

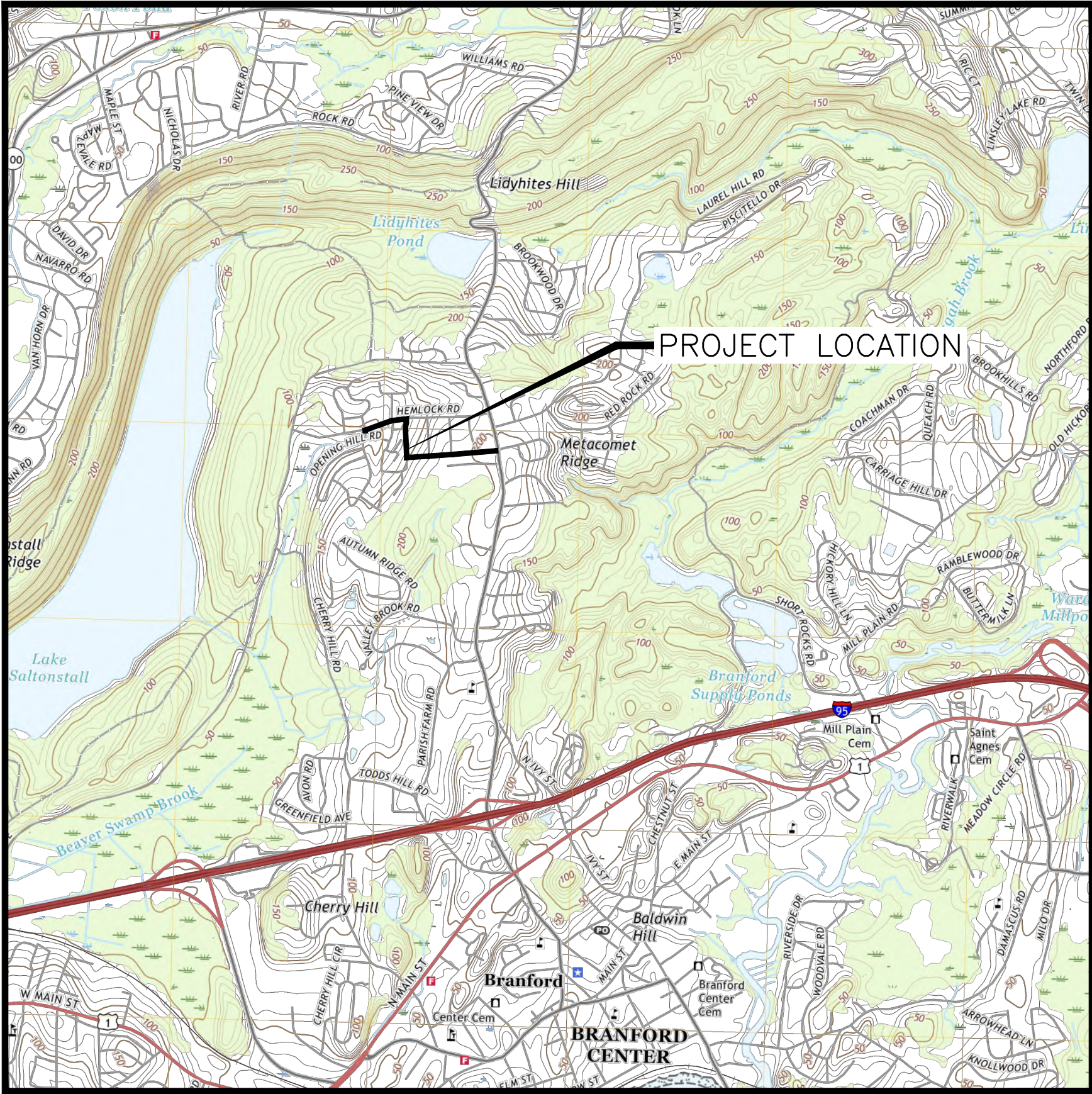
CONSTRUCTION PLANS

- for -

HEMLOCK PUMPING STATION FORCE MAIN REPLACEMENT

Branford, Connecticut

SEPTEMBER 2019

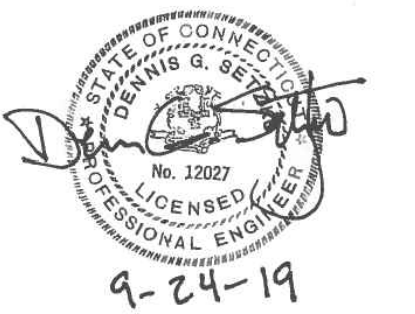


LIST OF DRAWINGS

SHEET	STATION	TITLE	INFORMATION
T-1	-	COVER SHEET	COVER SHEET
G-1	-	KEY MAP, LEGEND, AND GENERAL NOTES	KEY MAP, LEGEND, AND GENERAL NOTES
C-1	STA 10+00 TO 15+00	HEMLOCK ROAD	PLAN AND PROFILE
C-2	STA 15+00 TO 18+00	HEMLOCK ROAD	PLAN AND PROFILE
C-3	STA 18+00 TO 23+00	CYPRESS DRIVE	PLAN AND PROFILE
C-4	STA 23+00 TO 28+00	MILLWOOD DRIVE	PLAN AND PROFILE
C-5	STA 28+00 TO 33+50	MILLWOOD DRIVE	PLAN AND PROFILE
C-6	STA 33+50 TO 39+15	MILLWOOD DRIVE	PLAN AND PROFILE
D-1	-	DETAILS	DETAILS

LOCATION MAP
NTS





ISSUE/REVISION

IR	DATE	DESCRIPTION

PROJECT NUMBER

60581062

Designed By:	C. HALLORAN
Drawn By:	C. HALLORAN
Dept Check:	P. SAMMIS
Proj Check:	D. SETZKO
Date:	SEPTEMBER 2019
Scale:	NTS

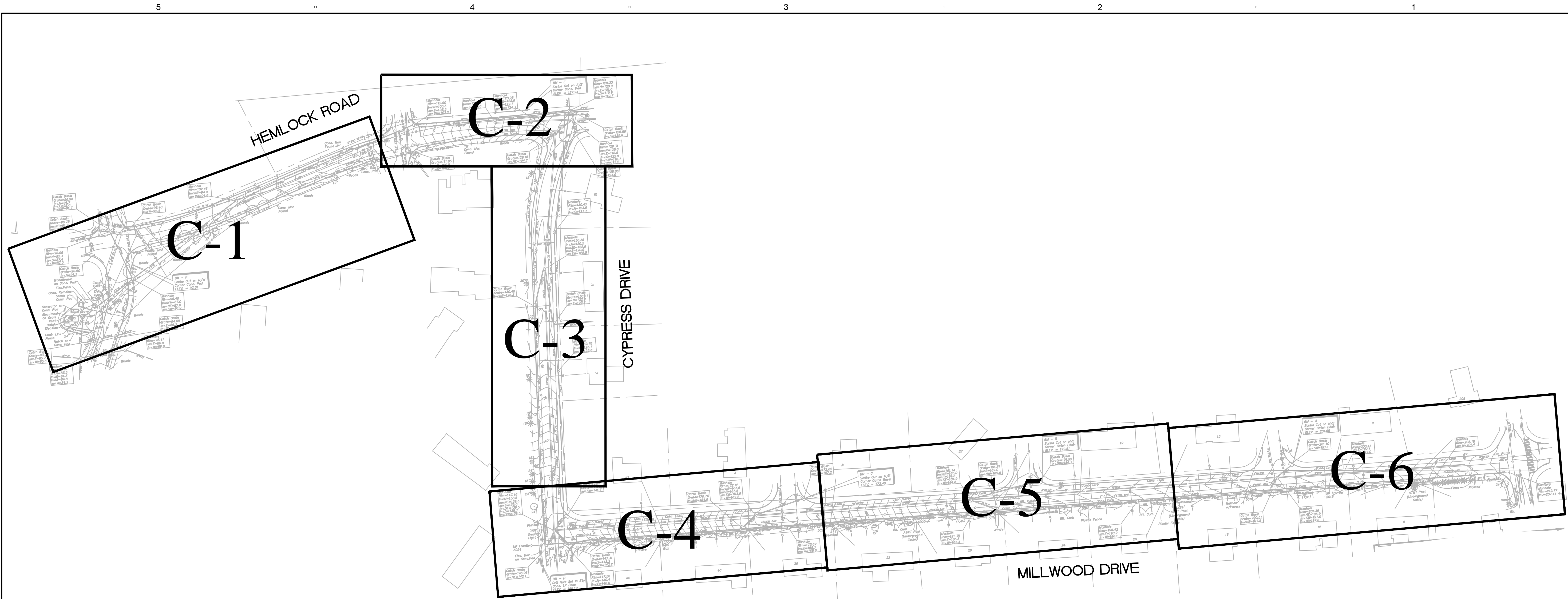
DISCIPLINE

CIVIL SHEET TITLE

KEY MAP, LEGEND, AND GENERAL NOTES

SHEET NUMBER

G-1



DRAWING SHEET LEGEND
 NOT TO SCALE

LEGEND

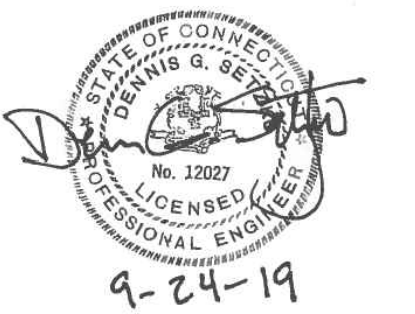
BIT.	BITUMINOUS	MAILBOX
BUSH		MANHOLE
C.I.	CAST IRON	OVERHEAD LINE
CATCH BASIN		PARKING METER
CONC.	CONCRETE	PROPERTY LINE
CONIFEROUS TREE		REINFORCED CONCRETE PIPE
DECIDUOUS TREE		SANITARY SEWER
ELECTRIC LINE		SANITARY SEWER SERVICE
FM	FORCE MAIN	SIGN
GAS GATE		STORM SEWER
GAS GATE		TELEPHONE LINE
GUY WIRE		UTILITY POLE
HYDRANT		WATER GATE
LIGHT POLE		WATER LINE

SURVEY NOTES:

1. TOPOGRAPHIC INFORMATION DEPICTED HEREON IS BASED ON A GROUND SURVEY OCTOBER 2018 BY AECOM.
2. VERTICAL DATUM IS BASED UPON NAVD 1988.
3. NORTH IS BASED ON REFERENCE NAD 1983.
4. STREETLINE INFORMATION DEPICTED HEREON IS BASED ON GROUND SURVEY LOCATIONS OF EXISTING MONUMENTATION. STREETLINES ARE DEPICTED FOR GENERAL REFERENCE AND ORIENTATION AND ARE NOT INTENDED TO CONVEY A PROPERTY/BOUNDARY OPINION.
5. ANY UNDERGROUND UTILITY, STRUCTURE AND FACILITY LOCATIONS DEPICTED AND NOTED HEREON HAVE BEEN COMPILED FROM RECORD MAPPING. THESE LOCATIONS MUST BE CONSIDERED AS APPROXIMATE IN NATURE. ADDITIONALLY, OTHER SUCH FEATURES MAY EXIST ON THE SITE, THE EXISTENCE OF WHICH ARE UNKNOWN TO (THE SIGNER). THE SIZE, LOCATION AND EXISTENCE OF ALL SUCH FEATURES MUST BE FIELD DETERMINED AND VERIFIED BY THE APPROPRIATE AUTHORITIES PRIOR TO ANY CONSTRUCTION. CALL BEFORE YOU DIG 1-800-922-4455.
6. SANITARY AND DRAINAGE STRUCTURES ARE BASED ON GROUND SURVEY; HOWEVER, INTERCONNECTING PIPES ARE DEPICTED ONLY IN SO FAR AS SURVEY WAS ABLE TO VERIFY SUCH CONNECTIONS BY RECORD MAPPING.
7. THIS MAP HAS BEEN PREPARED IN ACCORDANCE WITH SECTIONS 20-300b-1 THROUGH 20-300b-20 OF THE REGULATIONS OF CONNECTICUT STATE AGENCIES - "MINIMUM STANDARDS FOR SURVEYS AND MAPS IN THE STATE OF CONNECTICUT" AS ENDORSED BY THE CONNECTICUT ASSOCIATION OF LAND SURVEYORS, INC. ON SEPTEMBER 26, 1996.
8. THE PURPOSE OF THIS MAP IS TO DEPICT EXISTING CONDITIONS WITHIN THE SURVEY AREA AS OF THE DATE OF THE SURVEY, OCTOBER 2018. THIS SURVEY AND MAP CONFORM TO A-2 HORIZONTAL ACCURACY AND T-2 VERTICAL ACCURACY.

GENERAL NOTES:

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE COMPLETE ADHERENCE TO ALL PROVISIONS OF THE CONTRACT DOCUMENTS, INCLUDING BUT NOT LIMITED TO, THE CONTRACT DRAWINGS, SPECIFICATIONS, AND VARIOUS PERMITS APPENDED THERETO.
2. THE EXISTING SANITARY SEWER SYSTEM MUST REMAIN OPERATIONAL DURING CONSTRUCTION. BYPASS PUMPING ARRANGEMENTS SHALL BE REVIEWED AND APPROVED BY THE ENGINEER PRIOR TO CONSTRUCTION. EXISTING SEWER SERVICE CONNECTIONS THAT ARE TEMPORARILY DISCONNECTED SHALL BE RECONNECTED AT THE END OF THE WORK DAY. CONTRACTOR SHALL PROVIDE SUPERVISED BYPASS PUMPING WITH BACKUP IF PUMPING EXTENDS BEYOND THE WORK DAY. PROPERTY OWNERS MUST BE INFORMED OF ANY DISRUPTION TO SEWER SERVICE.
3. ALL TOPOGRAPHIC FEATURES ARE NOT NECESSARILY INDICATED ON THE PLANS. THE CONTRACTOR SHALL THOROUGHLY REVIEW THE SITE OF THE WORK AND TOTALLY FAMILIARIZE HIMSELF WITH ALL EXISTING CONDITIONS AND FEATURES.
4. THE CONTRACTOR WILL BE REQUIRED TO SECURE VARIOUS PERMITS FOR THIS CONTRACT. REFER TO THE SPECIFICATIONS FOR ADDITIONAL INFORMATION.
5. INFORMATION ABOUT EXISTING UTILITIES SHOWN ON THE DRAWINGS IS BASED ON THE BEST AVAILABLE DATA, IS APPROXIMATE ONLY, AND IS PROVIDED FOR REFERENCE ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT SIZE, TYPE, LOCATION, AND ELEVATION OF ALL EXISTING UTILITIES PRIOR TO THE START OF CONSTRUCTION. THE CONTRACTOR SHALL HAVE ALL UNDERGROUND UTILITIES LOCATED AND MARKED IN THE FIELD BY THE RESPECTIVE UTILITY COMPANIES BY CALLING "CALL-BEFORE-YOU-DIG" AT 1-800-922-4455. DISCREPANCIES IN UTILITY LOCATION AFFECTING THE WORK SHALL BE IMMEDIATELY BROUGHT TO THE ATTENTION OF THE OWNER.
6. THE CONTRACTOR SHALL CONFINE HIS CONSTRUCTION OPERATIONS TO THE PROJECT LIMIT LINES, TO WITHIN EXISTING STREET LINES, AND TO THE EASEMENTS OR RIGHTS-OF-WAY ACROSS PRIVATE PROPERTIES, AS SHOWN ON THE DRAWINGS.
7. THE CONTRACTOR SHALL PROVIDE THE SERVICES OF A REGISTERED LAND SURVEYOR TO PERFORM A BENCH MARK RUN AND CHECK PRIOR TO ANY OTHER ACTIVITY. SUFFICIENT BENCH MARKS AND TURNING POINTS SHALL BE ESTABLISHED ALONG THE CONSTRUCTION ROUTE ON SOUND AND STABLE OBJECTS, TO ENABLE A CHECK INTO AT LEAST TWO (2) BENCH MARKS FROM EACH AND EVERY INSTRUMENT SETUP. THE CONTRACTOR SHALL FURNISH A COPY OF THE STAKE OUT AND BENCH MARK RUN AND CHECK, TOGETHER WITH ALL BENCH MARK AND TURNING POINT LOCATIONS AND ELEVATIONS TO THE OWNER.
8. THE CONTRACTOR SHALL PROVIDE THE SERVICE OF A REGISTERED LAND SURVEYOR TO STAKE OUT THE PROPOSED SANITARY SEWERS AND FORCE MAIN, MAKING FULL ADJUSTMENTS IN THE ALIGNMENT AND STRUCTURE LOCATIONS, AS APPROVED BY THE OWNER, TO FACILITATE MAINTENANCE OF TRAFFIC AND TO MINIMIZE UTILITY RELOCATIONS. THE HORIZONTAL AND/OR VERTICAL LOCATION OF THE PROPOSED SEWER MAY BE VARIED SLIGHTLY TO BEST FIT EXISTING FIELD CONDITIONS. NO WORK SHALL BEGIN UNTIL THE FIELD STAKED ALIGNMENT IS APPROVED BY THE OWNER.
9. ALL EXISTING UTILITIES, HYDRANTS, BELOW AND ABOVE GROUND, SHALL BE TEMPORARILY SUPPORTED, AND/OR RESET BY THE AFFECTED UTILITY COMPANY, IF IN CONFLICT WITH THE PROPOSED WORK OR THE OPERATION OF THE CONTRACTOR'S EQUIPMENT. COORDINATION AND IMPLEMENTATION SHALL BE THE CONTRACTOR'S RESPONSIBILITY AT HIS EXPENSE.
10. EXCAVATION CLOSE TO EXISTING UTILITIES SHALL BE PERFORMED BY HAND TO DETERMINE THE EXACT LOCATION BEFORE DRIVING PILES AND/OR SHEETING OR BEFORE EXCAVATION BEGINS.
11. THE CONTRACTOR SHALL FURNISH UNIFORMED POLICE OFFICERS AND/OR FLAG PERSONS AS ARE NECESSARY FOR THE DIRECTION AND CONTROL OF TRAFFIC WITHIN AND ADJACENT TO THE CONSTRUCTION SITE AT THE LOCATIONS AND PERIODS OF TIME AS ORDERED BY THE OWNER.
12. TRENCHES SHALL BE SHEETED WHERE REQUIRED BY FIELD CONDITIONS.
13. ALL SANITARY MANHOLES, SANITARY SEWERS, PIPES, AND FORCE MAINS, AND ADDITIONAL COMPONENTS WHICH ARE PART OF THE COMPLETED SYSTEM, SHALL BE THOROUGHLY CLEANED AND MADE OPERATIONAL BY THE CONTRACTOR PRIOR TO FINAL ACCEPTANCE.
14. EXPERIMENTAL EXCAVATION, AS PROVIDED FOR IN THE BID, SHALL BE PERFORMED BY THE CONTRACTOR WHERE SHOWN, APPROVED, AND AS OTHERWISE DIRECTED BY THE ENGINEER.
15. INSTALL PROPER EROSION AND SEDIMENTATION CONTROLS AT CATCH BASINS AS DESCRIBED IN THE SPECIFICATIONS.
16. ALL SURFACE AREAS DISTURBED BY CONSTRUCTION RELATED ACTIVITIES SHALL BE RESTORED TO THE PRE-CONSTRUCTION CONDITION OR BETTER WITH BITUMINOUS CONCRETE PAVEMENT, BITUMINOUS CONCRETE/CEMENT CONCRETE CURBING OR BY HYDROSEEDING.



IR	DATE	DESCRIPTION

60581062

Drawn By: **C. HALLORAN**

Dept Check: **P. SAMMIS**

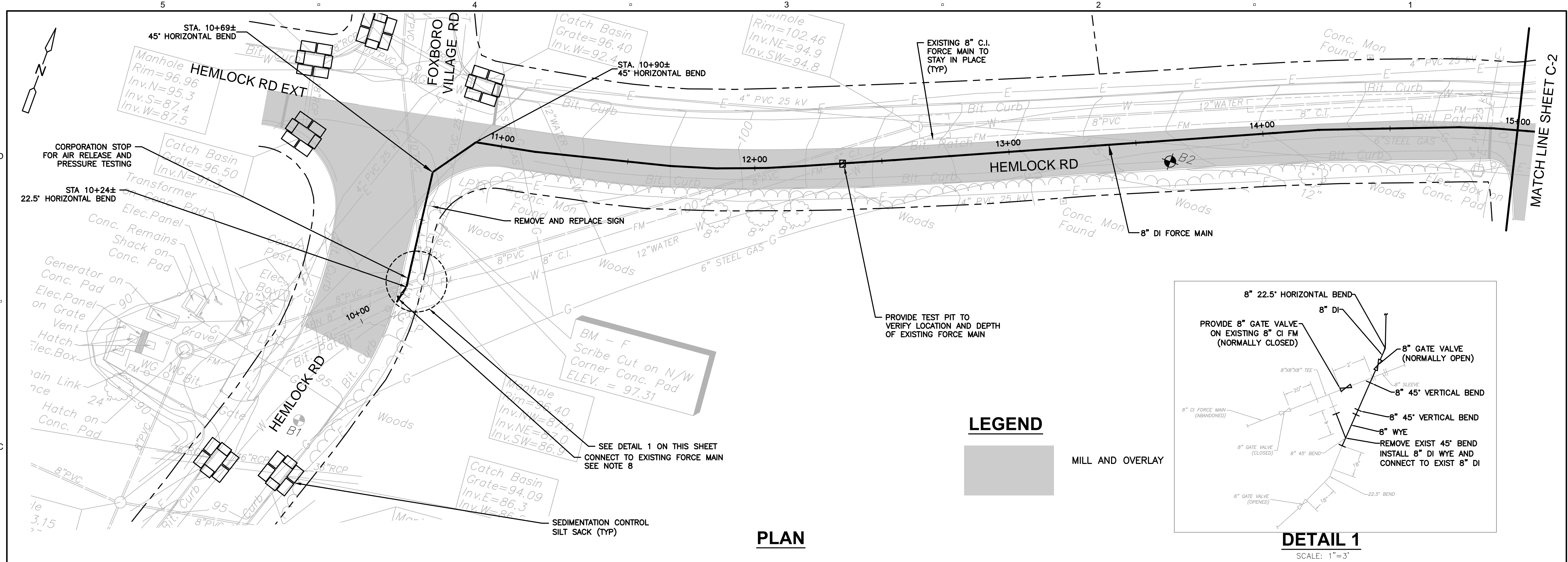
Proj Check: **D. SETZKO**

Date: **SEPTEMBER 2019**

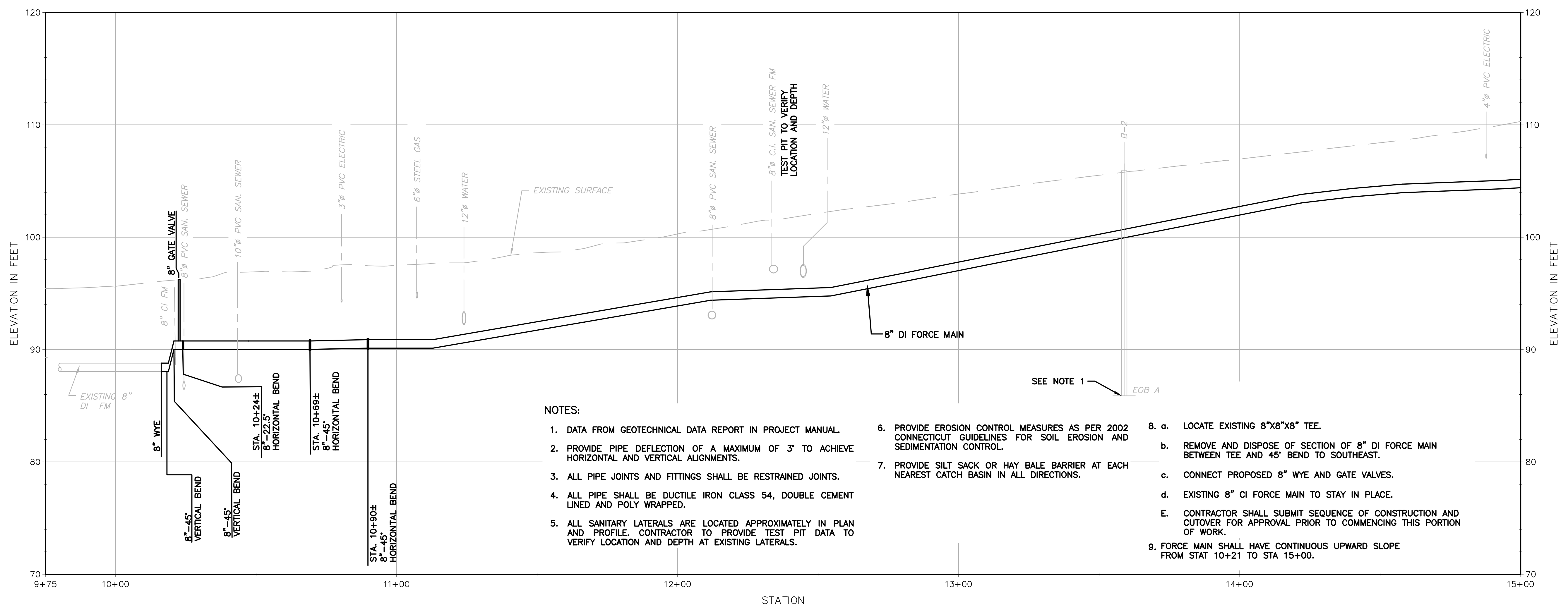
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CIVIL
SHEET TITLE

**HEMLOCK ROAD
PLAN AND PROFILE
STA 10+00 TO 15+00
SHEET NUMBER**



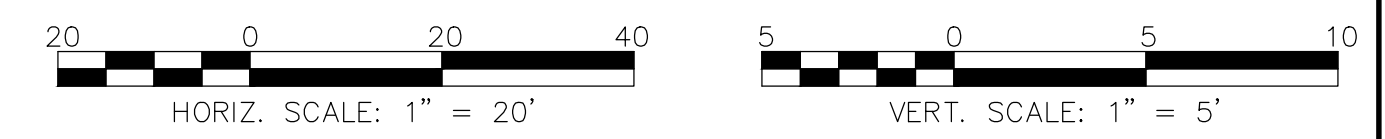
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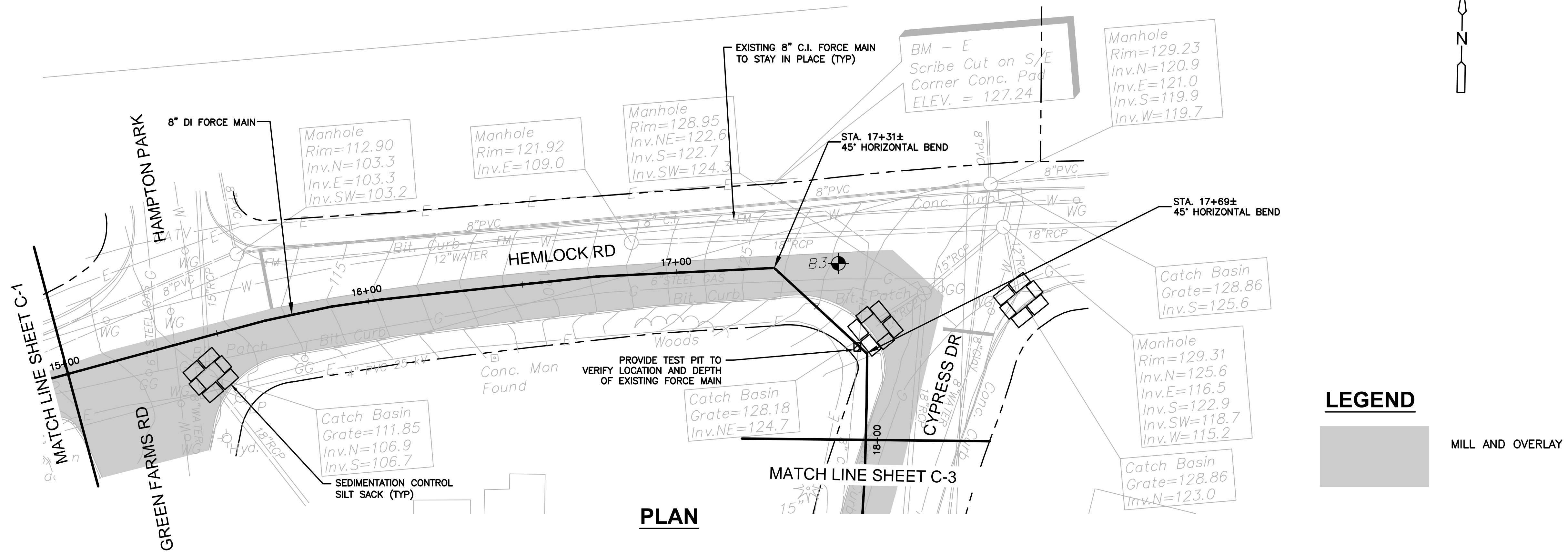


PROFILE

NOTES:

- DATA FROM GEOTECHNICAL DATA REPORT IN PROJECT MANUAL.
- PROVIDE PIPE DEFLECTION OF A MAXIMUM OF 3" TO ACHIEVE HORIZONTAL AND VERTICAL ALIGNMENTS.
- ALL PIPE JOINTS AND FITTINGS SHALL BE RESTRAINED JOINTS.
- ALL PIPE SHALL BE DUCTILE IRON CLASS 54, DOUBLE CEMENT LINED AND POLY WRAPPED.
- ALL SANITARY LATERALS ARE LOCATED APPROXIMATELY IN PLAN AND PROFILE. CONTRACTOR TO PROVIDE TEST PIT DATA TO VERIFY LOCATION AND DEPTH AT EXISTING LATERALS.
- PROVIDE EROSION CONTROL MEASURES AS PER 2002 CONNECTICUT GUIDELINES FOR SOIL EROSION AND SEDIMENTATION CONTROL.
- PROVIDE SILT SACK OR HAY BALE BARRIER AT EACH NEAREST CATCH BASIN IN ALL DIRECTIONS.
- LOCATE EXISTING 8"x8"x8" TEE.
 - REMOVE AND DISPOSE OF SECTION OF 8" DI FORCE MAIN BETWEEN TEE AND 45° BEND TO SOUTHEAST.
 - CONNECT PROPOSED 8" WYE AND GATE VALVES.
 - EXISTING 8" CI FORCE MAIN TO STAY IN PLACE.
 - CONTRACTOR SHALL SUBMIT SEQUENCE OF CONSTRUCTION AND CUTOVER FOR APPROVAL PRIOR TO COMMENCING THIS PORTION OF WORK.
- FORCE MAIN SHALL HAVE CONTINUOUS UPWARD SLOPE FROM STAT 10+21 TO STA 15+00.

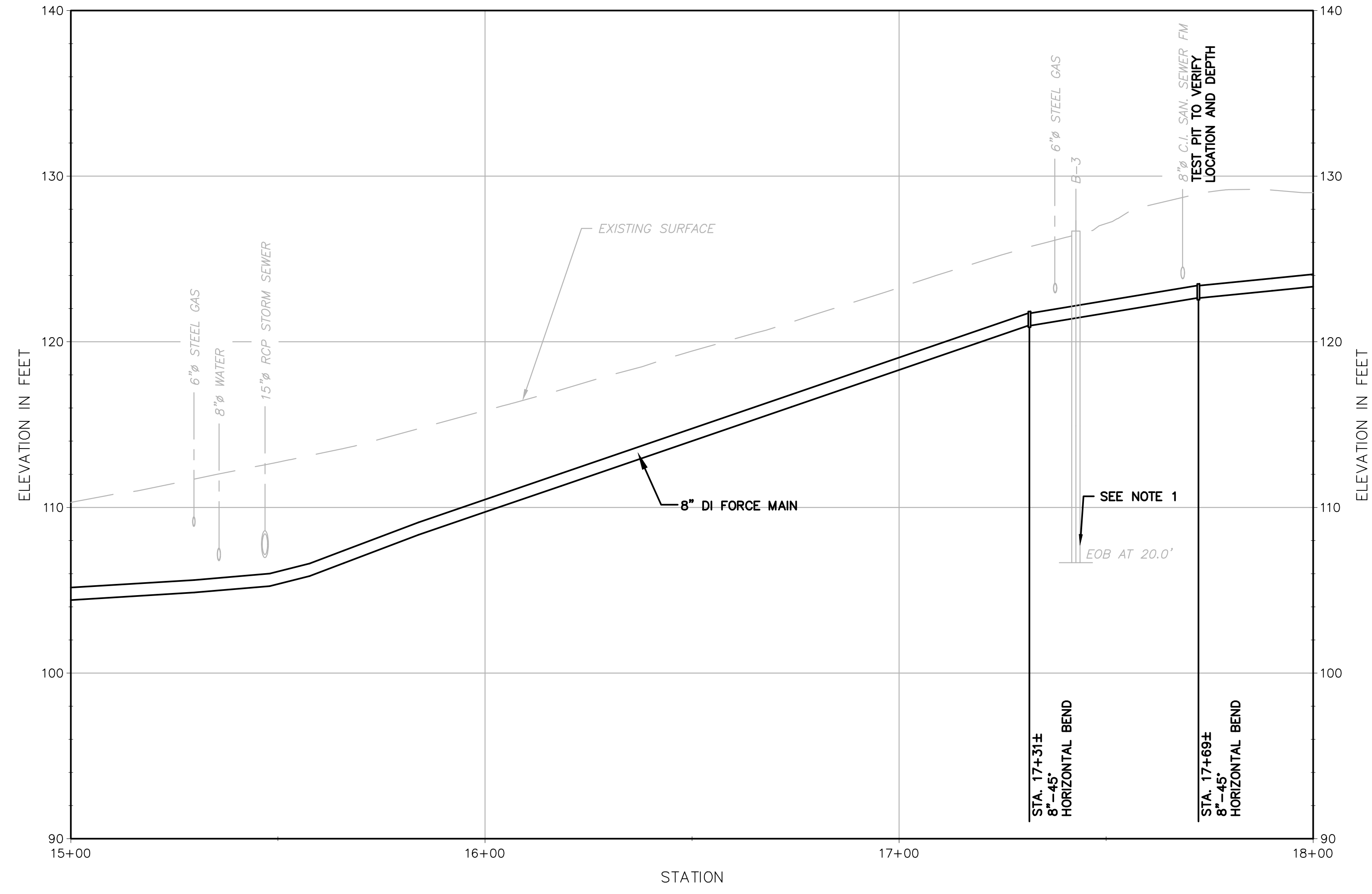




PLAN

LEGEND

MILL AND OVERLAY



PROFILE

- NOTES:**
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 - FORCE MAIN SHALL HAVE CONTINUOUS UPWARD SLOPE FROM STA 15+00 TO STA 18+00.

REGISTRATION



ISSUE/REVISION

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Drawn By:	C. HALLORAN
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Proj Check:	D. SETZKO
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Scale:	1" = 20'

DISCIPLINE

CIVIL

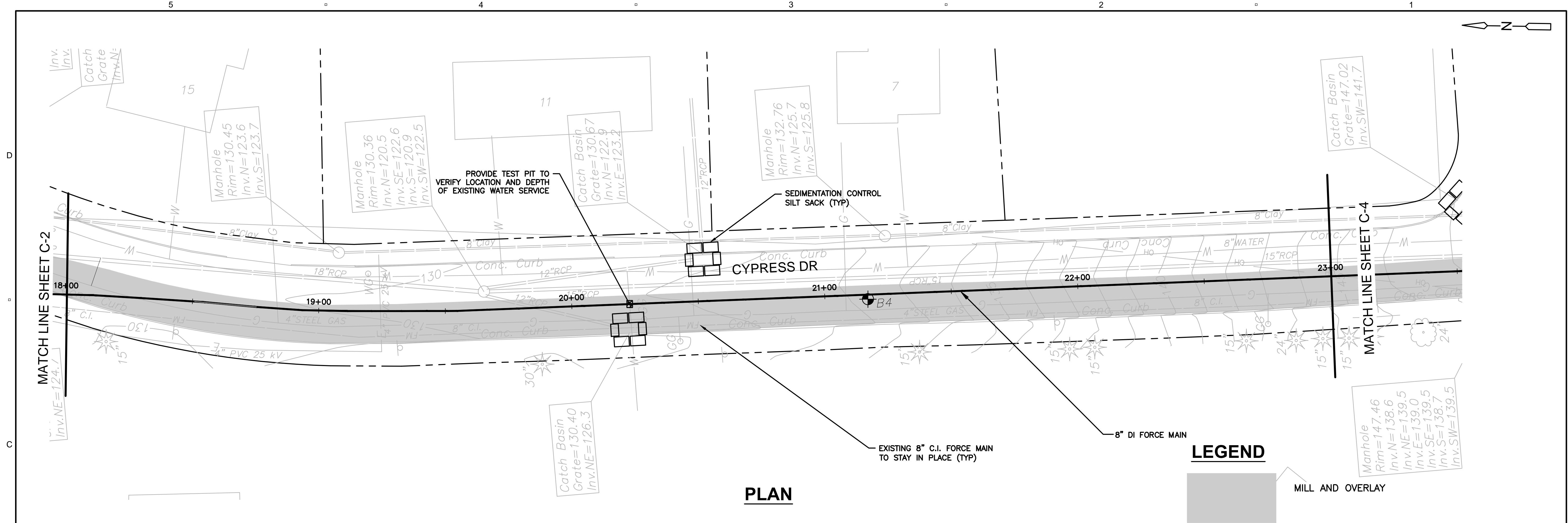
SHEET TITLE

**HEMLOCK ROAD
 PLAN AND PROFILE
 STA 15+00 TO 18+00
 SHEET NUMBER**

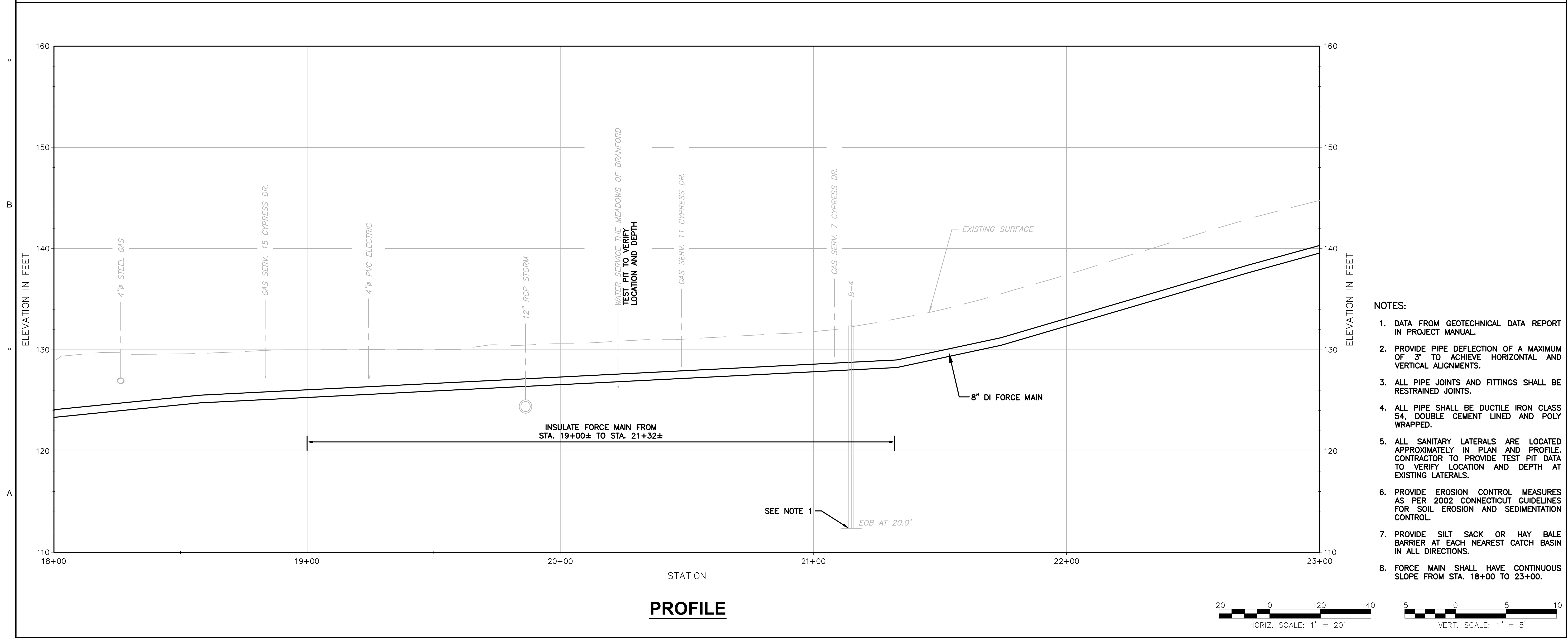


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60581062



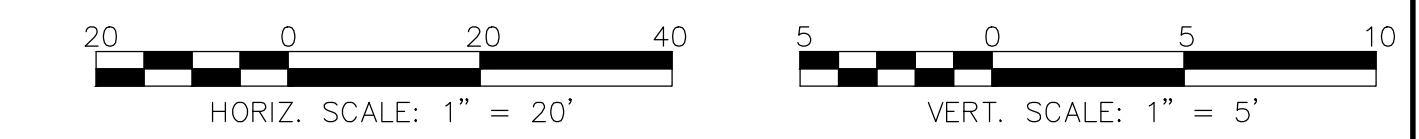
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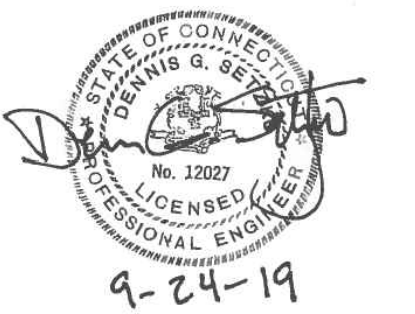


PROFILE

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- PROVIDE SILT SACK OR HAY BALE BARRIER AT EACH NEAREST CATCH BASIN IN ALL DIRECTIONS.
- FORCE MAIN SHALL HAVE CONTINUOUS SLOPE FROM STA. 18+00 TO 23+00.

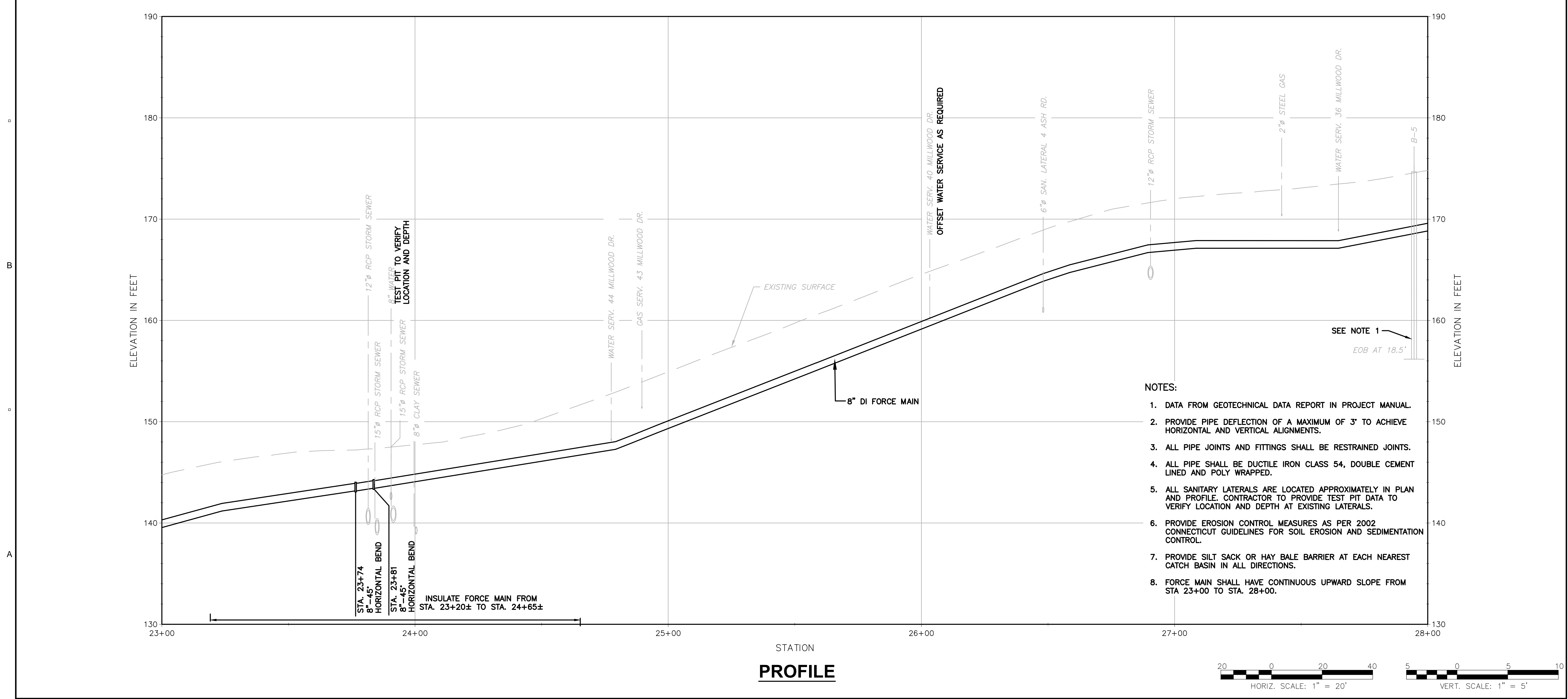
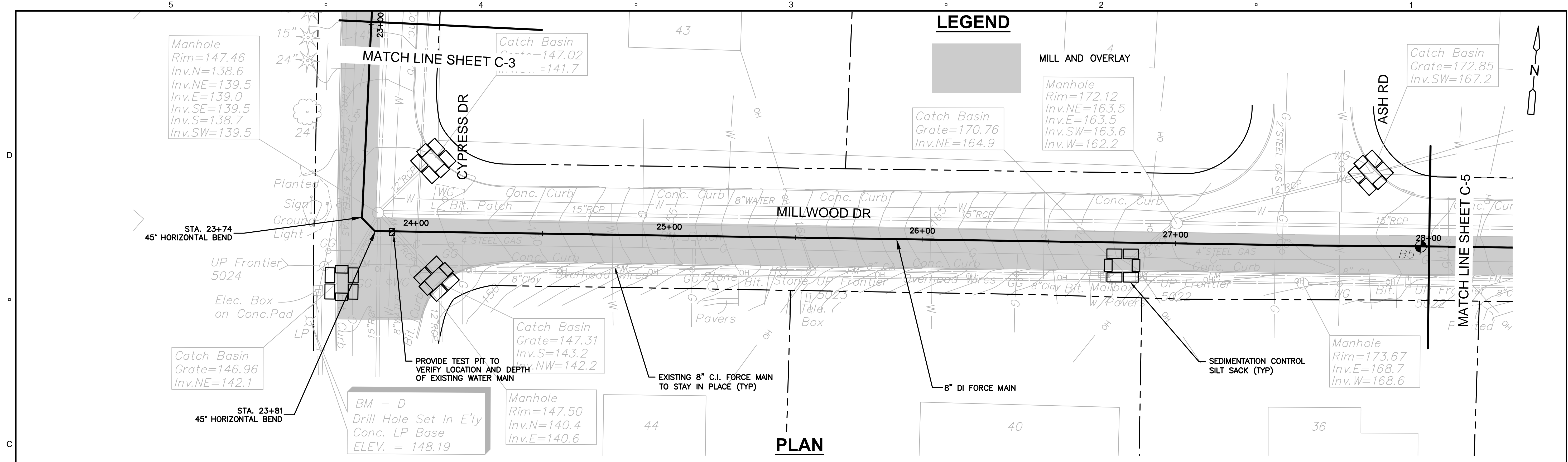




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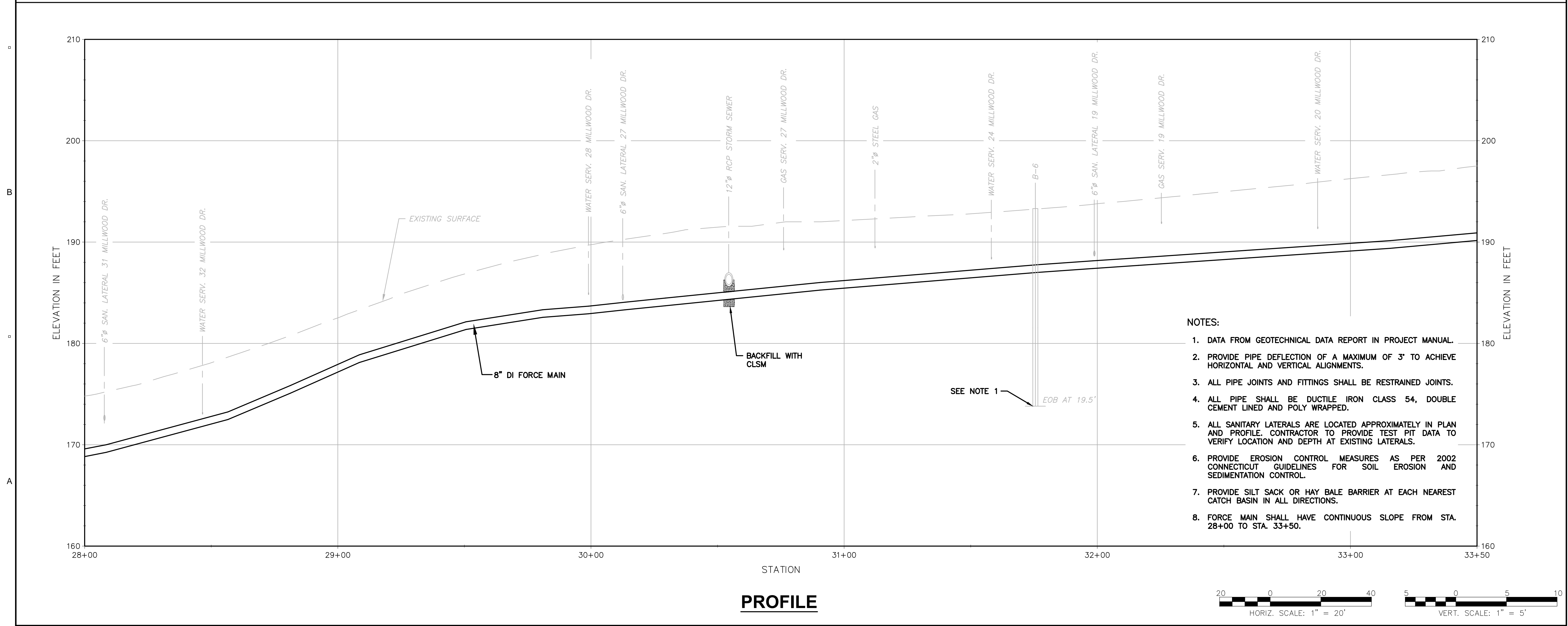
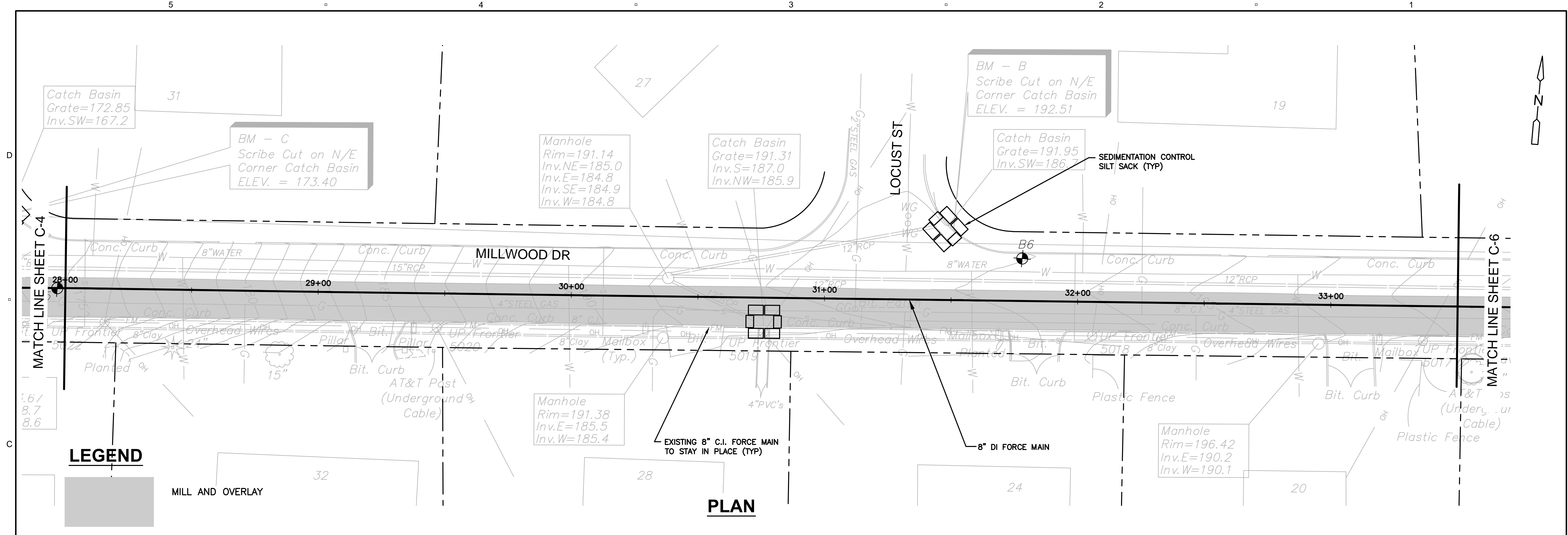
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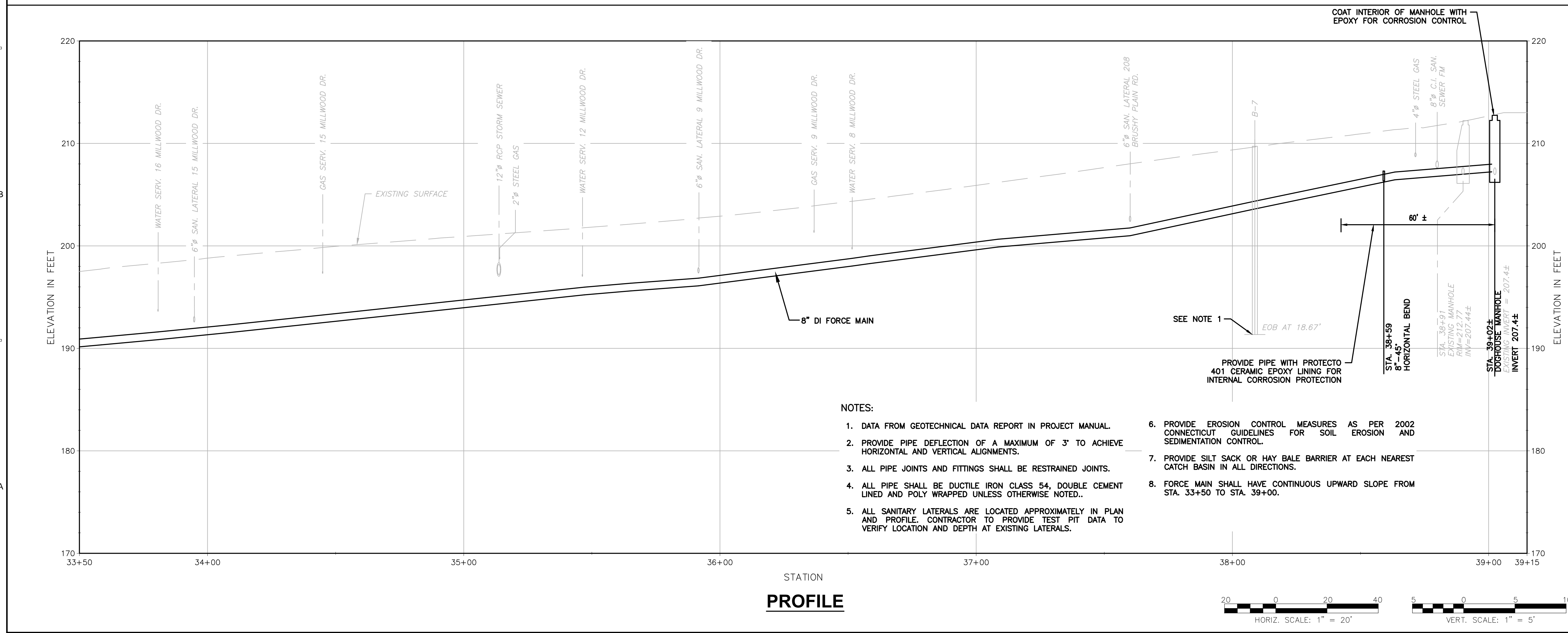
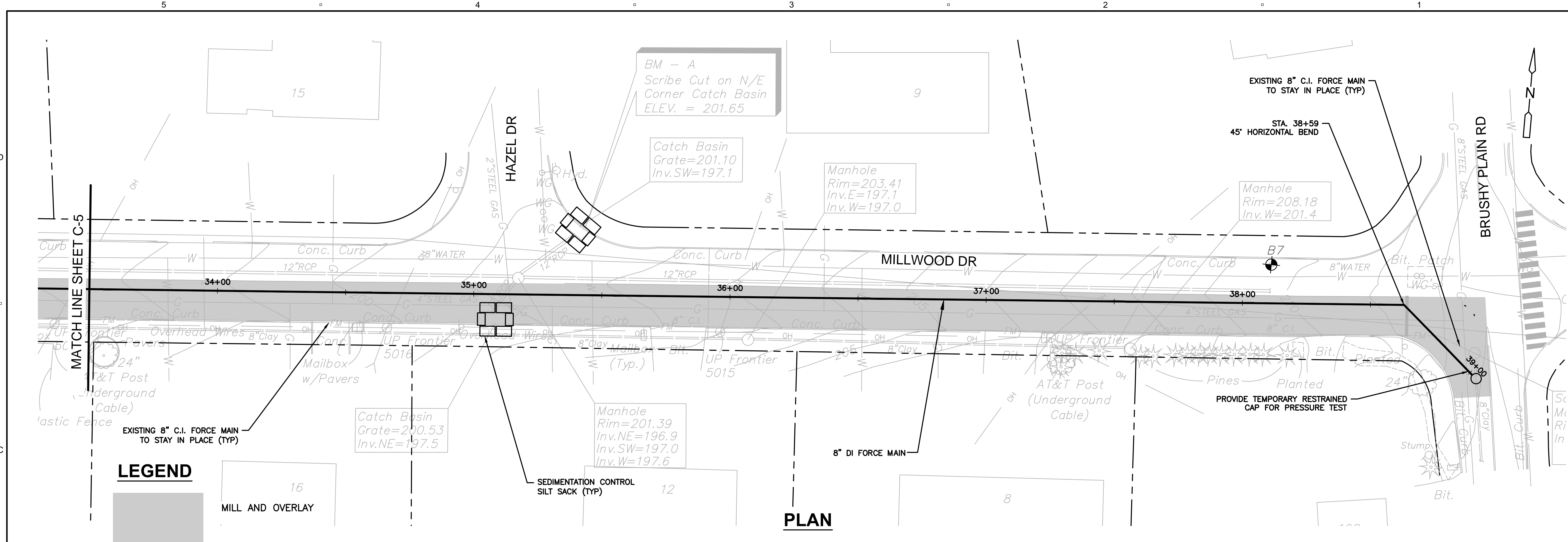
CIVIL

SHEET TITLE

**MILLWOOD DRIVE
 PLAN AND PROFILE
 STA 28+00 TO 33+50
 SHEET NUMBER**

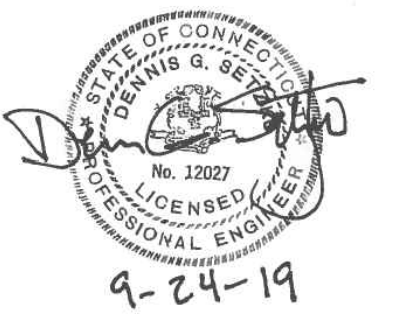
C-5





- NOTES:**
- DATA FROM GEOTECHNICAL DATA REPORT IN PROJECT MANUAL.
 - PROVIDE PIPE DEFLECTION OF A MAXIMUM OF 3' TO ACHIEVE HORIZONTAL AND VERTICAL ALIGNMENTS.
 - ALL PIPE JOINTS AND FITTINGS SHALL BE RESTRAINED JOINTS.
 - ALL PIPE SHALL BE DUCTILE IRON CLASS 54, DOUBLE CEMENT LINED AND POLY WRAPPED UNLESS OTHERWISE NOTED.
 - ALL SANITARY LATERALS ARE LOCATED APPROXIMATELY IN PLAN AND PROFILE. CONTRACTOR TO PROVIDE TEST PIT DATA TO VERIFY LOCATION AND DEPTH AT EXISTING LATERALS.
 - PROVIDE EROSION CONTROL MEASURES AS PER 2002 CONNECTICUT GUIDELINES FOR SOIL EROSION AND SEDIMENTATION CONTROL.
 - PROVIDE SILT SACK OR HAY BALE BARRIER AT EACH NEAREST CATCH BASIN IN ALL DIRECTIONS.
 - FORCE MAIN SHALL HAVE CONTINUOUS UPWARD SLOPE FROM STA. 33+50 TO STA. 39+00.

REGISTRATION



ISSUE/REVISION

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Drawn By: **C. HALLORAN**

Dept Check: **P. SAMMIS**

Proj Check: **D. SETZKO**

Date: **SEPTEMBER 2019**

Scale: **1" = 20'**

DISCIPLINE

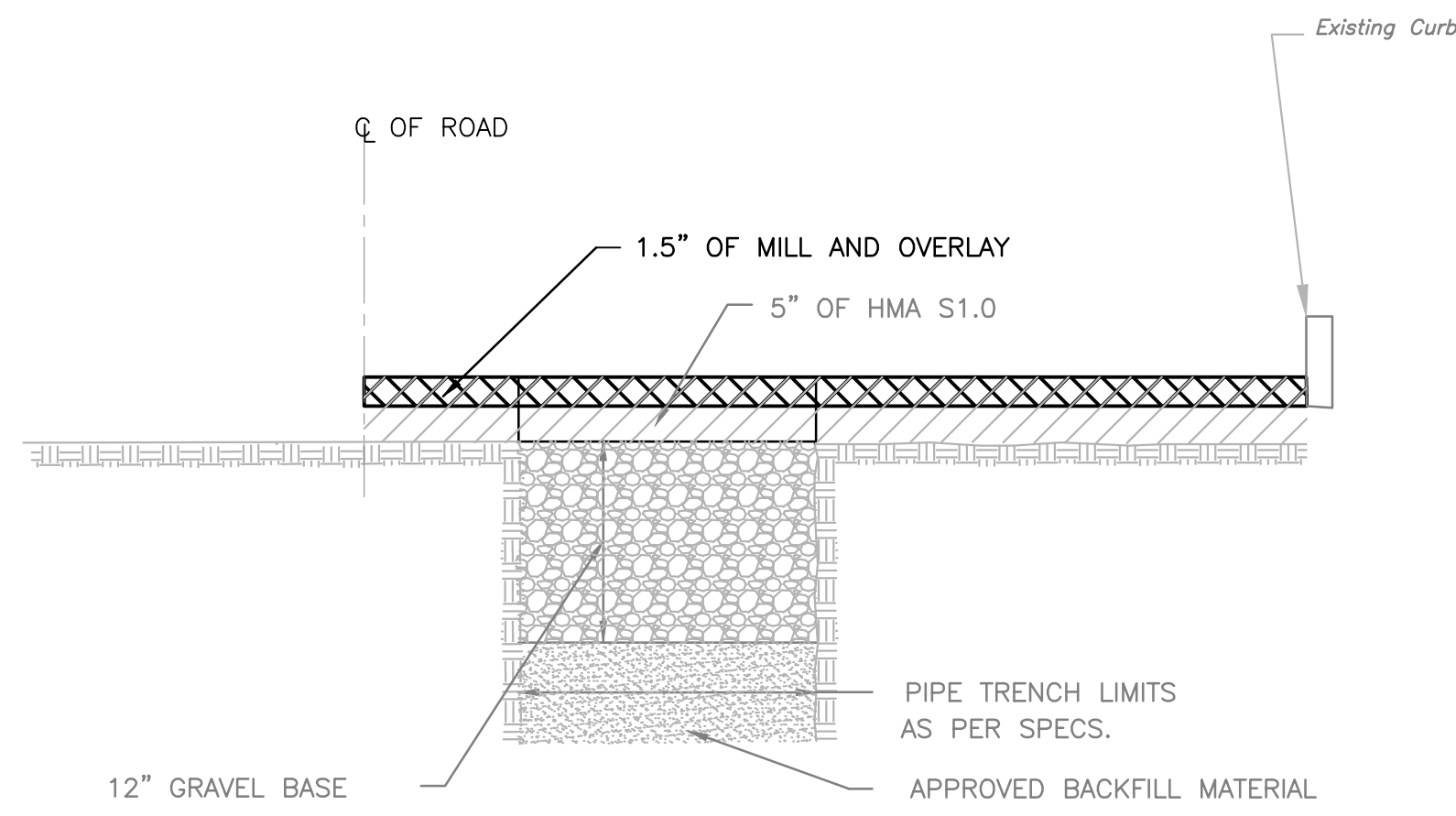
CIVIL

SHEET TITLE

**MILLWOOD DRIVE
 PLAN AND PROFILE
 STA 33+50 TO 39+15**

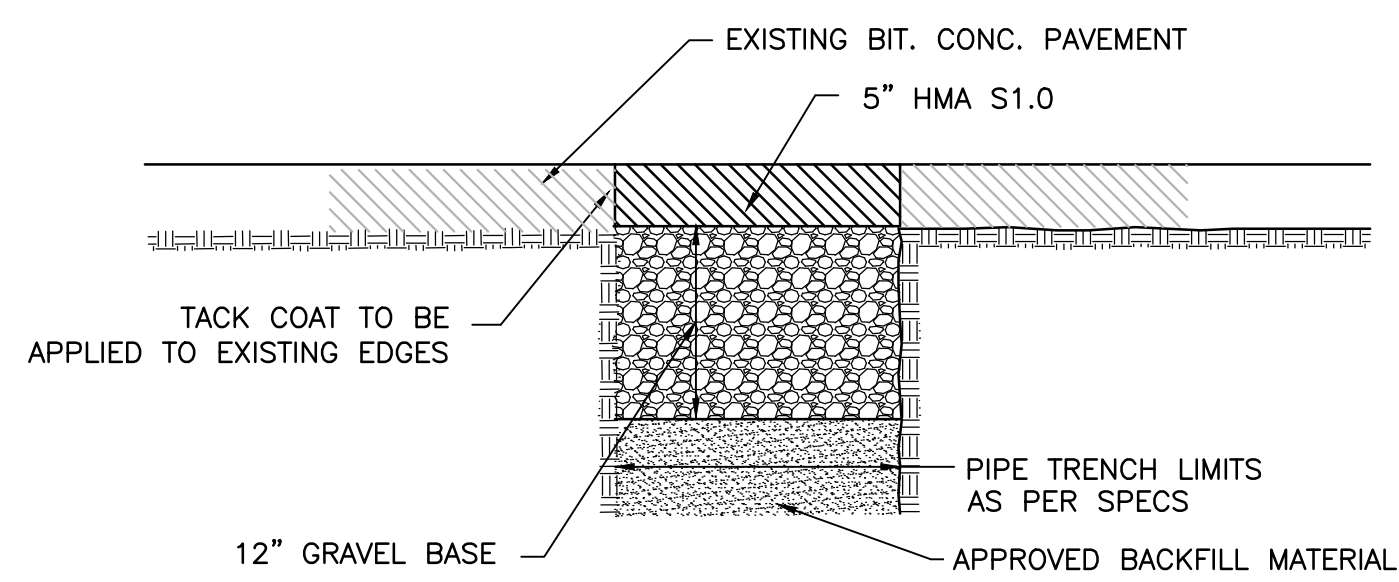
SHEET NUMBER

C-6

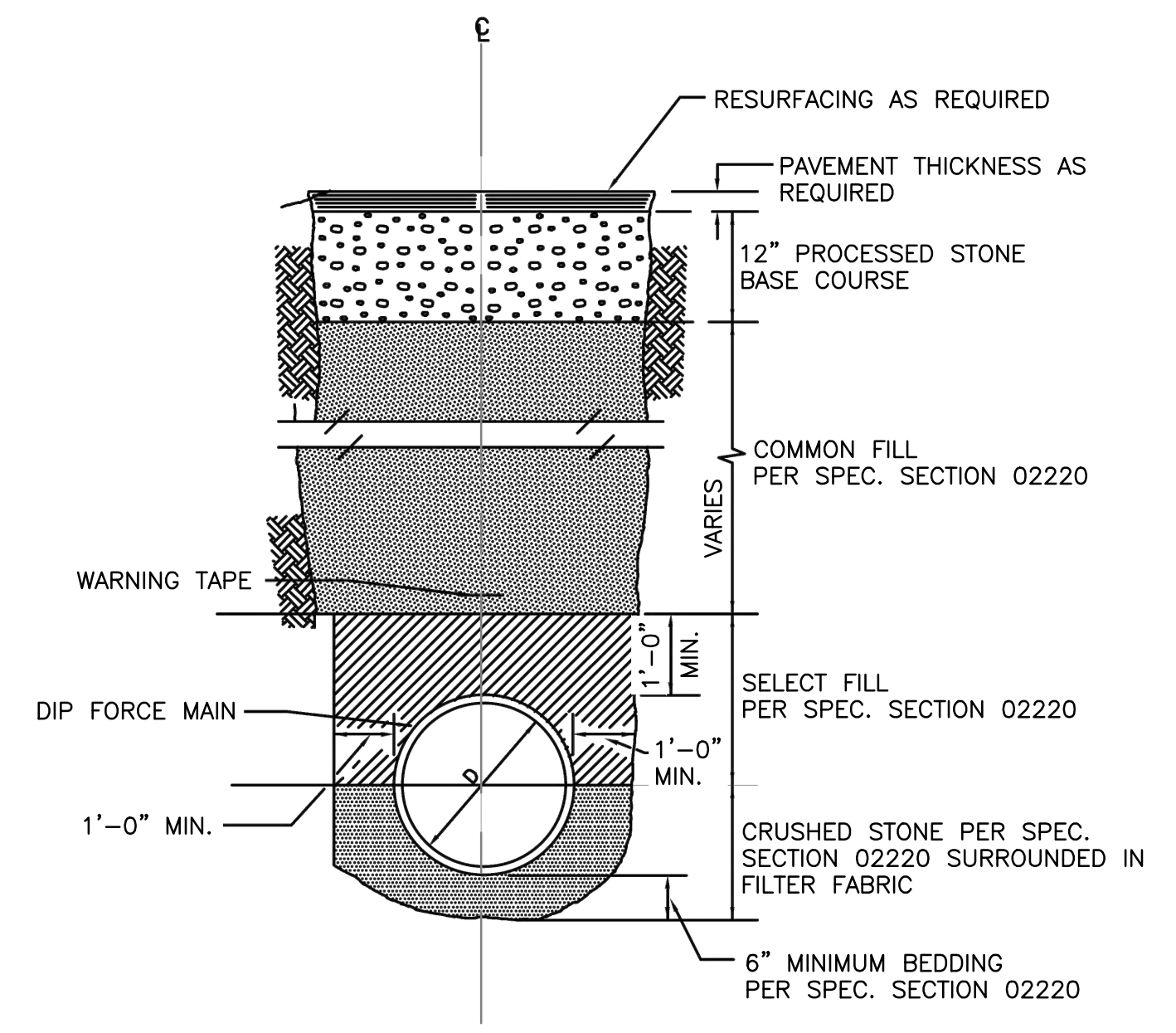


PERMANENT PAVEMENT REPAIR
NTS

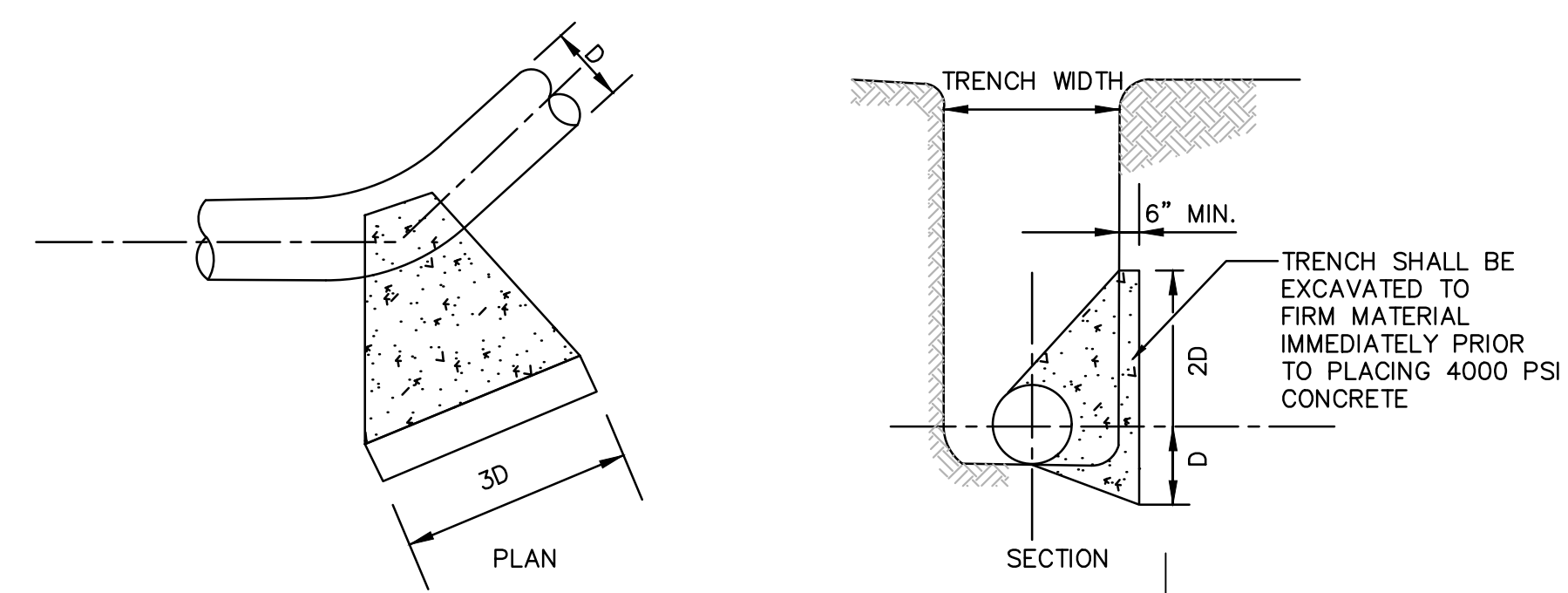
- NOTES:**
- CONTRACTOR TO FINISH PAVEMENT MARKINGS TO MATCH EXISTING CONDITIONS.



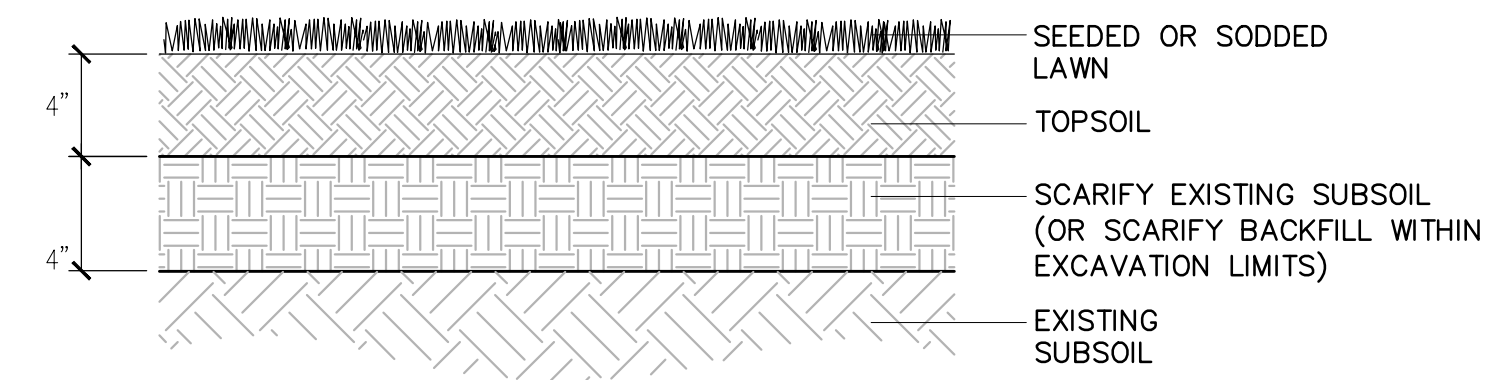
TEMPORARY PAVEMENT REPAIR DETAIL
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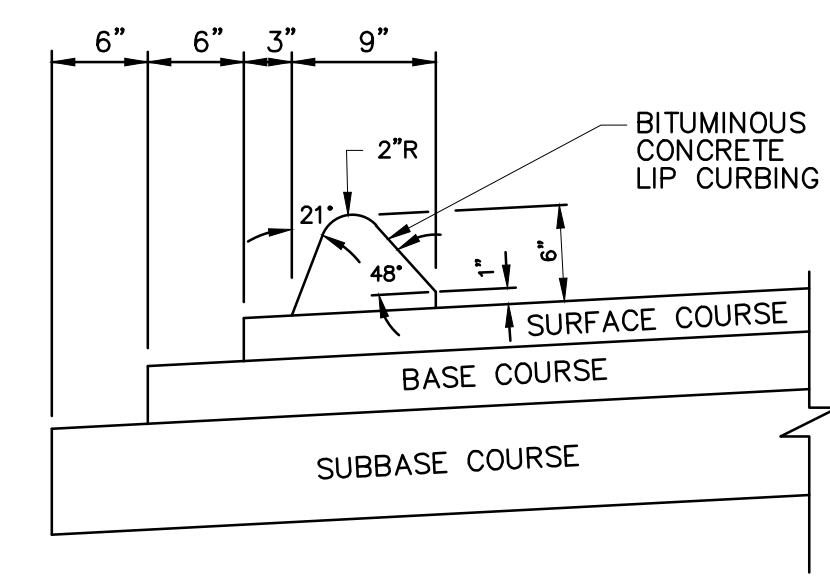
TYPICAL TRENCH SECTION
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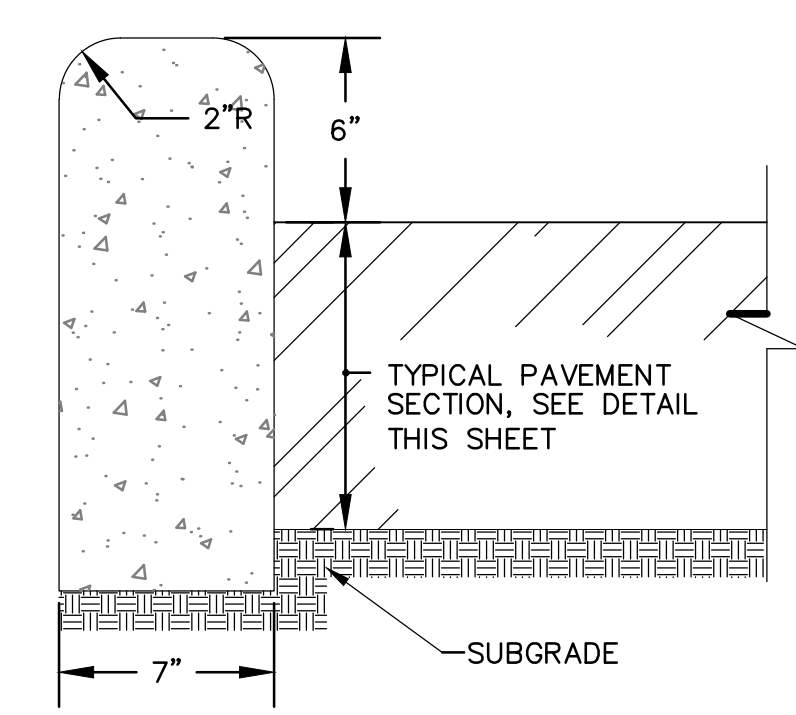
THRUST BLOCK DETAIL
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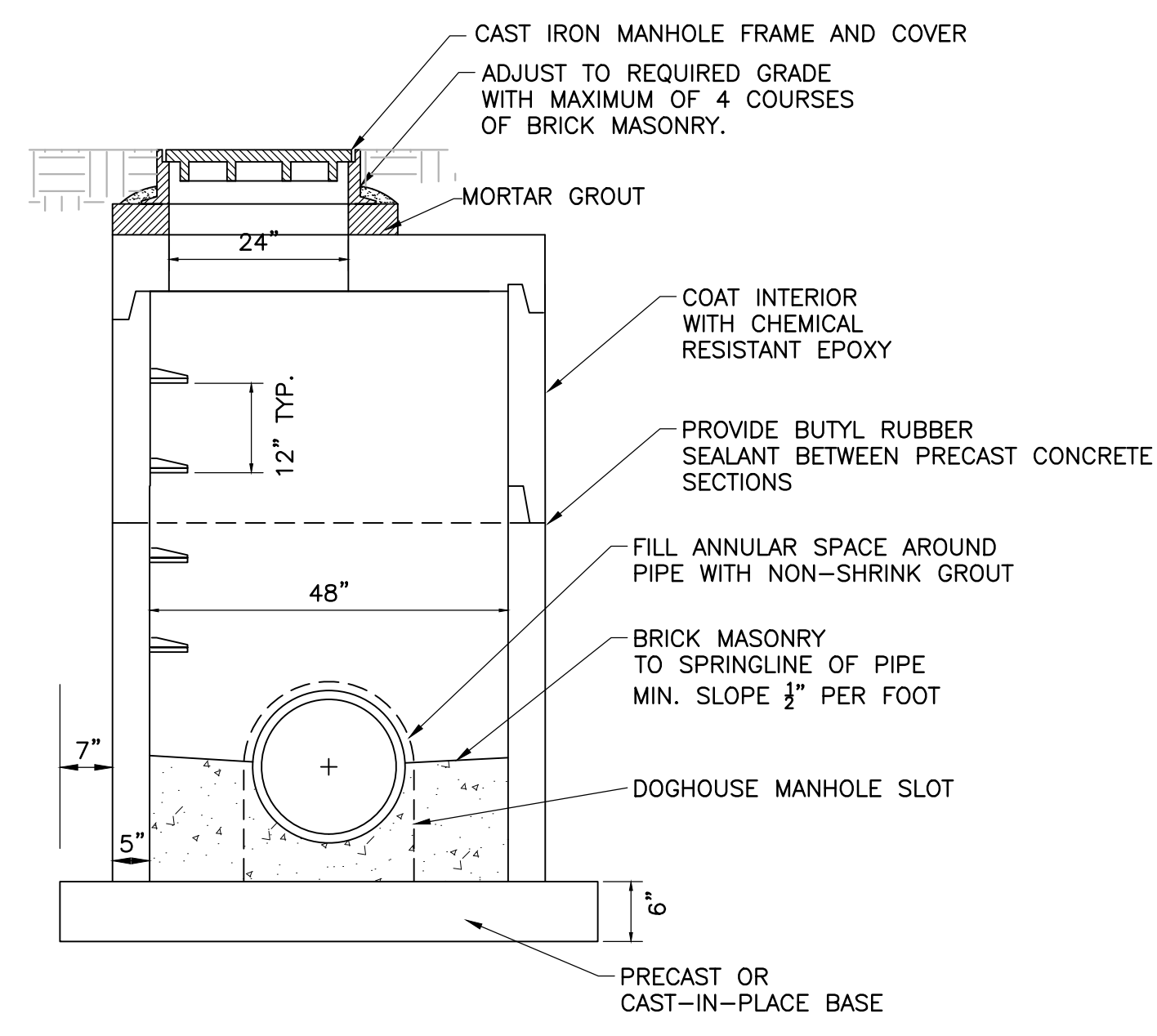
TURF ESTABLISHMENT
NTS



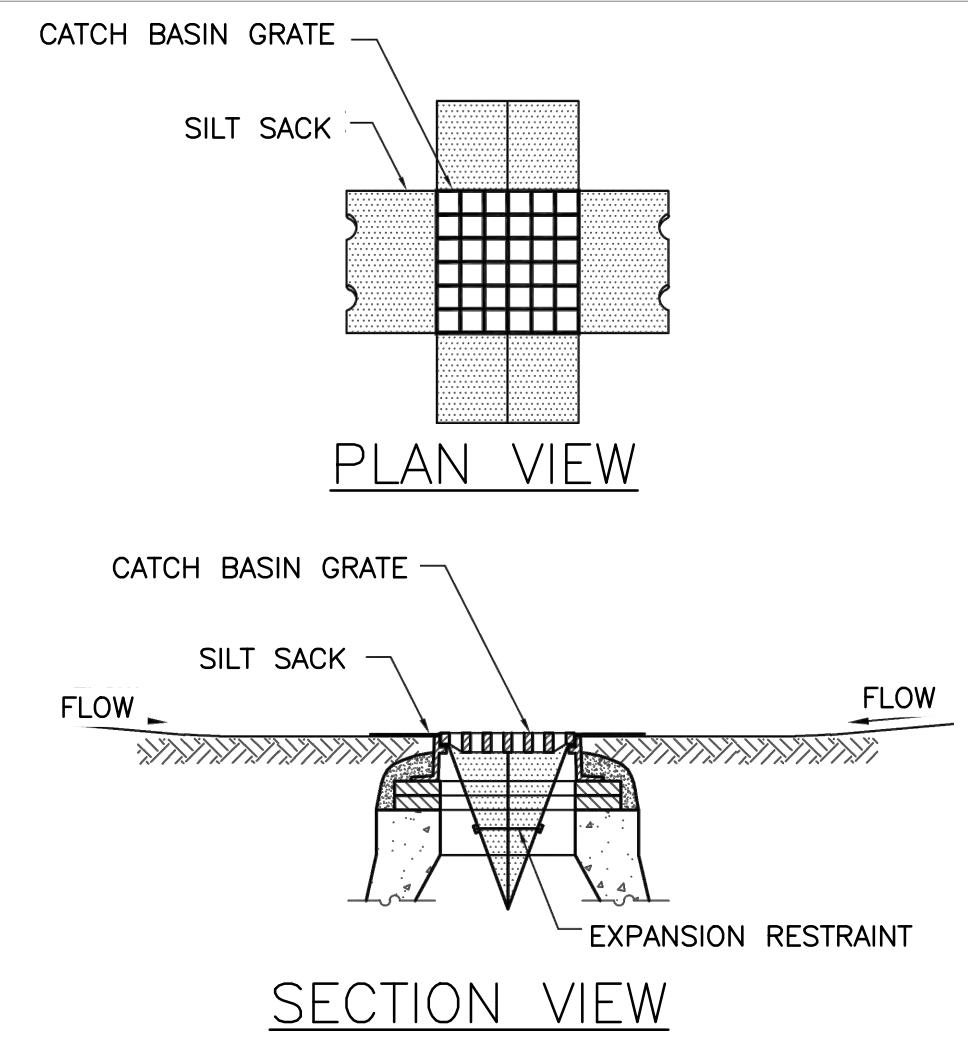
BITUMINOUS CONCRETE CURB
NTS



6" CONCRETE CURB DETAIL
NTS



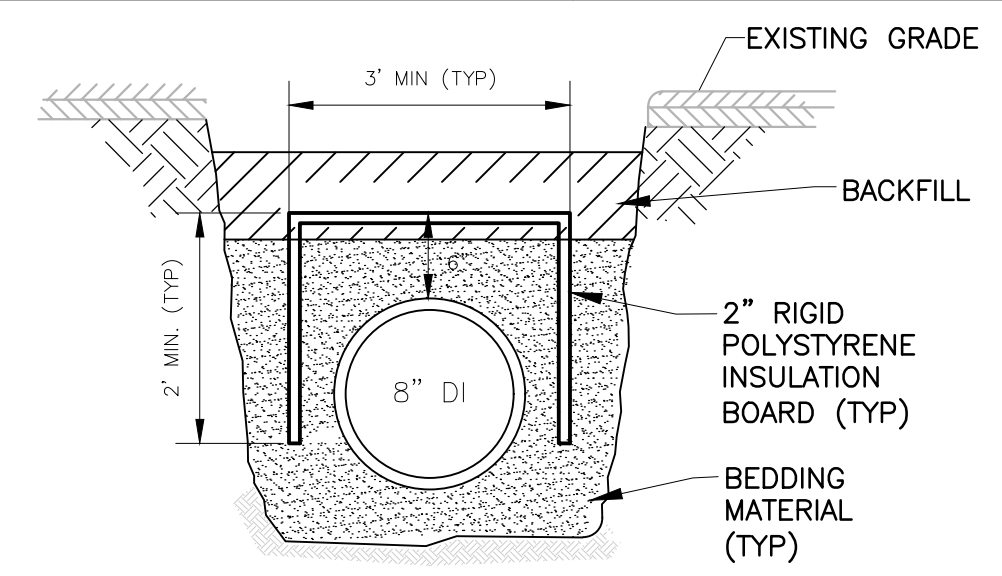
PRECAST DOGHOUSE MANHOLE
NTS



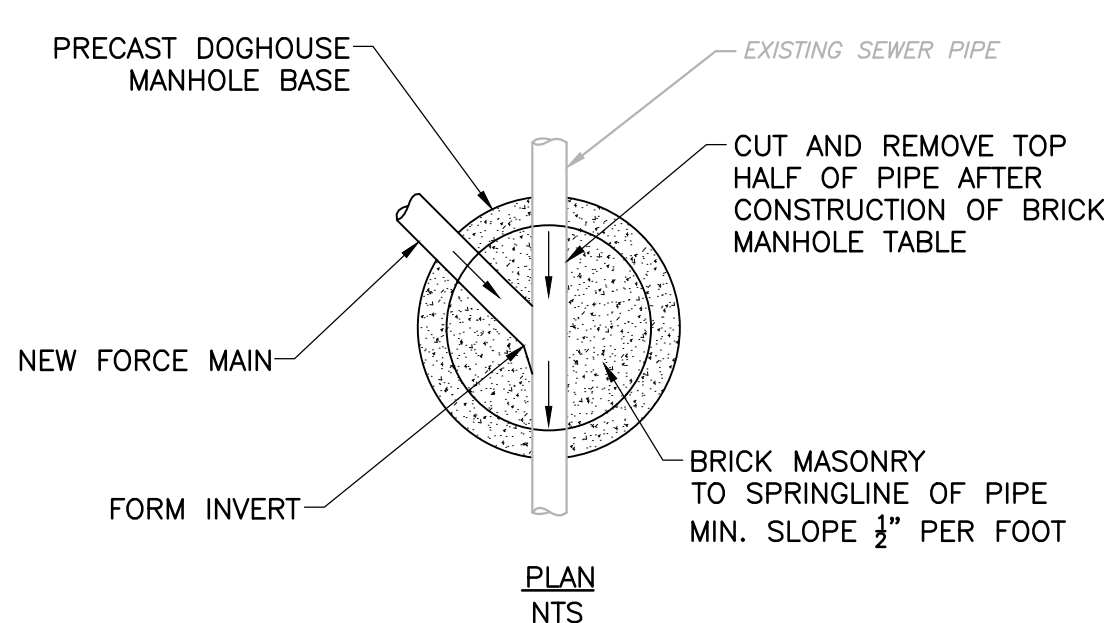
SILT SACK SEDIMENT TRAP DETAIL
NTS

PROPOSED CONSTRUCTION SEQUENCE

- OBTAIN REQUIRED PERMITS
- PROVIDE REQUIRED TRAFFIC MANAGEMENT.
- INSTALL REQUIRED EROSION CONTROL MEASURES.
- PERFORM TEST PITS AND PROVIDE REQUIRED INFORMATION TO THE ENGINEER. ENGINEER SHALL ADJUST PLAN/PROFILE AS REQUIRED BASED ON THE TEST PIT INFORMATION.
- CONSTRUCT PROPOSED 8" DI FORCE MAIN FROM STA 10+05 TO STA 39+00±.
- DURING LOW FLOW CONDITIONS SHUT DOWN THE EXISTING PUMP STATION AND DEWATER EXISTING FORCE MAIN. PROVIDE DEWATERING OF THE EXISTING PUMP STATION WET WELL UNTIL PUMPING OPERATIONS ARE RESTORED. SEE REQUIREMENTS OF SECTION 02060.
- CONSTRUCT THRUST BLOCK ON PROPOSED 8" FORCE MAIN AS SHOWN ON PLAN AND DETAIL SHEETS. PROVIDE CONNECTION AT STATION 10+05± WITH 45° BEND. ALLOW SUFFICIENT TIME FOR THRUST BLOCK CONCRETE TO REACH MINIMUM COMPRESSIVE STRENGTH BEFORE TESTING.
- TEST PROPOSED FORCE MAIN AND RESTORE PUMPING OPERATIONS.



FORCE MAIN INSULATION
NTS



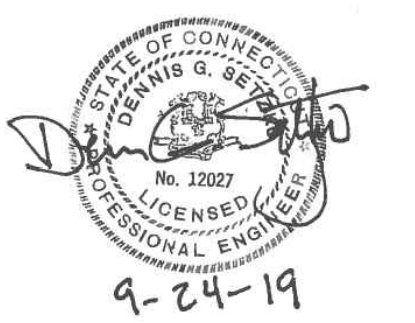
PRECAST DOGHOUSE MANHOLE
NTS

PROJECT
HEMLOCK PUMPING STATION FORCE MAIN REPLACEMENT
 Hemlock Road
 Branford, CT 06405

CLIENT
TOWN OF BRANFORD
 1019 Main Street
 Branford, CT 06405
 203.315.0606 tel 203.315.2188 fax
 www.branford-ct.gov

CONSULTANT
 AECOM Technical Services, Inc.
 500 Enterprise Drive, Suite 1A
 Rocky Hill, CT 06067-3913
 860.263.5800 tel 860.263.5777 fax
 www.aecom.com

REGISTRATION



ISSUE/REVISION

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Designed By: **C. HALLORAN**

Drawn By: **C. HALLORAN**

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Proj Check: **D. SETZKO**

Date: **SEPTEMBER 2019**

Scale: **NTS**

DISCIPLINE

CIVIL

SHEET TITLE

DETAILS

SHEET NUMBER

D-1