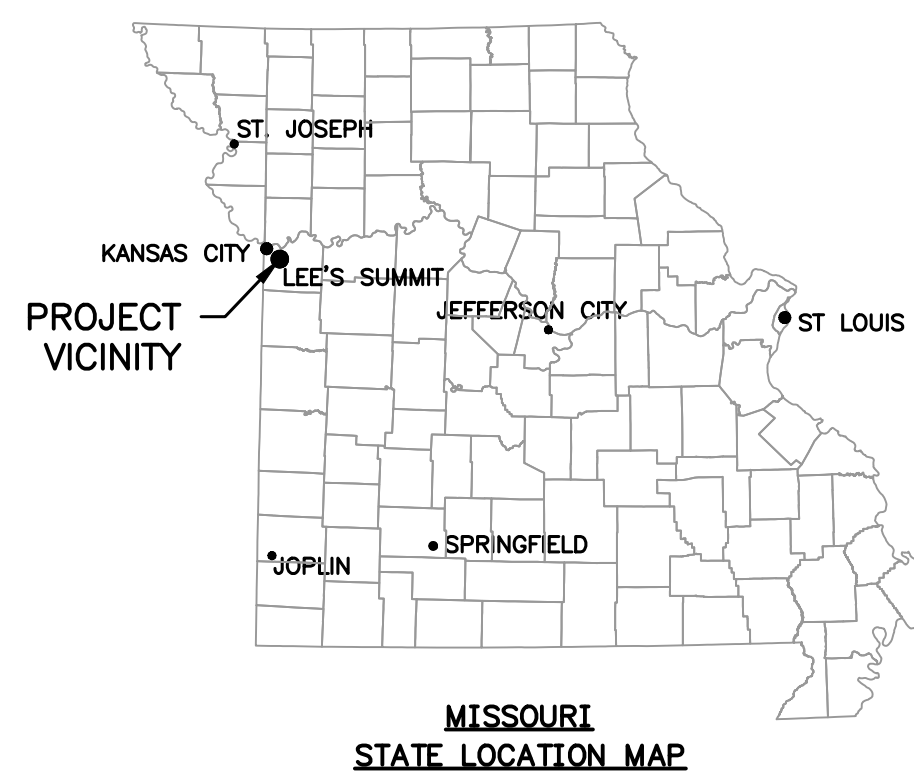


SUMMIT VIEW FARMS 4TH PLAT
LOTS 75-120 AND TRACT D

WATER LINE PLANS

LEE'S SUMMIT, JACKSON COUNTY, MISSOURI
SECTION 26, TOWNSHIP 47 N, RANGE 32W
LAMP RYNEARSON NO. 0318050.02



CALL OR CLICK 3 DAYS BEFORE YOU DIG!
MISSOURI ONE CALL SYSTEM
1-800-DIG-RITE OR 811
www.mo1call.com

ALL UTILITIES ARE SHOWN BASED ON THE INFORMATION AVAILABLE TO THE ENGINEER. THERE IS NO GUARANTEE ALL FACILITIES ARE SHOWN OR THAT THE LOCATION, DEPTH, AND SIZE OF EACH FACILITY IS CORRECT. THE CONTRACTOR IS RESPONSIBLE FOR LOCATING ALL UTILITIES AND SERVICE LINES PRIOR TO CONSTRUCTION. COORDINATE NECESSARY RELOCATIONS WITH UTILITY COMPANIES.

OWNER CONTACT
BILL KENNEY
SUMMIT VIEW FARMS DEVELOPMENT GROUP, LLC
P.O. BOX 291
LEE'S SUMMIT, MO 64063
billkenney9@gmail.com
(816) 838-0552

CONSULTANT CONTACT
DAN MCGHEE
LAMP RYNEARSON
9001 STATE LINE ROAD, SUITE 200
KANSAS CITY, MO 64114
Dan.McGhee@lamprynearson.com
(816) 361-0440



LOCATION MAP

UTILITIES		
ELECTRIC:	EVERGY	(816) 471-5275
GAS:	SPIRE ENERGY	(816) 756-5252
TELEPHONE:	AT&T	(816) 325-5607
CABLE:	SPECTRUM	(816) 358-8833
WATER:	LEE'S SUMMIT WATER UTILITIES	(816) 969-1900
SEWER:	LEE'S SUMMIT WATER UTILITIES	(816) 969-1900

ESTIMATED SUMMARY OF QUANTITIES			
ITEM NO.	ITEM DESCRIPTION	ESTIMATED QUANTITY	UNIT
1	6" WATER MAIN (PVC AWWA C900)	411	LF
2	8" WATER MAIN (PVC AWWA C900)	2,371	LF
3	8" X 8" TEE (DUCTILE IRON)	4	EA
4	6" 11.25, 22.5, 45 OR 90 DEGREE BEND	5	EA
5	8" 11.25, 22.5, 45 OR 90 DEGREE BEND	14	EA
6	THRUST BLOCKS	44	EA
7	8" GATE VALVE	6	EA
8	6" RESTRAINED CAP	1	EA
9	8" RESTRAINED CAP	2	EA
10	FIRE HYDRANT ASSEMBLY	6	EA
11	CONNECT TO EXISTING WATER MAIN	3	EA

INDEX OF SHEETS

- 01 COVER SHEET
- 02 GENERAL LAYOUT PLAN SHEET
- 03 WATER LINE PLAN AND PROFILE LINE 4-01 SHEET
- 04 WATER LINE PLAN AND PROFILE LINES 4-02 AND 4-03 SHEET
- 05 WATER LINE PROFILE LINES 4-04 AND 4-05 SHEET
- 06 WATER DETAILS SHEET



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Kansas City, MO 64114
816.361.0440
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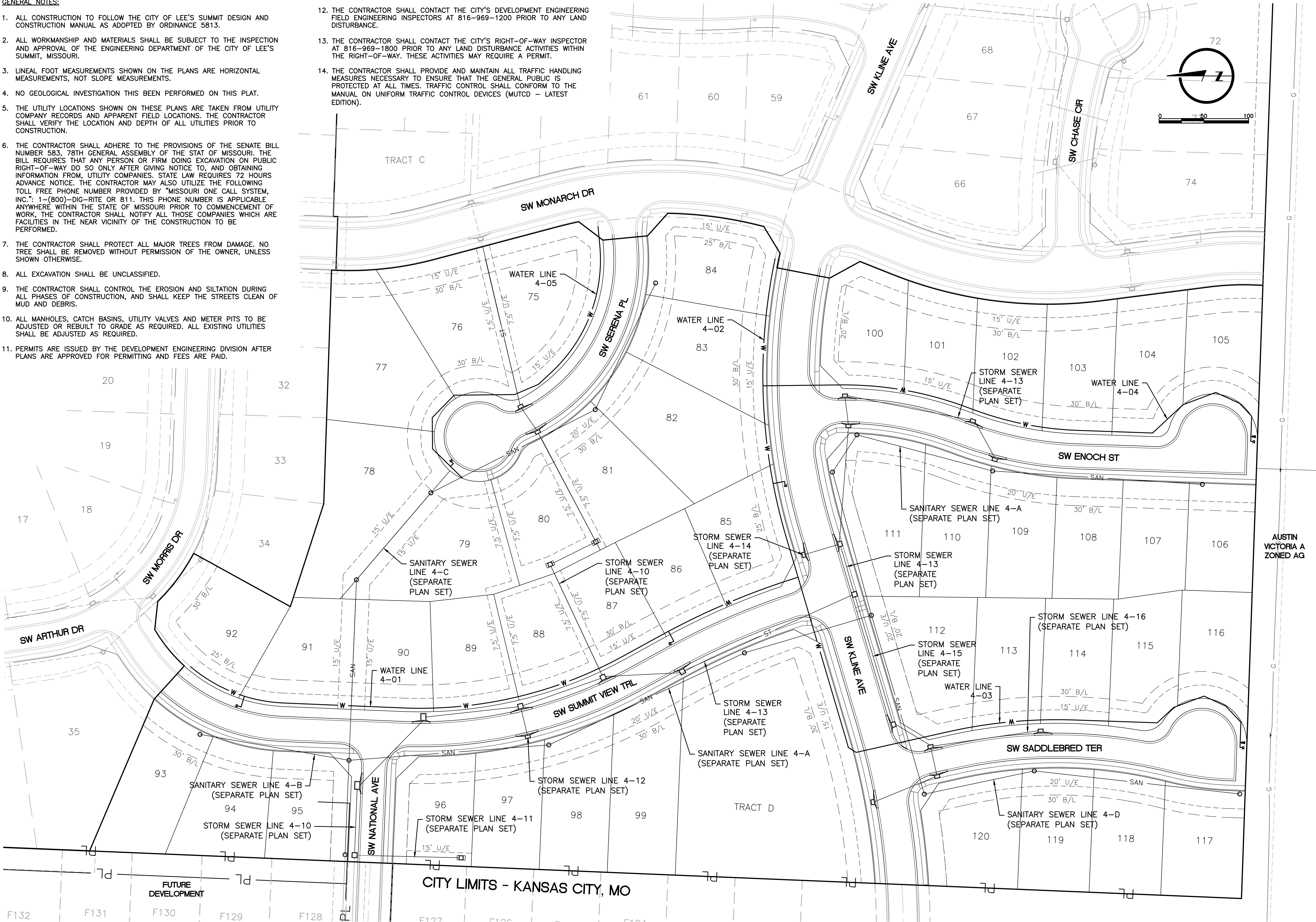


APPROVED: _____ DATE: 01-07-2020
MARK DANIEL MCGHEE JR., PE

GENERAL NOTES:

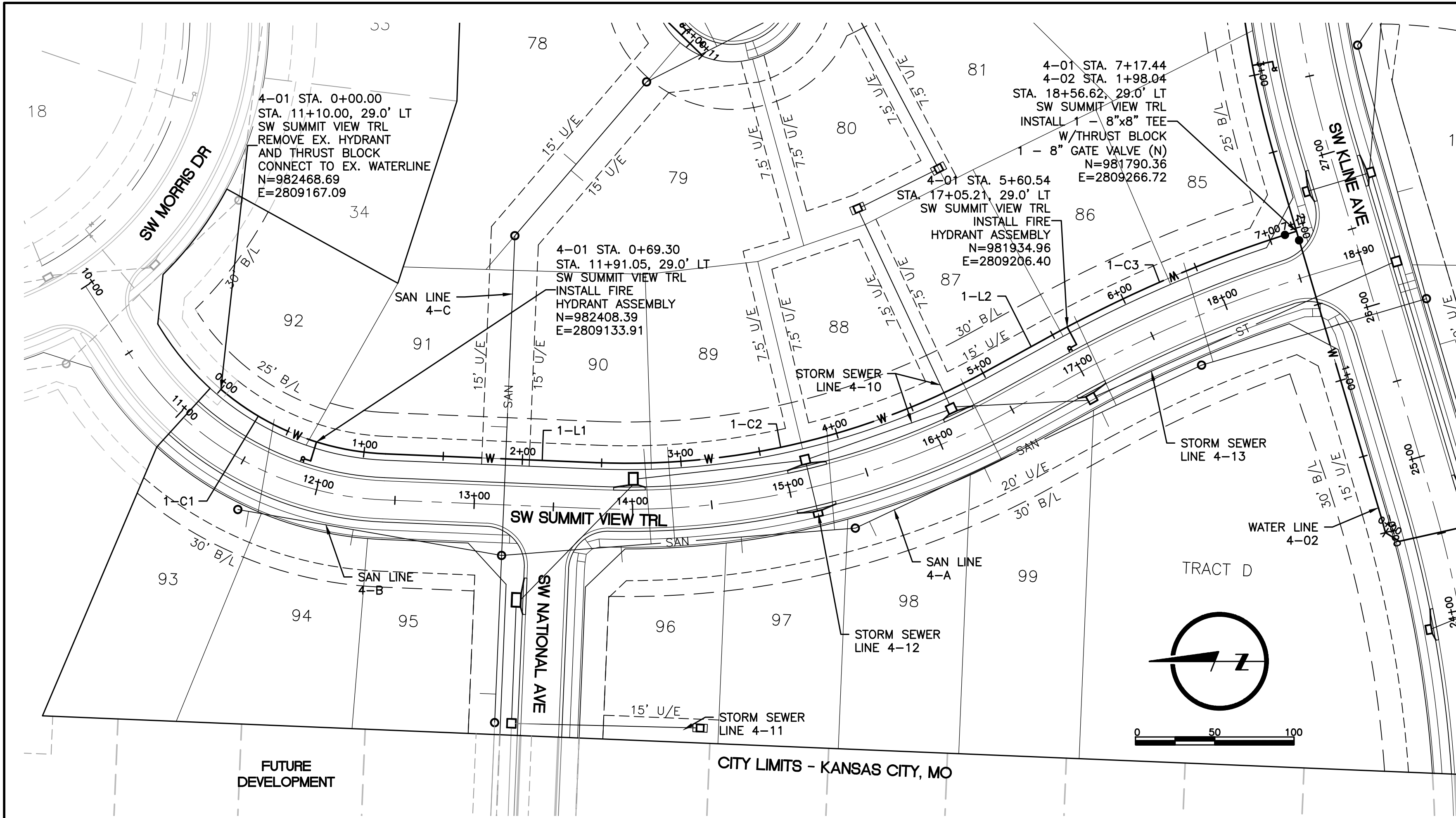
- ALL CONSTRUCTION TO FOLLOW THE CITY OF LEE'S SUMMIT DESIGN AND CONSTRUCTION MANUAL AS ADOPTED BY ORDINANCE 5813.
- ALL WORKMANSHIP AND MATERIALS SHALL BE SUBJECT TO THE INSPECTION AND APPROVAL OF THE ENGINEERING DEPARTMENT OF THE CITY OF LEE'S SUMMIT, MISSOURI.
- LINEAL FOOT MEASUREMENTS SHOWN ON THE PLANS ARE HORIZONTAL MEASUREMENTS, NOT SLOPE MEASUREMENTS.
- NO GEOLOGICAL INVESTIGATION THIS BEEN PERFORMED ON THIS PLAT.
- THE UTILITY LOCATIONS SHOWN ON THESE PLANS ARE TAKEN FROM UTILITY COMPANY RECORDS AND APPARENT FIELD LOCATIONS. THE CONTRACTOR SHALL VERIFY THE LOCATION AND DEPTH OF ALL UTILITIES PRIOR TO CONSTRUCTION.
- THE CONTRACTOR SHALL ADHERE TO THE PROVISIONS OF THE SENATE BILL NUMBER 583, 78TH GENERAL ASSEMBLY OF THE STAT OF MISSOURI. THE BILL REQUIRES THAT ANY PERSON OR FIRM DOING EXCAVATION ON PUBLIC RIGHT-OF-WAY DO SO ONLY AFTER GIVING NOTICE TO, AND OBTAINING INFORMATION FROM, UTILITY COMPANIES. STATE LAW REQUIRES 72 HOURS ADVANCE NOTICE. THE CONTRACTOR MAY ALSO UTILIZE THE FOLLOWING TOLL FREE PHONE NUMBER PROVIDED BY "MISSOURI ONE CALL SYSTEM, INC.": 1-(800)-DIG-RITE OR 811. THIS PHONE NUMBER IS APPLICABLE ANYWHERE WITHIN THE STATE OF MISSOURI PRIOR TO COMMENCEMENT OF WORK, THE CONTRACTOR SHALL NOTIFY ALL THOSE COMPANIES WHICH ARE FACILITIES IN THE NEAR VICINITY OF THE CONSTRUCTION TO BE PERFORMED.
- THE CONTRACTOR SHALL PROTECT ALL MAJOR TREES FROM DAMAGE. NO TREE SHALL BE REMOVED WITHOUT PERMISSION OF THE OWNER, UNLESS SHOWN OTHERWISE.
- ALL EXCAVATION SHALL BE UNCLASSIFIED.
- THE CONTRACTOR SHALL CONTROL THE EROSION AND SILTATION DURING ALL PHASES OF CONSTRUCTION, AND SHALL KEEP THE STREETS CLEAN OF MUD AND DEBRIS.
- ALL MANHOLES, CATCH BASINS, UTILITY VALVES AND METER PITS TO BE ADJUSTED OR REBUILT TO GRADE AS REQUIRED. ALL EXISTING UTILITIES SHALL BE ADJUSTED AS REQUIRED.
- PERMITS ARE ISSUED BY THE DEVELOPMENT ENGINEERING DIVISION AFTER PLANS ARE APPROVED FOR PERMITTING AND FEES ARE PAID.

- THE CONTRACTOR SHALL CONTACT THE CITY'S DEVELOPMENT ENGINEERING FIELD ENGINEERING INSPECTORS AT 816-969-1200 PRIOR TO ANY LAND DISTURBANCE.
- THE CONTRACTOR SHALL CONTACT THE CITY'S RIGHT-OF-WAY INSPECTOR AT 816-969-1800 PRIOR TO ANY LAND DISTURBANCE ACTIVITIES WITHIN THE RIGHT-OF-WAY. THESE ACTIVITIES MAY REQUIRE A PERMIT.
- THE CONTRACTOR SHALL PROVIDE AND MAINTAIN ALL TRAFFIC HANDLING MEASURES NECESSARY TO ENSURE THAT THE GENERAL PUBLIC IS PROTECTED AT ALL TIMES. TRAFFIC CONTROL SHALL CONFORM TO THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD - LATEST EDITION).



LAMP RYNEARSON MO CERT. NO. 2013011903 MARK DANIEL MCGHEE JR. PE - 2008019568 REVISIONS 01/07/2020 PER CITY COMMENTS	
9001 State Line Rd., Ste. 200 Kansas City, MO 64114 816.361.0440 LampRynearson.com	
LAMP RYNEARSON	
SUMMIT VIEW FARMS 4TH PLAT	LEE'S SUMMIT, MISSOURI
WATER LINE PLANS	GENERAL LAYOUT PLAN SHEET
DESIGNER / DRAFTER AJM DATE 11/20/2019 PROJECT NUMBER 0318050.02 BOOK AND PAGE	
SHEET	
02 of 06	

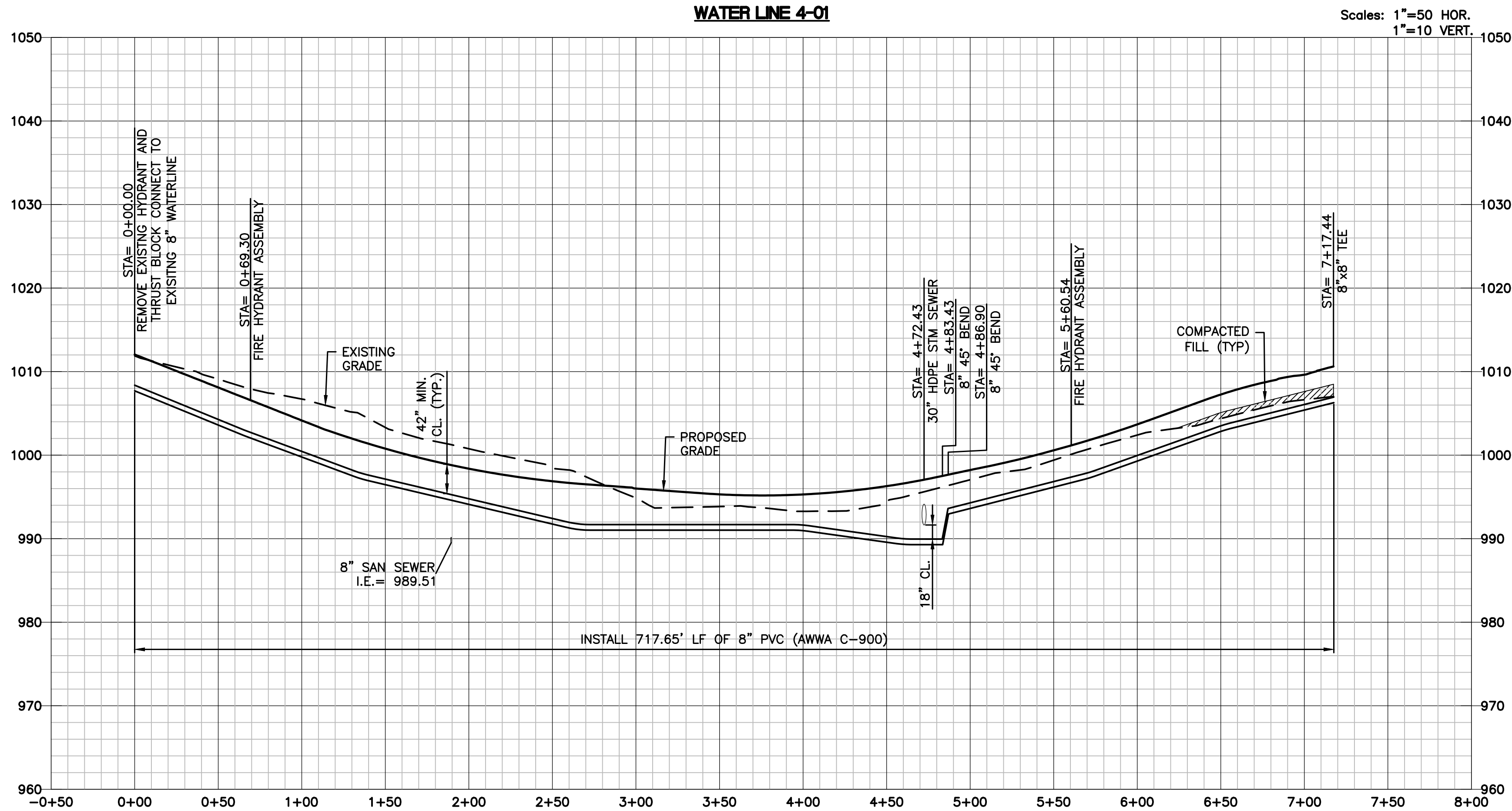
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WATER MAIN NOTES:

1. WATER MAINS AND SANITARY SEWER MAINS (INCLUDING STRUCTURES) SHALL HAVE AT LEAST 10'-FT OF HORIZONTAL SEPARATION FROM EDGE OF WATER PIPE TO EDGE OF SEWER PIPE OR SEWER STRUCTURE.
2. WATER MAINS AND SANITARY SEWERS SHALL HAVE AT LEAST 18-INCHES OF VERTICAL SEPARATION FROM EDGE OF PIPE TO EDGE OF PIPE. THE CROSSING SHALL BE ARRANGED SO THAT THE WATER MAIN JOINTS WILL BE EQUIDISTANT AND AS FAR AS POSSIBLE FROM THE SEWER MAIN JOINTS.
3. CONCRETE THRUST BLOCKS SHALL BE INSTALLED AT ALL HORIZONTAL FITTING, VERTICAL FITTING, AND FIRE HYDRANT ASSEMBLY LOCATIONS IN ACCORDANCE WITH CITY STANDARD DETAILS WAT-1, WAT-2, AND WAT-8.
4. COMPACTED FILL SHALL BE PLACED TO A MINIMUM 18" ABOVE THE TOP OF PIPE PRIOR TO INSTALLATION.

ALIGNMENT TABLE 4-01					
Line #/Curve #	Length	Direction/Delta	Radius	BEGIN NORTHING/EASTING	END NORTHING/EASTING
1-C1	113.57	038.05	171.00	N=982364.89/E=2809126.40	N=982468.69/E=2809167.09
1-L1	133.00	N02° 22' 44.46"E		N=982232.00/E=2809120.88	N=982364.89/E=2809126.40
1-C2	255.84	031.12	471.00	N=981985.95/E=2809178.50	N=982232.00/E=2809120.88
1-L2	48.40	N28° 44' 26.42"W		N=981943.52/E=2809201.77	N=981985.95/E=2809178.50
1-C3	166.64	011.52	829.00	N=981790.36/E=2809266.72	N=981943.52/E=2809201.77



LAMP RYNEARSON
MO CERT. NO. 2013011903

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PE - 2008019568

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SUMMIT VIEW FARMS 4TH PLAT

LEE'S SUMMIT, MISSOURI

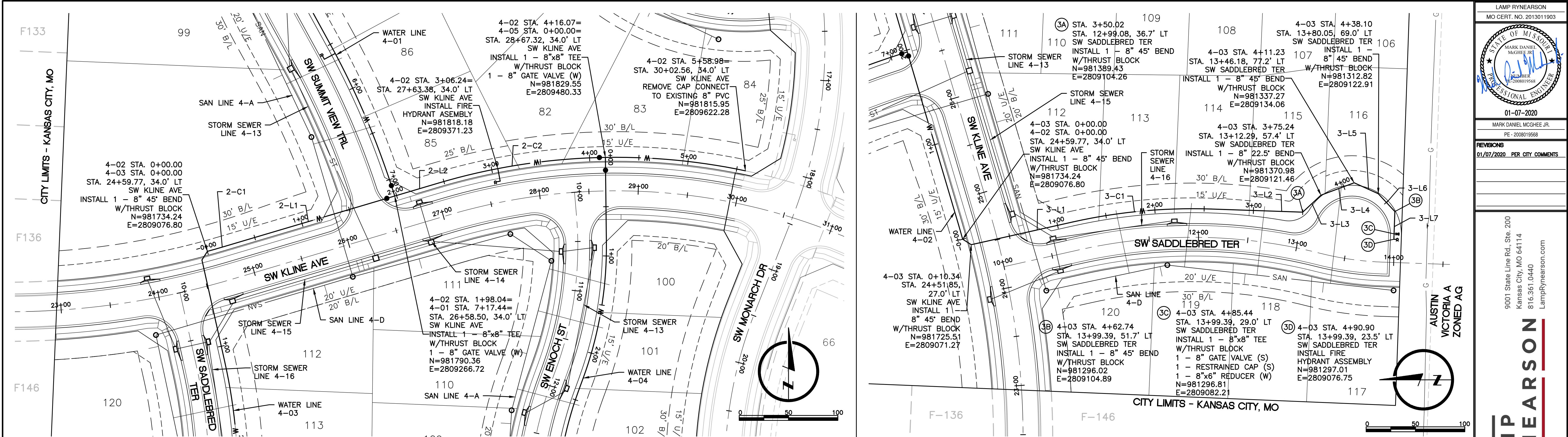
WATER LINE PLANS

WATER LINE PLAN AND PROFILE

WATER LINE 4-01

DESIGNER / DRAFTER
AJM
DATE
11/20/2019
PROJECT NUMBER
0318050.02
BOOK AND PAGE

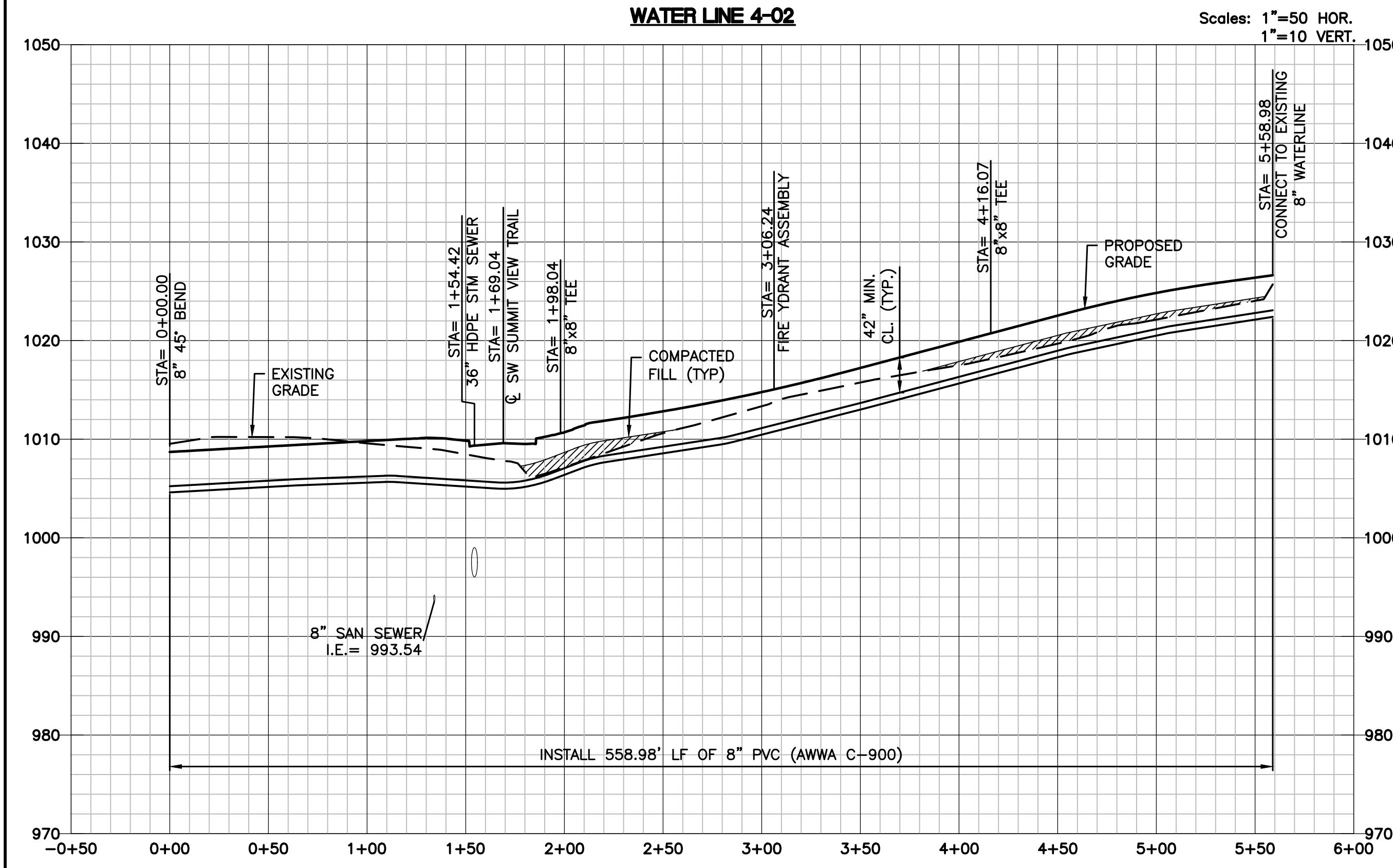
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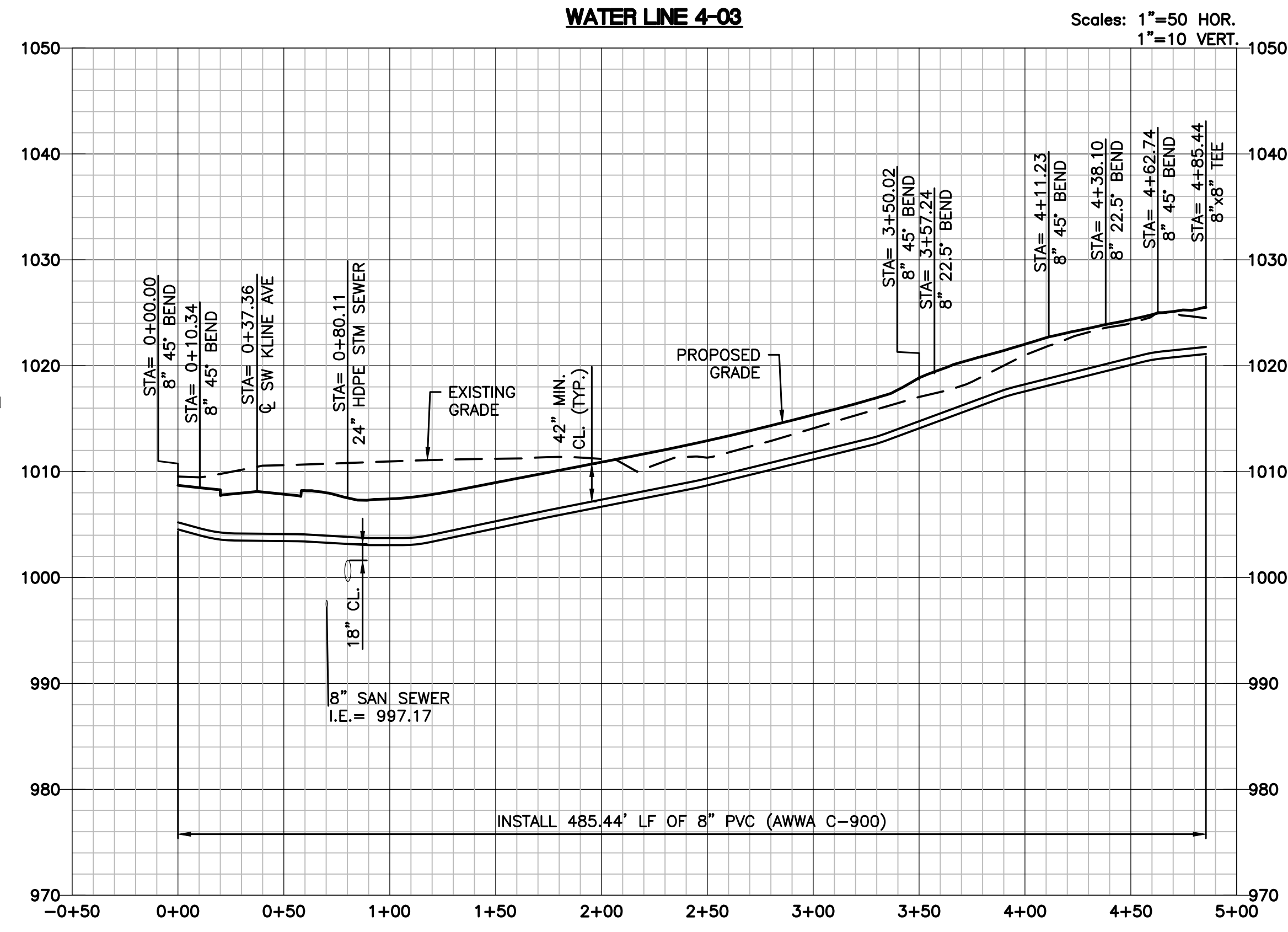
ALIGNMENT TABLE 4-02					
Line #/Curve #	Length	Direction/Delta	Radius	BEGIN NORTHING/EASTING	END NORTHING/EASTING
2-C1	22.97	001.72	766.00	N=981732.34/E=2809069.74	N=981738.54/E=2809091.85
2-L1	203.43	N73° 29' 29.49"E		N=981738.54/E=2809091.85	N=981796.34/E=2809286.90
2-L2	25.21	N73° 29' 29.49"E		N=981796.34/E=2809286.90	N=981803.51/E=2809311.07
2-C2	314.69	028.44	634.00	N=981815.95/E=2809622.28	N=981803.51/E=2809311.07

ALIGNMENT TABLE 4-03					
Line #/Curve #	Length	Direction/Delta	Radius	BEGIN NORTHING/EASTING	END NORTHING/EASTING
3-L1	112.78	S12° 37' 14.80"E		N=981732.34/E=2809069.74	N=981622.29/E=2809094.38
3-C1	140.97	014.58	554.00	N=981622.29/E=2809094.38	N=981482.31/E=2809107.44
3-L2	92.93	S01° 57' 29.64"W		N=981482.31/E=2809107.44	N=981389.43/E=2809104.26
3-L3	25.22	S42° 59' 30.55"E		N=981389.43/E=2809104.26	N=981370.98/E=2809121.46

ALIGNMENT TABLE 4-03					
3-L4	35.99	S20° 29' 30.55"E		N=981370.98/E=2809121.46	N=981337.27/E=2809134.06
3-L5	26.87	S24° 30' 29.45"W		N=981337.27/E=2809134.06	N=981312.82/E=2809122.91
3-L6	24.64	S47° 00' 29.45"W		N=981312.82/E=2809122.91	N=981296.02/E=2809104.89
3-L7	28.16	N87° 59' 30.55"W		N=981296.02/E=2809104.89	N=981297.01/E=2809076.75



- WATER MAIN NOTES:**
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LAMP RYNEARSON
MO CERT. NO. 2013011903

MARK DANIEL MCGHEE JR.
PE - 2008019568
REVISIONS
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LAMP RYNEARSON

SUMMIT VIEW FARMS 4TH PLAT

LEE'S SUMMIT, MISSOURI

WATER LINE PLANS

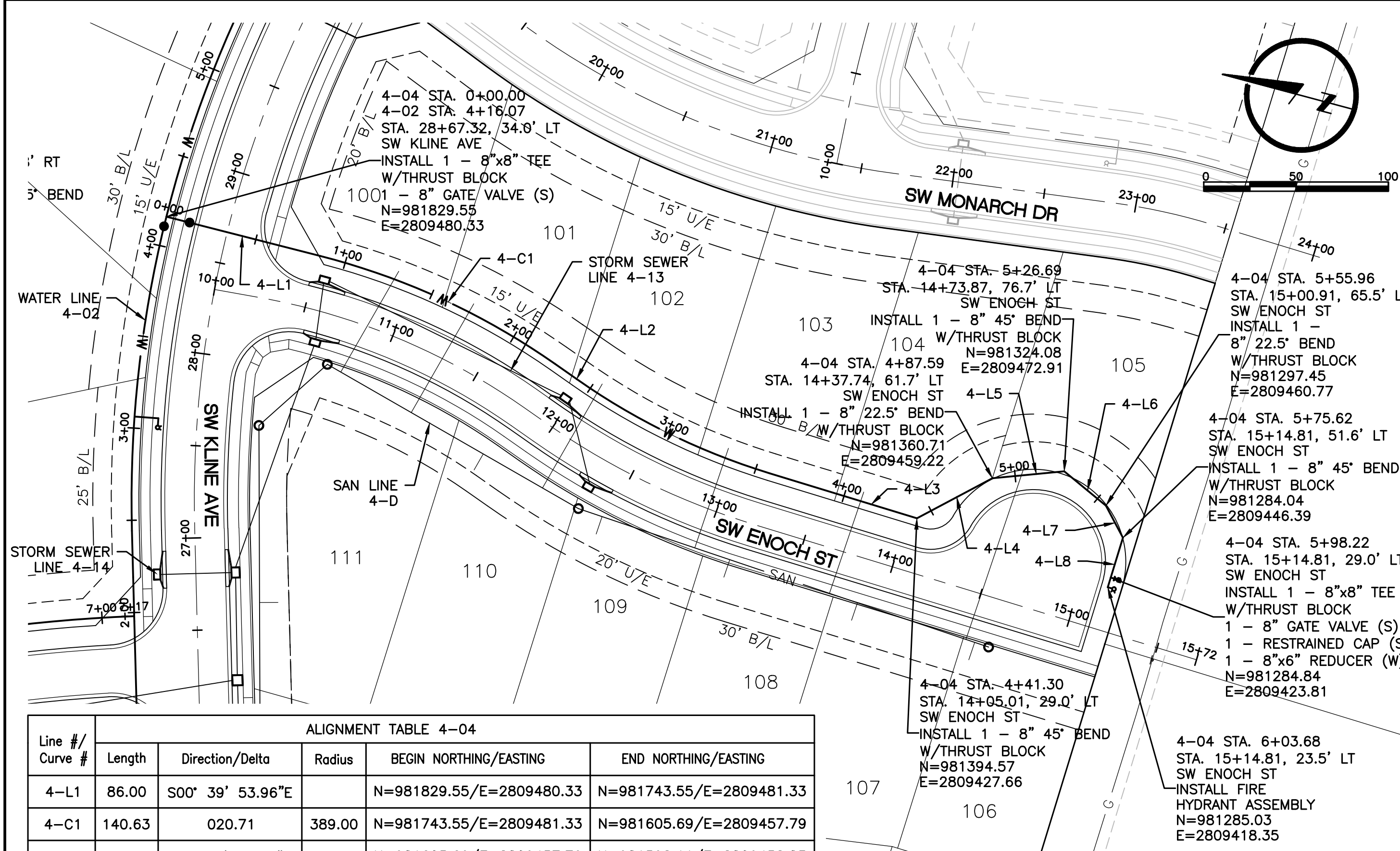
WATER LINE PLAN AND PROFILE

WATER LINE 4-02 AND 4-03

DESIGNER / DRAFTER
AJM
DATE
11/20/2019
PROJECT NUMBER
0318050.02
BOOK AND PAGE

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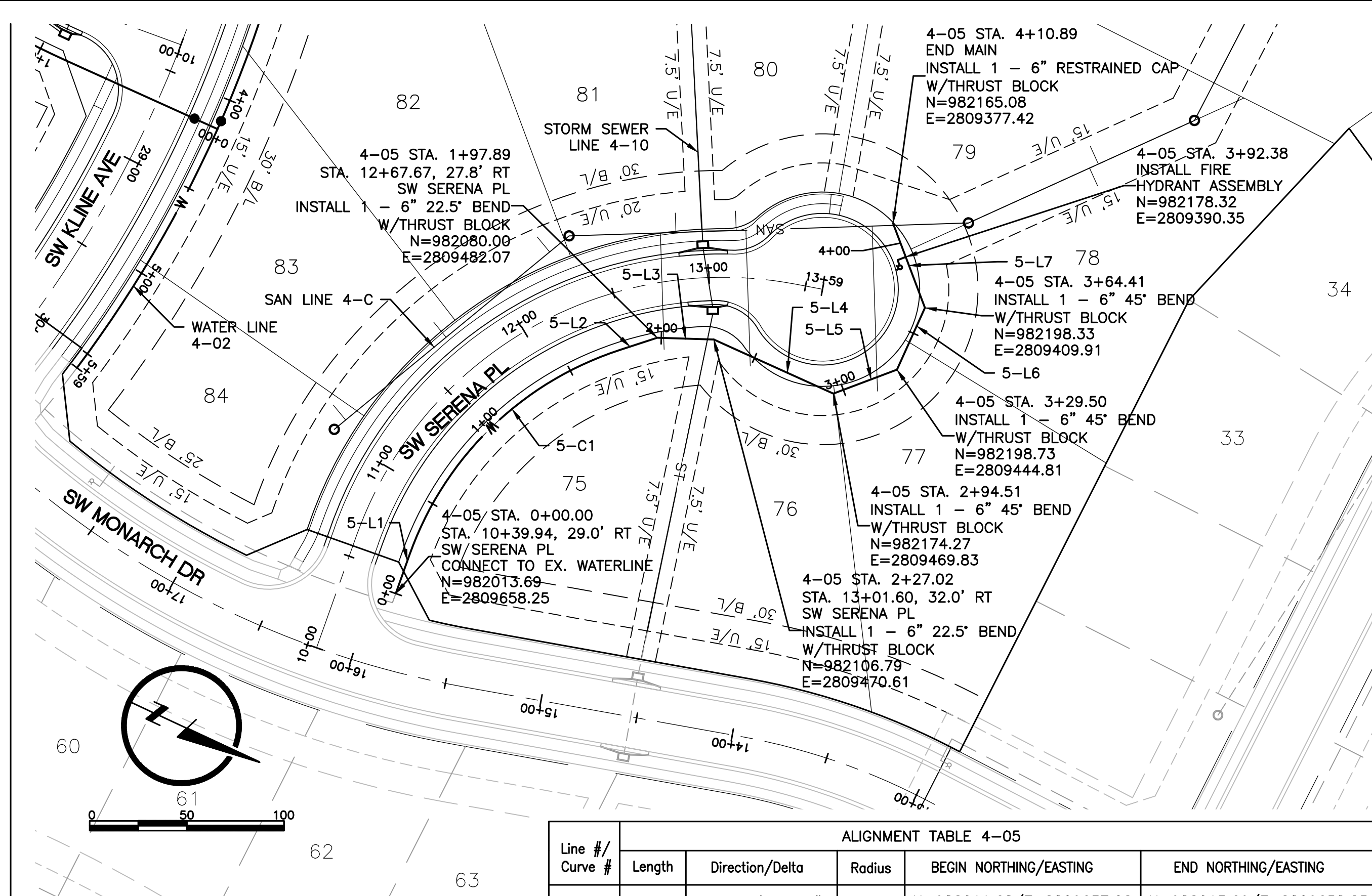
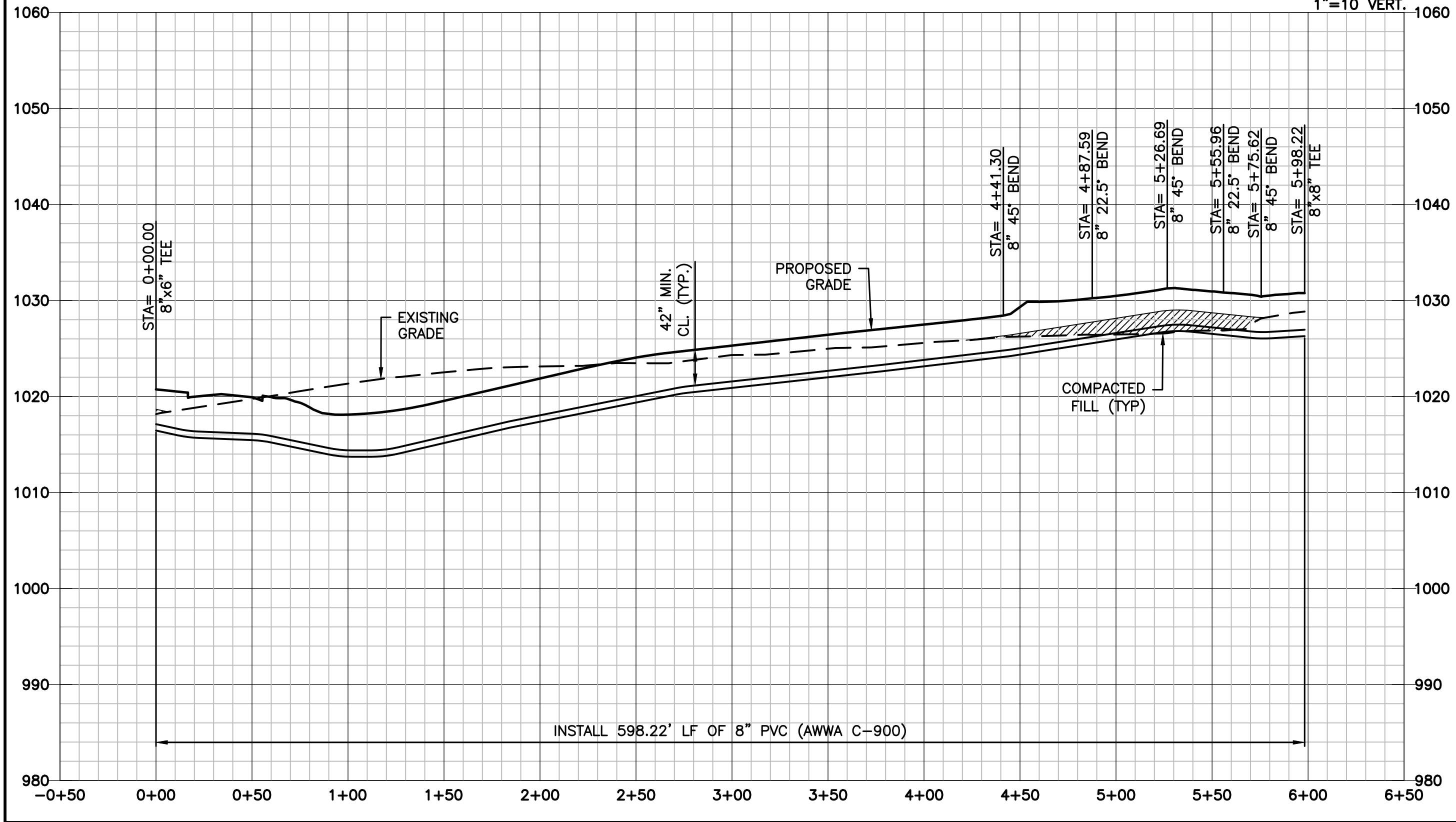
ALIGNMENT TABLE 4-04					
Line #/ Curve #	Length	Direction/Delta	Radius	BEGIN NORTHING/EASTING	END NORTHING/EASTING
4-L1	86.00	S00° 39' 53.96"E		N=981829.55/E=2809480.33	N=981743.55/E=2809481.33
4-C1	140.63	020.71	389.00	N=981743.55/E=2809481.33	N=981605.69/E=2809457.79
4-L2	14.45	S20° 02' 52.84"W		N=981605.69/E=2809457.79	N=981592.11/E=2809452.83
4-C2	116.81	018.04	371.00	N=981592.11/E=2809452.83	N=981477.93/E=2809430.58
4-L3	83.41	S02° 00' 29.45"W		N=981477.93/E=2809430.58	N=981394.57/E=2809427.66
4-L4	46.29	S42° 59' 30.55"E		N=981394.57/E=2809427.66	N=981360.71/E=2809459.22
4-L5	39.10	S20° 29' 30.55"E		N=981360.71/E=2809459.22	N=981324.08/E=2809472.91
4-L6	29.27	S24° 30' 29.45"W		N=981324.08/E=2809472.91	N=981297.45/E=2809460.77
4-L7	19.66	S47° 00' 29.45"W		N=981297.45/E=2809460.77	N=981284.04/E=2809446.39
4-L8	28.06	N87° 59' 30.55"W		N=981284.04/E=2809446.39	N=981285.03/E=2809418.35

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WATER LINE 4-04

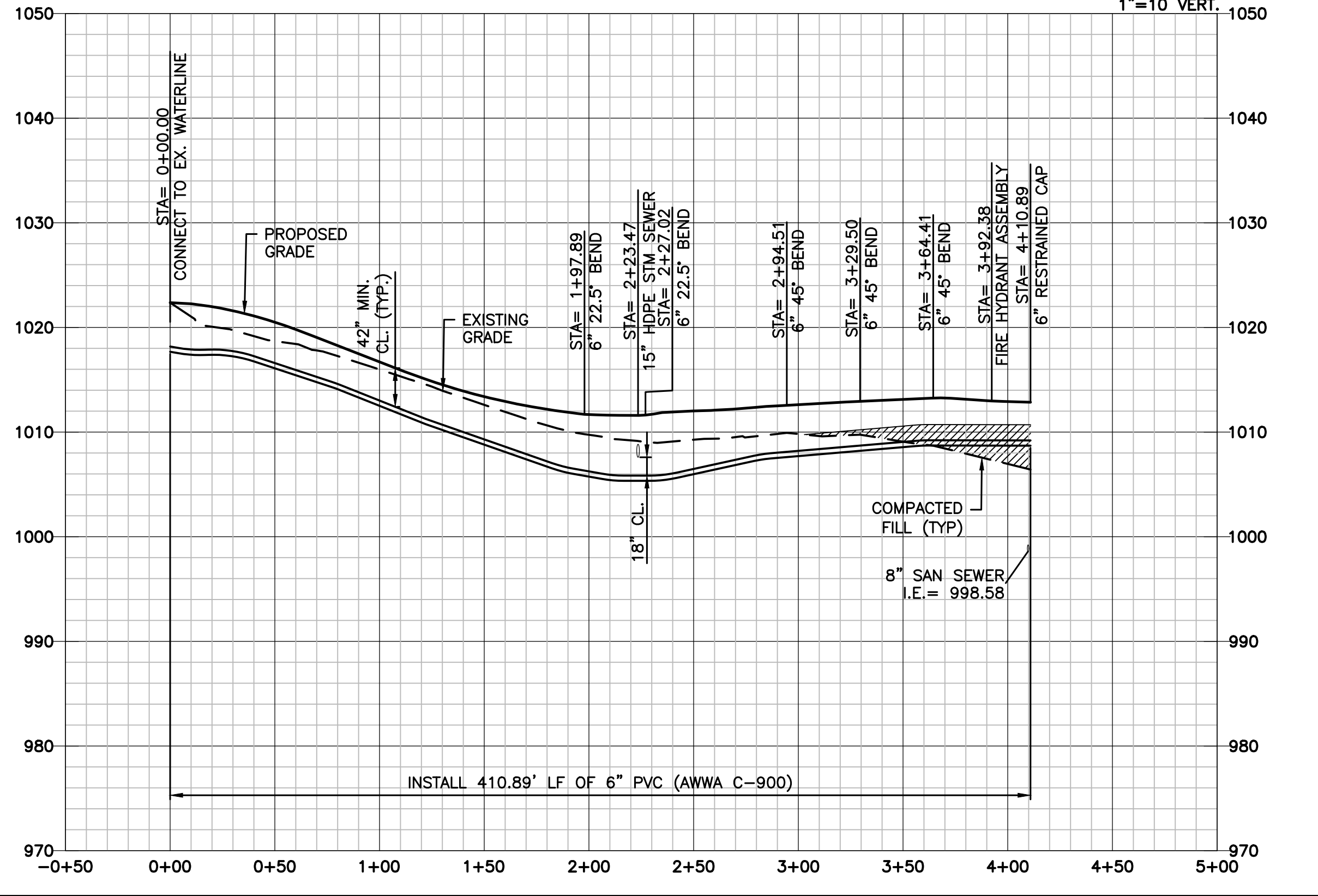
Scales: 1"=50 HOR.
1"=10 VERT.



ALIGNMENT TABLE 4-05					
Line #/ Curve #	Length	Direction/Delta	Radius	BEGIN NORTHING/EASTING	END NORTHING/EASTING
5-L1	21.32	N84° 35' 12.87"E		N=982011.68/E=2809637.02	N=982013.69/E=2809658.25
5-C1	156.16	052.32	171.00	N=982065.10/E=2809496.01	N=982011.68/E=2809637.02
5-L2	20.41	S43° 05' 19.14"E		N=982080.00/E=2809482.07	N=982065.10/E=2809496.01
5-L3	29.13	S23° 09' 40.37"E		N=982106.79/E=2809470.61	N=982080.00/E=2809482.07
5-L4	67.49	S00° 39' 40.37"E		N=982174.27/E=2809469.83	N=982106.79/E=2809470.61
5-L5	34.99	S45° 39' 40.37"E		N=982198.73/E=2809444.81	N=982174.27/E=2809469.83
5-L6	34.90	N89° 20' 19.63"E		N=982198.33/E=2809409.91	N=982198.73/E=2809444.81
5-L7	46.48	N44° 20' 19.63"E		N=982165.08/E=2809377.42	N=982198.33/E=2809409.91

WATER LINE 4-05

Scales: 1"=50 HOR.
1"=10 VERT.



LAMP RYNEARSON
MO CERT. NO. 2013011903
STATE OF MISSOURI
MARK DANIEL MCGHEE JR.
PE - 2008019568
01-07-2020
REVISIONS
01/07/2020 PER CITY COMMENTS

9001 State Line Rd., Ste. 200
Kansas City, MO 64114
816.361.0440
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LAMP RYNEARSON

SUMMIT VIEW FARMS 4TH PLAT

LEE'S SUMMIT, MISSOURI

WATER LINE PLANS
WATER LINE PLAN AND PROFILE
WATER LINE 4-04 AND 4-05

DESIGNER / DRAFTER
AJM
DATE
11/20/2019
PROJECT NUMBER
0318050.02
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05 OF 06

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REQUIRED CONCRETE BEARING AREA (SQUARE FEET – SF)

NOM. DIA. (INCHES)	TEE, PLUG	90 BEND	45 BEND	22.5 BEND	11.25 BEND
6	4.7	6.7	4.0	4.0	4.0
8	8.4	11.8	6.4	4.0	4.0
10	13.1	18.5	10.0	5.1	4.0
12	18.8	26.7	14.4	7.4	4.0
14	25.7	36.3	19.6	10.0	5.0
16	33.5	47.4	25.6	13.1	6.6
18	42.4	REST. JT.	32.5	16.5	8.3
20	REST. JT.	REST. JT.	40.1	20.4	10.3
24	REST. JT.	REST. JT.	REST. JT.	29.4	14.8

NOTES:

1. ALL BENDS WITHOUT RESTRAINED JOINTS SHALL HAVE CONCRETE THRUST BLOCKS INSTALLED FOR RESTRAINT.
2. MEGA LUGS MAY BE USED ONLY IN CONJUNCTION WITH CONCRETE THRUST BLOCKING.
3. BEARING AREA MUST BE AGAINST UNDISTURBED SOIL.
4. DO NOT COVER JOINTS OR BOLTS (WHERE APPLICABLE) WITH CONCRETE.

POURED CONCRETE BLOCKS (TYP.)

UNDISTURBED EARTH

BEARING AREA (TYP.)

BOND BREAKER (TYP. ALL BLOCKS)

PLAN

SECTION A

1/4" BOND BREAKER

1/2" DIAMETER

LS

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

HORIZONTAL THRUST BLOCKS

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

VALVE COVER

FINAL GRADE

CUT A NOTCH IN TOP OF VALVE BOX AND PLACE 2' OF TRACER WIRE COILED INSIDE VALVE COVER BOX

STANDARD 2" SQUARE VALVE OPERATING NUT

WELD (TYP. 8 PLACES)

ALIGNMENT WASHER 1/8" MIN. STEEL 4-1/2"

1"Ø COLD ROLLED STEEL

MIN. 5"Ø FERROUS METAL VALVE BOX

SOCKET FROM 1/4" STEEL INSIDE DIMENSIONS 2-3/16" X 3" DEEP DO NOT TIGHTEN SET SCREW TO 2" OPERATING NUT

INSTALL TRACER WIRE ALONG OUTSIDE SURFACE OF VALVE BOX

3" MAXIMUM

VARIES AS REQUIRED

2"

3-1/4"

LS

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

VALVE STEM EXTENSION AND VALVE BOX

Date: 02/13
Drawn By: JN
Checked By: DL
FILE: WAT-9
Rev: 1/14
Rev:

24" MIN. OR EQUAL TO TRENCH WIDTH

24" MIN.

POUR CONCRETE AGAINST UNDISTURBED EARTH

MJ RETAINER GLAND

3" CLEAR

TRENCH WIDTH

5" MIN.

MJ VALVE

PIPE SIZE

6"

8"

12"

4"

7"

15"

10" MIN.

TOP VIEW

SECTION A

WATER MAIN

POUR CONCRETE AGAINST UNDISTURBED EARTH

#4 @ 12" O.C. EACH WAY EACH FACE

NOTE:

THIS DETAIL NOT TO BE USED FOR PIPE GREATER THAN 12"

LS

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

STRADDLE BLOCK

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

6" MIN.

6" MIN.

SEE TABLE

SEE TABLE

BACKFILL

BEDDING

TRENCH BOTTOM

GENERAL NOTES:

1. ALL WATERLINES SHALL HORIZONTALLY CLEAR STORM SEWER STRUCTURES BY 5' AND SANITARY SEWER STRUCTURES BY 10'. WATER MAINS SHALL VERTICALLY CLEAR STORM SEWER STRUCTURES AND SANITARY SEWER STRUCTURES BY 18".

2. WATER MAIN INSTALLATION SHALL COMPLY WITH APPLICABLE LOCAL, STATE, AND FEDERAL REQUIREMENTS.

3. MAXIMUM WIDTHS: MAXIMUM TRENCH WIDTHS SHALL BE GOVERNED BY EXISTING SOILS. TRENCH TYPE, BEDDING, AND LAYING CONDITIONS. MAXIMUM WIDTHS SHALL NOT EXCEED THE MANUFACTURER'S RECOMMENDATIONS.

4. TRENCH DEWATERING: SEE SECTION 2100.

5. TRENCH SLOPE: SEE SECTION 2100.

6. TRENCH SHIELDS: SEE SECTION 2100.

7. COMPACTED FILL: SEE SECTION 2100.

8. PIPE EMBEDMENT: SEE SECTION 2100. MINIMUM THICKNESS BENEATH PIPE SHALL BE 6 INCHES PER PIPE CLEARANCES TABLE.

9. BEDDING INSTALLATION: SEE SECTION 2100.

10. BACKFILL: SEE SECTION 2100.

MINIMUM TRENCH WIDTHS AND PIPE CLEARANCES (IN)

NOMINAL PIPE DIAMETER	SUGGESTED TRENCH WIDTH 1	PIPE SIDE CLEARANCE 2 (SOIL/ROCK)	PIPE BOTTOM CLEARANCE (SOIL/ROCK)
6	30	6/6	6/6
8	32	6/6	6/6
10	34	6/6	6/6
12	36	6/6	6/6

1 - MEASURED BELOW A HORIZONTAL PLANE 6" ABOVE THE TOP OF THE PIPELINE
2 - MEASURED FROM THE OUTSIDE FACE OF PIPE BARREL TO INSIDE FACE OF TRENCH

2' FROM BACK OF CURB

BACK OF CURB

GROUND SURFACE

THRUST BLOCK (SEE NOTE 1)

KEEP WEEPHOLE FREE OF CONCRETE AND FOREIGN MATERIAL

24"X24"X4" SOLID CONCRETE PAD

UNDISTURBED EARTH

PROVIDE MIN. 1/2" CU. YD. OF 3/4" GRANULAR FILL PER AWWA C600 SECTION 4.2.7.2.4

MJ RESTRAINT FITTINGS (SEE NOTES 1 & 2)

20" MIN. 42" MAX.

MECHANICAL JOINT (TYP.)

VALVE LID & COVER

VARIES

VALVE BOX & BASE

6" GATE VALVE

UNDISTURBED EARTH

24" MIN.

LS

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HYDRANT WITH 90 DEGREE BEND

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FILE: WAT-8
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REQUIRED CONCRETE VOLUME (CUBIC FEET – CF)

NOM. DIA. (INCHES)	TEE, PLUG	90 BEND	45 BEND	22.5 BEND	11.25 BEND
6	50.5	71.4	38.6	19.7	9.9
8	89.8	126.9	65.7	35.0	17.6
10	140.2	198.3	107.3	54.7	27.5
12	202.0	REST. JT.	154.6	78.8	39.6
14	REST. JT.	REST. JT.	210.4	107.3	53.9
16	REST. JT.	REST. JT.	REST. JT.	140.1	70.4
18	REST. JT.	REST. JT.	REST. JT.	177.3	89.1
20	REST. JT.	REST. JT.	REST. JT.	REST. JT.	110.0
24	REST. JT.	REST. JT.	REST. JT.	REST. JT.	158.4

NOTES:

1. ALL BENDS WITHOUT RESTRAINED JOINTS SHALL HAVE CONCRETE THRUST BLOCKS INSTALLED FOR RESTRAINT.
2. MEGA LUGS MAY BE USED ONLY IN CONJUNCTION WITH CONCRETE THRUST BLOCKING.
3. BEARING MUST BE AGAINST UNDISTURBED SOIL.
4. DO NOT COVER JOINTS OR BOLTS (WHERE APPLICABLE) WITH CONCRETE.

#4 EPOXY COATED GR. 60 REBAR WITH 6" HOOK & 12" MIN. CONCRETE EMBEDMENT DEPTH

UNDISTURBED EARTH

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VERTICAL THRUST BLOCKS

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LENGTH AS SHOWN ON PLANS

3" CLEAR

6"

6"

6"

6"

CONCRETE ENCASUREMENT

NOTES:

1. INTERMEDIATE BELLS SHALL BE ENCASED.
2. REINFORCING STEEL SHALL BE #4 @ 12" O.C. EACH WAY WITH A MINIMUM REBAR LAP OF 12".
3. THIS DETAIL IS FOR PIPES 12" AND SMALLER.

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WATER PIPE ENCASUREMENT

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FILE: WAT-4
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LAMP RYNEARSON
MO CERT. NO. 2013011903

STATE OF MISSOURI

MARK DANIEL MCGHEE JR.

PROFESSIONAL ENGINEER

11-07-2020

MARK DANIEL MCGHEE JR.

PE - 2008019568

REVISIONS

01/07/2020	PER CITY COMMENTS

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816.361.0440
LampRynearson.com

LAMP RYNEARSON

SUMMIT VIEW FARMS 4TH PLAT

LEE'S SUMMIT, MISSOURI

WATER LINE PLANS

WATER LINE DETAILS

DESIGNER / DRAFTER

AJM

DATE

11/20/2019

PROJECT NUMBER

0318050.02

BOOK AND PAGE

SHEET

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