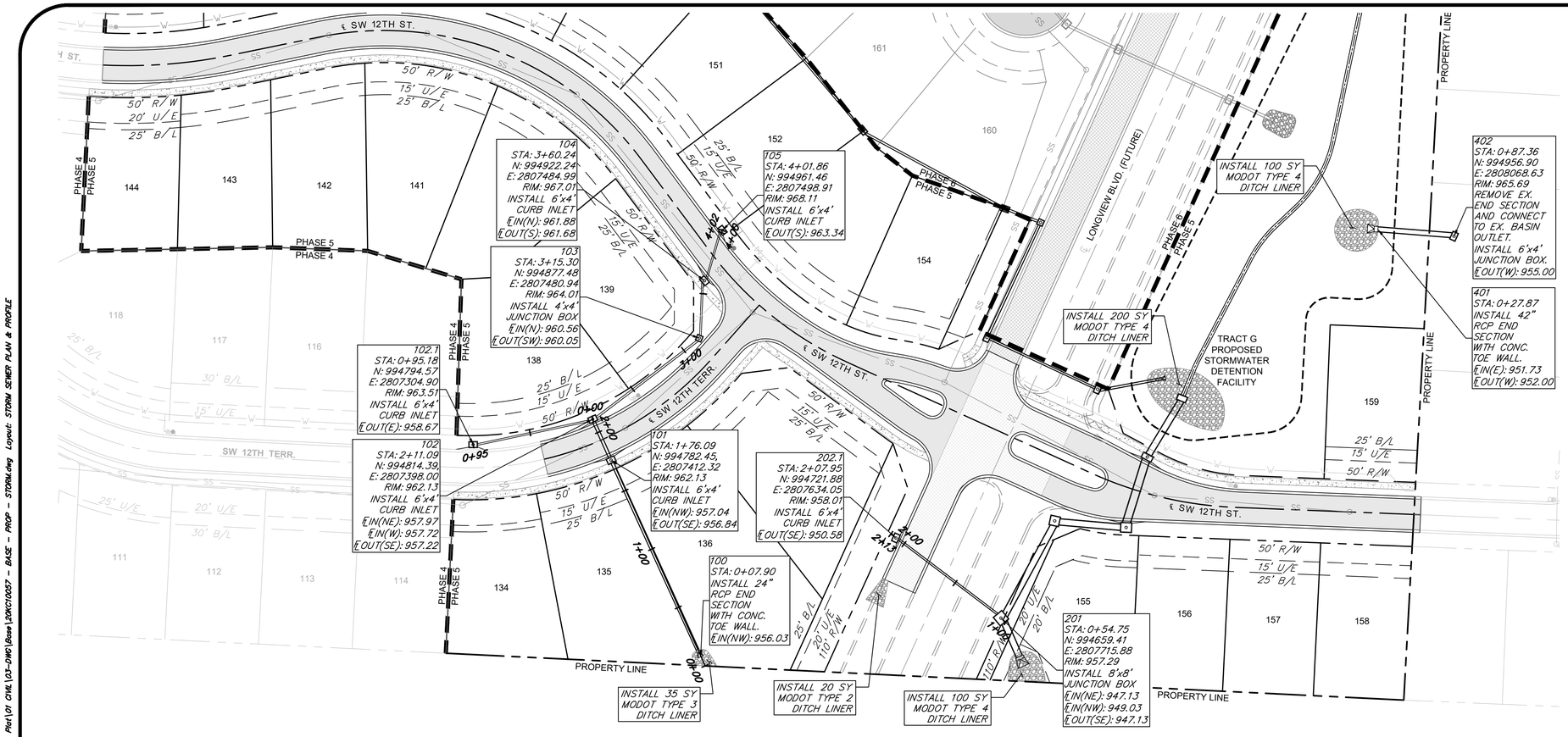
SUMMIT HOMES KC
HIGHLAND MEADOWS - 5TH PLAT

DRAINAGE CALCULATIONS

S10, T47N, R32W
LEE'S SUMMIT, JACKSON COUNTY, MISSOURI

STATE OF MISSOURI
ZACH A. MYERS
NUMBER PE-2012009232
11/11/20
PROFESSIONAL ENGINEER

SHEET NUMBER
C202
8 OF 26



LEGEND

- RIP RAP
- FILL PRIOR TO PIPE INSTALLATION
- 900 — PROPOSED MAJOR CONTOUR
- 901 — PROPOSED MINOR CONTOUR
- 900 — EXISTING MAJOR CONTOUR
- 901 — EXISTING MINOR CONTOUR

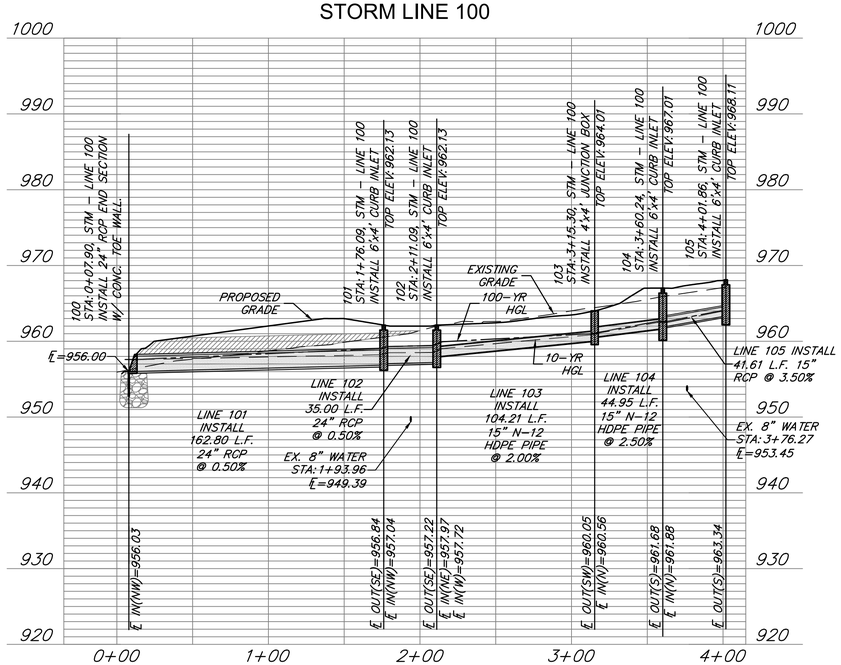
STORM PIPE AND STRUCTURES:

1. HDPE PIPE SHALL CONFORM TO ASTM F2306. JOINTS SHALL BE INTEGRAL BELL AND SPIGOT WITH RUBBER GASKETS. JOINTS SHALL BE WATER TIGHT AS DEFINED BY ASTM F2306.
2. CONCRETE PIPE SHALL CONFORM TO ASTM C76, CLASS III, WALL TYPE B. JOINTS SHALL BE TONGUE-IN-GROVE WITH PREFORMED, FLEXIBLE SEALANTS AND SHALL CONFORM TO ASTM C990.
3. PROPOSED CURB INLETS AND JUNCTION BOXES SHALL CONFORM TO THE CITY OF LEE'S SUMMIT STANDARD DETAILS.

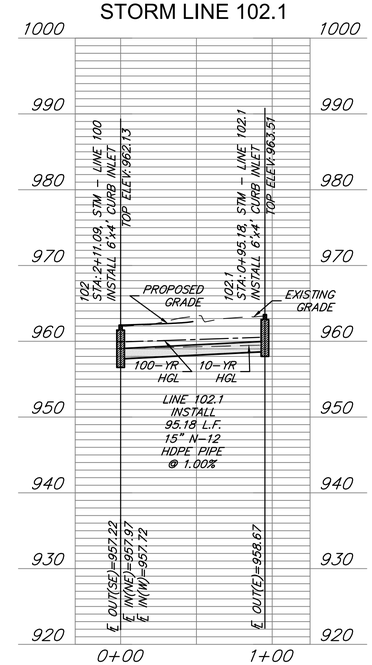
GENERAL NOTES:

1. COORDINATES AT TOP ELEVATIONS SHOWN ARE LOCATED AT CENTER OR STRUCTURES. ROAD OFFSETS AREA AT INSIDE FACE OF CURB INLETS, AND AT CENTER OF MANHOLES AND JUNCTIONS BOXES.
2. PIPE LENGTHS INDICATED ARE FROM CENTER OF STRUCTURE TO CENTER OF STRUCTURE.
3. INSIDE FRONT FACE OF CURB INLETS SHALL BE LOCATED 1.5 FEET BEHIND BACK OF CURB. STRUCTURE SHALL BE PARALLEL WITH CURB ALIGNMENT.
4. TOP ELEVATION OF CURB INLETS SHALL BE SLOPED TO CONFORM TO GRADE OF STREET.
5. WATER MAINS AND STORM SEWERS SHALL HAVE AT LEAST 3' OF CLEAR HORIZONTAL SEPARATION.
6. CONTROLLED FILL: PRIOR TO INSTALLATION OF STORM SEWER PIPING IN FILL AREAS, FILL SHALL BE PLACED AND COMPACTED TO A MINIMUM 95% OF STANDARD PROCTOR DENSITY PER ASTM D 698 TO A MINIMUM DEPTH OF 2 FEET ABOVE THE TOP OF PIPE.

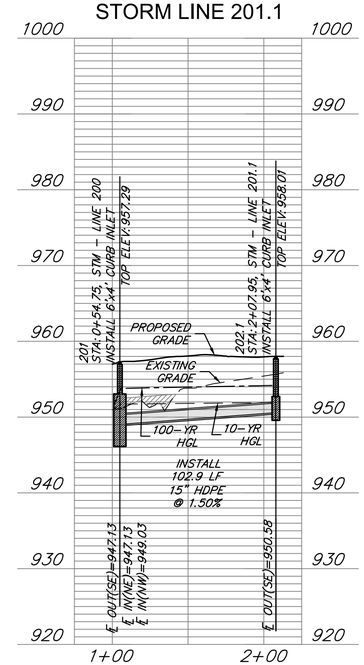
STORM LINE 100



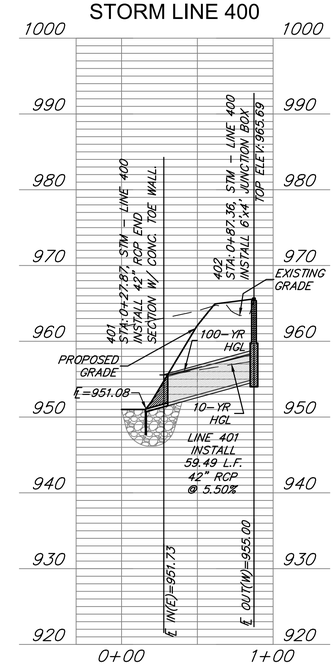
STORM LINE 102.1



STORM LINE 201.1



STORM LINE 400



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MO COA NO.	000062

REVISIONS		
NO.	DESCRIPTION	BY	DATE

SUMMIT HOMES KC
HIGHLAND MEADOWS - 5TH PLAT

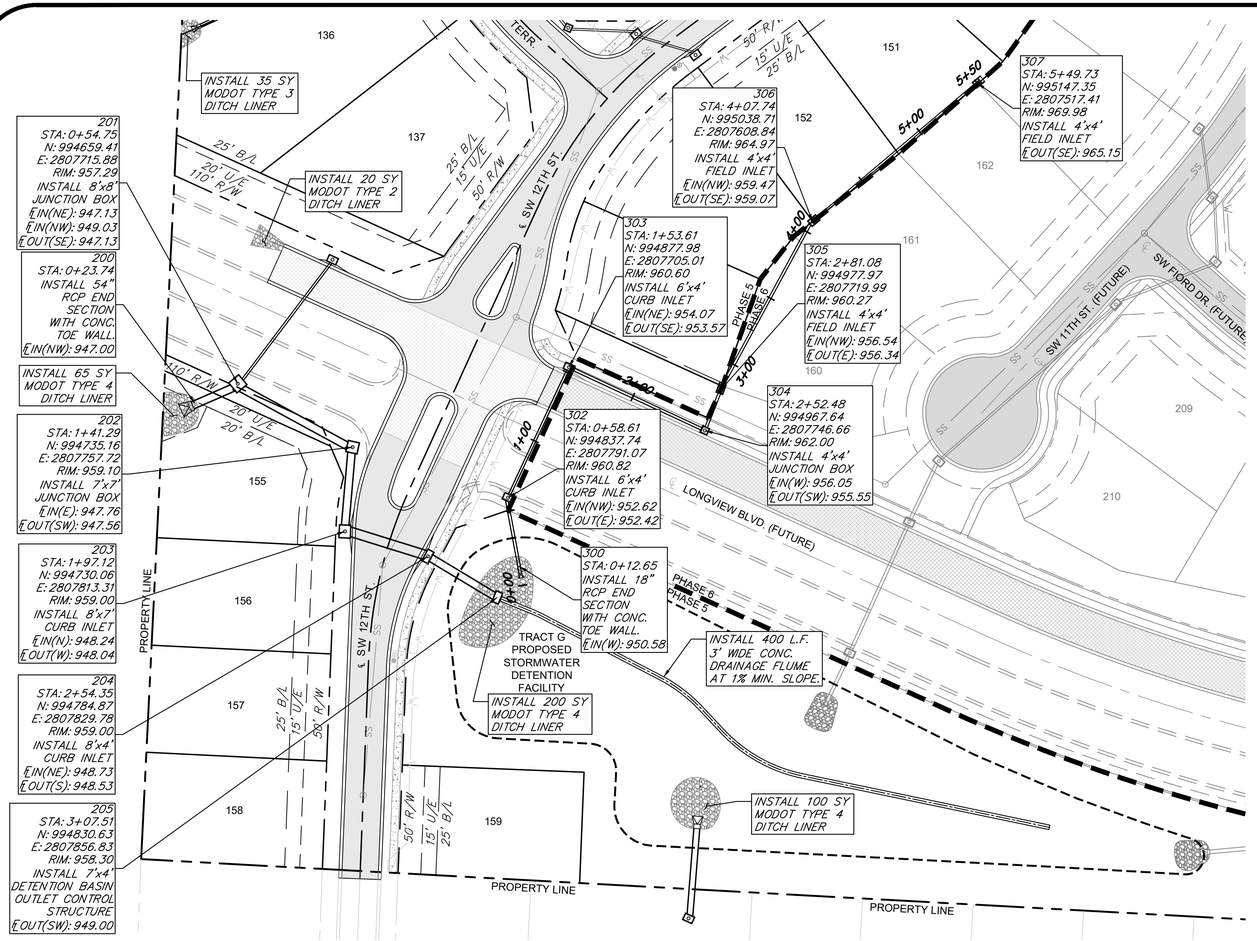
STORM SEWER PLAN & PROFILE

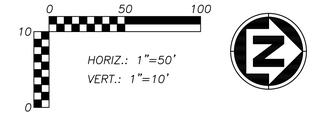
S10, T47N, R32W
LEE'S SUMMIT, JACKSON COUNTY, MISSOURI

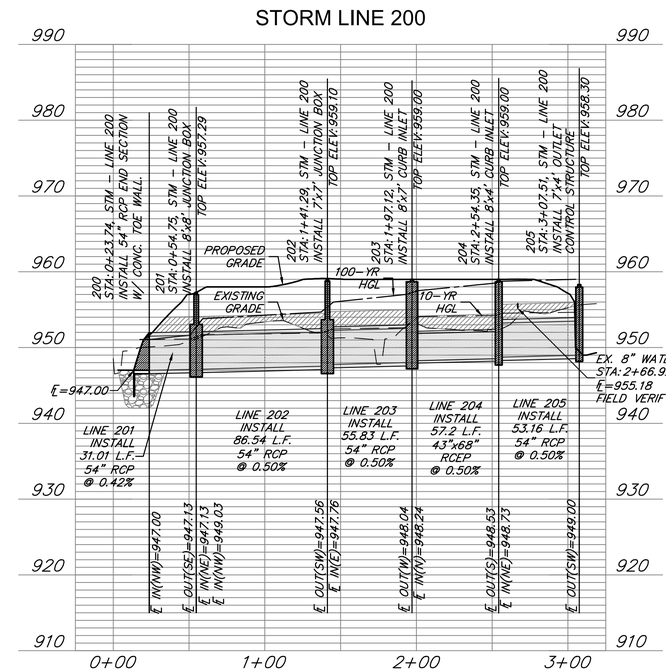
STATE OF MISSOURI
ZACH A. MYERS
NUMBER PE-2012009232
11/11/20
PROFESSIONAL ENGINEER

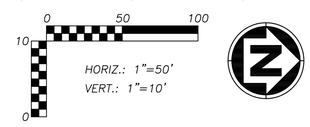
SHEET NUMBER
C203
9 OF 26

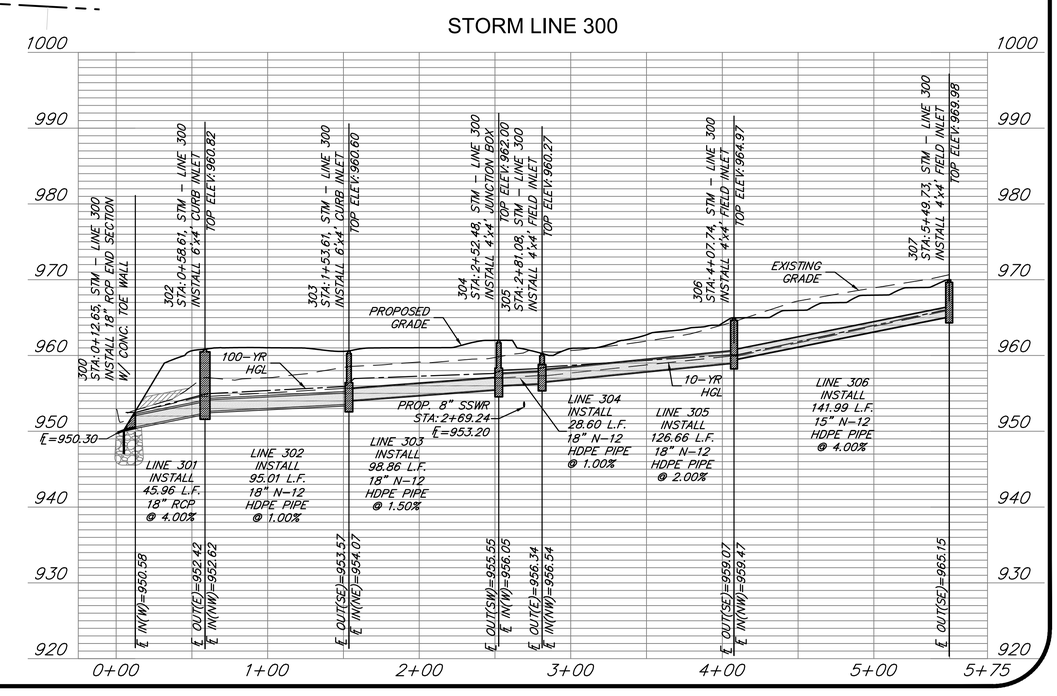
Nov 11, 2020 – 11:58am Plotted By: gcate G:\Shared drives\KC10 – Land Development\Projects\2020\20KC10057 Highland Meadows – 5th Plat\01 CIVIL\03-DWG\Base\20KC10057 – BASE – PROP – STORM.dwg Layout: STORM SEWER PLAN & PROFILE











GENERAL NOTES:

1. COORDINATES AT TOP ELEVATIONS SHOWN ARE LOCATED AT CENTER OR STRUCTURES. ROAD OFFSETS AREA AT INSIDE FACE OF CURB INLETS, AND AT CENTER OF MANHOLES AND JUNCTIONS BOXES.
2. PIPE LENGTHS INDICATED ARE FROM CENTER OF STRUCTURE TO CENTER OF STRUCTURE.
3. INSIDE FRONT FACE OF CURB INLETS SHALL BE LOCATED 1.5 FEET BEHIND BACK OF CURB. STRUCTURE SHALL BE PARALLEL WITH CURB ALIGNMENT.
4. TOP ELEVATION OF CURB INLETS SHALL BE SLOPED TO CONFORM TO GRADE OF STREET.
5. WATER MAINS AND STORM SEWERS SHALL HAVE AT LEAST 3' OF CLEAR HORIZONTAL SEPARATION.
6. CONTROLLED FILL: PRIOR TO INSTALLATION OF STORM SEWER PIPING IN FILL AREAS, FILL SHALL BE PLACED AND COMPACTED TO A MINIMUM 95% OF STANDARD PROCTOR DENSITY PER ASTM D 698 TO A MINIMUM DEPTH OF 2 FEET ABOVE THE TOP OF PIPE.

LEGEND

- RIP RAP
- FILL PRIOR TO PIPE INSTALLATION
- 900 PROPOSED MAJOR CONTOUR
- 901 PROPOSED MINOR CONTOUR
- 900 EXISTING MAJOR CONTOUR
- 901 EXISTING MINOR CONTOUR

STORM PIPE AND STRUCTURES:

1. HDPE PIPE SHALL CONFORM TO ASTM F2306. JOINTS SHALL BE INTEGRAL BELL AND SPIGOT WITH RUBBER GASKETS. JOINTS SHALL BE WATER TIGHT AS DEFINED BY ASTM F2306.
2. CONCRETE PIPE SHALL CONFORM TO ASTM C76, CLASS III, WALL TYPE B. JOINTS SHALL BE TONGUE-IN-GROVE WITH PREFORMED, FLEXIBLE SEALANTS AND SHALL CONFORM TO ASTM C990.
3. PROPOSED CURB INLETS AND JUNCTION BOXES SHALL CONFORM TO THE CITY OF LEE'S SUMMIT STANDARD DETAILS.

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JOB NUMBER:	20KC10057
MO COA NO.	000062

REVISIONS			
NO.	DESCRIPTION	BY	DATE

SUMMIT HOMES KC
HIGHLAND MEADOWS - 5TH PLAT

STORM SEWER PLAN & PROFILE (2)

S10, T47N, R32W
LEE'S SUMMIT, JACKSON COUNTY, MISSOURI

STATE OF MISSOURI
ZACH A. MYERS
NUMBER PE-2012009232
11/11/20
PROFESSIONAL ENGINEER

SHEET NUMBER
C204
10 OF 26

SEQUENCE OF CONSTRUCTION:

PHASE I OF LAND DISTURBANCE

1. INSTALL PERIMETER EROSION CONTROL MEASURES PRIOR TO ANY LAND DISTURBANCE.
2. INSTALL TEMPORARY CONSTRUCTION EXIT.
3. BEGIN STRIPPING AND GRUBBING.
4. BEGIN GRADING OF SEDIMENT BASIN – REFER TO INTERMEDIATE ESC PLAN.

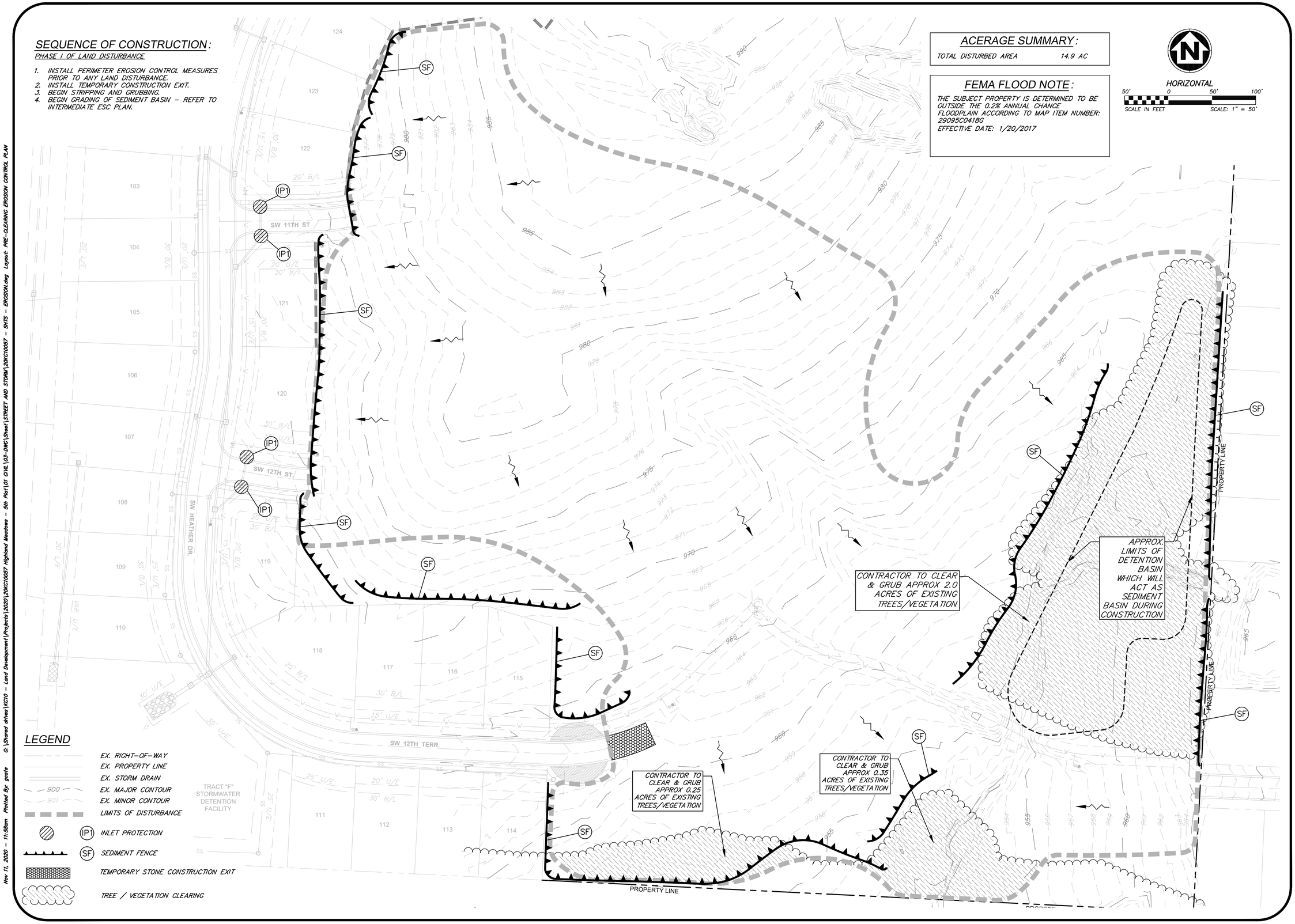
ACERAGE SUMMARY:

TOTAL DISTURBED AREA 14.9 AC

FEMA FLOOD NOTE:

THE SUBJECT PROPERTY IS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN ACCORDING TO MAP ITEM NUMBER: 29095C0418G
EFFECTIVE DATE: 1/20/2017

HORIZONTAL
50' 0 50' 100'
SCALE IN FEET SCALE: 1" = 50'



LEGEND

- EX. RIGHT-OF-WAY
- EX. PROPERTY LINE
- EX. STORM DRAIN
- 900 EX. MAJOR CONTOUR
- 901 EX. MINOR CONTOUR
- LIMITS OF DISTURBANCE
- IP1 INLET PROTECTION
- SF SEDIMENT FENCE
- TEMPORARY STONE CONSTRUCTION EXIT
- TREE / VEGETATION CLEARING

Nov 11, 2020 – 11:58am Plotted By: gcole G:\Shared drives\KC10 – Land Development\Projects\2020\20KC10057 Highland Meadows – 5th Plat\07 CIVIL\03-DWG\Sheet\STREET AND STORM\20KC10057 – SVTS – EROSION.dwg Layout: PRE-CLEARING EROSION CONTROL PLAN

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CHECK BY:	ZM
LICENSE NO.	PE-2012003232
DATE:	11/11/2020
ISSUED FOR:	FOR REVIEW
JOB NUMBER:	20KC10057
MO COA NO.	000062

REVISIONS

NO.	DESCRIPTION	BY	DATE

SUMMIT HOMES KC
HIGHLAND MEADOWS - 5TH PLAT

PRE-CLEARING EROSION CONTROL PLAN

S10, T47N, R32W
LEE'S SUMMIT, JACKSON COUNTY, MISSOURI

STATE OF MISSOURI
ZACH A. MYERS
NUMBER PE-2012009232
11/11/20
PROFESSIONAL ENGINEER

SHEET NUMBER
C301
11 OF 26

SEQUENCE OF CONSTRUCTION:

PHASE 1 OF LAND DISTURBANCE

1. INSTALL PERIMETER EROSION CONTROL MEASURES PRIOR TO ANY LAND DISTURBANCE
2. INSTALL TEMPORARY CONSTRUCTION EXIT
3. BEGIN STRIPPING AND GRUBBING
4. BEGIN GRADING OF SEDIMENT BASIN – REFER PHASE 2 ESC PLAN

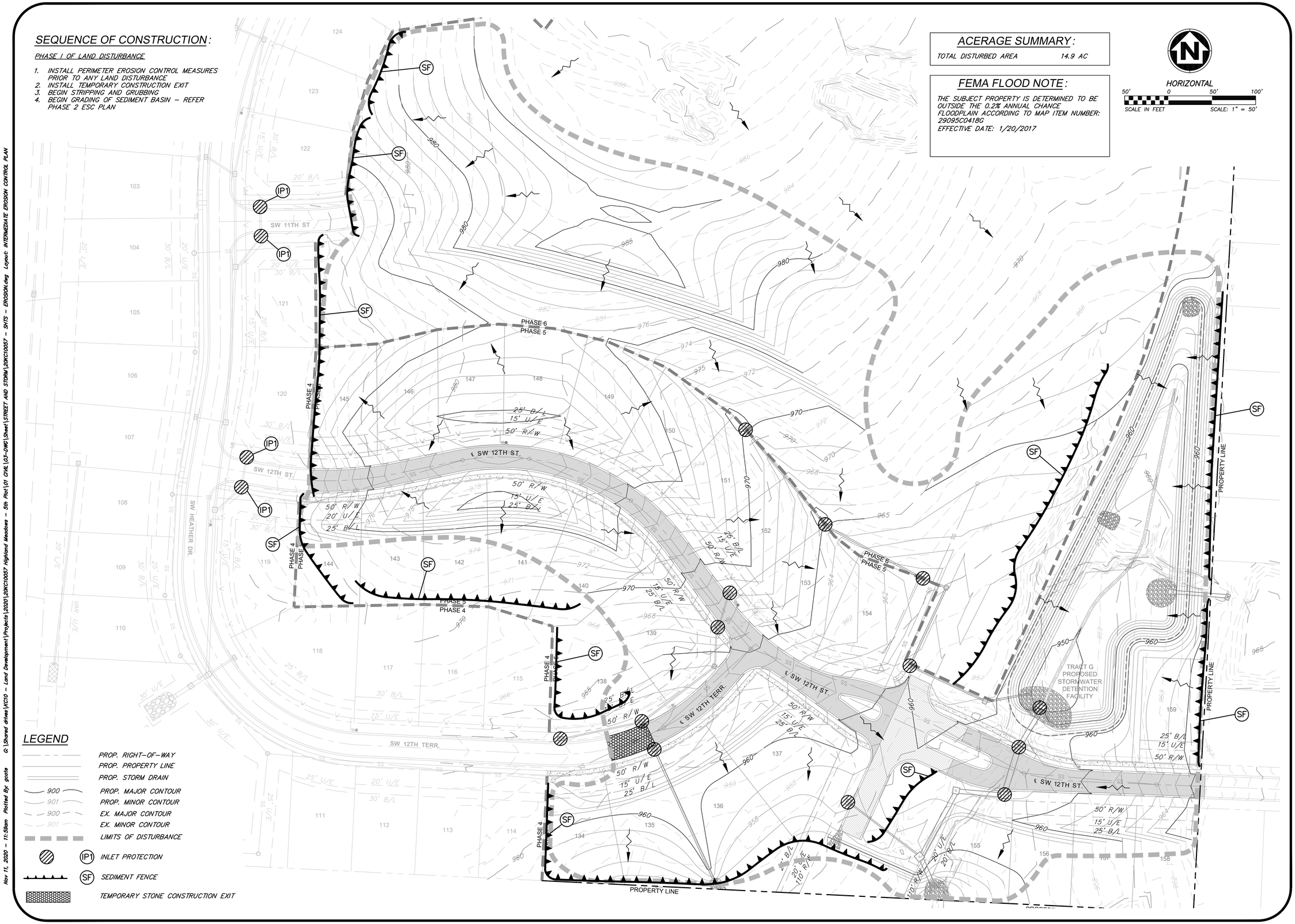
ACERAGE SUMMARY:

TOTAL DISTURBED AREA 14.9 AC

FEMA FLOOD NOTE:

THE SUBJECT PROPERTY IS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN ACCORDING TO MAP ITEM NUMBER: 29095C0418G
EFFECTIVE DATE: 1/20/2017

HORIZONTAL
50' 0 50' 100'
SCALE IN FEET SCALE: 1" = 50'



LEGEND

- PROP. RIGHT-OF-WAY
- PROP. PROPERTY LINE
- PROP. STORM DRAIN
- 900 PROP. MAJOR CONTOUR
- 901 PROP. MINOR CONTOUR
- 900 EX. MAJOR CONTOUR
- 901 EX. MINOR CONTOUR
- LIMITS OF DISTURBANCE
- (IP1) INLET PROTECTION
- (SF) SEDIMENT FENCE
- TEMPORARY STONE CONSTRUCTION EXIT

Nov 11, 2020 – 11:50am Plotted By: gcate G:\Shared drives\KC10 – Land Development\Projects\2020\20KC10057 Highland Meadows – 5th Plat\01 CIVIL\03-DWG\Sheet\STREET AND STORM\20KC10057 – SVTS – EROSION.dwg Layout: INTERMEDIATE EROSION CONTROL PLAN

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DRAWING INFO.	
DRAWN BY:	GC
CHECK BY:	ZM
LICENSE NO.	PE-2012003232
DATE:	11/11/2020
ISSUED FOR:	FOR REVIEW
JOB NUMBER:	20KC10057
MO COA NO.	000062

REVISIONS

NO.	DESCRIPTION	BY	DATE

SUMMIT HOMES KC
HIGHLAND MEADOWS - 5TH PLAT

INTERMEDIATE EROSION CONTROL PLAN

S10, T47N, R32W
LEE'S SUMMIT, JACKSON COUNTY, MISSOURI

STATE OF MISSOURI
ZACH A. MYERS
NUMBER PE-2012009232
11/11/20
PROFESSIONAL ENGINEER

SHEET NUMBER
C302
12 OF 26

GENERAL NOTES:

ALL MEASURES STATED ON THIS SITE MAP, AND IN THE STORM WATER POLLUTION PREVENTION PLAN, SHALL BE MAINTAINED IN FULLY FUNCTIONAL CONDITION UNTIL NO LONGER REQUIRED FOR A COMPLETED PHASE OF WORK OR FINAL STABILIZATION OF THE SITE. ALL EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE CHECKED BY A QUALIFIED PERSON IN ACCORDANCE WITH THE CONTRACT DOCUMENTS OR THE APPLICABLE PERMIT, WHICHEVER IS MORE STRINGENT, AND REPAIRED IN ACCORDANCE WITH THE FOLLOWING:

1. AT A MINIMUM, THE CONTRACTOR SHALL FOLLOW THE REQUIREMENTS FOR GOOD HOUSEKEEPING, SPILL CONTROL AND EROSION AND SEDIMENT CONTROL AS SPECIFIED IN THE KANSAS CITY METROPOLITAN CHAPTER OF THE AMERICAN PUBLIC WORKS ASSOCIATION SECTION 2150.
2. INLET PROTECTION DEVICES AND BARRIERS SHALL BE REPAIRED OR REPLACED IF THEY SHOW SIGNS OF UNDERMINING OR DETERIORATION.
3. ALL SEEDED AREAS SHALL BE CHECKED REGULARLY TO SEE THAT A GOOD STAND IS MAINTAINED. AREAS SHOULD BE FERTILIZED, WATERED, AND RESEEDED AS NEEDED.
4. SILT FENCES SHALL BE REPAIRED TO THEIR ORIGINAL CONDITIONS IF DAMAGED. SEDIMENT SHALL BE REMOVED FROM THE SILT FENCES WHEN IT REACHES ONE-HALF THE HEIGHT OF THE SILT FENCE.
5. THE CONSTRUCTION EXITS SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOW OF MUD ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING OF THE CONSTRUCTION EXITS AS CONDITIONS DEMAND.
6. THE TEMPORARY PARKING AND STORAGE AREA SHALL BE KEPT IN GOOD CONDITION (SUITABLE FOR PARKING AND STORAGE). THIS MAY REQUIRE PERIODIC TOP DRESSING OF THE TEMPORARY PARKING AREA AS CONDITIONS DEMAND.
7. DRAINAGE SWALES WITH SLOPES STEEPER THAN 15% SHALL BE INSPECTED AFTER EACH RAINFALL EVENT. THESE CHANNELS AND SLOPES SHOULD BE TREATED WITH EROSION FABRIC. IF THE CHANNELS OR SLOPES SHOW ANY SIGN OF FAILURE, COORDINATE WITH THE ENGINEER TO DEVELOP A PLAN TO RE-STABILIZE THE FAILED AREA.

LEGEND

- PROP. RIGHT-OF-WAY
- PROP. PROPERTY LINE
- PROP. STORM DRAIN
- 900 PROP. MAJOR CONTOUR
- 901 PROP. MINOR CONTOUR
- 900 EX. MAJOR CONTOUR
- 901 EX. MINOR CONTOUR
- LIMITS OF DISTURBANCE
- (IP1) INLET PROTECTION
- (SF) SEDIMENT FENCE
- (SI) SLOPE INTERRUPT - COMPOST BERM, GRAVEL BERM, COMPOST SOCK - PLACED AT 75 FT INTERVALS WHERE FLATTER THAN 15%, SPACED EVERY 10 VERTICAL FEET ON STEEP SLOPES
- TEMPORARY STONE CONSTRUCTION EXIT

Nov 11, 2020 - 11:50am Plotted By: gcate G:\Shared drives\KC10 - Land Development\Projects\2020\20KC10057 Highland Meadows - 5th Plat\01 CIVIL\03-DWG\Sheet\STREET AND STORM\20KC10057 - SVTS - EROSION.dwg Layout: FINAL STABILIZATION EROSION CONTROL PLAN

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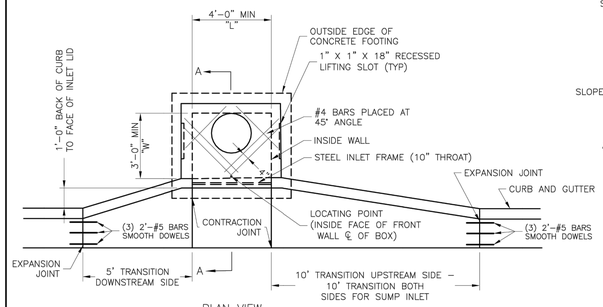
HIGHLAND MEADOWS - 5TH PLAT

FINAL STABILIZATION EROSION CONTROL PLAN

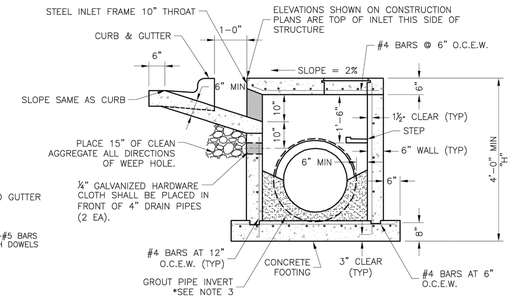
S10, T47N, R32W
LEE'S SUMMIT, JACKSON COUNTY, MISSOURI

STATE OF MISSOURI
ZACH A. MYERS
NUMBER PE-2012009232
11/11/20
PROFESSIONAL ENGINEER

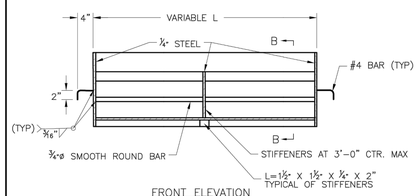
SHEET NUMBER
C303
13 OF 26



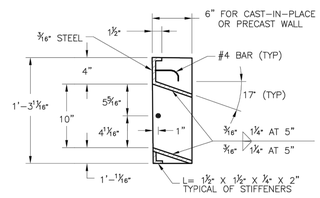
PLAN VIEW



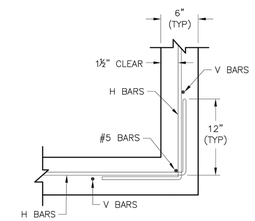
SECTION A–A



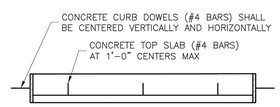
FRONT ELEVATION



SECTION B–B



WALL CORNER DETAIL



PLAN VIEW

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

GENERAL NOTES:
1. THE FIRST DIMENSION LISTED IN THE CONSTRUCTION NOTES IS THE "L" DIMENSION. THE SECOND DIMENSION IS THE "W" DIMENSION.
2. FLOW LINES LISTED ON THE PROJECT PLANS ARE LISTED AT THE INSIDE FACE OF THE WALL.
3. FLOOR OF INLET GROUTED AND SHAPED TO MATCH PIPE INVERT TO PROVIDE SMOOTH FLOW.
4. LOCATE MH RING AND COVER ON BLANK WALL IF POSSIBLE.
5. STEPS SHALL BE SPACED AT 1'–4" O.C. VERTICALLY ON BLANK WALL IF POSSIBLE.
6. BEVEL ALL EXPOSED EDGES WITH ¾"CHAMFER OR ½" TOOLED EDGE.
7. ON–GRADE INLETS SHALL CONFORM TO THE STREET GRADE AND SUMP INLETS SHALL BE LEVEL.
8. PRECAST LIDS SHALL BE PINNED, SEALED WITH NON–SHRINKABLE GROUT AND REMOVABLE FOR FUTURE MAINTENANCE.
9. LIFTING RINGS SHALL BE REMOVED AND SEALED WITH NON–SHRINKABLE GROUT
10. FOR RING AND COVER SEE THE STORMWATER APPROVED PRODUCT LIST.

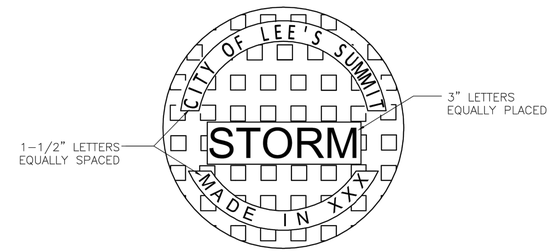
LEE'S SUMMIT MISSOURI
PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063

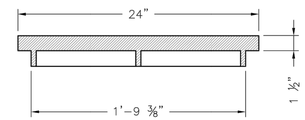
STANDARD DETAILS
CITY OF LEE'S SUMMIT, MO
LEE'S SUMMIT, JACKSON COUNTY, MO

Project:
Sheet Name: CURB INLET DETAIL

Drawn By: MJF
Checked By: DL
Date: 04/17
Proj. #:

STM-1





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

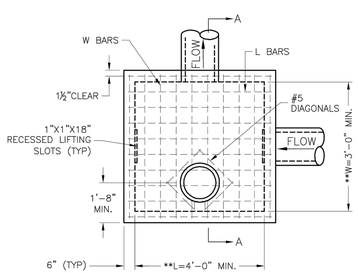
*COVER AND FRAME MODEL INFORMATION REFER TO THE STORMWATER APPROVED PRODUCT LIST.

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

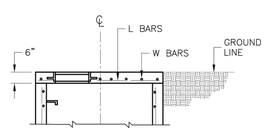
STORM MANHOLE COVER DETAIL

Date: 04/17
Drawn By: MJF
Checked By: DL

STM-6



PLAN

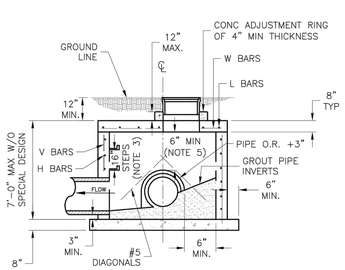


SLAB TOP ALTERNATE FOR JUNCTION BOX (SHALLOW)

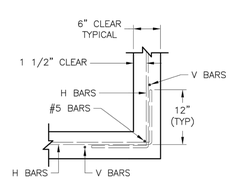
** INCREASE IN MULTIPLES OF 6" (7'–0") MAX WITHOUT SPECIAL DESIGN. (SEE PROJECT PLANS FOR DETAILS)

REINFORCING

BARS	BAR SIZE	SPACING (IN.)
H	4	12
V	4	12
L	5	6
W	5	6



SECTION A–A



WALL CORNER DETAIL

GENERAL NOTES:
1. LOCATE RING AND COVER ON BLANK WALL.
2. USE ¾" CHAMFER STRIP OR ½" R EDGER TOOL ON ALL EXPOSED CONCRETE CORNERS.
3. STEPS REQUIRED AT 16" O.C. WHEN DEPTH FROM TOP OF CASTING TO INVERT EXCEEDS 4' ON BLANK WALL IF POSSIBLE.
4. BOXOUTS WILL NOT BE ALLOWED TO PROJECT THROUGH THE CORNERS OF THE STRUCTURE AND THE MINIMUM DISTANCE BETWEEN BOXOUTS IS 6".
5. THE MINIMUM REINFORCING SHALL BE 1 H–BAR OVER A CAST–IN–PLACE PIPE AND 2 H–BARS OVER A PRECAST BOXOUT.
8. PRECAST LIDS SHALL BE PINNED, SEALED WITH NON–SHRINKABLE GROUT AND REMOVABLE FOR FUTURE MAINTENANCE.
9. REINFORCING OF COVERS IN STREETS REQUIRE SPECIAL DESIGN.
10. FOR RING AND COVER SEE THE STORMWATER APPROVED PRODUCT LIST.

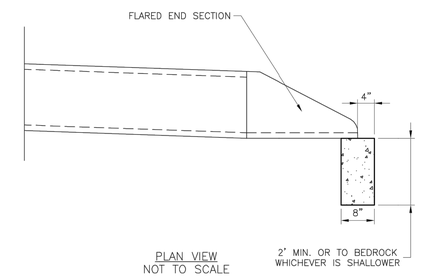
LEE'S SUMMIT MISSOURI
PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063

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

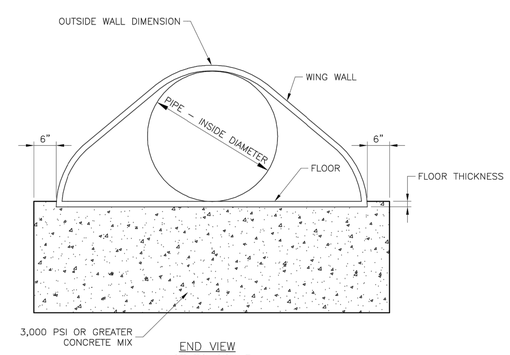
Project:
Sheet Name: JUNCTION BOX DETAIL

Drawn By: MJF
Checked By: DL
Date: 04/17
Proj. #:

STM-3



PLAN VIEW
NOT TO SCALE



END VIEW
NOT TO SCALE

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

FLARED END SECTION SUPPORT DETAIL

Date: 04/17
Drawn By: MJF
Checked By: DL

STM-5

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REVISIONS

NO.	DESCRIPTION	BY	DATE

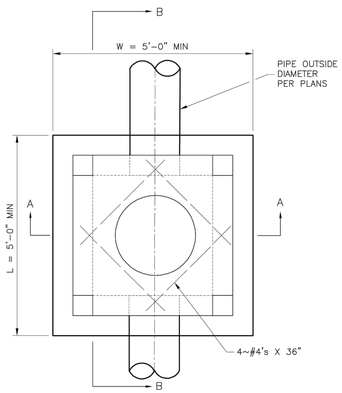
SUMMIT HOMES KC
HIGHLAND MEADOWS - 5TH PLAT

STORM SEWER DETAILS

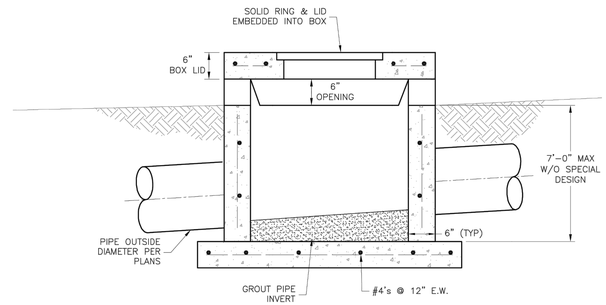
S10, T47N, R32W
LEE'S SUMMIT, JACKSON COUNTY, MISSOURI

STATE OF MISSOURI
ZACH A. MYERS
NUMBER PE-2012009232
11/11/20
PROFESSIONAL ENGINEER

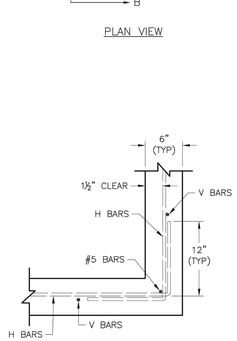
SHEET NUMBER
C401
14 OF 26



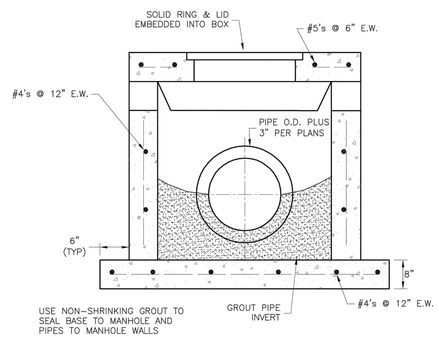
PLAN VIEW



SECTION B–B



WALL CORNER DETAIL



SECTION A–A

GENERAL NOTES:

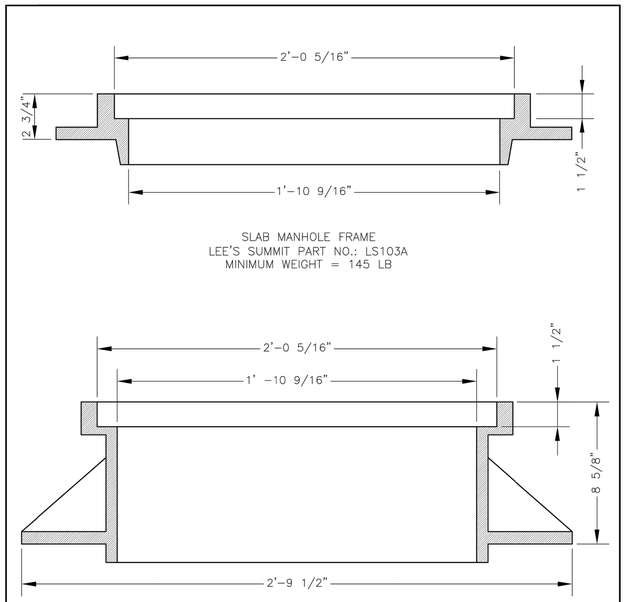
1. LOCATE RING AND COVER OVER OUTLET ON BLANK WALL.
2. USE ¾" CHAMFER ON ALL EXPOSED CONCRETE CORNERS.
3. FLOOR OF INLET GROUTED AND SHAPED TO MATCH PIPE INVERT TO PROVIDE SMOOTH FLOW.
4. STEPS REQUIRED AT 16" O.C. WHEN DEPTH FROM TOP OF CASTING TO INVERT EXCEEDS 3' ON BLANK WALL IF POSSIBLE.
5. BOXOUTS WILL NOT BE ALLOWED TO PROJECT THROUGH THE CORNERS OF THE STRUCTURE.
6. THE MINIMUM REINFORCING SHALL BE 1 H–BAR OVER A CAST–IN–PLACE PIPE AND 2 H–BARS OVER A PRECAST BOXOUT.
7. SHOW FIELD INLET ORIENTATION ON PLANS PLUS NUMBER AND SIDE OF OPENINGS.
8. PRECAST LIDS SHALL BE PINNED, SEALED WITH NON–SHRINKABLE GROUT AND REMOVABLE FOR FUTURE MAINTENANCE.
9. FOR RING AND COVER SEE THE STORMWATER APPROVED PRODUCT LIST.

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

Project: STANDARD DETAILS
CITY OF LEE'S SUMMIT, MO
LEE'S SUMMIT, JACKSON COUNTY, MO
Sheet Name: FIELD INLET DETAIL

Drawn By: MJF
Checked By: DL
Date: 04/17
Proj. #:

STM-2



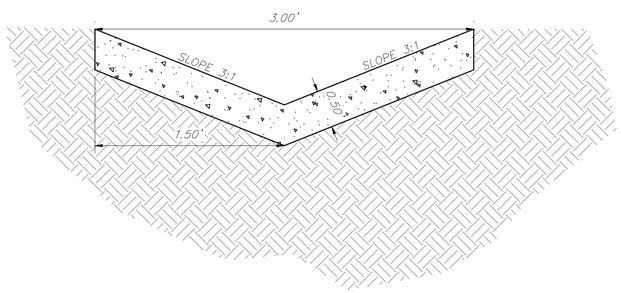
*COVER AND FRAME MODEL INFORMATION REFER TO THE STORMWATER APPROVED PRODUCTS LIST.

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

STORM MANHOLE FRAME DETAIL

Date: 04/17
Drawn By: MJF
Checked By: DL

STM-7



CONCRETE FLUME DETAIL
NOT TO SCALE

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SUMMIT HOMES KC
HIGHLAND MEADOWS - 5TH PLAT

STORM SEWER DETAILS (2)

S10, T47N, R32W
LEE'S SUMMIT, JACKSON COUNTY, MISSOURI

STATE OF MISSOURI
ZACH A. MYERS
NUMBER PE-2012009232
11/11/20
PROFESSIONAL ENGINEER

SHEET NUMBER
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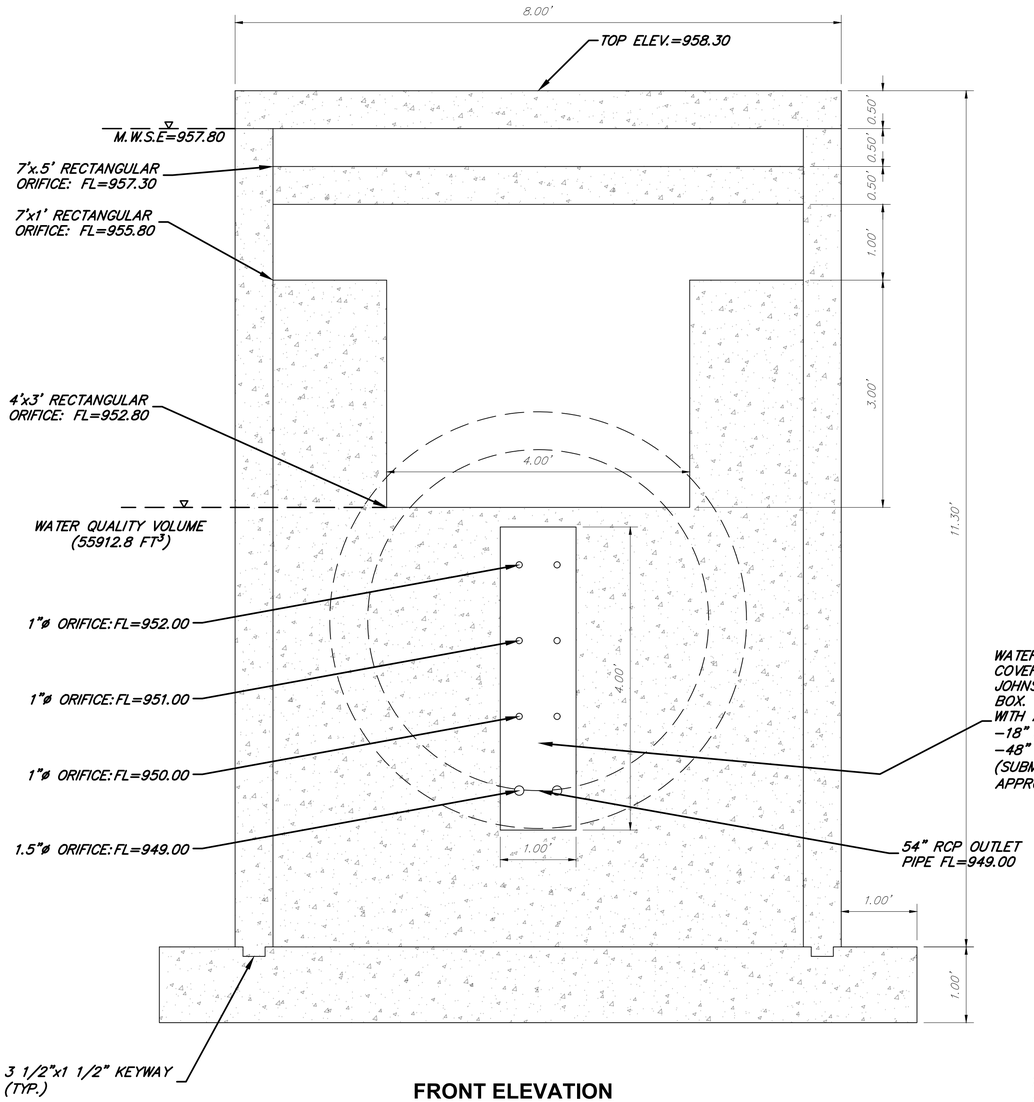
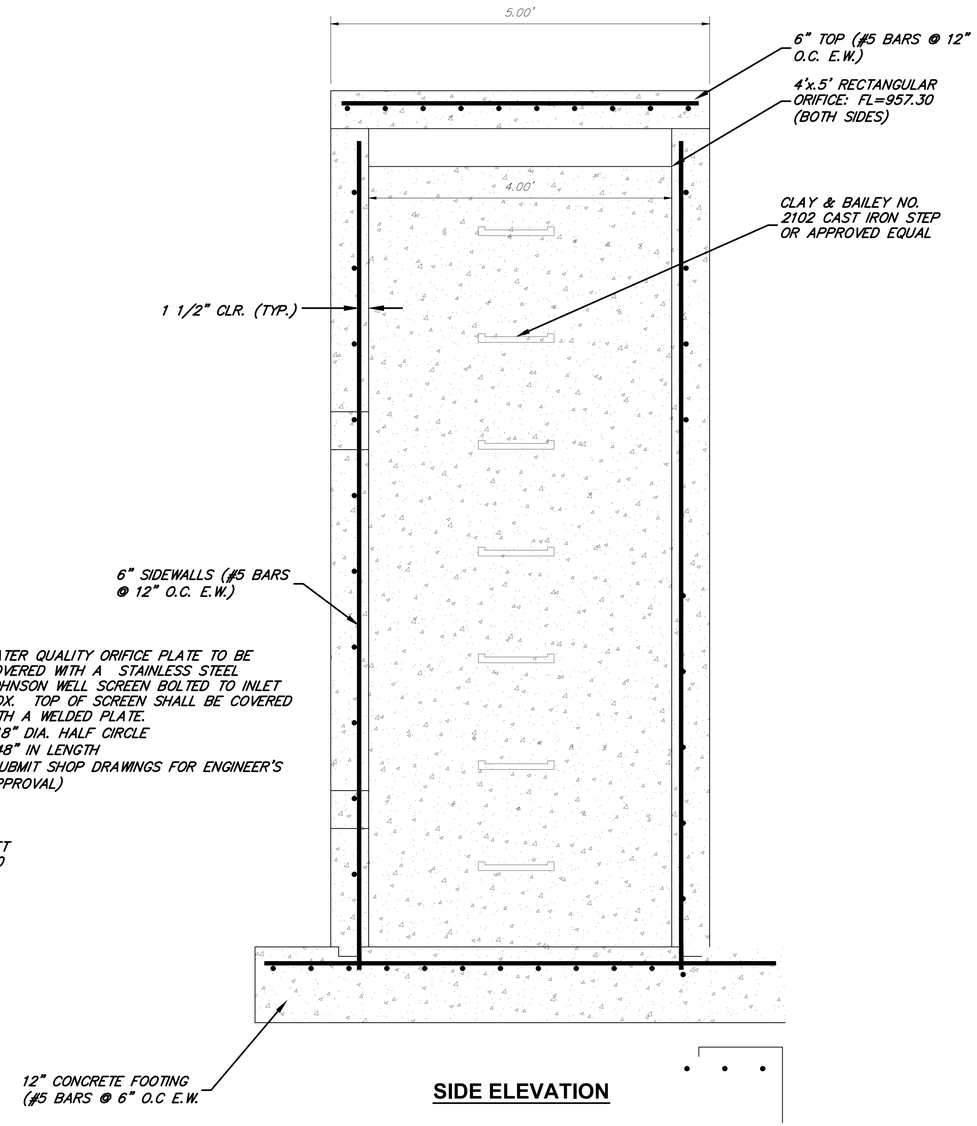


FRONT ELEVATION

WATER QUALITY ORIFICE PLATE TO BE COVERED WITH A STAINLESS STEEL JOHNSON WELL SCREEN BOLTED TO INLET BOX. TOP OF SCREEN SHALL BE COVERED WITH A WELDED PLATE.
–18" DIA. HALF CIRCLE
–48" IN LENGTH
(SUBMIT SHOP DRAWINGS FOR ENGINEER'S APPROVAL)



SIDE ELEVATION

DETENTION OUTLET CONTROL STRUCTURE

SCALE: 1"=1'

NOTES:

1. ALL CONCRETE SHALL BE 4000 PSI.
2. ALL REINFORCING STEEL SHALL BE 60 KSI.
3. THE FIRST DIMENSION LISTED IN THE CONSTRUCTION NOTES IS THE "L" DIMENSION. THE SECOND DIMENSION IS THE "W" DIMENSION.
4. FLOOR OF INLET SHALL BE SHAPED WITH NON–REINFORCED CONCRETE INVERT TO PROVIDE SMOOTH FLOW.
5. EXPANSION JOINTS SHALL BE EITHER HOT OR COLD POURED JOINT SEALING COMPOUND, OR PREMOLDED EXPANSION JOINT FILLER.
6. BEVEL ALL EXPOSED EDGES WITH TRIANGULAR MOLDING.
7. ALL DIMENSIONS RELATIVE TO REINFORCING STEEL ARE TO CENTERLINE OF BARS. 2" CLEARANCE SHALL BE PROVIDED THROUGHOUT UNLESS NOTED OTHERWISE. TOLERANCE OF ±1/8" SHALL BE PERMITTED.
8. ALL LAP SPLICES NOT SHOWN SHALL BE A MINIMUM OF 40 BAR DIAMETERS IN LENGTH.
9. ALL DOWELS SHALL BE ACCURATELY PLACED AND SECURELY TIED IN PLACE PRIOR TO PLACEMENT OF BOTTOM SLAB CONCRETE. STICKING OF DOWELS INTO FRESH OR PARTIALLY HARDENED CONCRETE WILL NOT BE ACCEPTABLE.
10. ALL REINFORCING STEEL SHALL BE SUPPORTED ON FABRICATED STEEL BAR SUPPORTS @ 3'–0" MAXIMUM SPACING.
11. DO NOT SCALE THESE DRAWINGS FOR DIMENSIONS OR CLEARANCES. ANY QUESTIONS REGARDING DIMENSIONS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER PRIOR TO CONSTRUCTION.
12. THE BOTTOM SLAB SHALL BE AT LEAST 24 HOURS OLD BEFORE PLACING SIDEWALL CONCRETE. ALL SIDEWALL FORMS SHALL REMAIN IN PLACE A MINIMUM OF 24 HOURS AFTER SIDEWALLS ARE POURED BEFORE REMOVAL, AND AFTER REMOVAL SHALL BE IMMEDIATELY TREATED WITH MEMBRANE CURING COMPOUND.
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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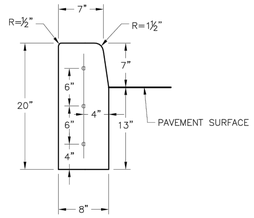
SUMMIT HOMES KC
HIGHLAND MEADOWS - 5TH PLAT

STORM SEWER DETAILS (3)

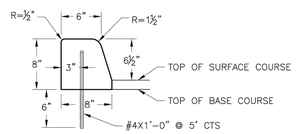
S10, T47N, R32W
LEE'S SUMMIT, JACKSON COUNTY, MISSOURI

STATE OF MISSOURI
ZACH A. MYERS
NUMBER PE-2012009232
11/11/20
PROFESSIONAL ENGINEER

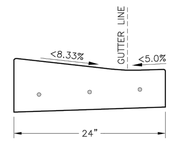
SHEET NUMBER
C403
16 OF 26



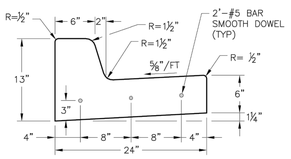
STRAIGHT CURB
(TYPE C-1)



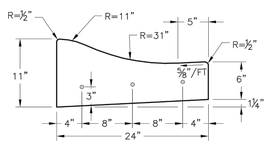
DOWELLED CURB
(TYPE DC)



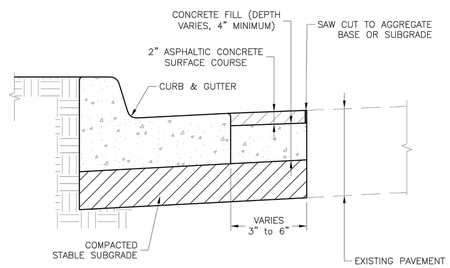
CURB & GUTTER DETAIL AT RAMP
(ADA SLOPE REQUIREMENTS)



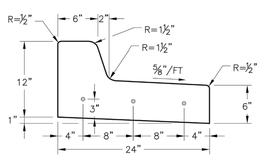
STRAIGHT BACK CURB &
GUTTER
(TYPE CG-1)



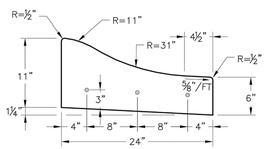
ROLL BACK CURB &
GUTTER
(TYPE CG-2)



CURB REPLACEMENT DETAIL



STRAIGHT BACK DRY CURB &
GUTTER
(TYPE CG-1 DRY)



ROLL BACK DRY CURB &
GUTTER
(TYPE CG-2 DRY)

GENERAL NOTES

1. ¾" ISOLATION JOINTS WITH 3 (2'-#5 BAR) SMOOTH DOWELS SHALL BE PLACED AT RADIUS POINTS AND AT 150' INTERVALS. THESE DOWEL BARS SHALL BE GREASED AND WRAPPED ON ONE END WITH EXPANSION TUBES.
2. 3" DEEP CONTRACTION JOINTS SHALL BE INSTALLED AT APROXIMATELY 10' INTERVALS. THESE JOINTS SHALL PASS ACROSS THE ENTIRE CURB SECTION.
3. CONCRETE FILL SHALL HAVE UNIFORM AND SMOOTH FINISH
4. KCMMB 4K CONCRETE SHALL BE USED FOR ALL CURB.
5. ASPHALTIC CONCRETE SURFACE COURSE SHALL CONFORM TO STANDARD SPECIFICATIONS SECTION 2205.2.
6. CURBS FOR NEW STREETS SHALL BE BUILT ON ASPHALT OR AGGREGATE BASE AS SHOWN IN TYPICAL SECTION DETAIL.
7. WHITE CURING COMPOUND MUST BE APPLIED UNIFORMLY TO THE CONCRETE SURFACE IMMEDIATELY AFTER FINAL FINISHING.

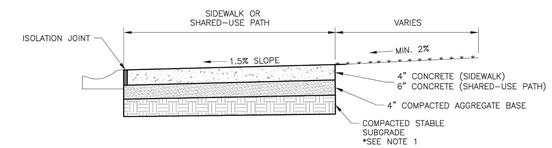
LEE'S SUMMIT
MISSOURI
PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063

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

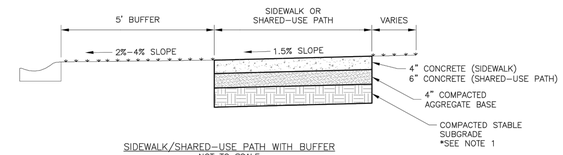
Sheet Name: CURB & GUTTER DETAIL

Drawn By: MJF
Checked By: DL
Date: 04/17
Proj. #:

GEN-4



SIDEWALK/SHARED-USE PATH WITHOUT BUFFER
NOT TO SCALE



SIDEWALK/SHARED-USE PATH WITH BUFFER
NOT TO SCALE

GENERAL NOTES:

1. SUBGRADE MUST BE OF STABLE, COMPACTED EARTH AND SHALL BE OVERLAYED WITH 4" COMPACTED DENSE GRADED AGGREGATE BASE.
2. 1.5% CROSS SLOPE MUST BE MAINTAINED THROUGH DRIVEWAYS.
3. KCMMB 4K CONCRETE MIX SHALL BE REQUIRED FOR ALL SIDEWALKS AND SHARED-USE PATHS OR AS APPROVED BY THE CITY INSPECTOR.
4. ALL SIDEWALKS SHALL MEET CURRENT PUBLIC RIGHT OF WAY ACCESSIBILITY GUIDELINES (PROWAG).
5. AN EXPANSION JOINT SHALL BE PLACED AT A MAXIMUM OF 150 FT. CONSTRUCTION JOINTS SHALL BE PLACED THE SAME WIDTH OF SIDEWALK, BUT NO GREATER THAN 10 FT.
6. SHARED-USE PATH WIDTH SHALL BE 10 FT. WIDE.
7. SIDEWALK FINISHING (NO PICTURE FRAMING) AS DIRECTED BY CITY INSPECTOR.
8. WHITE CURING COMPOUND MUST BE APPLIED UNIFORMLY TO THE CONCRETE SURFACE IMMEDIATELY AFTER FINAL FINISHING.

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

SIDEWALK/SHARED-USE PATH DETAIL

Date: 04/17
Drawn By: MJF
Checked By: DL

GEN-2

ANDERSON ENGINEERING
EMPLOYEE OWNED
ENGINEERS • SURVEYORS • LABORATORIES • DRILLING
811 E. THIRD STREET • JOPLIN, MISSOURI 64801 • PHONE (417) 782-7399
A LICENSED MISSOURI ENGINEERING & SURVEYING CORPORATION - LC 62

REVISIONS			DRAWING INFO.	
NO.	DESCRIPTION	BY	DATE	DRAWN BY: GC
				CHECK BY: ZM
				LICENSE NO. PE-2012003232
				DATE: 11/11/2020
				ISSUED FOR: FOR REVIEW
				JOB NUMBER: 20KC10057
				MO COA NO. 000062

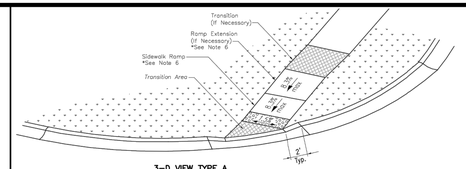
SUMMIT HOMES KC
HIGHLAND MEADOWS - 5TH PLAT

CURB & SIDEWALK DETAILS

S10, T47N, R32W
LEE'S SUMMIT, JACKSON COUNTY, MISSOURI

STATE OF MISSOURI
ZACH A. MYERS
NUMBER PE-2012009232
11/11/20
PROFESSIONAL ENGINEER

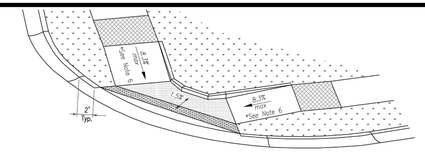
SHEET NUMBER
C404
17 OF 26



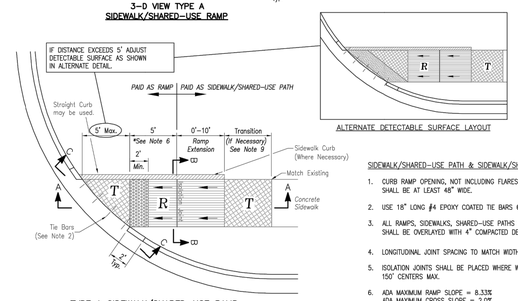
3-D VIEW TYPE A
SIDEWALK/SHARED-USE RAMP

LEGEND

R	SIDEWALK RAMP
TS	TURNING SPACE
	DETECTABLE WARNING SURFACE
T	TRANSITION



3-D VIEW TYPE B
SIDEWALK/SHARED-USE RAMP

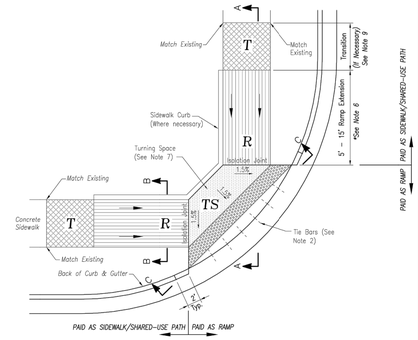


TYPE A SIDEWALK/SHARED-USE RAMP
Not to Scale

ALTERNATE DETECTABLE SURFACE LAYOUT

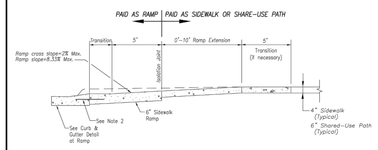
SIDEWALK/SHARED-USE PATH & SIDEWALK/SHARED-USE RAMP NOTES:

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

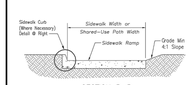


PAID AS SIDEWALK/SHARED-USE PATH PAID AS RAMP

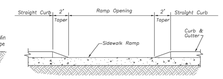
TYPE B SIDEWALK/SHARED-USE RAMP
Not to Scale



SECTION A-A

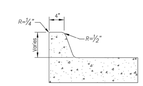


SECTION B-B

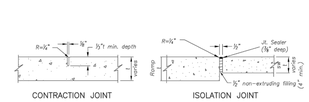


SECTION C-C

TYPE A & B SIDEWALK RAMP
Not to Scale

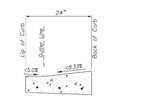


SIDEWALK CURB DETAIL
Not to Scale



CONTRACTION JOINT ISOLATION JOINT

JOINT DETAILS
Not to Scale



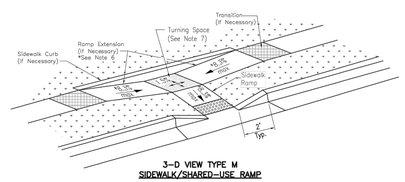
CURB & GUTTER DETAIL AT RAMP
Not to Scale

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

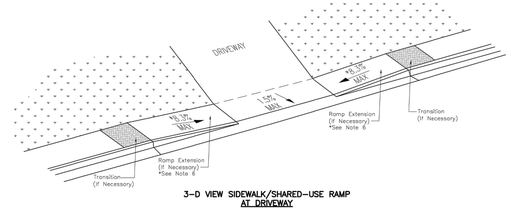
LEE'S SUMMIT MISSOURI
PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063

Drawn By: MJF
Checked By: DL
Date: 04/17
Proj. #:

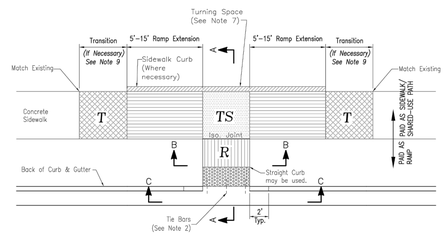
GEN-3A



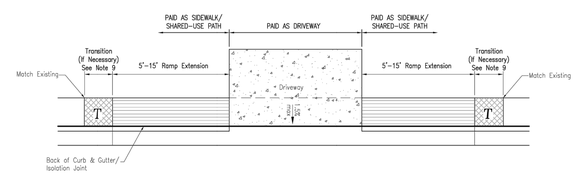
3-D VIEW TYPE M
SIDEWALK/SHARED-USE RAMP



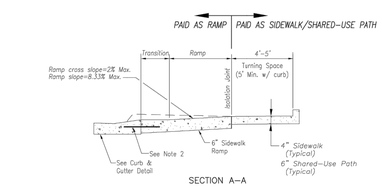
3-D VIEW SIDEWALK/SHARED-USE RAMP
AT DRIVEWAY



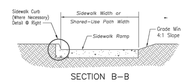
TYPE M SIDEWALK/SHARED-USE RAMP
Not to Scale



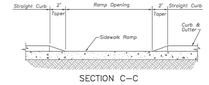
SIDEWALK/SHARED USE RAMP
AT DRIVEWAY WITH ADJOINING CURB



SECTION A-A



SECTION B-B



SECTION C-C

TYPE M SIDEWALK RAMP
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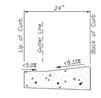
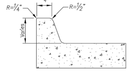


CURB & GUTTER DETAIL AT RAMP
Not to Scale



SIDEWALK CURB DETAIL
Not to Scale

LEGEND

R	SIDEWALK RAMP
TS	TURNING SPACE
	DETECTABLE WARNING SURFACE
T	TRANSITION

SIDEWALK/SHARED-USE PATH & SIDEWALK/SHARED-USE RAMP NOTES:

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

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

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

Drawn By: MJF
Checked By: DL
Date: 04/17
Proj. #:

GEN-3B

ANDERSON ENGINEERING
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A LICENSED MISSOURI ENGINEERING & SURVEYING CORPORATION - LC 62

REVISIONS			
NO.	DESCRIPTION	BY	DATE

DRAWING INFO.	
DRAWN BY:	GC
CHECK BY:	ZM
LICENSE NO.	PE-2012003232
DATE:	11/11/2020
ISSUED FOR:	FOR REVIEW
JOB NUMBER:	20KC10057
MO COA NO.	000062

SUMMIT HOMES KC
HIGHLAND MEADOWS - 5TH PLAT

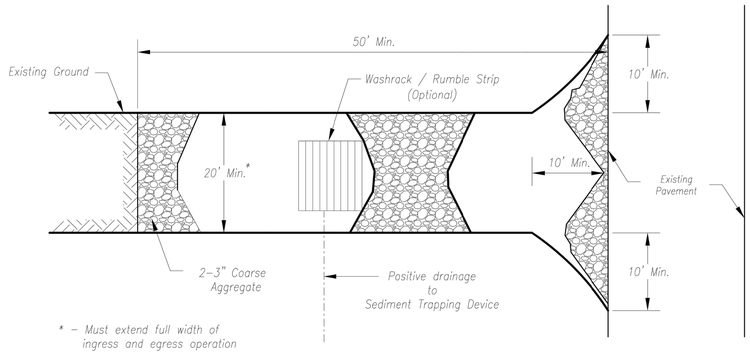
ADA RAMP DETAILS

S10, T47N, R32W
LEE'S SUMMIT, JACKSON COUNTY, MISSOURI

STATE OF MISSOURI
ZACH A. MYERS
NUMBER PE-2012009232
11/11/20
PROFESSIONAL ENGINEER

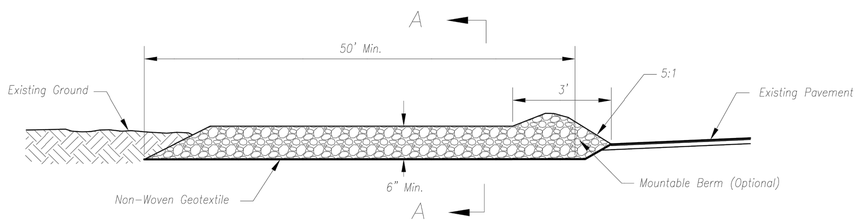
SHEET NUMBER
C405
18 OF 26

Nov 11, 2020 – 11:50am Plotted By: gcote G:\Shared drives\KC10 – Land Development\Projects\2020\20KC10057 Highland Meadows – 5th Plat\01 CIVIL\03-DWG\Sheet\STREET AND STORM\20KC10057 – SHTS – DETAILS.dwg Layout: ADA RAMP DETAILS



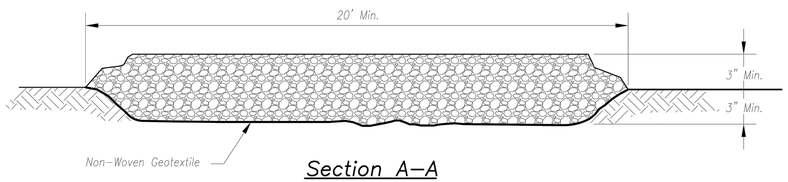
Plan View

Not to Scale



Side Elevation

Not to Scale



Section A-A

Not to Scale

Notes for Construction Entrance:

1. Avoid locating on steep slopes, at curves on public roads, or downhill of disturbed area.
2. Remove all vegetation and other unsuitable material from the foundation area, grade, and crown for positive drainage.
3. If slope towards the public road 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.
4. 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:

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

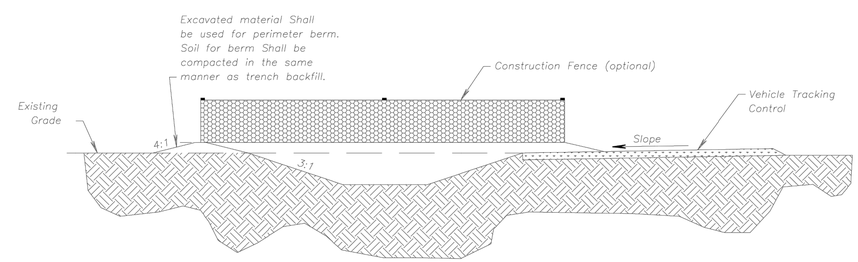
CONSTRUCTION ENTRANCE

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.
3. 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:

1. 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.
3. 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.
4. 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

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.

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KANSAS CITY METRO CHAPTER

CONSTRUCTION ENTRANCE AND CONCRETE WASHOUT

STANDARD DRAWING NUMBER ESC-01

ADOPTED: 10/24/2016

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HIGHLAND MEADOWS - 5TH PLAT

CONSTRUCTION ENTRANCE DETAILS

S10, T47N, R32W
LEE'S SUMMIT, JACKSON COUNTY, MISSOURI

STATE OF MISSOURI
ZACH A. MYERS
NUMBER PE-2012009232
11/11/20
PROFESSIONAL ENGINEER

SHEET NUMBER
C406
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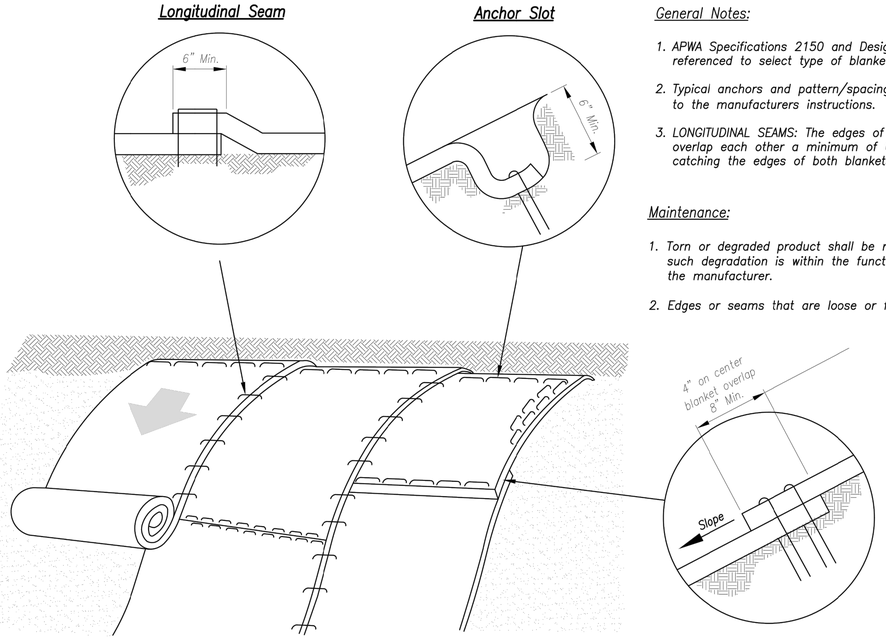


Installation on Slopes

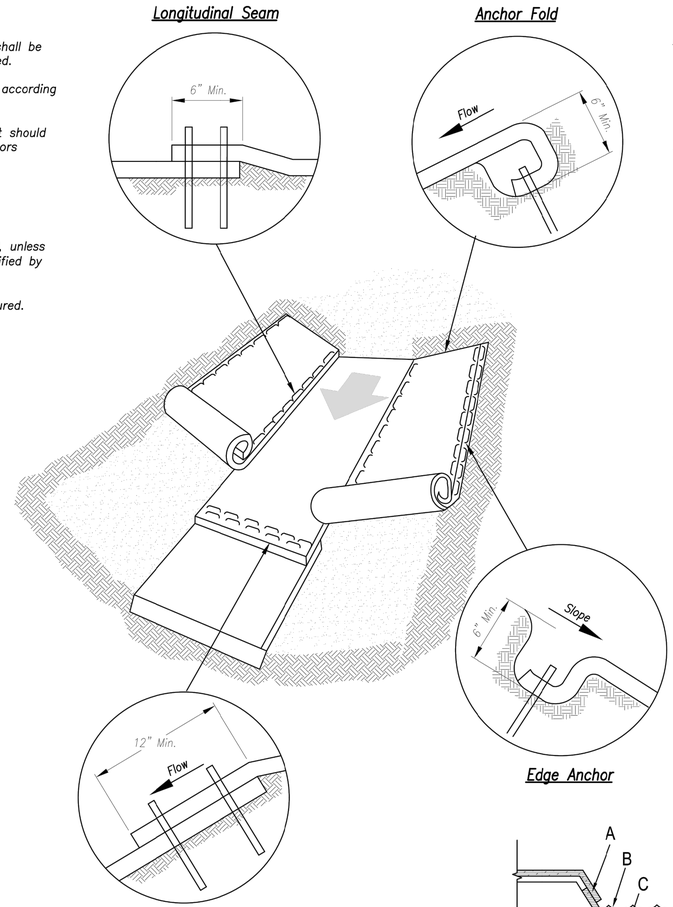
Splice Seam

General Notes:

1. APWA Specifications 2150 and Design Guidance 5100 shall be referenced to select type of blanket or mat to be used.
2. Typical anchors and pattern/spacing shall be installed according to the manufacturers instructions.
3. LONGITUDINAL SEAMS: The edges of the blanket or mat should overlap each other a minimum of 6 inches, with anchors catching the edges of both blankets.

Maintenance:

1. Torn or degraded product shall be repaired or replaced, unless such degradation is within the functional longevity specified by the manufacturer.
2. Edges or seams that are loose or frayed shall be secured.

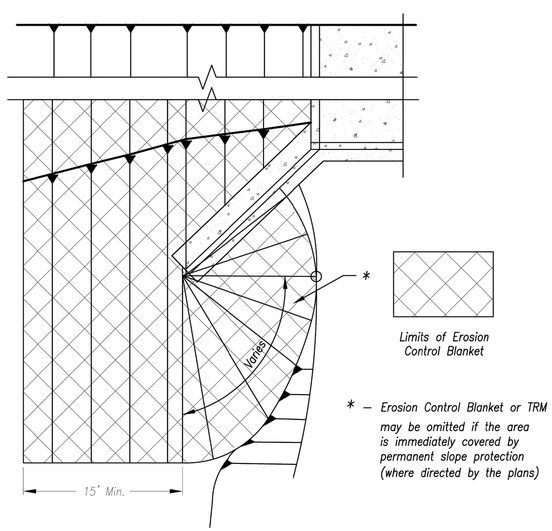


Edge Anchor

Splice Seam

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.



Limits of Erosion Control Blanket

* – Erosion Control Blanket or TRM may be omitted if the area is immediately covered by permanent slope protection (where directed by the plans)

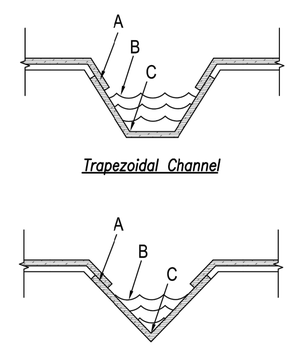
Partial Box Culvert Plan

Not to Scale

Installation Around Culvert Slope

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 seams.
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.



Trapezoidal Channel

V Channel

Installation in Channels

Critical Points:

A – Overlaps and seams;

B – Projected water line;

C – Channel bottom / side slope vertices;

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

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EROSION CONTROL BLANKETS AND TURF REINFORMENT MATS

STANDARD DRAWING NUMBER ESC-02

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HIGHLAND MEADOWS - 5TH PLAT

STEEP SLOPE PROTECTION DETAILS

S10, T47N, R32W
LEE'S SUMMIT, JACKSON COUNTY, MISSOURI

STATE OF MISSOURI ZACH A. MYERS NUMBER PE-2012009232 11/11/20 PROFESSIONAL ENGINEER

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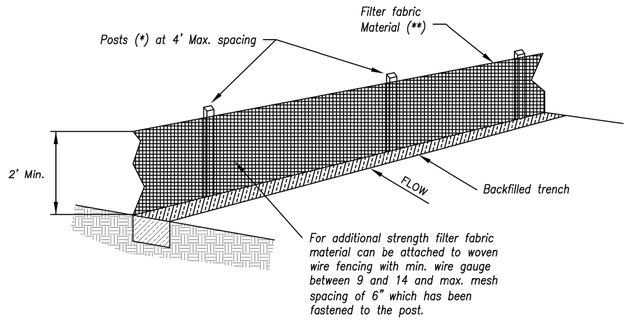
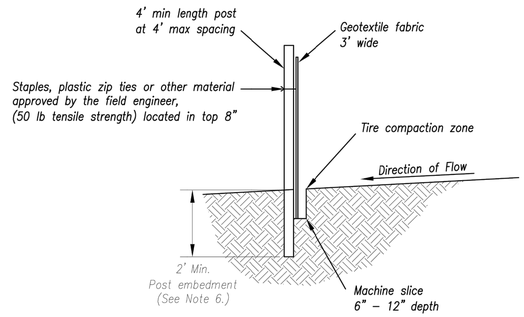




(*) POSTS

- MIN, LENGTH 4'
- HARDWOOD 1 3/16" x 1 3/16"
- NO.2 SOUTHERN PINE 2 5/8" x 2 5/8"
- STEEL 1.33 LB/FT

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

SILT FENCE DETAILS

Not to Scale

Notes:

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).
3. 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 used.

Maintenance:

1. Remove and dispose of sediment deposits when the deposit approaches ⅓ the height of silt fence.
2. Repair as necessary to maintain function and structure.

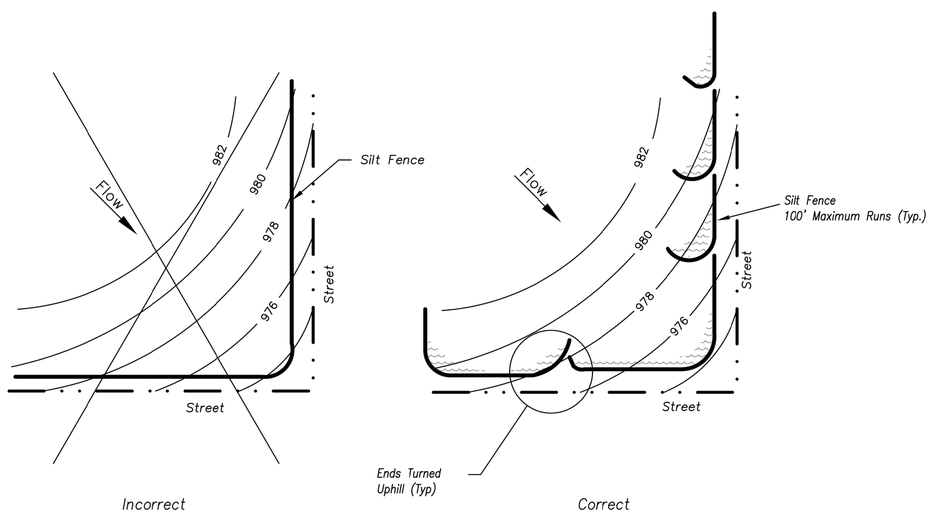
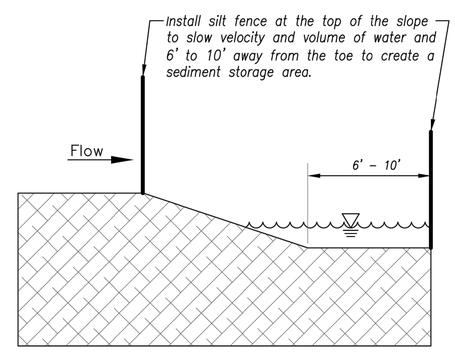
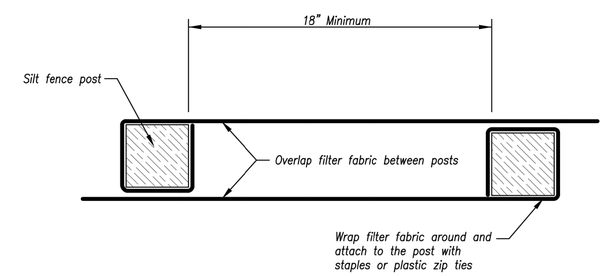


Figure A

SILT FENCE LAYOUT

Not to Scale





JOINING FENCE SECTIONS

Not to Scale

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

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SILT FENCE

STANDARD DRAWING NUMBER ESC-03

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SILT FENCE DETAILS

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LEE'S SUMMIT, JACKSON COUNTY, MISSOURI

STATE OF MISSOURI
ZACH A. MYERS
NUMBER PE-2012009232
11/11/20
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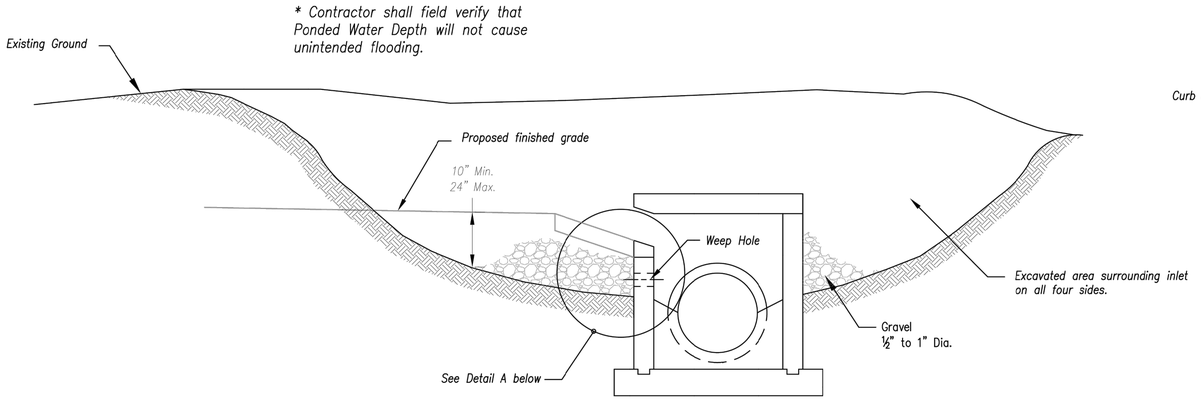
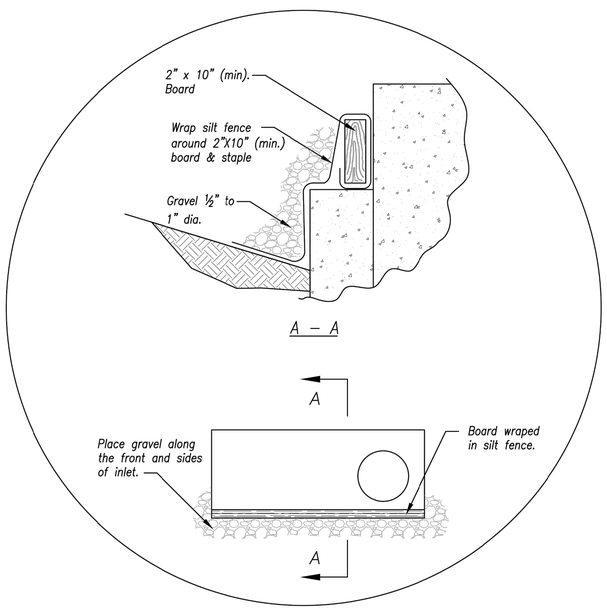
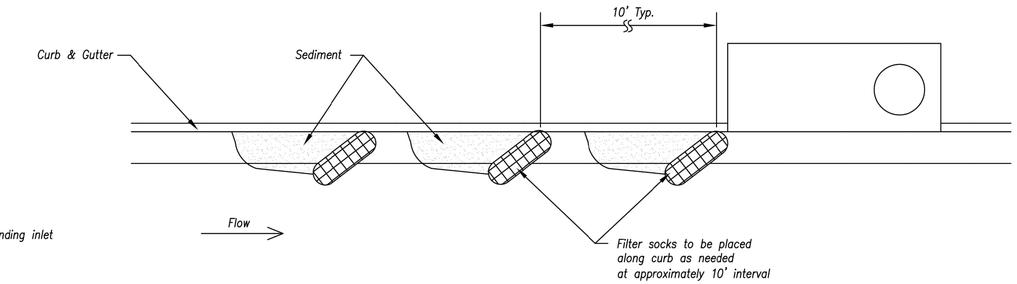




Detail A

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



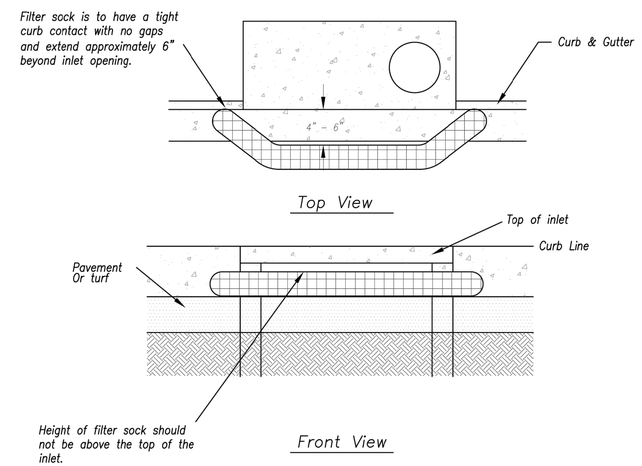
On Grade Curb Inlet Protection

Notes:

1. 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.
3. Contractor to field verify ponding water shall not create a traffic hazard.

Maintenance:

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.



Sump Inlet Sediment Filter

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

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

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CURB INLET PROTECTION

STANDARD DRAWING NUMBER ESC-06
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CURB INLET PROTECTION DETAILS

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STATE OF MISSOURI ZACH A. MYERS NUMBER PE-2012009232 11/11/20 PROFESSIONAL ENGINEER

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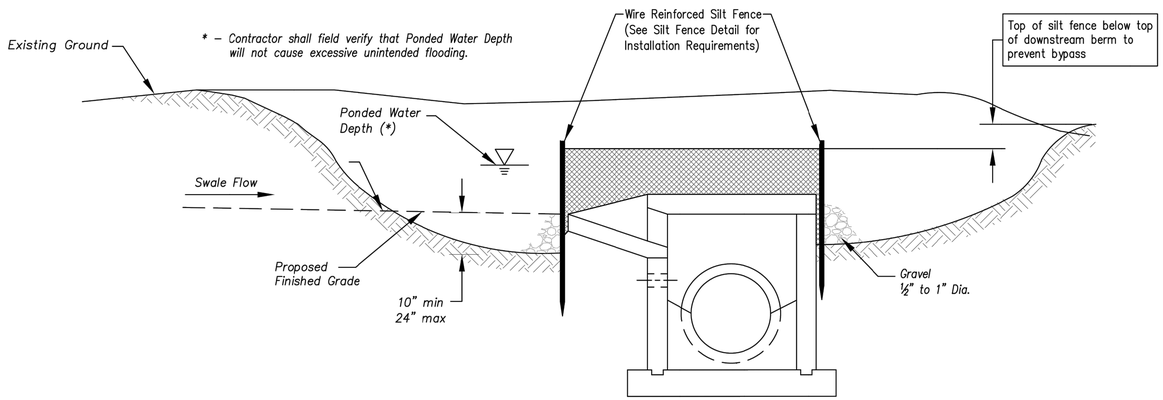

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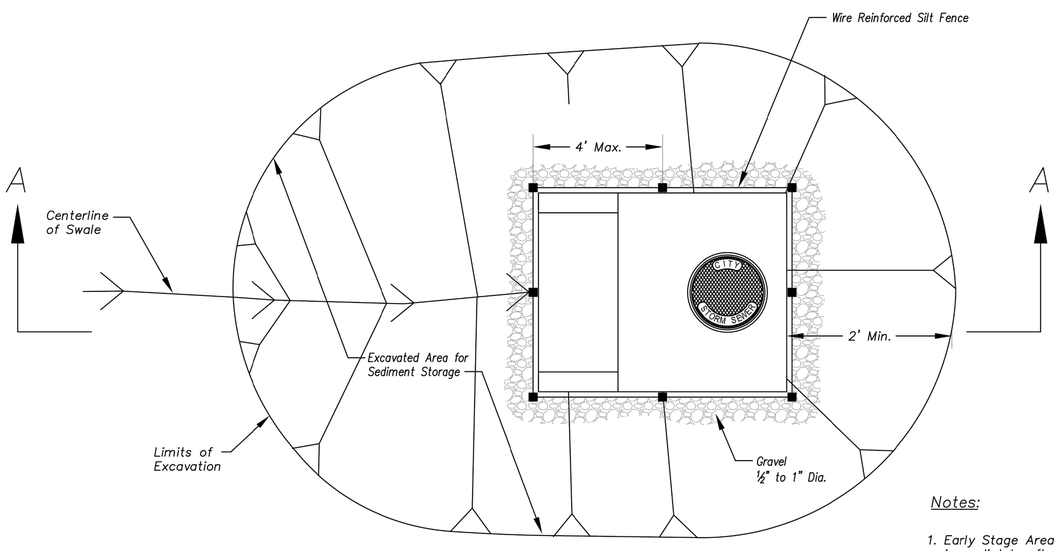
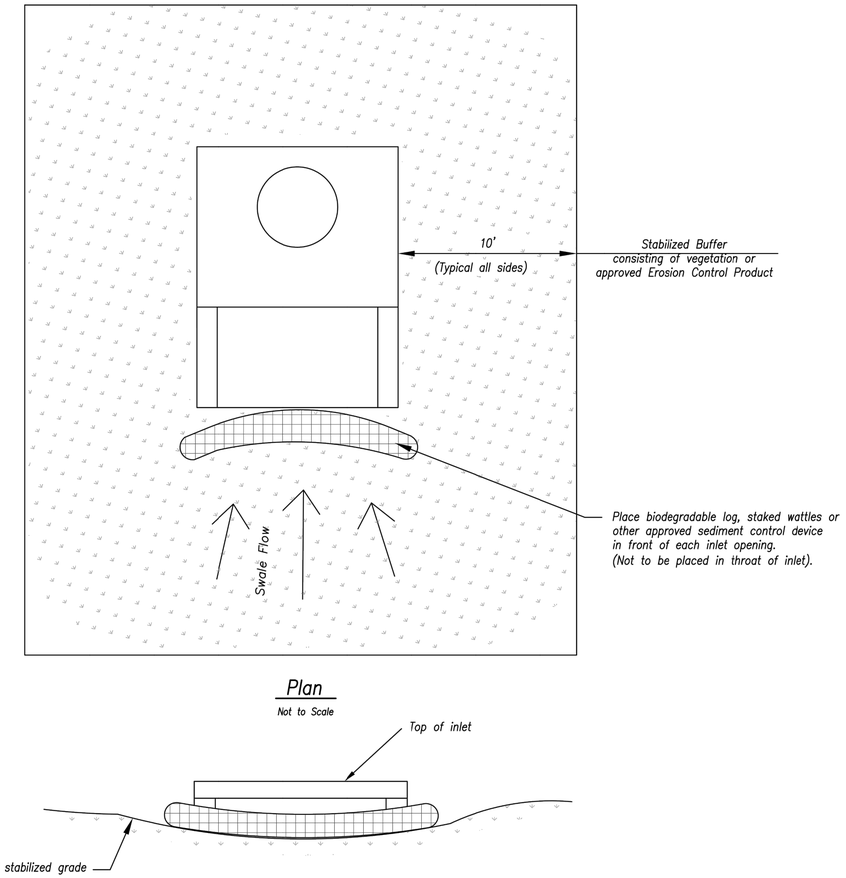


Plan
Not to Scale

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



Plan
Not to Scale

Front View

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

Notes:

1. Early Stage Area Inlet Sediment Barrier to be installed immediately after inlet or junction box is constructed.
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.
4. Wire reinforced silt fence may be used in place of silt fence attached to wood frame.

Maintenance:

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.

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

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AREA INLET AND JUNCTION BOX PROTECTION

STANDARD DRAWING NUMBER ESC-07
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SUMMIT HOMES KC
HIGHLAND MEADOWS - 5TH PLAT

AREA INLET PROTECTION DETAILS

S10, T47N, R32W
LEE'S SUMMIT, JACKSON COUNTY, MISSOURI

STATE OF MISSOURI
ZACH A. MYERS
NUMBER PE-2012009232
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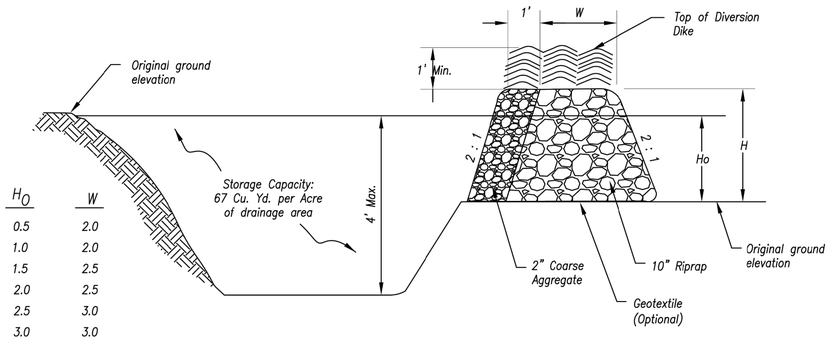

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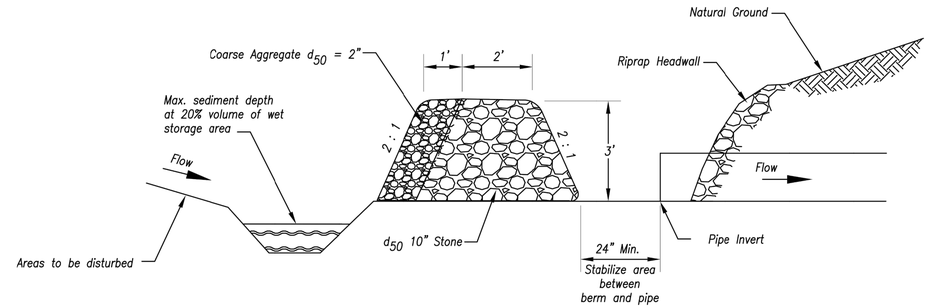
2.0	1.0	2.0
2.5	1.5	2.5
3.0	2.0	2.5
3.5	2.5	3.0
4.0	3.0	3.0
4.5	3.5	4.0
5.0	4.0	4.5

(*) Cross Section of Outlet

Not to Scale



Section A–A

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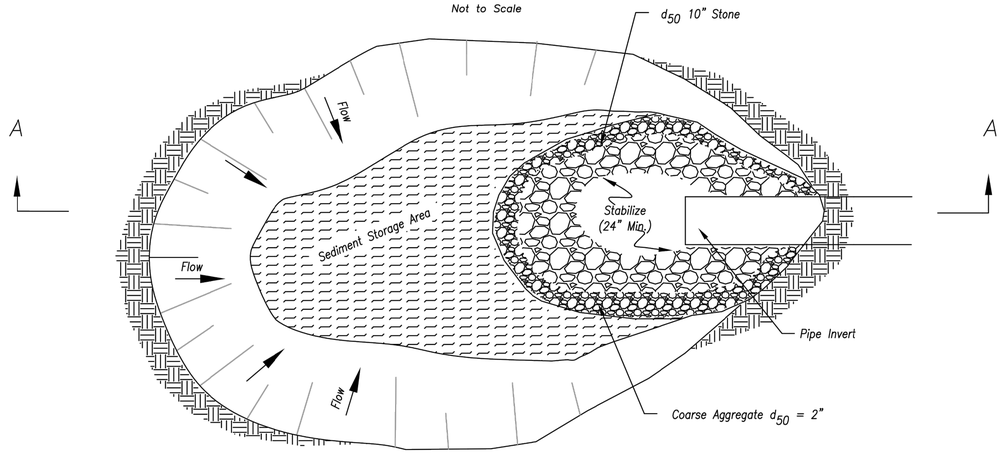
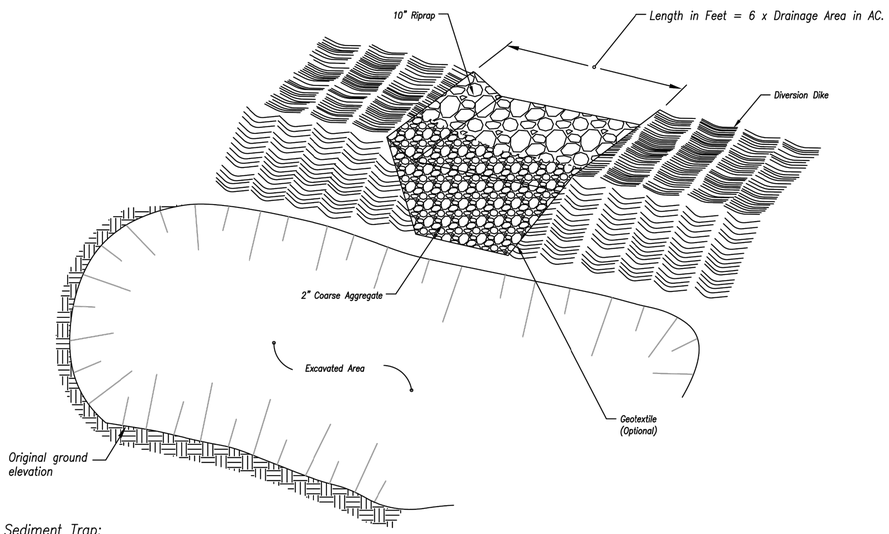


Plan View

Not to Scale



(*) Perspective View of Outlet

Not to Scale

(*) – The perspective view and cross section are schematic in nature. Construction plans must provide specific site construction arrangements.

Notes for Sediment Trap:

1. The area under the embankment shall be cleared, grubbed, and stripped of any vegetation and root mat.
2. Fill material for the embankment shall be free of roots or other woody vegetation, organic material, large stones, and other objectionable material. The embankment should be compacted in 6–inch layers by traversing with construction equipment.
3. The earthen embankment shall be stabilized immediately after installation.
4. Construction operations shall be carried out to minimize erosion and water pollution.
5. The structure shall be removed and the area stabilized when the upslope drainage area has been stabilized.
6. All cut and fill slopes shall be 2H : 1V or flatter, except for excavated, wet storage areas which may be at a maximum 1H : 1V grade.

Maintenance for Sediment Trap:

1. Check sediment traps after periods of significant runoff.
2. Remove sediment and restore the trap to its original dimensions when sediment accumulates to 20% of the storage capacity.
3. Immediately repair any erosion damage to the embankment and outlet.
4. Keep outlet and pool area free of all trash and other debris.

SEDIMENT TRAP

Notes for Sediment Trap at Culvert Opening:

1. The inlet protection device shall be constructed in a manner that will facilitate clean–out and disposal of trapped sediment and minimize interference with construction activities.
2. The inlet protection devices shall be constructed in such manner that any resultant ponding stormwater will not cause excessive inconvenience or damage to adjacent areas or structures.
3. Geometry of the design will be a horseshoe shape around the culvert inlet.
4. The toe of the riprap shall be no closer than 24" from the culvert opening to provide an acceptable emergency outlet for flows from larger storm events.
5. Storage requirements equivalent to that of temporary sediment trap.
6. 67 C.Y./Acre wet storage below base of stone.
7. 67 C.Y./Acre dry storage from base of stone to top of stone berm.

Maintenance for Sediment Trap at Culvert Opening:

1. Check sediment traps after periods of significant runoff.
2. Remove sediment and restore the trap to its original dimensions when sediment accumulates to 20% of the storage capacity.
3. Immediately repair any erosion damage to the embankment and outlet.
4. Keep outlet and pool area free of all trash and other debris.

SEDIMENT TRAP AT CULVERT OPENING

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

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KANSAS CITY METRO CHAPTER

SEDIMENT TRAPS

STANDARD DRAWING NUMBER ESC-08

ADOPTED: 10/24/2016

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HIGHLAND MEADOWS - 5TH PLAT

SEDIMENT TRAP DETAILS

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C411
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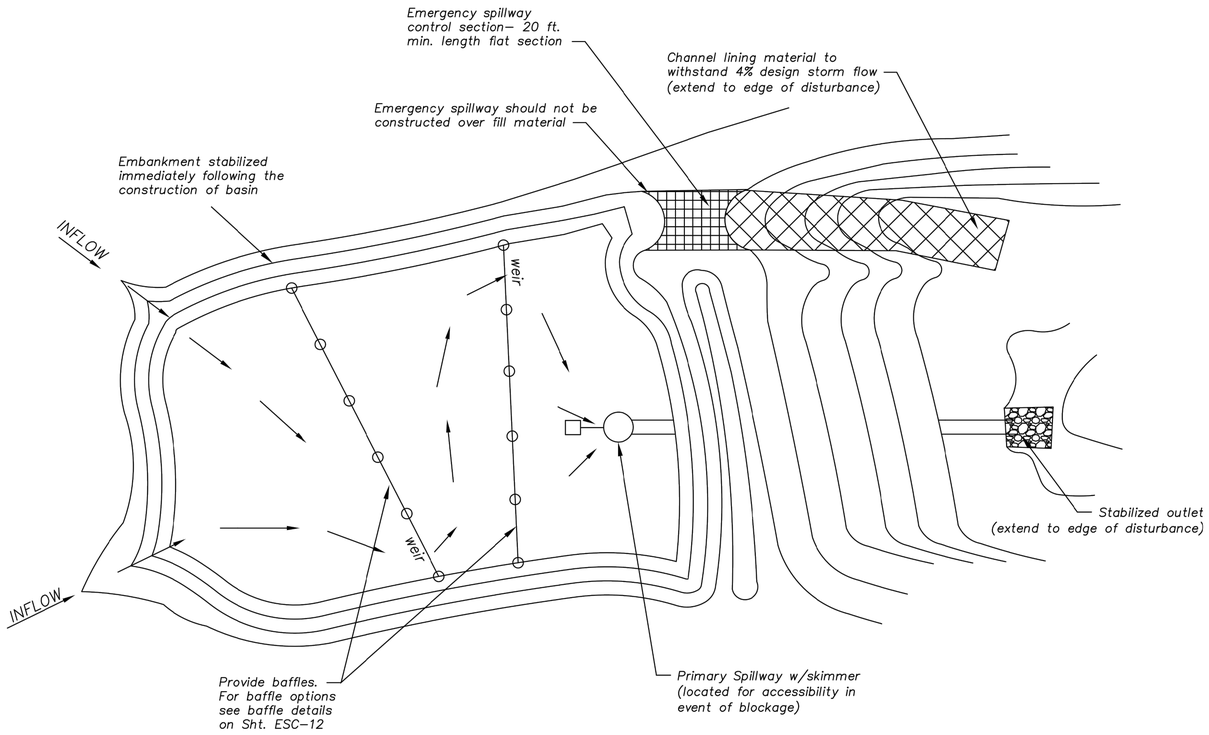
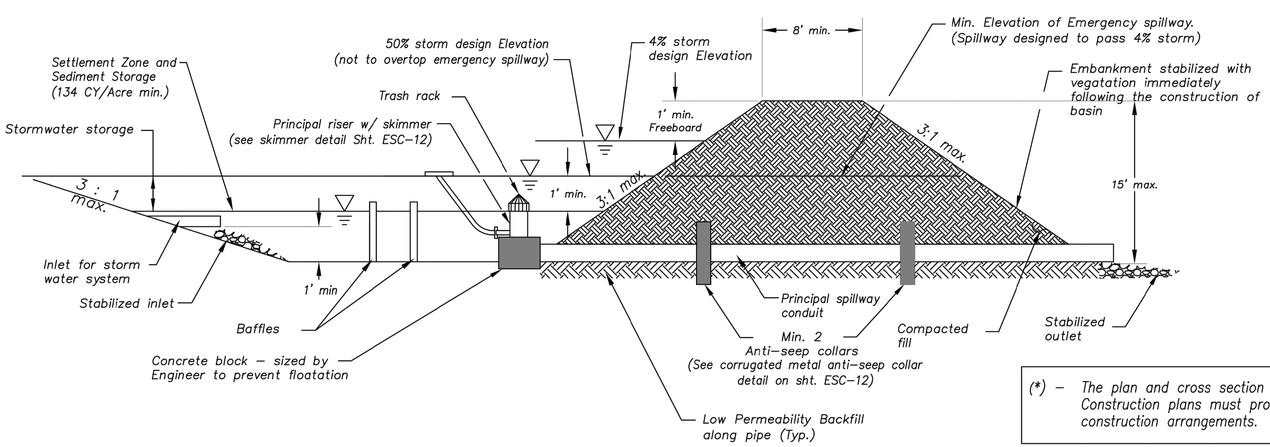


Plan View (*)

Not to Scale



Cross Section (*)

Not to Scale

(*) – The plan and cross section are schematic in nature. Construction plans must provide specific site construction arrangements.

Sediment Basin Design Summary (**)

Design Item	Basin #1	Basin #2	Units	Notes
Site Data:				
Tributary Drainage Area to Pond			Acres	
50% (2 yr) Design Flow			cfs	
4% (25 yr) Design Flow			cfs	
Pond Data:				
Minimum Sediment Storage Volume			cu yd	134 cy/acre required minimum
Provided Sediment Storage Volume			cu yd	
Bottom Elevation			Ft	
Sediment Cleanout Elevation			Ft	Elevation equal to 20% of original design volume
Top of Riser Elevation			Ft	Top of dry storage volume
Emergency Spillway Elevation			Ft	at or above Q–2 elevation. 1.0 ft min above principal spillway
Top of Dam Elevation			Ft	1.0 ft min above Q–25 elevation
Basin Shape Data:				
A = Area at Normal Pool			SF	
L = Length of Flow Path			Ft	
We = Effective Width = A/L			Ft	
Length to Width Ratio = L/We				
Principal Spillway Data:				
Riser Pipe dia			in	15" min. Size for 2 year flow minimum
Barrel Pipe dia			in	15" min. Size for 2 year flow minimum
Concrete Base size for Riser Pipe			CY	Size to prevent flotation. 1.25 safety factor required
Skimmer Size				Designer to provide specific details and calculations per application to dewater in 48 to 72 hours
Emergency Spillway Data:				
Design Depth in Spillway			ft	
Design Velocity in Spillway			ft/sec	
Lining Material				Designer to provide specific details and calculations per application
(**) – Required on all Sediment Basin Plan Sheets				

Sediment Basin Notes:

1. Interior baffles shall be provided to reduce short–circuiting of the basin. See Sht. ESC–12 for approved baffle options.
2. 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".

Maintenance:

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.

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Kansas City Metro Chapter APWA AMERICAN PUBLIC WORKS ASSOCIATION

KANSAS CITY METRO CHAPTER

SEDIMENT BASIN

STANDARD DRAWING NUMBER ESC-II

ADOPTED: 10/24/2016

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FIELD BOOK:	
JOB NUMBER:	21442-17

REVISIONS

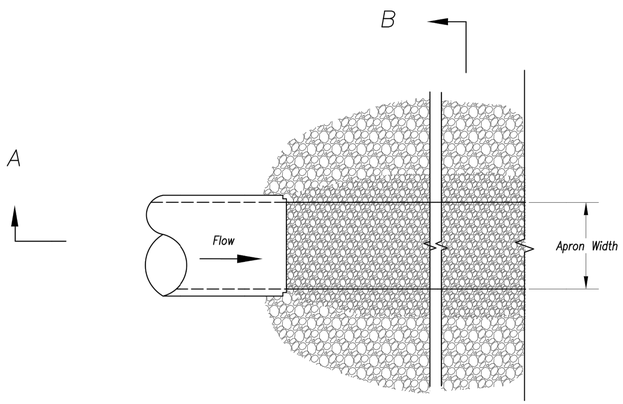
NO.	DESCRIPTION	BY	DATE

HIGHLAND MEADOWS DEVELOPERS, LLC
HIGHLAND MEADOWS SUBDIVISION

SEDIMENT BASIN DETAILS

LEE'S SUMMIT, JACKSON COUNTY, MISSOURI

STATE OF MISSOURI ZACH A. MYERS NUMBER PE-2012009232 11/11/20 PROFESSIONAL ENGINEER



Plan View
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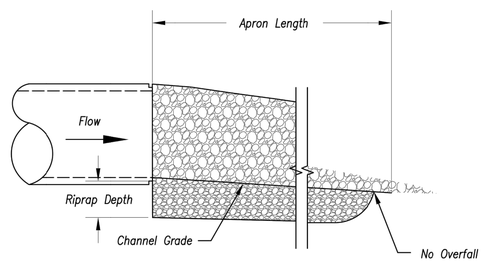

Section A–A
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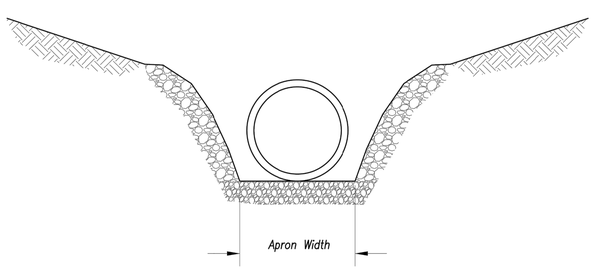

Section B–B
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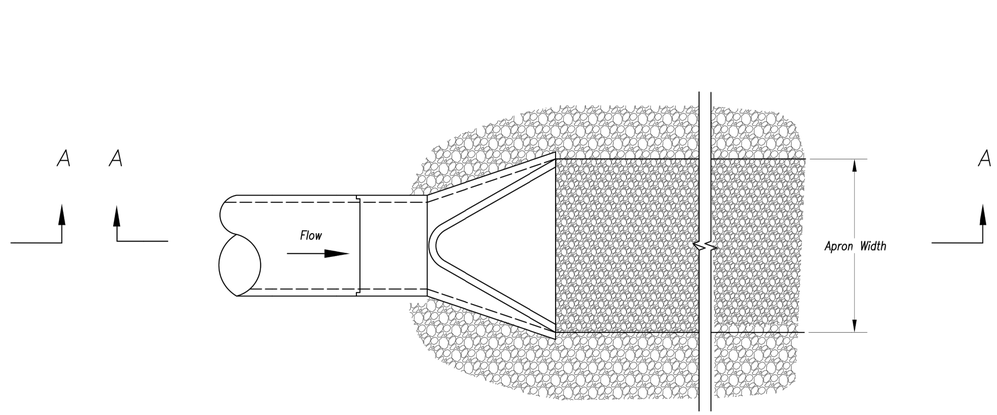
OUTLET PROTECTION W/O END SECTION



Plan View
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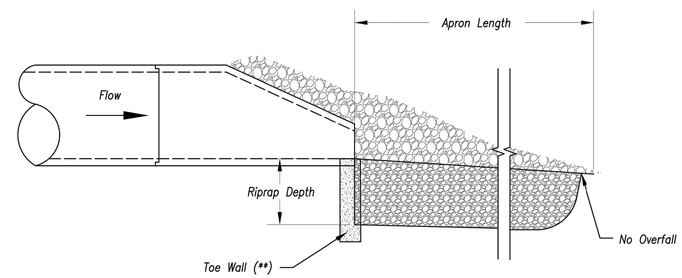

Section A–A
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OUTLET PROTECTION WITH END SECTION

Notes:

1. Rock all sides steeper than 3:1.
2. Stabilize all disturbed areas downstream of outlet to the limits of disturbance.
3. Alternative outlet protection and slope stabilization measures may be used with approval by the Engineer.
4. Install riprap apron so that it is no higher than flowline of pipe.
5. Reference APWA Specification 2650 for rock type, size, and placement.

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

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OUTLET PROTECTION

STANDARD DRAWING NUMBER ESC-14

ADOPTED: 10/24/2016

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REVISIONS

NO.	DESCRIPTION	BY	DATE

SUMMIT HOMES KC
HIGHLAND MEADOWS - 5TH PLAT

OUTLET PROTECTION DETAILS

S10, T47N, R32W
LEE'S SUMMIT, JACKSON COUNTY, MISSOURI

STATE OF MISSOURI
ZACH A. MYERS
NUMBER PE-2012009232
11/11/20
PROFESSIONAL ENGINEER

SHEET NUMBER
C413
26 OF 26

Nov 11, 2020 – 12:00pm Plotted By: gcate G:\Shared drives\KC10 – Land Development\Projects\2020\20KC10057 Highland Meadows – 5th Plat\01 CIVIL\03-DWG\Sheet\STREET AND STORM\20KC10057 – SHTS – DETAILS.dwg Layout: OUTLET PROTECTION DETAILS