

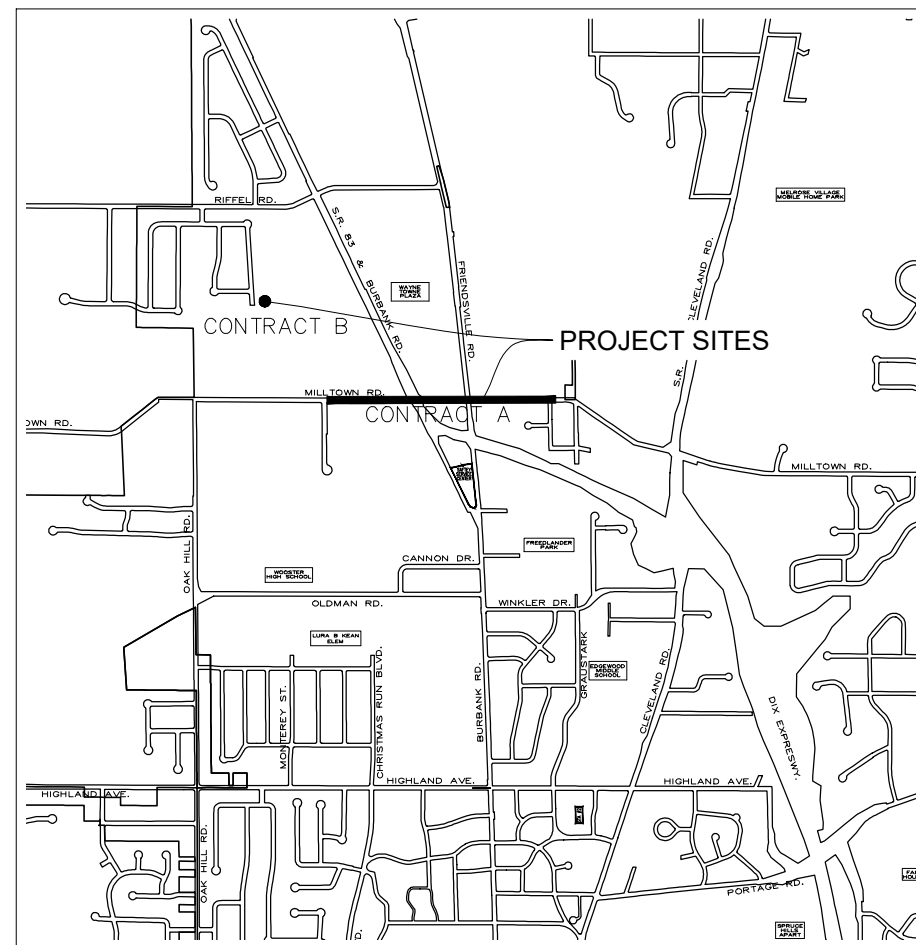
W. MILLTOWN ROAD AREA SANITARY SEWER IMPROVEMENTS CONTRACT A: SANITARY SEWER REPLACEMENT

CITY OF WOOSTER, OHIO (WAYNE COUNTY)
2025

INDEX OF SHEETS

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ESTIMATED CONSTRUCTION COST = \$800,000



LOCATION MAP



SPECIFICATIONS

THE 2023 CONSTRUCTION AND MATERIAL SPECIFICATIONS OF THE STATE OF OHIO, DEPARTMENT OF TRANSPORTATION, INCLUDING CHANGES AND SUPPLEMENTAL SPECIFICATIONS, AND THE CITY OF WOOSTER ENGINEERING CONSTRUCTION STANDARDS SHALL GOVERN THIS IMPROVEMENT.



DESIGNED *Bret Baker*
BRET D. BAKER, STAFF ENGINEER

DATE February 12, 2025

PLAN PREPARED BY
CITY OF WOOSTER
DIVISION OF ENGINEERING

538 N. MARKET ST.
PH: (330) 263-5251

WOOSTER, OHIO 44691
FAX: (330) 263-5283



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SHEET							OFFICE CALCS	BID ITEM	ODOT ITEM	QUANTITY	UNIT	DESCRIPTION
2	4	5	6	7	8	9						
	155	111	201	505	53	5		1A	202	1030	FT	PIPE REMOVED
	2	1		2	1			1B	202	6	EACH	MANHOLE REMOVED
	35			35	5			2A	611	75	FT	6" CONDUIT, SDR 35
	484	111	201	505	505	97		2B	611	1902	FT	8" CONDUIT, SDR 35
	2	1		2	2	1		2C	611	8	EACH	MANHOLE, 48" ID
							1	3	614	1	LS	MAINTAINING TRAFFIC
1								4A	638	1	EACH	8" WATERLINE RELOCATION
2								4B	638	2	EACH	12" WATERLINE RELOCATION
1								4C	638	1	EACH	16" WATERLINE RELOCATION
1								5	642	1	LS	TRAFFIC PAINT
1								6	644	1	LS	THERMOPLASTIC PAVEMENT MARKINGS
							1000	7	SPECIAL	1000	SY	TEMPORARY PAVEMENT

DRWN BY	CHKD BY	APPROV BY
SLG	--	BDB
DATE	02/25	SCALE
		N/A



CITY OF WOOSTER
DIVISION OF ENGINEERING
300 PLAINFIELD ST.
WOOSTER, OHIO 44691
PH: (330) 249-1231
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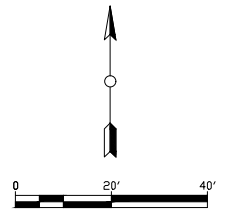
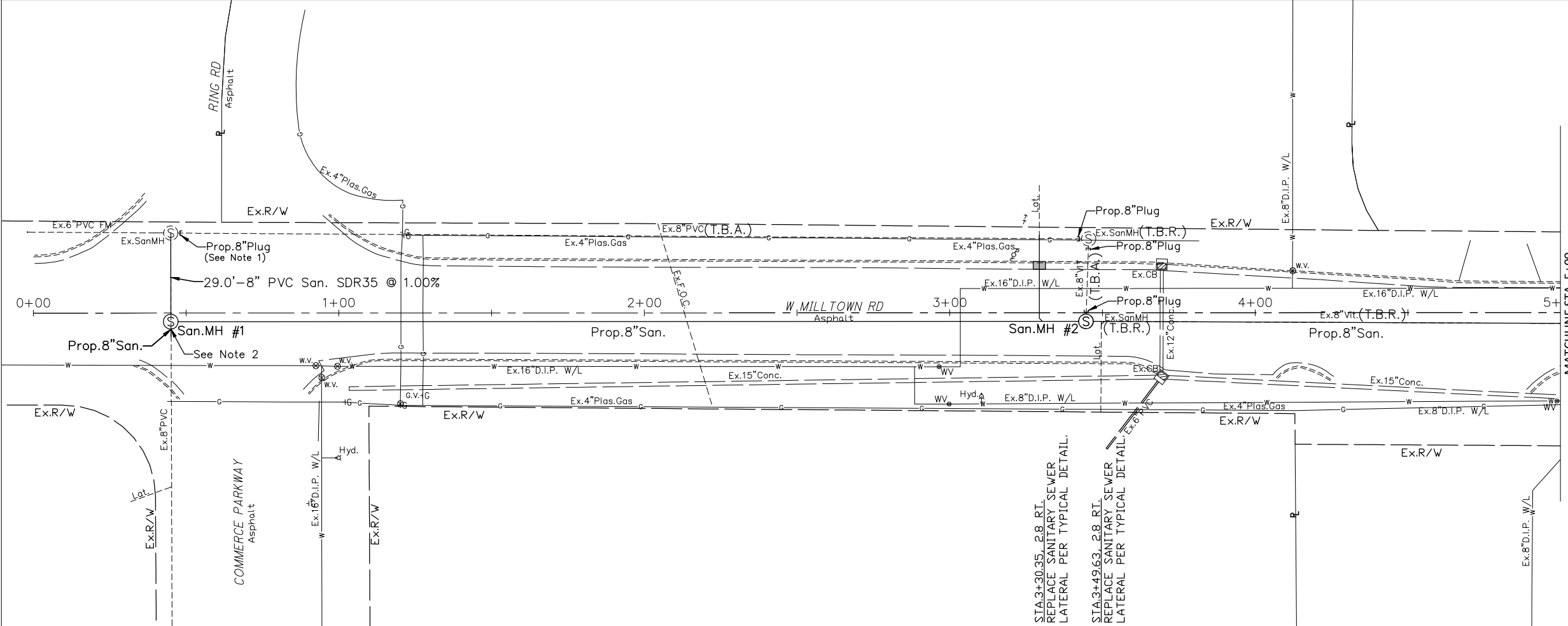
JOHN REE
CITY ENGINEER

W. MILLTOWN ROAD AREA
SANITARY SEWER IMPROVEMENTS
GENERAL SUMMARY

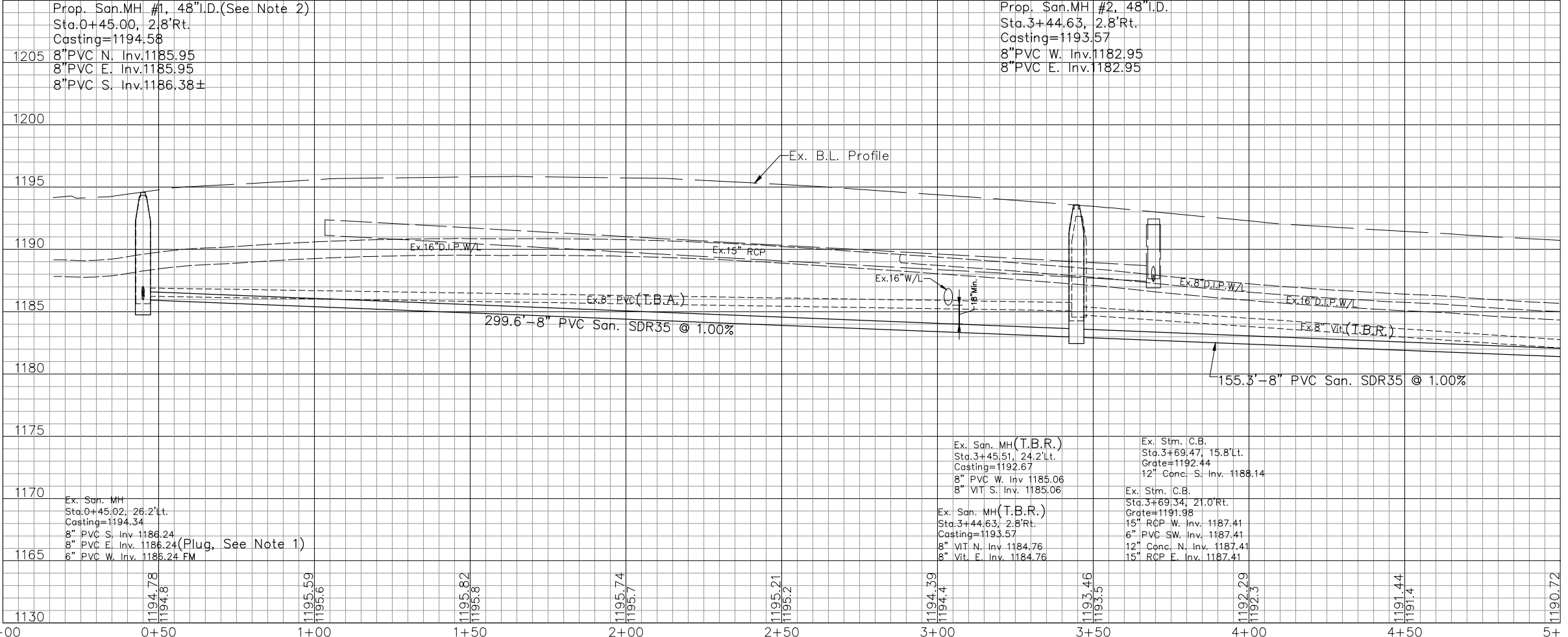
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LEGEND
 INDICATES CONCRETE REPLACEMENT

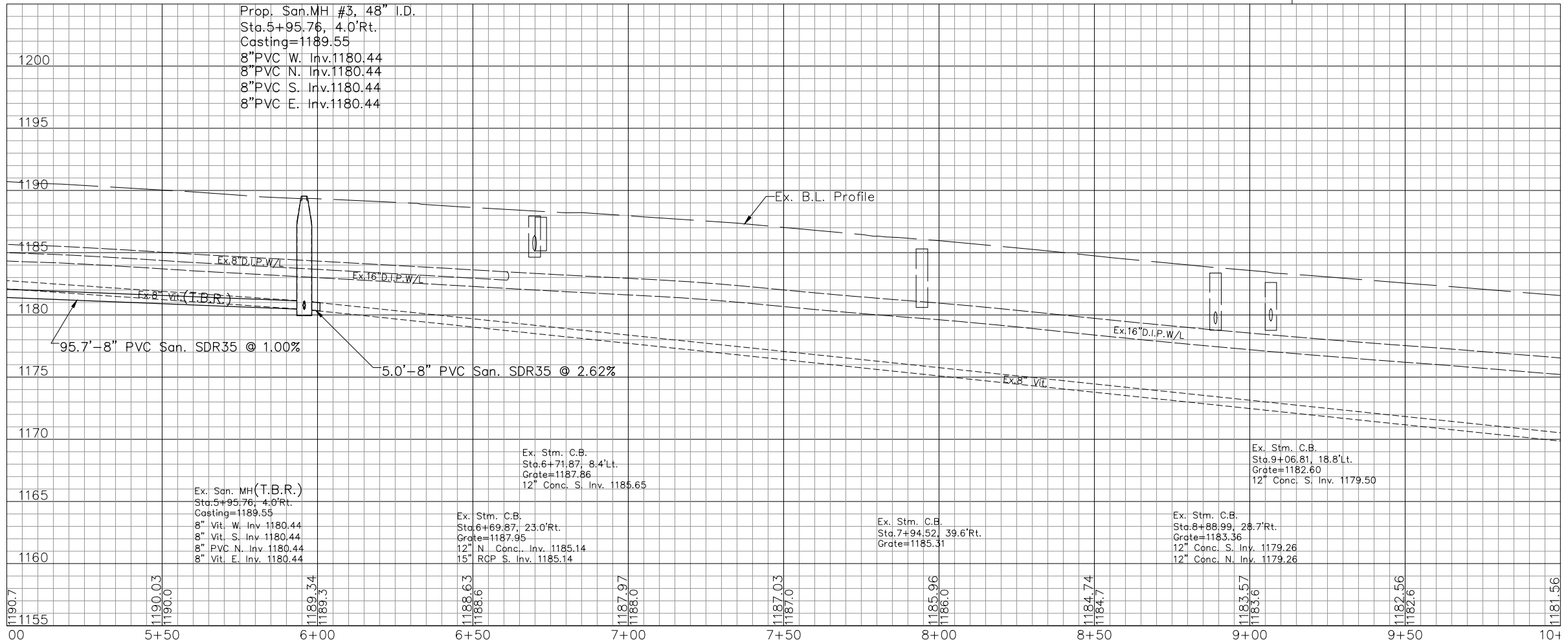
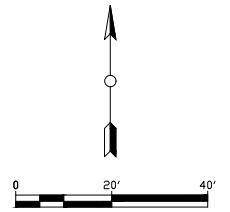
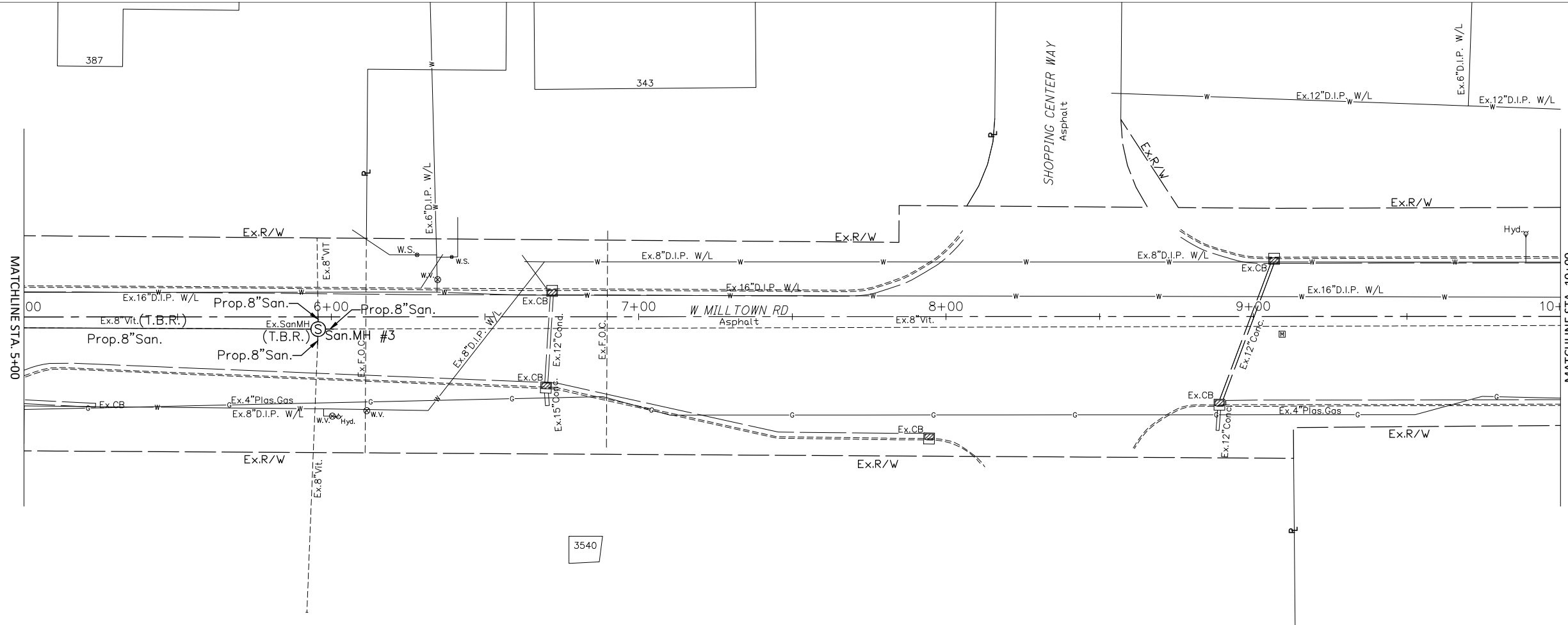


CONSTRUCTION NOTES:

1. THE CONTRACTOR SHALL ABANDON AND PLUG THE EXISTING 8" SEWER BETWEEN EXISTING MANHOLES. THE EXISTING 8" HOLE IN THE MANHOLE SHALL BE PLUGGED WITH CONCRETE AND THE FLOW LINES READJUSTED TO DIRECT FLOW SOUTH.
2. CONTRACTOR SHALL FIELD VERIFY THE INVERT OF THE EX. 8" SEWER AT THE LOCATION OF PROPOSED MH#2. CONTRACTOR SHALL NOTIFY THE ENGINEER SO ANY ADJUSTMENT TO SLOPE THAT IS NECESSARY CAN BE MADE BETWEEN PROPOSED SANITARY MH#1 AND MH#2

CITY OF WOOSTER DIVISION OF ENGINEERING	DATE: 10/24	SCALE: N/A
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Prop. San. MH #3, 48" I.D.
 Sta. 5+95.76, 4.0'Rt.
 Casting=1189.55
 8" PVC W. Inv. 1180.44
 8" PVC N. Inv. 1180.44
 8" PVC S. Inv. 1180.44
 8" PVC E. Inv. 1180.44

Ex. San. MH (T.B.R.)
 Sta. 5+95.76, 4.0'Rt.
 Casting=1189.55
 8" Vit. W. Inv. 1180.44
 8" Vit. S. Inv. 1180.44
 8" PVC N. Inv. 1180.44
 8" Vit. E. Inv. 1180.44

Ex. Stm. C.B.
 Sta. 6+69.87, 23.0'Rt.
 Grate=1187.95
 12" N. Concl. Inv. 1185.14
 15" RCP S. Inv. 1185.14

Ex. Stm. C.B.
 Sta. 7+94.52, 39.6'Rt.
 Grate=1185.31

Ex. Stm. C.B.
 Sta. 9+06.81, 18.8'Lt.
 Grate=1182.60
 12" Concl. S. Inv. 1179.50

Ex. Stm. C.B.
 Sta. 8+88.99, 26.7'Rt.
 Grate=1183.36
 12" Concl. S. Inv. 1179.26
 12" Concl. N. Inv. 1179.26

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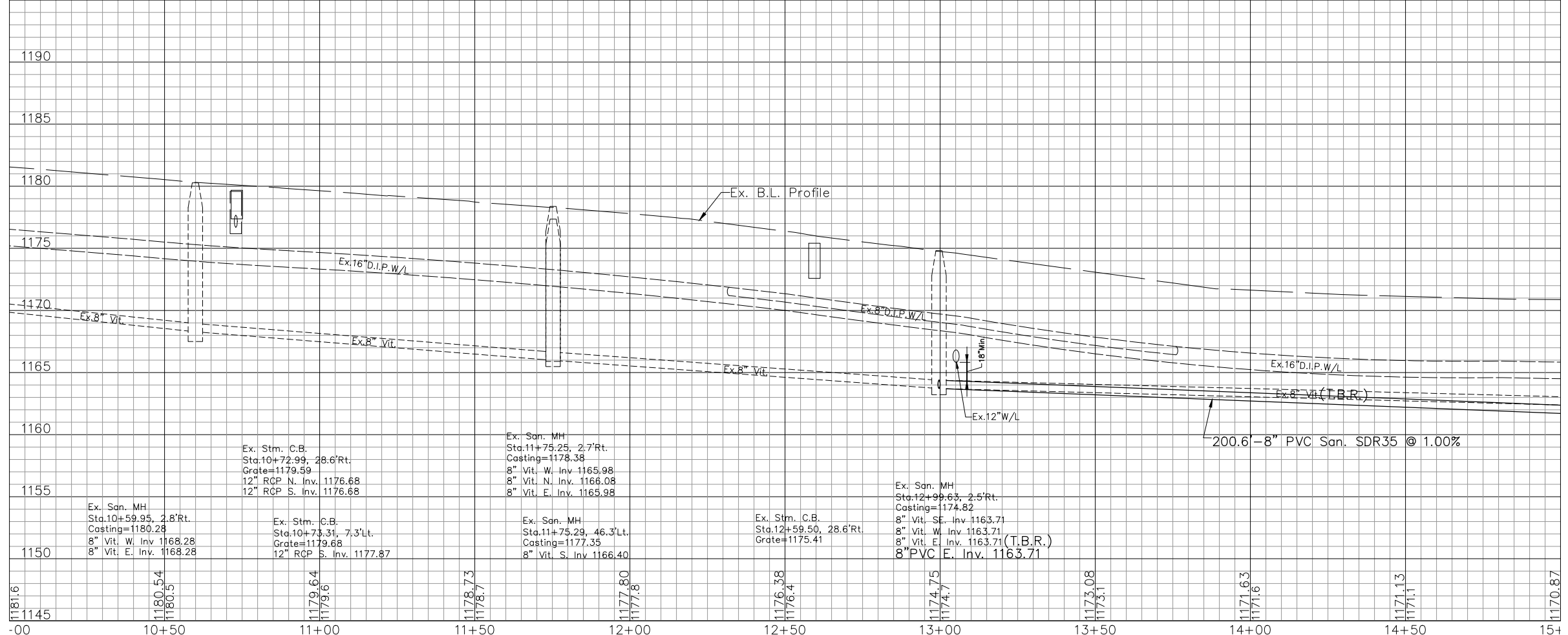
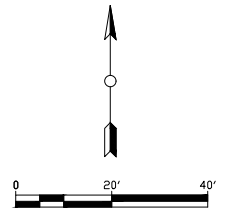
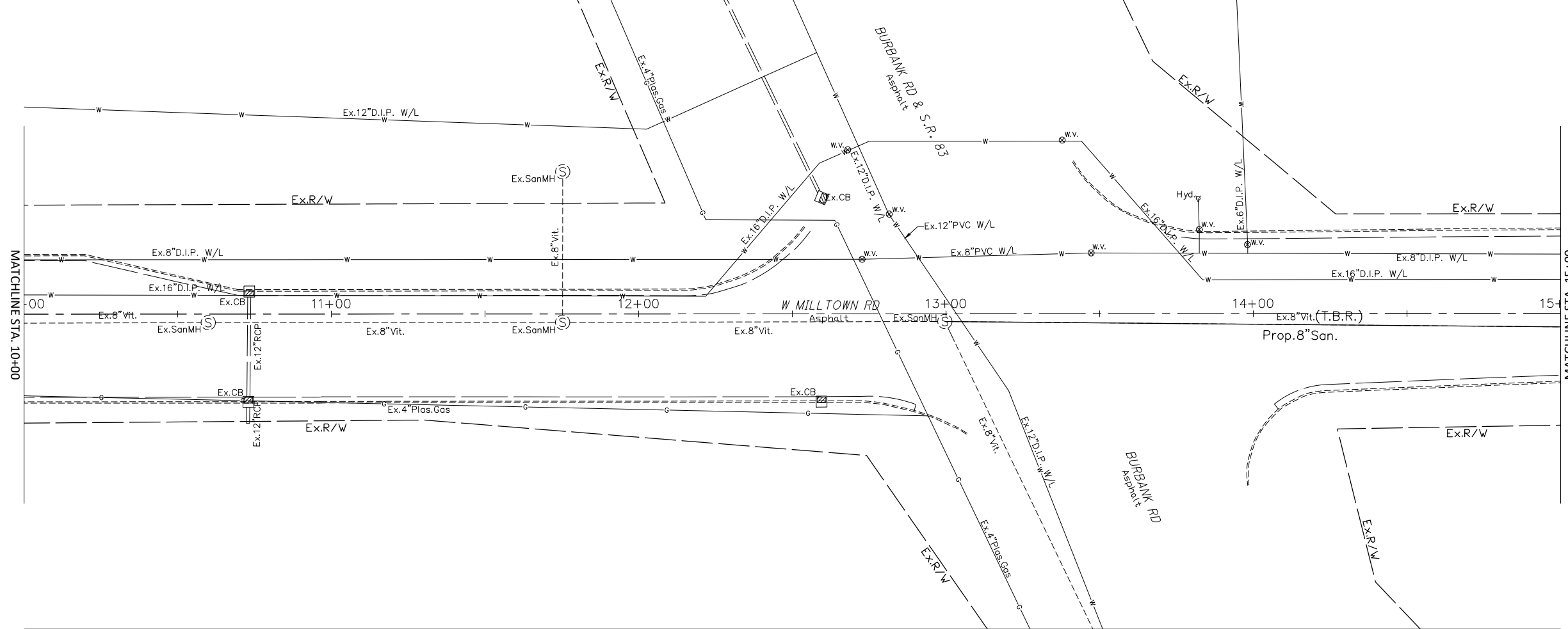
CITY OF WOOSTER
 DIVISION OF ENGINEERING
 200 N. MARKET ST. SUITE 400
 WOOSTER, OHIO 44691
 (330) 265-2521
 JOHN REE
 CITY ENGINEER

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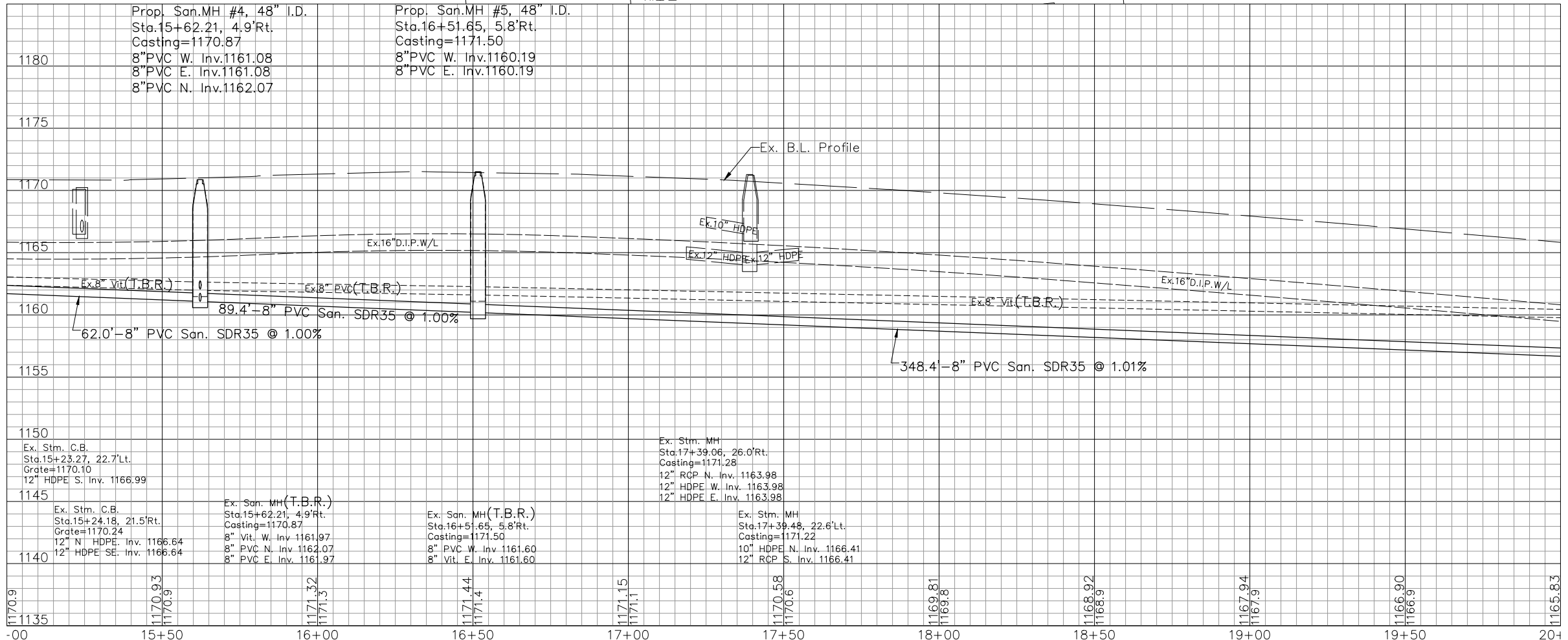
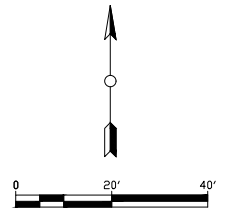
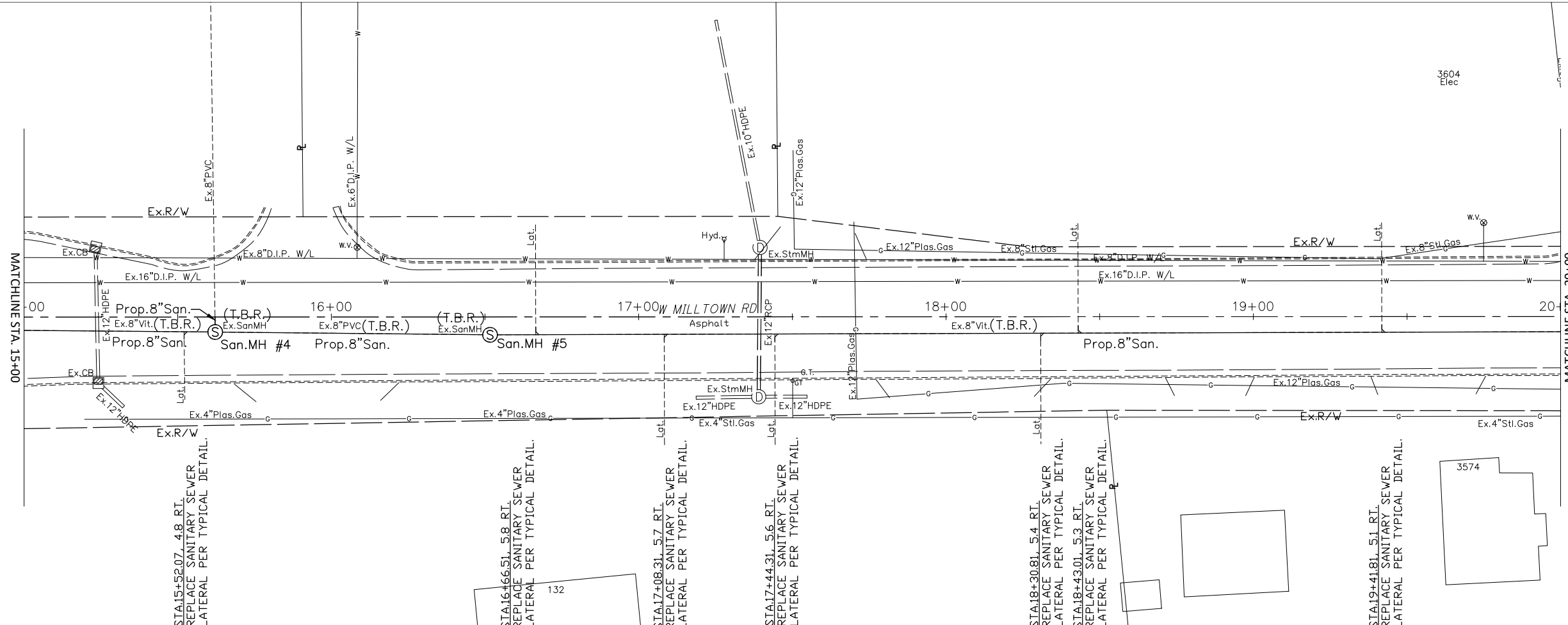
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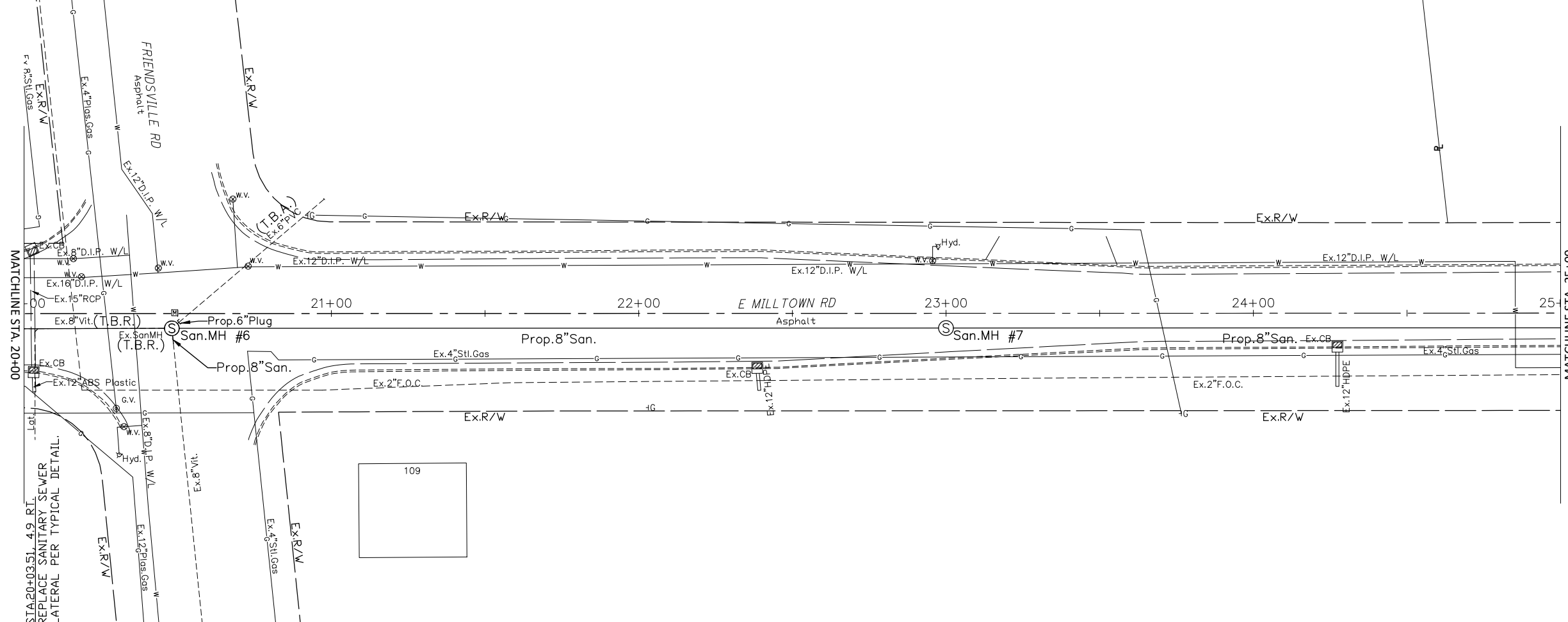
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CITY OF WOOSTER							
DIVISION OF ENGINEERING							
300 N. MARKET ST. WOOSTER, OHIO 44691							
PH: (330) 249-1511							
JOHN ROSE							
CITY ENGINEER							
W. MILLTOWN ROAD AREA SANITARY SEWER IMPROVEMENTS STA. 10+00 TO STA. 15+00							
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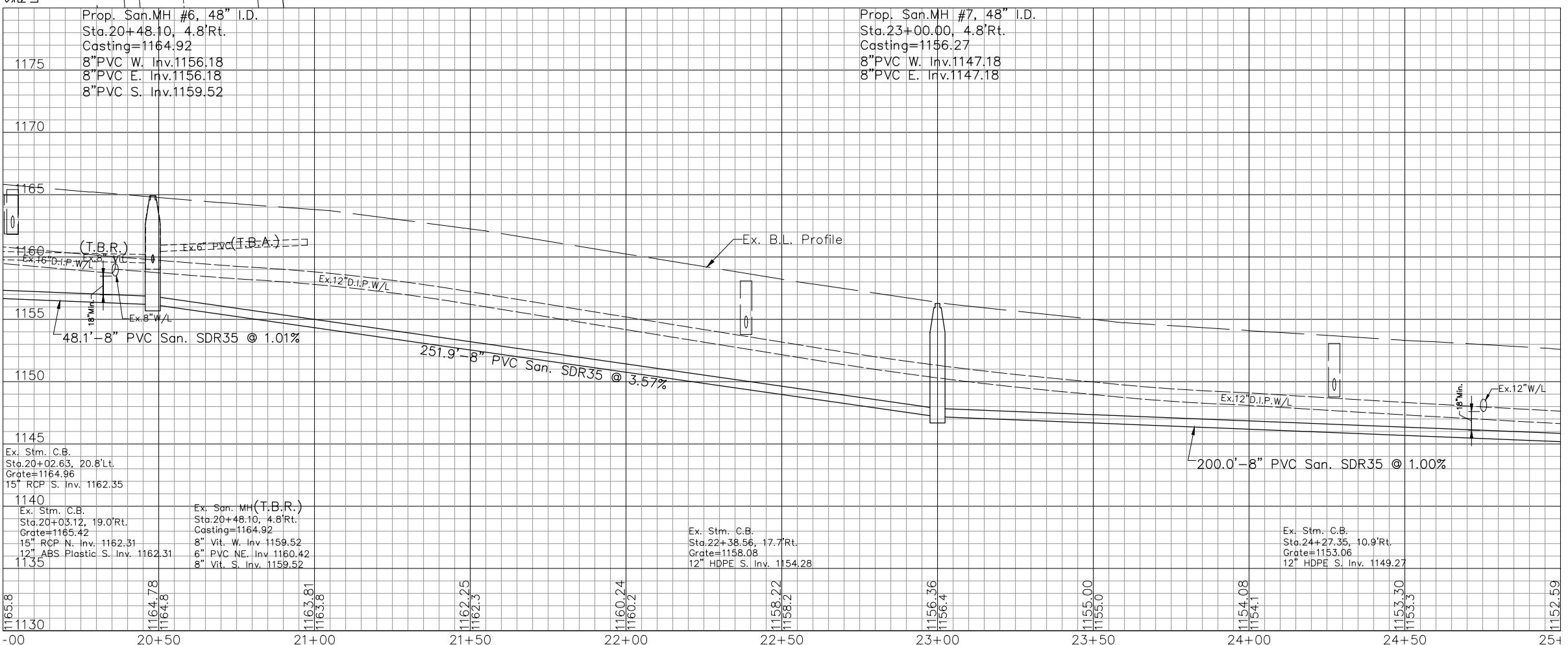
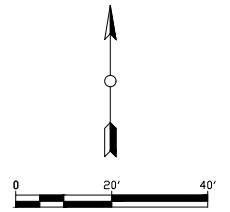


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						N/A
DATE	10/24					
CITY OF WOOSTER DIVISION OF ENGINEERING <small>300 N. MARKET ST. WOOSTER, OHIO 44691 TEL: (330) 249-2451 JOHN REBE CITY ENGINEER johnr@wooster.com</small>						
						
W. MILLTOWN ROAD AREA SANITARY SEWER IMPROVEMENTS STA. 15+00 TO STA. 20+00						
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MATCHLINE STA. 25+00



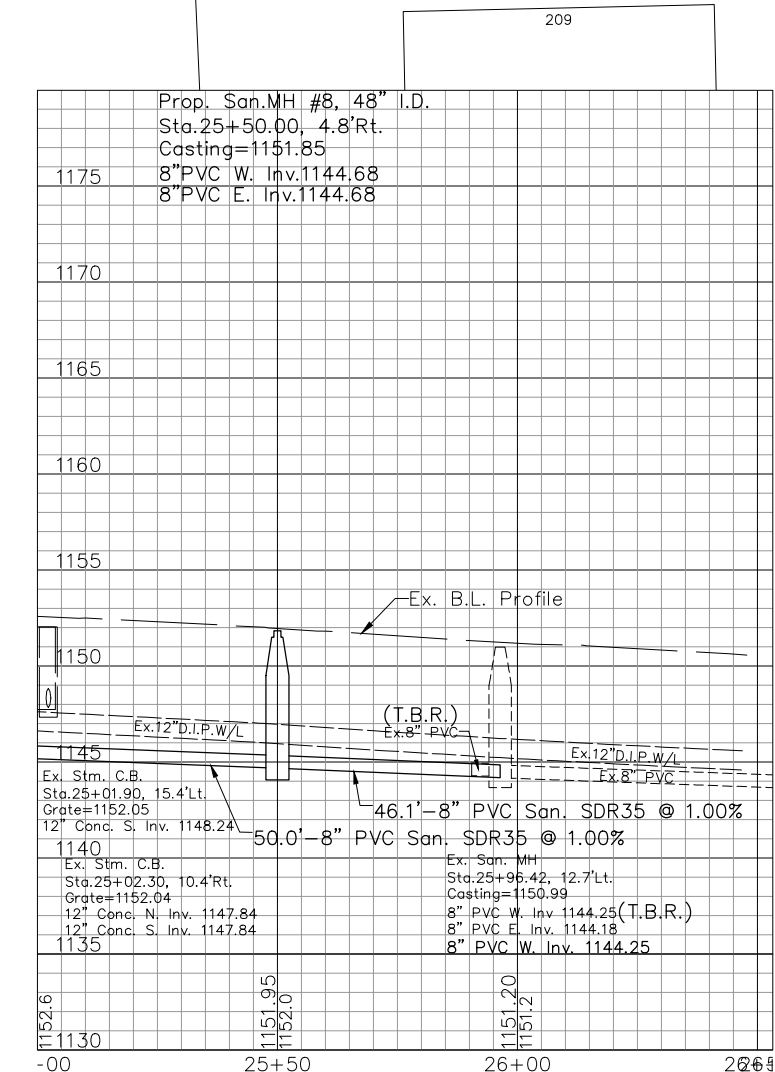
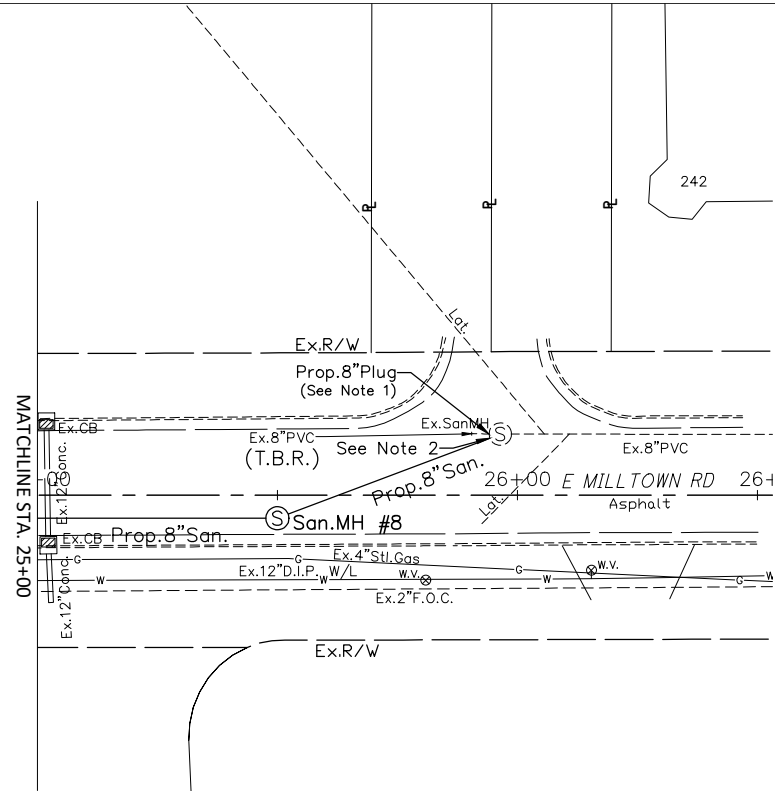
DRWN BY: CHKD BY: APPROVD BY:
 SLG: BDB BDB BDB
 DATE: 10/24 SCALE: N/A
 CITY OF WOOSTER
 DIVISION OF ENGINEERING
 REGISTERED PROFESSIONAL ENGINEER
 JOHN ROSE
 PROJECT NO. 242016
 DATE: 03/12/2025
 CITY ENGINEER: John Rose

W. MILLTOWN ROAD AREA
 SANITARY SEWER IMPROVEMENTS
 STA. 20+00 TO STA. 25+00

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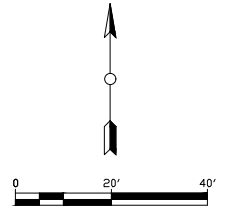
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CONSTRUCTION NOTES:

1. THE CONTRACTOR SHALL REMOVE AND THE EXISTING 8" SEWER STUB. THE EXISTING 8" HOLE IN THE MANHOLE SHALL BE PLUGGED WITH CONCRETE.
2. THE CONTRACTOR SHALL CORE-DRILL AN OPENING FOR THE PROPOSED 8" SEWER AND SHALL REWORK THE BOTTOM OF THE CHANNEL TO ADJUST FLOW LINES.



CITY OF WOOSTER DIVISION OF ENGINEERING		DRWN BY	CHKD BY	APPROV BY
JOHN RICE		SLG	BDB	BDB
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10/24		10/24		N/A

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**W. MILLTOWN ROAD AREA
SANITARY SEWER IMPROVEMENTS
STA. 25+00 TO STA. 26+50**

SANITARY SEWER CONSTRUCTION

GRAVITY SEWER

MAIN PIPE:

8" MINIMUM PVC, ASTM D3034; JOINTS ASTM D3212.
 8" MINIMUM DUCTILE IRON PIPE, CLASS 52, AWWA C151, CERAMIC EPOXY LINED.
 AIR TEST REQUIRED ON ALL MAINS AND LATERALS.
 A 5% DEFLECTION TEST WITH AN APPROVED MANDREL SHALL BE MADE AFTER 30 DAYS. THE CITY OF WOOSTER ENGINEERING DIVISION RESERVES THE RIGHT TO REQUIRE RE-TESTING WITHIN 1 YEAR AFTER INSTALLATION.
 MINIMUM REQUIRED SLOPE SHALL NOT BE LESS THAN 0.40% FOR 8" PIPE. THE CITY ENGINEER MAY REQUIRE A GREATER MINIMUM SLOPE FOR END OF LINE SEWERS.

LATERALS:

6" MINIMUM PVC (SAME SPECIFICATIONS AS FOR MAIN PIPE).
 LATERAL CONNECTIONS TO MAIN SEWERS SHALL NOT BE MADE AT MANHOLES UNLESS OTHERWISE APPROVED BY THE CITY ENGINEER.
 WYE OR TEE TYPE FITTINGS SHALL BE USED AT MAIN PIPE.
 ONLY FERNCO 5000 SERIES STRONG BACK COUPLINGS ARE PERMITTED FOR IN-LINE SPLICES, AND ONLY WHEN NECESSARY.
 FERNCO 5000 SERIES STRONG BACK COUPLINGS SHALL BE USED FOR BUILDING SEWER CONNECTIONS. A NEOPRENE O-RING (DOUGHNUT) MAY BE USED AS AN ALTERNATIVE, WITH THE 4" PIPE INSIDE THE 6" PIPE A MINIMUM OF 18".
GLUED JOINTS UNDERGROUND ARE PROHIBITED.
 90° BENDS ARE NOT PERMITTED. TWO 45° FITTINGS SHALL BE USED WITH A MINIMUM 24" STRAIGHT PIPE IN BETWEEN FITTINGS.
 6" CLEAN-OUT, OF SAME MATERIAL, IS REQUIRED EVERY 100' MAXIMUM. 1.00% MINIMUM SLOPE.

MANHOLE PIPE CONNECTORS:

PVC PLASTIC PIPE CONNECTORS TO MANHOLES SHALL BE RUBBER SLEEVES W/ STAINLESS STEEL BANDING, CAST-IN RUBBER COMPRESSION GASKETS, OR FIELD INSTALLED RUBBER COMPRESSION GASKETS W/ GROUT COLLAR THAT PROVIDES A FLEXIBLE, WATERTIGHT SEAL PER ASTM C923.

BEDDING:

PVC: ASTM 2321D, CLASS 1, GRANULAR MATERIAL (ODOT #8 AGGREGATE).

BACKFILL:

PVC: CLEAN BEDDING MATERIALS AS INITIAL BACKFILL TO SPRING LINE; CLEAN HAUNCHING MATERIAL TO 12" ABOVE THE PIPE CROWN. UNDER ALL PAVED AREAS, INCLUDING AN AREA 2' BEYOND THE PAVEMENT EDGES, BACKFILL ENTIRELY WITH THE SPECIFIED GRANULAR MATERIAL.

METER:

WHERE SEWER WILL BE METERED DIRECTLY FOR BILLING (RATHER THAN BASED ON THE WATER METER) AN EFFLUENT WASTEWATER METER WILL BE SPECIFIED BY THE CITY. THE CUSTOMER SHALL PURCHASE AND INSTALL THE METER, AND THE CITY WILL PROVIDE THE ELECTRONIC READER DEVICE.

SANITARY SEWER INSTALLATION

ROOF DRAINS, FOUNDATION DRAINS AND OTHER CLEAN WATER CONNECTIONS TO THE PROPOSED SANITARY SEWER ARE PROHIBITED.

GENERAL NOTES
SANITARY SEWER

MANHOLES (SANITARY & STORM)

A. CONSTRUCTION:

- SANITARY MANHOLES SHALL BE VACUUM TESTED IN ACCORDANCE WITH ASTM C1244.
- ALL NEW MANHOLES SHALL BE 48" MINIMUM INSIDE DIAMETER, PRECAST CONCRETE CONFORMING TO ASTM C478. PRECAST BASES SHALL BE 6" THICK MINIMUM.
- NEW MANHOLES PLACED OVER EXISTING SEWER LINES, REFERRED TO AS "DOG-HOUSE" MANHOLES, SHALL HAVE CAST-IN-PLACE CONCRETE BASES WITH REINFORCEMENT (REBAR #4 @ 12" O/C EACH WAY). BASES SHALL BE CLASS OC MS OR QC MISC CONCRETE WITH A MINIMUM THICKNESS OF 10".
- MANHOLES WITH PRECAST CONCRETE BASES SHALL BE PLACED ON A COMPACTED GRAVEL BED OF ODOT NO. 57 AGGREGATE HAVING A MINIMUM THICKNESS OF 3".
- RUBBER O-RING GASKETS (MEETING ASTM C-443) SHALL BE USED BETWEEN PRECAST MANHOLE SECTIONS. APPLY MASTIC TAR STRIP BETWEEN SECTIONS.
- SANITARY MANHOLE PIPE CONNECTORS SHALL BE RUBBER SLEEVES W/ STAINLESS STEEL BANDING, CAST-IN RUBBER COMPRESSION GASKETS, OR FIELD INSTALLED RUBBER COMPRESSION GASKETS W/ GROUT COLLAR THAT PROVIDES A FLEXIBLE, WATERTIGHT SEAL PER ASTM C-923.
- THE CENTERLINE OF THE MANHOLE SHALL BE LOCATED OVER THE CENTERLINE OF THE MAIN SEWER, WHENEVER POSSIBLE.
- MANHOLE STEPS SHALL BE REINFORCED POLYPROPYLENE PLASTIC, 16" O/C MAXIMUM AND IN PROPER ALIGNMENT.
- MANHOLE FRAMES SHALL BE SET EVEN AND FLUSH WITH THE INTERIOR WALLS OF THE MANHOLE.
- GRADE ADJUSTMENT RINGS SHALL BE PRECAST CONCRETE ONLY AND CONFORMING TO ASTM C478 GRADE RINGS. BRICK OR BLOCK MATERIALS ARE NOT PERMITTED. A MAXIMUM 12" OF ADJUSTMENT RINGS MAY BE USED. FINAL ADJUSTMENTS SHALL USE EJ INFRA-SPACER TO ACCOUNT FOR LONGITUDINAL AND CROSS SLOPES.
- SANITARY MANHOLE CASTINGS IN OR NEAR WATERWAYS AND DITCHES SHALL BE FITTED WITH A MANHOLE INFILTRATION PROTECTION DEVICE, THE COST OF WHICH SHALL BE INCLUDED IN THE PRICE OF THE MANHOLE.
- MANHOLES LOCATED WITHIN THE SLOPE OF A DITCH SHALL BE INSTALLED SO THE STEPS ARE ON THE OPPOSITE SIDE OF MANHOLE FROM THE DITCH OR FLOWLINE. CONTRACTOR SHALL COORDINATE WITH THE MANUFACTURER FOR CORRECT ORIENTATION OF STEPS.

B. CASTINGS:

1) APPROVED MANHOLE FRAMES AND LIDS ARE SHOWN IN THE TABLE:

MANHOLE USE TYPE	HT	EJ		NEENAH	
		CASTING	LID	CASTING	LID
MANHOLE WITHIN PAVEMENT	9"	1050	TYPE A	R-1713 NON-ROCKING	TYPE B NON-ROCKING
MANHOLE NOT IN PAVEMENT BUT IN RW	9"	1050	TYPE A	R-1713	TYPE B
	7"	*1022		R-1772	
MANHOLE IN YARD NOT IN RW	9"	1050 ZPT	BOLT DOWN	R-1916-C	TYPE B
	7"	*1045 ZPT		R-1916-F	BOLT DOWN

*Must be preapproved by the City Engineer

- FRAMES SHALL BE SET LEVEL, EXCEPT SET TO GRADE WHEN WITHIN THE PAVEMENT. LIDS SHALL BE FITTED AND FINISHED TO PROVIDE A FIRM AND EVEN SEAT IN THE FRAME.
- FRAMES AND LIDS SHALL BE FITTED, MATCHED, AND MARKED PRIOR TO DELIVERY TO THE PROJECT.
- THE FRAME SHALL BE SET ON A MASTIC STRIP AROUND ITS PERIMETER AND PLACED ON THE SEAT OF THE CONCRETE STRUCTURE.
- ANY SUBSTITUTIONS OF EQUAL QUALITY AND DIMENSIONS SHALL BE APPROVED BY THE CITY ENGINEER PRIOR TO PROCUREMENT.
- ALL LIDS SHALL BE CAST WITH THE WORDS "SANITARY" OR "STORM" AS APPROPRIATE.
- ALL CASTINGS AND LIDS SHALL BE COATED WITH A WATERBASED BITUMINOUS COATING OR EQUAL.
- ALL CASTINGS AND LIDS SHALL MEET OR EXCEED AASHTO H-20 LOADING AND AASHTO M305 REQUIREMENTS.

C. PAYMENT:

1) PAYMENT SHALL BE FOR THE MANHOLE COMPLETE IN PLACE, EXCAVATION AND BACKFILL INCLUDED.

GENERAL NOTES
MANHOLES

SANITARY SEWER TESTING

A. LEAKAGE TESTING:

- LEAKAGE TESTING OF ALL NEW SANITARY SEWERS SHALL BE PERFORMED USING THE LOW PRESSURE AIR TEST METHOD PER ASTM F1417.
- TESTING SHALL NOT BE PERFORMED UNTIL ALL LATERALS REQUIRED ON THE LINE TO BE TESTED HAVE BEEN INSTALLED.
- THE ENDS OF THE SEWER SECTION TO BE TESTED SHALL BE CLOSED AT THE UPSTREAM AND DOWNSTREAM MANHOLES WITH AIRTIGHT BULKHEADS OR PLUGS.
- AIR SHALL BE ADDED TO THE SEWER BY MEANS OF AN AIR PUMP UNTIL A PRESSURE OF APPROXIMATELY 4 PSI GREATER THAN THE EXTERNAL WATER PRESSURE EXISTS WITHIN THE SEWER.
- THE AIR LINE SHALL BE CLOSED AND THE PRESSURE ALLOWED TO STABILIZE FOR A PERIOD OF AT LEAST 2 MINUTES.
- AFTER THE STABILIZATION PERIOD, THE PRESSURE IN THE LINE SHALL BE REDUCED TO 3.5 PSI GREATER THAN THE EXTERNAL WATER PRESSURE AND THE TIME SHALL BE MEASURED FOR THE PRESSURE IN THE SEWER TO DROP FROM 3.5 TO 2.5 PSI GREATER THAN THE EXTERNAL WATER PRESSURE.
- THE PERMISSIBLE TIME FOR THE SPECIFIED PRESSURE DROP SHALL BE GREATER THAN THE SUM OF THE TIMES FOR THE VARIOUS PIPE SIZES AND LENGTHS IN THE SECTION BEING TESTED AS DETERMINED IN THE FOLLOWING TABLE:

MINIMUM TEST TIME FOR VARIOUS PIPE SIZES			
NOMINAL PIPE SIZE (IN)	TIME (SEC/100 FT)	NOMINAL PIPE SIZE (IN)	TIME (SEC/100 FT)
6	40	24	214
8	71	27	250
10	89	30	286
12	107	33	323
15	125	36	361
18	144	42	436
21	178	48	513

- FAILURES SHALL BE FOUND AND CORRECTED AND THE TEST REPEATED UNTIL SATISFACTORY RESULTS ARE OBTAINED.
- THE CONTRACTOR SHALL PERFORM ALL TESTING IN THE PRESENCE OF THE CITY ENGINEER OR REPRESENTATIVE AND SHALL SUPPLY ALL NECESSARY EQUIPMENT FOR PERFORMING THE REQUIRED LOW PRESSURE AIR TESTING.

B. DEFLECTION TESTING:

- DEFLECTION TESTING OF ALL NEW SANITARY SEWERS SHALL BE PERFORMED USING ELECTRONIC EQUIPMENT SPECIFICALLY DESIGNED FOR SEWER DEFLECTION TESTING AND WHICH WILL MEASURE AND CONTINUOUSLY RECORD BOTH THE LOCATION AND PIPE DEFLECTION; OR THE STANDARD MANDREL TESTING METHOD SHALL BE USED. ELECTRONIC EQUIPMENT SHALL BE APPROVED BY THE CITY ENGINEER PRIOR TO USE.
- DEFLECTION TESTING SHALL NOT BE PERFORMED DURING THE FIRST 30 DAYS AFTER FINAL BACKFILL HAS BEEN PLACED.
- THE DEFLECTION SENSING DEVICE SHALL BE PULLED THROUGH THE SEWER SEGMENT UNDER TEST AT A RATE OF SPEED NOT EXCEEDING 30 FEET PER MINUTE.
- THE PERMISSIBLE DEFLECTION SHALL NOT EXCEED 5 PERCENT OF THE ORIGINAL INSIDE DIAMETER OF THE SEWER. IF ANY PIPING TEST DISCLOSES DEFLECTION GREATER THAN THIS AMOUNT, THE CONTRACTOR SHALL LOCATE AND REPAIR THE CAUSE OF FAILURE AND RETEST THE PIPING UNTIL DEFLECTION AFTER A 30 DAY PERIOD FALLS WITHIN PERMISSIBLE LIMITS. IN LIEU OF MANDREL TESTING THE CONTRACTOR MAY VIDEO THE SEWER.
- THE CONTRACTOR SHALL PERFORM ALL TESTING IN THE PRESENCE OF THE CITY ENGINEER OR REPRESENTATIVE AND SHALL SUPPLY ALL NECESSARY EQUIPMENT FOR PERFORMING THE REQUIRED DEFLECTION TESTING.

GENERAL NOTES
SEWER TESTING

SANITARY SEWER TESTING, CONT'D

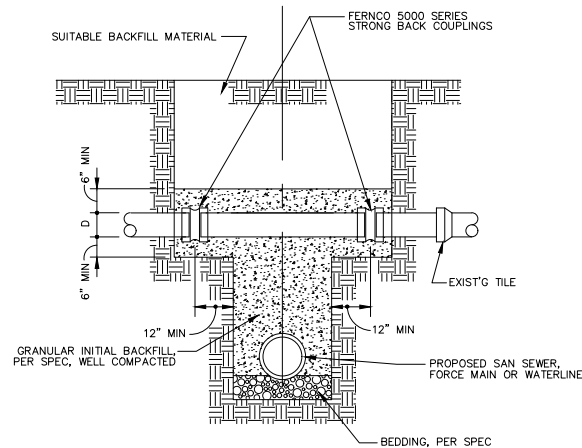
C. MANHOLE TESTING:

- VACUUM TESTING OF ALL NEW SANITARY MANHOLES PER ASTM C1244 SHALL BE PERFORMED AFTER INSTALLATION OF THE TOP PRECAST MANHOLE SECTION, PRECAST ADJUSTING RINGS, AND THE MANHOLE FRAME.
- ALL PIPES ENTERING THE MANHOLE SHALL BE CLOSED WITH AIRTIGHT BULKHEADS OR PLUGS AND THE TOP OPENING OF THE MANHOLE SHALL BE CLOSED WITH A SUITABLE AIR TEST HEAD.
- AIR SHALL BE WITHDRAWN FROM THE MANHOLE BY MEANS OF A VACUUM PUMP UNTIL A VACUUM OF 10 INCHES OF MERCURY EXISTS WITHIN THE MANHOLE.
- THE VACUUM LINE SHALL BE CLOSED AND THE TIME SHALL BE MEASURED FOR THE VACUUM IN THE MANHOLE TO DROP FROM 10 TO 9 INCHES OF MERCURY.
- THE PERMISSIBLE TIME FOR THE SPECIFIED VACUUM DROP SHALL BE GREATER THAN 1.77 SECONDS PER FOOT OF MANHOLE DEPTH FOR 48 INCH DIAMETER MANHOLES, 2.30 SECONDS PER FOOT OF MANHOLE DEPTH FOR 60 INCH DIAMETER MANHOLES, AND 2.84 SECONDS PER FOOT OF MANHOLE DEPTH FOR 72 INCH DIAMETER MANHOLES.
- IF ANY MANHOLE TEST DISCLOSES A TIME LESS THAN REQUIRED, THE CONTRACTOR SHALL LOCATE AND REPAIR THE CAUSE OF FAILURE AND RETEST THE MANHOLE UNTIL THE TEST TIME FALLS WITHIN PERMISSIBLE LIMITS.
- THE CONTRACTOR SHALL PERFORM ALL TESTING IN THE PRESENCE OF THE CITY ENGINEER OR REPRESENTATIVE AND SHALL SUPPLY ALL NECESSARY EQUIPMENT FOR PERFORMING THE REQUIRED VACUUM TESTING.

D. FORCEMAIN TESTING:

- PRESSURE TESTING OF ALL NEW SANITARY SEWER FORCEMAINS SHALL BE PERFORMED USING THE HYDROSTATIC PRESSURE METHOD AS SPECIFIED FOR WATERMAINS, EXCEPT AS MODIFIED BELOW.
- HYDROSTATIC TESTING OF FORCEMAINS SHALL BE TESTED AT A PRESSURE OF 65 PSI OR 50% ABOVE THE NORMAL OPERATING PRESSURE AT THE LOWEST POINT IN THE PIPING UNDER TEST, WHICHEVER IS GREATER.
- THE CONTRACTOR SHALL PERFORM ALL TESTING IN THE PRESENCE OF THE CITY ENGINEER OR REPRESENTATIVE AND SHALL SUPPLY ALL NECESSARY EQUIPMENT FOR PERFORMING THE REQUIRED HYDROSTATIC TESTING.

GENERAL NOTES
SEWER TESTING



TYPICAL TILE REPLACEMENT DETAIL

TILE
REPAIR

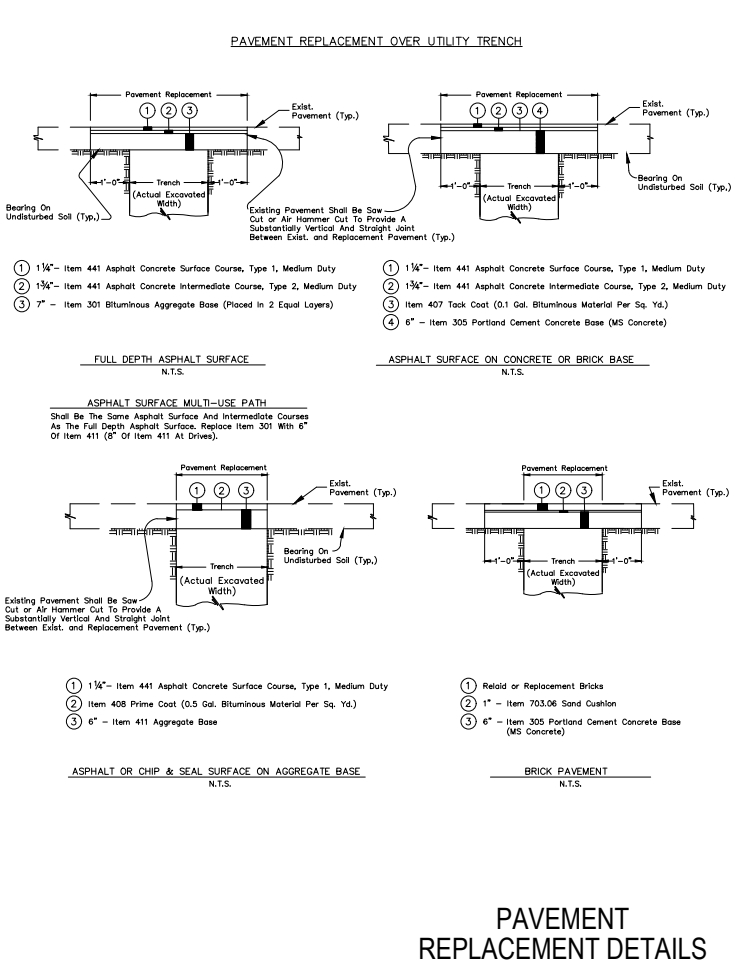
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 CHKD BY: JAR
 APPROVED BY: JAR
 DATE: 01/25
 SCALE: N/A
 CITY OF WOOSTER
 DIVISION OF ENGINEERING
 330 S. MARKET ST.
 WOOSTER, OHIO 44691
 (614) 279-2221
 JOHN REE, CITY ENGINEER



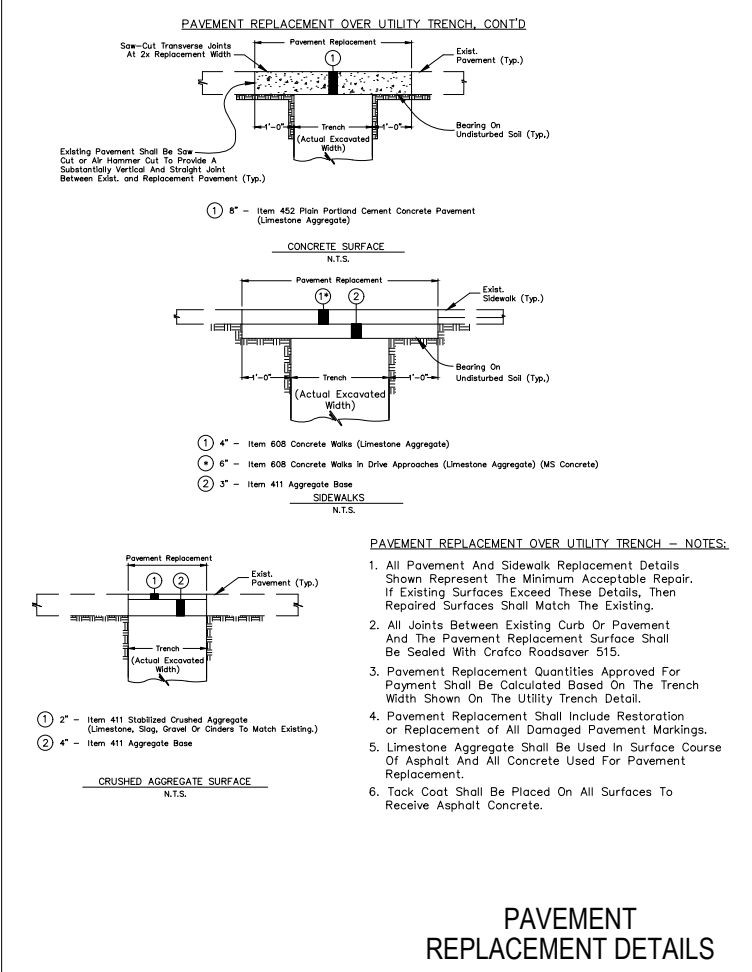
W. MILLTOWN ROAD AREA
 SANITARY SEWER IMPROVEMENT
 MISCELLANEOUS DETAILS

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SHEET 10 of 12

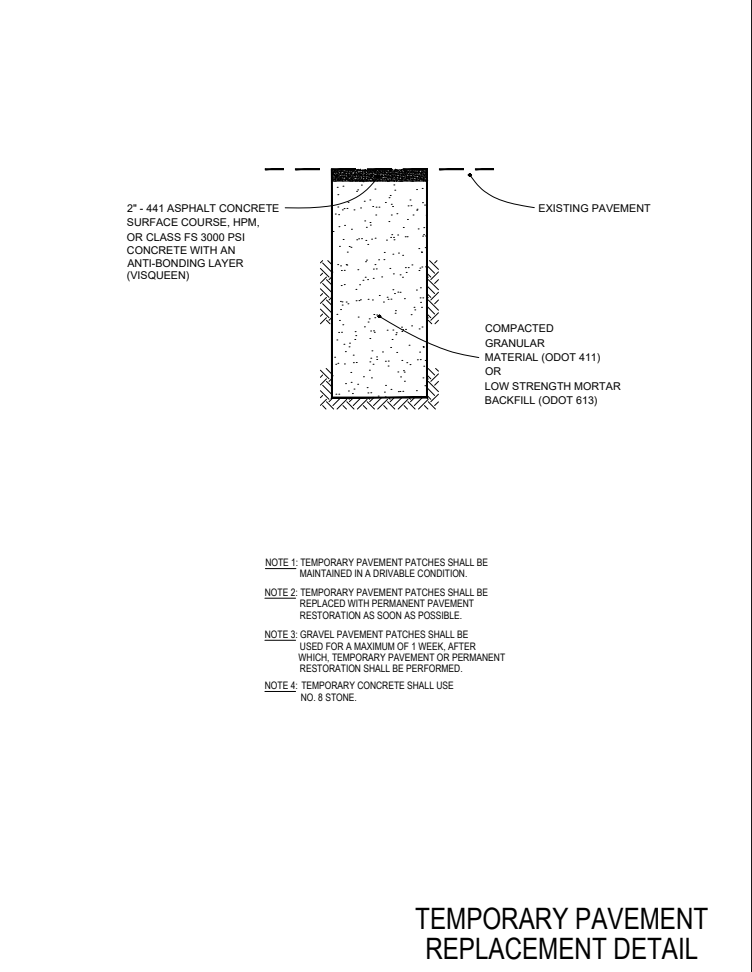
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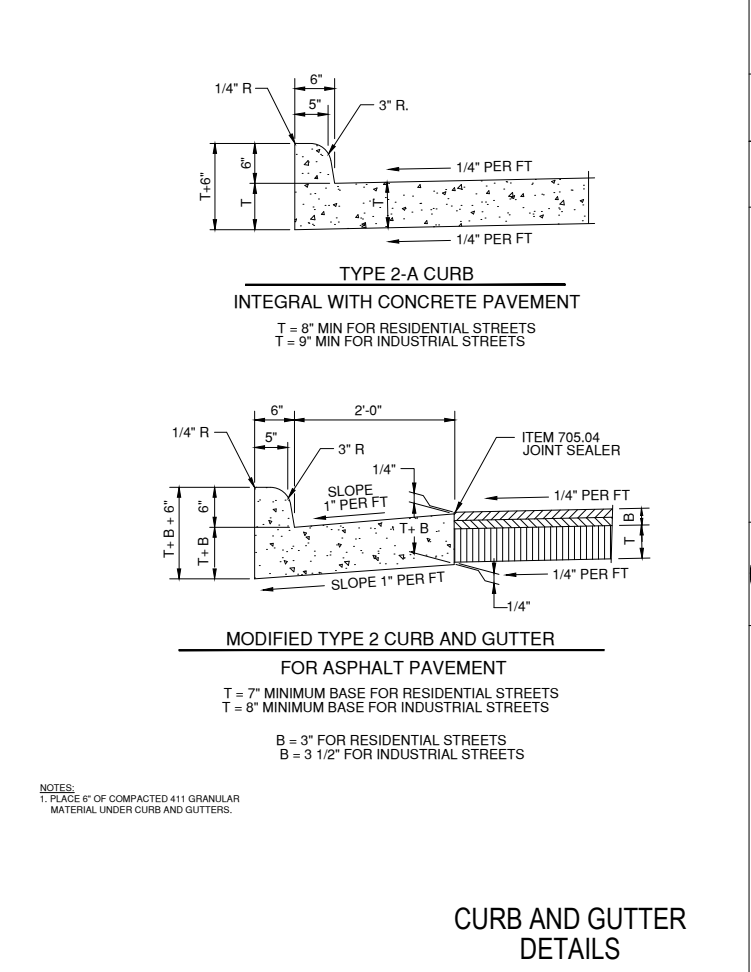
PAVEMENT REPLACEMENT DETAILS



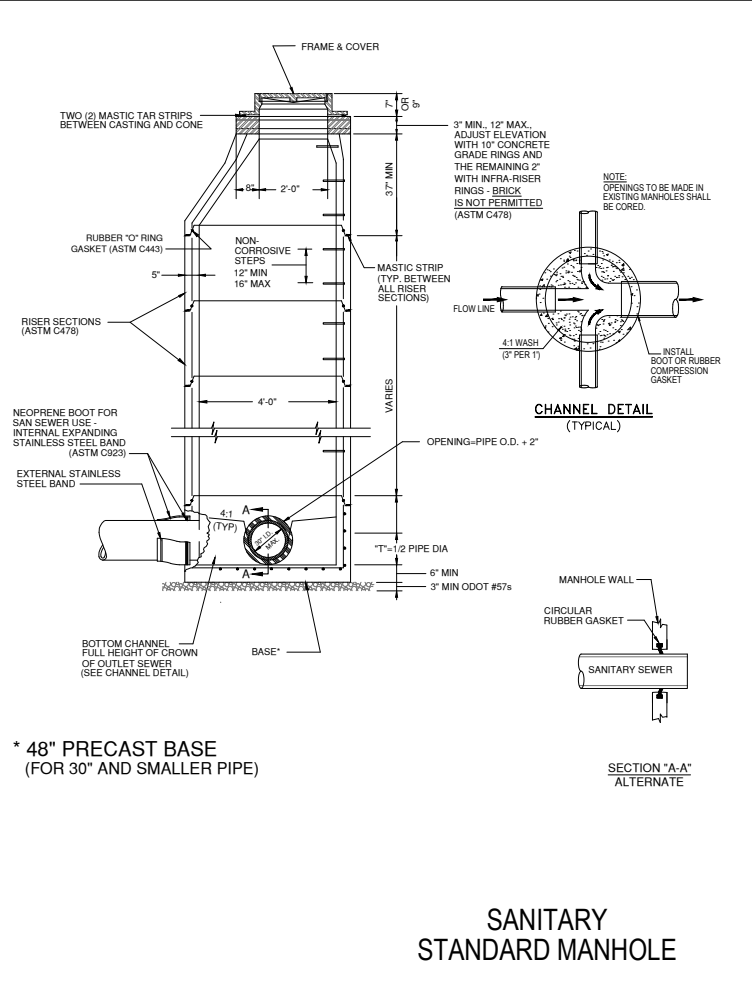
PAVEMENT REPLACEMENT DETAILS



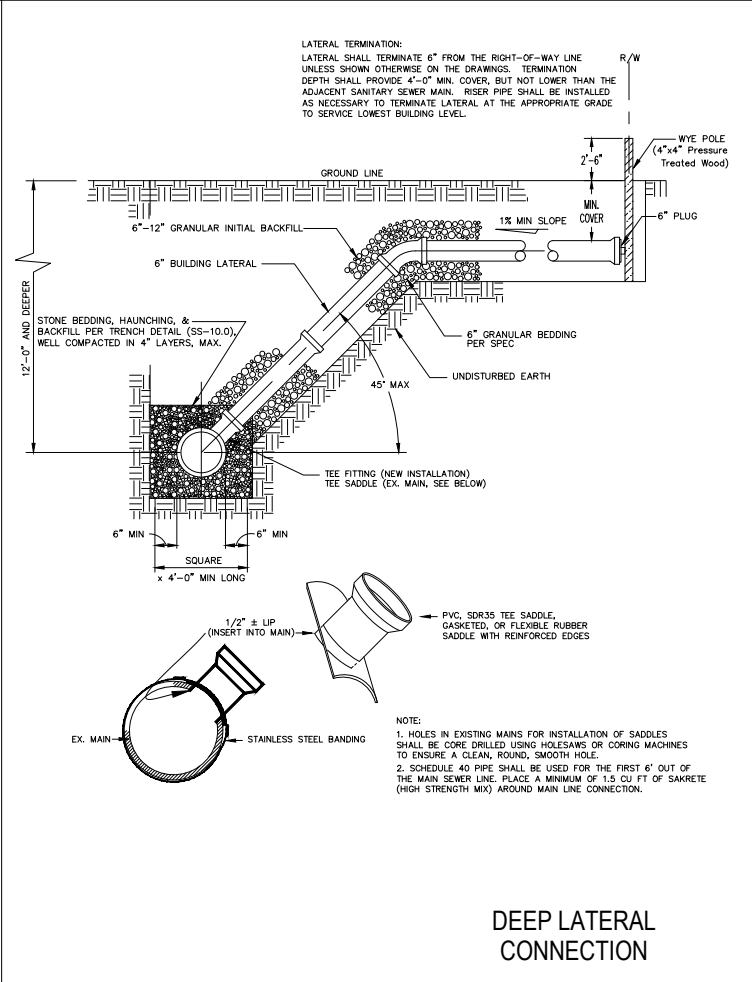
TEMPORARY PAVEMENT REPLACEMENT DETAIL



CURB AND GUTTER DETAILS

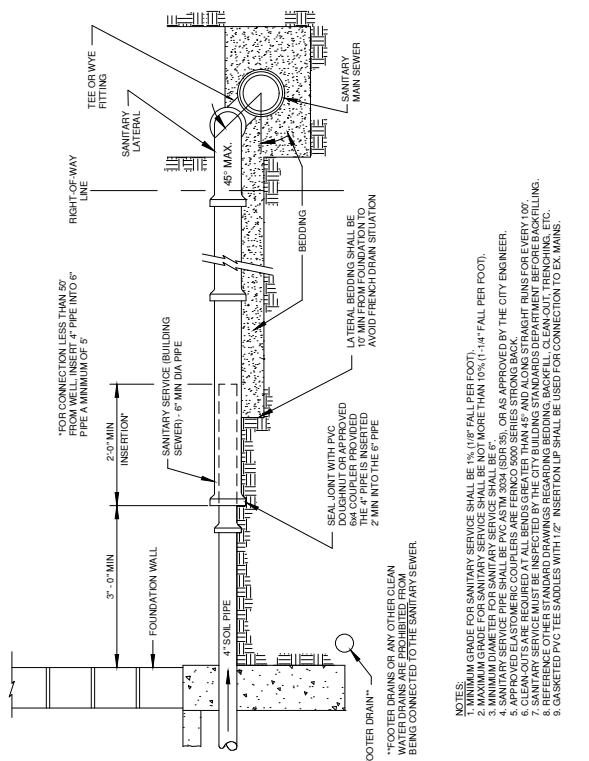


SANITARY STANDARD MANHOLE



DEEP LATERAL CONNECTION

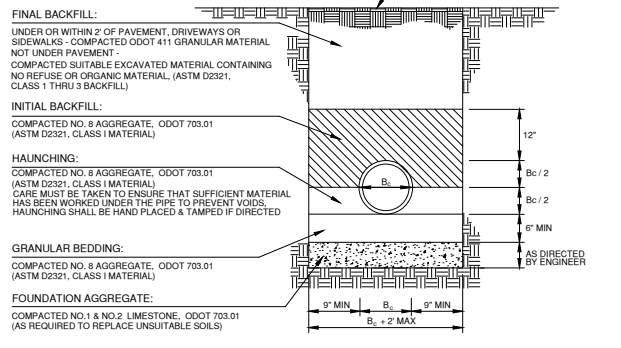
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SLG	---	JAR	N/A	01/25
CITY OF WOOSTER DIVISION OF ENGINEERING 330 N. BALDWIN ST. WOOSTER, OHIO 44691 PH: 330.249.2421 JOHN REE CITY ENGINEER				
W. MILLTOWN ROAD AREA SANITARY SEWER IMPROVEMENT MISCELLANEOUS DETAILS				
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TYPICAL SANITARY SERVICE CONNECTION

- NOTES:
1. MINIMUM GRADE FOR SANITARY SERVICE SHALL BE 1% (1/8" FALL PER FOOT).
 2. MINIMUM GRADE FOR SANITARY SEWER SHALL BE 0.5% (1/4" FALL PER FOOT).
 3. MINIMUM DIAMETER FOR SANITARY SERVICE SHALL BE 6".
 4. SANITARY SERVICE PIPE SHALL BE PVC ASTM 3024 (SDR 35), OR AS APPROVED BY THE CITY ENGINEER.
 5. SANITARY SEWER PIPE SHALL BE PVC ASTM 3024 (SDR 35), OR AS APPROVED BY THE CITY ENGINEER.
 6. CLEAN OUTS ARE REQUIRED AT ALL BENDS GREATER THAN 45° AND ALONG STRAIGHT RUNS FOR EVERY 100'.
 7. SANITARY SERVICE MUST BE INSPECTED BY THE CITY BUILDING STANDARDS DEPARTMENT BEFORE BACKFILLING.
 8. ALL JOINTS SHALL BE GASKETED WITH 1/2" GASKETS.
 9. GASKETED PVC TEE SADDLES WITH 1/2" INSERTION UP SHALL BE USED FOR CONNECTION TO EX. MAINS.
- *FOOTER DRAINS OR ANY OTHER CLEAN WATER DRAINS ARE PROHIBITED FROM BEING CONNECTED TO THE SANITARY SEWER.

PVC GRAVITY PIPE
TYPICAL TRENCH SECTION
BEDDING AND BACKFILL

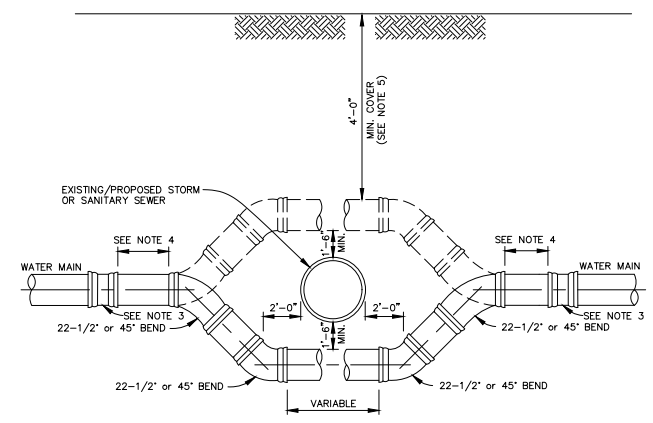


SANITARY SEWER TRENCH DETAILS

TRAFFIC NOTES

- A. GENERAL:**
- 1) THESE CONDITIONS SHALL GENERALLY APPLY TO ALL TRAFFIC CONTROL DEVICES, SIGNS, PAVEMENT MARKINGS, AND MATERIALS.
- B. TRAFFIC CONTROL SIGNS:**
- 1) ALL SIGNS (OTHER THAN STREET NAME SIGNS) SHALL CONFORM TO THE CURRENT EDITIONS OF THE OHIO DEPARTMENT OF TRANSPORTATION CONSTRUCTION AND MATERIAL SPECIFICATIONS (CMS), ODOT STANDARD CONSTRUCTION DRAWINGS, AND OF THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES.
- C. STREET SIGNS:**
- 1) ALL STREET SIGNS SHALL CONFORM TO CITY OF WOOSTER SPECIFICATIONS AND TO THE APPLICABLE PORTIONS OF ITEM 630, OHIO DEPARTMENT OF TRANSPORTATION CONSTRUCTION AND MATERIALS SPECIFICATIONS, AND THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (CURRENT EDITIONS).
 - 2) ALL SIGNS SHALL BE FABRICATED ON 0.080" 5052 ALLOY ALUMINUM BLANK (NON-EXTRUDED).
 - 3) ALL SIGNS SHALL HAVE A FEDERAL RADIUS (ACCORDING TO THE SIZE OF BLANK). NO SPECIALTY SIGNAGE (CONSISTING OF MATERIAL SUCH AS FIBERGLASS, WOOD, PLASTIC, OR OTHER) SHALL BE INSTALLED IN THE CITY OF WOOSTER RIGHT-OF-WAY WITHOUT PRIOR WRITTEN APPROVAL OF THE CITY ENGINEER.
- D. TRAFFIC SIGNALS:**
- 1) ALL TRAFFIC SIGNALS SHALL CONFORM TO CURRENT CITY OF WOOSTER REQUIREMENTS AND ITEMS 632 AND 633, OHIO DEPARTMENT OF TRANSPORTATION CONSTRUCTION AND MATERIALS SPECIFICATIONS (CURRENT EDITION) FOR TRAFFIC SIGNAL EQUIPMENT AND CONTROLLERS. CONTACT CITY OF WOOSTER ENGINEERING DIVISION FOR CURRENT REQUIREMENTS.
- E. PAVEMENT MARKING:**
- 1) ALL PAVEMENT MARKINGS SHALL CONFORM TO CITY OF WOOSTER SPECIFICATIONS AND THE CURRENT EDITION OF THE OHIO DEPARTMENT OF TRANSPORTATION CONSTRUCTION AND MATERIALS SPECIFICATIONS FOR THE VARIOUS TYPES OF TRAFFIC PAINT. IN GENERAL, ALL LONG LINES SHALL BE ITEM 642 TYPE 1 TRAFFIC PAINT AND OTHER MARKINGS SHALL BE ITEM 644 THERMOPLASTIC, EXCEPT WHERE PAVEMENT SURFACE DOES NOT ALLOW FOR ITEM 644. IN THIS SITUATION, THE ALTERNATIVE TYPE(S) OF TRAFFIC PAINT SHALL BE APPROVED BY THE CITY ENGINEER.

GENERAL NOTES TRAFFIC



WATER MAIN OFFSET DETAIL

- NOTES:
1. ALL JOINTS SHALL BE RESTRAINED.
 2. ALL FASTENERS SHALL BE STAINLESS STEEL.
 3. SOLID SLEEVES SHALL BE USED IF THE EXISTING WATER MAIN IS DUCTILE IRON; OTHERWISE, HYMAX GRIP (OR EQUAL) RESTRAINED COUPLINGS SHALL BE USED.
 4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONFIRMING IN THE FIELD THAT THE LENGTH OF RESTRAINED PIPE ON BOTH SIDES OF THE BENDS IS MET AND IF IT ISN'T REPLACING THIS PORTION OF THE WATER MAIN AT NO ADDITIONAL COST TO THE OWNER.
 5. IF ANY PORTION OF THE WATER MAIN BEING OFFSET IS LESS THAN 4' COVER, CONTACT THE ENGINEER TO DETERMINE IF ADDITIONAL LENGTH OF RESTRAINED PIPE IS NEEDED.