

# TOWN OF WEBSTER, MASSACHUSETTS

## BIGELOW ROAD

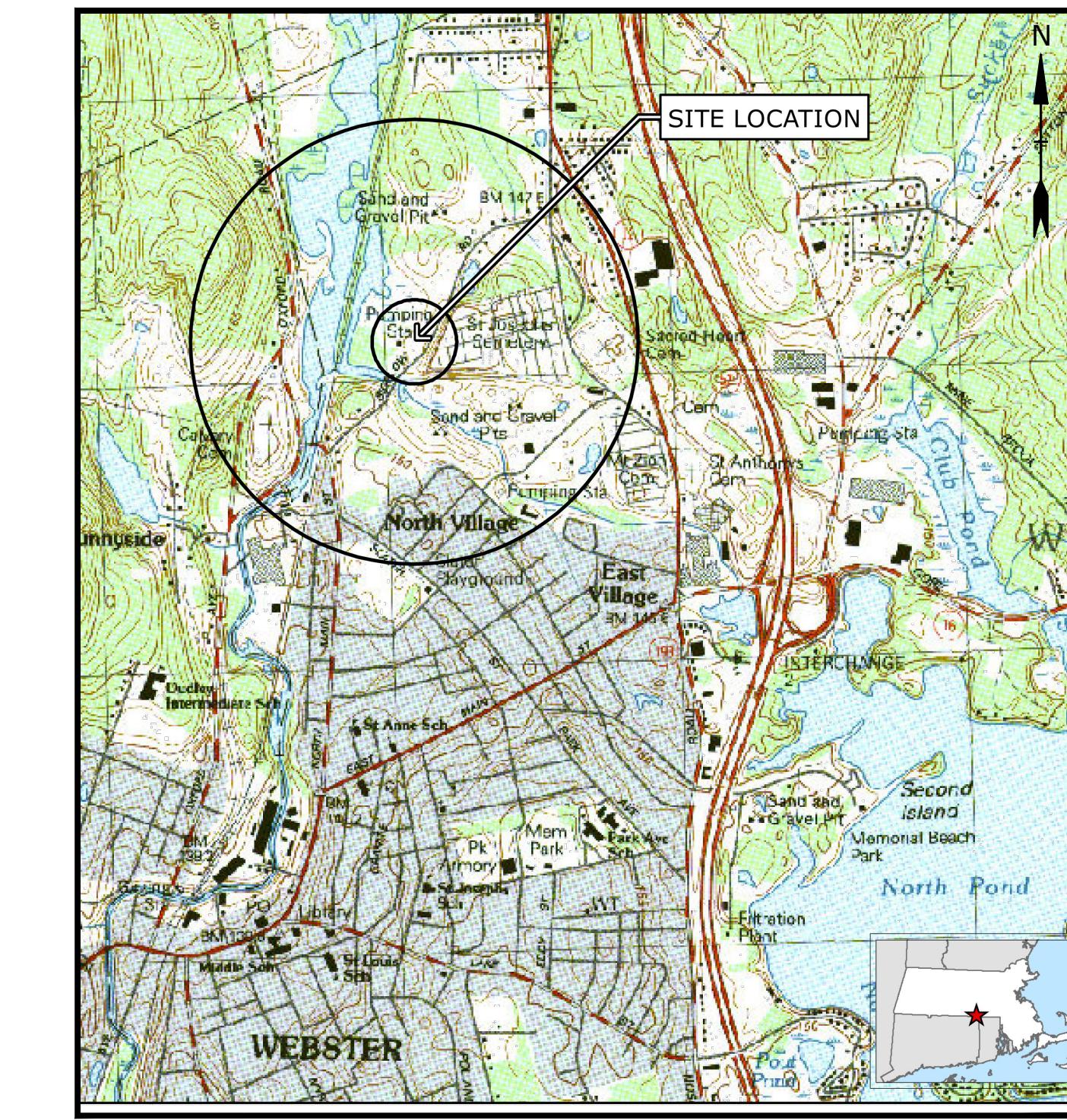
## WATER TREATMENT PLANT

### DWRSP PROJECT NO. 10380

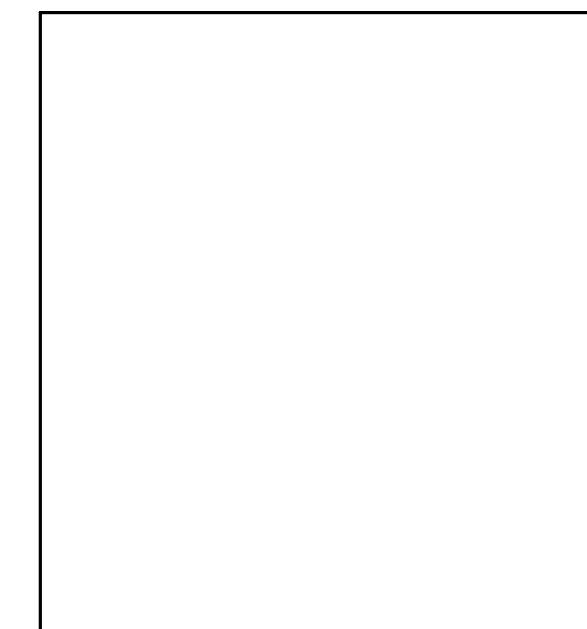
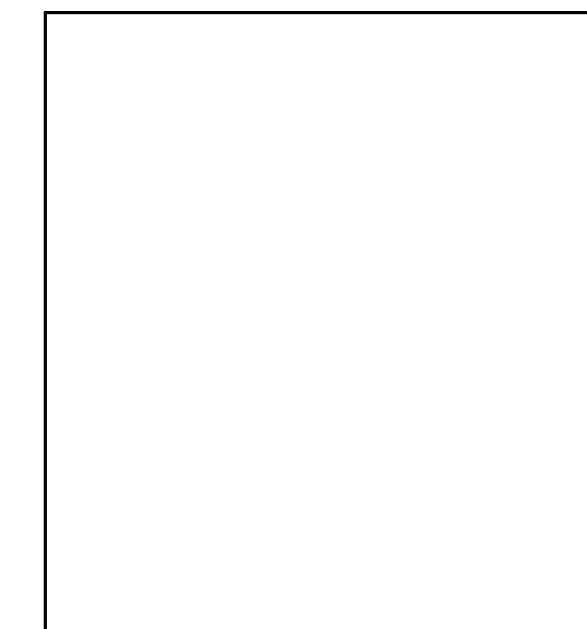
## PERMIT SET

## SEPTEMBER 2023

LIST OF DRAWINGS		
SHEET NO.	DRAWING NO.	DRAWING TITLE
GENERAL		
1	G-001	COVER SHEET
2	G-002	GENERAL NOTES AND LEGEND
CIVIL		
3	C-101	EXISTING CONDITIONS WATER MAIN AND WTP PLAN
4	C-102	EXISTING CONDITIONS WTP PLAN
5	C-103	EROSION CONTROL AND SITE DEMOLITION PLAN
6	C-104	SITE LAYOUT AND MATERIALS PLAN
7	C-105	SITE GRADING AND DRAINAGE PLAN
8	C-106	SITE UTILITY PLAN
9	C-107	SITE LANDSCAPING PLAN
10	C-201	BIGELOW ROAD WATER MAIN STA 0+00 TO STA 10+00
11	C-202	BIGELOW ROAD WATER MAIN STA 10+00 TO STA 17+91
12	C-203	HDD PROFILE AT CULVERT CROSSINGS STA 9+10 TO STA 12+10
13	C-501	CIVIL DETAILS - 1
14	C-502	CIVIL DETAILS - 2
15	C-503	CIVIL DETAILS - 3
16	C-504	CIVIL DETAILS - 4
17	C-505	CIVIL DETAILS - 5
18	C-506	WELL 3A DETAILS
19	C-507	TRAFFIC CONTROL DETAILS
ARCHITECTURAL		
20	A-101	FIRST FLOOR & EQUIPMENT PLATFORM PLANS
21	A-201	BUILDING ELEVATIONS
22	A-202	BUILDING ELEVATIONS
23	A-301	BUILDING SECTIONS
ELECTRICAL		
24	E-201	ELECTRICAL LIGHTING PLAN - WTP



PREPARED BY:  
**Tighe&Bond**



TOWN ADMINISTRATOR  
RICHARD LAFOND

BOARD OF SELECTMEN  
EARL GABOR, CHAIRMAN  
TOM KLEBART, VICE-CHAIRMAN  
RANDY BECKER, SECRETARY  
LISA KONTES, SELECTMAN  
MARK ROGERS, SELECTMAN

WATER SUPERINTENDENT  
THOMAS CUTLER

WATER COMMISSIONERS  
TOM ANDRADE, CHAIRMAN  
EARL GABOR, VICE-CHAIRMAN  
MARC BECKER, MEMBER  
DAN DUTEAU, MEMBER

NOT FOR CONSTRUCTION

COMPLETE SET 24 SHEETS

DESCRIPTION	EXISTING	PROPOSED
PROPERTY LINE		
LIMITS OF WORK		
INTERMEDIATE CONTOURS		
INDEX CONTOURS	— 25 — X 141.2	— 25 — + 32.0 ← 0.0%
SPOT GRADE		
MAGNITUDE & DIRECTION OF SLOPE		
STORM DRAIN	SD — SD	SD —
GRAVITY SANITARY SEWER	SS — SS	SS — SS
SANITARY SEWER FORCE MAIN	SFM —	SFM —
WATER SERVICE	W — W	W — W
POTABLE WATER	PW —	PW —
RAW WATER	RW —	RW —
UNDERGROUND ELECTRIC	E — E	E — E
GAS SERVICE	G — G	G — G
OVERHEAD UTILITY	OHW — OHW	OHW —
CURB		
EDGE OF PAVEMENT		
DIRT ROAD		
STONE WALL	— — — — —	— — — — —
FENCE	X — X — X	X — X — X
STORM DRAIN STRUCTURES	MANHOLE (◎) S CATCH BASIN (CB)	MANHOLE (◎) CATCH BASIN (CB)
SANITARY SEWER MANHOLE	○	○
WATER SERVICE STRUCTURES	HYDRANT (◎) MANHOLE (◎) VALVE (W)	HYDRANT (◎) MANHOLE (W) VALVE (W)
GAS SERVICE STRUCTURES	MANHOLE (◎) VALVE (W) GG	MANHOLE (◎) VALVE (W) GG
ELECTRIC SERVICE STRUCTURES	MANHOLE (◎) LIGHT (★)	MANHOLE (◎) LIGHT (★)
TREELINE		
25-FOOT BUFFER TO WETLAND		
50-FOOT BUFFER TO WETLAND		
100-FOOT BUFFER TO WETLAND		
100-YEAR FLOOD ELEVATION		
ZONE 1		
DEMOLITION / GEOTECHNICAL		
EROSION & SEDIMENT CONTROL		
UTILITY TO BE ABANDONED		
UTILITY TO BE DEMOLISHED		
ITEM TO BE DEMOLISHED	XXXXXX	XXXXXX
TEST PIT		
MONITORING WELL		
BORING		

#### EROSION CONTROL AND RESOURCE AREA PROTECTION NOTES

1. PROVIDE ALL EROSION CONTROL MEASURES SHOWN, SPECIFIED, REQUIRED BY PERMIT, AND/OR REQUIRED BY THE ENGINEER PRIOR TO ANY CONSTRUCTION OR IMMEDIATELY UPON REQUEST. MAINTAIN SUCH CONTROL MEASURES UNTIL FINAL SURFACE TREATMENTS ARE IN PLACE AND/OR UNTIL PERMANENT VEGETATION IS ESTABLISHED. INSPECT AFTER EACH RAINSTORM AND DURING MAJOR STORM EVENTS TO CONFIRM THAT ALL SEDIMENTATION AND EROSION CONTROL MEASURES REQUIRED ARE IN PLACE AND EFFECTIVE.
2. PRIOR TO STARTING WORK, CLEARLY STAKE WORK LIMITS. DO NOT DISTURB VEGETATION AND TOPSOIL BEYOND THE PROPOSED LIMITS. COORDINATE WITH THE ENGINEER FOR LOCATIONS OF TEMPORARY STOCKPILING OF TOPSOIL DURING CONSTRUCTION.
3. INSTALL SILT SACKS OR OTHER APPROVED SEDIMENTATION BARRIERS IN/AT ALL CATCH BASINS IN THE PROJECT AREA.
4. COMPACT, STABILIZE, AND LOAM AND SEED SIDE SLOPES, SHOULDER AREAS AND DISTURBED VEGETATED AREAS IN ACCORDANCE WITH THE CONTRACT DOCUMENTS AND AS REQUIRED BY PERMITS. GRADE SIDE SLOPES, SHOULDER AREAS AND DISTURBED VEGETATED AREAS TO A MAXIMUM SLOPE OF 3 HORIZONTAL TO 1 VERTICAL (3H:1V), WHERE POSSIBLE. PROVIDE BIODEGRADABLE EROSION CONTROL BLANKETS TO PREVENT EROSION WHERE SLOPES ARE STEEPER THAN 3H:1V.
5. SETTLE OR FILTER ALL SILT-LADEN WATER FROM DEWATERING ACTIVITIES IN A SEDIMENTATION OR FILTER BAG TO REMOVE SEDIMENTS PRIOR TO RELEASE USING A SEDIMENTATION OR FILTER BAG LOCATED DOWN-GRADIENT OF THE DEWATERED AREA.
6. SWEEP, COLLECT, REMOVE AND DISPOSE OF ANY SEDIMENT TRACKED ONTO PUBLIC RIGHT-OF-WAYS AT THE END OF EACH DAY.
7. LOAM AND SEED ALL DISTURBED VEGETATED AREAS TO ESTABLISH COVER AND STABILIZATION AS SOON AS POSSIBLE FOLLOWING DISTURBANCE.
8. MAINTAIN AN ADDITIONAL SUPPLY OF EROSION CONTROL MEASURES ON-SITE FOR EMERGENCY REPAIRS.
9. STORE FUEL, OIL, PAINT, OR OTHER HAZARDOUS MATERIALS IN A SECONDARY CONTAINER AND REMOVE TO A SECURE LOCKED AND COVERED AREA DURING NON-WORK HOURS.

#### SURFACE RESTORATION NOTES

1. ALL PAVEMENT DAMAGED BY THE CONTRACTOR'S OPERATIONS SHALL BE REPLACED IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.
2. PROVIDE SITE GRADING AT HANDICAPPED RAMPS, SIDEWALKS, AND BUILDING ENTRANCES THAT IS CONSISTENT WITH THE RELEVANT ACCESS REQUIREMENTS OF THE ARCHITECTURAL BARRIERS ACT (ABA), THE AMERICANS WITH DISABILITIES ACT (ADA), AND MA ARCHITECTURAL ACCESS BOARD REQUIREMENTS (AAB). SMALL CHANGES IN GRADE OVER RELATIVELY SHORT DISTANCES (E.G. AT PARKING SPACES, ACCESSIBLE ROUTES, AND RAMPS) MIGHT NOT BE CLEARLY DEPICTED WITHIN THE CONTOUR INTERVAL SHOWN. COMPLY WITH THE CRITERIA IN THESE STANDARDS. SELECT MAXIMUM SLOPE CRITERIA ARE REPRODUCED BELOW:
  - ACCESSIBLE PARKING STALL AND PASSENGER LOADING ZONE (ANY DIRECTION) SLOPE < 2.0%
  - LONGITUDINAL SLOPE ALONG ACCESSIBLE ROUTES < 5.0%
  - CROSS SLOPE ALONG ACCESSIBLE ROUTES < 2.0%
3. PROTECT PROJECT FEATURES (E.G., WALLS, FENCES, MAIL BOXES, SIGNS, SIDEWALKS, CURBING, STAIRS, WALKWAYS, TREES, ETC.) FROM DAMAGE DURING CONSTRUCTION, INCLUDING PROVIDING TEMPORARY SUPPORTS, WHEN APPROPRIATE.
4. EXISTING SURVEY MONUMENTS DISTURBED BY THE CONTRACTOR SHALL BE REPLACED BY A LAND SURVEYOR LICENSED IN THE STATE IN WHICH THE WORK IS PERFORMED AT NO ADDITIONAL COST TO THE OWNER.
5. COORDINATE THE ADJUSTMENT OF EXISTING UTILITY STRUCTURES WITH EACH RESPONSIBLE UTILITY OWNER PRIOR TO RECONSTRUCTION AND/OR PAVING OPERATIONS. RAISE ALL STRUCTURES TO FINISHED GRADES PRIOR TO THE END OF THE CONSTRUCTION SEASON AND PRIOR TO FINISHED PAVING.
6. REPAIR DISTURBED PAVED SURFACES AT THE END OF EACH WORK WEEK, UNLESS OTHERWISE APPROVED/REQUIRED BY THE OWNER.
7. PLACE TEMPORARY BITUMINOUS CONCRETE PAVEMENT AT DISTURBED PORTLAND CEMENT CONCRETE SIDEWALKS AND DRIVEWAYS AT THE END OF EACH WORK WEEK, UNLESS OTHERWISE APPROVED/REQUIRED BY THE OWNER.
8. RESTORE ALL AREAS DISTURBED BY THE CONTRACTOR BEYOND THE PAYLINE LIMITS TO ORIGINAL CONDITIONS AT NO ADDITIONAL COST TO THE OWNER.
9. REGRADE ALL UNPAVED AREAS DISTURBED BY THE WORK AS REQUIRED. REPAIR/REPLACE PAVED SURFACES DISTURBED BY THE WORK IN-KIND, UNLESS OTHERWISE NOTED. RESTORE SURFACES TO EXISTING OR PROPOSED CONDITIONS AS INDICATED ON THE DRAWINGS.
10. PROVIDE A SMOOTH, FLUSH TRANSITION BETWEEN ALL NEW AND EXISTING PAVEMENTS AND WALKING SURFACES.

#### ABBREVIATIONS

ABDN'(D)	ABANDON(ED)	N	NORTH
AC	ASBESTOS CEMENT PIPE	NITC	NOT IN THIS CONTRACT
BC	BOTTOM OF CURB	NTS	NOT TO SCALE
BFP	BACK FLOW PREVENTOR	N/A	NOT APPLICABLE
BIT	BITUMINOUS	N/F	NOW OR FORMERLY
BL	BASELINE	OC	ON CENTER
BLDG	BUILDING	OCS	OUTLET CONTROL STRUCTURE
BLSF	BORDERING LANDS SUBJECT TO FLOODING	OH	OVERHEAD
BND	BOUND	PB	PLANT BED
BOC	BOTTOM OF CURB	PC	POINT OF CURVATURE
BOT	BOTTOM	PCC	POINT OF COMPOUND
BS	BOTTOM OF STEP	PCPP	CURVATURE
BW	BOTTOM OF WALL	PERFORATED CORRUGATED	POLYETHYLENE PIPE
CATV	CABLE TELEVISION	PERF	PERFORATED
CB	CATCH BASIN	PI	POINT OF INTERSECTION
CEM	CEMENT	PRC	POINT OF REVERSE CURVATURE
CI	CAST IRON PIPE	PSF	POUNDS PER SQUARE FOOT
CL	CENTERLINE	PSI	POUNDS PER SQUARE INCH
CLF	CHAIN LINK FENCE	PT	POINT OF TANGENCY
CO	CLEAN OUT	PVC	POLYVINYLCHLORIDE
CONC	CONCRETE	PVMT	PAVEMENT
CPP	CORRUGATED	R	RADIUS
		RCP	REINFORCED CONCRETE PIPE
CY	CUBIC YARD	RD	ROOF DRAIN
DH	DRILL HOLE	REV	REVISION
DI	DUCTILE IRON PIPE	ROW	RIGHT OF WAY
DIA	DIAMETER	RT	RIGHT
DMH	DRAIN MANHOLE	R&D	REMOVE AND DISPOSE
E	EAST	R&R	REMOVE AND RESET
EF	EACH FACE	R&S	REMOVE AND STACK
EG	EXISTING GRADE	S	SOUTH
EL/ELEV	ELEVATION	SAN	SANITARY
ELEC	ELECTRIC	SCH	SCHEDULE
EMH	ELECTRIC MANHOLE	SF	SQUARE FOOT
EOP	EDGE OF PAVEMENT	SMH	SEWER MANHOLE
EW	EACH WAY	SS	STAINLESS STEEL
EXIST	EXISTING	STA	STATION
FES	FLARED END SECTION	STL	STEEL
FF	FINISH FLOOR	STRM	STORM
FM	FORCE MAIN	T	TANGENT LENGTH
G	GAS	TC	TOP OF CURB
GG	GAS GATE	TEL-DATA	TEL-DATA
GRAN	GRANITE	TP	TEST PIT
HC	HANDICAP	TS	TOP OF STEP
HDPE	HIGH DENSITY POLYETHYLENE	TW	TOP OF WALL
HMA	HOT MIX ASPHALT	TYP	TYPICAL
HYD	HYDRANT	UP	UTILITY POLE
IN	INCHES	W	WATER
INV	INVERT	WG	WATER GATE
IP	IRON PIN	WW	WATER VALVE
L	LENGTH OF CURB	XFMR	TRANSFORMER
LP	LIGHT POLE		
LT	LEFT		
MAX	MAXIMUM		
MH	MANHOLE		
MIN	MINIMUM		
MISC	MISCELLANEOUS		
MON	MONUMENT		
MJ	MECHANICAL JOINT		

#### ABBREVIATIONS CONT'D

N	NORTH
NITC	NOT IN THIS CONTRACT
NTS	NOT TO SCALE
N/F	NOW OR FORMERLY
OC	ON CENTER
OCS	OUTLET CONTROL STRUCTURE
OH	OVERHEAD
PB	PLANT BED
PC	POINT OF CURVATURE
PCC	POINT OF COMPOUND
PCPP	CURVATURE
PERF	PERFORATED
PI	POINT OF INTERSECTION
PRC	POINT OF REVERSE CURVATURE
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
PT	POINT OF TANGENCY
PVC	POLYVINYLCHLORIDE
PVMT	PAVEMENT
R	RADIUS
RCP	REINFORCED CONCRETE PIPE
RD	ROOF DRAIN
REV	REVISION
ROW	RIGHT OF WAY
RT	RIGHT
R&D	REMOVE AND DISPOSE
R&R	REMOVE AND RESET
R&S	REMOVE AND STACK
S	SOUTH
SAN	SANITARY
SCH	SCHEDULE
SF	SQUARE FOOT
SMH	SEWER MANHOLE
SS	STAINLESS STEEL
STA	STATION
STL	STEEL
STRM	STORM
T	TANGENT LENGTH
TC	TOP OF CURB
TEL-DATA	TEL-DATA
TP	TEST PIT
TS	TOP OF STEP
TW	TOP OF WALL
TYP	TYPICAL
UP	UTILITY POLE
W	WATER
WG	WATER GATE
WW	WATER VALVE
XFMR	TRANSFORMER

#### BASE PLAN NOTES

1. THE EXISTING CONDITIONS INFORMATION SHOWN ON THE DRAWINGS IS BASED ON THE FOLLOWING:
  - SURVEY DRAWINGS PROVIDED BY WSP USA, INC., DATED DECEMBER 30, 2022, TITLED "BIGELOW ROAD PUMP STATION"
2. UTILITY LOCATIONS SHOWN WERE PLOTTED FROM INFORMATION SUPPLIED BY RESPECTIVE UTILITY COMPANIES AND DATA OBTAINED FROM FIELD SURVEYS AND AS BUILT DRAWINGS. THE ACCURACY AND COMPLETENESS OF SUBSURFACE INFORMATION SHOWN ON THESE DRAWINGS IS NOT GUARANTEED. DETERMINE THE LOCATIONS AND ELEVATIONS OF ALL UTILITIES WHICH MAY AFFECT CONSTRUCTION OPERATIONS.
3. SUB-SURFACE EXPLORATIONS WERE PERFORMED BY GEOFSEARCH, INC. ON MAY 3, 2023. BORING LOCATIONS SHOWN ON THE DRAWINGS ARE APPROXIMATE AND BORING INFORMATION IS NOT GUARANTEED IN ANY WAY TO REPRESENT EXISTING CONDITIONS. BORING LOGS ARE INCLUDED IN THE PROJECT MANUAL FOR THE CONTRACTORS INFORMATION ONLY.
4. SOIL EVALUATIONS WERE PERFORMED IN THE AREAS OF THE PROPOSED STORMWATER MANAGEMENT SYSTEMS BY TIMOTHY J. GRACE ON APRIL 21, 2023. TEST PIT LOCATIONS ARE SHOWN ON THE SITE PLANS.
5. THE DRAWINGS ARE BASED ON THE FOLLOWING DATUMS: HORIZONTAL NAD83; VERTICAL NAVD88
6. THE EXISTING CONDITIONS SHOWN ARE APPROXIMATE. FIELD VERIFY EXISTING CONDITIONS.

#### GENERAL NOTES

1. NOTIFY DIGSAFE AT 1-888-344-7233 AND OTHER UTILITY OWNERS IN THE AREA NOT ON THE DIGSAFE LIST AT LEAST 72 HOURS PRIOR TO ANY DIGGING, TRENCHING, ROCK REMOVAL, DEMOLITION, BORING, BACKFILLING, GRADING, LANDSCAPING, OR ANY OTHER EARTH MOVING OPERATIONS.
2. LOCATIONS OF EXISTING UTILITIES ARE APPROXIMATE. IN ADDITION, SOME UTILITIES MAY NOT BE SHOWN. DETERMINE THE EXACT LOCATION OF UTILITIES BY TEST PIT OR OTHER METHODS, AS NECESSARY TO PREVENT DAMAGE TO UTILITIES AND/OR INTERRUPTIONS IN UTILITY SERVICE. PERFORM TEST PIT EXCAVATIONS AND OTHER INVESTIGATIONS TO LOCATE UTILITIES, AND PROVIDE THIS INFORMATION TO THE ENGINEER, PRIOR TO CONSTRUCTING THE PROPOSED IMPROVEMENTS. LOCATE ALL EXISTING UTILITIES TO BE CROSSED BY HAND EXCAVATION.
3. NOT ALL OF THE UTILITY SERVICES TO BUILDINGS ARE SHOWN. THE CONTRACTOR SHALL ANTICIPATE THAT EACH PROPERTY HAS SERVICE CONNECTIONS FOR THE VARIOUS UTILITIES.
4. BOLD TEXT AND LINES INDICATE PROPOSED WORK. LIGHT TEXT AND LINES INDICATE APPROXIMATE EXISTING CONDITIONS.
5. TIGHE & BOND ASSUMES NO RESPONSIBILITY FOR ANY ISSUES, LEGAL OR OTHERWISE, RESULTING FROM CHANGES MADE TO THESE DRAWINGS WITHOUT WRITTEN AUTHORIZATION FROM TIGHE & BOND.
6. EXCAVATE ADDITIONAL TEST PITS TO LOCATE EXISTING UTILITIES AS DIRECTED OR APPROVED BY THE ENGINEER.
7. NOTIFY THE ENGINEER OF ANY UTILITIES IDENTIFIED DURING CONSTRUCTION THAT ARE NOT SHOWN ON THE DRAWINGS OR THAT DIFFER IN SIZE OR MATERIAL.
8. THE CONTRACTOR IS RESPONSIBLE FOR SITE SAFETY; COORDINATION WITH THE OWNER, ALL SUBCONTRACTORS, AND WITH OTHER CONTRACTORS WORKING WITHIN THE LIMITS OF WORK, THE MEANS AND METHODS OF CONSTRUCTING THE PROPOSED WORK.
9. OBTAIN, PAY FOR AND COMPLY WITH PERMITS, NOTICES AND FEES NECESSARY TO COMPLETE THE WORK. ARRANGE AND PAY FOR NECESSARY INSPECTIONS AND APPROVALS FROM THE JURISDICTIONAL AUTHORITIES.
10. SHORE UTILITY TRENCHES WHERE FIELD CONDITIONS DICTATE AND/OR WHERE REQUIRED BY LOCAL, STATE AND FEDERAL HEALTH AND SAFETY CODES.
11. FIELD VERIFY ALL EXISTING CONDITIONS PRIOR TO CONSTRUCTION. IF FIELD CONDITIONS ARE OBSERVED THAT VARY SIGNIFICANTLY FROM THOSE SHOWN ON THE DRAWINGS, IMMEDIATELY NOTIFY THE ENGINEER IN WRITING FOR RESOLUTION OF THE CONFLICTING INFORMATION.
12. PROTECT AND MAINTAIN ALL UTILITIES IN THE AREAS UNDER CONSTRUCTION DURING THE WORK. LEAVE ALL PIPES AND STRUCTURES WITHIN THE LIMITS OF THE CONTRACT IN A CLEAN AND OPERABLE CONDITION AT THE COMPLETION OF THE WORK. TAKE ALL NECESSARY PRECAUTIONS TO PREVENT SAND AND SILT FROM DISTURBED AREAS FROM ENTERING THE DRAINAGE SYSTEM.
13. NOTIFY THE ENGINEER IN WRITING OF ANY CONFLICT, ERROR, AMBIGUITY, OR DISCREPANCY WITH THE PLANS OR BETWEEN THE PLANS AND ANY APPLICABLE LAW, REGULATION, CODE, STANDARD SPECIFICATION, OR MANUFACTURER'S INSTRUCTIONS.
14. THE CONTRACTOR IS RESPONSIBLE FOR SUPPORT OF EXISTING UTILITIES AND REPAIR OR REPLACEMENT COSTS OF UTILITIES DAMAGED DURING CONSTRUCTION, WHETHER ABOVE OR BELOW GRADE. REPLACE DAMAGED UTILITIES IMM

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# **BIGELOW ROAD WTP**

# Webster Water Department

# Town of Webster, Massachusetts

A	9/5/2023	PERMIT SET
MARK	DATE	DESCRIPTION
PROJECT NO:		W5002-034-B
DATE:		SEPTEMBER 5, 2023
FILE:		W5002-034-CS-B-Site.dwg
DRAWN BY:		TCW
DESIGNED/CHECKED BY:		TJG/DMT
APPROVED BY:		-

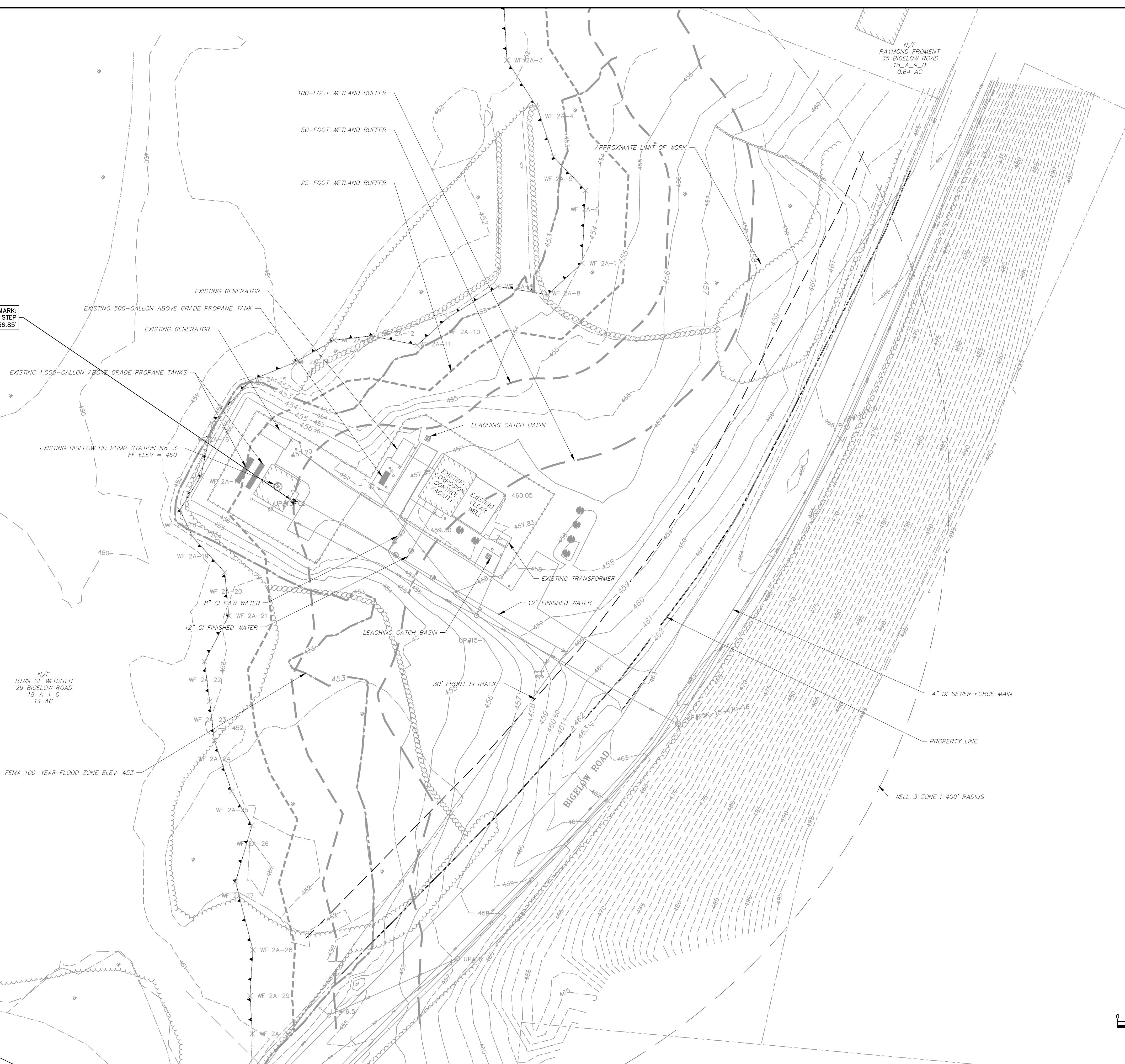
## EXISTING CONDITIONS WATER MAIN AND WTP PLAN

SCALE: 1" = 80'

C-101

Last Saved: 8/29/2023  
Plotted On: Aug 29, 2023-3:19pm By: TWalsh

BENCHMARK:  
BMK-D SQ CUT CONC STEP  
ELEV: 456.85'



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## BIGELOW ROAD WTP

Webster Water  
Department

Town of Webster,  
Massachusetts

A	9/5/2023	PERMIT SET
MARK	DATE	DESCRIPTION
PROJECT NO:	W5002-034-B	
DATE:	SEPTEMBER 5, 2023	
FILE:	W5002-034-CS-B-Site.dwg	
DRAWN BY:	TCW	
DESIGNED/CHECKED BY:	TJG/DMT	
APPROVED BY:	-	

## EXISTING CONDITIONS WTP PLAN

SCALE: 1" = 30'

C-102

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NOT FOR  
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**BIGELOW  
ROAD WTP**

Webster Water  
Department

Town of Webster,  
Massachusetts

MARK	DATE	PERMIT SET DESCRIPTION
PROJECT NO:	W5002-034-B	
DATE:	SEPTEMBER 5, 2023	
FILE:	W5002-034-CS-B-Site.dwg	
DRAWN BY:	TCW	
DESIGNED/CHECKED BY:	TJJ/DMT	
APPROVED BY:	-	

EROSION CONTROL AND  
SITE DEMOLITION PLAN

SCALE: 1" = 30'

C-103

BENCHMARK:  
BMK-D SQ CUT CONC STEP  
ELEV: 456.85

COORDINATE WITH NATIONAL GRID  
TO RELOCATE UTILITY POLE UP 15-1

DEMO EXISTING SHRUBS

ABANDON EXISTING WATER MAIN

EROSION CONTROL BARRIER (TYP)

50' WETLAND BUFFER  
25' WETLAND BUFFER  
DEMO CHAINLINK FENCE  
DEMOLISH EXISTING GENERATORS, PROPANE,  
AND BOLLARDS

WF 2A-3  
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**BIGELOW  
ROAD WTP**

Webster Water  
Department

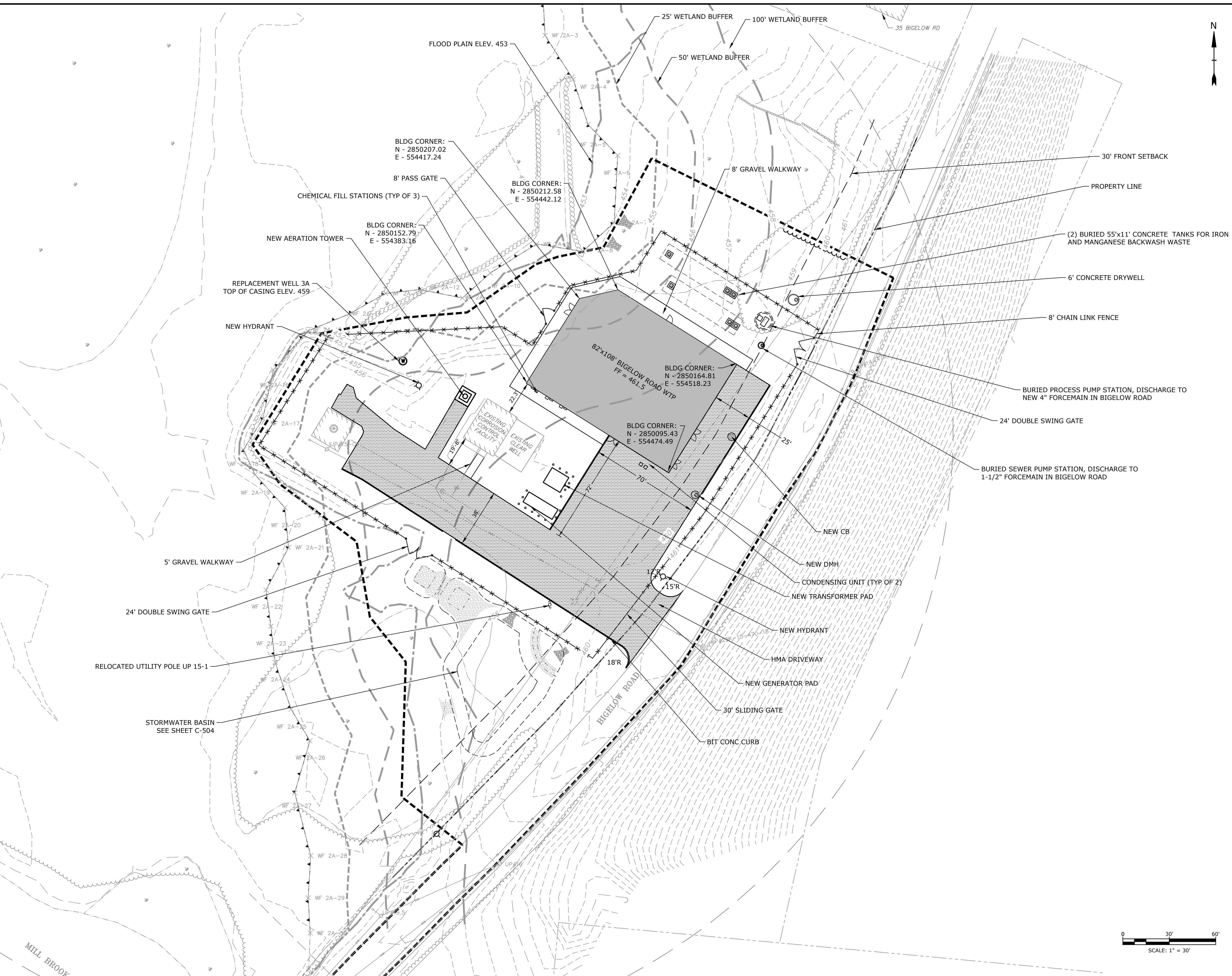
Town of Webster,  
Massachusetts

A	9/5/2023	PERMIT SET
MARK	DATE	DESCRIPTION
PROJECT NO:	W5002-034-B	
DATE:	SEPTEMBER 5, 2023	
FILE:	W5002-034-CS-B-Site.dwg	
DRAWN BY:	TCW	
DESIGNED/CHECKED BY:	TIG/DMT	
APPROVED BY:	-	

**SITE LAYOUT AND  
MATERIALS PLAN**

SCALE: 1" = 30'

**C-104**




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**BIGELOW  
ROAD WTP**

 Webster Water  
Department

 Town of Webster,  
Massachusetts

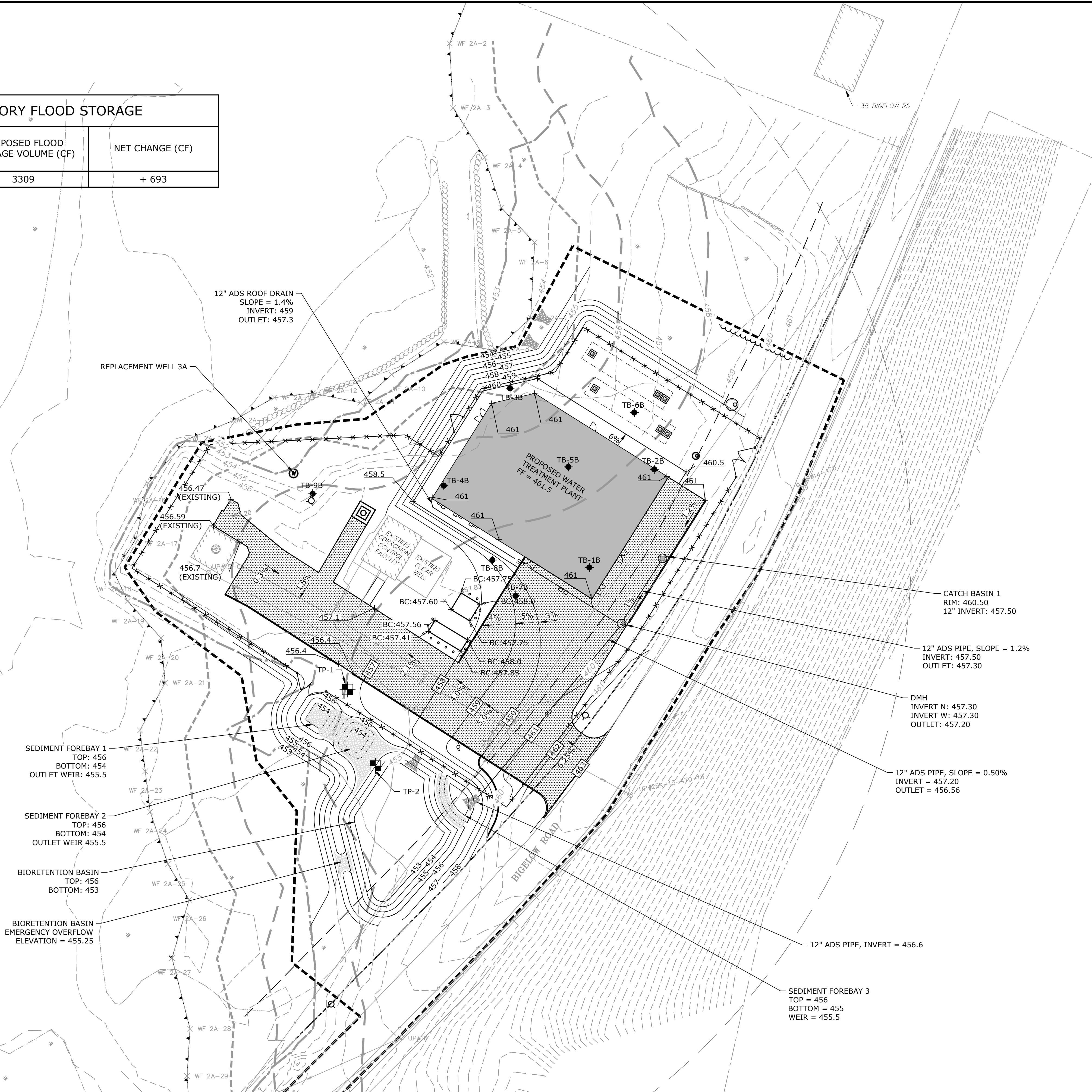
A	9/5/2023	PERMIT SET
MARK	DATE	DESCRIPTION
PROJECT NO:	W5002-034-B	
DATE:	SEPTEMBER 5, 2023	
FILE:	W5002-034-CS-B-Site.dwg	
DRAWN BY:	TCW	
DESIGNED/CHECKED BY:	TJG/DMT	
APPROVED BY:	-	

**SITE GRADING AND  
DRAINAGE PLAN**

SCALE: 1" = 30'

C-105

COMPENSATORY FLOOD STORAGE		
EXISTING FLOOD STORAGE VOLUME (CF)	PROPOSED FLOOD STORAGE VOLUME (CF)	NET CHANGE (CF)
2616	3309	+ 693





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**BIGELOW  
ROAD WTP**

Webster Water  
Department

Town of Webster,  
Massachusetts

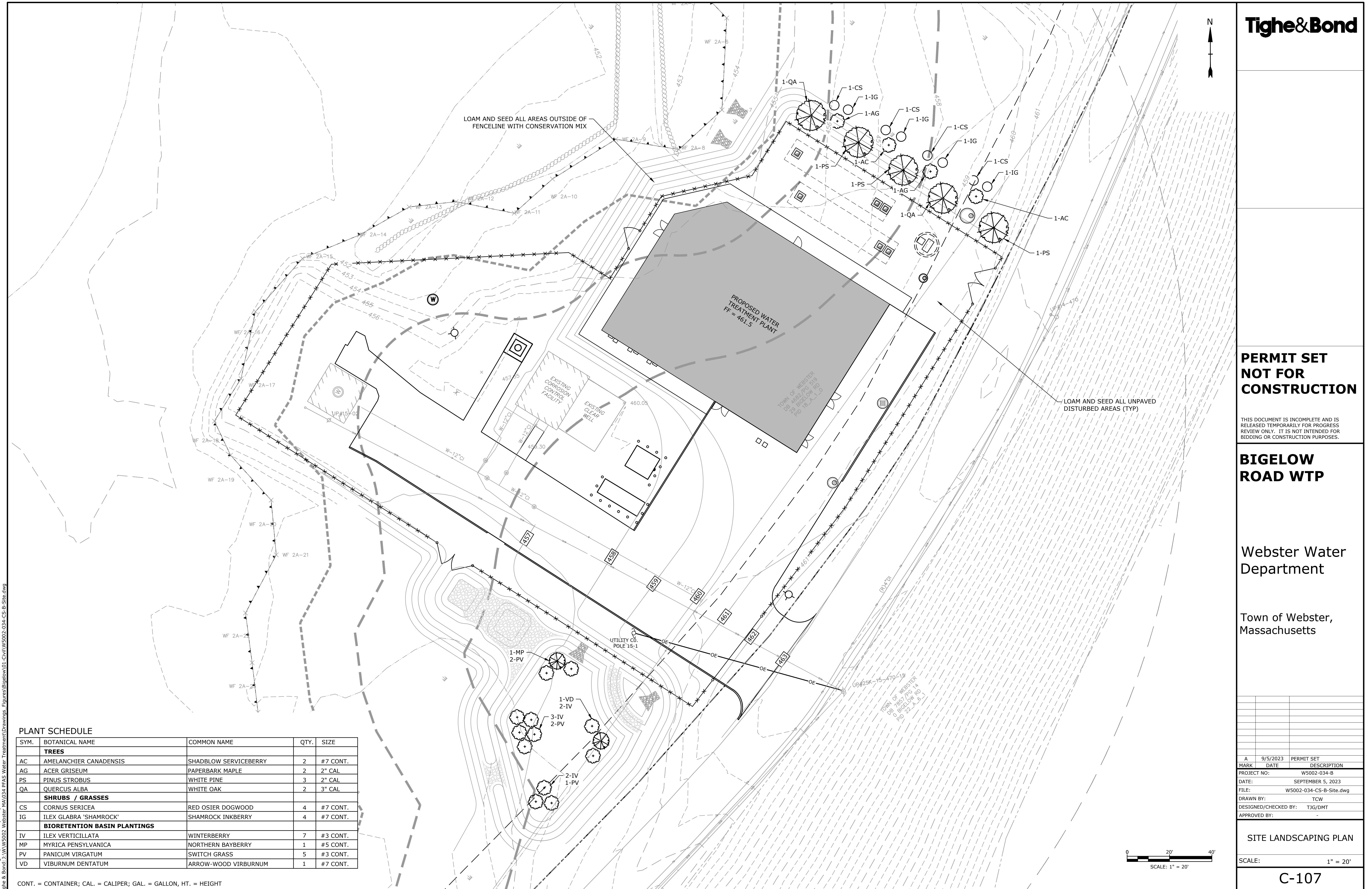
**PLANT SCHEDULE**

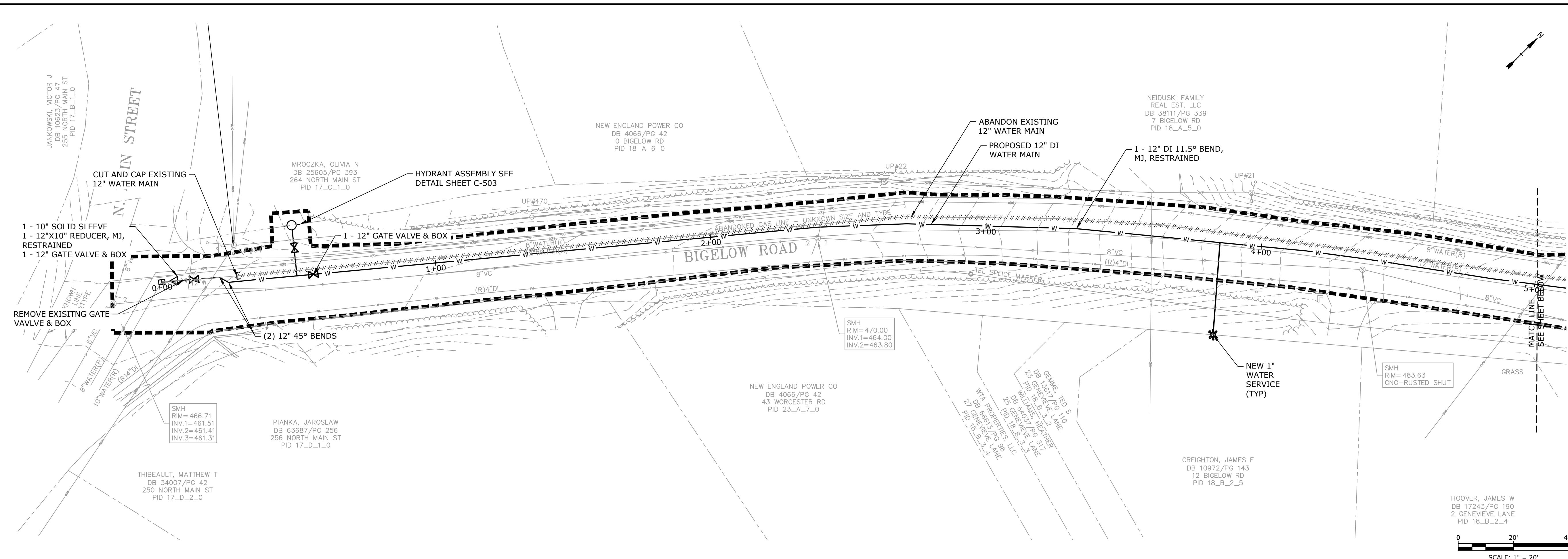
SYM.	BOTANICAL NAME	COMMON NAME	QTY.	SIZE
<b>TREES</b>				
AC	AMELANCHIER CANADENSIS	SHADBLOW SERVICEBERRY	2	#7 CONT.
AG	ACER GRISEUM	PAPERBARK MAPLE	2	2" CAL
PS	PINUS STROBUS	WHITE PINE	3	2" CAL
QA	QUERCUS ALBA	WHITE OAK	2	3" CAL
<b>SHRUBS / GRASSES</b>				
CS	CORNUS SERICEA	RED OSIER DOGWOOD	4	#7 CONT.
IG	ILEX GLABRA 'SHAMROCK'	SHAMROCK INKBERRY	4	#7 CONT.
<b>BIORETENTION BASIN PLANTINGS</b>				
IV	ILEX VERTICILLATA	WINTERBERRY	7	#3 CONT.
MP	MYRICA PENNSYLVANICA	NORTHERN BAYBERRY	1	#5 CONT.
PV	PANICUM VIRGATUM	SWITCH GRASS	5	#3 CONT.
VD	VIBURNUM DENTATUM	ARROW-WOOD VIRBURNUM	1	#7 CONT.

CONT. = CONTAINER; CAL. = CALIPER; GAL. = GALLON, HT. = HEIGHT

0 20' 40'  
SCALE: 1" = 20'

C-107



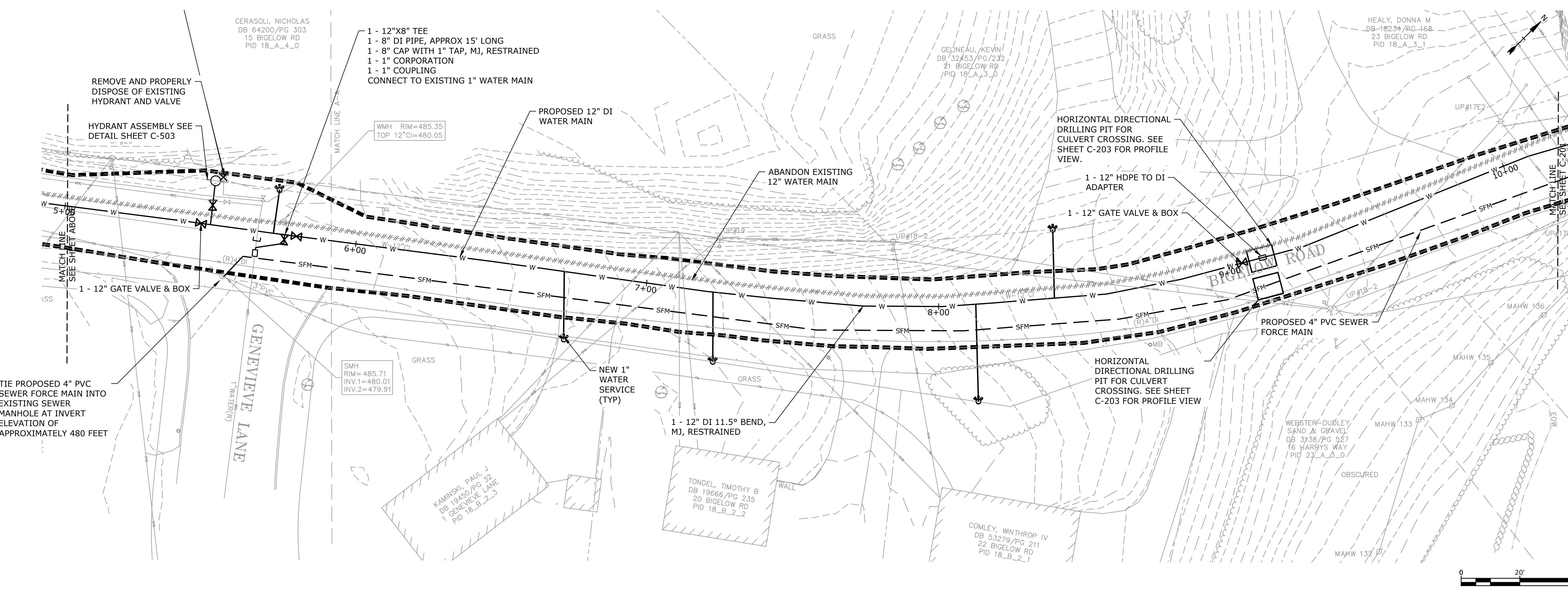


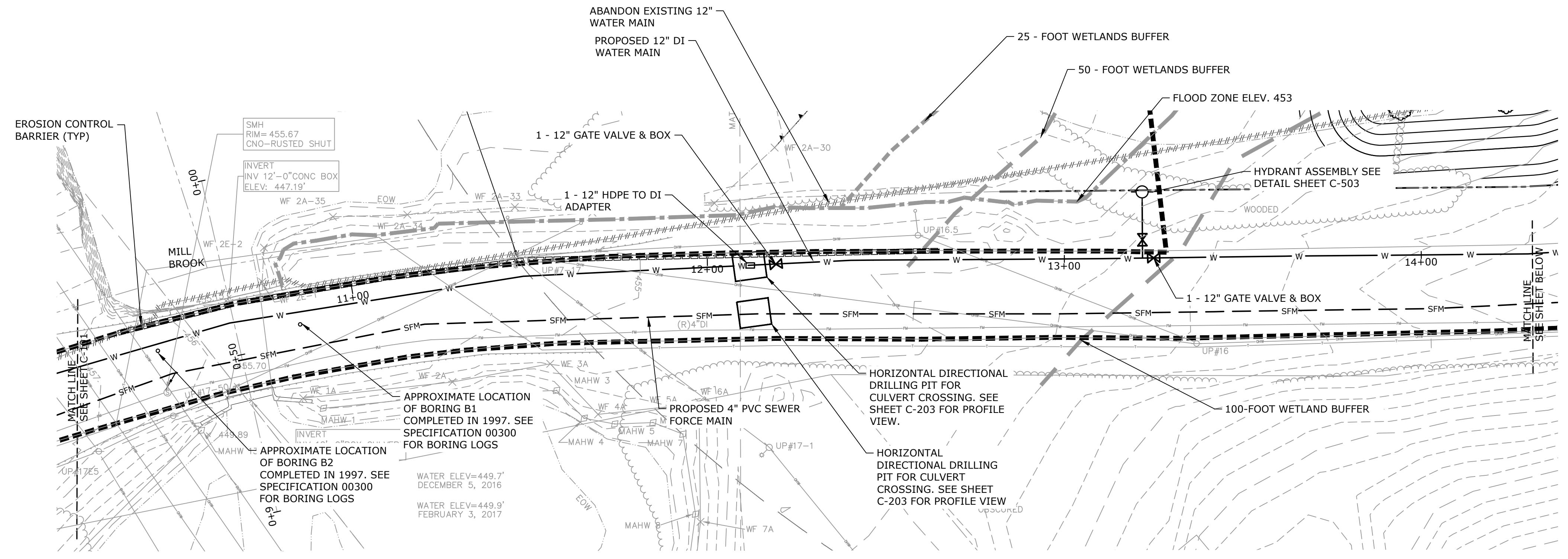
## BIGELOW ROAD WTP

Webster Water  
Department

Town of Webster,  
Massachusetts

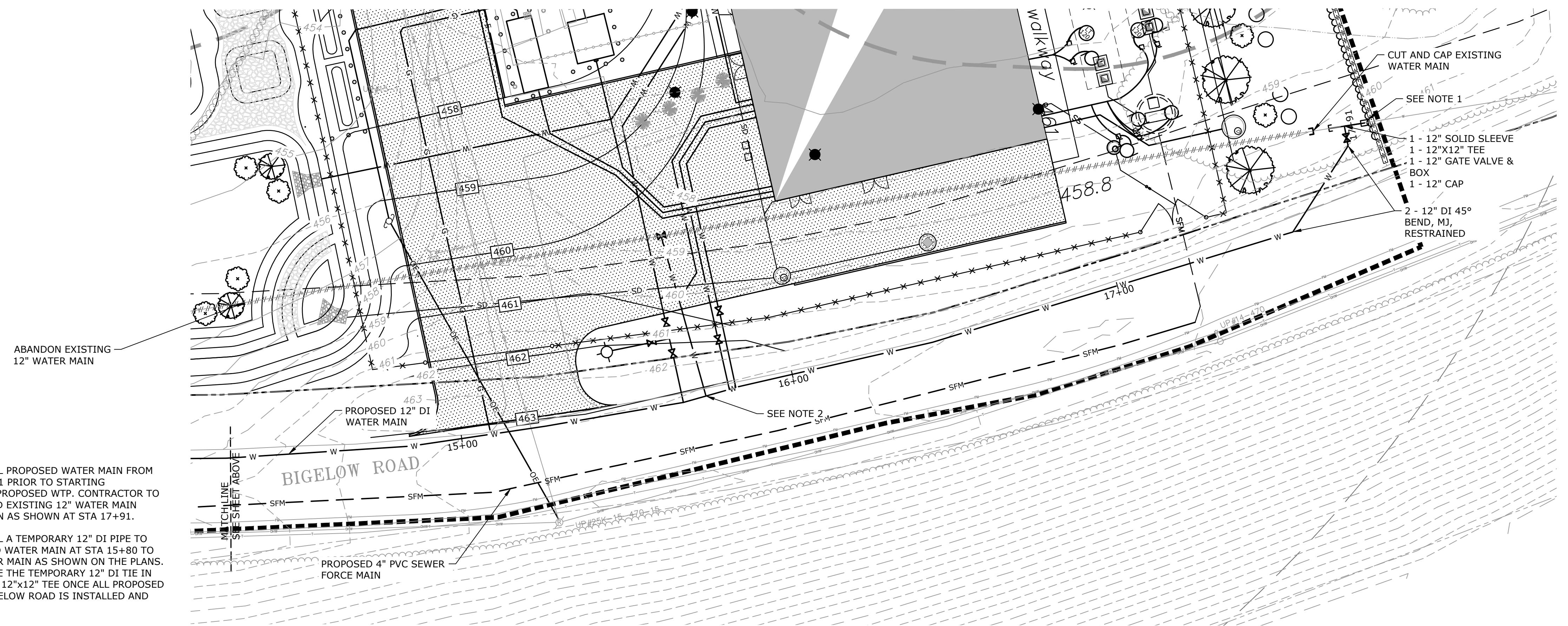
A	9/5/2023	PERMIT SET MARK	DATE	DESCRIPTION
PROJECT NO:	W5002-034-B			
DATE:	SEPTEMBER 5, 2023			
FILE:	W5002-034-Water Main.dwg			
DRAWN BY:	JM			
DESIGNED/CHECKED BY:	ASL			
APPROVED BY:	DMT			
<b>BIGELOW ROAD WATER MAIN STA 0+00 TO STA 10+00</b>				
SCALE:	1" = 20'			
<b>C-201</b>				





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CONSTRUCTION**

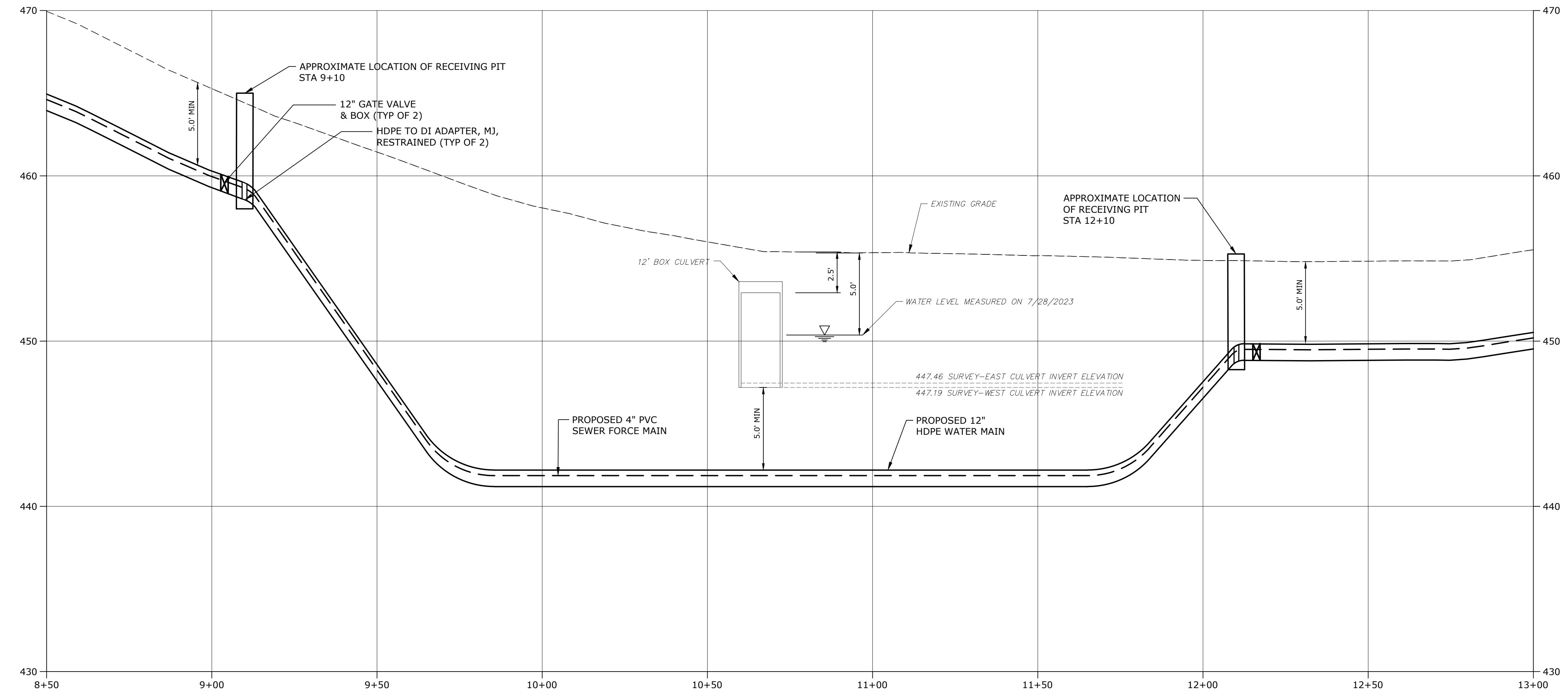
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NOTES  
1. CONTRACTOR TO INSTALL PROPOSED WATER MAIN FROM STA 15+80 TO STA 17+91 PRIOR TO STARTING CONSTRUCTION OF THE PROPOSED WTP. CONTRACTOR TO CONNECT PROPOSED AND EXISTING 12" WATER MAIN PRIOR TO CONSTRUCTION AS SHOWN AT STA 17+91.  
2. CONTRACTOR TO INSTALL A TEMPORARY 12" DI PIPE TO CONNECT THE PROPOSED WATER MAIN AT STA 15+80 TO THE EXISTING 12" WATER MAIN AS SHOWN ON THE PLANS. CONTRACTOR TO REMOVE THE TEMPORARY 12" DI TIE IN AND CAP THE PROPOSED 12"x12" TEE ONCE ALL PROPOSED WATER MAIN ALONG BIGELOW ROAD IS INSTALLED AND ACTIVE.

A	9/5/2023	PERMIT SET
MARK	DATE	DESCRIPTION
PROJECT NO:	W5002-034-B	
DATE:	SEPTEMBER 5, 2023	
FILE:	W5002-034-Water Main.dwg	
DRAWN BY:	JM	
DESIGNED/CHECKED BY:	ASL	
APPROVED BY:	DMT	
<b>BIGELOW ROAD WATER MAIN</b> STA 10+00 TO STA 17+91 AND SEWER FORCE MAIN		
SCALE:	1" = 20'	

C-202



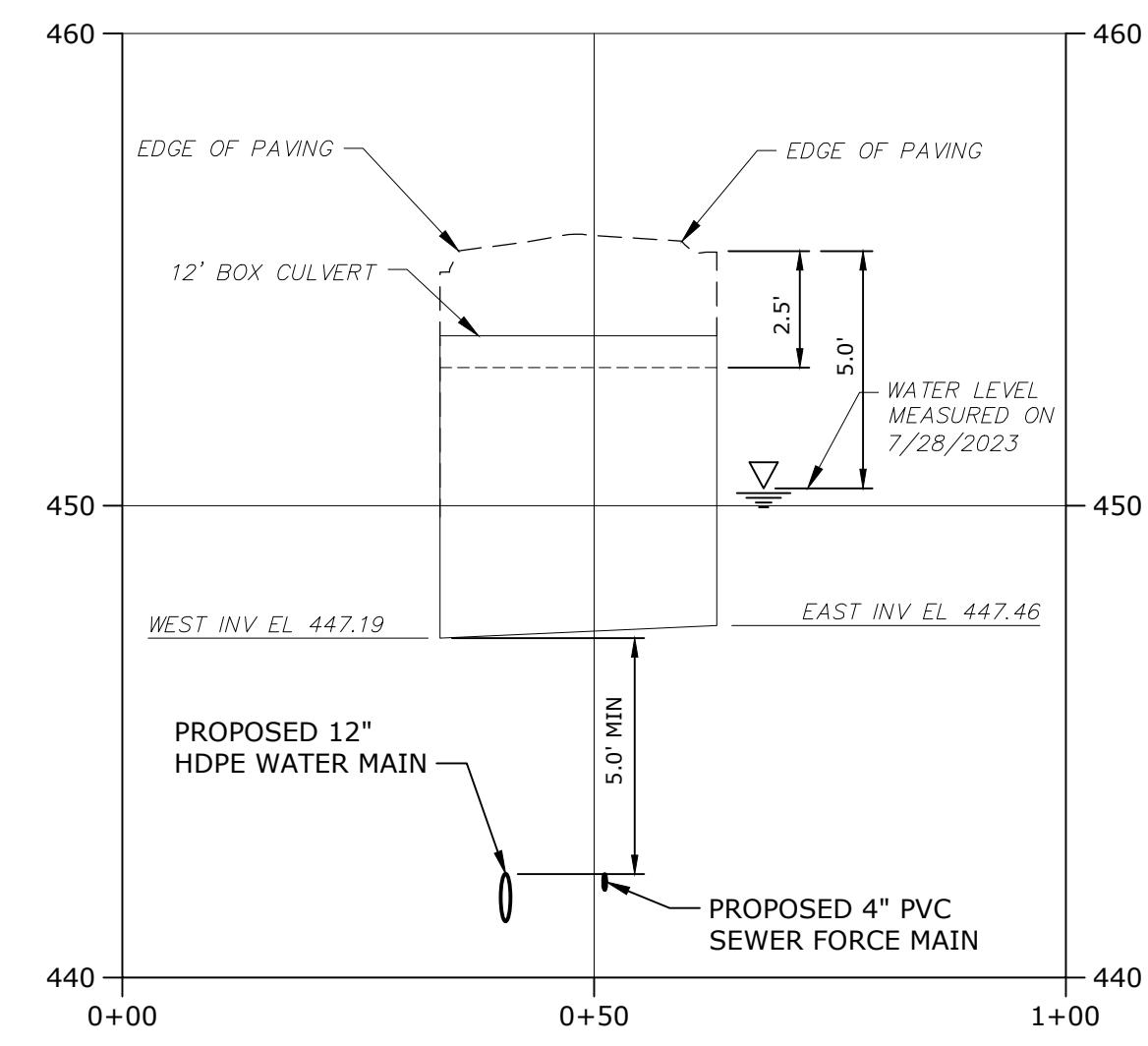
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**BIGELOW  
ROAD WTP**

Webster Water  
Department

Town of Webster,  
Massachusetts

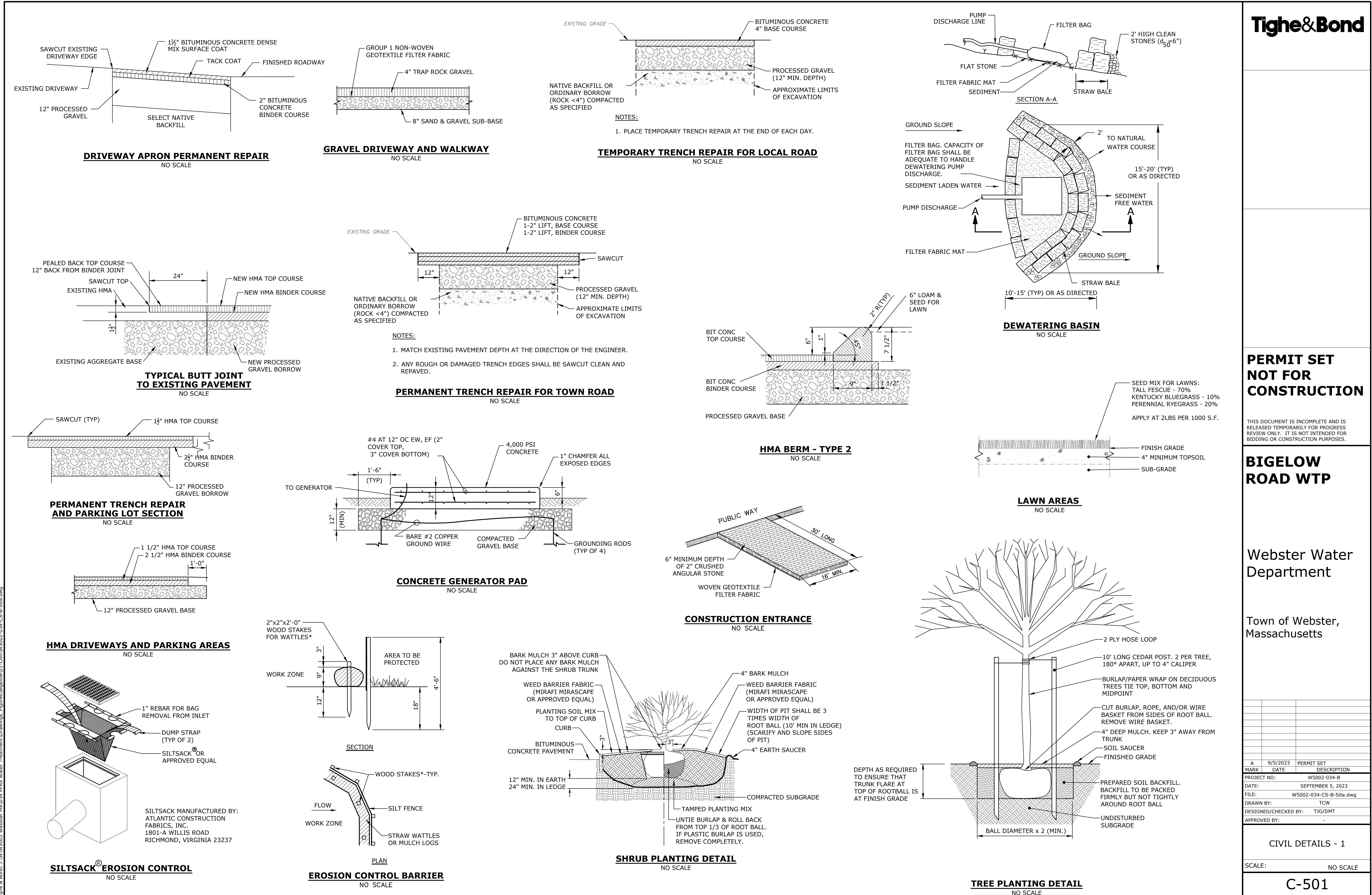


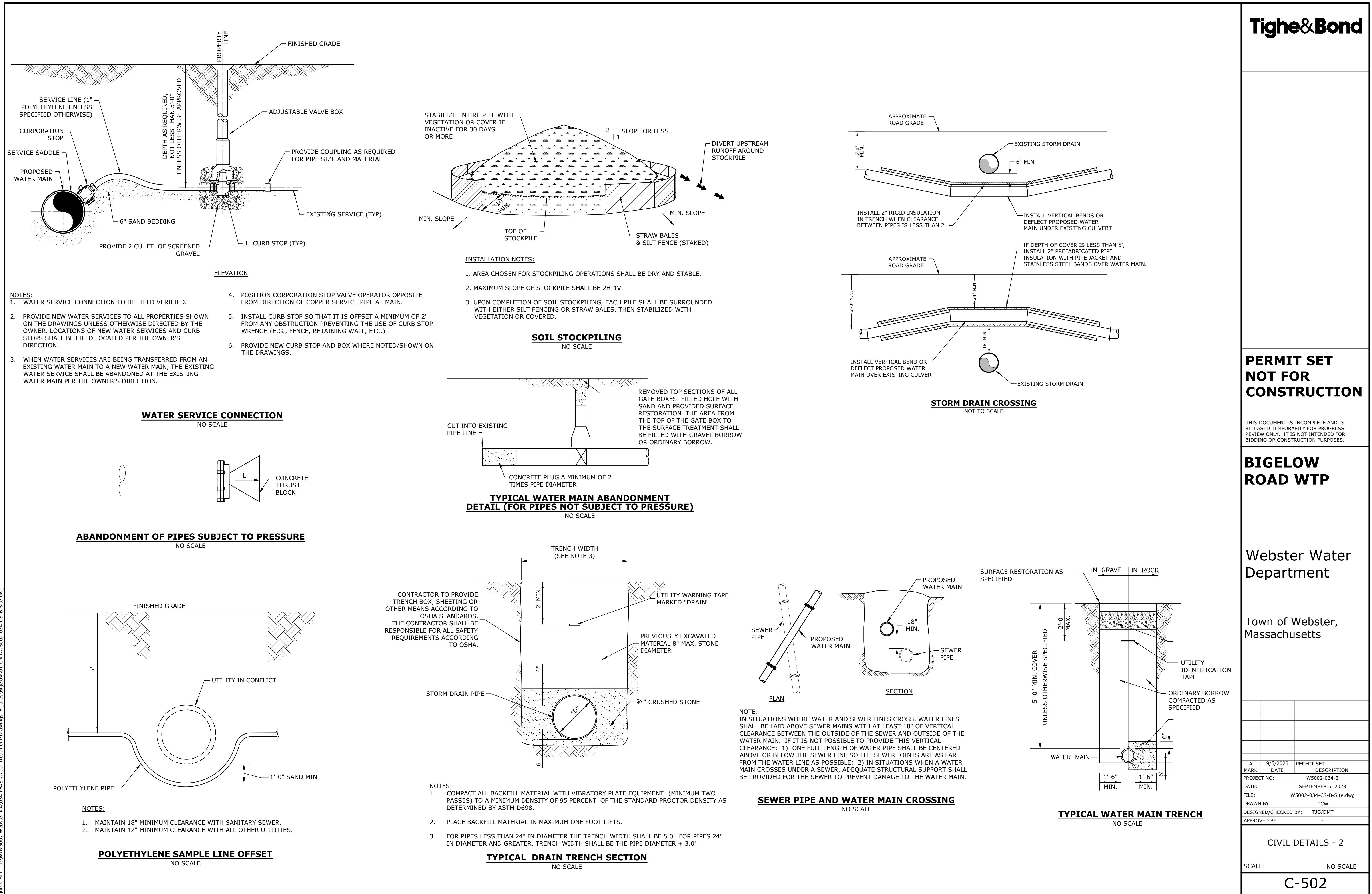
**NOTES**

- EXISTING FORCE MAIN AND DRAINAGE LINE IN BIGELOW ROAD. CONTRACTOR TO COORDINATE DIRECTION DRILL TO PROTECT EXISTING UTILITIES.

HORIZONTAL SCALE 1" = 20'  
0 20' 40'  
0 4' 8'  
VERTICAL SCALE 1" = 4'  
0 4' 8'

C-203





**ELEVATION**

NOTES:

1. ALL CONCRETE SHALL BE PRECAST (3000 PSI).
2. ALL MJ JOINTS SHALL HAVE RETAINER GLANDS.
3. CARE SHALL BE TAKEN TO AVOID BLOCKING HYDRANT BASE DRAIN HOLES DURING PLACEMENT OF THE CONCRETE THRUST BLOCK. DRAIN HOLES SHALL BE VERIFIED AS OPEN AND FREE OF OBSTRUCTIONS PRIOR TO BACKFILLING.
4. CARE SHALL BE TAKEN TO PLACE CONCRETE THRUST BLOCK TO ALLOW ACCESS TO ALL MECHANICAL JOINT GLANDS AND BOLTS. ALL BOLTS AND GLANDS SHALL BE FREE AND UNOBSTRUCTED BEFORE BACKFILLING.
5. HYDRANT SHALL BE SET PLUMB. VERTICAL HYDRANT EXTENSIONS SHALL BE USED AS NECESSARY TO PROPERLY LOCATE THE BREAKAWAY FLANGE PER MANUFACTURER'S RECOMMENDATIONS AND THE WEBSTER WATER DEPARTMENT REQUIREMENTS.
6. SET/LOCATE HYDRANT AS SPECIFIED IN SECTION 02518.

**PLAN**

**DI WATER MAIN CAPPING DETAIL**

NO SCALE

**WATER MAIN CAPPING DETAIL**

NO SCALE

**HYDRANT INSTALLATION**

NO SCALE

**SECTION**

NOTES:

- 1. PRECAST CONCRETE THRUST BLOCK AGAINST UNDISTURBED SOIL.
- 2. PIPE BEDDING MATERIAL.
- 3. PRECAST CONCRETE THRUST BLOCK AGAINST UNDISTURBED SOIL.
- 4. DOWNWARD VERTICAL BEND.
- 5. PRECAST CONCRETE THRUST BLOCK AGAINST UNDISTURBED SOIL.
- 6. UPWARD VERTICAL BEND.

VERTICAL CONCRETE THRUST BLOCK								
UPWARD VERTICAL BENDS			DOWNWARD VERTICAL BENDS					
D	Bearing Area (SF)	L	H	W	Bearing Area (SF)	L	H	W
6	2.9	1.4	2.0	0.7	0.7	4.6	2.3	5.0
8	4.9	1.8	2.7	0.9	1.3	6.0	3.0	5.0
10	7.4	2.2	3.4	1.1	1.9	7.4	3.7	5.0
12	10.5	2.6	4.0	1.3	2.7	8.8	4.4	5.0

\* THE WIDTH OF THE BLOCK (W) IS ASSUMED TO BE THE WIDTH OF THE TRENCH.

**PLAN AT BEND**

**SECTION**

NOTES:

1. DIMENSIONS SHOWN CALCULATED PER 200 PSI INTERNAL PIPE PRESSURE FOR SOIL BEARING LOADS OF 3,000 PSF.
2. CONCRETE THRUST BLOCKS SHALL BE CONSTRUCTED OF PRECAST CONCRETE AGAINST UNDISTURBED SOIL.
3. DIMENSIONS L, W, & H MAY BE ADJUSTED TO MEET FIELD CONDITIONS PROVIDED THE BEARING AREA REMAINS UNCHANGED.
4. THE HEIGHT OF THE BLOCK (H) SHALL BE LESS THAN OR EQUAL TO HALF THE TRENCH DEPTH.
5. POLYETHYLENE SHEETING SHALL BE PLACED OVER MJ FITTINGS TO PREVENT DIRECT CONTACT BETWEEN CONCRETE AND THE FITTING.

D	Bearing Area (SF)	45 bend			11 1/4 or 22 1/2 bend			Tee/End				
		L	H	W	Bearing Area (SF)	L	H	W	Bearing Area (SF)	L	H	W
6	2.9	1.4	2.0	0.7	1.5	1.0	1.5	0.5	3.7	1.6	2.3	0.8
8	4.9	1.8	2.7	0.9	2.5	1.3	1.9	0.7	6.4	2.1	3.1	1.1
10	7.4	2.2	3.4	1.1	3.8	1.6	2.4	0.8	9.7	2.5	3.9	1.3
12	10.5	2.6	4.0	1.3	5.3	1.9	2.8	1.0	13.7	3.0	4.6	1.5
16	18.2	3.5	5.2	1.8	9.3	2.5	3.7	1.3	23.8	4.0	5.9	2.0

**CONCRETE THRUST BLOCK FOR HORIZONTAL BENDS AND TEES**

NO SCALE

**6" DIAMETER STEEL BOLLARD**

NO SCALE

Size (in)	Fitting	Minimum Restrained Length (ft)
6"	90 Bend	19.5
6"	45 Vertical up bend	8.1
6"	45 Vertical down bend	20.5
8"	90 Bend	25.2
8"	45 Bend	10.4
8"	22 1/2 bend	5.0
8"	11 1/4 bend	2.5
8"	Dead end/Valve	49.4
8"	45 Vertical up bend	10.4
8"	45 Vertical down bend	26.6
8"	8" x 6" Tee	18.7
8"	8" x 8" Tee	33.2
10"	45 Bend	12.6
10"	45 Vertical up bend	12.6
10"	45 Vertical down bend	32.2
12"	90 Bend	35.7
12"	45 Bend	14.8
12"	22 1/2 bend	7.1
12"	11 1/4 bend	3.5
12"	Dead end/Valve	49.4
12"	45 Vertical up bend	14.8
12"	45 Vertical down bend	37.9
12"	12" x 12" Tee	60.3
12"	12" x 8" Tee	33.2
12"	12" x 6" Tee	18.7

**MINIMUM RESTRAINED LENGTHS FOR DI PIPE**

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## BIGELOW ROAD WTP

Webster Water  
Department

Town of Webster,  
Massachusetts

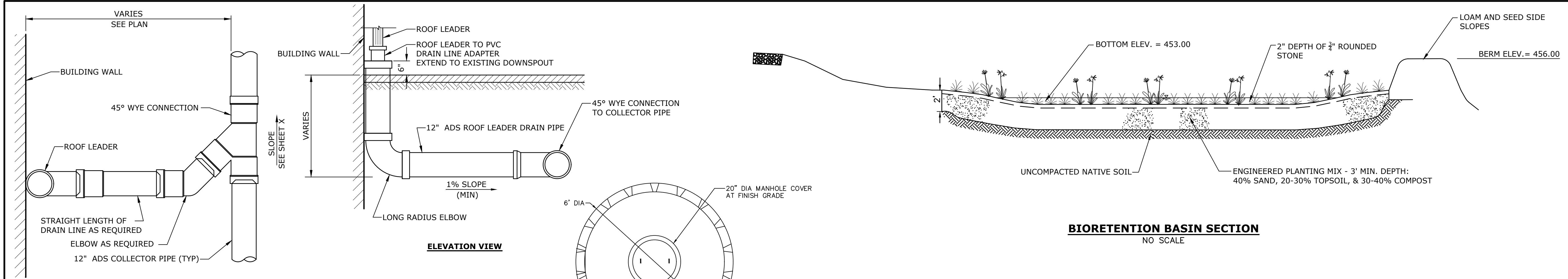
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DATE	SEPTEMBER 5, 2023	
FILE	W5002-034-CS-B-Site.dwg	
DRAWN BY	TMP	
DESIGNED/CHECKED BY	TJG/DMT	
APPROVED BY	-	

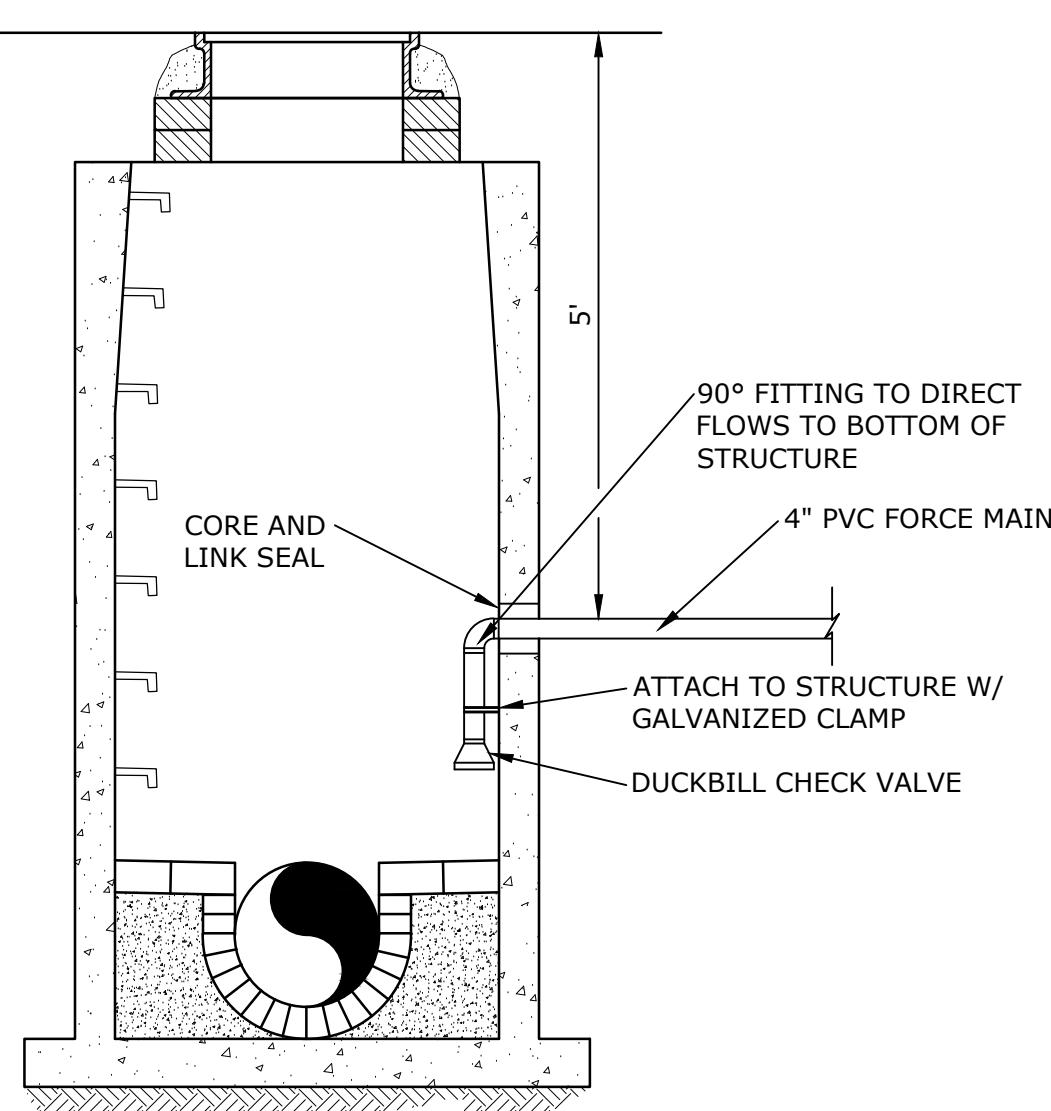
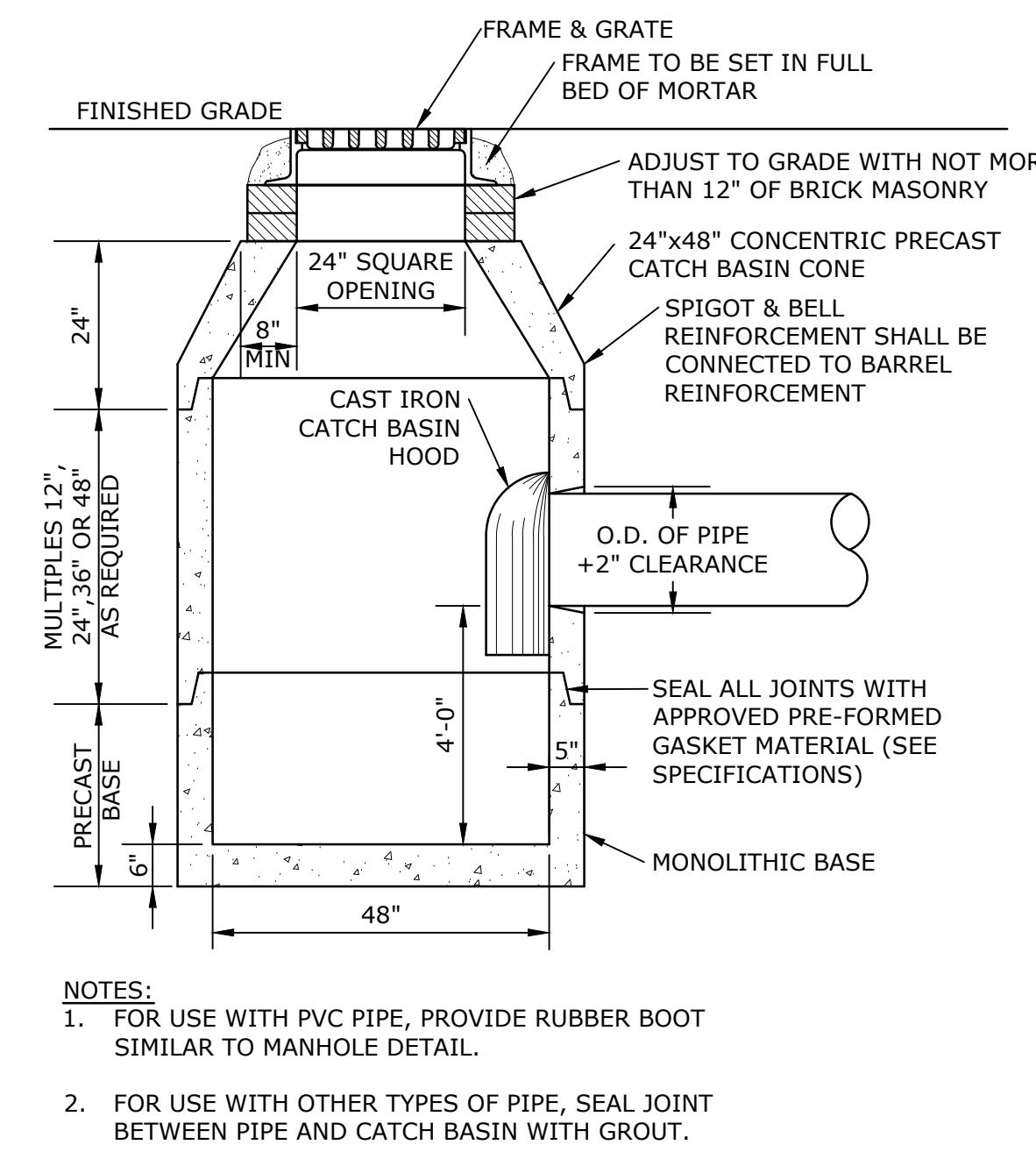
CIVIL DETAILS - 3

SCALE: NO SCALE

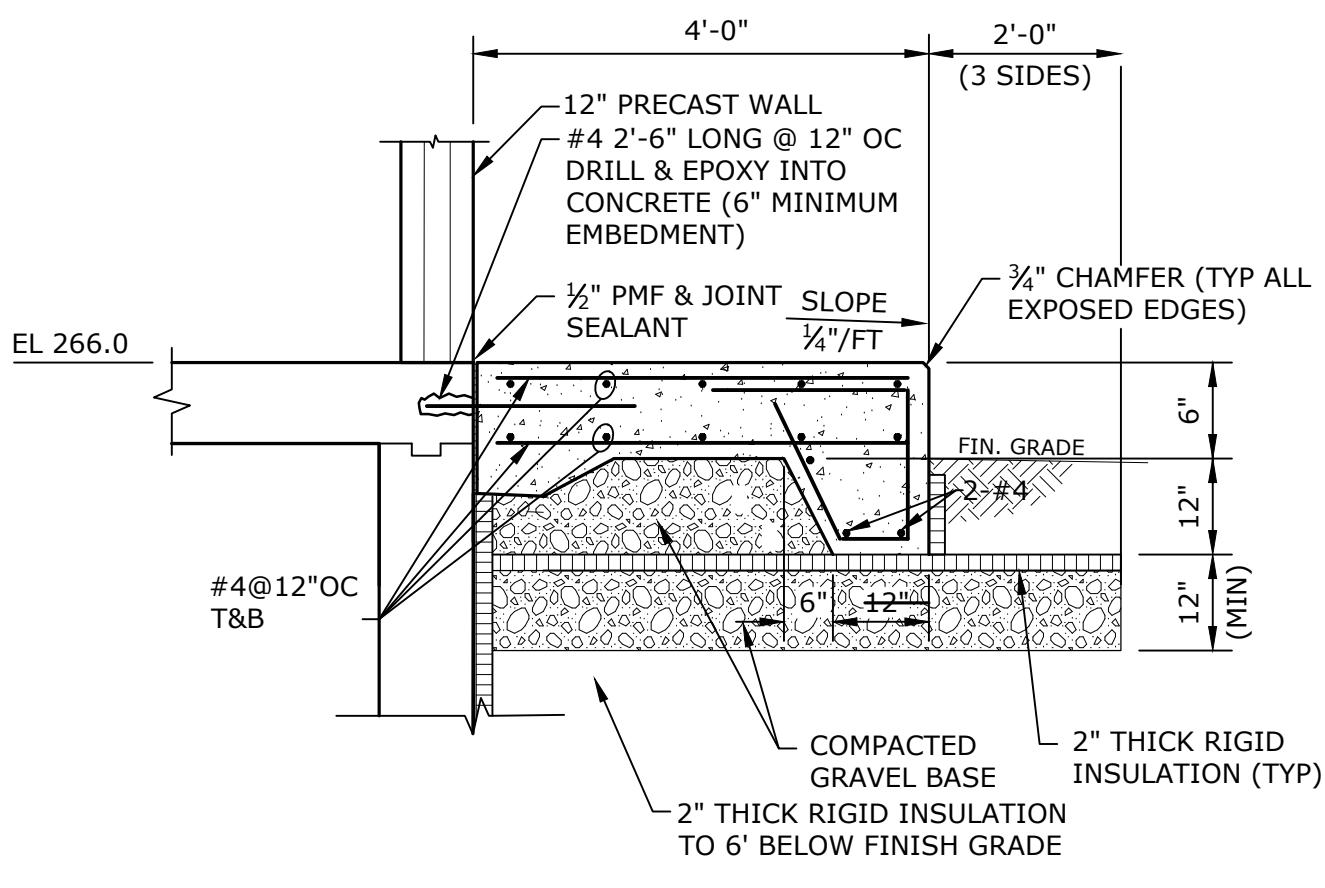
C-503

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Plotted On: Aug 28, 2023 3:20pm By: TWalsh  
Tighe & Bond: 1:WW5002 Webster MA034 PFAS Water Treatment Drawings Figures/Bigelow01-civil/W5002-034-CS-B-Site.dwg

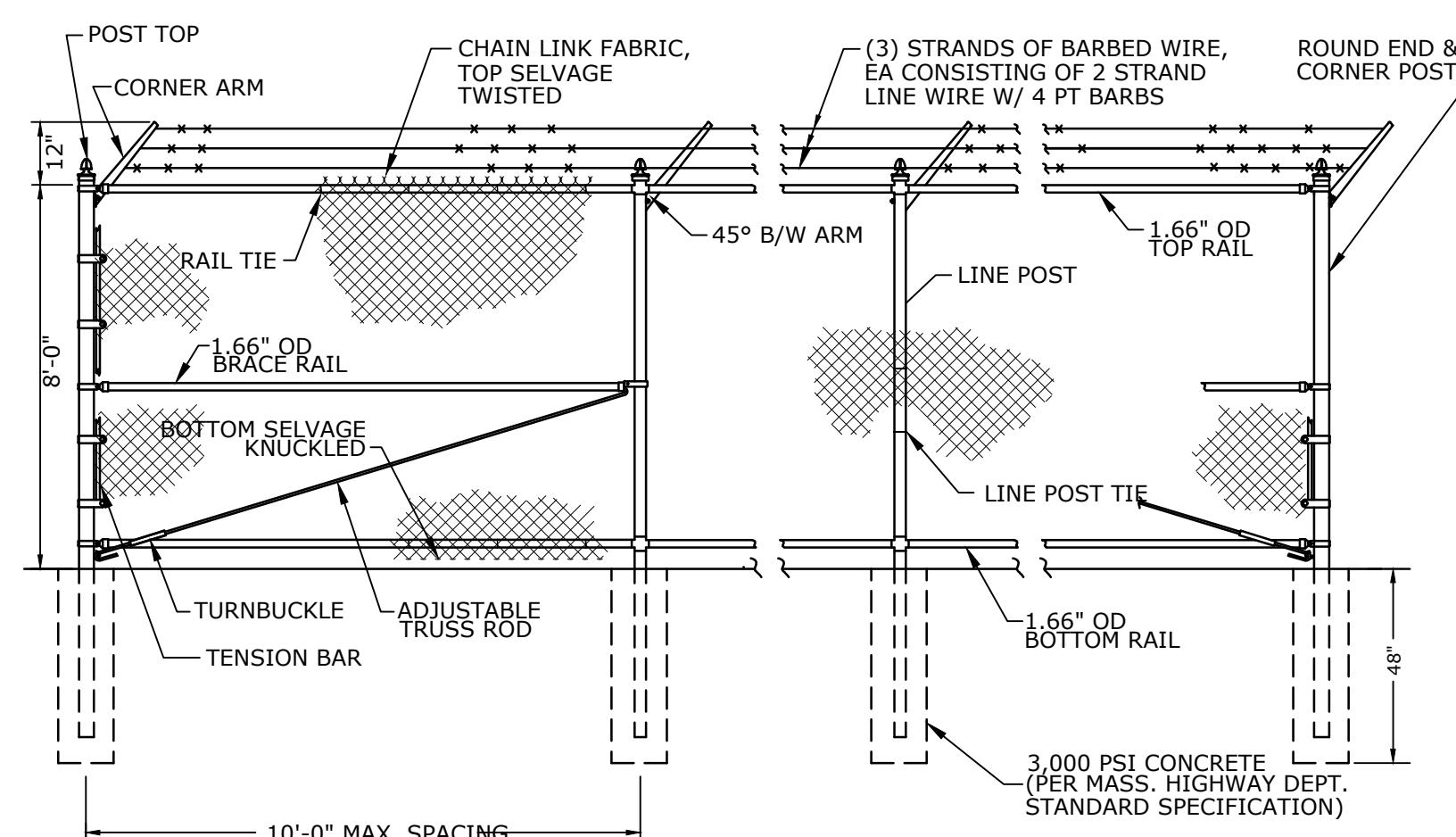




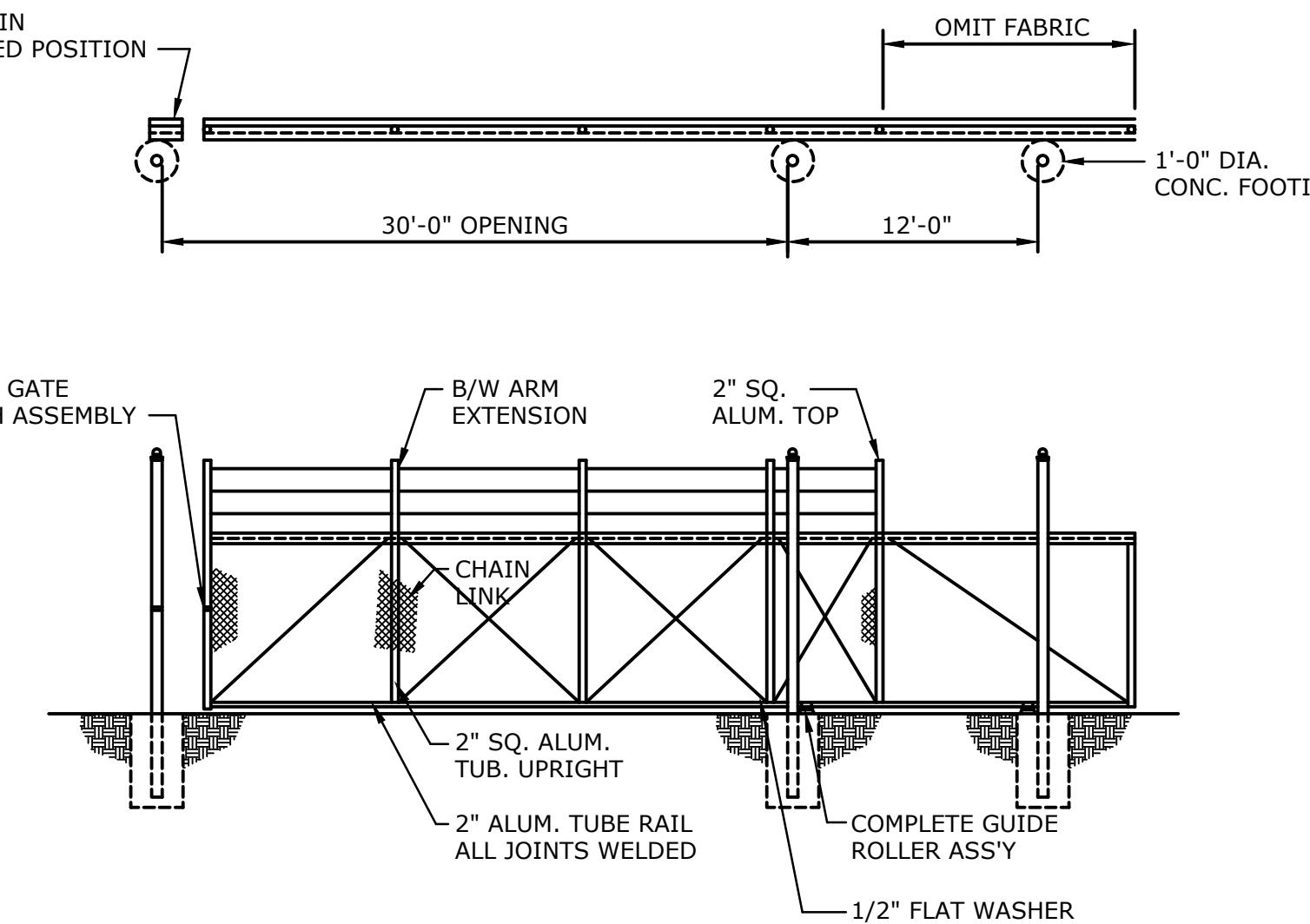
**PRECAST CONCRETE DEEP SUMP HOODED CATCH BASIN (CB)**  
NO SCALE



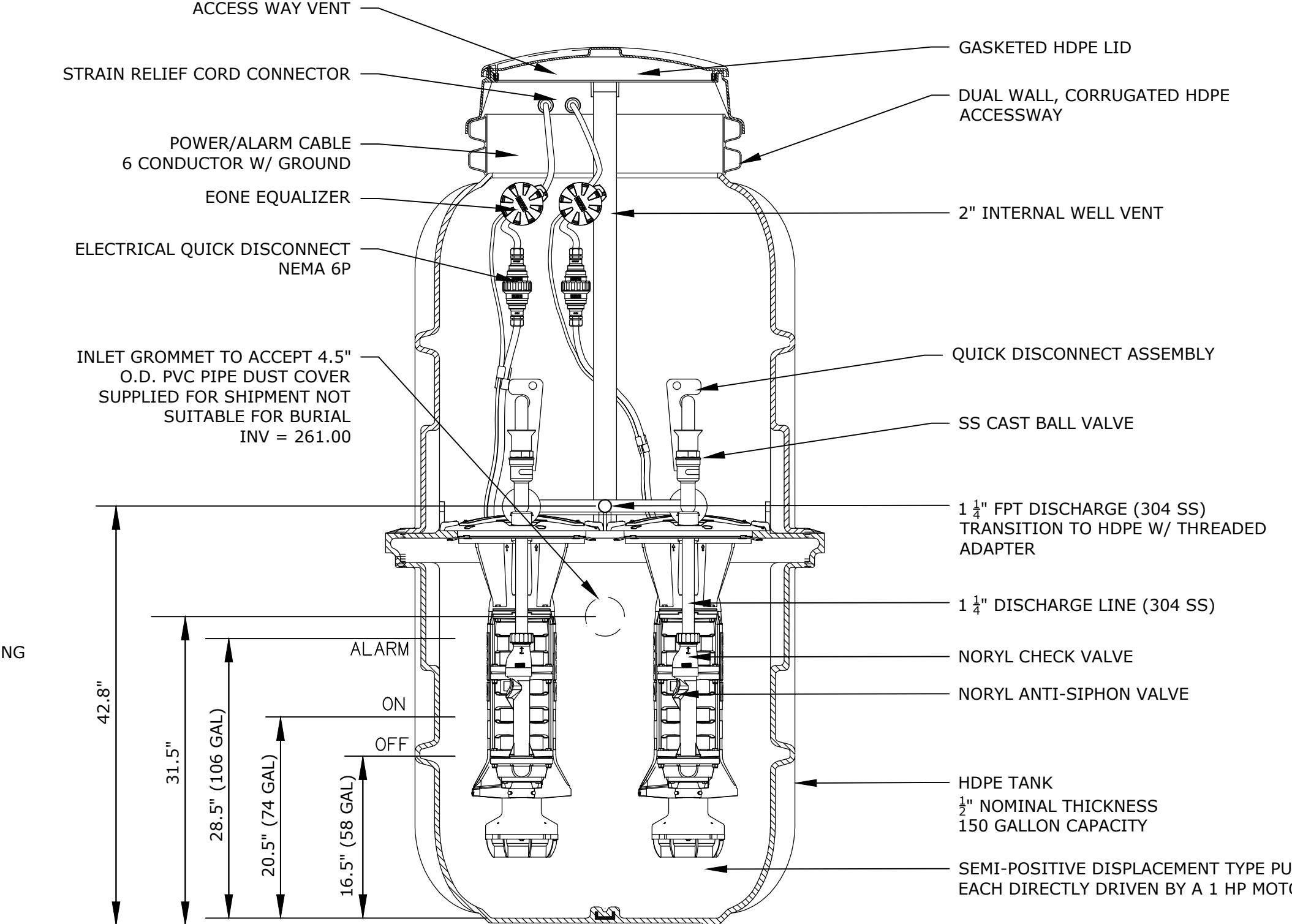
**CONCRETE LANDING AT EXTERIOR DOORS**  
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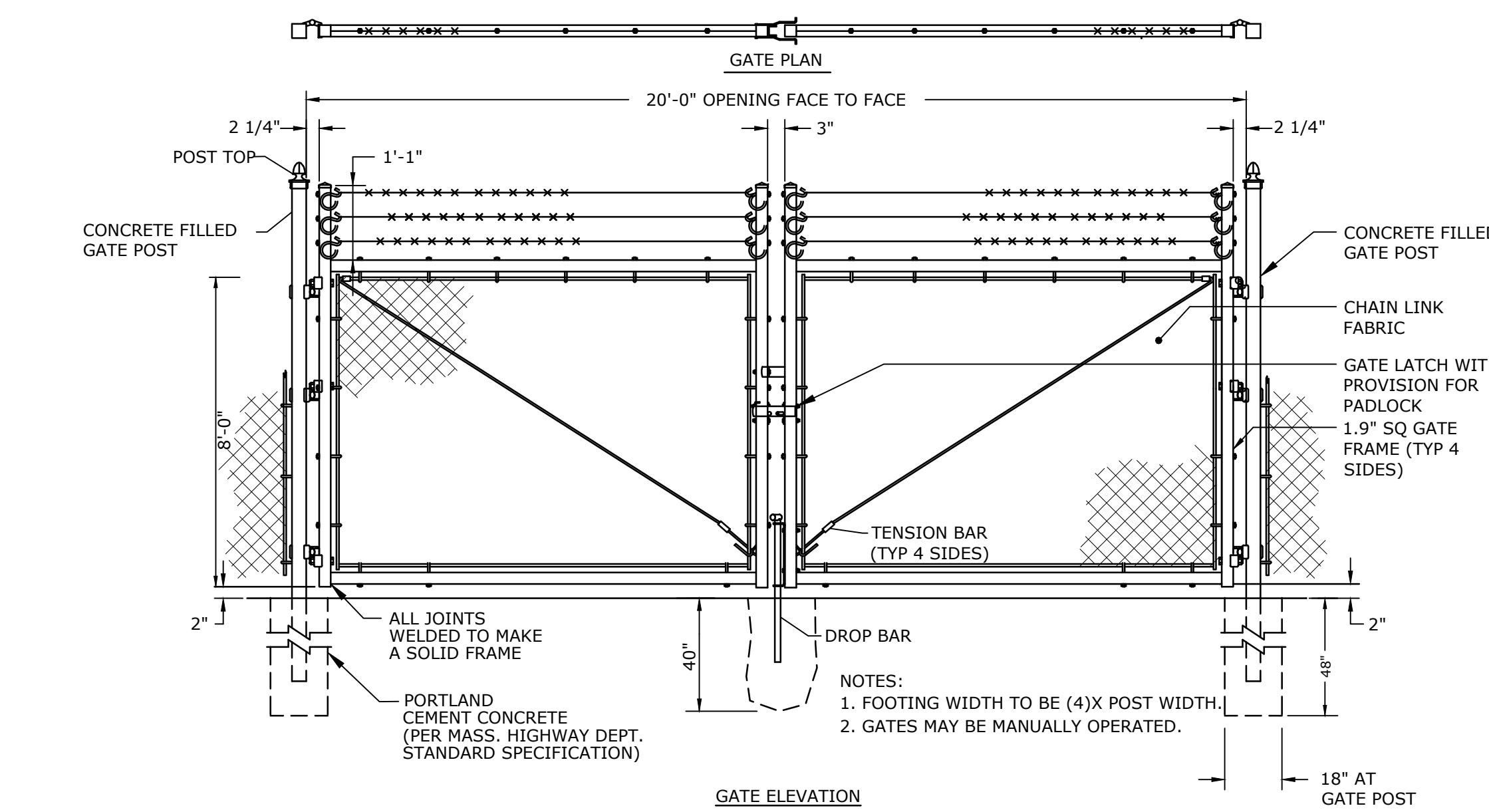
**CHAIN LINK FENCE**  
NO SCALE



**SINGLE CANTILEVER SLIDING GATE**  
NO SCALE



**BURIED SEWER PUMP STATION**  
NO SCALE



**DOUBLE SWING GATE**  
NO SCALE

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## BIGELOW ROAD WTP

## Webster Water Department

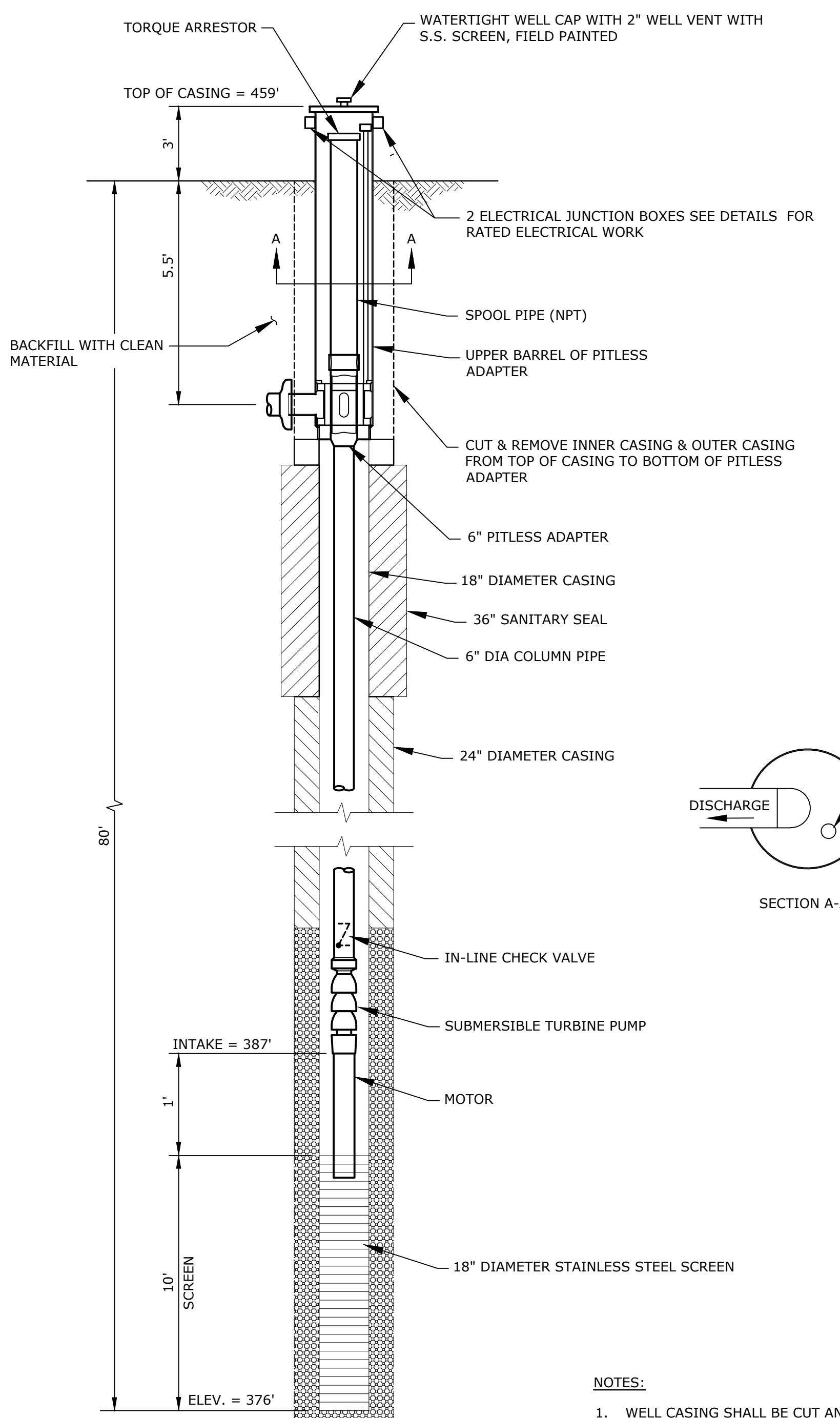
## Town of Webster, Massachusetts

MARK	9/5/2023	PERMIT SET
DATE	SEPTEMBER 5, 2023	DESCRIPTION
PROJECT NO:	W5002-034-B	
FILE:	W5002-034-CS-B-Site.dwg	
DRAWN BY:	TCW	
DESIGNED/CHECKED BY:	TJG/DMT	
APPROVED BY:		

CIVIL DETAILS - 5

SCALE: NO SCALE

C-505

**NOTES:**

1. WELL CASING SHALL BE CUT AND CAPPED. A PITLESS ADAPTER SHALL BE INSTALLED AT CENTERLINE OF DISCHARGE AT 5'-6" BELOW LOCAL GROUND ELEVATION.
2. THE PITLESS ADAPTER SHALL BE SIZED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.
3. THE FINISHED GRADE FOR A RADIUS OF 5 FEET AROUND THE WELL CASING SHALL BE FILLED WITH A HIGH CLAY CONTENT LOAM TO A SLOPE OF ABOUT ONE INCH PER FOOT, COMPAKTED, FINE GRADED AND SEEDED.
4. CONTRACTOR SHALL PROVIDE A 1.5" PVC STILLING WELL TUBE WITHIN THE WELL FOR THE WELL LEVEL TRANSDUCER.

**WELLHEAD PITLESS ADAPTER CONNECTION AND GRAVEL PACKED WELL 3A DETAIL**

NO SCALE

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ROAD WTP**Webster Water  
DepartmentTown of Webster,  
MassachusettsA 9/5/2023 PERMIT SET  
MARK DATE DESCRIPTION

PROJECT NO: W5002-034-B

DATE: SEPTEMBER 5, 2023

FILE: W5002-034-CS-B-Site.dwg

DRAWN BY: TCW

DESIGNED/CHECKED BY: TIG/DMT

APPROVED BY: -

**WELL 3A DETAILS**

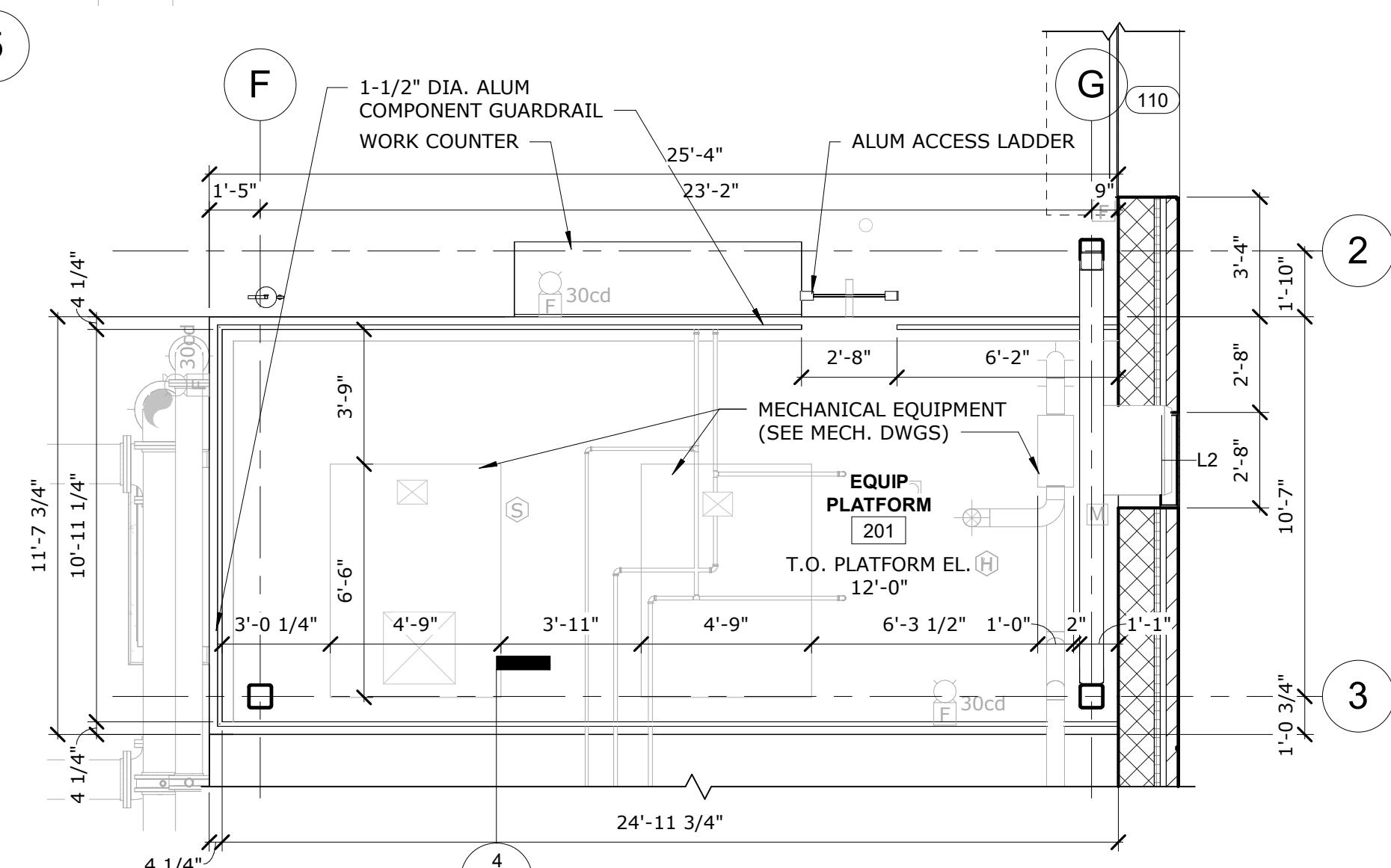
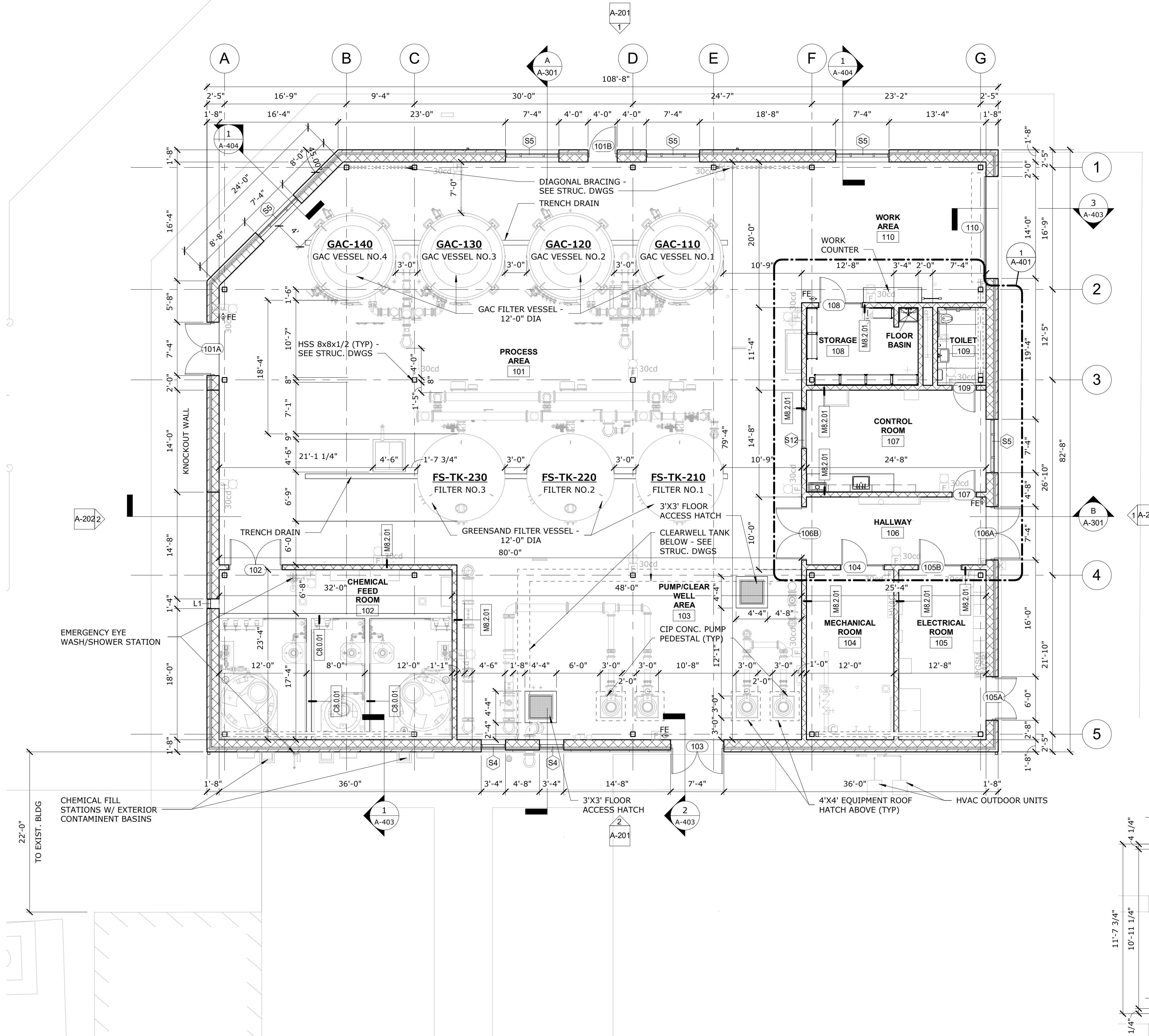
SCALE: NO SCALE

**C-506**



## GENERAL FLOOR PLAN NOTES

- DO NOT SCALE PLANS. FIELD VERIFY AND COORDINATE ALL DIMENSIONS AND CONDITIONS SHOWN. REPORT ANY DISCREPANCIES OR DEVIATIONS TO THE ENGINEER.
- LAY OUT NEW PARTITIONS FOR THE ENGINEER'S REVIEW PRIOR TO ROUGH FRAMING OF WALLS. VERIFY COLUMN LOCATIONS AND COORDINATE WITH PARTITION LAYOUT.
- DIMENSIONS ARE FROM FACE OF MASONRY OR FACE OF STUD UNLESS NOTED OTHERWISE.
- SEE ACCESSIBILITY STANDARDS ON GENERAL ARCHITECTURAL SHEETS FOR CLEARANCES AND MOUNTING HEIGHTS OF TYPICAL ELEMENTS AND ACCESSORIES.
- ACCESSIBILITY CLEARANCES ON ACCESSIBLE ROUTES AND ACCESSIBLE DESIGNATED RESTROOMS SHALL TAKE PRIORITY OVER OTHER DIMENSIONS UNLESS NOTED OTHERWISE.
- AT PENETRATIONS THROUGH FIRE RATED ASSEMBLIES, PROVIDE ADDITIONAL BLOCKING, FIRESTOPPING, AND/OR FIRESAFING AT BOTH SIDES OF THE ASSEMBLY TO MAINTAIN FIRE RATING REQUIRED BY CODE.
- PROVIDE ACCESS PANELS AS REQUIRED AT WALL AND CEILING LOCATIONS FOR ACCESS TO DUCTWORK, PIPING VALVES, CLEANOUTS, AND OTHER CONCEALED ITEMS FOR MAINTENANCE. WHERE ACCESS PANELS ARE REQUIRED IN FIRE RATED ASSEMBLIES, PROVIDE FIRE RATED ACCESS PANELS OF EQUAL RATING TO THE ASSEMBLY. COORDINATE LOCATIONS WITH STRUCTURAL, M/E/P, HVAC, AND FP DRAWINGS.
- SEE ELECTRICAL DRAWINGS FOR LOCATIONS OF SURFACE MOUNTED AND CONCEALED WIRING (CONDUITS, JUNCTION BOXES, ETC.) COORDINATE WITH INSTALLATION OF OTHER SYSTEMS AND ROOM FINISHES AS REQUIRED.
- PROVIDE BLOCKING WHERE REQUIRED FOR WALL MOUNTED CABINETS, SHELVES, TOILET ACCESSORIES, AND FIXTURE COMPONENTS. COORDINATE BLOCKING LOCATIONS WITH THE ARCHITECTURAL FLOOR PLANS, INTERIOR ELEVATIONS, AND ACCESSIBILITY REQUIREMENTS DEMONSTRATED IN THE ARCHITECTURAL GENERAL DRAWINGS.
- PROVIDE SEPARATION AT DISSIMILAR METALS AND MATERIALS TO PREVENT GALVANIC ACTION.
- PAINT EXPOSED SURFACES EXCEPT WHERE FINISH SCHEDULES INDICATE THAT A SURFACE OR MATERIAL IS NOT TO BE PAINTED OR IS TO REMAIN UNFINISHED. IF THE FINISH SCHEDULE DOES NOT SPECIFICALLY MENTION AN ITEM OR SURFACE, FINISH THE ITEM OR SURFACE TO MATCH SIMILAR ADJACENT MATERIALS.
- ALL STRUCTURAL, M/E/P, HVAC, AND FP SYSTEMS SHOWN ON THE ARCHITECTURAL DRAWINGS ARE DEPICTED FOR GENERAL REPRESENTATION AND SHALL NOT TAKE PRIORITY OVER THE ENGINEER'S DRAWINGS. THE CONTRACTOR SHALL NOTIFY THE ENGINEER IF DISCREPANCIES EXIST BETWEEN THE ARCHITECTURAL AND ENGINEERING DRAWINGS.
- SEE ALTERNATES SCHEDULE IN THE SPECIFICATIONS FOR ADDITIONAL WORK DESCRIPTIONS.

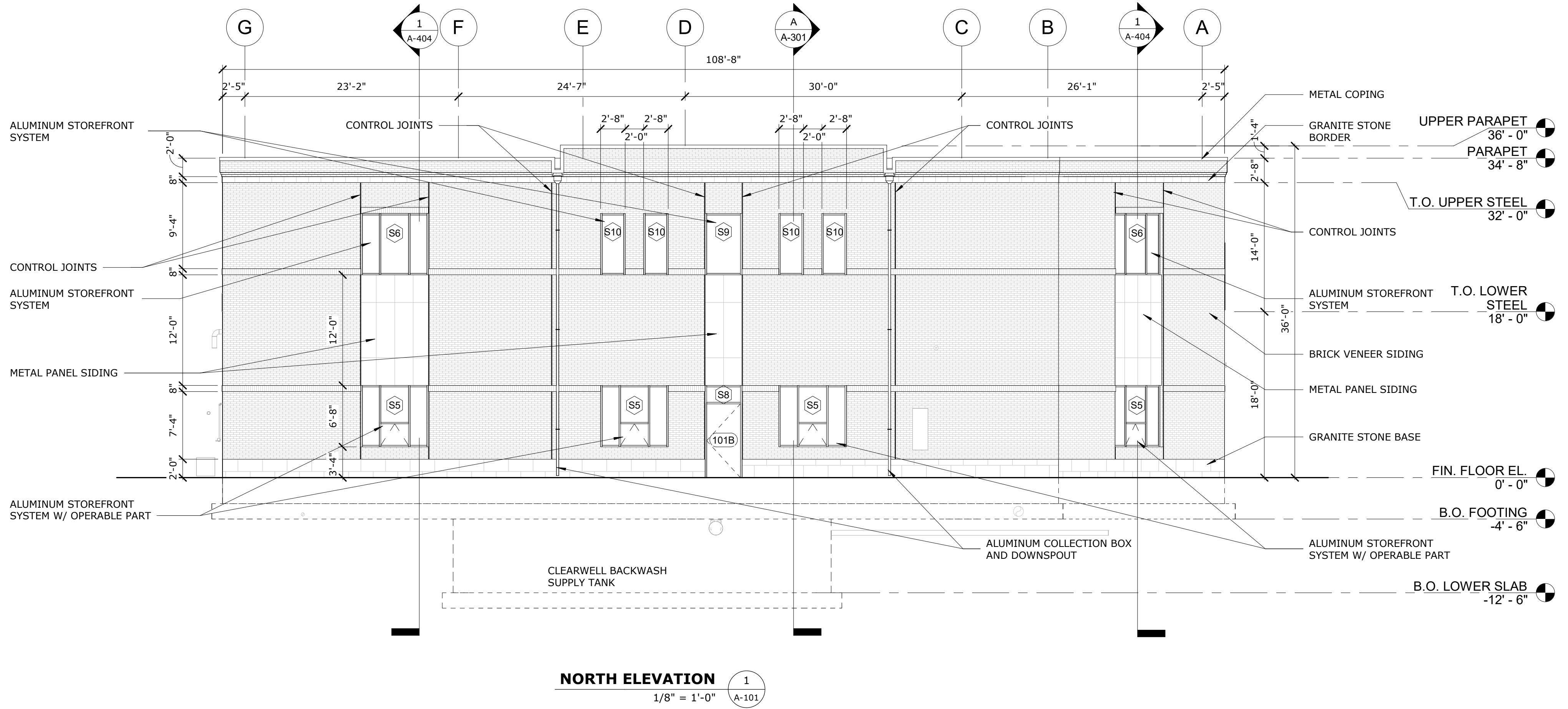
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ROAD WTPWebster Water  
DepartmentTown of Webster,  
Massachusetts

MARK	DATE	PERMIT SET	DESCRIPTION
	9/5/2023		
PROJECT NO:	W5002-034-B		
DATE:	SEPTEMBER 5, 2023		
FILE:	W5002-034-B-A-101		
DRAWN BY:	AH - MI		
DESIGNED/CHECKED BY:	MI		
APPROVED BY:	-		

FIRST FLOOR & EQUIPMENT  
PLATFORM PLANS

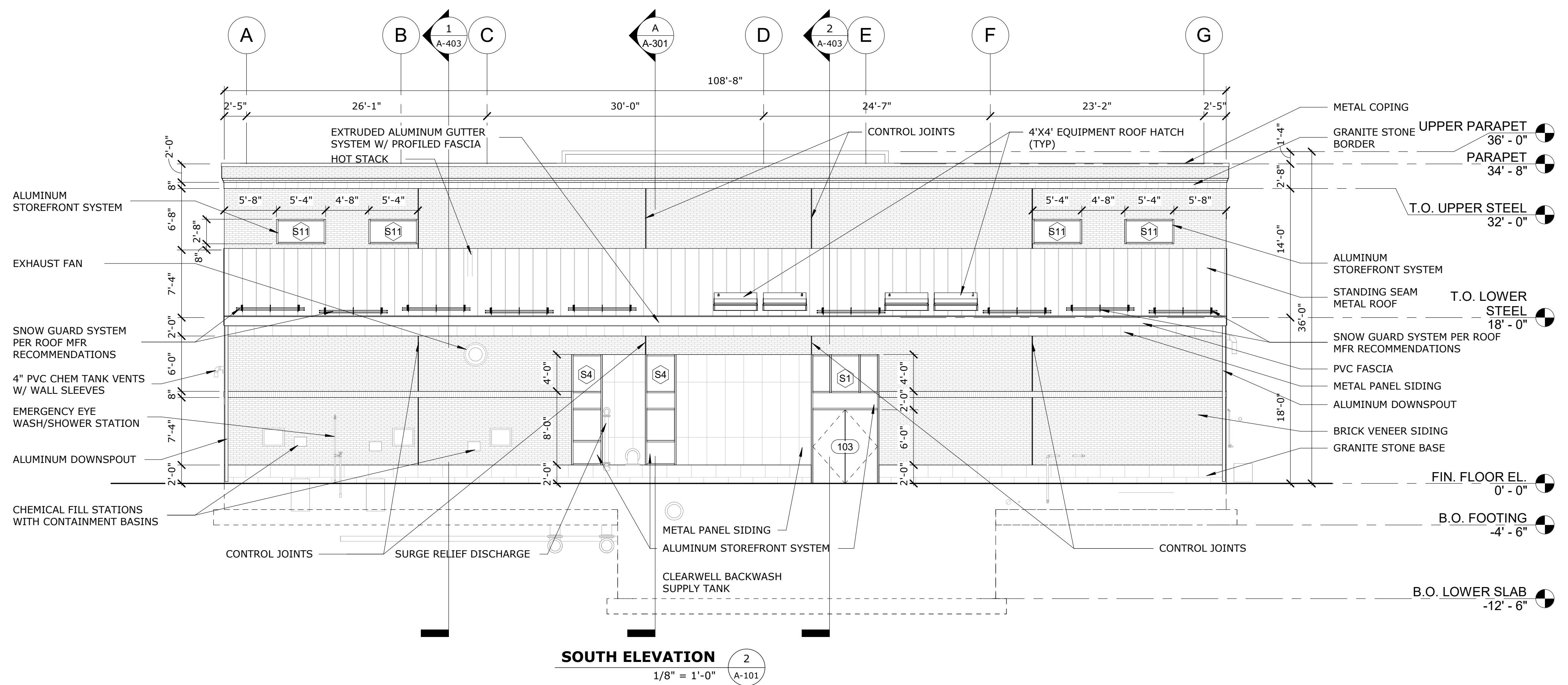
SCALE: AS SHOWN

A-101



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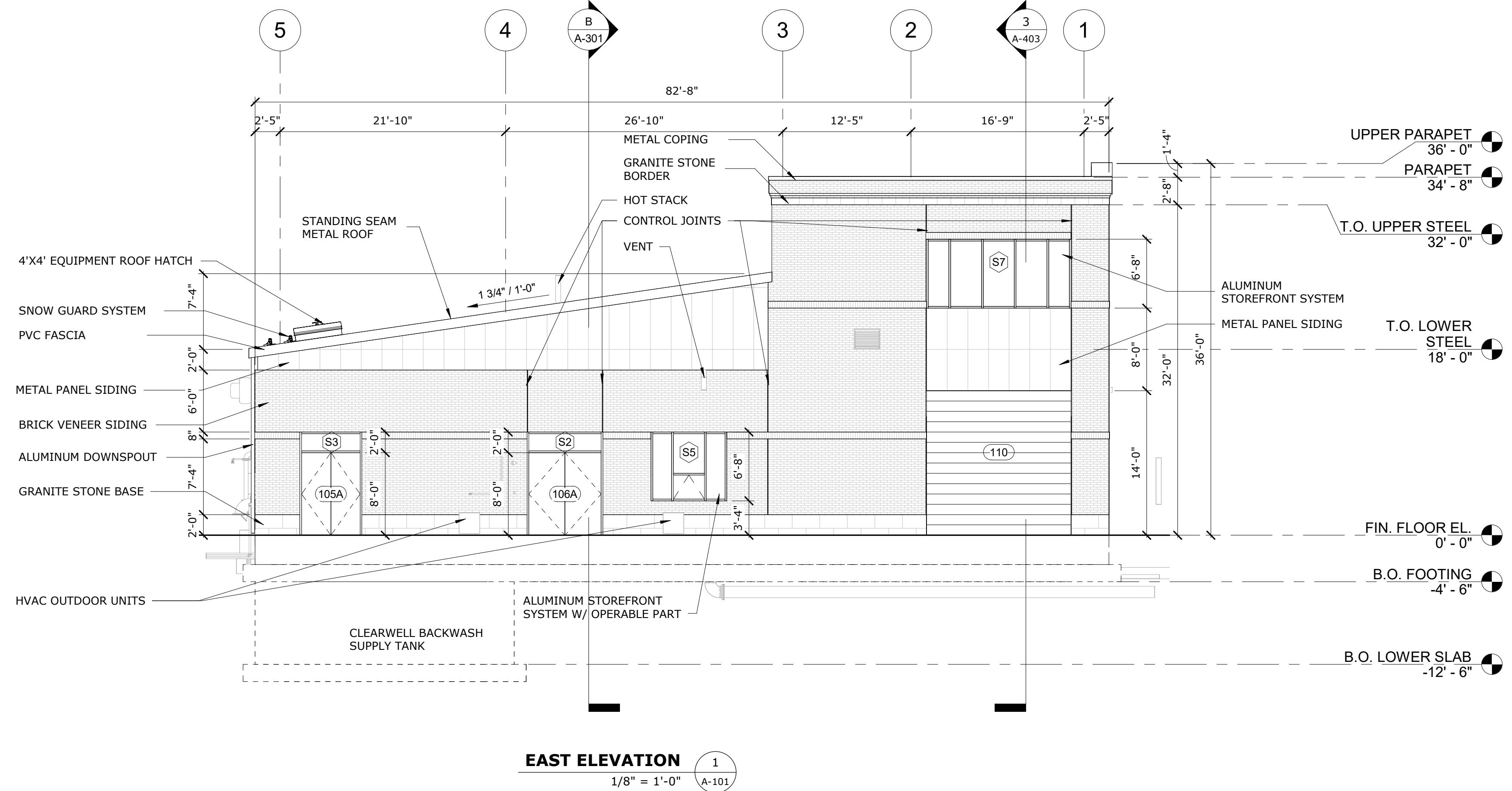


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Webster Water  
Department

Town of Webster,  
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MARK	9/5/2023	PERMIT SET DESCRIPTION
PROJECT NO:	W5002-034-B	
DATE:	SEPTEMBER 5, 2023	
FILE:	W5002-034-B-A-201	
DRAWN BY:	AH - MI	
DESIGNED/CHECKED BY:	MI	
APPROVED BY:	-	
<b>BUILDING ELEVATIONS</b>		
SCALE:	AS SHOWN	
<b>A-201</b>		



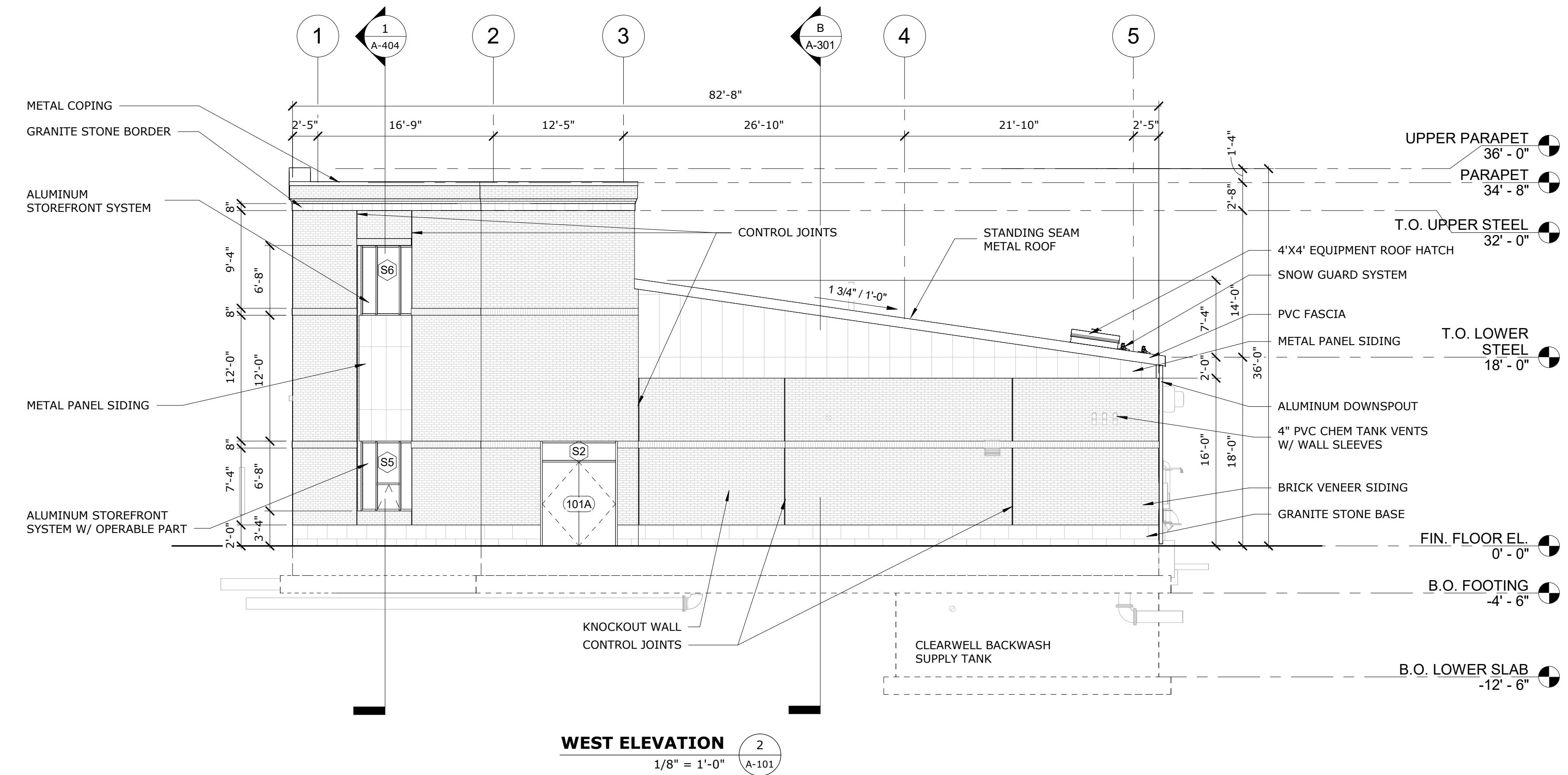
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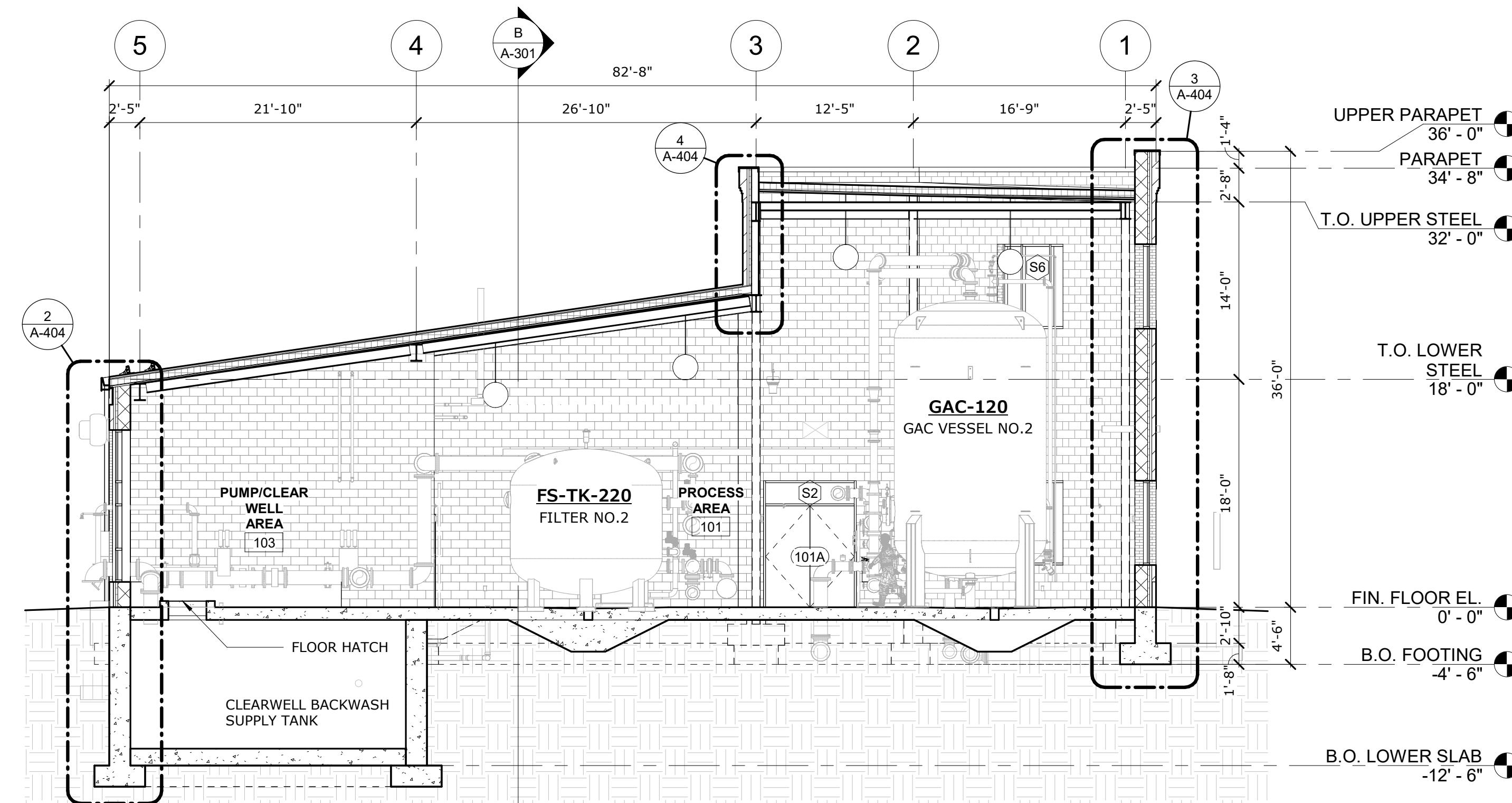
Webster Water  
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Town of Webster,  
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MARK	9/5/2023	PERMIT SET
PROJECT NO:	W5002-034-B	DESCRIPTION
DATE:	SEPTEMBER 5, 2023	
FILE:	W5002-034-B-A-202	
DRAWN BY:	AH - MI	
DESIGNED/CHECKED BY:	MI	
APPROVED BY:	-	

SCALE:	AS SHOWN
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SCALE: 1/8"=1'-0"	A-202



BUILDING SECTION A  
1/8" = 1'-0" A-101

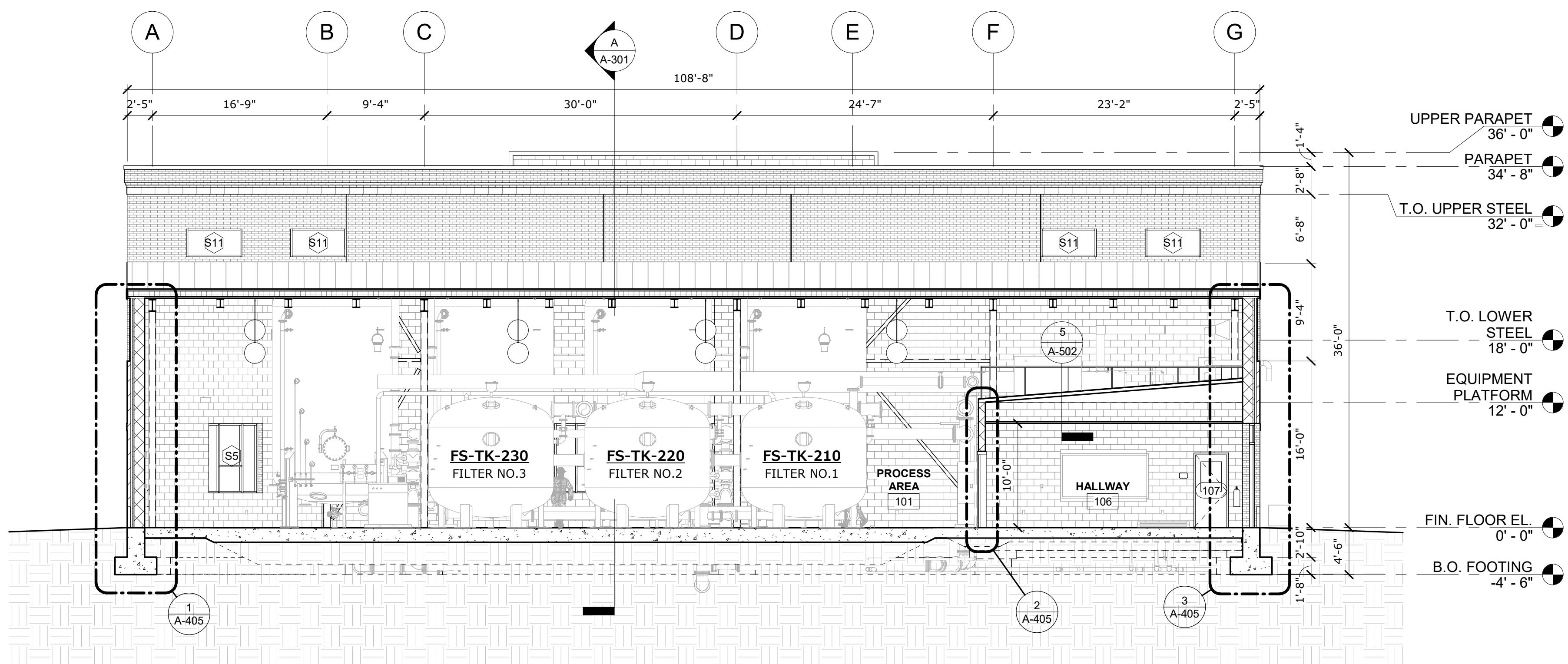
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Webster Water  
Department

Town of Webster,  
Massachusetts



BUILDING SECTION B  
1/8" = 1'-0" A-101

MARK	9/5/2023	PERMIT SET
PROJECT NO:	W5002-034-B	DESCRIPTION
DATE:	SEPTEMBER 5, 2023	
FILE:	W5002-034-B-A-301	
DRAWN BY:	AH - MI	
DESIGNED/CHECKED BY:	MI	
APPROVED BY:	-	

SCALE:	AS SHOWN
--------	----------

A-301

0 4' 8' 16'  
SCALE: 1/8"=1'-0"

