

CALL BEFORE YOU DIG
MISS UTILITY OF DELMARVA
1-800-282-8555 (IN DE.)
PLEASE GIVE TWO WORKING DAYS
ADVANCE NOTICE

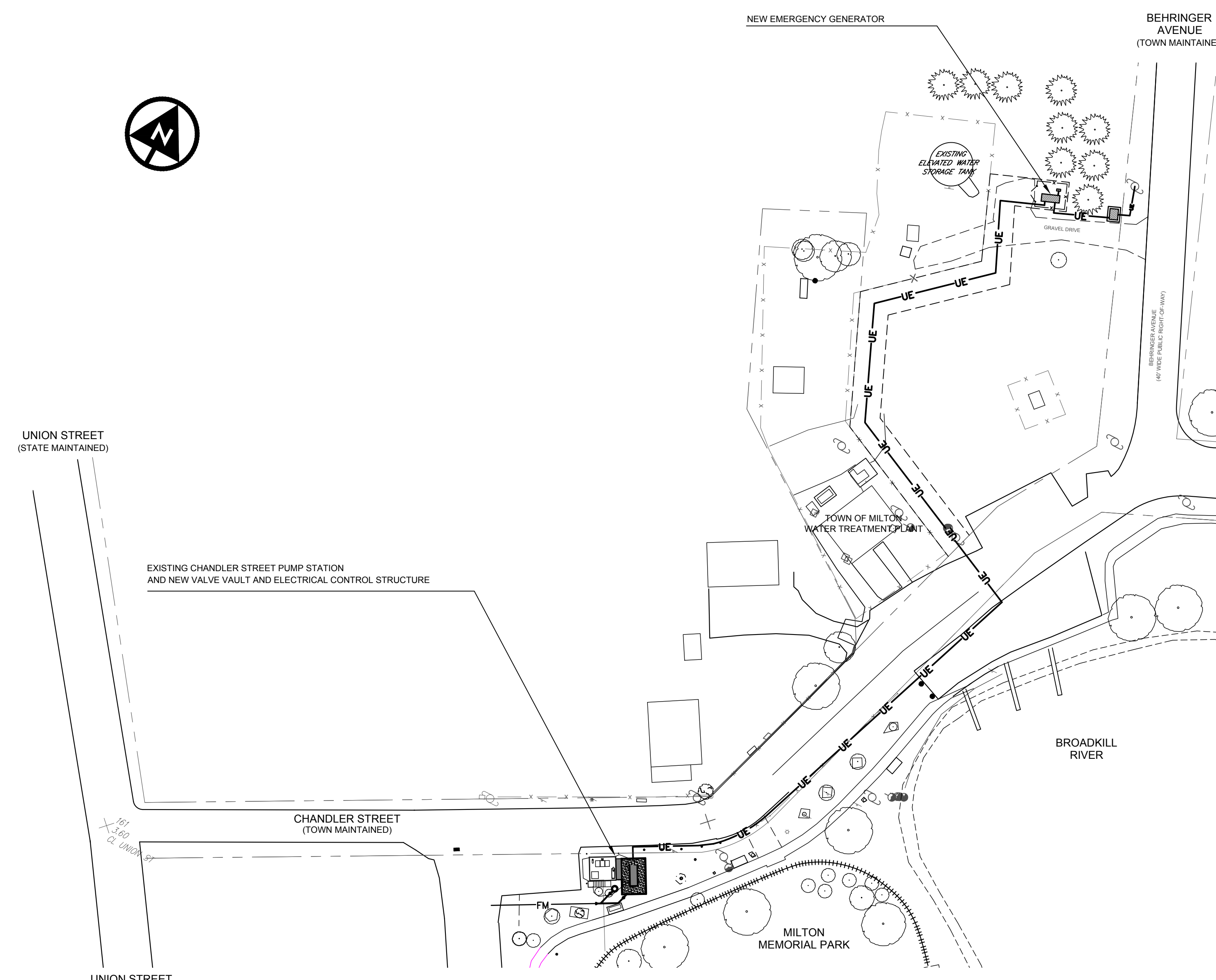
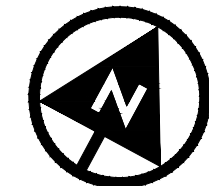
THIS DRAWING DOES NOT INCLUDE NECESSARY
COMPONENTS FOR CONSTRUCTION SAFETY.

ALL CONSTRUCTION MUST BE DONE IN
COMPLIANCE WITH THE OCCUPATIONAL SAFETY
AND HEALTH ACT OF 1970 AND ALL RULES AND
REGULATIONS THERETO APPURTENANT.

ARTESIAN WASTE WATER MANAGEMENT CHANDLER STREET PUMPING STATION TOWN OF MILTON SUSSEX COUNTY, DELAWARE

ARTESIAN WASTEWATER MANAGEMENT NOTES:

- BIDS ARE TO BE BASED ON THE DRAWINGS PROVIDED. THIS IS TO INCLUDE ALL RESTORATION NOTED ON THE DRAWING.
- ALL MATERIAL AND INSTALLATION SHALL CONFORM TO ARTESIAN WASTEWATER MANAGEMENT, INC. SPECIFICATIONS AND 10 STATES STANDARDS.
- DEPTH OF THE PROPOSED SEWER MAIN SHALL BE A MINIMUM OF 48" FROM FINISHED GRADE TO TOP OF PIPE, INCLUDING SERVICES, UNLESS OTHERWISE SHOWN.
- DEPTH OF THE PROPOSED SEWER MAIN MAY VARY DUE TO EXISTING FACILITIES.
- EXISTING GRADES ARE NOT TO BE CHANGED.
- 18" VERTICAL CLEARANCE BETWEEN ALL UTILITIES IS TO BE MAINTAINED.
- 10' HORIZONTAL SEPARATION FROM EXISTING WATER MAINS IS TO BE MAINTAINED UNLESS NOTED OTHERWISE.
- ALL ROADWAY PATCH SHALL BE TO STATE SPEC.
- ALL CONCRETE CURB SHALL NOT BE DISTURBED UNLESS IT IS UNAVOIDABLE.
- ALL CONCRETE SIDEWALK PATCHES SHALL BE 4" THICK WITH 4" OF CRUSHER RUN.
- THE DELDOT INSPECTOR NEEDS TO BE NOTIFIED 24 HOURS IN ADVANCE OF MATERIAL PLACEMENT TO REQUEST MATERIAL RELEASES. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY THE DELDOT INSPECTOR.
- ALL MOT SHALL BE IN ACCORDANCE WITH THE DELAWARE MUTCD MANUAL, (LATEST EDITION) AND BE NCHRP 350 CERTIFIED.
- EXISTING UTILITIES ARE SHOWN IN ACCORDANCE WITH BEST AVAILABLE INFORMATION. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY AND ALLOW FOR THEIR LOCATION.
- THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT THE EXISTING UTILITIES AND MAINTAIN UNINTERRUPTED SERVICE AND ANY DAMAGE DONE TO THEM DUE TO HIS NEGLIGENCE SHALL BE IMMEDIATELY AND COMPLETELY REPAIRED AT HIS EXPENSE.
- TEMPORARY SIDEWALK HAS TO BE PLACED WHERE EXISTING SIDEWALK IS REMOVED WITH BLACKTOP OR COLD PATCH. NO MORE THAN 500' CAN BE REMOVED WITHOUT PUTTING IN THE TEMPORARY SIDEWALK.
- HYDRO-SEEDING AND SIFTED TOPSOIL SHALL BE USED FOR THE RESTORATION IN GRASS AREAS/LAWNS. GRASS SEED SPECIFICATIONS FULL SUNSHADE MIX
30% MONTAUK TALL FESCUE
20% PERENNIAL RYEGRASS
20% ANNUAL RYEGRASS
20% CREEPING RED FESCUE
10% KENTUCKY BLUEGRASS
- ALL BUSHES, SHRUBS TREES AND OTHER VEGETATION WITHIN STATE RIGHT-OF-WAY REMOVED OR IMPACTED DURING CONSTRUCTION SHALL BE REPLACED IN KIND TO THE SATISFACTION OF DELDOT, OR AS APPROVED BY DELDOT INSPECTOR.
- SIDEWALKS THAT GO THROUGH DRIVEWAYS SHALL BE INCLUDED IN THE LUMP SUM PRICE FOR SELECT. ALL OTHER SIDEWALK WILL BE A UNIT PRICE.
- VACUUM EXCAVATION METHOD IS TO BE USED FOR TEST HOLES WHERE EXISTING UTILITIES CROSS PROPOSED SEWER MAINS IN PAVING.
- CONTRACTOR SHALL VERIFY THE LOCATION AND ELEVATION OF EXISTING UTILITIES AT ALL PROPOSED CROSSINGS PRIOR TO THE START OF CONSTRUCTION. ANY DISCREPANCIES AND/OR PROPOSED MODIFICATIONS SHALL BE BROUGHT TO THE ATTENTION OF THE ARTESIAN WASTEWATER MANAGEMENT INSPECTOR AT LEAST ONE WEEK PRIOR TO THE PLANNED COMMENCEMENT OF CONSTRUCTION.
- HOLD UTILITY POLES AS NEEDED, REMOVE & REPLACE GUY WIRES, AS NECESSARY.
- ANY EXISTING PROPERTY MONUMENTATION THAT IS DISTURBED DURING CONSTRUCTION ACTIVITIES ARE TO BE REPLACED OR RESTORED TO ORIGINAL POSITION BY CONTRACTOR.



CHANDLER STREET SEWAGE PUMPING STATION - SITE PLAN
SCALE : 1" = 40'

LEGEND:

| | | |
|--|------|----------------------------|
| | R/W | RIGHT-OF-WAY LINE |
| | PR | PROPERTY LINE |
| | PR | ADJACENT PROPERTY LINE |
| | PR | GOVERNMENTAL BOUNDARY LINE |
| | COMM | COMMUNICATION LINE |
| | CATV | TELEPHONE LINE |
| | FO | NATURAL GAS LINE |
| | COMM | TELEPHONE LINE |
| | G | NATURAL GAS LINE |
| | SA | SANITARY SEWER LINE |
| | FM | SANITARY SEWER MANHOLE |
| | SD | SANITARY SEWER FORCE MAIN |
| | W | WATER MAIN |
| | W | WATER VALVE |
| | W | FIRE HYDRANT |
| | PR | BENCHMARK |
| | PR | PR. BUILDINGS |

| | | |
|--|------|---------------------------|
| | PR | RIGHT-OF-WAY LINE |
| | PR | PROPERTY LINE |
| | PR | LEASE LINE |
| | PR | BUILDING SETBACK LINE |
| | PR | FENCES |
| | COMM | COMMUNICATION LINE |
| | CATV | CABLE TELEVISION LINE |
| | FO | FIBER OPTIC LINE |
| | COMM | TELEPHONE LINE |
| | G | NATURAL GAS LINE |
| | SA | SANITARY SEWER LINE |
| | FM | SANITARY SEWER MANHOLE |
| | SD | SANITARY SEWER FORCE MAIN |
| | W | WATER MAIN |
| | W | WATER VALVE |
| | W | FIRE HYDRANT |
| | W | BENCHMARK |
| | PR | PR. BUILDINGS |

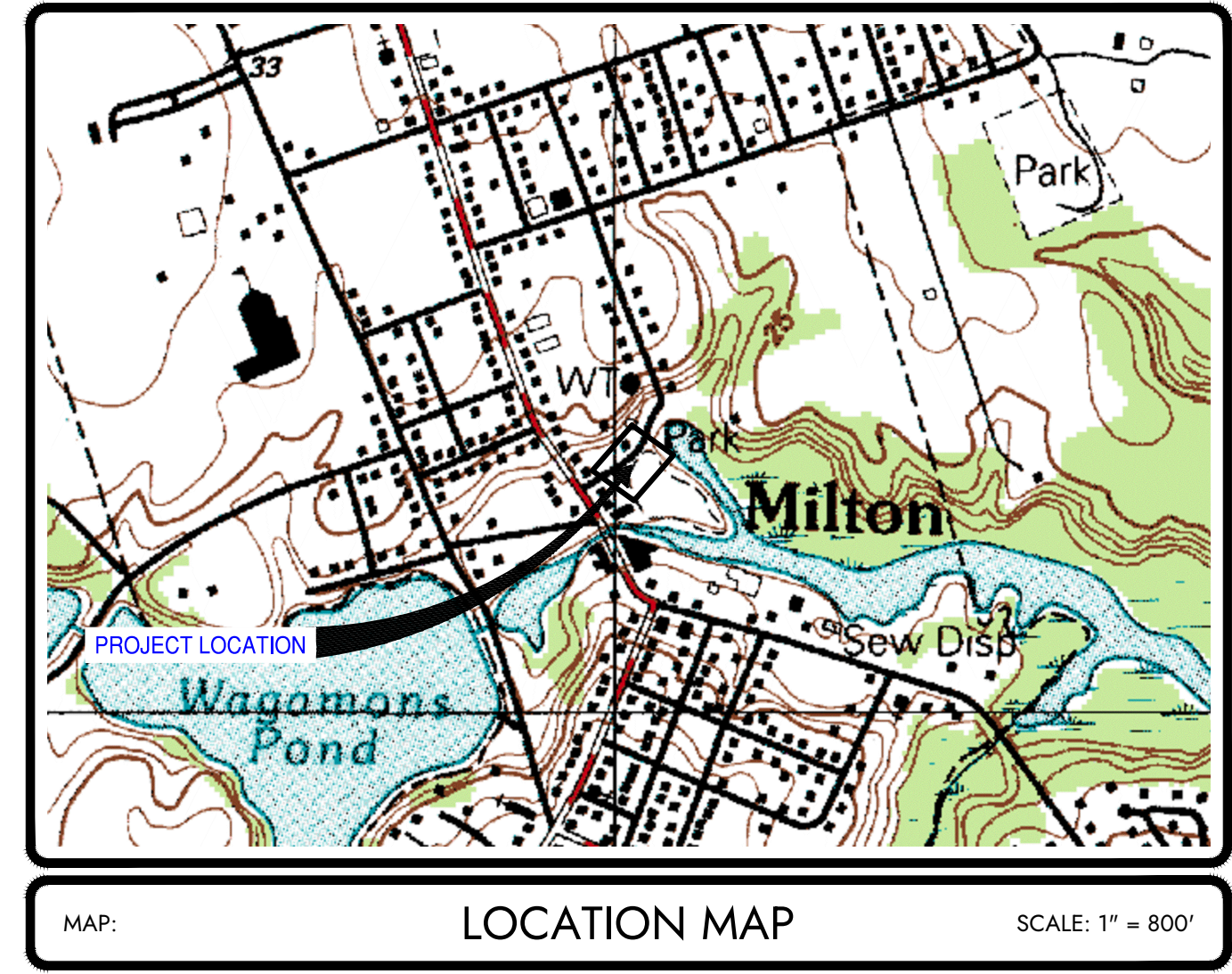
- FIRE MARSHAL NOTES:**
- ALL FIRE LANES, FIRE HYDRANTS AND FIRE DEPARTMENT CONNECTIONS SHALL BE MARKED IN ACCORDANCE WITH THE DELAWARE STATE FIRE PREVENTION REGULATIONS.
 - ALL THREADS PROVIDED FOR FIRE DEPARTMENT CONNECTIONS, TO SPRINKLER SYSTEMS, STANDPIPES, YARD HYDRANTS OR ANY OTHER FIRE HOSE CONNECTIONS SHALL BE UNIFORM TO THOSE USED BY THE FIRE DEPARTMENT IN WHOSE DISTRICT THEY ARE LOCATED.

- STORM DRAINAGE :**
- IT IS THE CONTRACTOR'S RESPONSIBILITY TO REPAIR OR REPLACE ANY STORM DRAINAGE THAT IS DAMAGED DURING CONSTRUCTION

- SEDIMENT AND EROSION CONTROL:**
- DISTURBED GRASS AREAS ARE TO BE RESTORED WITH TOPSOIL AND HYDRO-SEED. TO INCLUDE ADEQUATE IRRIGATION FOR A PERIOD OF FOUR WEEKS, AS REQUIRED. CONTRACTOR SHALL COMPLY WITH THE DELAWARE SEDIMENT AND EROSION CONTROL HANDBOOK AND STANDARD PLAN APPROVAL FOR MINOR LINEAR UTILITY DISTURBANCES.
 - SILT FENCE SHALL BE USED WHERE NECESSARY. SEDIMENTATION AND EROSION CONTROL PRACTICES ARE SUBJECT TO INSPECTION BY THE NEW CASTLE COUNTY CONSERVATION DISTRICT.
 - LIMIT OF DISTURBANCE SHALL TAKE PLACE ENTIRELY WITHIN APPROVED EASEMENTS.

- TRAFFIC CONTROL:**
- CONTRACTOR IS RESPONSIBLE TO FOLLOW THE GUIDELINE SET FORTH IN THE LATEST VERSION OF THE DELAWARE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, AND DIRECTIVES SET FORTH BY THE DELAWARE DEPARTMENT OF TRANSPORTATION.

- DEPTH:**
- TOP OF PROPOSED SEWER FORCE MAIN SHALL BE A MINIMUM OF 42" COVER FROM CROWN OF ROAD IN AREAS WHERE ROAD IS LOWER THAN EXISTING GRADE.
 - HOLD UTILITY POLES AS NEEDED, REMOVE & REPLACE GUY WIRES, AS NECESSARY.



- SHEET INDEX:**
- G-1 COVER SHEET
 - C-1 OVERALL SITE PLAN
 - C-2 PUMPING STATION SITE PLAN
 - C-3 SITE DETAILS
 - M-1 DEMOLITION - PLANS AND SECTIONS
 - M-2 PUMPING STATION - PLANS
 - M-3 PUMPING STATION - SECTIONS
 - M-4 PUMPING STATION - EXTERIOR ELEVATIONS
 - M-5 PUMPING STATION - DETAILS
 - E-1 OVERALL ELECTRICAL SITE PLAN
 - E-2 PARTIAL ELECTRICAL SITE PLANS
 - E-3 PUMP STATION ELECTRICAL SITE PLAN
 - E-4 SINGLE LINE DIAGRAM, PANEL SCHEDULES, DUCT BANK DETAIL, AND STANDARD DETAILS



verdantas
PEOPLE FOCUSED FUTURE

1060 S. GOVERNORS AVE. SUITE 101
DOVER DE 19904-0920
PH 302.674.1090
FAX 302.674.1099

STEVEN H. LEWANDOWSKI, P.E.
PROFESSIONAL ENGINEER
LICENSE NO. 11573
1-17-2024
STATE DELAWARE
P.E. #11573

| | |
|--|-----------|
| DESIGNED BY: | SHL |
| DRAWN BY: | DAC |
| CHECKED BY: | SHL |
| PROJECT NO. | 15737 |
| ISSUED FOR DNR/REC CONSTRUCTION PERMIT | |
| REVISION | |
| CHK'D BY | DATE |
| | 1/17/2024 |

TOWN OF MILTON ~ SUSSEX COUNTY ~ DELAWARE

ARTESIAN WASTE WATER MANAGEMENT CHANDLER STREET PUMPING STATION

COVER SHEET

APPLICATION NO. _____

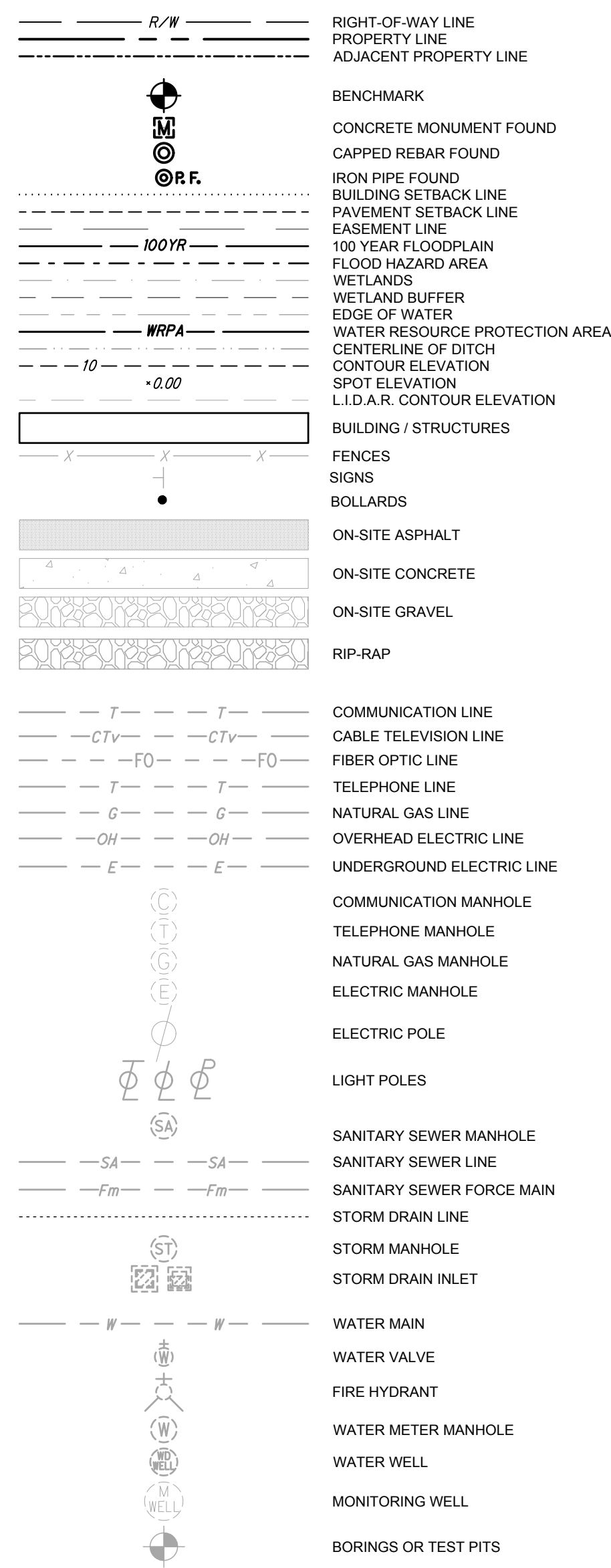
DATE: **DECEMBER 2023**

SCALE: **1" = 40'**

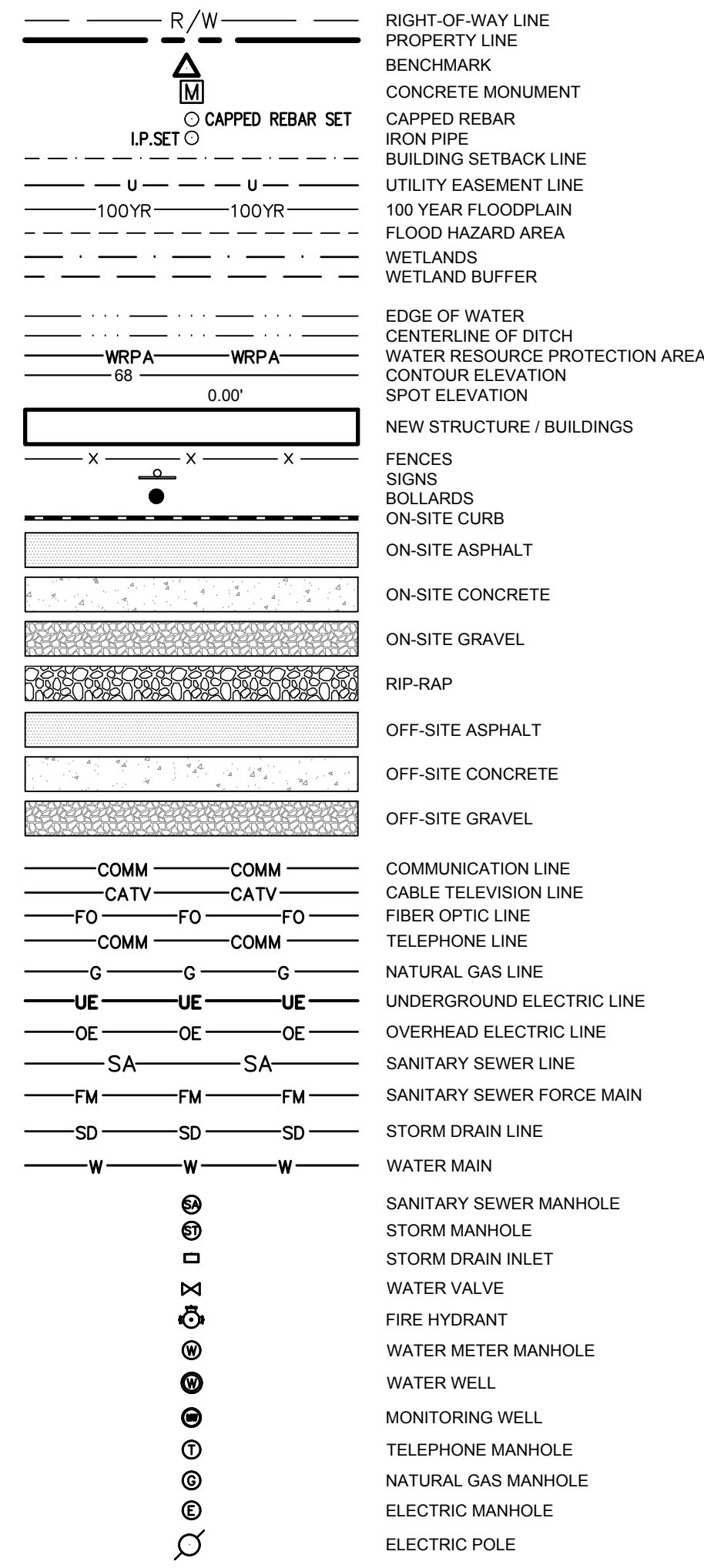
SHEET: **G-1**

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EXISTING CONDITIONS LEGEND:



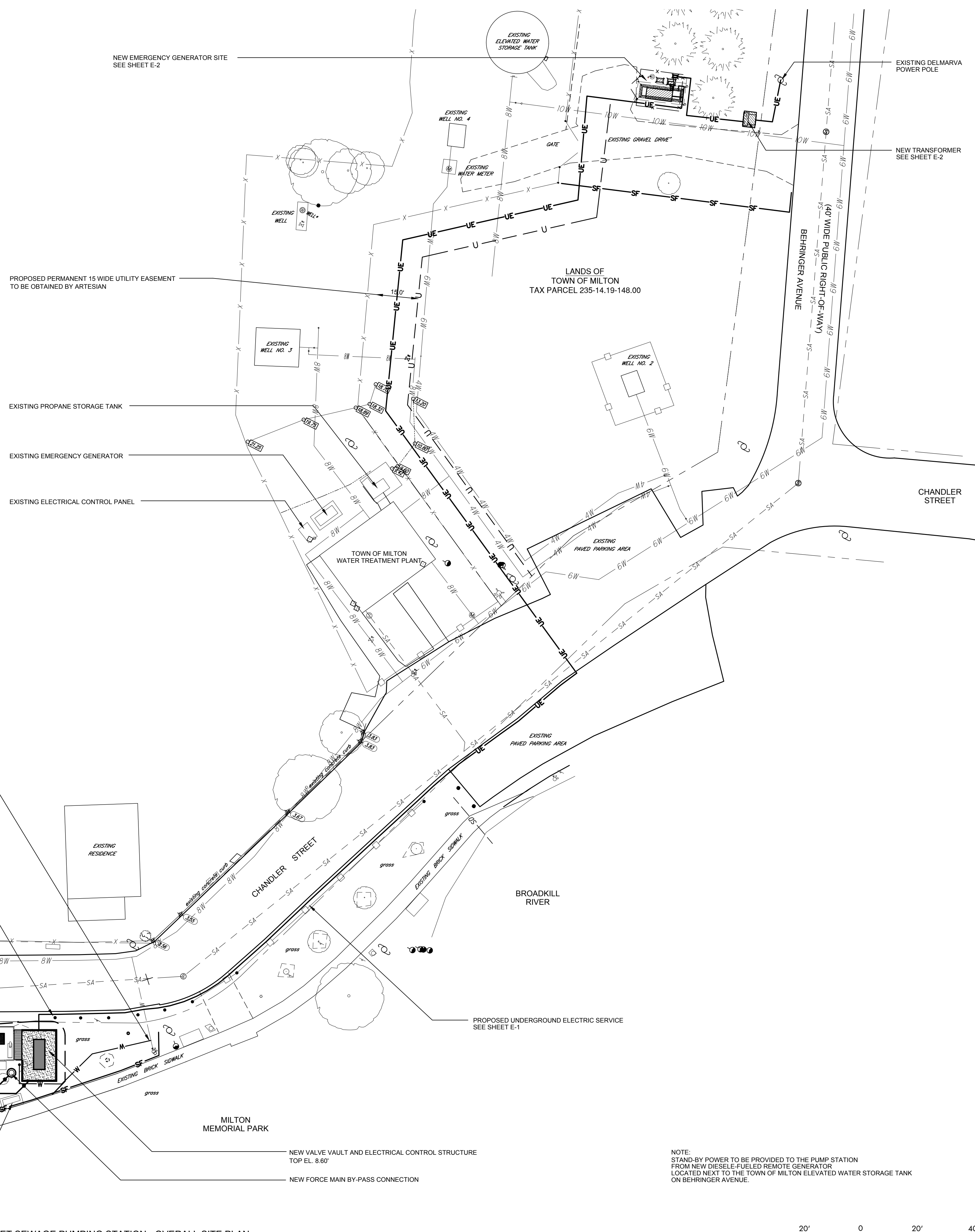
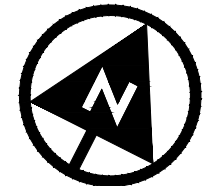
NEW CONDITIONS LEGEND:



CONNECT NEW 3/4" HDPE DR 9 YARD HYDRANT WATER SERVICE TO EXISTING YARD HYDRANT WATER SERVICE CONTRACTOR TO VERIFY SIZE, MATERIAL AND LOCATION PRIOR TO CONNECTION

REMOVE EXISTING BOLLARDS AND SIGNAGE DURING CONSTRUCTION AS REQUIRED REINSTALL AT COMPLETION OF NEW CONSTRUCTION

CONNECT NEW 3/4" HDPE DR 9 YARD HYDRANT WATER SERVICE TO EXISTING 8" WATER MAIN INSTALL IN 2" DIA. G.S. SCH 40 CASING PIPE UNDER ROAD INSTALL BY OPEN TRENCH METHOD, REPAVING TO MATCH EXISTING



CHANDLER STREET SEWAGE PUMPING STATION - OVERALL SITE PLAN
SCALE : 1" = 20'



NOTE:
STAND-BY POWER TO BE PROVIDED TO THE PUMP STATION FROM NEW DIESEL-FUELED REMOTE GENERATOR LOCATED NEXT TO THE TOWN OF MILTON ELEVATED WATER STORAGE TANK ON BEHRINGER AVENUE.



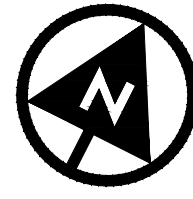
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|--------------|-------|
| DESIGNED BY: | SHL |
| DRAWN BY: | DAC |
| CHECKED BY: | SHL |
| PROJECT NO. | 15737 |

| NO. | DATE | REVISION |
|-----|-----------|---------------------------------------|
| 1 | 1/17/2024 | ISSUED FOR DIRECT CONSTRUCTION PERMIT |

TOWN OF MILTON ~ SUSSEX COUNTY ~ DELAWARE
**ARTESIAN WASTER WATER MANAGEMENT
CHANDLER STREET PUMPING STATION**
OVERALL SITE PLAN

| | |
|-----------------|---------------|
| APPLICATION NO. | 2021- |
| DATE: | OCTOBER, 2023 |
| SCALE: | 1" = 20' |
| SHEET: | C-1 |

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CONNECT NEW 3/4" HDPE DR 9
YARD HYDRANT WATER SERVICE
TO EXISTING 8" WATER MAIN
SEE DETAIL, SHEET C-3

EXISTING SANITARY MANHOLE
TOP EL. 2.86'
INV. IN. EL. -3.39'
INV. OUT. EL. -4.08'

EXISTING 12" DIA. PVC SDR 35 GRAVITY SEWER

EXISTING 12" DIA. PVC SDR 35 GRAVITY SEWER

EXISTING CHANDLER STREET PUMP STATION
TOP EL. 8.60'

EXISTING STEEL BOLLARD

NEW YARD HYDRANT
SEE DETAIL, SHEET C-3

NEW 8" DIA. PVC FORCE MAIN (BY OTHERS)

EXISTING
STONE

EXISTING
PAVED PARKING AREA

EXISTING
BRICK SIDEWALK

MILTON
MEMORIAL PARK

RESIDENCE

EXISTING WOOD PICKET FENCE

EXISTING WOOD PICKET FENCE

EXISTING 8" DIA. GRAVITY SEWER

EXISTING SANITARY MANHOLE

TOP EL. 2.86'
INV. IN. EL. -3.39'
INV. OUT. EL. -4.08'

EXISTING 12" DIA. PVC SDR 35 GRAVITY SEWER

EXISTING STEEL POST AND CHAIN PARK LINE

PROPOSED UNDERGROUND ELECTRIC SERVICE
FROM NEW EMERGENCY GENERATOR SITE
SEE ELECTRICAL SHEETS

CONNECT NEW 3/4" HDPE DR 9 YARD HYDRANT SERVICE
TO EXISTING YARD HYDRANT SERVICE
SEE DETAIL, SHEET C-3

NEW VALVE VAULT STRUCTURE AND ELECTRICAL CONTROL CABINET
TOP EL. 8.60'

NEW YARD HYDRANT
SEE DETAIL, SHEET C-3

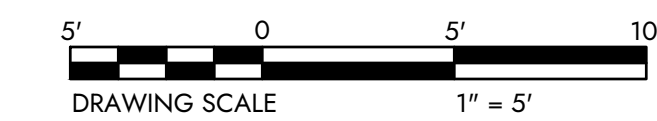
NEW FORCE MAIN BY-PASS CONNECTION
SEE DETAIL, SHEET C-3

REMOVE EXISTING LANDSCAPING TREES AND SHRUBS
WITH-IN THE NEW CONSTRUCTION AREA (TYPICAL)
(COORDINATE REPLANTING OF TREES AND SHRUBS WITH TOWN REPRESENTATIVE)

NEW 8" x 6" REDUCER (LIMIT OF THIS CONTRACT)

EXISTING 8" DIA. C.I. FORCE MAIN
TO BE CONVERTED TO INFLUENT SEWER

CHANDLER STREET SEWAGE PUMPING STATION - SITE PLAN
SCALE: 1" = 5'



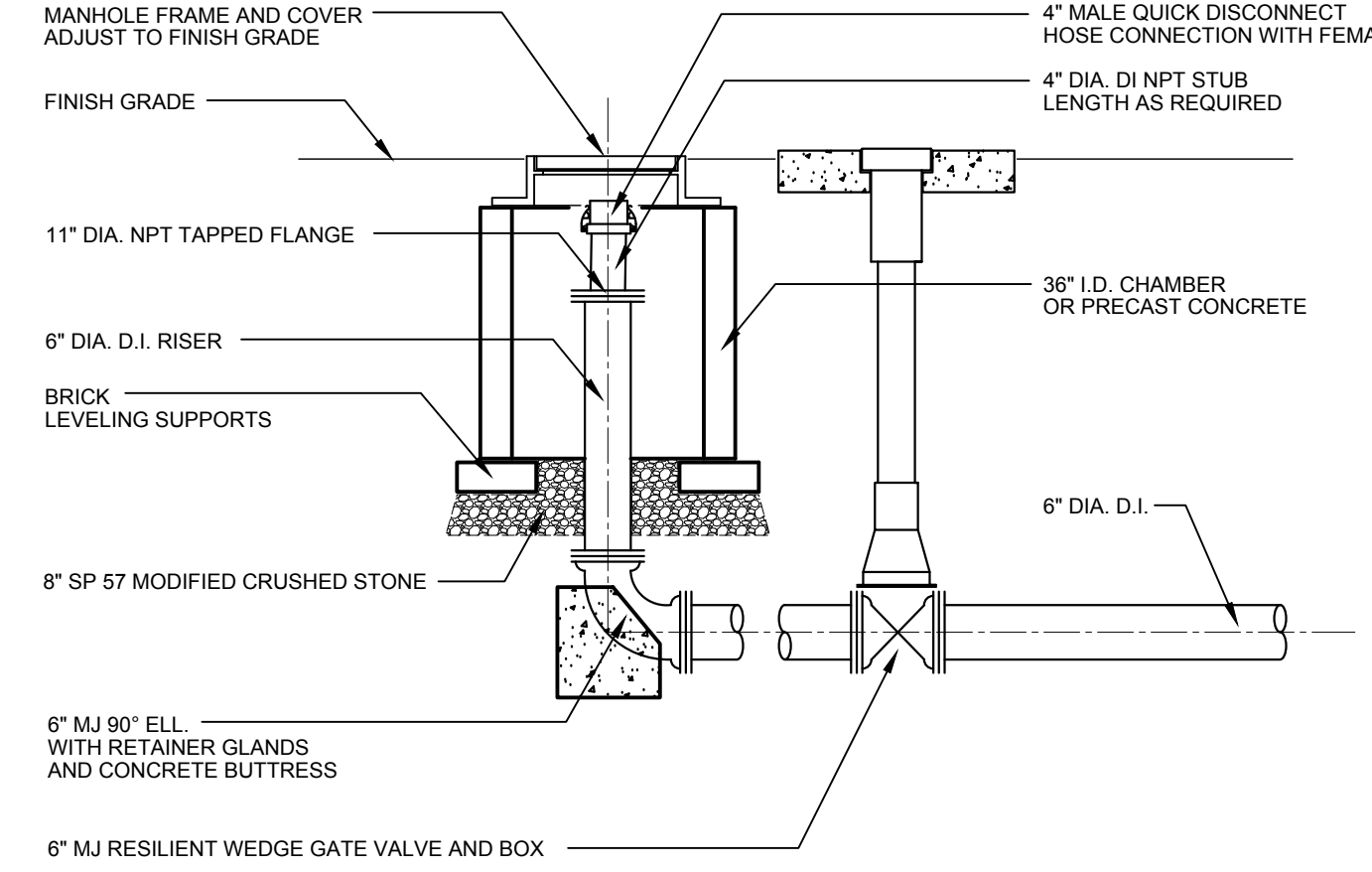
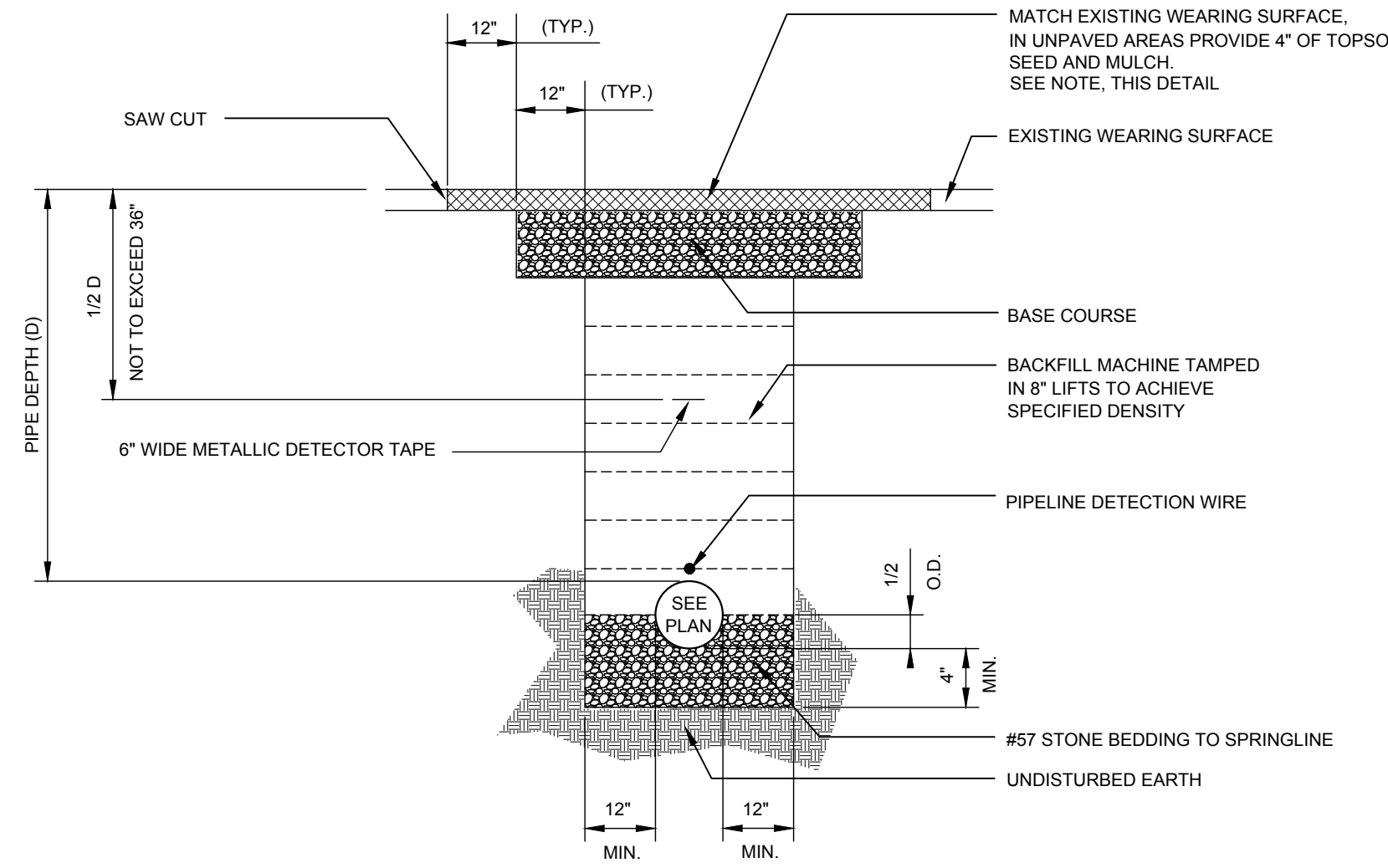
DESIGNED BY: DAC
DRAWN BY: DAC
CHECKED BY: SHL
PROJECT NO. 15737
P.E. #15738
STATE: DELAWARE

| NO. | REVISION | ISSUED FOR | DATE |
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| 1 | ISSUED FOR DNR/EC CONSTRUCTION PERMIT | | 1/17/2024 |

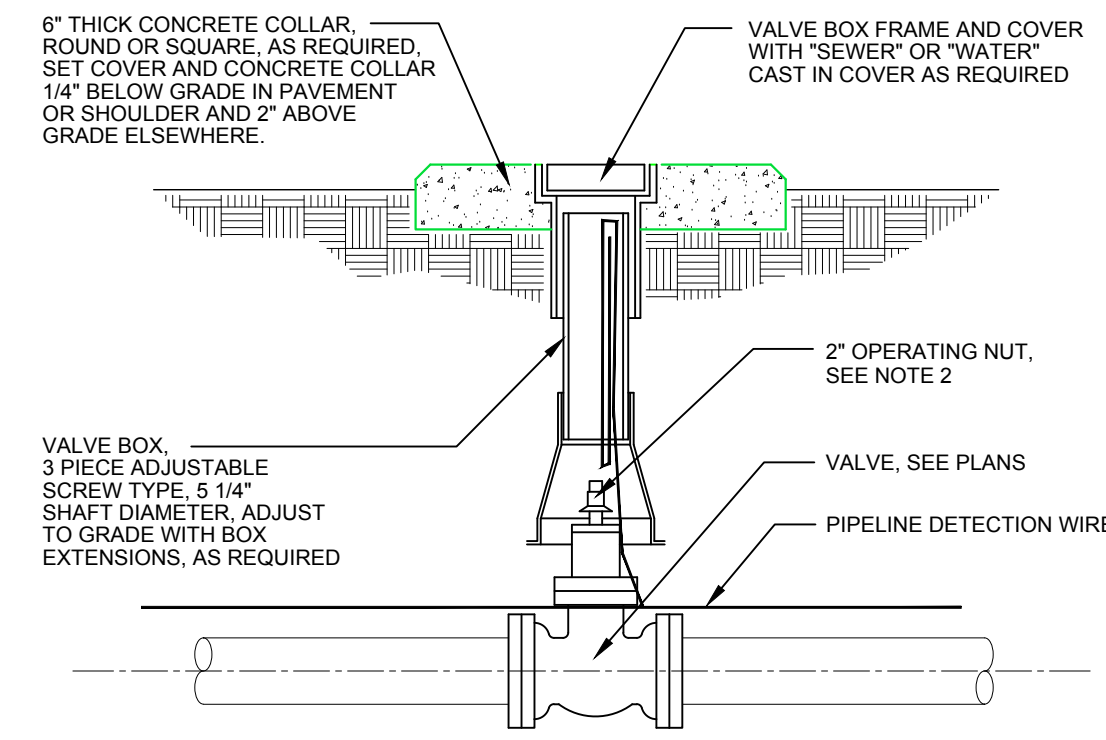
TOWN OF MILTON ~ SUSSEX COUNTY ~ DELAWARE
ARTESIAN WASTER WATER MANAGEMENT
CHANDLER STREET PUMPING STATION
PUMPING STATION
SITE PLAN

APPLICATION NO. 2021-
DATE: OCTOBER, 2023
SCALE: 1" = 5'
SHEET: C-2

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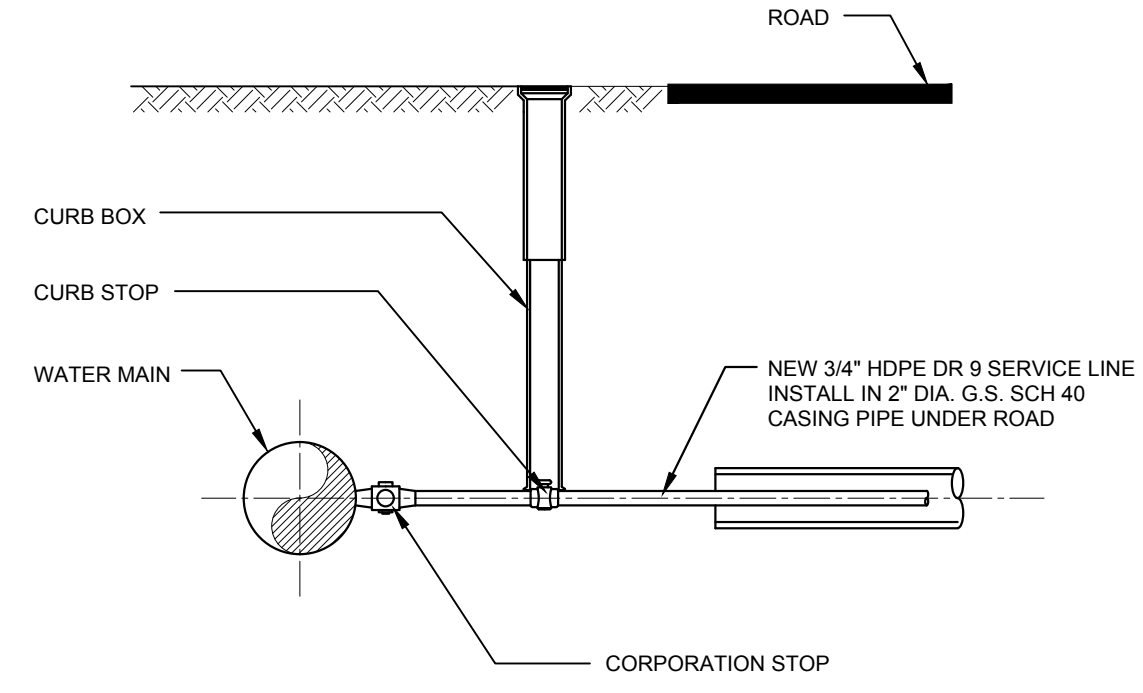


BY-PASS PUMPING CONNECTION MANHOLE DETAIL
NO SCALE

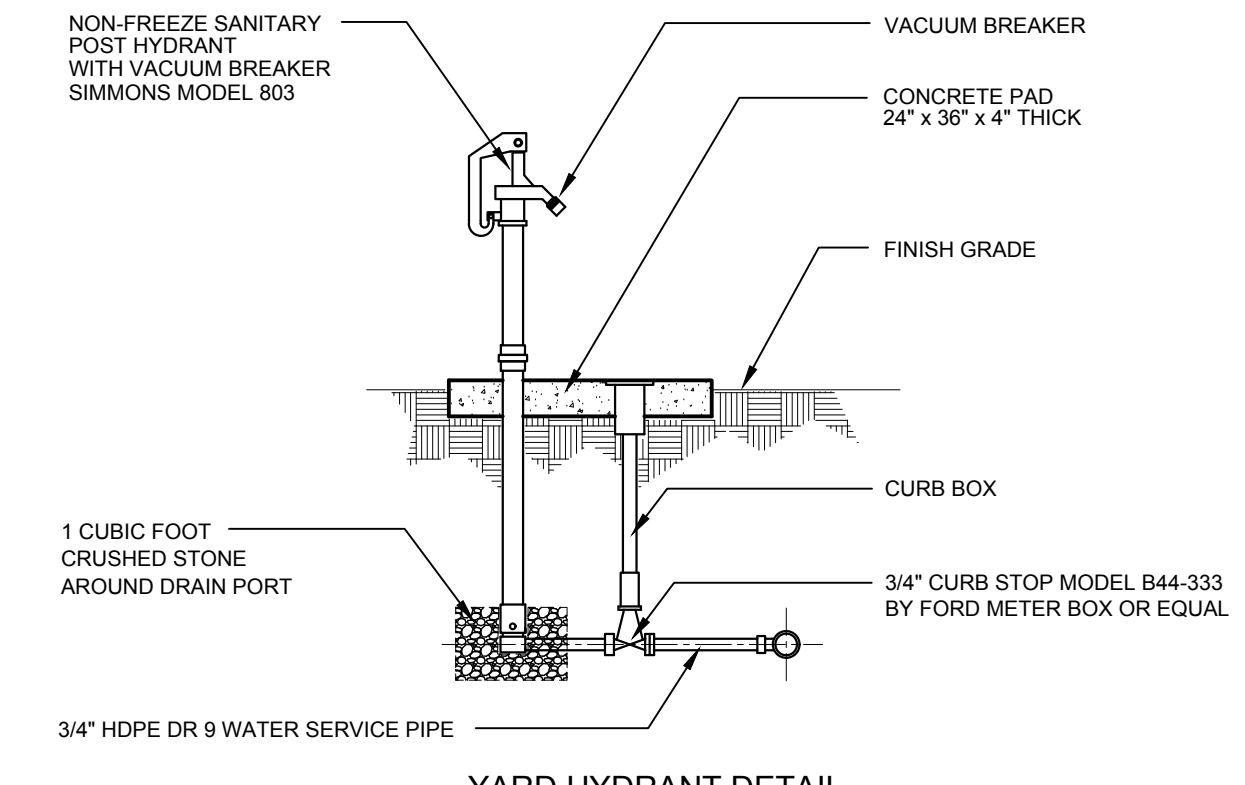


NOTES:
1. VALVE BOX REQUIRED FOR ALL BURIED VALVES. PROVIDE OPERATING WRENCH IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.
2. PROVIDE 1 1/2\"/>

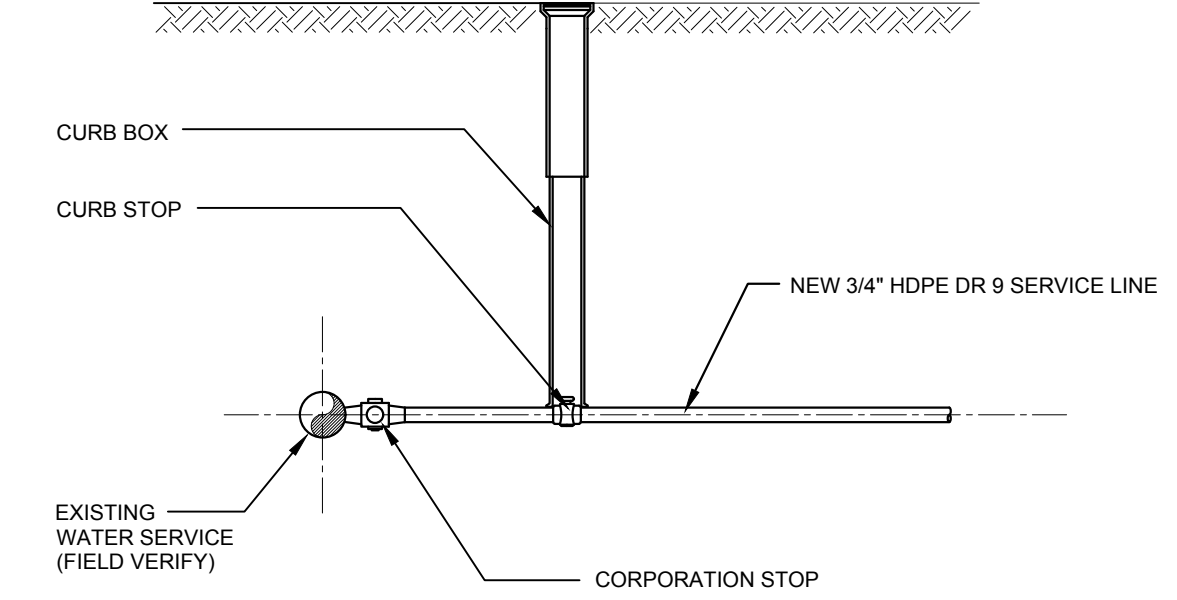
VALVE BOX DETAIL
NO SCALE



CORPORATION STOP AND CURB BOX DETAIL
NO SCALE



YARD HYDRANT DETAIL
NO SCALE

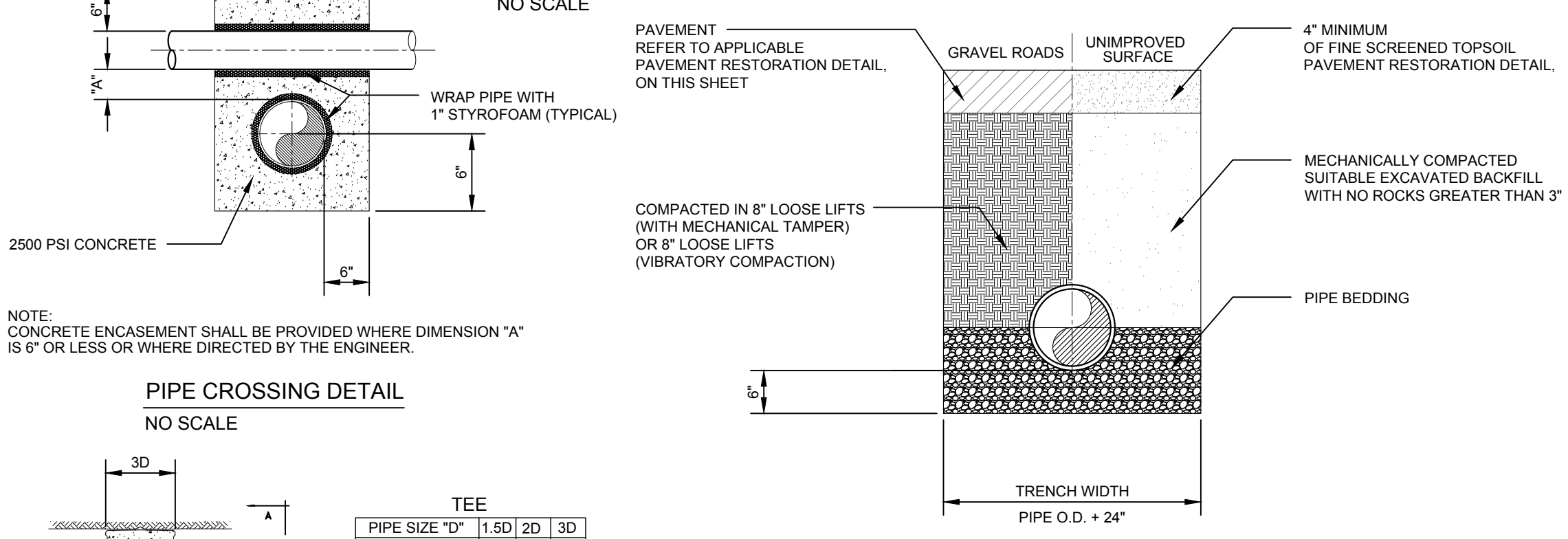


CORPORATION STOP AND CURB BOX DETAIL
NO SCALE

| RESTORATION | BASE COURSE | INTERMEDIATE COURSE | WEARING SURFACE/OVERLAY |
|-------------------------|-----------------------------------|--|--|
| HOT-MIX FLEXIBLE PAVING | 8 INCHES GRADED AGGREGATE, TYPE B | 1 1/2 INCHES HOT-MIX, HOT-LAID, BITUMINOUS CONCRETE, TYPE B OR C | 1 1/2 INCHES HOT-MIX, HOT-LAID, BITUMINOUS CONCRETE, TYPE C |
| HOT-MIX OVERLAY | - | - | 1 1/2 INCHES HOT-MIX, HOT-LAID, BITUMINOUS CONCRETE, TYPE C EXCEPT WHERE NOTED |
| STONE | 8 INCHES GRADED AGGREGATE, TYPE B | - | - |
| UNPAVED | - | - | 6 INCHES TOPSOIL, SEED AND MULCH |

NOTE: AT ROAD CROSSINGS, WEARING SURFACE REPAIR SHALL EXTEND 10 FEET ON BOTH SIDES OF CENTERLINE OF PIPE.

REPAVING AND TRENCH DETAIL



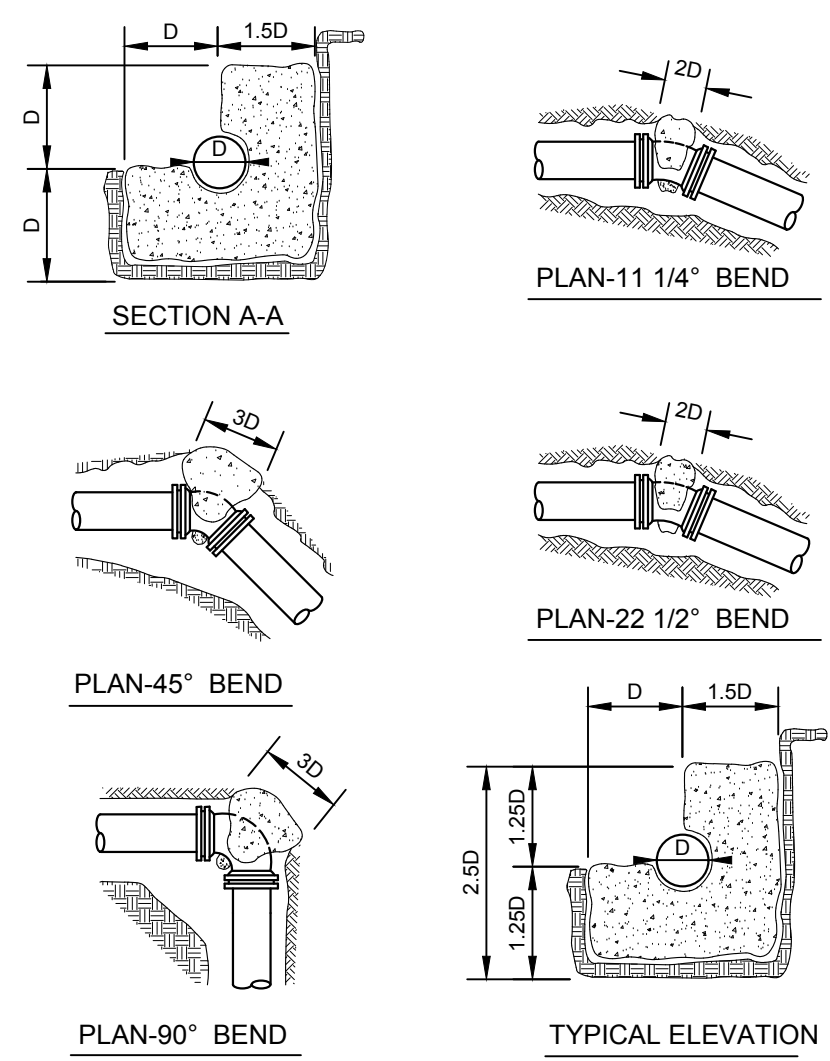
NOTE: CONCRETE ENCASEMENT SHALL BE PROVIDED WHERE DIMENSION 'A' IS 6\"/>

TEE

| PIPE SIZE "D" | 1.5D | 2D | 3D |
|---------------|------|-----|-----|
| 20" | 30" | 40" | 60" |
| 16" | 24" | 32" | 48" |
| 12" | 18" | 24" | 36" |
| 8" | 12" | 16" | 24" |
| 6" | 9" | 12" | 18" |
| 4" | 6" | 8" | 12" |

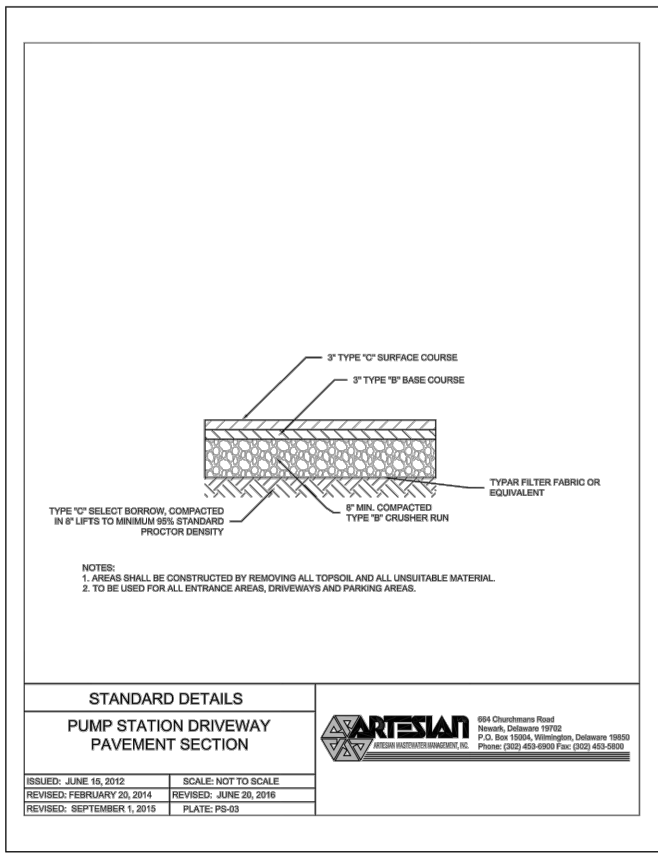
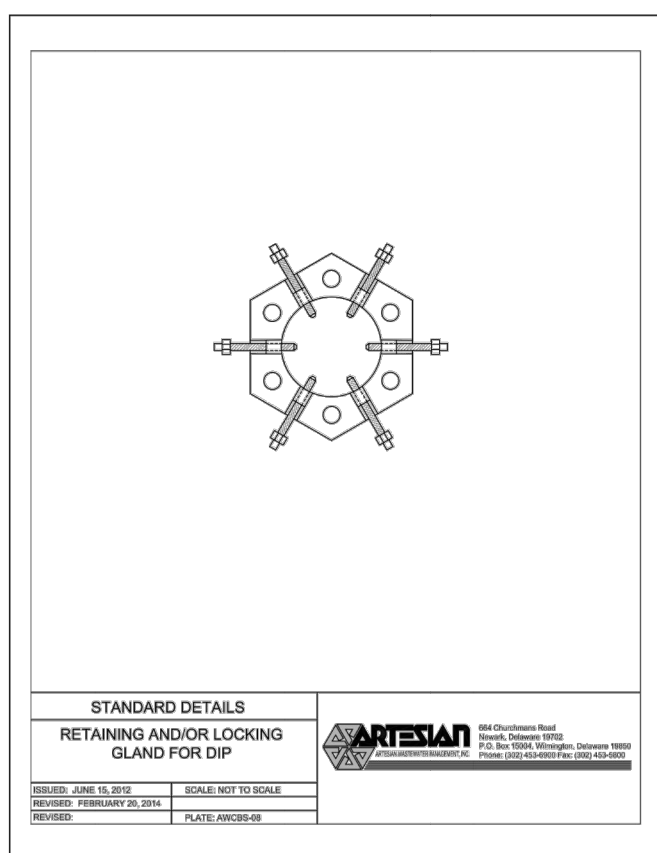
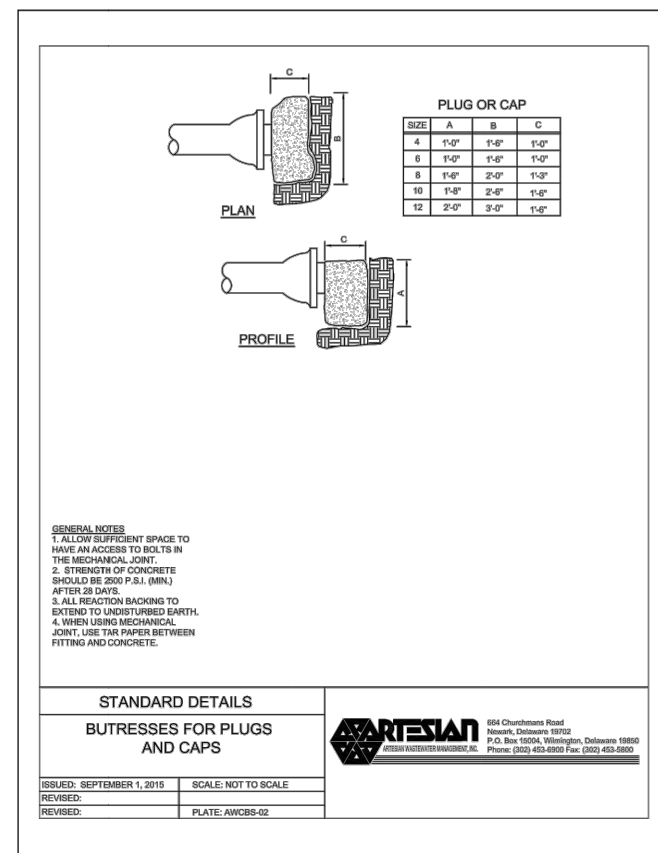
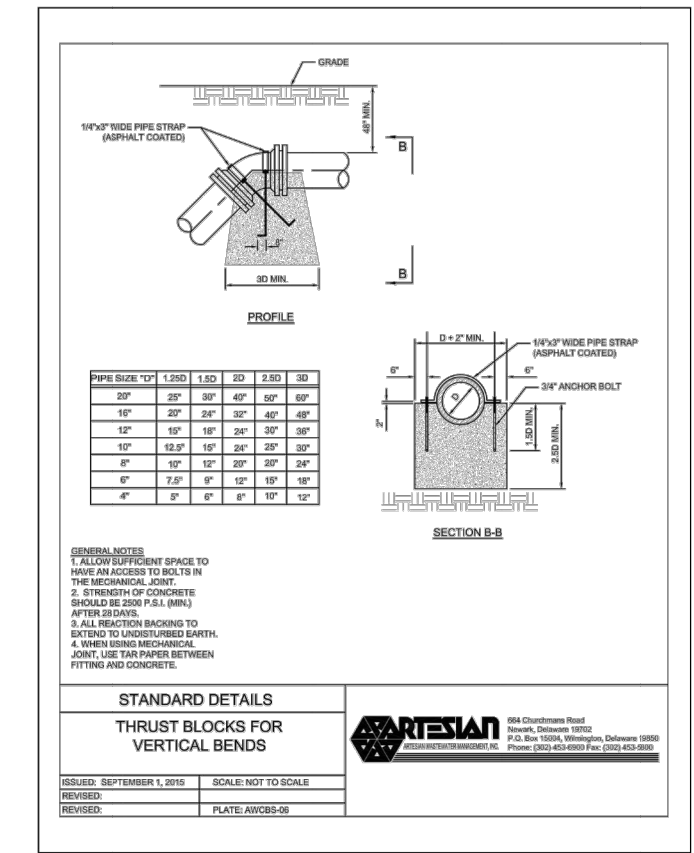
NOTE: BACKFILL SHALL BE COMPACTED IN 8\"/>

TRENCH RESTORATION DETAIL (DUCTILE IRON PIPE)
NO SCALE



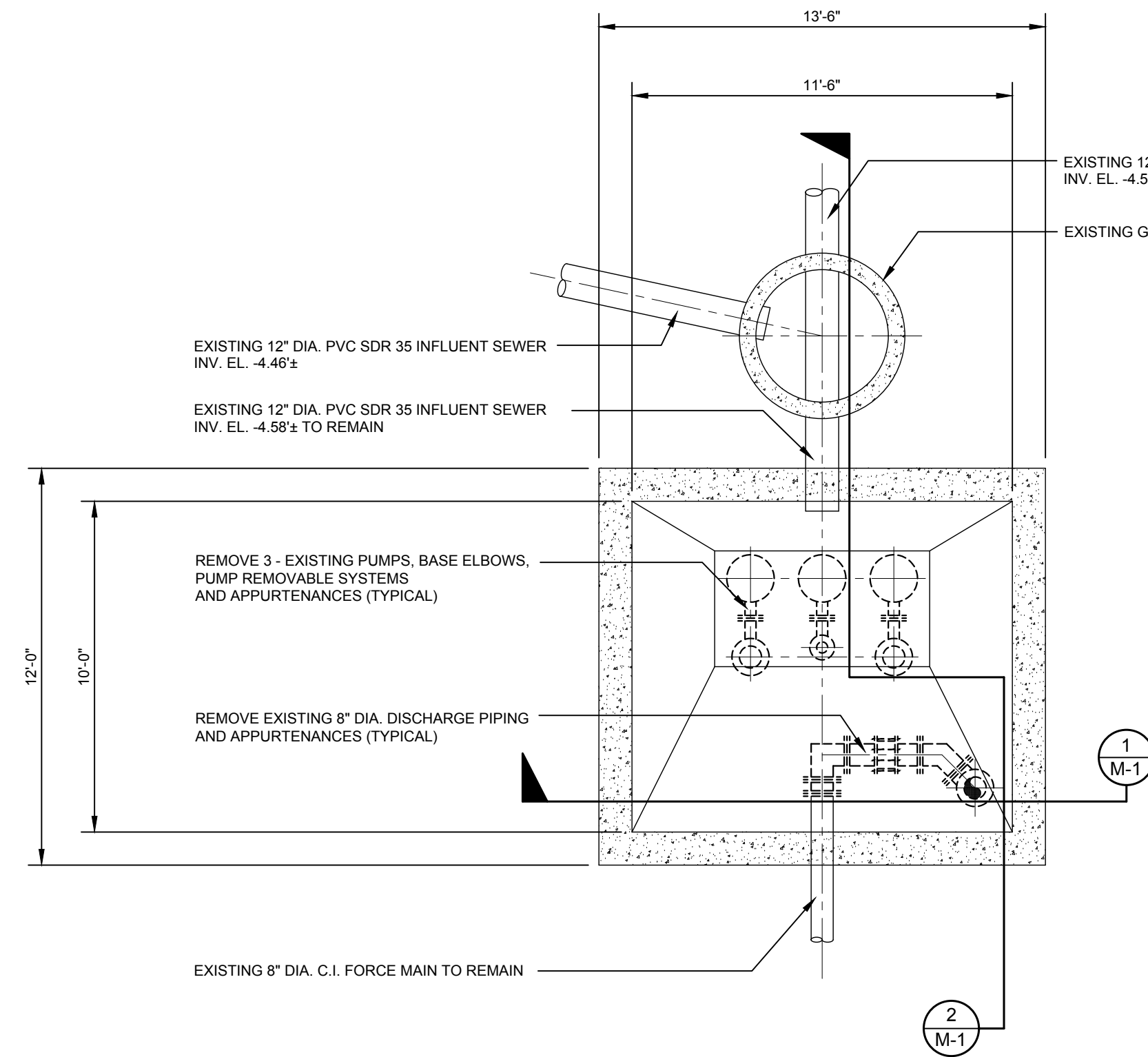
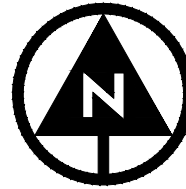
CONCRETE BUTTRESSES DETAILS
NO SCALE

| PIPE SIZE "D" | 1.25D | 1.5D | 2D | 2.5D | 3D |
|---------------|-------|------|-----|------|-----|
| 20" | 25" | 30" | 40" | 50" | 60" |
| 16" | 20" | 24" | 32" | 40" | 48" |
| 12" | 15" | 18" | 24" | 30" | 36" |
| 8" | 10" | 12" | 16" | 20" | 24" |
| 6" | 7.5" | 9" | 12" | 15" | 18" |
| 4" | 7.5" | 9" | 12" | 15" | 18" |

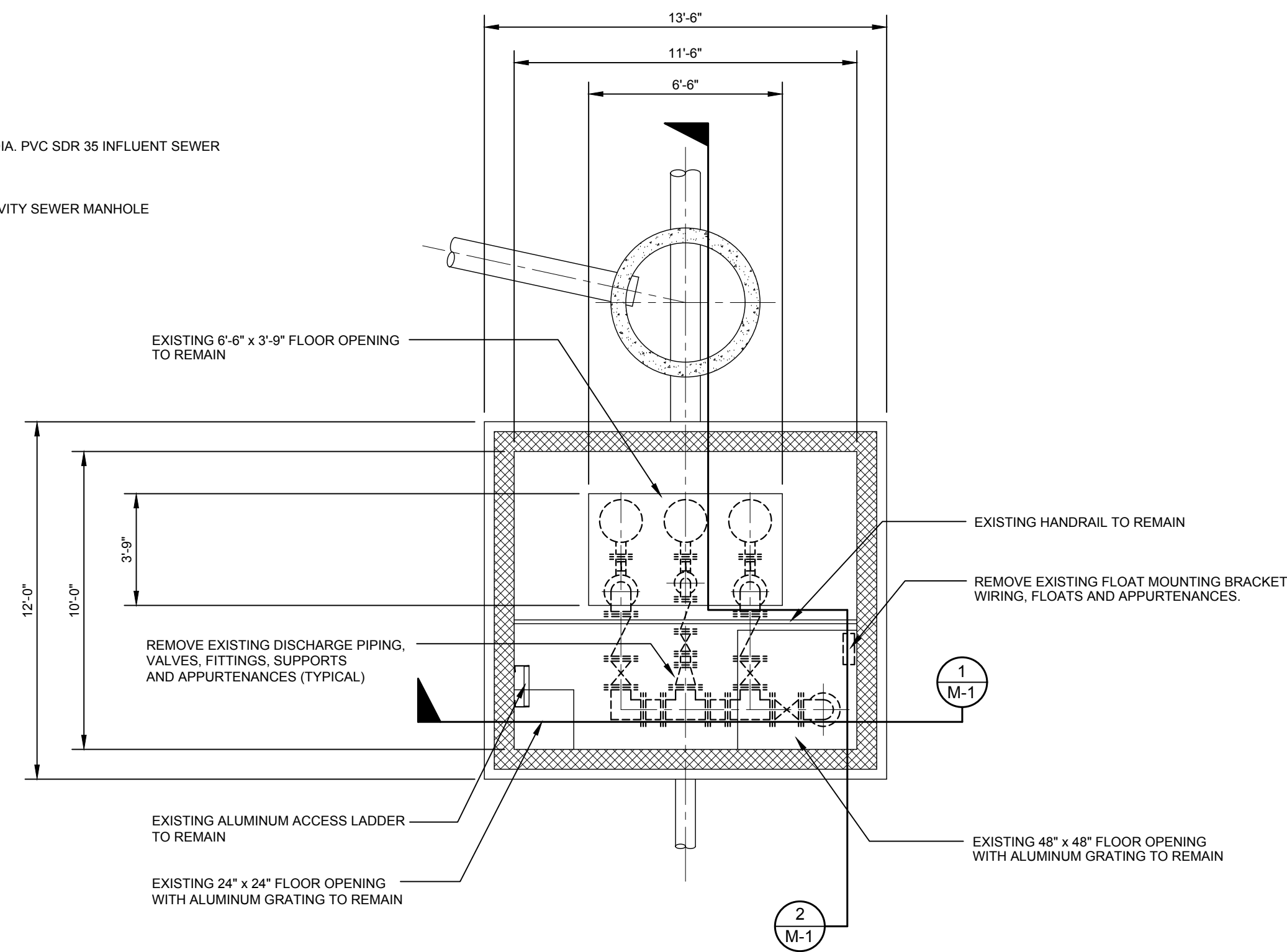


| No. | REVISION | ISSUED FOR | PERMIT |
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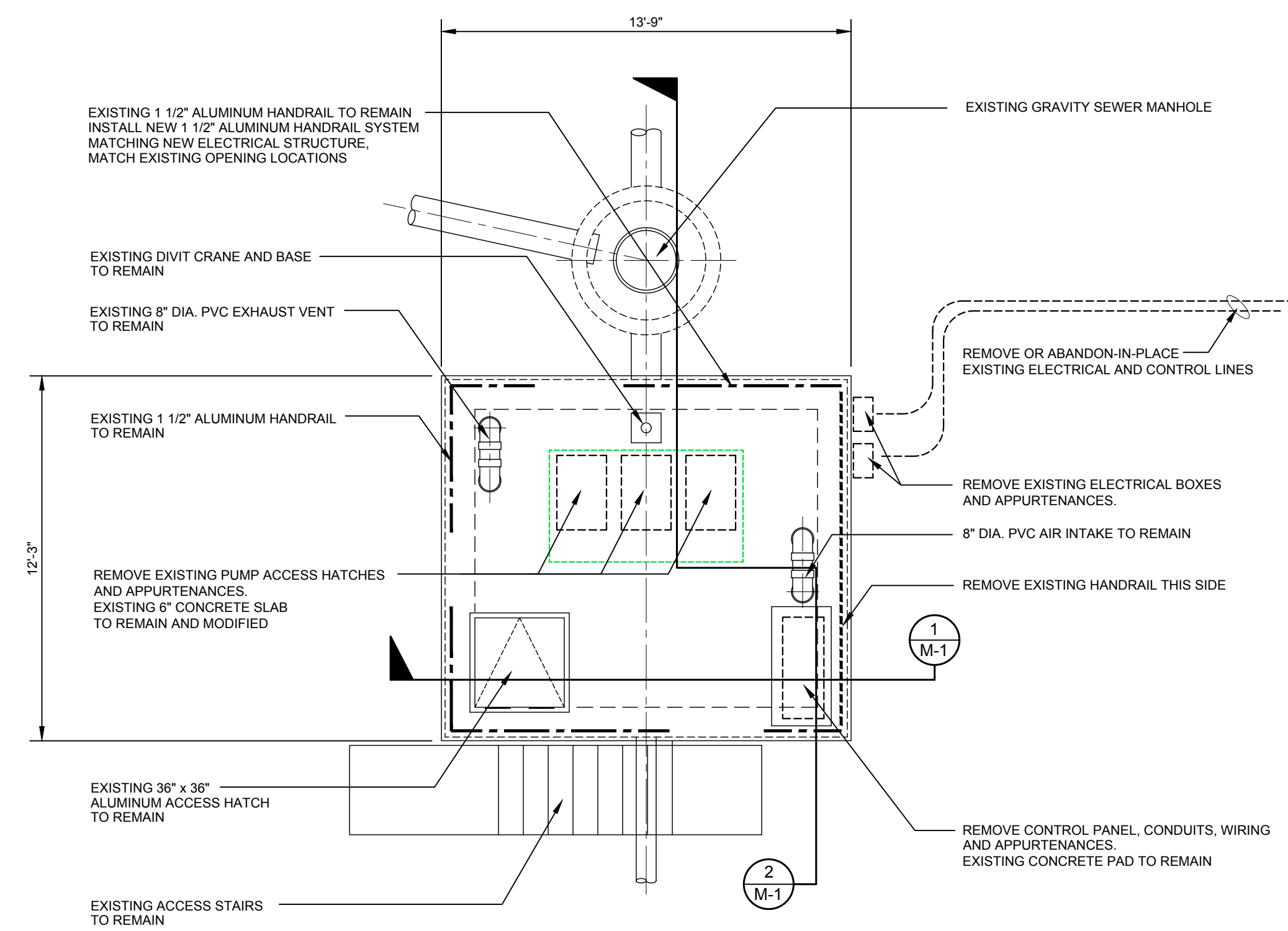
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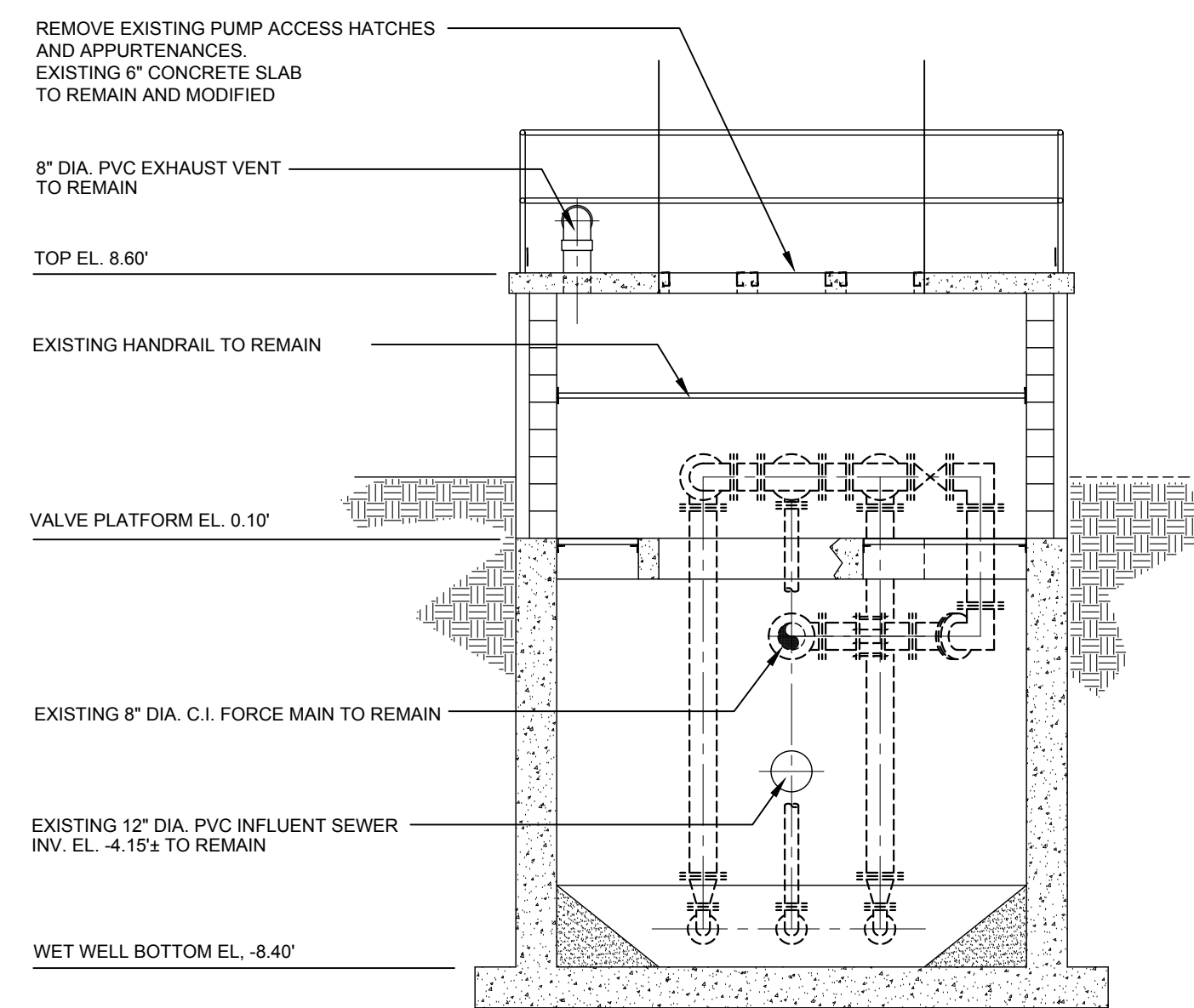
EXISTING WET WELL - DEMOLITION PLAN
SCALE : 1/4" = 1'-0"



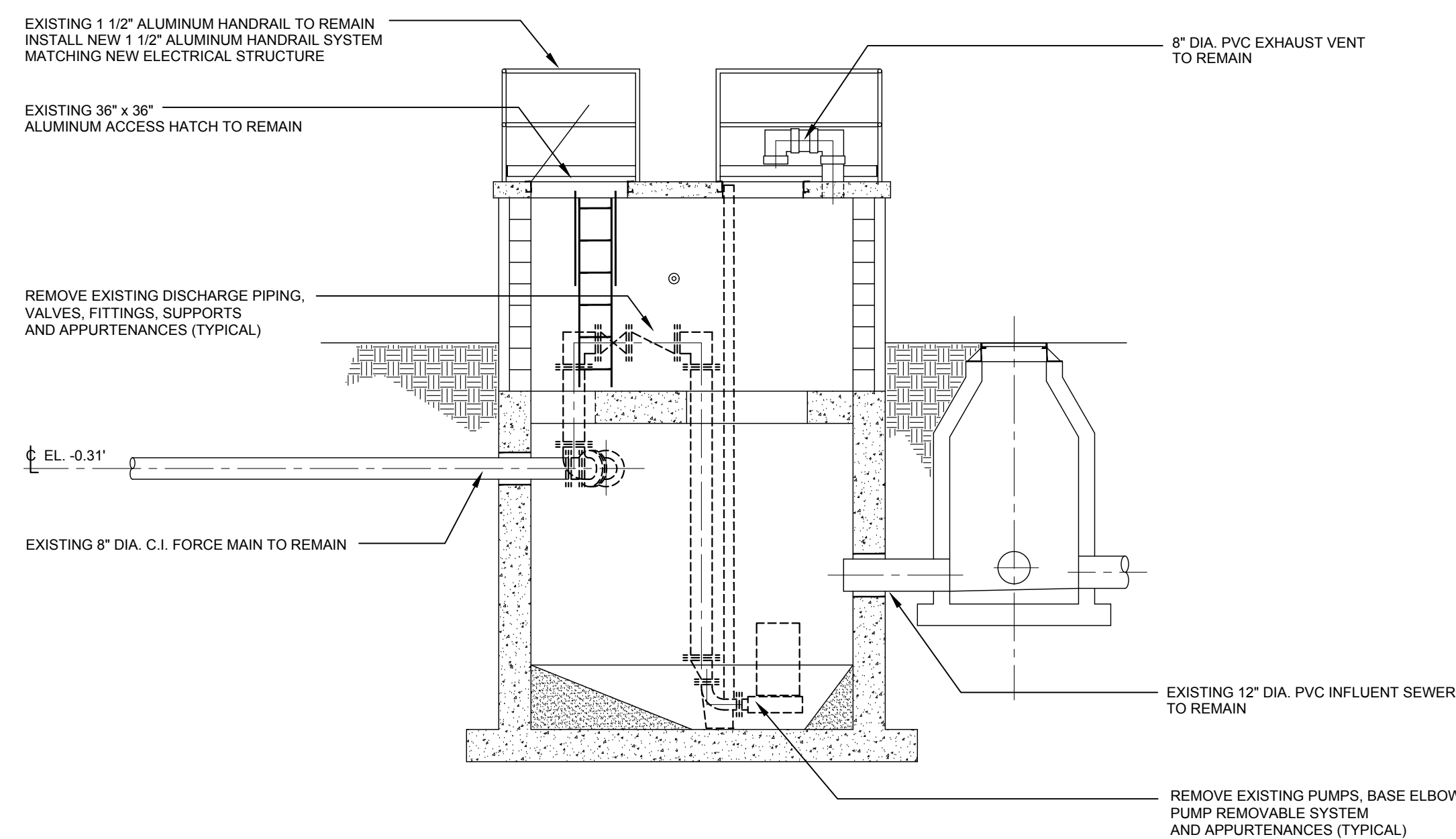
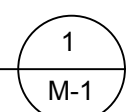
EXISTING VALVE PLATFORM - DEMOLITION PLAN
SCALE : 1/4" = 1'-0"



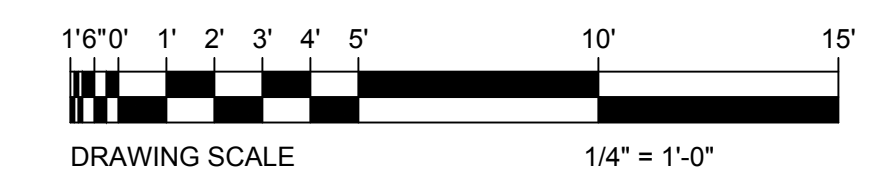
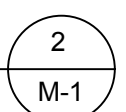
EXISTING TOP SLAB - DEMOLITION PLAN
SCALE : 1/4" = 1'-0"



SECTION 1
SCALE : 1/4" = 1'-0"



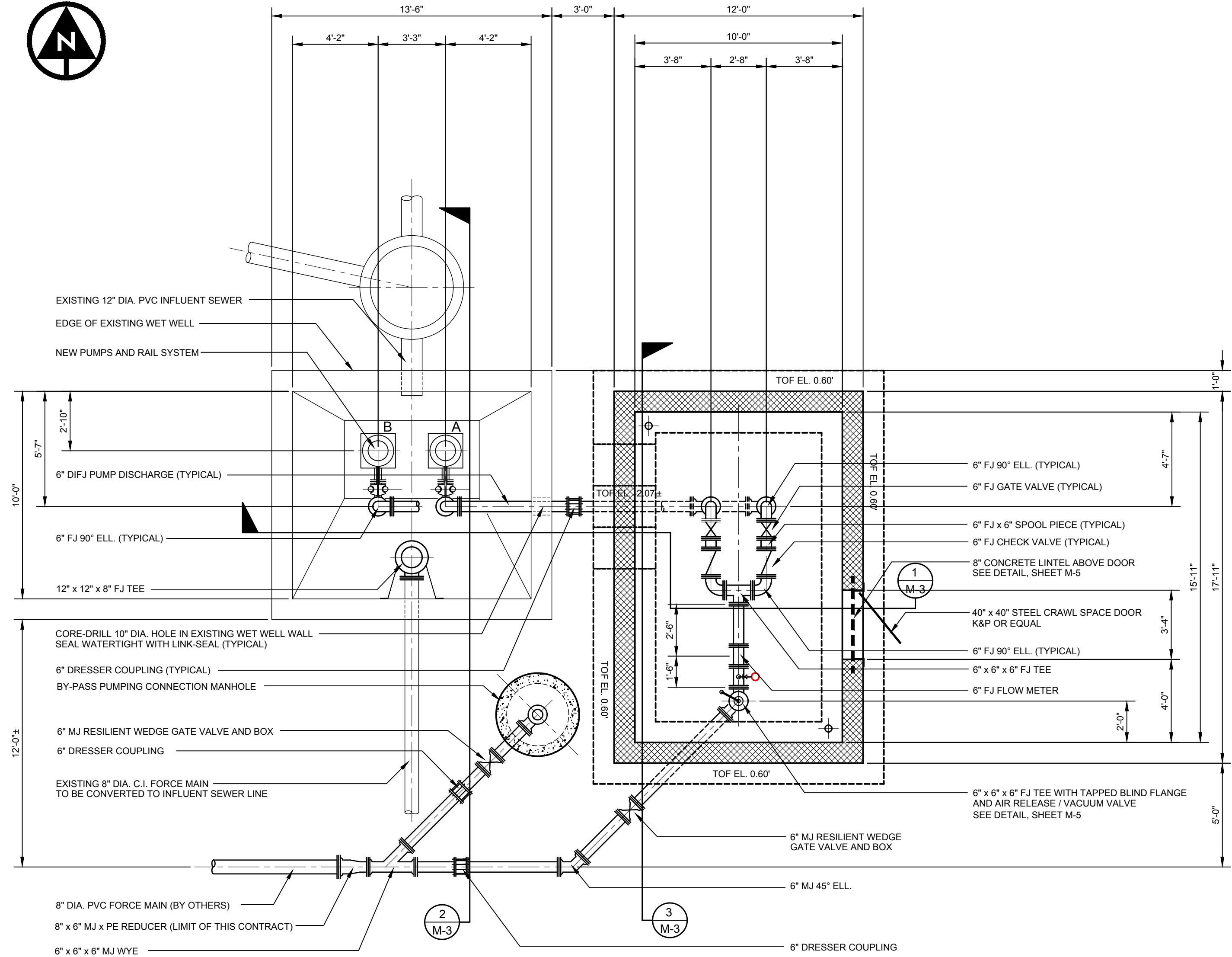
SECTION 2
SCALE : 1/4" = 1'-0"



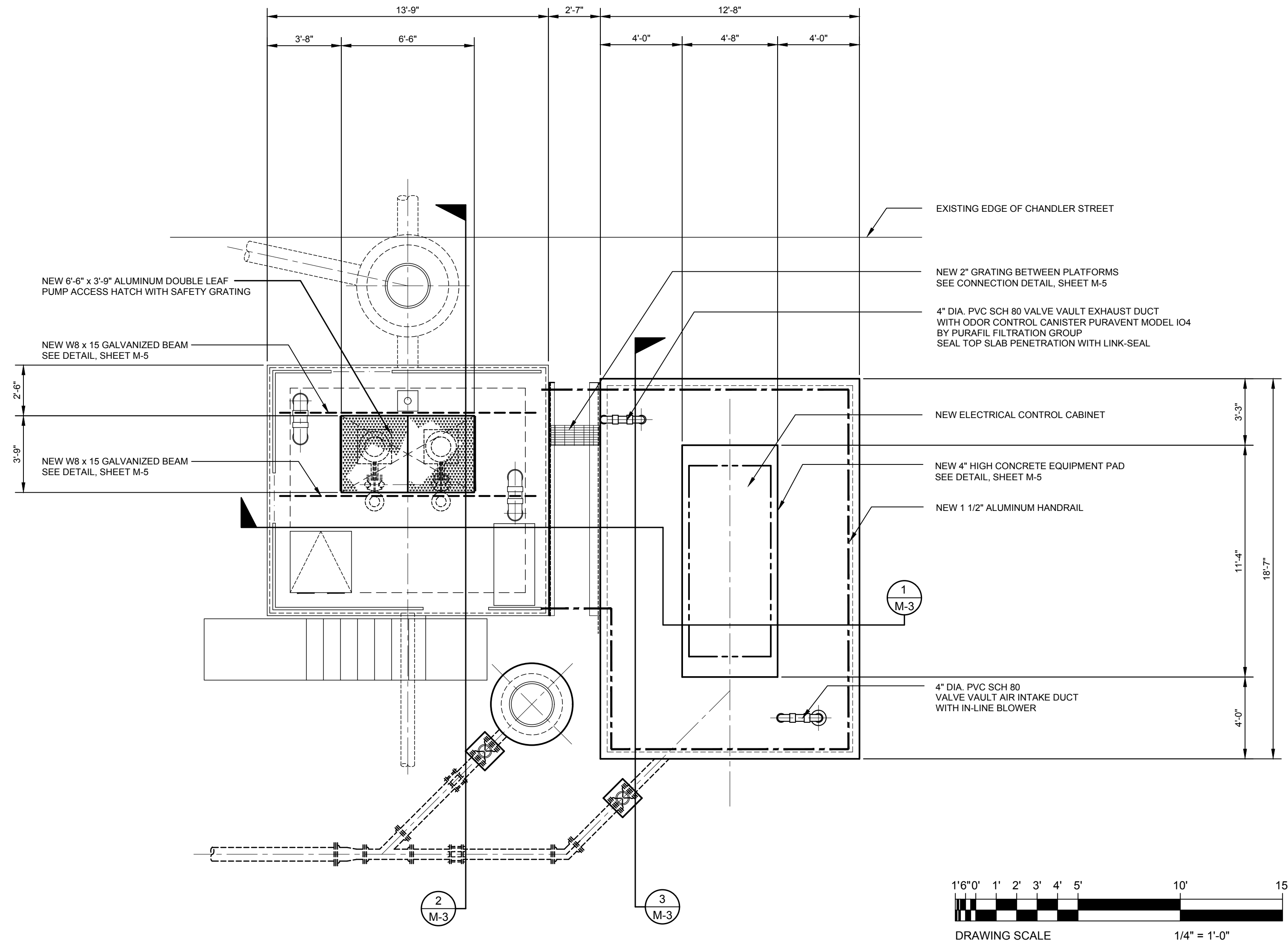
| NO. | REVISION | DATE | ISSUED FOR |
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| 1 | ISSUED FOR DNREC CONSTRUCTION PERMIT | 11/17/2024 | |

TOWN OF MILTON ~ SUSSEX COUNTY ~ DELAWARE
**ARTESIAN WASTE WATER MANAGEMENT
CHANDLER STREET PUMPING STATION**
DEMOLITION
PLANS AND SECTIONS

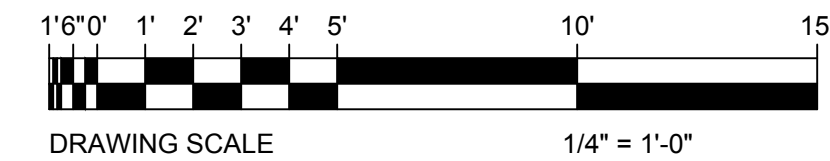
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WET WELL AND VALVE VAULT - PLAN
SCALE : 1/4" = 1'-0"



TOP SLABS - PLANS
SCALE : 1/4" = 1'-0"



NP 3202 SH 3" 275
Horizontal self-priming centrifugal pump. Ideal for pumping in water applications. Modular design with high adaptation grade.

Technical specification

Curves according to: Water, pure Water, pure [1000], 39.2 °F, 42.42 ft/H₂O, 1.6891E-5 ft/s

Configuration

| | | | |
|-------------------|----------------------|--------------------|-------------------------|
| Motor number | 3202-095-30-18-2AA-W | Installation type | P - Semi permanent, Wet |
| Impeller diameter | 200 mm | Discharge diameter | 4 inch |

Pump Information

| | | | |
|-------------------------|----------|----------|------------|
| Impeller diameter | 200 mm | Material | Hard Iron™ |
| Discharge diameter | 4 inch | | |
| Inlet diameter | 150 mm | | |
| Maximum operating speed | 3450 rpm | | |
| Number of blades | 7 | | |

Max. fluid temperature: 41 °C

Project: Blank
Created by: AJ Wilson
Created on: 1/9/2023
Last update: 1/9/2023

NP 3202 SH 3" 275
Technical specification

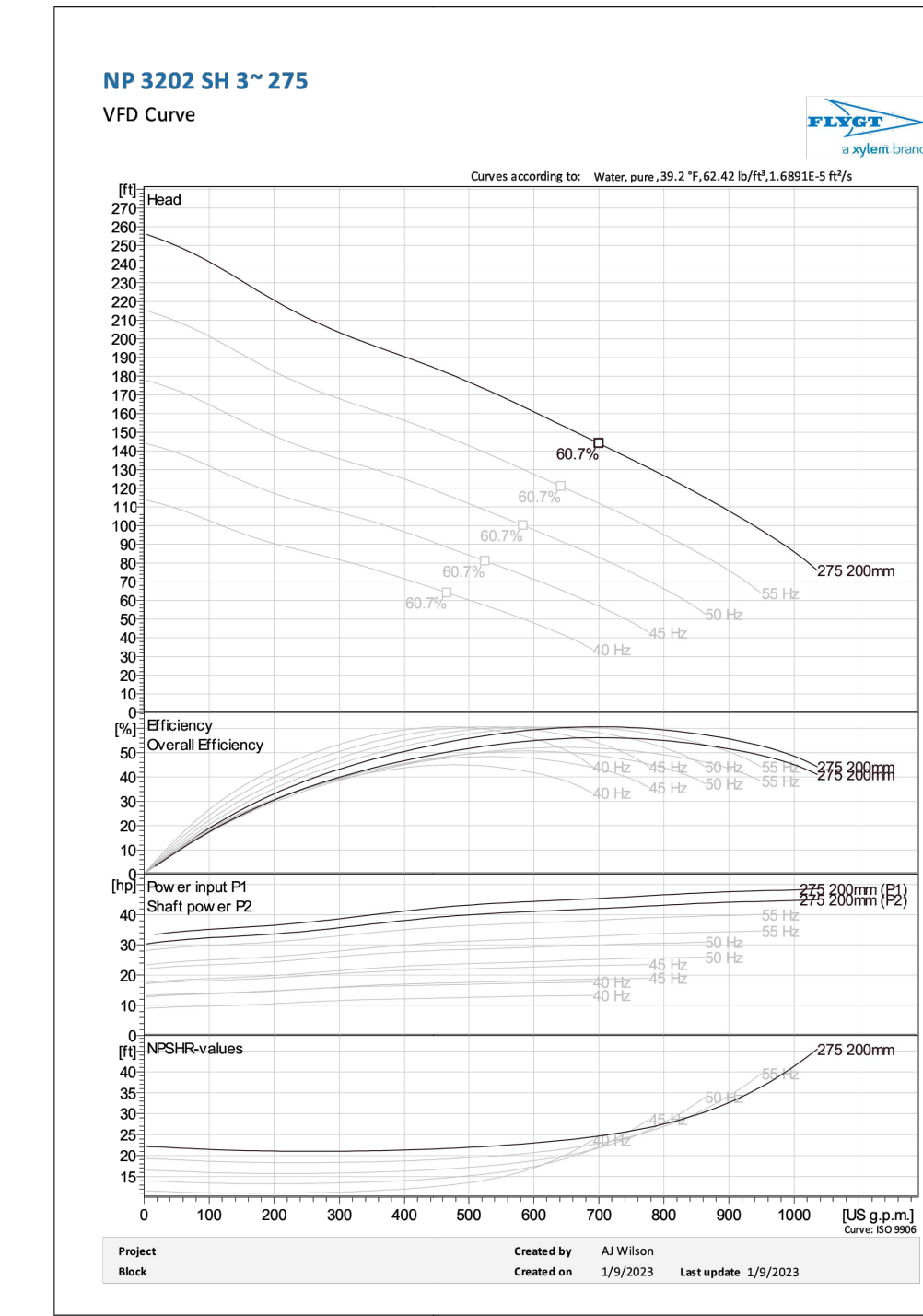
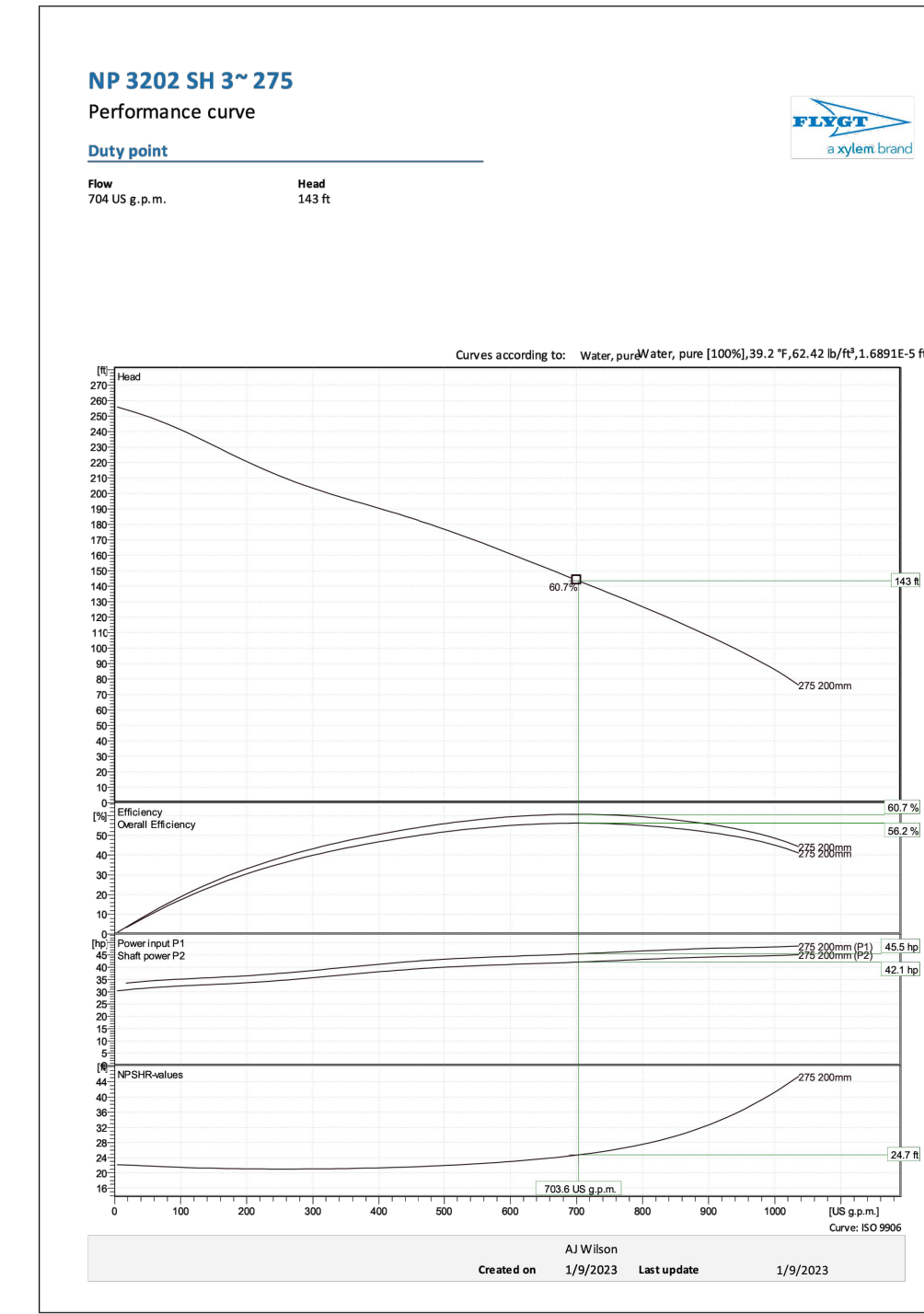
Motor - General

| | | | | | | | |
|--------------|----------------------|-----------------|----------------|------------------|----------|-----------------|-------|
| Motor number | 3202-095-30-18-2AA-W | Phase | 3 [∅] | Rated speed | 3450 rpm | Rated power | 10 hp |
| ATM approval | FM | Number of poles | 2 | Rated current | 58 A | Water resistant | 60 |
| Frequency | 60 Hz | Rated voltage | 460 V | Insulation class | H | Type of Duty | S1 |
| Version code | 055 | | | | | | |

Motor - Technical

| | | | | | | | |
|-------------------------|------|-----------------------------|-------|-----------------------------------|------------------------|----------------------|----|
| Power factor - 1/2 Load | 0.91 | Motor efficiency - 1/2 Load | 88.1% | Total moment of inertia | 3.34 kg·m ² | Starts per hour max. | 30 |
| Power factor - 3/4 Load | 0.89 | Motor efficiency - 3/4 Load | 87.0% | Starting current, direct starting | 500 A | | |
| Power factor - 1/2 Load | 0.94 | Motor efficiency - 1/2 Load | 83.8% | Starting current, star delta | 127 A | | |

Project: Blank
Created by: AJ Wilson
Created on: 1/9/2023
Last update: 1/9/2023



NP 3202 SH 3" 275
Dimensional drawing

Project: Blank
Created by: AJ Wilson
Created on: 1/9/2023
Last update: 1/9/2023

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| 1 | ISSUED FOR DINEC CONSTRUCTION PERMIT | 1/17/2024 | |

| NO. | REVISION | DATE |
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| 1 | ISSUED FOR DNREC CONSTRUCTION PERMIT | 1/17/2024 |

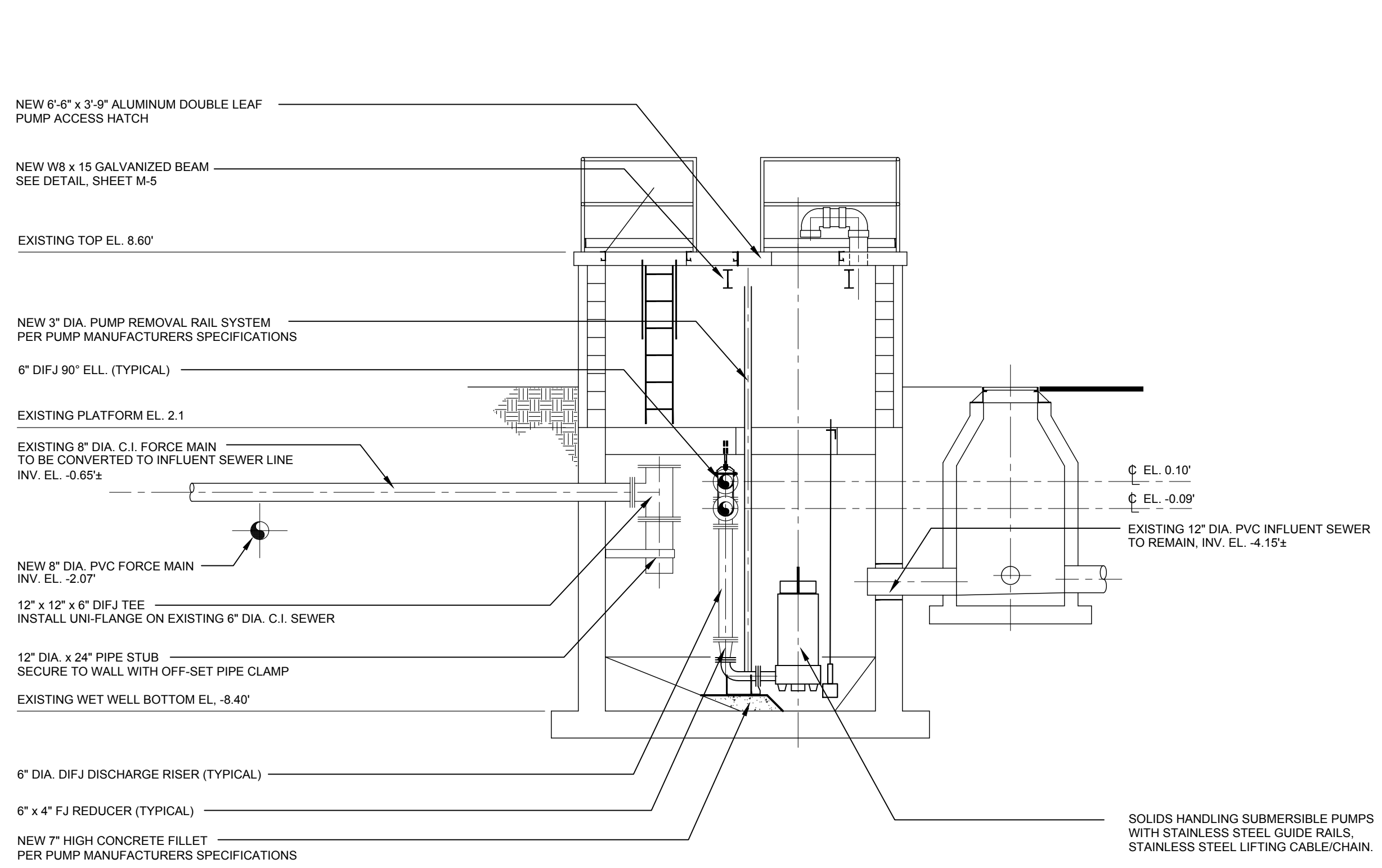
TOWN OF MILTON ~ SUSSEX COUNTY ~ DELAWARE
**ARTESIAN WASTE WATER MANAGEMENT
CHANDLER STREET PUMPING STATION
PUMPING STATION
SECTIONS**

APPLICATION NO.

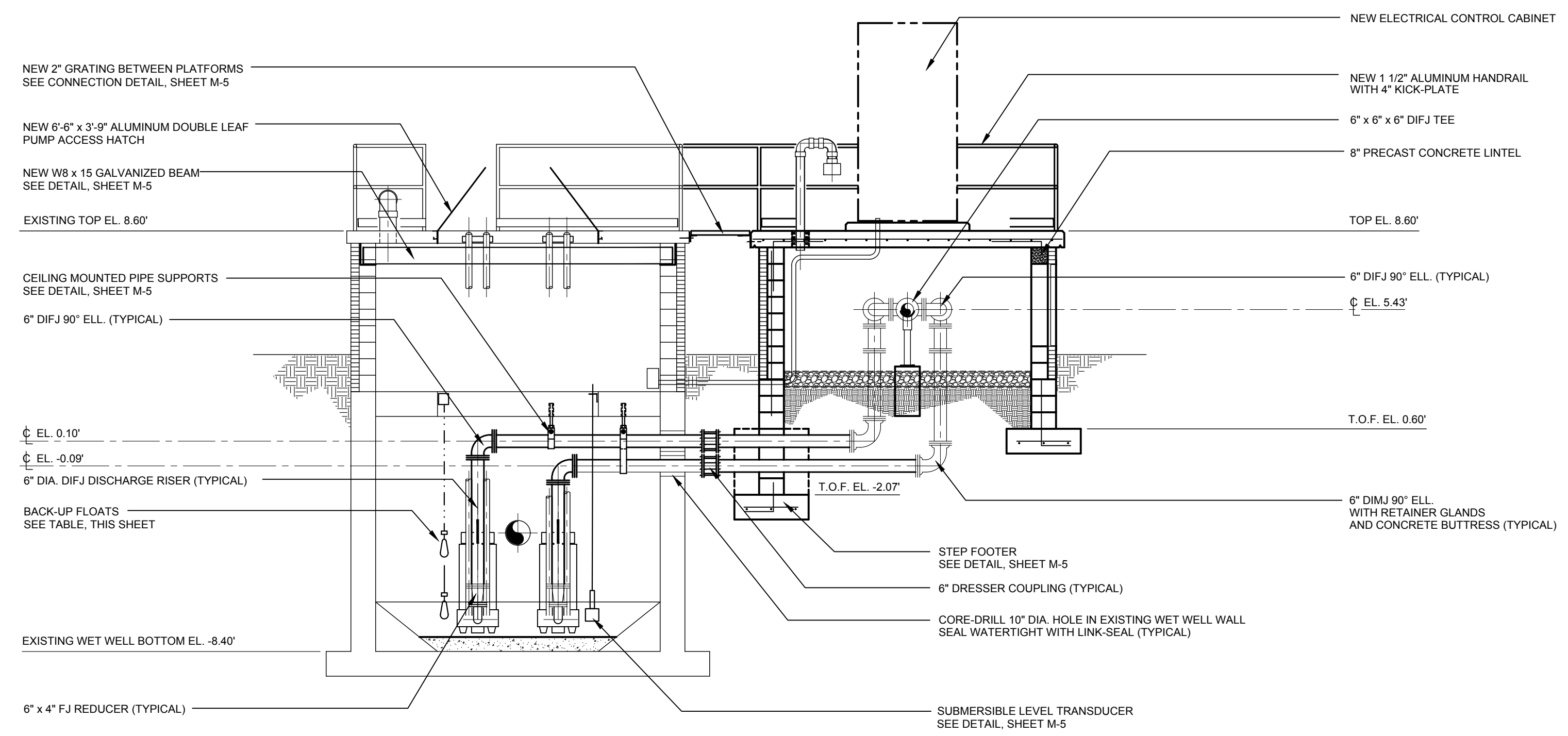
DATE: DECEMBER 2023

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

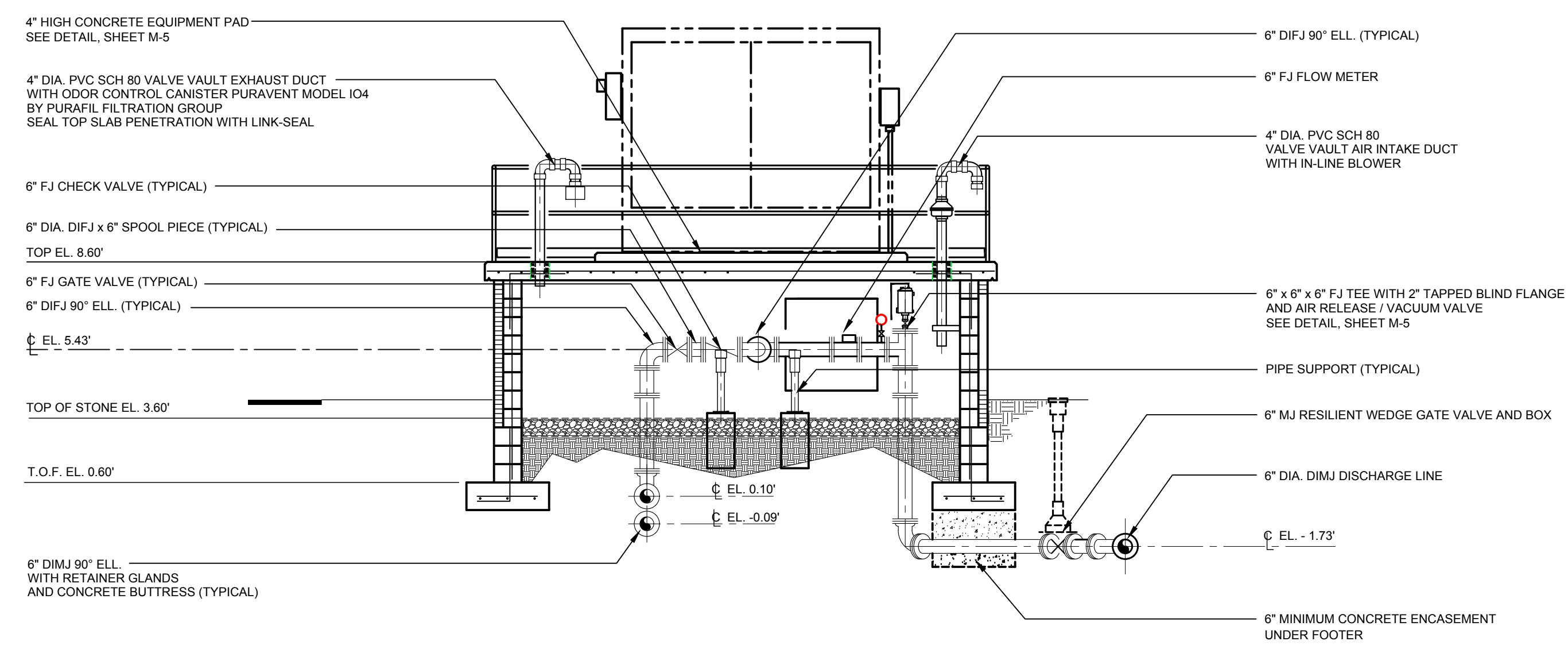
SHEET: M-3



SECTION 1
SCALE: 1/4" = 1'-0"
SEE SHEET 6



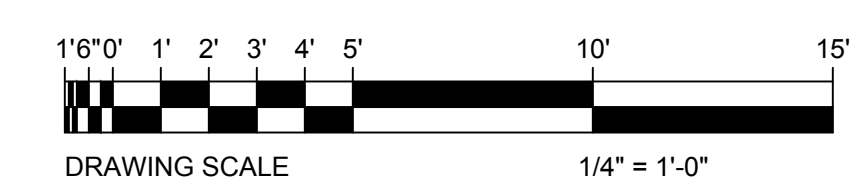
SECTION 2
SCALE: 1/4" = 1'-0"
SEE SHEET 6



SECTION 3
SCALE: 1/4" = 1'-0"
SEE SHEET 6

LIQUID LEVEL CONTROL ELEVATIONS:

| FUNCTION | ELEVATION (FT.) | HEIGHT ABOVE WET WELL BOTTOM (FT.) |
|---------------------------------------|-----------------|------------------------------------|
| A BACK-UP HIGH WATER ALARM (FLOAT) | -4.25' | 4.15' |
| B HIGH WATER ALARM | -4.50' | 3.90' |
| C LAG PUMP ON | -4.75' | 3.65' |
| D LEAD PUMP ON | -6.25' | 3.15' |
| E PUMPS OFF | -6.40' | 2.00' |
| F BACK-UP OFF LOW WATER LEVEL (FLOAT) | -6.65' | 1.75' |
| G WET WELL BOTTOM | -8.40' | 0.00' |

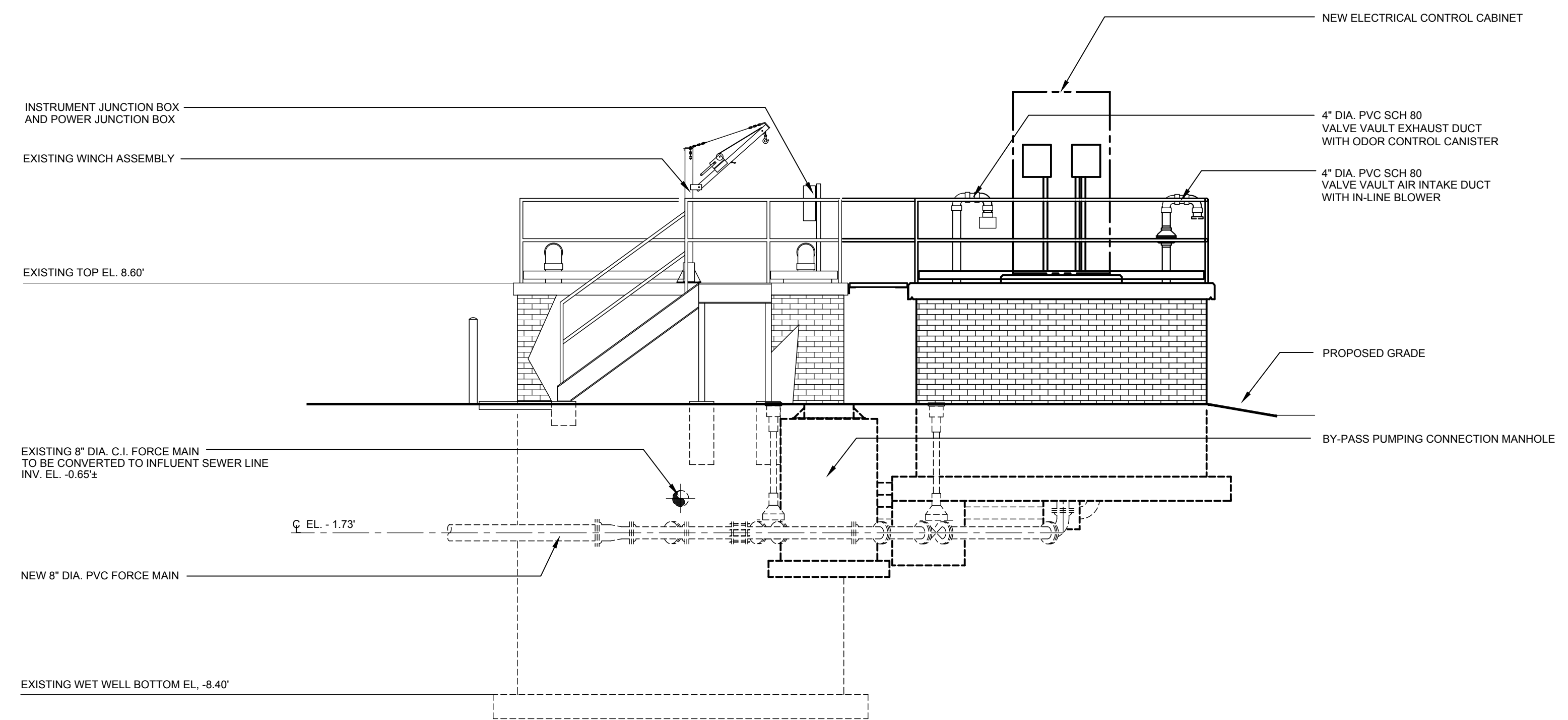


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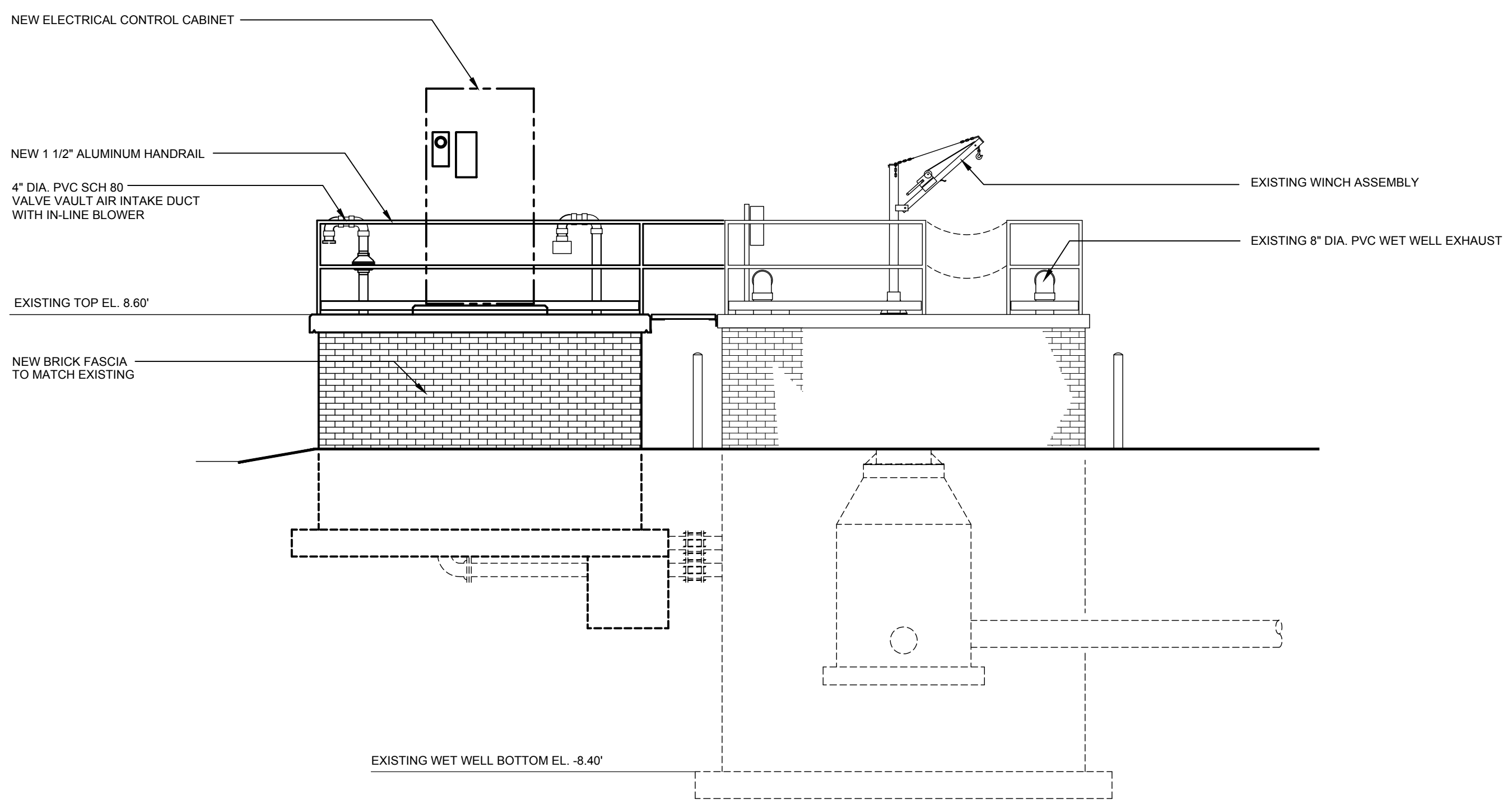
| NO. | REVISION | DATE |
|-----|---------------------------------------|-----------|
| 1 | ISSUED FOR DNR/DC CONSTRUCTION PERMIT | 1/17/2024 |

TOWN OF MILTON ~ SUSSEX COUNTY ~ DELAWARE
**ARTESIAN WASTE WATER MANAGEMENT
CHANDLER STREET PUMPING STATION**
PUMPING STATION
EXTERIOR ELEVATIONS

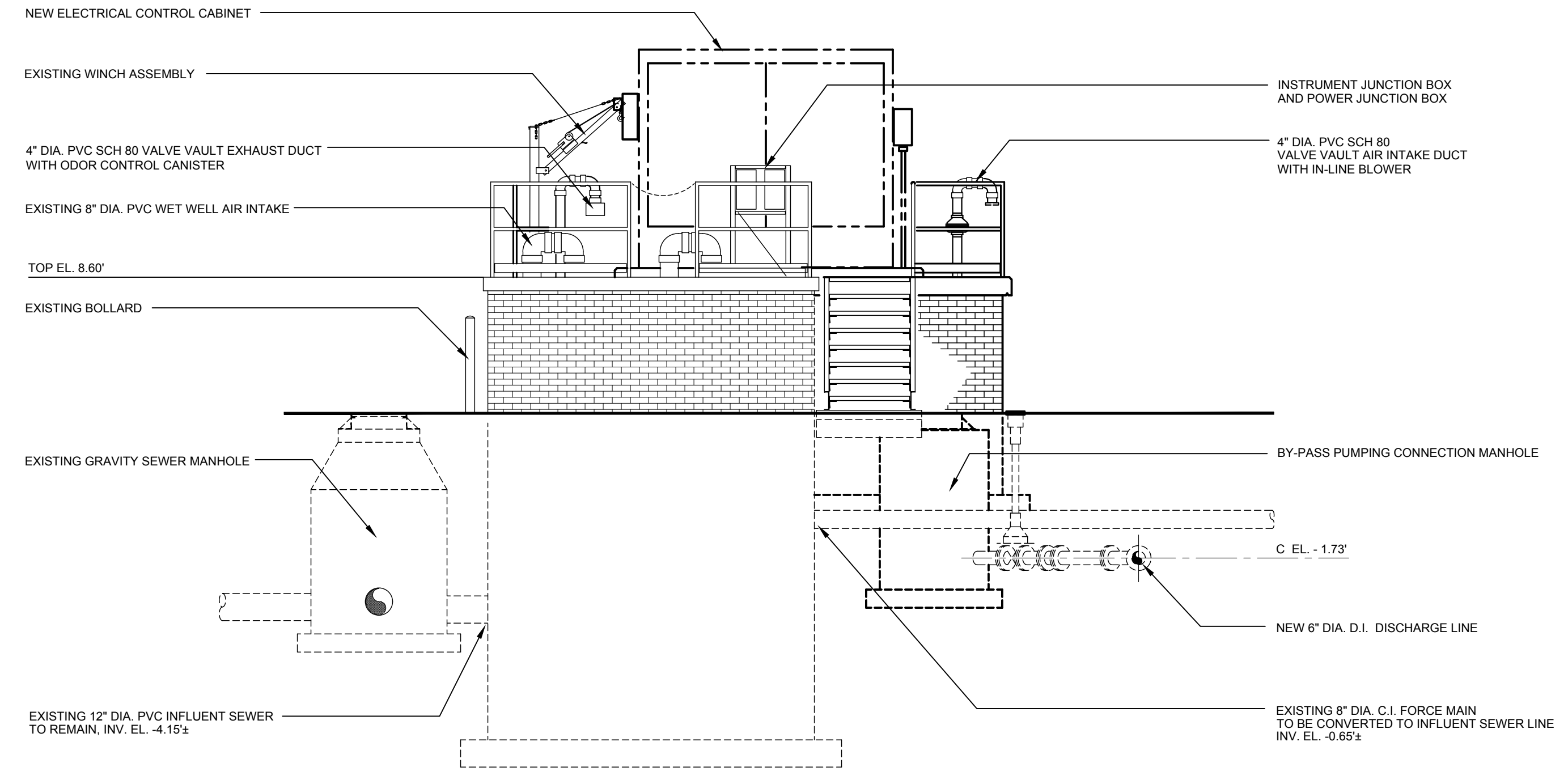
APPLICATION NO.
DATE: DECEMBER 2023
SCALE: 1/4" = 1'-0"
SHEET: M-4



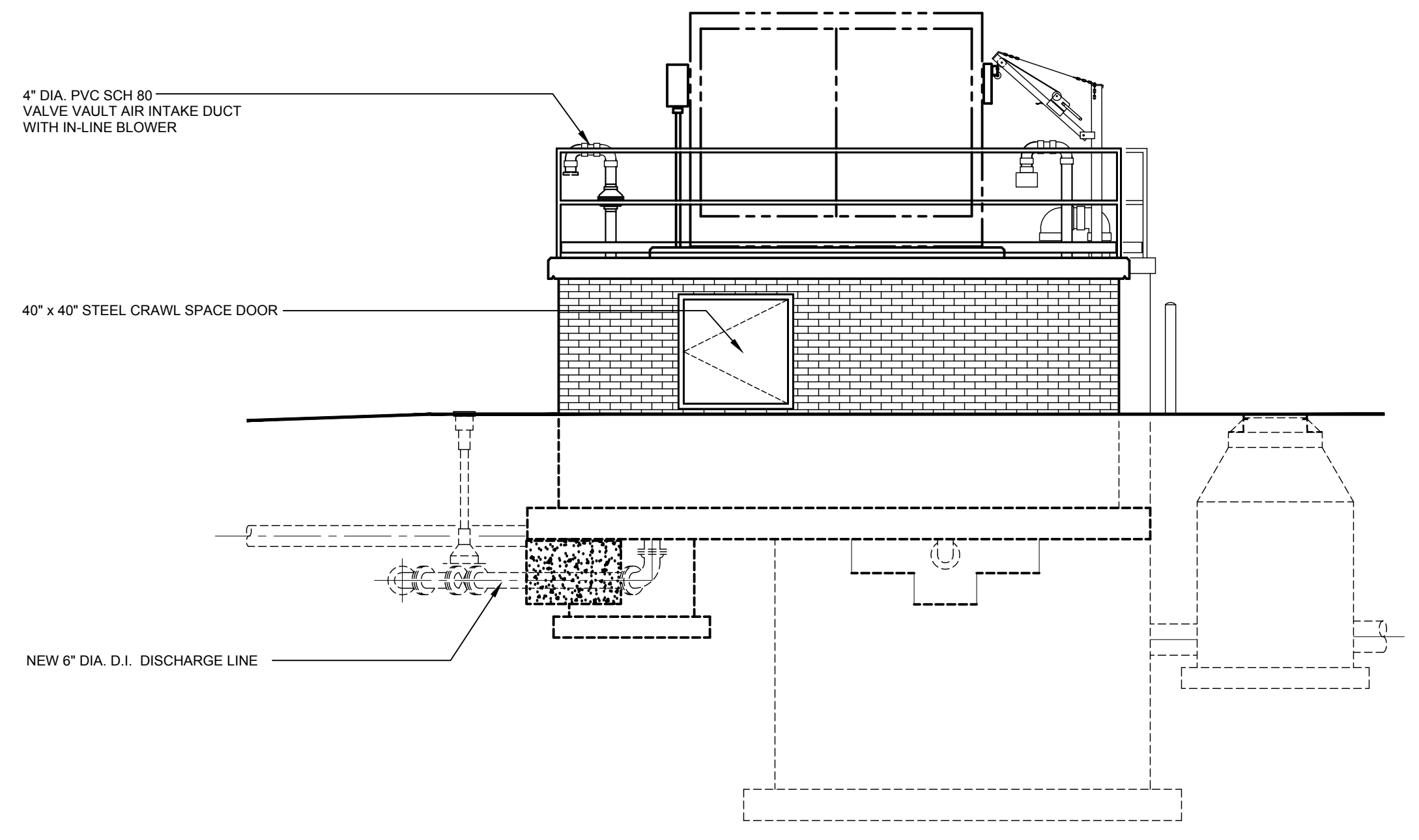
SOUTHERN EXTERIOR ELEVATION
SCALE : 1/4" = 1'-0"



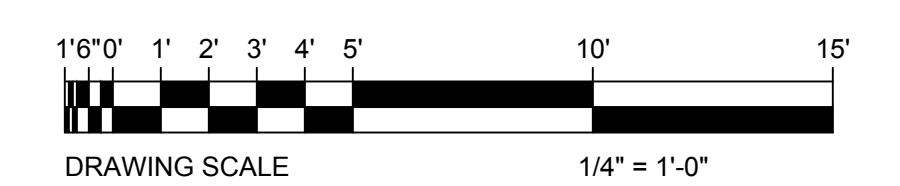
NORTHERN EXTERIOR ELEVATION
SCALE : 1/4" = 1'-0"



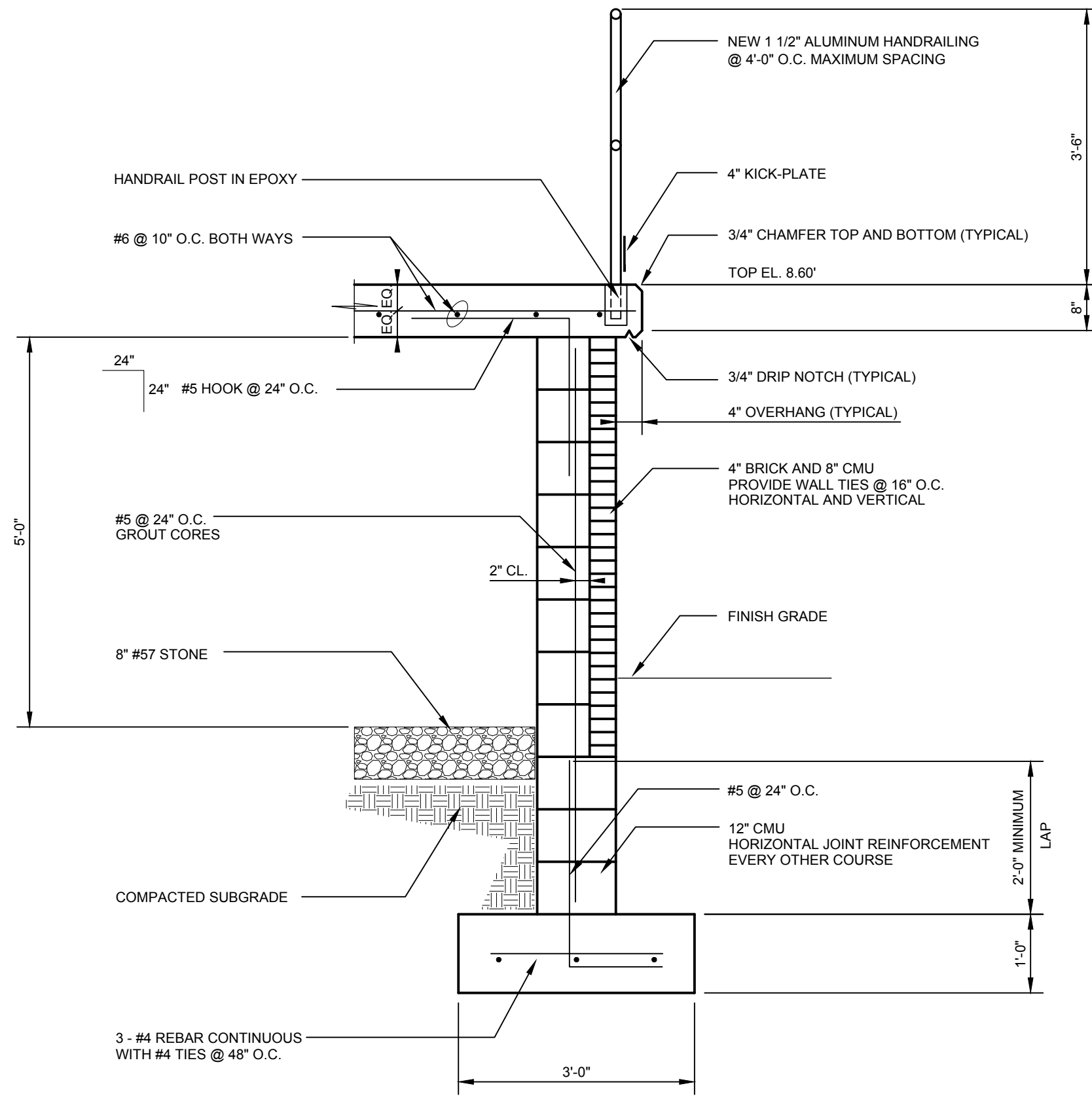
WESTERN EXTERIOR ELEVATION
SCALE : 1/4" = 1'-0"



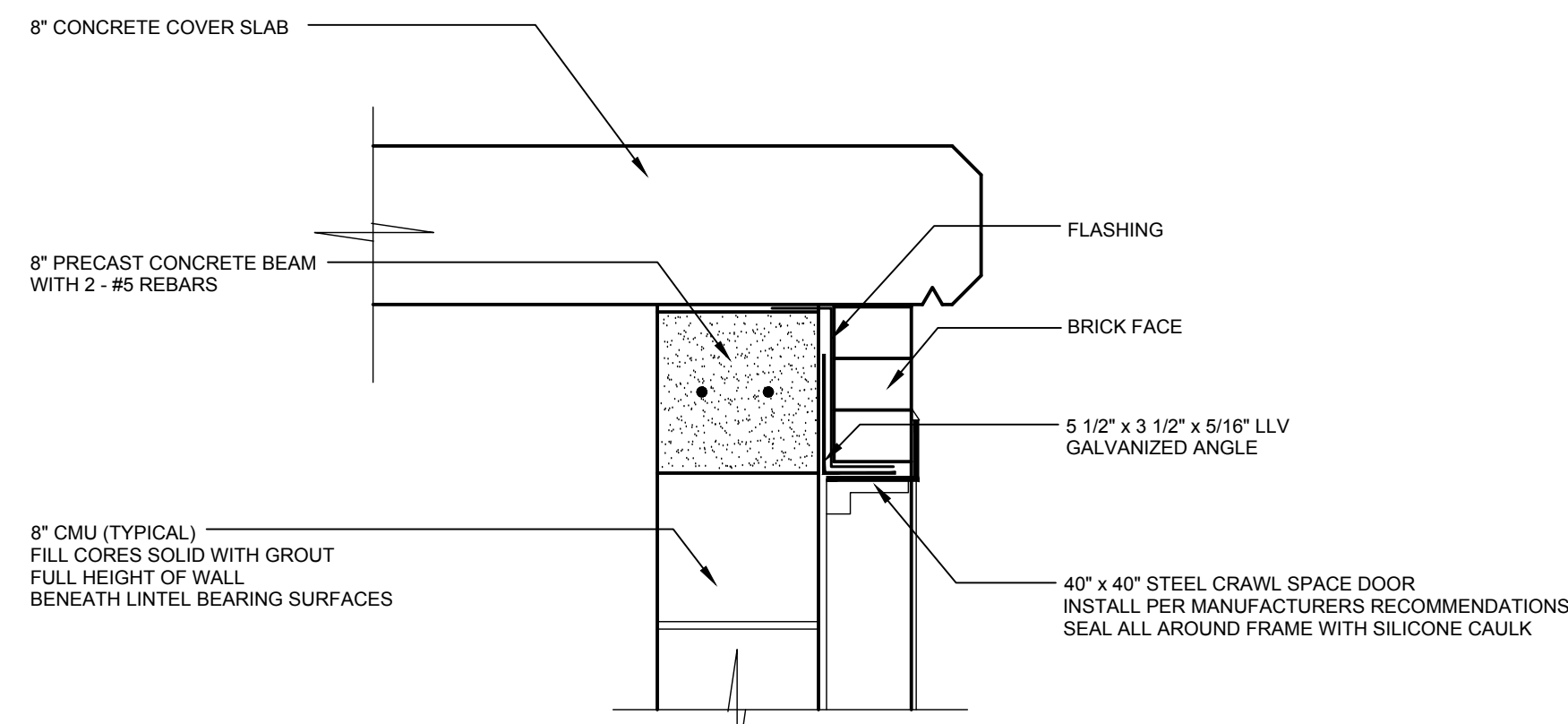
EASTERN EXTERIOR ELEVATION
SCALE : 1/4" = 1'-0"



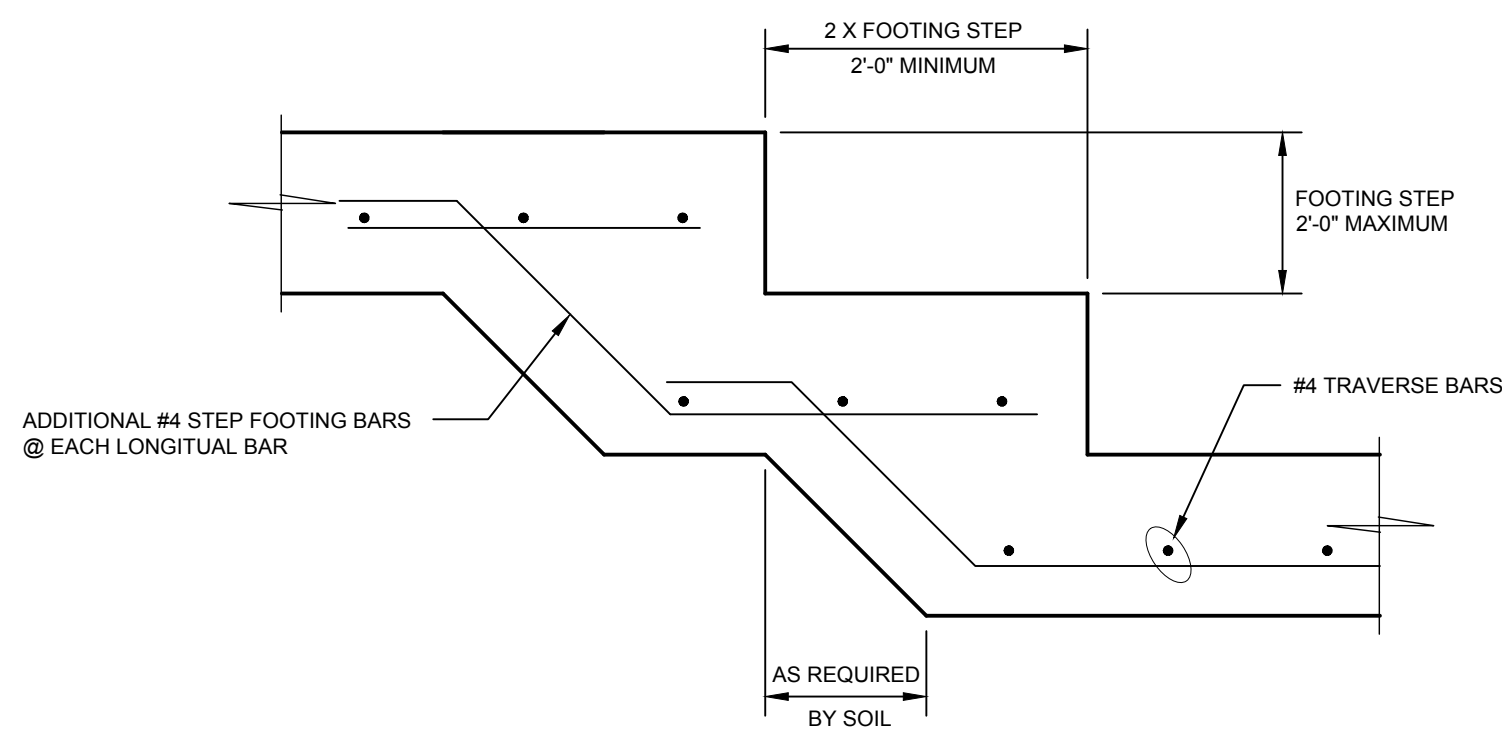
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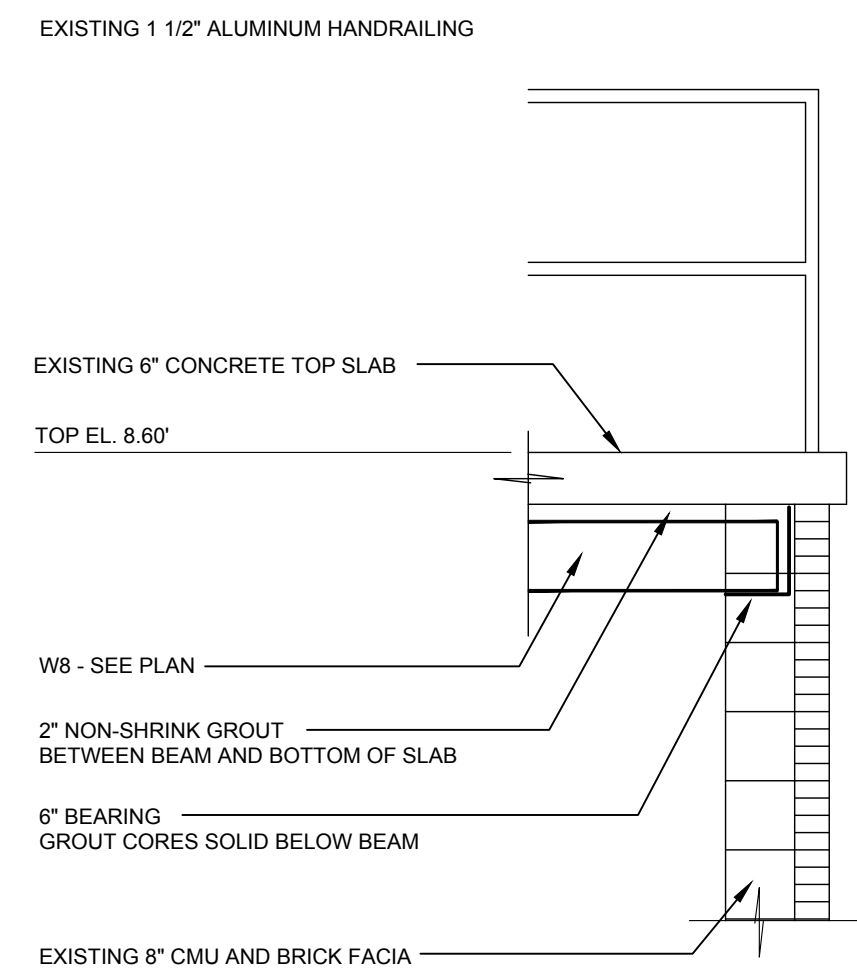
NEW PLATFORM TOP SLAB AND WALL DETAIL
NO SCALE



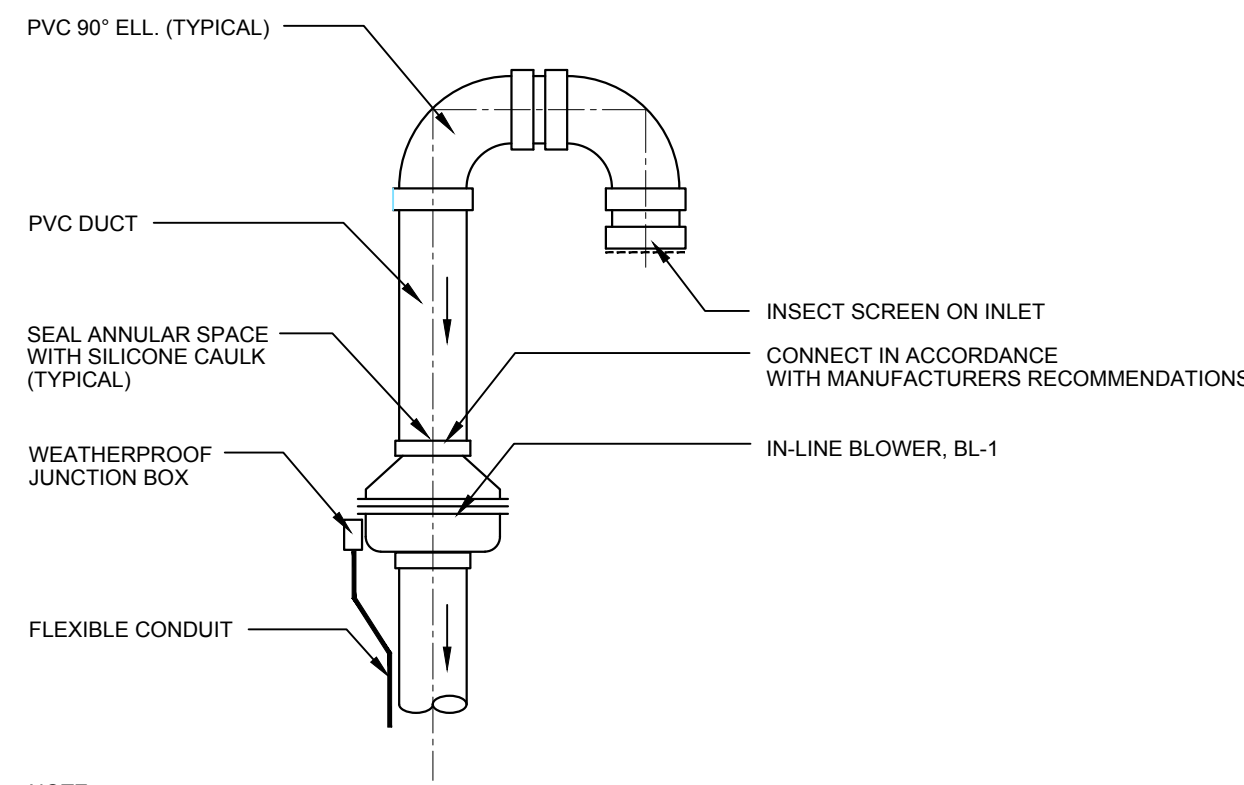
DOOR LINTEL DETAIL
NO SCALE



STEP FOOTING DETAIL
NO SCALE

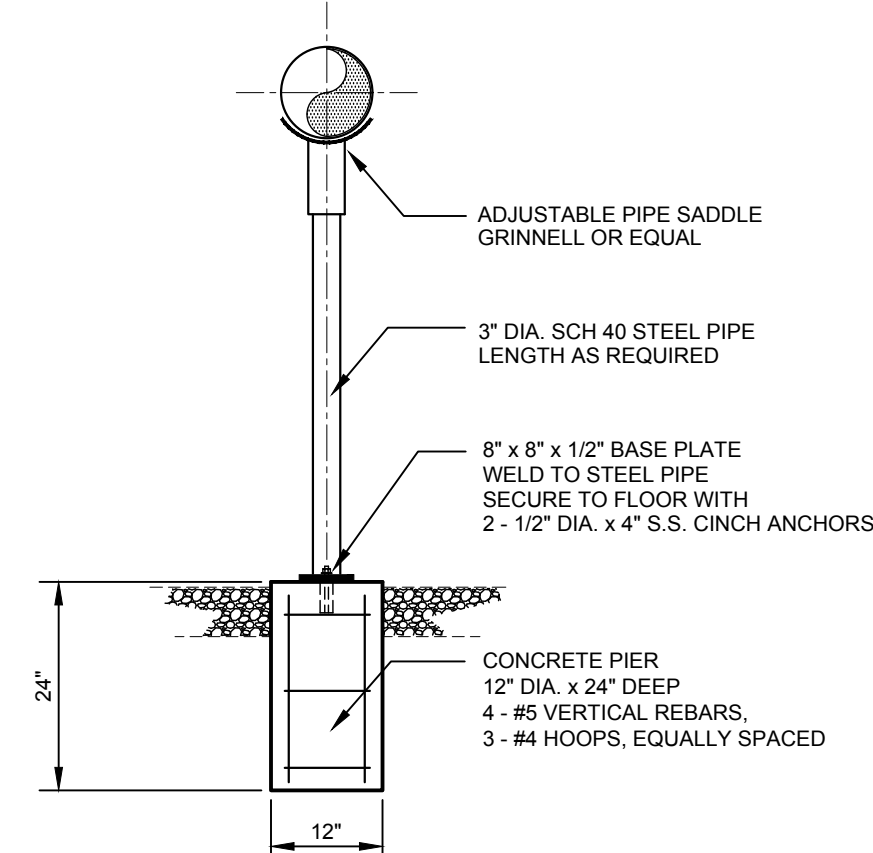


NEW SUPPORT BEAM DETAIL
NO SCALE

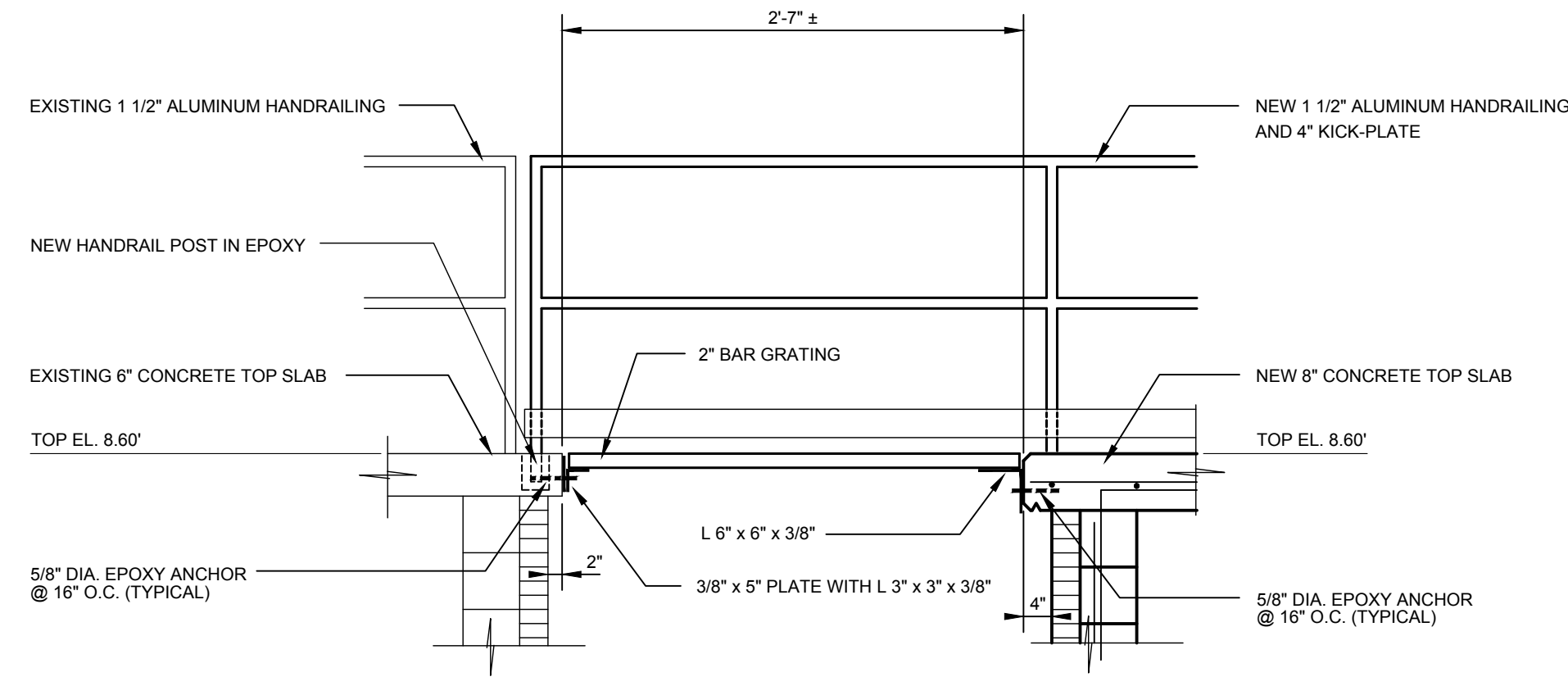


NOTE:
VALVE VAULT EXHAUST PIPE SIMILAR EXCEPT NO BLOWER.

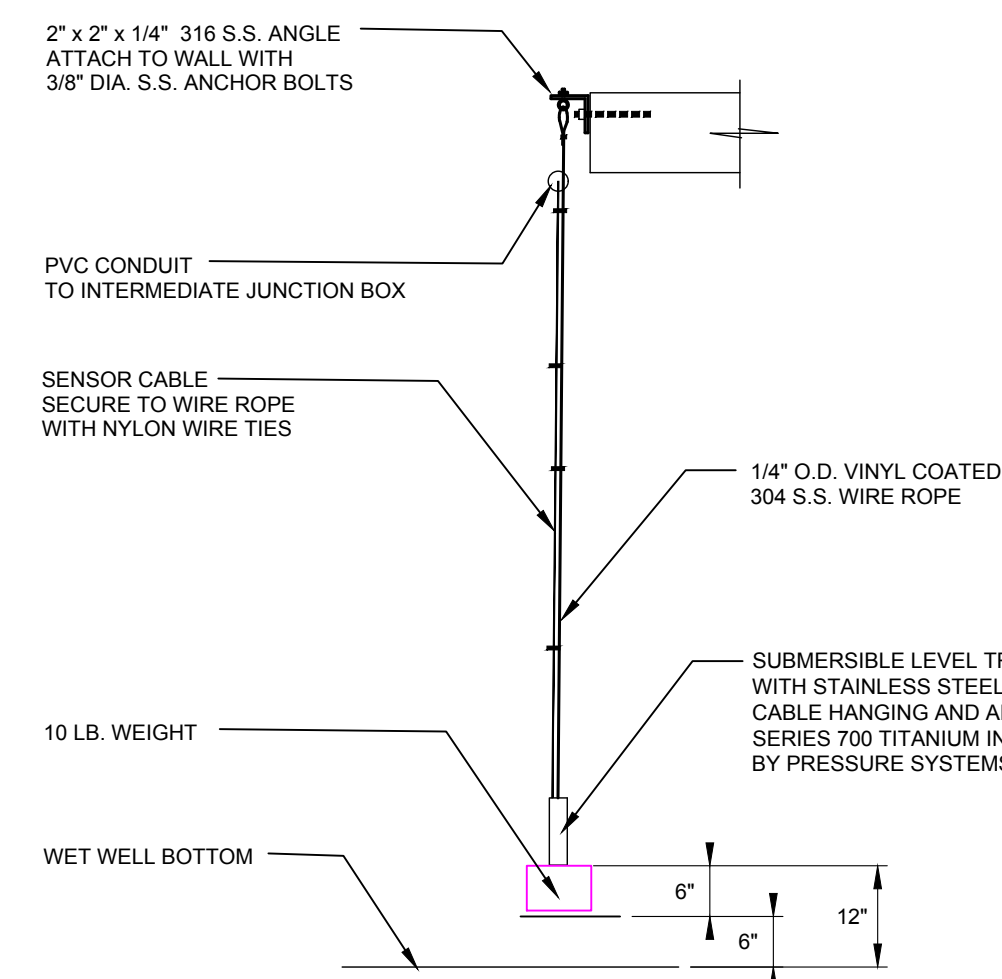
VALVE VAULT IN-LINE BLOWER DETAIL
NO SCALE



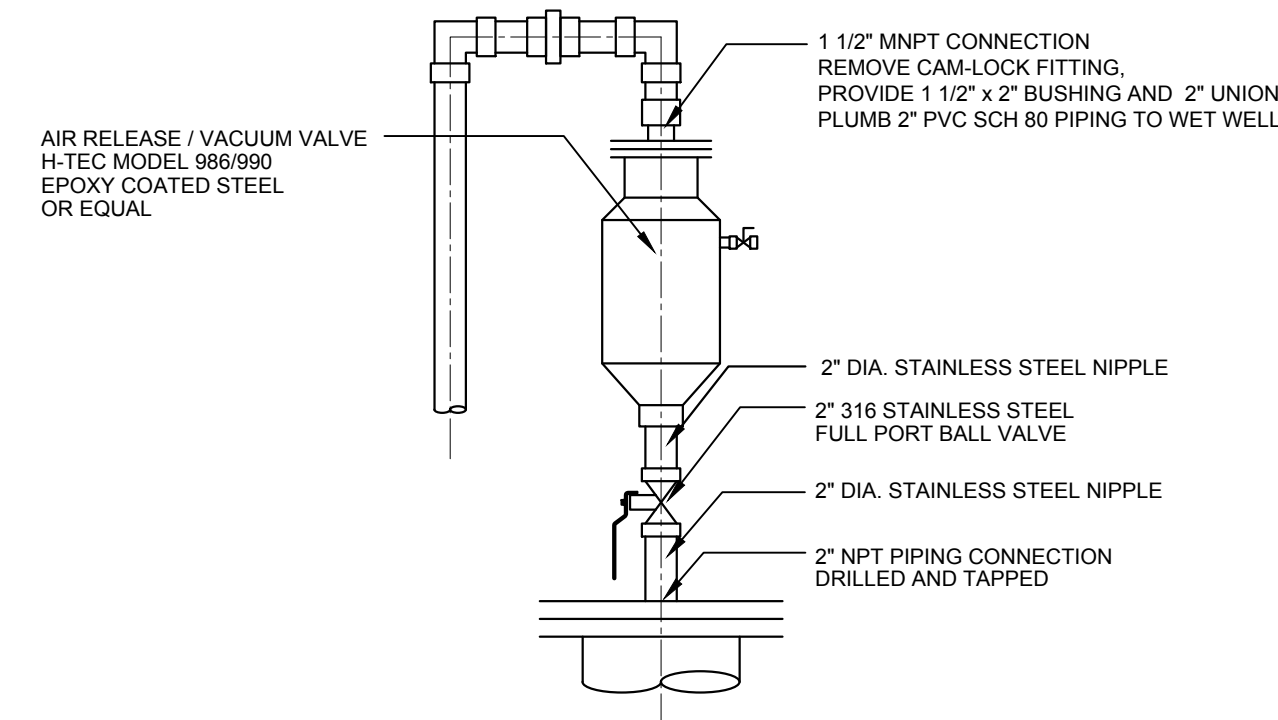
PIPE SUPPORT DETAIL
NO SCALE



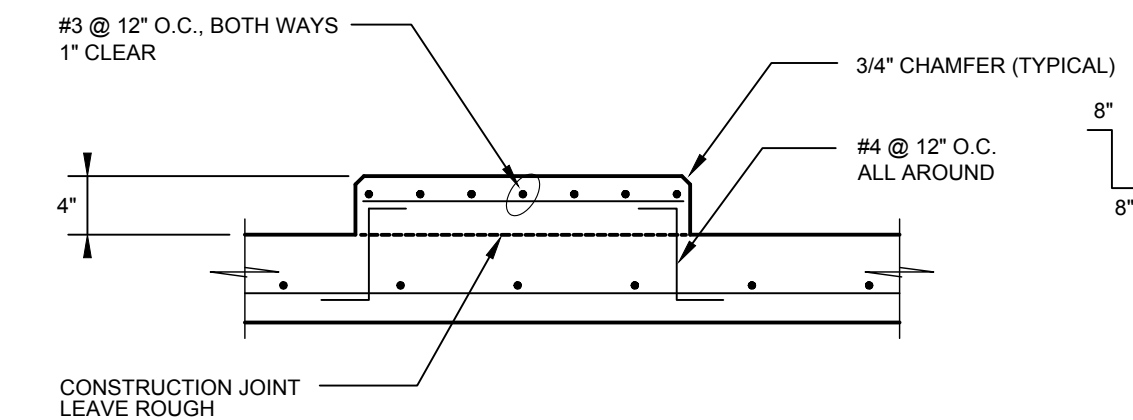
NEW GRATING CONNECTION DETAIL
NO SCALE



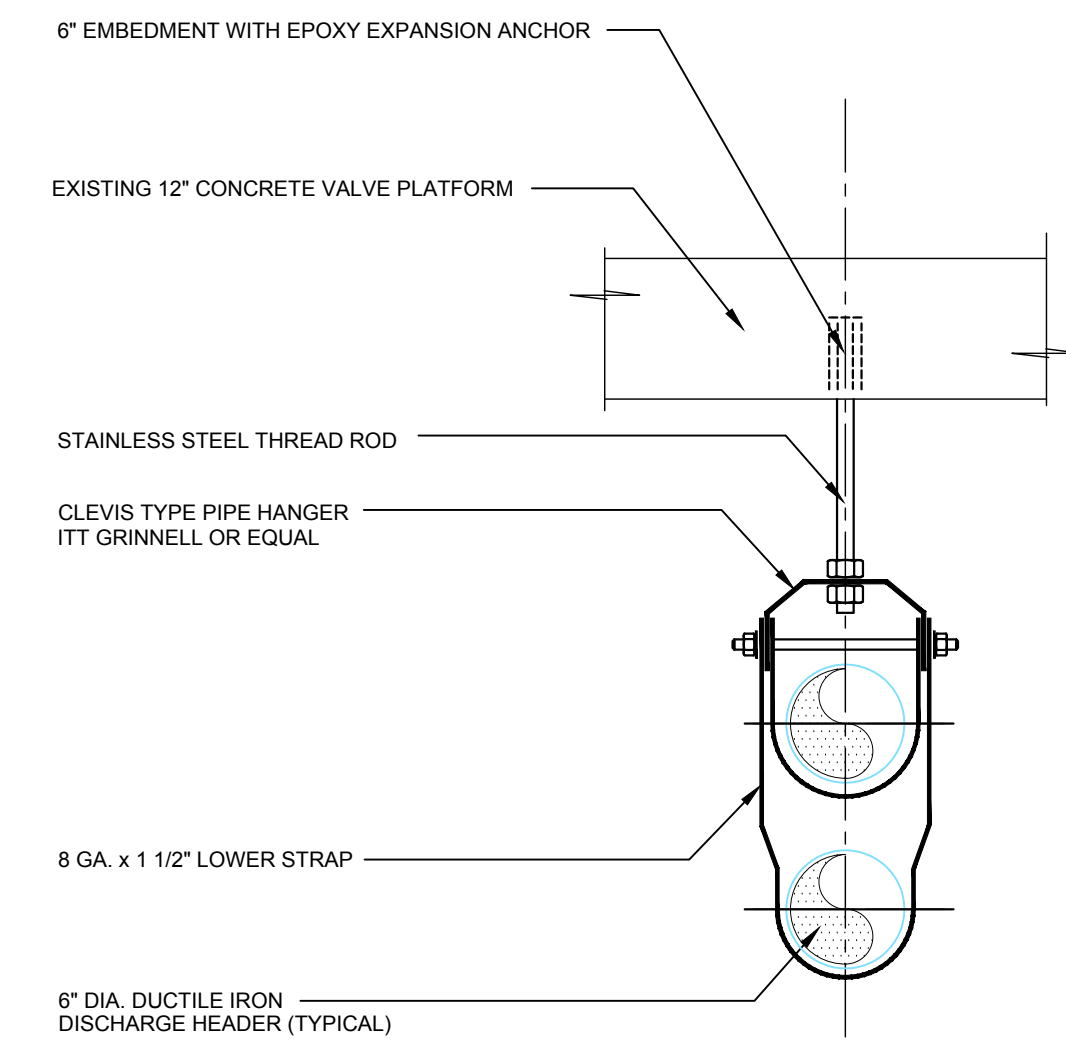
SUBMERSIBLE LEVEL TRANSDUCER DETAIL
NO SCALE



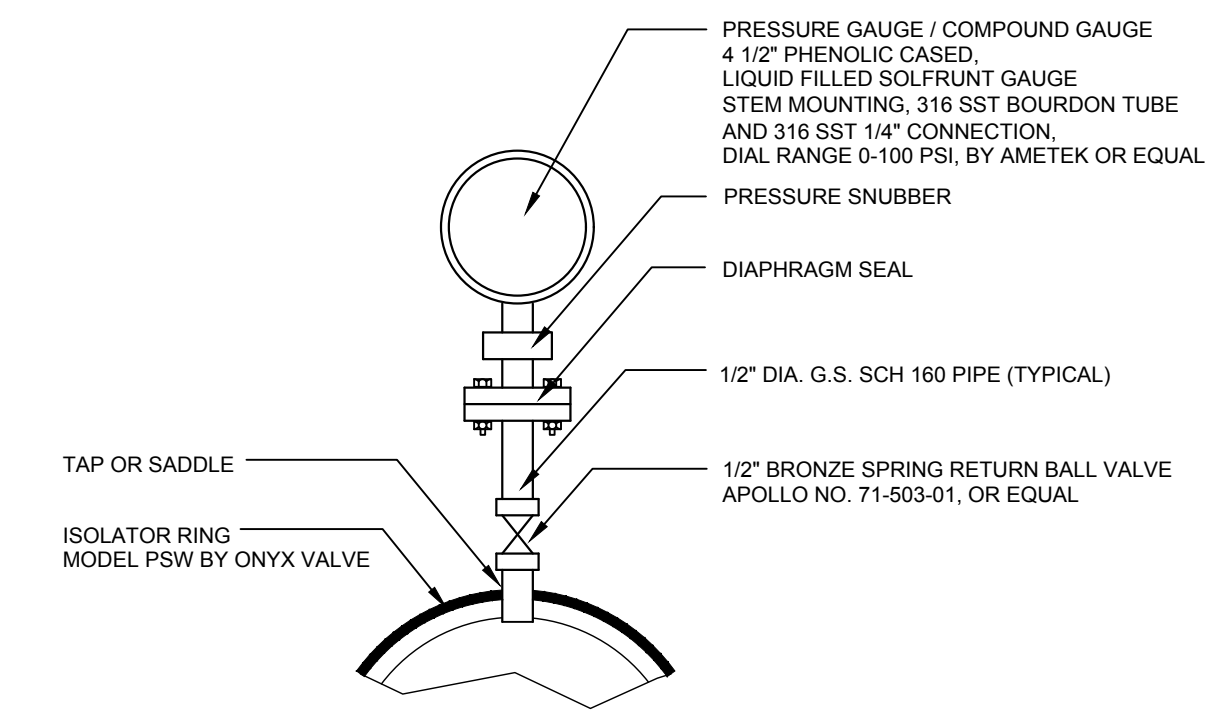
AIR RELEASE / VACUUM VALVE DETAIL
NO SCALE



EQUIPMENT PAD DETAIL
NO SCALE



CEILING MOUNTED PIPE SUPPORT DETAIL
NO SCALE



PRESSURE GAUGE ASSEMBLY DETAIL
NO SCALE

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|-----|--------------------------------------|------------|------|
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TOWN OF MILTON ~ SUSSEX COUNTY ~ DELAWARE
**ARTESIAN WASTE WATER MANAGEMENT
CHANDLER STREET PUMPING STATION
PUMPING STATION
DETAILS**

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GENERAL NEW WORK NOTES:

- REFERENCE TO CODES AND STANDARDS LISTED HEREIN SHALL CONSTITUTE MINIMUM ACCEPTABLE REQUIREMENTS. WHERE DRAWING AND SPECIFICATION REQUIREMENTS EXCEED THOSE OF CODES LISTED, DRAWINGS AND SPECIFICATIONS SHALL TAKE PRECEDENCE FOR WORK OF THIS PROJECT.
 - TITLE 49 OF THE CODE OF FEDERAL REGULATIONS PART 192
 - NATIONAL FIRE PROTECTION ASSOCIATION (NFPA 70 - NEC, 70E, 37, 497)
 - NATIONAL ELECTRICAL SAFETY CODE (IEEE/ANSI C2)
 - UNDERWRITERS LABORATORIES (UL)
 - NATIONAL ELECTRICAL MANUFACTURERS' ASSOCIATION (NEMA)
 - INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS (IEEE)
 - INSULATED POWER CABLE ENGINEERS ASSOCIATION (IPCEA)
 - AMERICAN SOCIETY FOR TESTING MATERIALS (ASTM)
 - AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI)
 - ANY STATE, COUNTY, OF LOCAL ACTS OR CODES HAVING JURISDICTION.
- DRAWINGS ARE DIAGRAMMATIC IN NATURE. DRAWINGS INDICATE THE GENERAL DETAILS OF WORK INTENDED AND ARE NOT INCLUSIVE OF ALL ANCILLARY ITEMS REQUIRED FOR PROPER INSTALLATION. EC WILL ENSURE ALL REFERENCED CODES AND STANDARDS UNDER ITEM #1 ARE ADHERED TO.
- CONTRACTOR SHALL PROVIDE ELECTRICAL INSPECTION SHALL BE MADE BY AN AGENCY ACCEPTABLE TO THE AUTHORITY HAVING JURISDICTION. ALL CERTIFICATES SHALL BE IN TRIPLICATE, SHALL BE DELIVERED TO AND BECOME PROPERTY OF OWNER.
- COMPLETE CIRCUIT ROUTING IS NOT SHOWN. FIELD DETERMINE ACTUAL ROUTING AS REQUIRED FOR PROPER INSTALLATION OF NEW WORK.
- COORDINATE WORK WITH THAT OF OTHER TRADES SO THAT WORK WILL BE PROVIDED IN THE MOST DIRECT MANNER AND SO THAT INTERFERENCE BETWEEN CONDUITS, PIPING, DUCTS, EQUIPMENT, STRUCTURAL FEATURES AND ALL OTHER ASPECTS OF THE WORK WILL BE AVOIDED.
- MATERIALS SHALL BE PROVIDED IN ACCORDANCE WITH MATERIAL MANUFACTURER'S INSTALLATION INSTRUCTIONS. OBTAIN MANUFACTURER'S INSTALLATION INSTRUCTIONS PRIOR TO ROUGHING-IN. WHERE EQUIPMENT IS FURNISHED BY OTHER TRADES FOR INSTALLATION AS WORK UNDER THIS DIVISION, OR WHERE ELECTRICAL SERVICE OR UTILITY CONNECTION TO EQUIPMENT INSTALLED BY OTHERS IS INDICATED AS WORK OF THIS DIVISION, OBTAIN SHOP DRAWINGS AND INSTALLATION INSTRUCTIONS FROM THE RESPECTIVE CONTRACTOR PRIOR TO ROUGHING-IN. DISCREPANCIES BETWEEN INSTALLATION INSTRUCTIONS AND CONTRACT DOCUMENTS SHALL BE BROUGHT TO THE ATTENTION OF HAYDEN ELECTRIC.
- MATERIALS SHALL BE NEW, OF THE BEST OF THEIR RESPECTIVE KINDS, WITHOUT IMPERFECTIONS OR BLEMISHES, AND SHALL BE PROTECTED FROM THE ELEMENTS PRIOR TO INSTALLATION.
- WORK SHALL BE INSTALLED BY PERSONNEL SKILLED IN THE TRADE INVOLVED.
- DRAWINGS ARE GENERALLY INDICATIVE OF WORK TO BE INSTALLED, BUT MAY NOT INDICATE ALL BENDS, FITTINGS, BOXES, ETC., REQUIRED TO MEET CONDITIONS. WHERE ITEMS SHOWN ON THE DRAWINGS, OR HEREIN DESCRIBED, ARE NOT CLEARLY UNDERSTOOD, BIDDERS SHALL CONFER WITH THE RPR AND ENGINEER. NO ALLOWANCE WILL BE MADE FOR LACK OF INFORMATION AFTER BID IS SUBMITTED AND PROJECT IS AWARDED TO EC.
- CONFIRM THE POSITION, LOCATION, AND MANUFACTURER'S REQUIREMENTS FOR EQUIPMENT PRIOR TO ROUGH-IN.
- CONDUIT, WIRE, CABLE, WIRING DEVICES, AND EQUIPMENT SHALL BE INSTALLED IN SUCH A MANNER AS TO PRESERVE ACCESS TO EQUIPMENT INSTALLED UNDER THIS PROJECT.
- DAMAGES TO FACTORY FINISHES ON ELECTRICAL EQUIPMENT SHALL BE TOUCHED UP TO MATCH ORIGINAL FINISH AND RATINGS.
- UPON COMPLETION OF WORK, REMOVE ALL DIRT, FOREIGN MATERIALS, STAINS, FINGERPRINTS, ETC., FROM ALL PARTS AND EQUIPMENT. INSTALLATION SHALL BE SUBJECT TO INSPECTION BY THE RPR.
- AFTER INSTALLATION OF WIRING AND ASSOCIATED DEVICES HAS BEEN COMPLETED, ELECTRICAL CONDUCTORS SHALL BE TESTED TO INSURE CONTINUITY, PROPER SPLICING, FREEDOM FROM GROUND (EXCEPT "MADE GROUND" AND THOSE REQUIRED FOR PROTECTION), AND INSULATION RESISTANCE IN ACCORDANCE WITH UNDERWRITERS LABORATORIES REQUIREMENTS. FURNISH AND EMPLOY NECESSARY INSTRUMENTS SUCH AS AMMETERS, VOLTMETERS, MEGGERS, ETC.
- CONSULT WITH THE RPR PRIOR TO TESTING AND ADJUSTING TO DETERMINE INTENDED FUNCTION OF EQUIPMENT, WIRING, AND SYSTEMS. PERFORM SUCH TESTS AND MAKE NECESSARY ADJUSTMENTS TO ENSURE THAT DESIGN FUNCTION IS OBTAINED.
- INTERRUPTIONS OF AN ESTABLISHED POWER SUPPLY SHALL BE CONDUCTED ONLY WHEN AUTHORIZED IN WRITING BY HAYDEN ELECTRIC. EC SHALL SUBMIT A WRITTEN REQUEST FIVE (5) DAYS IN ADVANCE, FOR A SERVICE INTERRUPTION AND SHALL STATE THE ESTIMATED TIME INVOLVED DURING WHICH THE POWER SUPPLY WILL BE INTERRUPTED. POWER SUPPLY INTERRUPTIONS SHALL BE COORDINATED WITH OTHER TRADES SO THERE WILL BE A MINIMUM OF INCONVENIENCE TO THESE TRADES. IF TEMPORARY POWER SERVICE IS REQUIRED DURING THE POWER SUPPLY INTERRUPTION, IT SHALL BE THE RESPONSIBILITY OF THE EC TO FURNISH, INSTALL, CONNECT AND OTHERWISE PROVIDE THE TEMPORARY SERVICE AT NO ADDITIONAL COST.
- UNLESS OTHERWISE NOTED, ALL ELECTRICAL EQUIPMENT AND ITEMS SHALL BE AS LISTED OR AS APPROVED. SUBSTITUTION OF ELECTRICAL EQUIPMENT AND ITEMS MUST BE APPROVED BY THE RPR.
- PROVIDE 2-HOUR FIRE STOP FOR ANY PENETRATIONS THAT PENETRATE FIRE RATED WALLS.
- PROVIDE AS-BUILT INFORMATION FOR ALL MAJOR ELECTRICAL DEVICES (IE, PULL BOXES, GENERAL CONDUIT ROUTES, DEVICE LOCATIONS) SO TO ENSURE A COMPLETE AND THOROUGH SET OF "AS-BUILT" PLANS.
- UNLESS OTHERWISE NOTED, ITEMS SHOWN IN DARK LINE WEIGHT IS WORK THAT SHALL BE PERFORMED BY EC, AND ITEMS SHOWN IN LIGHT LINE WEIGHT IS EITHER EXISTING TO REMAIN OR WORK PERFORMED BY OTHERS.
- ALL EMPTY CONDUITS SHALL HAVE A NYLON CORD PROVIDED CONTINUOUSLY THROUGH THE LENGTH OF EACH EMPTY CONDUIT AND ACCESSIBLE AT BOTH ENDS OF EACH CONDUIT.
- LOCATION OF NEW EQUIPMENT IS APPROXIMATE AND SHALL BE COORDINATED IN FIELD WITH EXISTING INTERFERENCES. MAINTAIN PROPER CLEARANCES IN AVAILABLE SPACE AS REQUIRED BY NATIONAL ELECTRICAL CODE.
- WHERE ITEMS OF MATERIAL OR EQUIPMENT ARE SPECIFIED BY BRAND NAME, CATALOG NUMBERS, OR BY NAMES OF MANUFACTURERS, REFERENCE IS INTENDED TO BE DESCRIPTIVE, NOT RESTRICTIVE, AND IS SOLELY FOR PURPOSES OF INDICATING TYPE, QUALITY, AND APPEARANCE OF ITEM THAT WILL BE ACCEPTABLE.
- GC SHALL PROVIDE ALL EXCAVATION, BEDDING, BACKFILL AND FINISHED GRADING NECESSARY TO PROVIDE ELECTRICAL WORK.

GENERAL ABBREVIATIONS:

| | |
|-------|--|
| AF | ABOVE FINISHED FLOOR |
| AFG | ABOVE FINISHED GRADE |
| AHJ | AUTHORITY HAVING JURISDICTION |
| AWG | AMERICAN WIRE GAUGE |
| BFF | BELOW FINISHED FLOOR |
| BFG | BELOW FINISHED GRADE |
| BOB | BASIS OF DESIGN |
| CB | CIRCUIT BREAKER |
| CDP | CONDUIT DISTRIBUTION PANEL |
| C | CONDUIT |
| CLG | CEILING |
| CP | CAPPED / PLUGGED CONDUIT (SPARE) |
| CU | COPPER |
| DS | DISCONNECT SWITCH |
| EC | ELECTRICAL CONTRACTOR |
| ETR | EXISTING TO REMAIN |
| FD | FIELD DETERMINE |
| GC | GENERAL CONTRACTOR |
| GFCI | GROUND FAULT CIRCUIT INTERRUPTING |
| GFI | GROUND FAULT INTERRUPTING |
| GND | GROUND |
| HC | HVAC CONTRACTOR |
| HP | HORSE POWER |
| HPS | HIGH PRESSURE SODIUM |
| HSS | HOLLOW STRUCTURAL STEEL |
| I/O | INPUT / OUTPUT |
| JB | JUNCTION BOX |
| KW | KILOWATT |
| KVA | KILO-VOLT AMPS |
| MC | MECHANICAL CONTRACTOR |
| MCB | MAIN CIRCUIT BREAKER |
| MDP | MAIN DISTRIBUTION PANEL |
| MFR'S | MANUFACTURER'S |
| MLO | MAIN LUGS ONLY |
| PB | PULL BOX |
| PPL | PPL ELECTRIC UTILITIES CORPORATION |
| QTY | QUANTITY |
| REMSI | RULES FOR ELECTRIC METER & SERVICE INSTALLATIONS |
| RGS | RIGID GALVANIZED STEEL |
| RPR | RESIDENT PROJECT REPRESENTATIVE |
| SCH | SCHEDULE |
| TYP | TYPICAL |
| UON | UNLESS OTHERWISE NOTED |
| V | VOLT |
| VAC | VOLT ALTERNATING CURRENT |
| VCR | VACUUM RECLOSER |
| VFD | VARIABLE FREQUENCY DRIVE |
| XFMR | TRANSFORMER |

SITE NOTES:

(NOT REFERENCED ON DRAWING)

- THE LOCATION OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY AND HAVE NOT BEEN INDEPENDENTLY VERIFIED BY THE OWNER OR ITS REPRESENTATIVE. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF EXISTING UTILITIES BEFORE COMMENCING WORK AND AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY THE CONTRACTORS FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.
- CONTRACTOR SHALL OBTAIN THE SERVICES OF AN INDEPENDENT TESTING COMPANY, WHO SHALL BE RESPONSIBLE FOR THE IDENTIFICATION AND LOCATION OF ALL SITE UTILITIES IN THE AREA OF EXCAVATION OR DRILLING. NO ADDITIONAL COMPENSATION SHALL BE GIVEN FOR REPAIRS REQUIRED FOR DAMAGES TO EXISTING SITE UTILITIES.
- CONTRACTOR SHALL IMMEDIATELY REPAIR, AT NP ADDITIONAL COST TO THE OWNER, ANY DAMAGE DURING EXCAVATION/BACKFILLING, OR BORING TO EXISTING SITE UTILITIES.

CONTROLS NOTE:

CONTRACTOR TO INCLUDE CONTROL SHOP DRAWINGS AS PART OF THE SUBMITTAL PROCESS.

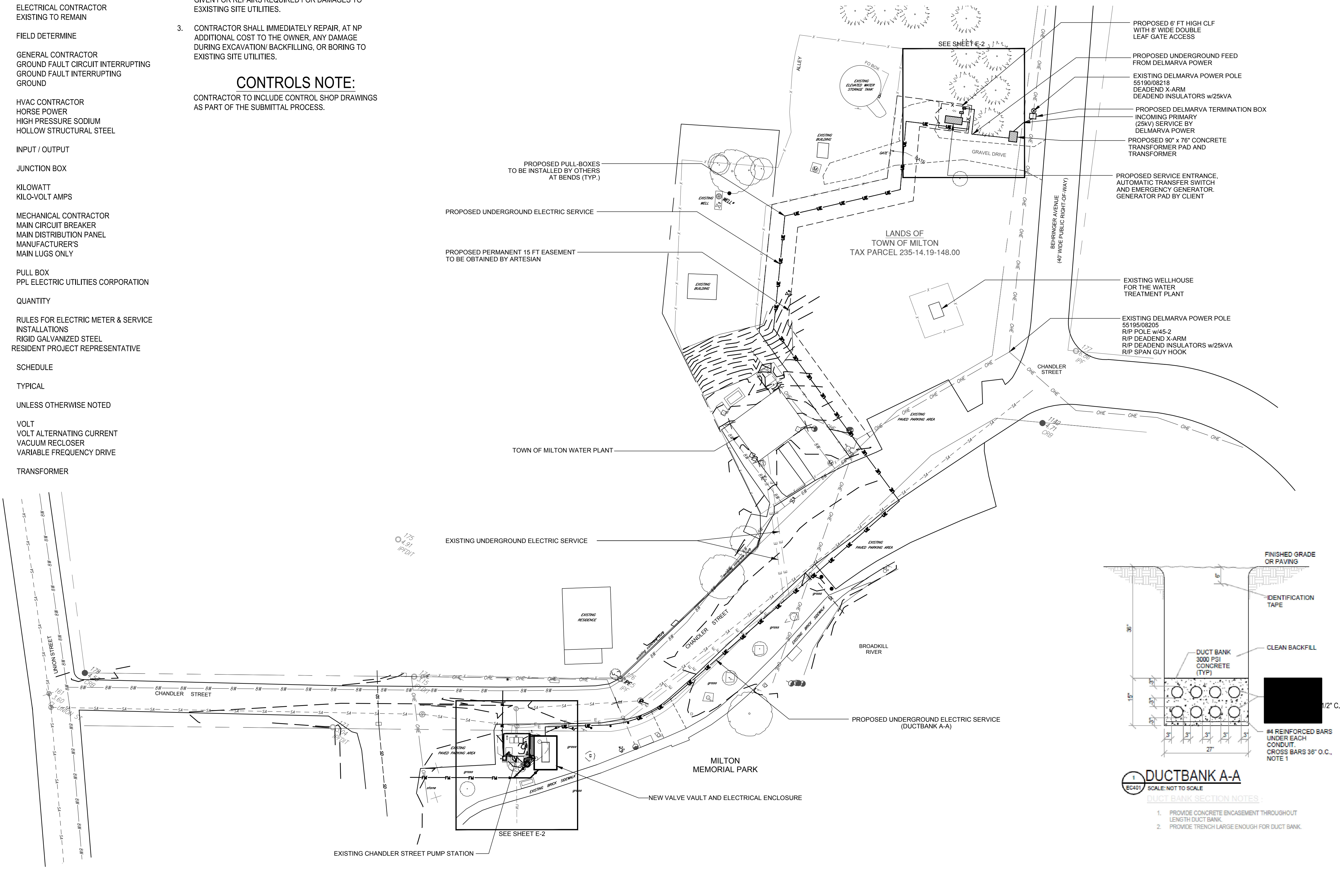
ARC FLASH NOTES

- EACH PANELBOARD, SWITCHBOARD, ENCLOSED CIRCUIT BREAKER & ELECTRICAL DISTRIBUTION APPARATUS SHALL BE PROVIDED WITH AN ARC FLASH LABEL INDICATING THE AVAILABLE ENERGY, SAFETY ZONE & EQUIPMENT PROTECTION REQUIRED. CONTRACTOR SHALL PREPARE AN ARC FLASH SAFETY STUDY, IN ADDITION TO THE COORDINATION & SHORT CIRCUIT STUDY AS PART OF THIS CONTRACT. REFER TO SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
- CONTRACTOR SHALL VERIFY FEEDER SIZES THAT ARE SHOWN ON THE EXISTING FEEDER SCHEDULE AND PROVIDE THIS INFORMATION TO THE POWER SYSTEM STUDY ENGINEER.

SHORT CIRCUIT, COORDINATION & ARC FLASH NOTES

- CONTRACTOR SHALL PROVIDE ALL FIELD INFORMATION INCLUDING BUT NOT LIMITED TO PANELBOARD DATA, FEEDER SIZE AND LENGTH & ALL OTHER RELATIVE INFORMATION TO THE ENGINEER PREPARING THE STUDY (UNDER THEIR CONTRACT) WHO WILL PERFORM THE SHORT CIRCUIT COORDINATION & ARC FLASH STUDY. ONCE STUDY IS COMPLETE, CONTRACTOR TO MAKE ALL FINAL CIRCUIT BREAKER ADJUSTMENTS TO MATCH THE STUDY & APPLY ALL ARC FLASH LABELS TO THE DISTRIBUTION EQUIPMENT.
- CONTRACTOR SHALL VERIFY FEEDER SIZES THAT ARE SHOWN ON THE EXISTING FEEDER SCHEDULE AND PROVIDE THIS INFORMATION TO THE POWER SYSTEM STUDY ENGINEER.

| ELECTRICAL SYMBOL LEGEND | | | |
|--------------------------|---|--|--|
| POWER | | | |
| | DUPLEX RECEPTACLE, 20A 120V | | 220V RECEPTACLE |
| | GROUND FAULT INTERRUPTER PROTECTED RECEPTACLE | | SIMPLEX RECEPTACLE, 20A 120V |
| | COUNTERTOP RECEPTACLE - 6" ABOVE COUNTER | | IN-FLOOR MOUNT DUPLEX RECEPTACLE, 20A 120V |
| | ISOLATED GROUND RECEPTACLE | | CEILING MOUNT DUPLEX RECEPTACLE, 20A 120V |
| | 'N-USE' WEATHER PROTECTED GFI TYPE RECEPTACLE | | RECEPTACLE WITH LOCKING COVER |
| | CEILING MOUNTED RECEPTACLE | | DISCONNECT SWITCH |
| | HORIZONTALLY MOUNTED RECEPTACLE | | JUNCTION BOX |
| | RECEPTACLE TO BE WIRED TO DEDICATED CIRCUIT | | JUNCTION BOX WALL MOUNTED |
| | TRANSFORMER | | CURRENT TRANSFORMER |
| | RANGE RECEPTACLE | | CIRCUIT BREAKER |
| | MOTOR STARTER SWITCH | | OVERHEAD DOOR CONTROLLER |
| | MOTOR STARTER | | UTILITY POWER POLE |
| | HAND DRYER | | MOTOR - HORSEPOWER AS INDICATED |
| | MOTOR CONTROL SWITCH | | MOTORIZED DOOR CONTROL SWITCH |
| | DIMMING SWITCH | | COMBINATION MAGNETIC STARTER / DISCONNECT |
| | ENCLOSED CIRCUIT BREAKER | | PANELBOARD |
| | MAGNETIC STARTER | | QUAD RECEPTACLE |
| | MOTORS | | TRANSFORMER |



CHANDLER STREET SEWAGE PUMPING STATION - OVERALL ELECTRICAL SITE PLAN
SCALE: 1" = 30'



STEVEN H. LEWANDOWSKI, P.E.
 1060 S. GOVERNORS AVE. SUITE 101
 DOVER DE 19904-0920
 PHONE 302.674.1090
 FAX 302.674.1099
 STATE DELAWARE
 1-17-2024
 P.E. #11578

| DESIGNED BY: | DATE: | ISSUED FOR: | REVISION: | NO.: |
|--|---|--|------------------------|------|
| SHL | 1/17/2024 | ISSUED FOR DINEC CONSTRUCTION PERMIT | | |
| DRAWN BY: <td>DATE: <td>CHECKED BY: <td>PROJECT NO.: <td></td> </td></td></td> | DATE: <td>CHECKED BY: <td>PROJECT NO.: <td></td> </td></td> | CHECKED BY: <td>PROJECT NO.: <td></td> </td> | PROJECT NO.: <td></td> | |
| DAC | | SHL | 15737 | |

TOWN OF MILTON ~ SUSSEX COUNTY ~ DELAWARE
**ARTESIAN WASTE WATER MANAGEMENT
 CHANDLER STREET PUMPING STATION**
 OVERALL ELECTRICAL SITE PLAN

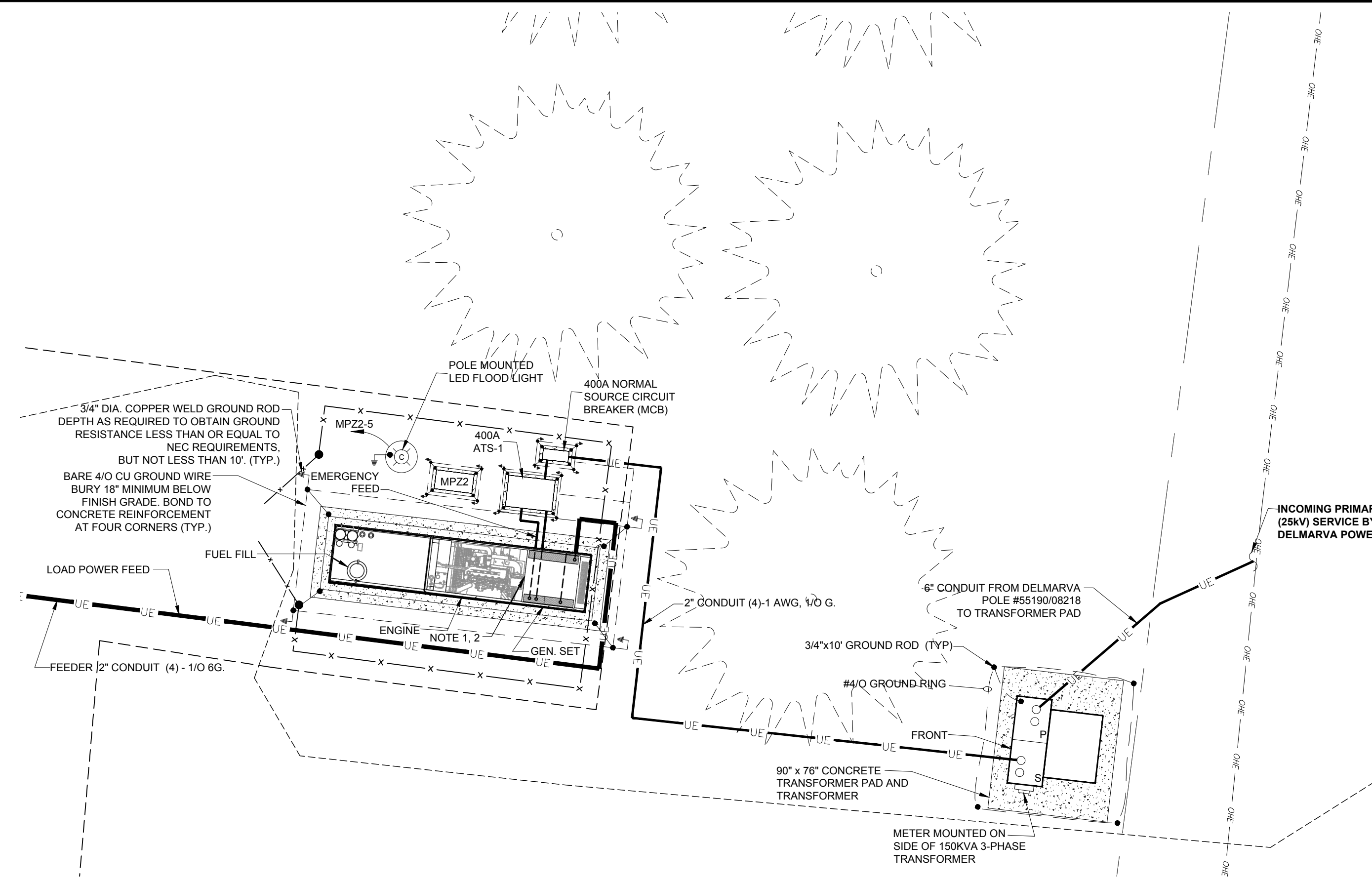
| | |
|------------------|---------------|
| APPLICATION NO.: | |
| DATE: | DECEMBER 2023 |
| SCALE: | 1" = 30' |
| SHEET: | E-1 |

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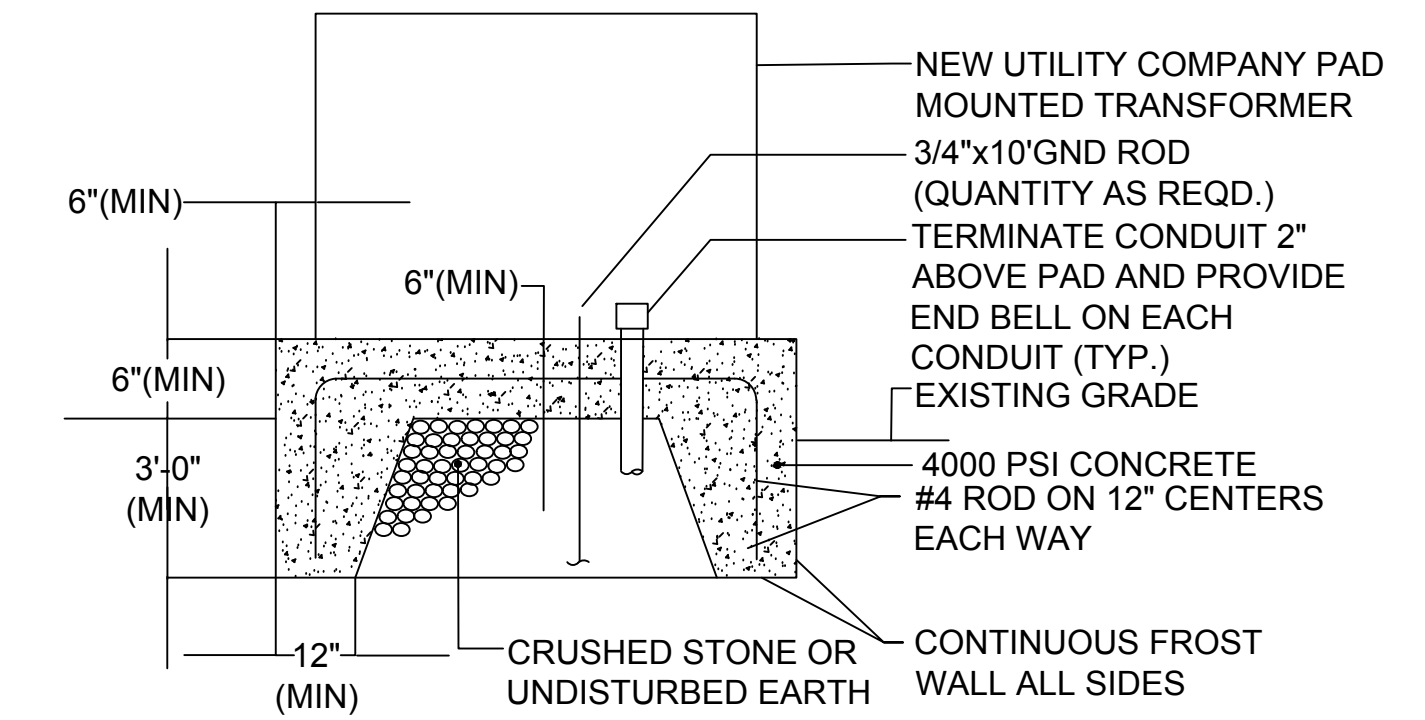
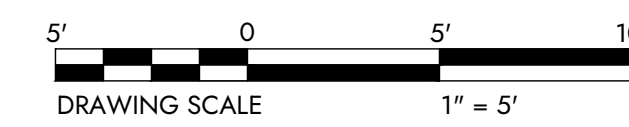


SHEET NOTES

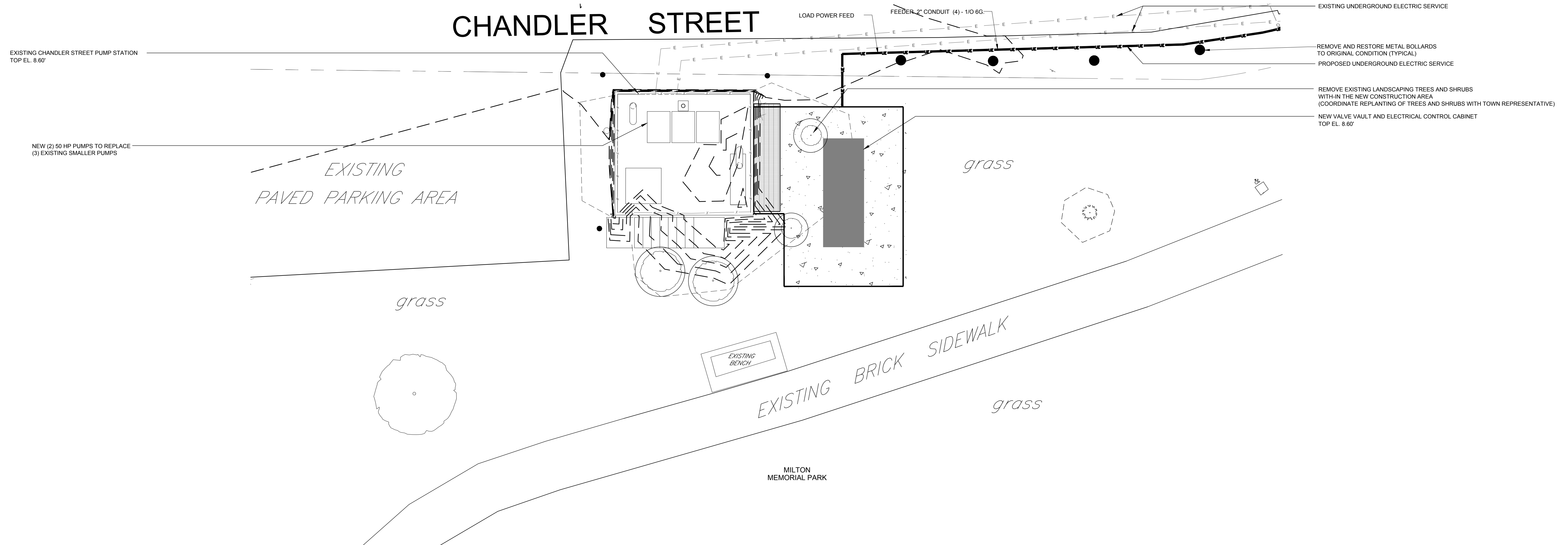
1. PROVIDE SINGLE POLE SWITCH AND VAPORPROOF LIGHT FIXTURE WITH GUARD & GLOBE AND 100W EQUIVALENT SCREW-IN LED LAMP INSIDE GENERATOR ENCLOSURE.
2. PROVIDE GFCI RECEPTACLE INSIDE GENERATOR ENCLOSURE.



CHANDLER STREET GENERATOR, ATS, AND TRANSFORMER - PARTIAL SITE PLAN
SCALE: 1" = 5'



TRANSFORMER PAD DETAIL
NO SCALE



CHANDLER STREET SEWAGE PUMPING STATION - PARTIAL ELECTRICAL SITE PLAN
SCALE: 1" = 5'



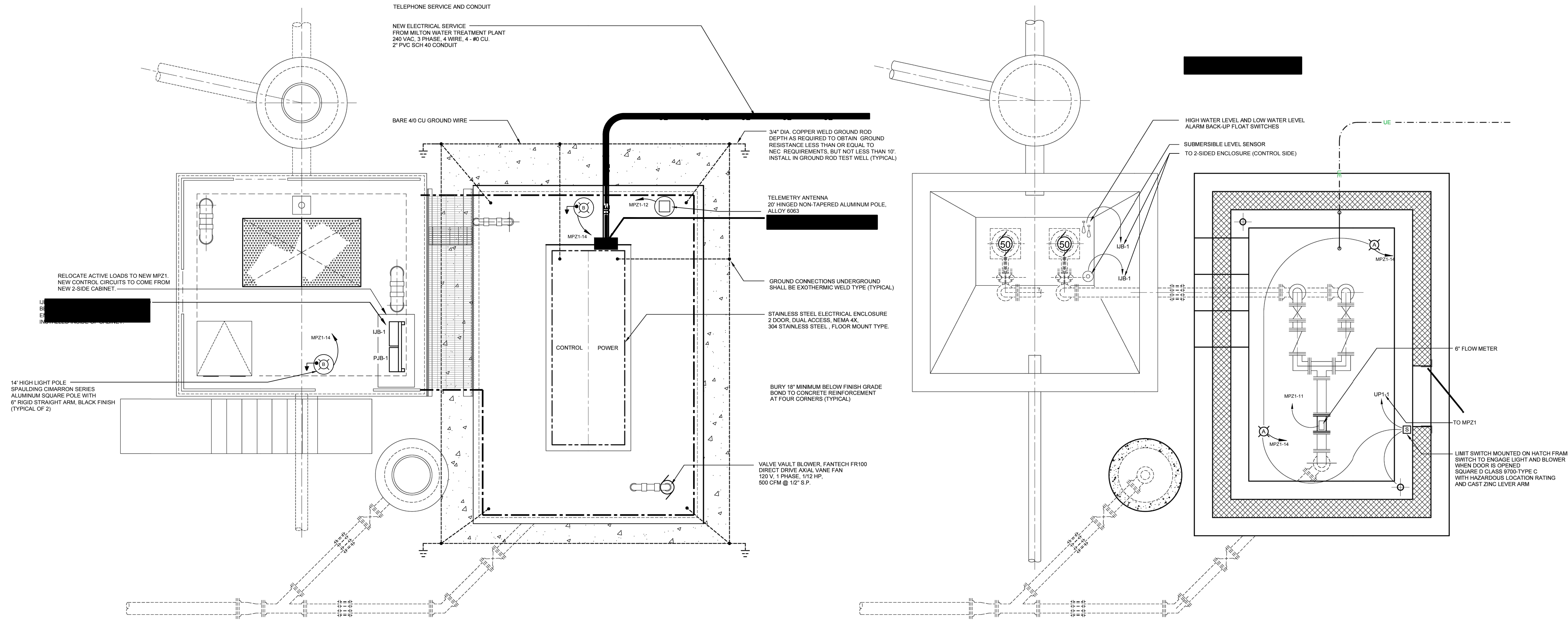
DESIGNED BY: SHL
DRAWN BY: DAC
CHECKED BY: SHL
PROJECT NO. 15737
STATE DELAWARE P.E. #15737

| NO. | REVISION | DATE | ISSUED FOR |
|-----|---------------------------------------|-----------|------------|
| 1 | ISSUED FOR DIRECT CONSTRUCTION PERMIT | 1/17/2024 | |

TOWN OF MILTON ~ SUSSEX COUNTY ~ DELAWARE
ARTESIAN WASTER WATER MANAGEMENT
CHANDLER STEER PUMPING STATION

PARTIAL ELECTRICAL SITE PLANS

APPLICATION NO.
DATE: DECEMBER 2023
SCALE: 1" = 5'
SHEET: E-2



CHANDLER STREET PUMPING STATION - TOP SLAB ELECTRICAL PLAN
SCALE: 3/8" = 1'-0"

CHANDLER STREET PUMPING STATION - VALVE VAULT ELECTRICAL PLAN
SCALE: 3/8" = 1'-0"

LIGHTING SCHEDULE:

| IDENT. | VOLTS | LAMP | DESCRIPTION |
|--------|---------|-----------------------|---|
| A | 120 | INCANDESCENT 150 W | EXPLOSION PROOF CLASS I, GROUPS C AND D PENDANT MOUNTED KILLARK / HUBBELL ENVIRO-RITE II N2 SERIES |
| B | 120 | LED 400W | 14' HIGH LIGHT POLE - SPALDING CIMARRON SERIES ALUMINUM SQUARE POLE WITH 6' RIGID STRAIGHT ARM, BLACK FINISH (TYPICAL OF 2) |
| C | 120-277 | LED 20W | HUBBELL OUTDOOR RATIO LED FLOODLIGHT, 3200L, 26W 40K, WIDE DIST. KNUCKLE MT., 120-277V |

CHANDLER STREET SEWAGE PUMPING STATION - PARTIAL ELECTRICAL SITE PLAN
SCALE: 1" = 5'

NOTE:
STAND-BY POWER TO BE PROVIDED TO THE PUMP STATION
FROM NEW DIESEL-FUELED REMOTE GENERATOR
LOCATED AT THE TOWN OF MILTON'S WATER TREATMENT PLANT ON CHANDLER STREET.



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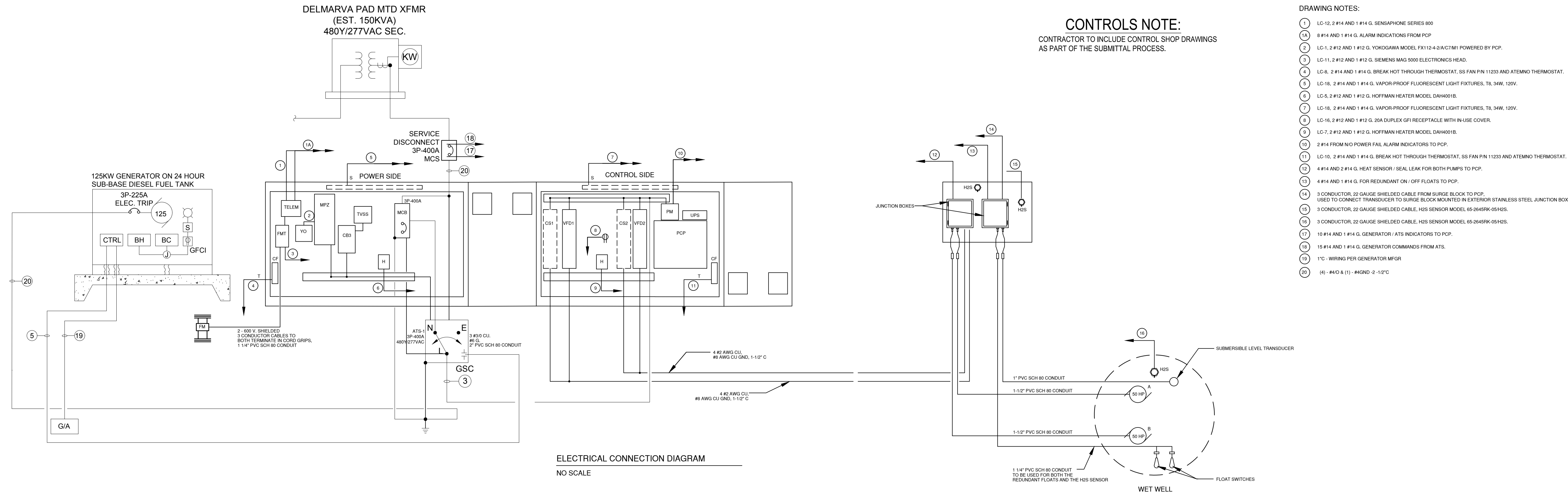


DESIGNED BY: SHL
DRAWN BY: DAC
CHECKED BY: SHL
PROJECT NO. 15737
STATE: DELAWARE
P. E. 15737

| NO. | REVISION | ISSUED FOR | DATE |
|-----|--|------------|-----------|
| | ISSUED FOR DNR/EC CONSTRUCTION PERMIT <td></td> <td>1/17/2024</td> | | 1/17/2024 |

TOWN OF MILTON ~ SUSSEX COUNTY ~ DELAWARE
ARTESIAN WASTER WATER MANAGEMENT
CHANDLER STEER PUMPING STATION
PUMP STATION ELECTRICAL SITE PLAN

APPLICATION NO.
DATE: DECEMBER 2023
SCALE: N.T.S.
SHEET: E-3



CONTROLS NOTE:
CONTRACTOR TO INCLUDE CONTROL SHOP DRAWINGS AS PART OF THE SUBMITTAL PROCESS.

- DRAWING NOTES:**
- LC-12, 2 #14 AND 1 #14 G. SENSAPHONE SERIES 800
 - #14 AND 1 #14 G. ALARM INDICATIONS FROM PCP
 - LC-1, 2 #12 AND 1 #12 G. YOKOGAWA MODEL FX112-2/A/C7/M1 POWERED BY PCP.
 - LC-8, 2 #14 AND 1 #14 G. SIEMENS MAG 5000 ELECTRONICS HEAD.
 - LC-8, 2 #14 AND 1 #14 G. BREAK HOT THROUGH THERMOSTAT, SS FAN P/N 11233 AND ATEMO THERMOSTAT.
 - LC-16, 2 #14 AND 1 #14 G. VAPOR-PROOF FLUORESCENT LIGHT FIXTURES, T8, 34W, 120V.
 - LC-5, 2 #12 AND 1 #12 G. HOFFMAN HEATER MODEL DAH4001B.
 - LC-18, 2 #14 AND 1 #14 G. VAPOR-PROOF FLUORESCENT LIGHT FIXTURES, T8, 34W, 120V.
 - LC-16, 2 #12 AND 1 #12 G. 20A DUPLEX GFI RECEPTACLE WITH IN-USE COVER.
 - LC-7, 2 #12 AND 1 #12 G. HOFFMAN HEATER MODEL DAH4001B.
 - 2 #14 FROM N/O POWER FAIL ALARM INDICATORS TO PCP.
 - LC-10, 2 #14 AND 1 #14 G. BREAK HOT THROUGH THERMOSTAT, SS FAN P/N 11233 AND ATEMO THERMOSTAT.
 - #14 AND 2 #14 G. HEAT SENSOR / SEAL LEAK FOR BOTH PUMPS TO PCP.
 - #14 AND 1 #14 G. FOR REDUNDANT ON / OFF FLOATS TO PCP.
 - 3 CONDUCTOR, 22 GAUGE SHIELDED CABLE FROM SURGE BLOCK TO PCP. USED TO CONNECT TRANSUCER TO SURGE BLOCK MOUNTED IN EXTERIOR STAINLESS STEEL JUNCTION BOX.
 - 3 CONDUCTOR, 22 GAUGE SHIELDED CABLE, H2S SENSOR MODEL 65-2649K-05-H2S.
 - 3 CONDUCTOR, 22 GAUGE SHIELDED CABLE, H2S SENSOR MODEL 65-2649K-05-H2S.
 - 10 #14 AND 1 #14 G. GENERATOR / ATS INDICATORS TO PCP.
 - 15 #14 AND 1 #14 G. GENERATOR COMMANDS FROM ATS.
 - 1" - WIRING PER GENERATOR MFGOR
 - (4) - #4 & (1) - #6ND - 2-12°C

LOAD CENTER 'MPZ1' 208Y / 120V, 3 PHASE, 60 HZ., 3 WIRE

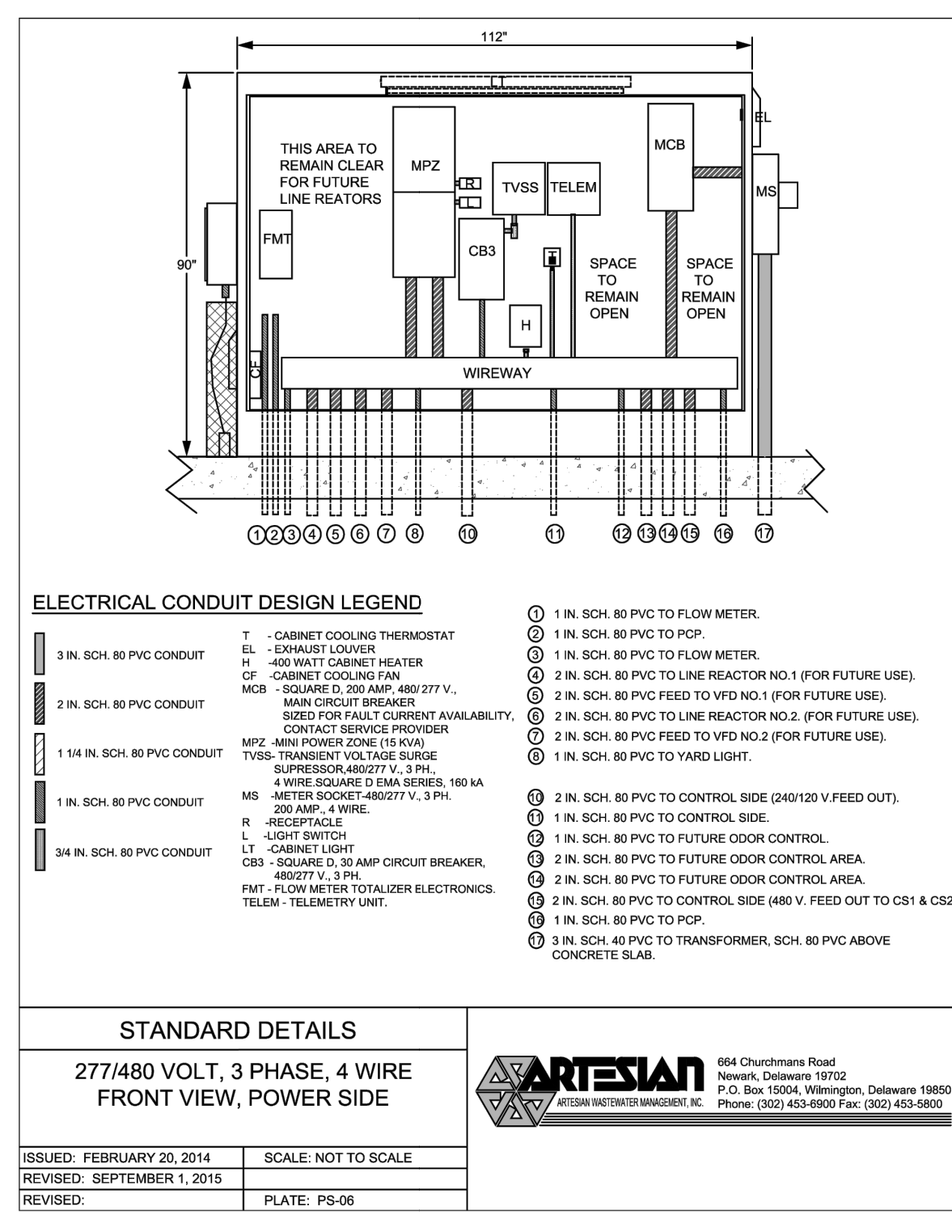
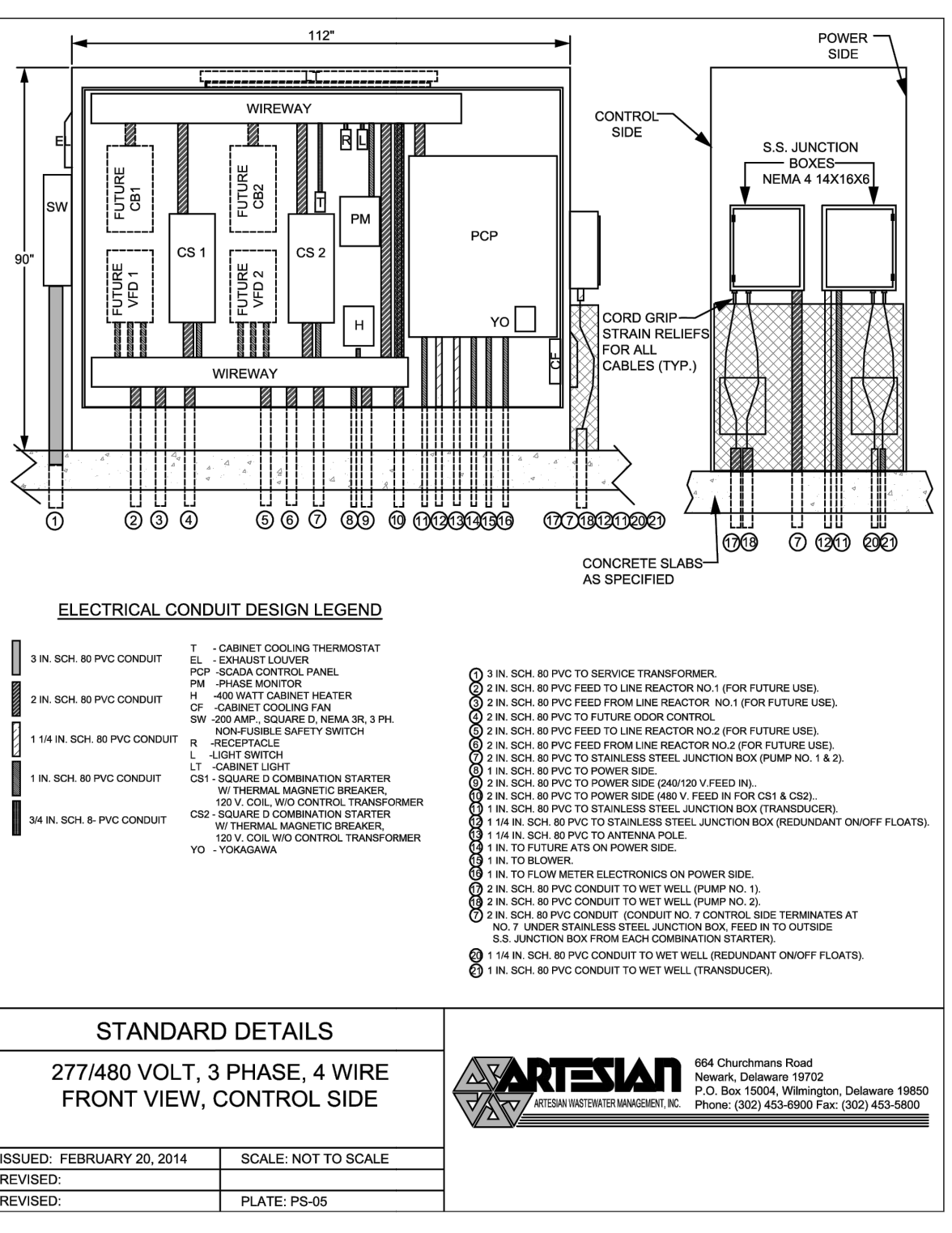
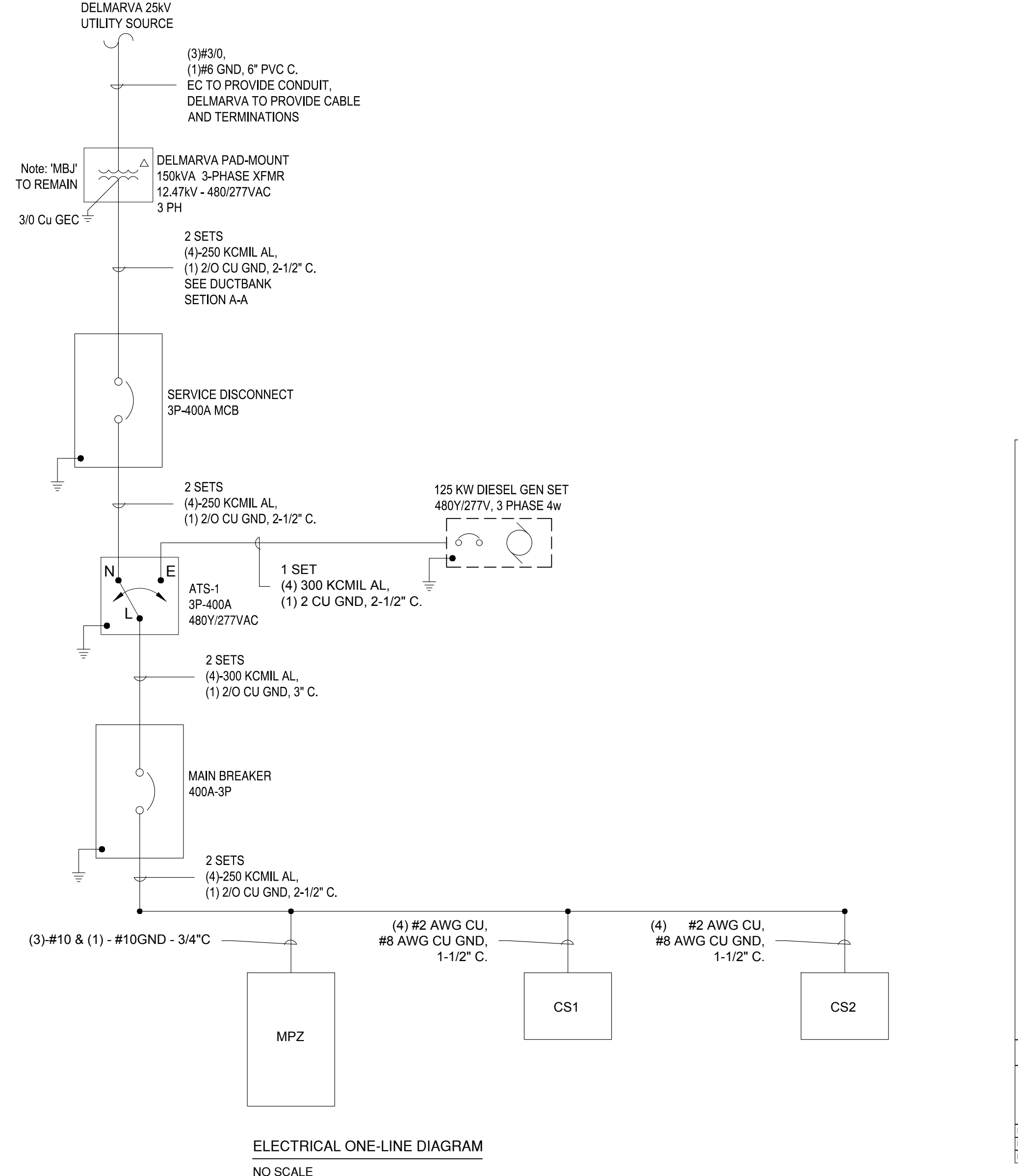
| CKT # | LOAD DESCRIPTION | QTY | SIZE | GRD | COND. | AMPS | POLE | KVA PER PHASE | | | | | POLE | COND. | GRD | FEEDER SIZE | QTY | LOAD DESCRIPTION | CKT # | | |
|---------------------|--------------------------------|-----|------|-----|--------|------|------|---------------|--------|--------|--------|--------|--------|-------|------|-------------|-----|--------------------------------|----------------------|----|--|
| | | | | | | | | A | B | C | A | B | | | | | | | | C | |
| 1 | PUMP CONTROL PANEL | 3 | 12 | 12 | 3/4" | 20 | 1 | 2.40 | | 0.10 | | | | | | | | MAIN CIRCUIT BREAKER 208/120V | 2 | | |
| 3 | GEN BLOCK HEATER | 3 | 2 | 8 | 1-1/4" | 20 | 1 | 1.50 | 1.50 | 0.10 | | | | | | | | | 4 | | |
| 5 | POWER SIDE HEATER | 3 | 12 | 12 | 3/4" | 20 | 1 | | 1.00 | 1.00 | 0.10 | | | | | | | | 6 | | |
| 7 | CONTROL SIDE HEATER | 3 | 12 | 12 | 3/4" | 20 | 1 | 1.00 | | 0.70 | | 1 | 15 | 3/4" | 12 | 12 | 3 | POWER SIDE EXHAUST FAN | 8 | | |
| 9 | VALVE ENCLOSURE HEATER NO. 1 | 3 | 12 | 12 | 3/4" | 20 | 1 | 0.20 | | 0.70 | | 1 | 15 | 3/4" | 12 | 12 | 3 | CONTROL SIDE EXHAUST FAN | 10 | | |
| 11 | FLOW METER | 3 | 12 | 12 | 3/4" | 20 | 1 | | | 5.00 | | 0.50 | 1 | 15 | 3/4" | 12 | 12 | 3 | TELEMETRY SERIES 800 | 12 | |
| 13 | VALVE ENCLOSURE HEATER NO. 2 | 3 | 12 | 12 | 3/4" | 20 | 1 | 5.00 | | 0.10 | | 1 | 20 | 3/4" | 12 | 12 | 3 | PUMP STATION EXTERIOR LIGHTING | 14 | | |
| 15 | VALVE ENCLOSURE HEATER NO. 2 | 3 | 12 | 12 | 3/4" | 20 | 1 | 5.00 | | 0.20 | | 1 | 20 | 3/4" | 12 | 12 | 3 | GFI RECEPTACLES | 16 | | |
| 17 | GEN BATTERY CHARGER | 3 | 2 | 8 | 1-1/4" | 20 | 1 | 0.20 | 0.50 | | 0.10 | 1 | 15 | 3/4" | 12 | 12 | 3 | ELECTRIC CABINET LIGHTS | 18 | | |
| 19 | GEN LIGHTING & RECEPTACLES | 3 | 2 | 8 | 1-1/4" | 20 | 1 | 0.20 | 0.10 | | | 1 | 15 | 3/4" | 12 | 12 | 3 | VALVE ENCLOSURE LIGHTS | 20 | | |
| 21 | ELECTRIC HOIST | 3 | 12 | 12 | 3/4" | 20 | 1 | 1.00 | | 0.10 | | | | | | | | BLANK | 22 | | |
| 23 | PUMP STATION INTERIOR LIGHTING | 3 | 12 | 12 | 3/4" | 20 | 1 | | | 0.10 | | | | | | | | BLANK | 24 | | |
| TOTAL KVA PER PHASE | | | | | | | | 4.4000 | 1.2000 | 0.8000 | 0.8000 | 0.8000 | 1.0000 | | | | | | | | |
| TOTAL A @ KVA | | | | | | | | 4.2000 | | | | | | | | | | | | | |
| TOTAL B @ KVA | | | | | | | | 0.00 | | | | | | | | | | | | | |
| TOTAL C @ KVA | | | | | | | | 1.1000 | | | | | | | | | | | | | |
| TOTAL 3 @ KVA | | | | | | | | 7.8000 | | | | | | | | | | | | | |
| TOTAL A @ AMPS | | | | | | | | 20.19 | | | | | | | | | | | | | |
| TOTAL B @ AMPS | | | | | | | | 12.02 | | | | | | | | | | | | | |
| TOTAL C @ AMPS | | | | | | | | 5.29 | | | | | | | | | | | | | |
| TOTAL 3 @ AMPS | | | | | | | | 21.67 | | | | | | | | | | | | | |
| VOLTAGE | | | | | | | | 208/120V | | | | 30.3w | | | | | | | | | |
| AMPCAPACITY | | | | | | | | 100A | | | | | | | | | | | | | |
| AIC RATING | | | | | | | | 10,000 | | | | | | | | | | | | | |

REMARKS: ALL CONDUIT SIZES ARE SHOWN FOR INTERIOR INSTALLATION. MINIMUM RACEWAY SIZE FOR UNDERGROUND INSTALLATION IS 3/4"

LOAD CENTER 'MPZ2' 280Y / 120V, 3 PHASE, 60 HZ., 3 WIRE

| CKT # | LOAD DESCRIPTION | QTY | SIZE | GRD | COND. | AMPS | POLE | KVA PER PHASE | | | | | POLE | COND. | GRD | FEEDER SIZE | QTY | LOAD DESCRIPTION | CKT # | |
|---------------------|----------------------------|-----|------|-----|-------|------|------|---------------|--------|--------|--------|--------|--------|--------|-----|-------------|-----|------------------|-------|----|
| | | | | | | | | A | B | C | A | B | | | | | | | | C |
| 1 | GEN BATTERY CHARGER | 3 | 12 | 12 | 3/4" | 20 | 1 | 0.50 | | 0.00 | | | | | | | | | BLANK | 2 |
| 3 | GEN BLOCK HEATER | 3 | 12 | 12 | 3/4" | 20 | 1 | 1.50 | 1.50 | 0.00 | | | | | | | | | | 4 |
| 5 | GEN LIGHTING & RECEPTACLES | 3 | 12 | 12 | 3/4" | 20 | 1 | | 0.20 | | 0.00 | | | | | | | | | 6 |
| 7 | BLANK | | | | | | | 0.00 | | 0.00 | | | | | | | | | | 8 |
| 9 | BLANK | | | | | | | 0.00 | | 0.00 | | | | | | | | | | 10 |
| 11 | BLANK | | | | | | | 0.00 | | 0.00 | | | | | | | | | | 12 |
| 13 | BLANK | | | | | | | 0.00 | | 0.00 | | | | | | | | | | 14 |
| 15 | BLANK | | | | | | | 0.00 | | 0.00 | | | | | | | | | | 16 |
| 17 | BLANK | | | | | | | 0.00 | | 0.00 | | | | | | | | | | 18 |
| 19 | BLANK | | | | | | | 0.00 | | 0.00 | | | | | | | | | | 20 |
| 21 | BLANK | | | | | | | 0.00 | | 0.00 | | | | | | | | | | 22 |
| 23 | BLANK | | | | | | | 0.00 | | 0.00 | | | | | | | | | | 24 |
| TOTAL KVA PER PHASE | | | | | | | | 5.5000 | 1.5000 | 0.2000 | 0.0000 | 0.0000 | 1.0000 | 1.0000 | | | | | | |
| TOTAL A @ KVA | | | | | | | | 0.5000 | | | | | | | | | | | | |
| TOTAL B @ KVA | | | | | | | | 1.5000 | | | | | | | | | | | | |
| TOTAL C @ KVA | | | | | | | | 0.2000 | | | | | | | | | | | | |
| TOTAL 3 @ KVA | | | | | | | | 2.2000 | | | | | | | | | | | | |
| TOTAL A @ AMPS | | | | | | | | 2.40 | | | | | | | | | | | | |
| TOTAL B @ AMPS | | | | | | | | 7.21 | | | | | | | | | | | | |
| TOTAL C @ AMPS | | | | | | | | 0.96 | | | | | | | | | | | | |
| TOTAL 3 @ AMPS | | | | | | | | 6.11 | | | | | | | | | | | | |
| VOLTAGE | | | | | | | | 208/120V | | | | 30.3w | | | | | | | | |
| AMPCAPACITY | | | | | | | | 100A | | | | | | | | | | | | |
| AIC RATING | | | | | | | | 10,000 | | | | | | | | | | | | |

REMARKS: ALL CONDUIT SIZES ARE SHOWN FOR INTERIOR INSTALLATION. MINIMUM RACEWAY SIZE FOR UNDERGROUND INSTALLATION IS 3/4"



verdantas
PEOPLE FOCUSED FUTURE

1000 S. GOVERNORS AVE. SUITE 101
DOVER DE 19904-0920
TEL: 302.674.1000
FAX: 302.674.1099

DESIGNED BY: SHL
DRAWN BY: DAC
CHECKED BY: SHL
PROJECT NO. 15737

ISSUED FOR DINEC CONSTRUCTION PERMIT

REVISION

NO.

1-17-2024
STATE DELAWARE
P.E. #15737

TOWN OF MILTON ~ SUSSEX COUNTY ~ DELAWARE

ARTESIAN WASTER WATER MANAGEMENT
CHANDLER STEER PUMPING STATION

SINGLE LINE DIAGRAM, PANEL SCHEDULES AND DUCT BANK DETAIL

APPLICATION NO.

DATE: DECEMBER 2023

SCALE: N.T.S.

SHEET: E-4