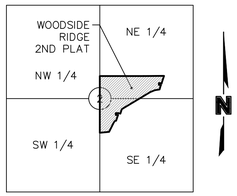
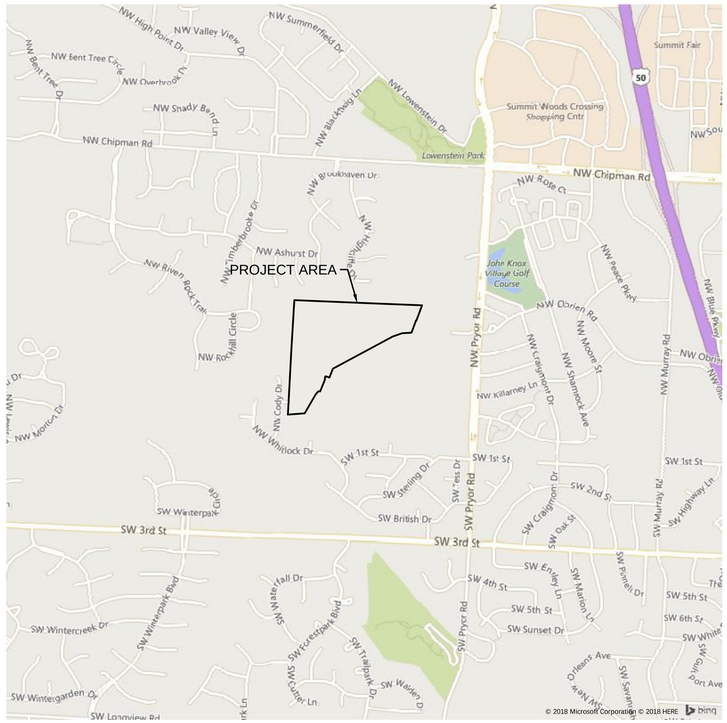


LOCATION MAP
Sec. 2, Twp. 47 N., Rge. 32 W.
(N.T.S.)

WOODSIDE RIDGE SECOND PLAT SANITARY SEWER PLANS

SECTION 2, TOWNSHIP 47 N, RANGE 32 W
IN LEE'S SUMMIT, JACKSON COUNTY, MO

PROJECT TEAM & UTILITY CONTACT LIST	
OWNER / DEVELOPER CLAYTON PROPERTIES GROUP, LLC, DBA SUMMIT HOMES 120 SE 30TH STREET LEE'S SUMMIT, MO 64082 CONTACT: VINCENT WALKER PHONE: 816.246.6700 FAX: 816.246.2662	UTILITY SERVICE NUMBERS NAME: DEVELOPMENT SERVICES PHONE: 816-969-1200 NAME: LEE'S SUMMIT WATER & SERVICES DEPARTMENT PHONE: 816-969-1940 NAME: SPIRE (MGE) PHONE: 314-342-0500 NAME: AT&T PHONE: 800-286-8313 NAME: EVERGY PHONE: 816-471-5275 NAME: SPECTRUM (TWC) PHONE: 877-772-2253 NAME: GOOGLE FIBER PHONE: 877-454-6959
ENGINEER OLSSON 1301 BURLINGTON, SUITE 100 NORTH KANSAS CITY, MO 64116 CONTACT: JULIE E SELLERS, P.E. PHONE: 816.361.1177	
SURVEYOR OLSSON 1301 BURLINGTON, SUITE 100 NORTH KANSAS CITY, MO 64116 CONTACT: JASON ROUDEBUSH, PLS PHONE: 816.361.1177	
GEOTECHNICAL ENGINEER OLSSON 1700 E. 123RD ST. OLATHE, KS 66061 CONTACT: JAMES LANDRUM PHONE: 816.829.0078	



SHEET LIST TABLE	
Sheet #	Sheet Title
201	COVER SHEET
202	GENERAL NOTES
C203	MASTER PLAN
C204	GENERAL LAYOUT
C205	GENERAL LAYOUT
C206	GENERAL LAYOUT
C207	SANITARY SEWER PLAN & PROFILE
C208	SANITARY SEWER PLAN & PROFILE
C209	SANITARY SEWER PLAN & PROFILE
C210	SANITARY SEWER PLAN & PROFILE
C211	SANITARY SEWER TABLES
C212	DETAILS SHEET
C213	DETAILS SHEET

☒ NOT FOR CONSTRUCTION

☐ REVIEWED FOR CONSTRUCTION

CALL BEFORE YOU DIG 1-800-DIG-RITE MISSOURI ONE CALL SYSTEM

PROPERTY DESCRIPTION:

Part of Lot 3B, WEST VILLAGE COMMERCIAL DEVELOPMENT, LOTS 3A AND 3B, a subdivision recorded as Instrument Number 19E0018413 in Book I182 at Page 62 in Jackson County Recorder of Deeds Office located in the Northeast and Southeast Quarter of Section 2, 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 Jason S Roudebush, P.L.S. 2002014092 as follows: Commencing at the Southeast corner of said Southeast Quarter; thence North 87°47'03" West, on the South line of said Southeast Quarter 2,633.21 feet to the Southwest corner of said Southeast Quarter; thence North 03°05'41" East, on the West line of said Southeast Quarter, 1,326.36 feet to the Southwest corner of said Lot 3B, also being the Southwest corner of the North half said Southeast Quarter, also being a point on the Easterly line of STERLING HILLS 5TH PLAT, a subdivision in said Lee's Summit recorded as Instrument Number I1273788 in Book I54 at Page 88 in said Jackson County Recorder of Deeds Office, also being the Southwest corner of proposed WOODSIDE RIDGE 1st Plat, Lots 1 thru 143 Inclusive, and Tracts A, B, C, D, E, F, G and H; thence North 03°05'41" East on said West line and said Easterly line, also being the West line of said Lot 3B, also being the Westerly line of proposed WOODSIDE RIDGE 1ST PLAT, LOTS 1 thru 143 Inclusive, and Tracts A, B, C, D, E, F, G and H, 389.26 feet to the Point of Beginning of the tract of land to be herein described; thence leaving said proposed Westerly line, continuing North 03°05'41" East on said West lines and said Easterly lines, 936.61 feet to the Northeast corner of said STERLING HILLS 5TH PLAT, also being a point on the Easterly line of WINTERSET WOODS – 3RD PLAT, a subdivision in said Lee's Summit recorded as Instrument Number 2003I0002463 in Book I74 at Page 14 in said Jackson County Recorder of Deeds Office, also being the Northwest corner of said Southeast Quarter; thence North 03°26'14" East, on the said West line of said Lot 3B, said Easterly line and West line of said Northeast Quarter, 665.72 feet to the Northwest corner of the South Half of said Northeast Quarter, also being the Northwest corner of said Lot 3B, also being the Northeast corner of said WINTERSET WOODS – 3RD PLAT, also being a point on the Southerly line of BROOKRIDGE ESTATES – SECOND PLAT LOTS 39–84, a subdivision in said Lee's Summit recorded as Instrument Number I802804 in Book I44 at Page 57 in said Jackson County Recorder of Deeds Office; thence South 87°37'42" East, along said Southerly line, also along the North line of said Lot 3B, also being the North line of said South Half of said South Half of said Northeast Quarter, also being the South line of THE FOREST OF BROOKRIDGE ESTATES – THIRD PLAT LOTS 117 – 133, a distance of 1,210.45 feet to the Southeast corner of said THE FOREST OF BROOKRIDGE ESTATES – THIRD PLAT LOTS 117 – 133 and to a point on said proposed Westerly line; thence South 87°37'42" East on said North line of said South Half of said South Half, said North line of said Lot 3B, and said proposed Westerly line, 574.95 feet; thence leaving said North lines, South 20°32'36" West, along said proposed Westerly line, 229.10 feet; thence Westerly, along said proposed Westerly line, on a curve to the left, having an initial tangent bearing of North 69°27'24" West with a radius of 425.00 feet, a central angle of 00°42'29" and an arc distance of 5.25 feet; thence South 19°50'07" West, along said proposed Westerly line 178.42 feet; thence South 85°52'23" West, along said proposed Westerly line, 130.41 feet; thence South 70°59'24" West, along said proposed Westerly line, 137.47 feet; thence South 61°49'26" West, along said proposed Westerly line, 951.56 feet; thence South 21°24'31" West, along said proposed Westerly line, 135.10 feet; thence Westerly, along said proposed Westerly line, along a curve to the left having an initial tangent bearing of North 68°35'29" West with a radius of 275.00 feet, a central angle of 12°33'32" and an arc distance of 60.28 feet; thence South 08°50'59" West, along said proposed Westerly line, 50.00 feet; thence South 22°12'04" West, along said proposed Westerly line, 173.03 feet; thence North 75°51'31" West, along said proposed Westerly line, 21.43 feet; thence South 41°11'03" West, along said proposed Westerly line, 60.06 feet; thence South 29°55'27" West, along said proposed Westerly line, 306.11 feet; thence South 85°54'26" West, along said proposed Westerly line, 236.75 feet to the Point of Beginning. Containing 1,514,368 square feet or 34.77 acres, more or less.

BENCHMARK

BMK #5 CHISELED SQUARE ON THE S.E. CORNER OF A CONCRETE PAD FOR A TRAFFIC SIGNAL BOX AT THE S.W. CORNER OF PRYOR ROAD AND O'BRIEN ROAD.

ELEVATION: 979.24

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

JULIE E SELLERS, P.E. — 7/10/20
CIVIL ENGINEER — DATE
MO# 2017000367

olsson
MO Certificate of Authority # 001592
1301 BURLINGTON, SUITE 100
NORTH KANSAS CITY, MO 64116
TEL 816.361.1177
www.olsson.com

STATE OF MISSOURI
JULIE ELAINE SELLERS
NUMBER PE-2017000367
7/10/20
PROFESSIONAL ENGINEER

NO. REV.	DATE	REVISIONS DESCRIPTION	BY
1	07/10/2020	REVISED PER CITY COMMENTS	

REVISIONS

COVER SHEET
SANITARY SEWER PLANS

WOODSIDE RIDGE
SECOND PLAT

LEE'S SUMMIT, MO

2020

drawn by: C.S.M
checked by: S.M.S
designed by: C.S.M
QA/QC by: J.E.S
project no.: C18.1140
date: 2020.07.10

SHEET
C201

DWG: F:\2018\1001-1500\018-1140-C\40-Design\AutoCAD\Final Plans\Sheets\GNCV\Sanitary Sewer Plans\C_TTL01_C181140.dwg USER: ssoylor
DATE: Jul 09, 2020 12:48pm

GENERAL NOTES:

1. LINEAR FOOT MEASUREMENTS SHOWN ON THE PLANS ARE HORIZONTAL MEASUREMENTS (NOT SLOPE MEASUREMENTS) FROM CENTER OF STRUCTURE TO CENTER OF STRUCTURE.

2. THE CONSTRUCTION COVERED BY THESE PLANS SHALL CONFORM TO THE CURRENT "CITY STANDARDS" AND SPECIFICATIONS OF THE CPD–DS–LDD, LEE'S SUMMIT, EXCEPT AS NOTED.

3. THE DEVELOPER SHALL PERFORM ALIGNMENT AND GRADE, INFILTRATION – EXFILTRATION, DEFLECTION, SOIL DENSITY, AND MANHOLE TESTS AS CALLED OUT IN SECTION 2500 OF THE CURRENT APWA (AMERICAN PUBLIC WORKS ASSOCIATION) STANDARDS AND SPECIFICATIONS. ANY SECTION OF SEWER FAILING ANY OF THE ABOVE MENTIONED TESTS SHALL BE RETESTED BY THE DEVELOPER AFTER REPLACEMENT OR REPAIR.

4. THE DEVELOPER MAY, AS AN ALTERNATE, SUBSTITUTE A.B.S. OR V.C.P. PIPE FOR P.V.C. PIPE. THE FOLLOWING PIPE DEFLECTION TEST SHALL BE IMPLEMENTED ON A.B.S. AND P.V.C. PIPE:

THE DEVELOPER SHALL PERFORM DIAMETRICAL DEFLECTION TESTS ON FLEXIBLE AND SEMI–FLEXIBLE (I.E. POLY–VINYL–CHLORIDE AND ACRYLONITRILLE BUTADIENE STYRENE) PIPE WHEN USED AS A PUBLIC DIAMETER. ALL TESTS HALL BE CONDUCTED BETWEEN MANHOLES.
SEWER TESTS SHALL BE CONDUCTED BETWEEN MANHOLES.
SEWER TESTED SHALL BE 100% OF THE TOTAL SEWER INSTALLED.
A MANDREL WITH A DIAMETER EQUAL TO 95% OF THE INSIDE DIAMETER OF THE PIPE BEING INSTALLED SHALL BE USED.

5. THE DEVELOPER SHALL PERFORM DIAMETRICAL DEFLECTION TESTS ON FLEXIBLE AND SEMI–FLEXIBLE (I.E. POLY–VINYL–CHLORIDE AND ACRYLONITRILE BUTADIENE STYRENE) PIPE WHEN USED AS A PUBLIC SEWER PRIOR TO FINAL ACCEPTANCE. THE MAXIMUM ALLOWABLE DEFLECTION SHALL BE 5% OF THE INSIDE DIAMETER. ALL TESTS SHALL BE CONDUCTED BETWEEN MANHOLES. SEWER TESTED SHALL BE 100% OF THE TOTAL SEWER INSTALLED. A MANDREL WITH A DIAMETER EQUAL TO 95% OF THE INSIDE DIAMETER OF THE PIPE BEING INSTALLED SHALL BE USED.

6. PRIOR TO ORDERING PRE–CAST STRUCTURES, SHOP DRAWINGS ARE TO BE SUBMITTED TO THE DESIGN ENGINEER FOR APPROVAL. THE DESIGN ENGINEER SHALL INDICATE APPROVAL OF THE SHOP DRAWINGS.

7. DEVELOPER SHALL PROVIDE EARTHWORK AND MATERIAL TESTING TO COMPLY WITH THE STANDARD SPECIFICATIONS OF THE CPD–DS–LDD.

8. DURING CONSTRUCTION OF THE PROJECT, THE DEVELOPER SHALL KEEP ONE RECORD COPY OF ALL SPECIFICATIONS, DRAWINGS, ADDENDA, MODIFICATIONS, AND SHOP DRAWINGS AT THE SITE IN GOOD CONDITION. THESE DOCUMENTS SHALL BE ANNOTATED TO SHOW ALL CHANGES MADE DURING CONSTRUCTION. THE EXACT LOCATION OF ALL SEWER WYES, TEES, AND SERVICE LINES SHALL BE RECORD ON THESE DOCUMENTS. AT THE CONCLUSION OF CONSTRUCTION, THESE DOCUMENTS SHALL BE FORWARDED TO THE DESIGN ENGINEER FOR PREPARATION OF AS–BUILT DRAWINGS.

9. THE PROJECT BENCHMARKS AND ALL ELEVATIONS SHOWN ON THE PROFILES ARE N.G.V.D.

10. THE DEVELOPER IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES, AND WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE DEVELOPER MUST CALL THE APPROPRIATE UTILITY COMPANY AT LEAST 48 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION OF UTILITIES. IT IS THE DEVELOPERS RESPONSIBILITY TO RELOCATE AND/OR ADJUST ALL EXISTING UTILITIES, CONFLICT WITH PROPOSED SITE IMPROVEMENTS.

11. THE DEVELOPER SHALL ALSO UTILIZE THE FOLLOWING TOLL FREE PHONE NUMBER PROVIDED BY "MISSOURI ONE CALL SYSTEM, INC." 1–800–DIG–RITE. THIS PHONE NUMBER IS APPLICABLE ANYWHERE WITHIN THE STATE OF MISSOURI. THE NAMES AND TELEPHONE NUMBERS OF UTILITY COMPANIES, EVEN IF ONLY REMOTELY INVOLVED WITH THIS HIS PROJECT ARE LISTED UNDER "UTILITY CONTACTS" THIS SHEET.

12. THE DEVELOPER SHALL PROVIDE AND MAINTAIN ALL TRAFFIC CONTROL MEASURES NECESSARY TO ENSURE THAT THE GENERAL PUBLIC IS PROTECTED AT ALL TIMES. TRAFFIC CONTROL SHALL CONFORM TO THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD–LATEST EDITION).

13. THE SITE PLAN IS BASED ON SURVEY BY OLSSON, COMPLETED 02–24–2020. CONDITIONS ON SITE AT THE TIME OF CONSTRUCTION MAY VARY FROM THE SURVEYED CONDITIONS. DEVELOPER SHALL VERIFY EXISTING SITE CONDITIONS PRIOR TO BEGINNING CONSTRUCTION.

14. THE DEVELOPER IS RESPONSIBLE FOR OBTAINING ALL PERMITS (EXCEPT LAND DISTURBANCE), BONDS, INSURANCE, ETC. AND PAYING ALL FEES. THE COST OF DEVELOPERS BONDS AND INSURANCE AS REQUIRED BY THE CITY OF LEE'S SUMMIT SHALL BE THE RESPONSIBILITY OF THE DEVELOPER.

15. DEVELOPER SHALL COMPLY WITH ALL APPLICABLE REGULATIONS REQUIRED BY THE CITY AND THE STATE.

16. THE DEVELOPER MUST REMOVE AT HIS COST ANY BAD SUBSURFACE SOIL WHICH WOULD NOT BE ABLE TO SUPPORT ANY PROPOSED PUBLIC IMPROVEMENT. BACKFILL SHALL BE ACCOMPLISHED IN ACCORDANCE WITH SECTIONS 2100 AND 2201 ENTITLED "GRADING AND SITE PREPARATION" AND "SUBGRADE PREPARATION".

17. VERTICAL CONTROL IS BASED ON THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88). THE DEVELOPER IS ADVISED TO USE BENCHMARK INFORMATION FOR VERTICAL CONTROL.
HORIZONTAL CONTROL (CONTROL POINT INFORMATION) IS BASED ON THE NORTH AMERICAN DATUM OF 1983 (NAD83). THE DEVELOPER IS ADVISED TO USE CONTROL POINT INFORMATION FOR HORIZONTAL CONTROL.

PLUMBING NOTES:

1. ALL LOTS HAVE BEEN SUPPLIED WITH WYES OR LATERALS. PLUMBER SHALL CONNECT HOUSE SERVICE TO MAIN AT LOCATIONS INDICATED.

2. ALL SERVICE LINES SHALL BE LAID AT 2% MINIMUM SLOPE, UNLESS OTHERWISE NOTED.

3. M.S.F.E. ELEVATION – INDICATES BASEMENT FLOOR ELEVATION OR LOWEST FLOOR ELEVATION SERVICEABLE BY PROPOSED SANITARY SEWER.

EXCAVATING NOTES:

1. IT SHALL BE THE RESPONSIBILITY OF THE DEVELOPER TO CONTROL DOWNSTREAM EROSION AND SILTATION DURING ALL PHASES OF CONSTRUCTION.

2. THE DEVELOPER SHALL BE RESPONSIBLE FOR RECORDING ROCK ELEVATIONS AT 25 FOOT (MAXIMUM) INTERVALS WHERE ENCOUNTERED, AND FURNISHING THIS INFORMATION TO THE DESIGN ENGINEER FOR USE ON AS–BUILTS.

3. THE LOCATIONS OF EXISTING UTILITIES AS SHOWN ARE APPROXIMATE. IT SHALL BE THE RESPONSIBILITY OF THE DEVELOPER TO VERIFY THE LOCATIONS OF ALL EXISTING UTILITIES. EROSION CONTROL PLANS AND PROCEDURES SHALL BE IN PLACE PRIOR TO ANY EXCAVATION.

4. NO SUBSURFACE EXPLORATION FOR THE DETERMINATION OF AND/OR THE LOCATION OF EXISTING ROCK HAS BEEN MADE.

5. WHEN SEWER LINES CROSS A LOW POINT IN A CREEK, THE SEWER LINE MUST BE ENCASED ACCORDING TO LEE'S SUMMIT.

6. DEVELOPER IS RESPONSIBLE FOR KEEPING ALL PUBLIC ROADWAYS ADJACENT TO THE CONSTRUCTION SITE FREE OF DIRT AND DEBRIS RESULTING FROM ACTIVITIES RELATED TO THE CONSTRUCTION OF THIS PROJECT. INSPECTIONS AND CLEANUP TO OCCUR ON A DAILY BASIS.

7. DEVELOPER SHALL KEEP THE ENTIRE PROJECT SITE FREE OF DEBRIS AND TRASH AT ALL TIMES. DEVELOPER SHALL EXECUTE WORK USING METHODS THAT MINIMIZE EXCESSIVE NOISE OR DUST EMISSIONS. DEVELOPER SHALL PROVIDE METHODS, MEANS AND FACILITIES TO PREVENT CONTAMINATION OF SOIL OR WATER FROM DISCHARGE OF REGULATED MATERIALS (I.E. FUEL) USED DURING CONSTRUCTION.

8. THE DEVELOPER SHALL ERECT AND MAINTAIN ORANGE COLORED TEMPORARY CONSTRUCTION FENCE AROUND ALL AREAS INDICATED ON THE PLANS TO BE LEFT UNDISTURBED BOTH TEMPORARY AND PERMANENTLY THE DEVELOPER WILL BE GIVEN NOTICE WHEN HE MAY ENTER THESE AREAS MARKED TEMPORARY BY THE OWNER ONCE PERMITS HAVE BEEN OBTAINED. THE FENCE MATERIAL SHALL BE 48" TALL. HIGH DENSITY POLYETHYLENE (HDPE) WITH NOMINAL MESH OPENING SIZE OF 1.25 INCHES X 1.25 INCHES.

LEGEND	
ECTVOH	EXISTING CABLE TV, OVERHEAD
ECTV	EXISTING CABLE TV, UNDERGROUND
CTVOH	PROPOSED CABLE TV, OVERHEAD
CTV	PROPOSED CABLE TV, UNDERGROUND
FCTVOH	FUTURE CABLE TV, OVERHEAD
FCTV	FUTURE CABLE TV, UNDERGROUND
EFOOH	EXISTING FIBER OPTIC, OVERHEAD
EFO	EXISTING FIBER OPTIC, UNDERGROUND
FOOH	PROPOSED FIBER OPTIC, OVERHEAD
FO	PROPOSED FIBER OPTIC, UNDERGROUND
FFOOH	FUTURE FIBER OPTIC, OVERHEAD
FFO	FUTURE FIBER OPTIC, UNDERGROUND
EFP	EXISTING FIRE PROTECTION SYSTEM LINE
FP	PROPOSED FIRE PROTECTION SYSTEM LINE
FFP	FUTURE FIRE PROTECTION SYSTEM LINE
EFL	EXISTING FUEL LINE
FL	PROPOSED FUEL LINE
FFL	FUTURE FUEL LINE
EG	EXISTING NATURAL GAS LINE
G	PROPOSED NATURAL GAS LINE
FG	FUTURE NATURAL GAS LINE
ETELOH	EXISTING TELEPHONE LINE, OVERHEAD
ETEL	EXISTING TELEPHONE LINE, UNDERGROUND
TELOH	PROPOSED TELEPHONE LINE, OVERHEAD
TEL	PROPOSED TELEPHONE LINE, UNDERGROUND
FTELOH	FUTURE TELEPHONE LINE, OVERHEAD
FTEL	FUTURE TELEPHONE LINE, UNDERGROUND
EEOH	EXISTING POWER\ELECTRIC LINE, OVERHEAD
EE	EXISTING POWER\ELECTRIC LINE, UNDERGROUND
EOH	PROPOSED POWER\ELECTRIC LINE, OVERHEAD
E	PROPOSED POWER\ELECTRIC LINE, UNDERGROUND
FEOH	FUTURE POWER\ELECTRIC LINE, OVERHEAD
FE	FUTURE POWER\ELECTRIC LINE, UNDERGROUND
ESS	EXISTING SANITARY SEWER
SS	PROPOSED SANITARY SEWER
FSS	FUTURE SANITARY SEWER
ESL	EXISTING STEAM LINE
SL	PROPOSED STEAM LINE
FSL	FUTURE STEAM LINE
EST	EXISTING STORM SEWER
ST	PROPOSED STORM SEWER
FST	FUTURE STORM SEWER
EW	EXISTING WATER LINE
W	PROPOSED WATER LINE
FW	FUTURE WATER LINE

1

ESTIMATE OF QUANTITIES

ITEM NO.	DESCRIPTION	UNIT	QUANTITY	AS-BUILT
STREET				
1	8" SANITARY PVC (SDR–26)	L.F.	2903.2	
2	MANHOLES, STD. 4' DIA.	EA.	17	
3	DROP MANHOLE STD. 4' DIA.	EA.	3	
4	DROP ADDITION	V.F.	24.07	
5	CONNECTION TO EXISTING M.H.	EA.	3	
6	SERVICE WYE	EA.	47	
7	4" LATERAL PIPE	L.F.	1888.76	

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.

AS–BUILT / SERVICE LINE NOTE
1.) CONTRACTOR SHALL PLACE 2"X4" TIMBER OR METALLIC TAPE AT END OF EACH SERVICE LINE STUB. STANDARD 8' LENGTH MAY BE VARIED WITH 3' EXPOSED WHEN PLACED DIRECTLY OVER THE SERVICE LINE TERMINATION POINT. 2"X4" TIMBER SHALL BE MARKED APPROPRIATELY TO IDENTIFY SEWER SERVICE STUB.

2.) CONTRACTOR SHALL BE RESPONSIBLE FOR RECORDING OF ROCK ELEVATIONS AT 25' INTERVALS WHERE ENCOUNTERED. CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR RECORDING SERVICE LINE LOCATIONS FROM THE DOWNSTREAM OR UPSTREAM MANHOLE AND SERVICE LINE LENGTHS DURING CONSTRUCTION OPERATIONS. CONTRACTOR SHALL ALSO RECORD VERTICAL ELEVATIONS WITH A REFERENCE POINT. ALL INFORMATION SHALL BE PROVIDED TO THE ENGINEER OF RECORD FOR PREPARATION OF AS–BUILT PLANS.

CONTROL POINT TABLE

POINT NUMBER	EASTING	NORTHING	POINT ELEVATION	DESCRIPTION
1	2813424.811	1004323.277	978.52	SET ⅝" IB/CAP ON THE WEST SIDE OF PRYOR ROAD ON THE NORTH SIDE OF THE NORTH ENTRANCE TO THE JOHN KNOX VILLAGE CARE CENTER. 23.0' S TO BACK OF CURB. 51.0' SE TO POWER POLE. 52.4' S TO LIGHT POLE.
2	2810579.799	1003600.769	965.27	SET ⅝" IB/CAP ON THE SW CORNER OF THE INTERSECTION OF NW ASHURST AND NW ESSEX AVE. 12.2' NW TO CENTERLINE FIBER BOX. 37.3' E TO STOP SIGN. 39.7' E–NE TO LIGHT POLE.
3	2810569.194	1000980.591	904	SET ⅝" IB/CAP AT THE SE CORNER OF NW CODY DRIVE AND NW WHITLOCK DRIVE. 12.2' E TO NW CORNER CURB INLET. 7.7' SE TO POWER POLE. 49.7' W–NW TO STOP SIGN.
4	2813406.046	1000727.167	958.11	SET ⅝" IB/CAP ON THE SE CORNER SW PRYOR ROAD AND SW 1ST STREET. 10.8' NE TO FIRE HYDRANT. 22.1' NE TO SE CORNER CURB INLET. 22.0' SW TO NE CORNER CURB INLET.
6	2813383.638	1002469.496	979.56	SET ⅝" IB/CAP ON THE SW CORNER OF PRYOR ROAD AND O'BRIEN ROAD. IT IS IN LINE WITH THE PC OF THE CURB RETURN N AND THE BENCHMARK E.

BENCHMARK

POINT NUMBER	EASTING	NORTHING	POINT ELEVATION	DESCRIPTION
5	2813403.101	1002468.034	979.24	CHISELED BOX ON THE SE CORNER OF A CONCRETE PAD FOR A TRAFFIC SIGNAL BOX AT THE SW CORNER OF PRYOR ROAD AND O'BRIEN ROAD.

ALL NOTES REFERENCED ON THIS PLAN SHEET MAY HAVE APPLICATIONS TO EVERY FACET OF THE CONSTRUCTION PLANS. THE NOTE HEADINGS OR TITLES ARE TO BE USED AS A GENERAL GUIDE TO APPLICABLE SITUATIONS.

olsson
MO Certificate of Authority #001592
KS Certificate of Authority #E-2011
NORTH KANSAS CITY, MO 64116
TEL 816.361.1177
www.olsson.com

STATE OF MISSOURI
JULIE ELAINE SELLERS
NUMBER PE-2017000367
7/10/20
PROFESSIONAL ENGINEER

NO. REV.	DATE	REVISIONS DESCRIPTION	BY
1	07/10/2020	REVISED PER CITY COMMENTS	

REVISIONS

GENERAL NOTES
SANITARY SEWER PLANS

WOODSIDE RIDGE
SECOND PLAT

LEE'S SUMMIT, MO

2020

drawn by: C.S.M
checked by: S.M.S
designed by: C.S.M
QA/QC by: J.F.S
project no.: C18-1140
date: 2020.07.10

SHEET
C202

DWG: F:\2018\1001-1500\018-1140-C\40-Design\AutoCAD\Final Plans\Sheets\GNCV\Sanitary Sewer Plans\C_GEN01_C181140.dwg
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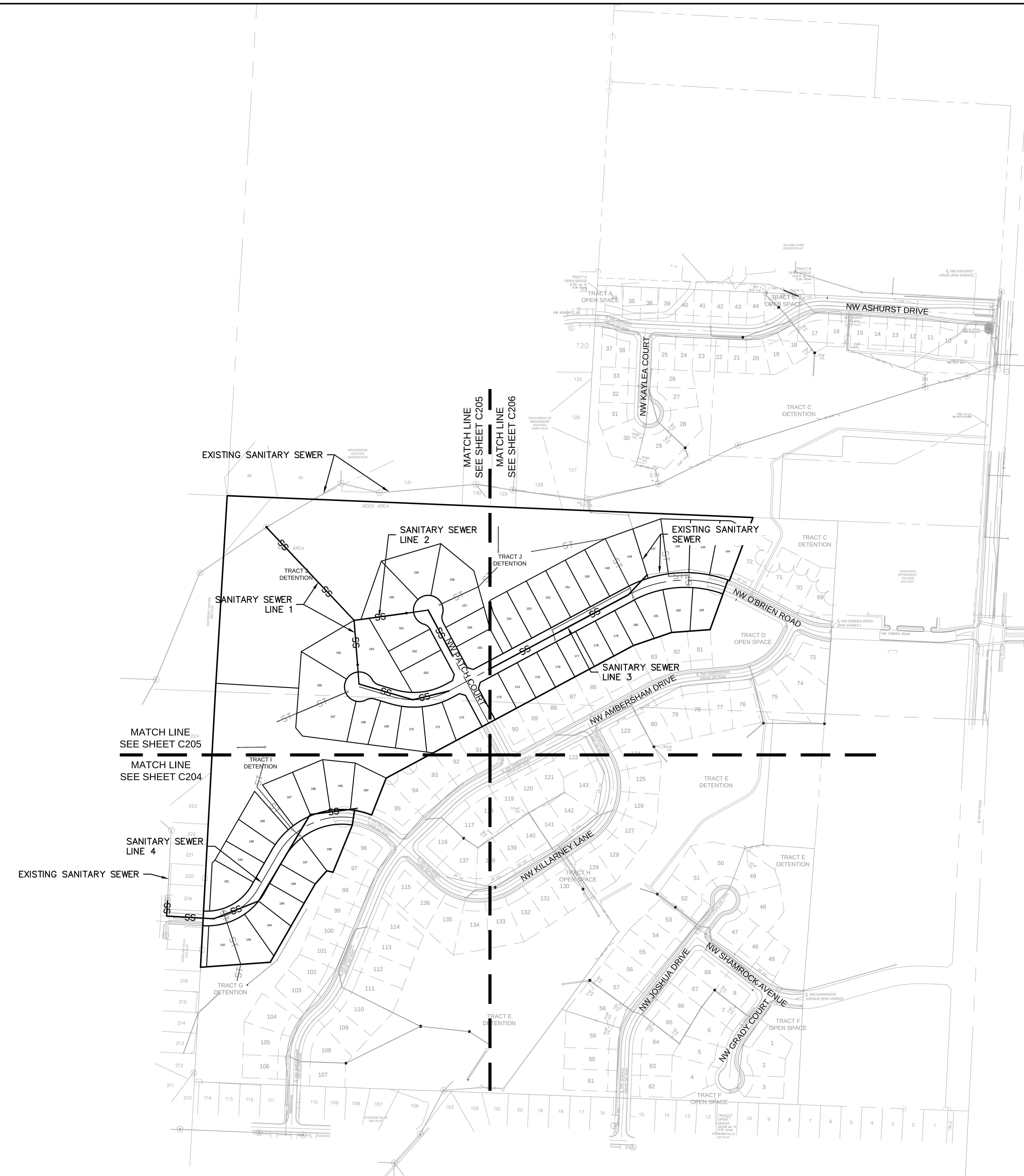
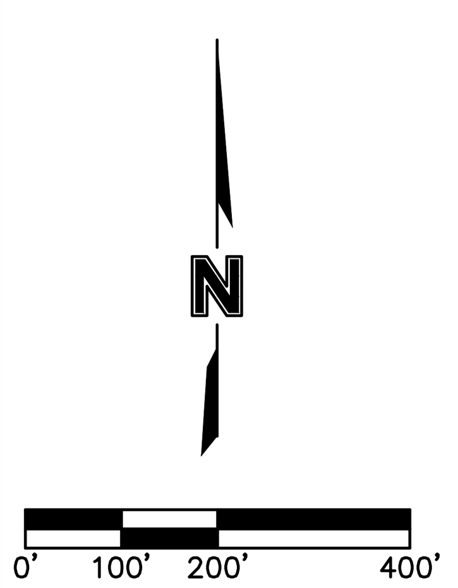
USER: ssoyor





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DATE: Jul 09, 2020 12:49pm

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STATE OF MISSOURI
JULIE ELAINE SELLERS
NUMBER PE-2017000367
PROFESSIONAL ENGINEER
7/10/20

REVISIONS

NO. REV.	DATE	REVISIONS DESCRIPTION	BY

MASTER PLAN
SANITARY SEWER PLANS

WOODSIDE RIDGE
SECOND PLAT

LEE'S SUMMIT, MO

2020

drawn by:	C.S.M
checked by:	S.M.S
designed by:	C.S.M
QA/QC by:	J.E.S
project no.:	C18-1140
date:	2020.07.10

SHEET
C203

DWG: F:\2018\1001-1500\018-1140-C\40-Design\AutoCAD\Final Plans\Sheets\GNCV\Sanitary Sewer Plans\C_GEN02_C181140.dwg USER: ssaylor
DATE: Jul 09, 2020 12:49pm

olsson

MO Certificate of Authority #-001592
1301 BURLINGTON, SUITE 100
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TEL 816.361.1177
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STATE OF MISSOURI
JULIE ELAINE SELLERS
NUMBER PE-2017000367
PROFESSIONAL ENGINEER
7/10/20

REVISIONS

NO. REV.	DATE	REVISIONS DESCRIPTION	BY
1	07/10/2020	REVISED PER CITY COMMENTS	

GENERAL LAYOUT
SANITARY SEWER PLANS

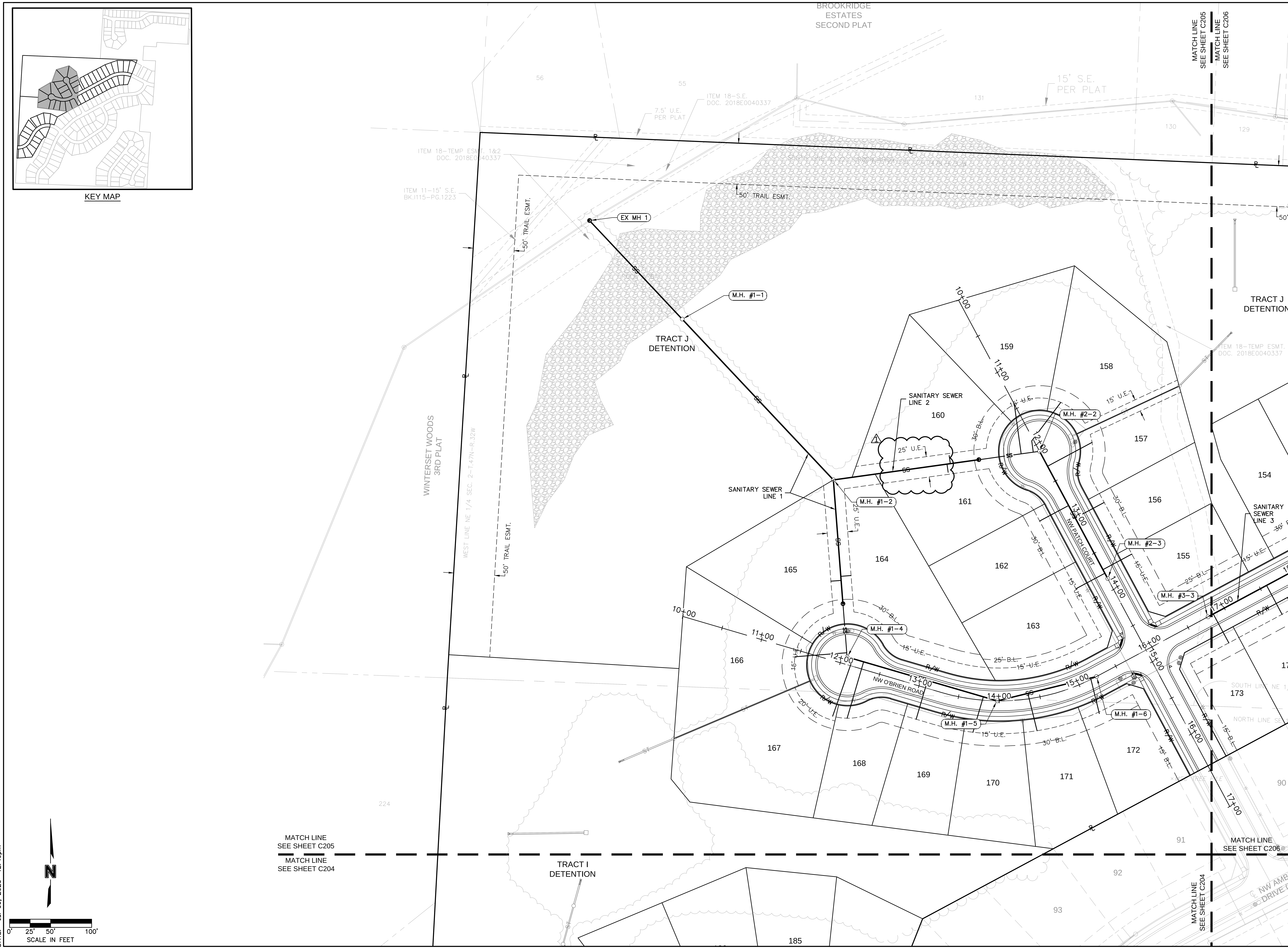
WOODSIDE RIDGE
SECOND PLAT

LEE'S SUMMIT, MO

2020

drawn by: C.S.M
checked by: S.M.S
designed by: C.S.M
QA/QC by: J.E.S
project no.: C18-1140
date: 2020.07.10

SHEET
C204



KEY MAP
BROOKRIDGE ESTATES SECOND PLAT
MATCH LINE SEE SHEET C205
MATCH LINE SEE SHEET C206
MATCH LINE SEE SHEET C204
15' S.E. PER PLAT
ITEM 18-S.E. DOC. 2018E0040337
7.5' U.E. PER PLAT
ITEM 18-TEMP ESMT. 1&2 DOC. 2018E0040337
ITEM 11-15' S.E. BK.I115-PG.1223
ITEM 18-TEMP ESMT. 3 DOC. 2018E0040337
50' TRAIL ESMT.
EX MH 1
M.H. #1-1
M.H. #1-2
M.H. #1-4
M.H. #1-5
M.H. #1-6
M.H. #2-2
M.H. #2-3
M.H. #3-3
TRACT J DETENTION
TRACT I DETENTION
SANITARY SEWER LINE 1
SANITARY SEWER LINE 2
SANITARY SEWER LINE 3
WINTERSET WOODS 3RD PLAT
WEST LINE NE 1/4 SEC. 2-T.47N-R.32W
SOUTH LINE NE 1/4
NW PATCH COURT
NW O'BRIEN ROAD
NW AMBER DRIVE
25' U.E.
15' U.E.
20' U.E.
30' B.L.
25' B.L.
15' B.L.
R/W
SCALE IN FEET
0' 25' 50' 100'
N

DWG: F:\2018\1001-1500\018-1140-C\40-Design\AutoCAD\Final Plans\Sheets\GNCV\Sanitary Sewer Plans\C_GEN02_C181140.dwg USER: ssoylor
DATE: Jul 09, 2020 12:49pm

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JULIE ELAINE SELLERS
NUMBER PE-2017000367
7/10/20
PROFESSIONAL ENGINEER

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1	7/10/2020	REVISED PER CITY COMMENTS	

GENERAL LAYOUT
SANITARY SEWER PLANS

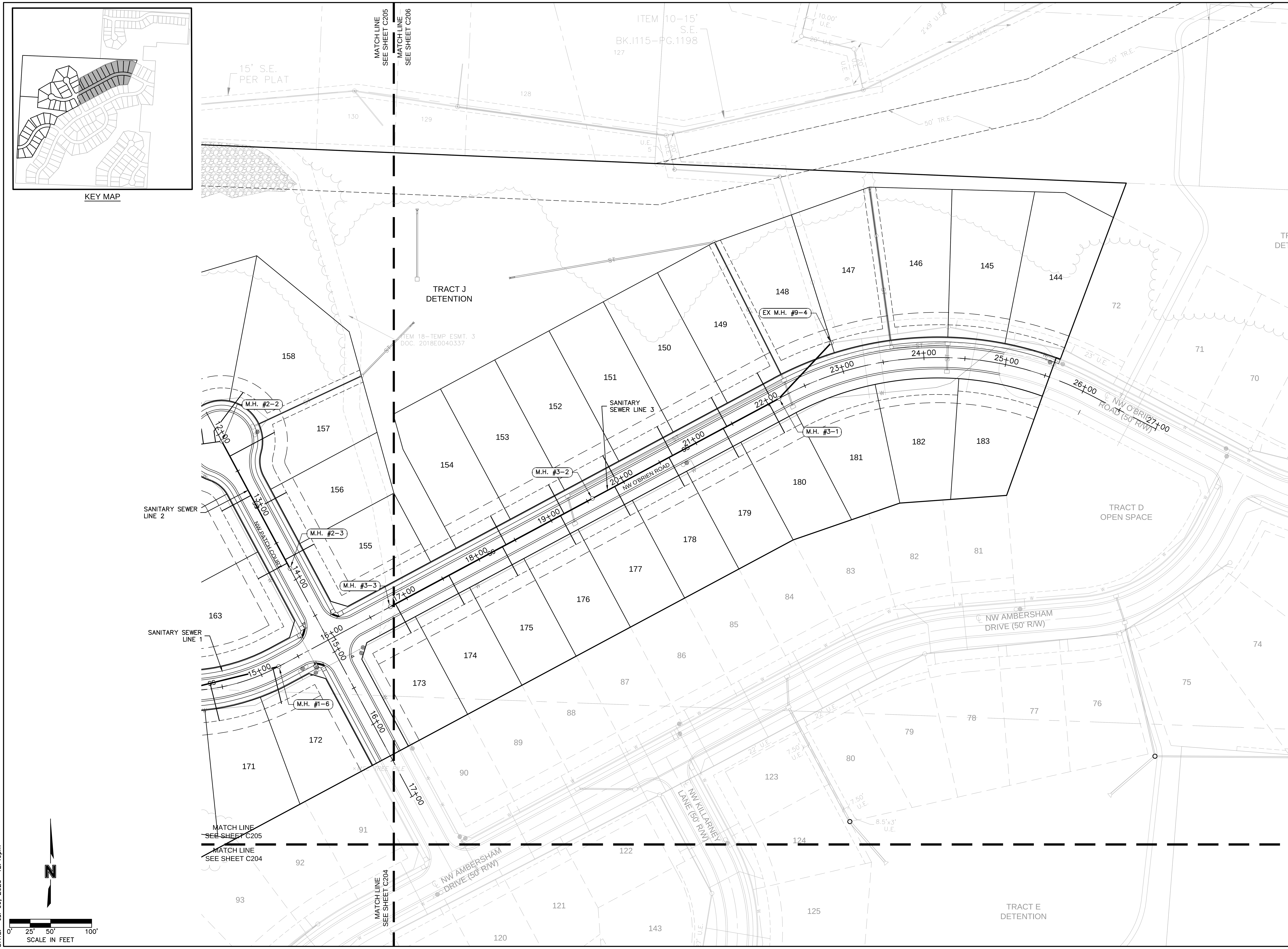
WOODSIDE RIDGE
SECOND PLAT

LEE'S SUMMIT, MO

2020

drawn by:	C.S.M
checked by:	S.M.S
designed by:	C.S.M
QA/QC by:	J.E.S
project no.:	C18-1140
date:	2020.07.10

SHEET
C205


KEY MAP
MATCH LINE SEE SHEET C205
MATCH LINE SEE SHEET C206
MATCH LINE SEE SHEET C204
TRACT J DETENTION
ITEM 18-TEMP ESMT. 3 DOC. 2018E0040337
ITEM 10-15' S.E. BK.I115-PG.1198
15' S.E. PER PLAT
SANITARY SEWER LINE 1
SANITARY SEWER LINE 2
SANITARY SEWER LINE 3
M.H. #2-2
M.H. #2-3
M.H. #3-3
M.H. #3-2
M.H. #3-1
M.H. #1-6
EX M.H. #9-4
NW PATCH COURT
NW O'BRIEN ROAD
NW O'BRIEN ROAD (50' R/W)
NW AMBERSHAM DRIVE (50' R/W)
NW KILLARNEY LANE (50' R/W)
TRACT D OPEN SPACE
TRACT E DETENTION
144
145
146
147
148
149
150
151
152
153
154
155
156
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180
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182
183
SCALE IN FEET
0' 25' 50' 100'
N

DWG: F:\2018\1001-1500\018-1140-C\40-Design\AutoCAD\Final Plans\Sheets\GNCV\Sanitary Sewer Plans\C_GEN02_C181140.dwg USER: ssaylor
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REVISIONS

GENERAL LAYOUT
SANITARY SEWER PLANS

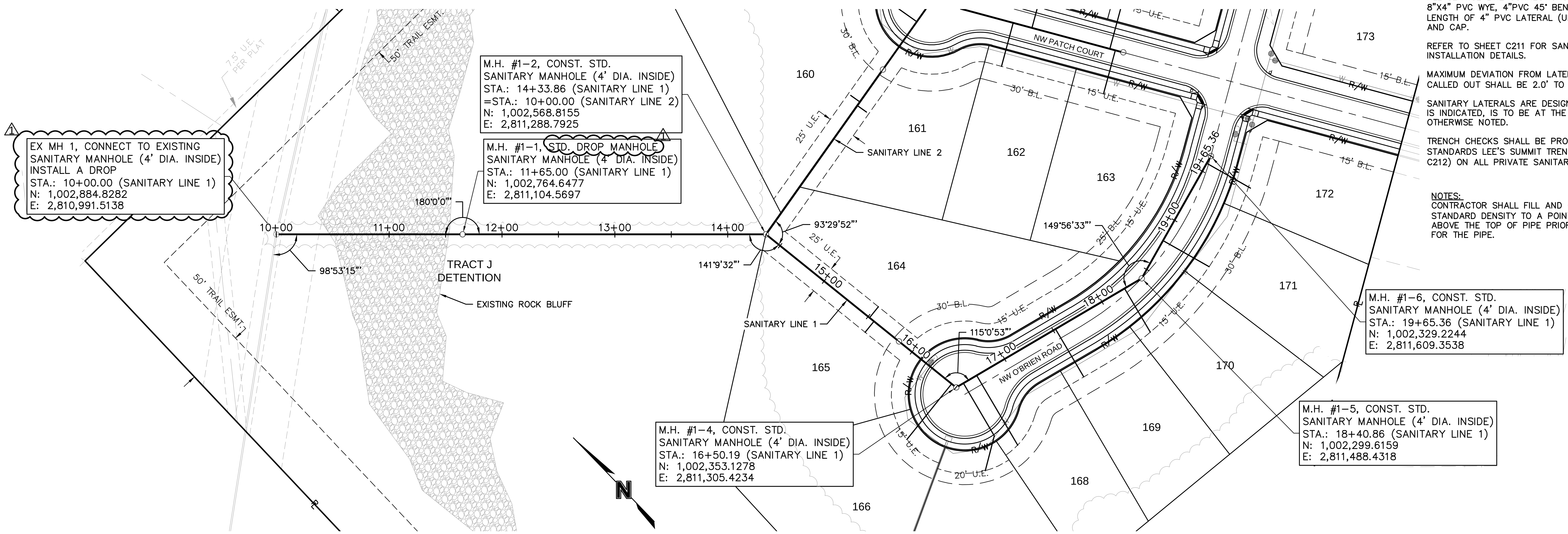
WOODSIDE RIDGE
SECOND PLAT

2020

LEE'S SUMMIT, MO

drawn by: C.S.M
checked by: S.M.S
designed by: C.S.M
QA/QC by: J.E.S
project no.: C18-1140
date: 2020.07.10

SHEET
C206



NOTES:

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.

REFER TO SHEET C211 FOR SANITARY DESIGN AND LATERAL INSTALLATION DETAILS.

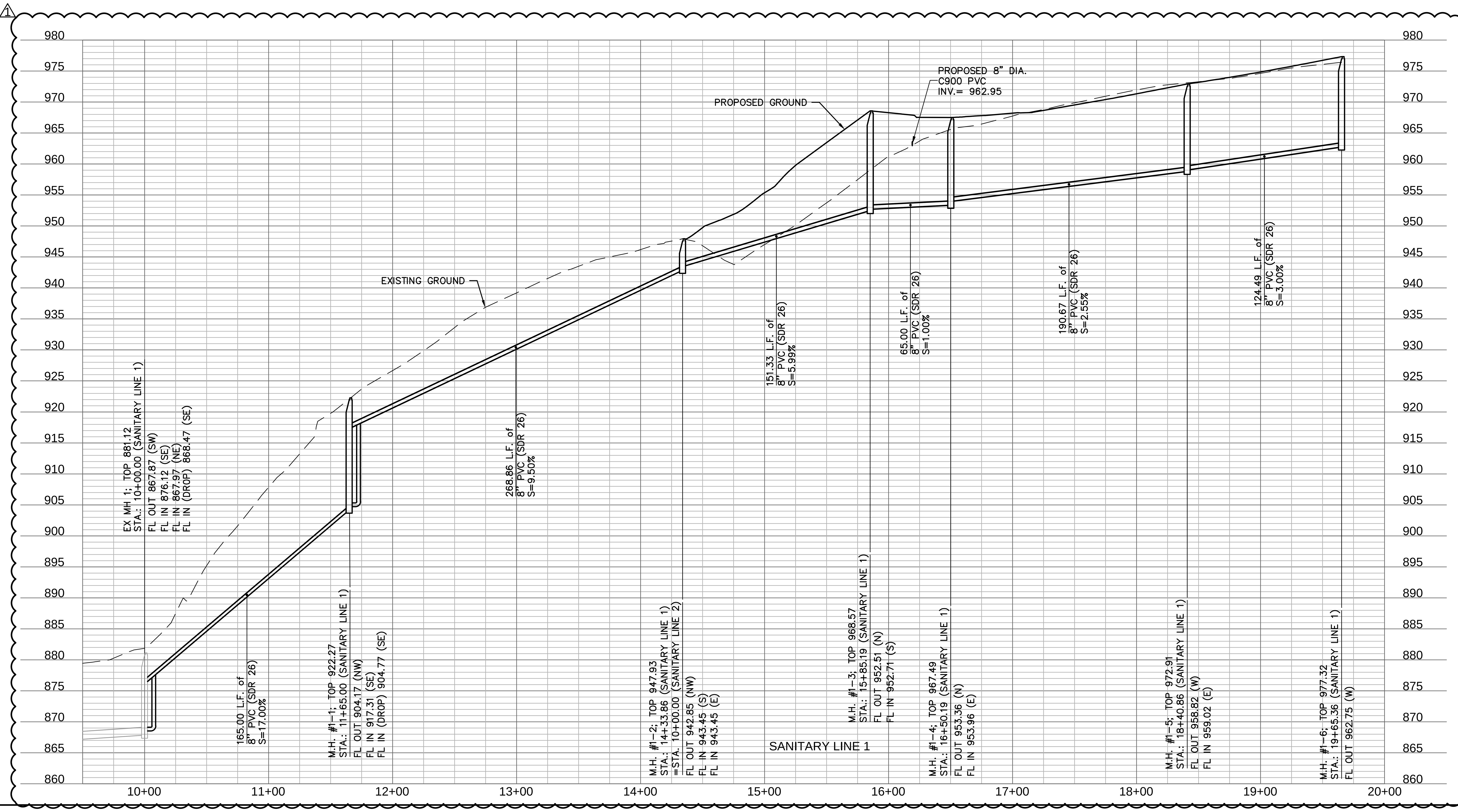
MAXIMUM DEVIATION FROM LATERAL STATION LOCATIONS AS CALLED OUT SHALL BE 2.0' TO AVOID PIPE JOINT.

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

TRENCH CHECKS SHALL BE PROVIDED IN ACCORDANCE WITH STANDARDS LEE'S SUMMIT TRENCH CHECK DETAIL (SHEET C212) ON ALL PRIVATE SANITARY SEWER SERVICE LATERALS.

NOTES:

CONTRACTOR SHALL FILL AND COMPACT TO 95% STANDARD DENSITY TO A POINT 36" MINIMUM ABOVE THE TOP OF PIPE PRIOR TO EXCAVATION FOR THE PIPE.



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2020

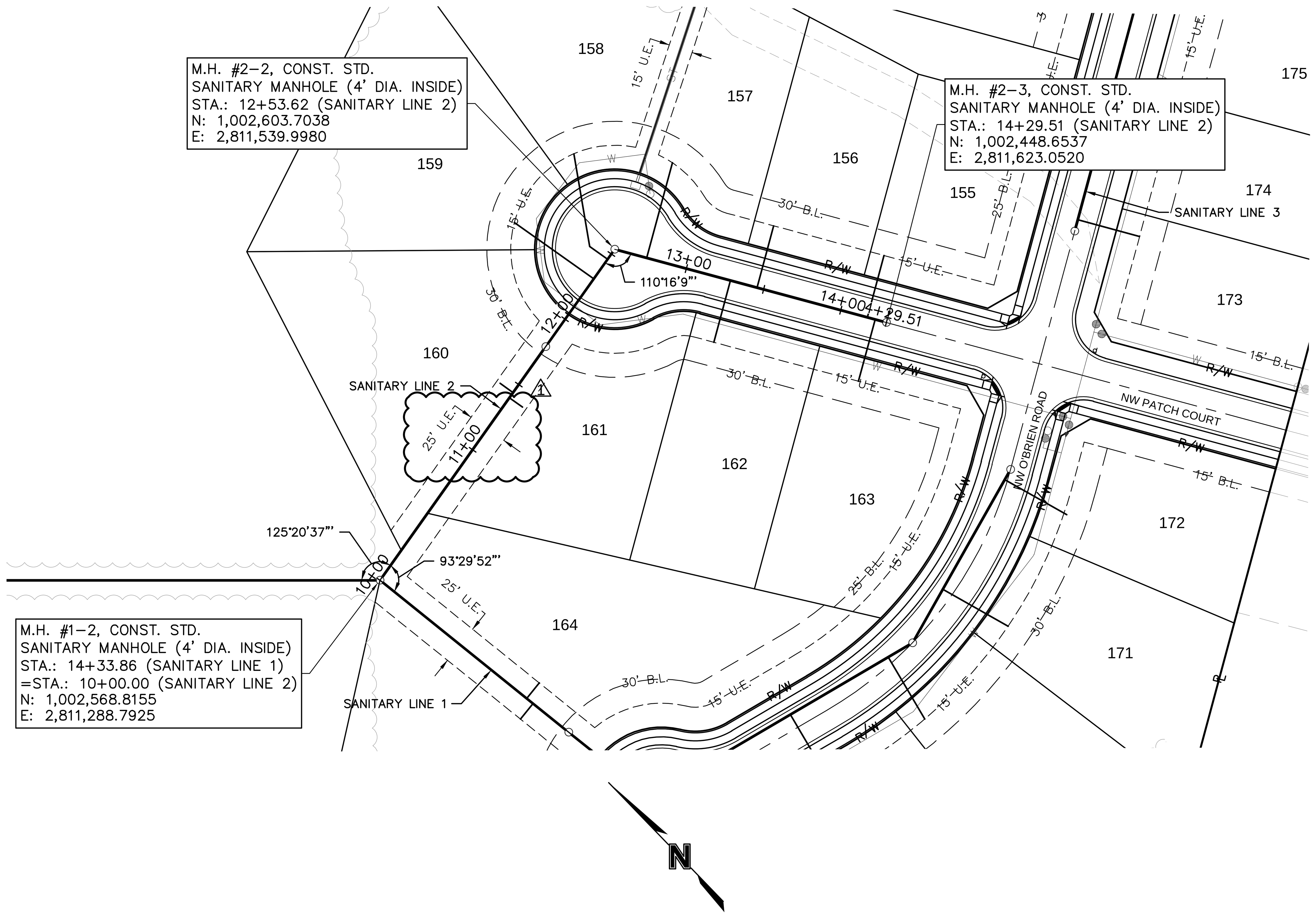
SANITARY SEWER PLAN & PROFILE
SANITARY SEWER PLANS

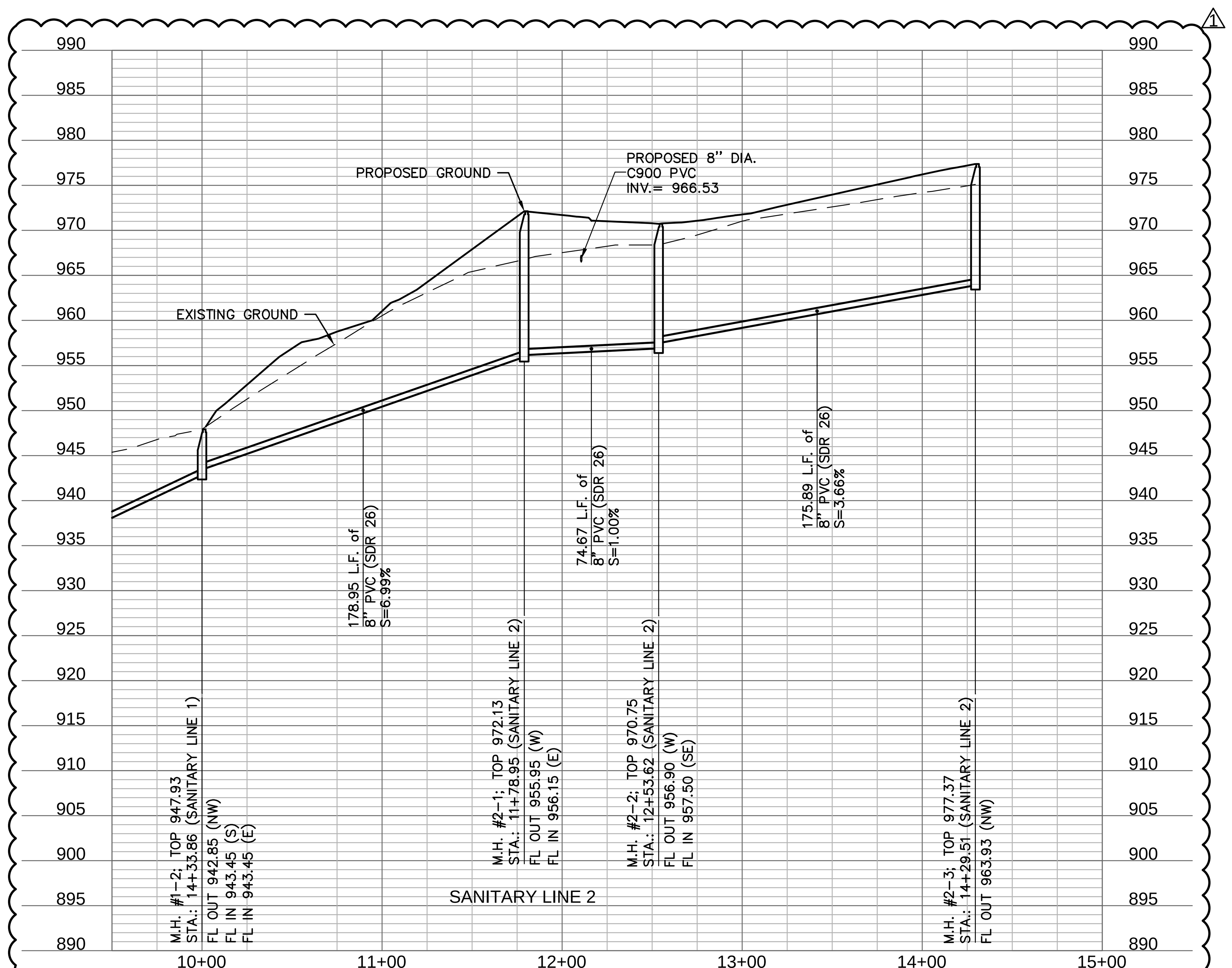
WOODSIDE RIDGE
SECOND PLAT

LEE'S SUMMIT, MO

drawn by:	C.S.M
checked by:	S.M.S
designed by:	C.S.M
QA/QC by:	J.E.S
project no.:	C18-1140
date:	2020.07.10

SHEET
C207





0' 25' 50' 100'
SCALE IN FEET

NOTES:

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NOTES:

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SANITARY SEWER PLAN & PROFILE
SANITARY SEWER PLANS

WOODSIDE RIDGE
SECOND PLAT

LEE'S SUMMIT, MO

2020

drawn by:	C.S.M
checked by:	S.M.S
designed by:	C.S.M
QA/QC by:	J.E.S
project no.:	C18-1140
date:	2020.07.10

SHEET
C208

DWG: F:\2018\1001-1500\018-1140-C\40-Design\AutoCAD\Final Plans\Sheets\GNCV\Sanitary Sewer Plans\C_SAN02_C181140.dwg USER: ssaylor
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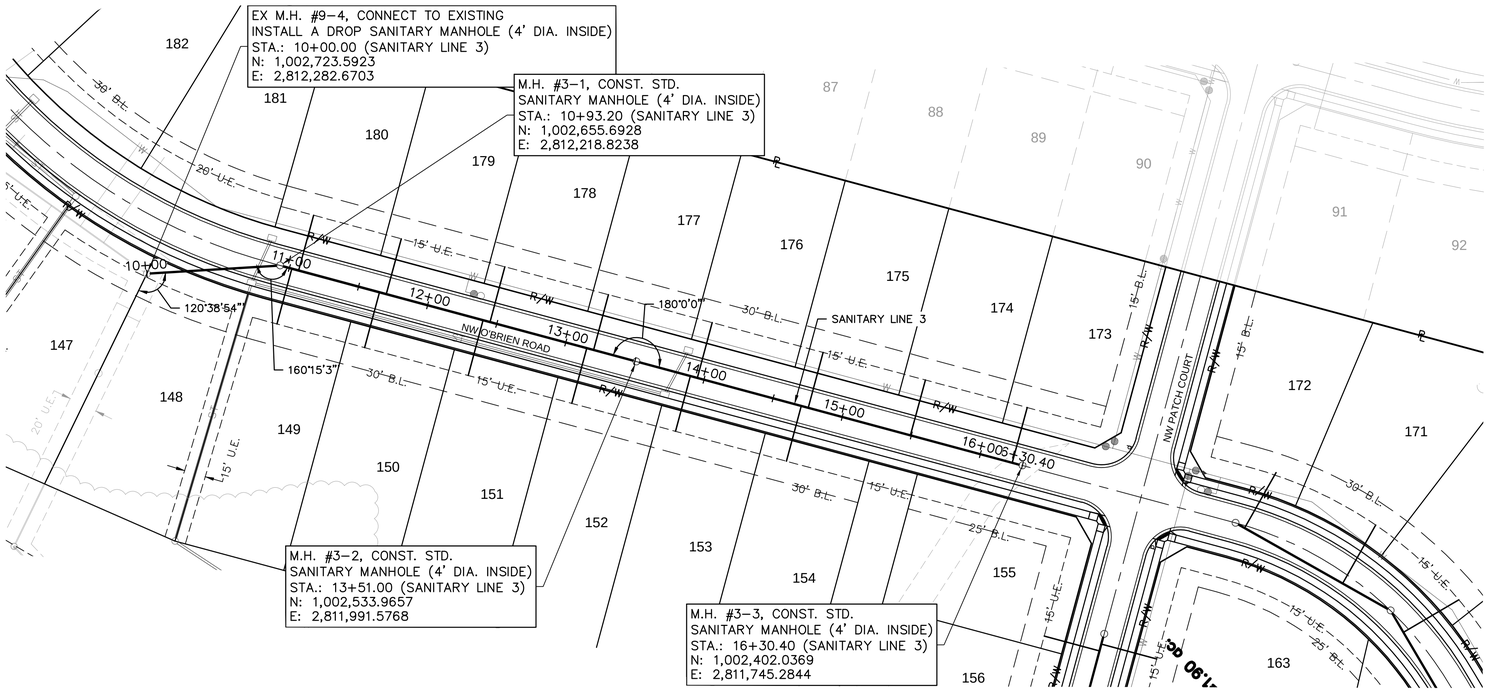

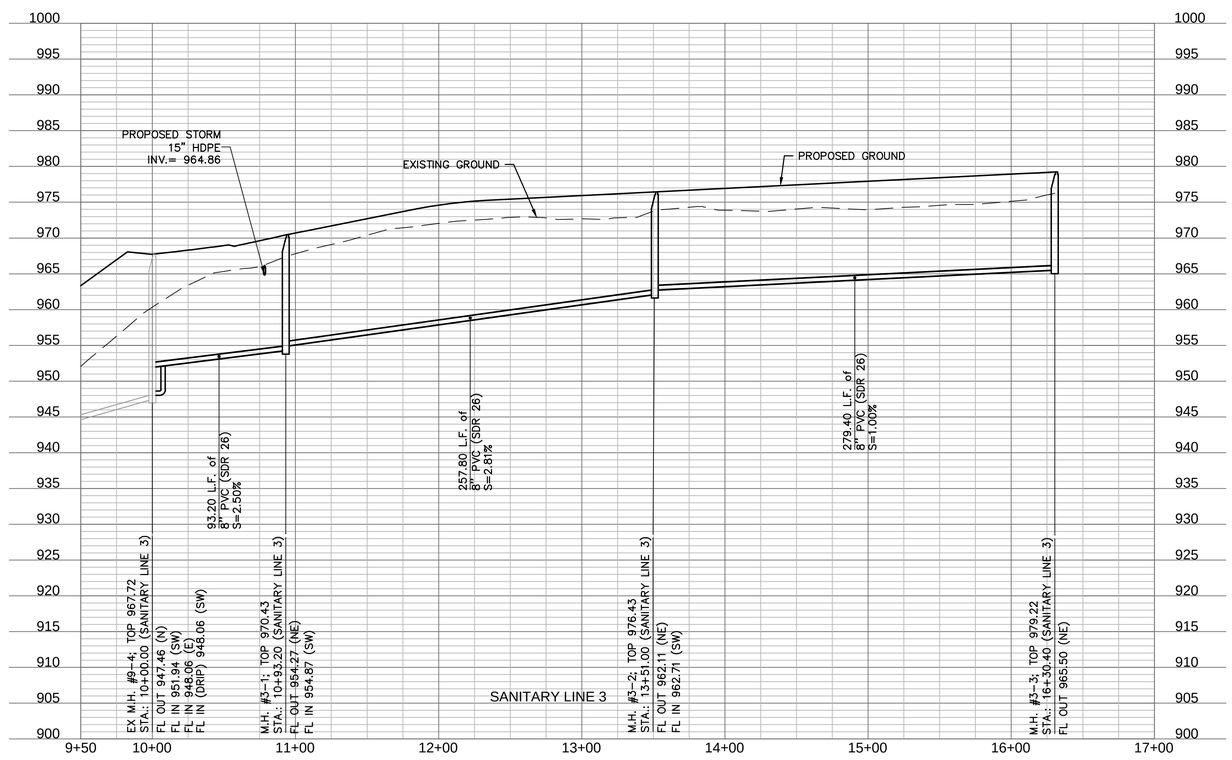

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SANITARY SEWER PLAN & PROFILE
SANITARY SEWER PLANS

WOODSIDE RIDGE
SECOND PLAT

LEE'S SUMMIT, MO

2020

drawn by: C.S.M
checked by: S.M.S
designed by: C.S.M
QA/QC by: J.E.S
project no.: C18-1140
date: 2020.07.10

SHEET
C209

20'
10'
5'
0'
0' 25' 50' 100'
SCALE IN FEET

DWG: F:\2018\1001-1500\018-1140-C\40-Design\AutoCAD\Final Plans\Sheets\GNCV\Sanitary Sewer Plans\C_SAN03_C181140.dwg
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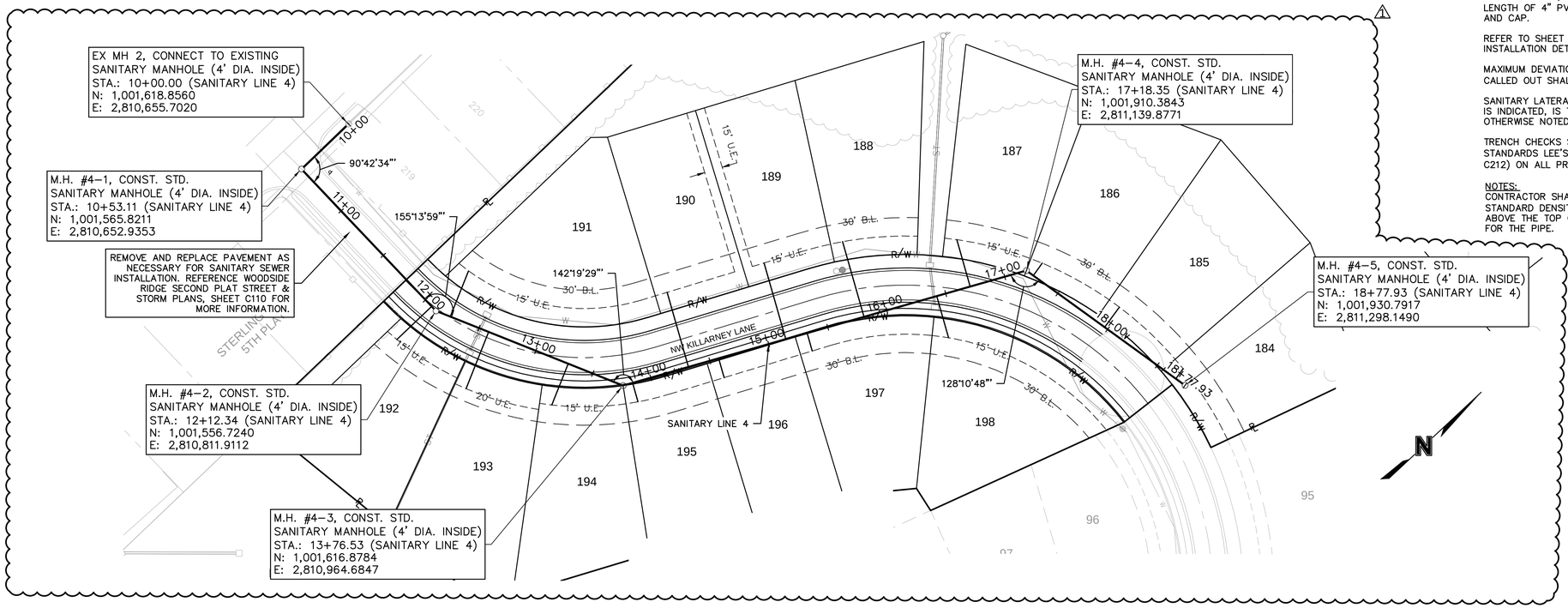

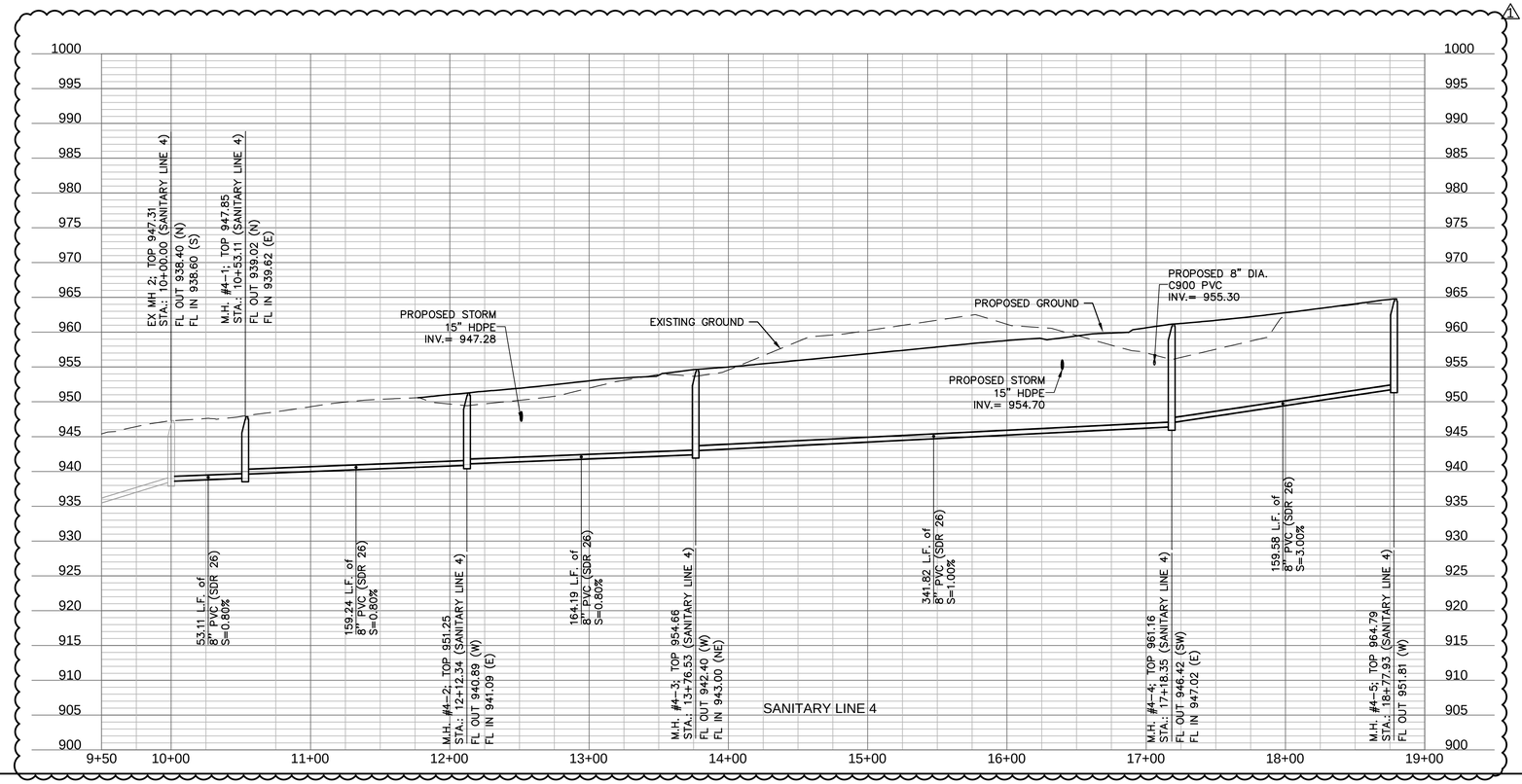

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SANITARY SEWER PLAN & PROFILE
SANITARY SEWER PLANS

WOODSIDE RIDGE
SECOND PLAT

LEE'S SUMMIT, MO

2020

drawn by: C.S.M
checked by: S.M.S
designed by: C.S.M
QA/QC by: J.E.S
project no.: C18.1140
date: 2020.07.10

SHEET
C210

SCALE IN FEET
0' 25' 50' 100'
20'
10'
5'
0'

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Sanitary Sewer Laterals

Lot Number	Lateral Station	Lateral Length (ft)	Riser (ft)	Flowline at Main (ft)	Flowline at End of Lateral (ft)	Minimum Servicable Floor Elevation (ft)
150	11+65.14	40.00	4.0	956.9	962.6	965.41
151	12+40.14	40.00	4.0	959.0	964.7	967.52
152	13+15.14	40.00	2.0	961.1	964.9	967.66
153	13+90.14	40.00	1.0	963.1	965.9	968.68
154	14+70.41	40.00	1.0	963.9	966.7	969.48
155	14+17.17	40.00	1.0	963.5	966.3	969.07
156	13+45.75	40.00	1.0	960.9	963.7	966.46
157	12+73.79	61.61	0.0	958.2	960.5	963.28
158	12+45.92	72.52	0.0	956.8	959.3	962.08
159	12+30.97	60.93	1.0	956.7	959.9	962.68
160	11+43.81	10.00	5.0	953.5	959.6	962.41
161	11+39.81	10.00	6.0	953.2	960.3	963.11
162	13+28.57	40.00	1.0	960.3	963.0	965.83
163	14+22.17	40.00	1.0	963.7	966.5	969.26
164	15+51.64	10.00	5.0	950.5	956.6	959.41
165	15+56.64	10.00	4.0	950.8	955.9	958.73
166	16+45.07	63.29	0.0	953.3	955.6	958.38
167	16+54.28	85.90	0.0	954.1	956.8	959.49
168	16+71.28	71.64	0.0	954.5	956.9	959.74
169	17+52.34	49.23	1.0	956.6	959.5	962.34
170	18+23.26	44.95	1.0	958.4	961.3	964.06
171	18+79.32	46.90	2.0	960.2	964.1	966.88
172	19+57.99	44.54	2.0	962.5	966.4	969.20
173	16+23.06	40.00	1.0	965.4	968.2	971.01
174	15+49.40	40.00	1.0	964.7	967.5	970.27
175	14+75.40	40.00	1.0	964.0	966.7	969.53
176	13+95.13	40.00	1.0	963.2	965.9	968.73
177	13+20.13	40.00	2.0	961.2	965.0	967.80
178	12+45.13	40.00	4.0	959.1	964.9	967.66
179	11+70.14	40.00	4.0	957.0	962.7	965.55
180	11+06.41	40.00	3.0	955.2	960.0	962.78
184	18+68.67	10.12	1.0	951.5	953.7	956.52
185	17+97.13	20.30	1.0	949.4	951.8	954.58
186	17+25.29	12.48	2.0	947.2	950.4	953.24
187	16+70.70	39.79	1.0	945.9	948.7	951.53
188	15+80.69	63.73	1.0	945.0	948.3	951.10
189	15+14.41	64.58	0.0	944.4	946.7	949.48
190	14+31.93	63.28	0.0	943.6	945.8	948.63
191	12+24.92	40.14	0.0	941.2	943.0	945.80
192	12+07.26	39.13	0.0	940.9	942.6	945.44
193	12+58.60	49.77	0.0	941.5	943.5	946.26
194	13+28.43	36.19	0.0	942.0	943.7	946.55
195	13+84.63	16.04	0.0	943.1	944.4	947.21
196	14+57.56	16.33	0.0	943.8	945.1	947.94
197	15+32.55	15.14	1.0	944.6	946.9	949.65
198	16+42.32	35.21	3.0	945.7	950.3	953.11

Sanitary Sewer Design Information

Upstream Manhole	Downstream Pipe Slope (%)	Downstream Pipe Diameter (in)	Proposed Cumulative Area (Ac.)	Future Cumulative Area (Ac.)	Peak Base Flow 50-Year Design (gpd)	Peak Inflitration Flow 50-Year Design (gpd)	Peak Inflow 50-Year Design (cfs)	Total Peak Flow (cfs)	Downstream Pipe Mannings N	Downstream Pipe Capacity (cfs)	Downstream Pipe Full Flow Velocity (fps)
EX MH 7776	1.33%	15	346.72	0.00	520080.00	173360.000	4.251	5.324	0.014	6.92	5.64
MH 1-1	17.00%	8	7.72	0.00	11580.00	3860.000	0.228	0.252	0.014	4.63	13.25
MH 1-2	9.50%	8	7.72	0.00	11580.00	3860.000	0.228	0.252	0.014	3.46	9.91
MH 1-3	5.99%	8	3.97	0.00	5955.00	1985.000	0.124	0.136	0.014	2.75	7.87
MH 1-4	1.00%	8	2.80	0.00	4200.00	1400.000	0.089	0.098	0.014	1.12	3.21
MH 1-5	2.55%	8	2.31	0.00	3465.00	1155.000	0.075	0.082	0.014	1.79	5.13
MH 1-6	3.00%	8	0.76	0.00	1140.00	380.000	0.026	0.028	0.014	1.94	5.57
MH 1-2	9.50%	8	7.72	0.00	11580.00	3860.000	0.228	0.252	0.014	3.46	9.91
MH 2-1	6.99%	8	3.75	0.00	5625.00	1875.000	0.117	0.129	0.014	2.97	8.50
MH 2-2	1.00%	8	2.85	0.00	4275.00	1425.000	0.091	0.100	0.014	1.12	3.21
MH 2-3	3.66%	8	1.90	0.00	2850.00	950.000	0.000	0.000	0.000	0.00	0.00
EX MH 3-3	5.68%	8	9.58	0.00	14370.00	4790.000	0.277	0.307	0.014	2.67	7.66
MH 3-1	2.50%	8	4.45	0.00	6675.00	2225.000	0.137	0.151	0.014	1.77	5.08
MH 3-2	2.81%	8	4.45	0.00	6675.00	2225.000	0.137	0.151	0.014	1.88	5.39
MH 3-3	1.00%	8	1.92	0.00	2880.00	960.000	0.063	0.069	0.014	1.12	3.21
EX MH 4	5.80%	8	5.44	0.00	8160.00	2720.000	0.165	0.182	0.014	2.70	7.74
MH 4-1	0.80%	8	5.44	0.00	8160.00	2720.000	0.165	0.182	0.014	1.00	2.88
MH 4-2	0.80%	8	5.44	0.00	8160.00	2720.000	0.165	0.182	0.014	1.00	2.88
MH 4-3	0.80%	8	5.12	0.00	7680.00	2560.000	0.156	0.172	0.014	1.00	2.88
MH 4-4	1.00%	8	3.92	0.00	5880.00	1960.000	0.122	0.134	0.014	1.12	3.21
MH 4-5	3.00%	8	1.07	0.00	1605.00	535.000	0.036	0.039	0.014	1.94	5.57

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REVISIONS

SANITARY SEWER TABLES
SANITARY SEWER PLANS

WOODSIDE RIDGE
SECOND PLAT

LEE'S SUMMIT, MO

2020

drawn by: C.S.M
checked by: S.M.S
designed by: C.S.M
QA/QC by: J.E.S
project no.: C18-1140
date: 2020.07.10

SHEET
C211

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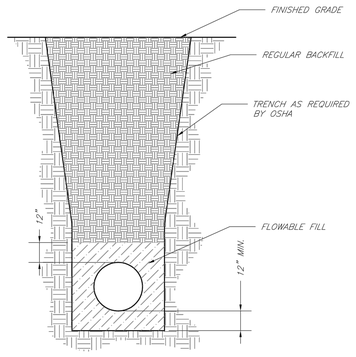
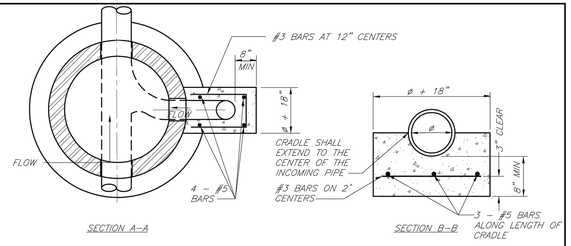
DATE: Jul 09, 2020 12:52pm



NOT TO SCALE

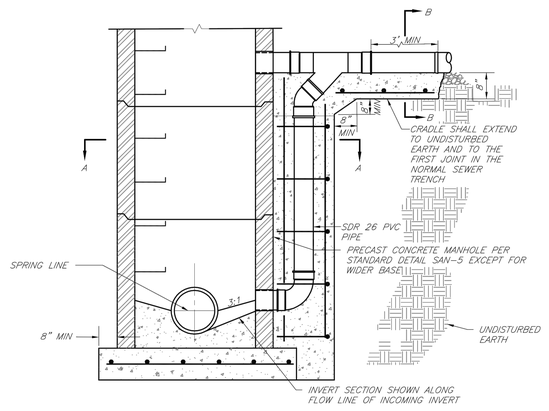
NOTES:
1. FLOWABLE FILL SHALL MEET THE REQUIREMENTS OF THE CITY OF LEE'S SUMMIT DESIGN AND CONSTRUCTION MANUAL.
2. REGULAR BACKFILL ABOVE THE TRENCH CHECK SHALL BE FREE OF DEBRIS, ORGANIC MATTER, AND STONES > 6" IN ANY DIMENSION.
3. TOP OF FLOWABLE BACKFILL SHALL EXTEND 12" ABOVE THE TOP OF THE PIPE.
4. LENGTH OF TRENCH CHECK SHALL BE A MINIMUM OF 12".

LEE'S SUMMIT MISSOURI	Date: 02/13
PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063	Drawn By: JN
	Checked By: DL
	FILE: WAT-6
TRENCH CHECK	Rev: 1/14
	Rev:



SECTION A–A

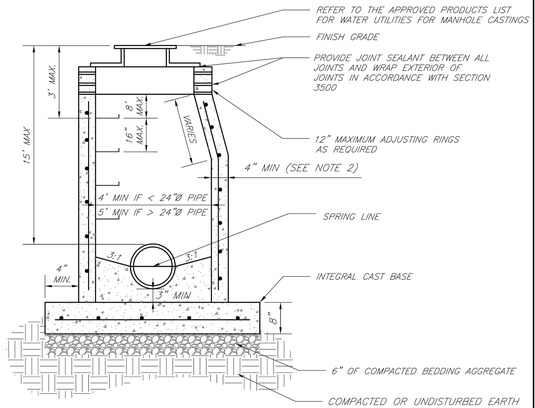
SECTION B–B



ELEVATION

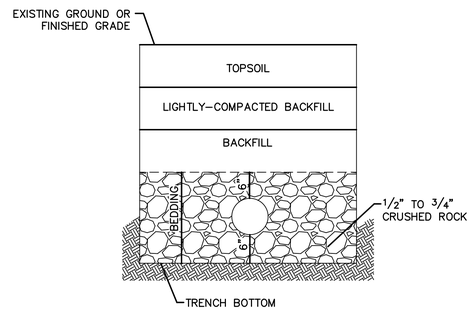
NOTE:
REFER TO DRAWING SAN–2 FOR MANHOLE DETAILS NOT SHOWN.

LEE'S SUMMIT MISSOURI	Date: 02/13
PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063	Drawn By: JN
	Checked By: DL
	FILE: SAN–4
DROP SANITARY SEWER MANHOLE	Rev: 1/14
	Rev:



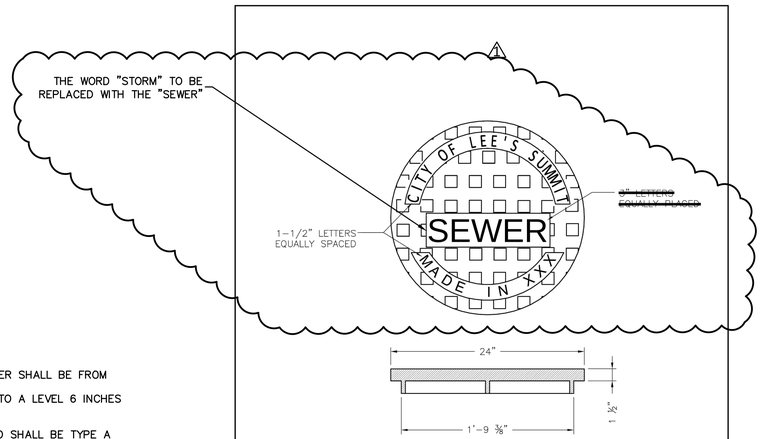
NOTES:
1. PRECAST CONCRETE MANHOLES SHALL CONFORM TO ASTM C478 EXCEPT AS MODIFIED BY THE SPECIFICATIONS.
2. A WALL THICKNESS NOT LESS THAN ONE–TWELFTH (1/12) OF THE INSIDE DIAMETER OR 4", WHICHEVER IS GREATER, SHALL BE USED WHEN THE MANHOLE DEPTH IS LESS THEN 15'.
3. WATERPROOFING SHALL BE REQUIRED ON 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	Date: 02/13
PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063	Drawn By: JN
	Checked By: DL
	FILE: SAN–2
STANDARD PRECAST MANHOLE – SANITARY SEWER	Rev: 1/14
	Rev:



UNDERGROUND PIPE INSTALLATION FOR SANITARY SEWER

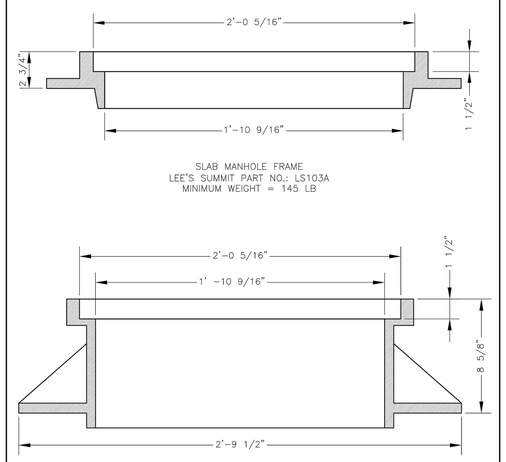
NOTES:
1. A MINIMUM OF 36 INCHES OF COVER SHALL BE OVER THE TOP OF THE PIPE. THIS MINIMUM OF COVER SHALL BE FROM THE TOP OF PIPE TO THE FINISHED GRADE.
2. BEDDING AGGREGATE SHALL BE PLACED FROM A LEVEL 6 INCHES BELOW THE BOTTOM OF THE PIPE TO A LEVEL 6 INCHES ABOVE THE TOP OF THE PIPE.
3. TRENCH BACKFILL IN PAVED AREAS WITHIN STREET OR ALLEY RIGHT OF WAYS
   a. NARROW TRENCH: SUITABLE BACKFILL MATERIAL FOR TRENCHES 24 INCHES OR LESS IN WIDTH AND SHALL BE TYPE A FLOWABLE FILL.
   b. STANDARD TRENCH: SUITABLE BACKFILL MATERIAL FOR TRENCHES BETWEEN 24 TO 48 INCHES WIDE SHALL BE EITHER TYPE A FLOWABLE FILL OR DENSE, WELL GRADED AGGREGATE BASE MATERIAL. AGGREGATE BASE MATERIAL SHALL MEET THE REQUIREMENTS FOR KDOT AB–3; MODOT TYPES 1 OR 5; OR APWA 2202.2.
   c. WIDE TRENCH: SUITABLE BACKFILL MATERIAL FOR TRENCHES GREATER THAN 48 INCHES WIDE SHALL BE SUITABLE MATERIAL AS SPECIFIED FOR EARTH EMBANKMENT IN APWA STANDARD SPECIFICATIONS, SECTION 2102.2.C.
4. SUITABLE BACKFILL MATERIAL OUTSIDE OF PAVED AREAS WITHIN RIGHT OF WAY, AND ALL AREAS OUTSIDE RIGHT OF WAY, MAY BE SUITABLE MATERIAL AS SPECIFIED FOR EARTH EMBANKMENT IN APWA STANDARD SPECIFICATIONS, SECTION 2102.2.C. SUITABLE BACKFILL MATERIAL MAY ALSO BE OTHER TRENCH BACKFILL MATERIAL (FLOWABLE FILL OR AGGREGATE BASE) DEPENDING ON SITE CONDITIONS, TRENCH WIDTHS OR AT THE DIRECTION OF THE CITY'S ON SITE INSPECTOR.



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	Date: 04/17
PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063	Drawn By: MJF
	Checked By: DL
STORM MANHOLE COVER DETAIL	STM-6



SLAB MANHOLE FRAME
LEE'S SUMMIT PART NO.: LS103A
MINIMUM WEIGHT = 145 LB

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

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

LEE'S SUMMIT MISSOURI	Date: 04/17
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STORM MANHOLE FRAME DETAIL	STM-7

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MO Certificate of Authority # 001592
3101 W. 75th Street, Suite 203
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STATE OF MISSOURI
JULIE ELAINE SELLERS
NUMBER PE-2017000367
7/10/20
PROFESSIONAL ENGINEER

NO. REV.	DATE	REVISIONS DESCRIPTION	BY
1	07/10/2020	REVISED PER CITY COMMENTS	

REVISIONS

DETAILS SHEET
SANITARY SEWER PLANS

WOODSIDE RIDGE
SECOND PLAT

LEE'S SUMMIT, MO

2020

drawn by: C.S.M
checked by: S.M.S
designed by: C.S.M
QA/QC by: J.E.S
project no.: C18-1140
date: 2020.07.10

SHEET
C212

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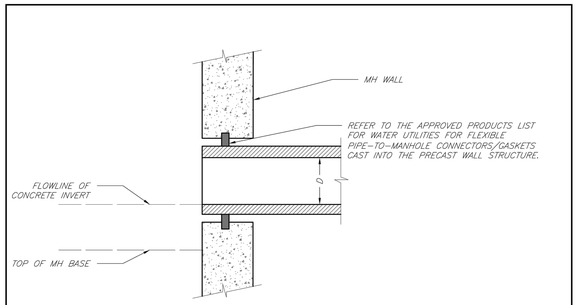
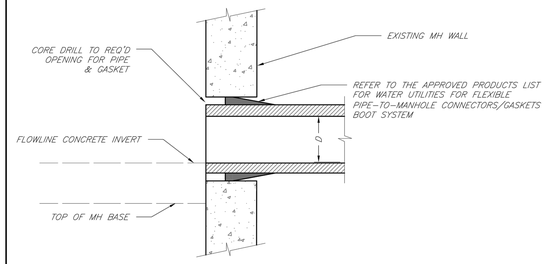
USER: ssaylor



NEW MANHOLE

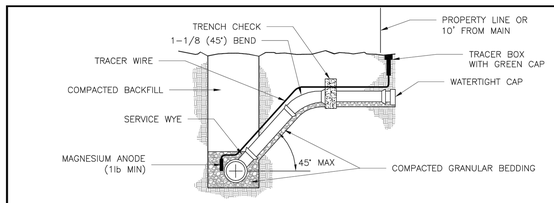


EXISTING MANHOLE

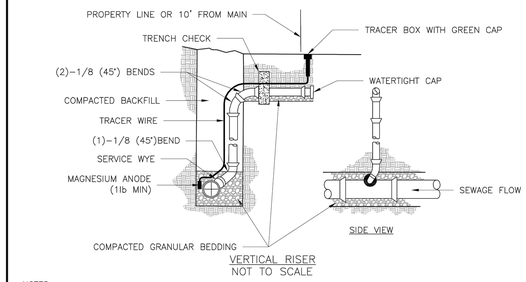
LEE'S SUMMIT
MISSOURI
PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063

MANHOLE WALL CONNECTIONS

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



STANDARD INSTALLATION
NOT TO SCALE



VERTICAL RISER
NOT TO SCALE

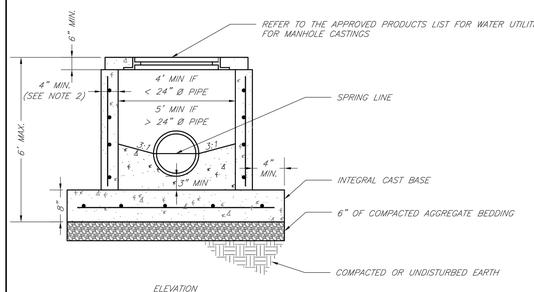
NOTES:
1. ALL SEWER STUBS SHALL BE CONSTRUCTED TO PROPERTY LINE OR 10' MINIMUM FROM THE MAIN. WHERE SIDEWALKS ARE PRESENT, CONTRACTOR SHALL EXTEND SERVICE LINE UNDER EXISTING SIDEWALK TO TWO FEET BEYOND.
2. ALL NEW CONSTRUCTION OFF SEWER STUBS SHALL BE TEMPORARILY MARKED WITH A MARKING STAKE, 36" ABOVE 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.

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



ELEVATION

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.
3. WATERPROOFING SHALL BE REQUIRED ON THE OUTSIDE OF MANHOLES. THE WATERPROOFING SHALL CONSIST OF A TOTAL DRY FILM THICKNESS OF NOT LESS THEN 14 MILS OF BITUMINOUS COATING.
4. THE FILL CONCRETE FLOW CHANNEL FOR SIDE BRANCHES SHALL BE PLACED TO PROVIDE A SMOOTH TRANSITION INTO THE FLOW LINE.
5. REFER TO THE APPROVED PRODUCTS LIST FOR WATER UTILITIES FOR MANHOLE GASKET MODELS.
6. PROVIDE STEPS AS SHOWN ON THE APPROVED PRODUCTS LIST FOR MANHOLE DEPTHS GREATER THAN 4'.

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

SHALLOW PRECAST MANHOLE – SANITARY SEWER

Date:	02/13
Drawn By:	JN
Checked By:	DL
FILE:	SAN-3
Rev:	1/14
Rev:	

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3101 BROADWAY, SUITE 515
NORTH KANSAS CITY, MO 64116
TEL 816.361.1177
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STATE OF MISSOURI
JULIE ELAINE SELLERS
NUMBER PE-2017000367
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2020

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date: 2020.07.10

SHEET
C213

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