CITY OF BEACON, NEW YORK
WEST MAIN STREET
PUMP STATION AND FORCE MAIN

JANUARY 2023

RECEIVED
APR 17 2023
BY:

RECOMMENDED FOR APPROVAL

DUTCHESS COUNTY DEPARTMENT OF HEALTH
APPROVED
DATE: 5/8/2023
PROJECT: WEST MAIN ST PUMP STATION
PUMP STATION + FORCE MAIN
C. BEACON
24 SHEETS, ENG. REP., SPECS
P.E.
SUPERVISING PUBLIC HEALTH ENGINEER

DRAWING INDEX

UTILITY LOCATION NOTES:

1. EXISTING UTILITY INFORMATION SHOWN HEREON HAS BEEN COLLECTED FROM UTILITY MARKOUT BY RESPECTIVE UTILITY COMPANIES, ALONG WITH VARIOUS SOURCES AND IS NOT GUARANTEED AS TO ACCURACY OR COMPLETENESS. THE CONTRACTOR SHALL VERIFY ALL INFORMATION TO THEIR SATISFACTION PRIOR TO EXCAVATION. WHERE EXISTING UTILITIES ARE CROSSED BY PROPOSED CONSTRUCTION, TEST PITS SHALL BE DUG BY THE CONTRACTOR PRIOR TO CONSTRUCTION TO ASCERTAIN EXISTING INVERTS, MATERIALS, AND SIZE. TEST PIT INFORMATION SHALL BE GIVEN TO THE ENGINEER PRIOR TO CONSTRUCTION TO PERMIT ADJUSTMENTS AS REQUIRED TO AVOID CONFLICTS.

DUTCHESS COUNTY STANDARD NOTES:

1. THE DESIGN, CONSTRUCTION AND INSTALLATION SHALL BE IN ACCORDANCE WITH THIS PLAN AND GENERALLY ACCEPTED STANDARDS IN EFFECT AT THE TIME OF CONSTRUCTION WHICH INCLUDE:

   "NEW YORK STATE DESIGN STANDARDS FOR INTERMEDIATE SIZED WASTEWATER TREATMENT SYSTEMS", NYSDEC
   "RECOMMENDED STANDARDS FOR SEWAGE TREATMENT WORKS, (TEN STATES)."
   "RECOMMENDED STANDARDS FOR WATER WORKS, (TEN STATES)."
   "NEW YORK STATE DEPARTMENT OF HEALTH AND DUTCHESS COUNTY ENVIRONMENTAL HEALTH SERVICES DIVISION POLICIES, PROCEDURES AND STANDARDS."
   "DUTCHESS COUNTY AND NEW YORK STATE SANITARY CODES."
   "DUTCHESS COUNTY ENVIRONMENTAL HEALTH SERVICES DIVISION CERTIFICATE OF APPROVAL LETTER."

2. THIS PLAN IS APPROVED AS MEETING THE APPROPRIATE AND APPLIED TECHNICAL STANDARDS, GUIDELINES, POLICIES AND PROCEDURES FOR ARRANGEMENT OF SEWAGE DISPOSAL AND WATER SUPPLY FACILITIES.

3. UPON COMPLETION OF THE FACILITIES, THE FINISHED WORKS SHALL BE INSPECTED, TESTED, AND CERTIFIED COMPLETE TO THE DC EHSD BY THE NEW YORK STATE LICENSED PROFESSIONAL ENGINEER SUPERVISING CONSTRUCTION. NO PART OF THE FACILITIES SHALL BE PLACED INTO SERVICE UNTIL ACCEPTED BY THE DC EHSD.

4. APPROVAL OF ANY PLAN(S) OR AMENDMENT THERETO SHALL BE VALID FOR A PERIOD OF FIVE (5) YEARS FROM THE DATE OF APPROVAL. FOLLOWING THE EXPIRATION OF SAID APPROVAL, THE PLAN(S) SHALL BE RE-SUBMITTED TO THE COMMISSIONER OF HEALTH FOR CONSIDERATION FOR RE-APPROVAL. RE-SUBMISSION OR REVISED SUBMISSION OF PLANS AND/OR ASSOCIATED DOCUMENTS SHALL BE SUBJECT TO COMPLIANCE WITH THE TECHNICAL STANDARDS, GUIDELINES, POLICIES AND PROCEDURES IN EFFECT AT THE TIME OF THE RE-SUBMISSION.

5. NO CELLAR, FOOTING, FLOOR, GARAGE, COOLER OR ROOF DRAINS SHALL BE DISCHARGED INTO THE SEWAGE COLLECTION SYSTEM.

6. ALL BUILDINGS SHALL BE CONSTRUCTED AT AN ELEVATION HIGH ENOUGH TO ENSURE GRAVITY FLOW TO THE SEWAGE COLLECTION SYSTEM.

7. ALL REQUIRED EROSION & SEDIMENT CONTROL AND STORMWATER POLLUTION PREVENTION WATER QUALITY & QUANTITY CONTROL STRUCTURES, PERMANENT AND TEMPORARY, ARE SHOWN ON THE PLANS.

8. THE DC EHSD SHALL BE NOTIFIED SIXTY DAYS PRIOR TO ANY CHANGE IN USE; USE CHANGES MAY REQUIRE REAPPROVAL BY THE DC EHSD.

9. NO BUILDINGS ARE TO BE OCCUPIED AND THE NEW WASTEWATER COLLECTION SYSTEM SHALL NOT BE PLACED INTO SERVICE UNTIL A "CERTIFICATE OF CONSTRUCTION COMPLIANCE" IS ISSUED UNDER SECTION 19.7 OF ARTICLE 19 OF THE DUTCHESS COUNTY SANITARY CODE.

Edward Belicki
AUTHORIZED REPRESENTATIVE OF THE CITY OF BEACON

STATE OF NEW YORK
LICENSED PROFESSIONAL ENGINEER

GENERAL NOTES

1. BOLD TEXT AND LINES INDICATE PROPOSED WORK, UNLESS OTHERWISE NOTED. LIGHT TEXT AND LINES INDICATE APPROXIMATE EXISTING CONDITIONS.
2. EXISTING AND PROPOSED PIPING LAYOUTS ARE SHOWN ON THE DRAWINGS. FINAL LAYOUTS MAY CHANGE FROM THAT SHOWN ON THE ORIGINAL DESIGN TO ACCOMMODATE FIELD CONDITIONS. CONTRACTOR'S BID SHALL INCLUDE ALL BENDS, FITTINGS, PIPE SUPPORTS AND PIPE RESTRAINTS NEEDED FOR A COMPLETE PROJECT.
3. CONTRACTOR SHALL DIG TEST PITS WHERE SHOWN AND ELSEWHERE AS REQUIRED TO CONFIRM THE LOCATION OF THE EXISTING UTILITIES PRIOR TO THE START OF WORK.
4. CONTRACTOR SHALL BE RESPONSIBLE FOR MEETING ALL APPLICABLE SAFETY REGULATIONS IN THE PROJECT AREA.
5. UNDER NO CIRCUMSTANCE SHALL EMERGENCY ACCESS BE RESTRICTED DURING THE PROJECT.
6. ALL PIPES OR OTHER UTILITIES DAMAGED DURING THE CONTRACTOR'S OPERATIONS SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO REPAIR OR REPLACE AT NO COST TO THE OWNER. ANY EXISTING WORK OR PROPERTY DAMAGED OR DISRUPTED BY CONSTRUCTION ACTIVITIES SHALL BE REPLACED OR REPAIRED TO MATCH ORIGINAL EXISTING CONDITIONS BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.
7. SUPPORT ALL UTILITIES AND STRUCTURES DURING THE CONSTRUCTION AND REPAIR IF DAMAGED.
8. TAKE MEASURES AND PROVIDE CONTINUOUS BARRIERS OF SUFFICIENT TYPE, SIZE, AND STRENGTH TO PREVENT ACCESS TO OPEN EXCAVATIONS AT THE COMPLETION OF EACH DAYS WORK.
9. ALL DISTURBED AREAS SHALL BE LOAMED & SEEDED UNLESS OTHERWISE SPECIFIED. CONTRACTOR SHALL OVER-EXCAVATE LOAM & SEED AREAS AS REQUIRED TO MEET GRADE.
10. PER NEW YORK LAW, CALL DIG SAFELY (800-962-7962 or 811) PRIOR TO ANY UNDERGROUND EXCAVATION ON SITE.
11. PROTECT ALL PROPERTY MONUMENTATION THROUGHOUT DEMOLITION AND CONSTRUCTION OPERATIONS. SHOULD ANY MONUMENTATION BE DISTURBED BY THE CONTRACTOR, EMPLOY A LICENSED LAND SURVEYOR TO REPLACE IT.

EROSION CONTROL NOTES

1. ALL EROSION CONTROL MEASURES SHOWN, SPECIFIED AND REQUIRED BY THE OWNER'S REPRESENTATIVE SHALL BE INSTALLED PRIOR TO ANY CONSTRUCTION OR IMMEDIATELY UPON REQUEST. THE CONTRACTOR SHALL MAINTAIN ALL SUCH CONTROL MEASURES UNTIL FINAL SURFACE TREATMENTS ARE IN PLACE AND/OR UNTIL PERMANENT VEGETATION IS ESTABLISHED.
2. INSPECT INLET PROTECTION AND EROSION CONTROL DEVICES DAILY AND AFTER EACH RAIN STORM OF 0.5 INCH OR GREATER. REPAIR/MODIFY PROTECTION AS NECESSARY TO MAXIMIZE EFFICIENCY OF FILTER. REPLACE ALL FILTERS WHEN SEDIMENT IS 1/3 THE FILTER HEIGHT.
3. CONTROL DUST AND WIND EROSION THROUGHOUT THE CONSTRUCTION PERIOD. DUST CONTROL MEASURES SHALL INCLUDE, BUT NOT LIMITED TO, SPRINKLING WATER ON UNSTABLE SOILS SUBJECT TO ARID CONDITIONS.
4. REMOVE AND PROPERLY DISPOSE OF ALL TEMPORARY EROSION CONTROL DEVICES ONCE DISTURBED AREAS HAVE BEEN STABILIZED.
5. PRIOR TO STARTING WORK, CLEARLY STAKE WORK LIMIT LINE(S). DO NOT DISTURB VEGETATION AND TOPSOIL BEYOND THE PROPOSED LIMIT LINE. COORDINATE WITH THE ENGINEER THE LOCATIONS FOR THE TEMPORARY STOCKPILING OF TOPSOIL DURING CONSTRUCTION.

SYSTEM REQUIREMENTS

1. CONTRACTOR SHALL BE RESPONSIBLE FOR KEEPING THE EXISTING WEST MAIN STREET PUMP STATION OPERATIONAL THROUGHOUT CONSTRUCTION AND SHALL MAINTAIN ACCESS TO THE PUMP STATION SITE TO BEACON WATER & SEWER DEPARTMENT STAFF FOR ROUTINE MAINTENANCE.
2. REFERENCE IS MADE TO THE REPORT ENTITLED "LIMITED PHASE II ENVIRONMENTAL SITE ASSESSMENT" PREPARED BY LABELLA DATED MAY 24, 2022. CONTRACTOR SHALL COMPLY WITH THE REPORT RECOMMENDATIONS AS THEY PERTAIN TO DEWATERING ON THE PUMP STATION SITE. ALL EXCAVATED MATERIAL FROM THE PUMP STATION SITE SHALL BE REMOVED FROM THE SITE AND DISPOSED OF AS RECOMMENDED THE REPORT. ITEM 4 MATERIAL AS OUTLINED IN SPECIFICATION SECTION 02224 SHALL BE BROUGHT TO THE SITE TO REPLACE THE EXCAVATED MATERIAL IF NECESSARY TO MEET THE FINAL GRADES SHOWN ON THE DRAWINGS.
3. REFERENCE IS MADE TO THE REPORT ENTITLED "GEOTECHNICAL INVESTIGATION: WEST MAIN STREET PUMP STATION UPGRADES" PREPARED BY GZA GEOENVIRONMENTAL OF NEW YORK DATED APRIL 14, 2022. CONTRACTOR SHALL COMPLY WITH THE REPORT RECOMMENDATIONS FOR SUPPORT OF EXCAVATION AND DEWATERING DESIGNS AND CALCULATIONS, STAMPED AND SEALED BY A NEW YORK PROFESSIONAL ENGINEER.

SUGGESTED SEQUENCE OF CONSTRUCTION

1. INSTALL FORCE MAIN, NEW PUMP STATION, SMH-1 AND NEW GRAVITY INFLUENT SEWER AS SHOWN ON SHEET C-101.
2. PRESSURE TEST THE NEW FORCE MAIN.
3. TEST THE NEW GRAVITY INFLUENT SEWER PIPING AND MANHOLE.
4. CLEAR WATER PRESSURE TEST THE PUMP STATION DISCHARGE PIPING BY RECIRCULATING FLOW. USE THE NEW STATION BYPASS PIPING CONNECTION FOR THE TEST IF REQUIRED.
5. ONCE BOTH THE FORCE MAIN AND THE PUMP STATION INFLUENT/DISCHARGE PIPING HAVE PASSED INITIAL TESTING, PERFORM A PRELIMINARY TEST ON NEW PUMPS AND CONTROLS USING RECIRCULATED FLOW.
6. CREATE A BERM OR DIRECT CONNECTION (USING A FULL FLOW-THRU SEWER PLUG DIVERTER SYSTEM (LANSAS PRODUCTS; STEMAR INC.; OR EQUAL)) WITHIN THE EXISTING PUMP STATION TO ISOLATE THE INFLUENT MANHOLE, CORE THE MANHOLE WALL, AND MAKE THE CONNECTION TO NEW PUMP STATION'S INFLUENT SEWER LINE.
7. CREATE A BERM OR DIRECT CONNECTION (USING A FULL FLOW-THRU SEWER PLUG DIVERTER SYSTEM) WITHIN THE EXISTING STATION TO ISOLATE/BLOCK OFF FLOW TO THE EXISTING PUMP STATION INFLUENT PIPE. A TEMPORARY PLUG OF THE FLOW TO THE EXISTING PUMP STATION IS ALSO AN OPTION FOR DIVERTING FLOW TO THE NEW STATION.
8. REDIRECT SEWAGE FLOW TO THE NEW PUMP STATION AND USE THIS FLOW TO PERFORMANCE TEST THE PUMP STATION. PUMP MANUFACTURER'S STARTUP SHOULD OCCUR AT THIS TIME.

UTILITY SERVICE NOTES

1. NEW WATER SERVICE TO BE PROVIDED BY CONTRACTOR IN ACCORDANCE WITH THE REQUIREMENTS OF THE BEACON WATER AND SEWER DEPARTMENT AND AS SHOWN ON THE DRAWINGS. CONTACT PERSON: ED BALICKI, 845-831-3136. THERE WILL BE NO FEE CHARGED BY THE CITY FOR THE WATER SERVICE.
2. NEW GAS AND ELECTRIC SERVICE TO BE PROVIDED BY CENTRAL HUDSON GAS AND ELECTRIC. CONTACT PERSON KERRIE PRATT, 845-897-6152.
3. CITY OF BEACON TO COORDINATE WITH LOCAL TELEPHONE COMPANY TO PROVIDE TELEPHONE SERVICE TO PUMP STATION.

ABBREVIATIONS

BIT	BITUMINOUS CONCRETE	MIN.	MINIMUM
CHK	CHECK	NG	NATURAL GAS
CI	CAST IRON	NYSDEC	NYS DEPARTMENT OF ENVIRONMENTAL CONSERVATION
CLF, C/L FEN	CHAIN LINK FENCE	OC	ON CENTER
CTR	CENTER	OE	OVERHEAD ELECTRIC
CONC	CONCRETE	PCP	PUMP CONTROL PANEL
CW	CONCRETE WALK	PVC	POLYVINYL CHLORIDE
DI	DUCTILE IRON	PW	POTABLE WATER
DR	DRIVE	RET WALL	RETAINING WALL
E	ELECTRIC	SCH	SCHEDULE
EL.	ELEVATION	SS	SANITARY SEWER
EOW	EDGE OF WATER	STL	STEEL
EQ	EQUIPMENT	TBM	TEMPORARY BENCH MARK
HDPE	HIGH DENSITY POLYETHYLENE	TP	TELEPHONE POLE
HMA	HOT MIX ASPHALT	TYP	TYPICAL
HYD	HYDRANT	UP	UTILITY POLE
INV	INVERT	VIT	VITREOUS
LP	LIGHT POLE	VLV	VALVE
MAX.	MAXIMUM	WF	WETLAND FLAG
		WWTP	WASTEWATER TREATMENT PLANT

LEGEND

	EXISTING	PROPOSED
UNDERGROUND SANITARY SEWER	SS SS	SS SS
UNDERGROUND WATER	W W	W W
OVERHEAD ELECTRIC	OE	
UNDERGROUND GAS	G G	G G
STORM DRAIN		
SANITARY FORCE MAIN	SFM	SFM
UNDERGROUND ELECTRIC		E E
PROPERTY LINE		
EASEMENT LINE		
EDGE OF PAVEMENT (NO CURB)		
CHAIN LINK FENCE	X X X X X	X X X X X
MAJOR CONTOUR	200	
MINOR CONTOUR	198	
STONE WALL		
EROSION CONTROLS		
SWALE		
ELECTRIC MANHOLE	E	
DRAIN MANHOLE	D	
SIGN		
HYDRANT		
DECIDUOUS TREE		
CONIFEROUS TREE		
SANITARY MANHOLE	S	S
VALVE	WV	
CATCH BASIN	CB	
UTILITY POLE		
BOLLARD		
GUY POLE/GUY WIRE		
LIGHT FIXTURE		
SPOT GRADE	X 805.43	
BUILDING/STRUCTURE		

SECTION REFERENCE LETTER / DRAWING WHERE SECTION IS SHOWN OR TAKEN — SECTION A / A-1

DETAIL REFERENCE NUMBER / DRAWING WHERE DETAIL IS SHOWN OR TAKEN — DETAIL 1 / A-1

PHOTOGRAPH - ARROWS INDICATES VIEW DIRECTION

EQUIPMENT, STRUCTURES, PIPING, AND/OR CONDUITS TO BE REMOVED

DUTCHESS ... HEALTH
... See first ... ature.

Tighe&Bond

STATE OF NEW YORK — PETER M. VALINSKI — LICENSED PROFESSIONAL ENGINEER — 098563 — 10/20/2022

STATE OF NEW YORK — LORI CARRIERO — LICENSED PROFESSIONAL ENGINEER — 095440-1 — 10/20/2022

West Main Street Pump Station and Force Main

City of Beacon

Beacon, New York

MARK	DATE	DESCRIPTION
	10/19/2022	FOR REGULATORY REVIEW

PROJECT NO:	B0748-003
DATE:	OCTOBER 2022
FILE:	B0748-003-G-002.dwg
DRAWN BY:	TMP
CHECKED BY:	LAC
APPROVED BY:	PMV

GENERAL NOTES, LEGEND, AND ABBREVIATIONS

SCALE: NO SCALE

G-002
SHEET 2 OF 24

Last Saved: 10/18/2022
Plotted On: Oct 19, 2022 - 8:05am By: TMP
Tighe & Bond: J:\B\B0748 Beacon, NY\003 West Main Street PS\Drawings\Sheets\B0748-003-G-002.dwg

REFERENCE CODES

THIS PROJECT HAS BEEN DESIGNED ACCORDING TO THE FOLLOWING CODES:

2020 BUILDING CODE OF NEW YORK STATE:

INTERNATION BUILDING CODE (IBC 2018)
ASCE 7-16 MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES
INTERNATIONAL MECHANICAL CODE/2018
INTERNATIONAL ENERGY CONSERVATION CODE/2018 (IECC)
NATIONAL FIRE PROTECTION ASSOCIATION 101 LIFE SAFETY CODE/2018 (NFPA 101)
NATIONAL ELECTRIC CODE/NATIONAL FIRE PROTECTION ASSOCIATION NFPA 70, 2017

Building Code Analysis
2020 Building Code of New York State

Building Height and Area Limitations:	
Building Use Group: (Section 306)	F-1
Construction Type:	IIB
Street Frontage:	NA
Automatic Sprinkler System	No
Height Calculations:	
Allowable Stories (Table 504.4):	1 Story
Actual Story Height:	1 Story
Allowable Height (Table 504.3):	55'-0"
Actual Building Height:	Approx. 9'-10"
Area Calculations:	
Allowable Area (Table 506.2) F-1 Controls:	15,500 sf
Street Frontage Increase (506.3):	NA
Total Allowable Building Area per Floor:	15,500 sf
Building Area (Section 502.1):	
Actual Area	250 sf
Ratio of Actual to Allowable Area	0.016

From Table 601 - IBC 2018
FIRE-RESISTANCE RATING REQUIREMENTS FOR BUILDING ELEMENTS (hours)

Type of Construction	Type IIB - B: Unprotected		
BUILDING ELEMENT	Required	Provided	Remarks
Structural Frame			
Including columns, girders, trusses	0	-	-
Bearing Walls			
Exterior	0	1	-
Interior	0	-	
Nonbearing Walls and Partitions			
Exterior	0	-	-
Interior	0		
Floor Construction			
Including supporting beams and joists	0	-	-
Roof Construction			
Including supporting beams and joists	0	-	-

From Table 602 - IBC 2018
FIRE-RESISTANCE RATING REQUIREMENTS FOR EXTERIOR WALLS BASED ON FIRE SEPARATION DISTANCE

Fire Separation Distance (FSD)	Required	Provided	Remarks
FSD < 5 ft	2	-	N/A
5 ft ≤ FSD < 10 ft	1	1	PRECAST CONCRETE WALLS
10 ft ≤ FSD < 30 ft	0	-	N/A
FSD ≥ 30 ft	0	-	N/A

NOTES:
1. THE FIRE SEPARATION DISTANCE FOR THE PURPOSES OF DETERMINING EXTERIOR WALL, ROOF, AND OPENING PROTECTION SHALL BE IN ACCORDANCE WITH IBC 2018 705.3.

   THE DISTANCE FROM THE IMAGINARY LOT LINE AND THE EXISTING BUILDING IS BETWEEN 5 AND 10 FEET.

Energy Chart (Building Envelope)

Component Description	Gross Area	Required R-Value	Provided R-Value	Required U-Factor (Min)	Provided U-Factor (Min)
ROOF: PRECAST CONCRETE ROOF WITH ROOF INSULATION & EPDM ROOFING	202 SF	R-15	12.5	0.066	-
WALL: PRECAST CONCRETE INULATED SANDWICH PANEL	466 SF	11.4 CI	12.5	0.087	-
FOUNDATION FROST WALLS AND SLAB-ON-GRADE	50 FT (Perimeter)	7.5 CI	10	0.119	-
MAN DOORS: Insulated metal	42 SF	-	-	0.37	0.24

COMPLIANCE STATEMENT

THE PROPOSED ELECTRIC BUILDING IS EXEMPT FROM THE ENERGY CODE AND MEETS THE EXEMPTION REQUIREMENTS SPECIFIED IN THE INTERNATIONAL ENERGY CONSERVATION CODE IECC 2018 SECTION C402.1.2

NOTE: CI = CONTINUOUS INSULATION

EGRESS REQUIREMENTS

LOCATION	DESIGN OCCUPANT LOAD	MAXIMUM COMMON PATH EGRESS TRAVEL DISTANCE (1)		NUMBER OF EXITS FROM ROOM	EXIT ACCESS TRAVEL DISTANCE (2)		NUMBER OF EXITS FROM BUILDING
		ALLOWABLE	ACTUAL		ALLOWABLE	ACTUAL	
ELECTRIC BUILDING	3	75 FEET	25 FEET	NA	NA	NA	1

(1) IBC 2018 TABLE 1006.2.1 SPACES WITH ONE EXIT OR EXIT ACCESS DOORWAY
(2) IBC 2018 TABLE 1017.2 EXIT ACCESS TRAVEL DISTANCE

DUTCHESS COUNTY DEPT. OF HEALTH
Pool ... York
This ... ved.
See first sheet for ... nature.

Tighe&Bond

STATE OF NEW YORK
PETER M. VALINSKY
098593
LICENSED PROFESSIONAL ENGINEER
10/20/2022

STATE OF NEW YORK
JONATHAN POPOLI
94139
LICENSED PROFESSIONAL ENGINEER
10/21/2022

West Main Street Pump Station and Force Main

City of Beacon

Beacon, New York

MARK	DATE	DESCRIPTION
	10/19/2022	FOR REGULATORY REVIEW

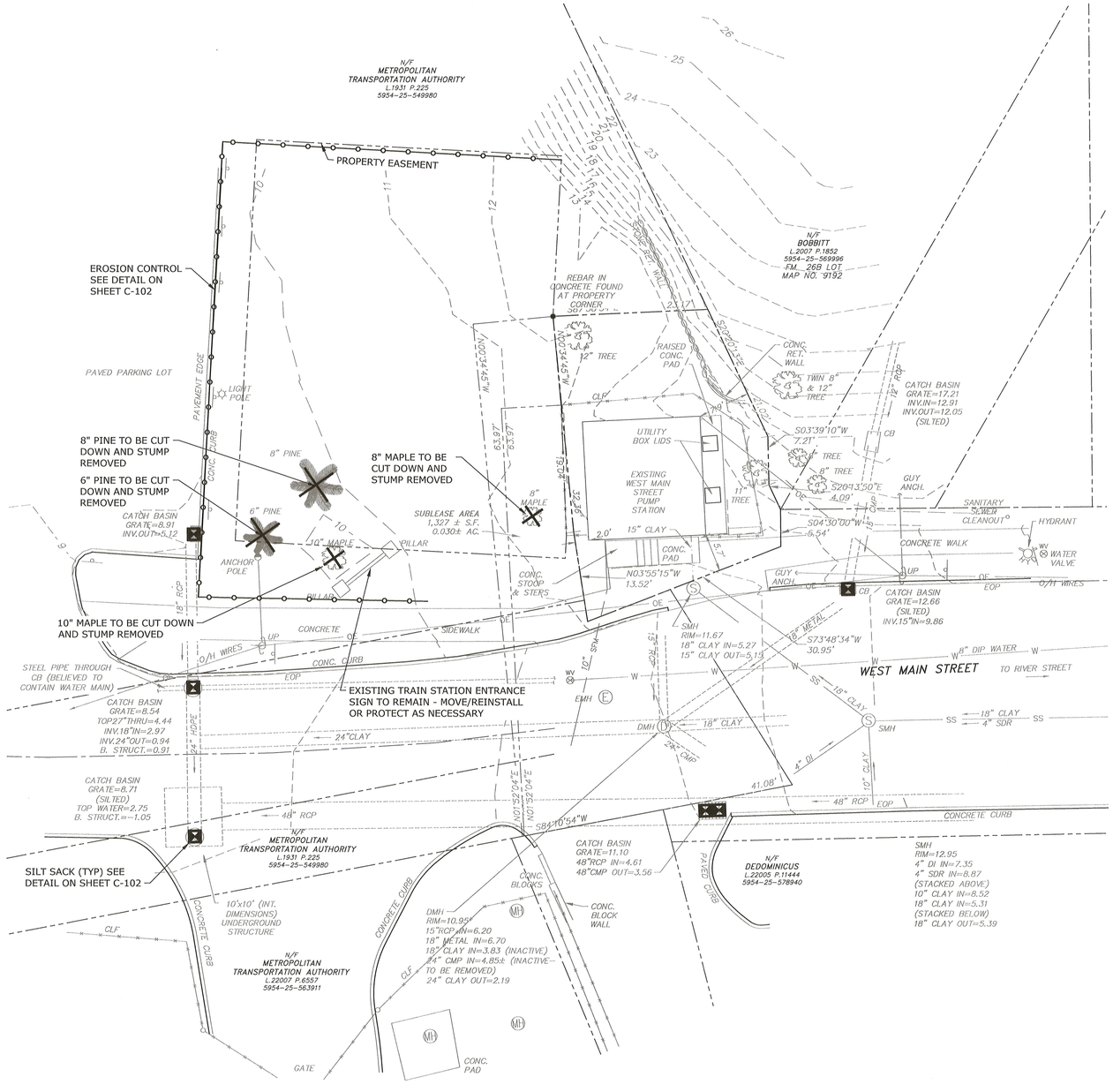
PROJECT NO:	B0748-003
DATE:	OCTOBER 2022
FILE:	B0748-003-G-003.dwg
DRAWN BY:	IAC
CHECKED BY:	JF
APPROVED BY:	PMV

CODE REVIEW

SCALE: AS SHOWN

G-003
SHEET 3 OF 24

Last Saved: 10/19/2022
Plotted On: Oct 19, 2022 - 8:05am By: TMP
Tighe & Bond: J:\B\B0748 Beacon, NY\003 West Main Street PS\Drawings\Sheets\B0748-003-G-003.dwg



NOTES:

1. THIS SURVEY IS SUBJECT TO ANY FINDINGS OF A TITLE SEARCH.
2. SUBSURFACE STRUCTURES AND UTILITIES NOT VISIBLE AT THE TIME OF SURVEY HAVE NOT BEEN SHOWN.
3. REFERENCES:
   MAP ENTITLED "SUBDIVISION PLAN LANDS OF JDG REALTY CORPORATION, MAIN & BRANCH STREET, CITY OF BEACON, DUTCHESS COUNTY, NEW YORK," DATED SEPTEMBER 28, 1990, LAST REVISED OCTOBER 24, 1990 AND FILED IN THE DUTCHESS COUNTY CLERK'S OFFICE ON FEBRUARY 25, 1991 AS MAP NO. 9192.

   MAP ENTITLED "FISHKILL LANDING NORTH, CITY OF BEACON, DUTCHESS COUNTY,
   NEW YORK," DATED SEPTEMBER 22, 1983, LAST REVISED APRIL 5, 1984 AND FILED IN THE DUTCHESS COUNTY CLERK'S OFFICE ON MAP 10, 1984 AS MAP NO. 6889.
4. TOPOGRAPHY SHOWN IS FROM AN ACTUAL FIELD SURVEY COMPLETED ON MARCH 25, 2013 AND MAY 16, 2014. CONTOUR ELEVATIONS ARE IN NAVD 88 DATUM.

N

DUTCHESS COUNTY DEPARTMENT OF HEALTH
Pr...
Th...
See first...

SCALE IN FEET
0 10' 20'
GRAPHIC SCALE

Tighe&Bond

STATE OF NEW YORK
PETER M. VALINSKI
LICENSED PROFESSIONAL ENGINEER
098563
10/20/2022

STATE OF NEW YORK
LORI CARRIERO
LICENSED PROFESSIONAL ENGINEER
095440-1
10/20/2022

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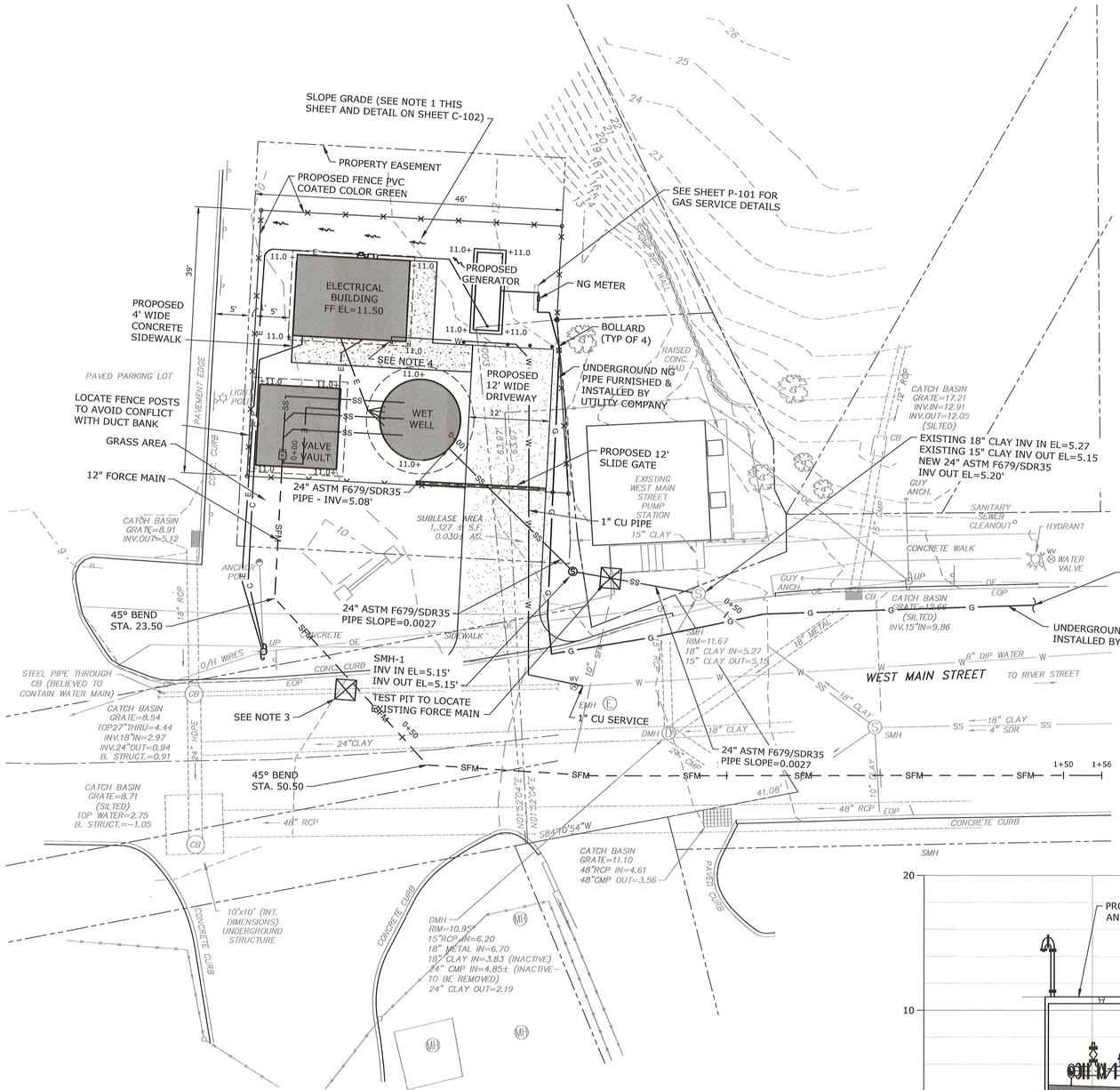
DRAWN BY:	TMP
CHECKED BY:	LAC, DRF
APPROVED BY:	PMV

EXISTING CONDITIONS SITE PLAN

SCALE: 1" = 10'

C-100
SHEET 4 OF 24

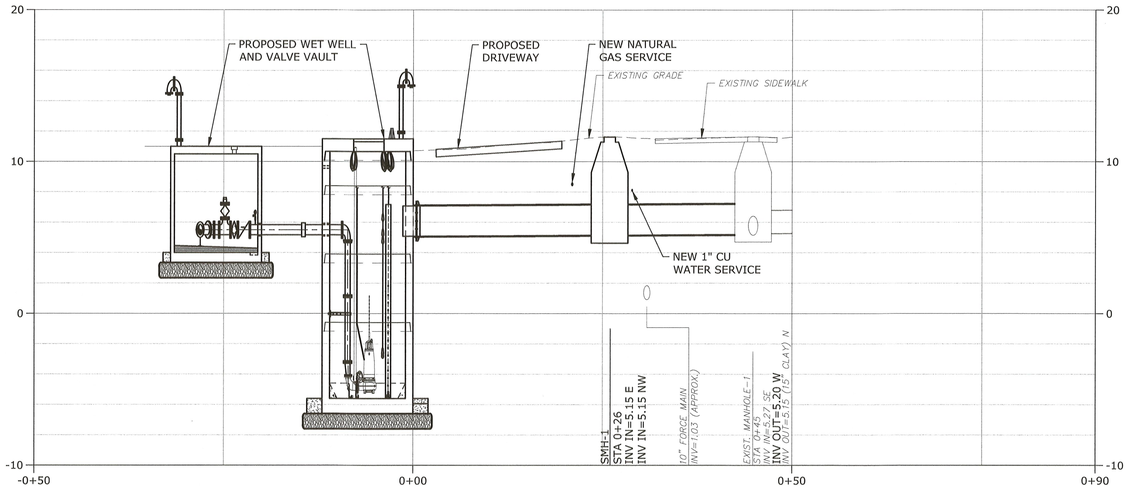
Last Saved:10/19/2022
Plotted On:Oct 19, 2022-8:05am By: TMP
Tighe & Bond J:\B\B0748 Beacon, NY\003 West Main Street PS\Drawings\Sheets\B0748-003-C-100.dwg



N

NOTES:

1. SLOPE GRADE 5% FROM BUILDING TO FENCE LINE AT THE BACK SIDE OF THE BUILDING.
2. ALL AREAS INSIDE THE FENCE THAT ARE NOT SIDEWALK OR DRIVEWAY WILL BE LOAMED AND SEEDED.
3. CONTRACTOR TO DIG TEST PIT TO VERIFY TOP ELEVATION OF STEEL PIPE. MAINTAIN 6" MINIMUM CLEARANCE BETWEEN TOP OF STORM LINE AND BOTTOM OF FORCE MAIN.
4. NEW WATER SERVICE WITH BACKFLOW PREVENTER AND FROST FREE WALL HYDRANT. SEE P-101 FOR MORE INFORMATION.
5. THE COVERS FOR THE WET WELL AND VALVE PIT SHALL HAVE A SIGN READING "DANGER - PERMIT REQUIRED - CONFINED SPACE, DO NOT ENTER" PER THE REQUIREMENTS OF OSHA 1926.1203(b)(1).
6. 1" WATER SERVICE PIPE TO BE ENCASED IN POLYETHYLENE WHERE 10-FEET OF SEPARATION DOES NOT EXIST BETWEEN SERVICE PIPE AND SMH-1.



24-INCH INFLUENT
1"=10' HORIZ.
1=5' VERT.

DUTCHESS COUNTY DEPT. OF HEALTH
Poughkeepsie New York
These plans are approved.
See first sheet for date and signature.

SCALE IN FEET
0 10' 20'
GRAPHIC SCALE

Tighe&Bond

STATE OF NEW YORK
PETER M. VALINSKI
098583
LICENSED PROFESSIONAL ENGINEER
03/30/2023

STATE OF NEW YORK
LORI CARRIERO
095440-1
LICENSED PROFESSIONAL ENGINEER
03/30/2023

West Main _ Street Pump Station and Force Main

City of Beacon

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CHECKED BY:	LAC, DRF
APPROVED BY:	PMV

PROPOSED CONDITIONS SITE PLAN

SCALE: 1" = 10'

C-101
SHEET 5 OF 24

Last Saved:1/12/2023
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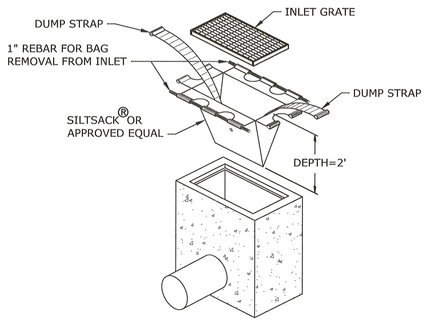
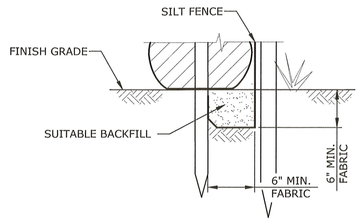
Tighe & Bond:J:\B\B0748 Beacon, NY\003 West Main Street PS\Drawings\Sheets\B0748-003-C-101.dwg



NOTES:

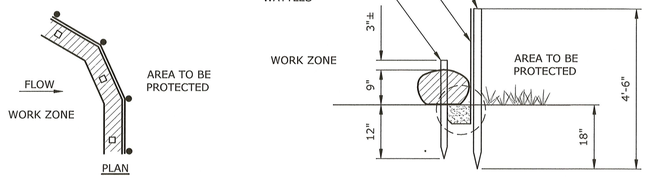
1. SILTSACKS MANUFACTURED BY ATLANTIC CONSTRUCTION FABRICS, INC.; 1801-A WILLIS ROAD; RICHMOND, VA 23237.
2. SILTSACKS FOR TRENCH GRATE WILL MATCH OPENING LENGTH AS REQUIRED.
3. SILTSACKS SHALL BE CLEANED OUT AND MAINTAINED IN GOOD WORKING ORDER PER MFR RECOMMENDATIONS.

CATCH BASIN EROSION CONTROL SILTSACK®
NO SCALE



FABRIC TOE-IN DETAIL

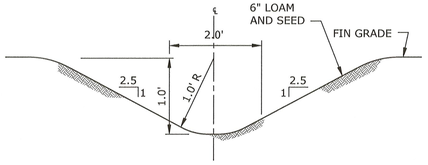
*-STAKES TO BE SPACED AT 4'-5' O.C. STAGGER STAKES BETWEEN STRAW WATTLES AND SILT FENCE



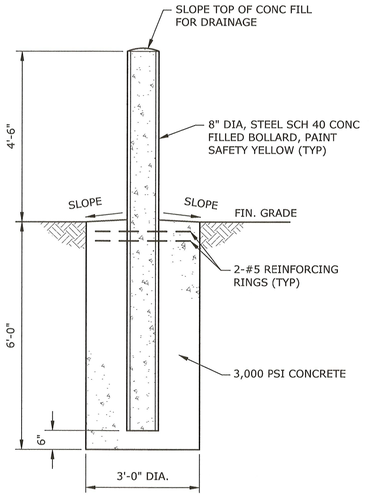
PLAN

SECTION

EROSION CONTROL DETAIL
NO SCALE



TYPICAL SWALE
NO SCALE



8" DIAMETER STEEL BOLLARD
NO SCALE

Tighe&Bond

STATE OF NEW YORK
PETER M. VALINSKI
LICENSED PROFESSIONAL ENGINEER
098563
10/20/2022

STATE OF NEW YORK
LORI CARRIERO
LICENSED PROFESSIONAL ENGINEER
095440-1
10/20/2022

West Main Street Pump Station and Force Main

City of Beacon

Beacon, New York

MARK	DATE	DESCRIPTION
	10/19/2022	FOR REGULATORY REVIEW

PROJECT NO:	B0748-003
DATE:	OCTOBER 2022
FILE:	Site Details.dwg
DRAWN BY:	TMP
CHECKED BY:	LAC
APPROVED BY:	PMV

PUMP STATION CIVIL DETAILS - 1

SCALE: AS SHOWN

C-102
SHEET 6 OF 24

Last Saved: 10/18/2022
Plotted On: Oct 19, 2022 - 8:07am By: TMP
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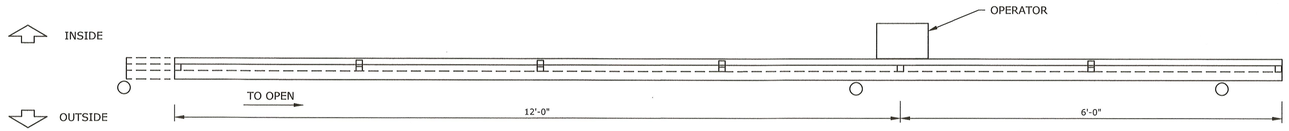
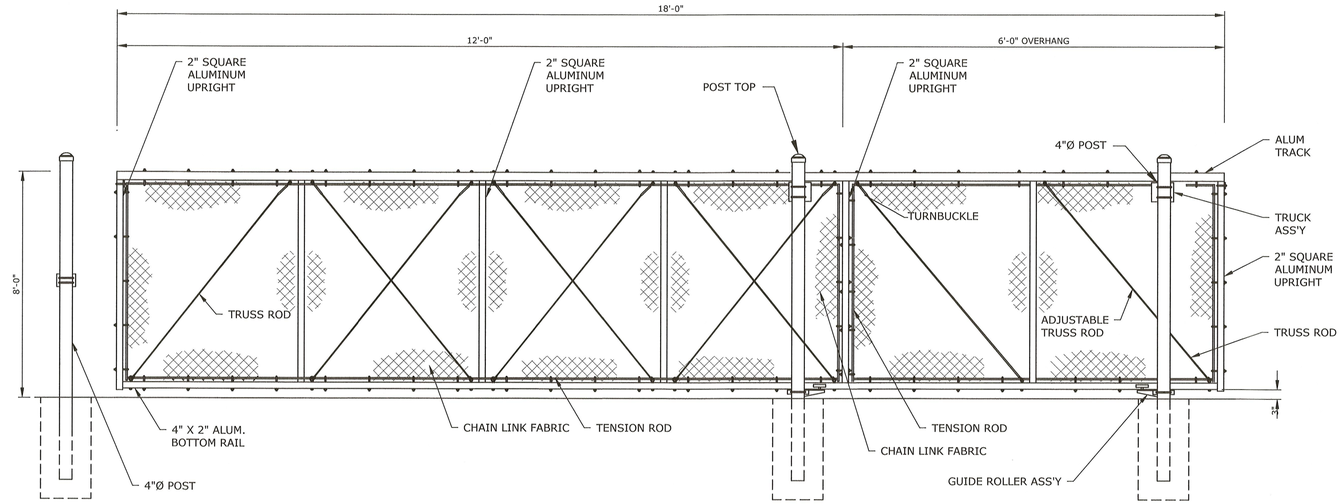
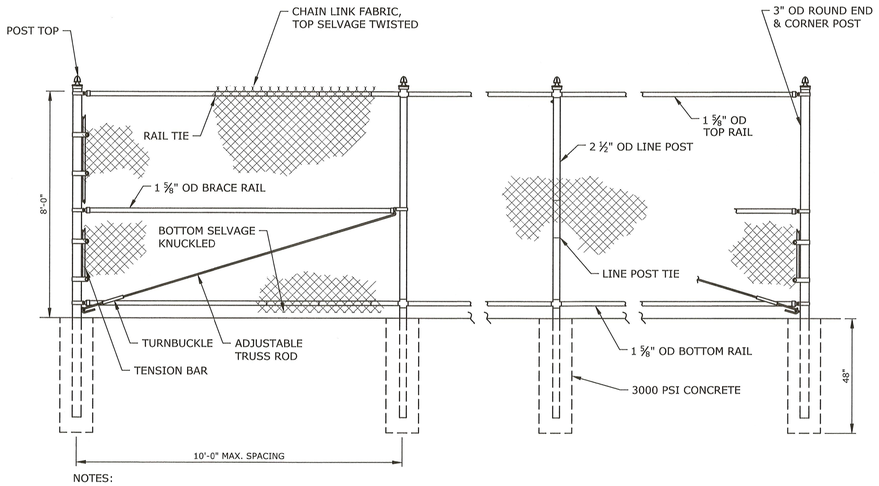


GATE PLAN



GATE ELEVATION

SLIDE GATE
NO SCALE



NOTES:
1. FOOTING WIDTH TO BE (4)X POST WIDTH.
2. FABRIC AND POSTS SHALL BE BLACK PVC COATED PER ASTM F 668 2B.

CHAIN LINK FENCE
NO SCALE

DUTCHESS [illegible] DEPARTMENT OF HEALTH
Pool [illegible]
These [illegible]
See first sheet [illegible] signature.

Tighe&Bond

STATE OF NEW YORK
PETER M. VALINSKI
LICENSED PROFESSIONAL ENGINEER
098563
10/20/2022

STATE OF NEW YORK
LORI CARRIERO
LICENSED PROFESSIONAL ENGINEER
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West Main Street Pump Station and Force Main

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Beacon, New York

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APPROVED BY:	PMV

PUMP STATION
CIVIL DETAILS - 2

SCALE: AS SHOWN

C-103
SHEET 7 OF 24

Last Saved:10/18/2022
Plotted On:Oct 19, 2022-8:07am By: TMP
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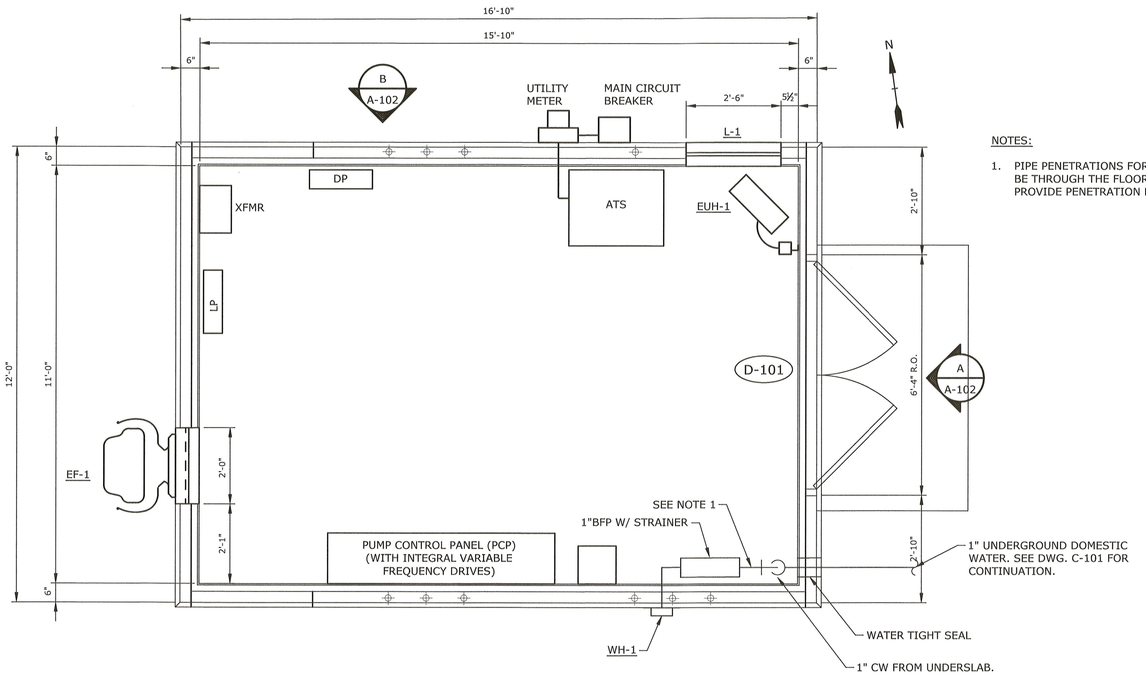
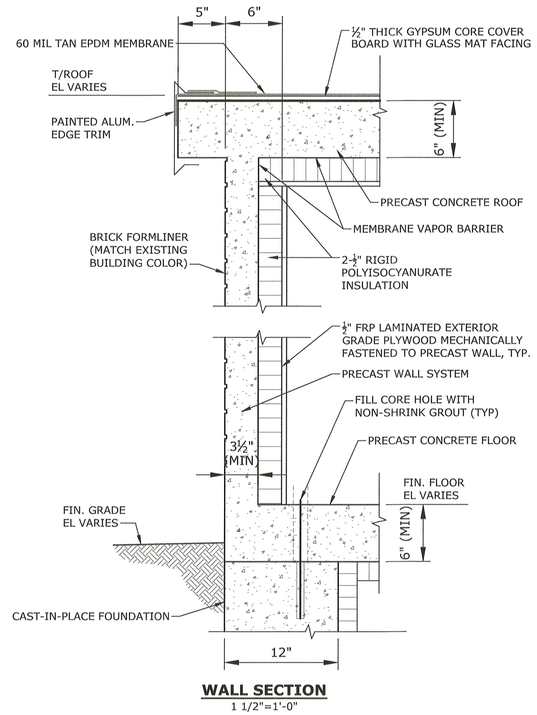


FLOOR PLAN
1/2"=1'-0"

NOTES:

1. PIPE PENETRATIONS FOR THE 1" WATER SERVICE MUST BE THROUGH THE FLOOR. BUILDING SUPPLIER TO PROVIDE PENETRATION POINTS. SEE SHEET P-101.



WALL SECTION
1 1/2"=1'-0"

DOOR SCHEDULE													
DOOR NO.	DOOR SIZE	MATERIAL			DOOR TYPE	FRAME TYPE	FIRE RATING (HRS.)	DETAIL			GLAZING	WEATHER STRIPPING	HARDWARE SET	REMARKS
		DOOR	FRAME	DOOR THICKNESS				HEAD	JAMB	SILL				
D101	(2) 3'-0"x7'-0"	INSUL. HM	INSUL. HM	1¾"	A	F1	-	H-1	J-1	-	-	-	HW-1	SEE SPECIFICATIONS FOR HARDWARE

LEGEND

DOOR CONSTRUCTION/FACING & FINISH

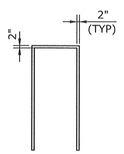
HM = HOLLOW METAL
MFR = MANUFACTURER

NOTES:

1. FIRE RATING LISTED IN NUMBER OF HOURS.
2. PROVIDE THRESHOLD & WEATHER STRIPPING AT ALL EXTERIOR DOORS

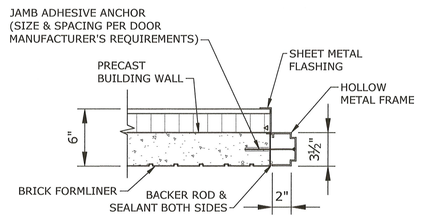
A
FLUSH

DOOR TYPES



F1

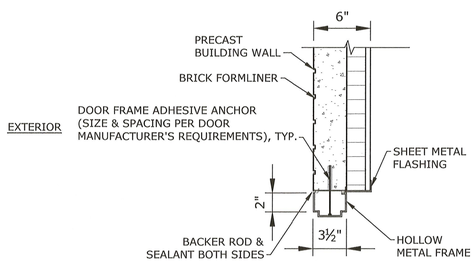
DOOR FRAME TYPES



EXTERIOR

J-1

JAMB DETAIL
NO SCALE



H-1

HEAD DETAIL
NO SCALE

Tighe&Bond

STATE OF NEW YORK
PETER M. VALINSKY
LICENSED PROFESSIONAL ENGINEER
098563
10/20/2022

STATE OF NEW YORK
JONATHAN POPOLI
LICENSED PROFESSIONAL ENGINEER
094139
10/21/2022

West Main Street Pump Station and Force Main

City of Beacon

Beacon, New York

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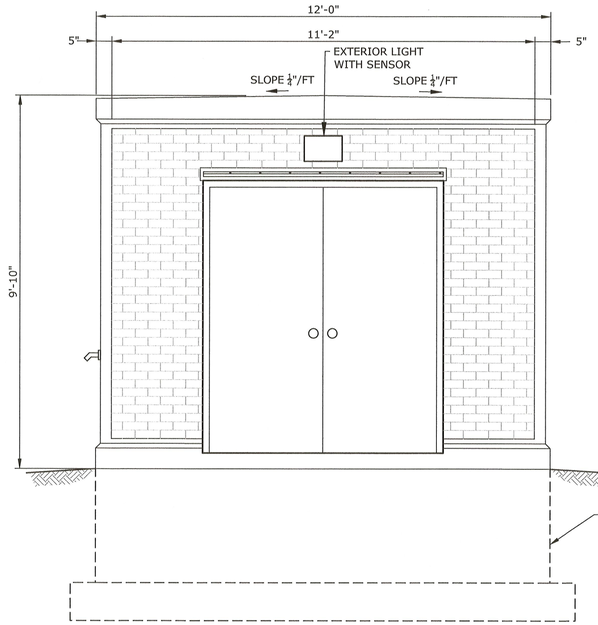
DRAWN BY:	TMP, IAC
CHECKED BY:	JF
APPROVED BY:	PMV

PREFABRICATED BUILDING, FLOOR PLAN AND DETAILS

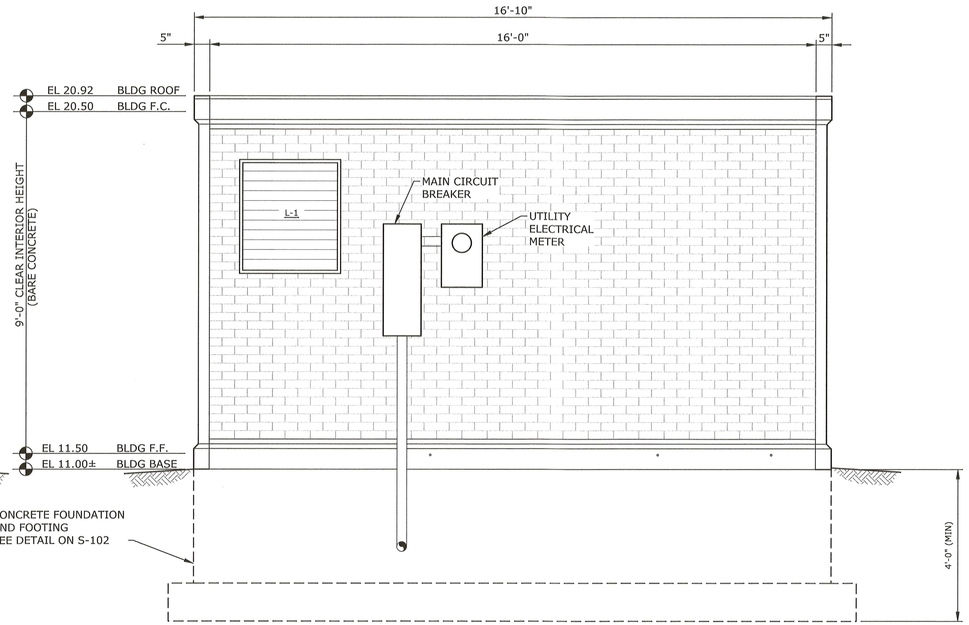
SCALE: AS SHOWN

A-101
SHEET 8 OF 24

Last Saved: 10/18/2022
Plotted On: Oct 19, 2022 - 8:08am By: TMP
Tighe & Bond: J:\B\B0748 Beacon, NY\003 West Main Street PS\Drawings\Sheets\B0748-003-A-101 and A-102.dwg



A A-101 **ELEVATION**
1/2"=1'-0"



B A-101 **ELEVATION**
1/2"=1'-0"

NOTES:

1. THE PREFABRICATED, FACTORY BUILT PRECAST CONCRETE BUILDING SHALL BE DELIVERED TO THE SITE COMPLETE WITH ALL ANCILLARY EQUIPMENT AS DESCRIBED IN SPECIFICATION SECTION 13121, FULLY INSTALLED AND TESTED INCLUDING BUT NOT LIMITED TO THE FOLLOWING:
   a. PRECAST SINGLE-LEVEL CONCRETE BUILDING ENCLOSURE
   b. HEATING AND VENTILATION
   c. INTERNAL WIRING INCLUDING FOR OUTLETS AND LIGHTING
   d. DOORS AND LOUVERS
   e. PIPE AND ELECTRICAL CONDUIT WALL PENETRATION SLEEVES AND MECHANICAL SEALS
   f. BUILDING INSULATION AND FINISH MATERIALS

   THE ALL INTERNAL ELECTRICAL WILL BE COMPLETE AND ELECTRICAL OUTLETS, LIGHTING, FANS, LOUVERS, AND HEATERS SHALL BE INSTALLED AND GIVEN AN OPERATIONAL TEST PRIOR TO SHIPPING. BUILDING COMPONENTS SHALL BE INSTALLED IN ACCORDANCE WITH APPLICABLE NEW YORK BUILDING AND ELECTRICAL CODES. THIS BUILDING IS EXEMPT FROM BUILDING THERMAL ENVELOPE PROVISIONS OF THE 2018 IECC PER CODE SECTION C402.1.2.

2. THE PRECAST BUILDING SHOP DRAWINGS AND DESIGN CALCULATIONS SHALL BE STAMPED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF NEW YORK.

DUTCHESS COUNTY DEPT. OF HEALTH
Poughkeepsie New York
These plans are approved.
See first sheet for date and signature.

Tighe&Bond

STATE OF NEW YORK
PETER M. VALINSKY
098563
LICENSED PROFESSIONAL ENGINEER
10/20/2022

STATE OF NEW YORK
JONATHAN POPOLI
94139
LICENSED PROFESSIONAL ENGINEER
10/21/2022

West Main Street Pump Station and Force Main

City of Beacon

Beacon, New York

SERVICES PROVIDED IN NEW YORK BY T&B ENGINEERING AND LANDSCAPE ARCHITECTURE, P.C.

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DRAWN BY:	IAC, TMP
CHECKED BY:	JF
APPROVED BY:	PMV

EXTERIOR ELEVATIONS

SCALE: AS SHOWN

A-102
SHEET 9 OF 24

Last Saved: 10/18/2022
Plotted On: Oct 19, 2022-8:08am By: TMP
Tighe & Bond: J:\B\B0748 Beacon, NY\003 West Main Street PS\Drawings\Sheets\B0748-003-A-101 and A-102.dwg

GENERAL

1. STRUCTURAL WORKS SHALL CONFORM TO STATE BUILDING CODE, LATEST EDITION, INCLUDING MOST RECENT ADDENDA, AND CONTRACT DOCUMENTS. IN CASE OF CONFLICT, MOST STRINGENT REQUIREMENT SHALL GOVERN.
2. CONTRACTOR SHALL VERIFY AND COORDINATE DIMENSIONS RELATED TO THIS PROJECT.
3. CONTRACTOR SHALL EXAMINE DRAWINGS FOR ALL TRADES FOR THE VERIFICATION OF LOCATION AND DIMENSIONS OF ALL CHASES, INSERTS, OPENINGS, SLEEVES AND OTHER PROJECT REQUIREMENTS NOT SHOWN ON THE STRUCTURAL DRAWINGS.
4. PROVIDE CAULKING AT ALL CONTROL JOINTS. PROVIDE COMPRESSIBLE FILLER AND SEALANT AT ALL EXPANSION AND ISOLATION JOINTS.
5. PROVIDE PREMOLDED JOINT FILLLER WHERE SLABS ON GRADE ABUT WALLS AND COLUMNS.
6. ALL ELEVATIONS ARE BASED ON NAVD 88 DATUM.

REINFORCEMENT

1. DETAILING, FABRICATION, AND ERECTION OF REINFORCEMENT, UNLESS OTHERWISE NOTED, SHALL CONFORM TO ACI "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE (ACI 318)" AND ACI "MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES (ACI 315)", LATEST EDITION.
2. STEEL REINFORCEMENT UNLESS OTHERWISE SHOWN SHALL CONFORM TO ASTM A615 GRADE 60 MINIMUM (YIELD STRENGTH - 60,000 PSI).
3. WELDED WIRE FABRIC REINFORCEMENT SHALL CONFORM TO: ASTM A185.
4. PROVIDE AND SCHEDULE ON SHOP DRAWINGS, ALL NECESSARY ACCESSORIES TO HOLD REINFORCEMENT SECURELY IN POSITION: MINIMUM REQUIREMENTS SHALL BE: HIGH CHAIRS, 4'-0" ON CENTER, #5 SUPPORT BAR FOR HIGH CHAIRS, SLAB BOLSTERS, 3'-6" ON CENTER, ALL WIRE CHAIRS AND BOLSTERS TO BE PLASTIC TIPPED.
5. THE CONCRETE PROTECTIVE COVERING FOR REINFORCEMENT SHALL BE AS FOLLOWS, UNLESS OTHERWISE SHOWN:
   A. CAST-IN-PLACE CONCRETE.

	EXPOSED TO EARTH, WATER OR WEATHER	NOT EXPOSED TO EARTH, WATER, OR WEATHER
(a) SLAB ON GRADE	3 INCHES	2 INCHES
(b) COLUMN TIES	2 INCHES	1 1/2 INCHES
(c) COLUMN MAIN REBARS	2 1/2 INCHES	2 INCHES
(d) BEAM STIRRUPS	2 INCHES	1 1/2 INCHES
(e) BEAM MAIN REBARS	2 1/2 INCHES	2 INCHES
(f) SLAB/WALL #3 TO #5 INCL'S	1 1/2 INCHES	3/4 INCHES
(g) SLAB/WALL #6 TO #11 INCL'S	2 INCHES	3/4 INCHES

   (h) NOTE:MAXIMUM DEVIATION FROM THESE REQUIREMENTS SHALL BE +1/4" FOR SECTIONS TEN (10) INCHES OR LESS, AND +1/2" FOR SECTIONS OVER TEN (10) INCHES THICK.

   B. PRECAST CONCRETE

	EXPOSED TO EARTH, WATER OR WEATHER	NOT EXPOSED TO EARTH, WATER, OR WEATHER
(a) COLUMN TIES	1 1/4 INCHES	3/8 INCHES
(b) COLUMN MAIN REBARS	1 1/2 INCHES	5/8 INCHES
(c) BEAM STIRRUPS	1 1/4 INCHES	3/8 INCHES
(d) BEAM MAIN REBARS	1 1/2 INCHES	5/8 INCHES
(e) SLABS #11 BAR AND SMALLER	1 1/4 INCHES	5/8 INCHES
(f) WALL #11 BAR AND SMALLER	3/4 INCHES	5/8 INCHES

   C. IN NO CASE SHALL THE COVER BE LESS THAN THE BAR DIAMETER.
   D. WHERE CONTINUOUS BARS ARE CALLED FOR THEY SHALL BE RUN CONTINUOUSLY AROUND CORNERS AND LAPPED AT NECESSARY SPLICES OR HOOKED AT DISCONTINUOUS ENDS.
6. WHERE REINFORCEMENT IS NOT SHOWN ON DRAWINGS, PROVIDE REINFORCEMENT IN ACCORDANCE WITH APPLICABLE TYPICAL DETAILS OR SIMILAR TO THAT SHOWN FOR MOST NEARLY SITUATIONS, AS DETERMINED BY THE ENGINEER. IN NO CASE SHALL REINFORCEMENT BE LESS THAN MINIMUM REINFORCEMENT PERMITTED BY THE APPLICABLE CODES, NOR LESS THAN THE FOLLOWING:
   A. BEAM STIRRUPS - #3 @ 12" OC
   B. BEAM STIRRUP SUPPORTS - 1-#5 @ EACH STIRRUP BEND
   C. FACE REINFORCEMENT IN BEAMS OR PORTIONS OF BEAMS - #4 @ 12" EF
   D. STRUCTURAL SLABS - .0028 GROSS CONCRETE AREA IN EACH DIRECTION
   E. STRUCTURAL WALLS - .0028 GROSS CONCRETE AREA IN EACH DIRECTION
8. WHERE REINFORCEMENT IS CALLED FOR IN SECTION, REINFORCEMENT IS CONSIDERED TYPICAL WHEREVER THE SECTION APPLIES.
9. REINFORCEMENT SHALL BE CONTINUOUS THROUGH ALL CONSTRUCTION JOINTS UNLESS OTHERWISE INDICATED ON THE DRAWINGS.
10. WELDED WIRE FABRICS SHALL LAP 12" OR TWO SPACES, WHICHEVER IS LARGER, AND SHALL BE WIRED TOGETHER.
11. REINFORCEMENT COUPLER SPLICES SHALL BE MECHANICAL DEVICES CAPABLE OF TRANSMITTING THE ULTIMATE TENSILE AND COMPRESSIVE STRENGTH OF THE BAR.
12. INSTALLATION OF REINFORCEMENT SHALL BE COMPLETE AT LEAST 24 HOURS PRIOR TO SCHEDULED CONCRETE PLACEMENT. NOTIFY ENGINEER OF COMPLETION AT LEAST 24 HOURS PRIOR TO SCHEDULED COMPLETION OF REINFORCEMENT PLACEMENT.
13. REINFORCEMENT SHALL BE SET BEFORE PLACING CONCRETE. SETTING ANY REINFORCEMENT INTO WET CONCRETE IS PROHIBITED.

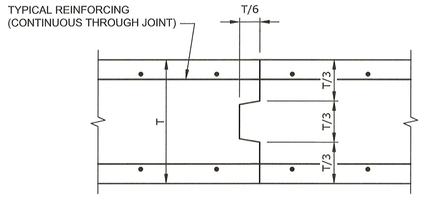
GENERAL SYMBOLS

CONCRETE

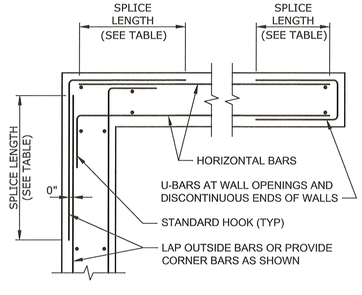
1. CONCRETE WORK SHALL CONFORM TO THE LATEST EDITIONS OF THE BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE (ACI 318), AND SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDING (ACI 301).
2. CONCRETE SHALL BE CONTROLLED CONCRETE, PROPORTIONED, MIXED, AND PLACED UNDER THE SUPERVISION OF AN APPROVED CONCRETE TESTING AGENCY OR THE ENGINEER.
3. PRECAST CONCRETE SHALL BE NORMAL WEIGHT CONCRETE AND SHALL HAVE A COMPRESSIVE STRENGTH OF 5000 PSI AT 28 DAYS FOR THE PRECAST BUILDING, UNLESS OTHERWISE NOTED AND SHALL BE AIR ENTRAINED (SEE SPECIFICATIONS).
4. CAST-IN-PLACE CONCRETE EXPOSED TO FREEZE/THAW CONDITIONS AND/OR DEICING CHEMICALS SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 4500 PSI. ALL OTHER CAST-IN-PLACE CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 4000 PSI AT 28 DAYS, UNLESS OTHERWISE NOTED AND SHALL BE AIR ENTRAINED (SEE SPECIFICATIONS).
5. THE USE OF CONSTRUCTION JOINTS WHERE SHOWN ON THE DRAWINGS IS MANDATORY. OMISSIONS, ADDITIONS OR CHANGES SHALL NOT BE MADE EXCEPT WITH THE SUBMISSION OF A WRITTEN REQUEST TOGETHER WITH DRAWINGS OF THE PROPOSED JOINT LOCATIONS FOR APPROVAL OF THE STRUCTURAL ENGINEER.
6. WHERE CONSTRUCTION JOINTS ARE NOT SHOWN, DRAWINGS SHOWING LOCATION OF CONSTRUCTION JOINTS AND CONCRETE PLACING SEQUENCE SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PRIOR TO PREPARATION OF THE REINFORCEMENT SHOP DRAWINGS.
7. CONCRETE SLABS SHALL BE CAST SO THAT THE SLAB THICKNESS IS AT NO POINT LESS THAN THAT INDICATED ON THE DRAWINGS.
8. CONCRETE SLABS AND WALLS SHALL BE CAST ALTERNATELY OR IN A CHECKERBOARD FASHION SO THAT ADJACENT SECTIONS ARE PLACED NO SOONER THAN THREE DAYS APART. AT LEAST TWO DAYS MUST ELAPSE AFTER PLACING CONCRETE IN WALLS BEFORE PLACING FLOOR SYSTEM SUPPORTED THEREON.
9. CONCRETE SHALL BE PLACED WITHOUT HORIZONTAL CONSTRUCTION JOINTS EXCEPT WHERE SHOWN OR NOTED.
10. EXPOSED EDGES OF CONCRETE ELEMENTS SHALL HAVE CHAMFERED CORNERS
11. ONLY CRITICAL CONSTRUCTION JOINTS ARE SHOWN. SEE SPECIFICATIONS FOR REQUIRED MAXIMUM SPACING OF CONSTRUCTION JOINTS.

FOUNDATIONS

1. NO CONCRETE SHALL BE PLACED IN WATER OR ON FROZEN GROUND.
2. BOTTOM OF FOUNDATION ELEVATIONS GIVEN ON DRAWINGS ARE TO BE CONSIDERED MINIMUM DEPTHS. CONTRACTOR SHALL HAVE FURTHER EXCAVATION AS REQUIRED TO REACH GOOD BEARING.
3. ALL EXCAVATIONS FOR FOOTINGS SHALL BE FINISHED BY HAND FOR THE LAST 6".
4. ALL FINISHED EXCAVATIONS SHALL BE INSPECTED BY THE ENGINEER BEFORE ANY CONCRETE IS PLACED.
5. ALL BACKFILL UNDER OR ADJACENT TO ANY PORTION OF THE STRUCTURES SHALL BE COMPACTED IN 6" LIFTS. SEE SPECIFICATIONS.
6. REMOVE UNSUITABLE FILL AND/OR IMPROVE THE SUBGRADE PER SPECIFICATION REQUIREMENTS. BACKFILL WITH COMPACTED STRUCTURAL (GRANULAR) FILL UP TO THE UNDERSIDE OF THE BUILDING SLABS. SEE SPECIFICATIONS.



CONSTRUCTION JOINT WALL OR SLAB (NO WATERSTOP)
NO SCALE



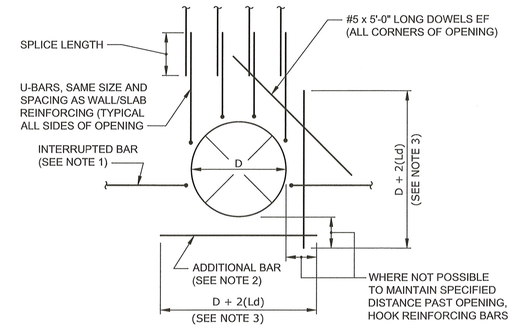
PLAN OF HORIZONTAL REINFORCING AT CORNERS OF CONCRETE WALL
NO SCALE

BAR SIZE DESIGNATION		DEVELOPMENT LENGTH (INCHES)	SPLICE LENGTH (INCHES)	
ENGLISH	METRIC	Ld	CLASS B	CLASS B TOP BARS
#3	#10	15	19	25
#4	#13	19	25	33
#5	#16	24	31	40
#6	#19	29	37	48
#7	#22	42	54	70
#8	#25	48	62	81
#9	#29	54	70	91
#10	#32	61	79	103

REBAR SPLICE LENGTH SCHEDULE

NOTES:

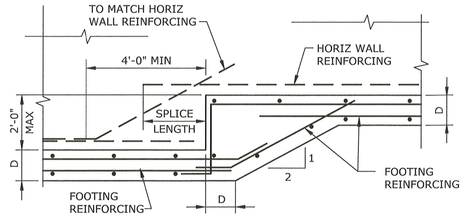
1. IF CLEAR SPACING BETWEEN THE REBARS IS LESS THAN THREE BAR DIAMETERS, OR IF COVER IS LESS THAN TWO BAR DIAMETERS, INCREASE THE SPLICE LENGTH BY AN ADDITIONAL 50%.
2. IF EPOXY COATED REBAR IS USED, INCREASE THE SPLICE LENGTH BY AN ADDITIONAL 50%.
3. IF LIGHTWEIGHT CONCRETE IS USED, INCREASE THE SPLICE LENGTH BY AN ADDITIONAL 30%.
4. THE MINIMUM REBAR SPLICE LENGTH SCHEDULE IS BASED ON F'c= 4,000 PSI AND Fy= 60,000 PSI. ADJUST FOR OTHER STRENGTHS USING ACI-318.
5. FOR HORIZONTAL REINFORCEMENT SO PLACED THAT MORE THAN 12 INCHES OF FRESH CONCRETE IS CAST IN THE MEMBER BELOW, INCREASE THE DEVELOPMENT LENGTH BY AN ADDITIONAL 30%.
6. WHEN BARS OF DIFFERENT SIZE ARE LAP SPLICED, THE SPLICE LENGTH SHALL BE THE LARGER OF EITHER THE DEVELOPMENT LENGTH OF THE LARGER BAR OR THE SPLICE LENGTH OF THE SMALLER BAR.



NOTES:

1. FOR SLAB OR WALL APPLICATION WITH A CONCRETE THICKNESS LESS THAN 12 INCHES, 180° OR 90°, HOOK BARS MAY BE USED IN LIEU OF "U-BARS".
2. PROVIDE ADDITIONAL BARS NOT LESS THAN ONE HALF (1/2) OF INTERRUPTED BARS AT EACH SIDE OF OPENING AT 3" ON CENTER.
3. FOR TOP BARS IN SLAB, INCREASE DEVELOPMENT LENGTH BY 30%.

TYPICAL REINFORCING AT OPENING IN CONCRETE WALLS AND SLABS
NO SCALE



ELEVATION OF CONTINUOUS STEPPED WALL FOOTING
NO SCALE

DUTCHESS COUNTY DEPT. OF HEALTH
Poughkeepsie New York
These plans are approved.
See first sheet for date and signature.

Tighe&Bond

STATE OF NEW YORK
PETER M. VALINSKY
LICENSED PROFESSIONAL ENGINEER
098563
10/20/2022

STATE OF NEW YORK
JONATHAN POPOLI
LICENSED PROFESSIONAL ENGINEER
94139
10/21/2022

West Main Street Pump Station and Force Main

City of Beacon

Beacon, New York

MARK	DATE	DESCRIPTION
	10/19/2022	FOR REGULATORY REVIEW

PROJECT NO:	B0748-003
DATE:	OCTOBER 2022
FILE:	B0748-003-S-101.dwg
DRAWN BY:	IAC, TMP
CHECKED BY:	JF
APPROVED BY:	PMV

STRUCTURAL NOTES AND DETAILS

SCALE: AS SHOWN

S-101
SHEET 10 OF 24

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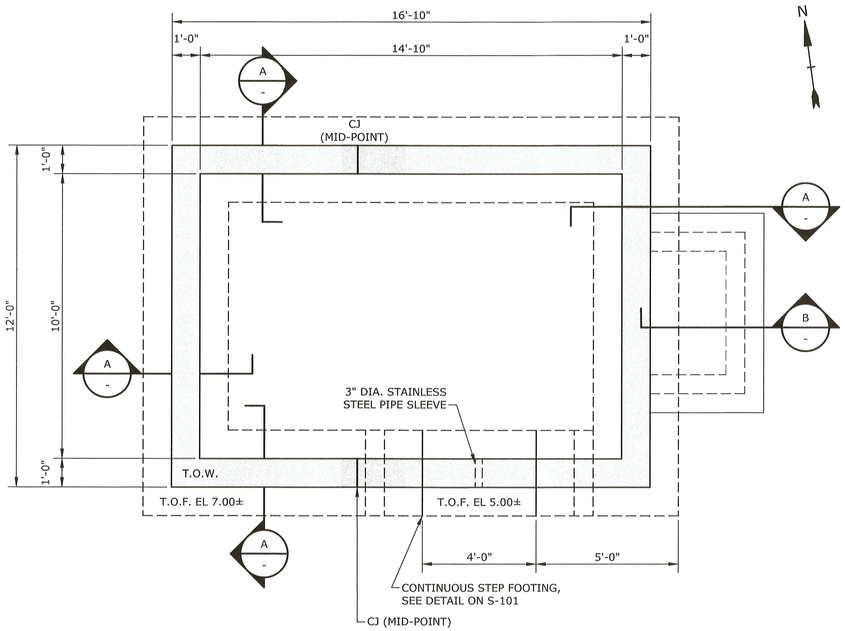
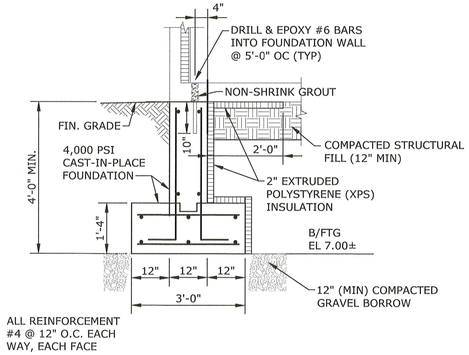


FOUNDATION PLAN
3/8"=1'-0"

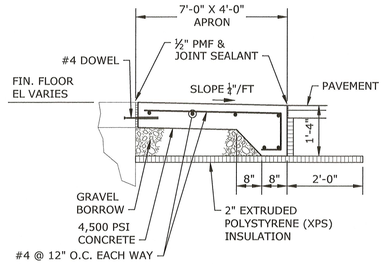
STRUCTURAL DESIGN LOADS

L1	RISK CATEGORY OF BUILDING	
	A. ELECTRICAL FACILITY	RISK CATEGORY II
L2	APPLICABLE CODES	
	A. 2020 BUILDING CODE OF NEW YORK STATE (IBC 2018)	
	B. MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES ASCE 7-16	
	C. INTERNATIONAL ENERGY CONSERVATION CODE IECC 2018	
L3	DEAD LOADS	
	A. WEIGHT OF BUILDING COMPONENTS AND EQUIPMENT	
L4	COLLATERAL LOADS	
	A. MECHANICAL DEAD LOAD	10 PSF
L5	SNOW LOADS	
	A. GROUND SNOW LOAD (Pg)	30 PSF
	B. IMPORTANCE FACTOR	I_S =1.0
	C. FLAT ROOF SNOW LOAD(Pf) (MINIMUM)	30 PSF (PER ASCE7-16 7.3-1)
	D. DRIFTING SNOW	PER ASCE 7-16 7.7, 7.8
L6	LIVE LOADS	
	A. GROUND FLOOR (PRECAST BUILDING SLAB)	150 PSF
	B. BUILDING ROOF	20 PSF
L7	WIND LOADS (ASCE 7-16)	
	A. BASIC WIND SPEED V_{ULT}	112 MPH
	B. WIND EXPOSURE	EXPOSURE C
	C. INTERNAL PRESSURE COEFFICIENT	GCpi = ±0.18
	D. HURRICANE PRONE REGION	NO
L8	SEISMIC LOADS (ASCE 7-16)	
	A. SITE CLASS	B
	B. 0.2 SECOND MAPPED SPECTRAL RESPONSE ACCELERATION (S_S)	0.233
	C. 1.0 SECOND MAPPED SPECTRAL RESPONSE ACCELERATION (S_1)	0.057
	D. DESIGN SPECTRAL RESPONCE ACCELERATION - SHORT PERIOD (S_{DS})	0.140
	E. DESIGN SPECTRAL RESPONCE ACCELERATION - LONG PERIOD (S_{D1})	0.030
	F. SEISMIC OCCUPANCY IMPORTANCE FACTOR (I_E)	1.25
	G. SEISMIC DESIGN CATEGORY	B



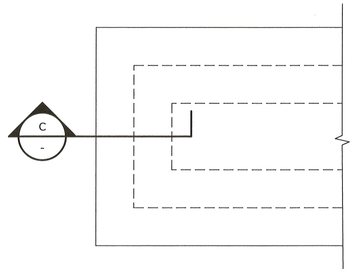
CAST-IN-PLACE FOUNDATION WALL/FOOTING

SECTION A
1/2"=1'-0"

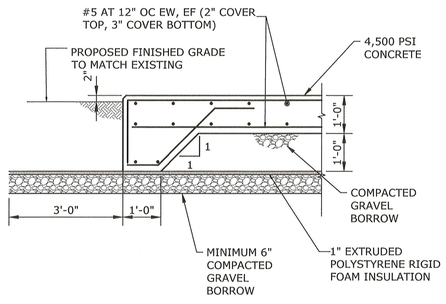


CAST-IN-PLACE CONCRETE ENTRANCE SLAB

SECTION B
1/2"=1'-0"



GENERATOR PAD PLAN
1/2"=1'-0"



SECTION C
1/2"=1'-0"

FOUNDATION NOTES

1. FOUNDATION PLAN DIMENSIONS ARE PRELIMINARY. FINAL FOUNDATION DIMENSIONS WILL BE COORDINATED AND ADJUSTED BASED ON THE APPROVED PRECAST BUILDING SHOP DRAWINGS.
2. THE NET ALLOWABLE BEARING PRESSURE = 1.5 TSF FOR FOOTING HAVING MINIMUM LATERAL DIMENSION OF AT LEAST 2 FEET.
3. ALL REINFORCING IS #4 BARS AT 12" ON CENTER UNLESS NOTED OTHERWISE.
4. COORDINATE SIZE AND LOCATION OF SLAB OPENINGS FOR PIPE PENETRATIONS WITH MECHANICAL DRAWINGS.
5. ESTIMATED ELEVATION OF BOTTOM OF FOOTING IS INDICATED THUS [7.00] ON PLAN. BOTTOM OF EACH EXTERIOR FOOTING SHALL BE A MINIMUM OF 4'-0" BELOW ADJACENT FINISH GRADE.
6. COORDINATE TOP OF FOUNDATION WALLS AND BOTTOM OF FOOTING ELEVATIONS WITH APPROVED PRECAST BUILDING SHOP DRAWINGS.

DUTCHESS COUNTY DEPT. OF HEALTH
Poughkeepsie New York
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0 1' 2' 4'
SCALE: 1/2"=1'-0"

0 2' 4' 6'
SCALE: 3/8"=1'-0"

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PETER M. VALINSKY
LICENSED PROFESSIONAL ENGINEER
098563
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STATE OF NEW YORK
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LICENSED PROFESSIONAL ENGINEER
94139
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PREFABRICATED BUILDING, FOUNDATION PLAN AND DETAILS

SCALE: AS SHOWN

S-102
SHEET 11 OF 24

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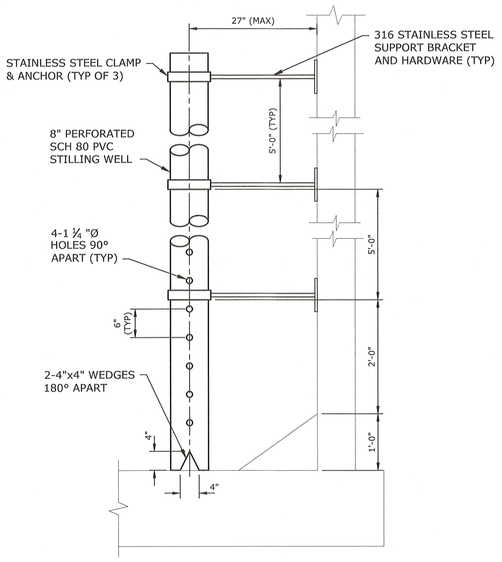
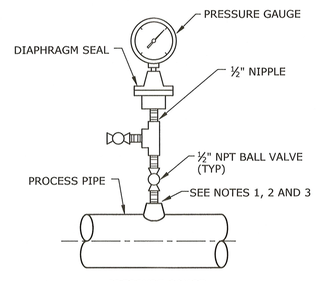
NOTES

1. ALL PIPE PENETRATIONS IN VALVE VAULT AND WET WELL SHALL HAVE PIPE SLEEVES AND SEALS.
2. ALL 8" CHECK VALVES SHALL BE RODDED TO WALL FOR THRUST RESTRAINT WITH 2¾" STAINLESS STEEL THREADED RODS AND ANCHORS.
3. ALL EXPOSED PIPING IN WET WELL AND VALVE VAULT SHALL BE PAINTED IN ACCORDANCE WITH SECTION 09900.
4. GRAVITY INLET CONNECTION TO WET WELL SHALL BE CORED AND FITTED WITH ANNULAR SEALS AND EXTENSION PIPING BOOTS.
5. INTERIOR OF NEW WET WELL TO BE COATED IN ACCORDANCE WITH SECTION 09900.
6. PROVIDE SHEETING AND DEWATERING AS NECESSARY FOR INSTALLMENT OF WET WELL.
7. PIPE SUPPORTS ARE NOT SHOWN. NUMBER AND LOCATION OF PIPE SUPPORTS TO BE DESIGNED BY THE CONTRACTOR PER REQUIREMENTS OF SPECIFICATION SECTION 15060.
8. PRECAST STRUCTURE REBAR SPACING AND CONCRETE THICKNESSES ARE SHOWN FOR EXAMPLE ONLY AND SHALL BE THE RESPONSIBILITY OF THE PRECAST STRUCTURE SUPPLIER.
9. EACH JOINT IN THE CONCRETE STRUCTURES SHALL HAVE (1) ROW OF BITUMINOUS SEALING STRIP CONTINUOUS AROUND THE ENTIRE PERIMETER.
10. CONTRACTOR SHALL VERIFY ALL SIZE AND LOCATIONS OF ALL OPENINGS/HOLES AND COORDINATE WITH THE PRECAST STRUCTURE MANUFACTURER AND THE PUMP SUPPLIER, PRIOR TO FABRICATION.
11. CONTRACTOR SHALL PROVIDE PIPING LAYOUT DRAWING AND SHALL CONDUCT ALL TEST PITS TO CONFIRM THE ELEVATION OF THE FORCE MAIN DISCHARGE TIE-IN LOCATION PRIOR TO SUBMITTING PRECAST CONCRETE STRUCTURE FOR APPROVAL. CONTRACTOR MUST CONFIRM THE LOCATIONS OF ALL PIPING PENETRATIONS, INCLUDING THE VALVE BOX COVERS, AND COORDINATE WITH THE PRECAST STRUCTURE MANUFACTURER.



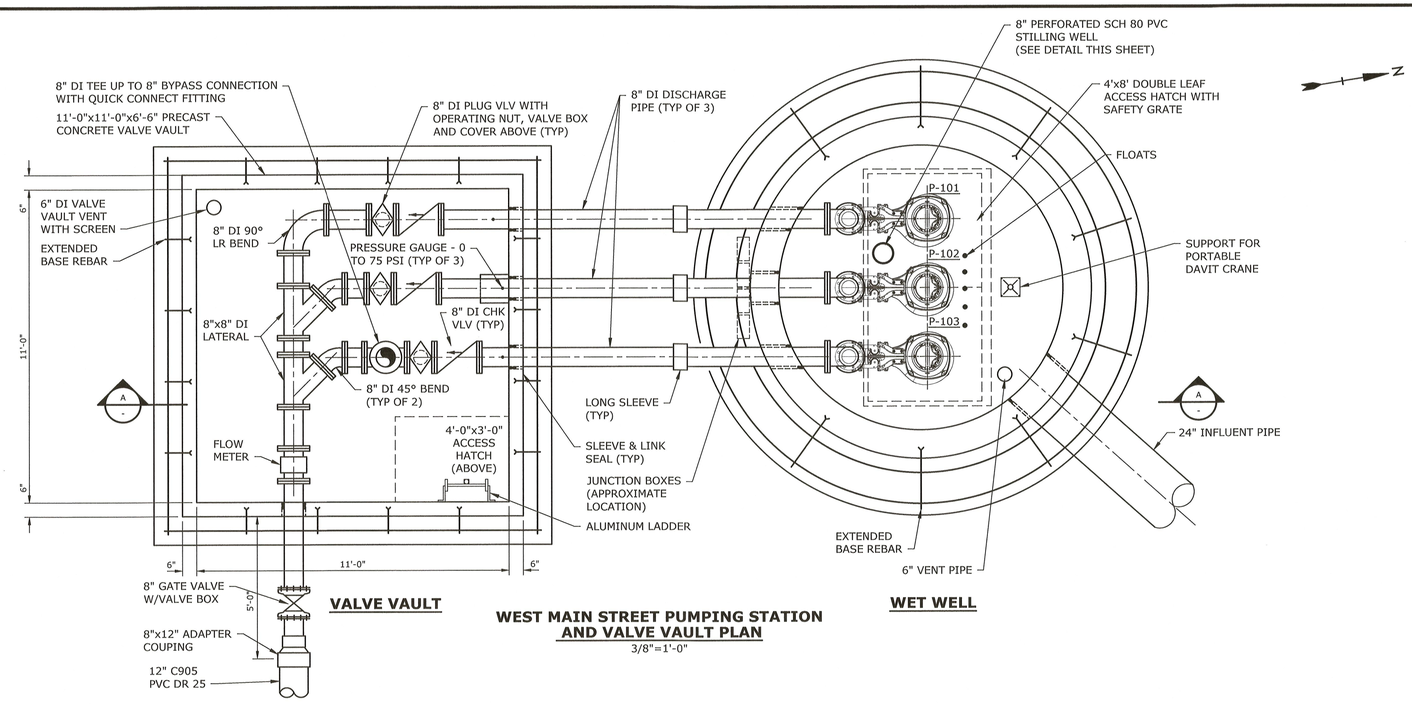
STILLING WELL DETAIL
3/4"=1'-0"



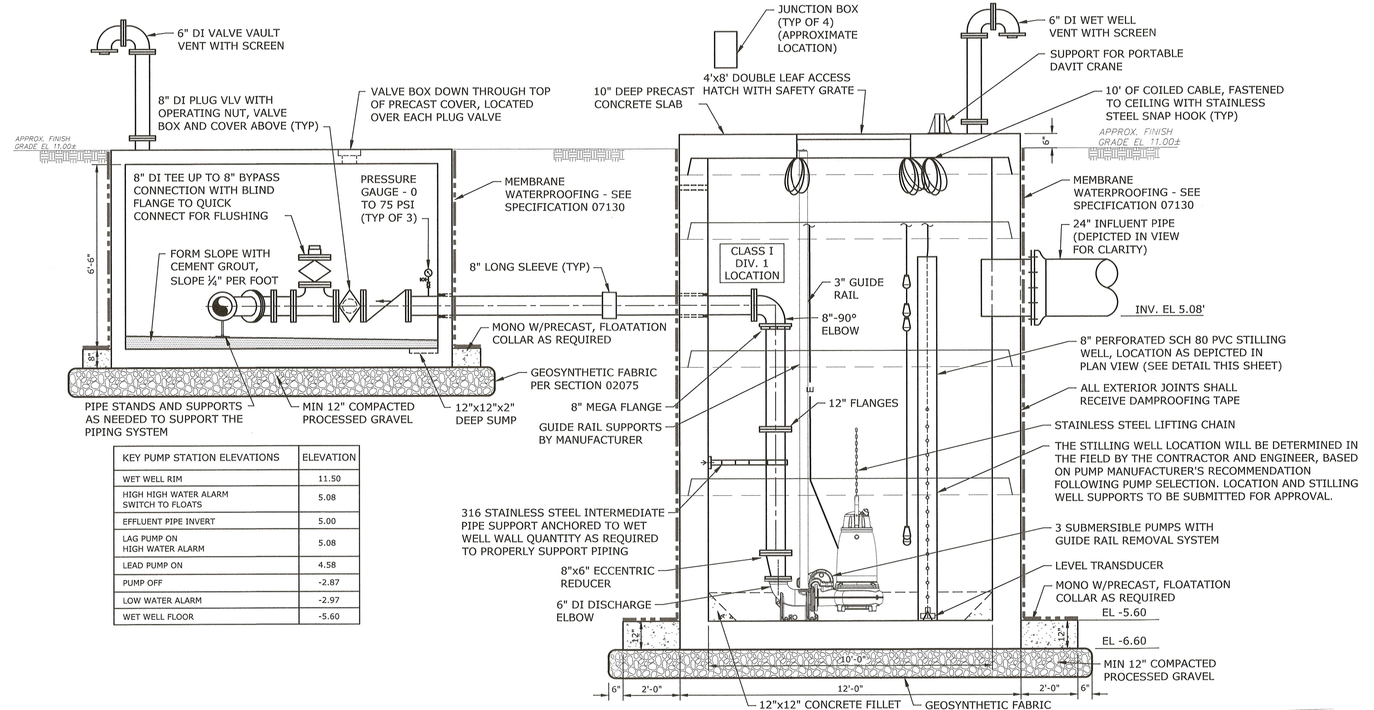
PRESSURE GAUGE

NOTES:
1. FOR STEEL, GALVANIZED STEEL, AND PVC 2½" AND SMALLER, USE A BUSHING IN A TEE.
2. FOR DUCTILE IRON AND FIBERGLASS REINFORCED PLASTIC PIPE, ALL SIZES, USE A PIPE SADDLE AND BUSHING.
3. FOR STEEL AND STAINLESS STEEL PIPES 3" AND LARGER, USE THRED-O-LET AS SHOWN.

PRESSURE GAUGE
NO SCALE



WEST MAIN STREET PUMPING STATION AND VALVE VAULT PLAN
3/8"=1'-0"



SECTION A
3/8"=1'-0"

KEY PUMP STATION ELEVATIONS	ELEVATION
WET WELL RIM	11.50
HIGH HIGH WATER ALARM SWITCH TO FLOATS	5.08
EFFLUENT PIPE INVERT	5.00
LAG PUMP ON HIGH WATER ALARM	5.08
LEAD PUMP ON	4.58
PUMP OFF	-2.87
LOW WATER ALARM	-2.97
WET WELL FLOOR	-5.60

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Tighe&Bond

STATE OF NEW YORK
PETER M. VALINSKI
098563
LICENSED PROFESSIONAL ENGINEER
01/12/2023

STATE OF NEW YORK
LORI CARRIERO
095440-1
LICENSED PROFESSIONAL ENGINEER
01/12/2023

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SERVICES PROVIDED IN NEW YORK BY T&B ENGINEERING AND LANDSCAPE ARCHITECTURE, P.C.

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MECHANICAL PLAN AND SECTION

SCALE: AS SHOWN

M-101
SHEET 12 OF 24

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