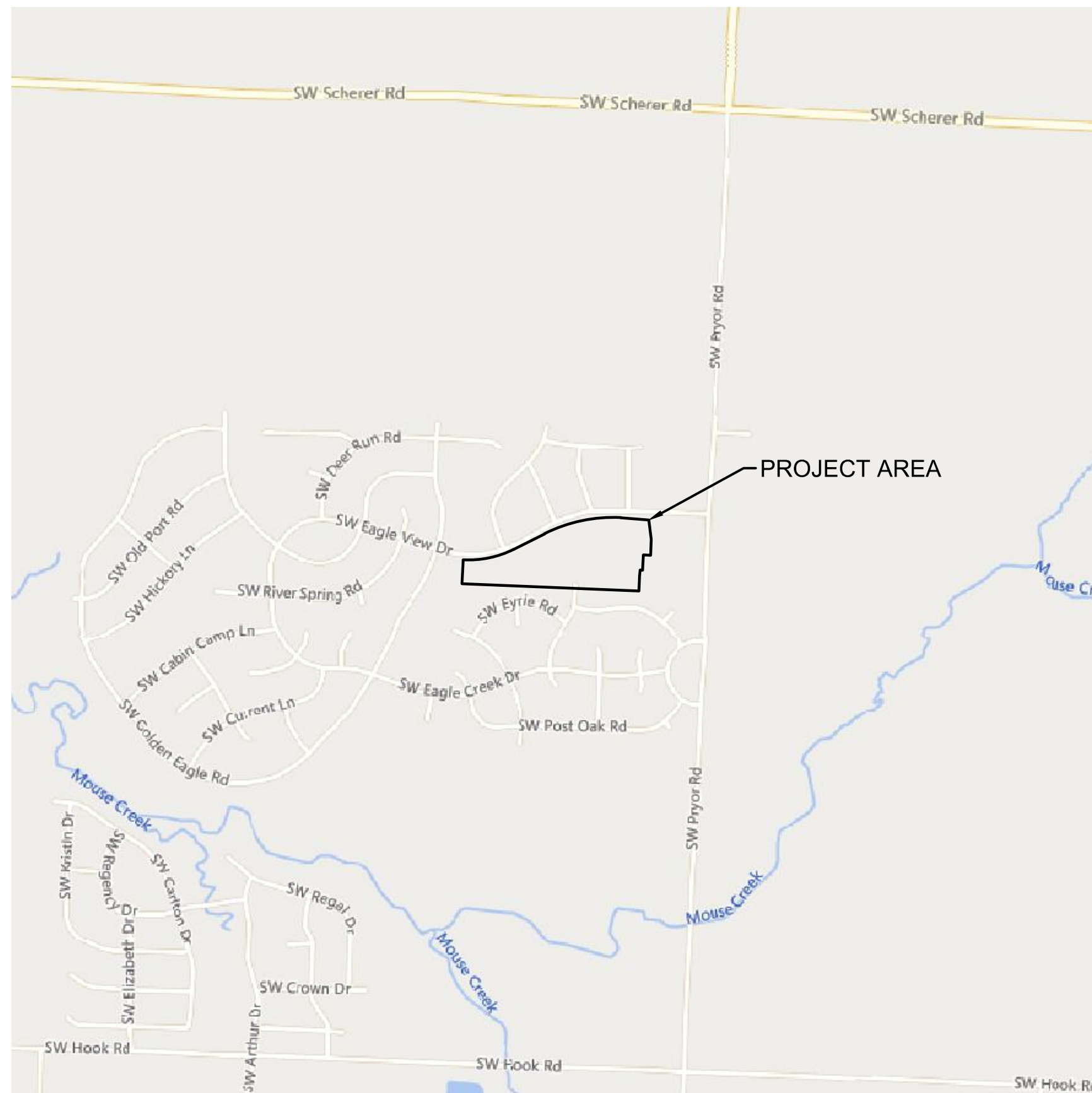


EAGLE CREEK VILLAS FIRST PLAT SANITARY SEWER PLANS

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



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TITLE SHEET
 SANITARY SEWER PLANS
 EAGLE CREEK VILLAS
 FIRST PLAT
 MISSOURI

drawn by: _____ CW
checked by: _____ SS
approved by: _____ JS
QA/QC by: _____ JS
project no.: _____ A20-2467
drawing no.: C TTL01 A202467
date: _____ 10/20/2023

SHEET
C201

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DATE: Oct 27, 2023 1:09pm
USER: cwoodward
XREFS: C_PTBK_A202467

GENERAL NOTES

1.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING THAT THE PLANS IN THEIR POSSESSION ARE THE MOST CURRENT VERSION ISSUED, ARE FULLY COORDINATED WITH ALL SUBCONTRACTORS, AND PRESENT ON SITE AT ALL TIMES. CURRENT PLANS PREPARED BY OLSSON MAY BE OBTAINED AT THE DIRECTION OF OLSSON'S CLIENT. DIRECT REQUESTS TO OLSSON MAY REQUIRE ADDITIONAL AUTHORIZATIONS, AGREEMENTS, AND/OR FEES. PLEASE CONTACT THE ENGINEER FOR INFORMATION.
2.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DEVIATIONS FROM THESE PLANS UNLESS WRITTEN APPROVAL FROM ENGINEER, OWNER, AND DEVELOPER.
3.

ALL WORK AND MATERIALS SHALL BE SUBJECT TO INSPECTION AND APPROVAL BY THE OWNER OR THE OWNER'S REPRESENTATIVE.
4.

ALL ESTIMATES OF QUANTITIES ARE FOR INFORMATIONAL PURPOSES ONLY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING QUANTITIES AND ITEMS OF WORK.
5.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ALL LABOR, MATERIALS, AND EQUIPMENT REQUIRED TO COMPLETE THE WORK SHOWN IN THE PLANS.
6.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL REQUIRED PERMITS, PAYING ALL FEES, AND FOR OTHERWISE COMPLYING WITH ALL APPLICABLE REGULATIONS GOVERNING THE WORK.
7.

THE CONTRACTOR SHALL NOT ENGAGE IN ACTIVITIES THAT MAY ENCROACH ON WATERS OF THE U.S., INCLUDING WETLANDS, UNTIL ANY NECESSARY PERMITS MAY BE OBTAINED. THE CONTRACTOR SHALL REVIEW AND COMPLY WITH ALL CONDITIONS DESCRIBED IN THE PERMIT.
8.

THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR CONDITIONS OF THE JOB SITE, THE SAFETY OF ALL PERSONS INCLUDING VISITORS AND THE GENERAL PUBLIC, AND PROPERTY DURING PERFORMANCE OF THE WORK. THIS REQUIREMENT WILL APPLY CONTINUOUSLY THROUGHOUT THE PROJECT AND NOT BE LIMITED BY WORKING HOURS. ANY CONSTRUCTION OBSERVATION BY THE ENGINEER OF THE CONTRACTOR'S PERFORMANCE IS NOT INTENDED TO INCLUDE REVIEW OF THE ADEQUACY OF THE CONTRACTOR'S SAFETY MEASURES.
9.

PRIOR TO COMMENCEMENT OF WORK THE CONTRACTOR SHALL NOTIFY AND COORDINATE WITH ALL UTILITY COMPANIES AND OBTAIN ANY RELEVANT INFORMATION. NOTIFY ENGINEER OF ANY DISCREPANCIES.
10.

THE CONTRACTOR IS RESPONSIBLE FOR THE PROTECTION OF ALL BOUNDARY CORNERS AND SECTION CORNERS. ANY BOUNDARY CORNER AND/OR SECTION CORNER DISTURBED OR DAMAGED BY CONSTRUCTION ACTIVITIES SHALL BE RESET BY A LAND SURVEYOR LICENSED IN THE STATE OF MISSOURI, AT THE CONTRACTOR'S EXPENSE.
11.

THE CONTRACTOR IS RESPONSIBLE FOR THE PROTECTION OF ADJACENT PROPERTIES AND SHALL TAKE ALL PRECAUTIONS NECESSARY TO PREVENT DAMAGE DURING CONSTRUCTION. THE CONTRACTOR IS ALSO RESPONSIBLE FOR REPAIRING ANY DAMAGE RESULTING FROM CONSTRUCTION ACTIVITIES.
12.

PRIOR TO MOVING OFF THE JOB THE CONTRACTOR SHALL NOTIFY THE OWNER AND ENGINEER TO PERFORM A FINAL WALK-THROUGH OF THE CONSTRUCTION SITE.

REFERENCES

1.

UNLESS EXPLICITLY DESCRIBED OTHERWISE WITHIN THESE PLANS THE FOLLOWING SHALL APPLY:

A.

ALL CONSTRUCTION, INCLUDING THOSE LISTED BELOW, SHALL CONFORM TO THE LATEST CODES AND ORDINANCES OF LEE'S SUMMIT, MISSOURI.

B.

ALL CONSTRUCTION IN MODOT RIGHT-OF-WAY SHALL CONFORM TO THE LATEST SPECIFICATIONS ADOPTED BY U.S. DEPARTMENT OF TRANSPORTATION AND MODOT.

C.

ALL TRAFFIC CONTROL SIGNAGE SHALL CONFORM WITH THE CURRENT EDITION OF THE MANUAL FOR UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).

D.

ALL UTILITY EXTENSIONS AND CONSTRUCTION SHALL CONFORM TO THE STANDARDS AND SPECIFICATIONS OF THE UTILITY COMPANIES.

E.

ALL EXTERIOR PAVEMENT (PCC, ASPHALT, ETC.) SHALL BE IN CONFORMANCE WITH THE SPECIFICATIONS OF LEE'S SUMMIT, MISSOURI
4.

THE CONTRACTOR IS RESPONSIBLE FOR CONTACTING THE DELIVERY MANAGER AND COORDINATING ANY MAILBOXES THAT MAY BE DISTURBED. FAILURE TO DO SO MAY SUBJECT THE CONTRACTOR TO PROSECUTION BY THE FEDERAL GOVERNMENT.

EXISTING CONDITIONS

1.

THE CONTRACTOR SHALL VISIT THE SITE AND BECOME FAMILIAR WITH THE EXISTING CONDITIONS OF THE PROJECT AREA.
2.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR PERFORMING THEIR OWN INVESTIGATIONS AND MAKING THEIR OWN ASSUMPTIONS REGARDING SITE SURFACE AND SUBSURFACE CONDITIONS. THIS INCLUDES THE LOCATION AND CONSISTENCY OF ANY EXISTING ROCK LAYERS UNDERLYING THE PROJECT SITE. CONTACT THE ENGINEER REGARDING ANY DISCREPANCIES THAT MAY AFFECT THE ABILITY TO CONSTRUCT FROM THESE PLANS AS DESIGNED.
3.

EXISTING CONDITIONS WERE DETERMINED THROUGH A VARIETY OF METHODS THAT MAY INCLUDE SURVEY, AERIAL IMAGERY, AVAILABLE RECORDS, GIS DATA, ETC. SUBSURFACE CONDITIONS ARE APPROXIMATE AND MAY NOT INCLUDE ALL UTILITIES AND OTHER SITE IMPROVEMENTS PRESENT ON SITE. THE CONTRACTOR SHALL MAKE EXPLORATION EXCAVATIONS AND LOCATE EXISTING UNDERGROUND UTILITIES SUFFICIENTLY AHEAD OF CONSTRUCTION TO PERMIT REVISIONS TO PLANS WHEN CONFLICTS AND DISCREPANCIES ARE FOUND.

CONSTRUCTION

1.

THE CONTRACTOR SHALL INSTALL TRAFFIC CONTROL WHILE WORKING IN THE PUBLIC RIGHT-OF-WAY AS SHOWN IN THESE PLANS. IF PLANS ARE NOT PROVIDED, CONTRACTOR SHALL COORDINATE AND PROVIDE CONTROLS TO THE SATISFACTION OF THE RIGHT-OF-WAY OWNER.
2.

THE CONTRACTOR SHALL PROTECT ALL TREES OVER 3" CALIPER FROM DAMAGE. NO TREE SHALL BE REMOVED WITHOUT PERMISSION OF THE OWNER, UNLESS SHOWN OTHERWISE ON THESE PLANS.
3.

THE CONTRACTOR SHALL DISPOSE ALL WASTE MATERIAL RESULTING FROM THE PROJECT OFF-SITE AND IN STRICT CONFORMANCE WITH ALL LOCAL CODES AND ORDINANCES.
4.

ALL MANHOLES, CATCH BASINS, UTILITY VALVES AND METER PITS ARE TO BE ADJUSTED OR REBUILT TO GRADE AS REQUIRED. NOT ALL ADJUSTMENTS ARE INDICATED IN THE PLANS.
5.

THE CONTRACTOR SHALL STREET SWEEP OR OTHERWISE CLEAN ALL ACCESS ROUTES TO THE SITE AT CONCLUSION OF THE PROJECT.

SHOP DRAWINGS

1.

THE CONTRACTOR SHALL SUBMIT SHOP DRAWING A MINIMUM OF 7 DAYS PRIOR TO THE REQUESTED DATE OF APPROVAL. ENGINEER SHALL REVIEW SHOP DRAWINGS OR SAMPLES CONFORMANCE WITH THE DESIGN FOR THIS PROJECT AS DESCRIBED IN THE PLANS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ERRORS OR OMISSIONS IN SHOP DRAWINGS. THE ENGINEER'S REVIEW SHALL NOT EXTEND TO MEANS OR METHODS OF CONSTRUCTION. CONTRACTOR SHALL BE RESPONSIBLE FOR ANY VARIATION FROM THE REQUIREMENTS OF THE CONTRACT DOCUMENTS UNLESS CONTRACTOR HAS NOTIFIED ENGINEER OF EACH SUCH VARIATION AT THE TIME OF SUBMISSION, AND OBTAINED ENGINEER'S WRITTEN APPROVAL OF EACH SUCH VARIATION. PRIOR TO SUBMITTING EACH SHOP DRAWING OR SAMPLE, CONTRACTOR SHALL HAVE REVIEWED AND VERIFIED:

A.

ALL FIELD MEASUREMENTS, QUANTITIES, DIMENSIONS, SPECIFIED PERFORMANCE CRITERIA, INSTALLATION REQUIREMENTS, MATERIALS, CATALOG NUMBERS AND SIMILAR INFORMATION WITH RESPECT THERETO;

B.

ALL MATERIALS WITH RESPECT TO INTENDED USE, FABRICATION, SHIPPING, HANDLING, STORAGE, ASSEMBLY AND INSTALLATION PERTAINING TO THE PERFORMANCE OF THE WORK;

C.

ALL INFORMATION RELATIVE TO MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES OF CONSTRUCTION AND SAFETY PRECAUTIONS AND PROGRAMS INCIDENT THERETO;

D.

CONTRACTOR SHALL ALSO HAVE REVIEWED AND COORDINATED EACH SHOP DRAWING OR SAMPLE WITH OTHER SHOP DRAWINGS AND SAMPLES, AND WITH THE REQUIREMENTS OF THE WORK AND THE CONTRACT DOCUMENTS.

E.

ALL SUBMITTED SHOP DRAWINGS SHALL BEAR A STAMP OR SPECIFIC WRITTEN INDICATION AND SIGNATURE THAT CONTRACTOR HAS FULLY COMPLETED THE ABOVE TASKS.
2.

SHOP DRAWINGS AS DESCRIBED ABOVE ARE REQUIRED FOR, BUT NOT LIMITED TO, THE FOLLOWING:

A.

ALL SANITARY SEWER STRUCTURES TO BE INSTALLED WITH THIS PROJECT.

B.

ANY ITEMS IN THESE PLANS THAT ALLOW FOR AN 'APPROVED EQUAL' ALTERNATIVE.

SANITARY SEWER GENERAL NOTES

1.

PRIOR TO COMMENCEMENT OF WORK THE CONTRACTOR SHALL NOTIFY AND COORDINATE CONSTRUCTION WITH CITY OF LEE'S SUMMIT, MISSOURI.
2.

ALL PIPE LENGTHS ARE CALCULATED LINEARLY FROM CENTER OF STRUCTURE TO CENTER OF STRUCTURE.
3.

ALL STRUCTURE DIMENSIONS ARE TO INSIDE FACE OF STRUCTURE.
4.

COORDINATES ARE PROVIDED AT THE CENTER OF STRUCTURE. ADDITIONAL COORDINATES PROVIDED ARE PER LOCAL CODES AND ORDINANCES OR AS AN AID WHEN ORIENTING THE LID DURING INSTALLATION.
5.

THE CONTRACTOR SHALL EXPOSE EXISTING UTILITIES AT LOCATIONS OF POSSIBLE CONFLICT AND POINTS OF CONNECTION PRIOR TO ANY CONSTRUCTION OF SANITARY SEWER.
6.

SANITARY SEWER TRENCHES SHALL BE CONSTRUCTED SUCH THAT UNDISTURBED EXISTING SOIL OR FILL COMPACTED TO 95% PROCTOR DENSITY IS AT A DEPTH THAT IS 18" ABOVE TOP OF PROPOSED PIPE.
7.

MANHOLE INVERT CHANNELS SHALL BE SMOOTH, CIRCULAR, AND CONFORMING TO ½ THE ADJACENT PIPE SECTION (INVERT TO CENTER). CHANGES IN DIRECTION OF FLOW SHALL BE MADE WITH A SMOOTH CURVE AND MAINTAIN SHAPE THROUGHOUT. CHANGES IN GRADE OF ADJACENT PIPES SHALL BE TRANSITIONED SMOOTHLY AND EVENLY THROUGH THE MANHOLE.
8.

PIPE PENETRATIONS SHALL BE USE GASKETS TO ENSURE WATERTIGHT SEALS.
9.

TRACING TAPE SHALL BE INSTALLED ALONG ALL NON-METALLIC SURFACES OR AS DIRECTED BY LOCAL CODES AND ORDINANCES.
10.

SEWER LINE INSPECTIONS AND TESTING MUST BE SCHEDULED A MINIMUM OF TWO FULL BUSINESS DAYS IN ADVANCE. CONTRACTOR SHALL FURNISH ALL TESTING EQUIPMENT. TESTING SHALL INCLUDE

A.

MANDREL TEST OF ALL GRAVITY SEWERS. IF THE MANDREL TEST FAILS ON ANY SECTION OF PIPE, THAT SECTION SHALL BE UNCOVERED AND REPLACED.

B.

AIR PRESSURE TEST OF ALL GRAVITY SEWERS.

C.

VACUUM TEST OF ALL MANHOLES.
11.

REFER TO SHEET C206 FOR SANITARY DESIGN & SEWER LATERAL INFORMATION.
12.

ALL SERVICE LINE CONNECTIONS SHALL BE MADE WITH AN 8"x4" PVC WYE, 4"PVC 45° BEND, AND THE APPROPRIATE LENGTH OF 4" PVC LATERAL (UNLESS OTHERWISE SHOWN) AND CAP. SEE DETAIL SHEET C207.
13.

MSFE-- INDICATES LOWEST FLOOR SERVICEABLE BY PROPOSED SANITARY SEWER.
14.

MAXIMUM DEVIATION FROM LATERAL STATION LOCATIONS AS CALLED OUT SHALL BE 2.0' TO AVOID PIPE JOINT.
15.

SANITARY LATERALS ARE DESIGNED @ 2.00% SLOPE. IF RISER IS INDICATED, IT IS TO BE AT THE SANITARY MAIN, UNLESS OTHERWISE NOTED.
16.

REFER TO CURRENT CITY SPECIFICATIONS FOR MINIMUM PIPE SLOPES.
17.

CONTRACTOR MAY BE REQUIRED TO RECONSTRUCT PIPE AND STRUCTURE IF MINIMUM INVERT DROP OR PIPE SLOPE REQUIREMENTS ARE NOT MET.
18.

SANITARY STRUCTURES SHALL BE PER CURRENT CITY DETAILS. IF CITY DOES NOT HAVE PUBLISHED DETAILS STRUCTURES SHALL BE PER CURRENT APWA SPECIFICATIONS.
19.

GRAVITY SANITARY SEWER AND WATER LINES SHALL BE SEPARATED BY A MINIMUM OF 10' HORIZONTALLY WHEN PARALLEL AND 2' VERTICALLY WHEN CROSSING. WATER LINES SHALL CROSS ABOVE SANITARY SEWERS.

ESTIMATE OF QUANTITIES				
ITEM NO.	DESCRIPTION	UNIT	QUANTITY	AS-BUILT
STREET				
	8" SANITARY PVC (SDR-26)	L.F.	2365.21	
	MANHOLES, STD. 4' DIA.	EA.	12	
	CONNECTION TO EXISTING STRUCTURE	EA.	1	
	TRACER WIRE	L.F.	2365.21	
	SERVICE WYE	EA.	58	
	4" LATERAL PIPE	L.F.	2316.42	

SUMMARY OF QUANTITIES AS INDICATED ABOVE AND ANY QUANTITIES AS SHOWN WITHIN THE PLANS HAVE BEEN PROVIDED FOR PERMITTING PURPOSES ONLY AND ARE NOT INTENDED FOR USE IN PREPARATION OF CONTRACT DOCUMENTS. QUANTITIES INTENDED FOR, BUT NOT LIMITED TO, THE PREPARATION OF PROPOSALS AND BID DOCUMENTS SHALL BE INDEPENDENTLY EVALUATED BY THE ESTIMATING PARTY BASED UPON THE CONTENTS OF THESE PLANS.

PLAN LEGEND

_____	R/W	_____	PROPERTY BOUNDARY; R/W LINE
_____		_____	PROPERTY LOT LINE
_____	SS	_____	EXISTING SANITARY LINE
_____	SD	_____	EXISTING STORM LINE
_____	W	_____	EXISTING WATER LINE
_____	SS	_____	PROPOSED SANITARY LINE
-----		-----	PROPOSED SANITARY SERVICE STUB
_____	SD	_____	PROPOSED STORM LINE
_____	W	_____	PROPOSED WATER LINE
	⬮		SURVEY CONTROL POINT
	⬮		SURVEY BENCHMARK
	⬮		ELECTRIC BOX
	⬮		ELECTRICAL POLE
	⬮		SIGN
	⬮		STORM MANHOLE
	⬮		STORM INTAKE
	⬮		SANITARY MANHOLE
	⬮		GAS METER
	⬮		GAS MANHOLE
	⬮		FIBER BOX

EASEMENT ABBREVIATIONS LIST

A.E.	ACCESS EASEMENT
T.E.	TEMPORARY EASEMENT
U.E.	UTILITY EASEMENT

SANITARY SEWER SERVICE STUBS SHOWN ON THIS SHEET TO SERVE FUTURE BUILDINGS THAT ARE NOT PROPOSED WITH THESE PLANS.

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STATE OF MISSOURI
STEPHEN M. SAYLOR
LICENSED PROFESSIONAL ENGINEER
NUMBER
PE-2018021249
10/27/2023

BY

REVISIONS DESCRIPTION

DATE

REV. NO.

2023

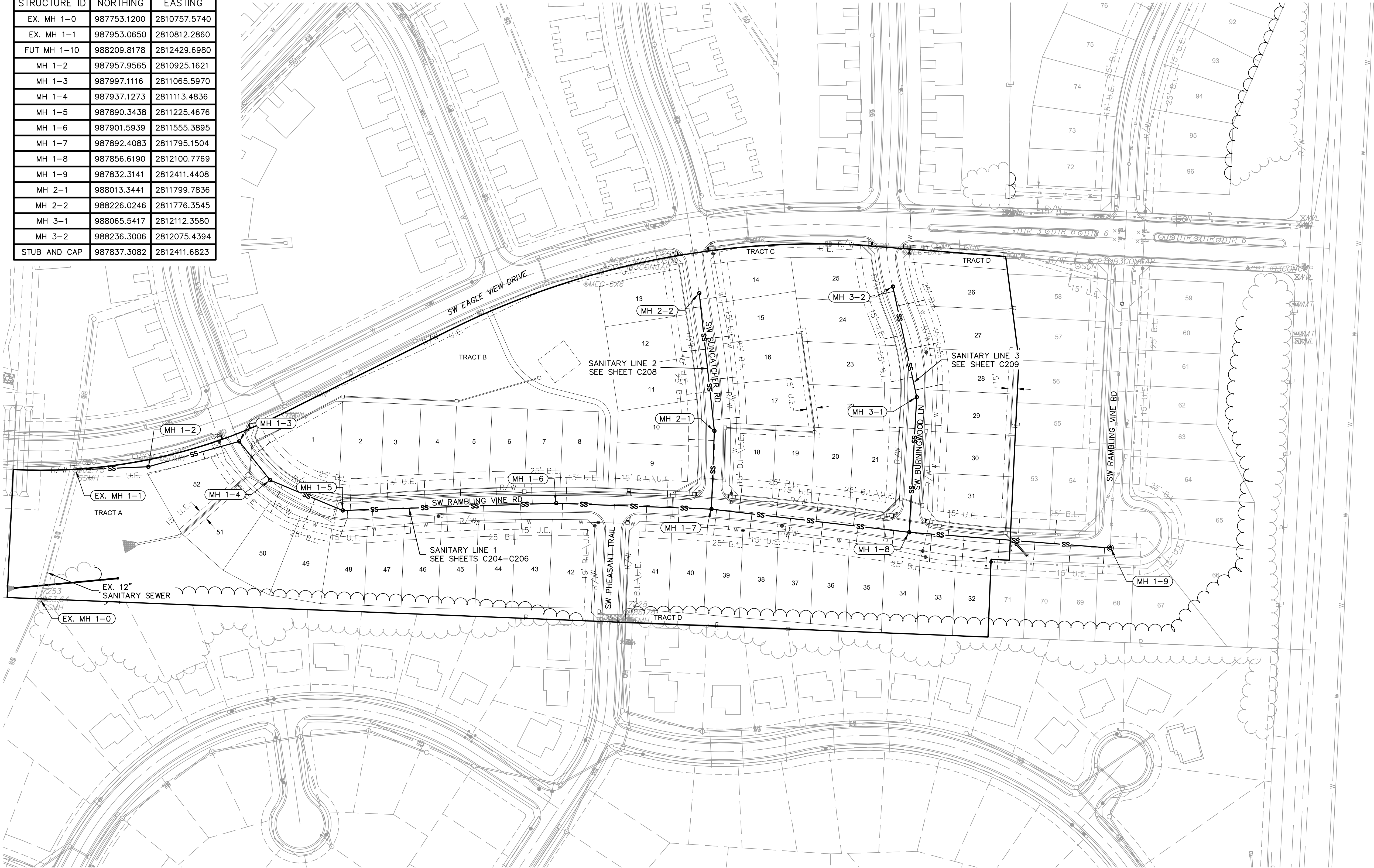
GENERAL NOTES
SANITARY SEWER PLANS
EAGLE CREEK VILLAS
FIRST PLAT
LEE'S SUMMIT, MISSOURI

drawn by: _____ CW
checked by: _____ SS
approved by: _____ JS
QA/QC by: _____ JS
project no.: A20-2467
drawing no.: C TTL01 A202467
date: 10/20/2023

SHEET
C202

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USER: swoodward

Structure Table		
STRUCTURE ID	NORTHING	EASTING
EX. MH 1-0	987753.1200	2810757.5740
EX. MH 1-1	987953.0650	2810812.2860
FUT MH 1-10	988209.8178	2812429.6980
MH 1-2	987957.9565	2810925.1621
MH 1-3	987997.1116	2811065.5970
MH 1-4	987937.1273	2811113.4836
MH 1-5	987890.3438	2811225.4676
MH 1-6	987901.5939	2811555.3895
MH 1-7	987892.4083	2811795.1504
MH 1-8	987856.6190	2812100.7769
MH 1-9	987832.3141	2812411.4408
MH 2-1	988013.3441	2811799.7836
MH 2-2	988226.0246	2811776.3545
MH 3-1	988065.5417	2812112.3580
MH 3-2	988236.3006	2812075.4394
STUB AND CAP	987837.3082	2812411.6823



GENERAL LAYOUT
SANITARY SEWER PLANS

EAGLE CREEK VILLAS
FIRST PLAT

LEE'S SUMMIT, MISSOURI

2023

REVISIONS

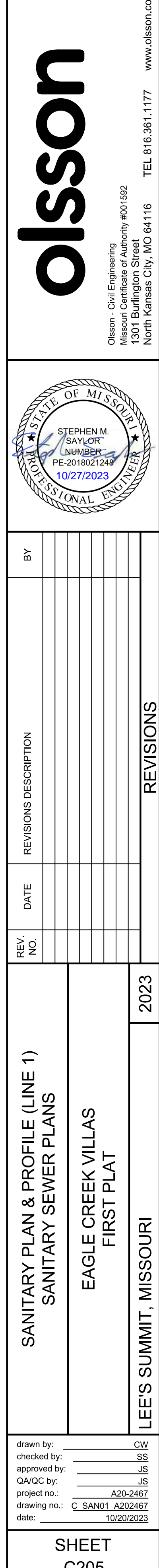
drawn by: _____
checked by: _____
approved by: _____
QA/QC by: _____
project no.: A20-2467
drawing no.: C_GEN01_A202467
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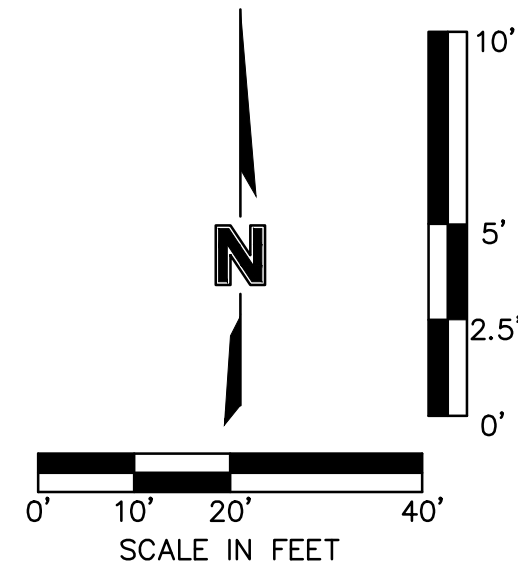
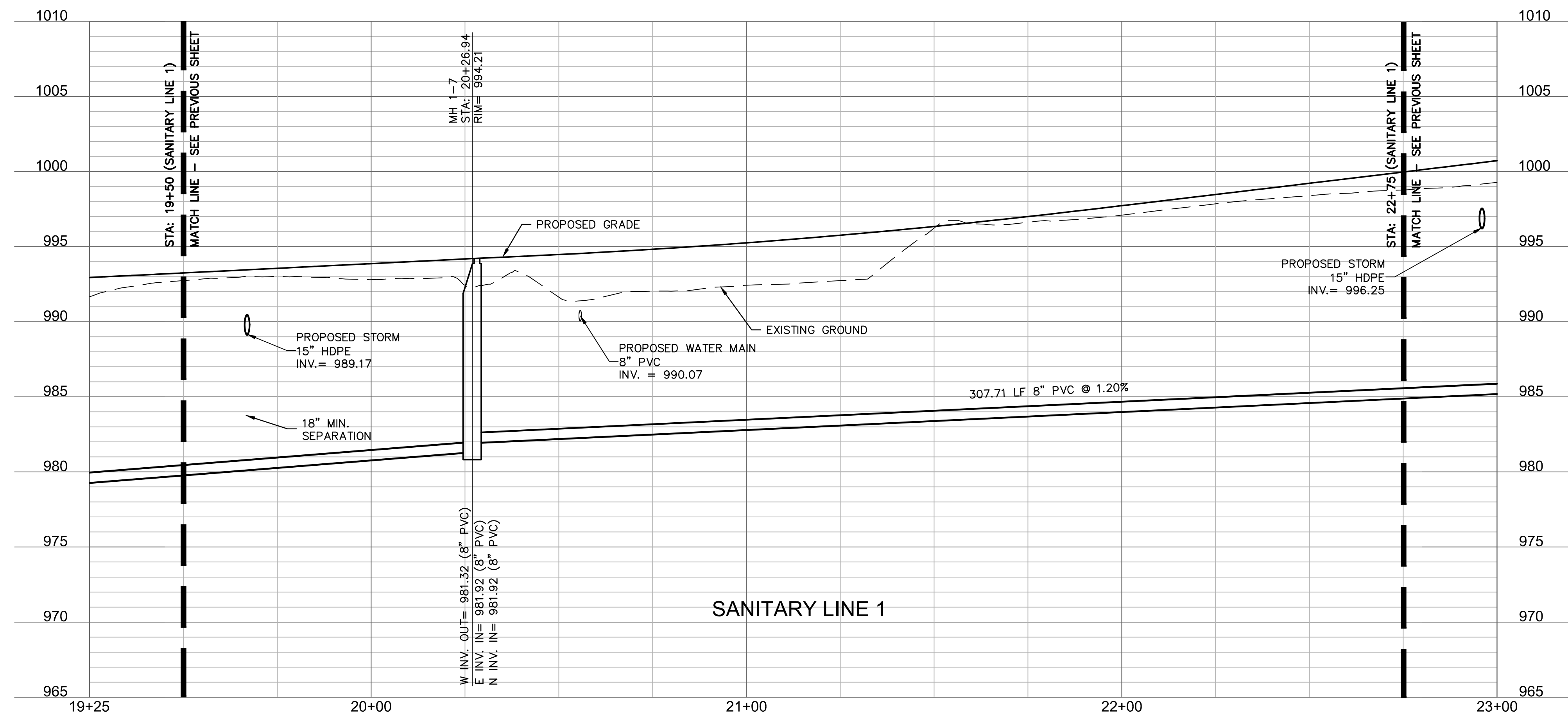
SHEET
C203

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STATE OF MISSOURI
STEPHEN M. SAYLOR
NUMBER
PE-2018021249
10/27/2023
PROFESSIONAL ENGINEER



DWC
DAT

<div>drawn by: _____ CWW</div> <div>checked by: _____ SS</div> <div>approved by: _____ JS</div> <div>QA/QC by: _____ JS</div> <div>project no.: _____ A20-2467</div> <div>drawing no.: _____ C_SAND1 A202467</div> <div>date: _____ 10/20/2023</div>	SANITARY PLAN & PROFILE (LINE 1)		<div>REV. NO.</div> <div>DATE</div> <div>REVISIONS DESCRIPTION</div> <div>BY</div>
	SANITARY SEWER PLANS		
	EAGLE CREEK VILLAS		
	FIRST PLAT		
	LEE'S SUMMIT, MISSOURI		
	2023		
	REVISIONS		
SHEET			
C206			

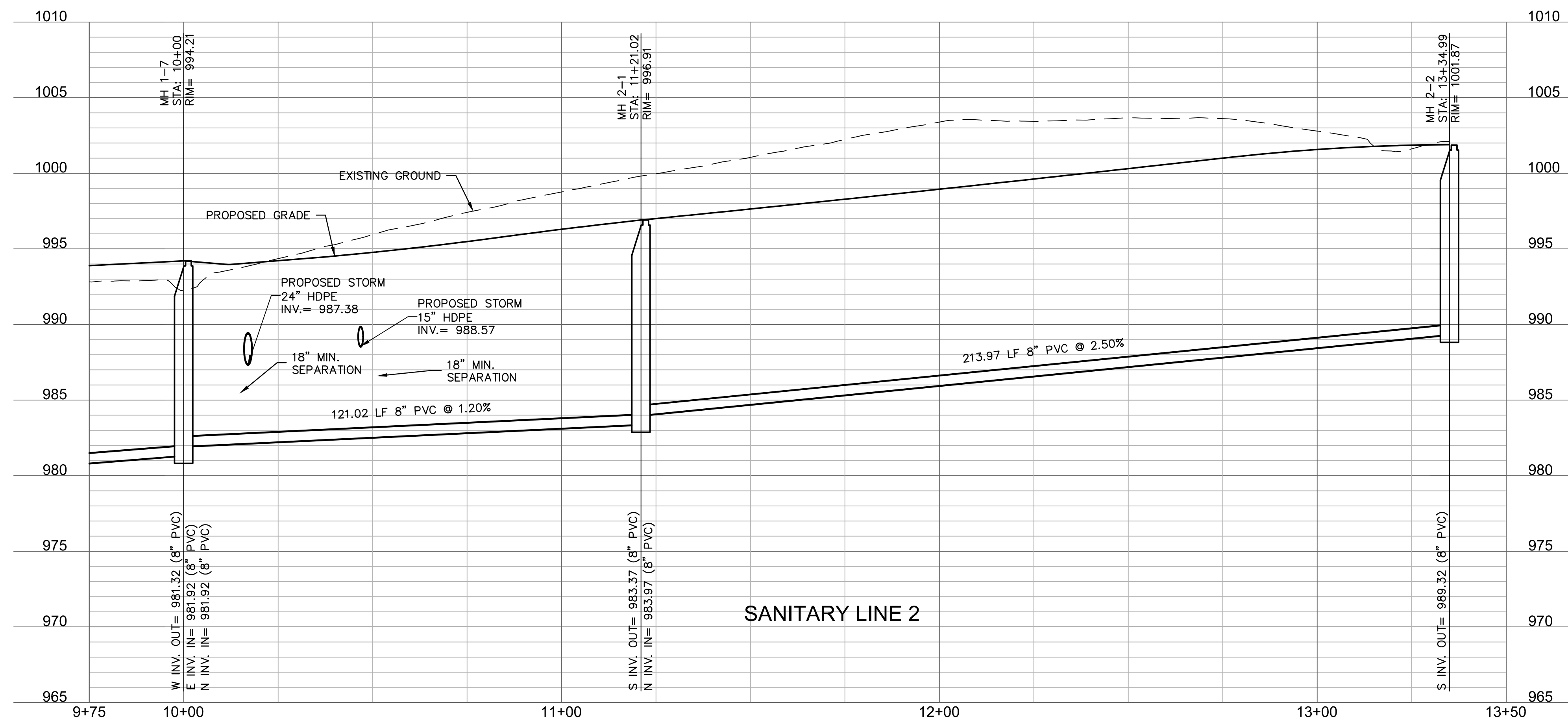
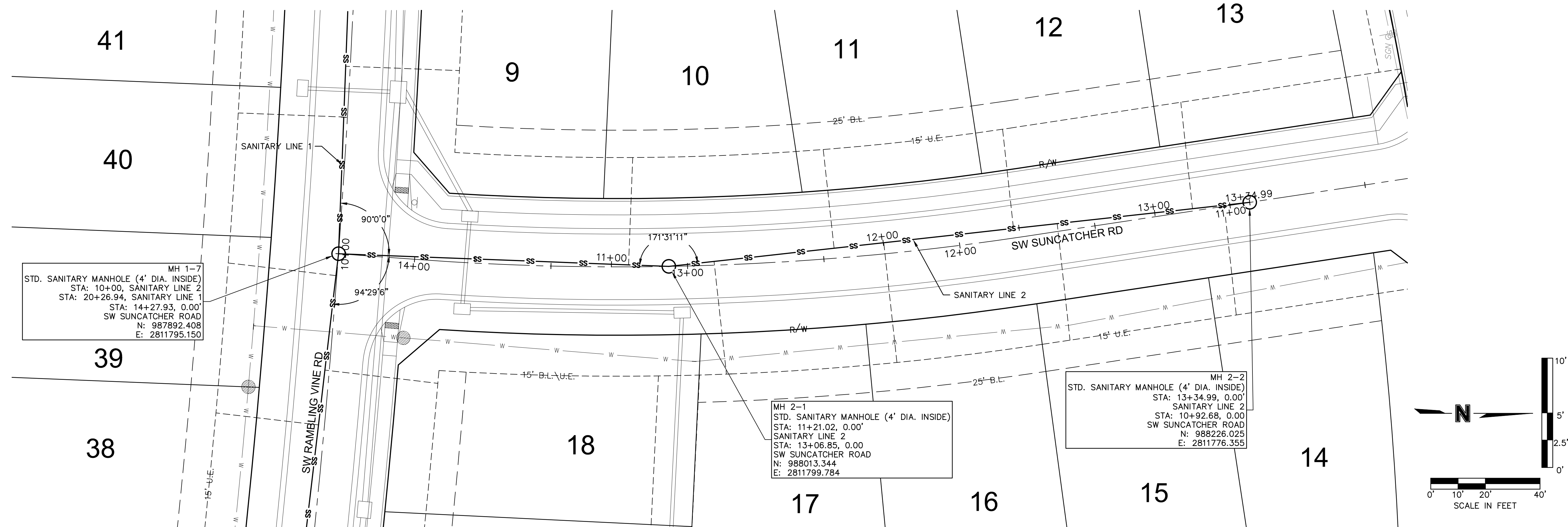


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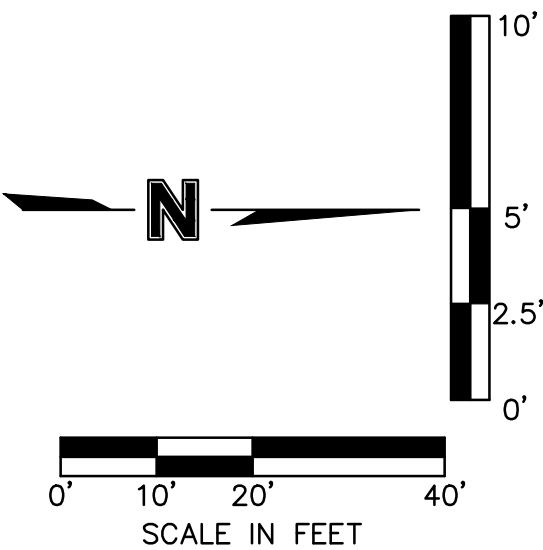
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USER: cwoodward

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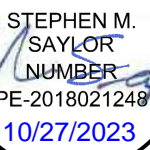


SANITARY PLAN & PROFILE (LINE 2) SANITARY SEWER PLANS	REV. NO.	DATE	REVISIONS DESCRIPTION	BY
EAGLE CREEK VILLAS FIRST PLAT				
drawn by: _____ CW checked by: _____ SS approved by: _____ JS QA/QC by: _____ JS project no.: A20-2467 drawing no.: C. SAN02 A202467 date: 10/20/2023	2023 REVISIONS			

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Oct 27, 2023



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REVISIONS

LEE'S SUMMIT, MISSOURI

SHEET
C209

Sanitary Sewer Laterals						
Lot Number	Lateral Station	Lateral Length	Riser	Flowline at Main	Flowline at End of Lateral	Minimum Servicable Floor Elevation
		(ft)	(ft)	(ft)	(ft)	(ft)
1	12+89.67	37.00	2.0	959.4	963.1	965.76
2	14+69.39	39.00	0.0	966.5	968.2	970.93
3	15+27.27	41.00	1.0	968.2	971.0	973.68
4	15+84.57	42.00	1.0	969.9	972.7	975.40
5	16+39.78	43.00	1.0	971.5	974.4	977.07
6	16+94.93	43.00	2.0	973.2	977.0	979.69
7	17+50.01	42.00	2.0	974.8	978.6	981.31
8	18+02.13	41.00	2.0	976.8	980.6	983.30
9	19+58.28	42.00	0.0	979.9	981.8	984.48
10	11+06.28	40.00	1.0	983.2	986.0	988.67
11	11+81.90	37.00	1.0	985.5	988.2	990.91
12	12+47.97	37.00	1.0	987.1	989.9	992.56
13	13+13.92	40.00	0.0	988.8	990.6	993.29
14	13+25.59	41.00	0.0	989.1	990.9	993.60
15	12+64.08	43.00	1.0	987.5	990.4	993.08
16	12+00.20	44.00	1.0	985.9	988.8	991.51
17	11+37.68	42.00	1.0	984.4	987.2	989.90
18	20+69.80	42.00	0.0	982.4	984.3	986.97
19	21+27.71	43.00	0.0	983.1	985.0	987.69
20	21+89.81	44.00	1.0	983.9	986.7	989.43
21	22+47.98	43.00	2.0	984.6	988.4	991.09
22	11+60.74	40.00	3.0	988.1	992.9	995.58
23	12+40.83	34.00	2.0	989.7	993.3	996.04
24	13+07.77	31.00	2.0	990.5	994.1	996.78
25	13+76.48	40.00	1.0	991.3	994.1	996.81
26	13+53.27	44.00	1.0	991.0	993.9	996.61
27	12+84.60	50.00	2.0	990.2	994.2	996.88
28	12+20.38	44.00	2.0	989.5	993.3	995.99
29	11+67.57	41.00	2.0	988.2	992.0	994.70
30	11+03.57	41.00	3.0	987.5	992.2	994.91
31	23+95.07	38.00	4.0	987.4	993.1	995.76
32	24+19.62	46.00	4.0	987.9	993.7	996.45
33	23+69.38	44.00	3.0	986.9	991.7	994.42
34	23+10.69	39.00	3.0	985.3	990.0	992.74
35	22+55.42	28.00	3.0	984.7	989.2	991.86
36	22+00.22	37.00	1.0	984.0	986.7	989.42
37	21+50.08	37.00	0.0	983.4	985.1	987.83
38	20+90.00	38.00	0.0	982.7	984.4	987.13
39	20+34.99	40.00	0.0	982.0	983.8	986.51
40	19+76.87	39.00	1.0	980.3	983.1	985.77
41	19+26.87	38.00	1.0	979.3	982.1	984.75
42	17+96.86	40.00	2.0	976.7	980.5	983.17
43	17+31.94	38.00	2.0	974.3	978.0	980.70
44	16+74.83	38.00	2.0	972.6	976.3	978.99
45	16+17.65	38.00	1.0	970.9	973.6	976.31
46	15+60.39	39.00	1.0	969.2	971.9	974.62
47	15+03.07	41.00	0.0	967.5	969.3	971.98
48	14+64.39	42.00	0.0	966.3	968.1	970.84
49	14+10.42	49.00	0.0	964.1	966.1	968.77
50	13+55.79	46.00	0.0	962.4	964.4	967.07
51	13+26.55	42.00	0.0	960.9	962.7	965.41
52	12+00.33	12.00	4.0	955.1	960.3	962.96
FUT 53	25+03.26	35.00	5.0	989.6	996.2	998.88
FUT 54	25+60.14	37.00	7.0	990.7	999.3	1002.02
FUT 55	28+07.63	40.00	10.0	996.3	1007.9	1010.57
FUT 56	29+19.63	40.00	7.0	998.5	1007.2	1009.87
FUT 57	29+85.63	40.00	4.0	999.8	1005.5	1008.25
FUT 58	30+11.71	55.00	1.0	1000.3	1003.4	1006.13
FUT 59	30+16.71	54.00	1.0	1000.4	1003.5	1006.21
FUT 60	29+99.21	40.00	3.0	1000.1	1004.8	1007.54
FUT 61	29+49.21	40.00	6.0	999.1	1006.8	1009.48
FUT 62	28+89.21	40.00	8.0	997.9	1007.5	1010.24
FUT 63	27+99.21	40.00	10.0	996.1	1007.7	1010.40
FUT 64	27+46.59	40.00	9.0	995.0	1005.7	1008.37
FUT 65	27+05.43	95.00	7.0	994.2	1004.0	1006.68
FUT 66	26+64.70	104.00	7.0	993.4	1003.3	1006.05
FUT 67	26+54.26	95.00	8.0	992.6	1003.3	1006.04
FUT 68	26+37.59	41.00	8.0	992.3	1001.9	1004.63
FUT 69	25+84.62	43.00	6.0	991.2	998.9	1001.65
FUT 70	25+29.66	45.00	5.0	990.1	996.9	999.61
FUT 71	24+74.69	47.00	4.0	989.0	994.9	997.57

*Basement sewer service may not be available. A pump associated piping located on the interior of the building may need to be provided to lift

Sanitary Sewer Design Information											
Upstream Manhole	Downstream Pipe Slope	Downstream Pipe Diameter	Proposed Cumulative Area	Future Cumulative Area	Peak Base Flow	Peak Infiltration Flow	Peak Inflow	Total Peak Flow	Downstream Pipe Mannings N	Downstream Pipe Capacity	Downstream Pipe Full Flow Velocity
	(%)	(in)	(Ac.)	(Ac.)	(gpd)	(gpd)	(cfs)	(cfs)		(cfs)	(fps)
EX MH 1-1	2.09%	8	8.62	4.70	19980.00	6660.000	0.372	0.413	0.014	1.75	5.00
MH 1-2	1.94%	8	8.62	4.70	19980.00	6660.000	0.372	0.413	0.014	1.68	4.82
MH 1-3	4.10%	8	8.37	4.70	19605.00	6535.000	0.366	0.406	0.014	2.45	7.01
MH 1-4	4.10%	8	7.78	4.70	18720.00	6240.000	0.351	0.390	0.014	2.45	7.01
MH 1-5	3.00%	8	7.34	4.70	18060.00	6020.000	0.340	0.377	0.014	2.09	6.00
MH 1-6	2.98%	8	7.34	4.70	18060.00	6020.000	0.340	0.377	0.014	2.09	5.98
MH 1-7	2.00%	8	5.88	4.70	15870.00	5290.000	0.303	0.336	0.014	1.71	4.90
MH 1-8	1.20%	8	2.08	4.70	10170.00	3390.000	0.202	0.223	0.014	1.32	3.79
MH 1-9	2.00%	8	0.00	3.29	4935.00	1645.000	0.104	0.114	0.014	1.71	4.90
FT MH 1-10	2.00%	8	0.00	0.00	0.00	0.000	0.000	0.000	0.014	1.71	4.90
MH 2-1	1.20%	8	1.57	0.00	2355.00	785.000	0.052	0.057	0.014	1.32	3.79
MH 2-2	2.50%	8	0.00	0.00	0.00	0.000	0.000	0.000	0.014	1.91	5.47
MH 3-1	1.20%	8	1.49	0.00	2235.00	745.000	0.049	0.054	0.014	1.32	3.79
MH 3-2	1.20%	8	0.00	0.00	0.00	0.000	0.000	0.000	0.014	1.32	3.79

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TEL 816.361.1177
www.olsson.com

STATE OF MISSOURI
STEPHEN M. SAYLOR
NUMBER
PE-2018021249
10/27/2023
PROFESSIONAL ENGINEER

DESIGN TABLES
SANITARY SEWER PLANS

EAGLE CREEK VILLAS
FIRST PLAT

2023

drawn by: _____ CW
checked by: _____ SS
approved by: _____ JS
QA/QC by: _____ JS
project no.: A20-2467
drawing no.: C DTL01 A202467
date: 10/20/2023

SHEET
C210

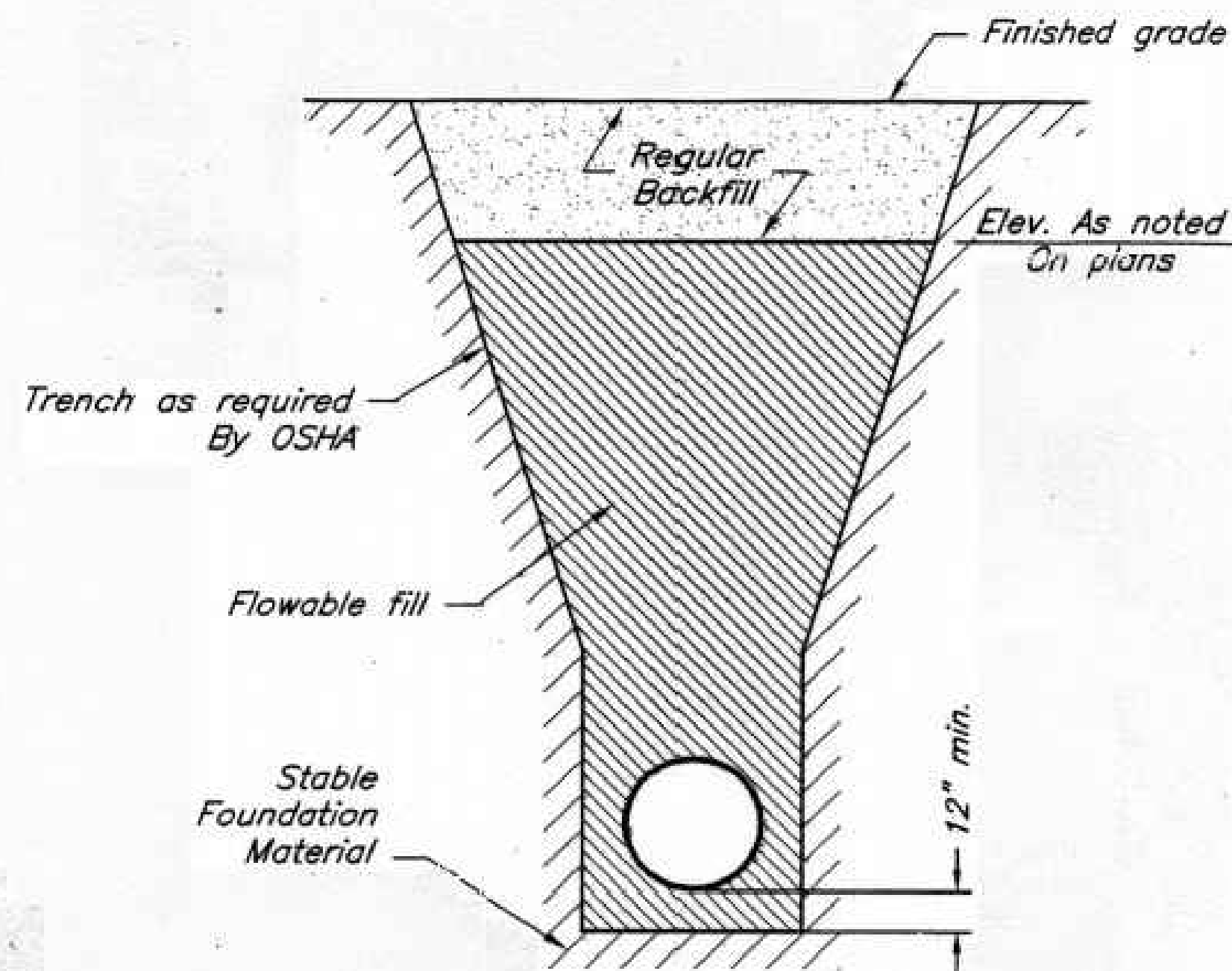
BY

REVISIONS DESCRIPTION

DATE

REV. NO.

REVISIONS



NOTES

1. FLOWABLE FILL SHALL MEET THE REQUIREMENTS OF THE CITY OF LEE'S SUMMIT STANDARD SPECIFICATIONS.
2. REGULAR BACKFILL ABOVE THE TRENCH CHECK SHALL BE FREE OF DEBRIS, ORGANIC MATTER, AND STONES > 6" IN ANY DIMENSION.
3. TOP OF FLOWABLE BACKFILL SHALL BE A MINIMUM OF 2 FEET BELOW FINISHED GRADE.

Subject to revision without notice.

Date: 09/16/04

Rev:

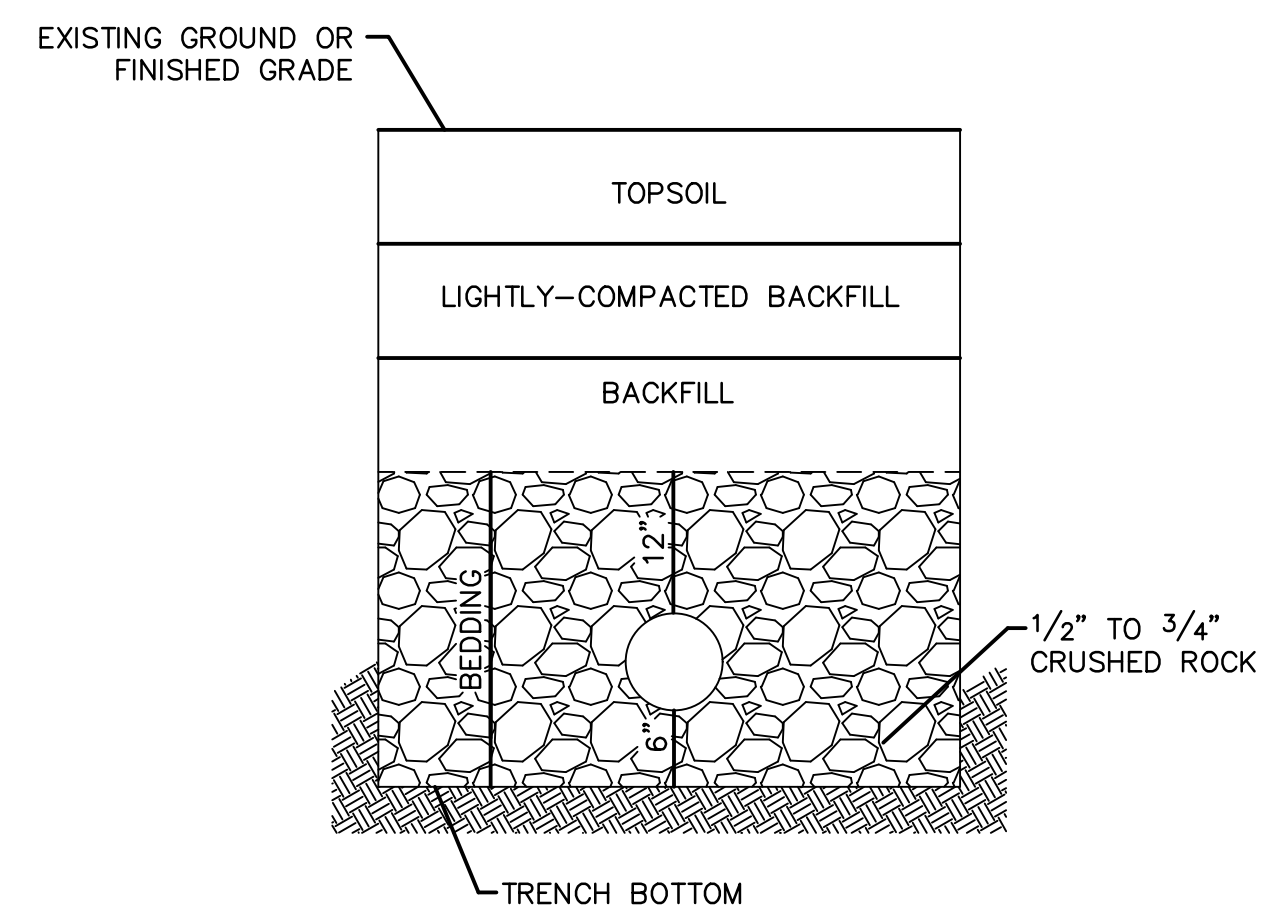
Rev

Rev:

1

CITY OF LEE'S SUMMIT, MISSOURI

TRENCH CHECK



UNDERGROUND PIPE INSTALLATION FOR SANITARY SEWER

NOTES:

1. A MINIMUM OF 36 INCHES OF COVER SHALL BE OVER THE TOP OF THE PIPE. THIS MINIMUM OF COVER SHALL BE FROM THE TOP OF PIPE TO THE FINISHED GRADE.
2. BEDDING AGGREGATE MATERIAL SHALL BE PER SECTION 6900 AND 2102 OF THE CITY DESIGN AND CONSTRUCTION MANUAL. BEDDING AGGREGATE SHALL BE PLACED FROM A LEVEL 6 INCHES BELOW THE BOTTOM OF THE PIPE TO A LEVEL 12 INCHES ABOVE THE TOP OF THE PIPE.
3. BACKFILL MATERIAL AND PLACEMENT SHALL BE PER SECTION 6900 AND 2102 OF THE CITY DESIGN AND CONSTRUCTION MANUAL.
4. TRENCHING SHALL BE IN ACCORDANCE WITH CURRENT OSHA REGULATIONS. SLOPES MUST NOT EXTEND BELOW TOP OF BEDDING.
5. MINIMUM AND MAXIMUM TRENCH WIDTHS SHALL BE IN ACCORDANCE WITH PIPE MANUFACTURERS RECOMMENDATION AS APPROVED ON ENGINEERING PLANS.



also

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BY

REVISIONS DESCRIPTION

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REV.

REVISIONS

DETAIL SHEET
SANITARY SEWER PLANS

**EAGLE CREEK VILLAS
FIRST PLAT**

LEE'S SUMMIT, MISSOURI

2023

drawn by: _____ CW
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