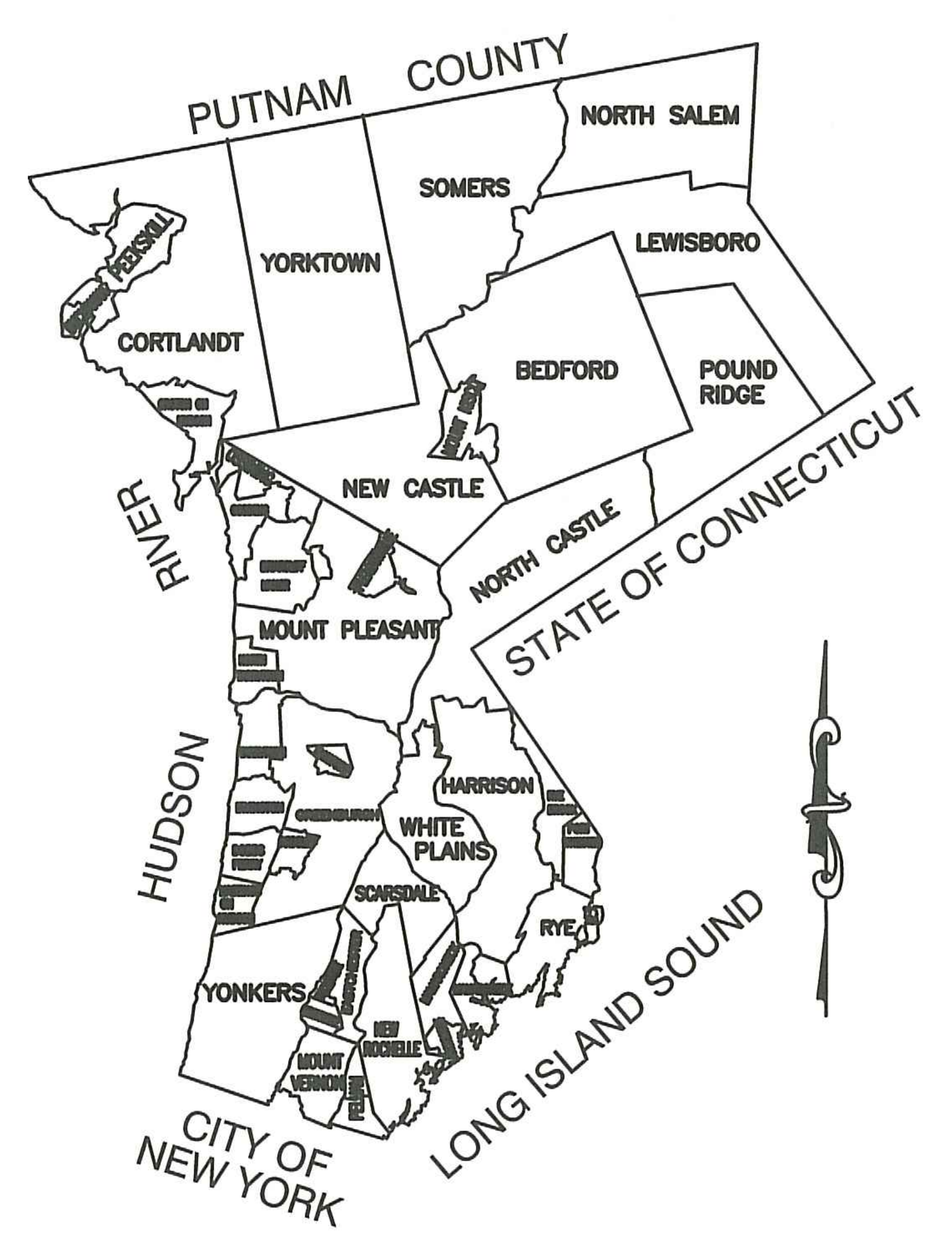
DATE: 3/11/2021 12:53 PM

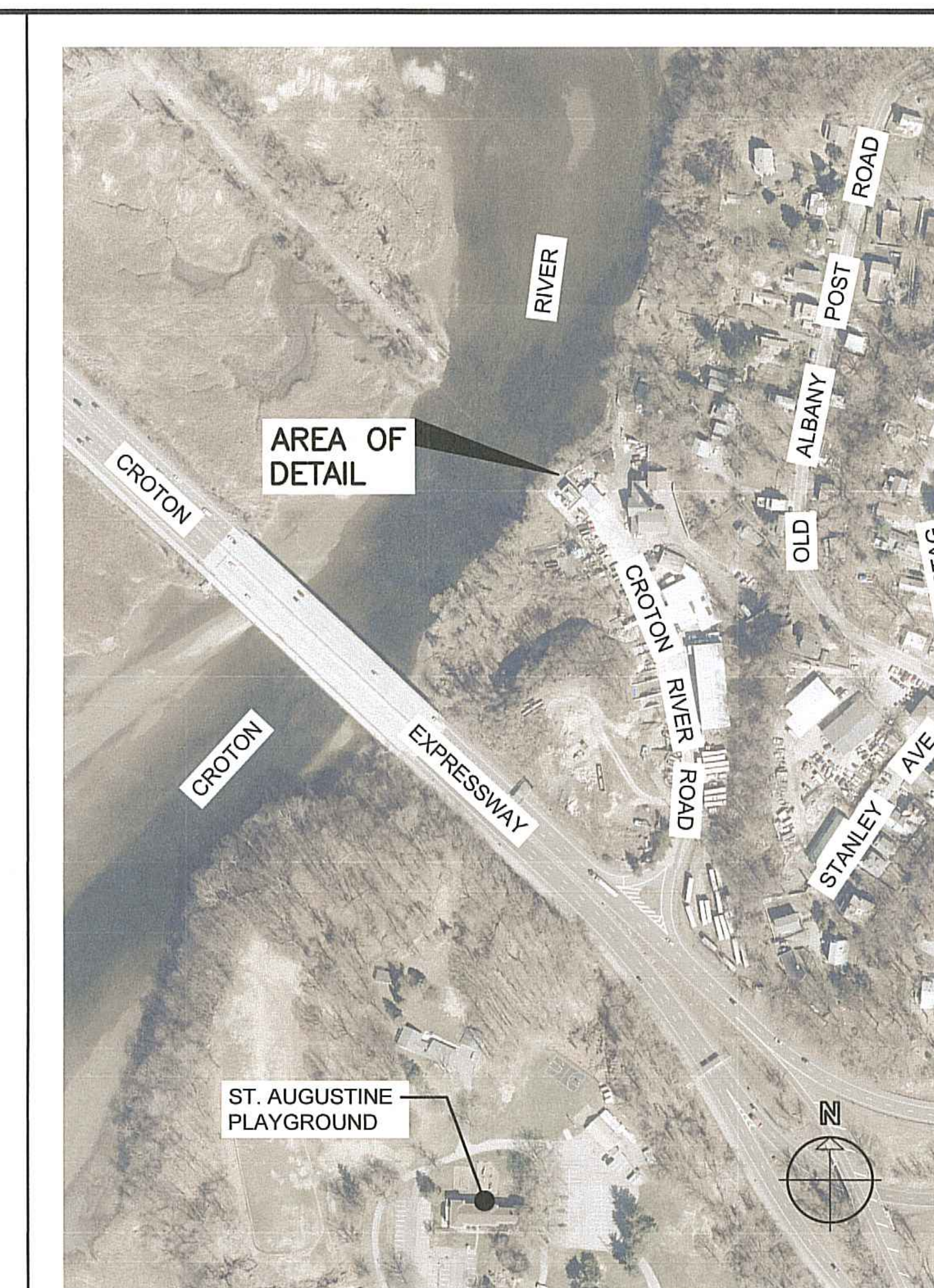


WESTCHESTER COUNTY

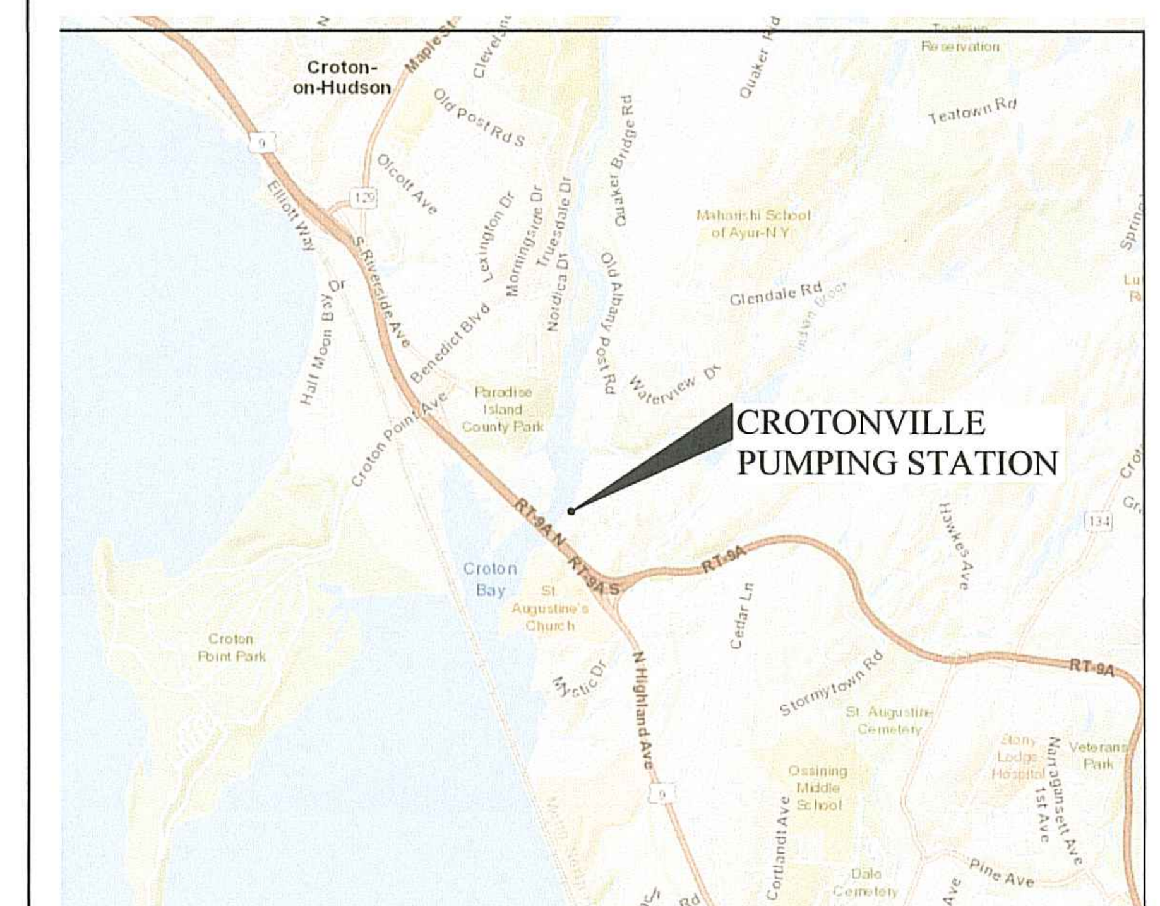
Westchester gov.com

WESTCHESTER COUNTY, NEW YORK
DEPARTMENT OF PUBLIC WORKS AND TRANSPORTATION
DIVISION OF ENGINEERING

CONTRACT No. 17-529
PUMPING STATION REHABILITATION
CROTONVILLE PUMPING STATION
OSSINING SANITARY SEWER DISTRICT
OSSINING, NEW YORK



LOCATION MAP
SCALE: N.T.S.



VICINITY MAP
SCALE: N.T.S.

SHEET NO.	SHEET TITLE	DPW FILE NO.
T-001	TITLE SHEET	208-03-T-25-0
G-001	NOTES, SYMBOLS AND ABBREVIATIONS	208-03-G-26-0
C-101	EXISTING SITE AND DEMOLITION PLAN	208-03-G-27-0
C-102	SITE PLAN	208-03-G-28-0
C-501	DETAILS	208-03-G-29-0
C-502	DETAILS	208-03-G-30-0
S-001	GENERAL NOTES	208-03-S-31-0
S-101	MAIN FLOOR PLAN	208-03-S-32-0
S-102	ELECTRICAL SERVICE PLATFORM	208-03-S-33-0
S-103	PARTIAL EXISTING ROOF PLANS	208-03-S-34-0
S-104	ELECTRICAL SERVICE PLATFORMS	208-03-S-35-0
S-301	SECTIONS & DETAILS	208-03-S-36-0
S-302	SECTIONS & DETAILS	208-03-S-37-0
S-303	SECTIONS & DETAILS	208-03-S-38-0
S-501	TYPICAL DETAILS	208-03-S-39-0
A-001	ABBREVIATIONS & SYMBOLS	208-03-A-40-0
A-002	CODE ANALYSIS	208-03-A-41-0
A-101	PLANS	208-03-A-42-0
A-102	ROOF PLAN	208-03-A-43-0
A-201	ELEVATION	208-03-A-44-0
A-301	SECTIONS	208-03-A-45-0
A-302	SECTIONS AT FLOOD DOORS	208-03-A-46-0
A-501	TRANSLUCENT PANEL DETAILS	208-03-A-47-0
A-601	SCHEDULES AND DETAILS	208-03-A-48-0
M-101	LOWER & MIDDLE LEVEL DEMOLITION PLANS	208-03-M-49-0
M-102	MAIN LEVEL DEMOLITION PLAN & SECTION	208-03-M-50-0
M-103	LOWER & MIDDLE LEVEL PLANS	208-03-M-51-0
M-104	MAIN LEVEL PLAN	208-03-M-52-0
M-301	SECTIONS	208-03-M-53-0
M-302	SECTIONS	208-03-M-54-0
M-501	TYPICAL DETAILS	208-03-M-55-0
M-502	TYPICAL DETAILS	208-03-M-56-0

SHEET NO.	SHEET TITLE	DPW FILE NO.
I-001	PROCESS CONTROL AND INSTRUMENTATION SYMBOLS	208-03-E-57-0
I-002	P&ID PUMPING STATION	208-03-E-58-0
I-003	P&ID CHEMICAL SYSTEM	208-03-E-59-0
I-004	P&ID ANCILLARY	208-03-E-60-0
E-001	GENERAL NOTES, ABBREVIATIONS & SYMBOLS	208-03-E-61-0
E-101	DEMOLITION PLANS	208-03-E-62-0
E-102	DEMOLITION PLANS	208-03-E-63-0
E-103	POWER PLANS	208-03-E-64-0
E-104	POWER PLANS	208-03-E-65-0
E-105	LIGHTING PLANS	208-03-E-66-0
E-106	LIGHTING PLANS	208-03-E-67-0
E-501	ELECTRICAL DETAILS	208-03-E-68-0
E-502	ELECTRICAL DETAILS	208-03-E-69-0
E-601	ONE-LINE DIAGRAMS	208-03-E-70-0
E-602	ELEMENTARY DIAGRAMS	208-03-E-71-0
E-603	ELEMENTARY DIAGRAMS	208-03-E-72-0
E-604	SCHEDULES	208-03-E-73-0
E-605	CONDUIT SCHEDULE	208-03-E-74-0
H-101	MAIN LEVEL & ROOF PLANS	208-03-H-75-0
H-102	MIDDLE LEVEL & LOWER LEVEL PLANS	208-03-H-76-0
H-301	SECTIONS	208-03-H-77-0
H-302	SECTIONS	208-03-H-78-0
H-501	DETAILS	208-03-H-79-0
H-601	SCHEDULE	208-03-H-80-0
P-101	MAIN LEVEL PLUMBING DEMOLITION & INSTALLATION PLANS	208-03-P-81-0
P-102	MIDDLE LEVEL PLUMBING DEMOLITION & INSTALLATION PLANS	208-03-P-82-0
P-103	LOWER LEVEL PLUMBING DEMOLITION & INSTALLATION PLANS	208-03-P-83-0
P-701	ISOMETRIC, DETAIL & SCHEDULE	208-03-P-84-0

IN CHARGE OF R. GELL
CHECKED BY D. ROONEY
MADE BY T. LARAMAY

PROFESSIONAL SEAL
STATE OF NEW YORK · LOWELL AVERY KACHALSKY · LICENSED PROFESSIONAL ENGINEER · No. 059148

IT IS A VIOLATION OF NYS LAW FOR ANY PERSON TO ALTER THIS DOCUMENT IN ANY WAY, UNLESS ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER. IF A DOCUMENT BEARING THE SEAL ON AN ENGINEER IS ALTERED, THE ALTERING ENGINEER SHALL AFFIX TO THE DOCUMENT THEIR SEAL AND THE NOTATION "ALTERED BY" FOLLOWED BY THEIR SIGNATURE AND THE DATE OF SUCH ALTERATION, AND A SPECIFIC DESCRIPTION OF THE ALTERATION.

RECOMMENDED FOR DESIGN	RECOMMENDED FOR CONSTRUCTION	RECOMMENDED FOR CONSTRUCTION	APPROVED FOR CONSTRUCTION	APPROVED FOR CONSTRUCTION
DATE: 6/28/21	DATE: 9.20.21	DATE: 9.20.2021	DATE: 6/29/21	DATE: 9/20/21
JOSEPH GIBNEY, P.E.	LEAH RADKO, P.E.	GAYLE M. KATZMAN, P.E.	VINCENT F. KOPICKI, P.E.	HUGH J. GREECHAN, JR., P.E.
DIRECTOR OF WASTEWATER TREATMENT	DIRECTOR OF DESIGN COORDINATION	FIRST DEPUTY COMMISSIONER	COMMISSIONER	COMMISSIONER
DEPARTMENT OF ENVIRONMENTAL FACILITIES	DEPARTMENT OF PUBLIC WORKS AND TRANSPORTATION	DEPARTMENT OF PUBLIC WORKS AND TRANSPORTATION	DEPARTMENT OF ENVIRONMENTAL FACILITIES	DEPARTMENT OF PUBLIC WORKS AND TRANSPORTATION

CONSULTANT INFORMATION

O'BRIEN & GERE ENGINEERS, INC.
50 MAIN ST., 10TH FLOOR, SUITE 1000
WHITE PLAINS, NEW YORK 10606

REVISION NUMBER	DATE	MADE BY	APP'D BY	REVISION

RECORD DRAWING CERTIFICATION

☐ AS BUILT - CHANGES AS NOTED
☐ AS BUILT - NO CHANGES

CONTRACTOR	PROJECT COORDINATOR
NAME	NAME
SIGNATURE	SIGNATURE
TITLE DATE	TITLE DATE

WESTCHESTER COUNTY, NEW YORK
DEPARTMENT OF PUBLIC WORKS AND TRANSPORTATION
DIVISION OF ENGINEERING

CROTONVILLE PUMPING STATION REHABILITATION
OSSINING SANITARY SEWER DISTRICT
OSSINING, NEW YORK
TITLE SHEET

CONTRACT NUMBER 17-529
SHEET NUMBER T-001
SHEET NO. 1 OF 60
SCALE: N.T.S.
DATE: 12/21/2018
DPW FILE NO. 208-03-T-25-0
REV. NO. 0

I:\WESTCHESTER-CO.-DPW.13020\66136.CROTONVILLE-PUM\DOCS\DWG\SHEETS\66136.TITLE SHEET.DWG

DATE: 3/11/2021 12:30 PM

GENERAL DEMOLITION NOTES:

1. SEE ARCHITECTURAL, HVAC, PLUMBING AND ELECTRICAL DRAWINGS FOR RELATED REMOVALS AND DEMOLITION TO BE PERFORMED UNDER THIS PROJECT.
2. ALL WALL, FLOOR AND ROOF OPENINGS RESULTING FROM DEMOLITION WORK SHALL BE SEALED AS SPECIFIED. FIREWALL PENETRATIONS SHALL BE SEALED TO MAINTAIN APPROPRIATE FIRE RATING. BELOW GRADE AND WET AREA PENETRATIONS SHALL BE SEALED WATERTIGHT. SEE STRUCTURAL DRAWINGS FOR TYPICAL DETAILS FOR REPAIR OF WALL, FLOOR AND ROOF OPENINGS RESULTING FROM DEMOLITION WORK.
3. UNLESS OTHERWISE NOTED OR SPECIFIED IN CONTRACT DOCUMENTS, ALL MATERIALS REMOVED OR DEMOLISHED UNDER THIS PROJECT SHALL BE LEGALLY DISPOSED OF OFF-SITE BY CONTRACTOR. WHERE SPECIFICALLY NOTED, CERTAIN ITEMS OF EQUIPMENT SHALL BE TURNED OVER TO OWNER.
4. SCHEDULE AND SEQUENCE OF REMOVAL AND DEMOLITION WORK SHALL BE IN ACCORDANCE WITH CONSTRAINTS STIPULATED ON CONTRACT DRAWINGS AND AS SPECIFIED.
5. UNLESS OTHERWISE NOTED, FOR EXISTING MECHANICAL EQUIPMENT INDICATED FOR REMOVAL, REMOVAL SHALL INCLUDE DEMOLITION OF EXISTING ANCHOR BOLTS, CONCRETE BASE PAD, AND REPAIR OF CONCRETE FLOOR TO MATCH CONDITION OF SURROUNDING FLOOR.
6. UNLESS OTHERWISE NOTED, REMOVAL OF EXISTING INTERIOR PIPING SYSTEMS SHALL INCLUDE REMOVAL OF INSULATION, HANGERS, SUPPORTS, ANCHORS, FIXTURES AND ACCESSORIES. ANY EMBEDDED HARDWARE OR ANCHORS SHALL BE CUT FLUSH WITH WALL, FLOOR OR SLAB SURFACE AND PATCHED AS SPECIFIED.
7. PROVIDE NEW GASKETS AND HARDWARE AT ALL CONNECTIONS BETWEEN NEW AND EXISTING PIPING, AND WHERE EXISTING PIPING IS DISASSEMBLED.
8. OWNER WILL IDENTIFY EQUIPMENT TO BE SALVAGED. CONTRACTOR SHALL REMOVE AND PROTECT EQUIPMENT TO BE SALVAGED AND DELIVER TO OWNER AS SPECIFIED. CONTRACTOR SHALL SECURE AND STORE EQUIPMENT UNTIL OWNER CAN TAKE DELIVERY.
9. FOR CLARITY, EXISTING FACILITIES AND PIPING ARE GENERALLY SHOWN LIGHT. NEW FACILITIES AND PIPING ARE GENERALLY SHOWN HEAVY.
10. CONTRACTOR SHALL COORDINATE ALL WORK AFFECTING UTILITIES WITH RESPECTIVE UTILITY OWNERS. ALL DETAILS OF CONSTRUCTION AND/OR RELOCATION OF AFFECTED UTILITIES SHALL BE APPROVED BY UTILITY OWNER APPROVING AGENCIES.

GENERAL NOTES:

1. SITE BASE MAPPING IS BASED ON A TOPOGRAPHIC SURVEY PREPARED BY WARD CARPENTER DATED JULY 2017 AND HISTORICAL RECORDS (CHARLES R VELZY ASSOCIATES, INC., 1975, "CROTON & CROTONVILLE PUMPING STATIONS"). ALL ELEVATIONS REFER TO THE 1988 NORTH AMERICAN VERTICAL DATUM (NAVD88).
2. FLOOD DESIGN ELEVATION IS 12.5' BASED ON THE 1988 NORTH AMERICAN VERTICAL DATUM (NAVD88).
3. CONTRACTOR SHALL NOTIFY DIG SAFELY NEW YORK 72 HOURS PRIOR TO WORK REQUIRING EXCAVATION.
4. CONTRACTOR SHALL NOTIFY OWNER AND ENGINEER A MINIMUM OF SEVEN DAYS PRIOR TO COMMENCEMENT OF ON-SITE CONSTRUCTION, INCLUDING ANY DEMOLITION WORK.
5. EXISTING LOCATIONS AND ELEVATIONS ARE APPROXIMATE ONLY. CONDUCT ALL CONSTRUCTION AND CONTROL SURVEYS AND VERIFY ALL DIMENSIONS PERTINENT TO WORK OF THIS CONTRACT IN FIELD PRIOR TO SUBMITTAL OF SHOP DRAWINGS.
6. PROVIDE ALL NECESSARY VEHICLE TRAFFIC CONTROL DURING CONSTRUCTION AS REQUIRED.
7. RESTORE ALL DAMAGED FACILITIES AND DISTURBED SURFACES TO ORIGINAL OR BETTER CONDITION INCLUDING TOPSOIL, SEED, FERTILIZER AND MULCH IN ACCORDANCE WITH SPECIFICATIONS.
8. PROTECT ALL EXISTING FACILITIES NO SCHEDULED FOR DEMOLITION DURING WORK OF THIS CONTRACT.
9. COMPLY WITH ALL REGULATORY APPROVAL PERMIT CONDITIONS.
10. PROVIDE EROSION AND SEDIMENT CONTROLS AS SHOWN OR REQUIRED. A SWPPP HAS NOT BEEN PREPARED FOR THIS PROJECT AS THE AREA OF DISTURBANCE IS LESS THAN ONE ACRE.
11. SCHEDULE AND PERFORM WORK IN ACCORDANCE WITH SEQUENCE AND SCHEDULE CONSTRAINTS SPECIFIED.
12. COUNTY PERSONNEL SHALL OPERATE ALL EXISTING VALVES AND EQUIPMENT. CONTRACTOR SHALL COORDINATE OPERATION OF EXISTING FACILITIES WITH COUNTY TO COINCIDE WITH SCHEDULED WORK ACTIVITIES.
13. CONTRACTOR SHALL COORDINATE WITH AND OBTAIN APPROVAL FROM OWNER FOR LOCATION OF FIELD OFFICE TRAILERS, CONSTRUCTION EQUIPMENT, TEMPORARY PARKING AND STAGING AREAS.
14. CONTRACTOR IS PERMITTED TO STORE/STAGE EQUIPMENT AND MATERIALS WITHIN OWNER APPROVED CONSTRUCTION STAGING AREAS AT CONTRACTOR'S OWN RISK. CONTRACTOR SHALL BE RESPONSIBLE FOR DEVELOPMENT OF SITE IN A FASHION THAT WILL PERMIT ADEQUATE STAGING.
15. REFER TO APPLICABLE PIPE SCHEDULES, VALVE SCHEDULE AND TECHNICAL SPECIFICATIONS FOR MATERIALS AND INSTALLATION REQUIREMENTS. PIPE SCHEDULES AND VALVE SCHEDULE ARE LOCATED IN THE TECHNICAL SPECIFICATIONS.
16. FLEXIBLE COUPLINGS SHOWN ON THE CONTRACT DRAWINGS ARE REQUIRED FOR REMOVAL OF EQUIPMENT AND PIPING BY THE OWNER AFTER COMPLETION OF THE WORK. ADDITIONAL COUPLINGS MAY BE REQUIRED TO FACILITATE INSTALLATION BY THE CONTRACTOR - NO ADDITIONAL PAYMENT WILL BE MADE THEREFOR.
17. PROVIDE HARNESSING FOR ALL FLEXIBLE COUPLINGS INSTALLED INSIDE STRUCTURES, UNLESS OTHERWISE INDICATED.
18. IN GENERAL, SMALL DIAMETER PIPING (I.E., 2-1/2" AND SMALLER) IS SHOWN FOR GENERAL LAYOUT PURPOSES ONLY, AND IS NOT INTENDED TO SHOW EXACT ALIGNMENT, NUMBER OF FITTINGS, VALVES AND APPURTENANCES. ALL PIPING, FITTINGS AND APPURTENANCES SHALL BE PROVIDED AS SPECIFIED ON THE INSTRUMENTATION DRAWINGS OR SHOWN IN APPLICABLE SCHEMATIC DIAGRAMS, AND AS REQUIRED FOR A COMPLETE INSTALLATION. ACTUAL PIPE ROUTING SHALL BE DETERMINED BY THE CONTRACTOR SUBJECT TO REVIEW BY THE ENGINEER, AND SHALL BE COORDINATED TO AVOID CONFLICTS WITH EXISTING AND NEW WORK OF ELECTRICAL, HVAC AND PLUMBING SYSTEMS, AND SO AS NOT TO INTERFERE WITH ACCESS TO OR OPERATION OF ANY OTHER PIPE, VALVE OR EQUIPMENT. SMALL DIAMETER PIPING SYSTEMS SHALL BE LAID OUT AND INSTALLED IN AN ORGANIZED, NEAT AND WORKMANLIKE MANNER.
19. PIPE SIZES SHOWN MAY NOT BE THE SAME AS SIZES OF CONNECTIONS TO THE EQUIPMENT SUPPLIED. PROVIDE ALL NECESSARY REDUCERS, BUSHINGS AND APPURTENANCES REQUIRED TO MAKE EQUIPMENT CONNECTIONS.
20. REPAIR INTERIOR AND EXTERIOR PIPE COATINGS DAMAGED DURING INSTALLATION.
21. CONTRACTOR SHALL COORDINATE WALL HANGER LOCATIONS, ALLOWABLE LOADS, AND ATTACHMENT METHODS WITH MANUFACTURER OF WALL BRACKET AND OBTAIN APPROVAL OF THE ENGINEER.
22. SEE INSTRUMENTATION DRAWINGS FOR INSTRUMENT PIPING CONNECTION DETAILS.

EROSION & SEDIMENT CONTROL NOTES:

1. WATER FROM DEWATERING OPERATIONS SHALL BE PRETREATED IN ACCORDANCE WITH MOST CURRENT NYSDEC STORMWATER GENERAL PERMIT CONDITIONS PRIOR TO DISCHARGE TO SURFACE WATERS.
2. THE STABILIZED CONSTRUCTION ENTRANCE SHALL BE MAINTAINED AS DETAILED PRIOR TO USE BY CONSTRUCTION VEHICLES AND EQUIPMENT.
3. EROSION AND SEDIMENT CONTROL FACILITIES SHALL BE INSTALLED AND MAINTAINED BY CONTRACTOR IN ACCORDANCE WITH NEW YORK STATE STANDARDS FOR EROSION & SEDIMENT CONTROL.
4. PERIODIC CLEANING AND INSPECTION OF TEMPORARY EROSION AND SEDIMENT CONTROL DEVICES SHALL BE NECESSARY. ANY DEFICIENCIES SHALL BE RESOLVED WITHIN 24 HOURS.
5. SILT FENCES INSTALLED FOR THE PURPOSE OF SLOWING OVERLAND (SHEET) FLOW SHALL BE ARRANGED PERPENDICULAR TO THE DIRECTION OF THE SHEET FLOW. SUCH INSTALLATION MAY REQUIRE SHORT, STAGGERED SEGMENTS OF FENCE IN ORDER TO BE LOCATED WHOLLY WITHIN THE DESIGNATED CONSTRUCTION LIMITS.
6. CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PRECLUDE CONTAMINATION OF ANY WATERWAYS BY SUSPENDED SOLIDS, SEDIMENTS, FUELS, SOLVENTS, LUBRICANTS, EPOXY COATINGS, PAINT, CONCRETE, LEACHATE, OR ANY OTHER ENVIRONMENTALLY DELETERIOUS MATERIALS ASSOCIATED WITH THE PROJECT WORK.
7. EROSION AND SEDIMENT CONTROL DEVICES (E.G. SILT FENCING, ETC.) SHALL BE INSPECTED AND MAINTAINED IN EFFECTIVE CONDITION BY CONTRACTOR UNTIL FINAL COMPLETION AND ACCEPTANCE BY OWNER.

RESTORATION NOTES:

1. WHEN RESTORING LAWN AREAS, ON-SITE MATERIAL MAY BE USED TO BACKFILL AREA WITHIN FOUR INCHES OF FINISHED SURFACE. FINISHED SURFACE SHALL MATCH EXISTING ELEVATIONS AND GRADES UNLESS OTHERWISE NOTED. ON-SITE MATERIAL SHALL BE THOROUGHLY COMPACTED AND FREE OF GRASS CLUMPS, TREE ROOTS, PIECES OF ASPHALT AND OTHER EXTRANEOUS MATERIALS, AND STONES LARGER THAN ONE INCH IN SIZE.
2. ALL DISTURBED NON-PAVED AREAS SHALL RECEIVE FOUR INCHES OF TOPSOIL, SEED AND MULCH AND SHALL BE WATERED BY CONTRACTOR UNTIL A HEALTHY STAND OF GRASS IS OBTAINED.
3. ANY ADJACENT AREAS DISTURBED OR DAMAGED DURING CONSTRUCTION SHALL BE RESTORED TO PRE-CONSTRUCTION CONDITIONS TO THE SATISFACTION OF OWNER AT CONTRACTOR'S EXPENSE.

START UP AND COMMISSIONING NOTES:

1. UPON COMPLETION AND PRIOR TO USE, TWO (2) SETS OF AS-BUILT PLANS MUST BE SUBMITTED TOGETHER WITH P.E. CERTIFICATION OF CONSTRUCTION AND ACCEPTABLE LEAKAGE TEST AND PUMP TEST RESULTS.

LEGEND

- 440 — EXISTING CONTOUR
- X — X — EXISTING CHAIN LINK FENCE
- ℄ — EXISTING PROPERTY LINE
- APPROXIMATE EXISTING MUNICIPAL BOUNDARY
- ∅ EXISTING POWER POLE
- OHE — EXISTING OVERHEAD ELECTRIC
- W — W — EXISTING WATER MAIN
- EXISTING PIPING, EQUIPMENT AND FEATURES TO BE REMOVED
- EXISTING PIPING TO BE ABANDONED IN-PLACE
- NEW PIPING, EQUIPMENT AND FEATURES
- SF — NEW SILT FENCE
- NEW CHAIN LINK FENCE
- 1 / G-102 — SECTION NUMBER OR DETAIL LETTER REFERENCE; SHEET NUMBER REFERENCE (INDICATES SHEET NUMBER ON WHICH SECTION WAS CUT OR IS SHOWN)
- (D) POINT OF DISCONNECTION
- (P) POINT OF CONNECTION

TYPICAL VALVE IDENTIFICATION

24"-BFV
- NOMINAL PIPE SIZE
- VALVE TYPE (SEE ABBREVIATIONS)

TYPICAL PIPING IDENTIFICATION

24"Ø-SAN-DI
- NOMINAL PIPE SIZE
- SERVICE DESIGNATION (SEE ABBREVIATIONS)
- PIPE MATERIAL (IF DIFFERENT THAN PIPING SCHEDULE)

ABBREVIATIONS

PIPING SERVICE IDENTIFICATION

CW	COLD WATER, POTABLE
D/W	DRAIN/WASTE
FM	FORCEMAIN
HW	HOT WATER, POTABLE
IW	INSTRUMENT WATER
O/F	OVERFLOW
PD	PROCESS DRAIN
PW	PLANT WATER (NON-POTABLE)
RW	RAW WATER
SAN	SANITARY SEWER
SAW	SAMPLE WATER
ST	STORM SEWER
TW	TEMPERED WATER
V	VENT
W	WATER (GENERAL)

PIPE MATERIALS

CI	CAST IRON
CPVC	CHLORINATED POLYVINYL CHLORIDE
CS	CARBON STEEL
CU	COPPER
DI	DUCTILE IRON
GS	GALVANIZED STEEL
HDPE	HIGH DENSITY POLYETHYLENE
PVC	POLYVINYL CHLORIDE
SS	STAINLESS STEEL

VALVES

AVV	AIR/VACUUM VALVE
ARV	AIR RELEASE VALVE
BV	BALL VALVE
BFV	BUTTERFLY VALVE
CV	CHECK VALVE
GLV	GLOBE VALVE
GV	GATE VALVE
SCV	SURGE CONTROL VALVE

MISCELLANEOUS

ALUM	ALUMINUM
B/	BOTTOM OF
℄	SURVEY BASELINE
BM	BENCHMARK
BOL	BOLLARD
℄	CENTERLINE
CLR.	CLEAR
CMU	CONCRETE MASONRY UNIT
CONC.	CONCRETE
CORP.	CORPORATION STOP
DR	DIMENSIONAL RATIO
EL.	ELEVATION
EOP	EDGE OF PAVEMENT
ELEC.	ELECTRIC
E&SC	EROSION & SEDIMENT CONTROL
EXIST.	EXISTING
FF	FINISHED FLOOR
FLG.	FLANGE
FPOST	FENCE POST
HP	HIGH POINT
INV.	INVERT
LF	LINEAR FEET
LP	LOW POINT
MJ	MECHANICAL JOINT
NO	NORMALLY OPEN
OC	ON CENTER
OHE	OVERHEAD ELECTRIC
OPNG.	OPENING
PE	PLAIN END
PERF.	PERFORATED
PO	PUSH ON
PS	PUMPING STATION
RED.	REDUCER
SDR	STANDARD DIMENSIONAL RATIO
SF	SILT FENCE
ST. STL.	STAINLESS STEEL (OTHER THAN PIPING)
SWPPP	STORM WATER POLLUTION PREVENTION PLAN
T/	TOP OF
TYP.	TYPICAL
VFD	VARIABLE FREQUENCY DRIVE
W/	WITH
WV	EXISTING WATER VALVE
WW	WASTEWATER

DocuSign

IN ACCORDANCE WITH TITLE VIII, ARTICLE 145, SECTION 7209 (2) OF THE NEW YORK STATE EDUCATION LAW, IT IS A VIOLATION OF LAW FOR ANY PERSON UNLESS ACTING UNDER THE DIRECTION OF A LICENSED ENGINEER TO ALTER THIS DOCUMENT.

IN CHARGE OF R. GELL
CHECKED BY D. ROONEY
MADE BY T. LARAMAY

O'BRIEN & GERE ENGINEERS, INC.
50 MAIN ST., 10TH FLOOR, SUITE 1000
WHITE PLAINS, NEW YORK 10606

REVISION NUMBER	DATE	MADE BY	APP'D BY	REVISION

RECORD DRAWING CERTIFICATION

☐ AS BUILT - CHANGES AS NOTED
☐ AS BUILT - NO CHANGES

CONTRACTOR
NAME
SIGNATURE
TITLE DATE

PROJECT COORDINATOR
NAME
SIGNATURE
TITLE DATE

WESTCHESTER COUNTY, NEW YORK
DEPARTMENT OF PUBLIC WORKS AND TRANSPORTATION
DIVISION OF ENGINEERING

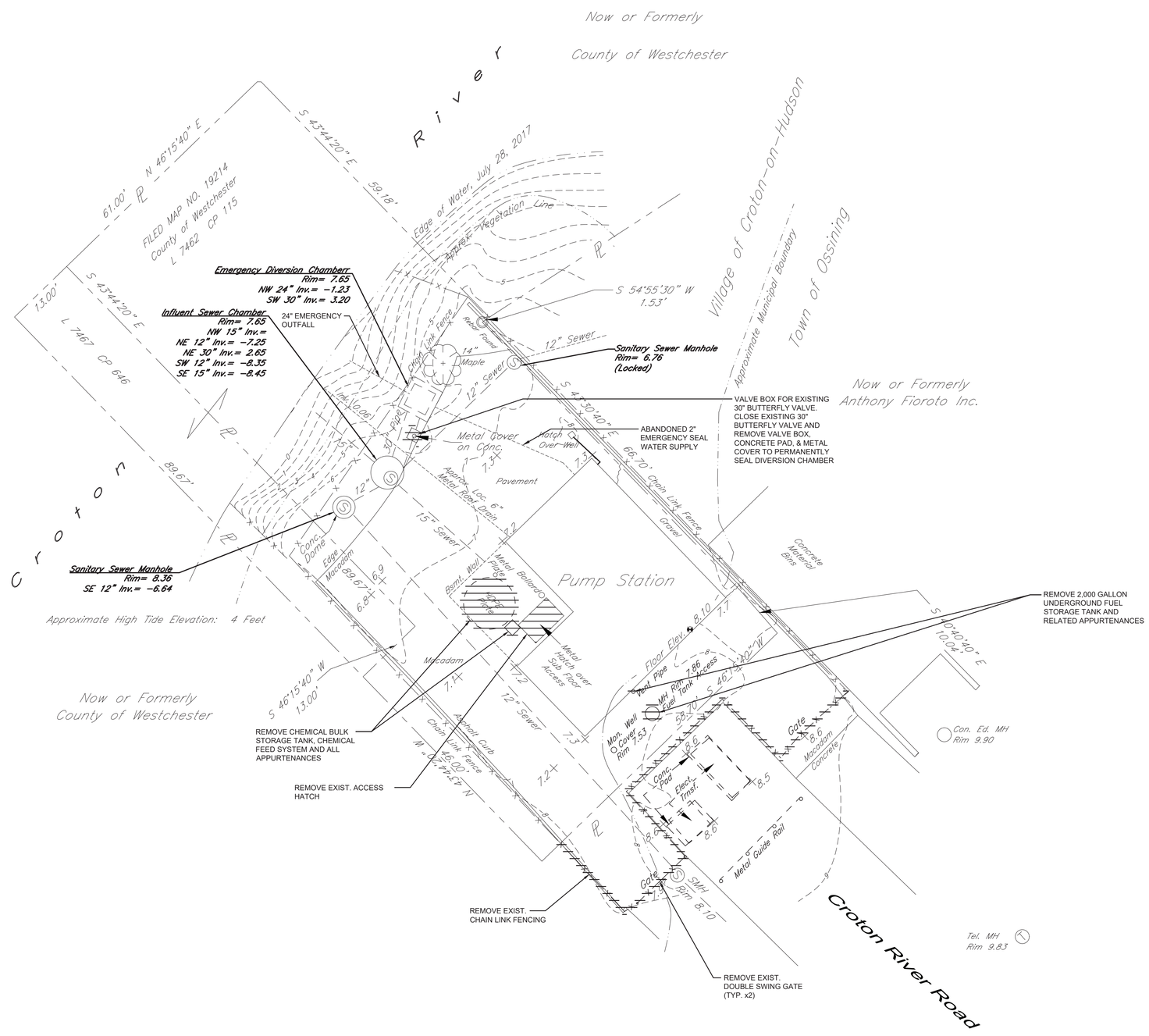
CONTRACT NUMBER 17-529
SHEET NUMBER G-001
SHEET NO. 2 OF 60

CROTONVILLE PUMPING STATION REHABILITATION
OSSINING SANITARY SEWER DISTRICT
OSSINING, NEW YORK
INDEX TO DRAWINGS, NOTES, SYMBOLS & ABBREVIATIONS

SCALE: N.T.S.
DATE: 12/21/2018
DPW FILE NO. 208-03-G-26-0
REV. NO. 0

I:\WESTCHESTER-CO..DPW\13020\66136.CROTONVILLE-PUM\DOCS\DWG\SHEETS\66136G-001.DWG

DATE: 2/19/2021 3:26 PM



EXISTING SITE AND DEMOLITION PLAN

1"=10' 10' 0 10'

TRUE NORTH

IN ACCORDANCE WITH TITLE VIII, ARTICLE 145, SECTION 7209 (2) OF THE NEW YORK STATE EDUCATION LAW, IT IS A VIOLATION OF LAW FOR ANY PERSON UNLESS ACTING UNDER THE DIRECTION OF A LICENSED ENGINEER TO ALTER THIS DOCUMENT.

IN CHARGE OF R. GELL
CHECKED BY D. ROONEY
MADE BY T. LARAMAY

O'BRIEN & GERE ENGINEERS, INC.
50 MAIN ST., 10TH FLOOR, SUITE 1000
WHITE PLAINS, NEW YORK 10606

REVISION NUMBER	DATE	MADE BY	APP'D BY	REVISION

RECORD DRAWING CERTIFICATION

☐ AS BUILT - CHANGES AS NOTED
☐ AS BUILT - NO CHANGES

CONTRACTOR
NAME
SIGNATURE
TITLE DATE

PROJECT COORDINATOR
NAME
SIGNATURE
TITLE DATE

WESTCHESTER COUNTY, NEW YORK
DEPARTMENT OF PUBLIC WORKS AND TRANSPORTATION
DIVISION OF ENGINEERING

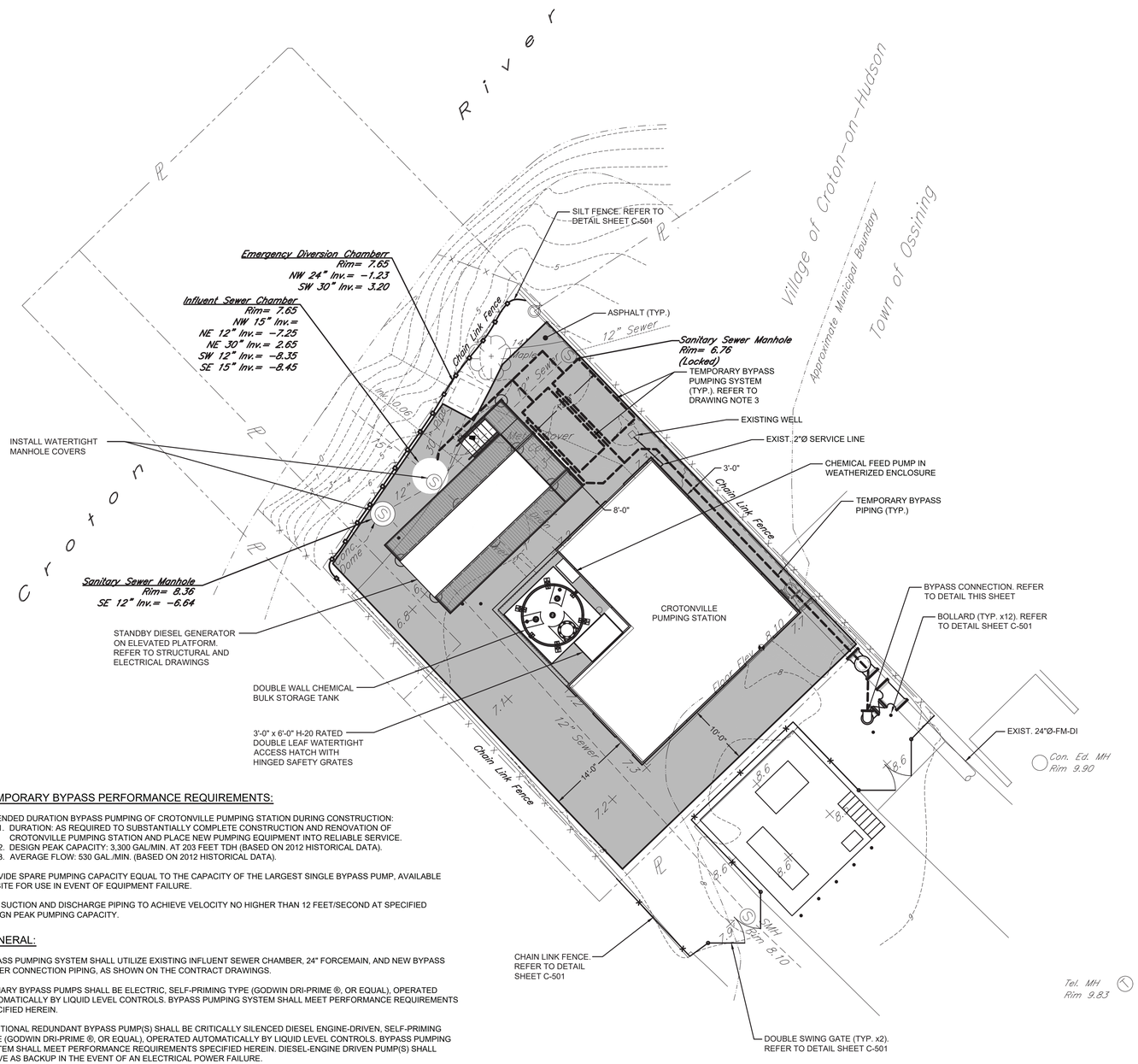
CONTRACT NUMBER 17-529
SHEET NUMBER C-101
SHEET NO. 3 OF 60

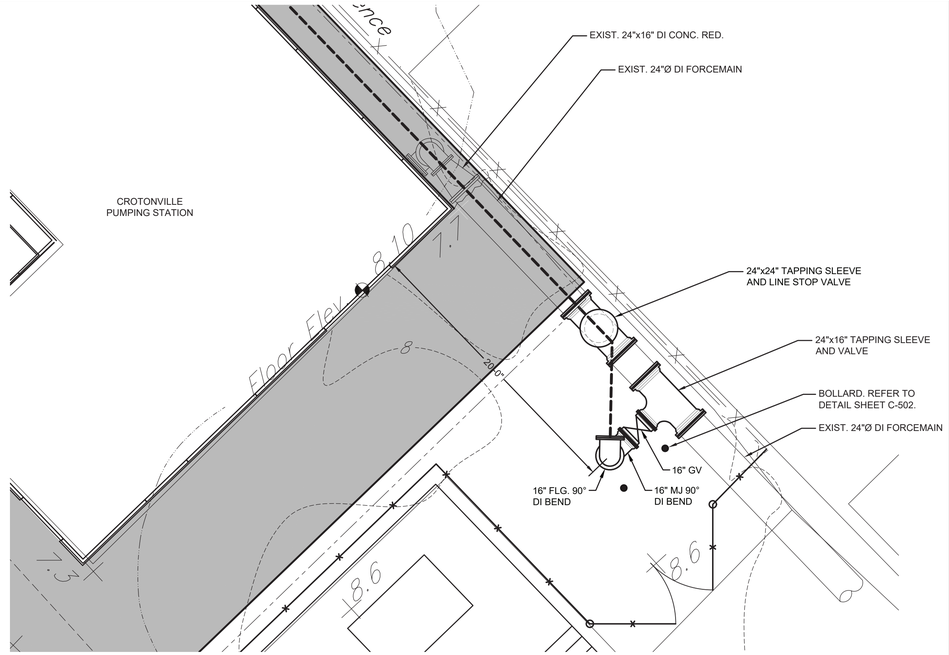
CROTONVILLE PUMPING STATION REHABILITATION
OSSINING SANITARY SEWER DISTRICT
OSSINING, NEW YORK
EXISTING SITE AND DEMOLITION PLAN

SCALE: 1" = 10'
DATE: 12/21/2018
DPW FILE NO. 208-03-G-27-0
REV. NO. 0

I:\WESTCHESTER-CO.-DPW.13020\66136.CROTONVILLE-PUMI\DOCS\DWG\SHEETS\66136C-101.DWG

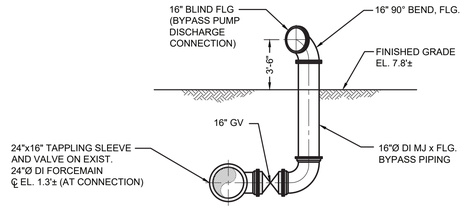
DATE: 4/11/2021 9:04 AM





PARTIAL SITE PLAN

1"=5'



BYPASS CONNECTION DETAIL

1"=5'

1.1 TEMPORARY BYPASS PERFORMANCE REQUIREMENTS:

A. EXTENDED DURATION BYPASS PUMPING OF CROTONVILLE PUMPING STATION DURING CONSTRUCTION:
   1. DURATION: AS REQUIRED TO SUBSTANTIALLY COMPLETE CONSTRUCTION AND RENOVATION OF CROTONVILLE PUMPING STATION AND PLACE NEW PUMPING EQUIPMENT INTO RELIABLE SERVICE.
   2. DESIGN PEAK CAPACITY: 3,300 GAL/MIN. AT 203 FEET TDH (BASED ON 2012 HISTORICAL DATA).
   3. AVERAGE FLOW: 530 GAL./MIN. (BASED ON 2012 HISTORICAL DATA).

B. PROVIDE SPARE PUMPING CAPACITY EQUAL TO THE CAPACITY OF THE LARGEST SINGLE BYPASS PUMP, AVAILABLE ON-SITE FOR USE IN EVENT OF EQUIPMENT FAILURE.

C. SIZE SUCTION AND DISCHARGE PIPING TO ACHIEVE VELOCITY NO HIGHER THAN 12 FEET/SECOND AT SPECIFIED DESIGN PEAK PUMPING CAPACITY.

1.2 GENERAL:

A. BYPASS PUMPING SYSTEM SHALL UTILIZE EXISTING INFLUENT SEWER CHAMBER, 24" FORCEMAIN, AND NEW BYPASS SEWER CONNECTION PIPING, AS SHOWN ON THE CONTRACT DRAWINGS.

B. PRIMARY BYPASS PUMPS SHALL BE ELECTRIC, SELF-PRIMING TYPE (GODWIN DRI-PRIME ®, OR EQUAL), OPERATED AUTOMATICALLY BY LIQUID LEVEL CONTROLS. BYPASS PUMPING SYSTEM SHALL MEET PERFORMANCE REQUIREMENTS SPECIFIED HEREIN.

C. ADDITIONAL REDUNDANT BYPASS PUMP(S) SHALL BE CRITICALLY SILENCED DIESEL ENGINE-DRIVEN, SELF-PRIMING TYPE (GODWIN DRI-PRIME ®, OR EQUAL), OPERATED AUTOMATICALLY BY LIQUID LEVEL CONTROLS. BYPASS PUMPING SYSTEM SHALL MEET PERFORMANCE REQUIREMENTS SPECIFIED HEREIN. DIESEL-ENGINE DRIVEN PUMP(S) SHALL SERVE AS BACKUP IN THE EVENT OF AN ELECTRICAL POWER FAILURE.

D. INFLUENT SLUICE GATE SHALL BE CLOSED AND BYPASS PUMPING SYSTEM SHALL DRAW SUCTION FROM EXISTING INFLUENT SEWER CHAMBER AS SHOWN ON THE CONTRACT DRAWINGS.

E. BYPASS PUMPING SYSTEM SHALL DISCHARGE TO NEW BYPASS SEWER CONNECTION ON EXISTING FORCEMAIN AS SHOWN ON THE CONTRACT DRAWINGS. CONTRACTOR MAY PROPOSE AN ALTERNATIVE BYPASS PUMPING SYSTEM FOR REVIEW BY THE ENGINEER. ALTERNATIVE BYPASS PUMPING FACILITIES SHALL MEET THE PERFORMANCE REQUIREMENTS SPECIFIED.

1.3 EXECUTION:

A. CONSTRUCT AND TEST FORCEMAIN BYPASS CONNECTION PIPING PRIOR TO NEED FOR TEMPORARY BYPASS PUMPING; MAINTAIN CONNECTION TO EXISTING PUMPING STATION DISCHARGE PIPING UNTIL PERMANENT DISCHARGE PIPING HAS BEEN INSTALLED.

B. INSTALL AND TEST TEMPORARY LINE STOP ON EXISTING FORCEMAIN AND TEMPORARY TAP AND DRAIN VALVE ON DISCHARGE PIPE INSIDE PUMPING STATION. REMOVE EXISTING PIPE WITH TEMPORARY DRAIN BETWEEN THE HOURS OF MIDNIGHT TO 6:00 AM AND INSTALL NEW PERMANENT 16" TEE, 6" DRAIN VALVE, 16" DISCHARGE ISOLATION GATE VALVE, AND A TEMPORARY TEST FLANGE. TEST COMPLETION PLUG AND REMOVE LINE STOP AFTER TESTING OF 16" DISCHARGE ISOLATION GATE VALVE. COLLECT DRAINAGE AND PUMP SEWAGE TO ACCEPTABLE STORAGE OR DISPOSAL LOCATION THROUGHOUT INSTALLATION AND REMOVAL OF TEMPORARY LINE STOP. PROVIDE PERMANENT BLIND FLANGE ON DRAIN VALVE AND LEAVE TEMPORARY TEST FLANGE ON 16" GATE VALVE UNTIL REMAINDER OF NEW DISCHARGE PIPING IS TO BE ASSEMBLED.

C. CLOSE INFLUENT SLUICE GATE AND IMPLEMENT TEMPORARY BYPASS PUMPING BEFORE INITIATING DEMOLITION OR REMOVAL WORK; MAINTAIN CONTINUOUS BYPASS PUMPING UNTIL STRUCTURAL, MECHANICAL, HVAC AND ELECTRICAL WORK IS SUBSTANTIALLY COMPLETE AND RELIABLE SYSTEM PERFORMANCE IS DEMONSTRATED.

SITE PLAN

1"=10'

TRUE NORTH

DRAWING NOTES:

1. DO NOT LOCATED BOLLARDS DIRECTLY IN FRONT OF ELECTRICAL PANELS OR DOORS. COORDINATION FINAL LOCATIONS WITH EQUIPMENT PROVIDED AND ENGINEER

2. PERFORM THE FOLLOWING MEASURES TO PERMIT INSTALLATION OF FORCEMAIN BYPASS CONNECTION AS SHOWN:
   - OWNER WILL STOP PUMPING OPERATIONS AND CLOSE GATE AT INFLUENT CHANNEL.
   - DRAIN 24-INCH FORCEMAIN BACK TO PUMPING STATION. PUMP WASTEWATER DRAINED FROM FORCEMAIN, AS WELL AS INFLUENT WASTEWATER ENTERING PUMIPNG STATION FOR DURATION OF BYPASS CONNECTION WORK, INTO APPROPRIATE WASTEWATER COLLECTION/TRANSPORT VEHICLES UNTIL BYPASS CONNECTION PIPING IS COMPLETE AND SECURED. DISCHARGE COLLECTED WASTEWATER IN ACCORDANCE WITH ALL APPLICABLE REGULATIONS. NO DISCHARGE FEES WILL BE IMPOSED BY OWNER.
   - OWNER WILL RESUME NORMAL OPERATION OF CROTONVILLE PUMPING STATION AFTER BYPASS PUMPING CONNECTION IS COMPLETE AND SECURED.

3. PEAK BYPASS PUMPING CAPACITY: 3,300 GPM AT 203 FEET TDH.

DocuSign

IN ACCORDANCE WITH TITLE VIII, ARTICLE 145, SECTION 7209 (2) OF THE NEW YORK STATE EDUCATION LAW, IT IS A VIOLATION OF LAW FOR ANY PERSON UNLESS ACTING UNDER THE DIRECTION OF A LICENSED ENGINEER TO ALTER THIS DOCUMENT.

IN CHARGE OF R. GELL
CHECKED BY D. ROONEY
MADE BY T. LARAMAY

O'BRIEN & GERE ENGINEERS, INC.
50 MAIN ST., 10TH FLOOR, SUITE 1000
WHITE PLAINS, NEW YORK 10606

REVISION NUMBER	DATE	MADE BY	APP'D BY	REVISION

RECORD DRAWING CERTIFICATION

☐ AS BUILT - CHANGES AS NOTED
☐ AS BUILT - NO CHANGES

CONTRACTOR
NAME
SIGNATURE
TITLE DATE

PROJECT COORDINATOR
NAME
SIGNATURE
TITLE DATE

WESTCHESTER COUNTY, NEW YORK
DEPARTMENT OF PUBLIC WORKS AND TRANSPORTATION
DIVISION OF ENGINEERING

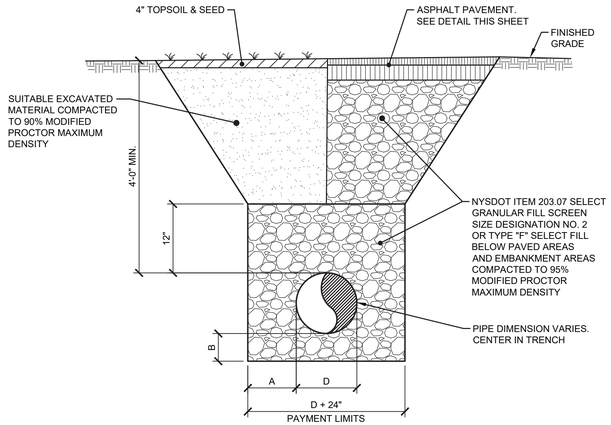
CONTRACT NUMBER 17-529
SHEET NUMBER C-102
SHEET NO. 4 OF 60

CROTONVILLE PUMPING STATION REHABILITATION
OSSINING SANITARY SEWER DISTRICT
OSSINING, NEW YORK
SITE PLAN

SCALE: AS NOTED
DATE: 12/21/2018
DPW FILE NO. 208-03-G-28-0
REV. NO. 0

I:\WESTCHESTER_CO-_DPW\ 13020\68136.CROTONVILLE-PUM\DOCS\DWG\SHEETS\66136C-102.DWG

DATE: 11/17/2020 12:17 PM



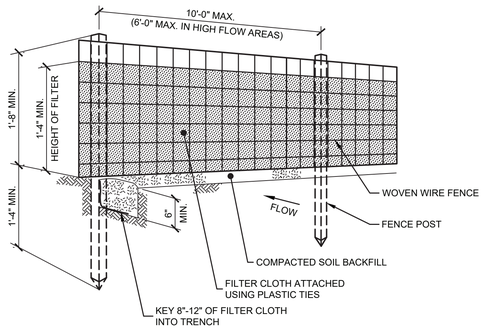
PIPE DIA. D	MIN. A	MIN. B
18" AND SMALLER	12"	6"
20" AND LARGER	18"	9"

DETAIL NOTES:

1. DIMENSIONS REFLECT COMPACTED THICKNESS.
2. EXCAVATED MATERIAL MAY BE USED AS BACKFILL ONLY WHERE APPROVED BY CONSULTANT IN NON-PAVED AREAS.
3. BEDDING AND BACKFILL PLACED ADJACENT TO AND UP TO 12 INCHES OVER PIPE SHALL BE PLACED IN LOOSE LIFTS NOT EXCEEDING 8 INCHES, AND SHALL BE COMPACTED TO 95% MAXIMUM DENSITY (MODIFIED PROCTOR) IN A MANNER THAT WILL NOT DAMAGE THE PIPE.
4. BACKFILL PLACED IN EXCESS OF 12 INCHES OVER TOP OF PIPE SHALL BE COMPACTED TO 95% MAXIMUM DRY DENSITY IN PAVEMENT AREAS AND STRUCTURAL AREAS, AND 90% OF THE MAXIMUM DRY DENSITY IN NON-PAVED AREAS. HORIZONTAL LIFTS SHALL NOT EXCEED 8 INCHES.
5. BEDDING MATERIAL SHALL BE PLACED AND COMPACTED AT A MOISTURE CONTENT WITHIN +2% OF ITS OPTIMUM MOISTURE CONTENT.
6. PAYMENT LIMITS SHOWN ARE MAXIMUM ALLOWED. MINIMUM TRENCH WIDTH SHALL EXTEND 12 INCHES EACH SIDE OF PIPE.
7. CONTRACTOR SHALL RESTORE EXISTING UNPAVED SURFACES WITH TOPSOIL AND SEED TO ESTABLISH SPECIFIED GRADE.

TYPICAL TRENCH DETAIL

NOT TO SCALE



MATERIALS:

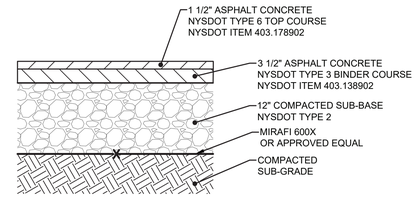
-FENCE POSTS: 2" HARDWOOD.
-FENCE: WOVEN WIRE 14.5 GAUGE, 6" MAX. MESH OPENING.
-FILTER CLOTH: FILTER X, MIRAFI 100X, STABI-LINKA T140N OR APPROVED EQUAL.
-PREFABRICATED UNIT: GEOFAB, ENVIROFENCE, OR APPROVED EQUAL.

DETAIL NOTES:

1. WOVEN WIRE FENCE TO BE FASTENED SECURELY TO FENCE POSTS WITH WIRE TIES OR STAPLES.
2. FILTER CLOTH TO BE FASTENED SECURELY TO WOVEN WIRE FENCE WITH TIES SPACED EVERY 24" AT TOP AND MID SECTION.
3. WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER THEY SHALL BE OVERLAPPED BY SIX INCHES AND FOLDED.
4. MAINTENANCE SHALL BE PERFORMED AS NEEDED AND MATERIAL REMOVED WHEN "BULGES" DEVELOP IN THE SILT FENCE.
5. THE LOCATION OF SILT FENCE SHALL BE AS INDICATED ON SHEET G-101. SILT FENCING ASSOCIATED WITH THE CONSTRUCTION STAGING AREAS IS NOT REQUIRED IF THE GRASS IS RETAINED WITHIN THE CONSTRUCTION STAGING AREA.

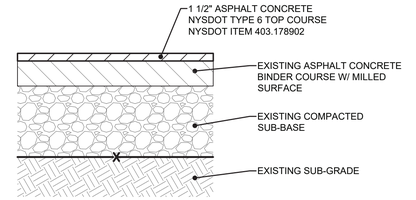
TYPICAL SILT FENCE DETAIL

NOT TO SCALE



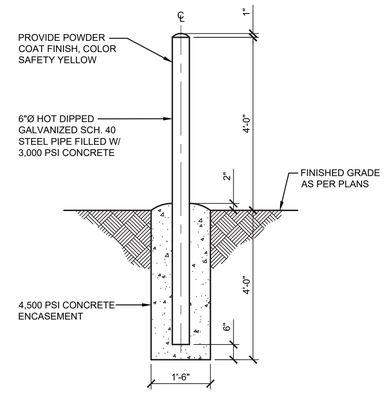
NEW ASPHALT PAVEMENT SECTION DETAIL

NOT TO SCALE



RESURFACED ASPHALT PAVEMENT SECTION DETAIL

NOT TO SCALE

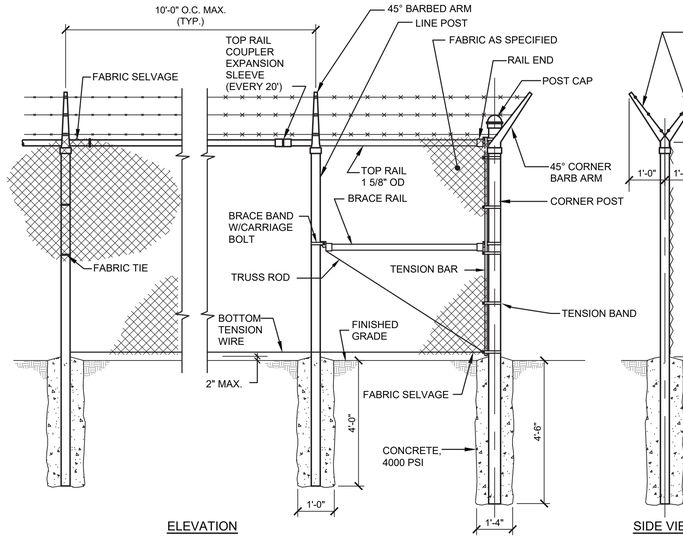


DETAIL NOTES:

1. FIELD LOCATE WITH CONSULTANT. PROVIDE MINIMUM OF 6.
2. TYPICAL LOCATION IS 2'-0" OFF FACE OF STRUCTURE OR FACE OF CURB, UNLESS OTHERWISE NOTED.

TYPICAL BOLLARD DETAIL

NOT TO SCALE



ELEVATION

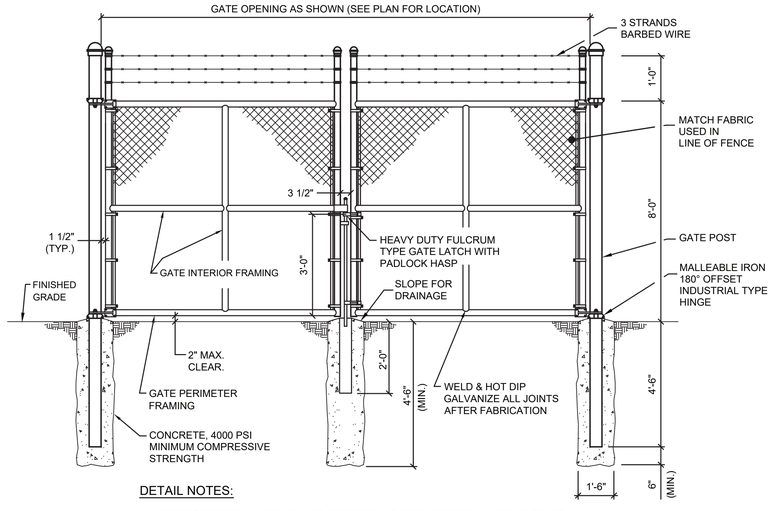
SIDE VIEW

DETAIL NOTES:

1. BRACE GATES SIMILAR TO CORNER POSTS.
2. CONFORM BOTTOM OF FENCE TO FINISHED GRADE.
3. SEE SITE PLANS REGARDING USE OF EXISTING POSTS/FOUNDATIONS.
4. BRACE RAILS SHALL BE ON THE INSIDE OF THE FENCE WITH NO FOOTHOLDS ON THE OUTSIDE OF THE FENCE.

CHAIN LINK FENCE DETAIL

NOT TO SCALE



DETAIL NOTES:

1. PROVIDE MISCELLANEOUS HARDWARE SIMILAR TO THAT USED IN LINE OF FENCE.
2. PROVIDE MECHANICAL KEEPER AT FULL OPEN POSITION FOR EACH GATE LEAF. SET IN CONCRETE EQUIVALENT TO FENCE POST DETAIL.
3. LOCK WILL BE SUPPLIED BY OWNER.
4. SUBMIT SHOP DRAWINGS FOR APPROVAL.

DOUBLE SWING GATE DETAIL

NOT TO SCALE

DocuSign

IN ACCORDANCE WITH TITLE VIII, ARTICLE 145, SECTION 7209 (2) OF THE NEW YORK STATE EDUCATION LAW, IT IS A VIOLATION OF LAW FOR ANY PERSON UNLESS ACTING UNDER THE DIRECTION OF A LICENSED ENGINEER TO ALTER THIS DOCUMENT.

IN CHARGE OF R. GELL
CHECKED BY D. ROONEY
MADE BY T. LARAMAY

O'BRIEN & GERE ENGINEERS, INC.
50 MAIN ST., 10TH FLOOR, SUITE 1000
WHITE PLAINS, NEW YORK 10606

REVISION NUMBER	DATE	MADE BY	APP'D BY	REVISION

RECORD DRAWING CERTIFICATION

☐ AS BUILT - CHANGES AS NOTED
☐ AS BUILT - NO CHANGES

CONTRACTOR
NAME
SIGNATURE
TITLE DATE

PROJECT COORDINATOR
NAME
SIGNATURE
TITLE DATE

WESTCHESTER COUNTY, NEW YORK
DEPARTMENT OF PUBLIC WORKS AND TRANSPORTATION
DIVISION OF ENGINEERING

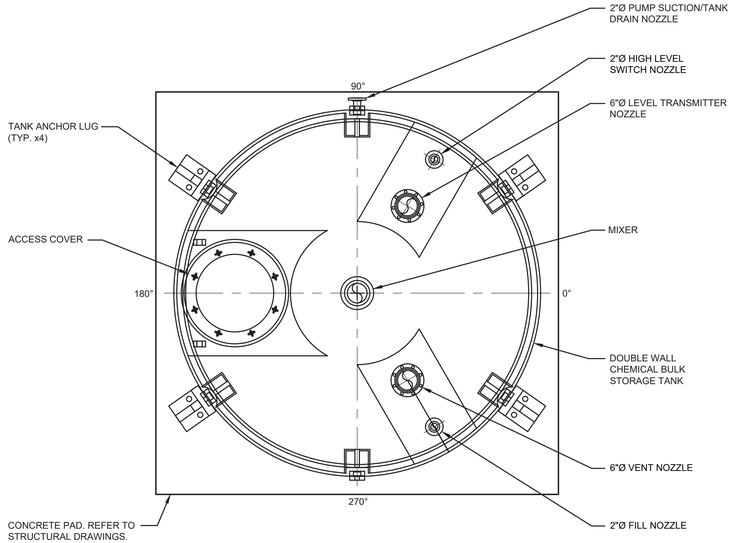
CONTRACT NUMBER 17-529
SHEET NUMBER C-501
SHEET NO. 5 OF 60

CROTONVILLE PUMPING STATION REHABILITATION
OSSINING SANITARY SEWER DISTRICT
OSSINING, NEW YORK
DETAILS

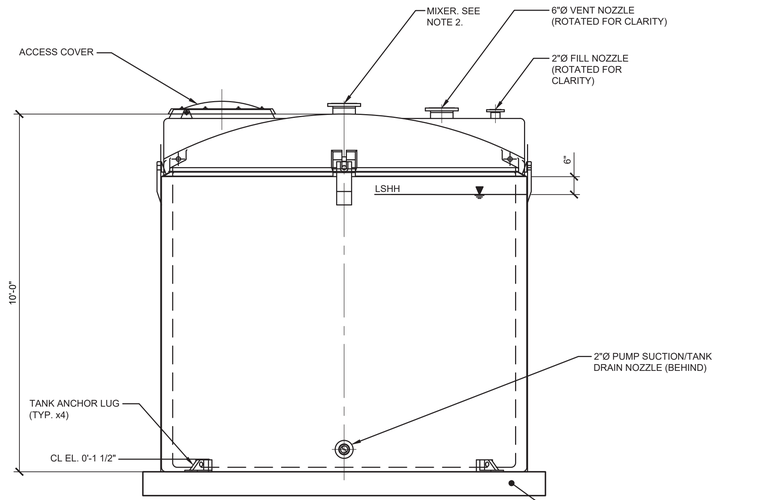
SCALE: AS NOTED
DATE: 12/21/2018
DPW FILE NO. 208-03-G-29-0
REV. NO. 0

I:\WESTCHESTER-CO.-DPW.13020\66136.CROTONVILLE-PUM\DOCS\DWG\SHEETS\66136C-501.DWG

DATE: 11/17/2020 12:18 PM



PLAN



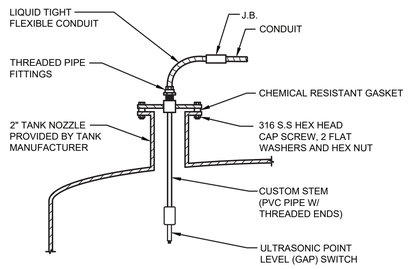
ELEVATION

DETAIL NOTES:

1. PROVIDE FLEXIBLE CONNECTION (FITTINGS SUPPLIED BY TANK MANUFACTURER) AT PUMP SUCTION/TANK DRAIN.
2. COORDINATE MIXER MOUNTING CONFIGURATION AND SIZE WITH MIXER MANUFACTURER.

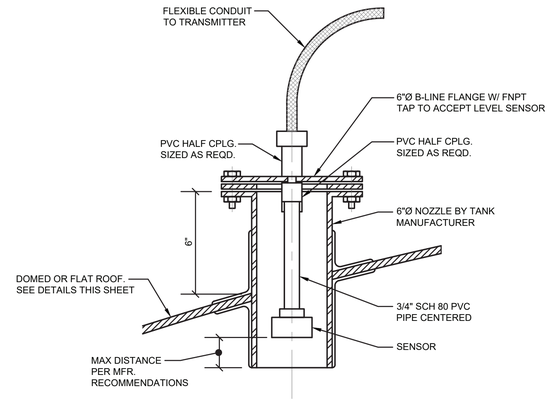
CHEMICAL BULK STORAGE TANK DETAIL

NOT TO SCALE



CHEMICAL TANK HIGH LEVEL SWITCH DETAIL

NOT TO SCALE



CHEMICAL TANK ULTRASONIC LEVEL SENSOR

NOT TO SCALE

DETAIL NOTES:

1. FABRICATE ENCLOSURE (APPROX. 2'-0" HIGH X 2'-0" WIDE X 1'-6" DEEP) IN SHOP OF 1/2"-INCH THICK GRAY PVC SHEET WITH SOLVENT WELDED JOINTS. SLOPE BOTTOM OF ENCLOSURE FOUR WAYS TO DRAIN CONNECTION. PROVIDE LATCHING DOOR WITH POLYPROPYLENE PIANO HINGE AND STAINLESS STEEL FASTENERS AND HARDWARE. SUBMIT SHOP DRAWING FOR REVIEW PRIOR TO FABRICATION. ATTACH TO SUPPORTS WITH STAINLESS STEEL HARDWARE.

CHEMICAL FILL STATION DETAIL

NOT TO SCALE

IN ACCORDANCE WITH TITLE VIII, ARTICLE 145, SECTION 7209 (2) OF THE NEW YORK STATE EDUCATION LAW, IT IS A VIOLATION OF LAW FOR ANY PERSON UNLESS ACTING UNDER THE DIRECTION OF A LICENSED ENGINEER TO ALTER THIS DOCUMENT.

IN CHARGE OF R. GELL
CHECKED BY D. ROONEY
MADE BY T. LARAMAY

O'BRIEN & GERE ENGINEERS, INC.
50 MAIN ST., 10TH FLOOR, SUITE 1000
WHITE PLAINS, NEW YORK 10606

REVISION NUMBER	DATE	MADE BY	APP'D BY	REVISION

RECORD DRAWING CERTIFICATION

☐ AS BUILT - CHANGES AS NOTED
☐ AS BUILT - NO CHANGES

CONTRACTOR
NAME
SIGNATURE
TITLE DATE

PROJECT COORDINATOR
NAME
SIGNATURE
TITLE DATE

WESTCHESTER COUNTY, NEW YORK
DEPARTMENT OF PUBLIC WORKS AND TRANSPORTATION
DIVISION OF ENGINEERING

CONTRACT NUMBER 17-529
SHEET NUMBER C-502
SHEET NO. 6 OF 60

CROTONVILLE PUMPING STATION REHABILITATION
OSSINING SANITARY SEWER DISTRICT
OSSINING, NEW YORK
DETAILS

SCALE: AS NOTED
DATE: 12/21/2018
DPW FILE NO. 208-03-G-30-0
REV. NO. 0

I:\WESTCHESTER-CO.-DPW.13020\66136.CROTONVILLE-PUM\DOCS\DWG\SHEETS\66136C-502.DWG

STRUCTURAL GENERAL NOTES

1. WORK SHALL COMPLY WITH THE NEW YORK STATE UNIFORM FIRE PREVENTION AND BUILDING CODE (BASED ON IBC 2015).
2. THE CONTRACTOR SHALL COORDINATE SPECIAL INSPECTIONS WITH OWNER.
3. SECTIONS AND DETAILS SHOWN ON DRAWINGS ARE TYPICAL. USE SIMILAR CONSTRUCTION AT LOCATIONS NOT SPECIFICALLY DETAILED. DO NOT SCALE DRAWINGS.
4. EXAMINE AND COMPARE STRUCTURAL DRAWINGS WITH ARCHITECTURAL, MECHANICAL, PLUMBING, SITE, ELECTRICAL, AND PROCESS DRAWINGS. VERIFY LOCATIONS AND DIMENSIONS OF CHASES, INSERTS, OPENINGS, SLEEVES, DEPRESSIONS, AND OTHER PROJECT REQUIREMENTS NOT SHOWN ON THE STRUCTURAL DRAWINGS.
5. VERIFY LOCATION OF EXISTING UNDERGROUND SITE UTILITIES PRIOR TO THE START OF WORK AND COORDINATE LOCATION WITH STRUCTURAL DRAWINGS. NOTIFY THE ENGINEER OF ANY CONFLICTS IN WRITING. DO NOT PROCEED WITH AFFECTED WORK UNTIL CONFLICTS HAVE BEEN RESOLVED.
6. ADEQUATE TEMPORARY BRACING OF CONSTRUCTION ELEMENTS SHALL BE PROVIDED FOR FOUNDATIONS, ABOVE GRADE WALLS, STRUCTURAL STEEL, AND OTHER STRUCTURAL SYSTEMS FOR WIND AND/OR CONSTRUCTION LOADS. BRACING SHALL BE MAINTAINED AT ALL TIMES DURING CONSTRUCTION OPERATIONS PRIOR TO STRUCTURAL ELEMENTS REACHING THEIR SPECIFIED DESIGN STRENGTH AND/OR REACHING THEIR COMPLETED FORM AS SHOWN ON THE CONTRACT DRAWINGS. DESIGN AND MAINTENANCE OF SAID BRACING SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
7. VERIFY IN FIELD EXISTING CONDITIONS AND DIMENSIONS PRIOR TO THE START OF WORK. NOTIFY THE ENGINEER OF RECORD OF ANY DISCREPANCIES IN WRITING. DO NOT PROCEED WITH AFFECTED WORK UNTIL DISCREPANCIES HAVE BEEN RESOLVED.
9. PRIOR TO EXCAVATION ADJACENT TO EXISTING STRUCTURES, DOCUMENT EXISTING DISTRESS TO THE EXISTING STRUCTURES INCLUDING PHOTOGRAPHS, LOCATIONS, AND DETAILED DESCRIPTIONS OF DISTRESS NOTED. SUBMIT DOCUMENTATION OF EXISTING DISTRESS, FOR RECORD PURPOSES, PRIOR TO PROCEEDING WITH EXCAVATION WORK.

STRUCTURAL FOUNDATION NOTES

1. FOUNDATION DESIGNS ARE BASED ON PRESUMPTIVE SOIL TYPES AND BEARING PRESSURES AS NOTED IN THE STRUCTURAL DESIGN CRITERIA. IF DURING EXCAVATION SOIL PROPERTIES APPEAR DIFFERENT THAN PRESUMED, CONTRACTOR SHALL NOTIFY ENGINEER OF RECORD BEFORE PROCEEDING WITH WORK.
2. GROUND WATER LEVELS SHALL BE LOWERED TO A MINIMUM OF 3 FEET BELOW MAXIMUM EXCAVATION DEPTH. LOWERING OF GROUND WATER SHALL BE CONTINUOUS DURING CONSTRUCTION AND SHALL BE MAINTAINED UNTIL BACKFILL IS PLACED TO AT LEAST 2 FEET ABOVE THE HIGHEST GROUND WATER ELEVATION. DESIGN AND MAINTENANCE OF SYSTEM TO LOWER GROUND WATER SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
3. FOUNDATIONS OR SLABS SHALL NOT BE PLACED IN WATER, OR SATURATED SUBGRADES, NOR ON FROZEN SUBGRADES. IN-PLACE FOUNDATIONS AND SLABS SHALL BE PROTECTED FROM FROST PENETRATION UNTIL PROJECT IS COMPLETE.
4. PLACE FOUNDATIONS ON 12 INCH THICKNESS OF CRUSHED STONE SUBBASE. COMPACT EXISTING SUBGRADE PRIOR TO PLACEMENT OF FOUNDATIONS.
5. COMPACTED STRUCTURAL BACKFILL: STRUCTURAL BACKFILL SHALL BE USED FOR BACKFILL BEHIND PERMANENT WALLS AND WHEREVER LOAD-BEARING CAPABILITY IS REQUIRED INCLUDING UNDER STRUCTURES, PAVEMENTS, AND SIDEWALKS. STRUCTURAL FILL SHALL CONSIST OF WELL-GRADED SAND, GRAVEL, CRUSHED ROCK, RECYCLED CONCRETE AGGREGATE, OR A MIXTURE OF THESE CONTAINING NO ORGANIC MATTER OR DELETERIOUS MATERIALS, WITH LIMITING MAXIMUM PARTICLE SIZE TO 3 INCHES, AND LIMITING FINES CONTENT TO LESS THAN 10% PASSING THE NO. 200 SIEVE. STRUCTURAL BACKFILL SHALL BE COMPACTED TO NOT LESS THAN 95% OF MAXIMUM DENSITY ACCORDING TO ASTM D1557. PLACE BACKFILL AND FILL MATERIALS IN LAYERS NOT MORE THAN 8 INCHES IN LOOSE DEPTH.
6. BACKFILL TO TOP OF FOOTINGS AS SOON AS POSSIBLE AFTER PLACING CONCRETE.
7. TOPSOIL, ORGANIC MATERIAL, AND ANY NATURAL OR MAN-MADE DEBRIS SHALL BE STRIPPED FROM THE SITE TO THE DEPTHS REQUIRED OR NOTED. THESE AND OTHER DELETERIOUS MATERIAL SHALL NOT BE USED AS BACKFILL UNDER ANY STRUCTURAL AREA AND SHALL BE REMOVED FROM THE SITE.
8. UNSUITABLE SUBGRADE, IF ENCOUNTERED, WILL BE UNDERCUT AND REPLACED WITH LEAN CONCRETE OR SELECT GRANULAR MATERIAL AS ORDERED BY THE GEOTECHNICAL ENGINEER.
9. FOUNDATION ELEMENTS SHALL BE CENTERED IN EACH DIRECTION UNDER SUPPORTED STRUCTURAL MEMBERS UNLESS NOTED OTHERWISE ON THE DRAWINGS. MINIMUM FOOTING PROJECTION SHALL BE 6 INCHES ADEQUATE, UNLESS OTHERWISE NOTED.
10. THE CONTRACTOR SHALL PROVIDE SUPPORTS, WHETHER SHEETING, SHORING, OR BRACING SUCH THAT NO HORIZONTAL MOVEMENT OR VERTICAL SETTLEMENT OCCURS TO EXISTING STRUCTURES, STREETS OR UTILITIES ADJACENT TO OR ON THE PROJECT SITE.
11. THE CONTRACTOR SHALL PROVIDE STABLE SIDES AND BOTTOM OF EXCAVATION DURING CONSTRUCTION BY SHORES, SLOPES, OR BENCHED SIDES. THE DESIGN AND INSTALLATION OF THE EXCAVATION BRACING SHALL BE IN ACCORDANCE WITH OSHA SHORING PRACTICES AND BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.

STRUCTURAL CONCRETE NOTES

1. CONCRETE WORK SHALL CONFORM TO REQUIREMENTS OF ACI 301, "SPECIFICATIONS FOR STRUCTURAL CONCRETE," ACI 318, "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE."
2. THE MANUFACTURER OF THE CONCRETE SHALL FURNISH TO THE PURCHASER AND ENGINEER OF RECORD WITH EACH BATCH OF CONCRETE BEFORE UNLOADING AT THE SITE, A DELIVERY TICKET WITH INFORMATION CONCERNING SAID CONCRETE IN ACCORDANCE WITH ASTM C94.
3. PRIOR TO MANUFACTURING, THE MANUFACTURER OF THE CONCRETE SHALL SUBMIT TO THE ENGINEER OF RECORD THE REQUIRED SUBMITTALS AS OUTLINED IN ACI 301.
4. CONCRETE SHALL BE NORMAL WEIGHT (145 PCF) WITH MIXES DESIGNED TO MEET THE FOLLOWING CRITERIA:

ITEM	MIN STRENGTH @28 DAYS (f'c) (P.S.I.)	MAX W/Cm RATIO	TOTAL AIR CONTENT (+ / - 1%)	MAX SLUMP	EXPOSURE CLASSES
A. INTERIOR CONCRETE	4000	.45	1%	4"	F0,S0,W0,C0
B. EXTERIOR CONCRETE	4500	.42	6%	4"	F2,S0,W1,C0

5. PORTLAND CEMENT USED FOR CONCRETE WORK SHALL COMPLY WITH ASTM C-150 FOR TYPE I/II CEMENT.
6. NORMAL WEIGHT CONCRETE SHALL CONTAIN FINE AND COARSE AGGREGATES COMPLYING WITH ASTM C-33. THE MAXIMUM SIZE OF COARSE AGGREGATES SHALL BE OF SIZES SUITABLE FOR PLACEMENT IN STRUCTURAL ELEMENTS CONSIDERING THEIR SIZE AND REINFORCEMENT CONFIGURATION.
7. CONCRETE PLACED UNDER COLD WEATHER CONDITIONS SHALL CONFORM WITH ALL REQUIREMENTS OF ACI 306, "STANDARD SPECIFICATION FOR COLD WEATHER CONCRETING". CONCRETE THAT MAY BE EXPOSED TO SUBSEQUENT MOISTURE AND FREEZING CONDITIONS PRIOR TO REACHING DESIGN COMPRESSIVE STRENGTH OR EXTERIOR CONCRETE WORK EXPOSED TO FREEZE / THAW CYCLING SHALL BE AIR-ENTRAINED AS SHOWN IN THE TABLE ABOVE. HOWEVER, SLAB FLATWORK TO RECEIVE A HARD-TROWEL FINISH SHALL NOT BE AIR ENTRAINED.
8. CONCRETE PLACED UNDER HOT WEATHER CONDITIONS SHALL CONFORM TO ALL REQUIREMENTS OF ACI 305.1, "SPECIFICATION FOR HOT WEATHER CONCRETING."
9. CHAMFER EXPOSED CORNERS OF CONCRETE 3/4 INCH.
10. CAST INTO CONCRETE ACCESSORIES REQUIRED BY ARCHITECTURAL FINISHES AND MECHANICAL EQUIPMENT. COORDINATE LOCATION AND QUANTITY WITH ARCHITECTURAL AND MECHANICAL DRAWINGS.

DESIGN CRITERIA

FLOOR LIVE LOAD

EQUIPMENT AREAS:	250 P.S.F. OR 3 KIPS CONCENTRATED
OFFICE & PERSONNEL ASSEMBLY AREAS:	100 P.S.F. OR 2 KIPS CONCENTRATED
STAIRS & EXITS:	100 P.S.F. OR 0.3 KIPS CONCENTRATED
WALKWAYS & ELEVATED PLATFORMS:	60 P.S.F.

WIND LOAD

BASIC WIND SPEED:	124 MPH
WIND IMPORTANCE:	III
WIND EXPOSURE:	D

EARTHQUAKE

SEISMIC IMPORTANCE FACTOR, Ie:	1.10
OCCUPANCY CATEGORY:	III
Ss:	0.292
S1:	0.061
SITE CLASS:	D
Sds:	0.305
Sd1:	0.098
SEISMIC DESIGN CATEGORY:	B

EQUIPMENT LOADS

EMERGENCY POWER GENERATOR:	22.0 KIPS
TRANSFORMER:	8.2 KIPS
SWITCHGEAR:	5.0 KIPS
MOBILE GENERATOR CONNECTION CABINET:	0.5 KIPS

FLOOD DESIGN

DESIGN FLOOD ELEVATION: 12'-6" ABOVE SEA LEVEL

STRUCTURAL CONCRETE NOTES (CONTINUED)

11. ADHESIVE ANCHORS SHALL NOT BE INSTALLED PRIOR TO CONCRETE HAVING REACHED A MINIMUM AGE OF 21 DAYS AND f'c = 2,500 PSI, VERIFIED THROUGH TESTING.
12. POST-INSTALLED ADHESIVE ANCHORS SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S PRINTED INSTALLATION INSTRUCTIONS.

    A. ANCHORS SHALL BE INSTALLED BY QUALIFIED PERSONNEL THAT ARE TRAINED TO INSTALL ADHESIVE ANCHORS. INSTALLERS SHALL BE CERTIFIED BY AN APPLICABLE CERTIFICATION PROGRAM WITHIN THE PAST FIVE YEARS. CERTIFICATION SHALL INCLUDE WRITTEN AND PERFORMANCE TESTS IN ACCORDANCE WITH THE ACI/CRSI ADHESIVE ANCHOR INSTALLER CERTIFICATION PROGRAM, OR EQUIVALENT.
    B. CONTINUOUS MONITORING OF INSTALLATION SHALL BE PERFORMED AS PART OF SPECIAL INSPECTIONS.

13. CURING OF CONCRETE SHALL COMMENCE AS SOON AS FREE WATER HAS DISAPPEARED FROM CONCRETE SURFACE AFTER PLACING AND FINISHING. CURING MATERIALS AND PROCEDURES ARE AS FOLLOWS:

    A. SLABS/MATS: COVER CONCRETE SURFACES WITH MOISTURE-RETAINING COVER MEETING ASTM C171, EITHER POLYETHYLENE FILM OR WHITE BURLAP-POLYETHYLENE SHEET. PLACE IN WIDEST PRACTICAL WIDTH WITH SIDES AND ENDS LAPPED A MINIMUM OF 3 INCHES AND SEALED BY WATERPROOF TAPE OR ADHESIVE. IMMEDIATELY REPAIR ANY HOLES OR TEARS DURING CURING PERIOD USING COVER MATERIAL AND WATERPROOF TAPE. KEEP CONTINUOUSLY WET FOR NOT LESS THAN 7 DAYS.
    B. FOUNDATIONS/WALLS: CURING COMPOUNDS MAY BE USED. CURING COMPOUND SHALL BE A CLEAR, WATERBORNE, MEMBRANE-FORMING COMPOUND: ASTM C309, TYPE 1, CLASS B, WITH 18 TO 25 PERCENT SOLIDS, NON-DISSIPATING. FOLLOW MANUFACTURER'S RECOMMENDED PROCEDURES.

STRUCTURAL REINFORCING NOTES

1. REINFORCEMENT WORK OF DETAILING, FABRICATION, AND ERECTION SHALL CONFORM TO ACI 318, "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE," ACI SP-66 "ACI DETAILING MANUAL," "CRSI MANUAL OF STANDARD PRACTICE," AND AWS D1.4 "STRUCTURAL WELDING CODE - REINFORCING STEEL."
2. STEEL REINFORCEMENT, UNLESS NOTED OTHERWISE, SHALL CONFORM TO THE FOLLOWING:

    A. BARS, TIES AND STIRRUPS: ASTM A615 GRADE 60 (Fy = 60 KSI)
    B. REINFORCING TO BE WELDED SHALL CONFORM TO ASTM A706 (Fy = 60 KSI) OR MILL TEST REPORTS SHALL BE SUBMITTED SHOWING CARBON EQUIVALENT.

3. MINIMUM CONCRETE PROTECTIVE COVER FOR REINFORCEMENT OF NON-ENVIRONMENTAL ENGINEERING CONCRETE SHALL BE AS FOLLOWS, UNLESS OTHERWISE NOTED:

A. UNFORMED SURFACES CAST AGAINST AND PERMANENTLY IN CONTACT WITH EARTH:	3.0"
B. BUILDING SURFACES FORMED IN CONTACT WITH EARTH OR EXPOSED TO WEATHER:	
#6 THROUGH #18 BARS:	2.0"
#5 BARS AND SMALLER:	1.5"
C. BUILDING SURFACES NOT IN CONTACT WITH OR EXPOSED TO WEATHER (WALLS AND SLABS):	
#14 AND #18 BARS:	1.5"
#11 BARS AND SMALLER:	0.75"
D. BUILDING BEAMS, GIRDERS, AND COLUMNS:	
PRINCIPAL REINFORCEMENT, TIES, STIRRUPS AND SPIRALS:	1.5"

4. WHERE CONTINUOUS REINFORCEMENT IS CALLED FOR, REINFORCEMENT SHALL BE EXTENDED CONTINUOUSLY AROUND CORNERS AND LAPPED AT NECESSARY SPLICES OR HOOKED AT DISCONTINUOUS ENDS.
5. LAPS SHALL BE CLASS "B" TENSION LAP SPLICES, UNLESS NOTED OTHERWISE.
6. EXTEND DOWELS TO THE 1/4-POINT OF SLAB SPAN, UNLESS OTHERWISE NOTED.
7. WHERE REINFORCEMENT IS SHOWN IN SECTION, REINFORCEMENT IS CONSIDERED TYPICAL WHEREVER THE SECTION APPLIES.
8. REINFORCEMENT SHALL BE CONTINUOUS THROUGH CONSTRUCTION JOINTS UNLESS OTHERWISE SHOWN.
9. REINFORCEMENT SHALL NOT BE TACK WELDED OR HEATED FOR BENDING.
10. INSTALLATION OF REINFORCEMENT SHALL BE COMPLETED AT LEAST 24 HOURS PRIOR TO THE SCHEDULED CONCRETE PLACEMENT. NOTIFY ENGINEER OF RECORD AND INSPECTOR OF COMPLETION AT LEAST 24 HOURS PRIOR TO THE SCHEDULED COMPLETION OF THE INSTALLATION OF REINFORCEMENT.
11. WELDING OF REINFORCEMENT SHALL CONFORM TO AWS D1.4 (INCLUDING PREHEAT REQUIREMENTS). ONLY BARS INDICATED ON DRAWINGS TO BE WELDED SHALL BE WELDED.

STRUCTURAL STEEL NOTES

1. FABRICATE AND ERECT STRUCTURAL STEEL IN ACCORDANCE WITH AISC 360, "SPECIFICATIONS FOR STRUCTURAL STEEL BUILDINGS," AND AISC 303, "CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES."
2. STEEL MEMBERS HAVE BEEN PROPORTIONED UTILIZING ALLOWABLE STRESS DESIGN (ASD) METHODS AS PRESCRIBED BY AISC.
3. STRUCTURAL STEEL SHALL BE DETAILED IN ACCORDANCE WITH "DETAILING FOR STEEL CONSTRUCTION (AISC)" AND WHERE REQUIRED, DESIGNED IN ACCORDANCE WITH CITED REFERENCES.
4. STRUCTURAL STEEL AND ACCESSORIES SHALL BE NEW AND CONFORM TO:

A. UNLESS OTHERWISE NOTED:	ASTM A992	(Fy = 50 KSI)
B. HOLLOW STRUCTURAL SECTIONS:		
ROUND:	ASTM A500 GRADE B	(Fy = 42 KSI)
SQUARE OR RECTANGULAR:	ASTM A500 GRADE B	(Fy = 46 KSI)
C. MISC STRUCTURAL SHAPES AND CONNECTIONS:	ASTM A36	(Fy = 36 KSI)
D. ANCHOR BOLTS:	ASTM F1554 GRADE 36	(Fy = 36 KSI)
E. HIGH STRENGTH BOLTS:	ASTM F3125 GRADE A325-N	(Fy = 120 KSI)

5. WELDING SHALL CONFORM TO THE REQUIREMENTS OF AWS D1.1, AND SHALL BE PERFORMED BY APPROVED, CERTIFIED PERSONS.
6. WELDED CONNECTIONS SHALL UTILIZE E70XX ELECTRODES.
7. WELDS SHALL DEVELOP FULL STRENGTH OF THE MATERIALS BEING WELDED, UNLESS OTHERWISE NOTED, EXCEPT THAT FILLET WELDS SHALL BE A MINIMUM OF 1/4", UNLESS OTHERWISE NOTED.
8. ANCHOR BOLTS, LEVELING PLATES, OR BEARING PLATES SHALL BE LOCATED AND BUILT INTO CONNECTING WORK, PRESET BY TEMPLATES, AND SET IN FULL BEDS OF NON-SHRINK GROUT.
9. PRINCIPAL STRUCTURAL BOLTED CONNECTIONS (BEAM-BEAM, BEAM-GIRDER, BEAM OR GIRDER TO COLUMN) SHALL BE MADE USING MINIMUM 3/4" DIAMETER ASTM F3125 GRADE A325 BOLTS IN BEARING CONNECTIONS.
10. BEAM CONNECTIONS SHALL PROVIDE CONNECTION CAPACITY BY ALLOWABLE STRESS DESIGN (ASD) METHODS. WHERE BEAM REACTIONS ARE NOT INDICATED ON THE PLANS, CONNECTION CAPACITY SHALL BE DETERMINED AS FOLLOWS:

    A. NON-COMPOSITE BEAMS: SUPPORT A REACTION "R" EQUAL TO 1/2 THE TOTAL UNIFORM LOAD CAPACITY OF THE BEAM FOR A GIVEN SHAPE, SPAN, AND GRADE OF STEEL PER "ALLOWABLE LOADS ON BEAMS" PART 3, AISC "MANUAL OF STEEL CONSTRUCTION."
    B. ADD TO "R" THE LOADS OR REACTIONS OF MEMBERS SUPPORTED BY THE BEAM NEAR SUPPORTS AND / OR THE VERTICAL COMPONENTS OF FORCE IN DIAGONAL BRACING MEMBERS FRAMING INTO BEAM.

11. A MINIMUM OF TWO (2) BOLTS SHALL BE UTILIZED AT CONNECTIONS.
12. BOLTS SHALL BE INSTALLED SNUG TIGHT AND PRETENSIONED BY TURN-OF-NUT PRETENSIONING IN ACCORDANCE WITH RCSC.
13. ENDS OF COLUMNS AT SPLICES AND AT OTHER BEARING CONNECTIONS SHALL BE "FINISHED TO BEAR" TO COMPLETE TRUE BEARING.
14. PROVIDE STIFFENERS "FINISHED TO BEAR" UNDER LOAD CONCENTRATIONS ON SUPPORTING MEMBERS, OVER COLUMNS, AND WHERE SHOWN ON DRAWINGS.
15. PROVIDE TEMPORARY ERECTION BRACING AND SUPPORTS TO HOLD STRUCTURAL STEEL FRAMING SECURELY IN POSITION. SUCH TEMPORARY BRACING AND SUPPORTS SHALL NOT BE REMOVED UNTIL PERMANENT BRACING HAS BEEN INSTALLED AND CONCRETE HAS ATTAINED 75% OF SPECIFIED CONCRETE STRENGTH.
16. STRUCTURAL FRAMING SHALL BE TRUE AND PLUMB BEFORE CONNECTIONS ARE FINALLY BOLTED OR WELDED. WHERE STEEL SHELF ANGLES FOR FACADE SUPPORT ARE PRESENT, TOP OF SHELF ANGLE ON SUCCESSIVE FLOORS WILL BE SET IN SAME VERTICAL PLANE.
17. FIELD CUTTING OF STRUCTURAL FRAMING AND / OR FIELD MODIFICATIONS OF STRUCTURAL FRAMING SHALL NOT BE MADE WITHOUT PRIOR WRITTEN APPROVAL BY ENGINEER OF RECORD FOR EACH SPECIFIC CASE.
18. UNLESS OTHERWISE SHOWN, COLUMNS SHALL BE EXTENDED TO TOPS OF BEAMS AND FRAMED CONNECTIONS.
19. THE CONTRACTOR SHALL FURNISH AND INSTALL ALL PLATES, CLIP ANGLES, CONNECTION MATERIALS, ETC. AS REQUIRED FOR COMPLETION OF THE STRUCTURE, EVEN IF SUCH ITEMS ARE NOT SPECIFICALLY SHOWN ON THE STRUCTURAL DRAWINGS.

STEEL RAILING NOTES

1. STEEL RAILINGS SHALL MEET THE FOLLOWING SPECIFICATIONS:

A. GUARDRAIL TOP RAIL:	NOMINAL 1 1/2" SCHED 40 PIPE (1.90" OD)	42" TOP OF RAIL AFF
B. GUARDRAIL INTERMEDIATE RAIL:	NOMINAL 1 1/2" SCHED 40 PIPE (1.90" OD)	21" TOP OF RAIL AFF
C. GUARDRAIL TOE PLATE:	PL 1/4"X4"	1/4" GAP AFF MAX
D. HANDRAIL:	NOMINAL 1 1/2" SCHED 40 PIPE (1.90" OD)	36" TOP OF RAIL AFF
E. POSTS:	NOMINAL 1 1/2" SCHED 80 PIPE (1.90" OD)	6' - 0" MAX SPACING

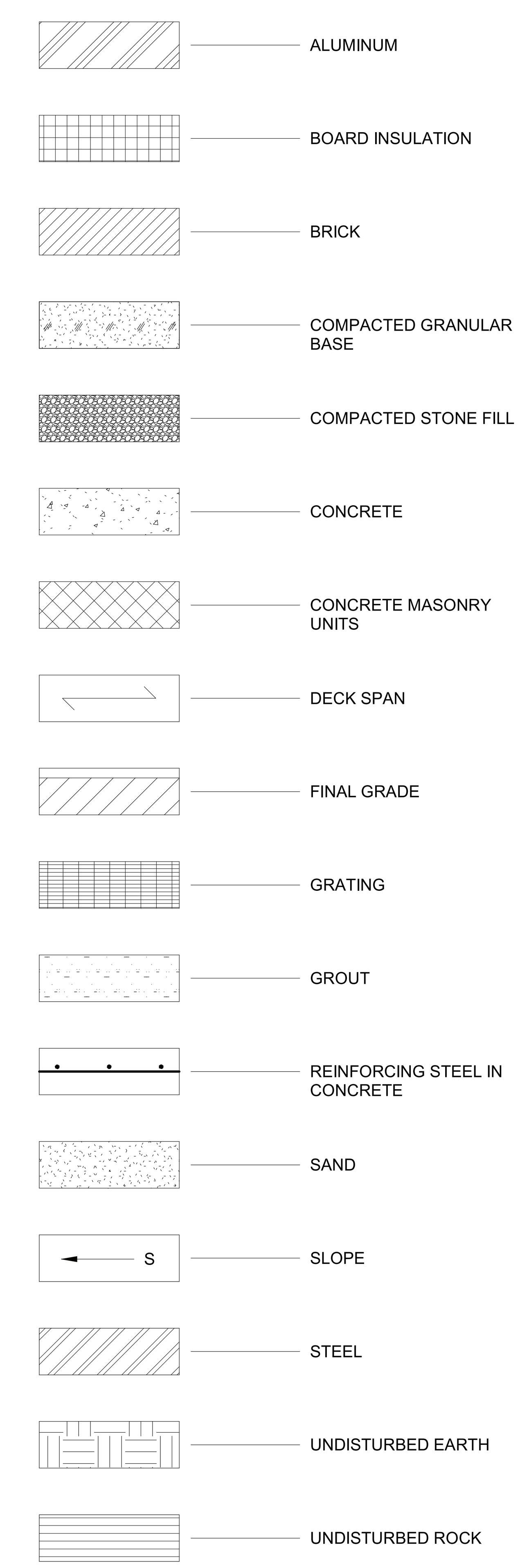
2. GUARDRAIL AND HANDRAIL SYSTEMS SHALL BE DESIGNED TO WITHSTAND A CONCENTRATED LOAD OF 200 POUNDS OR A UNIFORM LOAD OF 50 POUNDS PER FOOT APPLIED IN ANY DIRECTION AT ANY POINT ON THE SYSTEM.
3. SEE TYPICAL DETAILS FOR RAILING DETAILS.
4. STEEL RAILINGS SHALL BE NEW AND CONFORM TO ASTM A53 GRADE B (Fy = 35 KSI), UNLESS OTHERWISE NOTED.
5. POSTS SHALL NOT INTERRUPT THE CONTINUATION OF THE TOP RAIL AT ANY POINT ALONG THE RAILING, INCLUDING CORNERS AND END TERMINATIONS. THE TOP SURFACE OF THE TOP RAILING SHALL BE SMOOTH AND SHALL NOT BE INTERRUPTED BY PROJECTED FITTINGS.
6. USE FULLY WELDED JOINTS FOR PERMANENTLY CONNECTING RAILING COMPONENTS. WELDS SHALL BE SMOOTH AND BURR FREE.
7. PRIOR TO FABRICATION AND INSTALLATION OF RAILINGS, DRAWINGS AND STRUCTURAL CALCULATIONS FOR THE RAILINGS SHALL BE SUBMITTED TO THE ENGINEER OF RECORD FOR REVIEW. DRAWINGS AND CALCULATIONS SHALL BE SIGNED AND SEALED BY THE PROFESSIONAL ENGINEER (LICENSED IN NEW YORK) RESPONSIBLE FOR THEIR PREPARATION.

ABBREVIATIONS

@	AT
AA	THE ALUMINUM ASSOCIATION
AB	ANCHOR BOLT
ABC	AGGREGATE BASE COURSE
ACI	AMERICAN CONCRETE INSTITUTE
ADDL	ADDITIONAL
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AFS	ABOVE FINISHED SLAB
AGGR	AGGREGATE
AISC	AMERICAN INSTITUTE OF STEEL CONSTRUCTION
ALUM	ALUMINUM
ALT	ALTERNATE
ANSI	AMERICAN NATIONAL STANDARD INSTITUTE
APPD	APPROVED
APPROX	APPROXIMATE
AR	AS REQUIRED
ARCH	ARCHITECT, ARCHITECTURAL
ASCE	AMERICAN SOCIETY OF CIVIL ENGINEERS
ASD	ALLOWABLE STRESS DESIGN
ASTM	AMERICAN SOCIETY FOR TESTING AND MATERIALS
AWS	AMERICAN WELDING SOCIETY
B PL	BASE PLATE
BE	BOTTOM ELEVATION
BF	BOTH FACES
BFF	BELOW FINISHED FLOOR
BLDG	BUILDING
BM	BEAM
BOS	BOTTOM OF STEEL
BOT	BOTTOM
BRCG	BRACING
BRG	BEARING
BSMT	BASEMENT
BW	BOTH WAYS
(C)	COMPRESSION
C	CHANNEL
CFMF	COLD FORMED METAL FRAMING
CHEM	CHEMICAL
CHFR	CHAMFER
CIP	CAST-IN-PLACE
CJ	CONTROL JOINT, CONSTRUCTION JOINT
CL	CENTER LINE
CLL	COLUMN LINE
CLG	CEILING
CLR	CLEAR
CLSM	CONTROLLED LOW-STRENGTH MATERIAL
CMU	CONCRETE MASONRY UNIT
COL	COLUMN
CONC	CONCRETE
CONN	CONNECTION
CONSTR	CONSTRUCTION
CONT	CONTINUE, CONTINUOUS
CONTR	CONTRACTOR
COORD	COORDINATE
CRSI	CONCRETE REINFORCING STEEL INSTITUTE
CY	CUBIC YARDS
D	PENNY (NAIL SIZE)
DEMO.	DEMOLISH, DEMOLITION
DET	DETAIL
DFT	DRY FILM THICKNESS
DIA	DIAMETER
DIAG	DIAGONAL
DIM	DIMENSION
DL	DEAD LOAD
DOT	DEPARTMENT OF TRANSPORTATION
DWG	DRAWING
DWL	DOWEL
E	EAST
EA	EACH
EF	EACH FACE
EJ	EXPANSION JOINT
EL	ELEVATION
ELEC	ELECTRIC, ELECTRICAL
EMBED	EMBEDMENT
ENGR	ENGINEER
EOR	ENGINEER OF RECORD
EOS	EDGE OF SLAB
EQ	EQUAL
EQUIP	EQUIPMENT
EQUIV	EQUIVALENT
EW	EACH WAY
EX OR EXST	EXISTING
EXP	EXPANSION
EXT	EXTERIOR
f'c	SPECIFIED COMPRESSIVE STRENGTH OF CONCRETE
FD	FLOOR DRAIN
FIN	FINISH
f'm	SPECIFIED COMPRESSIVE STRENGTH OF CONCRETE MASONRY
FRC	FIBER REINFORCED CONCRETE
FRP	FIBERGLASS REINFORCED PLASTIC
FS	FAR SIDE
FT	FEET
FTG	FOOTING
Fy	MINIMUM YIELD STRESS
GA	GAGE
GALV	GALVANIZED
GR BM	GRADE BEAM
GRTG	GRATING
HDPE	HIGH DENSITY POLYETHYLENE
HORIZ	HORIZONTAL
HP	HIGH POINT
HS	HIGH STRENGTH
HVAC	HEATING, VENTILATING AND AIR CONDITIONING
IBC	INTERNATIONAL BUILDING CODE
ID	INSIDE DIAMETER
IF	INSIDE FACE
IN	INCHES
INFO	INFORMATION
INSUL	INSULATION
INT	INTERIOR
INV	INVERT
JT	JOINT
K OR KIP	THOUSAND POUNDS (1 K = 1000 LBS)
KB	KNEE BRACE
K/FT	KIPS PER FOOT
KIP FT	THOUSAND FOOT/POUNDS
KLF	KIPS PER LINEAL FOOT
KSF	KIPS PER SQUARE FOOT

LBS	POUNDS
LL	LIVE LOAD
LLH	LONG LEG HORIZONTAL
LLO	LONG LEG OUTSTANDING
LLV	LONG LEG VERTICAL
LONG	LONGITUDINAL
LPT	LOW POINT
LRFD	LOAD AND RESISTANCE FACTOR DESIGN
LW	LIGHTWEIGHT
MATL	MATERIAL
MAX	MAXIMUM
MECH	MECHANICAL
MEZZ	MEZZANINE
MFR	MANUFACTURER
MD	METAL DECK
MH	MANHOLE
MIL	ONE THOUSANDTH OF AN INCH
MIN	MINIMUM
MISC	MISCELLANEOUS
ML	MASONRY LINTEL (STEEL)
MTL	METAL
MO	MASONRY OPENING
MPII	MANUFACTURER'S PRINTED INSTALLATION INSTRUCTIONS
N	NORTH
NF	NEAR FACE
NIC	NOT IN CONTRACT
NO	NUMBER
#	NUMBER SYMBOL FOR REBAR SIZE
NS	NEAR SIDE
NTS	NOT TO SCALE
OC	ON CENTER
OD	OUTSIDE DIAMETER
OF	OUTSIDE FACE
OH	OPPOSITE HAND
OPNG	OPENING
OPP	OPPOSITE
OSHA	OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION
P/C OR PCP	PRECAST PLANK
PCC	PRECAST CONCRETE
PH	PENTHOUSE
PL	PLATE
PREFAB	PREFABRICATED
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
PVC	POLYVINYL CHLORINE
R	RADIUS OR RISER
RD	ROOF DRAIN
REBAR	REINFORCING STEEL BAR
REF	REFERENCE
REINF	REINFORCED
REQD	REQUIRED
REV	REVISION
RM	ROOM
S	SOUTH
SCG	SELF-CONSOLIDATING GROUT
SCHED	SCHEDULE
SE	STRUCTURAL ENGINEER
SECT	SECTION
SF	SQUARE FEET
SIM	SIMILAR
SQ	SQUARE
SS	STANDING SEAM (ROOF)
SSR	STANDING SEAM ROOFING
SST	STAINLESS STEEL
STD	STANDARD
STIFF	STIFFENER
STIR	STIRRUP
STL	STEEL
STRUCT	STRUCTURAL
SYMM	SYMMETRICAL
(T)	TENSION
T	TREAD, TOP
T&B	TOP AND BOTTOM
T&G	TONGUE & GROOVE
TE	TOP ELEVATION
TEMP	TEMPERATURE, TEMPORARY
TFF	TOP OF FINISH FLOOR
TO	TOP OF ____
TOB	TOP OF BEAM
TOC	TOP OF CONCRETE
TOF	TOP OF FOOTING
TOS	TOP OF SLAB, TOP OF STEEL
TOW	TOP OF WALL
TPER	THERMOPLASTIC ELASTOMERIC RUBBER
TYP	TYPICAL
UN	UNLESS NOTED
UNO	UNLESS NOTED OTHERWISE
UON	UNLESS OTHERWISE NOTED
VERT	VERTICAL
VIF	VERIFY IN FIELD
VRFY	VERIFY
W	WEST
W/	WITH
WF	WIDE FLANGE
WF BM	WIDE FLANGE BEAM
W/O	WITHOUT
WP	WORKING POINT
WS	WATERSTOP
XBRA	CROSSBRACING

SYMBOLS



07/09/21

IN ACCORDANCE WITH TITLE VIII, ARTICLE 145, SECTION 7209 (2) OF THE NEW YORK STATE EDUCATION LAW, IT IS A VIOLATION OF LAW FOR ANY PERSON UNLESS ACTING UNDER THE DIRECTION OF A LICENSED ENGINEER TO ALTER THIS DOCUMENT.

IN CHARGE OF L. WOODS
CHECKED BY T. KIVISTO
MADE BY R. EGAN

O'BRIEN & GERE ENGINEERS, INC.
50 MAIN ST., 10TH FLOOR SUITE 1000, WHITE PLAINS, NEW YORK 10606

REVISION NUMBER	DATE	MADE BY	APP'D BY	REVISION

RECORD DRAWING CERTIFICATION

☐ AS BUILT - CHANGES AS NOTED
☐ AS BUILT - NO CHANGES

CONTRACTOR	PROJECT COORDINATOR
NAME	NAME
SIGNATURE	SIGNATURE
TITLE DATE	TITLE DATE

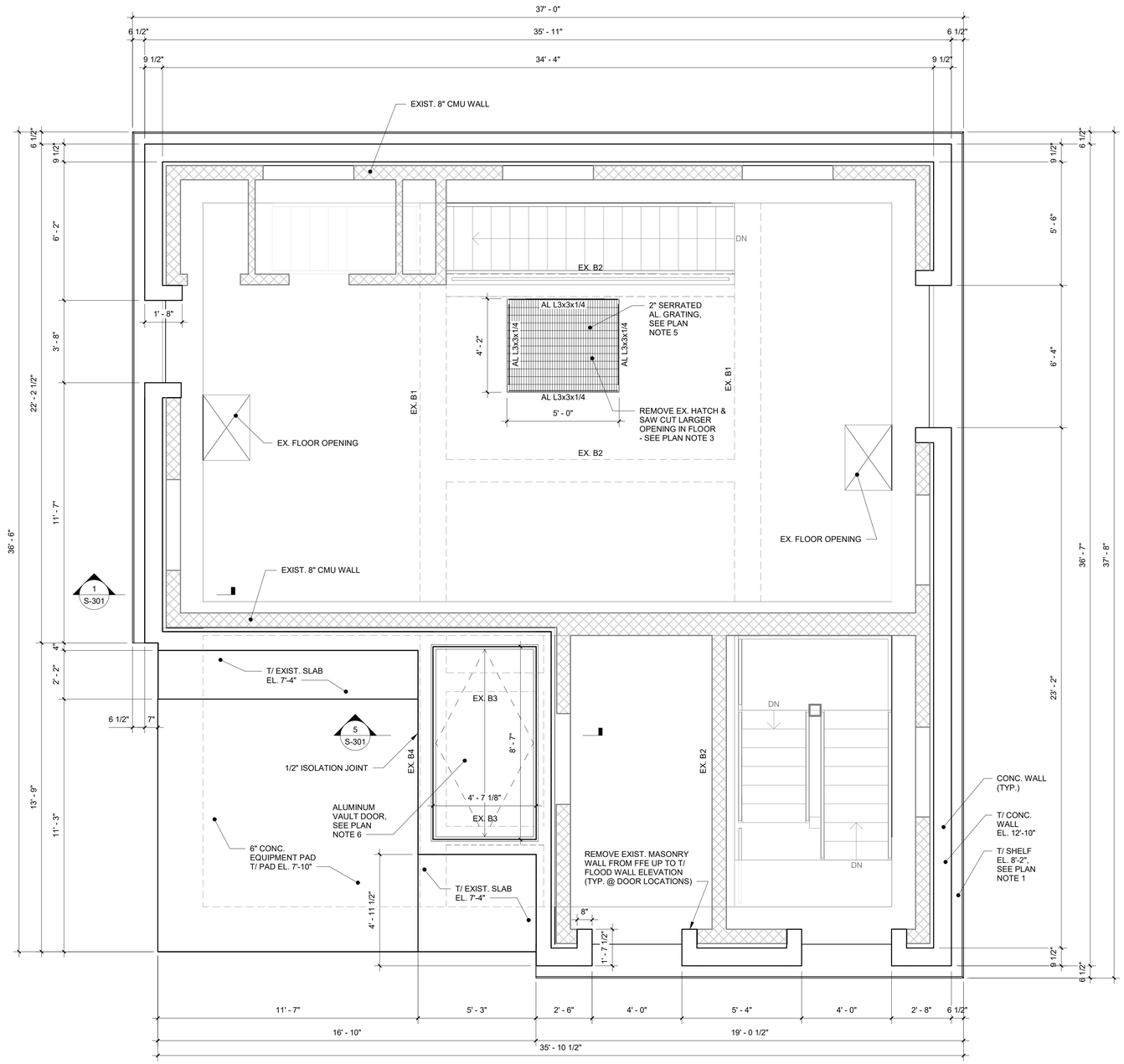
WESTCHESTER COUNTY, NEW YORK
DEPARTMENT OF PUBLIC WORKS AND TRANSPORTATION
DIVISION OF ENGINEERING

CONTRACT NUMBER 17-529
SHEET NUMBER S-001
SHEET NO. 7 OF 60

CROTONVILLE PUMPING STATION REHABILITATION
OSSINING SEWER DISTRICT
OSSINING, NEW YORK
GENERAL NOTES

SCALE:
DATE: 12/21/18
DPW FILE NO. 208-03-S-31-0
REV. NO. 0

4/13/2021 11:25:55 AM



MAIN FLOOR PLAN

3/8" = 1'-0"

PLAN NORTH

PLAN NOTES:

1. FIELD VERIFY TOP OF EXISTING SLAB ELEVATION, TOP OF SHELF ELEVATION TO MATCH.
2. COORDINATE SIZE AND LOCATION OF WALL PENETRATIONS WITH ARCHITECTURAL, PLUMBING, HVAC, ELECTRICAL AND MECHANICAL DRAWINGS AND EQUIPMENT MANUFACTURER.
3. REMOVE EX. HATCH AND ENLARGE FLOOR OPENING AND COVER WITH GRATING ON MID FLOOR LEVEL SIMILAR TO DETAILS SHOWN ON THIS LEVEL.
4. CONSTRUCTION AND CONTROL JOINTS SHALL BE LOCATED BY THE CONTRACTOR BASED ON PLANS, DETAILS AND SPACING LIMITATIONS SHOWN ON THE CONTRACT DOCUMENTS. SHOP DRAWINGS SHOWING CONTRACTORS PROPOSED LOCATION OF CONSTRUCTION AND CONTROL JOINTS AND CONCRETE PLACEMENT SEQUENCING SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW PRIOR TO THE PREPARATION OF THE REINFORCEMENT SHOP DRAWINGS AND PLACEMENT OF CONCRETE.
5. PROVIDE SERRATED ALUMINUM BAR GRATING WITH 2"x3/16" BEARING BARS AT 1 3/16" SPACING, AND CROSS BARS AT 4" SPACING. SECURE GRATING WITH STAINLESS STEEL HOLD-DOWN HARDWARE.
6. ALUMINUM VAULT DOOR SHALL BE WATER TIGHT AND RATED FOR A LIVE LOAD OF 60 PSF.

STATE OF NEW YORK · EDWARD W. WOODS · 074275 · LICENSED PROFESSIONAL ENGINEER

07/09/21

IN ACCORDANCE WITH TITLE VIII, ARTICLE 145, SECTION 7209 (2) OF THE NEW YORK STATE EDUCATION LAW, IT IS A VIOLATION OF LAW FOR ANY PERSON UNLESS ACTING UNDER THE DIRECTION OF A LICENSED ENGINEER TO ALTER THIS DOCUMENT.

IN CHARGE OF L. WOODS
CHECKED BY T. KIVISTO
MADE BY R. EGAN

O'BRIEN & GERE ENGINEERS, INC.
50 MAIN ST., 10TH FLOOR SUITE 1000,
WHITE PLAINS, NEW YORK 10606

REVISION NUMBER	DATE	MADE BY	APP'D BY	REVISION

RECORD DRAWING CERTIFICATION

☐ AS BUILT - CHANGES AS NOTED
☐ AS BUILT - NO CHANGES

CONTRACTOR
NAME
SIGNATURE
TITLE DATE

PROJECT COORDINATOR
NAME
SIGNATURE
TITLE DATE

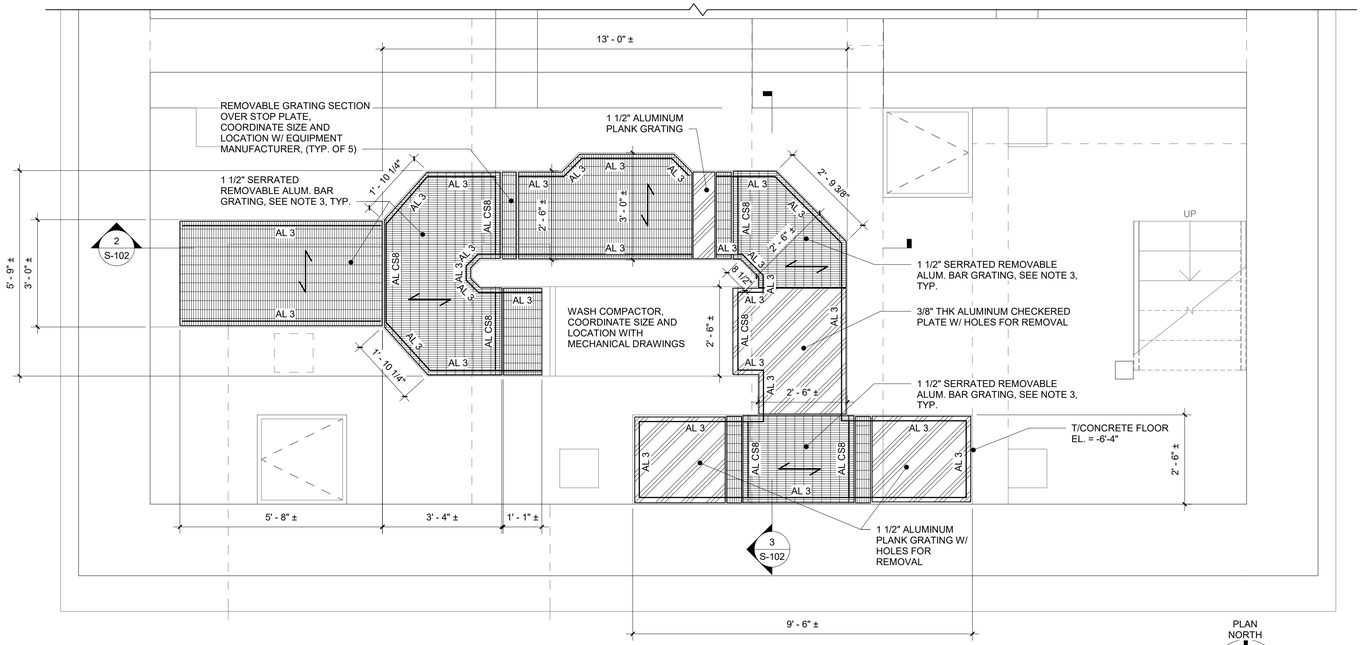
WESTCHESTER COUNTY, NEW YORK
DEPARTMENT OF PUBLIC WORKS AND TRANSPORTATION
DIVISION OF ENGINEERING

CONTRACT NUMBER 17-529
SHEET NUMBER S-101
SHEET NO. 8 OF 60

CROTONVILLE PUMPING STATION REHABILITATION
OSSINING SEWER DISTRICT
OSSINING, NEW YORK
MAIN FLOOR PLAN

SCALE:
DATE: 12/21/18
DPW FILE NO. 208-03-S-32-0
REV. NO. 0

C:\Users\laramatw.RAMBOLL\Documents\66136-S-Crotonville-PS-Central_tom.laramay@obg.com.rvt

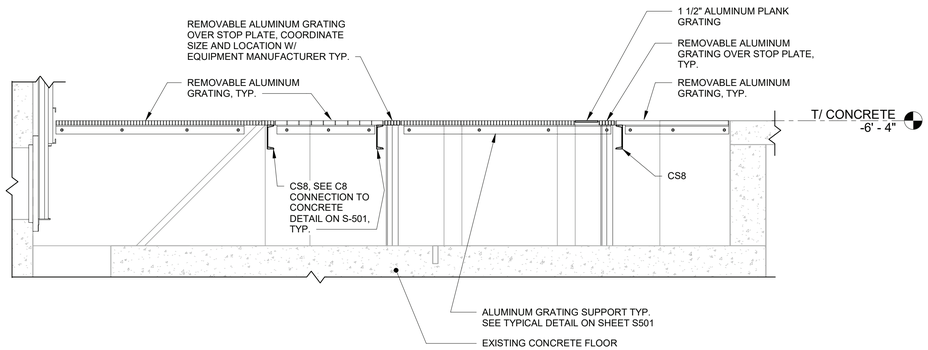


SCREEN ROOM FLOOR GRATING AND FRAMING PLAN

1/2" = 1'-0"

2' 1' 0 1' 2'

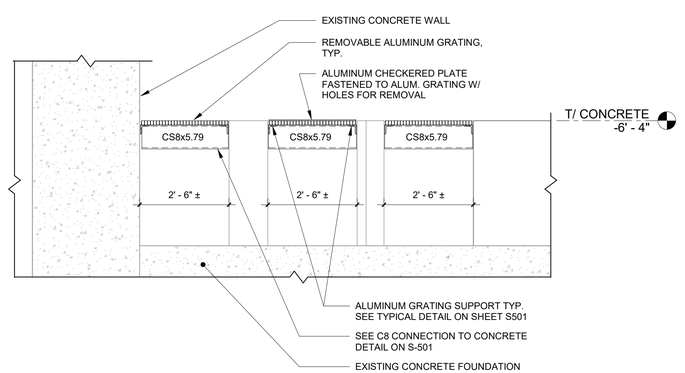
PLAN NOTES:
1. FIELD VERIFY TOP OF EXISTING SLAB ELEVATION AND CHANNEL GEOMETRY.
2. COORDINATE SIZE AND LOCATION OF GRATING PENETRATIONS WITH MECHANICAL DRAWINGS AND EQUIPMENT MANUFACTURER.
3. PROVIDE SERRATED ALUMINUM BAR GRATING WITH 1 1/2" x 3/16" BEARING BARS AT 1 3/16" SPACING, AND CROSS BARS AT 4" SPACING. SECURE GRATING WITH STAINLESS STEEL HOLD-DOWN HARDWARE. LIMIT INDIVIDUAL REMOVABLE GRATING PANEL WEIGHT TO 75 lbs.
4. SEE ALUMINUM GRATING SUPPORT DETAIL ON SHEET S-501. GRATING SHALL BE SUPPORTED AT THE PERIMETER.
5. AL CS8 DENOTES ALUMINUM CS8x5.79.
6. AL 3 DENOTES ALUMINUM L3x3x1/4". SEE AL. GRATING SUPPORT DETAIL ON S-501.



2 SECTION

1/2" = 1'-0"

2' 1' 0 1' 2'



3 SECTION

1/2" = 1'-0"

2' 1' 0 1' 2'

STATE OF NEW YORK · LEONARD W. WOODS · 074279 · LICENSED PROFESSIONAL ENGINEER

07/09/21

IN ACCORDANCE WITH TITLE VIII, ARTICLE 145, SECTION 7209 (2) OF THE NEW YORK STATE EDUCATION LAW, IT IS A VIOLATION OF LAW FOR ANY PERSON UNLESS ACTING UNDER THE DIRECTION OF A LICENSED ENGINEER TO ALTER THIS DOCUMENT.

IN CHARGE OF L. WOODS
CHECKED BY T. KIVISTO
MADE BY T. HOLLIS

O'BRIEN & GERE ENGINEERS, INC.
50 MAIN ST., 10TH FLOOR SUITE 1000, WHITE PLAINS, NEW YORK 10606

REVISION NUMBER	DATE	MADE BY	APP'D BY	REVISION

RECORD DRAWING CERTIFICATION

☐ AS BUILT - CHANGES AS NOTED
☐ AS BUILT - NO CHANGES

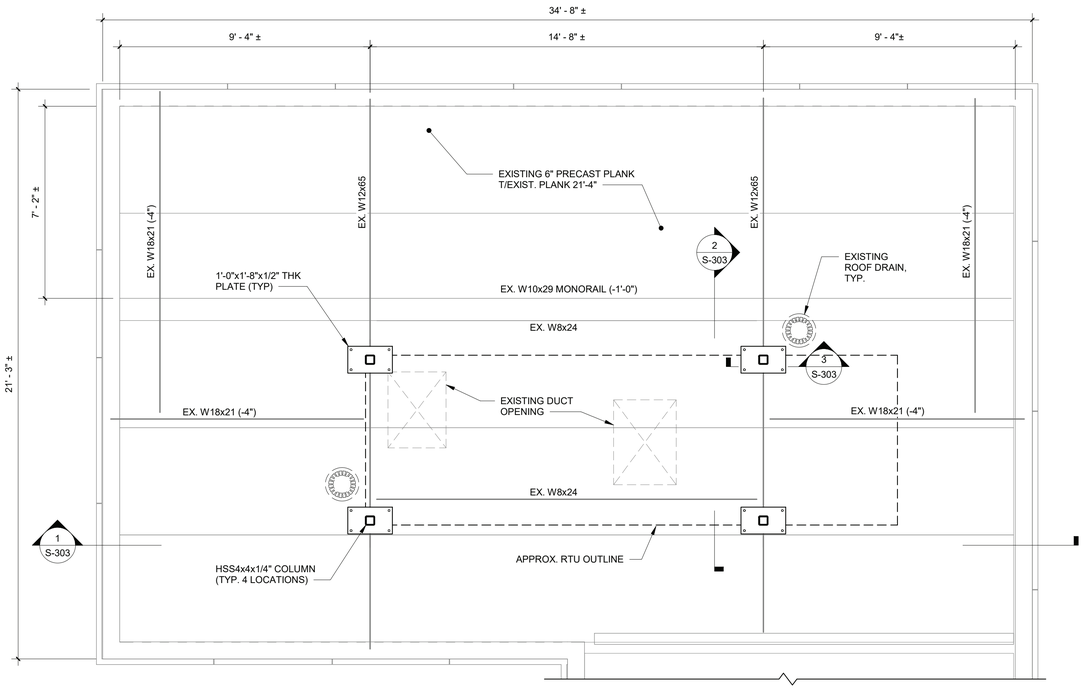
CONTRACTOR	PROJECT COORDINATOR
NAME	NAME
SIGNATURE	SIGNATURE
TITLE DATE	TITLE DATE

WESTCHESTER COUNTY, NEW YORK
DEPARTMENT OF PUBLIC WORKS AND TRANSPORTATION
DIVISION OF ENGINEERING

CONTRACT NUMBER 17-529
SHEET NUMBER S-102
SHEET NO. 9 OF 60

CROTONVILLE PUMPING STATION REHABILITATION
OSSINING SEWER DISTRICT
OSSINING, NEW YORK
PARTIAL FLOOR GRATING INFILL FRAMING PLAN

SCALE:
DATE: 11/19/19
DPW FILE NO. 208-03-S-33-0
REV. NO. 0

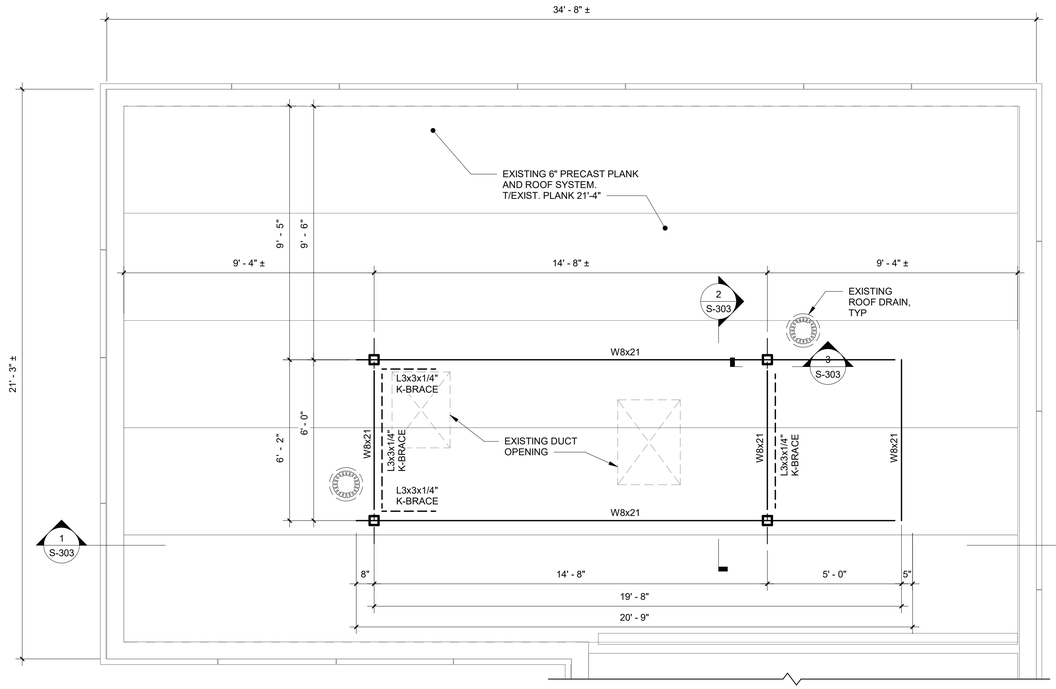


EXISTING ROOF COLUMN LOCATION PLAN

3/8" = 1'-0"

3' 2' 1' 0 1' 2' 3'

PLAN NORTH



RTU STEEL FRAMING PLAN

3/8" = 1'-0"

3' 2' 1' 0 1' 2' 3'

PLAN NORTH

PLAN NOTES:

1. EXISTING CONDITIONS AND ELEVATIONS SHALL BE FIELD VERIFIED AND COORDINATED WITH ARCHITECTURAL, MECHANICAL AND PLUMBING REQUIREMENTS, AND EQUIPMENT MANUFACTURER'S RECOMMENDATIONS OR REQUIREMENTS PRIOR TO FABRICATION AND PLACEMENT OF STEEL.
2. TOP OF EXISTING CONCRETE PLANK ELEVATION = 21' - 4". TOP OF EXISTING ROOF STEEL = 20'-10", UNLESS OTHERWISE NOTED ON PLANS AND SECTIONS.
3. TOP OF NEW RTU STEEL FRAME ELEVATION = 24' - 8", UNLESS NOTED OTHERWISE ON PLANS AND SECTIONS.
4. PROVIDE PROTECTION OF EXISTING ROOF AND FACILITIES DURING DEMOLITION & INSTALLATION ACTIVITIES.
5. PROVIDE HOT-DIPPED GALVANIZED FINISH FOR STRUCTURAL STEEL AND ACCESSORIES.
6. MAXIMUM SHEAR REACTION IS 6 KIPS. (1 KIP = 1,000 LBS)
7. MAXIMUM ACIAL FORCE IS 6 KIPS. (1 KIP = 1,000 LBS)
8. COORDINATE SIZE AND LOCATION OF RTU FRAMING WITH HVAC DRAWINGS AND EQUIPMENT MANUFACTURER.

STATE OF NEW YORK
LEONARD W. WOODS
074273
LICENSED PROFESSIONAL ENGINEER

07/09/21

IN ACCORDANCE WITH TITLE VIII, ARTICLE 145, SECTION 7209 (2) OF THE NEW YORK STATE EDUCATION LAW, IT IS A VIOLATION OF LAW FOR ANY PERSON UNLESS ACTING UNDER THE DIRECTION OF A LICENSED ENGINEER TO ALTER THIS DOCUMENT.

IN CHARGE OF L. WOODS
CHECKED BY T. KIVISTO
MADE BY T. HOLLIS

O'BRIEN & GERE ENGINEERS, INC.
50 MAIN ST., 10TH FLOOR SUITE 1000,
WHITE PLAINS, NEW YORK 10606

REVISION NUMBER	DATE	MADE BY	APP'D BY	REVISION

RECORD DRAWING CERTIFICATION

☐ AS BUILT - CHANGES AS NOTED
☐ AS BUILT - NO CHANGES

CONTRACTOR
NAME
SIGNATURE
TITLE DATE

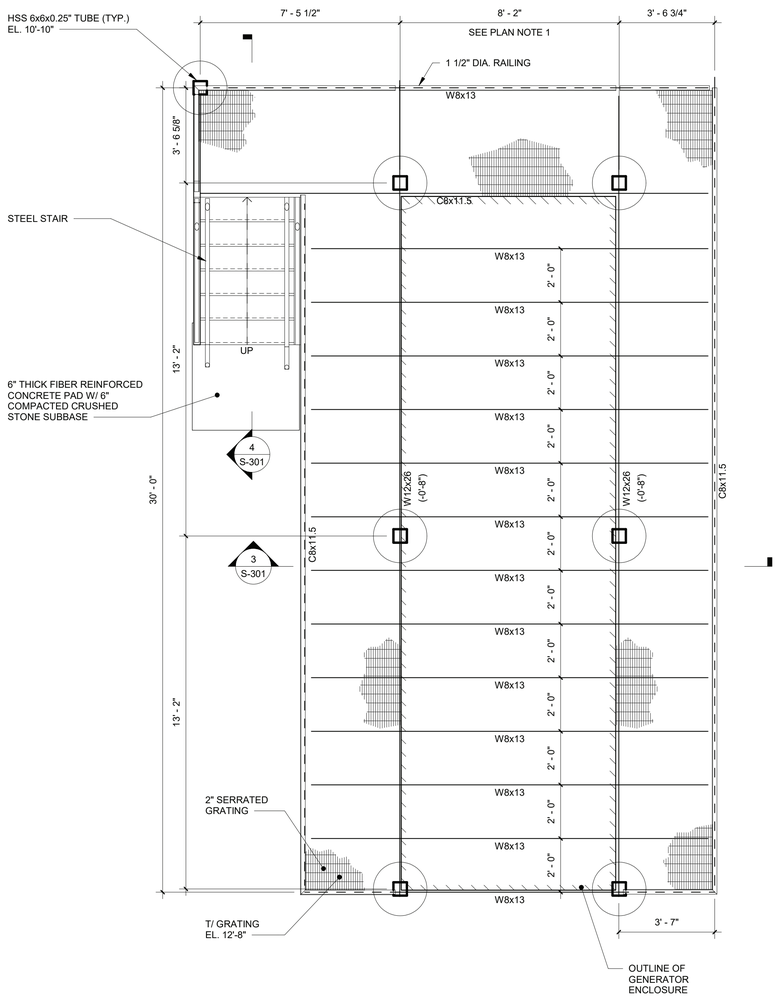
PROJECT COORDINATOR
NAME
SIGNATURE
TITLE DATE

WESTCHESTER COUNTY, NEW YORK
DEPARTMENT OF PUBLIC WORKS AND TRANSPORTATION
DIVISION OF ENGINEERING

CONTRACT NUMBER 17-529
SHEET NUMBER S-103
SHEET NO. 10 OF 60

CROTONVILLE PUMPING STATION REHABILITATION
OSSINING SEWER DISTRICT
OSSINING, NEW YORK
PARTIAL EXISTING ROOF PLANS

SCALE:
DATE: 11/19/19
DPW FILE NO. 208-03-S-34-0
REV. NO. 0

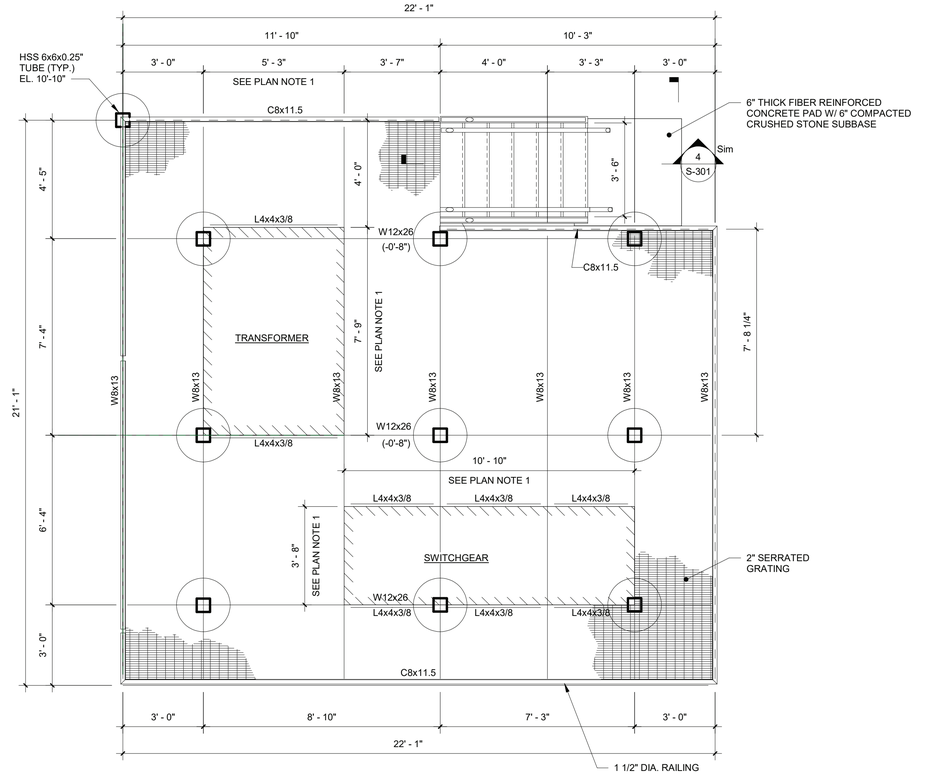


GENERATOR PLATFORM PLAN

3/8" = 1'-0" 3' 2' 1' 0 1' 2' 3'

PLAN NORTH

PLAN NOTES:
1. COORDINATE GENERATOR SIZES AND LOCATIONS WITH EQUIPMENT MANUFACTURER PRIOR TO FABRICATION.
2. HOT-DIP GALVANIZED STRUCTURAL STEEL AND ACCESSORIES.
3. T/ STEEL ELEVATION = 12'-6" UNLESS NOTES (+/- 0'-0") THEREFROM.
4. FIBER REINFORCEMENT SHALL BE BLENDED POLYPROPYLENE/POLYETHYLENE MACRO-MONOFILAMENT FIBERS AND POLYPROPYLENE MICRO-SYNTHETIC FIBERS SUCH AS NOVOMESH 950 BY FIBERMESH CONCRETE SOLUTIONS BY SIKA. WITH A DOSAGE OF 5 LBS/C.Y. OR AS RECOMMENDED BY THE FIBER MANUFACTURER.



SWITCHGEAR AND TRANSFORMER PLATFORM PLAN

3/8" = 1'-0" 3' 2' 1' 0 1' 2' 3'

PLAN NORTH

PLAN NOTES:
1. COORDINATE TRANSFORMER AND SWITCHGEAR SIZES AND LOCATIONS WITH EQUIPMENT MANUFACTURER PRIOR TO FABRICATION.
2. HOT-DIP GALVANIZED STRUCTURAL STEEL AND ACCESSORIES.
3. T/ STEEL ELEVATION = 12'-6" UNLESS NOTES (+/- 0'-0") THEREFROM.
4. FIBER REINFORCEMENT SHALL BE BLENDED POLYPROPYLENE/POLYETHYLENE MACRO-MONOFILAMENT FIBERS AND POLYPROPYLENE MICRO-SYNTHETIC FIBERS SUCH AS NOVOMESH 950 BY FIBERMESH CONCRETE SOLUTIONS BY SIKA. WITH A DOSAGE OF 5 LBS/C.Y. OR AS RECOMMENDED BY THE FIBER MANUFACTURER.

STATE OF NEW YORK
EDGUARD W. WOODS
074275
REGISTERED PROFESSIONAL ENGINEER

07/09/21

IN ACCORDANCE WITH TITLE VIII, ARTICLE 145, SECTION 7209 (2) OF THE NEW YORK STATE EDUCATION LAW, IT IS A VIOLATION OF LAW FOR ANY PERSON UNLESS ACTING UNDER THE DIRECTION OF A LICENSED ENGINEER TO ALTER THIS DOCUMENT.

IN CHARGE OF L. WOODS
CHECKED BY T. KIVISTO
MADE BY R. EGAN

O'BRIEN & GERE ENGINEERS, INC.
50 MAIN ST., 10TH FLOOR SUITE 1000,
WHITE PLAINS, NEW YORK 10606

REVISION NUMBER	DATE	MADE BY	APP'D BY	REVISION

RECORD DRAWING CERTIFICATION

☐ AS BUILT - CHANGES AS NOTED
☐ AS BUILT - NO CHANGES

CONTRACTOR
NAME
SIGNATURE
TITLE DATE

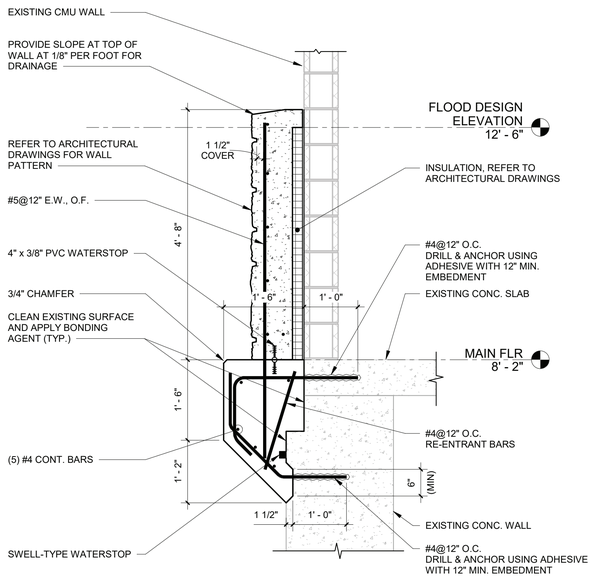
PROJECT COORDINATOR
NAME
SIGNATURE
TITLE DATE

WESTCHESTER COUNTY, NEW YORK
DEPARTMENT OF PUBLIC WORKS AND TRANSPORTATION
DIVISION OF ENGINEERING

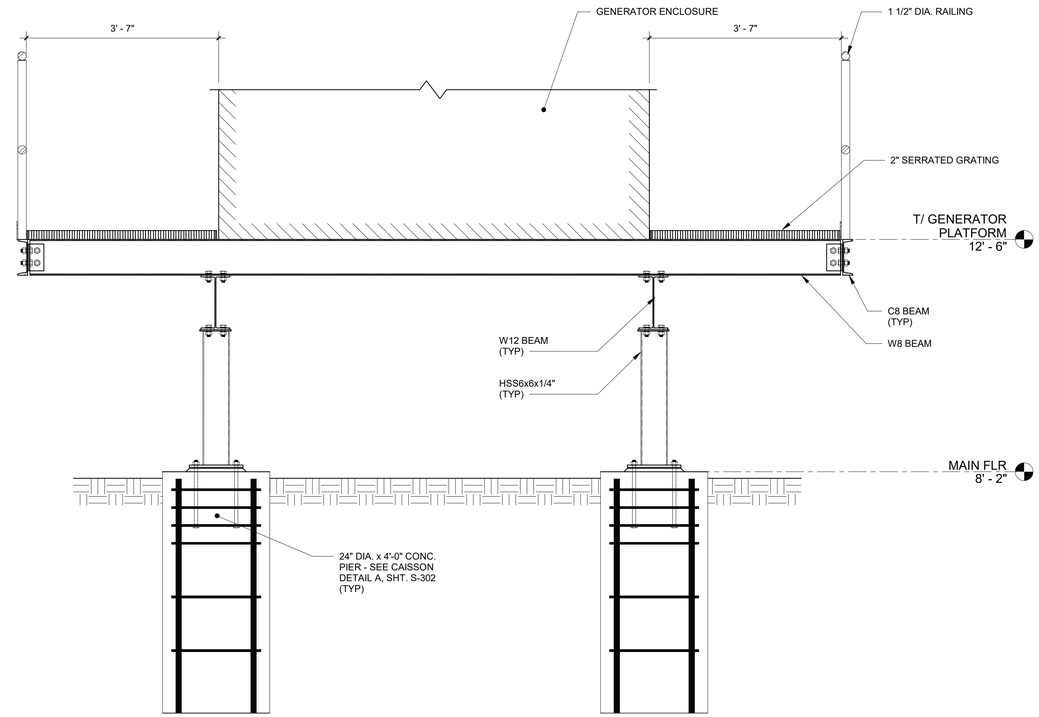
CONTRACT NUMBER 17-529
SHEET NUMBER S-104
SHEET NO. 11 OF 60

CROTONVILLE PUMPING STATION REHABILITATION
OSSINING SEWER DISTRICT
OSSINING, NEW YORK
ELECTRICAL SERVICE PLATFORMS

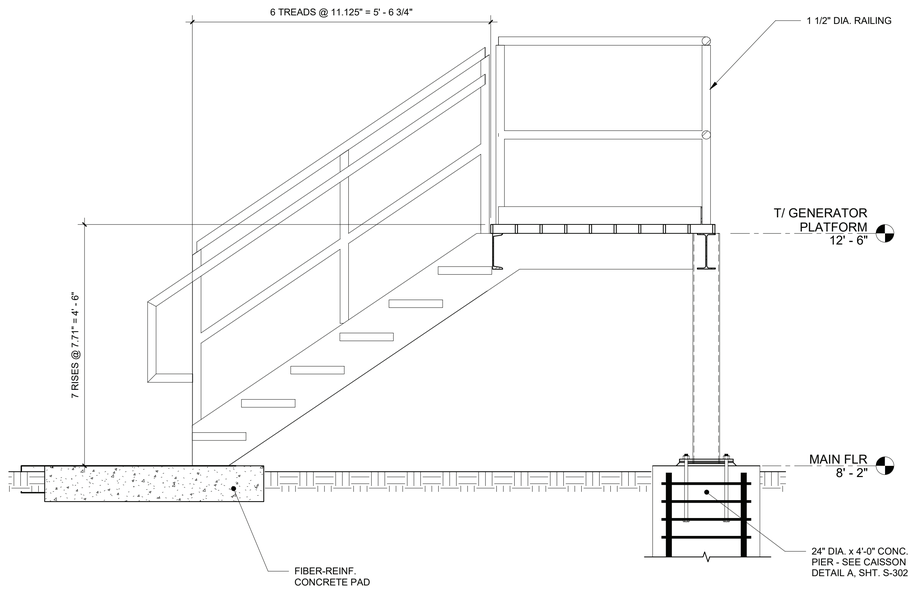
SCALE:
DATE: 12/21/18
DPW FILE NO. 208-03-S-35-0
REV. NO. 0



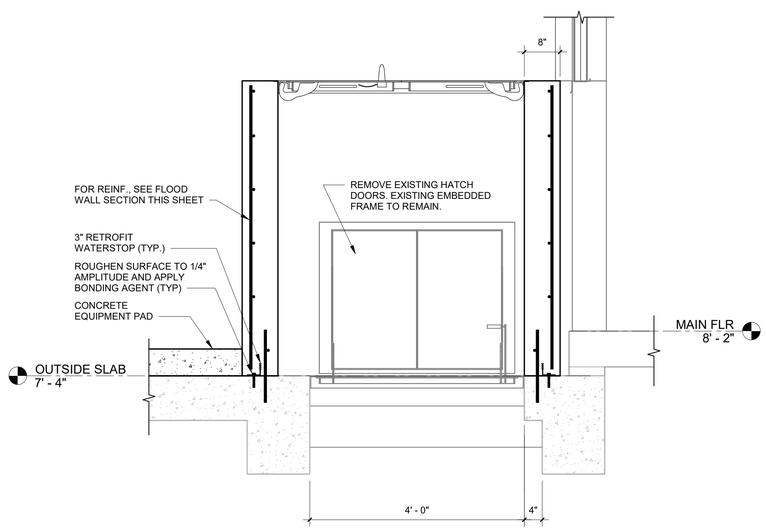
1 FLOOD WALL SECTION
3/4" = 1'-0"



3 SECTION
3/4" = 1'-0"



4 SECTION
3/4" = 1'-0"



5 SECTION
3/4" = 1'-0"

IN ACCORDANCE WITH TITLE VIII, ARTICLE 145, SECTION 7209 (2) OF THE NEW YORK STATE EDUCATION LAW, IT IS A VIOLATION OF LAW FOR ANY PERSON UNLESS ACTING UNDER THE DIRECTION OF A LICENSED ENGINEER TO ALTER THIS DOCUMENT.

07/09/21

IN CHARGE OF L. WOODS
CHECKED BY T. KIVISTO
MADE BY R. EGAN

O'BRIEN & GERE ENGINEERS, INC.
50 MAIN ST., 10TH FLOOR SUITE 1000, WHITE PLAINS, NEW YORK 10606

REVISION NUMBER	DATE	MADE BY	APP'D BY	REVISION

RECORD DRAWING CERTIFICATION

☐ AS BUILT - CHANGES AS NOTED
☐ AS BUILT - NO CHANGES

CONTRACTOR
NAME
SIGNATURE
TITLE DATE

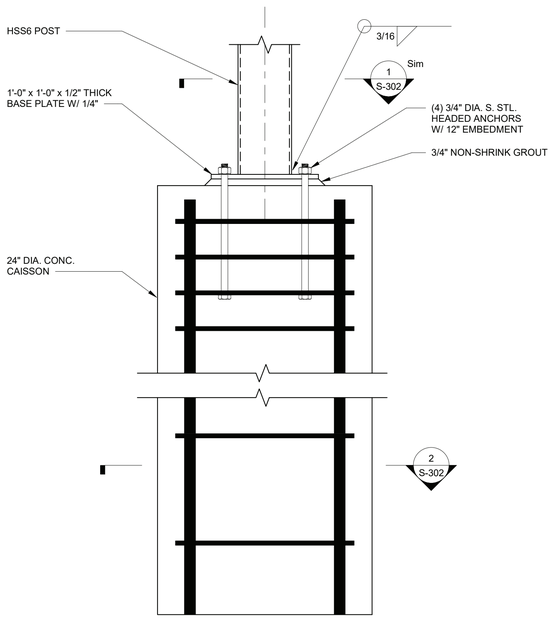
PROJECT COORDINATOR
NAME
SIGNATURE
TITLE DATE

WESTCHESTER COUNTY, NEW YORK
DEPARTMENT OF PUBLIC WORKS AND TRANSPORTATION
DIVISION OF ENGINEERING

CONTRACT NUMBER 17-529
SHEET NUMBER S-301
SHEET NO. 12 OF 60

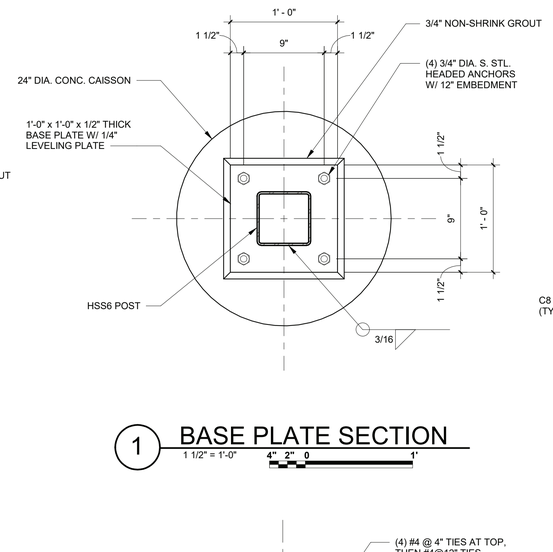
CROTONVILLE PUMPING STATION REHABILITATION
OSSINING SEWER DISTRICT
OSSINING, NEW YORK
SECTIONS AND DETAILS

SCALE:
DATE: 12/21/18
DPW FILE NO. 208-03-S-36-0
REV. NO. 0



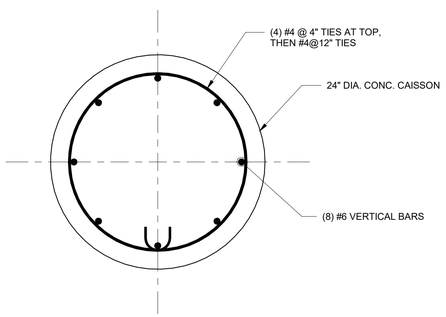
A CAISSON DETAIL

1 1/2" = 1'-0"



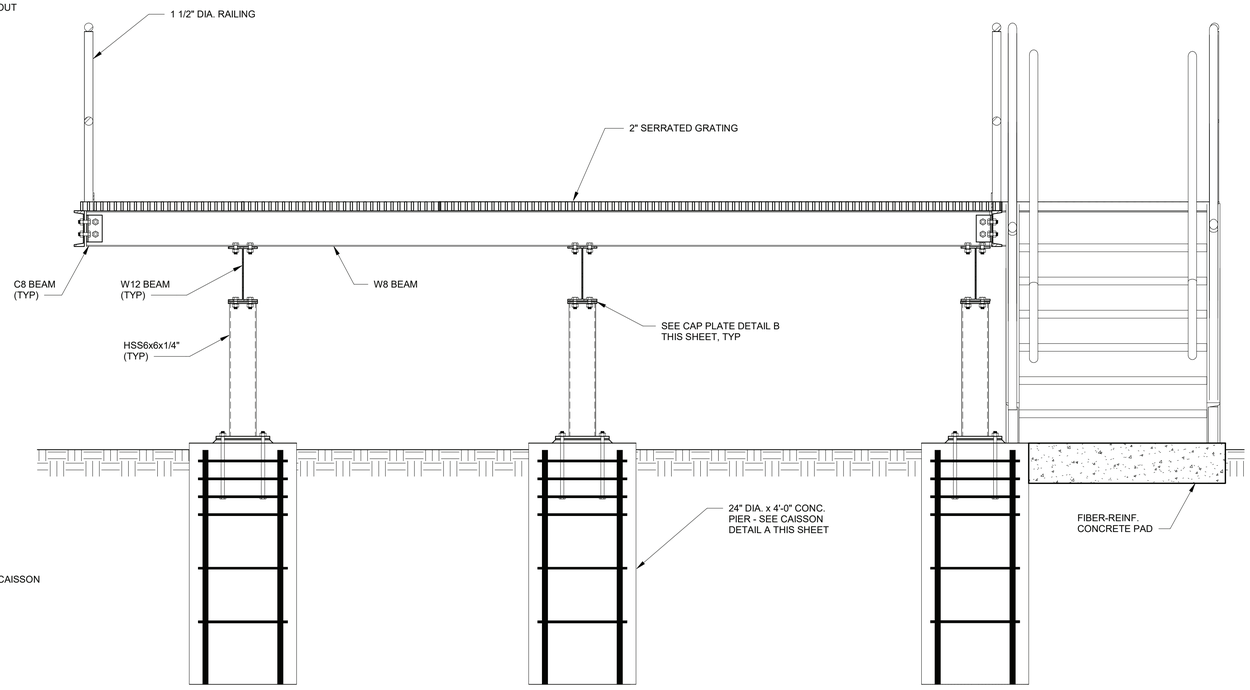
1 BASE PLATE SECTION

1 1/2" = 1'-0"



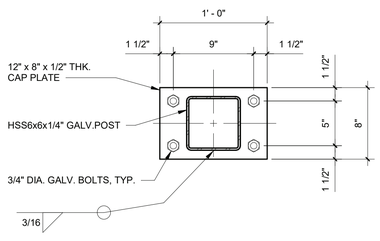
2 CAISSON SECTION

1 1/2" = 1'-0"



3 SECTION

3/4" = 1'-0"



B CAP PLATE DETAIL

1 1/2" = 1'-0"

STATE OF NEW YORK
LEONARD W. WOODS
074279
LICENSED PROFESSIONAL ENGINEER

07/09/21

IN ACCORDANCE WITH TITLE VIII, ARTICLE 145, SECTION 7209 (2) OF THE NEW YORK STATE EDUCATION LAW, IT IS A VIOLATION OF LAW FOR ANY PERSON UNLESS ACTING UNDER THE DIRECTION OF A LICENSED ENGINEER TO ALTER THIS DOCUMENT.

IN CHARGE OF L. WOODS
CHECKED BY T. KIVISTO
MADE BY R. EGAN

O'BRIEN & GERE ENGINEERS, INC.
50 MAIN ST., 10TH FLOOR SUITE 1000,
WHITE PLAINS, NEW YORK 10606

REVISION NUMBER	DATE	MADE BY	APP'D BY	REVISION

RECORD DRAWING CERTIFICATION

☐ AS BUILT - CHANGES AS NOTED
☐ AS BUILT - NO CHANGES

CONTRACTOR
NAME
SIGNATURE
TITLE DATE

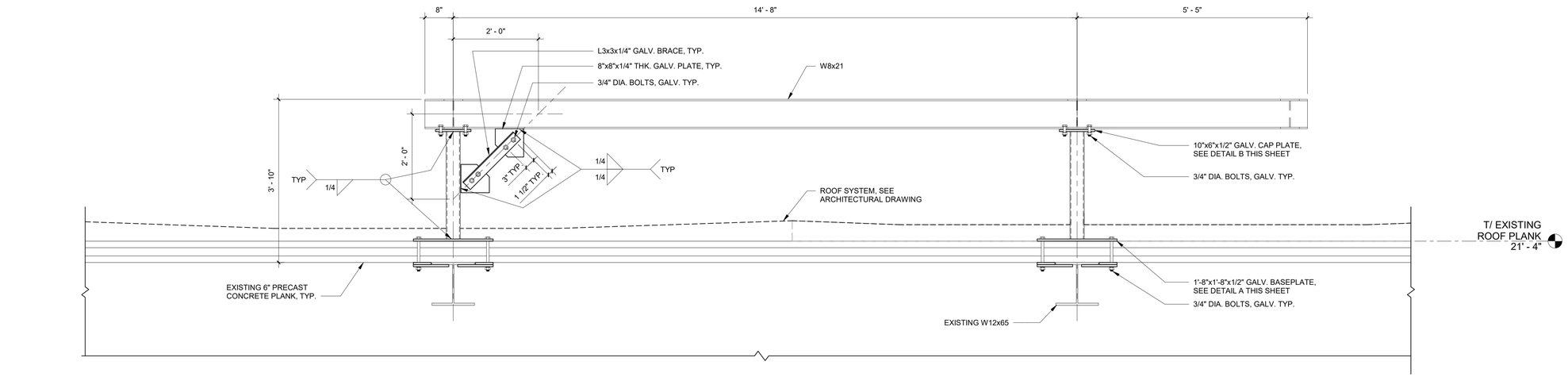
PROJECT COORDINATOR
NAME
SIGNATURE
TITLE DATE

WESTCHESTER COUNTY, NEW YORK
DEPARTMENT OF PUBLIC WORKS AND TRANSPORTATION
DIVISION OF ENGINEERING

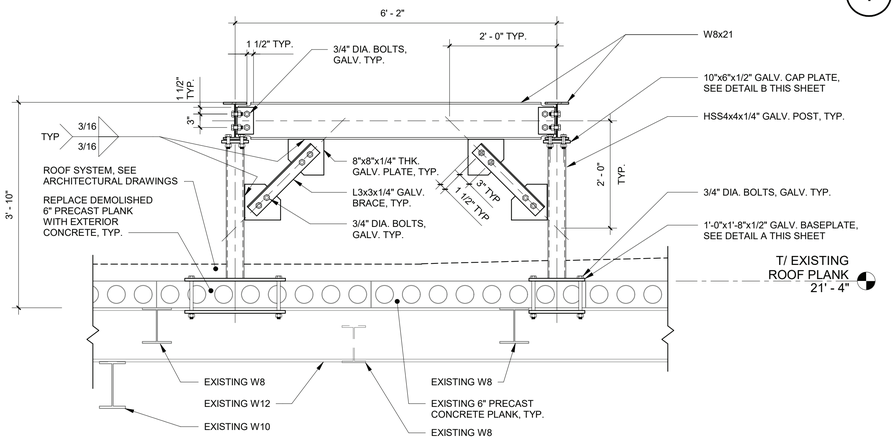
CONTRACT NUMBER 17-529
SHEET NUMBER S-302
SHEET NO. 13 OF 60

CROTONVILLE PUMPING STATION REHABILITATION
OSSINING SEWER DISTRICT
OSSINING, NEW YORK
SECTIONS AND DETAILS

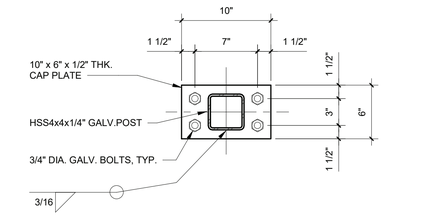
SCALE:
DATE: 12/21/18
DPW FILE NO. 208-03-S-37-0
REV. NO. 0



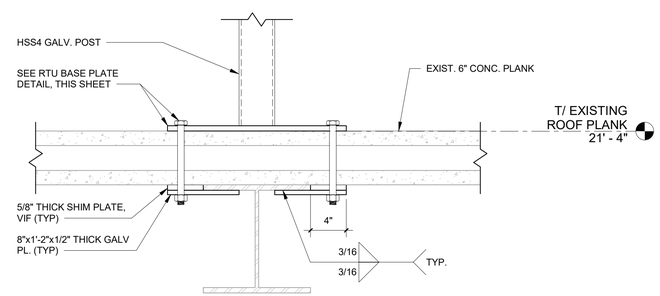
1 SECTION
3/4" = 1'-0"



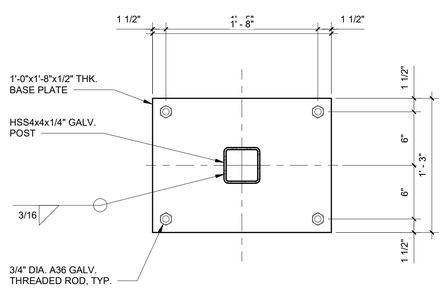
2 SECTION
3/4" = 1'-0"



B RTU CAP PLATE DETAIL
1 1/2" = 1'-0"



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



A RTU BASEPLATE DETAIL
1 1/2" = 1'-0"

STATE OF NEW YORK · EDWARD W. WOODS · 074213 · LICENSED PROFESSIONAL ENGINEER

07/09/21

IN ACCORDANCE WITH TITLE VIII, ARTICLE 145, SECTION 7209 (2) OF THE NEW YORK STATE EDUCATION LAW, IT IS A VIOLATION OF LAW FOR ANY PERSON UNLESS ACTING UNDER THE DIRECTION OF A LICENSED ENGINEER TO ALTER THIS DOCUMENT.

IN CHARGE OF L. WOODS
CHECKED BY T. KIVISTO
MADE BY T. HOLLIS

O'BRIEN & GERE ENGINEERS, INC.
50 MAIN ST., 10TH FLOOR SUITE 1000,
WHITE PLAINS, NEW YORK 10606

REVISION NUMBER	DATE	MADE BY	APP'D BY	REVISION

RECORD DRAWING CERTIFICATION

☐ AS BUILT - CHANGES AS NOTED
☐ AS BUILT - NO CHANGES

CONTRACTOR
NAME
SIGNATURE
TITLE DATE

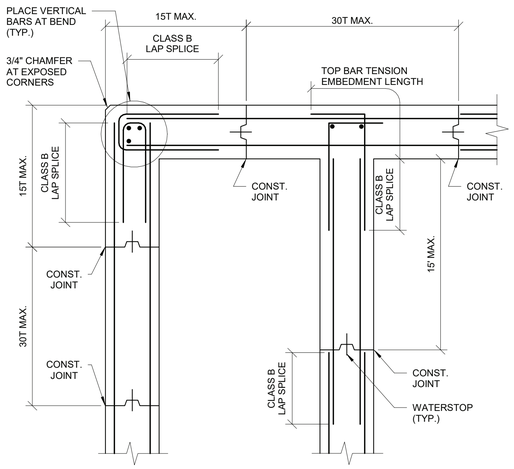
PROJECT COORDINATOR
NAME
SIGNATURE
TITLE DATE

WESTCHESTER COUNTY, NEW YORK
DEPARTMENT OF PUBLIC WORKS AND TRANSPORTATION
DIVISION OF ENGINEERING

CONTRACT NUMBER 17-529
SHEET NUMBER S-303
SHEET NO. 14 OF 60

CROTONVILLE PUMPING STATION REHABILITATION
OSSINING SEWER DISTRICT
OSSINING, NEW YORK
SECTIONS AND DETAILS

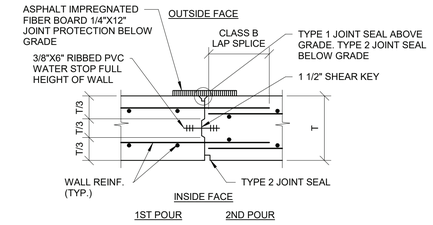
SCALE:
DATE: 11/19/19
DPW FILE NO. 208-03-S-38-0
REV. NO. 0



SCHEMATIC HORIZ. WALL REINF. & JOINT LOCATION DETAIL AT LIQUID RETAINING STRUCTURE

NOT TO SCALE

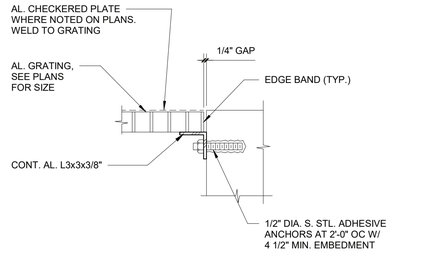
DETAIL NOTES:
1. CORNER AND INTERSECTION REINF. BARS SHALL BE SAME SIZE AND SPACING AS HORIZONTAL WALL REINFORCING U.O.N. WHERE REINFORCING IS NOT THE SAME IN EACH WALL, THE HEAVIER REINFORCING SHALL BE USED AT THE CORNER.
2. LAP SPLICE - CLASS "B" TOP BAR LAP SPLICE.
3. JOINT TYPE AS NOTED ON THE PLANS.
4. STAGGER WALL AND FOOTING JOINTS 4'-0" MINIMUM.



CONST. JOINT DETAIL AT LIQUID RETAINING STRUCTURE WALL

NOT TO SCALE

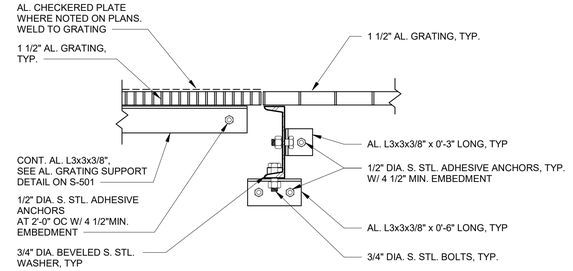
DETAIL NOTES:
1. MAXIMUM SPACING BETWEEN JOINTS, 30T NOT TO EXCEED 60 FEET FOR WALLS UP TO 24 INCHES THICK. FOR WALLS THAT ARE GREATER THAN 24 INCHES THICK, MAXIMUM SPACING BETWEEN JOINTS SHALL NOT EXCEED 72 FEET.
2. DETAILING OF CONCRETE REINFORCING SHALL NOT BEGIN UNTIL THE CONTRACTOR PROVIDES THE REBAR FABRICATOR WITH A FINALIZED JOINT LAYOUT THAT HAS BEEN REVIEWED BY THE ENGINEER.
3. STAGGER WALL AND SLAB CONSTRUCTION JOINTS 4'-0" MINIMUM.



AL. GRATING SUPPORT DETAIL

NOT TO SCALE

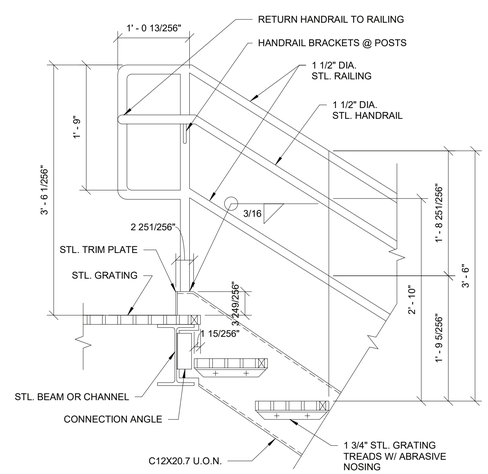
DETAIL NOTES:
1. BACK PAINT ALUMINUM SURFACES THAT WILL BE IN CONTACT W/ CONCRETE.
2. WHERE INDICATED ON THE PLANS SECURE GRATING THAT HAS A COVER PLATE TO SUPPORT FRAMING USING SELF TAPPING S. STL. SCREWS.
3. WHERE INDICATED ON THE PLANS SECURE GRATING THAT DOES NOT HAVE A COVER PLATE TO SUPPORT FRAMING USING S. STL. HAT CLIPS.



AL. C8 CONNECTION TO CONCRETE DETAIL

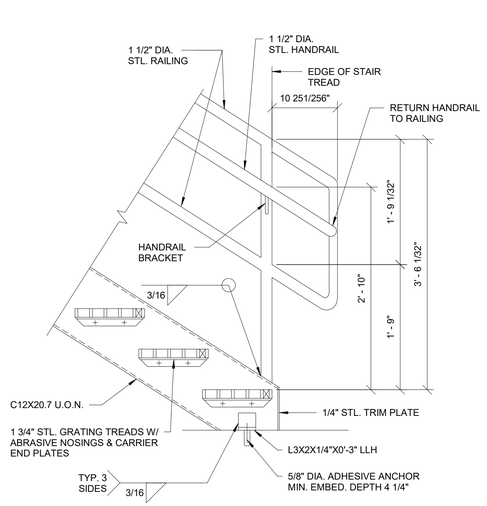
1 1/2" = 1'-0"

DETAIL NOTES:
1. BACK PAINT ALUMINUM SURFACES THAT WILL BE IN CONTACT W/ CONCRETE.
2. WHERE INDICATED ON THE PLANS SECURE GRATING THAT HAS A COVER PLATE TO SUPPORT FRAMING USING SELF TAPPING S. STL. SCREWS.
3. WHERE INDICATED ON THE PLANS SECURE GRATING THAT DOES NOT HAVE A COVER PLATE TO SUPPORT FRAMING USING S. STL. HAT CLIPS.



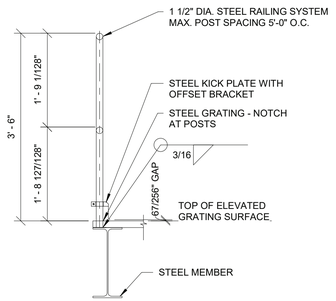
STAIR HEAD DETAIL AT PLATFORM

NOT TO SCALE



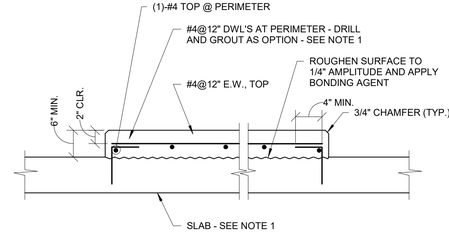
STAIR BASE DETAIL

NOT TO SCALE



FIXED STEEL RAILING DETAIL

NOT TO SCALE



DETAIL NOTES:
1. COORDINATE EQUIPMENT PAD SIZE & ANCHOR LOCATIONS WITH MECHANICAL DRAWINGS & EQUIPMENT MFR.

EQUIPMENT PAD DETAIL ON CONC. SLAB

NOT TO SCALE

STATE OF NEW YORK EDWARD W. WOODS 074275 REGISTERED PROFESSIONAL ENGINEER

07/09/21

IN ACCORDANCE WITH TITLE VIII, ARTICLE 145, SECTION 7209 (2) OF THE NEW YORK STATE EDUCATION LAW, IT IS A VIOLATION OF LAW FOR ANY PERSON UNLESS ACTING UNDER THE DIRECTION OF A LICENSED ENGINEER TO ALTER THIS DOCUMENT.

IN CHARGE OF L. WOODS
CHECKED BY T. KIVISTO
MADE BY R. EGAN

O'BRIEN & GERE ENGINEERS, INC.
50 MAIN ST., 10TH FLOOR SUITE 1000,
WHITE PLAINS, NEW YORK 10606

REVISION NUMBER	DATE	MADE BY	APP'D BY	REVISION

RECORD DRAWING CERTIFICATION

☐ AS BUILT - CHANGES AS NOTED
☐ AS BUILT - NO CHANGES

CONTRACTOR	PROJECT COORDINATOR
NAME	NAME
SIGNATURE	SIGNATURE
TITLE DATE	TITLE DATE

WESTCHESTER COUNTY, NEW YORK
DEPARTMENT OF PUBLIC WORKS AND TRANSPORTATION
DIVISION OF ENGINEERING

CONTRACT NUMBER 17-529
SHEET NUMBER S-501
SHEET NO. 15 OF 60

CROTONVILLE PUMPING STATION REHABILITATION
OSSINING SEWER DISTRICT
OSSINING, NEW YORK
TYPICAL DETAILS

SCALE:
DATE: 12/21/18
DPW FILE NO. 208-03-S-39-0
REV. NO. 0

ARCHITECTURAL ABBREVIATIONS

"A"	
&	AND
@	AT
AB	ANCHOR BOLTS
ABR	ABRASIVE
ACT	ACOUSTICAL CEILING TILE
ADD'L	ADDITIONAL
ADJ	ADJUSTABLE
AFF	ABOVE FINISHED FLOOR
ALT	ALTERNATE
ALUM	ALUMINUM
APPD	APPROVED
APPROX	APPROXIMATE
ARCH	ARCHITECTURAL
ASPH	ASPHALT
"B"	
B OR BOT	BOTTOM
B/ OR BO	BOTTOM OF
BD	BOARD
BFF	BELOW FINISHED FLOOR
BIT	BITUMINOUS
BLDG	BUILDING
BLK	BLOCK / BLOCKING
BM	BEAM
BOD	BOTTOM OF DUCT
BOL	BOTTOM OF LOUVER
BOP	BOTTOM OF PIPE
BRG	BEARING
"C"	
CJ	CONTROL JOINT
CANT	CANTILEVER
CEM	CEMENT
CHAN	CHANNEL
CHEM	CHEMICAL RESISTANT
CL	FINISH CENTERLINE
CLG	CEILING
CLR	CLEAR
CMU	CONCRETE MASONRY UNIT
COL	COLUMN
COMBO	COMBINATION
CONC	CONCRETE
CONST	CONSTRUCTION
CONST JT	CONSTRUCTION JOINT
CONT	CONTINUOUS
CONT'D	CONTINUED
CONTR	CONTRACT / CONTRACTOR
COORD	COORDINATE
CORR	CORRIDOR
CORRUG	CORRUGATED
CSK	COUNTERSINK
CSKSCR	COUNTERSUNK SCREW
CTR	CENTER
"D"	
DEG	DEGREE
DET	DETAIL
DEMO	DEMOLISH / DEMOLITION
DIA	DIAMETER
DIAG	DIAGONAL / DIAGRAM
DIM	DIMENSION
DIV	DIVISION
DL	DEAD LOAD
DN	DOWN
DR	DOOR
DWG	DRAWING
DWL	DOWEL
"E"	
EJ	EXPANSION JOINT
EA	EACH
EF	EACH FACE
ELEV	ELEVATION
ELEC	ELECTRIC / ELECTRICAL
ENGR	ENGINEER
EQ	EQUAL
EQUIP	EQUIPMENT
EQUIV	EQUIVALENT
EXP	EXPOSED
EW	EACH WAY
EXC	EXCAVATION
EXH	EXHAUST
EXIST	EXISTING
EXT	EXTERIOR

"F"	
FAC	FACTORY
FD	FLOOR DRAIN
FDN	FOUNDATION
FE	FIRE EXTINGUISHER
FF	FACTORY FINISH
FFE	FINISH FLOOR ELEVATION
FGR	FINISHED GRADE
FFL	FINISHED FLOOR
FIXT	FIXTURE
FIN	FINISH
FLR	FLOOR
FR	FRAME
FRT	FIRE RETARDANT TREATED
FT	FEET
FTG	FOOTING
FV	FIELD VERIFY
"G"	
GA	GAGE / GAUGE
GALV	GALVANIZED
GB	GRADE BEAM / GRAB BAR
GL	GLASS
GR	GRADE
GRD	GROUND
GS	GALVANIZED STEEL
GVL	GRAVEL
GWB	GYPSUM WALL BOARD
"H"	
HB	HOSE BIBB
HD	HEAD
HDW	HARDWARE
HGT	HEIGHT
HM	HOLLOW METAL
HMD	HOLLOW METAL DOOR
HMF	HOLLOW METAL FRAME
HORIZ	HORIZONTAL
HP	HIGH POINT
HVAC	HEATING, VENTILATING AND AIR CONDITIONING
"I"	
I.F.	INSIDE FACE
INCL	INCLUDED / INCLUDING
IND	INDUSTRIAL
INFO	INFORMATION
INSUL	INSULATION / INSULATED
INT	INTERIOR
INV	INVERT
"J"	
JST	JOIST
JT	JOINT
"K"	
KD	KNOCK DOWN
KFS	KIPS PER SQUARE FOOT
KFT	KIP FOOT
KP	KICK PLATE
"L"	
L	ANGLE
LAM	LAMINATE
LB	POUND
LBS	POUNDS
LF	LINEAR FEET
LG	LENGTH / LONG
LLH	LONG LEG HORIZONTAL
LLV	LONG LEG VERTICAL
LP	LOW POINT
LV	LOUVER
"M"	
MAN.	MANUAL
MATL	MATERIAL
MAX	MAXIMUM
MCP	METAL CLAD PANEL
MD	METAL DECK
MECH	MECHANICAL
MFG	MANUFACTURING
MFR	MANUFACTURER
MIN	MINIMUM
MISC	MISCELLANEOUS
MOD	MODIFICATION
MP	METAL PANEL
MS	METAL STUD
MTD	MOUNTED
MTL	METAL

"N"	
N	NORTH
N/A	NOT APPLICABLE
NC	NON COMBUSTIBLE
NF	NEAR FACE
NIC	NOT IN CONTRACT
NO. OR #	NUMBER
NOM	NOMINAL
NS	NEAR SIDE
NTS	NOT TO SCALE
"O"	
OC	ON CENTER
O.F.	OUTSIDE FACE
OH	OVERHEAD
OPNG	OPENING
OPP	OPPOSITE
"P"	
PAR	PARALLEL
PART.	PARTITION
PERF	PERFORATED
PL	PLATE
PLWD	PLYWOOD
PLUMB.	PLUMBING
PNL	PANEL
PR	PAIR
PRE	POWER ROOF EXHAUSTER
PREFAB	PREFABRICATED
PREFIN	PRE FINISHED
PRI	PRIMARY
PRMLD	PRE MOLDED
P.T.	PRESSURE TREATED
PT	PAINT / PAINTED
PVC	POLYVINYL CHLORIDE
PVT	PAVEMENT
PWE	POWER WALL EXHAUSTER
"Q"	
QUAL	QUALITY
QTY	QUANTITY
"R"	
RAD	RADIUS
RB	ROOF BEAM
RD	ROOF DRAIN
RECT	RECTANGLE / RECTANGULAR
REF	REFERENCE
REINF	REINFORCE
REQ'D	REQUIRED
REV	REVISION / REVISED
RFG	ROOFING
RM	ROOM
RO	ROUGH OPENING
"S"	
S	SOUTH
S/C	SITE/CIVIL
SCH	SCHEDULE
SEC	SECOND
SECT	SECTION
SF	SQUARE FOOT
SIM	SIMILAR
SHT	SHEET
SIM REV	SIMILAR REVERSED
SJ	STEEL JOIST
SPEC	SPECIFICATION
SQ	SQUARE
SS	STAINLESS STEEL
STA	STATION
STD	STANDARD
STIFF	STIFFENER
STL	STEEL
STOR	STORAGE
STRUCT	STRUCTURE / STRUCTURAL
SUSP	SUSPEND / SUSPENDED
SYM	SYMMETRICAL / SYMMETRICALLY
"T"	
T	TOP
T/ OR T.O.	TOP OF
TBD	TO BE DETERMINED
TEMP	TEMPERATURE
TH	THICK
THRD	THREAD / THREADED
TOB	TOP OF BLOCK
TOD	TOP OF DUCT
TOF	TOP OF FOOTING
TOL	TOP OF LOUVER
TOS	TOP OF SLAB / TOP OF STEEL
TOT	TOTAL
TOW	TOP OF WALL
TYP	TYPICAL
"U"	
UNO	UNLESS NOTED OTHERWISE
U/S	UNDERSIDE
"V"	
VCT	VINYL COMPOSITION TILE
VERT	VERTICAL
"W"	
W/O	WITHOUT
W/	WITH
W	WEST
WD	WOOD
WF	WATER FOUNTAIN
WLD	WELD / WELDED
WP	WATER PROOFING
WT	WEIGHT

ARCHITECTURAL GRAPHIC CONVENTIONS

- BACKFILL
- BATT INSULATION
- BRICK
- CELL VENT/WEEP VENT
- CONCRETE, CAST STONE, AND/OR PRECAST CONCRETE
- CONC. MASONRY UNIT (CMU)
- GRAVEL
- GROUT OR MORTAR
- GYPSUM WALL BOARD
- MORTAR NET
- PLYWOOD
- RIGID BOARD INSULATION
- SHIM
- STEEL
- WOOD BLOCKING

METHOD OF SECTIONING

THE DRAWING UPON WHICH A SECTION, VIEW OR DETAIL HAS BEEN TAKEN AND THE DRAWING UPON WHICH THE SECTION, VIEW OR DETAIL HAS BEEN SHOWN IS CROSS-REFERENCED WITH SYMBOLS AS FOLLOWS:

DRAWING WHERE SECTION IS TAKEN

1 / A-301 — THE NUMBER IN THE UPPER HALF OF THE CIRCLE IS THE SECTION NUMBER. THE BOTTOM NUMBER REFERS TO THE DRAWING NUMBER ON WHICH THE SECTION CAN BE FOUND.

DRAWING WHERE SECTION IS SHOWN

1 SECTION — SCALE — SCALE BAR LOCATION — THIS IS SHOWN UNDER EACH SECTION. THE NUMBER IS THE SECTION NUMBER ON THE SHEET.

ARCHITECTURAL SYMBOLS

- PLAN NORTH — DIRECTION NORTH
- 120 — NEW DOOR SYMBOL
- W1 — EXTERIOR WINDOW TYPE DESIGNATION
- PUMP ROOM / 101 — ROOM NAME AND ROOM NUMBER DESIGNATION
- SLOPE
- DATUM
- LV-3 — LOUVER DESIGNATION
- A / A-101 / 2 — INTERIOR ROOM AND WALL ELEVATIONS WITH LOCATION SHEET DESIGNATOR
- FE — FIRE EXTINGUISHER
- 1 / A-5 — DETAIL INDICATOR
- 1 / A — STRUCTURAL COLUMN GRID LINES AND INDICATOR

STATE OF NEW YORK — EDGARD W. WOODS — 074279 — LICENSED PROFESSIONAL ENGINEER

07/09/21

IN ACCORDANCE WITH TITLE VIII, ARTICLE 145, SECTION 7209 (2) OF THE NEW YORK STATE EDUCATION LAW, IT IS A VIOLATION OF LAW FOR ANY PERSON UNLESS ACTING UNDER THE DIRECTION OF A LICENSED ENGINEER TO ALTER THIS DOCUMENT.

IN CHARGE OF LWW
CHECKED BY WEC
MADE BY LER

O'BRIEN & GERE ENGINEERS, INC.
50 MAIN ST., 10TH FLOOR SUITE 1000,
WHITE PLAINS, NEW YORK 10606

REVISION NUMBER	DATE	MADE BY	APP'D BY	REVISION

RECORD DRAWING CERTIFICATION

- ☐ AS BUILT - CHANGES AS NOTED
- ☐ AS BUILT - NO CHANGES

CONTRACTOR	PROJECT COORDINATOR
NAME	NAME
SIGNATURE	SIGNATURE
TITLE DATE	TITLE DATE

WESTCHESTER COUNTY, NEW YORK
DEPARTMENT OF PUBLIC WORKS AND TRANSPORTATION
DIVISION OF ENGINEERING

CONTRACT NUMBER 17-529 | SHEET NUMBER A-001

SHEET NO. 16 OF 60

CROTONVILLE PUMPING STATION REHABILITATION

SCALE: AS NOTED
DATE: 12/21/18

OSSINING, NEW YORK
ABBREVIATIONS AND SYMBOLS

DPW FILE NO. 208-03-A-40-0 | REV. NO. 0

4/15/2021 10-12:09 AM

ARCHITECTURAL BUILDING CODE ANALYSIS:

APPLICABLE BUILDING CODE: NEW YORK STATE UNIFORM FIRE PREVENTION AND BUILDING CODE (UNIFORM CODE) WITH 2017 UNIFORM CODE SUPPLEMENT

CODE REFERENCE	REQUIREMENT	PROVIDED
CLASSIFICATION OF WORK / NYSEBC-CHAPTER 5	ALTERATION - LEVEL 2	ALTERATION - LEVEL 2
NYSEBC CHAPTER 7 - ALTERATIONS - LEVEL 1 LEVEL 1 ALTERATIONS INCLUDE THE REMOVAL AND REPLACEMENT OR THE COVERING OF EXISTING MATERIALS, ELEMENTS, EQUIPMENT, OR FIXTURES USING NEW MATERIALS, ELEMENTS, OR FIXTURES THAT SERVE THE SAME PURPOSE.		
FIRE PROTECTION GENERAL NYSEBC-703.1	ALTERATIONS SHALL BE DONE IN A MANNER THAT MAINTAINS THE LEVEL OF FIRE PROTECTION PROVIDED	IN COMPLIANCE
MEANS OF EGRESS GENERAL NYSEBC-704.1	ALTERATIONS SHALL BE DONE IN A MANNER THAT MAINTAINS THE LEVEL OF PROTECTION PROVIDED FOR THE MEANS OF EGRESS	IN COMPLIANCE
NYSEBC-CHAPTER 8 - ALTERATIONS - LEVEL 2 LEVEL 2 ALTERATIONS INCLUDE THE RECONFIGURATION OF SPACE, THE ADDITION OR ELIMINATION OF ANY DOOR OR WINDOW, THE RECONFIGURATION OR EXTENSION OF ANY SYSTEM, OR THE INSTALLATION OF ANY ADDITIONAL EQUIPMENT.	SHALL COMPLY WITH THE PROVISIONS OF CHAPTERS 7 FOR LEVEL 1 ALTERATIONS AS WELL AS THE PROVISIONS OF CHAPTER 8.	IN COMPLIANCE
FIRE PROTECTION SCOPE NYSEBC-804.1	THE REQUIREMENTS OF THIS SECTION SHALL BE LIMITED TO WORK AREAS IN WHICH LEVEL 2 ALTERATIONS ARE BEING PERFORMED, AND WHERE SPECIFIED THEY SHALL APPLY THROUGHOUT THE FLOOR ON WHICH THE WORK AREAS ARE LOCATED OR OTHERWISE BEYOND THE WORK AREA.	IN COMPLIANCE
MEANS OF EGRESS SCOPE NYSEBC-805.1	THE REQUIREMENTS OF THIS SECTION SHALL BE LIMITED TO WORK AREAS THAT INCLUDE EXITS OR CORRIDORS SHARED BY MORE THAN ONE TENANT WITHIN THE *WORK AREA* IN WHICH LEVEL 2 *ALTERATIONS* ARE BEING PERFORMED, AND WHERE SPECIFIED THEY SHALL APPLY THROUGHOUT THE FLOOR ON WHICH THE *WORK AREAS* ARE LOCATED OR OTHERWISE BEYOND THE *WORK AREA*.	IN COMPLIANCE
GENERAL NYSEBC-805.2	THE MEANS OF EGRESS SHALL COMPLY WITH THE REQUIREMENTS OF THIS SECTION.	IN COMPLIANCE

APPLICABLE ENERGY CODE: 2015 INTERNATIONAL ENERGY CONSERVATION CODE (IECC)

CODE REFERENCE	REQUIREMENT	PROVIDED
CLIMATE ZONES, DESIGN CONDITIONS, MATERIALS, EQUIPMENT AND SYSTEMS/ NYSECC-CHAPTER 3		
CLIMATE ZONES BY COUNTY, ALL ZONES ARE CATEGORY "A" OR MOIST DESIGNATIONS NYSECC-TABLE C301.1	CLIMATE ZONE 4A WESTCHESTER COUNTY	CLIMATE ZONE 4A WESTCHESTER COUNTY
COMMERCIAL ENERGY EFFICIENCY/ NYSECC-CHAPTER 4		
BUILDING ENVELOPE REQUIREMENTS-OPAQUE ASSEMBLIES NYSECC-TABLE 402.1.3	ROOFS INSULATION ENTIRELY ABOVE ROOF DECK = R-30ci WALLS, ABOVE GRADE MASS = R-9.5ci WALLS, BELOW GRADE MASS = EXISTING CONDITIONS SLAB-ON GRADE FLOORS UNHEATED SLABS=EXISTING CONDITIONS	ROOFS INSULATION ENTIRELY ABOVE ROOF DECK = R-30ci WALLS, ABOVE GRADE MASS = R-9.5ci WALLS, BELOW GRADE MASS = EXISTING CONDITIONS SLAB-ON GRADE FLOORS UNHEATED SLABS=EXISTING CONDITIONS

ARCHITECTURAL BUILDING CODE ANALYSIS:

APPLICABLE BUILDING CODE: NEW YORK STATE UNIFORM FIRE PREVENTION AND BUILDING CODE (UNIFORM CODE) WITH 2017 UNIFORM CODE SUPPLEMENT

CODE REFERENCE	REQUIREMENT	PROVIDED
USE AND OCCUPANCY CLASSIFICATION/ NYSBC CHAPTER 3		
OCCUPANCY CLASSIFICATION SECTION-302		MODERATE-HAZARD FACTORY INDUSTRIAL, GROUP F-1
GENERAL BUILDING HEIGHTS AND AREAS NYSBC-CHAPTER 5		
ALLOWABLE HEIGHT AND BUILDING AREA - NYSBC-TABLES 504.3, 504.4, 506.2	F-1 = 62,000 SF ALLOWABLE FLOOR AREA (3) STORIES/ 75'-0" MAX HEIGHT	F-1 = 940 SF (1) STORY @ 15'-4"
TYPES OF CONSTRUCTION / NYSBC-CHAPTER 6		
TYPE OF CONSTRUCTION NYSBC-TABLE 601	TYPE 2B - NONCOMBUSTIBLE	TYPE 2B - NONCOMBUSTIBLE
STRUCTURAL FRAME INCLUDING COLUMNS, GIRDERS, TRUSSES	FIRE RESISTANCE	FIRE RESISTANCE
BEARING WALLS	(0) HOURS	(0) HOURS
INTERIOR EXTERIOR	(0) HOURS (0) HOURS	(0) HOURS (0) HOURS
NONBEARING WALLS AND PARTITIONS EXTERIOR INTERIOR	 (0) HOURS (0) HOURS	 (0) HOURS (0) HOURS
FLOOR CONSTRUCTION	(0) HOURS	(0) HOURS
ROOF CONSTRUCTION	(0) HOURS	(0) HOURS
MEANS OF EGRESS / NYSBC-CHAPTER 10		
OCCUPANT LOAD NYSBC-TABLE 1004.1.2	F-1 OCCUPANCY	
BUSINESS AND INDUSTRIAL AREA @ 100 SF PER PERSON	940 SF/ 100 SF PER PERSON = 10 OCC	
EGRESS WIDTH PER OCCUPANT SERVED NYSBC-TABLE 1005.1	10 X .2" = 2" MIN REQ'D (1) 36" EXIT REQUIRED	IN COMPLIANCE (1) 44" EXIT PROVIDED (1) 68" EXIT PROVIDED
EXIT ACCESS TRAVEL DISTANCE NYSBC-TABLE 1017.2	F-1 WITHOUT SPRINKLER = 200 FT	F-1 = 28 FT
ACCESSIBILITY / NYSBC-CHAPTER 11 EMPLOYEE WORK AREAS NYSBC - 1103.2.2 EQUIPMENT SPACES NYSBC - 1103.2.9 SPACES FREQUENTED ONLY BY PERSONNEL FOR MAINTENANCE, REPAIR OR MONITORING OF EQUIPMENT ARE NOT REQUIRED TO BE ACCESSIBLE. SUCH SPACES INCLUDE, BUT NOT LIMITED TO, ELEVATOR PITS, ELEVATOR PENTHOUSES, MECHANICAL, ELECTRICAL, OR COMMUNICATIONS EQUIPMENT ROOMS, PIPING OR EQUIPMENT CATWALKS, WATER OR SEWAGE TREATMENT PUMP ROOMS AND STATIONS, ELECTRIC SUBSTATIONS AND TRANSFORMER VAULTS, AND HIGHWAY AND TUNNEL FACILITIES.	NOT REQUIRED	NOT REQUIRED

NOTE: TO THE BEST OF THE LICENSED PROFESSIONAL'S KNOWLEDGE, BELIEF AND PROFESSIONAL JUDGEMENT, SUCH PLANS AND SPECIFICATIONS ARE IN COMPLIANCE WITH THIS CODE

LIFE SAFETY SYMBOL LEGEND

- PATH OF EXIT TRAVEL CUMULATIVE (DIMENSIONS SHOWN INDICATES LENGTH OF TRAVEL DISTANCE FROM STARTING POINT INDICATED TO THE EXIT DISCHARGE)
- STARTING POINT FOR TRAVEL DISTANCE
- DIRECTION OF TRAVEL FOR APPROACH
- EXIT — EXTERIOR DOOR AS EXIT DISCHARGE
- EXIT SIGN
- FE — BRACKET MOUNTED FIRE EXTINGUISHER LOCATIONS SEE GENERAL NOTES

FIRE CLASSIFICATIONS

CLASS A FIRES: FIRES IN ORDINARY COMBUSTIBLE MATERIALS, SUCH AS WOOD, CLOTH, PAPER AND MANY PLASTICS.

CLASS B FIRES: FIRES IN FLAMMABLE LIQUIDS, COMBUSTIBLE LIQUIDS, PETROLEUM GREASES, TARS, OILS, OIL-BASED PAINTS, SOLVENTS, LACQUERS, ALCOHOLS, AND FLAMMABLE GASES.

CLASS C FIRES: FIRES THAT INVOLVE ENERGIZED ELECTRICAL EQUIPMENT WHERE THE ELECTRICAL NONCONDUCTIVITY OF THE EXTINGUISHING MEDIA IS OF IMPORTANCE. (WHEN ELECTRICAL EQUIPMENT IS DE-ENERGIZED, FIRE EXTINGUISHERS FOR CLASS A OR B FIRES CAN BE USED SAFELY.

CLASS D FIRES: FIRES IN COMBUSTIBLE METALS, SUCH AS MAGNESIUM, TITANIUM, ZIRCONIUM, SODIUM, LITHIUM, AND POTASSIUM.

CLASS K FIRES: FIRES IN COOLING APPLIANCES THAT INVOLVE COMBUSTIBLE COOKING MEDIA (VEGETABLE OR ANIMAL OILS AND FATS). NOT APPLICABLE FOR THIS FACILITY.

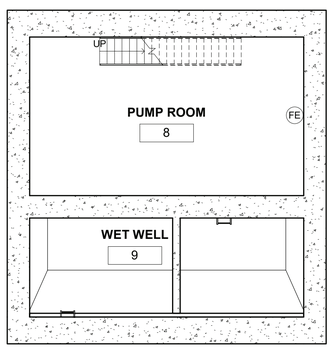
RECOMMENDED MARKING SYSTEM

ORDINARY COMBUSTIBLES — EXTINGUISHERS SUITABLE FOR CLASS A FIRES SHOULD BE IDENTIFIED BY A TRIANGLE CONTAINING THE LETTER "A". IF COLORED, THE TRIANGLE IS COLORED GREEN.

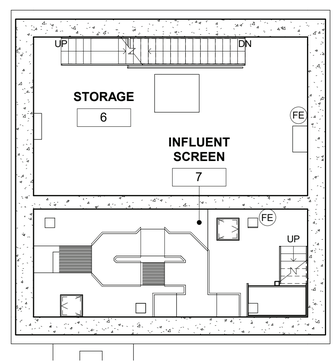
FLAMMABLE LIQUIDS — EXTINGUISHERS SUITABLE FOR CLASS B FIRES SHOULD BE IDENTIFIED BY A SQUARE CONTAINING THE LETTER "B". IF COLORED, THE SQUARE IS COLORED RED.

ELECTRICAL EQUIPMENT — EXTINGUISHERS SUITABLE FOR CLASS C FIRES SHOULD BE IDENTIFIED BY A CIRCLE CONTAINING THE LETTER "C". IF COLORED, THE CIRCLE IS COLORED BLUE.

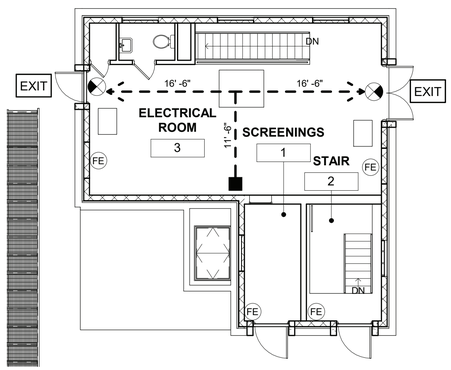
COMBUSTIBLE METALS — EXTINGUISHERS SUITABLE FOR FOR FIRES INVOLVING METALS SHOULD BE IDENTIFIED BY A FIVE POINTED STAR CONTAINING THE LETTER "D". IF COLORED, THE STAR IS COLORED YELLOW.



1 LIFE SAFETY PLAN LOWER LEVEL
1/8" = 1'-0"
8' 4' 0 8'
PLAN NORTH



2 LIFE SAFETYPLAN MID LEVEL
1/8" = 1'-0"
8' 4' 0 8'
PLAN NORTH



3 LIFE SAFETY PLAN MAIN FLOOR
1/8" = 1'-0"
8' 4' 0 8'
PLAN NORTH

STATE OF NEW YORK — EDWARD W. WOOD — 074279 — LICENSED PROFESSIONAL ENGINEER

07/09/21

IN ACCORDANCE WITH TITLE VIII, ARTICLE 145, SECTION 7209 (2) OF THE NEW YORK STATE EDUCATION LAW, IT IS A VIOLATION OF LAW FOR ANY PERSON UNLESS ACTING UNDER THE DIRECTION OF A LICENSED ENGINEER TO ALTER THIS DOCUMENT.

IN CHARGE OF LWW
CHECKED BY WEC
MADE BY LER

O'BRIEN & GERE ENGINEERS, INC.
50 MAIN ST., 10TH FLOOR SUITE 1000,
WHITE PLAINS, NEW YORK 10606

REVISION NUMBER	DATE	MADE BY	APP'D BY	REVISION

RECORD DRAWING CERTIFICATION

☐ AS BUILT - CHANGES AS NOTED
☐ AS BUILT - NO CHANGES

CONTRACTOR
NAME
SIGNATURE
TITLE DATE

PROJECT COORDINATOR
NAME
SIGNATURE
TITLE DATE

WESTCHESTER COUNTY, NEW YORK
DEPARTMENT OF PUBLIC WORKS AND TRANSPORTATION
DIVISION OF ENGINEERING

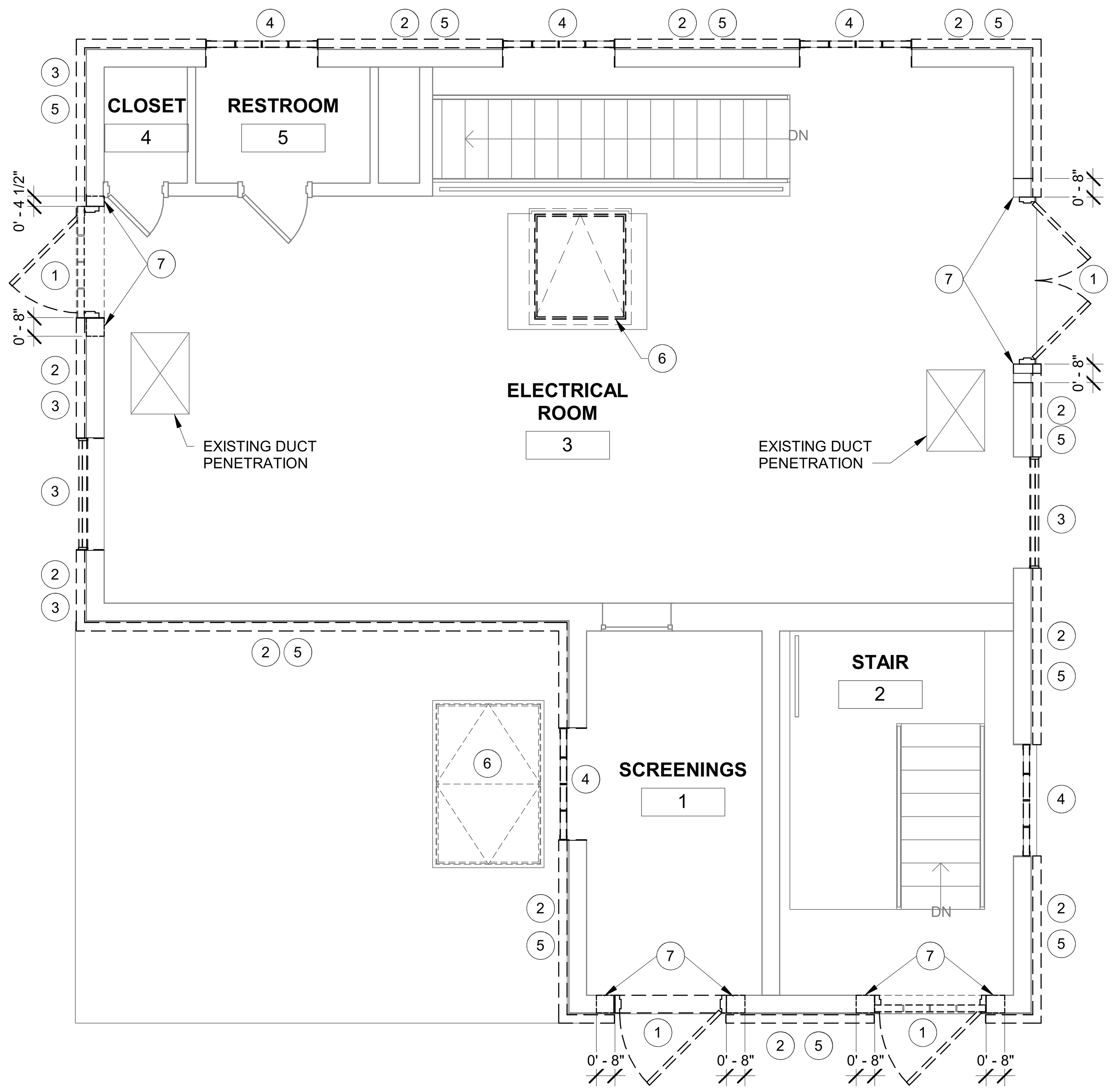
CONTRACT NUMBER 17-529
SHEET NUMBER A-002
SHEET NO. 17 OF 60
SCALE: AS NOTED
DATE: 12/21/18
DPW FILE NO. 208-03-A-41-0
REV. NO. 0

CROTONVILLE PUMPING STATION REHABILITATION

OSSINING, NEW YORK
CODE ANALYSIS

C:\Users\laramatv.RAMBOLL\Documents\66136-A-Crotonville-PS-Central_tom.laramay@obg.com.rvt

4/15/2021 10:12:11 AM



1 MAIN FLOOR - DEMOLITION

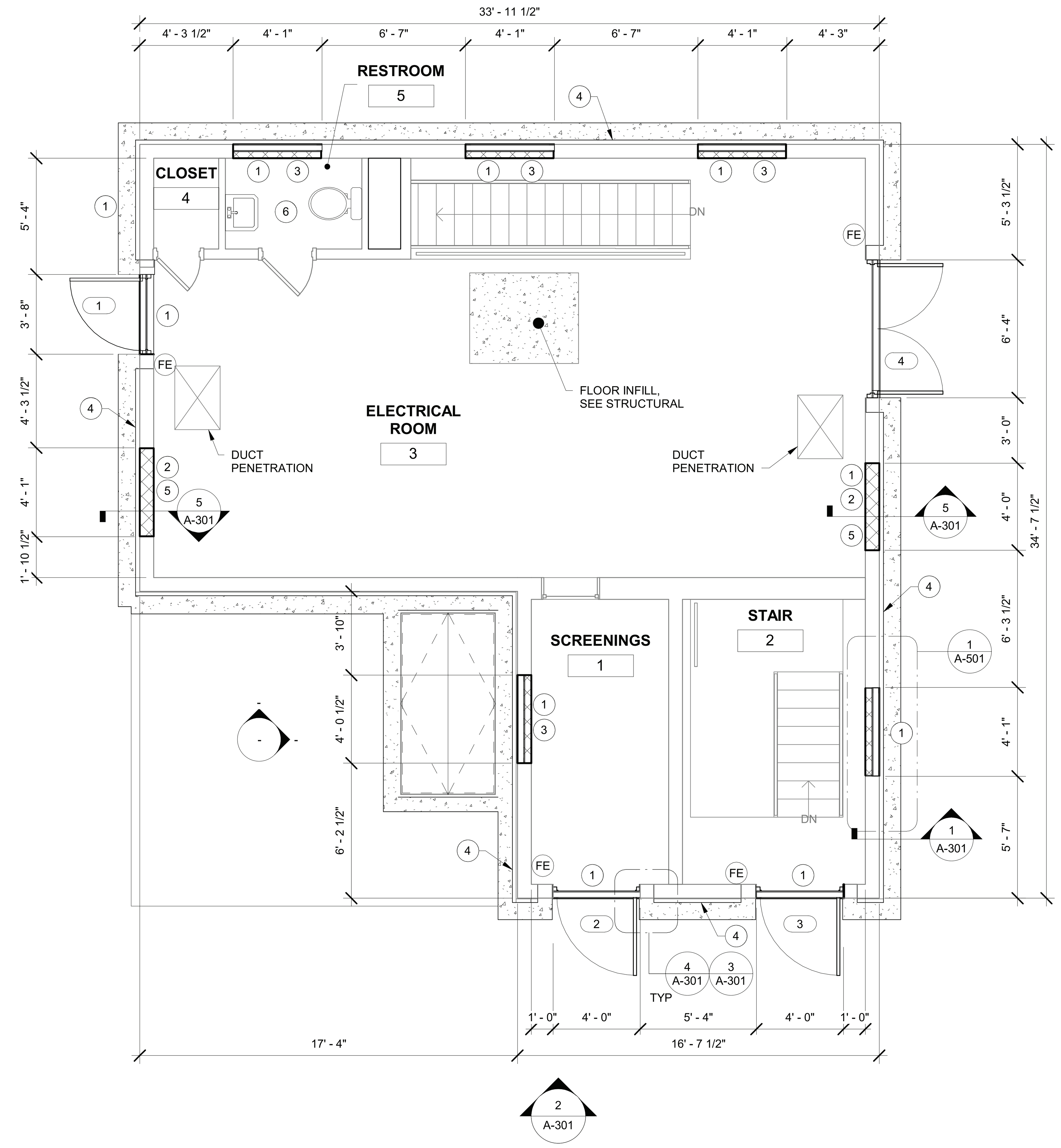
1/4" = 1'-0"

8' 4' 0 8'

PLAN NORTH

DEMOLITION KEYED NOTES

1. REMOVE EXISTING HOLLOW METAL DOORS AND FRAMES AND PREP OPENING FOR INSTALLATION OF FLOOD PROOF DOORS AND FRAMES.
2. PREP EXISTING WALL SURFACE FOR INSTALLATION OF THIN BRICK VENEER AND CONCRETE FLOOD WALL.
3. REMOVE EXISTING LOUVER AND PREPARE MASONRY OPENING TO BE INFILLED.
4. REMOVE EXISTING TRANSLUCENT PANEL COMPLETELY. PREP OPENING TO RECEIVE NEW TRANSLUCENT PANEL.
5. REMOVE EXISTING BRICK VENEER IN IT'S ENTIRETY FROM TOP OF FOUNDATION TO 12'-0" ABOVE MAIN FLOOR LEVEL.
6. REMOVE EXISTING HATCH DOORS.
7. REMOVE EXISTING 8" CMU EACH SIDE OF DOOR UP TO 4'-8" AFF DIMENSIONS INDICATED. CMU FROM 4'-8" AFF TO HEIGHT OF DOOR TO REMAIN. PROVIDE STRUCTURAL SHORING AS NECESSARY TO SUPPORT WALL ABOVE PRIOR TO REMOVING 8" CMU AT EACH SIDE OF DOOR.



2 MAIN FLOOR - INSTALLATION

1/4" = 1'-0"

8' 4' 0 8'

PLAN NORTH

INSTALLATION KEYED NOTES

1. PROVIDE AND INSTALL TRANSLUCENT PANELS. COORDINATE FINAL DIMENSIONS WITH INSTALLATION OF THIN BRICK VENEER SYSTEM.
2. INFILL OPENING TO MATCH EXISTING CMU WALL AND THIN BRICK VENEER SYSTEM.
3. INFILL WALL BELOW TRANSLUCENT PANEL WITH 8" CMU.
4. INSTALL THIN BRICK VENEER SYSTEM TO MATCH EXISTING BRICK.
5. PRIME AND PAINT INTERIOR WALLS AT WALL INFILL LOCATIONS. REFER TO SPECIFICATION SECTION 099900 FIELD PAINT SPEC FOR PAINT SYSTEM.
6. PROVIDE TOILET ACCESSORIES. LOCATE NEW ACCESSORIES IN SAME LOCATIONS AS EXISTING, UNLESS OTHERWISE DIRECTED.

NOTES

1. CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS IN FIELD.

STATE OF NEW YORK
LEONARD W. WOODS
074279
LICENSED PROFESSIONAL ENGINEER
[illegible]
07/09/21

IN ACCORDANCE WITH TITLE VIII, ARTICLE 145, SECTION 7209 (2) OF THE NEW YORK STATE EDUCATION LAW, IT IS A VIOLATION OF LAW FOR ANY PERSON UNLESS ACTING UNDER THE DIRECTION OF A LICENSED ENGINEER TO ALTER THIS DOCUMENT.

IN CHARGE OF LWW
CHECKED BY WEC
MADE BY LER

O'BRIEN & GERE ENGINEERS, INC.
50 MAIN ST., 10TH FLOOR SUITE 1000, WHITE PLAINS, NEW YORK 10606

REVISION NUMBER	DATE	MADE BY	APP'D BY	REVISION

RECORD DRAWING CERTIFICATION

☐ AS BUILT - CHANGES AS NOTED
☐ AS BUILT - NO CHANGES

CONTRACTOR	PROJECT COORDINATOR
NAME	NAME
SIGNATURE	SIGNATURE
TITLE DATE	TITLE DATE

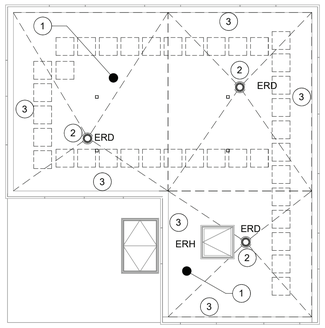
WESTCHESTER COUNTY, NEW YORK
DEPARTMENT OF PUBLIC WORKS AND TRANSPORTATION
DIVISION OF ENGINEERING

CROTONVILLE PUMPING STATION REHABILITATION

OSSINING, NEW YORK
PLANS

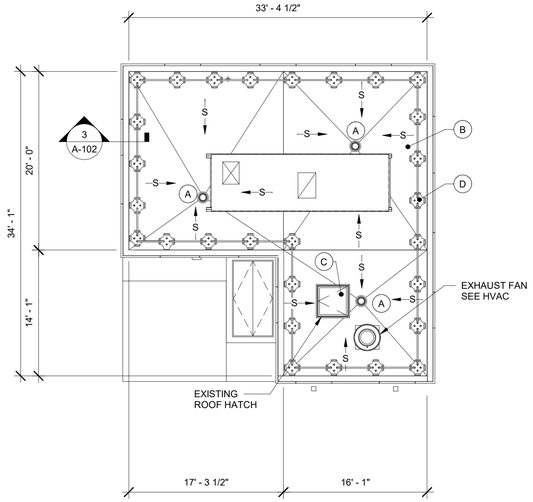
CONTRACT NUMBER 17-529
SHEET NUMBER A-101
SHEET NO. 18 OF 60
SCALE: AS NOTED
DATE: 12/21/18
DPW FILE NO. 208-03-A-42-0
REV. NO. 0

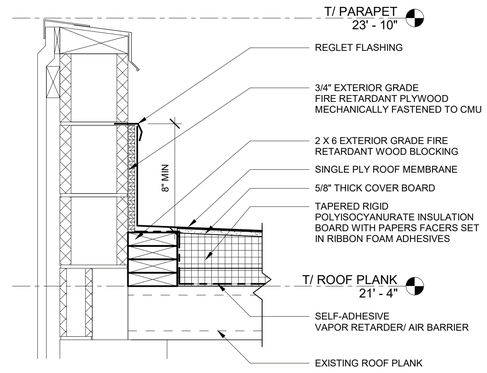
C:\Users\laramatw.RAMBOLL\Documents\66136-A-Crotonville-PS-Central_tom.laramay@obg.com.rvt



LEGEND

E.R.D.	EXISTING ROOF DRAIN
E.R.H.	EXISTING ROOF HATCH
E.E.F.	EXISTING EXHAUST FAN
E.G.V.	EXISTING GRAVITY VENT





1 ROOF PLAN - DEMOLITION

1/8" = 1'-0"

PLAN NORTH

8' 4' 0 8'

2 ROOF PLAN - INSTALLATION

1/8" = 1'-0"

PLAN NORTH

8' 4' 0 8'

3 SECTION DETAIL AT ROOF

1 1/2" = 1'-0"

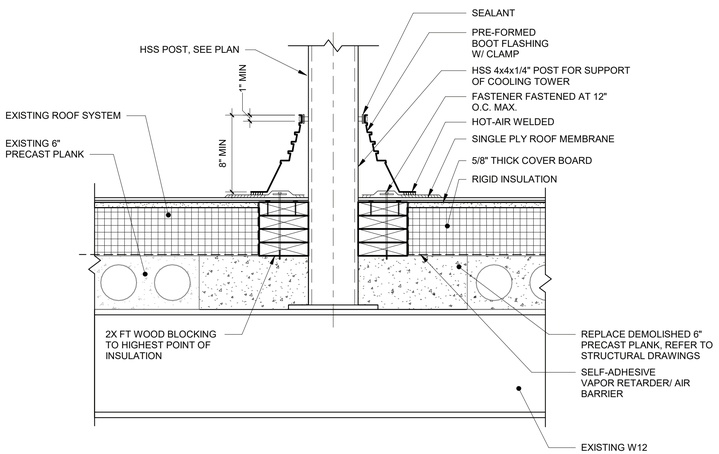
4" 2" 0 1'

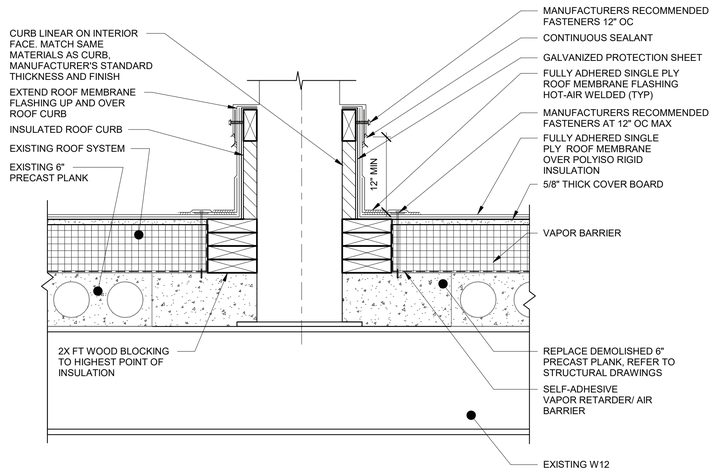
DEMOLITION KEYED NOTES

1. REMOVE EXISTING ROOFING MEMBRANE SYSTEM, FLASHING AND ETC. DOWN TO EXISTING CONCRETE PLANK AND PREP FOR INSTALLATION OF NEW ROOFING SYSTEM.
2. REMOVE EXISTING ROOF DRAIN STRAINERS AND CLAMP RING AND PREP FOR INSTALLATION OF NEW ROOF MEMBRANE. REPAIR OR REPLACE DRAIN HUB IF DAMAGED DURING CLAMP RING REMOVAL.
3. REMOVE EXISTING REGLET FLASHING AND REMOVE EXISTING ROOFING SYSTEM FLASHING AND PREPARE WALL SURFACE AND JOINT AS NEEDED FOR INSTALLATIONS.

INSTALLATION KEYED NOTES

- A. CLAMPING RING ROOF DRAIN. FIELD VERIFY LOCATION.
- B. TEXTURED MEMBRANE ROOF SYSTEM.
- C. FLASH EXISTING HATCH AS REQUIRED.
- D. 42" HIGH BALLASTED GUARDRAIL FALL PROTECTION SYSTEM.





4 RTU FRAME FLASHING DETAIL

1 1/2" = 1'-0"

4" 2" 0 1'

5 ROOF CURB DETAIL

1 1/2" = 1'-0"

4" 2" 0 1'

STATE OF NEW YORK
LEONARD W. WOOD
074213
LICENSED PROFESSIONAL ENGINEER

07/09/21

IN ACCORDANCE WITH TITLE VIII, ARTICLE 145, SECTION 7209 (2) OF THE NEW YORK STATE EDUCATION LAW, IT IS A VIOLATION OF LAW FOR ANY PERSON UNLESS ACTING UNDER THE DIRECTION OF A LICENSED ENGINEER TO ALTER THIS DOCUMENT.

IN CHARGE OF LWW
CHECKED BY WEC
MADE BY LER

O'BRIEN & GERE ENGINEERS, INC.
50 MAIN ST., 10TH FLOOR SUITE 1000,
WHITE PLAINS, NEW YORK 10606

REVISION NUMBER	DATE	MADE BY	APP'D BY	REVISION

RECORD DRAWING CERTIFICATION

☐ AS BUILT - CHANGES AS NOTED
☐ AS BUILT - NO CHANGES

CONTRACTOR	PROJECT COORDINATOR
NAME	NAME
SIGNATURE	SIGNATURE
TITLE DATE	TITLE DATE

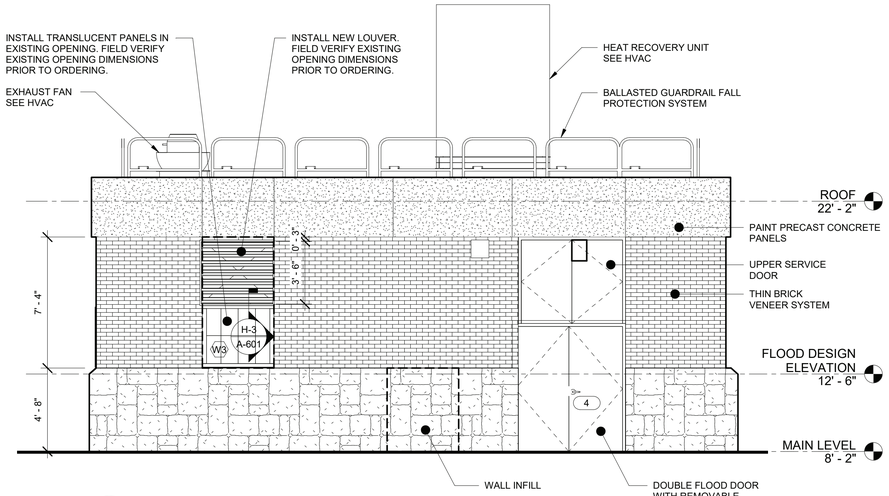
WESTCHESTER COUNTY, NEW YORK
DEPARTMENT OF PUBLIC WORKS AND TRANSPORTATION
DIVISION OF ENGINEERING

CONTRACT NUMBER 17-529
SHEET NUMBER A-102
SHEET NO. 19 OF 60
SCALE: AS NOTED
DATE: 12/21/18
DPW FILE NO. 208-03-A-43-0
REV. NO. 0

CROTONVILLE PUMPING STATION REHABILITATION

OSSINING, NEW YORK
ROOF PLANS

4/15/2021 10:12:14 AM



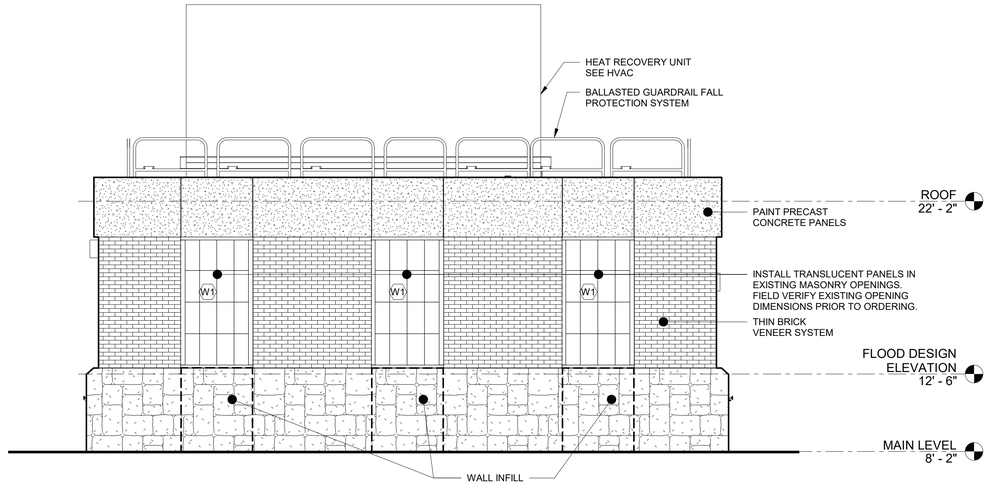
1 EAST ELEVATION
1/4" = 1'-0"
4' 2' 0 2' 4'

PAINT NOTES:

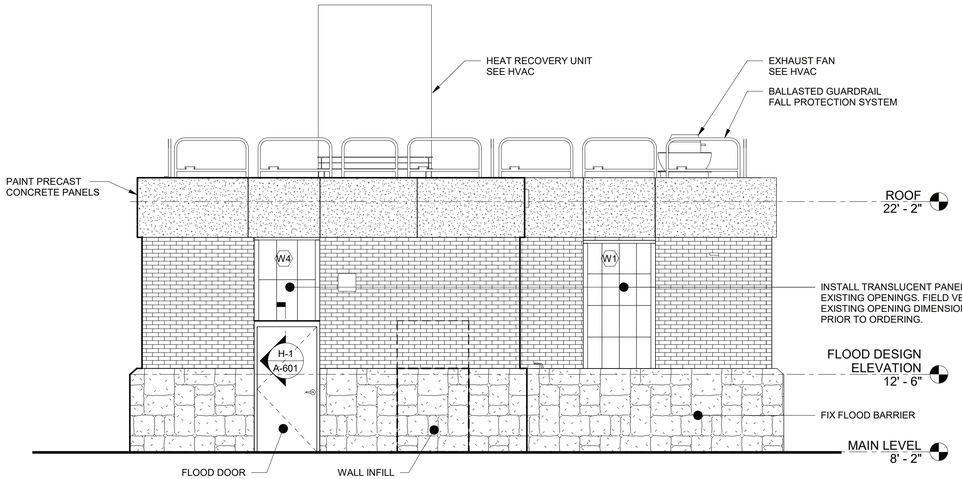
1 EXISTING PRECAST CONCRETE PANELS TO BE PAINTED.

2 PAINT COLOR: SHERWIN WILLIAMS (SW 7070 SITE WHITE OR APPROVED EQUAL) FINAL APPROVAL BY OWNER

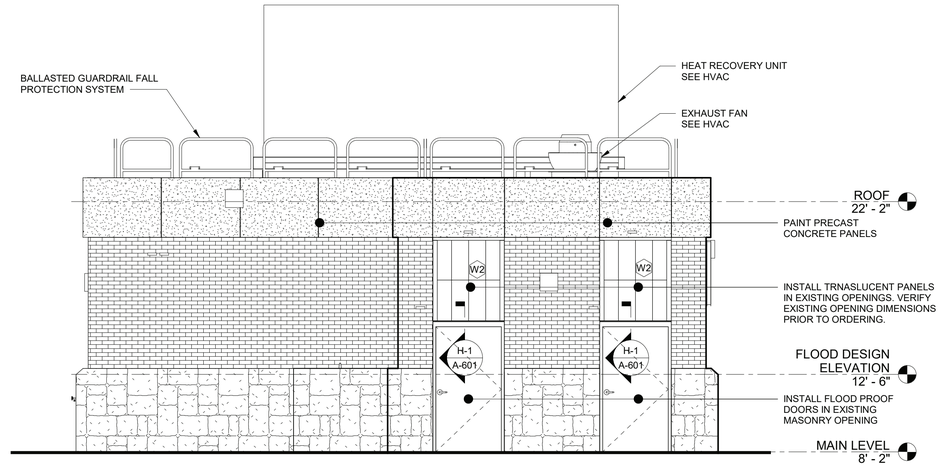
3. SEE FIELD PAINTING SPECIFICATION FOR APPLICABLE PAINT SYSTEM



2 NORTH ELEVATION
1/4" = 1'-0"
4' 2' 0 2' 4'



3 WEST ELEVATION
1/4" = 1'-0"
4' 2' 0 2' 4'



4 SOUTH ELEVATION
1/4" = 1'-0"
4' 2' 0 2' 4'

STATE OF NEW YORK
LEONARD W. WOOD
074279
LICENSED PROFESSIONAL ENGINEER

07/09/21

IN CHARGE OF LWW
CHECKED BY WEC
MADE BY LER

O'BRIEN & GERE ENGINEERS, INC.
50 MAIN ST., 10TH FLOOR SUITE 1000, WHITE PLAINS, NEW YORK 10606

REVISION NUMBER	DATE	MADE BY	APP'D BY	REVISION

RECORD DRAWING CERTIFICATION

☐ AS BUILT - CHANGES AS NOTED
☐ AS BUILT - NO CHANGES

CONTRACTOR
NAME
SIGNATURE
TITLE DATE

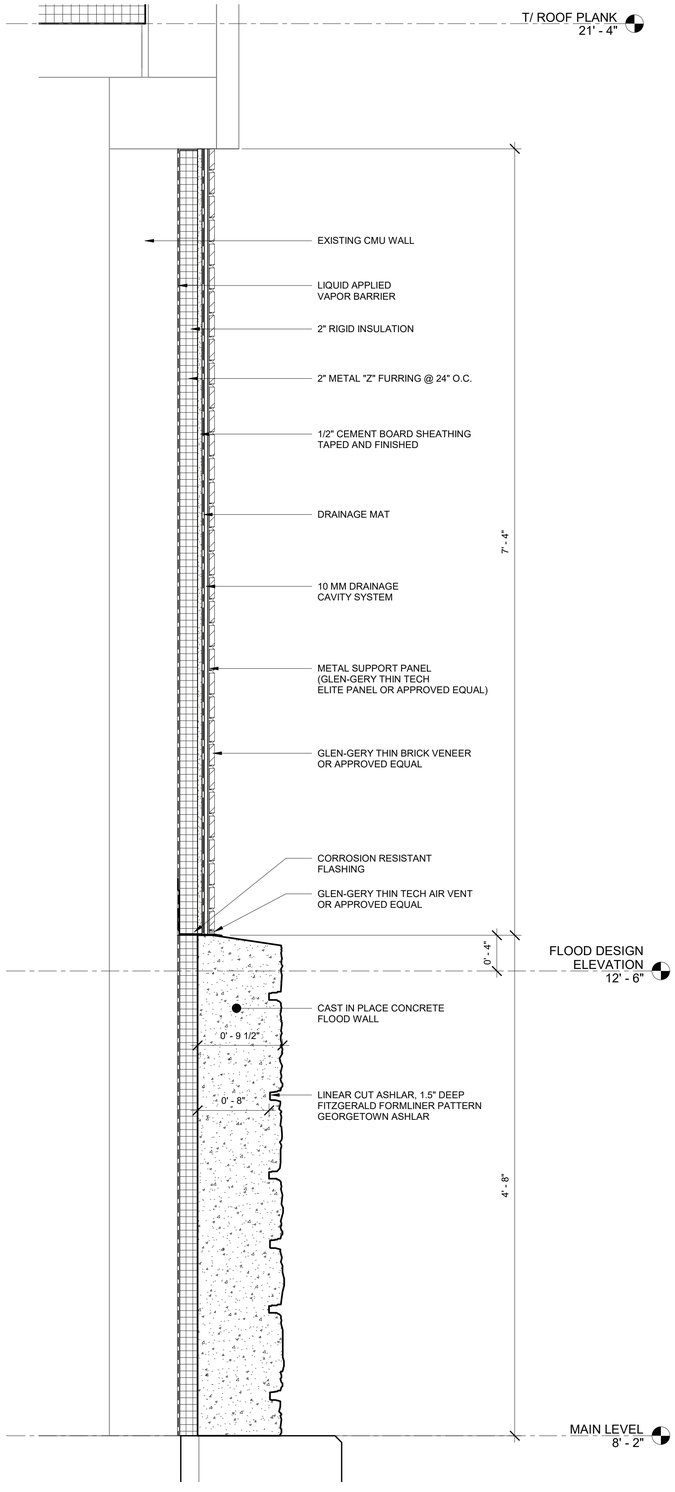
PROJECT COORDINATOR
NAME
SIGNATURE
TITLE DATE

WESTCHESTER COUNTY, NEW YORK
DEPARTMENT OF PUBLIC WORKS AND TRANSPORTATION
DIVISION OF ENGINEERING

CONTRACT NUMBER 17-529
SHEET NUMBER A-201
SHEET NO. 20 OF 60
SCALE: AS NOTED
DATE: 12/21/18
DPW FILE NO. 208-03-A-44-0
REV. NO. 0

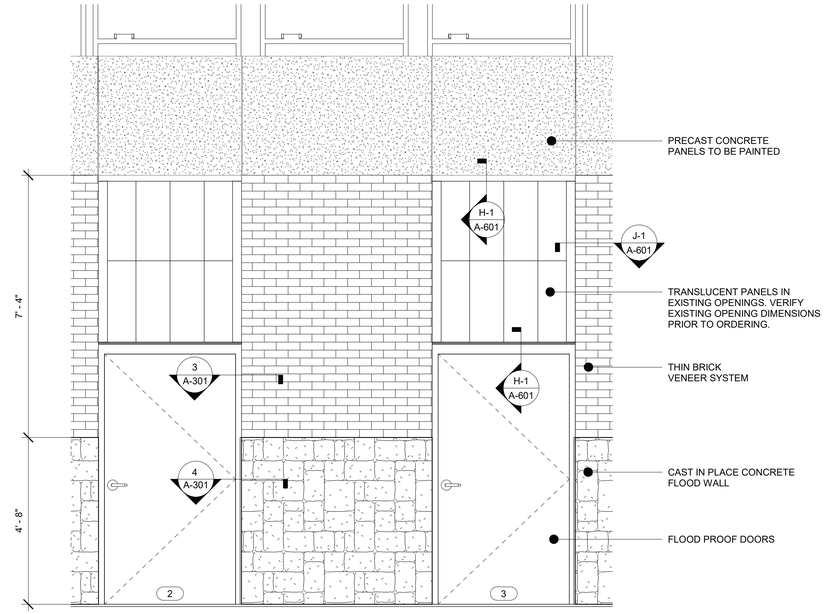
CROTONVILLE PUMPING STATION REHABILITATION

OSSINING, NEW YORK
ELEVATIONS



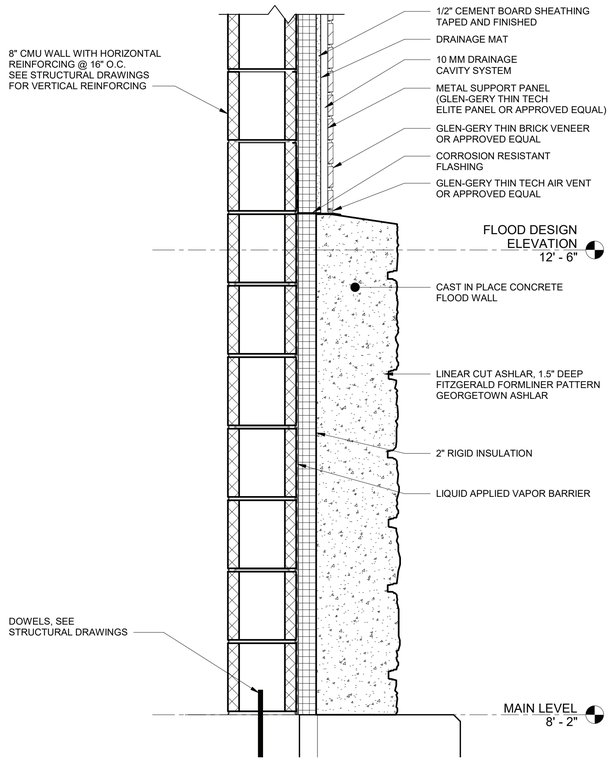
1 TYPICAL WALL SECTION AT FLOOD WALL LOCATIONS

1 1/2" = 1'-0"



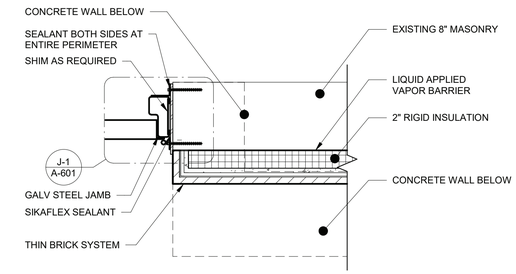
2 ENLARGED SOUTH ELEVATION

1/2" = 1'-0"



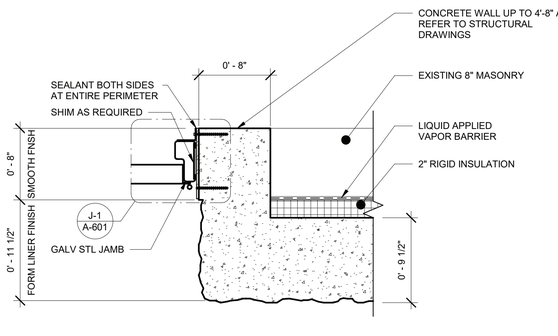
5 TYPICAL WALL SECTION AT INFILLED WALL

1 1/2" = 1'-0"



3 DETAIL AT CMU WALL

1 1/2" = 1'-0"



4 DETAIL AT CONCRETE WALL

1 1/2" = 1'-0"

07/09/21

IN CHARGE OF LWW
CHECKED BY WEC
MADE BY LER

O'BRIEN & GERE ENGINEERS, INC.
50 MAIN ST., 10TH FLOOR SUITE 1000, WHITE PLAINS, NEW YORK 10606

REVISION NUMBER	DATE	MADE BY	APP'D BY	REVISION

RECORD DRAWING CERTIFICATION

☐ AS BUILT - CHANGES AS NOTED
☐ AS BUILT - NO CHANGES

CONTRACTOR
NAME
SIGNATURE
TITLE DATE

PROJECT COORDINATOR
NAME
SIGNATURE
TITLE DATE

WESTCHESTER COUNTY, NEW YORK
DEPARTMENT OF PUBLIC WORKS AND TRANSPORTATION
DIVISION OF ENGINEERING

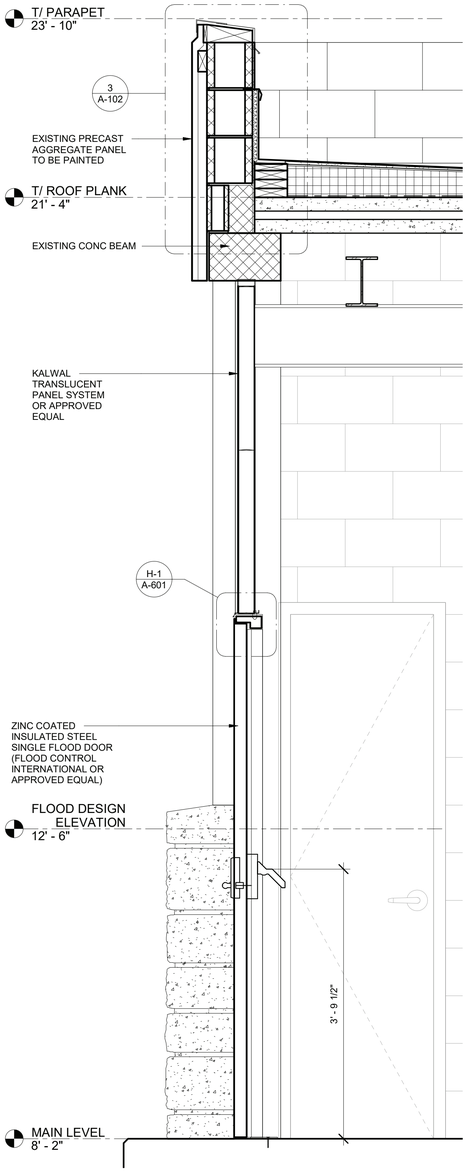
CONTRACT NUMBER 17-529
SHEET NUMBER A-301
SHEET NO. 21 OF 60

CROTONVILLE PUMPING STATION REHABILITATION

OSSINING, NEW YORK
SECTIONS

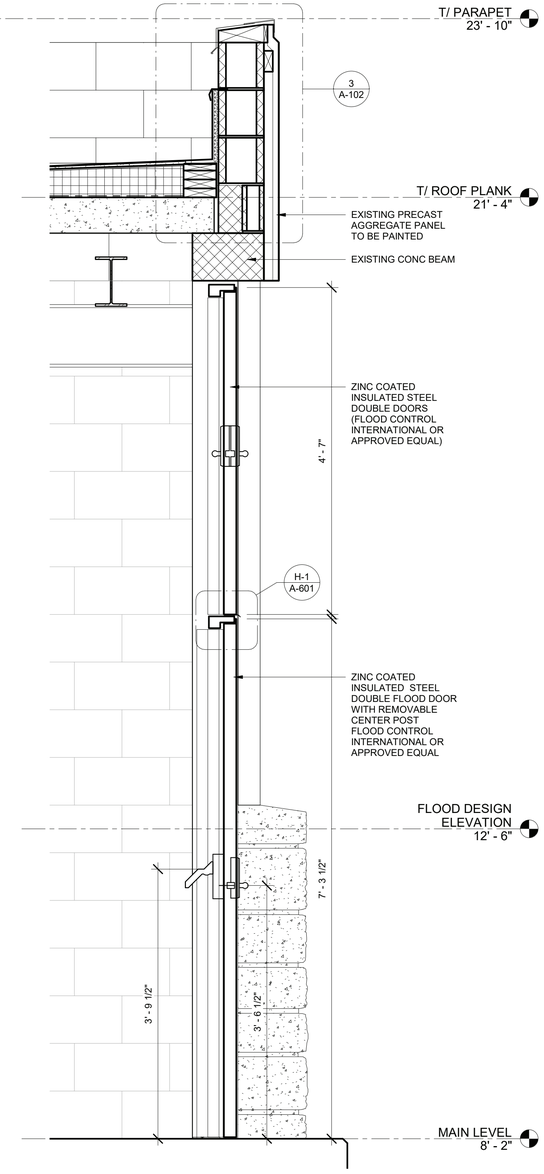
SCALE: AS NOTED
DATE: 12/21/18
DPW FILE NO. 208-03-A-45-0
REV. NO. 0

4/15/2021 10:12:16 AM



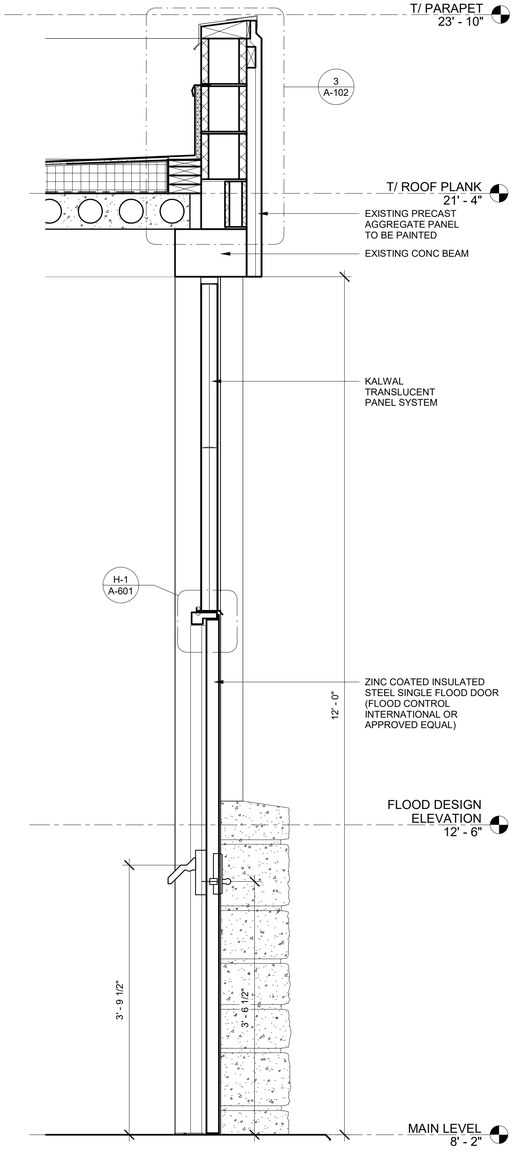
3 SECTION AT WEST WALL FLOOD DOOR

1" = 1'-0"



2 SECTION AT DOUBLE FLOOD DOOR

1" = 1'-0"



1 SECTION AT SOUTH WALL FLOOD DOOR

1" = 1'-0"

07/09/21

IN ACCORDANCE WITH TITLE VIII, ARTICLE 145, SECTION 7209 (2) OF THE NEW YORK STATE EDUCATION LAW, IT IS A VIOLATION OF LAW FOR ANY PERSON UNLESS ACTING UNDER THE DIRECTION OF A LICENSED ENGINEER TO ALTER THIS DOCUMENT.

IN CHARGE OF LWW
CHECKED BY WEC
MADE BY LER

O'BRIEN & GERE ENGINEERS, INC.
50 MAIN ST., 10TH FLOOR SUITE 1000,
WHITE PLAINS, NEW YORK 10606

REVISION NUMBER	DATE	MADE BY	APP'D BY	REVISION

RECORD DRAWING CERTIFICATION

- ☐ AS BUILT - CHANGES AS NOTED
- ☐ AS BUILT - NO CHANGES

CONTRACTOR
NAME
SIGNATURE
TITLE DATE

PROJECT COORDINATOR
NAME
SIGNATURE
TITLE DATE

WESTCHESTER COUNTY, NEW YORK
DEPARTMENT OF PUBLIC WORKS AND TRANSPORTATION
DIVISION OF ENGINEERING

CONTRACT NUMBER 17-529
SHEET NUMBER A-302
SHEET NO. 22 OF 60

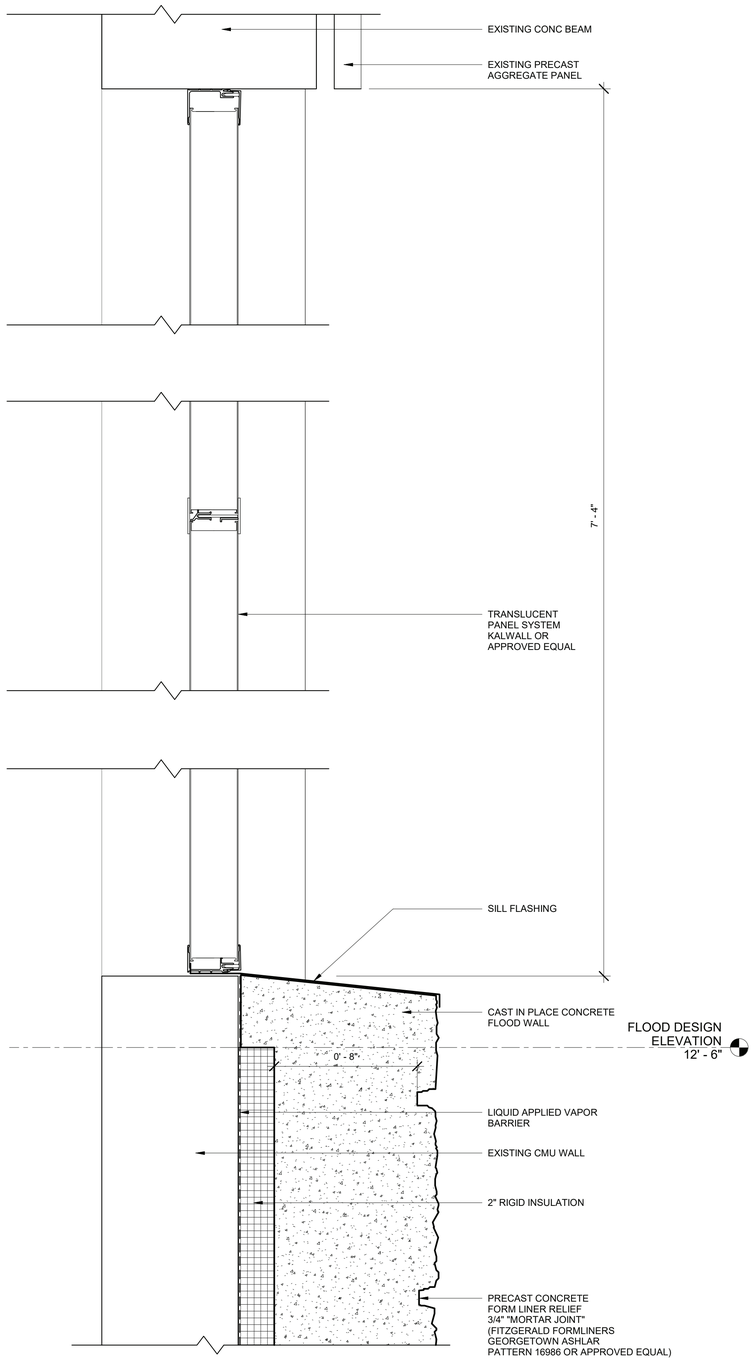
CROTONVILLE PUMPING STATION REHABILITATION

SCALE: AS NOTED
DATE: 12/21/18

OSSINING, NEW YORK
SECTIONS AT FLOOD DOORS

DPW FILE NO. 208-03-A-46-0
REV. NO. 0

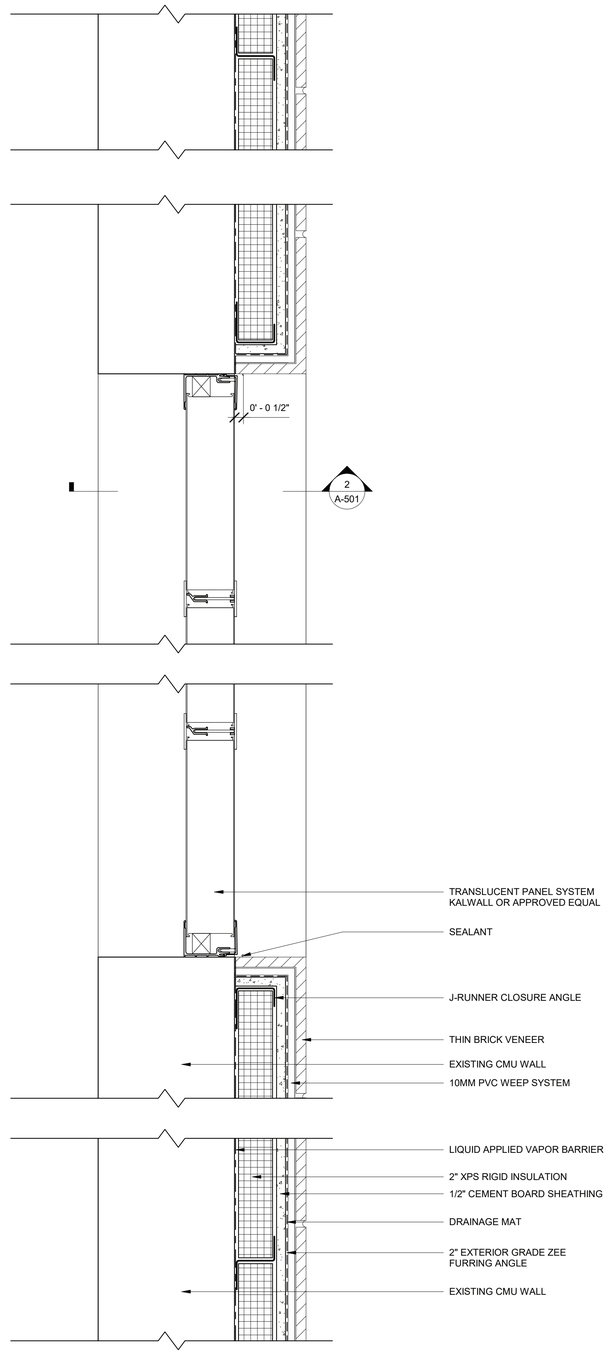
C:\Users\laramatw.RAMBOLL\Documents\66136-A-Crotonville-PS-Central_tom.laramay@obg.com.rvt



2 SECTION AT TRANSLUCENT PANEL SYSTEM

3" = 1'-0"

2" 1" 0 3" 6"



1 PLAN DETAIL AT TRANSLUCENT PANEL

3" = 1'-0"

2" 1" 0 3" 6"

STATE OF NEW YORK · LEONARD W. WOOD · 074279 · LICENSED PROFESSIONAL ENGINEER

07/09/21

IN ACCORDANCE WITH TITLE VIII, ARTICLE 145, SECTION 7209 (2) OF THE NEW YORK STATE EDUCATION LAW, IT IS A VIOLATION OF LAW FOR ANY PERSON UNLESS ACTING UNDER THE DIRECTION OF A LICENSED ENGINEER TO ALTER THIS DOCUMENT.

IN CHARGE OF LWW
CHECKED BY WEC
MADE BY LER

O'BRIEN & GERE ENGINEERS, INC.
50 MAIN ST., 10TH FLOOR SUITE 1000,
WHITE PLAINS, NEW YORK 10606

REVISION NUMBER	DATE	MADE BY	APP'D BY	REVISION

RECORD DRAWING CERTIFICATION

☐ AS BUILT - CHANGES AS NOTED
☐ AS BUILT - NO CHANGES

CONTRACTOR
NAME
SIGNATURE
TITLE DATE

PROJECT COORDINATOR
NAME
SIGNATURE
TITLE DATE

WESTCHESTER COUNTY, NEW YORK
DEPARTMENT OF PUBLIC WORKS AND TRANSPORTATION
DIVISION OF ENGINEERING

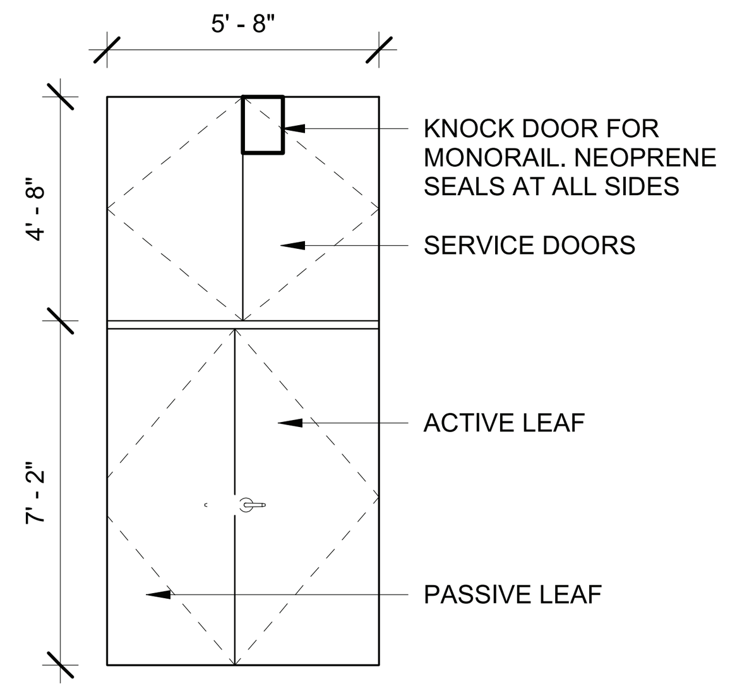
CONTRACT NUMBER 17-529
SHEET NUMBER A-501
SHEET NO. 23 OF 60
SCALE: AS NOTED
DATE: 12/21/18
DPW FILE NO. 208-03-A-47-0
REV. NO. 0

CROTONVILLE PUMPING STATION REHABILITATION

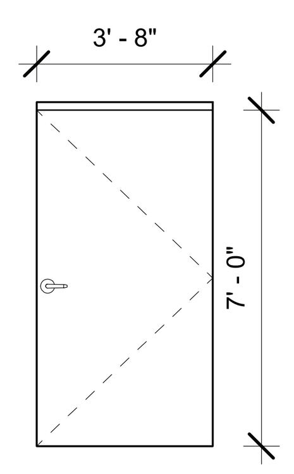
OSSINING, NEW YORK
TRANSLUCENT PANEL DETAILS

DOOR SCHEDULE

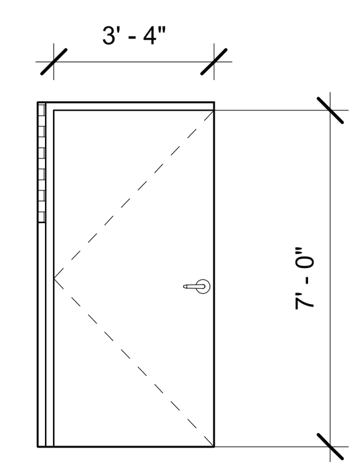
DOOR NUMBER	ROOM NAME	DOOR TYPE	DOOR MATERIAL	DOOR WIDTH	DOOR HEIGHT	DOOR FINISH	FRAME TYPE	FRAME MATERIAL	FRAME HEAD	FRAME JAMB	FRAME SILL	FRAME FINISH	FIRE RATING	HARDWARE GROUP	COMMENTS	DOOR NUMBER
1	ELECTRICAL ROOM	D-3	GALV STL	3' - 4"	7' - 0"	MANUFACTURED POWDER COAT FINISH	F-2	GALV STL	H-1	J-1	S-1	MANUFACTURED POWDER COAT FINISH	-		FLOOD DOOR	1
2	SCREENINGS	D-2	GALV STL	3' - 8"	7' - 0"	MANUFACTURED POWDER COAT FINISH	F-2	GALV STL	H-1	J-1	S-1	MANUFACTURED POWDER COAT FINISH	-		FLOOD DOOR	2
3	STAIR	D-2	GALV STL	3' - 8"	7' - 0"	MANUFACTURED POWDER COAT FINISH	F-2	GALV STL	H-1	J-1	S-1	MANUFACTURED POWDER COAT FINISH	-		FLOOD DOOR	3
4	ELECTRICAL ROOM	D-1	GALV STL	6' - 0"	7' - 0"	MANUFACTURED POWDER COAT FINISH	F-1	GALV STL	H-2	J-1	S-1	MANUFACTURED POWDER COAT FINISH	-		FLOOD DOOR	4



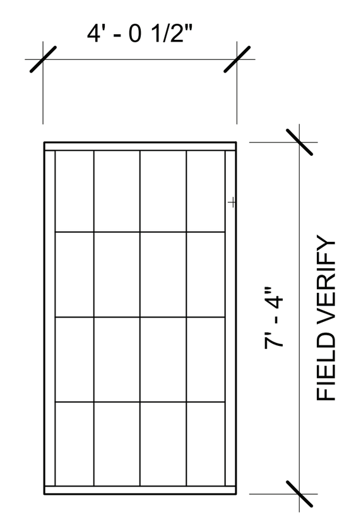
D-1
1/4" = 1'-0"



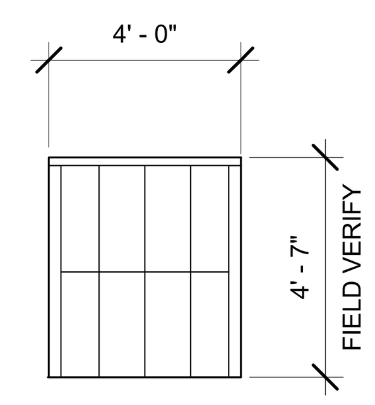
D-2
1/4" = 1'-0"



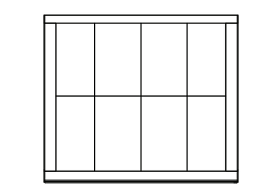
D-3
1/4" = 1'-0"



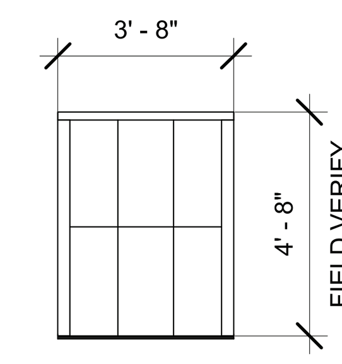
W1
1/4" = 1'-0"



W2
1/4" = 1'-0"

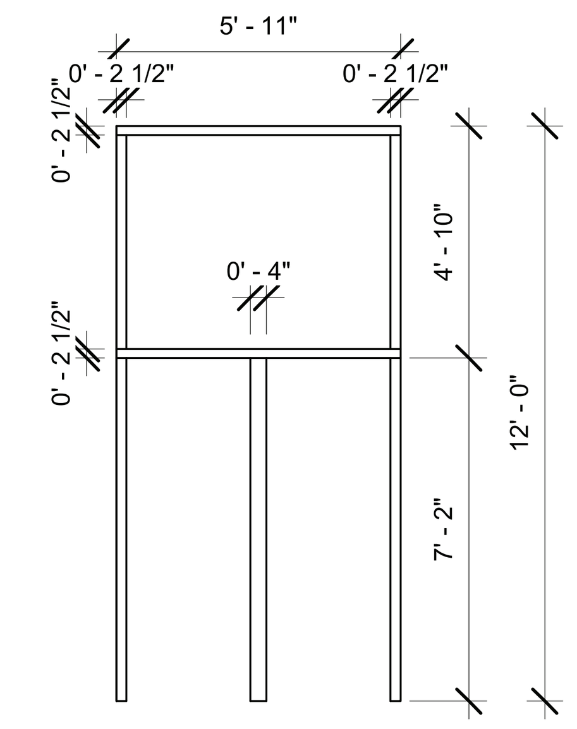


W3
1/4" = 1'-0"

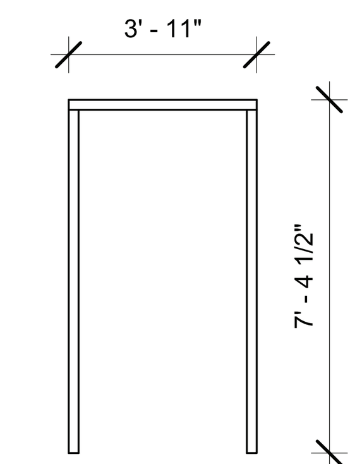


W4
1/4" = 1'-0"

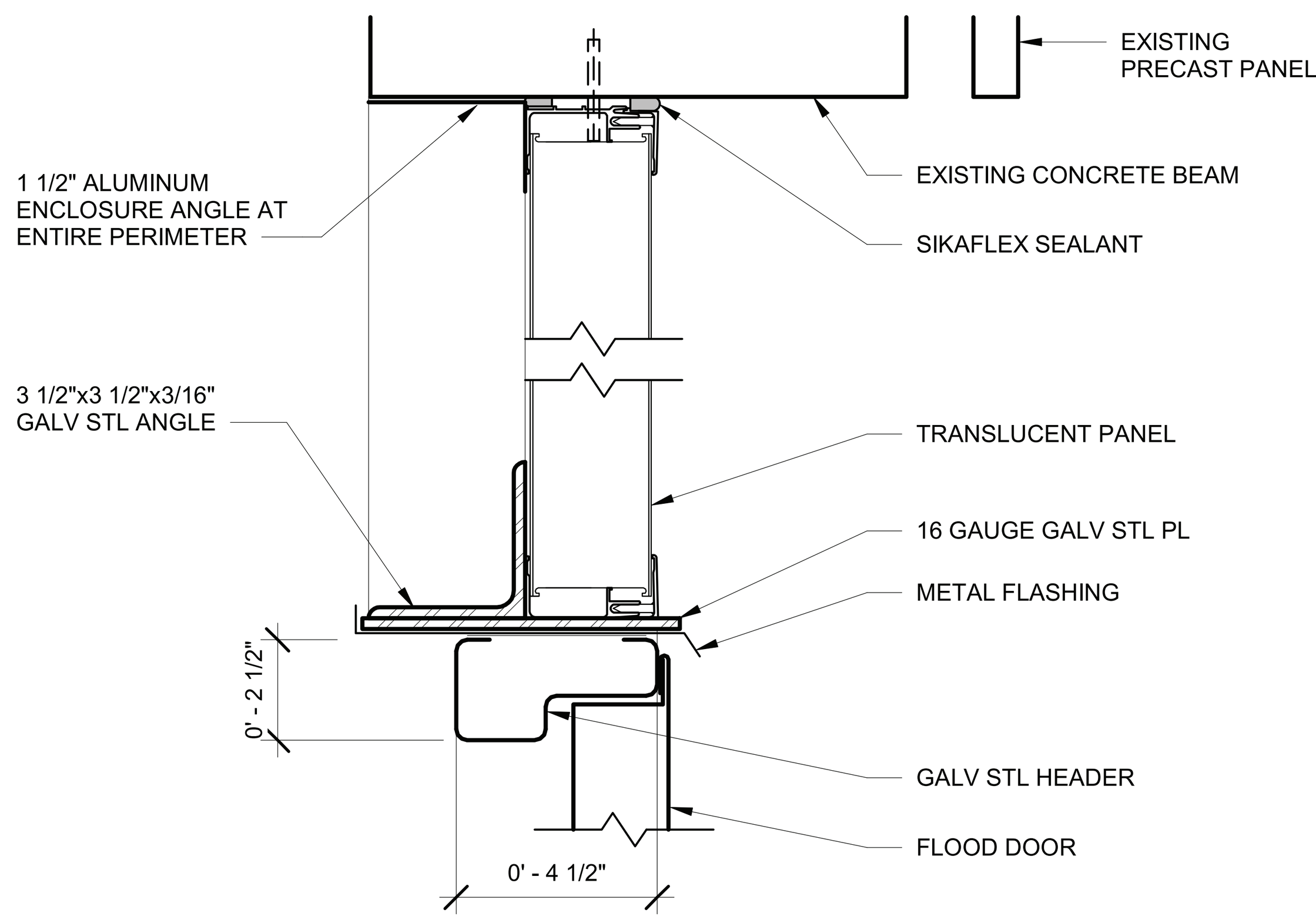
NOTE:
SEE SHEET A-501 FOR
TRANSLUCENT PANEL DETAILS



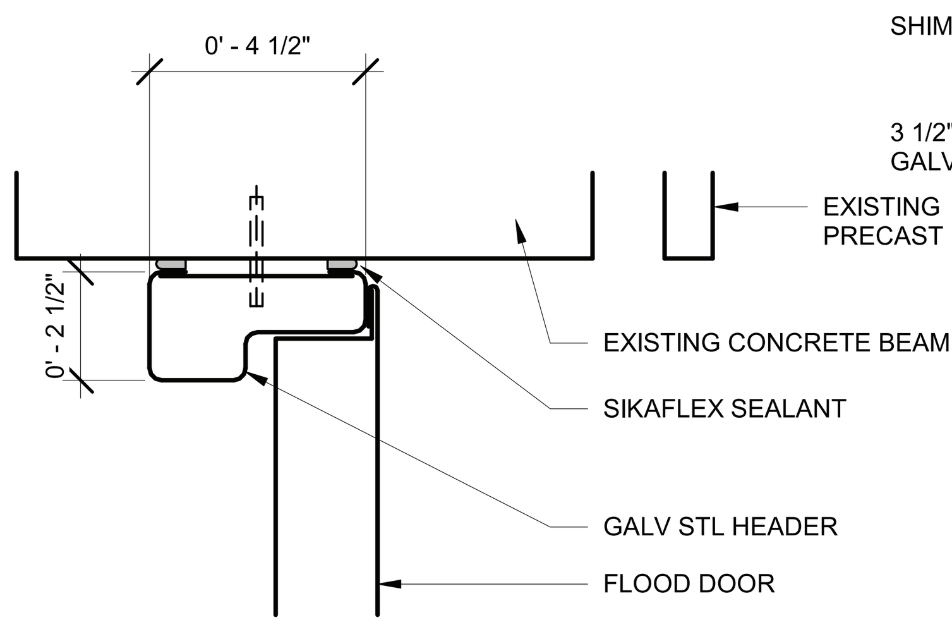
F-1
1/4" = 1'-0"



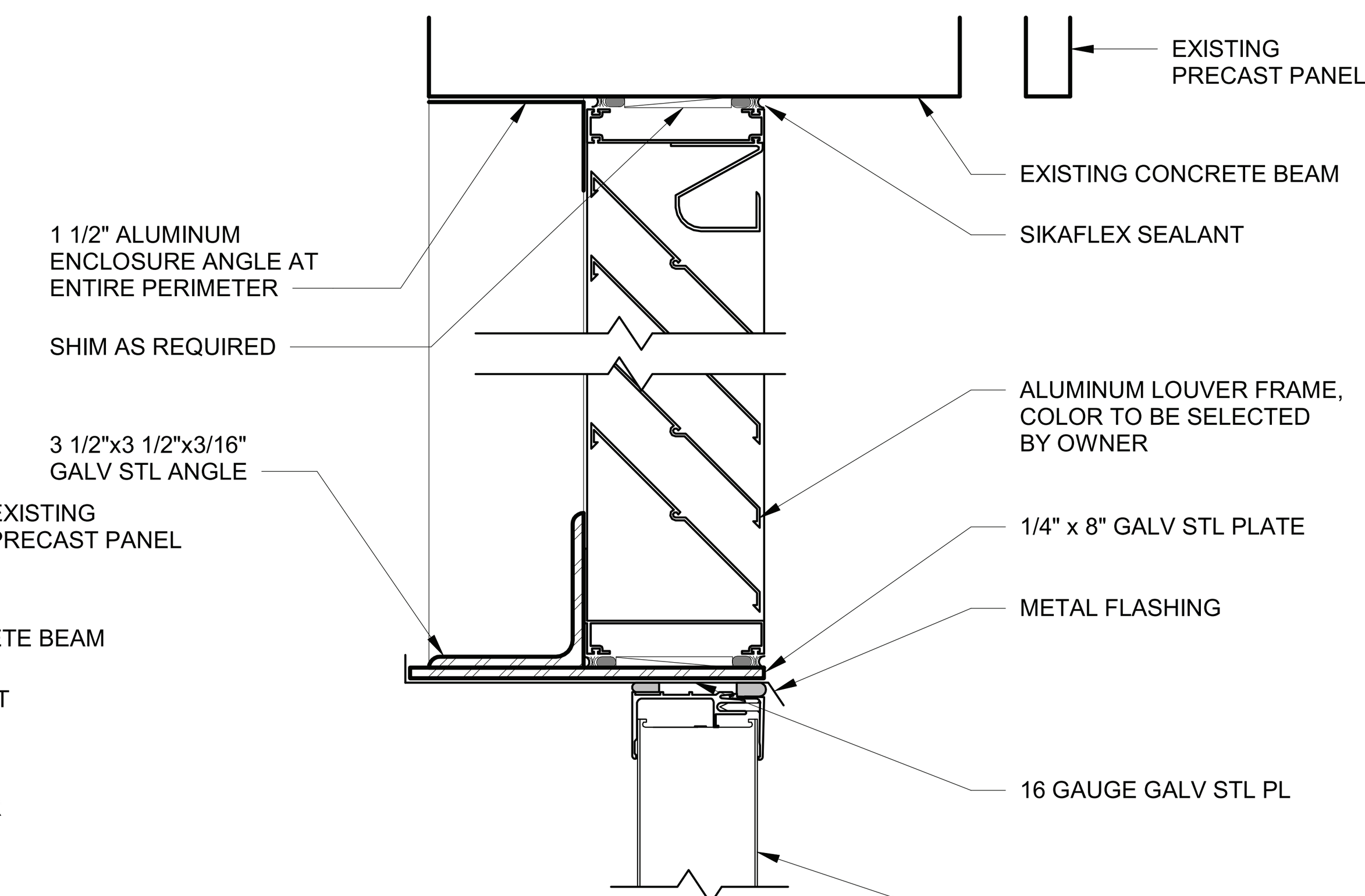
F-2
1/4" = 1'-0"



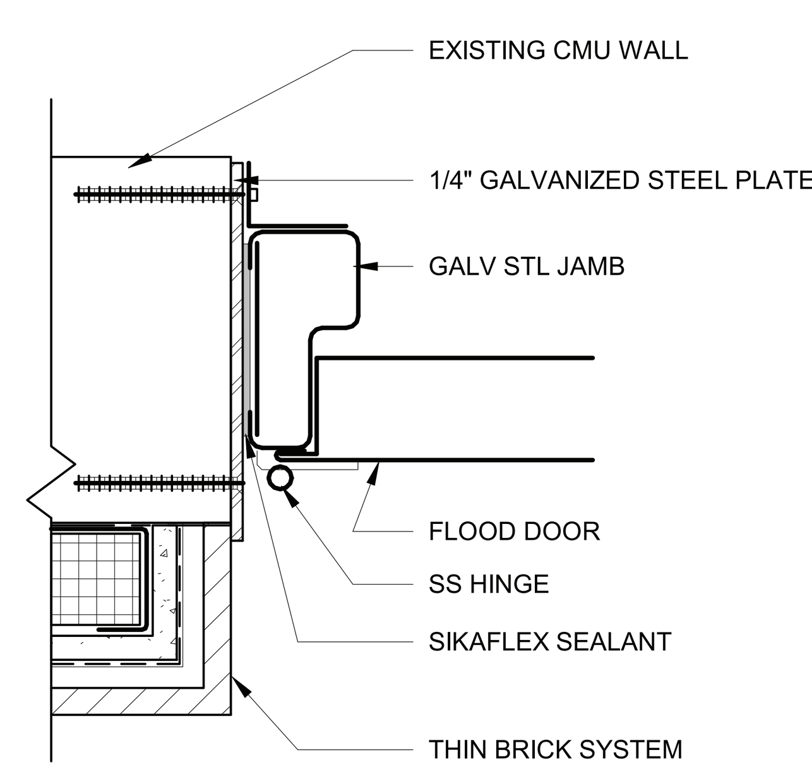
H-1
3" = 1'-0"



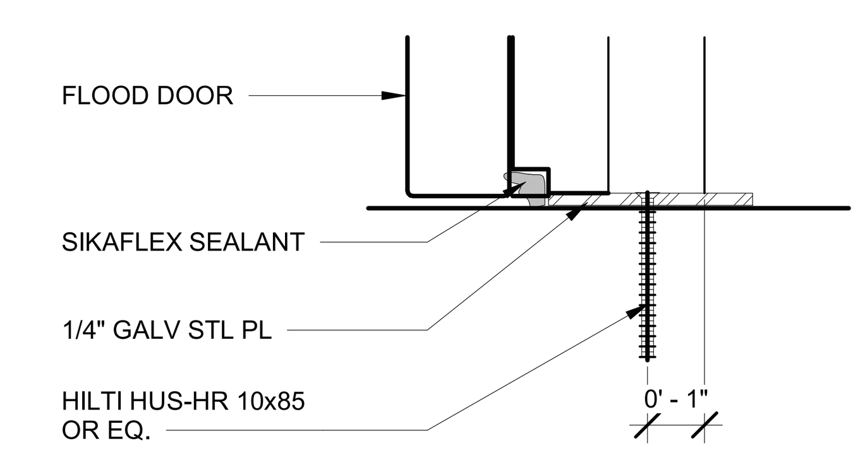
H-2
3" = 1'-0"



H-3
3" = 1'-0"



J-1
3" = 1'-0"



S-1
3" = 1'-0"

WHITE BACKGROUND WITH BLACK LETTERING

SIGN DIMENSIONS: 10" W X 14" H

PROVIDE (1) MINIMUM SIGN AT ALL NON-POTABLE WATER TAPS, HOSE BIBS, WALL HYDRANTS, ETC.

SIGNAGE
3" = 1'-0"

SELF ADHESIVE PIPE MARKER (6 1/2" X 1")
GREEN WITH WHITE LETTERING
PROVIDE AT 5'-0" INTERVALS
COORDINATE LOCATION WITH PLUMBING CONTRACTOR

PIPE MARKER
6" = 1'-0"

07/09/21

IN ACCORDANCE WITH TITLE VIII, ARTICLE 145, SECTION 7209 (2) OF THE NEW YORK STATE EDUCATION LAW, IT IS A VIOLATION OF LAW FOR ANY PERSON UNLESS ACTING UNDER THE DIRECTION OF A LICENSED ENGINEER TO ALTER THIS DOCUMENT.

IN CHARGE OF LWW
CHECKED BY WEC
MADE BY LER

O'BRIEN & GERE ENGINEERS, INC.
50 MAIN ST., 10TH FLOOR SUITE 1000, WHITE PLAINS, NEW YORK 10606

REVISION NUMBER	DATE	MADE BY	APP'D BY	REVISION

RECORD DRAWING CERTIFICATION

☐ AS BUILT - CHANGES AS NOTED
☐ AS BUILT - NO CHANGES

CONTRACTOR	PROJECT COORDINATOR
NAME	NAME
SIGNATURE	SIGNATURE
TITLE DATE	TITLE DATE

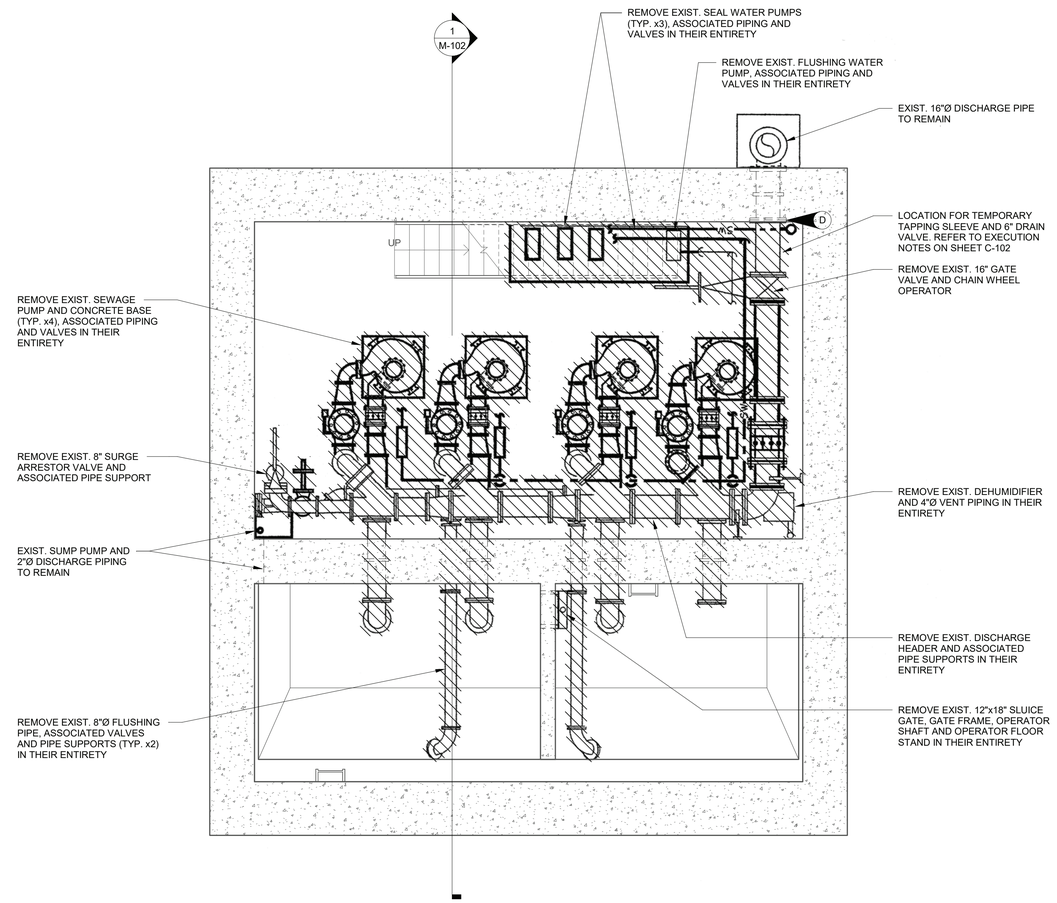
WESTCHESTER COUNTY, NEW YORK
DEPARTMENT OF PUBLIC WORKS AND TRANSPORTATION
DIVISION OF ENGINEERING

CROTONVILLE PUMPING STATION REHABILITATION

OSSINING, NEW YORK
SCHEDULES AND DETAILS

CONTRACT NUMBER 17-529
SHEET NUMBER A-601
SHEET NO. 24 OF 60
SCALE: AS NOTED
DATE: 12/21/18
DPW FILE NO. 208-03-A-48-0
REV. NO. 0

4/15/2021 10:12:18 AM
C:\Users\laramatw.RAMBOLL\Documents\66136-A-Crotonville-PS-Central_tom.laramay@obg.com.rvt

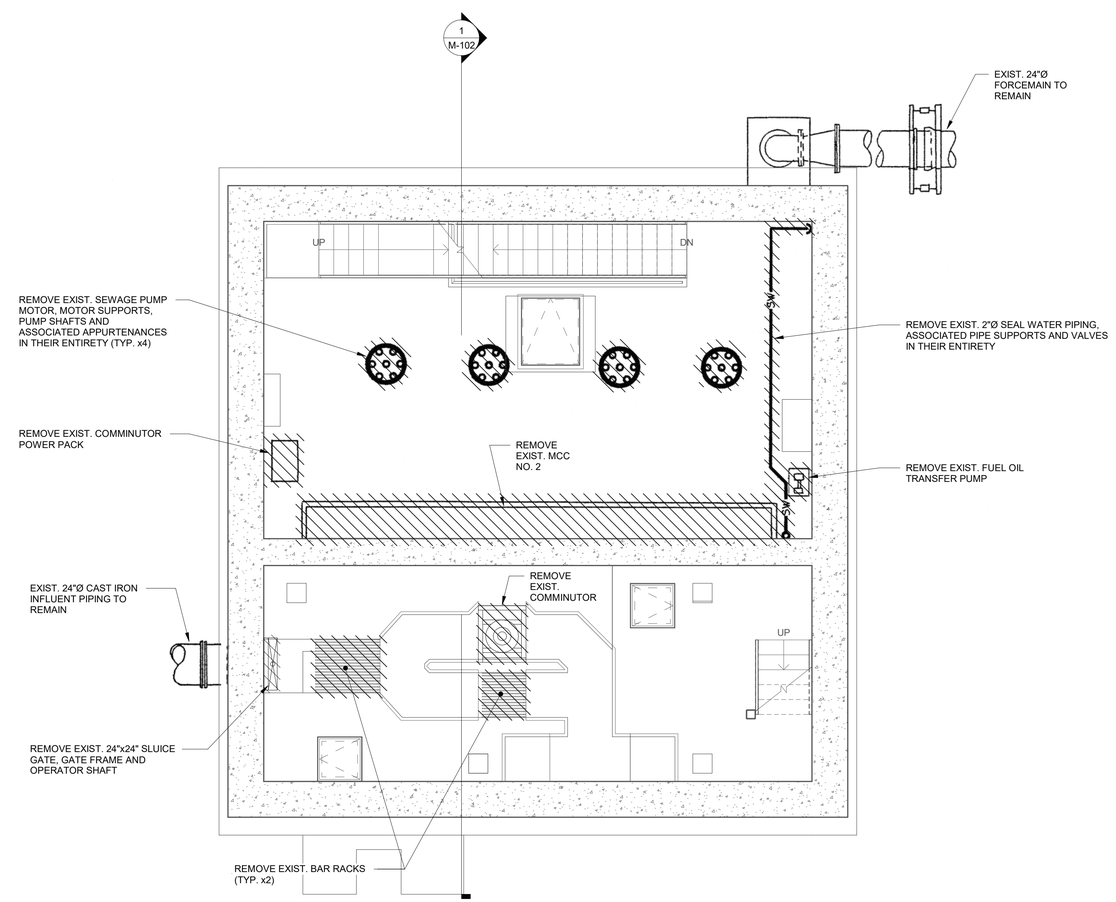


LOWER LEVEL DEMOLITON PLAN

1/4" = 1'-0"

4' 2' 0 2' 4'

PLAN NORTH



MIDDLE LEVEL DEMOLITION PLAN

1/4" = 1'-0"

4' 2' 0 2' 4'

PLAN NORTH

NOTES:

1. EXISTING DIMENSIONS, ELEVATIONS AND SIZES HAVE BEEN TAKEN FROM THE FOLLOWING DRAWINGS: "CROTONVILLE PUMP STATION REHABILITATION PROGRAM, PLANS AND SECTIONS, FOR WESTCHESTER COUNTY DEPARTMENT OF PUBLIC WORKS, DIVISION OF ENGINEERING, WESTCHESTER COUNTY, N.Y. BY LYNCH ENGINEERING, PC, PLEASANTVILLE, N.Y. DATED APRIL 26, 1996". ALL SITE MEASUREMENTS, DIMENSIONS, ELEVATIONS AND SIZES ARE TO BE CONSIDERED APPROXIMATE AND FIELD VERIFIED BY THE CONTRACTOR.
2. REFER TO ARCHITECTURAL, STRUCTURAL, ELECTRICAL, HVAC AND PLUMBING DRAWINGS FOR RELATED DEMOLITIONS TO BE PERFORMED UNDER THIS PROJECT.
3. ALL WALL, FLOOR AND ROOF OPENINGS RESULTING FROM DEMOLITION WORK SHALL BE SEALED AS SPECIFIED. BELOW GRADE AND WET WELL AREA PENETRATIONS SHALL BE SEALED WATERTIGHT.
4. UNLESS OTHERWISE NOTED OR SPECIFIED IN THE CONTRACT DOCUMENTS, ALL MATERIALS REMOVED OR DEMOLISHED UNDER THIS PROJECT SHALL BE PROPERLY DISPOSED OF OFF-SITE BY THE CONTRACTOR, AT A LOCATION PROPERLY LICENSED FOR SUCH DISPOSAL.
5. UNLESS OTHERWISE NOTED OR SPECIFIED IN THE CONTRACT DOCUMENTS, EXISTING ITEMS SHALL REMAIN. CONTRACTOR SHALL PROTECT EXISTING ITEMS FROM DAMAGE AND DUST DURING WORK. ANY DAMAGED ITEMS SHALL BE REPAIRED OR REPLACED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.
6. REMOVE EXISTING PIPE SUPPORTS. PATCH ANY HOLES TO MATCH EXISTING SURFACES.

DocuSign

IN ACCORDANCE WITH TITLE VIII, ARTICLE 145, SECTION 7209 (2) OF THE NEW YORK STATE EDUCATION LAW, IT IS A VIOLATION OF LAW FOR ANY PERSON UNLESS ACTING UNDER THE DIRECTION OF A LICENSED ENGINEER TO ALTER THIS DOCUMENT.

IN CHARGE OF R. GELL
CHECKED BY D. ROONEY
MADE BY T. LARAMAY

O'BRIEN & GERE ENGINEERS, INC.
50 MAIN ST., 10TH FLOOR SUITE 1000,
WHITE PLAINS, NEW YORK 10606

REVISION NUMBER	DATE	MADE BY	APP'D BY	REVISION

RECORD DRAWING CERTIFICATION

☐ AS BUILT - CHANGES AS NOTED
☐ AS BUILT - NO CHANGES

CONTRACTOR
NAME
SIGNATURE
TITLE DATE

PROJECT COORDINATOR
NAME
SIGNATURE
TITLE DATE

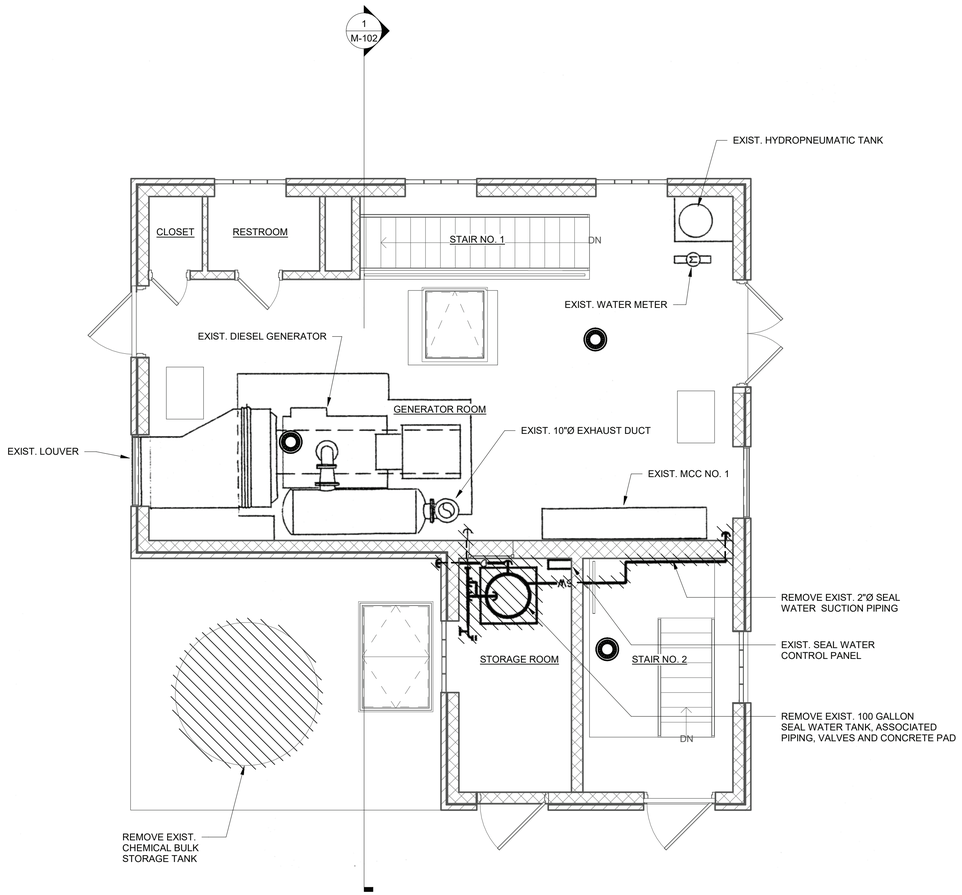
WESTCHESTER COUNTY, NEW YORK
DEPARTMENT OF PUBLIC WORKS AND TRANSPORTATION
DIVISION OF ENGINEERING

CONTRACT NUMBER 17-529
SHEET NUMBER M-101
SHEET NO. 25 OF 60

CROTONVILLE PUMPING STATION REHABILITATION
OSSINING SEWER DISTRICT
OSSINING, NEW YORK
LOWER & MIDDLE LEVEL DEMOLITION PLANS

SCALE: 1/4"=1'-0"
DATE: 12/21/2018
DPW FILE NO. 208-03-M-49-0
REV. NO. 0

4/11/2021 9:48:46 AM

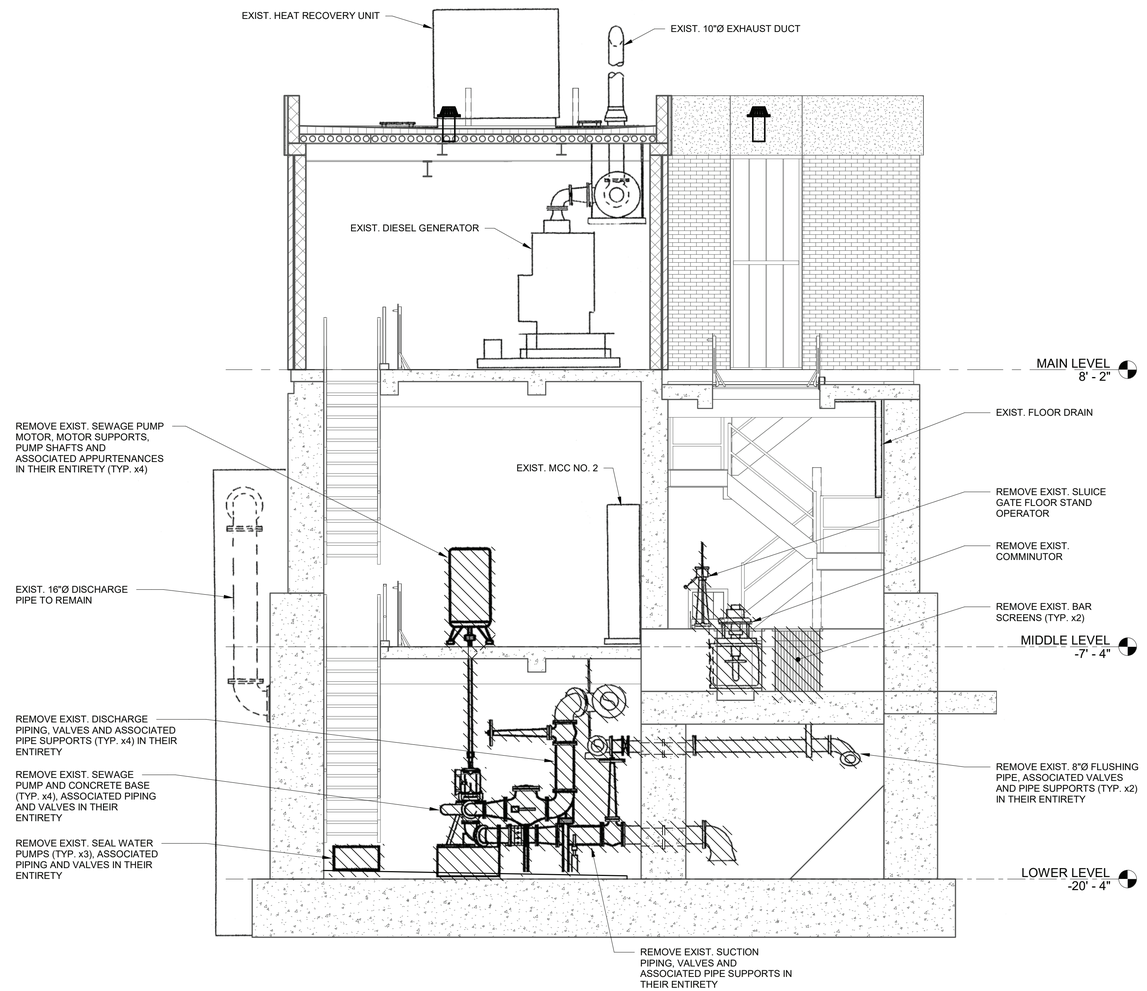


MAIN LEVEL DEMOLITION PLAN

1/4" = 1'-0"

4' 2' 0 2' 4'

PLAN NORTH



1 DEMOLITION SECTION

1/4" = 1'-0"

4' 2' 0 2' 4'

NOTES:

1. REFER TO ARCHITECTURAL, STRUCTURAL, ELECTRICAL, HVAC AND PLUMBING DRAWINGS FOR RELATED DEMOLITIONS TO BE PERFORMED UNDER THIS PROJECT.

IN CHARGE OF R.GELL
CHECKED BY D. ROONEY
MADE BY T. LARAMAY

O'BRIEN & GERE ENGINEERS, INC.
50 MAIN ST., 10TH FLOOR SUITE 1000,
WHITE PLAINS, NEW YORK 10606

REVISION NUMBER	DATE	MADE BY	APP'D BY	REVISION

RECORD DRAWING CERTIFICATION

☐ AS BUILT - CHANGES AS NOTED
☐ AS BUILT - NO CHANGES

CONTRACTOR
NAME
SIGNATURE
TITLE DATE

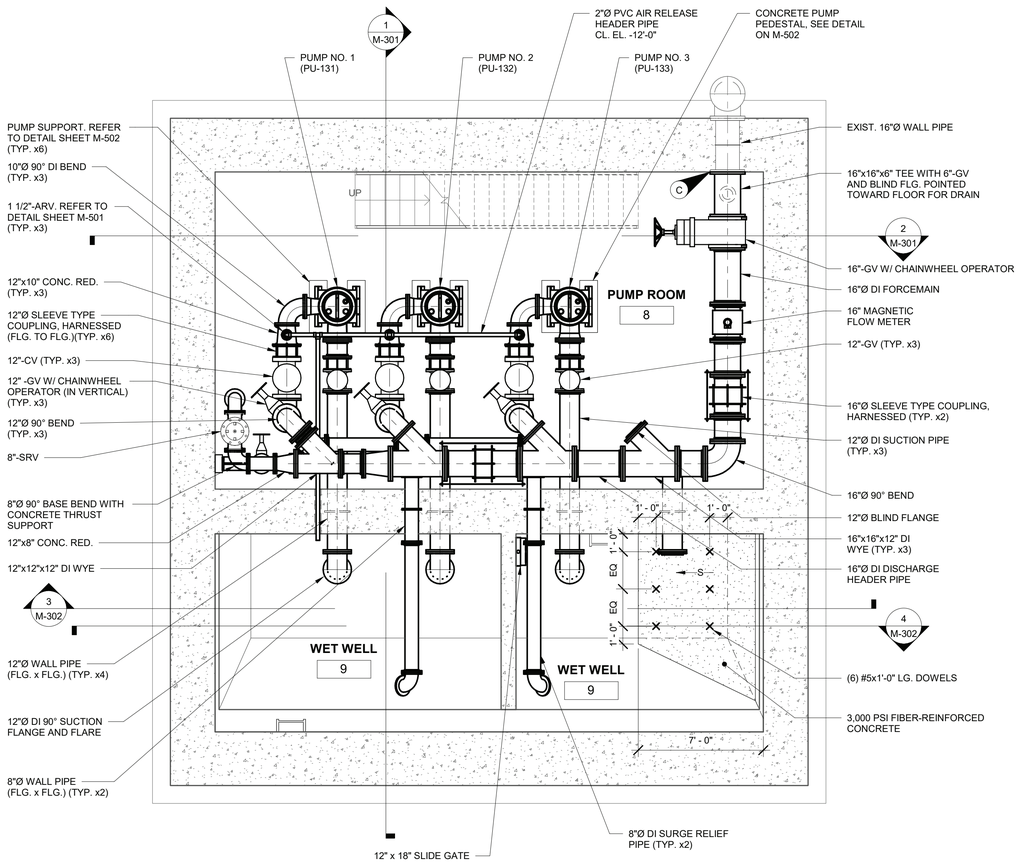
PROJECT COORDINATOR
NAME
SIGNATURE
TITLE DATE

WESTCHESTER COUNTY, NEW YORK
DEPARTMENT OF PUBLIC WORKS AND TRANSPORTATION
DIVISION OF ENGINEERING

CONTRACT NUMBER 17-529
SHEET NUMBER M-102
SHEET NO. 26 OF 60
SCALE: 1/4"=1'-0"
DATE: 12/21/2018
DPW FILE NO. 208-03-M-50-0
REV. NO. 0

CROTONVILLE PUMPING STATION REHABILITATION
OSSINING SEWER DISTRICT
OSSINING, NEW YORK
MAIN LEVEL DEMOLITION PLAN & SECTION

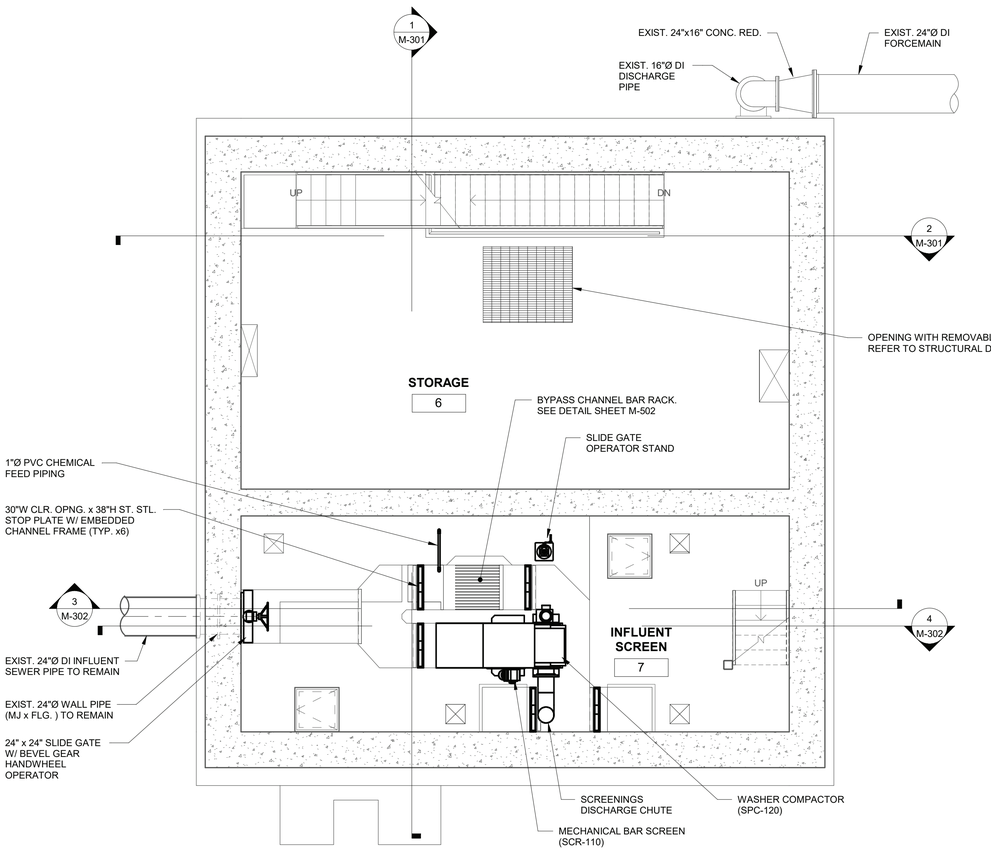
C:\Users\laramatw.RAMBOLL\Documents\66136-M-Crotonville-PS_tom.laramay@obg.com.rvt



LOWER LEVEL PLAN

1/4" = 1'-0" 4' 2' 0 2' 4'

PLAN NORTH



MIDDLE LEVEL PLAN

1/4" = 1'-0" 4' 2' 0 2' 4'

PLAN NORTH

PUMP OPERATING SCHEDULE

NO. OF PUMP OPERATING	FLOW (GPM)	FLOW (MGD)	FORCEMAIN VELOCITY (FT/SEC)
1	± 3,000	± 4.3	± 2.0
2	± 4,850	± 7.0	± 3.2
3	± 5,900	± 8.5	± 3.9

EQUIPMENT SCHEDULE

EQUIPMENT NAME	TAG NUMBER	LOCATION	BASIS OF DESIGN MANUFACTURER	MODEL	DESIGN CAPACITY	TDH	HORSE POWER	CLEAR BAR SPACING
PUMP NO. 1, NO. 2, NO. 3	PU-131, PU-132, PU-133	PUMP ROOM	ABS (SULZER)	XFP-250M-CH2	3,000 GPM	200 FEET	250 HP	NA
MECHANICAL BAR SCREEN	SCR-110	INFLUENT SCREEN ROOM	DUPERON	FLEX-RAKE	6.5 MGD	NA	NA	1 INCH
WASHER COMPACTOR	SPC-120	INFLUENT SCREEN ROOM	DUPERON	DUAL AUGER	3,000 GPM	NA	NA	NA

PIPE SCHEDULE

DESCRIPTION	SIZE	MATERIAL	CLASS	TEST PRESSURE (PSI)
PUMP SUCTION	12"Ø	DUCTILE IRON	53	100
PUMP DISCHARGE	10"Ø, 12"Ø, 16"Ø	DUCTILE IRON	53	100
SURGE RELIEF	8"Ø	DUCTILE IRON	53	100
CHEMICAL FEED	1"Ø	PVC	SCH. 80	100

DRAWING NOTES:

1. PUMPS TO BE TESTED IN THE FACTORY FOR HYDROSTATIC PRESSURE AND PERFORMANCE BY THE MANUFACTURER.
2. PUMP OPERATION CYCLING IS PUMP NO. 1-2-3, 2-3-1, AND 3-1-2, 1-2-3, ETC. PUMPS CYCLE AFTER EACH START.
3. PIPING TO BE TESTED IN ACCORDANCE WITH AWWA C600.

O'BRIEN & GERE ENGINEERS, INC.
50 MAIN ST., 10TH FLOOR SUITE 1000,
WHITE PLAINS, NEW YORK 10606

IN CHARGE OF R. GELL
CHECKED BY D. ROONEY
MADE BY T. LARAMAY

REVISION NUMBER	DATE	MADE BY	APP'D BY	REVISION

RECORD DRAWING CERTIFICATION

☐ AS BUILT - CHANGES AS NOTED
☐ AS BUILT - NO CHANGES

CONTRACTOR
NAME
SIGNATURE
TITLE DATE

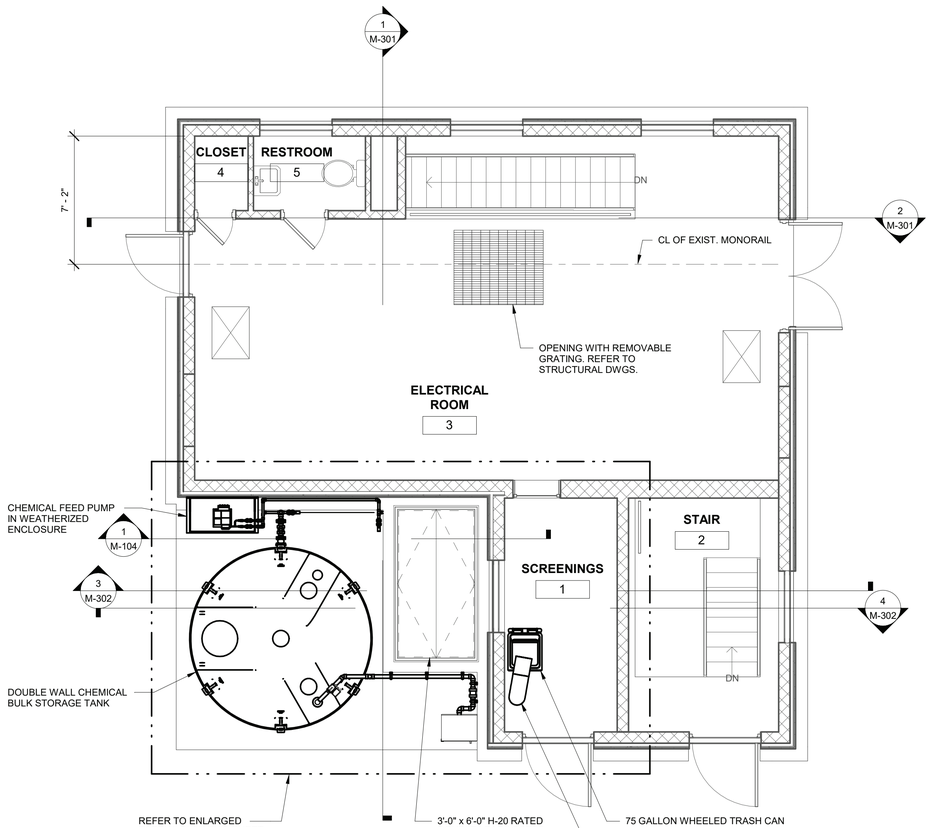
PROJECT COORDINATOR
NAME
SIGNATURE
TITLE DATE

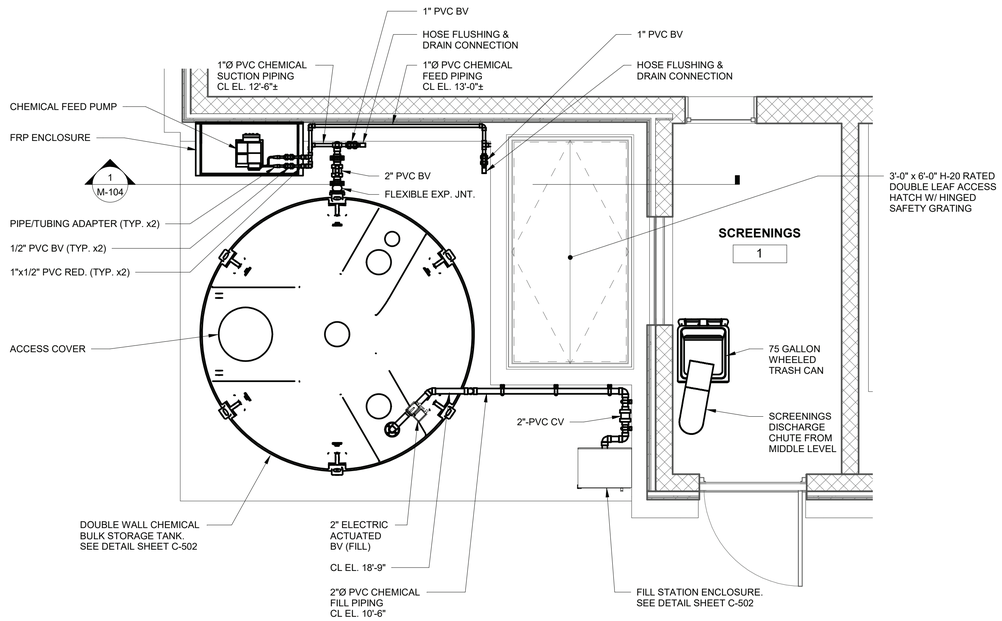
WESTCHESTER COUNTY, NEW YORK
DEPARTMENT OF PUBLIC WORKS AND TRANSPORTATION
DIVISION OF ENGINEERING

CONTRACT NUMBER 17-529
SHEET NUMBER M-103
SHEET NO. 27 OF 60
SCALE: 1/4"=1'-0"
DATE: 12/21/2018
DPW FILE NO. 208-03-M-51-0
REV. NO. 0

CROTONVILLE PUMPING STATION REHABILITATION
OSSINING SEWER DISTRICT
OSSINING, NEW YORK
LOWER & MIDDLE LEVEL PLANS

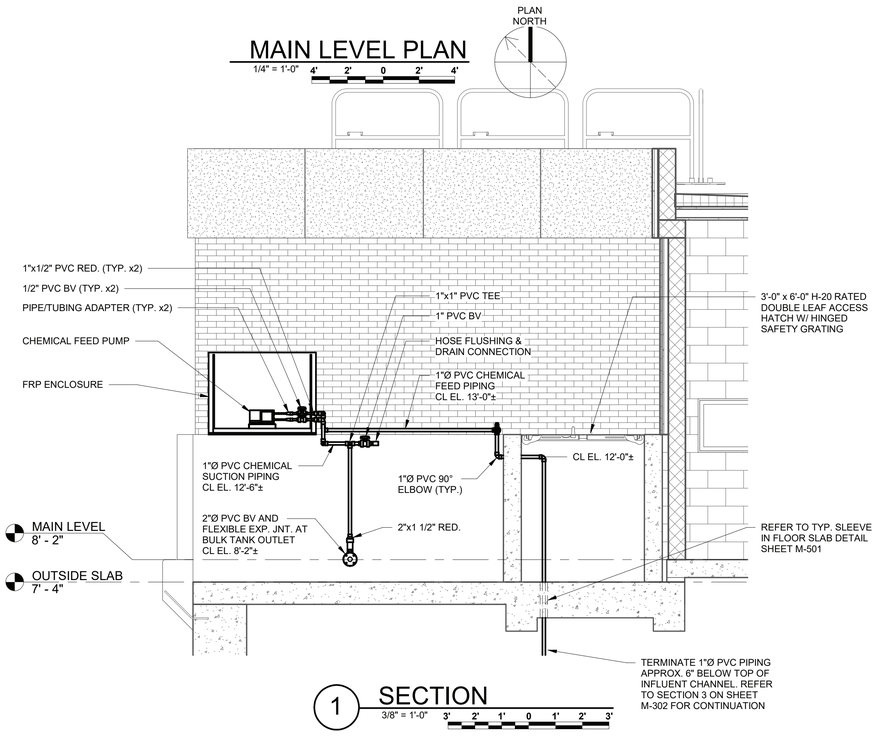
4/11/2021 9:48:51 AM





ENLARGED PARTIAL PLAN

3/8" = 1'-0" 3' 2' 1' 0 1' 2' 3'



MAIN LEVEL PLAN

1/4" = 1'-0" 4' 2' 0 2' 4'

1 SECTION

3/8" = 1'-0" 3' 2' 1' 0 1' 2' 3'

NOTES:

1. FABRICATE CHEMICAL FILL STATION ENCLOSURE IN SHOP OF 1/2" THICK GRAY PVC SHEET WITH SOLVENT WELDED JOINTS. SLOPE BOTTOM OF ENCLOSURE FOUR WAYS TO DRAIN CONNECTION. PROVIDE LATCHING DOOR WITH POLYPROPYLENE PIANO HINGE AND STAINLESS STEEL FASTENERS AND HARDWARE. SUBMIT SHOP DRAWING FOR REVIEW PRIOR TO FABRICATION. ATTACH TO SUPPORTS WITH STAINLESS STEEL HARDWARE.

IN CHARGE OF R. GELL
CHECKED BY D. ROONEY
MADE BY T. LARAMAY

O'BRIEN & GERE ENGINEERS, INC.
50 MAIN ST., 10TH FLOOR SUITE 1000,
WHITE PLAINS, NEW YORK 10606

REVISION NUMBER	DATE	MADE BY	APP'D BY	REVISION

RECORD DRAWING CERTIFICATION

☐ AS BUILT - CHANGES AS NOTED
☐ AS BUILT - NO CHANGES

CONTRACTOR
NAME
SIGNATURE
TITLE DATE

PROJECT COORDINATOR
NAME
SIGNATURE
TITLE DATE

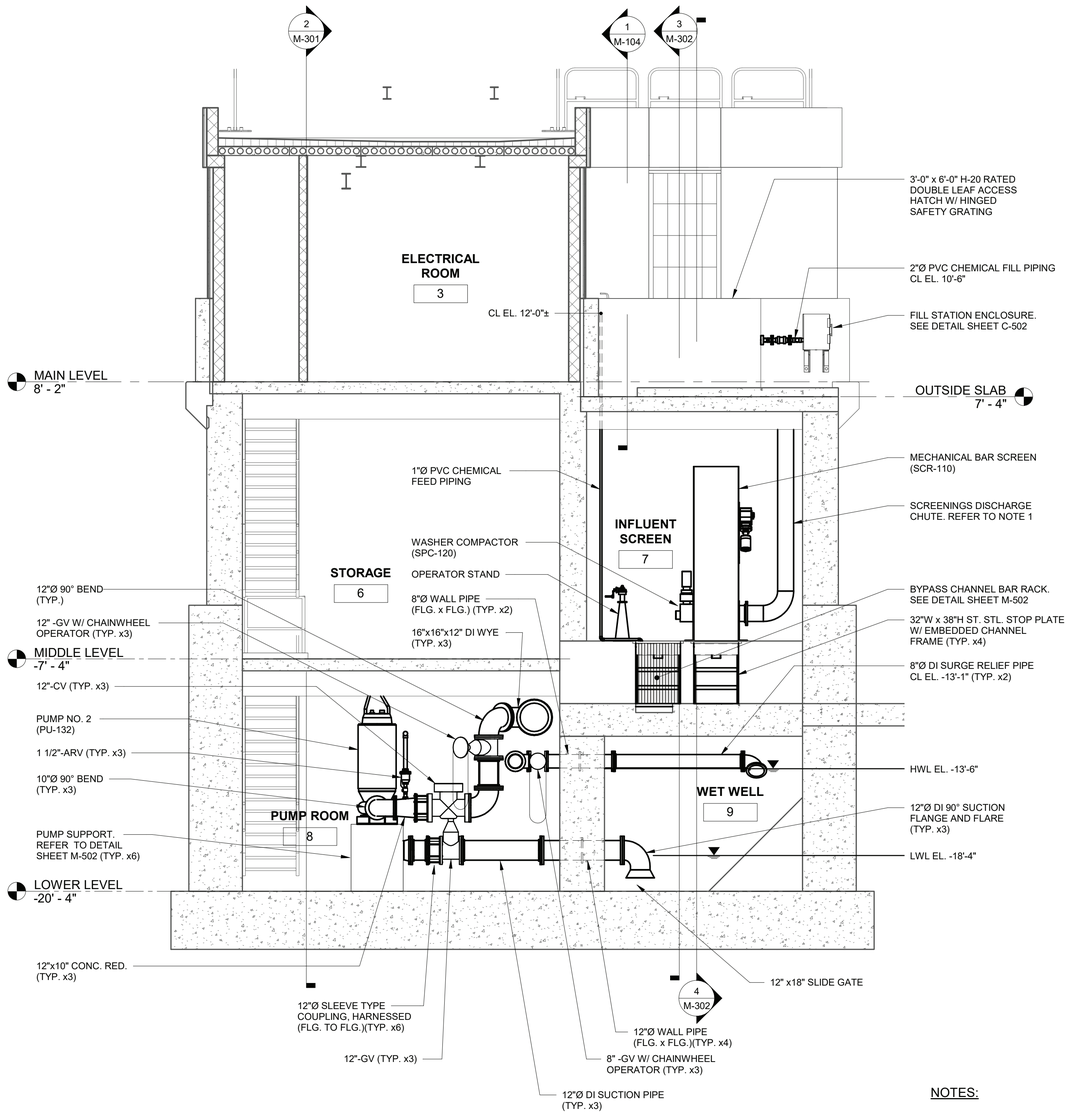
WESTCHESTER COUNTY, NEW YORK
DEPARTMENT OF PUBLIC WORKS AND TRANSPORTATION
DIVISION OF ENGINEERING

CONTRACT NUMBER 17-529
SHEET NUMBER M-104
SHEET NO. 28 OF 60

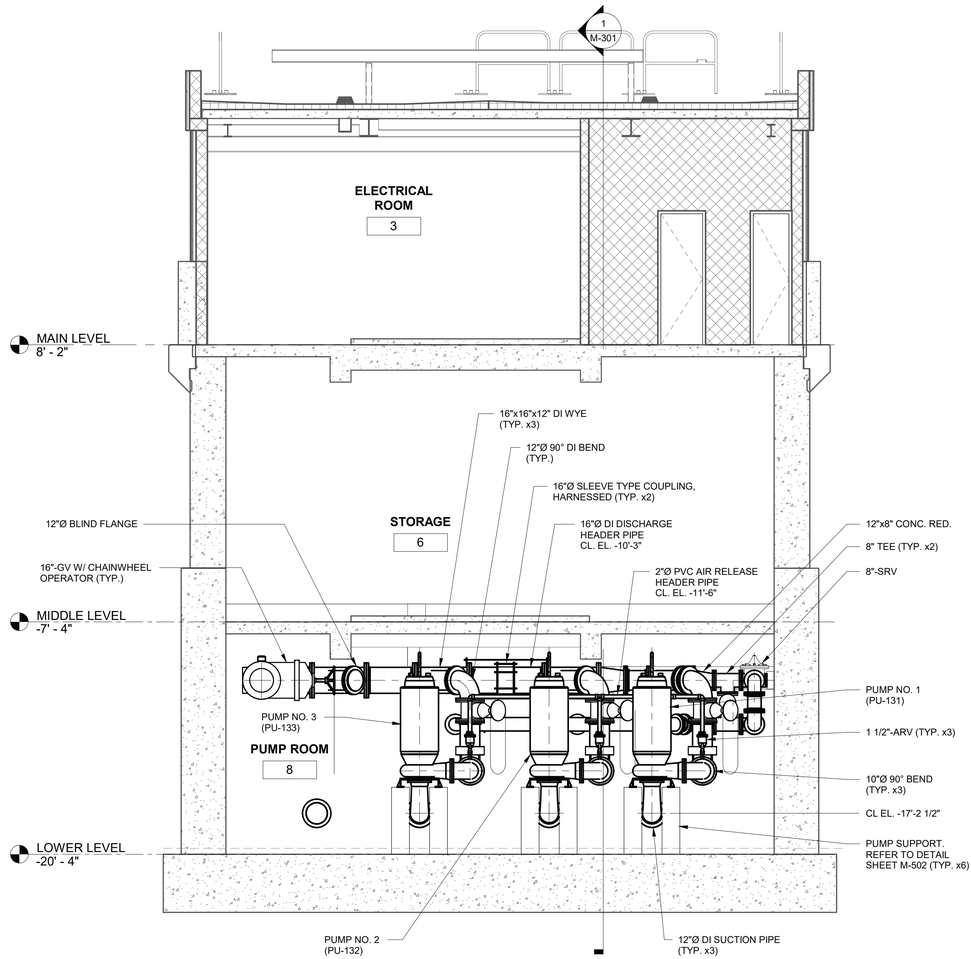
CROTONVILLE PUMPING STATION REHABILITATION
OSSINING SEWER DISTRICT
OSSINING, NEW YORK
MAIN LEVEL PLAN, ENLARGED PARTIAL PLAN & SECTION

SCALE: 1/4"=1'-0"
DATE: 12/21/2018
DPW FILE NO. 208-03-M-52-0
REV. NO. 0

4/11/2021 9:48:53 AM



1 SECTION
1/4" = 1'-0" 4' 2' 0 2' 4'



2 SECTION
1/4" = 1'-0" 4' 2' 0 2' 4'

NOTES:

1. COORDINATE SCREENINGS DISCHARGE CHUTE SIZE WITH APPROVED SHOP DRAWING OF WASHER/COMPACTOR.

PUMP CONTROL ELEVATIONS

DESCRIPTION	ACTUAL ELEVATION	ELEVATION ABOVE LOWER LEVEL
HIGH WATER LEVEL ALARM	-13-6"	6'-8"
LAG PUMP NO. 2 ON	-13'-10"	6'-4"
LAG PUMP NO. 1 ON	-14'-4"	5'-6"
LEAD PUMP ON	-15'-0"	4'-6"
LAG PUMP NO. 2 OFF	-17'-0"	3'-0"
LAG PUMP NO. 1 OFF	-17'-8"	3'-0"
LEAD PUMP OFF	-18'-0"	3'-0"
LOW WATER LEVEL ALARM	-18'-4"	2'-0"
LOW WATER LEVEL	-20'-4"	0'-0"

EQUIPMENT TABLE

EQUIPMENT NAME	TAG NUMBER	LOCATION	BASIS OF DESIGN MANUFACTURER	MODEL	DESIGN CAPACITY	TDH	HORSEPOWER	CLEAR BAR SPACING
CHEMICAL FEED PUMP	NA	OUTDOORS	WATSON MARLOW	530	12 GPH	30 PSI	NA	NA
MANUAL BAR SCREEN	BR-111	INFLUENT SCREEN ROOM	NA	NA	6.5 MGD	NA	NA	1.5"
MAGNETIC FLOW METER	FE-160	PUMP ROOM	ENDRESS + HAUSER	PROMAG 400	10 MGD	NA	NA	NA
MAGNESIUM HYDROXIDE STORAGE TANK	NA	OUTDOORS	POLYPROCESSING COMPANY	DOUBLE WALL	4,400 GALLONS	NA	NA	NA

IN ACCORDANCE WITH TITLE VIII, ARTICLE 145, SECTION 7209 (2) OF THE NEW YORK STATE EDUCATION LAW, IT IS A VIOLATION OF LAW FOR ANY PERSON UNLESS ACTING UNDER THE DIRECTION OF A LICENSED ENGINEER TO ALTER THIS DOCUMENT.

IN CHARGE OF R. GELL
CHECKED BY D. ROONEY
MADE BY T. LARAMAY

O'BRIEN & GERE ENGINEERS, INC.
50 MAIN ST., 10TH FLOOR SUITE 1000, WHITE PLAINS, NEW YORK 10606

REVISION NUMBER	DATE	MADE BY	APP'D BY	REVISION

RECORD DRAWING CERTIFICATION

☐ AS BUILT - CHANGES AS NOTED
☐ AS BUILT - NO CHANGES

CONTRACTOR
NAME
SIGNATURE
TITLE DATE

PROJECT COORDINATOR
NAME
SIGNATURE
TITLE DATE

WESTCHESTER COUNTY, NEW YORK
DEPARTMENT OF PUBLIC WORKS AND TRANSPORTATION
DIVISION OF ENGINEERING

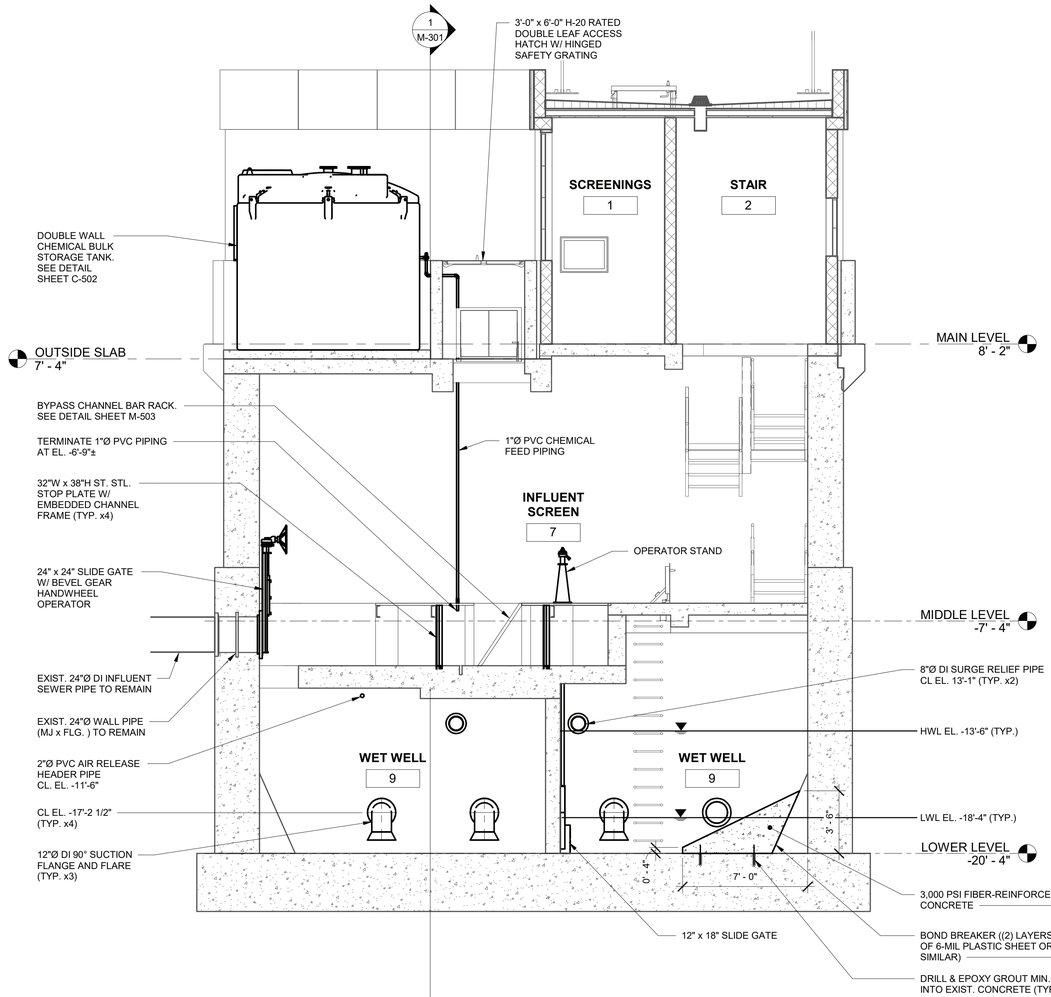
CONTRACT NUMBER 17-529
SHEET NUMBER M-301
SHEET NO. 29 OF 60

CROTONVILLE PUMPING STATION REHABILITATION
OSSINING SEWER DISTRICT
OSSINING, NEW YORK
SECTIONS

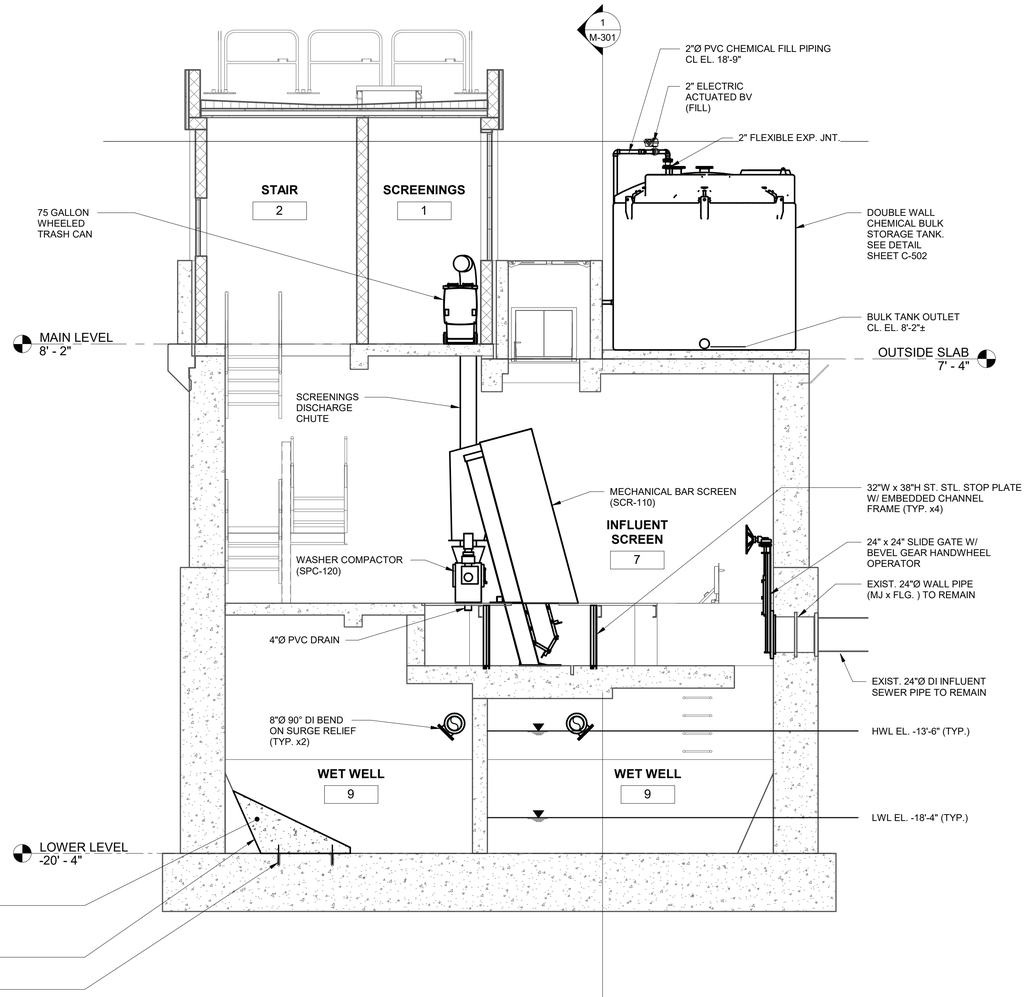
SCALE: 1/4"=1'-0"
DATE: 12/21/2018
DPW FILE NO. 208-03-M-53-0
REV. NO. 0

C:\Users\laramatw.RAMBOLL\Documents\661136-M-Crotonville-PS_tom.laramay@obg.com.rvt

4/11/2021 9:48:56 AM



3 SECTION
1/4" = 1'-0" 4' 2' 0 2' 4'



4 SECTION
1/4" = 1'-0" 4' 2' 0 2' 4'

MECHANICAL SCREEN SCHEDULE

ITEM	REQUIREMENT
BASIS OF DESIGN MANUFACTURER	DUPERON
MODEL	FLEX-RAKE
PEAK DESIGN CAPACITY (TOTAL)	6.5 MGD
NO. OF UNITS	1
CLEAR BAR SPACING	1 - INCH
TYPE	FLEXIBLE RAKE, FULL PENETRATION
CHANNEL WIDTH	2'-6"
CHANNEL DEPTH	3'-6"
ANGLE OF INCLINE	30 DEGREES FROM VERTICAL
OPERATING FLOOR HEIGHT ABOVE CHANNEL INVERT	3'-6"
DISCHARGE HEIGHT ABOVE OPERATING FLOOR	3'-6"
MAXIMUM HEADLOSS AT PEAK FLOW (CLEAN)	1.5 - INCHES ±
MAXIMUM HEADLOSS AT PEAK FLOW (25% BLINDED)	2.5 - INCHES ±
MATERIALS OF CONSTRUCTION	TYPE 316 STAINLESS STEEL

WASHER COMPACTOR SCHEDULE

ITEM	REQUIREMENT
BASIS OF DESIGN MANUFACTURER	DUPERON
MODEL	DUAL AUGER
NO. OF UNITS	1
PEAK CAPACITY (INTERMITTENT OPERATION)	10 cf / HOUR
AVERAGE CAPACITY (CONTINUOUS OPERATION)	6 cf / HOUR
HOPPER HEIGHT ABOVE OPERATING FLOOR	38 - INCHES
HOPPER LENGTH	43 - INCHES
DISCHARGE HEIGHT ABOVE OPERATING FLOOR	20'-0"
VOLUME REDUCTION (MIN.)	70%
WASH WATER USAGE	3 - 10 GAL./MIN.
WASH WATER PRESSURE (MIN.)	40 - 60 PSI
MATERIALS OF CONSTRUCTION	TYPE 316 STAINLESS STEEL

IN CHARGE OF R. GELL
CHECKED BY D. ROONEY
MADE BY T. LARAMAY

O'BRIEN & GERE ENGINEERS, INC.
50 MAIN ST., 10TH FLOOR SUITE 1000,
WHITE PLAINS, NEW YORK 10606

REVISION NUMBER	DATE	MADE BY	APP'D BY	REVISION

RECORD DRAWING CERTIFICATION

☐ AS BUILT - CHANGES AS NOTED
☐ AS BUILT - NO CHANGES

CONTRACTOR
NAME
SIGNATURE
TITLE DATE

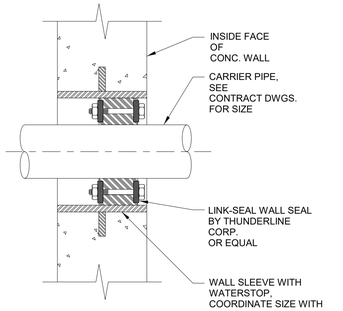
PROJECT COORDINATOR
NAME
SIGNATURE
TITLE DATE

WESTCHESTER COUNTY, NEW YORK
DEPARTMENT OF PUBLIC WORKS AND TRANSPORTATION
DIVISION OF ENGINEERING

CONTRACT NUMBER 17-529
SHEET NUMBER M-302
SHEET NO. 30 OF 60
SCALE: 1/4"=1'-0"
DATE: 12/21/2018
DPW FILE NO. 208-03-M-54-0
REV. NO. 0

CROTONVILLE PUMPING STATION REHABILITATION
OSSINING SEWER DISTRICT
OSSINING, NEW YORK
SECTIONS

C:\Users\laramatw.RAMBOLL\Documents\66136-M-Crotonville-PS_tom.laramay@obg.com.rvt

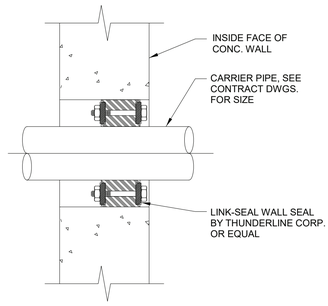


DETAIL NOTES:

1. LINK SEALS ARE REQUIRED ON BOTH FACES FOR ALL EXTERIOR PENETRATIONS.
2. PROVIDE STAINLESS STEEL HARDWARE.

MODULAR LINK SEAL WITH WALL SLEEVE DETAIL

NOT TO SCALE

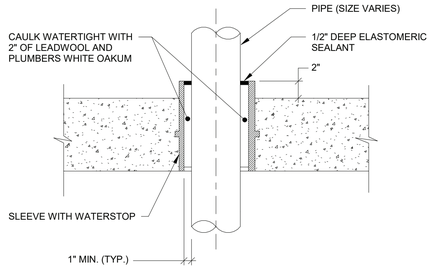


DETAIL NOTES:

1. LINK SEALS ARE REQUIRED ON BOTH FACES FOR ALL EXTERIOR PENETRATIONS, AND WALL DIVIDING WET WELL & DRY WELL.
2. COORDINATE CORE SIZE REQUIRED FOR PIPE PENETRATION WITH LINK SEAL MANUFACTURER.
3. PROVIDE STAINLESS STEEL HARDWARE.

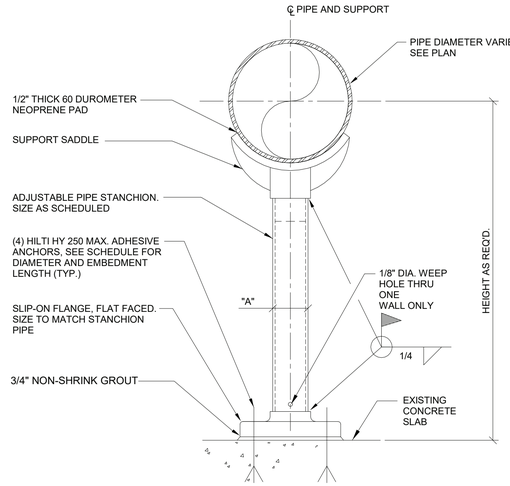
MODULAR LINK SEAL WITH CORED PENETRATION DETAIL

NOT TO SCALE



TYPICAL SLEEVE IN FLOOR SLAB DETAIL

NOT TO SCALE



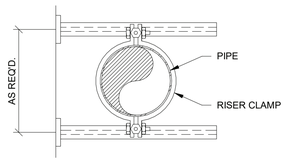
NOMINAL PIPE SIZE	'A'	ANCHOR SIZE	EMBEDMENT LENGTH
2.5 - 3.5	2.50	5/8"	5"
4 - 12	3.00	5/8"	5"

DETAIL NOTES:

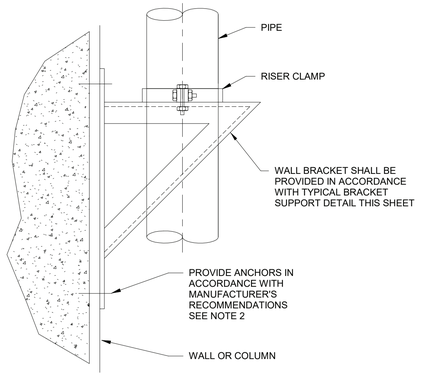
1. SEE SPECIFICATIONS FOR MATERIAL REQUIREMENTS IN PARTICULAR LOCATIONS AND PIPE SUPPORT SPACING.

TYPICAL PIPE STANCHION DETAIL (2 1/2" - 12"Ø)

NOT TO SCALE



PLAN



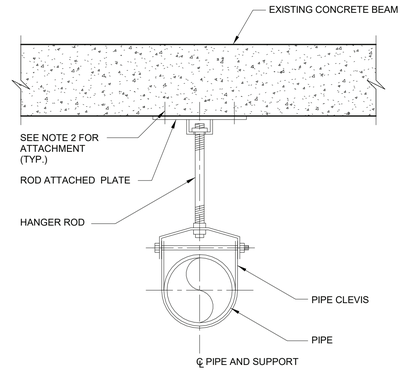
ELEVATION

DETAIL NOTES:

1. CONTRACTOR SHALL COORDINATE ATTACHMENT METHOD, INCLUDING ANCHOR SIZE, TYPE AND SPACING WITH BRACKET MANUFACTURER AND OBTAIN ENGINEER'S APPROVAL.

TYPICAL VERTICAL PIPE SUPPORT DETAIL

NOT TO SCALE

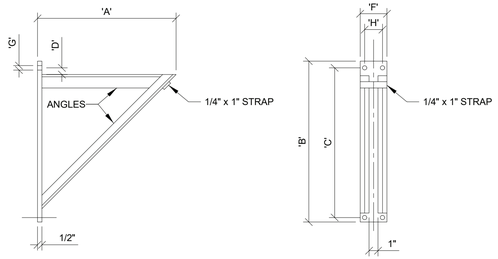


DETAIL NOTES:

1. SEE SPECIFICATIONS FOR HANGER ROD SIZING, PIPE SUPPORT SPACING AND MATERIAL REQUIREMENTS FOR SPECIFIC LOCATIONS.
2. ATTACH TO CONCRETE USING (4) HILTI HDI-P 3/8" DROP-IN ANCHORS. USE OF CONCRETE INSERTS OR CHANNEL SECTIONS IS ACCEPTABLE.

TYPICAL PIPE CLEVIS DETAIL

NOT TO SCALE



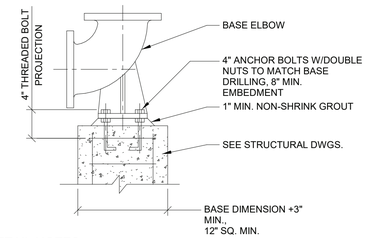
PIPE SIZE	'A'	'B'	'C'	'D'	'F'	'G'	'H'
8" AND SM.	"	18"	15 1/4"	1 1/4"	4"	13/16"	0"
10" TO 12"	"	30"	27 1/2"	1 1/2"	5"	1 1/16"	2 1/2"
14" TO 20"	"	36"	33 1/2"	1 1/2"	5"	1 1/16"	2 1/2"

DETAIL NOTES:

1. LOAD NOT TO EXCEED 3,000 LBS. ANGLE SIZE TO BE DETERMINED BY THE CONTRACTOR AND APPROVED BY THE CONSULTING ENGINEER.
2. * AS REQUIRED.
3. SEE SPECIFICATIONS FOR MATERIAL REQUIREMENTS IN PARTICULAR LOCATIONS.

TYPICAL BRACKET SUPPORT DETAIL

NOT TO SCALE

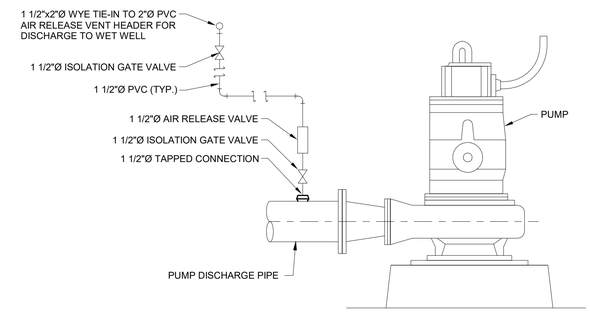


DETAIL NOTES:

1. DETAIL TO BE USED FOR SUPPORT OF VERTICAL TEE OR CROSS.

TYPICAL BASE ELBOW DETAIL

NOT TO SCALE



TYPICAL PUMP AIR RELEASE DETAIL

NOT TO SCALE

DocuSign

IN ACCORDANCE WITH TITLE VIII, ARTICLE 145, SECTION 7209 (2) OF THE NEW YORK STATE EDUCATION LAW, IT IS A VIOLATION OF LAW FOR ANY PERSON UNLESS ACTING UNDER THE DIRECTION OF A LICENSED ENGINEER TO ALTER THIS DOCUMENT.

IN CHARGE OF R. GELL
CHECKED BY D. ROONEY
MADE BY T. LARAMAY

O'BRIEN & GERE ENGINEERS, INC.
50 MAIN ST., 10TH FLOOR SUITE 1000, WHITE PLAINS, NEW YORK 10606

REVISION NUMBER	DATE	MADE BY	APP'D BY	REVISION

RECORD DRAWING CERTIFICATION

☐ AS BUILT - CHANGES AS NOTED
☐ AS BUILT - NO CHANGES

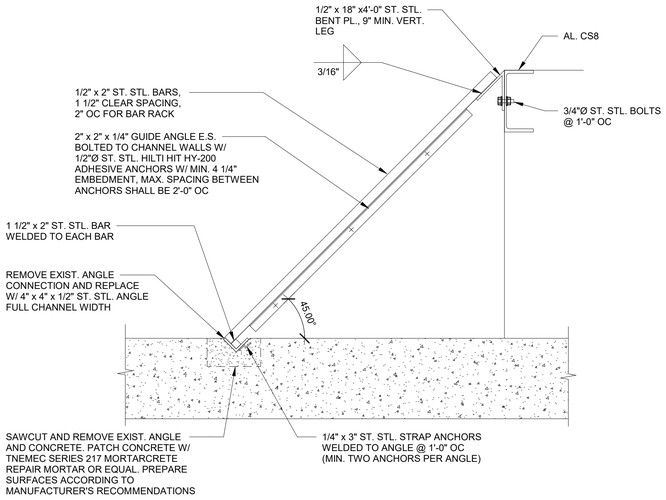
CONTRACTOR
NAME
SIGNATURE
TITLE DATE

PROJECT COORDINATOR
NAME
SIGNATURE
TITLE DATE

WESTCHESTER COUNTY, NEW YORK
DEPARTMENT OF PUBLIC WORKS AND TRANSPORTATION
DIVISION OF ENGINEERING

CONTRACT NUMBER 17-529
SHEET NUMBER M-501
SHEET NO. 31 OF 60
SCALE: AS NOTED
DATE: 12/21/2018
DPW FILE NO. 208-03-M-55-0
REV. NO. 0

CROTONVILLE PUMPING STATION REHABILITATION
OSSINING SEWER DISTRICT
OSSINING, NEW YORK
TYPICAL DETAILS



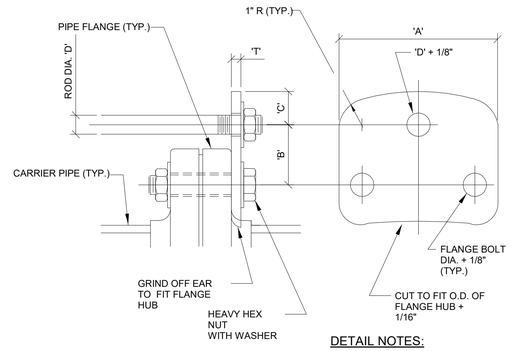
DETAIL NOTES:

1. HARDWARE AND FRAMING SHALL BE TYPE 316 STAINLESS STEEL.
2. BAR RACKS SHALL BE FABRICATED TO SUIT EXIST. STRUCTURE.

BYPASS CHANNEL BAR RACK DETAIL

3/4" = 1'-0"

6" 3" 0 1' 2'



HARNESS EAR DIMENSION SCHEDULE					
ROD DIA. 'D'	PIPE SIZES	'A'	'B'	'C'	'T'
5/8	4, 6	7	2 1/2	1 1/4	1
	8, 10, 12	7 1/2	2 1/2		
	16, 20	8	3		
	14, 18	8 1/2	3		
3/4	6	7	2 1/2	1 1/2	1 1/8
	8, 10, 12	7 1/2	2 1/2		
	16, 20	8	3		
	14, 18	8 1/2	3		
	24, 30	9	3		
1	10	7 1/2	2 1/2	1 1/2	1 1/2
	16, 20	8	3		
	14, 18	8 1/2	3		
	24, 30, 36	9	3		
	42, 48	9 1/2	3 1/2		

DETAIL NOTES:

1. ALL DIMENSIONS GIVEN IN HARNESS EAR SCHEDULE ARE IN INCHES.
2. HARNESS EAR MATERIAL SHALL CONFORM TO ASTM A36.
3. HARNESSING ROD SHALL CONFORM TO ASTM A449.

TYPICAL HARNESSING EAR DETAIL

NOT TO SCALE

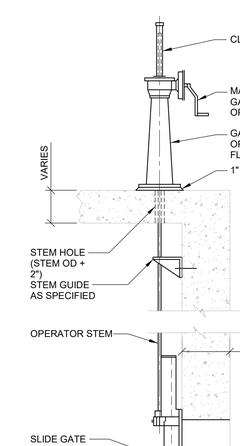
ALLOWABLE TEST PRESSURE (PSIG) FOR VARIOUS PIPE SIZES AND No./DIA. OF HARNESS RODS													
PIPE SIZE \ NO. & DIA. OF RODS	(2) 5/8"	(2) 3/4"	(2) 1"	(2) 1 1/4"	(2) 1 1/2"	(4) 5/8"	(4) 3/4"	(4) 1"	(4) 1 1/4"	(4) 1 1/2"	(6) 1 1/2"	(8) 1 1/2"	(8) 2"
4"	0-250												
6"		0-250											
8"		0-250											
10"		0-250											
12"		0-232	0-250			162-250	233-250						
14"		0-170	0-250			119-237	171-250						
16"		0-131	0-232			92-181	132-250	233-250					
18"		0-103	0-183			73-143	104-206	184-250					
20"		0-84	0-149	0-203		59-116	85-167	150-250	204-250				
24"		0-58	0-103	0-141			59-116	104-206	142-250				
30"		0-37	0-66	0-90	0-130		38-74	67-132	91-180	131-250			
36"			0-46	0-63	0-90			47-92	64-125	91-180	181-250		
42"			0-36	0-46	0-66			35-67	47-92	67-133	134-199	200-250	
48"			0-34	0-26	0-51			27-52	36-70	52-102	103-152	153-203	
54"					0-40					41-80	81-120	121-160	
60"					0-32					33-65	66-97	98-130	131-180

NOTE:

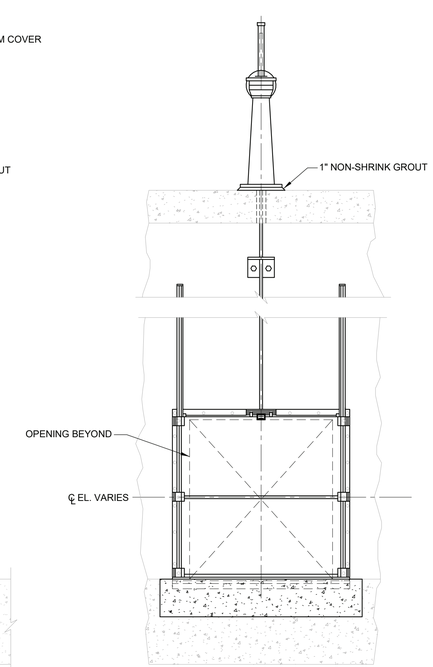
1. HARNESSING ROD SHALL CONFORM TO ASTM A449.

TYPICAL HARNESS ROD SCHEDULE

NOT TO SCALE



SECTION



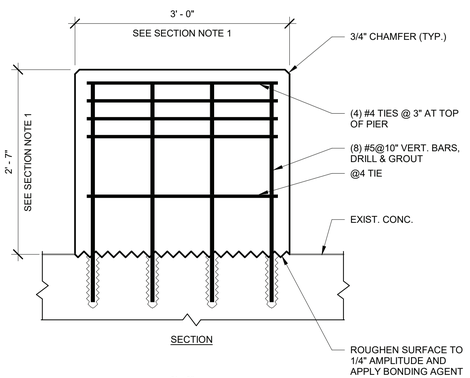
ELEVATION

DETAIL NOTES:

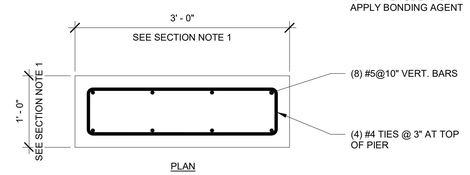
1. COORDINATE GATE MOUNTING WITH MANUFACTURER'S RECOMMENDATIONS.
2. OPERATOR SHOWN IS REPRESENTATIVE ONLY. REFER TO SECTION 40 05 59.

SLIDE GATE MOUNTING DETAIL

NOT TO SCALE



SECTION



PLAN

PUMP PEDESTAL DETAIL

1" = 1'-0"

DETAIL NOTE:

1. COORDINATE EQUIPMENT PAD SIZE AND ANCHOR LOCATIONS WITH MECHANICAL DRAWINGS AND EQUIPMENT MANUFACTURER.

IN ACCORDANCE WITH TITLE VIII, ARTICLE 145, SECTION 7209 (2) OF THE NEW YORK STATE EDUCATION LAW, IT IS A VIOLATION OF LAW FOR ANY PERSON UNLESS ACTING UNDER THE DIRECTION OF A LICENSED ENGINEER TO ALTER THIS DOCUMENT.

IN CHARGE OF R. GELL
CHECKED BY D. ROONEY
MADE BY T. LARAMAY

O'BRIEN & GERE ENGINEERS, INC.
50 MAIN ST., 10TH FLOOR SUITE 1000, WHITE PLAINS, NEW YORK 10606

REVISION NUMBER	DATE	MADE BY	APP'D BY	REVISION

RECORD DRAWING CERTIFICATION

☐ AS BUILT - CHANGES AS NOTED
☐ AS BUILT - NO CHANGES

CONTRACTOR
NAME
SIGNATURE
TITLE DATE

PROJECT COORDINATOR
NAME
SIGNATURE
TITLE DATE

WESTCHESTER COUNTY, NEW YORK
DEPARTMENT OF PUBLIC WORKS AND TRANSPORTATION
DIVISION OF ENGINEERING

CONTRACT NUMBER 17-529
SHEET NUMBER M-502
SHEET NO. 32 OF 60

CROTONVILLE PUMPING STATION REHABILITATION
OSSINING SEWER DISTRICT
OSSINING, NEW YORK
TYPICAL DETAILS

SCALE: AS NOTED
DATE: 12/21/2018
DPW FILE NO. 208-03-M-56-0
REV. NO. 0

DATE: 11/12/2020 12:04 PM

SYMBOL DEFINITIONS & FUNCTIONS TABLE

SHARED DISPLAY, SHARED CONTROL			LOCATION & ACCESSIBILITY
CONTROLLER	DISCRETE	PILOT LIGHT	
FUNCTION TAG	FUNCTION TAG	FUNCTION TAG	• LOCATED IN FIELD • NOT IN PANEL, CABINET OR CONSOLE MOUNTED • VISIBLE AT FIELD LOCATION • NORMALLY OPERATOR ACCESSIBLE
FUNCTION TAG	FUNCTION TAG	FUNCTION TAG	• LOCATED IN OR ON FRONT OF CENTRAL OR MAIN PANEL OR CONSOLE • VISIBLE ON FRONT OF PANEL OR ON VIDEO DISPLAY • NORMALLY OPERATOR ACCESSIBLE AT PANEL FRONT OR CONSOLE
FUNCTION TAG	FUNCTION TAG	FUNCTION TAG	• LOCATED IN REAR OF CENTRAL OR MAIN PANEL • LOCATED IN CABINET BEHIND PANEL • NOT VISIBLE ON FRONT OF PANEL OR ON VIDEO DISPLAY • NOT NORMALLY OPERATOR ACCESSIBLE AT PANEL OR CONSOLE
FUNCTION TAG	FUNCTION TAG	FUNCTION TAG	• LOCATED IN OR ON FRONT OF SECONDARY OR LOCAL PANEL OR CONSOLE • VISIBLE ON FRONT OF PANEL OR ON VIDEO DISPLAY • NORMALLY OPERATOR ACCESSIBLE AT PANEL FRONT OR CONSOLE
FUNCTION TAG	FUNCTION TAG	FUNCTION TAG	• LOCATED IN REAR OF SECONDARY OR LOCAL PANEL • LOCATED IN FIELD CABINET • NOT VISIBLE ON FRONT OF PANEL OR ON VIDEO DISPLAY • NOT NORMALLY OPERATOR ACCESSIBLE AT PANEL OR CONSOLE

DEVICE NOTATION TABLE

ANALYSIS

AIR	– EXCESS AIR	H2O	– WATER	ORP	– OXIDATION REDUCTION POTENTIAL
CO	– CARBON DIOXIDE	H2S	– HYDROGEN SULFIDE		
CL2	– CHLORINE RESIDUAL	IR	– INFRARED	pH	– HYDROGEN ION
COMB	– COMBUSTIBLES	MOIST	– MOISTURE	TC	– THERMAL CONDUCTIVITY
COND	– ELEC. CONDUCTIVITY	NH4	– AMMONIA	TURB	– TURBIDITY
DEN	– DENSITY	NO3	– NITRATE	UV	– ULTRAVIOLET
DO	– DISSOLVED OXYGEN	O2	– OXYGEN	VISC	– VISCOSITY

FLOW

CONE	– CONE	MAG	– MAGNETIC	THER	– THERMAL
COR	– CORIOLIS	OP	– ORIFICE PLATE	TTS	– TRANSIT TIME SONIC
DOP	– DOPPLER	PD	– POSITIVE DISPLACEMENT	TUR	– TURBINE
DSON	– DOPPLER SONIC	PT	– PITOT TUBE	US	– ULTRASONIC
FLN	– FLOW NOZZLE	PV	– PITOT VENTURI	VENT	– VENTURI
FLT	– FLOW TUBE	SNR	– SONAR	VOR	– VORTEX SHEDDING
LAM	– LAMINAR	SON	– SONIC	WDG	– WEDGE

LEVEL

CAP	– CAPACITANCE	LSR	– LASER	RES	– RESISTANCE
DP	– DIFFERENTIAL PRESSURE	MAG	– MAGNETIC	SON	– SONIC
DI	– DIELECTRIC CONSTANT	NUC	– NUCLEAR	US	– ULTRASONIC
GWR	– GUIDED WAVE RADAR	RAD	– RADAR	VIB	– VIBRATION

PRESSURE

ABS	– ABSOLUTE	MAN	– MANOMETER	SG	– STRAIN GAUGE
AVG	– AVERAGE	P–V	– PRESSURE–VACUUM	VAC	– VACUUM
DRF	– DRAFT				

TEMPERATURE

BM	– BI–METALLIC	TC	– THERMOCOUPLE	TCJ	– THERMOCOUPLE TYPE J
IR	– INFRARED	TCK	– THERMOCOUPLE TYPE K	THERM	– THERMISTOR
RAD	– RADIATION	TCT	– THERMOCOUPLE TYPE T	TRANS	– TRANSISTOR
RTD	– RES TEMP DETECTOR	TCE	– THERMOCOUPLE TYPE E		

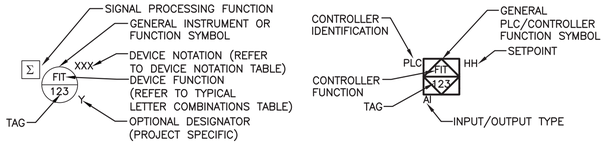
MISCELLANEOUS

BURNER, COMBUSTION		POSITION		SPEED	
FR	– FLAME ROD	CAP	– CAPACITANCE	ACC	– ACCELERATION
IGN	– IGNITER	IR	– INFRARED	PROX	– PROXIMITY
IR	– INFRARED	LAS	– LASER	VEL	– VELOCITY
TV	– TELEVISION	MAG	– MAGNETIC		
		MECH	– MECHANICAL		
		OPT	– OPTICAL		

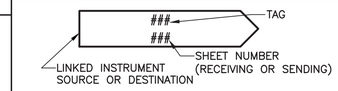
WEIGHT, FORCE		MOTOR CONTROL			
LC	– LOAD CELL	FVR	– FULL VOLTAGE REVERSING	SST	– SOLID STATE (SOFT START)
SG	– STRAIN GAUGE	FVNR	– FULL VOLTAGE NON–REV	VFC	– VARIABLE FREQUENCY CONTROLLER (AC)
WS	– WEIGHT SCALE	RVS	– REDUCED VOLTAGE		
		RVAT	– REDUCED VOLTAGE AUTO–TRANSFORMER	VFD	– VARIABLE FREQ DRIVE (DC)
				VSD	– VARIABLE SPEED DRIVE

NOTE: NOTATIONS MAY BE USED IF A GRAPHIC SYMBOL DOES NOT EXIST.

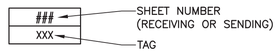
INSTRUMENT SYMBOL IDENTIFICATION



P&ID DIRECTION



SIGNAL CONTINUATION



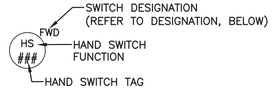
BOUNDARY LINES

- BUILDING BOUNDARY
- SYSTEM BOUNDARY
- EXIST. EQUIPMENT
- P — P — PACKAGED SYSTEM

SIGNAL LINES SYMBOLS

- INSTRUMENT CONNECTIONS (MECH)
- CAPILLARY TUBE
- ELECTRICAL OR ELECTRONIC
- SERIAL CONNECTION
- PNEUMATIC
- HYDRAULIC
- UNDEFINED
- HEAT TRACE
- SONIC GUIDED
- BINARY
- EN — ETHERNET
- CN — CONTROLNET
- DN — DEVICENET
- FO — FIBER OPTIC
- CC — COAX CABLE
- TP — TWISTED PAIR
- FB — FIELDBUS/PROFIBUS
- MBT — MODBUS
- MB+ — MODBUS PLUS
- ES — ELECTRICAL POWER SUPPLY
- IA(x) — INSTRUMENT AIR (x=pressure), PA [PLANT AIR], NS [NITROGEN], GS [GAS SUPPLY]
- HS(x) — HYDRAULIC POWER SUPPLY (x=pressure)
- WIRELESS COMMUNICATION LINK
- PLC COMMUNICATION LINK DATA LINK/LOGIC/SHARED CONTROL SYSTEM)
- COMMUNICATION LINK (CONNECTING TWO OR MORE INDEPENDENT MICROPROCESSORS)
- MECHANICAL LINK

HAND SWITCH DESIGNATION



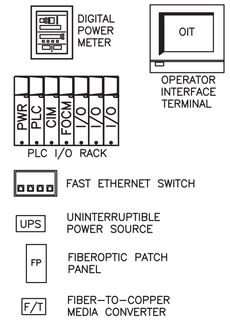
F/R	– FORWARD/REVERSE	ESTOP	– EMERGENCY STOP
L/A	– LOCAL/AUTOMATIC	FWD	– FORWARD
LOR	– LOCAL–OFF–REMOTE	HOA	– HAND–OFF–AUTO
OCA	– OPEN–CLOSE–AUTO	L/R	– LOCAL/REMOTE
OAC	– OPEN–AUTO–CLOSE	O/O	– ON/OFF
OSC	– OPEN–STOP–CLOSE	REV	– REVERSE

SETPOINT & I/O TYPES

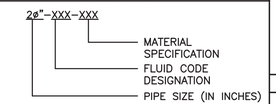
AI	– ANALOG INPUT
AO	– ANALOG OUTPUT
DI	– DISCRETE INPUT
DO	– DISCRETE OUTPUT
DO	– DISCRETE OUTPUT
H	– HIGH
HH	– HIGH HIGH
L	– LOW
LL	– LOW LOW

SCADA NETWORK OR SYSTEM ARCHITECTURE SYMBOLS AND ABBREVIATIONS

CIM	COMMUNICATION INTERFACE MODULE
CPU	CENTRAL PROCESSING UNIT
FOCM	FIBER OPTIC COMMUNICATIONS MODULE
PLC	PROGRAMMABLE LOGIC CONTROLLER



PIPE IDENTIFICATION



VALVE IDENTIFICATION

FLUID CODE

ALUM	– ALUMINUM SULFATE
EFF	– (PLANT) EFFLUENT
FINW	– FINISHED WATER
FLTW	– FILTERED WATER
FM	– FORCEMAIN (PUMPED SANITARY)
INF	– INFLUENT
NAOCL	– SODIUM HYPOCHLORITE
O/F	– OVERFLOW
POLY	– POLYMER
SAN	– SANITARY SEWER
SUP	– SUPERNATANT
THS	– THICKENED SLUDGE
WAS	– WASTE ACTIVATED SLUDGE

PIPING MATERIAL

BS	– BLACK STEEL
CI	– CAST IRON
CPVC	– CHLORINATED POLYVINYL CHLORIDE
DIP	– DUCTILE IRON PIPE
FRP	– FIBER REINFORCED PIPE
GCS	– GALVANIZED CARBON STEEL
HDPE	– HIGH DENSITY POLYETHYLENE
PVC	– POLYVINYL CHLORIDE
RCP	– REINFORCED CONCRETE PIPE
SS	– STAINLESS STEEL

NOTE

INFORMATION ON THIS DRAWING IS BASED ON THE INTERNATIONAL SOCIETY OF AUTOMATION (ISA) STANDARDS "ANSI/ISA–5.1–2009 INSTRUMENTATION SYMBOLS AND IDENTIFICATION" AND "ANSI/ISA–5.3–1983 GRAPHIC SYMBOLS FOR DISTRIBUTED CONTROL/SHARED DISPLAY INSTRUMENTATION, LOGIC AND COMPUTER SYSTEMS". REFER TO ANSI/ISA FOR FURTHER INFORMATION.

TYPICAL LETTER COMBINATIONS

FIRST LETTERS	INITIATING OR MEASURED VARIABLES	CONTROLLERS: RECORD CONTROL	CONTROLLERS: INDICATE CONTROL	CONTROLLERS: CONTROL	CONTROLLERS: CONTROL VALVES	READOUT DEVICES: RECORDING	READOUT DEVICES: INDICATING	SWITCHES AND ALARM DEVICES*: HIGH**	SWITCHES AND ALARM DEVICES*: LOW	SWITCHES AND ALARM DEVICES*: COMB	TRANSMITTERS: RECORDING	TRANSMITTERS: INDICATING	TRANSMITTERS: BLIND	SOLENOIDS, RELAYS, COMPUTING DEVICES	PRIMARY ELEMENT	TEST POINT	WELL OR PROBE	VIEWING DEVICES, GLASS	SAFETY DEVICE	FINAL ELEMENT
A	ANALYSIS	ARC	AIC	AC		AR	AI	ASH	ASL	ASHL	ART	AIT	AT	AY	AE	AP	AW			AV
B	BURNER/COMBUSTION	BRC	BIC	BC		BR	BI	BSH	BSL	BSHL	BRT	BIT	BT	BY	BE		BW	BG		BZ
C	USER'S CHOICE																			
D	USER'S CHOICE																			
E	VOLTAGE	ERC	EIC	EC		ER	EI	ESH	ESL	ESHL	ERT	EIT	ET	EY	EE					EZ
F	FLOW, FLOW RATE	FRC	FIC	FC	FCV,FICV	FR	FI	FSH	FSL	FSHL	FRT	FIT	FT	FY	FE	FP		FG		FV
FQ	FLOW TOTAL	FQRC	FQIC	FQC	FQCV	FQR	FQI	FQSH	FQSL			FQIT	FQT	FQY	FQE					FQV
FF	FLOW RATIO	FFRC	FFIC	FFC	FFK	FFR	FFI	FPSH	FFSL						FE					FFV
G	USER'S CHOICE																			
H	HAND	HRC	HIC	HC	HCV					HS									HSS	HV
I	CURRENT	IRC	IIC	IC		IR	II	ISH	ISL	ISHL	IRT	IIT	IT	IY	IE					IZ
J	POWER	JRC	JIC	JC	JK	JR	JI	JSH	JSL	JSHL	JRT	JIT	JT	JY	JE					JV
K	TIME	KRC	KIC	KC	KCV	KR	KI	KSH	KSL	KSHL	KRT	KIT	KT	KY	KE					KV
L	LEVEL	LRC	LIC	LC	LCV	LR	LI	LSH	LSL	LSHL	LRT	LIT	LT	LY	LE		LW	LG		LV
M	USER'S CHOICE																			
N	USER'S CHOICE																			
O	USER'S CHOICE																			
P	PRESSURE/VACUUM	PRC	PIC	PC	PCV	PR	PI	PSH	PSL	PSHL	PRT	PIT	PT	PY	PE	PP			PSV, PSE	PV
PD	PRESSURE/DIFFERENTIAL	PDRC	PDIC	PDC	PDCV	PDR	PDI	PDSH	PDSL		PDRT	PDIT	PDT	PDY	PDE	PDP				PDV
Q	QUANTITY	QRC	QIC	QC		QR	QI	QSH	QSL	QSHL	QRT	QIT	QT	QY	QE					QZ
R	RADIATION	RRC	RIC	RC		RR	RI	RSH	RSL	RSHL	RRT	RIT	RT	RY	RE		RW			RZ
S	SPEED/FREQUENCY	SRC	SIC	SC	SCV	SR	SI	SSH	SSL	SSHL	SRT	SIT	ST	SY	SE					SV
T	TEMPERATURE	TRC	TIC	TC	TCV	TR	TI	TSH	TSL	TSHL	TRT	TIT	TT	TY	TE	TP	TW		TSE	TV
TD	TEMPERATURE/DIFFERENTIAL	TDRC	TDIC	TDC	TDCV	TDR	TDI	TDSH	TDSL		TDRT	TDIT	TDT	TDY	TE	TP	TW			TDV
U	MULTIVARIABLE	URC	UIC	UC		UR	UI							UY						UV
V	VIBRATION/MACHINERY ANALYSIS	VRC	VIC	VC		VR	VI	VSH	VSL	VSHL	VRT	VIT	VT	VY	VE					VZ
W	WEIGHT/FORCE	WRC	WIC	WC	WCV	WR	WI	WSH	WSL	WSHL	WRT	WIT	WT	WY	WE					WZ
WD	WEIGHT/FORCE DIFFERENTIAL	WDRC	WDIC	WDC	WDCV	WDR	WDI	WDSH	WDSL		WDRT	WDIT	WDT	WDY	WE					WDZ
X	UNCLASSIFIED	XRC	XIC	XC																
Y	EVENT/STATE/PRESENCE	YC	YIC	YC		YR	YI	YSH	YSL				YT	YY	YE					YZ
Z	POSITION/DIMENSION	ZRC	ZIC	ZC	ZCV	ZR	ZI	ZSH	ZSL	ZSHL	ZRT	ZIT	ZT	ZY	ZE					ZV
ZD	GAUGING/DEVIATION	ZDRC	ZDIC	ZDC	ZDCV	ZDR	ZDI	ZDSH	ZSL		ZDRT	ZDIT	ZDT	ZDY	ZDE					ZDV

NOTE: THIS TABLE IS NOT ALL–INCLUSIVE
*A, ALARM, THE ANNUNCIATING DEVICE, MAY BE USED IN THE SAME FASHION AS (S) SWITCH, THE ACTUATING DEVICE.
** THE LETTERS H AND L MAY BE OMITTED IN THE UNDEFINED CASE.

***OTHER POSSIBLE COMBINATIONS:

KQI	(RUNNING TIME INDICATOR)	ZIC	(POSITION INDICATION – CLOSED)
HSS	(HAND SAFETY SWITCH)	ZIO	(POSITION INDICATION – OPEN)
ZZS	(ZERO POSITION SWITCH)	ZSC	(POSITION SWITCH – CLOSED)
		ZSO	(POSITION SWITCH – OPEN)

VALVES, FITTINGS, PUMPS & MISCELLANEOUS EQUIPMENT

- BV: BALL VALVE
- BF: BUTTERFLY VALVE
- CV: CHECK VALVE
- DV: DIAPHRAGM VALVE
- GV: GATE VALVE
- GLV: GLOBE VALVE
- KGV: KNIFE GATE VALVE
- PLV: PLUG VALVE
- PV: PINCH VALVE
- PRV: PRESSURE REGULATOR W/ INTERNAL TAP
- ARV: RELIEF VALVE
- 3–WAY VALVE
- ANGLE VALVE
- ATMOSPHERIC VENT
- BLIND FLANGE
- CAP
- CONCENTRIC REDUCER
- OPEN DRAIN
- FLEX CONNECTOR
- FLEXIBLE HOSE
- FLOW DIRECTION
- HARNESSED COUPLING
- HOSE CONNECTION
- AIR RELIEF VALVE
- MIXER OR FLOCCULATOR WITH ELECTRIC MOTOR
- CENTRIFUGAL COMPRESSOR OR BLOWER (XX)
- CENTRIFUGAL FAN
- CENTRIFUGAL PUMP (DRY PIT)
- GEAR PUMP–PD (POSITIVE DISPLACEMENT)
- VENDOR SUPPLIED DEVICE
- MOTOR (M ###)
- POINT OF CONNECTION (P)
- PIPING SPEC CHANGE (SPEC_SPEC)
- STOP PLATE
- SLIDE GATE
- SLUICE GATE

PRIMARY ELEMENTS

- BUBBLE TUBE
- SUBMERSIBLE PRESSURE TRANSDUCER
- UNCLASSIFIED LEVEL ELEMENT :X = E SWITCH :X = S (SEE SPECIFICATIONS) *SEE NOTATION TABLE (LX ###)*
- UNCLASSIFIED FLOW ELEMENT :X = E SWITCH :X = S (SEE SPECIFICATIONS) *SEE NOTATION TABLE (FX ###)*
- PRESSURE GAUGE (MECHANICAL SYSTEM)
- MAGNETIC FLOWMETER
- OPEN CHANNEL WEIR PLATE
- THERMAL MASS FLOWMETER
- TURBINE FLOWMETER
- VENTURI TUBE
- PRIMARY ELEMENT & STILLING WELL
- RADAR
- SONIC

IN ACCORDANCE WITH TITLE VIII, ARTICLE 145, SECTION 7209 (2) OF THE NEW YORK STATE EDUCATION LAW, IT IS A VIOLATION OF LAW FOR ANY PERSON UNLESS ACTING UNDER THE DIRECTION OF A LICENSED ENGINEER TO ALTER THIS DOCUMENT.

IN CHARGE OF D. LETKIEWICZ
CHECKED BY S. THOMPSON
MADE BY M. EUCEDA

O'BRIEN & GERE ENGINEERS, INC.
50 MAIN ST., 10TH FLOOR, SUITE 1000
WHITE PLAINS, NEW YORK 10606

REVISION NUMBER	DATE	MADE BY	APP'D BY	REVISION

RECORD DRAWING CERTIFICATION

- ☐ AS BUILT - CHANGES AS NOTED
- ☐ AS BUILT - NO CHANGES

CONTRACTOR	PROJECT COORDINATOR
NAME	NAME
SIGNATURE	SIGNATURE
TITLE DATE	TITLE DATE

WESTCHESTER COUNTY, NEW YORK
DEPARTMENT OF PUBLIC WORKS AND TRANSPORTATION
DIVISION OF ENGINEERING

CONTRACT NUMBER 17-529 | SHEET NUMBER I-001
SHEET NO. 33 OF 60

CROTONVILLE PUMPING STATION REHABILITATION
OSSINING SANITARY SEWER DISTRICT
OSSINING, NEW YORK
PROCESS CONTROL & INSTRUMENTATION SYMBOLS

SCALE:
DATE: 12/21/2018
DPW FILE NO. 208-03-E-57-0 | REV. NO. 0

I:\WESTCHESTER-CO.-DPW\13020\66136.CROTONVILLE-PUMP\DOCS\DWG\SHEETS\66136I-001A.DWG

DATE: 11/12/2020 12:06 PM

SCADA WORKSTATION (REMOTE)

COUNTY WAN — ROUTER — MODEM — ROUTER

UPS ON	UPS LOW BATTERY	PLC FAULT	LOSS OF ECHO	DIFFERENTIAL LEVEL	SCREEN IN AUTO	SCREEN FAULT	SCREEN RUNNING	WASH/COMP FAULT	WASH/COMP RUNNING	LO-LO LEVEL	HI-HI LEVEL	WET WELL LEVEL	PRIMARY LEVEL FAULT	WET WELL ACTIVE	PUMP CTL IN AUTO	LOWER LEVEL CTL DISABLED	RUN COMMAND	PUMP RUNNING	SSRV FAULT	PUMP HI PRESSURE	PUMP LEAK	PUMP HI TEMP	STATION DISCHARGE PRESSURE	STATION FLOW RATE	STATION TOTAL FLOW	DRY WELL FLOOD
YIL 010	JA 010	UA 011	XA 100	DLI 100	HS-1 110	YA 110	YI 110	YA 120	YI 120	LALL 130	LAHH 130	LI 130	YA 130	YIL 130	HS-1 133	HS-2 133	YC 133	YI 133	YA 133	PAH 133	LAH 133	TAH 133	PI 160	FI 160	SI 160	LAH 141

MAIN CONTROL PANEL (MCP)

UPS JS 010

TYPICAL FOR SECOND WELL

TYPICAL FOR PU-131 & PU-132

I-003 CONTROL

AUTO-DIALER — DUPLICATE ALARMS IN EX. AUTODIALER. SEE NOTE 4.

AUTO-DIALER — MOUNT AUTODIALER ON THE EXTERIOR OF THE MCP.

MECHANICAL BAR SCREEN CONTROL PANEL

SYSTEM		SCREEN		WASHER/COMPACTOR				
ON	SILENCE	ON	FAULT	ON	FAULT	WASH ON	FLSH ON	
YIL 100	HS3 100	YIL 110	YAL 110	YIL 120	YAL 120	YIL 120	YIL 120	
RESET			RESET		RESET	WASH HOA	FLSH HOA	
LIT 100			HS2 110		HS2 120	HS1 120	HS1 120	

PUMP SSRV CONTROLLER

	HOA	DISABLE	RUN	FAIL	TEMP	LEAK	PRESS
	HS-1 133	HS-2 133	YI 133	YA 133	TAH 133	LAH 133	PAH 133

PUMP PROTECTION PANEL

YC 133, YC 133 — SEE NOTE 1

BUBBLER PANEL

LSL 130C, LSHH 130C, LI 130B, LI 131B, LI 130A

POTABLE WATER

ZS 110B REV, ZS 110A OL, M 110, TSH 110

ESTOP FOR HS-2 110, HS-1 110

ZS 110C END

FOR ESTOP HS-1 120, HS-2 120

M 120

LSH 110

LE-110A, LE-110B

DUMPSTER

SPC-120
SCREENING PRESS CONVEYOR

MAGNESIUM HYDROXIDE SHEET I-003

CHANNEL

STOP PLATE

SCR-110
MECHANICAL BAR SCREEN

SANITARY SEWER INFLUENT

24"x24" SLIDE GATE

BR-111
BAR RACK

12"X18" SLIDE GATE

LE-130A

LSL 131C, LSHH 131C, LI 131A

LE-131A

WET WELL

PU-133
PUMP NO. 3

PU-132
PUMP NO. 2

PU-131
PUMP NO. 1

E-STOP — HS 133, TE 133, M 133, TSH 133, LSH 133, PG 133, PSH 133 — SEE NOTE 2 — 12" GV-133 — 10"x12" — CV-133 12" — 12" GV-143

E-STOP — HS 132, M 132, TSH 132, LSH 132, PG 132, PSH 132 — SEE NOTE 2 — 12" GV-132 — 10"x12" — CV-132 12" — 12" GV-142 — 12"x16"

E-STOP — HS 131, M 131, TSH 131, LSH 131, PG 131, PSH 131 — SEE NOTE 2 — 12" GV-131 — 10"x12" — CV-131 12" — 8" GV-161 — 12" GV-141 — 12"x8" — 8" SRV-161

PIT 160

120Vac FIT 160

16" — M — 16" GV-160

FE-160 (0-10 MGD)

PUMP STATION DISCHARGE

LSH 141

BUILDING SUMP

NOTES:

1. CERTAIN AREAS ARE CLASSIFIED AS HAZARDOUS LOCATIONS, PER THE NATIONAL ELECTRICAL CODE (NEC). ELECTRICAL INSTALLATION SHALL CONFORM WITH THE NEC FOR CLASS I DIVISION 1 ENVIRONMENTS. REFER TO ELECTRICAL DRAWINGS FOR LOCATIONS.
2. MONITOR RELAYS, (YC), FOR WINDING TEMPERATURE, BEARING TEMPERATURE AND, MOTOR HOUSING LEAK SHALL BE PROVIDED BY THE PUMP MANUFACTURER AND SHALL BE MOUNTED IN THE PUMP PROTECTION PANEL AND WIRED BY THE CONTRACTOR.
3. EACH PHASE OF THE MOTOR SHALL CONTAIN A TEMPERATURE SWITCH (TSH). IN ADDITION, RTD (TE) SHALL BE PROVIDED TO MONITOR MOTOR WINDINGS AND BEARING TEMPERATURE. A LEAK SENSOR (LSH) SHALL ALSO BE PROVIDED TO DETECT PRESENSE OF WATER WITHIN MOTOR HOUSING. REFER TO MECHANICAL SPECIFICATIONS FOR ACTUAL QUANTITIES
4. ALL NEW PLC EQUIPMENT, PLC MODIFICATIONS, AND WIRE TERMINATIONS AND I/O CHECKS SHALL BE BY CONTRACTOR.
5. PROVIDE A NEW AUTODIALER TO TRANSMIT STATION ALARMS. REFER TO SPECIFICATION 40 78 63, STATION ALARMS SHALL ALSO BE DUPLICATED AND SENT TO THE EXISTING AUTODIALER. PROVIDE RELAYS AND OTHER COMPONENTS IN THE CONTROL PANELS TO SPLIT THESE ALARMS INTO BOTH DIALERS.
6. PLC/OIT/SCADA PROGRAMMING BY OWNER APPROVED PROGRAMMER.

STATE OF NEW YORK — DAREK LETKIEWICZ — 075789 — LICENSED PROFESSIONAL ENGINEER

Jul 15 2021 2:31 PM

IN ACCORDANCE WITH TITLE VIII, ARTICLE 145, SECTION 7209 (2) OF THE NEW YORK STATE EDUCATION LAW, IT IS A VIOLATION OF LAW FOR ANY PERSON UNLESS ACTING UNDER THE DIRECTION OF A LICENSED ENGINEER TO ALTER THIS DOCUMENT.

IN CHARGE OF D. LETKIEWICZ
CHECKED BY S. THOMPSON
MADE BY M. EUCEDA

O'BRIEN & GERE ENGINEERS, INC.
50 MAIN ST., 10TH FLOOR, SUITE 1000
WHITE PLAINS, NEW YORK 10606

REVISION NUMBER	DATE	MADE BY	APP'D BY	REVISION

RECORD DRAWING CERTIFICATION

☐ AS BUILT - CHANGES AS NOTED
☐ AS BUILT - NO CHANGES

CONTRACTOR	PROJECT COORDINATOR
NAME	NAME
SIGNATURE	SIGNATURE
TITLE DATE	TITLE DATE

WESTCHESTER COUNTY, NEW YORK
DEPARTMENT OF PUBLIC WORKS AND TRANSPORTATION
DIVISION OF ENGINEERING

CONTRACT NUMBER 17-529 | SHEET NUMBER I-002
SHEET NO. 34 OF 60

CROTONVILLE PUMPING STATION REHABILITATION
OSSINING SANITARY SEWER DISTRICT
OSSINING, NEW YORK
P&ID - PUMPING STATION

SCALE:
DATE: 12/21/2018
DPW FILE NO. 208-03-E-58-0 | REV. NO. 0

I:\WESTCHESTER-CO.-DPW\ 13020\66136.CROTONVILLE-PUM\DOCS\DWG\SHEETS\66136I-I001.DWG

DATE: 11/12/2020 12:07 PM

SCADA WORKSTATION (REMOTE)

TANK LEVEL — LI 210 — HH H L LL
MIXER IN AUTO — HS-1 210
MIXER RUNNING — YI 210
MIXER FAULT — YA 210
MIXER RUN COMMAND — YC 210
TANK LEAK — LAH 210
PUMP ALARM — YA 210

MAIN CONTROL PANEL (MCP)

TANK LEVEL — LI 210 — HH H L LL
MIXER IN AUTO — HS-1 210
MIXER RUNNING — YI 210
MIXER FAULT — YA 210
MIXER RUN COMMAND — YC 210
TANK LEAK — LAH 210
PUMP ALARM — YA 211

CONTROL I-002

I-004 CONTROL

MIXER MOTOR STARTER

HOA	RESET	ON	FAULT
HS-1 210	HS-2 210	YI 210	YA 210

PUMP LOCAL KEYPAD DISPLAY

AUTO	START	DIRECTION	SPEED	RUN	ALARM
HS-1 211	HS-2 211	HS-3 211	HS-4 211	YI 211	YA 211

120Vac — LIT 210
M 210
LSHH 210
2" 2" 24"
FE-210
MAGNESIUM HYDROXIDE STORAGE TANK

2" 2" Check 1"

2" 1" 2"-MGOH2 2"X1" 1" 1"

1"x1/2" 1/2"

M 211
CHEMICAL FEED PUMP NO.1

1/2"x1" 1/2"

1" 1" 1"-MGOH2

TO INFLUENT CHANNEL SHEET I-002

NOTES:

1. MAGNESIUM HYDROXIDE TANK MIXER SHALL BE INTERLOCKED WITH TANK LEVEL. SHUTDOWN MIXER WHEN LEVEL IS 2/3 DOWN MIXER SHAFT.
2. CHEMICAL FEED PUMP IS MANUALLY CONTROLLED. PROVIDE ALL WIRING FOR FUTURE AUTOMATIC OPERATION.

STATE OF NEW YORK — DAREK LETKIEWICZ — 97178 — LICENSED PROFESSIONAL ENGINEER

Jul 15 2021 2:31 PM

IN ACCORDANCE WITH TITLE VIII, ARTICLE 145, SECTION 7209 (2) OF THE NEW YORK STATE EDUCATION LAW, IT IS A VIOLATION OF LAW FOR ANY PERSON UNLESS ACTING UNDER THE DIRECTION OF A LICENSED ENGINEER TO ALTER THIS DOCUMENT.

IN CHARGE OF D. LETKIEWICZ
CHECKED BY S. THOMPSON
MADE BY M. EUCEDA

O'BRIEN & GERE ENGINEERS, INC.
50 MAIN ST., 10TH FLOOR, SUITE 1000
WHITE PLAINS, NEW YORK 10606

REVISION NUMBER	DATE	MADE BY	APP'D BY	REVISION

RECORD DRAWING CERTIFICATION

☐ AS BUILT - CHANGES AS NOTED
☐ AS BUILT - NO CHANGES

CONTRACTOR
NAME
SIGNATURE
TITLE DATE

PROJECT COORDINATOR
NAME
SIGNATURE
TITLE DATE

WESTCHESTER COUNTY, NEW YORK
DEPARTMENT OF PUBLIC WORKS AND TRANSPORTATION
DIVISION OF ENGINEERING

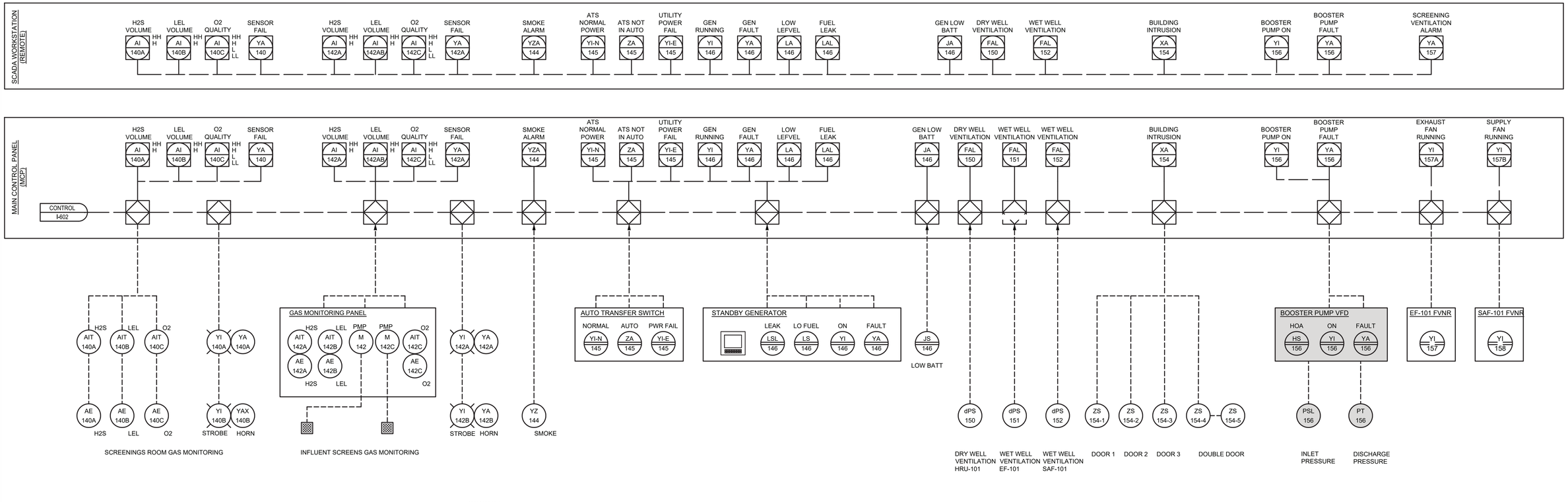
CONTRACT NUMBER 17-529
SHEET NUMBER I-003
SHEET NO. 35 OF 60

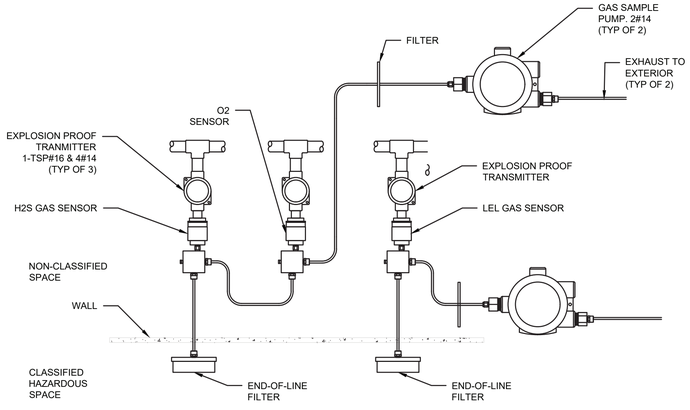
CROTONVILLE PUMPING STATION REHABILITATION
OSSINING SANITARY SEWER DISTRICT
OSSINING, NEW YORK
P&ID - CHEMICAL SYSTEM

SCALE:
DATE: 12/21/2018
DPW FILE NO. 208-03-E-59-0
REV. NO. 0

I:\WESTCHESTER-CO.-DPW.13020\68136.CROTONVILLE-PUMDOCS\DWG\SHEETS\68136I-602.DWG

DATE: 11/12/2020 12:08 PM





1 GAS SENSOR SAMPLING DETAIL

NOT TO SCALE

(INFLUENT SCREENING ROOM)

INFLUENT SCREENS ROOM:

1. PROVIDE GAS SAMPLING PANEL WITH SAMPLE PUMP, GAS SENSORS, TRANSMITTERS, FLOW CONTROLLER, FILTERS, VALVES AND TUBING.
2. INSTALL END-OF-LINE FILTERS IN THE HAZARDOUS SPACE WITH THE SUPPLIED SAMPLE TUBING. GAS SENSOR SAMPLE TUBE INLET FILTERS SHALL BE MOUNTED AT A HEIGHT WITHIN HAZARDOUS AREA TUBING SHALL NOT EXCEED 100 FEET OR AS NOTED BY MANUFACTURER.
3. GAS SAMPLING PANEL SHALL BE INSTALLED IN THE STORAGE ROOM. VENT ALL SAMPLING LINES TO THE EXTERIOR, AS RECOMMENDED BY THE MANUFACTURER.
4. IF ACCEPTABLE BY MANUFACTURER, THE USE OF A SINGLE TUBING AND SAMPLE PUMP MAY BE USED TO SAMPLE THE THREE GASES.
5. PROVIDE ALL THE COMPONENTS NECESSARY FOR FULLY FUNCTIONING SYSTEM. REFER TO SPECIFICATION 40 76 00 FOR ADDITIONAL DETAILS.

SCREENINGS ROOM:

1. PROVIDE GAS SENSORS AND TRANSMITTERS AS SPECIFIED.
2. GAS SENSOR SHALL BE MOUNTED AT A HEIGHTS RECOMMENDED BY MANUFACTURER. (LEL - 18" BELOW OF CEILING, H2S - NO MORE THAN 24" ABOVE FLOOR, O2 - 5 FOOT ABOVE FLOOR).
3. PROVIDE ALL THE COMPONENTS NECESSARY FOR FULLY FUNCTIONING SYSTEM. REFER TO SPECIFICATION 40 76 00 FOR ADDITIONAL DETAILS.

NOTES:

1. CERTAIN AREAS ARE CLASSIFIED AS HAZARDOUS LOCATIONS, PER THE NATIONAL ELECTRICAL CODE (NEC). ELECTRICAL INSTALLATION SHALL CONFORM WITH THE NEC FOR CLASS I DIVISION 1 ENVIRONMENTS. REFER TO ELECTRICAL DRAWINGS FOR LOCATIONS.
2. ALL NEW PLC EQUIPMENT, PLC MODIFICATIONS, AND WIRE TERMINATIONS AND I/O CHECKS SHALL BE BY CONTRACTOR.
3. PLC/OIT/SCADA PROGRAMMING BY OWNER APPROVED PROGRAMMER.
4. WET WELL VENTILATION IS INTERMITTENT. PROGRAMMER SHALL PROVIDE LOGIC TO ALARM WHEN THE GAS LEVEL EXCEED SETPOINT ONLY WHEN THE VENTILATION SYSTEM IS ACTIVE.

STATE OF NEW YORK · DAREK LETKIEWICZ · 075789 · LICENSED PROFESSIONAL ENGINEER

Jul 15 2021 2:31 PM

IN ACCORDANCE WITH TITLE VIII, ARTICLE 145, SECTION 7209 (2) OF THE NEW YORK STATE EDUCATION LAW, IT IS A VIOLATION OF LAW FOR ANY PERSON UNLESS ACTING UNDER THE DIRECTION OF A LICENSED ENGINEER TO ALTER THIS DOCUMENT.

IN CHARGE OF D. LETKIEWICZ
CHECKED BY S. THOMPSON
MADE BY M. EUCEDA

O'BRIEN & GERE ENGINEERS, INC.
50 MAIN ST., 10TH FLOOR, SUITE 1000
WHITE PLAINS, NEW YORK 10606

REVISION NUMBER	DATE	MADE BY	APP'D BY	REVISION

RECORD DRAWING CERTIFICATION

☐ AS BUILT - CHANGES AS NOTED
☐ AS BUILT - NO CHANGES

CONTRACTOR	PROJECT COORDINATOR
NAME	NAME
SIGNATURE	SIGNATURE
TITLE DATE	TITLE DATE

WESTCHESTER COUNTY, NEW YORK
DEPARTMENT OF PUBLIC WORKS AND TRANSPORTATION
DIVISION OF ENGINEERING

CONTRACT NUMBER 17-529
SHEET NUMBER I-004
SHEET NO. 36 OF 60

CROTONVILLE PUMPING STATION REHABILITATION
OSSINING SANITARY SEWER DISTRICT
OSSINING, NEW YORK
P&ID - ANCILLIARY

SCALE:
DATE: 12/21/2018
DPW FILE NO. 208-03-E-60-0
REV. NO. 0

I:\WESTCHESTER-CO.-DPW\13020\66136.CROTONVILLE-PUM\DOCS\DWG\SHEETS\66136I-I-003.DWG

ABBREVIATIONS

A

AFF	ABOVE FINISHED FLOOR
AC	ALTERNATING CURRENT
A	AMPS
AF	AMP FRAME
A.I.C.	AMPS INTERRUPTING CAPACITY
AT	AMPS TRIP
ATS	AUTOMATIC TRANSFER SWITCH

B

BKR	BREAKER

C

CUH	CABINET UNIT HEATER
℄	CENTERLINE
CKT	CIRCUIT
CC - ( )	CONTROL CONDUIT-(ID)
CP	CONTROL PANEL
CPT	CONTROL POWER TRANSFORMER
CR - ( )	CONTROL RELAY-(ID)
CT	CURRENT TRANSFORMER

D

DIA.	DIAMETER
DP	DIFFERENTIAL PRESSURE
DI	DIGITAL INPUT
DO	DIGITAL OUTPUT
DPM	DIGITAL POWER MONITOR
DC	DIRECT CURRENT
DDC	DIRECT DIGITAL CONTROL
DISC SW	DISCONNECT SWITCH
DP - ( )	DISTRIBUTION PANEL-(ID)
DP - ( ) / ( )	DISTRIBUTION PANEL CIRCUIT (PANEL NO.)/(CIRCUIT NO.)
DPDT	DOUBLE POLE, DOUBLE THROW
DB - (ID)	DUCT BANK - (ID)

E

EUH	ELECTRIC UNIT HEATER
EWH	ELECTRIC WATER HEATER
EL	ELEVATION
EMF - ( )	EMERGENCY MAIN FEEDER - (ID)
EF	EXHAUST FAN
EXIST.	EXISTING

F

FT	FEET
FIN FLR	FINISHED FLOOR
FIT	FLOW INDICATING TRANSMITTER
FE	FLOW PRIMARY ELEMENT
FSL	FLOW SWITCH LOW

G

GPM	GALLONS PER MINUTE
G	GREEN
GRD	GROUND
GFI	GROUND FAULT INTERRUPTER

H

HOA	HAND-OFF-AUTOMATIC
HS	HAND SWITCH
HZ	HERTZ
HP	HORSEPOWER

I

ID	IDENTIFICATION NUMBER
I/O	INPUT/OUTPUT

J

JB	JUNCTION BOX

K

K	DEGREES KELVIN
KVA	KILOVOLT AMPERE
KV	KILOVOLT
KW	KILOWATT

L

LSH	LEVEL SWITCH HIGH
LSHH	LEVEL SWITCH HIGH - HIGH
LSLL	LEVEL SWITCH LOW - LOW
LT	LEVEL TRANSMITTER
LS	LIMIT SWITCH
LCP	LOCAL CONTROL PANEL
LED	LIGHT EMITTING DIODE
LTG	LIGHTING
LP	LIGHTING PANEL
LP - ( )	LIGHTING PANEL CIRCUIT (CKT NO.)
L	LINE CONDUCTOR
LAN	LOCAL AREA NETWORK

M

MCB	MAIN CIRCUIT BREAKER
MF - ( )	MAIN FEEDER - (ID)
MLO	MAIN LUGS ONLY
MUAU	MAKE UP AIR UNIT
MCOV	MAXIMUM CONTINUIOS OPERATING VOLTAGE
MV	MEDIUM VOLTAGE
mA	MILLIAMPERES
MGD	MILLION GALLONS PER DAY
M - ( )	MOTOR - (ID)
MCP	MAIN CONTROL PANEL
MCC	MOTOR CONTROL CENTER
MCCP	MOLDED CASE CIRCUIT PROTECTOR
M	MOTOR STARTER CONTACTOR
MCM	THOUSAND CIRCULAR MILS
MTD	MOUNTED
MTS	MANUAL TRANSFER SWITCH
(N) / C	MULTICONDUCTOR CABLE (N = NUMBER OF CONDUCTORS)

N

NEC	NATIONAL ELECTRICAL CODE
N	NEUTRAL CONDUCTOR
N.C.	NORMALLY CLOSED
N.O.	NORMALLY OPEN
NO.	NUMBER

O

OL	OVERLOAD

P

Ø or PH	PHASE
PVC	POLYVINYL CHLORIDE CONDUIT
PT	POTENTIAL TRANSFORMER
PC - ( )	POWER & CONTROL CONDUIT - (ID)
PP	POWER PANEL
PB	PULLBOX
P - ( )	POWER CONDUIT-(ID)
PP - ( )	POWER PANEL - (CKT NO.)
( ) P	(QTY) POLES
PRESS SW	PRESSURE SWITCH
PCS ( )	PROCESS CONTROL SYSTEM CABINET (ID)
PLC	PROGRAMMABLE LOGIC CONTROLLER

Q

QTY	QUANTITY

R

RECPT	RECEPTACLE
R	RED
RMS	ROOT MEAN SQUARE

S

SPDT	SINGLE POLE, DOUBLE THROW
S/S	START/STOP
SCADA	SUPERVISORY CONTROL AND DATA AQUISITION
SPD	SURGE PROTECTIVE DEVICE
SW	SWITCH
SSRV	SOLID STATE REDUCED VOLTAGE STARTER
SWBD	SWITCHBOARD
SYMM	SYMMETRICAL

T

T - ( )	TELEPHONE CONDUIT - (ID)
TEMP	TEMPERATURE
TSH	TEMPERATURE SWITCH HIGH
T or T'STAT	THERMOSTAT
TR - ( )	TIMING RELAY - (ID)
TSP	TWISTED SHIELDED PAIR
TST	TWISTED SHIELDED TRIPLEX
TYP	TYPICAL

U

UPS	UNITERUPTABLE POWER SUPPLY

V

VFD	VARIABLE FREQUENCY DRIVE
VOIP	VOICE OVER INTERNET PROTOCOL
VA	VOLT - AMPERE
VAC	VOLTS ALTERNATING CURRENT
VAR	VOLT AMPERES REACTIVE
VT	VOLTAGE TRANSFORMER
VDC	VOLTS DIRECT CURRENT

W

W	WATT
WP	WEATHERPROOF

X

XFMR	TRANSFORMER

ONE-LINE AND ELEMENTARY DIAGRAM SYMBOLS

NOTE:

UNLESS OTHERWISE NOTED, ALL SWITCHES AND CONTACTS ARE SHOWN WITH ACTUATING DEVICES IN THE DE-ENERGIZED, OR NON-OPERATED POSITION.

- PUSHBUTTON (MOMENTARY, SPRING RETURN, NORMALLY OPEN CIRCUIT, CLOSE UPON ACTUATION)
- PUSHBUTTON (MOMENTARY, SPRING RETURN, NORMALLY CLOSED CIRCUIT, OPEN UPON ACTUATION)
- MAINTAINED CONTACT PUSHBUTTON WITH MUSHROOM HEAD OPERATOR
- MULTI-POSITION SELECTOR SWITCH
  X = CONTACT CLOSED
  * = SWITCH POSITIONS AS NOTED
- LIMIT SWITCH (NORMALLY OPEN)
- LEVEL ACTUATED SWITCH (CLOSE ON RISING LEVEL)
- TEMPERATURE ACTUATED SWITCH (CLOSE ON RISING TEMPERATURE)
- TEMPERATURE ACTUATED SWITCH (OPEN ON RISING TEMPERATURE)
- TIME DELAY CONTACT (NORMALLY OPEN, TIME DELAY CLOSE)
- TIME DELAY CONTACT (NORMALLY OPEN, TIME DELAY OPEN)
- TIME DELAY CONTACT (NORMALLY CLOSED, TIME DELAY OPEN)
- TIME DELAY CONTACT (NORMALLY CLOSED, TIME DELAY CLOSE)
- CONTACT (NORMALLY CLOSED)
- CONTACT (NORMALLY OPEN)
- INDICATING LIGHT (NON-PUSH-TO-TEST)
- RELAY OR CONTACTOR COIL
- MANUAL MOTOR STARTING SWITCH
- CIRCUIT BREAKER OR MCCP
- FUSE
- WIRING ROUTED FROM
- WIRING ROUTED TO
- RESISTANCE HEATING ELEMENT
- LOAD INTERRUPTOR SWITCH

* = LENS COLOR:

OP	-OPALESCENT	A	-AMBER
P	-PURPLE	B	-BLUE
R	-RED	C	-CLEAR
W	-WHITE	G	-GREEN
Y	-YELLOW	NE	-NEON
		O	-ORANGE

- FULL VOLTAGE NON-REVERSING MOTOR STARTER WITH THERMAL OVERLOAD RELAY
- NON-FUSED DISCONNECT SWITCH
- POLE
- TRANSFORMER
- UNGROUNDED WYE WINDING
- GROUNDED WYE WINDING
- DELTA WINDING
- MOTOR (* = HORSEPOWER)
- GROUND
- CURRENT TRANSFORMER
- VOLTAGE TRANSFORMER
- EQUIPMENT WIRING TERMINAL
- LIGHTNING ARRESTER
- DPM — DIGITAL POWER MONITOR

LIGHTING SYMBOLS

- EXIT SIGN (SHADED SEGMENTS = SIGN FACES)
- S — SINGLE POLE WALL SWITCH (UNLESS OTHERWISE INDICATED)
- S_3 — 3-WAY WALL SWITCH
- S_O — SINGLE POLE WALL SWITCH WITH OCCUPANCY SENSOR
- FIXTURE SWITCHING CONNECTION

GENERAL ELECTRICAL SYMBOLS

- EQUIPMENT OR WIRING TO BE REMOVED
- WIRING CONTINUATION
- J — JUNCTION BOX
- CONTROL STATION OR CONTROL DEVICE (TYPE AS NOTED)
- INSTRUMENT (TYPE OR TAG NO. AS NOTED)
- ELECTRICAL CONNECTION
- NON-FUSED DISCONNECT SWITCH
- HOMERUN TO PANELBOARD WITH CIRCUIT NUMBER AS SHOWN
- M — MANUAL MOTOR STARTING SWITCH
- GFI — DUPLEX GFCI RECEPTACLE
- WP/GFI — DUPLEX GFCI RECEPTACLE WITH WEATHERPROOF COVER
- T — THERMOSTAT
- DIRECT BURIED CONDUIT
- S — SMOKE DETECTOR - CEILING MOUNTED

COMMUNICATIONS SYSTEM SYMBOLS

- TELEPHONE
- TELEPHONE OUTLET

GENERAL NOTES:

1. ALL ELECTRICAL EQUIPMENT AND WIRING IS NEW UNLESS OTHERWISE NOTED.
2. WHERE EXISTING EQUIPMENT AND WIRING IS SHOWN TO BE MODIFIED OR REMOVED, FIELD VERIFY EXISTING LOCATIONS, CONNECTIONS AND WIRING TO ENSURE ACTUAL FEATURES ARE AS SHOWN OR NOTED.
3. FIELD VERIFY EXISTING FEATURES AS NECESSARY TO COORDINATE EXECUTION OF THE WORK SHOWN.
4. ELECTRICAL EQUIPMENT SHALL BE MOUNTED WITH OPERATING CONTROLS BETWEEN APPROXIMATELY 4'-0" AND 6'-0" ABOVE FINISHED FLOOR UNLESS OTHERWISE SHOWN OR SPECIFIED.

STATE OF NEW YORK · ERIC J. MILES · LICENSED PROFESSIONAL ENGINEER · 090895

2021-07-15

IN ACCORDANCE WITH TITLE VIII, ARTICLE 145, SECTION 7209 (2) OF THE NEW YORK STATE EDUCATION LAW, IT IS A VIOLATION OF LAW FOR ANY PERSON UNLESS ACTING UNDER THE DIRECTION OF A LICENSED ENGINEER TO ALTER THIS DOCUMENT.

IN CHARGE OF Eric Miles
CHECKED BY Jim Crosier
MADE BY J. Clark

O'BRIEN & GERE ENGINEERS, INC.
50 MAIN ST., 10TH FLOOR SUITE 1000,
WHITE PLAINS, NEW YORK 10606

REVISION NUMBER	DATE	MADE BY	APP'D BY	REVISION

RECORD DRAWING CERTIFICATION

☐ AS BUILT - CHANGES AS NOTED
☐ AS BUILT - NO CHANGES

CONTRACTOR	PROJECT COORDINATOR
NAME	NAME
SIGNATURE	SIGNATURE
TITLE DATE	TITLE DATE

WESTCHESTER COUNTY, NEW YORK
DEPARTMENT OF PUBLIC WORKS AND TRANSPORTATION
DIVISION OF ENGINEERING

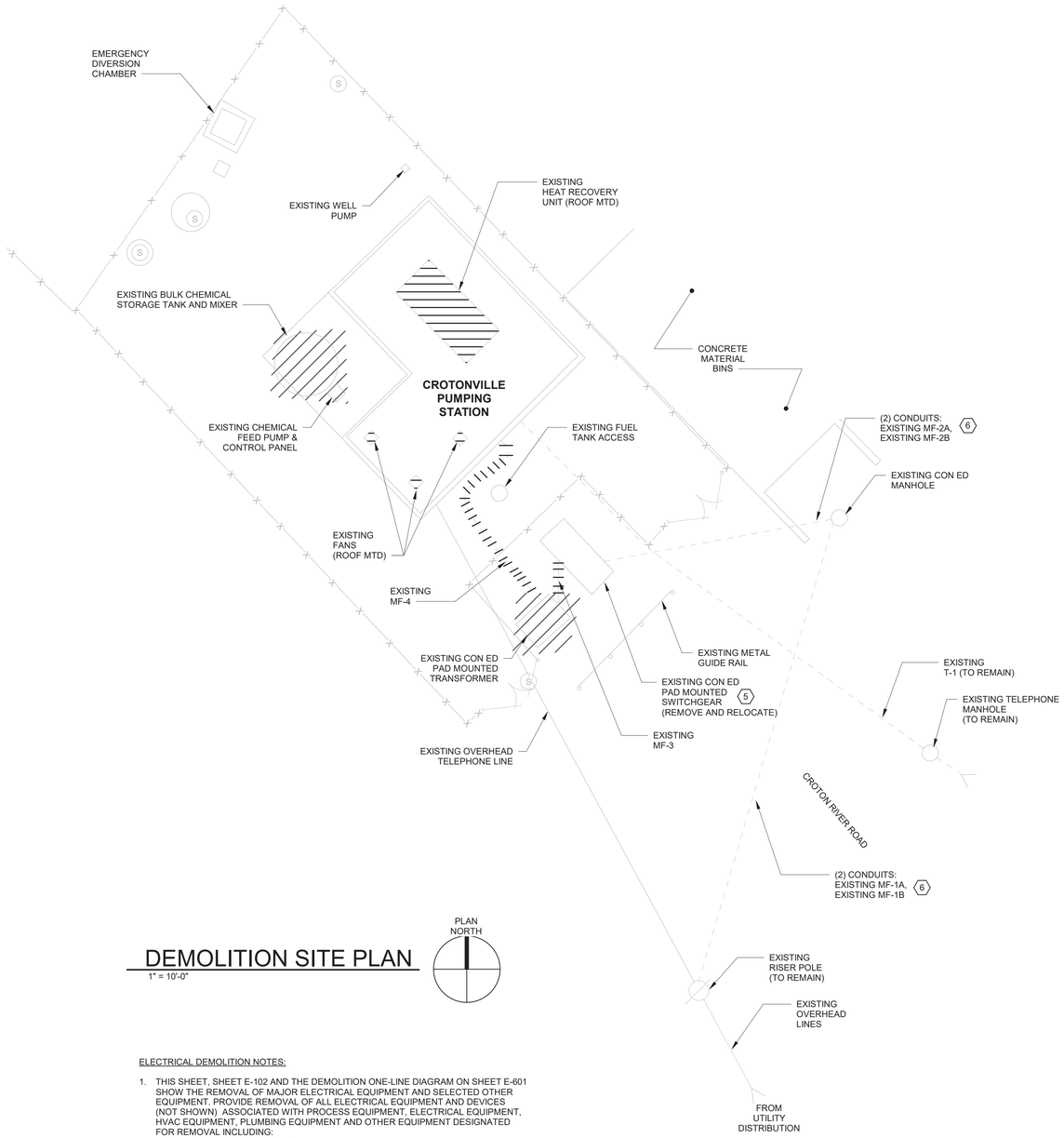
CONTRACT NUMBER
SHEET NUMBER E-001
SHEET NO. 37 OF 60

CROTONVILLE PUMPING STATION REHABILITATION

OSSINING, NEW YORK
GENERAL NOTES, ABBREVIATION & SYMBOLS

SCALE:
DATE: 12/21/2018
DPW FILE NO. 208-03-E-61-0
REV. NO. 0

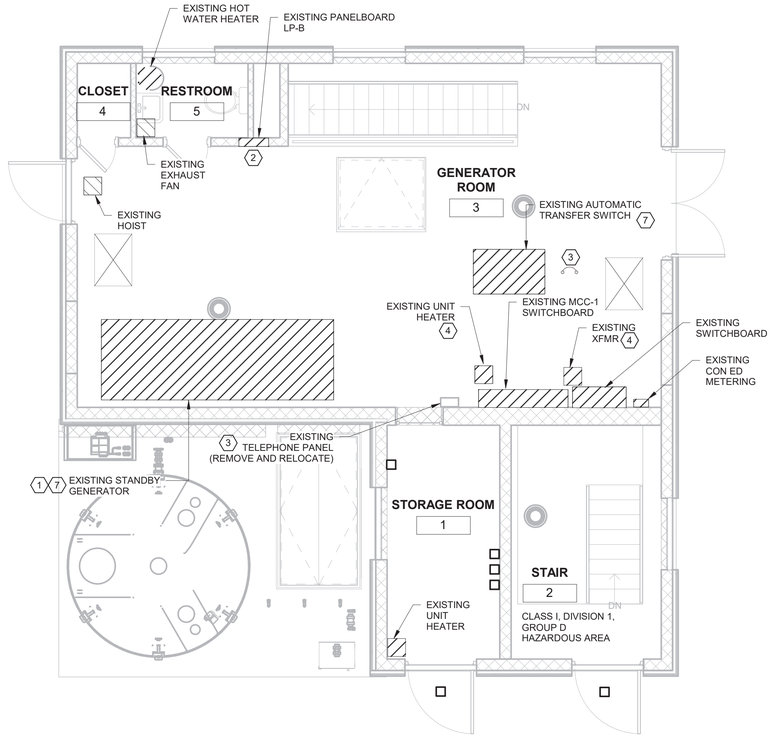
4/14/2021 8:32:19 AM



DEMOLITION SITE PLAN

1" = 10'-0"

PLAN NORTH



MAIN LEVEL DEMOLITION PLAN

1/4" = 1'-0"

4' 2' 0 2' 4'

PLAN NORTH

ELECTRICAL DEMOLITION NOTES:

1. THIS SHEET, SHEET E-102 AND THE DEMOLITION ONE-LINE DIAGRAM ON SHEET E-601 SHOW THE REMOVAL OF MAJOR ELECTRICAL EQUIPMENT AND SELECTED OTHER EQUIPMENT. PROVIDE REMOVAL OF ALL ELECTRICAL EQUIPMENT AND DEVICES (NOT SHOWN) ASSOCIATED WITH PROCESS EQUIPMENT, ELECTRICAL EQUIPMENT, HVAC EQUIPMENT, PLUMBING EQUIPMENT AND OTHER EQUIPMENT DESIGNATED FOR REMOVAL INCLUDING:
   - DISCONNECT SWITCHES
   - MOTOR CONTROLLERS
   - CONTROL DEVICES
   - CONTROL PANELS
   - CONTROL STATIONS
   - THERMOSTATS
2. PROVIDE REMOVAL OF THE FOLLOWING ELECTRICAL SYSTEMS AND EQUIPMENT (NOT SHOWN):
   - TRANSFORMERS
   - INSTRUMENTATION
   - DATA COMMUNICATION DEVICES (RETURN TO COUNTY)
   - CARBON MONOXIDE ALARM
   - FUEL TANK MONITORING EQUIPMENT (RETURN TO COUNTY)
   - DOOR SWITCHES
   - INTERIOR LIGHTING FIXTURES
   - EXTERIOR LIGHTING FIXTURES
   - LIGHTING CONTROLS
   - RECEPTACLES
   - WIRING
   - GROUNDING
3. WIRING REMOVALS SHALL INCLUDE CONDUCTORS, CABLES, EXPOSED CONDUITS, PULL BOXES, WIREWAYS, JUNCTION BOXES, SURFACE MOUNTED OUTLET BOXES, CONDUIT FITTINGS AND TELEPHONE JACKS UNLESS OTHERWISE INDICATED. CONCEALED AND UNDERGROUND CONDUITS MAY BE ABANDONED IN-PLACE UNLESS INTERFERING WITH NEW CONSTRUCTION. PORTIONS OF CONCEALED AND UNDERGROUND CONDUITS INTERFERING WITH NEW CONSTRUCTION SHALL BE REMOVED. RECESSED OUTLET BOXES MAY REMAIN IN-PLACE. PROVIDE BLANK COVERS ON REMAINING RECESSED OUTLET BOXES.

ELECTRICAL DEMOLITION NOTES CONTINUED:

4. WHERE WIRING REMOVALS INCLUDE UNDERGROUND CONDUITS ENTERING THE PUMPING STATION, REMOVE INTERIOR PORTION OF CONDUIT TO WITHIN 6" OF INTERIOR WALL SURFACE. SEAL INTERIOR OF REMAINING CONDUIT INTERIOR WITH CONDUIT SEALANT AND CAP.
5. PROVIDE REMOVAL OF ALL HARDWARE, SUPPORTS, BRACKETS AND FASTENERS ASSOCIATED WITH ELECTRICAL ITEMS DESIGNATED FOR REMOVAL.
6. PROVIDE RESTORATION OF SURFACES REQUIRING REPAIR AS A RESULT OF ELECTRICAL REMOVALS. THIS SHALL INCLUDE SEALING WALL, FLOOR, ROOF AND EQUIPMENT ENCLOSURE PENETRATIONS AND FILLING HOLES REMAINING FROM FASTENER REMOVALS. RESTORED SURFACES SHALL EQUAL ADJACENT UNDISTURBED SURFACES.
7. COORDINATE ELECTRICAL REMOVALS TO MAINTAIN OPERATION OF PROCESS EQUIPMENT, HVAC EQUIPMENT AND PLUMBING EQUIPMENT UNTIL THEIR DECOMMISSIONING INCLUDING ANY INSTRUMENTATION, LIGHTING OR BUILDING SYSTEMS NECESSARY FOR OPERATION OF THE EQUIPMENT.
8. REMOVED ELECTRICAL EQUIPMENT AND MATERIALS SHALL BE DISPOSED OF OFF-SITE UNLESS OTHERWISE INDICATED.
9. COORDINATE REMOVAL OF UTILITY OWNED EQUIPMENT AND WIRING WITH THE SERVICE PROVIDERS.

KEYED NOTES:

1. STANDBY GENERATOR REMOVALS SHALL INCLUDE FUEL PUMPS, DAY TANK, FUEL PIPING, VENT PIPING, BATTERIES, BATTERY CHARGER, AIR PLENUM AND EXHAUST SYSTEM. BATTERY CHARGER SHALL BE RETURNED TO COUNTY.
2. PROVIDE REMOVAL OF PANELBOARD LP-B COVER AND INTERIOR. RECESSED PANELBOARD BOX SHALL REMAIN IN-PLACE. PROVIDE A 12 GAUGE GALVANIZED STEEL PLATE SIZED AS NECESSARY TO COVER THE REMAINING RECESSED BOX. FASTEN PLATE SECURELY TO WALL.
3. PROVIDE REMOVAL/REINSTALLATION OF THE TELEPHONE SYSTEM COMPONENTS INDICATED. SEE SHEETS E-103 AND E-104 FOR LOCATIONS OF REINSTALLED COMPONENTS.
4. RETURN TO COUNTY AFTER REMOVAL.
5. PROVIDE REMOVAL / REINSTALLATION OF CON ED PAD MOUNTED SWITCHGEAR. REINSTALLATION SHALL BE ON ELEVATED PLATFORM AS SHOWN ON SHEET E-103.
6. REMOVE CONDUCTORS. EXISTING 4" CONDUITS SHALL REMAIN FOR REUSE.
7. COUNTY WILL REMOVE SELECTED COMPONENTS PRIOR TO EQUIPMENT DISPOSAL BY CONTRACTOR.

STATE OF NEW YORK · ERIC J. MILES · 090895 · LICENSED PROFESSIONAL ENGINEER

2021-07-15

IN ACCORDANCE WITH TITLE VIII, ARTICLE 145, SECTION 7209 (2) OF THE NEW YORK STATE EDUCATION LAW, IT IS A VIOLATION OF LAW FOR ANY PERSON UNLESS ACTING UNDER THE DIRECTION OF A LICENSED ENGINEER TO ALTER THIS DOCUMENT.

IN CHARGE OF Eric Miles
CHECKED BY Jim Crosier
MADE BY Joseph LaGoy

O'BRIEN & GERE ENGINEERS, INC.
50 MAIN ST., 10TH FLOOR SUITE 1000, WHITE PLAINS, NEW YORK 10606

REVISION NUMBER	DATE	MADE BY	APP'D BY	REVISION

RECORD DRAWING CERTIFICATION

☐ AS BUILT - CHANGES AS NOTED
☐ AS BUILT - NO CHANGES

CONTRACTOR
NAME
SIGNATURE
TITLE DATE

PROJECT COORDINATOR
NAME
SIGNATURE
TITLE DATE

WESTCHESTER COUNTY, NEW YORK
DEPARTMENT OF PUBLIC WORKS AND TRANSPORTATION
DIVISION OF ENGINEERING

CONTRACT NUMBER
SHEET NUMBER E-101
SHEET NO. 38 OF 60

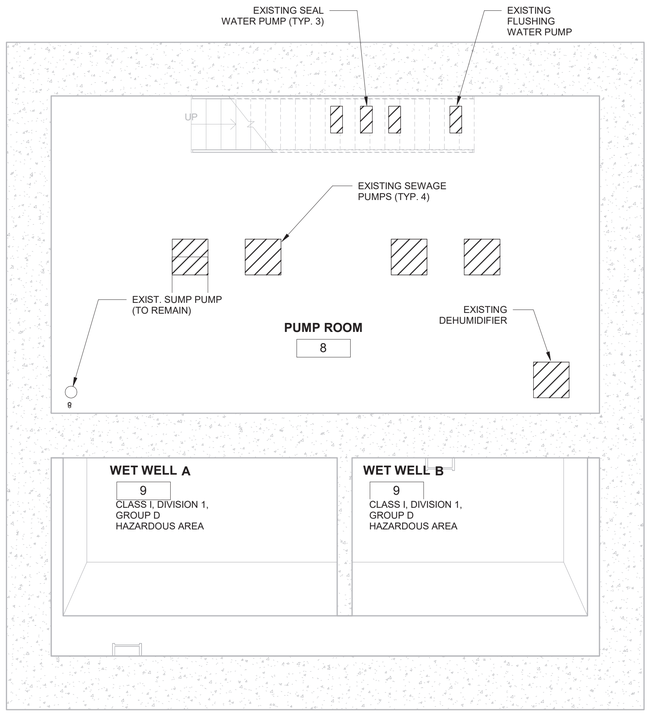
CROTONVILLE PUMPING STATION REHABILITATION

SCALE:
DATE: 12/21/2018

OSSINING, NEW YORK
DEMOLITION PLANS

DPW FILE NO. 208-03-E-62-0
REV. NO. 0

C:\Users\laramatw.RAMBOLL\Documents\66136-Crotonville-MEP_tom.laramay@obg.com.rvt

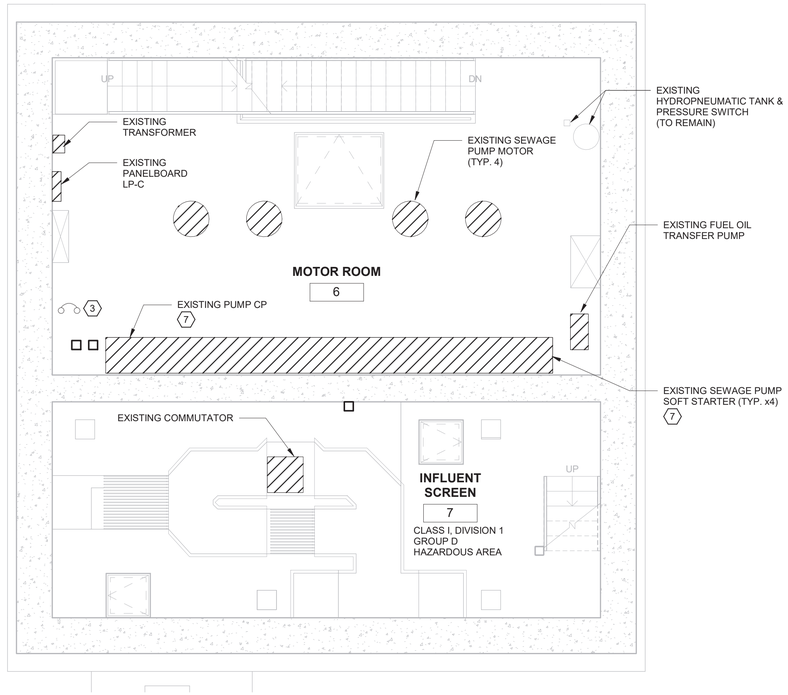


LOWER LEVEL DEMOLITION PLAN

1/4" = 1'-0"

PLAN NORTH

4' 2' 0 2' 4'



DETAIL NOTES:

1. SEE SHEET E-101 FOR KEYED NOT DESCRIPTIONS.

MIDDLE LEVEL DEMOLITION PLAN

1/4" = 1'-0"

PLAN NORTH

4' 2' 0 2' 4'

DRAWING NOTES:

1. SEE ELECTRICAL DEMOLITION NOTES SHEET E-101.

STATE OF NEW YORK · ERIC J. MILES · LICENSED PROFESSIONAL ENGINEER · 090895

2021-07-15

IN ACCORDANCE WITH TITLE VIII, ARTICLE 145, SECTION 7209 (2) OF THE NEW YORK STATE EDUCATION LAW, IT IS A VIOLATION OF LAW FOR ANY PERSON UNLESS ACTING UNDER THE DIRECTION OF A LICENSED ENGINEER TO ALTER THIS DOCUMENT.

IN CHARGE OF Eric Miles
CHECKED BY Jim Crosier
MADE BY Joseph LaGoy

O'BRIEN & GERE ENGINEERS, INC.
50 MAIN ST., 10TH FLOOR SUITE 1000, WHITE PLAINS, NEW YORK 10606

REVISION NUMBER	DATE	MADE BY	APP'D BY	REVISION

RECORD DRAWING CERTIFICATION

☐ AS BUILT - CHANGES AS NOTED
☐ AS BUILT - NO CHANGES

CONTRACTOR	PROJECT COORDINATOR
NAME	NAME
SIGNATURE	SIGNATURE
TITLE DATE	TITLE DATE

WESTCHESTER COUNTY, NEW YORK
DEPARTMENT OF PUBLIC WORKS AND TRANSPORTATION
DIVISION OF ENGINEERING

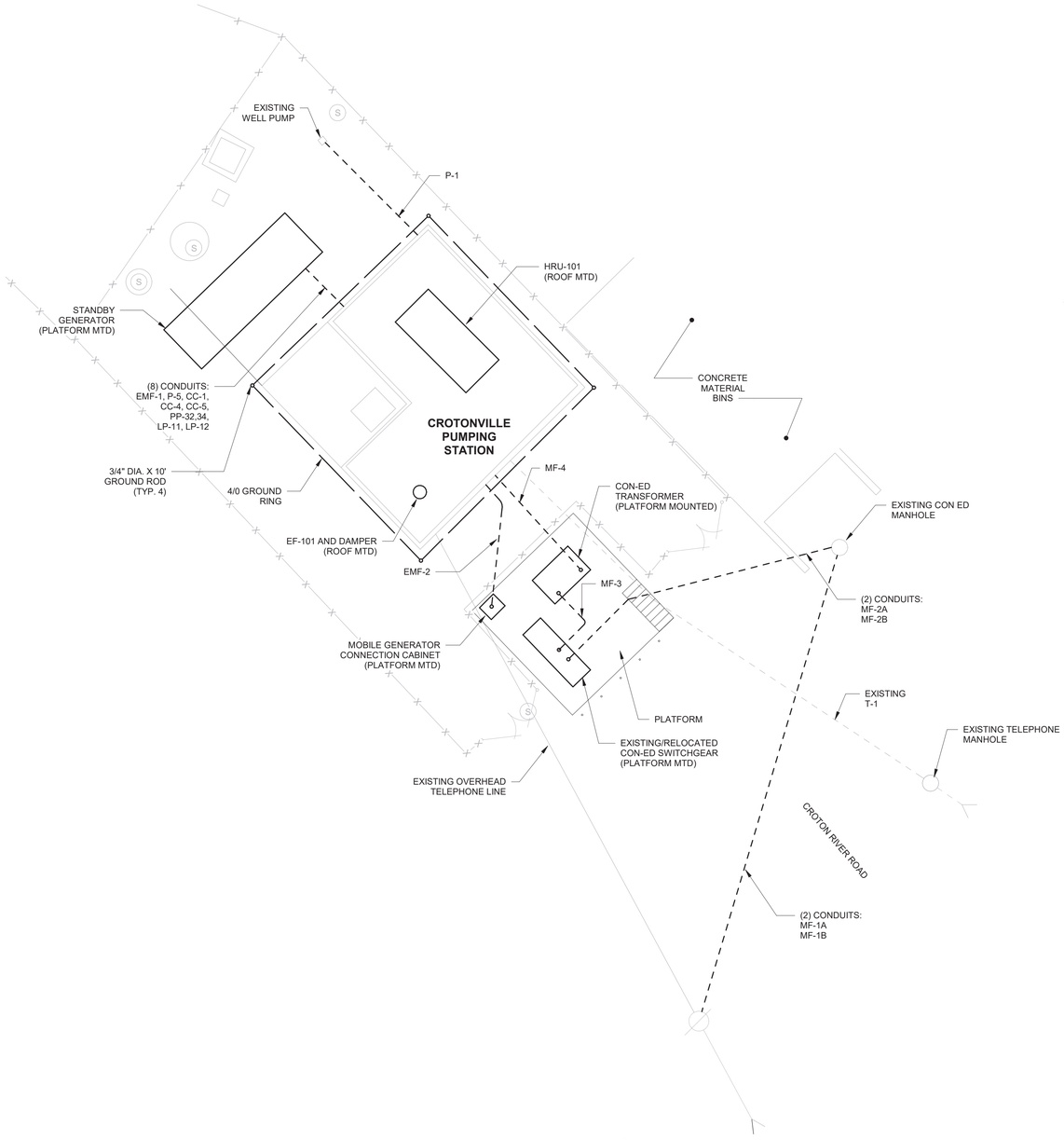
CONTRACT NUMBER
SHEET NUMBER E-102
SHEET NO. 39 OF 60

CROTONVILLE PUMPING STATION REHABILITATION

SCALE:
DATE: 12/21/2018

OSSINING, NEW YORK
DEMOLITION PLANS

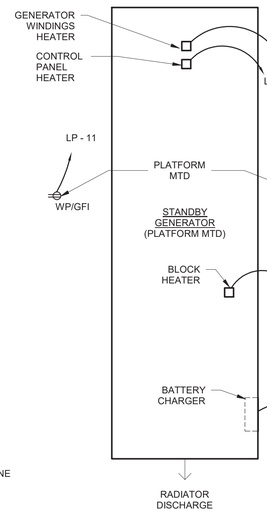
DPW FILE NO. 208-03-E-63-0
REV. NO. 0

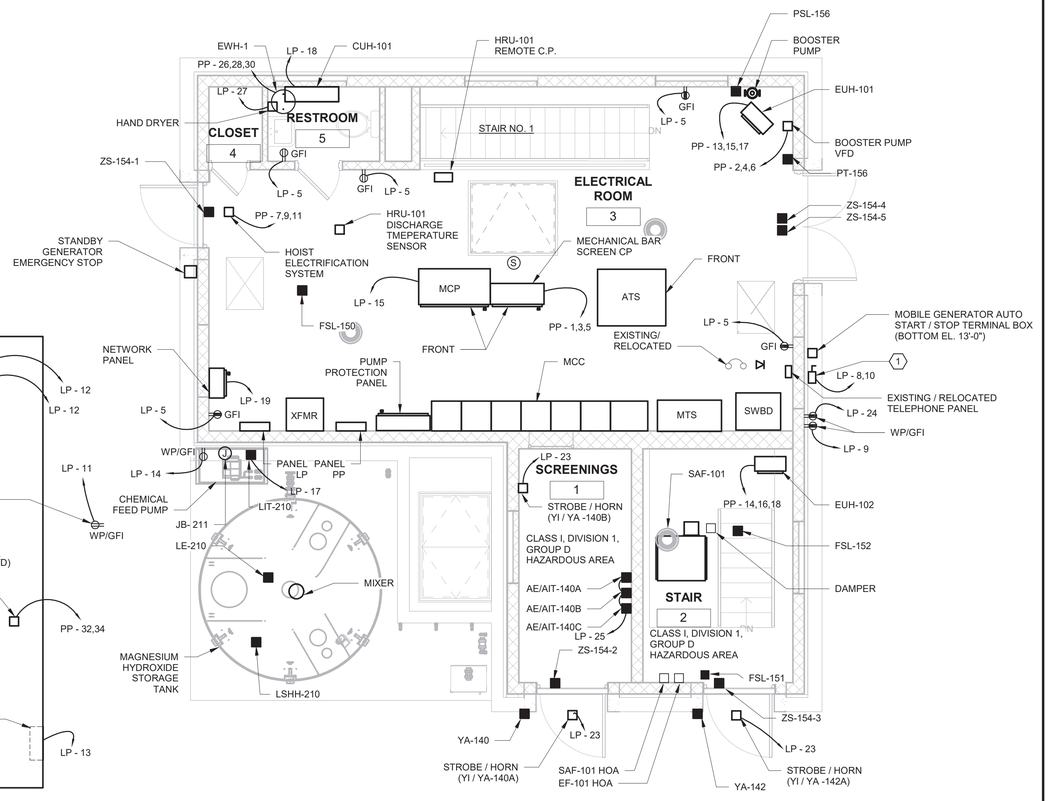


SITE PLAN

1" = 10'-0"

PLAN NORTH





MAIN LEVEL POWER PLAN

1/4" = 1'-0"

PLAN NORTH

KEYED NOTES:

1. PROVIDE 30 AMP, 2 POLE, NON-FUSED DISCONNECT SWITCH WITH NEUTRAL FOR 120/208VAC POWER TO MOBILE GENERATOR ACCESSORIES. CONNECTION FROM DISCONNECT SWITCH TO MOBILE GENERATOR BY OTHERS.

STATE OF NEW YORK · ERIC J. MILES · LICENSED PROFESSIONAL ENGINEER · 090895

2021-07-15

IN CHARGE OF Eric Miles
CHECKED BY Jim Crosier
MADE BY Joseph LaGoy

O'BRIEN & GERE ENGINEERS, INC.
50 MAIN ST., 10TH FLOOR SUITE 1000, WHITE PLAINS, NEW YORK 10606

REVISION NUMBER	DATE	MADE BY	APP'D BY	REVISION

RECORD DRAWING CERTIFICATION

- ☐ AS BUILT - CHANGES AS NOTED
- ☐ AS BUILT - NO CHANGES

CONTRACTOR	PROJECT COORDINATOR
NAME	NAME
SIGNATURE	SIGNATURE
TITLE DATE	TITLE DATE

WESTCHESTER COUNTY, NEW YORK
DEPARTMENT OF PUBLIC WORKS AND TRANSPORTATION
DIVISION OF ENGINEERING

CONTRACT NUMBER
SHEET NUMBER E-103
SHEET NO. 40 OF 60

CROTONVILLE PUMPING STATION REHABILITATION

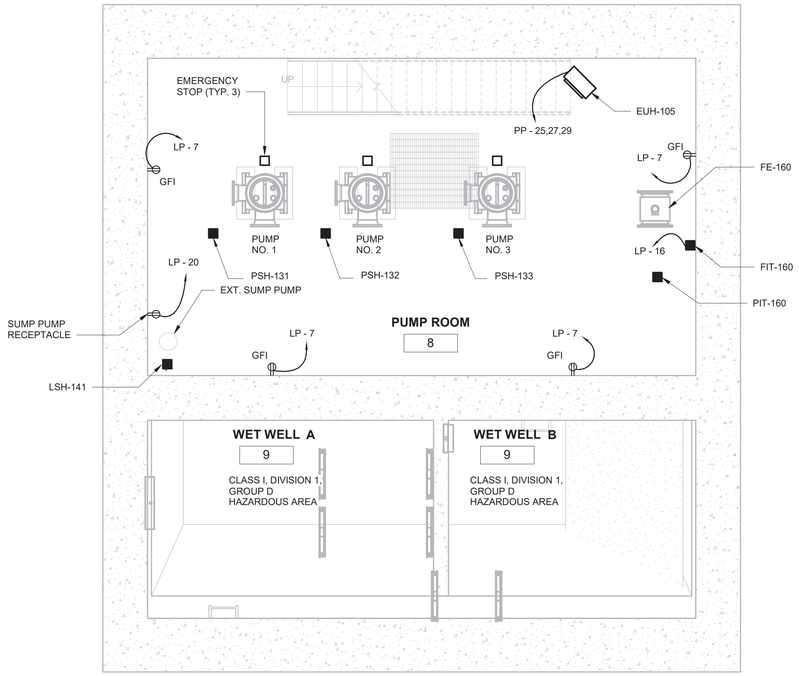
OSSINING, NEW YORK
POWER PLANS

SCALE:
DATE: 12/21/2018
DPW FILE NO. 208-03-E-64-0
REV. NO. 0

4/14/2021 8:32:23 AM

DRAWING NOTES:

1. MECHANICL BAR SCREEN AND WASHER COMPACTOR DISCONNECT SWITCHES SHALL BE 30 AMP, 3 POLE, NON-FUSED TYPE.
2. PROVIDE PUMP NO.1, NO. 2, AND NO. 3 POWER AND CONTROL CABLE INSTALLATION AS FOLLOWS: ROUTE CONDUITS P-131 FROM MCC AND CC-131A FROM PUMP PROTECTION PANEL TO A LOCATION DIRECTLY ABOVE PUMP NO.1. INSTALL PUMP CABLES AS OPEN WIRING FROM THIS LOCATION TO THE PUMP. PROVIDE 10' ADDITIONAL LENGTH OF EACH CABLE. (TYPICAL PUMP NO.2 WITH CONDUITS P-132 AND CC-132A AND PUMP NO.3 WITH CONDUITS P-133 AND CC-133A).

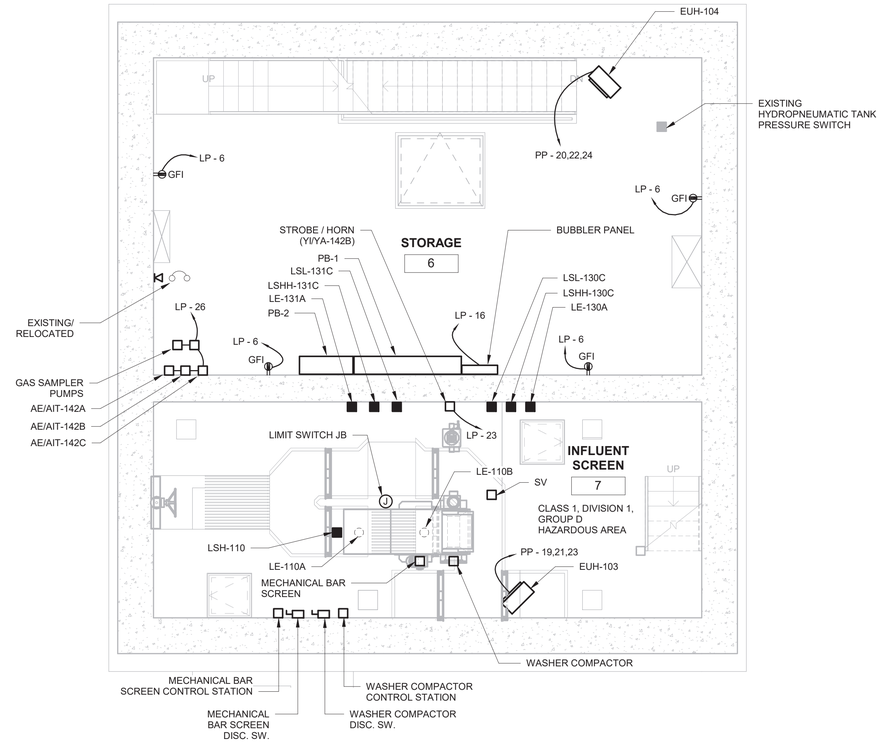


LOWER LEVEL POWER PLAN

1/4" = 1'-0"

4' 2' 0 2' 4'

PLAN NORTH



MIDDLE LEVEL POWER PLAN

1/4" = 1'-0"

4' 2' 0 2' 4'

PLAN NORTH

STATE OF NEW YORK
ERIC J. MILES
090895
LICENSED PROFESSIONAL ENGINEER

2021-07-15

IN ACCORDANCE WITH TITLE VIII, ARTICLE 145, SECTION 7209 (2) OF THE NEW YORK STATE EDUCATION LAW, IT IS A VIOLATION OF LAW FOR ANY PERSON UNLESS ACTING UNDER THE DIRECTION OF A LICENSED ENGINEER TO ALTER THIS DOCUMENT.

IN CHARGE OF Eric Miles
CHECKED BY Jim Crosier
MADE BY Joseph LaGoy

O'BRIEN & GERE ENGINEERS, INC.
50 MAIN ST., 10TH FLOOR SUITE 1000, WHITE PLAINS, NEW YORK 10606

REVISION NUMBER	DATE	MADE BY	APP'D BY	REVISION

RECORD DRAWING CERTIFICATION

☐ AS BUILT - CHANGES AS NOTED
☐ AS BUILT - NO CHANGES

CONTRACTOR
NAME
SIGNATURE
TITLE DATE

PROJECT COORDINATOR
NAME
SIGNATURE
TITLE DATE

WESTCHESTER COUNTY, NEW YORK
DEPARTMENT OF PUBLIC WORKS AND TRANSPORTATION
DIVISION OF ENGINEERING

CONTRACT NUMBER
SHEET NUMBER E-104
SHEET NO. 41 OF 60

CROTONVILLE PUMPING STATION REHABILITATION

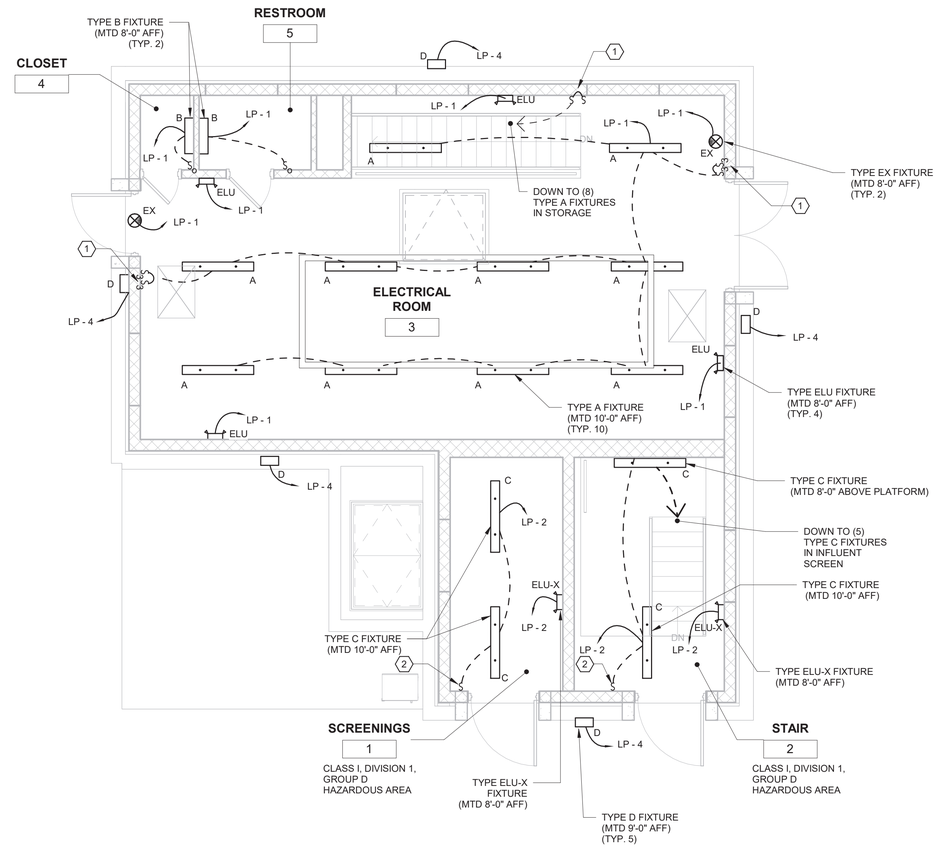
OSSINING, NEW YORK
POWER PLANS

SCALE:
DATE: 12/21/2018
DPW FILE NO. 208-03-E-65-0
REV. NO. 0

C:\Users\laramatw.RAMBOLL\Documents\66136-Crotonville-MEP_tom.laramay@obg.com.rvt

4/14/2021 8:32:24 AM

LIGHTING FIXTURE SCHEDULE				
TYPE	DESCRIPTION	LAMP	VOLTAGE	MANUFACTURER
A	4 FOOT PENDANT MOUNTED STRIP, FULL FROST LENS, STEP DIMMING DRIVER, WHITE FINISH	43 WATT LED 4958 LUMENS 3500K, 80 CRI	120 VAC	METALUX SNLED SERIES OR EQUAL
B	2 FOOT, ENCLOSED, WALL MOUNTED ACRYLIC FROSTED LENS, WHITE FINISH	19 WATT LED 1600 LUMENS, 3500K, 85 CRI	120 VAC	METALUX BCLED SERIES OR EQUAL
C	4 FOOT PENDANT AND WALL MOUNTED EXPLOSION PROOF, RATED CLASS I, DIVISION 1, GROUP D	(2) 28 WATT LED 7000 LUMENS, 4500K, 80 CRI	120 VAC	LARSON ELECTRONICS PART NO. EPL-48-2L-LED OR EQUAL
D	EXTERIOR WALL MOUNTED FORWARD THROW DISTRIBUTION, EMERGENCY BATTERY BACKUP, DARK BRONZE FINISH, INTEGRAL PHOTOCELL	50 WATT LED 6000 LUMENS 3000K, 70 CRI	120 VAC	LITHONIA WST SERIES LED OR EQUAL
ELU	TWO HEAD, SURFACE MOUNTED EMERGENCY LIGHTING UNIT, SELF DIAGNOSTICS, WHITE FINISH	(2) 5.4 WATT LED'S	120 VAC	LITHONIA ELMLT SERIES OR EQUAL
ELU-X	TWO HEAD, SURFACE MOUNTED EXPLOSION PROOF, EMERGENCY LIGHTING UNIT, RATED CLASS I, DIVISION. 1, GROUP D	(2) 10 WATT LED'S	120 VAC	LARSON ELECTRONICS PART NO. EXP-EMG-12W-2L OR EQUAL
EX	SINGLE FACED, SURFACE MOUNTED EXIT SIGN, WHITE HOUSING, RED LETTERS, EMERGENCY BATTERY BACKUP	1 WATT LED	120 VAC	LITHONIA LQM SERIES OR EQUAL



MAIN LEVEL LIGHTING PLAN

1/4" = 1'-0"

4' 2' 0 2' 4'

PLAN NORTH

KEYED NOTES:

1. PROVIDE TWO WALL SWITCHES FOR STEP DIMMING CONTROL OF THE CONNECTED LIGHTING FIXTURES. PROVIDE ENGRAVED NAMEPLATES AT EACH SWITCH INDICATING THE ROOM CONTROLLED AND "HIGH" OR "LOW" ACCORDINGLY.
2. 2 POLE WALL SWITCH . SEE SAF-101 ELEMENTARY SHEET E-603 FOR CONNECTIONS.

STATE OF NEW YORK · ERIC J. MILLER · 090895 · LICENSED PROFESSIONAL ENGINEER

2021-07-15

IN ACCORDANCE WITH TITLE VIII, ARTICLE 145, SECTION 7209 (2) OF THE NEW YORK STATE EDUCATION LAW, IT IS A VIOLATION OF LAW FOR ANY PERSON UNLESS ACTING UNDER THE DIRECTION OF A LICENSED ENGINEER TO ALTER THIS DOCUMENT.

IN CHARGE OF Eric Miles
CHECKED BY Jim Crosier
MADE BY Joseph LaGoy

O'BRIEN & GERE ENGINEERS, INC.
50 MAIN ST., 10TH FLOOR SUITE 1000, WHITE PLAINS, NEW YORK 10606

REVISION NUMBER	DATE	MADE BY	APP'D BY	REVISION

RECORD DRAWING CERTIFICATION

☐ AS BUILT - CHANGES AS NOTED
☐ AS BUILT - NO CHANGES

CONTRACTOR
NAME
SIGNATURE
TITLE DATE

PROJECT COORDINATOR
NAME
SIGNATURE
TITLE DATE

WESTCHESTER COUNTY, NEW YORK
DEPARTMENT OF PUBLIC WORKS AND TRANSPORTATION
DIVISION OF ENGINEERING

CONTRACT NUMBER
SHEET NUMBER E-105
SHEET NO. 42 OF 60

CROTONVILLE PUMPING STATION REHABILITATION

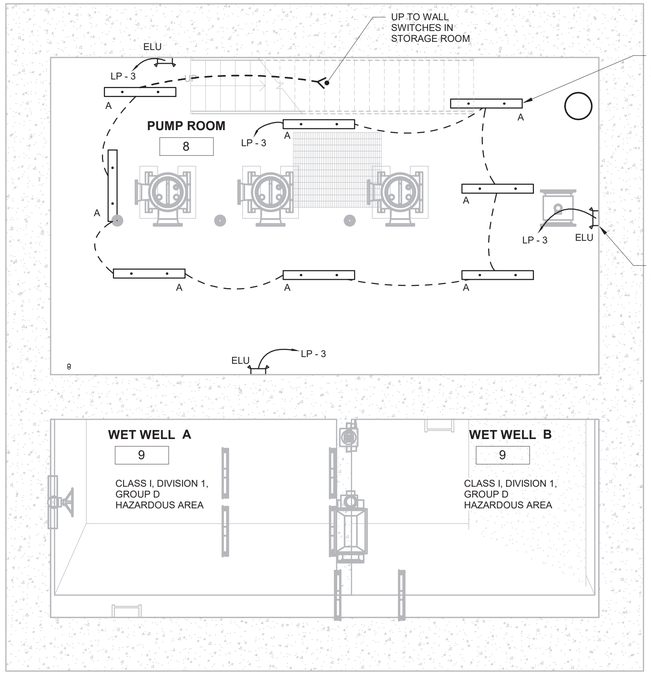
SCALE:
DATE: 12/21/2018

OSSINING, NEW YORK
LIGHTING PLANS

DPW FILE NO. 208-03-E-66-0
REV. NO. 0

C:\Users\laramatw.RAMBOLL\Documents\66136-Crotonville-MEP_tom.laramay@obg.com.rvt

4/14/2021 8:32:26 AM

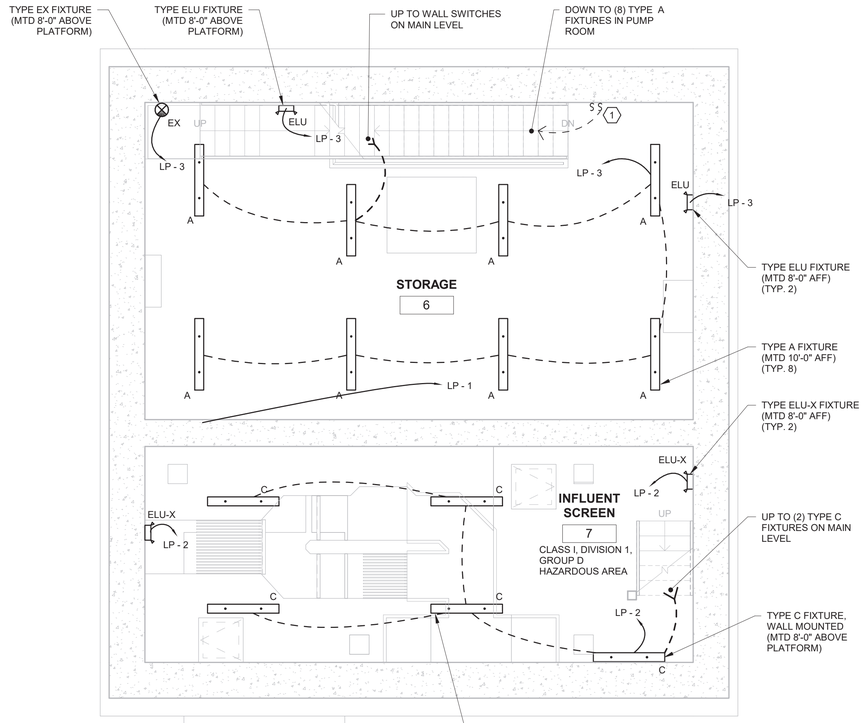


PLAN NORTH

LOWER LEVEL LIGHTING PLAN

1/4" = 1'-0"

4' 2' 0 2' 4'



PLAN NORTH

MIDDLE LEVEL LIGHTING PLAN

1/4" = 1'-0"

4' 2' 0 2' 4'

KEYED NOTES:

1. PROVIDE TWO WALL SWITCHES FOR STEP DIMMING CONTROL OF THE CONNECTED LIGHTING FIXTURES. PROVIDE ENGRAVED NAMEPLATES AT EACH SWITCH INDICATING THE ROOM CONTROLLED AND "HIGH" OR "LOW" ACCORDINGLY.

STATE OF NEW YORK · ERIC J. MILES · 090895 · LICENSED PROFESSIONAL ENGINEER

2021-07-15

IN ACCORDANCE WITH TITLE VIII, ARTICLE 145, SECTION 7209 (2) OF THE NEW YORK STATE EDUCATION LAW, IT IS A VIOLATION OF LAW FOR ANY PERSON UNLESS ACTING UNDER THE DIRECTION OF A LICENSED ENGINEER TO ALTER THIS DOCUMENT.

IN CHARGE OF Eric Miles
CHECKED BY Jim Crosier
MADE BY Joseph LaGoy

O'BRIEN & GERE ENGINEERS, INC.
50 MAIN ST., 10TH FLOOR SUITE 1000, WHITE PLAINS, NEW YORK 10606

REVISION NUMBER	DATE	MADE BY	APP'D BY	REVISION

RECORD DRAWING CERTIFICATION

- ☐ AS BUILT - CHANGES AS NOTED
- ☐ AS BUILT - NO CHANGES

CONTRACTOR	PROJECT COORDINATOR
NAME	NAME
SIGNATURE	SIGNATURE
TITLE DATE	TITLE DATE

WESTCHESTER COUNTY, NEW YORK
DEPARTMENT OF PUBLIC WORKS AND TRANSPORTATION
DIVISION OF ENGINEERING

CONTRACT NUMBER
SHEET NUMBER E-106
SHEET NO. 43 OF 60

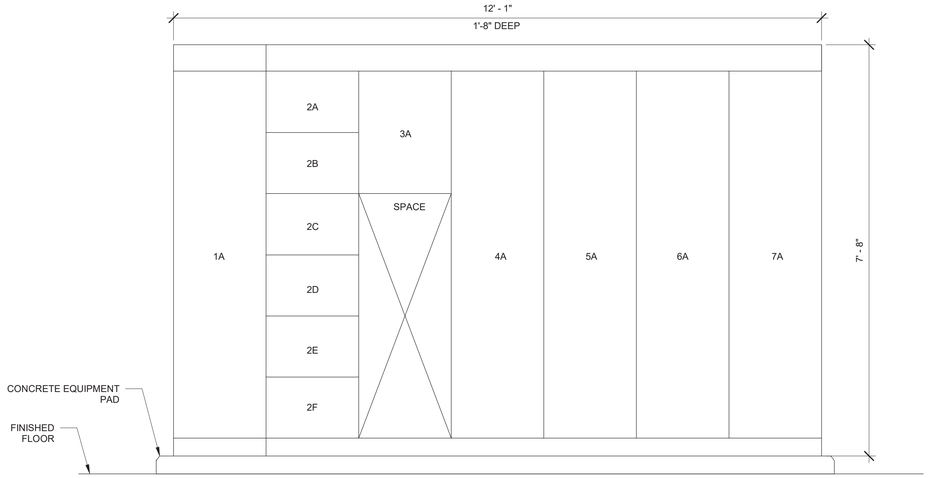
CROTONVILLE PUMPING STATION REHABILITATION

OSSINING, NEW YORK
LIGHTING PLANS

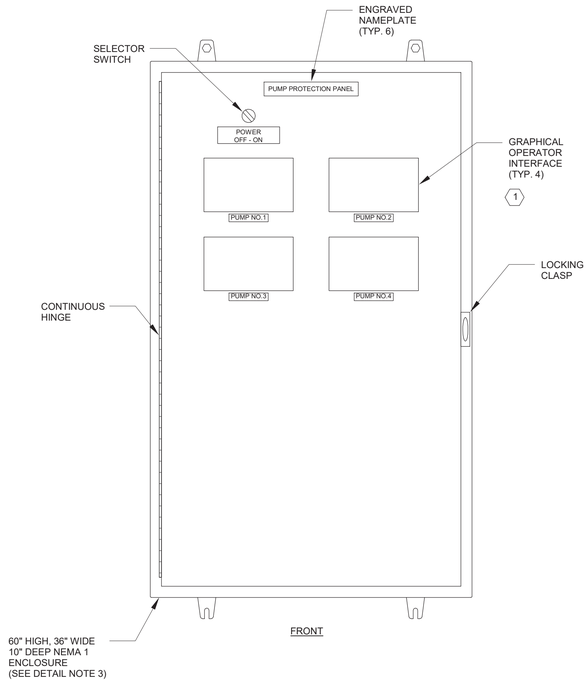
SCALE:
DATE: 12/21/2018

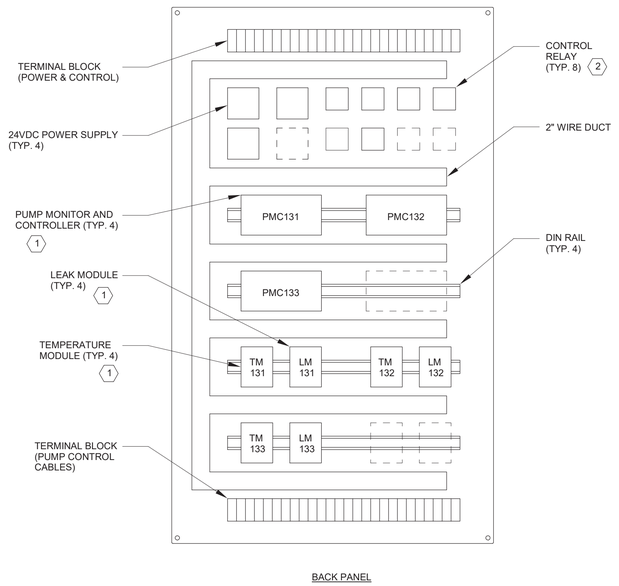
DPW FILE NO. 208-03-E-67-0
REV. NO. 0

C:\Users\laramatv.RAMBOLL\Documents\66136-Crotonville-MEP_tom.laramay@obg.com.rvt



MCC ELEVATION
NOT TO SCALE





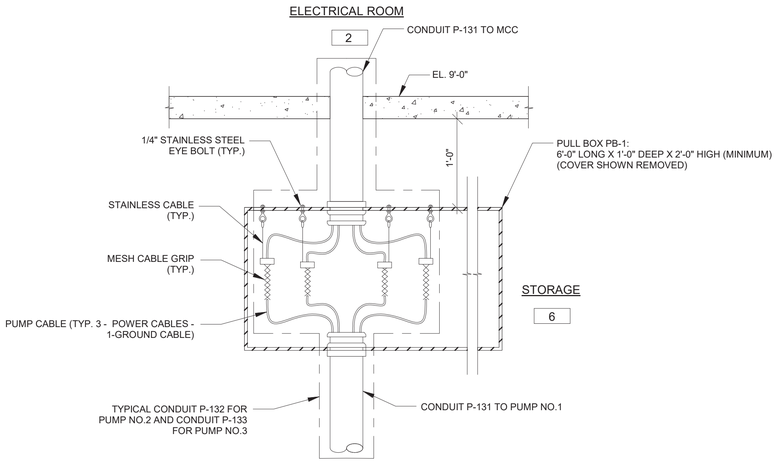
DETAIL NOTES:

1. DASHED LINES INDICATE FUTURE DEVICES BY OTHERS. PROVIDE SPACE ONLY.
2. EACH TERMINAL BLOCK SHALL BE PROVIDED WITH SPARES FOR FUTURE PUMP NO. 4. (QUANTITIES EQUAL TO INSTALLED PUMPS).
3. ENCLOSURE DIMENSIONS SHOWN SHALL BE MINIMUM. PROVIDE LARGER ENCLOSURE IF NECESSARY TO HOUSE THE REQUIRED COMPONENTS AS ACTUALLY FURNISHED WITH RESPECT TO COMPONENT DIMENSIONS, COMPONENT MANFUFACTURERS RECOMENDED CLEARANCES, AND MAINTENANCE.

KEYED NOTES:

1. FURNISHED WITH PUMP.
2. CONTROL RELAYS: CR131H, CR131I, CR132H, CR132I, CR133H, CR133I.

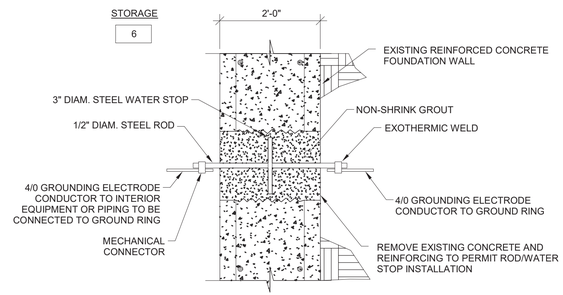
PUMP PROTECTION PANEL DETAIL
NOT TO SCALE



DETAIL NOTES:

1. DETAIL SHALL BE SIMILAR FOR PULL BOX PB-2 SERVING THE PUMP PROTECTION PANEL WITH CONDUITS CC-131A CC-132A AND CC-133A. (PUMP NO.1, 2, AND 3 CONTROL CABLES RESPECTIVELY)
2. PULL BOX PB-2 SHALL BE 3'-0" LONG X 1'-0" DEEP X 2'-0" HIGH (MINIMUM).

PULL BOX PB-1 DETAIL
NOT TO SCALE



TYPICAL GROUNDING ELECTRODE CONDUCTOR FOUNDATION WALL PENETRATION DETAIL
NOT TO SCALE

STATE OF NEW YORK · ERIC J. MILES · LICENSED PROFESSIONAL ENGINEER · 090895

2021-07-15

IN ACCORDANCE WITH TITLE VIII, ARTICLE 145, SECTION 7209 (2) OF THE NEW YORK STATE EDUCATION LAW, IT IS A VIOLATION OF LAW FOR ANY PERSON UNLESS ACTING UNDER THE DIRECTION OF A LICENSED ENGINEER TO ALTER THIS DOCUMENT.

IN CHARGE OF Eric Miles
CHECKED BY Jim Crosier
MADE BY Joseph LaGoy

O'BRIEN & GERE ENGINEERS, INC.
50 MAIN ST., 10TH FLOOR SUITE 1000, WHITE PLAINS, NEW YORK 10606

REVISION NUMBER	DATE	MADE BY	APP'D BY	REVISION

RECORD DRAWING CERTIFICATION

☐ AS BUILT - CHANGES AS NOTED
☐ AS BUILT - NO CHANGES

CONTRACTOR
NAME
SIGNATURE
TITLE DATE

PROJECT COORDINATOR
NAME
SIGNATURE
TITLE DATE

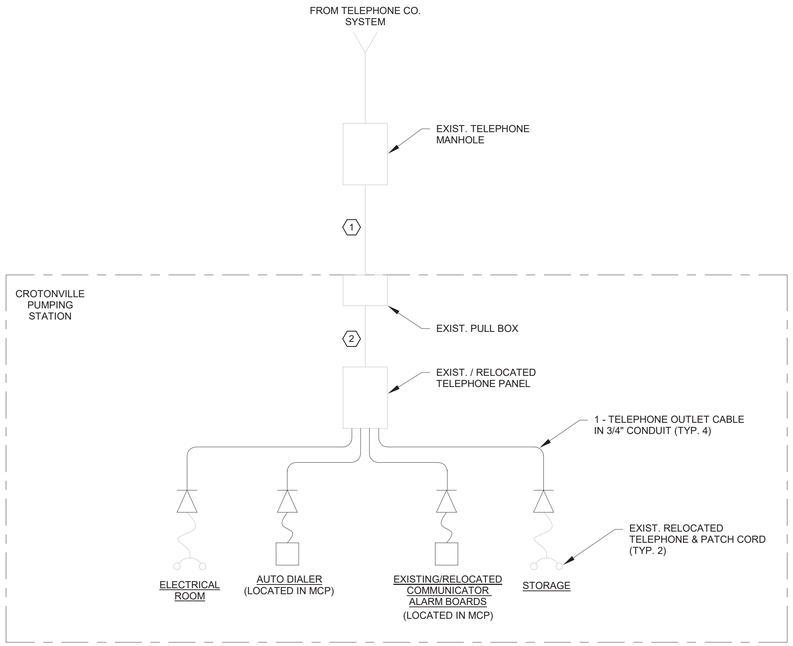
WESTCHESTER COUNTY, NEW YORK
DEPARTMENT OF PUBLIC WORKS AND TRANSPORTATION
DIVISION OF ENGINEERING

CONTRACT NUMBER
SHEET NUMBER E-501
SHEET NO. 44 OF 60

CROTONVILLE PUMPING STATION REHABILITATION

OSSINING, NEW YORK
ELECTRICAL DETAILS

SCALE:
DATE: 12/21/2018
DPW FILE NO. 208-03-E-68-0
REV. NO. 0



KEYED NOTES:

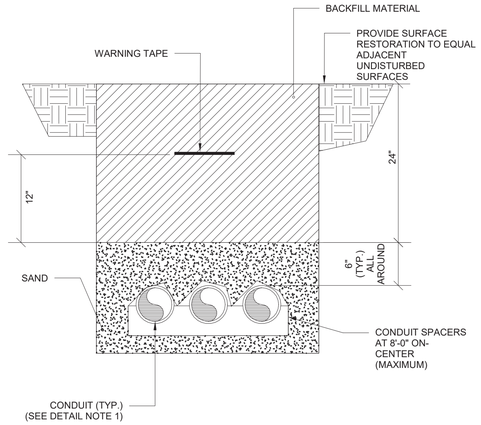
1. EXISTING CONDUIT WITH EXISTING TELEPHONE SERVICE CABLE.
2. DISCONNECT EXISTING TELEPHONE SERVICE CABLE FROM EXISTING TELEPHONE PANEL IN ITS PRESENT LOCATION. REINSTALL EXISTING TELEPHONE SERVICE CABLE IN NEW 2" CONDUIT ROUTED TO EXISTING / RELOCATED TELEPHONE PANEL.

DETAIL NOTES:

COORDINATE WITH THE TELEPHONE SERVICE PROVIDER AS NECESSARY TO FACILITATE RELOCATION OF TELEPHONE CO. EQUIPMENT AND WIRING. COMPLY WITH ALL APPLICABLE SERVICE PROVIDER STANDARDS. PROVIDE ANY ADDITIONAL MATERIALS OR LABOR REQUIRED BY THE SERVICE PROVIDER.

TELEPHONE SYSTEM SCHEMATIC

NOT TO SCALE



DETAIL NOTE:

1. REFER TO SITE PLANS, NOTES, AND CONDUIT SCHEDULES FOR CONDUIT GROUPINGS AND CONDUIT SIZES.

TYPICAL DIRECT BURIED CONDUIT DETAIL

NOT TO SCALE

STATE OF NEW YORK · ERIC J. MILES · 090895 · LICENSED PROFESSIONAL ENGINEER

2021-07-15

IN ACCORDANCE WITH TITLE VIII, ARTICLE 145, SECTION 7209 (2) OF THE NEW YORK STATE EDUCATION LAW, IT IS A VIOLATION OF LAW FOR ANY PERSON UNLESS ACTING UNDER THE DIRECTION OF A LICENSED ENGINEER TO ALTER THIS DOCUMENT.

IN CHARGE OF Eric Miles
CHECKED BY Jim Crosier
MADE BY Joseph LaGoy

O'BRIEN & GERE ENGINEERS, INC.
50 MAIN ST., 10TH FLOOR SUITE 1000, WHITE PLAINS, NEW YORK 10606

REVISION NUMBER	DATE	MADE BY	APP'D BY	REVISION

RECORD DRAWING CERTIFICATION

☐ AS BUILT - CHANGES AS NOTED
☐ AS BUILT - NO CHANGES

CONTRACTOR
NAME
SIGNATURE
TITLE DATE

PROJECT COORDINATOR
NAME
SIGNATURE
TITLE DATE

WESTCHESTER COUNTY, NEW YORK
DEPARTMENT OF PUBLIC WORKS AND TRANSPORTATION
DIVISION OF ENGINEERING

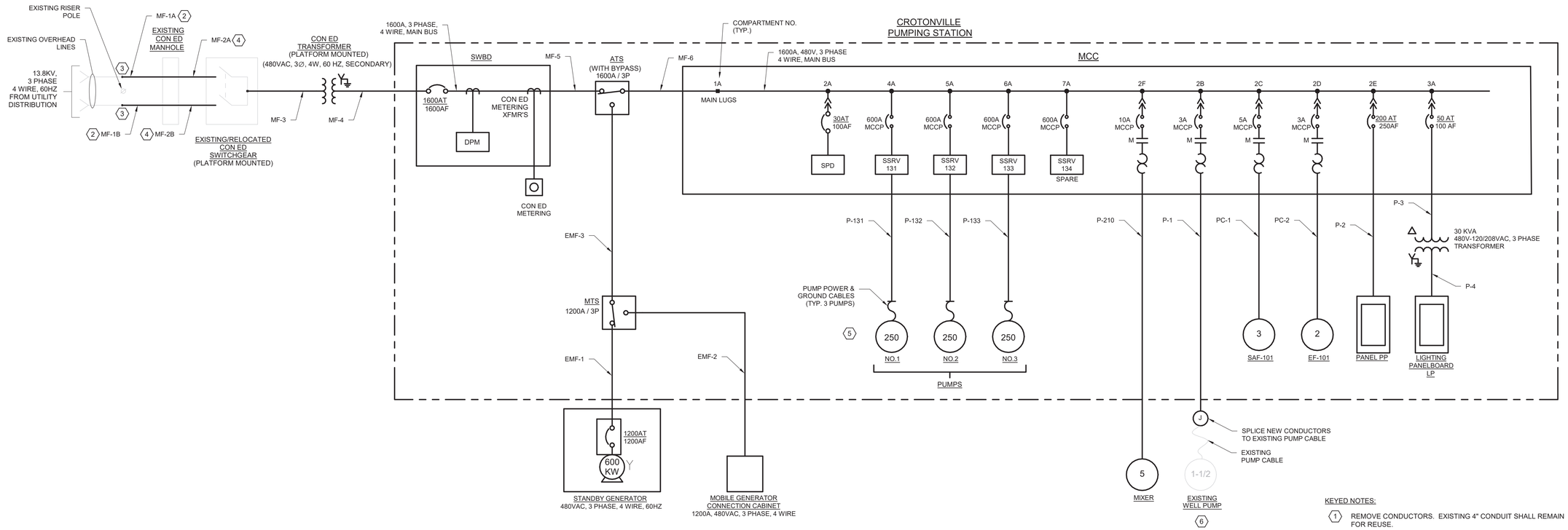
CONTRACT NUMBER
SHEET NUMBER E-502
SHEET NO. 45 OF 60

CROTONVILLE PUMPING STATION REHABILITATION

OSSINING, NEW YORK
ELECTRICAL DETAILS

SCALE:
DATE: 12/21/2018
DPW FILE NO. 208-03-E-69-0
REV. NO. 0

4/14/2021 8:32:28 AM

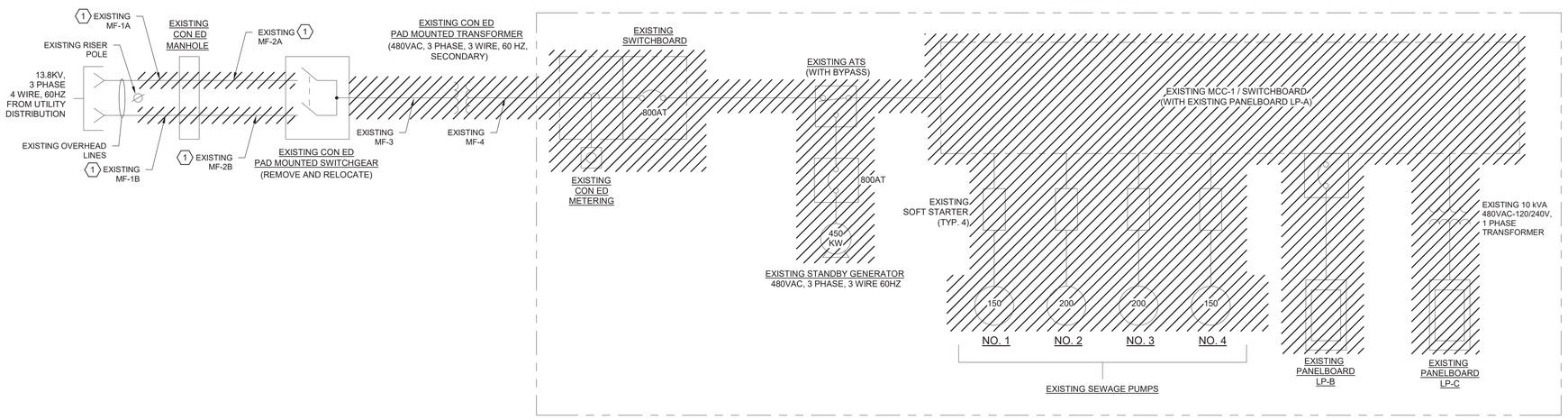


ONE-LINE DIAGRAM

NOT TO SCALE

KEYED NOTES:

1. REMOVE CONDUCTORS. EXISTING 4" CONDUIT SHALL REMAIN FOR REUSE.
2. PROVIDE NEW CONDUCTORS AS SCHEDULED IN EXISTING 4" CONDUIT.
3. CON ED SHALL SPLICE MF-1A AND MF1B CONDUCTORS TO EXISTING OVERHEAD LINES AT EXISTING RISER POLE.
4. PROVIDE NEW CONDUCTORS AS SCHEDULED IN EXISTING AND NEW 4" CONDUIT. NEW CONDUIT SHALL BE COUPLED TO EXISTING CONDUIT WITH LENGTH AS NECESSARY TO FACILITATE CONNECTION TO EXISTING/RELOCATED CON ED SWITCHGEAR. CONDUITS FROM RISER POLE TO EXISTING/RELOCATED CON ED SWITCHGEAR SHALL BE INSTALLED WITHOUT SPLICES.
5. PUMP POWER CABLES SHALL CONSIST OF 3 - 3/C 3/0 CABLES PER PUMP. PUMP GROUND CABLES SHALL CONSIST OF 1 - 1/0 CABLE PER PUMP.
6. REMOVE EXISTING BRANCH CIRCUIT WIRING ROUTED FROM EXISTING MCC TO EXISTING WELL PUMP (PUMP TO REMAIN). PROVIDE NEW BRANCH CIRCUIT WIRING TO EXISTING WELL PUMP AS SHOWN.



DETAIL NOTES:

1. SEE ELECTRICAL DEMOLITION NOTES, SHEET E-101.

DEMOLITION ONE-LINE DAIGRAM

NOT TO SCALE

2021-07-15

IN ACCORDANCE WITH TITLE VIII, ARTICLE 145, SECTION 7209 (2) OF THE NEW YORK STATE EDUCATION LAW, IT IS A VIOLATION OF LAW FOR ANY PERSON UNLESS ACTING UNDER THE DIRECTION OF A LICENSED ENGINEER TO ALTER THIS DOCUMENT.

IN CHARGE OF Eric Miles
CHECKED BY Jim Crosier
MADE BY Joseph LaGoy

O'BRIEN & GERE ENGINEERS, INC.
50 MAIN ST., 10TH FLOOR SUITE 1000, WHITE PLAINS, NEW YORK 10606

REVISION NUMBER	DATE	MADE BY	APP'D BY	REVISION

RECORD DRAWING CERTIFICATION

☐ AS BUILT - CHANGES AS NOTED
☐ AS BUILT - NO CHANGES

CONTRACTOR
NAME
SIGNATURE
TITLE DATE

PROJECT COORDINATOR
NAME
SIGNATURE
TITLE DATE

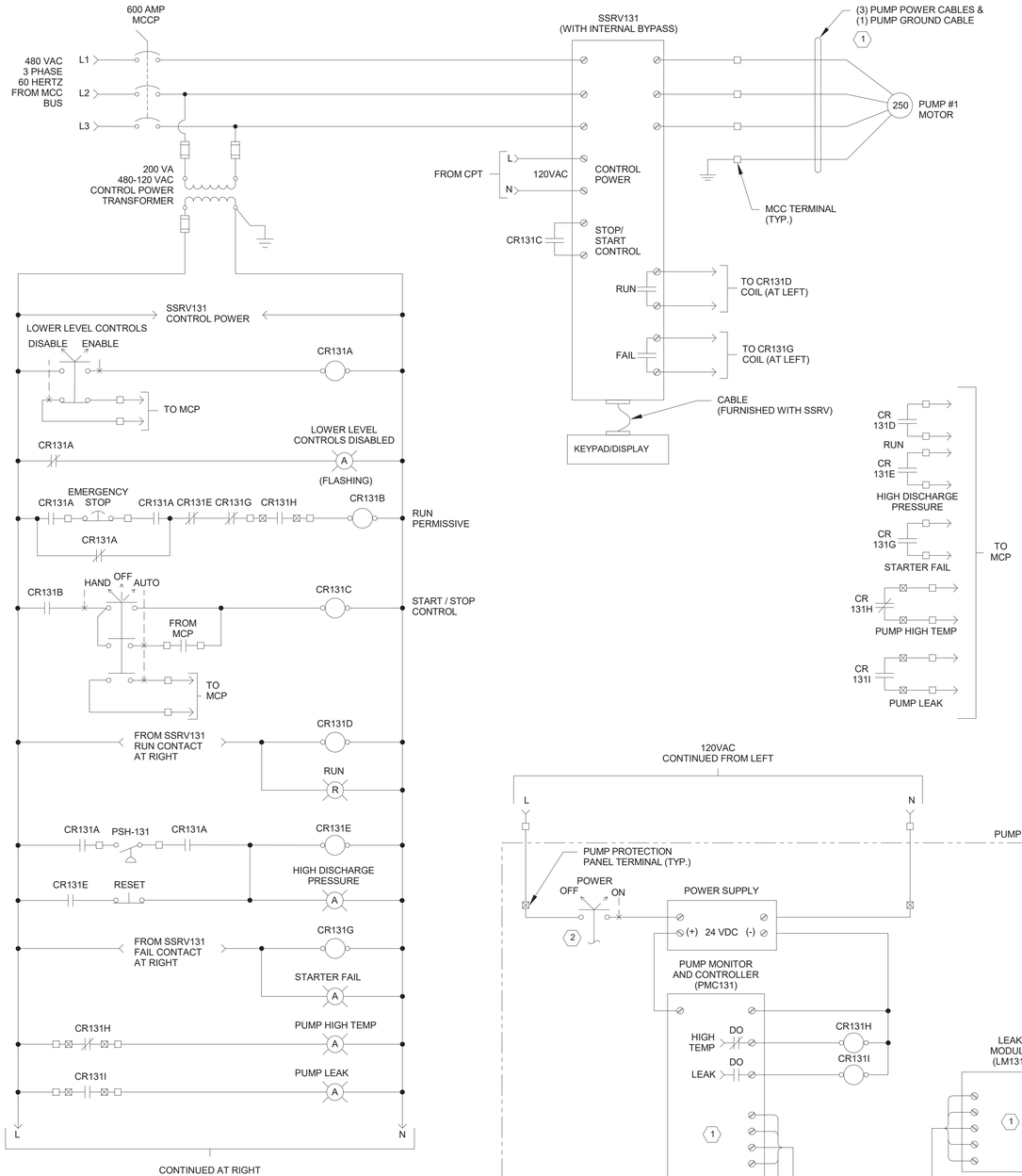
WESTCHESTER COUNTY, NEW YORK
DEPARTMENT OF PUBLIC WORKS AND TRANSPORTATION
DIVISION OF ENGINEERING

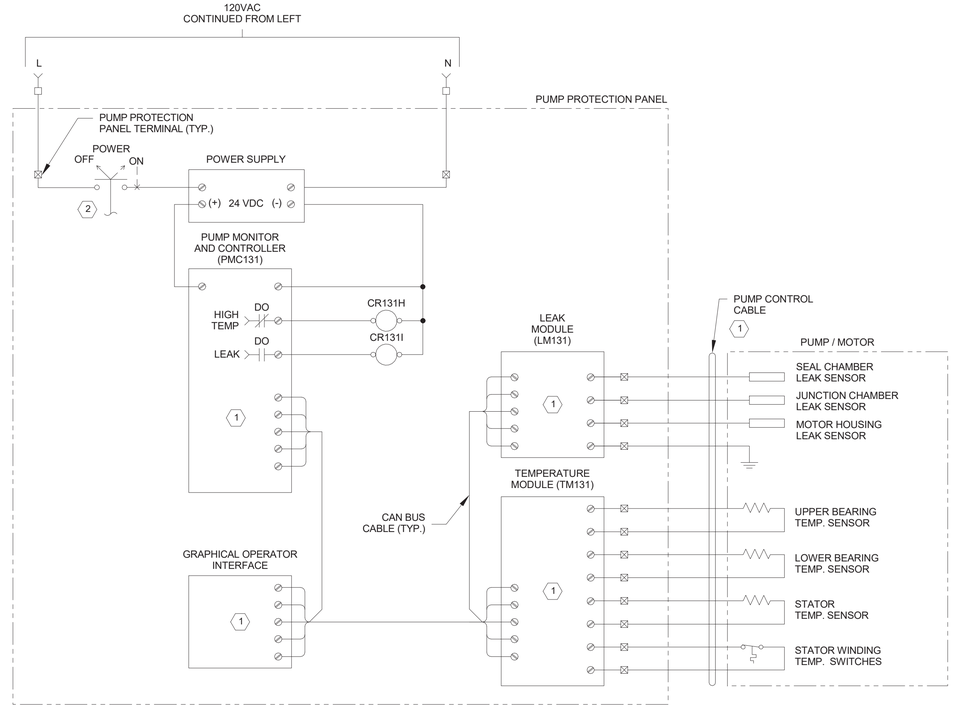
CONTRACT NUMBER
SHEET NUMBER E-601
SHEET NO. 46 OF 60

CROTONVILLE PUMPING STATION REHABILITATION
OSSINING, NEW YORK
ONE-LINE DIAGRAMS

SCALE:
DATE: 12/21/2018
DPW FILE NO. 208-03-E-70-0
REV. NO. 0

C:\Users\laramatw.RAMBOLL\Documents\66136-Crotonville-MEP_tom.laramay@obg.com.rvt





KEYED NOTES:

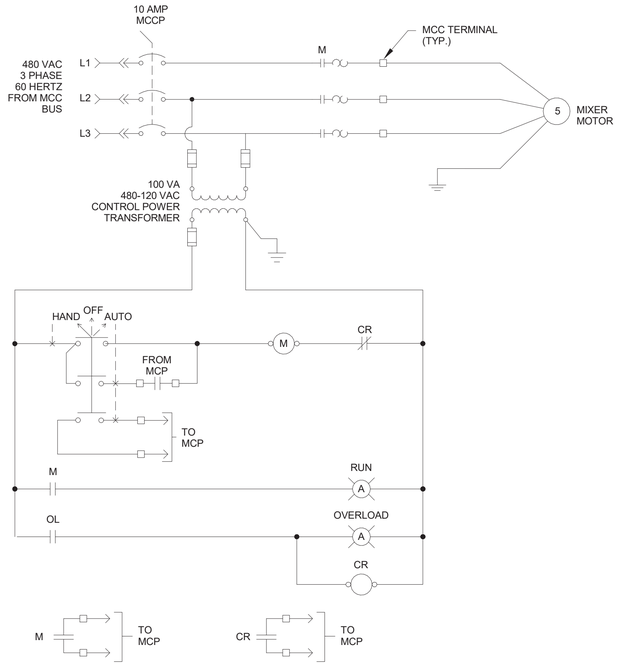
1. FURNISHED WITH PUMP.
2. PUMP PROTECTION PANEL POWER OFF-ON SELECTOR SWITCH SHALL BE 4 POLE. EACH POLE SHALL SIMULTANEOUSLY PROVIDE OFF-ON CONTROL OF INCOMING 120VAC POWER FROM PUMP NO.1, NO.2 AND NO.3 CONTROL CIRCUITS PLUS A SPARE POLE FOR FUTURE PUMP NO.4.

DETAIL NOTES:

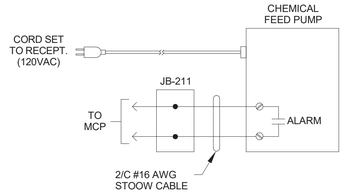
1. DEVICE TAG NUMBERS SHOWN ARE FOR PUMP NO.1 USING LOOP NO. 131.
   DEVICE TAG NUMBERS FOR PUMP NO.2 SHALL USE LOOP NO.132.
   DEVICE TAG NUMBERS FOR PUMP NO.3 SHALL USE LOOP NO.133.
   DEVICE TAG NUMBERS FOR PUMP NO.4 SHALL USE LOOP NO.134.
2. PUMP NO.4: PROVIDE MCC MOUNTED COMPONENTS ONLY.

TYPICAL: PUMP NO.2
PUMP NO.3
PUMP NO.4 (EXCEPT AS NOTED)

PUMP ELEMENTARY
NOT TO SCALE



MIXER ELEMENTARY
NOT TO SCALE



CHEMICAL FEED PUMP ELEMENTARY
NOT TO SCALE

2021-07-15

IN ACCORDANCE WITH TITLE VIII, ARTICLE 145, SECTION 7209 (2) OF THE NEW YORK STATE EDUCATION LAW, IT IS A VIOLATION OF LAW FOR ANY PERSON UNLESS ACTING UNDER THE DIRECTION OF A LICENSED ENGINEER TO ALTER THIS DOCUMENT.

IN CHARGE OF Eric Miles
CHECKED BY Jim Crosier
MADE BY Joseph LaGoy

O'BRIEN & GERE ENGINEERS, INC.
50 MAIN ST., 10TH FLOOR SUITE 1000,
WHITE PLAINS, NEW YORK 10606

REVISION NUMBER	DATE	MADE BY	APP'D BY	REVISION

RECORD DRAWING CERTIFICATION

☐ AS BUILT - CHANGES AS NOTED
☐ AS BUILT - NO CHANGES

CONTRACTOR
NAME
SIGNATURE
TITLE DATE

PROJECT COORDINATOR
NAME
SIGNATURE
TITLE DATE

WESTCHESTER COUNTY, NEW YORK
DEPARTMENT OF PUBLIC WORKS AND TRANSPORTATION
DIVISION OF ENGINEERING

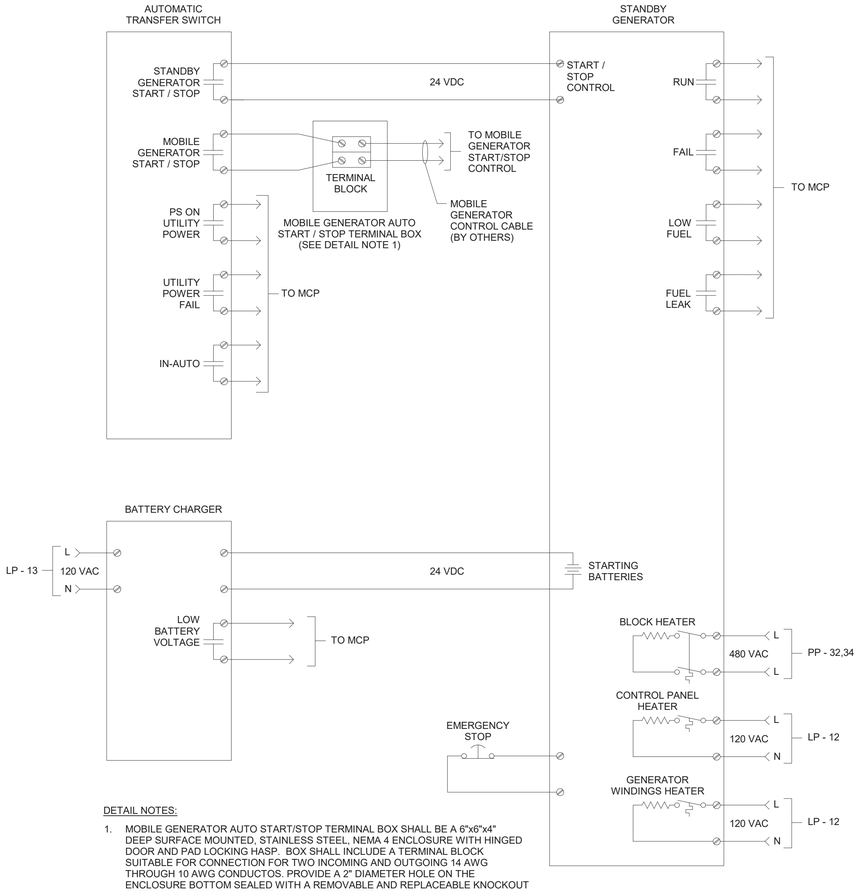
CONTRACT NUMBER
SHEET NUMBER E-602
SHEET NO. 47 OF 60

CROTONVILLE PUMPING STATION REHABILITATION

OSSINING, NEW YORK
ELEMENTARY DIAGRAMS

SCALE:
DATE: 12/21/2018
DPW FILE NO. 208-03-E-71-0
REV. NO. 0

4/14/2021 8:32:29 AM

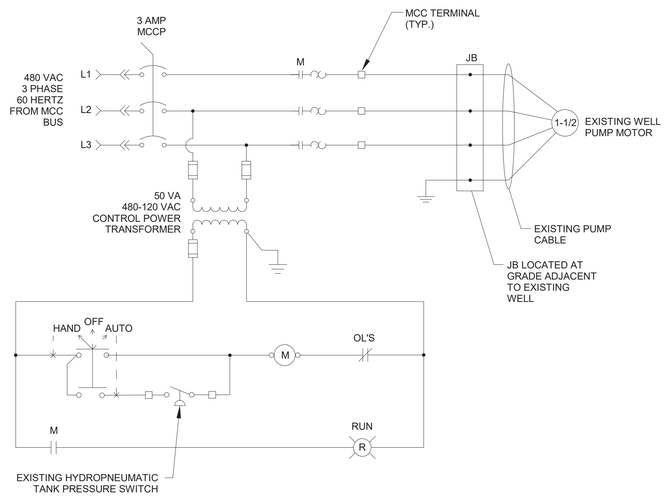


DETAIL NOTES:

1. MOBILE GENERATOR AUTO START/STOP TERMINAL BOX SHALL BE A 6"x6"x4" DEEP SURFACE MOUNTED, STAINLESS STEEL, NEMA 4 ENCLOSURE WITH HINGED DOOR AND PAD LOCKING HASP. BOX SHALL INCLUDE A TERMINAL BLOCK SUITABLE FOR CONNECTION FOR TWO INCOMING AND OUTGOING 14 AWG THROUGH 10 AWG CONDUCTOS. PROVIDE A 2" DIAMETER HOLE ON THE ENCLOSURE BOTTOM SEALED WITH A REMOVABLE AND REPLACEABLE KNOCKOUT FOR ENTRY OF MOBILE GENERATOR CONTROL CABLE.

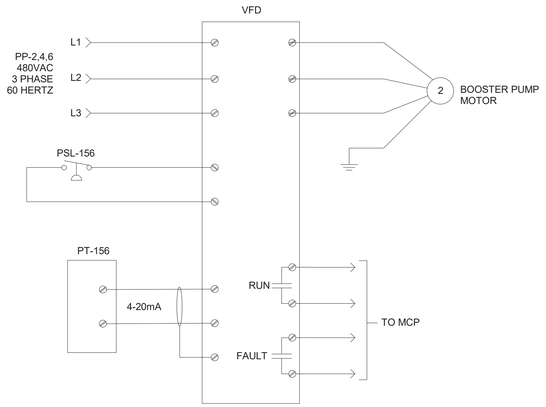
STANDBY GENERATOR ELEMENTARY

NOT TO SCALE



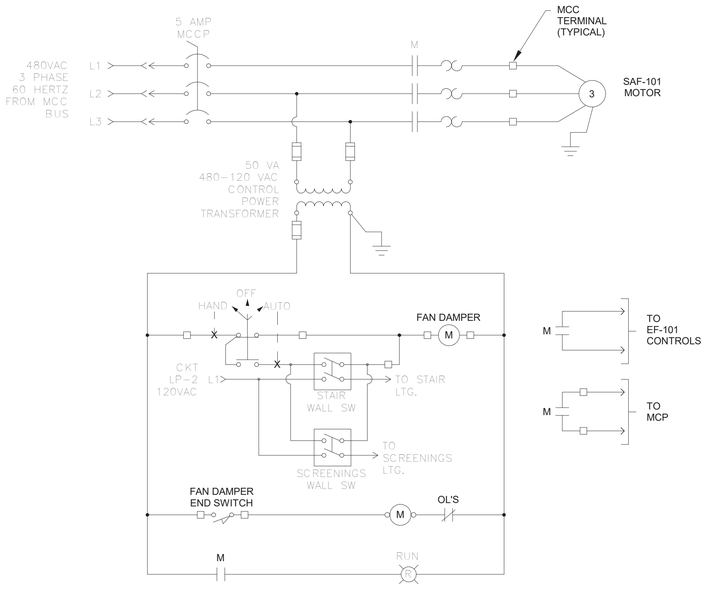
WELL PUMP ELEMENTARY

NOT TO SCALE



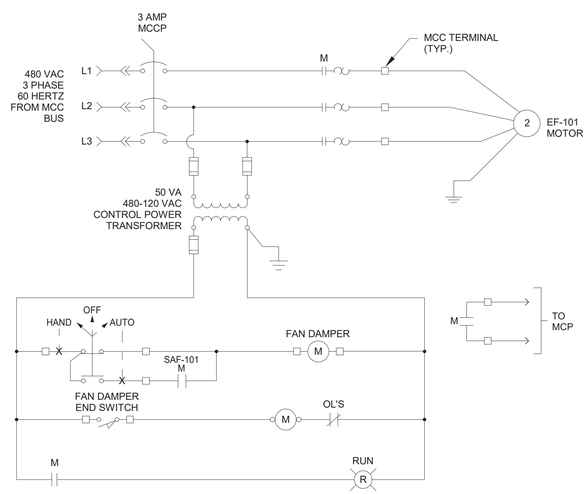
BOOSTER PUMP ELEMENTARY

NOT TO SCALE



SAF-101 ELEMENTARY

NOT TO SCALE



TYPICAL: EF-101 WITH 3 AMP MCCP AND 2HP MOTOR.

EF-101 ELEMENTARY

NOT TO SCALE

STATE OF NEW YORK — ERIC J. MILES — LICENSED PROFESSIONAL ENGINEER — 090895

2021-07-15

IN ACCORDANCE WITH TITLE VIII, ARTICLE 145, SECTION 7209 (2) OF THE NEW YORK STATE EDUCATION LAW, IT IS A VIOLATION OF LAW FOR ANY PERSON UNLESS ACTING UNDER THE DIRECTION OF A LICENSED ENGINEER TO ALTER THIS DOCUMENT.

IN CHARGE OF Eric Miles
CHECKED BY Jim Crosier
MADE BY Joseph LaGoy

O'BRIEN & GERE ENGINEERS, INC.
50 MAIN ST., 10TH FLOOR SUITE 1000,
WHITE PLAINS, NEW YORK 10606

REVISION NUMBER	DATE	MADE BY	APP'D BY	REVISION

RECORD DRAWING CERTIFICATION

☐ AS BUILT - CHANGES AS NOTED
☐ AS BUILT - NO CHANGES

CONTRACTOR
NAME
SIGNATURE
TITLE DATE

PROJECT COORDINATOR
NAME
SIGNATURE
TITLE DATE

WESTCHESTER COUNTY, NEW YORK
DEPARTMENT OF PUBLIC WORKS AND TRANSPORTATION
DIVISION OF ENGINEERING

CONTRACT NUMBER
SHEET NUMBER E-603
SHEET NO. 48 OF 60

CROTONVILLE PUMPING STATION REHABILITATION

OSSINING, NEW YORK
ELEMENTARY DIAGRAMS

SCALE:
DATE: 12/21/2018
DPW FILE NO. 208-03-E-72-0
REV. NO. 0

C:\Users\laramatw.RAMBOLL\Documents\66136-Crotonville-MEP_tom.laramay@obg.com.rvt

POWER PANEL: PP

LOCATION: ELECTRICAL ROOM
MOUNTING: SURFACE
ENCLOSURE: TYPE 1

VOLTS: 480/277 WYE
PHASES: 3
WIRES 4

A.I.C. RATING: 42,000
MAINS TYPE: MLO
MCB RATING: 200 A
PANEL RATING: 200 A

CONNECTED LOAD: 124.93 kVA

CKT	Circuit Description	Trip	Poles	KVA A		KVA B		KVA C		Poles	Trip	Circuit Description	CKT
1				0.66	0.94								2
3	MECHANICAL BAR SCREEN CP	20 A	3			0.66	0.94			3	20 A	BOOSTER PUMP	4
5								0.66	0.94				6
7				4.43	22.54								8
9	HOIST	20 A	3			4.43	22.54			3	110 A	HRU-101	10
11								4.43	22.54				12
13				1.67	1.67								14
15	EUH-101	20 A	3			1.67	1.67			3	20 A	EUH-102	16
17								1.67	1.67				18
19				1.67	1.67								20
21	EUH-103	20 A	3			1.67	1.67			3	20 A	EUH-104	22
23								1.67	1.67				24
25				1.00	3.00								26
27	EUH-105	20 A	3			1.00	3.00			3	20 A	EWH-1	28
29								1.00	3.00				30
31				0.00	6.50								32
33	SPARE	20 A	3			0.00	6.50			2	40 A	GENERATOR BLOCK HEATER	34
35								0.00	0.00	--	--	SPACE	36
37				0.00	0.00								38
39	SPARE	20 A	3			0.00	0.00			3	20 A	SPARE	40
41								0.00	0.00				42
		TOTAL LOAD:		44.45 kVA		44.45 kVA		37.99 kVA					
		TOTAL AMPS:		164 A		164 A		137 A					

LIGHTING PANEL: LP

LOCATION: ELECTRICAL ROOM
MOUNTING: SURFACE
ENCLOSURE: TYPE 1

VOLTS: 120/208 WYE
PHASES: 3
WIRES 4

A.I.C. RATING: 10,000
MAINS TYPE: MCB
MCB RATING: 100 A
PANEL RATING: 100 A

CONNECTED LOAD: 18.16 kVA

CKT	Circuit Description	Trip	Poles	KVA A		KVA B		KVA C		Poles	Trip	Circuit Description	CKT
1	ELEC RM, CLOSET, RESTROOM LTG	20 A	1	0.47	0.56					1	20 A	SCREENING, STAIR, INFL SCREEN LTG	2
3	STORAGE, PUMP ROOM LTG	20 A	1			0.69	0.25			1	20 A	EXTERIOR LTG	4
5	ELEC. RM, RESTROOM RECPTS	20 A	1					0.90	0.72	1	20 A	STORAGE RECPTS	6
7	PUMP ROOM RECPTS	20 A	1	0.72	2.50					2	30 A	MOBILE GEN ACCESS. DISC SW	8
9	MOBILE GEN ACCESSORY RECPT	20 A	1			0.18	2.50						10
11	STANDBY GEN PLATFORM RECPT	20 A	1					0.36	0.20	1	20 A	STANDBY GEN HEATERS	12
13	STANDBY GEN. BATTERY CHARGER	20 A	1	0.50	0.36					1	20 A	CHEM FEED PUMP RECPT	14
15	MAIN CONTROL PANEL	20 A	1			1.00	0.20			1	20 A	BUBBLER PANEL, FIT-160	16
17	LIT-210	20 A	1					0.10	2.00	1	30 A	CUH-101	18
19	NETWORK PANEL	20 A	1	0.10	0.70					1	20 A	SUMP PUMP RECPT.	20
21	MOBILE GEN. ACCESSORY RECEPT.	20 A	1			0.18	0.00			1	20 A	SPARE	22
23	HORN / STROBES	15 A	1					1.00	0.18	1	20 A	EXTERIOR GFI RECEPT.	24
25	SCREENINGS GAS MONITORING	20 A	1	1.50	1.25					1	20 A	INFL. SCREEN GAS MONITORING	26
27	HAND DRYER *	20 A	1			1.15	0.00			--	--	SPACE	28
29	SPACE	--	--					0.00	0.00	--	--	SPACE	30
31	SPACE	--	--	0.00	0.00					--	--	SPACE	32
33	SPACE	--	--			0.00	0.00			--	--	SPACE	34
35	SPACE	--	--					0.00	0.00	--	--	SPACE	36
37	SPACE	--	--	0.00	0.00					--	--	SPACE	38
39	SPACE	--	--			0.00	0.00			--	--	SPACE	40
41	SPACE	--	--					0.00	0.00	--	--	SPACE	42
		TOTAL LOAD:		8.62 kVA		6.11 kVA		5.20 kVA					
		TOTAL AMPS:		73 A		52 A		43 A					

* GFI CIRCUIT BREAKER

DRAWING NOTES:

1. POWER PANELBOARD AND LIGHTING PANELBOARD HOMERUN WIRING SHALL BE AS FOLLOWS:

CIRCUIT BREAKER	CONDUCTORS	CONDUIT
15AMP/1POLE	2-#14, 1-#14 GRD	3/4"
20AMP/1POLE	2-#12, 1-#12 GRD	3/4"
20AMP/3POLE	3-#12, 1-#12 GRD	3/4"
30AMP/1POLE	2-#10, 1-#10 GRD	3/4"
30AMP/2POLE	3-#10, 1-#10 GRD	3/4"
40AMP/2POLE	2-#8, 1-#10 GRD	3/4"
110AMP/3POLE	3-#2, 1-#6 GRD	1 1/4"

2. CONDUITS FOR POWER PANELBOARD AND LIGHTING PANELBOARD HOMERUNS SHALL BE PERMITTED TO BE CONSOLIDATED. SIZE AND DERATE CONDUCTOR. DEDICATED NEUTRAL FOR EACH CIRCUIT REQUIRING A NEUTRAL.

STATE OF NEW YORK · ERIC J. MILES · LICENSED PROFESSIONAL ENGINEER · 090895

2021-07-15

IN CHARGE OF Eric Miles
CHECKED BY Jim Crosier
MADE BY Joseph LaGoy

O'BRIEN & GERE ENGINEERS, INC.
50 MAIN ST., 10TH FLOOR SUITE 1000,
WHITE PLAINS, NEW YORK 10606

REVISION NUMBER	DATE	MADE BY	APP'D BY	REVISION

RECORD DRAWING CERTIFICATION

☐ AS BUILT - CHANGES AS NOTED
☐ AS BUILT - NO CHANGES

CONTRACTOR
NAME
SIGNATURE
TITLE DATE

PROJECT COORDINATOR
NAME
SIGNATURE
TITLE DATE

WESTCHESTER COUNTY, NEW YORK
DEPARTMENT OF PUBLIC WORKS AND TRANSPORTATION
DIVISION OF ENGINEERING

CONTRACT NUMBER
SHEET NUMBER E-604
SHEET NO. 49 OF 60

CROTONVILLE PUMPING STATION REHABILITATION

OSSINING, NEW YORK
SCHEDULES

SCALE:
DATE: 12/21/2018
DPW FILE NO. 208-03-E-73-0
REV. NO. 0

4/14/2021 8:32:30 AM

CONDUIT SCHEDULE

DESIGNATION	FROM	TO	CONDUIT SIZE	CONDUCTORS QTY / SIZE	REMARKS
MF-1A	EXISTING RISER POLE	EXISTING CON ED MANHOLE	EXIST. 4"	3 - #2 15KV MV CONDUCTORS	
MF-1B	EXISTING RISER POLE	EXISTING CON ED MANHOLE	EXIST. 4"	3 - #2 15KV MV CONDUCTORS	
MF-2A	EXISTING CON ED MANHOLE	EXISTING / RELOCATED CON ED SWITCHGEAR	*	3 - #2 15KV MV CONDUCTORS	* SEE KEYED NOTE 4, SHEET E-601
MF-2B	EXISTING CON ED MANHOLE	EXISTING / RELOCATED CON ED SWITCHGEAR	*	3 - #2 15KV MV CONDUCTORS	* SEE KEYED NOTE 4, SHEET E-601
MF-3	EXISTING / RELOCATED CON ED SWITCHGEAR	CON ED TRANSFORMER	4"	3 - #2 15KV MV CONDUCTORS	
MF-4	CON ED TRANSFORMER	SWBD	(4) 4"	32 - 250 MCM 4 - 4/0 GRD	
MF-5	SWBD	ATS	(4) 4"	32 - 250 MCM 4 - 4/0 GRD	
MF-6	ATS	MCC	(4) 4"	32 - 250 MCM 4 - 4/0 GRD	
EMF-1	STANDBY GENERATOR	MTS	(3) 4"	24 - 250 MCM 3 - 3/0 GRD	
EMF-2	MOBILE GENERATOR CONNECTION CABINET	MTS	(3) 4"	24 - 250 MCM 3 - 3/0 GRD	
EMF-3	MTS	ATS	(3) 4"	24 - 250 MCM 3 - 3/0 GRD	
P-1	MCC	WELL PUMP JB	3/4"	3 - #12, 1 - #12 GRD	
PC-1	MCC	SAF-101, HOA, DAMPER	3/4"	3 - #12, 1 - #12 GRD 7 - #14	
PC-2	MCC	EF-101, HOA, DAMPER	3/4"	3 - #12, #12 GRD 7 - #14	
P-2	MCC	PANEL PP	2"	4 - #3/0, 1- #6 GRD	
P-3	MCC	30kVA TRANSFORMER	1"	3 - #6, 1- #10GRD	
P-4	30kVA TRANSFORMER	LIGHTING PANELBOARD LP	1-1/2"	4 - #1, 1- #8 GRD	
P-5	BATTERY CHARGER	STANDBY GENERATOR STARTING BATTERIES	3/4"	2 - #10	
P-6	BOOSTER PUMP VFD	BOOSTER PUMP	3/4"	3 - #12, 1- #12 GRD	
P - 131	MCC	PUMP NO. 1	3"	3 - PUMP POWER CABLES 1 - PUMP GRD CABLE	CABLES FURNISHED WITH PUMP
P - 132	MCC	PUMP NO. 2	3"	3 - PUMP POWER CABLES 1 - PUMP GRD CABLE	CABLES FURNISHED WITH PUMP
P - 133	MCC	PUMP NO. 3	3"	3 - PUMP POWER CABLES 1 - PUMP GRD CABLE	CABLES FURNISHED WITH PUMP
P - 210	MCC	MIXER	3/4"	3-#12, 1-#12 GRD	
PC-110	MECHANICAL BAR SCREEN CP	MECHANICAL BAR SCREEN MOTOR	3/4"	3 - #12, 1 - #12 GRD, 2 - #14	

CONDUIT SCHEDULE CONT.

DESIGNATION	FROM	TO	CONDUIT SIZE	CONDUCTORS QTY / SIZE	REMARKS
PC-120	MECHANICAL BAR SCREEN CP	WASHER / COMPACTOR MOTOR	3/4"	3 - #12, 1 - #12 GRD, 2 - #14	
CC - 1	ATS	STANDBY GENERATOR	3/4"	2 - #14	
CC - 2	ATS	MOBILE GENERATOR AUTO START / STOP TERMINAL BOX	3/4"	2 - #14	
CC - 3	MCP	ATS	3/4"	6 - #14	
CC - 4	MCP	STANDBY GENERATOR, BATTERY CHARGER	3/4"	10 - #14	
CC - 5	STANDBY GENERATOR	EMERGENCY STOP	3/4"	2 - #14	
CC - 6	MCP	PUMP PROTECTION PANEL	1-1/2"	30 - #14	
CC - 7	MCP	MCC	1-1/2"	70 - #14	INCLUDES 10 SPARES
CC - 8	MCP	NETWORK PANEL	3/4"	1 - FIBER-OPTIC CABLE	
CC - 9	SAF-101 HOA	STAIR AND SCREENINGS WALL SWS	3/4"	2 - #14	
CC - 10	HRU-101	DISCHARGE TEMP. SENSOR	3/4"	4 - #14	
CC - 11	HRU-101	HRU-101 REMOTE CP	3/4"	16 - #14	
CC - 12	MCC	EXISTING HYDROPNEUMATIC TANK PRESSURE SW	3/4"	16 - #14	
CC-100A	MCP	MECHANICAL BAR SCREEN CP	3/4"	1 - #16 TSP	
CC-100B	MCP	MECHANICAL BAR SCREEN CP	3/4"	12 - #14	
CC-110A	MECHANICAL BAR SCREEN CP	LE-110A, LE-110B	3/4"	2 - #16 TSP	
CC-110B	MECHANICAL BAR SCREEN CP	LIMIT SWITCH JB, SV	3/4"	8 - #14	
CC-110C	MECHANICAL BAR SCREEN CP	LSH-110	3/4"	2 - #14	
CC-110D	MECHANICAL BAR SCREEN CP	MECHANICAL BAR SCREEN & WASHER COMP. CONTROL STATIONS	3/4"	16 - #14 1 - #14 GRD	
CC-130A	MCP	LE-130A, LE-131A	3/4"	2 - #16 TSP	
CC-130B	MCP	LSL-130C, LSHH-130C, LSL-131C, LSHH-131C	3/4"	8 - #14	
CC-130C	MCP	BUBBLER PANEL	3/4"	2 - #16 TSP	
CC - 131A	PUMP PROTECTION PANEL	PUMP NO. 1	1-1/2"	1 - PUMP CONTROL CABLE	CABLE FURNISHED WITH PUMP
CC-131B	MCC	PUMP NO.1 E-STOP, PSH-131	3/4"	4 - #14	
CC - 132A	PUMP PROTECTION PANEL	PUMP NO. 2	1-1/2"	1 - PUMP CONTROL CABLE	CABLE FURNISHED WITH PUMP
CC-132B	MCC	PUMP NO.2 E-STOP, PSH-132	3/4"	4 - #14	
CC - 133A	PUMP PROTECTION PANEL	PUMP NO. 3	1-1/2"	1 - PUMP CONTROL CABLE	CABLE FURNISHED WITH PUMP
CC-133B	MCC	PUMP NO.3 E-STOP, PSH-133	3/4"	4 - #14	

CONDUIT CONT.

DESIGNATION	FROM	TO	CONDUIT SIZE	CONDUCTORS QTY / SIZE	REMARKS
CC-140	MCP	STROBE / HORNS	3/4"	8 - #14	
CC-140A	MCP	AE/AIT-140A, AE/AIT-140B, AE/AIT-140C	1"	3 - #16 TSP	
CC-140B	MCP	AE/AIT-140A, AE/AIT-140B, AE/AIT-140C	3/4"	12 - #14	
CC-141	MCP	LSH-141	3/4"	2 - #14	
CC-142A	MCP	AE/AIT-142A, AE/AIT-142B, AE/AIT-142C	1"	3 - #16 TSP	
CC-142B	MCP	AE/AIT-142A, AE/AIT-142B, AE/AIT-142C	3/4"	16 - #14	
CC-144	MCP	SMOKE DETECTOR, FSL-150	3/4"	6 - #14	
CC-151	MCP	FSL-151, FSL-152, ZS-154-2, ZS-154-3	3/4"	8 - #14	
CC-154A	MCP	ZS-154-1	3/4"	2 - #14	
CC-154B	MCP	ZS-154-4, ZS-154-5	3/4"	4 - #14	
CC-156A	BOOSTER PUMP VFD	PSL-156	3/4"	2 - #14	
CC-156B	BOOSTER PUMP VFD	PT-156	3/4"	1 - #16 TSP	
CC-156C	MCP	BOOSTER PUMP VFD	3/4"	4 - #14	
CC-160A	FIT-160	FE-160	1"	FLOWMETER CABLE	CABLE FURNISHED WITH FLOWMETER
CC-160B	MCP	FIT-160, PIT-160	3/4"	2 - #16 TSP	
CC-210A	LE-210	FIT-210	3/4"	1 - #16 TSP	
CC-210B	MCP	FIT-210	3/4"	1 - #16 TSP	
CC-210C	MCP	LSHH-210	3/4"	2 - #14	
CC-211	MCP	JB-211	3/4"	2 - #14	

STATE OF NEW YORK · ERIC J. MILES · 090895 · LICENSED PROFESSIONAL ENGINEER

2021-07-15

IN CHARGE OF Eric Miles
CHECKED BY Jim Crosier
MADE BY Joseph LaGoy

O'BRIEN & GERE ENGINEERS, INC.
50 MAIN ST., 10TH FLOOR SUITE 1000, WHITE PLAINS, NEW YORK 10606

REVISION NUMBER	DATE	MADE BY	APP'D BY	REVISION

RECORD DRAWING CERTIFICATION

☐ AS BUILT - CHANGES AS NOTED
☐ AS BUILT - NO CHANGES

CONTRACTOR
NAME
SIGNATURE
TITLE DATE

PROJECT COORDINATOR
NAME
SIGNATURE
TITLE DATE

WESTCHESTER COUNTY, NEW YORK
DEPARTMENT OF PUBLIC WORKS AND TRANSPORTATION
DIVISION OF ENGINEERING

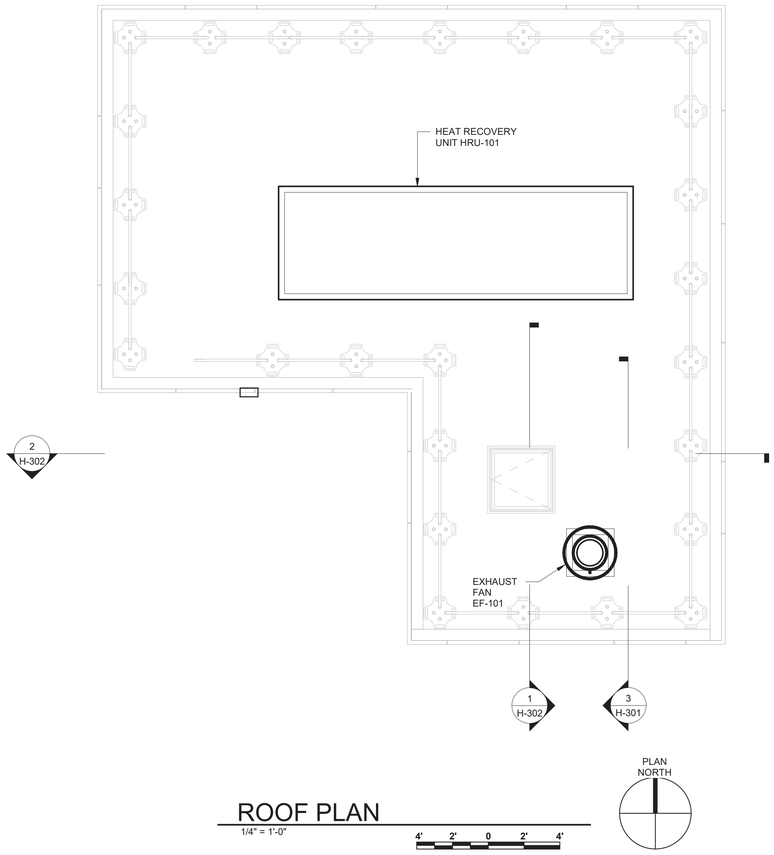
CONTRACT NUMBER
SHEET NUMBER E-605
SHEET NO. 50 OF 60

CROTONVILLE PUMPING STATION REHABILITATION

OSSINING, NEW YORK
CONDUIT SCHEDULE

SCALE:
DATE: 12/21/2018
DPW FILE NO. 208-03-E-74-0
REV. NO. 0

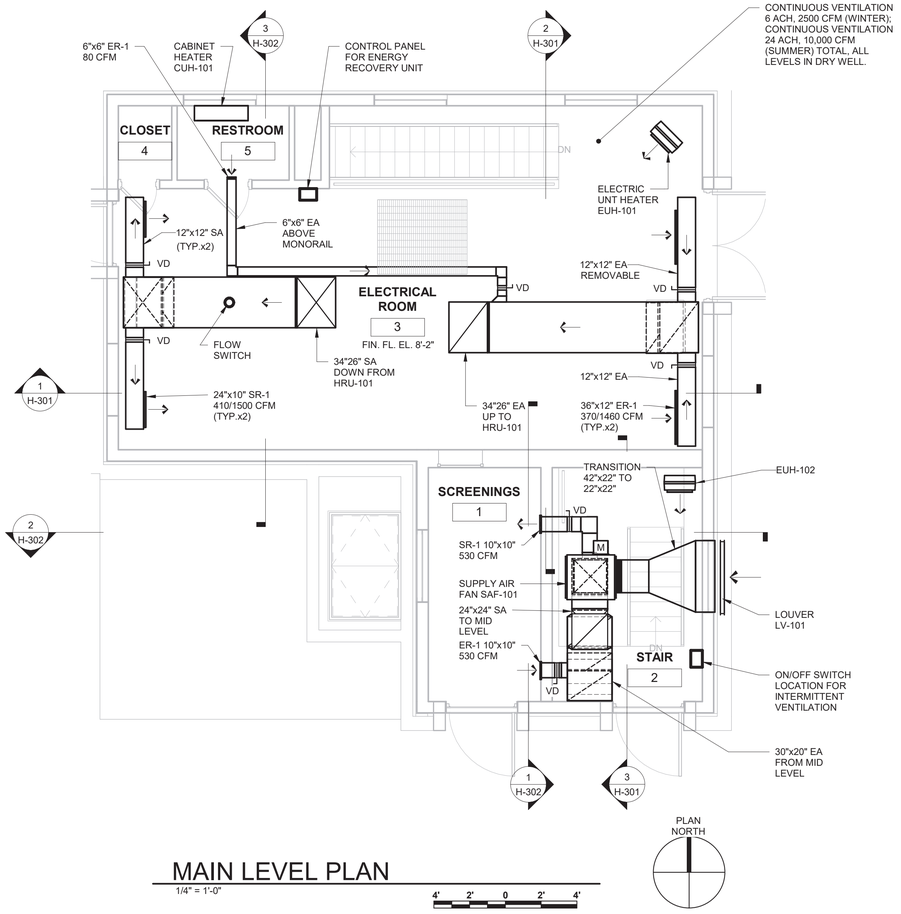
C:\Users\laramatw.RAMBOLL\Documents\66136-Crotonville-MEP_tom.laramay@obg.com.rvt



ROOF PLAN

1/4" = 1'-0"

4' 2' 0 2' 4'



MAIN LEVEL PLAN

1/4" = 1'-0"

4' 2' 0 2' 4'

ABBREVIATIONS

AFF.	ABOVE FINISHED FLOOR
CUH	CABINET UNIT HEATER
EA	EXHAUST AIR
EF	EXHAUST FAN
ER	EXHAUST REGISTER
EUH	ELECTRIC UNIT HEATER
LV	LOUVER
ERU	ENERGY RECOVERY UNIT
SA	SUPPLY AIR
SAF	SUPPLY AIR FAN
SR	SUPPLY REGISTER
RA	RETURN AIR
VD	VOLUME DAMPER

GENERAL NOTES

1. REFER TO SPECIFICATIONS FOR REGISTER SCHEDULE.

CONTROL SEQUENCE FOR INTERMITTENT VENTILATION IN WET WELL, SCREEN ROOM, AND SCREENING ROOM (SAF-101, EF-101):

PROVIDE SIGNAGE ABOVE SWITCHES, "INTERMITTENT VENTILATION SWITCH". INTERMITTENT VENTILATION WILL BE ACTIVATED WHEN SCREENING ROOM LIGHT IS TURNED ON OR WHEN STAIR LIGHT IS TURNED ON.

OFF: SYSTEM IS DE-ENERGIZED, FAN DAMPERS ARE CLOSED.

ON: SYSTEM DAMPERS OPEN, SAF-101 AND EF-101 MOTORS ARE ENERGIZED.

CONTROL SEQUENCE FOR CONTINUOUS VENTILATION IN DRY WELL: (HRU-101, LOW AIRFLOW SWITCH, DISCHARGE AIR TEMPERATURE SENSOR, INTEGRAL DAMPERS, CONTROL PANEL WITH ON-OFF-HAND SWITCH AND VISUAL AND AUDIBLE ALARMS).

PROVIDE SIGNAGE ABOVE CONTROL PANEL, "HRU-101 VENTILATION CONTROL PANEL".

OFF: SYSTEM IS DE-ENERGIZED, HRU-101 DAMPERS ARE CLOSED.

ON-(WINTER): HRU-101 DAMPERS OPEN, HRU-101 OPERATES AT 2500 CFM SUPPLY AND 2500 CFM EXHAUST.

HAND-(SUMMER): HRU-101 DAMPERS OPEN, HRU-101 OPERATES AT 10000 CFM EXHAUST

MODULATE HEATING SECTION VIA SCR CONTROL TO 55F LEAVING AIR TEMPERATURE.

ALARMS (AUDIBLE AND VISUAL), SHOW AT PANEL ON WALL WITH SWITCH (ON-OFF-HAND SWITCH): LOW TEMPERATURE, LOW AIRFLOW SWITCH.

Jul 16 2021 3:16 PM

IN CHARGE OF T. ERWIN

CHECKED BY K. RADEMACHER

MADE BY K. LABENSKI

O'BRIEN & GERE ENGINEERS, INC.
50 MAIN ST., 10TH FLOOR, SUITE 1000
WHITE PLAINS, NEW YORK 10606

REVISION NUMBER	DATE	MADE BY	APP'D BY	REVISION

RECORD DRAWING CERTIFICATION

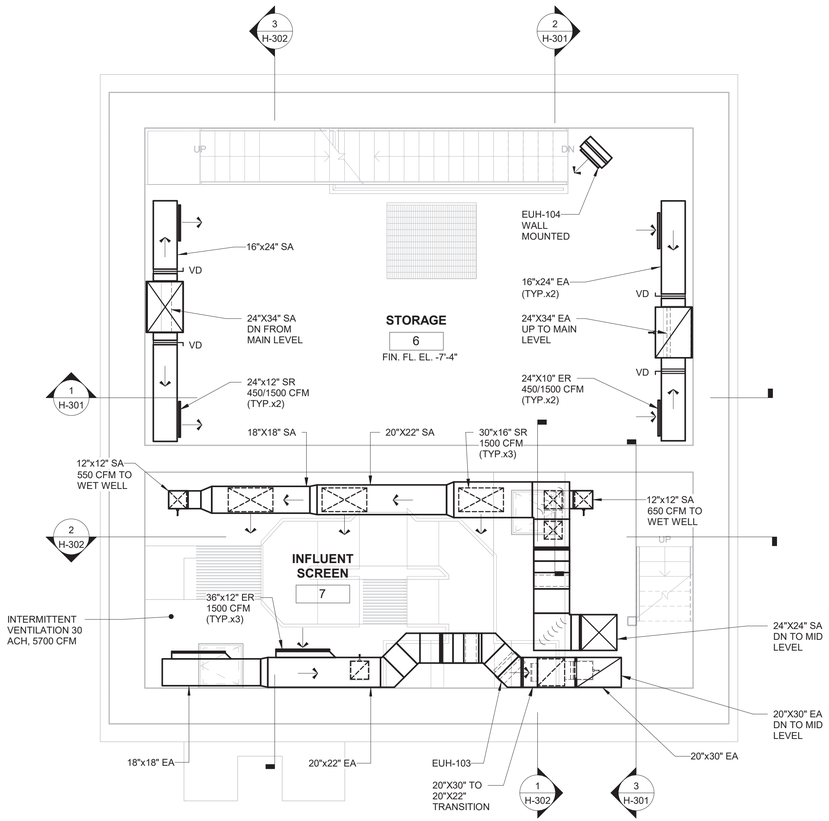
☐ AS BUILT - CHANGES AS NOTED
☐ AS BUILT - NO CHANGES

CONTRACTOR	PROJECT COORDINATOR
NAME	NAME
SIGNATURE	SIGNATURE
TITLE DATE	TITLE DATE

WESTCHESTER COUNTY, NEW YORK
DEPARTMENT OF PUBLIC WORKS AND TRANSPORTATION
DIVISION OF ENGINEERING

CROTONVILLE PUMPING STATION REHABILITATION
OSSINING SANITARY SEWER DISTRICT
OSSINING, NEW YORK
MAIN LEVEL & ROOF PLANS

CONTRACT NUMBER 17-534
SHEET NUMBER H-101
SHEET NO. 51 OF 60
SCALE: 1/4"=1'-0"
DATE: 12/21/2018
DPW FILE NO. 208-03-H-75-0
REV. NO. 0

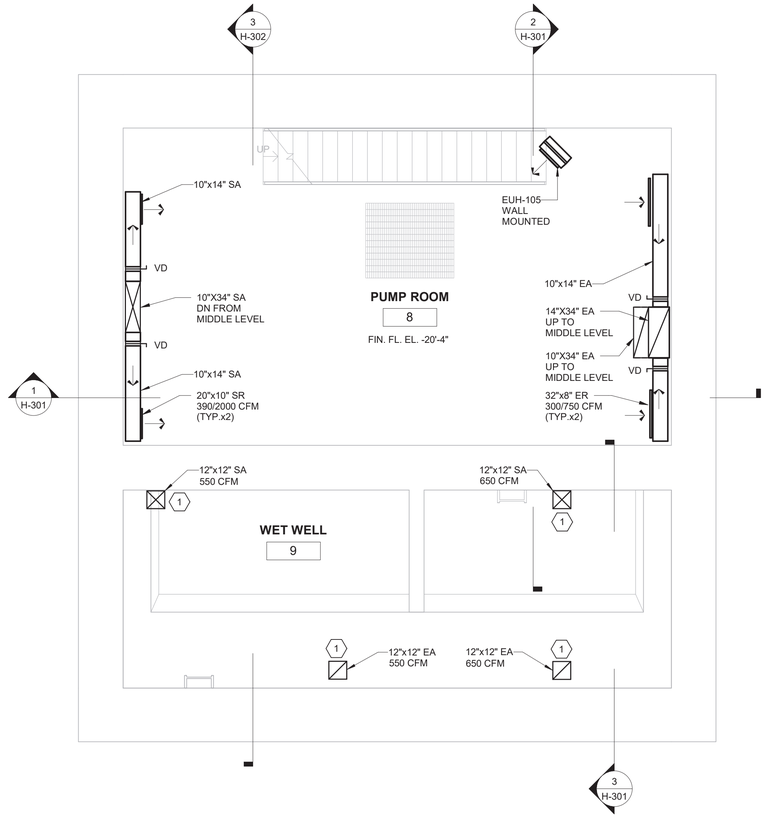


MIDDLE LEVEL FLOOR PLAN

1/4" = 1'-0"

4' 2' 0 2' 4'

PLAN NORTH



LOWER LEVEL FLOOR PLAN

1/4" = 1'-0"

4' 2' 0 2' 4'

PLAN NORTH

KEYED NOTES:

1. INSTALL WIRE MESH SCREEN AT TERMINATION OF DUCTWORK.

STATE OF NEW YORK
TIMOTHY ERWIN
LICENSED PROFESSIONAL ENGINEER
099617

Jul 16 2021 3:16 PM

IN ACCORDANCE WITH TITLE VIII, ARTICLE 145, SECTION 7209 (2) OF THE NEW YORK STATE EDUCATION LAW, IT IS A VIOLATION OF LAW FOR ANY PERSON UNLESS ACTING UNDER THE DIRECTION OF A LICENSED ENGINEER TO ALTER THIS DOCUMENT.

IN CHARGE OF T. ERWIN
CHECKED BY K. RADEMACHER
MADE BY K. LABENSKI

O'BRIEN & GERE ENGINEERS, INC.
50 MAIN ST., 10TH FLOOR, SUITE 1000
WHITE PLAINS, NEW YORK 10606

REVISION NUMBER	DATE	MADE BY	APP'D BY	REVISION

RECORD DRAWING CERTIFICATION

☐ AS BUILT - CHANGES AS NOTED
☐ AS BUILT - NO CHANGES

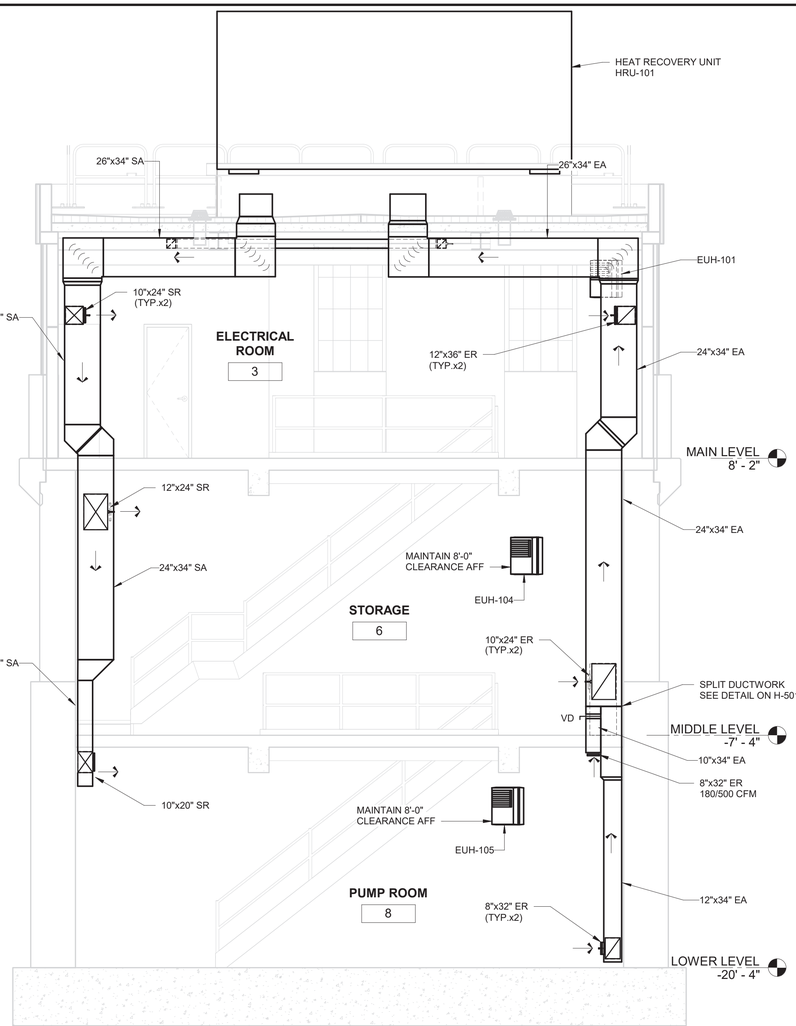
CONTRACTOR
NAME
SIGNATURE
TITLE DATE

PROJECT COORDINATOR
NAME
SIGNATURE
TITLE DATE

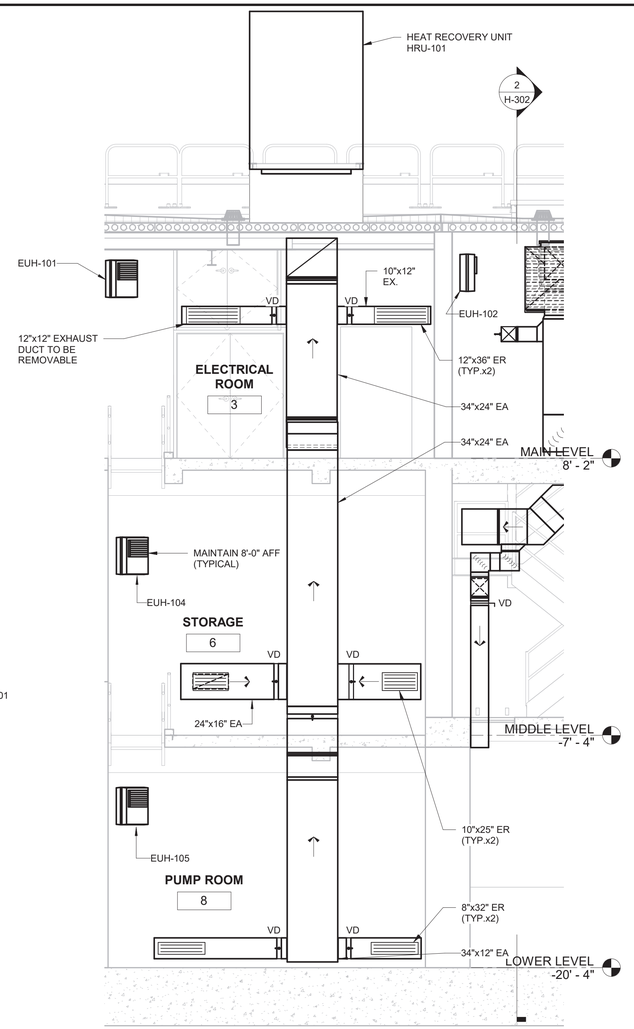
WESTCHESTER COUNTY, NEW YORK
DEPARTMENT OF PUBLIC WORKS AND TRANSPORTATION
DIVISION OF ENGINEERING

CONTRACT NUMBER 17-534
SHEET NUMBER H-102
SHEET NO. 52 OF 60
SCALE: 1/4"=1'-0"
DATE: 12/21/2018
DPW FILE NO. 208-03-H-76-0
REV. NO. 0

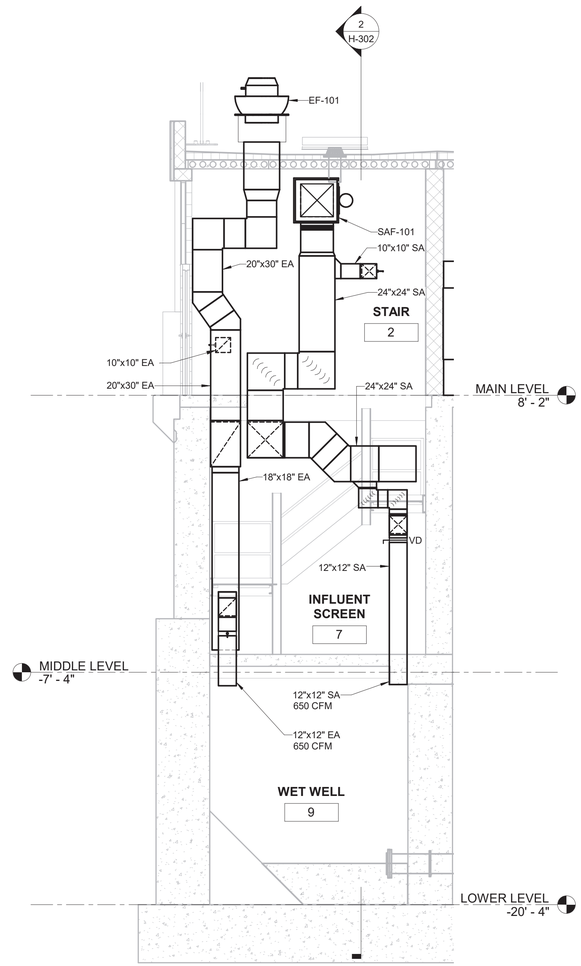
CROTONVILLE PUMPING STATION REHABILITATION
OSSINING SANITARY SEWER DISTRICT
OSSINING, NEW YORK
MIDDLE LEVEL & LOWER LEVEL PLANS



1 SECTION
1/4" = 1'-0"
4' 2' 0 2' 4'



2 SECTION
1/4" = 1'-0"
4' 2' 0 2' 4'



3 SECTION
1/4" = 1'-0"
4' 2' 0 2' 4'

STATE OF NEW YORK
TIMOTHY ERWIN
095517
LICENSED PROFESSIONAL ENGINEER

Jul 16 2021 3:16 PM

IN ACCORDANCE WITH TITLE VIII, ARTICLE 145, SECTION 7209 (2) OF THE NEW YORK STATE EDUCATION LAW, IT IS A VIOLATION OF LAW FOR ANY PERSON UNLESS ACTING UNDER THE DIRECTION OF A LICENSED ENGINEER TO ALTER THIS DOCUMENT.

IN CHARGE OF T. ERWIN
CHECKED BY K. RADEMACHER
MADE BY K. LABENSKI

O'BRIEN & GERE ENGINEERS, INC.
50 MAIN ST., 10TH FLOOR, SUITE 1000
WHITE PLAINS, NEW YORK 10606

REVISION NUMBER	DATE	MADE BY	APP'D BY	REVISION

RECORD DRAWING CERTIFICATION

☐ AS BUILT - CHANGES AS NOTED
☐ AS BUILT - NO CHANGES

CONTRACTOR
NAME
SIGNATURE
TITLE DATE

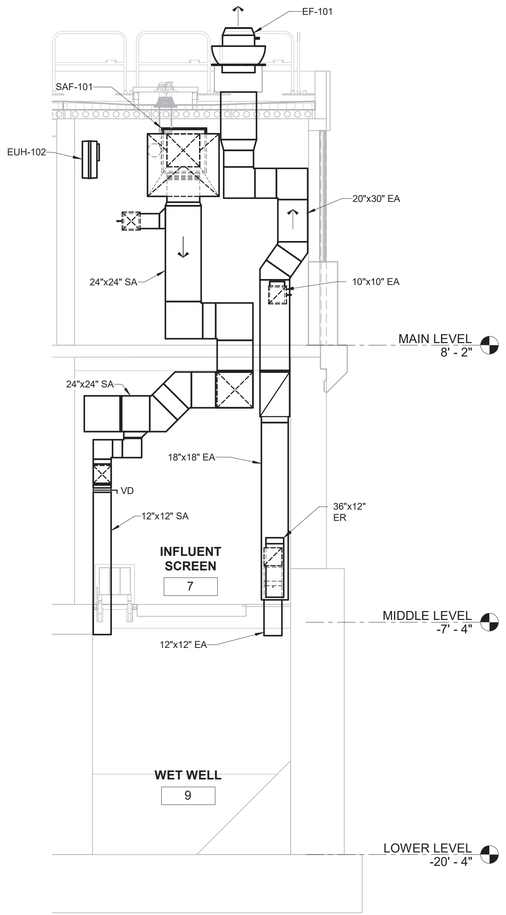
PROJECT COORDINATOR
NAME
SIGNATURE
TITLE DATE

WESTCHESTER COUNTY, NEW YORK
DEPARTMENT OF PUBLIC WORKS AND TRANSPORTATION
DIVISION OF ENGINEERING

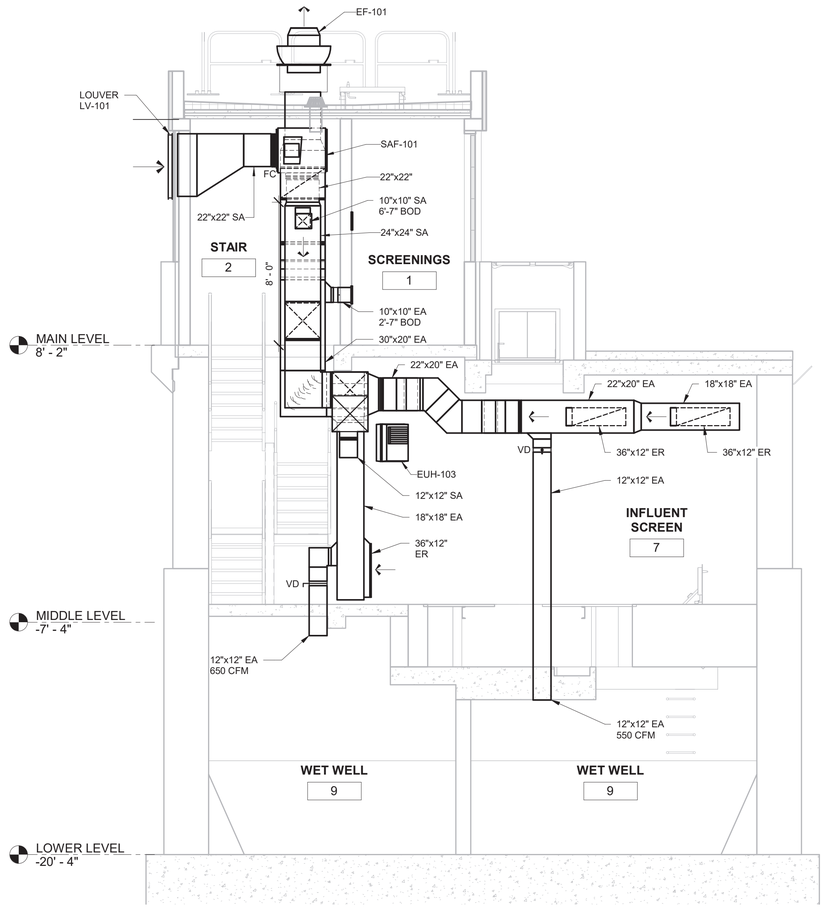
CONTRACT NUMBER 17-534
SHEET NUMBER H-301
SHEET NO. 53 OF 60

CROTONVILLE PUMPING STATION REHABILITATION
OSSINING SANITARY SEWER DISTRICT
OSSINING, NEW YORK
SECTIONS

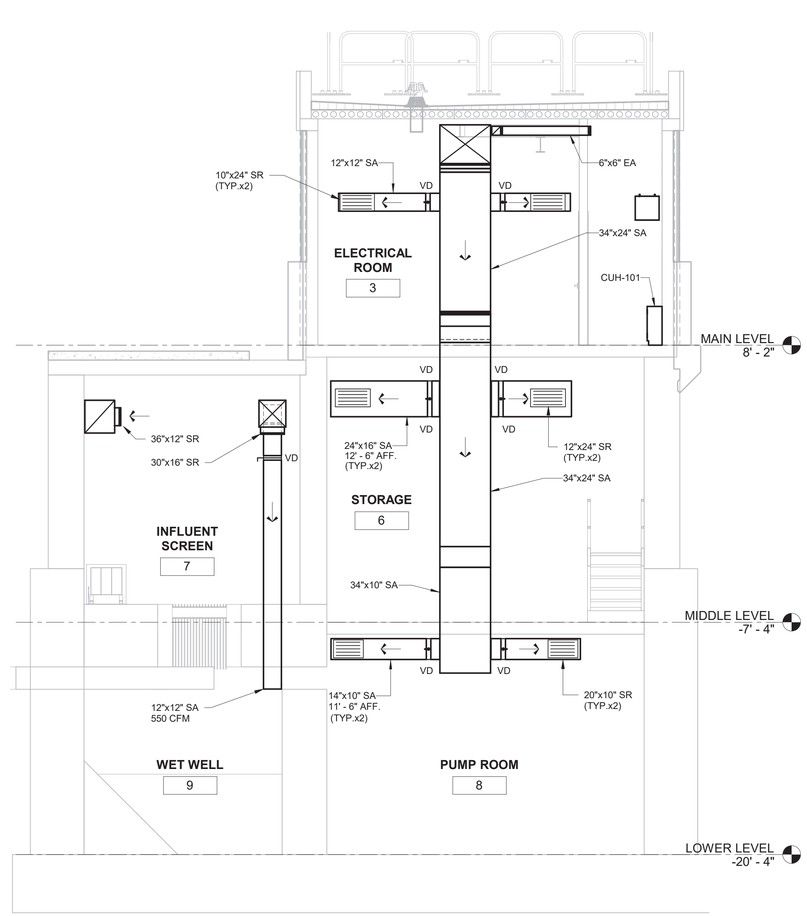
SCALE: 1/4"=1'-0"
DATE: 12/21/2018
DPW FILE NO. 208-03-H-77-0
REV. NO. 0



1 SECTION
1/4" = 1'-0"
4' 2' 0 2' 4'



2 SECTION
1/4" = 1'-0"
4' 2' 0 2' 4'



3 SECTION
1/4" = 1'-0"
4' 2' 0 2' 4'

STATE OF NEW YORK
TIMOTHY ERWIN
LICENSED PROFESSIONAL ENGINEER
099611

Jul 16 2021 3:16 PM

IN ACCORDANCE WITH TITLE VIII, ARTICLE 145, SECTION 7209 (2) OF THE NEW YORK STATE EDUCATION LAW, IT IS A VIOLATION OF LAW FOR ANY PERSON UNLESS ACTING UNDER THE DIRECTION OF A LICENSED ENGINEER TO ALTER THIS DOCUMENT.

IN CHARGE OF T. ERWIN
CHECKED BY K. RADEMACHER
MADE BY K. LABENSKI

O'BRIEN & GERE ENGINEERS, INC.
50 MAIN ST., 10TH FLOOR, SUITE 1000
WHITE PLAINS, NEW YORK 10606

REVISION NUMBER	DATE	MADE BY	APP'D BY	REVISION

RECORD DRAWING CERTIFICATION

☐ AS BUILT - CHANGES AS NOTED
☐ AS BUILT - NO CHANGES

CONTRACTOR
NAME
SIGNATURE
TITLE DATE

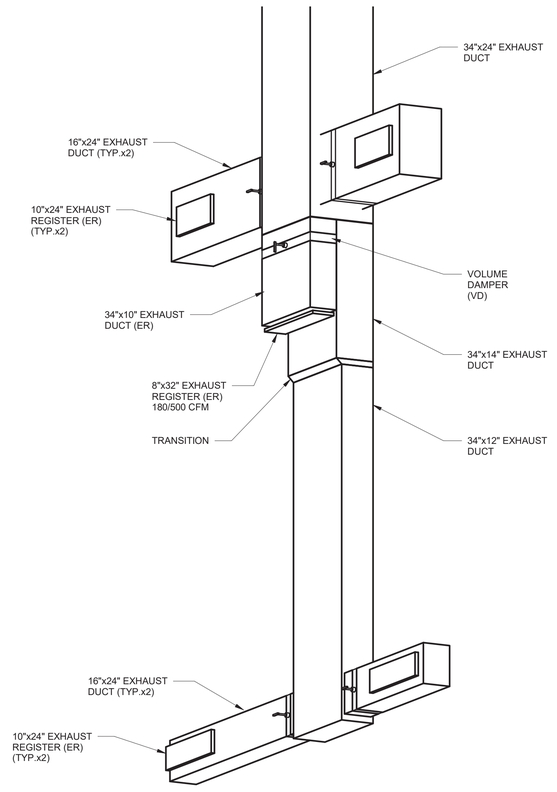
PROJECT COORDINATOR
NAME
SIGNATURE
TITLE DATE

WESTCHESTER COUNTY, NEW YORK
DEPARTMENT OF PUBLIC WORKS AND TRANSPORTATION
DIVISION OF ENGINEERING

CONTRACT NUMBER 17-534
SHEET NUMBER H-302
SHEET NO. 54 OF 60

CROTONVILLE PUMPING STATION REHABILITATION
OSSINING SANITARY SEWER DISTRICT
OSSINING, NEW YORK
SECTIONS

SCALE: 1/4"=1'-0"
DATE: 12/21/2018
DPW FILE NO. 208-03-H-78-0
REV. NO. 0



SPLIT DUCTWORK DETAIL

NOT TO SCALE

STATE OF NEW YORK · TIMOTHY ERWIN · 099617 · LICENSED PROFESSIONAL ENGINEER

Jul 16 2021 3:16 PM

IN ACCORDANCE WITH TITLE VIII, ARTICLE 145, SECTION 7209 (2) OF THE NEW YORK STATE EDUCATION LAW, IT IS A VIOLATION OF LAW FOR ANY PERSON UNLESS ACTING UNDER THE DIRECTION OF A LICENSED ENGINEER TO ALTER THIS DOCUMENT.

IN CHARGE OF T. ERWIN
CHECKED BY K. RADEMACHER
MADE BY K. LABENSKI

O'BRIEN & GERE ENGINEERS, INC.
50 MAIN ST., 10TH FLOOR, SUITE 1000
WHITE PLAINS, NEW YORK 10606

REVISION NUMBER	DATE	MADE BY	APP'D BY	REVISION

RECORD DRAWING CERTIFICATION

☐ AS BUILT - CHANGES AS NOTED
☐ AS BUILT - NO CHANGES

CONTRACTOR
NAME
SIGNATURE
TITLE DATE

PROJECT COORDINATOR
NAME
SIGNATURE
TITLE DATE

WESTCHESTER COUNTY, NEW YORK
DEPARTMENT OF PUBLIC WORKS AND TRANSPORTATION
DIVISION OF ENGINEERING

CONTRACT NUMBER 17-534
SHEET NUMBER H-501
SHEET NO. 55 OF 60

CROTONVILLE PUMPING STATION REHABILITATION
OSSINING SANITARY SEWER DISTRICT
OSSINING, NEW YORK
DETAILS

SCALE: N.T.S.
DATE: 12/21/2018
DPW FILE NO. 208-03-H-79-0
REV. NO. 0

HEAT RECOVERY UNIT (HRU) SCHEDULE

NO.	LOCATION	HEATING DATA			EXTERNAL STATIC (IN WC)	TOTAL STATIC (IN WC)	SUPPLY FAN		EXHAUST FAN		VOLTS/ PHASE	REMARKS
		ELECTRIC COIL										
		MN FACE AREA FT SQ	NOMINAL CAP (KW)	V/M/PH			CFM	HP	CFM	HP		
HRU-101	ROOF	6.43	55	460/60/3	0.75	1.5	SEE REMARK 1, 2	(2) 5	SEE REMARK 1, 2	(2) 5	460/3	1, 2, 3, 4, 5

REMARKS:

1. HRU TO SUPPLY 10,000 CFM IN SUMMER.
2. HRU TO SUPPLY 2,500 CFM IN WINTER.
3. SINGLE POINT OF ELECTRICAL CONNECTION.
4. PROVIDE WITH DISCHARGE AIR TEMPERATURE SENSORS, INTEGRAL DAMPERS, CONTROL PANEL FOR CONTROLS INCLUDING VISUAL AND AUDIBLE ALARMING IN ACCORDANCE WITH SEQUENCE OF OPERATION, ON-AUTO-OFF SWITCH FOR SUMMER, WINTER, OFF OPERATION.
5. PROVIDE WITH MANUFACTURER SUPPLIED VFDFOR SUPPLY AND EXHAUST FANS, INTEGRAL TO HRU CABINET WITH SINGLE POINT CONNECTION .

SUPPLY AIR FAN (SAF) SCHEDULE

NO.	BUILDING	LOCATION	AIR FLOW (CFM)	S.P. (IN WC)	FAN MOTOR		REMARKS
					HP	VOLTS/PHASE	
SAF-101	WET WELL	ROOF	6,230	1.0	3	460/3	1,2,3

REMARKS:

1. NEMA 7 EXPLOSION PROOF MOTOR.
2. ALUMINUM CONSTRUCTION.
3. PROVIDE WITH INTEGRAL NEMA 7 EXPLOSION PROOF DAMPER. DAMPER SHALL BE 120V, POWER OPEN / SPRING CLOSE, AND INCLUDE AN END SWITCH.

EXHAUST FAN (EF) SCHEDULE

NO.	LOCATION	AIR FLOW (CFM)	S.P. (IN WC)	HP	VOLTS/PHASE	DRIVE	REMARKS
EF-101	ROOF, WET WELL	6,230	1.0	2	460/3	BELT	1,2,3

REMARKS:

1. NEMA 7 EXPLOSION PROOF MOTOR.
2. TYPE B SPARK RESISTANT PER AMCA STANDARD 99-0401.
3. PROVIDE WITH INTEGRAL NEMA 7 EXPLOSION PROOF DAMPER. DAMPER SHALL BE 120V, POWER OPEN / SPRING CLOSE, AND INCLUDE AN END SWITCH.

FACILITY VENTILATION RATE SCHEDULE

ROOM OR AREA	VENTILATION TYPE	MINIMUM AIR CHANGES PER HOUR (ACH)
WET WELL	INTERMITTENT	30
SCREENINGS ROOM	INTERMITTENT	30
INFLUENT SCREENINGS ROOM	INTERMITTENT	30
STAIR	INTERMITTENT	30
DRY WELL	CONTINUOUS	6
ELECTRIC ROOM	CONTINUOUS	6

LOUVER (LV) SCHEDULE

NO.	DIMENSIONS		TYPE	DUTY	MAKE	MODEL	FREE AREA	SCREEN TYPE	REMARKS
	WIDTH	HEIGHT							
LV-101	4'-0"	3'-6"	INTAKE	FIXED	CONSTRUCTION SPECIALTIES	A6177	57.6%	BIRDSCREEN	1

REMARKS:

1. PROVIDE WITH PHENOLIC HERESITE COATING.

ELECTRIC UNIT HEATER (EUH) SCHEDULE

NO.	LOCATION	MINIMUM HEATING CAPACITY (KW)	VOLTS/PHASE	MOUNTING HEIGHT	REMARKS
EUH-101	ELECTRICAL ROOM, MAIN LEVEL	5	460/3	9'-0"	1,4,5,6
EUH-102	STAIR, MAIN LEVEL	5	460/3	9'-4"	1,2,3,4,5,6
EUH-103	INFLUENT SCREEN, MIDDLE LEVEL	5	460/3	8'-0"	1,2,3,4,5,6
EUH-104	STORAGE, MIDDLE LEVEL	3	460/3	9'-0"	1,4,5,6
EUH-105	PUMP ROOM, LOWER LEVEL	3	460/3	8'-0"	1,4,5,6
CUH-101	REST ROOM, MAIN LEVEL	2	120/1	0'-2"	4,5,7

REMARKS:

1. INSTALL WITH HORIZONTAL DISCHARGE.
2. NEMA 7 EXPLOSION PROOF MOTOR.
3. TYPE B SPARK RESISTANT PER AMCA 99-0401 STD.
4. INTEGRAL THERMOSTAT.
5. ELEVATION FROM THE FINISHED FLOOR TO THE BOTTOM OF THE UNIT.
6. WALL MOUNTED.
7. SEMI-RECESSED, WALL MOUNTED.

STATE OF NEW YORK · TIMOTHY ERWIN · 095617 · LICENSED PROFESSIONAL ENGINEER

Jul 16 2021 3:16 PM

IN CHARGE OF T. ERWIN
CHECKED BY K. RADEMACHER
MADE BY K. LABENSKI

O'BRIEN & GERE ENGINEERS, INC.
50 MAIN ST., 10TH FLOOR, SUITE 1000
WHITE PLAINS, NEW YORK 10606

REVISION NUMBER	DATE	MADE BY	APP'D BY	REVISION

RECORD DRAWING CERTIFICATION

☐ AS BUILT - CHANGES AS NOTED
☐ AS BUILT - NO CHANGES

CONTRACTOR
NAME
SIGNATURE
TITLE DATE

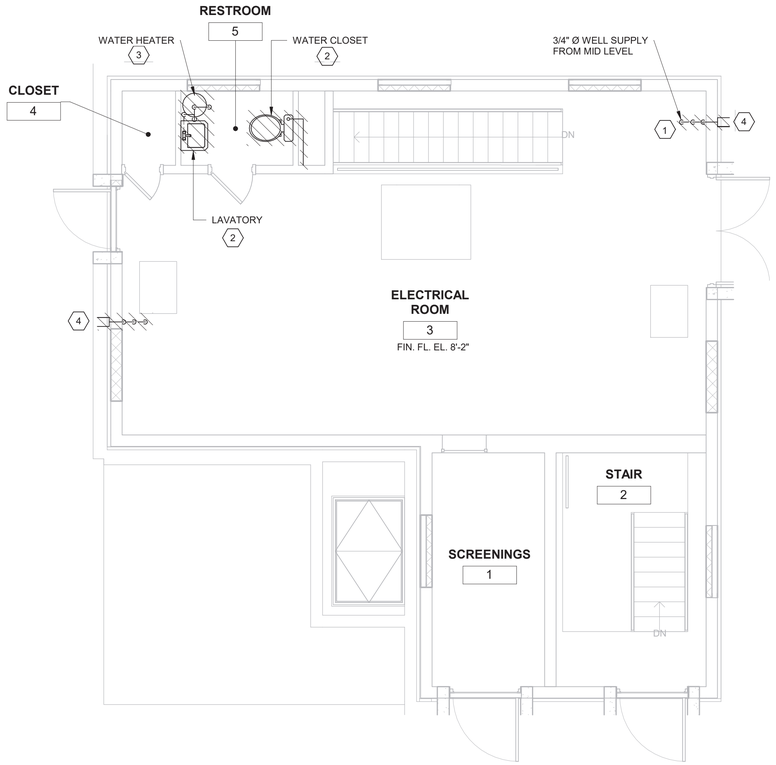
PROJECT COORDINATOR
NAME
SIGNATURE
TITLE DATE

WESTCHESTER COUNTY, NEW YORK
DEPARTMENT OF PUBLIC WORKS AND TRANSPORTATION
DIVISION OF ENGINEERING

CONTRACT NUMBER 17-534
SHEET NUMBER H-601
SHEET NO. 56 OF 60

CROTONVILLE PUMPING STATION REHABILITATION
OSSINING SANITARY SEWER DISTRICT
OSSINING, NEW YORK
SCHEDULES

SCALE: N.T.S.
DATE: 12/21/2018
DPW FILE NO. 208-03-H-80-0
REV. NO. 0



1 MAIN LEVEL - DEMOLITION PLAN

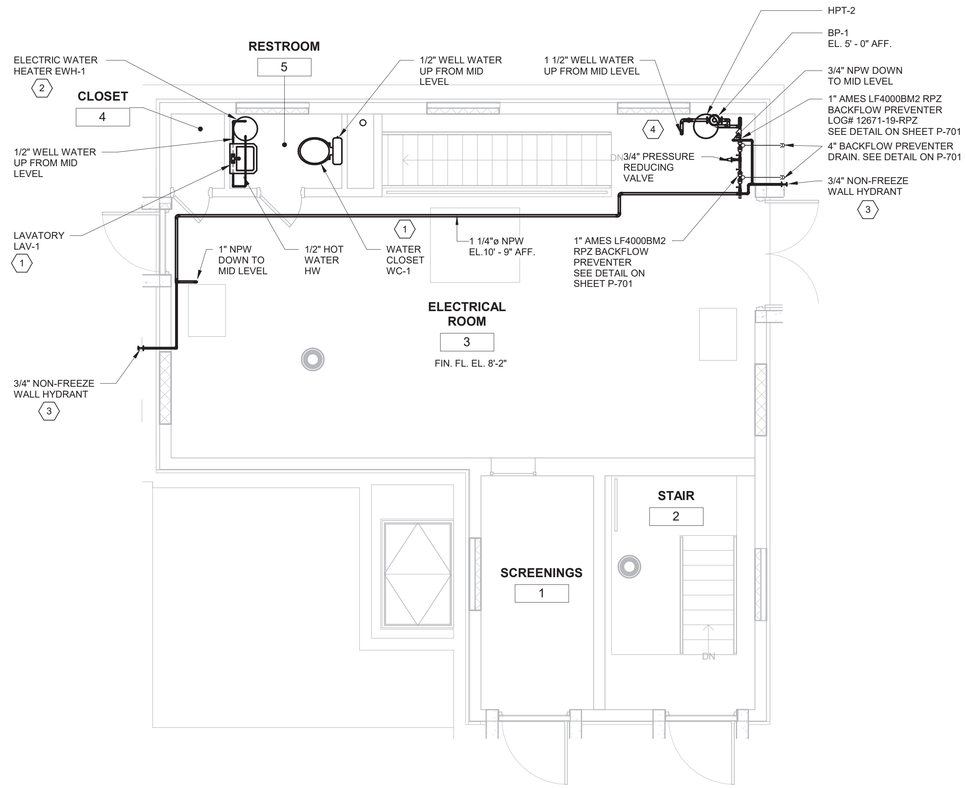
1/4" = 1'-0"

4' 2' 0 2' 4'

PLAN NORTH

KEYED NOTES:

1. DEMOLISH PIPING DOWN TO MIDDLE LEVEL. SEE P-102 FOR CONTINUATION.
2. DEMOLISH WATER CLOSET, LAVATORY AND PIPING DOWN TO MIDDLE LEVEL. SEE P-102 FOR CONTINUATION.
3. DEMOLISH ELECTRIC WATER HEATER AND PIPING DOWN TO MIDDLE LEVEL. SEE P-102 FOR CONTINUATION.
4. DEMOLISH NON-FREEZE WALL HYDRANT AND PIPING. SEE P-102 FOR CONTINUATION.



2 MAIN LEVEL - INSTALLATION PLAN

1/4" = 1'-0"

4' 2' 0 2' 4'

PLAN NORTH

KEYED NOTES:

1. PROVIDE TANK TYPE WATER CLOSET, LAVATORY AND PIPING.
2. PROVIDE ELECTRIC WATER HEATER AND PIPING.
3. PROVIDE NON-FREEZE WALL HYDRANT AND PIPING.
4. EXPOSED PIPING BETWEEN 2" INCOMING WELL WATER CONNECTION AND PRIMARY RPZ SHALL BE STENCILED "FEED LINE TO BACKFLOW PREVENTER - DO NOT TAP" AT 5'-0" INTERVALS.

STATE OF NEW YORK · TIMOTHY ERWIN · 095617 · LICENSED PROFESSIONAL ENGINEER

Jul 16 2021 3:17 PM

IN CHARGE OF T. ERWIN
CHECKED BY K. RADEMACHER
MADE BY K. LABENSKI

O'BRIEN & GERE ENGINEERS, INC.
50 MAIN ST., 10TH FLOOR, SUITE 1000
WHITE PLAINS, NEW YORK 10606

REVISION NUMBER	DATE	MADE BY	APP'D BY	REVISION

RECORD DRAWING CERTIFICATION

☐ AS BUILT - CHANGES AS NOTED
☐ AS BUILT - NO CHANGES

CONTRACTOR
NAME
SIGNATURE
TITLE DATE

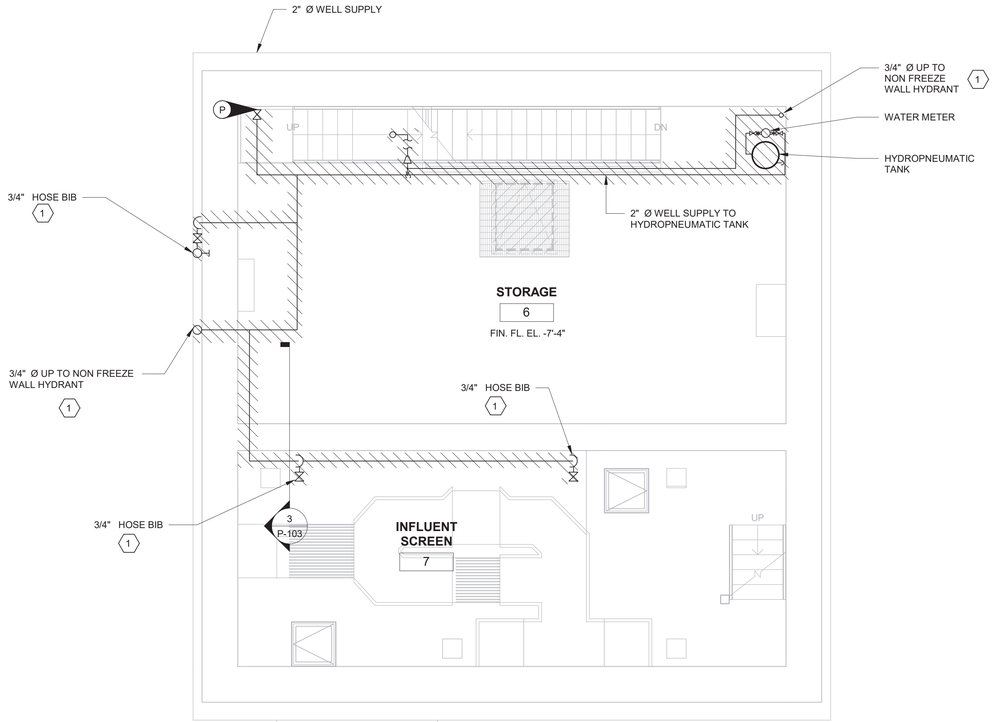
PROJECT COORDINATOR
NAME
SIGNATURE
TITLE DATE

WESTCHESTER COUNTY, NEW YORK
DEPARTMENT OF PUBLIC WORKS AND TRANSPORTATION
DIVISION OF ENGINEERING

CONTRACT NUMBER 17-534
SHEET NUMBER P-101
SHEET NO. 57 OF 60

CROTONVILLE PUMPING STATION REHABILITATION
OSSINING SANITARY SEWER DISTRICT
OSSINING, NEW YORK
MAIN LEVEL PLUMBING DEMOLITION & INSTALLATION PLANS

SCALE: 1/4"=1'-0"
DATE: 12/21/2018
DPW FILE NO. 208-03-P-81-0
REV. NO. 0



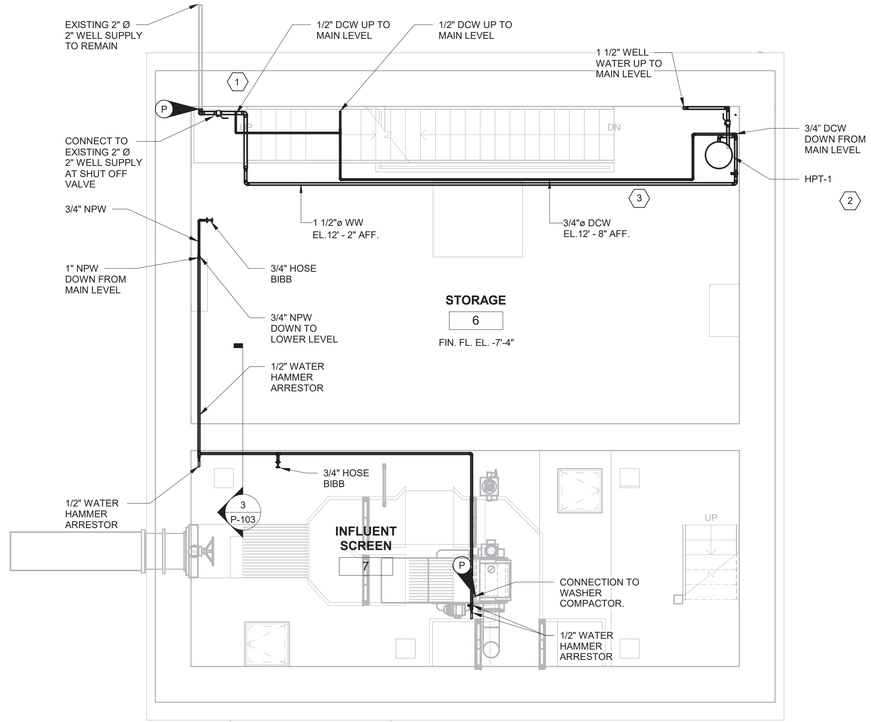
1 MIDDLE LEVEL DEMOLITION PLAN
1/4" = 1'-0"

PLAN NORTH

4' 2' 0 2' 4'

KEYED NOTES:

1. REMOVE EQUIPMENT AND ASSOCIATED PIPING.



2 MIDDLE LEVEL INSTALLATION PLAN
1/4" = 1'-0"

PLAN NORTH

4' 2' 0 2' 4'

KEYED NOTES:

1. EXISTING 2" Ø WELL WATER SUPPLY. CONNECT TO VALVE FOR THE INSTALLATION OF WELL WATER SUPPLY PIPING.
2. INSTALL HYDROPNEUMATIC TANK AND PIPING.
3. EXPOSED PIPING BETWEEN 2" INCOMING WELL WATER CONNECTION AND PRIMARY RPZ SHALL BE STENCILED "FEED LINE TO BACKFLOW PREVENTER - DO NOT TAP" AT 5'-0" INTERVALS.

GENERAL NOTES:

1. HOSE BIBBS TO BE INSTALLED AT A HEIGHT OF 3'-0" UNLESS OTHERWISE NOTED.

STATE OF NEW YORK TIMOTHY ERWIN 099611 LICENSED PROFESSIONAL ENGINEER

Jul 16 2021 3:17 PM

IN ACCORDANCE WITH TITLE VIII, ARTICLE 145, SECTION 7209 (2) OF THE NEW YORK STATE EDUCATION LAW, IT IS A VIOLATION OF LAW FOR ANY PERSON UNLESS ACTING UNDER THE DIRECTION OF A LICENSED ENGINEER TO ALTER THIS DOCUMENT.

IN CHARGE OF T. ERWIN
CHECKED BY K. RADEMACHER
MADE BY K. LABENSKI

O'BRIEN & GERE ENGINEERS, INC.
50 MAIN ST., 10TH FLOOR, SUITE 1000
WHITE PLAINS, NEW YORK 10606

REVISION NUMBER	DATE	MADE BY	APP'D BY	REVISION

RECORD DRAWING CERTIFICATION

☐ AS BUILT - CHANGES AS NOTED
☐ AS BUILT - NO CHANGES

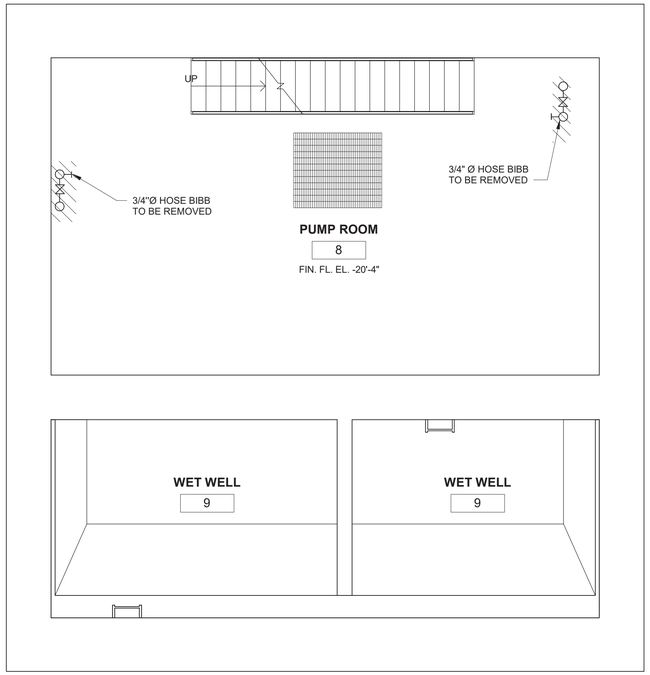
CONTRACTOR
NAME
SIGNATURE
TITLE DATE

PROJECT COORDINATOR
NAME
SIGNATURE
TITLE DATE

WESTCHESTER COUNTY, NEW YORK
DEPARTMENT OF PUBLIC WORKS AND TRANSPORTATION
DIVISION OF ENGINEERING

CONTRACT NUMBER 17-534
SHEET NUMBER P-102
SHEET NO. 58 OF 60
SCALE: 1/4"=1'-0"
DATE: 12/21/2018
DPW FILE NO. 208-03-P-82-0
REV. NO. 0

CROTONVILLE PUMPING STATION REHABILITATION
OSSINING SANITARY SEWER DISTRICT
OSSINING, NEW YORK
MIDDLE LEVEL PLUMBING DEMOLITION & INSTALLATION PLANS

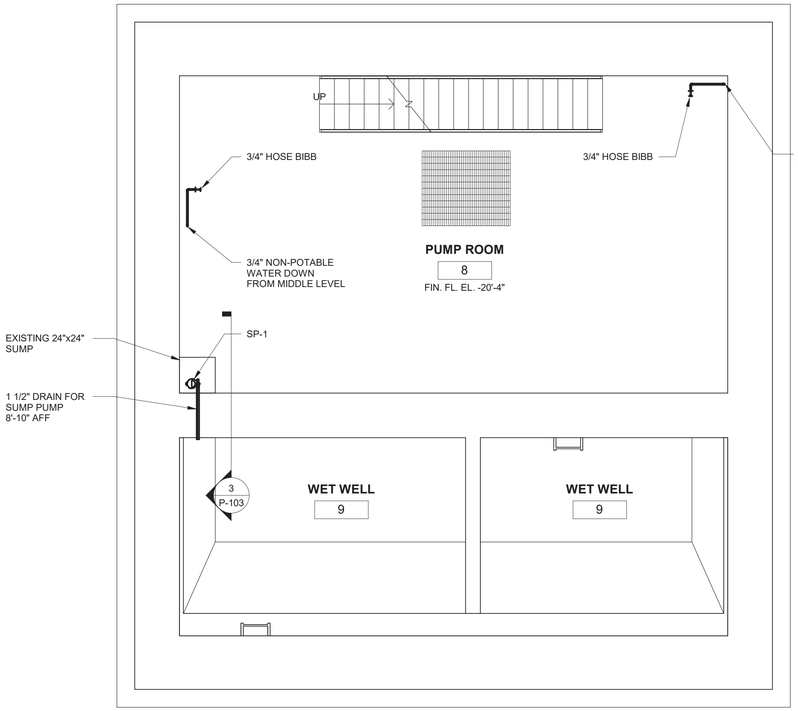


1 LOWER LEVEL DEMOLITION PLAN

1/4" = 1'-0"

4' 2' 0 2' 4'

PLAN NORTH

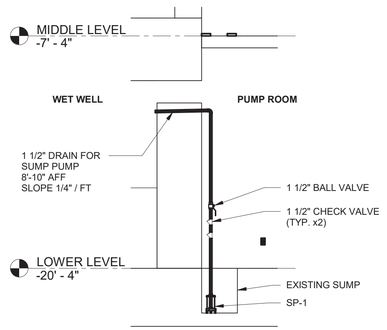


2 LOWER LEVEL INSTALLATION PLAN

1/4" = 1'-0"

4' 2' 0 2' 4'

PLAN NORTH



3 SUMP PUMP SECTION VIEW

1/4" = 1'-0"

GENERAL NOTES:

1. HOSE BIBBS TO BE INSTALLED AT A HEIGHT OF 3'-0" UNLESS OTHERWISE NOTED.

STATE OF NEW YORK · TIMOTHY ERWIN · 095617 · LICENSED PROFESSIONAL ENGINEER

Jul 16 2021 3:17 PM

IN ACCORDANCE WITH TITLE VIII, ARTICLE 145, SECTION 7209 (2) OF THE NEW YORK STATE EDUCATION LAW, IT IS A VIOLATION OF LAW FOR ANY PERSON UNLESS ACTING UNDER THE DIRECTION OF A LICENSED ENGINEER TO ALTER THIS DOCUMENT.

IN CHARGE OF T. ERWIN
CHECKED BY K. RADEMACHER
MADE BY K. LABENSKI

O'BRIEN & GERE ENGINEERS, INC.
50 MAIN ST., 10TH FLOOR, SUITE 1000
WHITE PLAINS, NEW YORK 10606

REVISION NUMBER	DATE	MADE BY	APP'D BY	REVISION

RECORD DRAWING CERTIFICATION

☐ AS BUILT - CHANGES AS NOTED
☐ AS BUILT - NO CHANGES

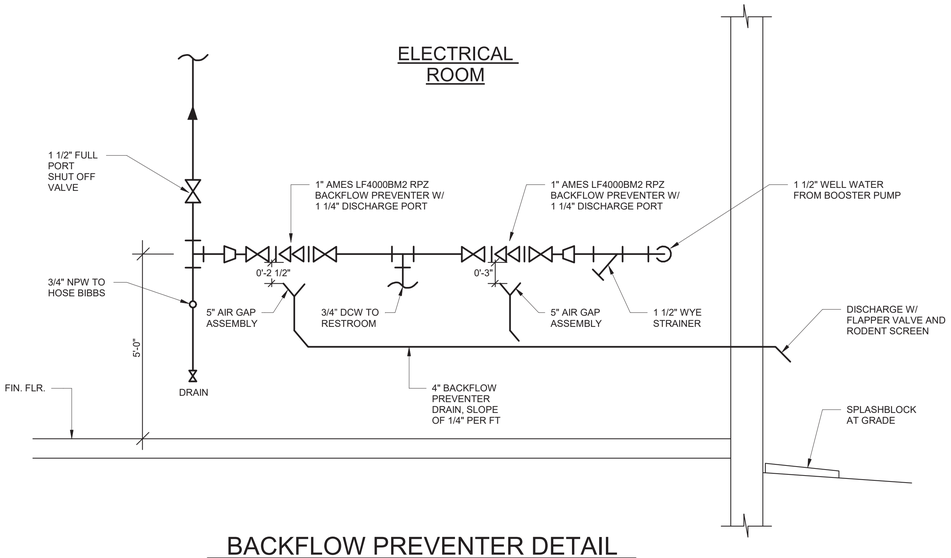
CONTRACTOR
NAME
SIGNATURE
TITLE DATE

PROJECT COORDINATOR
NAME
SIGNATURE
TITLE DATE

WESTCHESTER COUNTY, NEW YORK
DEPARTMENT OF PUBLIC WORKS AND TRANSPORTATION
DIVISION OF ENGINEERING

CONTRACT NUMBER 17-534
SHEET NUMBER P-103
SHEET NO. 59 OF 60
SCALE: 1/4"=1'-0"
DATE: 12/21/2018
DPW FILE NO. 208-03-P-83-0
REV. NO. 0

CROTONVILLE PUMPING STATION REHABILITATION
OSSINING SANITARY SEWER DISTRICT
OSSINING, NEW YORK
LOWER LEVEL PLUMBING DEMOLITION & INSTALLATION

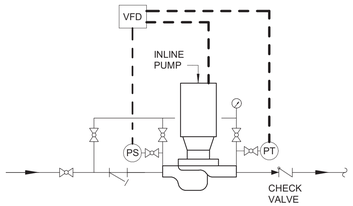


BACKFLOW PREVENTER DETAIL

NOT TO SCALE

ABBREVIATIONS

BP	BOOSTER PUMP
DCW	DOMESTIC COLD WATER
EWH	ELECTRIC WATER HEATER
HPT	HYDRO-PNEUMATIC TANK
NPW	NON-POTABLE WATER
PS	PRESSURE SENSOR
PT	PRESSURE TRANSMITTER



NOTES:

1. VALVES SHALL BE SAME SIZE AS PIPE.
2. FOR PUMPS OVER 1 HP: PUMP & PIPE WITHIN 20' SHALL HAVE SPRING ISOLATOR SUPPORTS.
3. INSTALLATION SHALL BE IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.

INLINE PUMP PIPING DETAIL

NOT TO SCALE

PLUMBING FIXTURE SCHEDULE

FIXTURE NAME	DESCRIPTION	CW	HW	VENT	SANITARY	REMARKS
WC-1	WATER CLOSET	1/2"	-	2"	3"	TANK TYPE STANDARD
LAV-1	LAVATORY	1/2"	1/2"	1 1/4"	1 1/4"	WALL HUNG

SUMP PUMP (SP) SCHEDULE

NO.	LOCATION	GPM	THD HEAD (FT)	RPM	MOTOR DATA		MANUFACTURER/ MODEL	REMARKS
					HP	VOLTS /PHASE		
SP-1	SUMP IN DRY WELL LOWER LEVEL	32	26	3450	3/4	115 V	BELL & GOSSETT/ SS0711	1

REMARKS:

1. PUMP SHALL BE POWERED BY CONVENIENCE OUTLET LOCATED NEAR EXISTING SUMP.

BOOSTER PUMP (BP) SCHEDULE

NO.	SERVICE	PUMP				MOTOR			REMARKS
		FLOW GPM	HEAD (FT)	MIN. PUMP EFFICIENCY	CONTROL	HP	RPM	VOLT/PHASE	
BP-1	DCW, NPW	20	157	63	VFD, CONSTANT PRESSURE	2	3500	460V/3 PH	1,2,3,4

REMARKS:

1. PUMPED FLUID: WELL WATER
2. BASE MOUNTED.
3. IN-LINE.
4. LOW PRESSURE CUT-OFF SWITCH SET TO 10 PSI.

ELECTRIC WATER HEATER (EWH) SCHEDULE

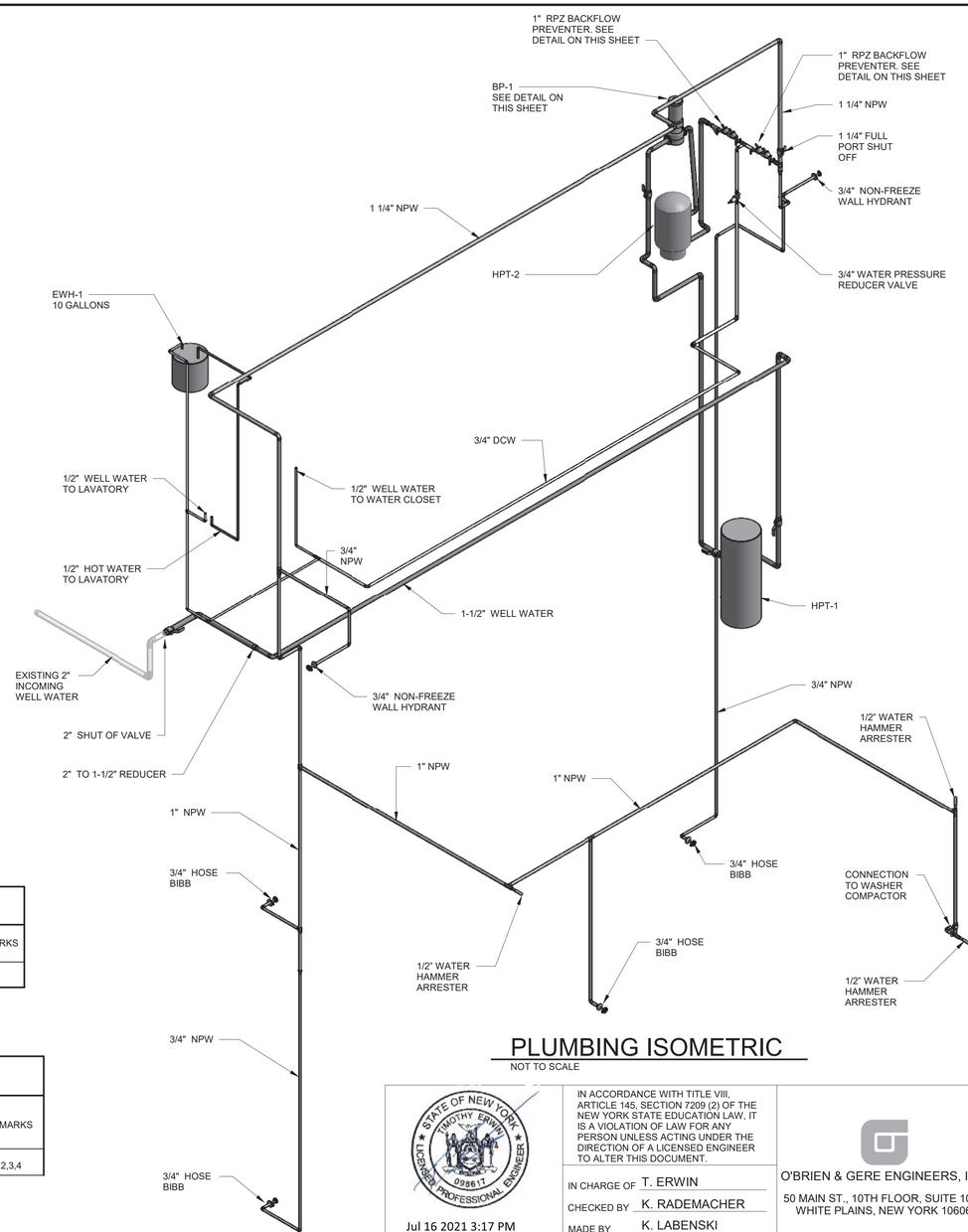
NO.	BUILDING	LOCATION	TANK CAPACITY (GALLONS)	HEATING INFORMATION				REMARKS
				INPUT RATING (KW)	VOLTAGE (V)	PHASE (PH)	SET TEMPERATURE	
EWH-1	PUMP STATION	REST ROOM	10	1.65	120	1	120°F	1

REMARKS:

1. WALL MOUNTED.

HYDRO-PNEUMATIC TANK (HPT) SCHEDULE

NO.	BUILDING	LOCATION	TANK CAPACITY (GALLONS)	SERVICE	TYPE	SIZE	CONNECTION SIZE	REMARKS
HT-1	PUMP STATION	MIDDLE LEVEL	211	WELL WATER	CLOSED	91" x 30" ø	1"	-
HT-2	PUMP STATION	MAIN LEVEL	18	DCW	CLOSED	31-1/4" x 16-1/4" ø	2"	-



PLUMBING ISOMETRIC

NOT TO SCALE

Jul 16 2021 3:17 PM

IN ACCORDANCE WITH TITLE VIII, ARTICLE 145, SECTION 7209 (2) OF THE NEW YORK STATE EDUCATION LAW, IT IS A VIOLATION OF LAW FOR ANY PERSON UNLESS ACTING UNDER THE DIRECTION OF A LICENSED ENGINEER TO ALTER THIS DOCUMENT.

IN CHARGE OF T. ERWIN
CHECKED BY K. RADEMACHER
MADE BY K. LABENSKI

O'BRIEN & GERE ENGINEERS, INC.
50 MAIN ST., 10TH FLOOR, SUITE 1000
WHITE PLAINS, NEW YORK 10606

REVISION NUMBER	DATE	MADE BY	APP'D BY	REVISION

RECORD DRAWING CERTIFICATION

☐ AS BUILT - CHANGES AS NOTED
☐ AS BUILT - NO CHANGES

CONTRACTOR
NAME
SIGNATURE
TITLE DATE

PROJECT COORDINATOR
NAME
SIGNATURE
TITLE DATE

WESTCHESTER COUNTY, NEW YORK
DEPARTMENT OF PUBLIC WORKS AND TRANSPORTATION
DIVISION OF ENGINEERING

CONTRACT NUMBER 17-534
SHEET NUMBER P-701
SHEET NO. 60 OF 60
SCALE: N.T.S.
DATE: 12/21/2018
DPW FILE NO. 208-03-P-84-0
REV. NO. 0

CROTONVILLE PUMPING STATION REHABILITATION
OSSINING SANITARY SEWER DISTRICT
OSSINING, NEW YORK
ISOMETRIC, DETAIL & SCHEDULE