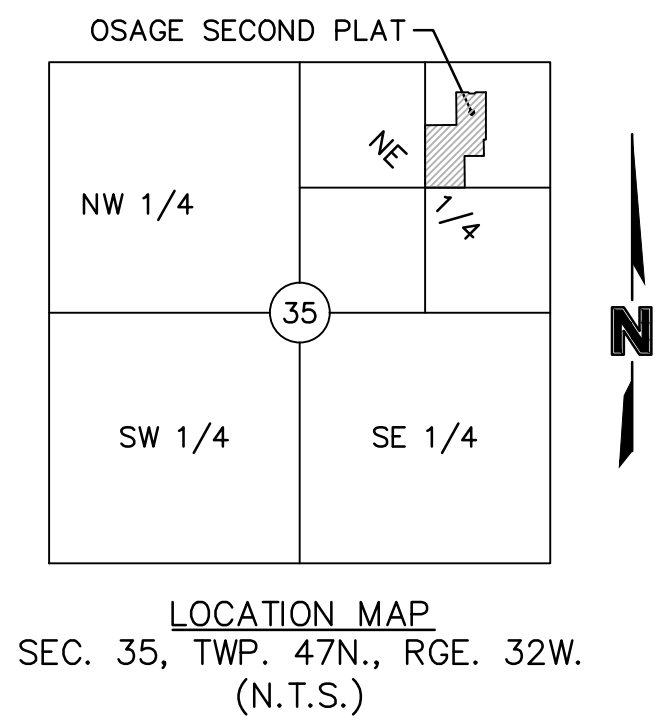


NE 1/4 SECTION 35, TOWNSHIP 47 N, RANGE 32 W.
IN LEE'S SUMMIT, JACKSON COUNTY, MISSOURI



PROJECT TEAM & UTILITY CONTACT LIST	
<u>OWNER / DEVELOPER</u> CLAYTON PROPERTIES GROUP, INC. D.B.A. SUMMIT HOMES 120 SE 30TH STREET CONTACT: VINCENT WALKER LEE'S SUMMIT, MO 64082 PHONE: 816-246-6700 EMAIL: VINCENT@SUMMITHOMESKC.COM	<u>UTILITY SERVICE NUMBERS</u> NAME: LEE'S SUMMIT PUBLIC WORKS PHONE: 816-969-1800 NAME: LEE'S SUMMIT WATER & SERVICES DEPARTMENT PHONE: 816-969-1940
<u>ENGINEER</u> OLSSON 1301 BURLINGTON ST. SUITE 100 NORTH KANSAS CITY, MO 64116 CONTACT: JULIE SELLERS, PE PHONE: 816.361.1177 EMAIL: JSSELLERS@OLSSON.COM	NAME: SPIRE (MGE) PHONE: 314-342-0500 NAME: AT&T PHONE: 800-286-8313 NAME: EVERGY PHONE: 816-471-5275
<u>SURVEYOR</u> OLSSON 1301 BURLINGTON ST. SUITE 100 NORTH KANSAS CITY, MO 64116 CONTACT: JASON ROUDEBUSH PHONE: 816.361.1177 EMAIL: JROUDEBUSH@OLSSON.COM	NAME: SPECTRUM (TWC) PHONE: 877-772-2253 NAME: GOOGLE FIBER PHONE: 877-454-6959



A tract of land in the Northeast Quarter of the Northeast Quarter of Section 35, Township 47 North, Range 32 West of the 5th Principal Meridian in Lee's Summit, Jackson County, Missouri being bounded and described by or under the direct supervision of Jeffrey P. Means P.L.S. 20100417866 as follows:

Commencing at the Northeast corner of said Northeast Quarter; thence North 88°07'14" West, on the North line of said Northeast Quarter, 1,319.40 feet to the Northwest corner of the Northeast Quarter of said Northeast Quarter; thence leaving said North line, South 02°10'22" West, on the West line of said Northeast Quarter, 346.14 feet to a point on the proposed Westerly line of OSAGE FIRST FLAT (LOTS 1 THRU 41, INCLUSIVE AND TRACTS A, B, C, D, E, F, G AND H); thence South 88°10'07" East, on said Westerly line, 127.17 feet; thence South 43°11'07" East, on said Westerly line, 19.80 feet; thence South 88°11'07" East, on said Westerly line, 50.00 feet; thence North 46°48'53" East, on said Westerly line, 19.80 feet; thence South 88°11'07" East, on said Westerly line, 106.00 feet; thence South 02°10'22" West, on said Westerly line, 346.14 feet; thence North 88°10'07" East, on said Westerly line, 127.17 feet; thence South 43°11'07" East, on said Westerly line, 19.80 feet; thence North 46°48'53" East, on said Westerly line, 19.80 feet; thence South 88°11'07" East, on said Westerly line, 50.00 feet; thence North 88°10'07" East, on said Westerly line, 106.00 feet; thence South 02°10'22" West, on said Westerly line, 346.14 feet to a point on the South line of said Northeast Quarter of said Northeast Quarter; thence North 88°09'45" East, on said South line, 423.24 feet to the Southwest corner of said Northeast Quarter of said Northeast Quarter; thence North 02°10'22" East, on the West line of said Northeast Quarter of said Northeast Quarter, 659.27 feet to the Point of Beginning. Containing 453,717 square feet or 10.42 acres, more or less.

BENCHMARK NO. 1
CHISELED PLUS ON THE EAST FLANGED BOLT OF THE FIRE HYDRANT ON THE WEST SIDE OF SW PRYOR ROAD ON ADJOINING PROPERTY SOUTH OF THE
SOUTHWEST CORNER OF SUBJECT PROPERTY.
ELEVATION = 1014.830

BENCHMARK NO. 2
RAILROAD SPIKE IN THE NORTH FACE OF POWER POLE LOCATED ON THE SOUTH SIDE MISSOURI STATE HIGHWAY 150 AT THE WEST SIDE OF THE DRIVEWAY TO
2025 MISSOURI STATE HIGHWAY 150, LEE'S SUMMIT, MO.
ELEVATION = 1031.313

SHEET LIST	
NUMBER	TITLE
C201	TITLE SHEET
C202	GENERAL NOTES
C203	GENERAL LAYOUT
C204	SANITARY PLAN & PROFILES (LINE 1)
C205	SANITARY PLAN & PROFILES (LINE 2)
C206	SANITARY PLAN & PROFILES (LINE 3)
C207	SANITARY PLAN & PROFILES (LINE 3 CONT'D)
C208	SANITARY PLAN & PROFILES (LINE 4)
C209	DESIGN TABLES
C210	DETAIL SHEET
C211	DETAIL SHEET



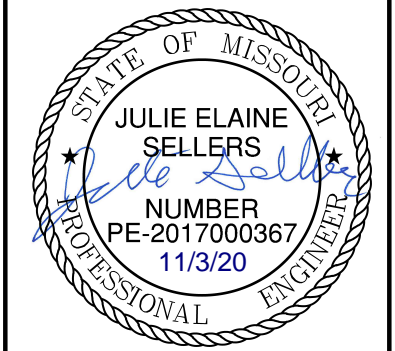
OLSSON HAS BEEN RETAINED TO PROVIDE AS-BUILT DRAWINGS FOR THIS PROJECT.

Julie Sellers
 JULIE SELLERS, P.E.
 CIVIL ENGINEER
 MO#2017000367

11/3/20

DATE

olsson

[illegible]

TITLE SHEET
SANITARY SEWER PLANS

OSAGE
SECOND PLAT

2020

drawn by: D.F. / M.O. / A.A.
checked by: C.G.W.
designed by: A.A.
QA/QC by: J.E.S.
project no.: C19-2339
drawing no.: _____
date: 2020.11.03

SHEET
C201

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DATE: Nov 03, 2020 7:35am
USER: oabdigaliyev
XREFS: C_PTBK_C192339

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.

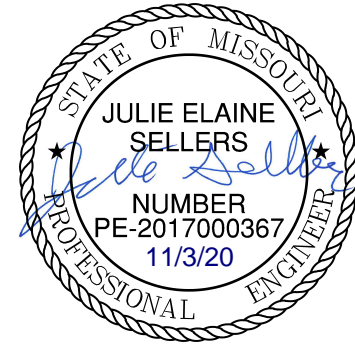
SANITARY SEWER GENERAL NOTES

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.
4. ALL STRUCTURE DIMENSIONS ARE TO INSIDE FACE OF STRUCTURE.
5. 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.
6. THE CONTRACTOR SHALL EXPOSE EXISTING UTILITIES AT LOCATIONS OF POSSIBLE CONFLICT AND POINTS OF CONNECTION PRIOR TO ANY CONSTRUCTION OF SANITARY SEWER.
7. 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.
8. 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.
9. PIPE PENETRATIONS SHALL BE USE GASKETS TO ENSURE WATERTIGHT SEALS.
10. TRACING TAPE SHALL BE INSTALLED ALONG ALL NON-METALLIC SURFACES OR AS DIRECTED BY LOCAL CODES AND ORDINANCES.
11. 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.
12. REFER TO SHEET XXX FOR SANITARY DESIGN & SEWER LATERAL INFORMATION.
13. 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 XXX.
14. MSFE- INDICATES LOWEST FLOOR SERVICEABLE BY PROPOSED SANITARY SEWER.
15. MAXIMUM DEVIATION FROM LATERAL STATION LOCATIONS AS CALLED OUT SHALL BE 2.0' TO AVOID PIPE JOINT.
16. SANITARY LATERALS ARE DESIGNED @ 2.00% SLOPE. IF RISER IS INDICATED, IT IS TO BE AT THE SANITARY MAIN, UNLESS OTHERWISE NOTED.
17. REFER TO CURRENT CITY SPECIFICATIONS FOR MINIMUM PIPE SLOPES.
18. CONTRACTOR MAY BE REQUIRED TO RECONSTRUCT PIPE AND STRUCTURE IF MINIMUM INVERT DROP OR PIPE SLOPE REQUIREMENTS ARE NOT MET.
19. SANITARY STRUCTURES SHALL BE PER CURRENT CITY DETAILS. IF CITY DOES NOT HAVE PUBLISHED DETAILS STRUCTURES SHALL BE PER CURRENT APWA SPECIFICATIONS.
20. 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.

CONTROL POINT TABLE				
POINT NUMBER	NORTHING	EASTING	POINT ELEVATION	DESCRIPTION
11	978424.224	2811650.442	1030.85	3" IB/CAP SET IN THE CENTER MEDIAN OF ROUTE 150. IT IS DUE NORTH OF THE CENTER LINE OF THE DRIVEWAY TO PROPERTY ADDRESS 2025 ROUTE 150. IT IS 12.15 FT WEST OF A LIGHT POLE, 8.5 FT SOUTH OF THE BACK OF CURB, AND 8.1 FT NORTH OF THE BACK OF CURB.
12	978340.573	2812332.280	1036.11	3" IB/CAP SET ON THE EAST SIDE OF SW PRYOR RD AT THE SOUTHEAST CORNER OF THE INTERSECTION OF ROUTE 150 AND SW PRYOR RD. IT IS 2.15 FT EAST OF THE BACK OF CURB, 19 FT WEST OF THE TRAFFIC SIGNAL POLE, AND 9.6 FT WEST OF A VAULT.
13	977064.448	2812265.992	1012.10	3" IB/CAP SET ON THE NORTHEAST CORNER OF THE INTERSECTION OF SW PRYOR RD AND SW NAPA VALLEY DR. IT IS 6 FT EAST OF THE BACK OF CURB, 10.2 FT NORTH OF THE CORNER OF THE SIDEWALK, AND 7.25 FT WEST OF ROCK LANDSCAPE BORDER.
14	977092.478	2810924.856	1040.93	3" IB/CAP SET IN THE NORTHWEST CORNER OF THE SOUTH ADJOINING PROPERTY. IT IS 7.5 FT EAST OF THE FENCE LINE, AND 45 FT SOUTH OF OF THE TREE LINE.
18	978446.811	2810956.695	1050.47	3" IB/CAP SET IN THE CENTER MEDIAN OF ROUTE 150. THE POINT IS DIRECTLY SOUTH OF A WHITE MAILBOX ON AN ORANGE POST FOR HOUSE ADDRESS 2144 ROUTE 150. IT IS 6.6 FT SOUTH OF THE BACK OF CURB, 5.8 FT NORTH OF THE BACK OF CURB, AND 31 FT EAST OF A LIGHT POLE.
BENCHMARK				
BMK1	977045.350	2812211.924	1014.83	CHISELED PLUS ON THE EAST FLANGED BOLT OF THE FIRE HYDRANT ON THE WEST SIDE OF SW PRYOR ROAD ON ADJOINING PROPERTY SOUTH OF THE SOUTHWEST CORNER OF SUBJECT PROPERTY.
BMK2	978357.416	2811627.737	1031.31	RAILROAD SPIKE IN THE NORTH FACE OF POWER POLE LOCATED ON THE SOUTH SIDE MISSOURI STATE HIGHWAY 150 AT THE WEST SIDE OF THE DRIVEWAY TO 2025 MISSOURI STATE HIGHWAY 150, LEE'S SUMMIT, MO.

ESTIMATE OF QUANTITIES				
ITEM NO.	DESCRIPTION	UNIT	QUANTITY	AS-BUILT
STREET				
1	8" SANITARY PVC (SDR-26)	L.F.	1508	
2	MANHOLES, STD. 4' DIA.	EA.	9	
3	CONNECTION TO EXISTING STUB	EA.	2	
4	TRACER WIRE	L.F.	2425	
5	TRACER WIRE BOX	EA.	60	
6	SERVICE WYE	EA.	60	
7	4" LATERAL PIPE	L.F.	2425	

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.



REVISIONS DESCRIPTION		DATE	REV. NO.	

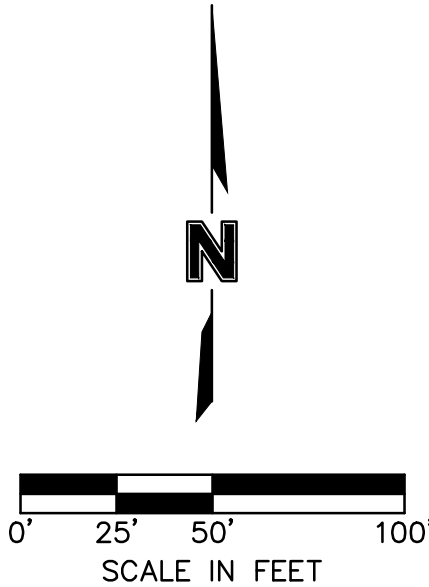
GENERAL NOTES SANITARY SEWER PLANS		OSAGE SECOND PLAT		2020
drawn by: <u>D.F. / M.O. / A.A.</u>				
checked by: <u>C.G.W.</u>				
designed by: <u>A.A.</u>				
QA/QC by: <u>J.E.S.</u>				
project no.: <u>C19-2339</u>				
drawing no.: _____				
date: <u>2020.11.03</u>				
SHEET C202				

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

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Structure Table		
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EX MH 1	977578.8528	2811489.8379
EX MH 2	977279.3112	2811292.7528
MH 1-1	977613.0260	2811437.5116
MH 1-2	977617.9860	2811280.9725
MH 1-3	977628.1714	2810959.5161
MH 2-1	977857.9032	2811445.2706
MH 2-2	978072.7943	2811452.0795
MH 3-1	977308.4056	2811258.6571
MH 3-2	977313.6031	2811094.6217
MH 3-3	977505.6385	2811100.7064
MH 4-1	977207.8690	2811091.2715



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STATE OF MISSOURI
JULIE ELAINE SELLERS
Missouri Professional Engineer
NUMBER PE-2017000367
11/3/20

GENERAL LAYOUT
SANITARY SEWER PLANS

OSAGE
SECOND PLAT

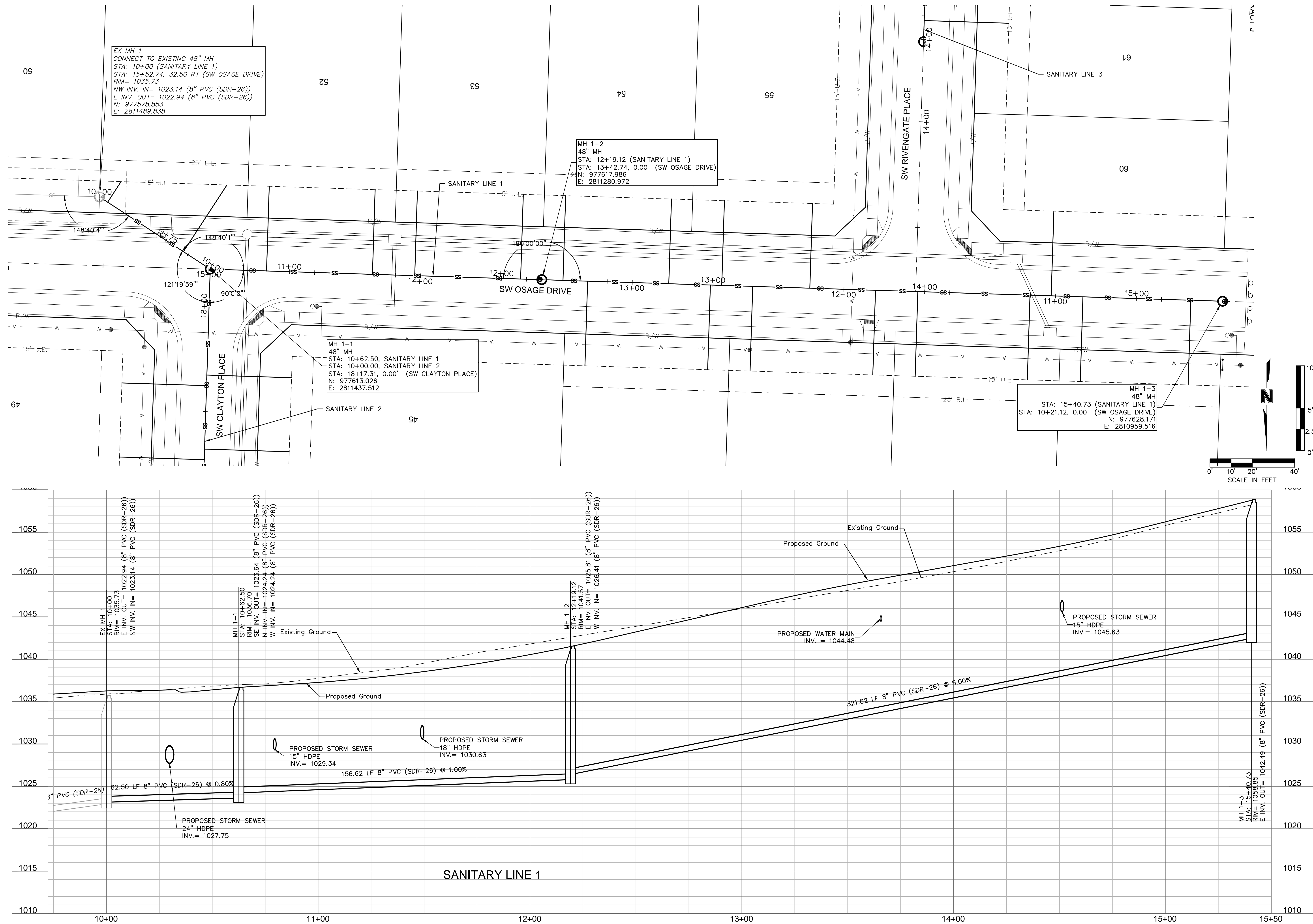
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drawn by: D.F./M.O./A.A.
checked by: C.G.W.
designed by: A.A.
QA/QC by: J.E.S.
project no.: C19-2339
drawing no.:
date: 2020.11.03

SHEET
C203

REVISIONS

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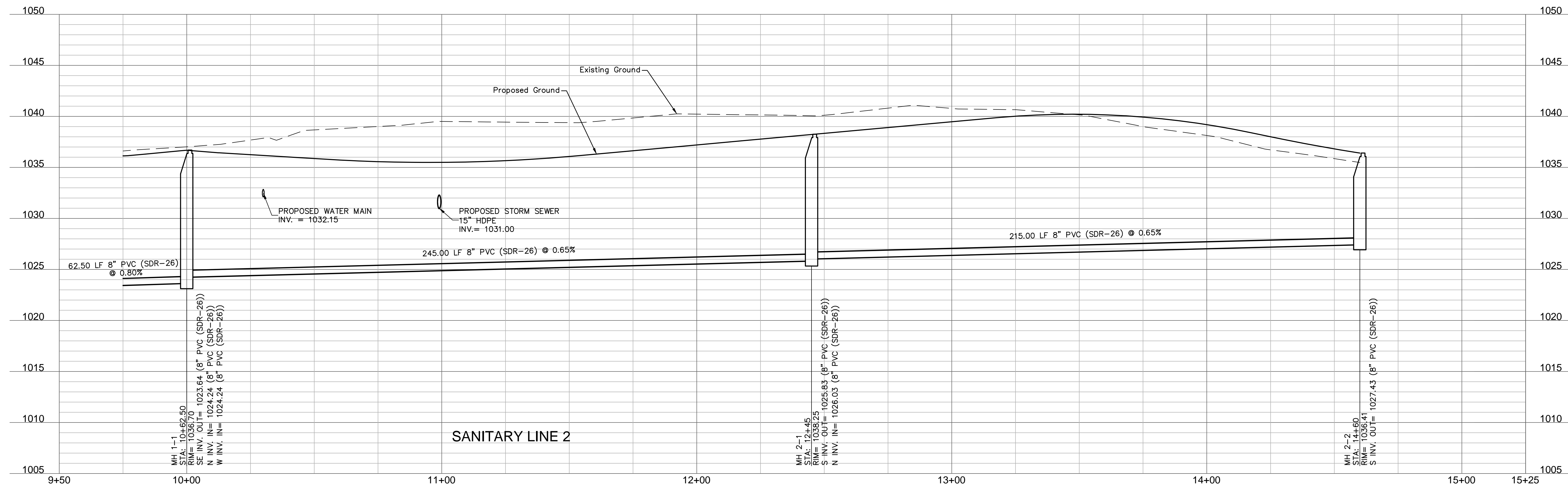
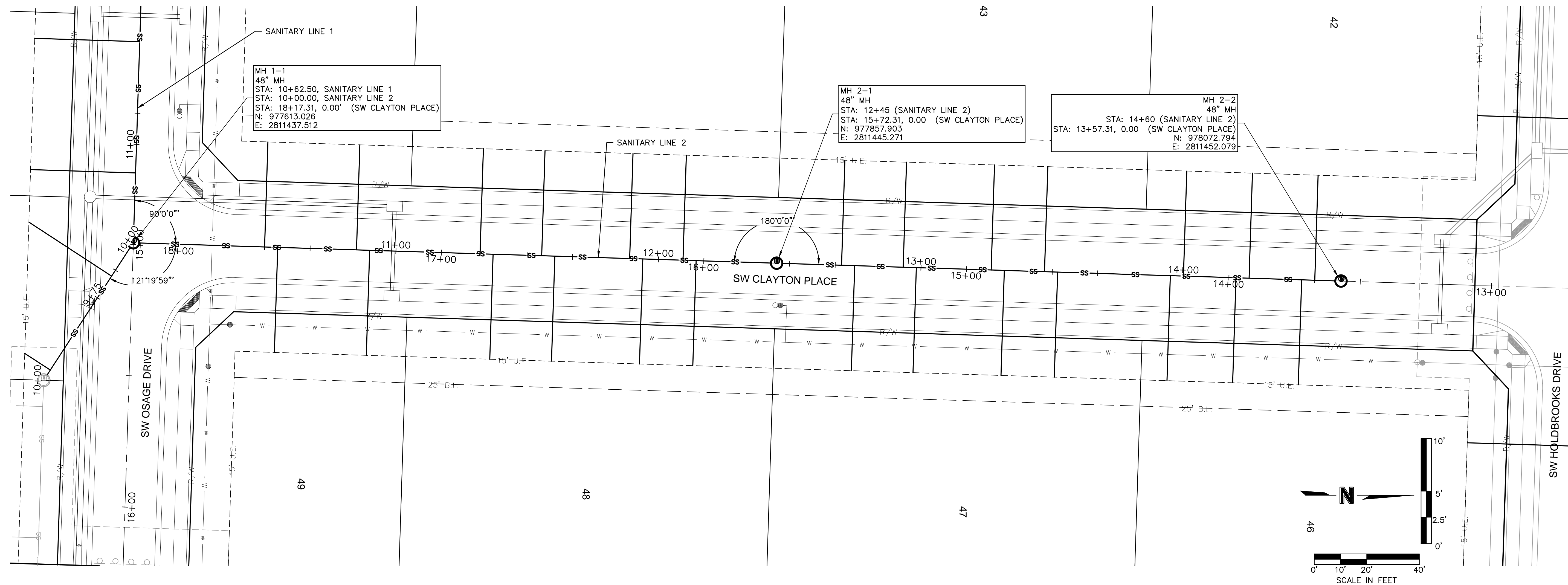


<div><div>drawn by: _____</div><div>checked by: _____</div><div>designed by: _____</div><div>QA/QC by: _____</div><div>project no.: _____</div><div>drawing no.: _____</div><div>date: _____</div></div> <div><div>_____ D.F. / M.O. / A.A.</div><div>_____ C.G.W.</div><div>_____ A.A.</div><div>_____ J.E.S.</div><div>_____ C19-2339</div><div>_____ 2020.11.03</div></div>		SANITARY PLAN & PROFILES (LINE 1)		REV. NO.		DATE		REVISIONS DESCRIPTION	
		SANITARY SEWER PLANS							
OSAGE SECOND PLAT									
2020								REVISIONS	

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STATE OF MISSOURI
JULIE ELAINE
SELLERS
NUMBER
PE-2017000367
11/3/20
PROFESSIONAL ENGINEER



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USER: aadb@digilive

USER: aabdigaliyev

liiyev

drawn by: D.F. / M.O. / A.A.
checked by: C.G.W.
designed by: A.A.
QA/QC by: J.E.S.
project no.: C19-2339
drawing no.: _____
date: 2020.11.03

SHEET
C205

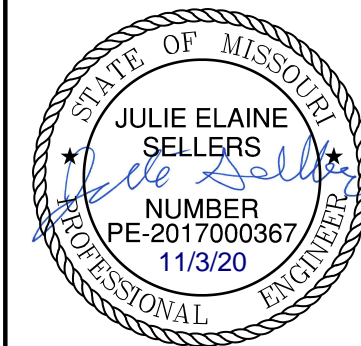
SANITARY PLAN & PROFILES (LINE 2)
SANITARY SEWER PLANS

OSAGE
SECOND PLAT

2020

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REVISIONS

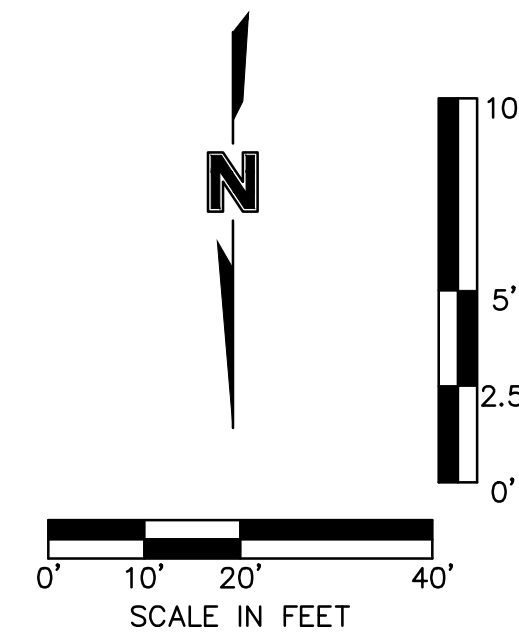
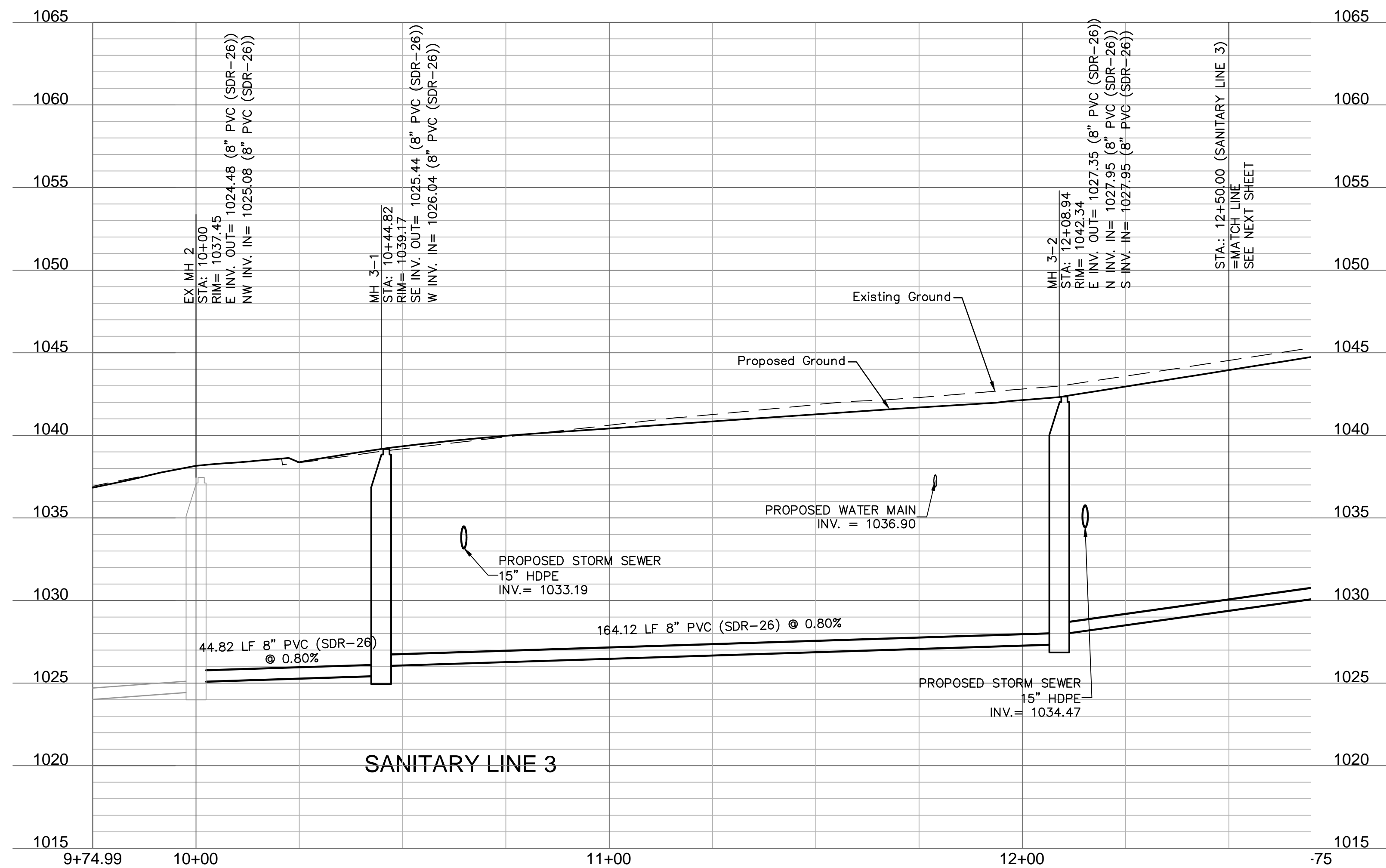
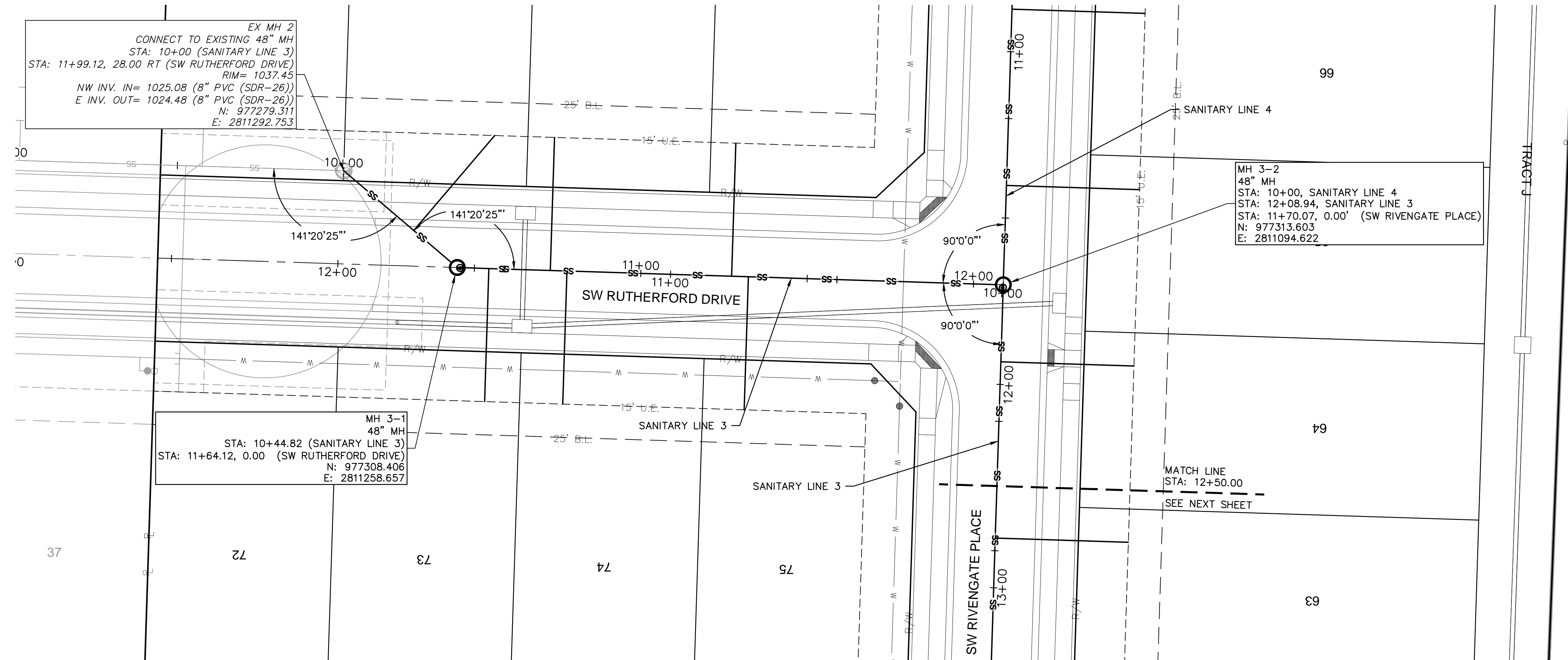


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DATE: Nov 03, 2020 7:36am



SANITARY PLAN & PROFILES (LINE 3)
SANITARY SEWER PLANS

OSAGE
SECOND PLAT

drawn by: D.F. / M.O. / A.A.
checked by: C.G.W.
designed by: A.A.
QA/QC by: J.E.S.
project no.: C19-2339
drawing no.: _____
date: 2020.11.03

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DATE _____

REV. 11/01

SANITARY PLAN & PROFILES (LINE 3)

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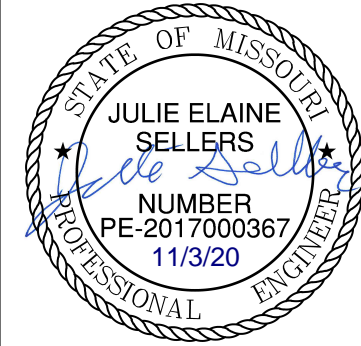
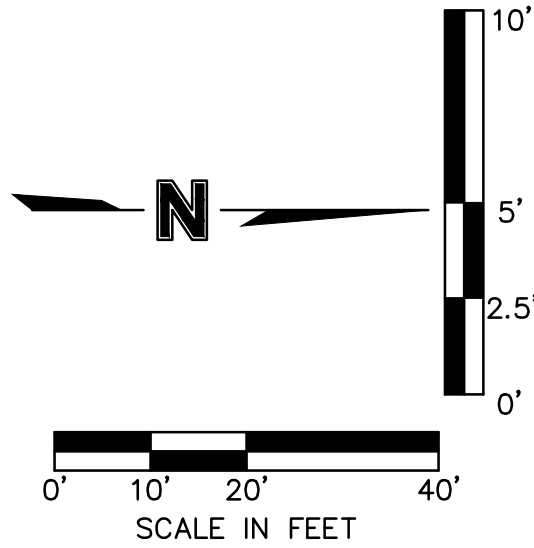
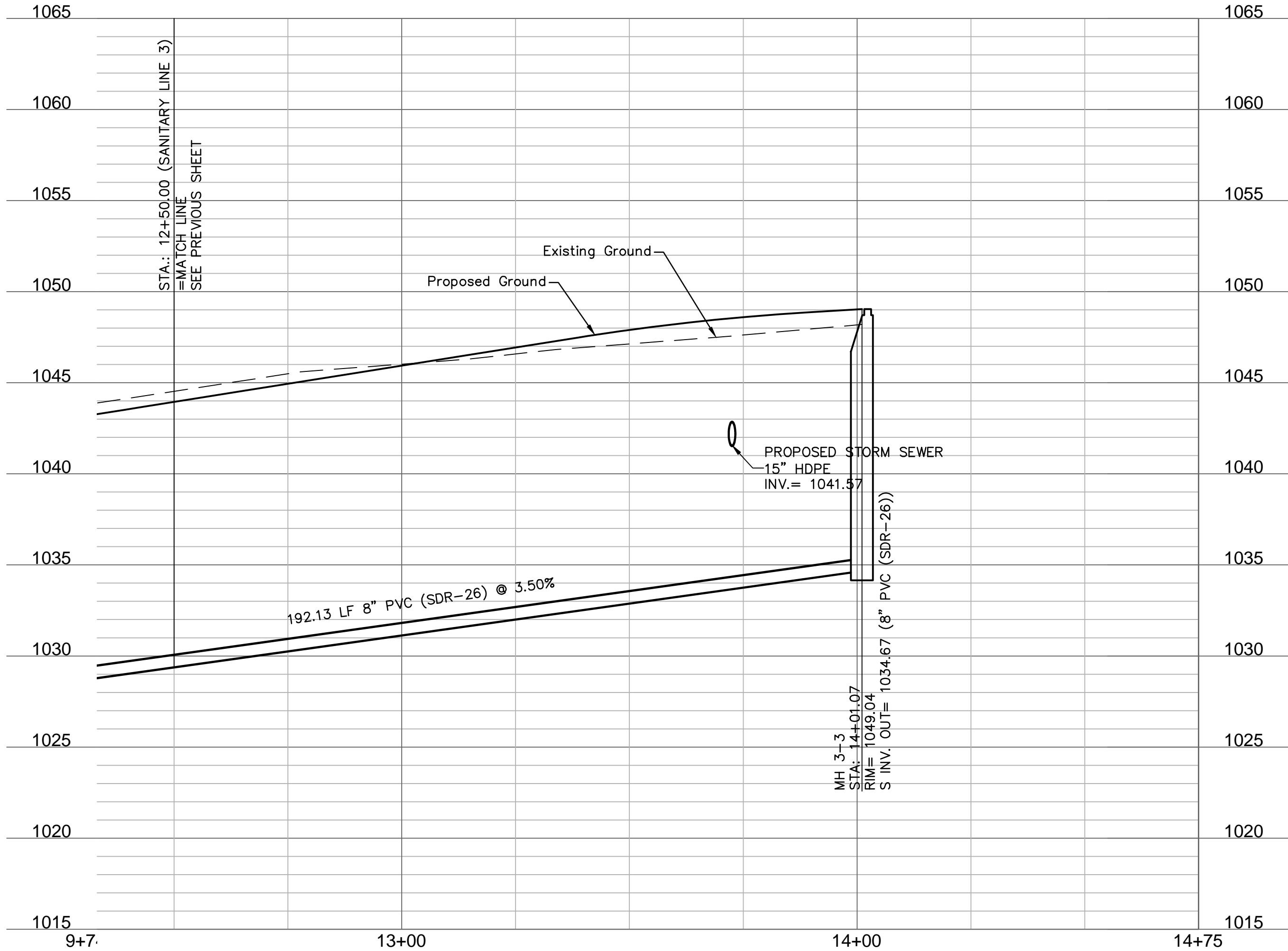
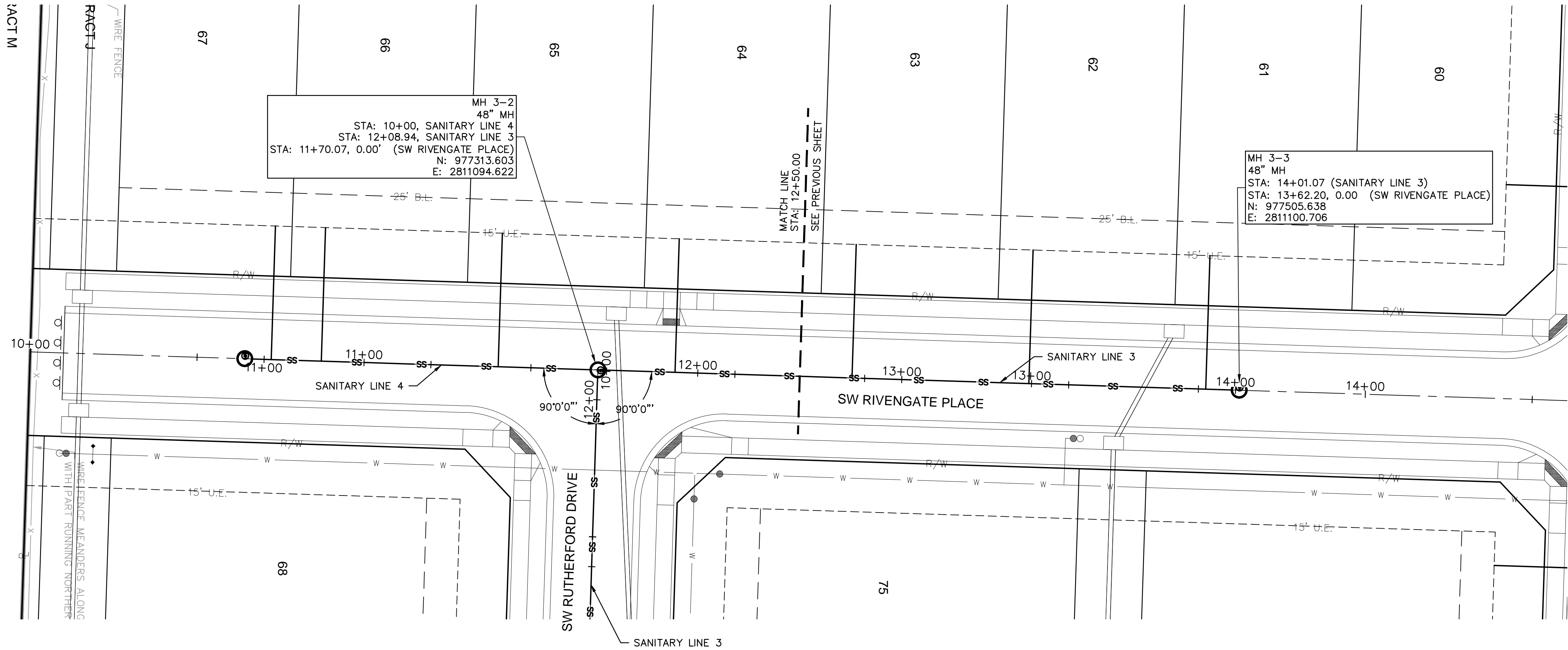
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STATE OF MISSOURI
JULIE ELAINE SELLERS
NUMBER
PE-2017000367
11/3/20
PROFESSIONAL ENGINEER

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REV. NO.	DATE	REVISIONS DESCRIPTION

SANITARY PLAN & PROFILES (LINE 3 CONT'D)
SANITARY SEWER PLANS

OSAGE
SECOND PLAT

2020

drawn by: D.F./M.O./A.A.
checked by: C.G.W.
designed by: A.A.
QA/QC by: J.E.S.
project no.: C19-2339
drawing no.:
date: 2020.11.03

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C207

Sanitary Sewer Laterals							
Lot Number	Lateral Station	Upstream Manhole	Lateral Length	Riser	Flowline at Main	Flowline at End of Lateral	Minimum Servicable Floor Elevation
			(ft)	(ft)	(ft)	(ft)	(ft)
42A	36+96.36	MH 1-12 (1st Plat)	69.00	1.0	1022.3	1025.7	1028.50
42B	14+50.00	MH 2-2	40.00	0.0	1027.4	1029.2	1031.97
42C	14+25.00	MH 2-2	40.00	0.0	1027.2	1029.0	1031.80
42D	14+00.00	MH 2-2	40.00	1.0	1027.0	1029.8	1032.62
43A	13+47.06	MH 2-2	40.00	2.0	1026.7	1030.5	1033.26
43B	13+26.76	MH 2-2	40.00	2.0	1026.6	1030.3	1033.12
43C	12+93.25	MH 2-2	40.00	2.0	1026.3	1030.1	1032.91
43D	12+69.75	MH 2-2	40.00	2.0	1026.2	1030.0	1032.75
44A	12+09.36	MH 2-1	40.00	0.0	1025.6	1027.4	1030.20
44B	11+89.05	MH 2-1	40.00	0.0	1025.5	1027.3	1030.07
44C	11+55.55	MH 2-1	40.00	0.0	1025.3	1027.1	1029.85
44D	11+32.05	MH 2-1	40.00	1.0	1025.1	1027.9	1030.68
45A	10+85.00	MH 2-1	40.00	0.0	1024.8	1026.6	1029.39
45B	10+50.00	MH 2-1	40.00	0.0	1024.6	1026.4	1029.17
46A	35+71.78	MH 1-12 (1st Plat)	69.00	1.0	1020.5	1023.8	1026.63
46B	14+45.00	MH 2-2	40.00	0.0	1027.3	1029.1	1031.93
46C	14+20.00	MH 2-2	40.00	0.0	1027.2	1029.0	1031.77
46D	13+95.00	MH 2-2	40.00	1.0	1027.0	1029.8	1032.59
47A	13+52.06	MH 2-2	40.00	2.0	1026.7	1030.5	1033.29
47B	13+31.76	MH 2-2	40.00	2.0	1026.6	1030.4	1033.16
47C	12+98.25	MH 2-2	40.00	2.0	1026.4	1030.1	1032.94
47D	12+75.00	MH 2-2	40.00	2.0	1026.2	1030.0	1032.79
48A	12+14.36	MH 2-1	40.00	0.0	1025.6	1027.4	1030.23
48B	11+94.05	MH 2-1	40.00	0.0	1025.5	1027.3	1030.10
48C	11+60.55	MH 2-1	40.00	0.0	1025.3	1027.1	1029.88
48D	11+37.05	MH 2-1	40.00	0.0	1025.1	1026.9	1029.73
49A	10+90.00	MH 2-1	40.00	0.0	1024.8	1026.6	1029.43
49B	10+55.00	MH 2-1	40.00	0.0	1024.6	1026.4	1029.20
51A	10+47.35	MH 1-1	37.61	1.0	1023.5	1026.3	1029.05
51B	10+04.64	MH 1-1	11.61	2.0	1023.2	1026.4	1029.17
52A	11+39.12	MH 1-2	40.00	1.0	1025.0	1027.8	1030.58
52B	10+89.12	MH 1-2	40.00	2.0	1024.5	1028.3	1031.06
53A	12+09.12	MH 1-2	40.00	3.0	1025.7	1030.4	1033.24
53B	11+59.12	MH 1-2	40.00	3.0	1025.2	1029.9	1032.74
54A	12+79.12	MH 1-3	40.00	2.0	1029.4	1033.2	1035.96
54B	12+29.12	MH 1-3	40.00	5.0	1026.9	1033.6	1036.40
55A	13+45.73	MH 1-3	40.00	3.0	1032.7	1037.5	1040.27
55B	13+04.12	MH 1-3	40.00	5.0	1030.7	1037.4	1040.15
56A	12+98.77	MH 1-3	40.00	2.0	1030.4	1034.1	1036.94
56B	12+40.77	MH 1-3	40.00	5.0	1027.5	1034.2	1036.98
57A	13+76.77	MH 1-3	40.00	3.0	1034.3	1039.0	1041.82
58B	13+18.77	MH 1-3	40.00	6.0	1031.4	1039.1	1041.86
58A	14+49.77	MH 1-3	40.00	3.0	1037.9	1042.7	1045.47
58B	13+18.77	MH 1-3	40.00	6.0	1031.4	1039.1	1041.86
59A	15+25.73	MH 1-3	40.00	4.0	1041.7	1047.5	1050.25
59B	14+74.77	MH 1-3	40.00	6.0	1039.2	1046.9	1049.66
60	14+59.77	MH 1-3	40.00	4.0	1038.4	1044.2	1046.95
61	13+91.07	MH 3-3	40.00	3.0	1034.3	1039.1	1041.87
62	13+38.07	MH 3-3	40.00	4.0	1032.5	1038.2	1040.99
63	12+85.07	MH 3-3	40.00	4.0	1030.6	1036.3	1039.14
64	12+32.07	MH 3-3	40.00	4.0	1028.8	1034.5	1037.28
65	10+29.87	MH 4-1	40.00	3.0	1027.4	1032.1	1034.90
66	10+82.87	MH 4-1	40.00	0.0	1027.8	1029.6	1032.39
67	10+97.87	MH 4-1	40.00	0.0	1027.9	1029.7	1032.51
68	11+27.30	MH 3-2	40.00	3.0	1026.7	1031.4	1034.24
69	10+72.80	MH 3-2	40.00	3.0	1026.3	1031.0	1033.80
70	10+27.64	MH 3-2	37.48	2.0	1025.9	1029.6	1032.41
73	10+54.32	MH 3-2	40.00	1.0	1026.1	1028.9	1031.69
74	10+77.82	MH 3-2	40.00	2.0	1026.3	1030.1	1032.86
75	11+32.35	MH 3-2	40.00	3.0	1026.7	1031.5	1034.28

Sanitary Sewer Design Information										
Upstream Manhole	Downstream Pipe Slope	Downstream Pipe Diameter	Proposed Cumulative Area	Future Cumulative Area	Minimum Hourly Peak Design Flow	Proposed Cumulative Peak Flows	Future Cumulative Peak Flows	Downstream Pipe Mannings N	Downstream Pipe Capacity	Downstream Pipe Full Flow Velocity
	(%)	(in)	(Ac.)	(Ac.)	(cfs/ac)	(cfs)	(cfs)		(cfs)	(fps)
EX MH 1	3.50%	8	6.93	0.00	0.02	0.139	0.139	0.013	2.26	6.48
MH 1-1	0.80%	8	6.23	0.00	0.02	0.125	0.125	0.013	1.08	3.10
MH 1-2	1.00%	8	2.47	0.00	0.02	0.049	0.049	0.013	1.21	3.46
MH 1-3	5.00%	8	2.00	0.00	0.02	0.040	0.040	0.013	2.70	7.74
MH 2-1	0.65%	8	3.53	0.00	0.02	0.071	0.071	0.013	0.97	2.79
MH 2-2	0.65%	8	1.84	0.00	0.02	0.037	0.037	0.013	0.97	2.79
EX MH 2	1.83%	8	3.66	0.00	0.02	0.073	0.073	0.013	1.63	4.68
MH 3-1	0.80%	8	2.56	0.00	0.02	0.051	0.051	0.013	1.08	3.10
MH 3-2	0.80%	8	2.38	0.00	0.02	0.048	0.048	0.013	1.08	3.10
MH 3-3	3.50%	8	0.71	0.00	0.02	0.014	0.014	0.013	2.26	6.48
MH 4-1	0.80%	8	0.53	0.00	0.02	0.011	0.011	0.013	1.08	3.10

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STATE OF MISSOURI

JULIE ELAINE SELLERS

Julie Sellers

NUMBER PE-2017000367

11/3/20

PROFESSIONAL

DESIGN TABLES

SANITARY SEWER PLANS

OSAGE

SECOND PLAT

2020

drawn by: D.F./M.O./A.A.

checked by: C.G.W.

designed by: A.A.

QA/QC by: J.E.S.

project no.: C19-2339

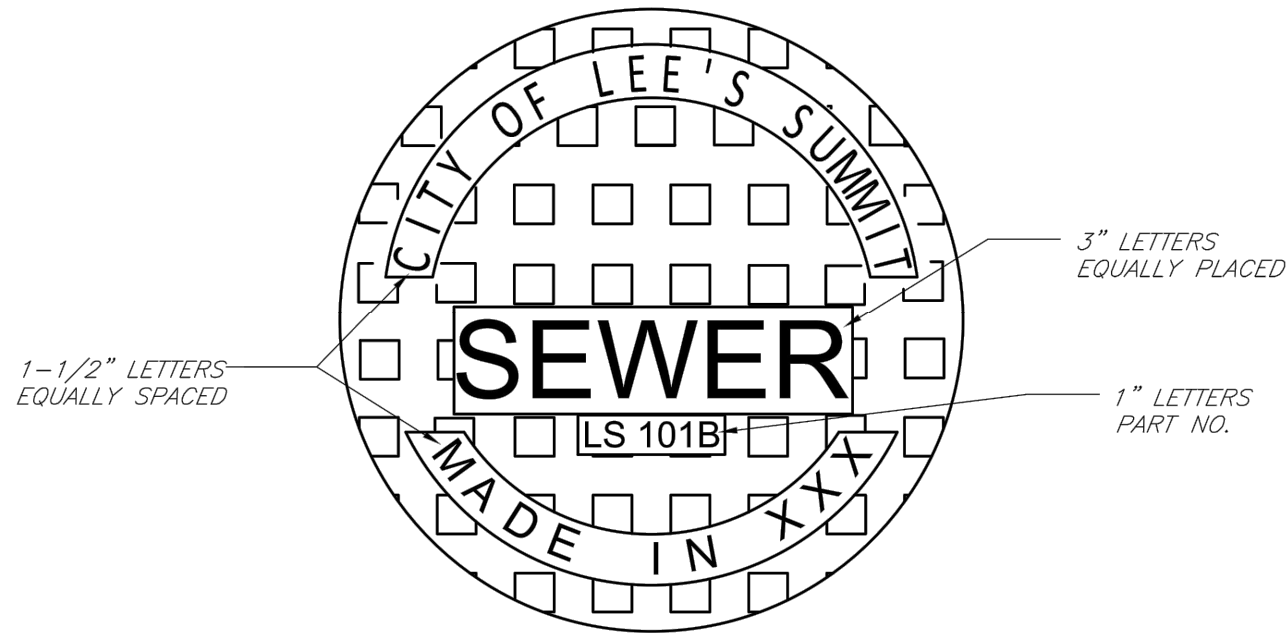
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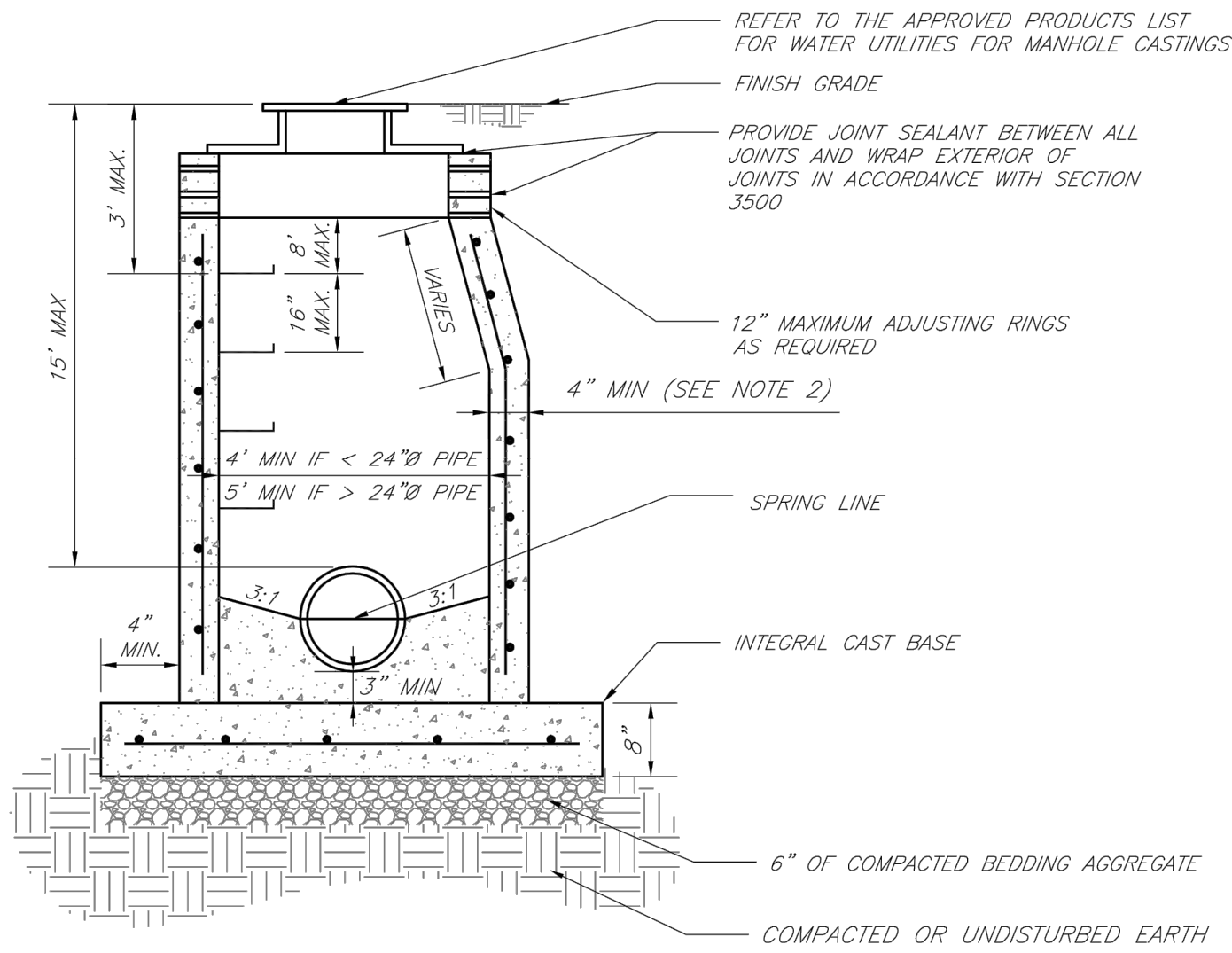
STANDARD 24" MANHOLE COVER
LEE'S SUMMIT PART NO.: LS101B
MINIMUM WEIGHT = 160 LB
MATCHING FRAME: LS101A
NOTE: PICK HOLES NOT SHOWN



CITY OF LEE'S SUMMIT, MO
PUBLIC WORKS DEPARTMENT
ENGINEERING DIVISION

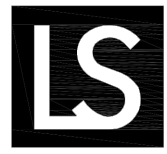
Date: 09/16/04
Drawn By: JN
Checked By:
FILE: SANITARY SEWER-2
Rev: 04/05/07
Rev: 12/12

STANDARD 24" MANHOLE COVER



NOTES:

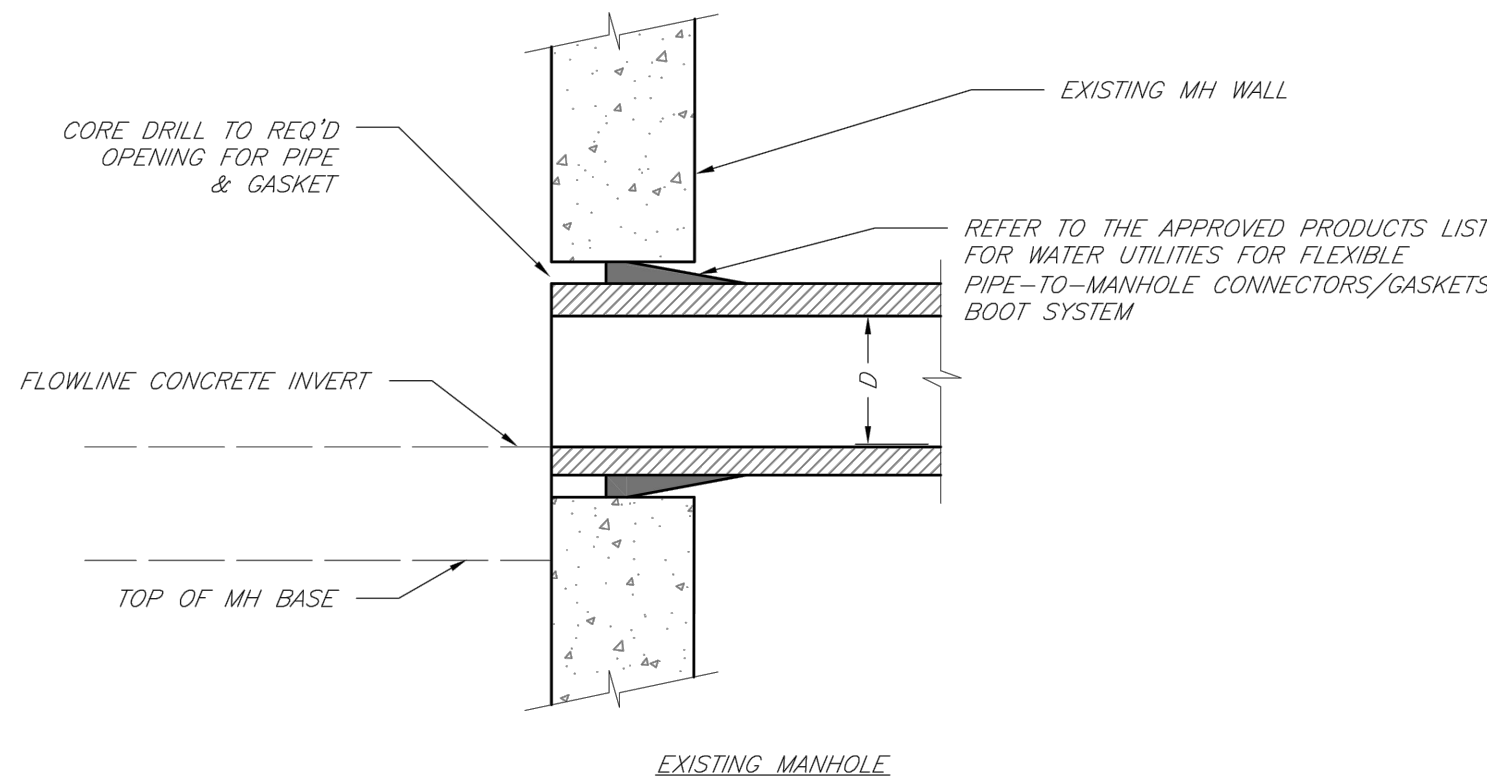
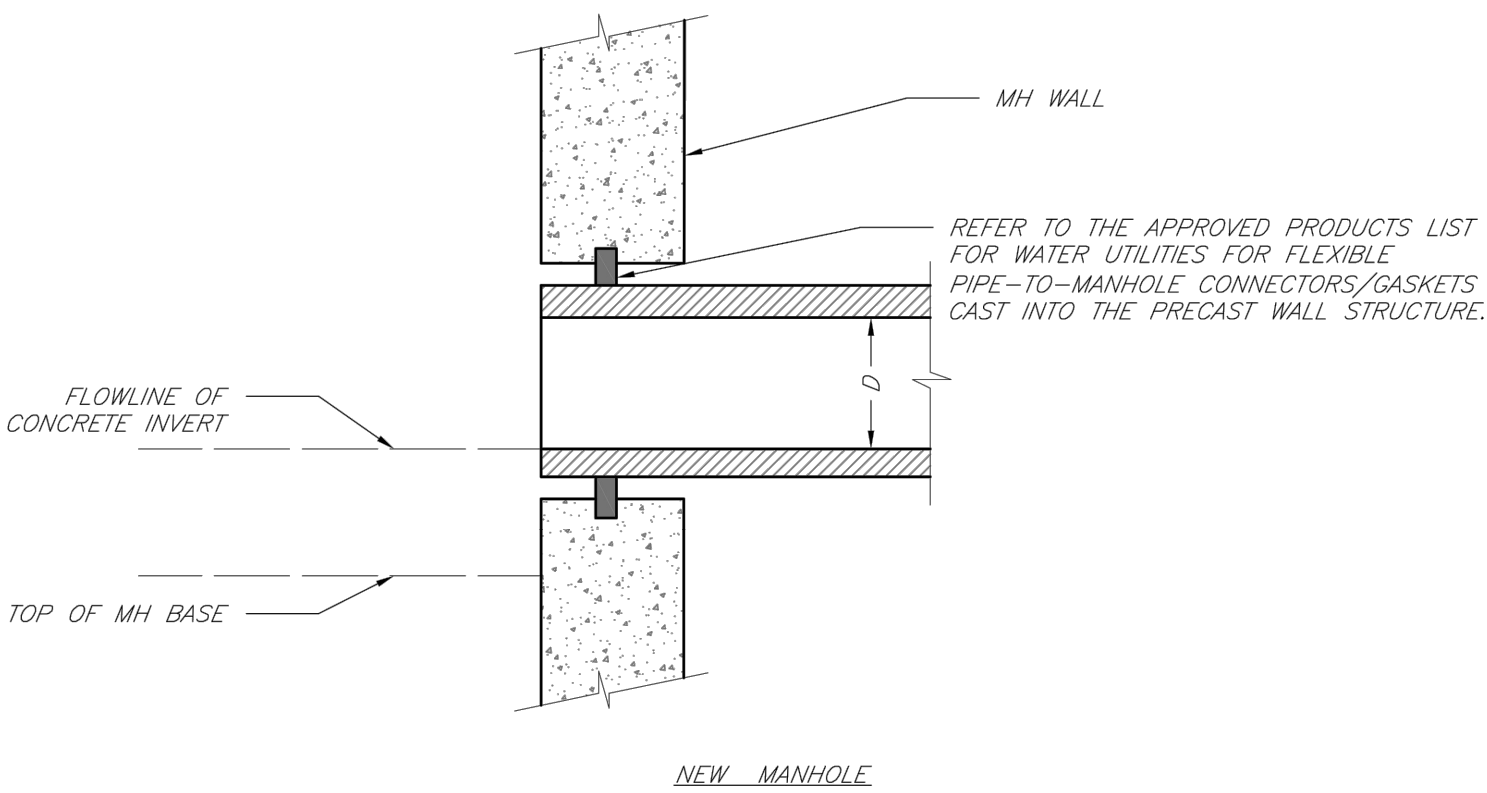
1. PRECAST CONCRETE MANHOLES SHALL CONFORM TO ASTM C478 EXCEPT AS MODIFIED BY THE SPECIFICATIONS.
2. A WALL THICKNESS NOT LESS THAN ONE-TWELFTH (1/12) OF THE INSIDE DIAMETER OR 4", WHICHEVER IS GREATER, SHALL BE USED WHEN THE MANHOLE DEPTH IS LESS THAN 15'.
3. WATERPROOFING SHALL BE REQUIRED ON THE OUTSIDE OF MANHOLES. THE WATERPROOFING SHALL CONSIST OF A TOTAL DRY FILM THICKNESS OF NOT LESS THAN 14 MILS OF BITUMINOUS COATING.
4. ONLY ECCENTRIC MANHOLE CONES WILL BE ALLOWED UNLESS OTHERWISE APPROVED BY THE CITY ENGINEER.
5. THE FILL CONCRETE FLOW CHANNEL FOR SIDE BRANCHES SHALL BE PLACED TO PROVIDE A SMOOTH TRANSITION INTO THE FLOW LINE.
6. REFER TO THE APPROVED PRODUCTS LIST FOR WATER UTILITIES FOR APPROVED MANHOLE GASKET MODELS.
7. REFER TO THE APPROVED PRODUCTS LIST FOR APPROVED STEPS.



LEE'S SUMMIT
MISSOURI

PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063
STANDARD PRECAST MANHOLE - SANITARY SEWER

Date: 02/13
Drawn By: JN
Checked By: DL
FILE: SAN-2
Rev: 1/14
Rev:



LEE'S SUMMIT
MISSOURI

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

Date: 02/13
Drawn By: JN
Checked By: DL
FILE: SAN-5
Rev: 1/14
Rev:

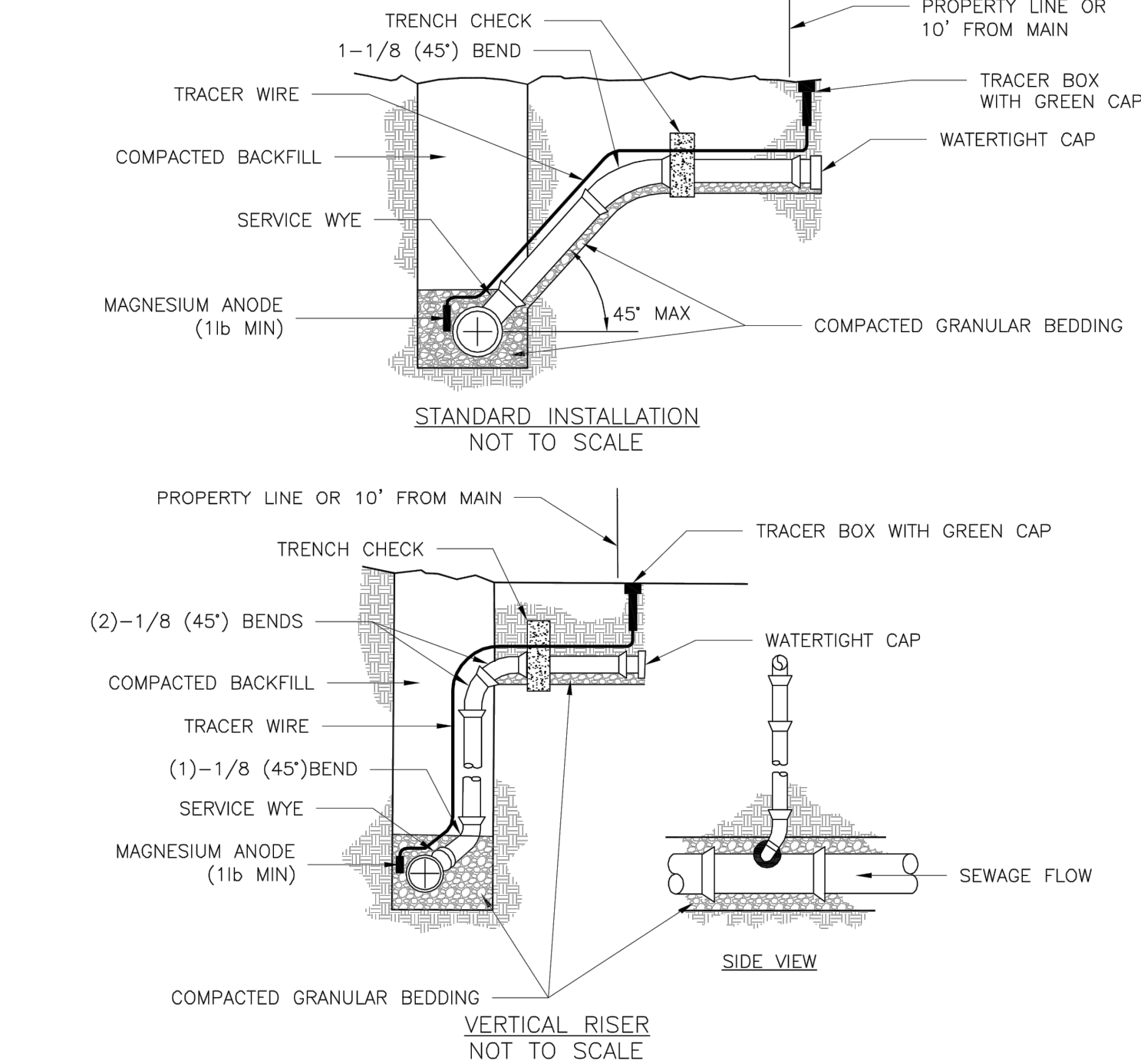


LEE'S SUMMIT
MISSOURI

PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063
BUILDING SEWER STUB AND RISER

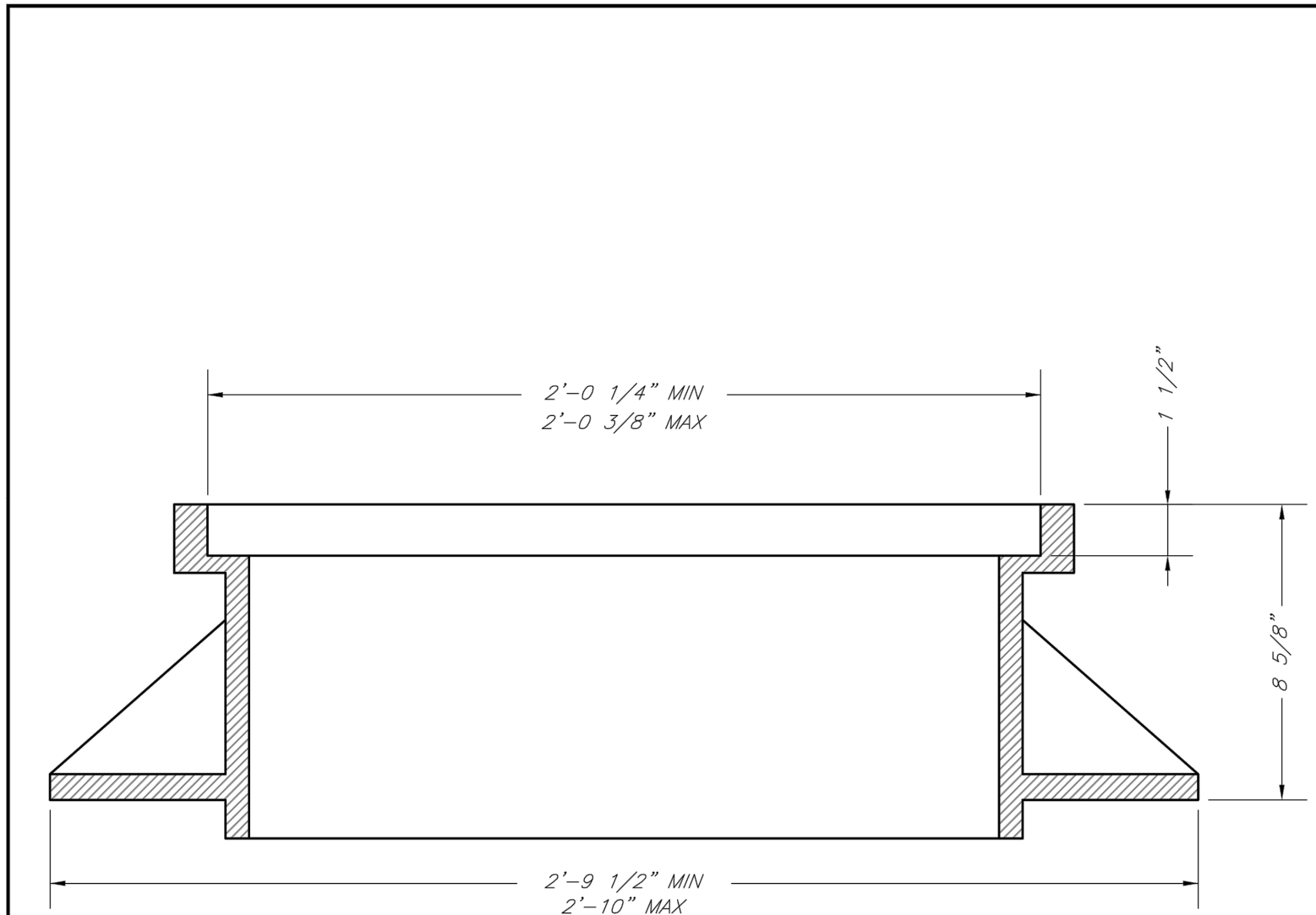
Date: 04/17
Drawn By: MJF
Checked By: DL

SAN-1



NOTES:

1. ALL SEWER STUBS SHALL BE CONSTRUCTED TO PROPERTY LINE OR 10' MINIMUM FROM THE MAIN, WHERE SIDEWALKS ARE PRESENT, CONTRACTOR SHALL EXTEND SERVICE LINE UNDER EXISTING SIDEWALK TO TWO FEET BEYOND.
2. ALL NEW CONSTRUCTION OFF SEWER STUBS SHALL BE TEMPORARILY MARKED WITH A MARKING STAKE, 36" ABOVE GROUND AND PAINTED GREEN.
3. IMPERVIOUS TRENCH CHECKS SHALL BE PLACED ON BUILDING SEWER STUBS (AT LEAST 5' AWAY FROM THE SANITARY SEWER MAIN).
4. TRENCH CHECKS ON THE BUILDING SEWER STUBS SHALL EXTEND 6" BELOW THE BOTTOM OF THE PIPE. LENGTH SHALL BE A MINIMUM OF 12". THE HEIGHT OF THE TRENCH CHECK SHALL EXTEND 12" ABOVE THE TOP OF THE PIPE. THE WIDTH OF THE TRENCH CHECK SHALL BE THE WIDTH OF THE TRENCH.
5. SEE SPECIFICATION SECTION 2100 FOR SEWER MAIN BEDDING AND BACKFILL.
6. #12 GAUGE GREEN INSULATED COPPER TRACER WIRE SHALL BE INSTALLED. TRACER WIRE TERMINAL BOXES SHALL BE INSTALLED DIRECTLY ABOVE THE SEWER SERVICE OR AS DETERMINED BY THE ENGINEER.
7. FOR SERVICES, TRACER WIRE SHALL RUN FROM THE WYE AND TERMINATE IN A FLUSH MOUNTED TRACER BOX WITH A GREEN CAST IRON LOCKABLE TOP. WIRE SHALL BE TAPED OR TIED TO THE PIPE AT 5' INTERVALS.
8. TRACER WIRE BOX SHALL BE INSTALLED WITHIN 1.0' OF PROPERTY LINE.
9. THE TRACER WIRE SHALL REMAIN CONTINUOUS TO THE GREATEST EXTENT POSSIBLE. SPLICES IN THE TRACER WIRE SHOULD BE MADE WITH SPLIT BOLT CONNECTORS. WIRE NUTS SHALL NOT BE USED. A WATER-PROOF CONNECTION IS NECESSARY TO PREVENT CORROSION.



STANDARD 24" MANHOLE FRAME
LEE'S SUMMIT PART NO.: LS101A
MINIMUM WEIGHT = 250 LB
MATCHING COVER: LS101B



CITY OF LEE'S SUMMIT, MO
PUBLIC WORKS DEPARTMENT
ENGINEERING DIVISION

Date: 09/16/04
Drawn By: JN
Checked By:
FILE: SANITARY SEWER-1
Rev: 01/04/07
Rev: 1/13

STANDARD 24" MANHOLE FRAME

DETAIL SHEET
SANITARY SEWER PLANS

OSAGE
SECOND PLAT

drawn by: DF/MQ/JAA
checked by: C.G.W.
designed by: A.A.
QA/QC by: J.E.S.
project no.: C19-2339
drawing no.:
date: 2020.11.03

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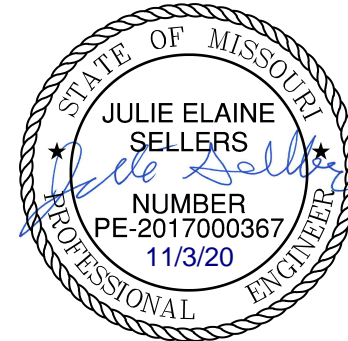
REVISIONS DESCRIPTION

DATE

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