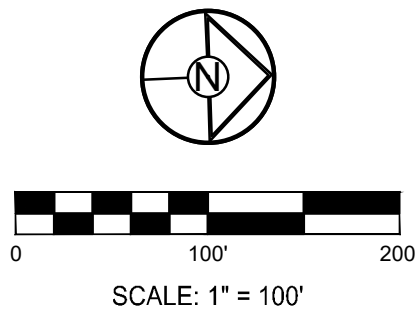


MO GRS BENCHMARK:

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



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ENGINEERS PLANNERS SURVEYORS LANDSCAPE ARCHITECTS

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WWW.SCHLAGELASSOCIATES.COM
Missouri State Certificates of Authority
#E2002003600-F #LAC200100237 #LS200200859-F

PREPARED BY:

STATE OF MISSOURI

MARK ALLEN BREUER

NUMBER 000007268

EXPIRATION DATE 08-28-2023

SCHLAGEL & ASSOCIATES, P.A.

RESIDENCES AT BLACKWELL
PUBLIC WATER MAIN PLANS

HERITAGE STREET LEE'S SUMMIT, MO

REVISION DATE	DESCRIPTION
1 01/23/2023	PER CITY COMMENTS
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DRAWN BY: ###	CHECKED BY: ###	DATE PREPARED: 11/30/2022	PROJ. NUMBER: 22-102
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GENERAL LAYOUT

MO GRS BENCHMARK:

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NOTES:

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PREPARED BY:



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HERITAGE STREET LEE'S SUMMIT, MO

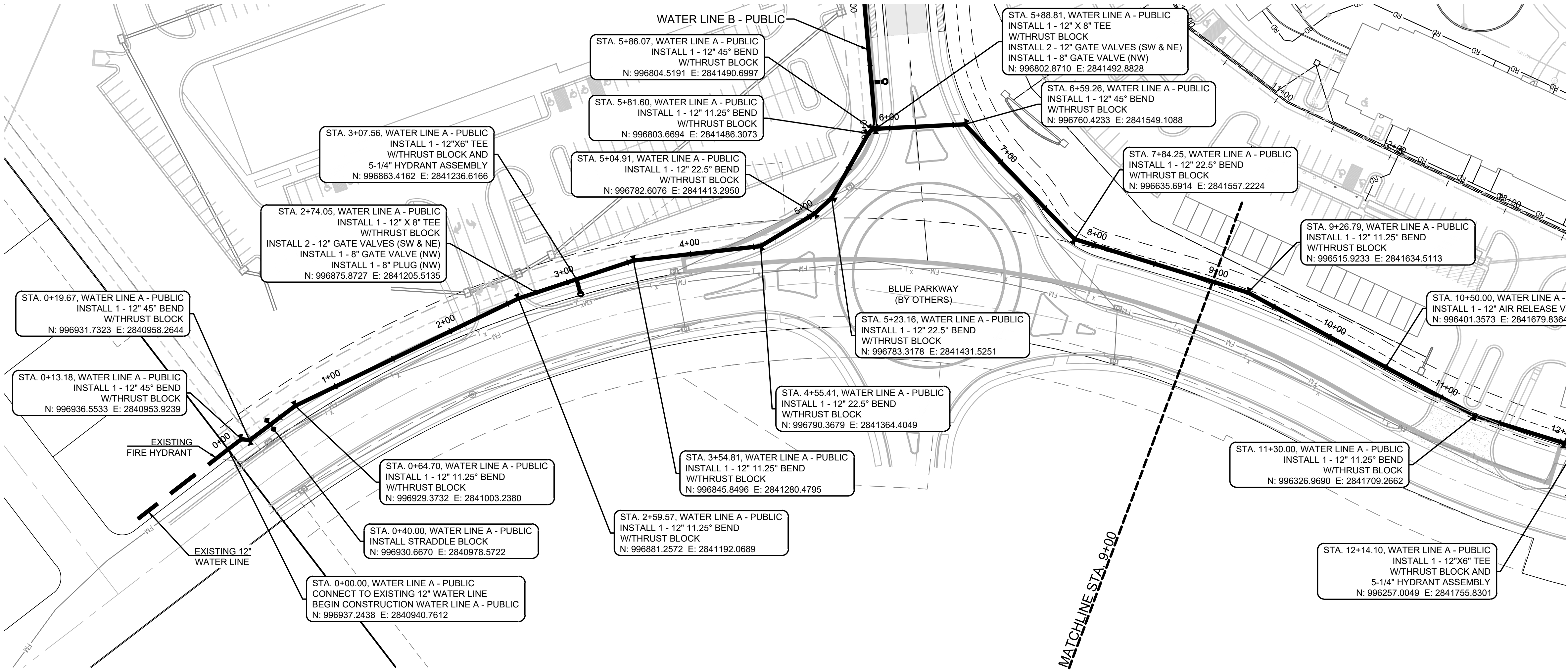
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DRAWN BY:	TRC
CHECKED BY:	MAB
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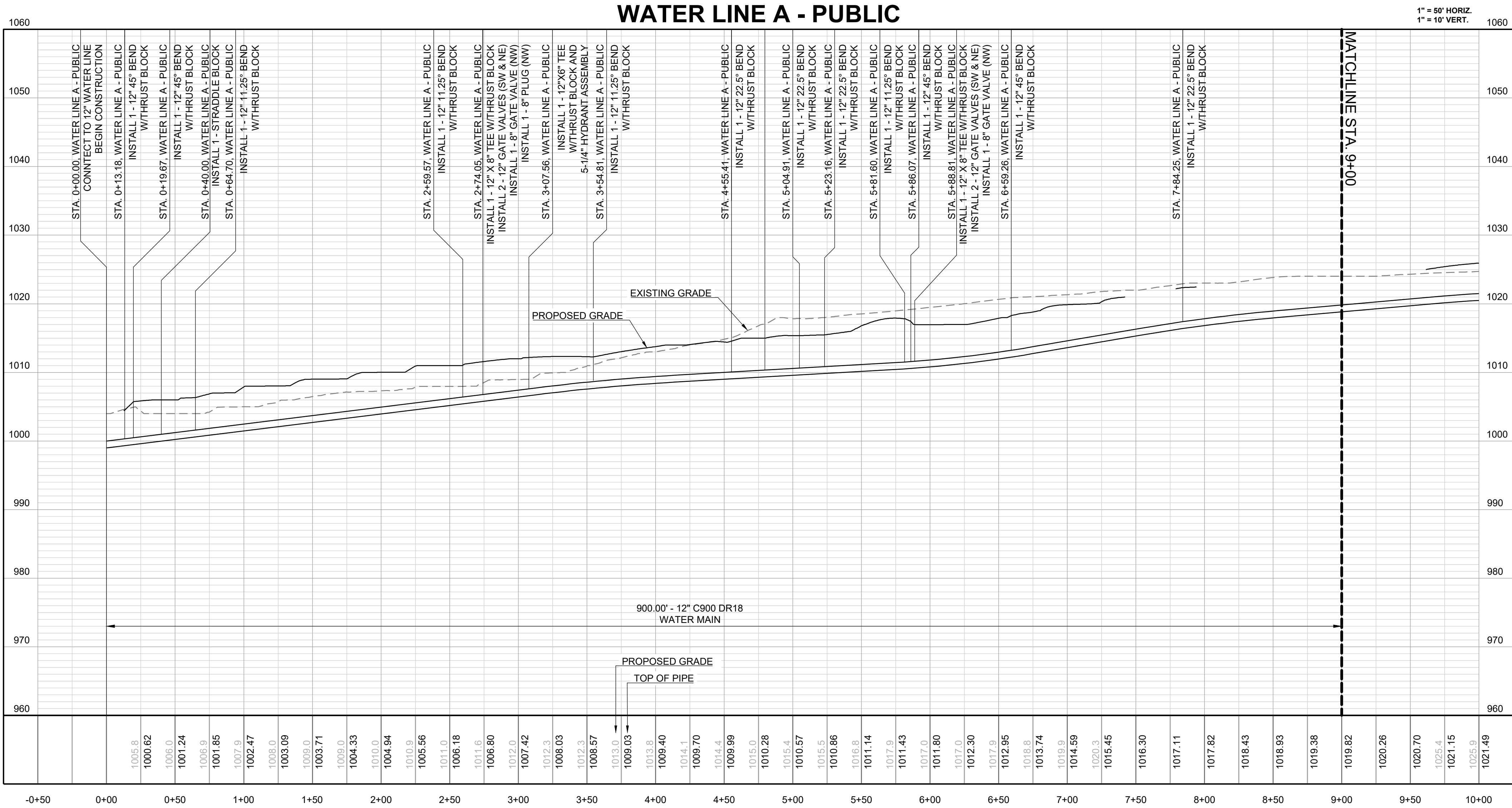
WATER LINE A - PUBLIC

SHEET

3



WATER LINE A - PUBLIC



STA. 5+88.81, WATER LINE A - PUBLIC
INSTALL 1 - 12" X 8" TEE
W/THRUST BLOCK
INSTALL 2 - 12" GATE VALVES (SW & NE)
INSTALL 1 - 8" GATE VALVE (NW)
N: 996802.8710 E: 2841492.8828

STA. 6+59.26, WATER LINE A - PUBLIC
INSTALL 1 - 12" 45° BEND
W/THRUST BLOCK
N: 996760.4233 E: 2841549.1088

STA. 7+84.25, WATER LINE A - PUBLIC
INSTALL 1 - 12" 22.5° BEND
W/THRUST BLOCK
N: 996535.6914 E: 2841557.2224

STA. 9+26.79, WATER LINE A - PUBLIC
INSTALL 1 - 12" 11.25° BEND
W/THRUST BLOCK
N: 996515.9233 E: 2841634.5113

STA. 10+50.00, WATER LINE A - PUBLIC
INSTALL 1 - 12" AIR RELEASE VALVE ASSEMBLY
N: 996401.3573 E: 2841679.8364

STA. 12+03.34, WATER LINE A - PUBLIC
INSTALL 1 - 12" 11.25° BEND
W/THRUST BLOCK
N: 996265.3474 E: 2841749.0319

STA. 16+77.00, WATER LINE A - PUBLIC
INSTALL 1 - 12" X 8" TEE
W/THRUST BLOCK
INSTALL 2 - 12" GATE VALVES (SW & NE)
INSTALL 1 - 8" GATE VALVE (NW)
INSTALL 1 - 8" PLUG (NW)
N: 995980.4966 E: 2842117.6811

STA. 16+57.13, WATER LINE A - PUBLIC
INSTALL STRADDLE BLOCK
N: 995986.3459 E: 2842098.6903

STA. 16+97.35, WATER LINE A - PUBLIC
INSTALL 1 - 12" 90° BEND
W/THRUST BLOCK
N: 995974.3694 E: 2842136.8584

STA. 17+03.94, WATER LINE A - PUBLIC
INSTALL 1 - 12" X 12" TEE
W/THRUST BLOCK
INSTALL 3 - 12" GATE VALVES (N, NE & SW)
CONNECT TO EXISTING 12" WATER LINE
END CONSTRUCTION WATER LINE A - PUBLIC
N: 995968.0645 E: 2842134.9631

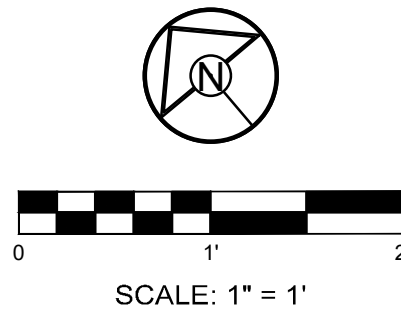
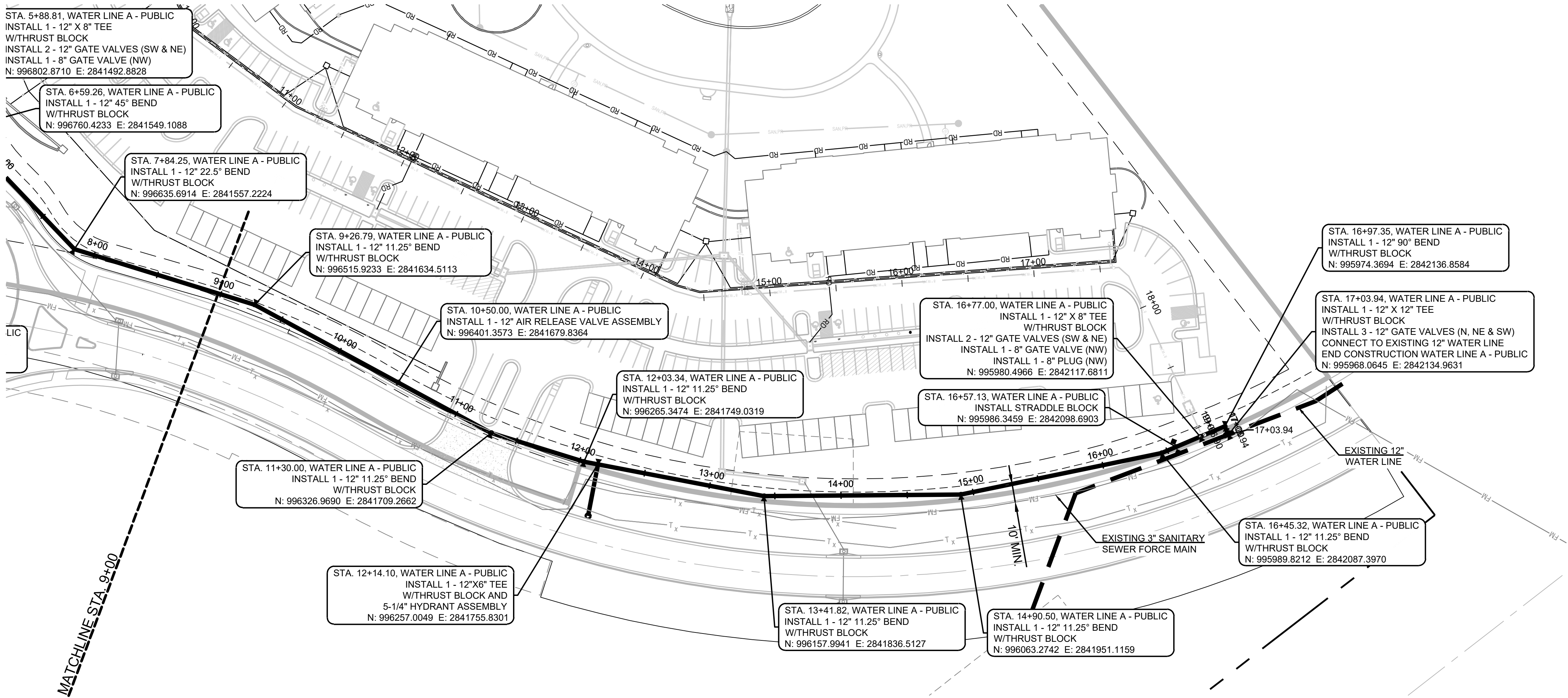
STA. 16+45.32, WATER LINE A - PUBLIC
INSTALL 1 - 12" 11.25° BEND
W/THRUST BLOCK
N: 995989.8212 E: 2842087.3970

STA. 13+41.82, WATER LINE A - PUBLIC
INSTALL 1 - 12" 11.25° BEND
W/THRUST BLOCK
N: 996157.9941 E: 2841836.5127

STA. 14+90.50, WATER LINE A - PUBLIC
INSTALL 1 - 12" 11.25° BEND
W/THRUST BLOCK
N: 996063.2742 E: 2841951.1159

STA. 12+14.10, WATER LINE A - PUBLIC
INSTALL 1 - 12"X6" TEE
W/THRUST BLOCK AND
5-1/4" HYDRANT ASSEMBLY
N: 996257.0049 E: 2841755.8301

STA. 11+30.00, WATER LINE A - PUBLIC
INSTALL 1 - 12" 11.25° BEND
W/THRUST BLOCK
N: 996326.9690 E: 2841709.2662



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N:1001052.8503, E:2845604.8272

ELEV. 997.045

PROJECT BENCHMARK:

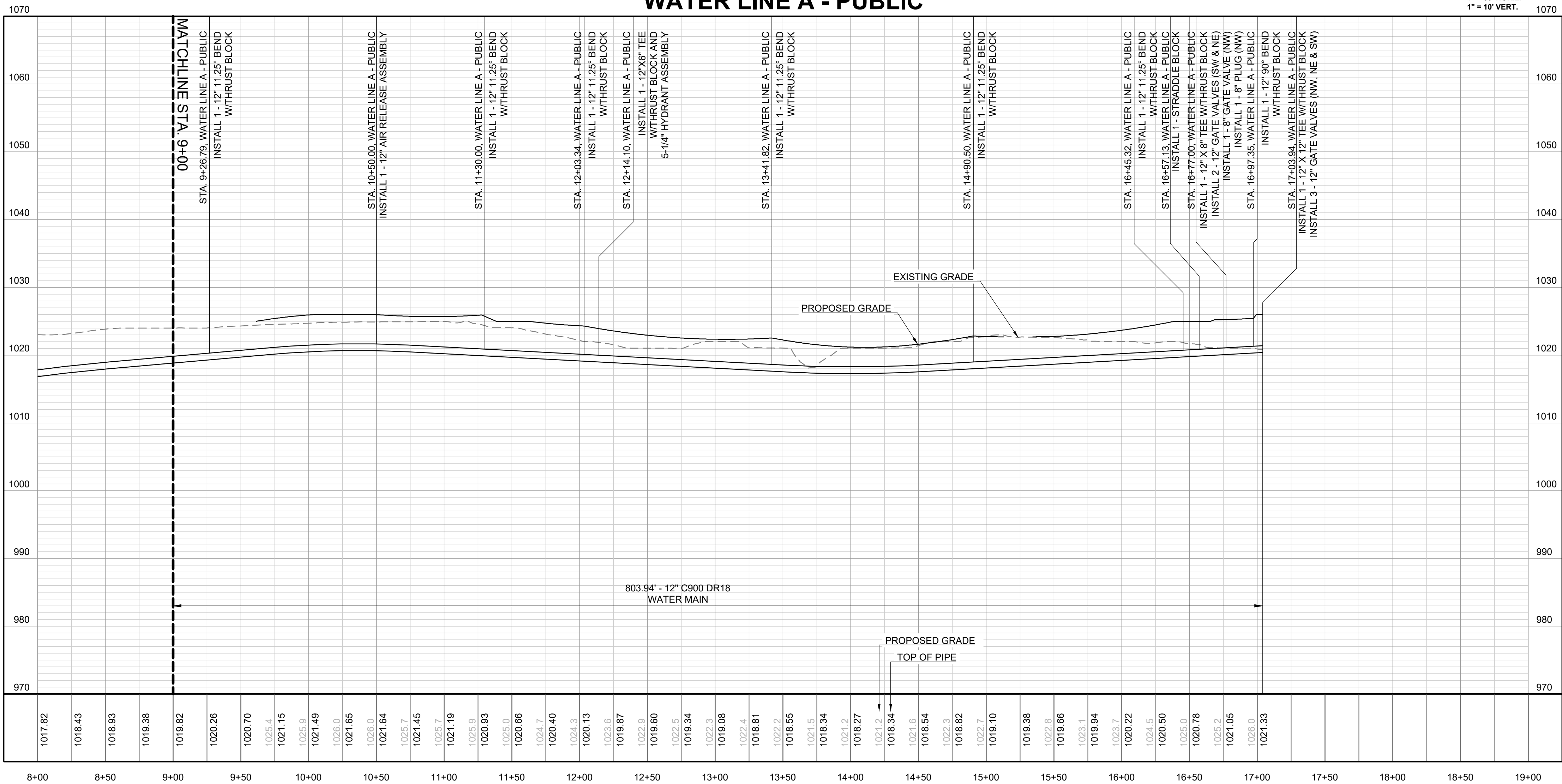
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PRIOR TO EXCAVATION.

WATER LINE A - PUBLIC



PREPARED BY:



SCHLAGEL & ASSOCIATES, P.A.

RESIDENCES AT BLACKWELL
PUBLIC WATER MAIN PLANS

HERITAGE STREET LEE'S SUMMIT, MO

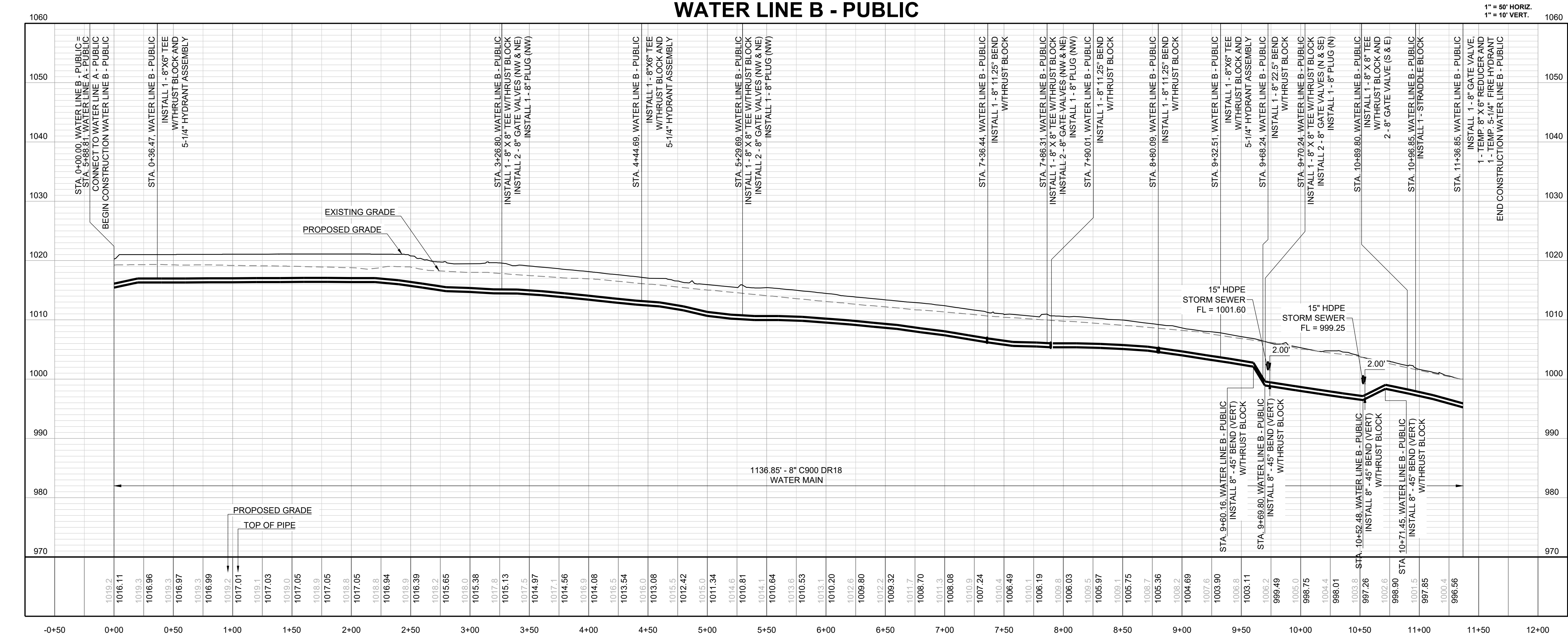
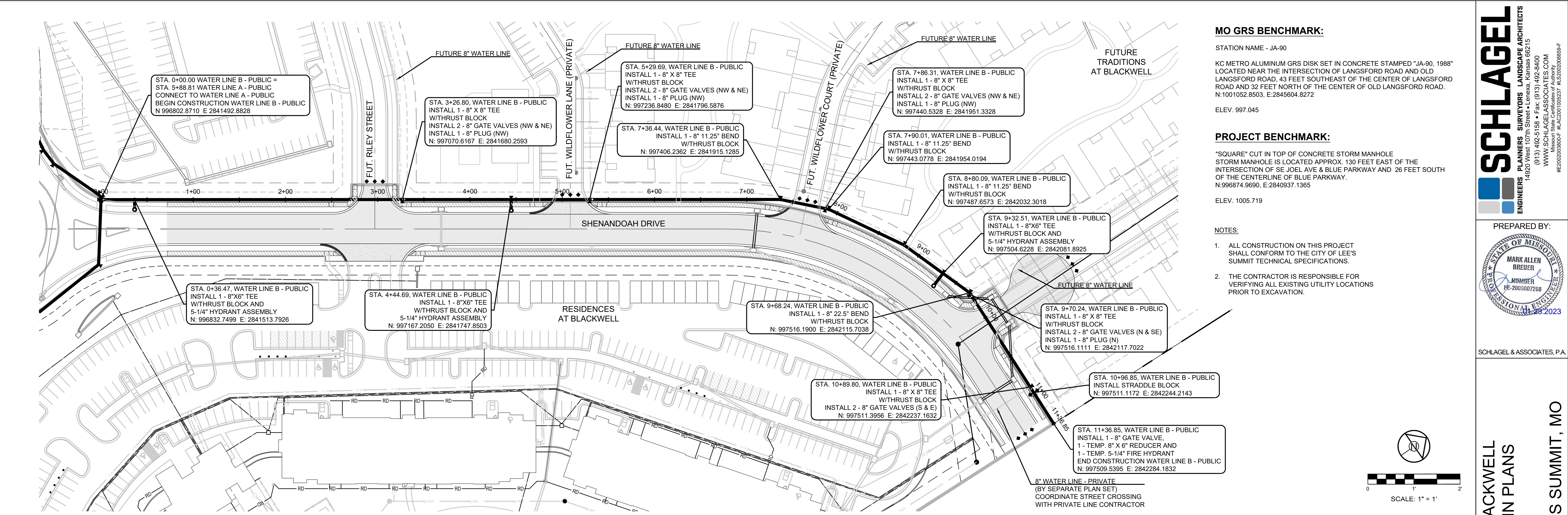
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DRAWN BY:	TRC
CHECKED BY:	MAB
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PROJ. NUMBER:	22-102

WATER LINE A -
PUBLIC

SHEET

4



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PREPARED BY:

MARK ALLEN BREWER
REGISTERED PROFESSIONAL ENGINEER
NO. 2003007268
EXPIRES 12-31-2023

SCHLAGEL & ASSOCIATES, P.A.

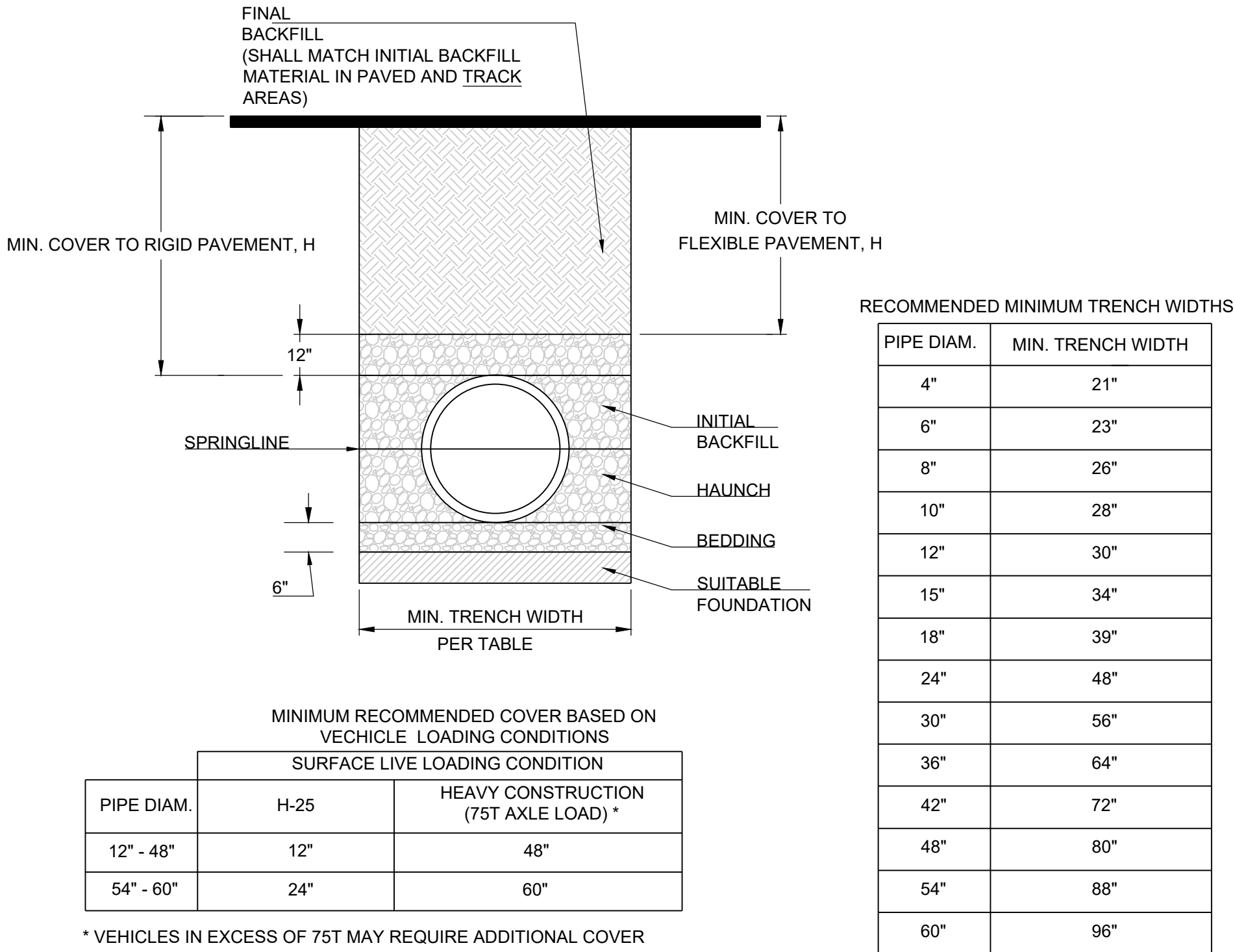
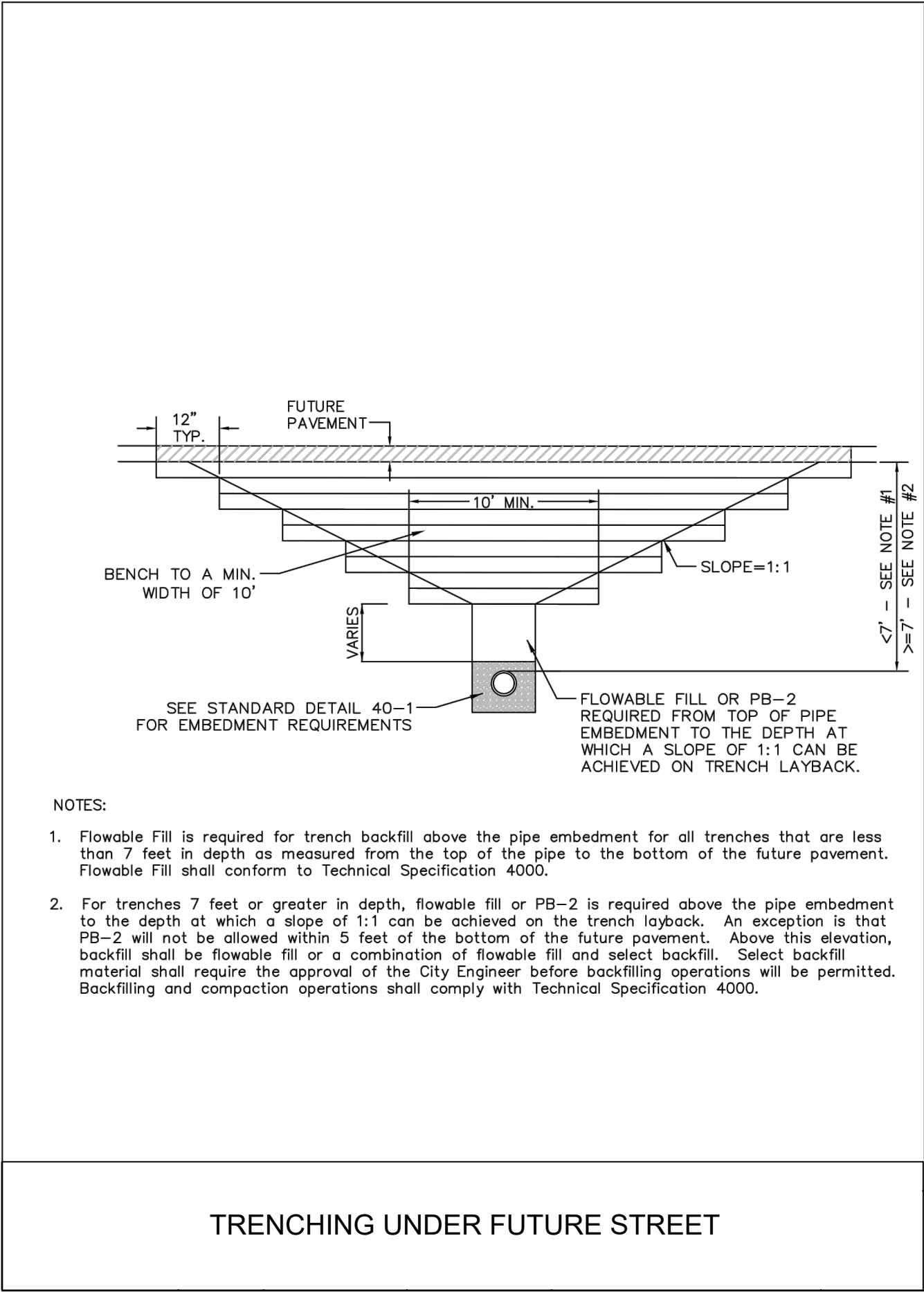
RESIDENCES AT BLACKWELL
PUBLIC WATER MAIN PLANS

HERITAGE STREET LEE'S SUMMIT, MO

DRAWN BY:	TRC	REVISION DATE:	01/23/2023	DESCRIPTION:	PER CITY COMMENTS
CHECKED BY: <td>MAB<td></td><td></td><td></td><td></td></td>	MAB <td></td> <td></td> <td></td> <td></td>				
DATE PREPARED: <td>11/30/2022<td></td><td></td><td></td><td></td></td>	11/30/2022 <td></td> <td></td> <td></td> <td></td>				
PROJ. NUMBER: <td>22-102<td></td><td></td><td></td><td></td></td>	22-102 <td></td> <td></td> <td></td> <td></td>				

WATER LINE B - PUBLIC

SHEET
5



- NOTES:**
- 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.
 - MEASURES SHOULD BE TAKEN TO PREVENT MIGRATION OF NATIVE FINES INTO BACKFILL MATERIAL, WHEN REQUIRED.
 - FOUNDATION:** 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.
 - BEDDING:** 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) .
 - INITIAL BACKFILL:** 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.
 - 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 FLOATATION. 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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