

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

**PROPOSED
HIGHWAY PLANS**

FAI 57 (I-57)
SECTION (28-5)PS-1

WEST FRANKFORT PUMP STATION
REHABILITATION
FRANKLIN COUNTY

C-99-072-022

| F.A.I. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|-------------|------------|----------|--------------------|-----------|
| 57 | 128-51PS-1 | FRANKLIN | 39 | 1 |
| ILLINOIS | | | CONTRACT NO. 78958 | |

D-99-053-22



PLANS PREPARED BY:

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

Quincy, Illinois www.klingner.com
616 North 24th Street
217.223.3670
Columbia, IL 62202
STATE OF ILLINOIS DESIGN FIRM NO. 184-2738

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TOWNSHIP
DENNING

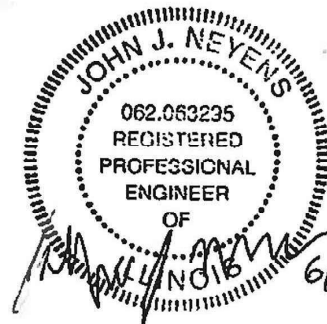
HIGHWAY STANDARDS

000001-08 001006
001001-02 664001-02

J.U.L.I.E.
JOINT UTILITY LOCATION INFORMATION FOR EXCAVATION
1-800-692-0123
OR 811

PROJECT ENGINEER GRANT DETERDING

CONTRACT NO. 78958

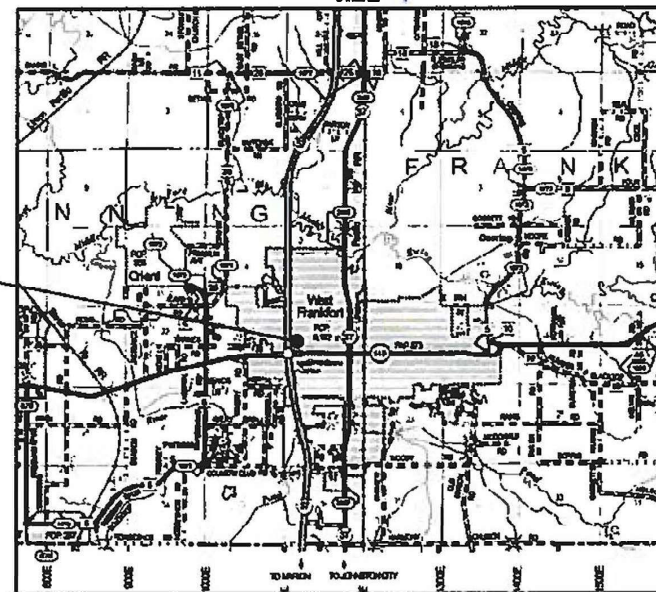


JOHN J. MEYENS
REGISTERED PROFESSIONAL ENGINEER
STATE OF ILLINOIS NO. 062-063235
LICENSE EXPIRES NOVEMBER 30, 2023

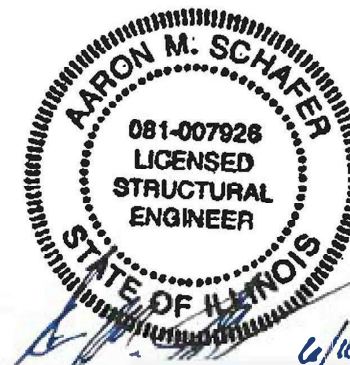
6/16/22



WEST FRANKFORT
PUMP STATION



FRANKLIN COUNTY



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

6/16/2022

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUBMITTED June 29 20 22
Kirk H. Bran REGIONAL ENGINEER
August 19, 2022
Scott A. Etk
ENGINEER OF DESIGN AND ENVIRONMENT
August 19, 2022
Stephen M. Faria
DIRECTOR OF HIGHWAYS PROJECT IMPLEMENTATION

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OF THE STATE OF ILLINOIS

D:\Projects\17824\Work\01.dwg - Phase II Pump Station Blanket Agreement\District 9 West Frankfort Pump Station\2000 Sheet\078958-ht-signatures.dgn

PREPARED BY: Charles Stein
DISTRICT STUDIES AND PLANS ENGINEER

EXAMINED BY: Nancy Stei
DISTRICT LAND ACQUISITION ENGINEER

EXAMINED BY: Car Mel
DISTRICT PROGRAM DEVELOPMENT ENGINEER

EXAMINED BY: R. [Signature]
DISTRICT OPERATIONS ENGINEER

EXAMINED BY: Douglas J. Kuehli
DISTRICT PROJECT IMPLEMENTATION ENGINEER

EXAMINED BY: Douglas J. Kuehli
DISTRICT CONSTRUCTION ENGINEER

EXAMINED BY: R. [Signature]
DISTRICT MATERIALS ENGINEER

KLINGNER & ASSOCIATES, P.C.
Engineers - Architects - Surveyors
#16 N. 24TH ST. QUINCY ILLINOIS 62424-2112-223-3870
STATE OF ILLINOIS DESIGN FIRM NO. 184-2738

| | | | | | |
|------------|---------------|----------|-----------|---------|---|
| USER NAME | ams | DESIGNED | AMS | REVISED | - |
| DRAWN | AMS | CHECKED | EBB | REVISED | - |
| PLOT SCALE | 2:8 1/4" = 1" | DATE | 5/25/2022 | REVISED | - |
| PLOT DATE | 6/16/2022 | | | | |

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**WEST FRANKFORT PUMP STATION
SIGNATURES**

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

| F.A.I. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|---------------------------|-------------|----------|--------------------|-----------|
| 57 | (28-51PS-1) | FRANKLIN | 39 | 2 |
| | | | CONTRACT NO. 78958 | |
| ILLINOIS FED. AID PROJECT | | | | |

GENERAL NOTES

1. 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.
2. THE CONTRACTOR SHALL COORDINATE AND RECEIVE WRITTEN APPROVAL FROM IDOT PRIOR TO ANY PUMP STATION OPERATIONAL OUTAGES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING TEMPORARY PUMPING OR OTHER ACCEPTABLE MEANS OF STORMWATER REMOVAL DURING ANY PUMP SYSTEM OUTAGES.
3. DURING CONSTRUCTION THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE THAT IS CAUSED TO THE EXISTING PUMP STATION BUILDING.
4. DRAWINGS ARE NOT TO SCALE.
5. THE DEPARTMENT RESERVES THE RIGHT TO NOTIFY THE CONTRACTOR TO CHANGE THE CONSTRUCTION SCHEDULE IF NEEDED TO ENSURE PROPER DEWATERING NEEDS FOR THE DEPARTMENT.

RATES OF APPLICATION TABLE

- | | |
|--|------------------|
| 1. AGGREGATE (SURFACE, BASE, SUBBASE, OR BACKFILL) | 2.05 TON / CU YD |
| STONE DUMPED RIPRAP | 1.50 TON / CU YD |

STRUCTURAL STEEL

1. STEEL FABRICATION AND ERECTION SHALL FOLLOW OSHA REQUIRMENTS.
2. STRUCTURAL STEEL:
 - a. WIDE FLANGE BEAMS - ASTM A992 (Fy=50ksi)
 - b. STEEL ANGLES, CHANNELS, RODS, AND PLATES - ASTM A36 (Fy=36 ksi)
 - c. WASHERS - ASTM F436
 - d. NUTS - ASTM A563
 - e. ANCHOR BOLTS - ASTM F1554 GRADE 36 (Fy=36 ksi)
3. ALL STEEL SHALL BE HOT DIPPED GALVANIZED.
4. REPAIR GALVANIZED SURFACES PER ASTM A780.

MASONRY

1. 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).
2. 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.
3. CONCRETE MASONRY UNITS SHALL BE UNITS CONFORMING TO ASTM C90, GRADE N, TYPE 1, NORMAL WEIGHT (DENSITY OF UNIT=135 pcf), MIN. BLOCK COMPRESSIVE STRENGTH = 2400 psi SPECIFIED DESIGN STRENGTH OF MASONRY, f'm=1500 PSI.
4. ASTM C270 TYPE "S" MORTAR WITH A MINIMUM COMPRESSIVE STRENGTH OF 1800 PSI SHALL BE USED FOR ALL MASONRY.
5. REINFORCING BARS SHALL CONFORM TO ASTM A615, GRADE 60.
6. ALL CORES WITH REINFORCEMENT SHALL BE FILLED SOLID WITH GROUT. PLACE REINFORCEMENT BARS BEFORE GROUTING. CONSOLIDATE GROUT BY MECHANICAL VIBRATION.
7. PROPERLY SECURE VERTICAL REINFORCEMENT BARS TO ENSURE BAR IS LOCATED IN THE CENTER OF THE CMU CELL.
8. 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.

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| | | |
|-------------------------------|----------------|-----------|
| USER NAME = oms | DESIGNED AMS | REVISED - |
| | DRAWN AMS | REVISED - |
| PLOT SCALE = 2:0 "-1" / 1 in. | CHECKED EBB | REVISED - |
| PLOT DATE = 6/16/2022 | DATE 5/25/2022 | REVISED - |

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**WEST FRANKFORT PUMP STATION
GENERAL NOTES**

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

| F.A.I. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|---------------------------|------------|----------|--------------------|-----------|
| 57 | (28-5)PS-1 | FRANKLIN | 39 | 3 |
| ILLINOIS FED. AID PROJECT | | | CONTRACT NO. 78958 | |

SUMMARY OF QUANTITIES

| CODE NO. | ITEM | UNIT | TOTAL QUANTITY | URBAN |
|----------|--------------------------------------|-------|----------------|------------------------|
| | | | | CONSTRUCTION TYPE CODE |
| | | | | FRANKLIN |
| | | | | 0044 |
| | | | | 100% STATE |
| 25000200 | SEEDING, CLASS 2 | ACRE | 0.1 | 0.1 |
| 25000400 | NITROGEN FERTILIZER NUTRIENT | POUND | 9 | 9 |
| 25000500 | PHOSPHORUS FERTILIZER NUTRIENT | POUND | 9 | 9 |
| 25000600 | POTASSIUM FERTILIZER NUTRIENT | POUND | 9 | 9 |
| 25000700 | AGRICULTURAL GROUND LIMESTONE | TON | 0.2 | 0.2 |
| 25100115 | MULCH, METHOD 2 | ACRE | 0.1 | 0.1 |
| 28100805 | STONE DUMPED RIPRAP, CLASS A3 | TON | 160 | 160 |
| 28200200 | FILTER FABRIC | SQ YD | 230 | 230 |
| 31101400 | SUBBASE GRANULAR MATERIAL, TYPE B 6" | SQ YD | 50 | 50 |
| 35100100 | AGGREGATE BASE COURSE, TYPE A | TON | 50 | 50 |
| 50102400 | CONCRETE REMOVAL | CU YD | 13.6 | 13.6 |
| 50200100 | STRUCTURE EXCAVATION | CU YD | 108 | 108 |

REV. - MS

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KLINGNER & ASSOCIATES, P.C.
 Engineers • Architects • Surveyors
 616 N. 24TH ST. QUINCY, ILLINOIS 62301 217.223.3670
 STATE OF ILLINOIS DESIGN FIRM NO. 184-2738

| | | |
|------------------------------|----------------|-----------|
| USER NAME = oms | DESIGNED AMS | REVISED - |
| | DRAWN AMS | REVISED - |
| PLOT SCALE = 210' = 1" / in. | CHECKED EBB | REVISED - |
| PLOT DATE = 6/1 /2022 | DATE 6/16/2022 | REVISED - |

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**WEST FRANKFORT PUMP STATION
 SUMMARY OF QUANTITIES**

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

| F.A.I. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|--------------------|------------|----------|---------------------------|-----------|
| 57 | (28-5)PS-1 | FRANKLIN | 39 | 4 |
| CONTRACT NO. 78958 | | | ILLINOIS FED. AID PROJECT | |

SUMMARY OF QUANTITIES

| CODE NO. | ITEM | UNIT | TOTAL QUANTITY | URBAN |
|----------|---|-------|----------------|--------------------------|
| | | | | CONSTRUCTION TYPE CODE |
| | | | | FRANKLIN 0044 100% STATE |
| 50300225 | CONCRETE STRUCTURES | CU YD | 25.9 | 25.9 |
| 50500405 | FURNISHING AND ERECTING STRUCTURAL STEEL | POUND | 8,079 | 8,079 |
| 50800105 | REINFORCEMENT BARS | POUND | 2,450 | 2,450 |
| 58600101 | GRANULAR BACKFILL FOR STRUCTURES | CU YD | 109 | 109 |
| 67100100 | MOBILIZATION | L SUM | 1 | 1 |
| Z0001904 | STRUCTURAL STEEL REMOVAL | L SUM | 1 | 1 |
| Z0007101 | CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES NO. 1 | L SUM | 1 | 1 |
| Z0022800 | FENCE REMOVAL | FOOT | 217 | 217 |
| Z0034100 | MASONRY WALL CONSTRUCTION | SQ FT | 296 | 296 |
| X0327472 | ROOF SAMPLING AND ASBESTOS CONTAINING MATERIAL (ACM) IDENTIFICATION | L SUM | 1 | 1 |
| X0327473 | HANDLING OF ASBESTOS CONTAINING MATERIALS (ACM) | L SUM | 1 | 1 |
| X0335700 | PUMP STATION GENERAL WORK | L SUM | 1 | 1 |

REV. - MS

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 STATE OF ILLINOIS DESIGN FIRM NO. 184-2738

| | | |
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| USER NAME = oms | DESIGNED AMS | REVISED - |
| | DRAWN AMS | REVISED - |
| PLOT SCALE = 210' = 1" / in. | CHECKED EBB | REVISED - |
| PLOT DATE = 6/1 /2022 | DATE 6/16/2022 | REVISED - |

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

WEST FRANKFORT PUMP STATION
SUMMARY OF QUANTITIES
 SCALE: NONE SHEET 2 OF 3 SHEETS STA. TO STA.

| | | | | |
|--------------------|------------|----------|---------------------------|-----------|
| F.A.I. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| 57 | (28-5)PS-1 | FRANKLIN | 39 | 5 |
| CONTRACT NO. 78958 | | | ILLINOIS FED. AID PROJECT | |

SUMMARY OF QUANTITIES

| CODE NO. | ITEM | UNIT | TOTAL QUANTITY | URBAN |
|----------|--|-------|----------------|------------------------|
| | | | | CONSTRUCTION TYPE CODE |
| | | | | FRANKLIN |
| | | | | 0044 |
| | | | | 100% STATE |
| X0783300 | PUMP STATION ELECTRICAL WORK | L SUM | 1 | 1 |
| X0783500 | PUMP STATION MECHANICAL WORK | L SUM | 1 | 1 |
| X5060601 | CONTAINMENT AND DISPOSAL OF NON-LEAD PAINT CLEANING RESIDUES NO. 1 | L SUM | 1 | 1 |
| X6640308 | CHAIN LINK GATES (SPECIAL) | EACH | 1 | 1 |
| X6640570 | CHAIN LINK FENCE, 8' (SPECIAL) | FOOT | 185 | 185 |
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REV. - MS

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 STATE OF ILLINOIS DESIGN FIRM NO. 184-2738

| | | |
|------------------------------|----------------|-----------|
| USER NAME = ems | DESIGNED AMS | REVISED - |
| DRAWN AMS | CHECKED EBB | REVISED - |
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| PLOT DATE = 6/16/2022 | | |

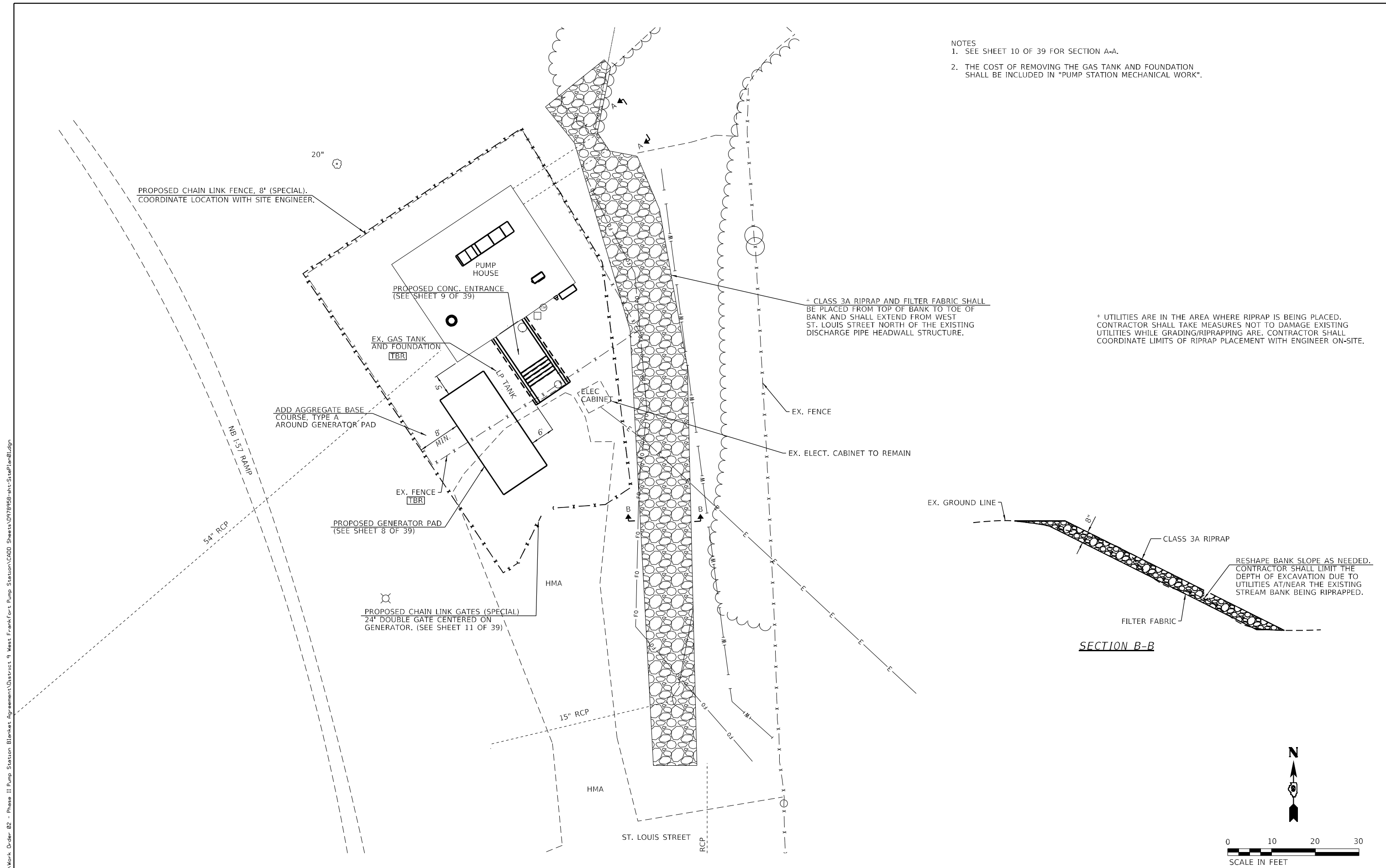
**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**WEST FRANKFORT PUMP STATION
 SUMMARY OF QUANTITIES**

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

| F.A.I. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|---------------------------|------------|----------|--------------|-----------|
| 57 | (28-5)PS-1 | FRANKLIN | 39 | 6 |
| CONTRACT NO. 78958 | | | | |
| ILLINOIS FED. AID PROJECT | | | | |

- NOTES
1. SEE SHEET 10 OF 39 FOR SECTION A-A.
 2. THE COST OF REMOVING THE GAS TANK AND FOUNDATION SHALL BE INCLUDED IN "PUMP STATION MECHANICAL WORK".



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 Engineers • Architects • Surveyors
 616 N. 24TH ST. QUINCY, ILLINOIS 62301 217.223.3670
 STATE OF ILLINOIS DESIGN FIRM NO. 164-2738

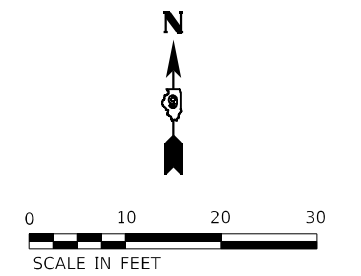
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|-------------------------|----------|-----------|
| USER NAME = oms | DESIGNED | REVISED - |
| PLOT SCALE = 1/8"=1'-0" | DRAWN | REVISED - |
| PLOT DATE = 6/16/2022 | CHECKED | REVISED - |
| | DATE | REVISED - |

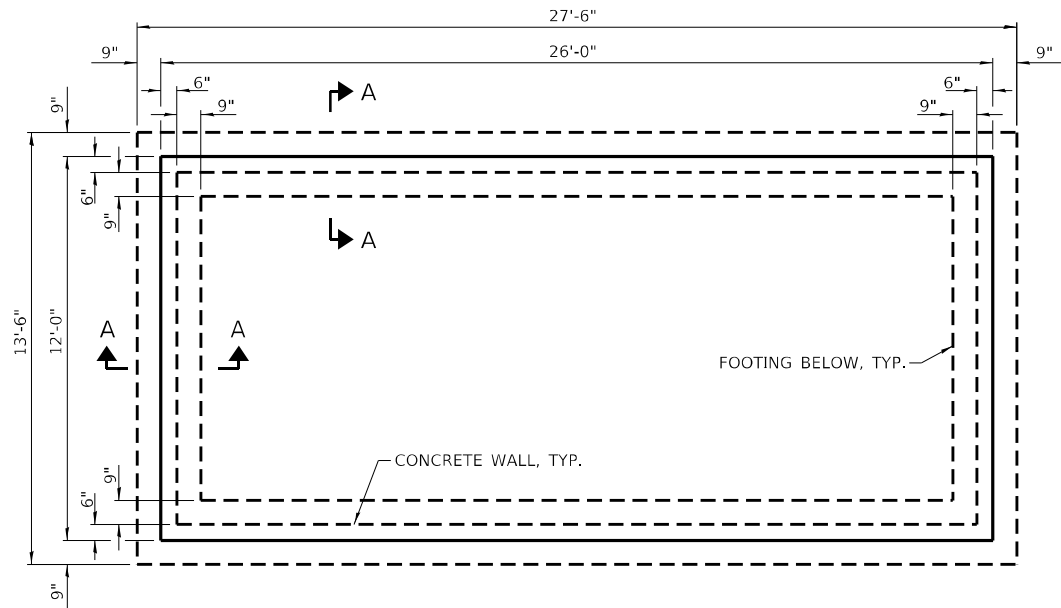
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**WEST FRANKFORT PUMP STATION
SITE PLAN**

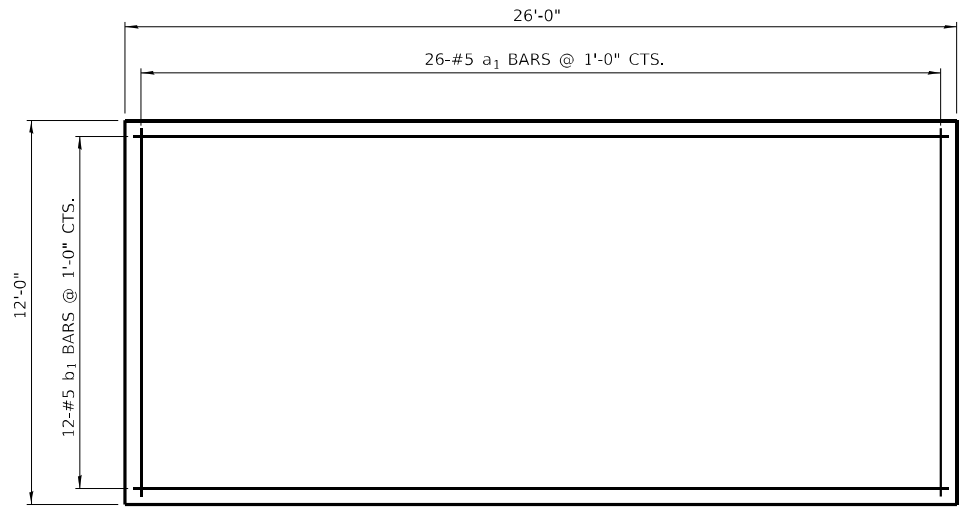
SCALE: 1"=10' SHEET 1 OF 1 SHEETS STA. TO STA.

| F.A.I. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|---------------------------|------------|----------|--------------|-----------|
| 57 | (28-5)PS-1 | FRANKLIN | 39 | 7 |
| CONTRACT NO. 78958 | | | | |
| ILLINOIS FED. AID PROJECT | | | | |

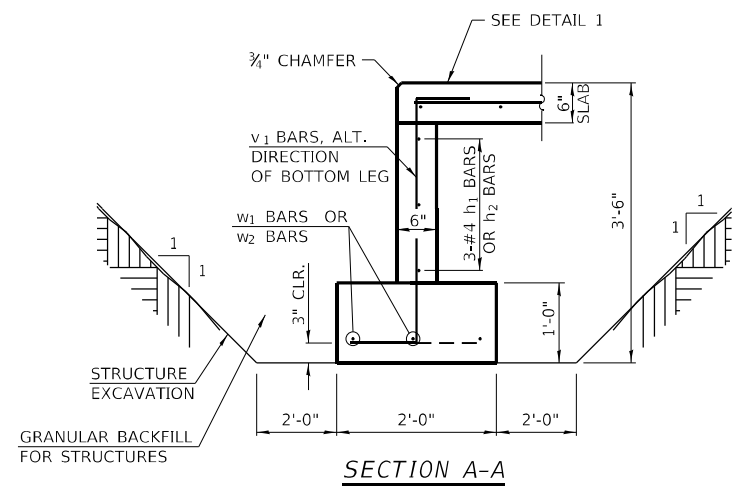




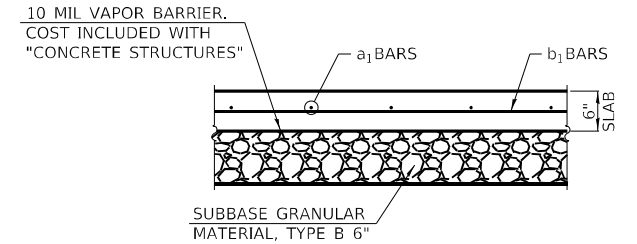
GENERATOR PAD FOUNDATION PLAN



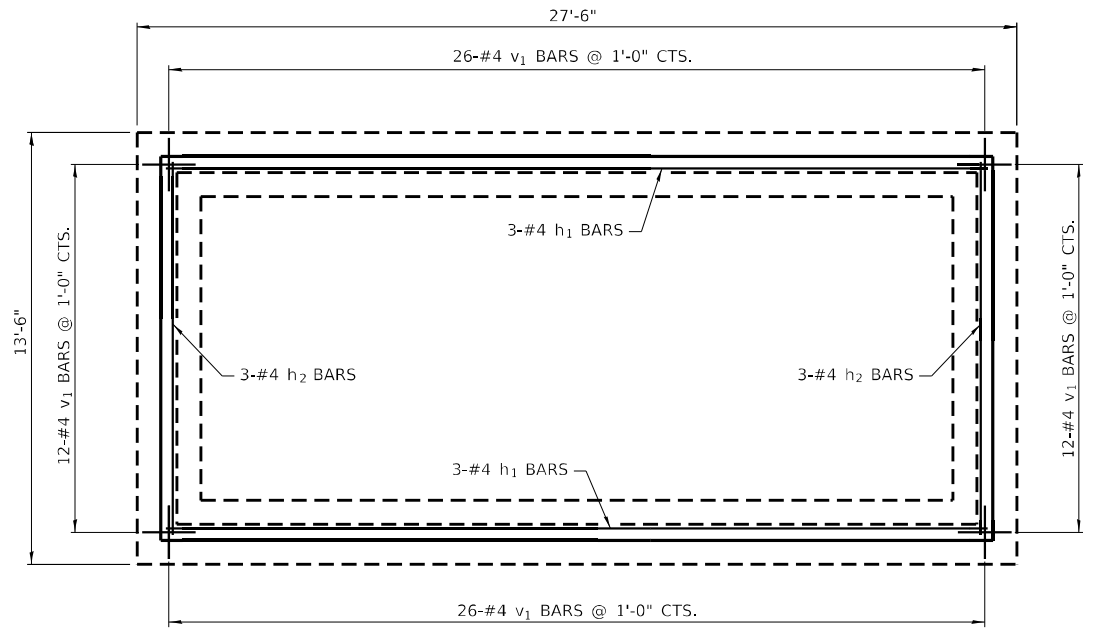
GENERATOR PAD SLAB REINFORCEMENT



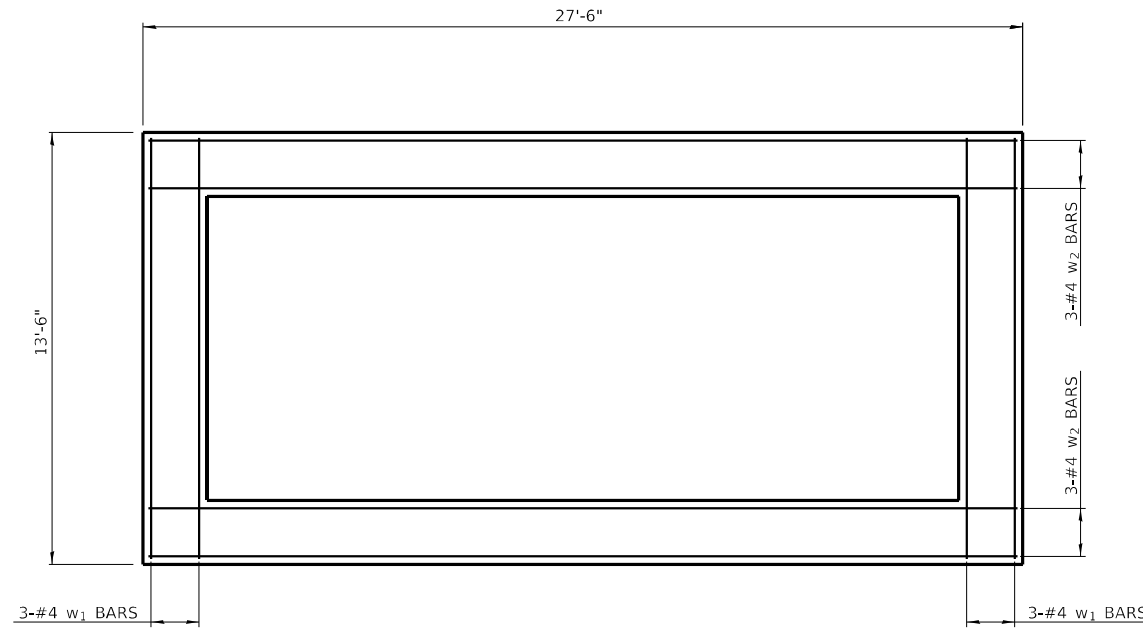
SECTION A-A



DETAIL 1 - 6" SLAB SECTION



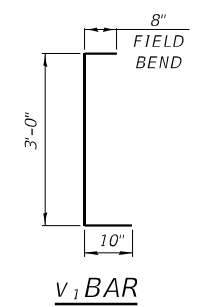
GENERATOR PAD WALL REINFORCEMENT



GENERATOR PAD FOOTING REINFORCEMENT

BILL OF MATERIAL

| Bar | No. | Size | Length | Shape |
|--------------------------------------|-----|------|---------|-------|
| a ₁ | 26 | #5 | 11'-8" | — |
| b ₁ | 12 | #5 | 25'-8" | — |
| h ₁ | 6 | #4 | 25'-8" | — |
| h ₂ | 6 | #4 | 11'-8" | — |
| v ₁ | 76 | #4 | 4'-6" | ⌋ |
| w ₁ | 6 | #4 | 13'-2" | — |
| w ₂ | 6 | #4 | 27'-2" | — |
| CONCRETE STRUCTURES | | | Cu. Yd. | 14.0 |
| REINFORCEMENT BARS | | | Lbs. | 1180 |
| STRUCTURE EXCAVATION | | | Cu. Yd. | 76 |
| GRANULAR BACKFILL FOR STRUCTURES | | | Cu. Yd. | 82 |
| SUBBASE GRANULAR MATERIAL, TYPE B 6" | | | Sq. Yd. | 31 |



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KLINGNER & ASSOCIATES, P.C.
 Engineers • Architects • Surveyors
 616 N. 24TH ST. QUINCY, ILLINOIS 62301 217.223.3670
 STATE OF ILLINOIS DESIGN FIRM NO. 164-2738

| | | |
|----------------------------|----------|-----------|
| USER NAME = oms | DESIGNED | REVISED - |
| PLOT SCALE = 6.0000' / in. | DRAWN | REVISED - |
| PLOT DATE = 6/16/2022 | CHECKED | REVISED - |
| | DATE | REVISED - |

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

WEST FRANKFORT PUMP STATION
GENERATOR PAD DETAILS

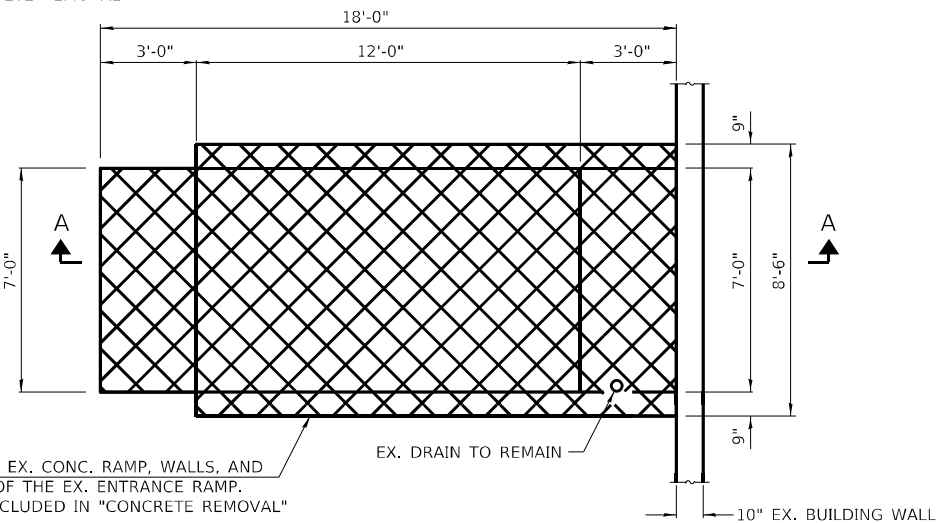
SCALE: NONE SHEET 1 OF 1 SHEETS STA. TO STA.

| | | | | |
|---------------------------|------------|----------|--------------|-----------|
| F.A.I. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| 57 | (28-5)PS-1 | FRANKLIN | 39 | 8 |
| CONTRACT NO. 78958 | | | | |
| ILLINOIS FED. AID PROJECT | | | | |

LEGEND

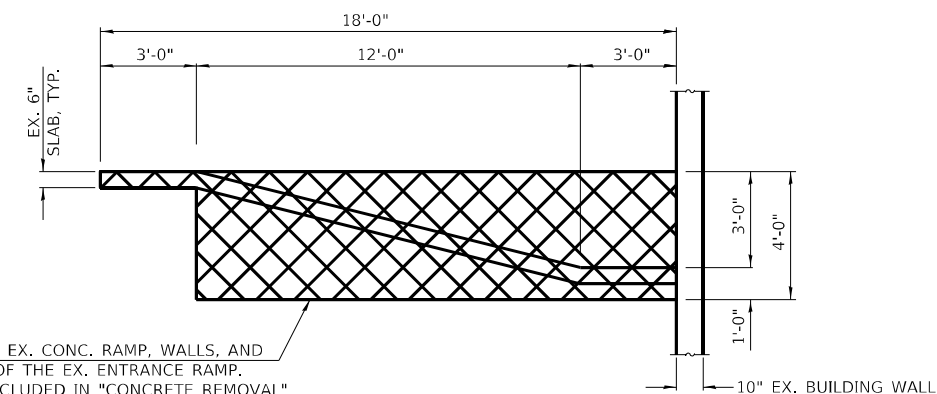


CONCRETE REMOVAL



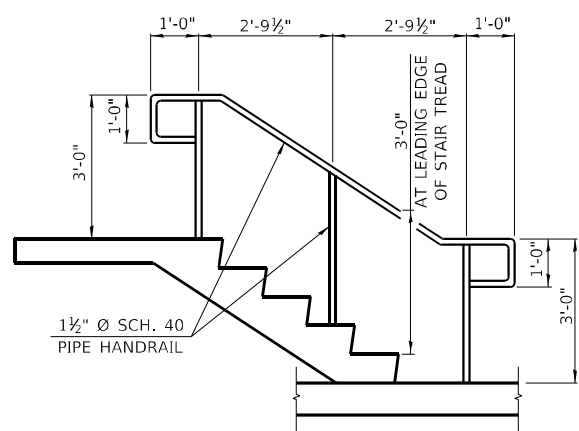
EX. CONC. ENTRANCE DEMO PLAN

REMOVE EX. CONC. RAMP, WALLS, AND REBAR OF THE EX. ENTRANCE RAMP. COST INCLUDED IN "CONCRETE REMOVAL"

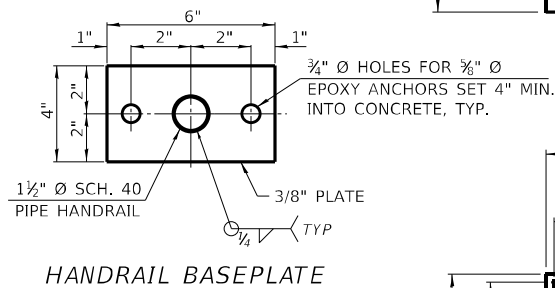


SECTION A-A

REMOVE EX. CONC. RAMP, WALLS, AND REBAR OF THE EX. ENTRANCE RAMP. COST INCLUDED IN "CONCRETE REMOVAL"

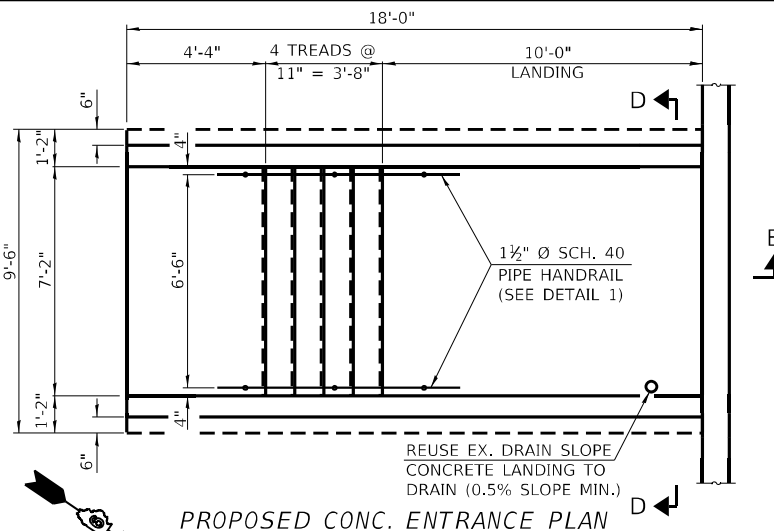


DETAIL 1 - HANDRAIL ELEVATION (BOTH SIDES)



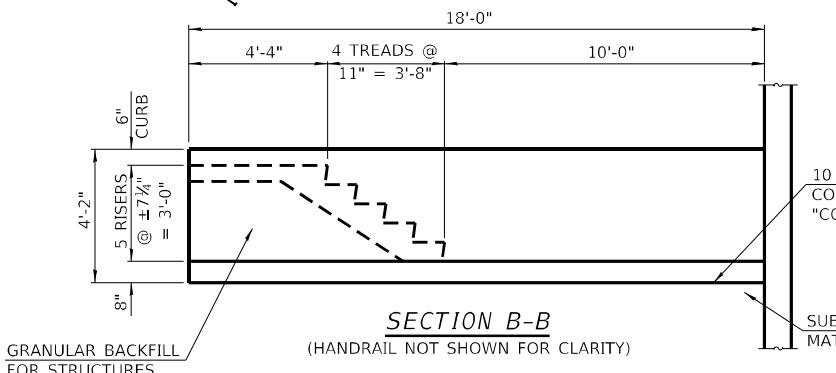
HANDRAIL BASEPLATE

- NOTES:
1. PROVIDE 3/4" Ø WEEP HOLES AT LOW POINTS OF HANDRAILS AND POSTS.
 2. ALL HANDRAILS, POSTS, AND ACCESORIES SHALL BE HOT DIPPED GALVANIZED.
 3. COST OF HANDRAIL SHALL BE INCLUDED IN FURNISHING AND ERECTING STRUCTURAL STEEL*.



PROPOSED CONC. ENTRANCE PLAN

REUSE EX. DRAIN SLOPE CONCRETE LANDING TO DRAIN (0.5% SLOPE MIN.)



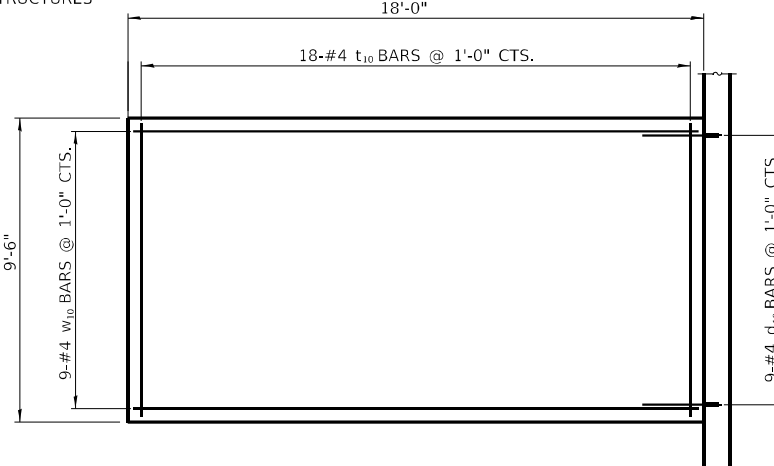
SECTION B-B

(HANDRAIL NOT SHOWN FOR CLARITY)

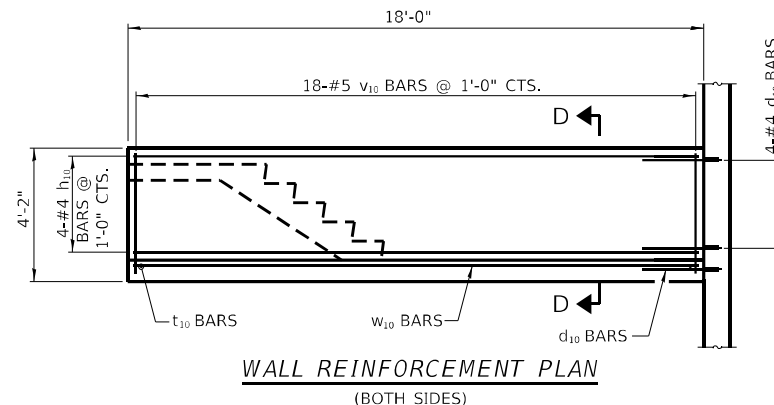
GRANULAR BACKFILL FOR STRUCTURES

10 MIL VAPOR BARRIER. COST INCLUDED WITH "CONCRETE STRUCTURES"

SUBBASE GRANULAR MATERIAL, TYPE B 6"

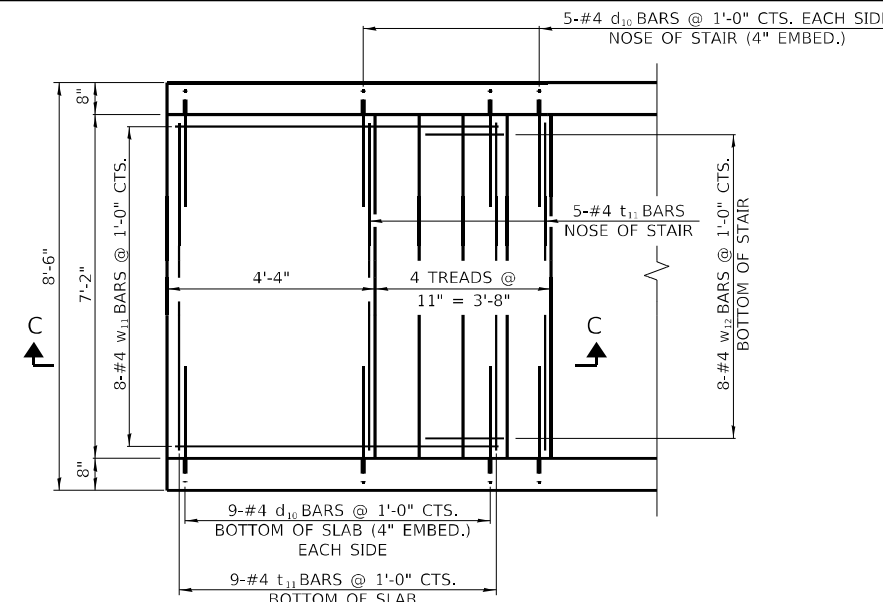


BOTTOM SLAB REINFORCEMENT PLAN

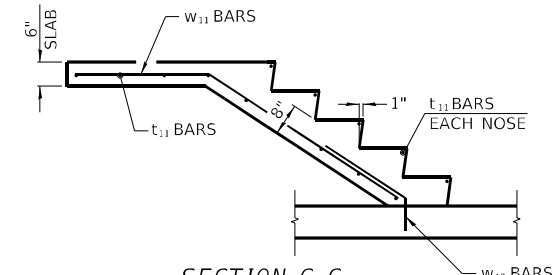


WALL REINFORCEMENT PLAN

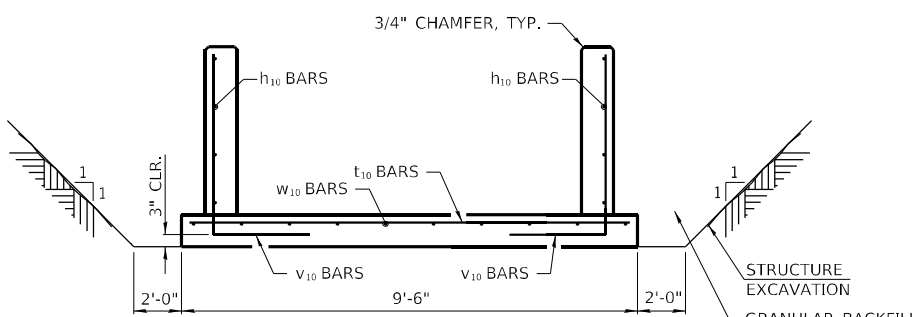
(BOTH SIDES)



STAIR REINFORCEMENT PLAN



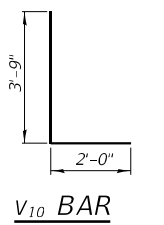
SECTION C-C



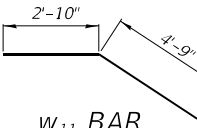
SECTION D-D

BILL OF MATERIAL

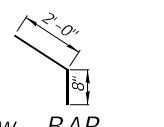
| Bar | No. | Size | Length | Shape | |
|--|-----|------|--------|---------|-----|
| d10 | 45 | #4 | 2'-6" | — | |
| h10 | 8 | #4 | 17'-8" | — | |
| t10 | 18 | #4 | 9'-2" | — | |
| t11 | 14 | #4 | 6'-10" | — | |
| v10 | 36 | #5 | 5'-9" | — | |
| w10 | 9 | #4 | 17'-8" | — | |
| w11 | 8 | #4 | 7'-7" | — | |
| w12 | 8 | #4 | 2'-8" | — | |
| CONCRETE STRUCTURES | | | | Cu. Yd. | 9.0 |
| REINFORCEMENT BARS | | | | Lbs. | 720 |
| CONCRETE REMOVAL | | | | Cu. Yd. | 5.7 |
| STRUCTURE EXCAVATION | | | | Cu. Yd. | 32 |
| FURNISHING AND ERECTING STRUCTURAL STEEL | | | | Lbs. | 132 |
| GRANULAR BACKFILL FOR STRUCTURES | | | | Cu. Yd. | 27 |
| SUBBASE GRANULAR MATERIAL, TYPE B 6" | | | | Sq. Yd. | 19 |



V10 BAR



W11 BAR



W12 BAR

Q:\17\files\170264\Work - Phase II Pump Station Blanket Agreement\District 9 West Frankfort Pump Station\CADD Sheets\097895B-shr-StructDetail02.dgn

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 STATE OF ILLINOIS DESIGN FIRM NO. 164-2738

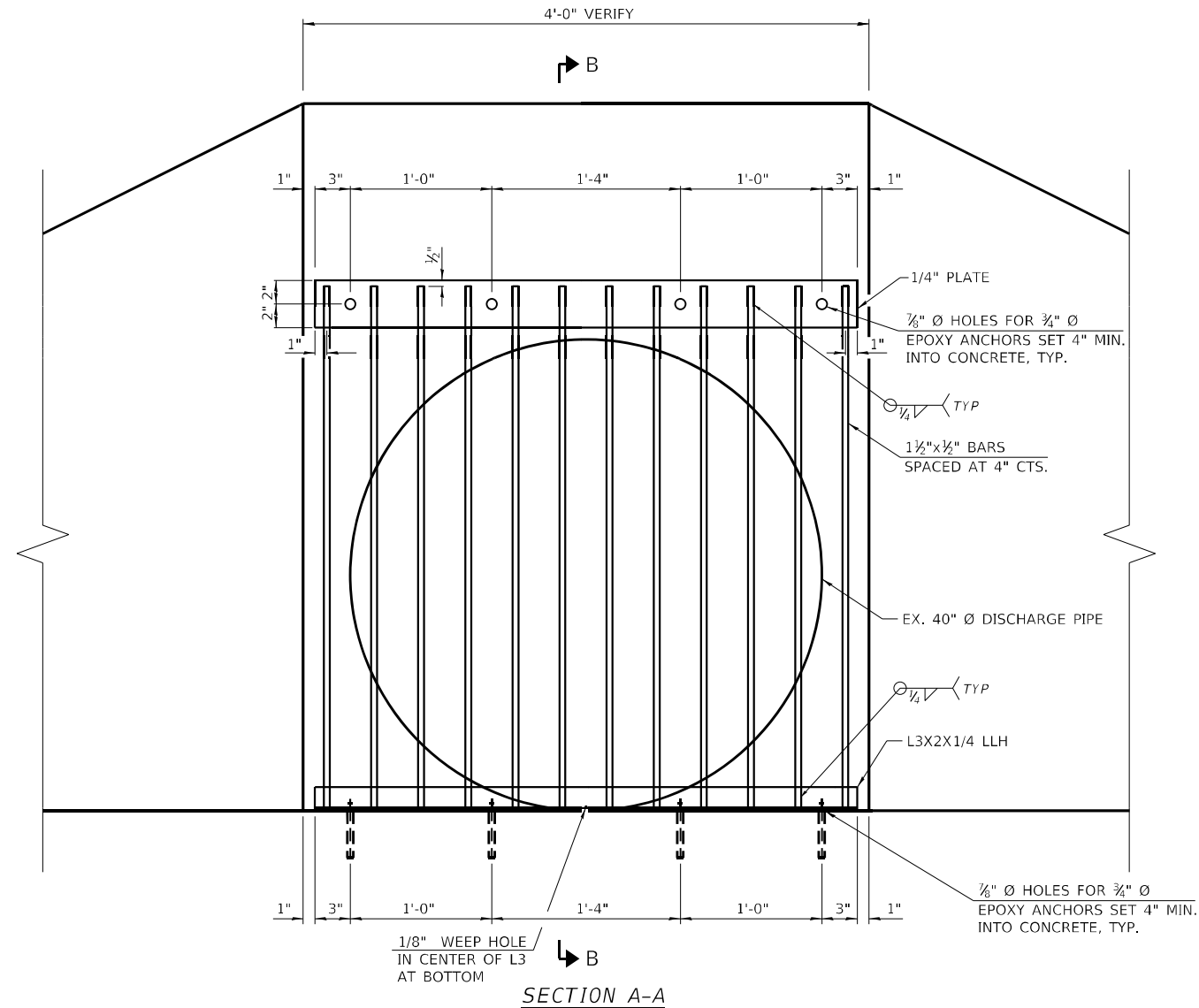
| | | |
|---------------------------|----------|-----------|
| USER NAME = oms | DESIGNED | REVISED - |
| PLOT SCALE = 6.0000' / 1" | DRAWN | REVISED - |
| PLOT DATE = 6/16/2022 | CHECKED | REVISED - |
| | DATE | REVISED - |

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

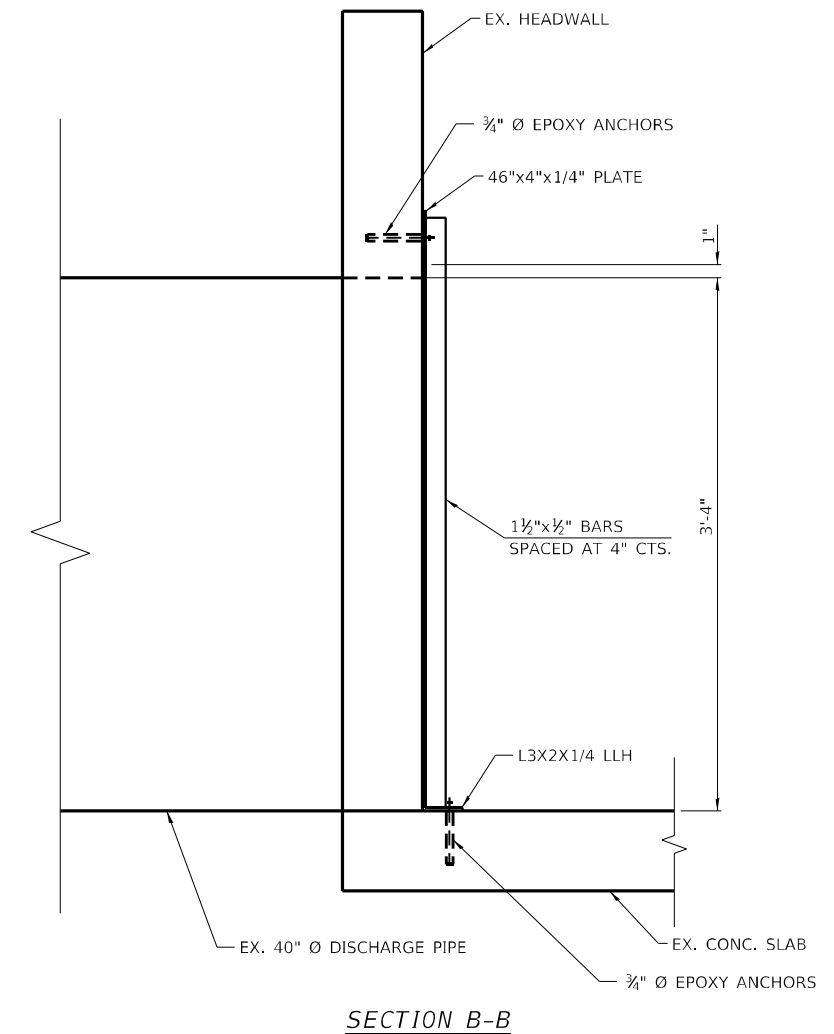
WEST FRANKFORT PUMP STATION CONCRETE ENTRANCE DEMO AND PROPOSED PLAN AND DETAILS

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

| | | | | |
|---------------------------|------------|----------|--------------|-----------|
| F.A.I. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| 57 | (28-5)PS-1 | FRANKLIN | 39 | 9 |
| CONTRACT NO. 78958 | | | | |
| ILLINOIS FED. AID PROJECT | | | | |



SECTION A-A



SECTION B-B

- NOTES:**
1. ALL STEEL SHALL BE HOT DIPPED GALVANIZED.
 2. CONTRACTOR SHALL VERIFY ALL DIMENSIONS, PRIOR TO STEEL FABRICATION.

ALL WORK ASSOCIATED WITH ITEMS ON THIS SHEET SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE PER POUND FOR "FURNISHING AND ERECTING STRUCTURAL STEEL", UNLESS OTHERWISE NOTED.

BILL OF MATERIAL

| FURNISHING AND ERECTING STRUCTURAL STEEL | POUND | 150 |
|--|-------|-----|
|--|-------|-----|

D:\17\files\170264\Work_Dr-dar_02 - Phase II Pump Station Blanket Agreement\District 9 West Frankfort Pump Station\CADD_Sheets\097895B-shr-SteelDetail103.dgn

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 STATE OF ILLINOIS DESIGN FIRM NO. 164-2738

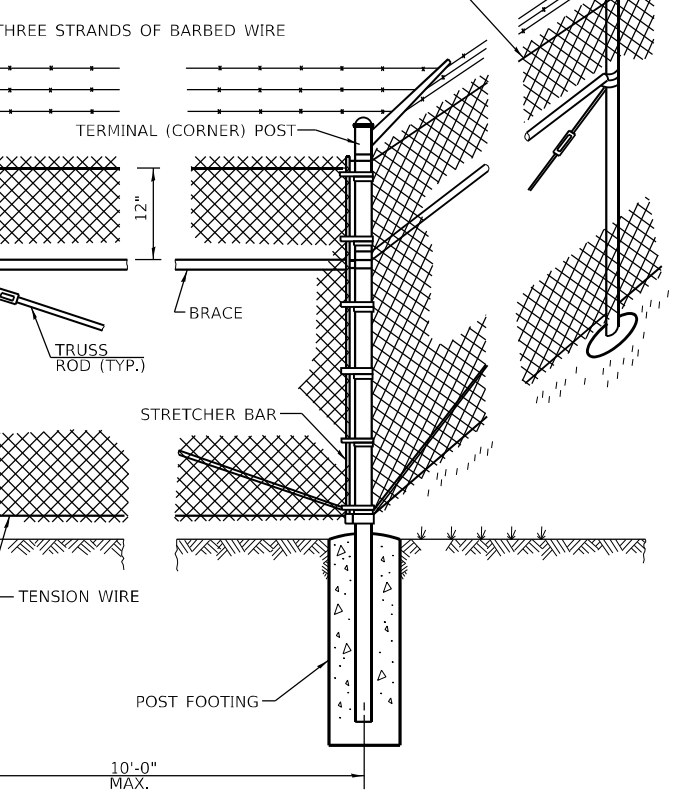
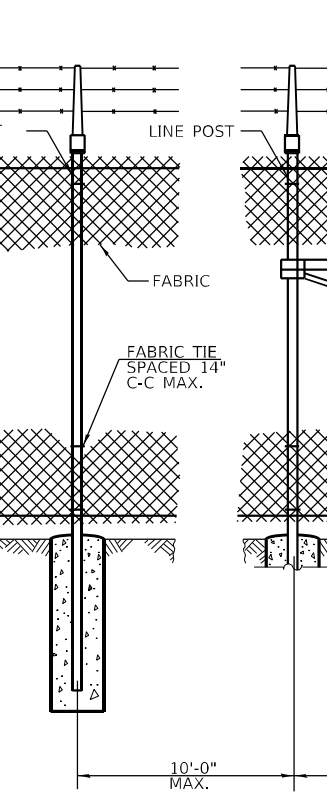
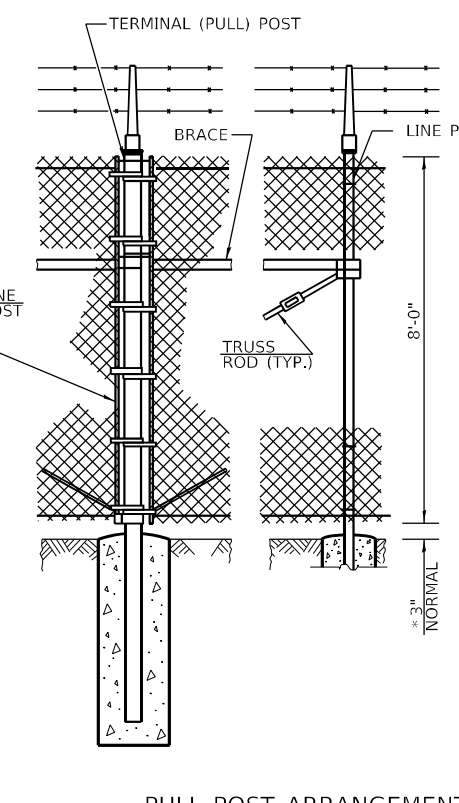
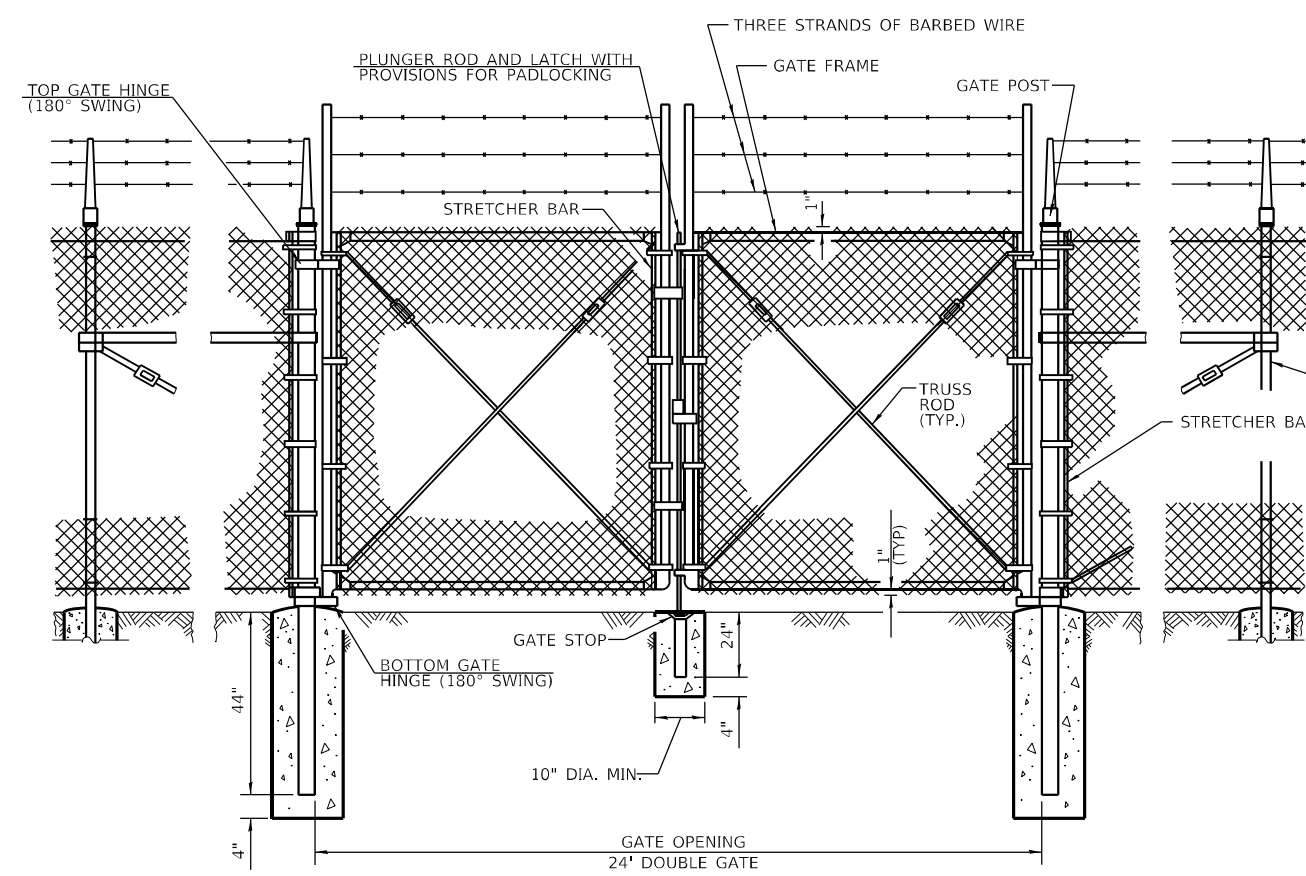
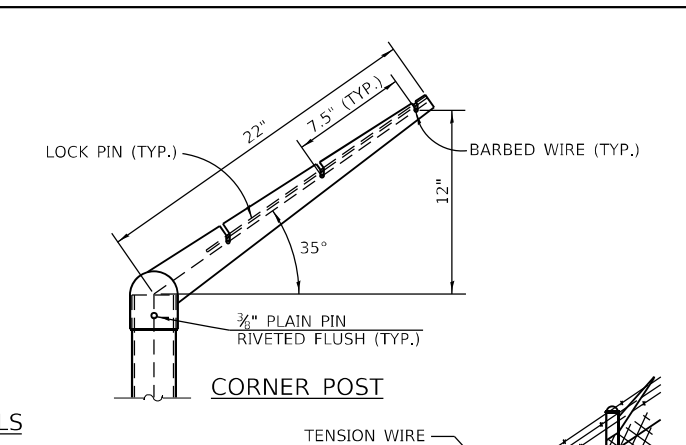
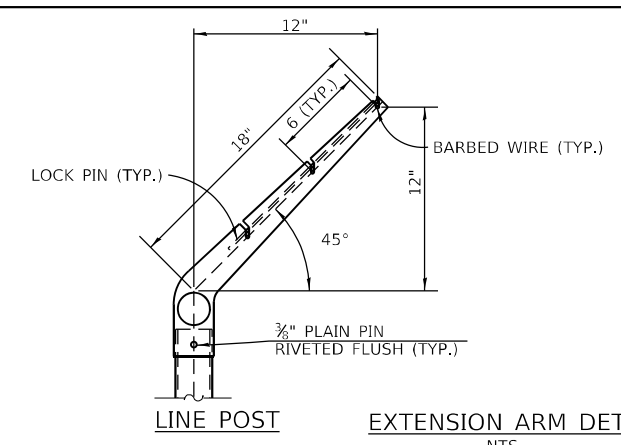
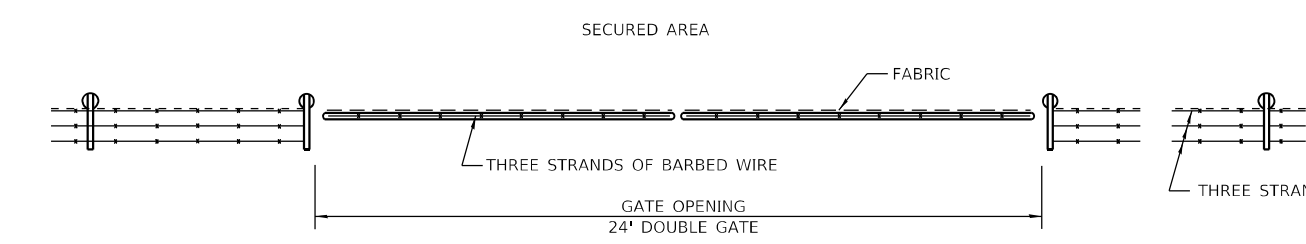
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|-----------------------------|----------|-----------|
| USER NAME = oms | DESIGNED | REVISED - |
| PLOT SCALE = 6.0000' / 1" = | DRAWN | REVISED - |
| PLOT DATE = 6/16/2022 | CHECKED | REVISED - |
| | DATE | REVISED - |

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

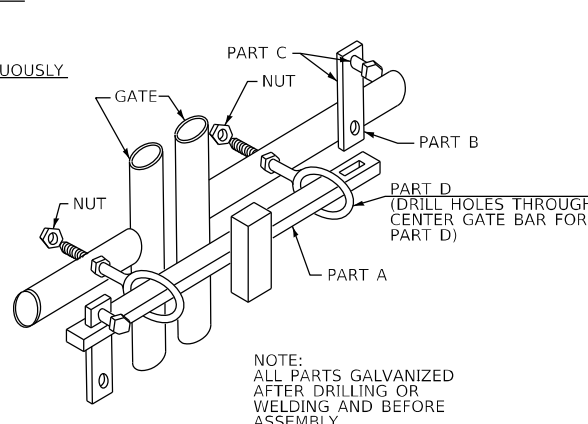
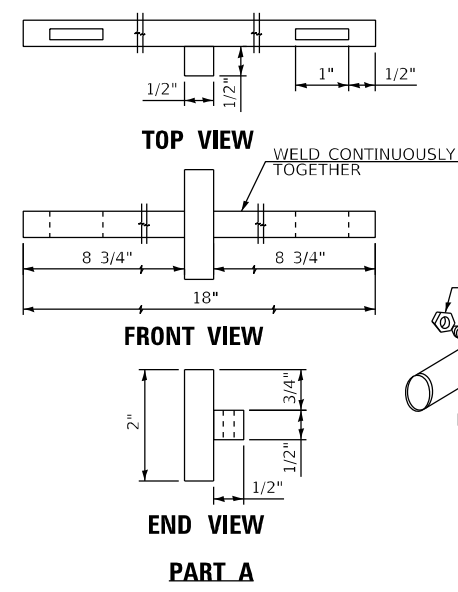
| | |
|---|----------------------------------|
| WEST FRANKFORT PUMP STATION DISCHARGE PIPE COVER DETAILS | |
| SCALE: NONE | SHEET 1 OF 1 SHEETS STA. TO STA. |

| F.A.I. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|---------------------------|------------|----------|--------------|-----------|
| 57 | (28-5)PS-1 | FRANKLIN | 39 | 10 |
| CONTRACT NO. 78958 | | | | |
| ILLINOIS FED. AID PROJECT | | | | |

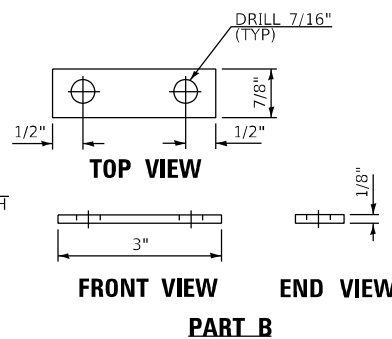
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ELEVATION
NTS



SWING GATE LOCKING DEVICE
NTS



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

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

GENERAL NOTES

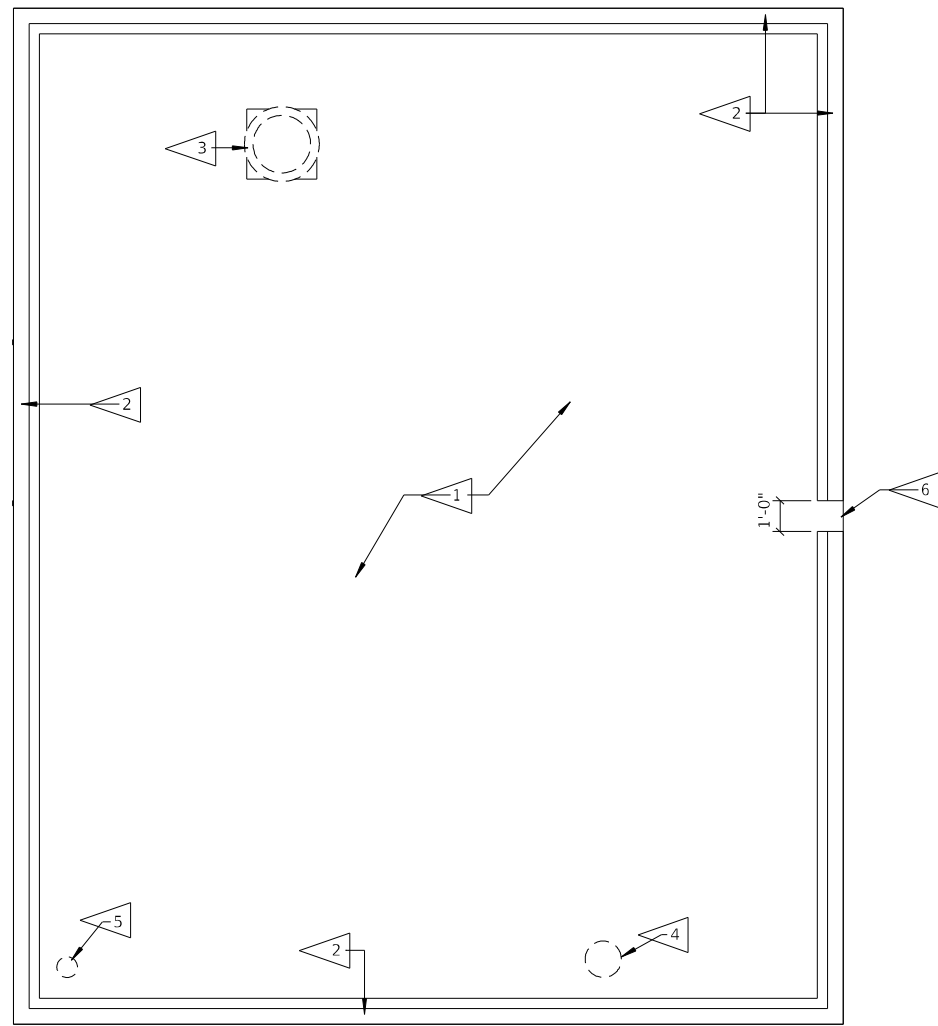
SEE HIGHWAY STANDARD 664001 FOR ADDITIONAL CHAIN LINK FENCE AND GATE DETAILS.

| | | |
|-----------------------------|----------------|-----------|
| USER NAME = oms | DESIGNED AMS | REVISED - |
| PLOT SCALE = 20.0000' / in. | DRAWN AMS | REVISED - |
| PLOT DATE = 6/16/2022 | CHECKED EBB | REVISED - |
| | DATE 5/20/2022 | REVISED - |

| | |
|---|----------------------------------|
| WEST FRANKFORT PUMP STATION CHAIN LINK FENCE DETAILS | |
| SCALE: NONE | SHEET 1 OF 1 SHEETS STA. TO STA. |

| | | | | |
|---------------------------|------------|----------|--------------|-----------|
| F.A.I. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| 57 | (28-5)PS-1 | FRANKLIN | 39 | 11 |
| CONTRACT NO. 78958 | | | | |
| ILLINOIS FED. AID PROJECT | | | | |

ALL WORK ASSOCIATED WITH ITEMS ON THIS SHEET SHALL BE PAID FOR AT THE CONTRACT LUMP SUM PRICE FOR "PUMP STATION GENERAL WORK", UNLESS OTHERWISE NOTED.



ROOF PLAN: DEMOLITION

GENERAL DEMOLITION NOTES

1. THE CONTRACTOR SHALL MAKE A PERSONAL INSPECTION OF THE SITE AND INCLUDE ALL WORK REQUIRED BY THE DRAWINGS. NOTIFY THE ENGINEER IN WRITING OF ANY INCONSISTENCIES IN THE DRAWINGS.
2. ALL MATERIALS THAT HAVE BEEN DEMOLISHED SHALL BE REMOVED AND LEGALLY DISPOSED OF OFF-SITE BY CONTRACTOR. NO DEMOLISHED MATERIALS SHALL BE STOCKPILED ON SITE.
3. COST OF ROOFING MATERIAL, FLASHING AND TRIM, AND ACCESSORIES SHALL BE INCLUDED IN "PUMP STATION GENERAL WORK".

KEYED DEMOLITION NOTES

- 1 REMOVE EXISTING ASPHALT BUILT-UP ROOF SYSTEM FROM EXISTING CONCRETE DECK IN ITS ENTIRETY. CONTRACTOR TO VERIFY IF ANY EXISTING ROOF MATERIALS CONTAIN ASBESTOS. IF ANY ROOFING MATERIALS DO CONTAIN ASBESTOS, THEY MUST BE REMOVED IN ACCORDANCE WITH STATE REGULATIONS. (SEE SPECIAL PROVISIONS).
- 2 REMOVE EXISTING SHEET METAL COPING AND WOOD NAILER AND DISPOSE OF OFF-SITE.
- 3 REMOVE EXISTING ROOF EQUIPMENT: SEE SHEETS 25-33 OF 39.
- 4 REMOVE EXISTING ROOF VENT AND INFILL EXISTING OPENING WITH CORRUGATED METAL DECK AND COLD FORMED STEEL FRAMING. TOP OF DECK TO BE FLUSH WITH TOP OF CONCRETE DECK: SEE SHEETS 25-33 OF 39.
- 5 REMOVE EXISTING ROOF DRAIN: SEE SHEETS 25-33 OF 39.
- 6 SAWCUT NEW SCUPPER OPENING INTO EXISTING 5-1/2" HIGH CONCRETE CURB AT ROOF EDGE FOR NEW SCUPPER. CENTER SCUPPER OPENING IN WALL.

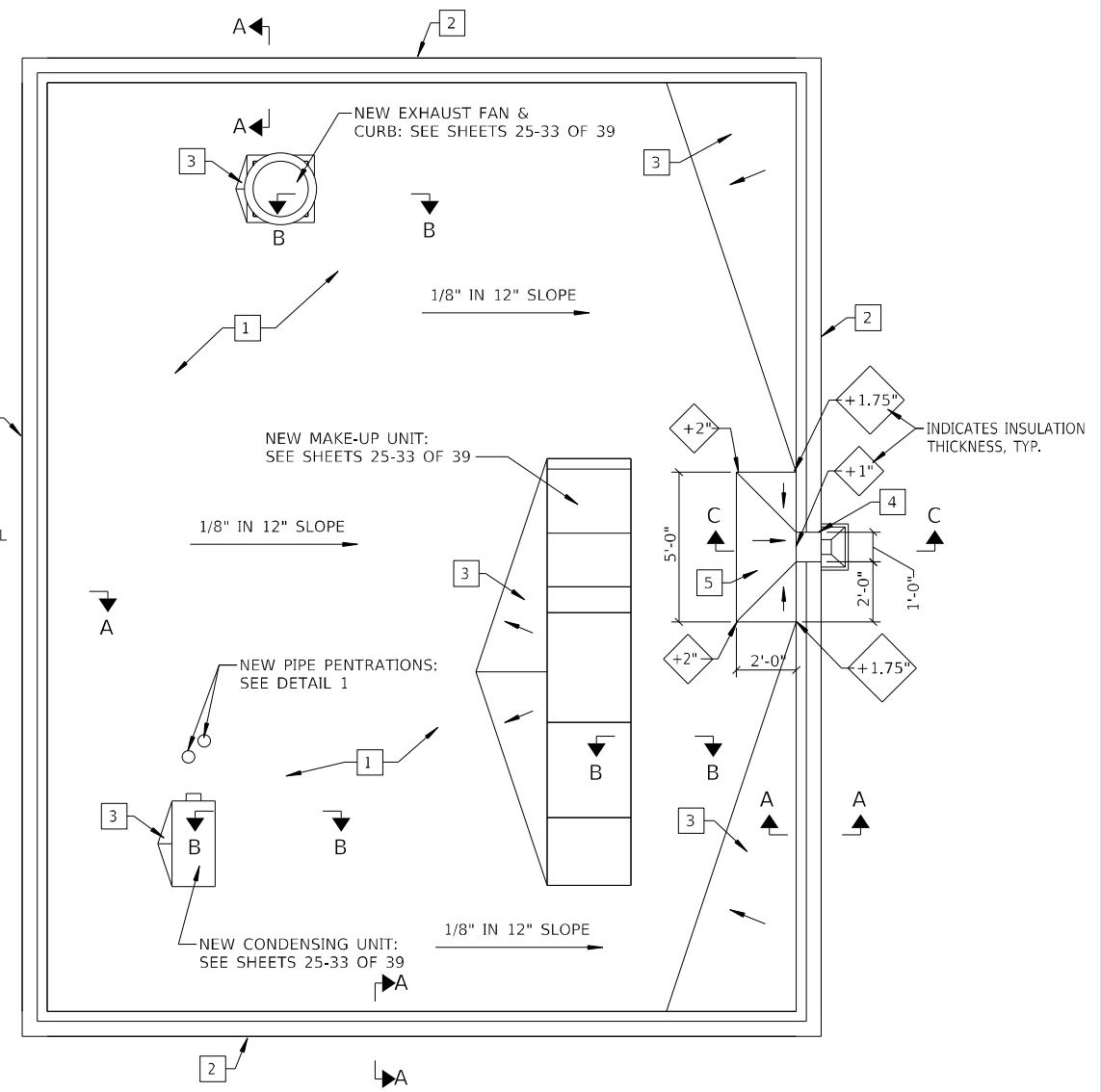
GENERAL RENOVATION NOTES

1. EXISTING CONCRETE ROOF DECK IS NOT SLOPED.
2. PROVIDE CRICKETS AT HIGH SLOPE SIDE OF ALL EQUIPMENT CURBS WHICH ARE PERPENDICULAR TO SLOPE DIRECTION.

KEYED RENOVATION NOTES

- 1 INSTALL NEW ROOF SYSTEM: 60 MIL. EPDM FULLY ADHERED OVER 1/8" IN 12" SLOPED POLYISO TAPERED INSULATION ADHERED OVER EXISTING CONCRETE DECK.
- 2 INSTALL NEW MANUFACTURED FASCIA SYSTEM.
- 3 PROVIDE CRICKET: 1/2" IN 12" TAPERED POLYISO. INSULATION. PLAN VIEW PROPORTION OF CRICKET TO BE 3:1 (LENGTH:WIDTH) RATIO.
- 4 INSTALL SHEET METAL SCUPPER LINER, COLLECTOR & DOWNSPOUT AT NEWLY SAWCUT SCUPPER OPENING.
- 5 PROVIDE SUMP AT SCUPPER: 1/2" IN 12" TAPERED POLYISO. INSULATION.

NOTES:
1. FOR SECTIONS A-A, B-B, AND C-C AND DETAIL 1, SEE SHEET 13 OF 39.



ROOF PLAN: RENOVATION

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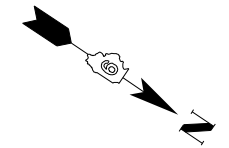
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616 N. 24TH ST. QUINCY, ILLINOIS 62301 217.223.3670
STATE OF ILLINOIS DESIGN FIRM NO. 184-2738

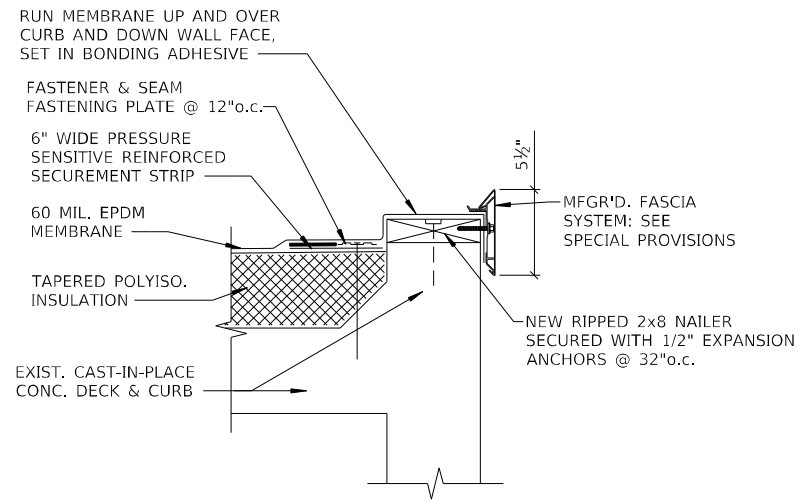
| | | |
|------------------------------|----------|-----------|
| USER NAME = oms | DESIGNED | REVISED - |
| PLOT SCALE = 2:0' min / 1/4" | DRAWN | REVISED - |
| PLOT DATE = 6/16/2022 | CHECKED | REVISED - |
| | DATE | REVISED - |

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

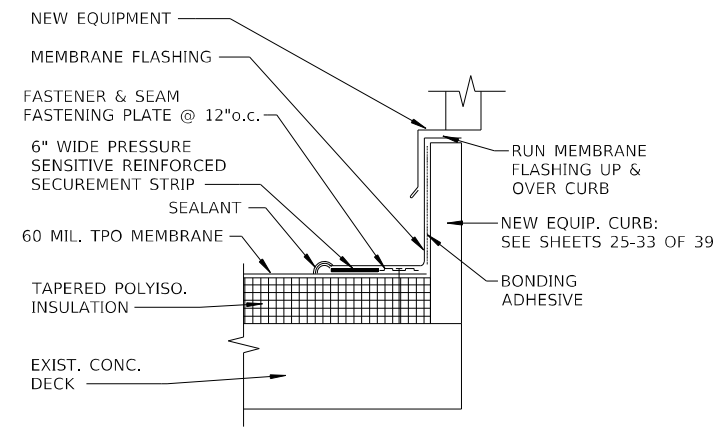
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|---|---------------------|------|---------|
| WEST FRANKFORT PUMP STATION ROOF DEMO AND RENOVATION PLANS | | | |
| SCALE: NONE | SHEET 1 OF 1 SHEETS | STA. | TO STA. |

| F.A.I. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|---------------------------|------------|----------|--------------|-----------|
| 57 | (28-5)PS-1 | FRANKLIN | 39 | 12 |
| CONTRACT NO. 78958 | | | | |
| ILLINOIS FED. AID PROJECT | | | | |

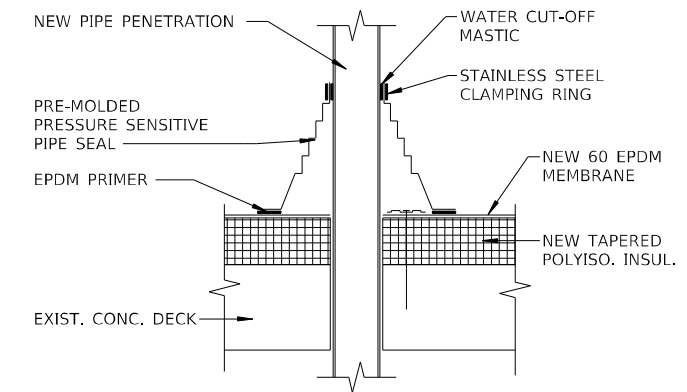




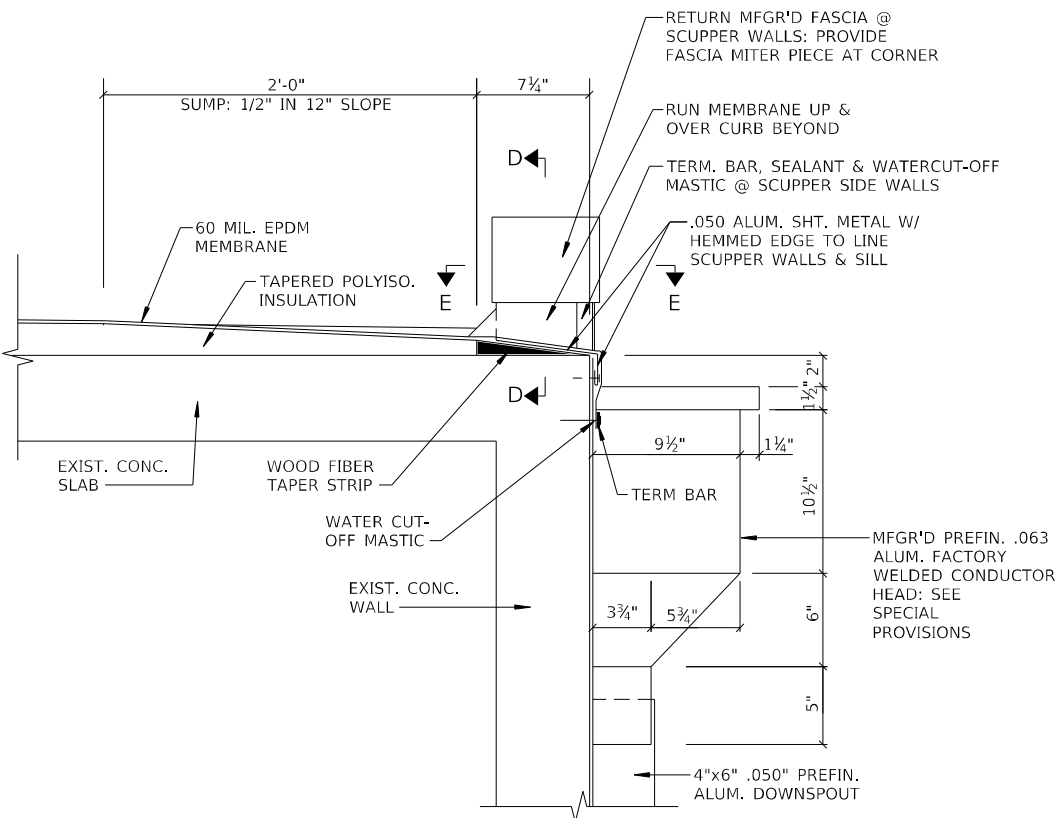
SECTION A-A - ROOF EDGE CURB



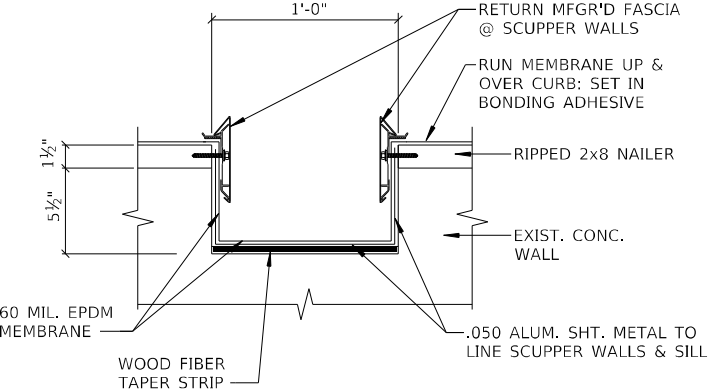
SECTION B-B - EQUIP. CURB



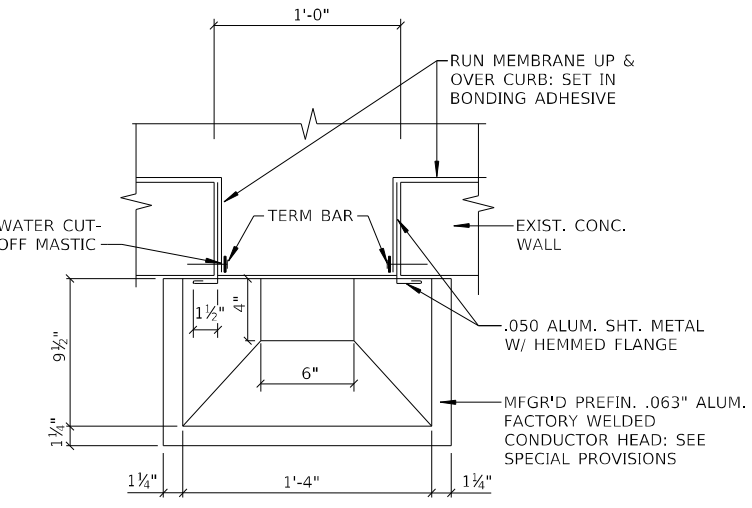
DETAIL 1 - PIPE FLASHING



SECTION C-C - SCUPPER



SECTION D-D - SCUPPER PROFILE



SECTION E-E - SCUPPER PLAN VIEW

ALL WORK ASSOCIATED WITH ITEMS ON THIS SHEET SHALL BE PAID FOR AT THE CONTRACT LUMP SUM PRICE FOR "PUMP STATION GENERAL WORK", UNLESS OTHERWISE NOTED.

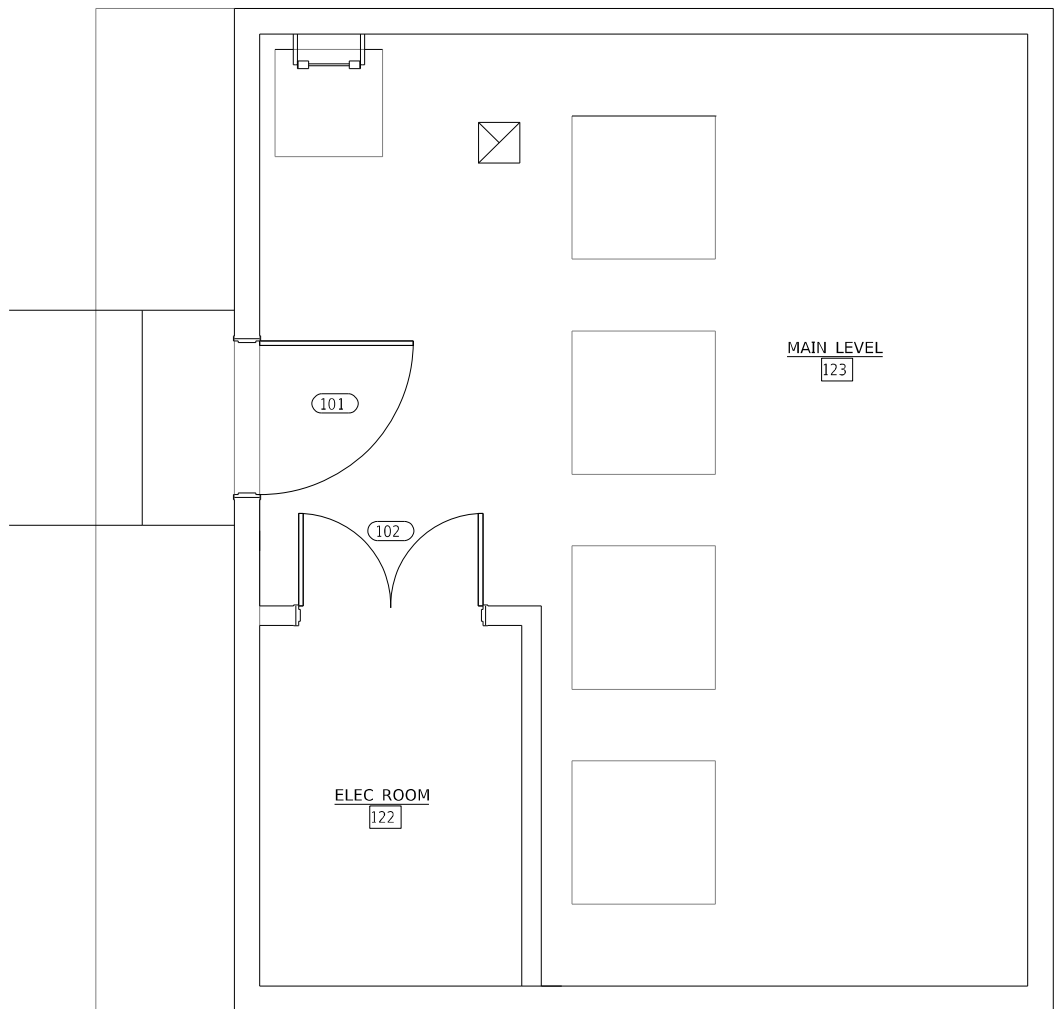
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| | | |
|-------------------------------|----------|-----------|
| USER NAME = oms | DESIGNED | REVISED - |
| PLOT SCALE = 2x8' 1/2" / 1/4" | DRAWN | REVISED - |
| PLOT DATE = 6/16/2022 | CHECKED | REVISED - |
| | DATE | REVISED - |

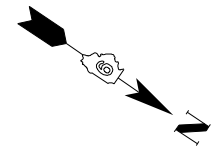
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|--|----------------------------------|
| WEST FRANKFORT PUMP STATION ROOF RENOVATION DETAILS | |
| SCALE: NONE | SHEET 1 OF 1 SHEETS STA. TO STA. |

| | | | | |
|---------------------------|------------|----------|--------------|-----------|
| F.A.I. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| 57 | (28-5)PS-1 | FRANKLIN | 39 | 13 |
| CONTRACT NO. 78958 | | | | |
| ILLINOIS FED. AID PROJECT | | | | |

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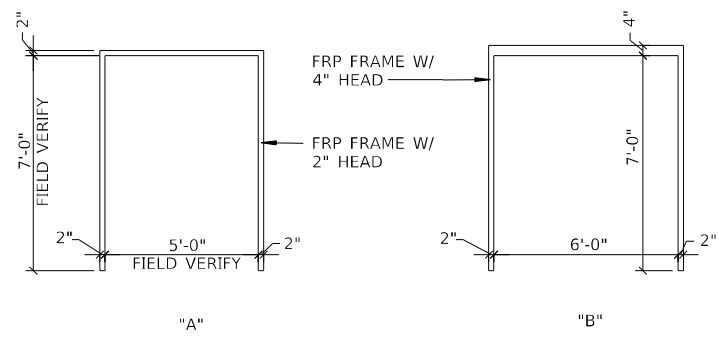


FLOOR PLAN: MAIN LEVEL

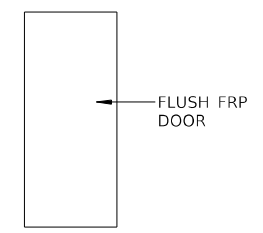


ALL WORK ASSOCIATED WITH ITEMS ON THIS SHEET SHALL BE PAID FOR AT THE CONTRACT LUMP SUM PRICE FOR "PUMP STATION GENERAL WORK", UNLESS OTHERWISE NOTED.

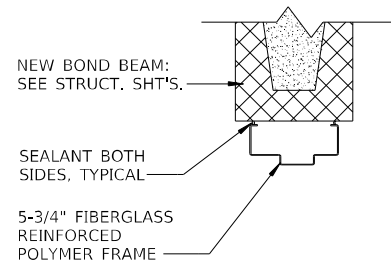
| DOOR AND FRAME SCHEDULE | | | | | | | | | | | | FIRE RATING | HARDWARE | | REMARKS |
|-------------------------|---------|---------|-----------|------|----------|---------|-------|----------|---------|----------|----------|-------------|----------------|-------------|---------|
| DOOR NUMBER | SIZE | | | TYPE | MATERIAL | FINISH | FRAME | | | DETAILS | | | HARDWARE GROUP | DOOR NUMBER | |
| | WIDTH | HEIGHT | THICKNESS | | | | TYPE | MATERIAL | FINISH | HEAD | JAMB | | | | |
| 101 | 5' - 0" | 7' - 0" | 1 3/4" | A | FRP | PREFIN. | A | FRP | PREFIN. | Detail 3 | Detail 4 | 01 | 101 | | |
| 102 | 6' - 0" | 7' - 0" | 1 3/4" | A | FRP | PREFIN. | B | FRP | PREFIN. | Detail 1 | Detail 2 | 02 | 102 | DOUBLE DOOR | |



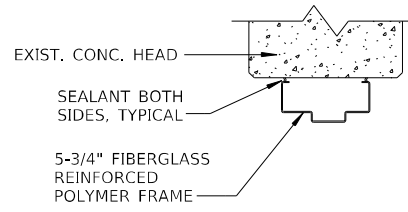
DOOR FRAME TYPES



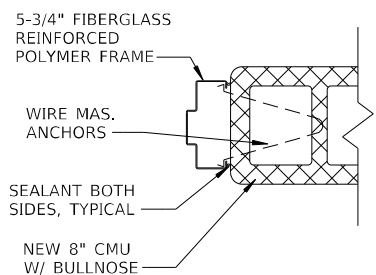
DOOR TYPE



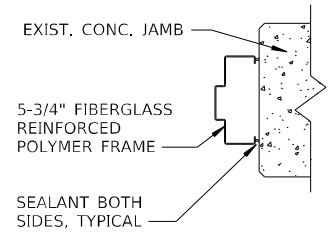
DETAIL 1: HEAD



DETAIL 3: HEAD

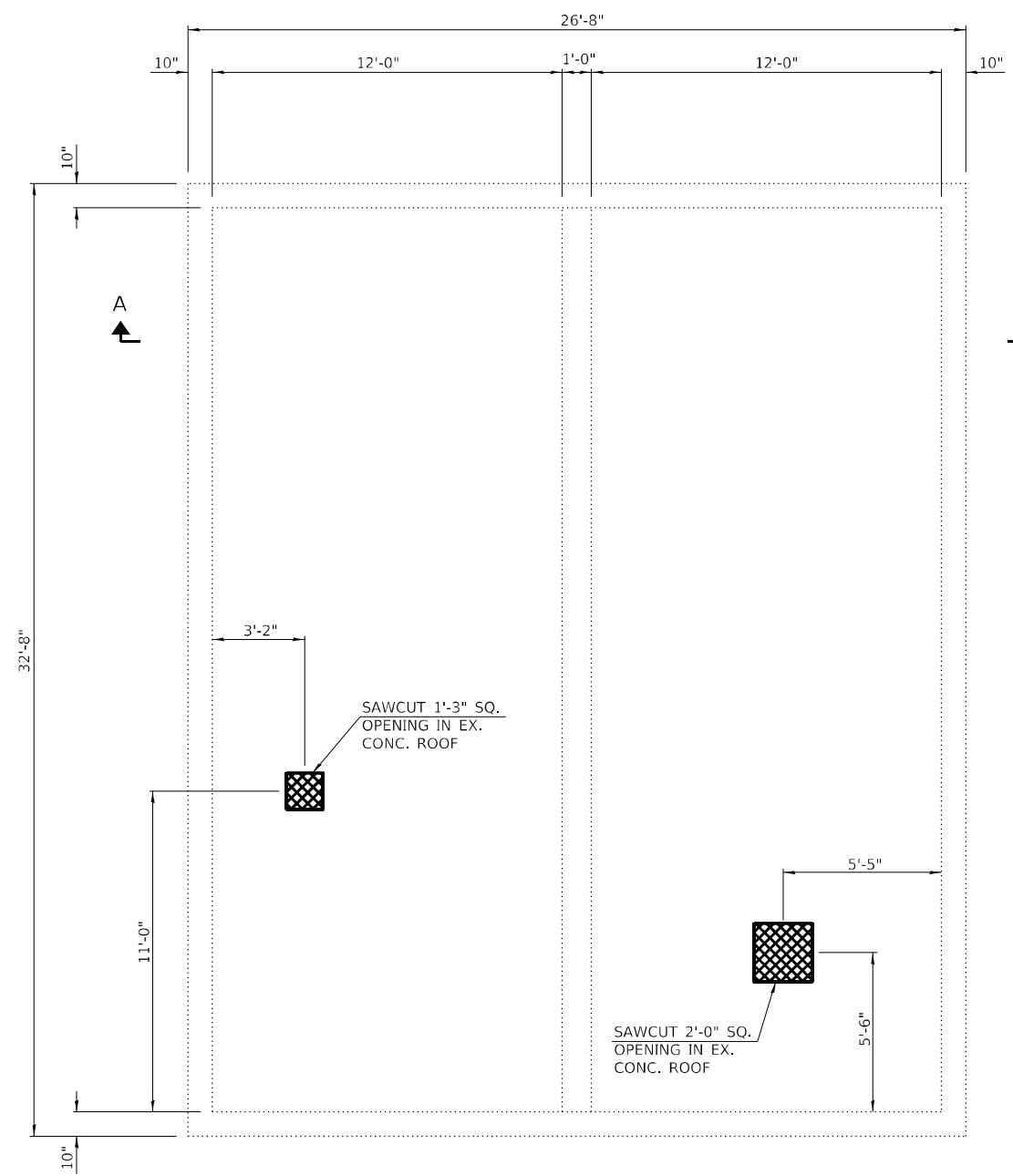


DETAIL 2: JAMB



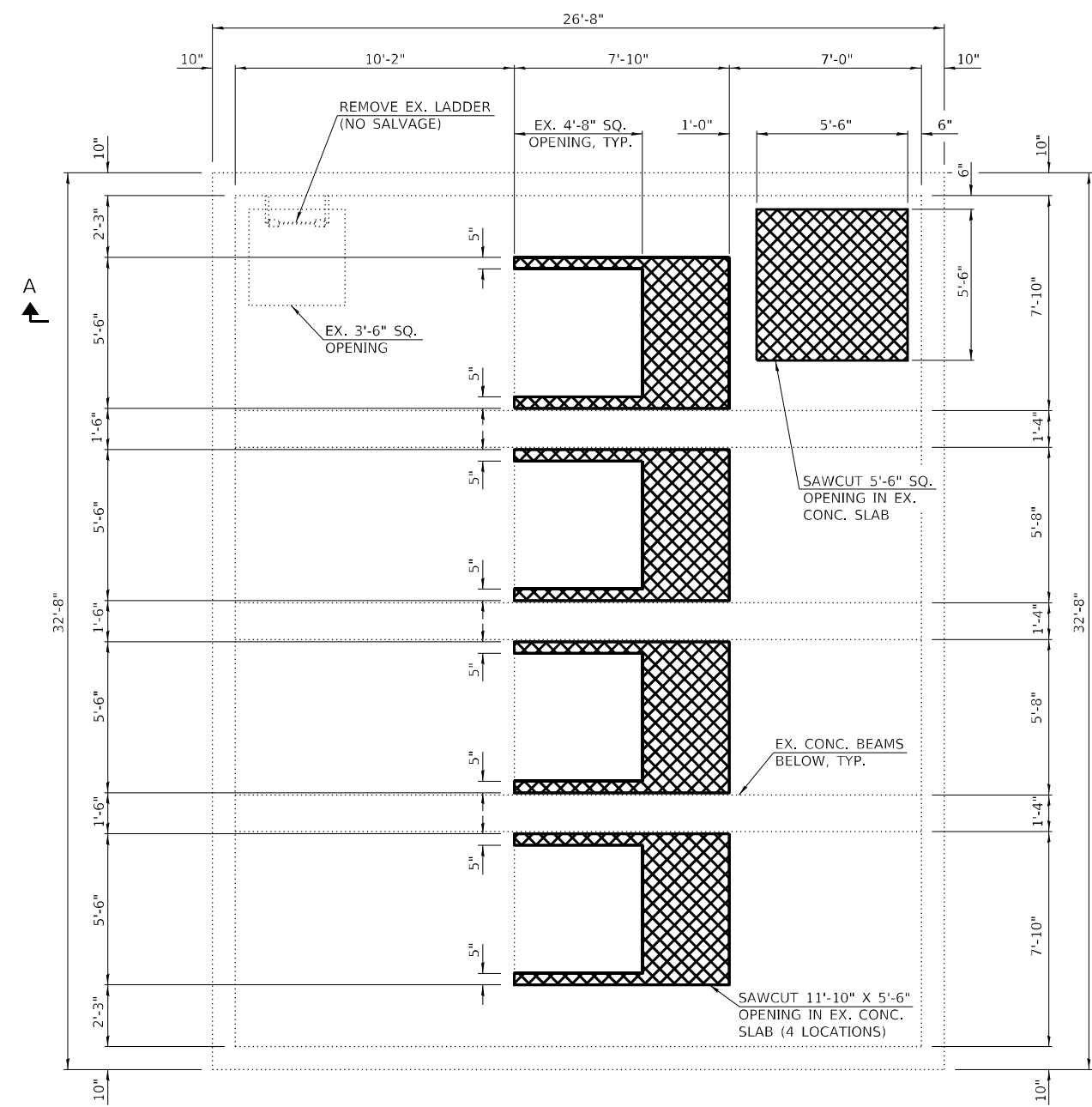
DETAIL 4: JAMB

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ROOF LEVEL - DEMO PLAN

LEGEND
 CONCRETE REMOVAL



MAIN LEVEL - DEMO PLAN

- NOTES:
1. COAT EXPOSED REBAR ENDS WITH EPOXY BONDING AGENT PER ECTION 508.04 OF THE STANDARD SPECIFICATIONS (COST INCLUDED IN "CONCRETE REMOVAL")
 2. COORDINATE ALL CONDUIT, PIPING, AND DUCT PENETRATION WITH MECHANICAL AND ELECTRICAL DRAWINGS.
 3. COST OF LADDER REMOVAL SHALL BE INCLUDED IN "STRUCTURAL STEEL REMOVAL".
 4. SEE SHEET 19 OF 39 FOR SECTION A-A.

BILL OF MATERIAL

| | | |
|------------------|-------|-----|
| CONCRETE REMOVAL | CU YD | 3.0 |
|------------------|-------|-----|

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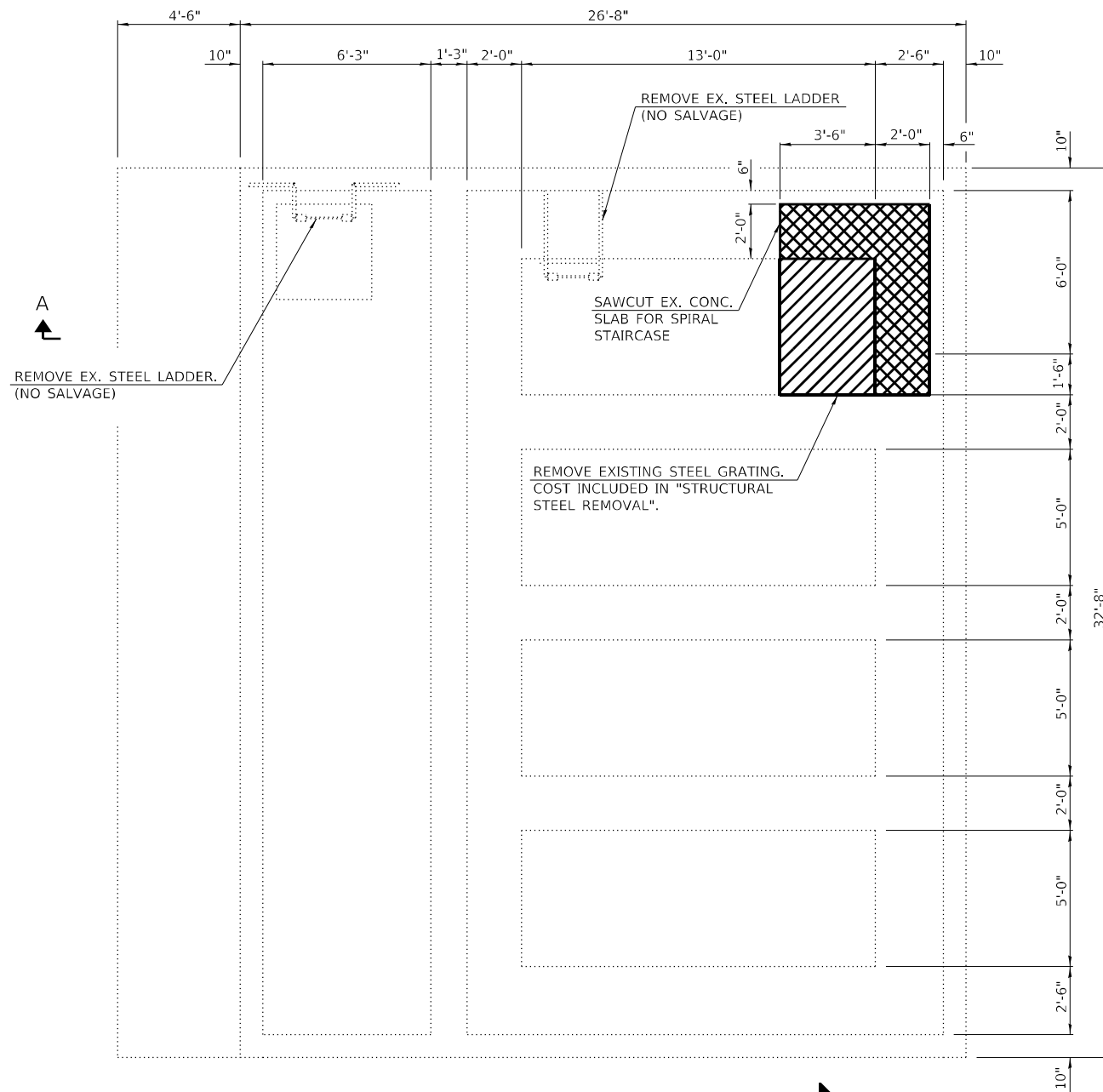
| | | |
|-----------------------------|----------|-----------|
| USER NAME = oms | DESIGNED | REVISED - |
| PLOT SCALE = 6.0000' / 1" = | DRAWN | REVISED - |
| PLOT DATE = 6/16/2022 | CHECKED | REVISED - |
| | DATE | REVISED - |

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

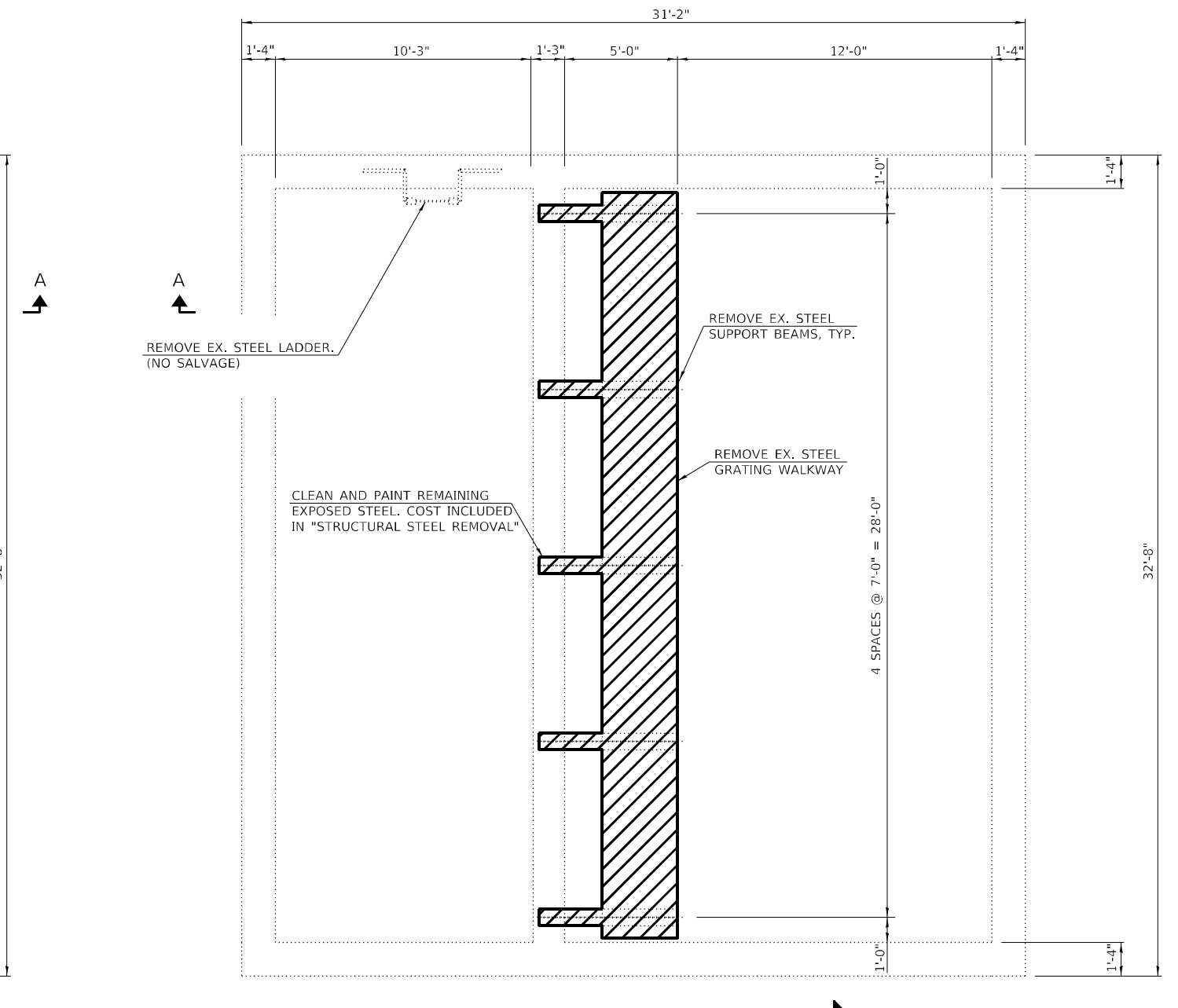
**WEST FRANKFORT PUMP STATION
 EXISTING PUMP STATION DEMOLITION PLANS**
 SCALE: NONE SHEET 1 OF 2 SHEETS STA. TO STA.

| | | | | |
|---------------------------|------------|----------|--------------|-----------|
| F.A.I. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| 57 | (28-5)PS-1 | FRANKLIN | 39 | 15 |
| CONTRACT NO. 78958 | | | | |
| ILLINOIS FED. AID PROJECT | | | | |

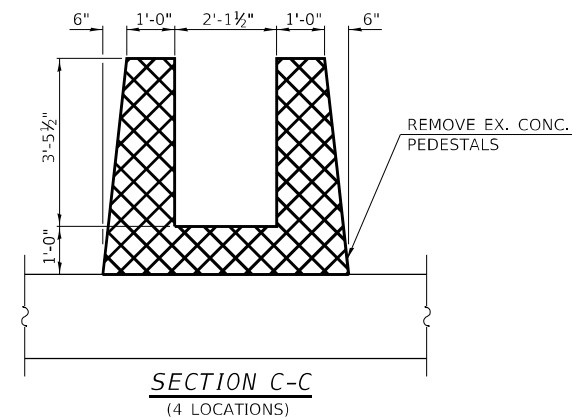
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STORAGE LEVEL - DEMO PLAN



LOWER WALKWAY - DEMO PLAN



SECTION C-C
(4 LOCATIONS)

LEGEND

- CONCRETE REMOVAL
- STEEL REMOVAL

- NOTES:
1. COAT EXPOSED REBAR ENDS WITH EPOXY BONDING AGENT PER SECTION 508.04 OF THE STANDARD SPECIFICATIONS (COST INCLUDED IN "CONCRETE REMOVAL")
 2. COORDINATE ALL CONDUIT, PIPING, AND DUCT PENETRATION WITH MECHANICAL AND ELECTRICAL DRAWINGS.
 3. COST OF LADDER REMOVAL, EX. STEEL WALKWAY SUPPORT BEAM REMOVAL, AND EX. STEEL WALKWAY GRATING SHALL BE INCLUDED IN "STRUCTURAL STEEL REMOVAL".
 4. SEE SHEET 19 OF 39 FOR SECTION A-A.

BILL OF MATERIAL

| | | |
|------------------|-------|-----|
| CONCRETE REMOVAL | CU YD | 4.9 |
|------------------|-------|-----|

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616 N. 24TH ST. QUINCY, ILLINOIS 62301 217.223.3670
STATE OF ILLINOIS DESIGN FIRM NO. 184-2738

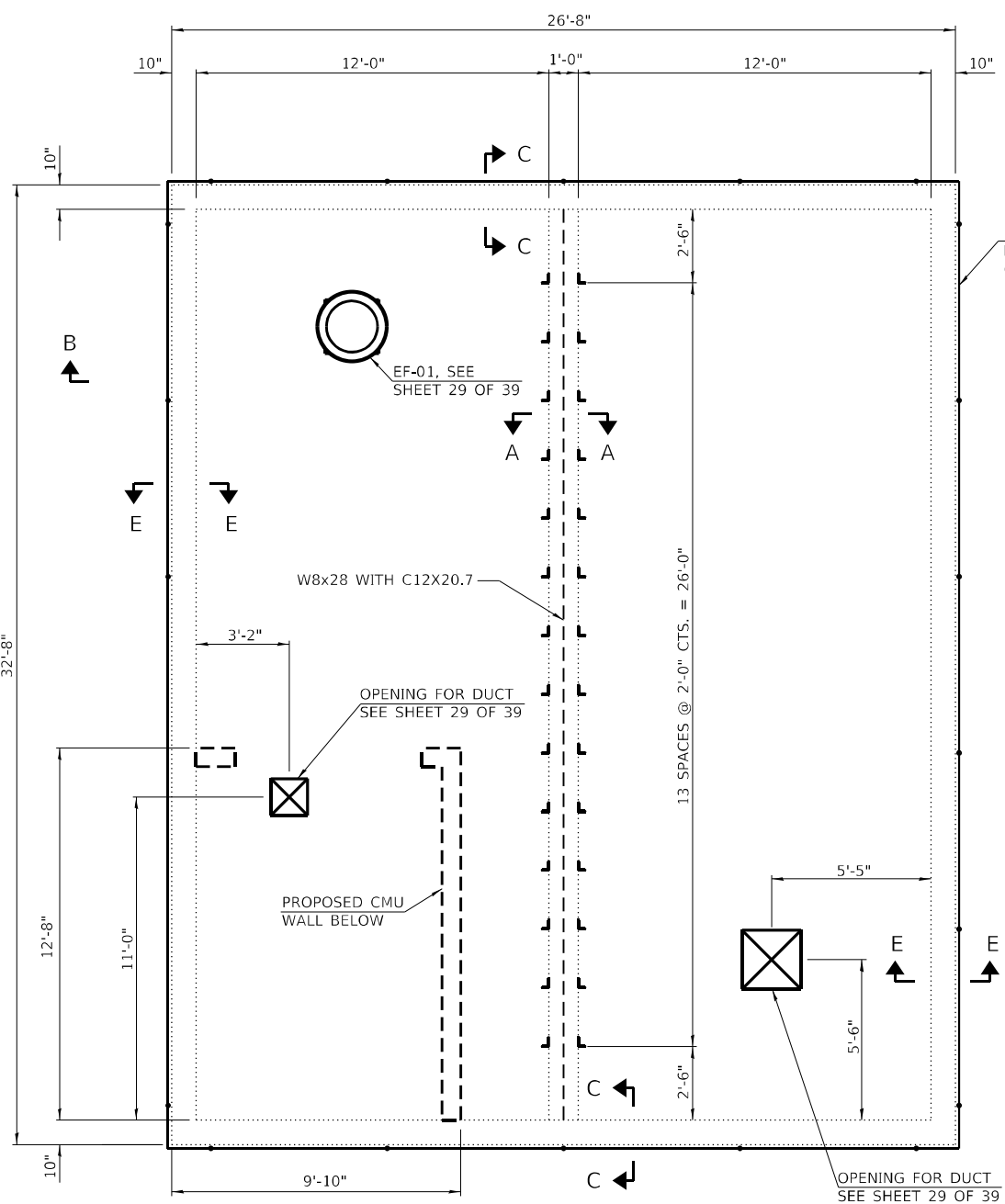
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|---------------------------|----------|-----------|
| USER NAME = oms | DESIGNED | REVISED - |
| PLOT SCALE = 6.0000' / 1" | DRAWN | REVISED - |
| PLOT DATE = 6/16/2022 | CHECKED | REVISED - |
| | DATE | REVISED - |

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**WEST FRANKFORT PUMP STATION
EXISTING PUMP STATION DEMOLITION PLANS**

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

| | | | | |
|---------------------------|------------|----------|--------------|-----------|
| F.A.I. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| 57 | (28-5)PS-1 | FRANKLIN | 39 | 16 |
| CONTRACT NO. 78958 | | | | |
| ILLINOIS FED. AID PROJECT | | | | |



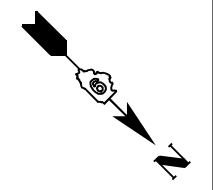
PATCH EX. OPENING WITH CONC. AND REBAR (SEE DETAIL 1 ON SHEET 21 OF 39)

1 1/2" Ø SCH. 40 PIPE HANDRAIL AND POSTS (6'-0" MAX POST SPACING)

MAIN LEVEL - PLAN

- NOTES:
1. ALL PENETRATIONS IN CMU WALLS AND IN THE EX. CONC. SLAB OF THE CMU ENCLOSURE SHALL BE FULLY GROUTED TO SEAL THE INSIDE OF THE CMU ENCLOSURE FROM THE REST OF THE EX. INTERIOR PUMP STATION BUILDING. COST INCLUDED IN "MASONRY WALL CONSTRUCTION".
 2. COAT EXPOSED REBAR ENDS WITH EPOXY BONDING AGENT PER SECTION 508.04 OF THE STANDARD SPECIFICATIONS (COST INCLUDED IN "CONCRETE REMOVAL")
 3. ALL STEEL SHALL BE HOT DIPPED GALVANIZED.
 4. SEE SECTION B-B ON SHEET 19 OF 39.
 5. SEE SECTIONS A-A, C-C, AND E-E ON SHEET 20 OF 39.
 6. SEE SECTIONS F-F, G-G, AND I-I ON SHEET 21 OF 39.

ROOF LEVEL - PLAN



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STATE OF ILLINOIS DESIGN FIRM NO. 164-2738

| | | |
|---------------------------|----------|-----------|
| USER NAME = oms | DESIGNED | REVISED - |
| PLOT SCALE = 6.0000' / 1" | DRAWN | REVISED - |
| PLOT DATE = 6/16/2022 | CHECKED | REVISED - |
| | DATE | REVISED - |

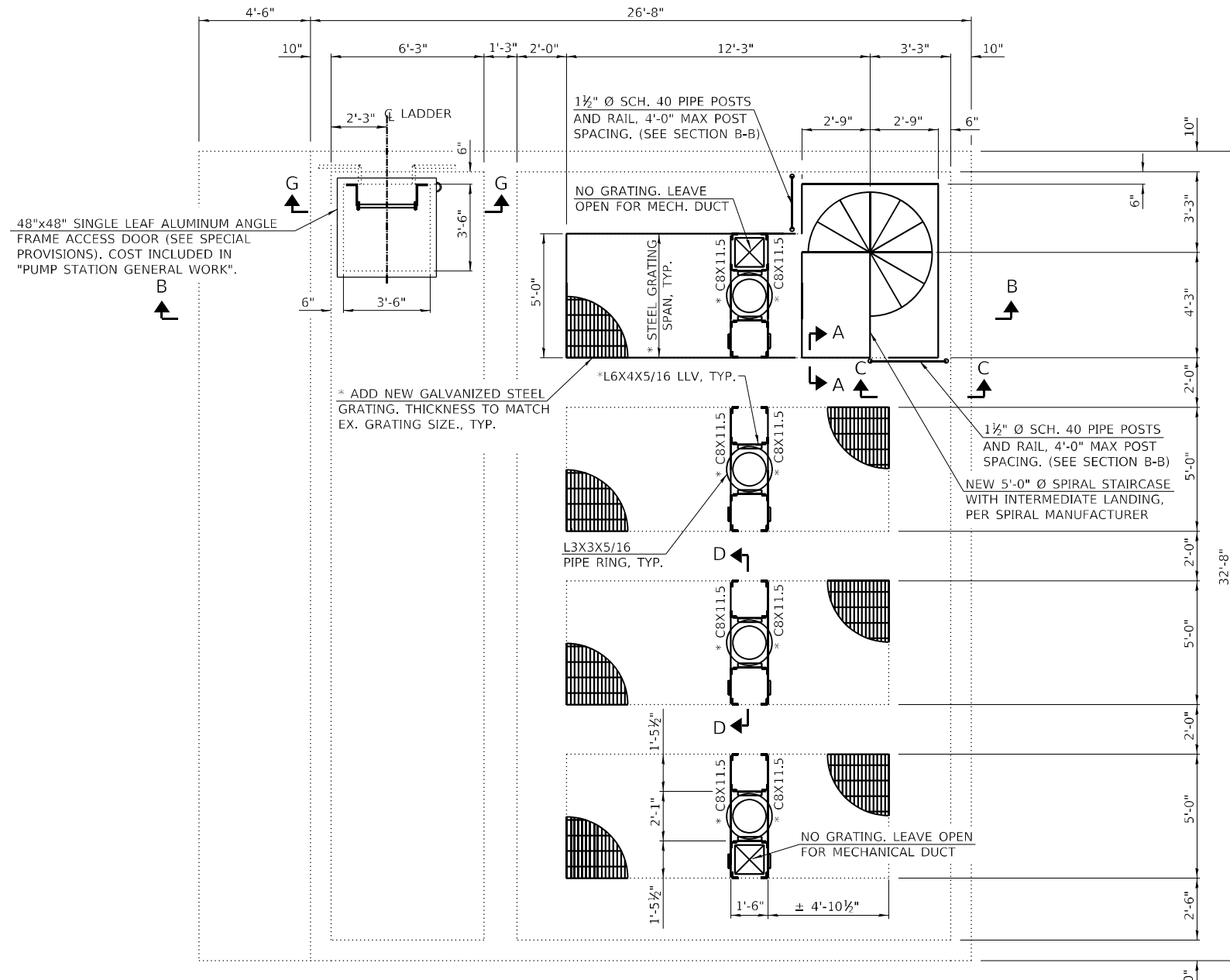
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

WEST FRANKFORT PUMP STATION
PROPOSED PUMP STATION BUILDING PLANS

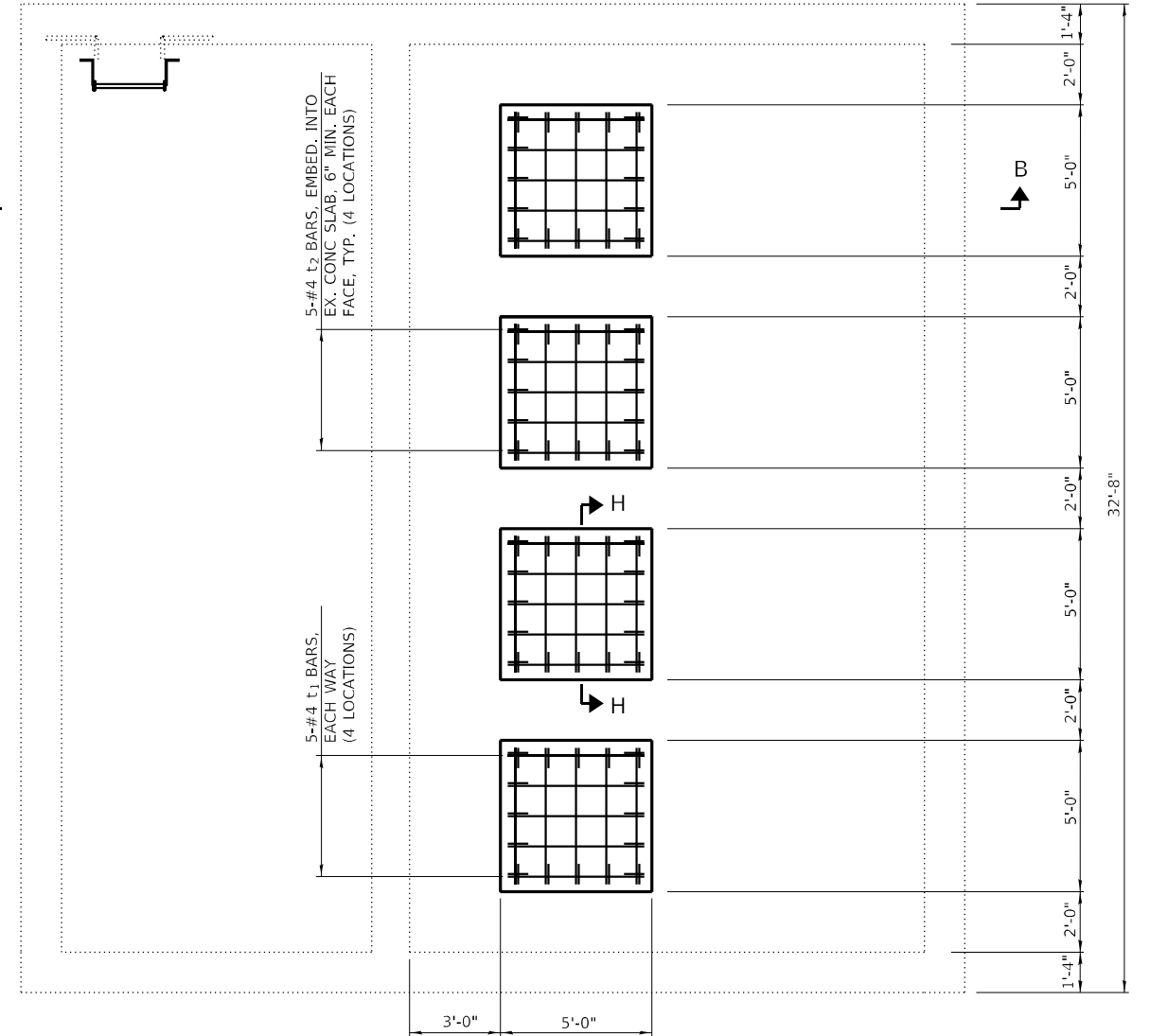
SCALE: NONE SHEET 1 OF 2 SHEETS STA. TO STA.

| F.A.I. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|---------------------------|------------|----------|--------------|-----------|
| 57 | (28-5)PS-1 | FRANKLIN | 39 | 17 |
| CONTRACT NO. 78958 | | | | |
| ILLINOIS FED. AID PROJECT | | | | |

- NOTE:
1. COAT EXPOSED REBAR ENDS WITH EPOXY BONDING AGENT PER SECTION 508.04 OF THE STANDARD SPECIFICATIONS (COST INCLUDED IN "CONCRETE REMOVAL")
 2. ALL STEEL SHALL BE HOT DIPPED GALVANIZED.
 3. SEE SECTION B-B ON SHEET 19 OF 39.
 4. SEE SECTION G-G ON SHEET 20 OF 39.
 5. SEE SECTIONS A-A, C-C, D-D, AND H-H ON SHEET 24 OF 39.
 6. SEE BILL OF MATERIAL ON SHEET 24 OF 39.



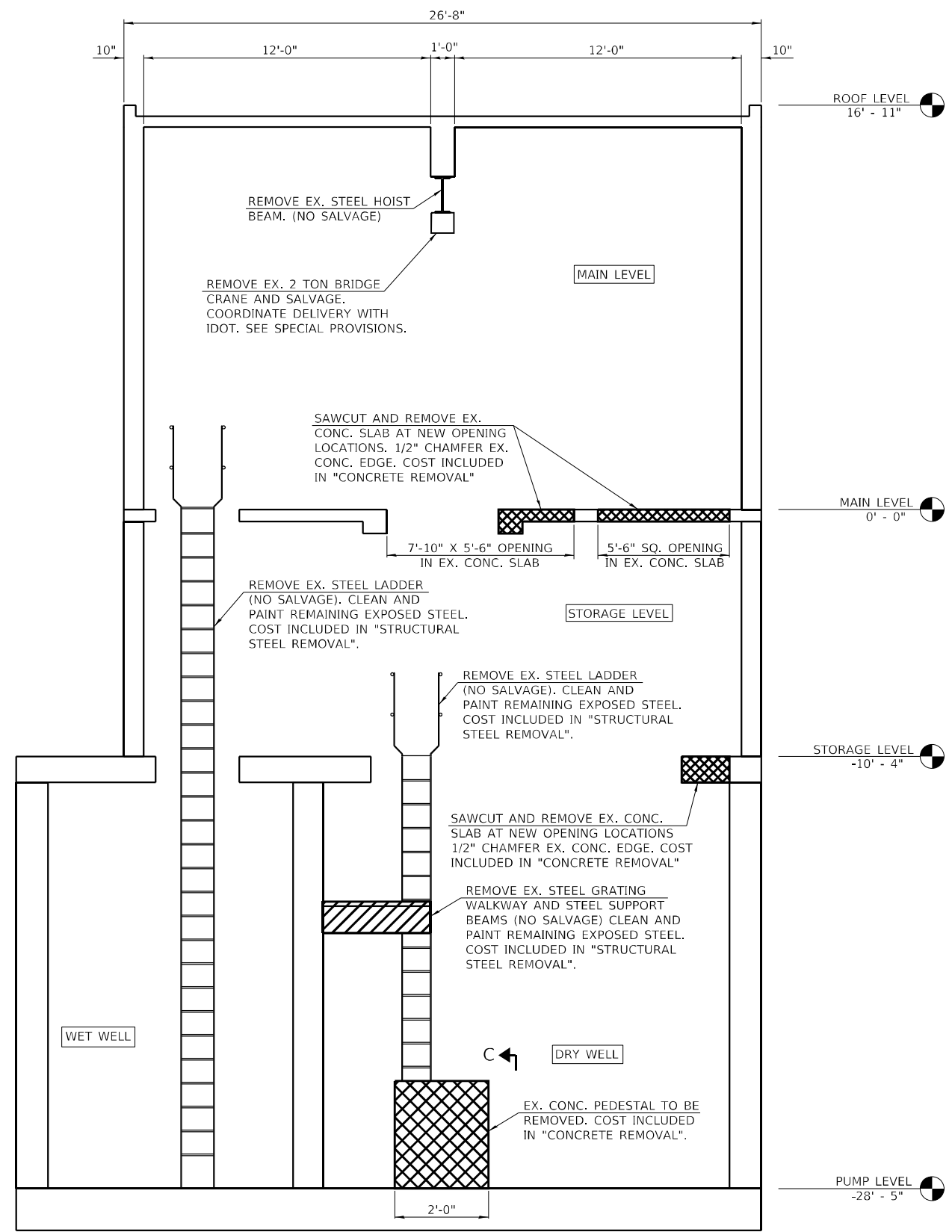
STORAGE LEVEL - PLAN



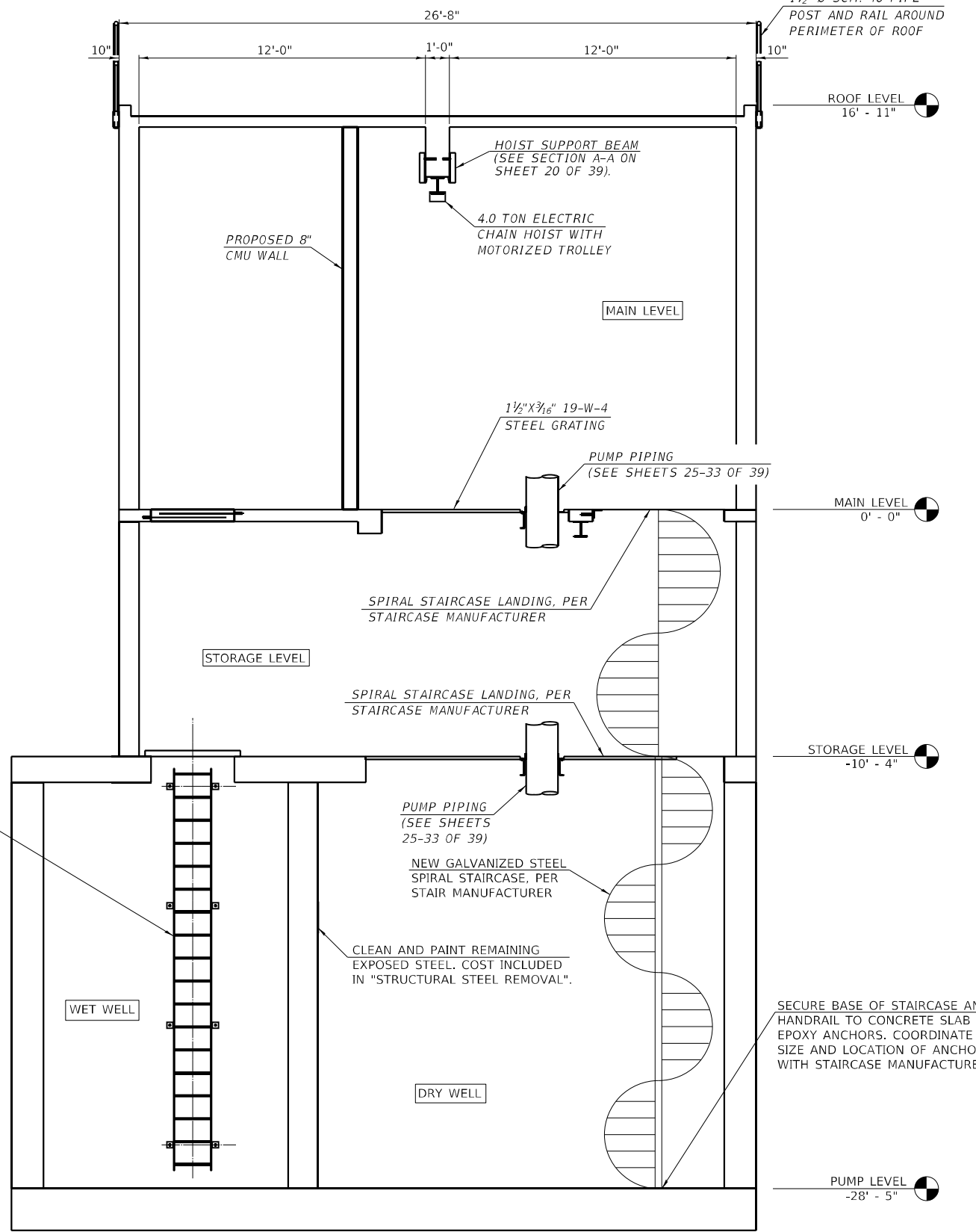
BOTTOM LEVEL - PLAN

* STEEL FRAMING AND GRATING SHALL BE REMOVABLE.

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BUILDING SECTION A-A - DEMO
(LOOKING SOUTHWEST)



BUILDING SECTION B-B - PROPOSED
(LOOKING SOUTHWEST)

LEGEND

| | |
|--|------------------|
| | CONCRETE REMOVAL |
| | STEEL REMOVAL |

- NOTES:**
1. COAT EXPOSED REBAR ENDS WITH EPOXY BONDING AGENT PER SECTION 508.04 OF THE STANDARD SPECIFICATIONS (COST INCLUDED IN "CONCRETE REMOVAL")
 2. COST OF NEW SPIRAL STAIRCASE AND 4 TON HOIST SHALL BE INCLUDED IN "PUMP STATION GENERAL WORK". SEE SPECIAL PROVISIONS.
 3. NEW SPIRAL STAIRCASE SHALL BE HOT DIPPED GALVANIZED. SEE SPECIAL PROVISIONS.
 4. FOR SECTION C-C SEE SHEET 16 OF 39.

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STATE OF ILLINOIS DESIGN FIRM NO. 164-2738

| | | |
|---------------------------|----------|----------|
| USER NAME = oms | DESIGNED | REVISD - |
| PLOT SCALE = 6.0000' / 1" | DRAWN | REVISD - |
| PLOT DATE = 6/16/2022 | CHECKED | REVISD - |
| | DATE | REVISD - |

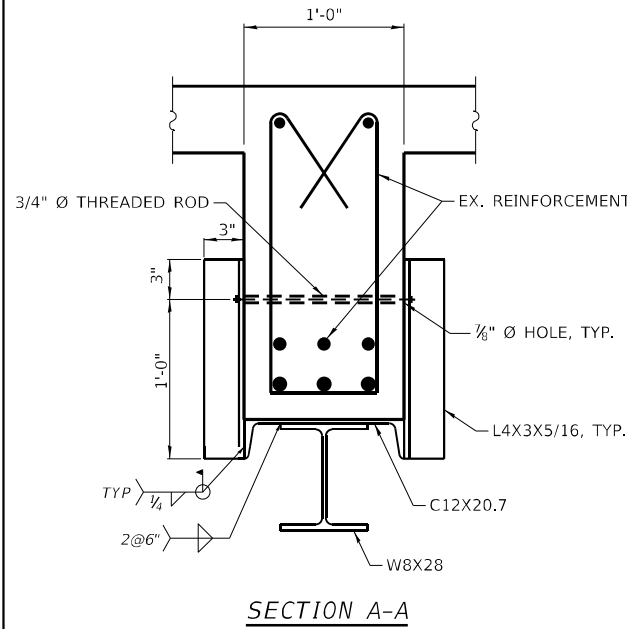
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**WEST FRANKFORT PUMP STATION
PUMP STATION BUILDING DEMO AND PROPOSED ELEVATIONS**

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

| F.A.I. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|---------------------------|------------|----------|--------------|-----------|
| 57 | (28-5)PS-1 | FRANKLIN | 39 | 19 |
| CONTRACT NO. 78958 | | | | |
| ILLINOIS FED. AID PROJECT | | | | |

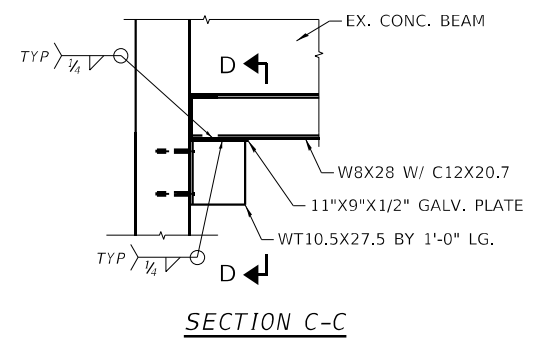
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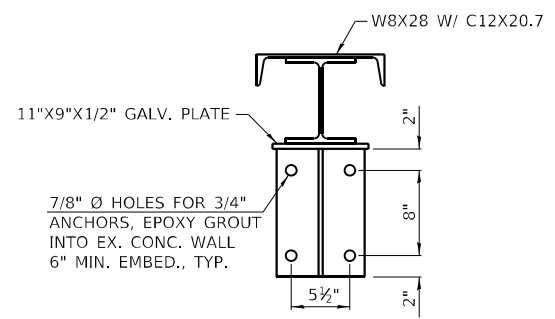
SECTION A-A

NOTE:
 1. COAT EXPOSED REBAR ENDS WITH EPOXY BONDING AGENT PER SECTION 508.04 OF THE STANDARD SPECIFICATIONS (COST INCLUDED IN "CONCRETE REMOVAL").
 2. CONTRACTOR SHALL VERIFY ALL DIMENSIONS, PRIOR TO FABRICATION.

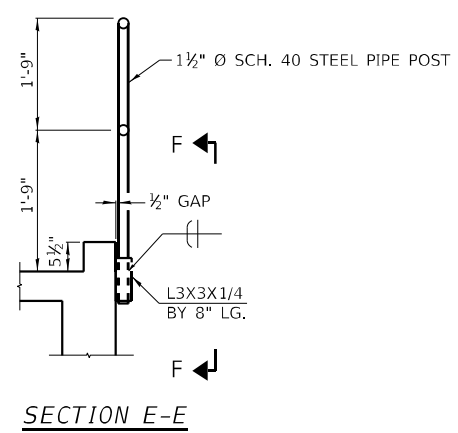
ALL WORK ASSOCIATED WITH ITEMS ON THIS SHEET SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE PER POUND FOR "FURNISHING AND ERECTING STRUCTURAL STEEL", UNLESS OTHERWISE NOTED.



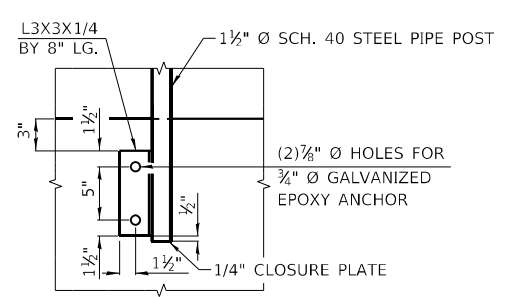
SECTION C-C



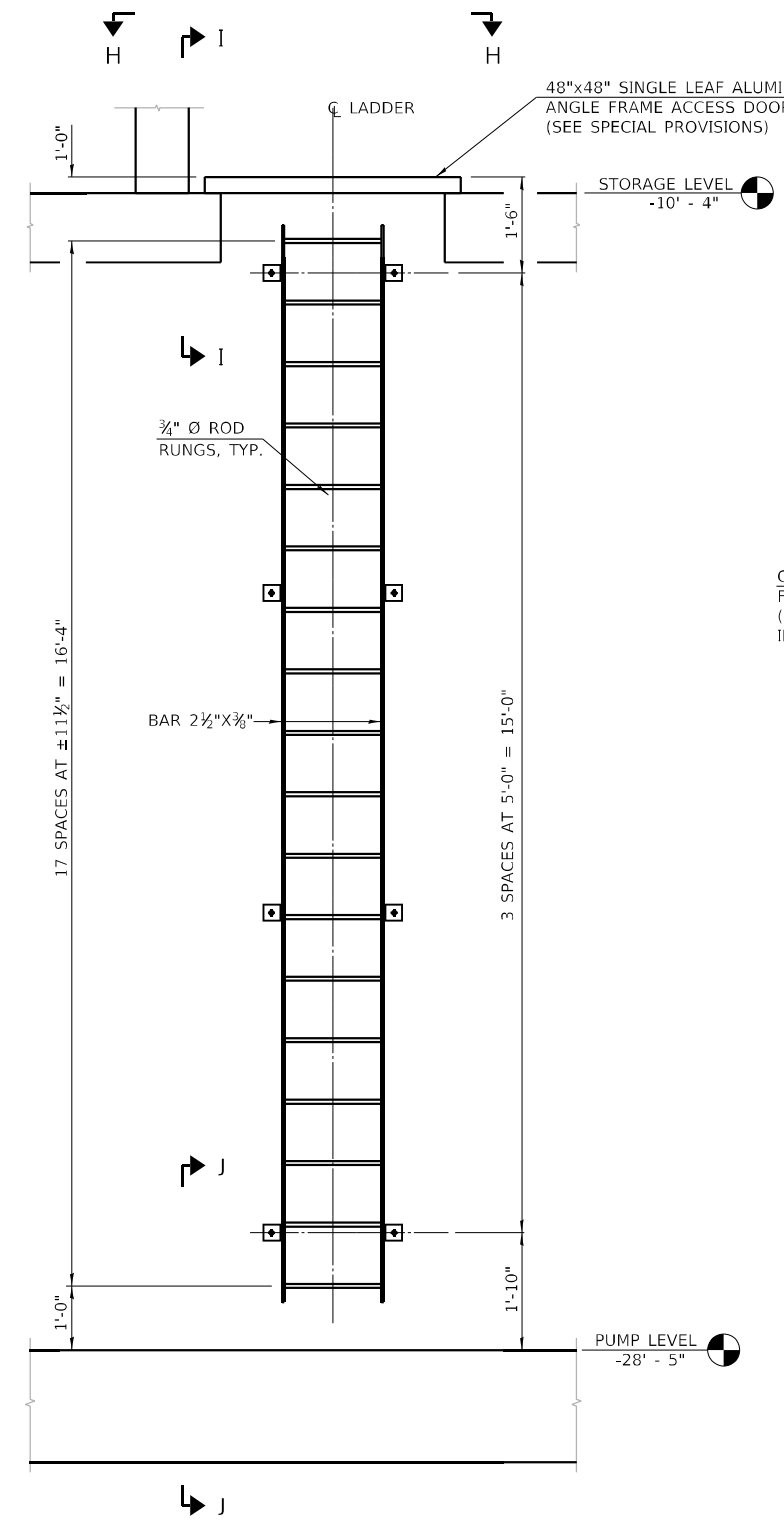
SECTION D-D



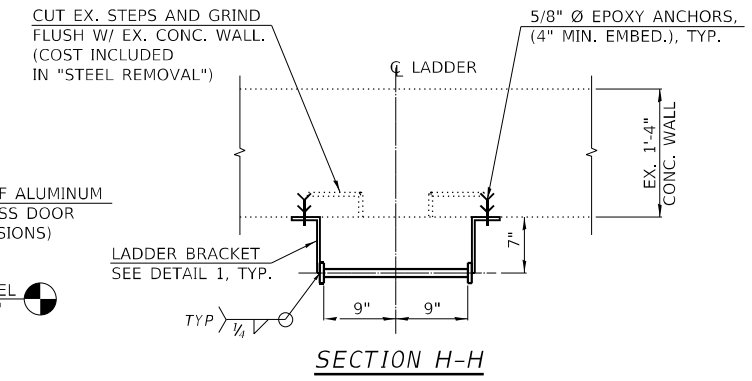
SECTION E-E



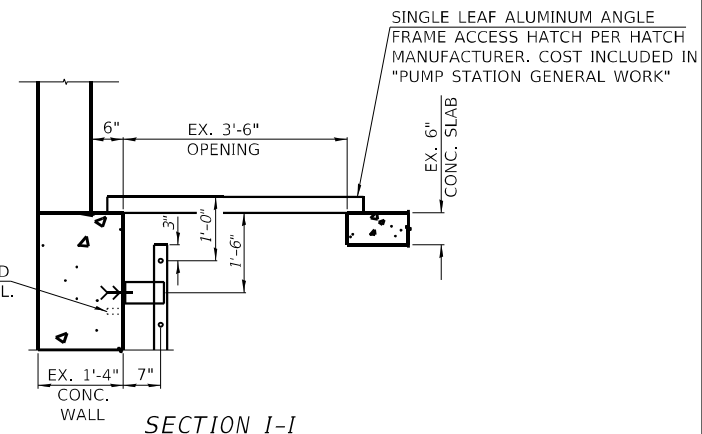
SECTION F-F



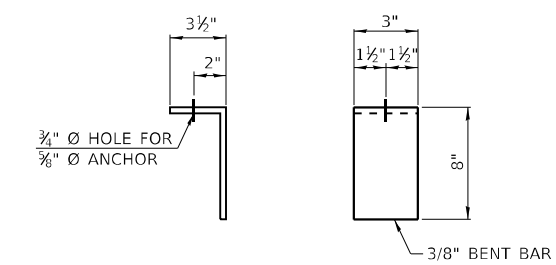
SECTION G-G



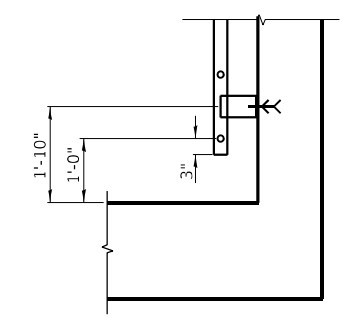
SECTION H-H



SECTION I-I



DETAIL 1 - BRACKET



SECTION J-J

BILL OF MATERIAL

| FURNISHING AND ERECTING STRUCTURAL STEEL | POUND | 3,040 |
|--|-------|-------|
|--|-------|-------|

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 STATE OF ILLINOIS DESIGN FIRM NO. 164-2738

| | | |
|----------------------------|----------|-----------|
| USER NAME = oms | DESIGNED | REVISED - |
| PLOT SCALE = 6.0000' / in. | DRAWN | REVISED - |
| PLOT DATE = 6/16/2022 | CHECKED | REVISED - |
| | DATE | REVISED - |

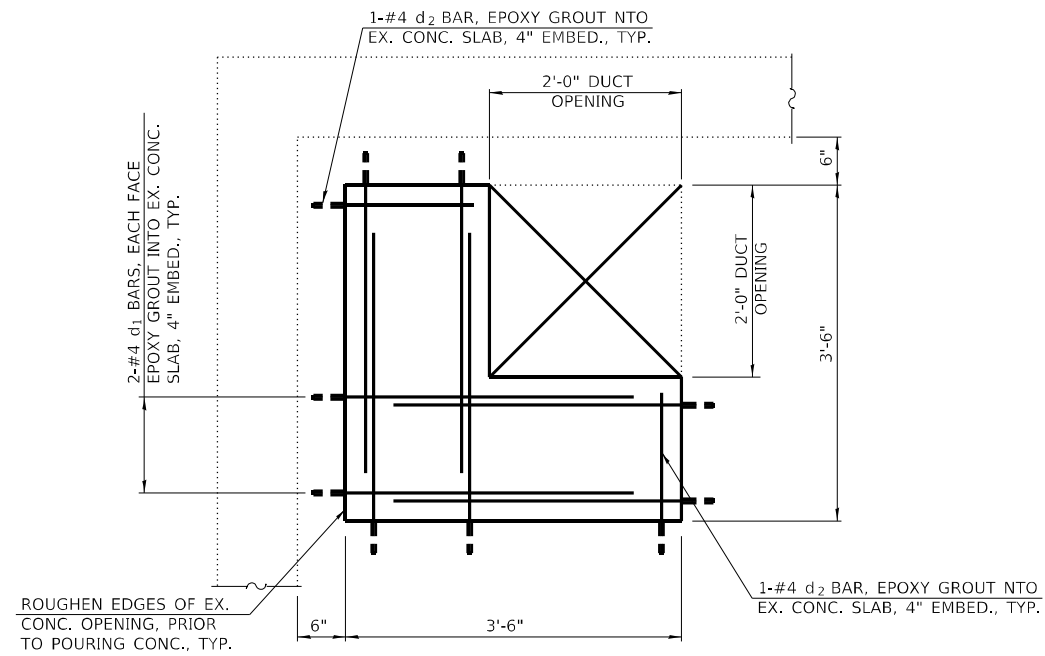
**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**WEST FRANKFORT PUMP STATION
 STRUCTURAL DETAILS**

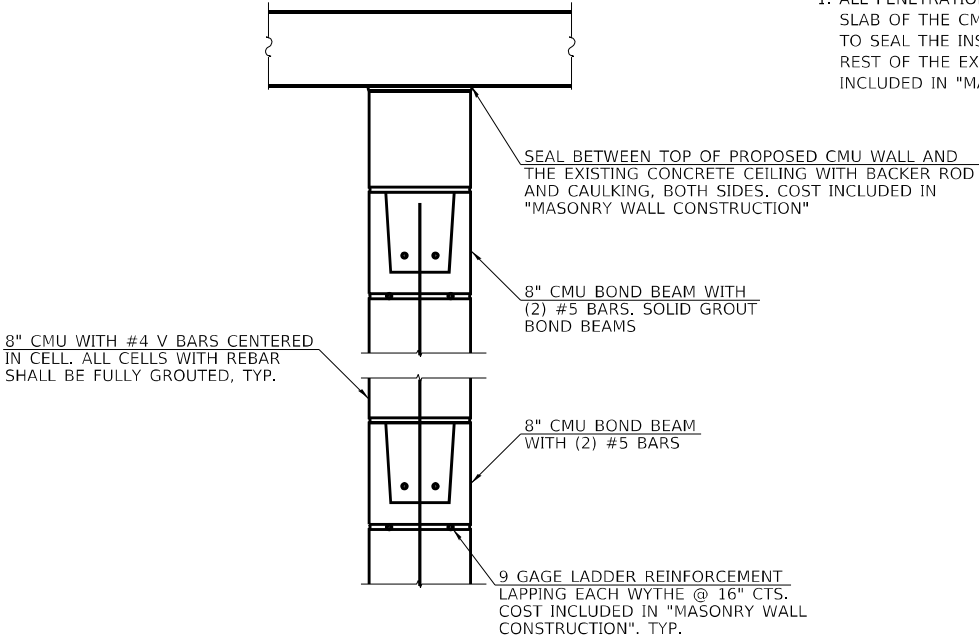
SCALE: NONE SHEET 1 OF 5 SHEETS STA. TO STA.

| F.A.I. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|---------------------------|------------|----------|--------------|-----------|
| 57 | (28-5)PS-1 | FRANKLIN | 39 | 20 |
| CONTRACT NO. 78958 | | | | |
| ILLINOIS FED. AID PROJECT | | | | |

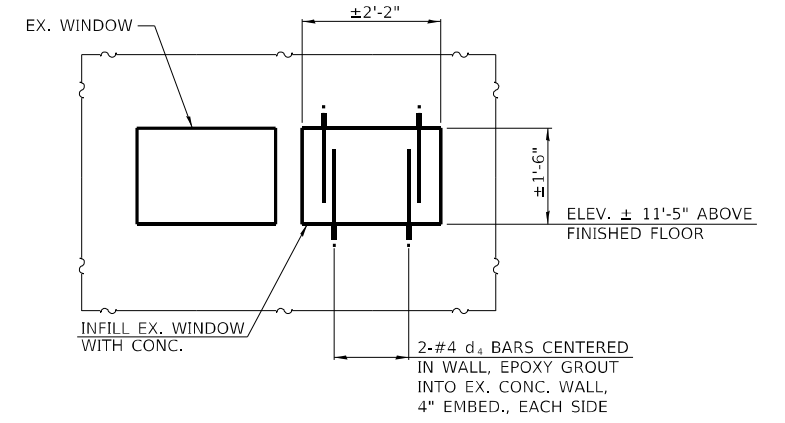
NOTE:
 1. ALL PENETRATIONS IN CMU WALLS AND IN THE EX. CONC. SLAB OF THE CMU ENCLOSURE SHALL BE FULLY GROUTED TO SEAL THE INSIDE OF THE CMU ENCLOSURE FROM THE REST OF THE EX. INTERIOR PUMP STATION BUILDING. COST INCLUDED IN "MASONRY WALL CONSTRUCTION".



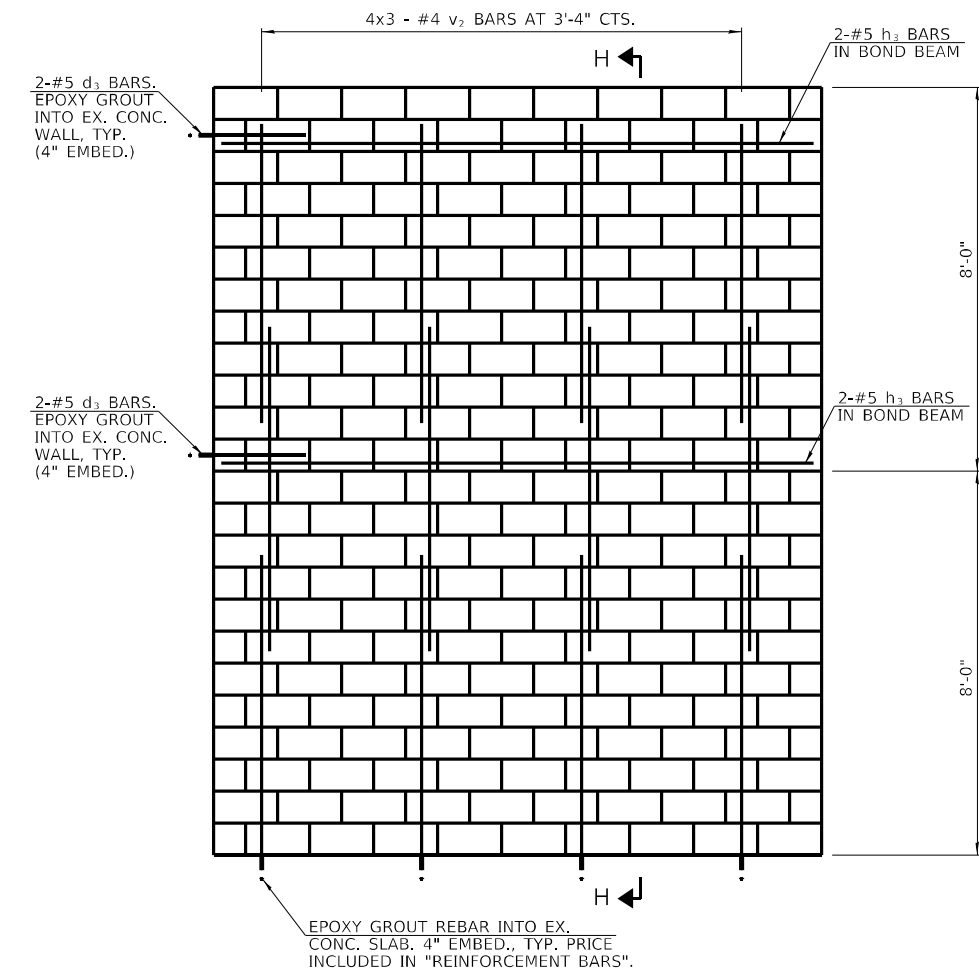
DETAIL 1 - PATCH DETAIL



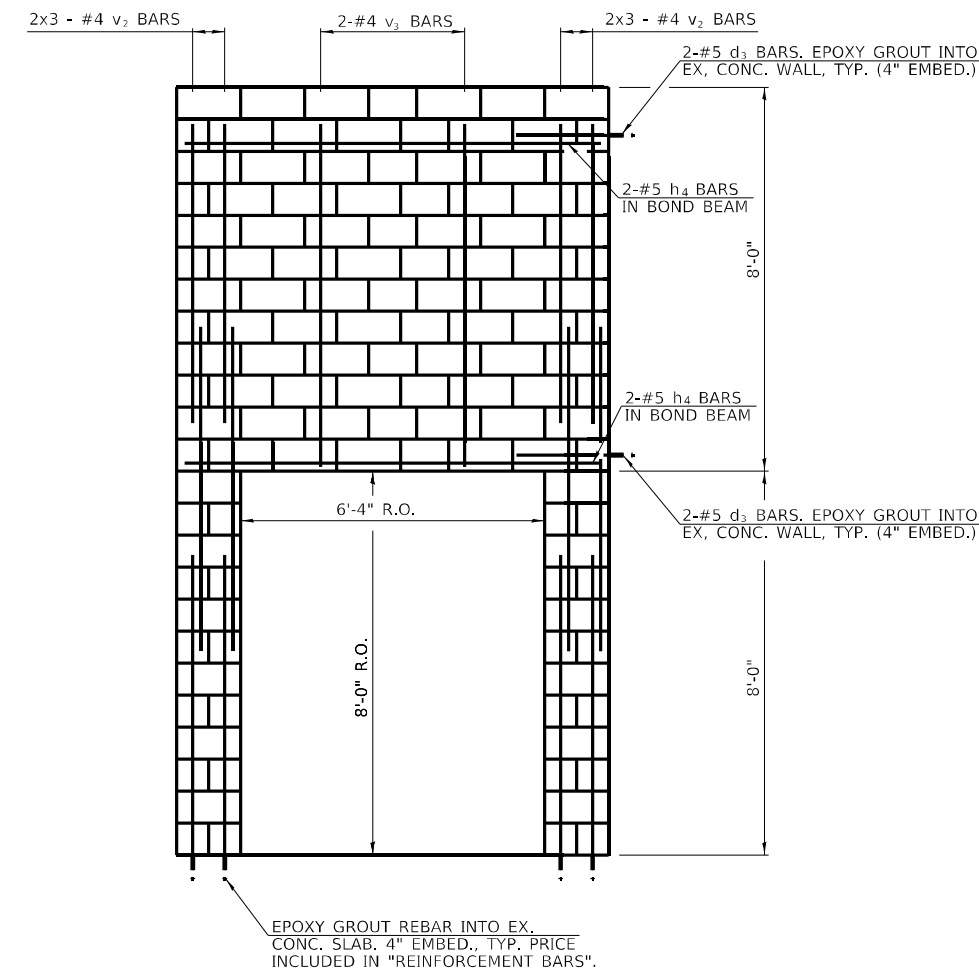
SECTION H-H



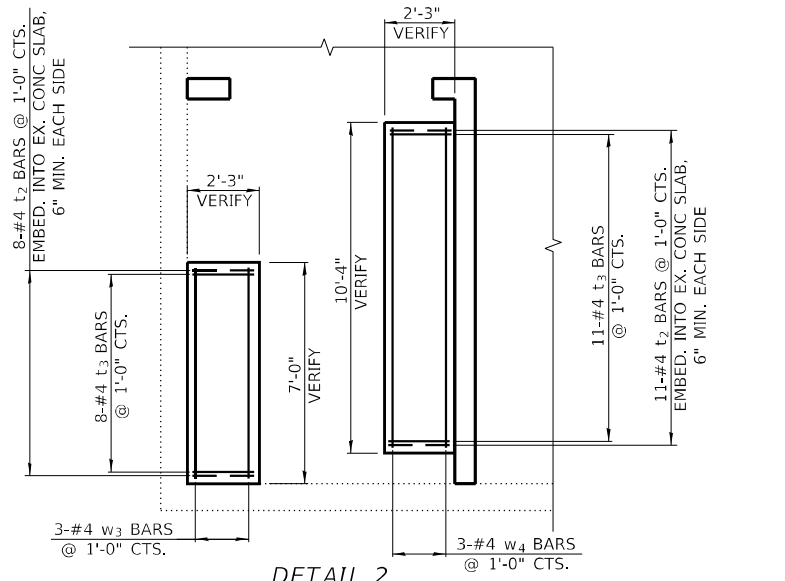
SECTION I-I - EX. WINDOW



SECTION F-F



SECTION G-G

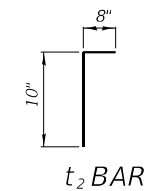


DETAIL 2

BILL OF MATERIAL

| Bar | No. | Size | Length | Shape |
|---------------------------|-----|------|---------|-------|
| d1 | 8 | #4 | 3'-6" | — |
| d2 | 2 | #4 | 1'-8" | — |
| d3 | 8 | #5 | 3'-0" | — |
| d4 | 4 | #4 | 1'-6" | — |
| h3 | 4 | #5 | 12'-8" | — |
| h4 | 4 | #5 | 8'-8" | — |
| t2 | 38 | #4 | 1'-6" | ┌ |
| t3 | 19 | #4 | 1'-11" | — |
| w3 | 3 | #4 | 6'-8" | — |
| w4 | 3 | #4 | 10'-0" | — |
| v2 | 24 | #4 | 6'-9" | — |
| v3 | 2 | #4 | 7'-6" | — |
| CONCRETE STRUCTURES | | | Cu. Yd. | 1.0 |
| REINFORCEMENT BARS | | | Lbs. | 350 |
| MASONRY WALL CONSTRUCTION | | | Sq. Ft. | 296 |

BARS INDICATED THUS 4X3-#4 ETC. INDICATES 4 LINES OF BARS WITH 3 LENGTHS PER LINE.



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 STATE OF ILLINOIS DESIGN FIRM NO. 164-2738

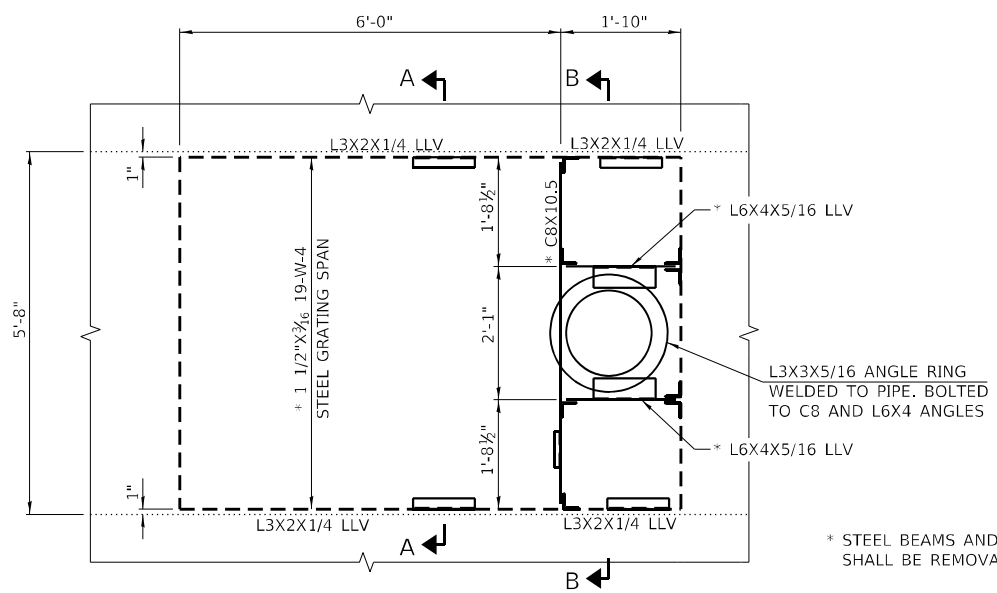
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|---------------------------|----------|-----------|
| USER NAME = oms | DESIGNED | REVISED - |
| PLOT SCALE = 6.0000' / 1" | DRAWN | REVISED - |
| PLOT DATE = 6/16/2022 | CHECKED | REVISED - |
| | DATE | REVISED - |

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

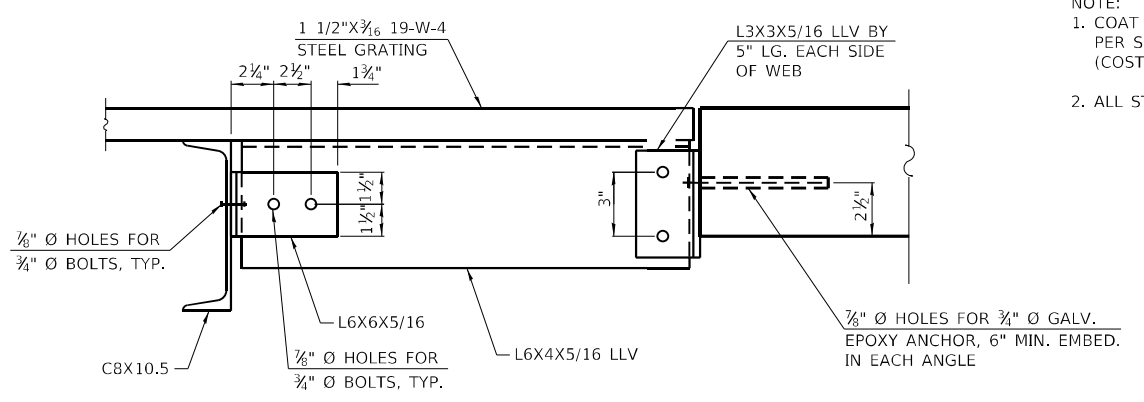
WEST FRANKFORT PUMP STATION
 STRUCTURAL DETAILS

SCALE: NONE SHEET 2 OF 5 SHEETS STA. TO STA.

| | | | | |
|---------------------------|------------|----------|--------------|-----------|
| F.A.I. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| 57 | (28-5)PS-1 | FRANKLIN | 39 | 21 |
| CONTRACT NO. 78958 | | | | |
| ILLINOIS FED. AID PROJECT | | | | |

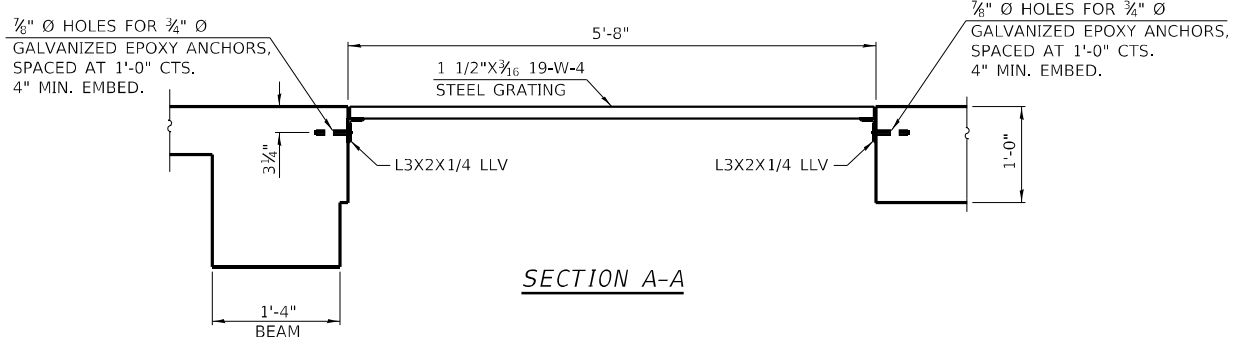


DETAIL 1 - PIPE SUPPORT
(MAIN LEVEL - 4 LOCATIONS)

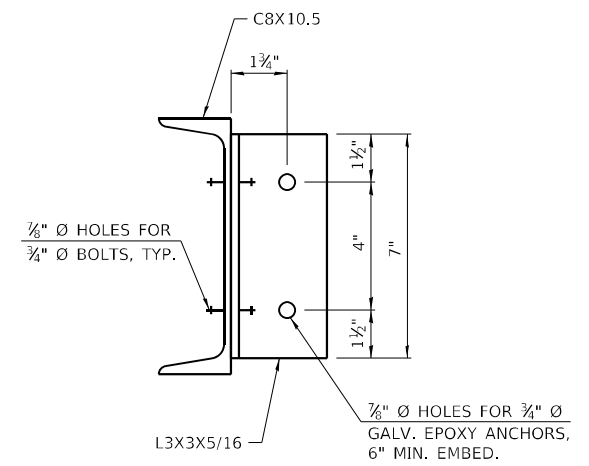


SECTION C-C

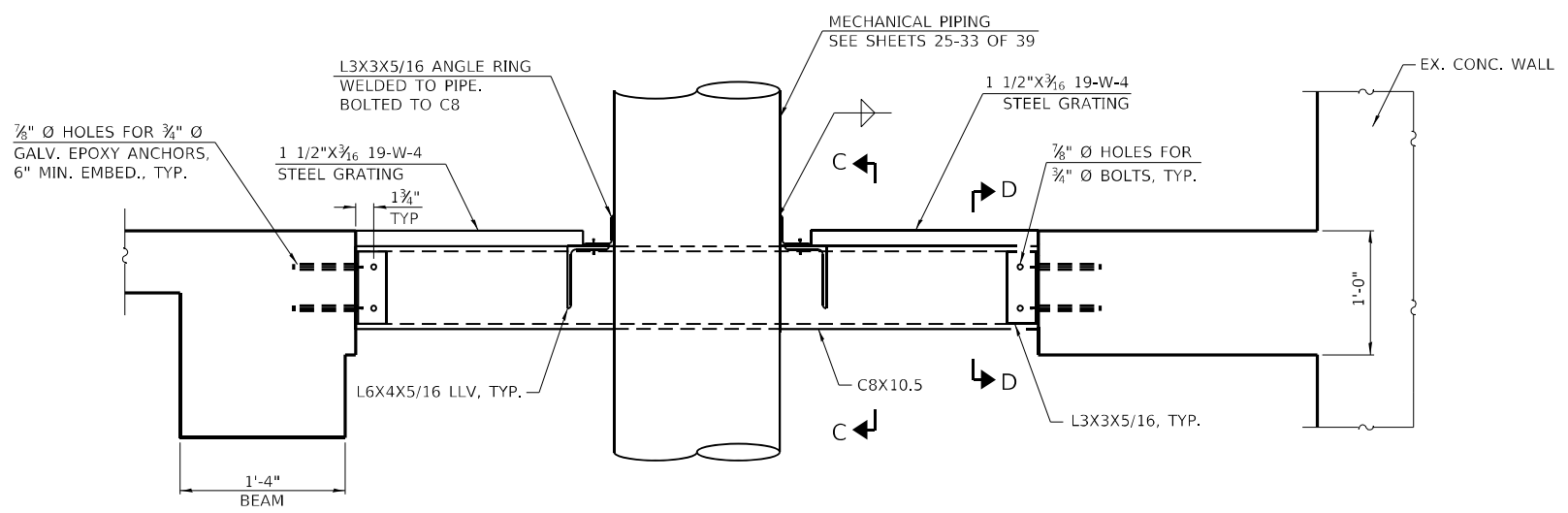
NOTE:
1. COAT EXPOSED REBAR ENDS WITH EPOXY BONDING AGENT PER SECTION 508.04 OF THE STANDARD SPECIFICATIONS (COST INCLUDED IN "CONCRETE REMOVAL")
2. ALL STEEL SHALL BE HOT DIPPED GALVANIZED.



SECTION A-A



SECTION D-D



SECTION B-B

ALL WORK ASSOCIATED WITH ITEMS ON THIS SHEET SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE PER POUND FOR "FURNISHING AND ERECTING STRUCTURAL STEEL", UNLESS OTHERWISE NOTED.

BILL OF MATERIAL

| | | |
|--|-------|-------|
| FURNISHING AND ERECTING STRUCTURAL STEEL | POUND | 2,709 |
|--|-------|-------|

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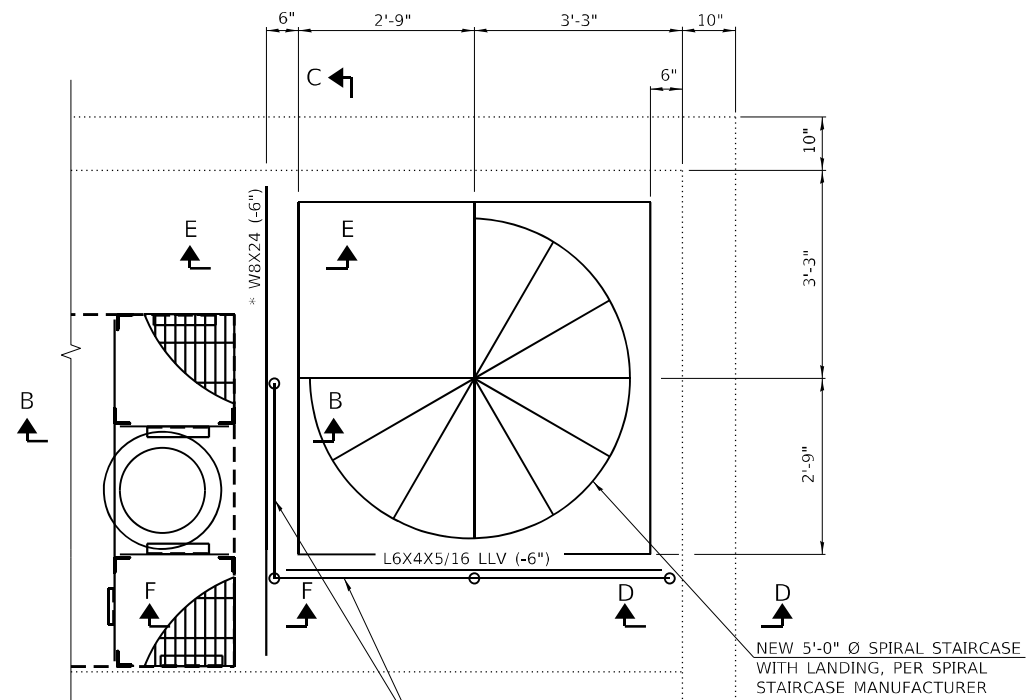
KLINGNER & ASSOCIATES, P.C.
Engineers • Architects • Surveyors
616 N. 24TH ST. QUINCY, ILLINOIS 62301 217.223.3670
STATE OF ILLINOIS DESIGN FIRM NO. 164-2738

| | | |
|---------------------------|----------|-----------|
| USER NAME = oms | DESIGNED | REVISED - |
| PLOT SCALE = 6.0000' / 1" | DRAWN | REVISED - |
| PLOT DATE = 6/16/2022 | CHECKED | REVISED - |
| | DATE | REVISED - |

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

| | |
|---|----------------------------------|
| WEST FRANKFORT PUMP STATION STRUCTURAL DETAILS | |
| SCALE: NONE | SHEET 3 OF 5 SHEETS STA. TO STA. |

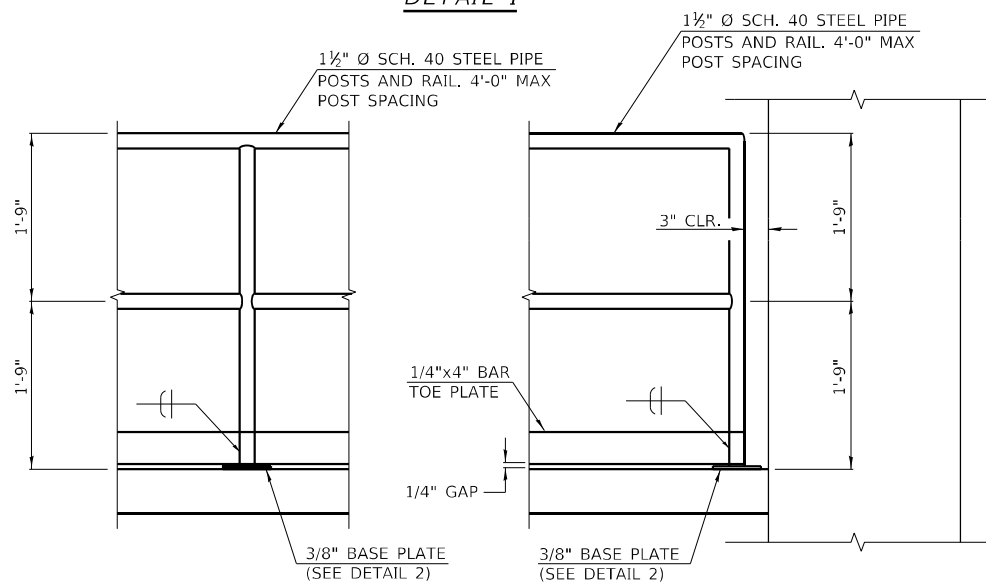
| F.A.I. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|---------------------------|------------|----------|--------------|-----------|
| 57 | (28-5)PS-1 | FRANKLIN | 39 | 22 |
| CONTRACT NO. 78958 | | | | |
| ILLINOIS FED. AID PROJECT | | | | |



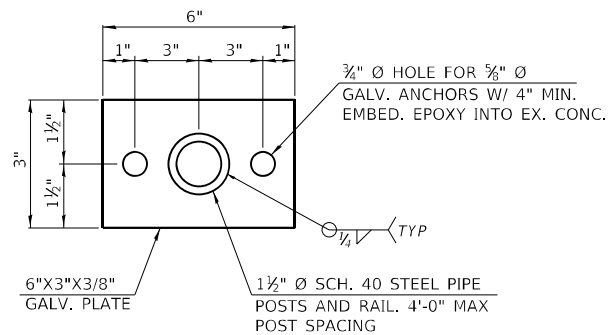
* INSTALL W8X24 PRIOR TO CUTTING CONCRETE

1 1/2" Ø SCH. 40 STEEL PIPE POSTS AND RAIL, 4'-0" MAX POST SPACING (SEE SECTION A-A)

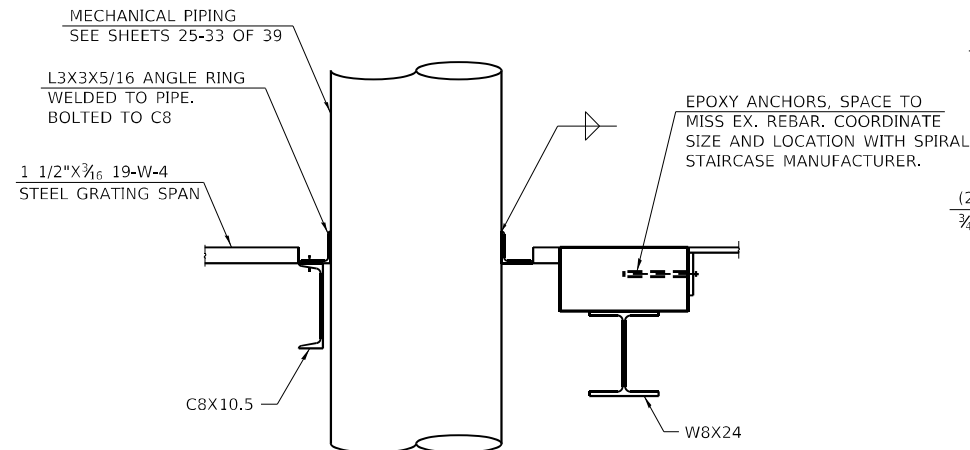
DETAIL 1



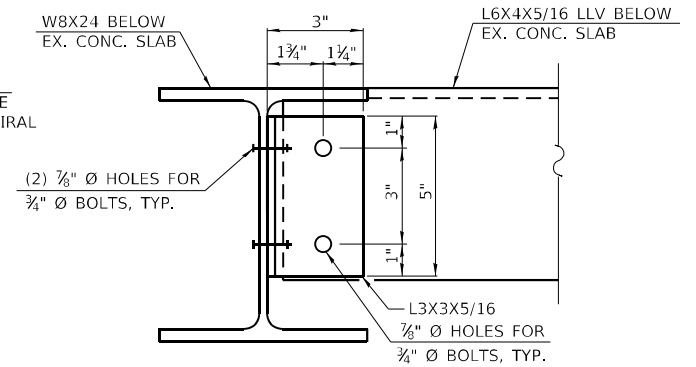
SECTION A-A - HANDRAIL SECTION



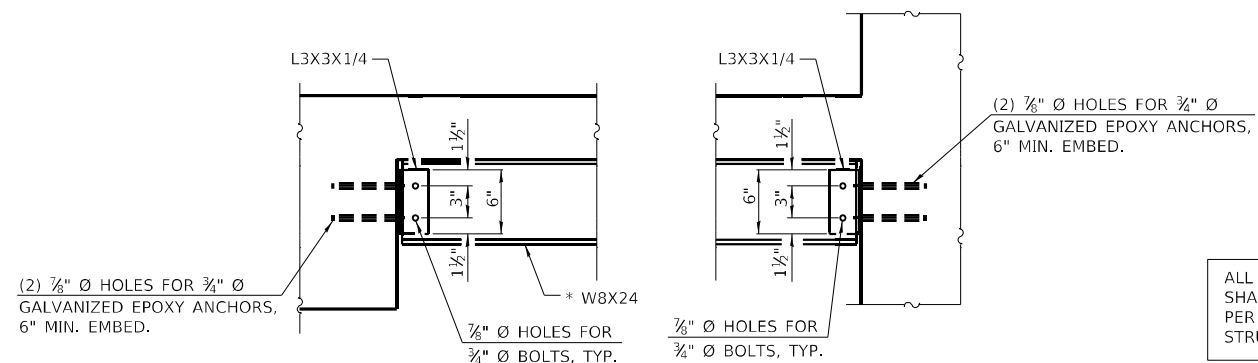
DETAIL 2 - HANDRAIL BASE PALTE



SECTION B-B



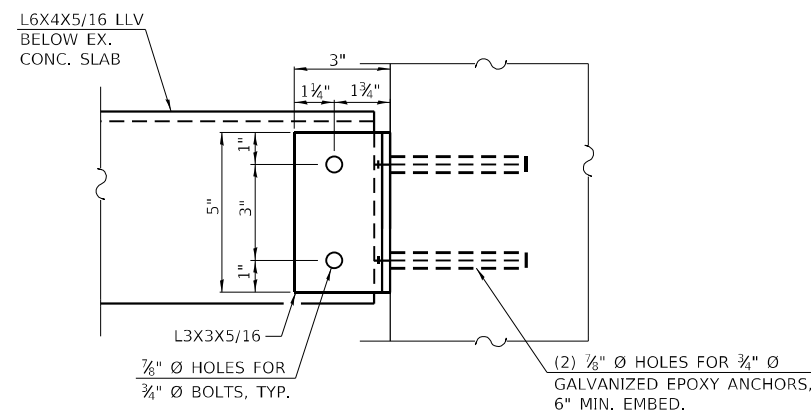
SECTION F-F



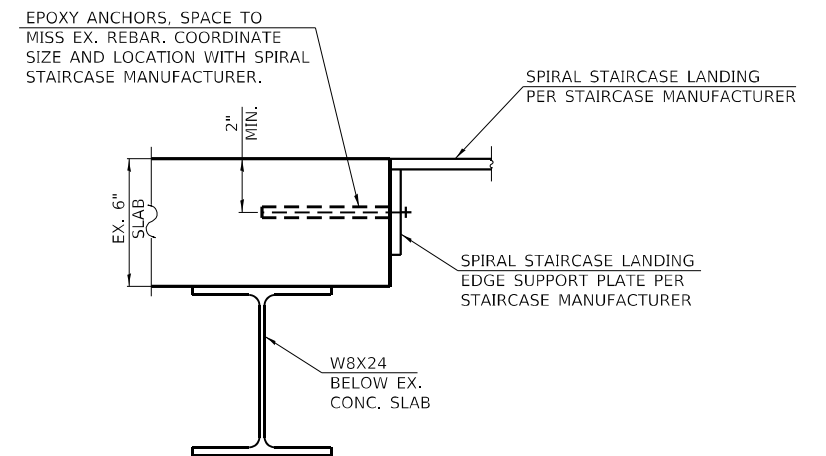
* INSTALL W8X24 PRIOR TO CUTTING CONCRETE

SECTION C-C

ALL WORK ASSOCIATED WITH ITEMS ON THIS SHEET SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE PER POUND FOR "FURNISHING AND ERECTING STRUCTURAL STEEL", UNLESS OTHERWISE NOTED.



SECTION D-D



SECTION E-E

BILL OF MATERIAL

| | | |
|--|-------|-----|
| FURNISHING AND ERECTING STRUCTURAL STEEL | POUND | 404 |
|--|-------|-----|

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616 N. 24TH ST. QUINCY ILLINOIS 62301 217.223.3670
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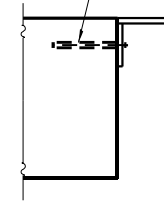
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|----------------------------|----------|-----------|
| USER NAME = oms | DESIGNED | REVISED - |
| PLOT SCALE = 6.0000' / in. | DRAWN | REVISED - |
| PLOT DATE = 6/16/2022 | CHECKED | REVISED - |
| | DATE | REVISED - |

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

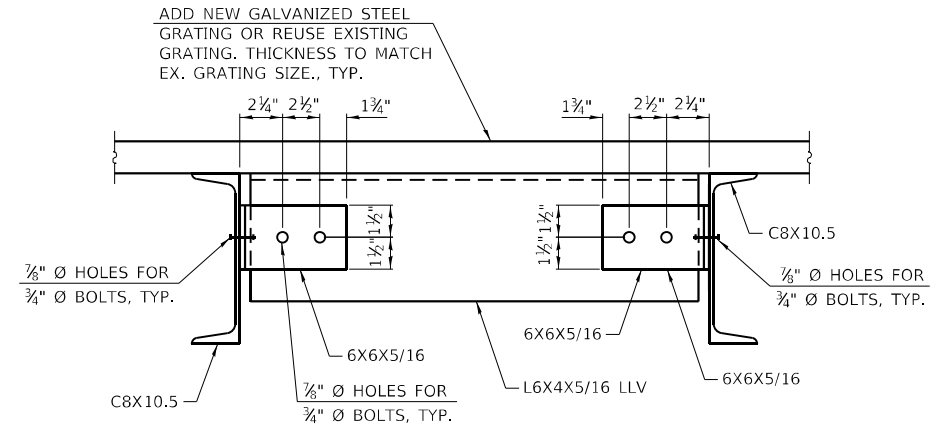
| | | | |
|---|---------|-------------|--------------|
| WEST FRANKFORT PUMP STATION STRUCTURAL DETAILS | | | |
| SCALE: NONE | SHEET 4 | OF 5 SHEETS | STA. TO STA. |

| | | | | |
|---------------------------|--------------------|-----------------|-----------------|--------------|
| F.A.I. RTE. 57 | SECTION (28-5)PS-1 | COUNTY FRANKLIN | TOTAL SHEETS 39 | SHEET NO. 23 |
| CONTRACT NO. 78958 | | | | |
| ILLINOIS FED. AID PROJECT | | | | |

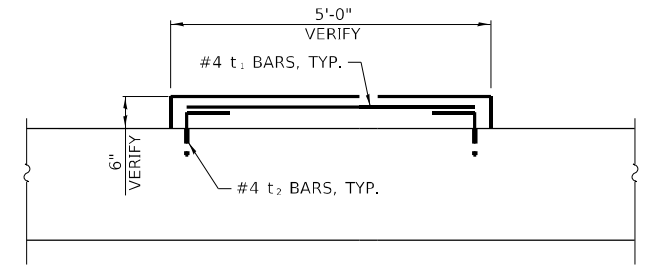
EPOXY ANCHORS, SPACE TO MISS EX. REBAR, COORDINATE SIZE AND LOCATION WITH SPIRAL STAIRCASE MANUFACTURER.



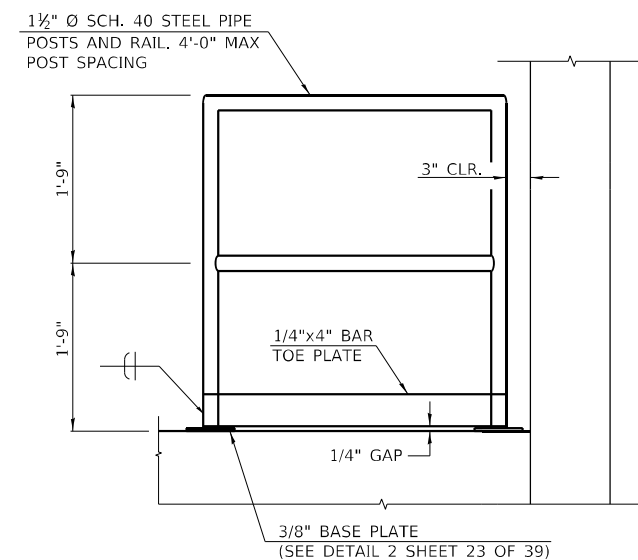
SECTION A-A



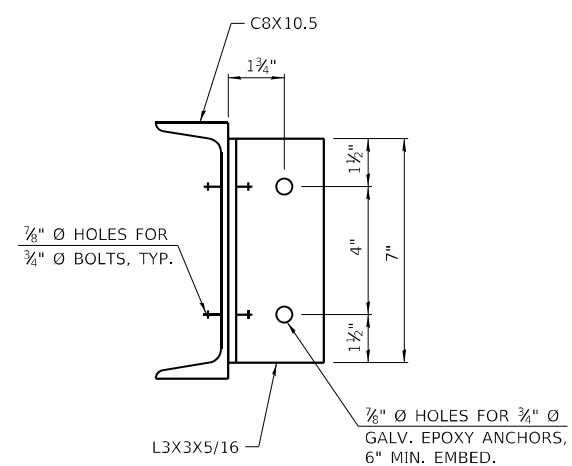
SECTION E-E



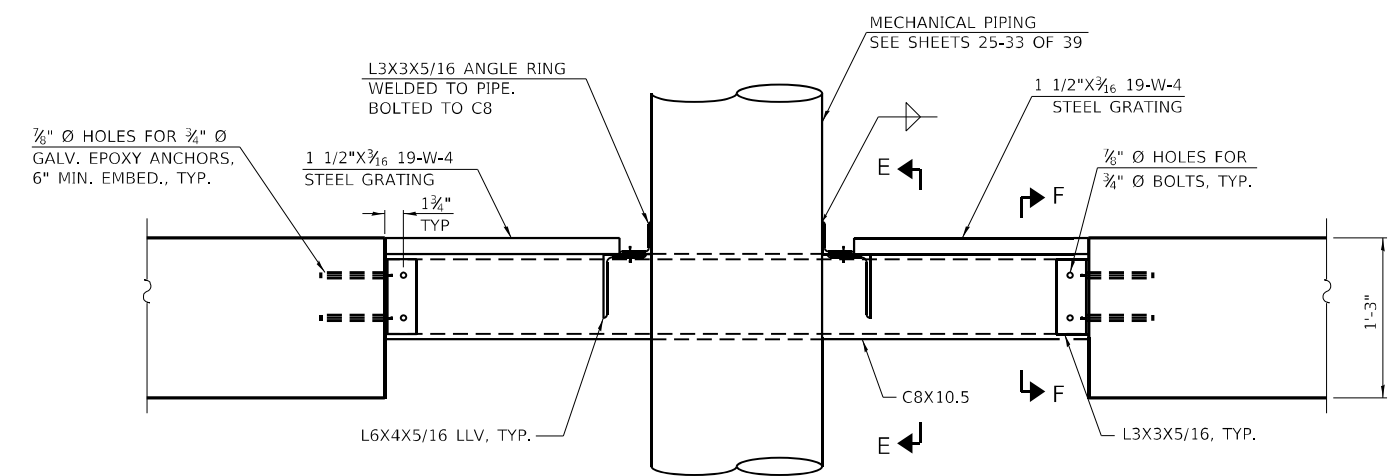
SECTION H-H
(PUMP LEVEL - 4 LOCATIONS)



SECTION C-C - HANDRAIL SECTION



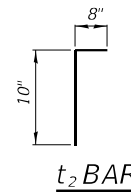
SECTION F-F



SECTION D-D
(STORAGE LEVEL - 4 LOCATIONS)

BILL OF MATERIAL

| Bar | No. | Size | Length | Shape |
|--|-----|------|--------|-------|
| t1 | 40 | #4 | 4'-8" | — |
| t2 | 80 | #4 | 1'-6" | ┌ |
| CONCRETE STRUCTURES | | | CU YD | 1.9 |
| REINFORCEMENT BARS | | | POUND | 200 |
| FURNISHING AND ERECTING STRUCTURAL STEEL | | | POUND | 1,644 |



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KLINGNER & ASSOCIATES, P.C.
Engineers • Architects • Surveyors
616 N. 24TH ST. QUINCY, ILLINOIS 62301 217.223.3670
STATE OF ILLINOIS DESIGN FIRM NO. 164-2738

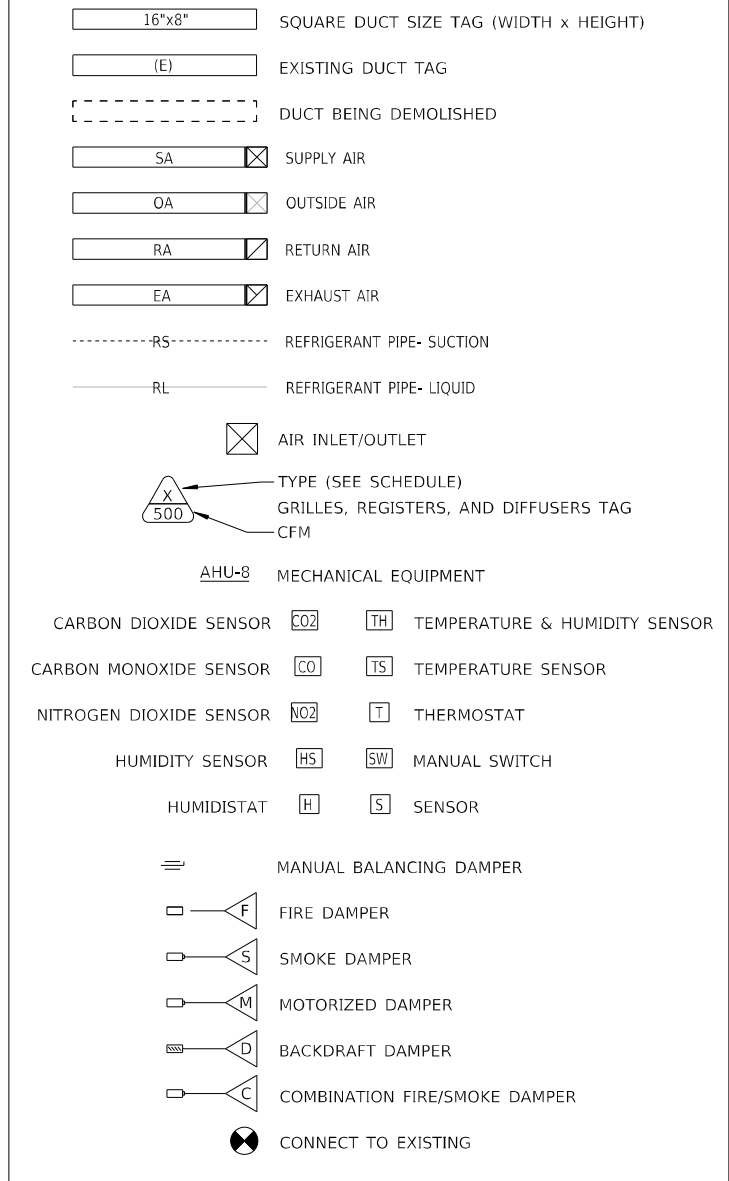
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| USER NAME = oms | DESIGNED | REVISED - |
| PLOT SCALE = 6.0000' / in. | DRAWN | REVISED - |
| PLOT DATE = 6/16/2022 | CHECKED | REVISED - |
| | DATE | REVISED - |

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

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| WEST FRANKFORT PUMP STATION STRUCTURAL DETAILS | | | |
| SCALE: NONE | SHEET 5 | OF 5 SHEETS | STA. TO STA. |

| | | | | |
|---------------------------|--------------------|-----------------|-----------------|--------------|
| F.A.I. RTE. 57 | SECTION (28-5)PS-1 | COUNTY FRANKLIN | TOTAL SHEETS 39 | SHEET NO. 24 |
| CONTRACT NO. 78958 | | | | |
| ILLINOIS FED. AID PROJECT | | | | |

HVAC SYMBOLS



GENERAL HVAC NOTES:

1. ALL MECHANICAL INSTALLATIONS SHALL CONFORM TO NFPA 90A, SMACNA, ASHRAE AND ALL OTHER STATE AND LOCAL CODES. DEVICES, APPARATUS, SYSTEMS, AND INSTALLATIONS SHALL BE ENTIRELY SUITABLE AND SAFE FOR EACH INTENDED APPLICATION AND BE IN FULL COMPLIANCE WITH APPLICABLE STANDARDS, REQUIREMENTS, RULES, REGULATIONS, CODES, STATUTES, ORDINANCES, ETC. OF MUNICIPAL, COUNTY, AND STATE GOVERNMENTS, OWNER'S INSURANCE COMPANY, LOCAL UTILITIES, AND LABOR REGULATIONS. ALL MECHANICAL INSTALLATIONS SHALL ALSO COMPLY WITH THE MANUFACTURER'S RECOMMENDATIONS/INSTRUCTIONS.
2. INSTALLATION OF MECHANICAL DEVICES SHALL BE COORDINATED WITH THE BUILDING STRUCTURE, LIGHTING FIXTURES, PIPING, CONDUIT, AND OTHER TRADES AS NECESSARY.
3. MECHANICAL EQUIPMENT, SUCH AS UNIT HEATERS, FANS, LOUVER-DAMPERS, ETC., SHALL BE FURNISHED AS INDICATED IN THE EQUIPMENT SCHEDULES.
4. MECHANICAL INSTALLATION SHALL BE COMPLETE AND SHALL INCLUDE ALL MECHANICAL WIRING, CONTROLS FOR STATS, UNIT HEATERS, FANS, LOUVER-DAMPERS, ETC.

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

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| USER NAME = oms | DESIGNED | REVISED - |
| | DRAWN | REVISED - |
| PLOT SCALE = 8:0' 1/4" / 1/4" | CHECKED | REVISED - |
| PLOT DATE = 6/16/2022 | DATE | REVISED - |

| F.A.I. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|---------------------------|------------|----------|--------------|-----------|
| 57 | (28-5)PS-1 | FRANKLIN | 39 | 25 |
| CONTRACT NO. 78958 | | | | |
| ILLINOIS FED. AID PROJECT | | | | |

| CONTROL DIAGRAM SYMBOL LEGEND | |
|-------------------------------|---|
| | POWER WIRING TO REMOTE DEVICE/EQUIPMENT |
| | POWER WIRING WITHIN CONTROL CABINET |
| | CONTROL VOLTAGE WIRING TO REMOTE DEVICE/EQUIPMENT |
| | CONTROL VOLTAGE WIRING WITHIN CONTROL CABINET |
| | WIRING TERMINATION POINT |
| | WIRING SPLICE |
| | NO CONNECTION |
| | DISCRETE INPUT/OUTPUT |
| | ANALOG INPUT/OUTPUT |
| | COMMUNICATION CONNECTION |
| | CIRCUIT BREAKER |
| | FUSE, XX = FUSE RATING |
| | NORMALLY OPEN SWITCH |
| | NORMALLY CLOSED SWITCH |
| | FUSED SWITCH, XX = FUSE RATING |
| | NORMALLY OPEN CONTACT |
| | NORMALLY CLOSED CONTACT |
| | MOTOR OVERLOAD RELAY |
| | NORMALLY OPEN TIME DELAY RELAY CLOSES UPON TIME DELAY AFTER ACTIVATION, XX = TIME (S) |
| | NORMALLY CLOSED TIME DELAY RELAY OPENS UPON TIME DELAY AFTER ACTIVATION, XX = TIME (S) |
| | NORMALLY CLOSED TIME DELAY RELAY OPENS UPON TIME DELAY AFTER DE-ACTIVATION, XX = TIME (SECONDS) |
| | NORMALLY OPEN 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 |
| | NORMALLY CLOSED FLOW SWITCH OPENS UPON INCREASING FLOW |
| | NORMALLY OPEN FLOAT SWITCH CLOSES UPON INCREASING LEVEL |
| | NORMALLY CLOSED FLOAT SWITCH OPENS UPON INCREASING LEVEL |
| | NORMALLY OPEN PRESSURE SWITCH CLOSES UPON INCREASING PRESSURE, XX = SETPOINT (POUNDS PER SQUARE INCH) |
| | NORMALLY CLOSED PRESSURE SWITCH OPENS UPON INCREASING PRESSURE, XX = SETPOINT (POUNDS PER SQUARE INCH) |
| | NORMALLY OPEN LIMIT SWITCH CLOSES UPON LIMIT, XX = SETPOINT |
| | NORMALLY CLOSED LIMIT SWITCH OPENS UPON LIMIT, XX = SETPOINT |
| | NORMALLY OPEN KEYED SWITCH CLOSES UPON KEY TURN |
| | VOLTAGE TRANSFORMER |
| | CURRENT TRANSFORMER |
| | MAGNETIC DOOR POSITION SENSOR |
| | NORMALLY CLOSED KEYED SWITCH OPENS UPON KEY TURN |
| | THREE POSITION SELECTOR SWITCH MAINTAINED CONTACTS (SHOWN IN HAND POSITION) |
| | TWO POSITION SELECTOR SWITCH MAINTAINED CONTACTS (SHOWN IN HAND POSITION) |
| | NORMALLY OPEN PUSHBUTTON MOMENTARY CONTACT, XX = FUNCTION |
| | NORMALLY CLOSED PUSHBUTTON MOMENTARY DISCONNECT, XX = FUNCTION |

| CONTROL DIAGRAM SYMBOL LEGEND | | |
|-------------------------------------|---|---|
| | CURRENT SWITCH | |
| | MOTOR SOFT STARTER, XX = SIZE | |
| | INDICATING LIGHT, C = COLOR | LENS COLOR CODE: R = RED Y = YELLOW G = GREEN W = WHITE B = BLUE A = AMBER |
| | PUSH-TO-TEST INDICATING LIGHT, C = COLOR | |
| | SOLENOID VALVE | |
| | SPECIALTY ITEM XX = DESCRIPTION | EXAMPLES: ETM = ELAPSED TIME METER MSC = MOTOR STARTS COUNTER |
| | INSTRUMENTATION/CONTROL DEVICE (LABELED ON DIAGRAM) XX= TYPE YY= TAG | EXAMPLES: T = THERMOSTAT GS = COMBUSITBLE GAS SENSOR PS = DOOR POSITION SENSOR |
| | LOCAL CONTROL DEVICE | |
| | REMOTE LOCATED CONTROL DEVICE | |
| | PANEL MOUNTED CONTROL DEVICE | |
| | INACCESSIBLE CONTROL DEVICE | |
| INSTRUMENTN NOTATION ABBREVIATIONS: | | |
| ALM = ALARM | PWR = POWER | OL = OVERLOAD |
| FLT = FAULT | MON = MONITOR | H = HAND |
| EBL = ENABLE | BYP = BYPASS | O = OFF (OR ON) |
| STS = STATUS | OVR = OVERRIDE | A = AUTOMATIC |

| ELECTRICAL SYMBOLS | |
|--------------------|--|
| | STANDARD DUPLEX RECEPTACLE |
| | DUPLEX GFCI RECEPTACLE WITH WEATHERPROOF ENCLOSURE |
| | SINGLE POLE SWITCH |
| | MOTOR HORSEPOWER RATED SWITCH |
| | JUNCTION BOX |
| | MOTOR (SEE SCHEDULE) |
| | BRANCH CIRCUIT HOME RUN |

GENERAL ELECTRICAL NOTES:

- APPLICABLE STANDARDS: NFPA-70, NFPA-101, STATE BUILDING CODES, AND THE OCCUPATIONAL SAFETY AND HEALTH ACT (OSHA) OF 1971 AND ALL AMENDMENTS THERETO; EQUIPMENT, DEVICES, APPARATUS, SYSTEMS, AND INSTALLATIONS SHALL BE ENTIRELY SUITABLE AND SAFE FOR EACH INTENDED APPLICATION AND BE IN FULL COMPLIANCE WITH APPLICABLE STANDARDS, REQUIREMENTS, RULES, REGULATIONS, CODES, STATUTES, ORDINANCES, ETC., OF MUNICIPAL, COUNTY, AND STATE GOVERNMENTS, OWNER'S INSURANCE COMPANY, LOCAL UTILITIES, AND LABOR REGULATIONS. NOTHING CONTAINED IN THESE PLANS AND SPECIFICATIONS SHALL BE CONSTRUED TO CONFLICT WITH THESE LAWS, CODES, AND ORDINANCES.
- DRAWINGS ARE SCHEMATIC AND SHOW APPROXIMATE LOCATIONS OF ELECTRICAL EQUIPMENT. EXACT LOCATIONS SHALL BE COORDINATED BY THE CONTRACTOR AND VERIFIED IN THE FIELD PRIOR TO ROUGH-IN.
- INSTALLATIONS WHICH INCLUDE ELECTRICAL FIXTURES, DEVICES, CONDUIT, SWITCHES, PANELS, HANGERS, WIRE, CABLE, STANDARDS, ETC., MUST BE ENTIRELY SUITABLE FOR TEMPERATURES, HUMIDITY, DAMP AREAS, VOLTAGE, FREQUENCY, AND ALL INSTALLATION CONDITIONS.
- INSTALLATION MUST BE ENTIRELY SAFE IN EVERY RESPECT, AND MUST NOT CREATE ANY CONDITIONS OF ANY KIND WHICH WILL BE HARMFUL TO ANY OCCUPANT OF THE BUILDING IF CONTRACTOR BELIEVES THAT INSTALLATION WILL NOT BE SAFE FOR ALL PEOPLE, HE/SHE SHALL SO REPORT IN WRITING TO ENGINEER BEFORE ANY EQUIPMENT IS PURCHASED OR WORK IS INSTALLED, GIVING EXACT RECOMMENDATIONS, AND REASONS FOR THEM.
- GROUNDING: ALL GROUNDING SHALL BE IN STRICT ACCORDANCE WITH THE LATEST EDITION OF THE NATIONAL ELECTRICAL CODE (NEC).
- INSTALLATION OF ELECTRICAL DEVICES SHALL BE COORDINATED WITH OTHER TRADES AS NECESSARY TO PREVENT ANY CONFLICTS DURING CONSTRUCTION.
- LIGHTING: FURNISH AND INSTALL ALL LIGHTING FIXTURES COMPLETE WITH LAMPS IN ACCORDANCE WITH THE LIGHT FIXTURE SCHEDULE SHOWN ON THE DRAWINGS. ALL UNITS SHALL BE COMPLETE WITH SUSPENSION ACCESSORIES, CANOPIES, SOCKETS, LOUVERS, FRAMES, AND ROUGH-IN BOXES, WIRED AND ASSEMBLIES TO FURNISH A COMPLETE WORKABLE SYSTEM.
- ELECTRICAL CONTRACTOR SHALL INSTALL LOW VOLTAGE CONDUIT AND JUNCTION BOXES.
- EQUIPMENT GROUNDING CONDUCTORS SHALL BE PULLED WITH ALL BRANCH CIRCUITS. CONDUIT SHALL NOT BE USED AS A GROUND U.N.O.

| ELECTRICAL ONE-LINE DIAGRAM SYMBOLS | |
|-------------------------------------|---|
| | CIRCUIT BREAKER XX = RATING, YY = TYPE, ZZ = NOTE |
| | REDUCED VOLTAGE AUTOTRANSFORMER (RVAT) MOTOR STARTER X = NEMA STARTER SIZE |
| | NON-FUSED DISCONNECT SWITCH WW = RATING, XX = NUMBER OF POLES, YY = ENCLOSURE TYPE |
| | FUSED DISCONNECT SWITCH WW = RATING, XX = NUMBER OF POLES, YY = FUSE RATING, ZZ = ENCLOSURE TYPE |
| | MOTOR STARTER WW = NEMA STARTER SIZE, XX = NUMBER OF POLES, YY = ENCLOSURE TYPE, ZZ = TAG |
| | COMBINATION MOTOR STARTER/DISCONNECT SWITCH WW = RATING, XX = NUMBER OF POLES, YY = ENCLOSURE TYPE, # = NEMA STARTER SIZE |
| | ELECTRIC MOTOR |
| | DIESEL GENERATOR, XX = CAPACITY, YY = NUMBER OF POLES |
| | FEEDER TAG |
| | GROUNDING ELECTRODE CONDUCTOR TAG |
| | EARTH GROUND |
| | TRANSIENT VOLTAGE SUPPRESSION DEVICE |
| | SURGE ARRESTER DEVICE |
| | VOLTAGE TRANSFORMER |
| | CURRENT TRANSFORMER |
| | CONTINUATION |
| | CONDUIT, PIPE, & WIRE ROUTE OE = OVERHEAD ELECTRIC UE = UNDERGROUND ELECTRIC PG = PUMPED GREASE |
| | ELECTRICAL PANEL XXX = PANEL TAG, ### = BUS RATING, MCB = MAIN CIRCUIT BREAKER |

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

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| USER NAME = oms | DESIGNED | REVISED - |
| | DRAWN | REVISED - |
| PLOT SCALE = 8x8' 1/4" | CHECKED | REVISED - |
| PLOT DATE = 6/16/2022 | DATE | REVISED - |

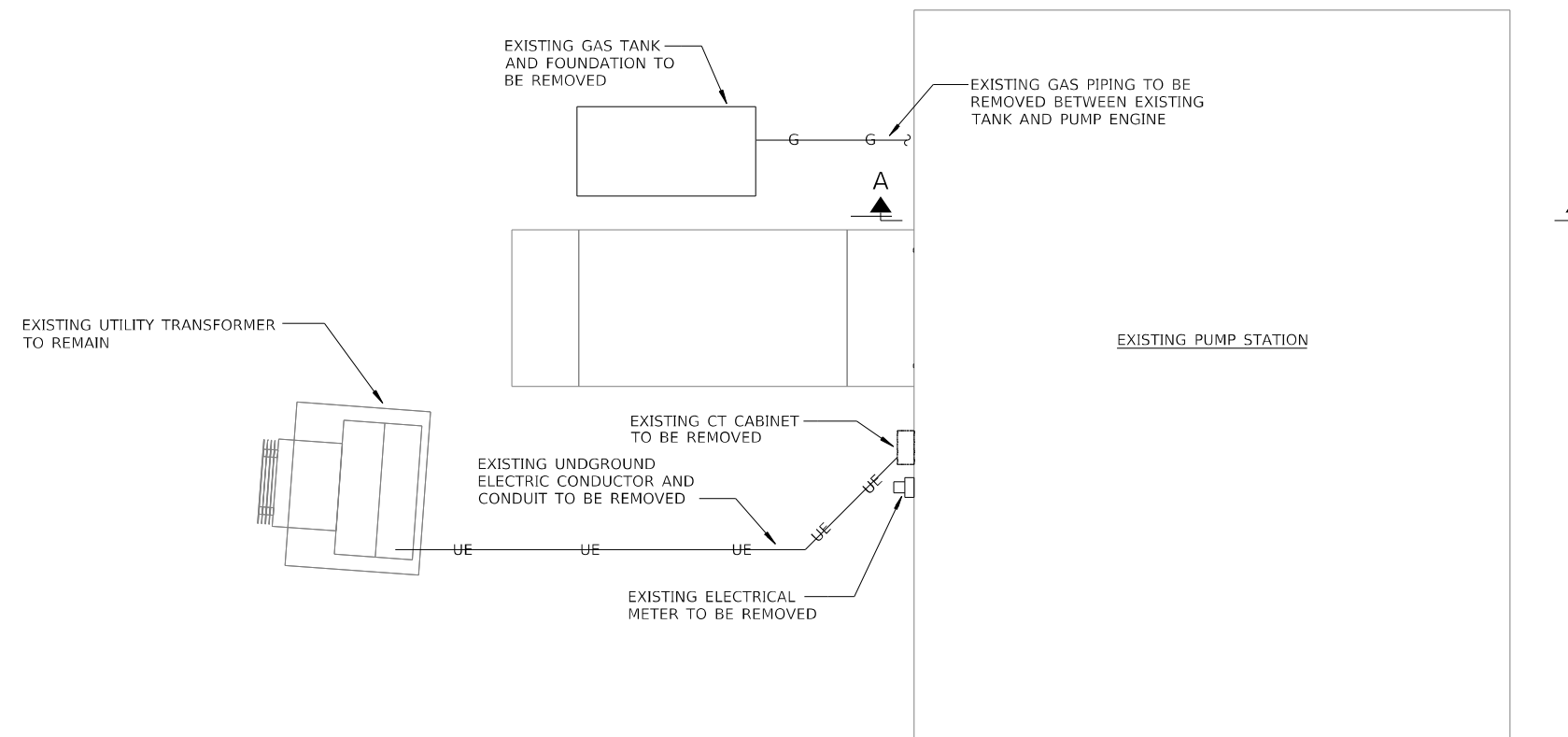
| WEST FRANKFORT PUMP STATION ELECTRICAL GENERAL NOTES AND LEGENDS | | F.A.I. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|---|---------------------|-------------|------------|----------|------------------|--------------------|
| SCALE: NONE | SHEET 2 OF 2 SHEETS | STA. | TO STA. | ILLINOIS | FED. AID PROJECT | |
| | | 57 | (28-5)PS-1 | FRANKLIN | 39 | 26 |
| | | | | | | CONTRACT NO. 78958 |

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

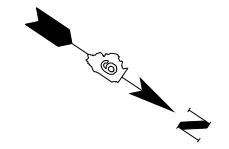
COST OF ALL ELECTRICAL RELATED ITEMS INCLUDED IN "PUMP STATION ELECTRICAL WORK"

NOTES:

1. SEE SHEET 31 OF 39 FOR SECTION A-A.



SITE DEMOLITION PLAN



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KLINGNER & ASSOCIATES, P.C.
 Engineers • Architects • Surveyors
 616 N. 24TH ST. QUINCY, ILLINOIS 62301 217.223.3670
 STATE OF ILLINOIS DESIGN FIRM NO. 184-2738

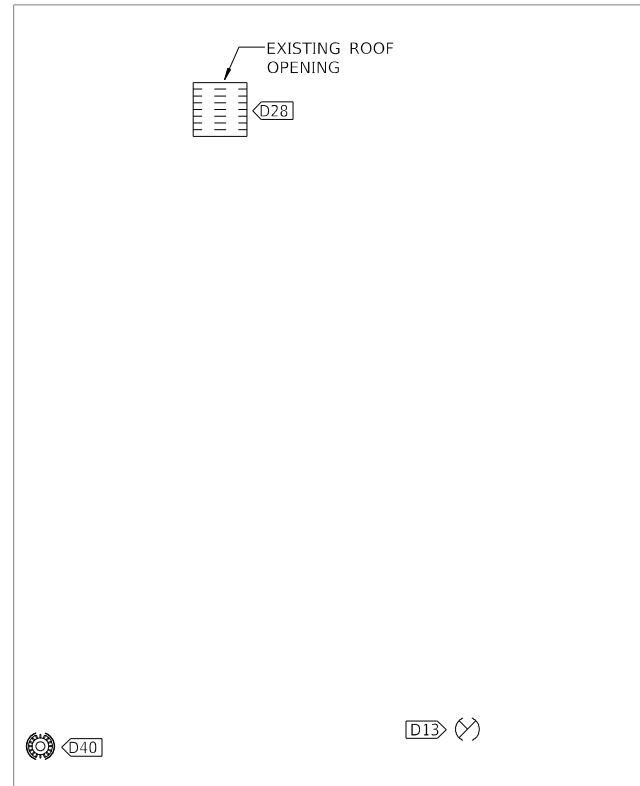
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**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

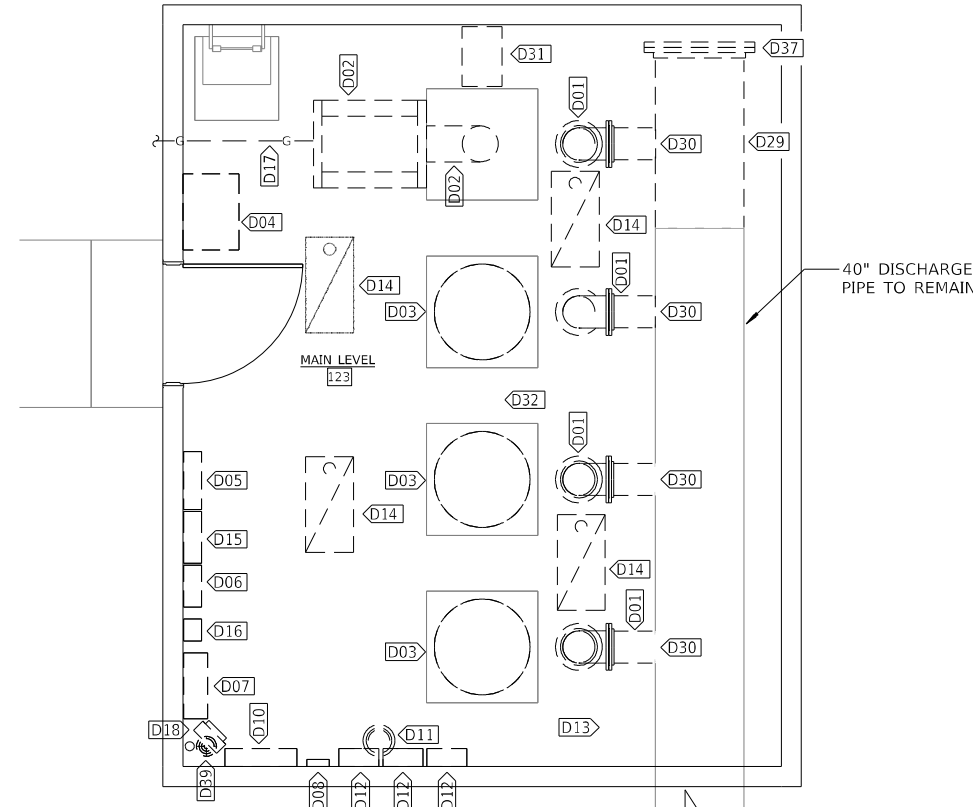
**WEST FRANKFORT PUMP STATION
 MECHANICAL AND ELECTRICAL SITE DEMOLITION PLAN**

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

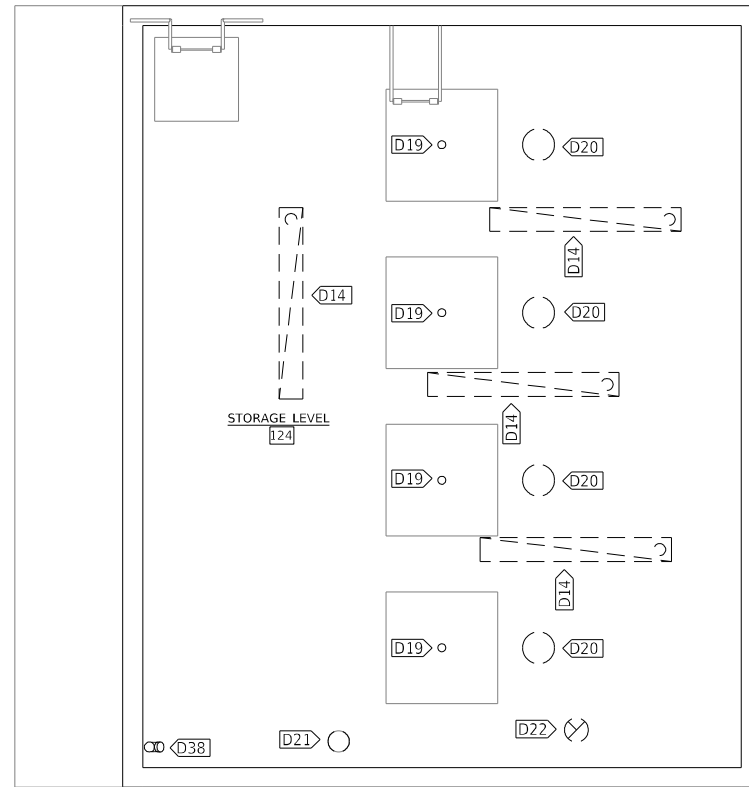
| F.A.I. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
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| CONTRACT NO. 78958 | | | | |
| ILLINOIS FED. AID PROJECT | | | | |



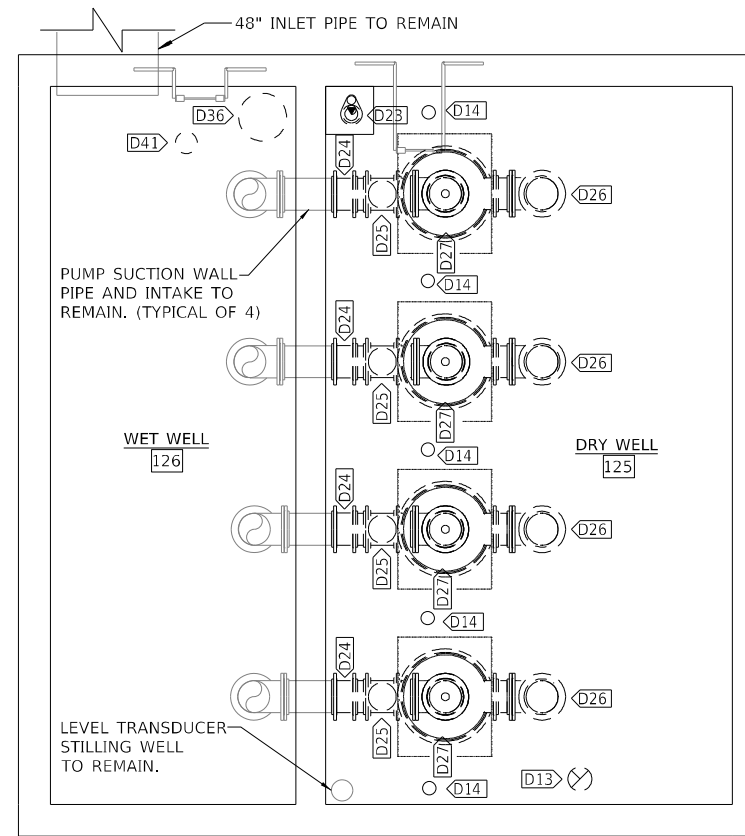
ROOF LEVEL DEMOLITION PLAN



MAIN LEVEL DEMOLITION PLAN



STORAGE LEVEL DEMOLITION PLAN



PUMP LEVEL DEMOLITION PLAN

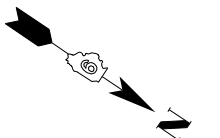
| VALUE | DESCRIPTION |
|-------|--|
| D01 | PUMP DISCHARGE PIPE AND FITTING TO BE REMOVED. |
| D02 | DIESEL ENGINE PUMP DRIVER AND ALL ANCILLARY EQUIPMENT TO BE REMOVED. INFILL EXHAUST PIPE PENETRATION TO MATCH ADJACENT MATERIAL. |
| D03 | PUMP MOTOR TO BE REMOVED. |
| D04 | AUTOMATIC TRANSFER SWITCH TO BE REMOVED. |
| D05 | DISCONNECT SWITCH TO BE REMOVED. |
| D06 | PUMP STATION LIGHTING PANEL TO BE REMOVED. |
| D07 | MAIN DISTRIBUTION PANEL TO BE REMOVED. |
| D08 | MISSION PANEL TO BE REMOVED. |
| D10 | PUMP CONTROLLER TO BE REMOVED. |
| D11 | STILLING WELL TO BE CUT AT STORAGE LEVEL. INFILL EXISTING PENETRATION. |
| D12 | PUMP CONTROL PANELS TO BE REMOVED. |
| D13 | REMOVE EXHAUST DUCT. INFILL EXISTING PENETRATIONS TO MATCH ADJACENT MATERIAL. |
| D14 | LIGHT FIXTURE TO BE REMOVED. |
| D15 | ELECTRICAL EQUIPMENT TO BE REMOVED. |
| D16 | STEP DOWN TRANSFORMER TO BE REMOVED. |
| D17 | GAS PIPING TO BE REMOVED BETWEEN EXISTING TANK AND PUMP ENGINE. |
| D18 | UNIT HEATER TO BE REMOVED. |
| D19 | PUMP DRIVE SHAFT TO BE REMOVED. |
| D20 | PUMP DISCHARGE PIPE TO BE REMOVED. |
| D21 | STILLING WELL TO BE CUT APPROXIMATELY 9" ABOVE STORAGE LEVEL FLOOR. REINSTALL BLIND FLANGE FROM UPPER LEVEL AT REVISED TOP OF STILLING WELL ELEVATION. |
| D22 | REMOVE EXHAUST DUCT AND ASSOCIATED EXHAUST FAN. REMOVE ASSOCIATED ELECTRICAL CONDUIT AND WIRING. |
| D23 | SUMP PUMP TO BE REMOVED. |
| D24 | BOLTED COUPLING "DRESSER COUPLING" TO BE REMOVED. |
| D25 | GATE VALVE TO BE REMOVED. |
| D26 | PUMP DISCHARGE 90 DEGREE FITTING TO BE REMOVED. |
| D27 | PUMP AND ASSOCIATED APPURTENANCES INCLUDING PEDESTAL TO BE REMOVED. |
| D28 | LOUVER TO BE REMOVED. EXISTING ROOF OPENING TO REMAIN. |
| D29 | 40" DISCHARGE PIPE TO BE CUT AND REMOVED AS SHOWN TO FACILITATE NEW SPIRAL STAIRCASE. SEE STRUCTURAL PLANS FOR INFORMATION ON STAIRCASE. |
| D30 | WELD CLOSURE CAP ON OPENING DUE TO REMOVAL OF PUMP DISCHARGE PIPING. |
| D31 | EXISTING HOIST TO BE REMOVED. |
| D32 | SEE STRUCTURAL SHEETS FOR INFORMATION ON HOIST BEAM/RAIL. SEE SHEET 20 OF 39. |
| D36 | REMOVE STILLING WELL AND ASSOCIATED FLOATS WITHIN WET WELL. |
| D37 | SALVAGE EXISTING BLIND FLANGE AND HARDWARE FOR REINSTALLATION. SEE PROCESS FLOOR PLANS. SHEET 30 OF 39. |
| D38 | ROOF/FLOOR DRAIN PIPE SHALL BE REMOVED. INFILL FLOOR OPENINGS. |
| D39 | MAIN LEVEL FLOOR DRAIN AND ROOF DRAIN PIPING UP TO ROOF DRAIN TO BE REMOVED. INFILL FORMER OPENINGS. |
| D40 | ROOF DRAIN TO BE REMOVED. INFILL FORMER OPENING. |
| D41 | REMOVE EXISTING LIGHT, SWITCH, AND ANY OTHER ELECTRICAL EQUIPMENT WITHIN WET WELL. |

GENERAL SHEET NOTES:

- REMOVE ALL EXISTING MECHANICAL EQUIPMENT, ELECTRICAL EQUIPMENT, ELECTRICAL CONDUIT, WIRING DEVICES AND OTHER SIMILAR ITEMS ANY NOT OTHERWISE INDICATED ON THE PLANS TO REMAIN WITHIN THE ENTIRE PUMP STATION.
- ALL UNUSED PENETRATIONS TO BE INFILLED TO MATCH ADJACENT MATERIAL AND BE MADE WATER TIGHT WHERE NECESSARY.
- CONTRACTOR SHALL DISPOSE OF ALL REMOVAL ITEMS, UNLESS NOTED OTHERWISE.

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

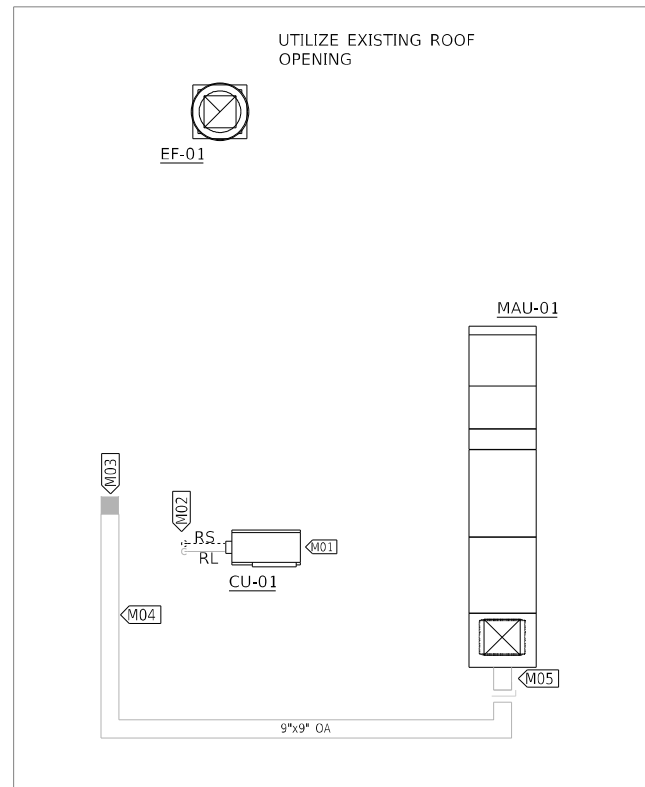
COST OF ALL ELECTRICAL RELATED ITEMS INCLUDED IN "PUMP STATION ELECTRICAL WORK"



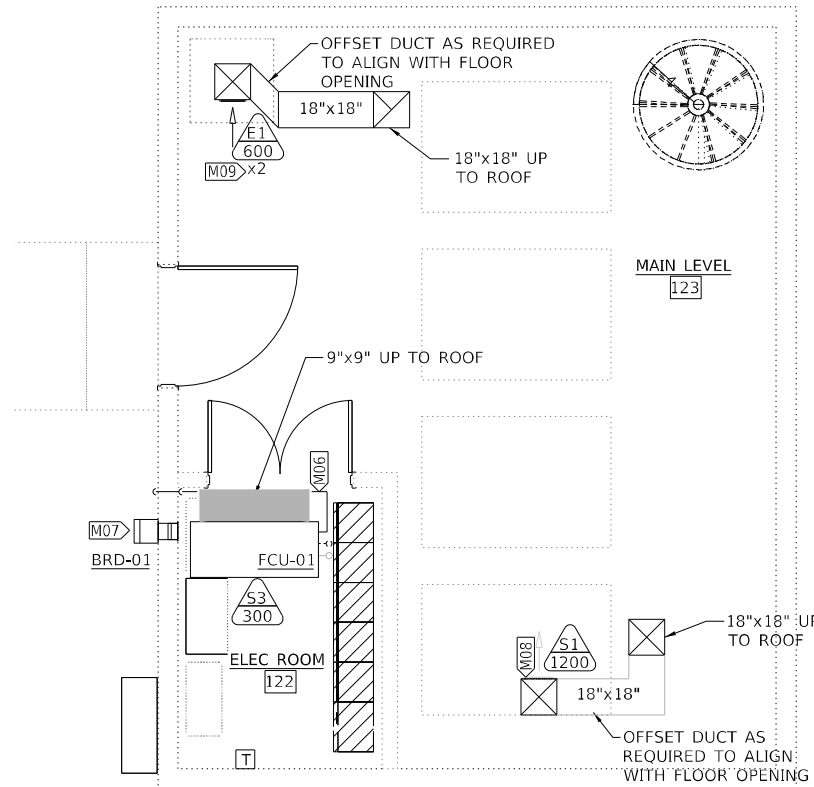
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| USER NAME = oms | DESIGNED | REVISED - |
| | DRAWN | REVISED - |
| PLOT SCALE = 8:0' 1/4" | CHECKED | REVISED - |
| PLOT DATE = 6/16/2022 | DATE | REVISED - |

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| F.A.I. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| 57 | (28-5)PS-1 | FRANKLIN | 39 | 28 |
| CONTRACT NO. 78958 | | | | |
| ILLINOIS FED. AID PROJECT | | | | |



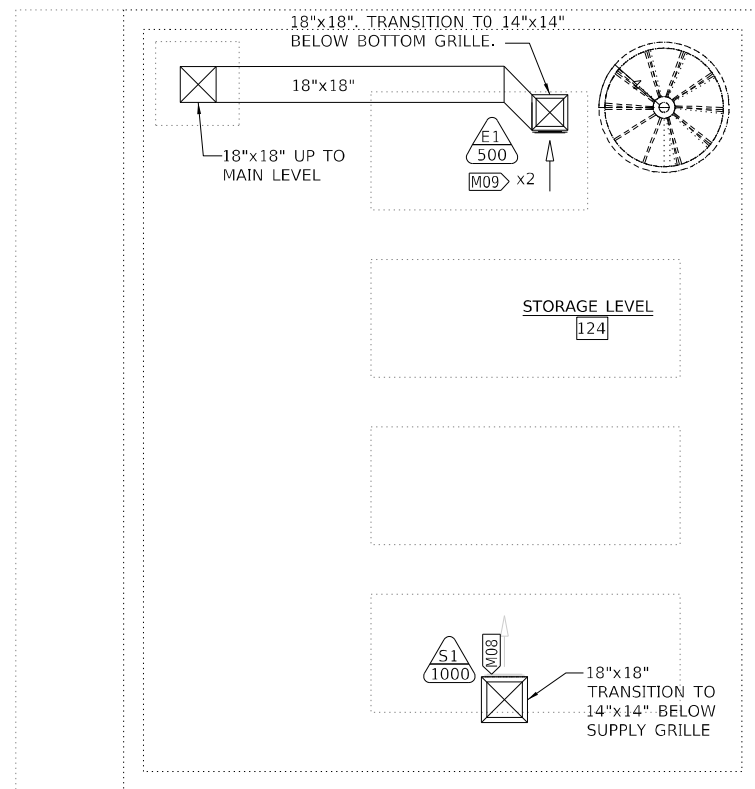
ROOF LEVEL HVAC PLAN



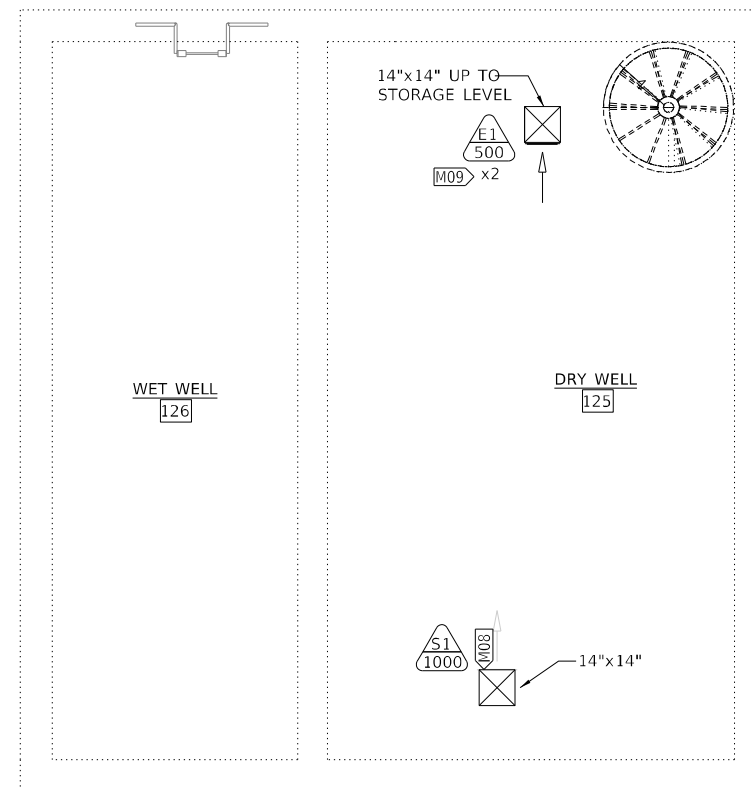
MAIN LEVEL HVAC PLAN

| KEYNOTE LEGEND | |
|----------------|---|
| VALUE | DESCRIPTION |
| M01 | SUPPORT CONDENSING UNIT ON RUBBER BASE HVAC ROOF SUPPORT SYSTEM. |
| M02 | PROVIDE PIPE PENETRATION BOOT AND MAKE WATER TIGHT. |
| M03 | CUT NEW OPENING IN ROOF AND PROVIDE CURB TO FACILITATE DUCT PENETRATION. |
| M04 | DOUBLE WALL INSULATED DUCT WITH WHITE PVC JACKET. |
| M05 | PROVIDE EXTENDED HEIGHT CURB TO ALLOW FOR DUCT CONNECTION TO CURB ABOVE ROOF. |
| M06 | 1" PVC CONDENSATE DRAIN LINE. PENETRATE EXTERIOR WALL AT 12" ABOVE FLOOR. TURN DRAIN DOWN ON EXTERIOR SIDE OF WALL AND TERMINATE ABOVE GRADE. |
| M07 | CUT NEW OPENING IN WALL FOR BAROMETRIC RELIEF DAMPER. |
| M08 | SUPPLY GRILLE LOCATED IN VERTICAL SECTION OF DUCTWORK. LOCATE GRILLE APPROXIMATELY HALFWAY BETWEEN FLOOR AND DECK ABOVE. |
| M09 | INSTALL ONE EXHAUST GRILLE WITHIN 6 INCHES OF DECK ABOVE AND ONE GRILLE WITHIN 6 INCHES ABOVE FLOOR. |

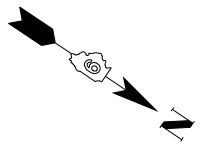
COST OF ALL MECHANICAL RELATED ITEMS INCLUDED IN "PUMP STATION MECHANICAL WORK"



STORAGE LEVEL HVAC PLAN



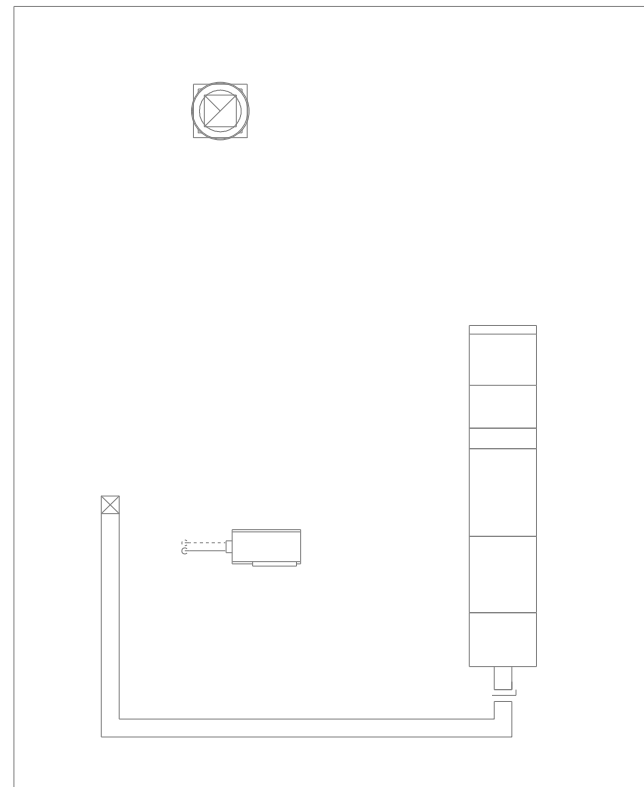
PUMP LEVEL HVAC PLAN



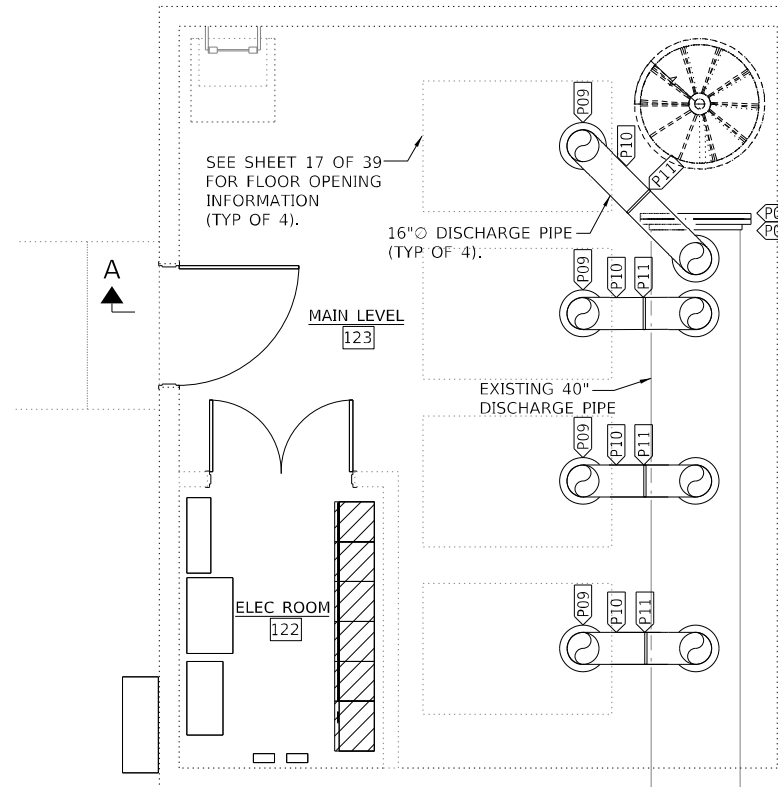
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| USER NAME = oms | DESIGNED | REVISED - |
| PLOT SCALE = 8:0' 1/4" = 1/4" | DRAWN | REVISED - |
| PLOT DATE = 6/16/2022 | CHECKED | REVISED - |
| | DATE | REVISED - |

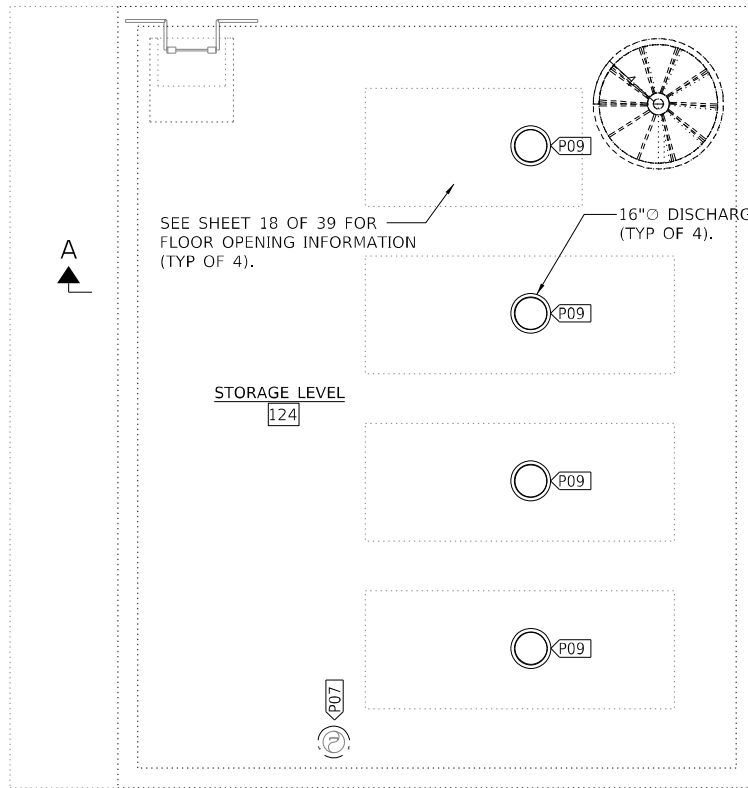
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|---------------------------|------------|----------|--------------|--------------------|
| 57 | (28-5)PS-1 | FRANKLIN | 39 | 29 |
| | | | | CONTRACT NO. 78958 |
| ILLINOIS FED. AID PROJECT | | | | |



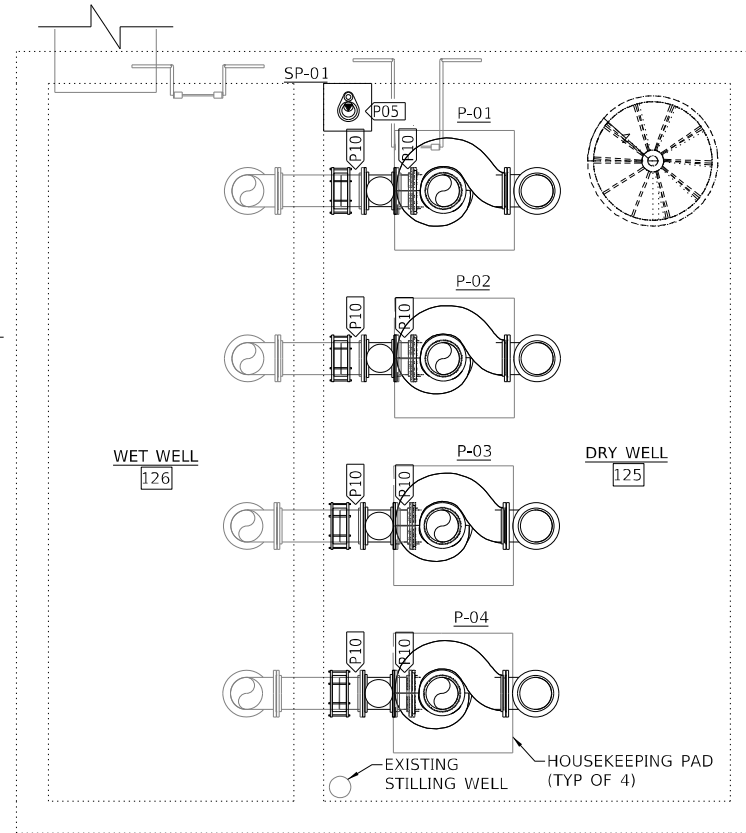
ROOF LEVEL PROCESS PLAN



MAIN LEVEL PROCESS PLAN



STORAGE LEVEL PROCESS PLAN



PUMP LEVEL PROCESS PLAN

| KEYNOTE LEGEND | |
|----------------|--|
| VALUE | DESCRIPTION |
| P03 | FABRICATE AND INSTALL NEW ANGLE FLANGE TO MATCH FORMER ANGLE FLANGE AND END OF COMMON DISCHARGE PIPE. |
| P04 | INSTALL SALVAGED BLIND FLANGE. RE-USE EXISTING HARDWARE. PROVIDE NEW RUBBER GASKET. |
| P05 | INSTALL SUMP PUMP AND ASSOCIATED FLOATS IN EXISTING SUMP PIT. INSTALL NEW 2" STEEL DISCHARGE PIPE. |
| P07 | LEVEL TRANSDUCER STILLING WELL TO BE CUT 9" ABOVE STORAGE LEVEL FLOOR. REINSTALL BLIND FLANGE AT REVISED TOP OF STILLING WELL ELEVATION. INSTALL NEW LEVEL TRANSDUCER IN EXISTING STILLING WELL. |
| P09 | ANGLE FLANGE WELDED TO PIPE TO PROVIDE VERTICAL AND LATERAL SUPPORT AT FLOOR PENETRATION ELEVATION. SEE SHEETS 22-23 OF 39 FOR ADDITIONAL INFORMATION. |
| P10 | ADJUST LENGTH OF HORIZONTAL PIPE SPOOL AS REQUIRED TO ALLOWED PUMP CENTER OF GRAVITY TO BE DIRECTLY LOCATED UNDERNEATH OVERHEAD HOIST. |
| P11 | PIPE SUPPORT: PIPE SADDLE WITH U-BOLT. 3"Ø PIPE STANCHION WITH 12" x 12" BASEPLATE |

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

NOTES:
1. SEE SHEET 31 OF 39 FOR SECTION A-A.

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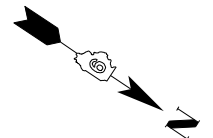
KLINGNER & ASSOCIATES, P.C.
Engineers • Architects • Surveyors
616 N. 24TH ST. QUINCY, ILLINOIS 62301 217.223.3670
STATE OF ILLINOIS DESIGN FIRM NO. 184-2738

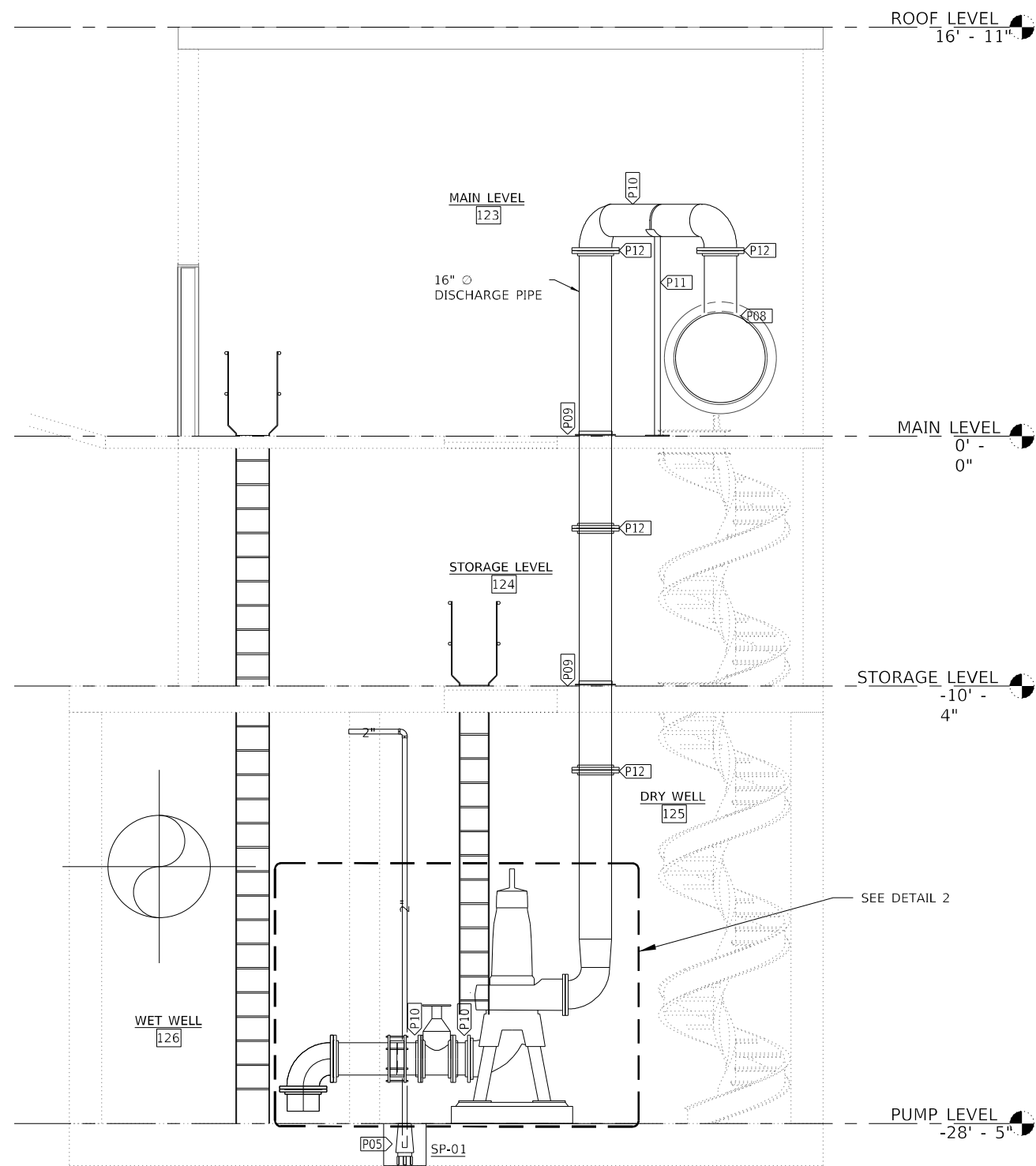
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

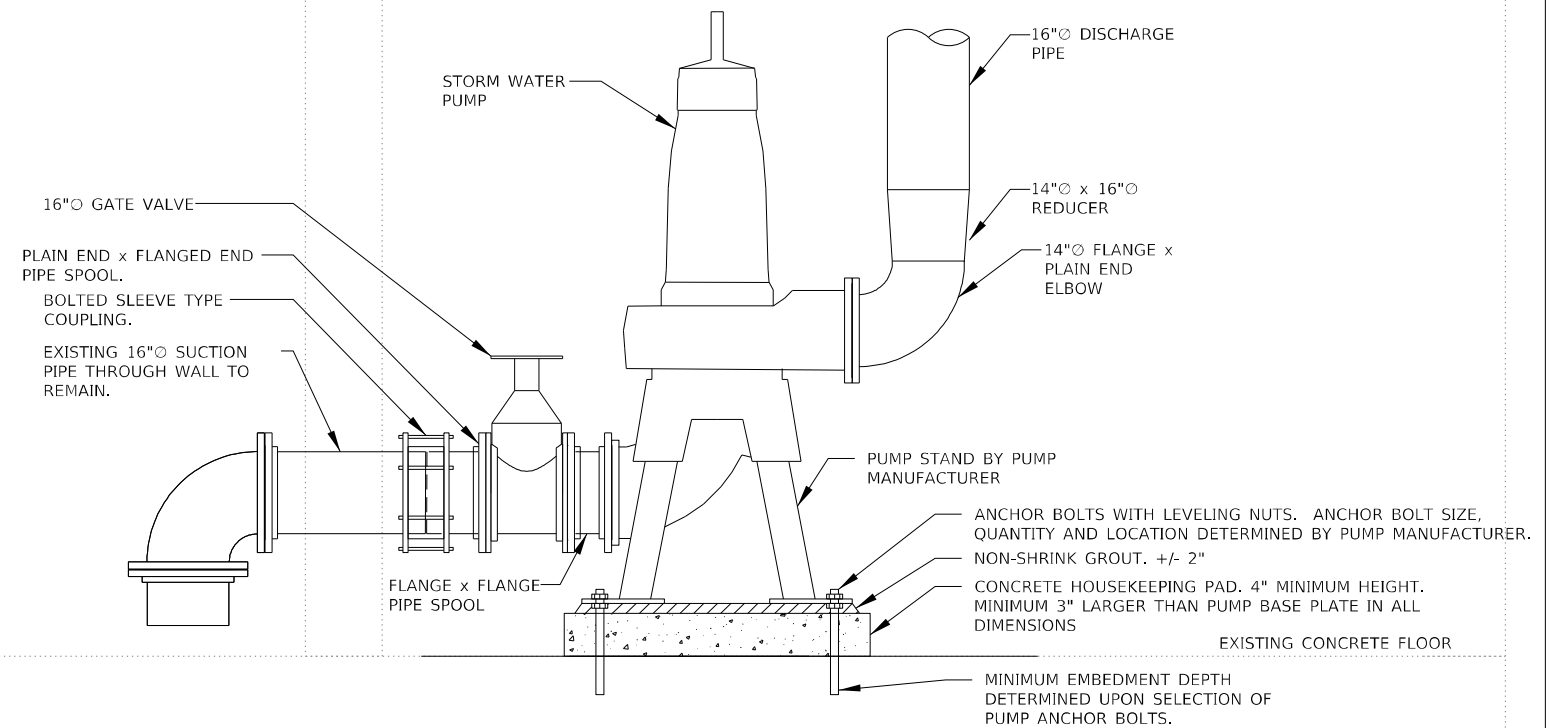
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|---|----------------------------------|
| WEST FRANKFORT PUMP STATION MECHANICAL PLANS | |
| SCALE: NONE | SHEET 1 OF 1 SHEETS STA. TO STA. |

| | | | | |
|---------------------------|------------|----------|--------------|-----------|
| F.A.I. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| 57 | (28-5)PS-1 | FRANKLIN | 39 | 30 |
| CONTRACT NO. 78958 | | | | |
| ILLINOIS FED. AID PROJECT | | | | |





SECTION A-A - PUMPING EQUIPMENT



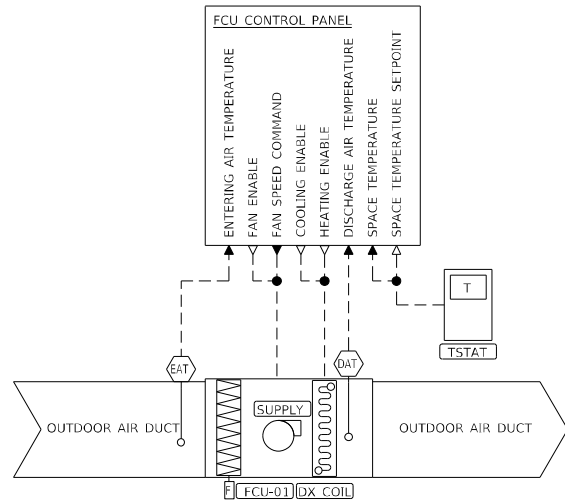
DETAIL 2 - PUMPING EQUIPMENT

| KEYNOTE LEGEND | |
|----------------|--|
| VALUE | DESCRIPTION |
| P05 | INSTALL SUMP PUMP AND ASSOCIATED FLOATS IN EXISTING SUMP PIT. INSTALL NEW 2" STEEL DISCHARGE PIPE. INSTALL CHECK VALVE IN DISCHARGE PIPE. |
| P08 | WELD DISCHARGE PIPE CONNECTION TO EXISTING 40" COMMON GRAVITY DISCHARGE PIPE. |
| P09 | ANGLE FLANGE WELDED TO PIPE TO PROVIDE VERTICAL AND LATERAL SUPPORT AT FLOOR PENETRATION ELEVATION. SEE SHEETS 22-24 OF 39 FOR ADDITIONAL INFORMATION. |
| P10 | ADJUST LENGTH OF HORIZONTAL PIPE SPOOL AS REQUIRED TO ALLOWED PUMP CENTER OF GRAVITY TO BE DIRECTLY LOCATED UNDERNEATH OVERHEAD HOIST. |
| P11 | PIPE SUPPORT: PIPE SADDLE WITH U-BOLT. 3" PIPE STANCHION WITH 12" x 12" BASEPLATE |
| P12 | FLANGED JOINT |

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

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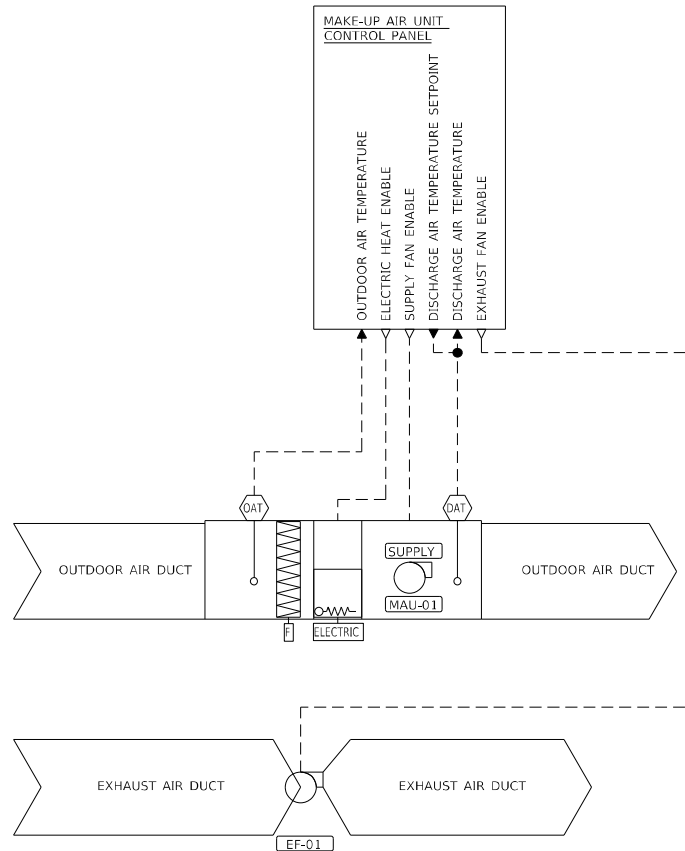
| FAN COIL UNIT CONTROL SUMMARY | | | | | | |
|-------------------------------|--------------------------|-------------|----------------|-----------|-----------|----------|
| CONTROL POINT | LOCAL CONTROLLER DISPLAY | BAS DISPLAY | BAS ADJUSTABLE | BAS TREND | BAS ALARM | COMMENTS |
| FCU ON/OFF | ● | | | | | |
| FAN ON/OFF | ● | | | | | |
| COOLING MODE | ● | | | | | |
| HEATING MODE | ● | | | | | |
| SPACE TEMPERATURE | ● | | | | | |
| SPACE TEMPERATURE SETPOINT | ● | | | | | |

FAN COIL UNIT SEQUENCE OF OPERATION

A. FCU UNIT CONTROL

1. THE FCU CONTROLLER SHALL OPERATE THE REFRIGERANT SYSTEM TO MAINTAIN THE SPACE AIR TEMPERATURE SETPOINT PROVIDED BY THE LOCAL THERMOSTAT.
2. THE FCU CONTROLLER SHALL AUTOMATICALLY OPERATE THE REFRIGERANT SYSTEM TO SWITCH BETWEEN HEATING AND COOLING OPERATION BASED ON THE DEVIATION BETWEEN THE ENTERING AIR TEMPERATURE AND THE SPACE TEMPERATURE DEVIATION FROM SETPOINT.
 - a. INITIAL COOLING SETPOINT: 72°F
 - b. INITIAL HEATING SETPOINT: 55°F
3. THE FCU CONTROLLER SHALL ENABLE THE SUPPLY FAN AT ALL TIMES.
4. THE FCU SUPPLY FAN SHALL MAINTAIN A CONSTANT SUPPLY AIR FLOW.

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



| MAKE-UP AIR UNIT CONTROL SUMMARY | | | | | | |
|------------------------------------|--------------------------|-------------|----------------|-----------|-----------|----------|
| CONTROL POINT | LOCAL CONTROLLER DISPLAY | BAS DISPLAY | BAS ADJUSTABLE | BAS TREND | BAS ALARM | COMMENTS |
| MAU ENABLE | ● | | | | | |
| HEATING MODE | ● | | | | | |
| OUTDOOR AIR TEMPERATURE | ● | | | | | |
| DISCHARGE AIR TEMPERATURE | ● | | | | | |
| DISCHARGE AIR TEMPERATURE SETPOINT | ● | | | | | |

MAKE-UP AIR UNIT SEQUENCE OF OPERATION

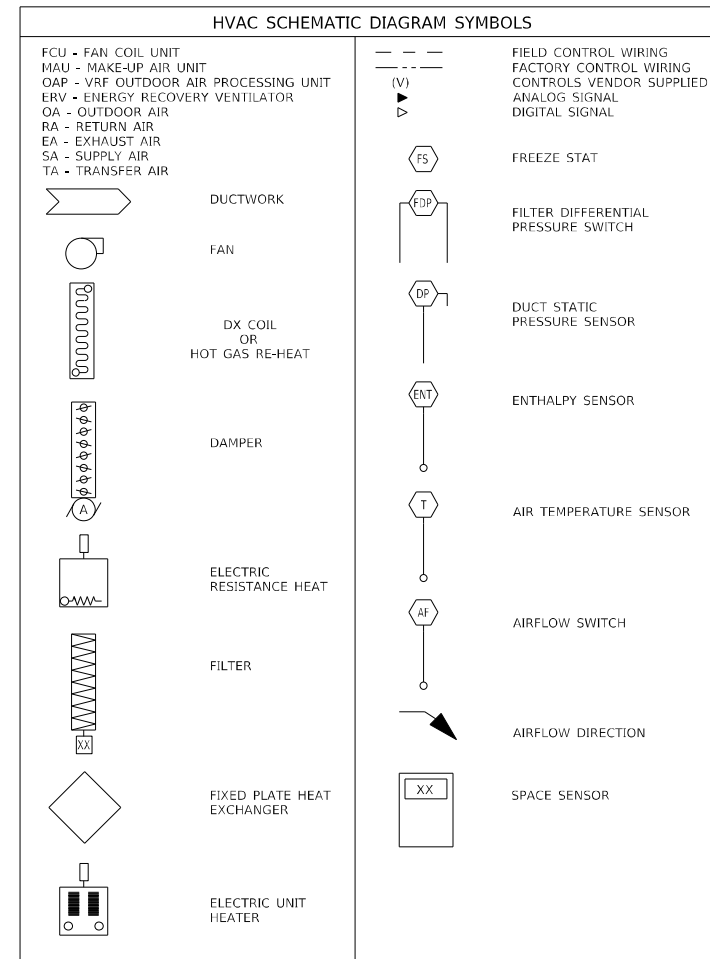
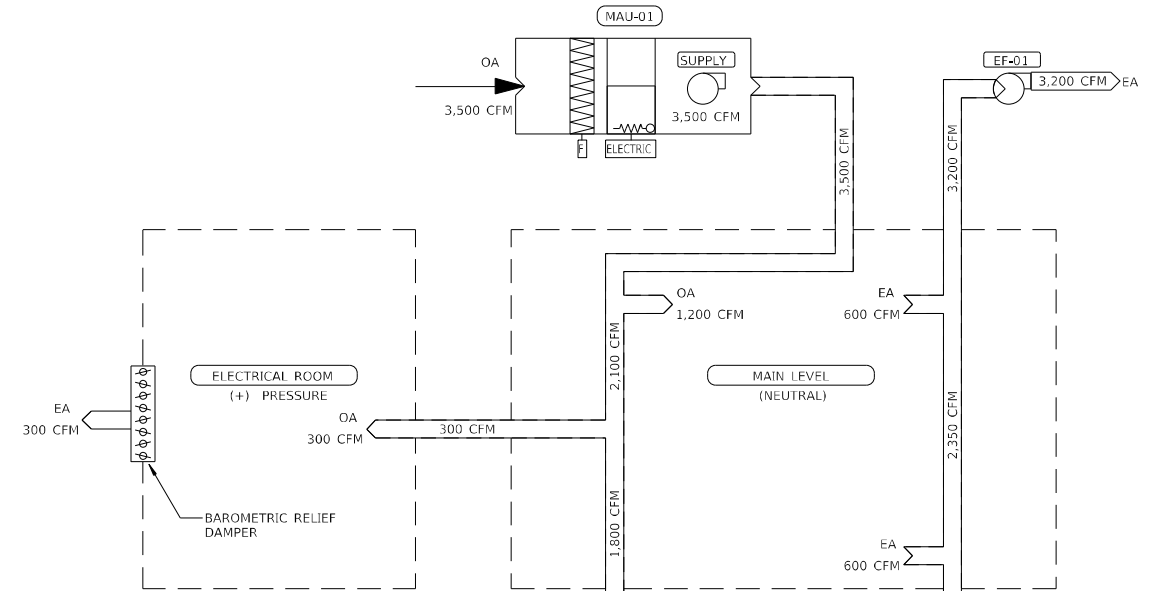
A. MAKE-UP AIR UNIT CONTROL

1. THE MAU SUPPLY FAN SHALL BE ENABLED AT ALL TIMES.
2. THE MAU SHALL BE IN HEATING MODE WHENEVER THE OUTDOOR AIR TEMPERATURE IS BELOW THE ELECTRIC HEAT SHALL BE ENABLED WHENEVER THE MAU IS IN HEATING MODE.
 - a. INITIAL HEATING MODE DISCHARGE AIR TEMPERATURE: 55°F
3. THE MAU ELECTRIC HEAT SHALL OPERATE TO MAINTAIN THE DISCHARGE AIR TEMPERATURE SETPOINT WHEN IN HEATING MODE

EXHAUST FAN SEQUENCE OF OPERATION

A. EXHAUST FAN CONTROL

1. THE EXHAUST FAN SHALL BE ENABLED AT ALL TIMES BY THE MAKE-UP AIR UNIT.
2. THE EXHAUST FAN SHALL MAINTAIN A CONSTANT EXHAUST AIR FLOW WHENEVER THE MAKE-UP AIR UNIT IS ENABLED.



AIRFLOW SCHEMATIC
NTS

| CONDENSING UNIT SCHEDULE | | | | | | | | | | | | | |
|--------------------------|-------------------------------|-------------|--------------|-----------|---------------|-----------|-----------------|------------|------------|-------|-------|------|-----|
| TAG | TYPE | REFRIGERANT | COOLING | | HEATING (47F) | | OPERATING RANGE | | ELECTRICAL | | | | |
| | | | CAP. (BTU/H) | MIN. SEER | CAP. (BTU/H) | MIN. HSPF | COOLING | HEATING | VOLT | FREQ | PHASE | MCA | MOP |
| CJ-01 | OUTDOOR REFRIGERANT HEAT PUMP | R410A | 24,000 | 15.8 | 27,000 | 8.6 | 23F TO 122F | -4F TO 61F | 208 V | 60 Hz | 1 | 19.6 | 30 |

| FAN COIL UNIT SCHEDULE | | | | | | | | | | | | |
|------------------------|---------------------------|-------------|--------------|-----------|--------------|-----------|------------|-------|-------|------|----------|-----|
| TAG | TYPE | REFRIGERANT | COOLING | | HEATING | | ELECTRICAL | | | | COMMENTS | |
| | | | CAP. (BTU/H) | MIN. SEER | CAP. (BTU/H) | MIN. HSPF | VOLT | FREQ | PHASE | MCA | | MOP |
| FCU-01 | OUTSIDE AIR FAN COIL UNIT | R410A | 48,100 | | 46,115 | | 208 V | 60 Hz | 1 | 2.15 | 15 | 1,2 |

COMMENTS
1 PROVIDE WITH CONTROLLER TO PROVIDE SEQUENCE OF OPERATION INDICATED
2 PROVIDE WITH WASHABLE FILTER

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

| DAMPER SCHEDULE | | | | | | | | | | |
|-----------------|--------------------------|------------|--------|--------------|------------------------|-------------|----------|------|-------|----------|
| TAG | TYPE | DIMENSIONS | | BACK PRESURE | START TO OPEN PRESSURE | MATERIAL | | | PAINT | COMMENTS |
| | | WIDTH | HEIGHT | | | FRAME | BLADE | SEAL | | |
| BRD-01 | BAROMETRIC RELIEF DAMPER | 8" | 6" | 2.0 IN. WG | 0.05 IN WG | GALV. STEEL | ALUMINUM | TPE | NONE | 1,2 |

COMMENTS
1 PROVIDE WITH MOUNTING FLANGE ON DISCHARGE SIDE
2 PROVIDE WITH 90 DEGREE WEATHERHOOD

| MAKE UP AIR UNIT SCHEDULE | | | | | | | | | | | | | | | | |
|---------------------------|--------------------|-----------------|-------------------|------------|----------------------|------------------|---------|-----|-----|------------|-------|-------|------|-----|-------------|-----------------|
| TAG | TYPE | OUTDOOR AIRFLOW | SUPPLY FAN | | | ELECTRIC HEAT | | | | ELECTRICAL | | | | | UNIT WEIGHT | COMMENTS |
| | | | TYPE | DRIVE TYPE | EXT. STATIC PRESSURE | HEATING CAPACITY | CONTROL | EAT | LAT | VOLT | FREQ | PHASE | MCA | MOP | | |
| MAU-01 | ELECTRIC HEAT ONLY | 3,500 CFM | BACKWARD INCLINED | DIRECT | 0.5 IN W.G. | 70 KW | SCR | 0F | 63F | 480 V | 60 Hz | 3 | 91.8 | 100 | 1,450 LBS | 1,2,3,4,5,6,7,8 |

COMMENTS
1 PROVIDE WITH DISCHARGE TEMPERATURE CONTROL. PROVIDE WITH REMOTE INTERFACE.
2 PROVIDE WITH INTAKE WEATHERHOOD AND BIRDSCREEN.
3 PROVIDE WITH 2-INCH WASHABLE ALUMINUM MESH FILTERS
4 PROVIDE WITH EXHAUST FAN STARTER
5 PROVIDE WITH FREEZE PROTECTION RELAY
6 PROVIDE WITH HEATING INLET AIR SENSOR
7 PROVIDE WITH EXTENDED HEIGHT ROOF CURB
8 PROVIDE WITH UNIT MOUNTED DISCONNECT

| FAN SCHEDULE | | | | | | | | | | | | | | |
|--------------|----------------------------------|-----------|-------------|------------|----------------------|---------|-------|------------|-------|-------|-----|-----|-------------|----------|
| TAG | TYPE | AIRFLOW | SUPPLY FAN | | | FAN RPM | | ELECTRICAL | | | | | UNIT WEIGHT | COMMENTS |
| | | | TYPE | DRIVE TYPE | EXT. STATIC PRESSURE | FAN RPM | SONES | VOLT | FREQ | PHASE | MCA | MOP | | |
| FF-01 | ROOF MOUNTED UPBLAST EXHAUST FAN | 3,200 CFM | CENTRIFUGAL | RFT | 0.25 IN W.G. | 536 | 8 | 208 V | 60 Hz | 1 | 5.4 | 20 | 125 LBS | 1,2,3 |

COMMENTS
1 SPARK RESISTANT B CONSTRUCTION
2 PROVIDE WITH UNIT MOUNTED DISCONNECT
3 PROVIDE WITH ADAPTER CURB TO MOUNT ON EXISTING ROOF PENETRATION

| GRILLES, REGISTERS, AND DIFFUSERS SCHEDULE | | | | | | | | | | | |
|--|----------------|-----------------|-------|-------------|---------------|--------|----------------------|---------------------|--------|--------|----------|
| TAG | TYPE | CONNECTION SIZE | | PERFORMANCE | | | DAMPER | MATERIAL | FINISH | FRAME | COMMENTS |
| | | HEIGHT | WIDTH | CFM | TOTAL P.D. | MAX NC | | | | | |
| S1 | SUPPLY GRILLE | 24" | 12" | 1,200 | 0.15 IN W.G. | 30 | OPPOSED BLADE DAMPER | 316 STAINLESS STEEL | MILL | FLANGE | 1 |
| E1 | EXHAUST GRILLE | 24" | 12" | 600 | 0.032 IN W.G. | 14 | OPPOSED BLADE DAMPER | 316 STAINLESS STEEL | MILL | FLANGE | 1 |

COMMENTS
1 DOUBLE DEFLECTION

| SUMP PUMP SCHEDULE | | | | | | | | | | | | | | |
|--------------------|---------------------------|----------------|-------------|-----|-----------------|-------------------|--------------|------------|-------|-------|-----|-----|----------------------|----------|
| TAG | TYPE | DISCHARGE SIZE | PERFORMANCE | | SOLIDS HANDLING | IMPELLER MATERIAL | PUMP HOUSING | ELECTRICAL | | | | | ENVIRONMENTAL RATING | COMMENTS |
| | | | GPM | TDH | | | | VOLT | FREQ | PHASE | MCA | MOP | | |
| SP-01 | SUBMERSIBLE EFFLUENT PUMP | 2" | 50 | 25' | 3/4" | BRONZE | CAST IRON | 120 | 60 Hz | 1 | 14 | 20 | CLASS 1, DIV. 1 | 1,2 |

COMMENTS
1 PROVIDE WITH SIMPLEX CONTROL AND STARTER PANEL: H/O/A SWITCH, RUN INDICATOR, VISUAL AND AUDIBLE ALARM, AND INTRINSICALLY SAFE RELAYS
2 ON, OFF, AND HIGH FLOAT SWITCHES

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| USER NAME = oms | DESIGNED | REVISED - |
| | DRAWN | REVISED - |
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| PLOT DATE = 6/16/2022 | DATE | REVISED - |

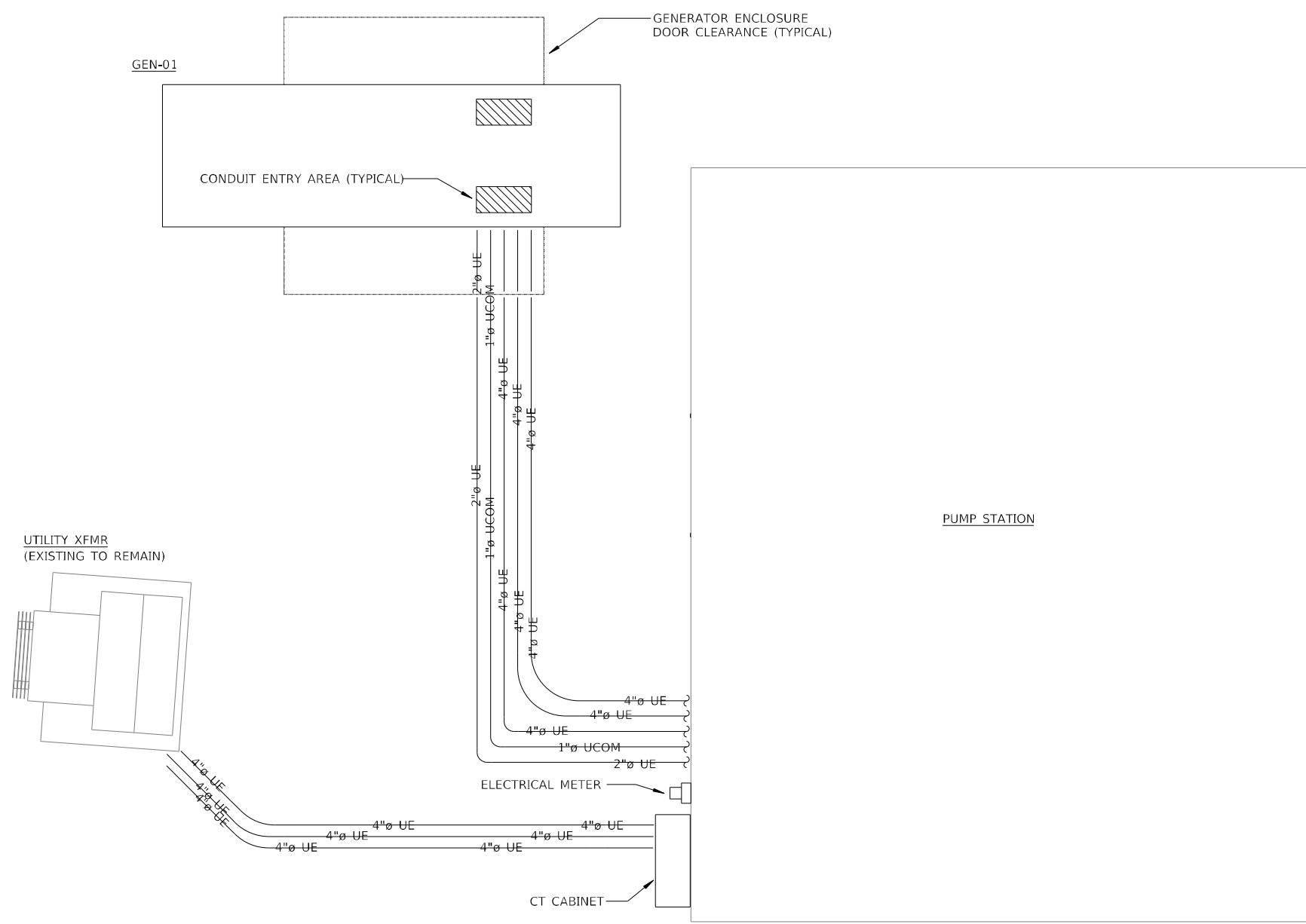
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

WEST FRANKFORT PUMP STATION
MECHANICAL SCHEDULES

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

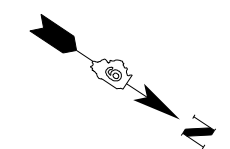
| F.A.I. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
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| 57 | (28-5)PS-1 | FRANKLIN | 39 | 33 |
| CONTRACT NO. 78958 | | | ILLINOIS FED. AID PROJECT | |

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

ELECTRICAL SITE PLAN

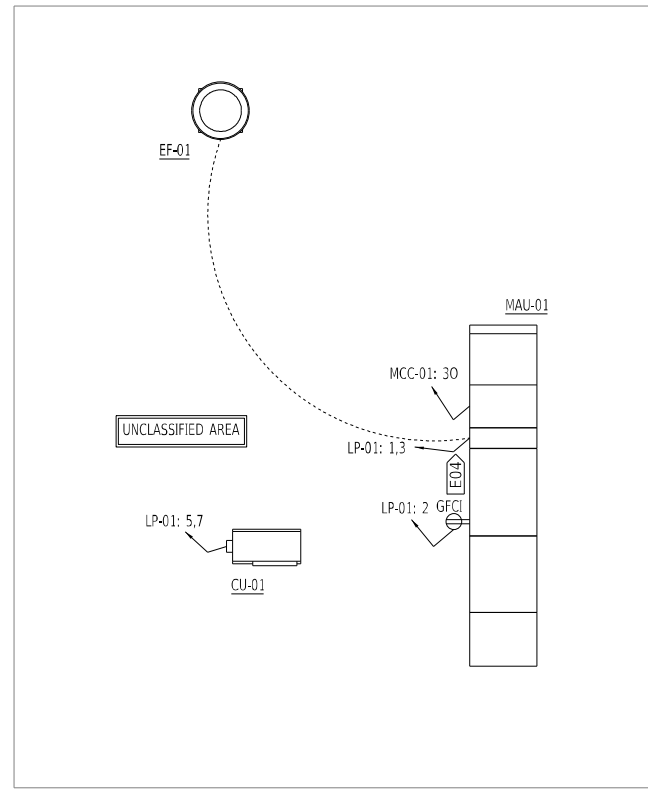


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|--|-------------------------------|----------|-----------|
| KLINGNER & ASSOCIATES, P.C. <small>Engineers • Architects • Surveyors</small> <small>616 N. 24TH ST. QUINCY, ILLINOIS 62301 217.223.3670</small> <small>STATE OF ILLINOIS DESIGN FIRM NO. 164-2738</small> | USER NAME = oms | DESIGNED | REVISED - |
| | | DRAWN | REVISED - |
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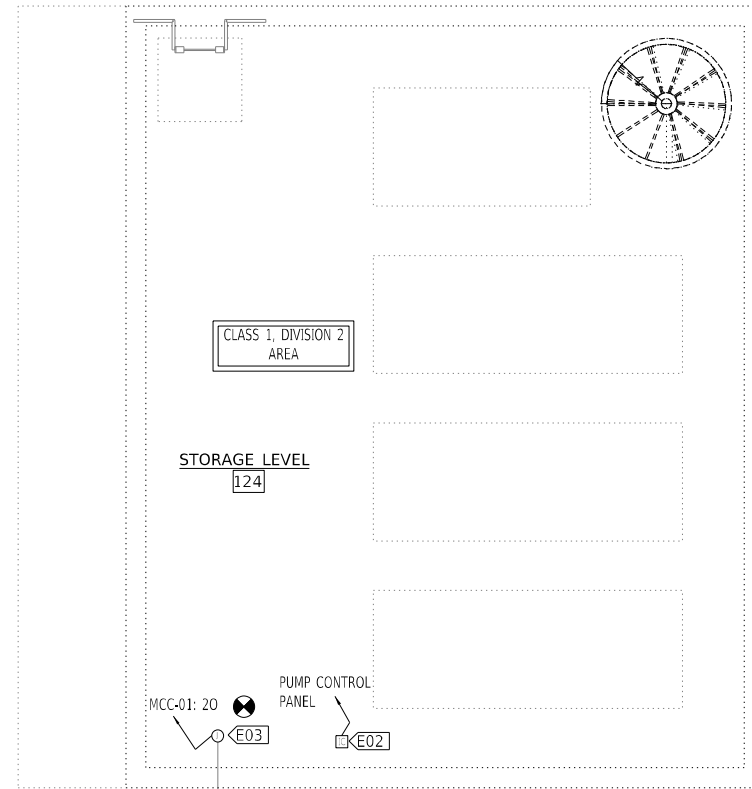
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

| | | | |
|---|---------|-------------|--------------|
| WEST FRANKFORT PUMP STATION ELECTRICAL SITE PLAN | | | |
| SCALE: NONE | SHEET 1 | OF 1 SHEETS | STA. TO STA. |

| | | | | |
|---------------------------|------------|----------|--------------------|-----------|
| F.A.I. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| 57 | (28-5)PS-1 | FRANKLIN | 39 | 34 |
| | | | CONTRACT NO. 78958 | |
| ILLINOIS FED. AID PROJECT | | | | |



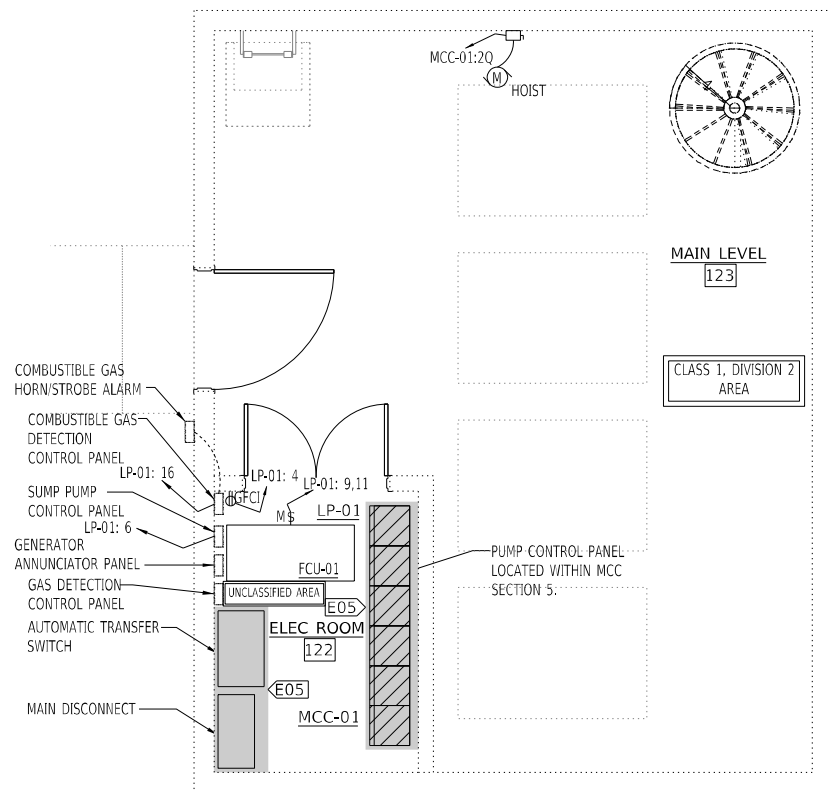
ROOF LEVEL POWER PLAN



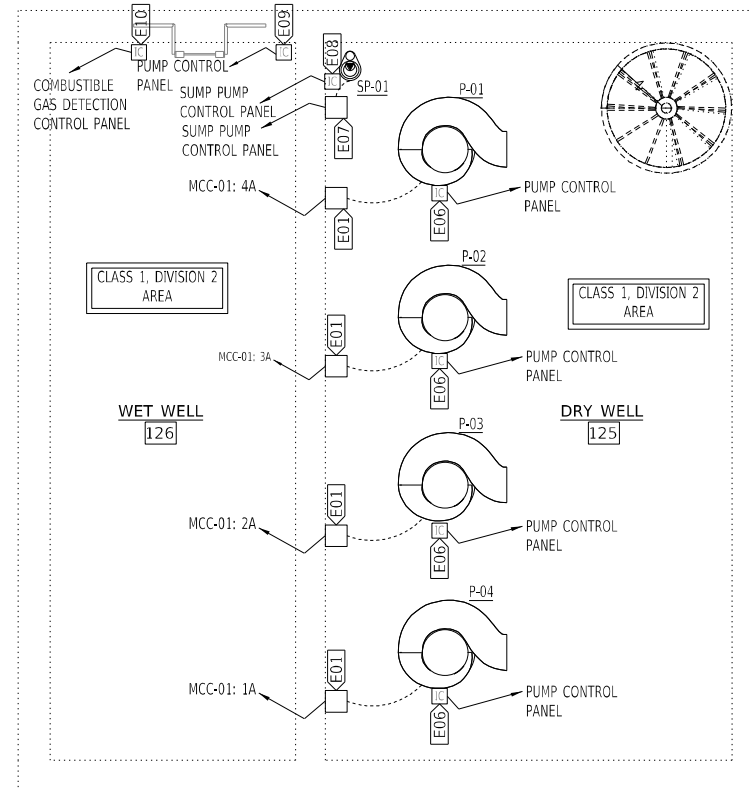
MAIN LEVEL POWER PLAN

| VALUE | DESCRIPTION |
|-------|--|
| E01 | 200A, SWITCH RATED RECEPTACLE/PLUG, NEMA 4X, CLASS 1, DIV. 2. MOUNT RECEPTACLE 6' ABOVE FLOOR WITH ANGLE WALL BOX KIT. INSTALL PLUG ON POWER CABLE SUPPLIED WITH PUMP. |
| E02 | INSTALL NEW PRESSURE LEVEL/TRANSMITTERS ON MODIFIED STILLING WELL. |
| E03 | REPLACE ROADWAY LIGHT JUNCTION BOX WITH NEW CLASS 1, DIV. 2 JUNCTION BOX. PROVIDE NEW CIRCUIT FROM MCC-01 TO THIS LOCATION. EXISTING CONDUCTORS TO HIGHWAY LIGHTING TO REMAIN. |
| E04 | STARTER FOR EXHAUST FAN LOCATED WITHIN MAU-01 |
| E05 | PROVIDE 4" TALL HOUSEKEEPING PAD FOR ELECTRICAL EQUIPMENT. |
| E06 | PUMP MONITORING: PROVIDE WITH CONTROL CABLE OF SUFFICIENT LENGTH TO CONNECT TO PUMP CONTROL PANEL WITH NO SPLICES |
| E07 | 20A, SWITCH RATED RECEPTACLE/PLUG, NEMA 4X, CLASS 1, DIV. 2. MOUNT RECEPTACLE 6' ABOVE FLOOR WITH ANGLE WALL BOX KIT. INSTALL PLUG ON POWER CABLE SUPPLIED WITH PUMP. |
| E08 | SUMP PUMP FLOAT SWITCHES |
| E09 | STORM WATER HIGH/LOW SUMP FLOAT SWITCHES. ATTACH TO LIFTING CHAIN AND SUSPEND WITHIN SUMP WITH 15 POUND MUSHROOM TYPE BOAT ANCHOR ON END OF LIFTING CHAIN. |
| E10 | COMBUSTIBLE GAS DETECTION SENSOR LOCATED WITHIN WET WELL. CONNECT TO CONTROL PANEL IN ELECTRICAL ROOM. |

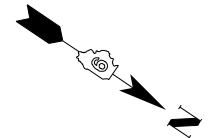
COST OF ALL ELECTRICAL RELATED ITEMS INCLUDED IN "PUMP STATION ELECTRICAL WORK"



STORAGE LEVEL POWER PLAN



PUMP LEVEL POWER PLAN

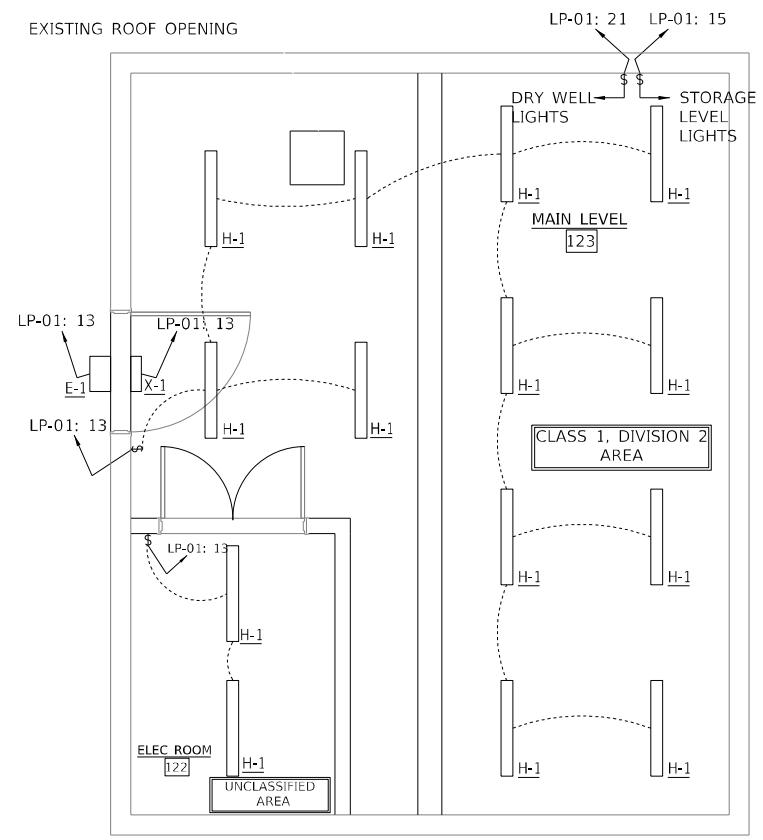


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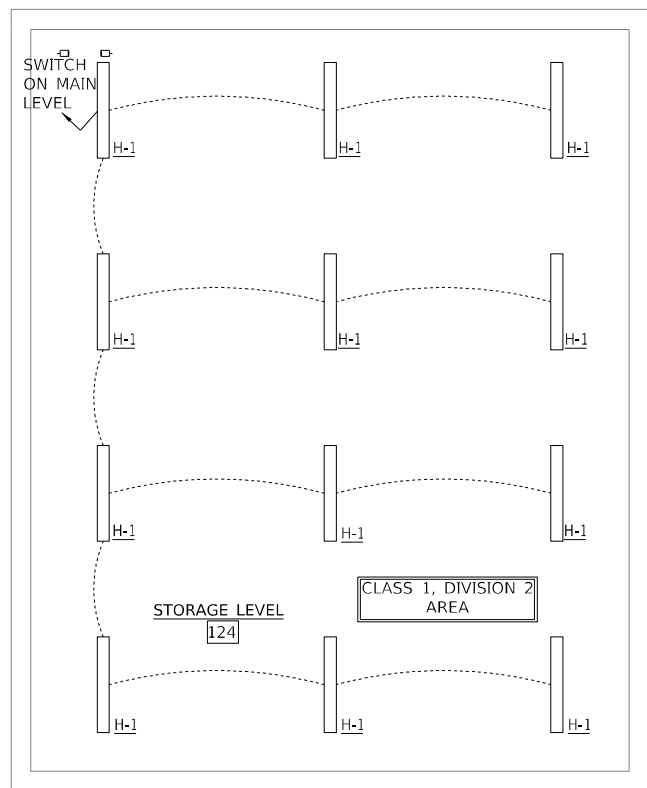
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| F.A.I. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| 57 | (28-5)PS-1 | FRANKLIN | 39 | 35 |
| CONTRACT NO. 78958 | | | | |
| ILLINOIS FED. AID PROJECT | | | | |

EXISTING ROOF OPENING

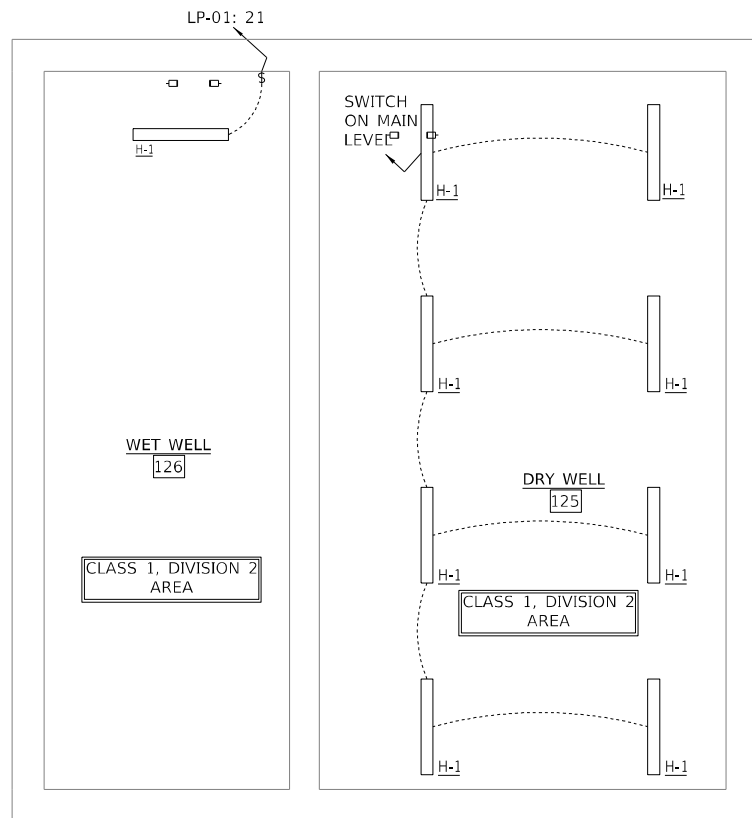


MAIN LEVEL LIGHTING PLAN

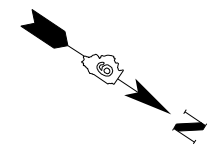
COST OF ALL ELECTRICAL RELATED ITEMS INCLUDED IN "PUMP STATION ELECTRICAL WORK"



STORAGE LEVEL LIGHTING PLAN



PUMP LEVEL LIGHTING PLAN



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KLINGNER & ASSOCIATES, P.C.
 Engineers • Architects • Surveyors
 616 N. 24TH ST. QUINCY, ILLINOIS 62301 217.223.3670
 STATE OF ILLINOIS DESIGN FIRM NO. 184-2738

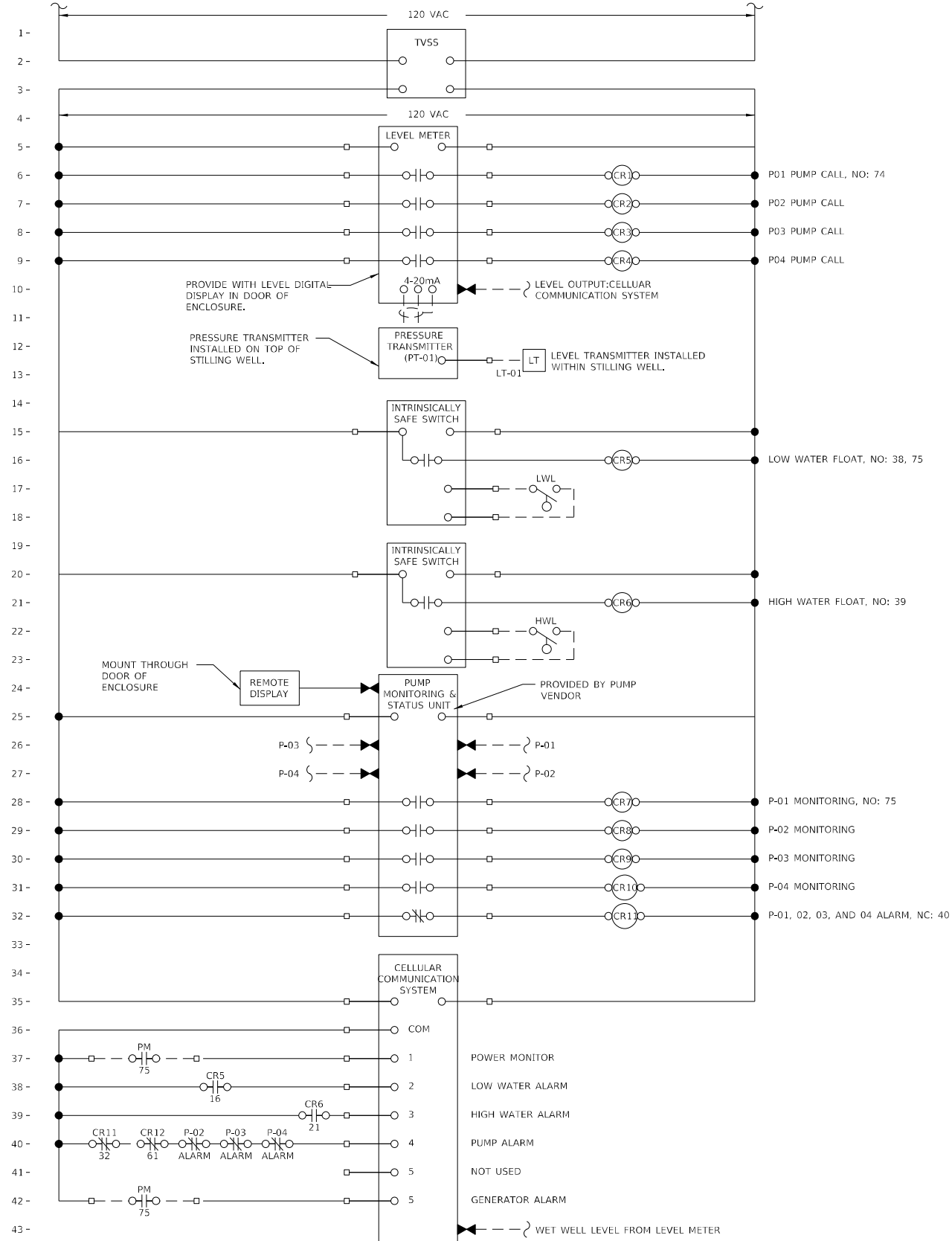
| | | |
|------------------------------|----------|-----------|
| USER NAME = oms | DESIGNED | REVISED - |
| | DRAWN | REVISED - |
| PLOT SCALE = 8:0' min / 1/4" | CHECKED | REVISED - |
| PLOT DATE = 6/16/2022 | DATE | REVISED - |

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

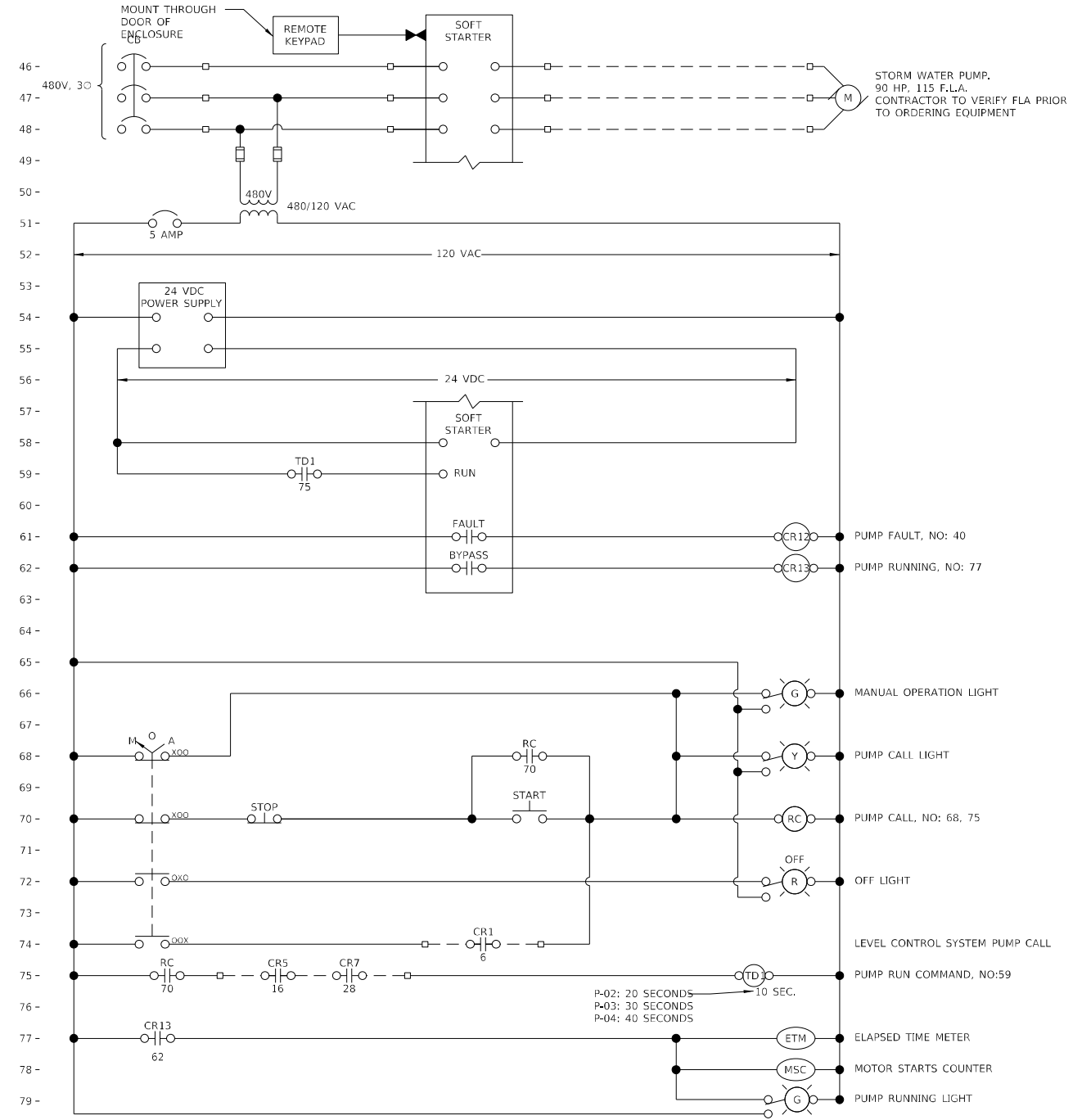
**WEST FRANKFORT PUMP STATION
 LIGHTING PLANS**

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

| F.A.I. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|---------------------------|------------|----------|--------------|-----------|
| 57 | (28-5)PS-1 | FRANKLIN | 39 | 36 |
| CONTRACT NO. 78958 | | | | |
| ILLINOIS FED. AID PROJECT | | | | |



CONTROL DRAWING No. 1
PUMP CONTROL PANEL



- STORMWATER PUMPS**
1. MAJOR EQUIPMENT:
 - a. PUMPS: (P-01, P-02, P-03, AND P-04)
 2. CONTROL LOGIC:
 - a. PUMPS (P1 AND P2)
 - 1) PUMP OPERATION SHALL BE PREVENTED WHENEVER THE PUMP MONITORING AND STATUS RELAY IS IN A FAULT CONDITION.
 - 2) PUMP OPERATION SHALL BE PREVENTED WHEN WATER LEVEL IS BELOW LOW WATER FLOAT ELEVATION
 - 3) WHEN OFF IS SELECTED AT THE MCC, THE PUMP SHALL BE OFF.
 - 4) WHEN MANUAL IS SELECTED AT THE MCC, THE PUMP SHALL BE CONTROLLED VIA START/STOP PUSHBUTTON FOLLOWING START DELAY.
 - 5) WHEN AUTO IS SELECTED AT THE MCC, THE PUMP SHALL OPERATE AUTOMATICALLY ACCORDING TO THE LEVEL CONTROL SYSTEM.
 - i. LEVEL CONTROL SYSTEM SHALL STAGE PUMPS ON AT FOUR DIFFERENT LEVELS: LEAD, LAG, HIGH, AND HIGH HIGH. ON/OFF ELEVATIONS FOR EACH LEVEL SHALL BE DETERMINED DURING CONSTRUCTION WITH OWNER INPUT.
 - ii. LEVEL CONTROL SYSTEM SHALL ALTERNATE LEAD, LAG, HIGH, AND HIGH HIGH PUMPS WITH THE COMPLETION OF EACH PUMPING CYCLE.
 - 6) PUMP RUNNING LIGHT, PUMP STARTS COUNTER, AND PUMP OPERATING HOUR METER SHALL BE ACTIVATED WHEN SOFT STARTER IS IN BYPASS MODE.

THE CONTROL LOOP DESCRIPTIONS ARE NOT INTENDED TO BE AN INCLUSIVE LISTING OF ALL ELEMENTS AND APPURTENANCES REQUIRED TO EXECUTE LOOP FUNCTIONS, BUT ARE RATHER INTENDED TO SUPPLEMENT AND COMPLEMENT THE DRAWINGS AND OTHER SPECIFICATION SECTIONS.

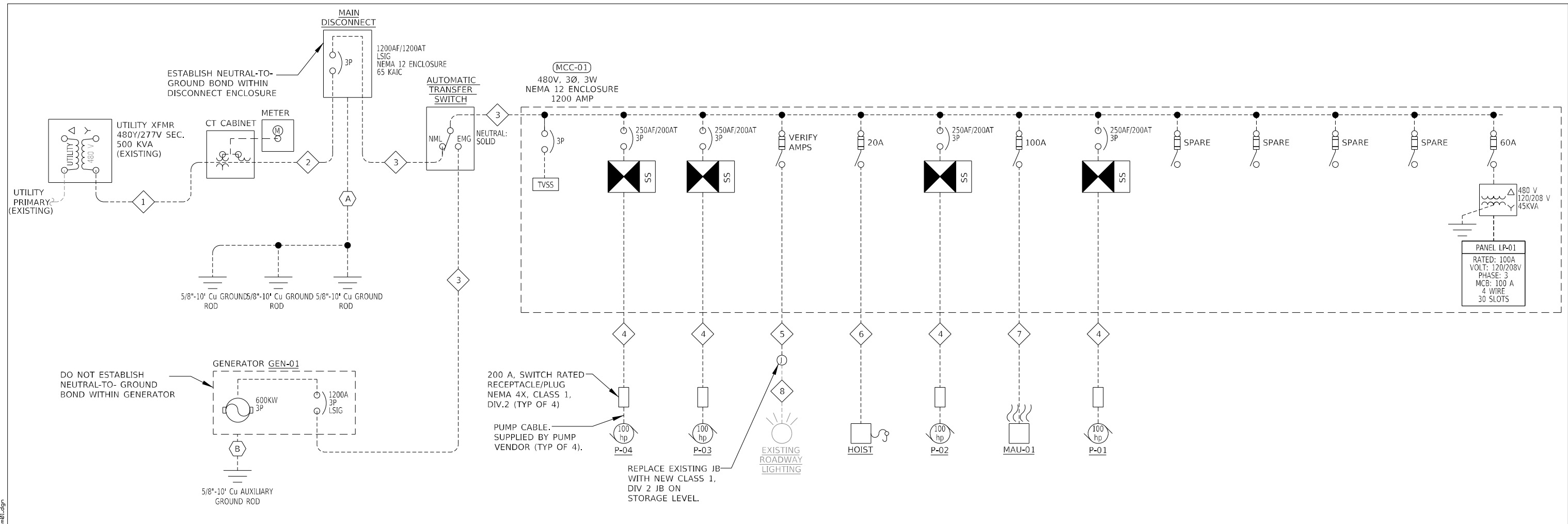
COST OF ALL ELECTRICAL RELATED ITEMS INCLUDED IN "PUMP STATION ELECTRICAL WORK"

CONTROL DRAWING No. 2
P01 (P02, P03, AND P04 SIMILAR)

| | | |
|----------------------|----------|-----------|
| USER NAME = *USER* | DESIGNED | REVISED - |
| PLOT SCALE = *SCALE* | DRAWN | REVISED - |
| PLOT DATE = *DATE* | CHECKED | REVISED - |
| | DATE | REVISED - |

| F.A.I. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|---------------------------|------------|----------|--------------|-----------|
| 57 | (28-5)PS-1 | FRANKLIN | 39 | 37 |
| CONTRACT NO. 78958 | | | | |
| ILLINOIS FED. AID PROJECT | | | | |

D:\17\Files\170264\Work-02 - Phase II Pump Station Blanket Agreement\District 9 West Frankfort Pump Station\CADD Sheets\097895B-ah-1-Diagram81.dgn



POWER ONE-LINE
NTS

| FEEDER SCHEDULE | | | | | | | |
|-----------------|--|----------|-----------|--------------|----------|---------|------|
| FEEDER TAG | PHASE CONDUCTORS | | | NEUTRAL SIZE | EGC SIZE | CONDUIT | |
| | PARALLEL SETS | QUANTITY | SIZE | | | SIZE | TYPE |
| 1 | 3 | 3 | 600 KCMIL | 600 KCMIL | -- | 4" | PVC |
| 2 | 3 | 3 | 600 KCMIL | 600 KCMIL | 3/0 AWG | 4" | RMC |
| 3 | 3 | 3 | 600 KCMIL | -- | 3/0 AWG | 4" | RMC |
| 4 | 1 | 3 | 2/0 | -- | #4 AWG | 2" | RMC |
| 5 | MATCH EXISTING CONDUCTORS SERVING HIGHWAY LIGHTING | | | | | | |
| 6 | 1 | 3 | 12 AWG | -- | 12 AWG | 3/4" | RMC |
| 7 | 1 | 3 | 1 AWG | -- | 8 AWG | 1-1/2" | RMC |
| 8 | EXISTING CONDUCTORS TO BE RE-USED | | | | | | |

| GEC SCHEDULE | |
|--------------|------------|
| GEC TAG | GEC SIZE |
| A | 3/0 AWG Cu |
| B | #6 AWG Cu |

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

D:\17 Files\170264\Work - Order - 02 - Phase II Pump Station Blanket Agreement\District 9 West Frankfort Pump Station\CADD Sheets\097958-sh-1-Schedule02.dgn

| | SECTION 6 | SECTION 5 | SECTION 4 | SECTION 3 | SECTION 2 | SECTION 1 | | | | |
|---|---|----------------------|--|--|--|--|---|--------------------------------|---------------------------------|--------------------------------------|
| A | 60A FUSIBLE SWITCH AND 45 KVA TRANSFORMER 480V PRI. x 120/208V SEC. | PUMP CONTROL SECTION | P-01 SOLID STATE SOFT STARTER 100 HP 480V 3-PHASE, 3W W/ CIRCUIT BREAKER DISCONNECT | P-02 SOLID STATE SOFT STARTER 100 HP 480V 3-PHASE, 3W W/ CIRCUIT BREAKER DISCONNECT | P-03 SOLID STATE SOFT STARTER 100 HP 480V 3-PHASE, 3W W/ CIRCUIT BREAKER DISCONNECT | MAIN LUGS | | | | |
| B | | | | | | 1A | | | | |
| C | | | | | | TVSS | | | | |
| D | | | | | | P-04 SOLID STATE SOFT STARTER 100 HP 480V 3-PHASE, 3W W/ CIRCUIT BREAKER DISCONNECT | | | | |
| E | | | | | | | 1E | | | |
| F | | | | | | | 100 AMP 3-PHASE, 4W PANELBOARD 120/208V 100A MAIN BREAKER | 4A | 3A | 2A |
| G | | | | | | | | 100A FUSIBLE SWITCH (SPARE) 4O | 100A FUSIBLE SWITCH (MAU-01) 3O | 100A FUSIBLE SWITCH 2O (ROADWAY LTS) |
| H | | | | | | | | 100A FUSIBLE SWITCH (SPARE) 4Q | SPACE | 100A FUSIBLE SWITCH (HOIST) 2Q |
| I | | | | | | | | 100A FUSIBLE SWITCH (SPARE) 4S | SPACE | SPACE |
| J | | | | | | | | 100A FUSIBLE SWITCH (SPARE) 4U | SPACE | SPACE |
| K | SPACE | SPACE | SPACE | | | | | | | |
| L | SPACE | SPACE | SPACE | | | | | | | |
| M | SPACE | SPACE | SPACE | | | | | | | |
| N | SPACE | SPACE | SPACE | | | | | | | |
| O | SPACE | SPACE | SPACE | | | | | | | |
| P | 6M | 5A | 4W | 3W | 2W | 1U | | | | |
| Q | 6X | SPACE | 4W | 3W | 2W | 1U | | | | |
| R | | | | | | | | | | |
| S | | | | | | | | | | |
| T | | | | | | | | | | |
| U | | | | | | | | | | |
| V | | | | | | | | | | |
| W | | | | | | | | | | |
| X | | | | | | | | | | |

MCC-01 ELEVATION
NTS

| MCC-01 SCHEDULE | | | | | | | | | | | | | | | | | | | | | | |
|-----------------|---------|------|---|---------------|------------------------|-----------|-----------------|--------------|-------------------|-------------------|----------------|----------------------|-------------|---------------|-------|-----|---------------------------|--------------|--------------------|----------------------|----------------|-------------------------|
| ID | SECTION | CELL | STARTER, CLASS, OR DESCRIPTION | SIZE (INCHES) | CB TRIP/FUSE CLIPS (A) | HP RATING | CONTROL DEVICES | | | | | | | | | | NAMEPLATE IDENTIFICATIONS | | | | | |
| | | | | | | | AUX INTLK | PUSH BUTTONS | SELECTOR SWITCHES | INDICATING LIGHTS | OTHER | | | | | | | | | | | |
| | | | | | | | NO | NC | START-STOP | FWD-REV-STOP | FAST-SLOW-STOP | HAND-OFF-AUTO ON-OFF | FWD-OFF-REV | FAST-OFF-SLOW | GREEN | RED | AMBER | PUSH TO TEST | ELAPSED TIME METER | MOTOR STARTS COUNTER | CURRENT SWITCH | |
| 1 | A | | 1,200 MAIN LUGS | 12 | | | | | | | | | | | | | | | | | | MAIN LUGS |
| 1 | E | | TVSS | 6 | | | | | | | | | | | | | | | | | | TVSS |
| 1 | G | | SOLID STATE SOFT STARTER (IEC CONTACTORS) | 42 | 200/250 | 100 | | | X | | X | | | | 2 | 1 | 1 | X | X | X | X | STORM WATER PUMP (P-04) |
| 1 | U | | SPACE | 12 | | | | | | | | | | | | | | | | | | SPACE |
| 2 | A | | SOLID STATE SOFT STARTER (IEC CONTACTORS) | 42 | 200/250 | 100 | | | X | | X | | | | 2 | 1 | 1 | X | X | X | X | STORM WATER PUMP (P-03) |
| 2 | O | | FUSIBLE SWITCH | 6 | 100 | | | | | | | | | | | | | | | | | ROADWAY LIGHTS |
| 2 | Q | | FUSIBLE SWITCH | 6 | 100 | | | | | | | | | | | | | | | | | HOIST |
| 2 | S | | SPACE | 6 | | | | | | | | | | | | | | | | | | SPACE |
| 2 | U | | SPACE | 6 | | | | | | | | | | | | | | | | | | SPACE |
| 2 | W | | SPACE | 6 | | | | | | | | | | | | | | | | | | SPACE |
| 3 | A | | SOLID STATE SOFT STARTER (IEC CONTACTORS) | 42 | 200/250 | 100 | | | X | | X | | | | 2 | 1 | 1 | X | X | X | X | STORM WATER PUMP (P-02) |
| 3 | O | | FUSIBLE SWITCH | 6 | 100 | | | | | | | | | | | | | | | | | MAU-01 |
| 3 | Q | | SPACE | 6 | | | | | | | | | | | | | | | | | | SPACE |
| 3 | S | | SPACE | 6 | | | | | | | | | | | | | | | | | | SPACE |
| 3 | U | | SPACE | 6 | | | | | | | | | | | | | | | | | | SPACE |
| 3 | W | | SPACE | 6 | | | | | | | | | | | | | | | | | | SPACE |
| 4 | A | | SOLID STATE SOFT STARTER (IEC CONTACTORS) | 42 | 200/250 | 100 | | | X | | X | | | | 2 | 1 | 1 | X | X | X | X | STORM WATER PUMP (P-01) |
| 4 | O | | FUSIBLE SWITCH | 6 | 100 | | | | | | | | | | | | | | | | | SPARE |
| 4 | Q | | FUSIBLE SWITCH | 6 | 100 | | | | | | | | | | | | | | | | | SPARE |
| 4 | S | | FUSIBLE SWITCH | 6 | 100 | | | | | | | | | | | | | | | | | SPARE |
| 4 | U | | FUSIBLE SWITCH | 6 | 100 | | | | | | | | | | | | | | | | | SPARE |
| 4 | W | | SPACE | 6 | | | | | | | | | | | | | | | | | | SPACE |
| 5 | A | | RELAY SECTION | 72 | | | | | | | | | | | | | | | | | | PUMP CONTROLS |
| 6 | A | | 45 KVA DISTRIBUTION TRANSFORMER | 36 | 60 | | | | | | | | | | | | | | | | | 120/208V, 3 PHASE XFMR |
| 6 | M | | PANELBOARD | 33 | 100 | | | | | | | | | | | | | | | | | PANEL LP-01 |
| 6 | X | | SPACE | 3 | | | | | | | | | | | | | | | | | | SPACE |

COMMENTS
1 PROVIDE FUSES WITHIN FUSIBLE SWITCHES MATCHED TO THE LOAD SERVED
2 PROVIDE WITH 160KA SURGE RATING TVSS

LIGHT FIXTURE SCHEDULE

| TAG | DESCRIPTION | MOUNT | TYPE | COLOR TEMP. | OUTPUT | DISTRIBUTION | DRIVER CONTROL | VOLT | LOAD | ACCESSORIES | REMARKS |
|-----|--|---------|------|-------------|----------|--------------|-------------------------|-------|-------|-----------------------|--|
| E1 | EXTERIOR WALL PACK | WALL | LED | 3000 K | 3,300 lm | R3 | FIELD ADJUSTABLE OUTPUT | 120 V | 29 VA | EXTERNAL GLARE SHIELD | INSTALL AT 9'-0" ABOVE CONTROL ROOM FLOOR. INTEGRAL PHOTOCCELL |
| H1 | 4' LINEAR HARSH ENVIRONMENT CLASS 1 DIV. 2 LISTED FIBERGLASS HOUSING | SURFACE | LED | 5000 K | 5,000 lm | | ON/OFF | 120 V | 47 VA | | |
| X1 | CLASS 1 DIV. 2 EXIT SIGN | SURFACE | LED | | | | | 120 V | 6 VA | BATTERY BACK-UP | |

| ELECTRICAL PANEL: LP-01 | | | | | | | | | | | | Area Served: PUMP STATION | | | |
|-------------------------|----------------------|------------|----------------|----------------|----------------|--------------------------|-----------------|------|------------|---|-----|----------------------------|--|-------------------|--|
| Location: MCC-01 | | | | | | | | | | | | 100A 120/208 V 3 Ph 4 Wire | | 100A MAIN BREAKER | |
| Fault Rating: 10,000 | | | | | | | | | | | | Load | | | |
| No. | Description | Brkr. Amps | A | B | C | C | B | A | Brkr. Amps | Description | No. | | | | |
| 1 | EF-01 | 20 | 561 | | | | | 180 | 20 | ROOF RECEPTACLE | 2 | | | | |
| 3 | | | | 561 | | | | 180 | 20 | ELECTRICAL ROOM RECEPTACLE | 4 | | | | |
| 5 | CU-01 | 30 | | | 2038 | 1680 | | | 20 | SUMP PUMP | 6 | | | | |
| 7 | | | | | | | | | 20 | SPARE | 8 | | | | |
| 9 | FCU-01 | 15 | | 224 | 224 | | | | 20 | GENERATOR ENGINE BATTERY CHARGER | 10 | | | | |
| 11 | | | | | | | | | 50* | GENERATOR BLOCK HEATER (COORDINATE BREAKER SIZE W/ EQUIP. PROVIDED) | 12 | | | | |
| 13 | MAIN LEVEL LIGHTS | 20 | 693 | | | | | | 20 | | 14 | | | | |
| 15 | STORAGE LEVEL LIGHTS | 20 | | 564 | | | | 250 | 20 | COMBUSTIBLE GAS DETECTOR | 16 | | | | |
| 17 | SPARE | 20 | | | | | | | 20 | SPARE | 18 | | | | |
| 19 | SPARE | 20 | | | | | | | 20 | SPARE | 20 | | | | |
| 21 | DRY WELL LIGHTS | 20 | | 426 | | | | 1000 | 20 | PUMP CONTROL SECTION | 22 | | | | |
| 23 | SPARE | 20 | | | | | | | 20 | SPARE | 24 | | | | |
| 25 | SPARE | 20 | | | | | | | 20 | SPARE | 26 | | | | |
| 27 | SPARE | 20 | | | | | | | 20 | SPARE | 28 | | | | |
| 29 | SPARE | 20 | | | | | | | 20 | SPARE | 30 | | | | |
| Totals | | | Phase A | Phase B | Phase C | Total Wattage(VA) | Capacity | | | | | | | | |
| | | | 3472 | 3205 | 3942 | 10619 | 36027 | | | | | | | | |

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



| | | |
|----------------------------|----------|-----------|
| USER NAME = oms | DESIGNED | REVISED - |
| PLOT SCALE = 8:0" 1" = 10' | DRAWN | REVISED - |
| PLOT DATE = 6/16/2022 | CHECKED | REVISED - |
| | DATE | REVISED - |

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

WEST FRANKFORT PUMP STATION
ELECTRICAL SCHEDULES

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

| F.A.I. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|---------------------------|------------|----------|--------------|-----------|
| 57 | (28-5)PS-1 | FRANKLIN | 39 | 39 |
| CONTRACT NO. 78958 | | | | |
| ILLINOIS FED. AID PROJECT | | | | |