SOUTH QUINCY LIFT STATION REHABILITATION

CITY OF QUINCY, ILLINOIS

PROJECT LOCATION:
RADIO ROAD & REFINERY ROAD
QUINCY, IL. 62305

BY:

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

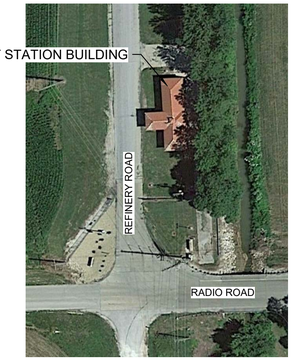
616 NORTH 24TH STREET
QUINCY, IL 62301
PHONE: (217) 223-3670

PROJECT LOCATION MAP

NOT TO SCALE

GENERAL NOTES

1. THE CONTRACTOR(S) SHALL CONFIRM CONDITIONS DESCRIBED HEREIN AND TELL THE ARCHITECT OF ANY DISCREPANCIES AND INTERFERENCES ENCOUNTERED PRIOR TO STARTING WORK AFFECTED THEREBY.
2. THE CONTRACTOR(S) SHALL FIELD VERIFY EXISTING DIMENSIONS AND CONDITIONS AND TELL THE ARCHITECT OF ANY DISCREPANCIES AND INTERFERENCES ENCOUNTERED PRIOR TO STARTING WORK AFFECTED THEREBY.
3. THE CONTRACTOR(S) SHALL BE RESPONSIBLE FOR OSHA COMPLIANCE AND JOB SITE SAFETY.
4. CONTRACTOR(S) SHALL VERIFY LOCATIONS OF ALL UTILITIES (TELEPHONE, DATA, GAS, ELECTRIC, SANITARY AND STORM SEWERS, ETC.) AT THE SITE BEFORE STARTING EXCAVATION OR CONSTRUCTION. THESE ITEMS SHALL BE MARKED AND PROTECTED.
5. THE CONTRACTOR(S) SHALL REPORT ANY SUSPICIOUS MATERIALS (POTENTIALLY HAZARDOUS) AT THE SITE IMMEDIATELY TO THE OWNER FOR HIS/HER FURTHER ACTION. UNLESS NOTED SPECIFICALLY ON THE DRAWINGS OR PROJECT MANUAL, THE ARCHITECT/ENGINEER IS NOT AWARE OF ANY HAZARDOUS MATERIALS AND HAS NOT BEEN HIRED BY THE OWNER TO DEAL WITH SUCH.
6. CONTRACTOR(S) SHALL TAKE PRECAUTIONS NECESSARY TO PROTECT ADJACENT PROPERTY FROM DAMAGE RESULTING FROM CONSTRUCTION OPERATIONS.
7. THE CONTRACTOR(S) SHALL SUBMIT EVIDENCE OF INSURANCE TO OWNER AND HAVE IT APPROVED AS ACCEPTABLE TO OWNER PRIOR TO STARTING WORK. OWNER AND ARCHITECT SHALL BE NAMED AS ADDITIONAL INSURED.



PROJECT SITE

NOT TO SCALE

SHEET INDEX

H. MICHAEL CARTER
LICENSED ARCHITECT
016061
STATE OF ILLINOIS
09/10/19

MICHAEL CARTER, A.I.A.
LICENSED ARCHITECT
STATE OF ILLINOIS LICENCE NO. 001.016061
LICENSE EXPIRES: 11/30/20

JOSEPH A. KNOCHEL
062.062983
REGISTERED PROFESSIONAL ENGINEER
OF
ILLINOIS
9/10/19

09/10/19

JOSEPH KNOCHEL, P.E.
LICENSED PROFESSIONAL ENGINEER
STATE OF ILLINOIS LICENCE NO. 062.062983
LICENSE EXPIRES: 11/30/19

AARON M. SCHAFER
081-007926
LICENSED STRUCTURAL ENGINEER
STATE OF ILLINOIS
9/10/2019

AARON SCHAFER, S.E.
LICENSED STRUCTURAL ENGINEER
STATE OF ILLINOIS LICENCE NO. 081-007926
LICENSE EXPIRES: 11/30/19

JEFFREY CONTE
09/10/19
062-052447
REGISTERED PROFESSIONAL ENGINEER
ILLINOIS

JEFFREY CONTE, P.E.
LICENSED PROCESS ENGINEER
STATE OF ILLINOIS LICENCE NO. 062-052447
LICENSE EXPIRES: 11/30/19

KLINGNER & ASSOCIATES, P. C.
Engineers • Architects • Surveyors
www.klingner.com
Galesburg, IL Burlington, IA
Pella, IA Hannibal, MO Columbia, MO
Quincy, Illinois
616 North 24th Street
217.223.3670

REVISION HISTORY

	DESCRIPTION	DATE	APPR

SOUTH QUINCY LIFT STATION REHABILITATION

CITY OF QUINCY
730 MAINE STREET
QUINCY, ILLINOIS

Non-Reduced Sheet Size 22" x 34"
Full sized plans have been prepared using standard scales. Reduced sized plans may not conform to standard scales.

DESIGNED	DRAWN
Designer	Author
FIELD	FIELD BOOK
CHECKED	CHECK DATE
Checker	

SHEET TITLE

TITLE SHEET

PROJECT NO.
19-0192
DRAWING ISSUED DATE:
09/10/19
SHEET
G001

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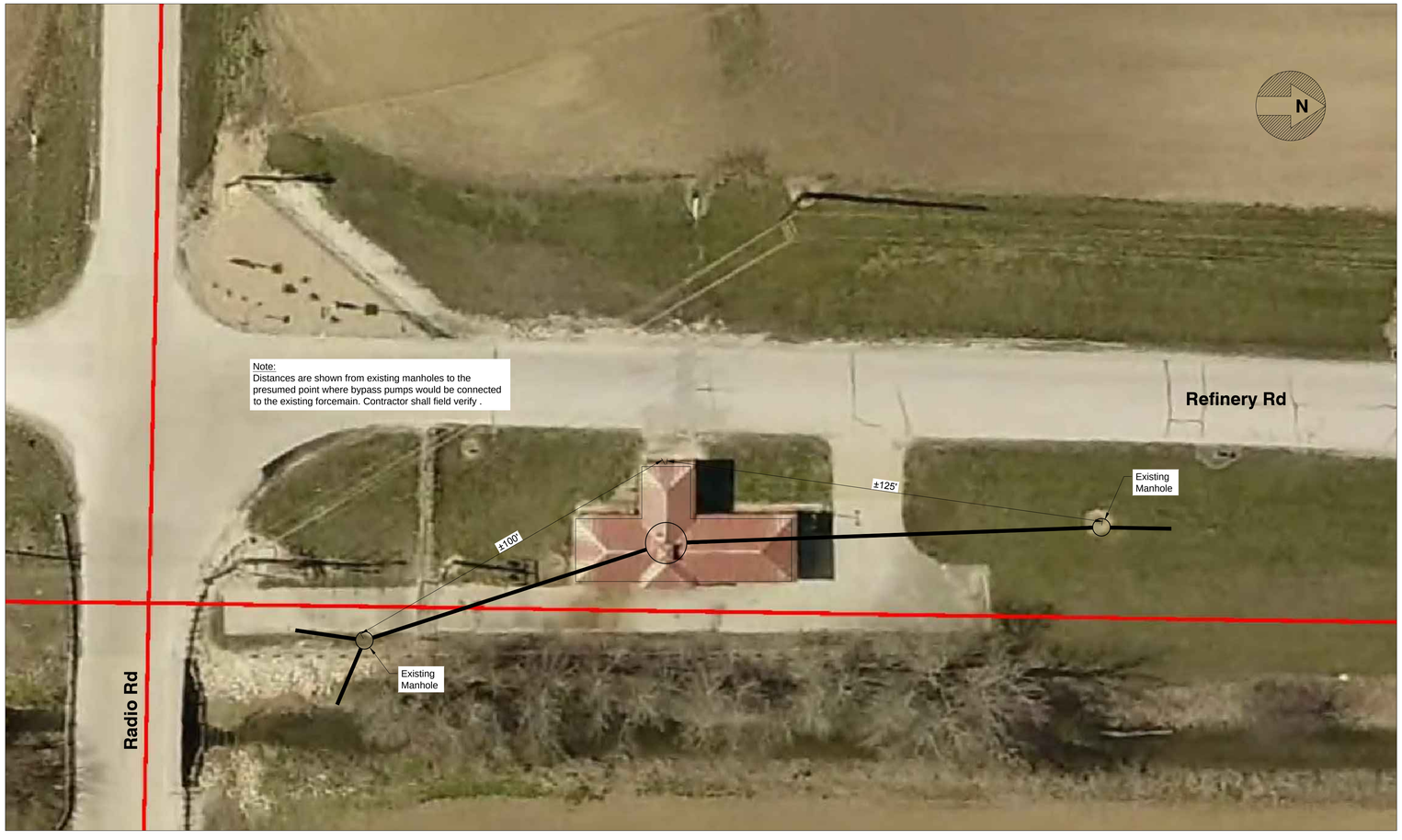


Lift Station Site Plan

Scale: 1" = 20'

Prepared for:
Department of Utilities
& Engineering
City of Quincy, Illinois

1 Inch

Full Scale Drawing: 22x34"

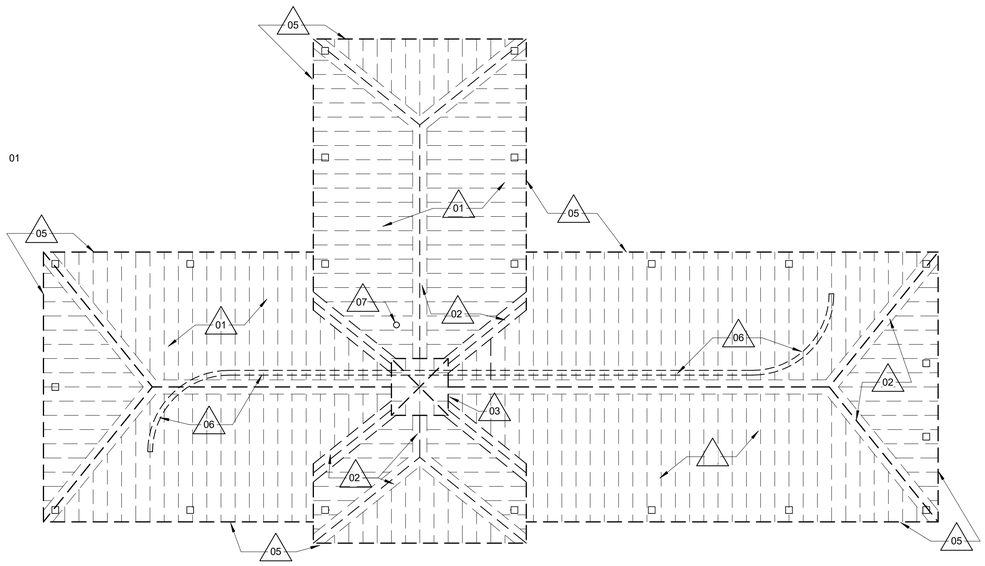
2019 Sewage Collection System Improvements
South Quincy Lift Station Rehabilitation

Lift Station Site Plan

Date 09/10/19

Sheet Number

C100



ROOF PLAN - DEMOLITION

3/16" = 1'-0"

GENERAL DEMOLITION NOTES:

01 ALL MATERIALS NOTED TO BE REMOVED SHALL BE REMOVED IN THEIR ENTIRETY FROM SITE UNLESS RETAINED FOR OWNER (SEE GENERAL NOTE 02 THIS SHEET). ALL WASTE MATERIALS SHALL BE TRANSPORTED AND APPROPRIATELY DISPOSED-OF IN ACCORDANCE WITH APPLICABLE STATE AND FEDEBRAL LAWS.

02 CONTRACTOR TO OFFER OWNER RIGHT OF FIRST REFUSAL FOR ALL ITEMS NOTED TO BE REMOVED.

DEMOLITION NOTES:

△ INDICATES DEMO. NOTE KEYNOTED ON PLAN

△01 REMOVE ALL EXISTING STANDING SEAM METAL ROOF PANELS THROUGHOUT.

△02 REMOVE ALL EXISTING HIP AND VALLEY FLASHING THOUGHOUT, TYPICAL.

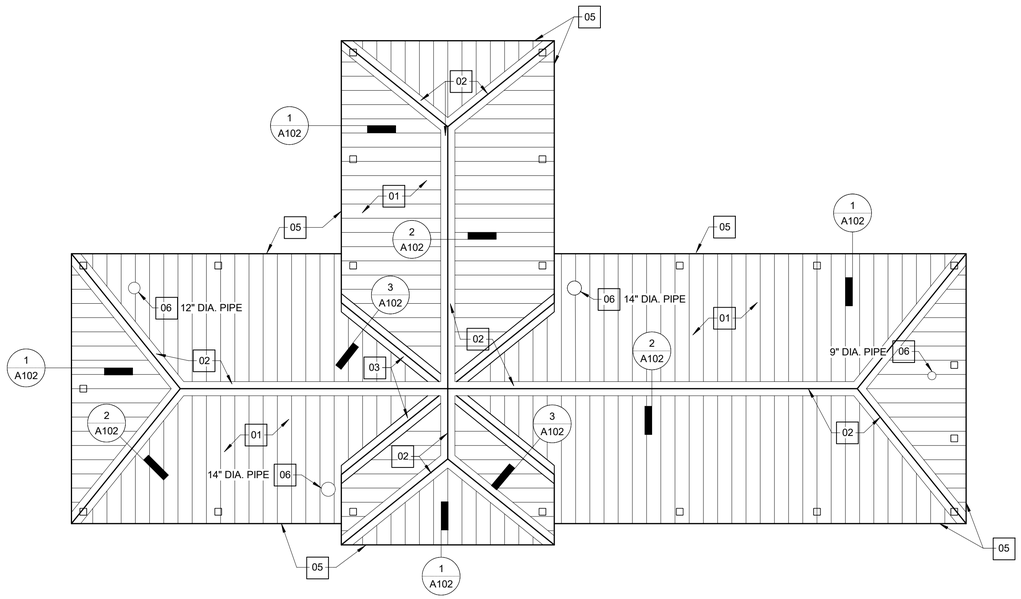
△03 REMOVE CUPOLA IN ITS ENTIRETY AND DISCARD OFF-SITE.

△04 NOT USED.

△05 REMOVE EXISTING SHEET METAL FASCIA AT ALL EAVES. EXISTING EAVE PURLIN MUST BE REMOVED TO REMOVE FASCIA.

△06 REMOVE EXISTING STEEL CRANE BEAMS LOCATED UNDER ROOF FRAMING.

△07 REMOVE EXISTING ROUND SHEET METAL VENT.



ROOF PLAN - RENOVATION

3/16" = 1'-0"

GENERAL RENOVATION NOTES:

01 TO PREVENT GALVANIC CORROSION, PROVIDE 45 MIL EPDM MEMBRANE SEPERATOR WHERE NEW ALUMINUM SHEET METAL INTERFACES WITH EXISTING STEEL FRAMING.

02 FOR NEW ALUMINUM STANDING SEAM ROOF PANELS TO BE INSTALLED OVER EXISTING STEEL PURLINS, BEARING PLATES MUST BE PLACED OVER PURLINS TO BE USED IN CONJUNCTION WITH ROOF PANEL SECUREMENT CLIPS. BEARING PLATES TO BE PROVIDED BY ALUMINUM ROOF PANEL MFGR.

RENOVATION KEYNOTES:

☐ INDICATES NOTES KEYED ON SHEET FLOOR PLANS

01 INSTALL NEW PREFINISHED STANDING SEAM ALUMINUM ROOF PANELS OVER NEW STEEL PURLINS: SEE SPEC SECTION 07410.

02 INSTALL NEW VENTED RIDGE AND HIP FLASHING: BY ALUM. ROOF PANEL MFGR.: SEE DETAIL A102-2

03 INSTALL NEW VALLEY FLASHING: BY ALUM. ROOF PANEL MFGR.: SEE DETAIL A102-3

04 NOT USED.

05 INSTALL NEW ALUM. FASCIA AROUND PERIMITER OF BUILDING: SEE DETAIL A501-1

06 INSTALL NEW EPDM SQUARE BASE PIPE BOOT FOR PIPE DIAMETER INDICATED.

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Checker	

SHEET TITLE

ROOF PLANS

PROJECT NO.
19-0192

DRAWING ISSUED DATE:
09/10/2019

SHEET
A101

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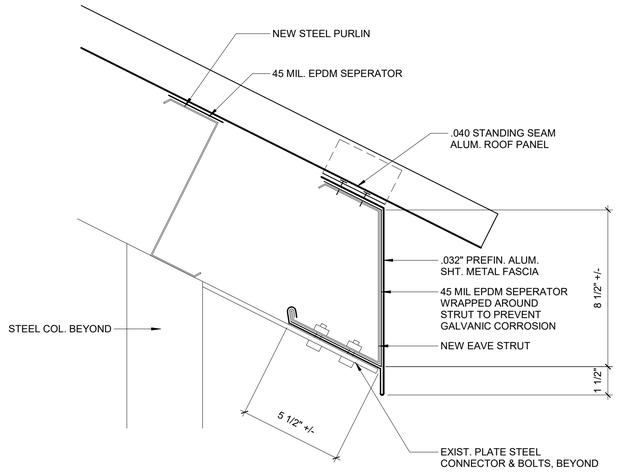
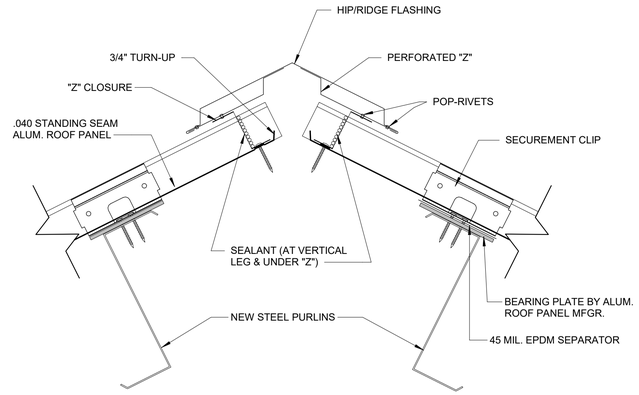
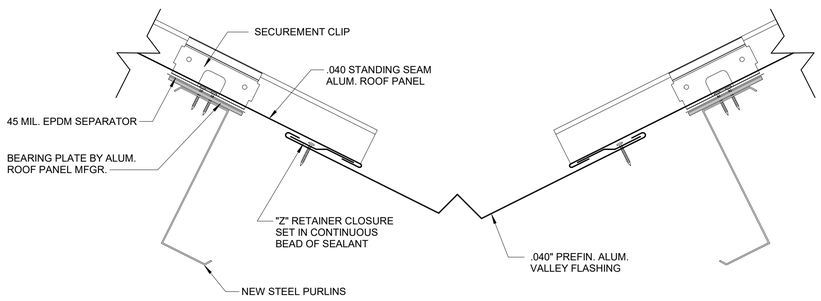


1 DETAIL - FLASHING
3" = 1'-0"



2 DETAIL - VENTED RIDGE & HIP FLASHING
3" = 1'-0"



3 Valley Detail
3" = 1'-0"

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Checker	

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ROOF DETAILS

PROJECT NO.
19-0192

DRAWING ISSUED DATE:
09/10/19

SHEET
A102

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DESIGN CRITERIA (NON-SHELTER)

1. Design Codes:
   a. International Building Code: IBC 2015
   b. Minimum Design Loads for Buildings and Other Structures: ASCE 7-10
2. Design Loads:
   a. Risk Category II
   b. Live Load
      i. Floor LL = 100 psf
   c. Dead Load
      i. Floor LL = 100 psf

EXISTING WORK

1. Existing conditions shown or noted on the drawings were obtained from field measurements or existing drawings. If conditions other than those shown exist, immediately notify the Engineer before proceeding with the work at that location. All dimensions shall be field verified.
2. Use appropriate construction methods and equipment as necessary to support existing structures and to avoid over stressing the existing structures.
3. Existing framing is assumed to be in original condition. If deterioration has occurred notify the Engineer of Record.

GENERAL

1. The structure is designed to be self-supporting and stable after the building is fully completed. It is solely the contractor 's responsibility to determine erection procedure and sequence and insure the safety of the construction personnel, public, building and its components parts, and adjacent buildings and properties. This includes the addition of whatever temporary or permanent shoring, bracing, needling, underpinning, or sheet piling, etc. that may be necessary to brace new construction, adjacent buildings, so that the structure is braced for wind, seismic, gravity, construction loads, etc. and that no horizontal or vertical settlement or any damage occurs to the adjacent existing structure. Temporary supports shall be maintained in place until permanents supports and/or shoring and bracing are installed.
2. Fall protection support from perimeter columns or walls shall be provided in accordance with OSHA requirements as required. Such material shall remain the contractor 's property after the completion of the project.
3. It is the contractor 's responsibility to enforce all applicable safety codes and regulations during all phases of construction.
4. The contractor shall perform all construction for the project in a manner and sequence that are based on accepted industry standards that recognize the interaction of the components that comprise the structure, without causing distress, unanticipated movements or irregular load paths as a result of the construction means and methods employed.
5. Construction loads shall not exceed design live loads. The contractor shall be responsible for all design required to support construction equipment used in constructing this project. Shoring and reshoring is the responsibility of the contractor.
6. Principal openings through the framing are shown on these drawings. The general contractor shall examine the structural and mechanical drawings for the required openings and shall verify size and location of all openings with the mechanical contractor. Providing all openings required by the mechanical, electrical, plumbing, or other trades shall be part of the general contract, whether or not shown in the structural drawings. Any deviation from the openings shown on the structural drawings shall be brought to the engineer's attention for review.
7. All contractors are required to examine the drawings and specifications carefully, visit the site and fully inform themselves as to all existing conditions and limitations, prior to agreeing to perform the work. Failure to visit the site and familiarize themselves with the existing conditions and limitations will in no way relieve the contractor from furnishing any materials or performing any work in accordance with drawings and specifications without additional cost to the owner.
8. Details labeled "Typical Details" on drawings apply to situations occurring on the project that are the same or similar to those specifically details. Such details apply whether or not details are referenced at each location. Notify engineer of clarification regarding applicability of "Typical Details".
9. Work these drawings with architectural, mechanical, and electrical drawings.
10. Do not scale drawings.
11. Should any of the general notes conflict with any details or instructions on plans, the strictest provision shall govern.
12. Omissions or conflicts between various elements of the drawings, notes and details shall be brought to the attention of the engineer and resolved before proceeding with the work.

CAST-IN-PLACE CONCRETE

1. All concrete construction shall conform to ACI 301, "Specification for Structural Concrete" and ACI 302, "Guide for Concrete Floor and Slab Construction", ACI 305 "Specification for Hot Weather Concreting" and ACI 306, "Standard Specification for Cold Weather Concreting", unless noted otherwise for the year referenced in the building code noted.
2. All detailing, fabrication and placing of reinforcing bars, unless otherwise noted, shall conform to ACI 318, "Building Code Requirements for Structural Concrete", ACI 117, "Specification for Tolerances for Concrete Construction and Materials ", and the latest ACI detailing manual.
3. Concrete shall be discharged at the site within 1 ½ hours after water has been added to the cement and aggregates. Addition of water to the mix at the project site will not be permitted. All water must be added at the batch plant. Slump may be adjusted only through the use of additional water reducing admixtures or high range water reducing admixture.
4. All concrete shall be placed without horizontal construction joints, except where specifically noted.
5. All exposed edges of concrete members shall be chamfered ¾" unless shown otherwise.
6. The placement of sleeves, outlet boxes, box-outs, anchors, etc., for the mechanical, electrical and plumbing trades is the responsibility of the trade involved; however, any box-outs not covered by typical details in structural drawings shall be submitted for approval.
7. Reinforcing bars shall conform to ASTM A615, Grade 60, No tack welding of reinforcing in the field will be permitted.
8. Reinforcing bars for welded applications shall conform to ASTM A706, 60 ksi yield strength.
9. Wire bar supports shall be furnished for all reinforcing within slabs, inclusive of welded wire fabric. Bottom bars in slabs-on-grade may be supported by other suitable supports. Reinforcing shall be properly positioned prior to concrete placement and may not be re-positioned once concrete operations have begun. Wire bar and other types of supports shall be in accordance with the concrete reinforcing steel institute manual of standard practice.
10. Reinforcement shall be continuous through all construction joints unless otherwise noted on drawings.
11. All hooks shown on drawings shall be standard hooks, unless otherwise noted.
12. Where continuous bars are called for, they shall run continuously around corners and be lapped at necessary splices. Lap lengths shall be as given in the splice and development table.
13. In reinforced concrete walls, grade beams and trench footing provide corner dowels of same size and spacing as horizontal reinforcing. Dowels shall lap with horizontal reinforcing in each direction.
14. The following minimum concrete cover shall be provide for reinforcement, unless otherwise noted:
    a. Earth formed and cast directly against soil – 3"
    b. Cast against forms but exposed to earth and weather
       #6 and Larger – 2'
       #5 and Smaller - 1 ½"
    c. Slabs and walls not exposed to earth or weather – ¾"
    d. Others - 2"
15. All structural concrete shall have a 4000 psi minimum compressive strength at age 28 days.
16. SPLICE LENGTHS:

Bar Size	Min. Lap
#3	1'-3"
#4	1'-7"
#5	2'-0"
#6	2'-6"
#7	3'-6"
#8	4'-0"
#9	4'-6"
#10	5'-0"

a. When lapping two different size bars, use the lap dimension of the smaller bar or the anchorage dimension of the larger bar, use whichever dimension is larger.

STRUCTURAL STEEL

1. Detailing, fabrication and erection shall conform to the AISC Specifications and Standard Code of Practice for the year referenced in the building code noted, except as modified by these notes and the project specifications.
2. Steel shall conform to the following grades unless otherwise noted:
   a. Plate, Angles, M, S and C Shapes – ASTM A36 (Fy=36 ksi)
   b. Bolts - ASTM 325-n, ¾" diameter minimum.
   c. Washers – ASTM F436
   d. Epoxy Shall be: HILTI HIT-HY 200-A; OR DEWALT/POWERS AC100+ GOLD; or approved equal.
   e. Welding Electrodes – E70xx
3. All structural steel shall be primed and panted per Painting Specification. Field touch up Primer and Paint.
4. All welding shall be in accordance with the "Structural Welding Code", AWS D1.1, Latest Edition.
5. Splicing of structural members where not detailed on the drawings is prohibited with our prior approval of the structural engineer.

ABBREVIATIONS

&	AND	I.D.	INSIDE DIAMETER
A.B.	ANCHOR BOLT	JST.	JOIST
ALT.	ALTERNATE	LG.	LONG
ARCH.	ARCHITECT	L.L.	LIVE LOAD
@	AT	LLH	LONG LEG HORIZONTAL
BLDG.	BUILDING	LLV	LONG LEG VERTICAL
BM.	BEAM	L.W.C.	LIGHT WEIGHT CONCRETE
BOT.	BOTTOM	MAX.	MAXIMUM
BRG.	BEARING	MECH.	MECHANICAL
BRDG.	BRIDGING	MIN.	MINIMUM
BYD.	BEYOND	NO. (#)	NUMBER
C.J.	CONSTRUCTION JOINT	N.T.S.	NOT TO SCALE
CL. (℄)	CENTERLINE	O.C.	ON CENTER
CLR.	CLEAR	O.H.	OPPOSITE HAND
CMU	CONCRETE MASONRY UNIT	OPNG.	OPENING
COL.	COLUMN	PEMB	PRE ENGINEERED METAL BUILDING
CONC.	CONCRETE	PL	PLATE
CTR.	CENTER	P.S.F.	POUNDS PER SQUARE FOOT
DBL.	DOUBLE	P.T.	PRESSURE TREATED
DIA (Ø)	DIAMETER	REINF.	REINFORCING
DIAPH.	DIAPHRAGM	R.O.	ROUGH OPENING
D.L.	DEAD LOAD	SCH.	SCHEDULE
DWLS.	DOWELS	SIM.	SIMILAR
EA.	EACH	S.L.	STEEL LINE
EL.	ELEVATION	STAGG.	STAGGERED
E.F.	EACH FACE	STD.	STANDARD
E.W.	EACH WAY	STIFF.	STIFFENER
EX.	EXISTING	THK.	THICK
FDN.	FOUNDATION	THRU.	THROUGH
F.F.	FINISHED FLOOR	T.B.R.	TO BE REMOVED
FLR.	FLOOR	T.O.S.	TOP OF STEEL
FTG.	FOOTING	T.O.W.	TOP OF WALL
GA.	GAUGE	TYP.	TYPICAL
GALV.	GALVANIZED	U.N.O.	UNLESS NOTED OTHERWISE
H.C.	HOLLOW CORE	VERT.	VERTICAL
HDR.	HEADER	W/	WITH
HGR.	HANGER	W.W.F.	WELDED WIRE FABRIC
HORIZ.	HORIZONTAL		
HT.	HEIGHT		

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AMS	AMS
FIELD	FIELD BOOK
CHECKED	CHECK DATE
KTH	8/7/2019

SHEET TITLE
STRUCTURAL NOTES

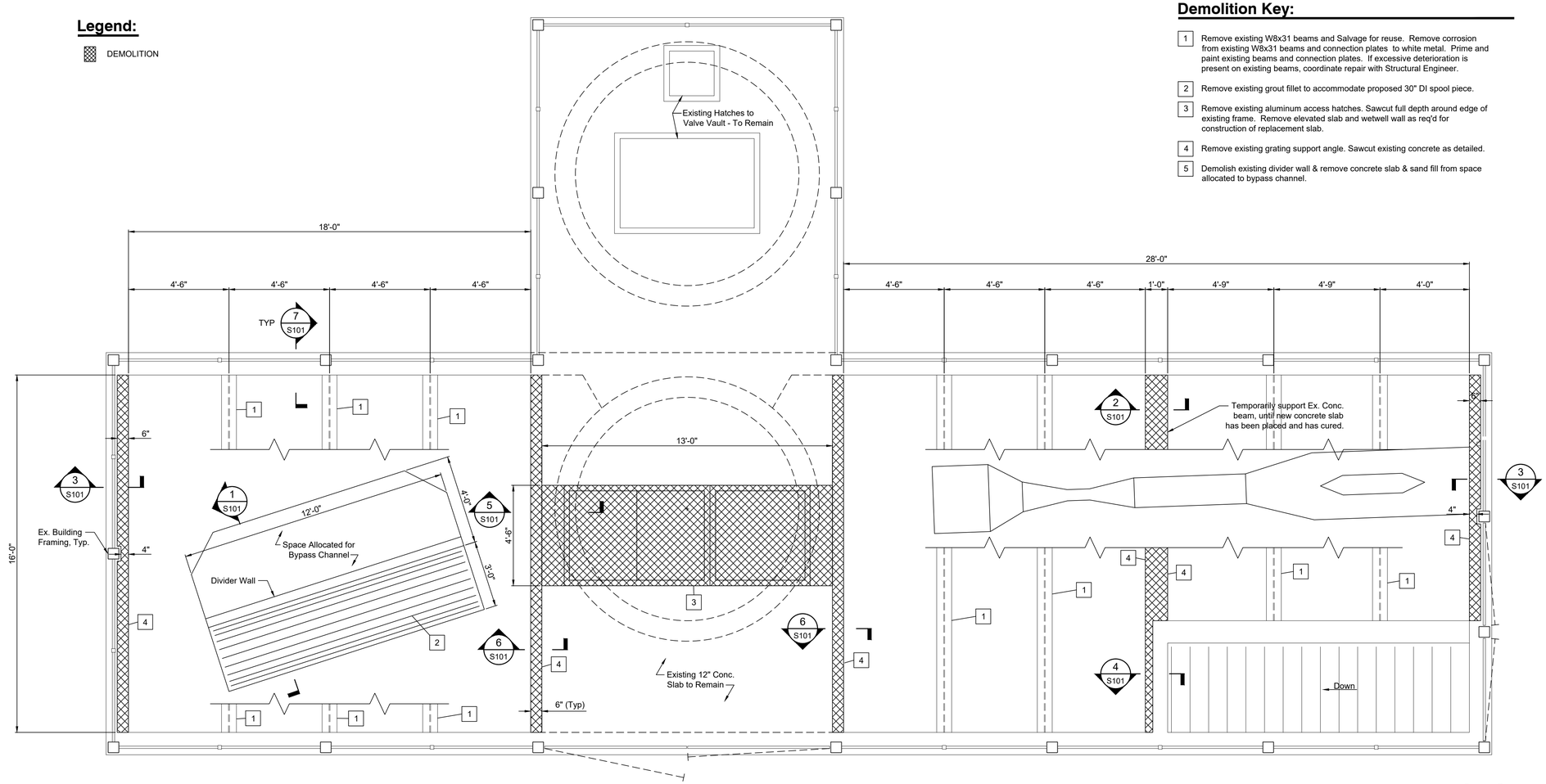
PROJECT NO.
19-0192
DRAWING ISSUED DATE:
08/07/2019
SHEET
S001

Legend:

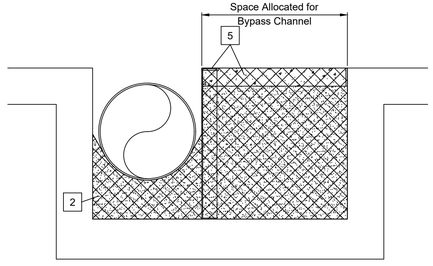
DEMOLITION

Demolition Key:

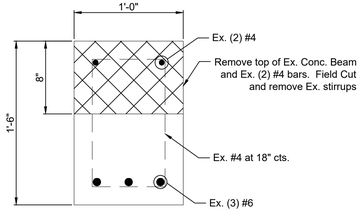
1. Remove existing W8x31 beams and Salvage for reuse. Remove corrosion from existing W8x31 beams and connection plates to white metal. Prime and paint existing beams and connection plates. If excessive deterioration is present on existing beams, coordinate repair with Structural Engineer.
2. Remove existing grout fillet to accommodate proposed 30" DI spool piece.
3. Remove existing aluminum access hatches. Sawcut full depth around edge of existing frame. Remove elevated slab and wetwell wall as req'd for construction of replacement slab.
4. Remove existing grating support angle. Sawcut existing concrete as detailed.
5. Demolish existing divider wall & remove concrete slab & sand fill from space allocated to bypass channel.



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



1 SECTION - CHANNEL REMOVAL
1/2"=1'-0"



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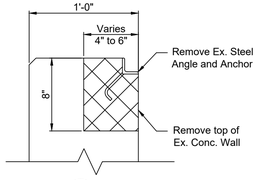

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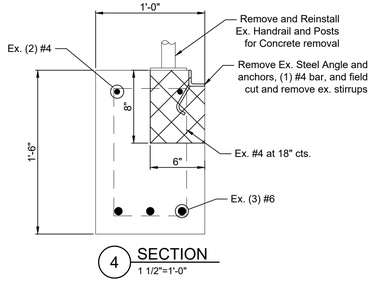

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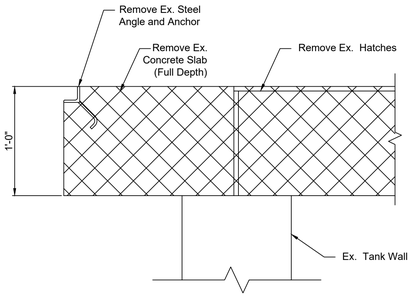

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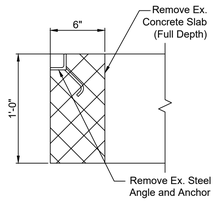

6 SECTION
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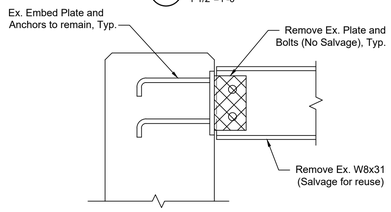

7 SECTION
1 1/2"=1'-0"

SCALE: 3/8" = 1'-0"

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

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

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616 North 24th Street
217.223.3670

REVISION HISTORY

MARK	DESCRIPTION	DATE	APPR
		.	.

SOUTH QUINCY LIFT STATION REHABILITATION
CITY OF QUINCY
730 MAINE STREET
QUINCY, ILLINOIS

Non-Reduced Sheet Size: 22" x 34"
Full sized plans have been prepared using standard scales. Reduced size plans may not conform to standard scales.

DESIGNED	DRAWN
AMS	AMS
FIELD	FIELD BOOK
CHECKED	CHECK DATE
KTH	8/7/2019

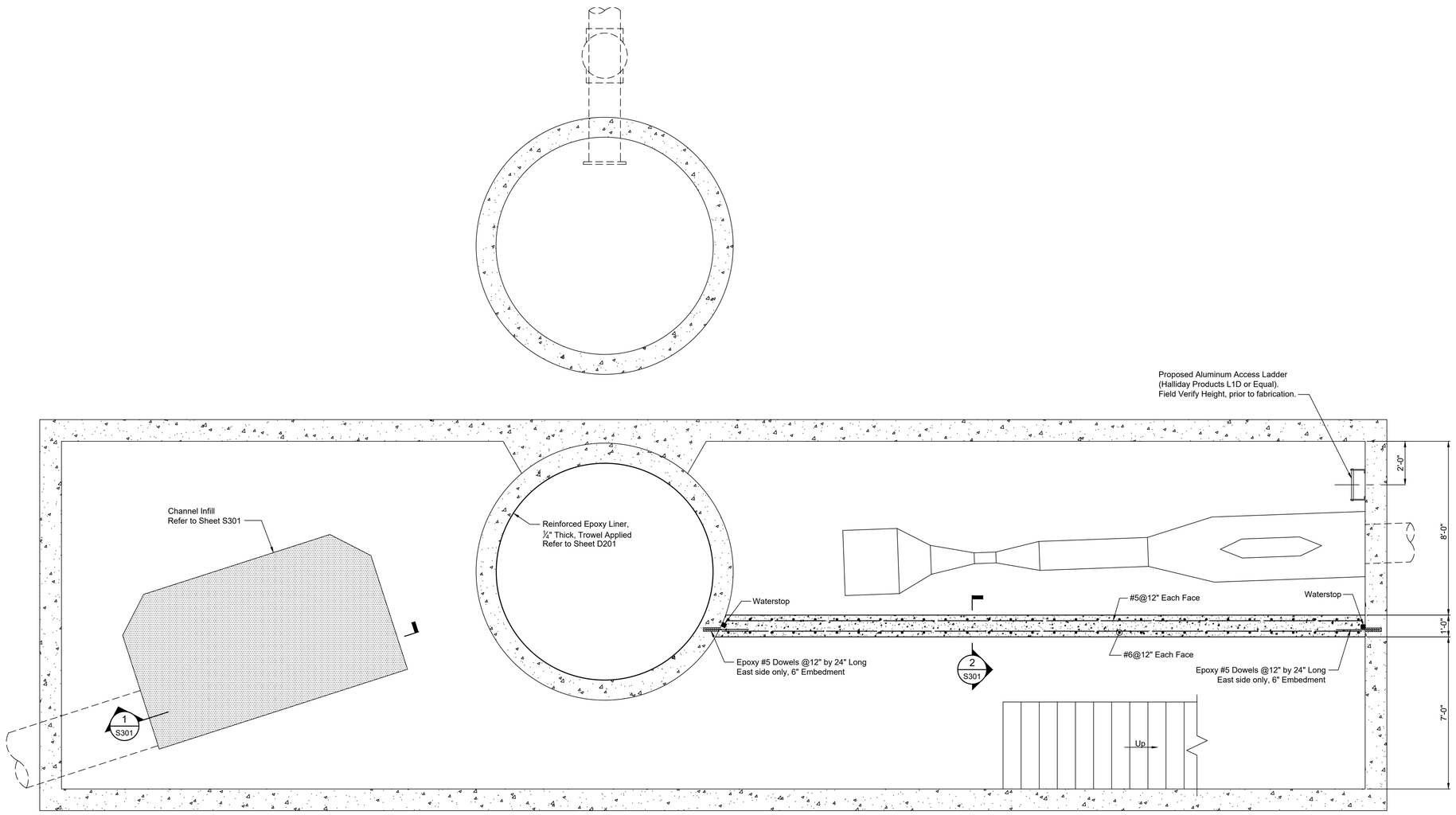
SHEET TITLE

STRUCTURAL DEMOLITION PLAN AND DETAILS

PROJECT NO.
19-0192

DRAWING ISSUED DATE:
08/07/2019

SHEET
S101



EXISTING BOTTOM SLAB PLAN

3/8" = 1'-0"

0 2 4

SCALE: 3/8" = 1'-0"

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REVISION HISTORY

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1		.	.

SOUTH QUINCY LIFT STATION REHABILITATION
CITY OF QUINCY
730 MAINE STREET
QUINCY, ILLINOIS

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FIELD	FIELD BOOK
CHECKED	CHECK DATE
KTH	8/7/2019

SHEET TITLE

EXISTING
BOTTOM
SLAB PLAN

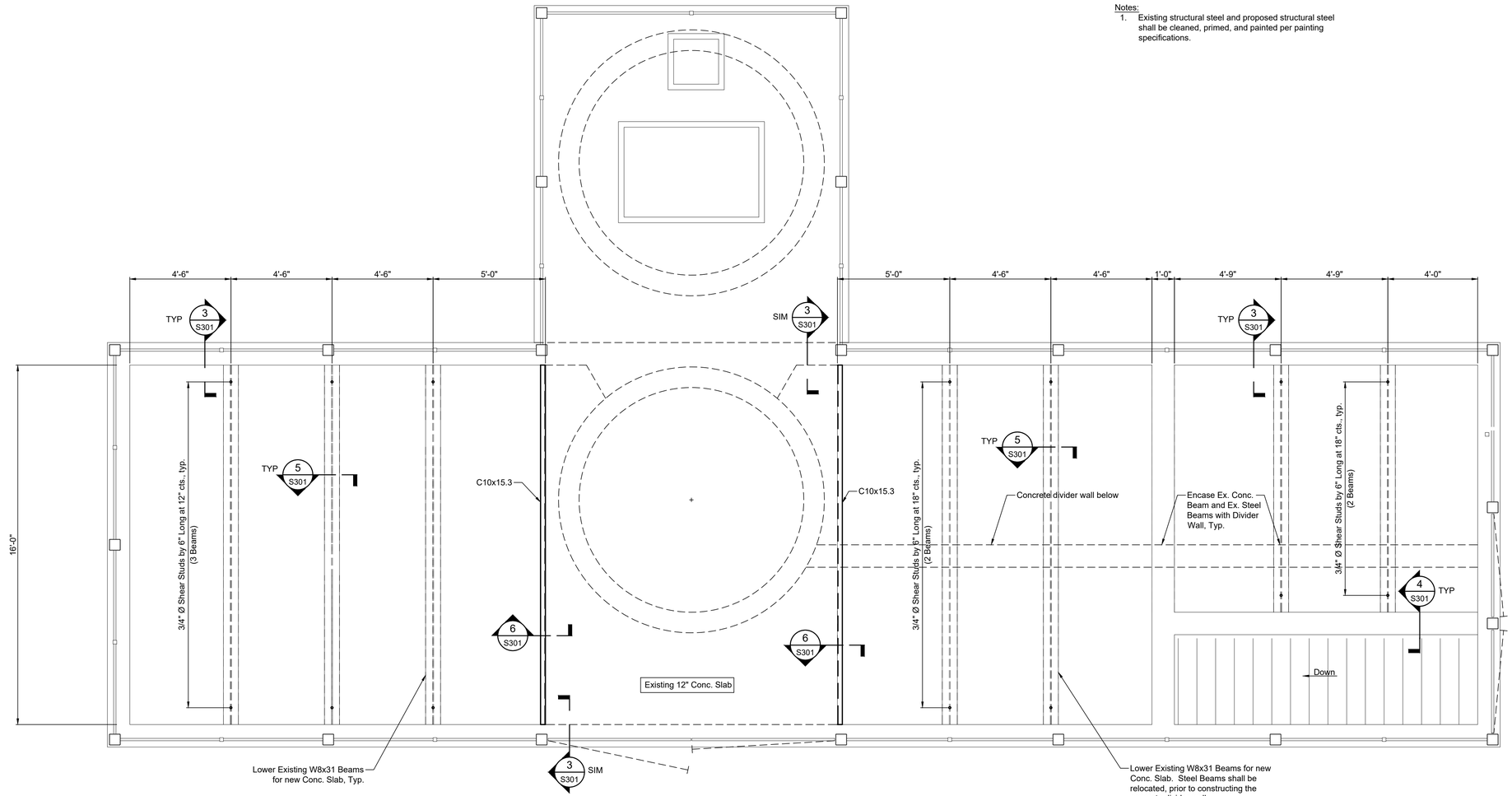
PROJECT NO.
19-0192

DRAWING ISSUED DATE:
08/07/2019

SHEET

S201

Notes:
1. Existing structural steel and proposed structural steel shall be cleaned, primed, and painted per painting specifications.



ELEVATED SLAB FRAMING PLAN

3/8" = 1'-0"

Note: Proposed Conc. Slab not shown for clarity (See Sheet S203 for Slab)

N

0 2 4

SCALE: 3/8" = 1'-0"

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REVISION HISTORY

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1		.	.

SOUTH QUINCY LIFT STATION REHABILITATION
CITY OF QUINCY
730 MAINE STREET
QUINCY, ILLINOIS

Non-Reduced Sheet Size: 22" x 34"
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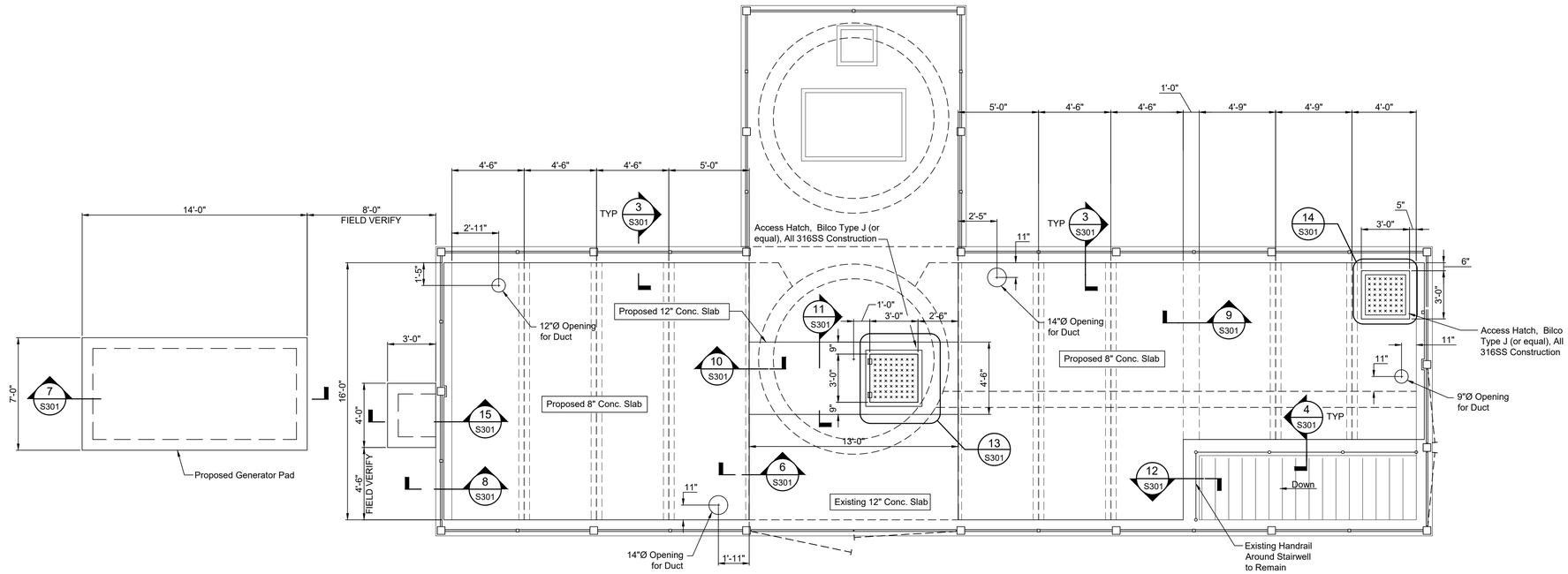
DESIGNED	DRAWN
AMS	AMS
FIELD	FIELD BOOK
CHECKED KTH	CHECK DATE 8/7/2019

SHEET TITLE
ELEVATED SLAB FRAMING PLAN

PROJECT NO. 19-0192
DRAWING ISSUED DATE: 08/07/2019
SHEET
S202



ELEVATED SLAB PLAN

1/2" = 1'-0"

0 1' 2' 4'

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

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REVISION HISTORY

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1		.	.

SOUTH QUINCY LIFT STATION REHABILITATION

CITY OF QUINCY
730 MAINE STREET
QUINCY, ILLINOIS

Non-Reduced Sheet Size: 22" x 34"

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FIELD	FIELD BOOK
CHECKED	CHECK DATE
KTH	8/7/2019

SHEET TITLE

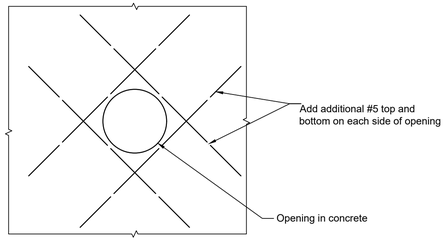
ELEVATED
SLAB
PLAN

PROJECT NO.
19-0192

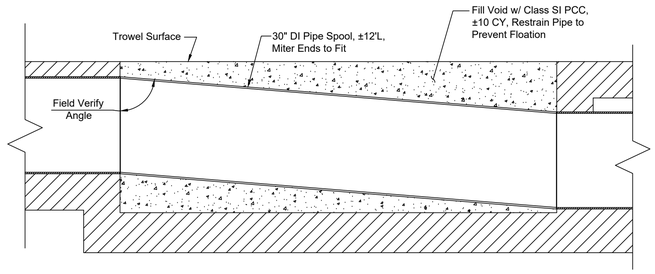
DRAWING ISSUED DATE:
08/07/2019

SHEET

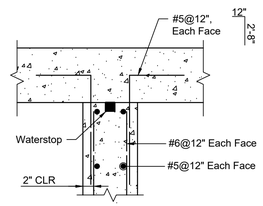
S203

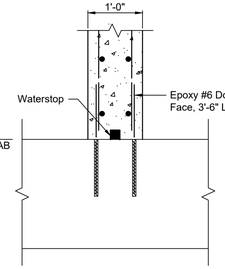


TYPICAL DETAIL
3/4" = 1'-0"

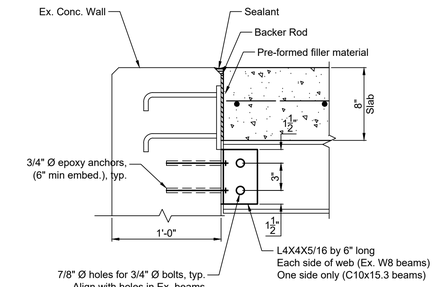


1 SECTION - CHANNEL INFILL
1/2"=1'-0"

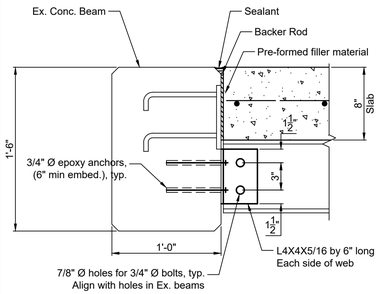




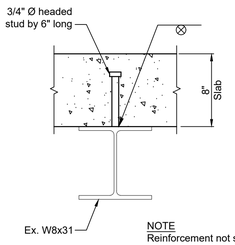
2 SECTION
3/4"=1'-0"



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

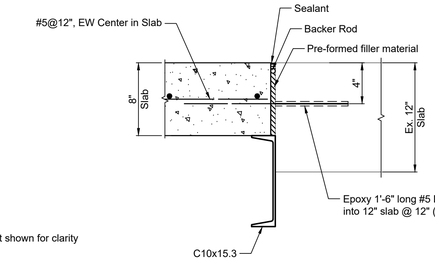


4 SECTION
1 1/2"=1'-0"

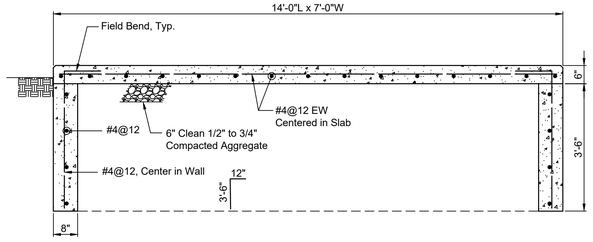


NOTE
Reinforcement not shown for clarity

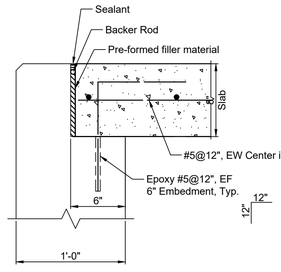
5 SECTION
1 1/2"=1'-0"



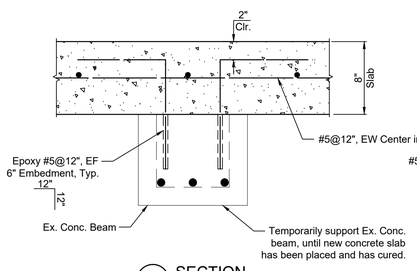
6 SECTION
1 1/2"=1'-0"



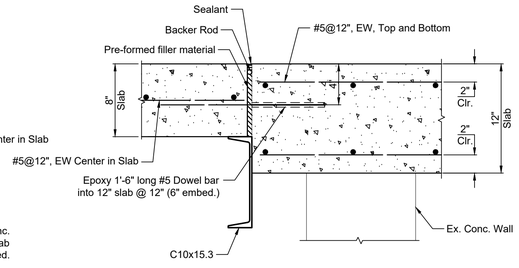
7 SECTION
1/2"=1'-0"



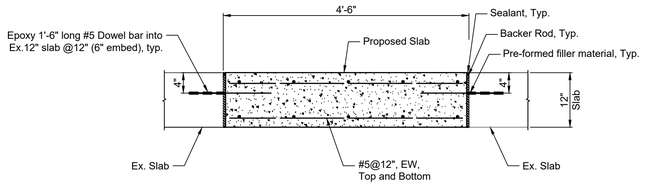
8 SECTION
1 1/2"=1'-0"



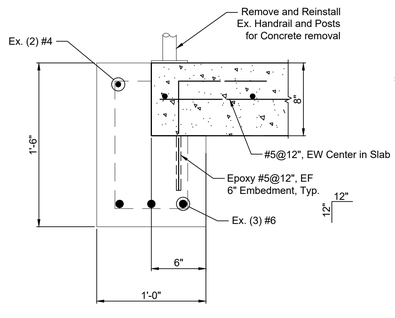
9 SECTION
1 1/2"=1'-0"



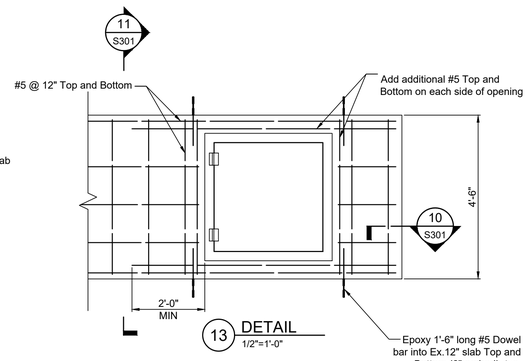
10 SECTION
1 1/2"=1'-0"



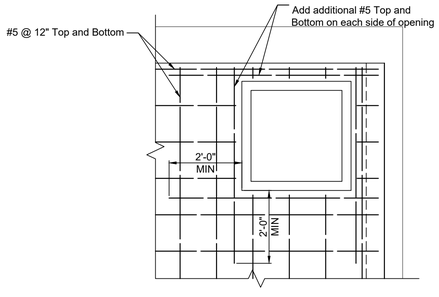
11 SECTION
3/4"=1'-0"



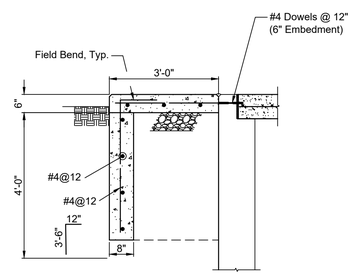
12 SECTION
1 1/2"=1'-0"



13 DETAIL
1/2"=1'-0"



14 DETAIL
1/2"=1'-0"



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

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

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

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

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REVISION HISTORY

MARK	DESCRIPTION	DATE	APPR
1		.	.

SOUTH QUINCY LIFT STATION
REHABILITATION
CITY OF QUINCY
730 MAINE STREET
QUINCY, ILLINOIS

Non-Reduced Sheet Size: 22" x 34"
Full sized plans have been prepared using standard scales. Reduced size plans may not conform to standard scales.

DESIGNED	DRAWN
AMS	AMS
FIELD	FIELD BOOK
CHECKED	CHECK DATE
KTH	8/7/2019

SHEET TITLE
STRUCTURAL DETAILS

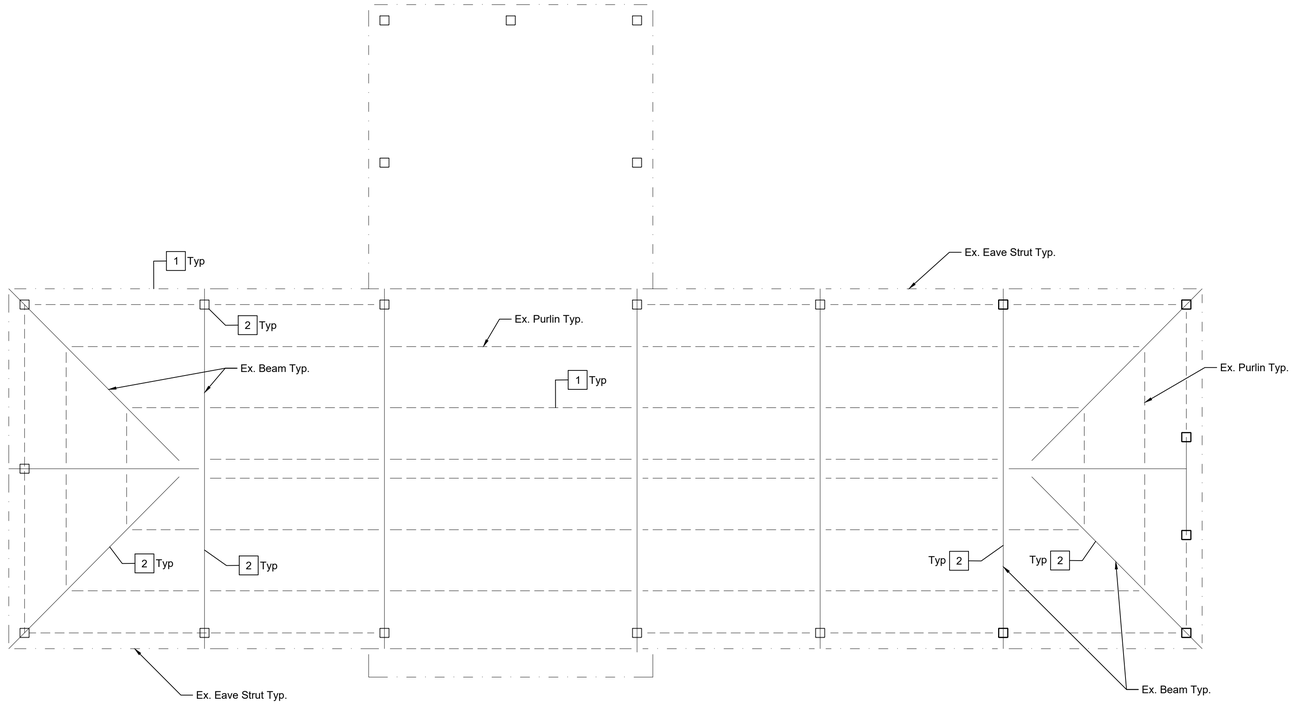
PROJECT NO.
19-0192
DRAWING ISSUED DATE:
08/07/2019
SHEET
S301

LEGEND

EX. BEAMS ————

EX. 8 1/2" PURLIN - - - - - -

EX. 8 1/2" EAVE STRUT -·-·-·-·-



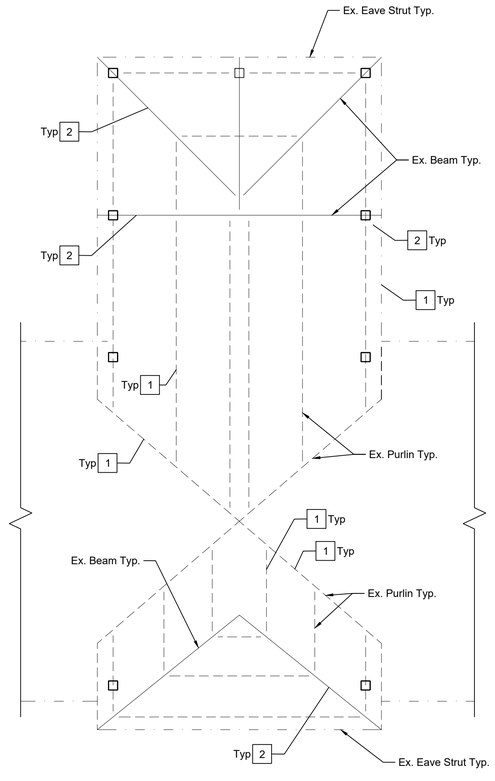
EXISTING LOWER ROOF FRAMING PLAN

1/4" = 1'-0"

Roof Rehabilitation Key:

1 Remove existing Roof Purlins and Eave Strusts and replace with member of equal or greater size . No Salvage. Prime and paint new Purlins and Struts, per specifications.

2 Prime and paint existing beams, columns, and connection plates, per specifications. If excessive deterioration is present on existing steel members, coordinate repair with Structural Engineer.



EXISTING UPPER ROOF FRAMING PLAN

1/4" = 1'-0"

0 2' 4' 8'

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

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REVISION HISTORY

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1		-	-

SOUTH QUINCY LIFT STATION REHABILITATION

CITY OF QUINCY
730 MAINE STREET
QUINCY, ILLINOIS

Non-Reduced Sheet Size: 22" x 34"

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DESIGNED	DRAWN
AMS	AMS
FIELD	FIELD BOOK
-	-
CHECKED	CHECK DATE
KTH	9/12/2019

SHEET TITLE

ROOF FRAMING PLANS

PROJECT NO.
19-0192

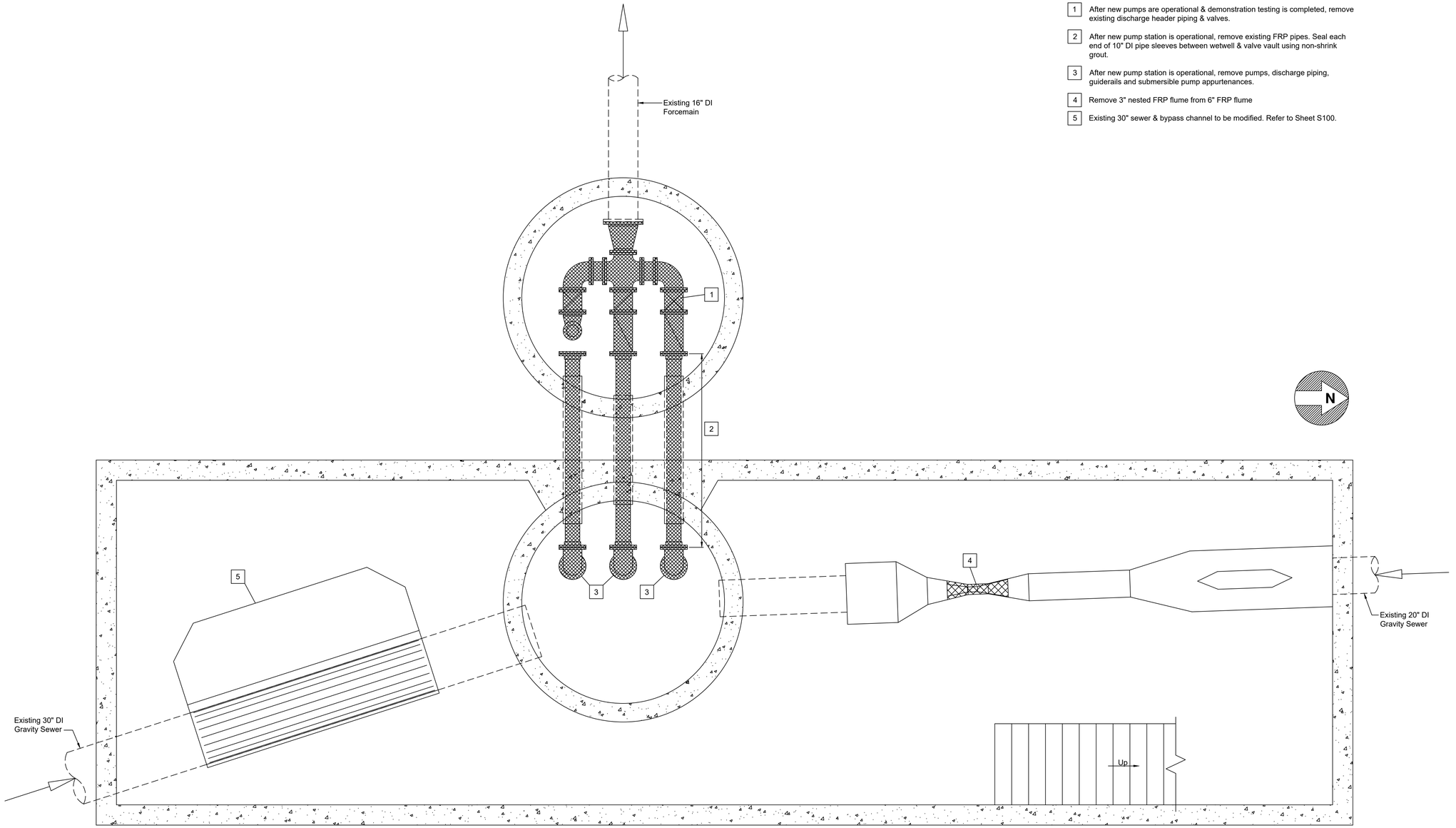
DRAWING ISSUED DATE:
09/12/2019

SHEET

S501

Demolition Key:

1. After new pumps are operational & demonstration testing is completed, remove existing discharge header piping & valves.
2. After new pump station is operational, remove existing FRP pipes. Seal each end of 10" DI pipe sleeves between wetwell & valve vault using non-shrink grout.
3. After new pump station is operational, remove pumps, discharge piping, guiderails and submersible pump appurtenances.
4. Remove 3" nested FRP flume from 6" FRP flume
5. Existing 30" sewer & bypass channel to be modified. Refer to Sheet S100.



Process Demolition Plan View below Elevated Slab

Scale: 3/8" = 1'-0"

Prepared for:
Department of Utilities
& Engineering
City of Quincy, Illinois

1 Inch

Full Scale Drawing: 22x34"

2019 Sewage Collection
System Improvements
South Quincy Lift Station
Rehabilitation

Process Piping Demolition
Plan View below Elevated Slab

Date 09/10/19

Sheet Number

PD100

Equipment ID:

01 Self-priming sewage pump & motor, skid mounted
02 10" knife gate valve, 316SS gate, handwheel operator
03 12" magnetic flow meter
04 12" eccentric plug valve, CI body, EPDM plug, gear operator & handwheel
05 6" eccentric plug valve, CI body, EPDM plug, gear operator & handwheel
06 6" cam & groove hose plug w/ flanged end ("PFA Adapter"), aluminum construction
07 16x12" DI flanged eccentric reducer
08 12" DI flanged base tee
09 12"x90° DI flanged elbow (short radius)
10 12x6" DI flanged eccentric reducer (short radius) w/ base under large end
11 12" DI flanged tee
12 12x10" DI flanged reducing elbow (short radius)
13 12" DI pipe spool, flange x flange, length varies
14 12" CI blind flange w/ 2" NPT tap at crown
15 12" slip-on flange & stub adapter, 316SS
16 12" pipe spool, buttweld, 316SS, Sched. 10 or heavier, length varies
17 12"x90° elbow, buttweld, 316SS, Sched. 10 or heavier
18 16x12" eccentric reducer, buttweld, 316SS, Sched. 10 or heavier
19 10" DI pipe spool, flange x flange, 9" L
20 10" rubber flapper check valve
21 1" air release valve (furnished by Pump Manufacturer)
22 1" sched. 40 316SS tee w/ 1" Sched. 80 PVC plug
23 1" sched. 40 316SS union
24 Air release piping, 1" Sched. 40 316SS pipe (length varies)
25 10" flange filler, ½" thick
26 2" sewage air release valve, SS construction
27 2" ball valve, 2" Sched 40 pipe nipples & 2" Sched 40 90° elbow, all 316SS
28 12x10" DI flanged reducing tee
29 12"x90° MJ Elbow w/ Romac Grip-Ring joint restraint
30 12" DI pipe spool, flange x plain end
31 Mueller DR2S tapping saddle, 10" DI, 1" NPT tap, nylon coated DI body, SS trim
32 12" flange adapter, Ford Meter Box Uniflange Series 200
33 12" DI pipe spool, MJ x plain end, 36" long

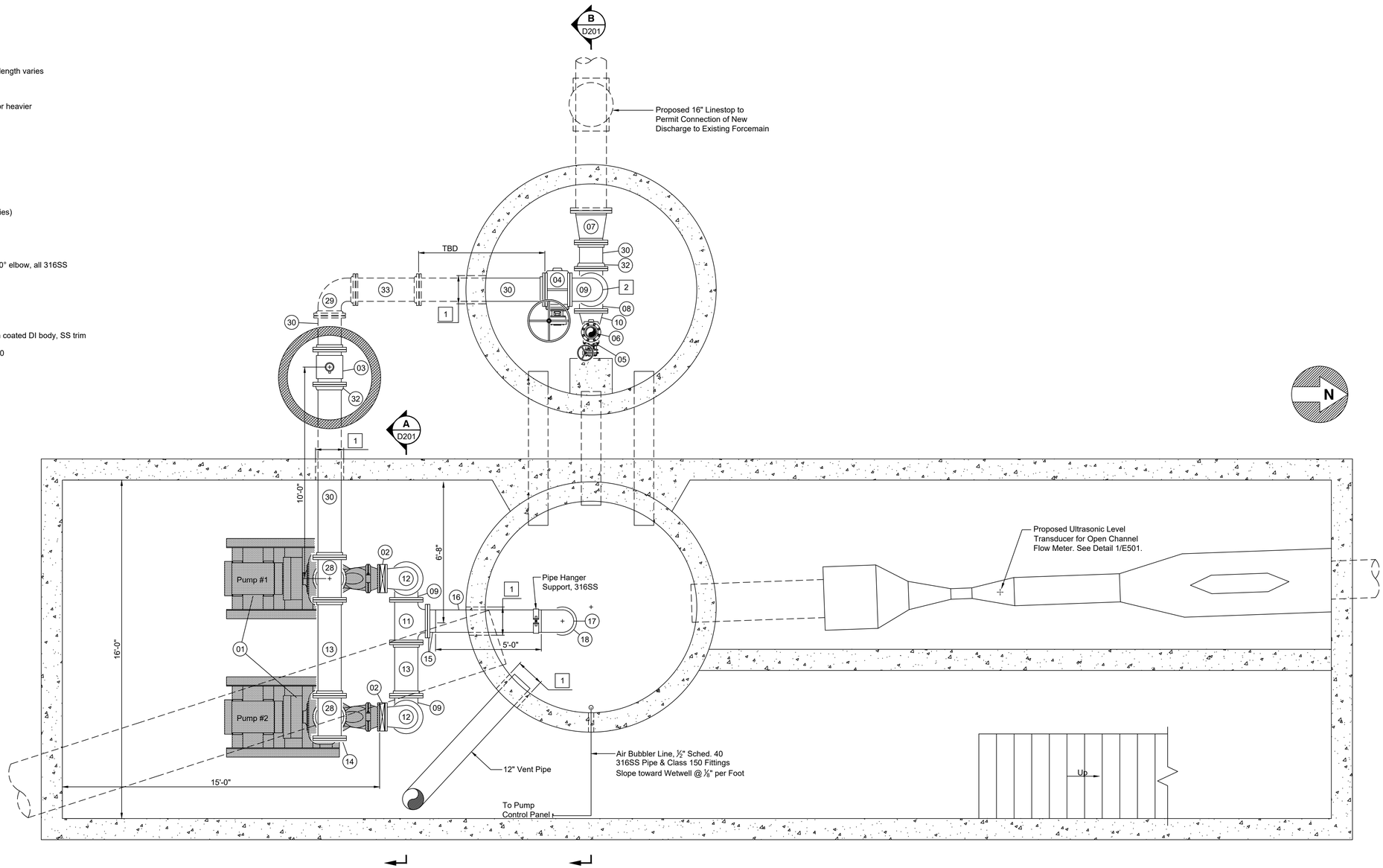
General Construction Notes:

1. All pipe hardware (bolts, nuts, studs, etc.) and pipe supports shall be 18-8 stainless steel construction. Apply anti-galling compound to threads prior to assembly.

Keyed Notes:

1 Core drill 16"Ø opening for proposed pipe. Seal annular space using Model S-316 Link Seal.

2 To test operation of the new pumps while the existing pumping system is still in service, rotate elbow 180° and install temporary 12" discharge piping from the elbow to the wetwell access hatch. Recirculate the pump discharge during the pump testing period.



Process Plan View below Elevated Slab

Scale: ⅜" = 1'-0"

Prepared for:
Department of Utilities
& Engineering
City of Quincy, Illinois

1 Inch

Full Scale Drawing: 22x34"

2019 Sewage Collection System Improvements South Quincy Lift Station Rehabilitation

Process Improvements Plan View below Elevated Slab

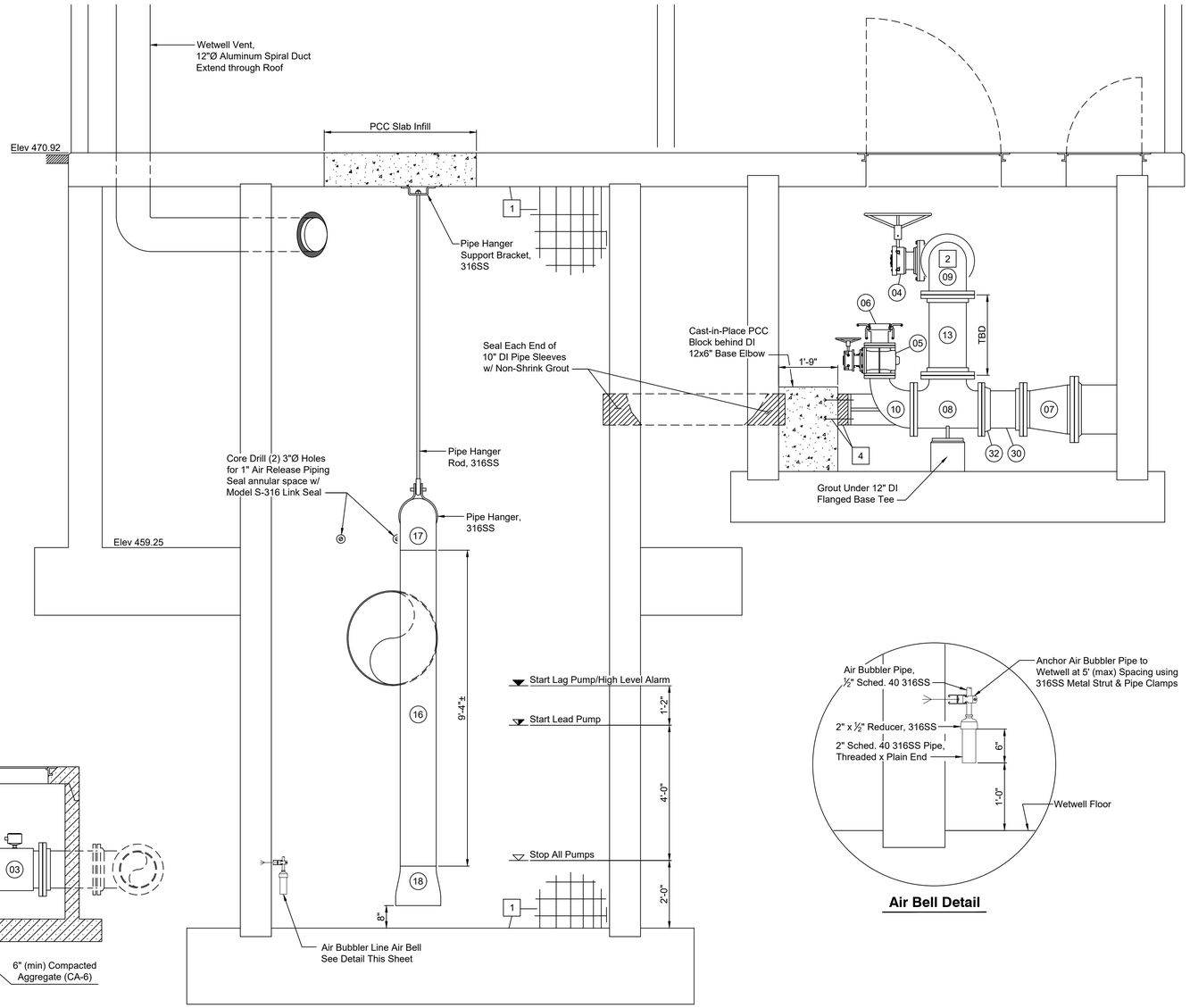
Date 09/10/19

Sheet Number

P101

Equipment ID:

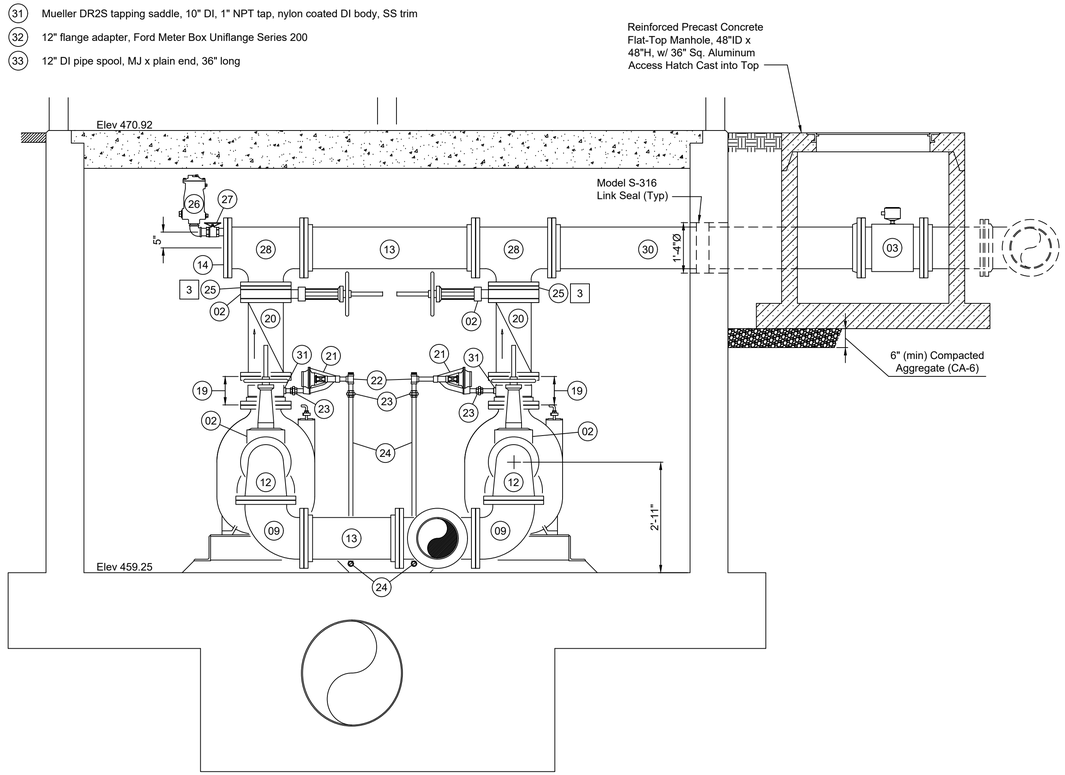
01. Self-priming sewage pump & motor, skid mounted
02. 10" knife gate valve, 316SS gate, handwheel operator
03. 12" magnetic flow meter
04. 12" eccentric plug valve, CI body, EPDM plug, gear operator & handwheel
05. 6" eccentric plug valve, CI body, EPDM plug, gear operator & handwheel
06. 6" cam & groove hose plug w/ flanged end ("PFA Adapter"), aluminum construction
07. 16x12" DI flanged eccentric reducer
08. 12" DI flanged base tee
09. 12"x90° DI flanged elbow (short radius)
10. 12x6" DI flanged eccentric reducer (short radius) w/ base under large end
11. 12" DI flanged tee w/ 2" NPT tap at crown
12. 12x10" DI flanged reducing elbow (short radius)
13. 12" DI pipe spool, flange x flange, length varies
14. 12" CI blind flange
15. 12" slip-on flange & stub adapter, 316SS
16. 12" pipe spool, buttweld, 316SS, Sched. 10 or heavier, length varies
17. 12"x90° elbow, buttweld, 316SS, Sched. 10 or heavier
18. 16x12" eccentric reducer, buttweld, 316SS, Sched. 10 or heavier
19. 10" DI pipe spool, flange x flange, 9" L
20. 10" rubber flapper check valve
21. 1" air release valve (furnished by Pump Manufacturer)
22. 1" sched. 40 316SS tee w/ 1" Sched. 80 PVC plug
23. 1" sched. 40 316SS union
24. Air release piping, 1" Sched. 40 316SS pipe (length varies)
25. 10" flange filler, ½" thick
26. 2" sewage air release valve, SS construction
27. 2" ball valve, 2" Sched 40 pipe nipples & 2" Sched 40 90° elbow, all 316SS
28. 12x10" DI flanged reducing tee
29. 12"x90° MJ Elbow w/ Romac Grip-Ring joint restraint
30. 12" DI pipe spool, flange x plain end
31. Mueller DR2S tapping saddle, 10" DI, 1" NPT tap, nylon coated DI body, SS trim
32. 12" flange adapter, Ford Meter Box Uniflange Series 200
33. 12" DI pipe spool, MJ x plain end, 36" long



B D101 **Wetwell & Valve Pit Elevation View**

Scale: ½" = 1'-0"

Air Bell Detail



A D101 **Pump Installation Front Elevation View**

Scale: ½" = 1'-0"

General Construction Notes:

1. All pipe hardware (bolts, nuts, studs, etc.) and pipe supports shall be 18-8 stainless steel construction. Apply anti-galling compound to threads prior to assembly.

Keyed Notes:

1. Remove any loose concrete. Clean wetwell via abrasive blasting to develop surface profile for coating. Follow blasting with high pressure water cleaning utilizing detergent and hot water to remove grease. Rinse well. Fill voids with two-component, 100% solids, high strength and structural-grade epoxy (EPOXYTEC CPP or approved equal), using ½" maximum passes. After filling voids, apply one (1) coat of EPOXYTEC CPP to all surfaces within the wetwell (±850 ft2). Use a notched trowel then flatten to ¼" thickness. Coordinate work with the Owner to minimize service interruptions.
2. To test operation of the new pumps while the existing pumping system is still in service, rotate elbow 180° and install temporary 12" piping from the elbow to the wetwell access hatch. Recirculate the pump discharge during the pump testing period.
3. Flange filler is required to provide clearance for knife gate valve handwheel. May be omitted if clearance is sufficient w/o flange filler.
4. Anchor 12x6" base tee to cured PCC block using (4) ⅞"Ø SS wedge anchors. Restrain base tee using washers & hex nuts on each side of base flange. Grout space between base flange and PCC block.

Prepared for:
Department of Utilities
& Engineering
City of Quincy, Illinois

1 Inch

Full Scale Drawing: 22x34"

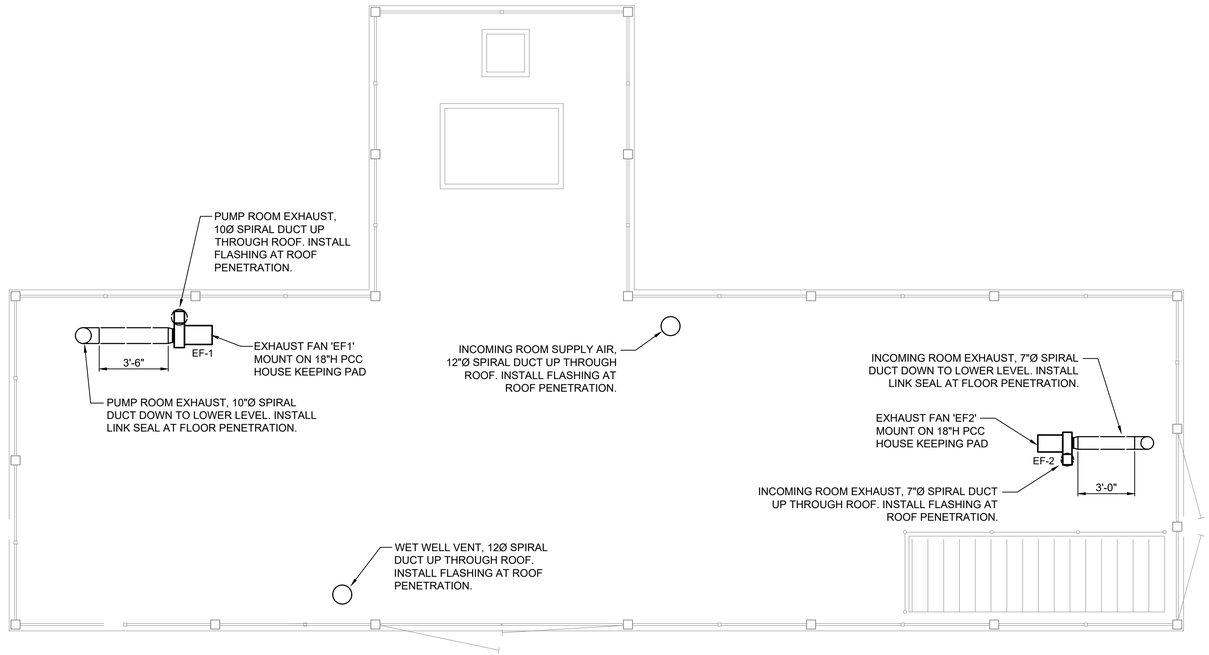
2019 Sewage Collection System Improvements South Quincy Lift Station Rehabilitation

Process Sections

Date 09/10/19

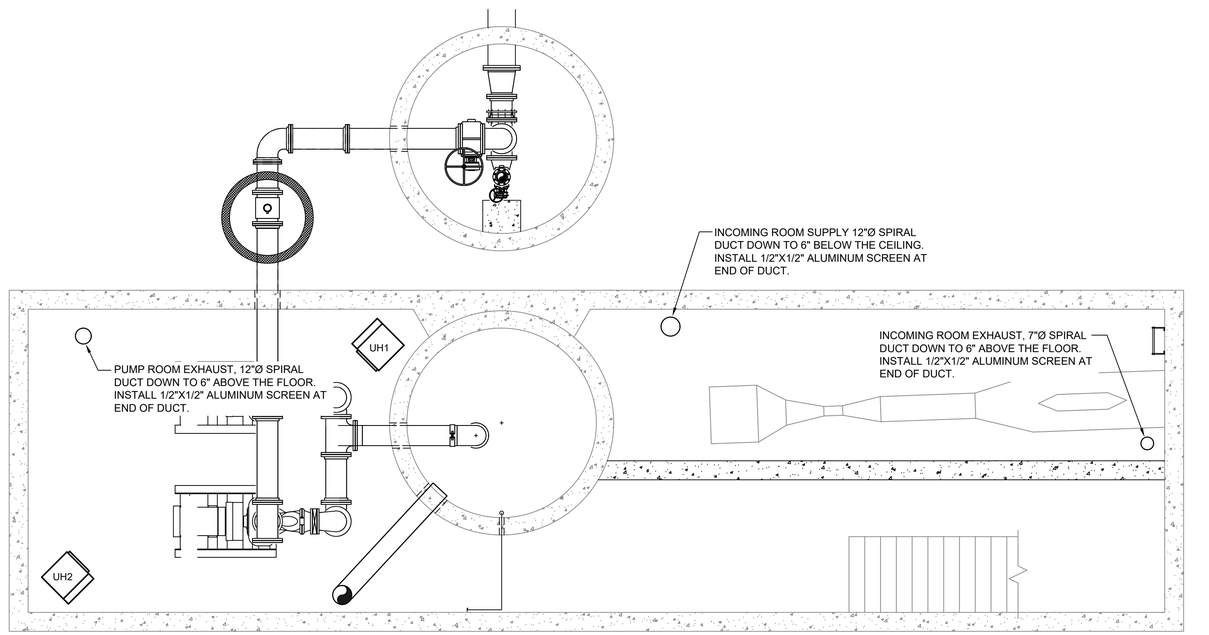
Sheet Number

P201



MECHANICAL PLAN - MAIN LEVEL

1/4" = 1'-0"



MECHANICAL PLAN - LOWER LEVEL

1/4" = 1'-0"

MECHANICAL LEGEND

EXISTING	TYPE/COMMENT	PROPOSED
	WALL MOUNTED SUPPLY AIR GRILLE.	
	CEILING MOUNTED SUPPLY AIR GRILLE.	
	WALL MOUNTED RETURN AIR GRILLE	
	CEILING MOUNTED RETURN AIR GRILLE	
	CEILING MOUNTED EXHAUST AIR GRILLE	
SIZE	SUPPLY AIR DUCTWORK	SIZE
SIZE	RETURN AIR DUCTWORK	SIZE
SIZE	EXHAUST AIR DUCTWORK	SIZE
SIZE	FRESH AIR DUCTWORK	SIZE
SIZE DIA	FLEX DUCT	SIZE DIA
(R) EQUIP.	REMOTE SENSOR (FOR NOTED EQUIPMENT)	(R) EQUIP.
(T) EQUIP.	THERMOSTAT (FOR NOTED EQUIPMENT)	(T) EQUIP.
VD	VOLUME DAMPER	VD
A XXX	DIFFUSER CALLOUT/REQUIRED CFM	A XXX

MECHANICAL NOTES:

1. APPLICABLE STANDARDS: NFPA 90A, NFPA 90B, 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. LOW PRESSURE DUCTWORK SHALL COMPLY WITH THE LATEST APPLICABLE SHEET METAL AND AIR CONDITIONING CONTRACTORS ASSOCIATION (SMACNA) STANDARDS AND RECOMMENDATIONS.
3. HANG DUCTWORK IN ACCORDANCE WITH SMACNA RECOMMENDATIONS. SUPPORT DIRECTLY FROM STRUCTURE.
4. MECHANICAL EQUIPMENT SUCH AS RTUs, MAUs, FANS, ETC. SHALL BE FURNISHED AS INDICATED IN EQUIPMENT SCHEDULES.
5. MECHANICAL CONTRACTOR SHALL BE RESPONSIBLE FOR ALL MECHANICAL WIRING, INCLUDING CONTROLS FOR STATS, RTUs, EXHAUST FANS, DAMPERS, ETC.
6. TESTING AND BALANCING SHALL BE PERFORMED BY AN INDEPENDENT TAB CONTRACTOR WITH AT LEAST FIVE YEARS OF EXPERIENCE AND UNDER THE SUPERVISION OF A LICENSED ENGINEER.

GENERAL DUCT CONSTRUCTION NOTES:

1. SPIRAL DUCT SHALL BE MANUFACTURED FROM ALUMINUM ALLOY 3003, 0.032" MINIMUM WALL THICKNESS, WITH ⅝" FLANGES ROLL FORMED DIRECTLY ON THE ENDS OF THE SPIRAL DUCT AND FITTINGS. PIPE AND FITTINGS SHALL BE JOINTED USING A NEOPRENE GASKET AND BARREL CLAMP. DUCT SHALL BE E-Z FLANGE JR. SPIRAL PIPE SYSTEM AS MANUFACTURED BY SHEET METAL CONNECTORS INC. (ROCKFORD, IL) OR EQUAL.
2. SEAL ANNULAR SPACE THROUGH FLOOR PENETRATIONS USING LINK SEAL MODEL S-316, OR EQUAL.

NORTH

0 2' 4' 8'

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

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REVISION HISTORY

MARK	DESCRIPTION	DATE	APPR
1		-	-

SOUTH QUINCY LIFT STATION REHABILITATION

CITY OF QUINCY
730 MAINE STREET
QUINCY, ILLINOIS

Non-Reduced Sheet Size: 22" x 34"
Full sized plans have been prepared using standard scales. Reduced size plans may not conform to standard scales.

DESIGNED	DRAWN
JAK	JAK
FIELD	FIELD BOOK
-	-
CHECKED	CHECK DATE
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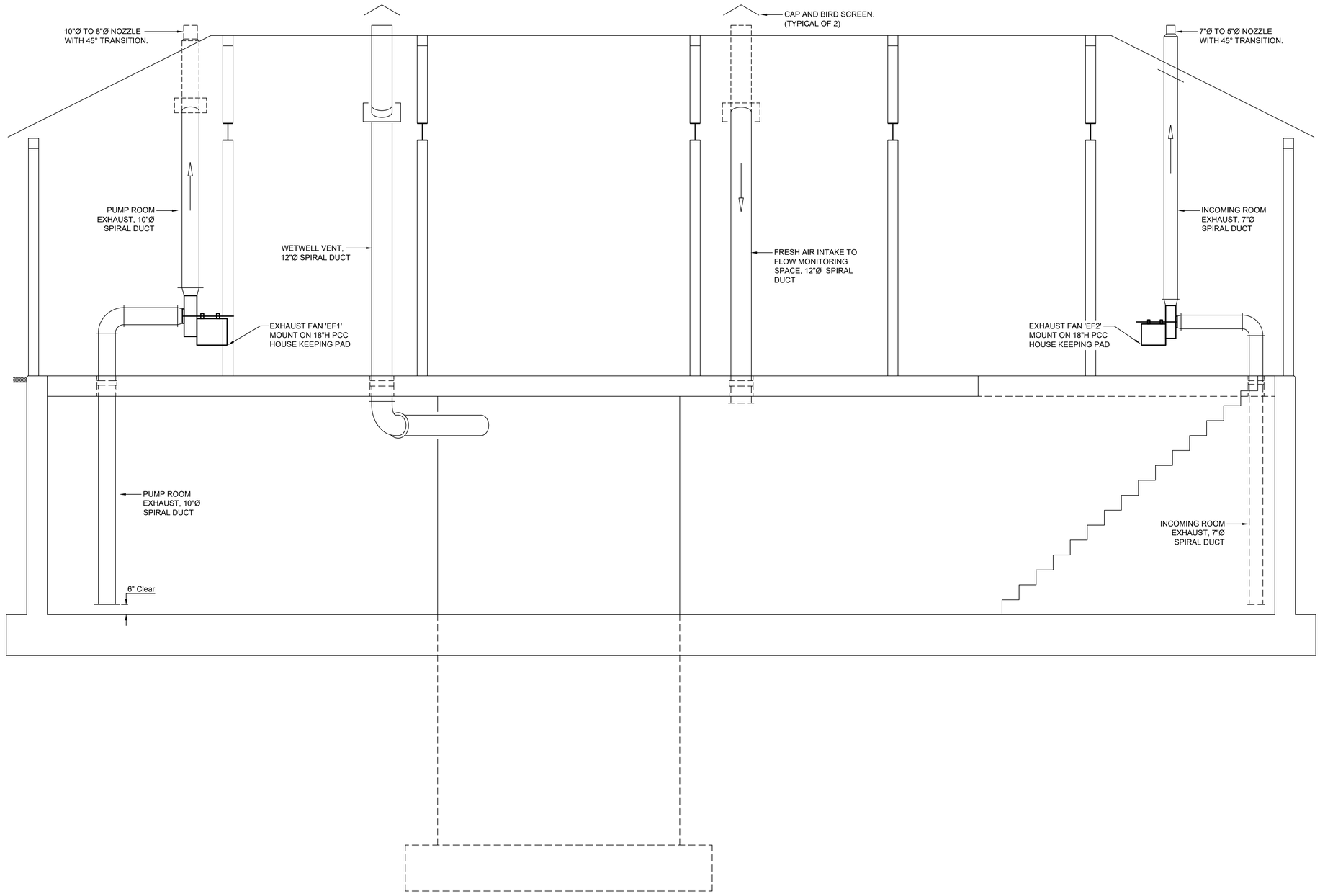
SHEET TITLE

MECHANICAL PLANS

PROJECT NO.
19-0192

DRAWING ISSUED DATE:
09/10/2019

SHEET
M101



MECHANICAL - ELEVATION VIEW

3/8" = 1'-0"

0 2 4

SCALE: 3/8" = 1'-0"

Unit Heater Schedule

ID	Manufact.	Model	kW	Voltage	Phase	Mounting	Notes
UH1	Modine	HEX	30	480	3	Ceiling	Provide factory installed thermostat & basic mounting kit
UH2	Modine	HEX	30	480	3	Ceiling	Provide factory installed thermostat & basic mounting kit

Exhaust Fan Schedule

ID	Manufact.	Model	cfm @ inches w.g.	rpm	bhp	Voltage	Phase	Notes
EF1	Greenheck	BCSW-FRP	1300 @ 1.0	1800	1.2	480	3	Fiberglass Centrifugal Fan, Type B Spark Resistance
EF2	Greenheck	BCSW-FRP	600 @ 1.0	2000	0.4	480	3	Fiberglass Centrifugal Fan, Type B Spark Resistance

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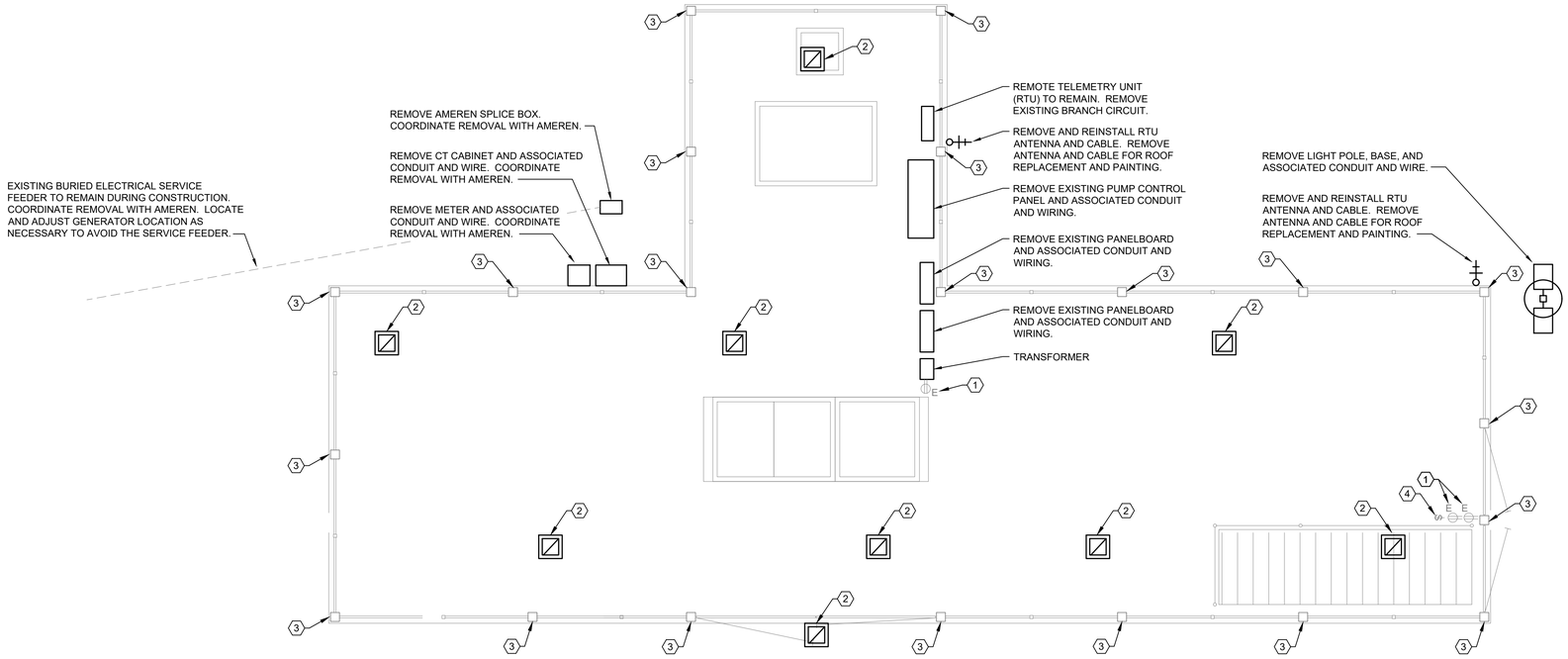
MECHANICAL ELEVATION AND SCHEDULES

PROJECT NO.
19-0192

DRAWING ISSUED DATE:
09/10/2019

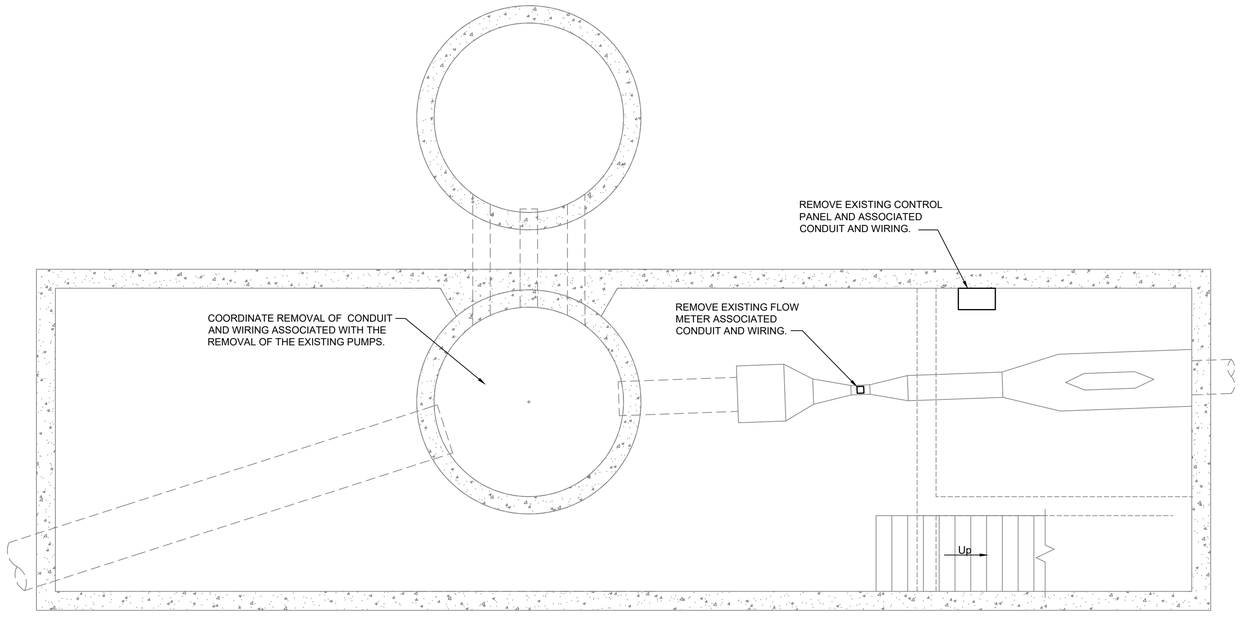
SHEET

M201



ELECTRICAL DEMOLITION PLAN - MAIN LEVEL

1/4" = 1'-0"



ELECTRICAL DEMOLITION PLAN - LOWER LEVEL

1/4" = 1'-0"

ELECTRICAL SYMBOLS

EXISTING	TYPE/COMMENT	PROPOSED
$	LIGHT SWITCH.	$
$X	LIGHT SWITCH, x-WAY.	$X
	FLOOR BOX WITH DUPLEX RECEPT.	
	FLOOR BOX FOR DATA/COMMUNICATION	
	WALL BOX FOR TELEPHONE	
	WALL BOX FOR DATA/COMMUNICATION	
E	DUPLEX RECEPTACLE OUTLET	
GFCI	GROUND FAULT CIRCUIT INTERRUPTER	GFCI
WP	WEATHER PROOF RECEPTACLE OUTLET - INSTALL 18" ABOVE PROPOSED GRADE AS SHOWN ON BUILDING ELEVATIONS	WP
	QUAD RECEPTACLE OUTLET	
J	JUNCTION BOX	J
M	MOTOR CONNECTION	M
	ELECTRICAL DISCONNECT, NEMA 4X FOR ALL LOCATIONS	
X-##	CIRCUITING NOTATION: X DENOTES PANEL AND ## DENOTES CIRCUIT NUMBER.	X-##
	DENOTES CIRCUITING FOR STANDARD ELECTRICAL DEVICES.	

ELECTRICAL NOTES:

1. 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.
2. 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.
3. 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 ENCOUNTERED.
4. 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.
5. GROUNDING: ALL GROUNDING SHALL BE IN STRICT ACCORDANCE WITH THE LATEST EDITION OF THE NATIONAL ELECTRICAL CODE (NEC).
6. INSTALLATION OF ELECTRICAL DEVICES SHALL BE COORDINATED WITH OTHER TRADES AS NECESSARY TO PREVENT ANY CONFLICTS DURING CONSTRUCTION.
7. LIGHTING: FURNISH AND INSTALL ALL LIGHTING FIXTURES COMPLETE WITH LAMPS IN ACCORDANCE WITH THE LIGHTING FIXTURE SCHEDULE SHOWN ON THE DRAWINGS. ALL UNITS SHALL BE COMPLETE WITH SUSPENSION ACCESSORIES, CANOPIES, SOCKETS, LOUVERS, FRAMES, AND ROUGH-IN BOXES, WIRED AND ASSEMBLES TO FURNISH A COMPLETE WORKABLE SYSTEM.
8. LOW VOLTAGE CONDUIT AND JUNCTION BOXES SHALL BE INSTALLED BY THE ELECTRICAL CONTRACTOR.
9. EQUIPMENT GROUNDING CONDUCTORS SHALL BE PULLED WITH ALL BRANCH CIRCUITS. CONDUIT SHALL NOT BE USED AS A GROUND U.N.O.
10. ELECTRICAL CONTRACTOR SHALL FURNISH AND INSTALL ALL MATERIALS, ACCESSORIES, TOOLS, EQUIPMENT, TRANSPORTATION, LABOR, SERVICES AND OPERATIONS NECESSARY FOR A COMPLETE ELECTRICAL SYSTEM.
11. ELECTRICAL CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS AND ARRANGE FOR ALL INSPECTIONS REQUIRED BY STATE OR LOCAL AUTHORITIES.
12. MATERIALS MUST BE NEW, IN FIRST CLASS CONDITION.
13. CONDUIT SHALL BE SEPARATELY HUNG AND ANCHORED, FREE TO EXPAND AND CONTRACT QUIETLY, WITHOUT IMPOSING STRAINS ON STRUCTURE, DEVICES, AND EQUIPMENT. CONDUIT SHALL BE RUN PARALLEL OR PERPENDICULAR TO BUILDING LINES.
14. CONTRACTOR SHALL PERFORM EXCAVATION REQUIRED TO INSTALL HIS WORK.

ELECTRICAL KEY NOTES (AS NOTED ON THIS SHEET ONLY)

1. REMOVE EXISTING RECEPTACLE AND ASSOCIATED CONDUIT AND WIRE.
2. REMOVE EXISTING LIGHT FIXTURE AND ASSOCIATED CONDUIT AND WIRE.
3. REMOVE EXISTING GROUND RING CONNECTIONS TO STRUCTURAL STEEL. PREPARE BURIED GROUND RING LOOP FOR REUSE.
4. REMOVE LIGHT SWITCH AND ASSOCIATED CONDUIT AND WIRE.

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0 2' 4' 8'

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

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REVISION HISTORY

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SOUTH QUINCY LIFT STATION REHABILITATION

CITY OF QUINCY
730 MAINE STREET
QUINCY, ILLINOIS

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JAK	JAK
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SHEET TITLE

ELECTRICAL DEMOLITON PLANS

PROJECT NO.
19-0192

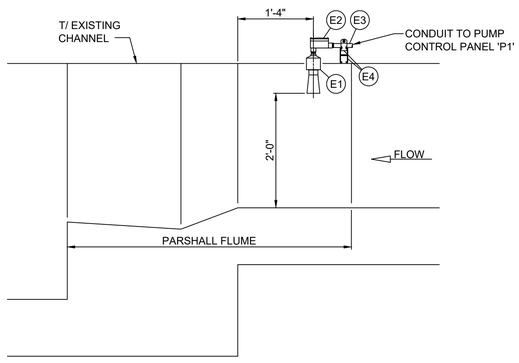
DRAWING ISSUED DATE:
09/10/2019

SHEET

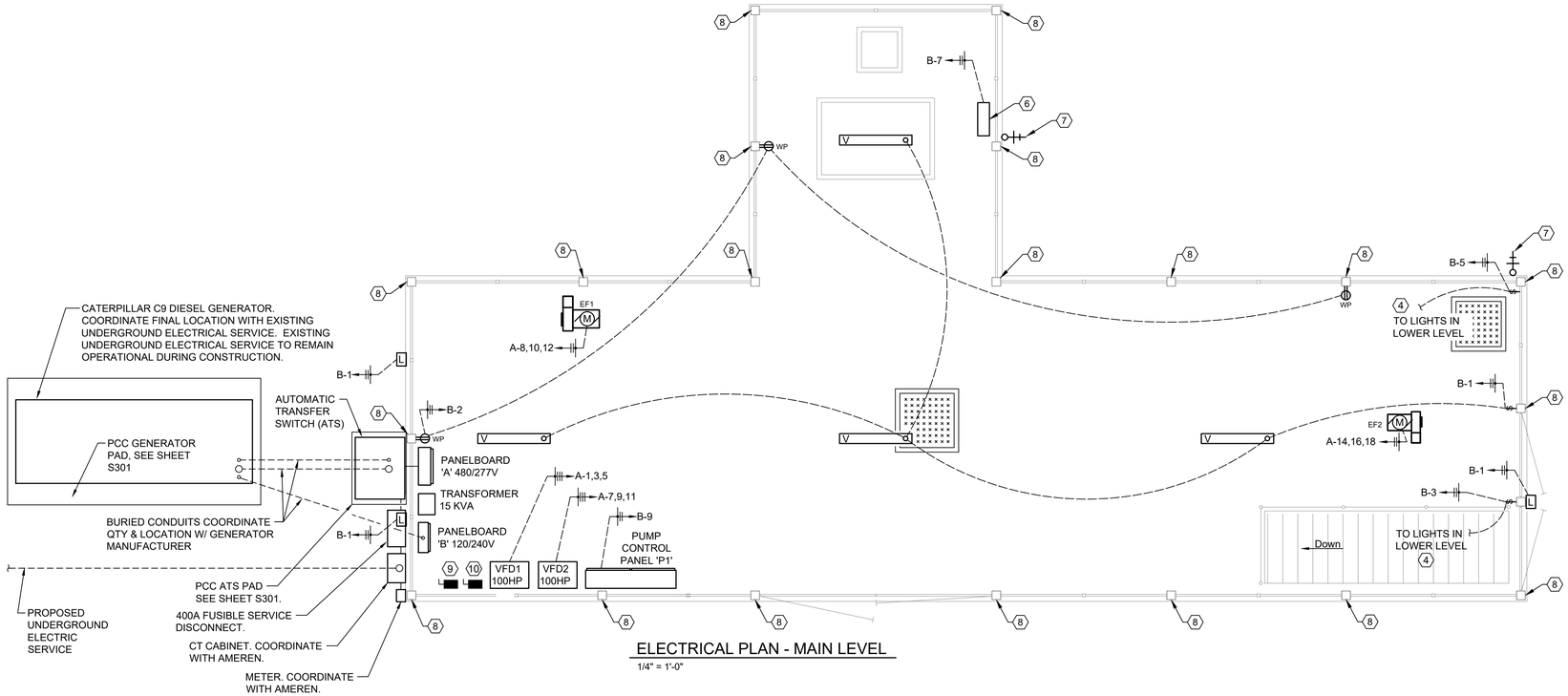
E101

EQUIPMENT ID:

- (E1) ULTRASONIC TRANSDUCER, ENDRESS + HAUSER FDU90 OR APPROVED EQUAL
- (E2) ALUMINUM CONDUIT BODY, TRADE SIZE ½
- (E3) RIGID ALUMINUM CONDUIT TO P1, TRADE SIZE ½
- (E4) METAL STRUT & PIPE CLAMP, 316SS CONSTRUCTION



1 FLOW METER TRANSDUCER MOUNTING

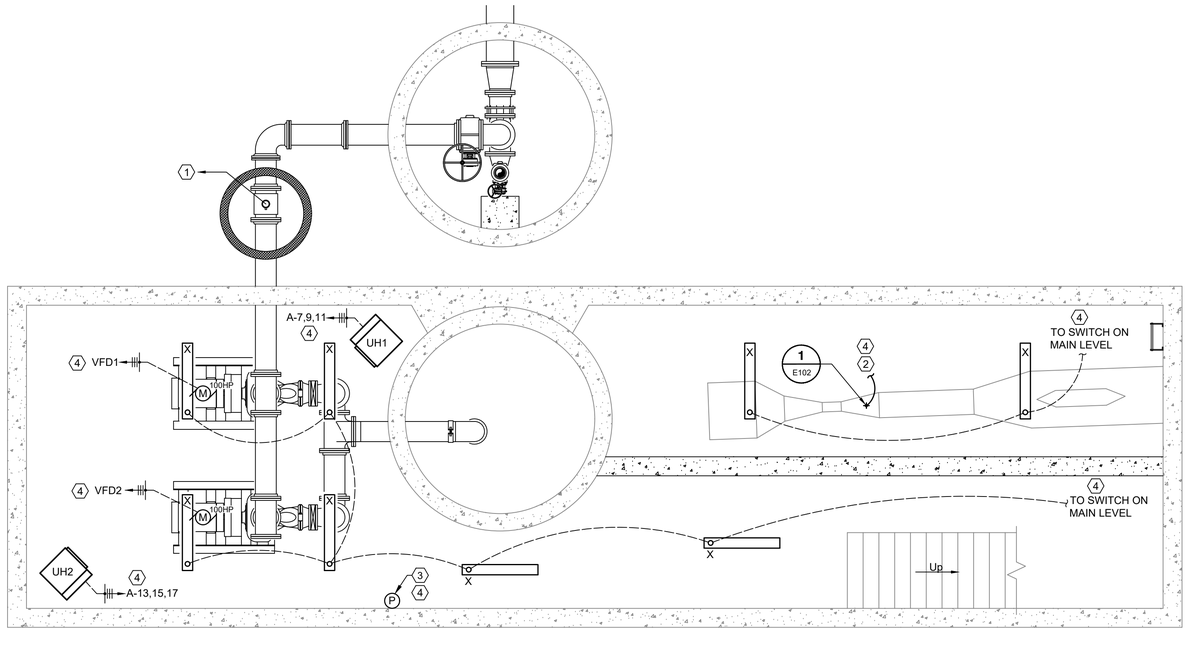


ELECTRICAL PLAN - MAIN LEVEL

1/4" = 1'-0"

ELECTRICAL KEY NOTES (AS NOTED ON THIS SHEET ONLY)

1. INSTALL TWO (2) FLOW METER CABLES BETWEEN FLOW SENSOR AND SIGNAL CONVERTER IN SEPARATE CONDUITS. SIGNAL CONVERTER IS MOUNTED IN PUMP CONTROL PANEL 'P1'.
2. INSTALL TRANSDUCER CABLE BETWEEN TRANSDUCER AND FLOW TRANSMITTER IN CONDUIT. FLOW TRANSMITTER IS MOUNTED IN PUMP CONTROL PANEL 'P1'.
3. CLASS 1, DIVISION 1 EMERGENCY STOP BUTTON. BUTTON SHALL BE WIRING TO SHUT DOWN BOTH PUMPS UPON ACTIVATION.
4. SEAL ALL CONDUITS PENETRATING THE NEW CONCRETE DECK. CONDUIT SEALS SHALL BE LOCATED 18" ABOVE THE NEW CONCRETE DECK.
5. NOT USED.
6. NEW BRANCH CIRCUIT FOR EXITING REMOTE TELEMETRY UNIT (RTU).
7. REMOVE AND REINSTALL RTU ANTENNA AND CABLE. COORDINATE WORK WITH GENERAL CONTRACTOR.
8. PROVIDE AND INSTALL NEW GROUND RING CONNECTION TO THE STRUCTURAL STEEL. CONNECT TO NEW GROUND RING PRIOR TO THE SLICE LOCATED BELOW GRADE.
9. NON-FUSIBLE LOCKABLE DISCONNECT FOR UH1. PROVIDE WITH NEMA 4X ENCLOSURE AND SAFESIDE VOLTAGE TEST STATION MODEL P-S11S21-M3RX.
10. NON-FUSIBLE LOCKABLE DISCONNECT FOR UH2. PROVIDE WITH NEMA 4X ENCLOSURE AND SAFESIDE VOLTAGE TEST STATION MODEL P-S11S21-M3RX.



ELECTRICAL PLAN - LOWER LEVEL

1/4" = 1'-0"

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

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SOUTH QUINCY LIFT STATION REHABILITATION
CITY OF QUINCY
730 MAINE STREET
QUINCY, ILLINOIS

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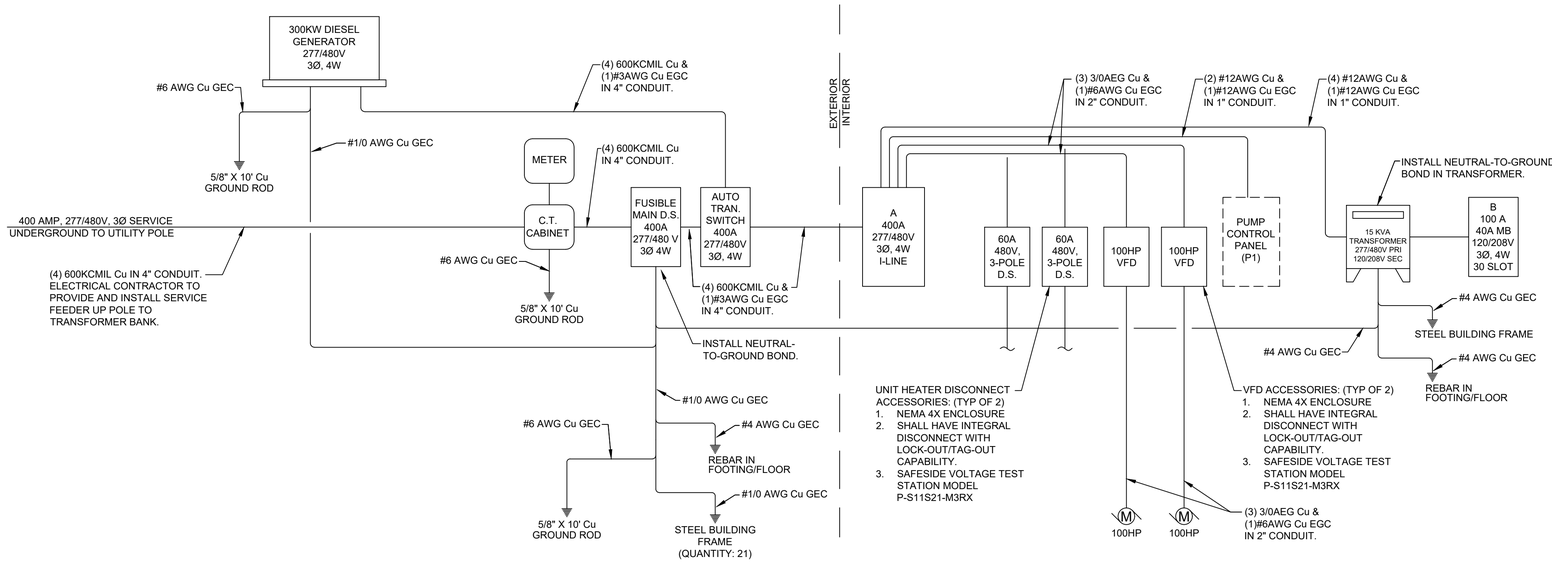
SHEET TITLE
ELECTRICAL AND LIGHTING PLANS

PROJECT NO.
19-0192
DRAWING ISSUED DATE:
09/10/2019
SHEET
E102



ONE LINE DIAGRAM
NO SCALE

LIGHTING SCHEDULE

ID	Manufact.	Model	Lamp Type	Voltage	Watts	Mounting	Notes
V	Metalux	Vaportite LED	4' Linear LED	120	55	Chain	Provide SS latches
X	Crouse-Hinds	Champ MLL	4' Linear LED	120	72	Ceiling	Hazardous location rated
L	Lumark	XTOR Crosstour	Area/Site LED	120	38	Wall	Photocell control

ELECTRICAL PANEL: A

Area Served: LIFT STATION

Location: EXTERIOR | SURFACE | 400 A 277/480 V 3 Ph 4 Wire, Fault Rating: 65,000A | MAIN LUG ONLY, NEMA 4X ENCLOSURE

No.	Description	Brkr. Amps	Load A	Load B	Load C	Load C	Load B	Load A	Brkr. Amps	Description	No.
1			34364					5000			2
3	VFD1 - PUMP #1	200		34364			5000		20	TRANSFORMER T1	4
5					34364	5000					6
7			34364					831			8
9	VFD2 - PUMP #2	200		34364			831		20	EXHAUST FAN EF-1	10
11					34364	831					12
13			10000					443			14
15	UNIT HEATER UH-1	50		10000			443		20	EXHASUT FAN EF-2	16
17					10000	443					18
13			10000								14
15	UNIT HEATER UH-2	50		10000						PREPARED SPACE	16
17					10000						18
			78728	78728	78728	6274	6274	6274			

Totals	Phase A	Phase B	Phase C	Total Wattage(VA)	Capacity
	85002	85002	85002	255006	332554

ELECTRICAL PANEL: B

Area Served: LIGHTS AND RECEPTACLES

Location: EXTERIOR | SURFACE | 100 A 277/480 V 3 Ph 4 Wire, Fault Rating: 42,000 | WITH 40A MAIN BREAKER, NEMA 4X ENCLOSURE

No.	Description	Brkr. Amps	Load A	Load B	Load C	Load C	Load B	Load A	Brkr. Amps	Description	No.
1	LIGHTS - MAIN LEVEL	20	296					540	20	RECEPTACLES	2
3	LIGHTS - PUMP ROOM LOWER LEVEL	20		420			2500		50	GENERATOR	4
5	LIGHTS - INCOMMING ROOM - LOWER	20			140	2500					6
7	REMOTE TELIMITRY UNIT	20	500						20	SPARE	8
9	PUMP CONTROL PANEL P1	20		500					20	SPARE	10
11	SPARE	20							20	SPARE	12
13	SPACE									SPACE	14
15	SPACE									SPACE	16
17	SPACE									SPACE	18
19	SPACE									SPACE	20
21	SPACE									SPACE	22
23	SPACE									SPACE	24
25	SPACE									SPACE	26
27	SPACE									SPACE	28
29	SPACE									SPACE	30
			796	920	140	2500	2500	540			

Totals	Phase A	Phase B	Phase C	Total Wattage(VA)	Capacity
	1336	3420	2640	7396	33255

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SHEET TITLE
ELECTRICAL ONE LINE DIAGRAM AND PANEL SCHEDULES

PROJECT NO.
19-0192

DRAWING ISSUED DATE:
09/10/2019

SHEET
E501