

LICKING VIEW
SANITARY SEWER IMPROVEMENTS

ZANESVILLE, OH
MUSKINGUM COUNTY

VICINITY MAP



INDEX OF SHEETS:

TITLE SHEET	1
PLAN SHEET LAYOUT	2
SYMBOLS & LINE STYLES LEGEND SHEET	3
GENERAL NOTES	4 - 5
GENERAL DETAILS	6 - 10
PLAN & PROFILE SHEETS	11 - 101
SANITARY PUMP STATION DETAILS	102 - 108
MUSKINGUM COUNTY SEWER STANDARDS	109 - 113
STORM SEWER PROFILE SHEETS	114 - 116
EROSION CONTROL SHEETS	117 - 118

Cindy S. Cameron

CINDY S. CAMERON, PRESIDENT
MUSKINGUM COUNTY COMMISSIONER

8/15/2023

DATE

Mollie S. Crooks

MOLLIE S. CROOKS
MUSKINGUM COUNTY COMMISSIONER

8/15/2023

DATE

Melissa J. Bell

MELISSA J. BELL
MUSKINGUM COUNTY COMMISSIONER

8/15/2023

DATE

Mark J. Eicher, P.E., P.S.
155 Rehl Road
Zanesville, Ohio 43701
740-454-0155
Muskingum County
ENGINEER'S OFFICE

SANITARY SEWER IMPROVEMENTS

PROJECT NAME:

PROJECT LOCATION:

PLANS APPROVED BY:

MJE

PLANS PREPARED BY:

HJ

DATE:

08/15/2023

REVISED:

04/29/2024

SHEET SIZE:

11" x 17"

SHEET NAME:

TITLE SHEET

SHEET NUMBER:

01
118

ENGINEER'S SEAL:



Mark J. Eicher

SIGNED:

DATE:

8-17-23

UNDERGROUND UTILITIES

Contact Two Working Days
Before You Dig



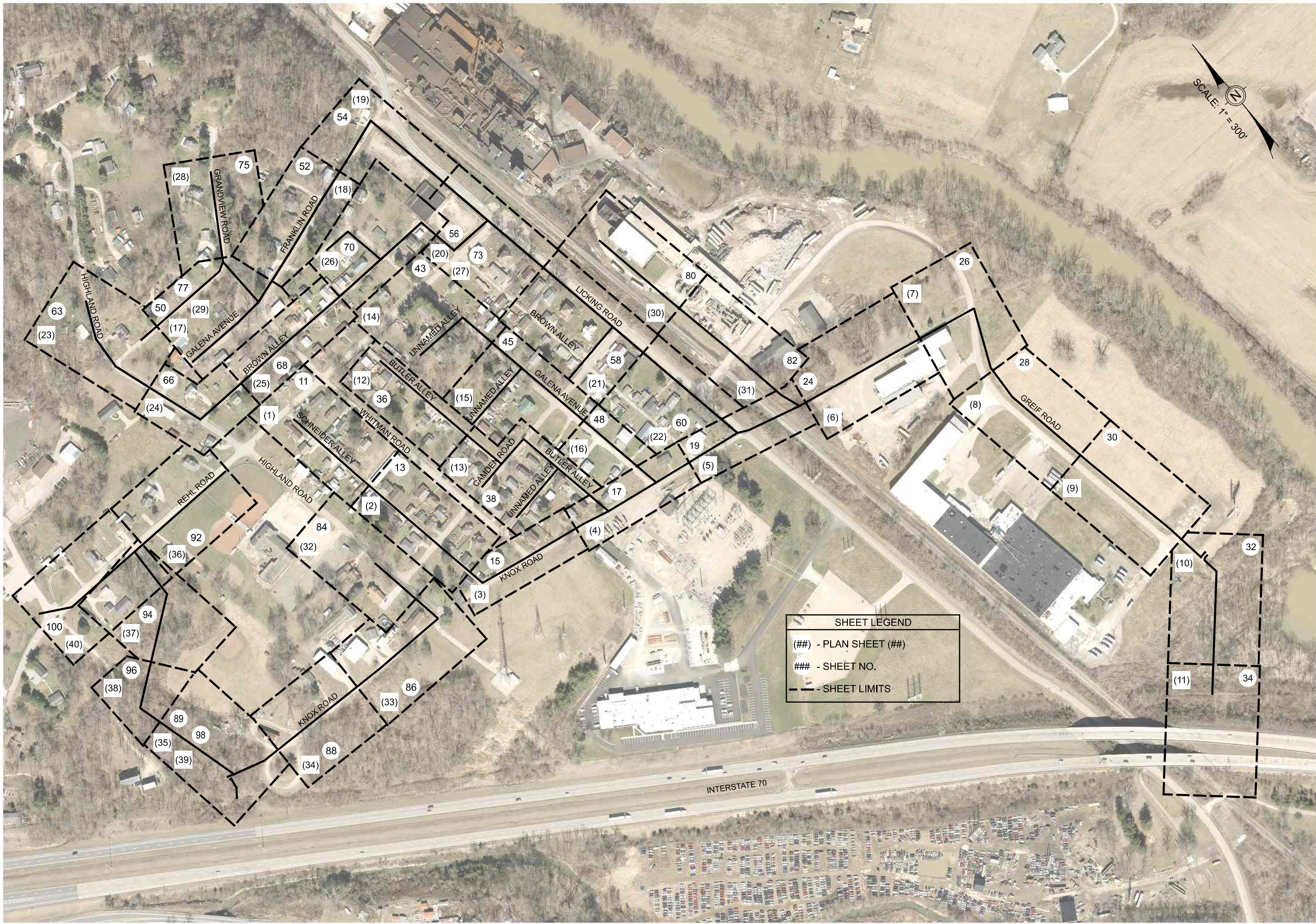
OHIO811, 8-1-1, or 1-800-362-2764
(Non-members must be called directly)

REVISIONS

NO.	DATE ISSUED	DESCRIPTION	SHEET NOS.
1	09/08/2023	GENERAL NOTES; PAY ITEM, DESCRIPTION CHANGES; EMERGENCY CONTACT INFO; ADDITIONAL SURVEY BENCHMARKS	5, 10, 23, 88, 89, 98
2	04/18/2024	ELIMINATION OF EASEMENT FOR PARCEL NO. 17-86-08-12-000; CHANGES TO SANITARY SEWER IMPROVEMENTS; LOCATION OF GREIF RD PUMP STATION; CHANGES TO DRAINAGE FEATURES; NEW UTILITY WORK	5, 11, 12, 30-33, 105, 106
3	04/29/2024	UPDATE OF EXISTING AND PROPOSED GAS LINES DEPICTED IN PLAN	11 TO 100 PLANVIEW SHEETS ONLY

OWNER: MUSKINGUM COUNTY COMMISSIONERS

ADDRESS: 401 MAIN STREET ZANESVILLE, OH 43701



SHEET LEGEND

(##) - PLAN SHEET (##)

- SHEET NO.

- - - SHEET LIMITS



PREPARED BY:

PROJECT NAME:

PLANS APPROVED BY:

PLANS PREPARED BY:

DATE:

REVISED:

SHEET SIZE:

SHEET NAME:

SHEET NUMBER:

Mark J. Eicher, P.E., P.S.
155 Rehl Road
Zanesville, Ohio 43701

Wiskingum

County

ENGINEER'S OFFICE

740-434-0155

SANITARY SEWER IMPROVEMENTS
PLAN SHEET LAYOUT

LICKING VIEW
ZANESVILLE, OHIO 43701

MJE

GJW

08/15/2023

11" x 17"

PLAN SHEET LAYOUT

02

118

43. FORCEMAIN NOTES

BACKFILL:

WHERE THE FORCEMAIN CROSSES PAVEMENT THE TOP OF BEDDING SHALL BE BACKFILLED WITH SUITABLE MATERIAL. BACKFILL SHALL BE SUITABLE MATERIAL FROM THE BOTTOM OF THE TRENCH TO WITHIN 8" OF THE FINISHED OR EXISTING GRADE. 8" OF COMPACTED GRANULAR MATERIAL SHALL BE PLACED TO FINISHED GRADE. ALL TRENCH BACKFILL SHALL BE COMPACTED IN 12-INCH LAYERS LOOSE MEASUREMENT. COMPACTION SHALL BE TO AT LEAST THE DENSITY OF THE SURROUNDING GROUND. THE COST OF ALL BACKFILL IS TO BE INCLUDED IN THE PRICE BID FOR THE VARIOUS SEWER ITEMS. PAYMENT FOR THIS ITEM SHALL NOT EXCEED A 4 FEET WIDE TRENCH.

MATERIALS:

ALL FORCEMAIN MATERIALS AND INSTALLATIONS SHALL BE IN ACCORDANCE WITH THE CURRENT RULES AND REGULATIONS. ALL FORCE MAIN MATERIAL SHALL BE PVC IN GRADE BETWEEN WATER LINES AND FORCE MAIN. THE FORCEMAIN SHALL BE LOWERED DURING CONSTRUCTION. BACKFILL GROUND OVER THE TOP OF THE PIPE SHALL BE FREE OF ROCKS, ORGANIC REFUSE OR OTHER OBJECTIONABLE MATERIAL. SEE BACKFILL NOTE ABOVE. THE INSTALLING CONTRACTOR IS RESPONSIBLE FOR CONDUCTING PRESSURE AND LEAKAGE TESTS AT A PRESSURE OF 150 PSI IN ACCORDANCE WITH AWWA C-600.

44. SANITARY SEWER NOTES

SERVICE LATERALS:

PIPE FOR ALL SERVICE LATERALS SHALL BE 4-INCH, SCHEDULE 40 PVC SEWER PIPE ASTM D3034, SDR 35 UNLESS NOTED IN PLANS. SERVICE LATERALS ARE SUBJECT TO EITHER THE INFILTRATION/EXFILTRATION OR AIR TEST. ALL SERVICE LATERALS SHALL BE LAID AT A MINIMUM GRADE OF 1/4 INCH PER FOOT. CONTRACTOR SHALL INSTALL A WYE, RISER AND CAP 3' PAST THE PROPERTY LINE WITH CLEANOUT. PAYMENT FOR THESE ITEMS SHALL BE INCLUDED IN THE UNIT PRICE BID FOR 4", 6" OR 8" SANITARY SERVICE LATERAL.

BORINGS FOR SERVICE LATERALS:

WHERE SPECIFIED IN THE PLANS, CONTRACTOR SHALL JACK AND BORE UNDER PAVEMENT TO INSTALL SERVICE LATERALS. IF AN INSTALLATION PIT OR RECEIVING PIT IS REQUIRED ON PRIVATE PROPERTY, THE CONTRACTOR WILL BE REQUIRED TO OBTAIN A WORK AGREEMENT WITH THE PROPERTY OWNER PRIOR TO COMMENCING BORING OPERATIONS. THE COST OF BORING SERVICE LATERALS SHALL BE INCLUDED IN THE UNIT PRICE BID FOR 4", 6" OR 8" SANITARY SERVICE LATERAL.

BACKFILL:

WHERE THE SANITARY SEWER OR SEWER SERVICE CROSSES PAVEMENT THE TOP OF BEDDING SHALL BE BACKFILLED WITH SUITABLE MATERIAL. SEE SANITARY DETAIL SHEETS FOR ADDITIONAL INFORMATION REGARDING BACKFILL REQUIREMENTS. THE COST OF ALL BACKFILL IS TO BE INCLUDED IN THE UNIT PRICE FOR THE VARIOUS SEWER ITEMS.

BEDDING:

ALL PIPE 8" OR SMALLER SHALL BE BEDDED IN #57, 6" BELOW AND 6" ABOVE TOP OF PIPE, AS SHOWN ON SHEET 7.

LEAKAGE TEST:

LEAKAGE TESTS SHALL BE SPECIFIED. THIS MAY INCLUDE APPROPRIATE WATER OR LOW PRESSURE AIR TESTING. THE TESTING METHODS SELECTED SHOULD TAKE INTO CONSIDERATION THE RANGE IN GROUNDWATER ELEVATIONS DURING THE TEST AND ANTICIPATED DURING THE DESIGN LIFE OF THE SEWER.

WATER (HYDROSTATIC) TEST: (FORCEMAIN)

THE LEAKAGE EXFILTRATION OR INFILTRATION SHALL NOT EXCEED 100 GALLONS PER INCH OF PIPE DIAMETER PER MILE PER DAY FOR ANY SECTION OF THE SYSTEM. AN EXFILTRATION OR INFILTRATION TEST SHALL BE PERFORMED WITH A MINIMUM POSITIVE HEAD OF 2 FEET.

AIR TEST: (GRAVITY SEWER)

THE AIR TEST SHALL, AS A MINIMUM, CONFORM TO THE TEST PROCEDURE DESCRIBED IN ASTM C-828-86 FOR CLAY PIPE, ASTM C 924 FOR CONCRETE PIPE, ASTM F-1417 FOR PVC, AND FOR OTHER MATERIALS TEST PROCEDURES APPROVED BY THE REGULATORY AGENCY.

STORM SEWER CROSSINGS:

WHERE THE SANITARY SEWER CROSSES A PROPOSED STORM SEWER, THE TRENCH SHALL BE BACKFILLED TO THE BOTTOM OF THE PROPOSED STORM SEWER WITH COMPACTED GRANULAR MATERIAL, EXTENDING A DISTANCE OF 10 LINEAL FEET CENTERED ON THE STORM SEWER. THE COST OF THIS WORK IS TO BE INCLUDED IN THE UNIT PRICE BID FOR VARIOUS SEWER ITEMS.

WATER LINE CROSSING:

ALL SANITARY SEWERS OR MANHOLES SHALL BE PLACED WITH AT LEAST 10 FEET HORIZONTAL SEPARATION FROM WATER LINES. WHENEVER A WATER LINE AND SEWER MUST CROSS, THE SEWER MAIN SHALL BE LAID SUCH THAT THE CROWN OF THE SEWER IS AT LEAST 18 INCHES BELOW THE INVERT OF THE WATER LINE MEASURED BETWEEN THE OUTSIDE PIPE WALLS. IN CASES WHERE THE REQUIRED SEPARATION CANNOT BE MAINTAINED, CONCRETE ENCASEMENT OF WATER LINE HAS BEEN CALLED OUT IN THE PLANS. THE COST OF CONCRETE ENCASEMENT IS TO BE INCLUDED IN THE UNIT PRICE FOR SANITARY SEWER PIPE PAY ITEMS.

MANHOLES:

ALL MANHOLES SHALL BE PRE-CAST, CONSTRUCTED AND PLACED IN ACCORDANCE WITH ASTM C-478 MATERIAL SPECIFICATIONS. THE JOINTS SHALL CONFORM TO ASTM C-443 JOINT SPECIFICATIONS. ALL MANHOLES SHALL REQUIRE MECHANICAL CHIMNEY SEALS TO BE INSTALLED. ALL MANHOLES SHALL BE VACUUM TESTED IN ACCORDANCE WITH ASTM C-1244 SPECIFICATIONS.

MANHOLE CASTINGS:

ALL MANHOLE CASTINGS SHALL BE NEENAH R-1642 OR R-1642-A, SUBJECT TO THE COUNTY'S APPROVAL. CASTING ADJUSTMENT BY GRADE RINGS MUST BE LESS THAN ONE (1) FOOT BEFORE A BARREL SECTION IS REQUIRED.

SEWER PIPE:

THE MINIMUM REQUIREMENTS FOR SEWER PIPE ON THIS PROJECT SHALL BE PVC-SDR 35 SEWER PIPE ASTM D3034, WITH JOINTS MEETING ASTM D-3212, AND FLEXIBLE RUBBER GASKETS MEETING ASTM F-477. BACKFILL SHALL CONFORM TO ASTM 2321, UNLESS OTHERWISE SHOWN ON THE PLANS.

DEFLECTION TEST:

DEFLECTION TESTS SHALL BE PERFORMED ON ALL FLEXIBLE PIPE. THE TEST SHALL BE CONDUCTED AFTER THE FINAL BACK FILL HAS BEEN IN PLACE AT LEAST 30 DAYS TO PERMIT STABILIZATION OF THE SOIL-PIPE SYSTEM, AND 1 YEAR AFTER INITIAL TESTING.

NO PIPE SHALL EXCEED A DEFLECTION OF 5 PERCENT. IF DEFLECTION EXCEEDS 5 PERCENT, REPLACEMENT OR CORRECTION SHALL BE ACCOMPLISHED IN ACCORDANCE WITH REQUIREMENTS IN THE APPROVED SPECIFICATIONS.

THE RIGID BALL OR MANDREL USED FOR THE DEFLECTION TEST SHALL HAVE A DIAMETER NOT LESS THAN 95 PERCENT OF THE BASE INSIDE DIAMETER OR AVERAGE INSIDE DIAMETER OF THE PIPE DEPENDING ON WHICH IS SPECIFIED IN ASTM SPECIFICATION, INCLUDING THE APPENDIX, TO WHICH THE PIPE IS MANUFACTURED. THE PIPE SHALL BE MEASURED IN COMPLIANCE WITH ASTM D-2122 STANDARD TEST METHOD OF DETERMINING DIMENSIONS OF THERMOPLASTIC PIPE AND FITTINGS. THE TEST SHALL BE PERFORMED WITHOUT MECHANICAL PULLING DEVICES. MANDREL TESTING MUST BE PERFORMED AT 30 DAYS AND ONE (1) YEAR FOLLOWING INSTALLATION.

SEEDING AND MULCHING:

PERMANENT SEEDING SHALL BE PROVIDED FOR ALL EXPOSED SOIL SURFACES WITHIN SEVEN (7) DAYS AFTER THE FINISH GRADE IS REACHED. PERMANENT SEEDING AND MULCHING AS SPECIFIED IN ODOT ITEM 659 IS ACCEPTABLE.

AREAS WHERE PERMANENT SEEDING HAS FAILED TO GERMINATE SHALL BE RESEEDD AND MULCHED AS NECESSARY TO ACHIEVE STABILIZATION AT NO ADDITIONAL COST TO MUSKINGUM COUNTY.

45. GRINDER PUMP INSTALLATIONS:

GRINDER PUMPS HAVE BEEN SPECIFIED FOR TWO PROPERTY OWNERS WHERE GRAVITY LATERAL SERVICE CONNECTIONS FROM THE DWELING UNIT CANNOT BE ACCOMMODATED. AT THESE LOCATIONS THE CONTRACTOR SHALL COORDINATE THE INSTALLATION DIRECTLY WITH THE PROPERTY OWNER. ELECTRICAL CONNECTIONS FOR GRINDER PUMPS SHALL BE MADE ON THE EXTERIOR AT THE EXISTING METER LOCATIONS. CONTRACTOR SHALL DETERMINE EXISTING SERVICE TYPE, SIZE, AND LOCATION AND PROVIDE A 3R COMBINATION METER BASE WITH A MINIMUM OF FOUR CIRCUITS WITH PASS THROUGH LUGS TO FEED EXISTING LOAD. CONTRACTOR SHALL COORDINATE METER BASE REPLACEMENT WITH PROPERTY OWNER AND UTILITY.

SEE GRINDER PUMP SPECIFICATIONS FOR CIRCUIT BREAKER AND CONDUCTORS REQUIREMENTS BELOW:

GRINDER PUMP SHALL BE E/ONE EXTREME MODEL DH071 MEETING THE FOLLOWING SPECIFICATIONS:
RATED FOR 700 GPD
70 GALLON CAPACITY
INDOOR OR OUTDOOR INSTALLATION
STANDARD OUTDOOR HEIGHTS RANGE FROM 61 INCHES TO 160 INCHES

GRINDER PUMP ELECTRIC MOTOR SHALL BE A 1 HP, 1725 RPM, 240 VOLT, 60 HERTZ, 1 PHASE, CAPACITOR START, BALL BEARING, AIR-COOLED INDUCTION TYPE WITH CLASS F INSULATION, AND LOW STARTING CURRENT NOT TO EXCEED 30AMPS.

ALL COSTS FOR PUMP INSTALLATION, UTILITY COORDINATION, UTILITY DISCONNECT, UTILITY RECONNECT, AND ALL NECESSARY ELECTRICAL COMPONENTS TO MEET CODE (INCLUDING BUT NOT LIMITED TO EQUIPMENT, CONDUITS, CONDUCTORS, BREAKERS, GROUNDING SYSTEM) SHALL BE INCLUDED IN THE UNIT PRICE FOR GRINDER PUMP STATION.

46. PAY ITEM CLARIFICATIONS

- ON THIS PROJECT 'AWWA C900' PIPE MUST HAVE A DIMENSION RATIO OF 18 (DR 18)
- ON THIS PROJECT 'PVC SDR 26 (DEPTH) RESTRAINED JOINTS (SURFACE)' CAN BE SUBSTITUTED FOR 'PVC SDR 35 (DEPTH)(RESTRAINED JOINTS) (SURFACE)' SUBJECT TO MUSKINGUM COUNTY'S REVIEW/APPROVAL OF RESTRAINED JOINT SYSTEMS.
- ON THIS PROJECT 'AWWA C906' PIPE MUST HAVE A DIMENSION RATION OF 11 (DR 11)
- ON THIS PROJECT PVC SDR35 PIPE DESIGNATED TO BE BORED OR JACKED (AKA TRENCHLESS) CONSTRUCTION SHALL HAVE RESTRAINED JOINTS.

47. PAVEMENT REPLACEMENT REQUIREMENTS FROM SEWER INSTALLATIONS

IF GREATER THAN 50 PERCENT OF THE WIDTH OF A LANE OR AN ALLEY IS IMPACTED BY SEWER CONSTRUCTION OR A PORTION OF REMAINING LANE OR ALLEY IS LESS THAN 4FT IN DIMENSION, THE ENTIRE LANE/ALLEY SHALL BE REPAVED. SEE DETAIL SHEETS FOR PAVEMENT BUILD-UP REQUIREMENTS. COST OF PAVEMENT REPLACEMENT IS TO BE INCLUDED IN THE UNIT PRICES FOR FORCE MAIN, SANITARY SEWER PIPE, OR STORM SEWER PIPE.

48. POWER POLE INSTALLATION

THE COST OF THE POWER POLE INSTALLATION PAY ITEM SHALL INCLUDE THE COST TO REMOVE THE ELECTRICAL CONDUIT FROM THE EXISTING POWER POLE AND THE SUBSEQUENT REINSTALLATION TO THE PROPOSED POWER POLE.

REVISION

ESTIMATED QUANTITIES

ITEM NO.	PAY ITEM DESCRIPTION	UNIT	TOTAL QTY
ROADWAY			
201	CLEARING AND GRUBBING	LS	1
207	TEMPORARY SEDIMENT & EROSION CONTROLS	LS	1
659	SEEDING & MULCHING	SY	36,028
SANITARY			
611	8" SANITARY SEWER PIPE, PVC SDR 35 (4 TO 8 FT DEEP) (UNDER VEGETATION)	LF	878
611	8" SANITARY SEWER PIPE, PVC SDR 35 (4 TO 8 FT DEEP) (UNDER ROADWAY)	LF	2,262
611	8" SANITARY SEWER PIPE, PVC SDR 35 (4 TO 8 FT DEEP) (UNDER ALLEYS/DRIVES)	LF	(2,627)
611	8" SANITARY SEWER PIPE, PVC SDR 35 (4 TO 8 FT DEEP) (UNDER ALLEYS/DRIVES)(DIRECTIONALLY DRILLED)	LF	150
611	8" SANITARY SEWER PIPE, PVC SDR 35 (8 TO 12 FT DEEP) (UNDER VEGETATION)	LF	(3,051)
611	8" SANITARY SEWER PIPE, PVC SDR 35 (8 TO 12 FT DEEP) (UNDER ROADWAY)	LF	2,050
611	8" SANITARY SEWER PIPE, PVC SDR 35 (8 TO 12 FT DEEP) (UNDER ALLEYS/DRIVES)	LF	2,178
611	8" SANITARY SEWER PIPE, PVC SDR 35 (12 TO 16 FT DEEP) (UNDER ROADWAY)	LF	206
611	8" SANITARY SEWER PIPE, HDPE AWWA C 906 (12 TO 16 FT DEEP) (UNDER ROADWAY) (DIRECTIONALLY DRILLED)	LF	250
611	8" SANITARY SEWER PIPE, HDPE AWWA C 906 (12 TO 16 FT DEEP) (UNDER ROADWAY)	LF	55
611	8" SANITARY SEWER PIPE, PVC AWWA C 900 (4 TO 8 FT DEEP) (UNDER VEGETATION)	LF	342
611	8" SANITARY SEWER PIPE, PVC AWWA C 900 (4 TO 8 FT DEEP)(UNDER ROADWAY)	LF	754
611	8" SANITARY SEWER PIPE, PVC AWWA C 900 (4 TO 8 FT DEEP) (UNDER ALLEYS/DRIVES)	LF	403
611	8" SANITARY SEWER PIPE, PVC AWWA C 900 (4 TO 8 FT DEEP)(RESTRAINED JOINTS)(UNDER ROADWAY)	LF	98
611	8" SANITARY SEWER PIPE, PVC SDR 35 (4 TO 8 FT DEEP) (RESTRAINED JOINTS) (UNDER ALLEYS/DRIVES)	LF	55
611	8" SANITARY SEWER PIPE, PVC AWWA C 900 (8 TO 12 FT DEEP) (UNDER ROADWAY)	LF	349
611	8" SANITARY SEWER PIPE, PVC AWWA C 900 (12 TO 16 FT DEEP)(UNDER ROADWAY)	LF	34
611	8" SANITARY SEWER PIPE, PVC SDR 35 (16 TO 20 FT DEEP)(RESTRAINED JOINTS)(UNDER ROADWAY)	LF	180
611	4" SANITARY SERVICE LATERAL, PVC SDR 35	LF	1,590
611	4" SANITARY SERVICE LATERAL, PVC SDR 35 (BORED OR JACKED)	LF	298
611	6" SANITARY SERVICE LATERAL, PVC SDR 35	LF	218
611	6" SANITARY SERVICE LATERAL, PVC SDR 35 (BORED OR JACKED)	LF	60
611	8" SANITARY SERVICE LATERAL, PVC SDR 35	LF	13
611	8" SANITARY SERVICE LATERAL, PVC SDR 35 (BORED OR JACKED)	LF	(110)
611	4" FORCE MAIN, PVC DR 18	LF	80
611	4" FORCE MAIN, HDPE AWWA C 906 (DIRECTIONALLY DRILLED)	LF	372
611	48" DIAMETER MANHOLE (4 TO 8 FT DEEP)	EA	58
611	48" DIAMETER MANHOLE (8 TO 12 FT DEEP)	EA	23
611	48" DIAMETER MANHOLE W/ OUTSIDE DROP (4 TO 8 FT DEEP)	EA	1
611	48" DIAMETER MANHOLE W/ OUTSIDE DROP (8 TO 12 FT DEEP)	EA	1
611	48" DIAMETER MANHOLE W/ OUTSIDE DROP (16 TO 20 FT DEEP)	EA	1
638	16" STEEL PIPE ENCASEMENT, SDTM A53 (BORED OR JACKED)	LF	109
SPECIAL	POWER POLE HOLD	EA	(12)
SPECIAL	POWER POLE INSTALLATION	EA	1
SPECIAL	GRAVITY SEWER AIR TESTING	LS	1
SPECIAL	GRINDER PUMP STATION	EA	2
SPECIAL	FORCE MAIN PRESSURE TESTING	LS	1
SPECIAL	CONNECT TO EXISTING FORCE MAIN	EA	1
SPECIAL	4" AIR RELEASE VALVE (FORCE MAIN)	EA	1
SPECIAL	SANITARY PUMP STATION, GRIEF ROAD	EA	1
SPECIAL	SANITARY PUMP STATION, KNOX ROAD	EA	1
SPECIAL	WATER SERVICE LINE REPAIR	EA	20
SPECIAL	ORANGE CONSTRUCTION FENCE	LF	1,000
DRAINAGE			
202	ABANDON MISC., JUNCTION BOX	EA	1
202	ABANDON MISC., EXIST. PIPE 12" AND UNDER	LF	1,152
202	CLASS QC1 CONCRETE, HEADWALL	LF	1,096
511	CLASS QC1 CONCRETE, HEADWALL	CY	0.81
611	12" CONDUIT, TYPE A	LF	847
611	12" CONDUIT, TYPE B	LF	491
611	15" CONDUIT, TYPE A	LF	86
611	15" CONDUIT, TYPE B	LF	537
611	18" CONDUIT, TYPE A	LF	38
611	18" CONDUIT, TYPE B	LF	223
611	30" CONDUIT, TYPE B	LF	68
611	CATCH BASIN, V-MOTION WITH BICYCLE SAFE GRATE	EA	9
611	CATCH BASIN, NO. 2-3 WITH BICYCLE SAFE GRATE	EA	(4)
611	MANHOLE, TYPE 3	EA	4
MAINTENANCE OF TRAFFIC			
614	MAINTENANCE OF TRAFFIC	LS	1
623	CONSTRUCTION LAYOUT STAKING	LS	1
624	MOBILIZATION	LS	1

REVISION	REV. BY	DATE	DESCRIPTION
△	GJW	04/18/2024	PAY ITEMS, QUANTITIES, AND CLARIFICATIONS ASSOCIATED WITH CHANGES IN SANITARY SEWER, GREIF PUMP STATION LOCATION, DRAINAGE FEATURES, AND NEW UTILITY WORK

Mark J. Elcher, P.E., P.S.

Muskingum
County
ENGINEER'S OFFICE

PREPARED BY:

SANITARY SEWER IMPROVEMENTS
GENERAL NOTES AND QUANTITY SUMMARY

PROJECT NAME:

PROJECT LOCATION:

PLANS APPROVED BY:

MJE

PLANS PREPARED BY:

GJW

DATE:

08/17/2023

REVISED:

04/18/2024

SHEET SIZE:

11" x 17"

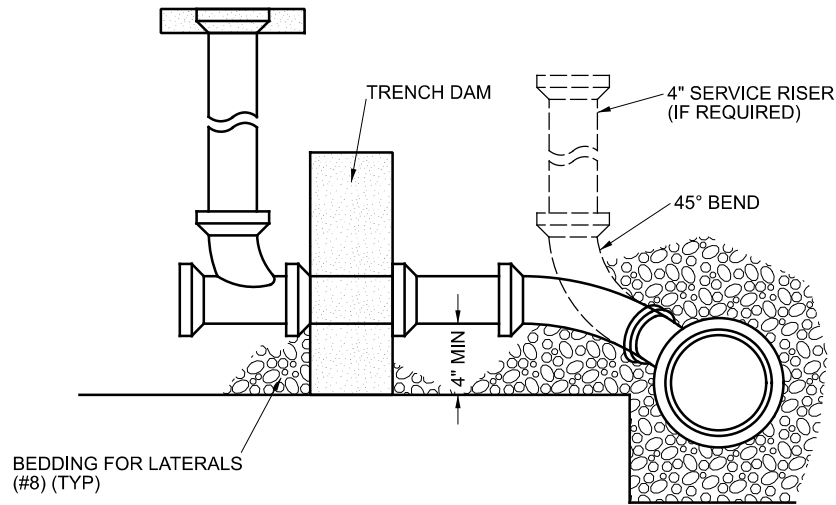
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GENERAL
NOTES (2)

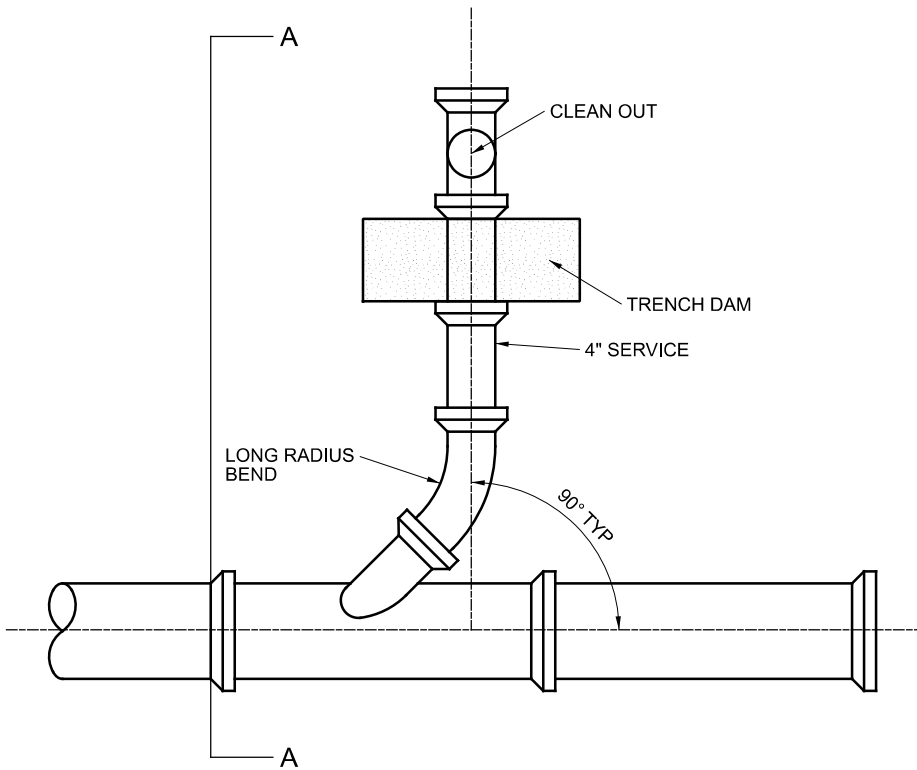
SHEET NUMBER:

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118

LICKING VIEW
ZANESVILLE, OHIO 43701

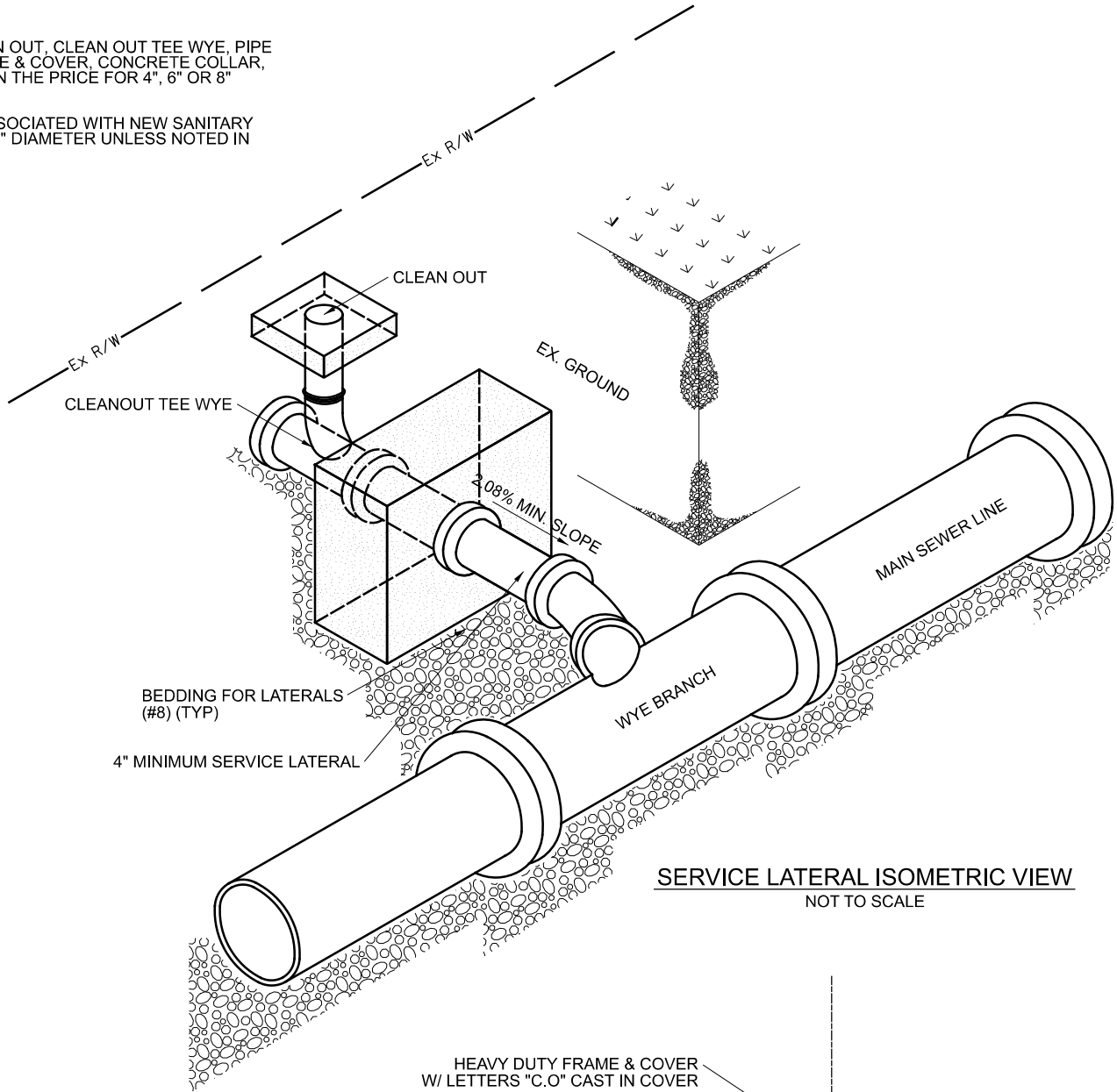


SERVICE LATERAL SECTION A - A
NOT TO SCALE

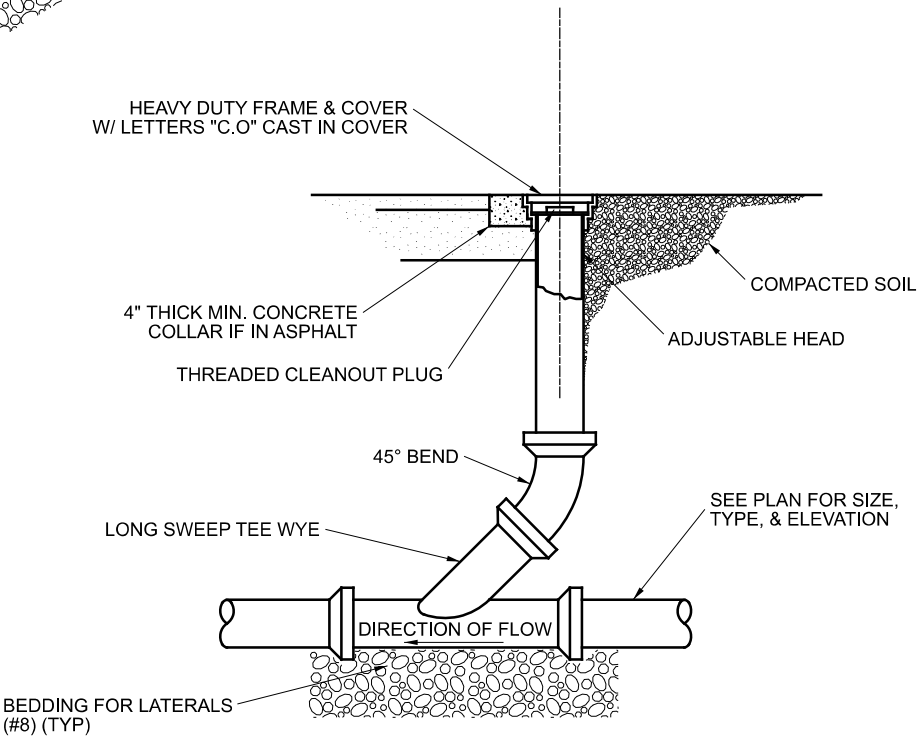


SERVICE LATERAL PLAN VIEW
NOT TO SCALE

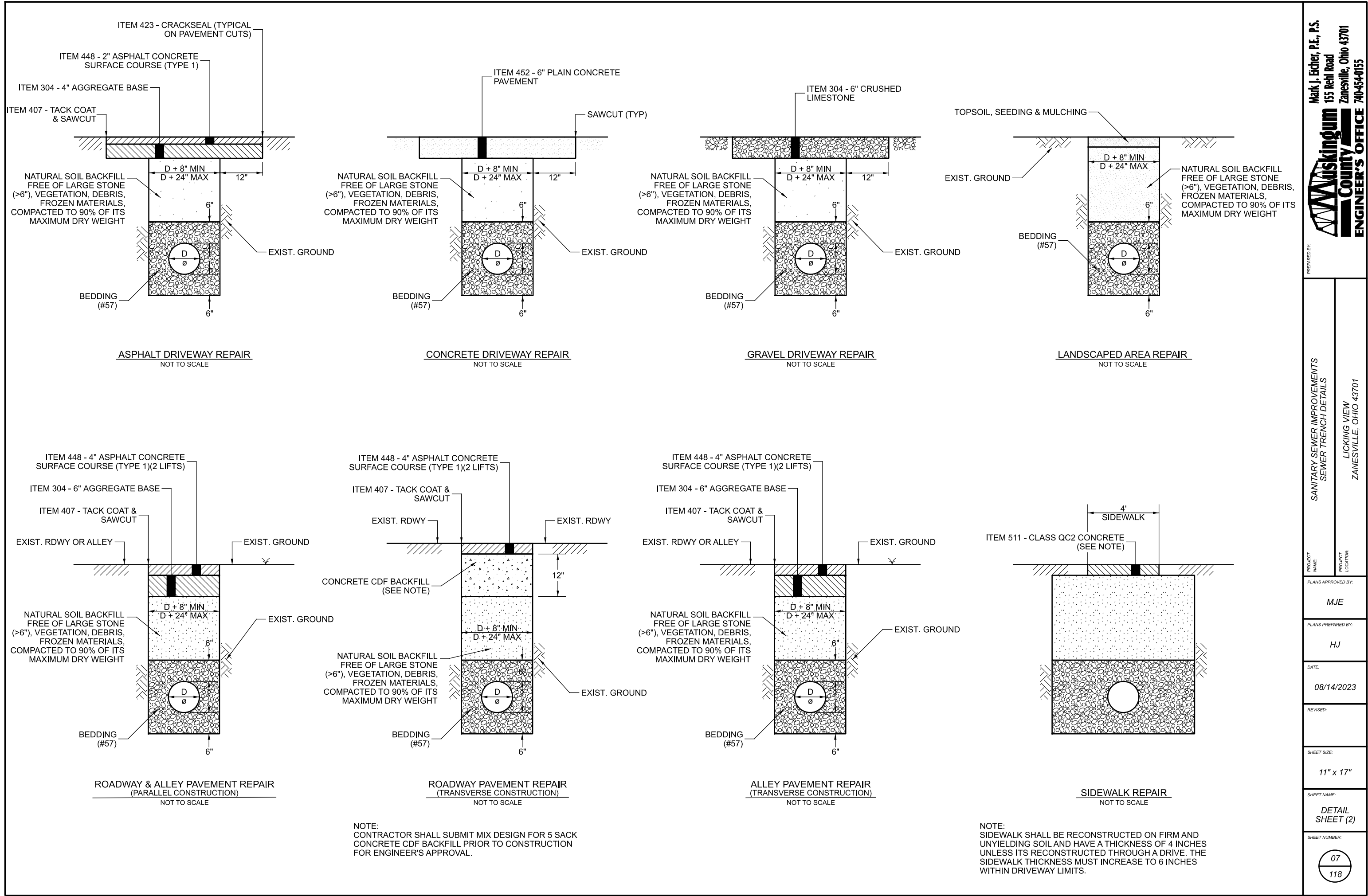
- NOTES:**
1. COST OF TRENCH DAM, RISER, CLEAN OUT, CLEAN OUT TEE WYE, PIPE BENDS, BEDDING, HEAVY DUTY FRAME & COVER, CONCRETE COLLAR, AND COMPACTION TO BE INCLUDED IN THE PRICE FOR 4", 6" OR 8" SANITARY SERVICE LATERAL.
 2. ALL SERVICE LINES, RISERS, ETC. ASSOCIATED WITH NEW SANITARY SEWER SERVICE SHALL BE 4", 6" OR 8" DIAMETER UNLESS NOTED IN THE PLANS OTHERWISE.



SERVICE LATERAL ISOMETRIC VIEW
NOT TO SCALE



ROAD ONLY CLEANOUT DETAIL
NOT TO SCALE



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Zanesville, Ohio 43701
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Wiskingum
County
ENGINEER'S OFFICE

PREPARED BY:

SANITARY SEWER IMPROVEMENTS
SEWER TRENCH DETAILS

PROJECT NAME:

LICKING VIEW
ZANESVILLE, OHIO 43701
PROJECT LOCATION:

PLANS APPROVED BY:

MJE

PLANS PREPARED BY:

HJ

DATE:

08/14/2023

REVISED:

SHEET SIZE:

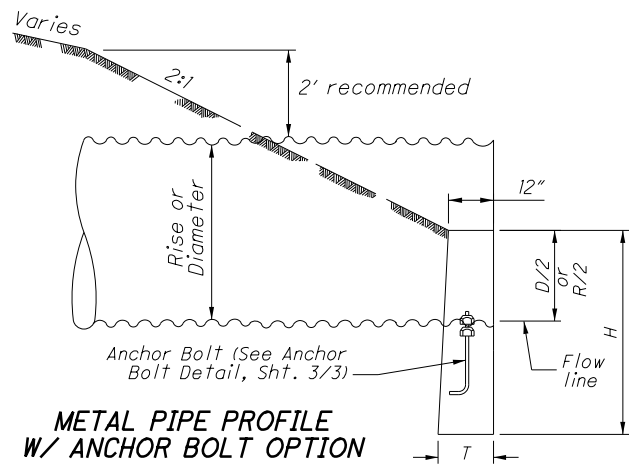
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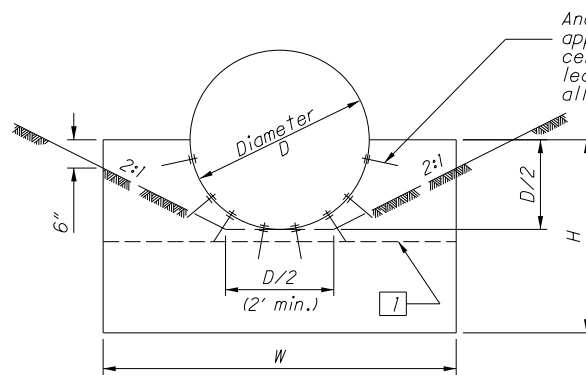
DETAIL SHEET (2)

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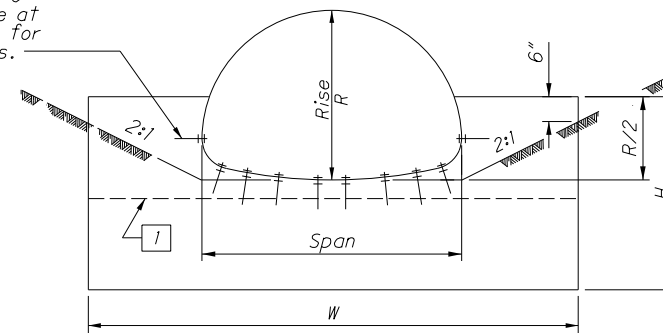


METAL PIPE PROFILE
W/ ANCHOR BOLT OPTION



CIRCULAR

METAL PIPE END TREATMENT "A" W/ ANCHOR BOLT OPTION

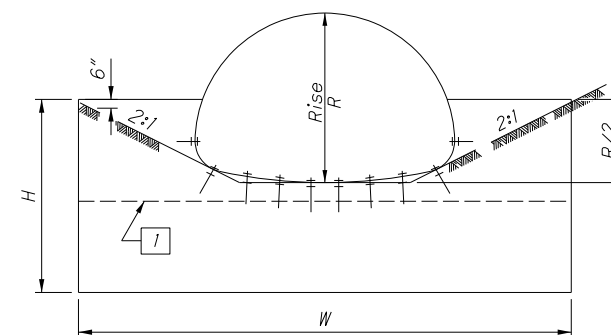
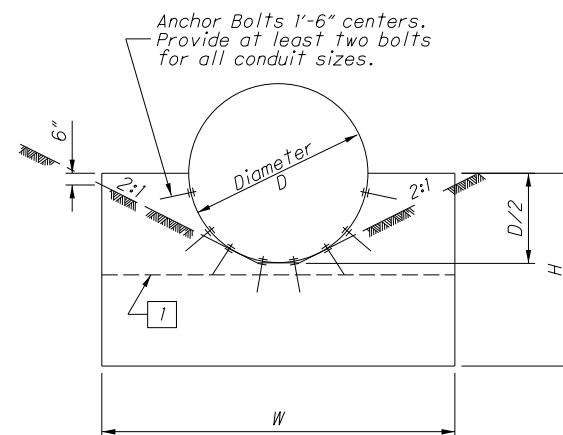


PIPE-ARCH

CAST-IN-PLACE HW FOR CORRUGATED METAL PIPE & PLASTIC PIPE (English)																
CIRCULAR					PIPE ARCH						PIPE ARCH					
D	W	H	T	CONC. cu. yds.	SPAN	RISE	W	H	T	CONC. cu. yds.	SPAN	RISE	W	H	T	CONC. cu. yds.
12"	2'-0"	3'-0"	12"	0.21	2.67x1/2" Corrugations						*81"	59"	12'-4"	5'-5"	15"	2.14
15"	2'-6"	3'-2"	12"	0.27	17"	13"	3'-0"	3'-0"	12"	0.31	87"	63"	13'-0"	5'-7"	17"	2.50
18"	3'-0"	3'-3"	12"	0.33	21"	15"	3'-6"	3'-0"	12"	0.35	95"	67"	14'-0"	5'-9"	20"	3.14
21"	3'-6"	3'-4"	12"	0.39	24"	18"	4'-0"	3'-9"	12"	0.43	103"	71"	15'-0"	5'-11"	22"	3.54
24"	4'-0"	3'-6"	12"	0.46	28"	20"	4'-6"	3'-3"	12"	0.48	112"	75"	16'-0"	6'-1"	24"	3.96
27"	4'-6"	3'-8"	12"	0.53	35"	24"	5'-6"	3'-5"	12"	0.61	117"	79"	17'-9"	6'-3"	25"	4.89
30"	5'-0"	3'-9"	12"	0.60	42"	29"	6'-6"	3'-7"	12"	0.73	128"	83"	18'-0"	6'-5"	26"	5.01
33"	5'-6"	3'-10"	12"	0.68	49"	33"	7'-8"	3'-9"	12"	0.90	137"	87"	19'-0"	6'-7"	27"	5.45
36"	6'-0"	4'-0"	12"	0.76	57"	38"	9'-0"	4'-0"	12"	1.10	142"	91"	20'-9"	6'-9"	27"	6.31
39"	6'-6"	4'-2"	12"	0.84	64"	43"	10'-0"	4'-4"	12"	1.31	6"x2" Corrugations (18" Corner Radius)					
42"	7'-0"	4'-3"	12"	0.92	71"	47"	11'-0"	4'-8"	12"	1.54	*6'-1"	4'-7"	11'-8"	5'-7"	12"	1.89
48"	8'-0"	4'-6"	12"	1.10	*77"	52"	11'-8"	5'-3"	12"	1.84	*6'-4"	4'-9"	12'-0"	5'-8"	14"	2.12
54"	9'-3"	4'-9"	12"	1.33	*83"	57"	12'-4"	5'-5"	15"	2.46	*6'-9"	4'-11"	12'-4"	5'-9"	15"	2.42
60"	10'-6"	5'-6"	12"	1.78	6"x2" Corrugations (31" Corner Radius)						*7'-0"	5'-1"	12'-8"	5'-10"	16"	2.44
66"	11'-9"	5'-9"	12"	2.06	13'-3"	9'-4"	23'-11"	7'-11"	32"	9.63	7'-3"	5'-3"	12'-11"	5'-11"	17"	2.69
72"	13'-0"	6'-0"	12"	2.37	13'-6"	9'-6"	24'-9"	8'-0"	32"	10.12	7'-8"	5'-5"	13'-2"	6'-0"	18"	2.77
78"	14'-3"	6'-3"	14"	2.94	14'-0"	9'-8"	24'-10"	8'-1"	33"	10.33	7'-11"	5'-7"	14'-0"	6'-1"	20"	3.15
84"	15'-6"	6'-6"	14"	3.30	14'-2"	9'-10"	25'-9"	8'-2"	33"	10.87	8'-2"	5'-9"	14'-8"	6'-2"	21"	3.45
90"	16'-9"	6'-9"	16"	4.00	14'-5"	10'-0"	26'-7"	8'-3"	33"	11.39	8'-7"	5'-11"	15'-0"	6'-3"	22"	3.75
96"	18'-0"	7'-0"	16"	4.40	14'-11"	10'-2"	26'-9"	8'-4"	34"	11.68	8'-10"	6'-1"	15'-10"	6'-4"	23"	4.15
102"	19'-3"	7'-3"	18"	5.28	15'-4"	10'-4"	26'-11"	8'-5"	34"	11.96	9'-4"	6'-3"	16'-0"	6'-5"	24"	4.65
108"	20'-6"	7'-6"	20"	6.21	15'-7"	10'-6"	27'-9"	8'-6"	34"	12.51	9'-6"	6'-5"	16'-10"	6'-6"	26"	4.93
114"	21'-9"	7'-9"	22"	7.25	15'-10"	10'-8"	28'-7"	8'-7"	35"	13.06	9'-9"	6'-7"	17'-9"	6'-7"	27"	5.41
120"	23'-0"	8'-0"	24"	8.38	16'-3"	10'-10"	28'-8"	8'-8"	35"	13.34	10'-3"	6'-9"	17'-10"	6'-8"	27"	5.45
*126"	23'-0"	8'-3"	26"	8.64	16'-6"	11'-0"	29'-7"	8'-9"	35"	13.94	10'-8"	6'-11"	17'-11"	6'-9"	27"	5.59
132"	23'-0"	8'-6"	28"	9.23	17'-0"	11'-2"	29'-8"	8'-10"	36"	14.24	10'-11"	7'-1"	18'-10"	6'-10"	28"	5.97
138"	24'-1"	8'-9"	30"	10.50	17'-2"	11'-4"	30'-7"	8'-11"	36"	14.84	11'-5"	7'-3"	18'-11"	6'-11"	28"	6.12
144"	25'-2"	9'-0"	32"	11.89	17'-5"	11'-6"	31'-5"	9'-0"	36"	15.42	11'-7"	7'-5"	19'-9"	7'-0"	28"	6.52
150"	26'-4"	9'-3"	34"	13.38	17'-11"	11'-8"	31'-7"	9'-1"	37"	15.83	11'-10"	7'-7"	20'-9"	7'-1"	29"	6.94
156"	27'-5"	9'-6"	36"	15.01	18'-1"	11'-10"	32'-5"	9'-2"	37"	16.43	12'-4"	7'-9"	20'-10"	7'-2"	29"	7.12
162"	28'-7"	9'-9"	38"	16.75	18'-7"	12'-0"	32'-6"	9'-3"	37"	16.78	12'-6"	7'-11"	21'-8"	7'-3"	29"	7.53
168"	29'-8"	10'-0"	40"	18.61	18'-9"	12'-2"	33'-4"	9'-4"	38"	17.43	12'-8"	8'-1"	22'-7"	7'-4"	30"	7.95
174"	30'-9"	10'-3"	42"	20.28	19'-3"	12'-4"	33'-5"	9'-5"	38"	17.78	12'-10"	8'-4"	23'-7"	7'-5"	30"	8.48
180"	31'-11"	10'-6"	43"	21.87	19'-6"	12'-6"	34'-5"	9'-6"	38"	18.49	13'-5"	8'-5"	23'-7"	7'-6"	30"	8.63
186"	33'-0"	10'-9"	44"	23.54	19'-8"	12'-8"	35'-3"	9'-7"	39"	19.19	13'-11"	8'-7"	23'-7"	7'-7"	31"	8.81
192"	34'-2"	11'-0"	45"	25.30	19'-11"	12'-10"	36'-3"	9'-8"	39"	19.95	14'-1"	8'-9"	25'-1"	7'-8"	31"	9.29
198"	35'-3"	11'-3"	46"	27.12	20'-5"	13'-0"	36'-3"	9'-9"	39"	20.30	14'-3"	8'-11"	25'-6"	7'-9"	31"	9.78
204"	36'-4"	11'-6"	47"	29.15	20'-7"	13'-2"	37'-2"	9'-10"	40"	21.05	14'-10"	9'-1"	25'-6"	7'-10"	32"	10.25
210"	37'-6"	11'-9"	48"	31.03	3'xi" Corrugations						15'-4"	9'-3"	25'-6"	7'-11"	32"	10.25
216"	38'-7"	12'-0"	49"	33.43	40"	31"	6'-6"	3'-7"	12"	0.70	15'-6"	9'-5"	26'-5"	8'-0"	32"	10.74
222"	39'-9"	12'-3"	50"	36.26	46"	36"	7'-8"	3'-9"	12"	0.85	15'-8"	9'-7"	27'-5"	8'-1"	33"	11.28
228"	40'-10"	12'-6"	51"	37.52	53"	41"	9'-0"	4'-0"	12"	1.06	15'-10"	9'-10"	28'-5"	8'-2"	33"	12.00
234"	42'-0"	12'-9"	52"	39.86	60"	46"	10'-0"	4'-4"	12"	1.27	16'-5"	9'-11"	28'-5"	8'-3"	33"	12.09
240"	43'-1"	13'-0"	53"	42.28	66"	51"	11'-0"	4'-8"	12"	1.54	16'-7"	10'-1"	29'-4"	8'-4"	34"	12.64
246"	44'-2"	13'-3"	54"	44.83	*73"	55"	11'-8"	5'-3"	12"	1.81	--	--	--	--	--	--
252"	45'-4"	13'-6"	55"	47.44												
* Determine channel configuration for pipe sizes between end treatment "A" and end treatment "B" by 2:1 slopes passing through a point 6" below the top and at each side of the headwall. For end treatment "B", 2:1 slopes are tangent to pipe.																

* Determine channel configuration for pipe sizes between end treatment "A" and end treatment "B" by 2:1 slopes passing through a point 6" below the top and at each side of the headwall. For end treatment "B", 2:1 slopes are tangent to pipe.

1 Top surface of 6" inlet headwall extension



METAL PIPE END TREATMENT "B"
W/ ANCHOR BOLT OPTION

STATE OF OHIO DEPARTMENT OF TRANSPORTATION

REVISIONS
7/30/07
7/20/12
1/18/13

ROADWAY
HYDRAULIC
ENGINEER
McGuff
Cuzzoli

OFFICE OF
HYDRAULIC
ENGINEERING

STANDARD HYDRAULIC CONSTRUCTION DRAWING
HALF-HEIGHT HEADWALLS FOR
CORRUGATED METAL PIPE AND
PLASTIC PIPE

SCD NUMBER
HW -2.1

1 / 3

Mark J. Eicher, P.E., P.S.
155 Rehl Road
Zanesville, Ohio 43701
ENGINEER'S OFFICE 740-454-0155

PREPARED BY:

SANITARY SEWER IMPROVEMENTS
SEWER TRENCH DETAILS

PROJECT NAME:

PLANS APPROVED BY:
MJE

PLANS PREPARED BY:
HJ

DATE:
08/14/2023

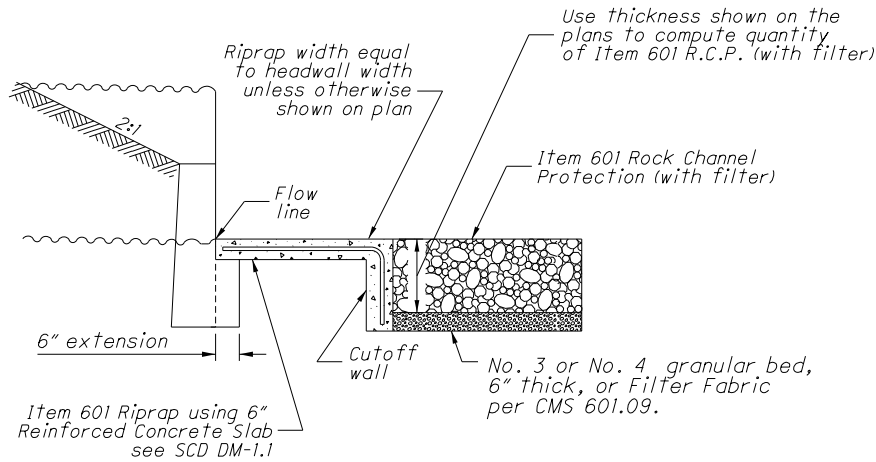
REVISED:

SHEET SIZE:
11" x 17"

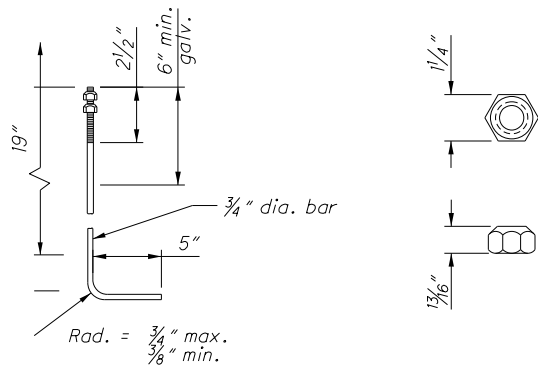
SHEET NAME:
DETAIL SHEET (3)

SHEET NUMBER:

08
118



OUTLET CHANNEL PROTECTION DETAIL



ANCHOR BOLT

NUT

(ASTM A 325 and A 153)

NOTES

GENERAL: Provide a riprap reinforced concrete slab according to SCD DM-1.1 if the pipe is depressed or it is specified in the plan. Payment for the slab is made per square yard of **Item 601 Riprap Using 6" Reinforced Concrete Slab** and includes the cost of the cutoff wall.

This drawing is for cast-in-place half-height concrete headwalls. When furnishing precast half-height headwalls, conform to pre-approved designs on file with the Office of Materials Management. Precast half-height headwalls are only approved for round conduits with a maximum conduit diameter of 78". When precast headwalls are furnished, provide openings for the anchor cable as shown and fill with grout after placement of the anchor cable. If anchor bolts are to be used with a precast headwall, fill the anchor cable openings with grout.

CONCRETE: Use 4000 psi compressive strength concrete for headwall. Concrete quantities are based on headwalls without the 6" extension under the channel protection.

ANCHOR BOLTS: Furnish bolts (see detail sheet 2/3) that meet ASTM A 307 for anchoring both ends of metal pipe. The top 6" min. of the bolt must be galvanized according to ASTM A 153. Cost of anchors is included in the price bid per foot of Item 611.

Headwall dimensions are based on end treatment "A" for pipe sizes up to and including 120", 71"x47", and 66"x51", and on end treatment "B" for sizes over and including 132", 13'-3"x9'-4", and 7'-3"x5'-3".

PLASTIC PIPE: Plastic pipe may not be available in all the sizes specified on this drawing.

ANCHOR CABLE: Furnish anchor cable (see detail sheet 2/3) that meets ASTM A 603 for anchoring both ends of plastic pipe. Wire rope clip must be galvanized according to ASTM A 153. Cost of anchor cable and wire rope clip is included in the unit price bid per foot of Item 611.

IMPROVED INLET FOR HDPE PIPE: Furnish improved inlet at upstream end of culverts and open-ended storm sewers using plastic pipe.

Use HDPE smooth cap and flange materials according to ASTM D 3350 345464C.

HALF-HEIGHT HEADWALL DETAILS

NOT TO SCALE

STATE OF OHIO DEPARTMENT OF TRANSPORTATION

REVISIONS
7/30/07
7/20/12
1/18/13

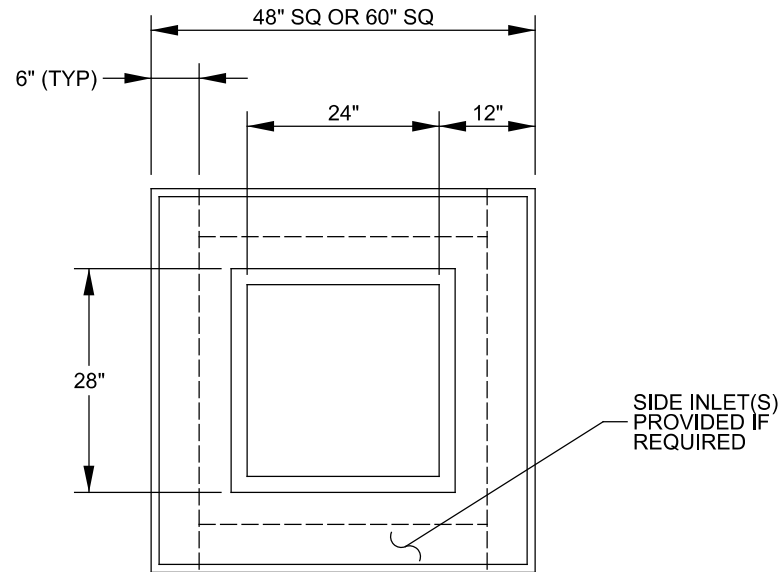
ROADWAY
HYDRAULIC
ENGINEER
Matt
Cozzoli

OFFICE OF
HYDRAULIC
ENGINEERING

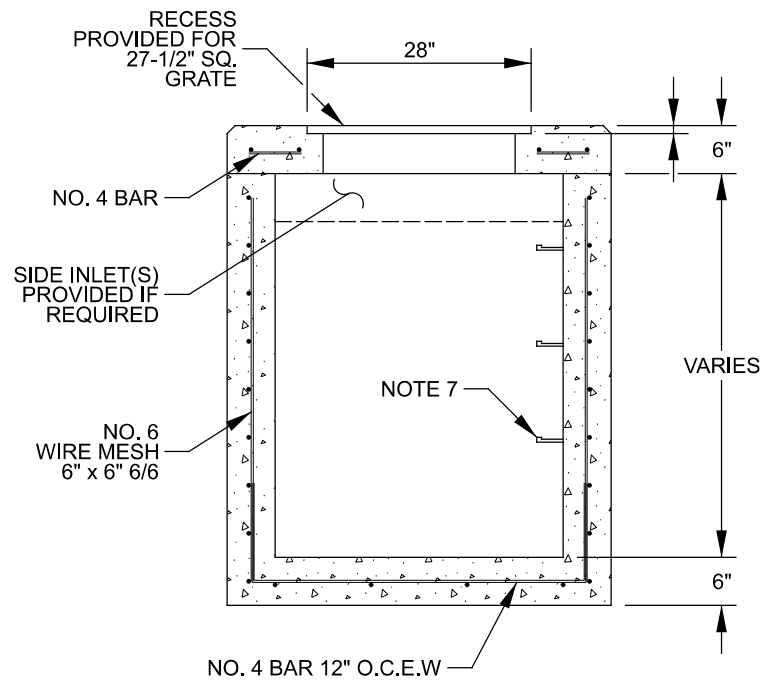
STANDARD HYDRAULIC CONSTRUCTION DRAWING
HALF-HEIGHT HEADWALLS FOR
CORRUGATED METAL PIPE AND
PLASTIC PIPE

SCD NUMBER
HW-2.1

3 / 3



TOP VIEW



SECTION VIEW

NOTES

1. CONCRETE 4,000 P.S.I AT 28 DAYS MINIMUM.
2. CAST IRON IS OPTIONAL.
3. HOLES FOR PIPE ARE 2" LARGE THAN PIPE O.D.
4. CONFORMS TO O.D.O.T. STANDARD CONSTRUCTION DRAWING CB 2-3 & 2-4.
5. TOPS ALSO AVAILABLE 52" & 64" SQUARE FOR FIELD-BUILT STRUCTURES.
6. HEAVY DUTY ANGLE FRAMES (CAST-IN) ALSO AVAILABLE FOR VEHICULAR AND/OR BICYCLE TRAFFIC AREAS.
7. STEPS ARE M.A. INDUSTRIES POLYPROPYLENE ON 12" CENTERS.

SIDE ENTRY CATCH BASIN DETAILS

NOT TO SCALE

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Zanesville, Ohio 43701
740-454-0155

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155 Rehl Road
Zanesville, Ohio 43701
740-454-0155

PREPARED BY:

SANITARY SEWER IMPROVEMENTS
SIDE ENTRY CATCH BASIN DETAIL

PROJECT
NAME:

PLANS APPROVED BY:

MJE

PLANS PREPARED BY:

HJ

DATE:

08/14/2023

REVISED:

SHEET SIZE:

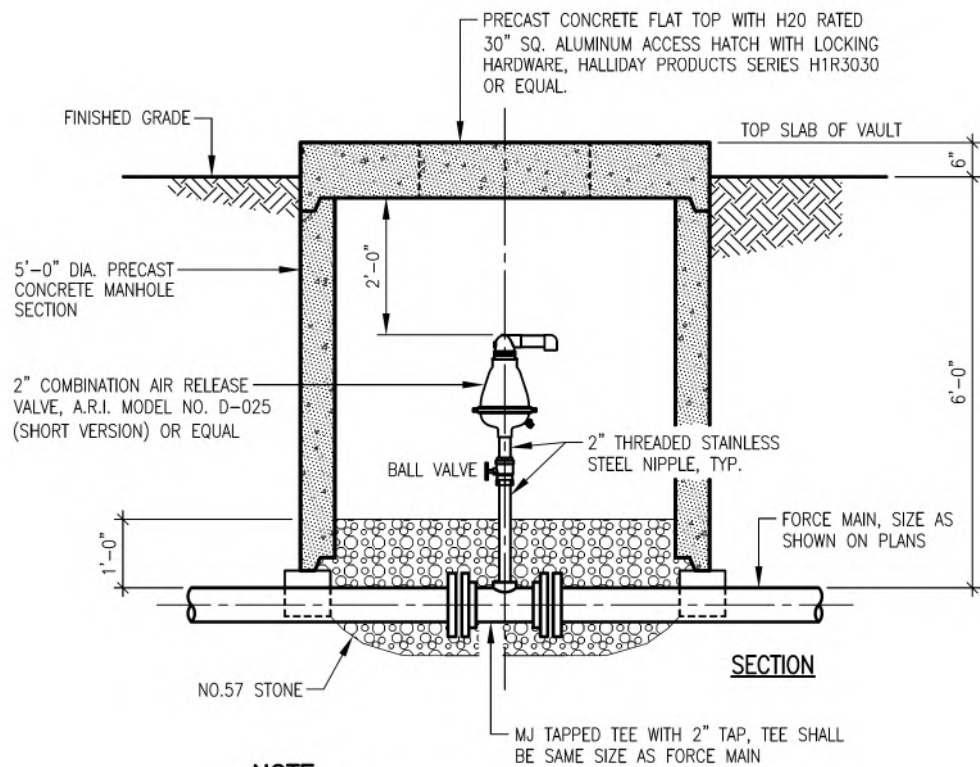
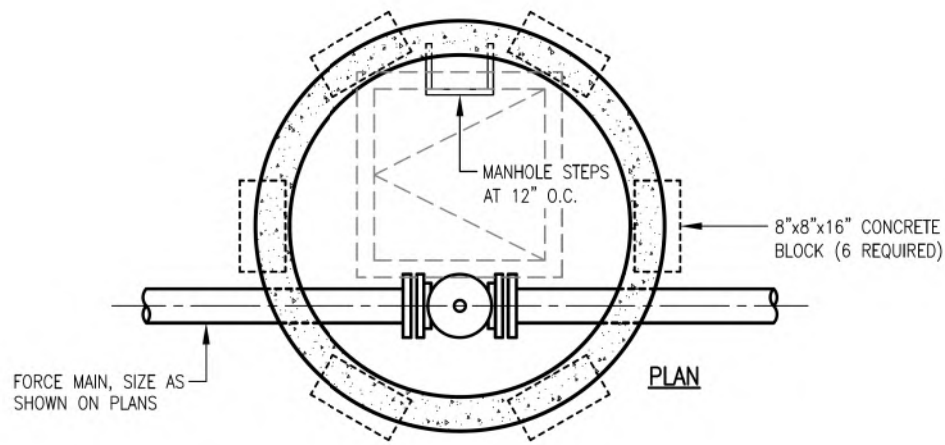
11" x 17"

SHEET NAME:

DETAIL
SHEET (4)

SHEET NUMBER:

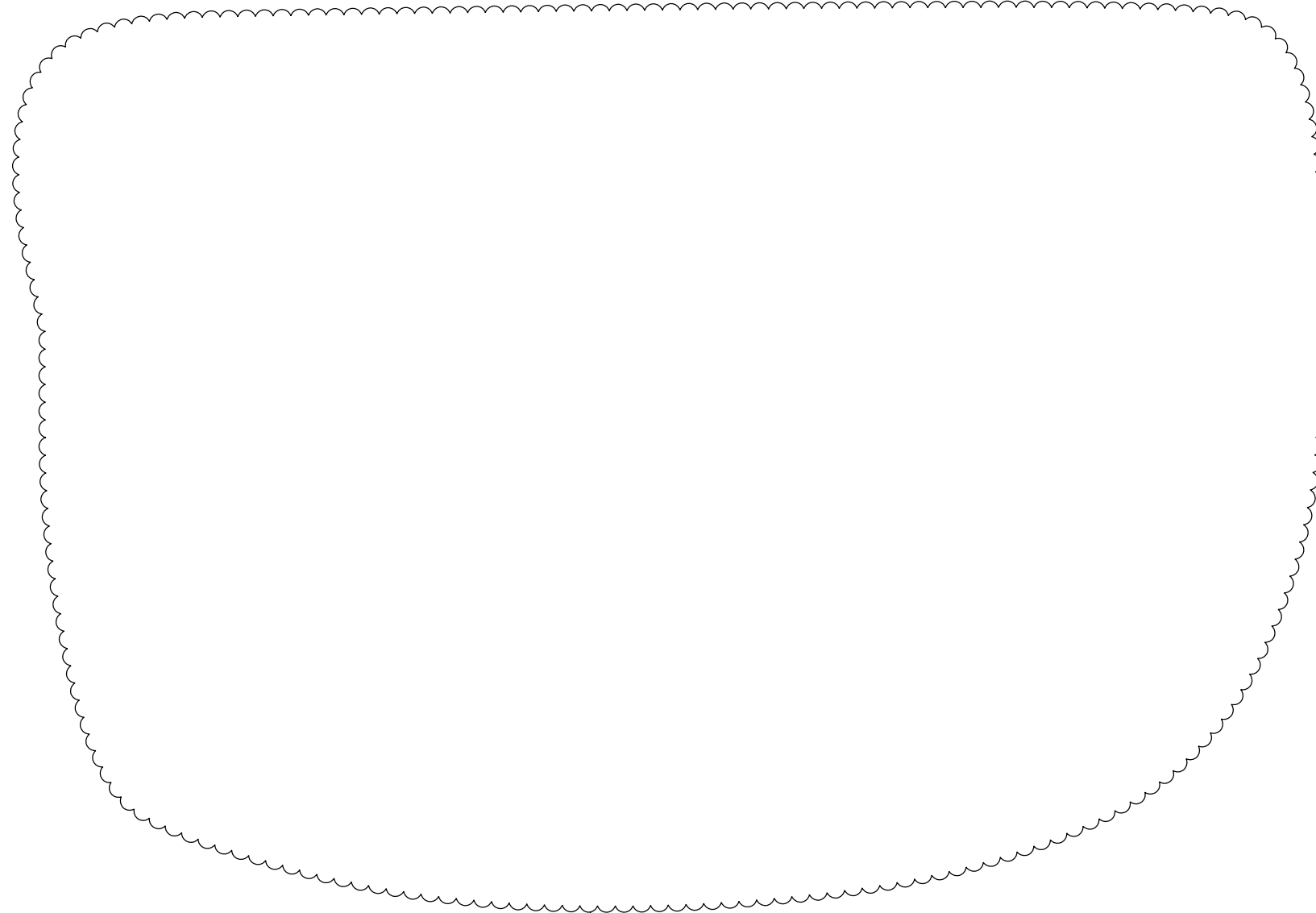
09
118



NOTE:

MAIN LINE AND VALVE SHALL BE OFFSET FROM CENTER OF MANHOLE TO ALLOW ACCESS.

SEWAGE COMBINATION AIR RELEASE DETAIL
NOT TO SCALE



REVISION

REVISION	REV. BY	DATE	DESCRIPTION
	GJW	09/08/2023	MANHOLE DETAIL ELIMINATED

PREPARED BY:

PROJECT NAME: SANITARY SEWER IMPROVEMENTS
 SIDE ENTRY CATCH BASIN DETAIL
 PROJECT LOCATION: LICKING VIEW
 ZANESVILLE, OHIO 43701

PLANS APPROVED BY:

MJE

PLANS PREPARED BY:

HJ

DATE:

08/14/2023

REVISED:

09/08/2023

SHEET SIZE:

11" x 17"

SHEET NAME:

DETAIL SHEET (5)

SHEET NUMBER:



REVISION	REV. BY	DATE	DESCRIPTION
1	GJW	04/29/2024	UPDATE OF THE DEPICTION OF EXISTING GAS LINE IN PLANVIEW

Mark J. Eicher, P.E., P.S.
155 Rehl Road
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740-454-0155

ENGINEER'S OFFICE

PROJECT NAME:
SANITARY SEWER IMPROVEMENTS
SCHNEIDER ALLEY

PROJECT LOCATION:
LICKING VIEW
ZANESVILLE, OHIO 43701

PLANS APPROVED BY:
MJE

PLANS PREPARED BY:
GJW

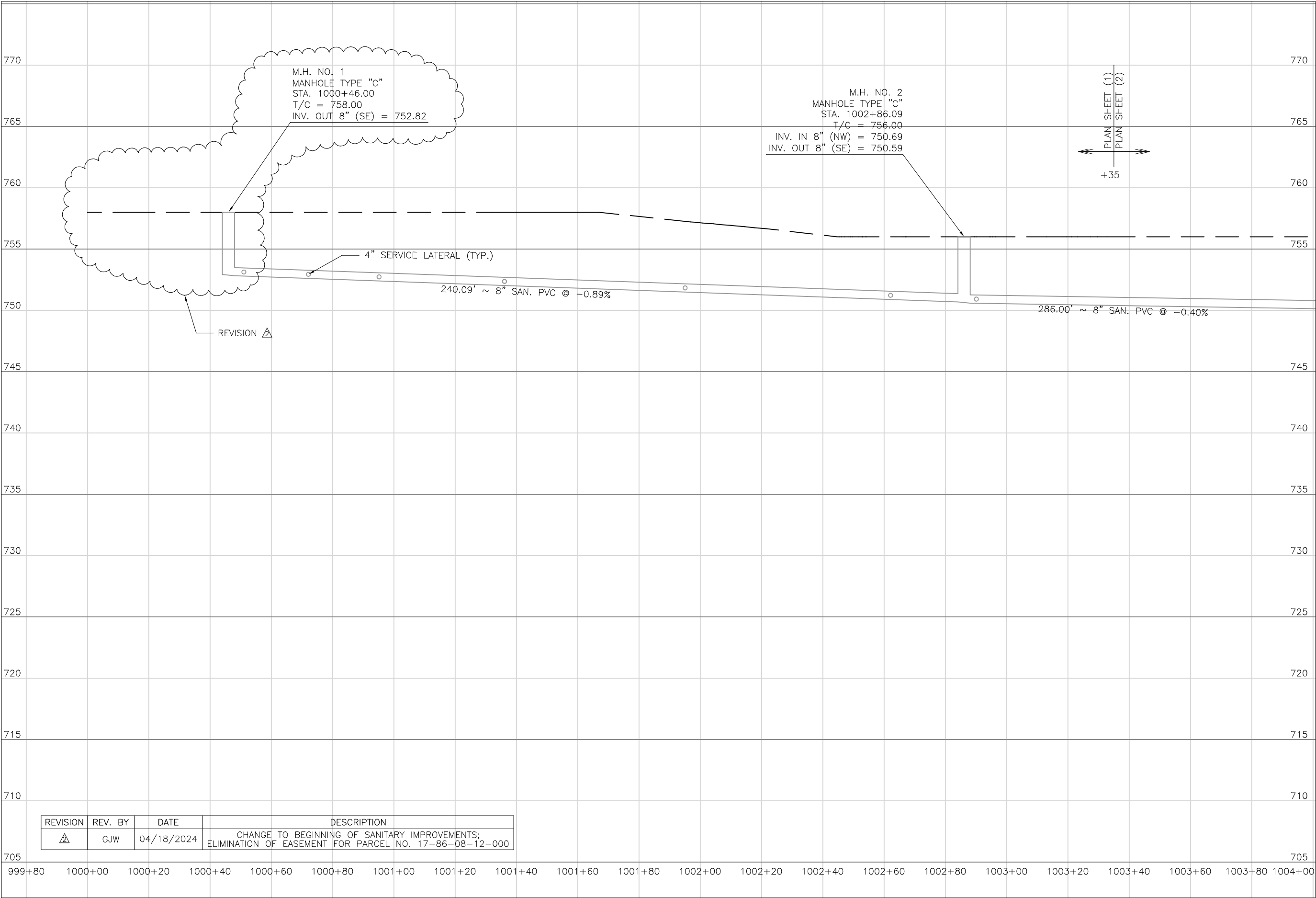
DATE:
08/15/2023

REVISED:
04/29/2024

SHEET SIZE:
11" x 17"

SHEET NAME:
PLAN SHEET (1)

SHEET NUMBER:
11
118



Mark J. Eicher, P.E., P.S.
155 Rehl Road
Zanesville, Ohio 43701
740-454-0155

ENGINEER'S OFFICE

PREPARED BY:

SANITARY SEWER IMPROVEMENTS
SCHNEIDER ALLEY

LICKING VIEW
ZANESVILLE, OHIO 43701

PLANS APPROVED BY:
MJE

PLANS PREPARED BY:
GJW

DATE:
08/15/2023

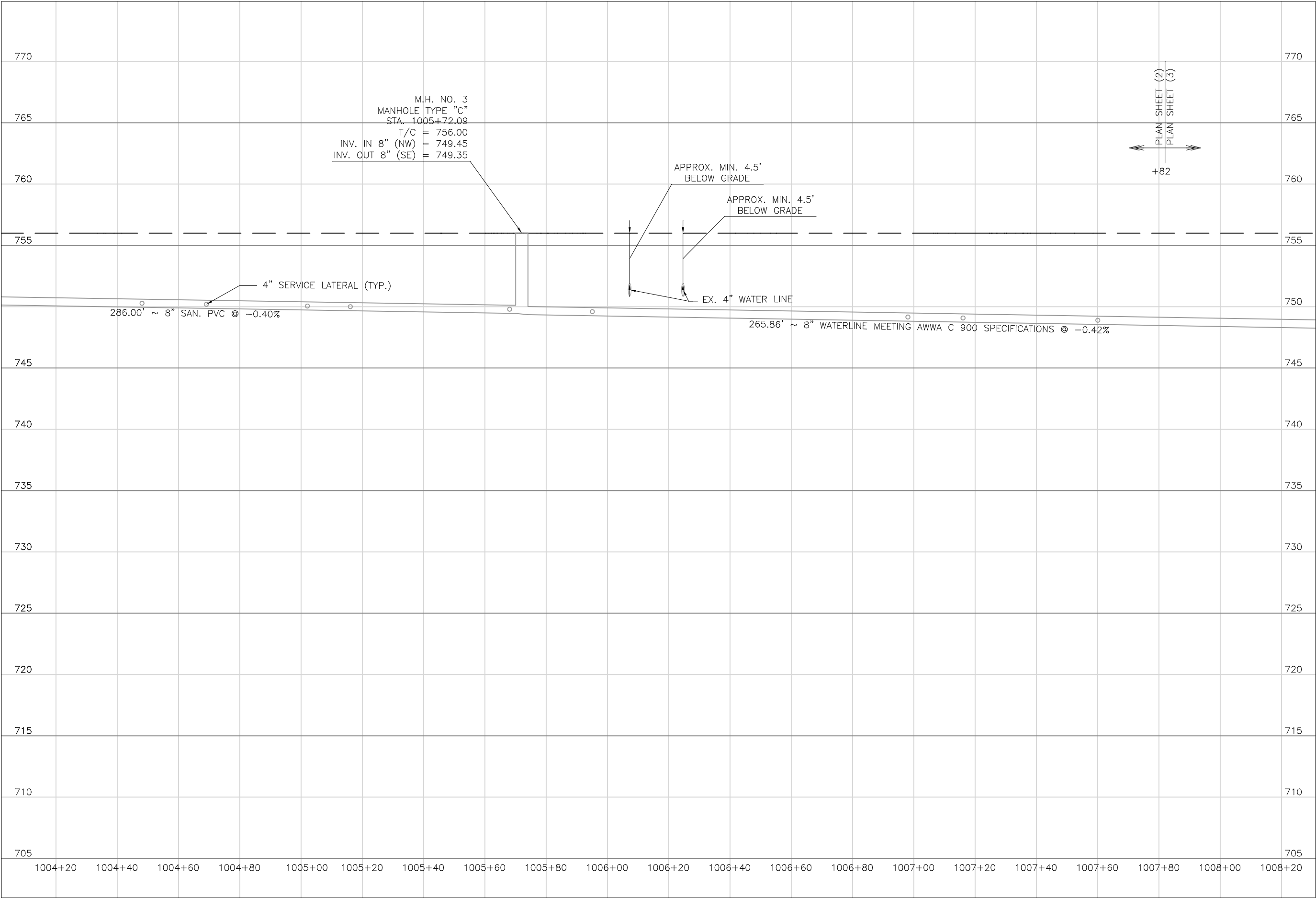
REVISED:
04/18/2024

SHEET SIZE:
11" x 17"

SHEET NAME:
**PROFILE MANHOLE
1 & 2**

SHEET NUMBER:

12
118



Mark J. Eicher, P.E., P.S.
155 Rehl Road
Zanesville, Ohio 43701
740-454-0155

PREPARED BY:
Mark J. Eicher, P.E., P.S.

SANITARY SEWER IMPROVEMENTS
SCHNEIDER ALLEY

LICKING VIEW
ZANESVILLE, OHIO 43701

PROJECT NAME:
SANITARY SEWER IMPROVEMENTS
SCHNEIDER ALLEY

PROJECT LOCATION:
LICKING VIEW
ZANESVILLE, OHIO 43701

PLANS APPROVED BY:
MJE

PLANS PREPARED BY:
HJ

DATE:
08/15/2023

REVISED:

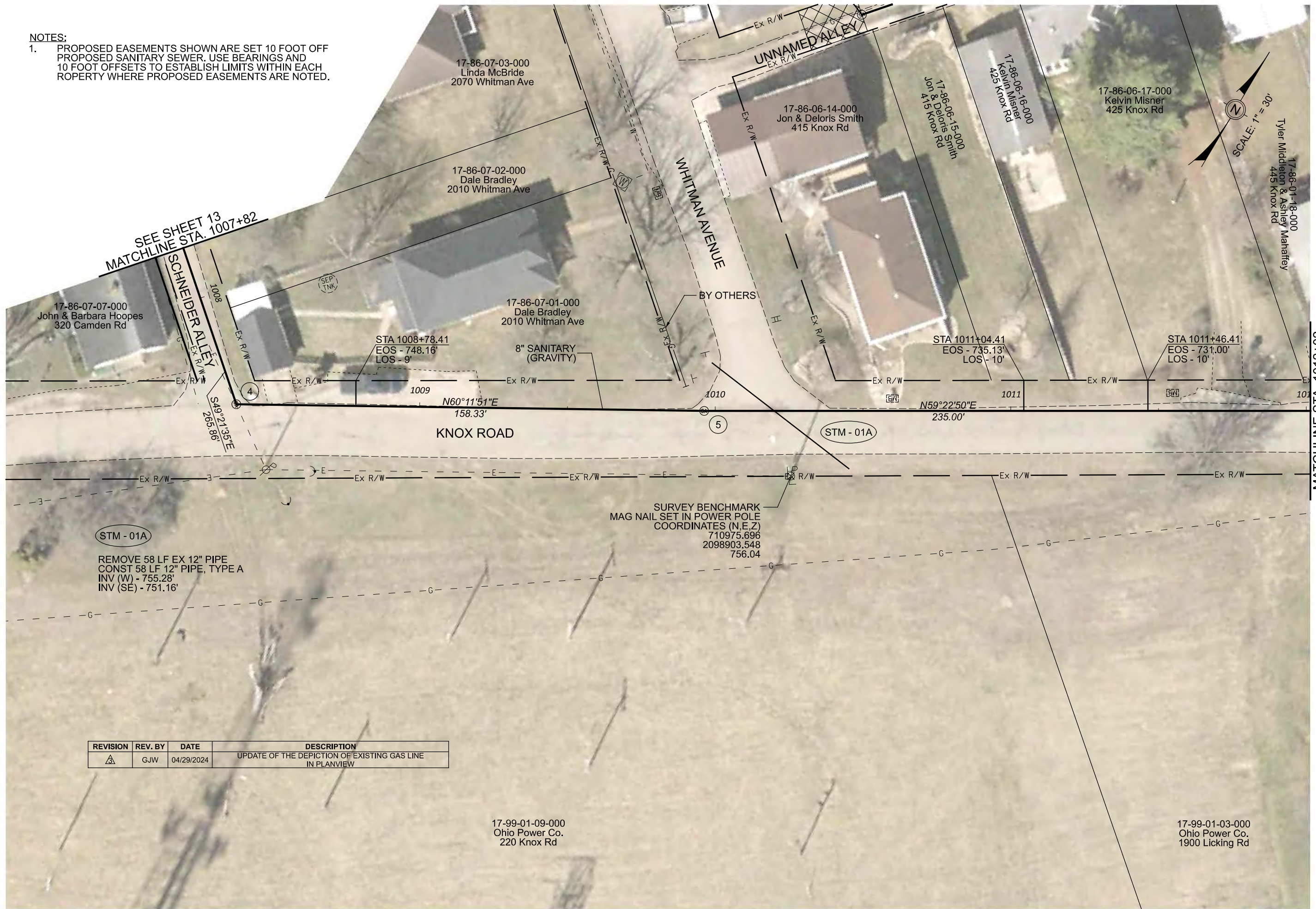
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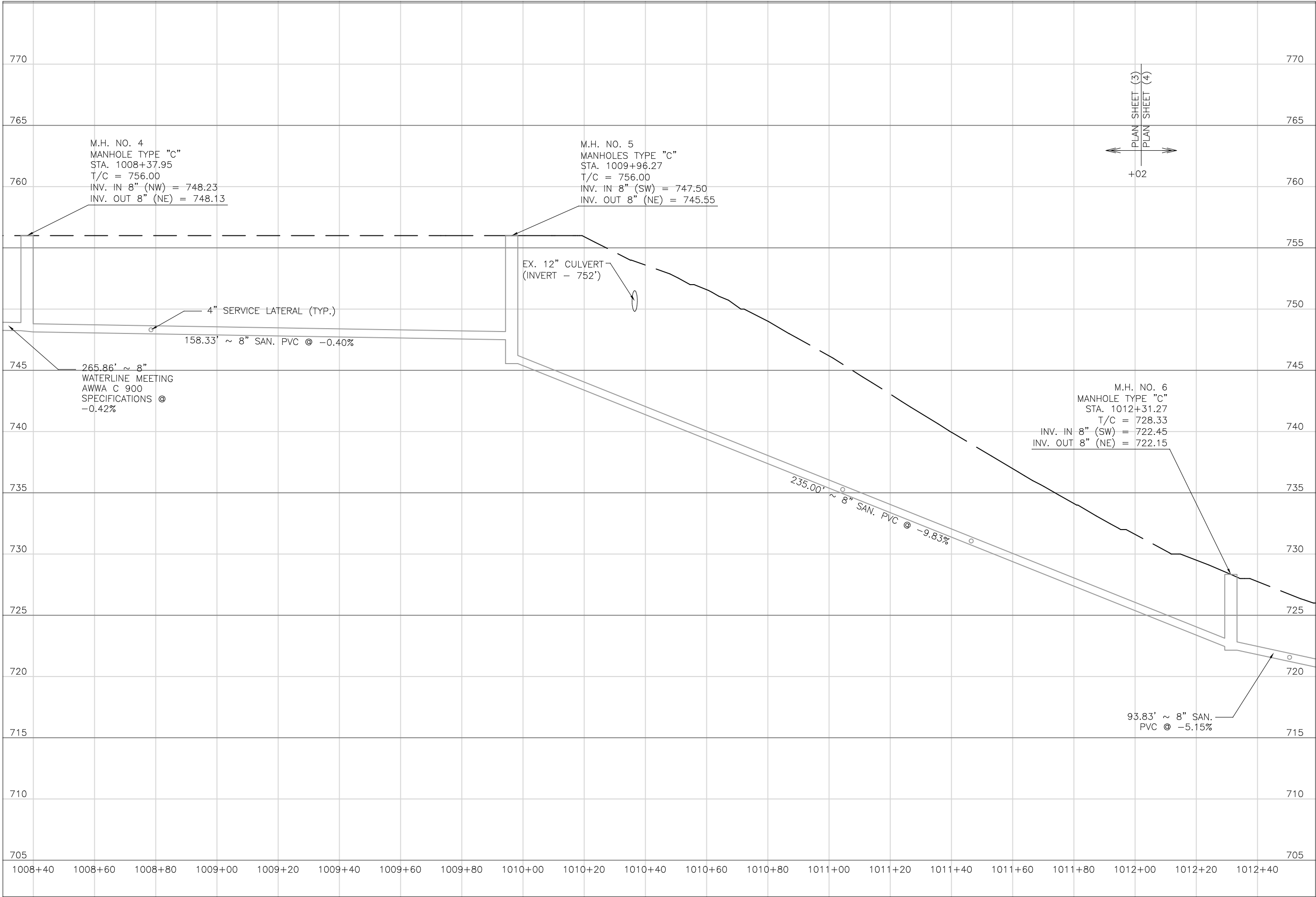
SHEET NAME:
PROFILE
MANHOLE 3

SHEET NUMBER:
14
118

NOTES:

1. PROPOSED EASEMENTS SHOWN ARE SET 10 FOOT OFF PROPOSED SANITARY SEWER. USE BEARINGS AND 10 FOOT OFFSETS TO ESTABLISH LIMITS WITHIN EACH ROPEYTY WHERE PROPOSED EASEMENTS ARE NOTED.





PREPARED BY:

SANITARY SEWER IMPROVEMENTS
SCHNEIDER ALLEY TO KNOX ROAD

PROJECT
NAME

PLANS APPROVED BY:

MJE

PLANS PREPARED BY:

HJ

DATE:

08/15/2023

REVISED:

SHEET SIZE:

11" x 17"

SHEET NAME:

PROFILE
MANHOLE
4 - 6

SHEET NUMBER:

16
118

LICKING VIEW
ZANESVILLE, OHIO 43701

PROJECT
LOCATION

NOTES:

1. PROPOSED EASEMENTS SHOWN ARE SET 10 FOOT OFF PROPOSED SANITARY SEWER. USE BEARINGS AND 10 FOOT OFFSETS TO ESTABLISH LIMITS WITHIN EACH PROPERTY WHERE PROPOSED EASEMENTS ARE NOTED.

SEE SHEET 48

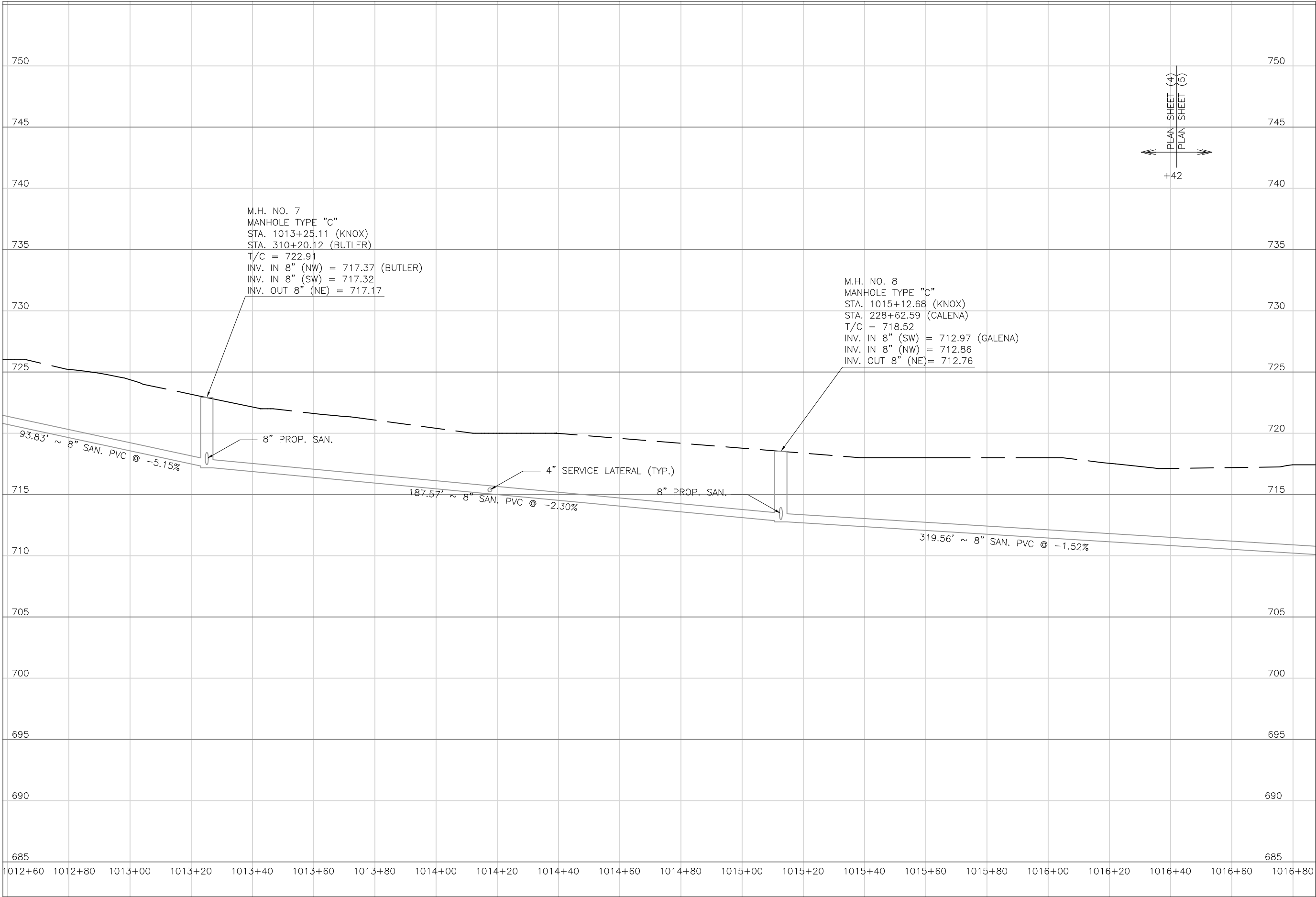
SEE SHEET 38
MATCHLINE STA. 309+34

SCALE: 1" = 30'

MATCHLINE STA. 1012+02

MATCHLINE STA. 1016+42

REVISION	REV. BY	DATE	DESCRIPTION
1	GJW	04/29/2024	UPDATE OF THE DEPICTION OF EXISTING GAS LINE IN PLANVIEW



Mark J. Eicher, P.E., P.S.
155 Rehl Road
Zanesville, Ohio 43701
740-454-0155

PREPARED BY:

PROJECT NAME:
SANITARY SEWER IMPROVEMENTS
KNOX ROAD

PROJECT LOCATION:
LICKING VIEW
ZANESVILLE, OHIO 43701

PLANS APPROVED BY:

MJE

PLANS PREPARED BY:

HJ

DATE:

08/15/2023

REVISED:

SHEET SIZE:

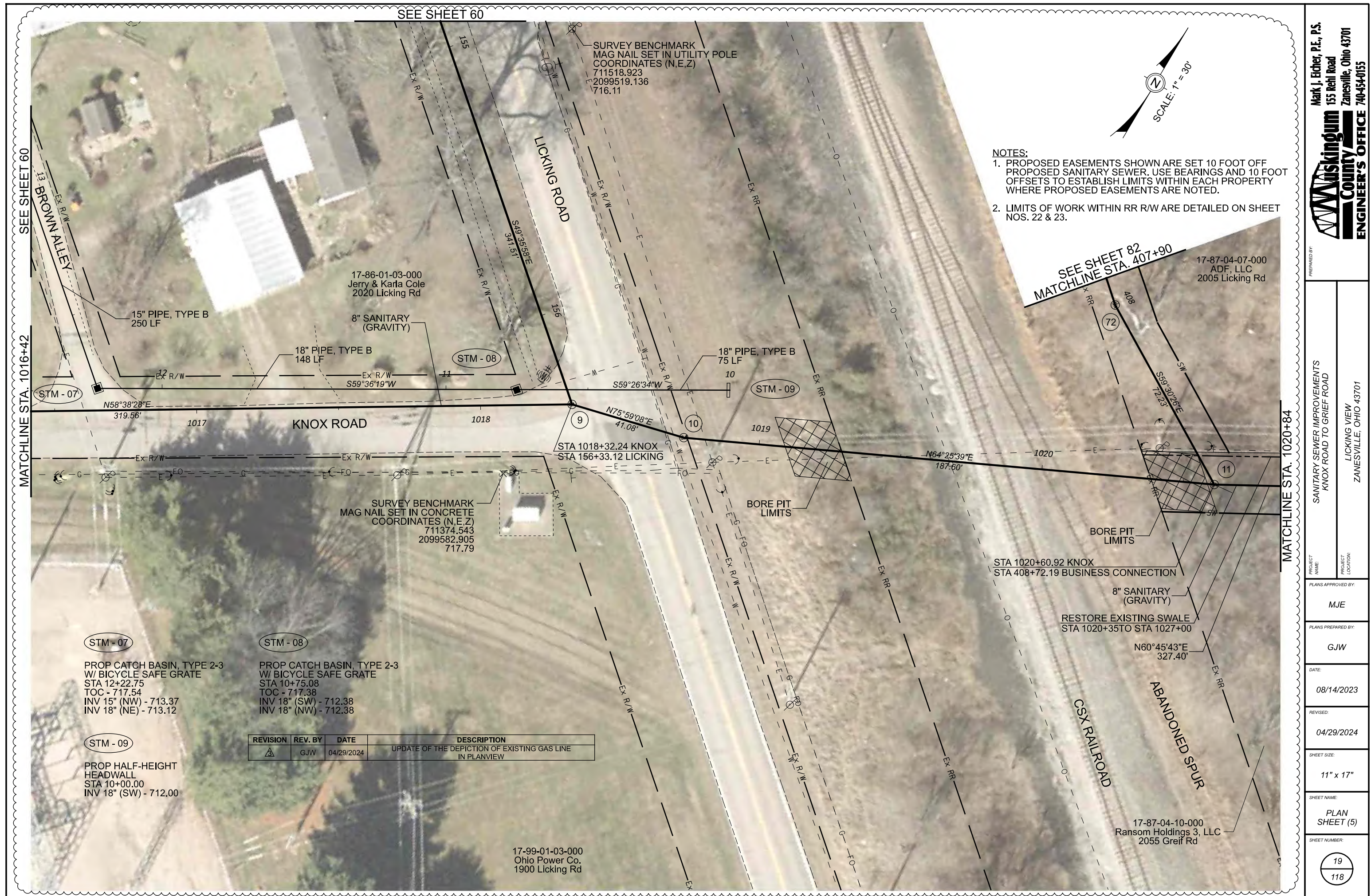
11" x 17"

SHEET NAME:

PROFILE
MANHOLE
7 & 8

SHEET NUMBER:

18
118



Markus Engineering
155 Rehl Road
Zanesville, Ohio 43701
740-454-0155

4

LICKING VIEW
ZANESVILLE, OHIO 43701

NAME: _____
PROJECT LOCATION: _____

PLANS APPROVED BY:

MJE

PLANS PREPARED BY:

GJW

DATE: 08/14/2022

08/14/2023	
REVISED:	

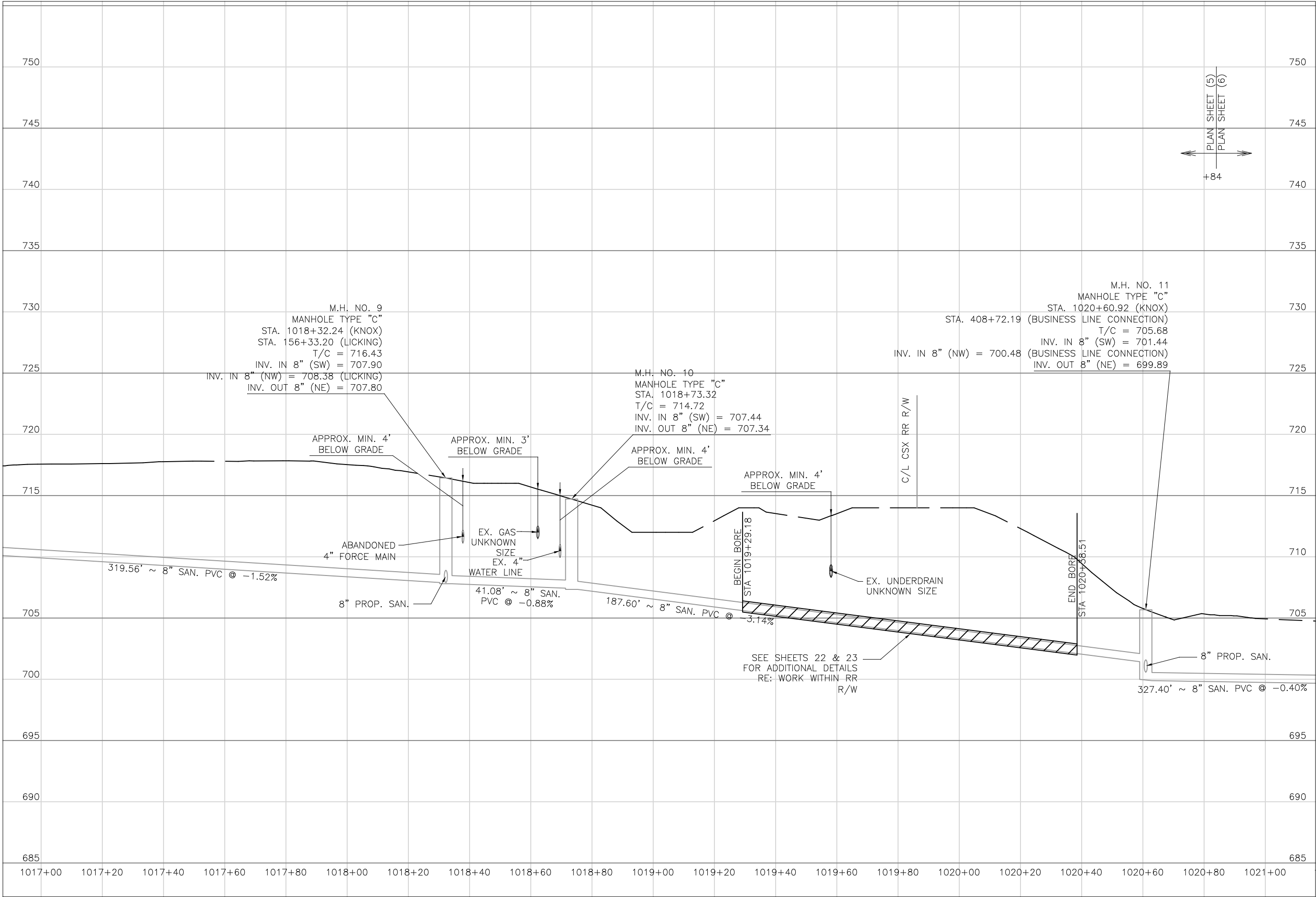
04/29/2024

11" x 17"

SHEET NAME:

PLAN
SHEET (5)

19
118



PREPARED BY:

SANITARY SEWER IMPROVEMENTS
KNOX ROAD

PROJECT NAME

PLANS APPROVED BY:

MJE

PLANS PREPARED BY:

HJ

DATE:

08/15/2023

REVISED:

SHEET SIZE:

11" x 17"

SHEET NAME:

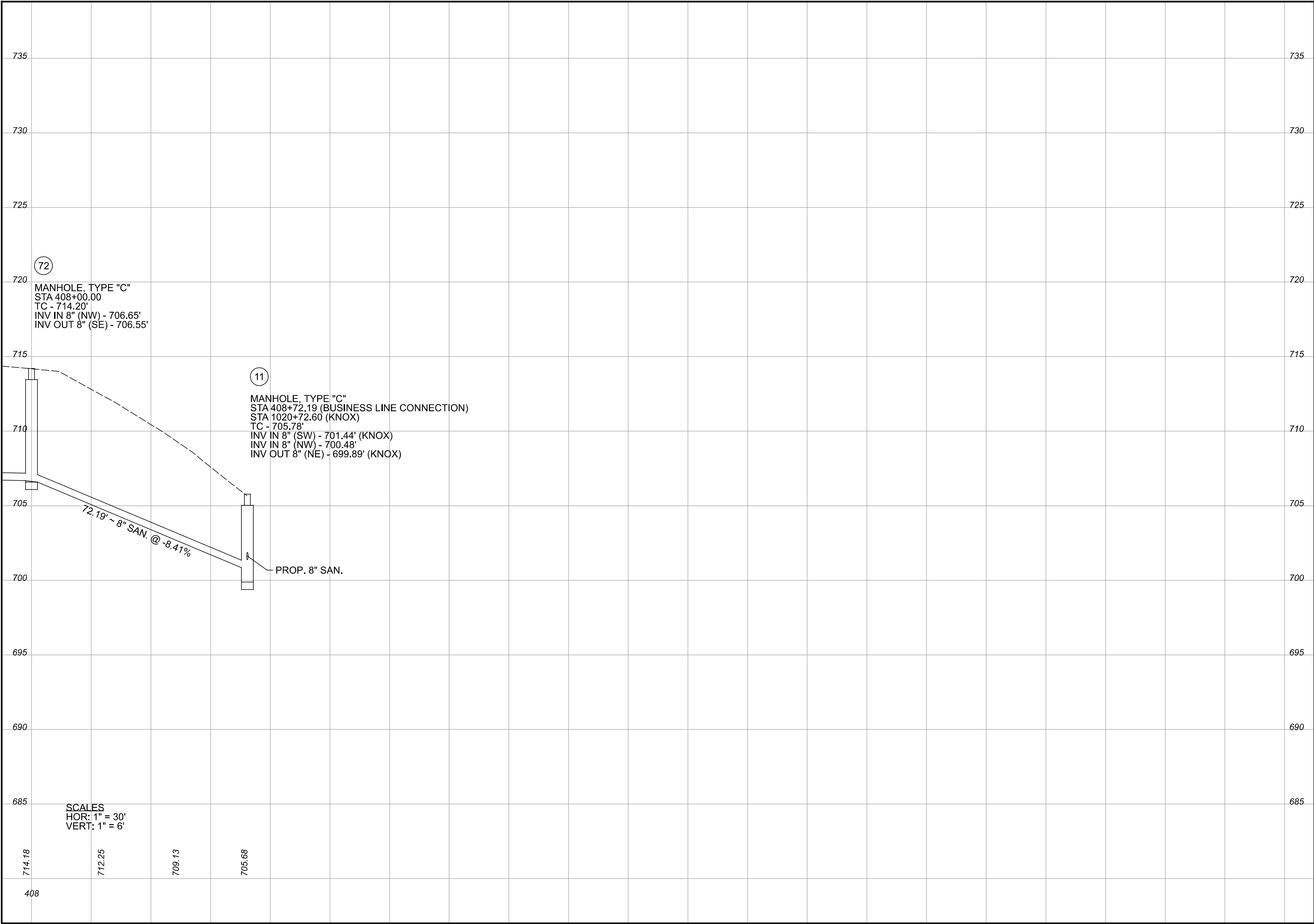
PROFILE
MANHOLE
9 - 11

SHEET NUMBER:

20
118

LICKING VIEW
ZANESVILLE, OHIO 43701

PROJECT LOCATION



Mark J. Eicher, P.E., P.S.
155 Rehl Road
Zanesville, Ohio 43701
740-434-0155

ENGINEER'S OFFICE

PREPARED BY:

PROJECT NAME:
SANITARY SEWER IMPROVEMENT
BUSINESS LINE CONNECTION TO KNOX ROAD

PROJECT LOCATION:
LICKING VIEW
ZANESVILLE, OHIO 43701

PLANS APPROVED BY:
MJE

PLANS PREPARED BY:
HJ

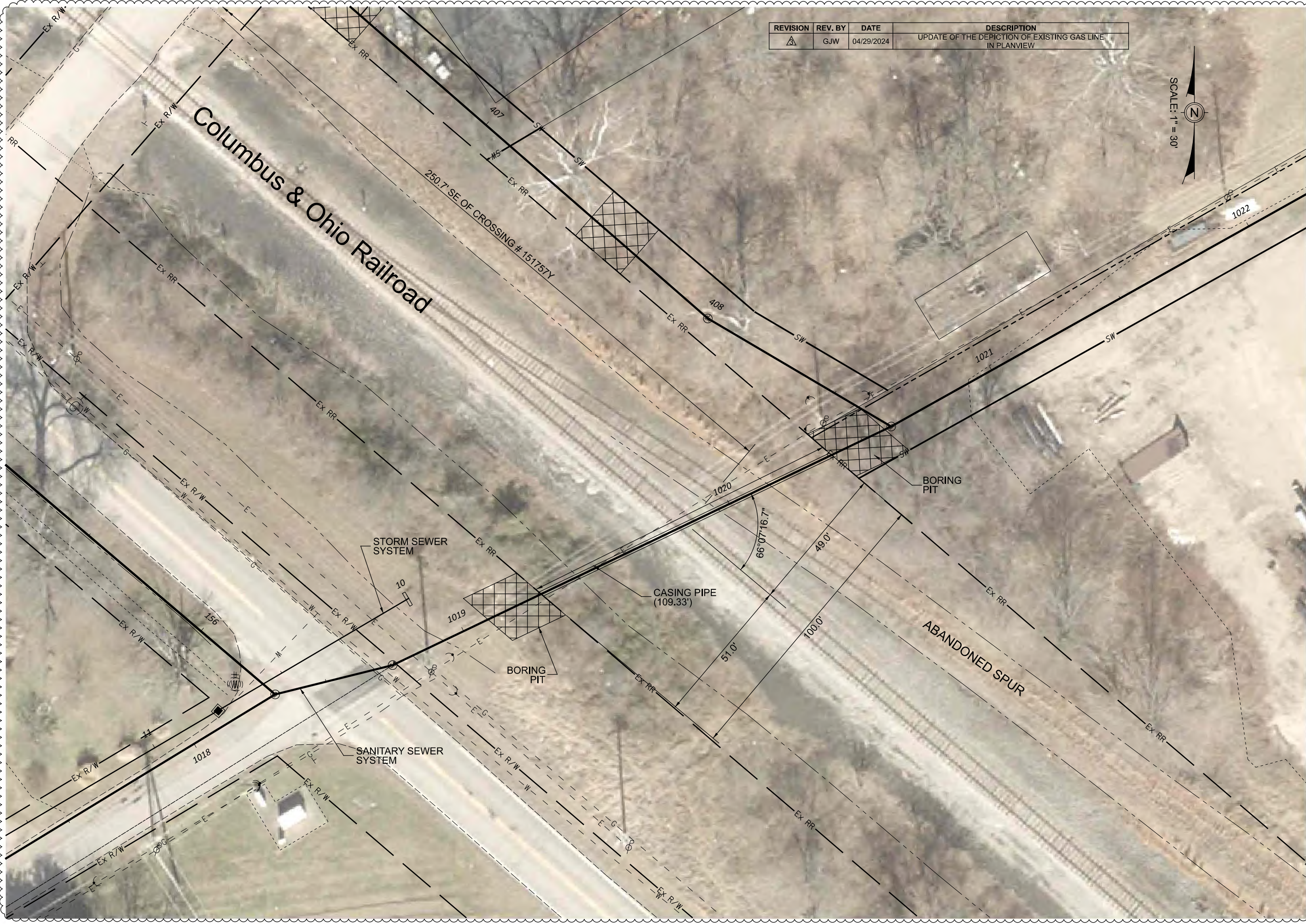
DATE:
06/26/2023

REVISED:

SHEET SIZE:
11" x 17"

SHEET NAME:
PROFILE
MANHOLE 72

SHEET NUMBER:
21



REVISION	REV. BY	DATE	DESCRIPTION
	GJW	04/29/2024	UPDATE OF THE DEPICTION OF EXISTING GAS LINE IN PLANVIEW

Mark J. Eichel, P.E., P.S.
155 Rehl Road
Zanesville, Ohio 43701
740-454-0155

Wiskingum County
ENGINEER'S OFFICE

PREPARED BY:

PROJECT NAME:
SANITARY SEWER IMPROVEMENTS
RAILROAD RIGHT-OF-WAY

PROJECT LOCATION:
LICKING VIEW
ZANESVILLE, OHIO 43701

PLANS APPROVED BY:

MJE

PLANS PREPARED BY:

GJW

DATE:

08/15/2023

REVISED:

04/29/2024

SHEET SIZE:

11" x 17"

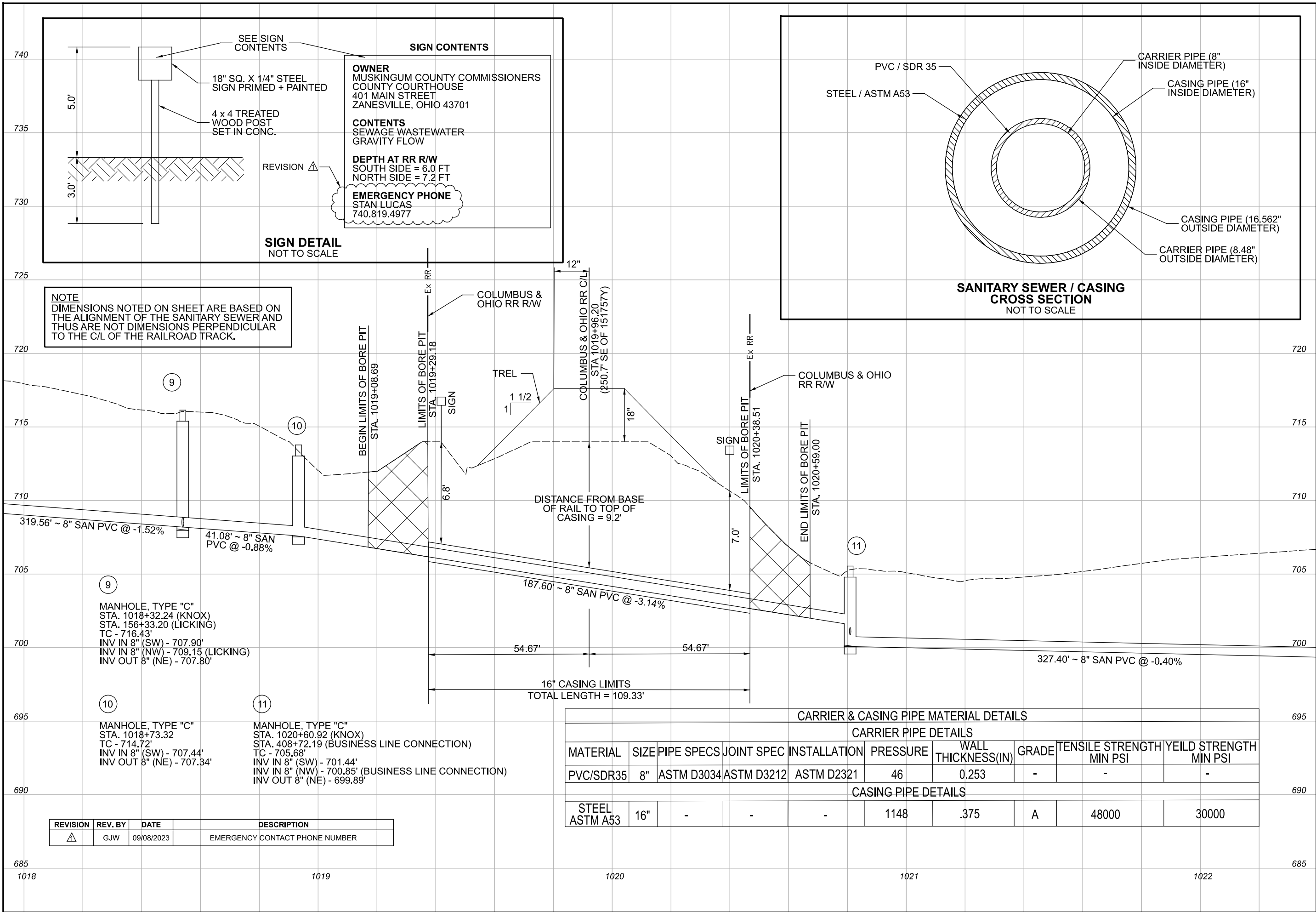
SHEET NAME:

PLAN SHEET

SHEET NUMBER:

22

118



Mark J. Eichel, P.E., P.S.
155 Rehl Road
Zanesville, Ohio 43701
ENGINEER'S OFFICE 740-454-0155

Muskingum County

ENGINEER'S OFFICE

SANITARY SEWER IMPROVEMENTS
RAILROAD RIGHT-OF-WAY

LICKING VIEW
ZANESVILLE, OHIO 43701

PLANS APPROVED BY:

MJE

PLANS PREPARED BY:

HJ

DATE:

08/15/2023

REVISED:

09/08/2023

SHEET SIZE:

11" x 17"

SHEET NAME:

PROFILE
RR X-ING

SHEET NUMBER:

23
118

MATCHLINE STA. 1020+84

MATCHLINE STA. 1025+25

NOTES:

1. PROPOSED EASEMENTS SHOWN ARE SET 10 FOOT OFF PROPOSED SANITARY SEWER. USE BEARINGS AND 10 FOOT OFFSETS TO ESTABLISH LIMITS WITHIN EACH PROPERTY WHERE PROPOSED EASEMENTS ARE NOTED.
2. MANHOLE NO. 12 NOT USED.

17-87-04-07-000
ADF, LLC
2005 Licking Rd

17-87-04-09-000
ADF, LLC
Greif Rd

17-87-04-10-000
Ransom Holdings 3, LLC
2055 Greif Rd

RESTORE EXISTING SWALE
STA 1020+35 TO STA 1027+00

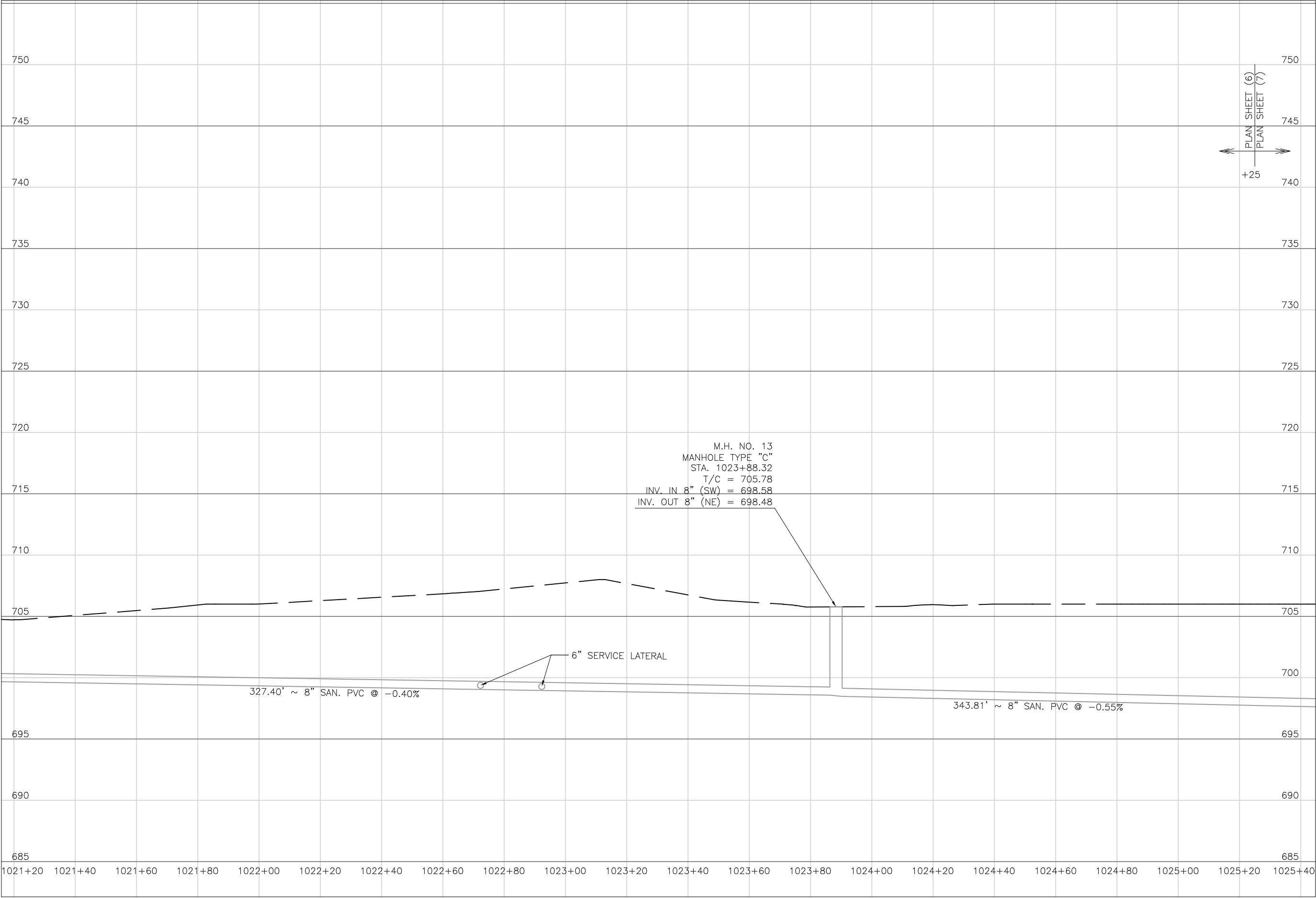
6" SERVICE LATERAL
STA 1022+72.32
EOS - 699.34'
LOS - 14'

6" SERVICE LATERAL
STA 1022+92.32
EOS - 699.26'
LOS - 14'

8" SANITARY
(GRAVITY)

REVISION	REV. BY	DATE	DESCRIPTION
△	GJW	04/29/2024	UPDATE OF THE DEPICTION OF EXISTING GAS LINE IN PLANVIEW





Mark J. Eicher, P.E., P.S.

155 Rehl Road

Zanesville, Ohio 43701

740-454-0155

ENGINEER'S OFFICE

740-454-0155

PREPARED BY:

Mark J. Eicher, P.E., P.S.

SANITARY SEWER IMPROVEMENTS

KNOX ROAD TO GRIEF ROAD

PROJECT NAME

SANITARY SEWER IMPROVEMENTS

PROJECT LOCATION

KNOX ROAD TO GRIEF ROAD

PLANS APPROVED BY:

MJE

PLANS PREPARED BY:

HJ

DATE:

08/15/2023

REVISED:

SHEET SIZE:

11" x 17"

SHEET NAME:

PROFILE MANHOLE 13

SHEET NUMBER:

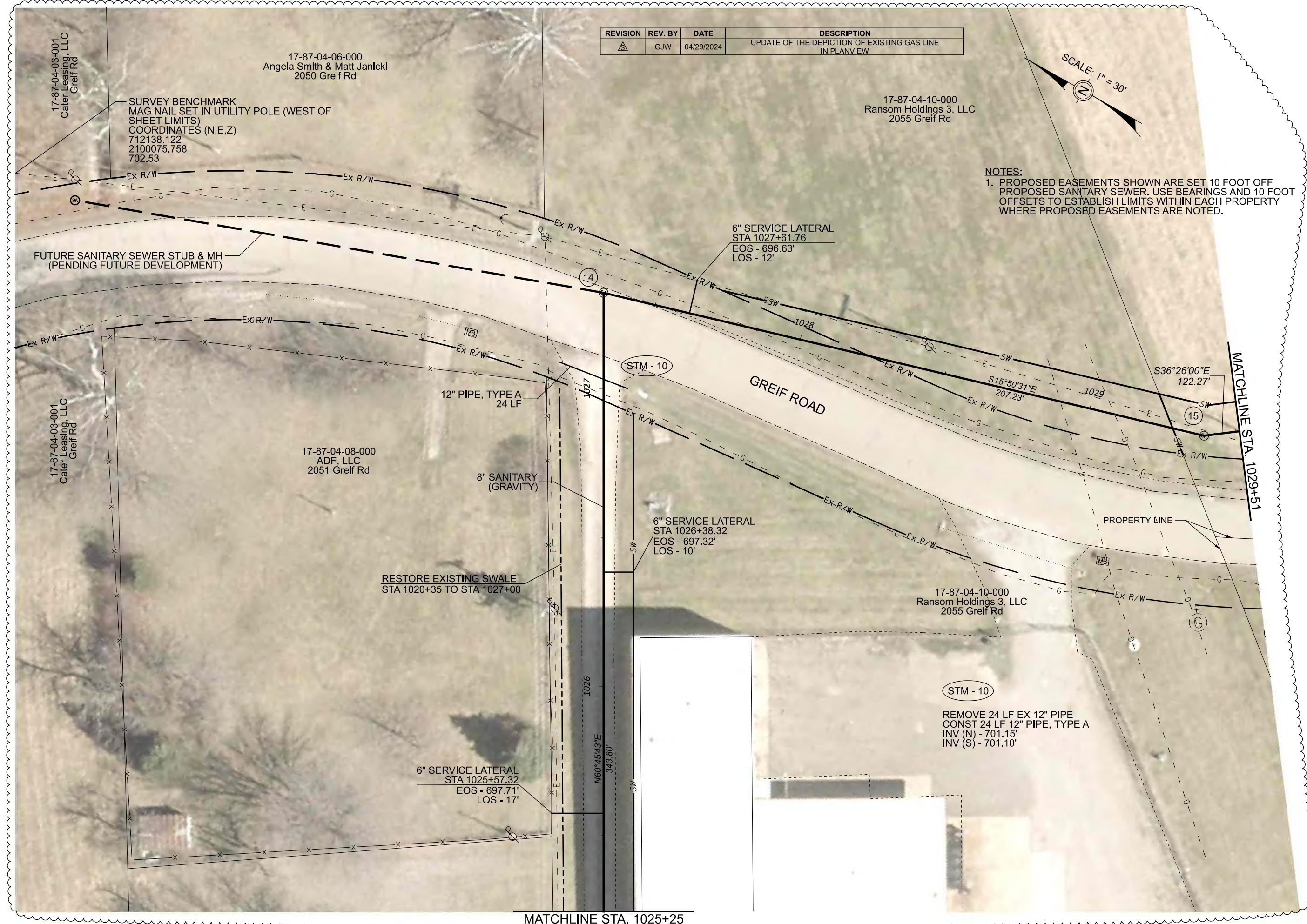
25

118

REVISION	REV. BY	DATE	DESCRIPTION
3	GJW	04/29/2024	UPDATE OF THE DEPICTION OF EXISTING GAS LINE IN PLANVIEW

SCALE: 1" = 30'

NOTES:
1. PROPOSED EASEMENTS SHOWN ARE SET 10 FOOT OFF PROPOSED SANITARY SEWER. USE BEARINGS AND 10 FOOT OFFSETS TO ESTABLISH LIMITS WITHIN EACH PROPERTY WHERE PROPOSED EASEMENTS ARE NOTED.



Markus & Associates, Inc.
ENGINEER'S OFFICE
740-454-0155
County
Zanesville, Ohio 43701
155 Rehl Road
Mark J. Eicher, P.E., P.S.

SANITARY SEWER IMPROVEMENTS
GRIEF ROAD

LICKING VIEW
ZANESVILLE, OHIO 43701

PLANS APPROVED BY:

MJE

PLANS PREPARED BY:

GJW

DATE: 08/14/2023

REVISED:
04/29/2024

SHEET SIZE:

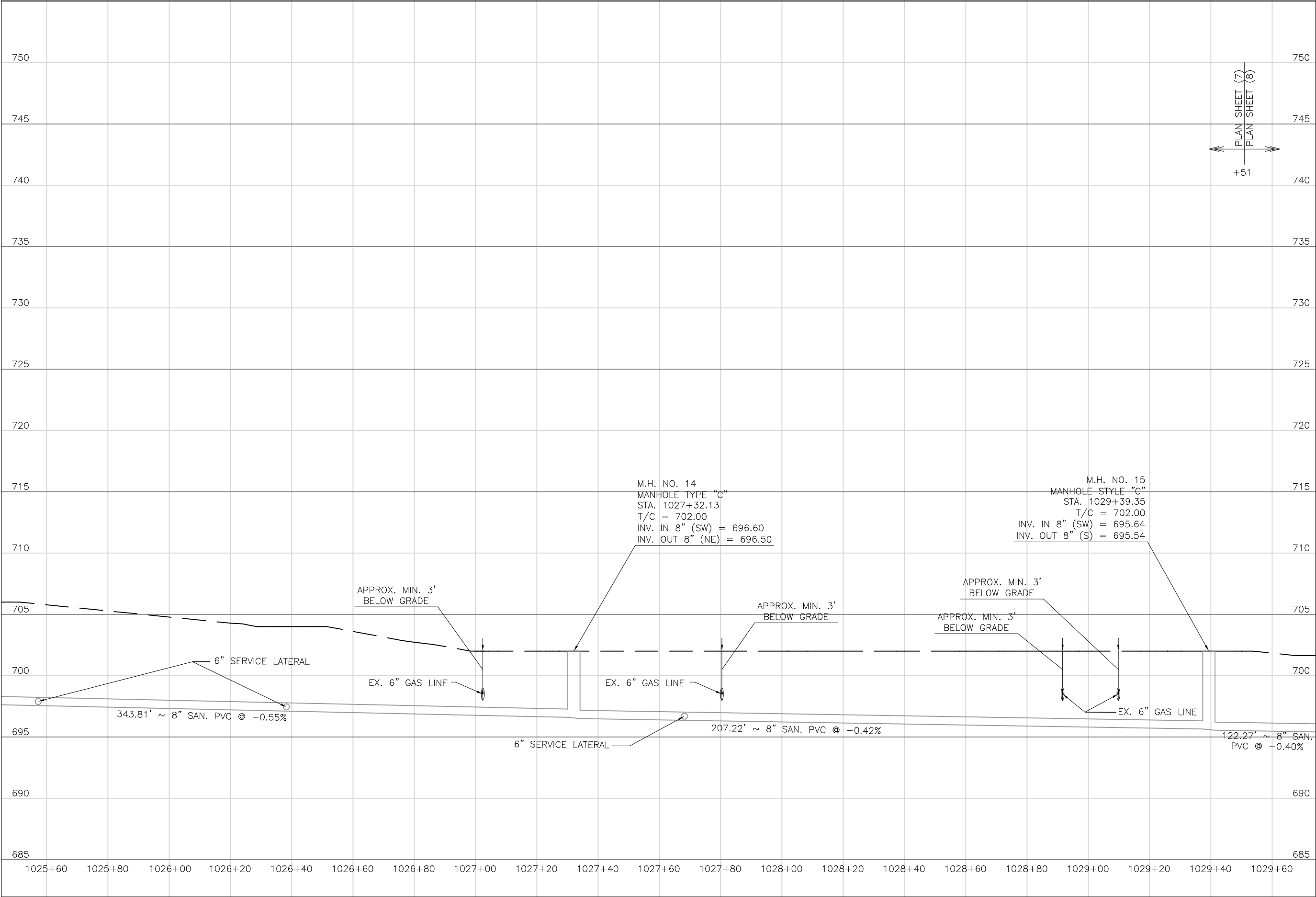
11" x 17"

SHEET NAME:

PLAN
SHEET (7)

SHEET NUMBER:

26
118



PLAN SHEET (7)
PLAN SHEET (8)
+51

Mark J. Eicher, P.E., P.S.
155 Rehl Road
Zanesville, Ohio 43701
740-454-0155

Muskingum County
ENGINEER'S OFFICE

PREPARED BY:

SANITARY SEWER IMPROVEMENTS
TO GRIEF ROAD

PROJECT NAME:

LICKING VIEW
ZANESVILLE, OHIO 43701

PROJECT LOCATION:

PLANS APPROVED BY:

MJE

PLANS PREPARED BY:

HJ

DATE:

08/15/2023

REVISED:

SHEET SIZE:

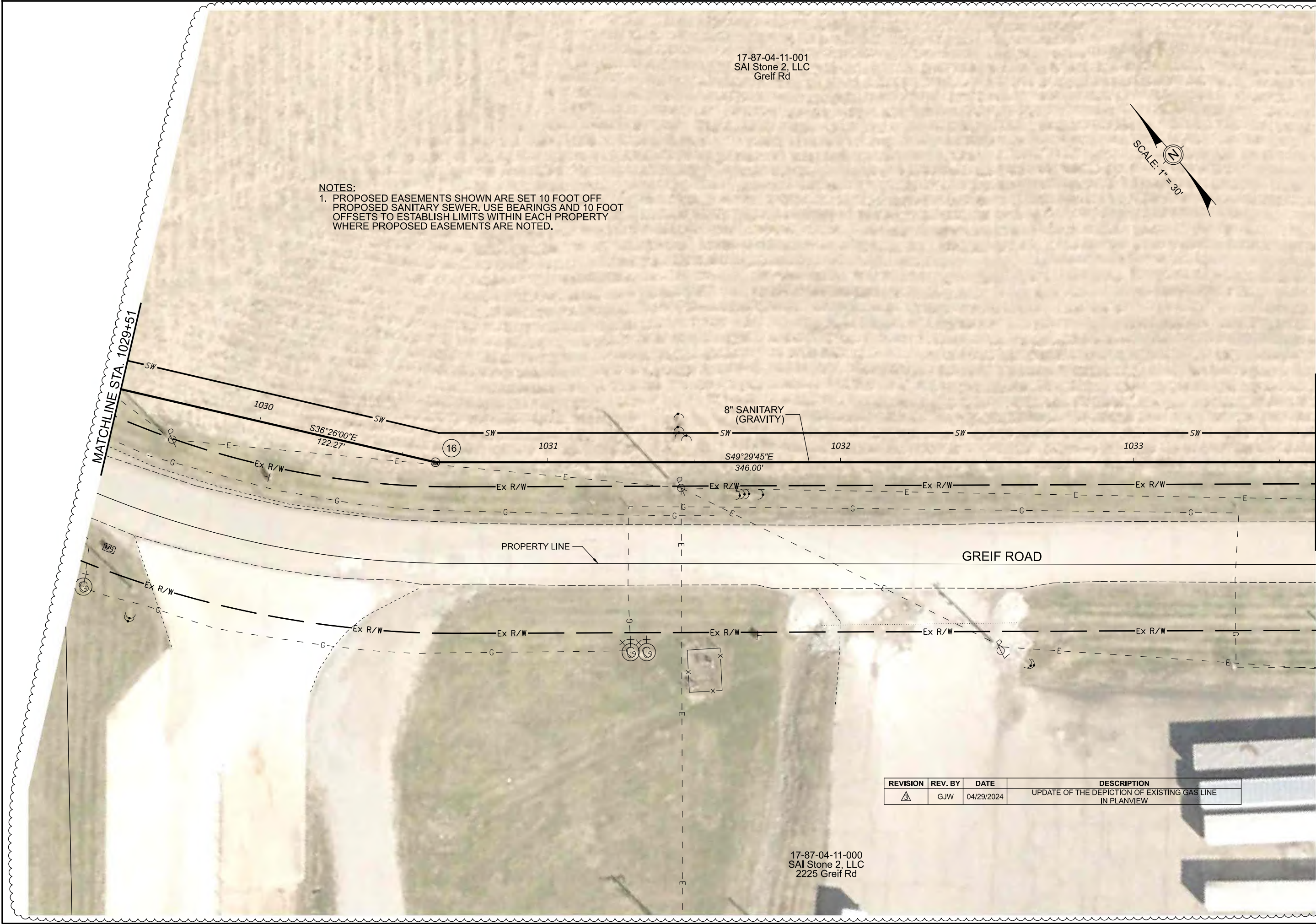
11" x 17"

SHEET NAME:

PROFILE MANHOLE
14 & 15

SHEET NUMBER:

27
118



NOTES:
1. PROPOSED EASEMENTS SHOWN ARE SET 10 FOOT OFF PROPOSED SANITARY SEWER. USE BEARINGS AND 10 FOOT OFFSETS TO ESTABLISH LIMITS WITHIN EACH PROPERTY WHERE PROPOSED EASEMENTS ARE NOTED.

17-87-04-11-001
SAI Stone 2, LLC
Greif Rd



MATCHLINE STA. 1029+51

MATCHLINE STA. 1033+62

REVISION	REV. BY	DATE	DESCRIPTION
	GJW	04/29/2024	UPDATE OF THE DEPICTION OF EXISTING GAS LINE IN PLANVIEW

17-87-04-11-000
SAI Stone 2, LLC
2225 Greif Rd

Mark J. Eichel, P.E., P.S.
155 Rehl Road
Zanesville, Ohio 43701
740-454-0155

ENGINEER'S OFFICE

PREPARED BY:

PROJECT NAME:
SANITARY SEWER IMPROVEMENTS
GRIEF ROAD

PROJECT LOCATION:
LICKING VIEW
ZANESVILLE, OHIO 43701

PLANS APPROVED BY:

MJE

PLANS PREPARED BY:

GJW

DATE:

08/14/2023

REVISED:

SHEET SIZE:

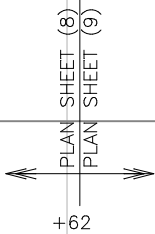
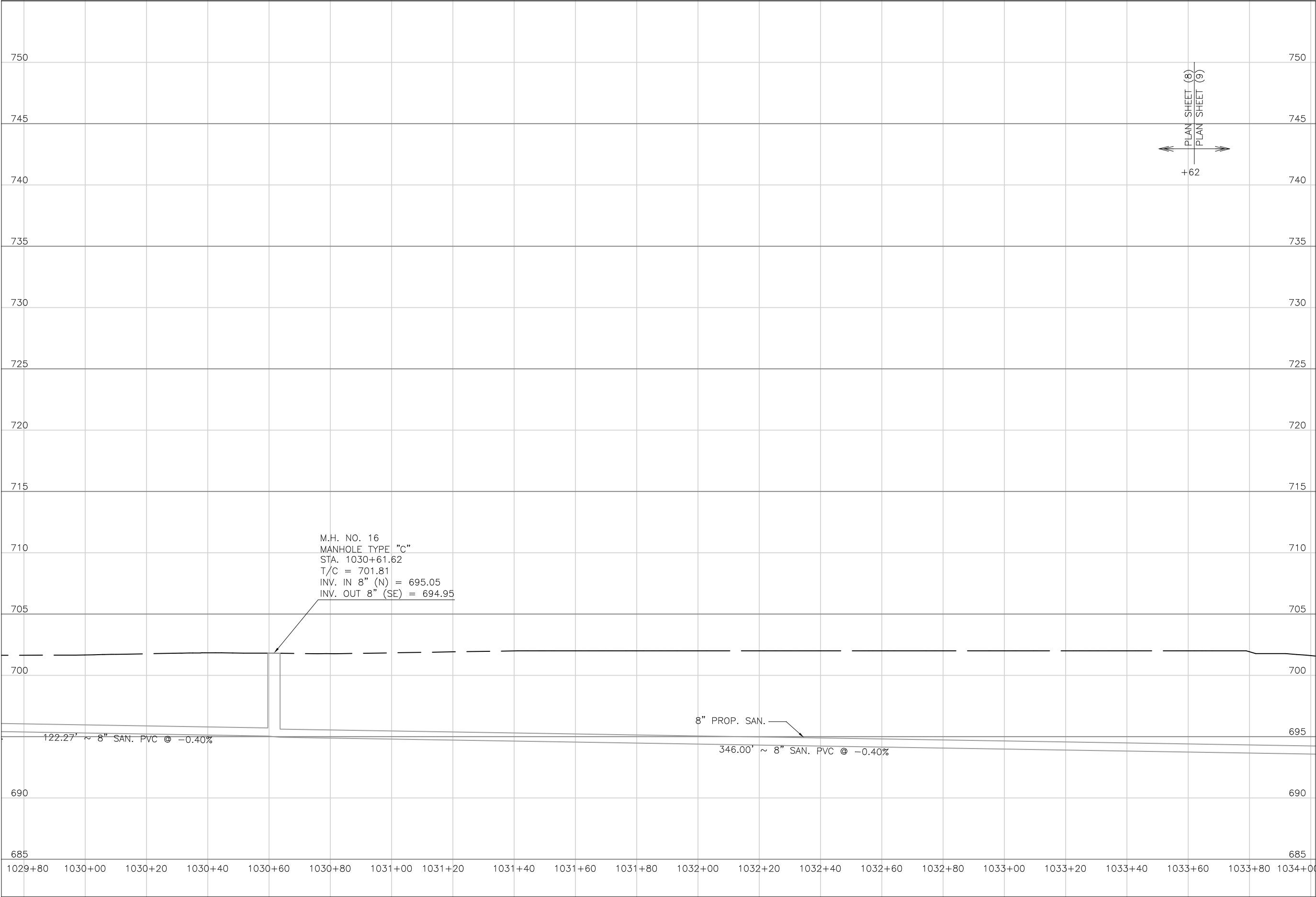
11" x 17"

SHEET NAME:

PLAN
SHEET (8)

SHEET NUMBER:

28
118



Mark J. Eicher, P.E., P.S.
155 Rehl Road
Zanesville, Ohio 43701
740-454-0155

Muskingum County
ENGINEER'S OFFICE

PREPARED BY:

SANITARY SEWER IMPROVEMENTS
GRIEF ROAD

PROJECT NAME

LICKING VIEW
ZANESVILLE, OHIO 43701

PROJECT LOCATION

PLANS APPROVED BY:

MJE

PLANS PREPARED BY:

HJ

DATE:

08/15/2023

REVISED:

SHEET SIZE:

11" x 17"

SHEET NAME:

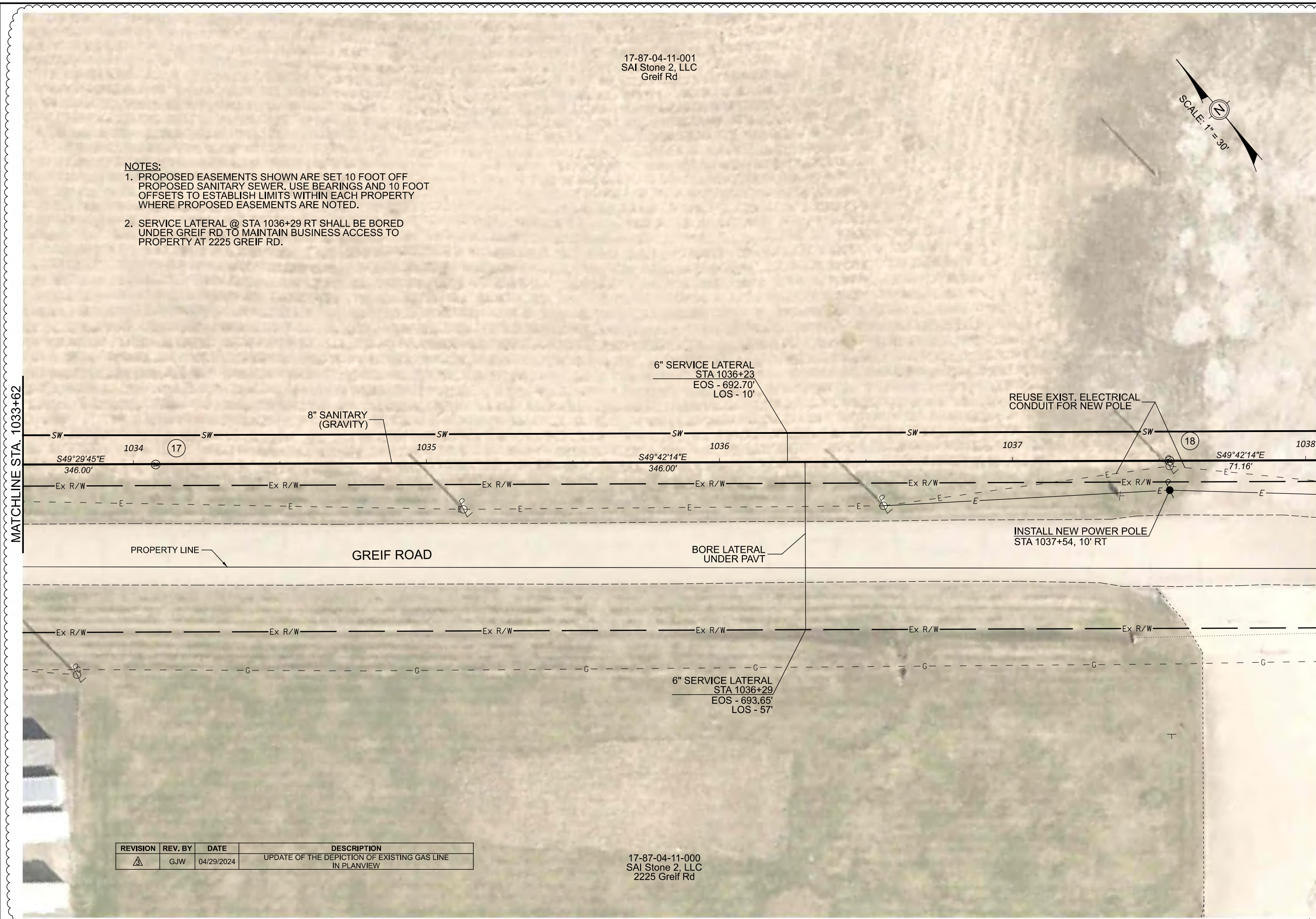
PROFILE
MANHOLE
16

SHEET NUMBER:

29
118

MATCHLINE STA. 1033+62

MATCHLINE STA. 1038+04



17-87-04-11-001
SAI Stone 2, LLC
Greif Rd

17-87-04-11-000
SAI Stone 2, LLC
2225 Greif Rd

NOTES:

1. PROPOSED EASEMENTS SHOWN ARE SET 10 FOOT OFF PROPOSED SANITARY SEWER. USE BEARINGS AND 10 FOOT OFFSETS TO ESTABLISH LIMITS WITHIN EACH PROPERTY WHERE PROPOSED EASEMENTS ARE NOTED.
2. SERVICE LATERAL @ STA 1036+29 RT SHALL BE BORED UNDER GREIF RD TO MAINTAIN BUSINESS ACCESS TO PROPERTY AT 2225 GREIF RD.

REVISION	REV. BY	DATE	DESCRIPTION
	GJW	04/29/2024	UPDATE OF THE DEPICTION OF EXISTING GAS LINE IN PLANVIEW

Mark J. Eicher, P.E., P.S.
155 Rehl Road
Zanesville, Ohio 43701
740-454-0155

ENGINEER'S OFFICE

PROJECT NAME:
SANITARY SEWER IMPROVEMENTS
GRIEF ROAD TO PUMP STATION

PROJECT LOCATION:
LICKING VIEW
ZANESVILLE, OHIO 43701

PLANS APPROVED BY:
MJE

PLANS PREPARED BY:
GJW

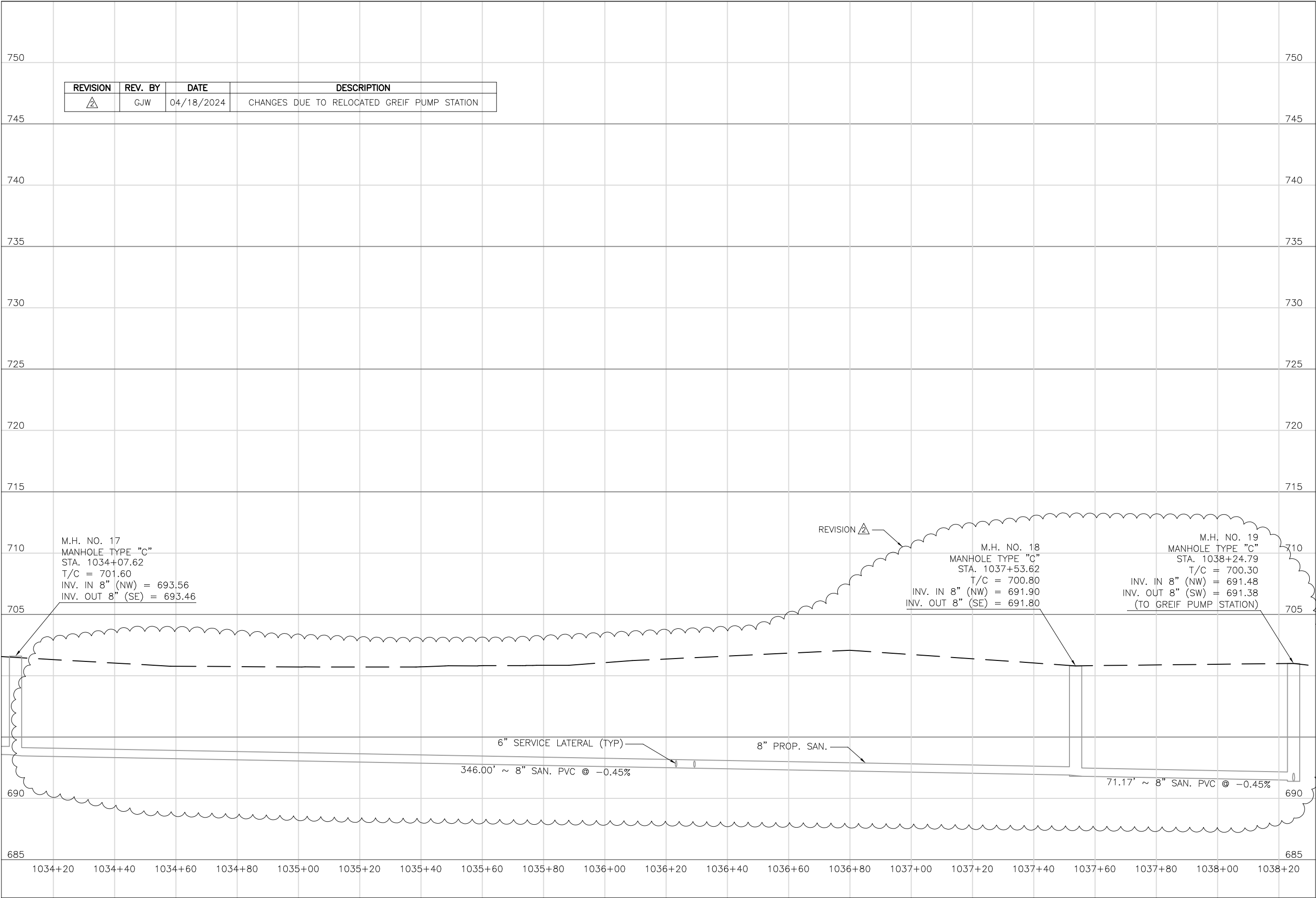
DATE:
08/14/2023

REVISED:
04/29/2024


SHEET SIZE:
11" x 17"

SHEET NAME:
PLAN
SHEET (9)

SHEET NUMBER:
30
118



Mark J. Eicher, P.E., P.S.
155 Rehl Road
Zanesville, Ohio 43701
740-454-0155

**Muskingum**
County
ENGINEER'S OFFICE

PREPARED BY:

SANITARY SEWER IMPROVEMENTS
GRIEF ROAD

PROJECT LOCATION
LICKING VIEW
ZANESVILLE, OHIO 43701

PLANS APPROVED BY:
MJE

PLANS PREPARED BY:
GJW

DATE:
08/15/2023

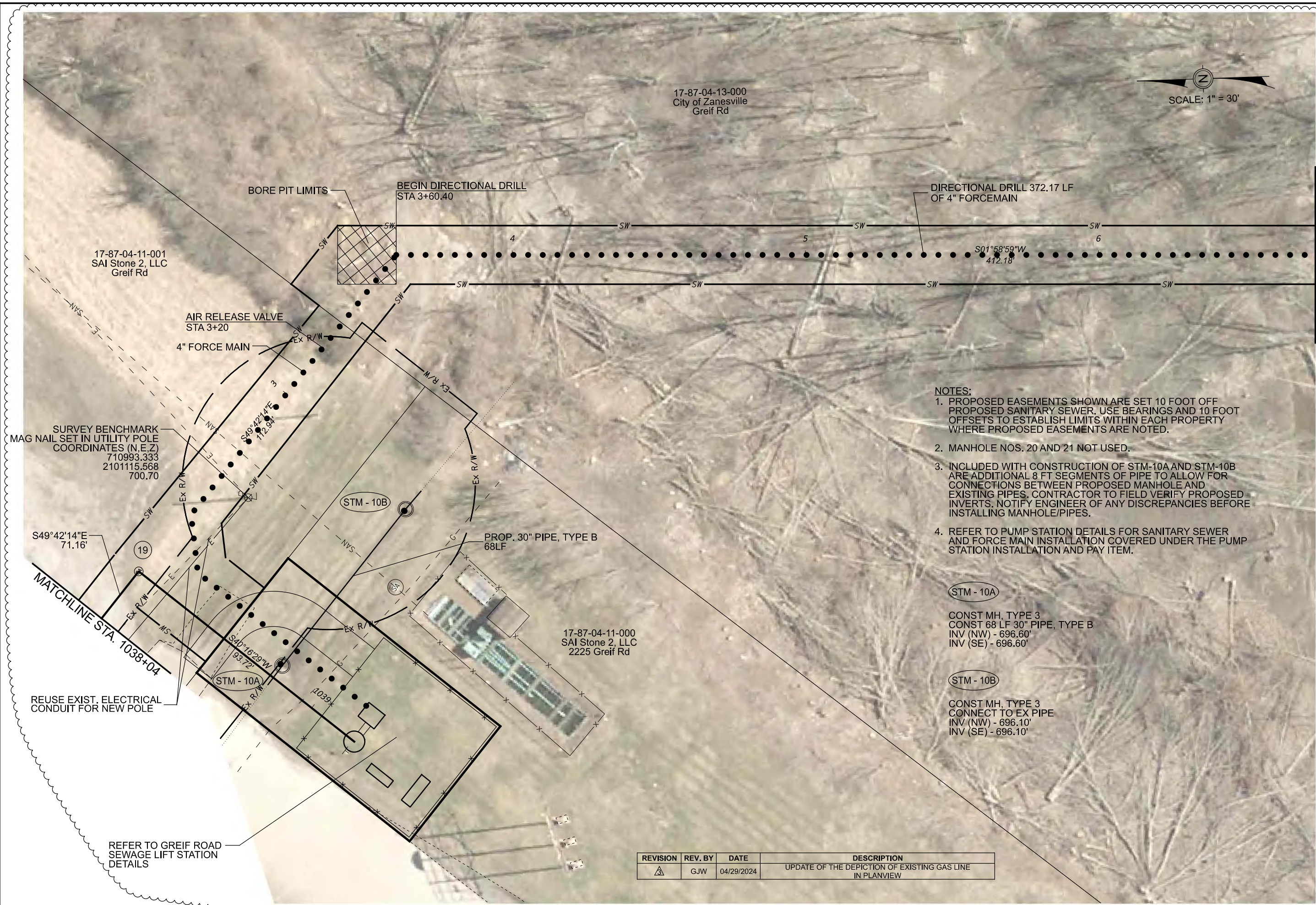
REVISED:
04/18/2024

SHEET SIZE:
11" x 17"

SHEET NAME:
**PROFILE
MANHOLES
17, 18 & 19**

SHEET NUMBER:

31
118



SCALE: 1" = 30'

- NOTES:**
1. PROPOSED EASEMENTS SHOWN ARE SET 10 FOOT OFF PROPOSED SANITARY SEWER. USE BEARINGS AND 10 FOOT OFFSETS TO ESTABLISH LIMITS WITHIN EACH PROPERTY WHERE PROPOSED EASEMENTS ARE NOTED.
 2. MANHOLE NOS. 20 AND 21 NOT USED.
 3. INCLUDED WITH CONSTRUCTION OF STM-10A AND STM-10B ARE ADDITIONAL 8 FT SEGMENTS OF PIPE TO ALLOW FOR CONNECTIONS BETWEEN PROPOSED MANHOLE AND EXISTING PIPES. CONTRACTOR TO FIELD VERIFY PROPOSED INVERTS. NOTIFY ENGINEER OF ANY DISCREPANCIES BEFORE INSTALLING MANHOLE/PIPES.
 4. REFER TO PUMP STATION DETAILS FOR SANITARY SEWER AND FORCE MAIN INSTALLATION COVERED UNDER THE PUMP STATION INSTALLATION AND PAY ITEM.

STM - 10A

CONST MH, TYPE 3
CONST 68 LF 30" PIPE, TYPE B
INV (NW) - 696.60'
INV (SE) - 696.60'

STM - 10B

CONST MH, TYPE 3
CONNECT TO EX PIPE
INV (NW) - 696.10'
INV (SE) - 696.10'

REVISION	REV. BY	DATE	DESCRIPTION
△	GJW	04/29/2024	UPDATE OF THE DEPICTION OF EXISTING GAS LINE IN PLANVIEW

MATCHLINE STA. 06+74

Mark J. Eicher, P.E., P.S.
155 Rehl Road
Zanesville, Ohio 43701
740-454-0155

Wiskingum
County
ENGINEER'S OFFICE

PREPARED BY:

SANITARY SEWER IMPROVEMENTS
GRIEF ROAD PUMP STATION TO FORCEMAIN CONNECTION

PROJECT NAME:

LICKING VIEW
ZANESVILLE, OHIO 43701

PROJECT LOCATION:

PLANS APPROVED BY:

MJE

PLANS PREPARED BY:

GJW

DATE:

08/17/2023

REVISED:

04/29/2024

SHEET SIZE:

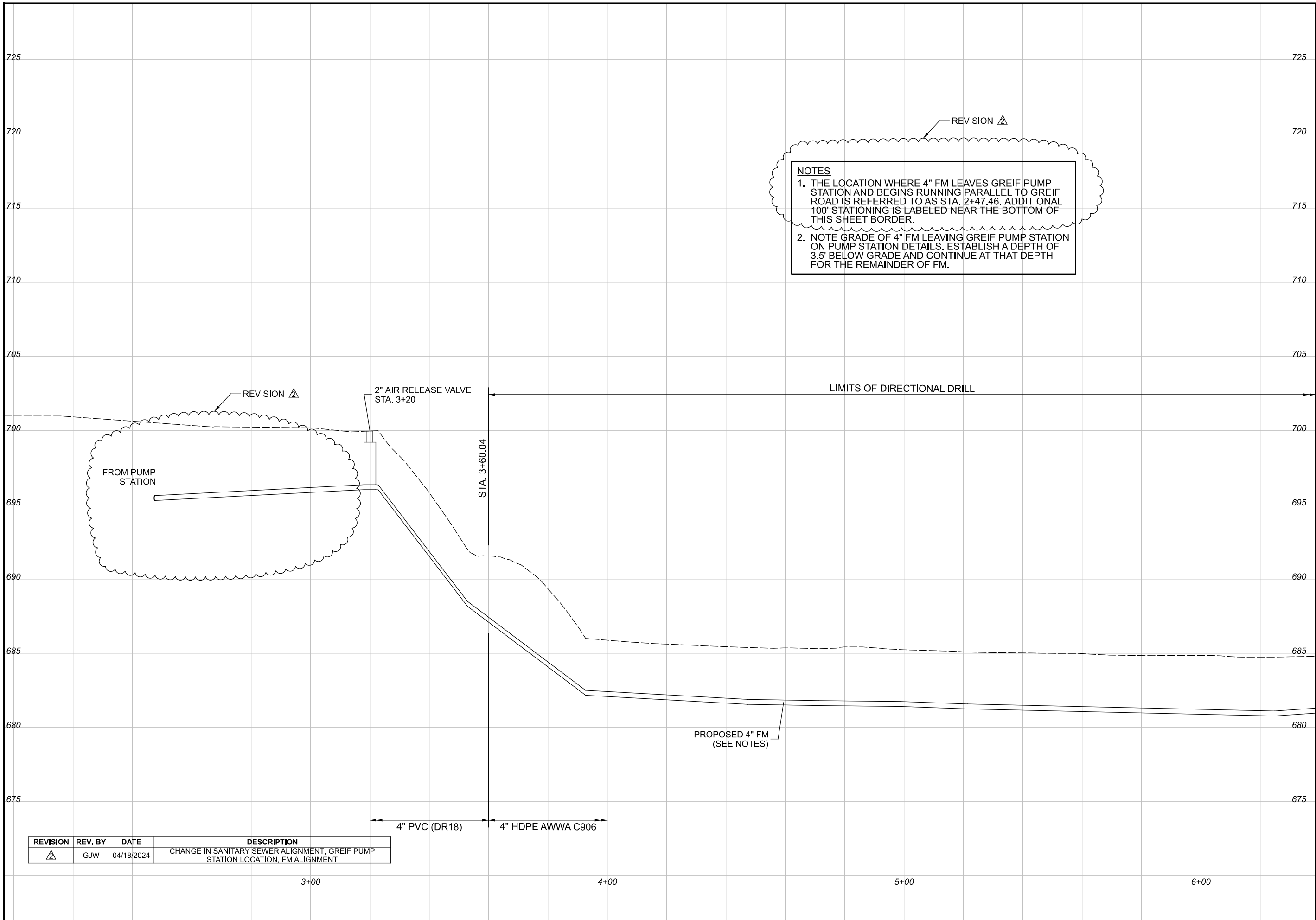
11" x 17"

SHEET NAME:

PLAN
SHEET (10)

SHEET NUMBER:

32
118



REVISION	REV. BY	DATE	DESCRIPTION
	GJW	04/18/2024	CHANGE IN SANITARY SEWER ALIGNMENT, GREIF PUMP STATION LOCATION, FM ALIGNMENT

Mark J. Eicher, P.E., P.S.
155 Rehl Road
Zanesville, Ohio 43701
740-454-0155

ENGINEER'S OFFICE

PREPARED BY:

PROJECT NAME:
SANITARY SEWER IMPROVEMENTS
GRIEF ROAD PUMP STATION TO WEST PIKE FM CONNECTION

PROJECT LOCATION:
LICKING VIEW
ZANESVILLE, OHIO 43701

PLANS APPROVED BY:
MJE

PLANS PREPARED BY:
GJW

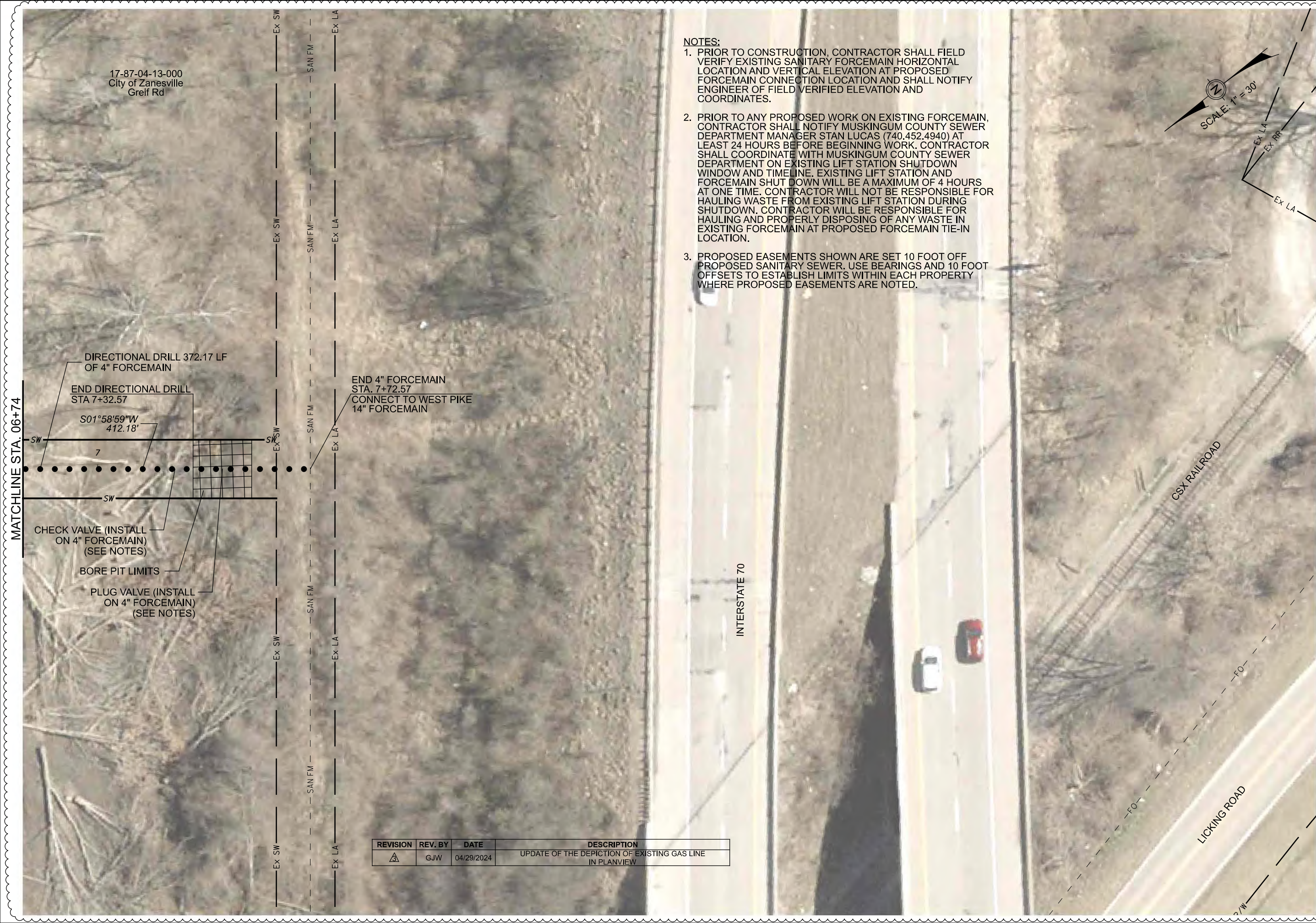
DATE:
08/14/2023

REVISED:
04/18/2024

SHEET SIZE:
11" x 17"

SHEET NAME:
PROFILE
FROM PUMP STA
TO W PIKE FM

SHEET NUMBER:
33
118



- NOTES:
1. PRIOR TO CONSTRUCTION, CONTRACTOR SHALL FIELD VERIFY EXISTING SANITARY FORCEMAIN HORIZONTAL LOCATION AND VERTICAL ELEVATION AT PROPOSED FORCEMAIN CONNECTION LOCATION AND SHALL NOTIFY ENGINEER OF FIELD VERIFIED ELEVATION AND COORDINATES.
 2. PRIOR TO ANY PROPOSED WORK ON EXISTING FORCEMAIN, CONTRACTOR SHALL NOTIFY MUSKINGUM COUNTY SEWER DEPARTMENT MANAGER STAN LUCAS (740.452.4940) AT LEAST 24 HOURS BEFORE BEGINNING WORK. CONTRACTOR SHALL COORDINATE WITH MUSKINGUM COUNTY SEWER DEPARTMENT ON EXISTING LIFT STATION SHUTDOWN WINDOW AND TIMELINE. EXISTING LIFT STATION AND FORCEMAIN SHUT DOWN WILL BE A MAXIMUM OF 4 HOURS AT ONE TIME. CONTRACTOR WILL NOT BE RESPONSIBLE FOR HAULING WASTE FROM EXISTING LIFT STATION DURING SHUTDOWN. CONTRACTOR WILL BE RESPONSIBLE FOR HAULING AND PROPERLY DISPOSING OF ANY WASTE IN EXISTING FORCEMAIN AT PROPOSED FORCEMAIN TIE-IN LOCATION.
 3. PROPOSED EASEMENTS SHOWN ARE SET 10 FOOT OFF PROPOSED SANITARY SEWER. USE BEARINGS AND 10 FOOT OFFSETS TO ESTABLISH LIMITS WITHIN EACH PROPERTY WHERE PROPOSED EASEMENTS ARE NOTED.



REVISION	REV. BY	DATE	DESCRIPTION
1	GJW	04/29/2024	UPDATE OF THE DEPICTION OF EXISTING GAS LINE IN PLANVIEW

PREPARED BY:
Mark J. Eicher, P.E., P.S.
155 Rehl Road
Zanesville, Ohio 43701
Muskingum County
ENGINEER'S OFFICE 740-454-0155

PROJECT NAME:
SANITARY SEWER IMPROVEMENTS
CONNECTION TO FORCEMAIN

PROJECT LOCATION:
LICKING VIEW
ZANESVILLE, OHIO 43701

PLANS APPROVED BY:
MJE

PLANS PREPARED BY:
GJW

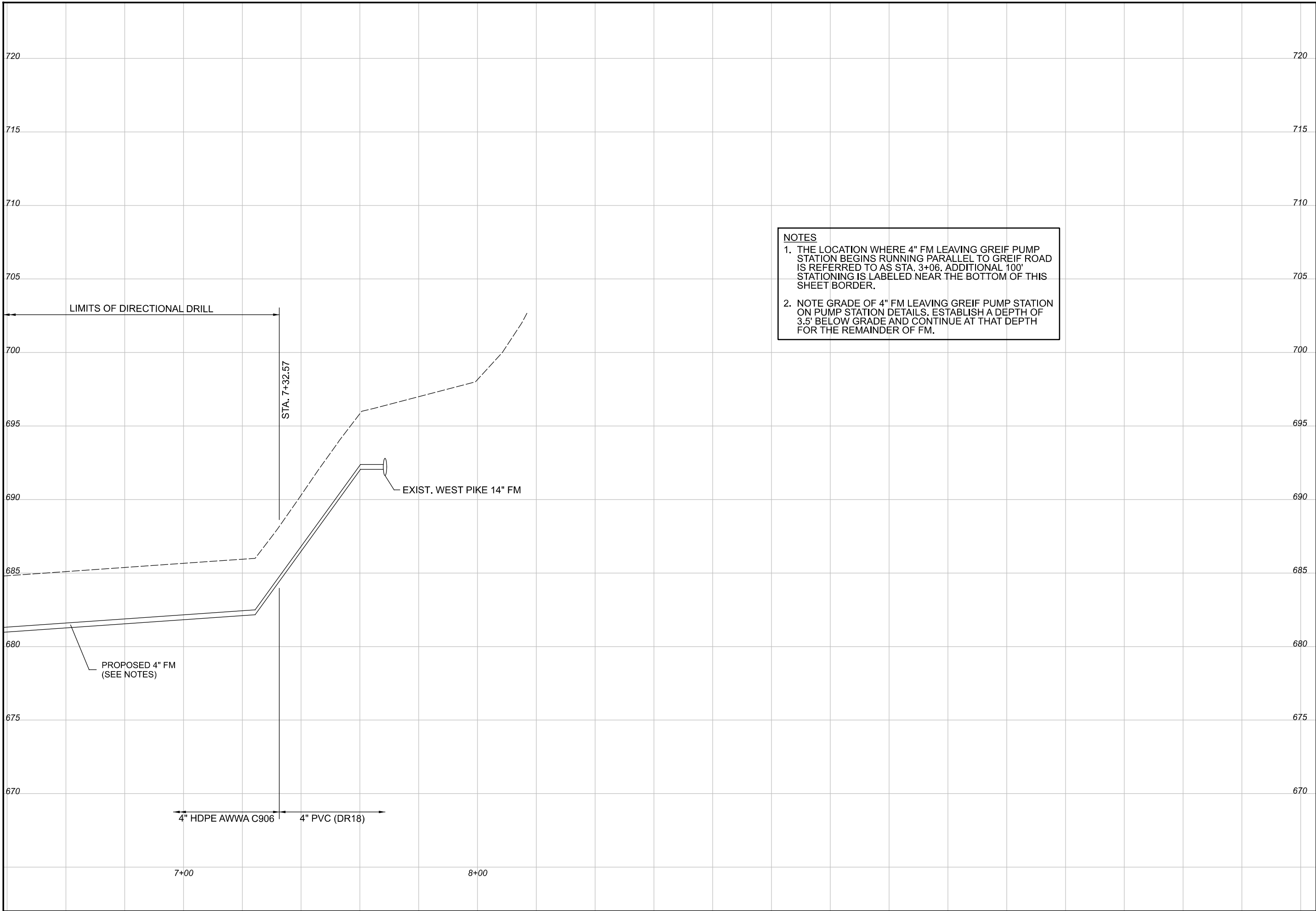
DATE:
08/14/2023

REVISED:
04/29/2024

SHEET SIZE:
11" x 17"

SHEET NAME:
PLAN
SHEET (11)

SHEET NUMBER:
34
118





SEE SHEET 43

SEE SHEET 45

MATCHLINE STA. 303+82

REVISION	REV. BY	DATE	DESCRIPTION
1	GJW	04/29/2024	UPDATE OF THE DEPICTION OF EXISTING GAS LINE IN PLANVIEW

Wiskindum County
ENGINEER'S OFFICE

Mark J. Eicher, P.E., P.S.
155 Rehl Road
Zanesville, Ohio 43701
740-454-0155

PROJECT NAME:
SANITARY SEWER IMPROVEMENTS
BUTLER ALLEY

PROJECT LOCATION:
LICKING VIEW
ZANESVILLE, OHIO 43701

PLANS APPROVED BY:
MJE

PLANS PREPARED BY:
GJW

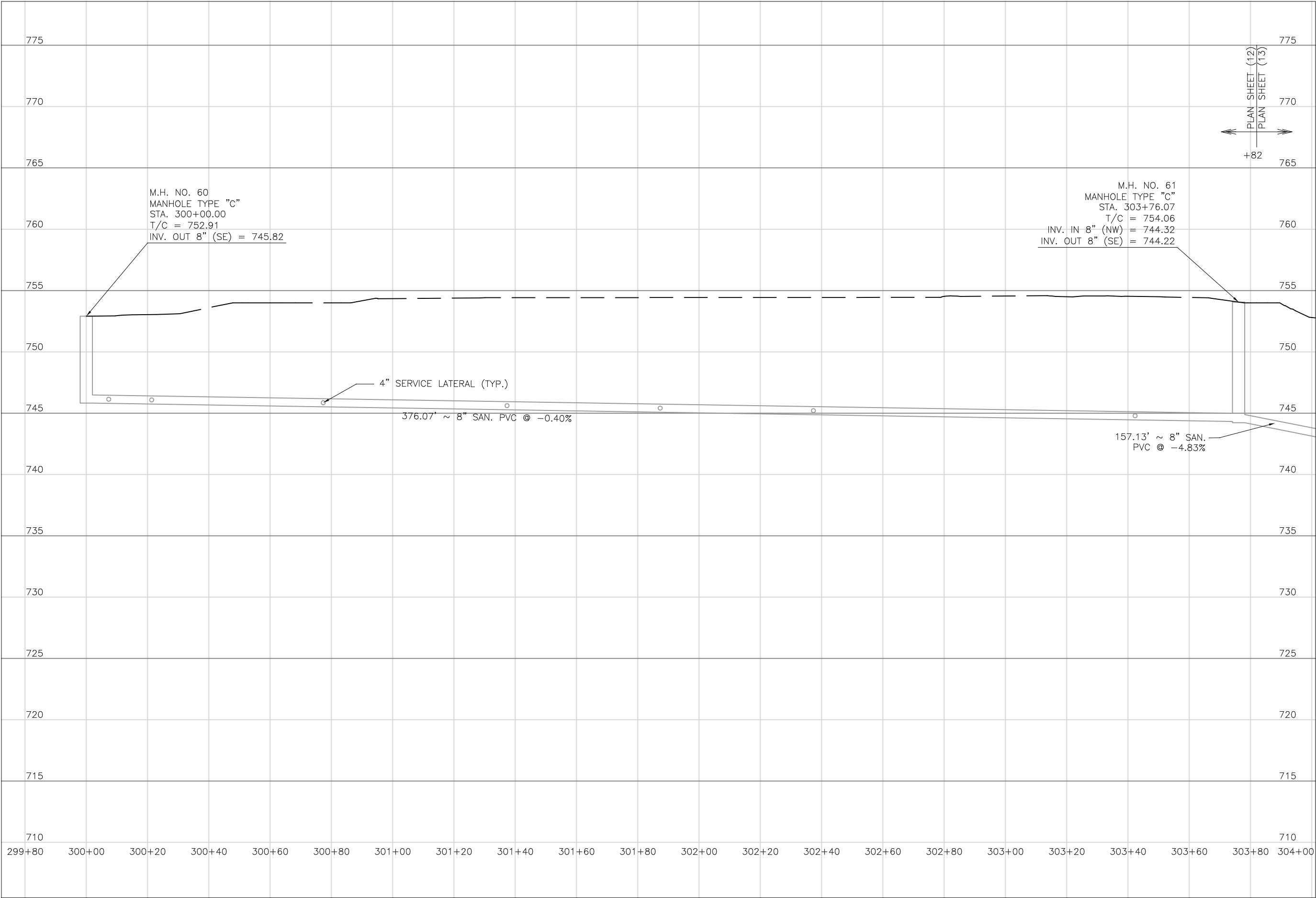
DATE:
08/14/2023

REVISED:
04/29/2024

SHEET SIZE:
11" x 17"

SHEET NAME:
PLAN
SHEET (12)

SHEET NUMBER:
36
118



Mark J. Elcher, P.E., P.S.
155 Rehman Road
Zanesville, Ohio 43701
740-454-0155

Prepared by:

Sanitary Sewer Improvements
Butler Alley

Project Name:

Sanitary Sewer Improvements
Butler Alley

Project Location:

Licking View
Zanesville, Ohio 43701

Plans Approved By:

MJE

Plans Prepared By:

HJ

Date:

08/15/2023

Revised:

Sheet Size:

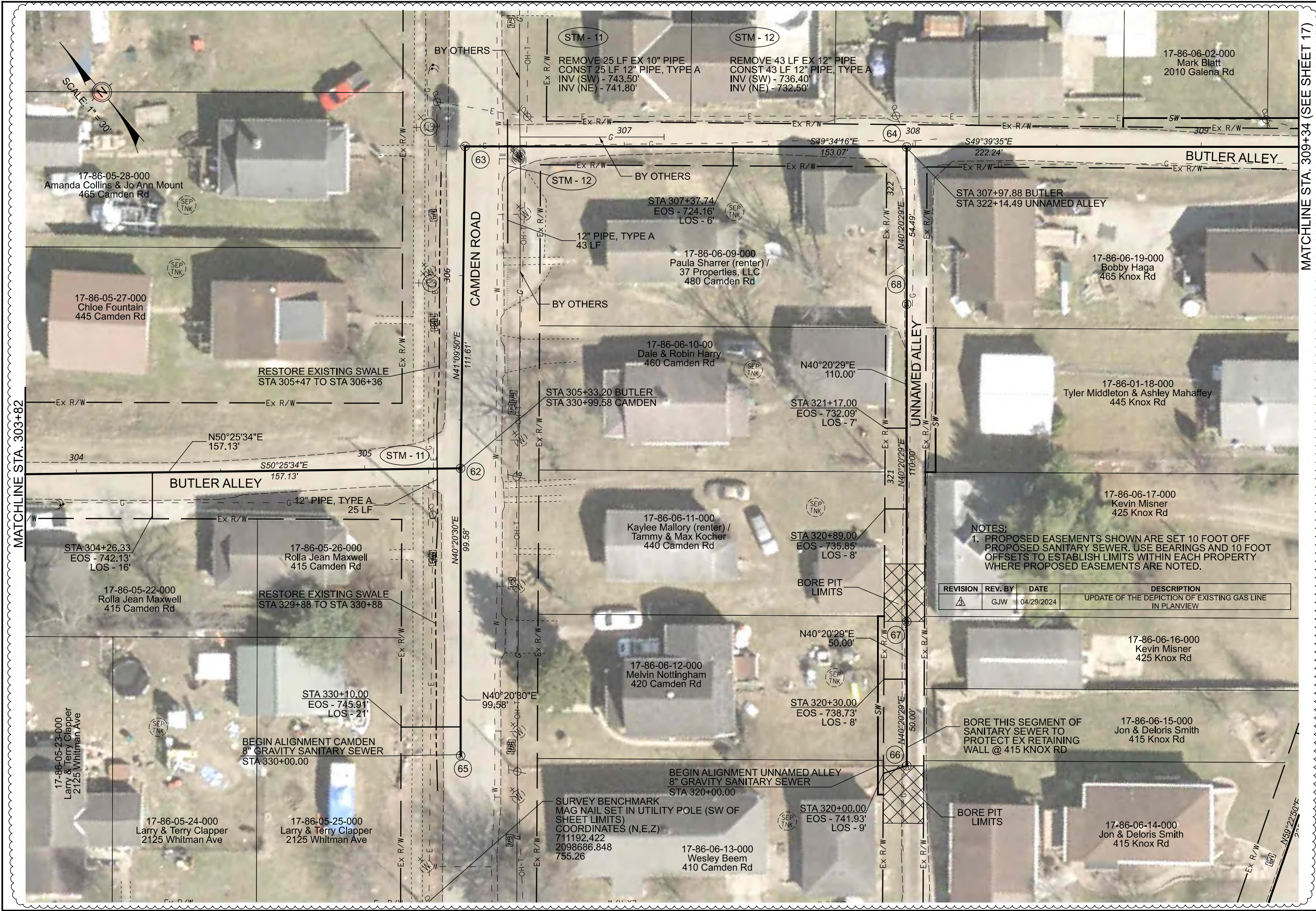
11" x 17"

Sheet Name:

Profile Manhole
60 & 61

Sheet Number:

37
118



MATCHLINE STA. 309+34 (SEE SHEET 17)

Mark J. Eichel, P.E., P.S.
155 Rehl Road
Zanesville, Ohio 43701
ENGINEER'S OFFICE 740-454-0155

PROJECT NAME: SANITARY SEWER IMPROVEMENTS
PROJECT LOCATION: BUTLER ALLEY TO CAMDEN ROAD TO BUTLER ALLEY
LICKING VIEW
ZANESVILLE, OHIO 43701

PLANS APPROVED BY:
MJE

PLANS PREPARED BY:
GJW

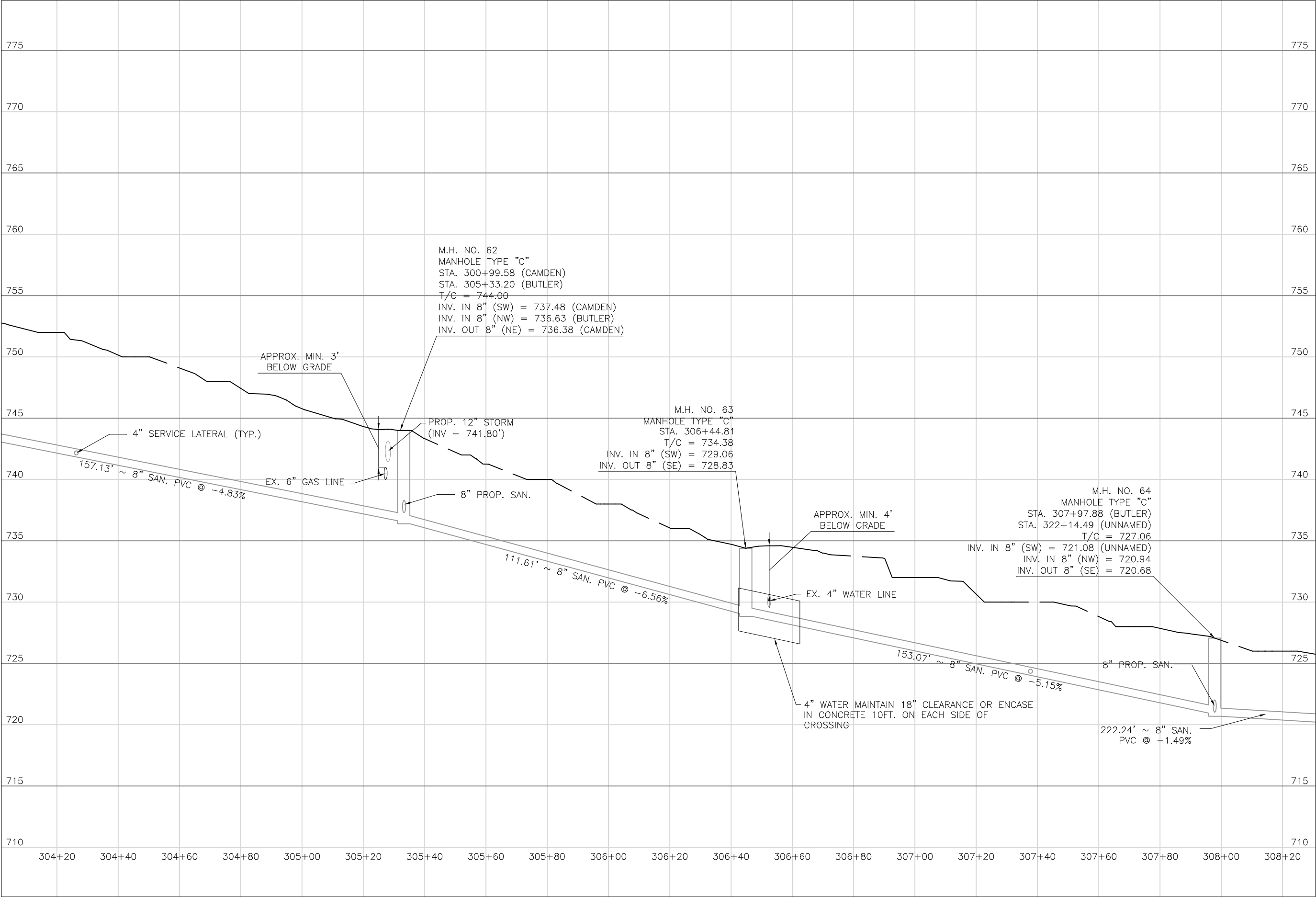
DATE:
08/14/2023

REVISED:
04/29/2024

SHEET SIZE:
11" x 17"

SHEET NAME:
PLAN SHEET (13)

SHEET NUMBER:
38
118



PREPARED BY:

SANITARY SEWER IMPROVEMENTS
BUTLER ALLEY TO CAMDEN ROAD TO BUTLER ALLEY

PROJECT
NAME

PLANS APPROVED BY:

MJE

PLANS PREPARED BY:

HJ

DATE:

08/15/2023

REVISED:

SHEET SIZE:

11" x 17"

SHEET NAME:

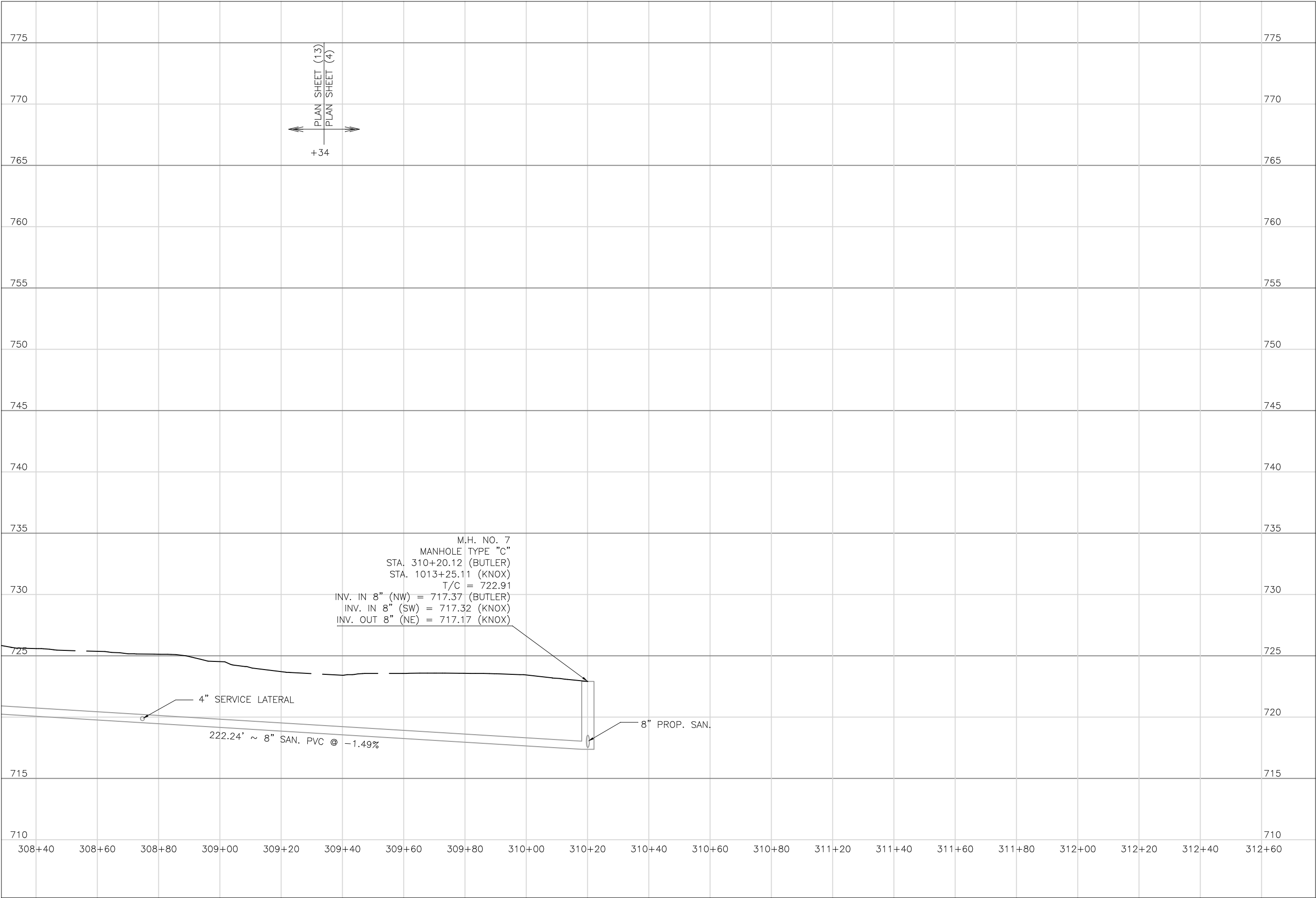
PROFILE
MANHOLE
62 - 64

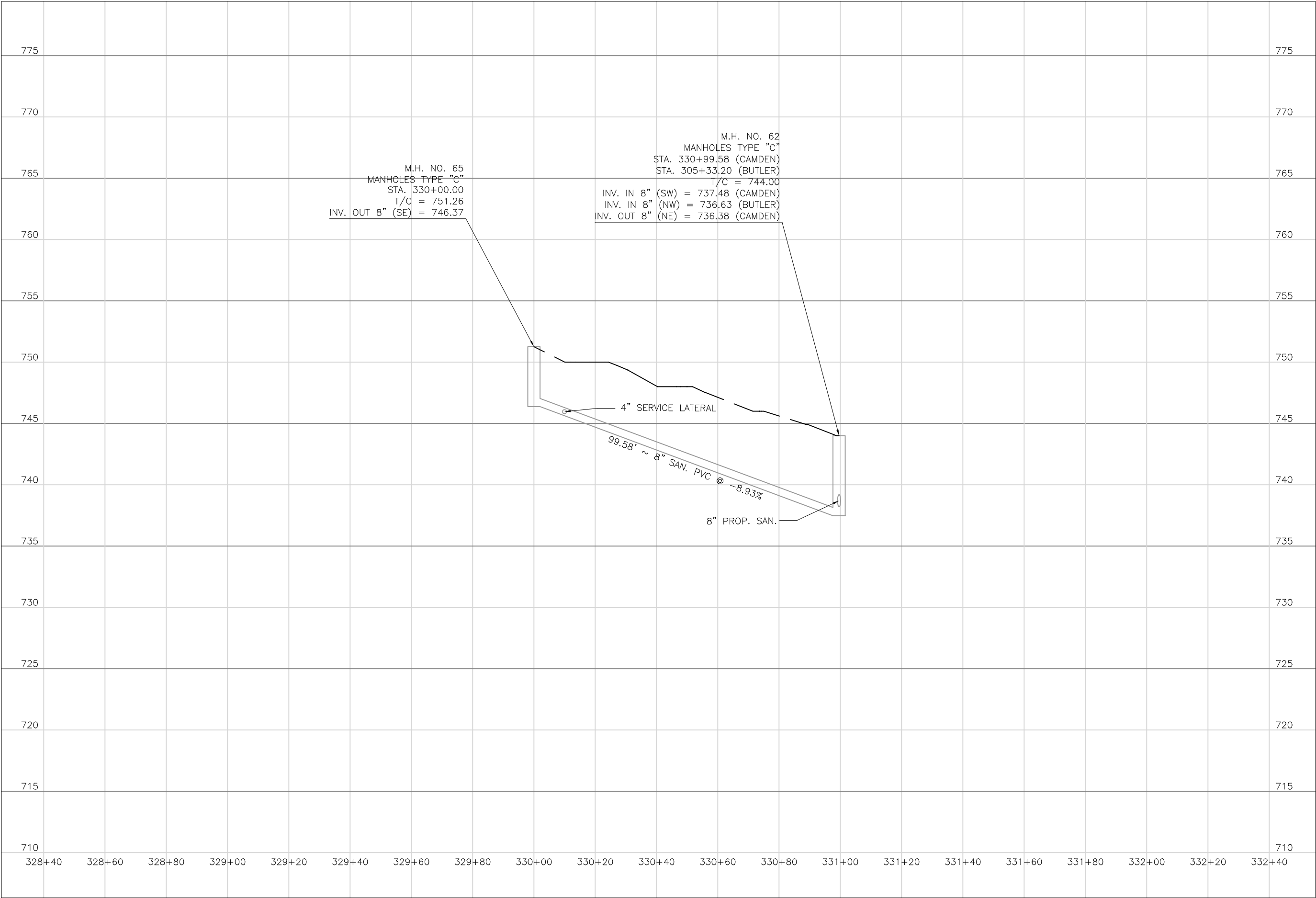
SHEET NUMBER:

39

118

LICKING VIEW
ZANESVILLE, OHIO 43701





Mark J. Eicher, P.E., P.S.
155 Rehl Road
Zanesville, Ohio 43701
740-454-0155

Mark J. Eicher, P.E., P.S.

155 Rehl Road

Zanesville, Ohio 43701

740-454-0155

Mark J. Eicher, P.E., P.S.

155 Rehl Road

Zanesville, Ohio 43701

740-454-0155

PREPARED BY:

PROJECT NAME:

PROJECT LOCATION:

SANITARY SEWER IMPROVEMENTS
CAMDEN ROAD

LICKING VIEW
ZANESVILLE, OHIO 43701

PLANS APPROVED BY:

MJE

PLANS PREPARED BY:

HJ

DATE:

08/15/2023

REVISED:

SHEET SIZE:

11" x 17"

SHEET NAME:

PROFILE
MANHOLE
65 & 62

SHEET NUMBER:

41
118



NOTES:
1. GRINDER PUMP SHALL BE INSTALLED AT THIS SERVICE LATERAL INSTALLATION FOR PROPERTY'S DISCHARGE.

REVISION	REV. BY	DATE	DESCRIPTION
1	GJW	04/29/2024	UPDATE OF THE DEPICTION OF EXISTING GAS LINE IN PLANVIEW

MATCHLINE STA. 221+38

Mark J. Eicher, P.E., P.S.
155 Rehl Road
Zanesville, Ohio 43701

ENGINEER'S OFFICE

PREPARED BY:
Mark J. Eicher, P.E., P.S.

PROJECT NAME:
SANITARY SEWER IMPROVEMENTS
GALENA AVENUE TO KNOX ROAD

PROJECT LOCATION:
LICKING VIEW
ZANESVILLE, OHIO 43701

PLANS APPROVED BY:
MJE

PLANS PREPARED BY:
GJW

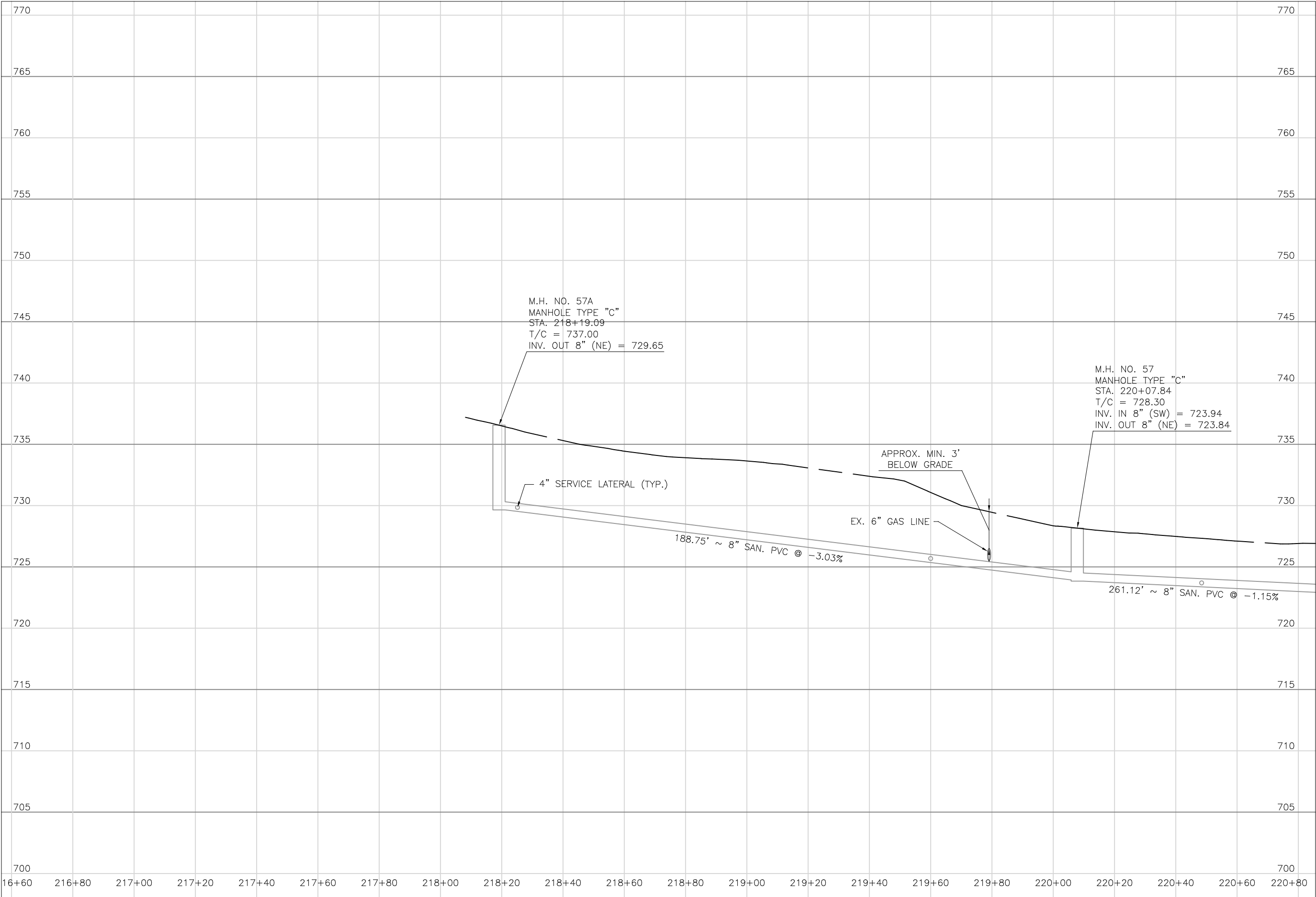
DATE:
08/14/2023

REVISED:
04/29/2024

SHEET SIZE:
11" x 17"

SHEET NAME:
PLAN
SHEET (14)

SHEET NUMBER:
43
118



Mark J. Elcher, P.E., P.S.
155 Rehl Road
Zanesville, Ohio 43701
740-454-0155

Muskingum

A County

ENGINEER'S OFFICE

PREPARED BY:

SANITARY SEWER IMPROVEMENTS
GALENA AVENUE

PROJECT NAME:

PROJECT LOCATION:

LICKING VIEW
ZANESVILLE, OHIO 43701

PROJECT LOCATION:

PLANS APPROVED BY:

MJE

PLANS PREPARED BY:

HJ

DATE:

08/15/2023

REVISED:

SHEET SIZE:

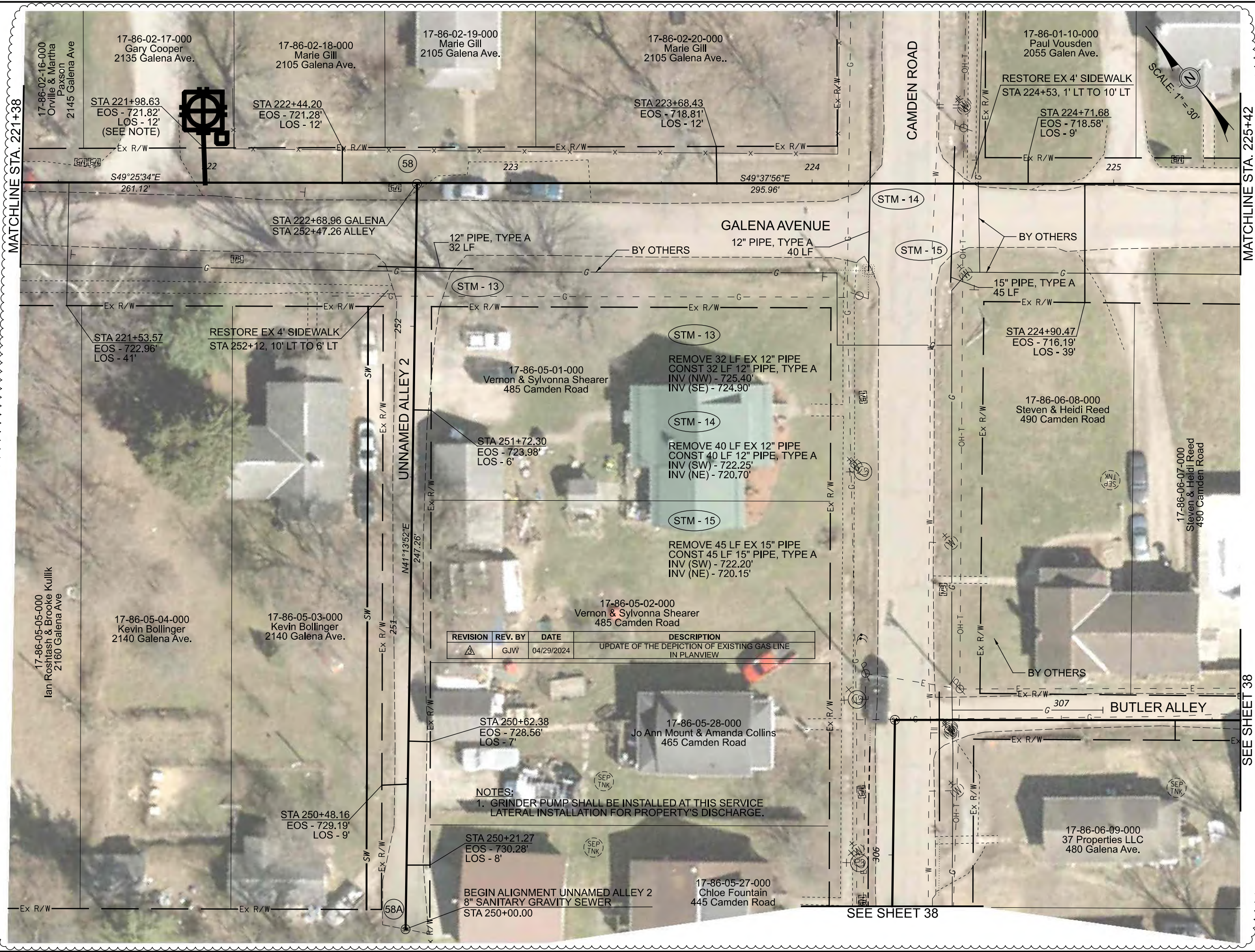
11" x 17"

SHEET NAME:

PROFILE
MANHOLE
57A & 57

SHEET NUMBER:

44
118



Mark J. Eicher, P.E., P.S.
Wiskingum
County
ENGINEER'S OFFICE

155 Rehl Road
Zanesville, Ohio 43701
740-454-0155

PROJECT NAME:
SANITARY SEWER IMPROVEMENTS
GALENA AVENUE TO KNOX ROAD

PROJECT LOCATION:
LICKING VIEW
ZANESVILLE, OHIO 43701

PLANS APPROVED BY:
MJE

PLANS PREPARED BY:
GJW

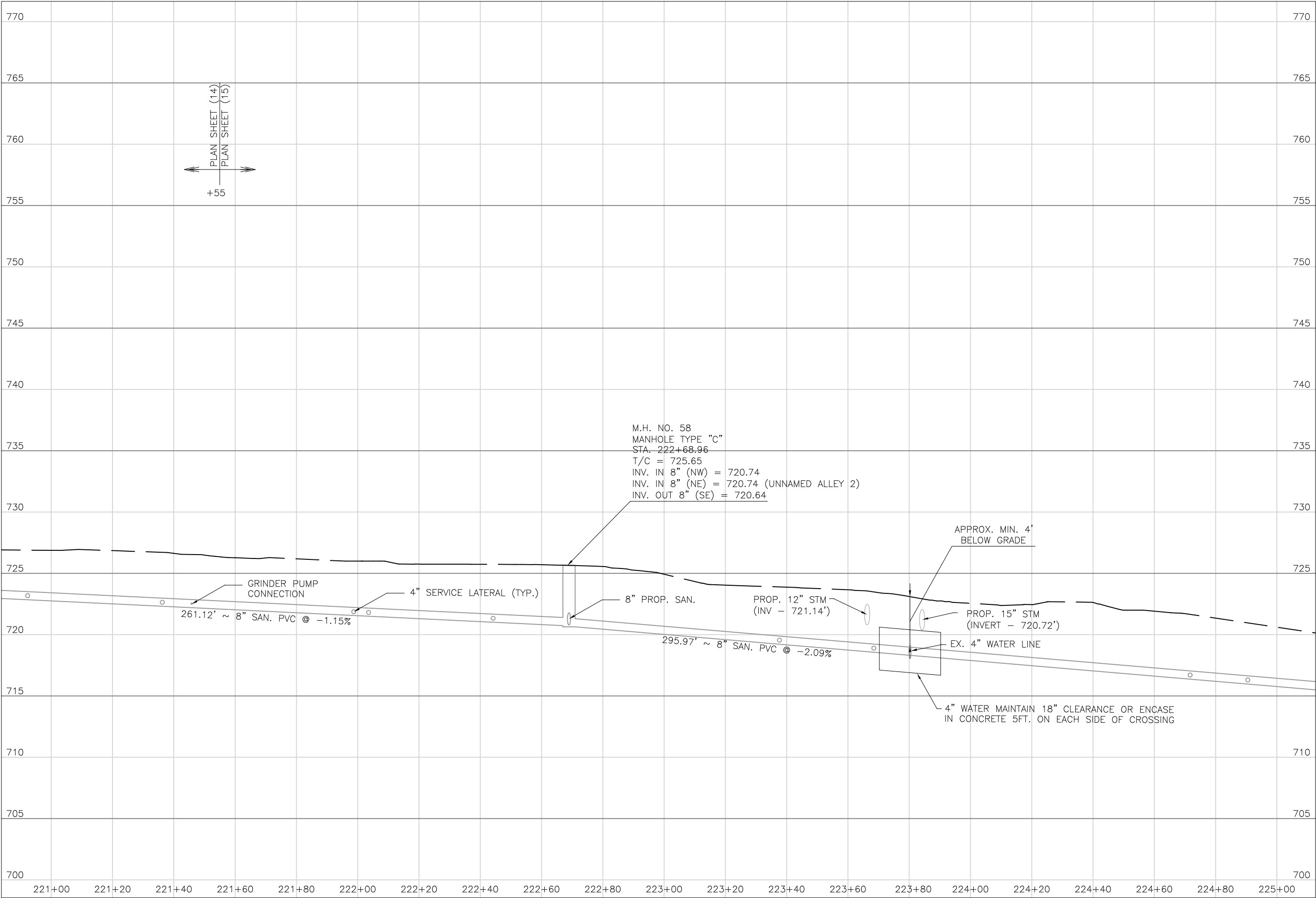
DATE:
08/14/2023

REVISED:
04/29/2024

SHEET SIZE:
11" x 17"

SHEET NAME:
PLAN SHEET (15)

SHEET NUMBER:
45
118



PREPARED BY:

SANITARY SEWER IMPROVEMENTS
GALENA AVENUE

PROJECT NAME:

PLANS APPROVED BY:

MJE

PLANS PREPARED BY:

HJ

DATE:

08/15/2023

REVISED:

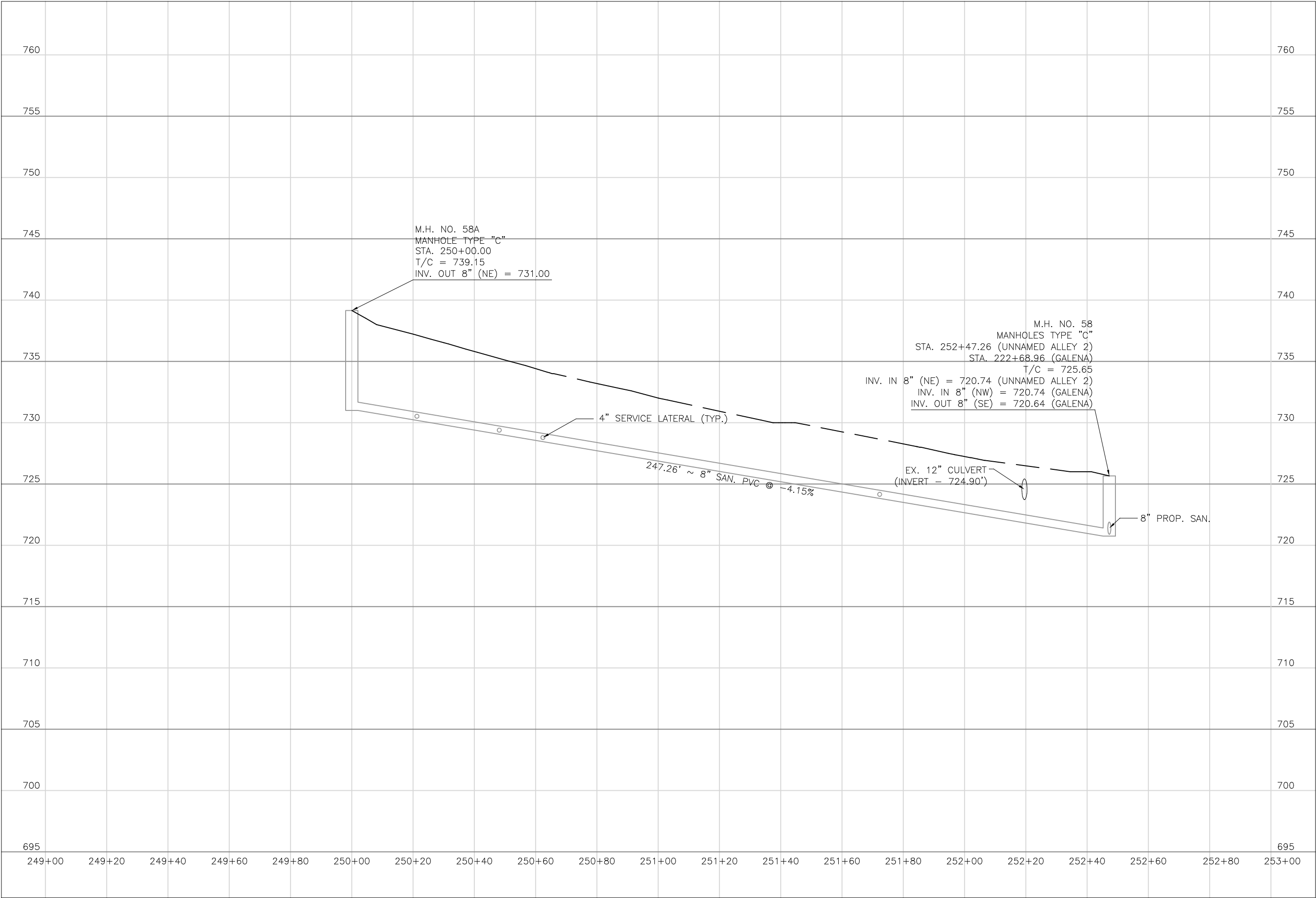
SHEET SIZE:

11" x 17"


SHEET NAME:

PROFILE
MANHOLE 58

SHEET NUMBER:



Mark J. Eicher, P.E., P.S.
155 Rehl Road
Zanesville, Ohio 43701
740-454-0155

**Muskingum**
County
ENGINEER'S OFFICE

PREPARED BY:

SANITARY SEWER IMPROVEMENTS
TO GALENA AVENUE

LICKING VIEW
ZANESVILLE, OHIO 43701

PROJECT
NAME

PROJECT
LOCATION

PLANS APPROVED BY:
MJE

PLANS PREPARED BY:
HJ

DATE:
08/15/2023

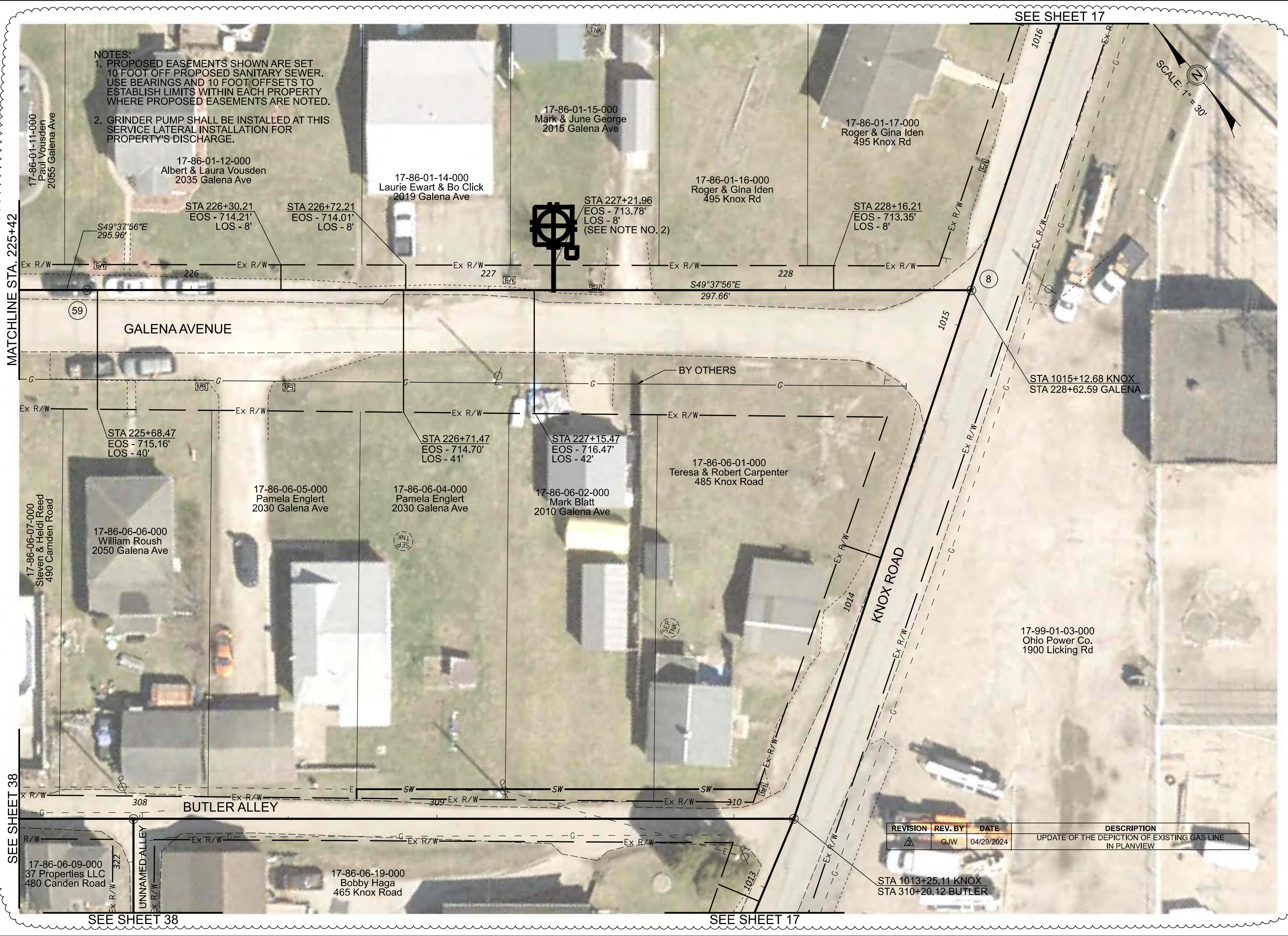
REVISED:

SHEET SIZE:
11" x 17"


SHEET NAME:
**PROFILE
MANHOLE
58A & 58**

SHEET NUMBER:

47
118



Mark J. Elcher, P.E., P.S.
155 Rehl Road
Zanesville, Ohio 43701
740-454-0155

Wiskindum
County
ENGINEER'S OFFICE

PREPARED BY:
PROJECT NAME:
PROJECT LOCATION:

SANITARY SEWER IMPROVEMENTS
GALENA AVENUE TO KNOX ROAD
LICKING VIEW
ZANESVILLE, OHIO 43701

PLANS APPROVED BY:
MJE

PLANS PREPARED BY:
GJW

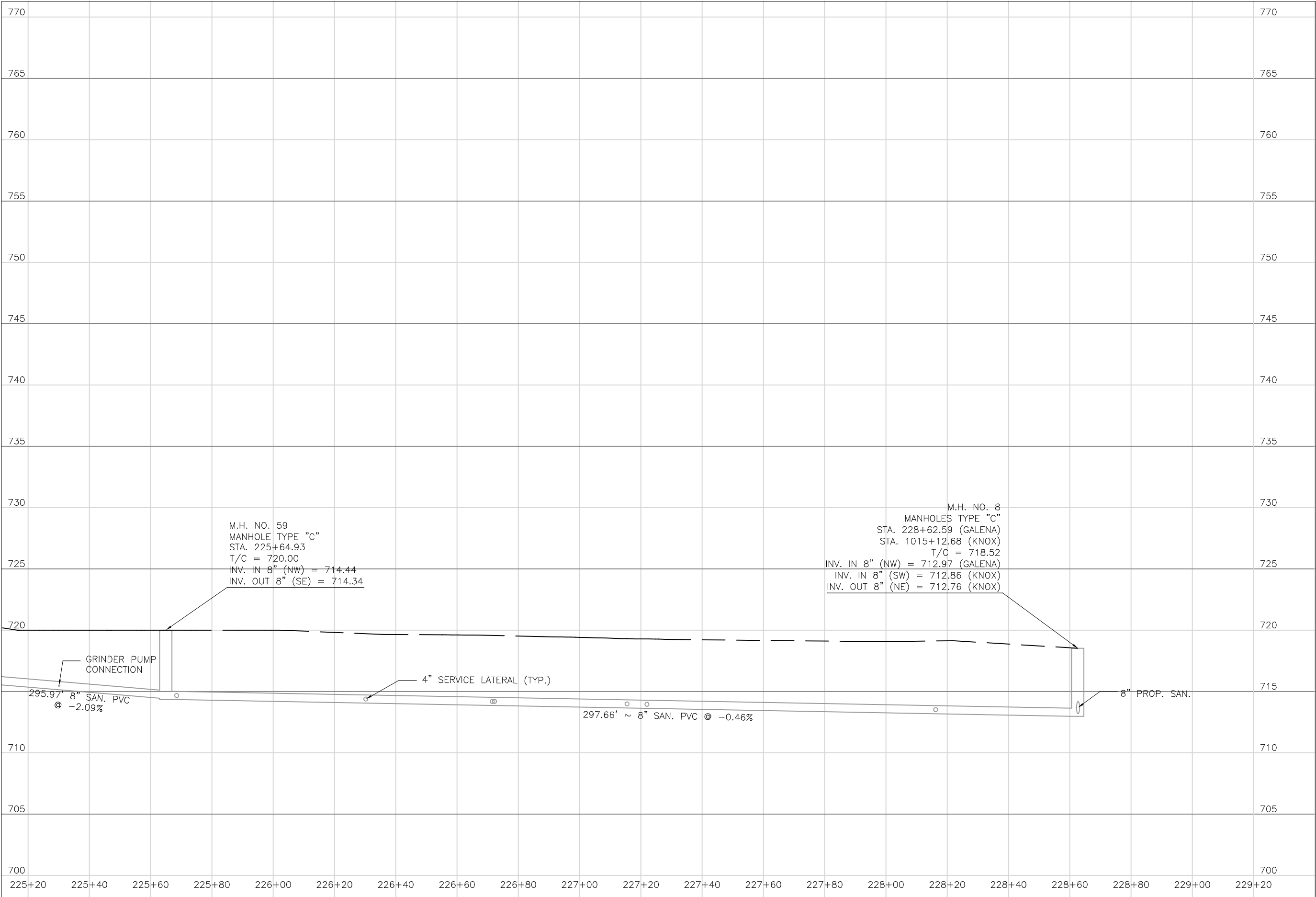
DATE:
08/14/2023

REVISED:
04/29/2024

SHEET SIZE:
11" x 17"

SHEET NAME:
PLAN
SHEET (16)

SHEET NUMBER:
48
118



Mark J. Eicher, P.E., P.S.
155 Rehl Road
Zanesville, Ohio 43701
740-454-0155

Muskingum

A County

ENGINEER'S OFFICE

PREPARED BY:

SANITARY SEWER IMPROVEMENTS
GALENA AVENUE TO KNOX ROAD

PROJECT LOCATION
LICKING VIEW
ZANESVILLE, OHIO 43701

PROJECT NAME

PROJECT LOCATION

PLANS APPROVED BY:
MJE

PLANS PREPARED BY:
HJ

DATE:
08/15/2023

REVISED:

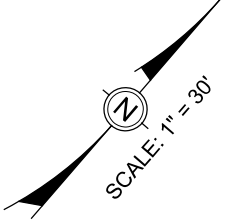
SHEET SIZE:
11" x 17"

SHEET NAME:
**PROFILE MANHOLE
59 & 8**

SHEET NUMBER:

49
118

SEE SHEET 63



17-85-02-13-000
T & H Rentals
315 Grandview Rd

17-85-02-14-000
T & H Rentals
315 Grandview Rd

17-85-02-15-000
Jamyne Griffin et al
325 Grandview Rd

17-85-02-16-000
Jamyne Griffin et al
325 Grandview Ave

17-85-02-17-000
Brigette Gooden
335 Grandview Ave

17-85-02-18-000
Brigette Gooden
335 Grandview Ave

- NOTES:
1. PROPOSED EASEMENTS SHOWN ARE SET 10 FOOT OFF PROPOSED SANITARY SEWER. USE BEARINGS AND 10 FOOT OFFSETS TO ESTABLISH LIMITS WITHIN EACH PROPERTY WHERE PROPOSED EASEMENTS ARE NOTED.
 2. REMOVE OR TRIM TREES AS NEEDED TO BE ABLE CONSTRUCT THE SANITARY SEWER.
 3. MANHOLE NO. 55 NOT USED.
 4. STM-19 NOT USED.
 5. MINIMUM DIMENSIONS BETWEEN EXISTING WATER LINE AND PROPOSED SANITARY SEWER AT VARIOUS LOCATIONS ARE NOTED IN THE TABLE BELOW:

LOCATION	SEPARATION
A	7'
B	6'
C	5'

17-85-01-16-000
Janice Wills & Madielene Shaver
345 Galena Ave

17-85-01-17-000
Tamara Hemmer
325 Galena Ave

BEGIN ALIGNMENT GALENA
8" GRAVITY SANITARY SEWER
STA 130+00.00

STA 130+10.09
EOS - 767.19'
LOS - 20'

STA 130+78.15
EOS - 763.00'
LOS - 21'

STA 131+25.11
EOS - 760.11'
LOS - 22'

RESTORE EXISTING SWALE
STA 131+79 TO STA 131+86

SURVEY BENCHMARK
MAG NAIL SET IN UTILITY POLE
COORDINATES (N.E.Z)
711837.568
2097959.616
751.73

17-85-01-13-000
Vernon & Marla Kimble
345 Galena Ave

17-85-01-12-000
Vernon & Marla Kimble
345 Galena Ave

17-85-01-14-000
Vernon & Marla Kimble
345 Galena Ave

17-85-01-15-000
Vernon & Marla Kimble
345 Galena Ave

RESTORE EXISTING SWALE
STA 132+07 TO STA 134+21

12" PIPE, TYPE A
51 LF

RESTORE EXISTING SWALE
STA 130+59 TO STA 131+65

GALENA AVENUE

STA 184+84.18 GRANDVIEW
STA 132+97.94 GALENA

STA 132+50.00
EOS - 748.34'
LOS - 30'

REVISION	REV. BY	DATE	DESCRIPTION
A	GJW	04/29/2024	UPDATE OF THE DEPICTION OF EXISTING GAS LINE IN PLANVIEW

Mark J. Eicher, P.E., P.S.
155 Rehl Road
Zanesville, Ohio 43701
ENGINEER'S OFFICE 740-454-0155

SANITARY SEWER IMPROVEMENTS
GALENA AVENUE TO FRANKLIN ROAD
LICKING VIEW
ZANESVILLE, OHIO 43701

PLANS APPROVED BY:
MJE

PLANS PREPARED BY:
GJW

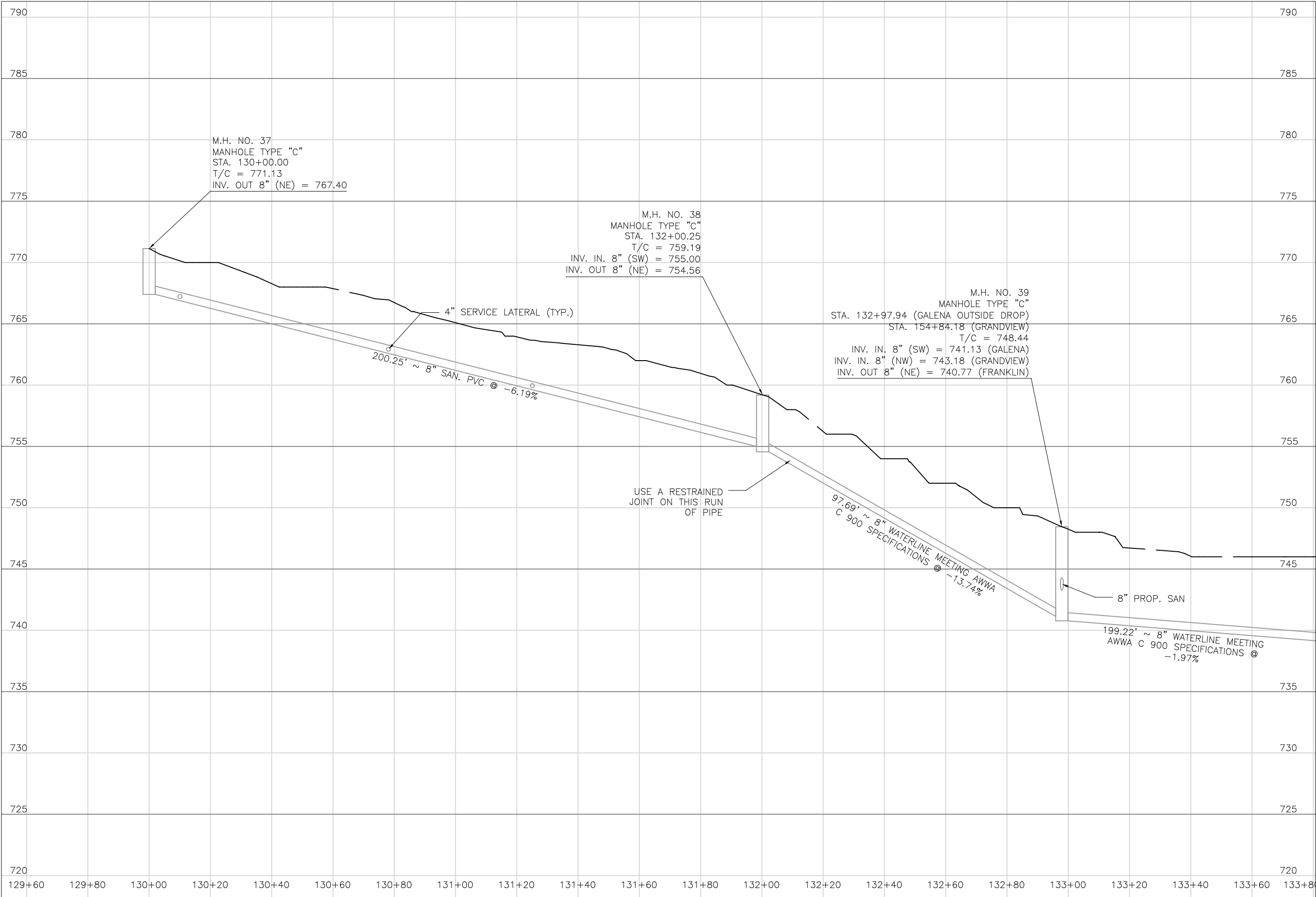
DATE:
08/14/2023

REVISED:
04/29/2024

SHEET SIZE:
11" x 17"

SHEET NAME:
PLAN SHEET (17)

SHEET NUMBER:
50
118



Mark J. Eicher, P.E., P.S.
155 Rehl Road
Zanesville, Ohio 43701
740-454-0155

ENGINEER'S OFFICE

PREPARED BY:

SANITARY SEWER IMPROVEMENTS
GALENA AVENUE

PROJECT NAME

PROJECT LOCATION

LICKING VIEW
ZANESVILLE, OHIO 43701

PROJECT LOCATION

PLANS APPROVED BY:

MJE

PLANS PREPARED BY:

DATE:

08/15/2023

REVISED:

SHEET SIZE:

11" x 17"

SHEET NAME:

SHEET NUMBER:

51
118

SHEET NUMBER

17-85-01-11-000
Bonnie Adams
505 Franklin Rd

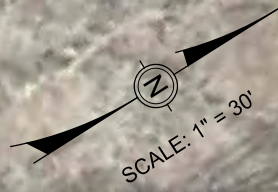
17-85-01-10-000
Bonnie Adams
505 Franklin Rd

17-85-01-09-000
Bonnie Adams
505 Franklin Rd

17-85-01-07-000
David Harrier
535 Franklin Rd

17-85-01-06-000
Old National Road Properties, LLC
Franklin Rd

17-85-01-08-000
Carter Walters
525 Franklin Rd



STM - 21

REMOVE 55 LF EX 15" PIPE
CONST 55 LF 15" PIPE, TYPE A
INV (SW) - 743.00'
INV (NE) - 740.50'

STM - 22

REMOVE 35 LF EX 12" PIPE
CONST 35 LF 12" PIPE, TYPE A
INV (SW) - 738.50'
INV (NE) - 737.15'

STM - 23

REMOVE 11 LF EX 12" PIPE
CONST 11 LF 12" PIPE, TYPE A
INV (SW) - 734.30'
INV (NE) - 733.60'

STM - 24

REMOVE 28 LF EX 15" PIPE
CONST 28 LF 15" PIPE, TYPE A
INV (W) - 732.60'
INV (E) - 730.60'

REVISION	REV. BY	DATE	DESCRIPTION
Δ	GJW	04/29/2024	UPDATE OF THE DEPICTION OF EXISTING GAS LINE IN PLANVIEW

NOTES:
1. MINIMUM DIMENSIONS BETWEEN EXISTING WATER LINE
AND PROPOSED SANITARY SEWER AT VARIOUS
LOCATIONS ARE NOTED IN THE TABLE BELOW:

LOCATION	SEPARATION
A	5'
B	7'
C	8'
D	6'

MATCHLINE STA. 134+11

RESTORE EXISTING SWALE
STA 132+07 TO STA 134+21

RESTORE EXISTING SWALE
STA 134+69 TO STA 135+62

STA 135+31.27
EOS - 735.45'
LOS - 16'

12" PIPE, TYPE A
35 LF

RESTORE EXISTING SWALE
STA 135+97 TO STA 136+44

STA 136+23.27
EOS - 731.05'
LOS - 16'

RESTORE EXISTING SWALE
STA 136+55 TO STA 136+75

STA 136+57.29
EOS - 729.38'
LOS - 14'

RESTORE EXISTING SWALE
STA 137+22 TO STA 139+06

6" SERVICE LATERAL
STA 137+35.30
EOS - 725.12'
LOS - 13'

STM - 21

15" PIPE, TYPE A
55 LF

SEE NOTES

FRANKLIN ROAD

SEE NOTES

STM - 22

12" PIPE, TYPE A
11 LF

STM - 23

15" PIPE, TYPE A
28 LF

STM - 24

SEE NOTES

SEE NOTES

STA 137+67.30
EOS - 723.53'
LOS - 20'

17-86-03-09-000
Michael Young
2285 Galena Ave

17-86-03-11-000
Michael Young
2285 Galena Ave

17-86-04-04-000
Alan & Ashley Sutton
2270 Galena Ave

17-86-04-03-000
Alan & Ashley Sutton
2270 Galena Ave

17-86-04-01-000
Alan & Ashley Sutton
2270 Galena Ave

SEE SHEET 70

MATCHLINE STA. 138+14

Mark J. Eicher, P.E., P.S.
155 Rehl Road
Zanesville, Ohio 43701
ENGINEER'S OFFICE 740-454-0155

PROJECT NAME: SANITARY SEWER IMPROVEMENTS
FRANKLIN ROAD
PROJECT LOCATION: LICKING VIEW
ZANESVILLE, OHIO 43701

PLANS APPROVED BY:
MJE

PLANS PREPARED BY:
GJW

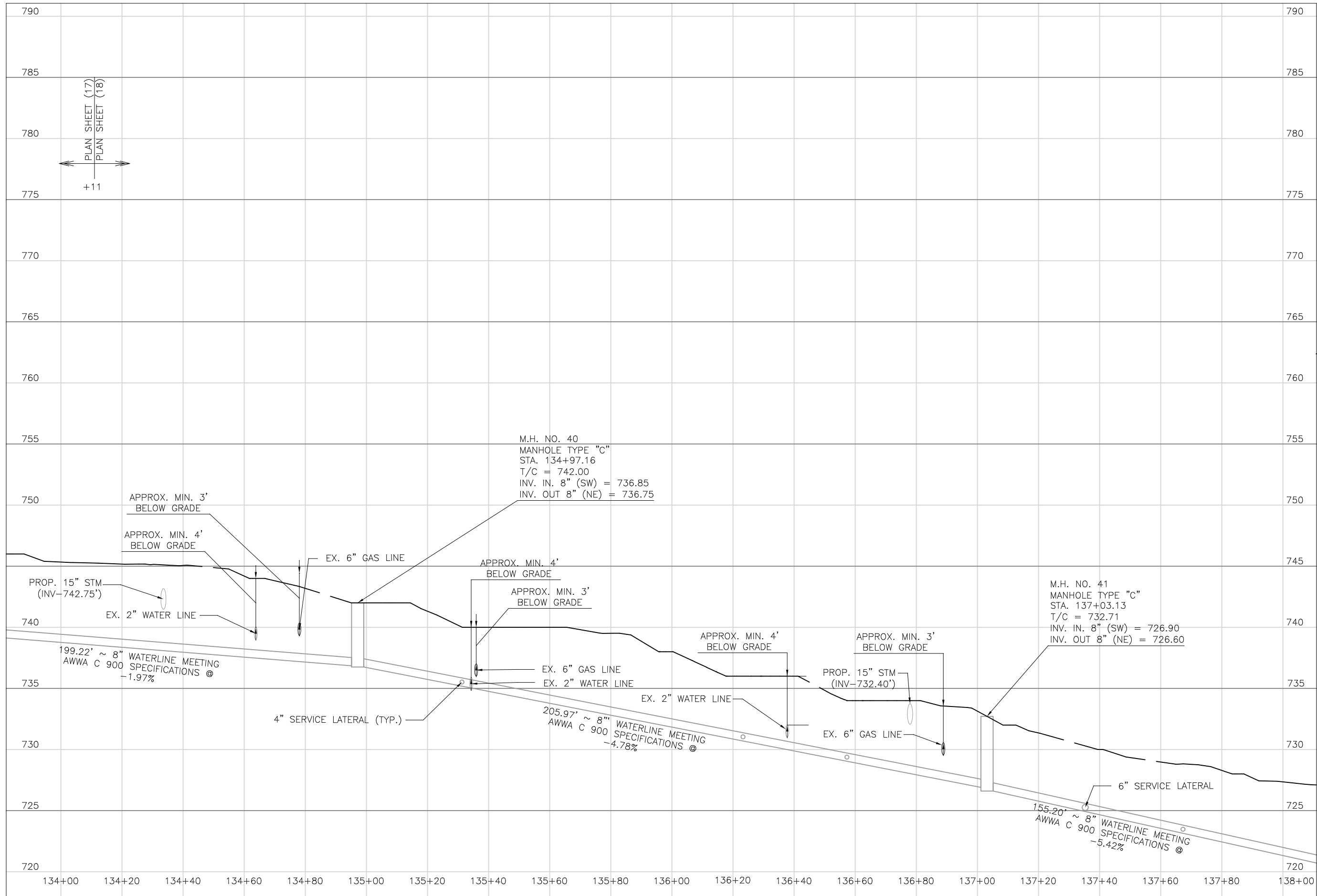
DATE:
08/14/2023

REVISED:
04/29/2024

SHEET SIZE:
11" x 17"

SHEET NAME:
PLAN
SHEET (18)

SHEET NUMBER:
52
118



Mark J. Eicher, P.E., P.S.
155 Rehl Road
Zanesville, Ohio 43701
740-454-0155

ENGINEER'S OFFICE

SANITARY SEWER IMPROVEMENTS
FRANKLIN ROAD

LICKING VIEW
ZANESVILLE, OHIO 43701

PREPARED BY:
MJE

PLANS PREPARED BY:
HJ

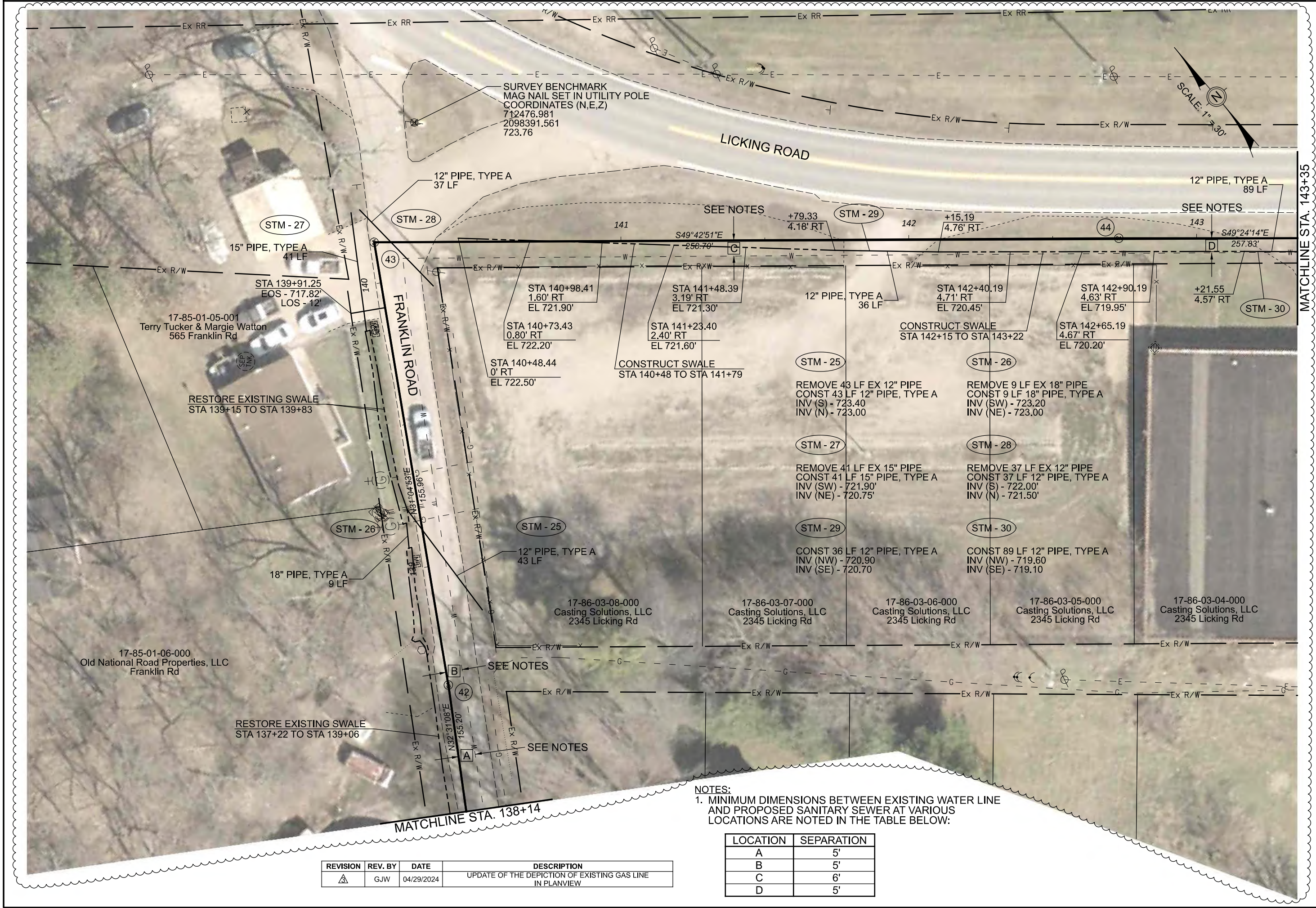
DATE:
08/15/2023

REVISED:

SHEET SIZE:
11" x 17"

SHEET NAME:
PROFILE
MANHOLE
40 & 41

SHEET NUMBER:
53
118



Mark J. Eicher, P.E., P.S.
155 Rehl Road
Zanesville, Ohio 43701
ENGINEER'S OFFICE 740-434-0155

Wiskingum
County
ENGINEER'S OFFICE

PREPARED BY:
PROJECT NAME:
PROJECT LOCATION:
PLANS APPROVED BY:
PLANS PREPARED BY:
DATE:
REVISED:
SHEET SIZE:
SHEET NAME:
SHEET NUMBER:

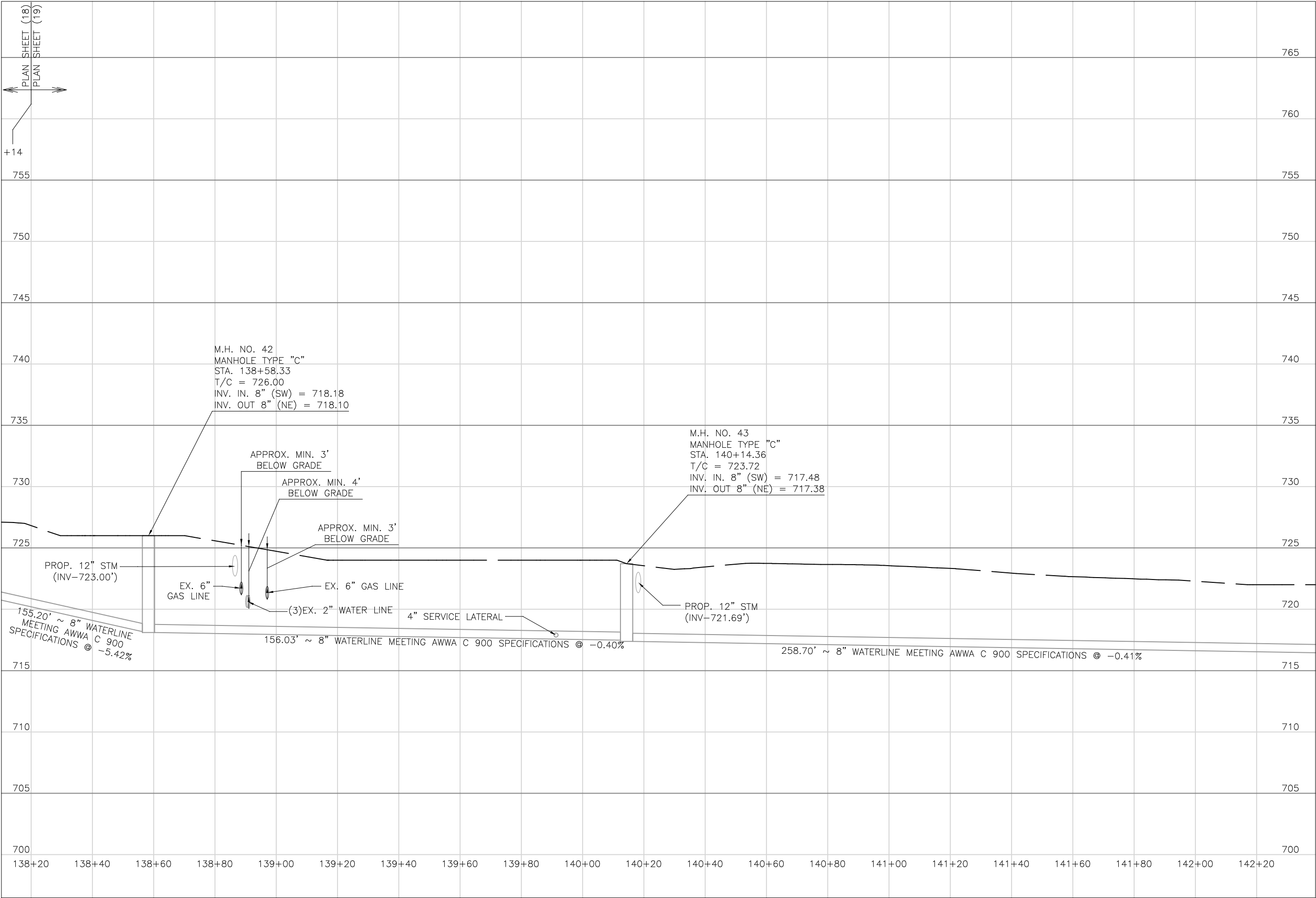
Sanitary Sewer Improvements
Franklin Road to Licking Road
Licking View
Zanesville, Ohio 43701

54
118

REVISION	REV. BY	DATE	DESCRIPTION
A	GJW	04/29/2024	UPDATE OF THE DEPICTION OF EXISTING GAS LINE IN PLANVIEW

LOCATION	SEPARATION
A	5'
B	5'
C	6'
D	5'

NOTES:
1. MINIMUM DIMENSIONS BETWEEN EXISTING WATER LINE AND PROPOSED SANITARY SEWER AT VARIOUS LOCATIONS ARE NOTED IN THE TABLE BELOW:



Mark J. Eicher, P.E., P.S.
155 Rehl Road
Zanesville, Ohio 43701
740-454-0155

Markuskingum

County

ENGINEER'S OFFICE

PREPARED BY:

PROJECT NAME:
SANITARY SEWER IMPROVEMENTS
FRANKLIN ROAD TO LICKING ROAD

PROJECT LOCATION:
LICKING VIEW
ZANESVILLE, OHIO 43701

PLANS APPROVED BY:

MJE

PLANS PREPARED BY:

HJ

DATE:

08/15/2023

REVISED:

SHEET SIZE:

11" x 17"

SHEET NAME:

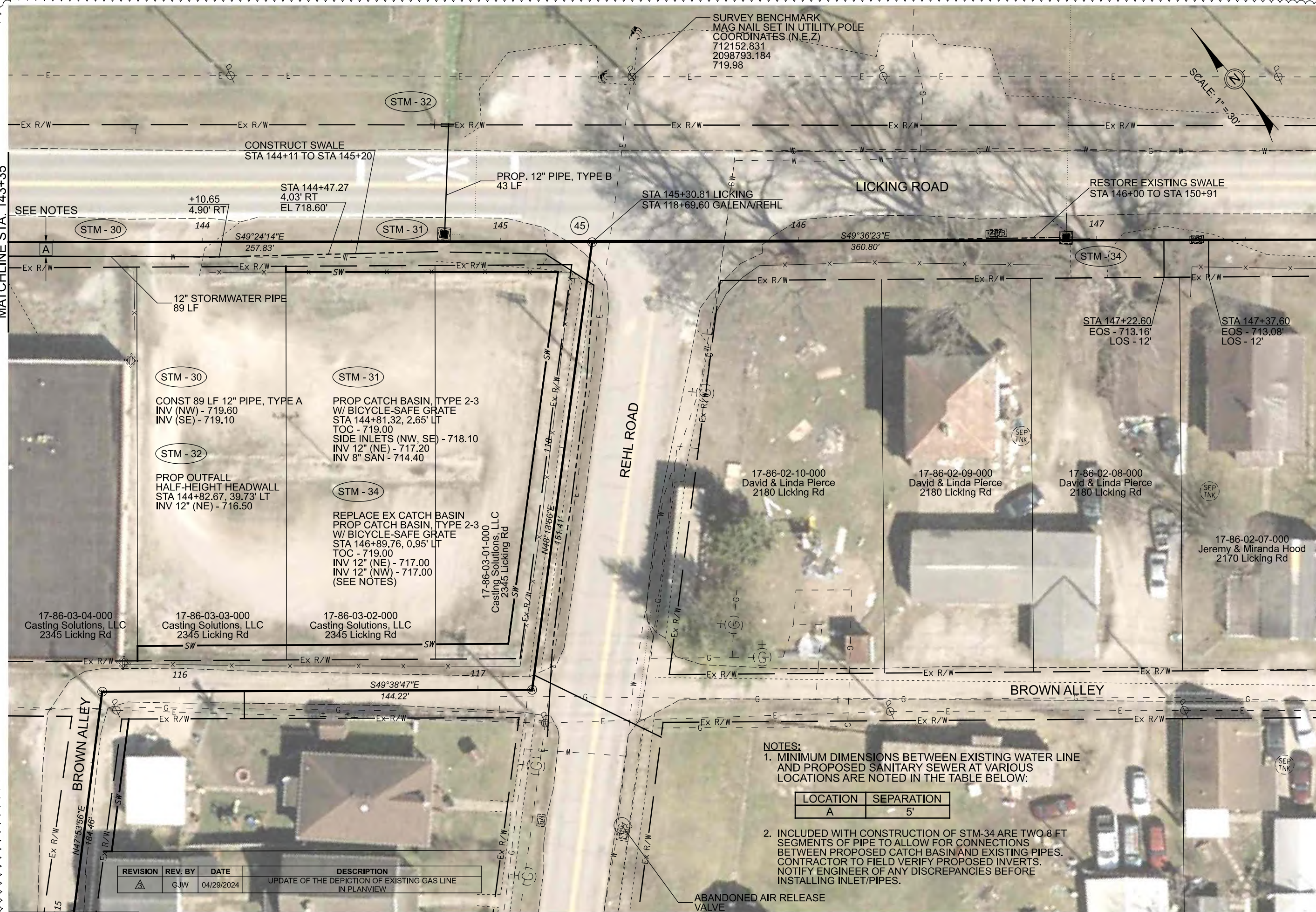
PROFILE
MANHOLE
42 & 43

SHEET NUMBER:

55
118

MATCHLINE STA. 143+35

MATCHLINE STA. 147+76



NOTES:
1. MINIMUM DIMENSIONS BETWEEN EXISTING WATER LINE AND PROPOSED SANITARY SEWER AT VARIOUS LOCATIONS ARE NOTED IN THE TABLE BELOW:

LOCATION	SEPARATION
A	5'

2. INCLUDED WITH CONSTRUCTION OF STM-34 ARE TWO 8 FT SEGMENTS OF PIPE TO ALLOW FOR CONNECTIONS BETWEEN PROPOSED CATCH BASIN AND EXISTING PIPES. CONTRACTOR TO FIELD VERIFY PROPOSED INVERTS. NOTIFY ENGINEER OF ANY DISCREPANCIES BEFORE INSTALLING INLET/PIPES.

REVISION	REV. BY	DATE	DESCRIPTION
A	GJW	04/29/2024	UPDATE OF THE DEPICTION OF EXISTING GAS LINE IN PLANVIEW

SEE SHEET 70

Mark J. Eichel, P.E., P.S.
155 Rehl Road
Zanesville, Ohio 43701
740-454-0155

Wiskindum County
ENGINEER'S OFFICE

PREPARED BY:
PROJECT NAME:
PROJECT LOCATION:

SANITARY SEWER IMPROVEMENTS
LICKING ROAD
LICKING VIEW
ZANESVILLE, OHIO 43701

PLANS APPROVED BY:
MJE

PLANS PREPARED BY:
GJW

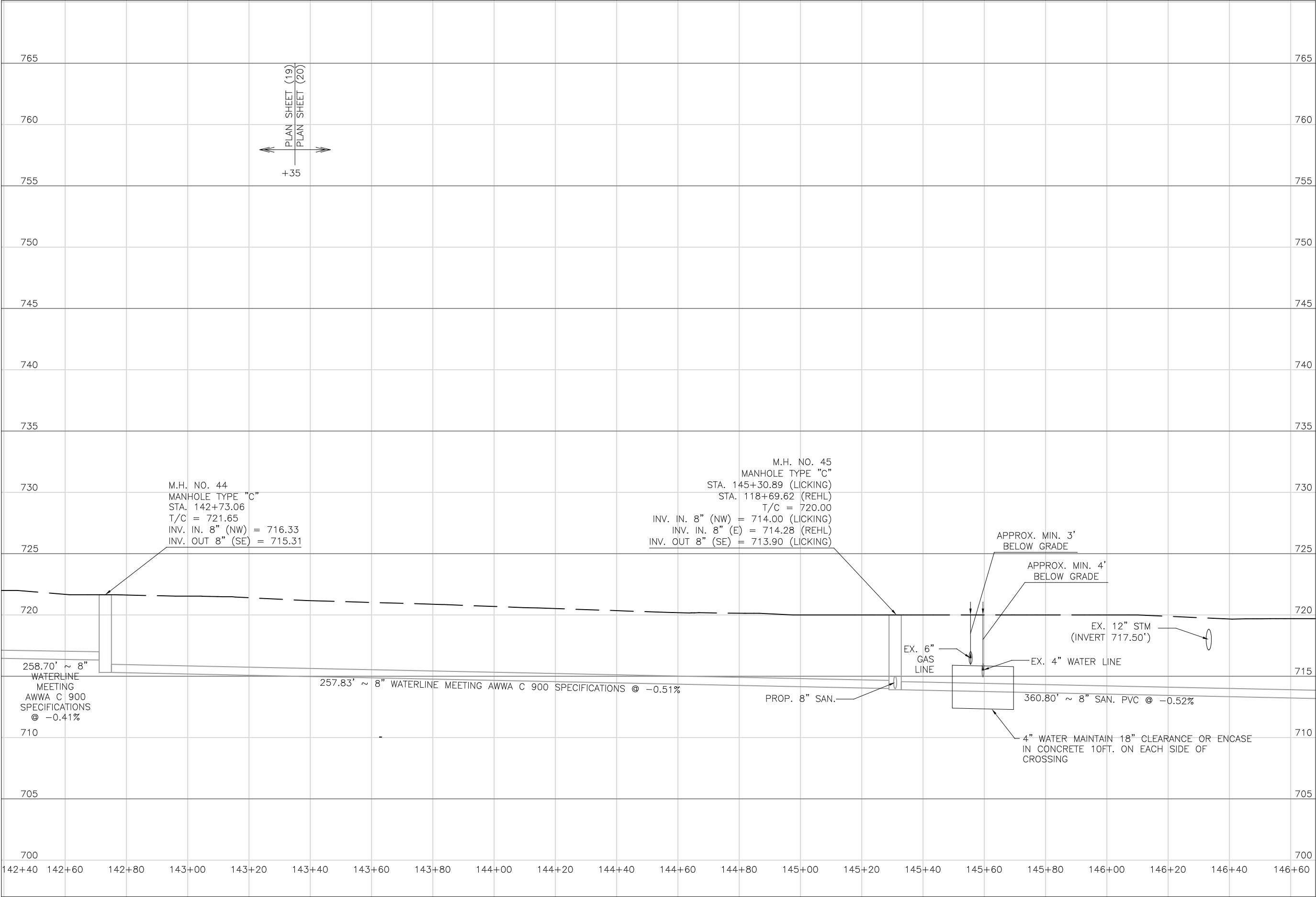
DATE:
08/14/2023

REVISED:
04/29/2024

SHEET SIZE:
11" x 17"

SHEET NAME:
PLAN SHEET (20)

SHEET NUMBER:
56
118



Mark J. Eicher, P.E., P.S.
155 Rehl Road
Zanesville, Ohio 43701
740-454-0155

Mark J. Eicher, P.E., P.S.
155 Rehl Road
Zanesville, Ohio 43701
740-454-0155

ENGINEER'S OFFICE

SANITARY SEWER IMPROVEMENTS
LICKING ROAD

LICKING VIEW
ZANESVILLE, OHIO 43701

PLANS APPROVED BY:
MJE

PLANS PREPARED BY:
HJ

DATE:
08/15/2023

REVISED:

SHEET SIZE:
11" x 17"

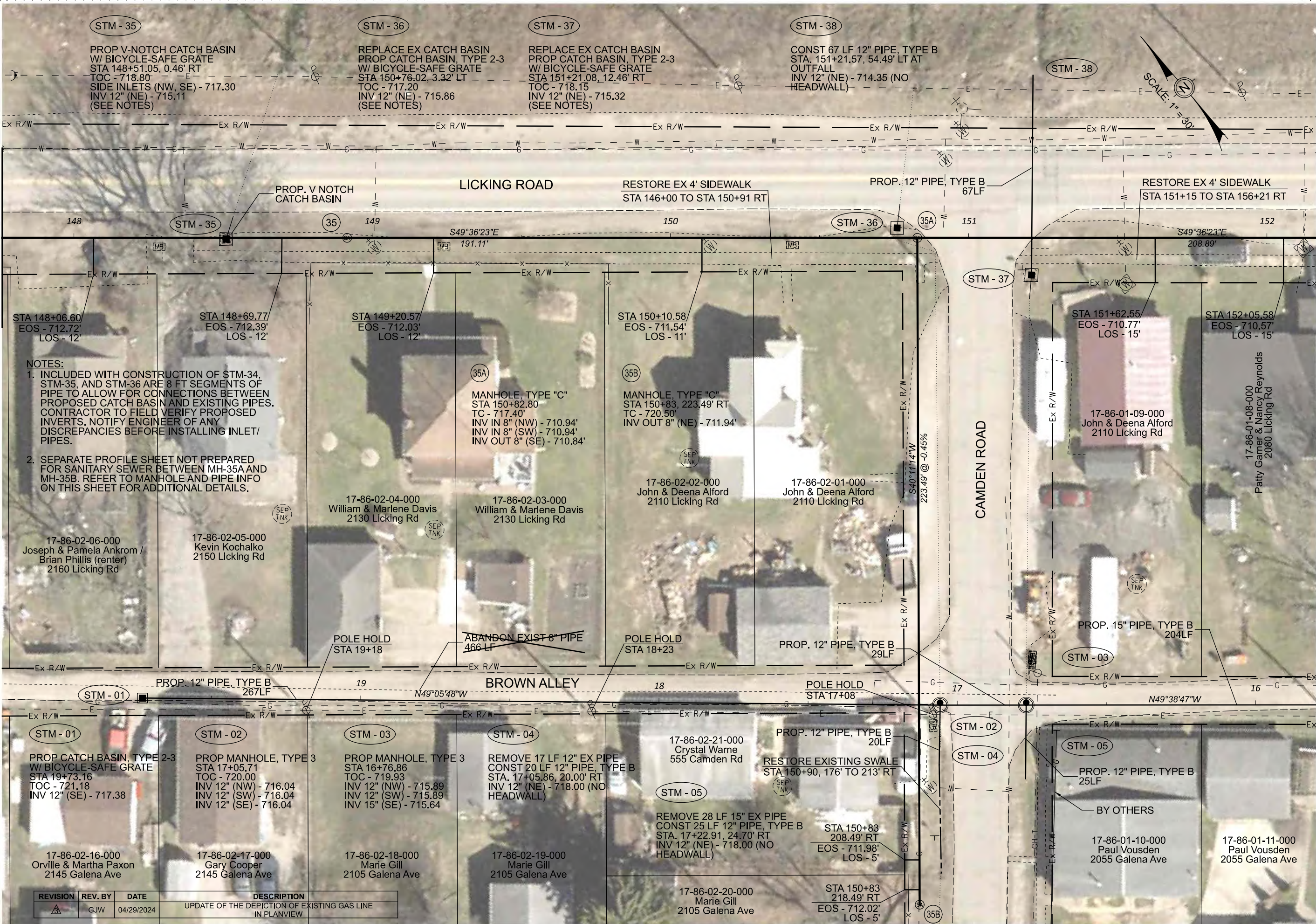
SHEET NAME:
PROFILE MANHOLE
44 & 45

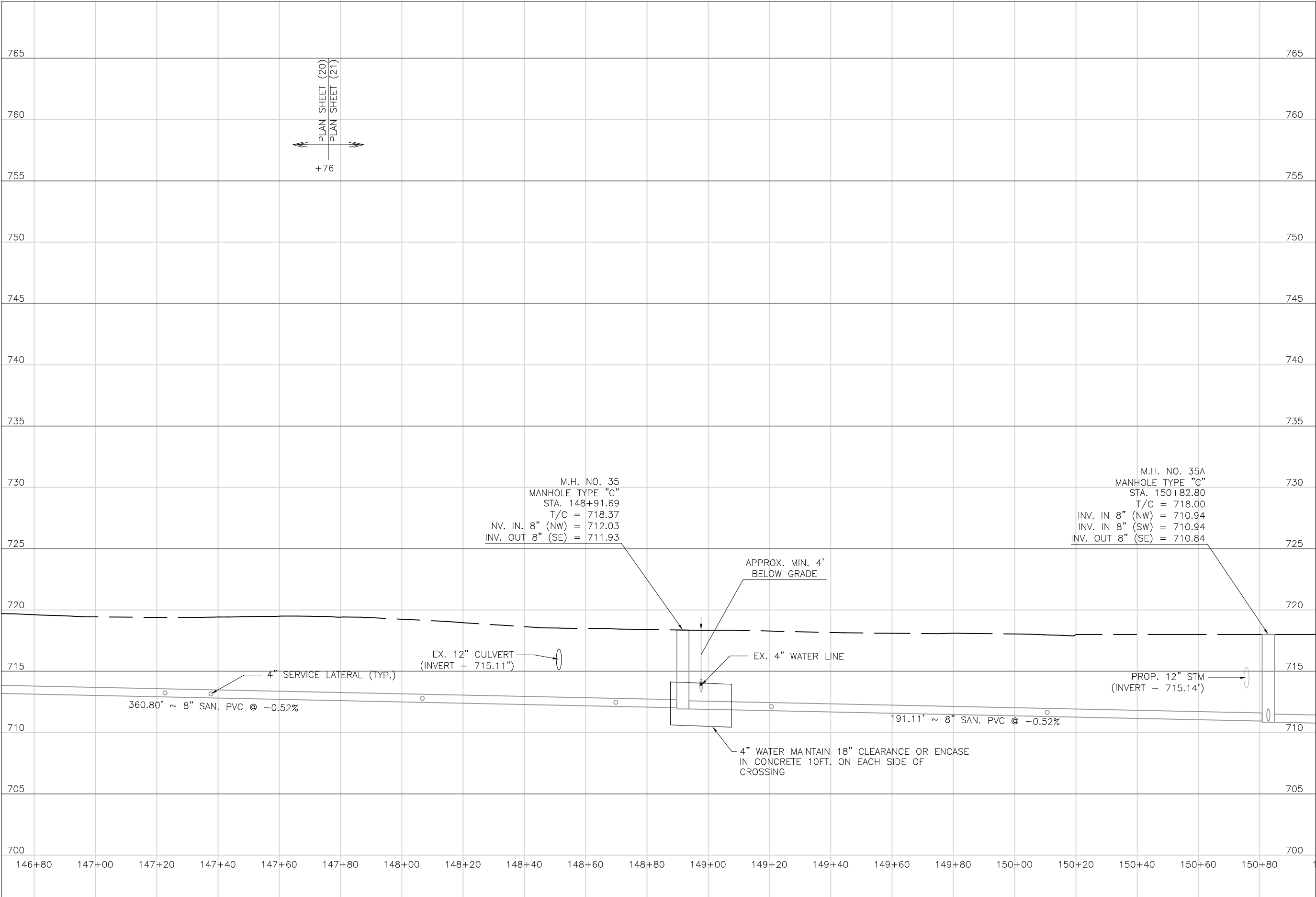
SHEET NUMBER:
57
118

MATCHLINE STA. 147+76

MATCHLINE STA. 152+17

MATCHLINE STA. 15+79





Mark J. Eicher, P.E., P.S.

155 Rehl Road

Zanesville, Ohio 43701

59

118

PREPARED BY:

PROJECT NAME:

PROJECT LOCATION:

SANITARY SEWER IMPROVEMENTS

LICKING ROAD

LICKING VIEW

ZANESVILLE, OHIO 43701

PLANS APPROVED BY:

MJE

PLANS PREPARED BY:

HJ

DATE:

08/15/2023

REVISED:

SHEET SIZE:

11" x 17"

SHEET NAME:

PROFILE MANHOLE

35 & 35A

SHEET NUMBER:

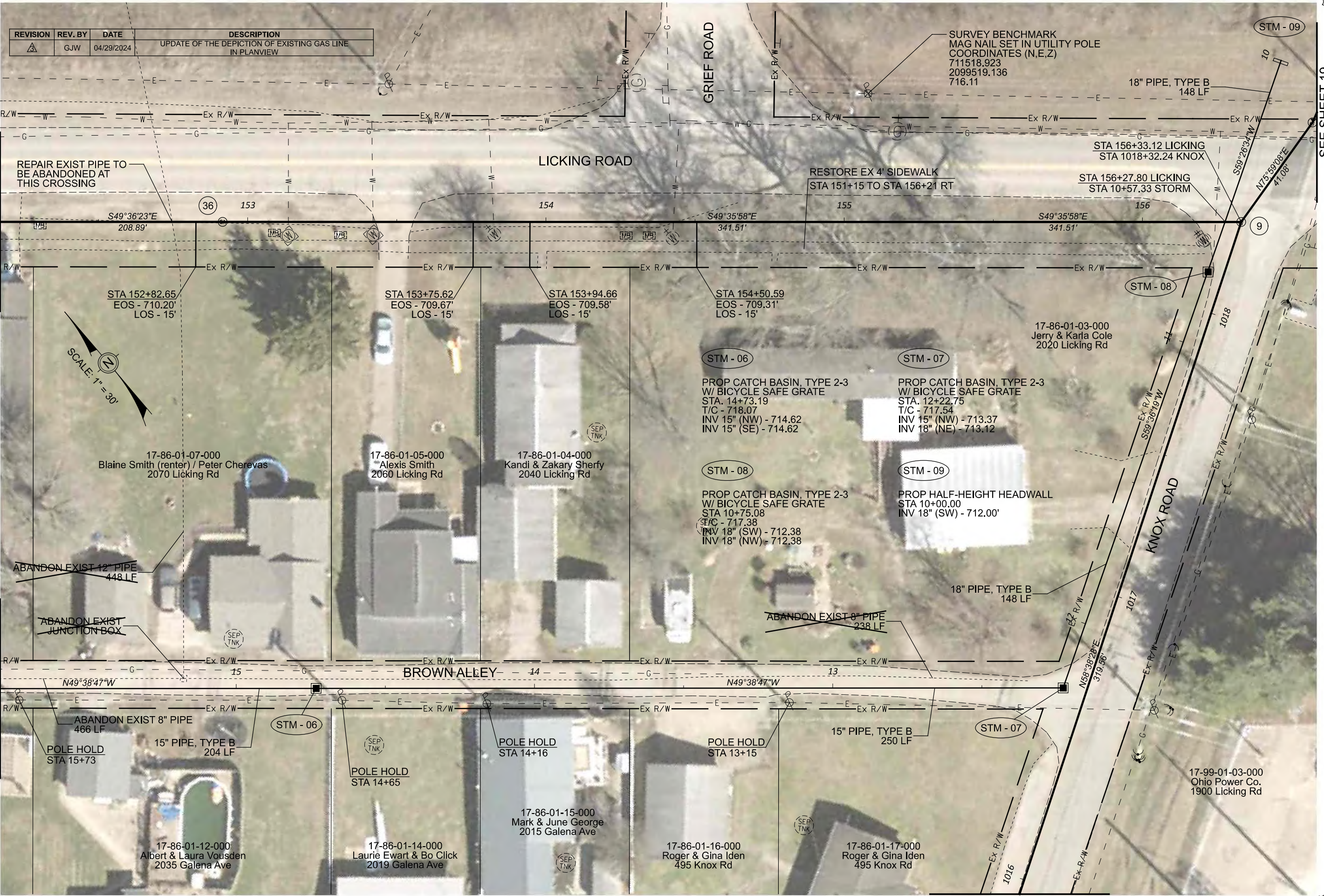
59

118

MATCHLINE STA. 152+17

MATCHLINE STA 15+79

REVISION	REV. BY	DATE	DESCRIPTION
	GJW	04/29/2024	UPDATE OF THE DEPICTION OF EXISTING GAS LINE IN PLANVIEW

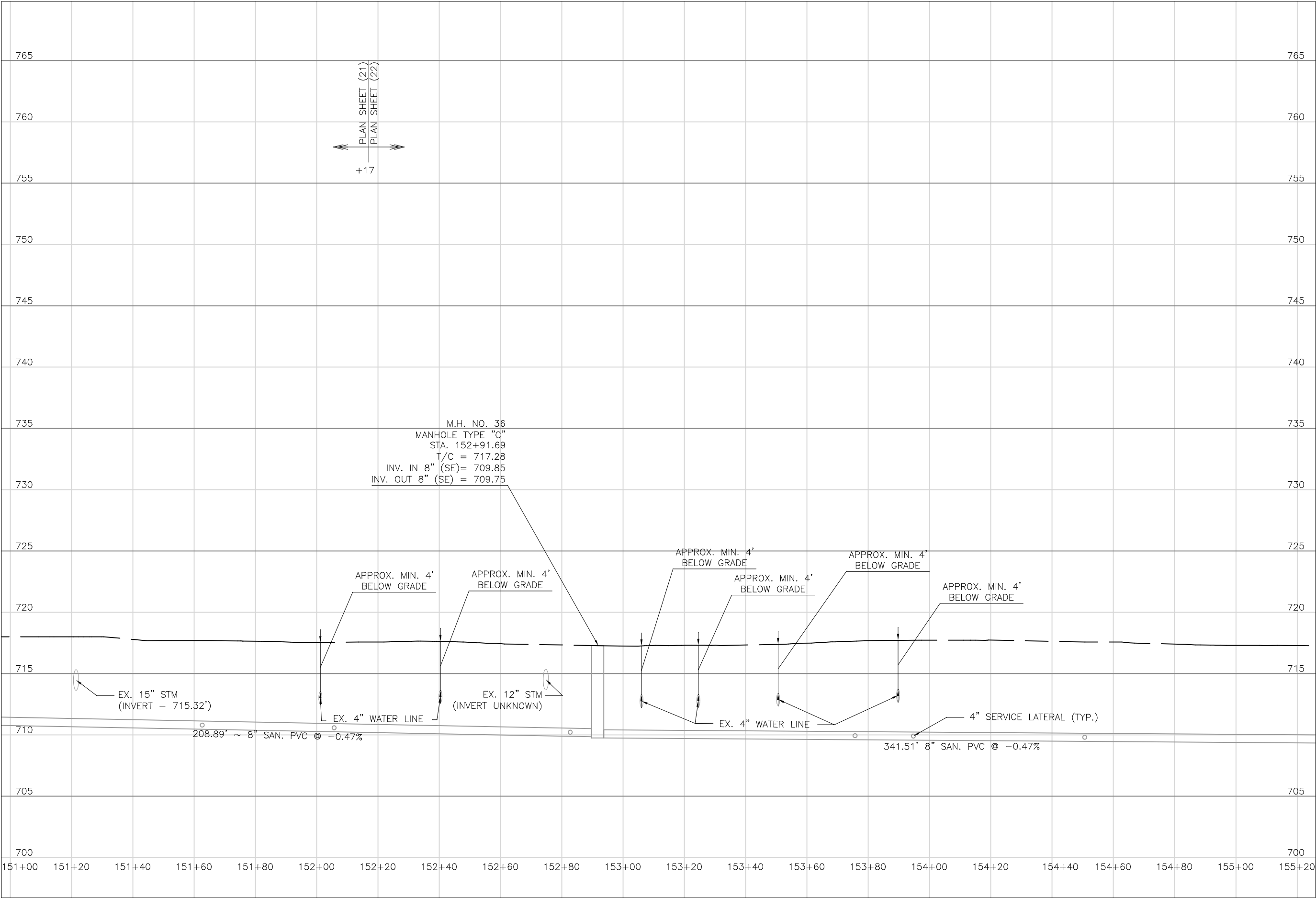


SEE SHEET 19

SEE SHEET 17

Mark J. Eicher, P.E., P.S.
Wiskingum
County
ENGINEER'S OFFICE 740-434-0155
155 Rehl Road
Zanesville, Ohio 43701

PREPARED BY:	PROJECT NAME:	PLANS APPROVED BY:	DATE:	REVISION:	SHEET SIZE:	SHEET NAME:	SHEET NUMBER:
	SANITARY SEWER IMPROVEMENTS LICKING ROAD TO KNOX ROAD	MJE	08/14/2023		11" x 17"	PLAN SHEET (22)	60 118
	PROJECT LOCATION:						
	LICKING VIEW ZANESVILLE, OHIO 43701						



Mark J. Eicher, P.E., P.S.
155 Rehl Road
Zanesville, Ohio 43701
740-454-0155

ENGINEER'S OFFICE

PREPARED BY:

SANITARY SEWER IMPROVEMENTS
LICKING ROAD

PROJECT NAME

PROJECT LOCATION

LICKING VIEW
ZANESVILLE, OHIO 43701

PROJECT LOCATION

PLANS APPROVED BY:

MJE

PLANS PREPARED BY:

HJ

DATE:

08/15/2023

REVISED:

SHEET SIZE:

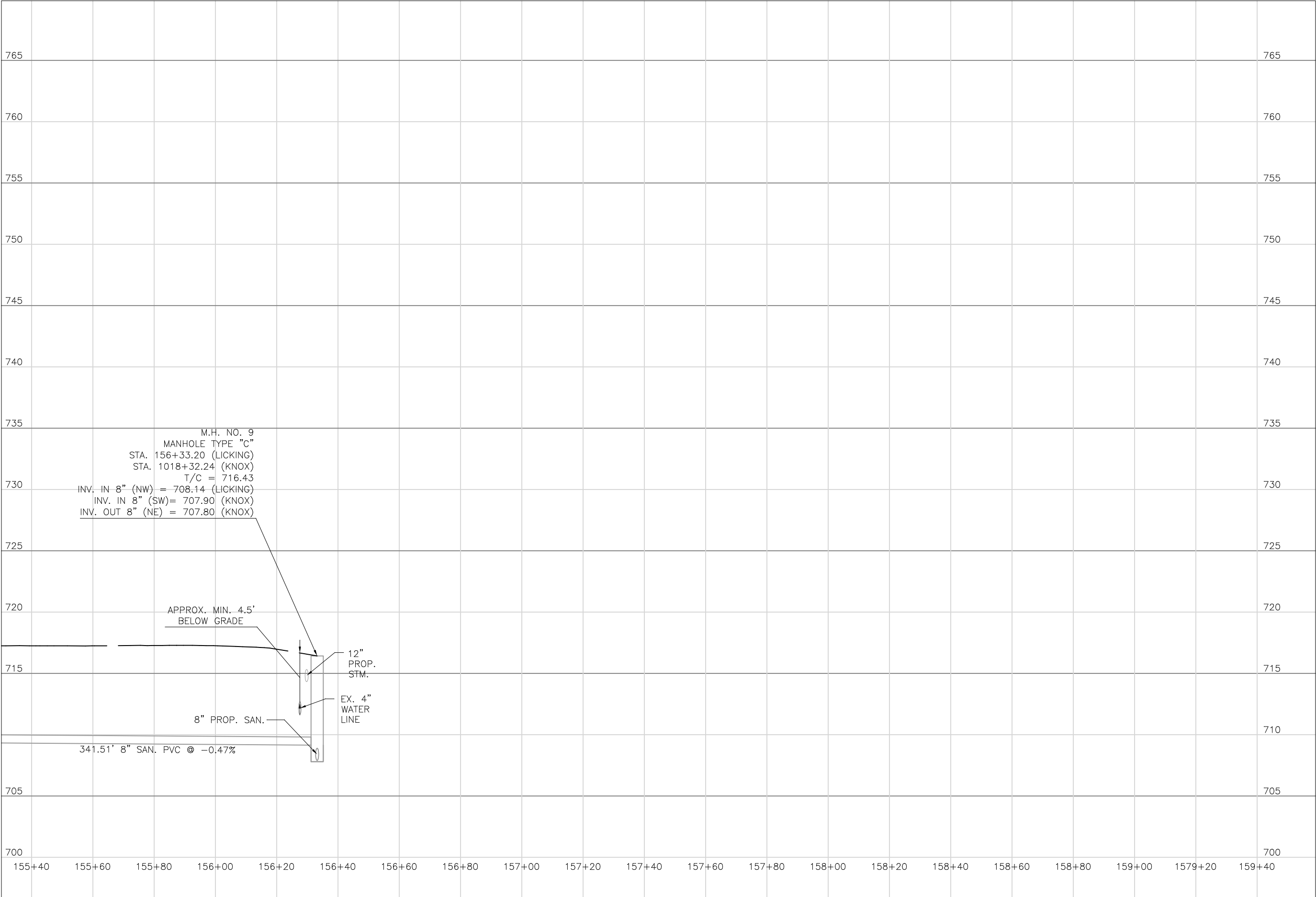
11" x 17"

SHEET NAME:

PROFILE
MANHOLE 36

SHEET NUMBER:

61
118



Mark J. Eicher, P.E., P.S.
155 Rehl Road
Zanesville, Ohio 43701
740-454-0155

PREPARED BY:

SANITARY SEWER IMPROVEMENTS
LICKING ROAD TO KNOX ROAD

LICKING VIEW
ZANESVILLE, OHIO 43701

PROJECT NAME

PROJECT LOCATION

PLANS APPROVED BY:
MJE

PLANS PREPARED BY:
HJ

DATE:
08/15/2023

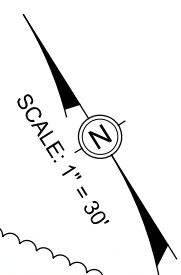
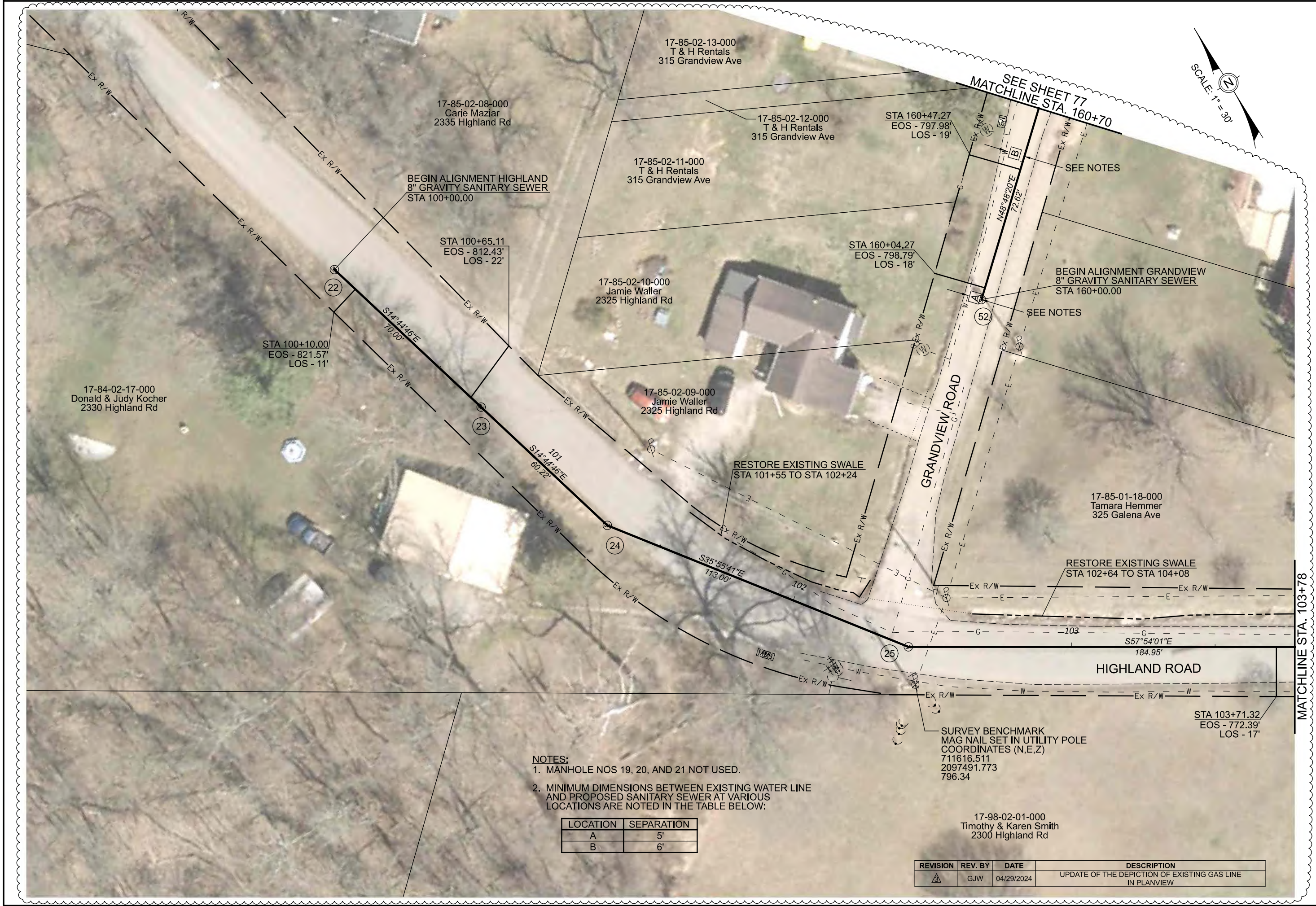
REVISED:

SHEET SIZE:
11" x 17"

SHEET NAME:
**PROFILE
MANHOLE 9**

SHEET NUMBER:

62
118



- NOTES:
1. MANHOLE NOS 19, 20, AND 21 NOT USED.
2. MINIMUM DIMENSIONS BETWEEN EXISTING WATER LINE AND PROPOSED SANITARY SEWER AT VARIOUS LOCATIONS ARE NOTED IN THE TABLE BELOW:

LOCATION	SEPARATION
A	5'
B	6'

REVISION	REV. BY	DATE	DESCRIPTION
	GJW	04/29/2024	UPDATE OF THE DEPICTION OF EXISTING GAS LINE IN PLANVIEW

MATCHLINE STA. 103+78

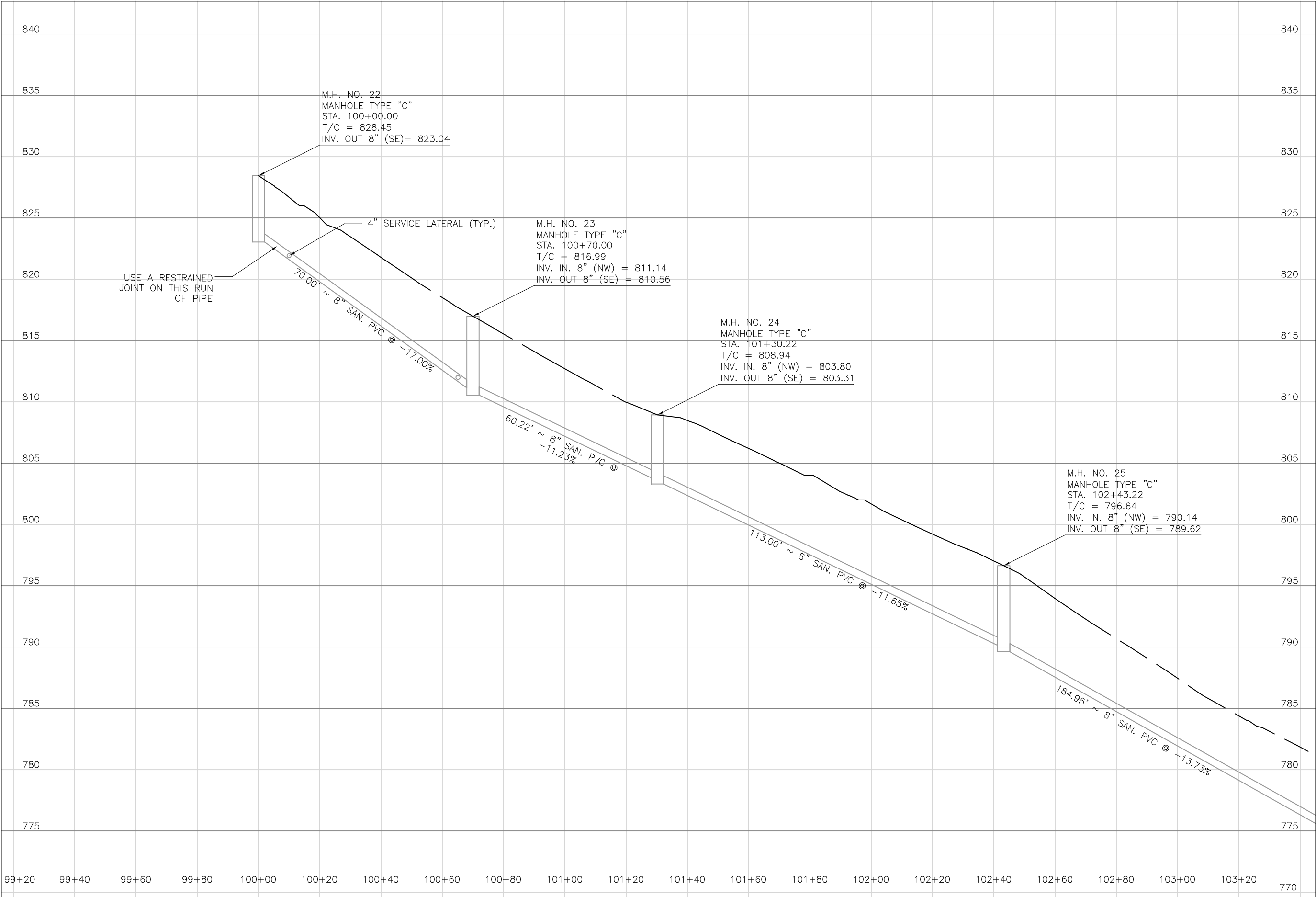
Mark J. Eicher, P.E., P.S.

155 Rehl Road
Zanesville, Ohio 43701
ENGINEER'S OFFICE 740-454-0155

PREPARED BY:
PROJECT NAME:
PROJECT LOCATION:
PLANS APPROVED BY:
PLANS PREPARED BY:
DATE:
REVISED:
SHEET SIZE:
SHEET NAME:
SHEET NUMBER:

SANITARY SEWER IMPROVEMENTS
HIGHLAND ROAD
LICKING VIEW
ZANESVILLE, OHIO 43701

63
118



Mark J. Eicher, P.E., P.S.
155 Rehl Road
Zanesville, Ohio 43701
740-454-0155

PREPARED BY:

SANITARY SEWER IMPROVEMENTS
HIGHLAND ROAD

LICKING VIEW
ZANESVILLE, OHIO 43701

PROJECT NAME:

PROJECT LOCATION:

PLANS APPROVED BY:

MJE

PLANS PREPARED BY:

HJ

DATE:

08/15/2023

REVISED:

SHEET SIZE:

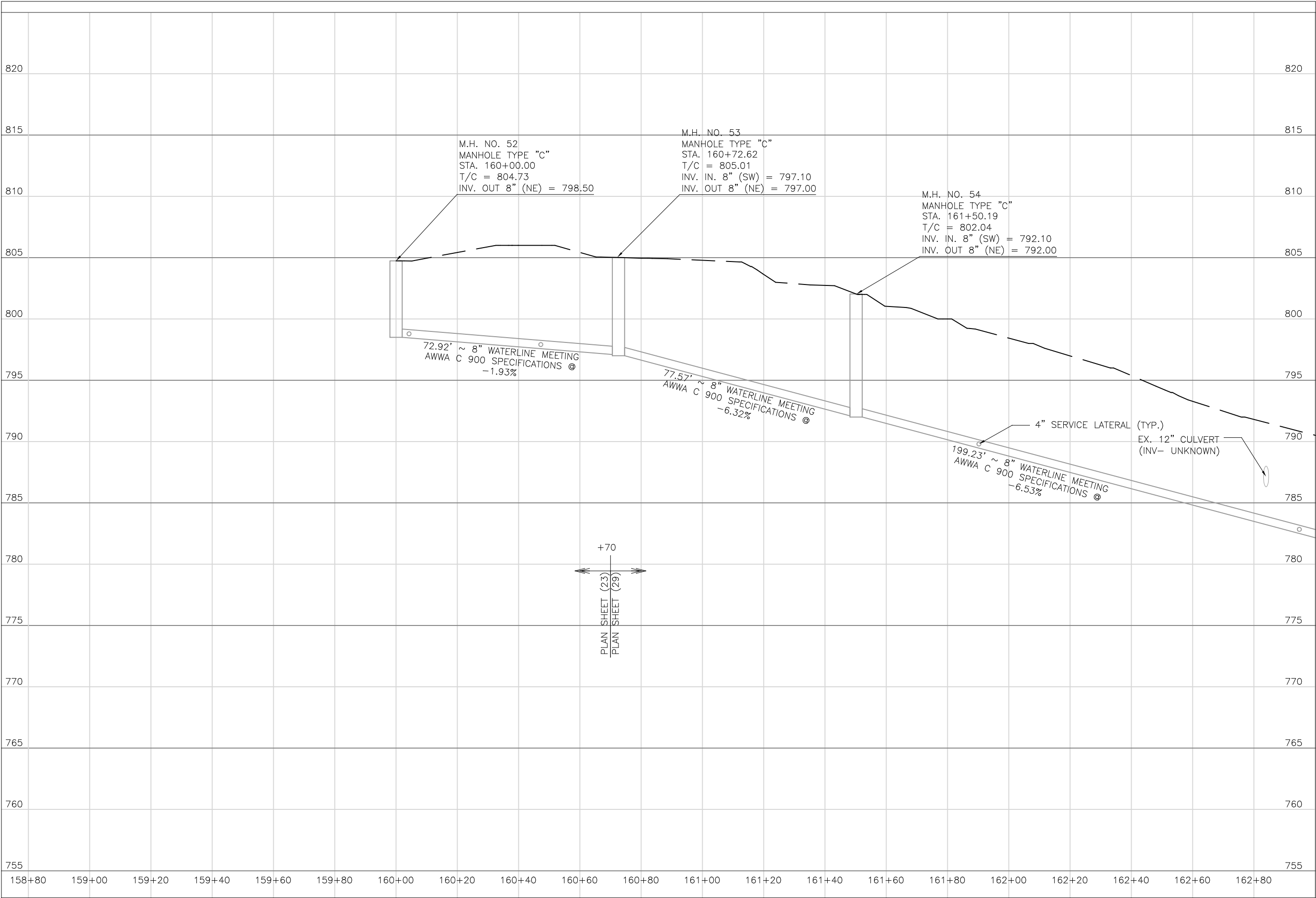
11" x 17"

SHEET NAME:

PROFILE
MANHOLE
22 - 25

SHEET NUMBER:

64
118



Mark J. Eicher, P.E., P.S.
155 Rehl Road
Zanesville, Ohio 43701
740-454-0155

ENGINEER'S OFFICE

PREPARED BY:

SANITARY SEWER IMPROVEMENTS
GRANDVIEW ROAD

PROJECT NAME:

LICKING VIEW
ZANESVILLE, OHIO 43701

PROJECT LOCATION:

PLANS APPROVED BY:

MJE

PLANS PREPARED BY:

HJ

DATE:

08/15/2023

REVISED:

SHEET SIZE:

11" x 17"

SHEET NAME:

PROFILE
MANHOLE
52 - 54

SHEET NUMBER:

65
118



Mark J. Eicher, P.E., P.S.
155 Rehl Road
Zanesville, Ohio 43701
740-454-0155

**Wiskindum**
County
ENGINEER'S OFFICE

PREPARED BY:

PROJECT NAME:
SANITARY SEWER IMPROVEMENTS
HIGHLAND ROAD TO BROWN ALLEY

PROJECT LOCATION:
LICKING VIEW
ZANESVILLE, OHIO 43701

PLANS APPROVED BY:
MJE

PLANS PREPARED BY:
GJW

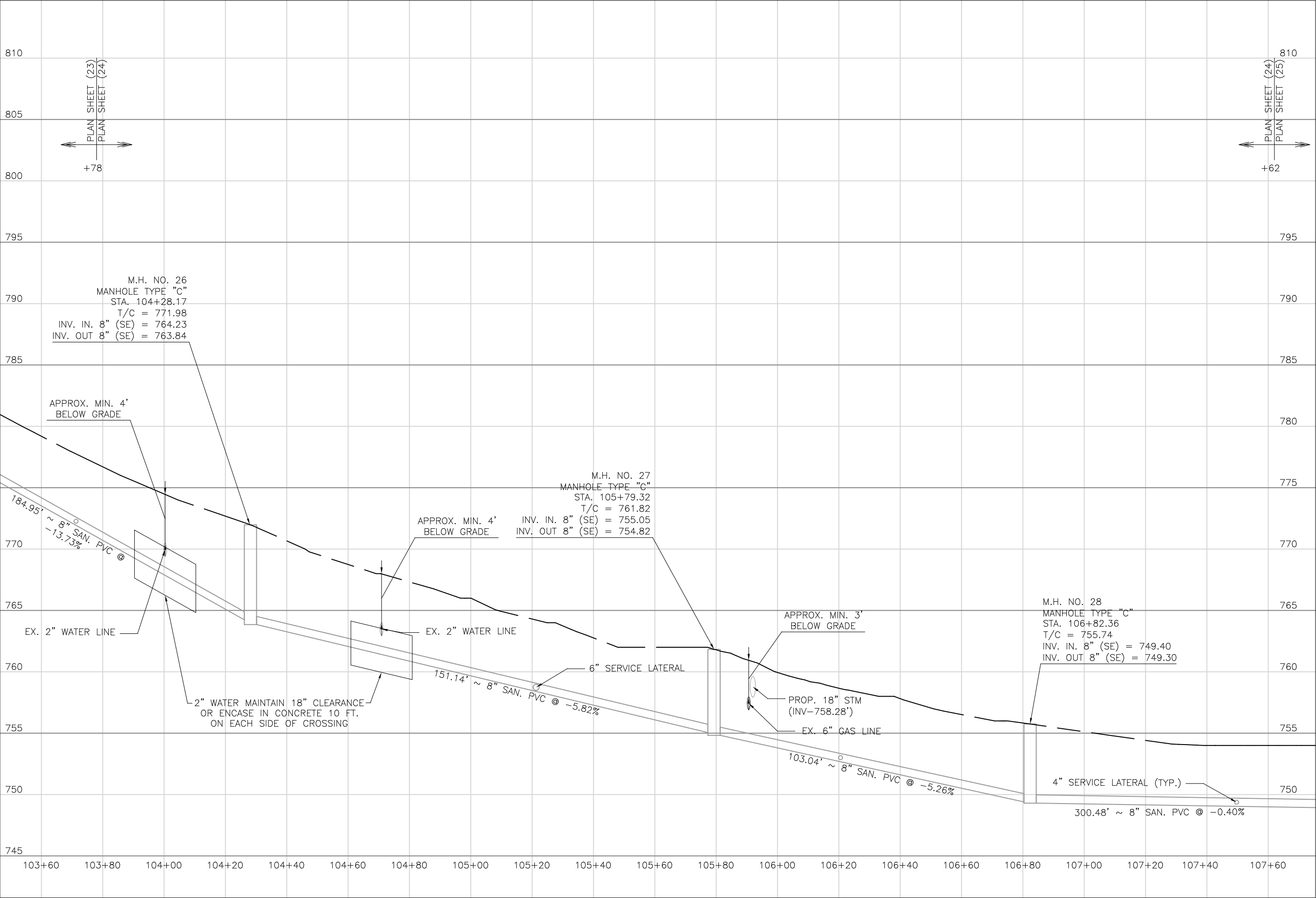
DATE:
08/14/2023

REVISED:
04/29/2024

SHEET SIZE:
11" x 17"

SHEET NAME:
PLAN
SHEET (24)

SHEET NUMBER:
66
118



Mark J. Eicher, P.E., P.S.
155 Rehl Road
Zanesville, Ohio 43701
740-454-0155

ENGINEER'S OFFICE

740-454-0155

PREPARED BY:

PROJECT NAME:
SANITARY SEWER IMPROVEMENTS
HIGHLAND ROAD TO BROWN ALLEY

PROJECT LOCATION:
LICKING VIEW
ZANESVILLE, OHIO 43701

PLANS APPROVED BY:

MJE

PLANS PREPARED BY:

HJ

DATE:

08/15/2023

REVISED:

SHEET SIZE:

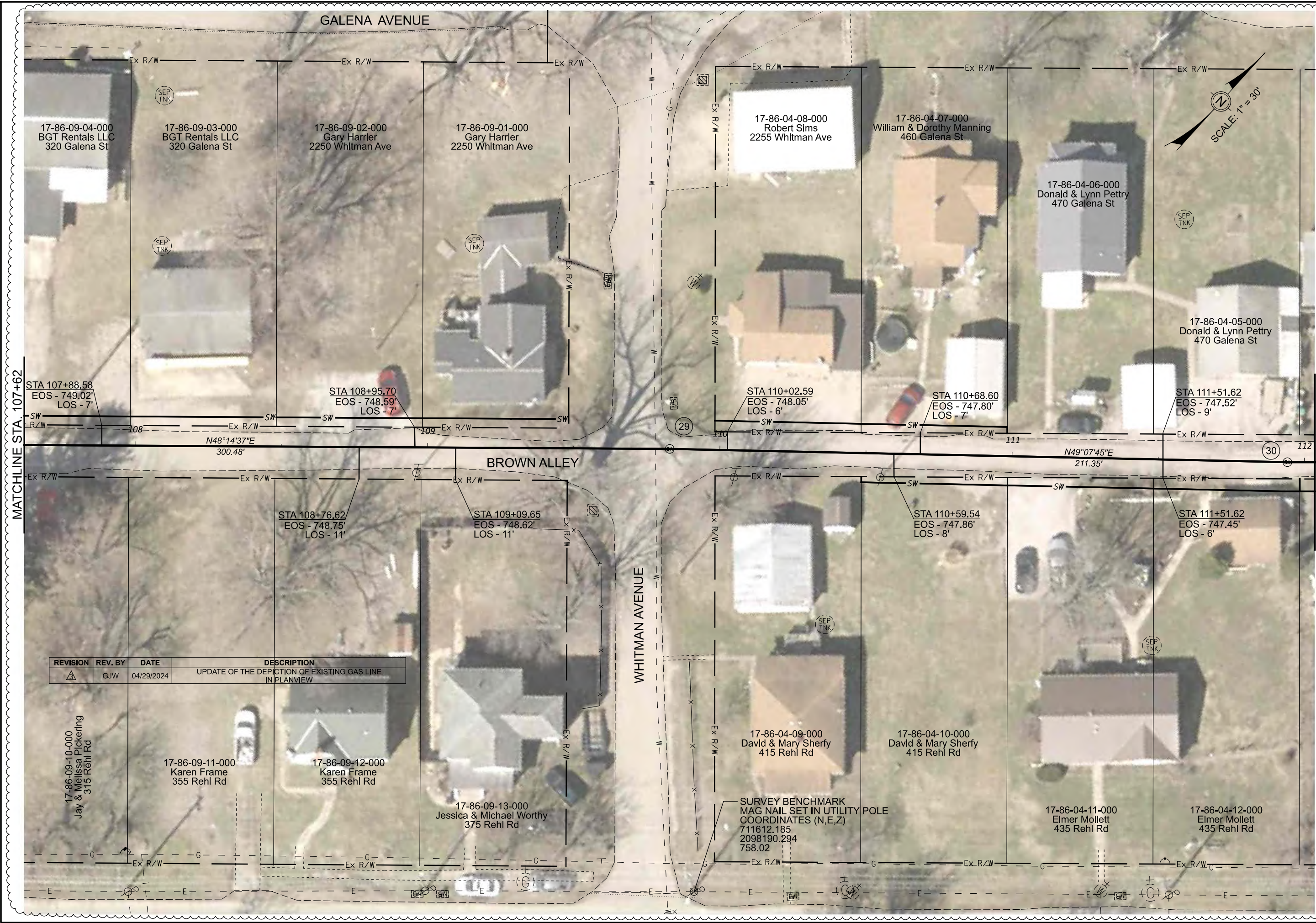
11" x 17"

SHEET NAME:

PROFILE
MANHOLE
26 - 28

SHEET NUMBER:

67
118



REVISION	REV. BY	DATE	DESCRIPTION
1	GJW	04/29/2024	UPDATE OF THE DEPICTION OF EXISTING GAS LINE IN PLANVIEW

17-86-09-10-000
Jay & Melissa Pickering
315 Rehl Rd

17-86-09-11-000
Karen Frame
355 Rehl Rd

17-86-09-12-000
Karen Frame
355 Rehl Rd

17-86-09-13-000
Jessica & Michael Worthly
375 Rehl Rd

17-86-04-09-000
David & Mary Sherfy
415 Rehl Rd

17-86-04-10-000
David & Mary Sherfy
415 Rehl Rd

17-86-04-11-000
Elmer Mollett
435 Rehl Rd

17-86-04-12-000
Elmer Mollett
435 Rehl Rd

SURVEY BENCHMARK
MAG NAIL SET IN UTILITY POLE
COORDINATES (N,E,Z)
711612.185
2098190.294
758.02

Mark J. Eicher, P.E., P.S.
155 Rehl Road
Zanesville, Ohio 43701
740-454-0155

Wiskindum
County
ENGINEER'S OFFICE

PROJECT NAME:
SANITARY SEWER IMPROVEMENTS
BROWN ALLEY

PROJECT LOCATION:
LICKING VIEW
ZANESVILLE, OHIO 43701

PLANS APPROVED BY:
MJE

PLANS PREPARED BY:
GJW

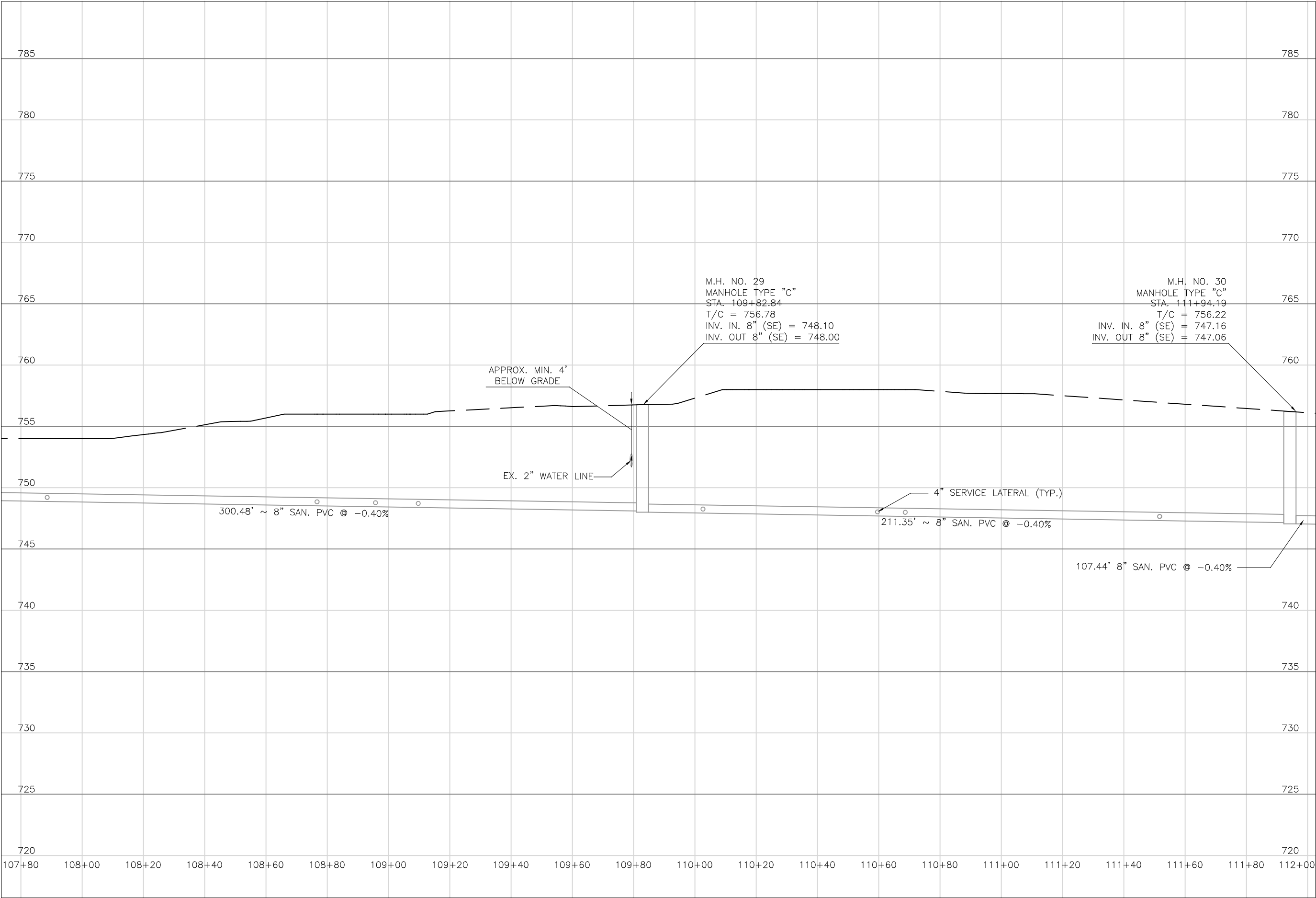
DATE:
08/14/2023

REVISED:
04/29/2024

SHEET SIZE:
11" x 17"

SHEET NAME:
PLAN
SHEET (25)

SHEET NUMBER:
68
118



Mark J. Eicher, P.E., P.S.
155 Rehl Road
Zanesville, Ohio 43701
740-454-0155

Muskingum
County
ENGINEER'S OFFICE

PREPARED BY:

SANITARY SEWER IMPROVEMENTS
BROWN ALLEY

PROJECT NAME

LICKING VIEW
ZANESVILLE, OHIO 43701

PROJECT LOCATION

PLANS APPROVED BY:
MJE

PLANS PREPARED BY:
HJ

DATE:
08/15/2023

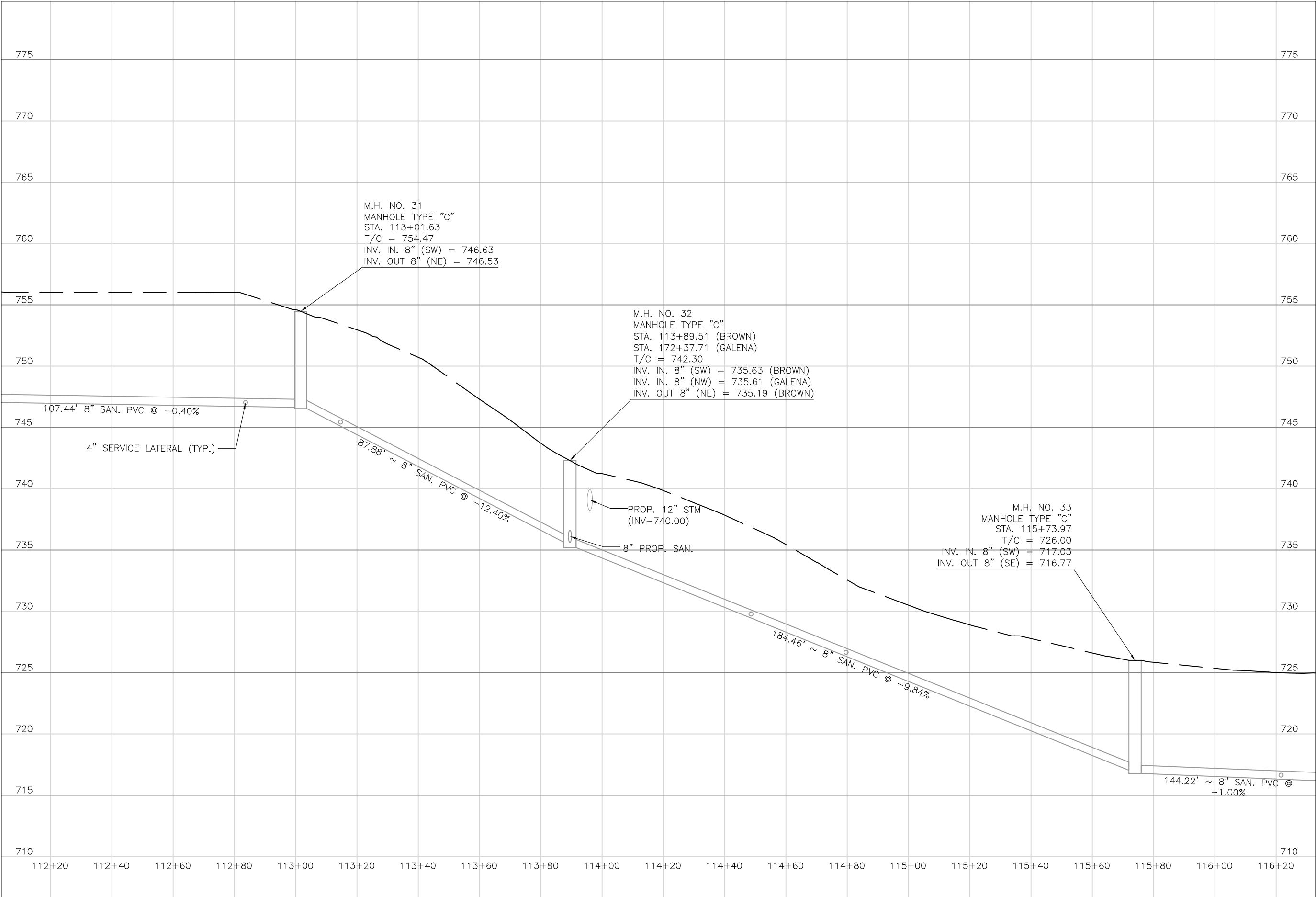
REVISED:

SHEET SIZE:
11" x 17"

SHEET NAME:
**PROFILE
MANHOLE
29 & 30**

SHEET NUMBER:

69
118



Mark J. Elcher, P.E., P.S.
155 Rehl Road
Zanesville, Ohio 43701
740-454-0155

ENGINEER'S OFFICE

PREPARED BY:

SANITARY SEWER IMPROVEMENTS
BROWN ALLEY

LICKING VIEW
ZANESVILLE, OHIO 43701

PROJECT NAME:

PROJECT LOCATION:

PLANS APPROVED BY:

MJE

PLANS PREPARED BY:

HJ

DATE:

08/15/2023

REVISED:

SHEET SIZE:

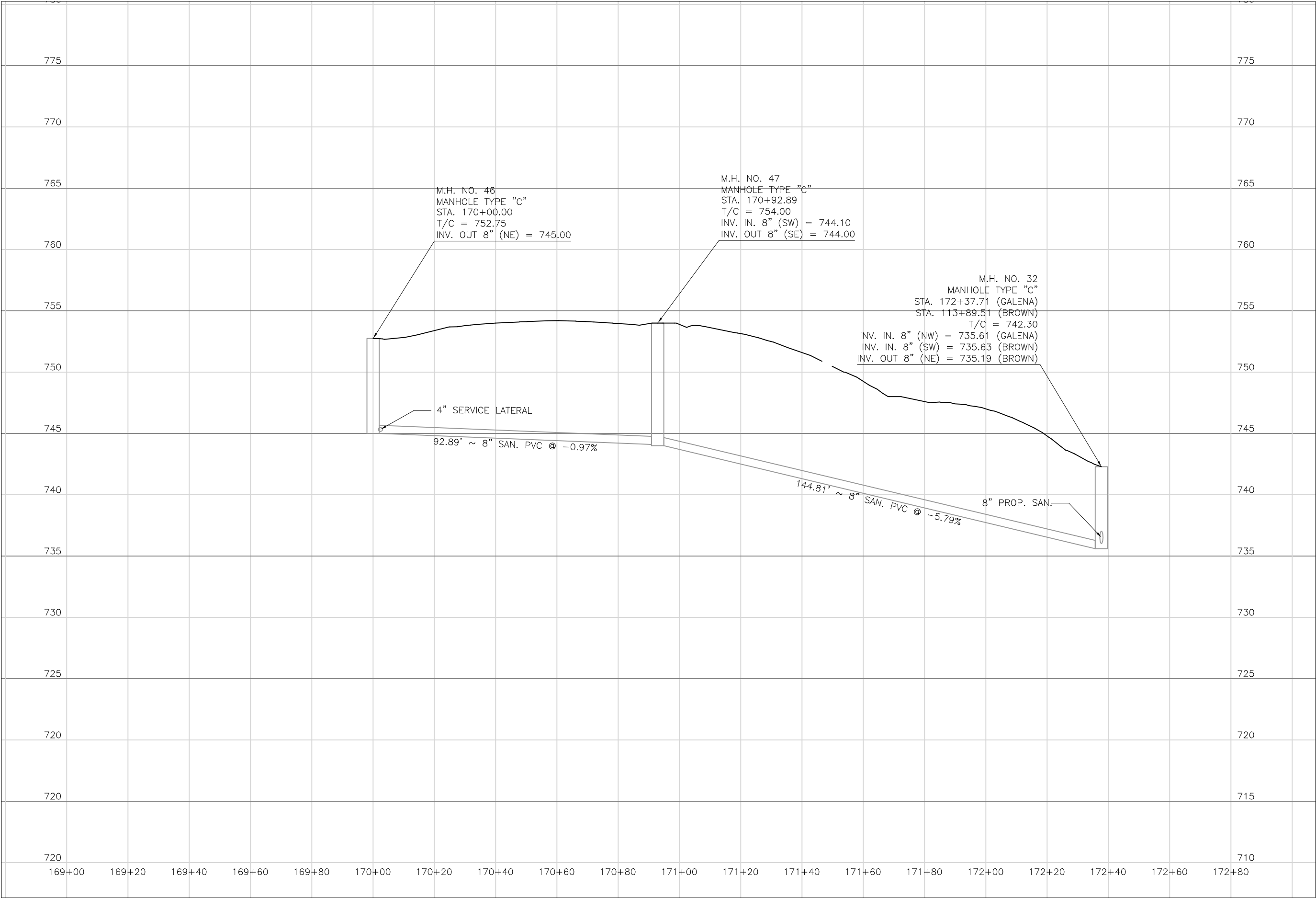
11" x 17"

SHEET NAME:

PROFILE
MANHOLE
31 - 33

SHEET NUMBER:

71
118



Mark J. Eicher, P.E., P.S.
155 Rehl Road
Zanesville, Ohio 43701
740-454-0155

ENGINEER'S OFFICE

PREPARED BY:

SANITARY SEWER IMPROVEMENTS
GALENA AVE TO BROWN ALLEY

LICKING VIEW
ZANESVILLE, OHIO 43701

PROJECT NAME:
PROJECT LOCATION:

PLANS APPROVED BY:
MJE

PLANS PREPARED BY:
HJ

DATE:
08/15/2023

REVISED:

SHEET SIZE:
11" x 17"

SHEET NAME:
**PROFILE
MANHOLE
46-47 & 32**

SHEET NUMBER:

72
118

SEE SHEET 56

MATCHLINE STA. 116+39

SEE SHEET 58

SEE SHEET 58

REVISION	REV. BY	DATE	DESCRIPTION
1	GJW	04/29/2024	UPDATE OF THE DERPICTION OF EXISTING GAS LINE IN PLANVIEW



SURVEY BENCHMARK
MAG NAIL SET IN UTILITY POLE
COORDINATES (N,E,Z)
712152.831
2098793.184
719.98

STA 118+69.60 GALENA/REHL
STA 145+30.81 LICKING

LICKING ROAD

17-86-03-04-001
Casting Solutions, LLC
2345 Licking Rd

17-86-03-04-000
Casting Solutions, LLC
2345 Licking Rd

RESTORE EX 4' SIDEWALK
STA 117+22 TO STA 118+56

RESTORE EXISTING SWALE
STA 117+30 TO STA 118+56

17-86-02-10-000
David & Linda Pierce
2180 Licking Rd

17-86-02-09-000
David & Linda Pierce
2180 Licking Rd

17-86-02-08-000
David & Linda Pierce
2180 Licking Rd

17-86-02-07-000
Jeremy & Miranda Hood
2170 Licking Rd

17-86-02-06-000
Joseph & Pamela Ankrom/
Brian Phillin (renter)
2160 Licking Rd

17-86-02-05-000
Kevin Kochalko
2150 Licking Rd

REMOVE 19 LF OF 12" EX PIPE
CONST 19 LF 12" PIPE, TYPE A
(NO HEADWALLS)
INV 12" (S) - 718.40
INV 12" (N) - 718.30

REMOVE 28 LF OF 12" EX PIPE
CONST 28 LF 12" PIPE, TYPE A
(NO HEADWALLS)
INV 12" (SW) - 720.15
INV 12" (NE) - 720.15

BORE LATERAL
UNDER PAVT

BROWN ALLEY

STA 117+23.21
EOS - 716.18'
LOS - 47'

ABANDONED AIR RELEASE
VALVE

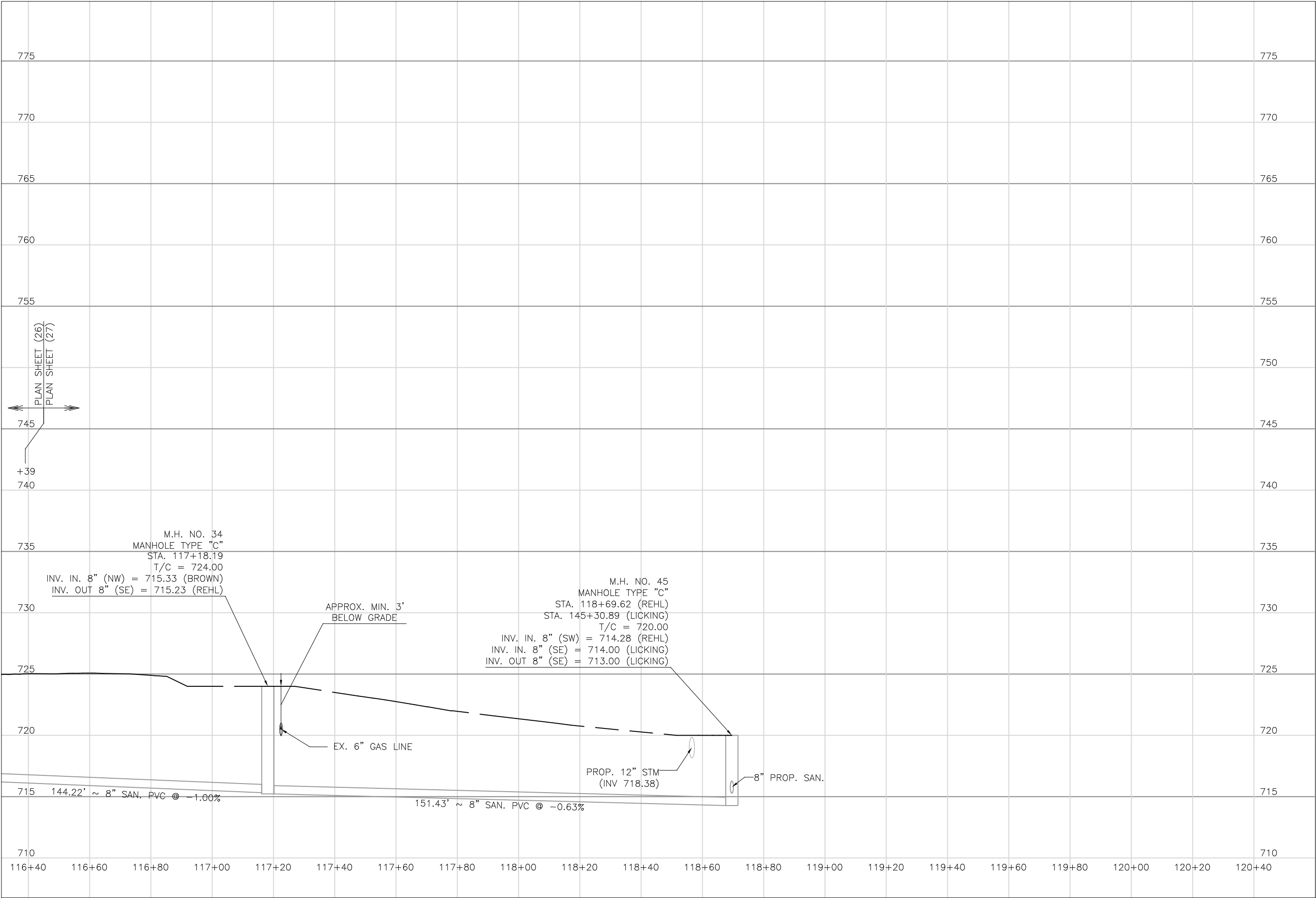
17-86-02-14-000
Lynn & John Dooley
2175 Galena Ave

17-86-02-15-000
Susan Taylor
2155 Galena Ave

12" PIPE, TYPE A
28LF

NOTES:

- SEE SHEETS 58 AND 60 FOR INFORMATION REGARDING DRAINAGE IMPROVEMENTS ON BROWN ALLEY.
- SERVICE LATERAL @ STA 117+23 RT SHALL BE BORED UNDER REHL RD TO MAINTAIN ACCESS
- BORING LATERAL ACROSS REHL ROAD MAY REQUIRE TEMPORARY EASEMENT FROM PROPERTY OWNER. CONTRACTOR TO COORDINATE DIRECTLY WITH PROPERTY OWNER TO OBTAIN EASEMENT.



Mark J. Elcher, P.E., P.S.

155 Rehl Road

Zanesville, Ohio 43701

740-454-0155

Muskingum

A County

ENGINEER'S OFFICE

PREPARED BY:

SANITARY SEWER IMPROVEMENTS

BROWN ALLEY TO REHL ROAD TO LICKING ROAD

PROJECT NAME

PROJECT LOCATION

LICKING VIEW

ZANESVILLE, OHIO 43701

PLANS APPROVED BY:

MJE

PLANS PREPARED BY:

HJ

DATE:

08/15/2023

REVISED:

SHEET SIZE:

11" x 17"

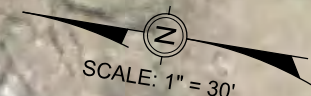
SHEET NAME:

PROFILE MANHOLE 34 & 45

SHEET NUMBER:

74

118



BEGIN ALIGNMENT GRANDVIEW
8" GRAVITY SANITARY SEWER
STA 180+00.00

BEGIN DIRECTIONAL DRILL
8" GRAVITY SANITARY SEWER
STA 180+55.00

BORE PIT LIMITS

SEE NOTES

SEE NOTES

MATCHLINE STA. 182+90
SEE SHEET 77

17-85-02-25-000
Donald & Linda Jones
375 Grandview Ave

STA 180+04.05
EOS - 786.70'
LOS - 9'

STA 180+50.07
EOS - 784.64'
LOS - 8'

17-85-02-24-000
Scott Hardesty
355 Grandview Ave

17-85-02-23-000
Scott Hardesty
355 Grandview Ave

17-85-02-22-000
Scott Hardesty
355 Grandview Ave

17-85-02-21-000
Scott Hardesty
355 Grandview Ave

17-85-02-20-000
Brigitte Gooden
335 Grandview Ave

17-85-02-19-000
Brigitte Gooden
335 Grandview Ave

- NOTES:
- 1. MANHOLE NOS 48 & 50 NOT USED.
 - 2. MINIMUM DIMENSIONS BETWEEN EXISTING WATER LINE AND PROPOSED SANITARY SEWER AT VARIOUS LOCATIONS ARE NOTED IN THE TABLE BELOW:

LOCATION	SEPARATION
A	7'
B	3'

REVISION	REV. BY	DATE	DESCRIPTION
1	GJW	04/29/2024	UPDATE OF THE DEPICTION OF EXISTING GAS LINE IN PLANVIEW

PREPARED BY:

Mark J. Eicher, P.E., P.S.
155 Rehl Road
Zanesville, Ohio 43701
740-454-0155

PROJECT NAME:

SANITARY SEWER IMPROVEMENTS
GRANDVIEW ROAD

PROJECT LOCATION:

LICKING VIEW
ZANESVILLE, OHIO 43701

PLANS APPROVED BY:

MJE

PLANS PREPARED BY:

GJW

DATE:

08/14/2023

REVISED:

04/29/2024

SHEET SIZE:

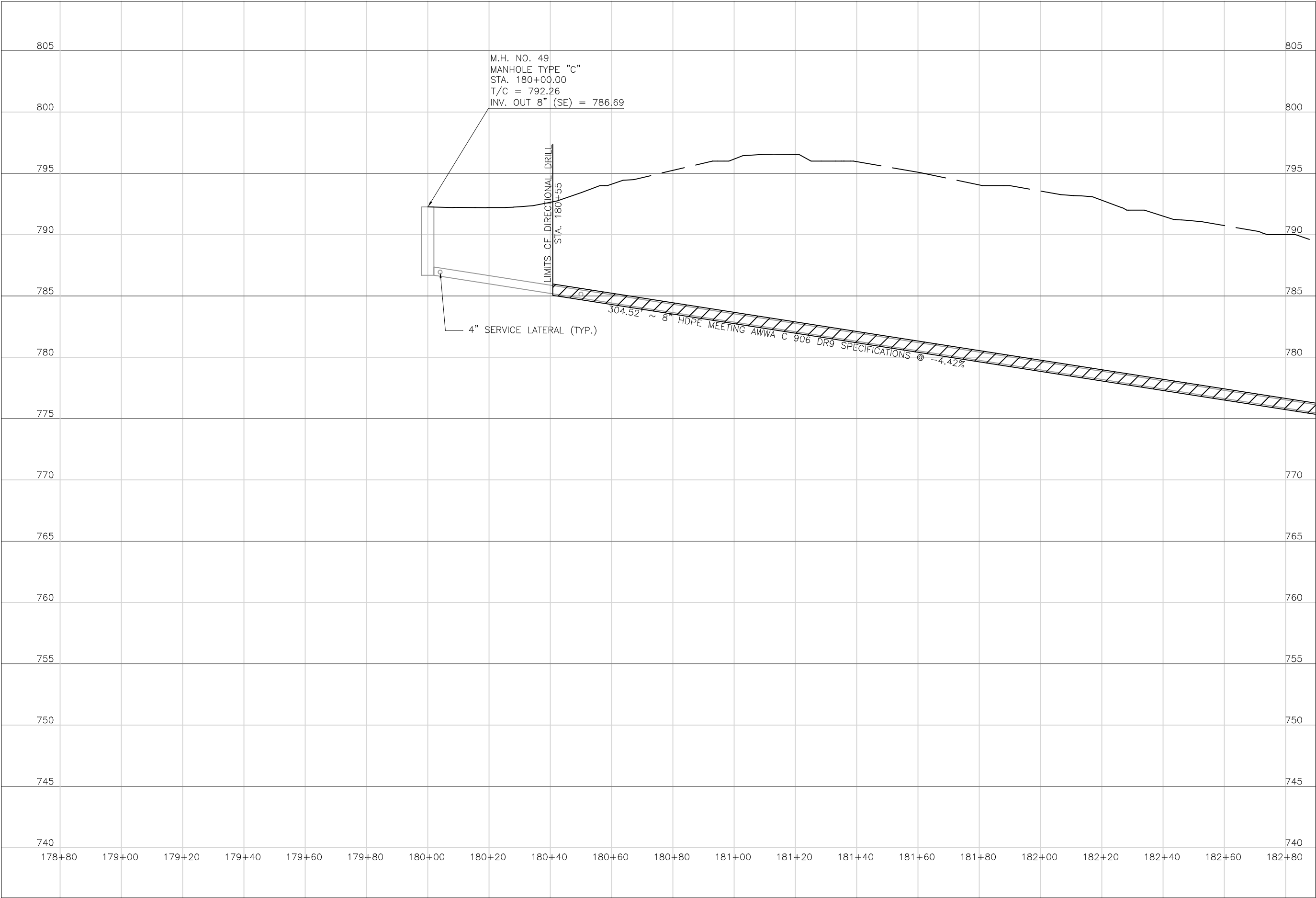
11" x 17"

SHEET NAME:

PLAN
SHEET (28)

SHEET NUMBER:

75
118



Mark J. Eicher, P.E., P.S.
155 Rehl Road
Zanesville, Ohio 43701
740-454-0155

Muskingum County
ENGINEER'S OFFICE

PREPARED BY:

SANITARY SEWER IMPROVEMENTS
GRANDVIEW ROAD

PROJECT NAME:

LICKING VIEW
ZANESVILLE, OHIO 43701

PROJECT LOCATION:

PLANS APPROVED BY:

MJE

PLANS PREPARED BY:

HJ

DATE:

08/15/2023

REVISED:

SHEET SIZE:

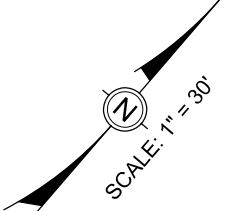
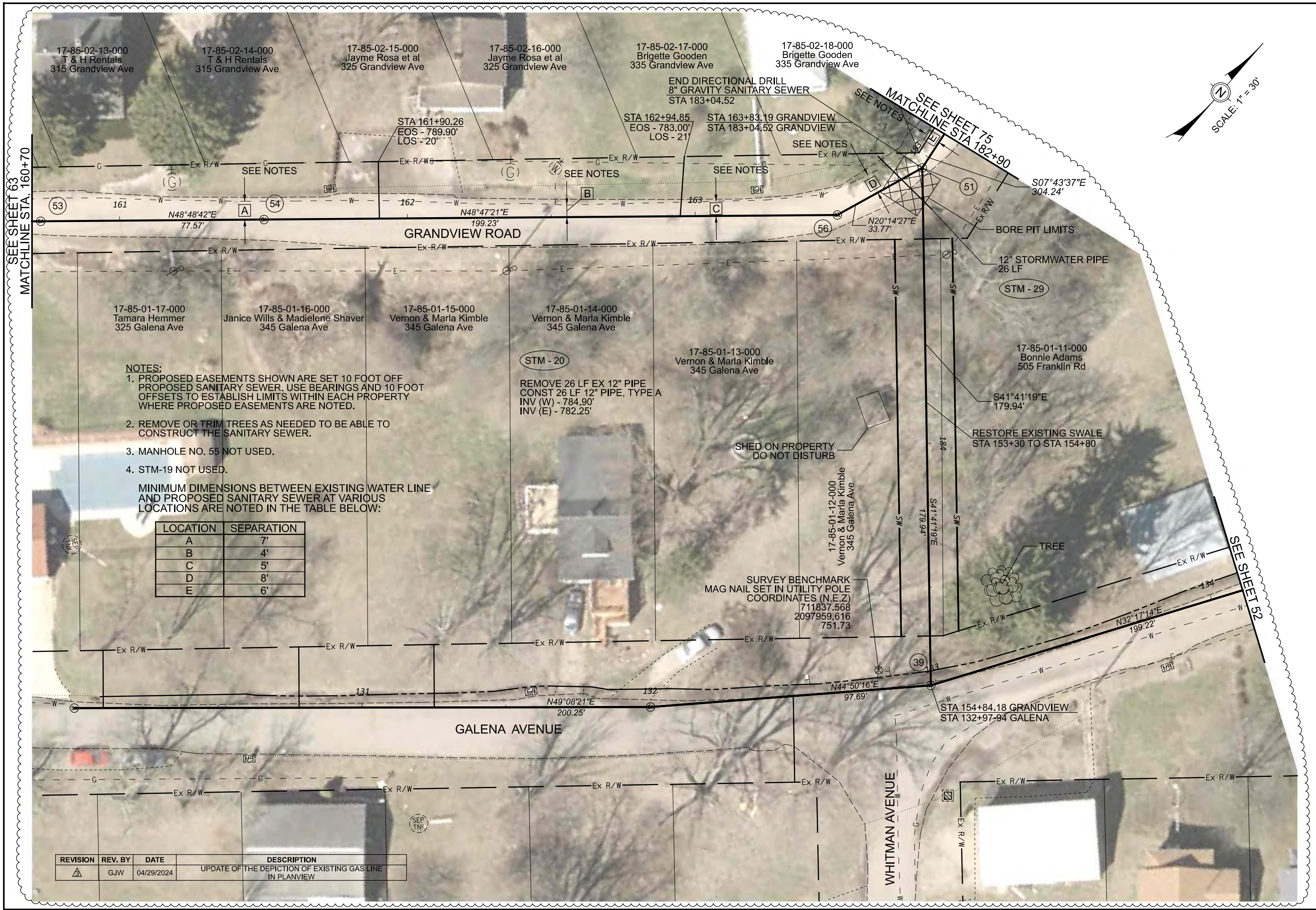
11" x 17"

SHEET NAME:

PROFILE
MANHOLE 49

SHEET NUMBER:

76
118



NOTES:

1. PROPOSED EASEMENTS SHOWN ARE SET 10 FOOT OFF PROPOSED SANITARY SEWER. USE BEARINGS AND 10 FOOT OFFSETS TO ESTABLISH LIMITS WITHIN EACH PROPERTY WHERE PROPOSED EASEMENTS ARE NOTED.
2. REMOVE OR TRIM TREES AS NEEDED TO BE ABLE TO CONSTRUCT THE SANITARY SEWER.
3. MANHOLE NO. 55 NOT USED.
4. STM-19 NOT USED.

MINIMUM DIMENSIONS BETWEEN EXISTING WATER LINE AND PROPOSED SANITARY SEWER AT VARIOUS LOCATIONS ARE NOTED IN THE TABLE BELOW:

LOCATION	SEPARATION
A	7'
B	4'
C	5'
D	8'
E	6'

REVISION	REV. BY	DATE	DESCRIPTION
1	GJW	04/29/2024	UPDATE OF THE DEPICTION OF EXISTING GAS LINE IN PLANVIEW

Mark J. Eichel, P.E., P.S.
155 Rehl Road
Zanesville, Ohio 43701
ENGINEER'S OFFICE 740-434-0155

Wiskindum

County

ENGINEER'S OFFICE

PREPARED BY:

SANITARY SEWER IMPROVEMENTS
GRANDVIEW ROAD TO GALENA AVENUE

PROJECT NAME:

LICKING VIEW
ZANESVILLE, OHIO 43701
PROJECT LOCATION:

PLANS APPROVED BY:

MJE

PLANS PREPARED BY:

GJW

DATE:

08/14/2023

REVISED:

04/29/2024

SHEET SIZE:

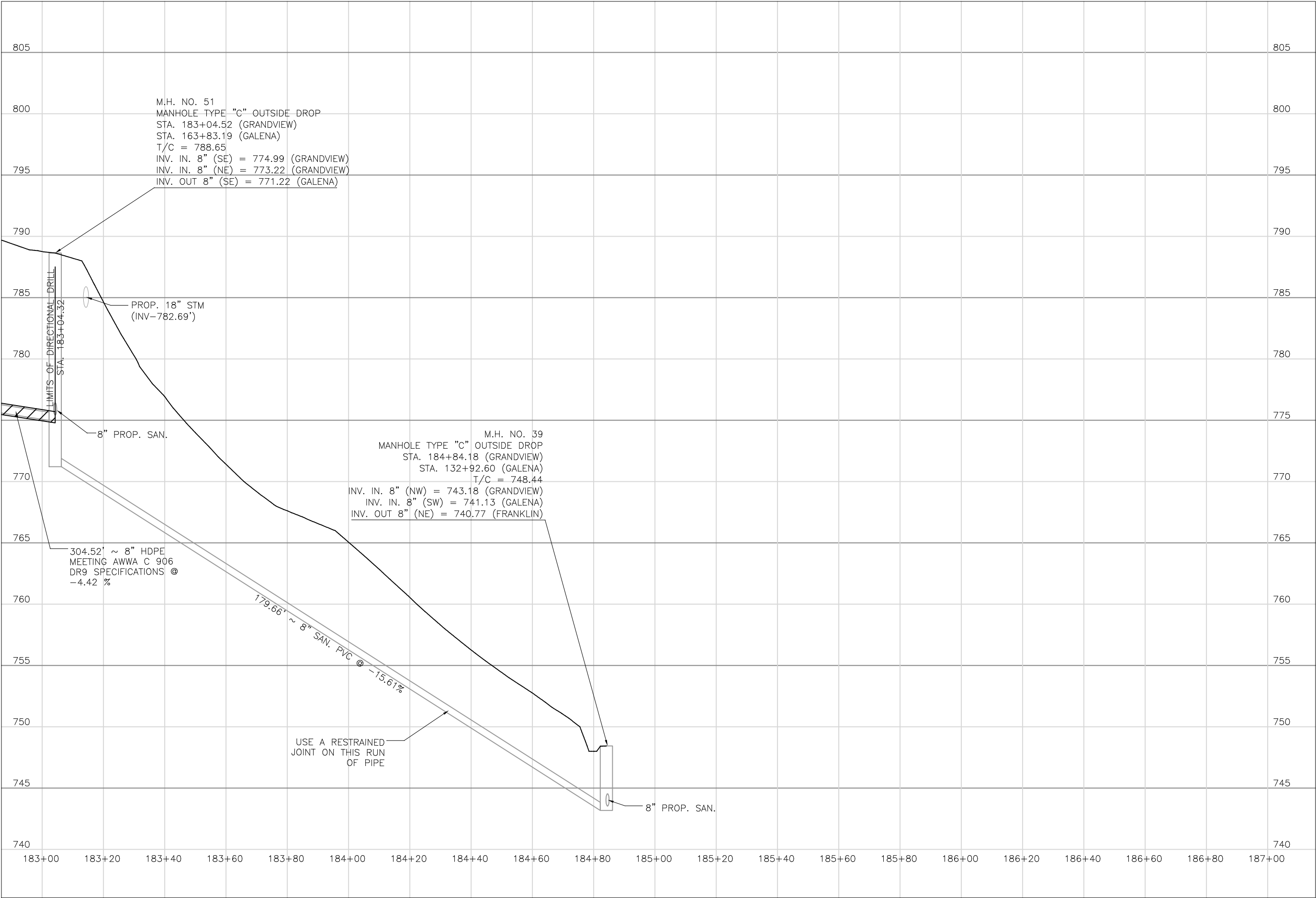
11" x 17"

SHEET NAME:

PLAN
SHEET (29)

SHEET NUMBER:

77
118



Mark J. Elcher, P.E., P.S.
155 Rehl Road
Zanesville, Ohio 43701
740-454-0155

Muskington
County
ENGINEER'S OFFICE

PREPARED BY:

SANITARY SEWER IMPROVEMENTS
GRANDVIEW ROAD TO GALENA AVENUE

LICKING VIEW
ZANESVILLE, OHIO 43701

PROJECT NAME:

PLANS APPROVED BY:

PLANS PREPARED BY:

DATE:

REVISED:

SHEET SIZE:

SHEET NAME:

SHEET NUMBER:

MJE

HJ

08/15/2023

11" x 17"

PROFILE
MANHOLE
51 & 39

78
118

17-87-04-03-000
Zaac Reality, LTD
2235 Licking Rd

REVISION	REV. BY	DATE	DESCRIPTION
△	GJW	04/29/2024	UPDATE OF THE DEPICTION OF EXISTING GAS LINE IN PLANVIEW

- NOTES:
1. MAINTAIN ACCESS TO / FROM OFFICE BUILDING AND THE PARKING LOT AT ALL TIMES.
 2. PROPOSED EASEMENTS SHOWN ARE SET 10 FOOT OFF PROPOSED SANITARY SEWER. USE BEARINGS AND 10 FOOT OFFSETS TO ESTABLISH LIMITS WITHIN EACH PROPERTY WHERE PROPOSED EASEMENTS ARE NOTED.

BEGIN ALIGNMENT GALENA
8" GRAVITY SANITARY SEWER
STA 400+00.00

8" SERVICE LATERAL
STA 400+00.00
EOS - 710.83'
LOS - 13'

6" SERVICE LATERAL
STA 402+10.00
EOS - 709.54'
LOS - 10'

17-87-04-01-000
Casting Solutions, LLC
2345 Licking Rd

MATCHLINE STA. 403+50

SANITARY SEWER IMPROVEMENTS
BUSINESS LINE CONNECTION

PROJECT
NAME:

PROJECT
LOCATION:

PLANS APPROVED BY:

MJE

PLANS PREPARED BY:

GJW

DATE:

08/14/2023

REVISED:

04/29/2024

SHEET SIZE:

11" x 17"

SHEET NAME:

PLAN
SHEET (30)

SHEET NUMBER:

80

118

Mark J. Eicher, P.E., P.S.
155 Rehl Road
Zanesville, Ohio 43701
ENGINEER'S OFFICE 740-454-0155

PREPARED BY:

SANITARY SEWER IMPROVEMENTS
BUSINESS LINE CONNECTION

PROJECT
NAME:

PROJECT
LOCATION:

PLANS APPROVED BY:

MJE

PLANS PREPARED BY:

GJW

DATE:

08/14/2023

REVISED:

04/29/2024

SHEET SIZE:

11" x 17"

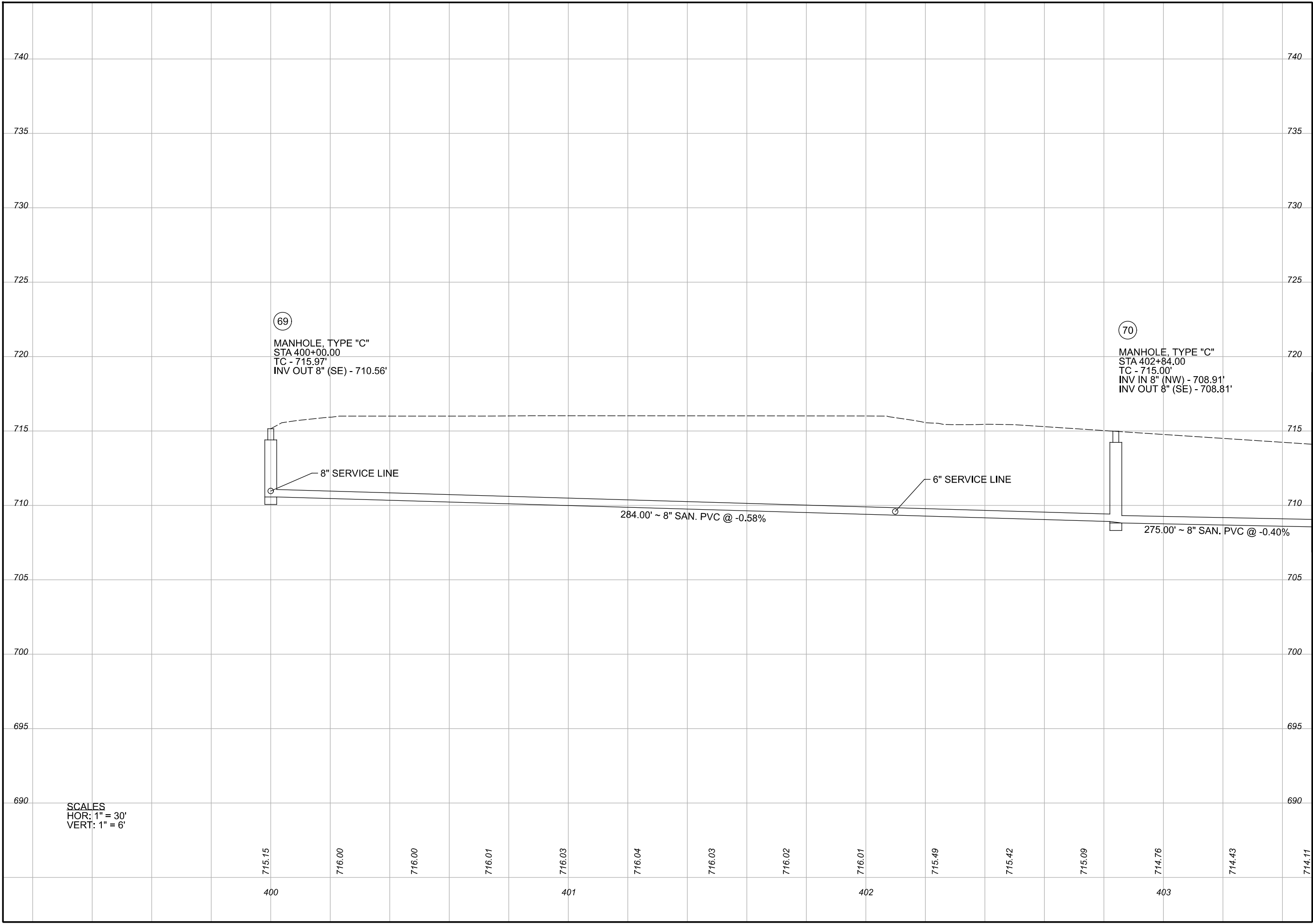
SHEET NAME:

PLAN
SHEET (30)

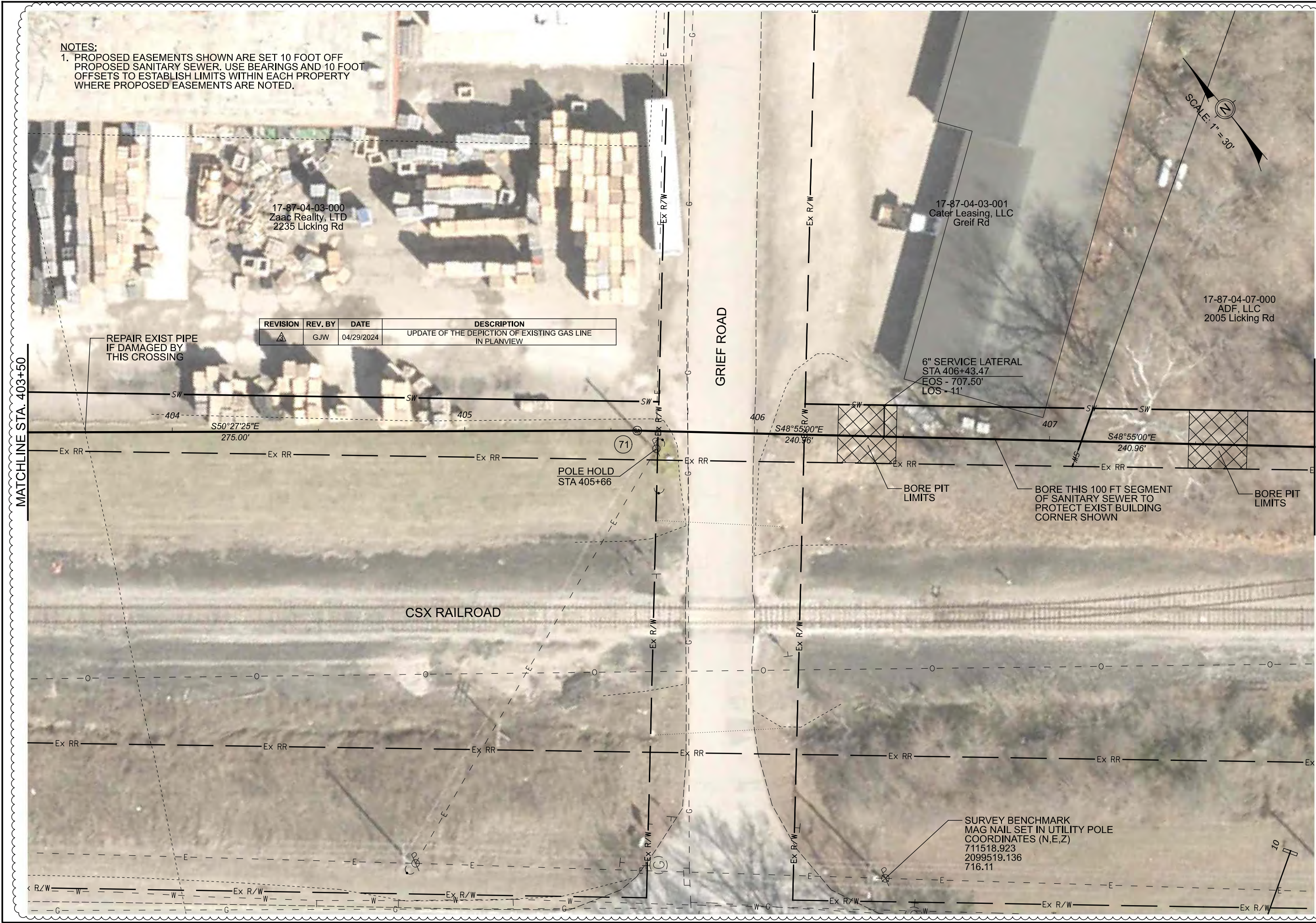
SHEET NUMBER:

80

118



SCALES
HOR: 1" = 30'
VERT: 1" = 6'



NOTES:

1. PROPOSED EASEMENTS SHOWN ARE SET 10 FOOT OFF PROPOSED SANITARY SEWER. USE BEARINGS AND 10 FOOT OFFSETS TO ESTABLISH LIMITS WITHIN EACH PROPERTY WHERE PROPOSED EASEMENTS ARE NOTED.

REVISION	REV. BY	DATE	DESCRIPTION
1	GJW	04/29/2024	UPDATE OF THE DEPICTION OF EXISTING GAS LINE IN PLANVIEW

REPAIR EXIST PIPE IF DAMAGED BY THIS CROSSING

POLE HOLD STA 405+66

6" SERVICE LATERAL STA 406+43.47 EOS - 707.50' LOS - 11'

BORE PIT LIMITS

BORE THIS 100 FT SEGMENT OF SANITARY SEWER TO PROTECT EXIST BUILDING CORNER SHOWN

BORE PIT LIMITS

SURVEY BENCHMARK
MAG NAIL SET IN UTILITY POLE
COORDINATES (N,E,Z)
711518.923
2099519.136
716.11

MATCHLINE STA. 407+90
SEE SHEET 14

Mark J. Eicher, P.E., P.S.
155 Rehl Road
Zanesville, Ohio 43701
ENGINEER'S OFFICE 740-454-0155

Wiskindum
County
ENGINEER'S OFFICE

PREPARED BY

SANITARY SEWER IMPROVEMENTS
BUSINESS LINE CONNECTION

PROJECT NAME:

LICKING VIEW
ZANESVILLE, OHIO 43701

PROJECT LOCATION:

PLANS APPROVED BY:

MJE

PLANS PREPARED BY:

GJW

DATE:

08/14/2023

REVISED:

04/29/2024

SHEET SIZE:

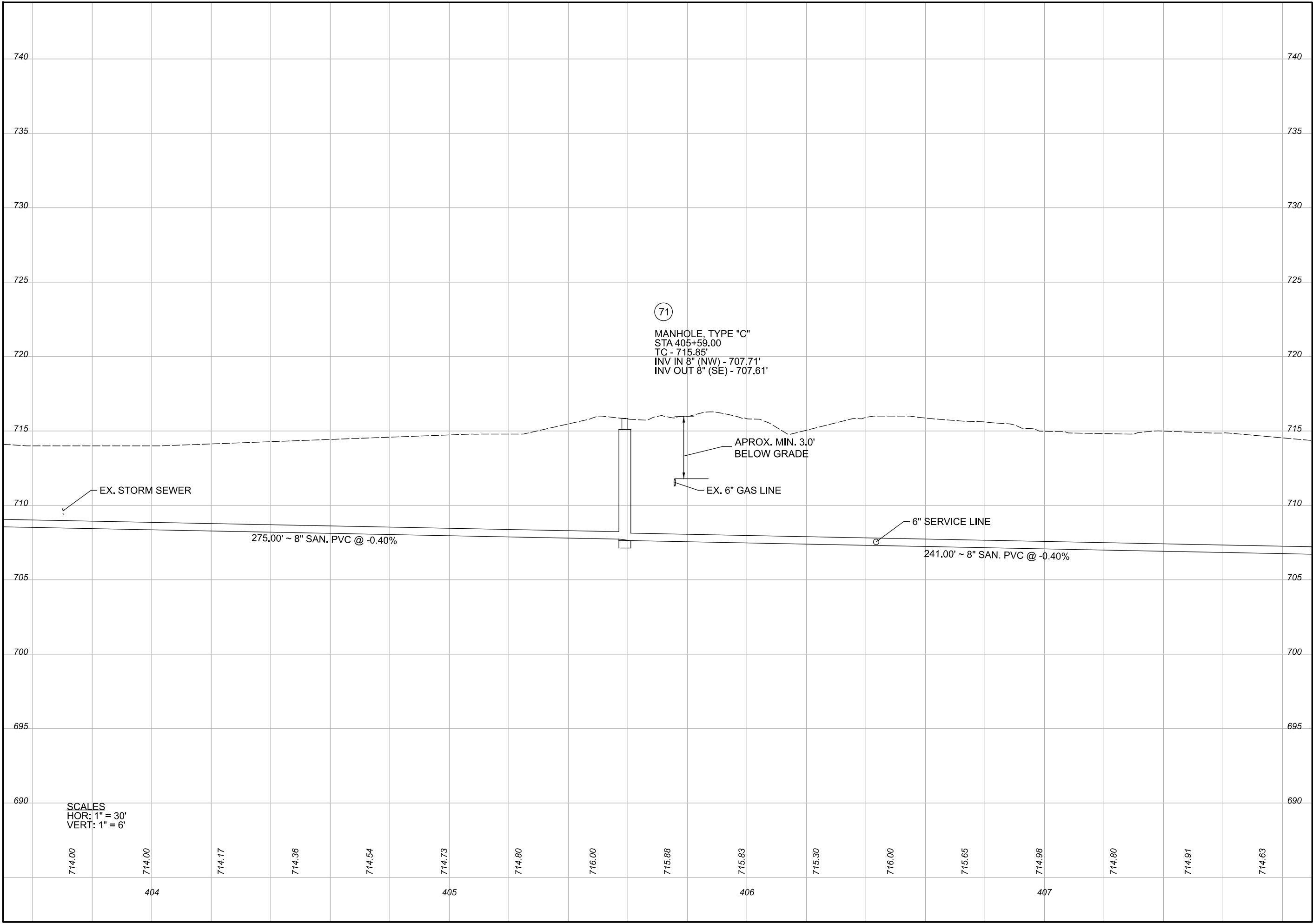
11" x 17"

SHEET NAME:

PLAN SHEET (31)

SHEET NUMBER:

82
118



SCALES
HOR: 1" = 30'
VERT: 1" = 6'

Mark J. Eicher, P.E., P.S.

155 Rehl Road

Zanesville, Ohio 43701

740-434-0155

Wiskindum

County

ENGINEER'S OFFICE

PREPARED BY:

SANITARY SEWER IMPROVEMENTS

BUSINESS LINE CONNECTION

PROJECT NAME:

LICKING VIEW

ZANESVILLE, OHIO 43701

PROJECT LOCATION:

PLANS APPROVED BY:

MJE

PLANS PREPARED BY:

HJ

DATE:

08/15/2023

REVISED:

SHEET SIZE:

11" x 17"

SHEET NAME:

PROFILE MANHOLE 71

SHEET NUMBER:

83

118



NOTES:
1. MANHOLE NO. 73 NOT USED.

REVISION	REV. BY	DATE	DESCRIPTION
△	GJW	04/29/2024	UPDATE OF THE DEPICTION OF EXISTING GAS LINE IN PLANVIEW

MATCHLINE STA. 2003+79

Mark J. Eicher, P.E., P.S.

Wiskingum

County

ENGINEER'S OFFICE

155 Rehl Road
Zanesville, Ohio 43701
740-454-0155

PREPARED BY:

SANITARY SEWER IMPROVEMENTS
HIGHLAND ROAD

PROJECT NAME:

LICKING VIEW
ZANESVILLE, OHIO 43701
PROJECT LOCATION:

PLANS APPROVED BY:

MJE

PLANS PREPARED BY:

GJW

DATE:

08/14/2023

REVISED:

04/29/2024

SHEET SIZE:

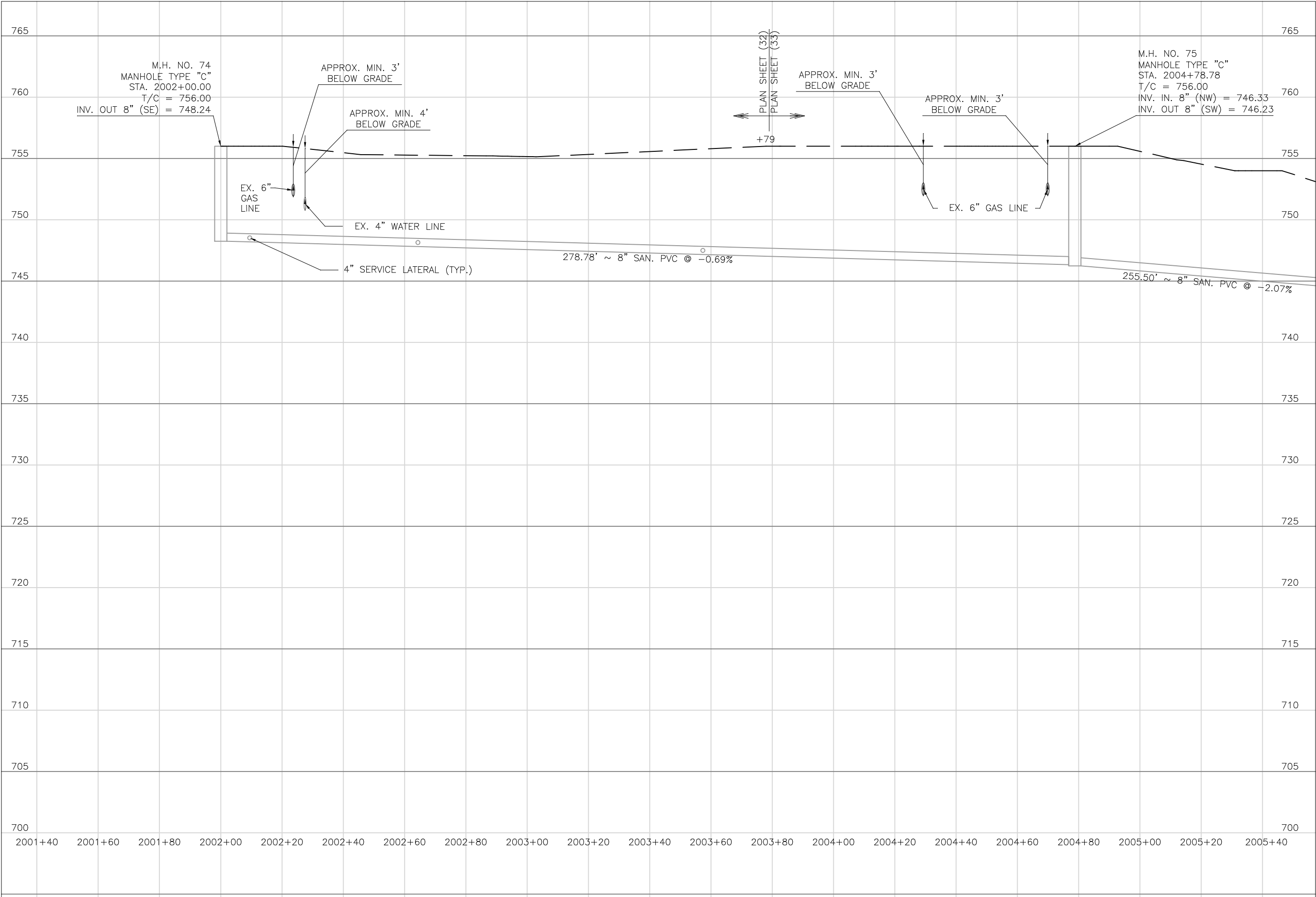
11" x 17"

SHEET NAME:

PLAN
SHEET (32)

SHEET NUMBER:

84
118



Mark J. Elcher, P.E., P.S.
155 Rehl Road
Zanesville, Ohio 43701
740-454-0155

Muskingum County
ENGINEER'S OFFICE

PREPARED BY:

SANITARY SEWER IMPROVEMENTS
HIGHLAND ROAD

PROJECT NAME

PROJECT LOCATION

LICKING VIEW
ZANESVILLE, OHIO 43701

PLANS APPROVED BY:

MJE

PLANS PREPARED BY:

HJ

DATE:

08/15/2023

REVISED:

SHEET SIZE:

11" x 17"

SHEET NAME:

PROFILE
MANHOLE
74 & 75

SHEET NUMBER:

85
118

REVISION	REV. BY	DATE	DESCRIPTION
	GJW	04/29/2024	UPDATE OF THE DEPICTION OF EXISTING GAS LINE IN PLANVIEW



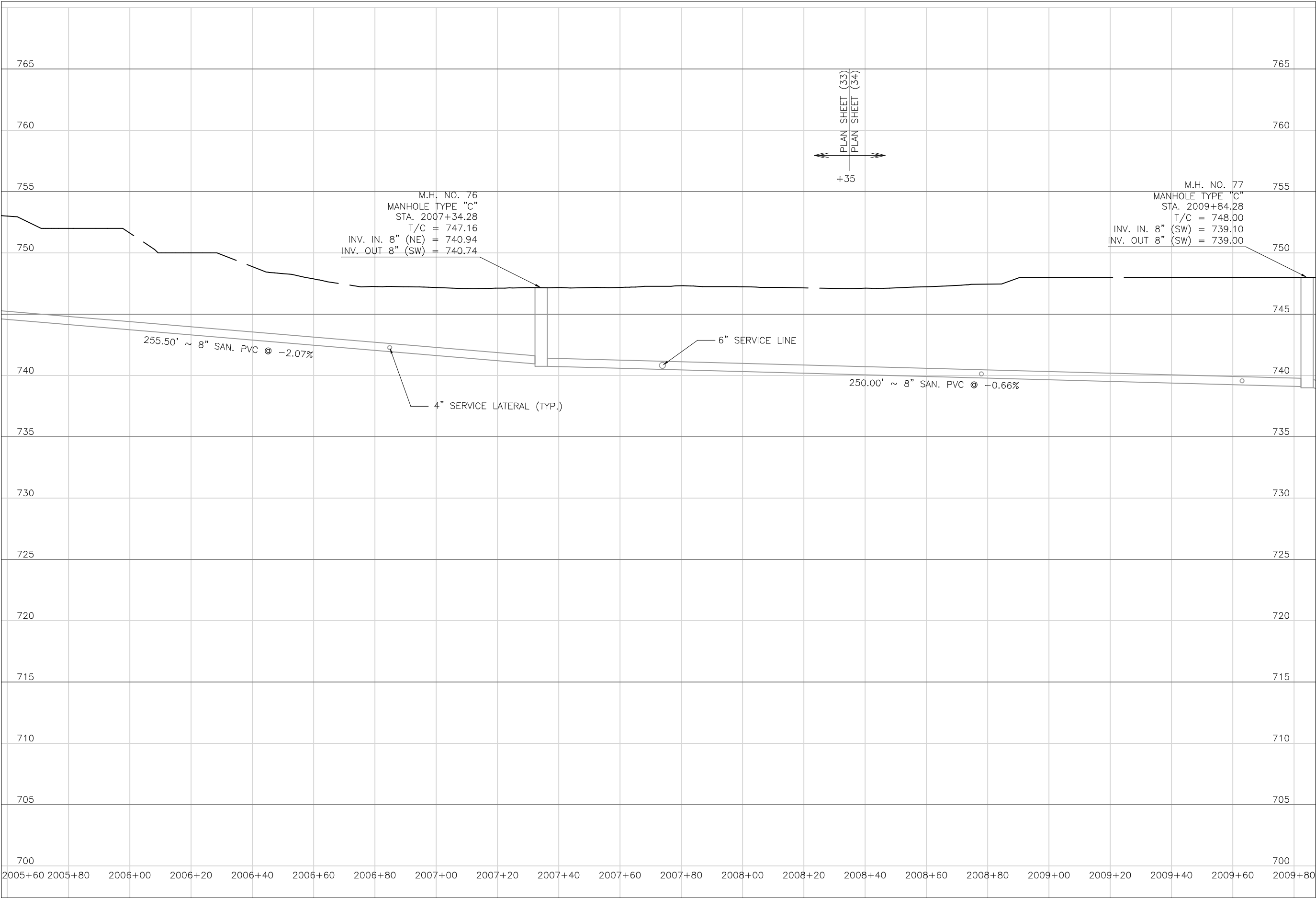
MATCHLINE STA. 2003+79

MATCHLINE STA. 2008+35

Wiskindum County
ENGINEER'S OFFICE

Mark J. Eichel, P.E., P.S.
155 Rehl Road
Zanesville, Ohio 43701
740-454-0155

PROJECT NAME: SANITARY SEWER IMPROVEMENTS HIGHLAND ROAD TO KNOX ROAD		PREPARED BY:
PROJECT LOCATION: LICKING VIEW ZANESVILLE, OHIO 43701		
PLANS APPROVED BY: <div>MJE</div>		
PLANS PREPARED BY: <div>GJW</div>		
DATE: 08/14/2023		
REVISED: 04/29/2024		
SHEET SIZE: 11" x 17"		
SHEET NAME: PLAN SHEET (33)		
SHEET NUMBER: <div>86</div> <div>118</div>		



Mark J. Eicher, P.E., P.S.
155 Rehl Road
Zanesville, Ohio 43701
740-454-0155

ENGINEER'S OFFICE

PREPARED BY:

SANITARY SEWER IMPROVEMENTS
HIGHLAND ROAD TO KNOX ROAD

PROJECT NAME

PROJECT LOCATION

LICKING VIEW
ZANESVILLE, OHIO 43701

PROJECT LOCATION

PLANS APPROVED BY:

MJE

PLANS PREPARED BY:

HJ

DATE:

08/15/2023

REVISED:

SHEET SIZE:

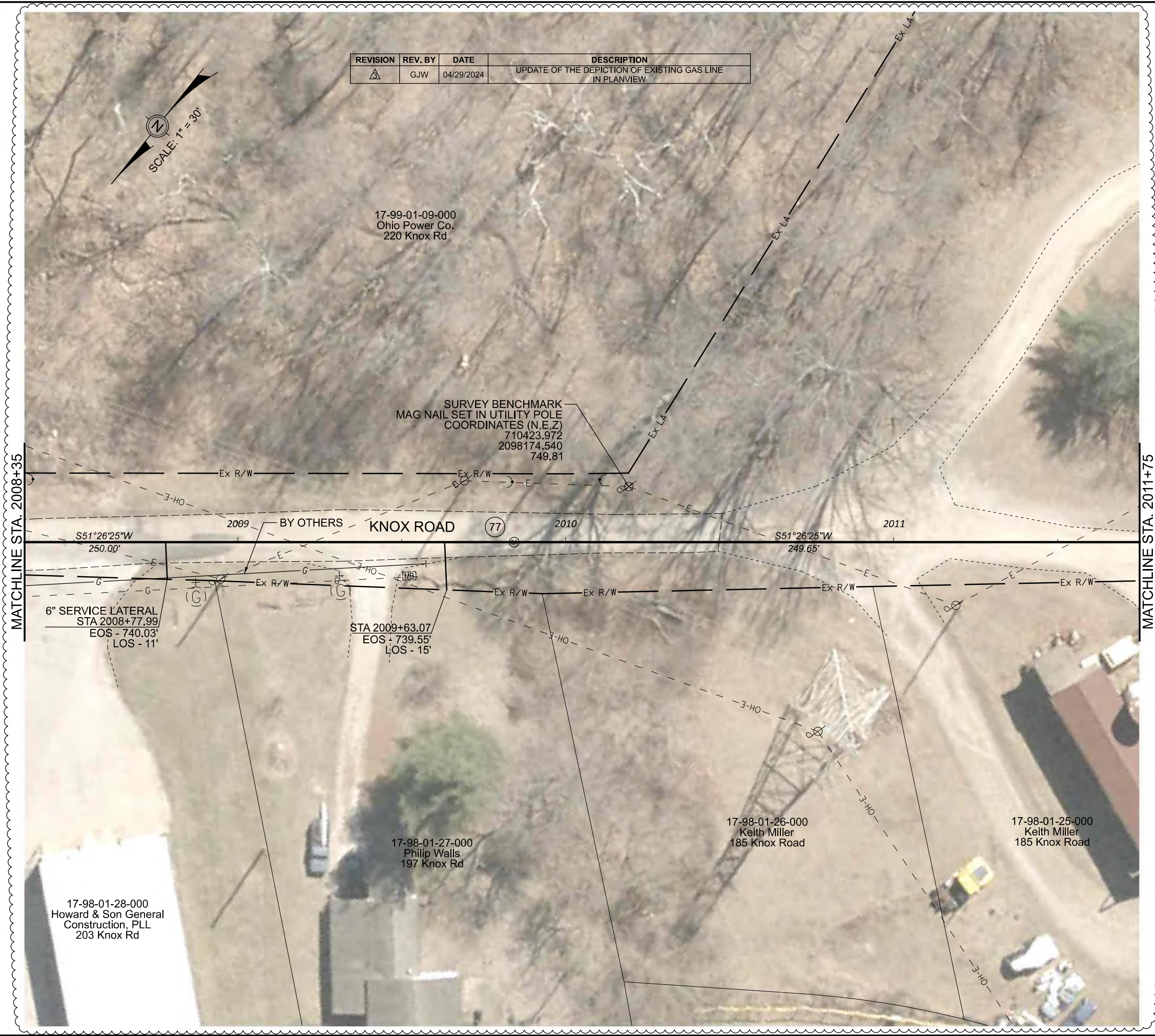
11" x 17"

SHEET NAME:

PROFILE
MANHOLE
76 & 77

SHEET NUMBER:

87
118



PREPARED BY

Wiskindum County
ENGINEER'S OFFICE

Mark J. Eicher, P.E., P.S.
155 Rehl Road
Zanesville, Ohio 43701
740-454-0155

PROJECT NAME:

SANITARY SEWER IMPROVEMENTS
HIGHLAND ROAD TO KNOX ROAD

PROJECT LOCATION:

LICKING VIEW
ZANESVILLE, OHIO 43701

PLANS APPROVED BY:

MJE

PLANS PREPARED BY:

GJW

DATE:

08/14/2023

REVISED:

04/29/2024

SHEET SIZE:

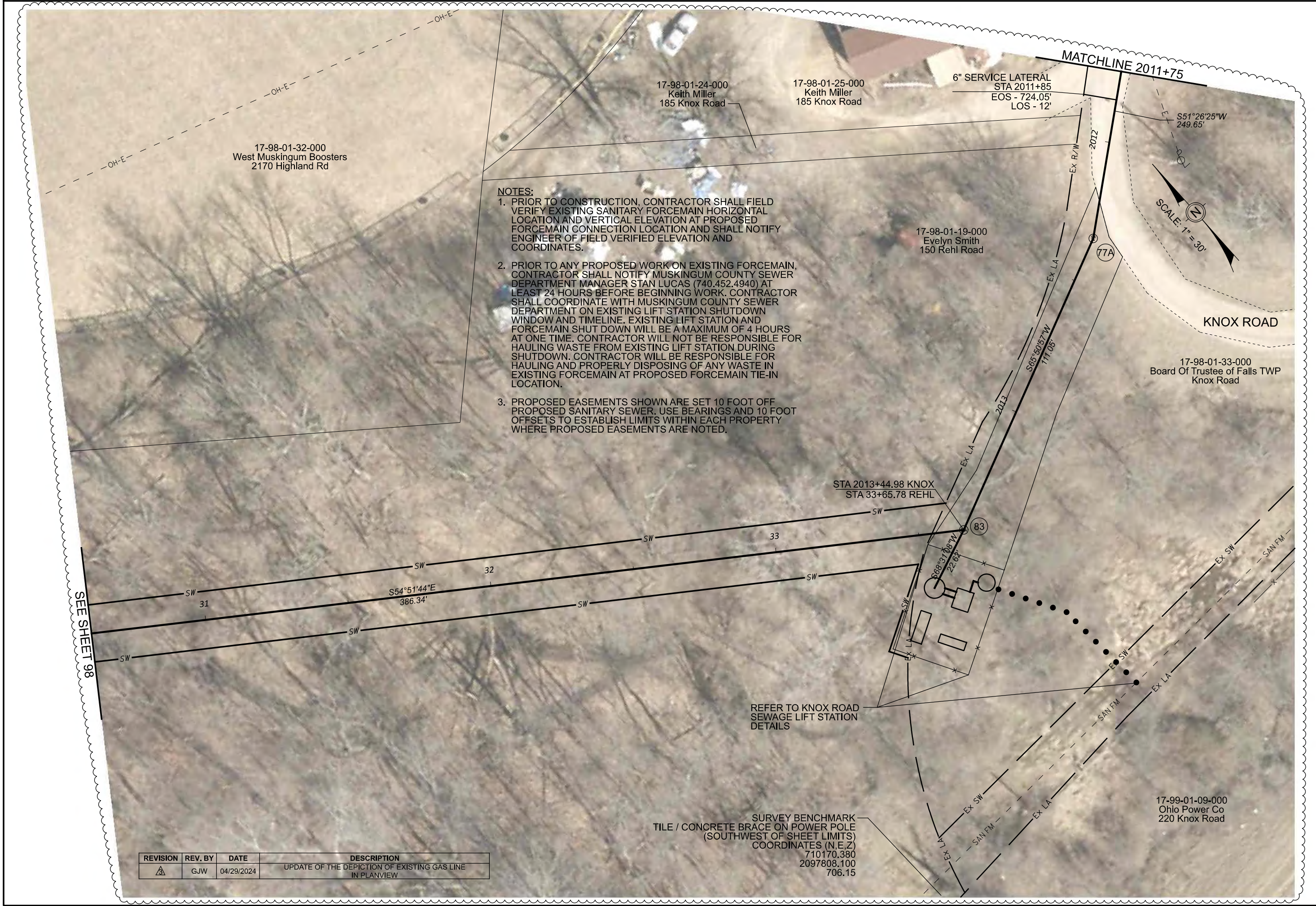
11" x 17"

SHEET NAME:

PLAN
SHEET (34)

SHEET NUMBER:

88
118



Mark J. Eichel, P.E., P.S.
155 Rehl Road
Zanesville, Ohio 43701
740-454-0155

ENGINEER'S OFFICE

PREPARED BY:

PROJECT NAME:
SANITARY SEWER IMPROVEMENTS
HIGHLAND ROAD TO KNOX ROAD

PROJECT LOCATION:
LICKING VIEW
ZANESVILLE, OHIO 43701

PLANS APPROVED BY:
MJE

PLANS PREPARED BY:
GJW

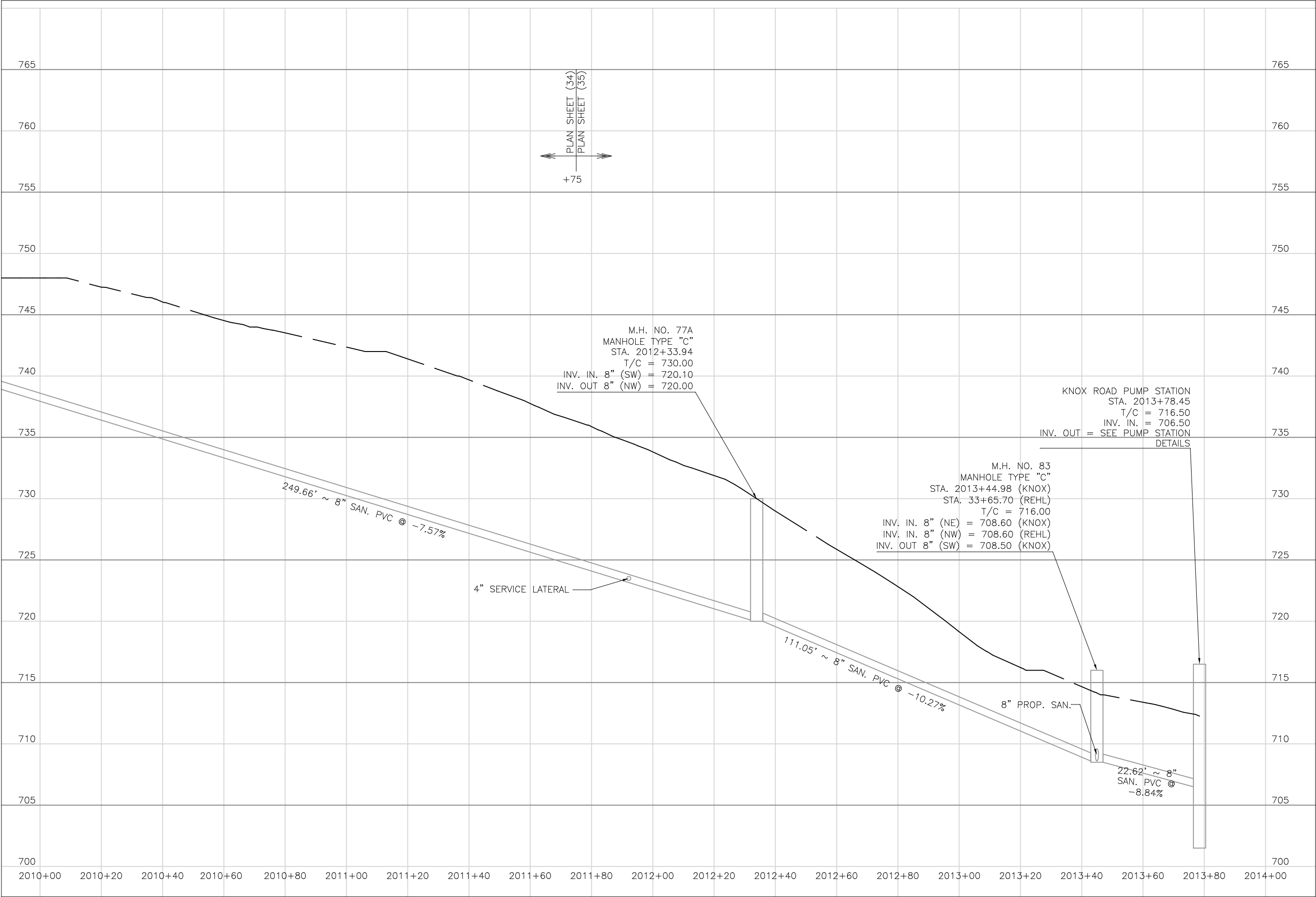
DATE:
08/14/2023

REVISED:
04/29/2024

SHEET SIZE:
11" x 17"

SHEET NAME:
PLAN
SHEET (35)

SHEET NUMBER:
89
118



Mark J. Eicher, P.E., P.S.
155 Rehl Road
Zanesville, Ohio 43701

Mark J. Eicher, P.E., P.S.

155 Rehl Road

Zanesville, Ohio 43701

PREPARED BY:

PROJECT NAME:

PROJECT LOCATION:

SANITARY SEWER IMPROVEMENTS

KNOX ROAD

LICKING VIEW

ZANESVILLE, OHIO 43701

PLANS APPROVED BY:

MJE

PLANS PREPARED BY:

HJ

DATE:

08/15/2023

REVISED:

SHEET SIZE:

11" x 17"

SHEET NAME:

PROFILE MANHOLE 77A & 83 PUMP STATION

SHEET NUMBER:

90

118

NOTES:

1. SERVICE LATERALS @ STA 20+00, 20+61.22+57 RT SHALL BE BORED UNDER REHL RD TO MAINTAIN ACCESS.
2. BORING LATERALS ACROSS REHL ROAD MAY REQUIRE TEMPORARY EASEMENTS FROM PROPERTY OWNERS. CONTRACTOR TO COORDINATE DIRECTLY WITH PROPERTY OWNERS TO OBTAIN EASEMENTS.

REVISION	REV. BY	DATE	DESCRIPTION
	GJW	04/29/2024	UPDATE OF THE DEPICTION OF EXISTING GAS LINE IN PLANVIEW



17-98-01-04-000
West Muskingum Boosters
2170 Highland Rd

17-98-01-32-000
Dixie Starkey
190 Rehl Rd

BEGIN ALIGNMENT REHL
8" GRAVITY SANITARY SEWER
STA 20+00.00

RESTORE EXISTING SWALE
STA 23+12 TO STA 24+06

RESTORE EXISTING SWALE
STA 20+00 TO STA 23+04

STA 23+30.00
EOS - 742.80'
LOS - 9'

REHL ROAD

BORE LATERAL
UNDER PAVT

BORE LATERAL
UNDER PAVT

BY OTHERS

BORE LATERAL
UNDER PAVT

STA 20+00.00
EOS - 751.92'
LOS - 43'

STA 20+60.82
EOS - 751.40'
LOS - 43'

STA 22+56.83
EOS - 747.81'
LOS - 42'

17-98-02-03-000
Sharol Stephenson
285 Rehl Rd

17-98-02-04-000
Kimberly Pinkerton
265 Rehl Rd

17-98-02-05-000
Kimberly Pinkerton
265 Rehl Rd

17-98-02-06-000
Sally Batross
215 Rehl Rd

17-98-02-07-000
William & Dorothy Manning
205 Rehl Rd

MATCHLINE STA. 23+70

Mark J. Eicher, P.E., P.S.
155 Rehl Road
Zanesville, Ohio 43701
ENGINEER'S OFFICE 740-454-0155

PROJECT NAME: SANITARY SEWER IMPROVEMENTS
REHL ROAD
PROJECT LOCATION: LICKING VIEW
ZANESVILLE, OHIO 43701

PLANS APPROVED BY:
MJE

PLANS PREPARED BY:
GJW

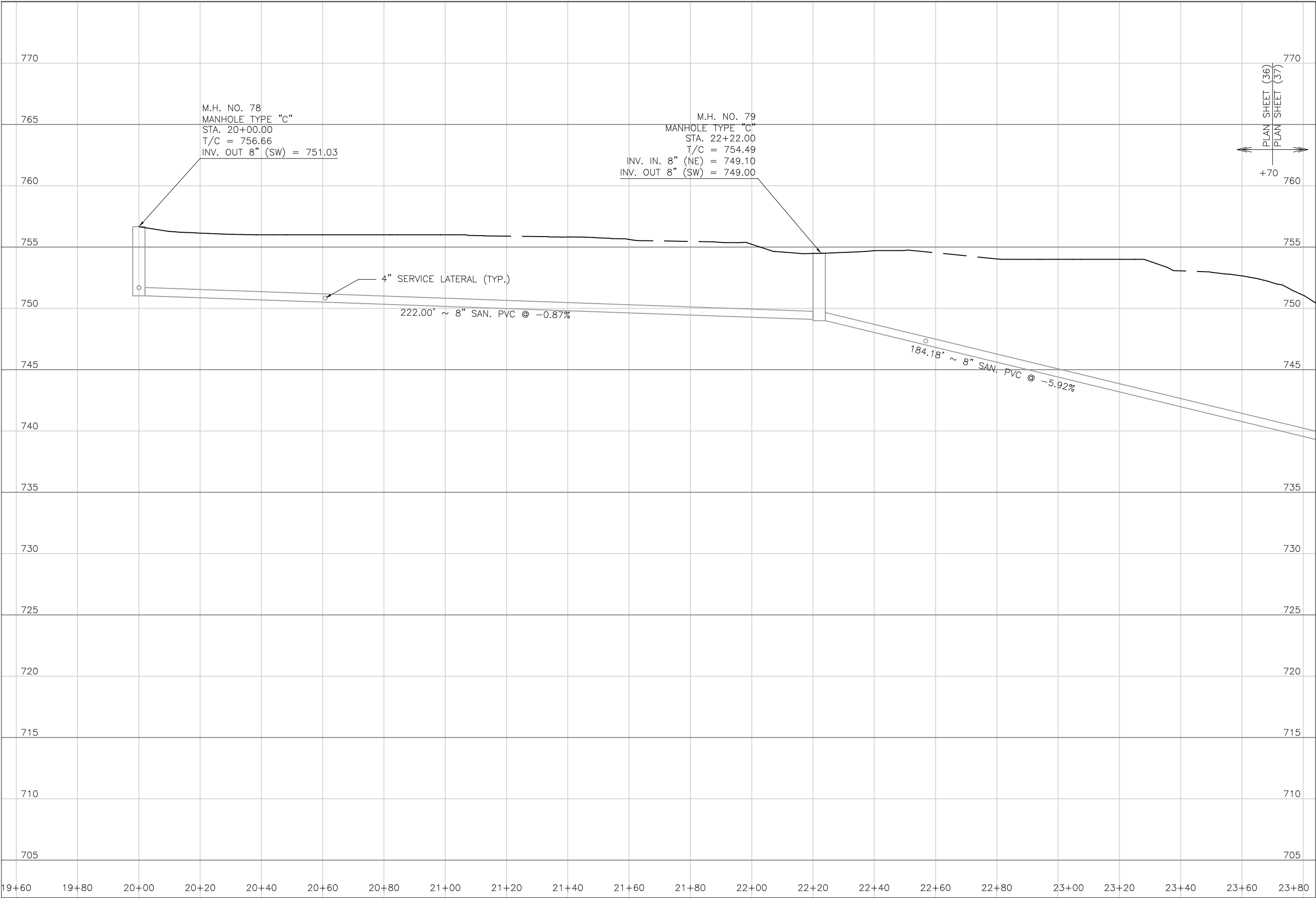
DATE:
08/14/2023

REVISED:
04/29/2024

SHEET SIZE:
11" x 17"

SHEET NAME:
PLAN
SHEET (36)

SHEET NUMBER:
92
118



PREPARED BY:

SANITARY SEWER IMPROVEMENTS
REHL ROAD

LICKING VIEW
ZANESVILLE, OHIO 43701

PROJECT
NAME

PROJECT
LOCATION

PLANS APPROVED BY:

MJE

PLANS PREPARED BY:

HJ

DATE:

08/15/2023

REVISED:

SHEET SIZE:

11" x 17"

SHEET NAME:

PROFILE
MANHOLE
78 & 79

SHEET NUMBER:

93

118



REVISION	REV. BY	DATE	DESCRIPTION
	GJW	04/29/2024	UPDATE OF THE DEPICTION OF EXISTING GAS LINE IN PLANVIEW

PREPARED BY:

Mark J. Eicher, P.E., P.S.
155 Rehl Road
Zanesville, Ohio 43701
ENGINEER'S OFFICE 740-434-0155

PROJECT NAME:

SANITARY SEWER IMPROVEMENT
REHL ROAD TO KNOX ROAD

PROJECT LOCATION:

LICKING VIEW
ZANESVILLE, OHIO 43701

PLANS APPROVED BY:

MJE

PLANS PREPARED BY:

GJW

DATE:

08/14/2023

REVISED:

04/29/2024

SHEET SIZE:

11" x 17"

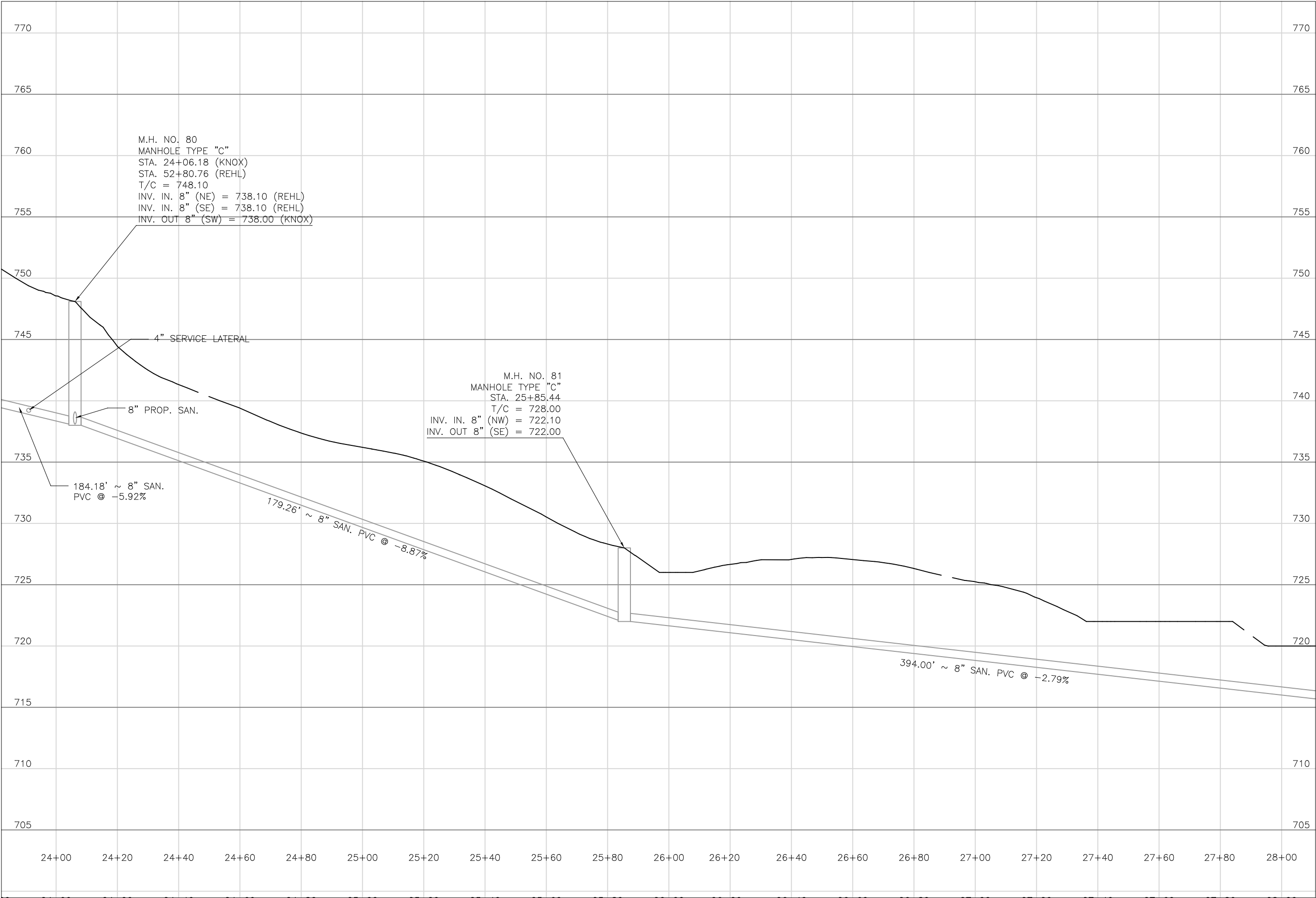
SHEET NAME:

PLAN
SHEET (37)


SHEET NUMBER:

94

118



Mark J. Eicher, P.E., P.S.
155 Rehl Road
Zanesville, Ohio 43701
740-454-0155

**Muskingum**
County
ENGINEER'S OFFICE

PREPARED BY:

SANITARY SEWER IMPROVEMENTS
REHL ROAD TO KNOX PUMP STATION

PROJECT LOCATION:
LICKING VIEW
ZANESVILLE, OHIO 43701

PLANS APPROVED BY:
MJE

PLANS PREPARED BY:
HJ

DATE:
08/15/2023

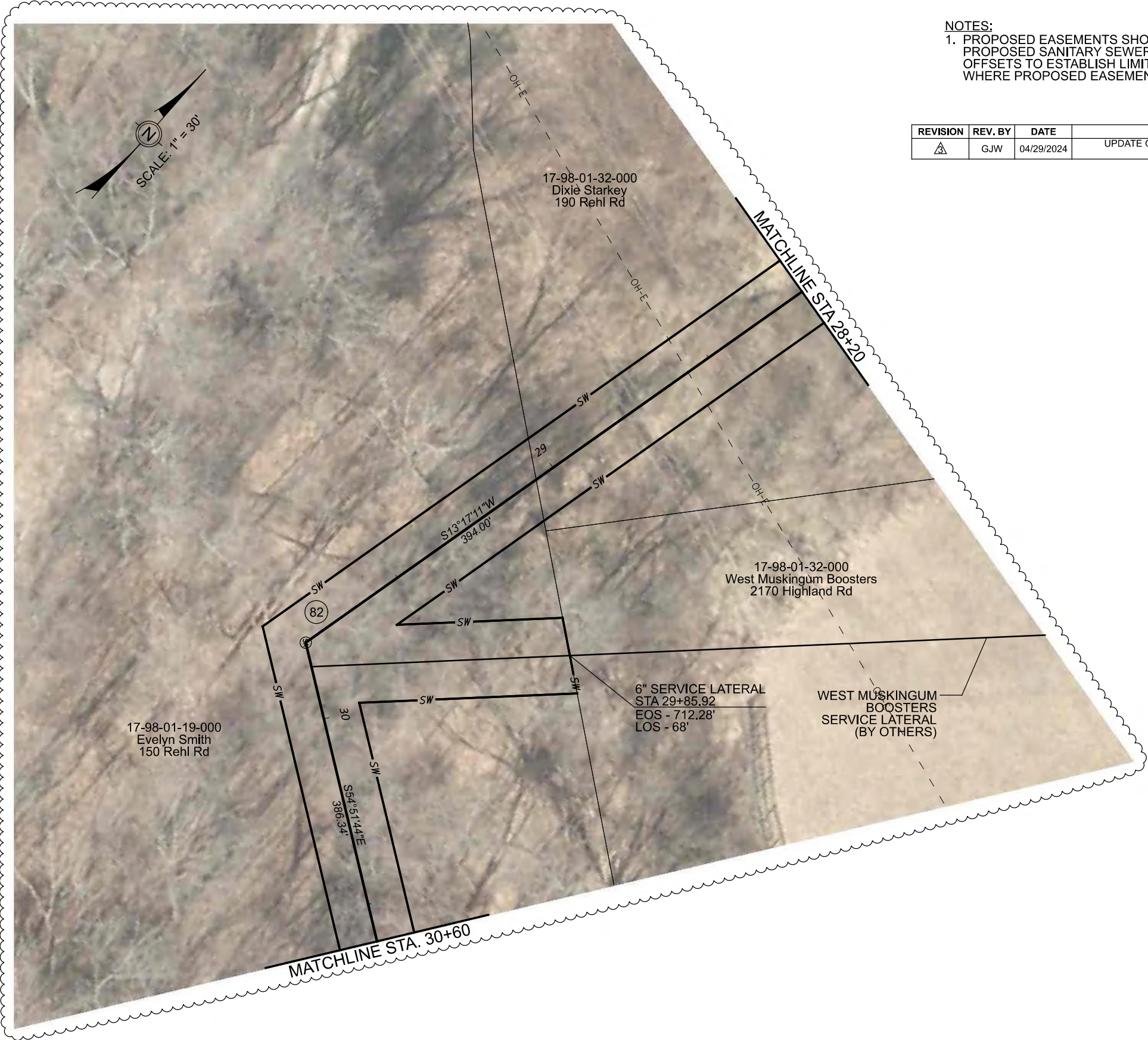
REVISED:

SHEET SIZE:
11" x 17"

SHEET NAME:
**PROFILE
MANHOLE
80 & 81**

SHEET NUMBER:

95
118



NOTES:
1. PROPOSED EASEMENTS SHOWN ARE SET 10 FOOT OFF PROPOSED SANITARY SEWER. USE BEARINGS AND 10 FOOT OFFSETS TO ESTABLISH LIMITS WITHIN EACH PROPERTY WHERE PROPOSED EASEMENTS ARE NOTED.

REVISION	REV. BY	DATE	DESCRIPTION
	GJW	04/29/2024	UPDATE OF THE DEPICTION OF EXISTING GAS LINE IN PLANVIEW

PREPARED BY:

SANITARY SEWER IMPROVEMENTS
REHL ROAD TO KNOX ROAD

PROJECT
NAME:

PLANS APPROVED BY:
MJE

PLANS PREPARED BY:
GJW

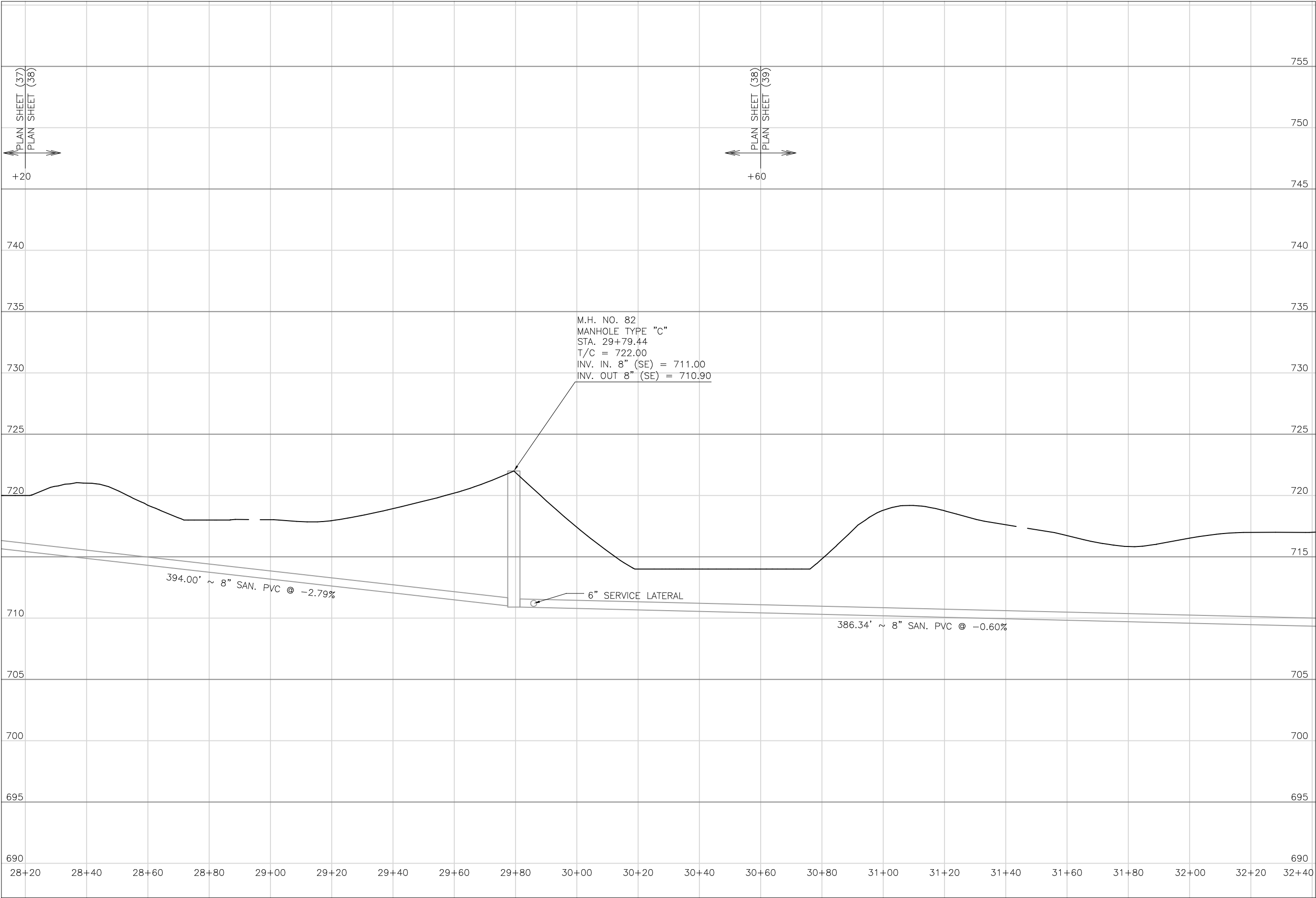
DATE:
08/14/2023

REVISED:
04/29/2024

SHEET SIZE:
11" x 17"

SHEET NAME:
PLAN
SHEET (38)

SHEET NUMBER:
96
118



Mark J. Eicher, P.E., P.S.
155 Rehl Road
Zanesville, Ohio 43701
740-454-0155

ENGINEER'S OFFICE

PREPARED BY:

SANITARY SEWER IMPROVEMENTS
KNOX ROAD TO PUMP STATION

PROJECT NAME

LICKING VIEW
ZANESVILLE, OHIO 43701

PROJECT LOCATION

PLANS APPROVED BY:

MJE

PLANS PREPARED BY:

HJ

DATE:

08/15/2023

REVISED:

SHEET SIZE:

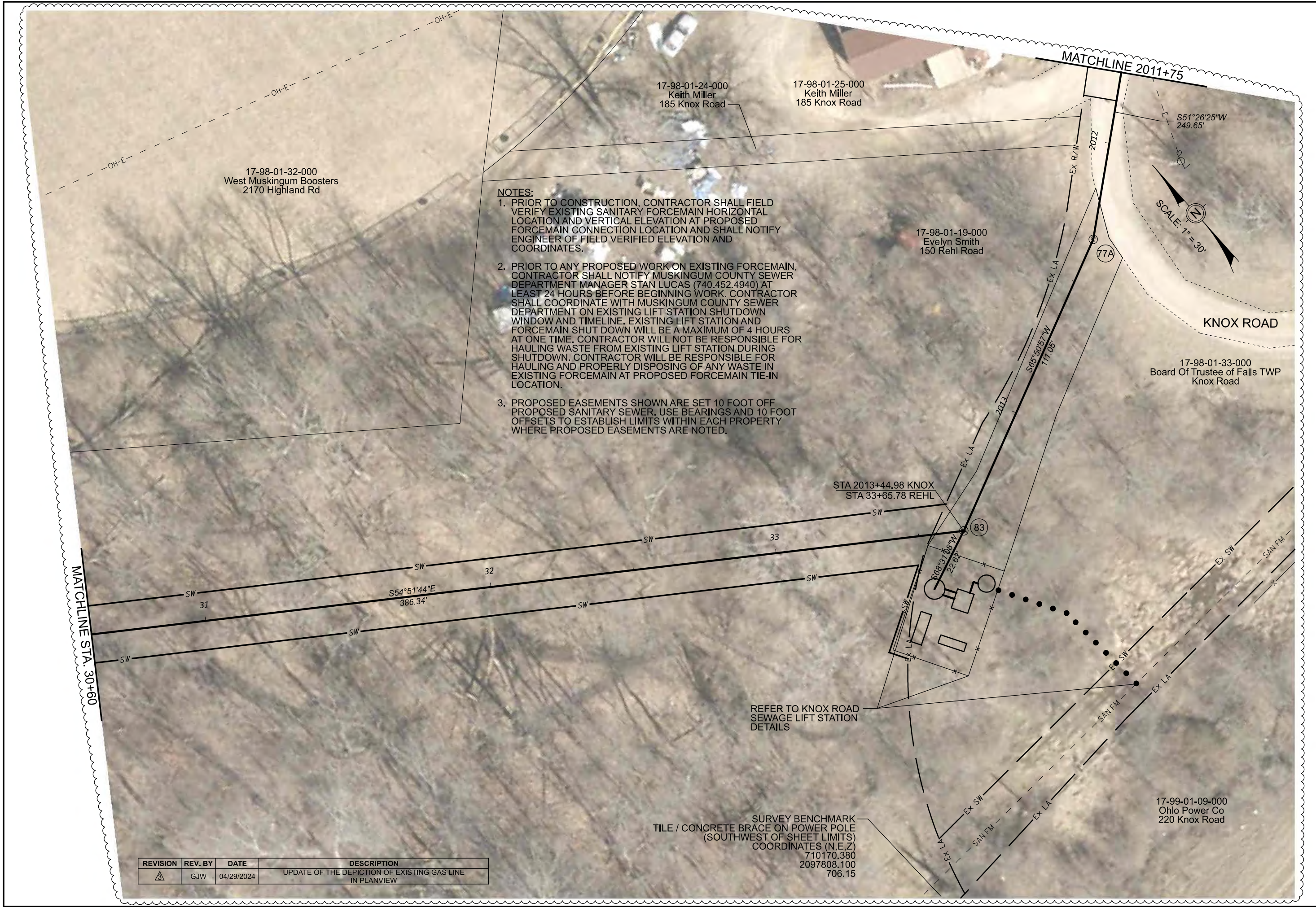
11" x 17"

SHEET NAME:

PROFILE
MANHOLE 82

SHEET NUMBER:

97
118



Mark J. Eichel, P.E., P.S.
155 Rehl Road
Zanesville, Ohio 43701
740-454-0155

ENGINEER'S OFFICE

PREPARED BY:

PROJECT NAME:
SANITARY SEWER IMPROVEMENTS
REHL ROAD TO KNOX ROAD PUMP STATION

PROJECT LOCATION:
LICKING VIEW
ZANESVILLE, OHIO 43701

PLANS APPROVED BY:
MJE

PLANS PREPARED BY:
GJW

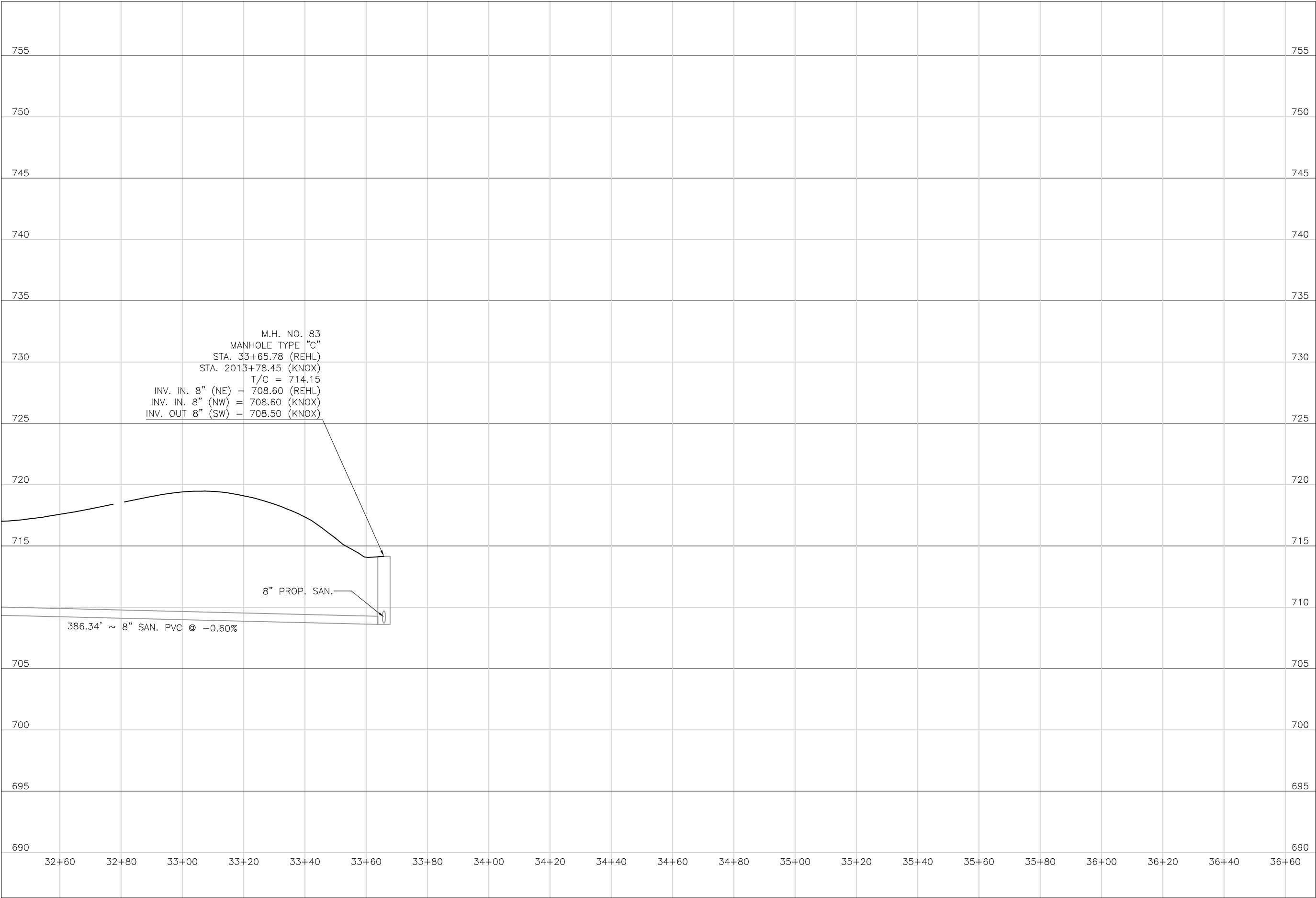
DATE:
08/14/2023

REVISED:
04/29/2024

SHEET SIZE:
11" x 17"

SHEET NAME:
PLAN
SHEET (39)

SHEET NUMBER:
98
118



Mark J. Eicher, P.E., P.S.
155 Rehl Road
Zanesville, Ohio 43701
740-454-0155

PREPARED BY:

SANITARY SEWER IMPROVEMENTS
TO KNOX ROAD

LICKING VIEW
ZANESVILLE, OHIO 43701

PROJECT NAME

PROJECT LOCATION

PLANS APPROVED BY:
MJE

PLANS PREPARED BY:
HJ

DATE:
08/15/2023

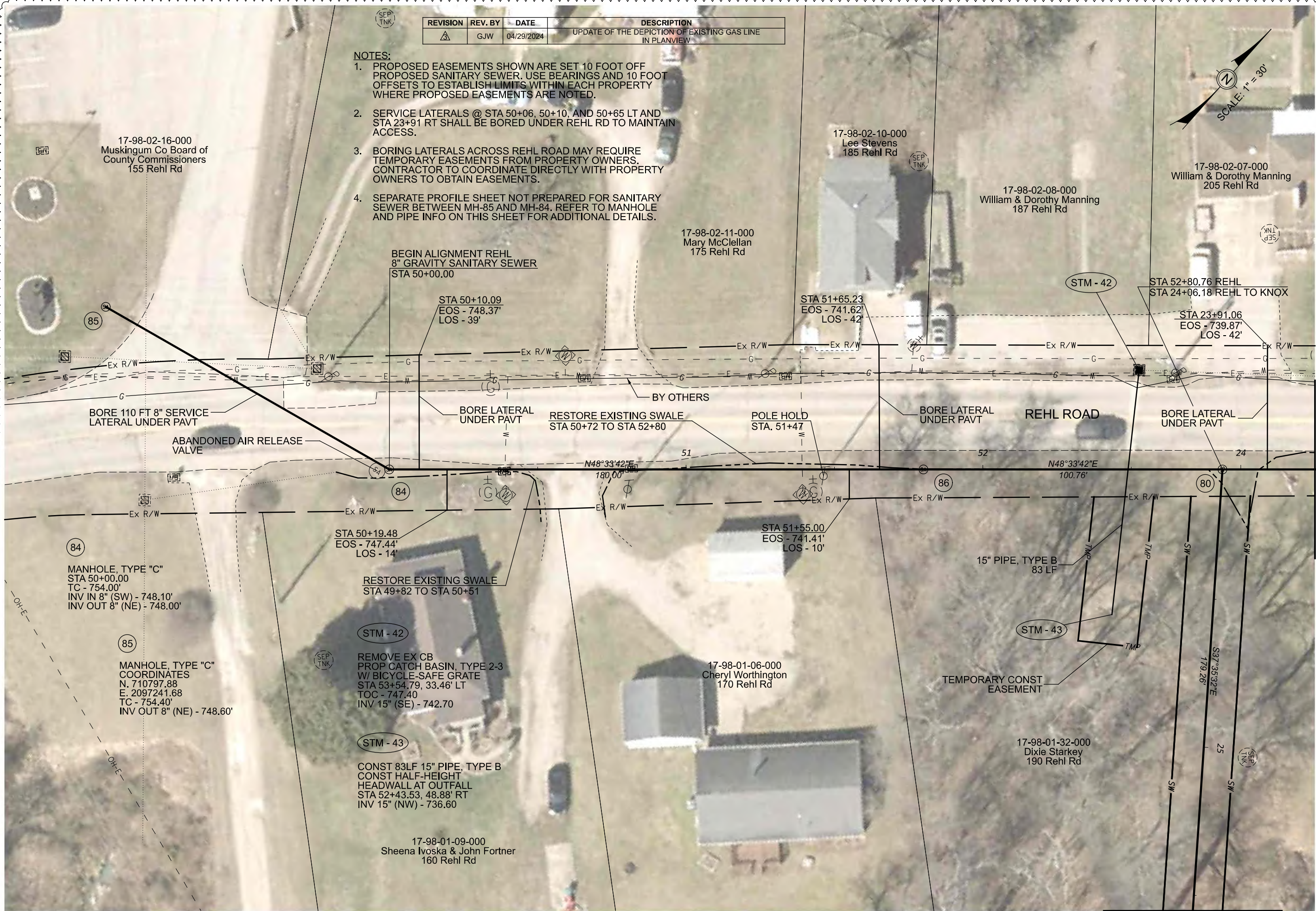
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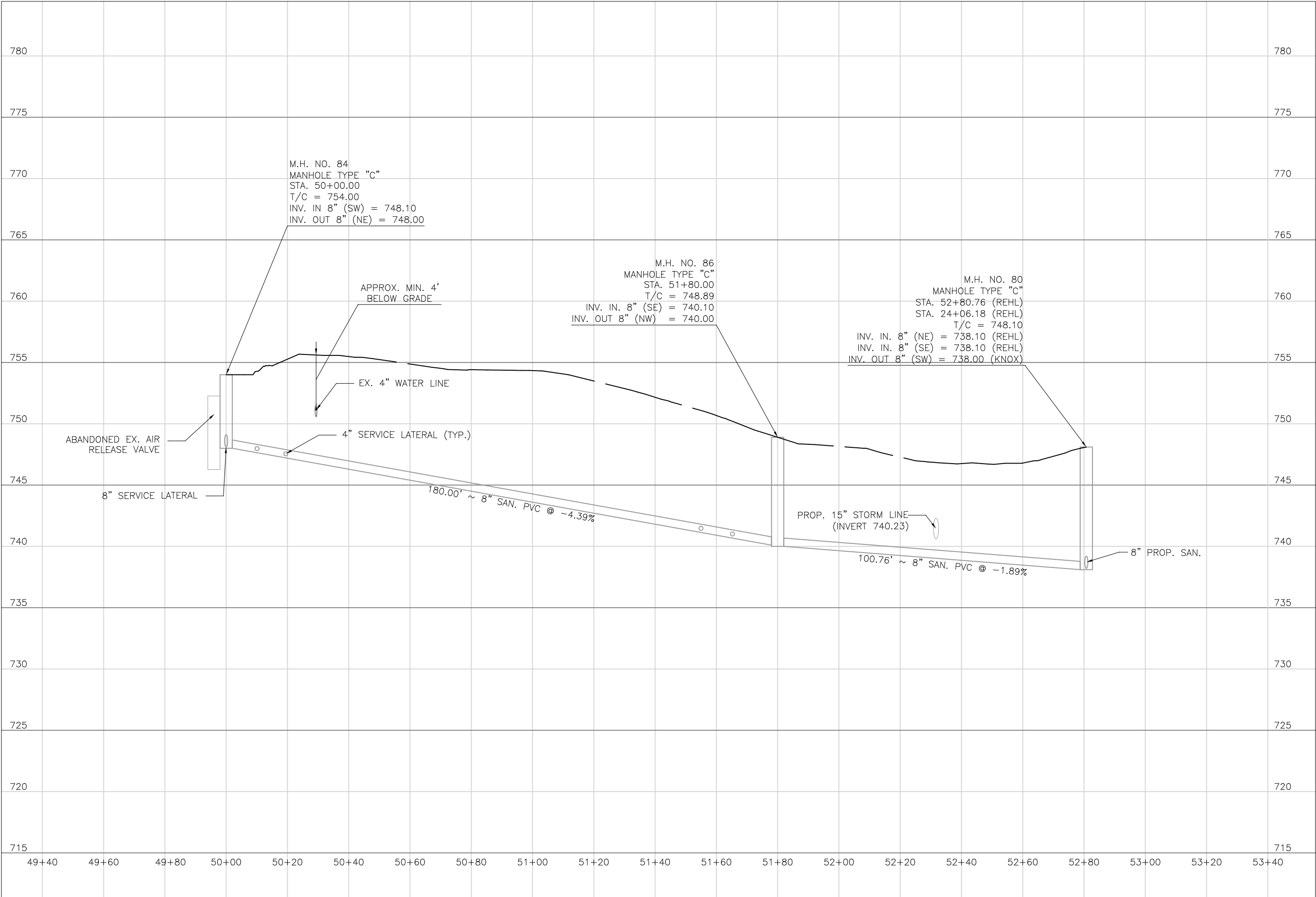
SHEET SIZE:
11" x 17"

SHEET NAME:
**PROFILE
MANHOLE 83**

SHEET NUMBER:

99
118





Mark J. Eicher, P.E., P.S.
155 Rehl Road
Zanesville, Ohio 43701
740-454-0155

ENGINEER'S OFFICE

PREPARED BY:

SANITARY SEWER IMPROVEMENTS
REHL ROAD

PROJECT NAME:

LICKING VIEW
ZANESVILLE, OHIO 43701

PROJECT LOCATION:

PLANS APPROVED BY:

MJE

PLANS PREPARED BY:

HJ

DATE:

08/15/2023

REVISED:

SHEET SIZE:

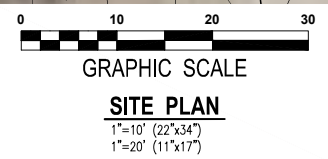
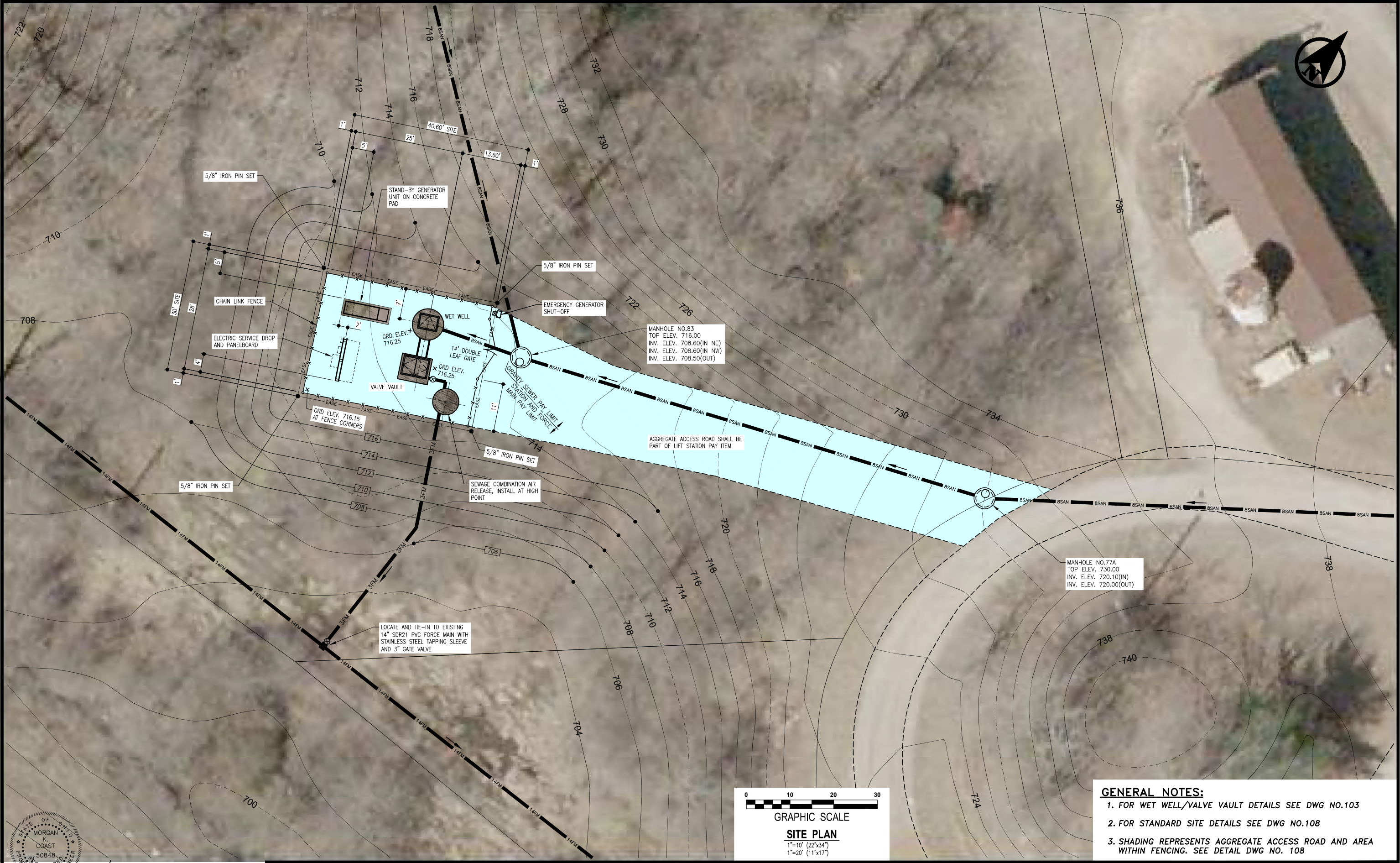
11" x 17"

SHEET NAME:

PROFILE
MANHOLE
84, 86, & 80

SHEET NUMBER:

101
118



- GENERAL NOTES:**
1. FOR WET WELL/VALVE VAULT DETAILS SEE DWG NO.103
 2. FOR STANDARD SITE DETAILS SEE DWG NO.108
 3. SHADING REPRESENTS AGGREGATE ACCESS ROAD AND AREA WITHIN FENCING. SEE DETAIL DWG NO. 108

5/11/22
 Morgan K. Coast
 PROFESSIONAL ENGINEER
 No. 50848
 STATE OF OHIO

NO.	DATE	REVISION

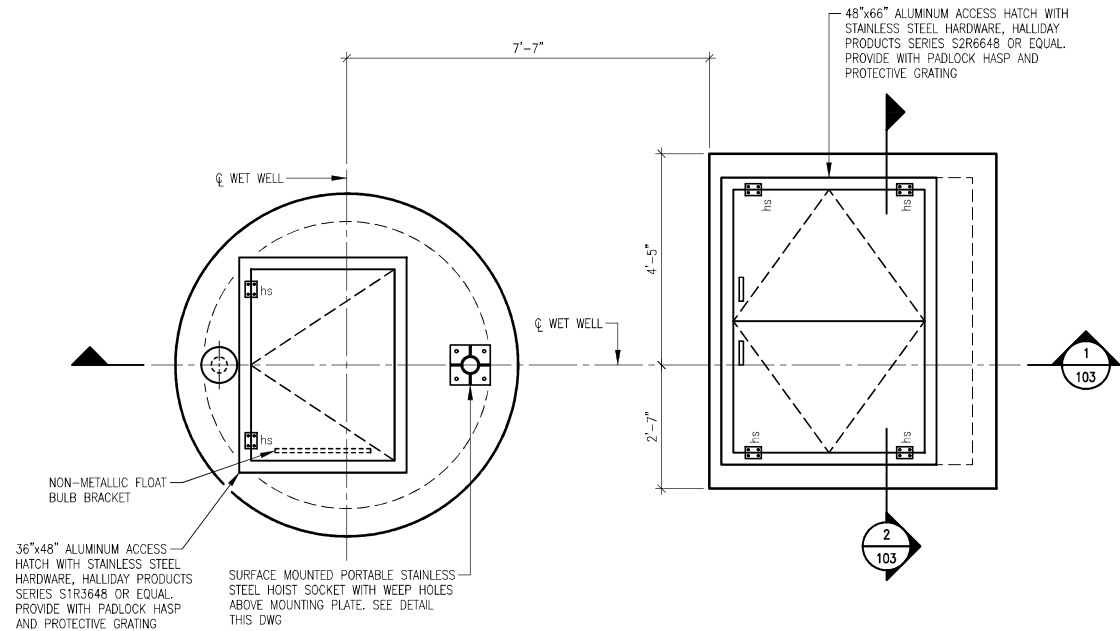
DRAWN BY:
DAVID STEWART
 CHECKED BY:
MORGAN K. COAST

VAUGHN, COAST & VAUGHN, INC.
 Engineers
 154 South Marietta Street
 St. Clairsville, Ohio 43950
 740-695-7256 Fax: 740-695-2203

MUSKINGUM COUNTY COMMISSIONERS
 Muskingum County Water and Sewer District
 Muskingum County, Ohio

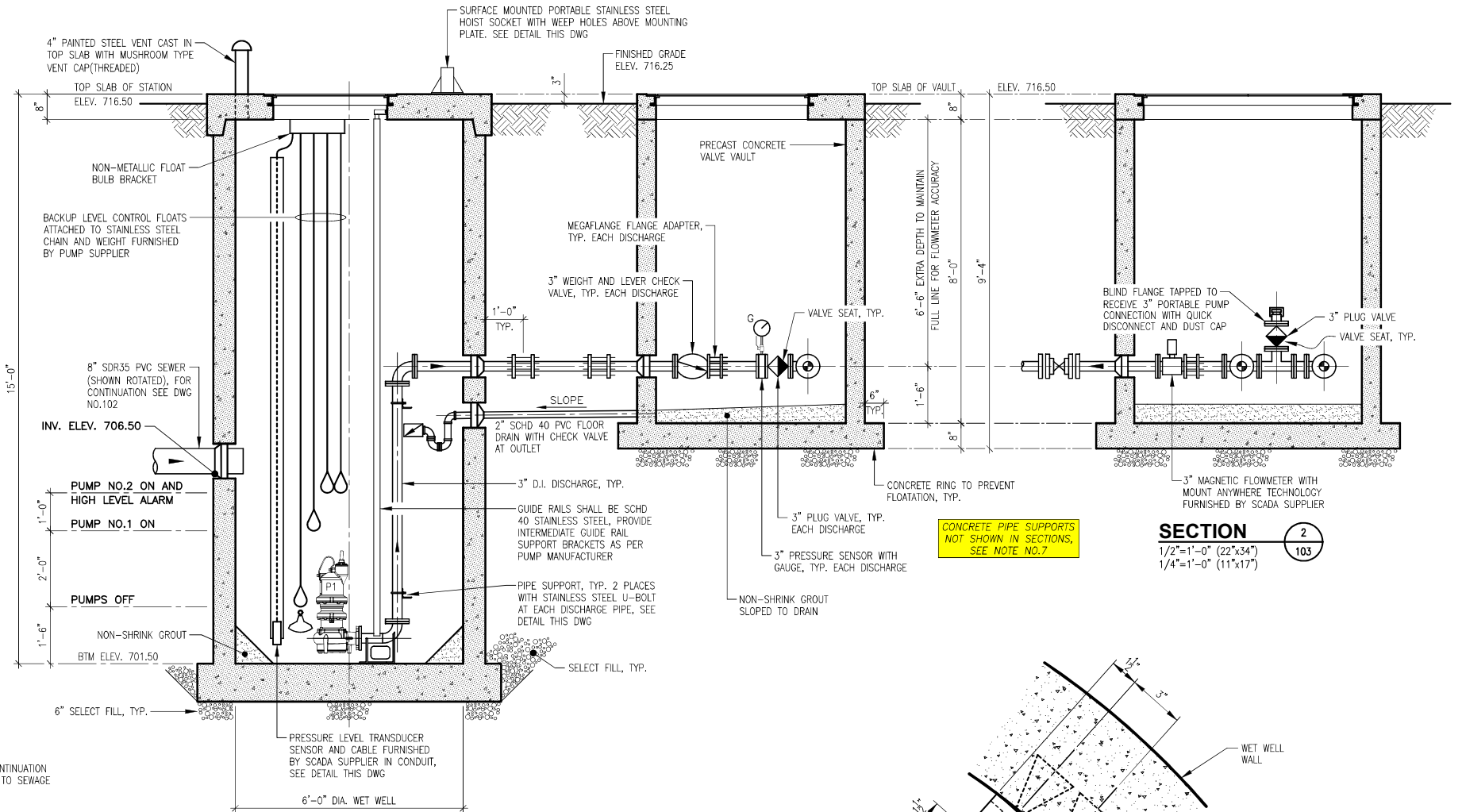
LICKING VIEW SANITARY SEWER IMPROVEMENTS
KNOX ROAD SEWAGE LIFT STATION
SITE PLAN

SCALE: AS SHOWN	PROJECT NO. 21038
DATE: MAY 2022	DRAWING NO. 102



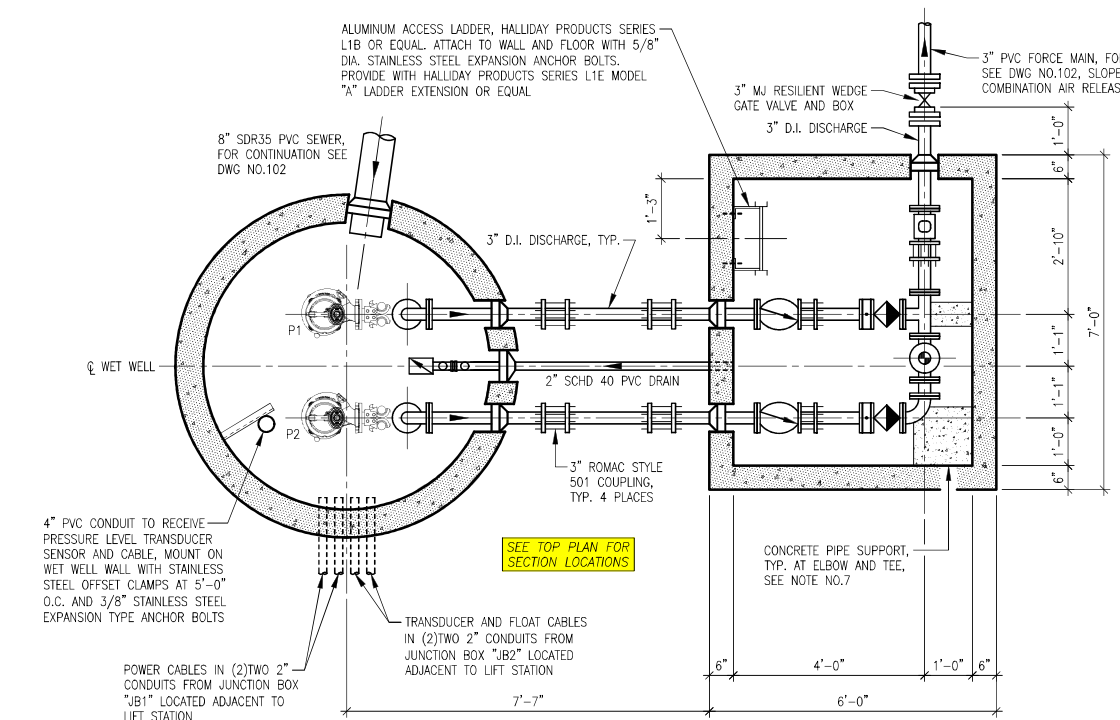
KNOX ROAD SEWAGE LIFT STATION TOP PLAN

1/2"=1'-0" (22"x34")
1/4"=1'-0" (11"x17")



SECTION 1

1/2"=1'-0" (22"x34")
1/4"=1'-0" (11"x17")

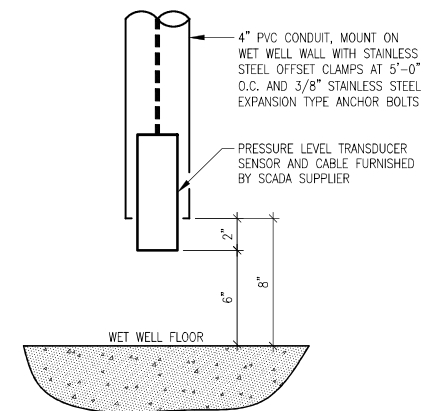


KNOX ROAD SEWAGE LIFT STATION SECTIONAL PLAN

1/2"=1'-0" (22"x34")
1/4"=1'-0" (11"x17")

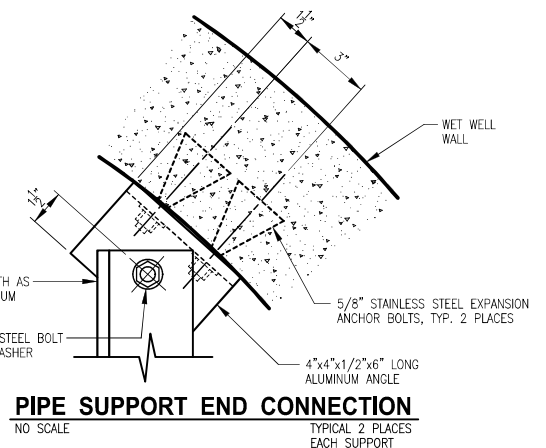
GENERAL NOTES FOR LIFT STATION AND VAULT:

1. ALL MECHANICAL JOINT FITTINGS AND VALVES SHALL BE EPOXY COATED, HAVE STAINLESS STEEL BOLTS AS PER SPECIFICATIONS.
2. ALL MECHANICAL JOINT FITTINGS SHALL BE RESTRAINED WITH MEGALUG JOINT RESTRAINT SYSTEM.
3. ALL METALLIC SURFACES IN CONTACT WITH CONCRETE SHALL RECEIVE 2 COATS OF COAL TAR EPOXY.
4. STRUCTURAL ALUMINUM SHALL BE 6061-T6.
5. ALL PIPE PENETRATIONS SHALL BE PSX BOOT GASKET, Z-LOK OR EQUAL, WATERTIGHT, FLEXIBLE AND NON-SHRINK UNLESS OTHERWISE NOTED.
6. CONTRACTOR SHALL PLACE SELECT FILL ON ORIGINAL, UNDISTURBED GROUND AND COMPACT TO 95% PROCTOR BENEATH AND ADJACENT TO ALL PRECAST CONCRETE STRUCTURES.
7. CONTRACTOR SHALL PROVIDE REINFORCED CONCRETE PIPE SUPPORTS UNDER 90° ELBOW AND TEE LOCATED IN VALVE VAULT. HEIGHT OF SUPPORT SHALL BE TO CENTER LINE OF PIPING.
8. SEE DWG NO.104 FOR ELECTRICAL.



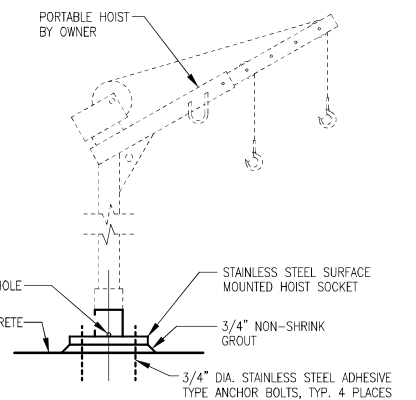
PRESSURE LEVEL TRANSDUCER DETAIL

NO SCALE



PIPE SUPPORT END CONNECTION

NO SCALE



PORTABLE HOIST DETAIL

NO SCALE

STATE OF OHIO
MORGAN K. COAST
50848
REGISTERED PROFESSIONAL ENGINEER
5/11/22

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NO.	DATE	REVISION

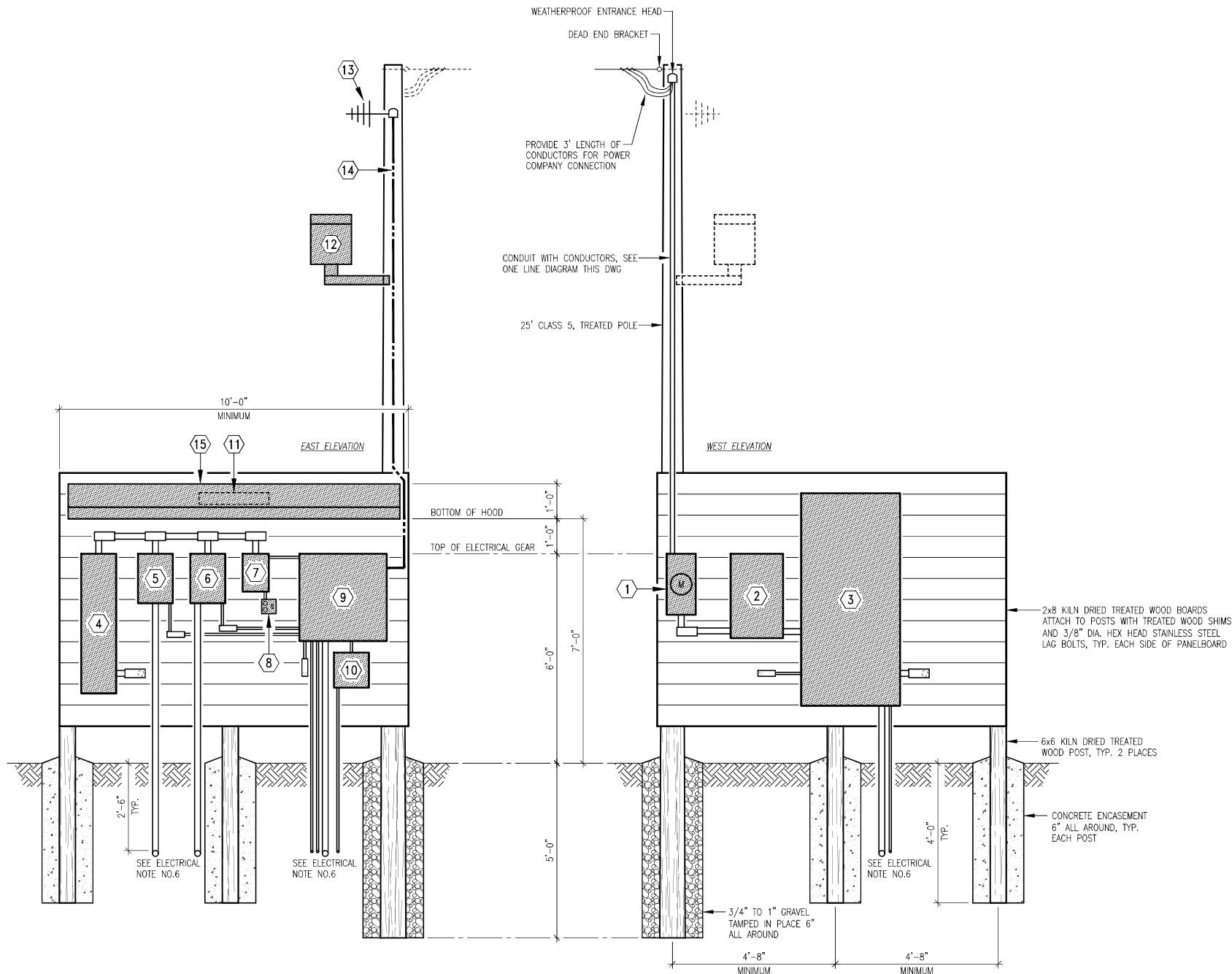
DRAWN BY:	DAVID STEWART
CHECKED BY:	MORGAN K. COAST

VAUGHN, COAST & VAUGHN, INC.
Engineers
154 South Marietta Street
St. Clairsville, Ohio 43950
740-695-7256 Fax: 740-695-2203

MUSKINGUM COUNTY COMMISSIONERS
Muskingum County Water and Sewer District
Muskingum County, Ohio

LICKING VIEW SANITARY SEWER IMPROVEMENTS
KNOX ROAD SEWAGE LIFT STATION
PLANS, SECTIONS AND DETAILS

SCALE:	AS SHOWN	PROJECT NO.	21038
DATE:	MAY 2022	DRAWING NO.	103



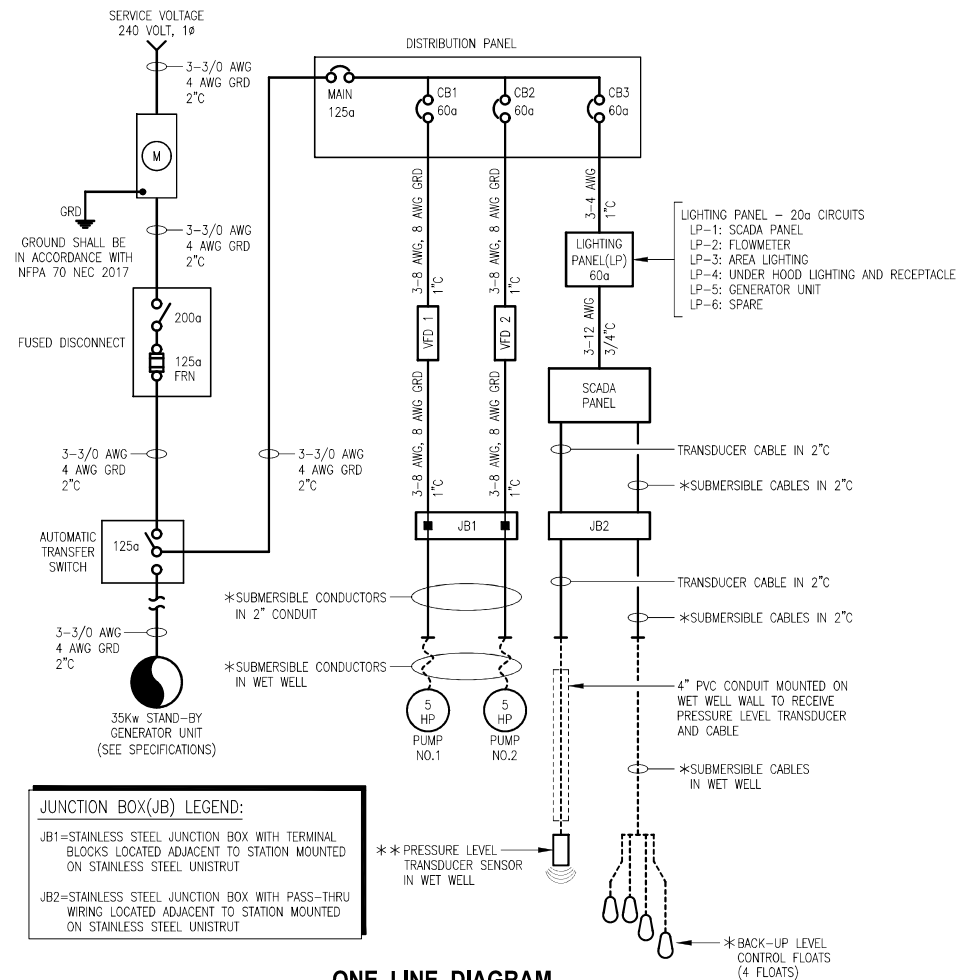
ELECTRIC PANELBOARD DETAIL
NO SCALE

KEY NOTE LEGEND FOR PANELBOARD DETAIL

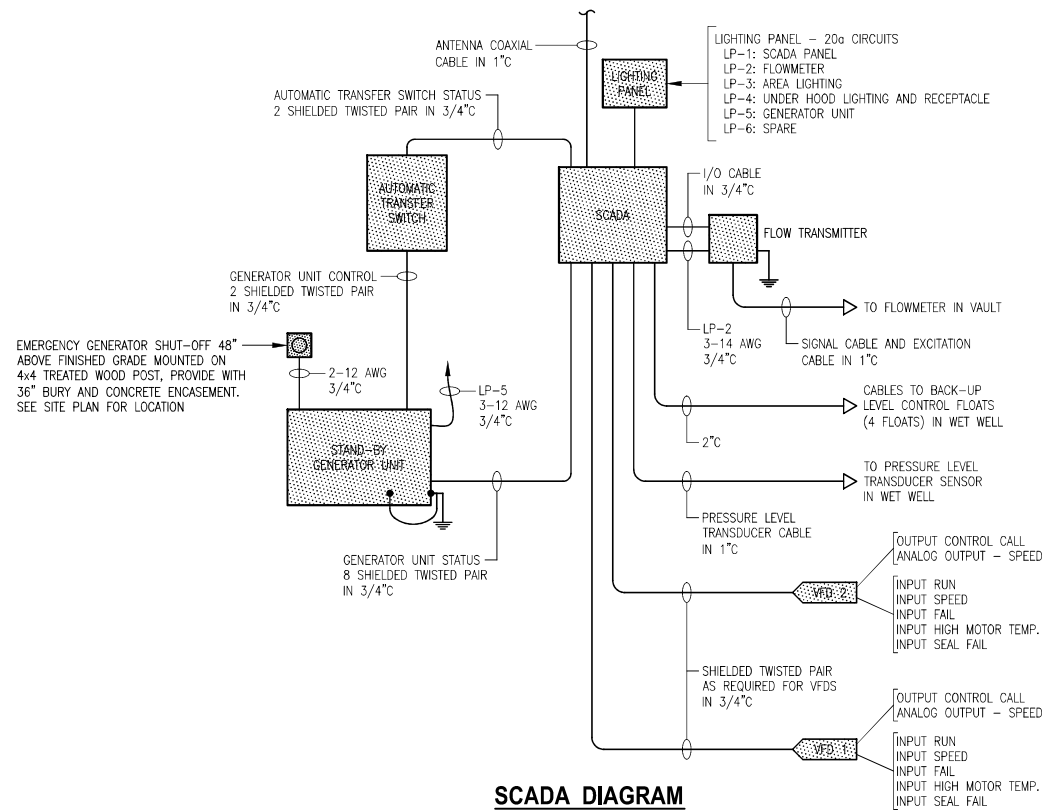
- | | |
|--|---|
| ① METER | ⑩ FLOW TRANSMITTER |
| ② FUSED DISCONNECT, NEMA 4X STAINLESS STEEL(SST) | ⑪ UNDER THE HOOD LIGHTING SHALL BE RAB LED LIGHTING MODEL NO. SHARK2-25NW/D10 OR EQUAL. |
| ③ AUTOMATIC TRANSFER SWITCH, NEMA 4X STAINLESS STEEL(SST), SUPPLIED BY STAND-BY GENERATOR UNIT MANUFACTURER. | ⑫ AREA LIGHTING SHALL BE RAB LED FLOODLIGHTING MODEL NO. FFLED-12-T-N WITH PHOTOCELL OR EQUAL, LIGHT SHALL FACE SEWAGE LIFT STATION |
| ④ DISTRIBUTION PANEL IN NEMA 4X ENCLOSURE, 240V, SINGLE PHASE | ⑬ SCADA ANTENNA WITH COAXIAL CABLE TO SCADA PANEL. |
| ⑤ VARIABLE FREQUENCY DRIVE NO.1, NEMA 4X STAINLESS STEEL | ⑭ 1" CONDUIT WITH SCADA ANTENNA COAXIAL CABLE TO SCADA PANEL. |
| ⑥ VARIABLE FREQUENCY DRIVE NO.2, NEMA 4X STAINLESS STEEL | ⑮ PRE-ENGINEERED 14ga. GALVANIZED STEEL HOOD WITH 36" PROJECTION FROM TREATED WOOD BOARDS AND 9'-6" LONG, PERMA TECH, INC. "PERMA METAL HOOD" OR EQUAL, COLOR: FOREST GREEN. BOLT TO TREATED BOARDS WITH 1/2" DIA. STAINLESS STEEL BOLTS, NUTS AND WASHERS SPACED PER MANUFACTURERS SPECIFICATIONS. |
| ⑦ LIGHTING PANEL IN NEMA 4X ENCLOSURE, PROVIDE WITH SIX(6) 120V-20a CIRCUIT BREAKERS, SEE DIAGRAMS THIS DWG. | |
| ⑧ DUPLEX GFCI RECEPTACLE AND SWITCH FOR UNDER HOOD LIGHTING IN WEATHERPROOF BOX. | |
| ⑨ SCADA PANEL, NEMA 4X STAINLESS STEEL. | |

ELECTRICAL NOTES:

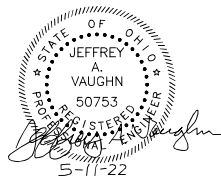
- ALL ELECTRICAL WORK SHALL BE COMPLETED IN ACCORDANCE WITH NFPA 70 NEC 2017.
- SERVICE ENTRANCE GROUNDING SHALL BE IN CONFORMANCE WITH NEC 2017 250.53.
- ALL CONDUITS SHALL BE SCHD 40 PVC WITH SIZE PER NEC 2017 ANNEX C TABLE C.10. ALL BURIED CONDUITS SHALL HAVE MINIMUM 30" COVER AND WARNING TAPE.
- SIZE ALL CONDUCTORS IN ACCORDANCE WITH NEC 2017 TABLE 310.15(B)(16)
- CONDUIT SUPPORT CLIPS SHALL BE NONMETALLIC AND HAVE STAINLESS STEEL ANCHOR SCREWS. CLIP SPACING SHALL BE AS PER MANUFACTURER SPECIFICATIONS.
- SEE ONE LINE DIAGRAM AND SCADA DIAGRAM FOR CONDUIT AND WIRES SIZES THAT ARE NOT SHOWN.
- * POWER AND BACK-UP FLOAT SYSTEM CABLES TO BE PROVIDED BY PUMP SUPPLIER. CONDUCTOR SIZES SHALL CONFORM TO NFPA 70 NEC 2017.
- ** SENSOR AND CABLE PROVIDED BY SCADA SUPPLIER.
- COORDINATE NUMBER AND LOCATION OF ALL CONDUITS BETWEEN GENERATOR CONDUIT STUB-UP AREA AND PANELBOARD GEAR.



ONE LINE DIAGRAM



SCADA DIAGRAM



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NO.	DATE	REVISION

DRAWN BY: DAVID STEWART
CHECKED BY: JEFFREY A. VAUGHN

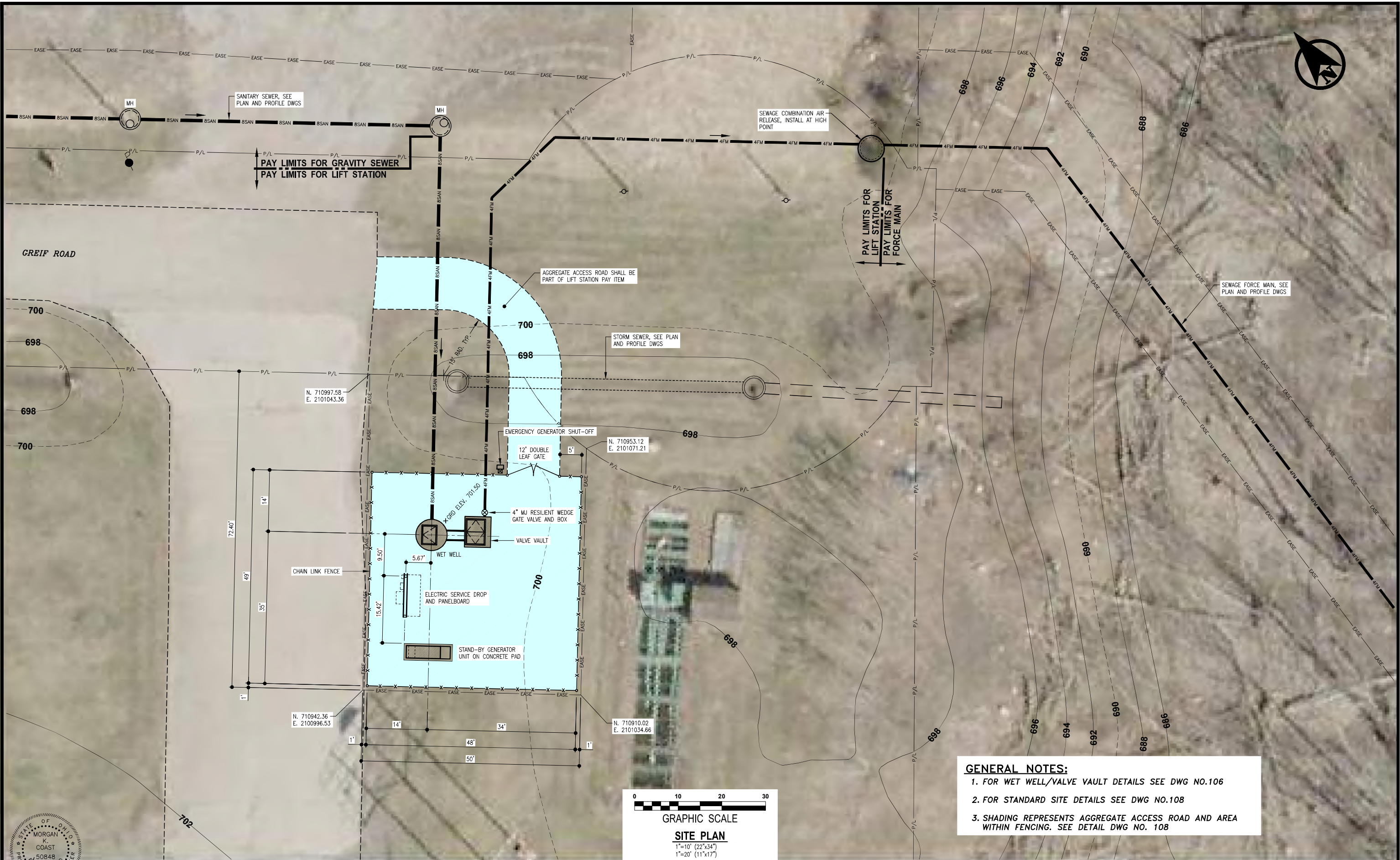
VAUGHN, COAST & VAUGHN, INC.
Engineers
154 South Marietta Street
St. Clairsville, Ohio 43950
740-695-7256 Fax: 740-695-2203

MUSKINGUM COUNTY COMMISSIONERS
Muskingum County Water and Sewer District
Muskingum County, Ohio

LICKING VIEW SANITARY SEWER IMPROVEMENTS
KNOX ROAD SEWAGE LIFT STATION
ELECTRICAL DETAIL AND DIAGRAMS

SCALE: AS SHOWN
DATE: MAY 2022

PROJECT NO. 21038
DRAWING NO. 104



- GENERAL NOTES:**
- 1. FOR WET WELL/VALVE VAULT DETAILS SEE DWG NO.106
 - 2. FOR STANDARD SITE DETAILS SEE DWG NO.108
 - 3. SHADING REPRESENTS AGGREGATE ACCESS ROAD AND AREA WITHIN FENCING. SEE DETAIL DWG NO. 108

Morgan K. Coast 5/11/22

NO.	DATE	REVISION
1	3/20/24	REVISED SEWAGE LIFT STATION SITE LOCATION

DRAWN BY:
DAVID STEWART

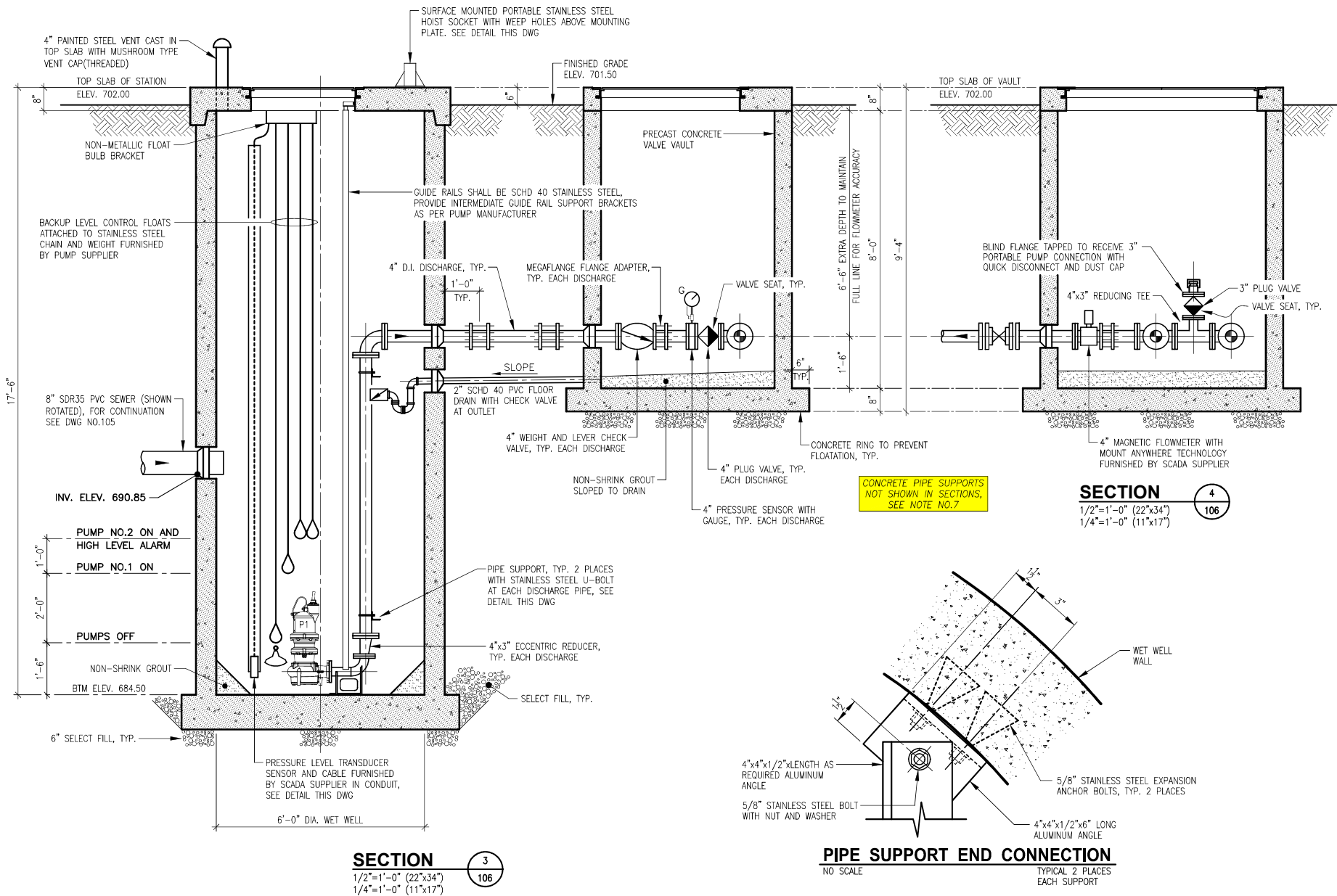
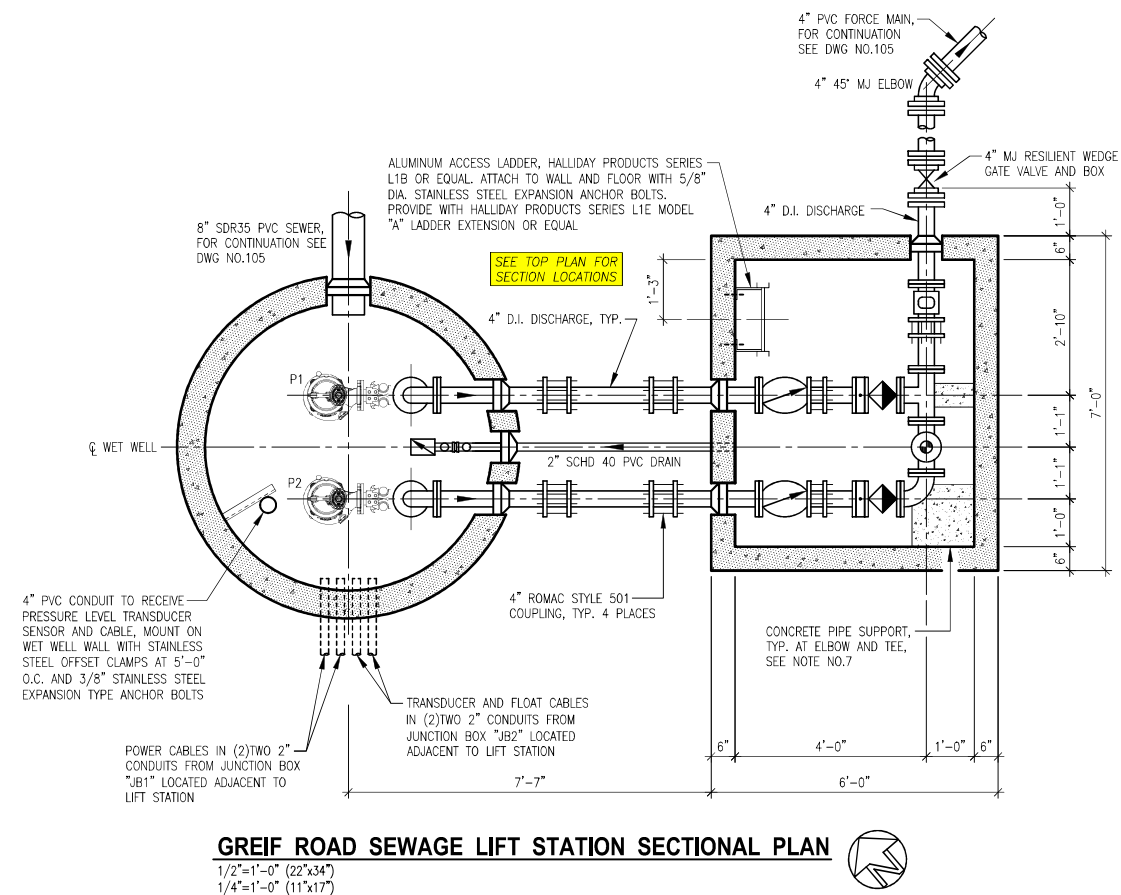
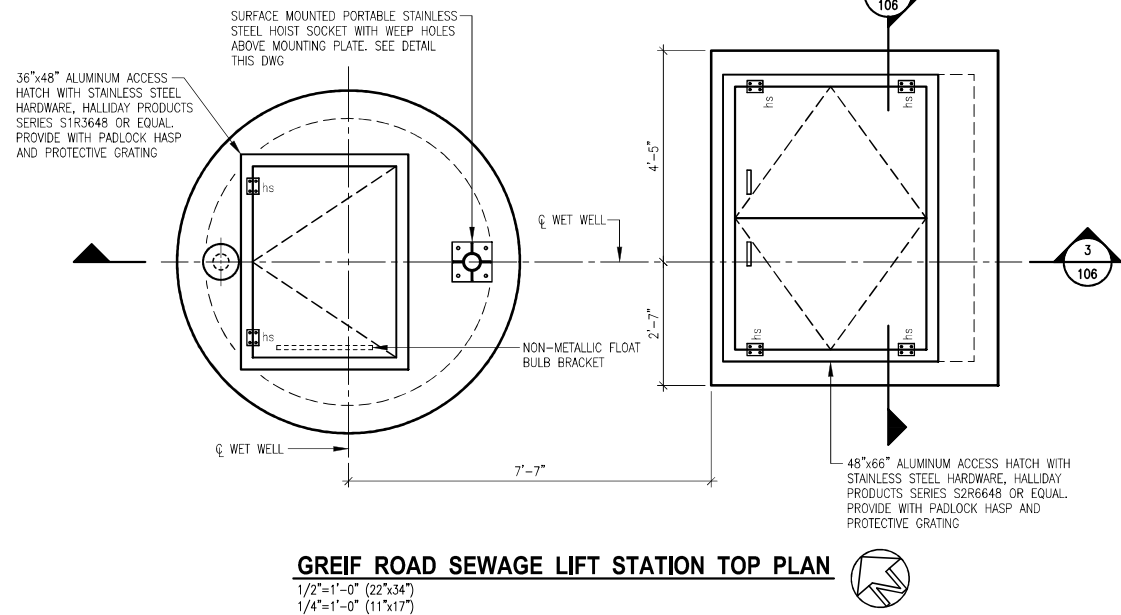
CHECKED BY:
MORGAN K. COAST

VAUGHN, COAST & VAUGHN, INC.
Engineers
154 South Marietta Street
St. Clairsville, Ohio 43950
740-695-7256 Fax: 740-695-2203

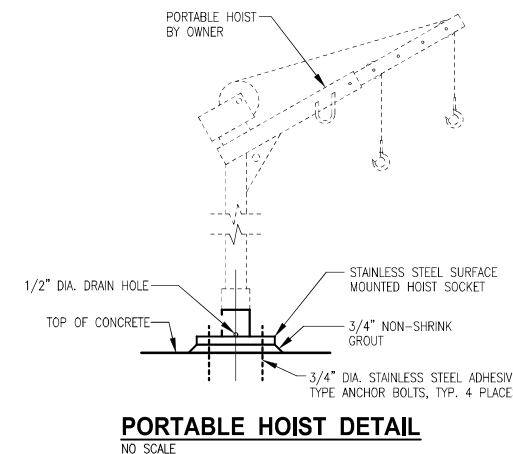
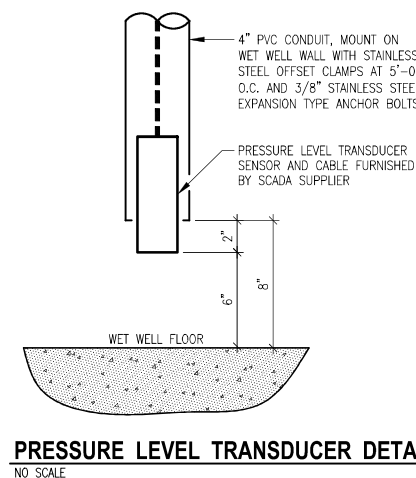
MUSKINGUM COUNTY COMMISSIONERS
Muskingum County Water and Sewer District
Muskingum County, Ohio

LICKING VIEW SANITARY SEWER IMPROVEMENTS
**GREIF ROAD SEWAGE LIFT STATION
SITE PLAN**

SCALE: AS SHOWN	PROJECT NO.: 21038
DATE: MAY 2022	DRAWING NO.: 105



- GENERAL NOTES FOR LIFT STATION AND VAULT:**
1. ALL MECHANICAL JOINT FITTINGS AND VALVES SHALL BE EPOXY COATED, HAVE STAINLESS STEEL BOLTS AS PER SPECIFICATIONS.
 2. ALL MECHANICAL JOINT FITTINGS SHALL BE RESTRAINED WITH MEGALUG JOINT RESTRAINT SYSTEM.
 3. ALL METALLIC SURFACES IN CONTACT WITH CONCRETE SHALL RECEIVE 2 COATS OF COAL TAR EPOXY.
 4. STRUCTURAL ALUMINUM SHALL BE 6061-T6.
 5. ALL PIPE PENETRATIONS SHALL BE PSX BOOT GASKET, 2-LOK OR EQUAL, WATERTIGHT, FLEXIBLE AND NON-SHRINK UNLESS OTHERWISE NOTED.
 6. CONTRACTOR SHALL PLACE SELECT FILL ON ORIGINAL, UNDISTURBED GROUND AND COMPACT TO 95% PROCTOR BENEATH AND ADJACENT TO ALL PRECAST CONCRETE STRUCTURES.
 7. CONTRACTOR SHALL PROVIDE REINFORCED CONCRETE PIPE SUPPORTS UNDER 90° ELBOW AND TEE LOCATED IN VALVE VAULT. HEIGHT OF SUPPORT SHALL BE TO CENTER LINE OF PIPING.
 8. SEE DWG NO.107 FOR ELECTRICAL.



STATE OF OHIO
MORGAN K. COAST
50848
REGISTERED PROFESSIONAL ENGINEER
5/11/22

NO.	DATE	REVISION
1	3/20/24	REVISED SEWAGE LIFT STATION PER SITE REVISIONS

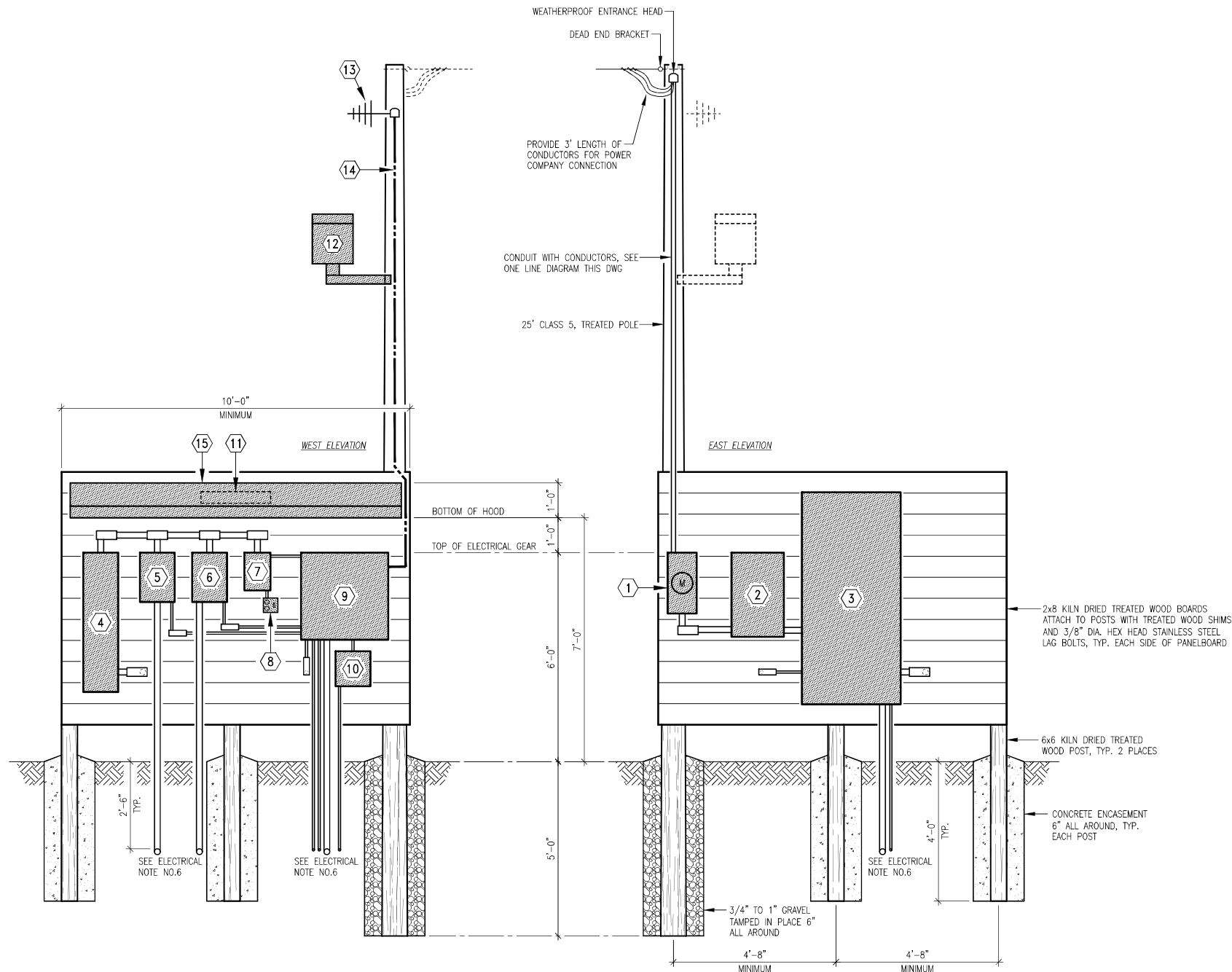
DRAWN BY:
DAVID STEWART
CHECKED BY:
MORGAN K. COAST

VAUGHN, COAST & VAUGHN, INC.
Engineers
154 South Marietta Street
St. Clairsville, Ohio 43950
740-695-7256 Fax: 740-695-2203

MUSKINGUM COUNTY COMMISSIONERS
Muskingum County Water and Sewer District
Muskingum County, Ohio

LICKING VIEW SANITARY SEWER IMPROVEMENTS
**GREIF ROAD SEWAGE LIFT STATION
PLANS, SECTIONS AND DETAILS**

SCALE:
AS SHOWN
DATE:
MAY 2022
PROJECT NO.
21038
DRAWING NO.
106



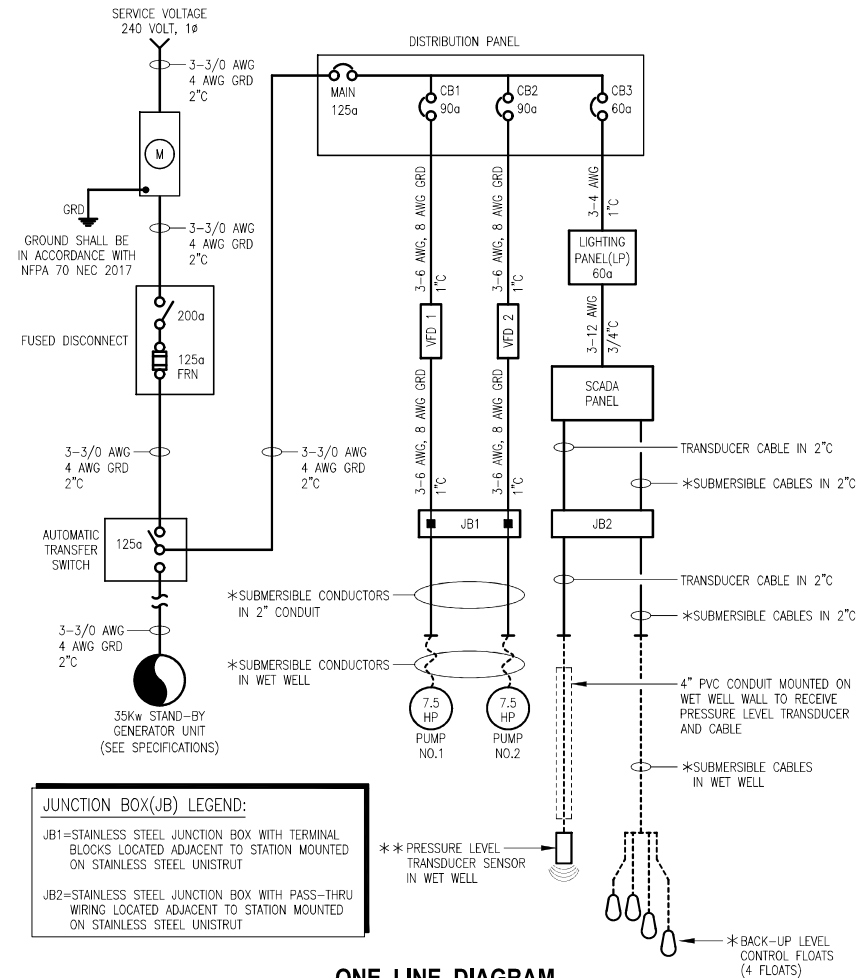
ELECTRIC PANELBOARD DETAIL
NO SCALE

KEY NOTE LEGEND FOR PANELBOARD DETAIL

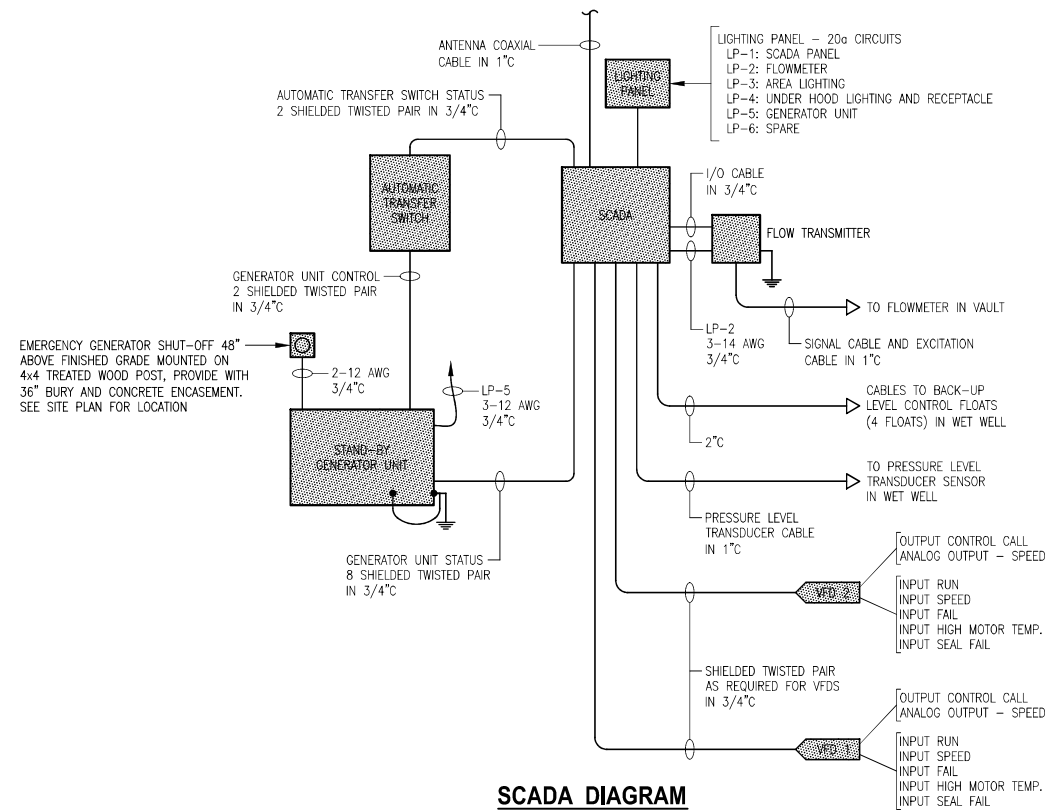
- | | |
|--|---|
| ① METER | ⑩ FLOW TRANSMITTER |
| ② FUSED DISCONNECT, NEMA 4X STAINLESS STEEL(SST) | ⑪ UNDER THE HOOD LIGHTING SHALL BE RAB LED LIGHTING MODEL NO. SHARK2-25NW/D10 OR EQUAL. |
| ③ AUTOMATIC TRANSFER SWITCH, NEMA 4X STAINLESS STEEL(SST), SUPPLIED BY STAND-BY GENERATOR UNIT MANUFACTURER. | ⑫ AREA LIGHTING SHALL BE RAB LED FLOODLIGHTING MODEL NO. FFLED-12-T-N WITH PHOTOCELL OR EQUAL, LIGHT SHALL FACE SEWAGE LIFT STATION |
| ④ DISTRIBUTION PANEL IN NEMA 4X ENCLOSURE, 240V, SINGLE PHASE | ⑬ SCADA ANTENNA WITH COAXIAL CABLE TO SCADA PANEL. |
| ⑤ VARIABLE FREQUENCY DRIVE NO.1, NEMA 4X STAINLESS STEEL | ⑭ 1" CONDUIT WITH SCADA ANTENNA COAXIAL CABLE TO SCADA PANEL. |
| ⑥ VARIABLE FREQUENCY DRIVE NO.2, NEMA 4X STAINLESS STEEL | ⑮ PRE-ENGINEERED 14ga. GALVANIZED STEEL HOOD WITH 36" PROJECTION FROM TREATED WOOD BOARDS AND 9'-6" LONG, PERMA TECH, INC. "PERMA METAL HOOD" OR EQUAL, COLOR: FOREST GREEN. BOLT TO TREATED BOARDS WITH 1/2" DIA. STAINLESS STEEL BOLTS, NUTS AND WASHERS SPACED PER MANUFACTURERS SPECIFICATIONS. |
| ⑦ LIGHTING PANEL IN NEMA 4X ENCLOSURE, PROVIDE WITH SIX(6) 120V-20a CIRCUIT BREAKERS | |
| ⑧ DUPLEX GFCI RECEPTACLE AND SWITCH FOR UNDER HOOD LIGHTING IN WEATHERPROOF BOX. | |
| ⑨ SCADA PANEL, NEMA 4X STAINLESS STEEL. | |

ELECTRICAL NOTES:

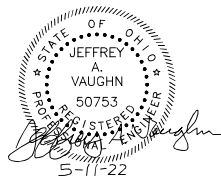
- ALL ELECTRICAL WORK SHALL BE COMPLETED IN ACCORDANCE WITH NFPA 70 NEC 2017.
- SERVICE ENTRANCE GROUNDING SHALL BE IN CONFORMANCE WITH NEC 2017 250.53.
- ALL CONDUITS SHALL BE SCHD 40 PVC WITH SIZE PER NEC 2017 ANNEX C TABLE C.10. ALL BURIED CONDUITS SHALL HAVE MINIMUM 30" COVER AND WARNING TAPE.
- SIZE ALL CONDUCTORS IN ACCORDANCE WITH NEC 2017 TABLE 310.15(B)(16)
- CONDUIT SUPPORT CLIPS SHALL BE NONMETALLIC AND HAVE STAINLESS STEEL ANCHOR SCREWS. CLIP SPACING SHALL BE AS PER MANUFACTURER SPECIFICATIONS.
- SEE ONE LINE DIAGRAM AND SCADA DIAGRAM FOR CONDUIT AND WIRES SIZES THAT ARE NOT SHOWN.
- * POWER AND BACK-UP FLOAT SYSTEM CABLES TO BE PROVIDED BY PUMP SUPPLIER. CONDUCTOR SIZES SHALL CONFORM TO NFPA 70 NEC 2017.
- ** SENSOR AND CABLE PROVIDED BY SCADA SUPPLIER.
- COORDINATE NUMBER AND LOCATION OF ALL CONDUITS BETWEEN GENERATOR CONDUIT STUB-UP AREA AND PANELBOARD GEAR.



ONE LINE DIAGRAM



SCADA DIAGRAM



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NO.	DATE	REVISION

DRAWN BY:
DAVID STEWART
CHECKED BY:
JEFFREY A. VAUGHN

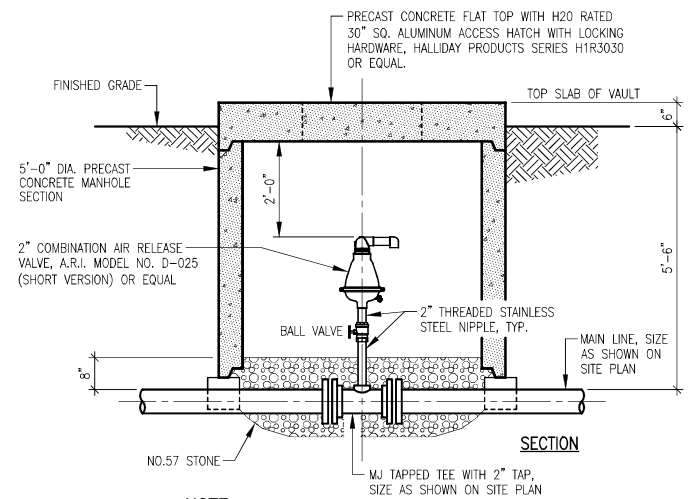
VAUGHN, COAST & VAUGHN, INC.
Engineers
154 South Marietta Street
St. Clairsville, Ohio 43950
740-695-7256 Fax: 740-695-2203

MUSKINGUM COUNTY COMMISSIONERS
Muskingum County Water and Sewer District
Muskingum County, Ohio

LICKING VIEW SANITARY SEWER IMPROVEMENTS
GREIF ROAD SEWAGE LIFT STATION
ELECTRICAL DETAIL AND DIAGRAMS

SCALE:
AS SHOWN
DATE:
MAY 2022

PROJECT NO.
21038
DRAWING NO.
107

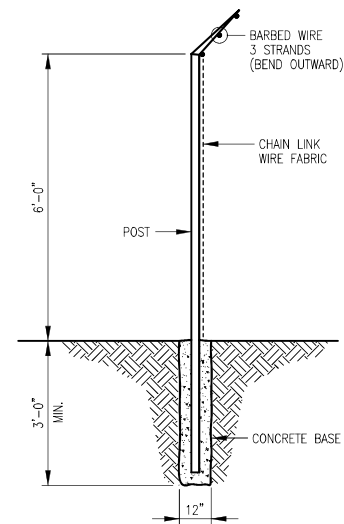


NOTE:

MAIN LINE AND VALVE SHALL BE OFFSET FROM
CENTER OF MANHOLE TO ALLOW ACCESS.

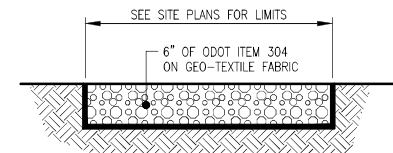
SEWAGE COMBINATION AIR RELEASE DETAIL

NO SCALE



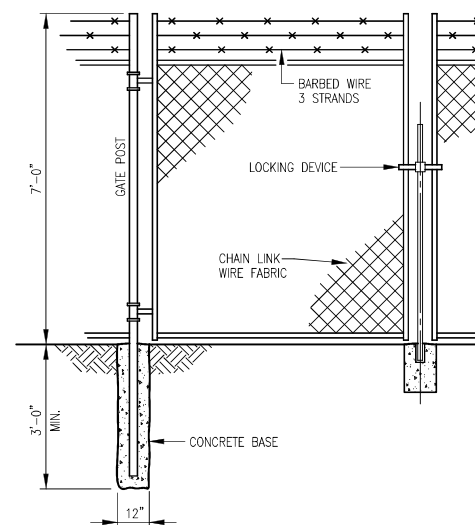
FENCE DETAIL

NO SCALE



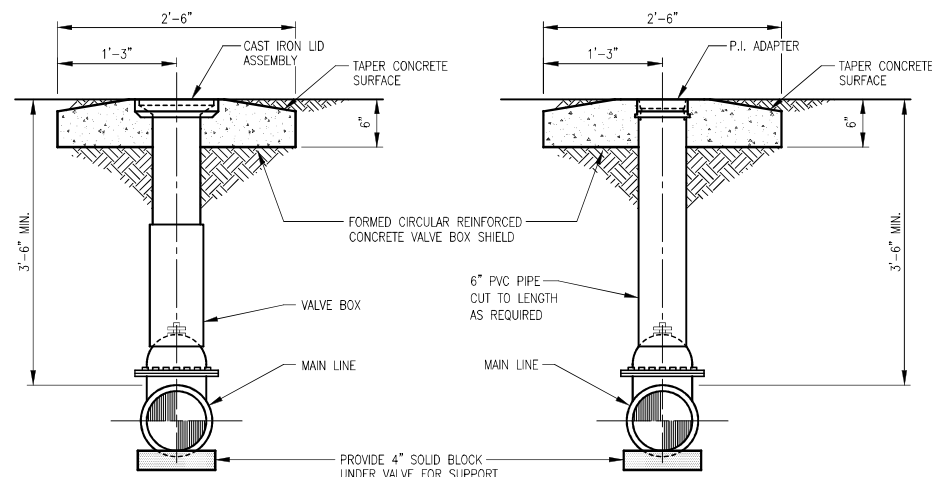
AGGREGATE ACCESS DRIVE AND PARKING DETAIL

NO SCALE

SHADED: 

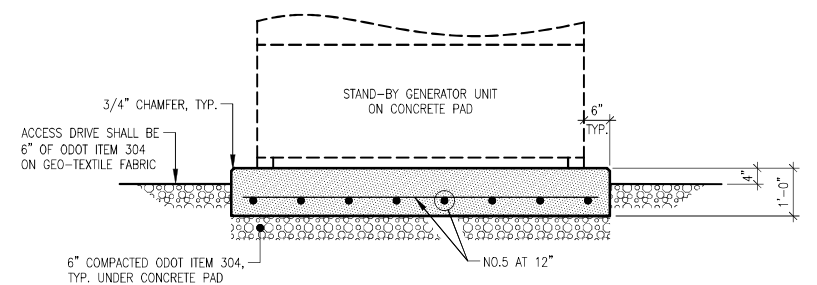
DOUBLE LEAF GATE DETAIL

NO SCALE



VALVE BOX SETTINGS

NO SCALE



CONCRETE PAD DETAIL

NO SCALE

FOR GENERATOR UNIT



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NO.	DATE	REVISION

DRAWN BY:	DAVID STEWART
CHECKED BY:	MORGAN K. COAST



VAUGHN, COAST & VAUGHN, INC.
Engineers
154 South Marietta Street
St. Clairsville, Ohio 43950
40-695-7256 Fax: 740-695-2203

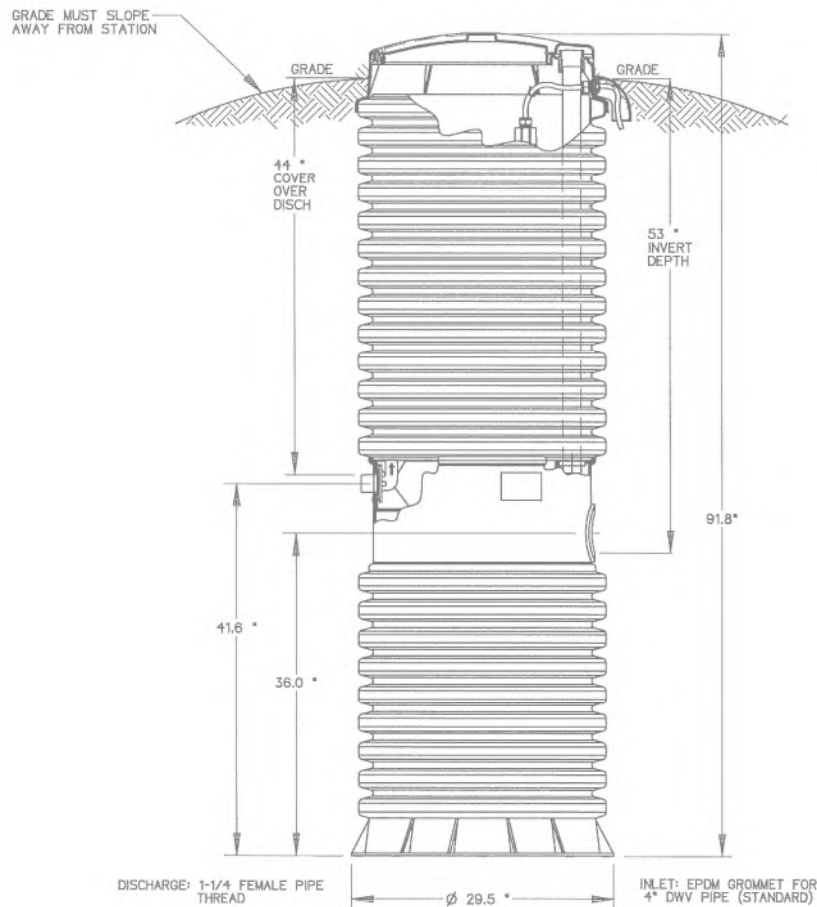
MUSKINGUM COUNTY COMMISSIONERS
Muskingum County Water and Sewer District
Muskingum County, Ohio

LICKING VIEW SANITARY SEWER IMPROVEMENTS
SEWAGE LIFT STATIONS
STANDARD SITE DETAILS

SCALE:	AS SHOWN
DATE:	MAY 2022

PROJECT NO. 21038
DRAWING NO. 108

OPTIONS : ☒ **DH071-93** (HARD WIRED
LEVEL CONTROLS)
☐ **DR071-93** (WIRELESS
LEVEL CONTROLS)



CONCRETE BALLAST MAY BE REQUIRED
SEE INSTALLATION INSTRUCTIONS
FOR DETAILS

NOTE: DIMENSIONS ARE FOR REF ONLY



AD	CAH	07/12/07	B	1/16
DR BY	CHK'D	DATE	ISSUE	SCALE



MODEL DH071-93 / DR071-93

NA0050P06

GRINDER PUMP
NOT TO SCALE

Muskingum County
Sewer Department
375 Richard Roads
Zanesville, Ohio 43701
Telephone (740) 452-4940
Fax (740) 453-6448



PREPARED BY:

MUSKINGUM COUNTY
SEWER STANDARDS

PROJECT
NAME:

PLANS APPROVED BY:

MJE

PLANS PREPARED BY:

HJ

DATE:

06/22/2022

REVISED:

SHEET SIZE:

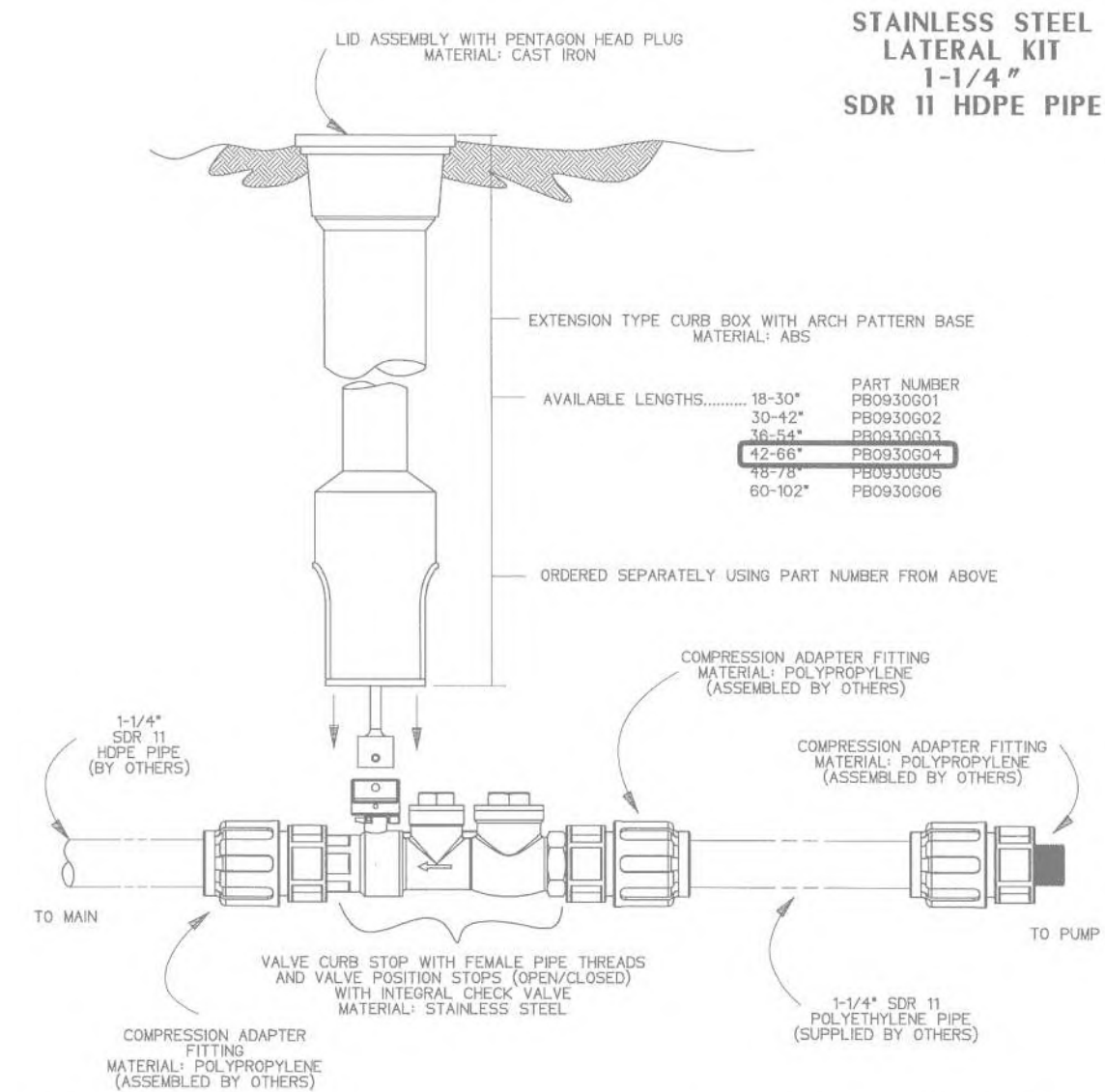
11"x17"

SHEET NAME:


GRINDER
PUMP

SHEET NUMBER:

110
118



- NOTES:
1. SS CURB STOP/CHECK VALVE AND FITTINGS ARE PROVIDED SEPARATELY, TO BE ASSEMBLED BY OTHERS
 2. TO ASSEMBLE, APPLY A DOUBLE LAYER OF TEFLON TAPE, AND A LAYER OF PIPE DOPE (SUPPLIED BY OTHERS) TO THE THREADS ON THE PLASTIC FITTINGS AND INSTALL PER THE MANUFACTURER'S INSTRUCTIONS
*FOR SS FITTING INTO SS THREAD, USE PIPE DOPE OR TEFLON TAPE, NOT BOTH
 3. ASSEMBLY IS TO BE PRESSURE TESTED (BY OTHERS)
 4. ASSEMBLY IS TO BE USED WITH SDR11 HDPE PIPE
 5. TO ORDER SS LATERAL KIT, USE PART NUMBER NC0193G01
 6. CURB BOX IS TO BE ORDERED SEPARATELY, SEE ABOVE

KIT PARTS ARE NOT ASSEMBLED				
SGS	DN	11/02/11	B	3/16
DR BY	CHK'D	DATE	ISSUE	SCALE
				
STAINLESS STEEL LATERAL KIT 1-1/4" SDR 11 HDPE PIPE				
NA0330P02				

LATERAL KIT HDPE PIPE
NOT TO SCALE

Muskingum County
Sewer Department
375 Richard Roads
Zanesville, Ohio 43701
Telephone (740) 452-4940
Fax (740) 453-6448



PREPARED BY:

PROJECT NAME: MUSKINGUM COUNTY SEWER STANDARDS	
PROJECT LOCATION: MUSKINGUM COUNTY, OHIO	

PLANS APPROVED BY:

MJE

PLANS PREPARED BY:

HJ

DATE:

06/22/2022

REVISED:

SHEET SIZE:

11"x17"

SHEET NAME:

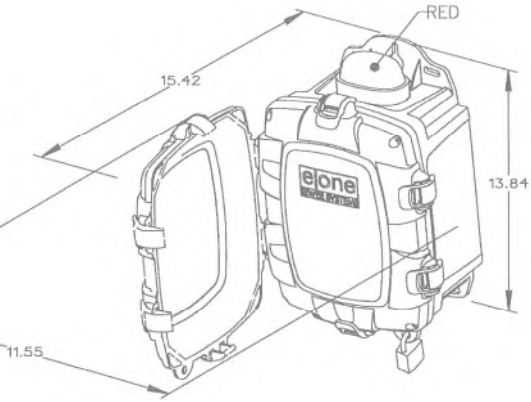
LATERAL KIT

SHEET NUMBER:

111
118

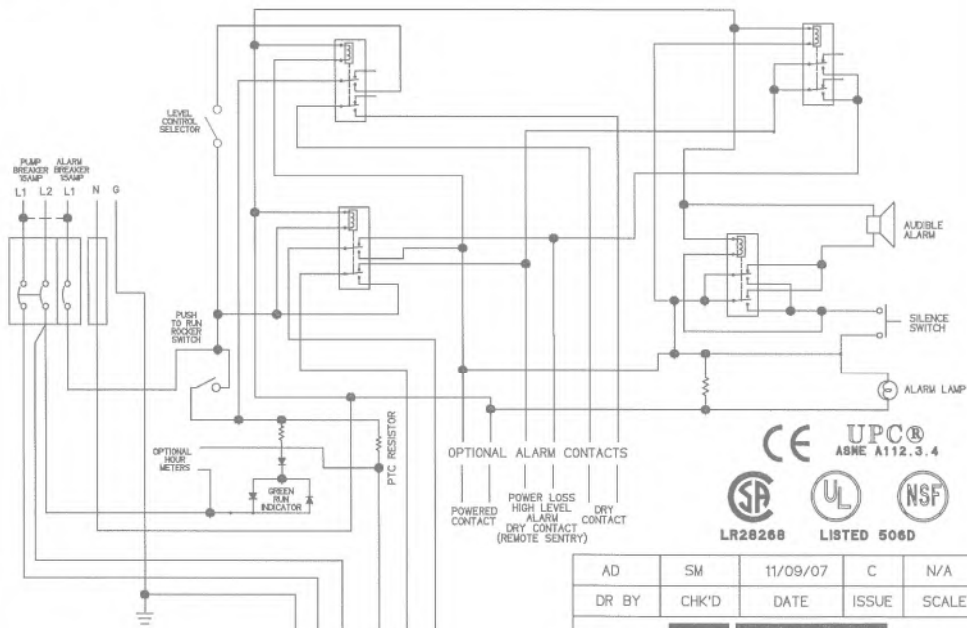
**SIMPLEX
SENTRY**

REDUNDANT RUN (HIGH LEVEL)
EXTERNAL VISUAL & AUDIBLE ALARM
EXTERNAL LATCHING MANUAL SILENCE
MANUAL RUN
PUMP RUN INDICATOR
CONFORMAL COATED CIRCUIT BOARD
PADLOCK
NEMA 4X ENCLOSURE ASSEMBLY
CORROSION PROOF THERMOPLASTIC
POLYESTER APPROVED BY UL FOR
ELECTRICAL CONTROL ENCLOSURE



OPTIONS:

- ☐ ALARM CONTACTS
☒ HOUR METER



PIN	FUNCTION	2000S	EXTREME
1	MANUAL RUN	RED	BROWN
2	L1	BLACK	RED
3	L2	WHITE	BLACK
4	GND	GREEN	GRN/YEL
5	ALARM FEED	ORANGE	YELLOW
6	ALARM RETURN	BLUE	BLUE

CONTROL CABLE:
TYPE TC- DIRECT BURIAL, 12AWG,
SIX CONDUCTOR

AD	SM	11/09/07	C	N/A
DR BY	CHK'D	DATE	ISSUE	SCALE



SIMPLEX SENTRY, 240V 60Hz.
DOUBLE POLE POWER

LM000326

ALARM BOX FOR GRINDER PUMP
NOT TO SCALE

Muskingum County
Sewer Department
375 Richard Roads
Zanesville, Ohio 43701
Telephone (740) 452-4940
Fax (740) 453-6448



PREPARED BY:

MUSKINGUM COUNTY
SEWER STANDARDS
MUSKINGUM COUNTY, OHIO

PLANS APPROVED BY:
MJE

PLANS PREPARED BY:
HJ

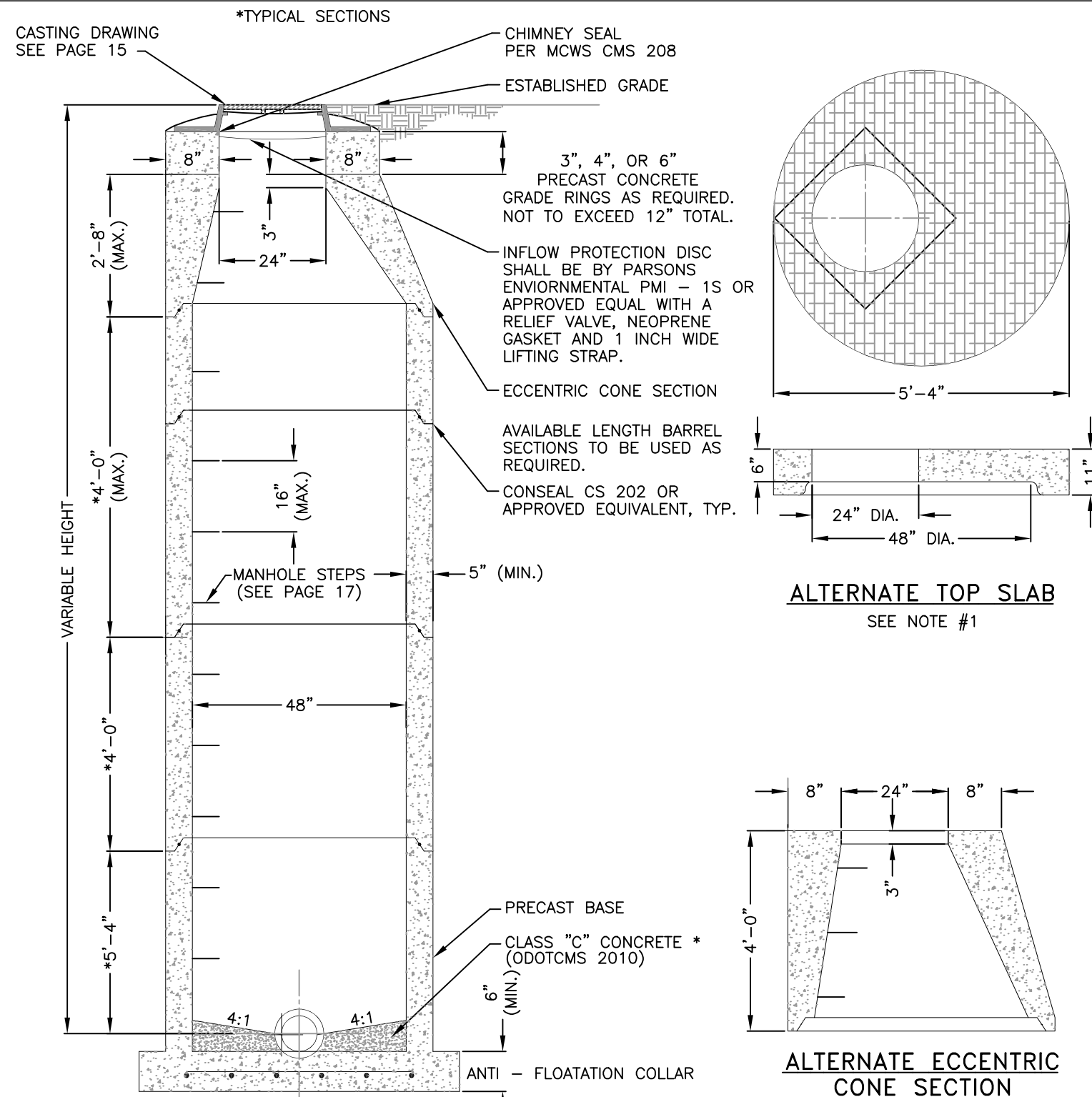
DATE:
06/22/2022

REVISED:

SHEET SIZE:
11"x17"

SHEET NAME:
ALARM BOX

SHEET NUMBER:
112
118



- NOTES:
1. WHEN SHOWN IN TRAFFIC AREAS, THE ALTERNATE TOP SLAB SHALL BE DESIGNED FOR HS-25 TRAFFIC LOADING.
 2. ALL CONSTRUCTION AND MATERIALS SHALL CONFORM TO ASTM C478-20 UNLESS OTHERWISE SHOWN.
 3. ALL CORE DRILLED OPENINGS SHALL BE DONE ONLY AS APPROVED AND DIRECTED BY THE ENGINEER.
 4. PRECAST CONCRETE GRADE RINGS, SEALED WITH CONSEAL, SHALL BE USED BETWEEN THE SLAB OR CONE TOP AND THE ACCESS FRAME CASTING AND COVER. NO MANHOLE BRICK SHALL BE PERMITTED FOR USE.
 5. SEWER PIPE SHALL BE SECURED THROUGH THE MANHOLE WALL BY KOR-N-SEAL BOOT, PRESS WEDGE 2 GASKET OR APPROVED EQUIVALENT MEETING ASTM C923.
 6. ALL MATERIAL SHOULD FOLLOW ODOTCMS 2019 EDITION UNLESS OTHERWISE NOTED.

PRECAST CONCRETE MANHOLE (24" PIPE AND SMALLER) NOT TO SCALE

Muskingum County
Sewer Department
375 Richard Roads
Zanesville, Ohio 43701
Telephone (740) 452-4940
Fax (740) 453-6448



PREPARED BY:

PROJECT NAME:
MUSKINGUM COUNTY
SEWER STANDARDS

PROJECT LOCATION:
MUSKINGUM COUNTY, OHIO

PLANS APPROVED BY:

MJE

PLANS PREPARED BY:

HJ

DATE:

06/22/2022

REVISED:

SHEET SIZE:

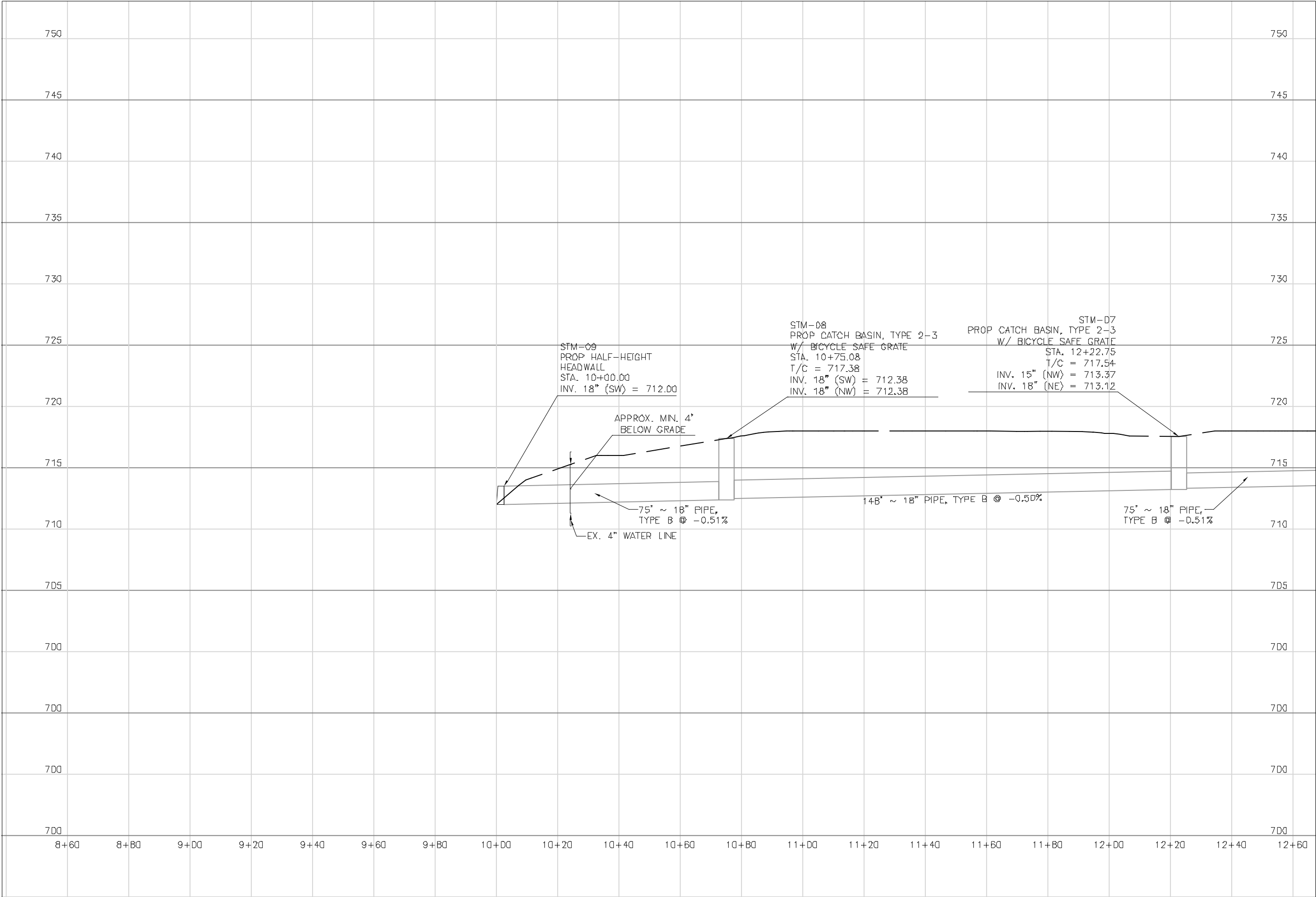
11"x17"

SHEET NAME:

PRECAST CON.
MH 24" - SM

SHEET NUMBER:

113
118



Mark J. Eicher, P.E., P.S.
155 Rehl Road
Zanesville, Ohio 43701
740-454-0155

ENGINEER'S OFFICE

PREPARED BY:

SANITARY SEWER IMPROVEMENTS
BROWN ALLEY STORM SEWER

PROJECT NAME

PROJECT LOCATION

LICKING VIEW
ZANESVILLE, OHIO 43701

PROJECT LOCATION

PLANS APPROVED BY:

MJE

PLANS PREPARED BY:

HJ

DATE:

08/15/2023

REVISED:

SHEET SIZE:

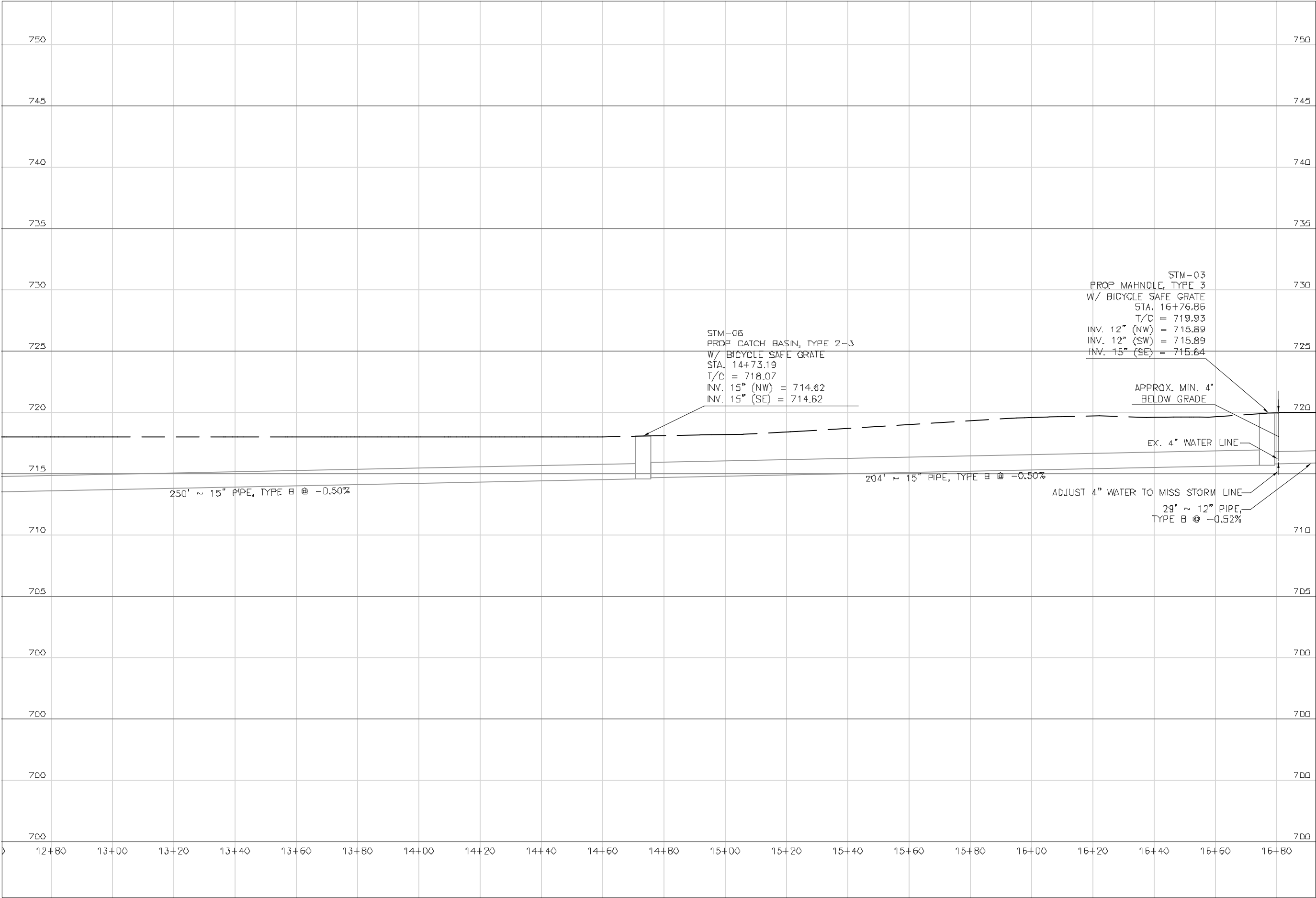
11" x 17"

SHEET NAME:

PROFILE
STM - 07, - 08,
- 09

SHEET NUMBER:

114
118



Mark J. Eicher, P.E., P.S.
155 Rehl Road
Zanesville, Ohio 43701
740-454-0155

ENGINEER'S OFFICE

PREPARED BY:

SANITARY SEWER IMPROVEMENTS
BROWN ALLEY STORM SEWER

LICKING VIEW
ZANESVILLE, OHIO 43701

PROJECT NAME:

PROJECT LOCATION:

PLANS APPROVED BY:

MJE

PLANS PREPARED BY:

HJ

DATE:

08/15/2023

REVISED:

SHEET SIZE:

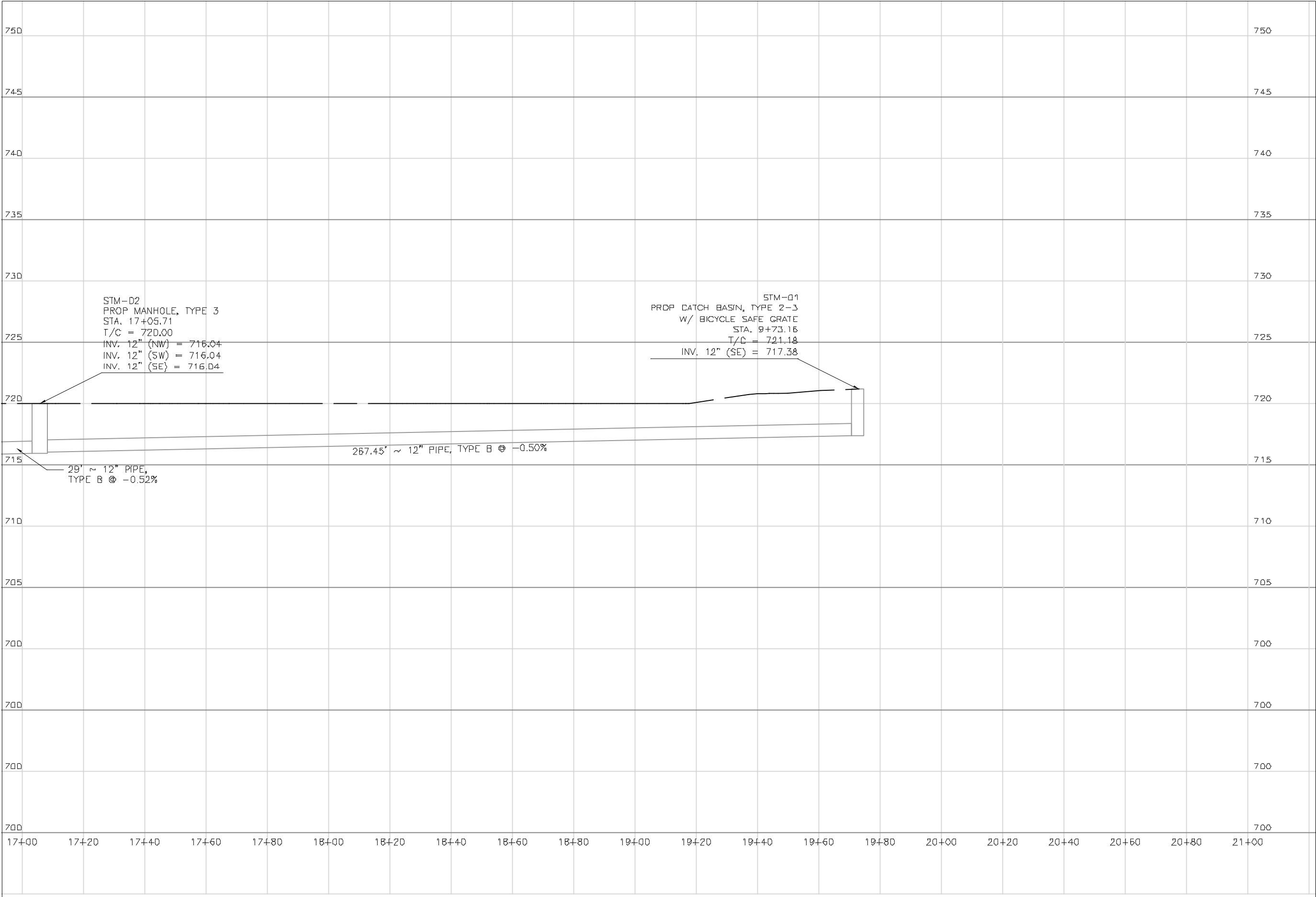
11" x 17"

SHEET NAME:

PROFILE
STM - 03, - 06

SHEET NUMBER:

115
118



Mark J. Eicher, P.E., P.S.
155 Rehl Road
Zanesville, Ohio 43701
740-454-0155

ENGINEER'S OFFICE

PREPARED BY:

SANITARY SEWER IMPROVEMENTS
BROWN ALLEY STORM SEWER

PROJECT NAME

PROJECT LOCATION

LICKING VIEW
ZANESVILLE, OHIO 43701

PROJECT LOCATION

PLANS APPROVED BY:

MJE

PLANS PREPARED BY:

HJ

DATE:

08/15/2023

REVISED:

SHEET SIZE:

11" x 17"

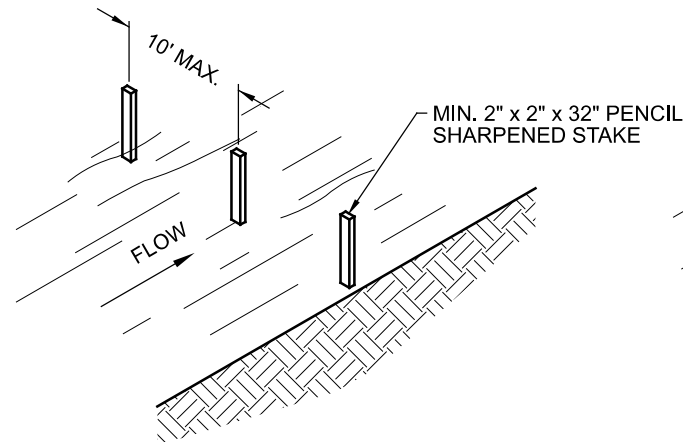
SHEET NAME:

PROFILE
STM - 01, -02

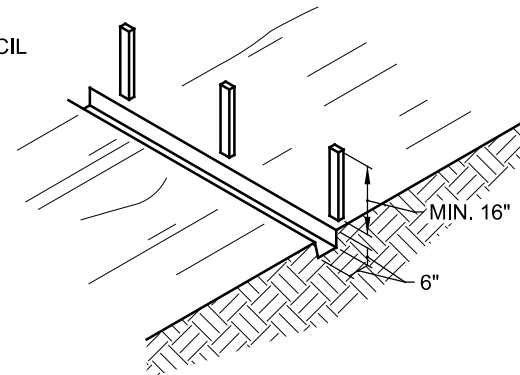
SHEET NUMBER:

116
118

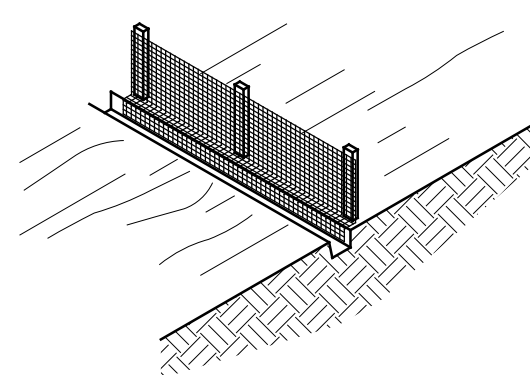
1) SET THE STAKES



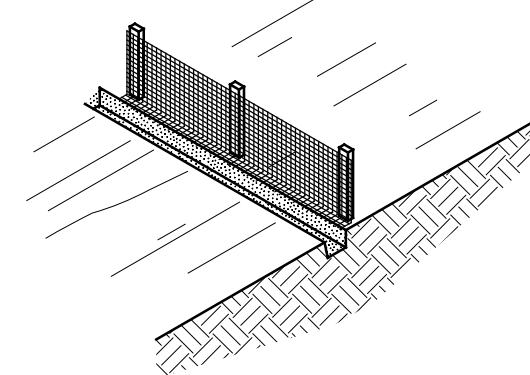
2) EXCAVATE A 6"X6" TRENCH UPSLOPE ALONG THE LINE STAKES.



3) STAPLE FILTER MATERIAL TO STAKES AND EXTEND IT INTO THE TRENCH.



4) BACKFILL AND COMPACT THE EXCAVATED SOIL



SEDIMENT FENCE DETAIL

SILT FENCE SHALL BE CONSTRUCTED BEFORE UPSLOPE LAND DISTURBANCE BEGINS.

ALL SILT FENCE SHALL BE PLACED AS CLOSE TO THE CONTOUR AS POSSIBLE SO THAT WATER WILL NOT CONCENTRATE AT LOW POINTS IN THE FENCE AND SO THAT SMALL SWALES OR DEPRESSIONS WHICH MAY CARRY SMALL CONCENTRATED FLOWS TO THE SILT FENCE ARE DISSIPATED ALONG ITS LENGTH.

TO PREVENT WATER PONDED BY THE SILT FENCE FROM FLOWING AROUND THE ENDS, EACH END SHALL BE CONSTRUCTED UPSLOPE SO THAT THE ENDS ARE AT A HIGHER ELEVATION.

WHERE POSSIBLE, SILT FENCE SHALL BE PLACED ON THE FLATTEST AREA AVAILABLE.

WHERE POSSIBLE, VEGETATION SHALL BE PRESERVED FOR 5 FT. (OR AS MUCH AS POSSIBLE) UPSLOPE FROM THE SILT FENCE. IF VEGETATION IS REMOVED, IT SHALL BE REESTABLISHED WITHIN 7 DAYS FROM THE INSTALLATION OF THE SILT FENCE.

THE HEIGHT OF THE SILT FENCE SHALL BE A MINIMUM OF 16 IN. ABOVE THE ORIGINAL GROUND SURFACE.

THE SILT FENCE SHALL BE PLACED IN A TRENCH CUT A MINIMUM OF 6 IN. DEEP. THE TRENCH SHALL BE CUT WITH A TRENCHER, CABLE LAYING MACHINE, OR OTHER SUITABLE DEVICE WHICH WILL ENSURE AN ADEQUATELY UNIFORM TRENCH DEPTH.

THE SILT FENCE SHALL BE PLACED WITH THE STAKES ON THE DOWNSLOPE SIDE OF THE GEOTEXTILE AND SO THAT 8 IN. OF CLOTH ARE BELOW THE GROUND SURFACE. EXCESS MATERIAL SHALL LAY ON THE BOTTOM OF THE 6 IN. DEEP TRENCH. THE TRENCH SHALL BE BACKFILLED AND COMPACTED.

SEAMS BETWEEN SECTION OF SILT FENCE SHALL BE OVERLAPPED WITH THE END STAKES OF EACH SECTION WRAPPED TOGETHER BEFORE DRIVING INTO THE GROUND.

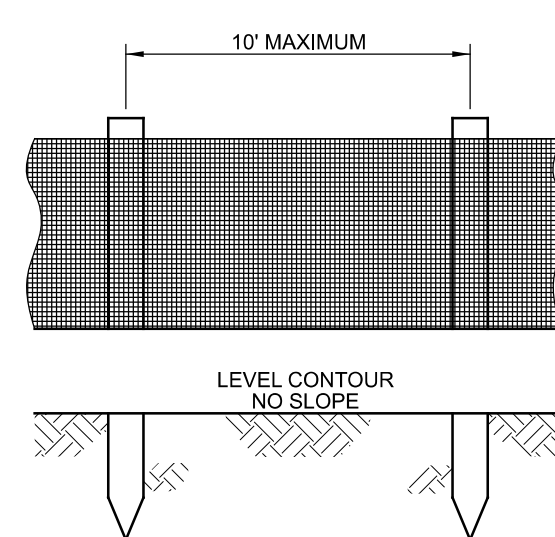
MAINTENANCE:

SILT FENCE SHALL ALLOW RUNOFF TO PASS ONLY AS DIFFUSE FLOW THROUGH THE GEOTEXTILE. IF RUNOFF OVERTOPS THE SILT FENCE, FLOWS UNDER OR AROUND THE ENDS, OR IN ANY OTHER WAY BECOMES A CONCENTRATED FLOW, ONE OF THE FOLLOWING SHALL BE PERFORMED, AS APPROPRIATE: 1) THE LAYOUT OF THE SILT FENCE SHALL BE CHANGED, 2) ACCUMULATED SEDIMENT SHALL BE REMOVED, OR 3) OTHER PRACTICES SHALL BE INSTALLED.

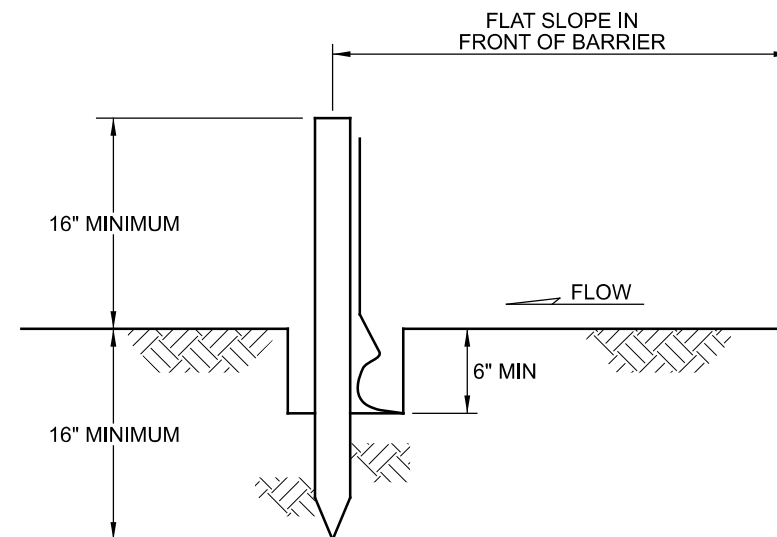
CRITERIA FOR SILT FENCE MATERIALS:

- FENCE POSTS: THE LENGTH SHALL BE A MINIMUM OF 32 IN. LONG. WOOD POSTS WILL BE 2-BY-2-IN. HARDWOOD OF SOUND QUALITY. THE MAXIMUM SPACING BETWEEN POSTS SHALL BE 10 FT.
- SILT FENCE FABRIC SHALL BE ODOT TYPE C GEOTEXTILE FABRIC OR AS DESCRIBED BY THE CHART BELOW:

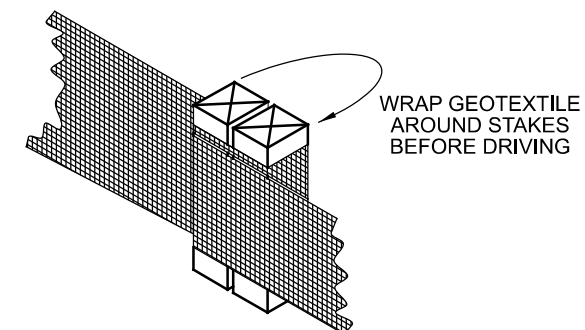
FABRIC PROPERTIES	
MINIMUM TENSILE STRENGTH.....	120 LBS.
MAXIMUM ELONGATION AT 60 LBS.....	50%
MINIMUM PUNCTURE STRENGTH.....	50 LBS.
MINIMUM TEAR STRENGTH.....	40 LBS.
MINIMUM BURST STRENGTH.....	200 PSI
APPARENT OPENING SIZE.....	≤ 0.84MM
MINIMUM PERMITTIVITY.....	1X10 ⁻² SEC ⁻¹
ULTRAVIOLET EXPOSURE STRENGTH RETENTION.....	70%



ELEVATION



SECTION



JOINING SECTIONS
OF SILT FENCE

SEDIMENT & EROSION CONTROL
GENERAL NOTES

IMPLEMENT SOIL EROSION AND SEDIMENTATION CONTROL MEASURES DURING CONSTRUCTION TO THE STANDARDS AND SPECIFICATIONS OF THE STATE OF OHIO AND THEY ARE TO REMAIN IN EFFECT UNTIL AREAS ARE PERMANENTLY STABILIZED.

MAKE DAILY INSPECTIONS OF THE SITE TO INSURE EFFECTIVENESS OF EROSION AND SEDIMENTATION CONTROL MEASURES, IMMEDIATELY MAKE NECESSARY REPAIRS.

IT MAY BECOME NECESSARY TO REMOVE PORTIONS OF THE BARRIER DURING CONSTRUCTION TO FACILITATE THE GRADING OPERATIONS IN CERTAIN AREAS. HOWEVER, THE BARRIER SHALL BE IN PLACE IN THE EVENING OR DURING ANY INCLEMENT WEATHER.

EROSION AND ANY SEDIMENTATION FROM THE WORK ON THIS SITE SHALL BE CONTAINED ON THE SITE AND NOT ALLOWED TO COLLECT IN ANY OFF-SITE DRAINAGE COURSE, WHETHER NATURAL OR MAN-MADE.

ALL EARTH CHANGES SHALL BE CONSTRUCTED AND COMPLETED IN SUCH A MANNER TO LIMIT THE EXPOSED AREA OF ANY DISTURBED LAND FOR THE SHORTEST PERIOD OF TIME.

ALL CONSTRUCTION TRAFFIC SHALL ENTER AND LEAVE BY THE DESIGNATED ENTRANCE. THIS ENTRANCE SHALL BE CONSTRUCTED OF CRUSHED STONE TO HELP FREE TIRES OF SOIL WHEN LEAVING THE SITE. INSTRUCT ALL VEHICLES TO CLEAN SOIL, MISCELLANEOUS DEBRIS, OR OTHER MATERIAL SPILLED, DUMPED OR OTHERWISE DEPOSITED ON PUBLIC STREETS, HIGHWAYS, SIDEWALKS OR OTHER PUBLIC THOROUGHFARES DURING TRANSIT TO AND FROM THE SITE.

INSTALL TEMPORARY EROSION AND SEDIMENTATION DEVICES AS SHOWN AND REQUIRED BY THESE PLANS. THESE DEVICES SHALL REMAIN IN PLACE AND BE MAINTAINED UNTIL PERMANENT STABILIZATION OF SLOPES, DITCHES AND OTHER EARTH CHANGES HAVE BEEN ACCOMPLISHED.

CATCH BASINS LOCATED IN THE STREET OR NEAR THE SITE WILL BE PROTECTED TO PREVENT SEDIMENTATION FROM ENTERING FACILITY. THE COVERS SHALL BE CHECKED PERIODICALLY AND CLEANED WHENEVER THEY FAIL TO FILTER RUNOFF.

WHERE APPLICABLE, THE DETENTION BASIN SHALL BE USED AS A TEMPORARY SEDIMENTATION BASIN. ALL SURFACE RUNOFF FROM THE PROJECT AREAS SHALL BE DIRECTED BY TEMPORARY DRAINAGE SWALES TO THE BASINS. AT THE COMPLETION OF CONSTRUCTION WHEN ALL DISTURBED AREAS HAVE BEEN STABILIZED THE BASINS SHALL BE CAREFULLY DRAINED WITHOUT DISTURBING THE SETTLED SILT, AND THEN GRADED AND SODDED TO CONFORM TO THE SITE GRADING PLAN.

THE LIMITS OF SEEDING AND MULCHING ARE AS SHOWN WITHIN THE PLAN. SEEDING HAS BEEN ASSUMED TO 5' OUTSIDE THE WORK LIMITS OR RIGHT-OF-WAY WHICHEVER IS GREATER. ALL AREAS NOT DESIGNATED TO BE SEEDED SHALL REMAIN UNDER NATURAL GROUND COVER. THOSE AREAS DISTURBED OUTSIDE THE SEEDING LIMITS SHALL BE MULCHED.

ALL SOIL EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE INSTALLED PRIOR TO, OR IN CONJUNCTION WITH, THE START OF EXCAVATION AND ARE TO REMAIN IN EFFECT UNTIL AREAS ARE STABILIZED. FIELD ADJUSTMENTS WITH RESPECT TO LOCATION AND DIMENSIONS MAY BE MADE BY THE ENGINEER AS REQUIRED.

FILTER BARRIERS CONSIST OF FILTER FABRIC AS SHOWN HEREON.

OHIO EPA PERMITS FOR TEMPORARY EROSION CONTROL ON THE CONSTRUCTION SITE SHALL BE OBTAINED. THE DESIGN OF THE EROSION CONTROL SYSTEMS SHALL FOLLOW THE REQUIREMENTS OF OHIO EPA, ITEM 207 OF OHIO DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS, AND THE CITY ENGINEER.

ADEQUATE DRAINAGE OF THE WORK AREA SHALL BE PROVIDED AT ALL TIMES, CONSISTENT WITH EROSION CONTROL PRACTICES.

SEEDING

DISTURBED AREAS THAT WILL REMAIN UNWORKED FOR 21 DAYS OR MORE SHALL BE SEEDED. OTHER SEDIMENT CONTROLS THAT ARE INSTALLED SHALL BE MAINTAINED UNTIL VEGETATION GROWTH HAS BEEN ESTABLISHED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REMOVAL OF ALL TEMPORARY SEDIMENT DEVICES AT THE CONCLUSION OF CONSTRUCTION BUT NOT BEFORE GROWTH OF PERMANENT GROUND COVER.

TEMPORARY SEEDING (TS) SHALL BE PROVIDED FOR ALL EXPOSED SURFACES AND SOIL STOCKPILES WHERE PERMANENT SEEDING OR ADDITIONAL WORK IS NOT SCHEDULED FOR A PERIOD OF TWENTY-ONE (21) DAYS. SEEDING SHALL BE PROVIDED WITHIN SEVEN (7) DAYS AFTER CONSTRUCTION OPERATIONS CEASE.

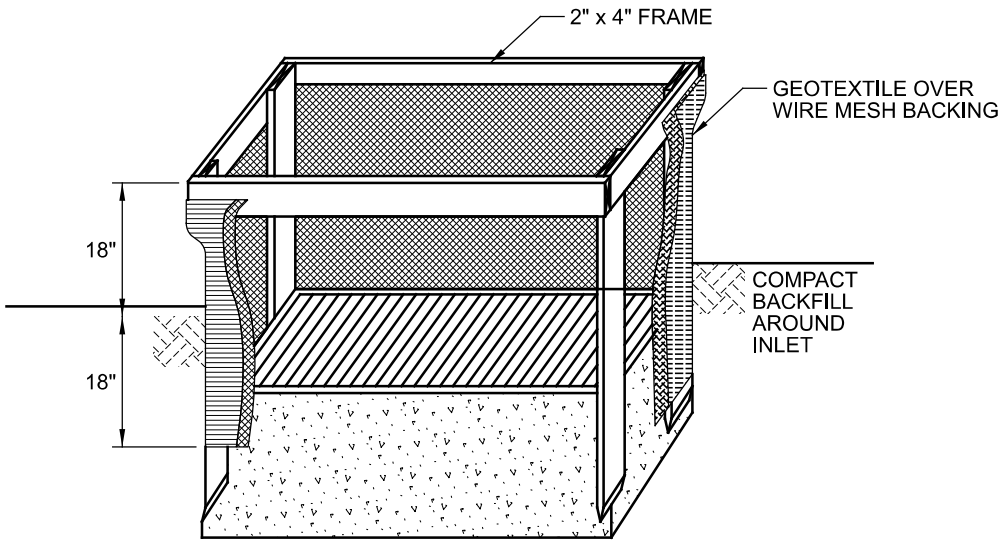
PERMANENT SEEDING (PS) SHALL BE PROVIDED FOR ALL EXPOSED SOIL SURFACES WITHIN SEVEN (7) DAYS AFTER THE FINISH GRADE IS REACHED.

TEMPORARY AND PERMANENT SEEDING, AS SPECIFIED IN ODOT ITEMS 207 AND 659, IS ACCEPTABLE.

AREAS WHERE TEMPORARY OR PERMANENT SEEDING HAS FAILED TO GERMINATE SHALL BE RESEEDED AND MULCHED AS NECESSARY TO ACHIEVE STABILIZATION.

SODDING (SO), CRITICAL AREA PLANTING (GC) AND TEMPORARY AND PERMANENT MULCHING (M) SHALL BE PROVIDED WITHIN SEVEN (7) DAYS AFTER FINISHED GRADE IS REACHED. AS SPECIFIED ODOT ITEM 660.

CATCH BASIN PROTECTION DETAIL



INLET PROTECTION SHALL BE CONSTRUCTED EITHER BEFORE UPSLOPE LAND DISTURBANCES BEGINS OR BEFORE THE STORM DRAIN BECOMES OPERATIONAL.

THE EARTH AROUND THE CATCH BASIN SHALL BE EXCAVATED COMPLETELY TO A DEPTH OF AT LEAST 18 INCHES.

THE WOODEN FRAME SHALL BE CONSTRUCTED OF 2 x 4 INCH CONSTRUCTION GRADE LUMBER. THE 2 x 4 INCH POSTS SHALL BE DRIVEN 1 FOOT INTO THE GROUND AT FOUR CORNERS OF THE INLET AND THE TOP PORTION OF 2 x 4 INCH FRAME ASSEMBLED USING THE OVERLAP JOINT SHOWN. THE TOP OF THE FRAME SHALL BE AT LEAST 6 INCHES BELOW ADJACENT ROADS IF PONDED WATER WOULD POSE A SAFETY HAZARD TO TRAFFIC.

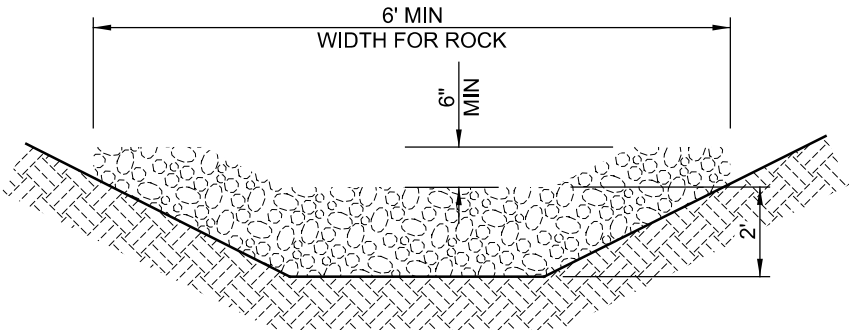
WIRE MESH SHALL BE SUFFICIENT STRENGTH TO SUPPORT FABRIC WITH WATER FULLY IMPOUNDED AGAINST IT. ITT SHALL BE STRETCHED TIGHTLY AROUND THE FRAME AND FASTENED SECURELY TO THE FRAME.

GEOTEXTILE SHALL HAVE AN EQUIVALENT OPENING SIZE OF 20-40 SIEVE AND BE RESISTANT TO SUNLIGHT. IT SHALL BE STRETCHED TIGHTLY AROUND THE FRAME AND FASTENED SECURELY. IT SHALL EXTEND FROM THE TOP OF THE FRAME TO 18 INCHES BELOW THE INLET NOTCH ELEVATION. THE GEOTEXTILE SHALL OVERLAP ACROSS ONE SIDE OF THE INLET SO THE ENDS OF THE CLOTH ARE NOT FASTENED TO THE SAME POST.

BACKFILL SHALL BE PLACED AROUND THE INLET IN COMPACTED 6 INCH LAYERS UNTIL THE EARTH IS EVEN WITH NOTCH ELEVATION ON ENDS AND TOP ELEVATION ON SIDES.

A COMPACTED EARTH DIKE OR A CHECK DAM SHALL BE CONSTRUCTED IN THE DITCH LINE BELOW THE INLET IF THE INLET IS NOT IN A DEPRESSION AND IF RUNOFF BYPASSING THE INLET WILL NOT FLOW TO A SETTLING POND. THE TOP OF EARTH DIKES SHALL BE AT LEAST 6 INCHES HIGHER THAN THE TOP OF THE FRAME.

ROCK CHECK DETAIL

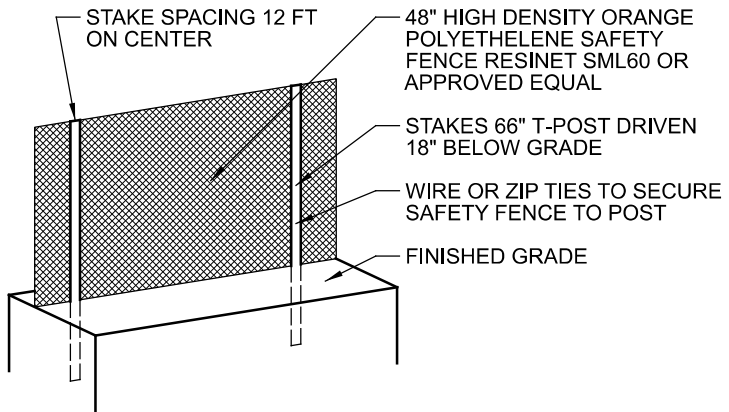


MINIMUM DIMENSIONS: 2' HIGH x 6' WIDE x 3' LONG

ROCK CHECKS:
MATERIALS: FURNISH MATERIAL CONFORMING TO ITEM 601
ROCK CHANNEL PROTECTION TYPE C OR D WITHOUT FILTER.

CONSTRUCTION:
PLACE THE ROCK OUTSIDE THE TRAFFIC CLEAR ZONE IN THE DITCH.

ORANGE CONSTRUCTION FENCE
DETAIL



INSTALLATION NOTES:

INSTALL 66" T-POSTS AT A MAXIMUM 12 FT ON CENTER. SINK POSTS 18" INTO GROUND. USE WIRE OR ZIP TIES TO FASTEN FENCE TO POSTS.