

CONSTRUCTION PLANS

FALCON MEADOW RV CAMPGROUND

OUTFALL LIFT STATION

A PORTION OF THE SOUTHWEST QUARTER OF SECTION 12 AND THE NORTHWEST QUARTER OF SECTION 13, TOWNSHIP 13 SOUTH, RANGE 65 WEST OF THE 6TH P.M.

EL PASO COUNTY, COLORADO

48 hours before you dig, CALL UTILITY NOTIFICATION CENTER OF COLORADO (UNCC) **811** Gas, Electric, Telephone, CATV and Panhandle Eastern Pipeline Locations

ELEMENTENGINEERING LLC



12687 W. CEDAR DRIVE, SUITE 300
LAKEWOOD, CO 80226

720.749.4165
WWW.ELEMENTENGINEERING.NET

PREPARED FOR

FALCON MEADOW RV CAMPGROUND
DAVID OZBURN, OWNER
719.421.0604
11150 HWY 24
PEYTON, CO 80831

ENGINEERING

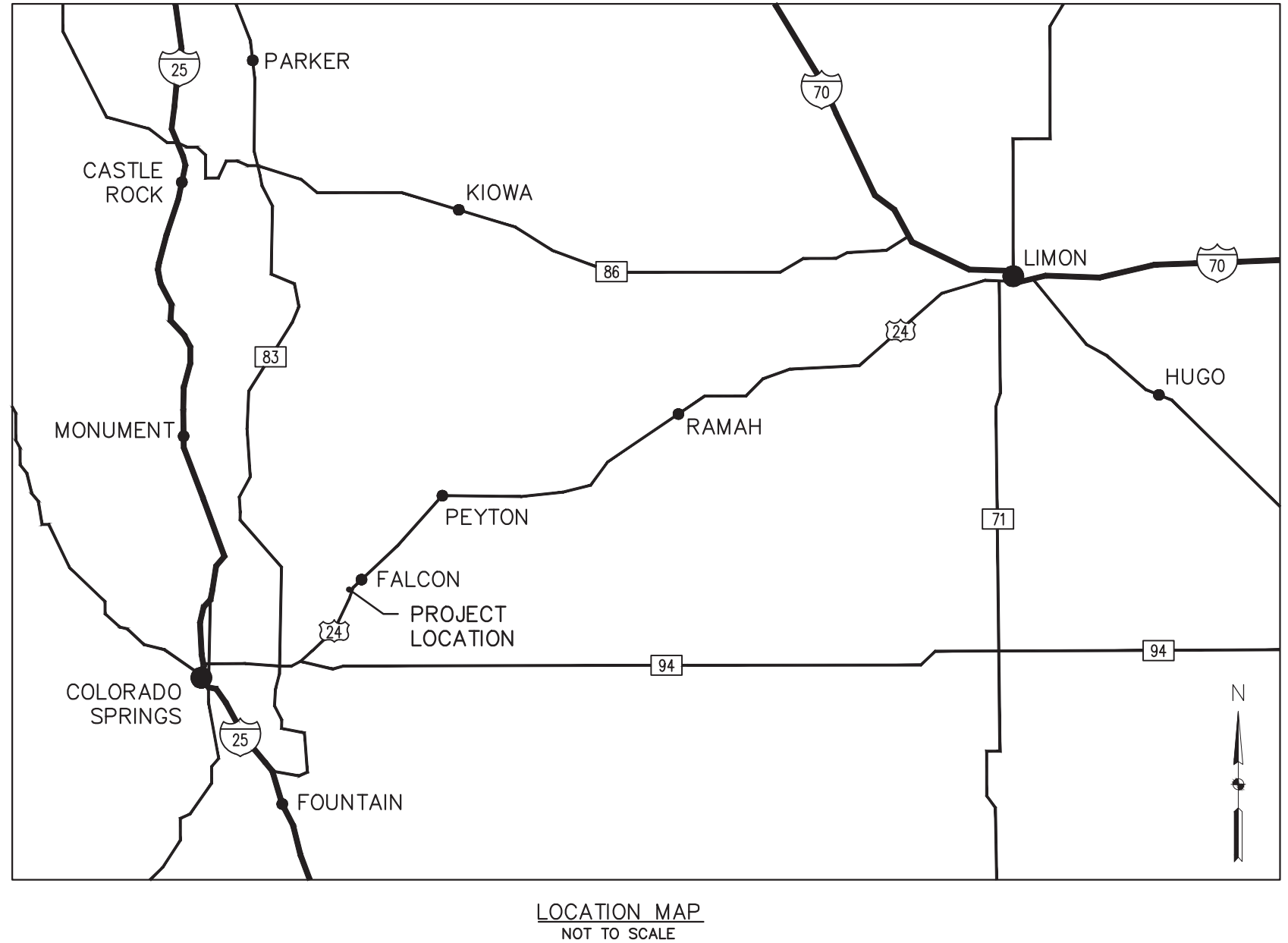
ELEMENT ENGINEERING, LLC
ALICE M. ARSENAULT, P.E. #53350
12687 W. CEDAR DRIVE, SUITE 300
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303.981.0453

WOODMEN HILLS METROPOLITAN DISTRICT

JERRY JACOBSON, GENERAL MANAGER
DANNY EVERETT, CHIEF INSPECTOR
8046 EASTONVILLE ROAD
FALCON, CO 80831
719.495.2500

SHEET INDEX

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James C. Ozburn 1-9-20
FALCON MEADOW RV CAMPGROUND OWNER DATE

THESE PLANS HAVE BEEN APPROVED BY THE FALCON MEADOW RV CAMPGROUND. A CAMPGROUND REPRESENTATIVE WILL OBSERVE THE WORK FOR COMPLIANCE WITH THE APPROVED PLANS, BUT DOES NOT GUARANTEE THE CONTRACTOR'S PERFORMANCE. THE CONTRACTOR IS RESPONSIBLE FOR CONSTRUCTION OF THE FACILITIES IN ACCORDANCE WITH THE APPROVED PLANS AND WITH APPLICABLE RULES AND REGULATIONS. WORK NOT PERFORMED IN ACCORDANCE WITH THE APPROVED PLANS WILL NOT BE ACCEPTED. ACCEPTANCE OF THE WORK DOES NOT RELIEVE THE CONTRACTOR OF THEIR OBLIGATIONS UNDER APPLICABLE WARRANTIES.

THE WOODMEN HILLS METROPOLITAN DISTRICT RECOGNIZES THE DESIGN ENGINEER AS HAVING RESPONSIBILITY FOR THE DESIGN AND HAS LIMITED ITS SCOPE OF REVIEW ACCORDINGLY.

WOODMEN HILLS METROPOLITAN DISTRICT
WASTEWATER DESIGN APPROVAL
DATE: *1/19/2020* BY: *Jerry Jacobson*
PROJECT NO. _____

IN CASE OF ERRORS OR OMISSIONS WITH THE WATER DESIGN AS SHOWN ON THIS DOCUMENT THE STANDARDS AS DEFINED IN THE "RULES AND REGULATIONS FOR INSTALLATION OF WASTEWATER MAINS AND SERVICES" SHALL RULE.

APPROVAL EXPIRES 180 DAYS FROM DESIGN APPROVAL.

ONSITE BENCHMARK INFORMATION
CONTROL POINT #100, SET NO. 4 REBAR AS SHOWN HEREON.
NORTHING (Y) 29961.01, EASTING (X) 20058.38, ELEVATION (Z) 6826.05, NAVD 88 (BASED ON NGS MONUMENT E24 WITH AN ELEVATION 6902.30 NAVD 88).

REVISIONS		DATE	BY
DESCRIPTION			
1	MODIFY TO TWO PUMPS	5/19	AA
2	ADD EROSION CONTROL SITE PLAN	7/19	AA
LIFT STATION - CONSOLIDATION			
COVER SHEET			
FALCON MEADOW RV CAMPGROUND 11150 HWY 24 PEYTON, CO 80831			
PREPARED UNDER THE DIRECT SUPERVISION OF			
FOR AND ON BEHALF OF ELEMENT ENGINEERING, LLC			
DATE		MARCH 2019	
JOB NUMBER		0055.0001	
SCALE		AS SHOWN	
DRAWING NAME		COVER	
SHEET		1 OF 9	

WOODMEN HILLS METROPOLITAN DISTRICT GENERAL NOTES

1.

ALL UTILITY CONSTRUCTION TO BE CONDUCTED IN CONFORMANCE WITH THE CURRENT WOODMEN HILLS METROPOLITAN DISTRICT (WHMD, THE DISTRICT) SPECIFICATIONS.
2.

ALL PLANS ON THE JOB SITE SHALL BE SIGNED BY THE DISTRICT AND THE DISTRICT'S ENGINEER. ANY REVISIONS TO THE PLANS SHALL BE SO NOTED WITH THE OLD DRAWING MARKED NOT VALID.
3.

ALL STATIONING IS CENTER LINE UNLESS OTHERWISE NOTED. ALL ELEVATIONS ARE CENTER LINE UNLESS OTHERWISE NOTED.
4.

ALL MATERIALS AND WORKMANSHIP SHALL BE SUBJECT TO INSPECTION BY THE DISTRICT. THE DISTRICT RESERVES THE RIGHT TO ACCEPT OR REJECT ANY SUCH MATERIALS AND WORKMANSHIP THAT DOES NOT CONFORM TO ITS STANDARDS AND SPECIFICATIONS.
5.

ALL WATER AND SEWER SERVICE LOCATIONS SHALL BE CLEARLY MARKED ON EITHER THE CURB HEAD OR THE FACE OF THE CURB, WITH AN "S" FOR SEWER AND A "W" FOR WATER.
6.

DUCTILE IRON PIPES, INCLUDING FITTINGS, VALVES, AND FIRE HYDRANTS, SHALL BE WRAPPED WITH POLYETHYLENE TUBING, DOUBLE BONDED AT EACH JOINT, AND ELECTRICALLY ISOLATED. BONDING AND ANODE CONNECTIONS SHALL BE THOROUGHLY COATED WITH BITUMINOUS COATINGS.
7.

ALL DUCTILE IRON PIPE LESS THAN 12 INCHES AND FITTINGS SHALL HAVE CATHODIC PROTECTION USING TWO NO. 6 WRES WITH 17 LB. MAGNESIUM ANODES EVERY 400 FEET AND 9 LB. MAGNESIUM ANODES AT EACH FITTING. ALL DUCTILE IRON PIPE 12 INCHES AND GREATER AND FITTINGS SHALL HAVE CATHODIC PROTECTION USING TWO NO. 6 WRES WITH 17 LB. MAGNESIUM ANODES EVERY 300 FEET AND 9 LB. MAGNESIUM ANODES AT EACH FITTING.
8.

ALL PIPE MATERIAL, BACKFILL, AND INSTALLATION SHALL CONFORM TO THE APPLICABLE SPECIFICATIONS OF THE CITY OF COLORADO SPRINGS, COLORADO DEPARTMENT OF TRANSPORTATION, EL PASO COUNTY DEPARTMENT OF TRANSPORTATION, COLORADO SPRINGS UTILITIES, AND THE GEOTECHNICAL ENGINEER.
9.

COMPACTION TESTS SHALL BE 95% STANDARD PROCTOR AS DETERMINED BY ASTM D698, UNLESS OTHERWISE APPROVED BY THE DISTRICT OR HIGHER STANDARD AS IMPOSED BY ANOTHER AGENCIES HAVING RIGHT-OF-WAY JURISDICTION. THIS SHALL INCLUDE ALL VALVES, FIRE HYDRANT RUNS, WATER & SEWER SERVICE LINES, AND MANHOLES. ALL REPORTS SHALL BE SUBMITTED TO THE DISTRICT FOR REVIEW AND APPROVAL.
10.

THE LOCATION OF ALL EXISTING UTILITIES SHOWN ON THE DRAWINGS ARE APPROXIMATE ONLY. THE LOCATION OF ALL UTILITIES SHALL BE FIELD VERIFIED PRIOR TO COMMENCING CONSTRUCTION ACTIVITIES. THE DISTRICT SHALL BE NOTIFIED OF ANY DEVIATIONS TO THE LINE AND/OR GRADE AS DEPICTED ON THE PLANS. CONTRACTOR SHALL SUBMIT TO THE DISTRICT AND THE ENGINEER OF RECORD A REPORT OF THE FIELD VERIFIED INFORMATION PRIOR TO THE START OF CONSTRUCTION.
11.

ALL BENDS SHALL BE FIELD STAKED PRIOR TO THE START OF CONSTRUCTION.
12.

BENDS, DEFLECTION, AND CUT PIPE LENGTHS SHALL BE USED TO HOLD HORIZONTAL ALIGNMENT OF SEWER AND WATER LINES TO NO MORE THAN 0.5' FROM THE DESIGNED ALIGNMENT. CONSTRUCTION STAKES TO BE AT 25' INTERVALS ALONG CURVES TO ASSURE LOCATION OF PIPE LINE CONSTRUCTION.
13.

AT ALL LOCATION WHERE CAP AND STUB IS NOTED ON DRAWINGS, PROVIDE A PLUG AT THE END OF THE PIPE JOINT NEAREST THE SPECIFIED STATION. PROVIDE A REVERSE ANCHOR AT ALL WATER LINE PLUGS.
14.

ALL UNUSED SALVAGED WATER UTILITY MATERIAL SHALL BE RETURNED TO THE METROPOLITAN DISTRICT AS REQUESTED.
15.

AT THE CONTRACTOR'S EXPENSE, ALL UTILITY MAINS SHALL BE SUPPORTED AND PROTECTED SUCH THAT THEY SHALL FUNCTION CONTINUOUSLY DURING CONSTRUCTION OPERATIONS. SHOULD A UTILITY MAIN FAIL AS A RESULT OF THE CONTRACTOR'S OPERATION, IT SHALL BE REPLACED IMMEDIATELY BY THE CONTRACTOR OR BY THE DISTRICT AT FULL COST OF LABOR AND MATERIALS TO THE CONTRACTOR/DEVELOPER.
16.

PUMPING OR BYPASS OPERATIONS SHALL BE REVIEWED AND APPROVED BY BOTH THE DISTRICT AND THE DISTRICT ENGINEER PRIOR TO EXECUTION.
17.

THE CONTRACTOR SHALL REPLACE OR REPAIR DAMAGE TO ALL SURFACE IMPROVEMENTS, INCLUDING BUT NOT LIMITED TO FENCES, LANDSCAPING, CURB AND GUTTER, AND/OR ASPHALT THAT MAY BE CAUSED DURING CONSTRUCTION.
18.

ALL CONTRACTORS WORKING ON OR NEAR A WATER OR SEWER FACILITY (TO INCLUDE SERVICE LINES) SHALL HAVE LIABILITY INSURANCE NAMING THE DISTRICT AS AN ADDITIONAL INSURED AND SHALL PROVIDE A CURRENT COPY OF WORKERS COMPENSATION INSURANCE ON FILE WITH THE DISTRICT. NO WORK CAN PROCEED WITHOUT CURRENT CERTIFICATES ON FILE AT THE DISTRICTS' OFFICE.
19.

THE CONTRACTOR SHALL NOTIFY THE DISTRICT AND ALL AFFECTED UTILITY COMPANIES ADJACENT TO THE PROPOSED UTILITY CONSTRUCTION A MINIMUM OF 48 HOURS AND A MAXIMUM OF 96 HOURS PRIOR TO THE START OF CONSTRUCTION. A WEEKLY CONSTRUCTION MEETING SHALL BE REQUIRED WITH THE CONTRACTOR, DISTRICT ENGINEER, AND ALL OTHER PARTIES AS DEEMED NECESSARY BY THE DISTRICT.
20.

COMMENCEMENT OF CONSTRUCTION OF WATER/SEWER SYSTEMS WITHIN METROPOLITAN DISTRICT:

20.1.

PRIOR TO THE START OF CONSTRUCTION, A PRE-CONSTRUCTION MEETING IS REQUIRED A MINIMUM OF 48 HOURS IN ADVANCE OF COMMENCEMENT OF WORK. A REPRESENTATIVE OF THE OWNER OR DEVELOPER, A REPRESENTATIVE OF THE CONTRACTOR AND DESIGN ENGINEER ARE REQUIRED TO ATTEND. CONTACT THE DISTRICT TO SCHEDULE THE PRE-CONSTRUCTION MEETING. NO PRE-CONSTRUCTION MEETING CAN BE SCHEDULED PRIOR TO FOUR (4) SIGNED/APPROVED PLAN SETS ARE RECEIVED BY THE DISTRICT.

20.2.

THE CONTRACTOR IS REQUIRED TO NOTIFY THE DISTRICT A MINIMUM OF 48 HOURS AND A MAXIMUM OF 2 WEEKS PRIOR TO THE START OF CONSTRUCTION. THE CONTRACTOR SHALL ALSO NOTIFY AFFECTED UTILITY COMPANIES AT LEAST 48 HOURS PRIOR TO THE START OF CONSTRUCTION ADJACENT TO THE KNOWN UTILITY LINES.
21.

TESTING OF FACILITIES:

21.1.

THE CONTRACTOR SHALL NOTIFY THE DISTRICT A MINIMUM OF 48 HOURS AND A MAXIMUM OF 96 HOURS PRIOR TO THE START OF ANY TESTING.

21.2.

ALL SECTIONS OF WATER LINE ARE TO MEET THE FOLLOWING PRESSURE TESTING REQUIREMENTS:

21.2.1.

TEST 100% OF ALL LINES

21.2.2.

MUST PASS PRESSURE TEST TO 200 PSI FOR TWO HOURS (UNLESS OTHERWISE APPROVED ON THE PLANS)

21.3.

ALL SANITARY SEWER FACILITIES ARE TO MEET THE FOLLOWING TESTING REQUIREMENTS:

21.3.1.

ALL LINES SHALL BE JET CLEANED PRIOR TO VACUUM OR PRESSURE TESTING

21.3.2.

ALL MANHOLES SHALL BE VACUUM TESTED WITH DISTRICT STAFF PRESENT PRIOR TO CCTV INSPECTION

21.3.3.

SEWER MAINS TO BE PRESSURE TESTED PRIOR TO CCTV INSPECTION

21.3.4.

ALL LINES SHALL BE CCTV INSPECTED AND VIDEO SHALL BE SUBMITTED TO THE DISTRICT FOR REVIEW AND APPROVAL.

22.

PRELIMINARY ACCEPTANCE SHALL BE DEFINED AS THE POINT IN TIME THAT THE DISTRICT ACCEPTS THE FACILITY FOR USE. ALL SURFACE IMPROVEMENTS AND RESTORATION SHALL BE COMPLETED WITHIN 30 DAYS OF COMMENCEMENT. SHOULD THE CONTRACTOR FAIL TO COMPLETE ALL SURFACE IMPROVEMENTS AND RESTORATION WITHIN 30 DAYS OF COMMENCEMENT OF SERVICE, THE DISTRICT, AT THEIR DISCRETION, MAY ELECT TO COMPLETE THE IMPROVEMENTS AT THE CONTRACTOR'S COST.

23.

FINAL ACCEPTANCE BY THE DISTRICT OF ANY LINE OR SYSTEM SHALL NOT OCCUR UNTIL COMPLETION OF FINAL ASPHALT LAYERS AND/OR FINAL COMPLETION AND/OR RESTORATION OF ALL SURFACE IMPROVEMENTS. THE WARRANTY PERIOD FOR ALL FACILITIES PRIOR TO FINAL ACCEPTANCE SHALL BE 24 MONTHS COMMENCING AFTER PRELIMINARY ACCEPTANCE.

24.

ACCEPTANCE

24.1.

THE DISTRICT MAY GIVE PRELIMINARY ACCEPTANCE ONCE ALL OF THE TESTS ON ALL THE LINES HAVE BEEN COMPLETED AND A WALK-THRU HAS OCCURRED.

24.2.

A SECOND ACCEPTANCE MAY OCCUR ONCE FIRST LIFT OF ASPHALT GOES DOWN AND A SECOND WALK-THRU OF THE SYSTEM OCCURS. IF ALL FACILITIES ARE CLEAN AND ACCESSIBLE, A FINAL ACCEPTANCE MAY OCCUR (THE DISTRICT MAY REQUIRE CLEANING AND RE-VIDEO OF THE SYSTEM, DEPENDING ON THE SEVERITY OF THE CONTAMINATION).

25.

ALL WATER AND SEWER MAINS, INCLUDING SERVICE LINES, SHALL HAVE "AS-BUILT" DRAWINGS PREPARED AND APPROVED PRIOR TO PRELIMINARY ACCEPTANCE BY THE DISTRICT.

26.

ALL COMMERCIAL/BUSINESS DEVELOPMENTS SHALL HAVE AN EIGHT INCH (MIN.) WATER MAIN LOOPED THROUGH THE PROPOSED PROPERTY WITH GATE VALVES LOCATED WHERE THE MAIN ENTERS THE PROPERTY LINE. AN EIGHT INCH SEWER MAIN SHALL BE INSTALLED FOR SERVICE TO COMMERCIAL/BUSINESS DEVELOPMENTS, AND A MANHOLE SHALL BE LOCATED WHERE THE MAIN ENTERS THE PROPERTY. THE END OF THE MAINS SHALL BE MARKED WITH THE APPROPRIATE COLORED CARSONITE MARKER ALONG WITH TRACER WIRE.

27.

AFTER REVIEW AND APPROVAL OF PLANS FOR THE EXTENSION OF LINES, FACILITIES AND/OR SERVICES, CONSTRUCTION MUST BE COMMENCED WITHIN 18 MONTHS FOR RESIDENTIAL SUBDIVISIONS AND 12 MONTHS FOR ANY COMMERCIAL INSTALLATIONS.

28.

INSPECTION FEES: CALL THE DISTRICT (719-495-2500) FOR FEE SCHEDULE.

29.

SANITARY SEWER LENGTHS ARE MH CENTER TO MH CENTER. ALL SANITARY SEWER PIPES SHALL BE SDR 35 PVC OR EQUAL. SEWER LINES MAY NOT EXCEED 7% GRADE FOR ANY SIZE WITHOUT PRIOR APPROVAL OF THE DISTRICT. ALL NEWLY CONSTRUCTED RESIDENTIAL SANITARY SEWER TAPS SHALL USE PRE-MANUFACTURED IN-LINE PVC PUSH-ON WYES. TAPPING SADDLES MAY ONLY BE USED FOR TAPPING PRE-EXISTING MAINS.

30.

ALL SANITARY SEWER MANHOLES SHALL BE WRAPPED WITH RU116-RUBR-NEK JOINT WRAP OR EQUIVALENT AND COATED.

31.

COMMENCEMENT OF USE OF SEWER LINES AND/OR SYSTEMS:

31.1.

NO SANITARY SEWER FACILITY SHALL BE PLACED IN SERVICE UNTIL THE COMPLETION OF ALL JET CLEANING, PRESSURE TESTING, VACUUM TESTING, CCTV INSPECTION, COMPACTION TESTING, AND AS-BUILT DRAWINGS ARE SUBMITTED AND APPROVED BY THE DISTRICT.

31.2.

NO SANITARY SEWER FACILITY SHALL BE PLACED IN SERVICE UNTIL ALL SERVICE LINES ARE COMPLETED AND THE FIRST LIFT OF ASPHALT IS COMPLETED OVER THE LINE. IN THE CASE WHERE NO ASPHALT IS TO BE PLACED OVER THE LINE, ANY REQUIRED SURFACE IMPROVEMENTS SHALL BE COMPLETED PRIOR TO USE OF THE FACILITY.

31.3.

ALL NECESSARY EASEMENTS (PLATTED OR DEEDED) ARE DEDICATED, EXECUTED BY THE DISTRICT, AND RECORDED.

31.4.

DOWNSTEAM PLUG CAN BE REMOVED ONCE FIRST LIFT OF ASPHALT IS DOWN AND THE ABOVE REQUIREMENTS ARE MET.

ABBREVIATIONS			
ARVB	AIR RELIEF VACUMBREAKER VALVE	MH	MANHOLE
BEG	BELOW EXISTING GRADE	N	NORTH
BFV	BUTTERFLY VALVE	NE	NORTHEAST
CL	CENTERLINE	NW	NORTHWEST
CMP	CORRUGATED METAL PIPE	OH	OVERHEAD
DIA. OR Ø	DIAMETER	PVC	POLYVINYL CHLORIDE
E	EAST	RAD OR R	RADIUS
EA	EACH	RPP	REINFORCED POLYPROPYLENE
ELEC	ELECTRICAL LINE	S	SOUTH
EOA	EDGE OF ASPHALT	SE	SOUTHEAST
EXIST. OR EX.	EXISTING	SW	SOUTHWEST
INV	INVERT	T.O.P.	TOP OF PIPE
LP	LOW POINT	UON	UNLESS OTHERWISE NOTED
FM	FORCE MAIN		

CIVIL/ARCHITECTURAL/PROCESS SYMBOLS LIBRARY

SECTION NO.

A

CUT ON SHEET

SHOWN ON SHEET

CX

DETAIL

SECTION NO.

A1

TAKEN FROM SHEET

SCALE

C1

TAKEN FROM SHEET

EL = 6110.00

ELEVATION

NOTES:

1.

LENGTH OF EXTENSION OF PIPE AND RESTRAINED JOINTS SHALL BE IN ACCORDANCE WITH THESE ENGINEERING STANDARDS.

2.

CATHODIC PROTECTION SHALL BE AS REQUIRED IN ACCORDANCE WITH THESE ENGINEERING STANDARDS.

FORCE MAIN LOWERING DETAIL

INSIDE DROP DETAIL
APPROX. TO SCALE

METER VAULT DETAIL

NOTES:

1.

DIMENSIONS SHOWN ARE REQUIRED UPSTREAM AND DOWNSTREAM DIAMETERS OF STRAIGHT PIPE.

2.

DETAIL FOR SCHEMATIC PURPOSES ONLY, CONFIRM DIMENSIONS AND FITTINGS AS NECESSARY.

3.

INSTALL METER PER MANUFACTURER'S REQUIREMENTS.

4.

FLOW METER 18" MIN ABOVE MANHOLE FLOOR.

MANHOLE BASE

NOTE: PROPOSED MANHOLE MUST FOLLOW ALL WOODMEN HILLS METROPOLITAN DISTRICT DETAILS AND SPECIFICATIONS

ELEMENTENGINEERING LLC

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WWW.ELEMENTENGINEERING.NET

12687 W. CEDAR DRIVE, SUITE 300
LAKEWOOD, CO 80226

REVISEIONS	NO	DATE	BY	DESCRIPTION
	1	5/19	AA	MODIFY TO TWO PUMPS
	2	7/19	AA	ADD EROSION CONTROL SITE PLAN

LIFT STATION – CONSOLIDATION

GENERAL NOTES & PROPOSED MANHOLE DETAILS

FALCON MEADOW RV CAMPGROUND
11150 HWY 24
PEYTON, CO 80831

PREPARED UNDER THE DIRECT SUPERVISION OF

FOR AND ON BEHALF OF
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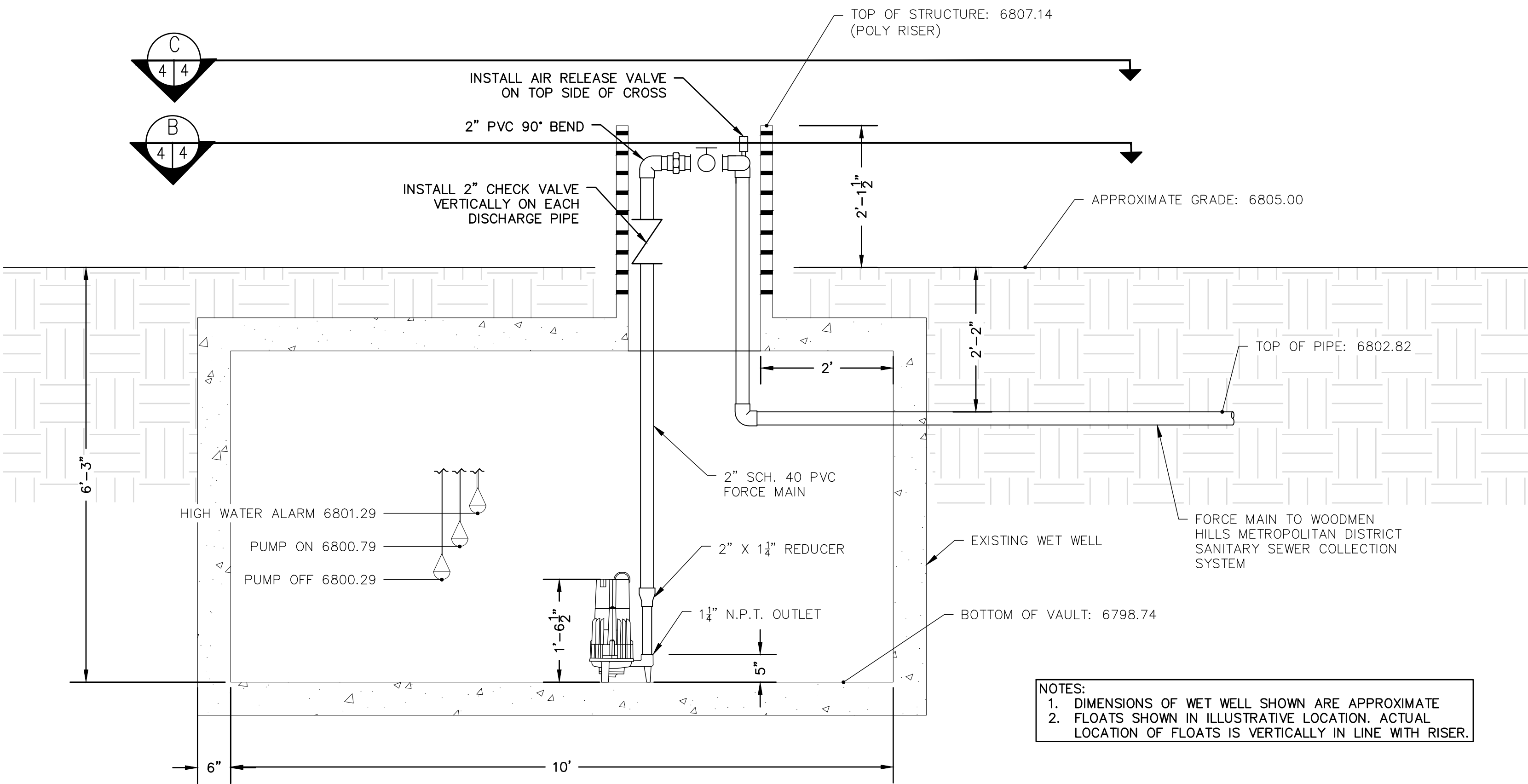
DATE
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JOB NUMBER
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SCALE
NTS

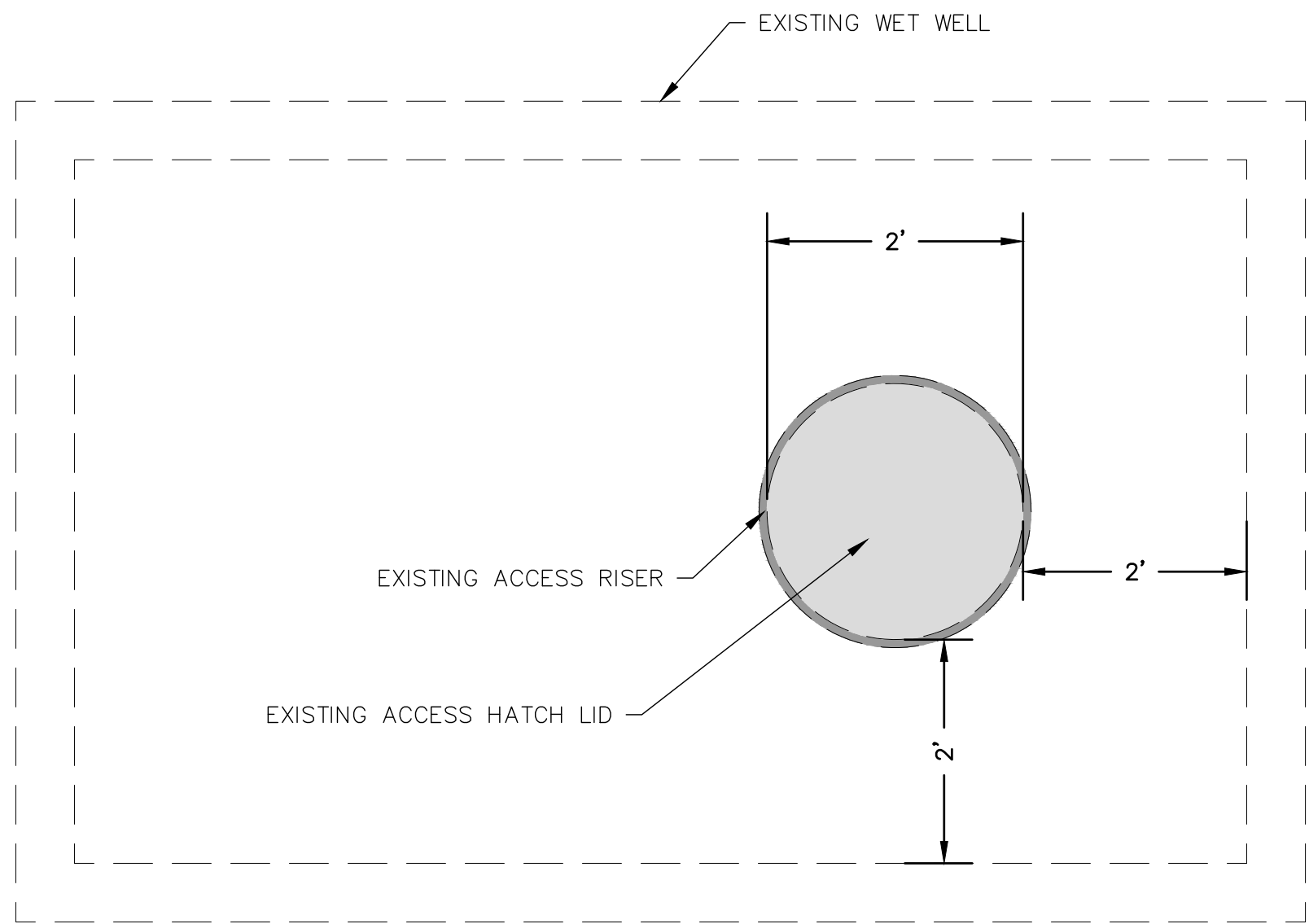
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NOTES

SHEET
2 OF 9



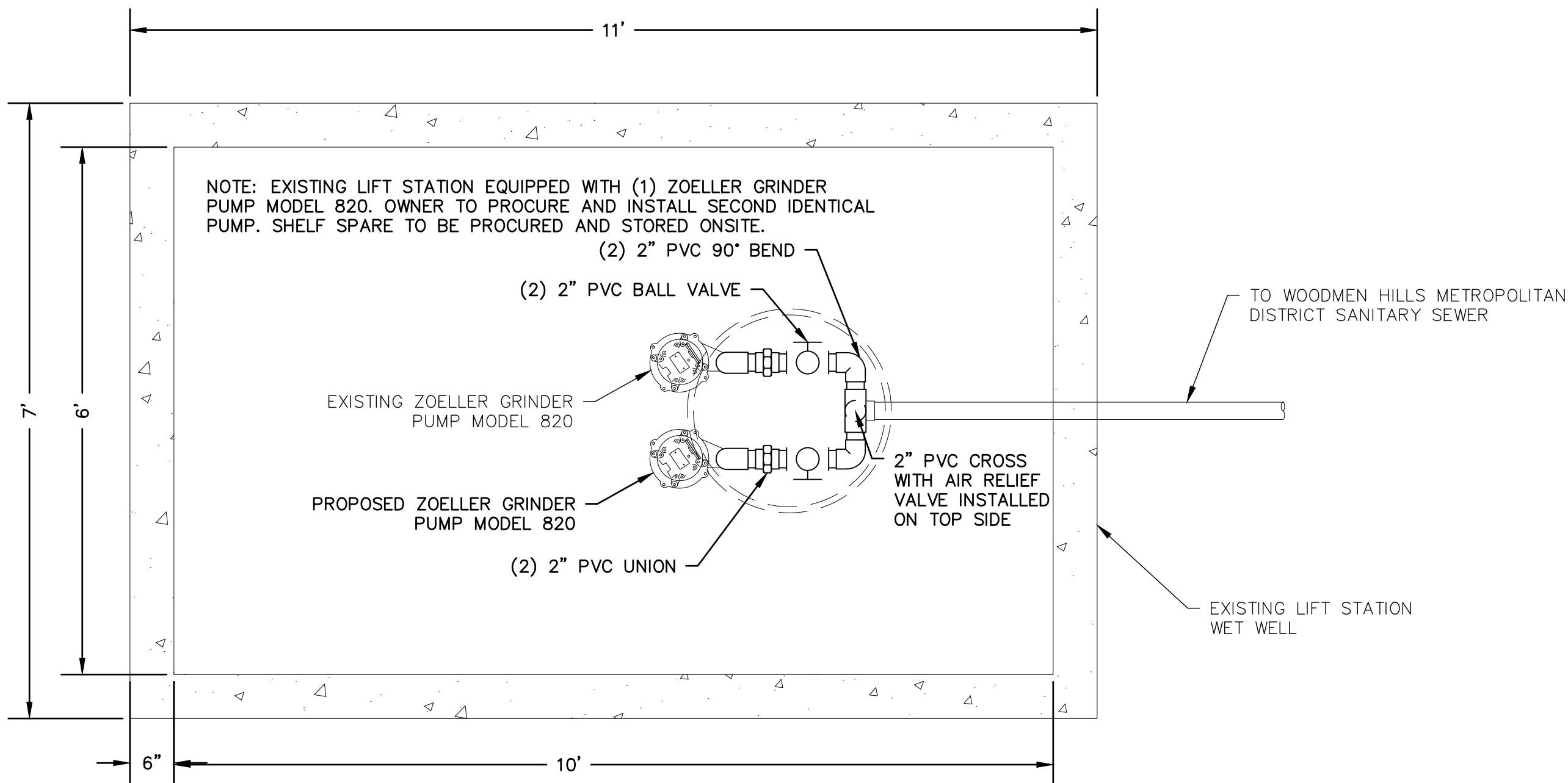
A
4
LIFT STATION PROFILE VIEW
3/4" = 1'

NOTES:
1. DIMENSIONS OF WET WELL SHOWN ARE APPROXIMATE
2. FLOATS SHOWN IN ILLUSTRATIVE LOCATION. ACTUAL LOCATION OF FLOATS IS VERTICALLY IN LINE WITH RISER.

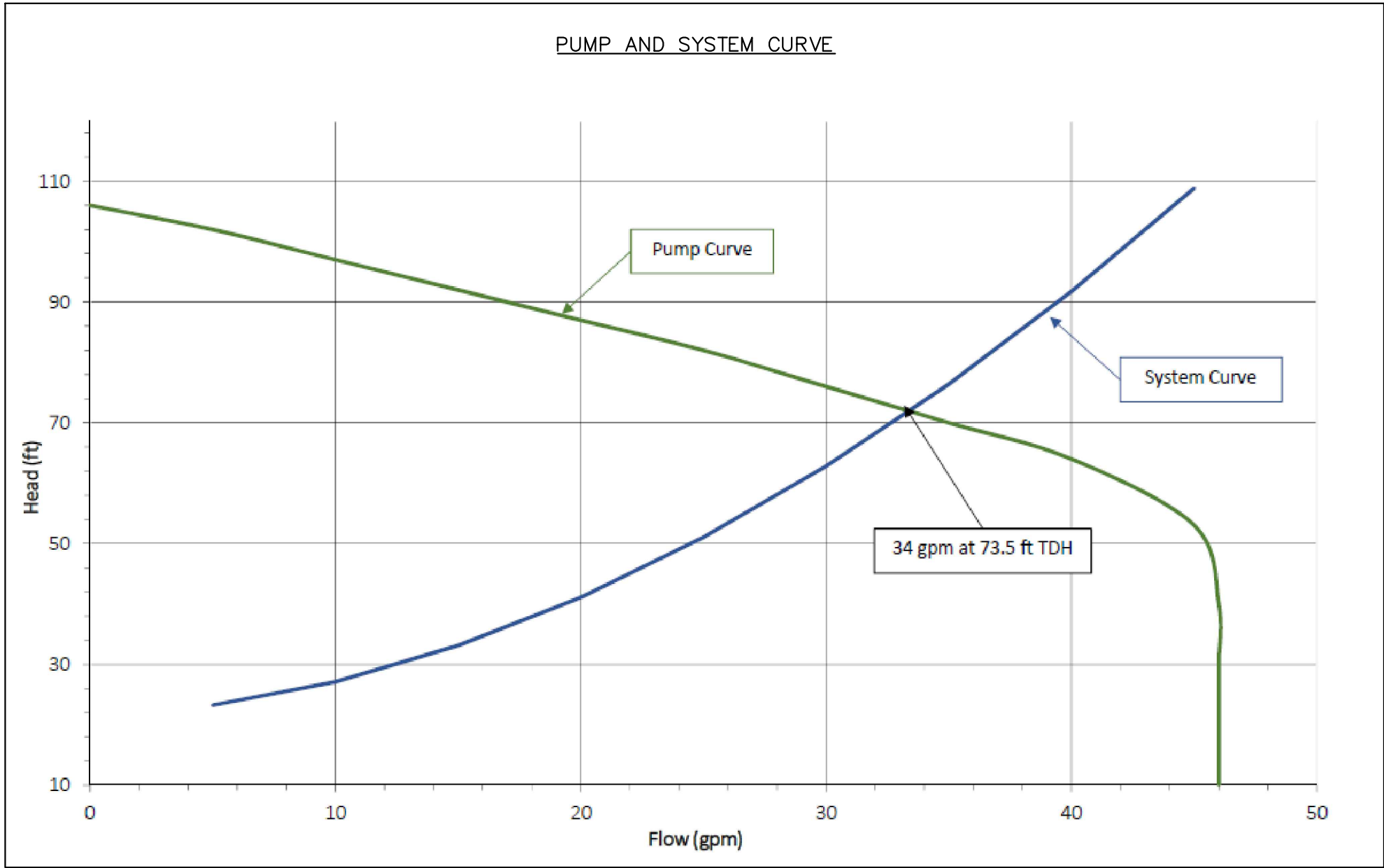


C
4
LIFT STATION GRADE VIEW
3/4" = 1'

LIFT STATION DESIGN SUMMARY	
PUMP INFORMATION	ZOELLER PUMP COMPANY SHARK SERIES 820 GRINDER PUMP 2 HP, 60 HZ, 3,450 RPM
MINIMUM FLOWRATE	15.1 GPM (FUTURE PEAK HOUR)
EXPECTED OPERATING POINT	34 GPM AT 73.5 FT TDH
FORCE MAIN	2-INCH SCHD 40 PVC



B
4
LIFT STATION PLAN VIEW
3/4" = 1'

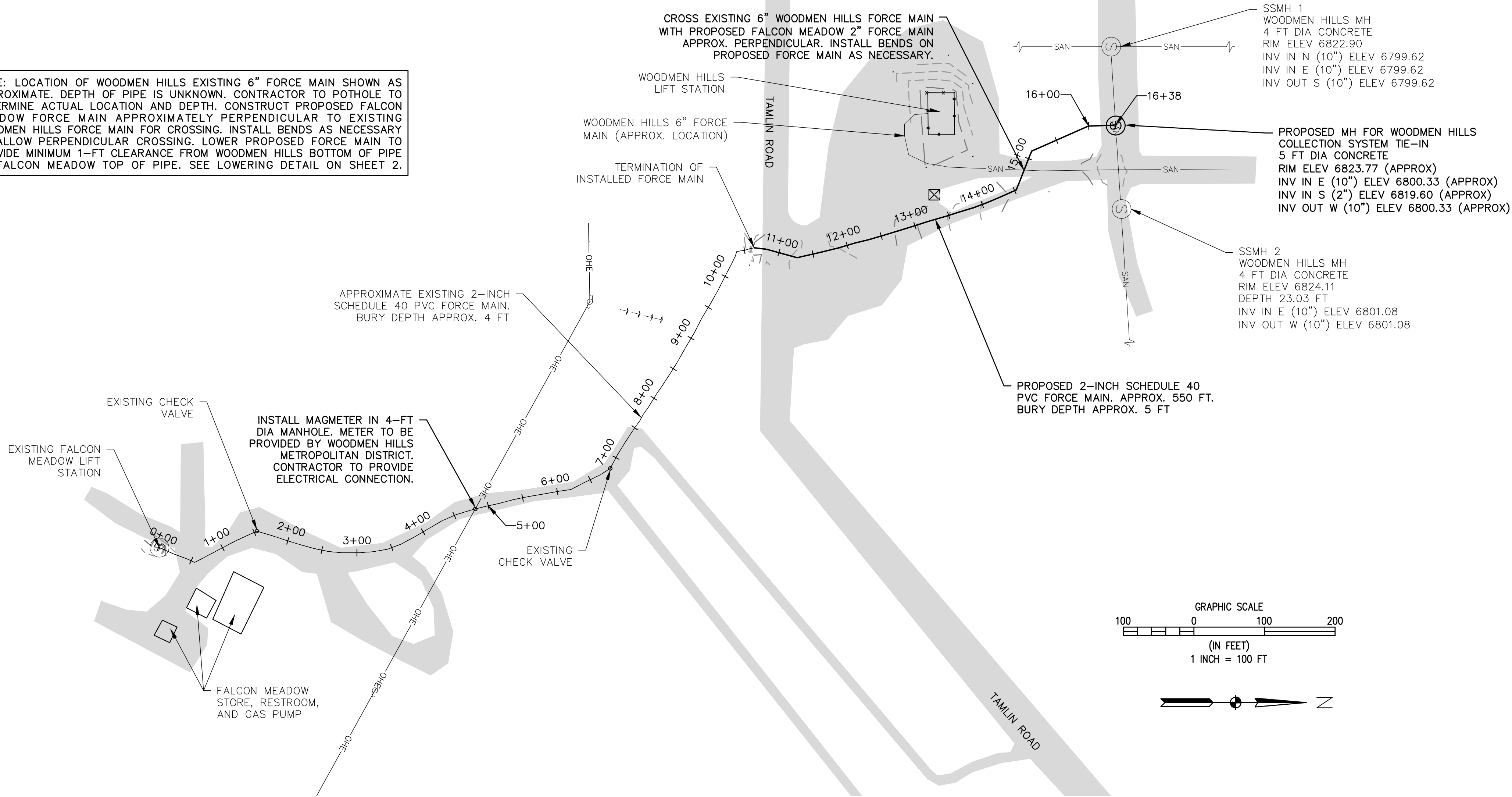


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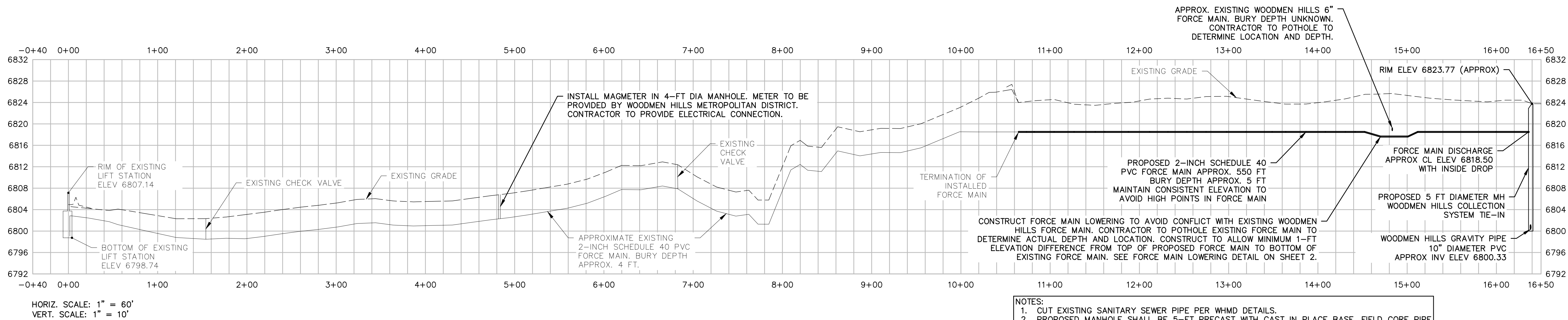
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SHEET	4 OF 9

NOTE: LOCATION OF WOODMEN HILLS EXISTING 6" FORCE MAIN SHOWN AS APPROXIMATE. DEPTH OF PIPE IS UNKNOWN. CONTRACTOR TO POTHOLE TO DETERMINE ACTUAL LOCATION AND DEPTH. CONSTRUCT PROPOSED FALCON MEADOW FORCE MAIN APPROXIMATELY PERPENDICULAR TO EXISTING WOODMEN HILLS FORCE MAIN FOR CROSSING. INSTALL BENDS AS NECESSARY TO ALLOW PERPENDICULAR CROSSING. LOWER PROPOSED FORCE MAIN TO PROVIDE MINIMUM 1-FT CLEARANCE FROM WOODMEN HILLS BOTTOM OF PIPE TO FALCON MEADOW TOP OF PIPE. SEE LOWERING DETAIL ON SHEET 2.



A
5
EXISTING AND PROPOSED FORCE MAIN PLAN
1" = 100'



HORIZ. SCALE: 1" = 60'
VERT. SCALE: 1" = 10'

B
5
EXISTING AND PROPOSED FORCE MAIN PROFILE
AS SHOWN

- NOTES:
- CUT EXISTING SANITARY SEWER PIPE PER WHMD DETAILS.
 - PROPOSED MANHOLE SHALL BE 5-FT PRECAST WITH CAST IN PLACE BASE. FIELD CORE PIPE PENETRATIONS PER WHMD DETAILS.
 - PROPOSED MANHOLE SHALL BE COATED, HAVE DOUBLE-RAMNECK INSIDE EACH JOINT, AND JOINT WRAP AROUND EACH JOINT.
 - INSTALL SEALED PVC WYE WITH CAP AND BEND TO CREATE INSIDE DROP IN PROPOSED MANHOLE (SEE DETAIL SHEET 2). EXTEND 2" SCHD 40 PVC PIPE TO BOTTOM OF MANHOLE AND INSTALL STAINLESS STEEL PIPE BRACKETS AND ANCHOR BOLTS EVERY 6-FT TO SUPPORT DOWN PIPE. EXTEND DROP PIPE INTO THE BENCH OF THE MANHOLE AND DAYLIGHT PIPE INTO A SHAPED CONCRETE TROUGH. INSTALL GROUT TO CHANNELIZE FLOW (SEE WHMD DETAIL).

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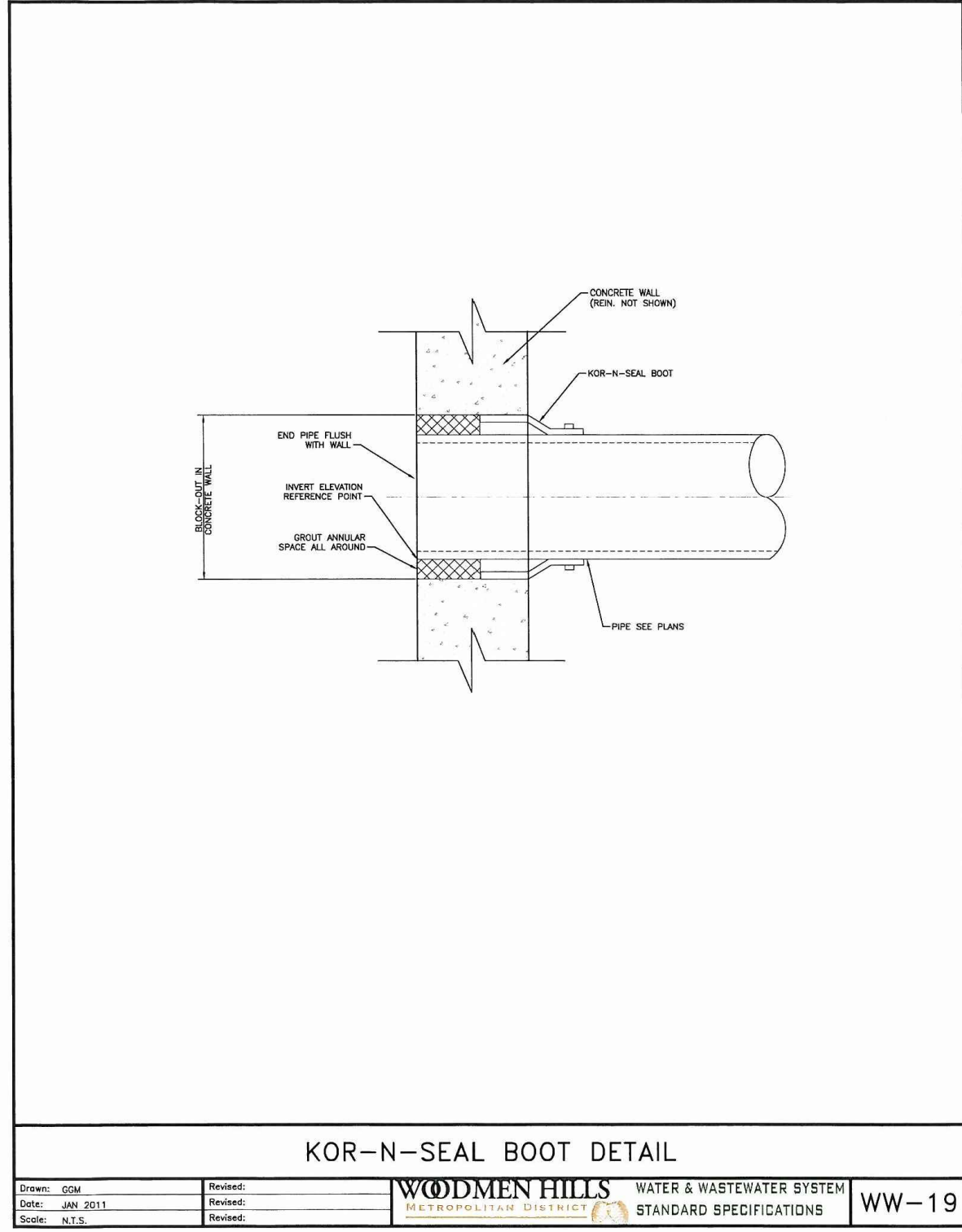
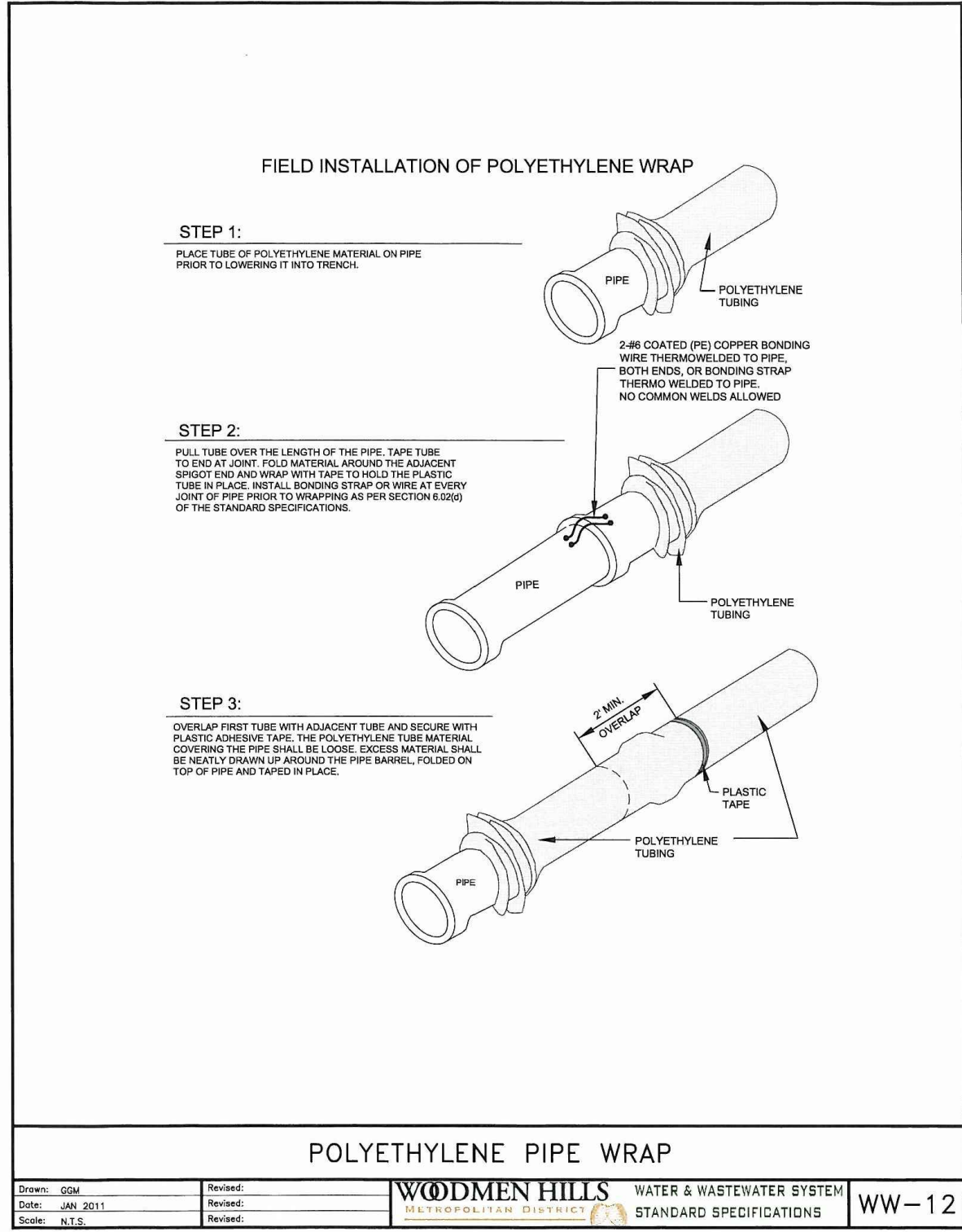
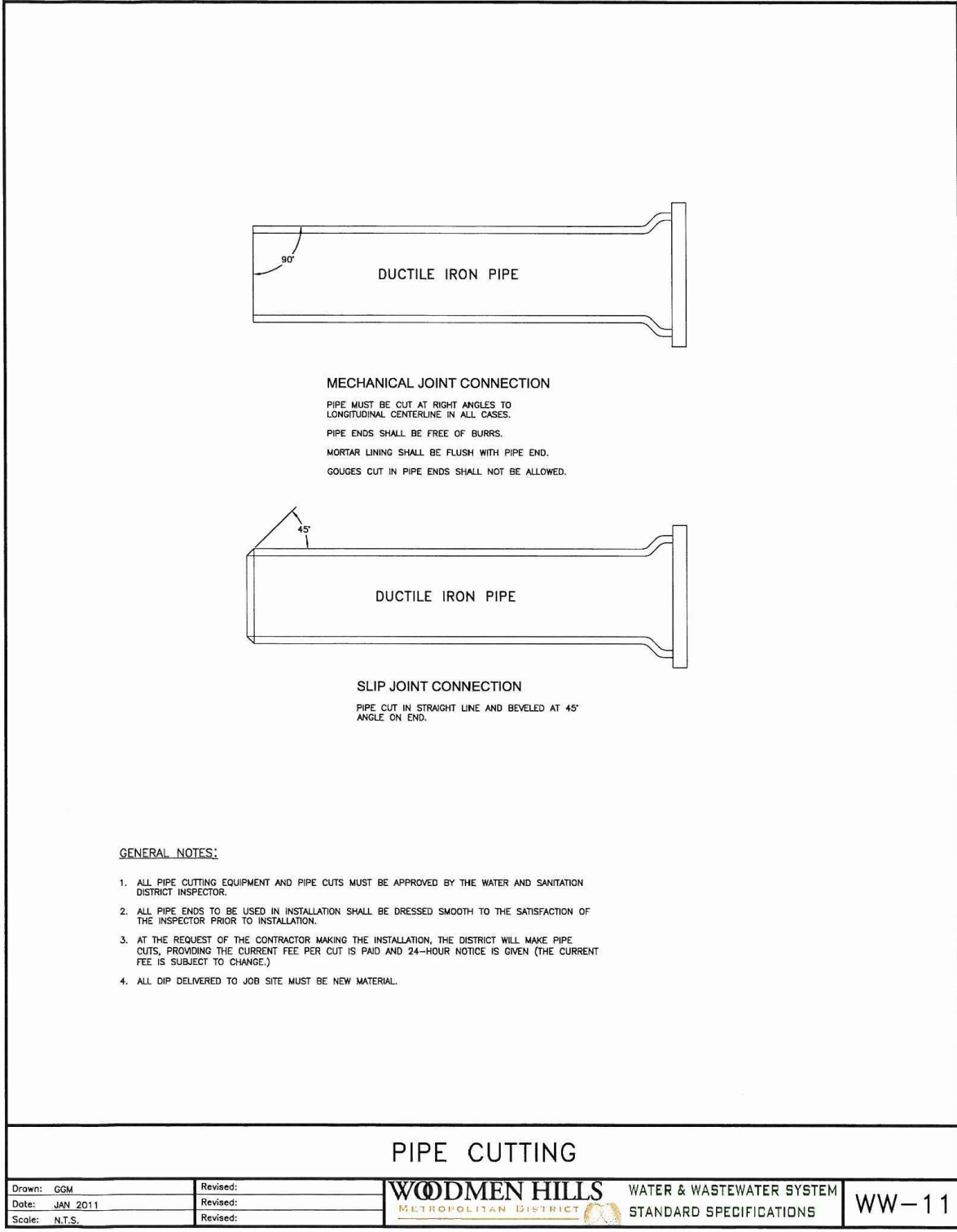
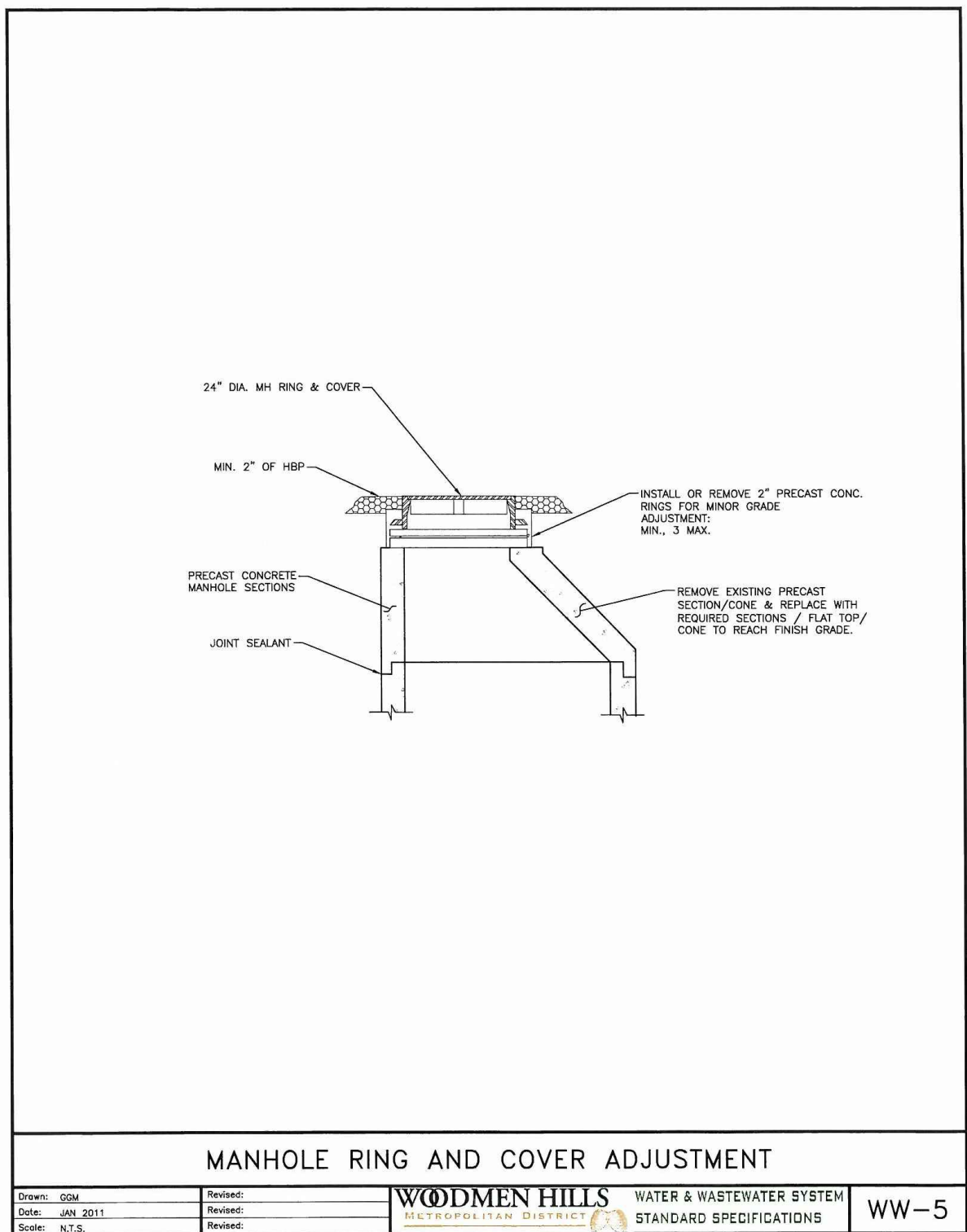
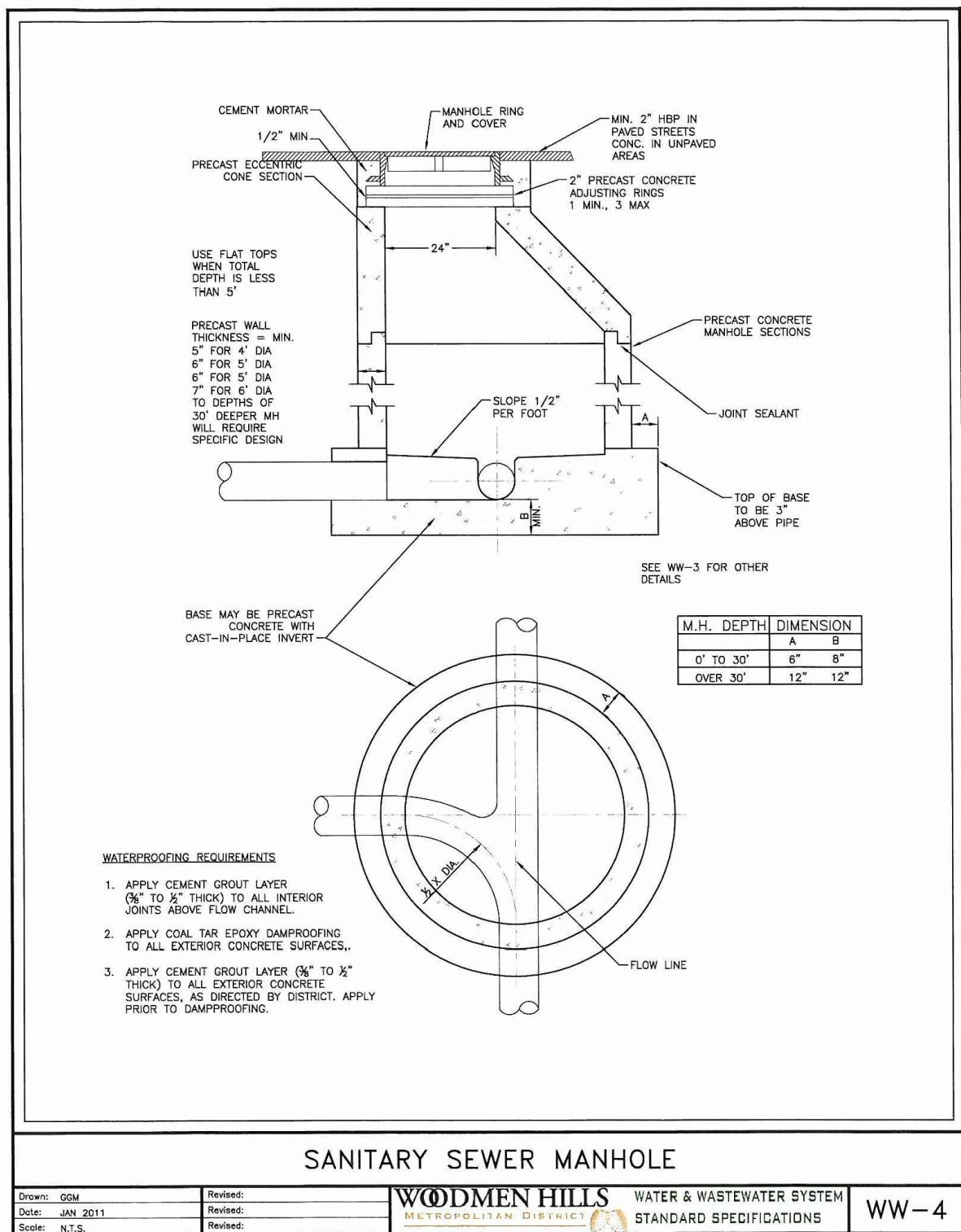
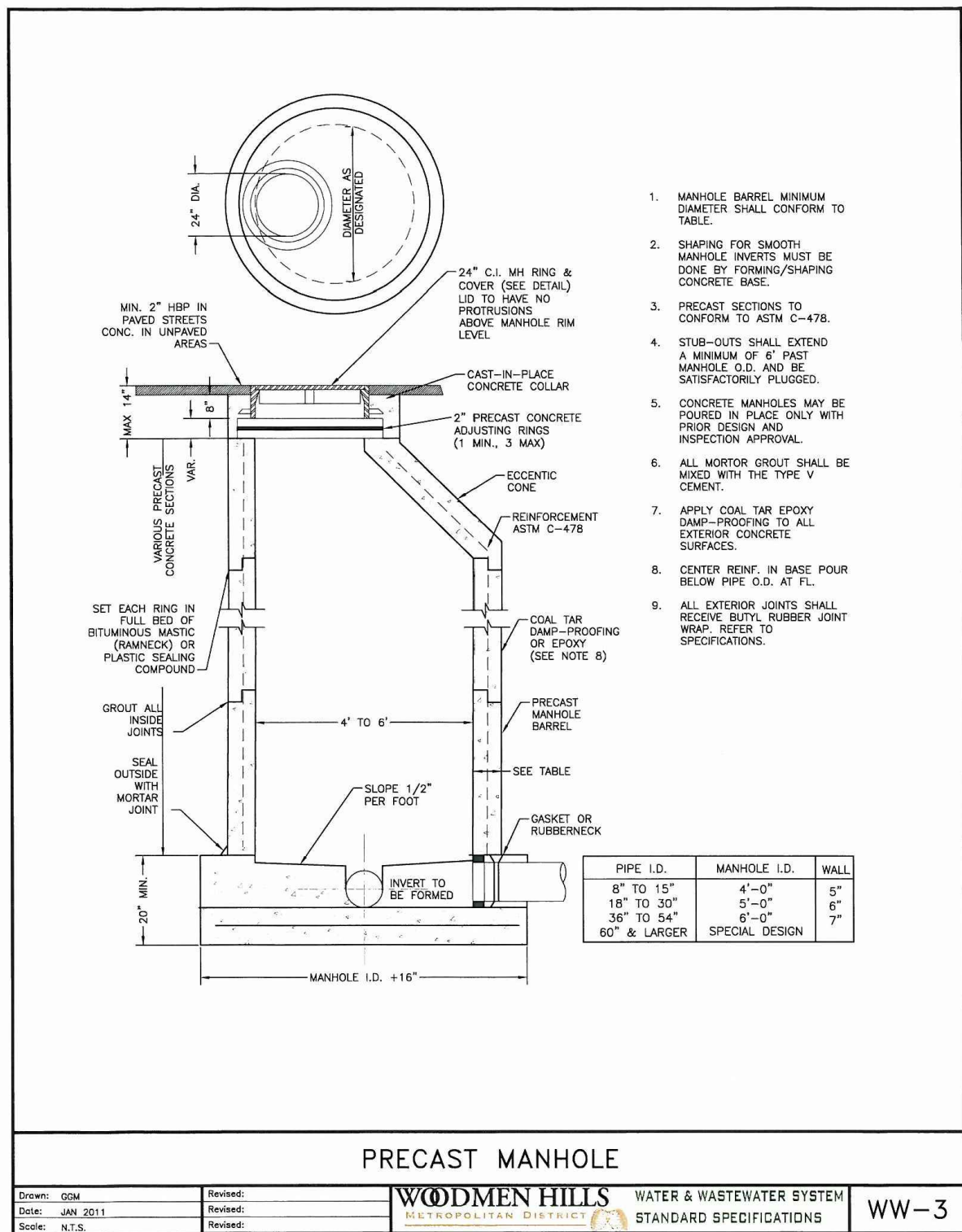
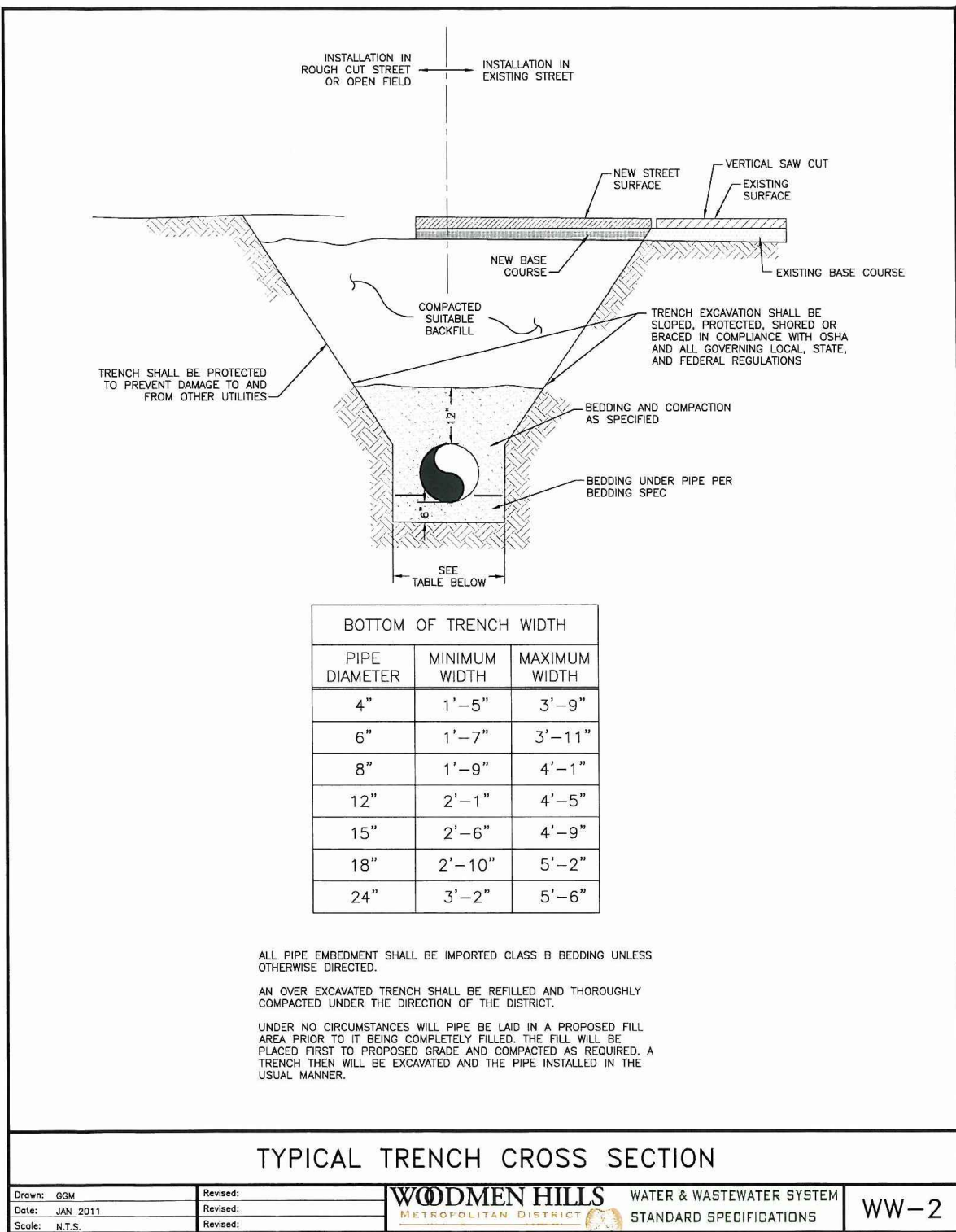
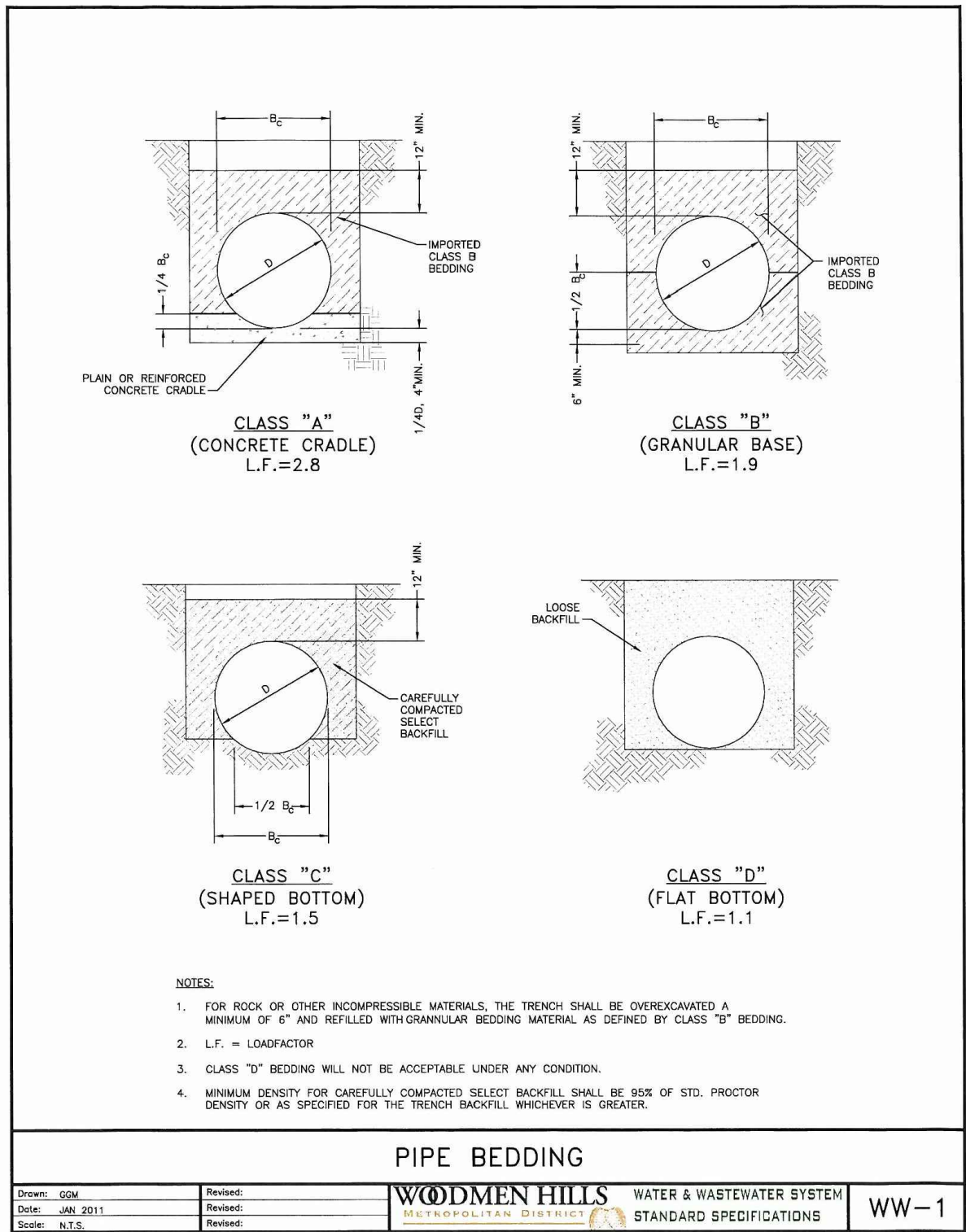
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FORCE MAIN PLAN &
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DRAWING NAME P & P
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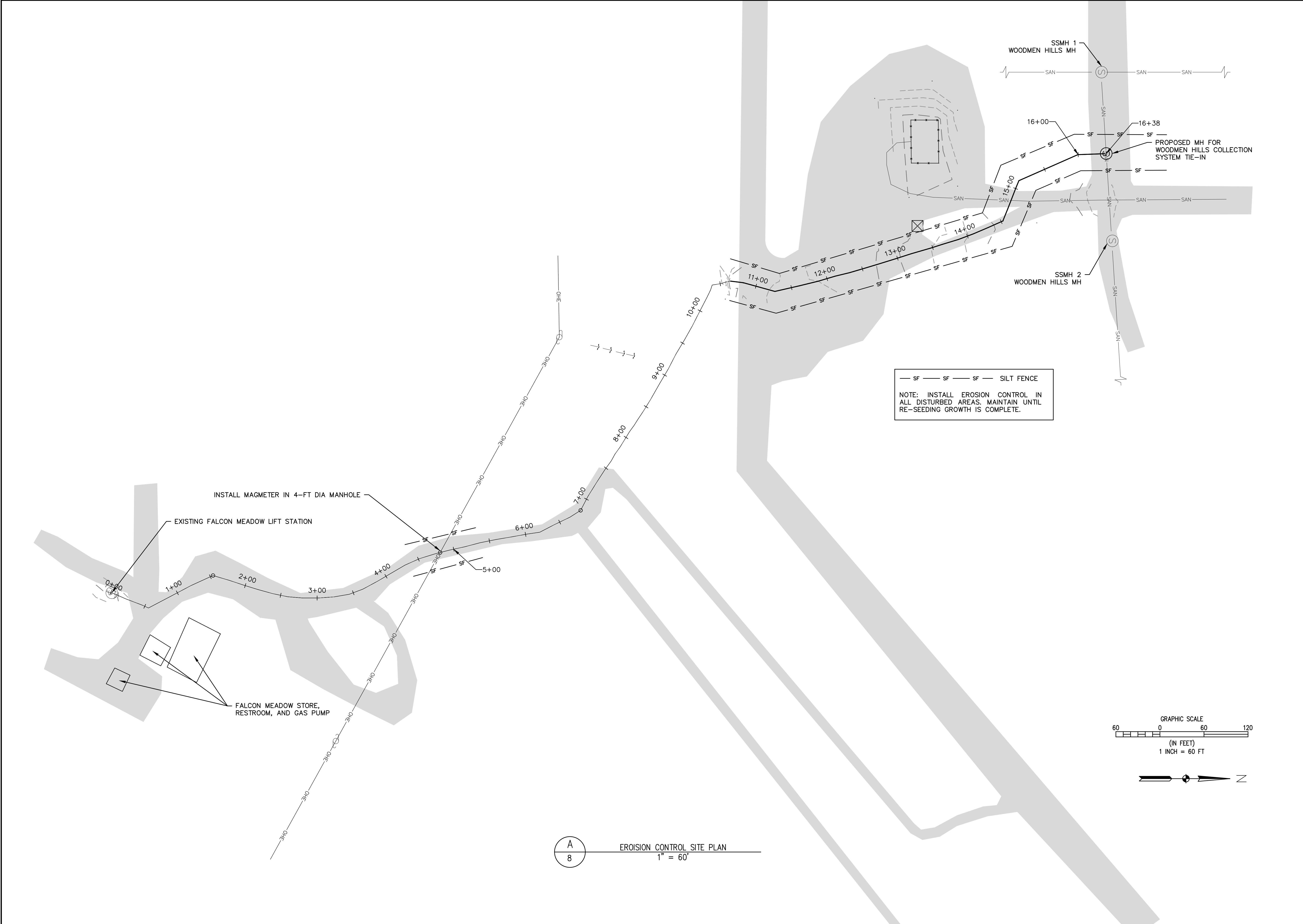
NOTE: ALL CONSTRUCTION OF INFRASTRUCTURE THAT WILL BE PART OF THE WOODMEN HILLS METROPOLITAN DISTRICT'S COLLECTION SYSTEM SHALL ABIDE BY THE CURRENT WOODMEN HILLS METROPOLITAN DISTRICT WATER AND WASTEWATER SYSTEM STANDARD SPECIFICATIONS



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1

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BY

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DATE

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ELEMENT

ENGINEERING LLC

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GENERAL NOTES

- ### BMP MAINTENANCE NOTES

- ## SILT FENCE INSTALLATION NOTES

- ## SILT FENCE MAINTENANCE NOTES

- ## ROCK SOCK MAINTENANCE NOTES

- ### STABILIZED CONSTRUCTION ENTRANCE/EXIT INSTALLATION NOTES

- ### STABILIZED CONSTRUCTION ENTRANCE/EXIT MAINTENANCE NOTES

1. ROCK SHALL BE REAPPLIED OR REGRADED AS NECESSARY TO THE STABILIZED ENTRANCE/EXIT TO MAINTAIN A CONSISTENT DEPTH.
2. SEDIMENT TRACKED ONTO PAVED ROADS IS TO BE REMOVED THROUGHOUT THE DAY AND AT THE END OF THE DAY BY SHOVELING OR SWEEPING. SEDIMENT MAY NOT BE WASHED DOWN STORM SEWER DRAINS.

SC-1



Rock Sock (RS)



SM-4



A technical line drawing of a conveyor system. It features a large hopper at the top left, which tapers into a long, inclined conveyor belt. At the bottom right, the conveyor belt splits into multiple parallel discharge chutes, each supported by a metal frame. The drawing is a perspective view, showing the top and side of the structure.

TARGETED POLLUTANTS
Caustic wastewater (high pH level near 12 units)
Suspended solids
Assorted Metals; Chromium VI, Nickel, Sulfate, Potassium, Magnesium and Calcium Compounds

LIFT STATION -- CONSOLIDATION
EROSION CONTROL DETAILS
FALCON MEADOW RV CAMPGROUND 11150 HWY 24 PEYTON, CO 80831

PREPARED UNDER THE DIRECT SUPERVISION OF

FOR AND ON BEHALF OF
ELEMENT ENGINEERING, LLC

DATE
MARCH 2019

JOB NUMBER
0055.0001

SCALE
NTS

DRAWING NAME

EROSION

SHEET
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