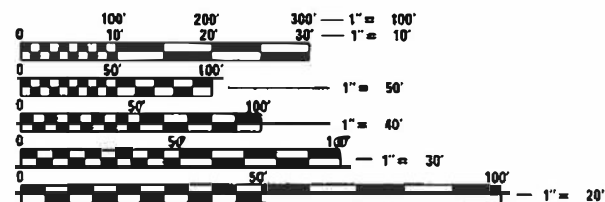


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- 41 ELECTRICAL DIAGRAMS

HIGHWAY STANDARDS

000001-08	442201-03	602601-06	602701-02
604001-05	606001-08	664001-02	701101-05
701400-11	701406-13	701411-09	701601-09
701801-06	701901-08	720011-01	728001-01
	836001-04	878001-11	001001-02
			420001-10
			602402-03



FULL SIZE PLANS HAVE BEEN PREPARED USING STANDARD ENGINEERING SCALES. REDUCED SIZED PLANS WILL NOT CONFORM TO STANDARD SCALES. IN MAKING MEASUREMENTS ON REDUCED PLANS, THE ABOVE SCALES MAY BE USED.

J.U.L.I.E.
JOINT UTILITY LOCATION INFORMATION FOR EXCAVATION
1-800-892-0123
OR 811

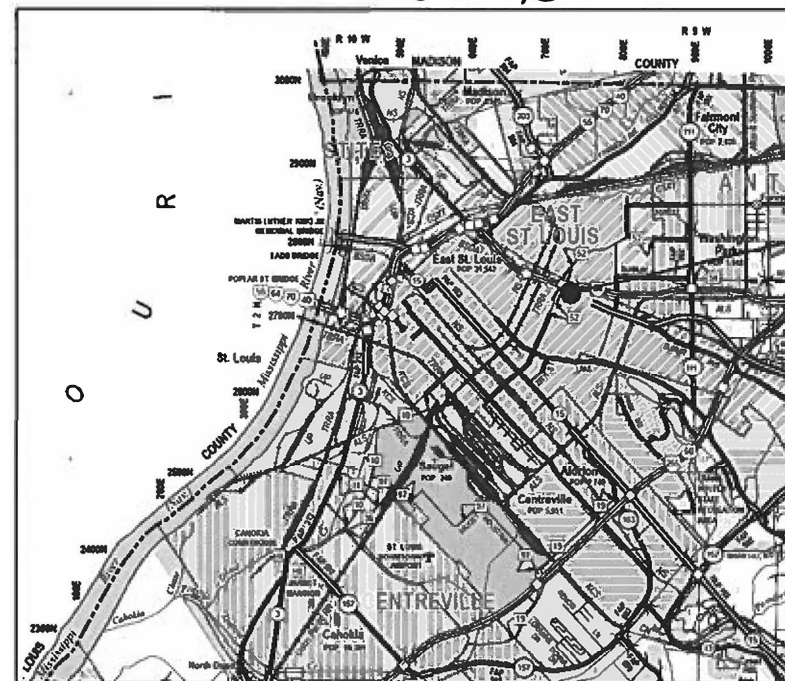
PROJECT ENGINEER: RICHARD BARBEE
PROJECT MANAGER: PHILLIP SAWYER

CONTRACT NO. 76P08

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
**PROPOSED
HIGHWAY PLANS**

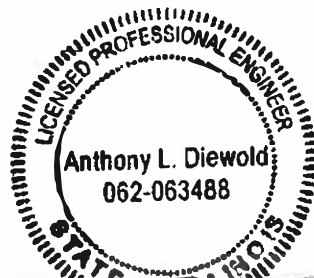
FAU ROUTE 9228 (25TH STREET)
SECTION (Z-1)PS-2, 29PS-2
25TH STREET PUMP STATION
BUILDING IMPROVEMENTS
ST. CLAIR COUNTY

C-98-095-21



ST. CLAIR COUNTY

GROSS LENGTH = NA
NET LENGTH = NA



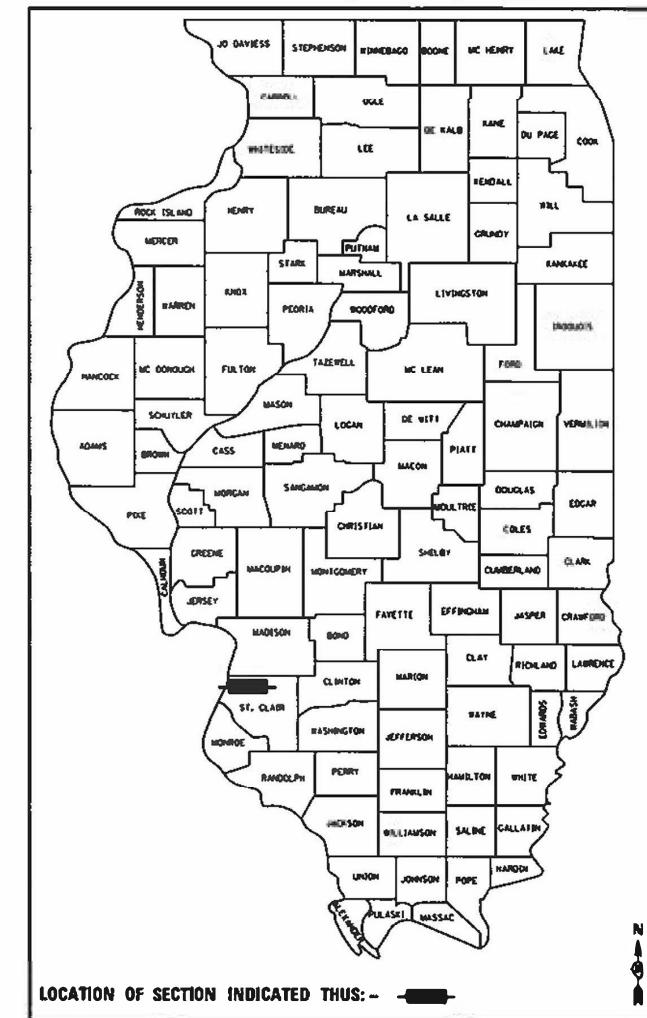
ANTHONY L. DIEWOLD
LICENSED PROFESSIONAL ENGINEER
STATE OF ILLINOIS NO. 062-063488
LICENSE EXPIRES NOVEMBER 30, 2023



AARON M. SCHAFER
LICENSED STRUCTURAL ENGINEER
STATE OF ILLINOIS NO. 081-007926
LICENSE EXPIRES NOVEMBER 30, 2022

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
9228	(Z-1)PS-2, 29PS-2	ST. CLAIR	41	1
ILLINOIS CONTRACT NO. 76P08				

D98-065-21



LOCATION OF SECTION INDICATED THUS: -

PLANS PREPARED BY:

KLINGNER & ASSOCIATES, P.C.
Engineers • Architects • Surveyors

Quincy, Illinois www.klingner.com
618 North 24th Street
217.223.3670
STATE OF ILLINOIS DESIGN FIRM NO. 184-2738

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUBMITTED MARCH 21 2023
Richard Barbree
REGISTERED ENGINEER

May 12, 2023 *Anthony L. Diewold*
ENGINEER OF DESIGN AND ENVIRONMENT

May 12, 2023 *Stephen M. Smith*
DIRECTOR OF HIGHWAYS PROJECT IMPLEMENTATION

PRINTED BY THE AUTHORITY
OF THE STATE OF ILLINOIS

GENERAL NOTES

- PLAN DIMENSIONS AND DETAILS RELATIVE TO EXISTING STRUCTURES HAVE BEEN TAKEN FROM EXISTING PLANS AND ARE SUBJECT TO NOMINAL CONSTRUCTION VARIATIONS. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY SUCH DIMENSIONS AND DETAILS IN THE FIELD, AND MAKE NECESSARY APPROVED ADJUSTMENTS PRIOR TO CONSTRUCTION OR ORDERING MATERIALS.
- TREES THREE (3) INCHES OR GREATER IN DIAMETER AT BREAST HEIGHT SHALL NOT BE CLEARED FROM APRIL 1ST THROUGH SEPTEMBER 30TH OF ANY GIVEN YEAR.
- THE CONTRACTOR SHALL SECURE ANY LOCAL, STATE, COUNTY PERMITS NEEDED FOR THIS PROJECT.
- THE CONTRACTOR SHALL PERFORM ALL CONSTRUCTION FOR THE PROJECT IN A MANNER AND SEQUENCE THAT ARE BASED ON ACCEPTED INDUSTRY STANDARDS THAT RECOGNIZE THE INTERACTION OF THE COMPONENTS THAT COMPRISE THE STRUCTURE, WITHOUT CAUSING DISTRESS, UNANTICIPATED MOVEMENTS OR IRREGULAR LOAD PATHS AS A RESULT OF THE CONSTRUCTION MEANS AND METHODS EMPLOYED.
- CONSTRUCTION LOADS SHALL NOT EXCEED DESIGN LIVE LOAD. THE CONTRACTOR IS RESPONSIBLE FOR ALL DESIGN REQUIRED TO SUPPORT CONSTRUCTION EQUIPMENT USED IN CONSTRUCTING THIS PROJECT. SHORING AND RESHORING IS THE RESPONSIBILITY OF THE CONTRACTOR.
- UTILITIES - LOCATIONS / INFORMATION ON PLANS
ILLINOIS STATE LAW REQUIRES A 48-HOUR NOTICE TO BE GIVEN TO UTILITIES BEFORE DIGGING. UTILITIES KNOWN TO HAVE FACILITIES WITHIN THE PROJECT AREA:
Ameren Illinois (GAS & ELECTRIC)
AT&T Illinois (COMMUNICATIONS)
CenturyLink, Inc. (COMMUNICATIONS)
City of East St. Louis (LIGHTING)
ILLINOIS AMERICAN WATER CO. (WATER)
Charter Communications, Inc. (COMMUNICATIONS)
Metro East Sanitary District (SANITARY SEWER)
- IT IS THE CONTRACTOR'S RESPONSIBILITY TO ENFORCE ALL APPLICABLE SAFETY CODES AND REGULATIONS DURING ALL PHASES OF CONSTRUCTION.
- ALL CONTRACTORS ARE REQUIRED TO EXAMINE THE DRAWINGS AND SPECIAL PROVISIONS CAREFULLY, VISIT THE SITE AND FULLY INFORM THEMSELVES AS TO ALL EXISTING CONDITIONS AND LIMITATIONS, PRIOR TO AGREEING TO PERFORM THE WORK. FAILURE TO VISIT THE SITE AND FAMILIARIZE THEMSELVES WITH THE EXISTING CONDITIONS AND LIMITATIONS WILL IN NO WAY RELIEVE THE CONTRACTOR FROM FURNISHING ANY MATERIALS OR PERFORMING ANY WORK IN ACCORDANCE WITH THE DRAWINGS AND SPECIFICATIONS WITHOUT ADDITIONAL COST TO THE OWNER.
- DURING CONSTRUCTION THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTENANCE OF THE EXISTING PUMP STATION BUILDING.
- DRAWINGS ARE NOT TO SCALE.
- THE DEPARTMENT RESERVES THE RIGHT TO NOTIFY THE CONTRACTOR TO CHANGE THE CONSTRUCTION SCHEDULE IF NEEDED TO ENSURE PROPER DEWATERING NEEDS FOR THE DEPARTMENT.
- THE DEPARTMENT STRONGLY ENCOURAGES THE PRIME CONTRACTOR AND THEIR APPROVED SUB-CONTRACTORS TO HIRE MINORITY, WOMEN AND DISADVANTAGED INDIVIDUALS FROM ITS FEDERALLY FUNDED HIGHWAY CONSTRUCTION CAREERS TRAINING PROGRAM (HCCTP) TO HELP MEET WORKFORCE AND TRAINEE GOALS. THIS PROGRAM IS TRAINING MINORITIES, WOMEN AND DISADVANTAGED INDIVIDUALS IN HIGHWAY CONSTRUCTION RELATED SKILLS, E.G., MATH FOR THE TRADES, JOB READINESS, TECHNICAL SKILLS COURSEWORK (CARPENTRY, CONCRETE FLATWORK, BLUEPRINT READING, SITE PLANS, SITE WORK, TOOLS USE, ETC.) AND OSHA 10 HOUR CERTIFICATION TO PREPARE THEM FOR A CAREER IN THE HIGHWAY CONSTRUCTION TRADES. GRADUATES ARE WELL TRAINED AND READY TO BECOME PRODUCTIVE ENTRY LEVEL CONSTRUCTION WORKERS. CONTACT THE DISTRICT 8 EEO OFFICE AT 618-346-3360 AND/OR THE HCTP COORDINATOR AT 618-874-6528 TO LEARN MORE ABOUT THE PROGRAM AND FOR ASSISTANCE IN MEETING WORKFORCE AND TRAINEE GOALS.
- THE CONTRACTOR AND THE ENGINEER SHALL BE AWARE THAT NO TOPOGRAPHY SURVEY WAS PERFORMED FOR THIS PROJECT. THE DETAILS, TOPOGRAPHY AND QUANTITIES SHOWN IN THE PLANS WERE CREATED USING MICROFILM AND FIELD MEASUREMENTS. ALL SHALL BE ASSUMED TO BE APPROXIMATE. THE CONTRACTOR SHALL FIELD VERIFY PRIOR TO CONSTRUCTION AND ORDERING MATERIALS.

- BENDING RADIUS OF FIBER OPTIC CABLE SHALL NOT BE LESS THAN SIX (6) INCHES.
- ALL HANDHOLES SHALL BE CONSTRUCTED OF PORTLAND CEMENT CONCRETE PER SECTION 814 OF THE STANDARD SPECIFICATIONS. THE LEGEND ON THE COVER SHALL BE "ITS". SLOPE HANDHOLE TO MATCH FINAL GRADE ELEVATION.
- THE CONTRACTOR SHALL BE REQUIRED TO PERFORM FIELD MEASUREMENTS TO VERIFY DIMENSIONS AND MATERIAL TYPE OF EXISTING STRUCTURES PRIOR TO ORDERING MOUNTING HARDWARE. CONDUIT ATTACHED TO STRUCTURE SHALL BE INSTALLED PER THE APPLICABLE PORTIONS OF SECTION 811 REGARDING SUPPORTS, SUSPENSION, FASTENERS AND HARDWARE.
- NOTE DELETED
- A 1/4" DIA. NYLON ROPE SHALL BE INSTALLED IN ALL CONDUIT RUNS. THE COST OF PULL ROPE SHALL BE INCLUDED IN THE PROPOSED ELECTRIC CABLE INSTALLATION AND OR FIBER OPTIC CABLE IN THAT CONDUIT.
- IN ADDITION TO BACKFILLING AND MECHANICALLY COMPACTING CONDUIT TRENCHES PER ARTICLE 810.04(A) OF THE STANDARD SPECIFICATIONS, SUITABLE AND SUFFICIENT BACKFILL MATERIAL SHALL BE ADDED ABOVE THE TRENCH TO TAKE CARE OF ANTICIPATED FINAL GRADE SETTLEMENT, AS DIRECTED BY THE ENGINEER.

RATES OF APPLICATION TABLE

1. AGGREGATE (SURFACE, BASE, SUBBASE, OR BACKFILL)	2.05 TON / CU YD
2. SEEDING:	
NITROGEN FERTILIZER NUTRIENT	90 LBS / ACRE
PHOSPHORUS FERTILIZER NUTRIENT	90 LBS / ACRE
POTASSIUM FERTILIZER NUTRIENT	90 LBS / ACRE
AGRICULTURAL GROUND LIMESTONE	2.0 TON / ACRE
MULCH METHOD	2.0 TON / ACRE

STRUCTURAL NOTES

- DESIGN LOADS:
- A. OCCUPANCY CATEGORY II
 - B. ROOF LOADS
 - I. DEAD LOAD = 100 PSF (INCLUDES SELF WEIGHT)
 - II. * LIVE LOAD = 25 PSF
 - C. ROOF SNOW LOAD
 - I. * GROUND SNOW LOAD, PG = 20 PSF
- * DESIGN IS BASED ON MOST CRITICAL EFFECT OF ROOF LIVE LOAD OR ROOF SNOW LOAD.
- D. WIND LOADING
 - I. BASIC WIND SPEED (3 SECOND GUST) = 115 MPH
 - II. EXPOSURE CATEGORY B
 - III. IMPORTANCE FACTOR, IW = 1.0
 - IV. DIRECTIONAL FACTOR, KD = 0.85
 - IV. TOPOGRAPHIC EFFECT, KZ = 1.0
 - V. INTERNAL PRESSURE COEFFICIENT, GCPI = ±0.55 (PARTIALLY ENCLOSED)
 - E. SEISMIC LOADING - EQUIVALENT LATERAL FORCE PROCEDURE
 - I. IMPORTANCE FACTOR, IE = 1.0
 - II. SITE CLASS D
 - III. SDS = 0.199 (SS = 18.7%)
 - IV. SD1 = 0.098 (S1 = 9.8%)
 - V. SEISMIC DESIGN CATEGORY B
 - VI. BASE SHEAR
 - A. RESISTING SYSTEM - ORDINARY REINFORCED MASONRY SHEAR WALLS
 - B. RESPONSE COEFFICIENT, R = 2
 - C. DEFLECTION AMPLIFICATION FACTOR, CD = 1.75
 - D. SYSTEM OVERSTRENGTH FACTOR, Ω0 = 2.5
 - E. BASE SHEAR, V = 0.099W

PRECAST STRUCTURAL CONCRETE

- PRECAST STRUCTURAL CONCRETE CONSTRUCTION SHALL CONSIST OF THE DESIGN, MANUFACTURE, TRANSPORTATION, AND ERECTION OF THE STRUCTURAL PRECAST ROOF PANEL.
- DESIGN OF PRECAST MEMBERS SHALL BE IN ACCORDANCE WITH APPLICABLE SECTIONS OF 1042 OF THE STANDARD SPECIFICATIONS
- PRECAST MEMBERS MAY BE CONVENTIONALLY REINFORCED AND/OR PRESTRESSED, CONSISTENT WITH THE DESIGN LOADS, SPANS, HANDLING STRESSES, ETC. DESIGN LOADS ARE SHOWN ON DRAWINGS.
- PRECAST CONTRACTOR SHALL FURNISH COMPLETE DESIGN CALCUALTIONS SIGNED BY A LICENSED STRUCTURAL ENGINEER LICENSED IN ILLINOIS, INCLUDING DETAILS OF CONNECTIONS.
- PRECAST CONTRACTOR SHALL FURNISH AND PLACE ANY TEMPORARY SHORING, BRACING, ETC. REQUIRED FOR ERECTION OF PRECAST WORK.
- PRECAST CONTRACTOR SHALL FURNISH ALL THREADED INSERTS, LIFTING ANCHORS, LIFTING COVERS, ETC., REQUIRED TO CONNECT THE PRECAST TO THE STRUCTURAL STEEL ANGLES.
- PRECAST MANUFACTURER SHALL CAST IN STRUCTURAL INSERTS AND LIFTING ANCHORS AS SHOWN ON THE STRUCTURAL DESIGN PLANS.

STRUCTURAL STEEL

- ALL STEEL SHALL BE FURNISHED IN ACCORDANCE WITH ARTICLE 505 OF THE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION.
- STEEL FABRICATION AND ERECTION SHALL FOLLOW OSHA REQUIRMENTS.
- STRUCTURAL STEEL:
 - a. STEEL ANGLES, RODS, AND PLATES - ASTM A36 (Fy=36 ksi)
 - b. WASHERS - ASTM F436
 - c. NUTS - ASTM A563
 - d. ANCHOR BOLTS - ASTM F1554 GRADE 36 (Fy=36 ksi)
- ALL STEEL SHALL BE HOT DIPPED GALVANIZED.
- REPAIR GALVANIZED SURFACES PER ASTM A780.
- EPOXY ANCHORS SHALL FOLLOW ARTICLE 584 OF THE STANDARD SPECIFICATIONS.

MASONRY

- ALL MASONRY SHALL CONFORM TO "BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES" (ACI 530/ASCE 5/TMS 402) AND "SPECIFICATIONS FOR MASONRY STRUCTURES" (ACI 530.1/ASCE 6/TMS 602).
- GROUT TO FILL CORES SHALL BE ASTM C476, COARSE GROUT (3/8" MAXIMUM AGGREGATE) WITH A MINIMUM COMPRESSIVE STRENGTH OF 3000 PSI IN 28 DAYS.
- CONCRETE MASONRY UNITS SHALL BE UNITS CONFORMING TO ASTM C90, GRADE N, TYPE I, NORMAL WEIGHT (DENSITY OF UNIT=135 pcf), MIN. BLOCK COMPRESSIVE STRENGTH = 2400 psi SPECIFIED DESIGN STRENGTH OF MASONRY, f'm=1500.
- ASTM C270 TYPE "S" MORTAR WITH A MINIMUM COMPRESSIVE STRENGTH OF 1800 PSI SHALL BE USED FOR ALL MASONRY.
- REINFORCING BARS SHALL CONFORM TO ASTM A615, GRADE 60.
- ALL CORES WITH REINFORCEMENT SHALL BE FILLED SOLID WITH GROUT. PLACE REINFORCEMENT BARS BEFORE GROUTING. CONSOLIDATE GROUT BY MECHANICAL VIBRATION.
- PROPERLY SECURE VERTICAL REINFORCEMENT BARS TO ENSURE BAR IS LOCATED IN THE CENTER OF THE CMU CELL.
- ALL CMU SHALL BE TEMPORARILY BRACED DURING CONSTRUCTION. TEMPORARY BRACING IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR. COST SHALL BE INCLUDED IN "MASONRY WALL CONSTRUCTION". THE CONTRACTOR IS RESPONSIBLE FOR ALL COST ASSOCIATED WITH REPAIRS RESULTING FROM IMPROPER OR INSUFFICIENT BRACING.

REV. - MS

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G & ASSOCIATES, P.C.
Engineers - Architects - Surveyors
616 N 24TH ST. QUINCY, ILLINOIS 62301 217.223.3570
STATE OF ILLINOIS DESIGN FIRM NO. 184-2738

DRAWN	AMS	REVISED	-
CHECKED	EBB	REVISED	-
DATE	12/21/2020	REVISED	-

PLOT SCALE = 2:0' = 1" / 16"
PLOT DATE = 1/25/2022

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**25TH STREET PUMP STATION
GENERAL NOTES**

SCALE: NONE SHEET 1 OF 1 SHEETS STA. TO STA.

9228	(Z-1)PS-2, 29PS-2	ST. CLAIR	41	2
CONTRACT NO. 76P08				
ILLINOIS FED. AID PROJECT				

ILLINOIS DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES

CODE NO.	ITEM	UNIT	100% STATE URBAN TOTAL QUANTITY	CONSTRUCTION TYPE CODE		
				ST. CLAIR 0044		
20100210	TREE REMOVAL (OVER 15 UNITS DIAMETER)	UNIT	87	87		
20800150	TRENCH BACKFILL	CU YD	21	21		
* 25000200	SEEDING, CLASS 2	ACRE	0.25	0.25		
* 25000400	NITROGEN FERTILIZER NUTRIENT	POUND	23	23		
* 25000500	PHOSPHORUS FERTILIZER NUTRIENT	POUND	23	23		
* 25000600	POTASSIUM FERTILIZER NUTRIENT	POUND	23	23		
* 25000700	AGRICULTURAL GROUND LIMESTONE	TON	1	1		
* 25100115	MULCH, METHOD 2	ACRE	0.25	0.25		
31101400	SUBBASE GRANULAR MATERIAL, TYPE B 6"	SQ YD	52	52		
35100100	AGGREGATE BASE COURSE, TYPE A	TON	114	114		
42400100	PORTLAND CEMENT CONCRETE SIDEWALK 4 INCH	SQ FT	50	50		
44000500	COMBINATION CURB AND GUTTER REMOVAL	FOOT	10	10		

* SPECIALTY ITEM

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PLOT SCALE = 2:0' = 1" / in.	CHECKED EBB	REVISED -
PLOT DATE = 1/25/2022	DATE 12/21/2020	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

25TH STREET PUMP STATION
SUMMARY OF QUANTITIES

SCALE: NONE SHEET 1 OF 6 SHEETS STA. TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
9228	(Z-1)PS-2, 29PS-2	ST. CLAIR	41	3
CONTRACT NO. 76P08				
ILLINOIS FED. AID PROJECT				

ILLINOIS DEPARTMENT OF TRANSPORTATION
SUMMARY OF QUANTITIES

CODE NO.	ITEM	UNIT	100% STATE URBAN TOTAL QUANTITY	CONSTRUCTION TYPE CODE		
				ST. CLAIR 0044		
44000600	SIDEWALK REMOVAL	SQ FT	50	50		
44200140	PAVEMENT PATCHING, TYPE I, 12 INCH	SQ YD	6	6		
44200144	PAVEMENT PATCHING, TYPE II, 12 INCH	SQ YD	11	11		
50102400	CONCRETE REMOVAL	CU YD	0.2	0.2		
50200100	STRUCTURE EXCAVATION	CU YD	222	222		
50300225	CONCRETE STRUCTURES	CU YD	22.7	22.7		
50500405	FURNISHING AND ERECTING STRUCTURAL STEEL	POUND	875	875		
50606701	CLEANING AND PAINTING STRUCTURAL STEEL, LOCATION 1	L SUM	1	1		
50800105	REINFORCEMENT BARS	POUND	1,390	1,390		
56104800	WATER VALVES 4"	EACH	1	1		
56201120	WATER SERVICE LINE 4"	FOOT	320	320		
56500500	DOMESTIC METER VAULTS	EACH	1	1		

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KLINGNER & ASSOCIATES, P.C.
Engineers • Architects • Surveyors
816 N. 24TH ST. QUINCY, ILLINOIS 62301 217.223.3570
STATE OF ILLINOIS DESIGN FIRM NO. 184-2738

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	DRAWN AMS	REVISED -
PLOT SCALE = 2:0' = 1" / in.	CHECKED EBB	REVISED -
PLOT DATE = 1/25/2022	DATE 12/21/2020	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**25TH STREET PUMP STATION
SUMMARY OF QUANTITIES**

SCALE: NONE SHEET 2 OF 6 SHEETS STA. TO STA.

F.A.U. RTE. 9228	SECTION (Z-1)PS-2, 29PS-2	COUNTY ST. CLAIR	TOTAL SHEETS 41	SHEET NO. 4
CONTRACT NO. 76P08			ILLINOIS FED. AID PROJECT	

ILLINOIS DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES

CODE NO.	ITEM	UNIT	100% STATE URBAN TOTAL QUANTITY	CONSTRUCTION TYPE CODE		
				ST. CLAIR 0044		
70102640	TRAFFIC CONTROL AND PROTECTION, STANDARD 701801	L SUM	1	1		
X7010237	CHANGEABLE MESSAGE SIGN (SPECIAL)	CAL DA	120	120		
81028370	UNDERGROUND CONDUIT, PVC, 3" DIA.	FOOT	435	435		
83600300	LIGHT POLE FOUNDATION, 30" DIAMETER	FOOT	7	7		
87100110	FIBER OPTIC CABLE IN CONDUIT, NO. 62.5/125, 6F	FOOT	2,430	2,430		
* A2007632	TREE, TAXODIUM DISTICHUM (COMMON BALD CYPRESS), 4" CALIPER, BALLED AND BURLAPPED	EACH	15	15		
Z0007101	CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES NO. 1	L SUM	1	1		
Z0013798	CONSTRUCTION LAYOUT	L SUM	1	1		
Z0022800	FENCE REMOVAL	FOOT	300	300		
Z0034100	MASONRY WALL CONSTRUCTION	SQ FT	177	177		
Z0056700	SANITARY SEWER 4"	FOOT	93	93		
X0323898	CLOSED CIRCUIT TELEVISION DOME CAMERA	EACH	1	1		

* SPECIALTY ITEM

REV. - MS

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KLINGNER & ASSOCIATES, P.C.
Engineers - Architects - Surveyors
616 N 24TH ST. QUINCY, ILLINOIS 62301-2117 223-3570
STATE OF ILLINOIS DESIGN FIRM NO. 184-2738

USE R	NA ME	DESIGNED	AMS	REVISED	-
		DRAWN	AMS	REVISED	-
		CHECKED	EBB	REVISED	-
		DATE	12/21/2020	REVISED	-

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

25TH STREET PUMP STATION
SUMMARY OF QUANTITIES

SCALE: NONE SHEET 4 OF 6 SHEETS STA. TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
922B	(Z-1)PS-2, 29PS-2	ST. CLAIR	41	6
CONTRACT NO. 76P08			ILLINOIS FED. AID PROJECT	

ILLINOIS DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES

CODE NO.	ITEM	UNIT	100% STATE URBAN TOTAL QUANTITY	CONSTRUCTION TYPE CODE		
				ST. CLAIR 0044		
X0324597	CLOSED CIRCUIT TELEVISION CABINET	EACH	1	1		
X8710318	FIBER OPTIC UTILITY MARKER	EACH	8	8		
X8300205	LIGHT POLE, STEEL 50 FT. WITH CAMERA LOWERING SYSTEM	EACH	1	1		
X0335700	PUMP STATION GENERAL WORK	L SUM	1	1		
X0783300	PUMP STATION ELECTRICAL WORK	L SUM	1	1		
X0783500	PUMP STATION MECHANICAL WORK	L SUM	1	1		
X0900086	PRECAST PUMP STATION BUILDING	L SUM	1	1		
X1200295	STEEL CASING PIPE, BORED AND JACKED, 8"	FOOT	137	137		
X1400127	CAT. 6 ETHERNET CABLE	FOOT	230	230		
X6022820	MANHOLES, SANITARY, 5'-DIAMETER, TYPE 1 FRAME, CLOSED LID	EACH	1	1		

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REV. - MS

KLINGNER & ASSOCIATES, P.C.
 Engineers - Architects - Surveyors
 616 N 24TH ST. QUINCY, ILLINOIS 62301-2117 223.3570
 STATE OF ILLINOIS DESIGN FIRM NO. 184-2738

USER NAME = oms	DESIGNED AMS	REVISED -
	DRAWN AMS	REVISED -
PLOT SCALE = 20' = 1" / in.	CHECKED EBB	REVISED -
PLOT DATE = 1/25/2022	DATE 12/21/2020	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

25TH STREET PUMP STATION
SUMMARY OF QUANTITIES

SCALE: NONE SHEET 5 OF 6 SHEETS STA. TO STA.

F.A.U. RTE. 9220	SECTION (Z-1)PS-2, 29PS-2	COUNTY ST. CLAIR	TOTAL SHEETS 41	SHEET NO. 7
CONTRACT NO. 76P08			ILLINOIS FED. AID PROJECT	

LEGEND

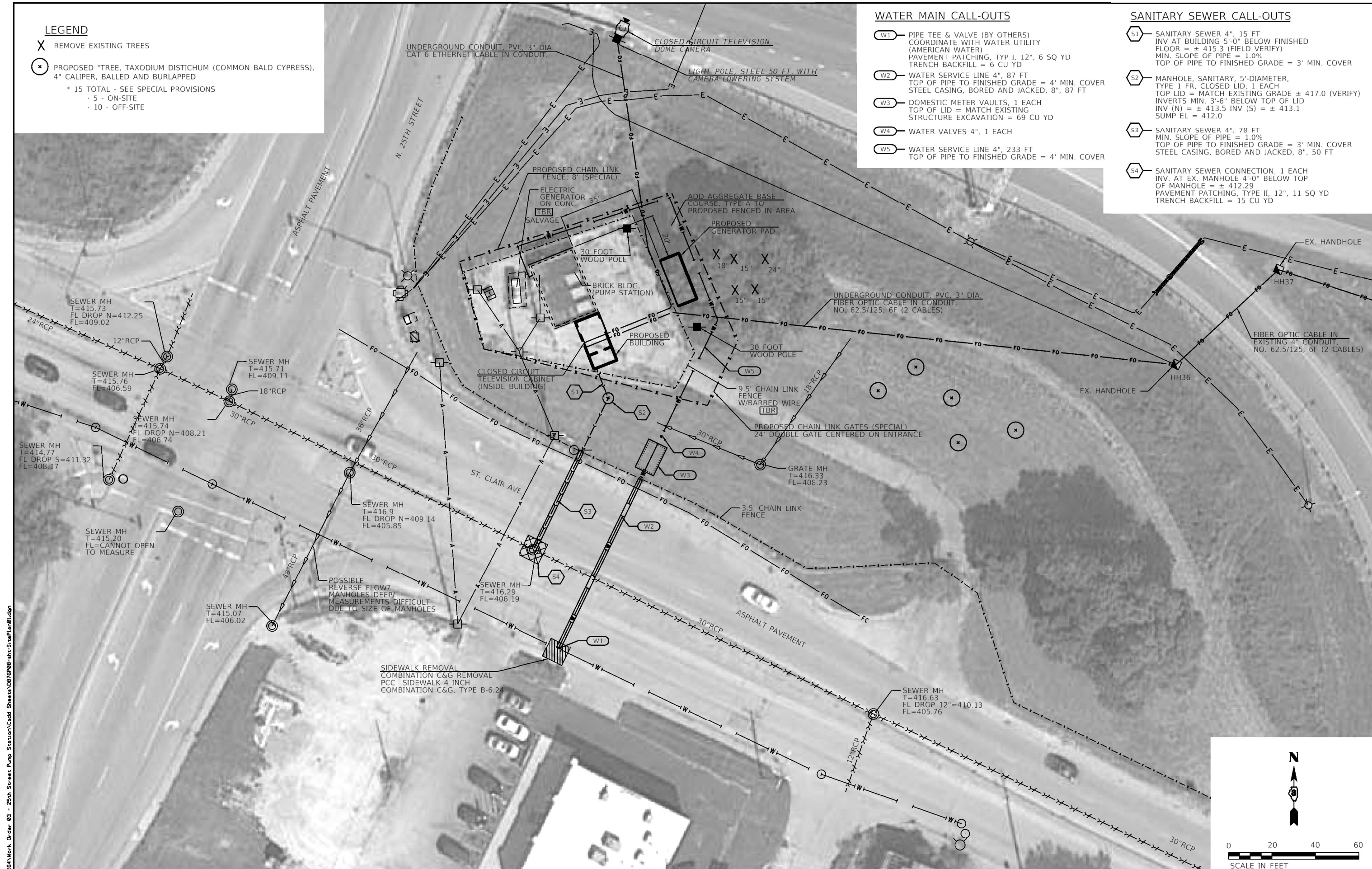
- X REMOVE EXISTING TREES
- ⊗ PROPOSED "TREE, TAXODIUM DISTICHUM (COMMON BALD CYPRESS), 4" CALIPER, BALLED AND BURLAPPED
- * 15 TOTAL - SEE SPECIAL PROVISIONS
 - 5 - ON-SITE
 - 10 - OFF-SITE

WATER MAIN CALL-OUTS

- W1 PIPE TEE & VALVE (BY OTHERS) COORDINATE WITH WATER UTILITY (AMERICAN WATER) PAVEMENT PATCHING, TYP I, 12", 6 SQ YD TRENCH BACKFILL = 6 CU YD
- W2 WATER SERVICE LINE 4", 87 FT TOP OF PIPE TO FINISHED GRADE = 4' MIN. COVER STEEL CASING, BORED AND JACKED, 8", 87 FT
- W3 DOMESTIC METER VAULTS, 1 EACH TOP OF LID = MATCH EXISTING STRUCTURE EXCAVATION = 69 CU YD
- W4 WATER VALVES 4", 1 EACH
- W5 WATER SERVICE LINE 4", 233 FT TOP OF PIPE TO FINISHED GRADE = 4' MIN. COVER

SANITARY SEWER CALL-OUTS

- S1 SANITARY SEWER 4", 15 FT INV. AT BUILDING 5'-0" BELOW FINISHED FLOOR = ± 415.3 (FIELD VERIFY) MIN. SLOPE OF PIPE = 1.0% TOP OF PIPE TO FINISHED GRADE = 3' MIN. COVER
- S2 MANHOLE, SANITARY, 5'-DIAMETER, TYPE 1 FR, CLOSED LID, 1 EACH TOP LID = MATCH EXISTING GRADE ± 417.0 (VERIFY) INVERTS MIN. 3'-6" BELOW TOP OF LID INV (N) = ± 413.5 INV (S) = ± 413.1 SUMP EL = 412.0
- S3 SANITARY SEWER 4", 78 FT MIN. SLOPE OF PIPE = 1.0% TOP OF PIPE TO FINISHED GRADE = 3' MIN. COVER STEEL CASING, BORED AND JACKED, 8", 50 FT
- S4 SANITARY SEWER CONNECTION, 1 EACH INV. AT EX. MANHOLE 4'-0" BELOW TOP OF MANHOLE = ± 412.29 PAVEMENT PATCHING, TYPE II, 12", 11 SQ YD TRENCH BACKFILL = 15 CU YD



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 Engineers - Architects - Surveyors
 816 N. 24TH ST. QUINCY, ILLINOIS 62301 217.223.3670
 STATE OF ILLINOIS DESIGN FIRM NO. 184-2738

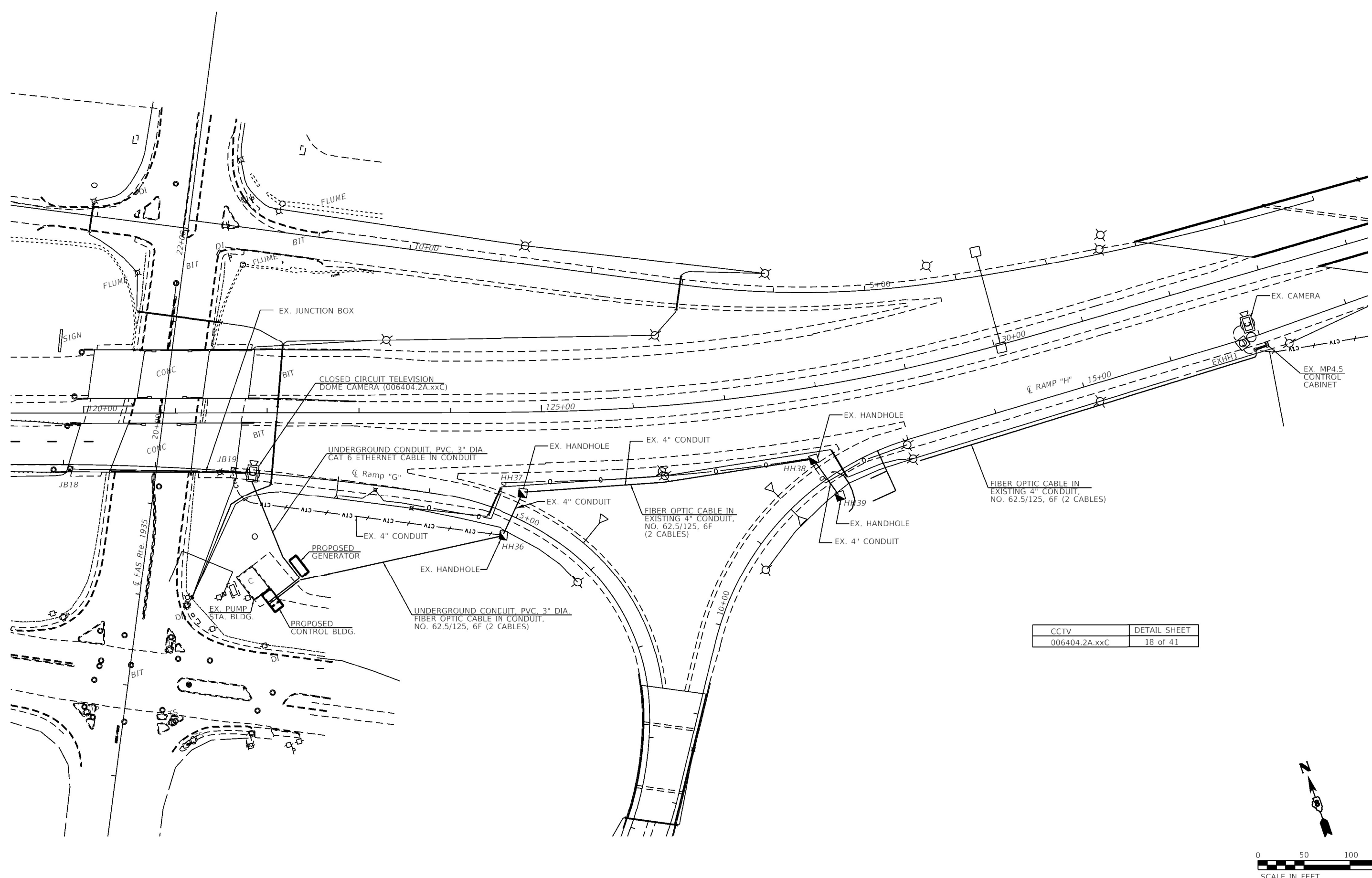
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PLOT DATE = 2/1/2022		

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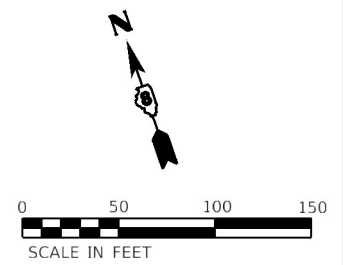
25TH STREET PUMP STATION		F.A.U. RT#	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
SITE PLAN		9228	(Z-1)PS-2, 29PS-2	ST. CLAIR	41	9
SCALE: 1"=20'		SHEET 1 OF 1 SHEETS		STA.	TO STA.	

CONTRACT NO. 76P08		ILLINOIS FED. AID PROJECT	
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CCTV	DETAIL SHEET
006404.2A.xx	18 of 41



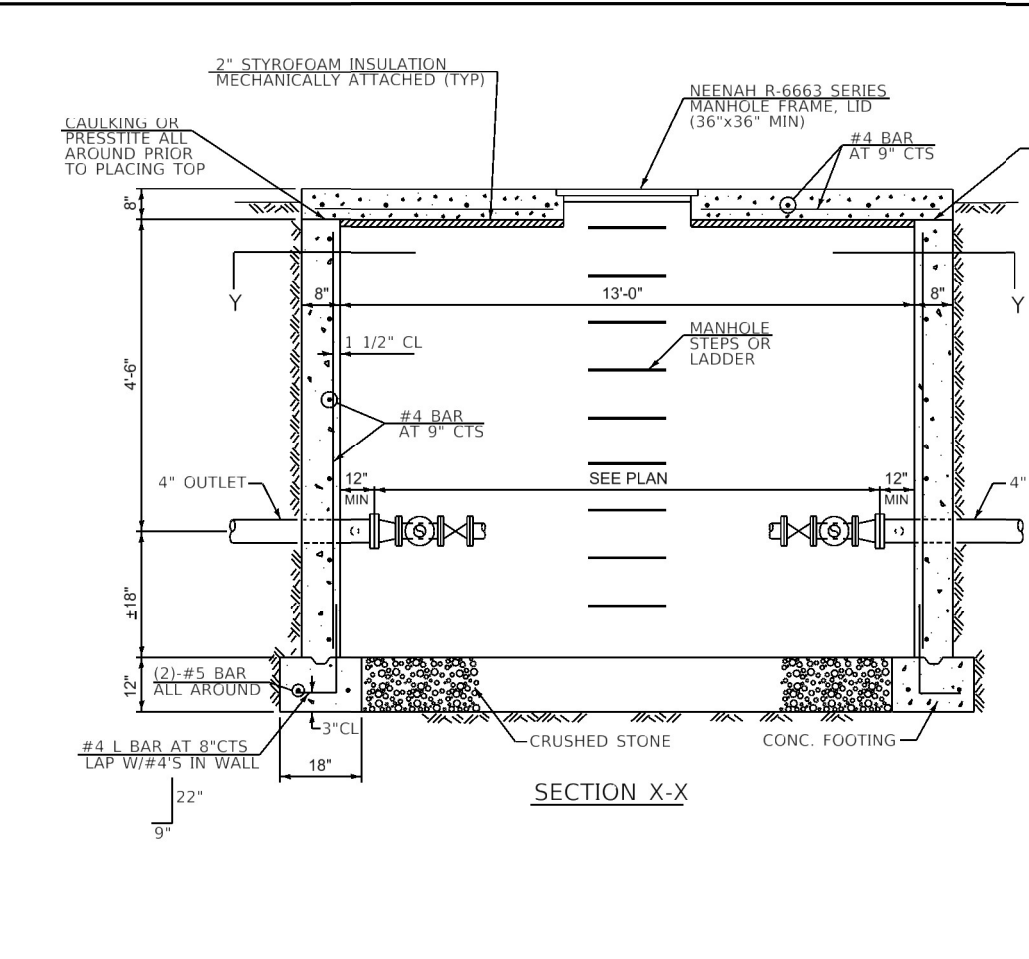
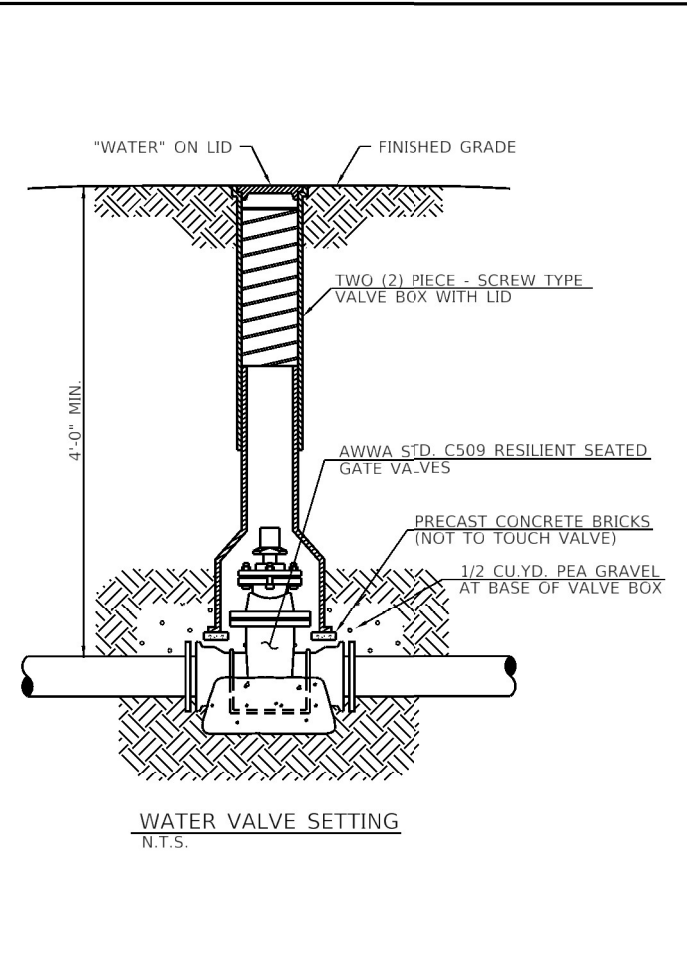
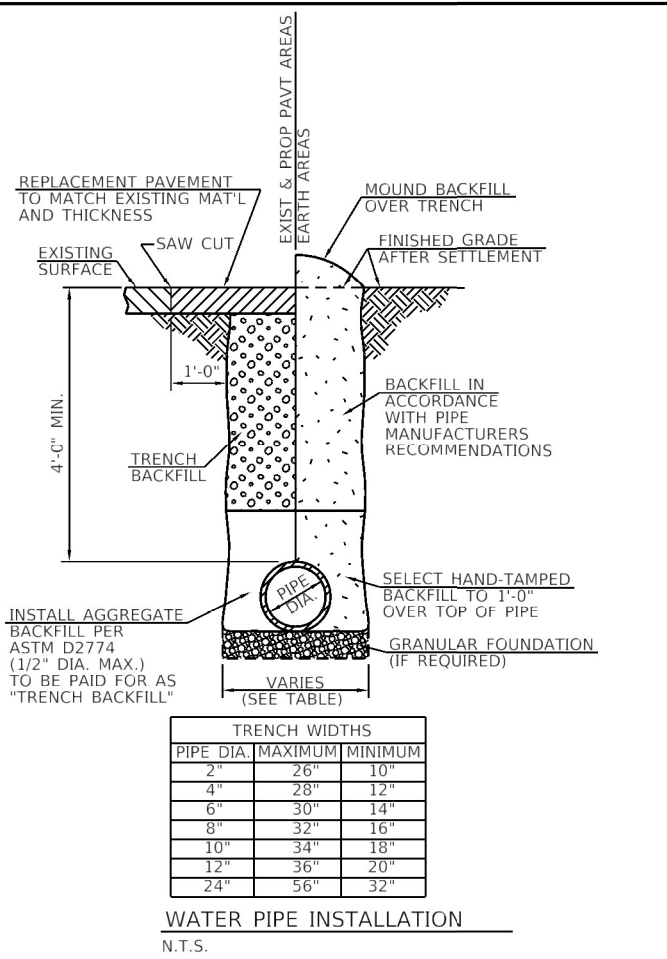
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 STATE OF ILLINOIS DESIGN FIRM NO. 184-2738

USER NAME = oms	DESIGNED	REVISED -
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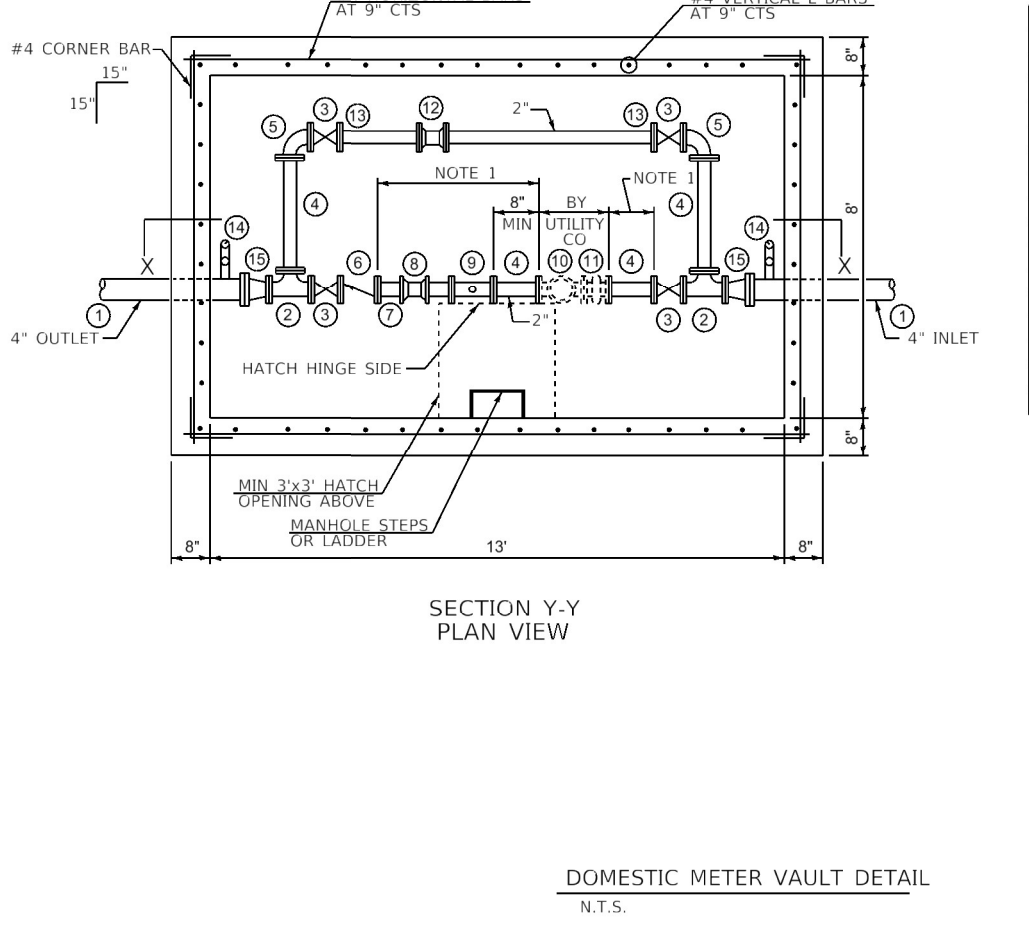
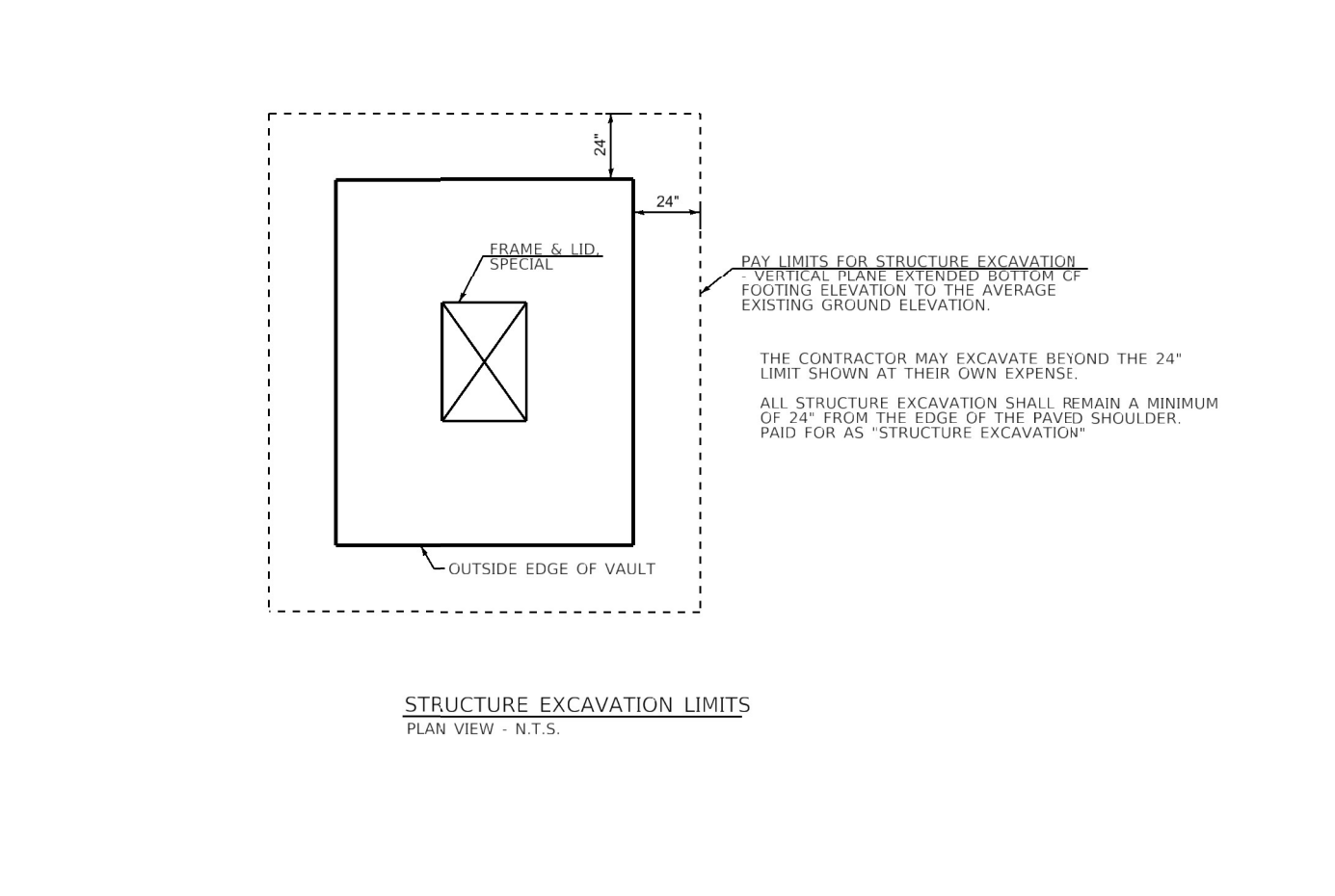
**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

25TH STREET PUMP STATION ITS PLAN			
SCALE: 1"=50'	SHEET 1 OF 1 SHEETS	STA.	TO STA.

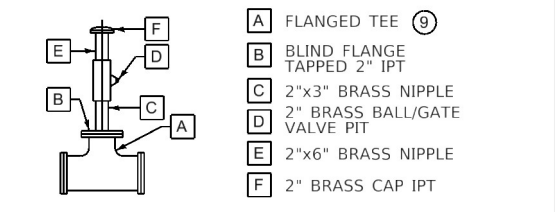
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9228	(Z-1)PS-2, 29PS-2	ST. CLAIR	41	10
CONTRACT NO. 76P08				
ILLINOIS FED. AID PROJECT				



- NOTES**
1. A MINIMUM OF (4) FOUR PIPE DIAMETERS OF STRAIGHT PIPE (CAN INCLUDE COMPONENTS THAT ARE FULLY OPEN IN THEIR NORMAL OPERATING POSITION) IS REQUIRED UPSTREAM AND DOWNSTREAM OF THE METER / STRAINER ASSEMBLY.
 2. PROVIDE KEYWAY IN CONCRETE FOOTING.
 3. AT THE OPTION OF THE CONTRACTOR, 24" HIGH L BARS CAN BE SET WITH THE FOOTING. VERTICAL STEEL FOR WALLS CAN BE LAPPED AND TIED TO L BARS.
 4. BACKFILL AROUND WELL EITHER AGGREGATE OR COMPACTED EARTH. AGGREGATE REQUIRED IN TRAFFIC AREAS.
 5. COST OF FURNISHING AND PLACING REINFORCEMENT BARS INCIDENTAL.
 7. METER ASSEMBLY & ACCESSORIES WILL BE BILLED TO THE CONTRACTOR.
 8. SECURE THE FLANGED PIPE TO A CONCRETE THRUST BLOCK OUTSIDE THE VAULT.



2" TURBINE METER SETTING MATERIAL LIST		
NO	DESCRIPTION	QTY
1	2" DIA SPOOL FLANGE x PE, DI	2
2	2"x2" DIA FLANGED TEE	2
3	2" FLANGED GATE VALVE w/HANDWHEEL	4
4	2" DIA SPOOL FLANGE x FLANGE, DI	4
5	2" DIA FLANGED 90° BEND	2
6	2" FLG. CHECK VALVE w/WEIGHTED ARM	1
7	2" DIA SPOOL FLANGE x PE, DI	2
8	2" SOLID SLEEVE MJ (SHORT PATTERN)	1
9	2"x2" FLANGED TEE (TEST NIPPLE)	1
10	2" TURBINE METER	(1) BY IAWC
11	2" STRAINER	(1) BY IAWC
12	2" COMPRESSION COUPLING	1
13	2" BLIND FLANGE	2
14	PRESSURE GAUGE (PLASTIC)	2
15	4" x 2" REDUCER	2



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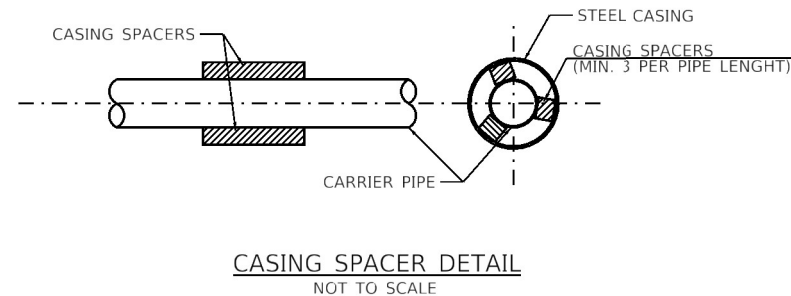
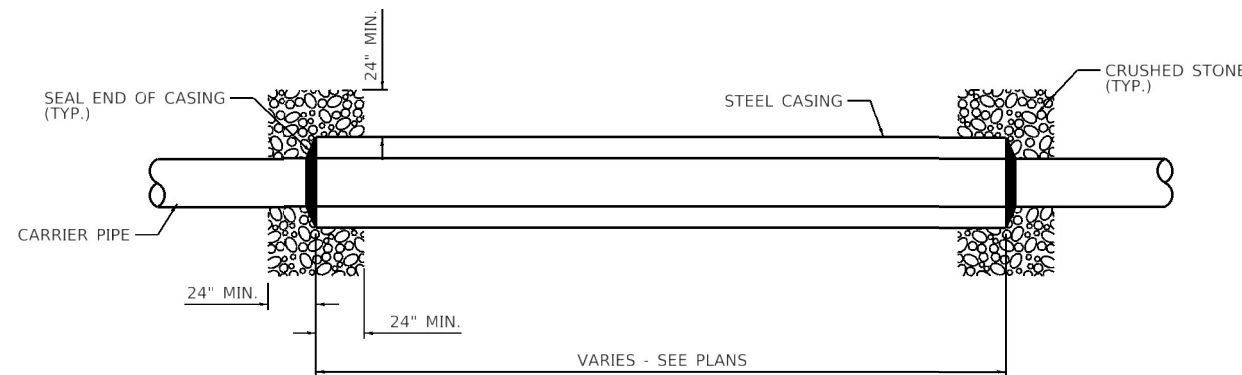
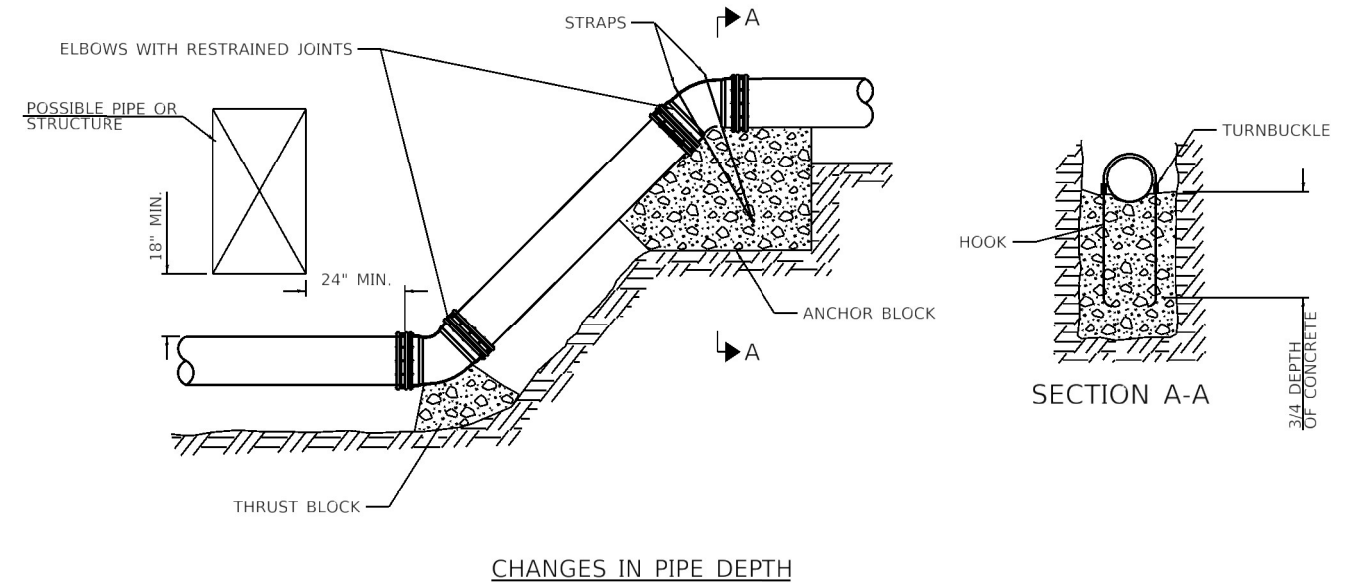
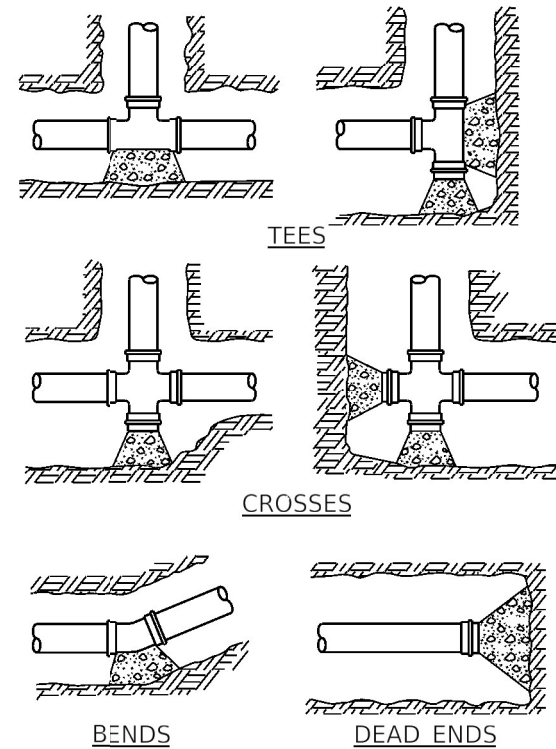
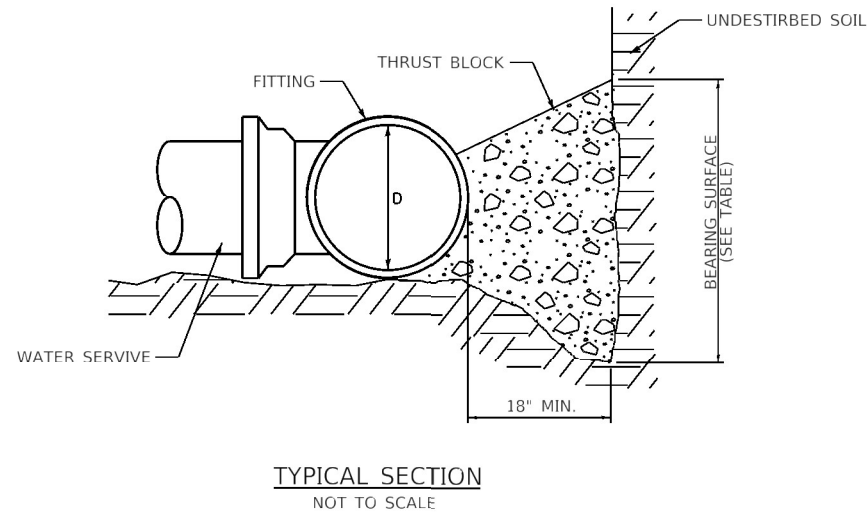
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	DATE 12/21/2020	REVISED -

STATE OF ILLINOIS
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25TH STREET PUMP STATION
MISCELLANEOUS DETAILS - SITE DETAILS

SCALE: NONE SHEET 1 OF 3 SHEETS STA. TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
922B	(Z-1)PS-2, 29PS-2	ST. CLAIR	41	11
CONTRACT NO. 76P08				
ILLINOIS FED. AID PROJECT				



DIAMETER OF PIPE, "D" INCHES	MINIMUM BEARING SURFACE (sf)				
	BENDS				TEES AND DEAD ENDS
	11 1/4°	22 1/2°	45°	90°	
4	1	1	2	4	3
6	1	2	4	8	6
8	2	4	7	14	10
10	3	6	11	21	15
12	4	8	16	29	21
14	5	11	21	39	28
16	7	14	27	50	36
18	9	17	34	63	45
20	11	21	42	78	55
24	15	31	60	111	78
30	24	47	92	171	120
36	34	67	132	244	173

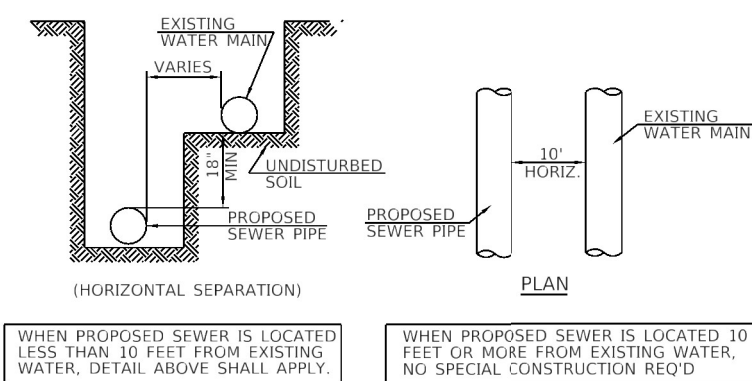
MINIMUM SURFACE AREA BASED ON WATER PRESSURE OF 150 PSI AND ALLOWABLE SOIL PRESSURE OF 1,000 PSF.

EXTEND THRUST BLOCKS TO UNDISTURBED SOIL.
EXCAVATION INTO TRENCH WALL MAY BE NECESSARY.

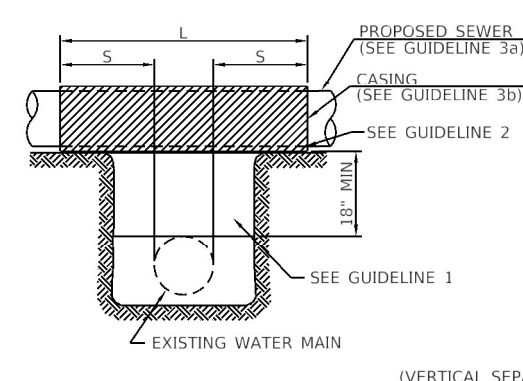
FORM VERTICAL SURFACES OF POURED CONCRETE THRUST BLOCKS EXCEPT ON BEARING SURFACE.

ENCASE ALL FITTINGS IN POLYETHYLENE WRAP.
DO NOT ALLOW CONCRETE TO DIRECTLY CONTACT JOINTS OR FITTING BOLTS.

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A - WATER AND SEWER SEPARATION REQUIREMENTS
N.T.S.

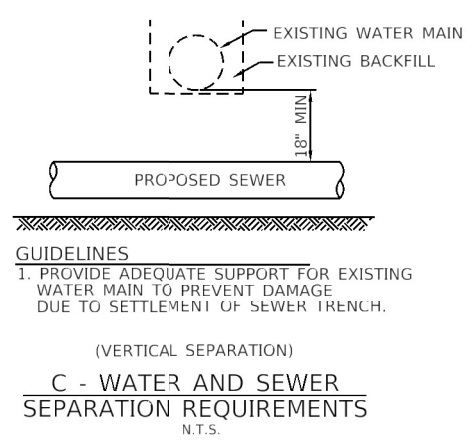


B - WATER AND SEWER SEPARATION REQUIREMENTS
N.T.S.

WATER & SEWER SEPARATION REQUIREMENTS
N.T.S.

GUIDELINES

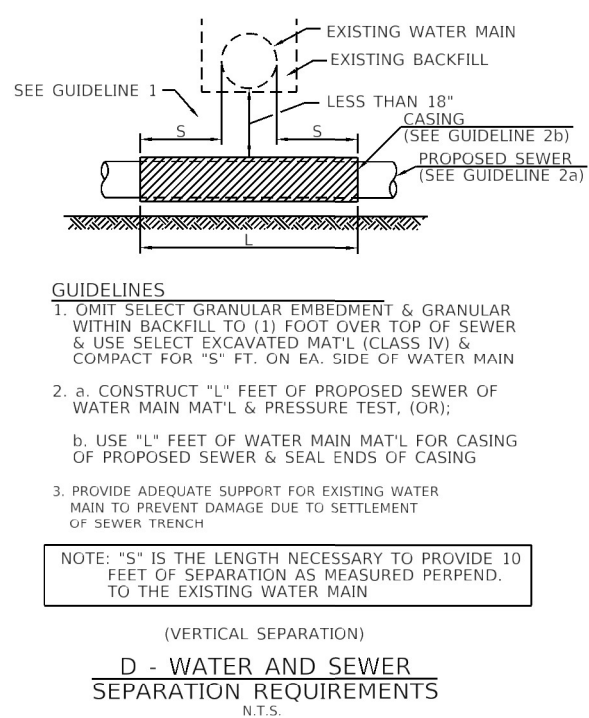
- IF SELECT GRANULAR BACKFILL EXISTS: REMOVE WITHIN WIDTH OF SEWER TRENCH & REPLACE WITH SELECT EXCAVATED MAT'L (CLASS IV) & COMPACT.
- OMIT SELECT GRANULAR EMBEDMENT & GRANULAR BACKFILL TO (1) FOOT OVER TOP OF SEWER & USE SELECT EXCAVATED MAT'L (CLASS IV) & COMPACT THE LENGTH OF "L" FEET.
- a. CONSTRUCT "L" FEET OF PROPOSED SEWER OF WATER MAIN MAT'L AND PRESSURE TEST, (OR);
b. USE "L" FEET OF WATER MAIN MAT'L FOR CASING OF PROPOSED SEWER & SEAL ENDS OF CASING



C - WATER AND SEWER SEPARATION REQUIREMENTS
N.T.S.

GUIDELINES

- PROVIDE ADEQUATE SUPPORT FOR EXISTING WATER MAIN TO PREVENT DAMAGE DUE TO SETTLEMENT OF SEWER TRENCH.



D - WATER AND SEWER SEPARATION REQUIREMENTS
N.T.S.

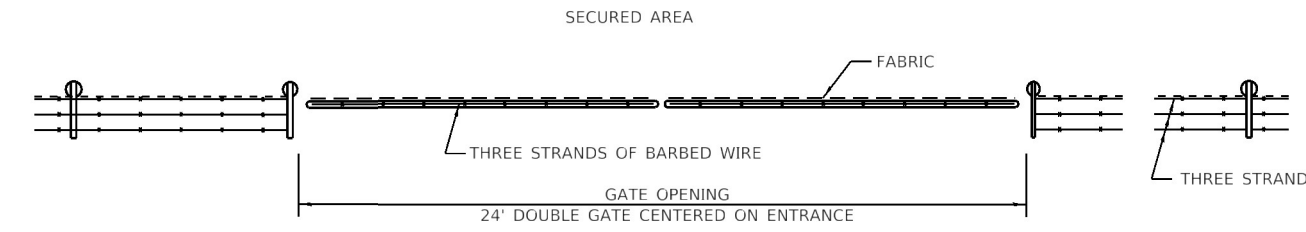
GUIDELINES

- OMIT SELECT GRANULAR EMBEDMENT & GRANULAR WITHIN BACKFILL TO (1) FOOT OVER TOP OF SEWER & USE SELECT EXCAVATED MAT'L (CLASS IV) & COMPACT FOR "S" FT. ON EA. SIDE OF WATER MAIN
- a. CONSTRUCT "L" FEET OF PROPOSED SEWER OF WATER MAIN MAT'L & PRESSURE TEST, (OR);
b. USE "L" FEET OF WATER MAIN MAT'L FOR CASING OF PROPOSED SEWER & SEAL ENDS OF CASING
- PROVIDE ADEQUATE SUPPORT FOR EXISTING WATER MAIN TO PREVENT DAMAGE DUE TO SETTLEMENT OF SEWER TRENCH

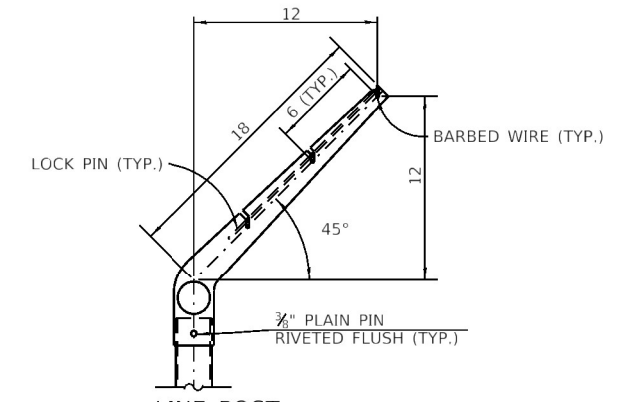
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	DRAWN AMS	REVISED -
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PLOT DATE = 1/25/2022	DATE 12/21/2020	REVISED -

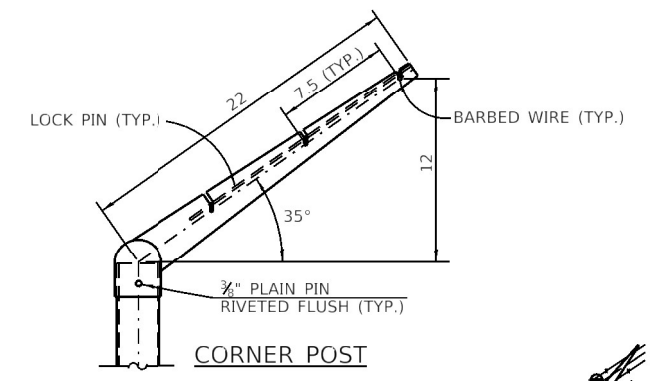
F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
9228	(Z-1)PS-2, 29PS-2	ST. CLAIR	41	13
CONTRACT NO. 76P08				
ILLINOIS FED. AID PROJECT				



PLAN
NTS

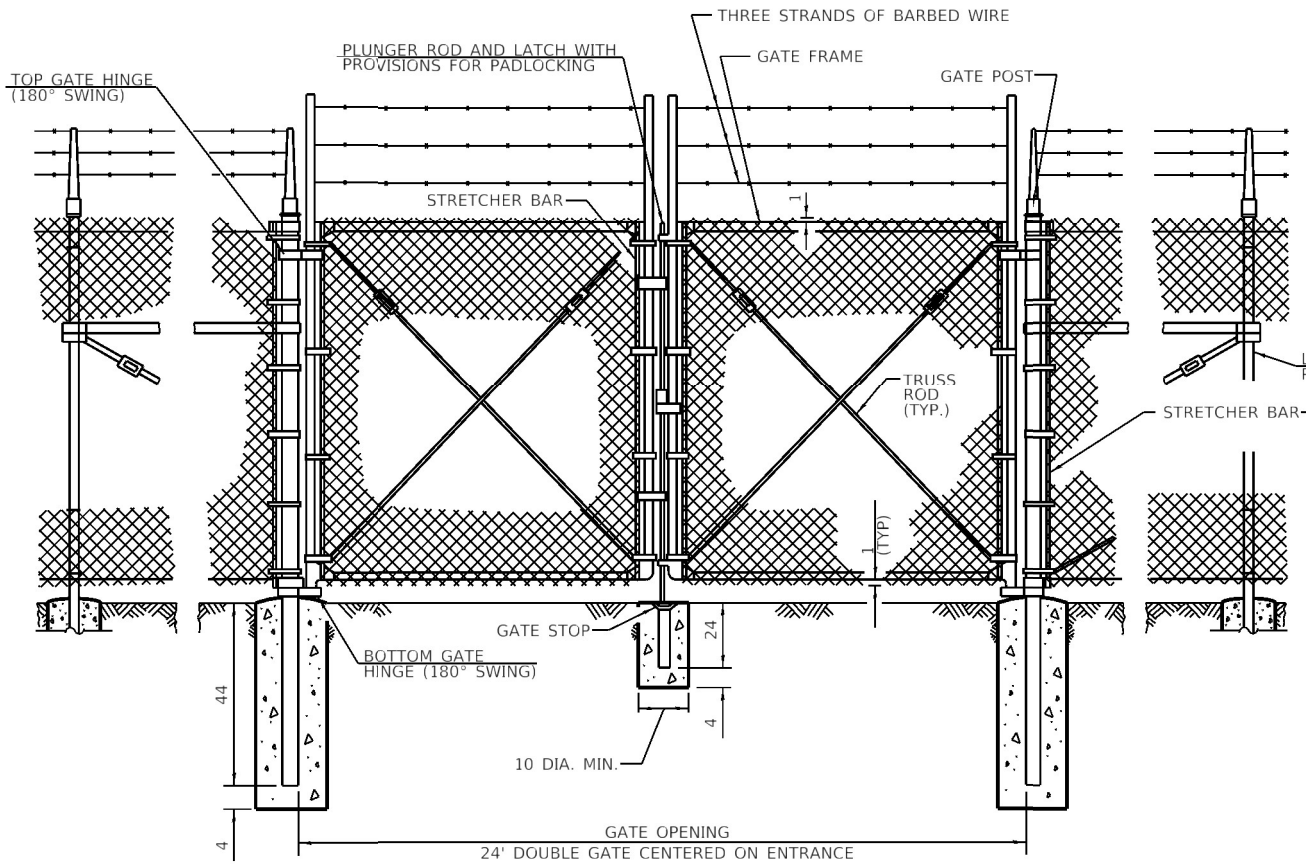


LINE POST

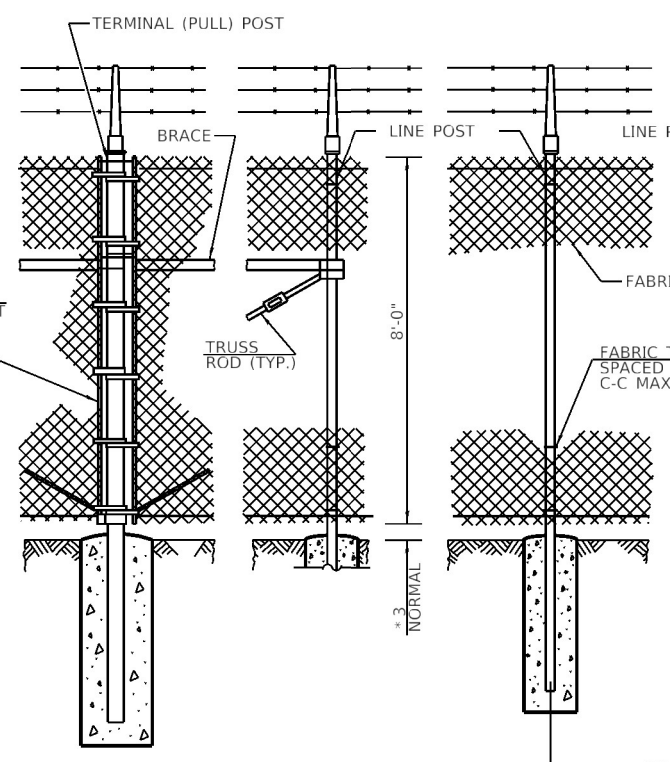


CORNER POST

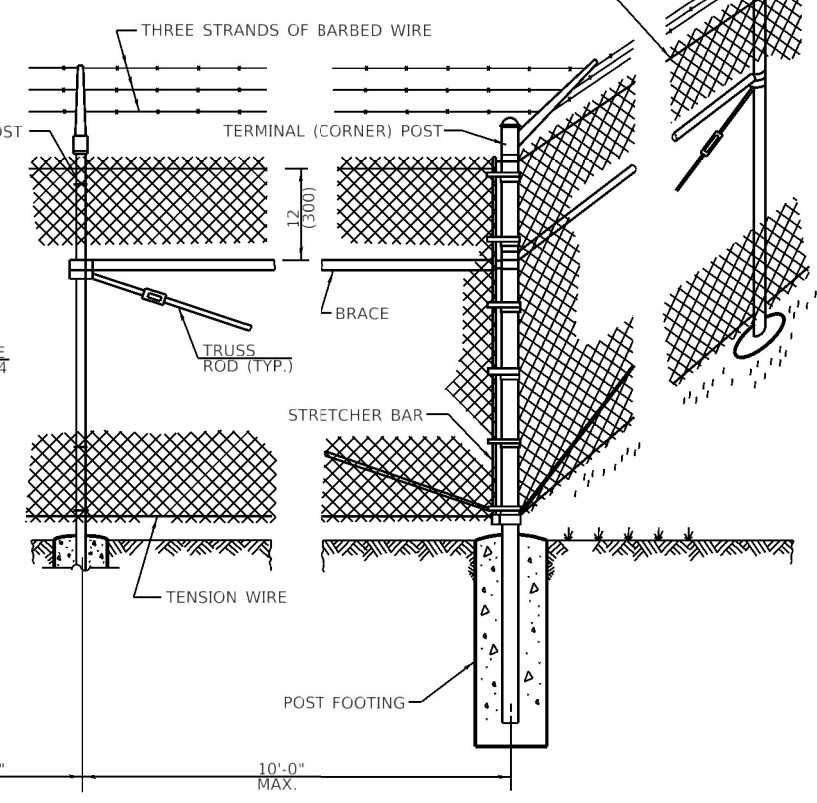
EXTENSION ARM DETAILS
NTS



VEHICLE GATE ARRANGEMENT



PULL POST ARRANGEMENT

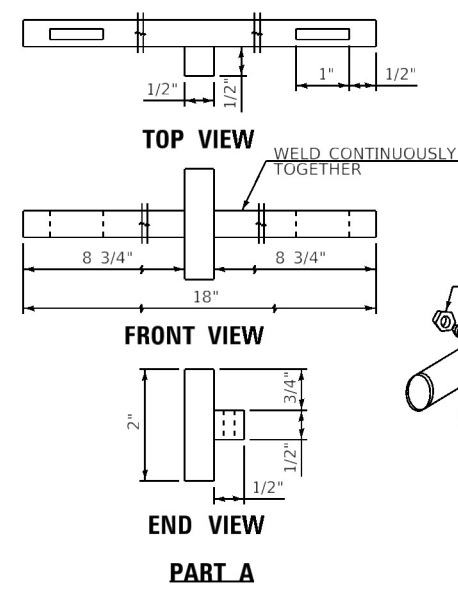


LINE POST ARRANGEMENT

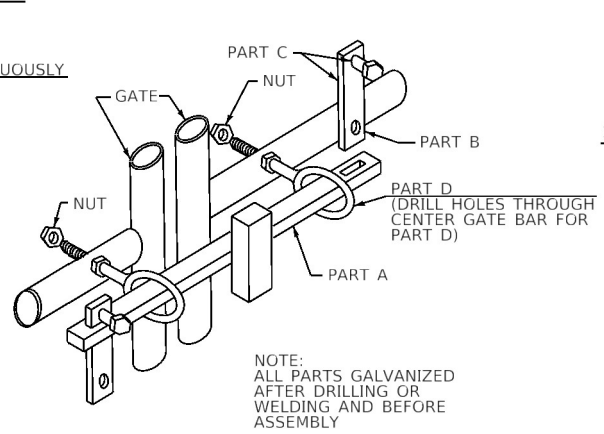
CORNER OR END POST ARRANGEMENT

ELEVATION
NTS

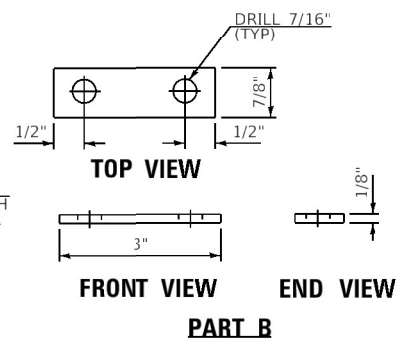
* ON UNEVEN GROUND THIS DIMENSION MAY VARY BETWEEN 1 MIN. TO 5 MAX. FOR A MAX. DISTANCE OF 8'-0".



PART A



SWING GATE LOCKING DEVICE
NTS



PART B

PART C IS FABRICATED THE SAME WITH A BOLT INTO EACH HOLE

PART C

GENERAL NOTES

SEE HIGHWAY STANDARD 664001 FOR ADDITIONAL CHAIN LINK FENCE AND GATE DETAILS.
ALL DIMENSIONS ARE IN INCHES UNLESS OTHERWISE SHOWN.

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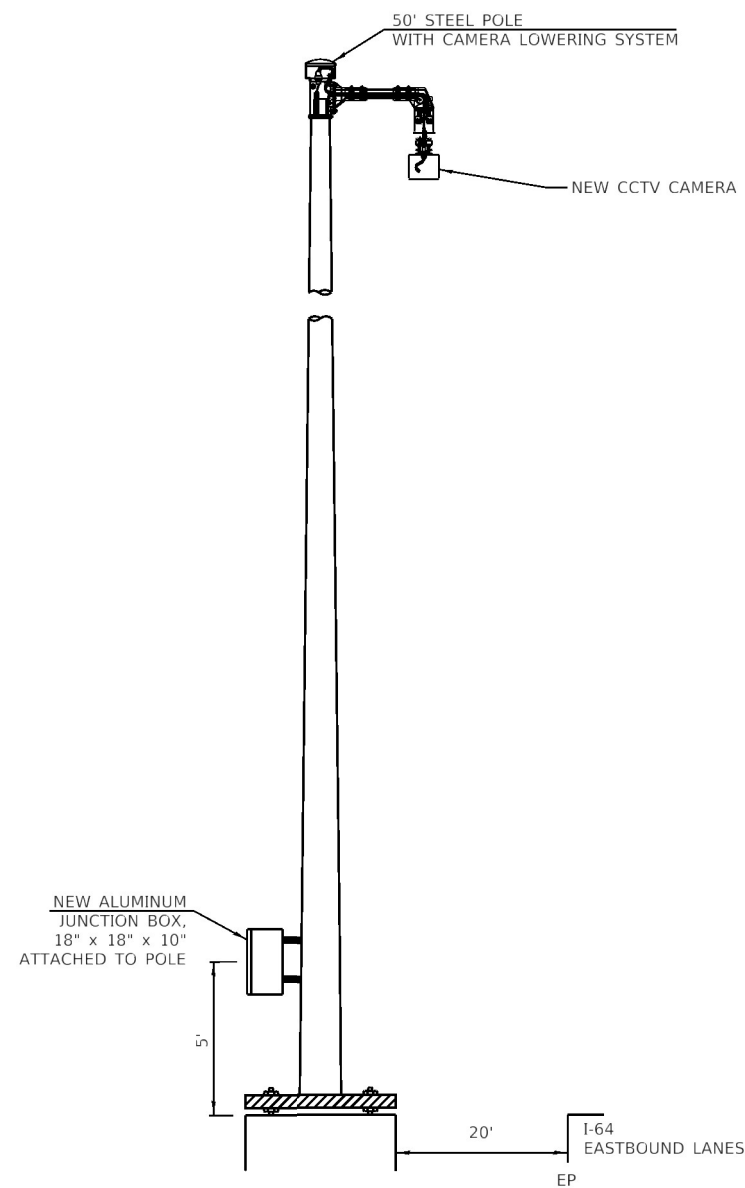
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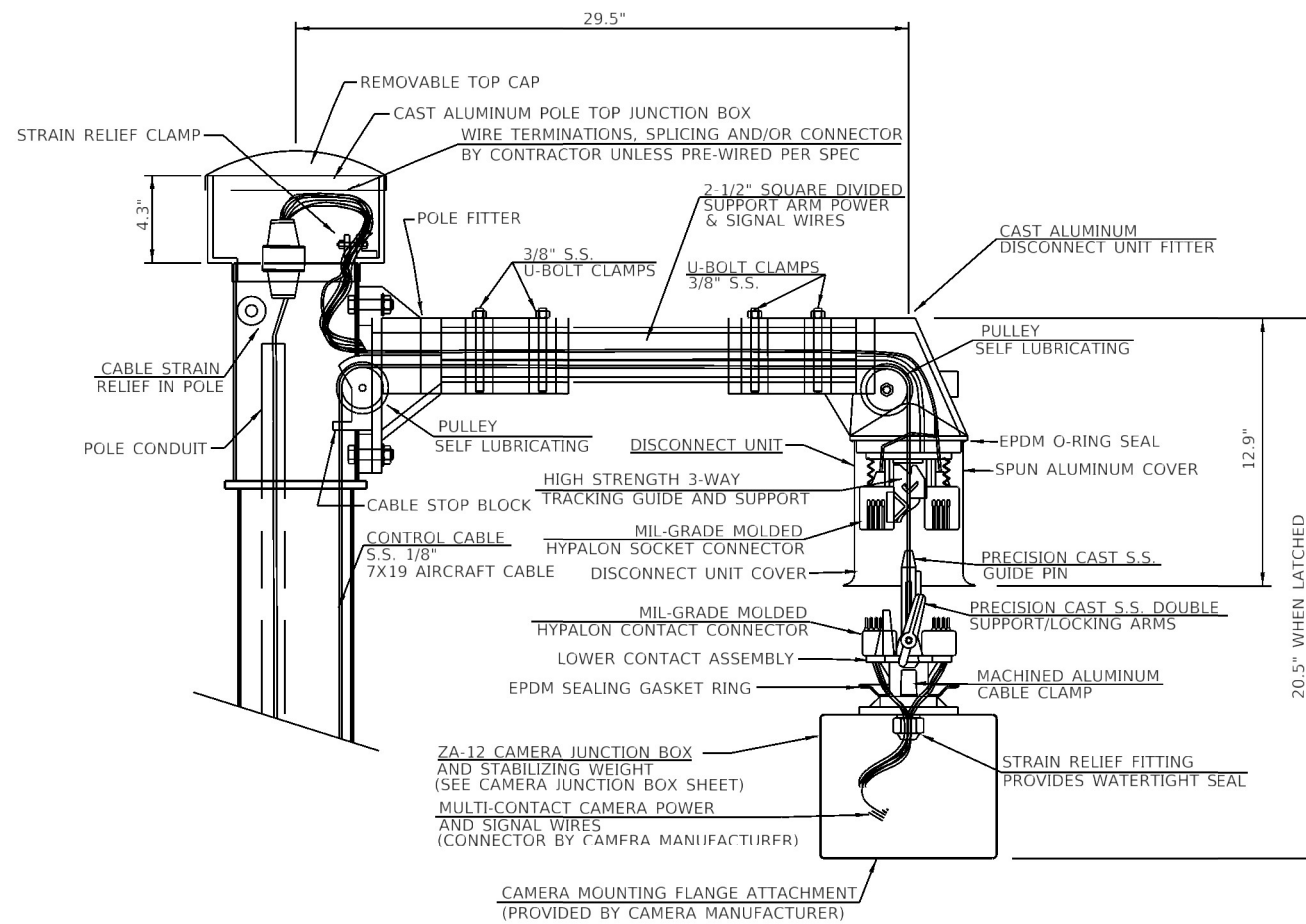
25TH STREET PUMP STATION
CHAIN LINK FENCE DETAILS

SCALE: NONE SHEET 1 OF 1 SHEETS STA. TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
9228	(2-1)PS-2, 29PS-2	ST. CLAIR	41	14
CONTRACT NO. 76P08				
ILLINOIS FED. AID PROJECT				



POLE MOUNTED CCTV DETAIL
NOT TO SCALE



CAMERA LOWERING SYSTEM FOR POLE
MOUNTING MULTI-FUNCTION SURVEILLANCE CAMERAS

CLDMG2-HYP-050-ST-D

NOT TO SCALE

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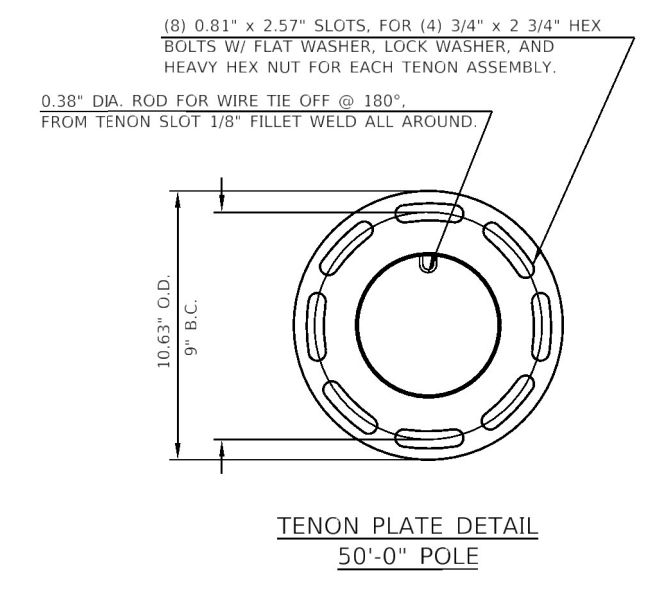
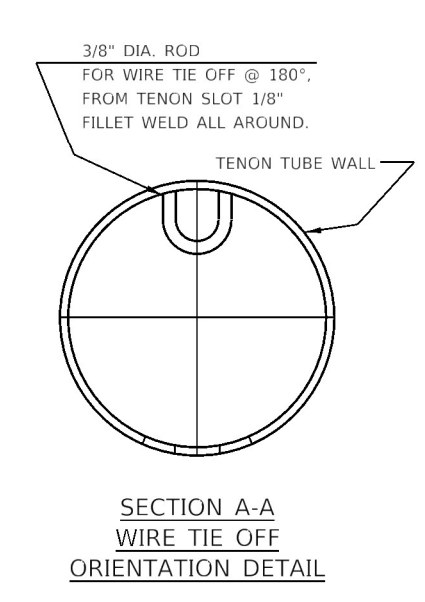
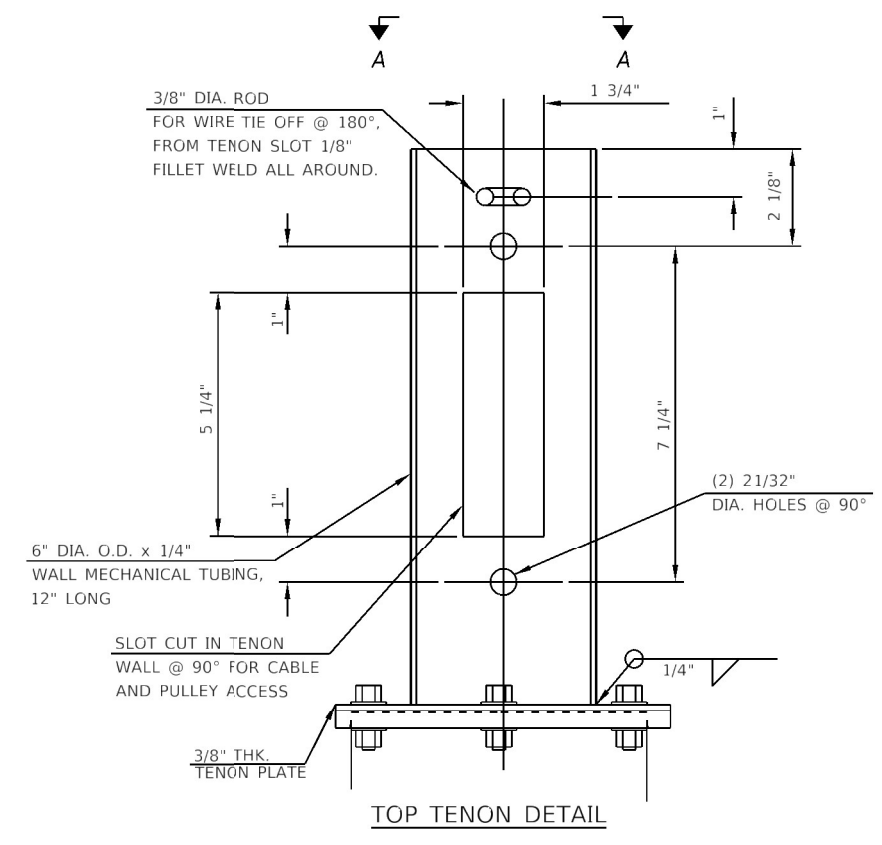
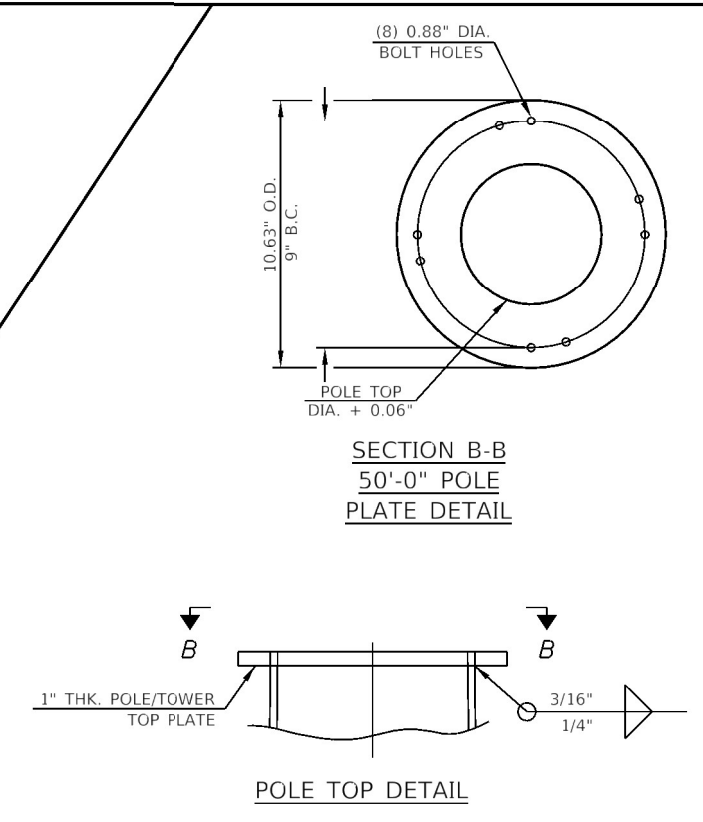
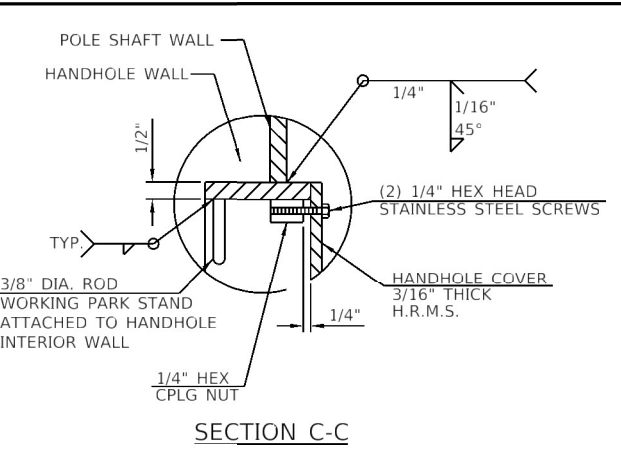
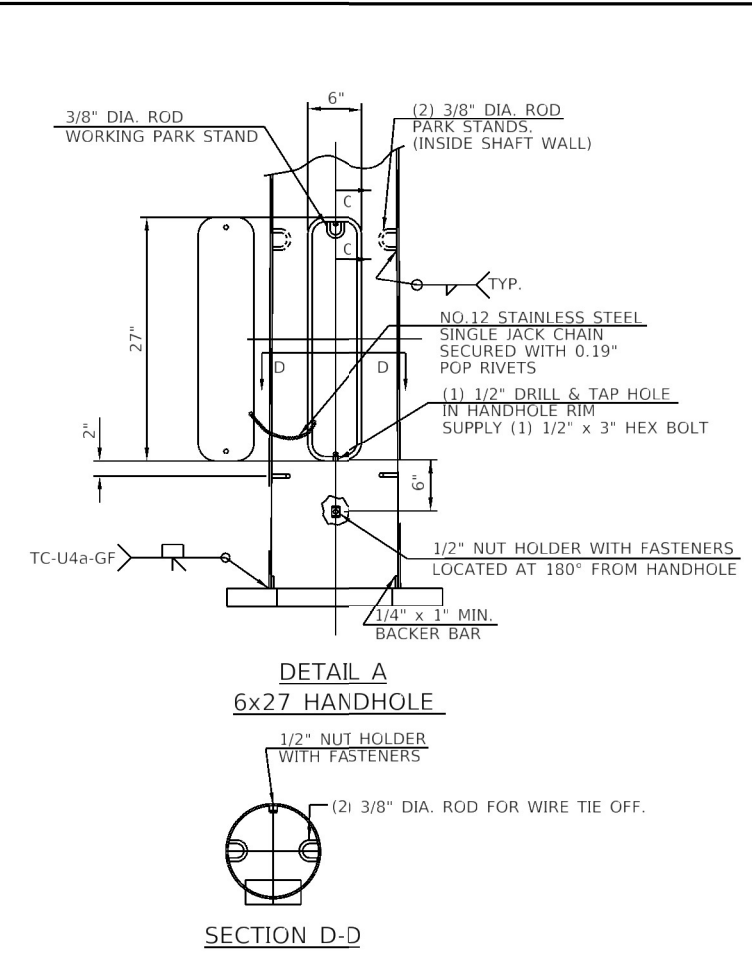
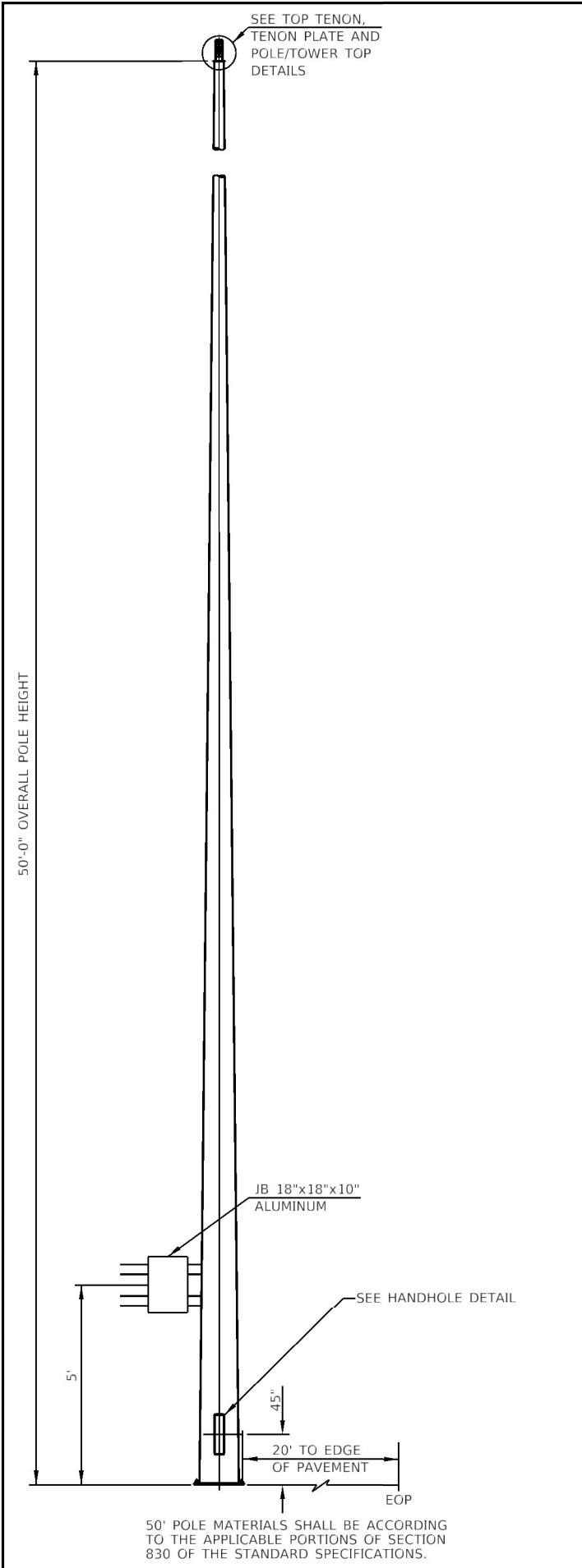
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PLOT DATE = 1/25/2022	CHECKED EBB	REVISED -
	DATE 12/21/2020	REVISED -

STATE OF ILLINOIS
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25TH STREET PUMP STATION
POLE MOUNTED CCTV DETAIL

SCALE: NONE SHEET 1 OF 1 SHEETS STA. TO STA.

F.A.U. RTE. 9228	SECTION (Z-1)PS-2, 29PS-2	COUNTY ST. CLAIR	TOTAL SHEETS 41	SHEET NO. 15
CONTRACT NO. 76P08				
ILLINOIS FED. AID PROJECT				



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	DATE 12/21/2020	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

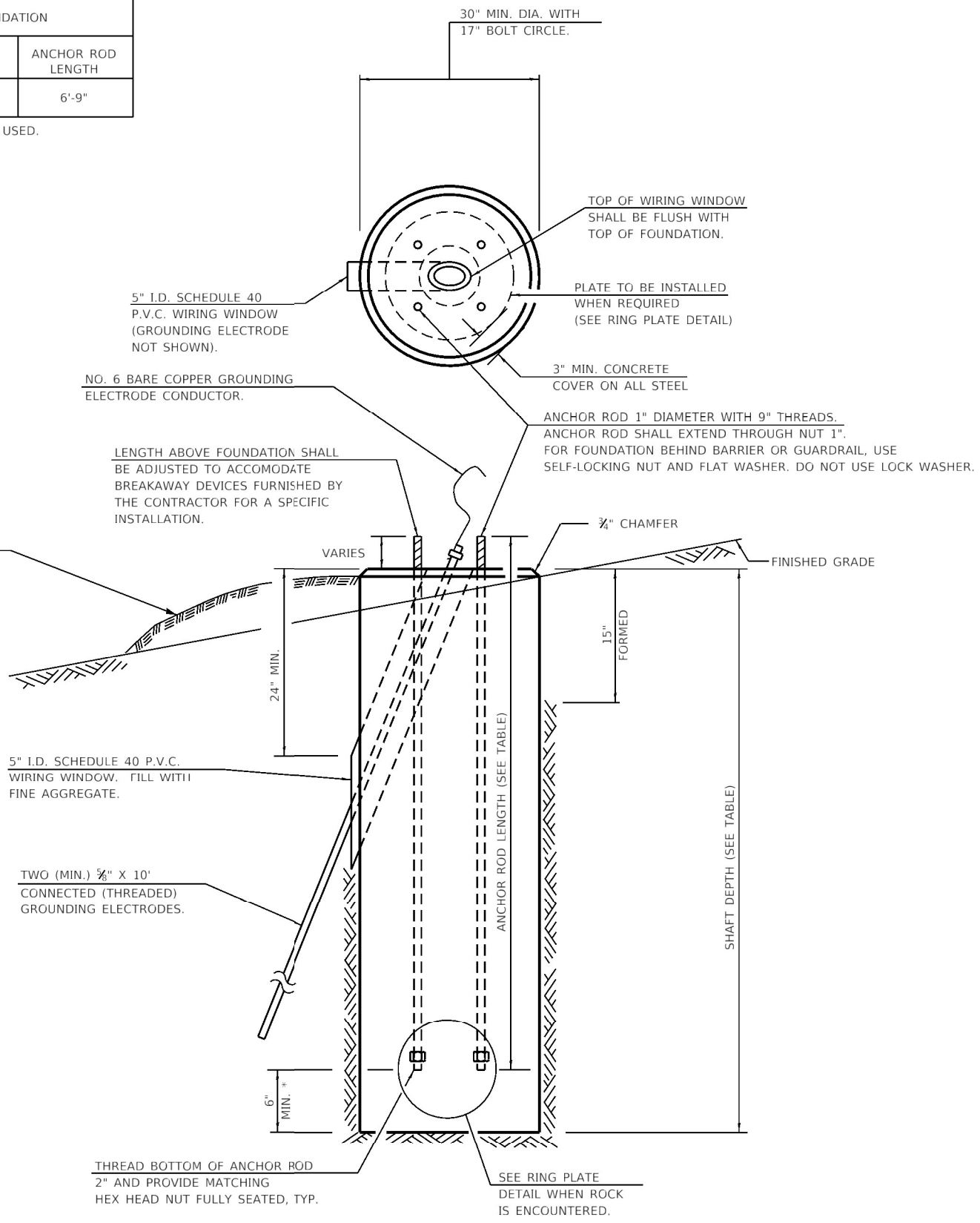
25TH STREET PUMP STATION
LIGHT POLE DETAILS

SCALE: NONE SHEET 1 OF 1 SHEETS STA. TO STA.

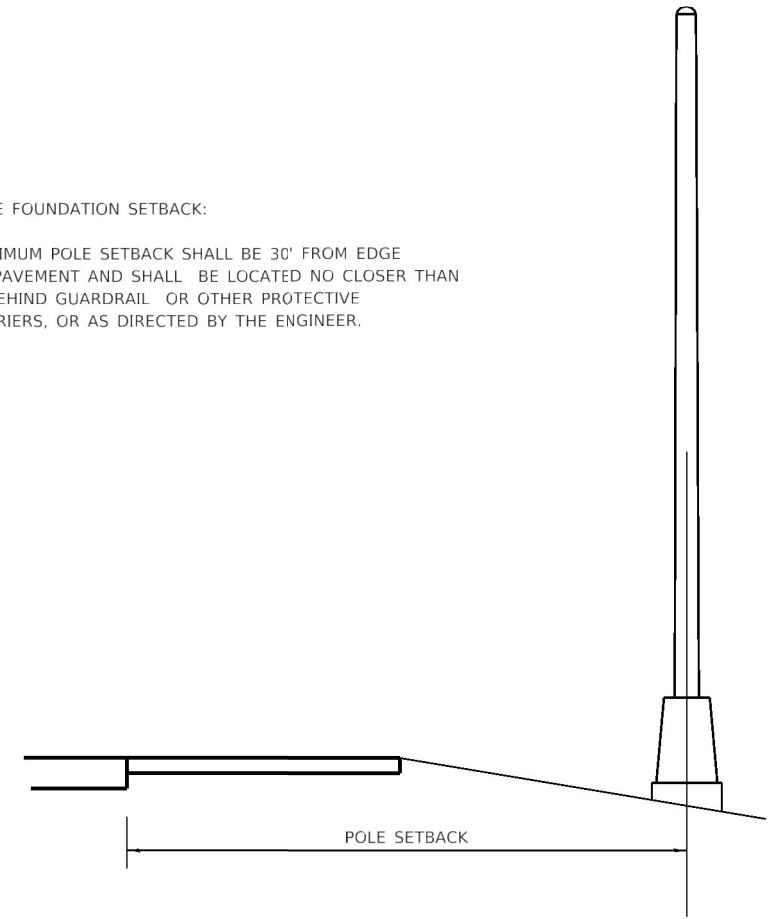
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CONTRACT NO. 76P08				
ILLINOIS FED. AID PROJECT				

CONCRETE FOUNDATION				
LIGHT POLE MOUNTING HEIGHT	BOLT CIRCLE DIAMETER	SHAFT DIAMETER	SHAFT DEPTH	ANCHOR ROD LENGTH
46'-50'	15"	30"	7'-0"	6'-9"

BOLT CIRCLE DIAMETER SHALL BE 17" WHEN A TRANSFORMER BASE IS USED.



POLE FOUNDATION SETBACK:
 MAXIMUM POLE SETBACK SHALL BE 30' FROM EDGE OF PAVEMENT AND SHALL BE LOCATED NO CLOSER THAN 5' BEHIND GUARDRAIL OR OTHER PROTECTIVE BARRIERS, OR AS DIRECTED BY THE ENGINEER.



GENERAL NOTES

ALL FOUNDATIONS ARE DESIGNED TO BE LOCATED ON SLOPES NOT EXCEEDING 2:1 WHERE SOILS HAVE AN UNCONFINED COMPRESSIVE STRENGTH OF AT LEAST 1.0 TSF. THE CONTRACTOR SHALL VERIFY THE SOIL STRENGTH DURING DRILLING FOR CONCRETE FOUNDATIONS OR BY MONITORING INSTALLATION RESISTANCE OF METAL FOUNDATIONS AND NOTIFY THE ENGINEER IF OTHER CONDITIONS ARE ENCOUNTERED.

WHEN ROCK IS ENCOUNTERED THE FOUNDATION DEPTH MAY BE REDUCED 6" FOR EVERY 12" OF EMBEDMENT IN ROCK. THE MINIMUM FOUNDATION DEPTH SHALL BE 4'-6" WITH CUT ANCHOR RODS 6" ABOVE BOTTOM OF EXCAVATED HOLE. SEE RING PLATE DETAIL.

ANCHOR RODS SHALL BE INCREASED IN DIAMETER AS NEEDED FOR 50' MOUNTING HEIGHT OR ABOVE. THE CONTRACTOR SHALL MATCH THE BREAKAWAY DEVICE SIZE OR SLOTTED HOLE SIZE IN THE POLE BASE PLATE TO ACCOMMODATE LARGER ROD SIZES.

TRANSFORMER BASES SHALL NOT BE USED ON METAL FOUNDATIONS.

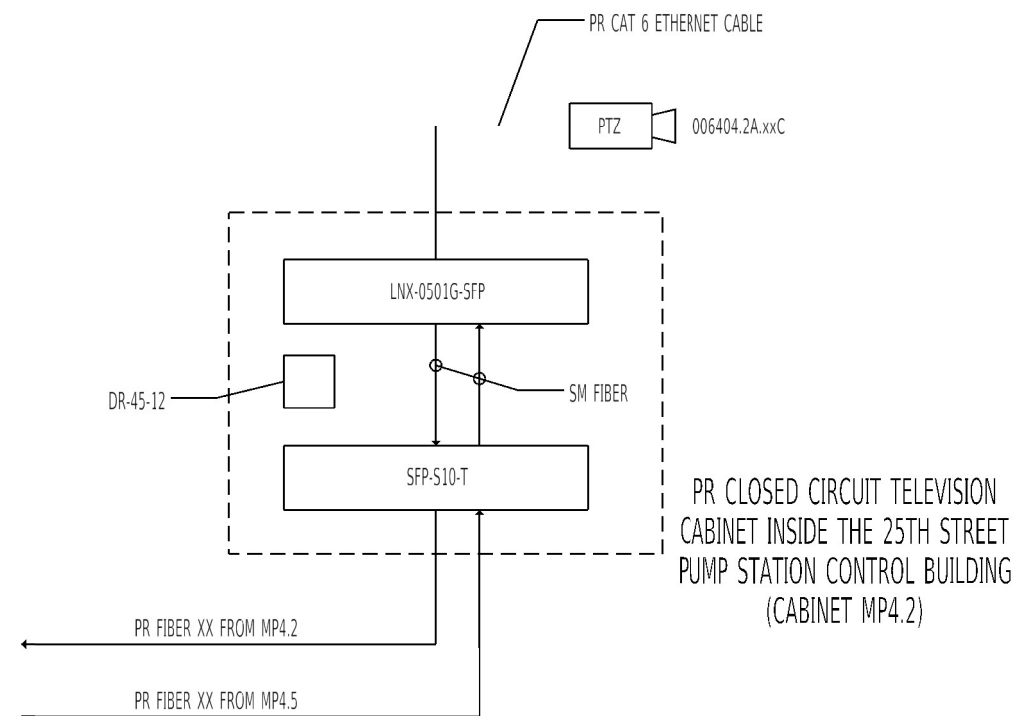
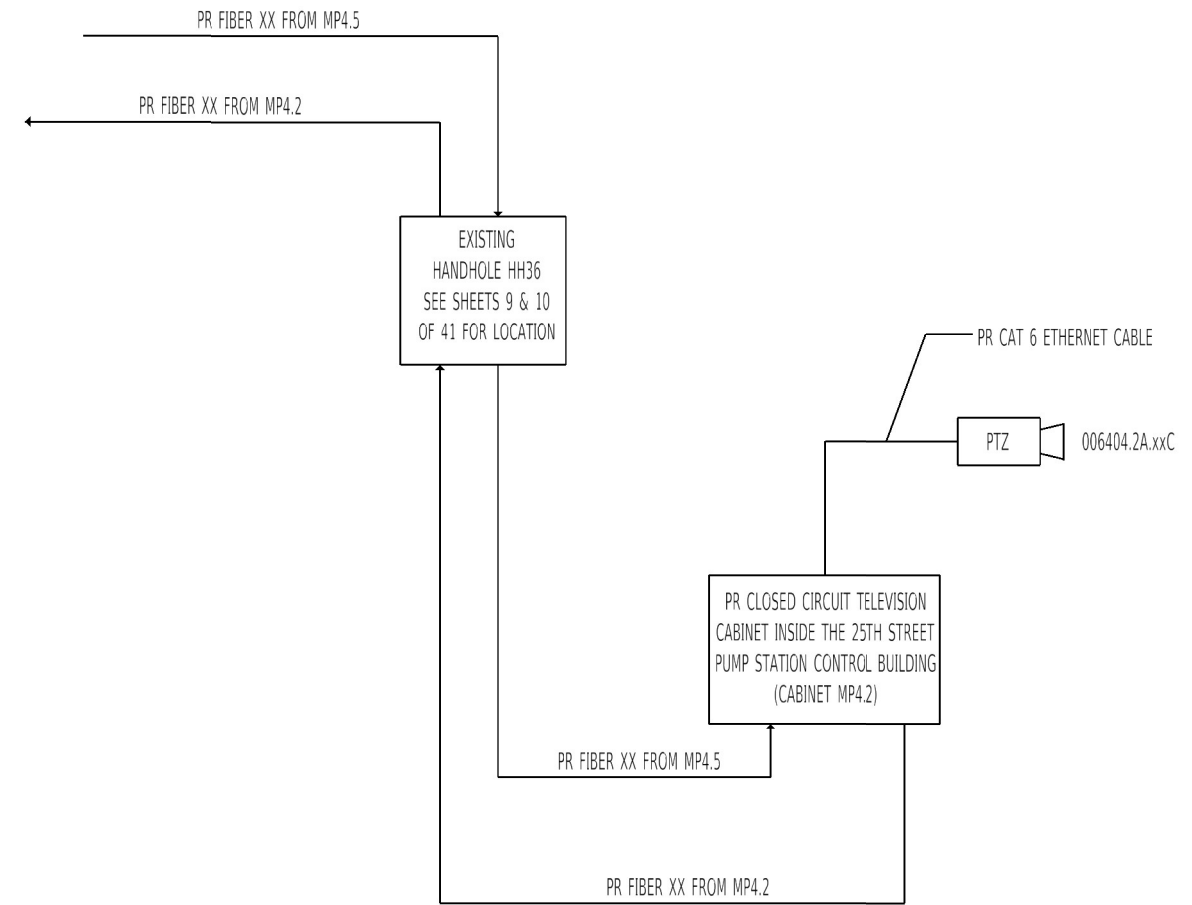
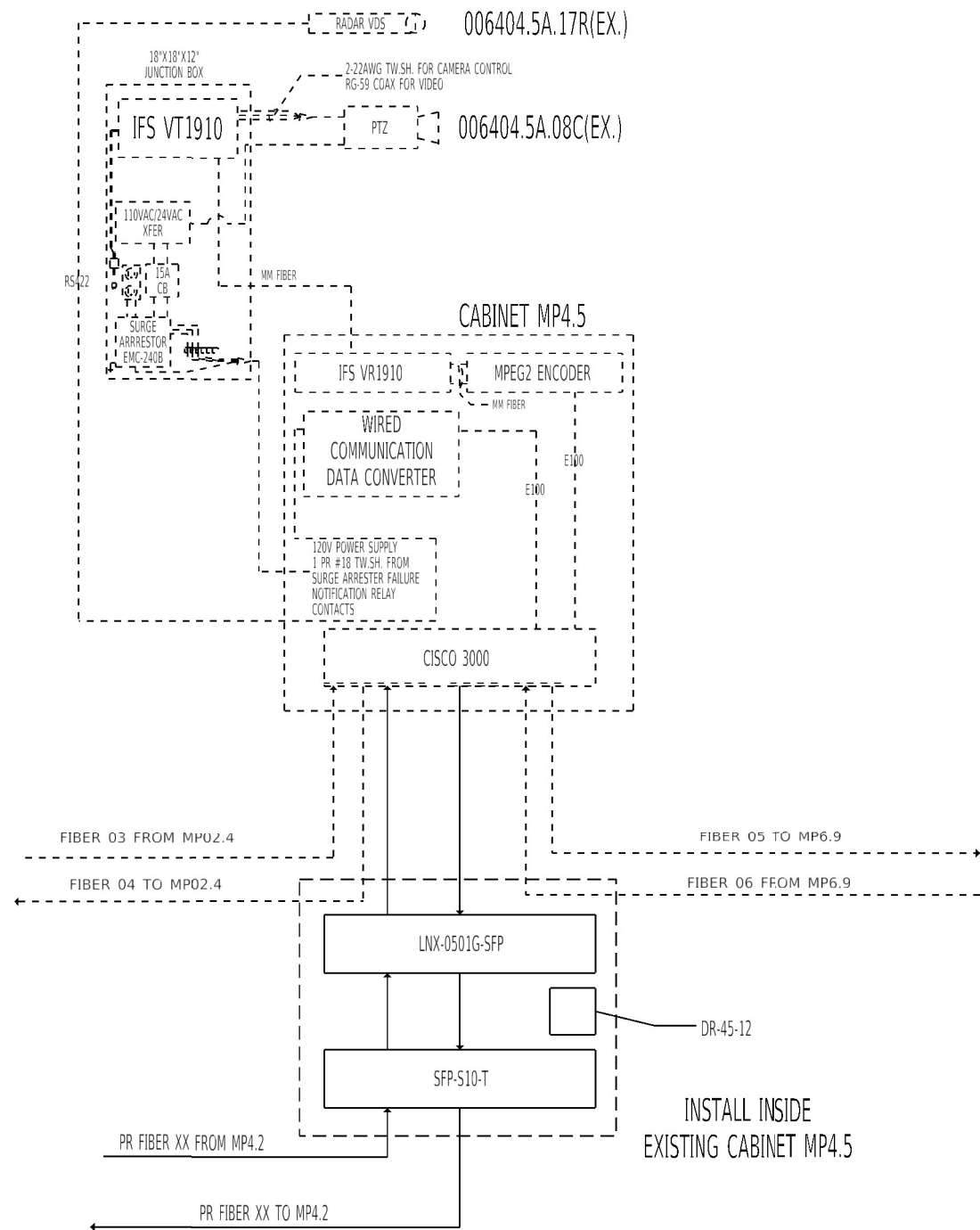
ALL DIMENSIONS ARE IN INCHES, UNLESS OTHERWISE SHOWN.

* IF THE REQUIRED ANCHOR ROD LENGTH ABOVE TOP OF FOUNDATION IS LESS THAN 3", ANCHOR RODS MAY BE LOWERED BELOW 6".

CONCRETE FOUNDATION

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KLINGNER & ASSOCIATES, P.C. Engineers • Architects • Surveyors 816 N. 24TH ST. QUINCY, ILLINOIS 62301 217.223.3570 STATE OF ILLINOIS DESIGN FIRM NO. 184-2738	USER NAME = oms	DESIGNED AMS	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	25TH STREET PUMP STATION LIGHT POLE FOUNDATION		F.A.U. RTE. 9228	SECTION (Z-1)PS-2, 29PS-2	COUNTY ST. CLAIR	TOTAL SHEETS 41	SHEET NO. 17
	PLOT SCALE = 40.0000' / in.	CHECKED EBB	REVISED -		SCALE: NONE	SHEET 1 OF 1 SHEETS	STA. TO STA.	ILLINOIS FED. AID PROJECT		CONTRACT NO. 76P08	
	PLOT DATE = 1/25/2022	DATE 12/21/2020	REVISED -								



INSTALL INSIDE EXISTING CABINET MP4.5

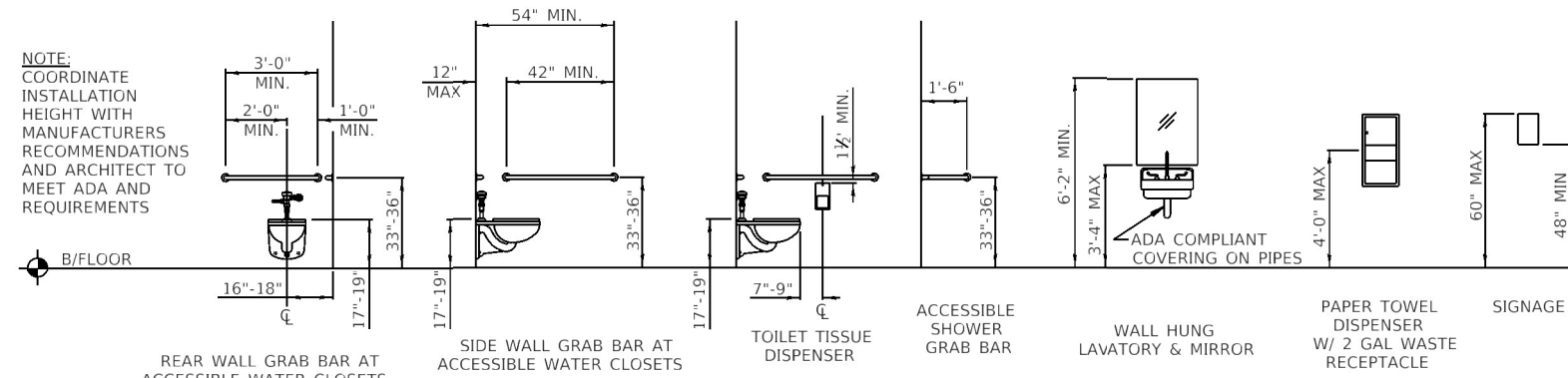
PR CLOSED CIRCUIT TELEVISION CABINET INSIDE THE 25TH STREET PUMP STATION CONTROL BUILDING (CABINET MP4.2)

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USER NAME = oms	DESIGNED AMS	REVISED -
PLOT SCALE = 40.0000' / in.	DRAWN AMS	REVISED -
PLOT DATE = 1/25/2022	CHECKED EBB	REVISED -
	DATE 3/23/2021	REVISED -

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
9228	(Z-1)PS-2, 29PS-2	ST. CLAIR	41	18
CONTRACT NO. 76P08				
ILLINOIS FED. AID PROJECT				

NOTE:
COORDINATE
INSTALLATION
HEIGHT WITH
MANUFACTURERS
RECOMMENDATIONS
AND ARCHITECT TO
MEET ADA AND
REQUIREMENTS



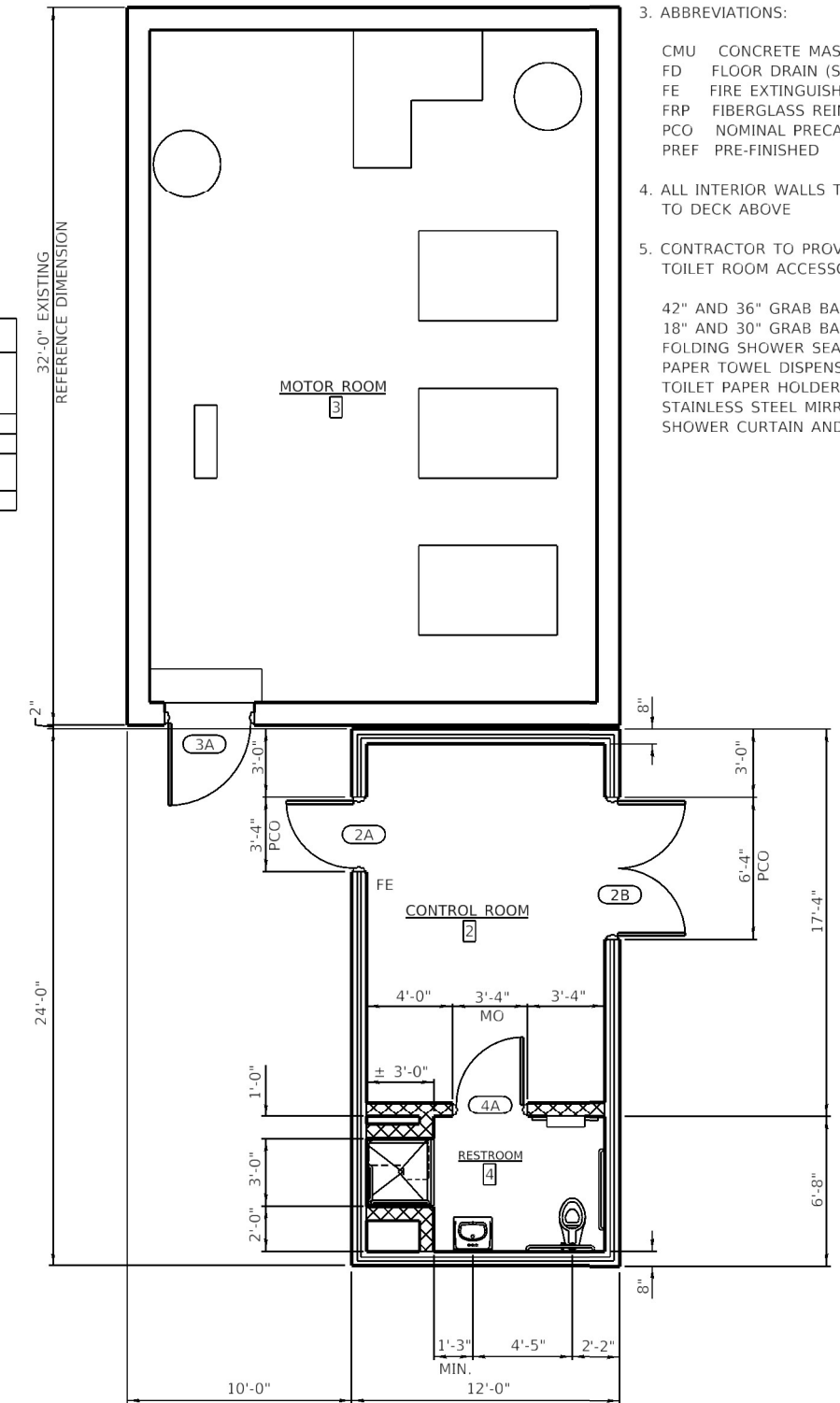
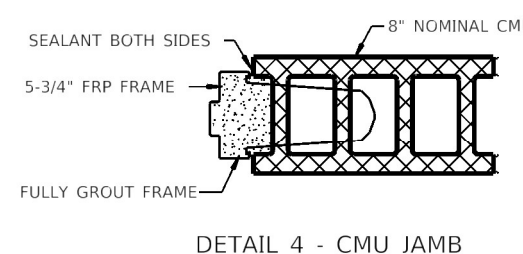
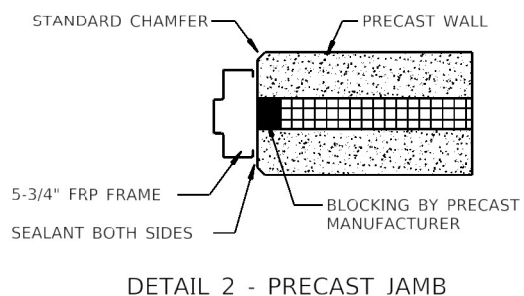
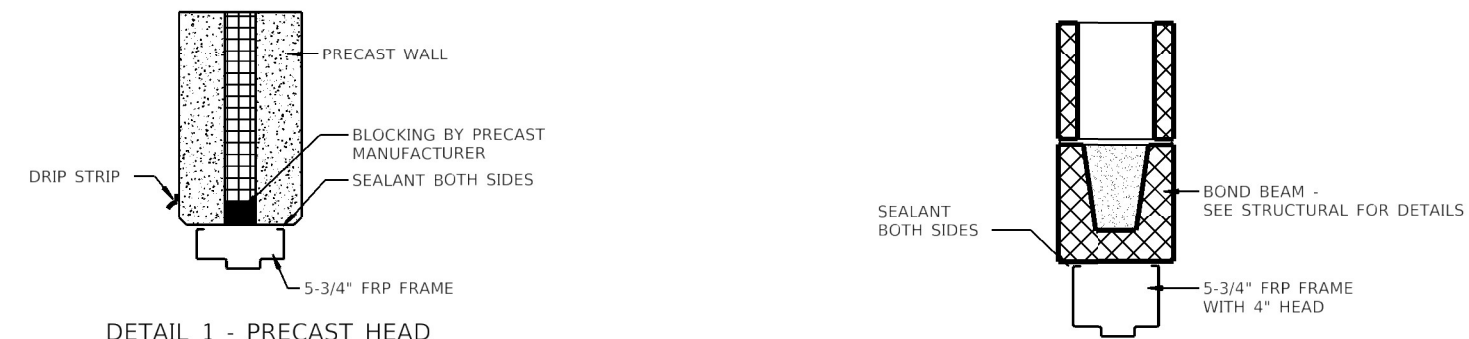
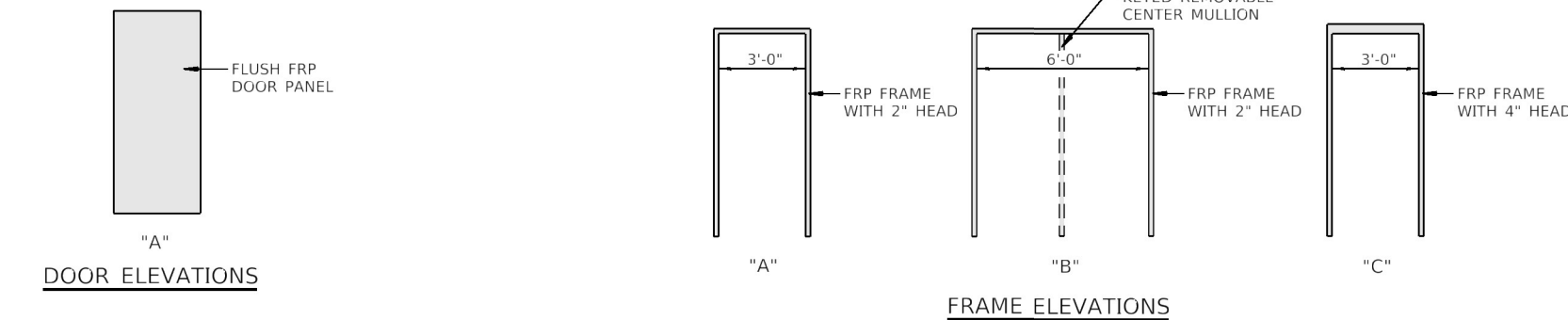
NOTE: WATER CLOSETS SHOWN ARE WALL-MOUNTED. ACTUAL TOILETS FOR PROJECT MAY VARY. USE FOR MOUNTING HEIGHTS ONLY.

ADA MOUNTING HEIGHTS

DOOR AND FRAME SCHEDULE

DOOR NUMBER	SIZE			TYPE	MATERIAL	FINISH	FRAME		DETAILS		FIRE RATING	* HARDWARE GROUP	DOOR NUMBER	REMARKS	
	WIDTH	HEIGHT	THICKNESS				TYPE	MATERIAL	FINISH	HEAD					JAMB
2A	3' - 0"	7' - 0"	1 3/4"	A	FRP	PREF	A	FRP	PREF	DETAIL 1	DETAIL 2	---	01	2A	
2B	6' - 0"	7' - 0"	1 3/4"	A	FRP	PREF	B	FRP	PREF	DETAIL 1	DETAIL 2	---	02	2B	
3A	3' - 8"	7' - 0"	1 3/4"	A	FRP	PREF	EXIST	EXIST	---	---	---	---	01	3A	EXISTING FRAME TO REMAIN - REPLACE DOOR AND HARDWARE ONLY
4A	3' - 0"	7' - 0"	1 3/4"	A	FRP	PREF	C	FRP	PREF	DETAIL 3	DETAIL 4	---	03	4A	

* SEE SPECIAL PROVISIONS



- GENERAL NOTES:
- CONTRACTOR SHALL FIELD VERIFY ALL EXISTING SITE CONDITIONS, INCLUDING SITE ACCESS, POWER SUPPLY, AND ANY OTHER ITEMS THAT AFFECT THE CONTRACT AND THE CONSTRUCTION OF THE IMPROVEMENT.
 - CONTRACTOR SHALL FIELD VERIFY ALL CONDITIONS AND DIMENSIONS PRIOR TO BEGINNING CONSTRUCTION.
 - ABBREVIATIONS:
 CMU CONCRETE MASONRY UNIT
 FD FLOOR DRAIN (SEE MECH. DWGS.)
 FE FIRE EXTINGUISHER - MOUNT 3'-10" TO TOP
 FRP FIBERGLASS REINFORCED POLYMER
 PCO NOMINAL PRECAST OPENING
 PREF PRE-FINISHED
 - ALL INTERIOR WALLS TO BE 8" CMU, FULL HEIGHT TO DECK ABOVE
 - CONTRACTOR TO PROVIDE AND INSTALL THE FOLLOWING TOILET ROOM ACCESSORIES:
 42" AND 36" GRAB BARS AT WATER CLOSET
 18" AND 30" GRAB BARS AT SHOWER
 FOLDING SHOWER SEAT
 PAPER TOWEL DISPENSER
 TOILET PAPER HOLDER
 STAINLESS STEEL MIRROR, 24"x36"
 SHOWER CURTAIN AND SHOWER ROD

MOTOR LEVEL FLOOR PLAN

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 STATE OF ILLINOIS DESIGN FIRM NO. 184-2738

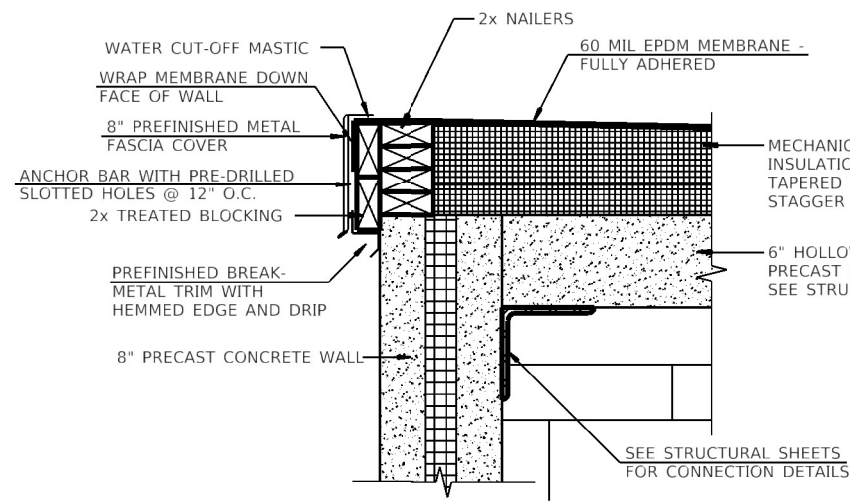
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	DRAWN CRC	REVISED -
PLOT SCALE = 8:0' = 1"	CHECKED AMS	REVISED -
PLOT DATE = 1/25/2022	DATE 12/21/2020	REVISED -

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

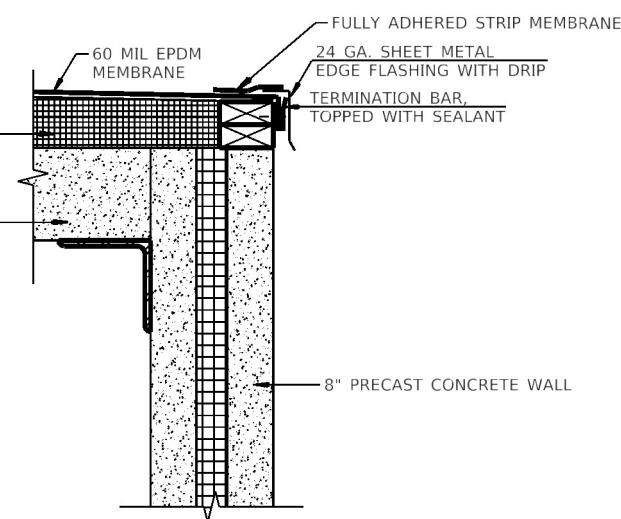
25TH STREET PUMP STATION
 ARCHITECTURAL PLAN AND DOOR SCHEDULE

SCALE: NONE SHEET 1 OF 1 SHEETS STA. TO STA.

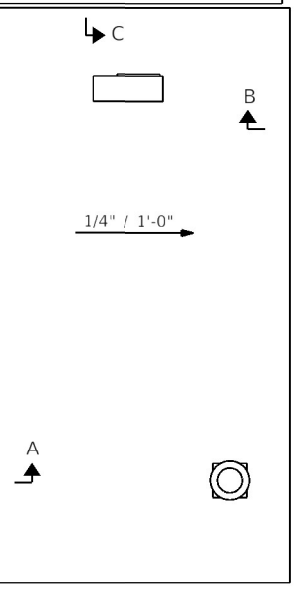
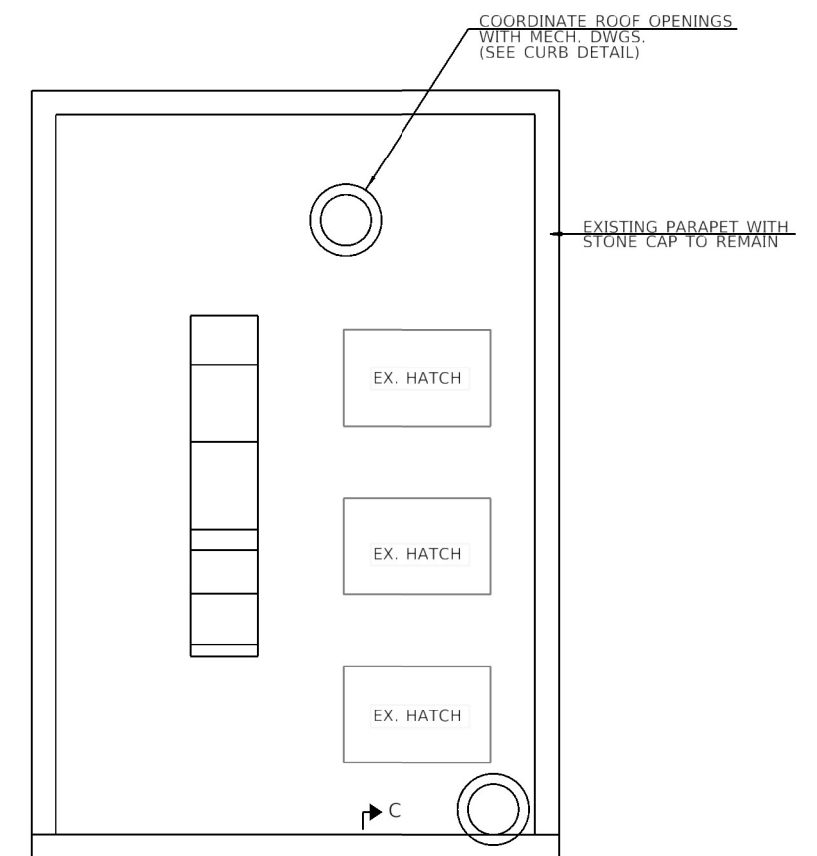
F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
9228	(2-1)PS-2, 29PS-2	ST. CLAIR	41	19
CONTRACT NO. 76P08				
ILLINOIS FED. AID PROJECT				



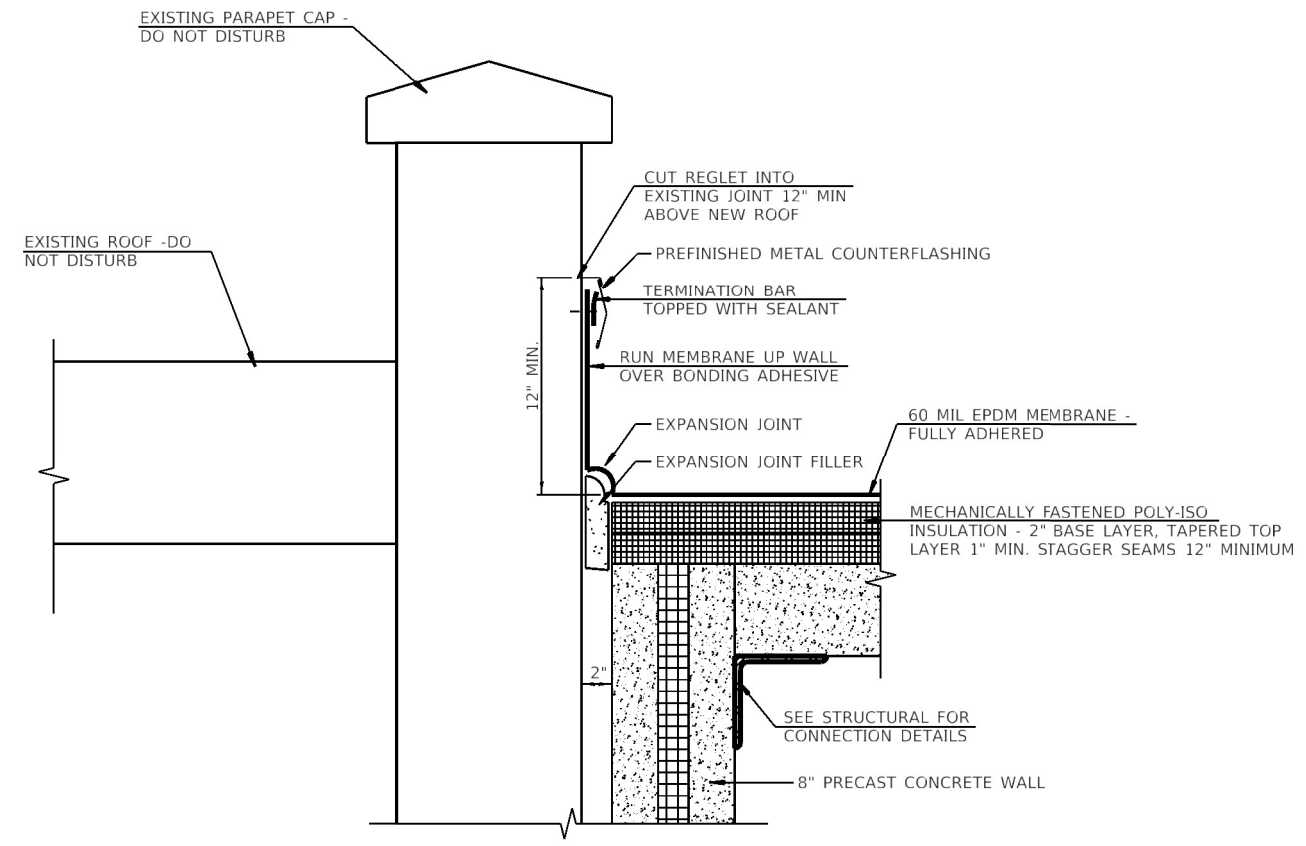
SECTION A-A
ROOF AT HIGH EAVE



SECTION B-B
ROOF AT LOW EAVE

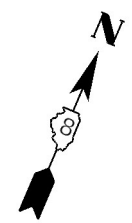


TYPICAL CURB DETAIL AT ROOF OPENINGS



SECTION C-C
ROOF AT EXISTING PARAPET

ROOF PLAN



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STATE OF ILLINOIS DESIGN FIRM NO. 184-2738

USER NAME = oms	DESIGNED CRC	REVISED -
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	DATE 12/21/2020	REVISED -

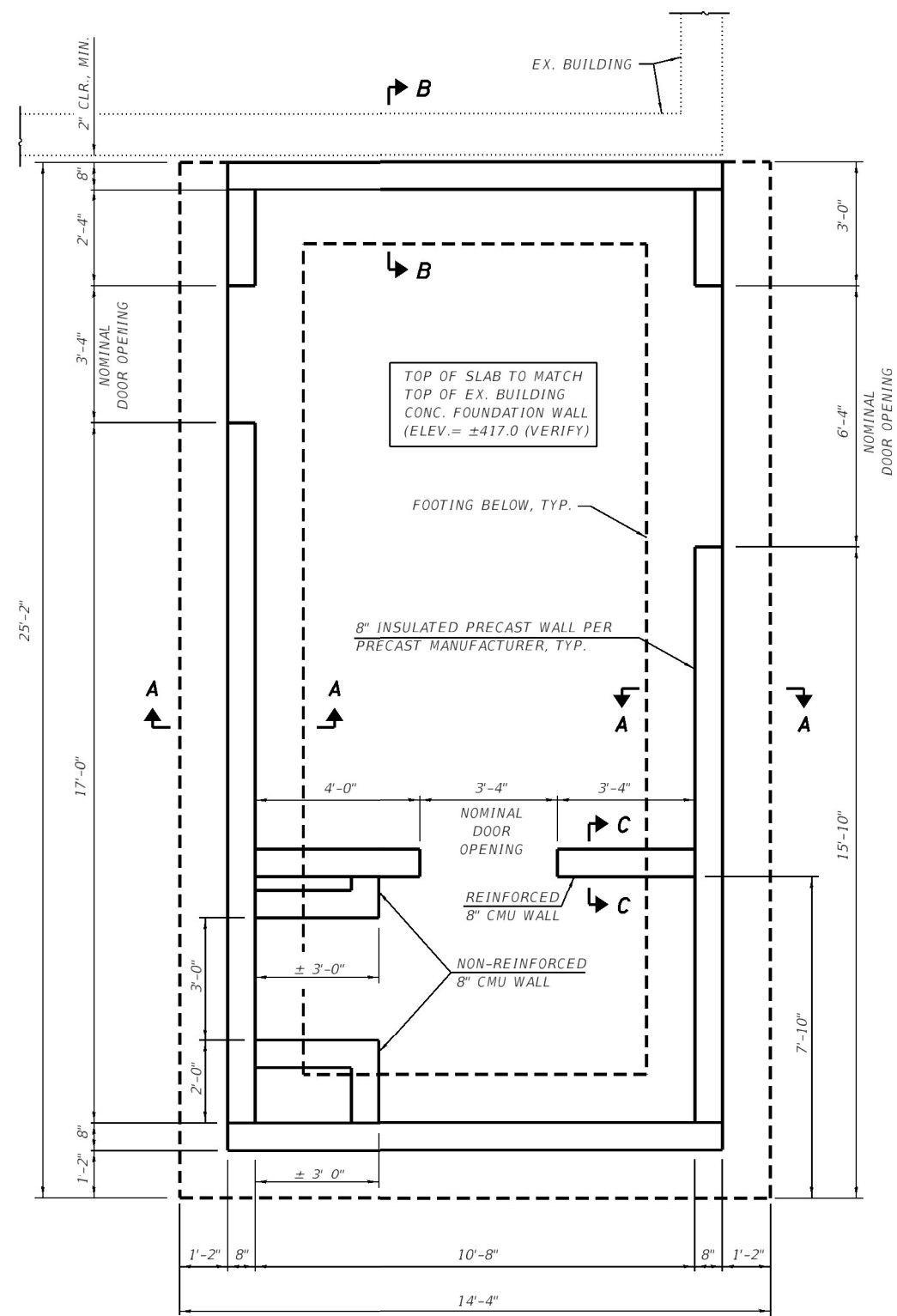
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

25TH STREET PUMP STATION
ARCHITECTURAL ROOF PLAN AND DETAILS

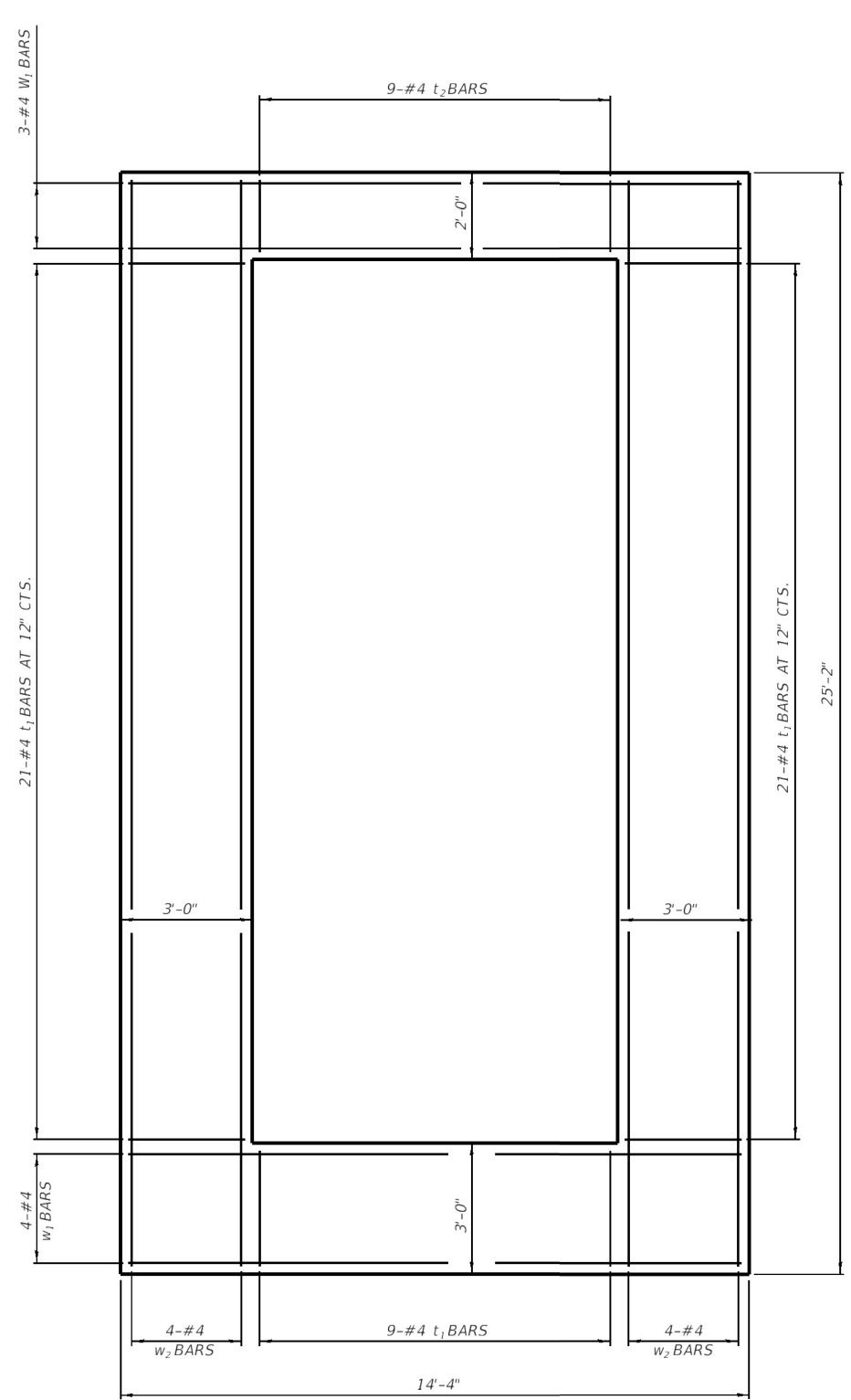
SCALE: NONE SHEET 1 OF 1 SHEETS STA. TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
9228	(Z-1)PS-2, 29PS-2	ST. CLAIR	41	20
CONTRACT NO. 76P08				
ILLINOIS FED. AID PROJECT				

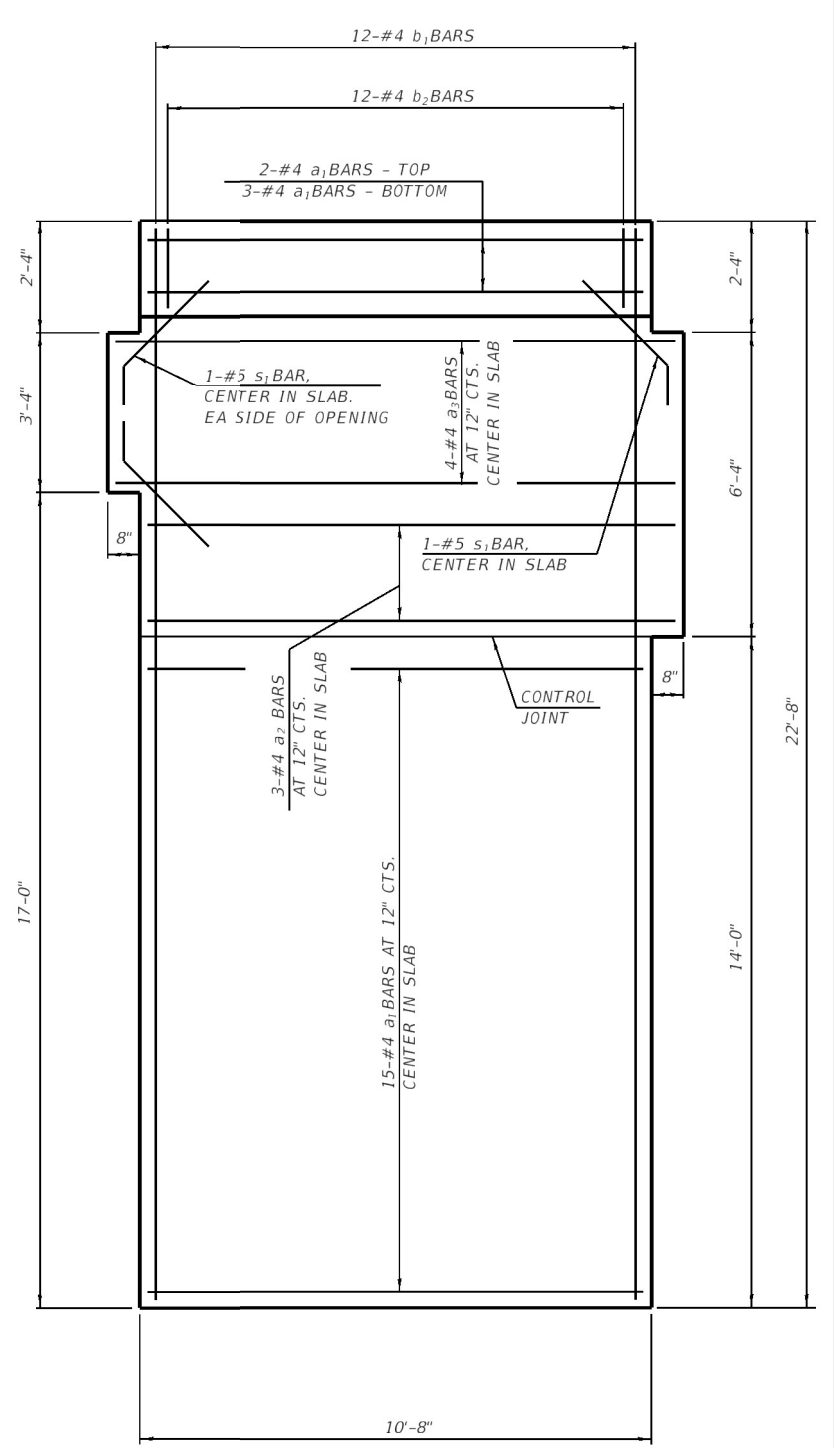
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FOUNDATION PLAN



FOOTING PLAN



SLAB PLAN

NOTES:

1. SEE SHEET 25 OF 41 FOR SECTIONS A-A, B-B AND C-C.
2. SEE SHEET 25 OF 41 FOR BILL OF MATERIAL.
3. INSULATED PRECAST CONCRETE WALL MANUFACTURER SHALL SUBMIT COMPLETE DESIGN CALCULATIONS AND SHOP DRAWINGS, SEALED BY AN ILLINOIS LICENSED STRUCTURAL ENGINEER.
4. COST OF PRECAST CONCRETE WALL PANELS SHALL BE INCLUDED IN THE LUMP SUM COST OF "PRECAST PUMP STATION BUILDING".



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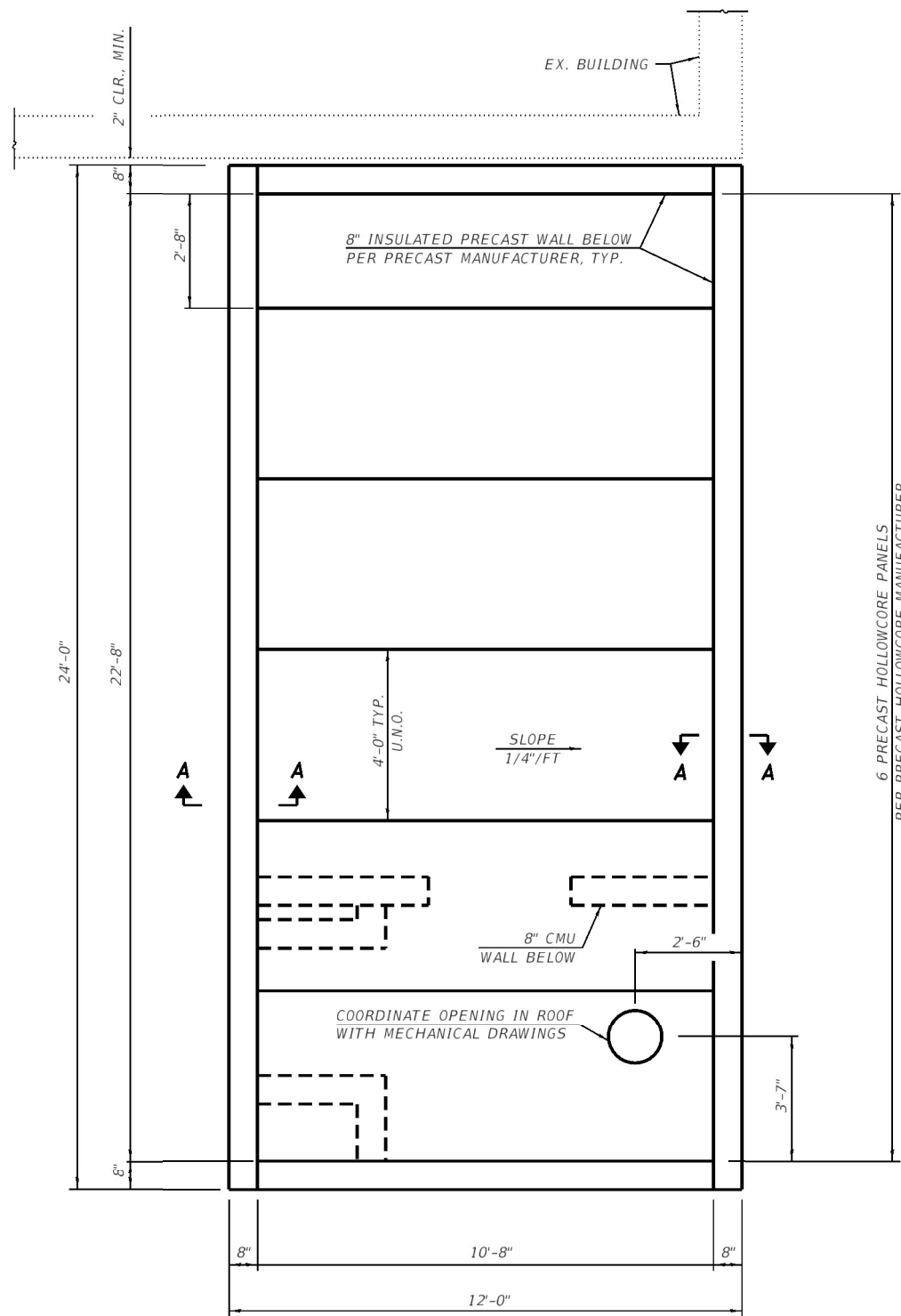
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PLOT DATE = 1/25/2022	DATE 12/21/2020	REVISED -

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

25TH STREET PUMP STATION
 PROPOSED FOUNDATION AND SLAB PLANS

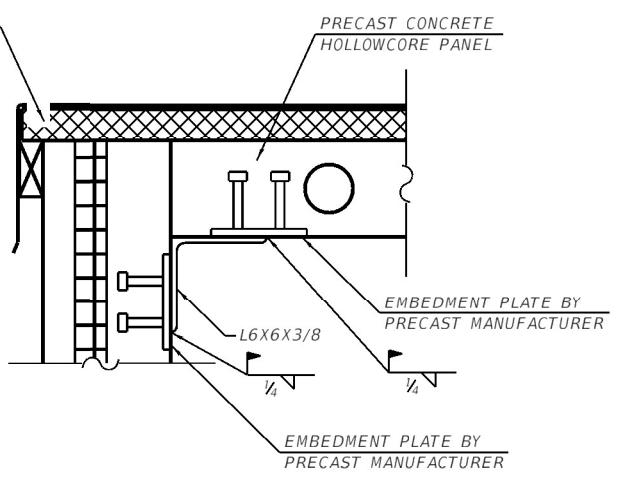
SCALE: NONE SHEET 1 OF 1 SHEETS STA. TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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CONTRACT NO. 76P08				
ILLINOIS FED. AID PROJECT				

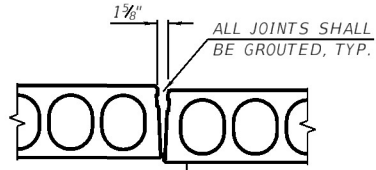


ROOF FRAMING PLAN

SEE ARCH. DWGS FOR ROOF DETAILS SHEETS 19 AND 20 OF 41



SECTION A-A

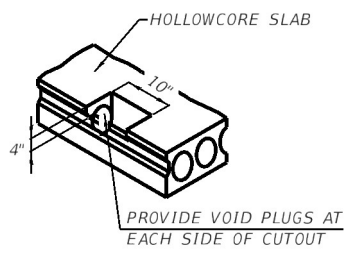


LEVEL SLABS BY JACKING THE "LOW" SLAB FROM BELOW (JACK AT SLAB JOINTS ONLY)

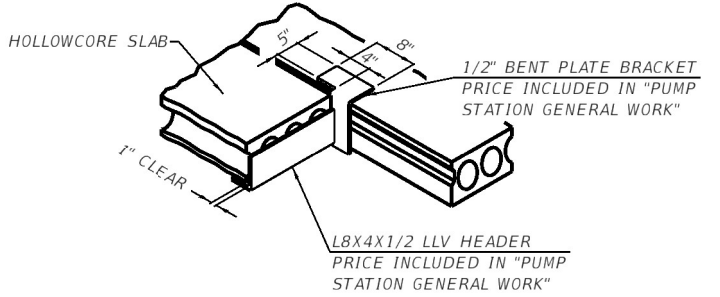
GROUTING PROCEDURE

1. 3 TO 1 RATIO - SAND TO CEMENT - WITH ENOUGH WATER FOR STIFF CONSISTENCY
2. FILL JOINTS COMPLETELY WITH GROUT.
3. 1 HOUR AFTER GROUTING, WIPE UNDERSIDE OF JOINT WITH BURLAP.

TYPICAL HOLLOWCORE JOINT DETAIL



TYPICAL CUTOUT DETAIL



TYPICAL HEADER DETAIL

- NOTES:
1. PRECAST CONCRETE HOLLOWCORE MANUFACTURER SHALL SUBMIT COMPLETE DESIGN CALCULATIONS AND SHOP DRAWINGS, SEALED BY AN ILLINOIS LICENSED STRUCTURAL ENGINEER.
 2. PRECAST CONCRETE HOLLOWCORE SHALL BE DESIGNED FOR:
 - * DEAD LOAD = 20 PSF (NOT INCLUDING SELF WEIGHT)
 - * LIVE LOAD = 25 PSF
 3. COST OF PRECAST CONCRETE HOLLOWCORE AND ALL REQUIRED CONNECTIONS SHALL BE INCLUDED IN THE LUMP SUM COST OF "PRECAST PUMP STATION BUILDING".

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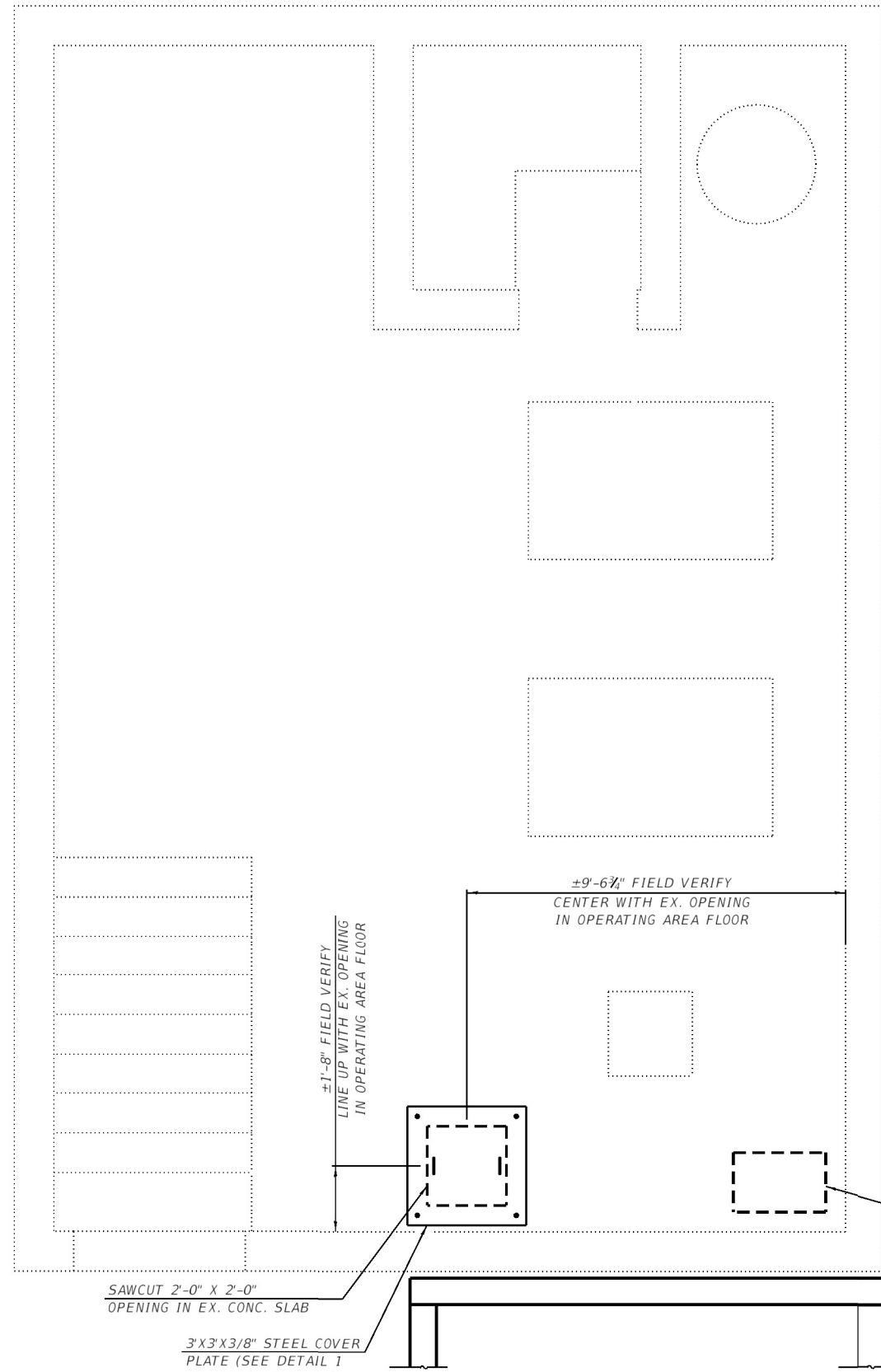
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PLOT SCALE = 4.0000' / 1" =	CHECKED EBB	REVISED -
PLOT DATE = 1/25/2022	DATE 12/21/2020	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

25TH STREET PUMP STATION PROPOSED ROOF FRAMING PLAN			
SCALE: NONE	SHEET 1 OF 1 SHEETS	STA. TO STA.	

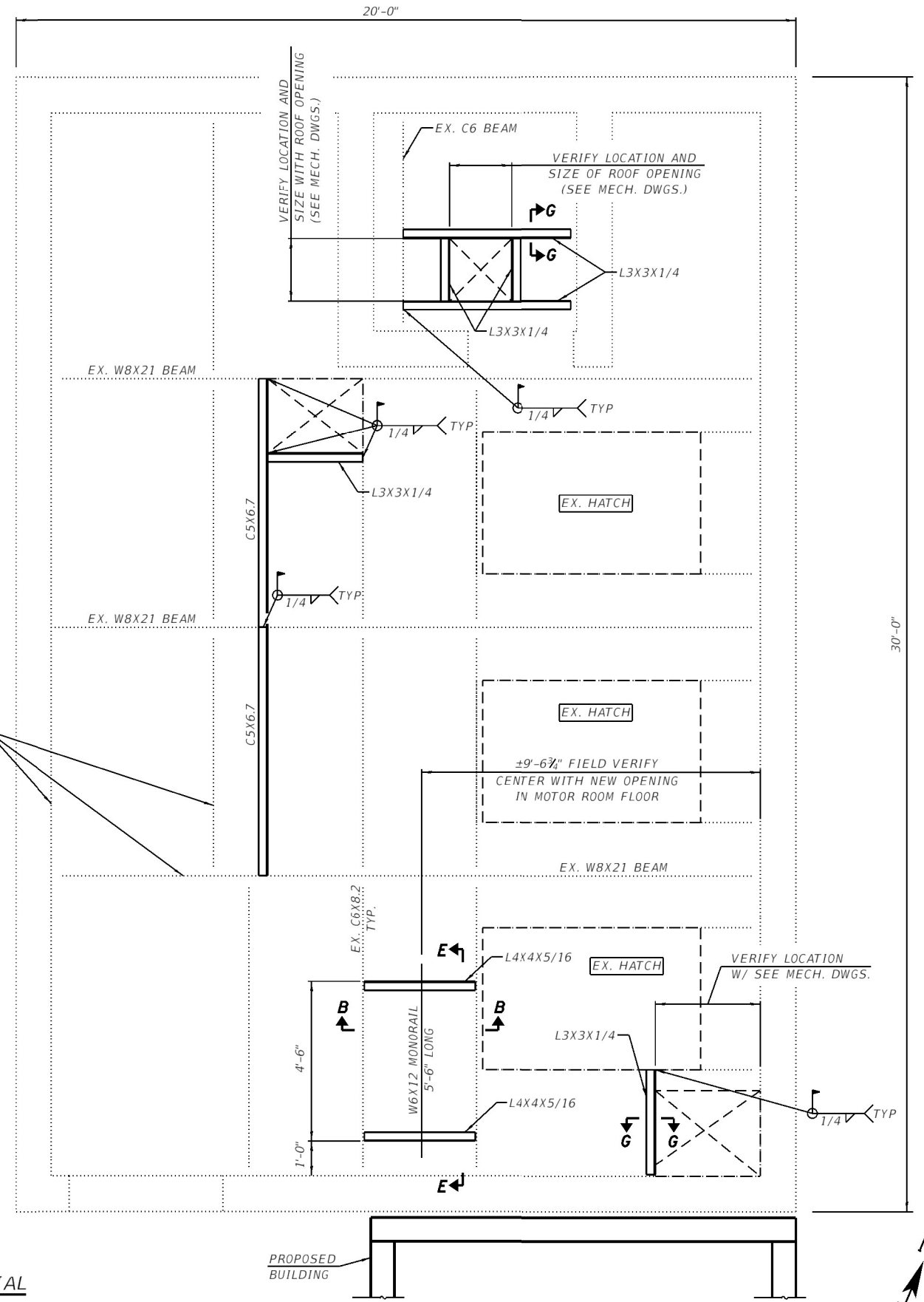
F.A.U. RTE. 9228	SECTION (Z-1)PS-2, 29PS-2	COUNTY ST. CLAIR	TOTAL SHEETS 41	SHEET NO. 22
CONTRACT NO. 76P08				ILLINOIS FED. AID PROJECT

- NOTE:
- EXISTING PAINT SHALL BE TESTED FOR LEAD, PRIOR TO CLEANING AND PAINTING STRUCTURAL STEEL. (TOTAL AREA = 450 SQ. FT.)
 - SEE SHEET 26 OF 41 FOR DETAIL 1 AND SECTIONS B-B AND E-E.
 - COORDINATE ALL DUCT OPENINGS IN ROOF WITH MECHANICAL DRAWINGS.



EXISTING PUMP STATION BUILDING MOTOR ROOM FLOOR PLAN

CLEAN AND PAINT EX. CEILING PERIMETER LEDGE ANGLES AND EX. STEEL ROOF FRAMING COST INCLUDED IN "CLEANING AND PAINTING STRUCTURAL STEEL, LOCATION 1, TYP. (TOTAL AREA = 450 SQ. FT.)"



EXISTING PUMP STATION BUILDING ROOF FRAMING PLAN

BILL OF MATERIAL

CONCRETE REMOVAL	CU YD	0.2
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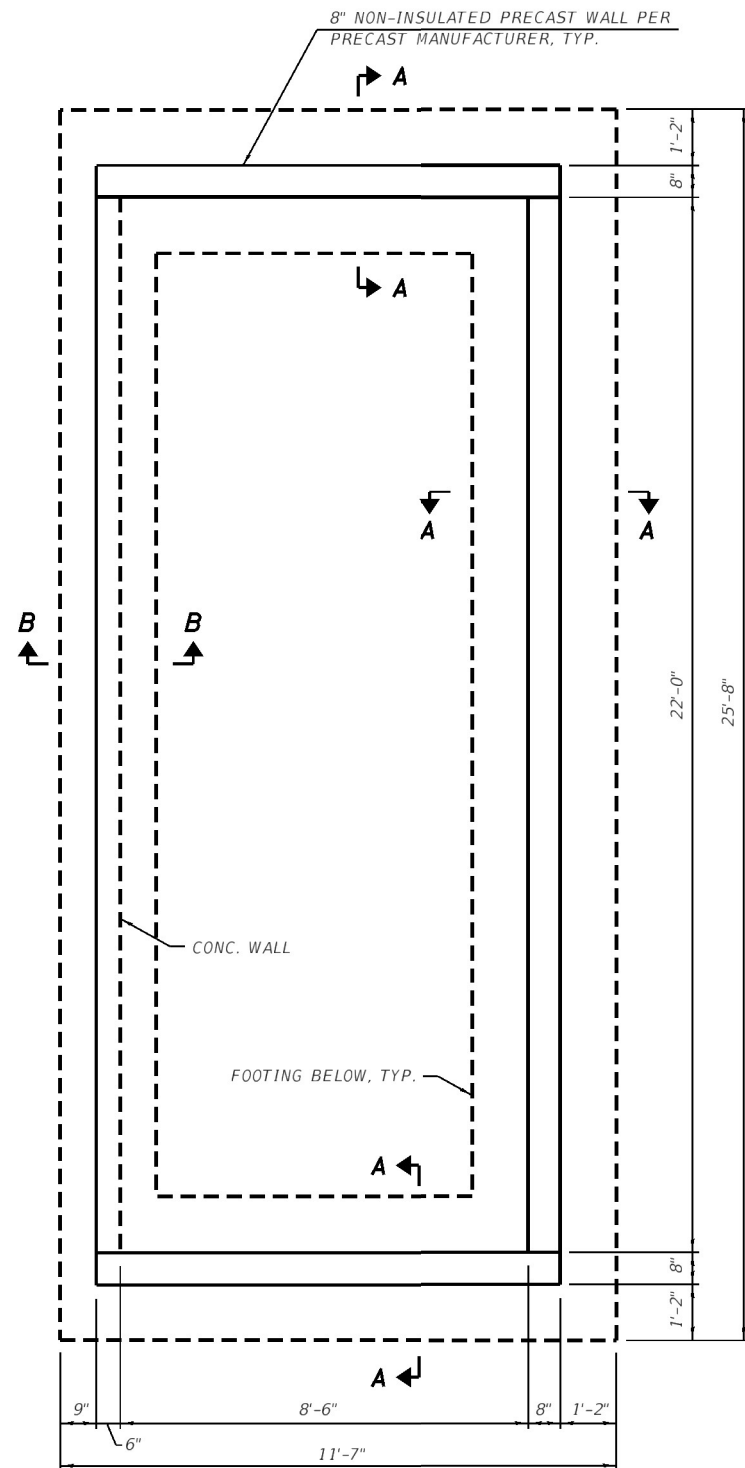
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 STATE OF ILLINOIS DESIGN FIRM NO. 184-2738

USER NAME = oms	DESIGNED AMS	REVISED -
PLOT SCALE = 4.0000' / 1" =	DRAWN AMS	REVISED -
PLOT DATE = 1/25/2022	CHECKED EBB	REVISED -
	DATE 12/21/2020	REVISED -

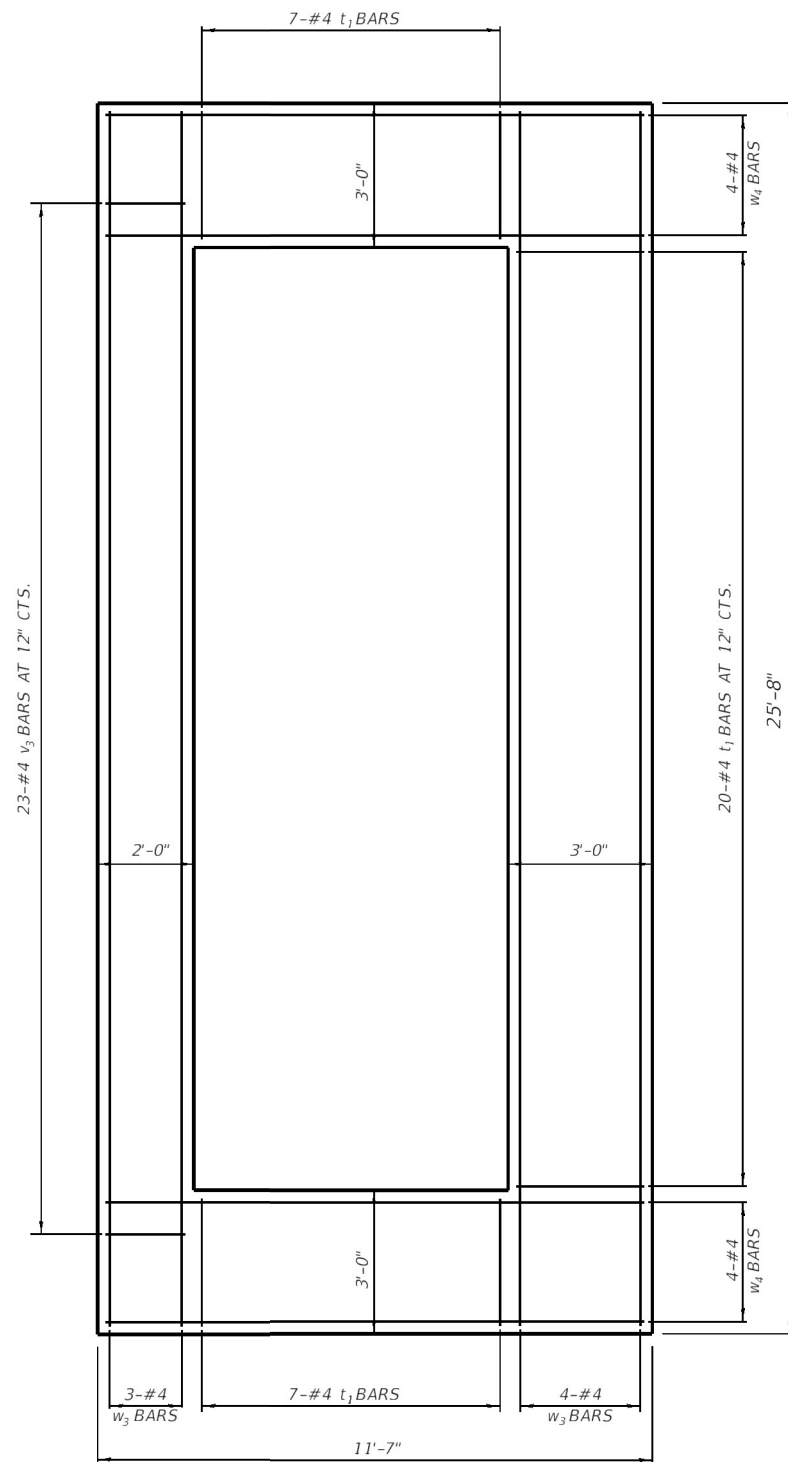
STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

25TH STREET PUMP STATION
 EXISTING PUMP STATION BUILDING PLANS
 SCALE: NONE SHEET 1 OF 1 SHEETS STA. TO STA.

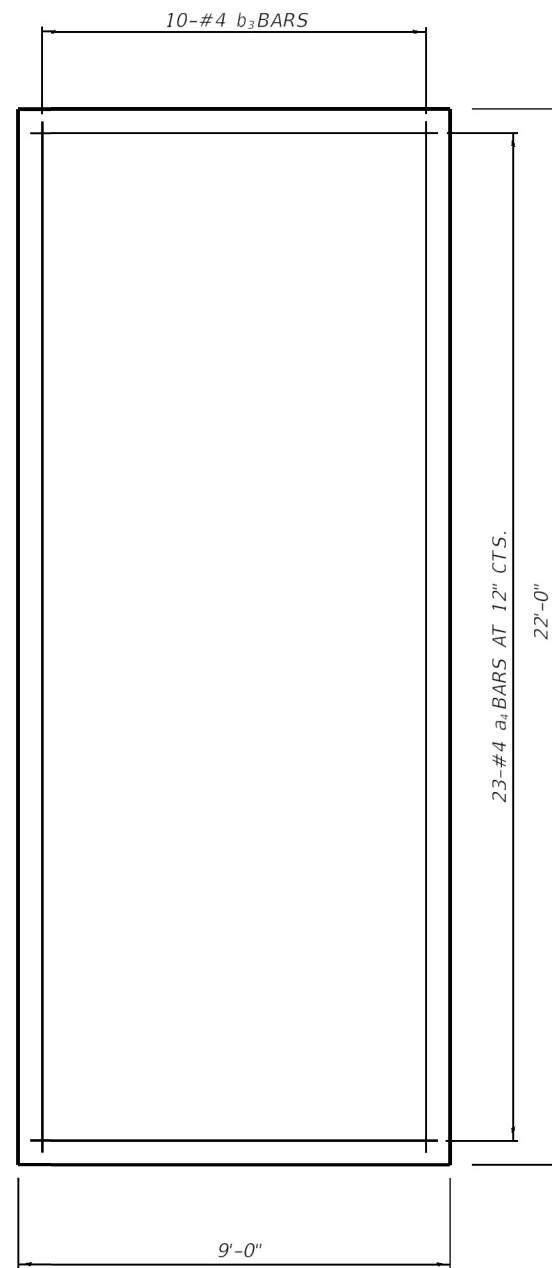
F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
9228	(Z-1)PS-2, 29PS-2	ST. CLAIR	41	23
CONTRACT NO. 76P08				
ILLINOIS FED. AID PROJECT				



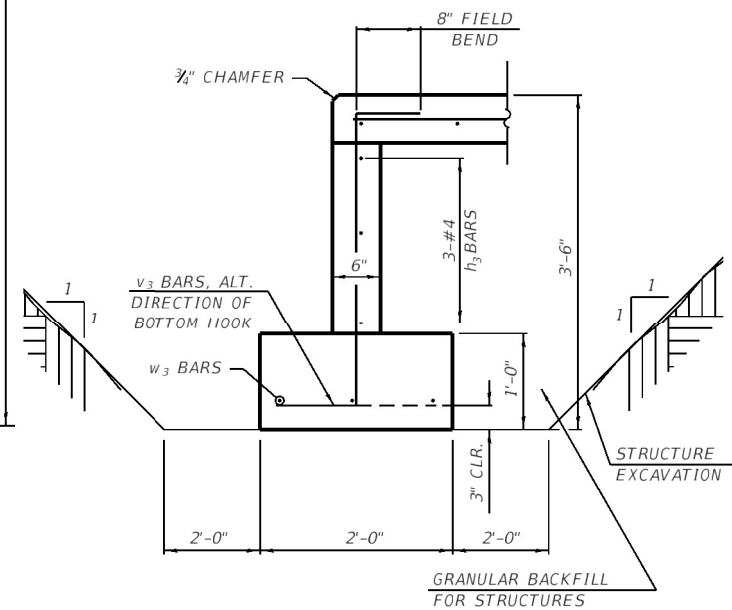
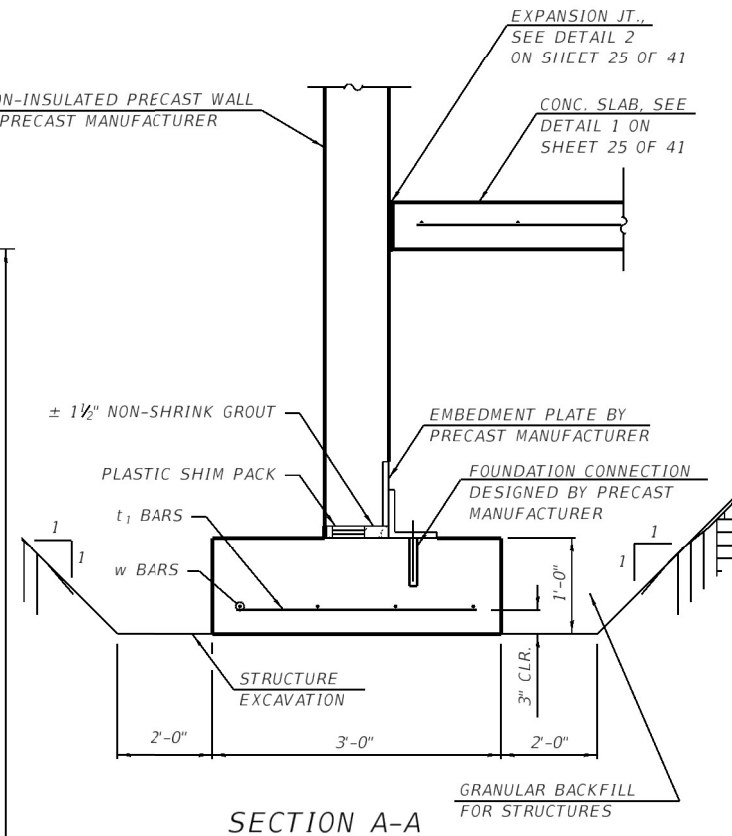
GENERATOR PAD FOUNDATION PLAN



GENERATOR PAD FOOTING PLAN



GENERATOR PAD SLAB PLAN



NOTES:

- SEE SHEET 25 OF 41 FOR BILL OF MATERIAL.
- PRECAST CONCRETE WALL MANUFACTURER SHALL SUBMIT COMPLETE DESIGN CALCULATIONS AND SHOP DRAWINGS, SEALED BY AN ILLINOIS LICENSED STRUCTURAL ENGINEER.

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USER NAME = oms	DESIGNED AMS	REVISED -
PLOT SCALE = 4.0000' / 1" =	DRAWN AMS	REVISED -
PLOT DATE = 1/25/2022	CHECKED EBB	REVISED -
	DATE 12/21/2020	REVISED -

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

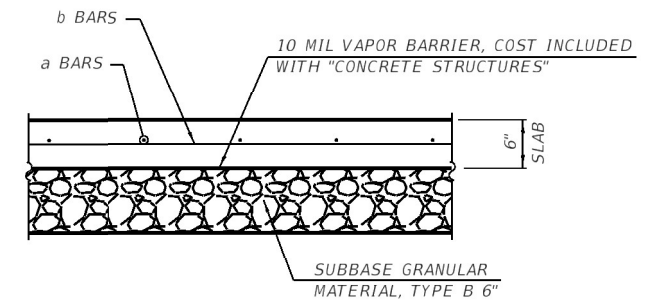
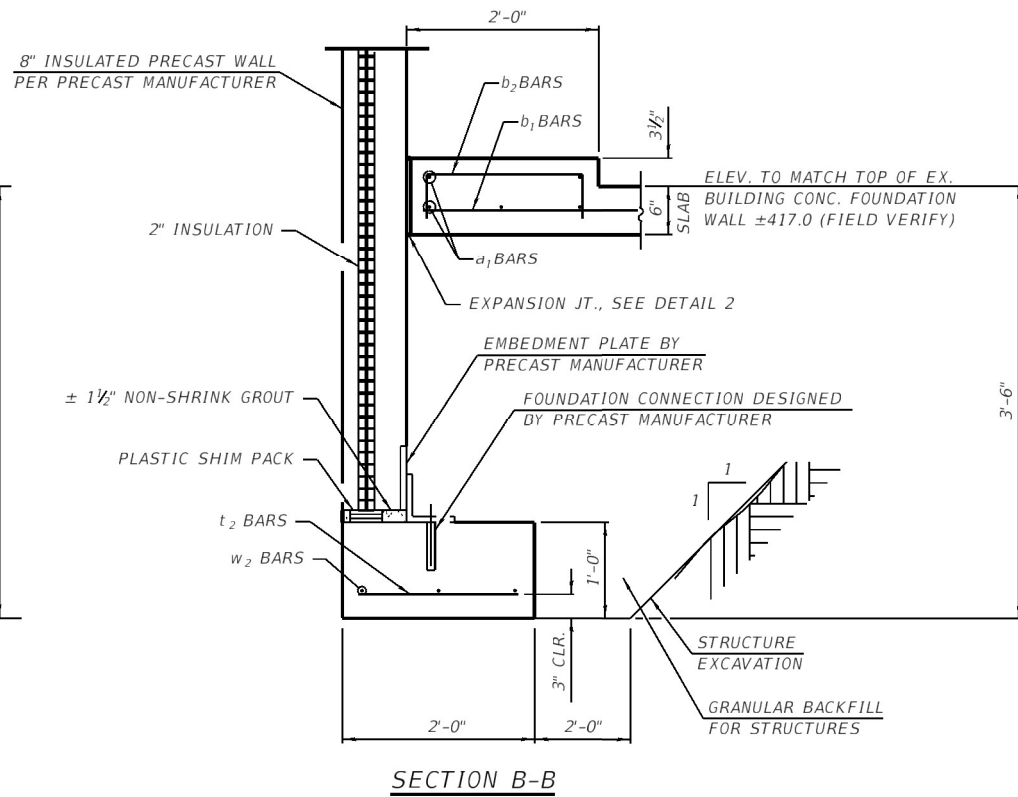
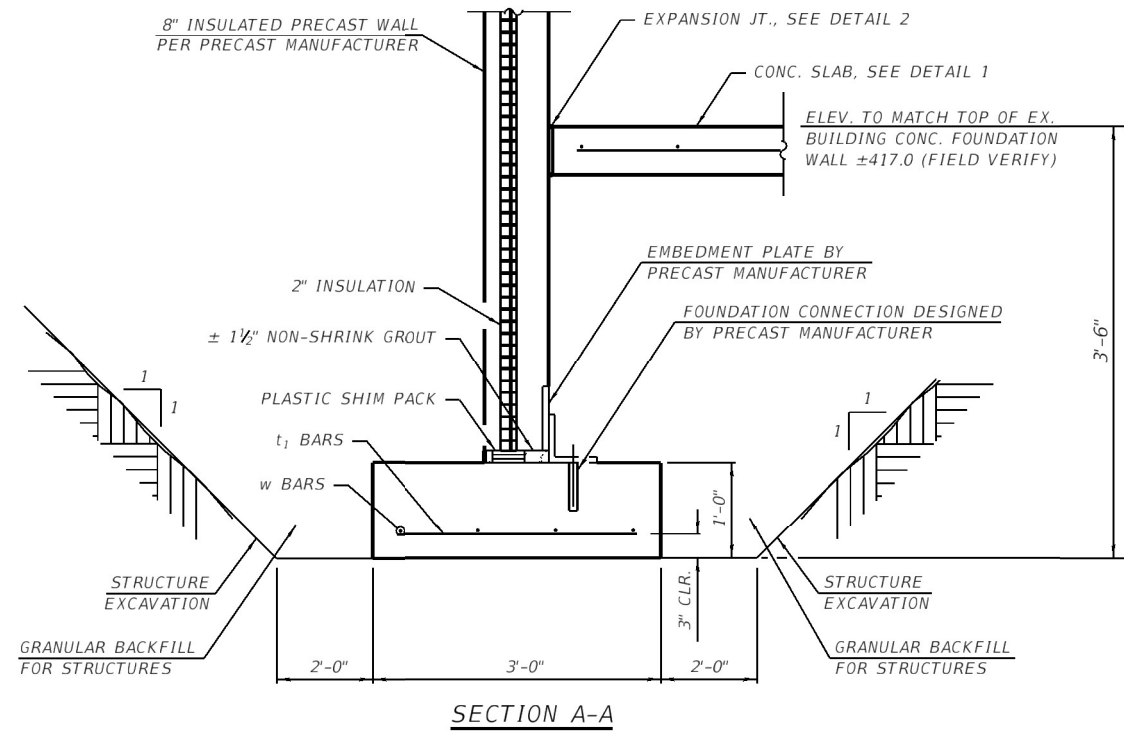
25TH STREET PUMP STATION
 PROPOSED GENERATOR FOUNDATION AND SLAB PLAN

SCALE: NONE SHEET 1 OF 1 SHEETS STA. TO STA.

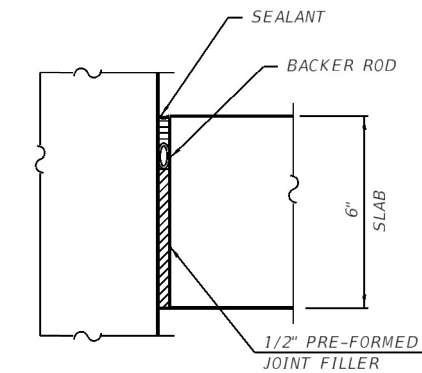
F.A.U. RTE. 9228	SECTION (Z-1)PS-2, 29PS-2	COUNTY ST. CLAIR	TOTAL SHEETS 41	SHEET NO. 24
CONTRACT NO. 76P08				ILLINOIS FED. AID PROJECT

NOTES:

1. INSULATED PRECAST CONCRETE WALL MANUFACTURER SHALL SUBMIT COMPLETE DESIGN CALCULATIONS AND SHOP DRAWINGS, SEALED BY AN ILLINOIS LICENSED STRUCTURAL ENGINEER.
2. COST OF PRECAST CONCRETE WALL PANELS AND ACCESORIES SHALL BE INCLUDED IN THE LUMP SUM COST OF "PRECAST PUMP STATION BUILDING".



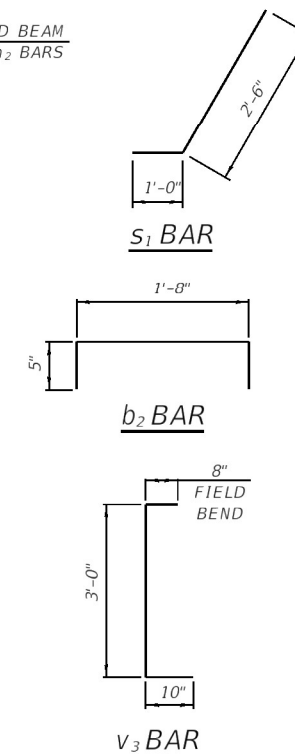
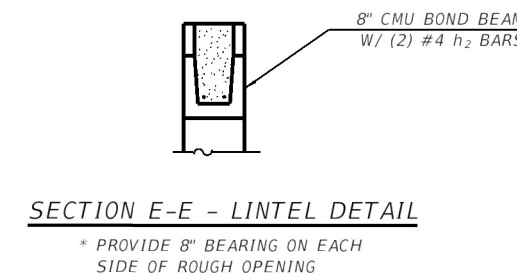
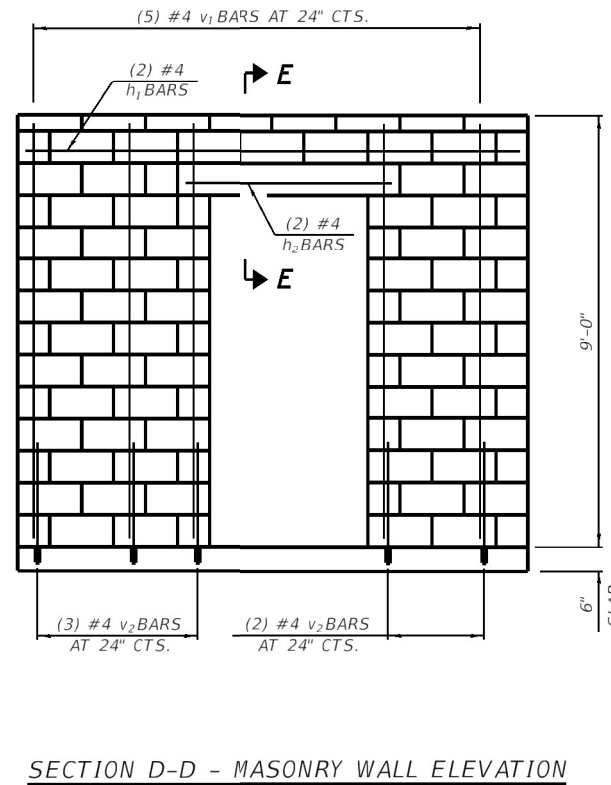
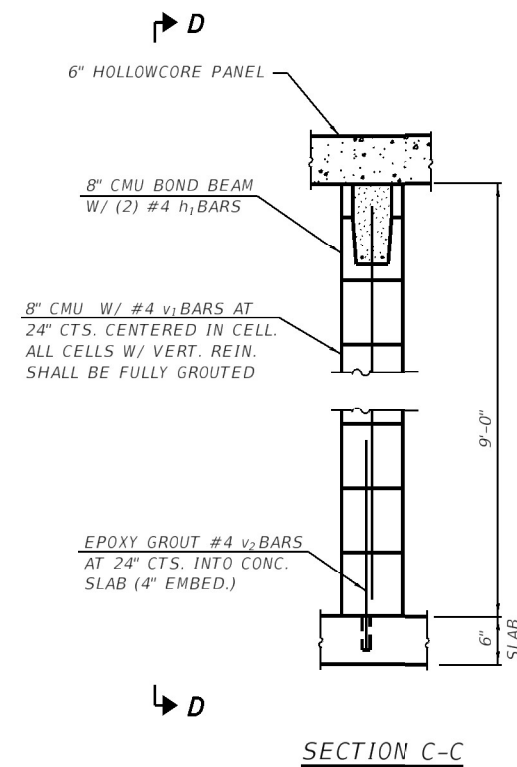
DETAIL 1 - 6" SLAB SECTION



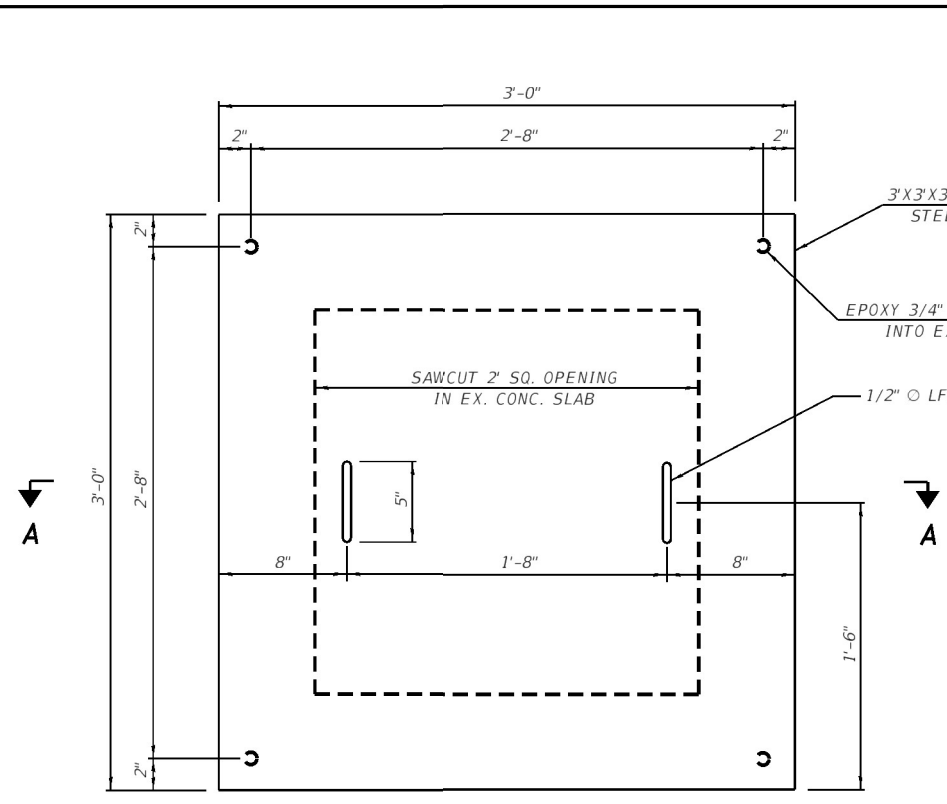
* COST OF SEALANT, BACKER ROD AND JOINT FILLER INCLUDED IN "CONCRETE STRUCTURE".

BILL OF MATERIAL

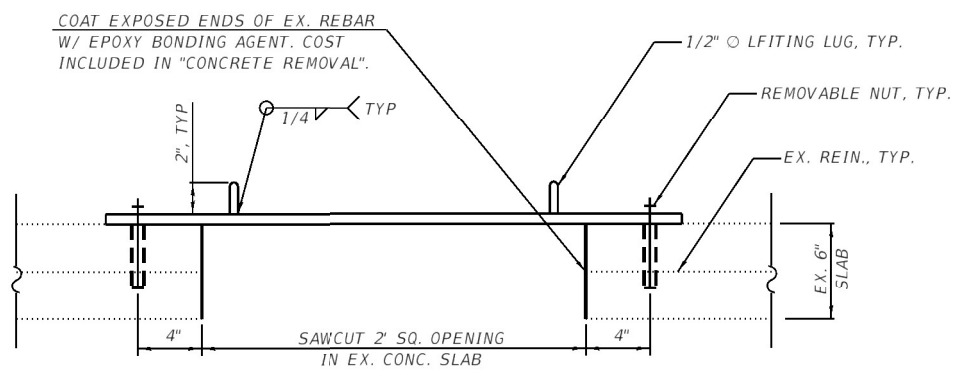
Bar	No.	Size	Length	Shape	
a1	20	#4	10'-4"	—	
a2	3	#4	11'-0"	—	
a3	4	#4	11'-8"	—	
a4	23	#4	8'-8"	—	
b1	12	#4	22'-4"	—	
b2	12	#4	2'-6"	—	
b3	10	#4	21'-8"	—	
h1	2	#4	10'-4"	—	
h2	2	#4	4'-4"	—	
h3	3	#4	21'-8"	—	
s1	3	#5	3'-6"	—	
t1	85	#4	2'-8"	—	
t2	9	#4	1'-8"	—	
v1	5	#4	8'-8"	—	
v2	5	#4	2'-6"	—	
v3	23	#4	4'-6"	—	
w1	7	#4	14'-0"	—	
w2	8	#4	24'-10"	—	
w3	7	#4	25'-4"	—	
w4	8	#4	11'-3"	—	
CONCRETE STRUCTURES				Cu. Yd.	22.7
REINFORCEMENT BARS				Lbs.	1,390
STRUCTURE EXCAVATION				Cu. Yd.	153
MASONRY WALL CONSTRUCTION				Sq. Ft.	177
GRANULAR BACKFILL FOR STRUCTURES				Cu. Yd.	109
SUBBASE GRANULAR MATERIAL, TYPE B 6"				Sq. Yd.	52



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DETAIL 1

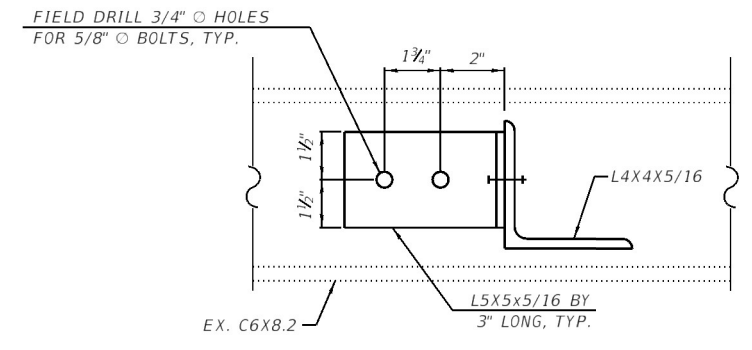


SECTION A-A

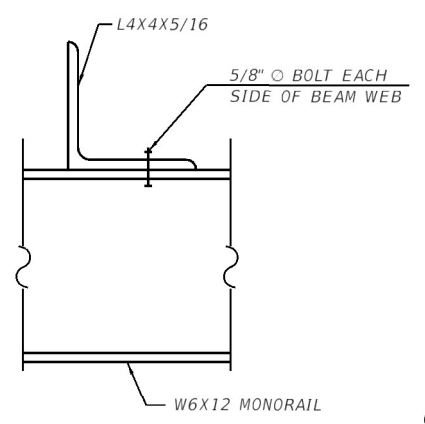
- NOTE:
- COST OF 1/4-TON ELECTRIC CHAIN HOIST W/ 50 FT LONG CHAIN LIFT INCLUDED IN "PUMP STATION GENERAL WORK".
 - COST OF STEEL COVER PLATE, LIFTING LUGS, ANCHORS, STEEL ROOF FRAMING FOR HOIST, AND DISCHARGE PIPE SUPPORTS SHALL BE INCLUDED IN "FURNISHING AND ERECTING STRUCTURAL STEEL".
 - COST OF SAWCUTTING EX. CONC. SLAB SHALL BE PAID FOR AS "CONCRETE REMOVAL".

BILL OF MATERIAL

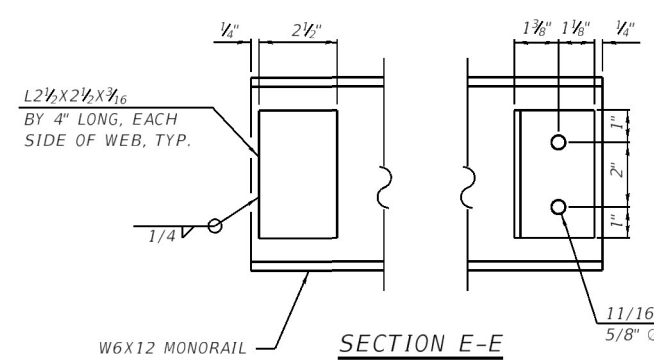
FURNISHING AND ERECTING STRUCTURAL STEEL	POUND	875
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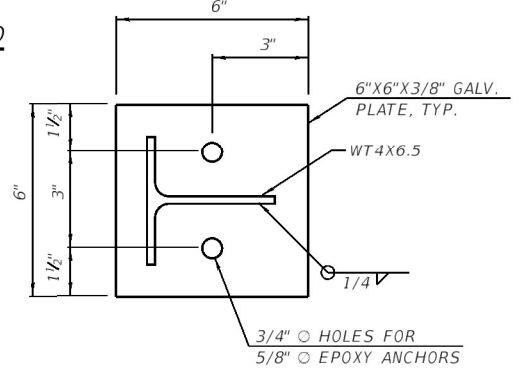
SECTION C-C



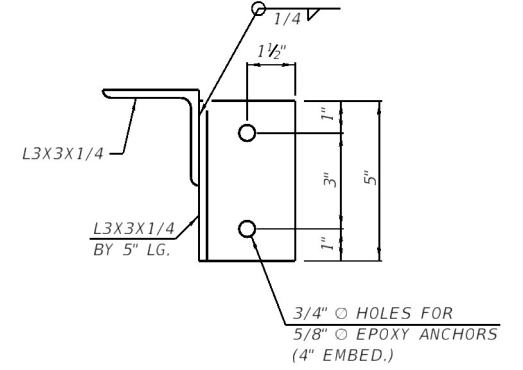
SECTION D-D



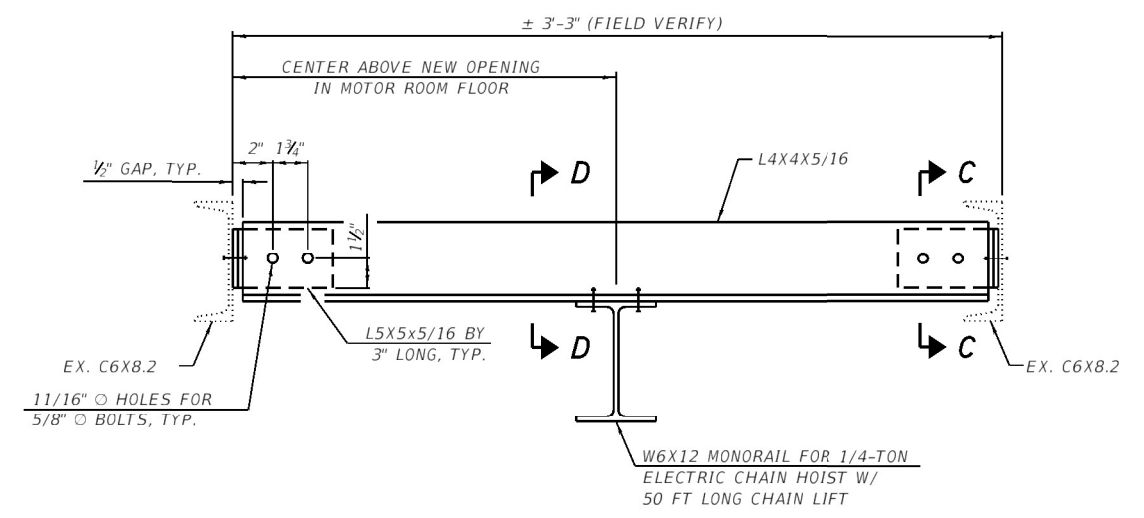
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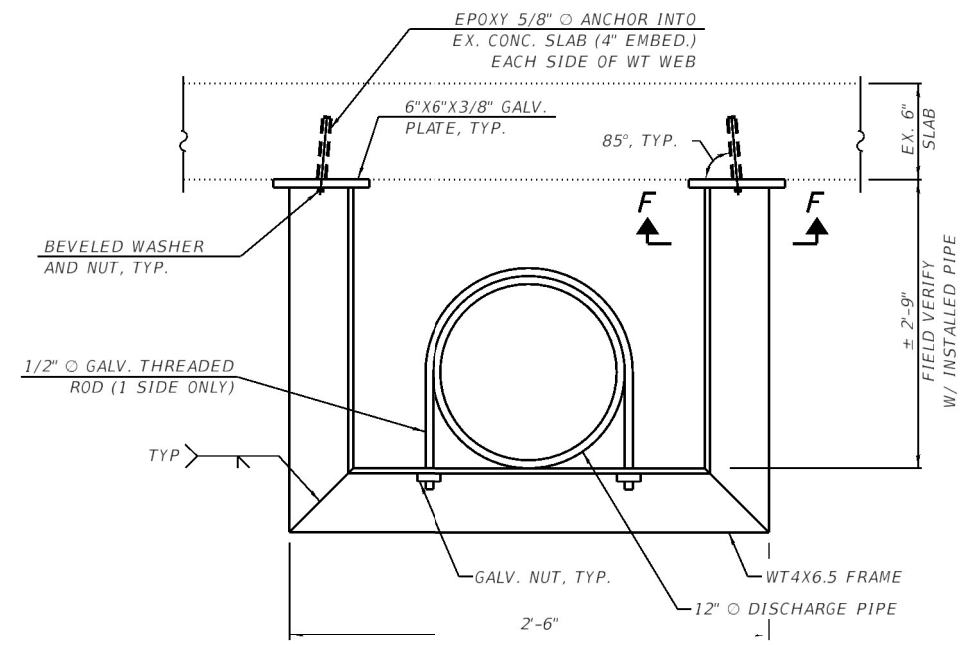
SECTION F-F



SECTION G-G

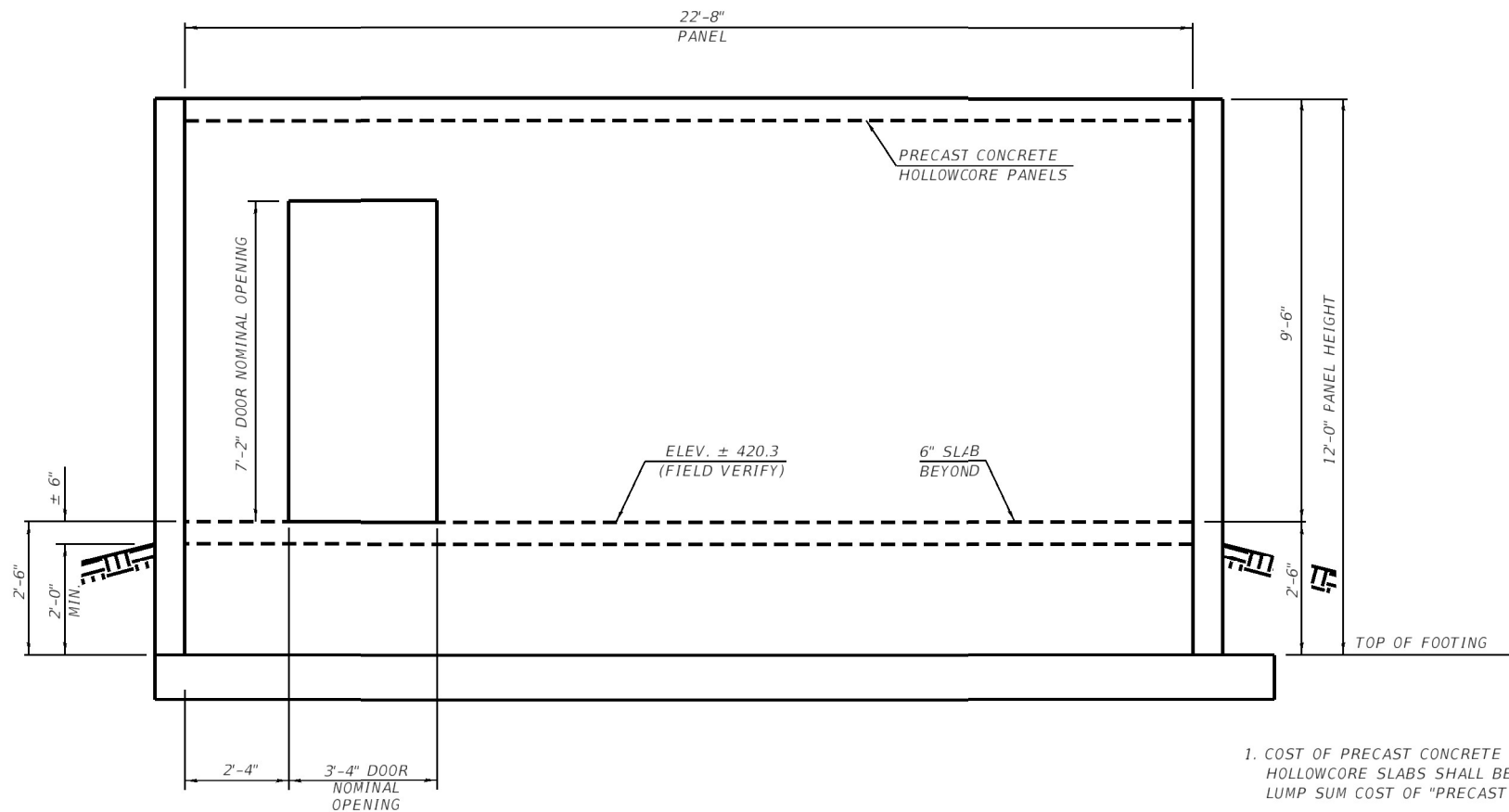


SECTION B-B

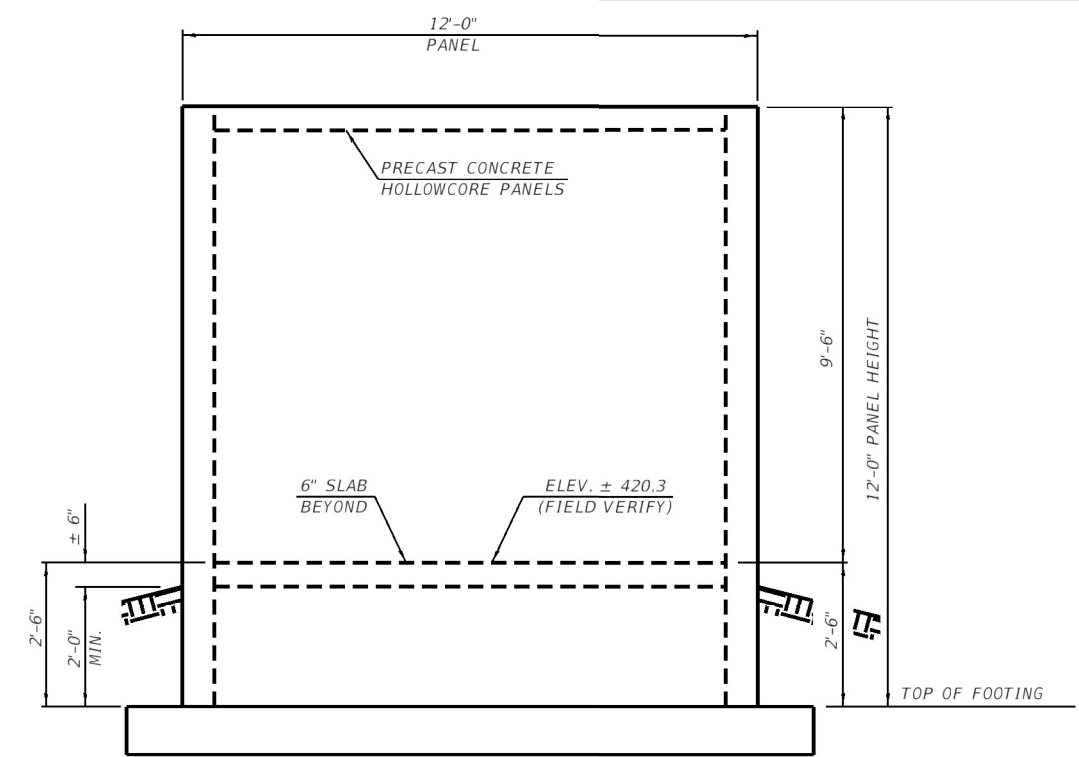


DETAIL 2 - DISCHARGE PIPE SUPPORT
6 LOCATIONS - COORDINATE WITH MECHANICAL DRAWINGS

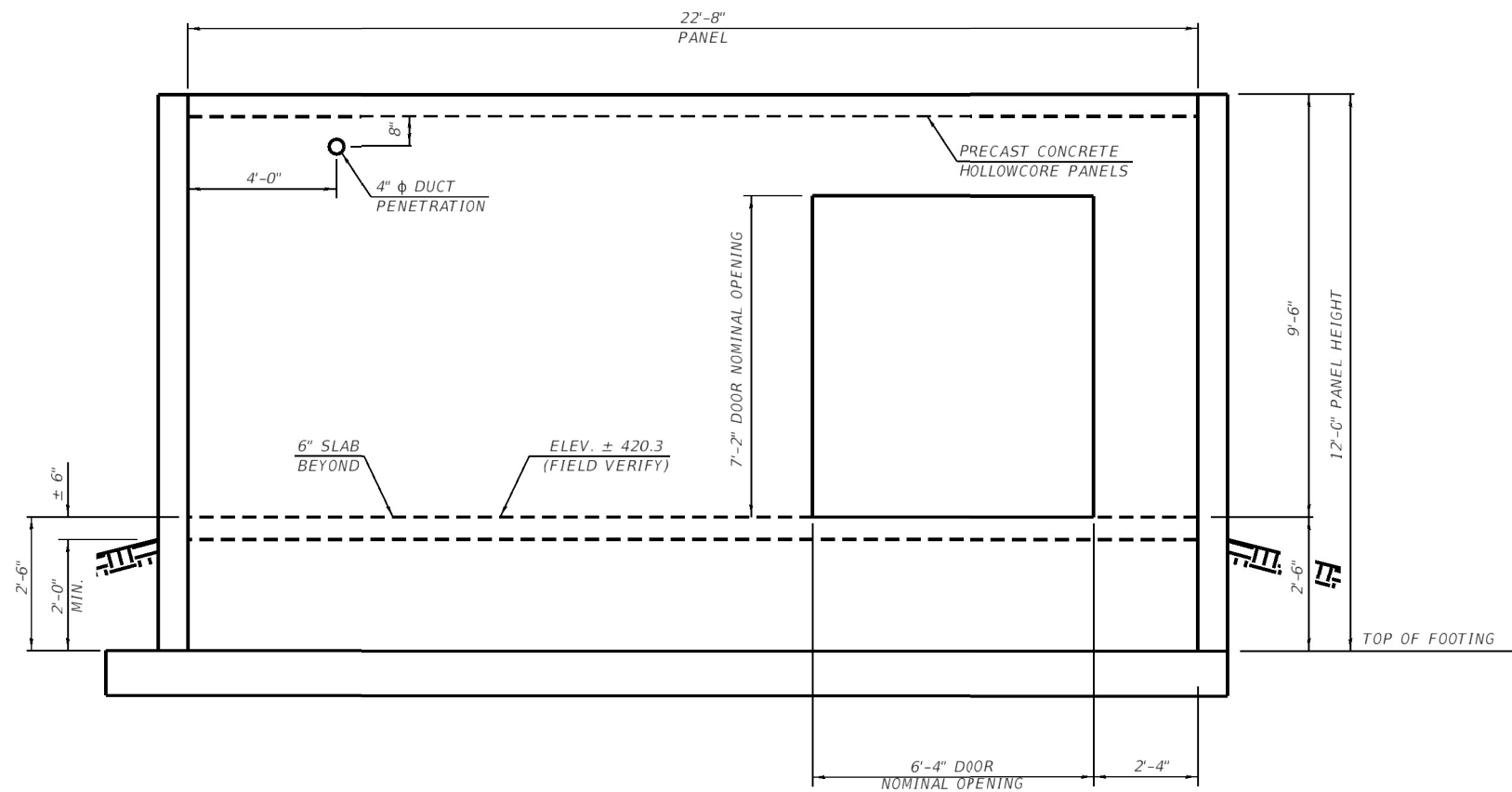
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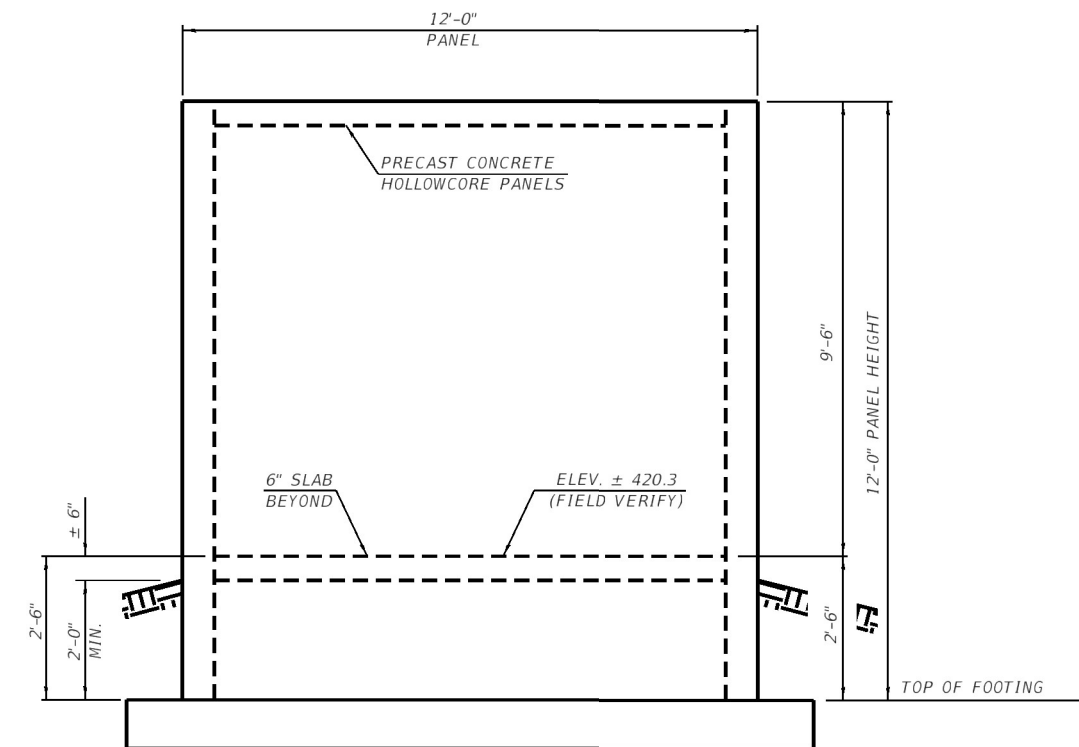
WEST WALL ELEVATION
(LOOKING EAST)



SOUTH WALL ELEVATION
(LOOKING NORTH)



EAST WALL ELEVATION
(LOOKING WEST)



NORTH WALL ELEVATION
(LOOKING SOUTH)

1. COST OF PRECAST CONCRETE WALL PANELS AND HOLLOWCORE SLABS SHALL BE INCLUDED IN THE LUMP SUM COST OF "PRECAST PUMP STATION BUILDING".
2. COST OF DOORS AND DOOR HARDWARE SHALL BE INCLUDED IN "PUMP STATION GENERAL WORK".

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STATE OF ILLINOIS DESIGN FIRM NO. 184-2738

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	DRAWN AMS	REVISED -
PLOT SCALE = 4.0000' / 1"	CHECKED EBB	REVISED -
PLOT DATE = 1/25/2022	DATE 12/21/2020	REVISED -

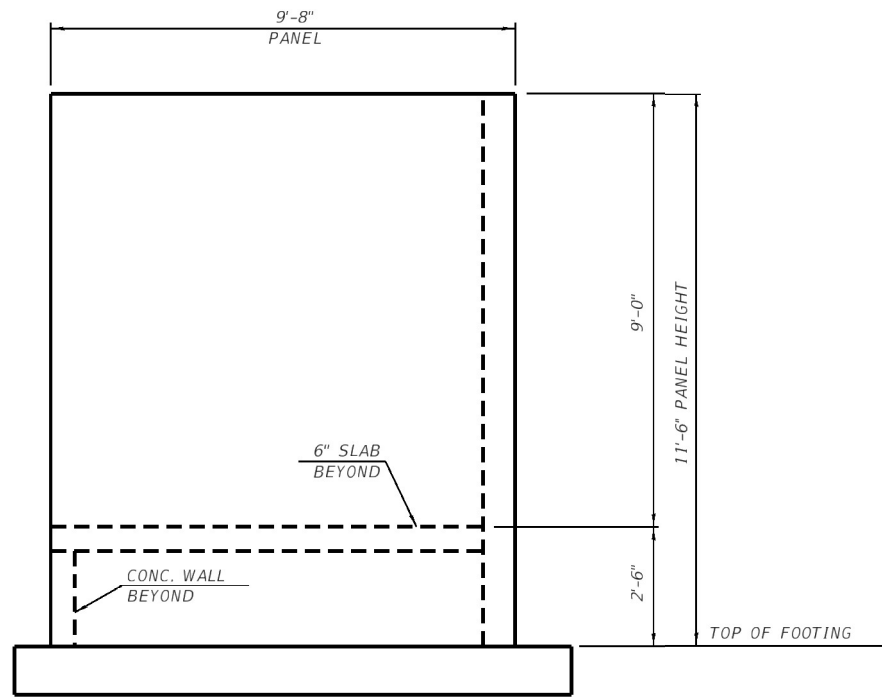
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**25TH STREET PUMP STATION
PROPOSED BUILDING ELEVATIONS**

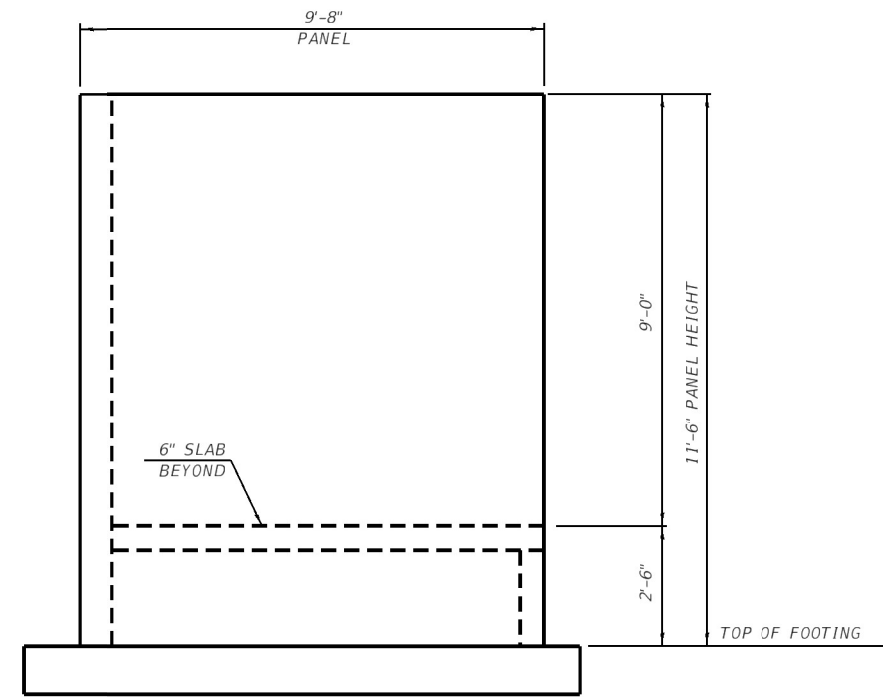
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F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
9228	(2-1)PS-2, 29PS-2	ST. CLAIR	41	27
CONTRACT NO. 76P08				

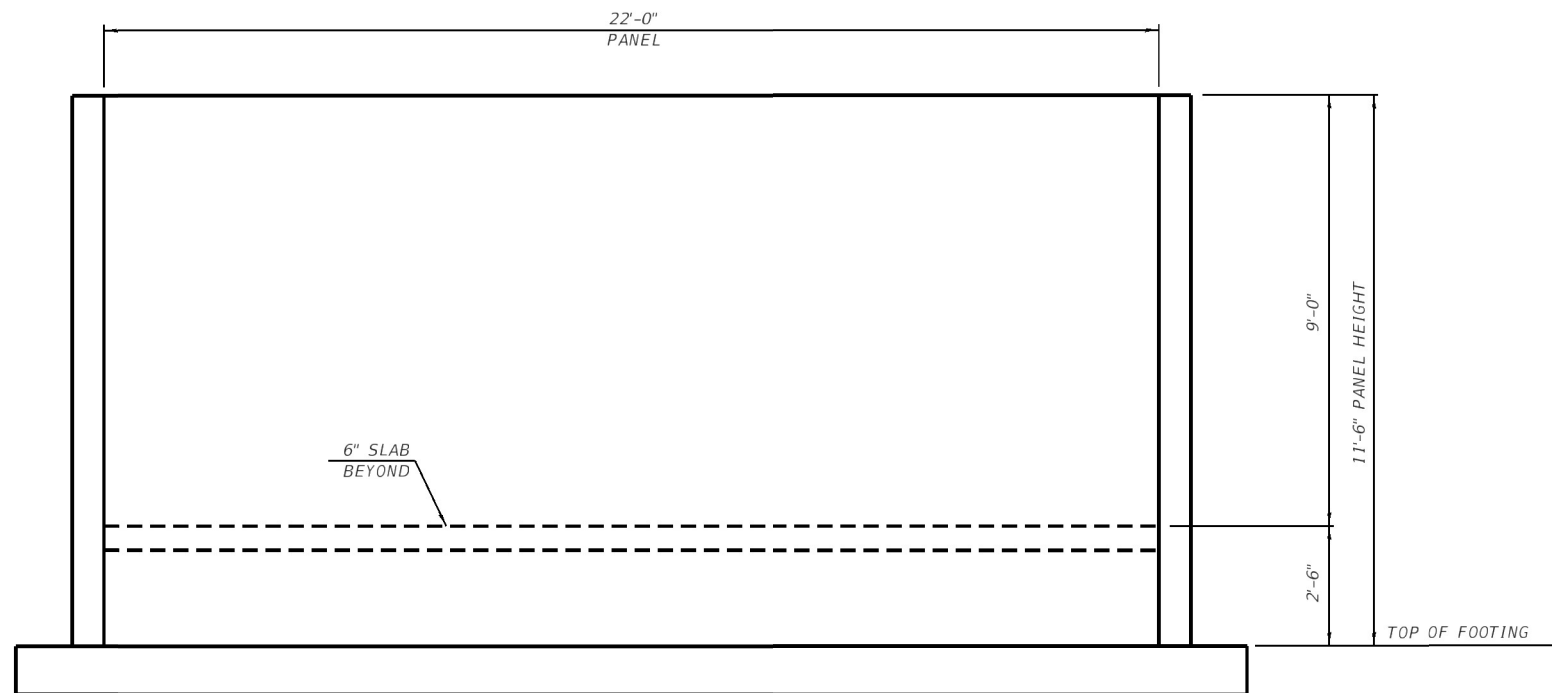
ILLINOIS FED. AID PROJECT



SOUTH WALL ELEVATION
(LOOKING NORTH)



NORTH WALL ELEVATION
(LOOKING SOUTH)



EAST WALL ELEVATION
(LOOKING WEST)

1. COST OF PRECAST CONCRETE WALL PANELS SHALL BE INCLUDED IN THE LUMP SUM COST OF "PRECAST PUMP STATION BUILDING".

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PLOT DATE = 1/25/2022	DATE 12/21/2020	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**25TH STREET PUMP STATION
PROPOSED GENERATOR WALL ELEVATIONS**

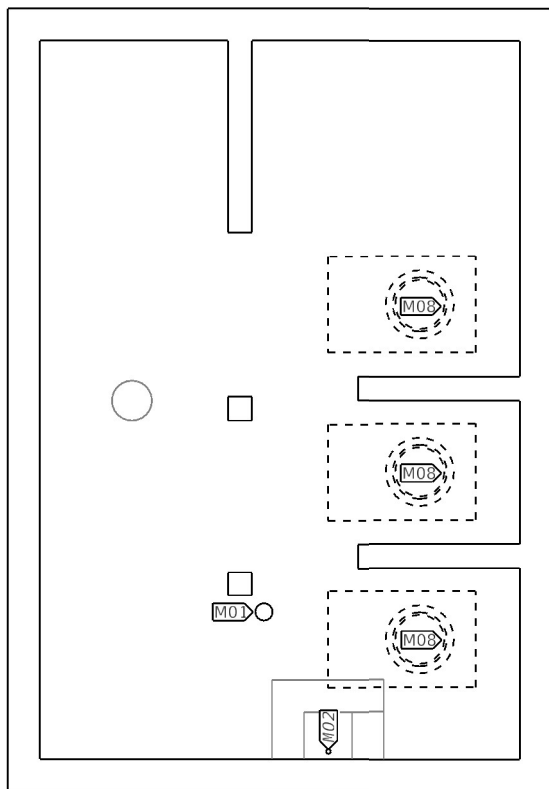
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F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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CONTRACT NO. 76P08				
ILLINOIS FED. AID PROJECT				

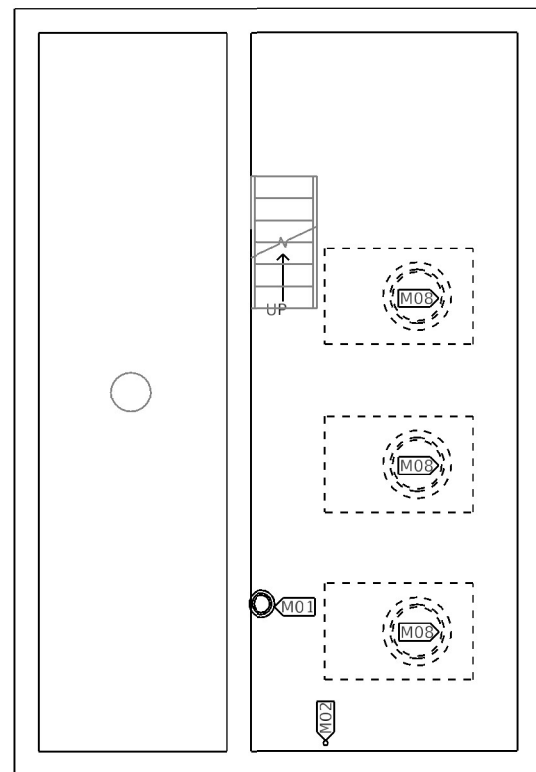
KEYNOTE LEGEND	
VALUE	DESCRIPTION
M01	REMOVE EXISTING ELECTRODE WELL PIPE IN THIS LOCATION AND INFILL PENETRATION WITH GROUT.
M02	REMOVE EXISTING SUMP PUMP DISCHARGE PIPING FROM SUMP PIT TO PENETRATION THROUGH EXTERIOR WALL.
M03	REMOVE AND REHAB EXISTING PUMPS (MAKE AVAILABLE FOR OWNER SALVAGE).
M04	REMOVE EXISTING PUMP DISCHARGE PIPING THROUGH WALL TO DISCHARGE WELL.
M05	REMOVE EXISTING OUTDOOR AIR SUPPLY FAN AND ASSOCIATED DUCT, HOOD, CONTROLS, ETC.
M06	REMOVE EXISTING DAMPER AND ACTUATOR. EXISTING LOUVER TO REMAIN.
M07	REMOVE EXISTING UNIT HEATER AND ASSOCIATED THERMOSTAT.
M08	REMOVE EXISTING PUMP TUBE AND MAKE AVAILABLE FOR OWNER SALVAGE.

* SEE SPECIAL PROVISIONS FOR PUMP AND PIPING REMOVAL AND SALVAGE.

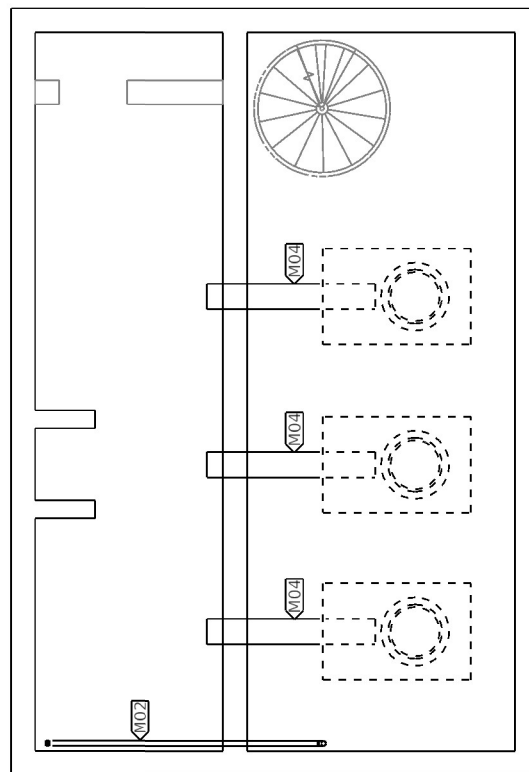
COST OF ALL REMOVAL ITEMS INCLUDED IN "PUMP STATION MECHANICAL WORK"



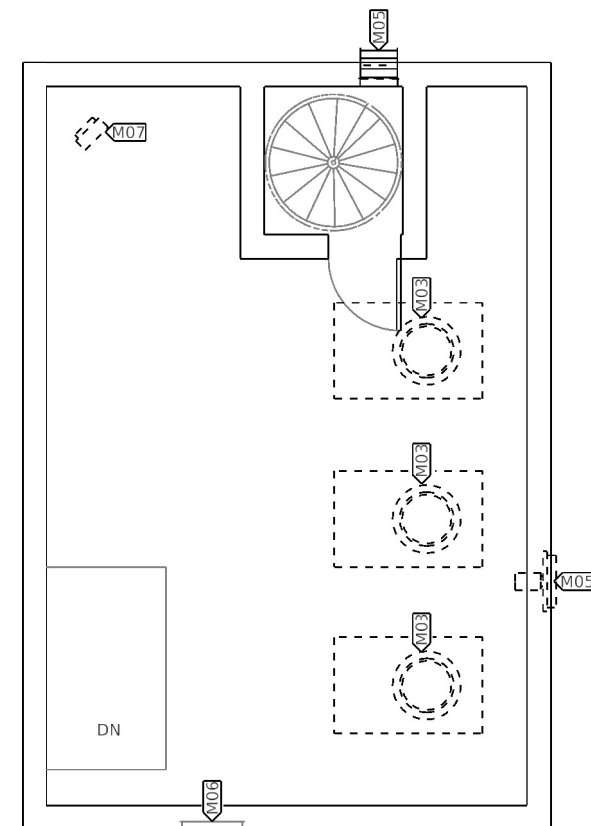
WET WELL LEVEL - MECHANICAL DEMOLITION PLAN



OPERATING LEVEL - MECHANICAL DEMOLITION PLAN



DISCHARGE LEVEL - MECHANICAL DEMOLITION PLAN



MOTOR LEVEL - MECHANICAL DEMOLITION PLAN

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 Engineers • Architects • Surveyors
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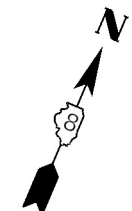
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STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

25TH STREET PUMP STATION
 MECHANICAL DEMOLITION PLAN

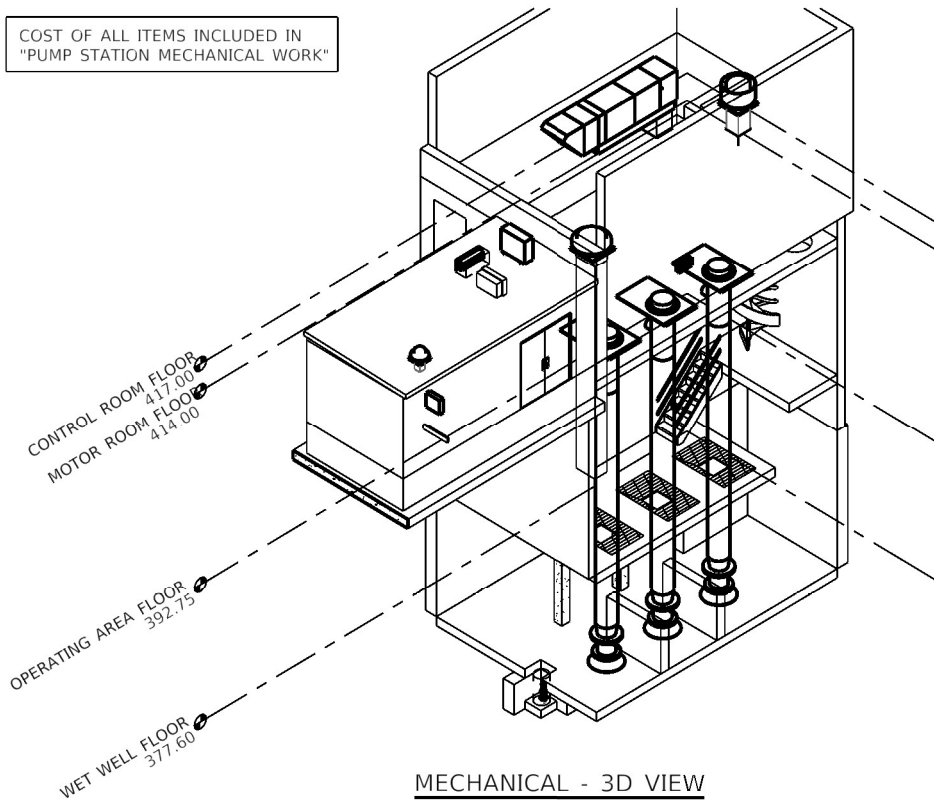
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F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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CONTRACT NO. 76P08				
ILLINOIS FED. AID PROJECT				



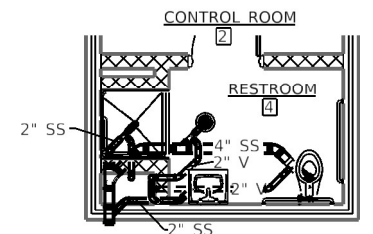
KEYNOTE LEGEND	
VALUE	DESCRIPTION
M09	COORDINATE SUMP PUMP SLIDE RAILS WITH EXISTING WET WELL LADDER.
M10	PROVIDE 2" DUCTILE IRON SUMP DISCHARGE PIPE FROM SUMP PUMP TO STORMWATER WET WELL.
M11	CORE DRILL THROUGH FOUNDATION WALL PROVIDE MODULAR ANNULAR SPACE SEAL (LINK SEAL) AT WALL PENETRATION. COORDINATE WITH SITE UTILITY PLAN.
M13	PROVIDE 18"x28" ALUMINUM SUPPLY AIR DUCT DOWN TO 1'-0" ABOVE OPERATING LEVEL FLOOR AND PROVIDE AND FOUR (4) DUCT MOUNTED, DOUBLE DEFLECTION, ALUMINUM SUPPLY GRILLES AT 2'-0", 6'-0", 10'-0" AND 14'-0" ABOVE THE OPERATING LEVEL FLOOR.
M14	CUT CONCRETE FLOOR TO ALLOW INSTALLATION OF NEW 24"x24" SUPPLY AIR DUCT THROUGH THE FLOOR. PROVIDE SEALANT TO CREATE AIR TIGHT SEAL BETWEEN DUCT AND FLOOR.
M15	INFILL EXISTING WALL PENETRATION WITH BRICK TO MATCH EXISTING. PROVIDE 2" CLOSED CELL FOAM INSULATION ON INTERIOR SIDE.
M16	TRANSITION FROM FAN OUTLET CONNECTION TO 28"x18" SUPPLY WITHIN CURB AND ABOVE ROOF. MAKE PENETRATION THROUGH EXISTING ROOF DECK IN THIS LOCATION TO ACCOMMODATE INSTALLATION OF ROOF CURB AND EQUIPMENT. COORDINATE PENETRATION WITH ROOFING CONTRACTOR.
M17	PROVIDE NEW DAMPER TO FIT EXISTING LOUVER AND INCLUDE 120V CLASS 1 DIVISION 2 EXPLOSION PROOF ACTUATOR.
M18	PROVIDE 6" SCHEDULE 40 STAINLESS STEEL PIPE WITH FLANGED FITTINGS FOR SUMP VACUUM CLEANING. ROUTE PIPE DOWN THROUGH FLOOR AND PROVIDE MODULAR ANNULAR SPACE SEAL (LINK SEAL) AT FLOOR PENETRATION.
M19	COORDINATE END FITTING TO MATCH IDOT VACUUM TRUCK CONNECTION. CONFIRM PREFERRED ELEVATION OF CONNECTION DURING CONSTRUCTION.
M20	PROVIDE 1/8 BEND FITTING TURNED DOWN AND THEN A BALL VALVE AND FIRE HOSE CONNECTION TO BE USED TO FILL TANKER TRUCKS WITH CLEAN WATER.
M21	PROVIDE DOUBLE CHECK BACKFLOW PREVENTER. PROVIDE A P-TRAP AND VENT THROUGH ROOF. ROUTE DRAIN THROUGH FLOOR TO DISCHARGE WELL AND SEAL FLOOR PENETRATION.
M22	CORE DRILL PENETRATION FOR SUMP PUMP DISCHARGE PIPE AS HIGH AS POSSIBLE AND PROVIDE LINK-SEAL. PROVIDE ELBOW TURNED DOWN.
M24	PROVIDE NEW PUMP TUBE.
M25	PROVIDE NEW 12" DISCHARGE PIPING FROM PUMP TUBE TO DISCHARGE WELL. PROVIDE FLEXIBLE CONNECTION TO PUMP DISCHARGE ELBOW AND NECESSARY OFFSET FITTINGS TO FACILITATE REUSE OF EXISTING WALL PENETRATIONS. INCLUDE MODULAR ANNULAR SPACE SEAL (LINK SEAL) AT WALL PENETRATION.
M27	INSTALL SUPPLY DIFFUSER AS HIGH AS POSSIBLE.
M28	MAKE PENETRATION THROUGH EXISTING ROOF DECK IN THIS LOCATION TO ACCOMMODATE INSTALLATION OF ROOF CURB AND EXHAUST FAN. COORDINATE PENETRATION WITH ROOFING CONTRACTOR.
M29	PROVIDE STEEL STUD AND 5/8" MOLD RESISTANT GYPSUM BOARD INFILL TO COMPLETE INSTALLATION OF SHOWER. COORDINATE WITH FIELD VERIFIED SHOWER DIMENSIONS.
M30	ROUTE BACKFLOW PREVENTER DRAIN TO DISCHARGE WELL.
M32	COMBINE SHOWER, LAVATORY, WATER CLOSET, AND FLOOR DRAIN VENTS ABOVE FLOOR AND ROUTE UP THROUGH ROOF.
M34	ALL PIPING SHALL BE ROUTED EXPOSED ON WALL.
M35	PROVIDE FIRE HOSE CONNECTION AND HOSE BIBB CONNECTIONS AT 3'-0" ABOVE FINISHED FLOOR IN THIS LOCATION.
M36	ROUTE 2-1/2" CW DOWN TO FIRE HOSE AND HOSE BIBB CONNECTIONS AT THE OPERATING LEVEL.
M37	PROVIDE FREEZELESS WALL HYDRANT WITH REMOVABLE KEY AT 18" ABOVE FINISHED GRADE IN THIS LOCATION.
M38	REFER TO STRUCTURAL PLANS FOR PIPE SUPPORT DETAIL. SEE SHEET 26 OF 41.
M39	ROUTE 4" CW THROUGH FLOOR IN THIS LOCATION AND PROVIDE MODULAR ANNULAR SPACE SEAL (LINK SEAL) AT FLOOR PENETRATION.
M40	ROUTE REFRIGERANT LINE-SET UP THROUGH ROOF AND CONNECT TO CONDENSING UNIT IN THIS LOCATION.
M41	ROUTE CONDENSATION DRAIN DOWN ADJACENT TO DOOR AND THEN PENETRATE WALL AT 1'-6" ABOVE FINISHED GRADE. ON EXTERIOR SIDE PROVIDE ELBOW AND 6" PIPE WITH END CUT AT 45A° TO DRAIN ON GRADE.

COST OF ALL ITEMS INCLUDED IN "PUMP STATION MECHANICAL WORK"

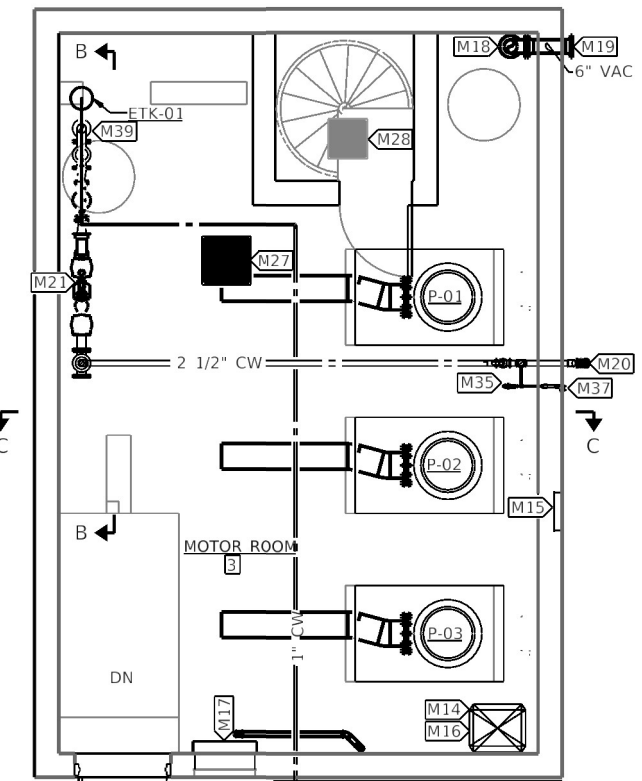


MECHANICAL - 3D VIEW

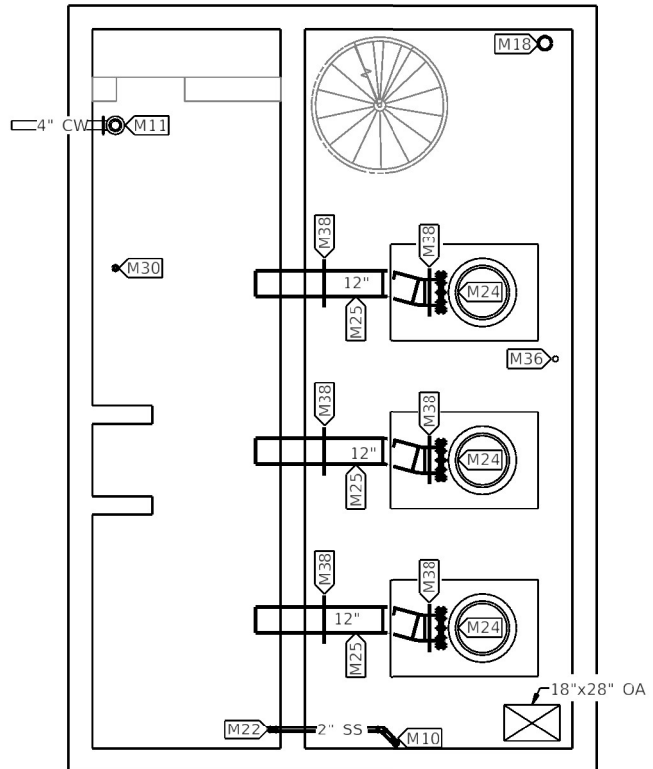
NOTE: SEE SHEET 33 OF 41 FOR SECTIONS A-A, B-B, AND C-C.



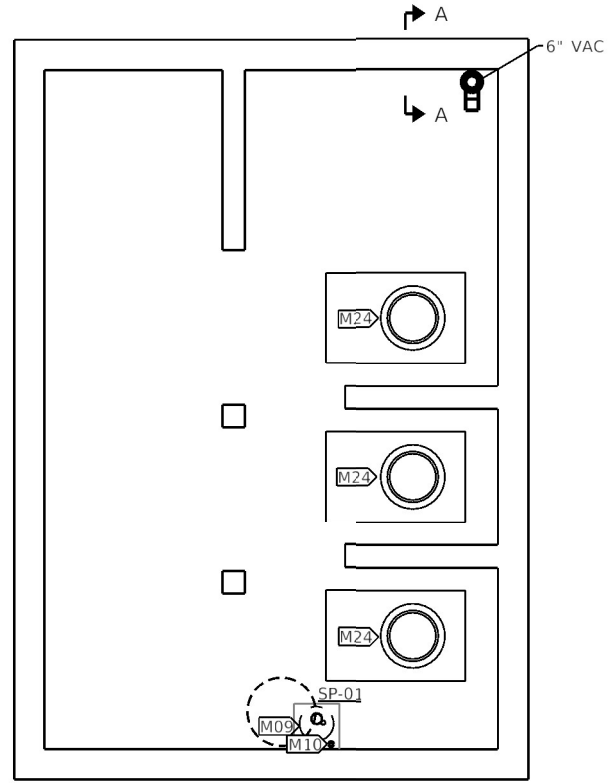
DETAIL 1 - RESTROOM BELOW FLOOR SANITARY PIPING PLAN



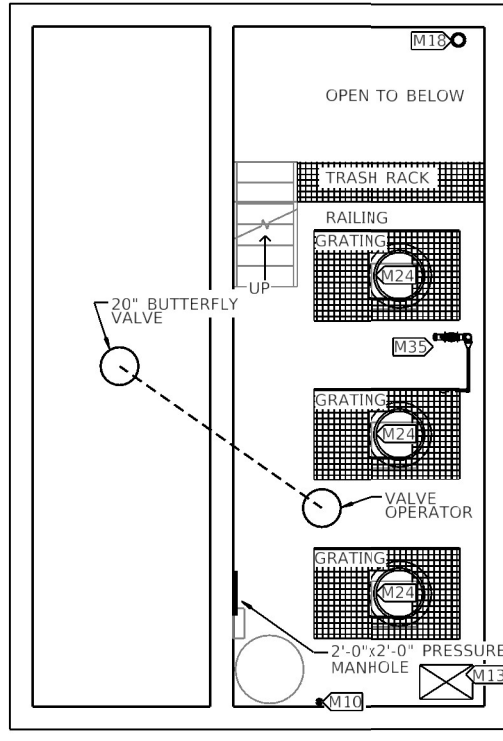
MOTOR LEVEL - MECHANICAL PLAN



DISCHARGE LEVEL - MECHANICAL PLAN



WET WELL LEVEL - MECHANICAL PLAN



OPERATING LEVEL - MECHANICAL PLAN

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PLOT DATE = 1/25/2022	CHECKED JJN	REVISED -
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

25TH STREET PUMP STATION
MECHANICAL PLANS

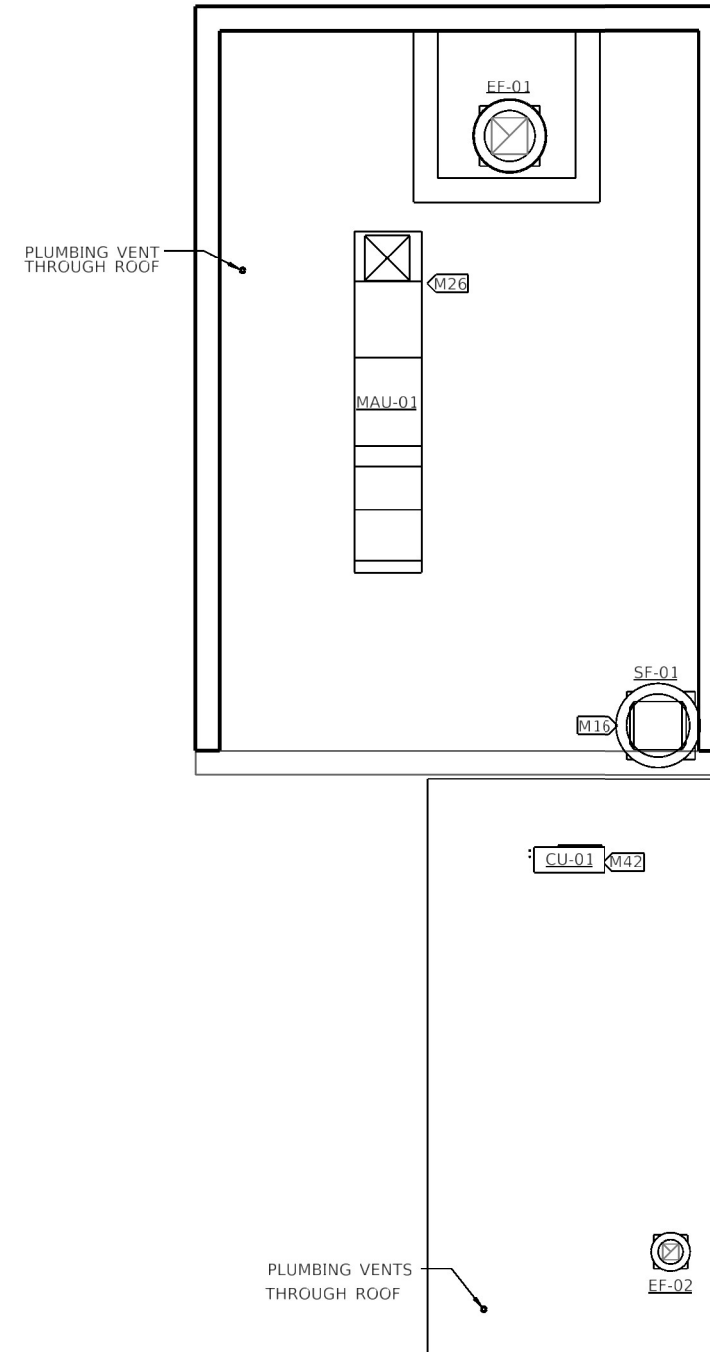
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F.A.U. RTE. 9228	SECTION (Z-1)PS-2, 29PS-2	COUNTY ST. CLAIR	TOTAL SHEETS 41	SHEET NO. 31
CONTRACT NO. 76P08			ILLINOIS FED. AID PROJECT	



KEYNOTE LEGEND	
VALUE	DESCRIPTION
M16	TRANSITION FROM FAN OUTLET CONNECTION TO 28"x18" SUPPLY WITHIN CURB AND ABOVE ROOF. MAKE PENETRATION THROUGH EXISTING ROOF DECK IN THIS LOCATION TO ACCOMMODATE INSTALLATION OF ROOF CURB AND EQUIPMENT. COORDINATE PENETRATION WITH ROOFING CONTRACTOR.
M26	ROUTE DUCT DOWN FROM MAKEUP AIR UNIT TO FACTORY PROVIDED THREE-WAY DIFFUSER. INSTALL DIFFUSER AS HIGH AS POSSIBLE. COORDINATE ROOF PENETRATION WITH EXISTING STRUCTURAL MEMBERS.
M42	PROVIDE MANUFACTURED CONDENSING UNIT SUPPORT STAND AND SECURE FEET TO ROOF UTILIZING ADHESIVE APPROVED BY ROOFING MANUFACTURER.

COST OF ALL ITEMS INCLUDED IN "PUMP STATION MECHANICAL WORK"



MECHANICAL ROOF PLAN

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PLOT DATE = 1/25/2022	DATE 12/21/2020	REVISED -

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
9228	(Z-1)PS-2, 29PS-2	ST. CLAIR	41	32
CONTRACT NO. 76P08				
ILLINOIS FED. AID PROJECT				

COST OF ALL ITEMS INCLUDED IN "PUMP STATION MECHANICAL WORK"

DOMESTIC EXPANSION TANK SCHEDULE							
TAG	DESCRIPTION	TANK VOLUME	ACCEPTANCE VOLUME	BASIS OF DESIGN			REMARKS
				MAKE	MODEL	WEIGHT	
ETK-01	POTABLE WATER, BLADDER STYLE EXPANSION TANK	4.4 gal	3.2 gal	AMTROL BELL & GOSSETT ZURN	ST PT WTTA	25 lb	PROVIDE WALL SUPPORT HARDWARE

RADIANT BASEBOARD HEATER SCHEDULE								
TAG	DESCRIPTION	CAPACITY	VOLT	FREQ	PHASE	MCA	MOP	REMARKS
RBH-01	ELECTRIC HYDRONIC BASEBOARD HEATER	1000 W	208 V	60 Hz	1	5 A	15 A	PROVIDE WALL MOUNT BRACKETS AND INTEGRAL LINE-VOLTAGE THERMOSTAT

ELECTRIC INSTANTANEOUS WATER HEATER SCHEDULE														
TAG	DESCRIPTION	MIN. FLOW	MAX. FLOW	CAPACITY	ELECTRICAL					BASIS OF DESIGN				REMARKS
					VOLT	FREQ	PHASE	FLA	MOP	MAKE	MODEL	WEIGHT		
DWH-01	THERMOSTATIC CONTROLLED ELECTRIC WATER HEATER	0.5 GPM	2.5 GPM	16 kW	480 V	60 Hz	3	19 A	25 A	EEMAX	XTP016480	50 lb	PROVIDE NON-FUSED DISCONNECT SWITCH	

HEAT PUMP SCHEDULE															
TAG	DESCRIPTION	REFRIGERANT	COOLING			HEATING			ELECTRICAL				BASIS OF DESIGN		
			CAP. (BTU/H)	MIN. SEER	MIN. HSPF	CAP. (BTU/H)	MIN. HSPF	VOLT	FREQ	PHASE	MCA	MOP	MAKE	MODEL	WEIGHT
CU-01	OUTDOOR REFRIGERANT HEAT PUMP UNIT	R410A	12,000	18	12	12,600	12	208 V	60 Hz	1	17 A	25 A	DAIKIN	RKL	150 lb

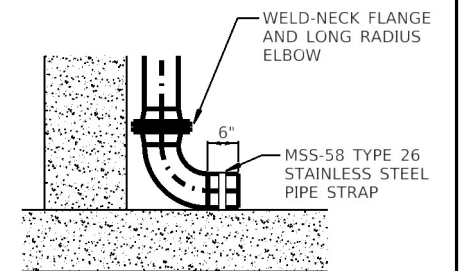
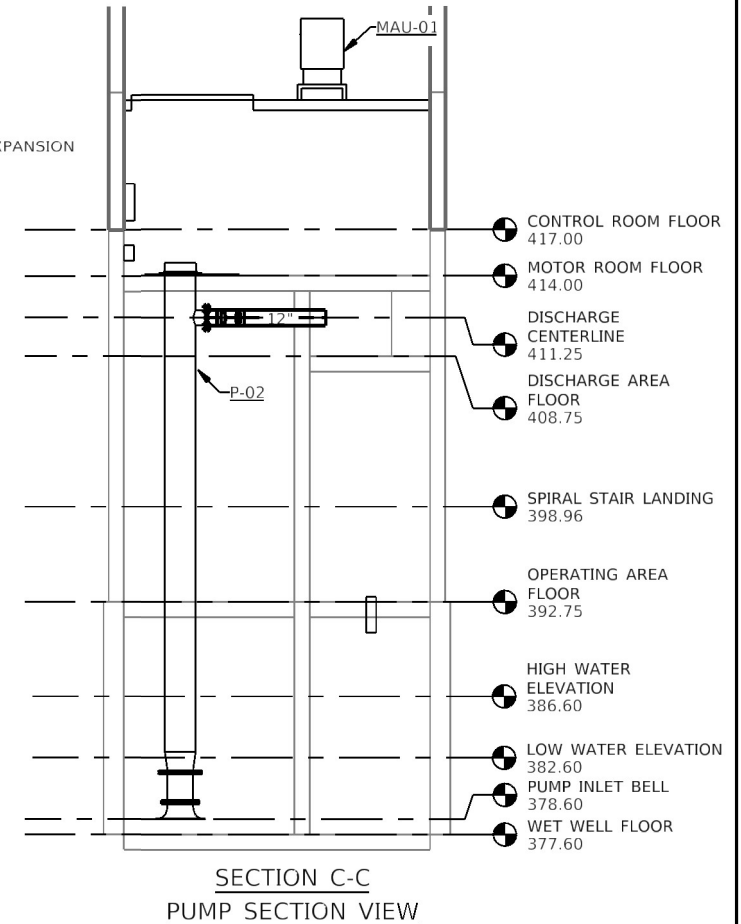
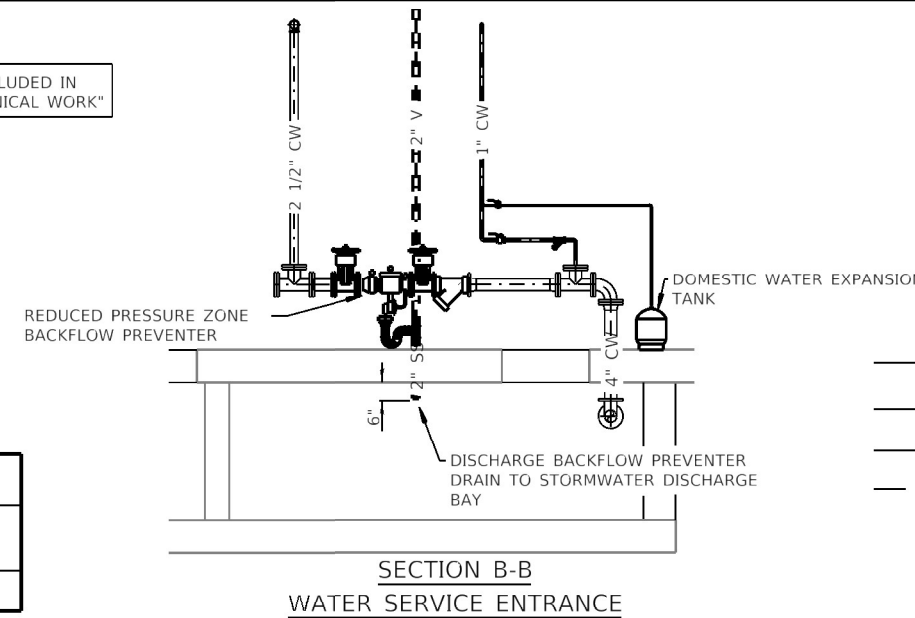
FAN COIL UNIT SCHEDULE													
TAG	DESCRIPTION	FILTER	COOLING CAP.	ELECTRICAL					BASIS OF DESIGN				REMARKS
				VOLT	PHASE	FREQ	MCA	MOP	MAKE	MODEL	WEIGHT		
FCU-01	WALL MOUNTED EXPOSED	WASHABLE	12,000	208 V	1	60 Hz	0.3 A	15 A	DAIKIN	FTX	30 lb	PROVIDE WIRED, WALL MOUNTED THERMOSTAT.	

SUMP PUMP SCHEDULE													
TAG	TYPE	FLOW	HEAD	ELECTRICAL			BASIS OF DESIGN				REMARKS		
				VOLT	POLES	MOP	MAKE	MODEL	WEIGHT				
SP-01	EXPLOSION PROOF EFFLUENT PUMP WITH INTRINSICALLY SAFE CONTROLS AND GUIDE RAILS	85.0 GPM	50.0 FT-H ₂ O	208 V	1	20 A	LIBERTY PUMPS, INC.	XFL152M-5	100 lb	PROVIDE GUIDE RAILS AND BASE, CHECK VALVE, 50' POWER CORD, SINGLE FLOAT SWITCH, AND INTRINSICALLY SAFE CONTROLS			

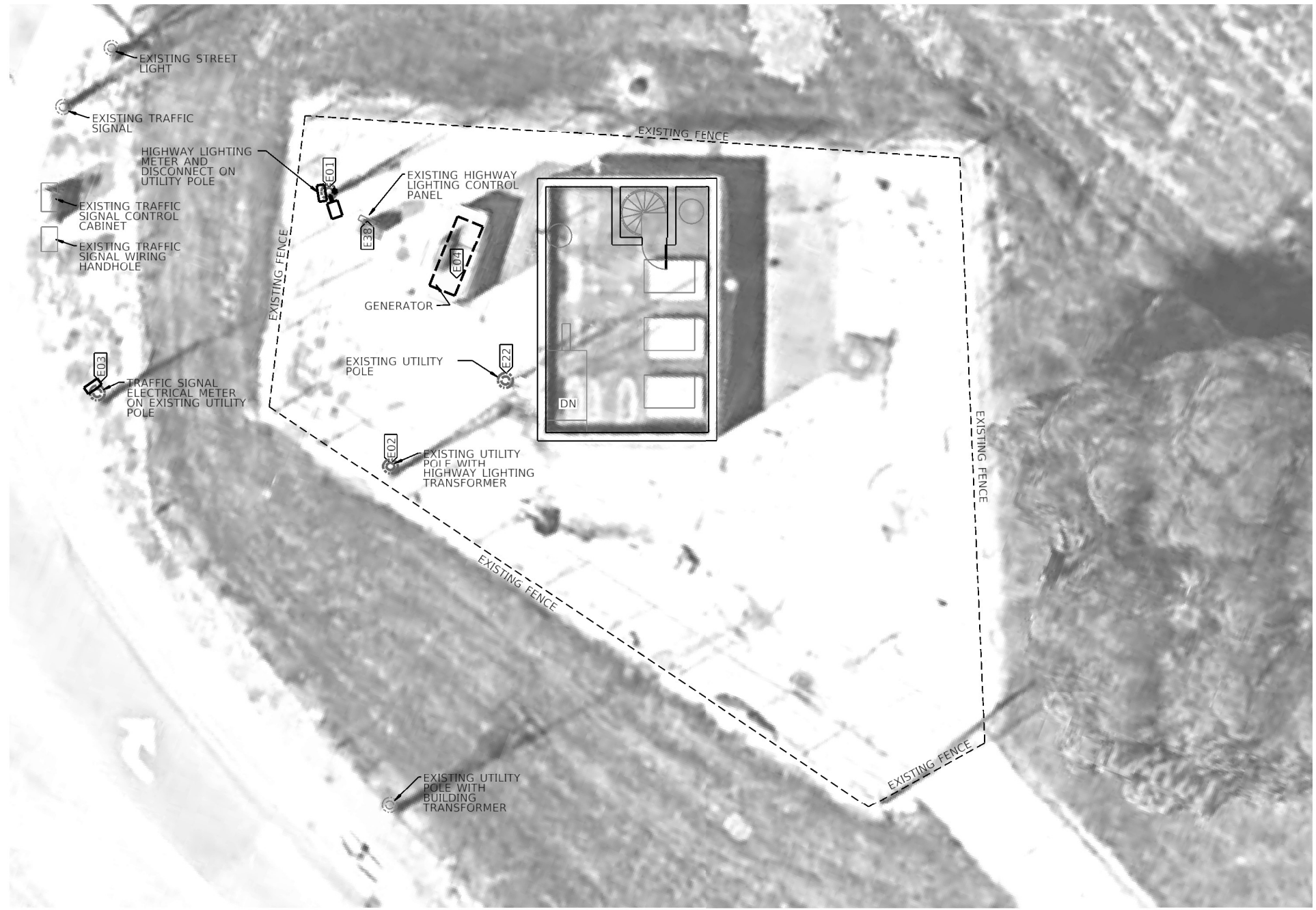
ROOFTOP MAKEUP AIR UNIT SCHEDULE																				
UNIT NO.	TYPE	OUTDOOR AIRFLOW	SUPPLY FAN				FILTER	ELECTRIC HEATING COIL				ELECTRICAL				MANUFACTURER	MODEL NO.	UNIT WEIGHT	REMARKS	
			TYPE	WHEEL TYPE	EXT. STATIC PRESS.	DRIVE TYPE		HEATING CAP.	CONTROL	EAT	LAT	VOLTAGE	PHASE	FREQ.	MCA					MOP
MAU-01	ELECTRIC HEAT ONLY	975 CFM	CENTRIFUGAL	PLENUM	0.75 in-wg	BELT	ALUMINUM	15 kW	SCR-MODULATING	0.0 °F	50.0 °F	480 V	3	60 Hz	60 A	60 A	GREENHECK	MSX-P114-H12	1300 lb	PROVIDE 3-WAY SUPPLY DIFFUSER

FAN SCHEDULE																
TAG	DESCRIPTION	AIRFLOW	WHEEL TYPE	TOTAL STATIC PRESS.	FAN RPM	DRIVE TYPE	MOTOR POWER	ELECTRICAL				BASIS OF DESIGN				REMARKS
								VOLTAGE	FREQ	PHASE	PHASE	MOP	MANUFACTURER	MODEL NO.	UNIT WEIGHT	
EF-01	ROOF MOUNTED UPBLAST EXHAUST FAN	4,360 CFM	CENTRIFUGAL	0.50 in-wg	1496	BELT	3.77 hp	208 V	60 Hz	3	3	15 A	GREENHECK	CUBE-180	150 lb	FAN SHALL BE LISTED FOR CLASS 1 DIVISION 2 ENVIRONMENT AND EXPLOSION PROOF. PROVIDE ROOF CURB, REMOTE TWO SPEED CONTROLLER, AND UNIT MOUNTED DISCONNECT SWITCH.
SF-01	ROOF MOUNTED SUPPLY FAN	4,400 CFM	CENTRIFUGAL	0.50 in-wg	1140	DIRECT	1 hp	120 V	60 Hz	1	1	20 A	GREENHECK	AS-24-430-B10	100 lb	PROVIDE MINIMUM 14" TALL HINGED ROOF CURB AND INTEGRAL DISCONNECT SWITCH.

PLUMBING FIXTURE SCHEDULE															
TAG	ADA	TYPE	DESCRIPTION	ROUGH IN PIPE SIZE				BASIS OF DESIGN		BASIS OF DESIGN FIXTURE ACCESSORIES					
				CW	HW	SS	V	MAKE	MODEL	TYPE	DESCRIPTION	MAKE	MODEL		
FD-01	Yes	FLOOR DRAIN	PVC BODY WITH LARGE CAPACITY CAST IRON RING AND GRATE, PROVIDE W/ DEBRIS BUCKET	0"	0"	4"	3"	SILOUX CHIEF JOSAM ZURN	860-4-P-I-U FD-370 FD2360						
LAV-01	Yes	LAVATORY	WALL MOUNT LAVATORY, 19"W X 17"D, VITREOUS CHINA WITH FAUCET HOLES ON 4" CENTERS	1/2"	1/2"	1 1/4"	1 1/4"	AMERICAN STANDARD GERBER KOHLER	DECLYN 0321.075 12-314-98 K-1728	FAUCET	4" CENTERS, SELF CLOSING METERING TYPE W/ SEPARATE HOT & COLD WATER CONTROL AND 0.5 GPM FLOW CONTROL	CHICAGO FAUCET GERBER TSBRASS WADE JAY R SMITH ZURN	802-VE2805-665ABCP 44-340 B-0831 520 0700 Z1231		
SH-1	Yes	SHOWER	TRANSFER TYPE ADA-ACCESSIBLE, ONE-PIECE MOLDED	1/2"	1/2"	2"	1 1/2"	AQUARIUS AQUATIC OASIS	G-3682-BF-625 1363BFRF SHFW-WX-3837/AD A-RS	VALVE	PRESSURE BALANCED, SINGLE HANDLE, ANTI-SCALD STAINLESS STEEL, 1-1/2" DIAMETER	LEODARD DELTA GERBER			
WC-01	Yes	WATER CLOSET	FLOOR MOUNTED VITREOUS CHINA, ELONGATED BOWL SIPHON JET, WATER SAVING, W/ TOP SPUD	1"	0"	3"	2"	AMERICAN STANDARD GERBER KOHLER	MADERA FLOWISE 3043.001 25-733 K-96057	SEAT	ELONGATED HEAVY DUTY, SOLID PLASTIC, OPEN FRONT, WITH LIFT OFF HINGE SYSTEM	BEMIS KOHLER AMERICAN STANDARD SLOAN	2155CTJ K-4666-CA 5901.100 ROYAL 111 E S-5-YO 606B.161 W/ PJ00.HAC ZEMS6000AV-MOB-W1		
										FLUSH VALVE	SENSOR OPERATED W/ TRANSFORMER & BUMPER ON ANGLE STOP	AMERICAN STANDARD ZURN			



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KEYNOTE LEGEND	
VALUE	DESCRIPTION
E01	COORDINATE REMOVAL EXISTING UTILITY POLE, AREA LIGHT, ELECTRICITY METER, AND DISCONNECT SWITCH TO HIGHWAY LIGHTING CONTROL PANEL. TRANSFER SERVICE TO NEW MAIN DISTRIBUTION PANEL.
E02	COORDINATE REMOVAL OF EXISTING UTILITY TRANSFORMER AND UTILITY POLE WITH ELECTRIC UTILITY.
E03	COORDINATE REMOVAL OF EXISTING UTILITY POLE AND ELECTRICITY METER TO TRAFFIC SIGNAL CONTROL PANEL. TRANSFER SERVICE TO NEW MAIN DISTRIBUTION PANEL.
E04	REMOVE EXISTING GENERATOR AND ALL ASSOCIATED CONDUIT, CONCRETE EQUIPMENT PAD, AND CONTROLS.
E22	COORDINATE REMOVAL OF EXISTING UTILITY POLE AND REVISIONS TO ELECTRICAL SERVICE WITH ELECTRIC UTILITY.
E38	REMOVE EXISTING LIGHTING CONTROL CIRCUIT BREAKERS AND CONTROLS TO BE RELOCATED. REFER TO SHEET 37 OF 41 FOR NEW LOCATION.

COST OF ALL REMOVAL ITEMS INCLUDED IN "PUMP STATION ELECTRICAL WORK"

ELECTRICAL SITE DEMOLITION PLAN



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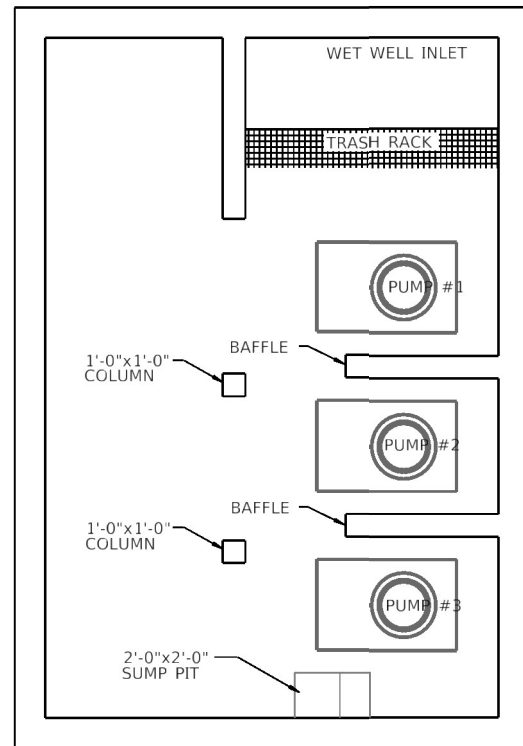
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 STATE OF ILLINOIS DESIGN FIRM NO. 184-2738

USER NAME = oms	DESIGNED ALD	REVISED -
	DRAWN ALD	REVISED -
PLOT SCALE = 1/8" = 1'-0"	CHECKED JUN	REVISED -
PLOT DATE = 1/25/2022	DATE 12/21/2020	REVISED -

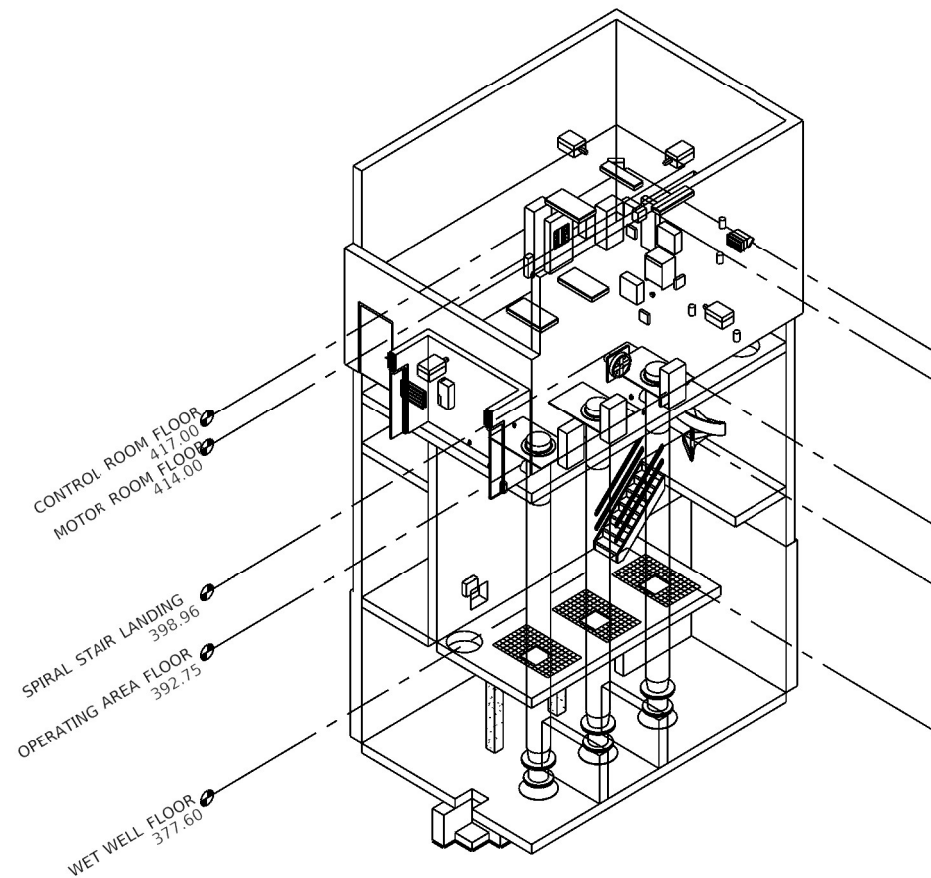
STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

25TH STREET PUMP STATION ELECTRICAL DEMOLITION PLANS	
SCALE: NONE	SHEET 1 OF 2 SHEETS STA. TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
9228	(Z-1)PS-2, 29PS-2	ST. CLAIR	41	34
CONTRACT NO. 76P08				
ILLINOIS FED. AID PROJECT				



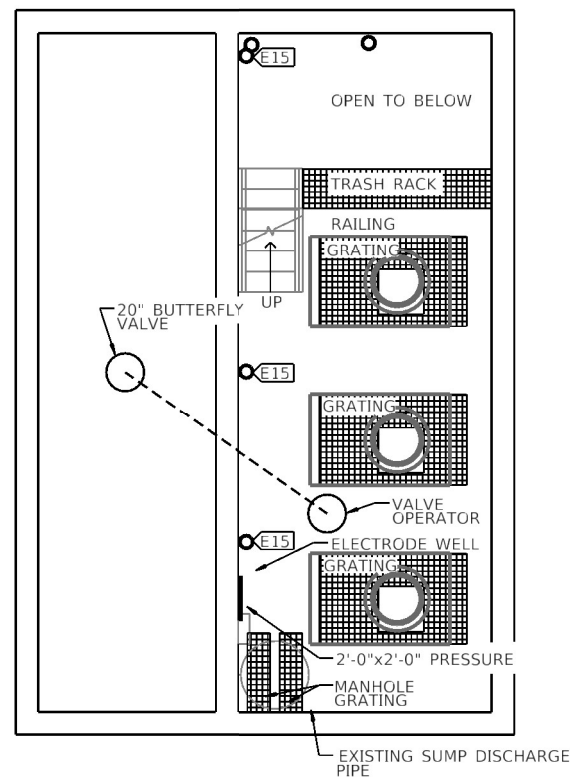
WET WELL LEVEL - ELECTRICAL DEMOLITION PLAN



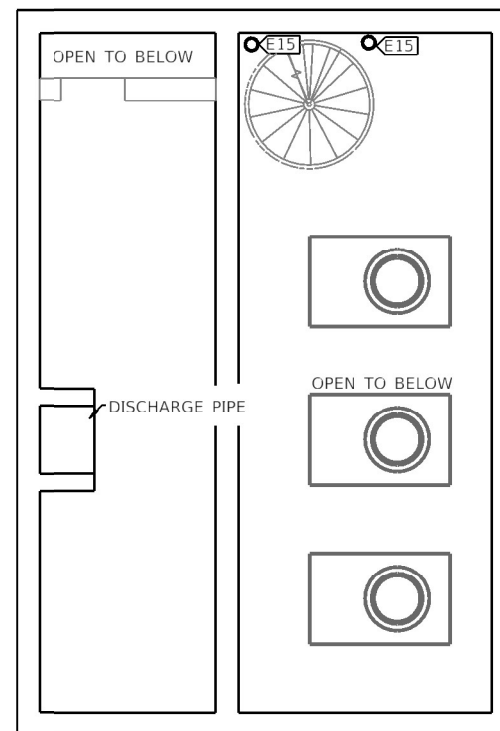
ELECTRICAL DEMOLITION - 3D VIEW

KEYNOTE LEGEND	
VALUE	DESCRIPTION
E05	REMOVE EXISTING CT CABINET AND ELECTRICITY METER AND RELOCATE TO NEW ADDITION. REFER TO NEW WORK PLAN SHEET FOR LOCATION.
E06	REMOVE EXISTING EXTERIOR LIGHT FIXTURE. EXISTING CONDUIT TO BE REUSED.
E07	REMOVE EXISTING MAIN DISTRIBUTION PANEL AND ALL ASSOCIATED CONDUIT AND WIRING TO CONNECTED EQUIPMENT OR DEVICES TO REMAIN.
E08	REMOVE EXISTING GENERATOR DISCONNECT SWITCH AND ALL ASSOCIATED CONDUIT AND WIRING.
E09	REMOVE EXISTING AUTOMATIC TRANSFER SWITCH AND ALL ASSOCIATED CONDUIT AND WIRING.
E10	REMOVE EXISTING FLOOR MOUNTED TRANSFORMER AND ALL ASSOCIATED CONDUIT AND WIRING.
E11	REMOVE EXISTING LOW VOLTAGE PANEL AND ALL ASSOCIATED CONDUIT AND WIRING TO CONNECTED EQUIPMENT OR DEVICES TO REMAIN.
E12	REMOVE EXISTING JUNCTION BOX.
E13	REMOVE EXISTING PUMP CONTROL PANEL AND ALL ASSOCIATED CONDUIT AND WIRING TO CONNECTED EQUIPMENT OR DEVICES TO REMAIN.
E14	REMOVE EXISTING LIGHT SWITCHES AND ALL ASSOCIATED CONDUIT AND WIRING.
E15	REMOVE EXISTING LIGHT FIXTURE AND ALL ASSOCIATED CONDUIT AND WIRING.
E16	REMOVE EXISTING RECEPTACLE AND ALL ASSOCIATED CONDUIT AND WIRING.
E17	REMOVE EXISTING CONDUIT AND WIRING TO EXHAUST FAN.
E18	REMOVE EXISTING SYSTEM FLOAT CONTROL PANEL AND RELOCATE TO CONTROL ROOM. REFER TO PLAN SHEET 37 OF 41 FOR LOCATION. RE-USE EXISTING FLOATS AND RE-ROUTE CONDUCTORS TO NEW CONTROL PANEL LOCATION.
E19	REMOVE EXISTING UNUSED DISCONNECT SWITCH AND ALL ASSOCIATED CONDUIT AND WIRING.
E20	REMOVE EXISTING CONDUIT AND WIRING TO INTAKE FAN.
E21	REMOVE EXISTING CONDUIT AND WIRING TO UNIT HEATER.
E41	REMOVE EXISTING DIALER TO BE RELOCATED TO THE CONTROL ROOM. REFER TO SHEET 36 OF 40 FOR NEW LOCATION.
E42	REMOVE EXISTING GENERATOR ANNUNCIATOR PANEL AND INCOMING CONDUIT BOX.

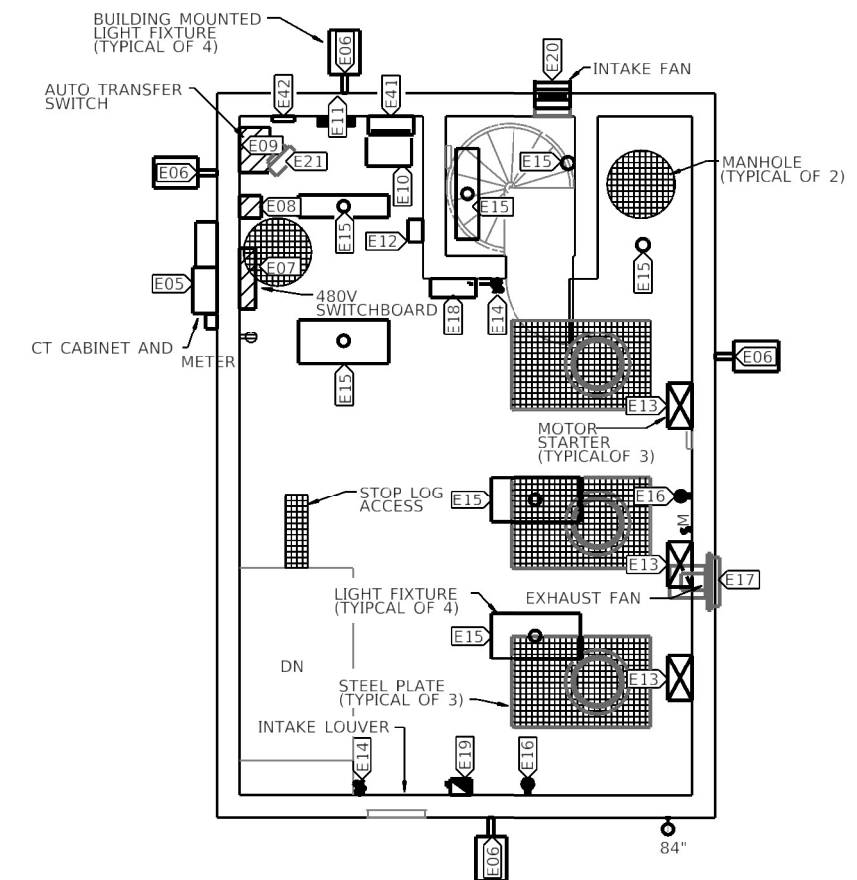
COST OF ALL REMOVAL ITEMS INCLUDED IN "PUMP STATION ELECTRICAL WORK"



OPERATING LEVEL - ELECTRICAL DEMOLITION PLAN



DISCHARGE LEVEL - ELECTRICAL DEMOLITION PLAN



MOTOR LEVEL - ELECTRICAL DEMOLITION PLAN

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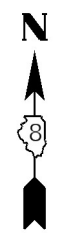




KEYNOTE LEGEND	
VALUE	DESCRIPTION
E23	COORDINATE GENERATOR PAD WITH STRUCTURAL PLANS.
E24	INSTALL VIDEO CAMERA ON WOODEN UTILITY POLE AT 15' ABOVE GRADE.
E25	COORDINATE CONNECTION TO EXISTING FIBER OPTIC CABLE WITHIN EXISTING JUNCTION BOX LOCATED ON THE BRIDGE SUPPORT BEAM IN THIS LOCATION. ROUTE FIBER TO PUMP BUILDING AND ROUTE CAT 5 CABLE FROM BUILDING THROUGH SAME CONDUIT FROM THE PUMP BUILDING TO THIS JUNCTION BOX AND FROM THIS JUNCTION BOX TO THE CAMERA POLE.
E26	PROVIDE ITS CAMERA, POLE, AND POLE BASE PER IDOT STANDARD SPECIFICATIONS IN THIS LOCATION.
E35	GENERATOR FEEDER CONDUIT FROM ATS-01 TO GEN-01.
E37	EXISTING HIGHWAY LIGHTING CONTROL CABINET TO REMAIN. INTERIOR LIGHTING CONTROL COMPONENTS TO BE RELOCATED. PROVIDE DOOR CONTACT ON CABINET DOOR AND INTEGRATE INTO EXISTING DIALER. REFER TO SHEET 37 OF 41 FOR NEW LOCATION.
E50	PROVIDE TWO SURFACE MOUNTED JUNCTION BOXES ON THE GENERATOR ENCLOSURE AT 2'-0" ABOVE GRADE TO FACILITATE POWER AND COMMUNICATION CABLING FROM THE BUILDING TO THE LIGHT POLES AND GENERATOR.
E51	INTERCEPT EXISTING TRAFFIC SIGNAL SERVICE FEEDER CONDUIT IN THIS LOCATION AND REFEED FROM PANEL LV. COORDINATE SWITCHOVER WITH IDOT.
E52	ROUTE SERVICE FEEDER FROM EXISTING POLE MOUNTED TRANSFORMERS DOWN TO BELOW GRADE AND UP IN CT CABINET. PROVIDE CONDUIT PER UTILITY REQUIREMENTS. COORDINATE WITH ELECTRICAL UTILITY.
E55	PROVIDE 120V DOOR POSITION SWITCH ON ALL GENERATOR DOORS. ROUTE CIRCUIT TO AUTODIALER.
E56	INSTALL VIDEO CAMERA AT 9'-6" ABOVE GRADE IN THIS LOCATION AND PROVIDE 3/4" RIGID METALLIC CONDUIT SURFACE MOUNTED ON GENERATOR ENCLOSURE WALLS FROM JUNCTION BOX TO CAMERA.
E57	PROVIDE 3/4" RIGID METALLIC CONDUIT SURFACE MOUNTED ON GENERATOR ENCLOSURE WALLS FROM JUNCTION BOX TO LIGHT FIXTURE.
E59	PROVIDE DOOR CONTACT ON EXISTING TRAFFIC SIGNAL DOOR AND INTEGRATE INTO EXISTING DIALER.

COST OF ALL ITEMS INCLUDED IN "PUMP STATION ELECTRICAL WORK"

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 Engineers • Architects • Surveyors
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 STATE OF ILLINOIS DESIGN FIRM NO. 184-2738

USER NAME = oms	DESIGNED ALD	REVISED -
	DRAWN ALD	REVISED -
PLOT SCALE = 20:0' = 1" / 10'	CHECKED JUN	REVISED -
PLOT DATE = 1/25/2022	DATE 12/21/2020	REVISED -

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**25TH STREET PUMP STATION
 ELECTRICAL SITE PLAN**

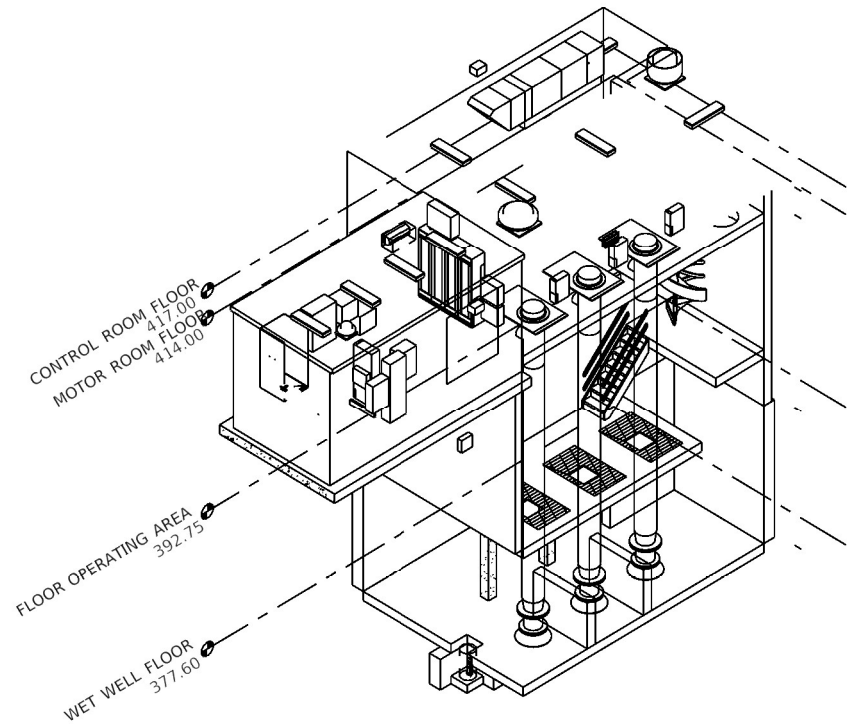
SCALE: NONE SHEET 1 OF 1 SHEETS STA. TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
9228	(Z-1)PS-2, 29PS-2	ST. CLAIR	41	36
CONTRACT NO. 76P08				
ILLINOIS FED. AID PROJECT				

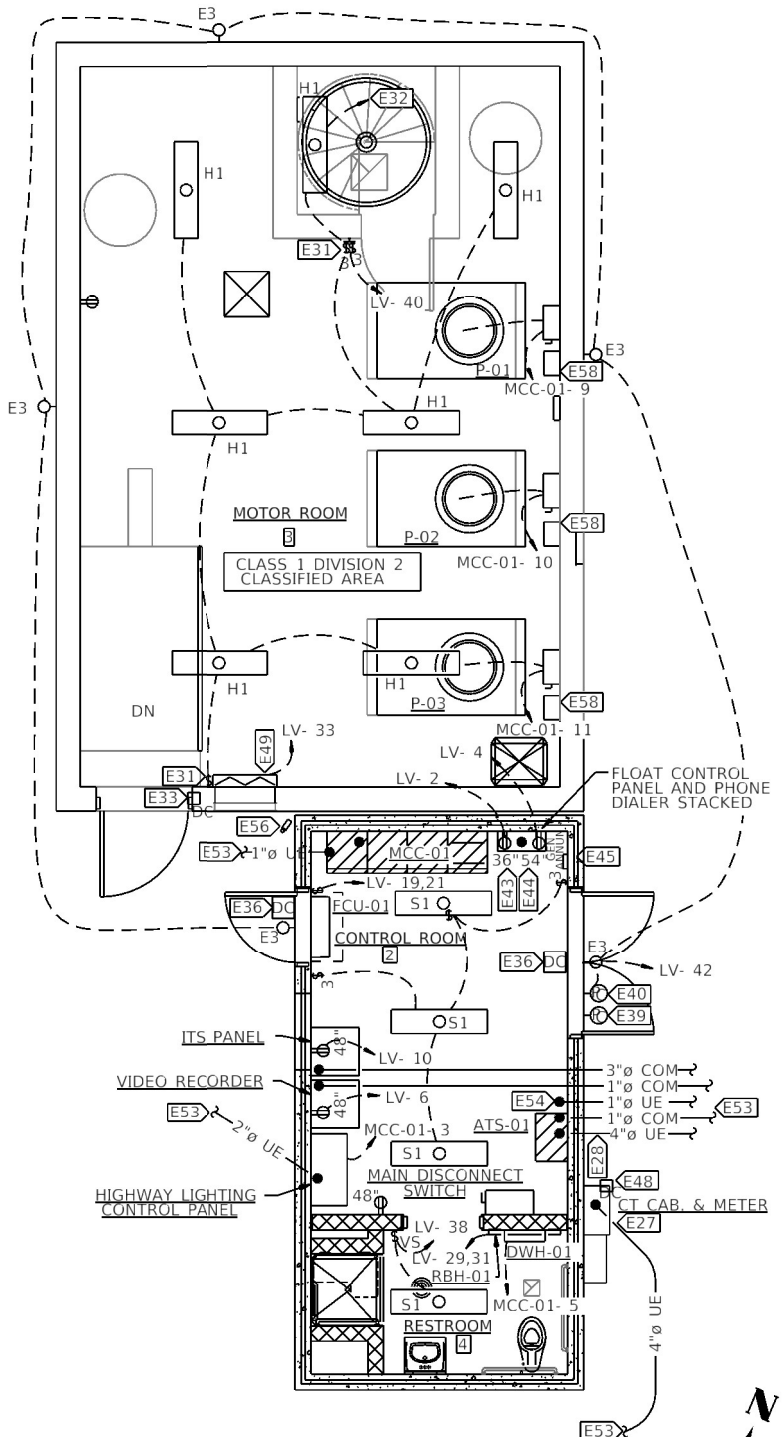
KEYNOTE LEGEND

VALUE	DESCRIPTION
E27	PROVIDE WALL MOUNTED CT CABINET AND METER PER ELECTRIC UTILITY REQUIREMENTS. COORDINATE FINAL LOCATION WITH ELECTRIC UTILITY.
E28	ROUTE UNDERGROUND CONDUIT THROUGH FOUNDATION WALL BELOW GRADE AND TURN UP THROUGH FLOOR WITHIN BUILDING.
E29	PENETRATE WALL BELOW MOTOR ROOM FLOOR.
E30	PROVIDE NEW 1" RIGID CONDUIT AND CIRCUIT UP TO MOTOR LEVEL FOR SUMP PUMP POWER. COORDINATE WITH MECHANICAL CONTRACTOR.
E31	PROVIDE CLASS 1 DIVISION 2 RATED LIGHT SWITCHES.
E32	EXTEND SWITCHED LIGHTING CIRCUIT TO LIGHTING IN LEVELS BELOW.
E33	REUSE EXISTING DOOR POSITION SWITCH. REROUTE CIRCUIT TO NEW AUTODIALER LOCATION.
E34	LIGHT SWITCH TO OPERATING LEVEL AND STAIRWELL LIGHTING.
E36	PROVIDE 120V DOOR POSITION SWITCH AND ROUTE CIRCUIT TO AUTODIALER.
E39	PROVIDE HIGHWAY LIGHTING CONTROL PHOTOCELL AT 8" BELOW SOFFIT IN THIS LOCATION. WIRE PHOTOCELL TO HIGHWAY LIGHTING CONTROL PANEL.
E40	PROVIDE PUMP STATION EXTERIOR LIGHTING CONTROL PHOTOCELL AT 8" BELOW SOFFIT IN THIS LOCATION.
E43	RELOCATE EXISTING FLOAT CONTROL PANEL TO THIS LOCATION.
E44	RELOCATE EXISTING PHONE DIALER PANEL TO THIS LOCATION.
E45	INSTALL GENERATOR ANNUNCIATOR PANEL ADJACENT TO THE PHONE AUTODIALER.
E46	PROVIDE 2" RIGID CONDUIT BELOW FLOOR AND PENETRATE THROUGH WALL BELOW EXISTING MOTOR ROOM FLOOR.
E47	PROVIDE 2" RIGID CONDUIT FROM FLOAT CONTROL PANEL TO EXISTING JUNCTION BOX ON WALL ON THE OPERATING LEVEL.
E48	PROVIDE 120V CT CABINET DOOR POSITION SWITCH AND ROUTE CIRCUIT TO AUTODIALER.
E49	MAKE FINAL CONNECTION TO 120V ACTUATOR PROVIDED BY MECHANICAL CONTRACTOR.
E53	REFER TO SHEET E101 FOR CONTINUATION.
E54	ROUTE LIGHT POLE LIGHT FIXTURE CIRCUIT AND GENERATOR BLOCK HEATER, BATTERY CHARGER, AND DOOR POSITION CIRCUITS IN 1" CONDUIT TO HANDHOLE. REFER TO SHEET 36 of 41.
E56	INSTALL VIDEO CAMERA AT 9'-6" ABOVE GRADE IN THIS LOCATION AND PROVIDE 3/4" RIGID METALLIC CONDUIT SURFACE MOUNTED ON GENERATOR ENCLOSURE WALLS FROM JUNCTION BOX TO CAMERA.
E58	12"x12"x6" CLASS 1 DIVISION 2 JUNCTION BOX FOR PUMP MONITORING CABLES. INCLUDE TERMINATION BARS WITHIN JUNCTION BOX.

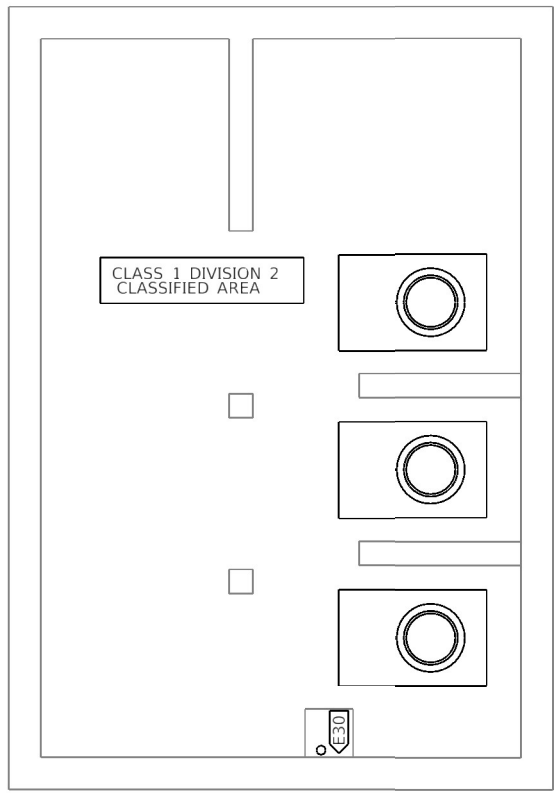
COST OF ALL ITEMS INCLUDED IN "PUMP STATION ELECTRICAL WORK"



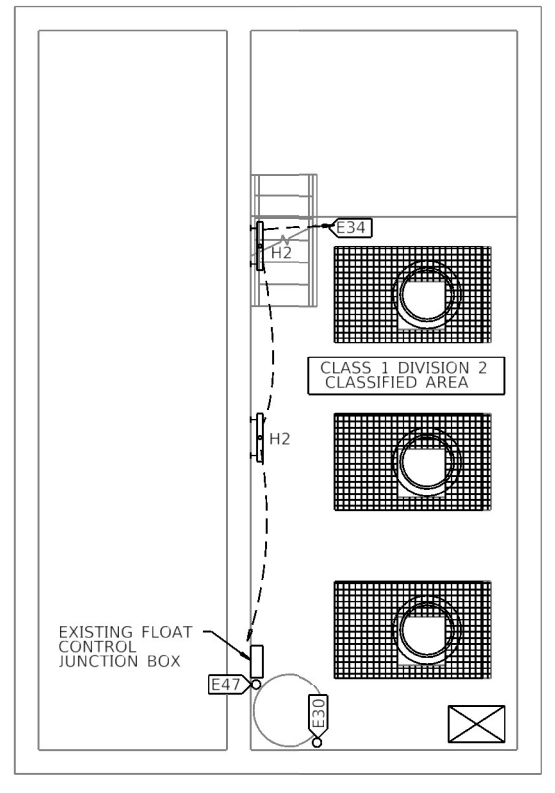
ELECTRICAL - 3D VIEW



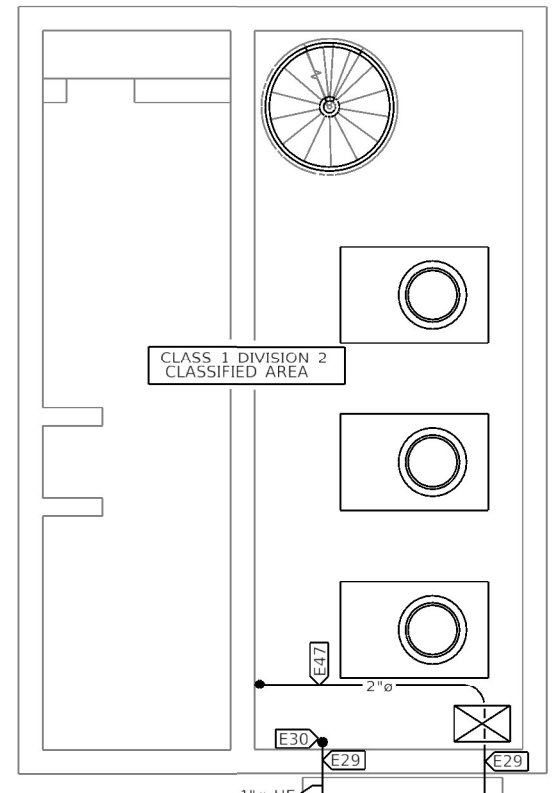
MOTOR LEVEL - ELECTRICAL FLOOR PLAN



WET WELL LEVEL - ELECTRICAL FLOOR PLAN



OPERATING LEVEL - ELECTRICAL FLOOR PLAN



DISCHARGE LEVEL - ELECTRICAL FLOOR PLAN

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 Engineers - Architects - Surveyors
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 STATE OF ILLINOIS DESIGN FIRM NO. 184-2738

USER NAME = oms	DESIGNED ALD	REVISED -
PLOT SCALE = 8/0 1" = 10'	DRAWN ALD	REVISED -
PLOT DATE = 1/25/2022	CHECKED JUN	REVISED -
	DATE 12/21/2020	REVISED -

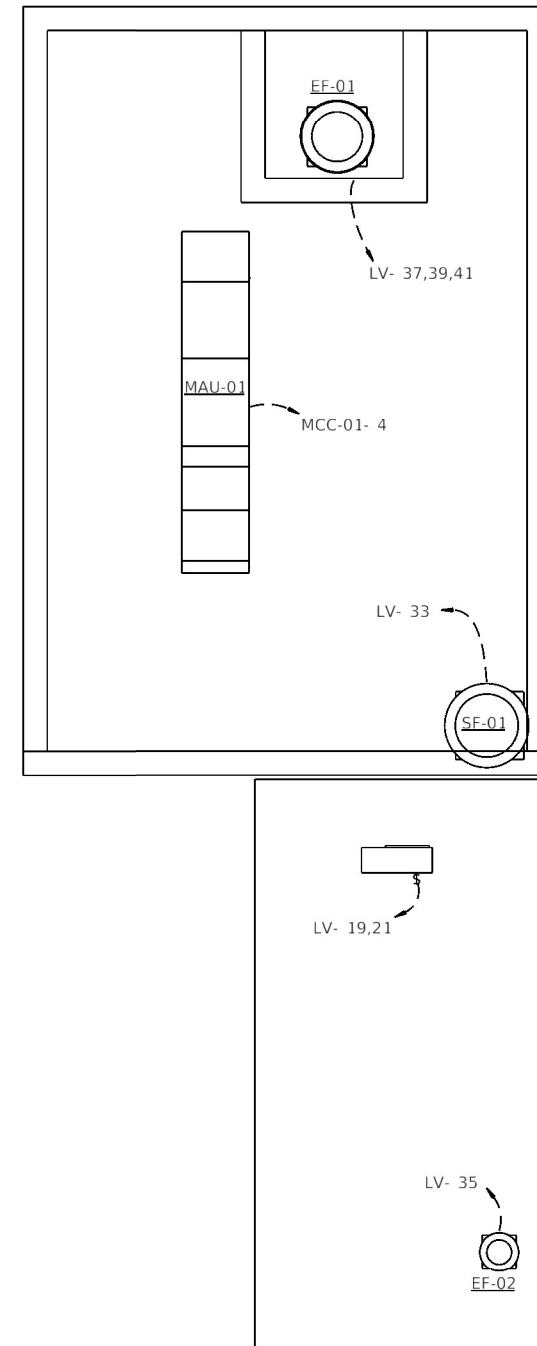
STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

25TH STREET PUMP STATION
 ELECTRICAL FLOOR PLAN

SCALE: NONE SHEET 1 OF 1 SHEETS STA. TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
9228	(Z-1)PS-2, 29PS-2	ST. CLAIR	41	37
CONTRACT NO. 76P08				
ILLINOIS FED. AID PROJECT				

COST OF ALL ITEMS INCLUDED IN
"PUMP STATION ELECTRICAL WORK"



ELECTRICAL ROOF PLAN



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STATE OF ILLINOIS DESIGN FIRM NO. 184-2738

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DATE 12/21/2020	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

25TH STREET PUMP STATION ELECTRICAL ROOF PLAN			
SCALE: NONE	SHEET 1 OF 1 SHEETS	STA.	TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
922B	(Z-1)PS-2, 29PS-2	ST. CLAIR	41	38
CONTRACT NO. 76P08				
ILLINOIS FED. AID PROJECT				

BACKUP GENERATOR SCHEDULE																
TAG	DESCRIPTION	RATING			VOLTAGE	PHASE	FREQ	POLES	ENGINE				ACCEPTABLE MANUFACTURERS	FUEL TANK	WEIGHT LBS	
		KW @ 130C	MAX START KW						FUEL	ARRANGEMENT	BHP	GOVERNOR				RADIATOR
GEN-01	DIESEL POWERED BACKUP GENERATOR WITH SUB-BASE FUEL STORAGE TANK, WEATHER ENCLOSURE, AND UNIT MOUNTED CIRCUIT BREAKER (LSI)	255	287		480/277	3	60	3	DIESEL	MIN. 6-CYLINDERS	385	ELECTRONIC	AIR COOLED	HIPOWER CUMMINS CATERPILLAR	472 GALLON	5400

SECTION: MCC-01																							
BUSS AMPS:		600 A		480/277V		NOTES:																	
AIC RATING:		60 A		3 PHASE		4 WIRES																	
SECTION	CELL	LOAD NAME	RATING	Load	STARTER, CLASS, OR DESCRIPTION	SIZE (IN)	HP RATING	NO	NC	CONTROL DEVICES													
										AUX ITLKS	PUSH BUTTONS	SELECTOR SWITCHES	INDICATING LIGHT	OTHER									
										START/STOP	FWD/REV/STOP	FAST/SLOW/STOP	HAND/OFF/AUTC	ON/OFF	FWD/OFF/REV	FAST/OFF/SLOW	GREEN	RED	AMBER	PUSH TO TEST	ELAPSED TIME METER	MOTOR STARTS COUNTER	CURRENT SWITCH
1	A	MAIN LUGS	-	0 kVA	MAIN LUGS W/ NEUTRAL...	18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1	G	TVSS	-	0 kVA	TRANSIENT VOLT. SURGE SUPRES.	18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1	M	HIGHWAY LIGHTING	100 A	10 kVA	CIRCUIT BREAKER	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1	O	MAU-01	25 A	15 kVA	CIRCUIT BREAKER	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1	Q	DWH-01	25 A	16 kVA	CIRCUIT BREAKER	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1	S	SPACE	-	0 kVA	SPACE	18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2	A	PANEL LV	-	0 kVA	120/208V, 225A, 3Ø, 4WIRE, 42-SLOT	36	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2	M	30 KVA XFMR	45 A	19 kVA	30 KVA XFMR WITH PRIM. & SEC....	36	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3	A	PUMP P-01	175 A	80 kVA	RVAT SOFT START WITH CIRC....	36	125	-	-	-	-	-	-	-	-	-	X	X	X	X	X	X	X
3	M	PUMP P-02	175 A	80 kVA	RVAT SOFT START WITH CIRC....	36	125	-	-	-	-	-	-	-	-	-	X	X	X	X	X	X	X
4	A	PUMP P-03	175 A	80 kVA	RVAT SOFT START WITH CIRC....	36	125	-	-	-	-	-	-	-	-	-	X	X	X	X	X	X	X
4	M	SPACE	-	0 kVA	SPACE	36	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TOTAL CONNECTED:			299 kVA																				
TOTAL CONNECTED:			359 A																				

BRANCH PANEL: LV														
LOCATION: CONTROL ROOM 2					VOLTS: 120/208					A.I.C. RATING: 22,000 AMPS SYMMETRICAL				
SUPPLY FROM: XFMR					PHASES: 3					PANEL TYPE: MAIN CB				
MOUNTING: SURFACE					WIRES: 4					MAINS RATING: 100 A				
ENCLOSURE: NEMA 1					ACCESSORIES:					MAIN BREAKER: 60 A				
CKT	CIRCUIT DESCRIPTION	TRIP	POLES	A	B	C	POLES	TRIP	CIRCUIT DESCRIPTION	CKT				
1	MAIN CIRCUIT BREAKER	100 A	3	0 VA	180 VA	0 VA	180 VA	1	20 A	FLOAT CONTROL PANEL	2			
3								1	20 A	PHONE DIALER PANEL	4			
5						0 VA	840 VA	1	20 A	VIDEO RECORDER	6			
7	RCPT - CONTROL ROOM & R.R.	20 A	1	180 VA	3600 VA			1	50 A	TRAFFIC SIGNAL CONTROL PANEL	8			
9	SPARE	20 A	1			0 VA	840 VA	1	20 A	ITS CAMERA	10			
11	SPARE	20 A	1			0 VA	0 VA	1	20 A	SPARE	12			
13	SPARE	20 A	1	0 VA	0 VA			1	20 A	SPARE	14			
15	SPARE	20 A	1			0 VA	0 VA	1	20 A	SPARE	16			
17	SPARE	20 A	1			0 VA	0 VA	1	20 A	SPARE	18			
19	CONTROL ROOM AIR CONDITIONING	25 A	2	1742 VA	0 VA			1	20 A	SPARE	20			
21						1742 VA	0 VA	1	20 A	SPARE	22			
23	GENERATOR ENGINE BLOCK	20 A	2			2496 VA	0 VA	1	20 A	SPARE	24			
25	HEATER			0 VA	0 VA			1	20 A	SPARE	26			
27	GENERATOR BATTERY CHARGER	20 A	1			600 VA	0 VA	1	20 A	SPARE	28			
29	RESTROOM BASEBOARD HEATER	20 A	2			375 VA	0 VA	1	20 A	SPARE	30			
31				375 VA	0 VA			1	20 A	SPARE	32			
33	WET WELL SUPPLY FAN	20 A	1			2170 VA	260 VA				34			
35	BATHROOM EXHAUST FAN	20 A	1			0 VA	260 VA	2	20 A	LITES - POLE MOUNTED	36			
37				937 VA	180 VA			1	20 A	LITES - CONTROL ROOM & R.R.	38			
39	WET WELL EXHAUST FAN	20 A	3			937 VA	371 VA	1	20 A	LITES - MOTOR ROOM	40			
						937 VA	448 VA	1	20 A	LITES - BUILDING MOUNTED	42			
PHASE LOAD:				7,023 VA		6,965 VA		5,256 VA		**TOTAL LOAD: 19,175 VA				
PHASE AMPS:				61 A		60 A		44 A		**TOTAL AMPS: 53 A				

* FIELD VERIFY BREAKER SIZE WITH ACTUAL EQUIPMENT PROVIDED. COORDINATE WITH OTHER CONTRACTORS AS NECESSARY.
**TOTAL LOAD AND TOTAL AMPS DO NOT INCLUDE DEMAND FACTOR CALCULATIONS.

ONE-LINE DIAGRAM SYMBOL LEGEND		
SYMBOL	DESCRIPTION	ADDITIONAL QUALIFIERS
	CIRCUIT BREAKER:	XX = BREAKER RATING YY = NUMBER OF POLES
	SOLID STATE SOFT STARTER	X = NEMA STARTER SIZE
	NON-FUSED DISCONNECT SWITCH:	WW = RATING XX = NUMBER OF POLES YY = ENCLOSURE NEMA RATING
	3-PHASE VOLTAGE TRANSFORMER	Δ = 3 WIRE DELTA CONNECTION Y = 4 WIRE WYE CONNECTION
	TRANSIENT VOLTAGE SURGE SUPPRESSOR	
	EARTH GROUND	
	AUTOMATIC TRANSFER SWITCH	WW=NORMAL DEVICE RATING XX = NORMAL DEVICE NUMBER OF POLES YY = EMERGENCY DEVICE RATING ZZ = EMERGENCY DEVICE NUMBER OF POLES
	GENERATOR	XX = OUTPUT CAPACITY YY = NUMBER OF POLES
	ELECTRIC MOTOR (HP LISTED ON PLANS)	

LIGHT FIXTURE SCHEDULE													
TAG	DESCRIPTION	MOUNT	TYPE	COLOR TEMP.	OUTPUT	DISTRIBUTION	DRIVER CONTROL	VOLT	LOAD	BASIS OF DESIGN			REMARKS
										MAKE	MODEL	ACCESSORIES	
E1	POLE MOUNTED AREA LIGHT	POLE	LED	3000 K	19,000 lm	R4	FIELD ADJUSTABLE OUTPUT	208 V	173 VA	LITHONIA	KAX1LED	ROUND POLE TENON, EXTERNAL GLARE SHIELD	PROVIDE 30' WOODEN POLE AND MOUNT FIXTURES AT 20' ABOVE GRADE
E2	POLE MOUNTED AREA LIGHT	POLE	LED	3000 K	19,000 lm	R5	FIELD ADJUSTABLE OUTPUT	208 V	173 VA	LITHONIA	KAX1LED	ROUND POLE TENON, EXTERNAL GLARE SHIELD	PROVIDE 30' WOODEN POLE AND MOUNT FIXTURES AT 20' ABOVE GRADE
E3	EXTERIOR WALL PACK	WALL	LED	3000 K	8,500 lm	R3	FIELD ADJUSTABLE OUTPUT	120 V	88 VA	LITHONIA	KAXWLED	EXTERNAL GLARE SHIELD	INSTALL AT 9'-0" ABOVE CONTROL ROOM FLOOR
H1	1'x4' HARSH ENVIRONMENT CLASS 1 DIVISION 2 LISTED ALUMINUM HOUSING AND DOOR	SURFACE	LED	5000 K	5,500 lm	WIDE	ON/OFF	120 V	45 VA	KENALL	HSEDO14		
H2	1'x4' HARSH ENVIRONMENT CLASS 1 DIVISION 2 LISTED ALUMINUM HOUSING AND DOOR	WALL	LED	5000 K	10,900 lm	WIDE	ON/OFF	120 V	29 VA	KENALL	HSEDO14		INSTALL AT 12' ABOVE OPERATING LEVEL FLOOR
S1	SURFACE MOUNTED STRIP	SURFACE	LED	5000 K	5,200 lm	WIDE	ON/OFF	120 V	45 VA	LITHONIA	CSSL48		

FEEDER SCHEDULE						
FEEDER TAG	PHASE CONDUCTORS		NEUTRAL SIZE	EGC SIZE	CONDUIT	
	QUANTITY	SIZE			SIZE	TYPE
1	3	600 KCMIL Cu	NA	#3 AWG Cu	4"	RMC/PVC
2	3	600 KCMIL Cu	600 KCMIL Cu	#3 AWG Cu	4"	RMC
3	3	2/0 AWG Cu	NA	#6 AWG Cu	1-1/2"	RMC
4	2	#3 AWG Cu	NA	#8 AWG Cu	1-1/4"	RMC
5	3	#10 AWG Cu	#10 AWG Cu	#10 AWG Cu	3/4"	RMC

GEC SCHEDULE	
GEC TAG	GEC SIZE
A	2/0 AWG Cu
B	#6 AWG Cu
C	#4 AWG Cu
D	#6 AWG Cu

COST OF ALL ITEMS INCLUDED IN "PUMP STATION ELECTRICAL WORK"

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KLINGNER & ASSOCIATES, P.C.
Engineers - Architects - Surveyors
616 N. 24TH ST. QUINCY, ILLINOIS 62301 | 217.223.5970
STATE OF ILLINOIS DESIGN FIRM NO. 184-2738

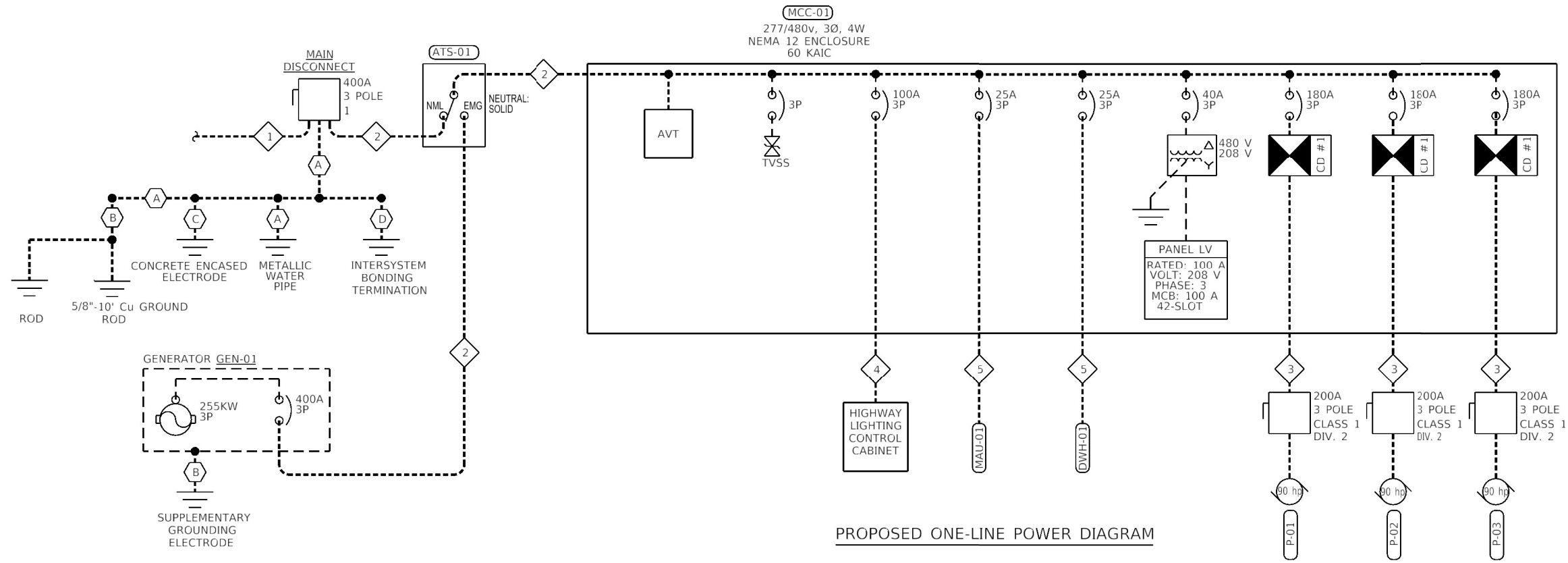
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PLOT DATE: 1/25/2022	DATE: 12/21/2020	REVISED: -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

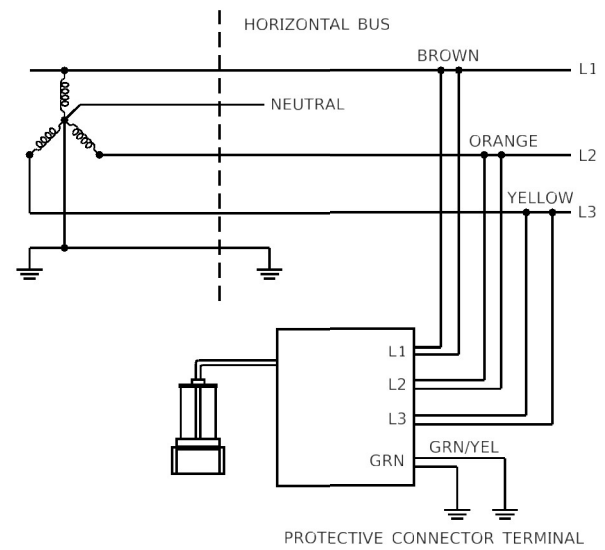
25TH STREET PUMP STATION
ELECTRICAL SCHEDULES

SCALE: NONE SHEET 1 OF 2 SHEETS STA. TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
9228	(Z-1)PS-2, 29PS-2	ST. CLAIR	41	39
CONTRACT NO. 76P08				
ILLINOIS FED. AID PROJECT				



PROPOSED ONE-LINE POWER DIAGRAM

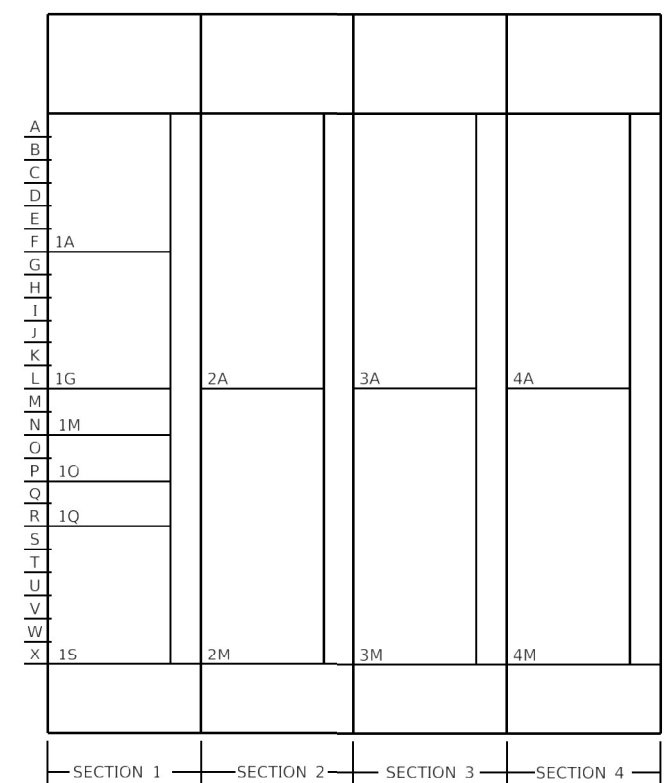


THREE-PHASE WYE: 3 PHASE, 4-WIRE WIRING DIAGRAM

AVT NOTES

1. SENSOR LEADS MUST NOT BE MECHANICALLY CONNECTED WITH EACH OTHER.
2. ALL SENSOR LEADS SHALL BE TERMINATED PROPERLY PER THE MANUFACTURER'S INSTRUCTIONS AND SECURED TO THE POWER CONDUCTOR OR OTHER NEARBY RIGID FEATURE TO PREVENT MOVEMENT.
3. THE AVT SHALL NOT BE EXTENDED VIA SPLICE.
4. CONNECTION METHODS SHALL NOT PIERCE OR OTHERWISE COMPROMISE THE INTEGRITY OF THE CONDUCTOR.

AVT SCHEDULE				
MANUFACTURER	MODEL	VOLTAGE (V)	ASSYMETRICAL RATING (A)	COMMENTS
PANDUIT CORP.	VERISAFE AVT	600	300,000	OR EQUAL APPROVED BY ENGINEER

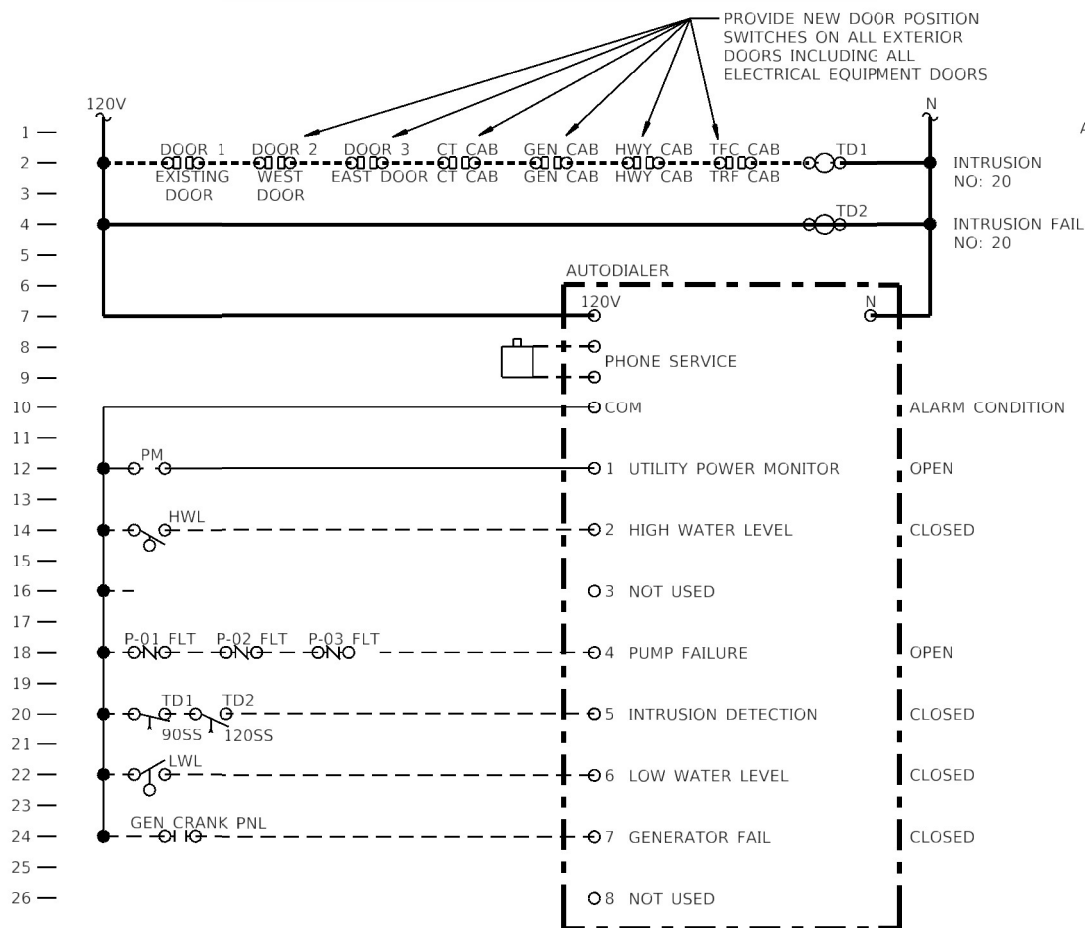


PROPOSED MCC DIAGRAM

COST OF ALL ITEMS INCLUDED IN "PUMP STATION ELECTRICAL WORK"

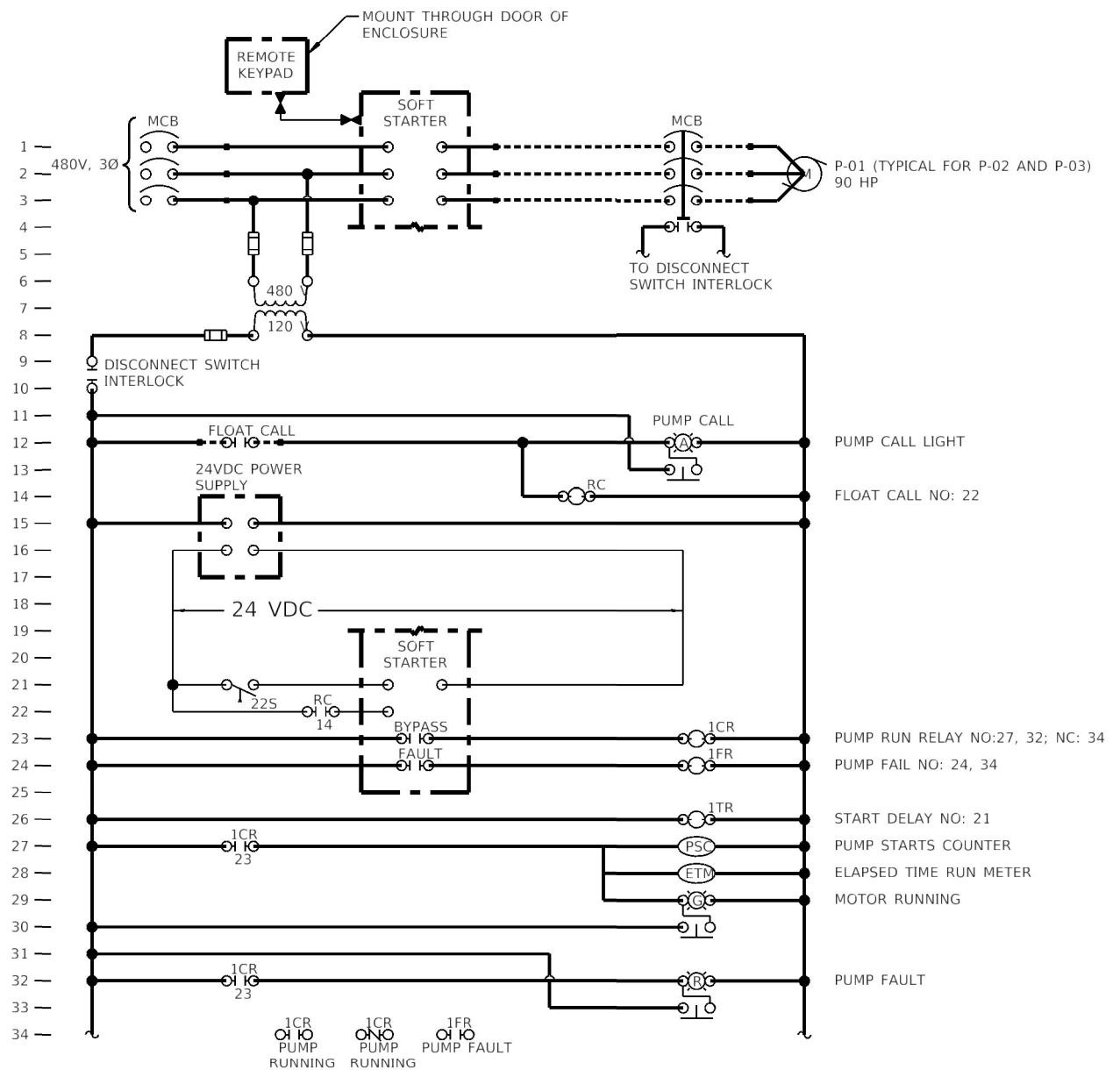
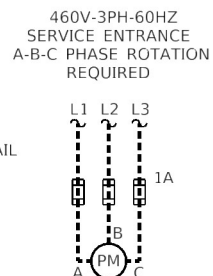
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CONTROL DIAGRAM SYMBOL LEGEND			
-----	FIELD INSTALLED WIRING		NORMALLY CLOSED FLOW SWITCH OPENS UPON INCREASING FLOW
---	WIRE INTEGRAL TO CONTROL EQUIPMENT		NORMALLY OPEN FLOAT SWITCH CLOSES UPON INCREASING LEVEL
○	WIRING TERMINATION POINT		NORMALLY CLOSED FLOAT SWITCH OPENS UPON INCREASING LEVEL
—●—	WIRING SPLICE		NORMALLY OPEN LEVEL SWITCH CLOSES UPON INCREASING PRESSURE, XX = SETPOINT (PSI)
+	NO CONNECTION		NORMALLY CLOSED LEVEL SWITCH OPENS UPON INCREASING PRESSURE, XX = SETPOINT (PSI)
△	BINARY INPUT/OUTPUT		NORMALLY OPEN LIMIT SWITCH CLOSES UPON LIMIT, XX = SETPOINT
◀	ANALOG INPUT/OUTPUT		NORMALLY CLOSED LIMIT SWITCH OPENS UPON LIMIT, XX = SETPOINT
↔	COMMUNICATION CONNECTION		THREE POSITION SELECTOR SWITCH MAINTAINED CONTACTS (SHOWN IN HAND POSITION)
	CIRCUIT BREAKER		NORMALLY OPEN PUSHBUTTON MOMENTARY CONTACT, XX = FUNCTION
	FUSE		NORMALLY CLOSED PUSHBUTTON MOMENTARY CONTACT, XX = FUNCTION
	NORMALLY OPEN CONTACT		INDICATING LIGHT, C = COLOR
	NORMALLY CLOSED CONTACT		PUSH-TO-TEST INDICATING LIGHT, C = COLOR
	MOTOR OVERLOAD RELAY		SOLENOID VALVE
	NORMALLY OPEN TIME DELAY RELAY CLOSES UPON TIME DELAY AFTER ACTIVATION, XX = TIME (S)		SPECIALTY ITEM XX = DESCRIPTION
	NORMALLY CLOSED TIME DELAY RELAY OPENS UPON TIME DELAY AFTER ACTIVATION, XX = TIME (S)		EXAMPLES: ETM = ELAPSED TIME METER MSC = MOTOR STARTS COUNTER
	NORMALLY OPEN TIME DELAY RELAY CLOSES UPON TIME DELAY AFTER DE-ACTIVATION, XX = TIME (SECONDS)		
	NORMALLY CLOSED TIME DELAY RELAY OPENS UPON TIME DELAY AFTER DE-ACTIVATION, XX = TIME (SECONDS)		
	NORMALLY OPEN TEMPERATURE SWITCH CLOSED ABOVE SETPOINT, XX = SETPOINT		
	NORMALLY CLOSED TEMPERATURE SWITCH OPEN ABOVE SETPOINT, XX = SETPOINT		
	NORMALLY OPEN FLOW SWITCH CLOSES UPON INCREASING FLOW		



- NOTES:
 1. THE EXISTING AUTODIALER CONTROL PANEL SHALL BE RELOCATED TO THE NEW CONTROL ROOM.
 2. ALL EXISTING ALARM WIRING SHALL BE REROUTED TO NEW AUTODIALER CONTROL PANEL LOCATION.
 3. PROVIDE NEW DOOR POSITION SWITCHES ON ALL EXTERIOR DOORS INCLUDING ALL ELECTRICAL EQUIPMENT DOORS.

AUTODIALER CONTROL DIAGRAM



STORMWATER PUMPS SEQUENCE OF OPERATIONS

- MAJOR EQUIPMENT:
 - PUMPS:
 - EXISTING STORM WATER PUMPS NOS. 1, 2, AND 3.
 - WATER LEVEL MEASUREMENT SYSTEM:
 - EXISTING FLOAT CONTROL PANEL IS TO BE RE-USED.
- CONTROL LOGIC:
 - STORM WATER PUMPS NOS. 1, 2, AND 3.
 - WHEN HAND IS SELECTED AT THE FLOAT CONTROL PANEL, THE PUMP SHALL RUN.
 - WHEN OFF IS SELECTED AT THE FLOAT CONTROL PANEL, THE PUMP SHALL BE OFF.
 - WHEN AUTO IS SELECTED AT THE FLOAT CONTROL PANEL, THE PUMPS SHALL BE CONTROLLED AS FOLLOWS.
 - RISING WATER LEVEL:
 - START LEAD PUMP WHEN WATER LEVEL REACHES LEAD PUMP WATER LEVEL.
 - START LAG PUMP WHEN WATER LEVEL REACHES LAG PUMP WATER LEVEL.
 - START LAG-LAG PUMP WHEN WATER LEVEL REACHES LAG-LAG PUMP WATER LEVEL.
 - FALLING WATER LEVEL:
 - STOP LAG-LAG PUMP WHEN WATER LEVEL DROPS BELOW LAG-LAG PUMP WATER LEVEL.
 - STOP LAG PUMP WHEN WATER LEVEL DROPS BELOW LAG PUMP WATER LEVEL.
 - STOP LEAD PUMP WHEN WATER LEVEL DROPS BELOW LEAD PUMP WATER LEVEL.
 - PUMP START DELAY TIMES SHALL PREVENT MORE THAN ONE PUMP STARTING CONCURRENTLY AFTER POWER OUTAGE.

PUMP CONTROL DRAWING

COST OF ALL ITEMS INCLUDED IN "PUMP STATION ELECTRICAL WORK"

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USER NAME = oms	DESIGNED ALD	REVISED -
PLOT SCALE = 8/0" = 1"	DRAWN ALD	REVISED -
PLOT DATE = 1/25/2022	CHECKED JUN	REVISED -
	DATE 12/21/2020	REVISED -

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
9228	(Z-1)PS-2, 29PS-2	ST. CLAIR	41	41
CONTRACT NO. 76P08				
ILLINOIS FED. AID PROJECT				