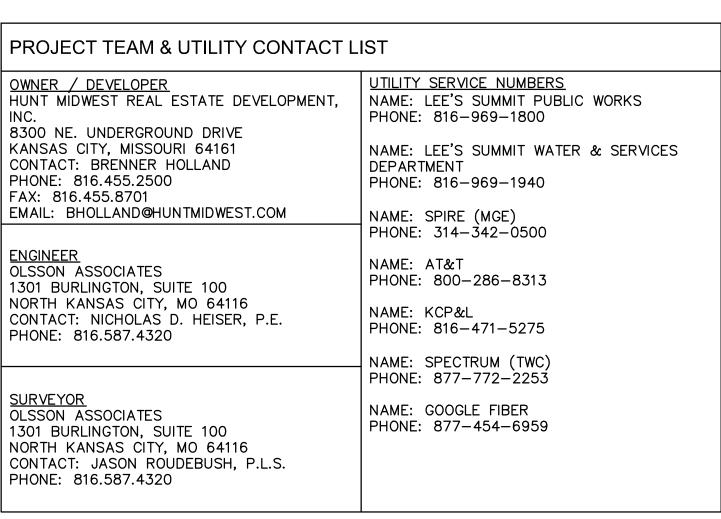


LOCATION MAP
Sec. 23, Twp. 47 N., Rge. 32 W.

## EAGLE CREEK SIXTEENTH PLAT SANITARY SEWER PLANS

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



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## PROPERTY DESCRIPTION:

A TRACT OF LAND IN THE NORTHWEST QUARTER OF SECTION 23, TOWNSHIP 47 NORTH, RANGE 32 WEST OF THE 5TH PRINCIPAL MERIDIAN IN LEE'S SUMMIT, JACKSON COUNTY, MISSOURI BEING BOUNDED AND DESCRIBED AS FOLLOWS: COMMENCING AT THE NORTHEAST CORNER OF SAID NORTHWEST QUARTER; THENCE NORTH 87°35'47" WEST, ALONG THE NORTH LINE OF SAID NORTHWEST QUARTER, 1,001.10 FEET TO THE NORTHWEST CORNER OF EAGLE CREEK-TWELFTH PLAT, A SUBDIVISION IN SAID LEE'S SUMMIT, JACKSON COUNTY, MISSOURI, SAID POINT ALSO BEING THE POINT OF BEGINNING OF THE TRACT OF LAND TO BE HEREIN DESCRIBED; THENCE SOUTH 02°24'13" WEST, ALONG THE WEST LINE OF SAID EAGLE CREEK-TWELFTH PLAT, 310.00 FEET; THENCE SOUTH 87°35'47" EAST, CONTINUING ALONG SAID WEST LINE, 420.00 FEET; THENCE SOUTH 31°26'22" WEST, CONTINUING ALONG SAID WEST LINE, 162.19 FEET; THENCE SOUTH 12°31'01" WEST, CONTINUING ALONG SAID WEST LINE, 50.00 FEET; THENCE SOUTH 15°32'15" WEST, CONTINUING ALONG SAID WEST LINE, 90.42 FEET; THENCE SOUTH 12°01'59" WEST, CONTINUING ALONG SAID WEST LINE, 80.68 FEET; THENCE SOUTH 05°54'26" WEST, CONTINUING ALONG SAID WEST LINE, 80.68 FEET; THENCE SOUTH 01°37'42" EAST, CONTINUING ALONG SAID WEST LINE, 117.75 FEET TO A POINT ON THE NORTH LINE OF EAGLE CREEK-SEVENTH PLAT, A SUBDIVISION IN SAID LEE'S SUMMIT, JACKSON COUNTY, MISSOURI; THENCE SOUTHWESTERLY, ALONG SAID NORTH LINE, ON A CURVE TO THE LEFT, HAVING AN INITIAL TANGENT BEARING OF SOUTH 69'38'42" WEST WITH A RADIUS OF 480.00 FEET, A CENTRAL ANGLE OF 32°25'10" AND AN ARC DISTANCE OF 271.60 FEET; THENCE WESTERLY, CONTINUING ALONG SAID NORTH LINE, ON A CURVE TO THE RIGHT, HAVING A COMMON TANGENT WITH THE LAST DESCRIBED COURSE WITH A RADIUS OF 25.00 FEET, A CENTRAL ANGLE OF 83°44'51" AND AN ARC DISTANCE OF 36.54 FEET TO A POINT ON THE EAST LINE OF EAGLE CREEK—THIRTEENTH PLAT, A SUBDIVISION IN SAID LEE'S SUMMIT, JACKSON COUNTY, MISSOURI; THENCE NORTH 59°01'37" WEST, CONTINUING ALONG SAID EAST LINE, 1.76 FEET; THENCE NORTHWESTERLY, CONTINUING ALONG SAID EAST LINE, ON A CURVE TO THE RIGHT, BEING TANGENT TO THE LAST DESCRIBED COURSE WITH A RADIUS OF 800.00 FEET, A CENTRAL ANGLE OF 21"15'50" AND AN ARC DISTANCE OF 296.90 FEET; THENCE NORTH 08°50'31" EAST, CONTINUING ALONG SAID EAST LINE, 21.80 FEET; THENCE NORTH 34°59'09" WEST, CONTINUING ALONG SAID EAST LINE, 50.00 FEET; THENCE NORTH 80°30'22" WEST, CONTINUING ALONG SAID EAST LINE, 20.95 FEET; THENCE NORTHERLY, CONTINUING ALONG SAID EAST LINE AND EAST LINE OF EAGLE CREEK-FOURTEENTH PLAT, A SUBDIVISION IN SAID LEE'S SUMMIT, JACKSON COUNTY, MISSOURI, ON A CURVE TO THE RIGHT, HAVING AN INITIAL TANGENT BEARING OF NORTH 32°00'07" WEST WITH A RADIUS OF 800.00 FEET, A CENTRAL ANGLE OF 19°02'35" AND AN ARC DISTANCE OF 265.89 FEET; THENCE NORTH 30°06'38" EAST, CONTINUING ALONG SAID EAST LINE OF SAID EAGLE CREEK-FOURTEENTH PLAT, 20.49 FEET; THENCE NORTH 73°25'49" EAST, CONTINUING ALONG SAID EAST LINE, 6.78 FEET; THENCE NORTH 16"19'09" WEST, CONTINUING ALONG SAID EAST LINE, 50.16 FEET; THENCE NORTH 52"30'25" WEST, CONTINUING ALONG SAID EAST LINE, 21.37 FEET; THENCE NORTHERLY, CONTINUING ALONG SAID EAST LINE AND EAST LINE OF EAGLE CREEK-FIFTEENTH PLAT, A SUBDIVISION IN SAID LEE'S SUMMIT, JACKSON COUNTY, MISSOURI, ON A CURVE TO THE RIGHT, HAVING AN INITIAL TANGENT BEARING OF NORTH 07°04'47" WEST WITH A RADIUS OF 800.00 FEET, A CENTRAL ANGLE OF 09°29'00" AND AN ARC DISTANCE OF 132.41 FEET; THENCE NORTH 02°24'13" EAST, CONTINUING ALONG SAID EAST LINE OF SAID EAGLE CREEK-FIFTEENTH PLAT, 134.41 FEET; THENCE NORTH 47°24'13" EAST, CONTINUING ALONG SAID EAST LINE, 35.36 FEET; THENCE NORTH 02°24'13" EAST, CONTINUING ALONG SAID EAST LINE, 50.00 FEET; THENCE NORTH 42°35'47" WEST, CONTINUING ALONG SAID EAST LINE, 35.36 FEET; THENCE NORTH 02°24'13" EAST, CONTINUING ALONG SAID EAST LINE, 105.00 FEET TO THE NORTHEAST CORNER OF SAID EAGLE CREEK-FIFTEENTH PLAT, ALSO BEING A POINT ON THE NORTH LINE OF SAID NORTHWEST QUARTER; THENCE SOUTH 87°35'47" EAST, ALONG SAID NORTH LINE, 358.00 FEET TO THE POINT OF BEGINNING. CONTAINING 496,989 SQUARE FEET OR 11.41 ACRES, MORE OR LESS.

## **BENCHMARK**

INTERSECTION OF S.W. LADDERBACK DRIVE AND S.W. OLD PORT ROAD, N.E. QUADRANT FIRE HYDRANT TOP FLANGE BOLT EASTERN MOST WITH "X" CHISEL ON TOP.
ELEV = 982.73

Sheet Number	Sheet Title
C201	TITLE SHEET
C202	GENERAL NOTES
C203	GENERAL LAYOUT
C204	SANITARY SEWER PLAN & PROFIL
C205	SANITARY SEWER PLAN & PROFIL
C206	SANITARY SEWER TABLES
C207	DETAIL SHEET
C208	DETAIL SHEET

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

NICHOLAS D. HEISER, P.E.	DATE
CIVIL ENGINEER	
MO#2015000555	

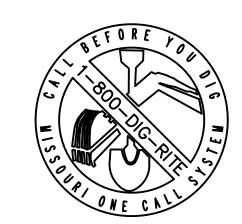
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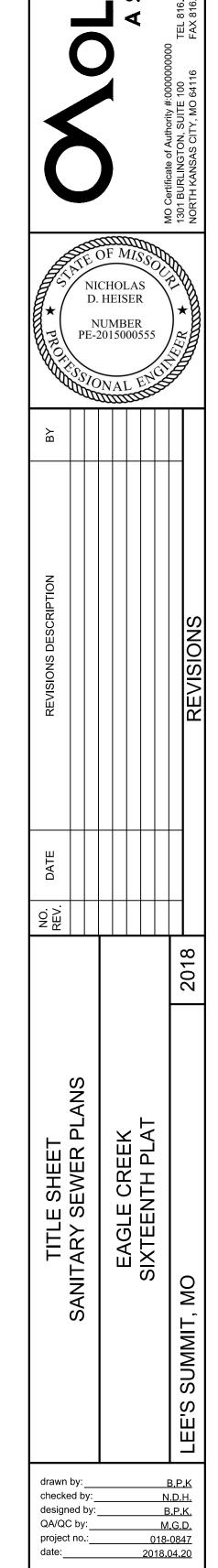
CITY OF LEE'S SUMMIT, MISSOURI

DATE

NOT FOR CONSTRUCTION

REVIEWED FOR CONSTRUCTION





SHEET

DWG:

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 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.

5. 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.

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

7. 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 RECORDED ON THESE DOCUMENTS. AT THE CONCLUSION OF CONSTRUCTION, THESE DOCUMENTS SHALL BE FORWARDED TO THE DESIGN ENGINEER FOR PREPARATION OF AS—BUILT DRAWINGS.

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

9. 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 THAT CONFLICT WITH PROPOSED SITE IMPROVEMENTS.

10. THE DEVELOPER SHALL 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 PROJECT ARE LISTED UNDER "UTILITY CONTACTS" THE COVER SHEET.

11. 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).

12. THE SITE PLAN IS BASED ON SURVEY BY OLSSON ASSOCIATES, COMPLETED 03-28-18. CONDITIONS ON SITE AT THE TIME OF CONSTRUCTION MAY VARY FROM THE SURVEYED CONDITIONS. DEVELOPER SHALL VERIFY EXISTING SITE CONDITIONS PRIOR TO BEGINNING CONSTRUCTION.

13. 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.

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

15. THE DEVELOPER MUST REMOVE AT THEIR 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".

16. 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, TEES 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.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 STANDARDS AND SPECIFICATIONS.

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 PERMANENT. 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.

	ESTIMATE OF QUANTITIES									
ITEM NO.	DESCRIPTION UNIT QUANTITY									
	STREET									
1	8" SANITARY PVC (SDR-26)	L.F.	1329.53							
3	MANHOLES, STD. 4' DIA.	EA.	6							
4	CONNECTION TO EXISTING M.H.	EA.	3							
5	SERVICE WYE	EA.	40							
6	4" LATERAL PIPE	L.F.	1635.60							

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 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.

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FUTURE CABLE TV, UNDERGROUND  EFOOH EXISTING FIBER OPTIC, OVERHEAD  EFO EXISTING FIBER OPTIC, UNDERGROUND  FOOH PROPOSED FIBER OPTIC, UNDERGROUND  FOOH FUTURE FIBER OPTIC, UNDERGROUND  FOOH FUTURE FIBER OPTIC, UNDERGROUND  FOOH FUTURE FIBER OPTIC, UNDERGROUND  EFP EXISTING FIRE PROTECTION SYSTEM LINE FOOD FUTURE FIRE PROTECTION SYSTEM LINE FUTURE NATURAL GAS LINE FUTURE NATURAL GAS LINE FUTURE NATURAL GAS LINE FUTURE NATURAL GAS LINE FUTURE FUTURE FUTURE FUTURE, UNDERGROUND FUTURE FUTURE FUTURE FUTURE, UNDERGROUND FUTURE TELEPHONE LINE, UNDERGROUND FUTURE FUTURE FUTURE FUTURE FUTURE, UNDERGROUND FUTURE FUTURE FUTURE FUTURE, UNDERGROUND FUTURE POWER\ELECTRIC LINE, UNDERGROUND FUTURE SANITARY SEWER FUTURE STEAM LINE FUTURE STORM SEWER	<del></del>	PROPOSED CABLE TV, UNDERGROUND
EFOOH  EXISTING FIBER OPTIC, OVERHEAD  EFO  EXISTING FIBER OPTIC, UNDERGROUND  FOOH  PROPOSED FIBER OPTIC, UNDERGROUND  FOOH  FOO PROPOSED FIBER OPTIC, UNDERGROUND  FOOH  FUTURE FIBER OPTIC, OVERHEAD  FUTURE FIBER OPTIC, UNDERGROUND  EFP  EXISTING FIRE PROTECTION SYSTEM LINE  FP  PROPOSED FIRE PROTECTION SYSTEM LINE  FIDER FUTURE FIRE PROTECTION SYSTEM LINE  FUTURE FIRE PROTECTION SYSTEM LINE  FUTURE FUEL LINE  FL  FUTURE FUEL LINE  FUTURE FUEL LINE  FO  FUTURE FUEL LINE  FO  FUTURE NATURAL GAS LINE  FUTURE TELEPHONE LINE, OVERHEAD  FUTURE TELEPHONE LINE, OVERHEAD  FUTURE TELEPHONE LINE, UNDERGROUND  FUTURE TELEPHONE LINE, UNDERGROUND  EEOH  FUTURE TELEPHONE LINE, UNDERGROUND  EEOH  PROPOSED POWER\ELECTRIC LINE, OVERHEAD  EE  EXISTING POWER\ELECTRIC LINE, UNDERGROUND  FUTURE POWER\ELECTRIC LINE, OVERHEAD  FUTURE POWER\ELECTRIC LINE, UNDERGROUND  FUTURE POWER\ELECTRIC LINE, OVERHEAD  FUTURE SANITARY SEWER  FUTURE STEAM LINE  FUTURE STORM SEWER  FUTURE STORM SEWER  FUTURE STORM SEWER  FUTURE STORM SEWER  EXISTING WATER LINE  PROPOSED WATER LINE  PROPOSED WATER LINE		
EFO  EXISTING FIBER OPTIC, UNDERGROUND  FOOH  PROPOSED FIBER OPTIC, OVERHEAD  FOOH  PROPOSED FIBER OPTIC, UNDERGROUND  FUTURE FIBER OPTIC, OVERHEAD  FUTURE FIBER OPTIC, UNDERGROUND  EFF  EXISTING FIRE PROTECTION SYSTEM LINE  FP  PROPOSED FIRE PROTECTION SYSTEM LINE  FILE  FUTURE FIRE PROTECTION SYSTEM LINE  FILE  FUTURE FIRE PROTECTION SYSTEM LINE  FILE  FUTURE FUEL LINE  FUTURE FUEL LINE  FUTURE FUEL LINE  FUTURE FUEL LINE  FO  FO  PROPOSED NATURAL GAS LINE  FO  FUTURE NATURAL GAS LINE  FUTURE PHONE LINE, OVERHEAD  FUTURE TELEPHONE LINE, OVERHEAD  FUTURE TELEPHONE LINE, UNDERGROUND  FUTURE TELEPHONE LINE, UNDERGROUND  FUTURE FUTURE TELEPHONE LINE, UNDERGROUND  FUTURE POWER\ELECTRIC LINE, OVERHEAD  FUTURE POWER\ELECTRIC LINE, UNDERGROUND  FUTURE POWER\ELECTRIC LINE, UNDERGROUND  FUTURE POWER\ELECTRIC LINE, UNDERGROUND  FUTURE SANITARY SEWER  FUTURE SANITARY SEWER  FUTURE SANITARY SEWER  FUTURE STEAM LINE  FUTURE STEAM SEWER  FUTURE STORM SEWER	<del>FCTV</del>	FUTURE CABLE TV, UNDERGROUND
FOOH FOOH FOOH FOOH FROPOSED FIBER OPTIC, UNDERGROUND FFOOH FUTURE FIBER OPTIC, UNDERGROUND FFOOH FUTURE FIBER OPTIC, UNDERGROUND FFOOH FUTURE FIBER OPTIC, UNDERGROUND EFP EXISTING FIRE PROTECTION SYSTEM LINE FP PROPOSED FIRE PROTECTION SYSTEM LINE FILE FUTURE FIRE PROTECTION SYSTEM LINE FILE FUTURE FIRE PROTECTION SYSTEM LINE FILE FUTURE FUEL LINE FILE FUTURE FUEL LINE FUTURE FUEL LINE FUTURE FUEL LINE FILE FUTURE AATURAL GAS LINE FUTURE NATURAL GAS LINE FUTURE NATURAL GAS LINE FUTURE NATURAL GAS LINE FUTURE NATURAL GAS LINE FUTURE POPOSED TELEPHONE LINE, OVERHEAD FIEL FUTURE TELEPHONE LINE, UNDERGROUND FIELDH FUTURE TELEPHONE LINE, UNDERGROUND FUTURE FUTURE FUTURE FUTURE TELEPHONE LINE, UNDERGROUND FUTURE FOWER\ELECTRIC LINE, UNDERGROUND FUTURE POWER\ELECTRIC LINE, UNDERGROUND FUTURE POWER\ELECTRIC LINE, UNDERGROUND FUTURE POWER\ELECTRIC LINE, UNDERGROUND FUTURE POWER\ELECTRIC LINE, UNDERGROUND FUTURE SANITARY SEWER FUTURE SANITARY SEWER FUTURE SANITARY SEWER FUTURE STEAM LINE FUTURE STEAM SEWER FUTURE STORM SEWER		
FO PROPOSED FIBER OPTIC, UNDERGROUND FFOOH FUTURE FIBER OPTIC, OVERHEAD FFOOH FUTURE FIBER OPTIC, UNDERGROUND EFP EXISTING FIRE PROTECTION SYSTEM LINE FP PROPOSED FIRE PROTECTION SYSTEM LINE FP PROPOSED FIRE PROTECTION SYSTEM LINE FFUTURE FIRE PROTECTION SYSTEM LINE FFUTURE FIRE PROTECTION SYSTEM LINE FFUTURE FUEL LINE FFUTURE FUEL LINE FUTURE FUEL LINE FUTURE FUEL LINE FUTURE FUEL LINE FUTURE NATURAL GAS LINE FUTURE NATURAL GAS LINE FUTURE NATURAL GAS LINE EXISTING TELEPHONE LINE, OVERHEAD ETEL EXISTING TELEPHONE LINE, OVERHEAD FUTURE TELEPHONE LINE, UNDERGROUND FUTURE TELEPHONE LINE, UNDERGROUND FUTURE TELEPHONE LINE, UNDERGROUND EXISTING POWER\ELECTRIC LINE, OVERHEAD EXISTING POWER\ELECTRIC LINE, UNDERGROUND EXISTING POWER\ELECTRIC LINE, UNDERGROUND FOH PROPOSED POWER\ELECTRIC LINE, UNDERGROUND FOH PROPOSED POWER\ELECTRIC LINE, UNDERGROUND FOH PROPOSED SANITARY SEWER FUTURE POWER\ELECTRIC LINE, UNDERGROUND EXS EXISTING STEAM LINE FUTURE STEAM LINE FUTURE STEAM LINE EXISTING STORM SEWER FUTURE STORM SEWER FUTURE STORM SEWER EXISTING WATER LINE W PROPOSED WATER LINE	<del>EFO</del>	EXISTING FIBER OPTIC, UNDERGROUND
FUTURE FIBER OPTIC, OVERHEAD FUTURE FIBER OPTIC, UNDERGROUND EFP EXISTING FIRE PROTECTION SYSTEM LINE FP PROPOSED FIRE PROTECTION SYSTEM LINE FFF FUTURE FUEL LINE FFF FUTURE FUEL LINE FFF FUTURE FUEL LINE FFF FUTURE FUEL LINE FFF FUTURE NATURAL GAS LINE FUTURE NATURAL GAS LINE FUTURE NATURAL GAS LINE FUTURE NATURAL GAS LINE FUTURE POPOSED TELEPHONE LINE, OVERHEAD FFF PROPOSED TELEPHONE LINE, UNDERGROUND FFF FUTURE FUTURE FUTURE TELEPHONE LINE, UNDERGROUND FFOH PROPOSED POWER\ELECTRIC LINE, UNDERGROUND FFOH FUTURE SANITARY SEWER FS FUTURE SANITARY SEWER FS FUTURE STEAM LINE FS FUTURE STEAM LINE FS FUTURE STEAM LINE FS FUTURE STEAM LINE FS FUTURE STORM SEWER	<del>F00H</del>	PROPOSED FIBER OPTIC, OVERHEAD
FFO FUTURE FIBER OPTIC, UNDERGROUND EFP EXISTING FIRE PROTECTION SYSTEM LINE FP PROPOSED FIRE PROTECTION SYSTEM LINE FFP FUTURE FUEL LINE FFP FUTURE NATURAL GAS LINE FFP FUTURE NATURAL GAS LINE FUTURE PROPOSED TELEPHONE LINE, OVERHEAD FUTURE TELEPHONE LINE, UNDERGROUND FUTURE TELEPHONE LINE, UNDERGROUND FUTURE POWER\ELECTRIC LINE, UNDERGROUND FUTU	<del></del>	
EFP EXISTING FIRE PROTECTION SYSTEM LINE FP PROPOSED FIRE PROTECTION SYSTEM LINE FILE FUTURE FIRE PROTECTION SYSTEM LINE EXISTING FUEL LINE FILE PROPOSED FUEL LINE FUTURE FUEL LINE FUTURE FUEL LINE EG EXISTING NATURAL GAS LINE FOR PROPOSED NATURAL GAS LINE FUTURE NATURAL GAS LINE EXISTING TELEPHONE LINE, OVERHEAD EXISTING TELEPHONE LINE, UNDERGROUND TELOH PROPOSED TELEPHONE LINE, UNDERGROUND FUTURE TELEPHONE LINE, UNDERGROUND FUTURE TELEPHONE LINE, UNDERGROUND EXISTING POWER\ELECTRIC LINE, OVERHEAD EXISTING POWER\ELECTRIC LINE, OVERHEAD EXISTING POWER\ELECTRIC LINE, OVERHEAD ENTOTICE POWER\ELECTRIC LINE, UNDERGROUND FUTURE POWER\ELECTRIC LINE, UNDERGROUND ESS EXISTING SANITARY SEWER FUTURE SANITARY SEWER FUTURE SANITARY SEWER ESS FUTURE SANITARY SEWER ESS FUTURE SANITARY SEWER ESS FUTURE STEAM LINE  FUTURE STEAM LINE  EXISTING STORM SEWER FUTURE STORM SEWER EXISTING WATER LINE  W PROPOSED WATER LINE	<del>-FF00H-</del>	FUTURE FIBER OPTIC, OVERHEAD
FP PROPOSED FIRE PROTECTION SYSTEM LINE FILE FUTURE FIRE PROTECTION SYSTEM LINE FILE EXISTING FUEL LINE FILE PROPOSED FUEL LINE FILE FUTURE FUEL LINE FUTURE FUEL LINE FOR EXISTING NATURAL GAS LINE FOR PROPOSED NATURAL GAS LINE FOR FUTURE NATURAL GAS LINE FILE EXISTING TELEPHONE LINE, OVERHEAD EXISTING TELEPHONE LINE, UNDERGROUND FILE PROPOSED TELEPHONE LINE, UNDERGROUND FUTURE POWER\ELECTRIC LINE, UNDERGROUND FUTURE POWER\ELECTRIC LINE, UNDERGROUND FUTURE POWER\ELECTRIC LINE, UNDERGROUND FUTURE POWER\ELECTRIC LINE, UNDERGROUND FUTURE SANITARY SEWER FUTURE SANITARY SEWER FUTURE SANITARY SEWER FUTURE STEAM LINE FUTURE STEAM LINE FUTURE STEAM LINE FUTURE STEAM LINE FUTURE STORM SEWER	)	
FIP FUTURE FIRE PROTECTION SYSTEM LINE  EFL EXISTING FUEL LINE  FL PROPOSED FUEL LINE  FUTURE FUEL LINE  EG EXISTING NATURAL GAS LINE  G PROPOSED NATURAL GAS LINE  FUTURE NATURAL GAS LINE  ETELOH EXISTING TELEPHONE LINE, OVERHEAD  ETEL PROPOSED TELEPHONE LINE, UNDERGROUND  TELOH PROPOSED TELEPHONE LINE, UNDERGROUND  FUTURE TELEPHONE LINE, UNDERGROUND  FUTURE TELEPHONE LINE, UNDERGROUND  EECH EXISTING POWER\ELECTRIC LINE, OVERHEAD  EXISTING POWER\ELECTRIC LINE, UNDERGROUND  EOH PROPOSED POWER\ELECTRIC LINE, UNDERGROUND  FUTURE POWER\ELECTRIC LINE, UNDERGROUND  ESS EXISTING SANITARY SEWER  FUTURE SANITARY SEWER  FUTURE SANITARY SEWER  FUTURE STEAM LINE  FUTURE STEAM LINE  FUTURE STEAM LINE  FUTURE STORM SEWER  FUTURE STORM SEWER  FUTURE STORM SEWER  EXISTING WATER LINE  W PROPOSED WATER LINE	<del></del>	EXISTING FIRE PROTECTION SYSTEM LINE
FL EXISTING FUEL LINE  FL PROPOSED FUEL LINE  FUTURE FUEL LINE  EG EXISTING NATURAL GAS LINE  FO PROPOSED NATURAL GAS LINE  FUTURE NATURAL GAS LINE  FUTURE NATURAL GAS LINE  EXISTING TELEPHONE LINE, OVERHEAD  EXISTING TELEPHONE LINE, UNDERGROUND  TELOH PROPOSED TELEPHONE LINE, UNDERGROUND  FUTURE TELEPHONE LINE, UNDERGROUND  FUTURE TELEPHONE LINE, UNDERGROUND  EXISTING POWER\ELECTRIC LINE, OVERHEAD  EXISTING POWER\ELECTRIC LINE, OVERHEAD  EXISTING POWER\ELECTRIC LINE, UNDERGROUND  EOH PROPOSED POWER\ELECTRIC LINE, UNDERGROUND  FUTURE POWER\ELECTRIC LINE, UNDERGROUND  FUTURE POWER\ELECTRIC LINE, UNDERGROUND  FUTURE POWER\ELECTRIC LINE, UNDERGROUND  ESS PROPOSED SANITARY SEWER  FUTURE SANITARY SEWER  FUTURE SANITARY SEWER  EXISTING STEAM LINE  FUTURE STEAM LINE  EXISTING STORM SEWER  FUTURE STORM SEWER  FUTURE STORM SEWER  EXISTING WATER LINE  PROPOSED WATER LINE	<del></del>	
FL PROPOSED FUEL LINE  FUTURE FUEL LINE  EG EXISTING NATURAL GAS LINE  PROPOSED NATURAL GAS LINE  FUTURE NATURAL GAS LINE  FUTURE NATURAL GAS LINE  EXISTING TELEPHONE LINE, OVERHEAD  EXISTING TELEPHONE LINE, UNDERGROUND  TELOH PROPOSED TELEPHONE LINE, UNDERGROUND  FUTURE TELEPHONE LINE, UNDERGROUND  FUTURE TELEPHONE LINE, UNDERGROUND  EECH EXISTING POWER\ELECTRIC LINE, OVERHEAD  EE EXISTING POWER\ELECTRIC LINE, OVERHEAD  EN PROPOSED POWER\ELECTRIC LINE, UNDERGROUND  EOH PROPOSED POWER\ELECTRIC LINE, UNDERGROUND  FUTURE POWER\ELECTRIC LINE, UNDERGROUND  FUTURE POWER\ELECTRIC LINE, UNDERGROUND  ESS EXISTING SANITARY SEWER  FUTURE SANITARY SEWER  FUTURE SANITARY SEWER  EXISTING STEAM LINE  FUTURE STEAM LINE  EXISTING STORM SEWER  FUTURE STORM SEWER  FUTURE STORM SEWER  EXISTING WATER LINE  PROPOSED WATER LINE  PROPOSED WATER LINE	<del></del>	
FILE FUTURE FUEL LINE  EG EXISTING NATURAL GAS LINE  FO PROPOSED NATURAL GAS LINE  FUTURE NATURAL GAS LINE  FUTURE NATURAL GAS LINE  ETELOH EXISTING TELEPHONE LINE, OVERHEAD  ETEL PROPOSED TELEPHONE LINE, UNDERGROUND  TELOH PROPOSED TELEPHONE LINE, UNDERGROUND  FUTURE TELEPHONE LINE, UNDERGROUND  FUTURE TELEPHONE LINE, UNDERGROUND  EECH EXISTING POWER\ELECTRIC LINE, OVERHEAD  EE EXISTING POWER\ELECTRIC LINE, UNDERGROUND  EOH PROPOSED POWER\ELECTRIC LINE, UNDERGROUND  FUTURE POWER\ELECTRIC LINE, UNDERGROUND  FUTURE POWER\ELECTRIC LINE, UNDERGROUND  FUTURE POWER\ELECTRIC LINE, UNDERGROUND  ESS EXISTING SANITARY SEWER  FSS FUTURE SANITARY SEWER  ESS FUTURE SANITARY SEWER  ESS FUTURE STEAM LINE  FUTURE STEAM LINE  EXISTING STORM SEWER  FUTURE STORM SEWER  FUTURE STORM SEWER  EXISTING WATER LINE  W PROPOSED WATER LINE	<del>EFL</del>	
EG EXISTING NATURAL GAS LINE  PROPOSED NATURAL GAS LINE  FUTURE NATURAL GAS LINE  ETELOH EXISTING TELEPHONE LINE, OVERHEAD  ETEL EXISTING TELEPHONE LINE, UNDERGROUND  TELOH PROPOSED TELEPHONE LINE, OVERHEAD  FUTURE TELEPHONE LINE, UNDERGROUND  FUTURE TELEPHONE LINE, UNDERGROUND  ECOH EXISTING POWER\ELECTRIC LINE, OVERHEAD  EE EXISTING POWER\ELECTRIC LINE, UNDERGROUND  EOH PROPOSED POWER\ELECTRIC LINE, UNDERGROUND  FUTURE POWER\ELECTRIC LINE, UNDERGROUND  FUTURE POWER\ELECTRIC LINE, UNDERGROUND  FUTURE POWER\ELECTRIC LINE, UNDERGROUND  FUTURE POWER\ELECTRIC LINE, UNDERGROUND  ESS EXISTING SANITARY SEWER  FOR PROPOSED SANITARY SEWER  FITURE SANITARY SEWER  ESL EXISTING STEAM LINE  FUTURE STEAM LINE  FUTURE STORM SEWER  FUTURE STORM SEWER  FUTURE STORM SEWER  EXISTING WATER LINE  W PROPOSED WATER LINE		
PROPOSED NATURAL GAS LINE FUTURE NATURAL GAS LINE ETELOH EXISTING TELEPHONE LINE, OVERHEAD ETELOH PROPOSED TELEPHONE LINE, UNDERGROUND TELOH PROPOSED TELEPHONE LINE, UNDERGROUND FUTURE TELEPHONE LINE, UNDERGROUND FUTURE TELEPHONE LINE, OVERHEAD FUTURE TELEPHONE LINE, UNDERGROUND EECOH EXISTING POWER\ELECTRIC LINE, OVERHEAD EE EXISTING POWER\ELECTRIC LINE, UNDERGROUND EOH PROPOSED POWER\ELECTRIC LINE, UNDERGROUND FUTURE POWER\ELECTRIC LINE, UNDERGROUND FUTURE POWER\ELECTRIC LINE, UNDERGROUND ESS EXISTING SANITARY SEWER FUTURE SANITARY SEWER ESL EXISTING STEAM LINE FUTURE STEAM LINE FUTURE STEAM LINE EST EXISTING STORM SEWER FUTURE STORM SEWER FUTURE STORM SEWER EW EXISTING WATER LINE PROPOSED WATER LINE PROPOSED WATER LINE	FFL	FUTURE FUEL LINE
FUTURE NATURAL GAS LINE  EXISTING TELEPHONE LINE, OVERHEAD  EXISTING TELEPHONE LINE, UNDERGROUND  TELOH  PROPOSED TELEPHONE LINE, UNDERGROUND  FUTURE TELEPHONE LINE, UNDERGROUND  FUTURE TELEPHONE LINE, UNDERGROUND  EECH  FUTURE TELEPHONE LINE, UNDERGROUND  EXISTING POWER\ELECTRIC LINE, OVERHEAD  EXISTING POWER\ELECTRIC LINE, UNDERGROUND  EOH  PROPOSED POWER\ELECTRIC LINE, UNDERGROUND  FUTURE POWER\ELECTRIC LINE, UNDERGROUND  FUTURE POWER\ELECTRIC LINE, UNDERGROUND  FUTURE POWER\ELECTRIC LINE, UNDERGROUND  ESS  EXISTING SANITARY SEWER  FSS  FUTURE SANITARY SEWER  ESL  EXISTING STEAM LINE  FUTURE STEAM LINE  FUTURE STEAM LINE  EXISTING STORM SEWER  FUTURE STORM SEWER  FUTURE STORM SEWER  EXISTING WATER LINE  PROPOSED WATER LINE  PROPOSED WATER LINE	<del>- EG</del>	EXISTING NATURAL GAS LINE
EXISTING TELEPHONE LINE, OVERHEAD  EXISTING TELEPHONE LINE, UNDERGROUND  TELOH PROPOSED TELEPHONE LINE, UNDERGROUND  TELOH PROPOSED TELEPHONE LINE, UNDERGROUND  FUTURE TELEPHONE LINE, OVERHEAD  FUTURE TELEPHONE LINE, UNDERGROUND  EXISTING POWER\ELECTRIC LINE, OVERHEAD  EXISTING POWER\ELECTRIC LINE, UNDERGROUND  EOH PROPOSED POWER\ELECTRIC LINE, UNDERGROUND  FUTURE POWER\ELECTRIC LINE, UNDERGROUND  FUTURE POWER\ELECTRIC LINE, UNDERGROUND  ESS EXISTING SANITARY SEWER  FSS PROPOSED SANITARY SEWER  ESL EXISTING STEAM LINE  FUTURE STEAM LINE  FUTURE STEAM LINE  EXISTING STORM SEWER  FST PROPOSED STORM SEWER  FST PROPOSED STORM SEWER  EXISTING WATER LINE  W PROPOSED WATER LINE	<del>G</del>	
TELOH PROPOSED TELEPHONE LINE, UNDERGROUND TELOH PROPOSED TELEPHONE LINE, OVERHEAD PROPOSED TELEPHONE LINE, UNDERGROUND FUTURE TELEPHONE LINE, UNDERGROUND EXISTING POWER\ELECTRIC LINE, OVERHEAD EXISTING POWER\ELECTRIC LINE, UNDERGROUND EOH PROPOSED POWER\ELECTRIC LINE, UNDERGROUND FUTURE POWER\ELECTRIC LINE, UNDERGROUND FUTURE POWER\ELECTRIC LINE, UNDERGROUND ESS EXISTING SANITARY SEWER FUTURE SANITARY SEWER ESL EXISTING STEAM LINE PROPOSED STEAM LINE FUTURE STEAM LINE FUTURE STORM SEWER FUTURE STORM SEWER EXISTING WATER LINE PROPOSED WATER LINE PROPOSED WATER LINE	<del>- FG</del>	
TELOH  TEL  PROPOSED TELEPHONE LINE, OVERHEAD  PROPOSED TELEPHONE LINE, UNDERGROUND  FILL  FUTURE TELEPHONE LINE, UNDERGROUND  EXISTING POWER\ELECTRIC LINE, OVERHEAD  EXISTING POWER\ELECTRIC LINE, UNDERGROUND  EOH  PROPOSED POWER\ELECTRIC LINE, UNDERGROUND  FUTURE POWER\ELECTRIC LINE, UNDERGROUND  FUTURE POWER\ELECTRIC LINE, UNDERGROUND  FUTURE POWER\ELECTRIC LINE, UNDERGROUND  ESS  EXISTING SANITARY SEWER  FSS  PROPOSED SANITARY SEWER  ESL  EXISTING STEAM LINE  FUTURE STEAM LINE  FUTURE STEAM LINE  EST  EXISTING STORM SEWER  FST  PROPOSED STORM SEWER  EXISTING WATER LINE  PROPOSED WATER LINE  PROPOSED WATER LINE		
TEL PROPOSED TELEPHONE LINE, UNDERGROUND FIELDH FUTURE TELEPHONE LINE, OVERHEAD FUTURE TELEPHONE LINE, UNDERGROUND EXISTING POWER\ELECTRIC LINE, OVERHEAD EXISTING POWER\ELECTRIC LINE, UNDERGROUND EOH PROPOSED POWER\ELECTRIC LINE, UNDERGROUND FUTURE POWER\ELECTRIC LINE, UNDERGROUND FUTURE POWER\ELECTRIC LINE, UNDERGROUND ESS EXISTING SANITARY SEWER ESS PROPOSED SANITARY SEWER ESS FUTURE SANITARY SEWER ESS FUTURE SANITARY SEWER ESS FUTURE SANITARY SEWER ESS FUTURE STEAM LINE FUTURE STEAM LINE FUTURE STEAM LINE EST EXISTING STORM SEWER EST PROPOSED STORM SEWER EST PROPOSED STORM SEWER EST PROPOSED STORM SEWER EXISTING WATER LINE PROPOSED WATER LINE	<del>ETEL</del>	
FUTURE TELEPHONE LINE, OVERHEAD FUTURE TELEPHONE LINE, UNDERGROUND ECOH EXISTING POWER\ELECTRIC LINE, OVERHEAD ECH EXISTING POWER\ELECTRIC LINE, UNDERGROUND PROPOSED POWER\ELECTRIC LINE, UNDERGROUND FUTURE POWER\ELECTRIC LINE, UNDERGROUND FUTURE POWER\ELECTRIC LINE, OVERHEAD FUTURE POWER\ELECTRIC LINE, UNDERGROUND ESS EXISTING SANITARY SEWER FUTURE SANITARY SEWER FUTURE SANITARY SEWER ESL EXISTING STEAM LINE SL PROPOSED STEAM LINE FUTURE STEAM LINE FUTURE STEAM LINE EST EXISTING STORM SEWER FUTURE STORM SEWER FUTURE STORM SEWER EXISTING WATER LINE PROPOSED WATER LINE	<del>TELOH</del>	
FUTURE TELEPHONE LINE, UNDERGROUND  EXISTING POWER\ELECTRIC LINE, OVERHEAD  EXISTING POWER\ELECTRIC LINE, UNDERGROUND  PROPOSED POWER\ELECTRIC LINE, OVERHEAD  PROPOSED POWER\ELECTRIC LINE, UNDERGROUND  FUTURE POWER\ELECTRIC LINE, UNDERGROUND  FUTURE POWER\ELECTRIC LINE, UNDERGROUND  ESS PROPOSED SANITARY SEWER  PROPOSED SANITARY SEWER  ESL EXISTING STEAM LINE  PROPOSED STEAM LINE  FUTURE STEAM LINE  FUTURE STEAM SEWER  FUTURE STORM SEWER  FOPOSED STORM SEWER  FUTURE STORM SEWER  FUTURE STORM SEWER  EXISTING WATER LINE  PROPOSED WATER LINE		
EXISTING POWER\ELECTRIC LINE, OVERHEAD  EXISTING POWER\ELECTRIC LINE, UNDERGROUND  PROPOSED POWER\ELECTRIC LINE, OVERHEAD  PROPOSED POWER\ELECTRIC LINE, UNDERGROUND  FUTURE POWER\ELECTRIC LINE, UNDERGROUND  FUTURE POWER\ELECTRIC LINE, UNDERGROUND  ESS EXISTING SANITARY SEWER  PROPOSED SANITARY SEWER  FUTURE SANITARY SEWER  ESL EXISTING STEAM LINE  PROPOSED STEAM LINE  FUTURE STEAM LINE  EST EXISTING STORM SEWER  FUTURE STORM SEWER  FUTURE STORM SEWER  FUTURE STORM SEWER  EXISTING WATER LINE  PROPOSED WATER LINE		
EE EXISTING POWER\ELECTRIC LINE, UNDERGROUND  PROPOSED POWER\ELECTRIC LINE, OVERHEAD  PROPOSED POWER\ELECTRIC LINE, UNDERGROUND  FUTURE POWER\ELECTRIC LINE, OVERHEAD  FUTURE POWER\ELECTRIC LINE, UNDERGROUND  ESS EXISTING SANITARY SEWER  PROPOSED SANITARY SEWER  FUTURE SANITARY SEWER  ESL EXISTING STEAM LINE  PROPOSED STEAM LINE  FUTURE STEAM LINE  FUTURE STEAM LINE  EST EXISTING STORM SEWER  FUTURE STORM SEWER  FUTURE STORM SEWER  FUTURE STORM SEWER  EXISTING WATER LINE  PROPOSED WATER LINE		
PROPOSED POWER\ELECTRIC LINE, OVERHEAD PROPOSED POWER\ELECTRIC LINE, UNDERGROUND FUTURE POWER\ELECTRIC LINE, OVERHEAD FUTURE POWER\ELECTRIC LINE, UNDERGROUND ESS EXISTING SANITARY SEWER PROPOSED SANITARY SEWER FUTURE SANITARY SEWER ESL EXISTING STEAM LINE PROPOSED STEAM LINE FUTURE STEAM LINE EST EXISTING STORM SEWER FUTURE STORM SEWER FUTURE STORM SEWER FUTURE STORM SEWER EXISTING WATER LINE PROPOSED WATER LINE		
PROPOSED POWER\ELECTRIC LINE, UNDERGROUND FUTURE POWER\ELECTRIC LINE, OVERHEAD FUTURE POWER\ELECTRIC LINE, UNDERGROUND ESS EXISTING SANITARY SEWER PROPOSED SANITARY SEWER FUTURE SANITARY SEWER ESL EXISTING STEAM LINE PROPOSED STEAM LINE FUTURE STEAM LINE EST EXISTING STORM SEWER FUTURE STORM SEWER FUTURE STORM SEWER FUTURE STORM SEWER EXISTING WATER LINE PROPOSED WATER LINE		,
FUTURE POWER\ELECTRIC LINE, OVERHEAD  FUTURE POWER\ELECTRIC LINE, UNDERGROUND  ESS EXISTING SANITARY SEWER  PROPOSED SANITARY SEWER  FUTURE SANITARY SEWER  ESL EXISTING STEAM LINE  PROPOSED STEAM LINE  FUTURE STEAM LINE  EST EXISTING STORM SEWER  FOR PROPOSED STORM SEWER  FUTURE STORM SEWER  FUTURE STORM SEWER  EW EXISTING WATER LINE  PROPOSED WATER LINE	<del></del>	
FUTURE POWER\ELECTRIC LINE, UNDERGROUND  ESS EXISTING SANITARY SEWER  PROPOSED SANITARY SEWER  FUTURE SANITARY SEWER  ESL EXISTING STEAM LINE  PROPOSED STEAM LINE  FUTURE STEAM LINE  EST EXISTING STORM SEWER  FOR STORM SEWER  FUTURE STORM SEWER  FUTURE STORM SEWER  EXISTING WATER LINE  PROPOSED WATER LINE	<del>E</del>	,
ESS EXISTING SANITARY SEWER  SS PROPOSED SANITARY SEWER  FUTURE SANITARY SEWER  ESL EXISTING STEAM LINE  SL PROPOSED STEAM LINE  FUTURE STEAM LINE  EST EXISTING STORM SEWER  ST PROPOSED STORM SEWER  FUTURE STORM SEWER  EW EXISTING WATER LINE  W PROPOSED WATER LINE	<del></del>	,
FST PROPOSED SANITARY SEWER  FUTURE SANITARY SEWER  EXISTING STEAM LINE  PROPOSED STEAM LINE  FUTURE STEAM LINE  EXISTING STORM SEWER  PROPOSED STORM SEWER  FUTURE STORM SEWER  EXISTING WATER LINE  PROPOSED WATER LINE	<del></del>	
FSS FUTURE SANITARY SEWER  ESL EXISTING STEAM LINE  PROPOSED STEAM LINE  FUTURE STEAM LINE  EST EXISTING STORM SEWER  PROPOSED STORM SEWER  FUTURE STORM SEWER  EW EXISTING WATER LINE  PROPOSED WATER LINE	<del>ESS</del>	
ESL EXISTING STEAM LINE  PROPOSED STEAM LINE  FUTURE STEAM LINE  EST EXISTING STORM SEWER  ST PROPOSED STORM SEWER  FST FUTURE STORM SEWER  EW EXISTING WATER LINE  PROPOSED WATER LINE	<del></del>	
SL PROPOSED STEAM LINE FUTURE STEAM LINE EST EXISTING STORM SEWER ST PROPOSED STORM SEWER FUTURE STORM SEWER EW EXISTING WATER LINE PROPOSED WATER LINE	<del></del>	
FSL FUTURE STEAM LINE  EST EXISTING STORM SEWER  PROPOSED STORM SEWER  FST FUTURE STORM SEWER  EW EXISTING WATER LINE  PROPOSED WATER LINE		
EST EXISTING STORM SEWER  ST PROPOSED STORM SEWER  FUTURE STORM SEWER  EW EXISTING WATER LINE  PROPOSED WATER LINE		
PROPOSED STORM SEWER  FUTURE STORM SEWER  EW EXISTING WATER LINE  PROPOSED WATER LINE		
FUTURE STORM SEWER  EW EXISTING WATER LINE  PROPOSED WATER LINE		
EXISTING WATER LINE PROPOSED WATER LINE		
	))	
	<del>FW</del>	FUTURE WATER LINE

ST	RUCTURES	
STRUCTURE ID	NORTHING	EASTING
M.H. #1-1	308741.9856	855987.9890
M.H. #2-1	308441.2245	855883.8374
M.H. #2-2	308433.3428	856092.0972
M.H. #2-3	308414.2024	856310.9219
M.H. #3-1	308192.2278	855886.5587
M.H. #3-2	308145.1165	856120.7744
E.X. M.H. #21-029	308756.8480	855665.0880
E.X. M.H. #30-132	308407.1460	855670.7990
E.X. M.H. #30-294	308138.6027	855767.0825

CONTROL POINT ELEVATION:

CP#200 - 3" I.B. CONTROL CAP
LOCATED AT INTERSECTION OF S.W. RIVER TRAIL ROAD AND S.W. LADDER
BACK DRIVE, GO NORTH TO END OF STREET WEST WIDE OF ROAD 6.30
FEET EAST TO END OF BACK OF CURB.
N=308941.491
E=855593.297

E=855593.297 ELEV=982.37

CP#22- 3 I.B. CONTROL CAP
LOCATED AT INTERSECTION OF S.W. LADDERBACK DRIVE AND S.W. OLD
PORT ROAD. GO NORTH TO BACK SIDE OF HOUSE #2400 ON WEST SIDE
OF ROAD, 3.00 FEET EAST TO BACK OF CURB, 7.70 NORTH TO FIRE
HYDRANT CL 14.20 FEET WEST TO SECTIONALIZER S.E. CORNER
N=308566.672
E=855581.894
ELEV=983.47

CP#202 - 3" I.B. CONTROL CAP LOCATED AT INTERSECTION OF S.W. EAGLE VIEW DRIVE AND S.W. DEER RUN ROAD S.W. QUADRANT OF INTERSECTION. GO 6.50 WEST TO CL OF MAILBOX, 2.50 FEET SOUTH TO SIDEWALK, 4.00 FEET NORTH TO BACK OF CURB, 8.00 FEET SOUTH EAST TO CL MANHOLE.

N=308014.383 E=856347.385 ELEV=977.09

CP#203 - 3" I.B. CONTROL CAP
LOCATED AT INTERSECTION OF S.W. DEER RUN ROAD AND S.W. RIVER
TRAIL ROAD NORTH EAST QUADRANT GO 14.80 FEET WEST TO LIGHTPOLE,
2.00 FEET SOUTH TO BACK OF CURB, 15.70 FEET NORTH EAST TO 2"
TREE
N=308674584

N=308674.584 E=856740.881 ELEV=997.941

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.

ASSOCIATES

MO Certific NICHOLAS D. HEISER

NUMBER
PE-20150005555

NUMBER
PE-20150005555

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REVISIONS DESCRIPTION							REVISIONS
DATE							
NO. REV.							
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GENERAL NOTES
SANITARY SEWER PLANS
EAGLE CREEK
SIXTEENTH PLAT
SIXTEESTH PLAT

 drawn by:
 B.P.K

 checked by:
 N.D.H.

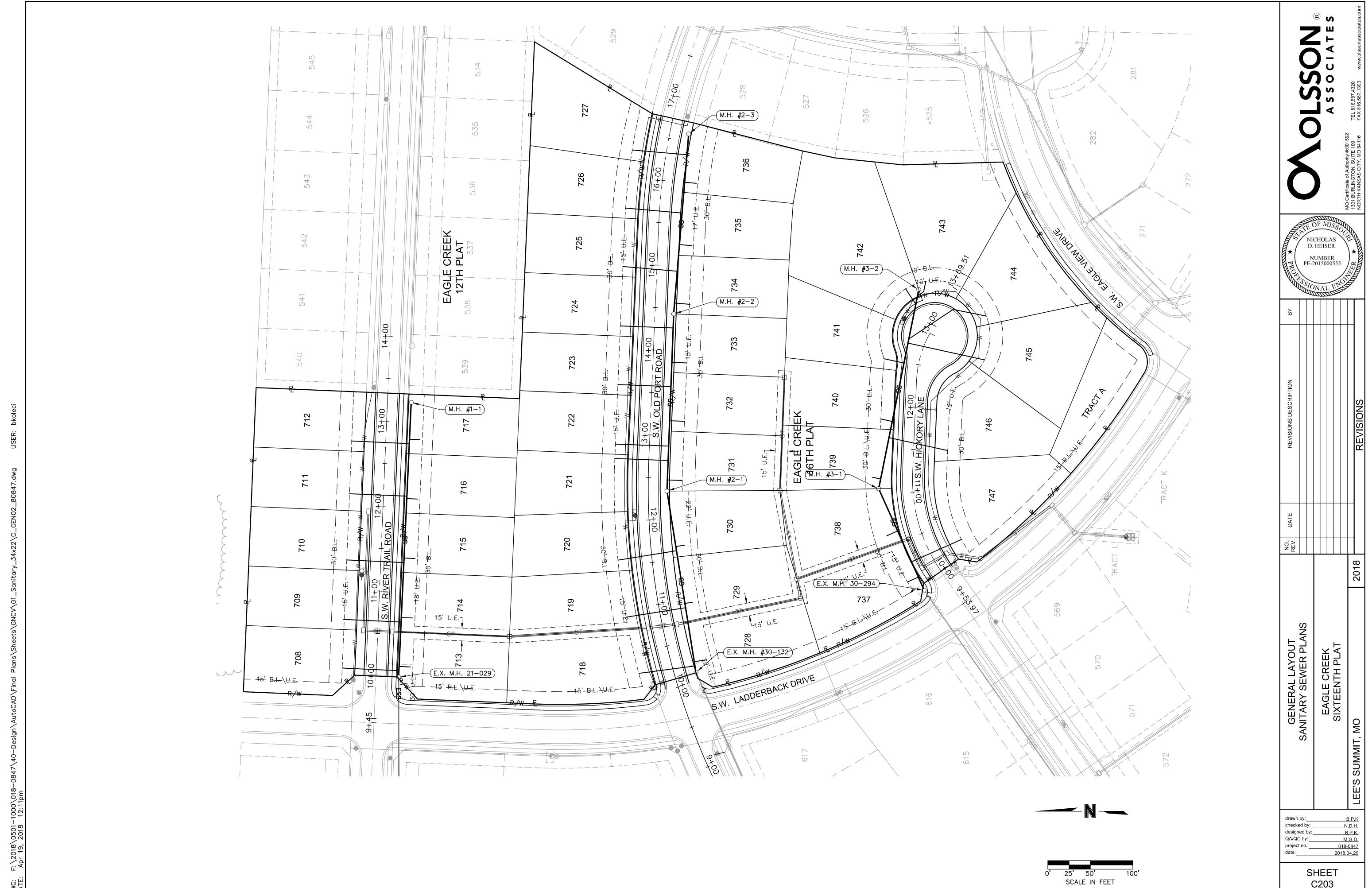
 designed by:
 B.P.K.

 QA/QC by:
 M.G.D.

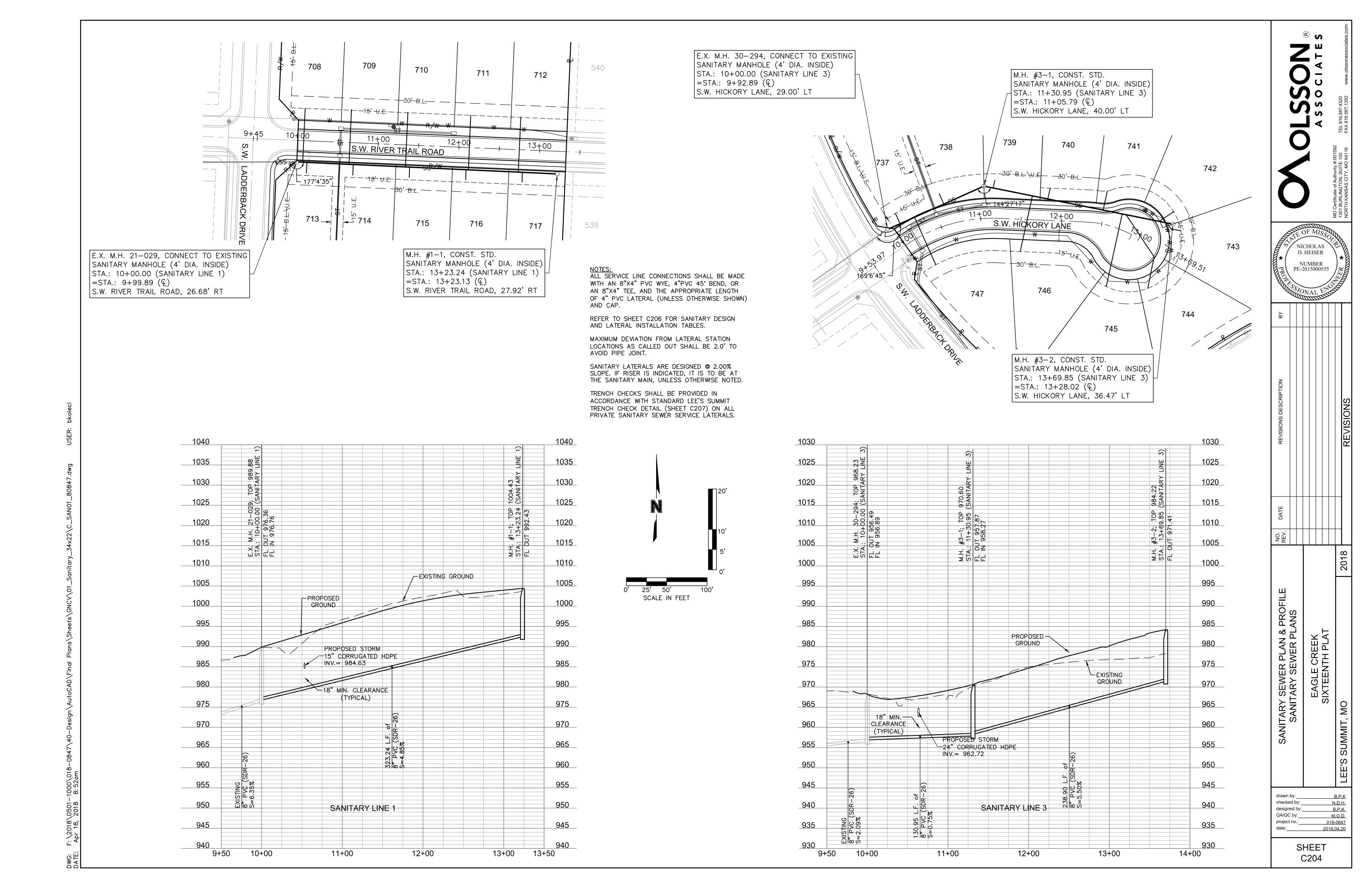
 project no.:
 018-0847

 date:
 2018.04.20

SHEET C202



SHEET C203



14+00

15+00

16+00

17+00

13+00

10+00

12+00

11+00

STONE A S S O C I A

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NICHOLAS D. HEISER

NUMBER PE-2015000555

DATE REVISIONS DESCRIPTION E

SANITARY SEWER PLANS
EAGLE CREEK
SIXTEENTH PLAT

drawn by: B.P.K checked by: N.D.H. designed by: B.P.K. QA/QC by: M.G.D. project no.: 018-0847 date: 2018.04.20

SHEET C205

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)			
708	10+07.50	66.72	0.0	977.1	979.5	982.25			
709	10+64.82	66.95	1.0	979.9	983.2	986.02			
710	11+34.84	67.24	2.0	983.3	987.6	990.40			
711	12+12.99	67.55	1.0	987.1	990.4	993.21			
712	12+74.83	68.31	0.0	990.1	992.4	995.25			
713	10+12.55	13.27	1.0	977.4	979.6	982.41			
714	10+70.09	13.03	2.0	980.2	983.4	986.17			
715	11+40.12	12.74	3.0	983.5	987.7	990.54			
716	12+10.12	12.46	3.0	986.9	991.1	993.93			
717	12+79.83	12.18	1.0	990.3	992.5	995.35			
718	10+07.50	66.12	0.0	967.9	970.2	973.04			
719	10+76.88	70.89	0.0	968.4	970.9	973.65			
720	11+44.66	69.79	0.0	968.9	971.3	974.14			
721	12+51.70	62.71	0.0	970.1	972.3	975.14			
722	12+68.69	63.15	2.0	971.4	975.6	978.44			
723	13+38.70	62.36	3.0	973.4	978.6	981.43			
724	14+07.70	62.07	2.0	975.4	979.6	982.45			
725	14+74.58	64.35	2.0	976.9	981.1	983.92			
726	15+43.30	67.73	2.0	977.6	981.9	984.75			
727	16+12.02	65.35	0.0	978.4	980.7	983.50			
728	10+12.50	13.55	0.0	968.0	969.2	972.02			
729	10+81.88	10.00	0.0	968.5	969.7	972.47			
730	11+49.66	10.67	0.0	969.0	970.2	973.00			
731	12+28.85	17.42	3.0	970.3	974.5	977.35			
732	12+98.51	17.48	4.0	972.3	977.5	980.35			
733	13+67.21	17.76	4.0	974.3	979.5	982.35			
734	14+37.09	18.03	3.0	976.5	980.8	983.56			
735	15+06.04	14.30	3.0	977.2	981.4	984.25			
736	15+79.55	13.07	2.0	978.0	981.3	984.05			
737	10+17.08	14.03	0.0	957.0	958.3	961.10			
738	10+76.56	14.02	0.0	957.5	958.7	961.54			
739	11+42.61	10.00	2.0	958.9	962.1	964.87			
740	12+11.68	13.68	3.0	962.7	966.9	969.73			
741	12+81.64	24.20	2.0	966.6	970.0	972.80			
742	13+52.35	21.68	0.0	970.4	971.9	974.68			
743	13+62.35	21.32	1.0	971.0	973.6	976.42			
744	13+10.69	102.48	2.0	968.2	972.9	975.74			
745	13+05.69	92.11	1.0	967.9	971.7	974.51			
746	11+92.25	70.64	3.0	961.6	967.0	969.80			
747	10+36.76	64.37	0.0	957.2	959.5	962.25			

	Sanitary Sewer Design Information										
Upstream Manhole	Downstream Pipe Slope	Downstream Pipe Diameter	Proposed Cumulative Area	Future Cumulative Area	Peak Base Flow	Peak Inflitration 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 1-0	6.35%	8	1.66	0.00	2490.00	830.000	0.055	0.060	0.013	3.04	8.72
MH 1-1	4.85%	8	2.55	0.00	3825.00	1275.000	0.082	0.090	0.013	2.66	7.62
EX MH 2-0	1.87%	8	6.81	0.00	10215.00	3405.000	0.203	0.224	0.013	1.65	4.73
MH 2-1	0.75%	8	5.07	0.00	7605.00	2535.000	0.155	0.171	0.013	1.05	3.00
MH 2-2	2.90%	8	3.33	0.00	4995.00	1665.000	0.105	0.115	0.013	2.06	5.90
MH 2-3	1.10%	8	2.09	0.00	3135.00	1045.000	0.068	0.074	0.013	1.27	3.63
EX MH 3-0	2.09%	8	6.54	0.00	9810.00	3270.000	0.196	0.216	0.013	1.75	5.00
MH 3-1	0.75%	8	3.68	0.00	5520.00	1840.000	0.115	0.127	0.013	1.05	3.00
MH 3-2	5.50%	8	2.08	0.00	3120.00	1040.000	0.068	0.074	0.013	2.83	8.12

MAXIMUM DEVIATION FROM LATERAL STATION LOCATIONS AS CALLED OUT SHALL BE  $2.0^{\circ}$  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 STANDARD LEE'S SUMMIT TRENCH CHECK DETAIL (SHEET C207) ON ALL PRIVATE SANITARY SEWER SERVICE LATERALS. SANITARY SEWER TABLES
SANITARY SEWER PLANS
EAGLE CREEK
SIXTEENTH PLAT

NICHOLAS D. HEISER

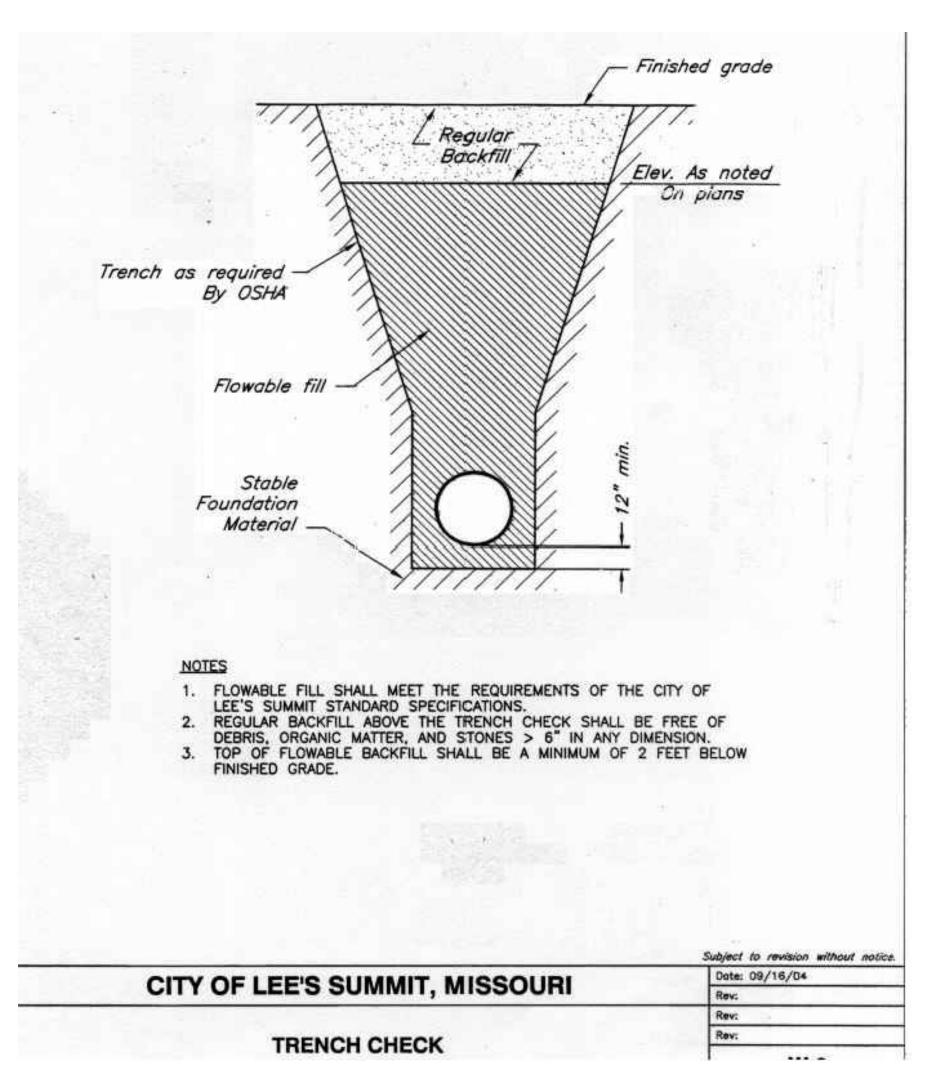
NOTES:
ALL SERVICE LINE CONNECTIONS SHALL BE MADE WITH AN 8"X4" PVC WYE,
4"PVC 45° BEND, OR AN 8"X4" TEE, AND THE APPROPRIATE LENGTH OF 4" PVC
LATERAL (UNLESS OTHERWISE SHOWN) AND CAP.

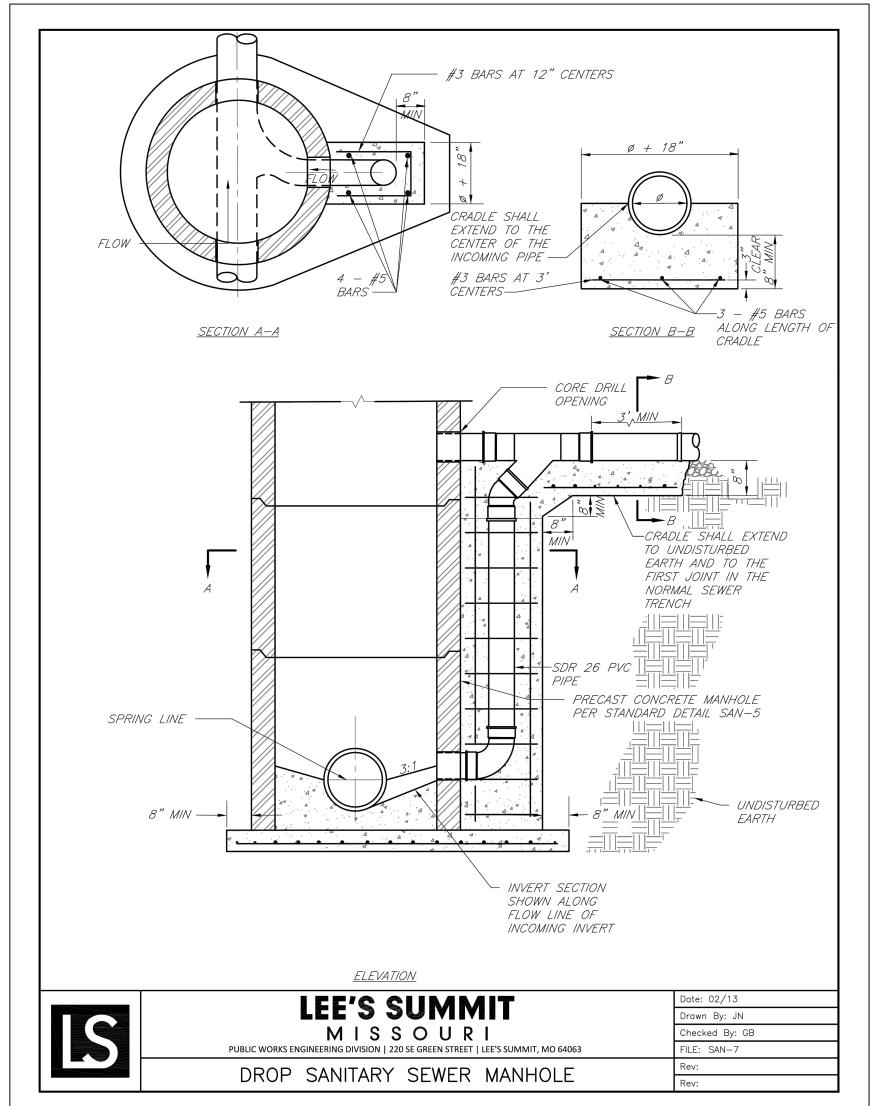
SHEET C206

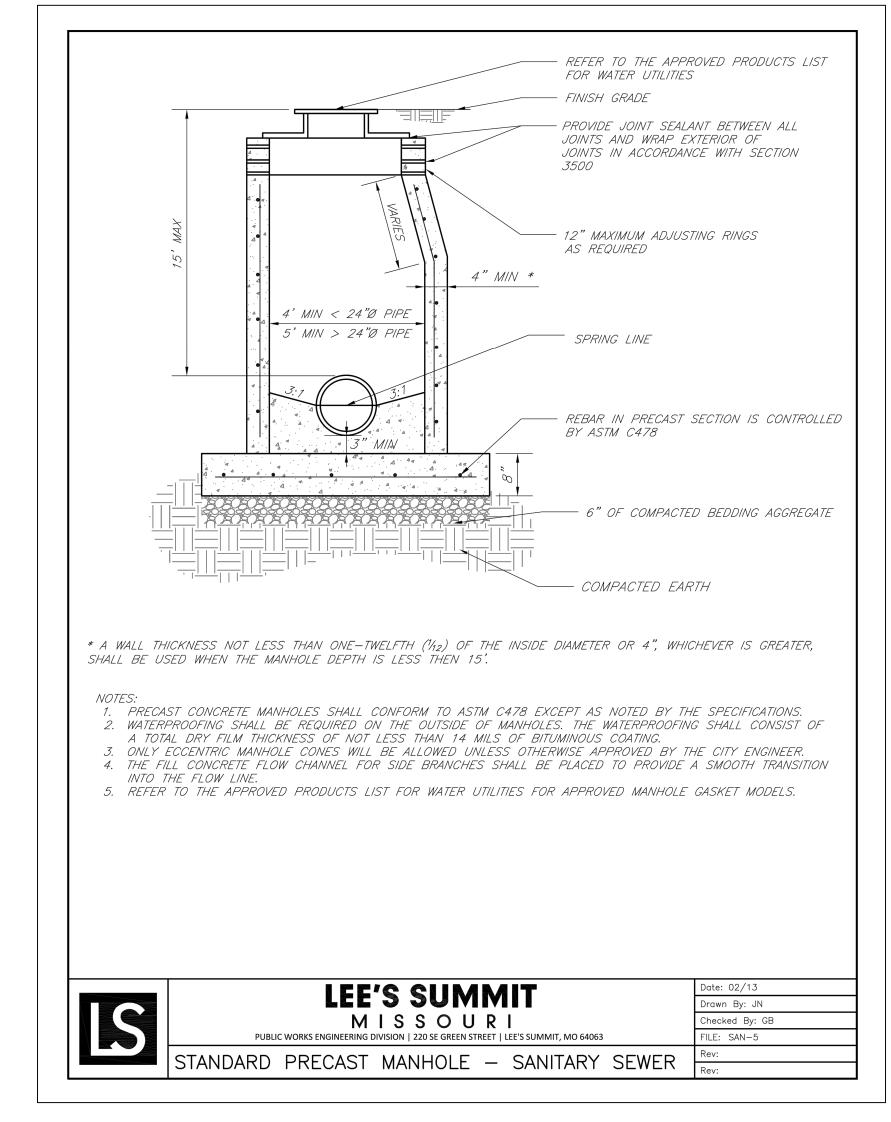
QA/QC by:\_ project no : B.P.K N.D.H. B.P.K. M.G.D.

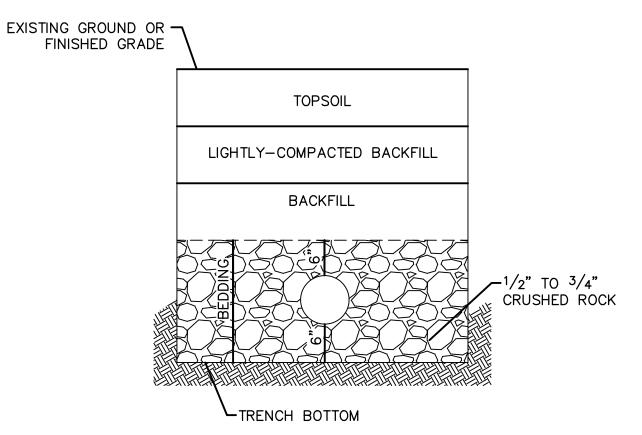
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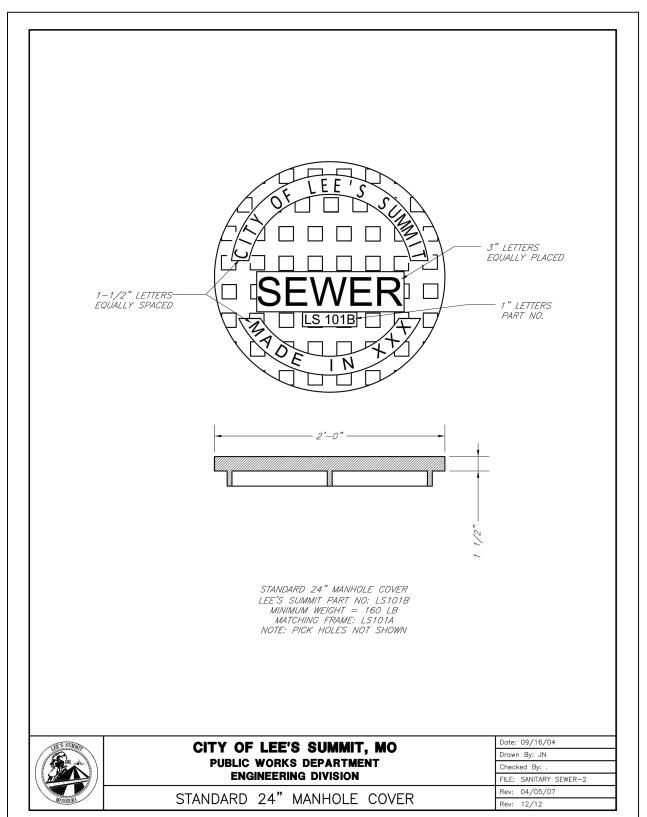


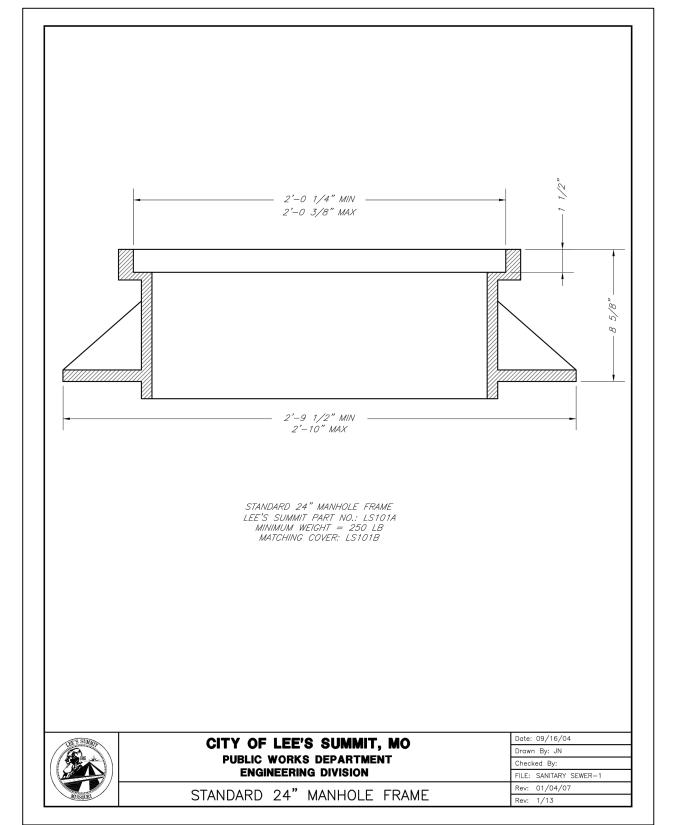


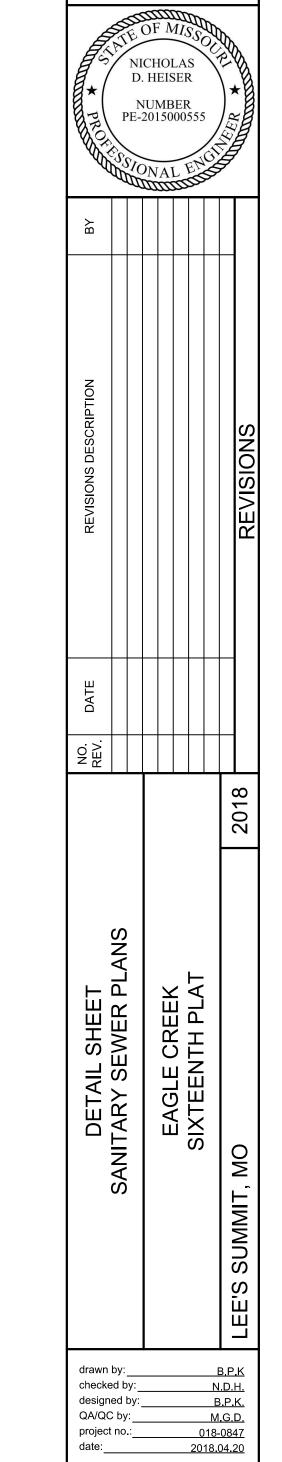


UNDERGROUND PIPE INSTALLATION FOR SANITARY SEWER

- . 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.
- 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. 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. 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.

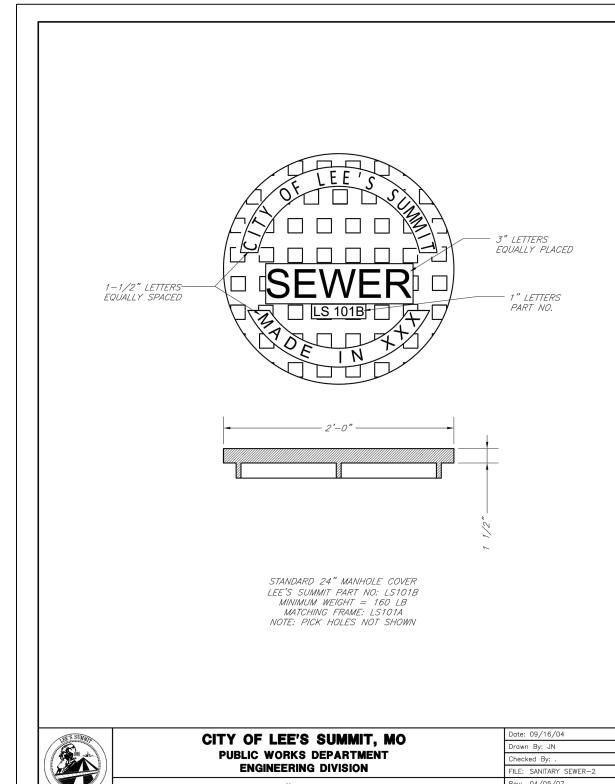


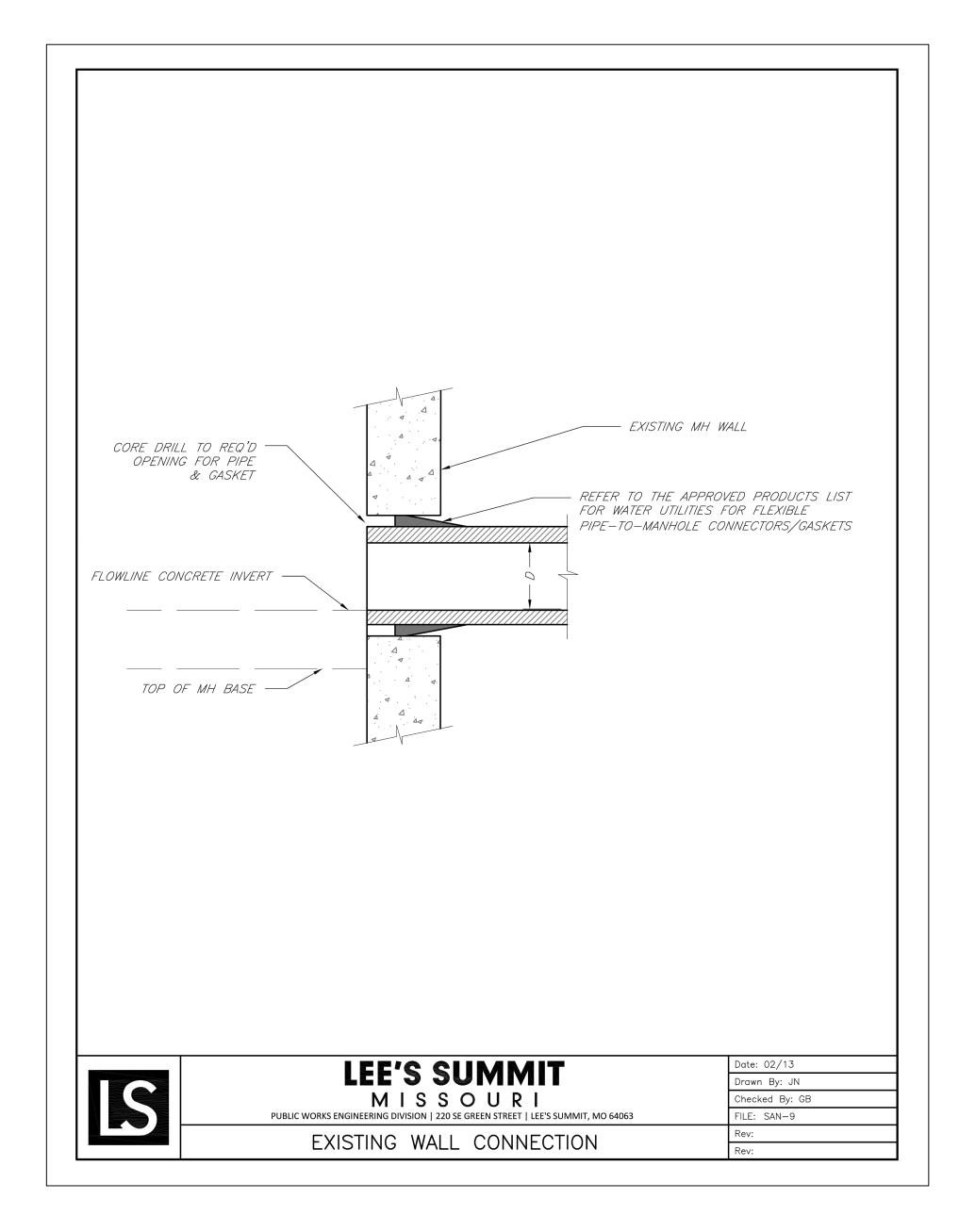


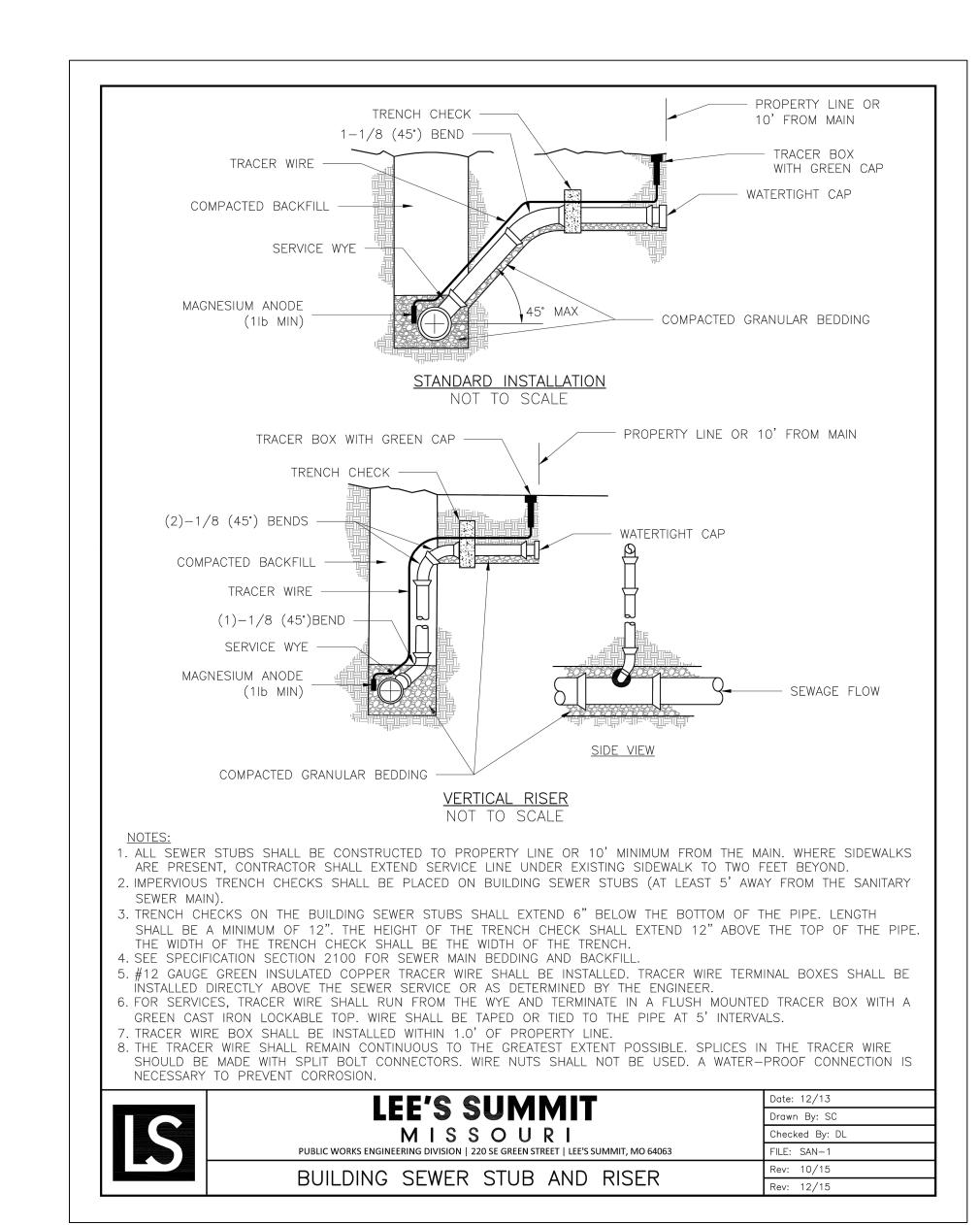


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NICHOLAS D. HEISER **NUMBER** PE-2015000555 EAGLE CREEK SIXTEENTH PLAT

checked by:

QA/QC by:\_

project no.:\_\_

SHEET

N.D.H. B.P.K.

M.G.D.

018-0847 2018.04.20