CO

TJB

G/E

PUB/E

U/E

WSE

W/E

PUBLIC EASEMENT

SERVICE LINE

- TOP ELEVATION

- UTILITY EASEMENT

- SIDEWALK

CURB & GUTTER

TREELINE

P/L PROPERTY LINES

—— STO—— STORM SEWER

---- CATV<sub>x</sub> ---- CABLE TV - EXISTING

GAS LINE - EXISTING

——Ty—— TELEPHONE LINE - EXIST.

—— E<sub>x</sub> — ELECTRIC LINE - EXISTING

CLEANOUT

ROW or R/W - RIGHT-OF-WAY

REINFORCED CONCRETE PIPE

SANITARY SEWER EASEMENT

- WATER SURFACE ELEVATION

**ASPHALT PAVEMENT - EXISTING** 

ASPHALT PAVEMENT - PROPOSED

CONCRETE PAVEMENT - EXISTING

**ASPHALT PAVEMENT - EXISTING** 

CONCRETE SIDEWALK - EXISTING

**CONCRETE SIDEWALK - PROPOSED** 

CURB & GUTTER - EXISTING

EXISTING LOT AND R/W LINES

EXISTING PLAT LINES

—— SANITARY SEWER MAIN

STORM SEWER - EXISTING

—— SANITARY SEWER MAIN - EXIST.

FIBER OPTIC CABLE - EXISTING

----- OHP<sub>x</sub> ----- OVERHEAD POWER LINE - EXIST

—— UGE<sub>x</sub> —— UNDERGROUND ELECTRIC - EX.

WATERLINE - EXISTING

EXISTING AREA INLET **EXISTING CURB INLET** 

EXISTING GRATE INLET **EXISTING JUNCTION BOX** 

EXISTING STORM MANHOLE

**EXISTING SANITARY MANHOLE** 

PROPOSED SANITARY MANHOLE

LIGHT - EXISTING

**EXISTING MANHOLE** 

WATERLINE EASEMENT

**SECTION 11-47-31** 

**LOCATION MAP** 

SCALE 1" = 2000'

**GENERAL NOTES** 

ADOPTED BY ORDINANCE 5813.

PRIOR TO CONSTRUCTION

ALL CONSTRUCTION TO FOLLOW THE CITY OF LEE'S SUMMIT DESIGN AND CONSTRUCTION MANUAL AS

ALL WORKMANSHIP AND MATERIALS SHALL BE SUBJECT TO THE INSPECTION AND APPROVAL OF THE

LINEAL FOOT MEASUREMENTS SHOWN ON THE PLANS ARE HORIZONTAL MEASUREMENTS, NOT SLOPE

THE UTILITY LOCATIONS SHOWN ON THESE PLANS ARE TAKEN FROM UTILITY COMPANY RECORDS AND

THE CONTRACTOR SHALL ADHERE TO THE PROVISIONS OF THE SENATE BILL NUMBER 583, 78TH GENERAL

ASSEMBLY OF THE STATE OF MISSOURI. THE BILL REQUIRES THAT ANY PERSON OR FIRM DOING

INFORMATION FROM, UTILITY COMPANIES. STATE LAW REQUIRES 48 HOURS ADVANCE NOTICE. THE

PRIOR TO ORDERING PRECAST STRUCTURES, SHOP DRAWING SHALL BE SUBMITTED TO THE DESIGN

THE CONTRACTOR SHALL PROTECT ALL MAJOR TREES FROM DAMAGE. NO TREE SHALL BE REMOVED

EXCAVATION ON PUBLIC RIGHT OF WAY DO SO ONLY AFTER GIVING NOTICE TO, AND OBTAINING

WHICH HAVE FACILITIES IN THE NEAR VICINITY OF THE CONSTRUCTION TO BE PERFORMED

SIGNED SHOP DRAWINGS SHALL BE PROVIDED TO THE CITY INSPECTOR UPON REQUEST

BY THE CONTRACTOR IN STRICT ACCORDANCE WITH ALL LOCAL CODES AND ORDINANCES.

10. ALL WASTE MATERIAL RESULTING FROM THE PROJECT SHALL BE DISPOSED OF OFF-SITE BY THE

11. ALL EXCAVATIONS SHALL BE UNCLASSIFIED. NO SEPARATE PAYMENT WILL BE MADE FOR ROCK

APPARENT FIELD LOCATIONS. THE CONTRACTOR SHALL VERIFY THE LOCATION AND DEPTH OF ALL UTILITIES

CONTRACTOR MAY 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. PRIOR TO COMMENCEMENT OF WORK, THE CONTRACTOR SHALL NOTIFY ALL THOSE COMPANIES

ENGINEER FOR APPROVAL. AFTER APPROVAL OF THE SHOP DRAWINGS, A COPY OF THE APPROVED AND

CLEARING AND GRUBBING OPERATIONS AND DISPOSAL OF ALL DEBRIS THEREFROM SHALL BE PERFORMED

THE CONTRACTOR SHALL CONTROL THE EROSION AND SILTATION DURING ALL PHASED OF CONSTRUCTION,

ALL MANHOLES, CATCH BASINS, UTILITY VALVES AND METER PITS TO BE ADJUSTED OR REBUILT TO GRADE

THE CONTRACTOR SHALL CONTACT DEVELOPMENT SERVICES INSPECTIONS AT: 816-969-1200 TO OBTAIN A

THE CONTRACTOR SHALL CONTACT THE 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 MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD-LATEST EDITION)

THE CONTRACTOR SHALL PROVIDE AND MAINTAIN ALL TRAFFIC HANDLING MEASURES NECESSARY TO

DEVELOPMENT SERVICES CONSTRUCTION PERMIT. A MINIMUM 48 HOUR NOTICE SHALL BE GIVEN PRIOR TO

ENSURE THAT THE GENERAL PUBLIC IS PROTECTED AT ALL TIMES. TRAFFIC CONTROL SHALL CONFORM TO

**SUMMARY OF QUANTITIES** 

QUANTITY UNITS

EΑ

LF

EΑ

EΑ

EΑ

EΑ

EΑ

EΑ

EΑ

EΑ

EA

2

2,985

5

5

13

4

3

14

5

2

MEASUREMENTS. ALL PAYMENTS SHALL BE MADE ON HORIZONTAL MEASUREMENTS.

ENGINEERING DEPARTMENT OF THE CITY OF LEE'S SUMMIT, MISSOURI.

NO GEOLOGICAL INVESTIGATION HAS BEEN PERFORMED ON THE SITE.

WITHOUT PERMISSION OF THE OWNER, UNLESS SHOWN OTHERWISE.

AND SHALL KEEP THE STREETS CLEAN OF MUD AND DEBRIS.

CONNECT TO EXISTING WATER LINE

INSTALL 8" C900 DR18 PVC WATER MAIN

INSTALL 8" X 8" TEE W/ THRUST BLOCK

INSTALL 8" X 6" TEE W/ THRUST BLOCK

INSTALL FIRE HYDRANT ASSEMBLY

INSTALL 8" PLUG

INSTALL 8" GATE VALVE

INSTALL 8" 11.25° DIP BEND W/ THRUST BLOCK

INSTALL 8" 45° DIP VERTICAL BEND W/ THRUST BLOCK

REMOVE END OF LINE TEMPORARY FIRE HYDRANT

REMOVE END OF LINE TEMPORARY 8" X 6" REDUCER

CONTRACTOR, OR AS DIRECTED BY THE OWNER.

# **UTILITY CONTACTS:**

MISSOURI DEPARTMENT OF TRANSPORTATION (MODOT) Steve Holloway 600 NE Colbern Road

Lee's Summit, MO 64086 (816) 607-2186 SPIRE

Brent Jones 3025 SE Clover Drive Lee's Summit, MO 64082 (816) 399-0663brent.jones@spireenergy.com

**EVERGY** Philip Ingram 1300 SE Hamblin Road Lee's Summit, MO 64081 Office: (816) 347-347-4339 philip.inghram@evergy.com

CITY OF LEES SUMMIT PUBLIC WORKS Dena Mezger 220 SE Green Street

Lee's Summit, MO 64063 (816) 969-1800 Mark Manion or Marty Loper

500 E. 8th Street, Room 370 Kansas City, MO 64106 (816) 275-2341 or (816) 275-1550 COMCAST CABLE

John Meadows 4700 Little Blue Parkway (816) 795-2257

CITY OF LEE'S SUMMIT WATER UTILITIES Mark Schaufler 1200 SE Hamblen Road Lee's Summit, MO 64081



811 or 1-800-344-7483 mo1call.com

# PUBLIC WATER MAIN PLANS REUNION AT BLACKWELL

# IN THE CITY OF LEE'S SUMMIT JACKSON COUNTY, MO

# **EARTHWORK**:

1. It is recommended that a Geotechnical Engineer observe and document all earthwork activities. Contours have been shown at 1-foot or 2-foot intervals, as indicated. Grading shall consist of completing the earthwork required to bring the physical ground elevations of the existing site to the finished grade (or sub-grade) elevations provided

RELEASED FOR CONSTRUCTION

**Development Services Department** 

Lee's Summit, Missouri

11/14/2023

- on the plans as spot grades, contours or others means as indicated on the plans. The existing site topography depicted on the plans by contouring has been established by aerial photography and field verified by g.p.s. observation near 11/11/2021 .The contour elevations provided may not be exact ground elevations, but rather interpretations of such. Accuracy shall be considered to be such that not more than 10 percent of spot elevation checks shall be in error by more than one-half the contour interval provided, as defined by the National Map Accuracy Standards. Any quantities provided for earthwork volumes are established using this topography contour accuracy, and therefore the inherent accuracy of any earthwork quantity is assumed from the topography accuracy.
- Proposed contours are to approximate finished grade
- Unless otherwise noted, payment for earthwork shall include backfilling of the curb and gutter, sidewalk and further manipulation of utility trench spoils. The site shall be left in a mowable condition and positive drainage maintained
- Unless otherwise noted, all earthwork is considered Unclassified. No additional compensation will be provided for rock or shale excavation, unless specifically stated otherwise.
- Prior to earthwork activities, pre-disturbance erosion and sediment control devices shall be in place per the Storm Water
- Pollution Prevention plan and/or the Erosion and Sediment Control Plan prepared for this site.
- All topsoil shall be stripped from all areas to be graded and stockpiled adjacent to the site at an area specified by the project owner or his appointed representative. Vegetation, trash, trees, brush, tree roots and limbs, rock fragments greater then 6-inches and other deleterious materials shall be removed and properly disposed of offsite or as directed by the owner
- Unless otherwise specified in the Geotechnical Report, all fills shall be placed in maximum 6-inch lifts and compacted to
- 95-percent of maximum density as defined using a standard proctor test (AASHTO T99/ASTM 698). Subgrade for pavements shall be proof-rolled prior to paving operations utilizing a fully loaded tandem axle dump truck. All areas exhibiting excessive pumping and heaving shall be removed, filled and compacted with suitable materials and
- retested until acceptable results are achieved and final approval has been obtained from the Geotechnical Engineer. 11. Subgrade for building pad shall include a minimum of 18-inches of Low Volume Change (LVC) material, or as identified in the site specific Geotechnical Report.
- 12. Fill materials shall be per Geotechnical Report and shall not include organic matter, debris or topsoil. All fills placed on slopes greater than 6:1 shall be benched.
- 13. The Contractor shall be responsible for redistributing the topsoil over proposed turf and landscaped areas to a minimum
- depth of 6-inches below final grade 14. All areas shall be graded for positive drainage. Unless noted otherwise the following grades shall apply:
- a. Turf Areas 2.5% Minimum, 4H:1V Maximum
- b. Paved Areas 1.2% Minimum, 5% Maximum
- 15. A.D.A. parking stalls shall not be sloped greater then 2% in any direction and constructed per A.D.A. requirements.
- 16. All disturbed areas shall be fertilized, seeded and mulched immediately after earthwork activities have ceased. Seeding shall be per the Erosion and Sediment Control Plan and/or Landscape Plan. If not specified seeding shall be per APWA Section 2400, latest edition. Unless otherwise noted, seeding shall be subsidiary to the contract price for earthwork and
- 17. All disturbed areas in the right-of-way shall be sodded.
- 18. Underdrains are recommended for all paved areas adjacent to irrigated turf and landscaped beds.
- 19. Contractor shall adhere to the reporting requirements outlined in the Storm Water Pollution Prevention Plan (SWPPP) prepared for this project. Erosion and Sediment control devices shall be properly maintained and kept clean of silt and debris and in good working order. Additional erosion and sediment control measures shall be installed as required.

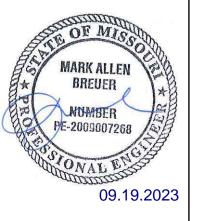
# **UTILITIES**:

- 1. Existing utilities have been shown to the greatest extent possible based upon information provided to the Engineer. The contractor is responsible for contacting the respective utility companies and field locating utilities prior to construction and identifying any potential conflicts. All conflicts shall immediately be brought to the attention of the Engineer.
- The contractor shall be responsible for coordinating any required utility relocations. Utilities damaged through the negligence of the contractor shall be repaired at the contractor's expense.
- Contractor shall verify flow-lines and structure tops prior to construction, and shall notify Engineer of any discrepancies. Provide shop drawings for all precast and manufactured utility structures for review by the Engineer prior to construction of
- 4. Utility Separation: Waterlines shall have a minimum of 10 feet horizontal and 2 feet vertical separation from all sanitary sewer lines, manholes, and sanitary sewer service laterals, as measured from edge to edge. If minimum separations can
- not be obtained, concrete encasement of the sanitary line shall be required 10 feet in each direction of the conflict. 5. Payment for trenching, backfilling, pipe embedment, flowable fill, backfill materials, clean up, seeding, sodding and any other items necessary for the construction of the utility line shall be included in the contract price for the utility installation.
- The Contractor shall be responsible for contacting respective utility companies 48-hours in advance for the inspection of any proposed utility main extension or service line or service connection to any existing main. Trench spoils shall be neatly placed onsite adjacent to the trench, and compacted to prevent saturation and excess
- sediment runoff. Unsuitable materials, excess rock and shale, asphalt, concrete, trees, brush etc. shall be properly disposed of offsite. Materials may be wasted onsite at the direction of the Owner or his appointed representative.
- All excavation is considered unclassified, unless noted otherwise. Unclassified excavation for utility trenching is subsidiary to the unit price provided for the pipe. Any quantity provided for rock excavation is estimated based on the best information provided to the Project Engineer. The Engineer has the authority to identify and define the physical characteristics to determine the classification. Unit price quantities for rock excavation will be paid at a trench width of the nominal pipe diameter of the installed main plus 18 inches. Contractor is required to dispose of excess rock from their trenches by disposing it in areas as specified by the Project Engineer.

PL2023045 PRSUBD20231351

**Sheet List Table** Sheet Number **Sheet Title** COVER SHEET GENERAL LAYOUT WATER LINE A - PUBLIC WATER LINE B - PUBLIC WATER LINE F - PUBLIC (STA 0+00 TO 11+00) WATER LINE F - PUBLIC (STA 11+00 TO 14+36.87) DETAILS DETAILS

PREPARED BY



SCHLAGEL & ASSOCIATES, P.A

DATE

# OWNER/DEVELOPER:

APPROVED BY

CITY ENGINEER

**GRIFFIN RILEY PROPERTY GROUP** JAKE LOVELESS, VICE PRESIDENT 21 SE 29TH TERRACE LEE'S SUMMIT p 816-366-7900 JAKE@GRIFFINRILEY.COM

APPROVED FOR ONE YEAR FROM THIS DATE

REUNION,

AG

# MO GRS BENCHMARK:

STATION NAME - JA-90

KC METRO ALUMINUM GRS DISK SET IN CONCRETE STAMPED "JA-90, 1988" LOCATED NEAR THE INTERSECTION OF LANGSFORD ROAD AND OLD LANGSFORD ROAD, 43 FEET SOUTHEAST OF THE CENTER OF LANGSFORD ROAD AND 32 FEET NORTH OF THE CENTER OF OLD LANGSFORD ROAD. N:1001052.8503, E:2845604.8272

ELEV. 997.045

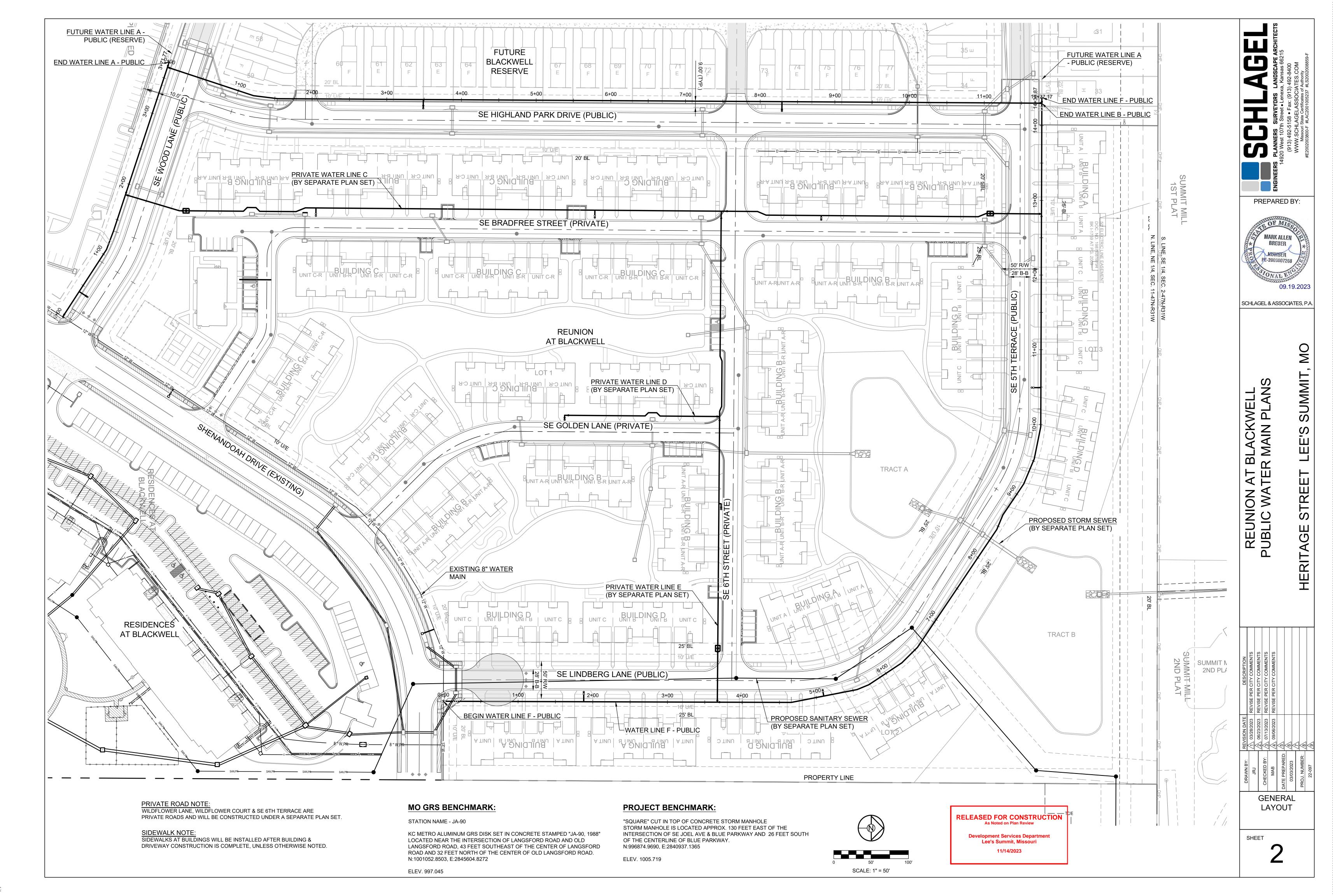
# PROJECT BENCHMARK:

"SQUARE" CUT IN TOP OF CONCRETE STORM MANHOLE STORM MANHOLE IS LOCATED APPROX. 130 FEET EAST OF THE INTERSECTION OF SE JOEL AVE & BLUE PARKWAY AND 26 FEET SOUTH OF THE CENTERLINE OF BLUE PARKWAY. N:996874.9690, E:2840937.1365

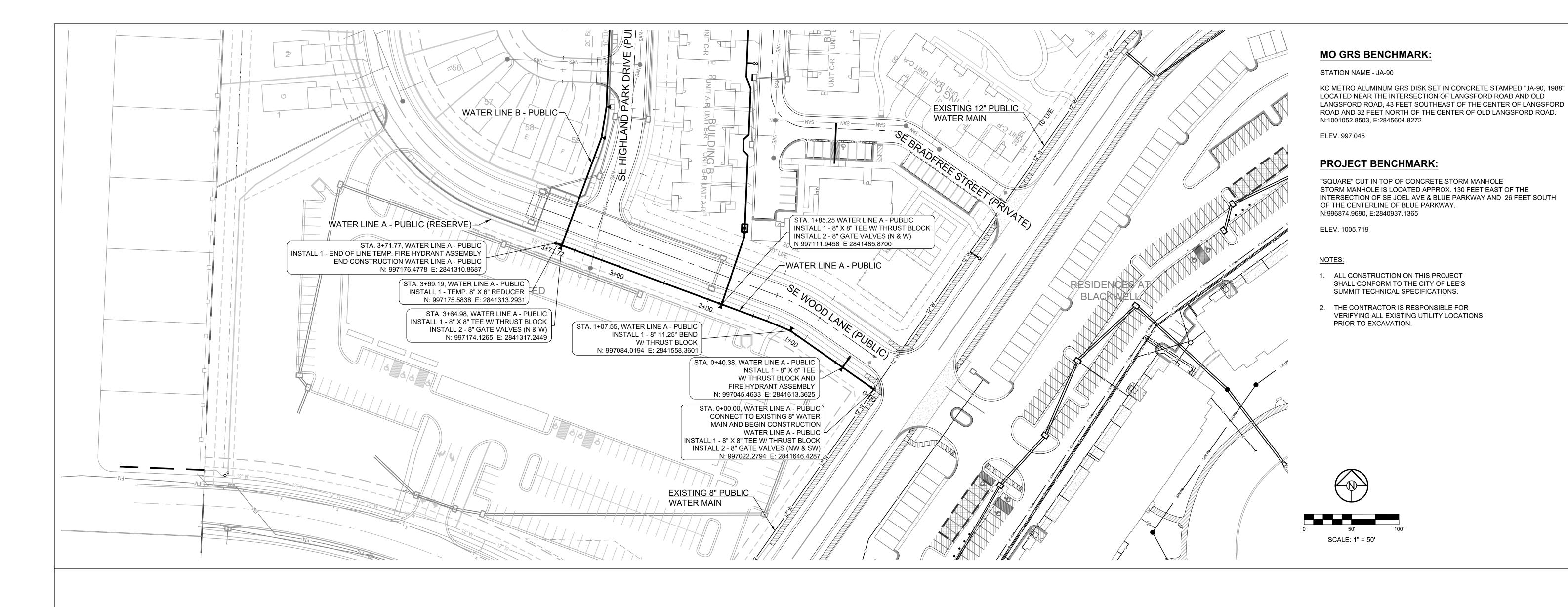
ELEV. 1005.719

**COVER SHEET** 

SHEET



I:\PROJECTS\2022\22-097\3.0 Design\3.0 DWG Plans\8.0 Water\PUBLIC\22-097 - PUBLIC WAT - GEN.dwg, 2 GENERAL LAYOUT, 9



1" = 50' HORIZ. 1" = 10' VERT. 1060

RELEASED FOR CONSTRUCTION
As Noted on Plan Review

Development Services Department Lee's Summit, Missouri

11/14/2023

1050	STA 3+71.77, WATER LINE A - PUBLIC INSTALL 1 - END OF LINE TEMP. FIRE HYDRANT ASSEMBLY STA 3+69.19, WATER LINE A - PUBLIC INSTALL 1 - 8" X 6" REDUCER	STA 3+64.98, WATER LINE A - PUBLIC INSTALL 1 - 8" X 8" TEE W/ THRUST BLOCK INSTALL 2 - 8" GATE VALVES (N & W)	5, WATER LINE A - PUBLIC 8" TEE W/ THRUST BLOCK - 8" GATE VALVES (N & W)	56, WATER LINE A - PUBLIC INSTALL 1 - 8" 11.25° BEND W/ THRUST BLOCK	STA 0+40.38, WATER LINE A - PUBLIC ALL 1 - 8" X 6" TEE W/ THRUST BLOCK AND FIRE HYDRANT ASSEMBLY +00, WATER LINE A - PUBLIC	NG 8" WATER VSTRUCTION UBLIC IE W/ THRUST BLOCK /ALVES (NW & SW)	1050
1030	STA 3+71.77, INSTALL FIRI STA 3+69.19,	PROPOSED	STA 1+85.25, WATER INSTALL 1 - 8" X 8" TEE W/ INSTALL 2 - 8" GATE W/ 2.20 WAYER W/ 3.50 W/ 3.5	STA 1+07.56,	STA 0+40.3 INSTALL 1 - 8" X AND F STA. 0+00, WATEI		1030
1010		= EXISTING	GRADE COVER				1020
1000		STA 3+30 -8" SANITARY FL 1002.89	371.77' - 8" C900 DR18				1000
990			WATER MAIN PROPOSED GRADE TOP OF PIPE		•	9	990
	001		1015.3 1015.3 1015.9 1012.14 1016.1 1016.3 1016.3			1014.62	
				<u> </u>			

**WATER LINE A - PUBLIC** 

REVISION DATE

A 03/28/2023 REVISE PER CITY COMMENTS

C 06/23/2023 REVISE PER CITY COMMENTS

C 06/23/2023 REVISE PER CITY COMMENTS

A 09/06/2023 REVISE PER CITY COMMENTS

ED: 6

FE: 6

PREPARED BY:

MARK ALLEN

BREUER

MUMBER

SCHLAGEL & ASSOCIATES, P.A.

BL 7 N

REUNION AT I PUBLIC WATER

STREE-

HERITAGE

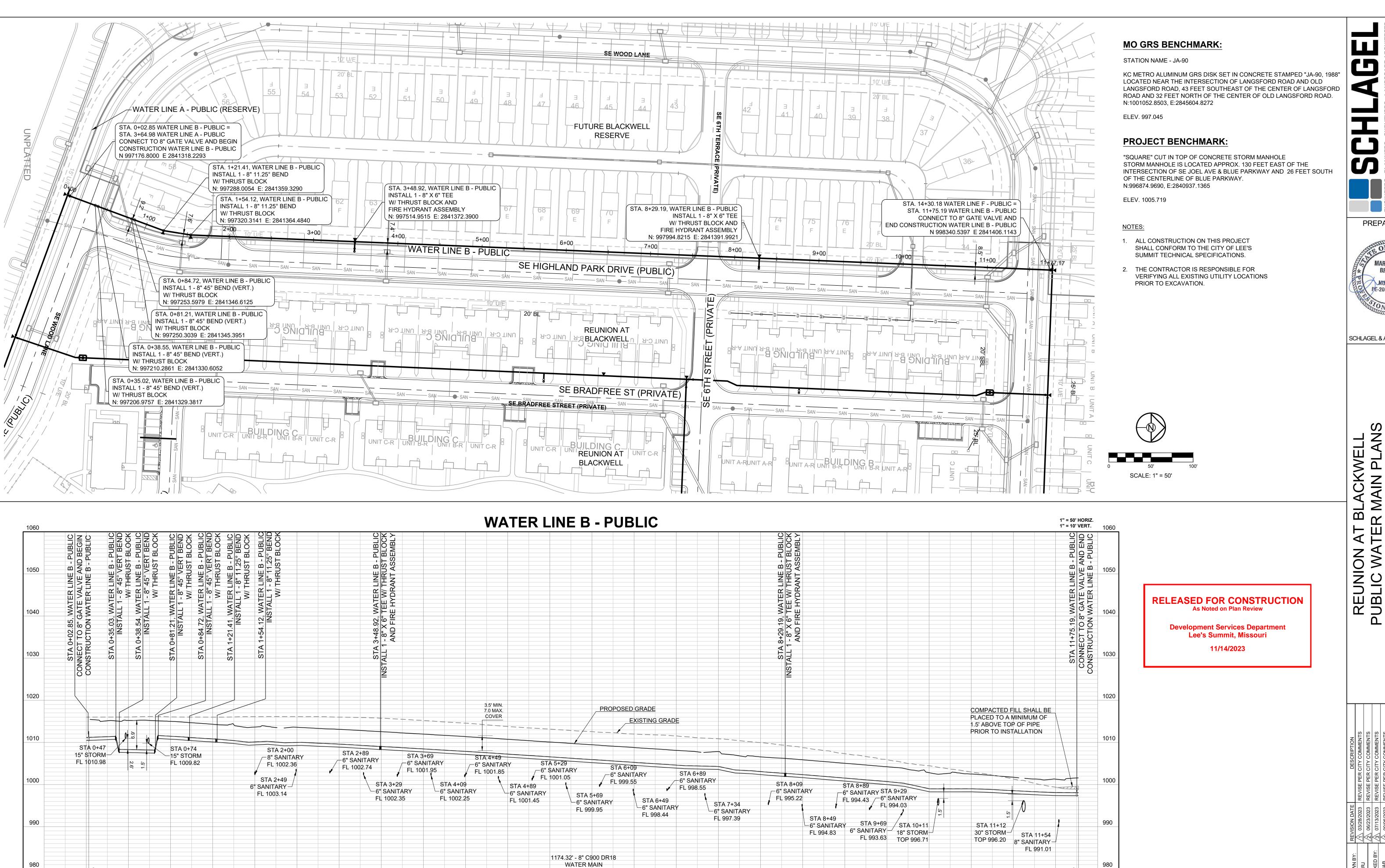
09.19.2023

PE-2009007268

WATER LINE A -PUBLIC

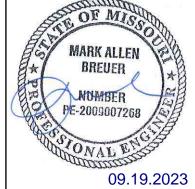
SHEET

3



PROPOSED GRADE TOP OF PIPE

PREPARED BY:



SCHLAGEL & ASSOCIATES, P.A

STREE

HERITAGE

PER CITY
PER CITY
PER CITY
PER CITY REVISE REVISE REVISE REVISE

WATER LINE B PUBLIC

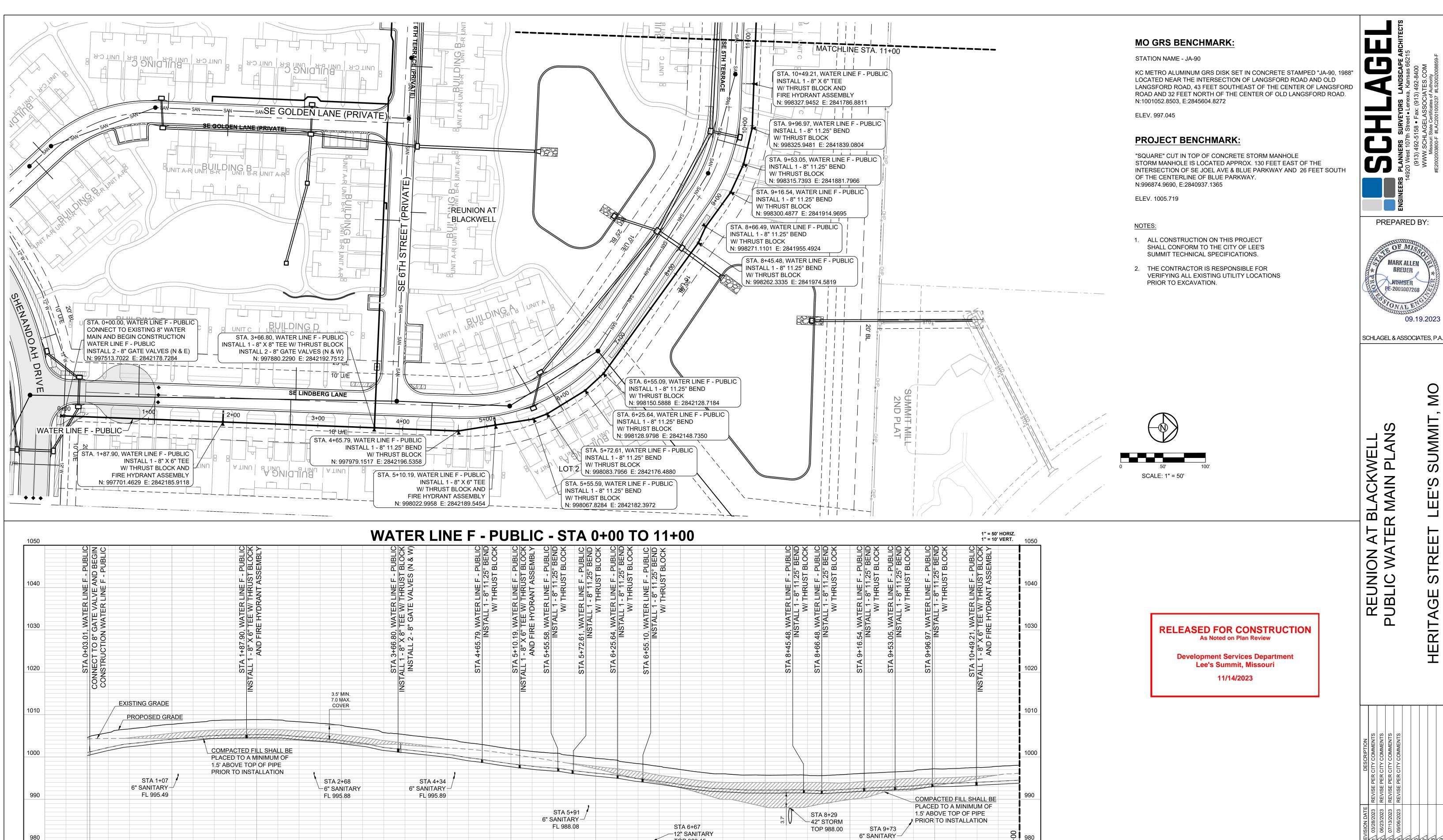
SHEET

11+50

11+00

10+50

12+00



TOP 980.15

7+00

8+00

1096.99' - 8" C900 DR18 WATER MAIN

6+00

PROPOSED GRADE TOP OF PIPE

5+00

970

960

-0+50

0+00

2+00

1+00

3+00

4+00

FL 984.83

10+00

11+00

9+00

REVISION DATE DESCRIPTION	To 3/28/2023 REVISE PER CITY COMMENTS	—— 2 06/23/2023 REVISE PER CITY COMMENTS	3Y: 3 07/13/2023 REVISE PER CITY COMMENTS	4 09/06/2023 REVISE PER CITY COMMENTS	3En: 5	9		ER:	6
		$\frac{1}{1}$		7	7	7	T		
RAWN BY:	<u> </u>	25	ECKED BY:	MAB	= PREPARED:	3/03/2023	20210010	JJ. NUMBER:	22-097

MARK ALLEN

BREUER

MUMBER

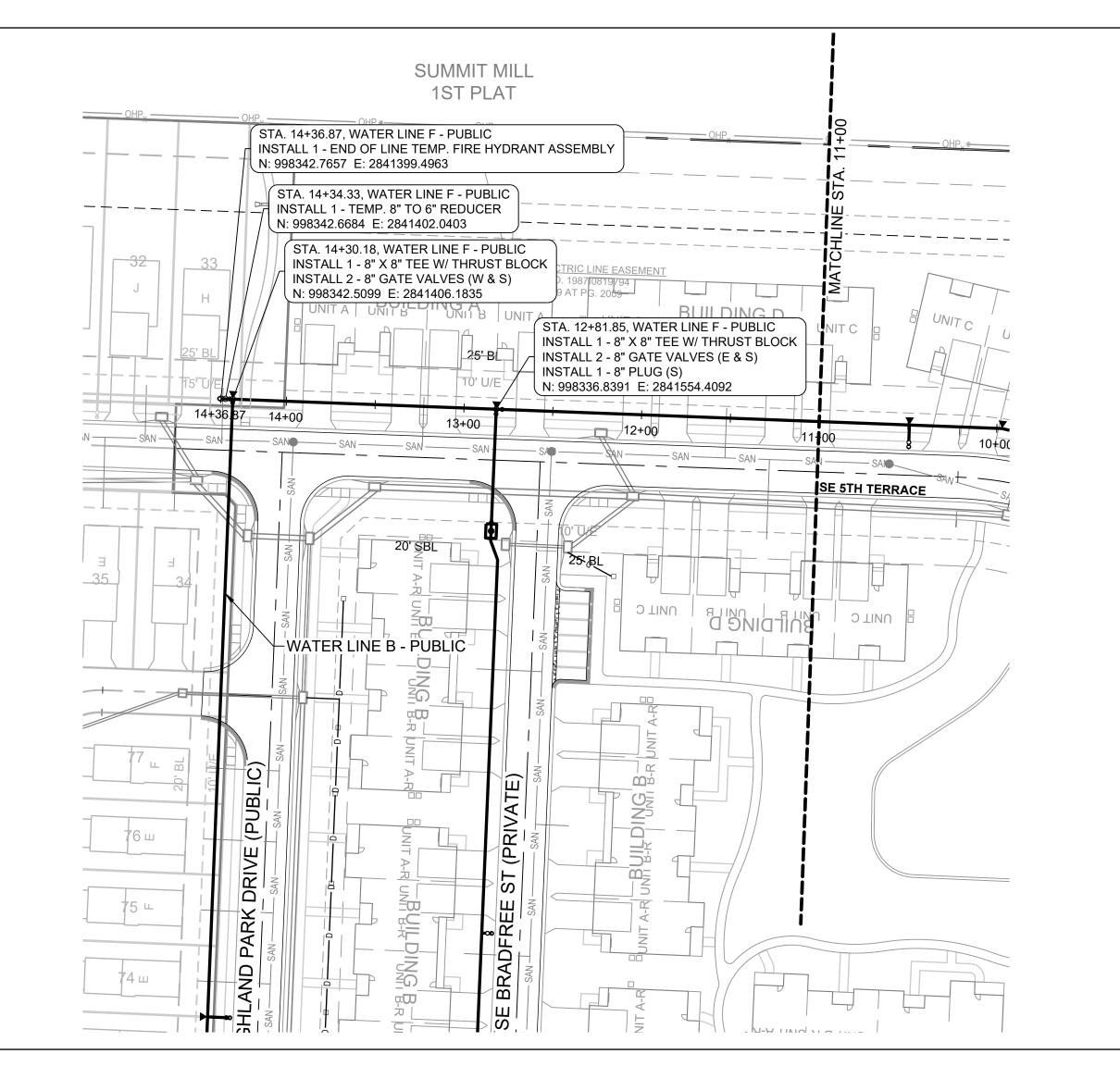
09.19.2023

STREE

HERITAGE

WATER LINE F -PUBLIC (STA 0+00 TO 11+00)

SHEET



# MO GRS BENCHMARK:

STATION NAME - JA-90

KC METRO ALUMINUM GRS DISK SET IN CONCRETE STAMPED "JA-90, 1988" LOCATED NEAR THE INTERSECTION OF LANGSFORD ROAD AND OLD LANGSFORD ROAD, 43 FEET SOUTHEAST OF THE CENTER OF LANGSFORD ROAD AND 32 FEET NORTH OF THE CENTER OF OLD LANGSFORD ROAD. N:1001052.8503, E:2845604.8272

ELEV. 997.045

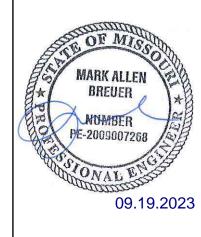
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"SQUARE" CUT IN TOP OF CONCRETE STORM MANHOLE STORM MANHOLE IS LOCATED APPROX. 130 FEET EAST OF THE INTERSECTION OF SE JOEL AVE & BLUE PARKWAY AND 26 FEET SOUTH OF THE CENTERLINE OF BLUE PARKWAY. N:996874.9690, E:2840937.1365

ELEV. 1005.719

#### NOTE

- ALL CONSTRUCTION ON THIS PROJECT SHALL CONFORM TO THE CITY OF LEE'S SUMMIT TECHNICAL SPECIFICATIONS.
- 2. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL EXISTING UTILITY LOCATIONS PRIOR TO EXCAVATION.



BLACKWELL R MAIN PLANS

STREE

HERITAGE

PREPARED BY:

SCHLAGEL & ASSOCIATES, P.A.

50' 100

SCALE: 1" = 50'

RELEASED FOR CONSTRUCTION
As Noted on Plan Review

Development Services Department Lee's Summit, Missouri 11/14/2023

1040						V	V A	٦,	ΓΕ	ER	l L	_[[	Ν	Ε	F	_	F	J	JE	3L	_[(	C		1" 1"	= 50' = 10'	HOR VER	IZ. T.	1040
CINE F - PUBLIC	昰		X 6" RF	)	RINFF-PUBLIC	THRUST BLOG	TE VALVES (W & S)					ER LINE F - PUBLIC	THRUSTB	VALVES (E													STA. 11+00	1030
14+36.87, WATER	INSTALL 1 - TEMP.	14+34-33 WATER	5 +		14+30 18 WATER	X 8" TEE	8" GA					WAT	8" X 8" TEE	2 - 8" G													MATCHLINE	1020
1010 <u>\</u>		S.			STA /		SNI	7	3.5' M 7.0 M/ COVE	٩X.		STA	INSTALL	Z					PL/ 1.5' PRI	ACE AB( OR	D T DVE TO	O A TO INS	MIN P O TAL	SH/ IMU F PI LAT	M C PE ION			1010
1000			772					<b>A</b>											////	///				NG (		DE — -		1000
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970																SED OF F			E									970
14+	-40 1001.5		14+	997.93	1001.3	997.71	1000.8	997.38	1000.6	20.766	13+	996.67	6.666	996.37	2.666	996.19	999.5	995.96	12 <del>-</del>	995.75 👌	0.999.0	995.51	998.5	995.04	998.3	994.76	998.1	994.54

12+00

11+00

13+00

14+40

14+00

STRUCTION VIEW
Department

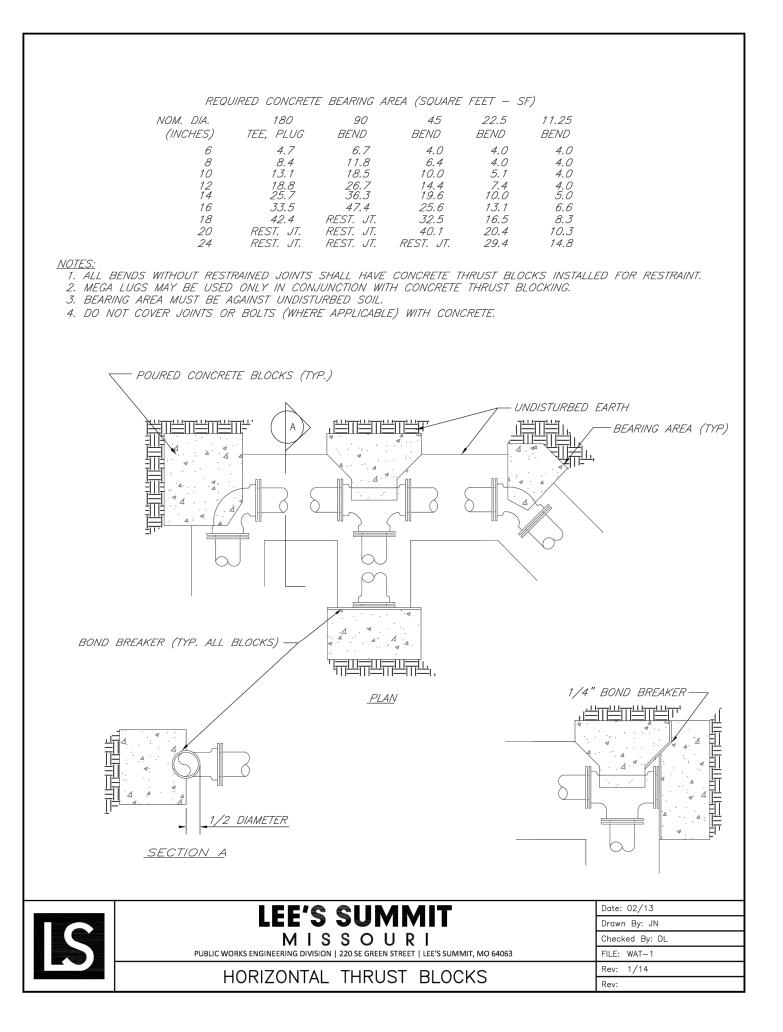
3 REVISE PER CITY COMMENTS

| 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100

WATER LINE F PUBLIC (STA
11+00 TO
14+36.87)

SHEET



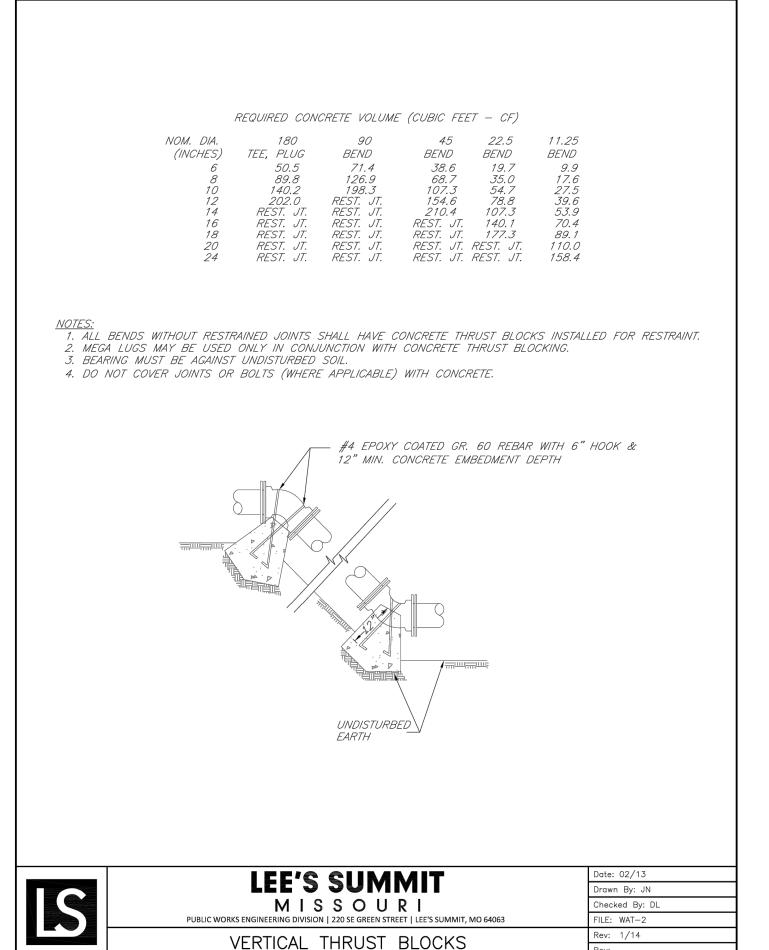


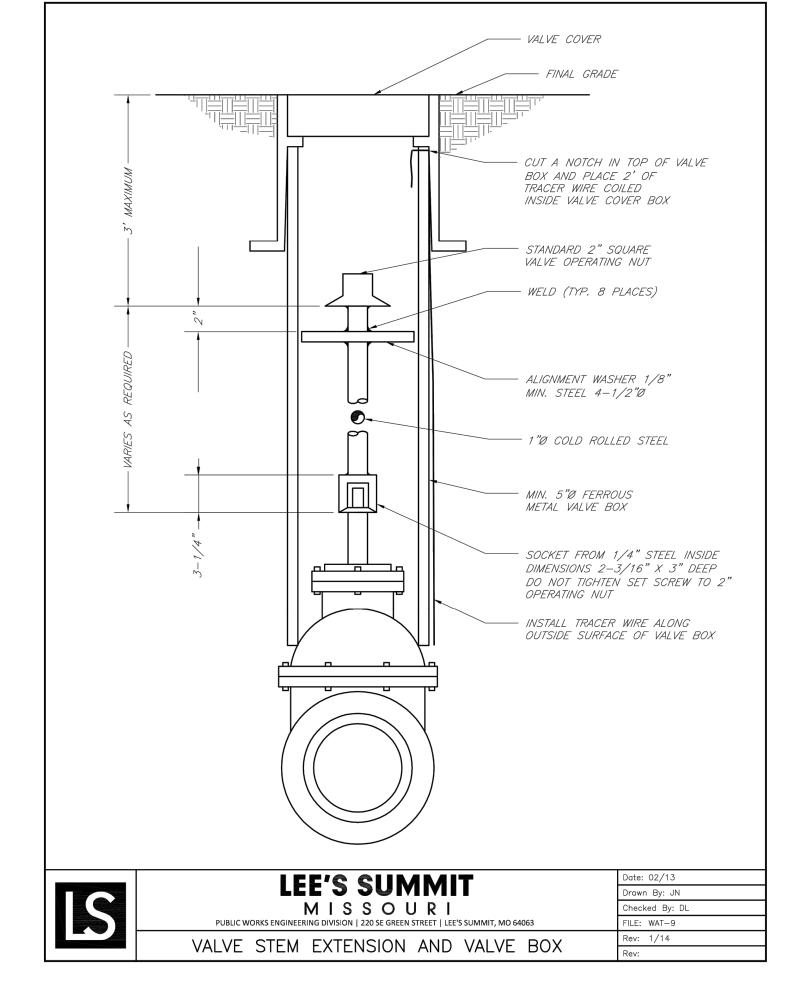
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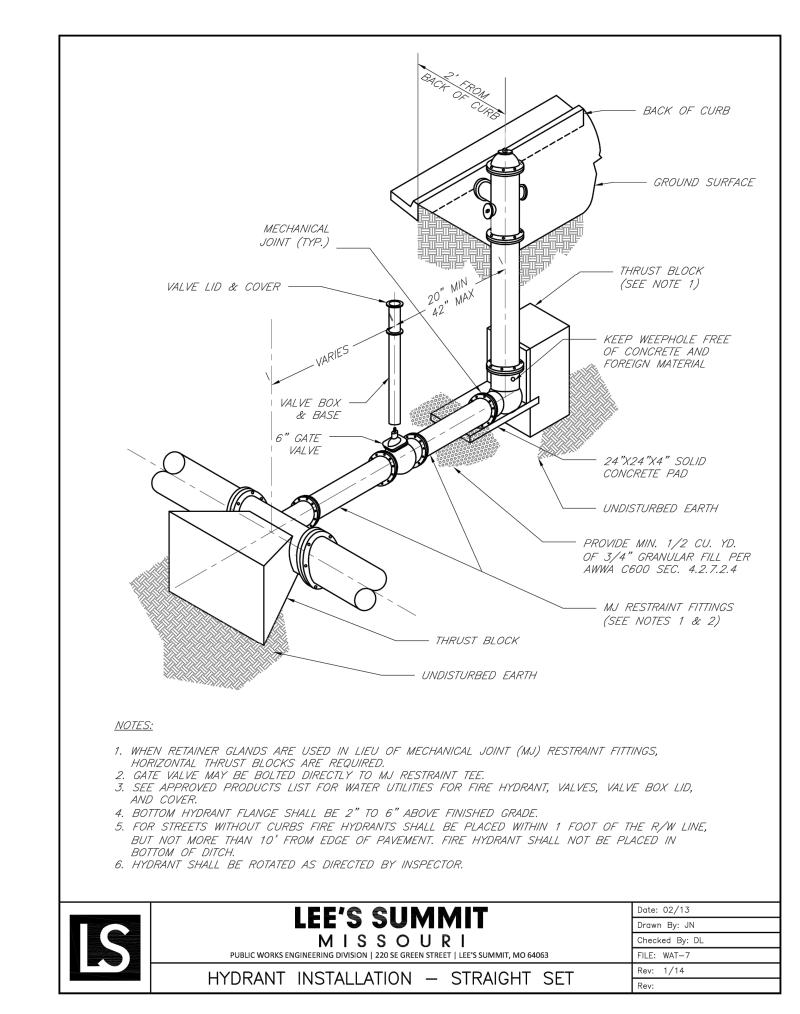
As Noted on Plan Review

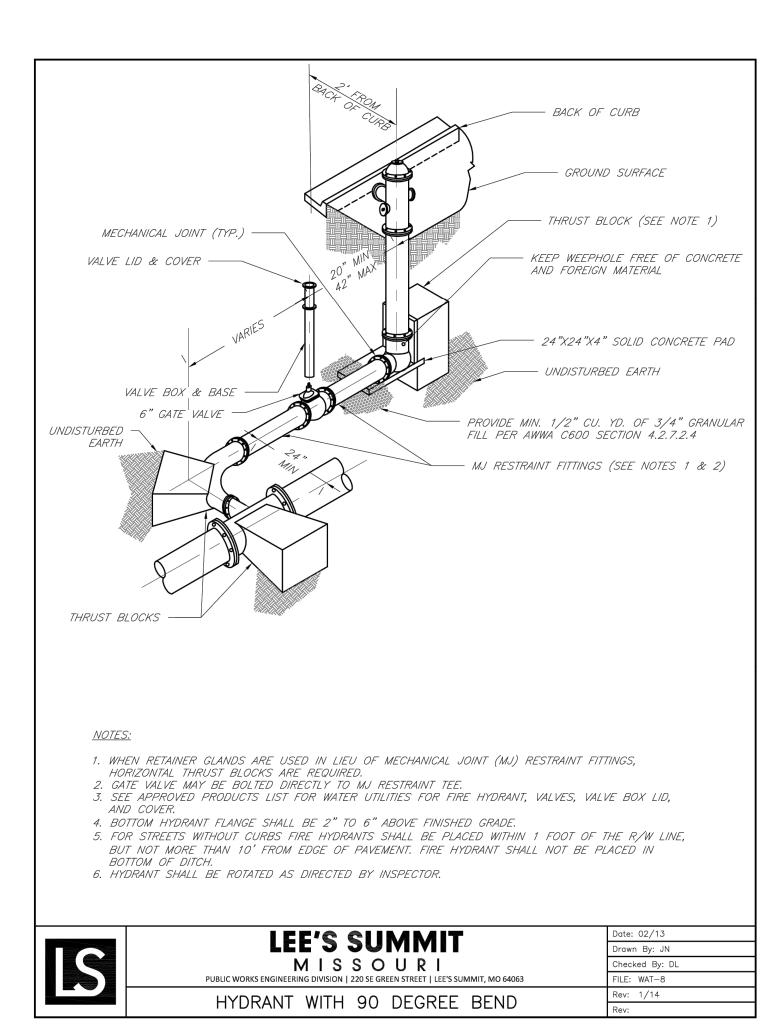
**Development Services Department** Lee's Summit, Missouri

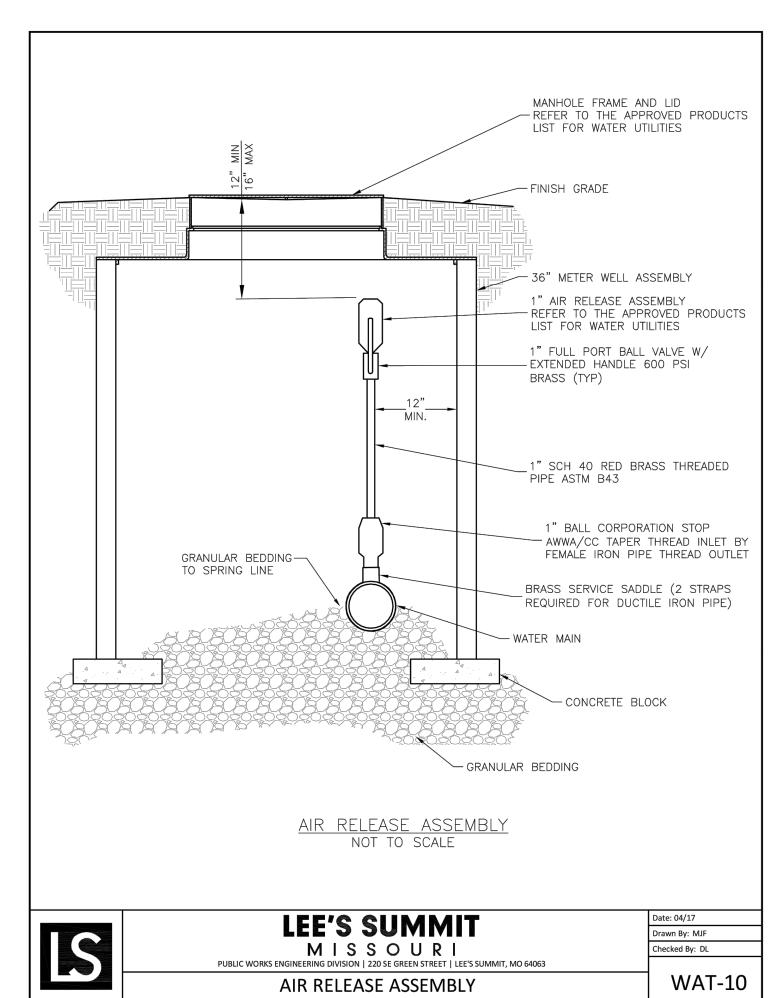
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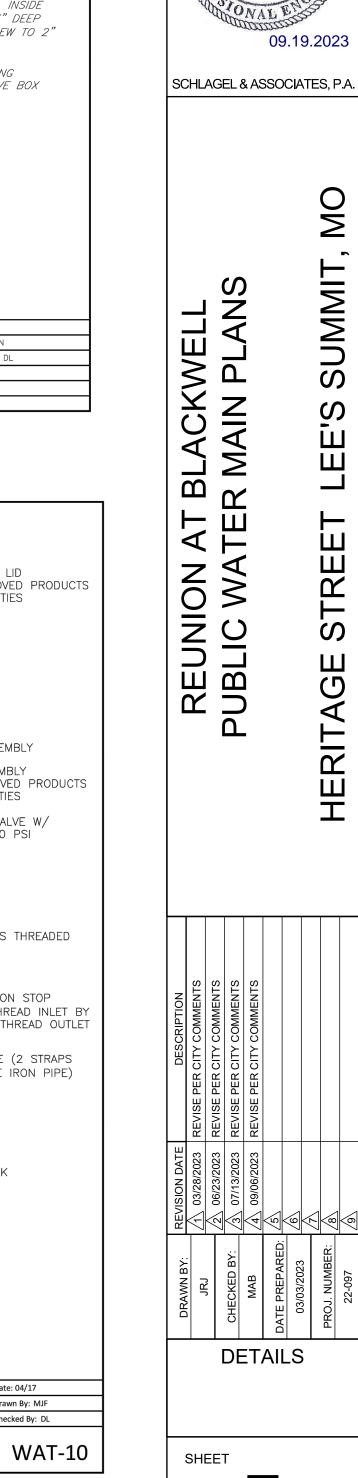












PREPARED BY:

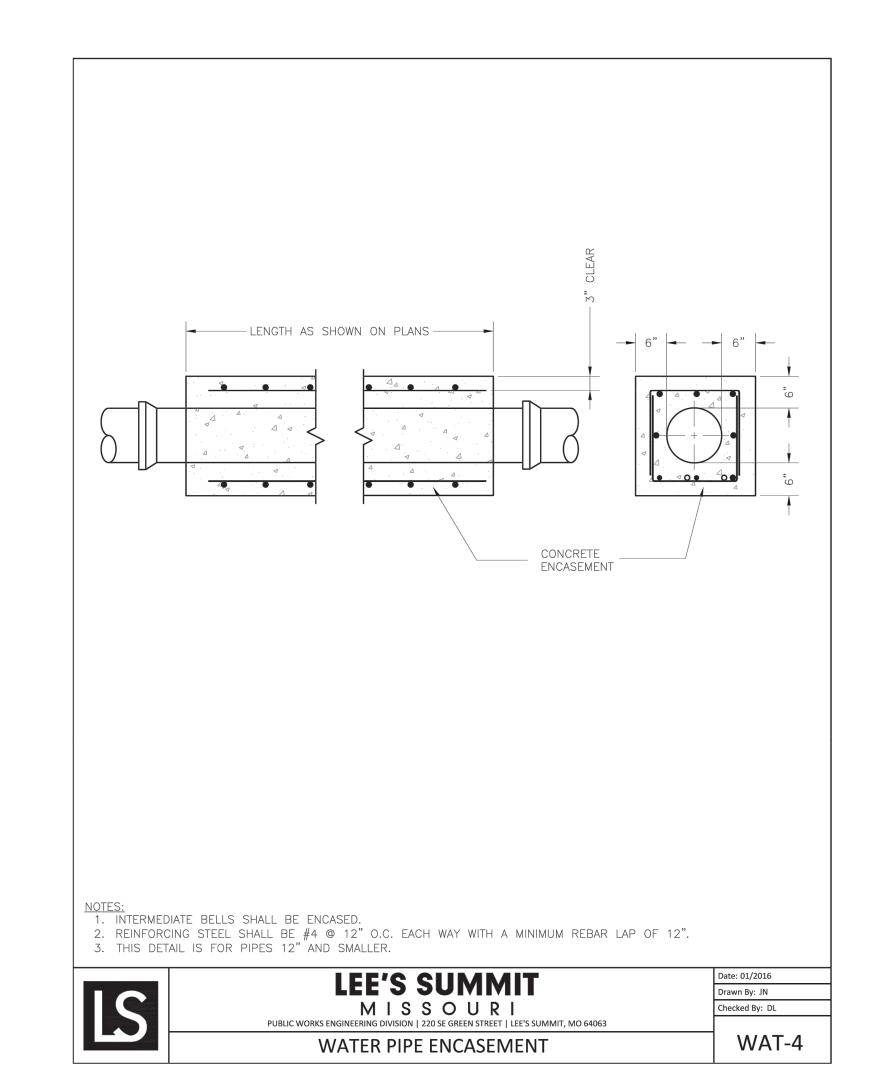
MARK ALLEN

BREUER

NUMBER PE-2009007268

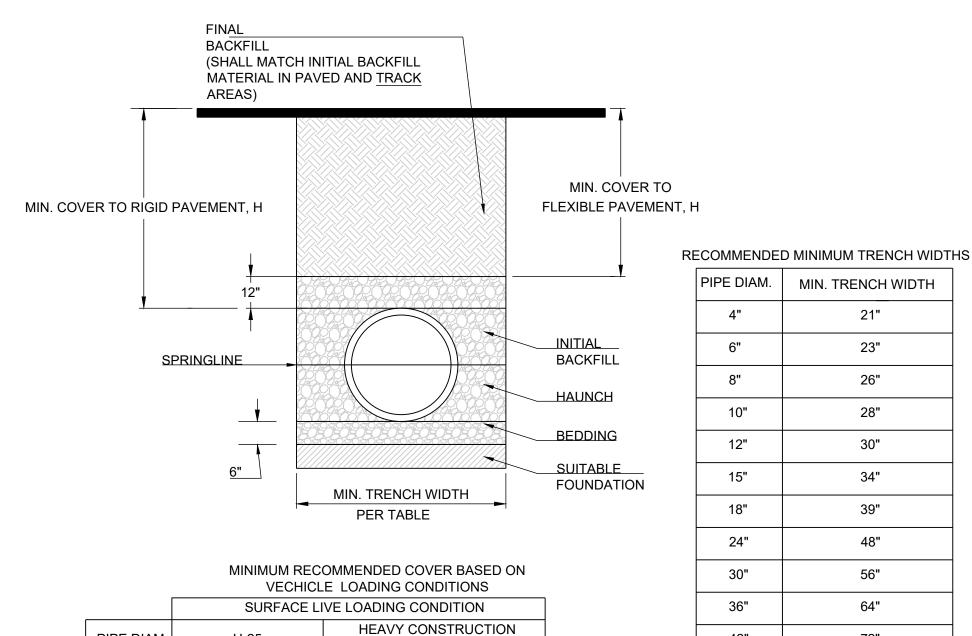
09.19.2023

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RELEASED FOR CONSTRUCTION
As Noted on Plan Review

Development Services Department Lee's Summit, Missouri 11/14/2023



# NOTES:

PIPE DIAM.

12" - 48"

54" - 60"

24"

\* VEHICLES IN EXCESS OF 75T MAY REQUIRE ADDITIONAL COVER

1. ALL PIPE SYSTEMS SHALL BE INSTALLED IN ACCORDANCE WITH ASTM D2321, "STANDARD PRACTICE FOR UNDERGROUND INSTALLATION OF THERMOPLASTIC PIPE FOR SEWERS AND OTHER GRAVITY FLOW APPLICATIONS", LATEST EDITION

42"

54"

60"

72"

80"

88"

96"

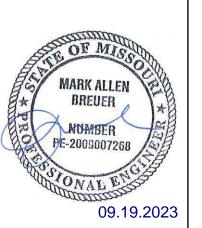
2. MEASURES SHOULD BE TAKEN TO PREVENT MIGRATION OF NATIVE FINES INTO BACKFILL MATERIAL, WHEN REQUIRED.

(75T AXLE LOAD) \*

- 3. <u>FOUNDATION</u>: WHERE THE TRENCH BOTTOM IS UNSTABLE, THE CONTRACTOR SHALL EXCAVATE TO A DEPTH REQUIRED BY THE ENGINEER AND REPLACE WITH SUITABLE MATERIAL AS SPECIFIED BY THE ENGINEER. AS AN ALTERNATIVE AND AT THE DISCRETION OF THE DESIGN ENGINEER, THE TRENCH BOTTOM MAY BE STABILIZED USING A GEOTEXTILE MATERIAL.
- 4. <u>BEDDING:</u> SUITABLE MATERIAL SHALL BE CLASS I, II OR III. THE CONTRACTOR SHALL PROVIDE DOCUMENTATION FOR MATERIAL SPECIFICATION TO ENGINEER. UNLESS OTHERWISE NOTED BY THE ENGINEER, MINIMUM BEDDING THICKNESS SHALL BE 6" (100mm).
- 5. <u>INITIAL BACKFILL:</u> SUITABLE MATERIAL SHALL BE CLASS I, II OR III IN THE PIPE ZONE EXTENDING NOT LESS THAN 6" ABOVE CROWN OF PIPE. THE CONTRACTOR SHALL PROVIDE DOCUMENTATION FOR MATERIAL SPECIFICATION TO ENGINEER. MATERIAL SHALL BE INSTALLED AS REQUIRED IN ASTM D2321, LATEST EDITION.
- 6. MINIMUM COVER: MINIMUM COVER, H, IN NON-TRAFFIC APPLICATIONS (GRASS OR LANDSCAPE AREAS) IS 12" FROM THE TOP OF PIPE TO GROUND SURFACE. ADDITIONAL COVER MAY BE REQUIRED TO PREVENT FLOATION. FOR TRAFFIC APPLICATIONS, MINIMUM COVER, H, IS 12" UP TO 48" DIAMETER PIPE AND 24" OF COVER FOR 54"-60" DIAMETER PIPE, MEASURED FROM TOP OF PIPE TO BOTTOM OF FLEXIBLE PAVEMENT OR TO TOP OF RIGID PAVEMENT.

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PREPARED BY:



SCHLAGEL & ASSOCIATES, P.A.

ON AT BLACKWELL WATER MAIN PLANS

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D BY: 2 06/23/2023 REVISE PER CITY OF 12/2023 RE

DETAILS

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