

# CITY OF JOLIET

## EAST SIDE WASTEWATER TREATMENT PLANT INFLUENT PUMP STATION AND SCREEN REPLACEMENT

### IEPA LOAN NO. L175070

JOLIET, ILLINOIS  
JULY 9, 2014



ILLINOIS



PREPARED FOR  
CITY OF JOLIET  
150 WEST JEFFERSON STREET  
JOLIET, ILLINOIS 60432



PREPARED BY



125 SOUTH WACKER DRIVE, SUITE 1850  
CHICAGO, ILLINOIS 60606  
312-236-9147

**CONFORMED DOCUMENTS**  
**CITY CONTRACT NO. 2011-0914**

DRAWING INDEX

Table with 3 columns: SHEET NUMBER, DRAWING NUMBER, DRAWING DESCRIPTION. Section 001 - GENERAL includes items like COVER, INDEX TO DRAWINGS, SEAL AND SIGNATURE SHEET, etc.

Section 002 - SITE DEVELOPMENT. Includes CIVIL sub-section with items like KEY MAP, REMOVAL PLAN, FACILITIES PLAN, PIPING PLAN, GRADING PLAN, ELECTRICAL PLAN.

Section 007 - ELECTRICAL DISTRIBUTION. Includes items like OVERALL ONE-LINE DIAGRAM, ONE-LINE DIAGRAM AND ELEVATION, etc.

Section 008 - NETWORK DIAGRAM. Includes NETWORK DIAGRAM.

Section 009 - PROCESS AND INSTRUMENTATION DIAGRAM. Includes items like PLANT INFLUENT, INFLUENT SCREENING AND CONVEYING, etc.

Section 100 - PUMP STATION AND SCREEN FACILITY. Includes STRUCTURAL sub-section with items like PLAN, EXTERIOR ELEVATIONS, SECTION.

Table with 3 columns: SHEET NUMBER, DRAWING NUMBER, DRAWING DESCRIPTION. Items include SECTION, SECTIONS, WALL SECTIONS, DETAILS.

Section PROCESS-MECHANICAL. Includes items like PLAN, SECTION.

Section PLUMBING/HVAC. Includes items like PLAN, PARTIAL PLAN.

Section ELECTRICAL. Includes items like PLAN, PARTIAL PLAN.

Section INSTRUMENTATION & CONTROL. Includes items like PLAN, PARTIAL PLAN.

Section 120 - ADMINISTRATION BUILDING. Includes ARCHITECTURAL/ELECTRICAL/INSTRUMENTATION & CONTROL sub-section with items like PLAN.

Section 125 - ABANDONED INFLUENT PUMP STATION. Includes REMOVALS sub-section with items like PLAN, SECTION.

Section 130 - PRELIMINARY TREATMENT BUILDING. Includes REMOVALS sub-section with items like PLAN.

Table with 3 columns: SHEET NUMBER, DRAWING NUMBER, DRAWING DESCRIPTION. Section STRUCTURAL/PROCESS-MECHANICAL/ELECTRICAL/INSTRUMENTATION includes items like PLAN, SECTIONS.

Section 999 - STANDARD DETAILS. Includes CIVIL sub-section with items like STANDARD DETAILS.

Section ARCHITECTURAL. Includes items like STANDARD DETAILS.

Section STRUCTURAL. Includes items like STANDARD DETAILS.

Section PROCESS-MECHANICAL. Includes items like STANDARD DETAILS.

Section PLUMBING. Includes items like STANDARD DETAILS.

Section HVAC. Includes items like SCHEDULES AND STANDARD DETAILS.

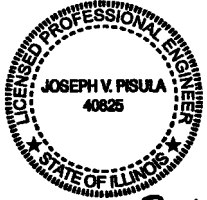
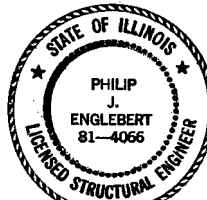




Section ELECTRICAL. Includes items like STANDARD DETAILS.

Section INSTRUMENTATION & CONTROL. Includes items like STANDARD DETAILS.

Vertical table with columns: Date, Checked By, Drawn By, Revision Description, Revision Number. Includes fields for Designer (KDS), Project No. (12614), Project Date (JUNE 2014).

CITY OF JOLIET  
EAST SIDE WASTEWATER TREATMENT PLANT  
INFLUENT PUMP STATION AND SCREEN REPLACEMENT  
JOLIET, IL  
INDEX TO DRAWINGS

DONOHUE logo and drawing information: Sheet No. 2, Drawing No. 001-G-1.

 <p><i>Joseph V. Pisula</i> 7-9-14 Expires: 11-30-15</p> <p>CIVIL DISCIPLINE</p>	 <p><i>Philip Englebert</i> 7-9-14 Expires 11-30-14</p> <p>STRUCTURAL AND ARCHITECTURAL DISCIPLINE</p>	 <p><i>Eric P. Cockerill</i> 07/09/2014 Expires 11/30/2015</p> <p>PROCESS DISCIPLINE</p>	 <p><i>Jeffrey L. Willis</i> 7/9/14 Exp: 11/30/15</p> <p>PLUMBING AND HVAC DISCIPLINE</p>	 <p><i>Mike Stonl</i> 7-9-14 Exp. 11-30-15</p> <p>ELECTRICAL DISCIPLINE</p>	 <p><i>Mike Stonl</i> 7-9-14 Exp. 11-30-15</p> <p>INSTRUMENTATION AND CONTROLS DISCIPLINE</p>
<p>LIST DRAWING SHEETS:</p> <p>001-G-4</p> <p>002-CK-1 002-CR-1 002-CR-2 002-CR-3A 002-CR-3B 002-CR-4 002-CF-1 002-CF-2 002-CF-3 002-CF-4 002-CP-1 002-CP-2 002-CP-3A 002-CP-3B 002-CP-4 002-CP-5 002-CG-1 002-CG-2 002-CG-3 002-CG-4</p> <p>999-C-1 999-C-2 999-C-3 999-C-4 999-C-5 999-C-6 999-C-7 999-C-8 999-C-9 999-C-10 999-C-11 999-C-12</p>	<p>LIST DRAWING SHEETS:</p> <p>100-AS-1 100-AS-2 100-AS-3 100-AS-4 100-AS-5 100-AS-6 100-AS-7 100-AS-8 100-AS-9 100-AS-10 100-AS-11 100-AS-12 100-AS-13 100-AS-14 100-AS-15 100-AS-16 100-AS-17 100-AS-18</p> <p>120-AEN-1</p> <p>125-SPEN-1 125-SMP-2 125-SEN-3 125-SMP-4 125-SMP-5</p> <p>130-SM-1 130-SM-2</p> <p>999-A-1 999-A-2</p> <p>999-S-1 999-S-2 999-S-3 999-S-4 999-S-5 999-S-6 999-S-7 999-S-8 999-S-9</p>	<p>LIST DRAWING SHEETS:</p> <p>001-G-3</p> <p>100-M-1 100-M-2 100-M-3 100-M-4 100-M-5</p> <p>125-R-1 125-R-2 125-R-3 125-R-4 125-R-5 125-R-6 125-R-7 125-R-8 125-SMP-2 125-SMP-4 125-SMP-5</p> <p>130-R-1 130-SM-1 130-SM-2</p> <p>999-M-1 999-M-2</p>	<p>LIST DRAWING SHEETS:</p> <p>001-G-5</p> <p>100-PH-1 100-PH-2 100-PH-3</p> <p>125-SPEN-1 125-SMP-2 125-SMP-4 125-SMP-5</p> <p>999-P-1 999-P-2</p> <p>999-H-1 999-H-2</p>	<p>LIST DRAWING SHEETS:</p> <p>001-G-5</p> <p>002-E-1</p> <p>007-E-1 007-E-2 007-E-3 007-E-4 007-E-5</p> <p>100-E-1 100-E-2 100-E-3 100-E-4 100-E-5 100-E-6 100-E-7</p> <p>120-AEN-1</p> <p>125-SPE-1 125-SEN-3</p> <p>130-SM-1 130-SM-2</p> <p>999-E-1 999-E-2 999-E-3 999-E-4</p>	<p>LIST DRAWING SHEETS:</p> <p>001-G-6 001-G-7</p> <p>008-I-1</p> <p>009-N-1 009-N-2 009-N-3 009-N-4</p> <p>100-N-1 100-N-2 100-N-3 100-N-4</p> <p>120-AEN-1</p> <p>125-SEN-3</p> <p>130-SMEN-1 130-SM-2</p> <p>999-N-1 999-N-2 999-N-3 999-N-4</p>

Date	
Checked By	
Drawn By	
Revision Description	
Revision Number	

Designed By	KDS
Drawn By	KDS
Checked By	ECP
Approved By	ECP
Filename	001G2.DWG
Project No.	12614
Project Date	JUNE 2014

CITY OF JOLIET  
EAST SIDE WASTEWATER TREATMENT PLANT  
INFLUENT PUMP STATION AND SCREEN REPLACEMENT  
JOLIET, IL  
SEAL AND SIGNATURE SHEET



Sheet No.	3
Drawing No.	

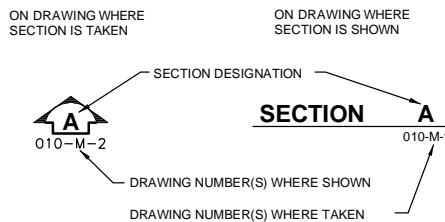
001-G-2

GENERAL LEGEND

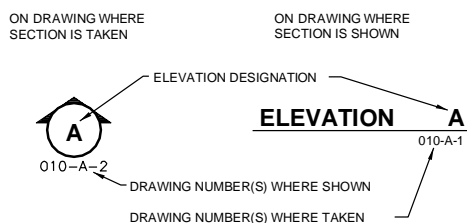
DISCIPLINE IDENTIFIER

Table with columns for DISCIPLINE and DISCIPLINE IDENTIFIER. Includes entries like GENERAL, CIVIL KEY, CIVIL REMOVAL, etc.

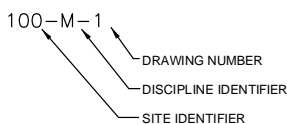
SECTION DESIGNATION



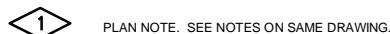
CASEWORK ELEVATION DESIGNATION



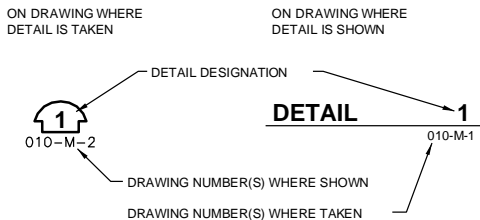
DRAWING NUMBER DESIGNATION



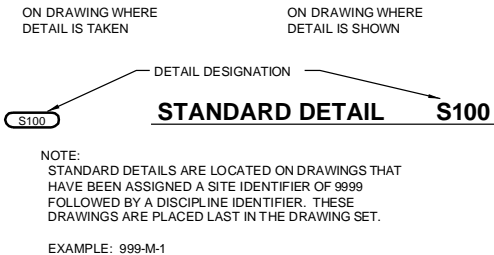
PLAN NOTE DESIGNATION



DETAIL DESIGNATION



STANDARD DETAIL DESIGNATION



GENERAL NOTES:

- 1. WORK IN THIS CONTRACT IS SHOWN FULL-TONE UNLESS OTHERWISE NOTED.

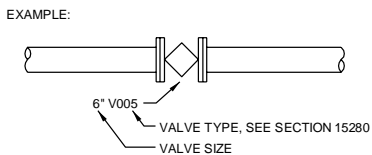
SYMBOLS

Table of symbols for materials and finishes: NON-RIGID INSULATION, RIGID INSULATION, SAND OR FILL, FREE DRAINING FILL, ROUGH CARPENTRY, CONCRETE, CONCRETE BLOCK, FACE BRICK, PRECAST CONCRETE PLANK, EARTH OR BACKFILL, ROCK, REMOVAL, GRATING, 2' x 2' SUSPENDED ACOUSTICAL CEILING, GYPSUM BOARD CEILING, CEILING HEIGHT ABOVE FINISHED FLOOR, DOOR DESIGNATOR, WINDOW DESIGNATOR.

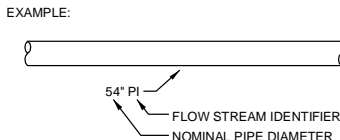
INSTRUMENT IDENTIFICATION

SAME AS SHOWN ON P&ID LEGEND. EXCEPTION: COMPONENT DESIGNATORS NOT USED ON PROCESS MECHANICAL DRAWINGS

VALVE IDENTIFICATION



PIPE IDENTIFICATION



ABBREVIATIONS

Large table of abbreviations and their corresponding full names, organized in columns. Includes terms like ACT, AD, ADDL, AFF, AHP, AL, ALP, ALT, APPROX., ARCH., AVG, etc.

NOTICE:

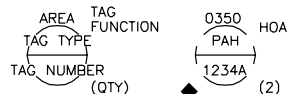
THIS IS A STANDARD LEGEND. NOT ALL OF THE INFORMATION SHOWN ON THIS LEGEND IS USED IN THESE CONTRACT DRAWINGS.

Project information and metadata: Date, Checked By, Drawn By, Revision Description, Revision Number, Designed By, Drawn By, Checked By, Approved By, Filename, Project No., Project Date, City of Joliet, East Side Wastewater Treatment Plant Influent Pump Station and Screen Replacement, Joliet, IL, General Legend Symbols and Abbreviations, Sheet No. 4, Drawing No. 001-G-3, DONOHUE logo.





**INSTRUMENT TAG IDENTIFICATION**



COMPONENT DESIGNATOR

- AREA** 0350: BUILDING OR PROCESS AREA NUMBER
- TAG TYPE** P: FIRST LETTER, SEE ISA TABLE BELOW  
AH: SUCCEEDING LETTERS, SEE ISA TABLE BELOW
- TAG NUMBER** 12: P&ID NUMBER  
3: LOOP NUMBER  
4: EQUIPMENT NUMBER  
A: DEVICE LETTER IF MULTIPLE DEVICES
- TAG FUNCTION** HOA: TAG FUNCTION ABBREVIATION, SEE LISTING AT RIGHT
- (QUANTITY)** (2): TOTAL NUMBER OF DEVICES WHERE MORE THAN ONE DEVICE IS REQUIRED. DEVICE NUMBERS ARE SEQUENTIAL BEGINNING WITH THE TAG NUMBER SHOWN. IF QUANTITY IS NOT SHOWN THEN ONE DEVICE ONLY IS REQUIRED.
- COMPONENT DESIGNATOR** SEE LISTING AT RIGHT

**TAG FUNCTION ABBREVIATIONS**

- ALRT ALERT
- ALT ALTERNATE
- C CLOSE(D)
- CB CIRCUIT BREAKER
- COMM COMMUNICATIONS
- CM COMPUTER-MANUAL
- DIFF DIFFERENCE OR DIFFERENTIAL
- DISC DISCONNECT SWITCH
- DN DEVICENET
- DO DISSOLVED OXYGEN
- ESTP ESTOP (EMERGENCY STOP)
- F FAIL
- F(X) CHARACTERIZED
- FOR FORWARD-STOP(OFF)-REVERSE (MAINTAINED CONTACT)
- FSR FORWARD-STOP-REVERSE (MOMENTARY CONTACT)
- FWD FORWARD
- F/R FORWARD/REVERSE (MOTOR STARTER COILS)
- HOA HAND-OFF-AUTOMATIC (MAINTAINED CONTACT)
- HOR HAND-OFF-REMOTE (MAINTAINED CONTACT)
- II CURRENT-TO-CURRENT
- IP CURRENT-TO-PNEUMATIC
- ISB INTRINSICALLY SAFE BARRIER
- LL LEAD-LAG (MAINTAINED CONTACT)
- LOE LOSS OF ECHO (ULTRASONIC SENSOR FAILURE)
- LOR LOCAL-OFF-REMOTE (MAINTAINED CONTACT)
- LOS LOCKOUT STOP (LOCKABLE IN "STOP" POSITION. MOMENTARY CONTACT)
- L/R LOCAL-REMOTE (MAINTAINED CONTACT)
- MA MANUAL-AUTOMATIC (MAINTAINED CONTACT)
- MOA MANUAL-OFF-AUTOMATIC (MAINTAINED CONTACT)
- O OPEN
- OA OFF-AUTOMATIC
- OCA OPEN-CLOSE-AUTOMATIC (MAINTAINED CONTACT)
- OC OPEN-CLOSE(D) (MAINTAINED CONTACT)
- OSC OPEN-STOP-CLOSE (MOMENTARY CONTACT SPRING RETURN TO CENTER POSITION)
- OL OVERLOAD
- OO ON-OFF (MAINTAINED CONTACT)
- OOA ON-OFF-AUTOMATIC (MAINTAINED CONTACT)
- OOR ON-OFF-REMOTE (MAINTAINED CONTACT)
- QTY QUANTITY
- R RUN
- REV REVERSE
- RSET RESET
- SBL SLUDGE BLANKET INTERFACE LEVEL
- SP SPEED POT
- SPD SPEED
- SQRT SQUARE ROOT
- SS START-STOP (MOMENTARY CONTACT)
- SSA START-STOP-AUTOMATIC (MOMENTARY CONTACT)
- SSL START-STOP-LOCK (LOCKABLE IN "STOP" POSITION. MOMENTARY CONTACT)
- STRT START
- SUM SUMMATION
- SUSP SUSPEND
- UPS UNINTERRUPTIBLE POWER SUPPLY
- VIB VIBRATION
- X MULTIPLY

**TAG SYMBOLS**

	FIELD MOUNTED	PANEL MOUNTED ACCESSIBLE TO OPERATOR	PANEL MOUNTED NONACCESSIBLE TO OPERATOR	MOTOR STARTER MOUNTED ACCESSIBLE TO OPERATOR	MOTOR STARTER MOUNTED NONACCESSIBLE TO OPERATOR
DISCRETE INSTRUMENTS					
PROGRAMMABLE CONTROLLER-BASED FUNCTIONS					
PANEL MOUNTED OIU FUNCTIONS					
PC BASED HMI WORKSTATION FUNCTIONS					

**INSTRUMENT SOCIETY OF AMERICA TABLE**

LETTER	FIRST LETTER (S)		SUCCEEDING LETTERS		
	PROCESS OR INITIATING VARIABLE	MODIFIER	READOUT OR PASSIVE FUNCTION	OUTPUT FUNCTION	MODIFIER
A	ANALYSIS (*)		ALARM (W. LOGGING)	ANNUNCIATE	
B	BURNER COMBUSTION		USERS CHOICE (*)	USERS CHOICE (*)	USERS CHOICE (*)
C	USERS CHOICE (*)			CONTROL	
D	USERS CHOICE (*)	DIFFERENTIAL			
E	VOLTAGE		PRIMARY ELEMENT		
F	FLOW RATE	RATIO			FEEDBACK
G	USERS CHOICE (*)		GLASS		
H	HAND (MANUAL)				HIGH
I	CURRENT		INDICATE		
J	POWER	SCAN			
K	TIME OR SCHEDULE	TIME RATE OF CHANGE	KEYPAD (DATA ENTRY)	CONTROL STATION	
L	LEVEL		LIGHT (PILOT)		LOW
M	MOTOR	MOMENTARY			MONITORING
N	USERS CHOICE (*)		USERS CHOICE (*)	USERS CHOICE (*)	USERS CHOICE (*)
O	USERS CHOICE (*)		ORIFICE		
P	PRESSURE OR VACUUM		POINT (TEST CONNECTION)		
Q	QUANTITY	INTEGRATE			
R	RADIATION		RECORD, TREND, LOG		
S	SPEED OR FREQUENCY	SAFETY			SWITCH
T	TEMPERATURE				TRANSMIT
U	UNIVERSAL/MULTIVARIABLE (*)		MULTIFUNCTION (*)	MULTIFUNCTION (*)	MULTIFUNCTION (*)
V	VIBRATION				VALVE
W	WEIGHT, FORCE, TORQUE		WELL		
X	UNCLASSIFIED (*)	X AXIS	UNCLASSIFIED (*)	UNCLASSIFIED (*)	UNCLASSIFIED (*)
Y	EVENT, STATE	Y AXIS		RELAY OR COMPUTE (*)	
Z	POSITION, DIMENSION	Z AXIS		DRIVE, ACTUATE OR UNCLASSIFIED FINAL CONTROL ELEMENT	

(\*) WHEN USED, EXPLANATION IS SHOWN ADJACENT TO INSTRUMENT SYMBOL.

**SPECIAL CASES:**

- ETM - ELAPSED TIME METER
- JBX - JUNCTION BOX
- NDX - INDEX #
- CAM - CAMERA
- MS - MOTOR STARTER
- MOR - MOTOR OVERLOAD RELAY
- MPR - MOTOR PROTECTION RELAY

**EQUIPMENT AND VALVE TAG IDENTIFICATION**

- TAG NUMBER**  
V-W-XYZ
- V: SITE IDENTIFIER (BUILDING NUMBER)
  - W: EQUIPMENT - SEE LIST BELOW
  - X: P&ID NUMBER
  - Y: LOOP NUMBER
  - Z: EQUIPMENT NUMBER
  - \*\* COMPONENT DESIGNATOR

- EQUIPMENT LIST**
- E - EJECTOR
  - G - GATE
  - M - MECHANICAL EQUIPMENT
  - P - PUMP
  - T - TANK
  - ATS - AUTOMATIC TRANSFER SWITCH
  - EPS - EMERGENCY POWER SYSTEM

**SELF CONTAINED VALVE ABBREVIATIONS**

- ARV AIR RELEASE VALVE
- AVRV AIR AND VACUUM RELIEF VALVE
- LCV LEVEL CONTROL VALVE
- PCV PRESSURE CONTROL VALVE
- TCV TEMPERATURE CONTROL VALVE
- PSV PRESSURE SAFETY (RELIEF) VALVE

**LOCAL CONTROL PANEL TAG IDENTIFICATION**

- TAG NUMBER**  
W-X-Y
- EQUIPMENT LIST**
- LCP - LOCAL CONTROL PANEL
  - CS - CONTROL STATION
  - ITC - INSTRUMENT TERM. CABINET
  - ASD - ADJUSTABLE SPEED DRIVE
  - AP - ALARM PANEL
  - SPCP - SUMP PUMP CONTROL PANEL
- ◆ COMPONENT DESIGNATOR

**DATA HIGHWAY SCHEMATIC ABBREVIATIONS**

- S SERIAL LINK (RS232/485)
- FOC FIBER OPTIC ETHERNET
- CE COPPER ETHERNET
- OIU OPERATOR INTERFACE UNIT
- MC FIBER OPTIC/ COPPER MEDIA CONVERTER
- NIC NETWORK INTERFACE CARD
- D DATA OUTLET

**COMPONENT DESIGNATORS**

- ◆ PROVIDE COMPONENT IN ACCORDANCE WITH DIVISIONS 27/40.
- ◆◆ FURNISHED AS PART OF A MANUFACTURER'S OR VENDOR'S PACKAGED SYSTEM UNDER DIVISIONS 23/41/43/46. TO BE INSTALLED IN ACCORDANCE WITH DIVISION 40.
- ◆◆◆ EXISTING COMPONENT, TO BE RELOCATED IN ACCORDANCE WITH DIVISION 40.
- ◆◆◆◆ OWNER FURNISHED COMPONENT, TO BE INSTALLED IN ACCORDANCE WITH DIVISION 40.
- \* PROVIDE COMPONENT IN ACCORDANCE WITH DIVISIONS 23/41/43/46.
- \*\* FURNISHED AS PART OF A MANUFACTURER'S OR VENDOR'S PACKAGED SYSTEM. TO BE INSTALLED IN ACCORDANCE WITH DIVISIONS 23/41/43/46.
- \*\*\* EXISTING COMPONENT, TO BE RELOCATED IN ACCORDANCE WITH DIVISIONS 23/41/43/46.
- \*\*\*\* OWNER FURNISHED COMPONENT, TO BE INSTALLED IN ACCORDANCE WITH DIVISIONS 23/41/43/46.
- PROVIDE COMPONENT IN ACCORDANCE WITH DIVISIONS 26/28.
- FURNISHED AS PART OF A MANUFACTURER'S OR VENDOR'S PACKAGED SYSTEM UNDER DIVISIONS 26/28 TO BE INSTALLED IN ACCORDANCE WITH DIVISION 40.
- EXISTING COMPONENT, TO BE RELOCATED IN ACCORDANCE WITH DIVISIONS 26/28.
- OWNER FURNISHED COMPONENT, TO BE INSTALLED IN ACCORDANCE WITH DIVISIONS 26/28.

COMPONENT DESIGNATORS ARE NOT INTENDED TO ENCOMPASS PIPING, CONDUIT, WIRING OR CONCRETE STRUCTURES.

**GENERAL NOTES**

- HALF-TONED PORTIONS OF P&ID'S  
INDICATE EXISTING DEVICES AND FACILITIES WHICH ARE NOT A PART OF THIS CONTRACT.
- HALF-TONED RECTANGULAR SHAPES ON P&ID'S  
REPRESENT EXISTING CONTROL PANELS WHICH ARE NOT A PART OF THIS CONTRACT.
- THERE IS NO INTENT TO SHOW ALL EXISTING FACILITIES ON THE P&ID'S.

**NOTICE:**

THIS IS A STANDARD LEGEND. NOT ALL OF THE INFORMATION SHOWN ON THIS LEGEND IS USED IN THESE CONTRACT DRAWINGS.



Mike Stone  
7-9-14  
Exp. 11-30-15

**LINE IDENTIFICATION**

**PROCESS FLOW**

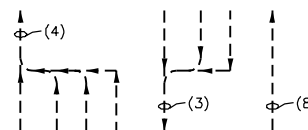
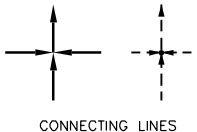
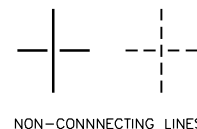
- PI NEW MAJOR PROCESS FLOW STREAM (CLOSED CONDUIT)
- RAS NEW INTERMEDIATE PROCESS FLOW STREAM (CLOSED CONDUIT)
- ALP NEW MINOR PROCESS FLOW STREAM (CLOSED CONDUIT)
- PI EXISTING MAJOR PROCESS FLOW STREAM (CLOSED CONDUIT)
- RAS EXISTING INTERMEDIATE PROCESS FLOW STREAM (CLOSED CONDUIT)
- ALP EXISTING MINOR PROCESS FLOW STREAM (CLOSED CONDUIT)
- PI NEW MAJOR PROCESS FLOW STREAM (OPEN CONDUIT)
- PI EXISTING MAJOR PROCESS FLOW STREAM (OPEN CONDUIT)
- PI HEAT TRACED PROCESS FLOW STREAM (CLOSED CONDUIT)

**SIGNALS**

- DISCRETE (ON/OFF ETC.)
- MODULATED (4 TO 20 mA DC ETC.)
- VENDOR FURNISHED CABLE
- S SERIAL LINK (RS-232, RS-485)
- INSTRUMENT SUPPLY OR CONNECTION TO EQUIPMENT FILLED SYSTEM (CAPILLARY TUBING ETC.)
- PNEUMATIC
- HYDRAULIC
- ELECTROMAGNETIC OR SONIC (GUIDED)
- ELECTROMAGNETIC OR SONIC (UNGUIDED)
- MECHANICAL LINK

**STRUCTURES AND EQUIPMENT**

- NEW OR RELOCATED EQUIPMENT
- EXISTING EQUIPMENT
- NEW OR RELOCATED STRUCTURE
- EXISTING STRUCTURE



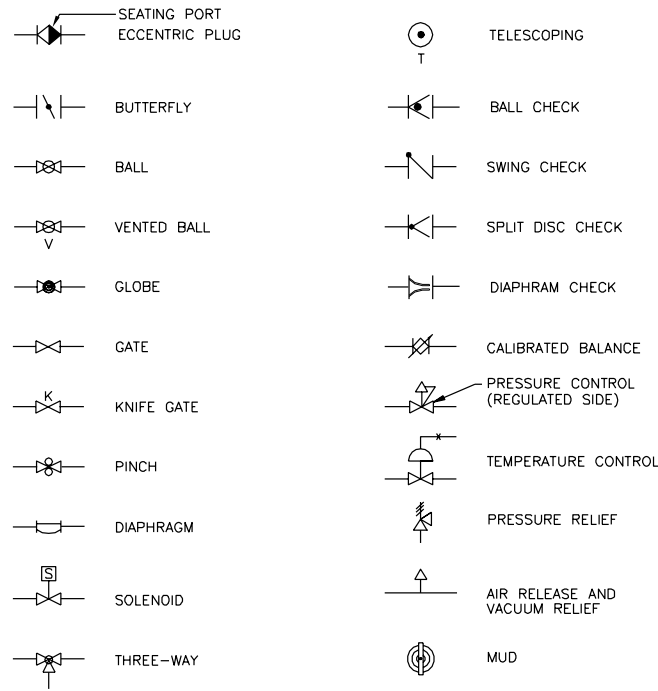
PARALLELING LINES. (PARENTHETICAL NUMBER INDICATES NUMBER OF SIGNALS REPRESENTED)

Date	Checked By	Drawn By	Revision Description	Revision Number

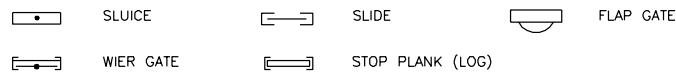
Designed By	DWG
Drawn By	DWG
Checked By	LET
Approved By	LET
Filename	001G6.DWG
Project No.	12614
Project Date	JUNE 2014

**CITY OF JOLIET**  
**EAST SIDE WASTEWATER TREATMENT PLANT**  
**INFLUENT PUMP STATION AND SCREEN REPLACEMENT**  
**JOLIET, IL**  
**INSTRUMENTATION AND CONTROL**  
**STANDARD LEGEND**

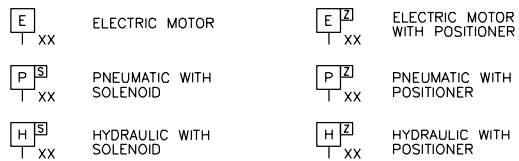
### VALVE SYMBOLS



### GATE SYMBOLS



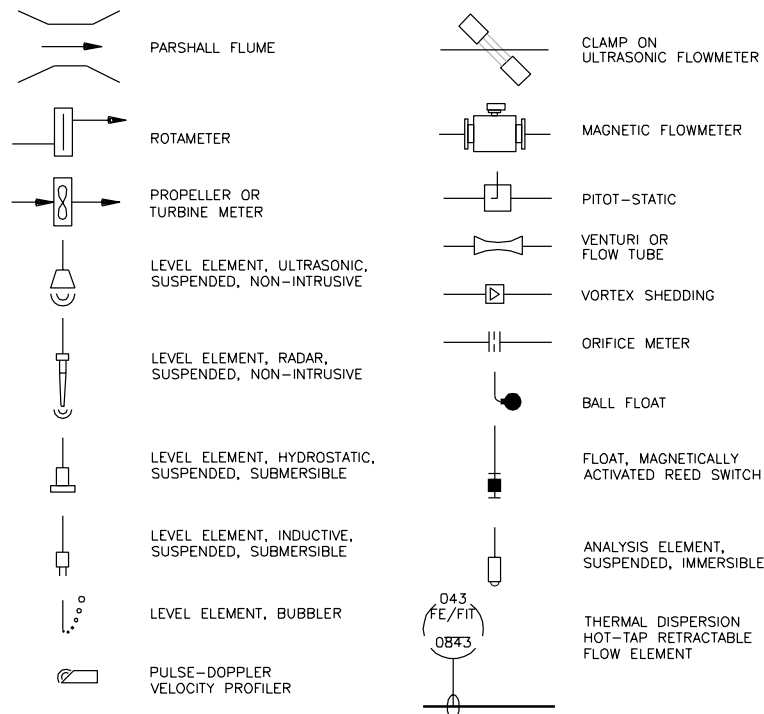
### VALVE AND GATE POWER ACTUATOR SYMBOLS



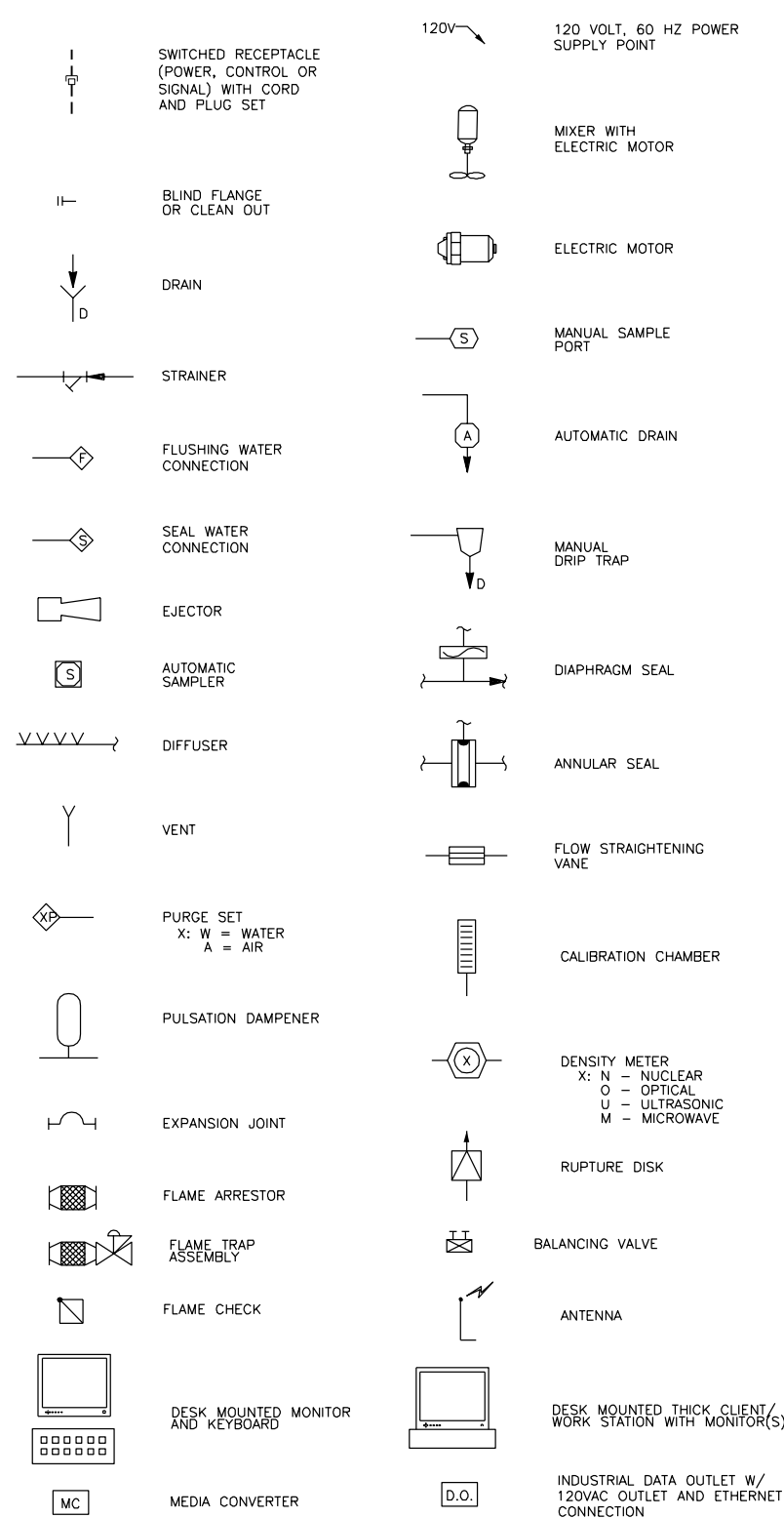
**NOTE ON 'XX':**  
ON LOSS OF PRIMARY POWER (PNEUMATIC OR ELECTRICAL)

XX:  
FC = FAIL CLOSED POSITION  
FIP = FAIL INTERMEDIATE POSITION  
FLP = FAIL LAST POSITION  
FO = FAIL OPEN POSITION

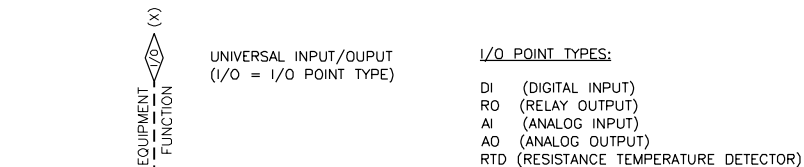
### FLOW AND LEVEL ELEMENT SYMBOLS



### MISCELLANEOUS SYMBOLS

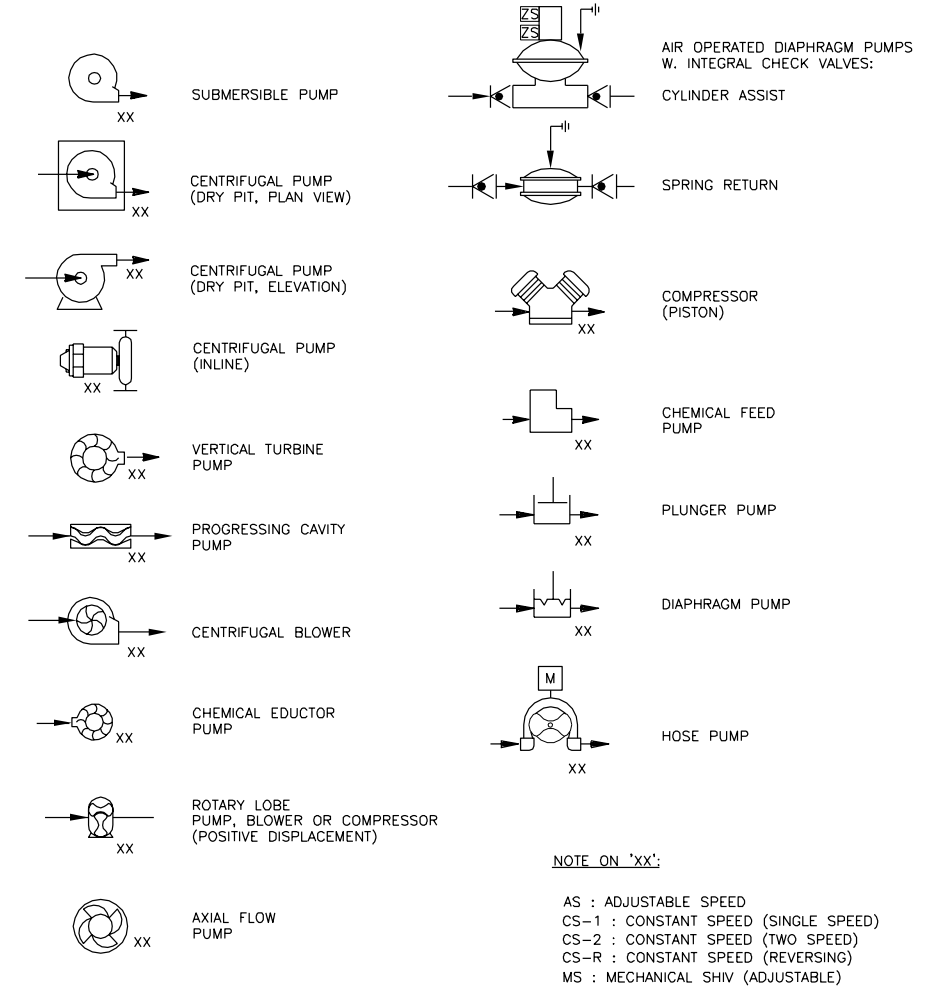


### INPUTS & OUTPUTS (I/O) TO PLC, DAQ OR DISTRIBUTED CONTROL SYSTEMS



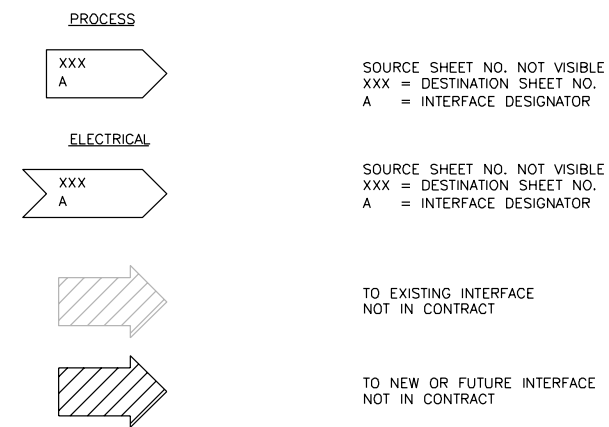
**NOTE ON 'X':**  
X = TOTAL NUMBER OF I/O WHERE MORE THAN ONE I/O IS REQUIRED. IF QUANTITY IS NOT SHOWN THEN ONE I/O IS REQUIRED.

### PUMP & COMPRESSOR SYMBOLS

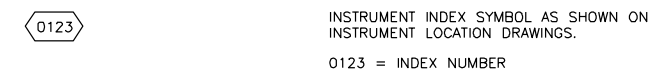


**NOTE ON 'XX':**  
AS : ADJUSTABLE SPEED  
CS-1 : CONSTANT SPEED (SINGLE SPEED)  
CS-2 : CONSTANT SPEED (TWO SPEED)  
CS-R : CONSTANT SPEED (REVERSING)  
MS : MECHANICAL SHIV (ADJUSTABLE)

### INTERFACE SYMBOLS

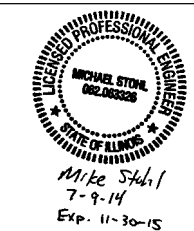


### INSTRUMENT INDEX SYMBOLS



### NOTICE:

THIS IS A STANDARD LEGEND. NOT ALL OF THE INFORMATION SHOWN ON THIS LEGEND IS USED IN THESE CONTRACT DRAWINGS.



Date	
Checked By	
Drawn By	
Revision Description	
Revision Number	
Designed By	DWG
Drawn By	DWG
Checked By	LET
Approved By	LET
Filename	001G7.DWG
Project No.	12614
Project Date	JUNE 2014
CITY OF JOLIET EAST SIDE WASTEWATER TREATMENT PLANT INFLUENT PUMP STATION AND SCREEN REPLACEMENT JOLIET, IL INSTRUMENTATION AND CONTROL STANDARD SYMBOLOLOGY	
Sheet No.	8
Drawing No.	001-G-7



**STRUCTURE LIST**

- 100 INFLUENT PUMP STATION AND SCREENING STRUCTURE
- 105 STORAGE BUILDING
- 120 ADMINISTRATION BUILDING
- 125 ABANDONED INFLUENT PUMP STATION
- 130 PRELIMINARY TREATMENT
- 140 PRIMARY TANKS
- 150 AERATION TANKS
- 160 AERATION TANKS
- 170 BLOWER BUILDING
- 181 FINAL CLARIFIER NO. 1
- 182 FINAL CLARIFIER NO. 2
- 183 FINAL CLARIFIER NO. 3
- 184 FINAL CLARIFIER NO. 4
- 185 FINAL CLARIFIER NO. 5
- 186 FINAL CLARIFIER NO. 6
- 187 RETURN ACTIVATED SLUDGE WELL
- 190 UV DISINFECTION
- 200 DICESTER COMPLEX
- 210 SOLIDS PROCESSING
- 221 SLUDGE STORAGE TANK NO. 2
- 222 SLUDGE STORAGE TANK NO. 4

**PLAN NOTES:**

1. CONSTRUCT TEMPORARY ACCESS ROUTE AROUND STR. 125 PRIOR TO BEGINNING EXCAVATION ACTIVITIES BETWEEN STR 120 AND STR 130. CONSTRUCTION SURFACE SHALL BE COMPACTED AGGREGATE BASE ON PREPARED SUBGRADE. AFTER CONSTRUCTION, ACCESS ROUTE SHALL BE MADE PERMANENT. FINAL SURFACE SHALL MATCH HMA PAVEMENT SECTION.
2. IF PRIMARY ENTRANCE IS CLOSED DURING CONSTRUCTION ACTIVITIES, ACCESS MUST BE MAINTAINED AT BOTH SECONDARY ENTRANCES LOCATIONS.
3. CONTRACTOR STAGING AND STORAGE AREA: TO BE RETURNED TO ORIGINAL, OR BETTER, CONDITION AT THE CONCLUSION OF CONSTRUCTION ACTIVITIES.

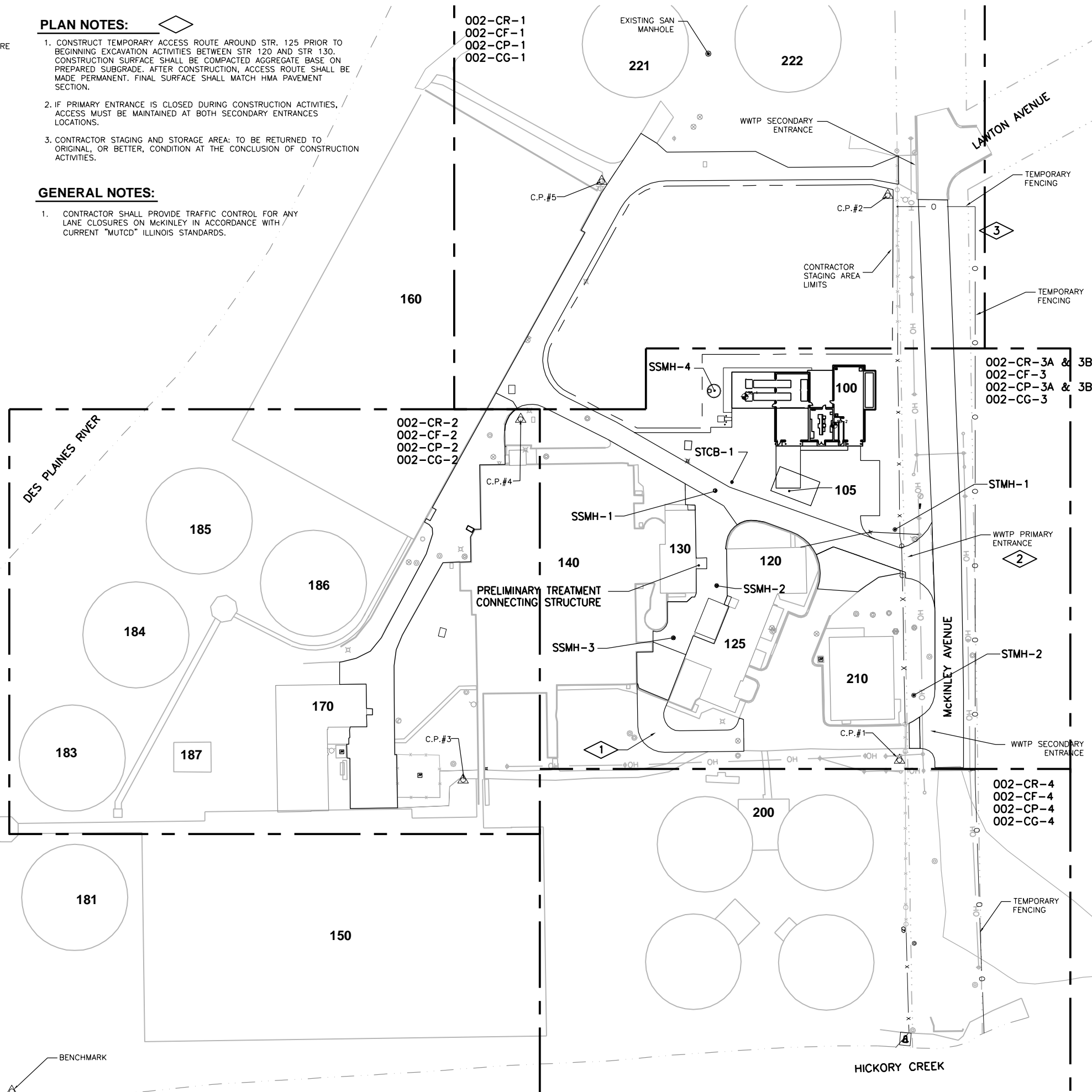
**GENERAL NOTES:**

1. CONTRACTOR SHALL PROVIDE TRAFFIC CONTROL FOR ANY LANE CLOSURES ON MCKINLEY IN ACCORDANCE WITH CURRENT "MUTCD" ILLINOIS STANDARDS.

CONTROL POINT SUMMARY			
POINT #	NORTHING	EASTING	ELEVATION
1	1762577.0910	1050688.3220	522.43
2	1763109.0168	1050677.2034	526.63
3	1762558.4840	1050277.1350	526.35
4	1762898.2991	1050331.2554	523.00
5	1763122.3094	1050407.7878	523.19

**BENCHMARK INFORMATION**

IDOT DIVISION OF WATERWAYS BRASS DISC IN OUTFALL HEADWALL TO HICKORY CREEK ELEV 519.37.



Date	Checked By	Drawn By	Revision Description	Revision Number

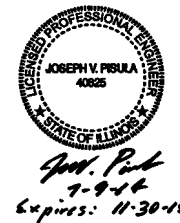
Designed By	TLW
Drawn By	TLW
Checked By	JVP
Approved By	JVP
Filename	002CK01.dwg
Project No.	12614
Project Date	JUNE 2014

**CITY OF JOLIET**  
**EAST SIDE WASTEWATER TREATMENT PLANT**  
**INFLUENT PUMP STATION AND SCREEN REPLACEMENT**  
**JOLIET, IL**  
**SITE DEVELOPMENT**  
**KEY MAP**

**DONOHUE**

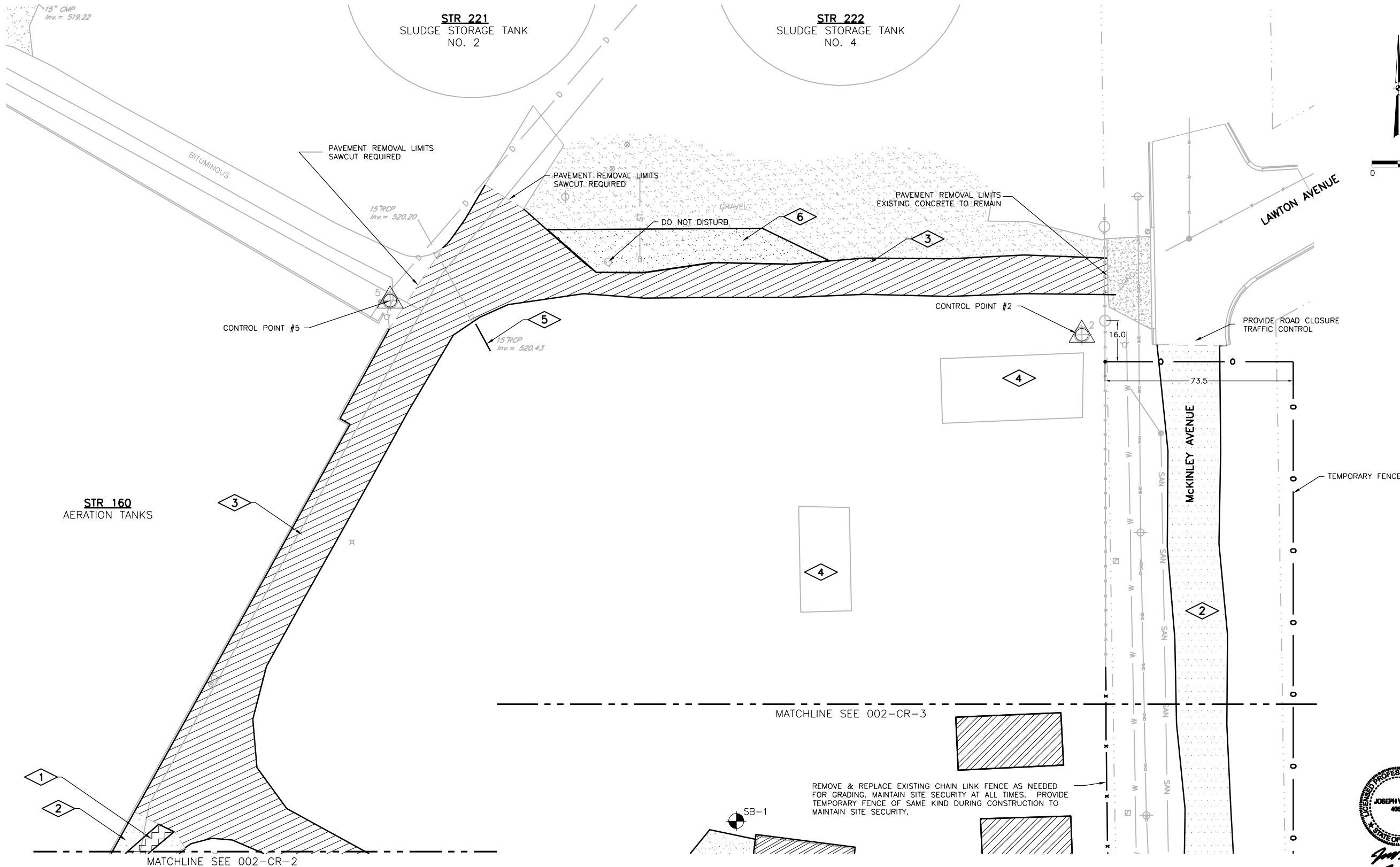
Sheet No. 9

Drawing No. 002-CK-1



**PLAN NOTES:**

1. REMOVE EXISTING ASPHALT PAVEMENT AS REQUIRED FOR TRENCHING ACTIVITIES. SEE (C120)
2. MILL EXISTING ASPHALT SURFACE. SEE (C110)
3. REMOVE EXISTING ASPHALT PAVEMENT. SEE (C119)
4. EXISTING BURIED FOUNDATION TO REMAIN.
5. REMOVE APPROXIMATELY 12 LF - 12" RCP CULVERT FOR WATER LINE CONSTRUCTION. REPLACE TO ORIGINAL LOCATION AND ELEVATION.
6. REMOVE GRAVEL. CONTRACTOR SHALL ONLY REUSE AGGREGATE AS APPROVED BY OWNER.



Revision Number	Revision Description	Drawn By	Checked By	Date

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Drawn By	TLW
Checked By	JVP
Approved By	JVP
Filename	002CR1
Project No.	12614
Project Date	JUNE 2014

**CITY OF JOLIET**  
**EAST SIDE WASTEWATER TREATMENT PLANT**  
**INFLUENT PUMP STATION AND SCREEN REPLACEMENT**  
**JOLIET, IL**  
**SITE DEVELOPMENT**  
**REMOVAL PLAN**



**DONOHUE**

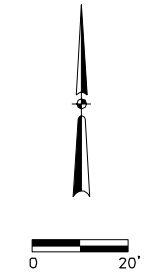
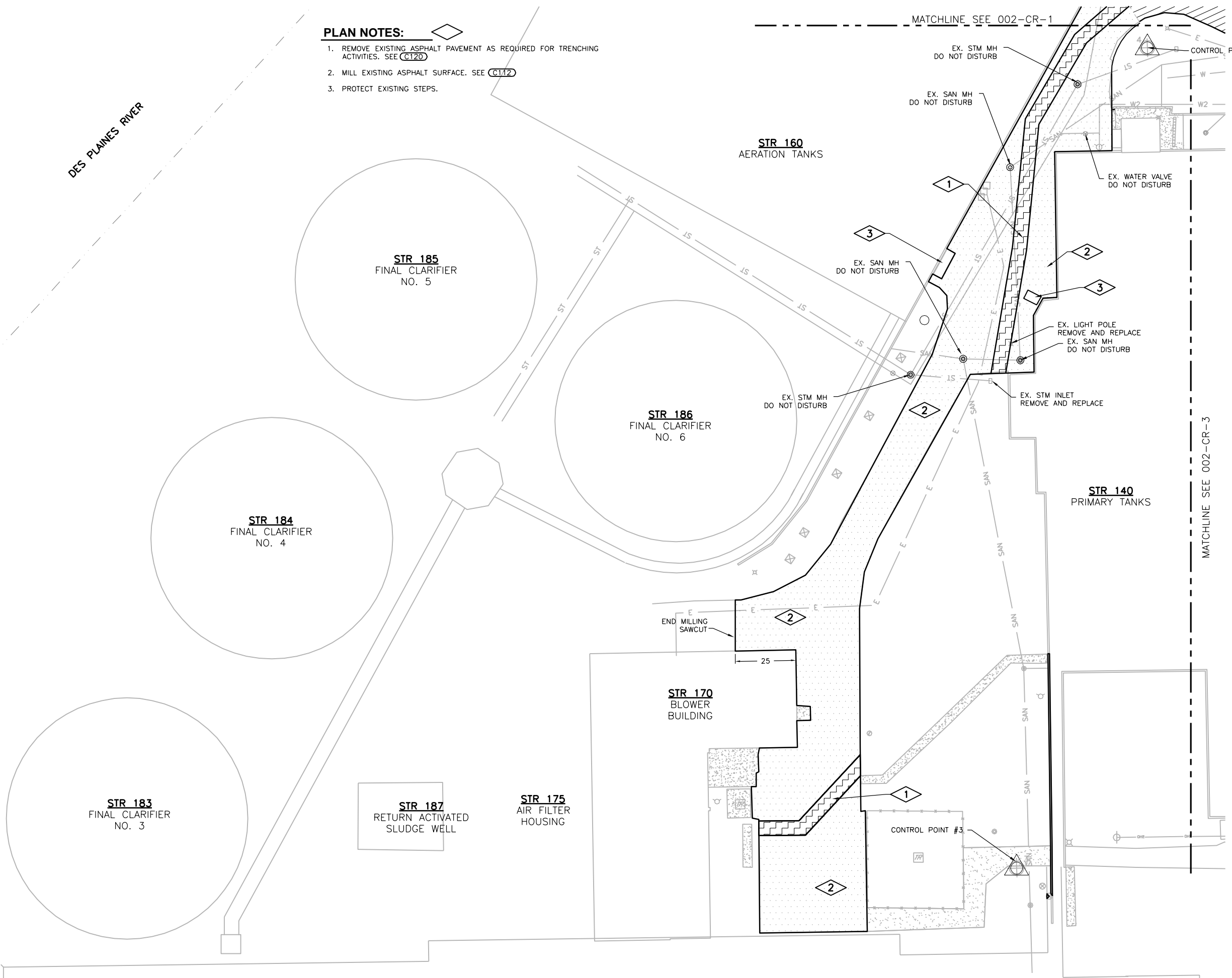
Sheet No. 10

Drawing No. 002-CR-1

DES PLAINES RIVER

**PLAN NOTES:**

- 1. REMOVE EXISTING ASPHALT PAVEMENT AS REQUIRED FOR TRENCHING ACTIVITIES. SEE **C120**
- 2. MILL EXISTING ASPHALT SURFACE. SEE **C112**
- 3. PROTECT EXISTING STEPS.



MATCHLINE SEE 002-CR-3

MATCHLINE SEE 002-CR-1

Revision Number	Revision Description

Designed By	TLW
Drawn By	TLW
Checked By	JVP
Approved By	JVP
Filename	002CR1
Project No.	12614
Project Date	JUNE 2014

**CITY OF JOLIET**  
**EAST SIDE WASTEWATER TREATMENT PLANT**  
**INFLUENT PUMP STATION AND SCREEN REPLACEMENT**  
**JOLIET, IL**  
**SITE DEVELOPMENT**  
**REMOVAL PLAN**



Sheet No.	11
Drawing No.	002-CR-2

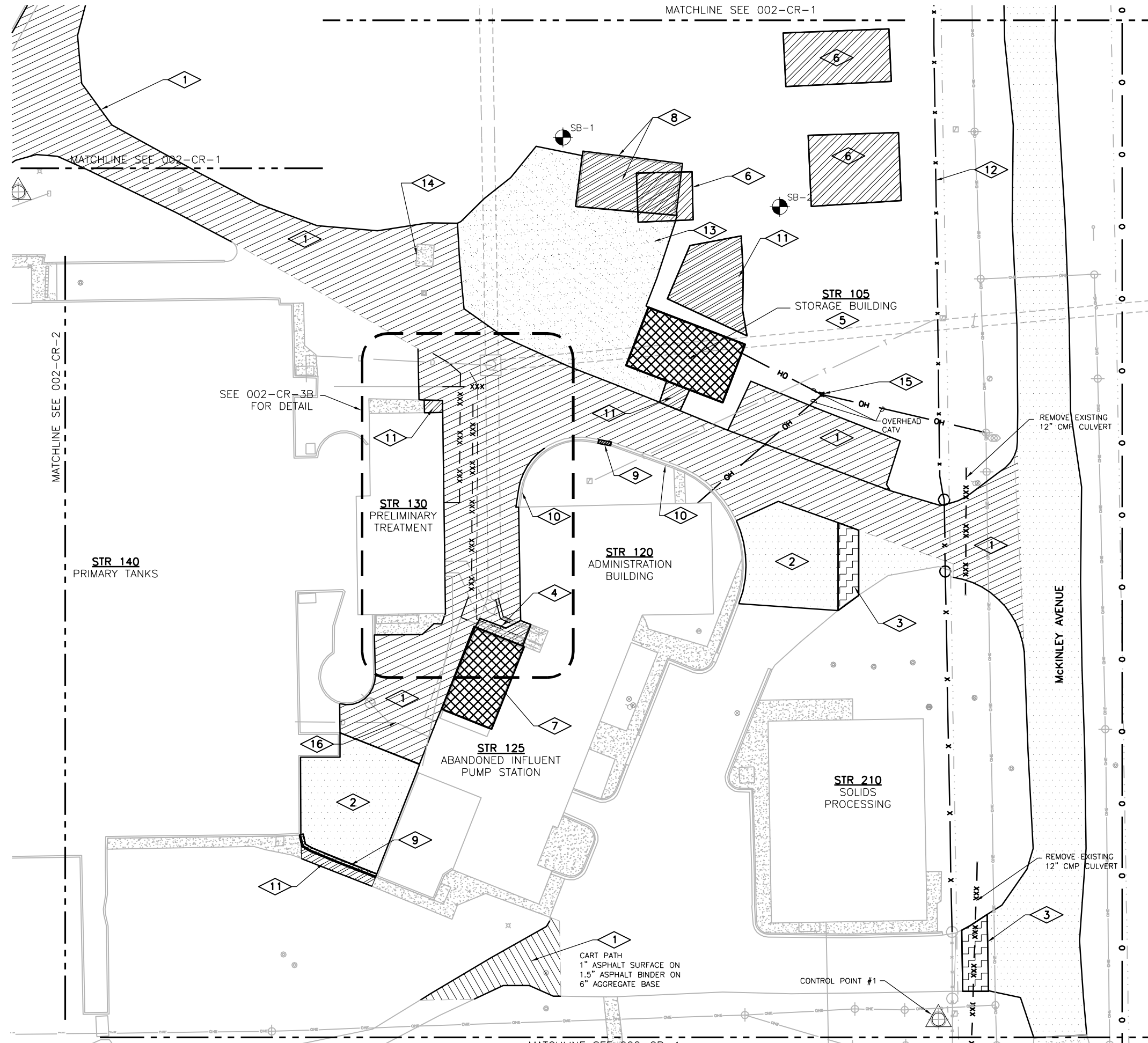
002-CR-2

MATCHLINE SEE 002-CR-1

MATCHLINE SEE 002-CR-1

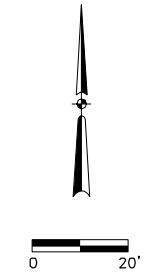
MATCHLINE SEE 002-CR-2

MATCHLINE SEE 002-CR-4



**GENERAL NOTES:**

1. ALL EXISTING PIPING SHALL BE FIELD VERIFIED FOR LOCATION AND ELEVATION AT CONNECTION OR CROSSING LOCATIONS.
2. SEE 002-CR-3B FOR DETAIL OF PIPING MODIFICATIONS PERFORMED BETWEEN STR 120 AND STR 130.



**PLAN NOTES:**

1. REMOVE EXISTING BITUMINOUS PAVEMENT. SEE (C119)
2. MILL EXISTING BITUMINOUS SURFACE. SEE (C110)
3. REMOVE EXISTING BITUMINOUS PAVEMENT, AS NEEDED FOR TRENCHING ACTIVITIES. SEE (C120)
4. REMOVE EXISTING CONCRETE SIDEWALK.
5. EXISTING BUILDING STR. 105 TO BE DEMOLISHED.
6. EXISTING FOUNDATION TO BE REMOVED. VERIFY LOCATION.
7. SEE 125-R-3 FOR PUMP STATION ABANDONMENT.
8. EXISTING STORAGE AREA.
  - A. STRUCTURE AND MATERIALS TO BE REMOVED BY OWNER.
  - B. CONCRETE FOUNDATION TO BE REMOVED BY CONTRACTOR.
9. EXISTING CONCRETE CURB AND GUTTER TO BE REMOVED.
10. EXISTING CURB AND GUTTER TO REMAIN.
11. EXISTING CONCRETE TO BE REMOVED.
12. REMOVE & REPLACE EXISTING CHAIN LINK FENCE AS NEEDED FOR GRADING. MAINTAIN SITE SECURITY AT ALL TIMES. PROVIDE TEMP. FENCE OF SAME KIND DURING CONSTRUCTION, AS NEEDED TO MAINTAIN SITE SECURITY.
13. REMOVE GRAVEL. CONTRACTOR SHALL ONLY REUSE AGGREGATE AS APPROVED BY OWNER.
14. PROTECT EXISTING DIESEL STORAGE TANK.
15. RELOCATE SITE LIGHT FIXTURE AND POLE. PROVIDE TEMPORARY CATV TO BUILDING 120 UNTIL FINAL SERVICE CAN BE INSTALLED. SEE SHEET 002-E-1 FOR MORE INFORMATION.
16. REMOVE PIPING AS REQUIRED FOR INSTALLATION OF SSMH-3.

Revision Number	Revision Description	Checked By	Drawn By	Date

Designed By	TLW
Drawn By	TLW
Checked By	JVP
Approved By	JVP
Filename	002CR1
Project No.	12614
Project Date	JUNE 2014

**CITY OF JOLIET**  
**EAST SIDE WASTEWATER TREATMENT PLANT**  
**INFLUENT PUMP STATION AND SCREEN REPLACEMENT**  
**JOLIET, IL**  
**SITE DEVELOPMENT**  
**REMOVAL PLAN**

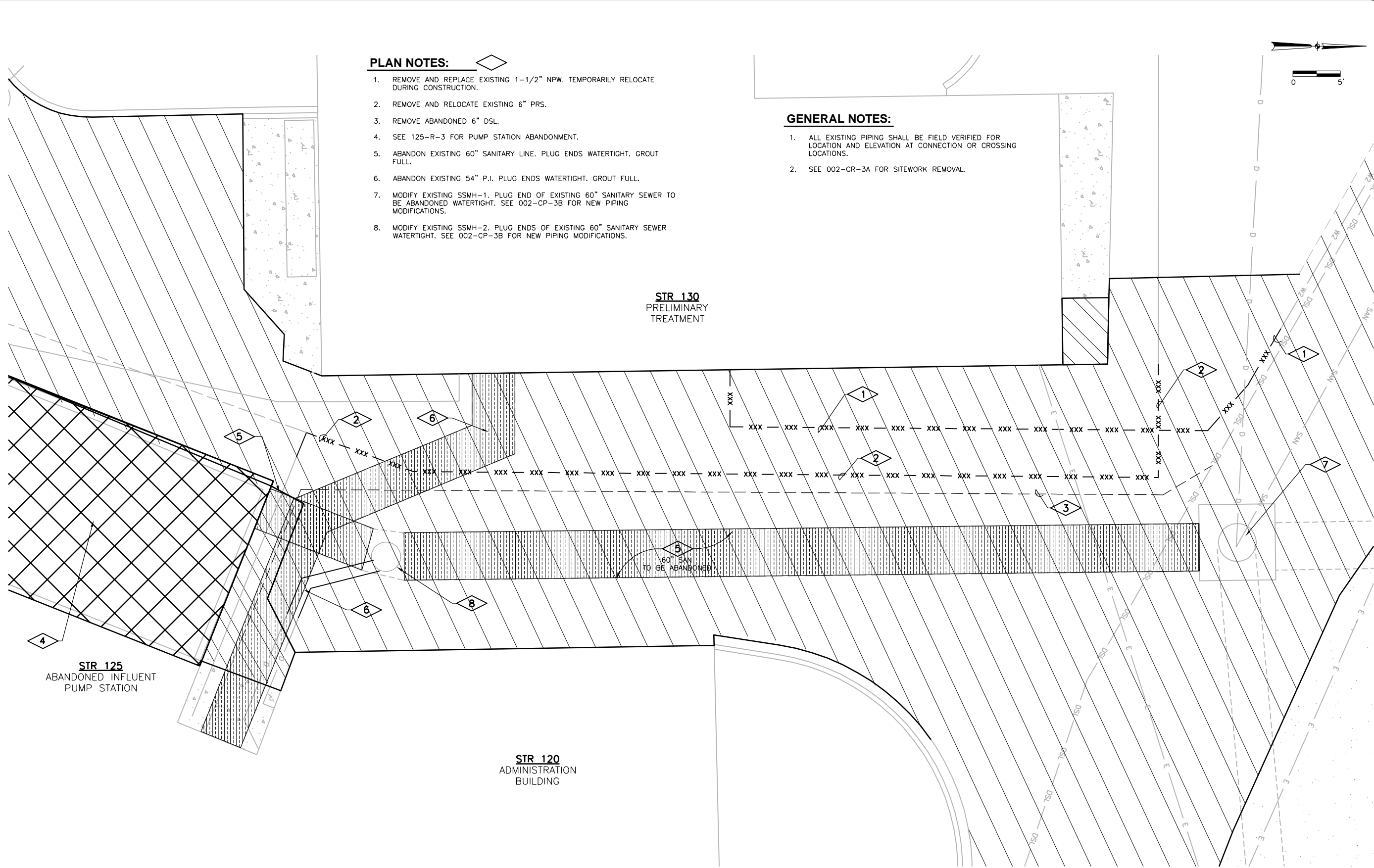


*Joe. Pink*  
 7-9-14  
 Expires: 11-30-15



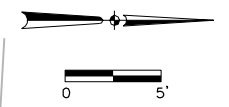
Sheet No. 12  
 Drawing No.

002-CR-3A



- PLAN NOTES:**
1. REMOVE AND REPLACE EXISTING 1-1/2" NPW. TEMPORARILY RELOCATE DURING CONSTRUCTION.
  2. REMOVE AND RELOCATE EXISTING 6" PRS.
  3. REMOVE ABANDONED 6" DSL.
  4. SEE 125-R-3 FOR PUMP STATION ABANDONMENT.
  5. ABANDON EXISTING 60" SANITARY LINE. PLUG ENDS WATERTIGHT. GROUT FULL.
  6. ABANDON EXISTING 54" P.I. PLUG ENDS WATERTIGHT. GROUT FULL.
  7. MODIFY EXISTING SSMH-1. PLUG END OF EXISTING 60" SANITARY SEWER TO BE ABANDONED WATERTIGHT. SEE 002-CP-3B FOR NEW PIPING MODIFICATIONS.
  8. MODIFY EXISTING SSMH-2. PLUG ENDS OF EXISTING 60" SANITARY SEWER WATERTIGHT. SEE 002-CP-3B FOR NEW PIPING MODIFICATIONS.

- GENERAL NOTES:**
1. ALL EXISTING PIPING SHALL BE FIELD VERIFIED FOR LOCATION AND ELEVATION AT CONNECTION OR CROSSING LOCATIONS.
  2. SEE 002-CR-3A FOR SITEWORK REMOVAL.



Revision Number	Revision Description	Checked By	Date

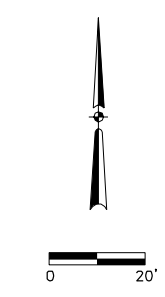
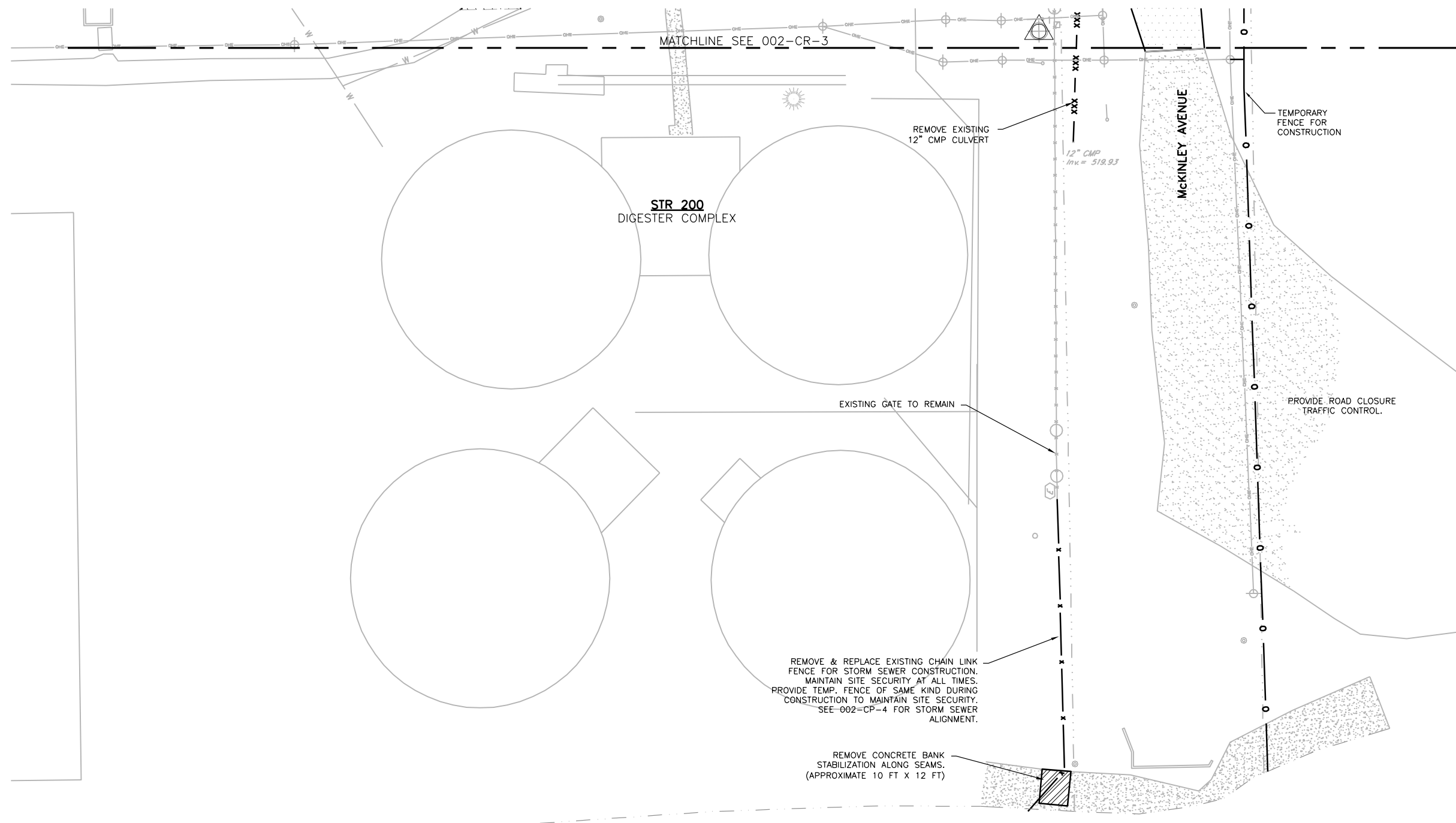
Designed By	TLW
Drawn By	TLW
Checked By	JVP
Approved By	JVP
Filename	002CR1
Project No.	12614
Project Date	JUNE 2014

**CITY OF JOLIET**  
**EAST SIDE WASTEWATER TREATMENT PLANT**  
**INFLUENT PUMP STATION AND SCREEN REPLACEMENT**  
**JOLIET, IL**  
**SITE DEVELOPMENT**  
**REMOVAL PLAN-DETAIL**



**DONOHUE**

Sheet No.	13
Drawing No.	002-CR-3B



Revision Number	Revision Description	Drawn By	Checked By	Date

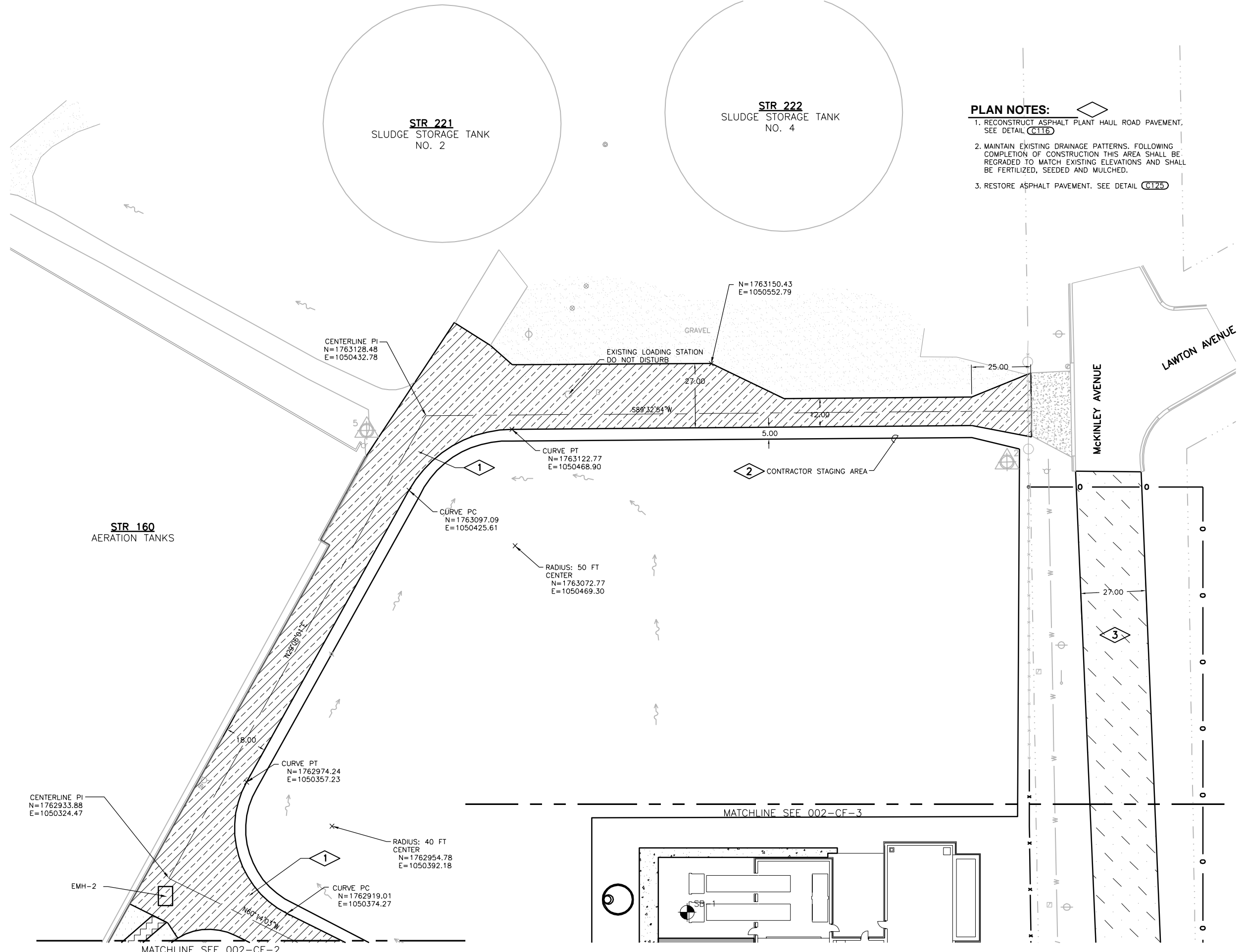
Designed By	TLW
Drawn By	TLW
Checked By	JVP
Approved By	JVP
Filename	002CR1
Project No.	12614
Project Date	JUNE 2014

**CITY OF JOLIET**  
**EAST SIDE WASTEWATER TREATMENT PLANT**  
**INFLUENT PUMP STATION AND SCREEN REPLACEMENT**  
**JOLIET, IL**  
**SITE DEVELOPMENT**  
**REMOVAL PLAN**



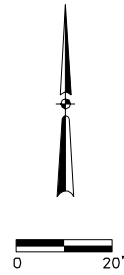
**DONOHUE**

Sheet No.	14
Drawing No.	002-CR-4



**PLAN NOTES:**

1. RECONSTRUCT ASPHALT PLANT HAUL ROAD PAVEMENT. SEE DETAIL C116
2. MAINTAIN EXISTING DRAINAGE PATTERNS. FOLLOWING COMPLETION OF CONSTRUCTION THIS AREA SHALL BE REGRADED TO MATCH EXISTING ELEVATIONS AND SHALL BE FERTILIZED, SEEDDED AND MULCHED.
3. RESTORE ASPHALT PAVEMENT. SEE DETAIL C125



Revision Number	Revision Description	Date

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**CITY OF JOLIET**  
**EAST SIDE WASTEWATER TREATMENT PLANT**  
**JOLIET, IL**  
**INFLUENT PUMP STATION AND SCREEN REPLACEMENT**  
**SITE DEVELOPMENT**  
**FACILITIES PLAN**

*Joseph V. Psula*  
 7-9-14  
 Expires: 11-30-15

**DONOHUE**

Sheet No. 15

Drawing No. 002-CF-1

DES PLAINES RIVER

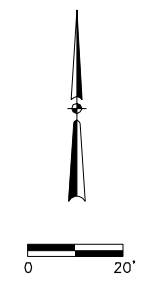
**GENERAL NOTES:**

- 1. TRENCHING FOR ELECTRICAL DUCT BANK SHOWN FOR REFERENCE ONLY. SEE 002-E-1 FOR ELECTRICAL SITEWORK.
- 2. CONTRACTOR SHALL GRADE ENTIRE SITE TO MATCH NEW AND EXISTING CONTOURS AND SHALL FERTILIZE, SEED, AND MULCH ALL DISTURBED GRASS AREAS.

**PLAN NOTES:**

- 1. TRENCHING LOCATION. RESTORE ASPHALT PAVEMENT. SEE C120
- 2. ELECTRIC MANHOLE. SEE E230
- 3. MILL & OVERLAY PLANT DRIVE. SEE DETAIL C112

MATCHLINE SEE 002-CF-1  
RADIUS: 20 FT CENTER  
N=1762887.38  
E=1050341.41



**STR 185**  
FINAL CLARIFIER  
NO. 5

**STR 184**  
FINAL CLARIFIER  
NO. 4

**STR 183**  
FINAL CLARIFIER  
NO. 3

**STR 187**  
RETURN ACTIVATED  
SLUDGE WELL

**STR 175**  
AIR FILTER  
HOUSING

**STR 170**  
BLOWER  
BUILDING

**STR 186**  
FINAL CLARIFIER  
NO. 6

**STR 160**  
AERATION TANKS

**STR 140**  
PRIMARY TANKS

EX. STEPS  
DO NOT DISTURB

EX. SAN MH  
DO NOT DISTURB

EX. WATER VALVE  
DO NOT DISTURB

EX. STEPS  
DO NOT DISTURB

EX. LIGHT POLE  
REMOVE AND REPLACE

EX. SAN MH  
DO NOT DISTURB

EX. STM MH  
DO NOT DISTURB

EX. STM INLET  
REMOVE AND REPLACE

EMH-1

3

1

CONTROL POINT #3

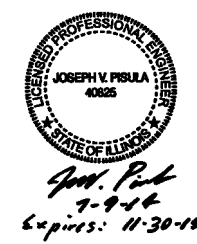
3

MATCHLINE SEE 002-CF-3

Date	Checked By	Drawn By	Revision Description

Designed By	TLW
Drawn By	TLW
Checked By	JVP
Approved By	JVP
Filename	002CF1
Project No.	12614
Project Date	JUNE 2014

CITY OF JOLIET  
EAST SIDE WASTEWATER TREATMENT PLANT  
INFLUENT PUMP STATION AND SCREEN REPLACEMENT  
JOLIET, IL  
SITE DEVELOPMENT  
FACILITIES PLAN

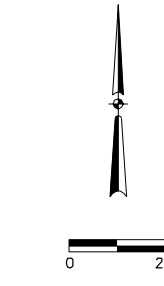
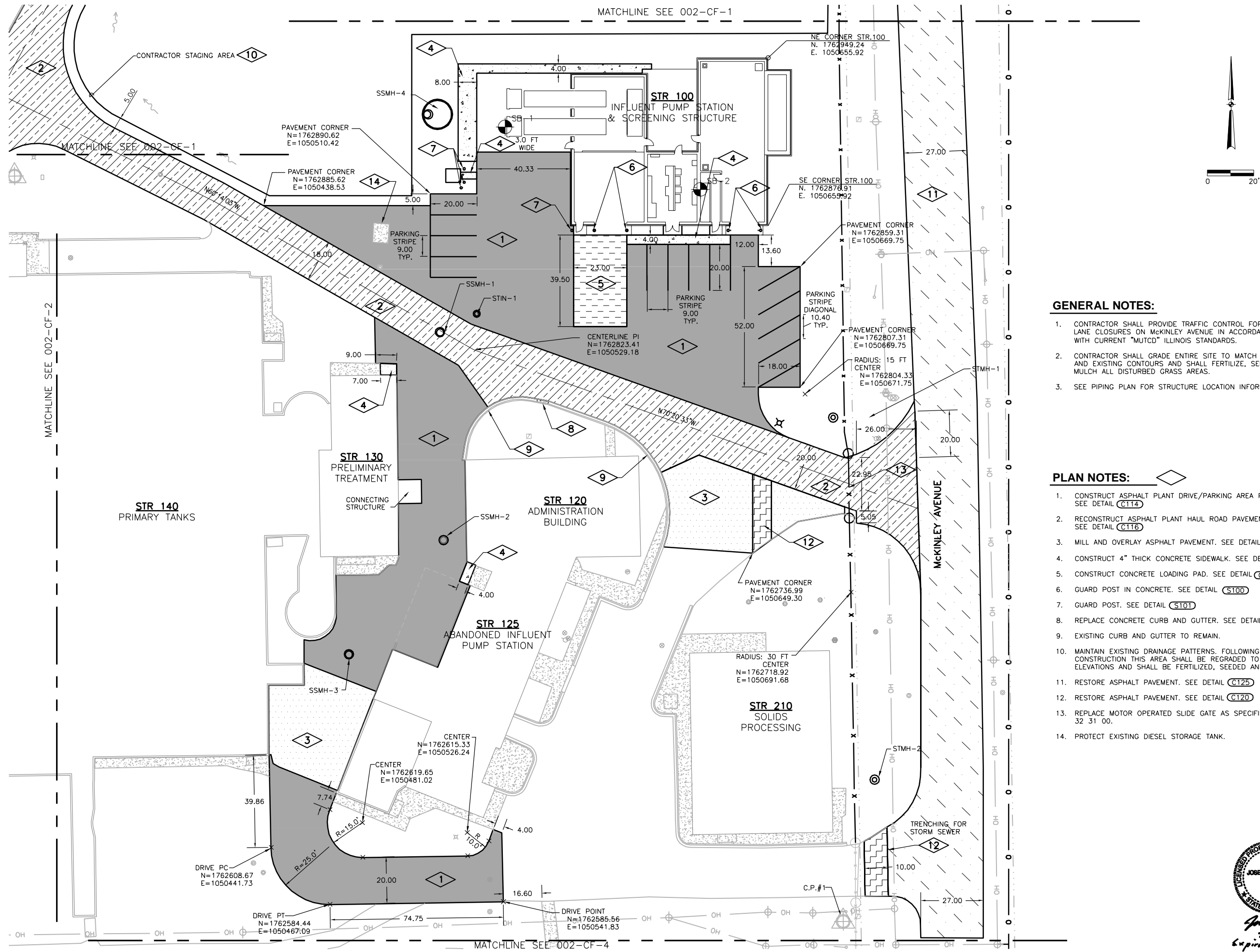


Sheet No. 16  
Drawing No.

002-CF-2



MATCHLINE SEE 002-CF-1



**GENERAL NOTES:**

1. CONTRACTOR SHALL PROVIDE TRAFFIC CONTROL FOR ANY LANE CLOSURES ON MCKINLEY AVENUE IN ACCORDANCE WITH CURRENT "MUTCD" ILLINOIS STANDARDS.
2. CONTRACTOR SHALL GRADE ENTIRE SITE TO MATCH NEW AND EXISTING CONTOURS AND SHALL FERTILIZE, SEED, AND MULCH ALL DISTURBED GRASS AREAS.
3. SEE PIPING PLAN FOR STRUCTURE LOCATION INFORMATION.

**PLAN NOTES:**

1. CONSTRUCT ASPHALT PLANT DRIVE/PARKING AREA PAVEMENT. SEE DETAIL **C114**
2. RECONSTRUCT ASPHALT PLANT HAUL ROAD PAVEMENT. SEE DETAIL **C116**
3. MILL AND OVERLAY ASPHALT PAVEMENT. SEE DETAIL **C112**
4. CONSTRUCT 4" THICK CONCRETE SIDEWALK. SEE DETAIL **C150**
5. CONSTRUCT CONCRETE LOADING PAD. SEE DETAIL **C118**
6. GUARD POST IN CONCRETE. SEE DETAIL **S100**
7. GUARD POST. SEE DETAIL **S101**
8. REPLACE CONCRETE CURB AND GUTTER. SEE DETAIL **C167**
9. EXISTING CURB AND GUTTER TO REMAIN.
10. MAINTAIN EXISTING DRAINAGE PATTERNS. FOLLOWING COMPLETION OF CONSTRUCTION THIS AREA SHALL BE REGRADED TO MATCH EXISTING ELEVATIONS AND SHALL BE FERTILIZED, SEEDED AND MULCHED.
11. RESTORE ASPHALT PAVEMENT. SEE DETAIL **C125**
12. RESTORE ASPHALT PAVEMENT. SEE DETAIL **C120**
13. REPLACE MOTOR OPERATED SLIDE GATE AS SPECIFIED IN SECTION 32 31 00.
14. PROTECT EXISTING DIESEL STORAGE TANK.

Date	
Checked By	
Drawn By	
Revision Description	
Revision Number	
Designed By	TLW
Drawn By	TLW
Checked By	JVP
Approved By	JVP
Filename	002CF1
Project No.	12614
Project Date	JUNE 2014

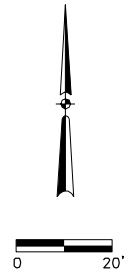
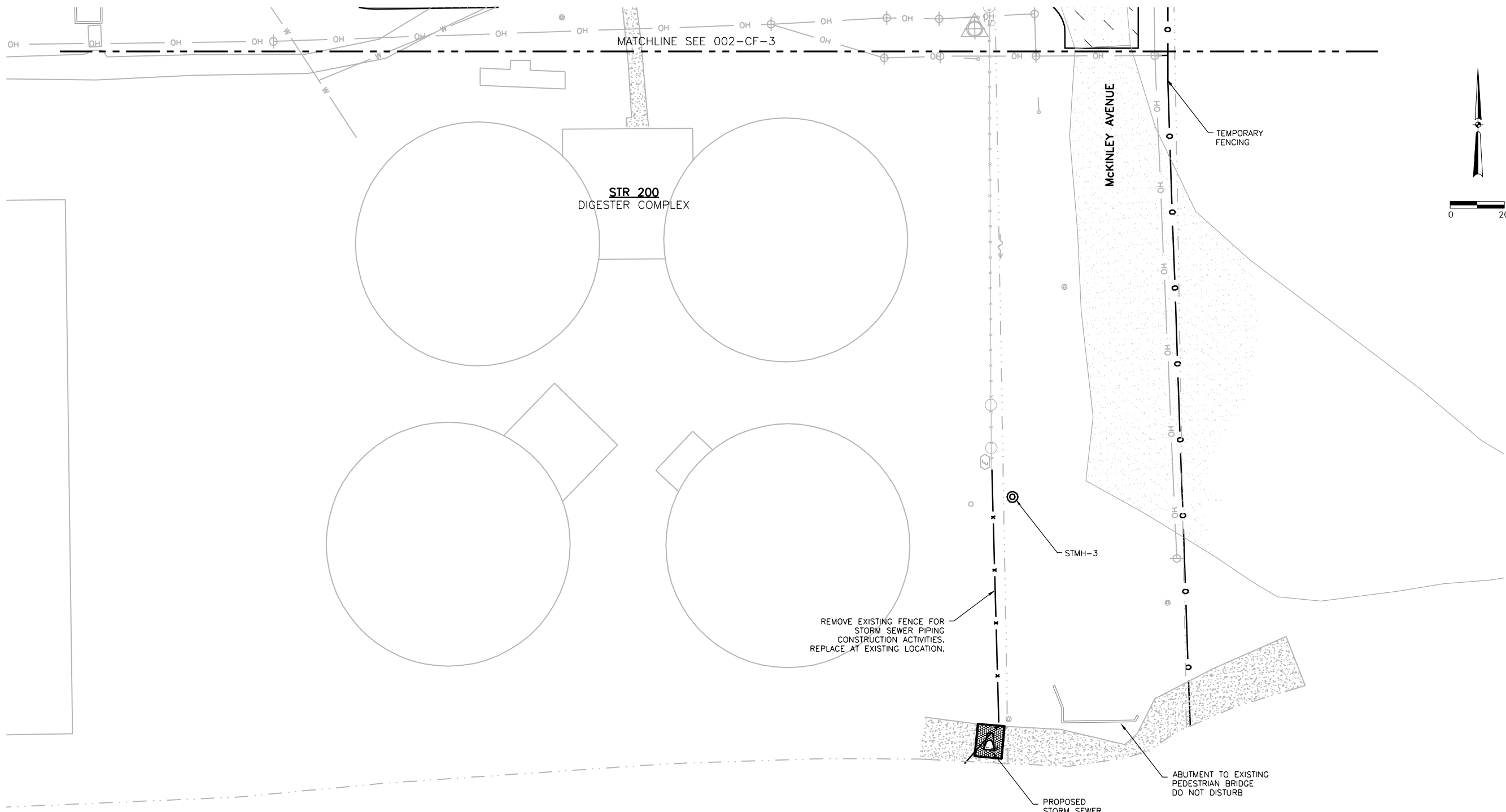
**CITY OF JOLIET**  
**EAST SIDE WASTEWATER TREATMENT PLANT**  
**JOLIET, IL**  
**INFLUENT PUMP STATION AND SCREEN REPLACEMENT**  
**SITE DEVELOPMENT**  
**FACILITIES PLAN**

**DONOHUE**

Sheet No. 17

Drawing No. 002-CF-3

*Joseph V. Rbula*  
 7-9-16  
 Expires: 11-30-16



**GENERAL NOTES:**

1. CONTRACTOR SHALL PROVIDE TRAFFIC CONTROL FOR ANY LANE CLOSURES ON MCKINLEY AVENUE IN ACCORDANCE WITH CURRENT "MUTCD" ILLINOIS STANDARDS.
2. CONTRACTOR SHALL GRADE ENTIRE SITE TO MATCH NEW AND EXISTING CONTOURS AND SHALL FERTILIZE, SEED, AND MULCH ALL DISTURBED GRASS AREAS.

REMOVE EXISTING FENCE FOR STORM SEWER PIPING CONSTRUCTION ACTIVITIES. REPLACE AT EXISTING LOCATION.

ABUTMENT TO EXISTING PEDESTRIAN BRIDGE DO NOT DISTURB

HICKORY CREEK

Revision Number	Revision Description	Drawn By	Checked By	Date

Designed By	TLW
Drawn By	TLW
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Approved By	JVP
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Project No.	12614
Project Date	JUNE 2014

**CITY OF JOLIET  
EAST SIDE WASTEWATER TREATMENT PLANT  
INFLUENT PUMP STATION AND SCREEN REPLACEMENT  
JOLIET, IL  
SITE DEVELOPMENT  
FACILITIES PLAN**

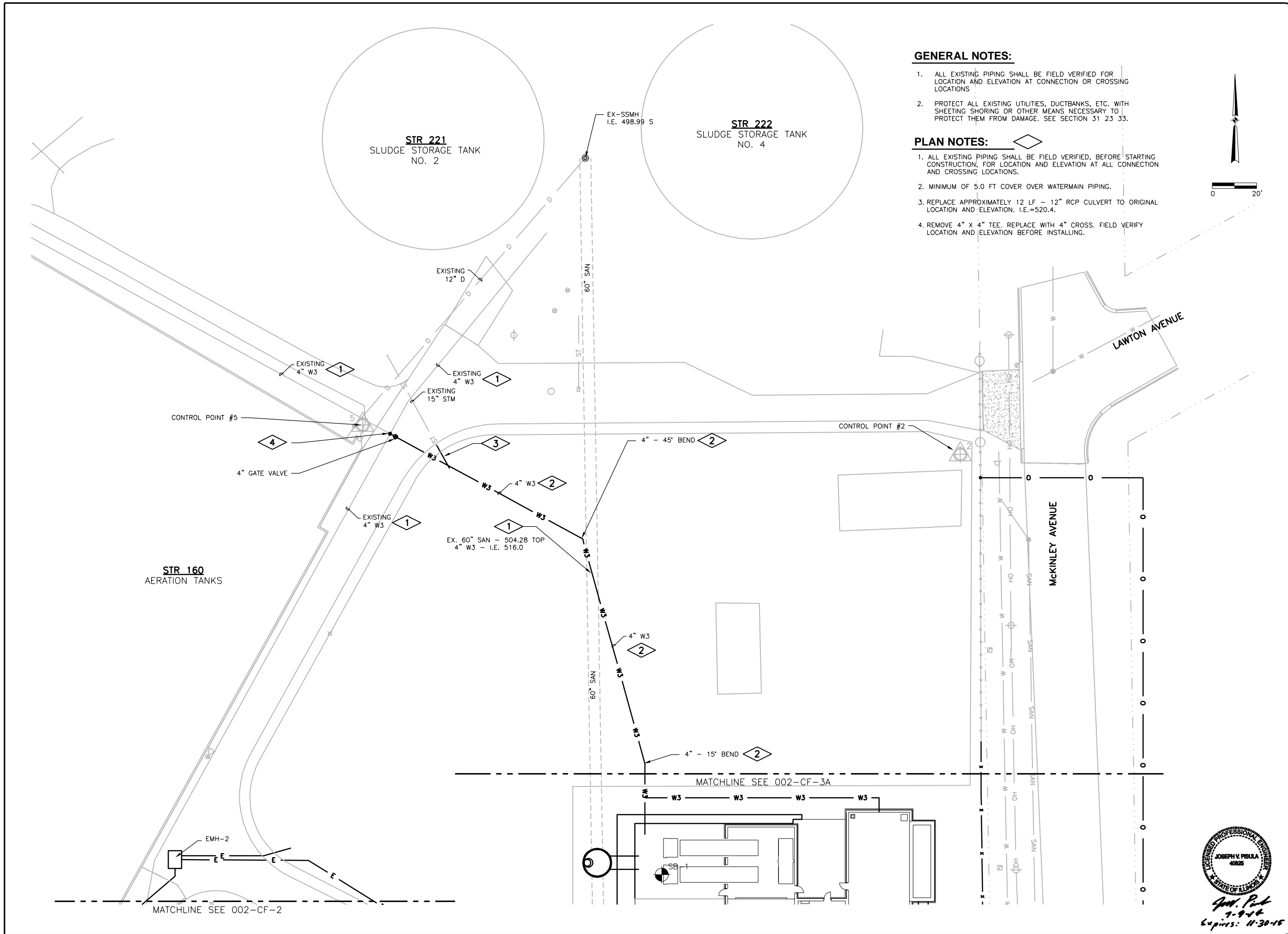


*Joseph V. Pisula*  
7-9-14  
Expires: 11-30-15



Sheet No.	18
Drawing No.	

002-CF-4

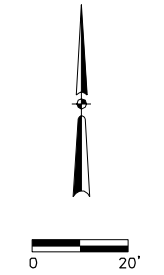


**GENERAL NOTES:**

1. ALL EXISTING PIPING SHALL BE FIELD VERIFIED FOR LOCATION AND ELEVATION AT CONNECTION OR CROSSING LOCATIONS
2. PROTECT ALL EXISTING UTILITIES, DUCTBANKS, ETC. WITH SHEETING SHORING OR OTHER MEANS NECESSARY TO PROTECT THEM FROM DAMAGE. SEE SECTION 31 23 33.

**PLAN NOTES:**

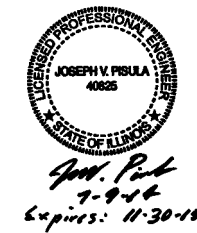
1. ALL EXISTING PIPING SHALL BE FIELD VERIFIED, BEFORE STARTING CONSTRUCTION, FOR LOCATION AND ELEVATION AT ALL CONNECTION AND CROSSING LOCATIONS.
2. MINIMUM OF 5.0 FT COVER OVER WATERMAIN PIPING.
3. REPLACE APPROXIMATELY 12 LF - 12" RCP CULVERT TO ORIGINAL LOCATION AND ELEVATION. I.E.=520.4.
4. REMOVE 4" X 4" TEE, REPLACE WITH 4" CROSS. FIELD VERIFY LOCATION AND ELEVATION BEFORE INSTALLING.



Revision Number	Revision Description	Drawn By	Checked By	Date

Designed By	TLW
Drawn By	TLW
Checked By	JVP
Approved By	JVP
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Project No.	12614
Project Date	JUNE 2014

CITY OF JOLIET  
 EAST SIDE WASTEWATER TREATMENT PLANT  
 INFLUENT PUMP STATION AND SCREEN REPLACEMENT  
 JOLIET, IL  
 SITE DEVELOPMENT  
 PIPING PLAN



Sheet No.	19
Drawing No.	002-CP-1

DES PLAINES RIVER

**GENERAL NOTES:**

1. ALL EXISTING PIPING SHALL BE FIELD VERIFIED, BEFORE STARTING CONSTRUCTION, FOR LOCATION AND ELEVATION AT CONNECTION OR CROSSING LOCATIONS.
2. ELECTRICAL DUCT BANK LOCATIONS SHOWN FOR REFERENCE ONLY. SEE 002-E-1 FOR ELECTRICAL SITWORK.
3. PROTECT ALL EXISTING UTILITIES, DUCTBANKS, ETC. WITH SHEETING SHORING OR OTHER MEANS NECESSARY TO PROTECT THEM FROM DAMAGE. SEE SECTION 31 23 33.

**STR 160**  
AERATION TANKS

**STR 185**  
FINAL CLARIFIER  
NO. 5

**STR 186**  
FINAL CLARIFIER  
NO. 6

**STR 184**  
FINAL CLARIFIER  
NO. 4

**STR 183**  
FINAL CLARIFIER  
NO. 3

**STR 187**  
RETURN ACTIVATED  
SLUDGE WELL

**STR 175**  
AIR FILTER  
HOUSING

**STR 170**  
BLOWER  
BUILDING

**STR 140**  
PRIMARY TANKS

MATCHLINE SEE 002-CP-1

MATCHLINE SEE 002-CP-3

EX. STM MH  
DO NOT DISTURB  
RIM: 523.58  
I.E. 518.58

CONTROL POINT #4

EX. SAN MH  
RIM: 524.25  
I.E. 510.75  
DO NOT DISTURB

EX. SAN MH  
RIM: 524.83  
I.E. 511.33  
DO NOT DISTURB

EX. STM MH  
DO NOT DISTURB  
RIM: 524.65  
I.E. 518.25 E  
I.E. 517.90 N

REMOVE AND REPLACE  
AS REQUIRED TO INSTALL  
ELECTRICAL DUCT BANK

EXISTING LIGHT  
REMOVE AND  
REPLACE

EX. SAN MH  
RIM: 524.70  
I.E. 510.80 N  
I.E. 510.30 W  
DO NOT DISTURB

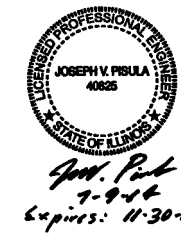
EX. STM INLET  
RIM: 524.27  
I.E. 518.77  
REMOVE AND REPLACE



Date	Checked By	Drawn By	Revision Description	Revision Number

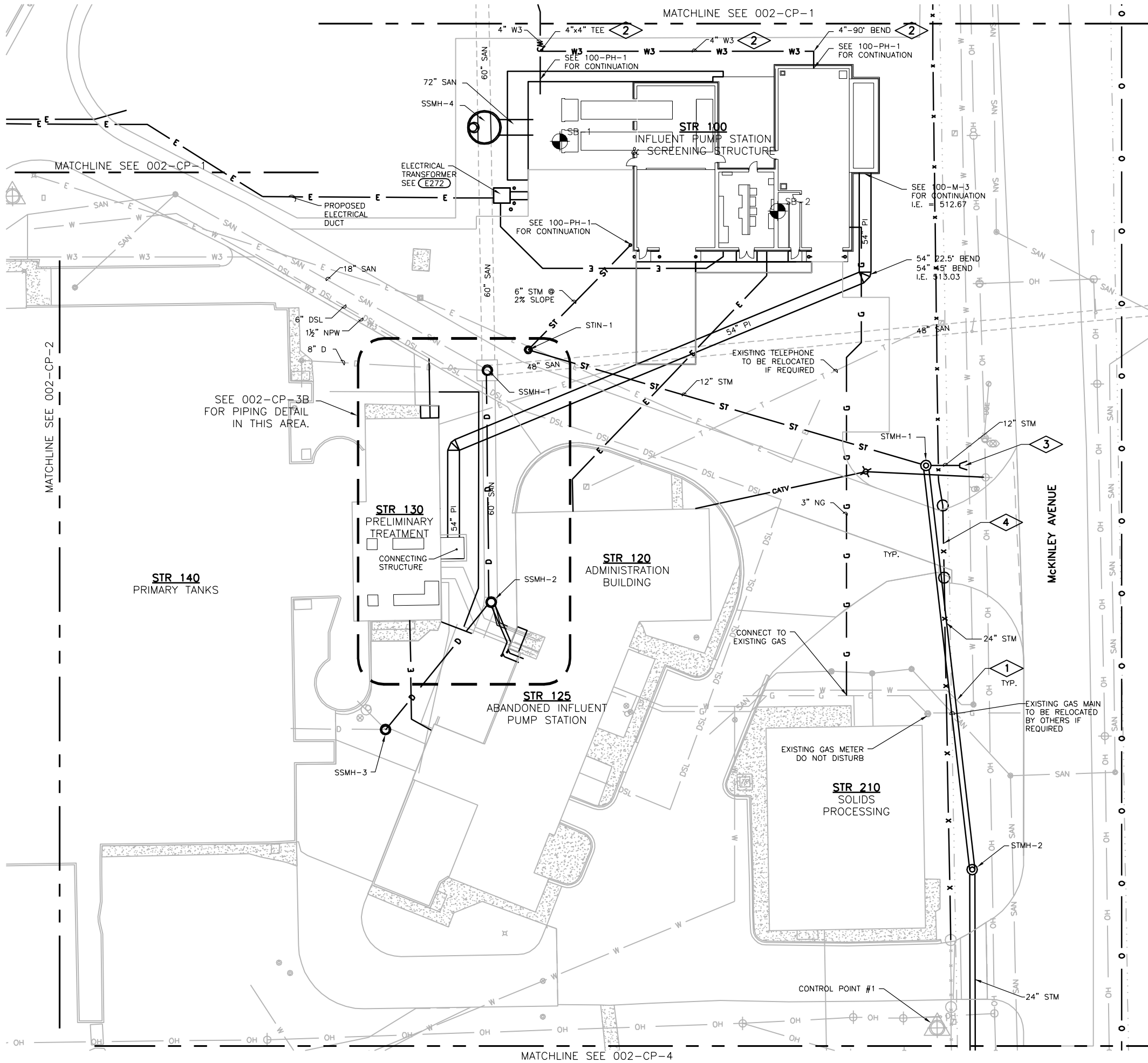
Designed By	TLW
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CITY OF JOLIET  
EAST SIDE WASTEWATER TREATMENT PLANT  
INFLUENT PUMP STATION AND SCREEN REPLACEMENT  
JOLIET, IL  
SITE DEVELOPMENT  
PIPING PLAN



**DONOHUE**

Sheet No.	20
Drawing No.	002-CP-2



**GENERAL NOTES:**

1. ALL EXISTING PIPING SHALL BE VERIFIED, BEFORE STARTING CONSTRUCTION. FOR LOCATION AND ELEVATION AT CONNECTION OR CROSSING LOCATIONS
2. SEE DRAWING 002-CP-3B FOR DETAIL OF PROPOSED PIPING BETWEEN STR 120 AND STR 130.
3. ELECTRICAL DUCT BANK LOCATIONS SHOWN FOR REFERENCE ONLY. SEE 002-E-1 FOR ELECTRICAL SITEWORK.
4. PROTECT ALL EXISTING UTILITIES, DUCTBANKS, ETC. WITH SHEETING SHORING OR OTHER MEANS NECESSARY TO PROTECT THEM FROM DAMAGE. SEE SECTION 31 23 33.

**PLAN NOTES:**

1. LOWER WATERMAIN AS REQUIRED FOR STORM SEWER CROSSING. FOR DETAILS SEE (C910)
2. MINIMUM 5.0 FT COVER OVER WATER PIPING.
3. CONCRETE CULVERT FLARED END SECTION. FOR DETAILS SEE (C810)
4. REPLACE MOTOR OPERATED SLIDE GATE AS SPECIFIED IN SECTION 32 31 00.

**SANITARY STRUCTURE NOTES:**

SSMH-1 N:1762831.05 E:1050514.58  
 SANITARY MANHOLE, EXISTING, SEE DETAIL (C251)  
 I.E. 498.53 N RIM EL = 522.80 +/-  
 I.E. 500.55 E  
 I.E. 498.53 S (MAINTAIN FLOW UNTIL STR. 100 OPERATIONAL)

SSMH-2 N:1762741.47 E:1050516.09  
 SANITARY MANHOLE, EXISTING, SEE DETAIL (C252)  
 CONNECT NEW 10" D. TEMPORARY REMOVE AND REPLACE 4" ACID & 4" D AS NEEDED TO CONNECT REROUTED 4" SAN & 6" DS FROM ABANDONED INFLUENT PUMP STATION. RIM EL. = 523.75 +/-

SSMH-3 N:1762703.37 E:1050476.63  
 SANITARY MANHOLE, 48" DIA. SEE DETAIL (C253)  
 LOCATE OVER EXISTING DRAIN PIPING, 10" X 6" WYE. FIELD VERIFY LOCATION AND ELEVATION. CONNECT EXISTING PIPING, NW & E. PLUG AND ABANDON EXISTING 10" D SE AFTER NEW PIPE TO SSMH-2 IS OPERATIONAL.  
 I.E. 507.20 NE RIM EL = 524.40 +/-

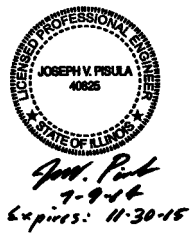
SSMH-4 N:1762924.89 E:1050513.48  
 SANITARY MANHOLE, 120" DIA. BASE W/ 48" RISERS  
 LOCATE OVER EXISTING 60" SAN. SEE DETAIL (C254)  
 FIELD VERIFY LOCATION & ELEVATIONS  
 I.E. 499.35 N/S  
 I.E. 499.25 E  
 RIM EL = SEE DRAWING 002-CG-3

**STORM STRUCTURE NOTES:**

STIN-1  
 STORM INLET, SEE DETAIL (C340)  
 N:1762839.00  
 E:1050530.42  
 I.E. 520.00 NE  
 I.E. 519.50 SE  
 RIM EL = SEE DRAWING 002-CG-3

STMH-1  
 STORM MANHOLE, 48" DIA., CLOSED  
 N:1762794.29  
 E:1050683.98  
 I.E. 518.00 NW  
 I.E. 517.00 S  
 I.E. 520.80 E  
 RIM EL = SEE DRAWING 002-CG-3

STMH-2  
 STORM MANHOLE, 48" DIA., OPEN GRATED  
 N:1762638.21  
 E:1050701.84  
 I.E. 516.22 N  
 I.E. 516.17 S  
 RIM EL = SEE DRAWING 002-CG-3



Date	Checked By	Drawn By	Revision Description

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**CITY OF JOLIET  
 EAST SIDE WASTEWATER TREATMENT PLANT  
 INFLUENT PUMP STATION AND SCREEN REPLACEMENT  
 JOLIET, IL  
 SITE DEVELOPMENT  
 PIPING PLAN**



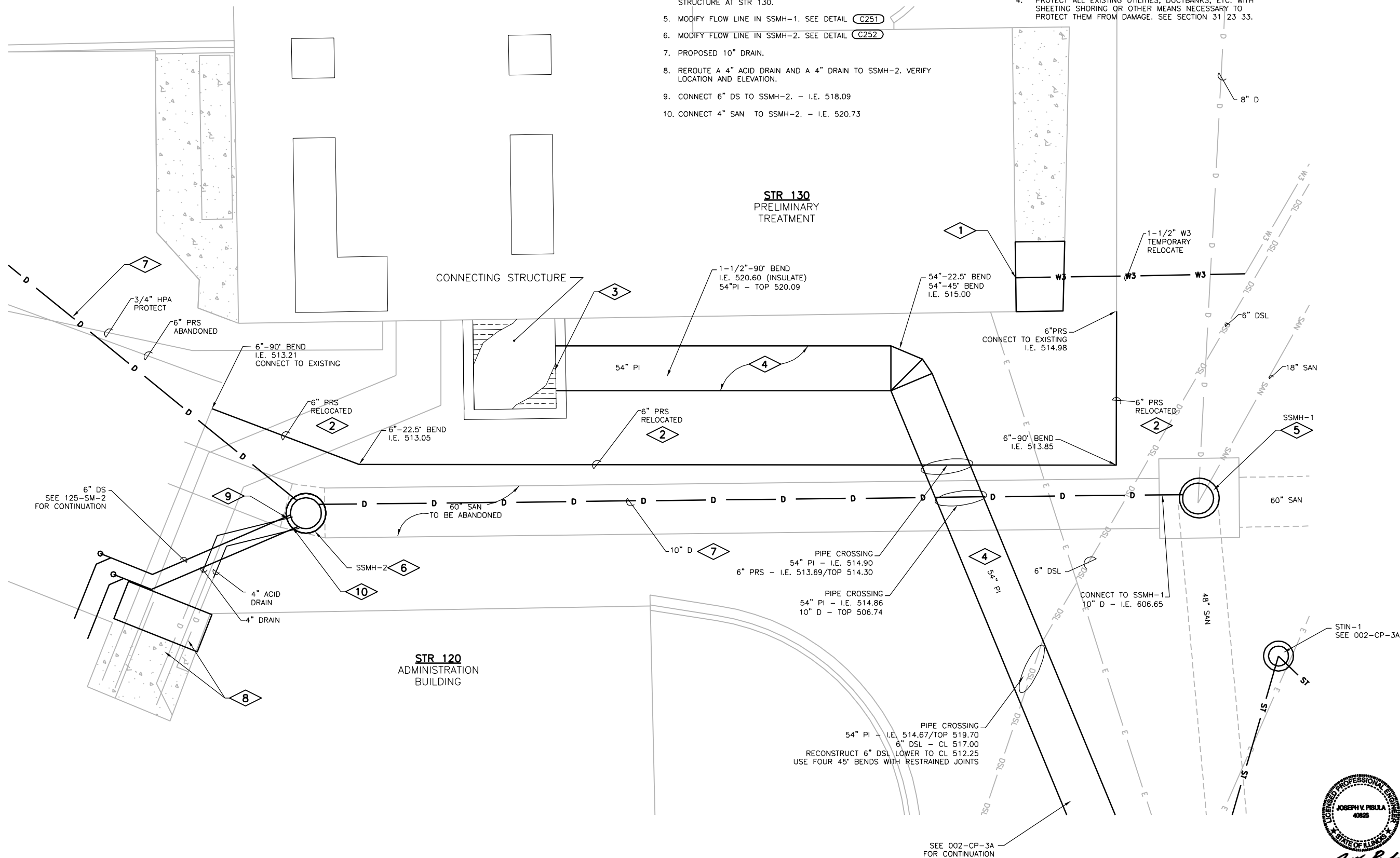
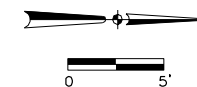
Sheet No. 21  
 Drawing No. 002-CP-3A

**PLAN NOTES:**

1. RELOCATE W3 THROUGH NORTH END OF PRELIMINARY TREATMENT BUILDING.
2. RELOCATE PRS LINE.
3. PRELIMINARY TREATMENT CONNECTING STRUCTURE. SEE 130-SMEN-1 FOR CONTINUATION.
4. CONSTRUCT NEW 54" P.I. BETWEEN STR 100 AND NEW CONNECTING STRUCTURE AT STR 130.
5. MODIFY FLOW LINE IN SSMH-1. SEE DETAIL C251
6. MODIFY FLOW LINE IN SSMH-2. SEE DETAIL C252
7. PROPOSED 10" DRAIN.
8. REROUTE A 4" ACID DRAIN AND A 4" DRAIN TO SSMH-2. VERIFY LOCATION AND ELEVATION.
9. CONNECT 6" DS TO SSMH-2. - I.E. 518.09
10. CONNECT 4" SAN TO SSMH-2. - I.E. 520.73

**GENERAL NOTES:**

1. MINIMUM 5.0 FT COVER OVER W3 PIPING.
2. ALL EXISTING PIPING SHALL BE FIELD VERIFIED, BEFORE STARTING CONSTRUCTION, FOR LOCATION AND ELEVATION AT CONNECTION OR CROSSING LOCATIONS.
3. SEE 002-CP-3A FOR OVERALL PIPING LAYOUT AND SANITARY STRUCTURE NOTES.
4. PROTECT ALL EXISTING UTILITIES, DUCTBANKS, ETC. WITH SHEETING SHORING OR OTHER MEANS NECESSARY TO PROTECT THEM FROM DAMAGE. SEE SECTION 31 23 33.



Date	
Checked By	
Drawn By	
Revision Description	
Revision Number	

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Project No.	12614
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**CITY OF JOLIET  
EAST SIDE WASTEWATER TREATMENT PLANT  
INFLUENT PUMP STATION AND SCREEN REPLACEMENT  
JOLIET, IL  
SITE DEVELOPMENT  
PIPING PLAN-DETAIL**



*Joe. Pisula*  
7-9-14  
Expires: 11-30-15

**DONOHUE**

Sheet No. 22

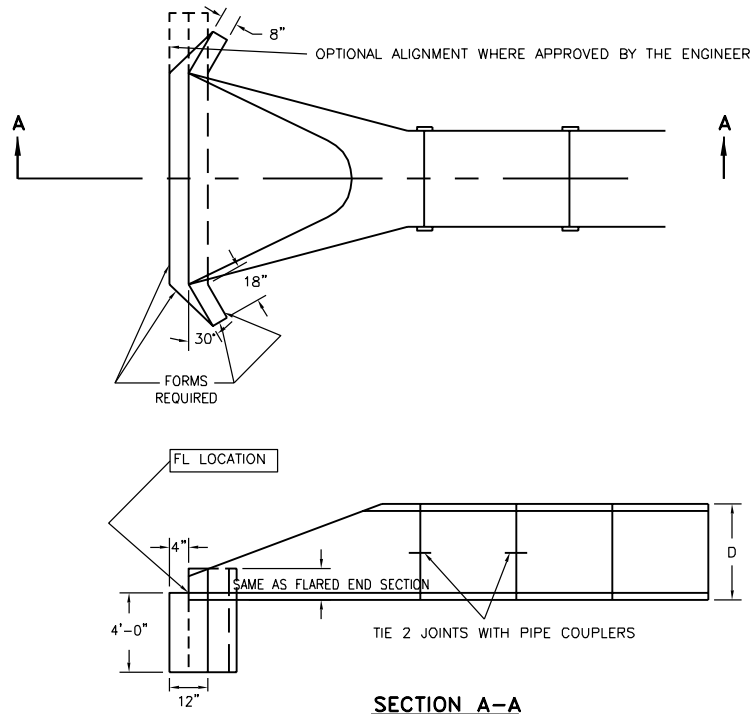
Drawing No. 002-CP-3B

**GENERAL NOTES:**

- ALL EXISTING PIPING SHALL BE FIELD VERIFIED, BEFORE STARTING CONSTRUCTION, FOR LOCATION AND ELEVATION AT CONNECTION OR CROSSING LOCATIONS.
- PROTECT ALL EXISTING UTILITIES, DUCTBANKS, ETC. WITH SHEETING SHORING OR OTHER MEANS NECESSARY TO PROTECT THEM FROM DAMAGE. SEE SECTION 31 23 33.

**PLAN NOTES:**

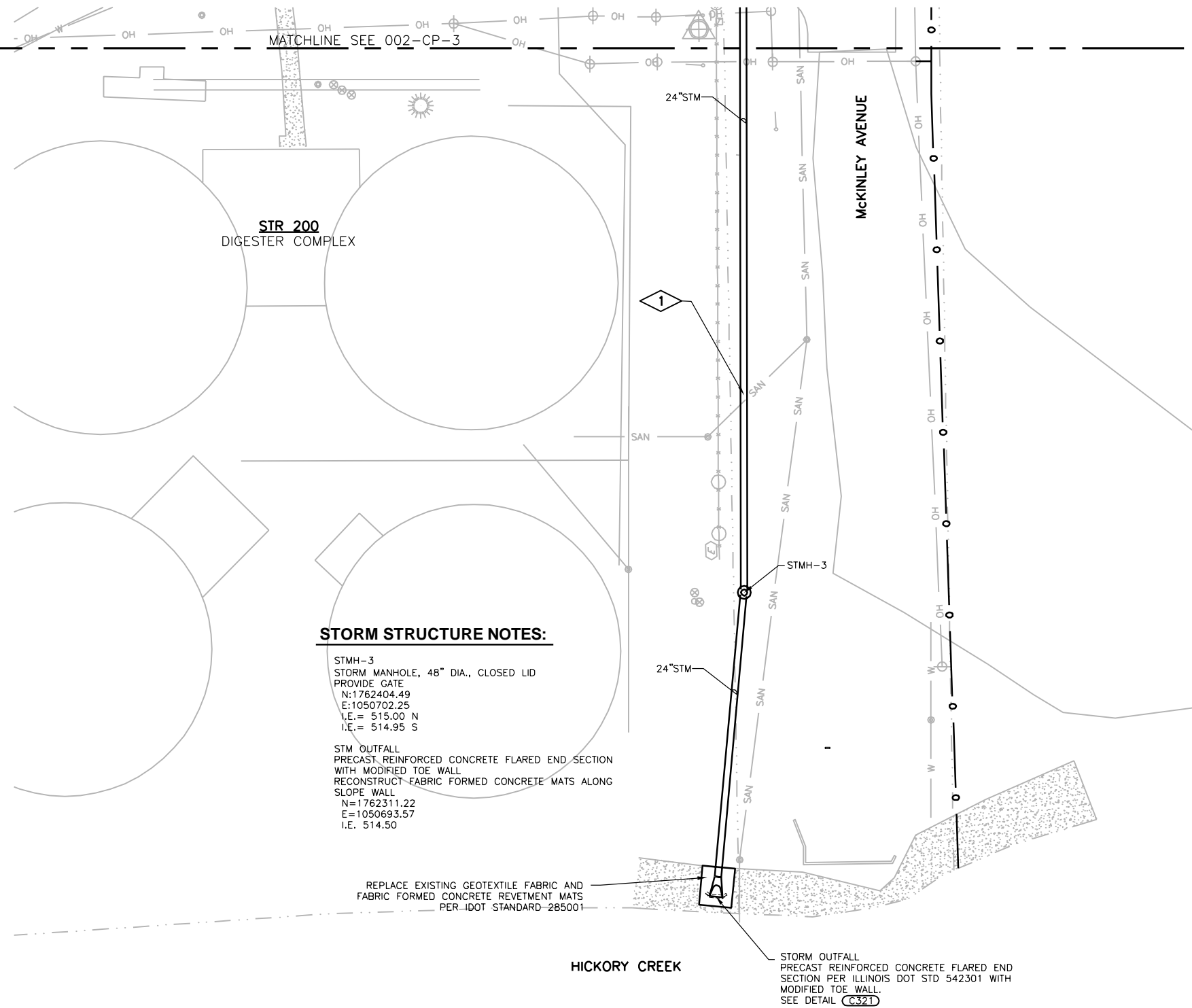
- FIELD VERIFY LOCATION AND ELEVATION BEFORE STARTING CONSTRUCTION.



FORM ALL WALLS OF TOEWALL EXCEPT BOTTOM AND BACK FACE BELOW PIPE. TOEWALL REINFORCING SHALL CONSIST OF #3 BARS ON 12" CENTERS EACH DIRECTION. MINIMUM CLEARANCE BETWEEN REINFORCING AND CONCRETE SURFACES SHALL BE TWO (2) INCHES.

PRECAST REINFORCED CONCRETE FLARED END SECTION SHALL BE IN ACCORDANCE WITH IDOT STANDARD 542301.

**FLARED END SECTION  
TOE WALL DETAIL** C321  
NTS



**STORM STRUCTURE NOTES:**

STMH-3  
STORM MANHOLE, 48" DIA., CLOSED LID  
PROVIDE GATE  
N:1762404.49  
E:1050702.25  
I.E.= 515.00 N  
I.E.= 514.95 S

STM OUTFALL  
PRECAST REINFORCED CONCRETE FLARED END SECTION WITH MODIFIED TOE WALL  
RECONSTRUCT FABRIC FORMED CONCRETE MATS ALONG SLOPE WALL  
N=1762311.22  
E=1050693.57  
I.E. 514.50

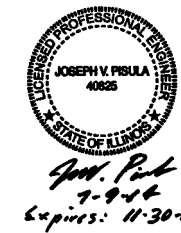
Date	Checked By	Drawn By	Revision Description	Revision Number

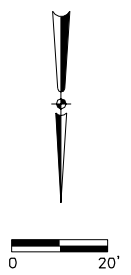
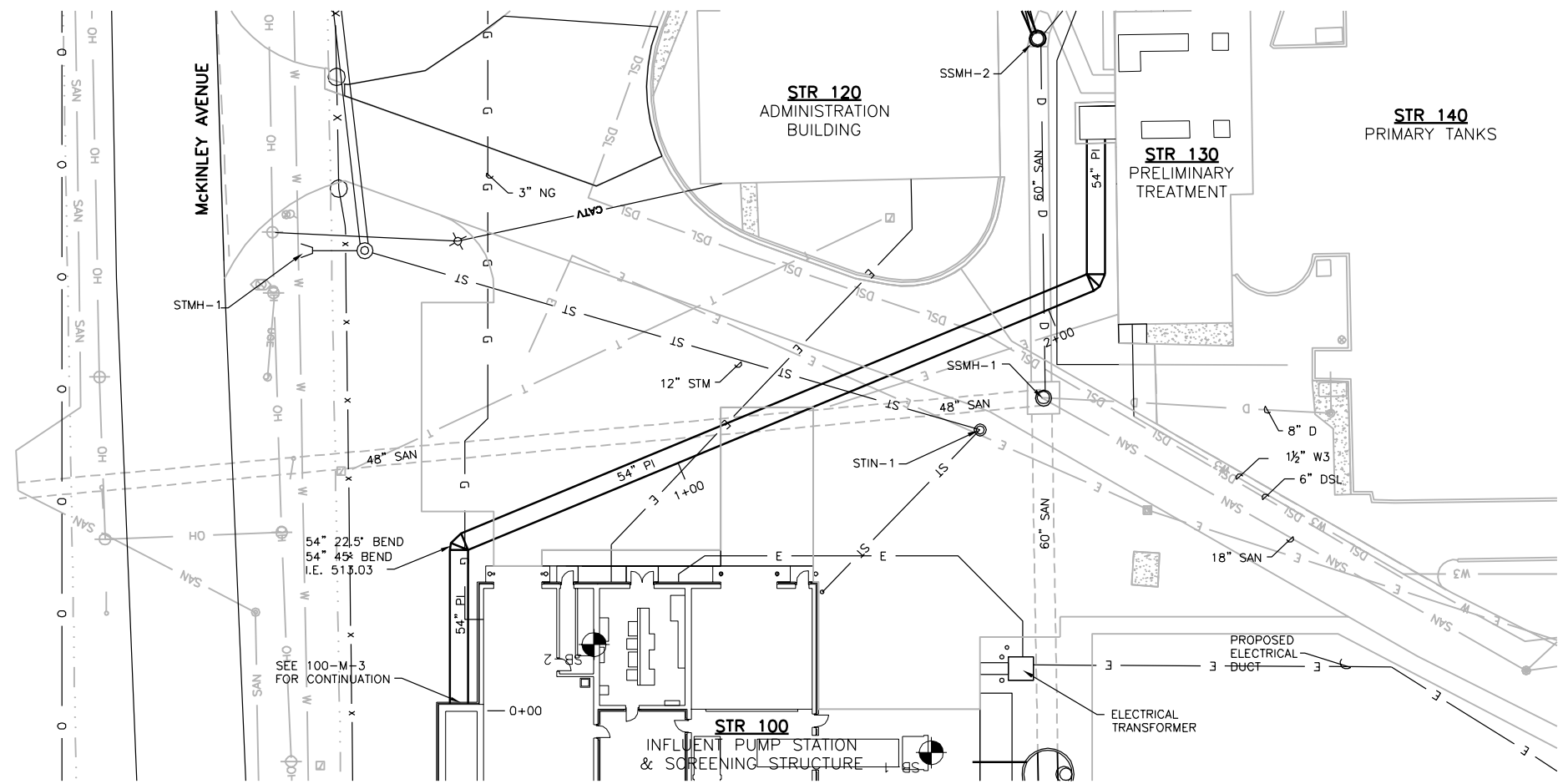
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Drawn By	TLW
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Project No.	12614
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CITY OF JOLIET  
EAST SIDE WASTEWATER TREATMENT PLANT  
INFLUENT PUMP STATION AND SCREEN REPLACEMENT  
JOLIET, IL  
SITE DEVELOPMENT  
PIPING PLAN

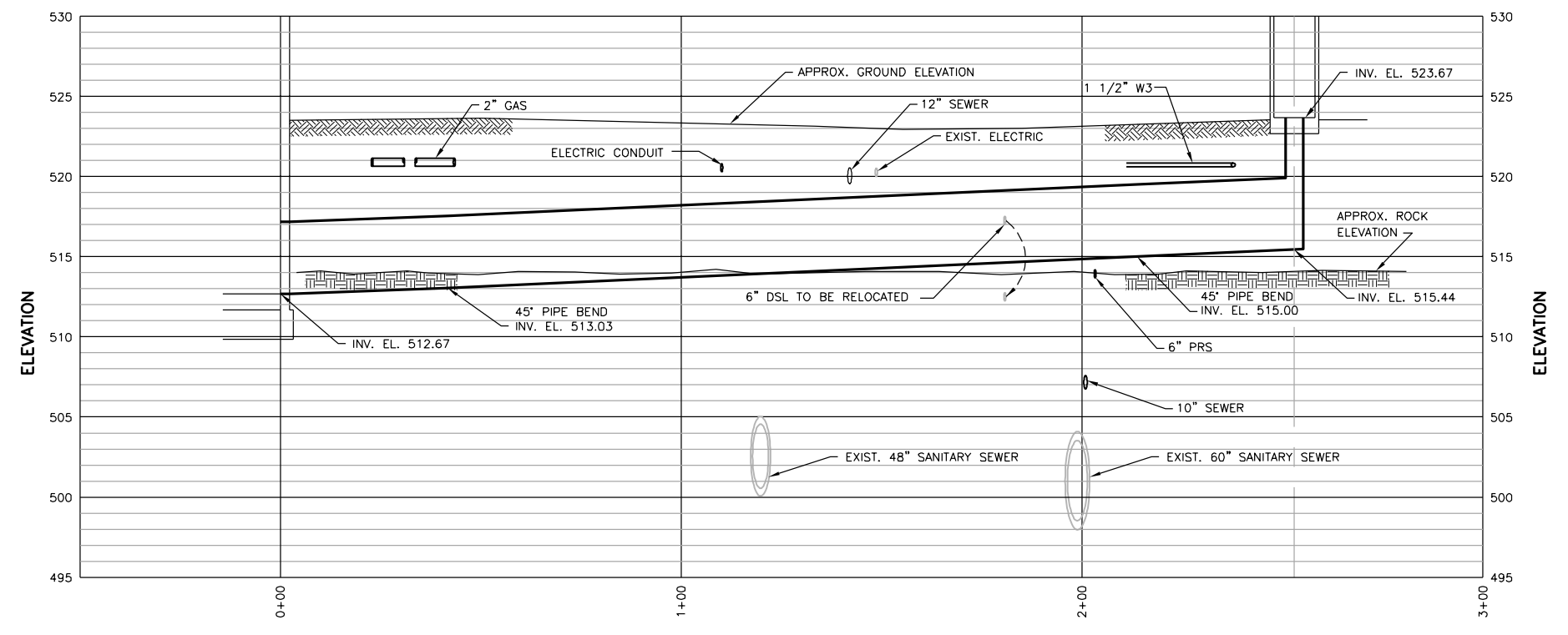


Sheet No.	23
Drawing No.	

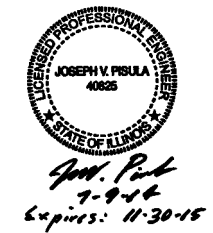




**54" PI PLAN**  
1"=20'



**54" PI PROFILE**  
1"=20'



Revision Number	Revision Description

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Drawn By	HF
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CITY OF JOLIET  
 EAST SIDE WASTEWATER TREATMENT PLANT  
 INFLUENT PUMP STATION AND SCREEN REPLACEMENT  
 JOLIET, IL  
 SITE DEVELOPMENT  
 PIPING PLAN AND PROFILE

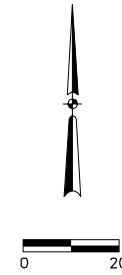
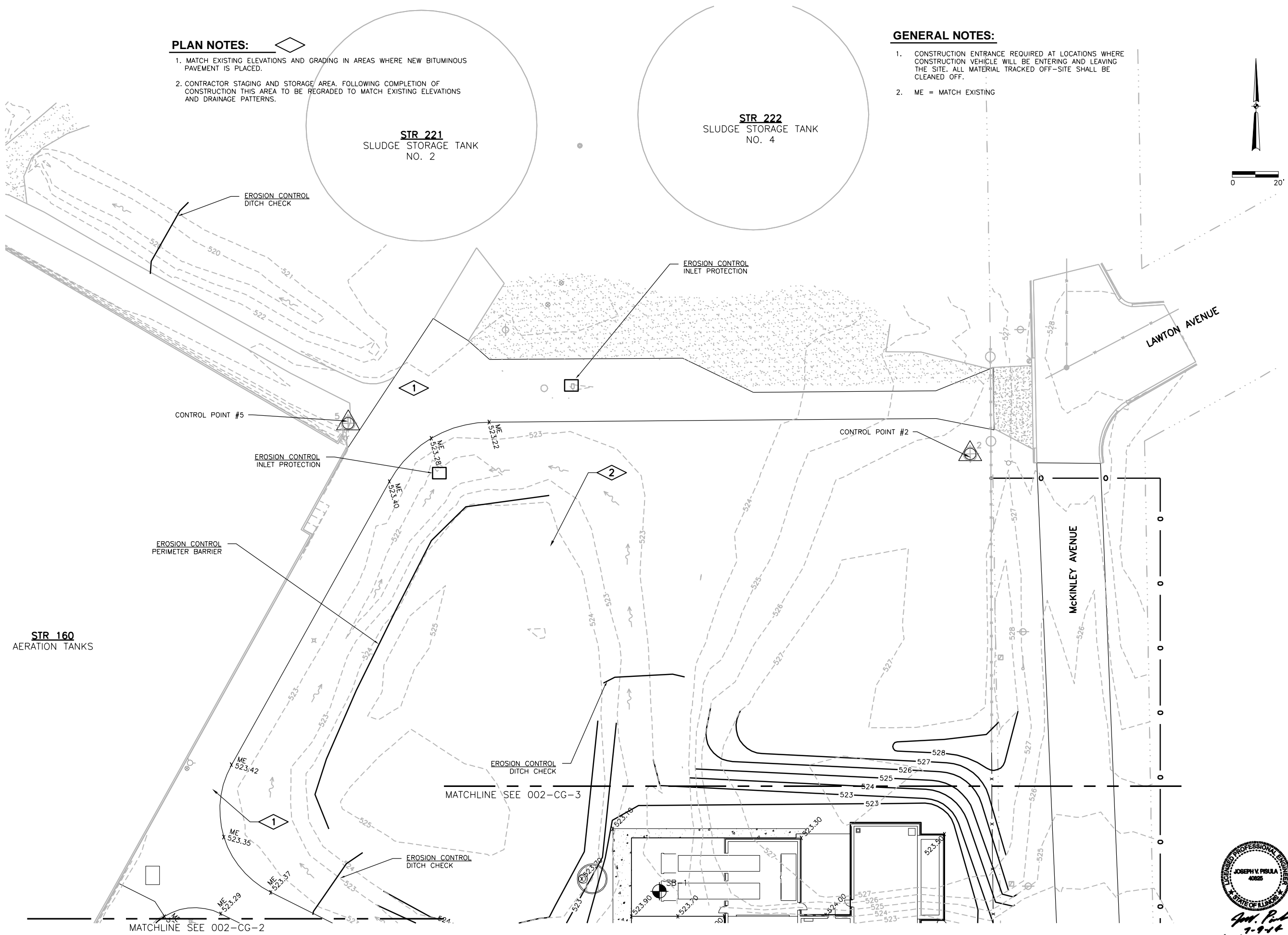


**PLAN NOTES:**

1. MATCH EXISTING ELEVATIONS AND GRADING IN AREAS WHERE NEW BITUMINOUS PAVEMENT IS PLACED.
2. CONTRACTOR STAGING AND STORAGE AREA. FOLLOWING COMPLETION OF CONSTRUCTION THIS AREA TO BE REGRADED TO MATCH EXISTING ELEVATIONS AND DRAINAGE PATTERNS.

**GENERAL NOTES:**

1. CONSTRUCTION ENTRANCE REQUIRED AT LOCATIONS WHERE CONSTRUCTION VEHICLE WILL BE ENTERING AND LEAVING THE SITE. ALL MATERIAL TRACKED OFF-SITE SHALL BE CLEANED OFF.
2. ME = MATCH EXISTING



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**CITY OF JOLIET**  
**EAST SIDE WASTEWATER TREATMENT PLANT**  
**INFLUENT PUMP STATION AND SCREEN REPLACEMENT**  
**JOLIET, IL**  
**SITE DEVELOPMENT**  
**GRADING & EROSION CONTROL PLAN**



**DONOHUE**

Sheet No. 25

Drawing No. 002-CG-1

*John. Park*  
7-9-14  
Expires: 11-30-15

DES PLAINES RIVER

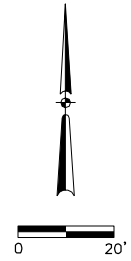
**GENERAL NOTES:**

1. IN AREAS OF BITUMINOUS PAVEMENT REPLACEMENT, MATCH EXISTING ELEVATIONS AND GRADING.
2. ME = MATCH EXISTING

MATCHLINE SEE 002-CG-1

**STR 160**  
AERATION TANKS

CONTROL POINT #4



**STR 185**  
FINAL CLARIFIER  
NO. 5

EROSION CONTROL  
INLET PROTECTION

**STR 140**  
PRIMARY TANKS

**STR 186**  
FINAL CLARIFIER  
NO. 6

MATCHLINE SEE 002-CG-3

**STR 184**  
FINAL CLARIFIER  
NO. 4

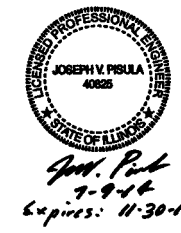
**STR 170**  
BLOWER  
BUILDING

**STR 187**  
RETURN ACTIVATED  
SLUDGE WELL

**STR 175**  
AIR FILTER  
HOUSING

CONTROL POINT #3

**STR 183**  
FINAL CLARIFIER  
NO. 3



Revision Number	Revision Description	Drawn By	Checked By	Date

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CITY OF JOLIET  
EAST SIDE WASTEWATER TREATMENT PLANT  
INFLUENT PUMP STATION AND SCREEN REPLACEMENT  
JOLIET, IL  
SITE DEVELOPMENT  
GRADING & EROSION CONTROL PLAN

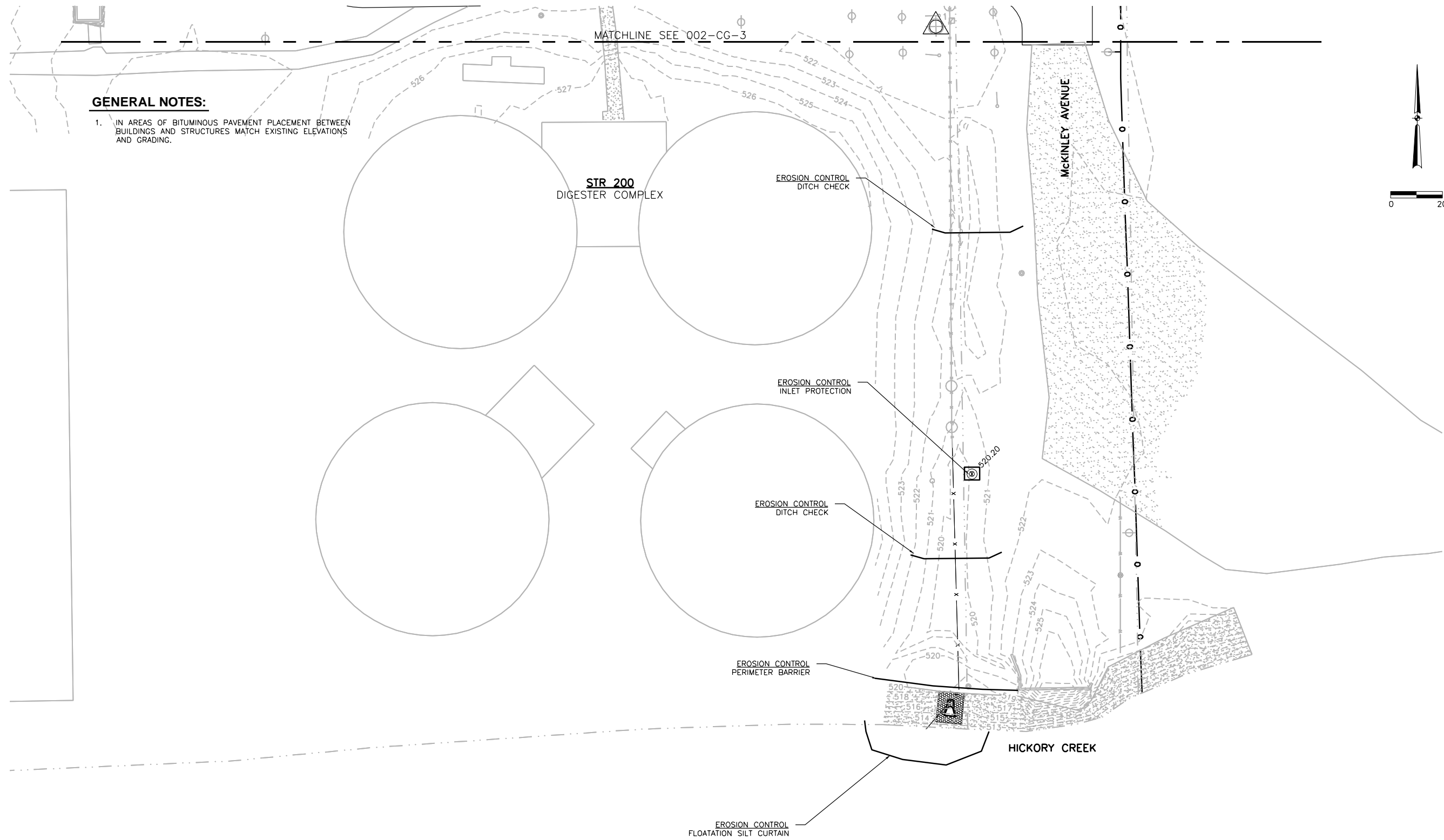
**DONOHUE**

Sheet No. 26  
Drawing No. 002-CG-2



**GENERAL NOTES:**

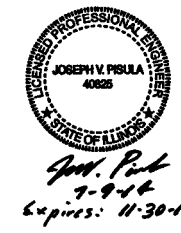
1. IN AREAS OF BITUMINOUS PAVEMENT PLACEMENT BETWEEN BUILDINGS AND STRUCTURES MATCH EXISTING ELEVATIONS AND GRADING.



Revision Number	Revision Description	Drawn By	Checked By	Date

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**CITY OF JOLIET  
EAST SIDE WASTEWATER TREATMENT PLANT  
INFLUENT PUMP STATION AND SCREEN REPLACEMENT  
JOLIET, IL  
SITE DEVELOPMENT  
GRADING & EROSION CONTROL PLAN**



**DONOHUE**

Sheet No. 28

Drawing No. 002-CG-4

**STRUCTURE LIST**

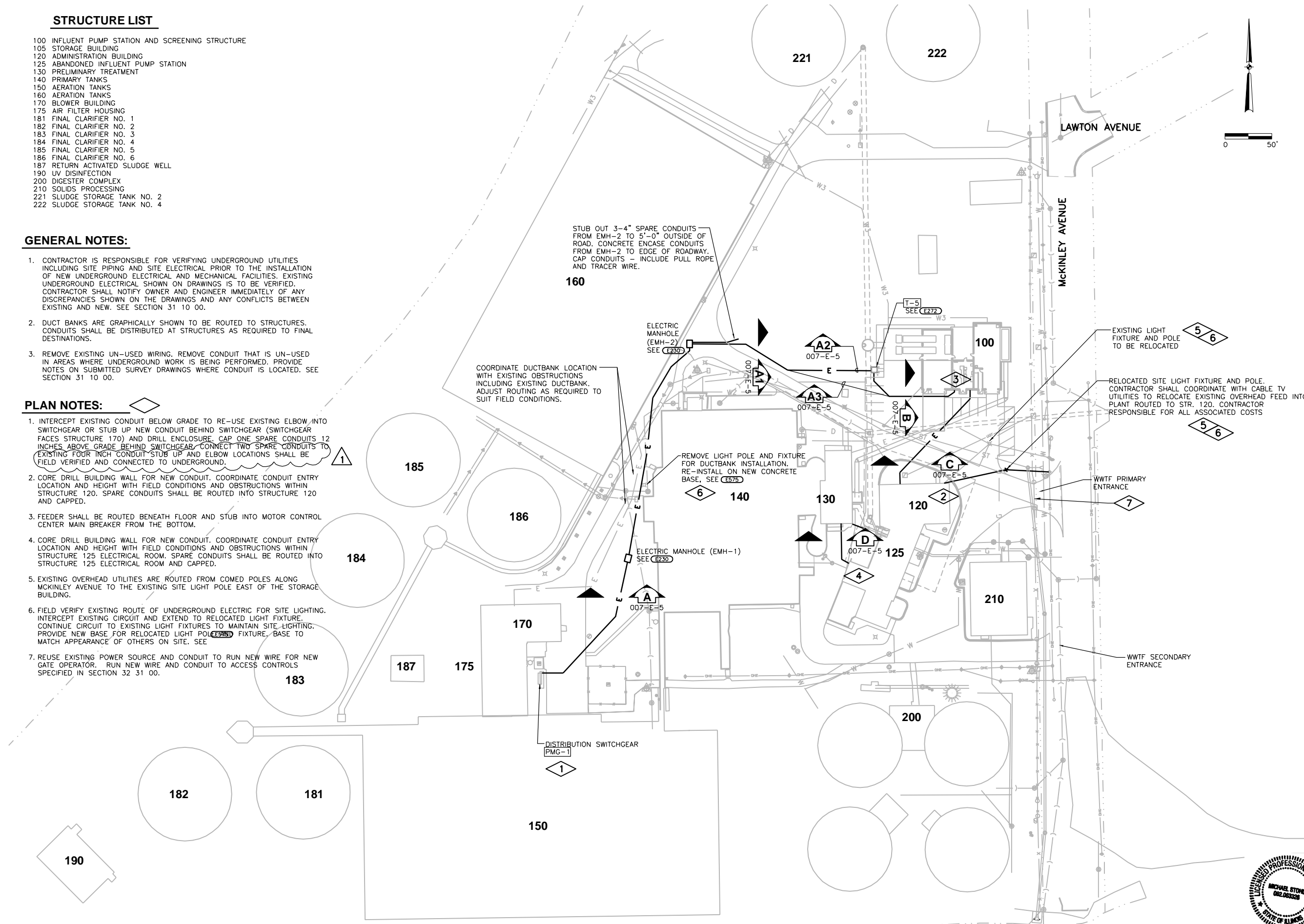
- 100 INFLUENT PUMP STATION AND SCREENING STRUCTURE
- 105 STORAGE BUILDING
- 120 ADMINISTRATION BUILDING
- 125 ABANDONED INFLUENT PUMP STATION
- 130 PRELIMINARY TREATMENT
- 140 PRIMARY TANKS
- 150 AERATION TANKS
- 160 AERATION TANKS
- 170 BLOWER BUILDING
- 175 AIR FILTER HOUSING
- 181 FINAL CLARIFIER NO. 1
- 182 FINAL CLARIFIER NO. 2
- 183 FINAL CLARIFIER NO. 3
- 184 FINAL CLARIFIER NO. 4
- 185 FINAL CLARIFIER NO. 5
- 186 FINAL CLARIFIER NO. 6
- 187 RETURN ACTIVATED SLUDGE WELL
- 190 UV DISINFECTION
- 200 DIGESTER COMPLEX
- 210 SOLIDS PROCESSING
- 221 SLUDGE STORAGE TANK NO. 2
- 222 SLUDGE STORAGE TANK NO. 4

**GENERAL NOTES:**

1. CONTRACTOR IS RESPONSIBLE FOR VERIFYING UNDERGROUND UTILITIES INCLUDING SITE PIPING AND SITE ELECTRICAL PRIOR TO THE INSTALLATION OF NEW UNDERGROUND ELECTRICAL AND MECHANICAL FACILITIES. EXISTING UNDERGROUND ELECTRICAL SHOWN ON DRAWINGS IS TO BE VERIFIED. CONTRACTOR SHALL NOTIFY OWNER AND ENGINEER IMMEDIATELY OF ANY DISCREPANCIES SHOWN ON THE DRAWINGS AND ANY CONFLICTS BETWEEN EXISTING AND NEW. SEE SECTION 31 10 00.
2. DUCT BANKS ARE GRAPHICALLY SHOWN TO BE ROUTED TO STRUCTURES. CONDUITS SHALL BE DISTRIBUTED AT STRUCTURES AS REQUIRED TO FINAL DESTINATIONS.
3. REMOVE EXISTING UN-USED WIRING. REMOVE CONDUIT THAT IS UN-USED IN AREAS WHERE UNDERGROUND WORK IS BEING PERFORMED. PROVIDE NOTES ON SUBMITTED SURVEY DRAWINGS WHERE CONDUIT IS LOCATED. SEE SECTION 31 10 00.

**PLAN NOTES:**

1. INTERCEPT EXISTING CONDUIT BELOW GRADE TO RE-USE EXISTING ELBOW INTO SWITCHGEAR OR STUB UP NEW CONDUIT BEHIND SWITCHGEAR (SWITCHGEAR FACES STRUCTURE 170) AND DRILL ENCLOSURE. CAP ONE SPARE CONDUITS 12 INCHES ABOVE GRADE BEHIND SWITCHGEAR. CONNECT TWO SPARE CONDUITS TO EXISTING FOUR INCH CONDUIT STUB UP AND ELBOW LOCATIONS SHALL BE FIELD VERIFIED AND CONNECTED TO UNDERGROUND.
2. CORE DRILL BUILDING WALL FOR NEW CONDUIT. COORDINATE CONDUIT ENTRY LOCATION AND HEIGHT WITH FIELD CONDITIONS AND OBSTRUCTIONS WITHIN STRUCTURE 120. SPARE CONDUITS SHALL BE ROUTED INTO STRUCTURE 120 AND CAPPED.
3. FEEDER SHALL BE ROUTED BENEATH FLOOR AND STUB INTO MOTOR CONTROL CENTER MAIN BREAKER FROM THE BOTTOM.
4. CORE DRILL BUILDING WALL FOR NEW CONDUIT. COORDINATE CONDUIT ENTRY LOCATION AND HEIGHT WITH FIELD CONDITIONS AND OBSTRUCTIONS WITHIN STRUCTURE 125 ELECTRICAL ROOM. SPARE CONDUITS SHALL BE ROUTED INTO STRUCTURE 125 ELECTRICAL ROOM AND CAPPED.
5. EXISTING OVERHEAD UTILITIES ARE ROUTED FROM COMED POLES ALONG MCKINLEY AVENUE TO THE EXISTING SITE LIGHT POLE EAST OF THE STORAGE BUILDING.
6. FIELD VERIFY EXISTING ROUTE OF UNDERGROUND ELECTRIC FOR SITE LIGHTING. INTERCEPT EXISTING CIRCUIT AND EXTEND TO RELOCATED LIGHT FIXTURE. CONTINUE CIRCUIT TO EXISTING LIGHT FIXTURES TO MAINTAIN SITE LIGHTING. PROVIDE NEW BASE FOR RELOCATED LIGHT POLE FIXTURE. BASE TO MATCH APPEARANCE OF OTHERS ON SITE. SEE E272.
7. REUSE EXISTING POWER SOURCE AND CONDUIT TO RUN NEW WIRE FOR NEW GATE OPERATOR. RUN NEW WIRE AND CONDUIT TO ACCESS CONTROLS SPECIFIED IN SECTION 32 31 00.



Revision Number	Revision Description	Checked By	Date
1	CHANGE PLAN NOTE 1	MS	8/13/14

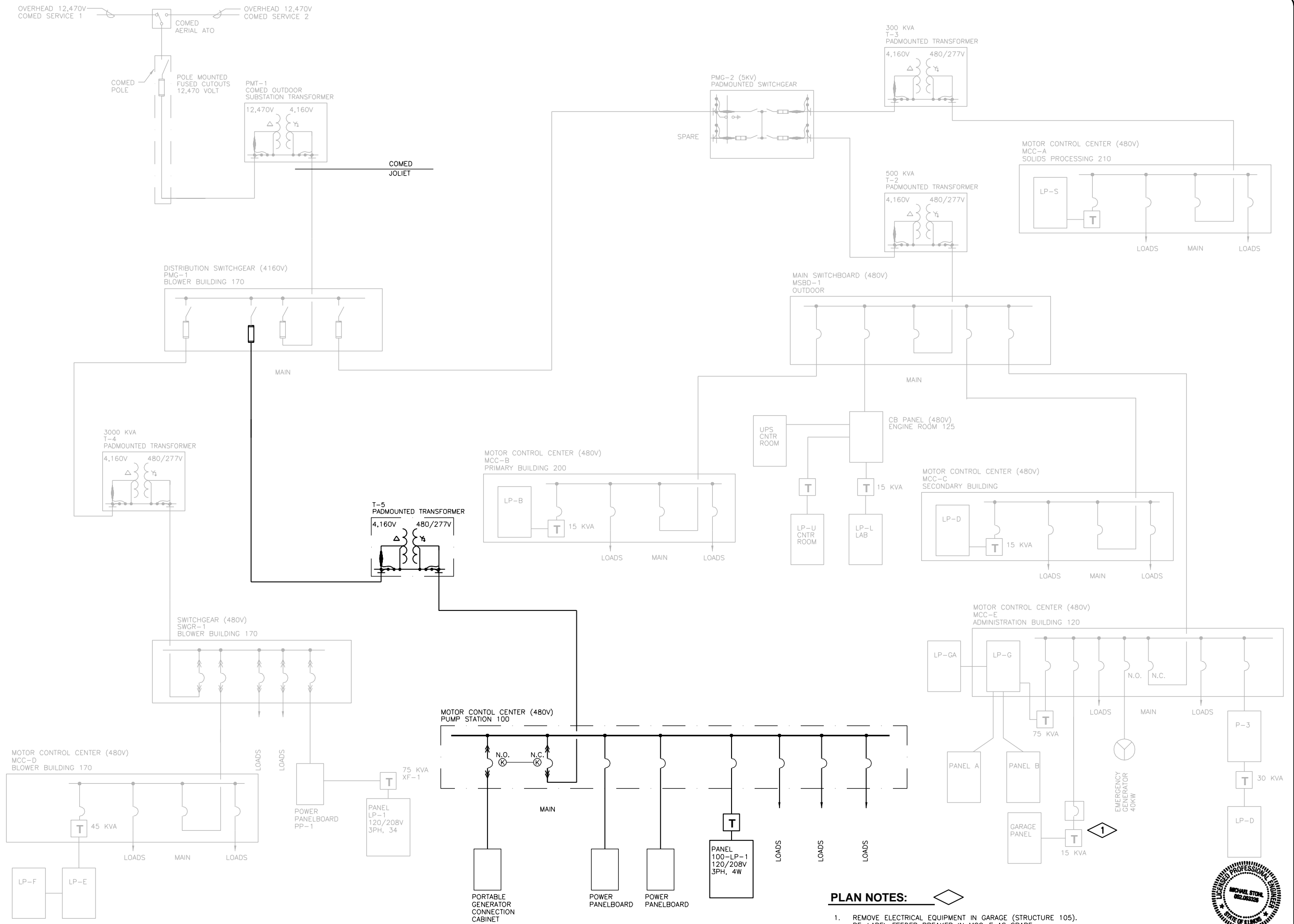
Designed By	MBS
Drawn By	MBS
Checked By	JAB
Approved By	JAB
Filename	002E01.DWG
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**CITY OF JOLIET**  
**EAST SIDE WASTEWATER TREATMENT PLANT**  
**INFLUENT PUMP STATION AND SCREEN REPLACEMENT**  
**JOLIET, IL**  
**SITE DEVELOPMENT**  
**ELECTRICAL PLAN**



Mike Stohel  
 7-9-14  
 Exp. 11-30-15

<b>DONOHUE</b>	
Sheet No.	29
Drawing No.	002-E-1



- PLAN NOTES:**
- REMOVE ELECTRICAL EQUIPMENT IN GARAGE (STRUCTURE 105). RE-LABEL FEEDER BREAKER IN MCC-E AS SPARE.



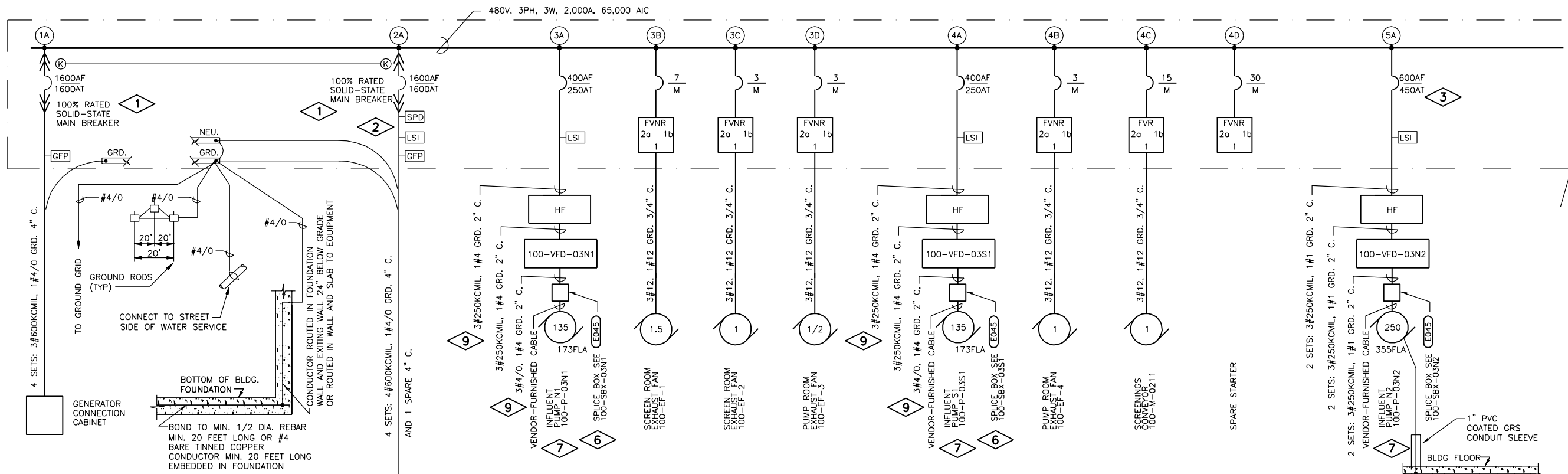
Revision Number	Revision Description	Drawn By	Checked By	Date

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Drawn By	MBS
Checked By	JAB
Approved By	JAB
Filename	007ED1.DWG
Project No.	12614
Project Date	JUNE 2014

**CITY OF JOLIET**  
**EAST SIDE WASTEWATER TREATMENT PLANT**  
**INFLUENT PUMP STATION AND SCREEN REPLACEMENT**  
**JOLIET, IL**  
**ELECTRICAL DISTRIBUTION**  
**OVERALL ONE-LINE DIAGRAM**

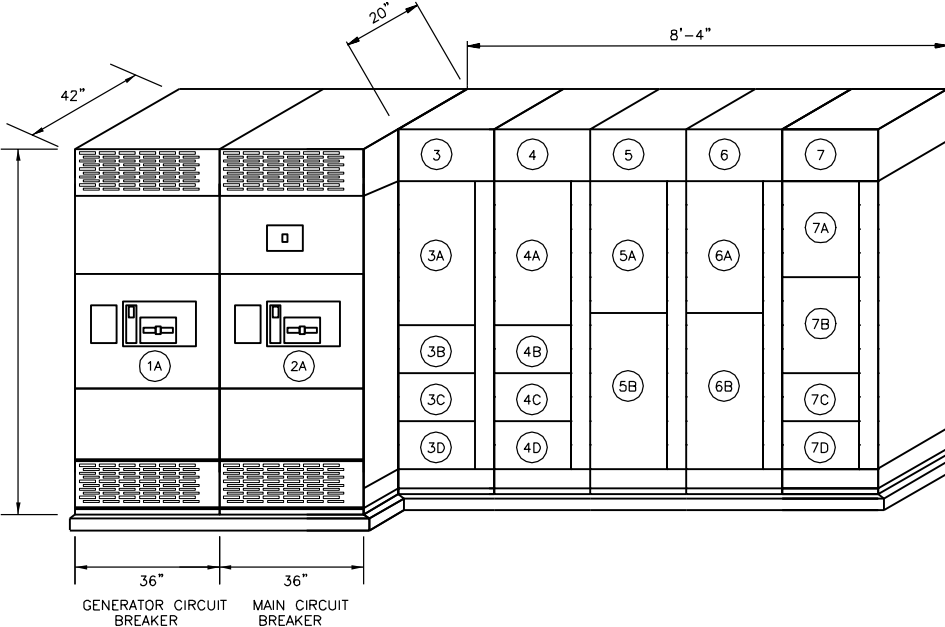
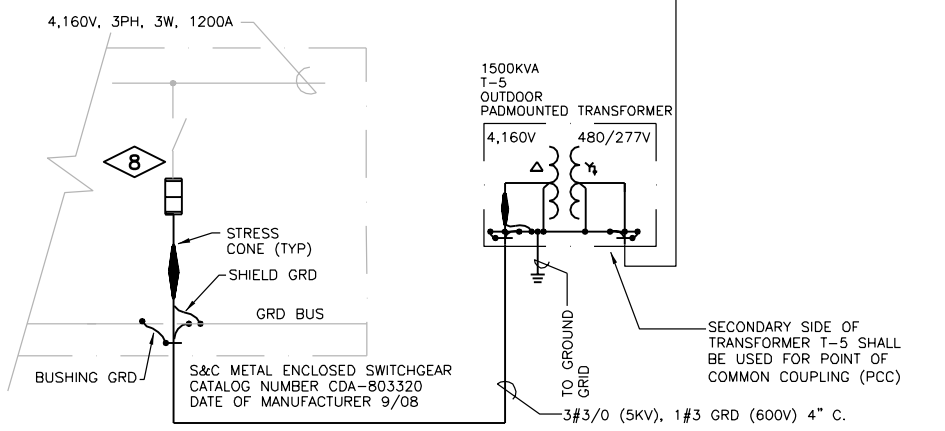


Sheet No.	30
Drawing No.	007-E-1



**100-MCC-1 ONE-LINE DIAGRAM  
INFLUENT PUMP STATION**

NTS



**100-MCC-1 ELEVATION  
INFLUENT PUMP STATION**

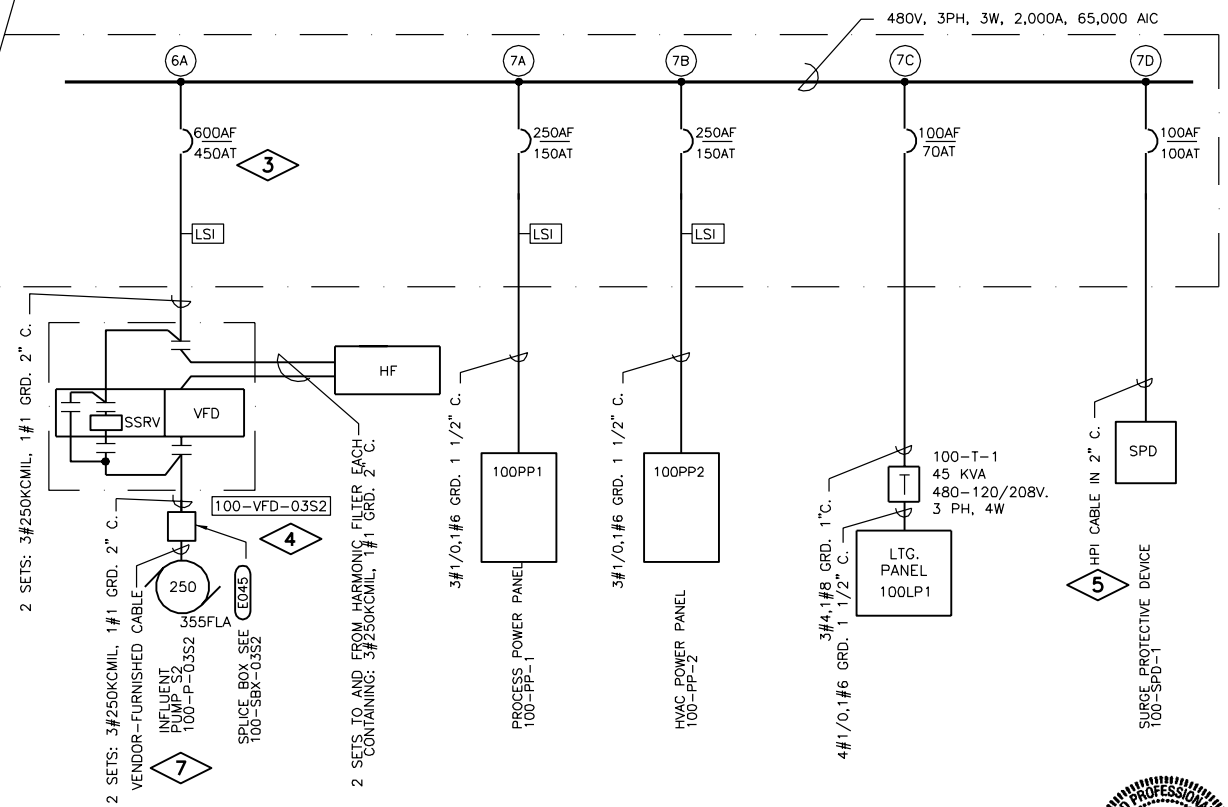
NTS

**GENERAL NOTES:**

- EQUIPMENT NAMEPLATES AND CIRCUIT DIRECTORIES SHALL INCLUDE EQUIPMENT NAMES ONLY, TAG NUMBER SHALL BE OMITTED. SEE SECTION 26 05 53.

**PLAN NOTES:**

- PROVIDE BREAKERS WITH KIRK-KEY INTERLOCKS.
- SPD SHALL BE INTEGRAL TO GEAR ON LINE SIDE OF MAIN BREAKER AND PROVIDED WITH CIRCUIT BREAKER DISCONNECT.
- SENSOR AND PLUG RATINGS SHALL BE PROVIDED BASED ON MOTOR NAMEPLATE AND CIRCUIT BREAKER IN VFD; ADJUST CONDUIT AND CONDUCTOR SIZES AS REQUIRED SUCH THAT CONDUCTORS AMPACITY IS EQUAL TO OR GREATER THAN PLUS RATING.
- VFD PROVIDED WITH A 3-CONTACTOR BYPASS UTILIZING A SOLID STATE REDUCED VOLTAGE STARTER (SOFT START) EQUIPPED WITH A RUN CONTACTOR THAT CAN ALSO ACT AS A BYPASS CONTACTOR FOR SOFT STARTER. SEE VFD SPECIFICATION FOR FURTHER DETAILS.
- PROVIDE HPI CABLE FROM MANUFACTURER OF SPD. COORDINATE CONDUIT SIZE WITH CABLE REQUIREMENTS.
- SIZE SPLICE BOX BASED ON MOTOR AND CABLE CHARACTERISTICS OF LARGER 100-P-03S2, -03N2 PUMP MOTORS.
- GROUND INFLUENT PUMPS AS SHOWN FOR INFLUENT PUMP N2. GROUND MOTOR FRAME WITH A BRAIDED GROUNDING CABLE RATED FOR MOTOR NAMEPLATE CURRENT.
- PROVIDE NEW ELECTRONIC FUSES (FAULT FITER) IN EXISTING FEEDER BAY; COORDINATE WITH S&C. SIZE FUSES PER POWER STUDIES IN ACCORDANCE WITH SECTION 26 05 73.
- INSTALL A SPARE 2" CONDUIT THAT CAN BE USED IN FUTURE WHEN PUMP IS UPSIZED.



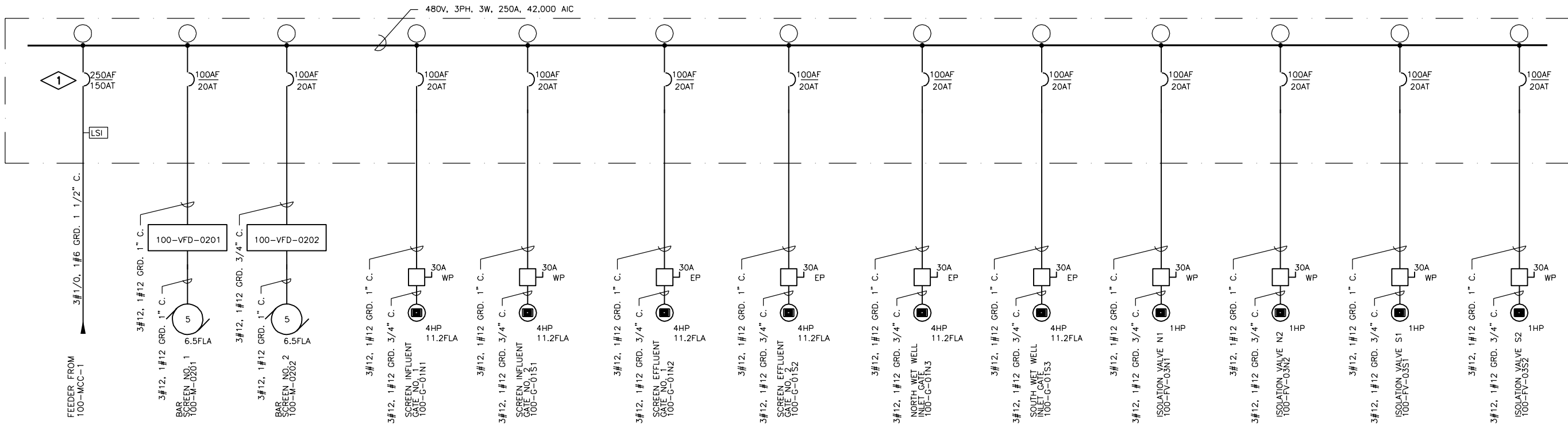
Mike Stone  
7-9-14  
Exp. 11-30-15

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CITY OF JOLIET  
EAST SIDE WASTEWATER TREATMENT PLANT  
INFLUENT PUMP STATION AND SCREEN REPLACEMENT  
JOLIET, IL  
ELECTRICAL DISTRIBUTION  
ONE-LINE DIAGRAM AND ELEVATION





**100-PP-1 ONE-LINE DIAGRAM  
PROCESS POWER PANEL  
INFLUENT PUMP STATION**

NTS

CKT. NO.	TRIP/P	DESCRIPTION	PHASE			DESCRIPTION	TRIP/P	CKT. NO.
			A	B	C			
1		MAIN BREAKER				SPARE	20/3	2
3	150/3	MAIN BREAKER						4
5								6
7								8
9	20/3	BAR SCREEN NO. 1 VFD 100-VFD-0201				BAR SCREEN NO. 2 VFD 100-VFD-0202	20/3	10
11								12
13								14
15	20/3	SCREEN INFLUENT GATE NO. 1 100-G-01N1				SCREEN INFLUENT GATE NO. 2 100-G-01S1	20/3	16
17								18
19								20
21	20/3	SCREEN EFFLUENT GATE NO. 1 100-G-01N2				SCREEN EFFLUENT GATE NO. 2 100-G-01S2	20/3	22
23								24
25								26
27	20/3	NORTH WET WELL INLET GATE 100-G-01N3				SOUTH WET WELL INLET GATE 100-G-01S3	20/3	28
29								30
31								32
33	20/3	ISOLATION VALVE N1 100-FV-03N1				ISOLATION VALVE N2 100-FV-03N2	20/3	34
35								36
37								38
39	20/3	ISOLATION VALVE S1 100-FV-03S1				ISOLATION VALVE S2 100-FV-03S2	20/3	40
41								42
TOTALS:			-	-	-	-		

**GENERAL NOTES:**

- DISCONNECTS SHOWN AS WP SHALL BE NEMA 4X 316 STAINLESS STEEL.
- EQUIPMENT NAMEPLATES AND CIRCUIT DIRECTORIES SHALL INCLUDE EQUIPMENT NAMES ONLY, TAG NUMBER SHALL BE OMITTED. SEE SECTION 26 05 53.

**PLAN NOTES:**

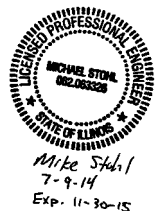
- 250AF LSI BREAKER WITH 150AT.

Revision Number	Revision Description	Drawn By	Checked By	Date

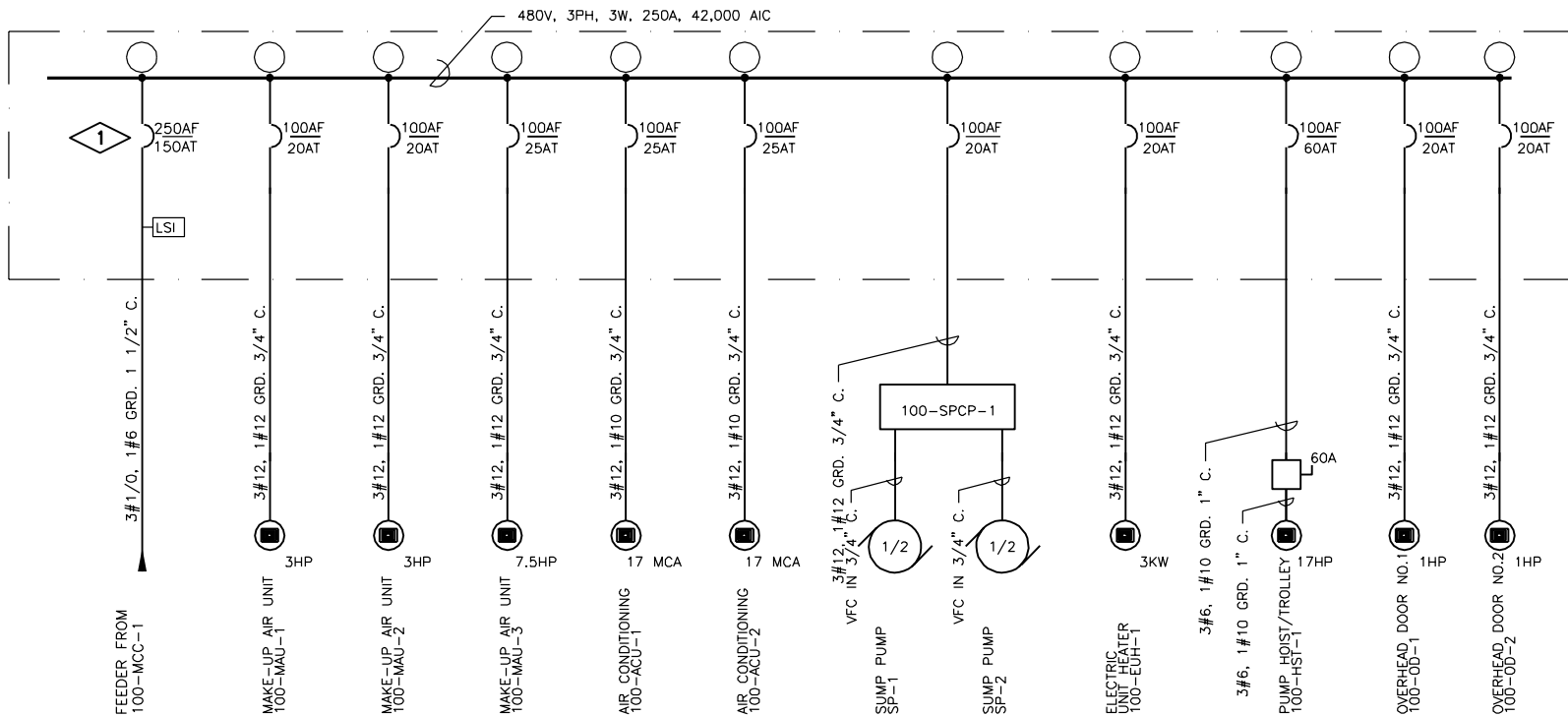
Designed By	MBS
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CITY OF JOLIET  
EAST SIDE WASTEWATER TREATMENT PLANT  
INFLUENT PUMP STATION AND SCREEN REPLACEMENT  
JOLIET, IL  
ELECTRICAL DISTRIBUTION  
ONE-LINE DIAGRAM AND SCHEDULE

Sheet No. 32  
Drawing No. 007-E-3

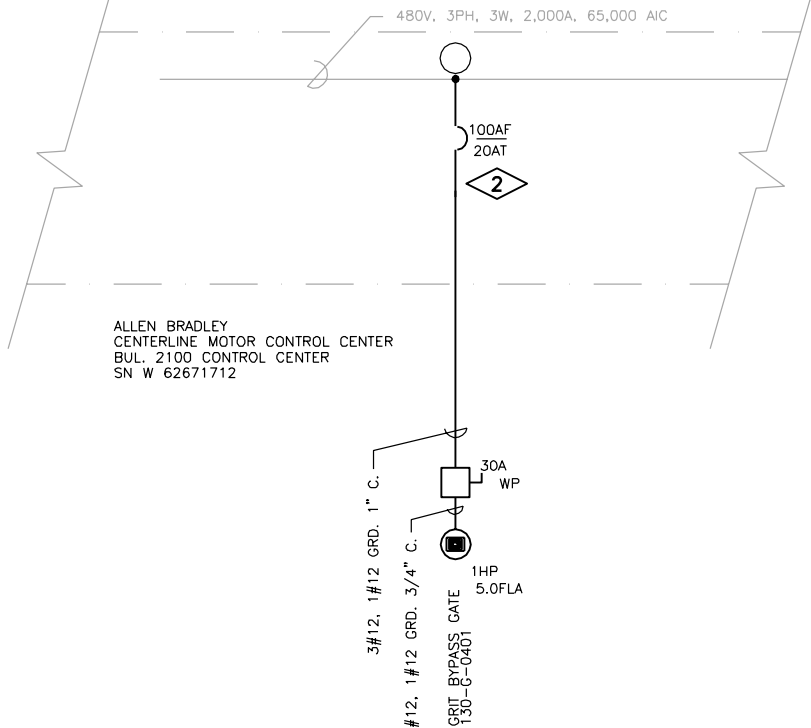






**100-PP-2 ONE-LINE DIAGRAM  
HVAC POWER PANEL  
INFLUENT PUMP STATION**

NTS



**MCC-E ONE-LINE DIAGRAM  
ABANDONED INFLUENT PUMP STATION**

NTS

SURFACE MOUNTED NEMA 1		PANEL SCHEDULE			250A MAIN BREAKER <b>1</b>			
480 V, 3 PHASE, 3 WIRE		100-PP-2			250A MAIN BUS			
RATING 42,000 A.I.C.					100A MIN. GRD. BUS			
CKT. NO.	TRIP/P	DESCRIPTION	PHASE			DESCRIPTION	TRIP/P	CKT. NO.
			A	B	C			
1			•			SCREEN ROOM ROOFTOP MAKE-UP AIR UNIT 100-MAU-1	20/3	2
3	150/3	MAIN BREAKER		•				4
5					•			6
7		SCREEN ROOM ROOFTOP MAKE-UP AIR UNIT 100-MAU-2	•			STORAGE ROOM ROOFTOP MAKE-UP AIR UNIT 100-MAU-3	20/3	8
9	20/3			•				10
11					•			12
13		ELECTRICAL ROOM AIR CONDITIONER 100-ACU-1	•			ELECTRICAL ROOM AIR CONDITIONER 100-ACU-2	25/3	14
15	25/3			•				16
17					•			18
19		SUMP PUMP CONTROL PANEL 100-SPCP-1	•			STAIRWELL UNIT HEATER 100-EUH-1	20/3	20
21	20/3			•				22
23					•			24
25		STORAGE ROOM HOIST 100-HST-1	•			OVERHEAD DOOR NO.1 100-OD-1	20/3	26
27	60/3			•				28
29					•			30
31		OVERHEAD DOOR NO.2 100-OD-2	•			SPARE	30/3	32
33	20/3			•				34
35					•			36
37			•					38
39		SPACE		•		SPACE		40
41					•			42
TOTALS:			-	-	-			

**GENERAL NOTES:**

- EQUIPMENT NAMEPLATES AND CIRCUIT DIRECTORIES SHALL INCLUDE EQUIPMENT NAMES ONLY, TAG NUMBER SHALL BE OMITTED. SEE SECTION 26 05 53.

**PLAN NOTES:**

- 250AF LSI BREAKER WITH 150AT.
- EXISTING LOADS BEING REMOVED SHALL HAVE POWER SOURCE IN MCC RELABELLED AS SPARE. REMOVE ONE OF THE EXISTING BUCKETS RELABELLED AS SPARE AND REPLACE WITH A NEW CIRCUIT BREAKER BUCKET.

SURFACE MOUNTED NEMA 1		PANEL SCHEDULE			150A MAIN BREAKER <b>1</b>			
120 / 208 V, 3 PHASE, 4 WIRE		100-LP-1			250A MAIN BUS			
RATING 22,000 A.I.C.					100A MIN. GRD. BUS			
CKT. NO.	TRIP/P	DESCRIPTION	PHASE			DESCRIPTION	TRIP/P	CKT. NO.
			A	B	C			
1	20/1	100-TCP-1 HVAC CONTROL PANEL	•			100-PLC-1 PLC PANEL	20/1	2
3	20/1	100-GUH-1 STORE RM HEATER NO.		•		100-GUH-2 STORE RM HEATER SO.	20/1	4
5	20/1	100-LCP-0421 GAS MONITOR LCP			•	100-FACP-1 FIRE ALARM PANEL	20/1	6
7	20/1	100-FIT-03N1 N1 FLOWMETER	•			100-FIT-03N2 N2 FLOWMETER	20/1	8
9	20/1	100-FIT-03S1 S1 FLOWMETER		•		100-FIT-03S2 S2 FLOWMETER	20/1	10
11	20/1	PUMP ROOM LIGHTING			•	PUMP ROOM RECEPTACLES	20/1	12
13	20/1	STAIRWAY LIGHTING	•			STAIRWAY RECEPTACLE	20/1	14
15	20/1	STORAGE ROOM LIGHTING		•		STORAGE ROOM RECEPTACLES	20/1	16
17	20/1	EXTERIOR SCREEN AREA RECEPTACLES			•	EXTERIOR SCREEN AREA LIGHTING	20/1	18
19	20/1	SCREEN/DUMPSTER RECEPTACLES	•			SCREEN/DUMPSTER LIGHTING	20/1	20
21	20/1	ELECTRICAL ROOM RECEPTACLES		•		ELECTRICAL ROOM LIGHTING	20/1	22
23	20/1	EXTERIOR LIGHTING			•	EXTERIOR RECEPTACLES	20/1	24
25	20/1	COURTYARD LIGHTING	•			STAIRWAY EXIT LIGHTS	20/1	26
27	20/1	STORAGE ROOM EXIT LIGHTS		•		ELECTRICAL ROOM EXIT LIGHTS	20/1	28
29	30/1	SCREEN/DUMPSTER EXIT LIGHTS			•	SPARE	30/1	30
31	20/1	SPARE	•					32
33	20/1	SPARE		•		SPARE	20/3	34
35	20/1	SPARE			•			36
37			•					38
39	30/3	SPARE		•		100-SPD-2	30/3	40
41					•			42
TOTALS:			-	-	-			



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CITY OF JOLIET  
EAST SIDE WASTEWATER TREATMENT PLANT  
INFLUENT PUMP STATION AND SCREEN REPLACEMENT  
JOLIET, IL  
ELECTRICAL DISTRIBUTION  
ONE-LINE DIAGRAM AND SCHEDULE

**DONOHUE**  
Sheet No. 33  
Drawing No.  
007-E-4

## DUCTBANK SCHEDULE

NUMBER	SIZE	FROM	TO	CONTENTS	REMARKS
1	4"	140-SWGR-1 EXISTING	T-5	POWER	4160V, VIA MANHOLES
2	4"	140-SWGR-1 EXISTING	T-5	SPARE	VIA MANHOLES
3	4"	140-SWGR-1 EXISTING	EMH-2	SPARE	VIA MANHOLES; FUTURE BAY
4	4"	140-SWGR-1 EXISTING	EMH-2	SPARE	VIA MANHOLES; FUTURE BAY
5	4"	T-5	100-MCC-1	POWER	480V
6	4"	T-5	100-MCC-1	POWER	480V
7	4"	T-5	100-MCC-1	POWER	480V
8	4"	T-5	100-MCC-1	POWER	480V
9	4"	T-5	100-MCC-1	SPARE	STUB INTO EQUIPMENT AND CAP
10	-				
11	2"	100-FOPP-1	STR. 120	COMMUNICATIONS	-
12	2"	STR. 100	STR. 120	CONTROLS	FIRE ALARM
13	2"	100-PLC-1	STR. 120	SPARE	-
14	1"	SCC-E	130-G-0401	CONTROLS	-
15	1"	MCC-E	130-G-0401	POWER	-
16	1"	MCC-E	130-G-0401	SPARE	-
17	4"	EMH-2	100-NET-1	SPARE	CONDUIT SHALL BYPASS T-5

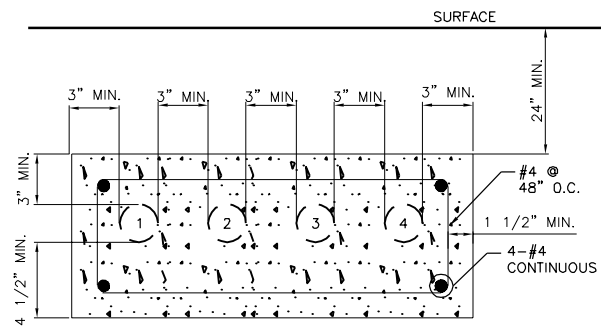


### GENERAL NOTES:

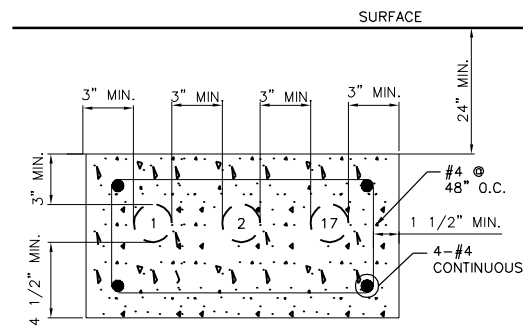
- "-" REPRESENTS A SPACE IN THE DUCT BANK.
- CONDUIT ELBOWS IN UNDERGROUND DUCT BANKS SHALL BE PVC COATED GRS CONDUIT.
- CONTRACTOR SHALL VERIFY CONDUIT DUCT BANK LAYOUTS. CONTRACTOR SHALL MODIFY CONDUIT LOCATIONS IN DUCT BANK TO SUIT FIELD CONDITIONS.
- EXTERIOR ABOVE GRADE CONDUIT SHALL BE PVC COATED GRS CONDUIT.
- CONCRETE FOR REINFORCED DUCT BANKS SHALL BE DYED RED.

### PLAN NOTES:

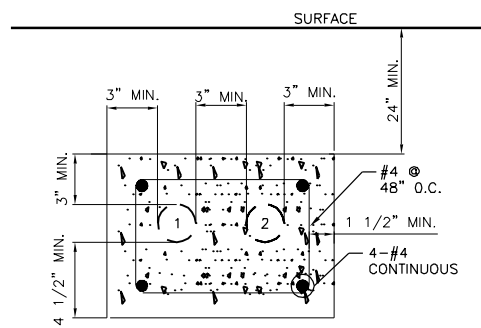
- STUB UP ONE SPARE FOR EXISTING FEEDER BAY. TWO SPARE CONDUITS FOR FUTURE SWITCHGEAR BAY SHALL CONNECT TO EXISTING CONDUIT ELBOWS BELOW GRADE IN VICINITY OF SWITCHGEAR.
- STUB UP CONDUIT AND CAP A MINIMUM OF 24" ABOVE GRADE AT STRUCTURE 130. ROUTE CONDUIT NEAR MCC-E AND CAP IN STRUCTURE 125.



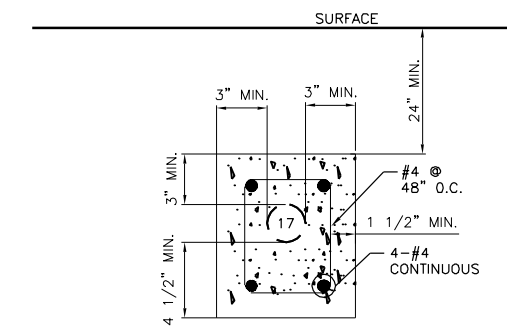
**DUCT BANK SECTION A**  
NTS 002-E-1



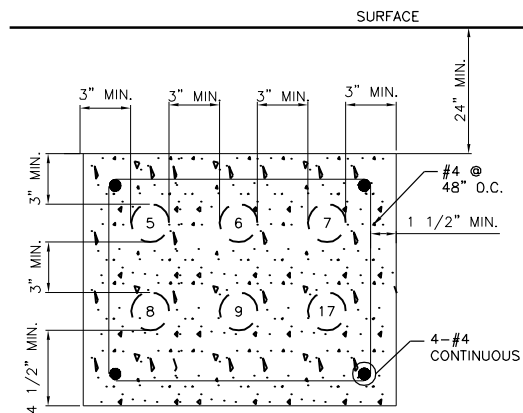
**DUCT BANK SECTION A1**  
NTS 002-E-1



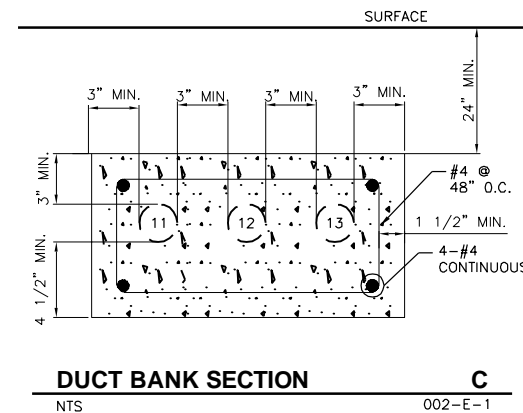
**DUCT BANK SECTION A2**  
NTS 002-E-1



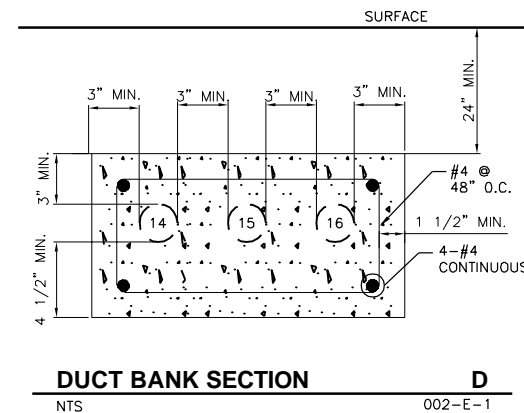
**DUCT BANK SECTION A3**  
NTS 002-E-1



**DUCT BANK SECTION B**  
NTS 002-E-1



**DUCT BANK SECTION C**  
NTS 002-E-1



**DUCT BANK SECTION D**  
NTS 002-E-1

Revision Number	Revision Description	Checked By	Date
1	CHANGED PLAN NOTE 1	MS	8/13/14

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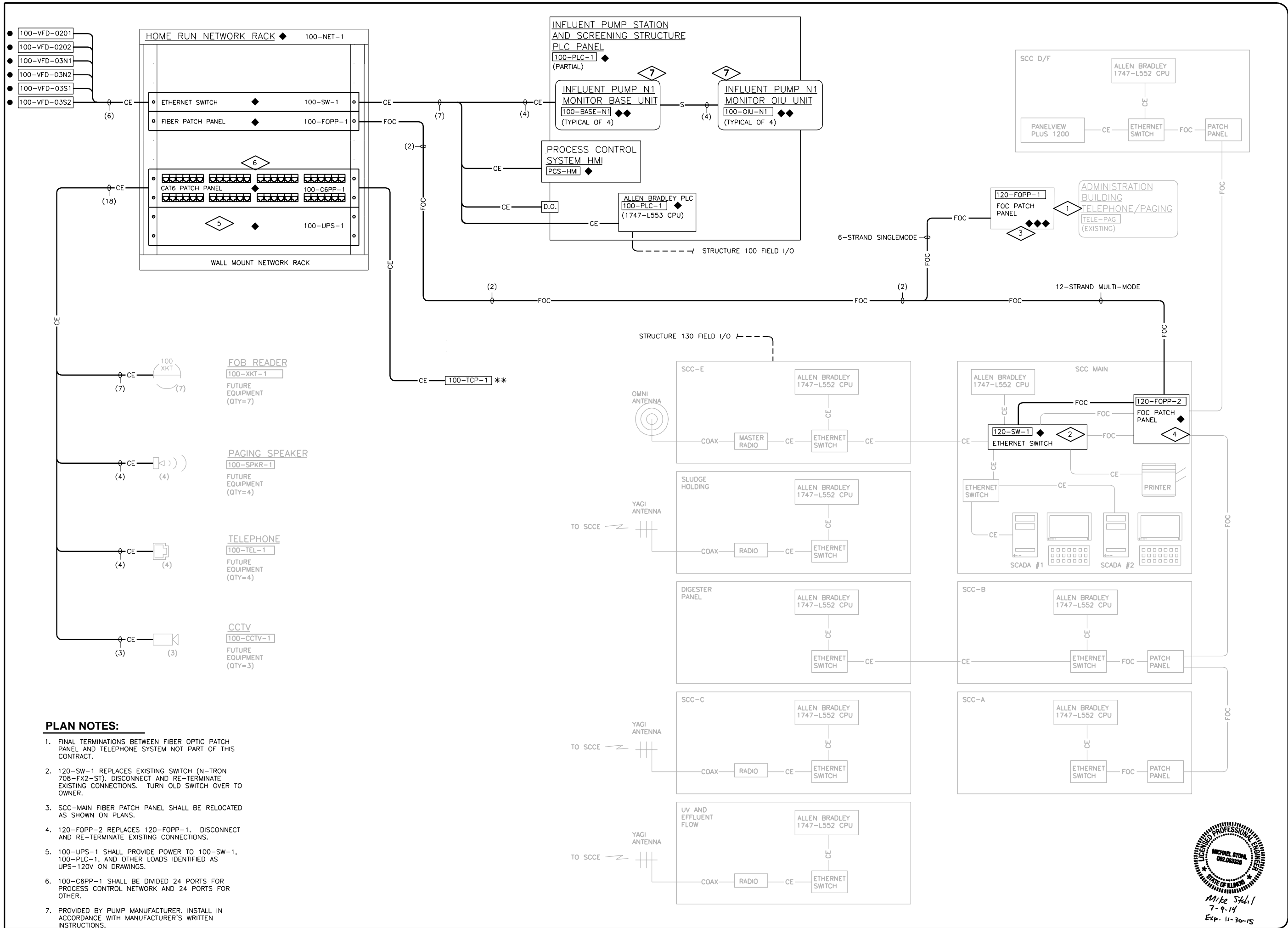
**CITY OF JOLIET**  
**EAST SIDE WASTEWATER TREATMENT PLANT**  
**INFLUENT PUMP STATION AND SCREEN REPLACEMENT**  
**JOLIET, IL**

**ELECTRICAL DISTRIBUTION**  
**SCHEDULE AND SECTIONS**

**DONOHUE**

Sheet No.	34
Drawing No.	007-E-5





**FOB READER**  
 100-XKT-1  
 FUTURE EQUIPMENT (QTY=7)

**PAGING SPEAKER**  
 100-SPKR-1  
 FUTURE EQUIPMENT (QTY=4)

**TELEPHONE**  
 100-TEL-1  
 FUTURE EQUIPMENT (QTY=4)

**CCTV**  
 100-CCTV-1  
 FUTURE EQUIPMENT (QTY=3)

**PLAN NOTES:**

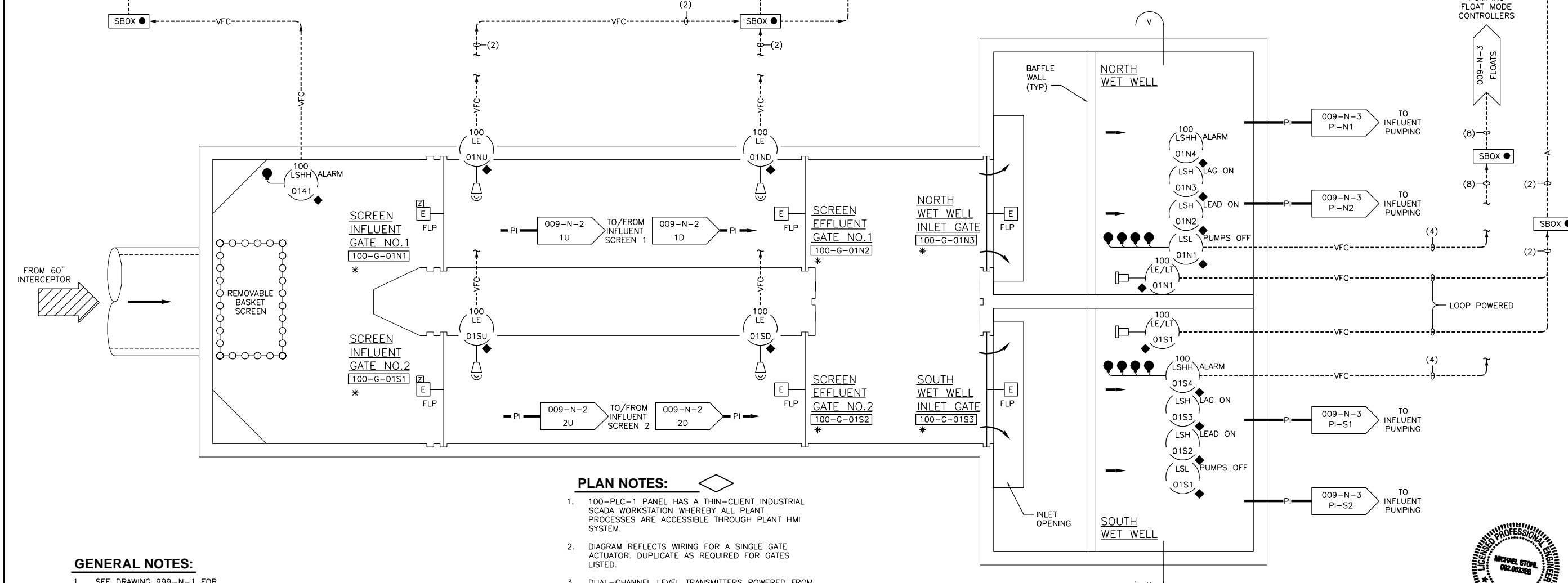
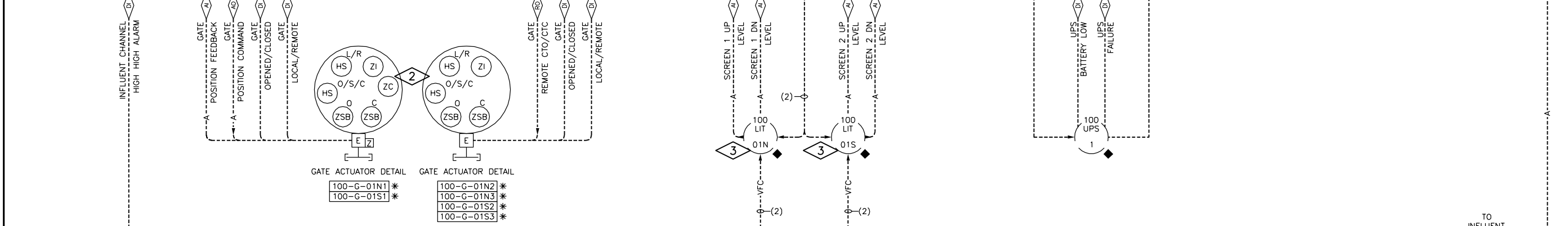
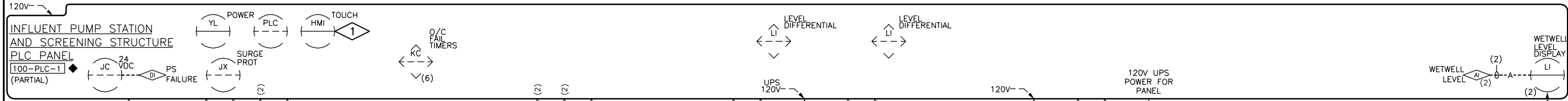
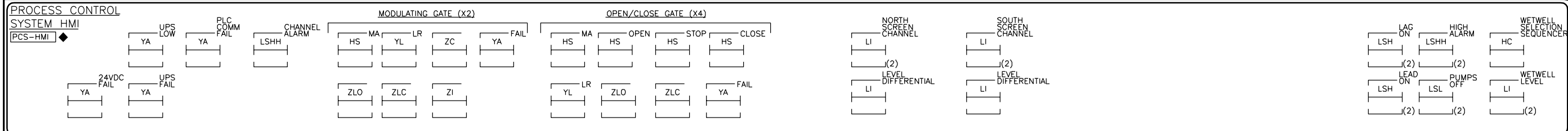
1. FINAL TERMINATIONS BETWEEN FIBER OPTIC PATCH PANEL AND TELEPHONE SYSTEM NOT PART OF THIS CONTRACT.
2. 120-SW-1 REPLACES EXISTING SWITCH (N-TRON 708-FX2-ST). DISCONNECT AND RE-TERMINATE EXISTING CONNECTIONS. TURN OLD SWITCH OVER TO OWNER.
3. SCC-MAIN FIBER PATCH PANEL SHALL BE RELOCATED AS SHOWN ON PLANS.
4. 120-FOPP-2 REPLACES 120-FOPP-1. DISCONNECT AND RE-TERMINATE EXISTING CONNECTIONS.
5. 100-UPS-1 SHALL PROVIDE POWER TO 100-SW-1, 100-PLC-1, AND OTHER LOADS IDENTIFIED AS UPS-120V ON DRAWINGS.
6. 100-C6PP-1 SHALL BE DIVIDED 24 PORTS FOR PROCESS CONTROL NETWORK AND 24 PORTS FOR OTHER.
7. PROVIDED BY PUMP MANUFACTURER. INSTALL IN ACCORDANCE WITH MANUFACTURER'S WRITTEN INSTRUCTIONS.

**LICENSED PROFESSIONAL ENGINEER**  
 MICHAEL STONE  
 062.083320  
 STATE OF ILLINOIS  
 Mike Stahl  
 7-9-14  
 Exp. 11-30-15

Date	Checked By	Drawn By	Revision Description	Revision Number

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**CITY OF JOLIET**  
**EAST SIDE WASTEWATER TREATMENT PLANT**  
**INFLUENT PUMP STATION AND SCREEN REPLACEMENT**  
**JOLIET, IL**  
**NETWORK DIAGRAM**

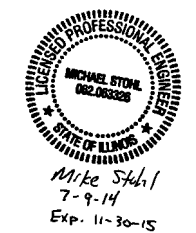


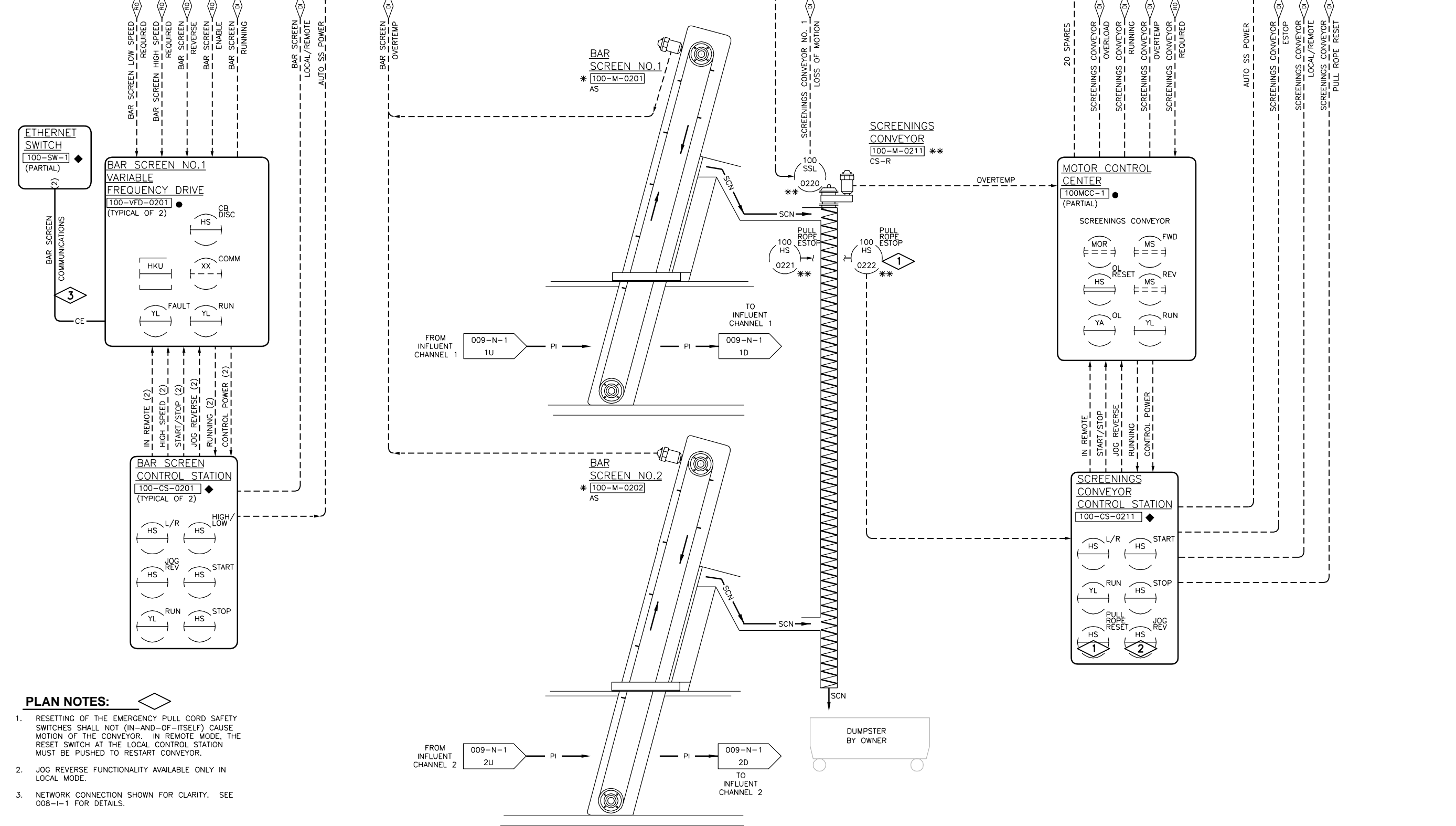
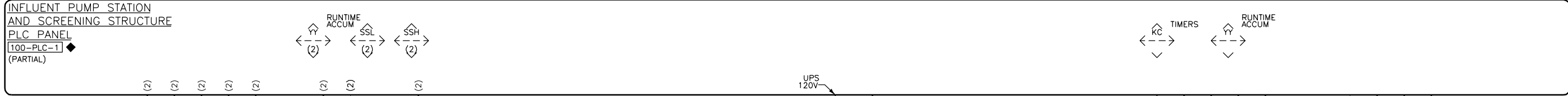
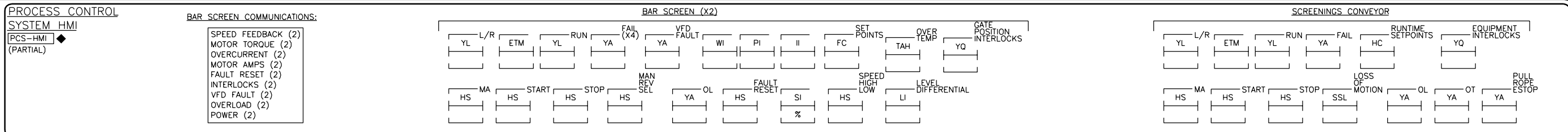
- PLAN NOTES:**
- 100-PLC-1 PANEL HAS A THIN-CLIENT INDUSTRIAL SCADA WORKSTATION WHEREBY ALL PLANT PROCESSES ARE ACCESSIBLE THROUGH PLANT HMI SYSTEM.
  - DIAGRAM REFLECTS WIRING FOR A SINGLE GATE ACTUATOR. DUPLICATE AS REQUIRED FOR GATES LISTED.
  - DUAL-CHANNEL LEVEL TRANSMITTERS POWERED FROM PLC PANEL.

- GENERAL NOTES:**
- SEE DRAWING 999-N-1 FOR ADDITIONAL INSTRUMENTATION AND CONTROL WIRING REQUIREMENTS.

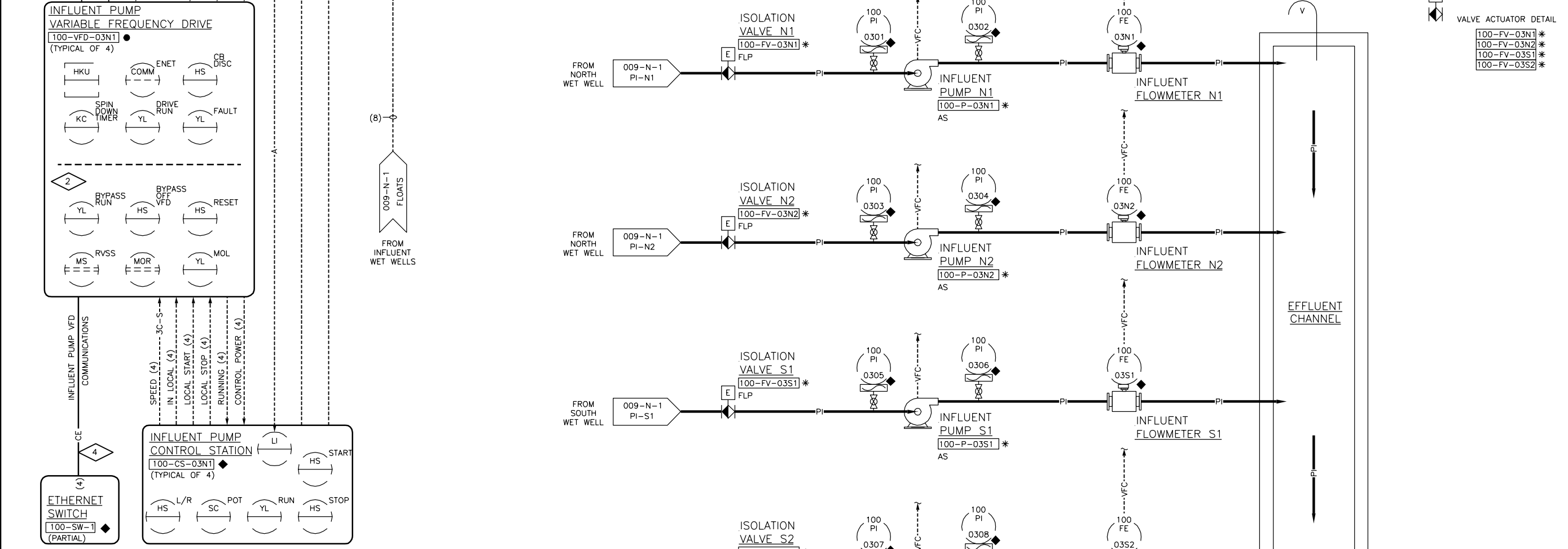
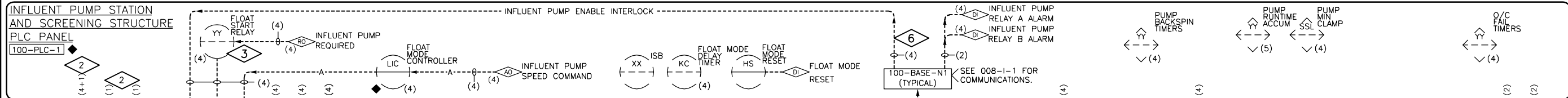
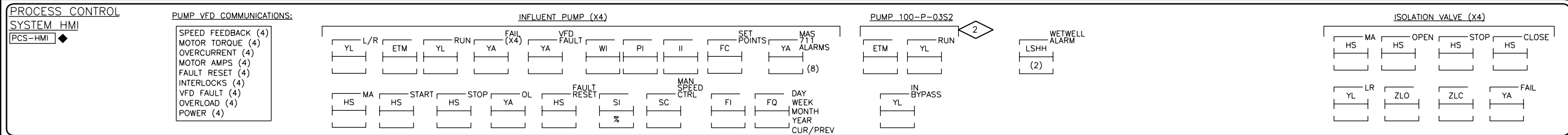
Date	
Checked By	
Drawn By	
Revision	
Revision Number	
Revision Description	
Designed By	DWG
Drawn By	DWG
Checked By	LET
Approved By	LET
Filename	009N1.DWG
Project No.	12614
Project Date	JUNE 2014

**CITY OF JOLIET**  
**EAST SIDE WASTEWATER TREATMENT PLANT**  
**INFLUENT PUMP STATION AND SCREEN REPLACEMENT**  
**JOLIET, IL**  
**PROCESS AND INSTRUMENTATION DIAGRAM**  
**PLANT INFLUENT**





Date	
Checked By	
Drawn By	
Revision Description	
Revision Number	
Designed By	DWG
Drawn By	DWG
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Filename	009N2.DWG
Project No.	12614
Project Date	JUNE 2014
<b>CITY OF JOLIET</b>	
<b>EAST SIDE WASTEWATER TREATMENT PLANT</b>	
<b>JOLIET, IL</b>	
<b>PROCESS &amp; INSTRUMENTATION DIAGRAM</b>	
<b>INFLUENT PUMP STATION AND SCREEN REPLACEMENT</b>	
<b>INFLUENT SCREENING AND CONVEYING</b>	
<b>DONOHUE</b>	
Sheet No.	37
Drawing No.	
<b>009-N-2</b>	



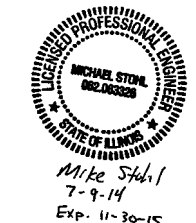
- PLAN NOTES:**
- DIAGRAM REFLECTS WIRING FOR A SINGLE ISOLATION VALVE ACTUATOR. DUPLICATE AS REQUIRED FOR VALVES LISTED.
  - BYPASS CONTACTORS AND ASSOCIATED CONTROLS/WIRING/FUNCTIONALITY SHALL BE INSTALLED FOR INFLUENT PUMP 100-P-03S2 ONLY.
  - PARALLEL PLC REQUIRED SIGNAL WITH FLOAT MODE RUN COMMAND SIGNAL FROM RELAY CONTACT.
  - NETWORK CONNECTION SHOWN FOR CLARITY. SEE 008-I-1 FOR DETAILS.
  - VENDOR FURNISHED CABLE OR VENDOR APPROVED WIRING AT CONTRACTOR'S OPTION.
  - GO-RELAY (PUMP INTERLOCK), 5A/250VAC NORMALLY OPEN.

- GENERAL NOTES:**
- SEE DRAWING 999-N-1 FOR ADDITIONAL INSTRUMENTATION AND CONTROL WIRING REQUIREMENTS.

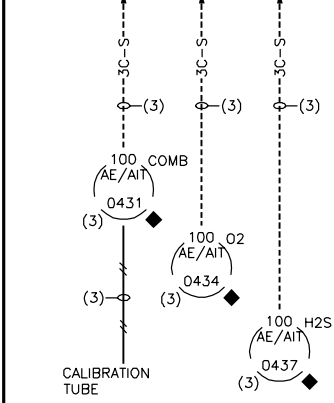
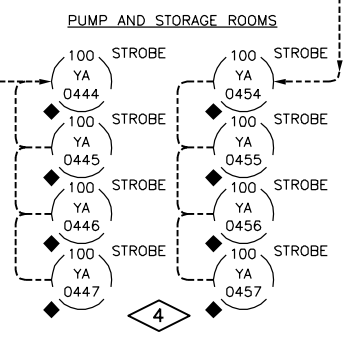
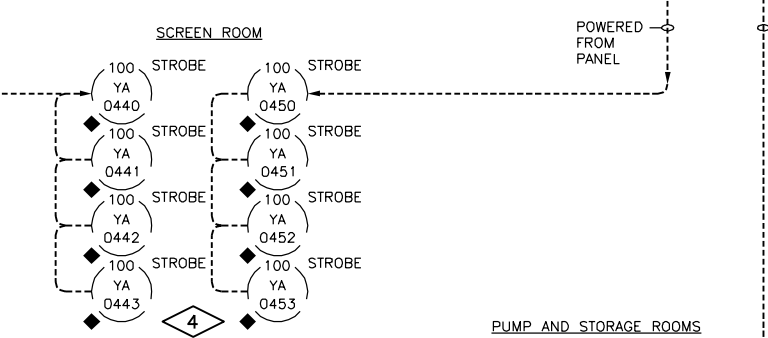
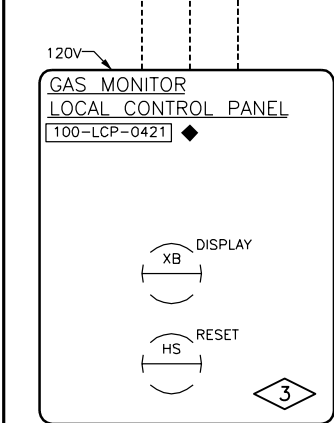
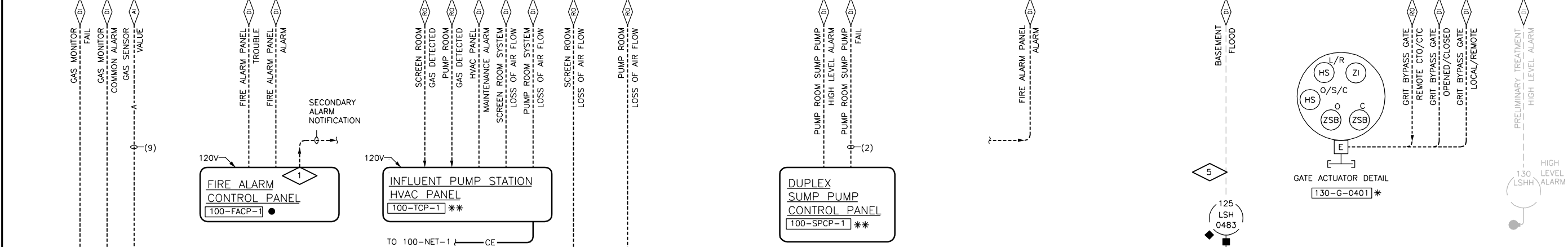
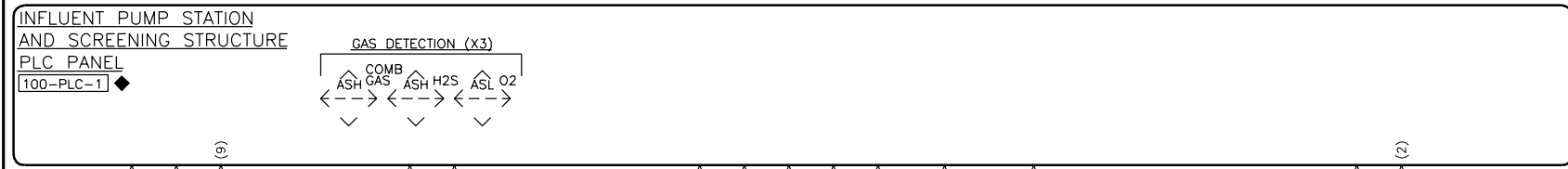
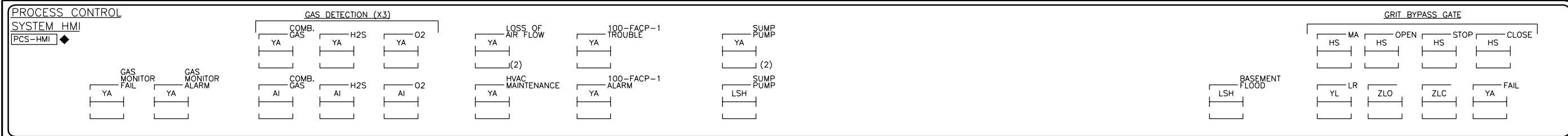
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Checked By	
Drawn By	
Revision Description	
Revision Number	
Designed By	DWG
Drawn By	DWG
Checked By	LET
Approved By	LET
Filename	009N3.DWG
Project No.	12614
Project Date	JUNE 2014

**CITY OF JOLIET**  
**EAST SIDE WASTEWATER TREATMENT PLANT**  
**INFLUENT PUMP STATION AND SCREEN REPLACEMENT**  
**JOLIET, IL**  
**PROCESS AND INSTRUMENTATION DIAGRAM**  
**INFLUENT PUMPING**

Sheet No. 38  
Drawing No. 009-N-3



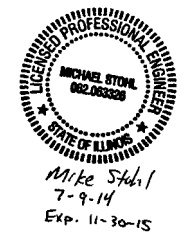
TO PRELIMINARY TREATMENT



TAG NAME	DESCRIPTION	LOCATION	CONTROLLING ALARMS
100-AE/AIT-0431	COMB GAS SENSOR	PUMP ROOM	100-YL-0444 100-YL-0445 100-YL-0446 100-YL-0447
100-AE/AIT-0434	O2 SENSOR		
100-AE/AIT-0437	H2S SENSOR		
100-AE/AIT-0432	COMB GAS SENSOR	STORAGE ROOM	100-YL-0440 100-YL-0441 100-YL-0442 100-YL-0443
100-AE/AIT-0435	O2 SENSOR		
100-AE/AIT-0438	H2S SENSOR		
100-AE/AIT-0433	COMB GAS SENSOR	SCREEN ROOM	100-YL-0440 100-YL-0441 100-YL-0442 100-YL-0443
100-AE/AIT-0436	O2 SENSOR		
100-AE/AIT-0439	H2S SENSOR		

**PLAN NOTES:**

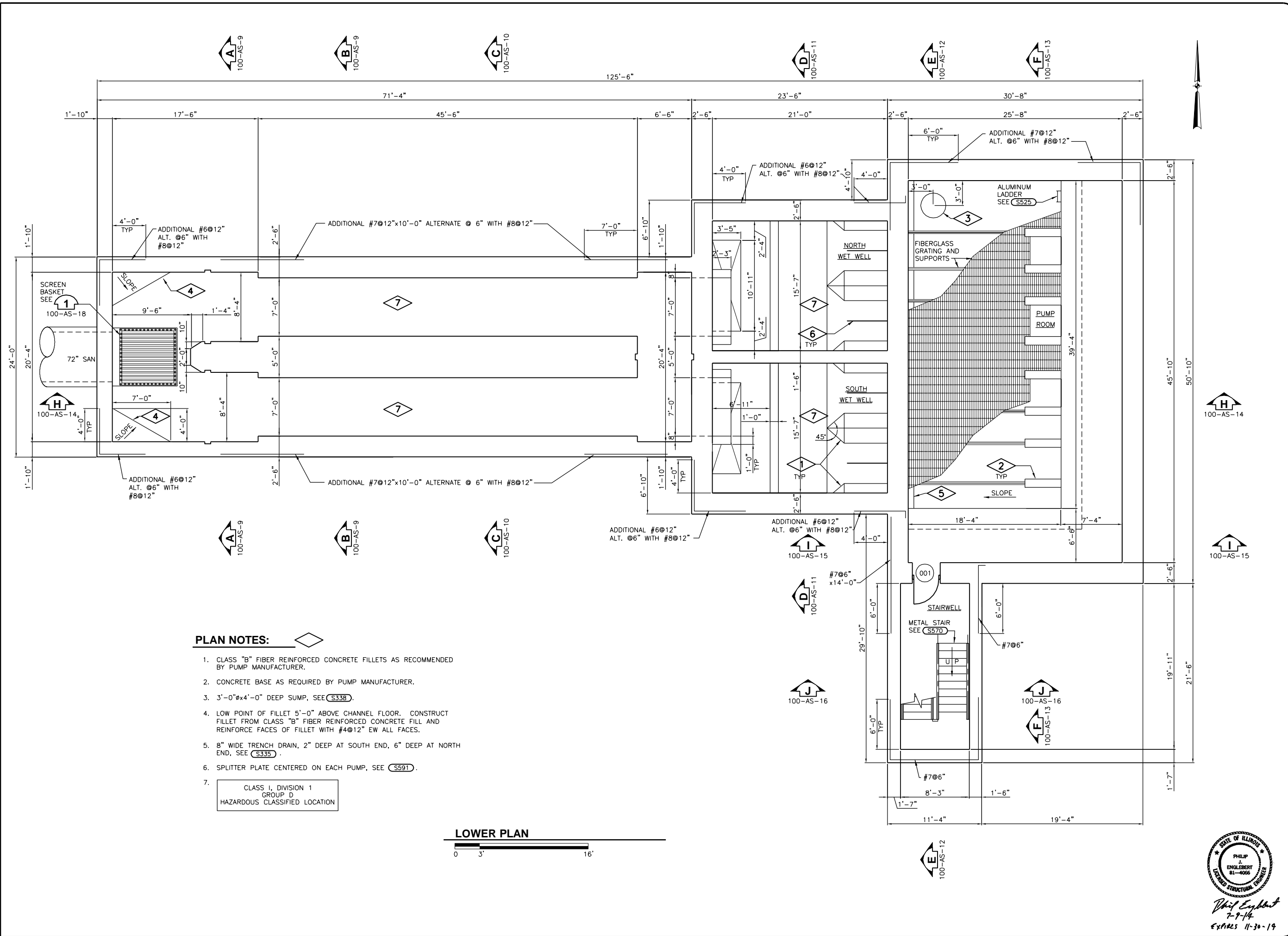
- PROVIDE INTERFACE RELAY OR OTHER MEANS FOR SECONDARY ALARM TRANSMISSION. SEE SECTION 28 31 12.
- 100-PLC-1 SHALL UTILIZE HIGH LEVEL ALARM SIGNAL TO STOP ALL INFLUENT PUMPS SHOWN ON 009-N-3.
- GAS SENSORS ARE LOOP POWERED FROM LOCAL CONTROL PANEL. ALARM STROBES SHALL BE POWERED FROM LOCAL CONTROL PANEL.
- LOSS OF AIR FLOW STROBES SHALL BE AMBER, GAS ALARM STROBES SHALL BE RED.
- VERIFY AND USE EXISTING CONDUIT TO SCC-E. PROVIDE SEAL-OFFS AS REQUIRED DUE TO RATED SPACE. PROVIDE INTRINSICALLY SAFE RELAY IN PLC PANEL.



Revision Number	Revision Description	Drawn By	Checked By	Date

Designed By	DWG
Drawn By	DWG
Checked By	LET
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Filename	009N4.DWG
Project No.	12614
Project Date	JUNE 2014

CITY OF JOLIET  
**EAST SIDE WASTEWATER TREATMENT PLANT  
 INFLUENT PUMP STATION AND SCREEN REPLACEMENT**  
 JOLIET, IL  
**PROCESS AND INSTRUMENTATION DIAGRAM  
 MISCELLANEOUS**



**PLAN NOTES:**

1. CLASS "B" FIBER REINFORCED CONCRETE FILLETS AS RECOMMENDED BY PUMP MANUFACTURER.
2. CONCRETE BASE AS REQUIRED BY PUMP MANUFACTURER.
3. 3'-0"x4'-0" DEEP SUMP, SEE (S338).
4. LOW POINT OF FILLET 5'-0" ABOVE CHANNEL FLOOR. CONSTRUCT FILLET FROM CLASS "B" FIBER REINFORCED CONCRETE FILL AND REINFORCE FACES OF FILLET WITH #4@12" EW ALL FACES.
5. 8" WIDE TRENCH DRAIN, 2" DEEP AT SOUTH END, 6" DEEP AT NORTH END, SEE (S335).
6. SPLITTER PLATE CENTERED ON EACH PUMP, SEE (S591).
7. CLASS I, DIVISION 1  
GROUP D  
HAZARDOUS CLASSIFIED LOCATION

CLASS I, DIVISION 1  
GROUP D  
HAZARDOUS CLASSIFIED LOCATION

**LOWER PLAN**



Revision Number	Revision Description	Drawn By	Checked By	Date

Designed By	AJT
Drawn By	AJT
Checked By	PJE
Approved By	PJE
Filename	100SP1.DWG
Project No.	12614
Project Date	JUNE 2014

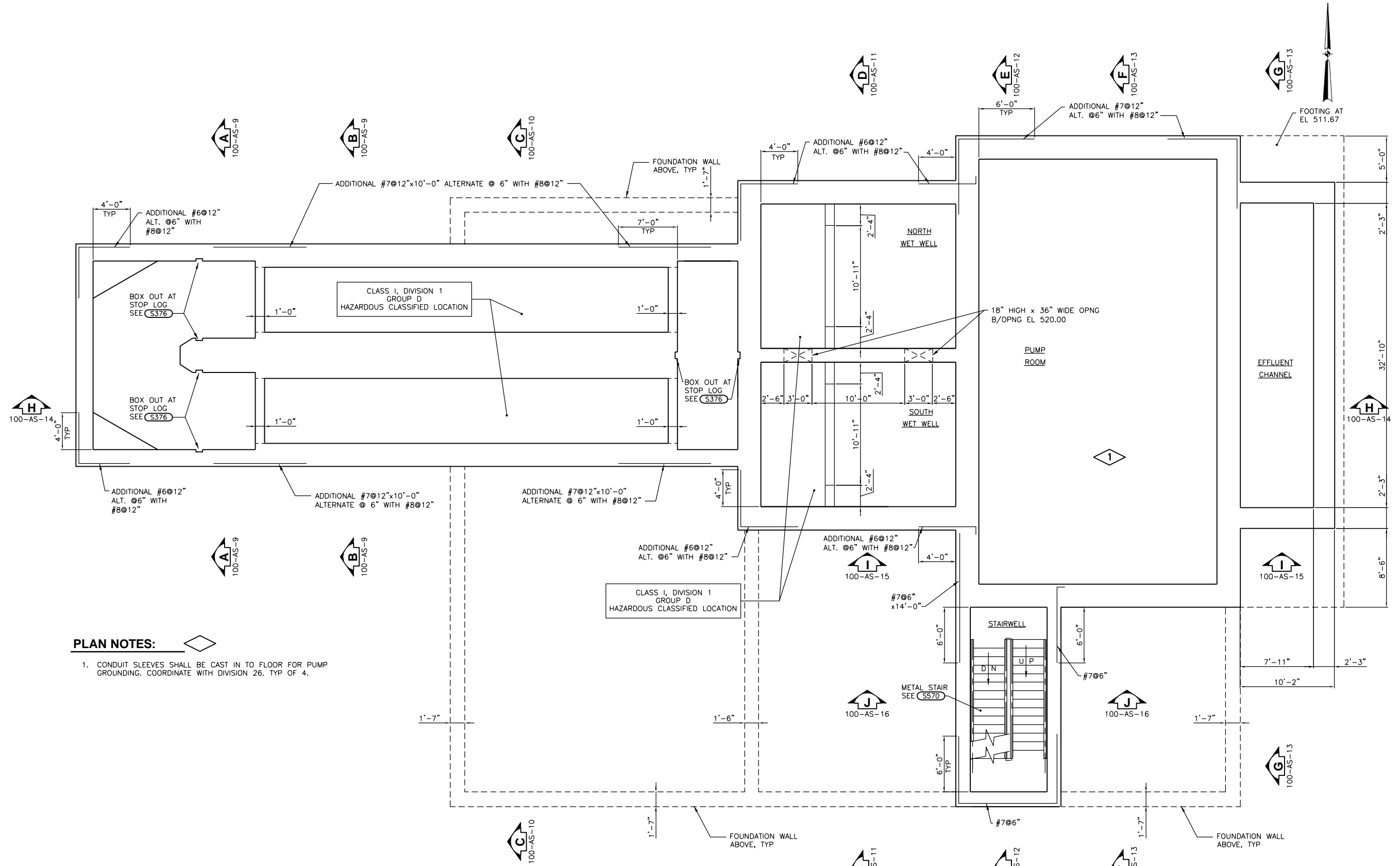
**CITY OF JOLIET**  
**EAST SIDE WASTEWATER TREATMENT PLANT**  
**JOLIET, IL**  
**INFLUENT PUMP STATION AND SCREEN REPLACEMENT**  
**PUMP STATION AND SCREEN FACILITY**  
**PLAN**

**DONOHUE**

Sheet No. 40  
Drawing No. 100-AS-1

**Philip Englebert**  
 7-9-14  
 EXPIRES 11-30-14





**PLAN NOTES:**

1. CONDUIT SLEEVES SHALL BE CAST IN TO FLOOR FOR PUMP GROUNDING. COORDINATE WITH DIVISION 26. TYP OF 4.

**INTERMEDIATE PLAN**



Date	Checked By	Drawn By	Revision Description

Revision Number	Revision Description

Designed By	AJT
Drawn By	AJT
Checked By	PJE
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Filename	100SP1.DWG
Project No.	12614
Project Date	JUNE 2014

**CITY OF JOLIET  
EAST SIDE WASTEWATER TREATMENT PLANT  
INFLUENT PUMP STATION AND SCREEN REPLACEMENT  
JOLIET, IL  
PUMP STATION AND SCREEN FACILITY  
PLAN**

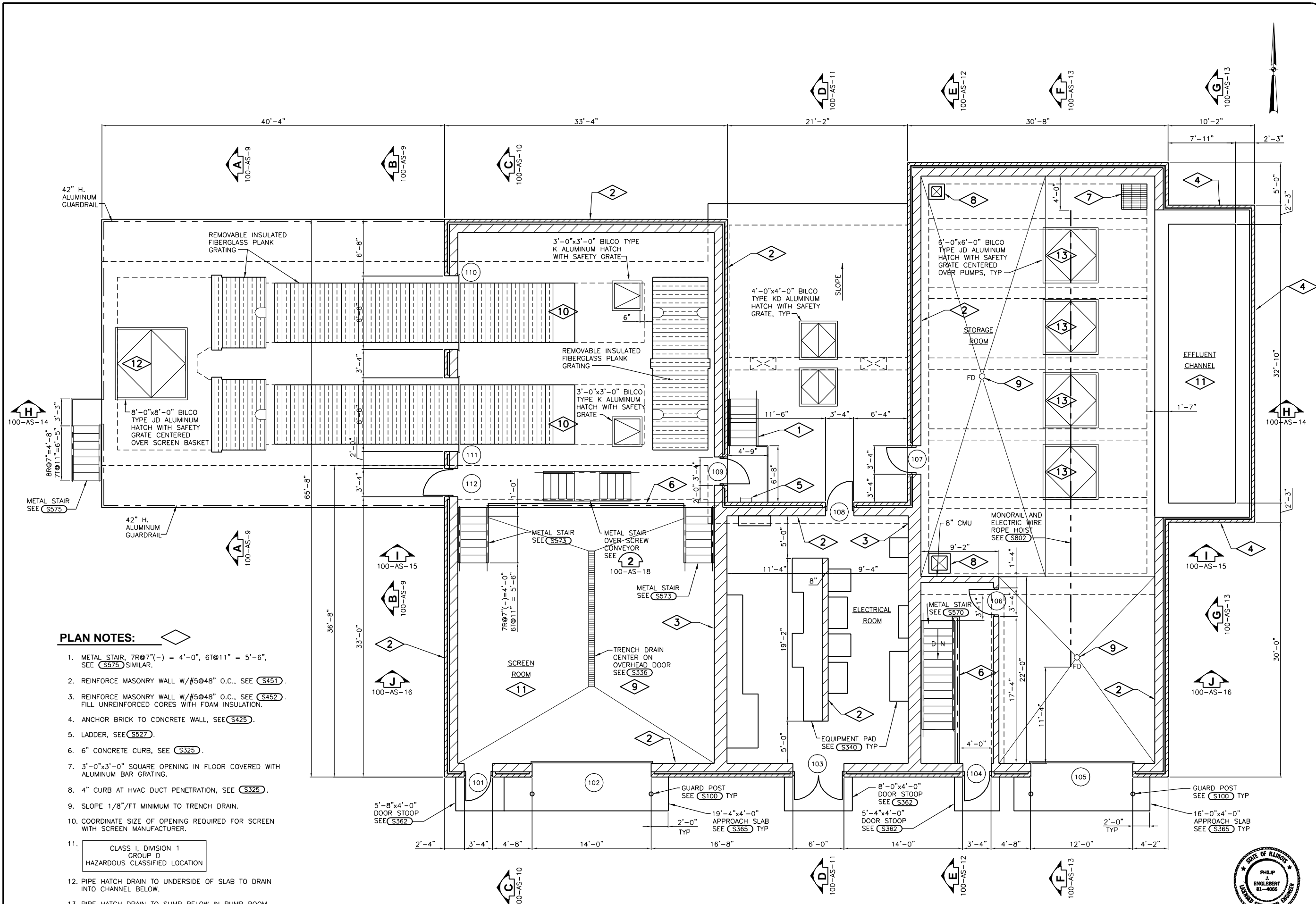


*Philip Englebert*  
7-9-14  
EXPIRES 11-30-19



Sheet No. 41

Drawing No. 100-AS-2



**PLAN NOTES:**

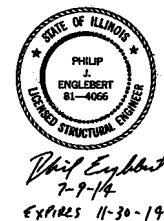
1. METAL STAIR, 7R@7"(-) = 4'-0", 6T@11" = 5'-6", SEE (S575) SIMILAR.
2. REINFORCE MASONRY WALL W/#5@48" O.C., SEE (S451).
3. REINFORCE MASONRY WALL W/#5@48" O.C., SEE (S452). FILL UNREINFORCED CORES WITH FOAM INSULATION.
4. ANCHOR BRICK TO CONCRETE WALL, SEE (S425).
5. LADDER, SEE (S527).
6. 6" CONCRETE CURB, SEE (S325).
7. 3'-0"x3'-0" SQUARE OPENING IN FLOOR COVERED WITH ALUMINUM BAR GRATING.
8. 4" CURB AT HVAC DUCT PENETRATION, SEE (S325).
9. SLOPE 1/8"/FT MINIMUM TO TRENCH DRAIN.
10. COORDINATE SIZE OF OPENING REQUIRED FOR SCREEN WITH SCREEN MANUFACTURER.
11. CLASS I, DIVISION 1 GROUP D HAZARDOUS CLASSIFIED LOCATION
12. PIPE HATCH DRAIN TO UNDERSIDE OF SLAB TO DRAIN INTO CHANNEL BELOW.
13. PIPE HATCH DRAIN TO SUMP BELOW IN PUMP ROOM.

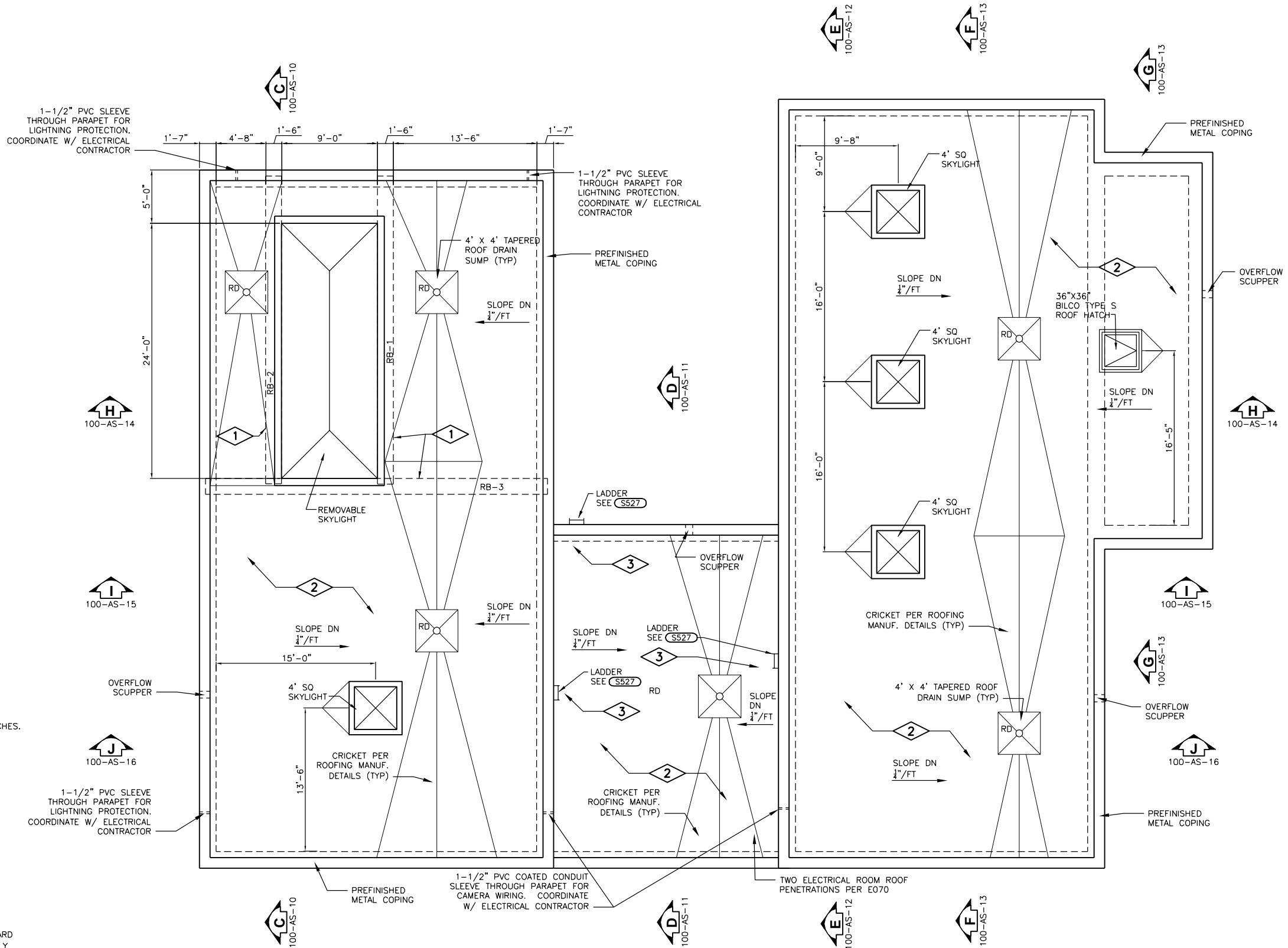


Date	
Checked By	
Drawn By	
Revision Description	
Revision Number	

Designed By	AJT
Drawn By	AJT
Checked By	PJE
Approved By	PJE
Filename	100SP1.DWG
Project No.	12614
Project Date	JUNE 2014

**CITY OF JOLIET  
EAST SIDE WASTEWATER TREATMENT PLANT  
INFLUENT PUMP STATION AND SCREEN REPLACEMENT  
JOLIET, IL  
PUMP STATION AND SCREEN FACILITY  
PLAN**





**GENERAL NOTES:**

1. VERIFY REQUIRED ROUGH OPENINGS FOR SKYLIGHTS AND HATCHES.
2. FLASH ALL ROOF PENETRATIONS PER ROOFING MEMBRANE MANUFACTURER'S REQUIREMENTS.

**PLAN NOTES:**

1. PRECAST CONCRETE ROOF BEAM. SEE **3** FOR DETAILS. 100-AS-18
2. FULLY ADHERED TPO ROOFING MEMBRANE OVER 3/8" COVER BOARD OVER 3" MIN. RIGID INSULATION, TAPERED 1/4"/FT. MECHANICALLY FASTENED AND ADHERED TO CONCRETE PLANK DECK.
3. PROVIDE WALKWAY MATS AT LADDERS AND AROUND ALL ROOFTOP MECHANICAL EQUIPMENT UNITS. SEE MECHANICAL PLANS FOR ROOF TOP EQUIPMENT AND PENETRATIONS INFORMATION.

**ROOF PLAN**



Date	
Checked By	
Drawn By	
Revision Description	
Revision Number	

Designed By	AJT
Drawn By	TJW
Checked By	PJE
Approved By	PJE
Filename	100SP1.DWG
Project No.	12614
Project Date	JUNE 2014

**CITY OF JOLIET  
EAST SIDE WASTEWATER TREATMENT PLANT  
INFLUENT PUMP STATION AND SCREEN REPLACEMENT  
JOLIET, IL  
PUMP STATION AND SCREEN FACILITY  
PLAN**



*Philip Englebert*  
7-9-14  
EXPIRES 11-30-19



Sheet No.	43
Drawing No.	

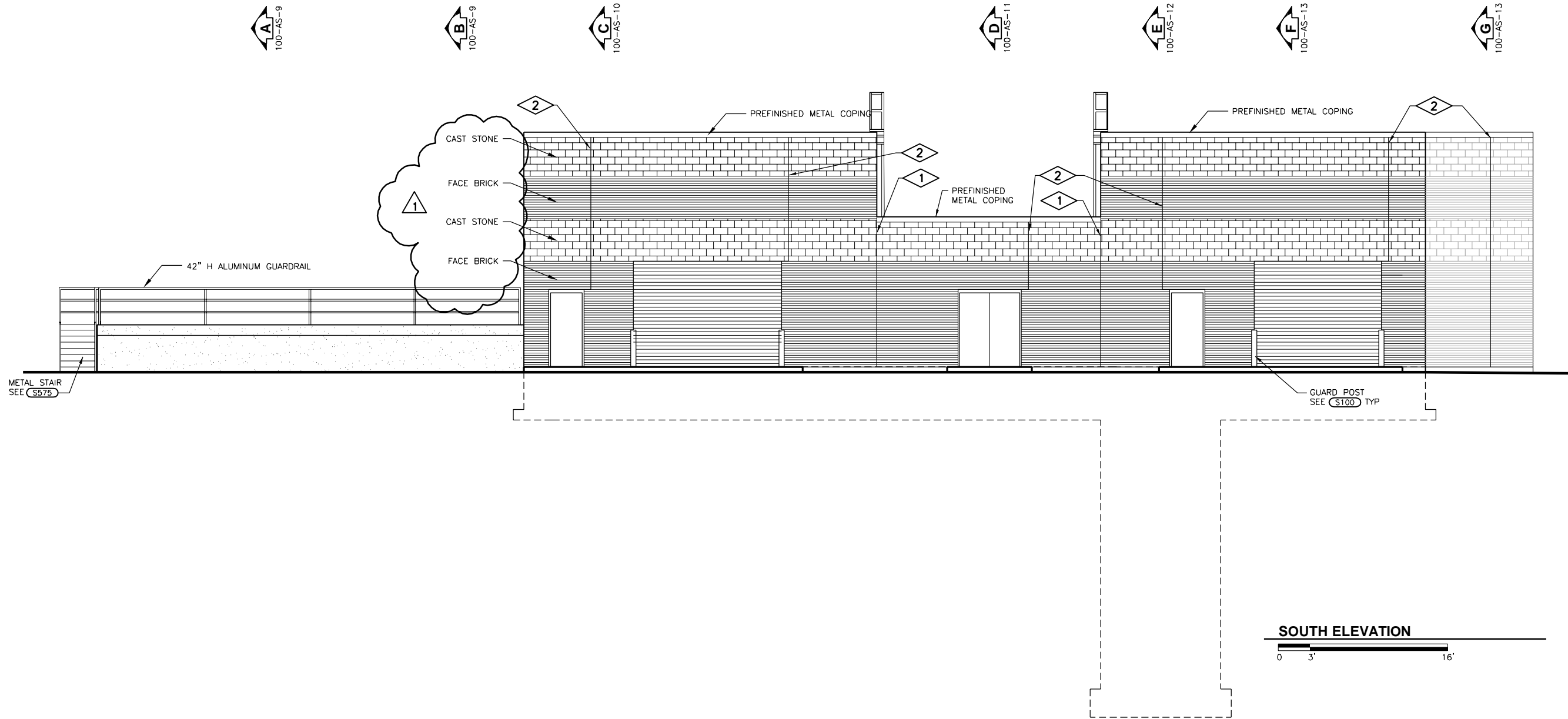
**100-AS-4**

**PLAN NOTES:**

1. CONTROL JOINT, SEE (S431).
2. CONTROL JOINT, SEE (S432).

**GENERAL NOTES:**

1. SEE MECHANICAL AND ELECTRICAL DRAWINGS FOR ADDITIONAL DETAILS.



**SOUTH ELEVATION**  
 0 3' 16'

Revision Number	Revision Description	Checked By	Date
1	ADDED CAST STONE	PJE	08/15/14

Designed By	AJT
Drawn By	AJT
Checked By	PJE
Approved By	PJE
Filename	100AE1.DWG
Project No.	12614
Project Date	JUNE 2014

CITY OF JOLIET  
 EAST SIDE WASTEWATER TREATMENT PLANT  
 INFLUENT PUMP STATION AND SCREEN REPLACEMENT  
 JOLIET, IL  
 PUMP STATION AND SCREEN FACILITY  
 EXTERIOR ELEVATIONS



Sheet No.	44
Drawing No.	

100-AS-5

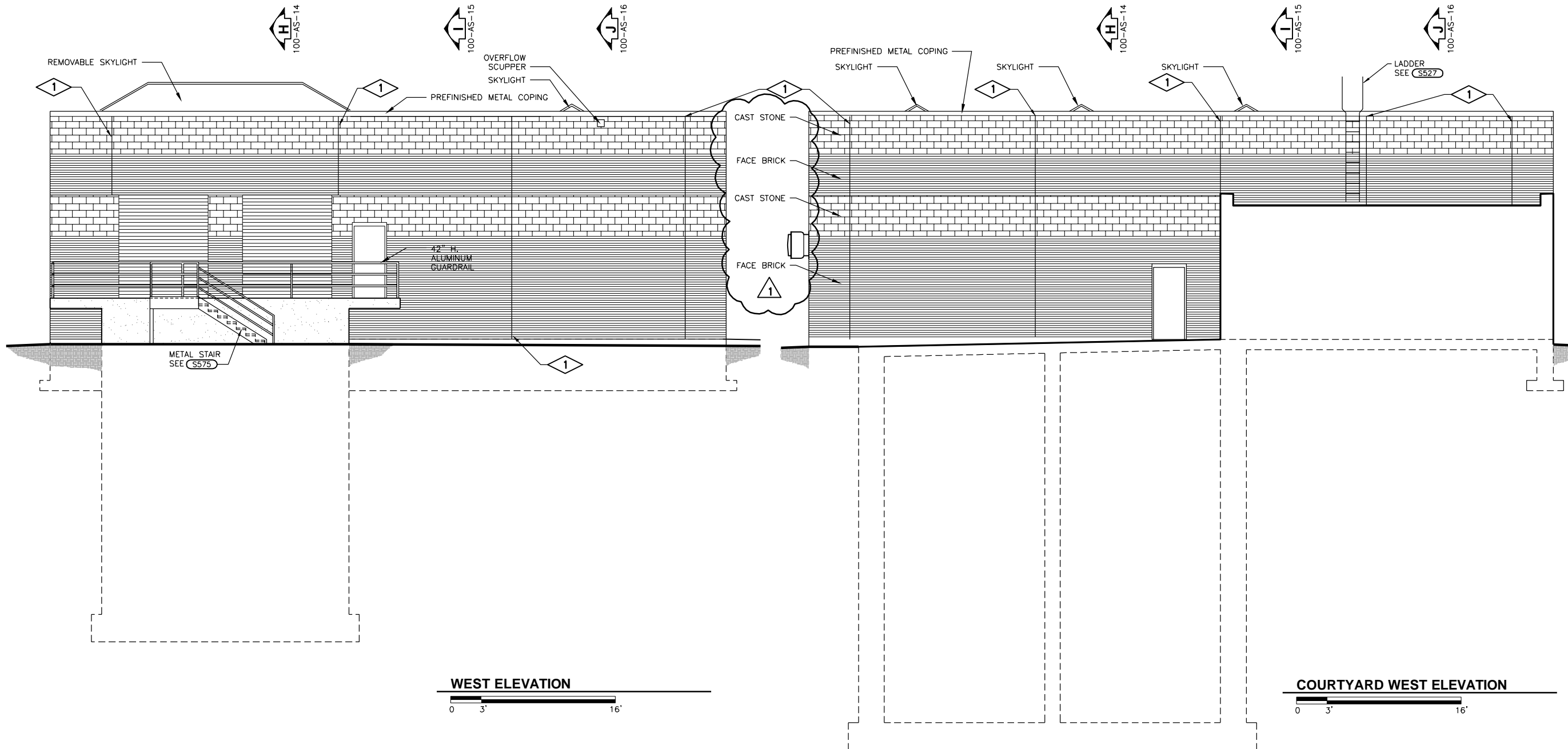
PHILIP J. ENGLEBERT  
 81-4066  
 LICENSED STRUCTURAL ENGINEER  
*Philip Englebert*  
 7-9-14  
 EXPIRES 11-30-14

**PLAN NOTES:**

- 1. CONTROL JOINT, SEE (S432).

**GENERAL NOTES:**

- 1. SEE MECHANICAL AND ELECTRICAL DRAWINGS FOR ADDITIONAL DETAILS.

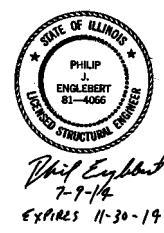


**WEST ELEVATION**  
0 3' 16'

**COURTYARD WEST ELEVATION**  
0 3' 16'

Date	08/15/14
Checked By	PJE
Drawn By	CLS
Revision Description	ADDED CAST STONE
Revision Number	1
Designed By	AJT
Drawn By	AJT
Checked By	PJE
Approved By	PJE
Filename	100AE1.DWG
Project No.	12614
Project Date	JUNE 2014

CITY OF JOLIET  
 EAST SIDE WASTEWATER TREATMENT PLANT  
 INFLUENT PUMP STATION AND SCREEN REPLACEMENT  
 JOLIET, IL  
 PUMP STATION AND SCREEN FACILITY  
 EXTERIOR ELEVATIONS



**DONOHUE**

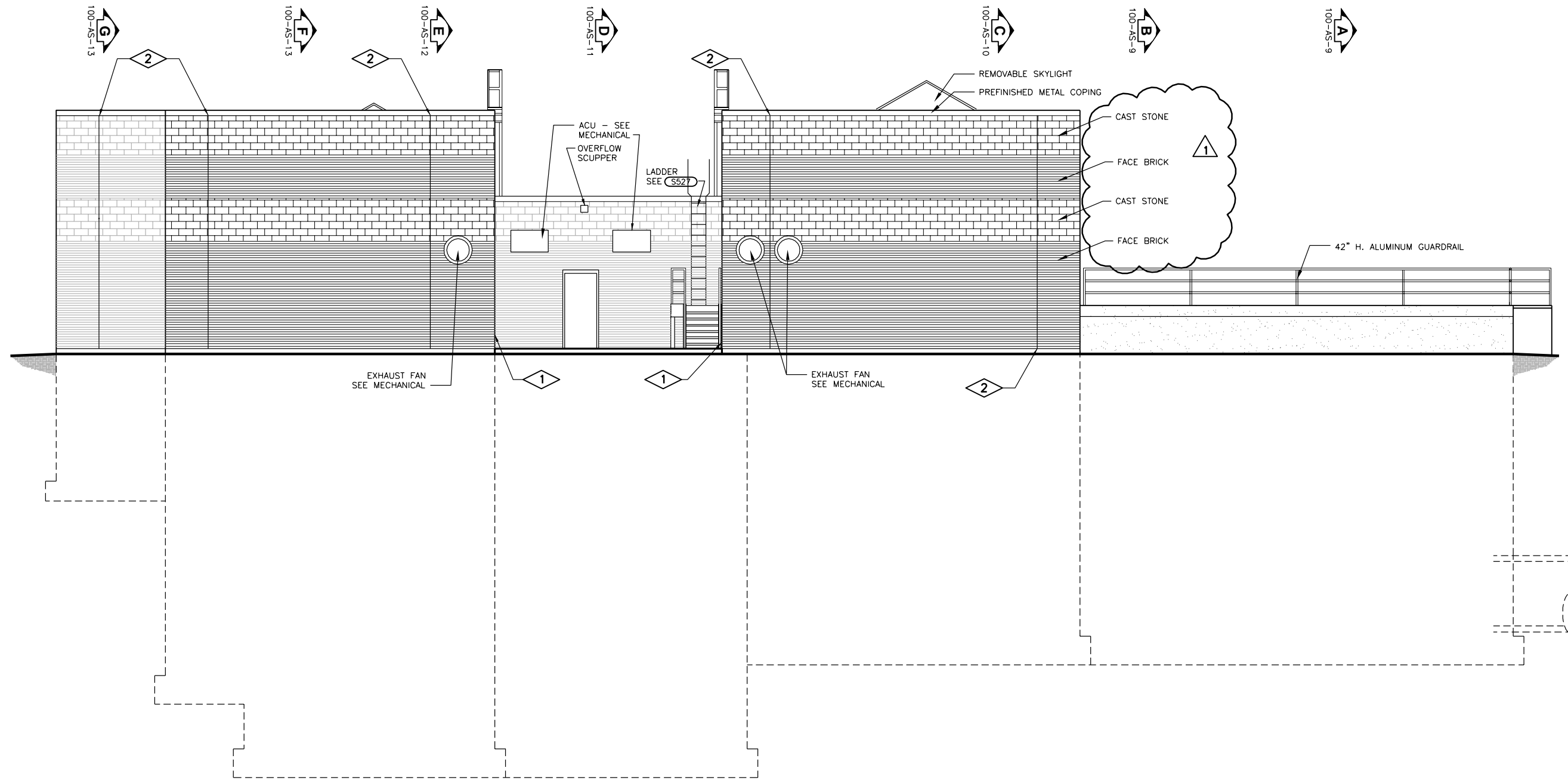
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 Drawing No. 100-AS-6

**PLAN NOTES:**

1. CONTROL JOINT, SEE (S431).
2. CONTROL JOINT, SEE (S432).

**GENERAL NOTES:**

1. SEE MECHANICAL AND ELECTRICAL DRAWINGS FOR ADDITIONAL DETAILS.



**NORTH ELEVATION**



*Philip Englebert*  
7-9-14  
EXPIRES 11-30-14

Revision Number	Revision Description	Drawn By	Checked By	Date
1	ADDED CAST STONE	CLS	PJE	08/15/14

Designed By	AJT
Drawn By	AJT
Checked By	PJE
Approved By	PJE
Filename	100AE1.DWG
Project No.	12614
Project Date	JUNE 2014

**CITY OF JOLIET**  
**EAST SIDE WASTEWATER TREATMENT PLANT**  
**INFLUENT PUMP STATION AND SCREEN REPLACEMENT**  
**JOLIET, IL**  
**PUMP STATION AND SCREEN FACILITY**  
**EXTERIOR ELEVATIONS**



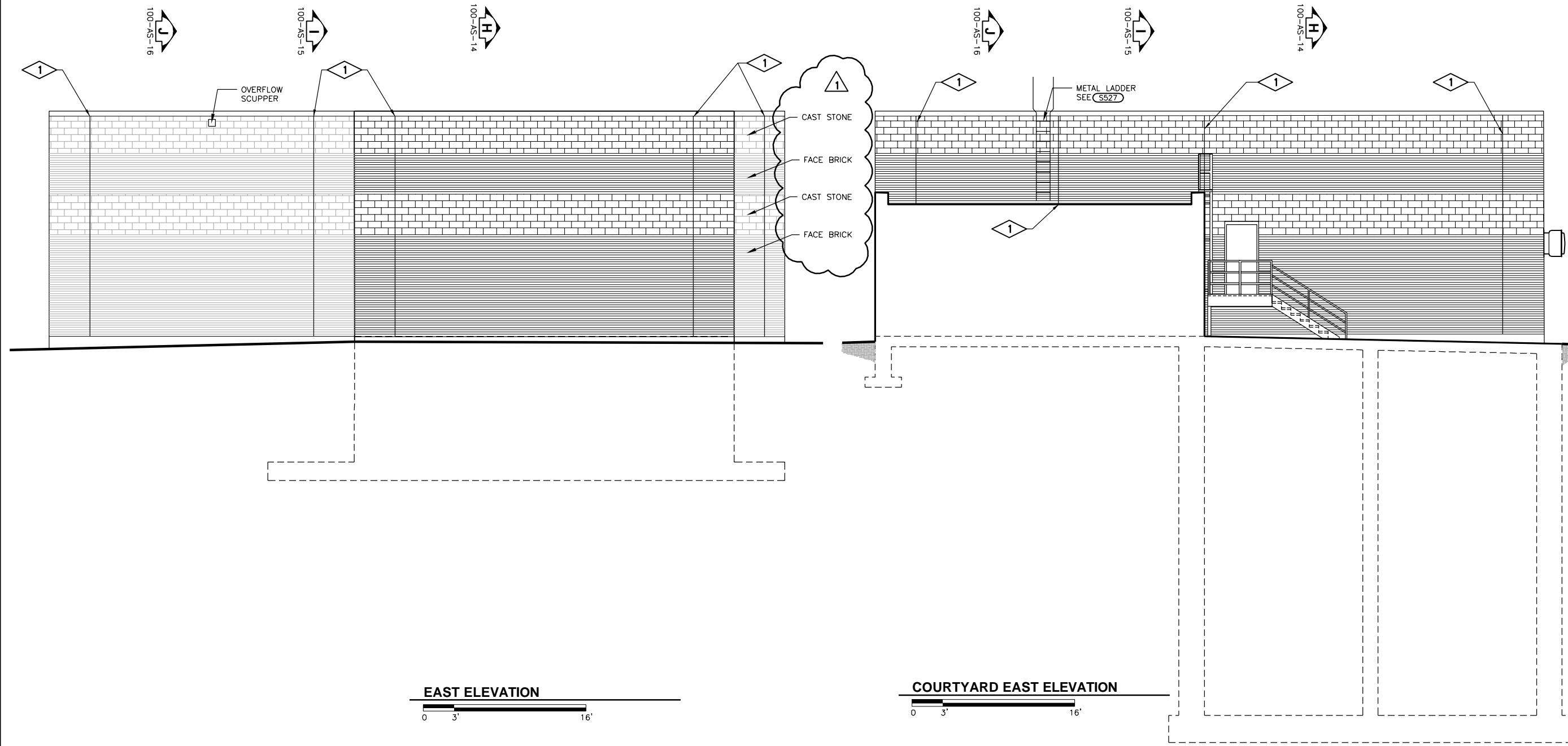
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Drawing No.	100-AS-7

**PLAN NOTES:**

- CONTROL JOINT, SEE (S432).

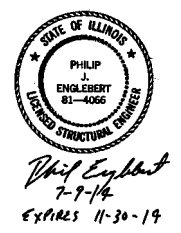
**GENERAL NOTES:**

- SEE MECHANICAL AND ELECTRICAL DRAWINGS FOR ADDITIONAL DETAILS.



Date	08/15/14
Checked By	PJE
Drawn By	CLS
Revision Description	
Revision Number	1
Added	CAST STONE
Designed By	AJT
Drawn By	AJT
Checked By	PJE
Approved By	PJE
Filename	100AE1.DWG
Project No.	12614
Project Date	JUNE 2014

**CITY OF JOLIET**  
**EAST SIDE WASTEWATER TREATMENT PLANT**  
**INFLUENT PUMP STATION AND SCREEN REPLACEMENT**  
**JOLIET, IL**  
**PUMP STATION AND SCREEN FACILITY**  
**EXTERIOR ELEVATIONS**



**DONOHUE**

Sheet No. **47**

Drawing No. **100-AS-8**

**PLAN NOTES:** 

1. COAT CHANNEL WALL AND UNDERSIDE OF CONCRETE SLABS WITH SYSTEM NO 29.
2. CONCRETE SLAB ON GRADE UNDER OVERHANG. PROVIDE 1/2 PREMOLDED JOINT FILLER BETWEEN CONCRETE SLAB AND STRUCTURE. SLOPE SLAB AWAY FROM STRUCTURE A MINIMUM OF 1". SEE C150.

Revision Number	Revision Description	Checked By	Drawn By	Date

Designed By	AJT
Drawn By	AJT
Checked By	PJE
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Filename	100SS1.DWG
Project No.	12614
Project Date	JUNE 2014

CITY OF JOLIET  
**EAST SIDE WASTEWATER TREATMENT PLANT  
 INFLUENT PUMP STATION AND SCREEN REPLACEMENT  
 JOLIET, IL**  
 PUMP STATION AND SCREEN FACILITY  
 SECTIONS



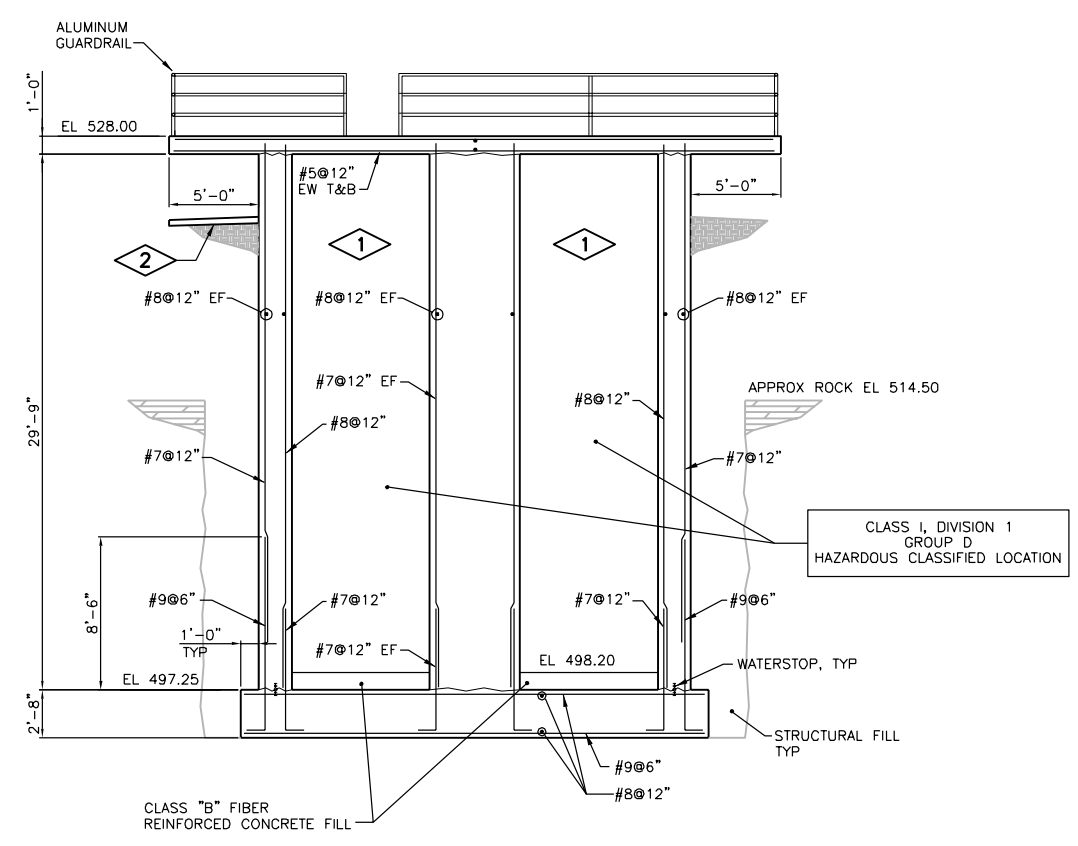
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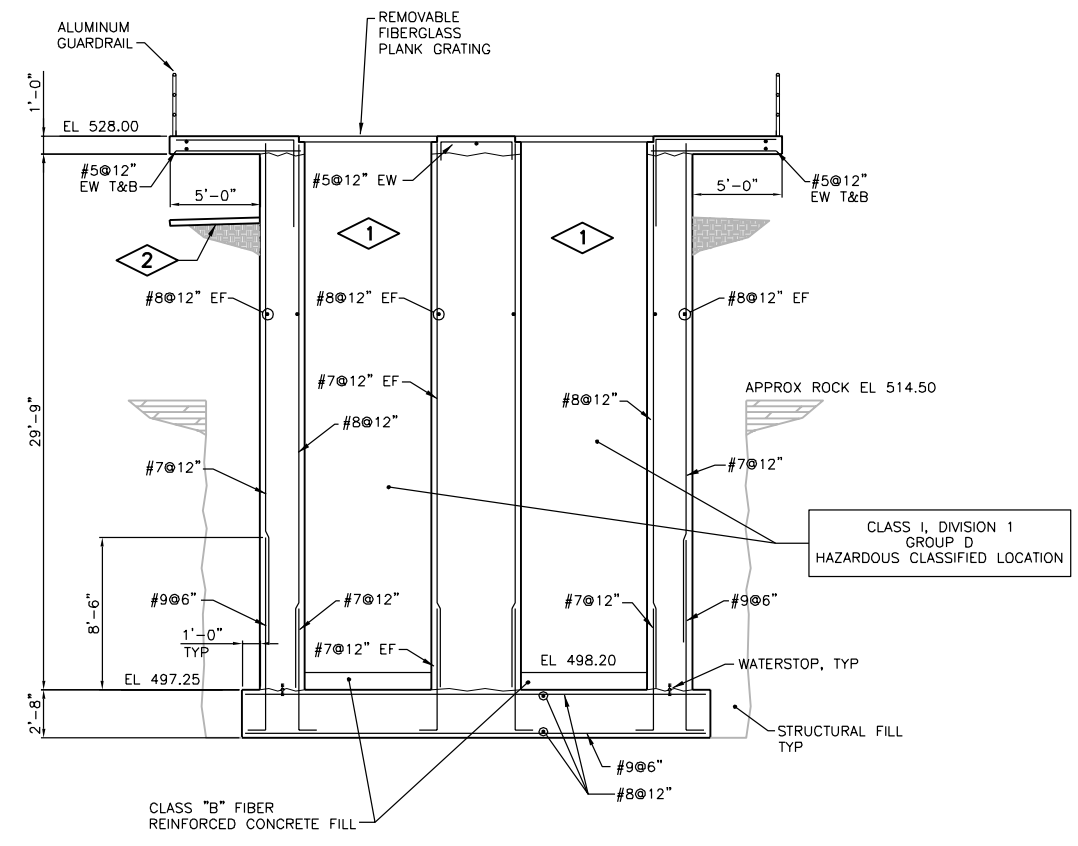
100-AS-9



*Philip Englebert*  
 7-9-14  
 EXPIRES 11-30-14



**SECTION A**  
 0 3' 16'  
 100-AS-1  
 100-AS-2  
 100-AS-3

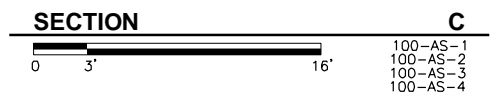
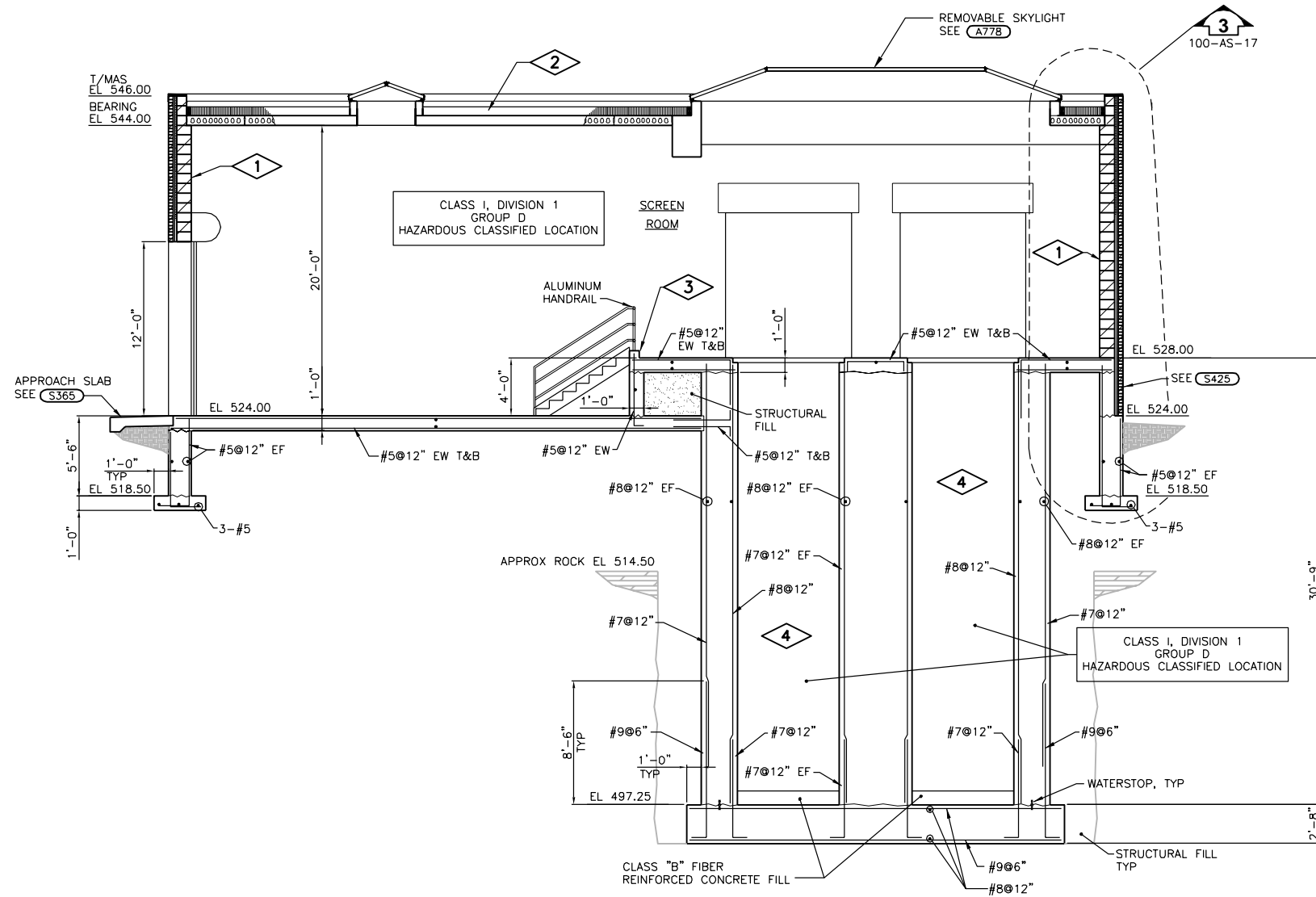


**SECTION B**  
 0 3' 16'  
 100-AS-1  
 100-AS-2  
 100-AS-3



**PLAN NOTES:**

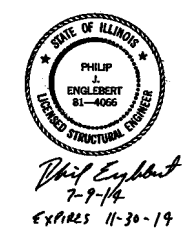
1. REINFORCE WALL WITH #5@48" O.C., SEE (S451).
2. FULLY ADHERED TPO ROOFING MEMBRANE OVER 1/2" COVER BOARD OVER 3" MIN RIGID INSULATION, TAPERED 1"/FT, MECHANICALLY FASTENED AND ADHERED TO 8" PRECAST HOLLOW CORE ROOF PLANK.
3. 6" CURB, SEE (S325).
4. COAT CHANNEL WALLS AND UNDERSIDE OF CONCRETE SLAB WITH SYSTEM 29.



Date	Checked By	Drawn By	Revision Number	Revision Description

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Drawn By	AJT
Checked By	PJE
Approved By	PJE
Filename	100SS1.DWG
Project No.	12614
Project Date	JUNE 2014

CITY OF JOLIET  
EAST SIDE WASTEWATER TREATMENT PLANT  
INFLOW PUMP STATION AND SCREEN REPLACEMENT  
JOLIET, IL  
PUMP STATION AND SCREEN FACILITY  
SECTION



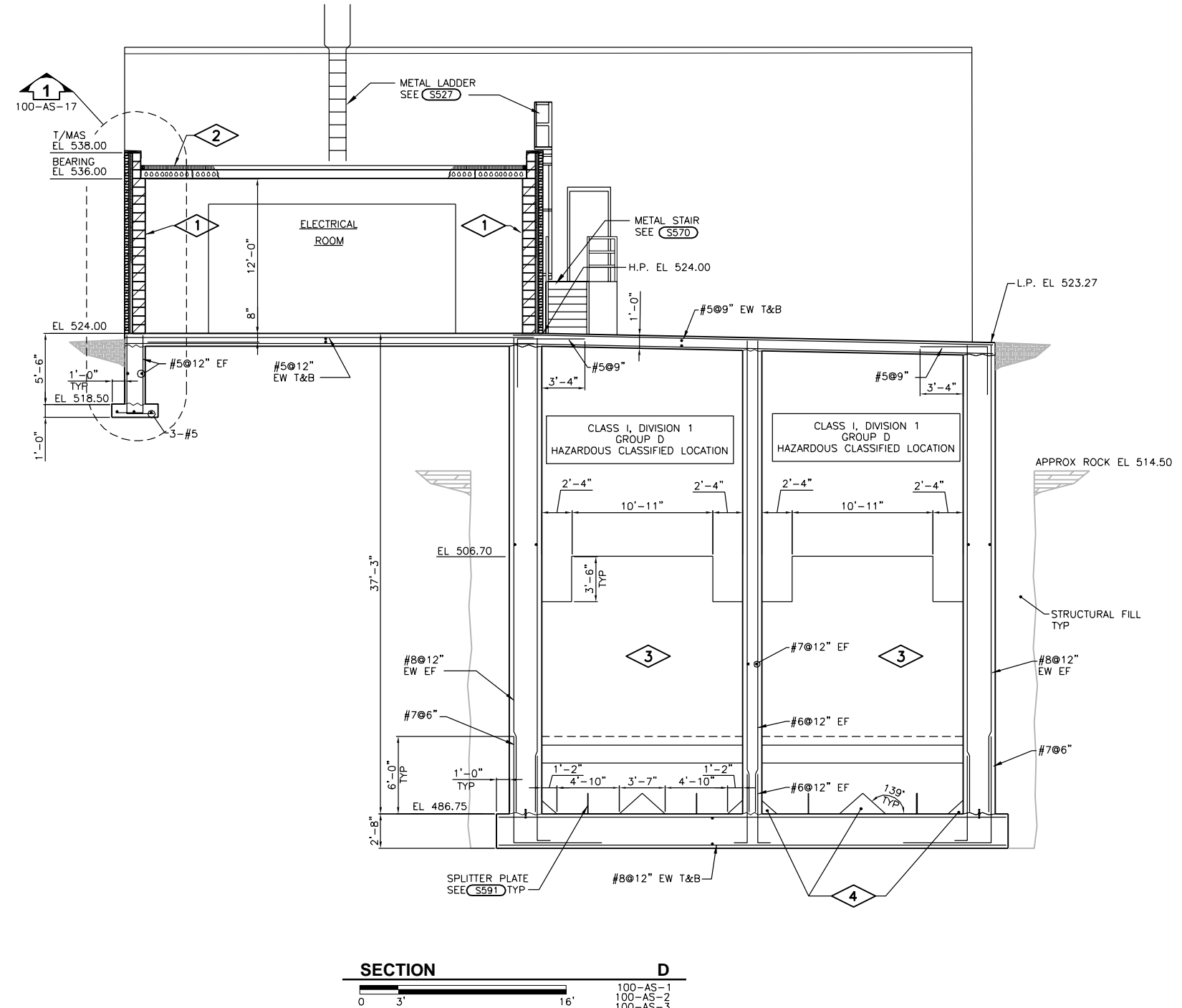
**DONOHUE**

Sheet No. 49

Drawing No. 100-AS-10

**PLAN NOTES:**

1. REINFORCE WALL WITH #5@48" O.C., SEE (S451).
2. FULLY ADHERED TPO ROOFING MEMBRANE OVER 1/2" COVER BOARD OVER 3" MIN RIGID INSULATION, TAPERED 1/4" / FT, MECHANICALLY FASTENED AND ADHERED TO 8" PRECAST HOLLOW CORE ROOF PLANK.
3. COAT WET WELL WALLS AND UNDERSIDE OF CONCRETE SLAB WITH SYSTEM 29.
4. CLASS "B" FIBER REINFORCED CONCRETE FILLETS. CONFIRM DIMENSIONS WITH PUMP MANUFACTURER.

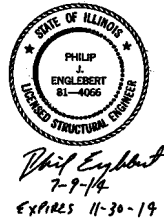


**SECTION D**  
 0 3' 16'  
 100-AS-1  
 100-AS-2  
 100-AS-3

Revision Number	Revision Description	Date

Designed By	AJT
Drawn By	AJT
Checked By	PJE
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Filename	100SS1.DWG
Project No.	12614
Project Date	JUNE 2014

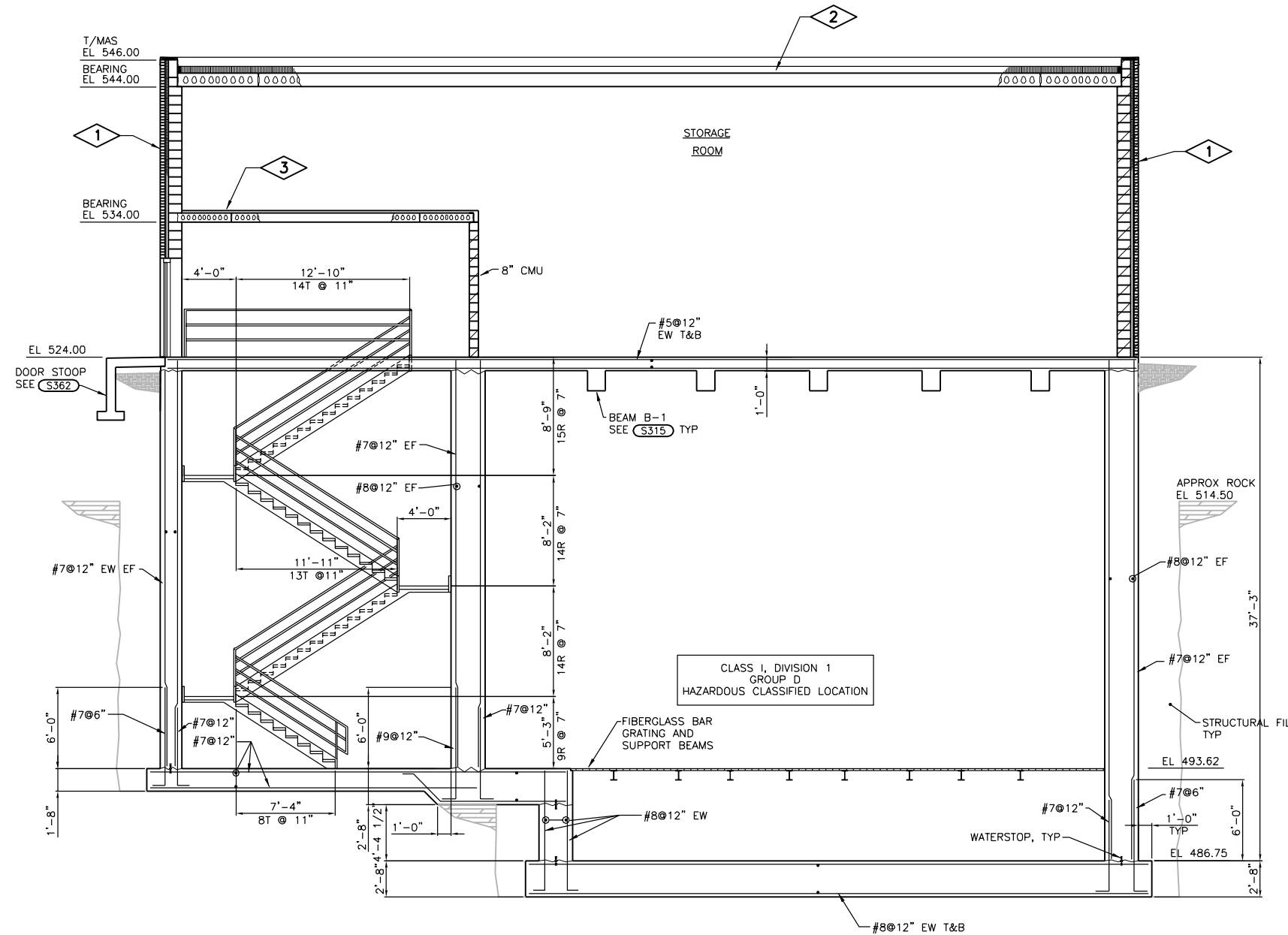
**CITY OF JOLIET  
 EAST SIDE WASTEWATER TREATMENT PLANT  
 INFLUENT PUMP STATION AND SCREEN REPLACEMENT  
 JOLIET, IL  
 PUMP STATION AND SCREEN FACILITY  
 SECTION**



**DONOHUE**  
 Sheet No. 50  
 Drawing No. 100-AS-11

**PLAN NOTES:**

1. REINFORCE WALL WITH #5@48" O.C., SEE (S451).
2. FULLY ADHERED TPO ROOFING MEMBRANE OVER 1/2" COVER BOARD OVER 3" MIN RIGID INSULATION, TAPERED 1/4"/FT, MECHANICALLY FASTENED AND ADHERED TO 12" PRECAST HOLLOW CORE ROOF PLANK.
3. 2" CONCRETE TOPPING OVER 8" PRECAST CONCRETE HOLLOW CORE ROOF PLANK.



*Philip Englebert*  
7-9-14  
EXPIRES 11-30-14

Revision Number	Revision Description	Checked By	Drawn By	Date

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CITY OF JOLIET  
EAST SIDE WASTEWATER TREATMENT PLANT  
INFLUENT PUMP STATION AND SCREEN REPLACEMENT  
JOLIET, IL  
PUMP STATION AND SCREEN FACILITY  
SECTION

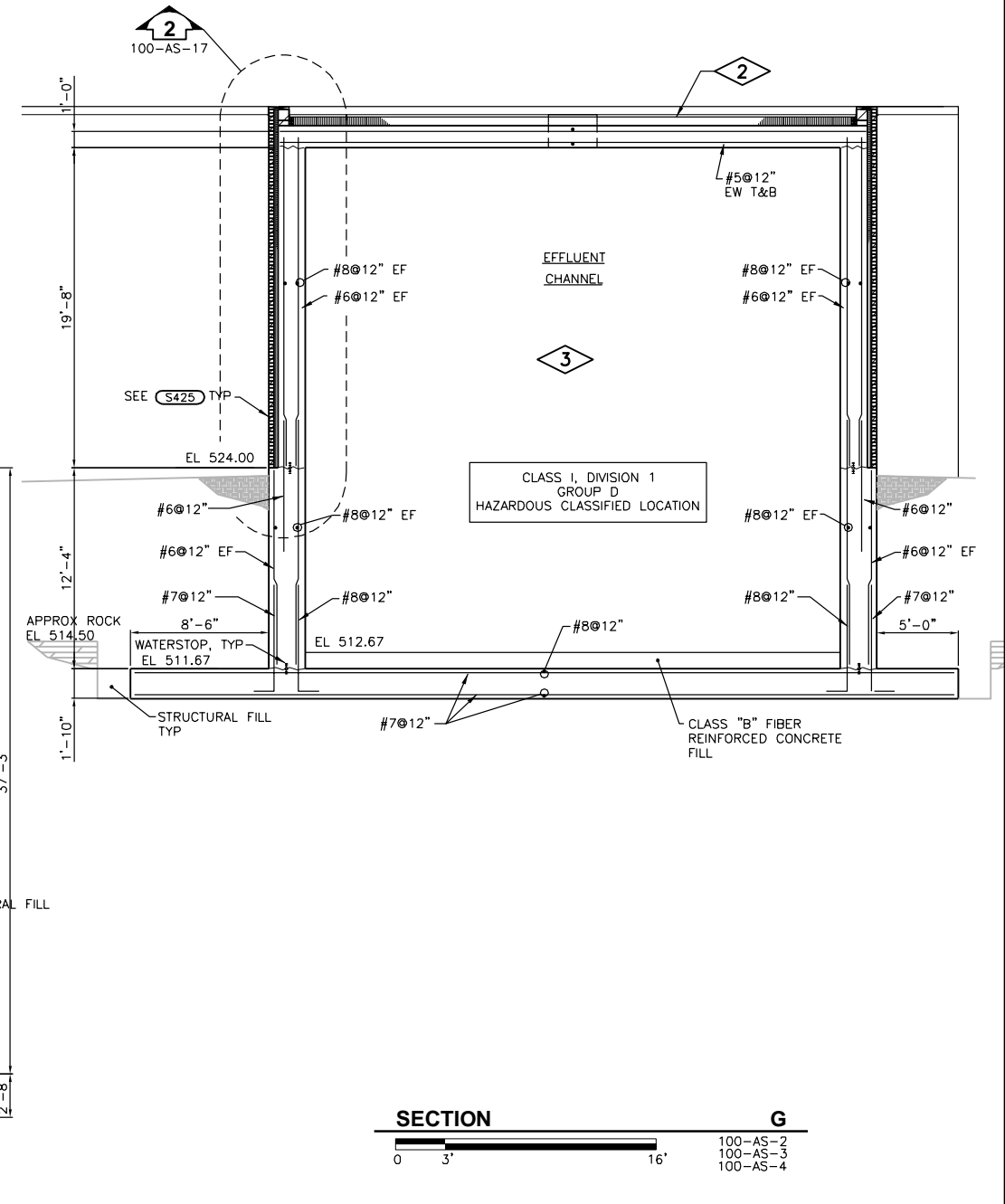
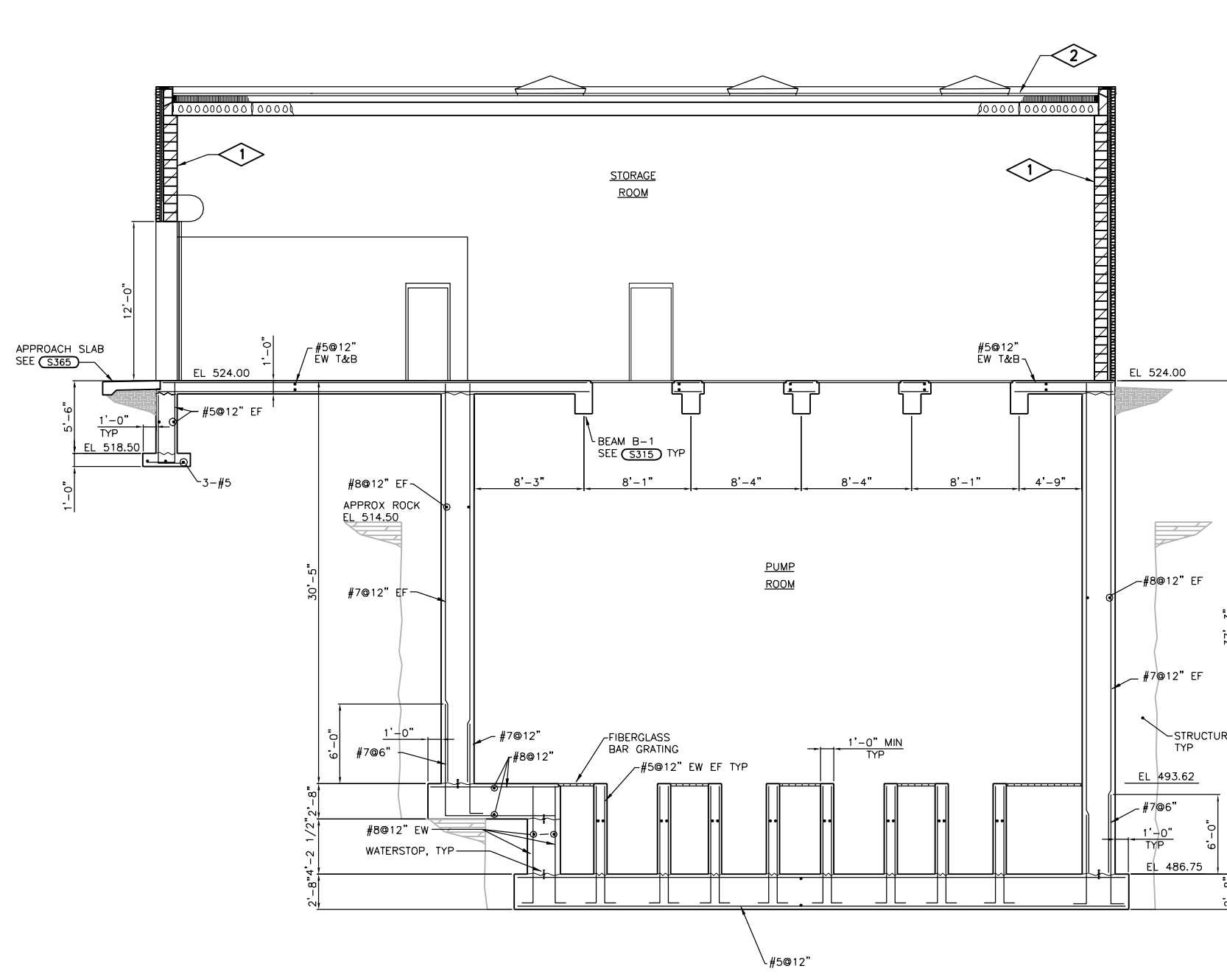
**DONOHUE**

Sheet No. 51

Drawing No. 100-AS-12

**PLAN NOTES:**

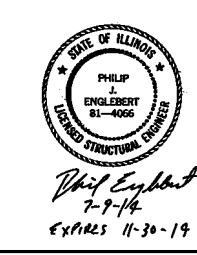
1. REINFORCE WALL WITH #5@48" O.C., SEE (S451).
2. FULLY ADHERED TPO ROOFING MEMBRANE OVER 1/2" COVER BOARD OVER 3" MIN RIGID INSULATION, TAPERED 1/4"/FT, MECHANICALLY FASTENED AND ADHERED TO 12" PRECAST HOLLOW CORE ROOF PLANK OR CONCRETE SLAB.
3. COAT EFFLUENT CHANNEL WALLS AND UNDERSIDE OF CONCRETE SLAB WITH SYSTEM 29.



Revision Number	Revision Description	Drawn By	Checked By	Date

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**CITY OF JOLIET**  
**EAST SIDE WASTEWATER TREATMENT PLANT**  
**INFLUENT PUMP STATION AND SCREEN REPLACEMENT**  
**JOLIET, IL**  
**PUMP STATION AND SCREEN FACILITY SECTIONS**



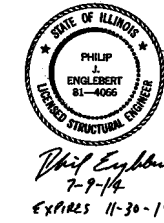
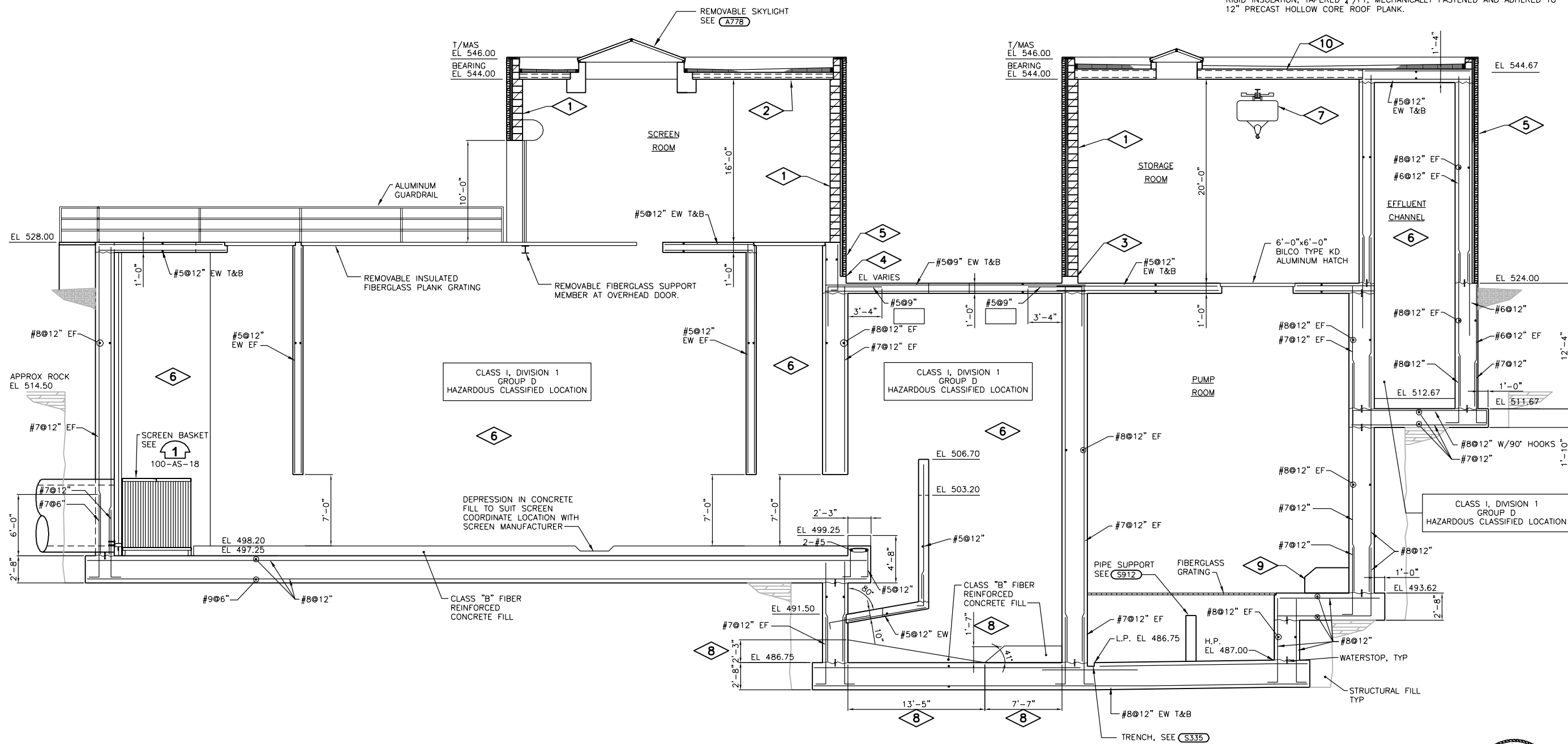
**DONOHUE**

Sheet No. 52

Drawing No. 100-AS-13

**PLAN NOTES:**

1. REINFORCE WALL WITH #5@48" O.C., SEE (S451).
2. FULLY ADHERED TPO ROOFING MEMBRANE OVER 1/2" COVER BOARD OVER 3" MIN RIGID INSULATION, TAPERED 1/4"/FT, MECHANICALLY FASTENED AND ADHERED TO 8" PRECAST HOLLOW CORE ROOF PLANK.
3. TOP OF CONCRETE CURB, EL 524.67, SEE (S325).
4. TOP OF CONCRETE EL 524.67.
5. ANCHOR BRICK TO CONCRETE WALL, SEE (S425).
6. COAT CONCRETE WALLS AND UNDERSIDE OF CONCRETE SLABS WITH SYSTEM 29.
7. 5-TON ELECTRIC WIRE ROPE HOIST AND MONORAIL, SEE (S802).
8. CONFIRM SIZE AND DIMENSION REQUIREMENTS WITH PUMP MANUFACTURER.
9. CONCRETE PIPE SUPPORT, SEE (4) 100-AS-18.
10. FULLY ADHERED TPO ROOFING MEMBRANE OVER 1/2" COVER BOARD OVER 3" MIN RIGID INSULATION, TAPERED 1/4"/FT, MECHANICALLY FASTENED AND ADHERED TO 12" PRECAST HOLLOW CORE ROOF PLANK.



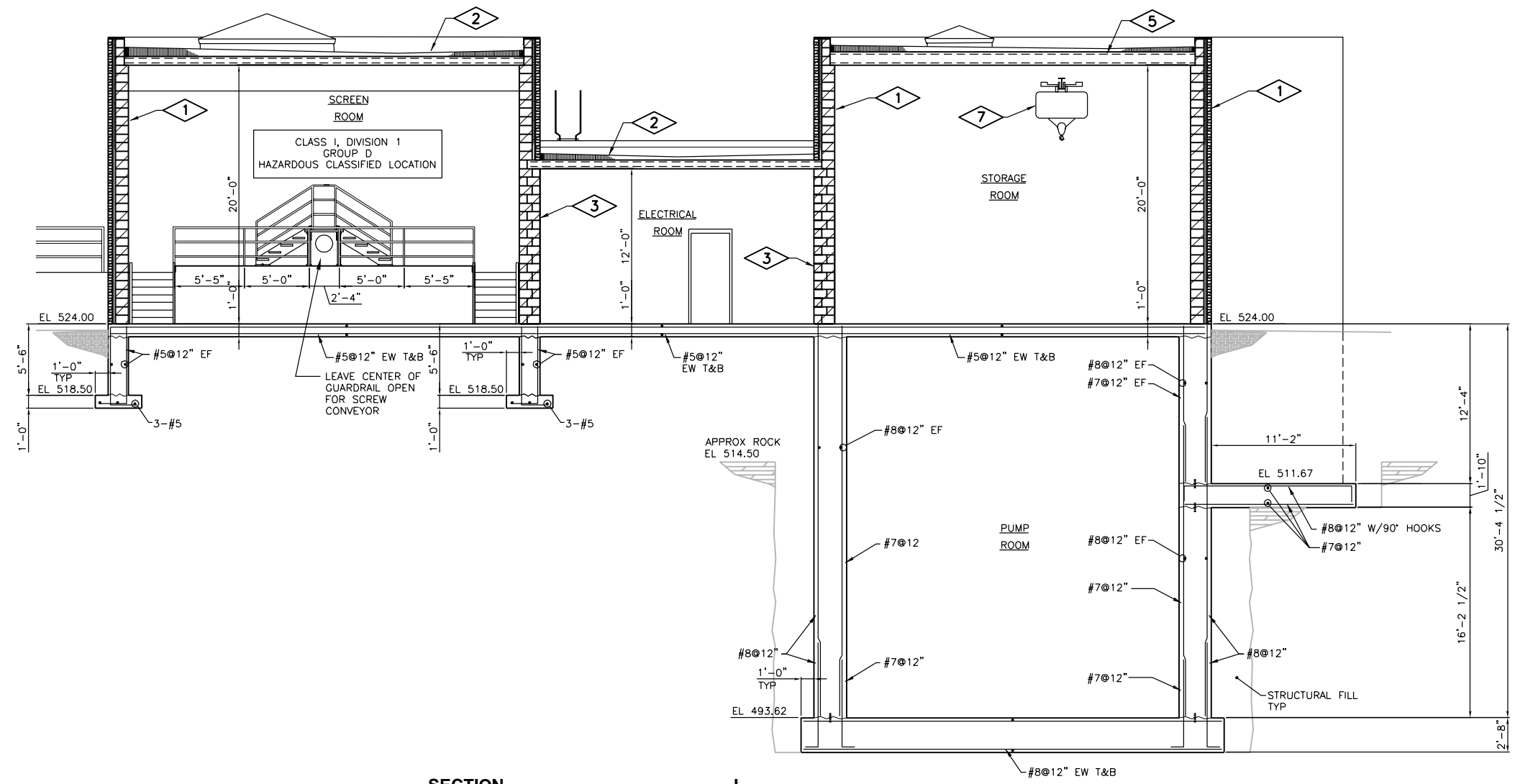
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Drawn By	
Revision Description	
Revision Number	

Designed By	AJT
Drawn By	AJT
Checked By	PJE
Approved By	PJE
Filename	100SS1.DWG
Project No.	12614
Project Date	JUNE 2014

**CITY OF JOLIET  
EAST SIDE WASTEWATER TREATMENT PLANT  
INFLUENT PUMP STATION AND SCREEN REPLACEMENT  
JOLIET, IL  
PUMP STATION AND SCREEN FACILITY  
SECTION**

**PLAN NOTES:** 

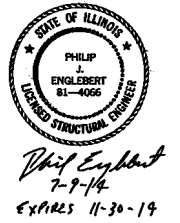
1. REINFORCE WALL WITH #5@48" O.C., SEE (S451).
2. FULLY ADHERED TPO ROOFING MEMBRANE OVER 1/2" COVER BOARD OVER 3" MIN RIGID INSULATION, TAPERED 1/2"/FT, MECHANICALLY FASTENED AND ADHERED TO 8" PRECAST HOLLOW CORE ROOF PLANK.
3. 12"/6" CMU, REINFORCE WITH #5@48" O.C., SEE (S452).
4. 5-TON ELECTRIC WIRE ROPE HOIST AND MONORAIL, SEE (S802).
5. FULLY ADHERED TPO ROOFING MEMBRANE OVER 1/2" COVER BOARD OVER 3" MIN RIGID INSULATION, TAPERED 1/2"/FT, MECHANICALLY FASTENED AND ADHERED TO 12" PRECAST HOLLOW CORE ROOF PLANK.



Revision Number	Revision Description	Drawn By	Checked By	Date

Designed By	AJT
Drawn By	TJW
Checked By	PJE
Approved By	PJE
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Project No.	12614
Project Date	JUNE 2014

**CITY OF JOLIET**  
**EAST SIDE WASTEWATER TREATMENT PLANT**  
**INFLUENT PUMP STATION AND SCREEN REPLACEMENT**  
**JOLIET, IL**  
**PUMP STATION AND SCREEN FACILITY**  
**SECTION**



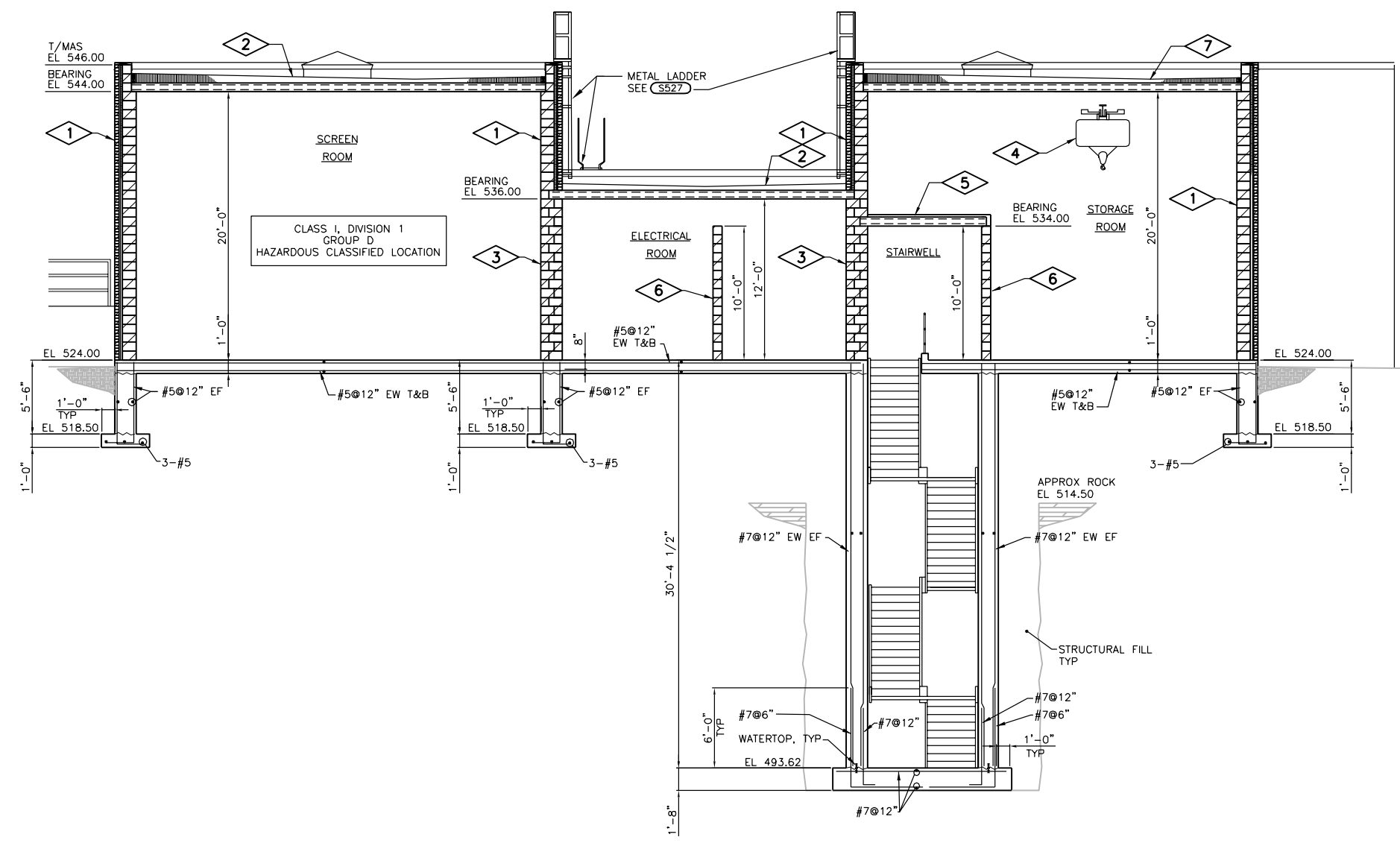
**DONOHUE**

Sheet No. **54**

Drawing No. **100-AS-15**

**PLAN NOTES:** 

1. REINFORCE WALL WITH #5@48" O.C., SEE (S451).
2. FULLY ADHERED TPO ROOFING MEMBRANE OVER 1/2" COVER BOARD OVER 3" MIN RIGID INSULATION, TAPERED 1/4"/FT, MECHANICALLY FASTENED AND ADHERED TO 8" PRECAST HOLLOW CORE ROOF PLANK.
3. 12"/6" CMU, REINFORCE WITH #5@48" O.C., SEE (S452).
4. 5-TON ELECTRIC WIRE ROPE HOIST AND MONORAIL, SEE (S802).
5. 8" PRECAST CONCRETE HOLLOW CORE PLANK WITH 2" CONCRETE TOPPING. SEE (S462).
6. 8" CMU REINFORCED WITH #5@48" O.C. FULLY GROUT ALL CORES. SEE (S451).
7. FULLY ADHERED TPO ROOFING MEMBRANE OVER 1/2" COVER BOARD OVER 3" MIN RIGID INSULATION, TAPERED 1/4"/FT, MECHANICALLY FASTENED AND ADHERED TO 12" PRECAST HOLLOW CORE ROOF PLANK.



Revision Number	Revision Description	Drawn By	Checked By	Date

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Drawn By	TJW
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Approved By	PJE
Filename	100SS1.DWG
Project No.	12614
Project Date	JUNE 2014

CITY OF JOLIET  
EAST SIDE WASTEWATER TREATMENT PLANT  
INFLUENT PUMP STATION AND SCREEN REPLACEMENT  
JOLIET, IL  
PUMP STATION AND SCREEN FACILITY  
SECTION

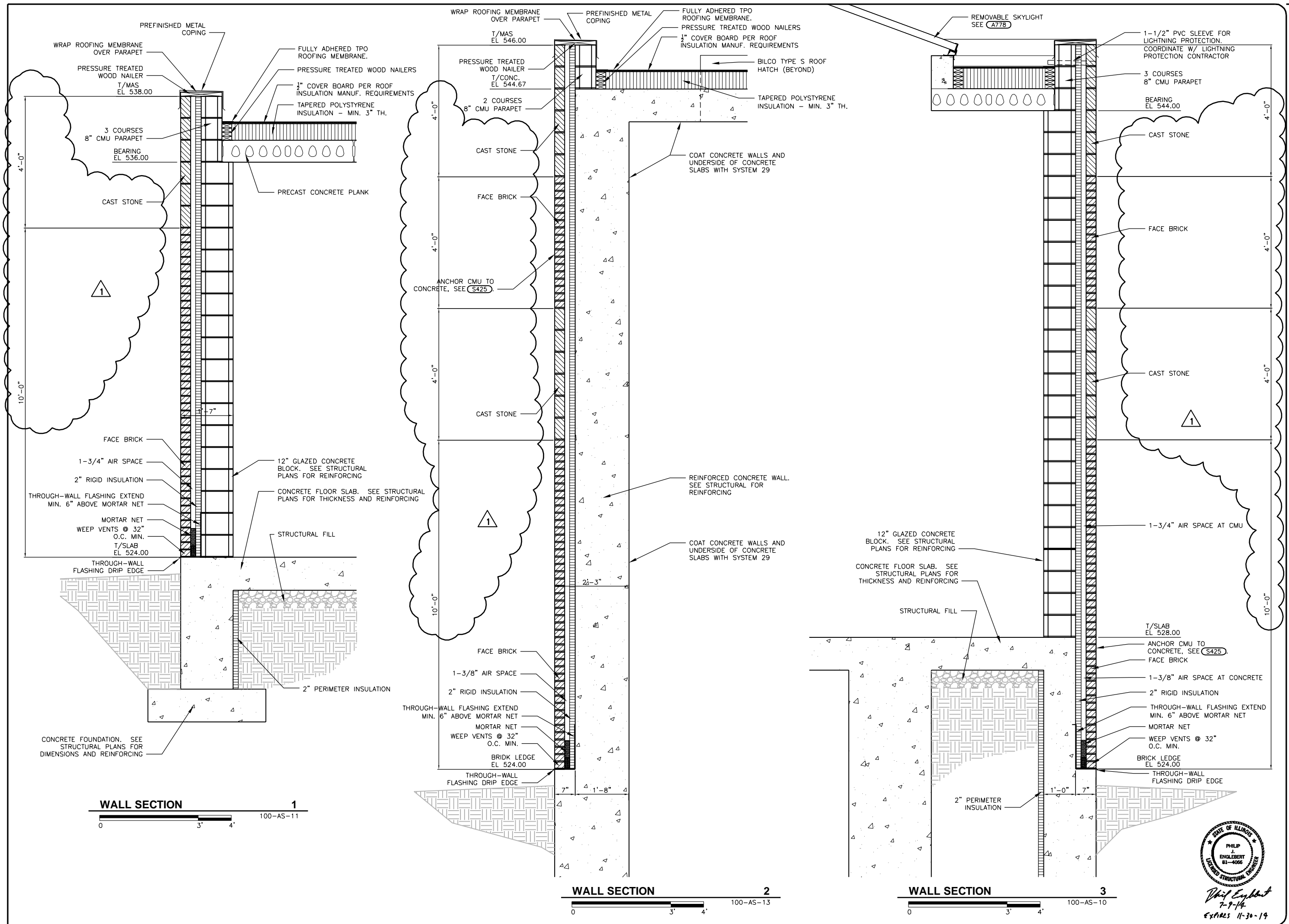


*Philip Englebert*  
7-9-14  
EXPIRES 11-30-14



Sheet No.	55
Drawing No.	

100-AS-16



Date	
Checked By	
Drawn By	
Revision Number	
Revision Description	
Designed By	TJW
Drawn By	TJW
Checked By	PJE
Approved By	PJE
Filename	100SS1.DWG
Project No.	12614
Project Date	JUNE 2014

**CITY OF JOLIET**  
**EAST SIDE WASTEWATER TREATMENT PLANT**  
**INFLUENT PUMP STATION AND SCREEN REPLACEMENT**  
**JOLIET, IL**  
**PUMP STATION AND SCREEN FACILITY**  
**WALL SECTIONS**

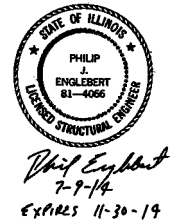
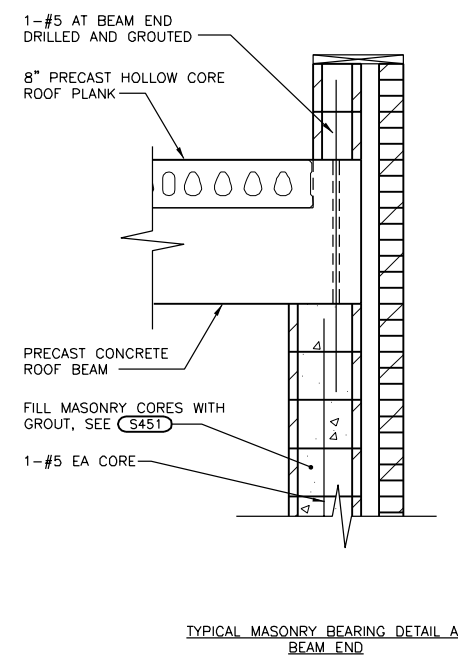
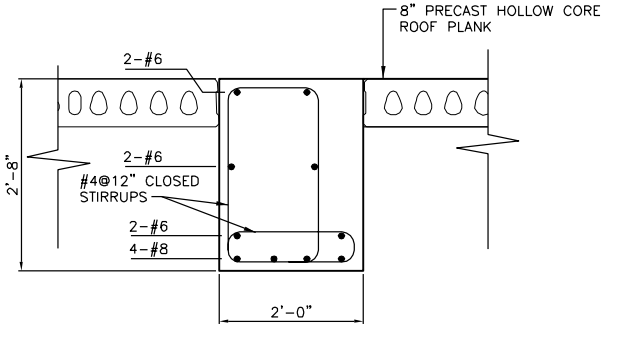
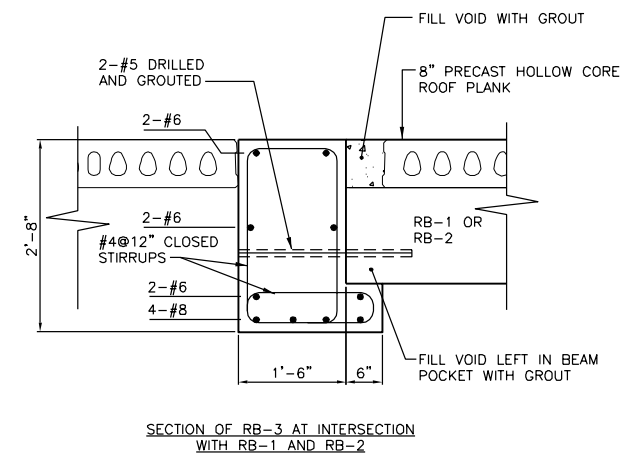
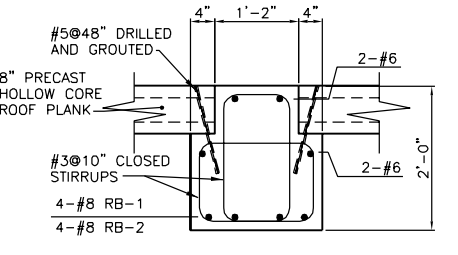
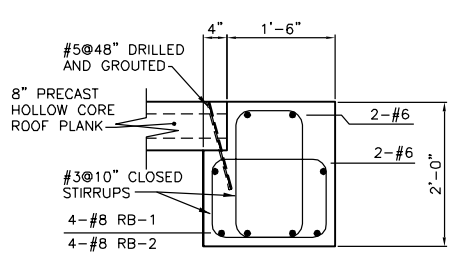
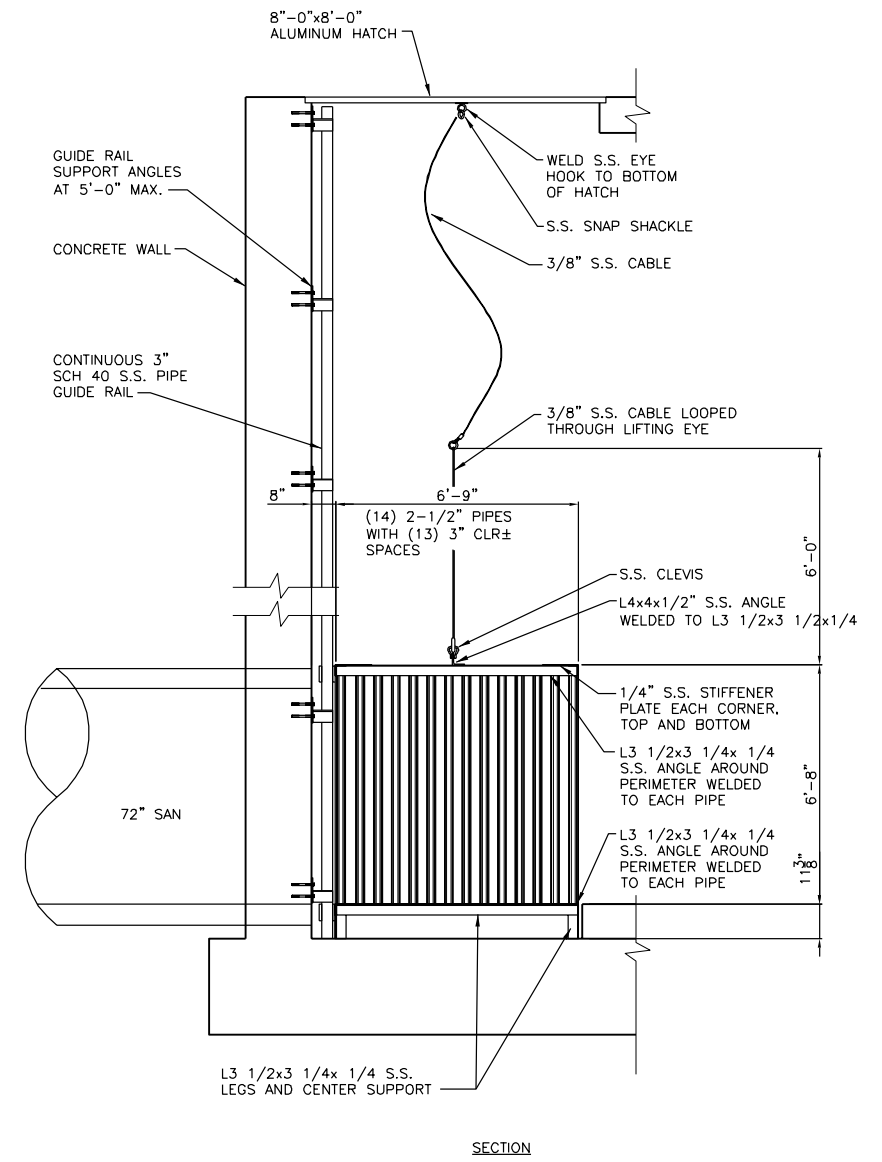
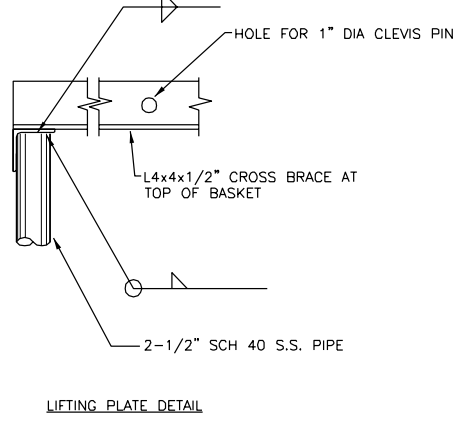
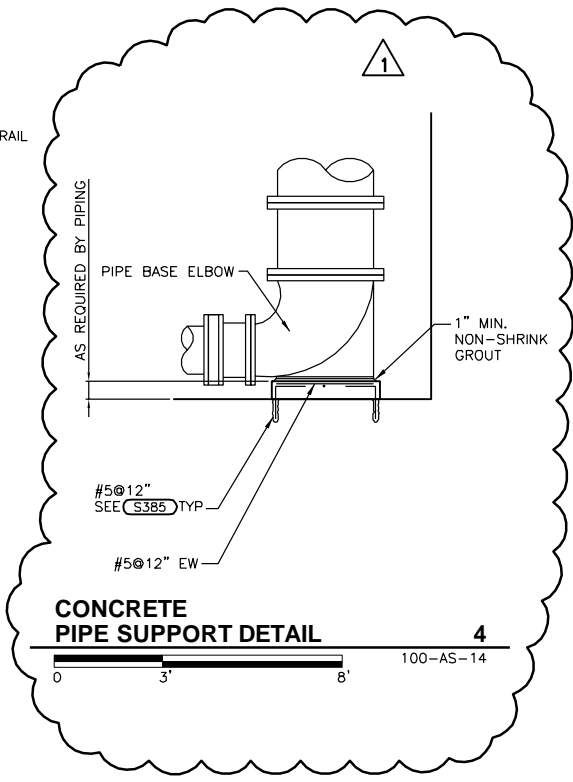
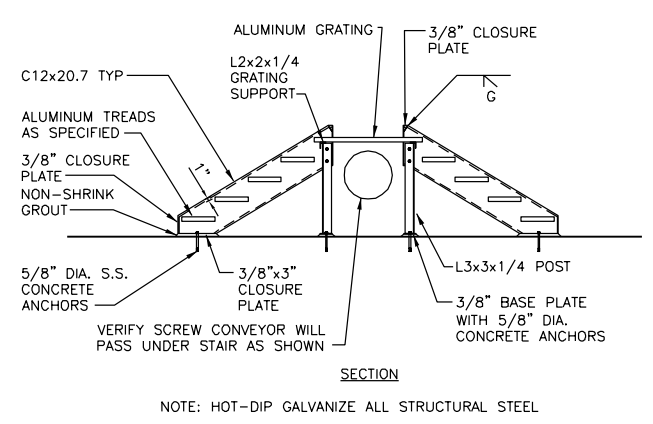
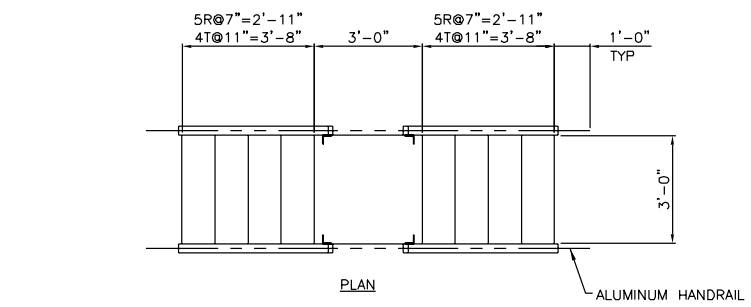
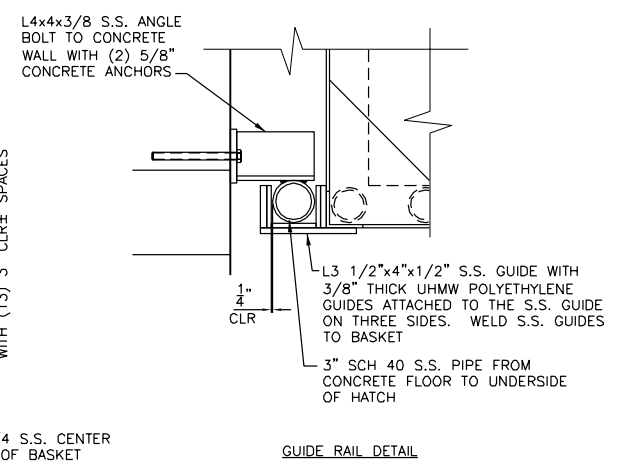
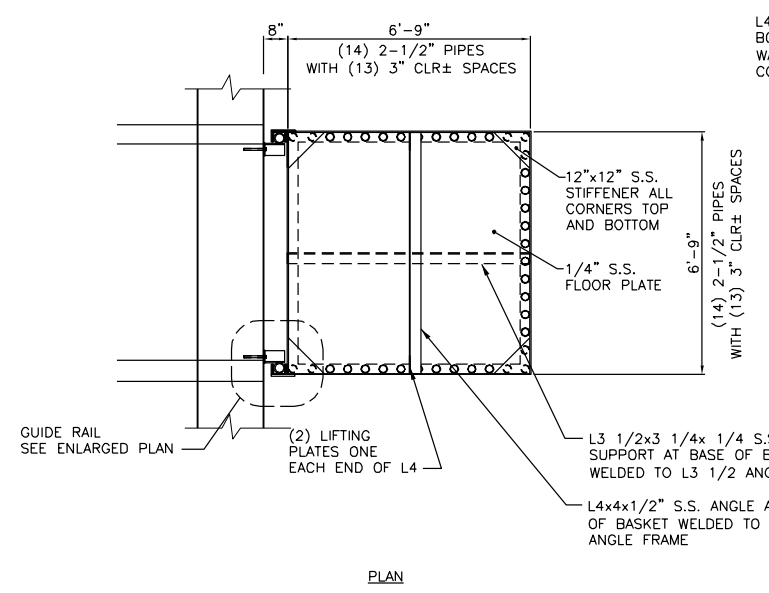
**DONOHUE**

Sheet No. **56**

Drawing No. **100-AS-17**

Philip J. Englebert  
 7-9-14  
 Expires 11-30-19





Date	
Checked By	
Drawn By	
Revision Description	
Revision Number	
Designed By	AJT
Drawn By	AJT
Checked By	PJE
Approved By	PJE
Filename	100SS1.DWG
Project No.	12614
Project Date	JUNE 2014

CITY OF JOLIET  
EAST SIDE WASTEWATER TREATMENT PLANT  
INFLUENT PUMP STATION AND SCREEN REPLACEMENT  
JOLIET, IL  
PUMP STATION AND SCREEN FACILITY  
DETAILS

**DONOHUE**

Sheet No. 57  
Drawing No. 100-AS-18



CLASS I, DIVISION 1  
GROUP D  
HAZARDOUS CLASSIFIED LOCATION

CLASS I, DIVISION 1  
GROUP D  
HAZARDOUS CLASSIFIED LOCATION

NORTH  
WET WELL  
INLET GATE  
100-G-01N3

SOUTH  
WET WELL  
INLET GATE  
100-G-01S3



WALL PENETRATION  
M130

72" SAN

SCREEN  
INFLUENT  
GATE NO.1  
100-G-01N1

BAR  
SCREEN  
NO.1  
100-M-0201

SCREEN  
EFFLUENT  
GATE NO.1  
100-G-01N2

SCREEN  
INFLUENT  
GATE NO.2  
100-G-01S1

BAR  
SCREEN  
NO.2  
100-M-0202

SCREEN  
EFFLUENT  
GATE NO.2  
100-G-01S2

NORTH  
WET WELL

SOUTH  
WET WELL

ISOLATION  
VALVE N1  
100-FV-03N1

INFLUENT  
PUMP N1  
100-P-03N1

ISOLATION  
VALVE N2  
100-FV-03N2

INFLUENT  
PUMP N2  
100-P-03N2

ISOLATION  
VALVE S1  
100-FV-03S1

INFLUENT  
PUMP S1  
100-P-03S1

ISOLATION  
VALVE S2  
100-FV-03S2

INFLUENT  
PUMP S2  
100-P-03S2

PRESSURE  
GAUGE  
100-PI-0301

PRESSURE  
GAUGE  
100-PI-0303

PRESSURE  
GAUGE  
100-PI-0305

PRESSURE  
GAUGE  
100-PI-0307

30" PI (TYP)  
M103

30" WALL PIPE (TYP)  
M103

PUMP  
ROOM



LOWER PLAN



Revision Number	Revision Description	Drawn By	Checked By	Date

Designed By: KDS

Drawn By: KDS

Checked By: XX3

Approved By: EPC

Filename: 100MP1.DWG

Project No.: 12614

Project Date: JUNE 2014

CITY OF JOLIET  
 EAST SIDE WASTEWATER TREATMENT PLANT  
 JOLIET, IL  
 INFLUENT PUMP STATION AND SCREEN REPLACEMENT  
 PUMP STATION AND SCREEN FACILITY  
 PLAN



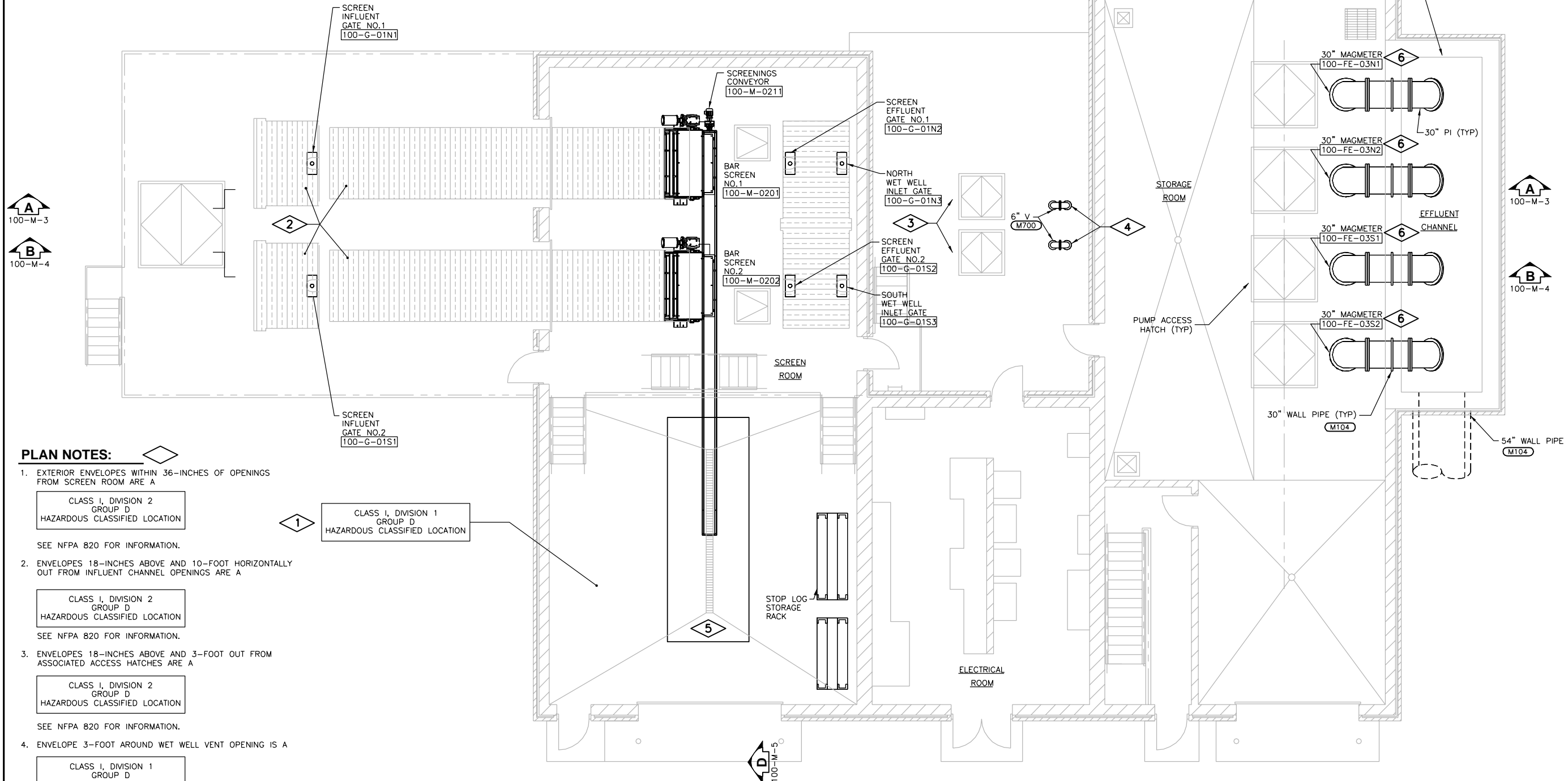
Sheet No. 58

Drawing No. 100-M-1

**ERIC P. COCKE**  
 REGISTRED PROFESSIONAL ENGINEER  
 OF ILLINOIS  
 07/09/2014  
 Expires: 11/30/2015



CLASS I, DIVISION 1  
GROUP D  
HAZARDOUS CLASSIFIED LOCATION



**PLAN NOTES:**

1. EXTERIOR ENVELOPES WITHIN 36-INCHES OF OPENINGS FROM SCREEN ROOM ARE A

CLASS I, DIVISION 2  
GROUP D  
HAZARDOUS CLASSIFIED LOCATION

SEE NFPA 820 FOR INFORMATION.

2. ENVELOPES 18-INCHES ABOVE AND 10-FOOT HORIZONTALLY OUT FROM INFLUENT CHANNEL OPENINGS ARE A

CLASS I, DIVISION 2  
GROUP D  
HAZARDOUS CLASSIFIED LOCATION

SEE NFPA 820 FOR INFORMATION.

3. ENVELOPES 18-INCHES ABOVE AND 3-FOOT OUT FROM ASSOCIATED ACCESS HATCHES ARE A

CLASS I, DIVISION 2  
GROUP D  
HAZARDOUS CLASSIFIED LOCATION

SEE NFPA 820 FOR INFORMATION.

4. ENVELOPE 3-FOOT AROUND WET WELL VENT OPENING IS A

CLASS I, DIVISION 1  
GROUP D  
HAZARDOUS CLASSIFIED LOCATION

AND ENVELOPE FROM 3-FOOT TO 5-FOOT AROUND WET WELL VENT OPENING IS A

CLASS I, DIVISION 2  
GROUP D  
HAZARDOUS CLASSIFIED LOCATION

SEE NFPA 820 FOR INFORMATION.

5. SCREENINGS DUMPSTER PROVIDED BY OWNER.

6. SEE **(N382)**

1 CLASS I, DIVISION 1  
GROUP D  
HAZARDOUS CLASSIFIED LOCATION

**GRADE PLAN**



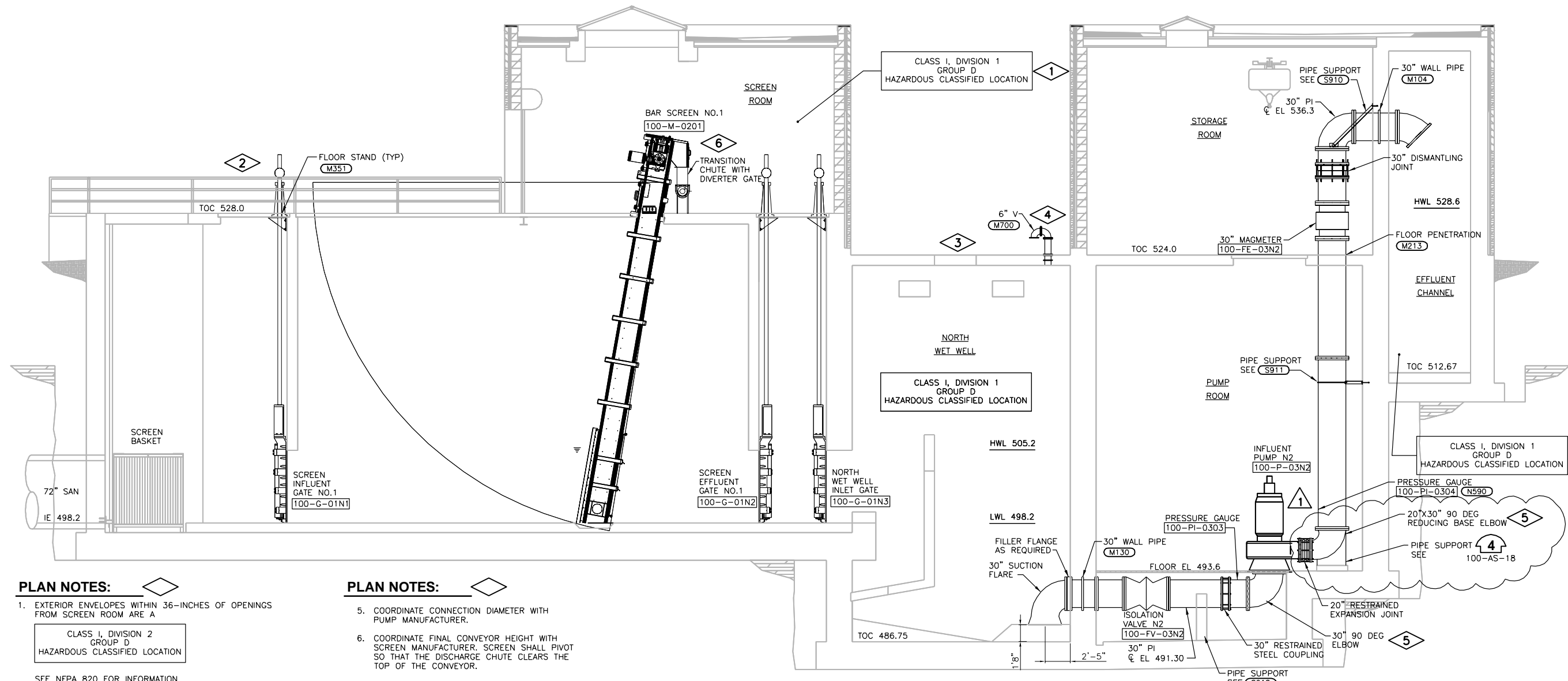
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Revision Description	
Revision Number	
Designed By	KDS
Drawn By	KDS
Checked By	NWC
Approved By	EPC
Filename	100MP1.DWG
Project No.	12614
Project Date	JUNE 2014

**CITY OF JOLIET  
EAST SIDE WASTEWATER TREATMENT PLANT  
INFLUENT PUMP STATION AND SCREEN REPLACEMENT  
JOLIET, IL  
PUMP STATION AND SCREEN FACILITY  
PLAN**



Sheet No. 59  
Drawing No. 100-M-2

**ERIC P. COCKRELL**  
REG. PROFESSIONAL ENGINEER  
OF ILLINOIS  
07/09/2014  
Expires: 11/30/2015



**PLAN NOTES:**

- EXTERIOR ENVELOPES WITHIN 36-INCHES OF OPENINGS FROM SCREEN ROOM ARE A

CLASS I, DIVISION 2  
GROUP D  
HAZARDOUS CLASSIFIED LOCATION

SEE NFPA 820 FOR INFORMATION.

- ENVELOPES 18-INCHES ABOVE AND 10-FOOT HORIZONTALLY OUT FROM INFLUENT CHANNEL OPENINGS ARE A

CLASS I, DIVISION 2  
GROUP D  
HAZARDOUS CLASSIFIED LOCATION

SEE NFPA 820 FOR INFORMATION.

- ENVELOPES 18-INCHES ABOVE AND 3-FOOT OUT FROM ASSOCIATED ACCESS HATCHES ARE A

CLASS I, DIVISION 2  
GROUP D  
HAZARDOUS CLASSIFIED LOCATION

SEE NFPA 820 FOR INFORMATION.

- ENVELOPE 3-FOOT AROUND WET WELL VENT OPENING IS A

CLASS I, DIVISION 1  
GROUP D  
HAZARDOUS CLASSIFIED LOCATION

AND ENVELOPE FROM 3-FOOT TO 5-FOOT AROUND WET WELL VENT OPENING IS A

CLASS I, DIVISION 2  
GROUP D  
HAZARDOUS CLASSIFIED LOCATION

SEE NFPA 820 FOR INFORMATION.

**PLAN NOTES:**

- COORDINATE CONNECTION DIAMETER WITH PUMP MANUFACTURER.
- COORDINATE FINAL CONVEYOR HEIGHT WITH SCREEN MANUFACTURER. SCREEN SHALL PIVOT SO THAT THE DISCHARGE CHUTE CLEARS THE TOP OF THE CONVEYOR.



Date	08/18/14
Checked By	EPC
Drawn By	KDS
Revision Description	BASE ELBOW PIPE SUPPORT
Revision Number	1

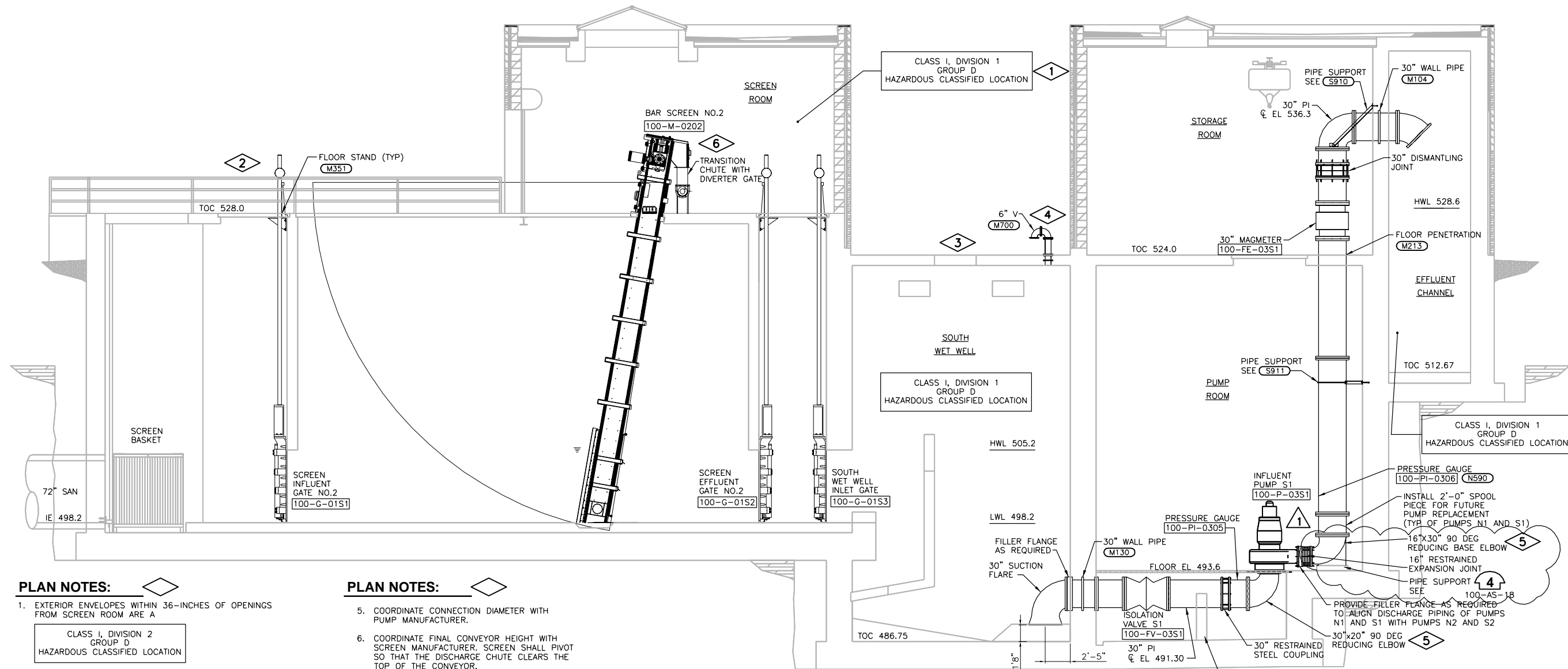
Designed By	KDS
Drawn By	KDS
Checked By	NWC
Approved By	EPC
Filename	100MS1.DWG
Project No.	12614
Project Date	JUNE 2014

CITY OF JOLIET  
EAST SIDE WASTEWATER TREATMENT PLANT  
INFLUENT PUMP STATION AND SCREEN REPLACEMENT  
JOLIET, IL  
PUMP STATION AND SCREEN FACILITY  
SECTION



*Eric F. Cookshell*  
07/09/2014  
Expires: 11/30/2015

<b>DONOHUE</b>
Sheet No. 60
Drawing No. 100-M-3



**PLAN NOTES:**

1. EXTERIOR ENVELOPES WITHIN 36-INCHES OF OPENINGS FROM SCREEN ROOM ARE A

CLASS I, DIVISION 2  
GROUP D  
HAZARDOUS CLASSIFIED LOCATION

SEE NFPA 820 FOR INFORMATION.

2. ENVELOPES 18-INCHES ABOVE AND 10-FOOT HORIZONTALLY OUT FROM INFLUENT CHANNEL OPENINGS ARE A

CLASS I, DIVISION 2  
GROUP D  
HAZARDOUS CLASSIFIED LOCATION

SEE NFPA 820 FOR INFORMATION.

3. ENVELOPES 18-INCHES ABOVE AND 3-FOOT OUT FROM ASSOCIATED ACCESS HATCHES ARE A

CLASS I, DIVISION 2  
GROUP D  
HAZARDOUS CLASSIFIED LOCATION

SEE NFPA 820 FOR INFORMATION.

4. ENVELOPE 3-FOOT AROUND WET WELL VENT OPENING IS A

CLASS I, DIVISION 1  
GROUP D  
HAZARDOUS CLASSIFIED LOCATION

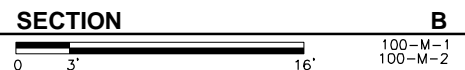
AND ENVELOPE FROM 3-FOOT TO 5-FOOT AROUND WET WELL VENT OPENING IS A

CLASS I, DIVISION 2  
GROUP D  
HAZARDOUS CLASSIFIED LOCATION

SEE NFPA 820 FOR INFORMATION.

**PLAN NOTES:**

5. COORDINATE CONNECTION DIAMETER WITH PUMP MANUFACTURER.
6. COORDINATE FINAL CONVEYOR HEIGHT WITH SCREEN MANUFACTURER. SCREEN SHALL PIVOT SO THAT THE DISCHARGE CHUTE CLEARS THE TOP OF THE CONVEYOR.



Date	08/18/14
Checked By	EPC
Drawn By	KDS
Revision Description	BASE ELBOW PIPE SUPPORT
Revision Number	1

Designed By	KDS
Drawn By	KDS
Checked By	NWC
Approved By	EPC
Filename	100MS1.DWG
Project No.	12614
Project Date	JUNE 2014

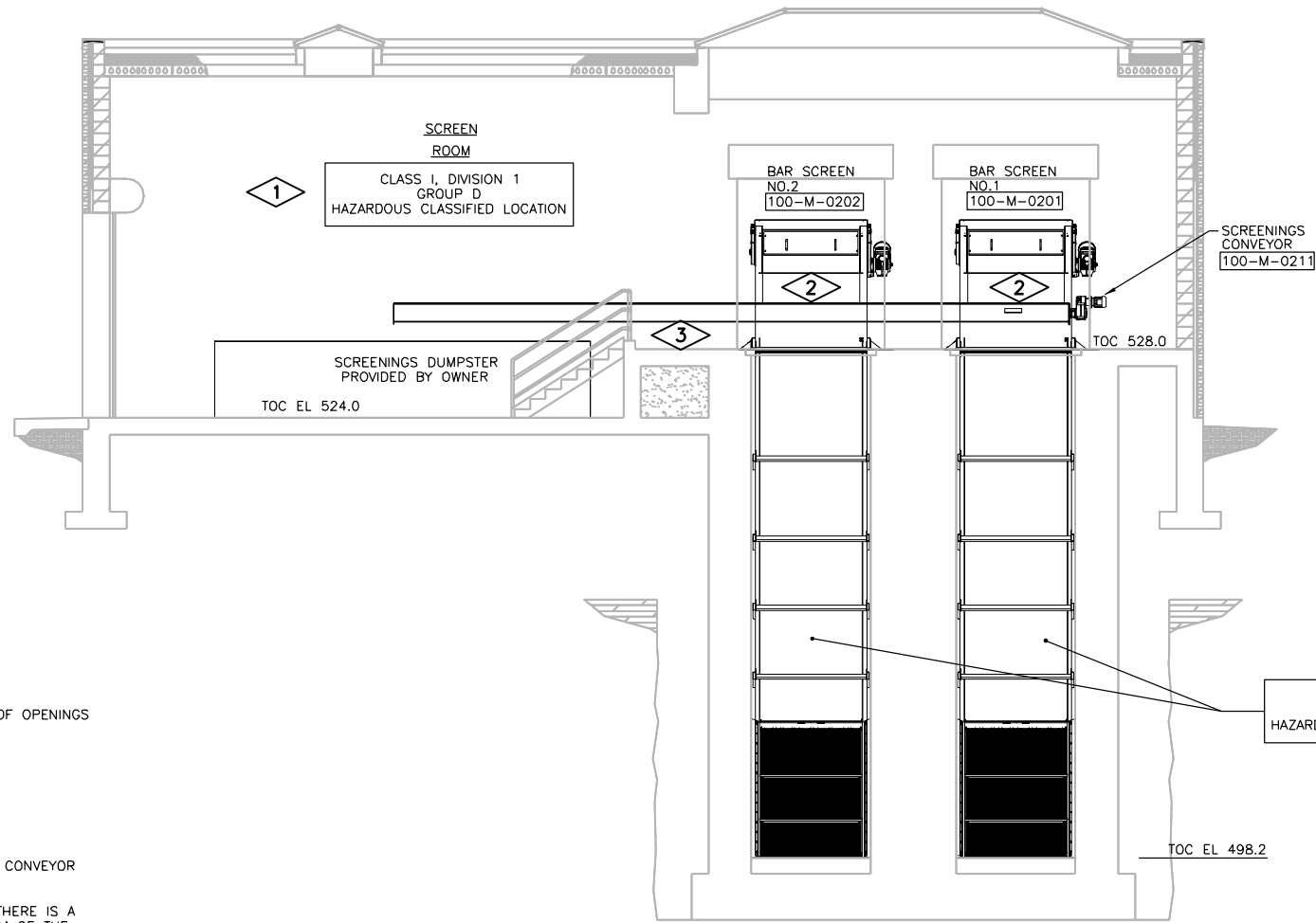
CITY OF JOLIET  
EAST SIDE WASTEWATER TREATMENT PLANT  
INFLUENT PUMP STATION AND SCREEN REPLACEMENT  
JOLIET, IL  
PUMP STATION AND SCREEN FACILITY  
SECTION



*Eric F. Cookerill*  
07/09/2014  
Expires 11/30/2015

**DONOHUE**

Sheet No. 61  
Drawing No. 100-M-4



**PLAN NOTES:**

1. EXTERIOR ENVELOPES WITHIN 36-INCHES OF OPENINGS FROM SCREEN ROOM ARE A

CLASS I, DIVISION 2  
GROUP D  
HAZARDOUS CLASSIFIED LOCATION

SEE NFPA 820 FOR INFORMATION.

2. COORDINATE CONNECTION LOCATIONS WITH CONVEYOR MANUFACTURER.

3. CONVEYOR SHALL BE MOUNTED SO THAT THERE IS A MINIMUM OF 1 FOOT BETWEEN THE BOTTOM OF THE CONVEYOR AND THE TOP OF THE ROLL OFF DUMPSTER. CONTRACTOR SHALL FURNISH AND INSTALL ALL MOUNTING MATERIAL AND HARDWARE AS SPECIFIED IN SECTION 41 12 13.37.

**SECTION**



**C**  
100-M-1  
100-M-2

Revision Number	Revision Description	Drawn By	Checked By	Date

Designed By	KDS
Drawn By	KDS
Checked By	NWC
Approved By	EPC
Filename	100MS1.DWG
Project No.	12614
Project Date	JUNE 2014

**CITY OF JOLIET  
EAST SIDE WASTEWATER TREATMENT PLANT  
INFLUENT PUMP STATION AND SCREEN REPLACEMENT  
JOLIET, IL  
PUMP STATION AND SCREEN FACILITY  
SECTION**

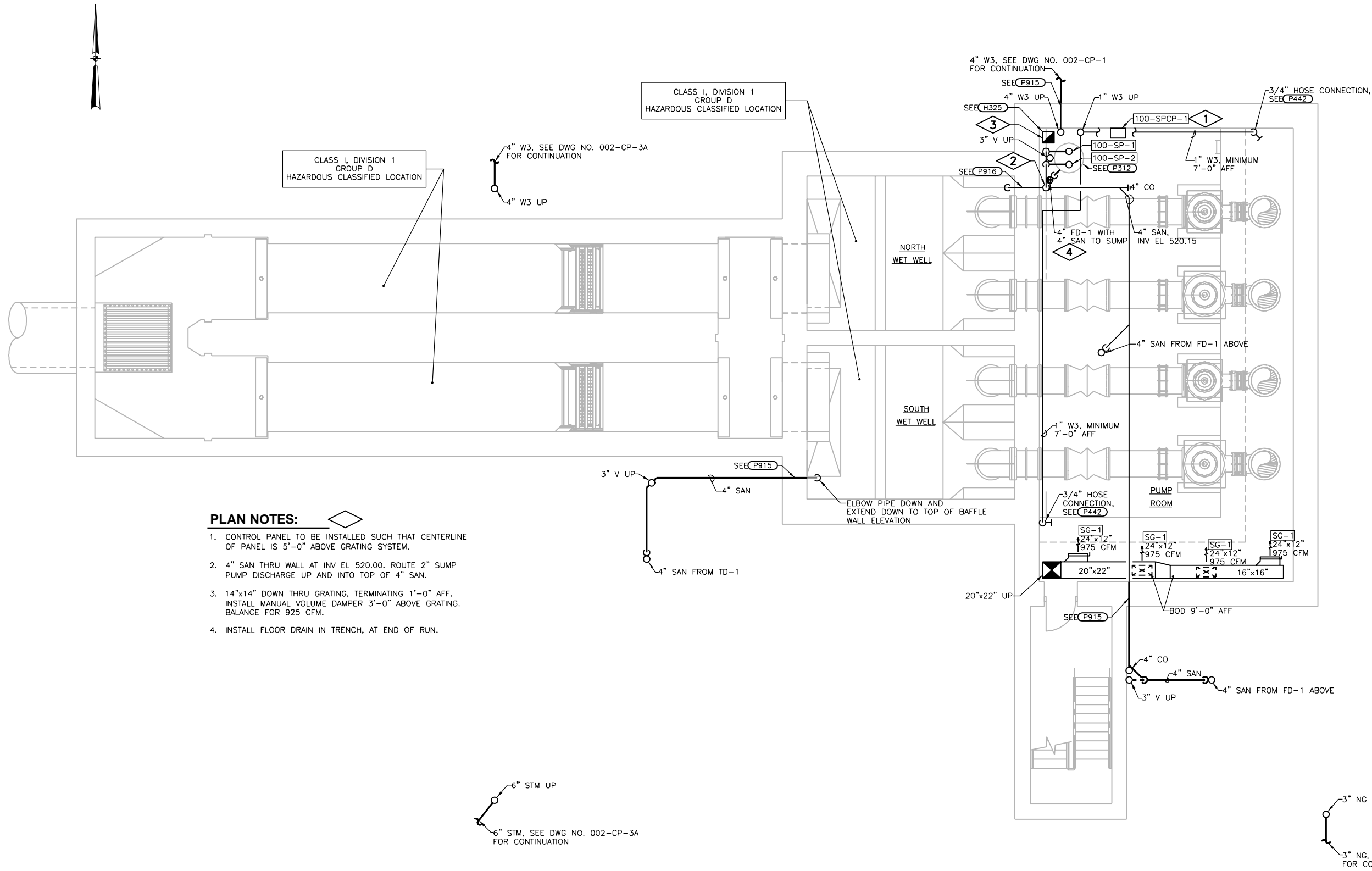


*Eric P. Cocherill*  
07/09/2014  
Expires: 11/30/2015

**DONOHUE**

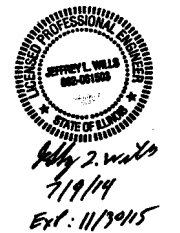
Sheet No. 62

Drawing No. 100-M-5



**PLAN NOTES:**

1. CONTROL PANEL TO BE INSTALLED SUCH THAT CENTERLINE OF PANEL IS 5'-0" ABOVE GRATING SYSTEM.
2. 4" SAN THRU WALL AT INV EL 520.00. ROUTE 2" SUMP PUMP DISCHARGE UP AND INTO TOP OF 4" SAN.
3. 14"x14" DOWN THRU GRATING, TERMINATING 1'-0" AFF. INSTALL MANUAL VOLUME DAMPER 3'-0" ABOVE GRATING. BALANCE FOR 925 CFM.
4. INSTALL FLOOR DRAIN IN TRENCH, AT END OF RUN.



Date	
Checked By	
Drawn By	
Revision Description	
Revision Number	

Designed By	JLW
Drawn By	JLW
Checked By	EPC
Approved By	EPC
Filename	100PH1.DWG
Project No.	12614
Project Date	JUNE 2014

**CITY OF JOLIET**  
**EAST SIDE WASTEWATER TREATMENT PLANT**  
**JOLIET, IL**  
**INFLUENT PUMP STATION AND SCREEN REPLACEMENT**  
**PUMP STATION AND SCREEN FACILITY**  
**PLAN**



**PLAN NOTES:**

- 1. EXTERIOR ENVELOPES WITHIN 36-INCHES OF OPENINGS FROM SCREEN ROOM ARE A  

CLASS I, DIVISION 2  
GROUP D  
HAZARDOUS CLASSIFIED LOCATION

  
 SEE NFPA 820 FOR INFORMATION.
- 2. ENVELOPES 18-INCHES ABOVE AND 10-FOOT HORIZONTALLY OUT FROM INFLUENT CHANNEL OPENINGS ARE A  

CLASS I, DIVISION 2  
GROUP D  
HAZARDOUS CLASSIFIED LOCATION

  
 SEE NFPA 820 FOR INFORMATION.
- 3. ENVELOPES 18-INCHES ABOVE AND 3-FOOT OUT FROM ASSOCIATED ACCESS HATCHES ARE A  

CLASS I, DIVISION 2  
GROUP D  
HAZARDOUS CLASSIFIED LOCATION

  
 SEE NFPA 820 FOR INFORMATION.
- 4. ENVELOPE 3-FOOT AROUND WET WELL VENT OPENING IS A  

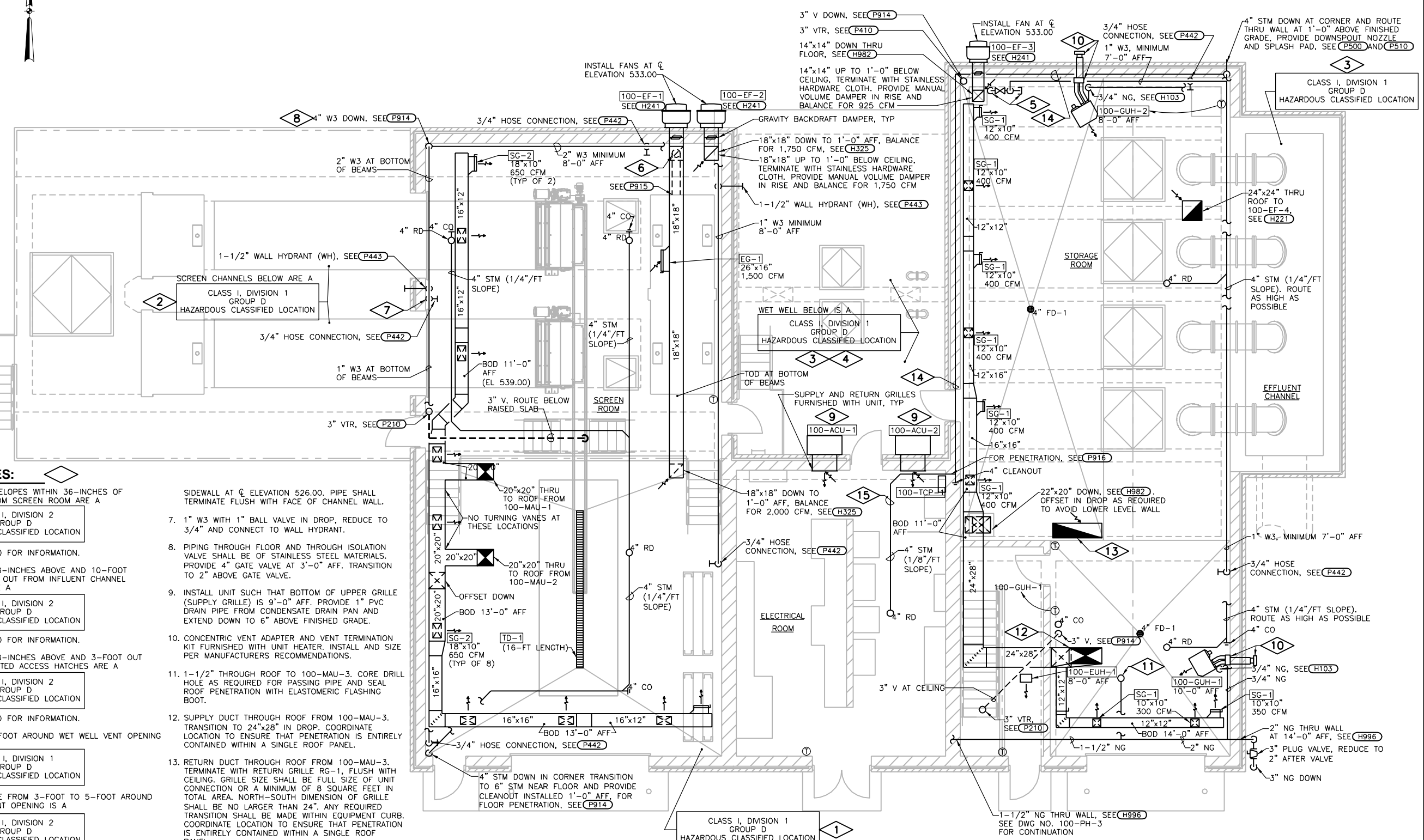
CLASS I, DIVISION 1  
GROUP D  
HAZARDOUS CLASSIFIED LOCATION

  
 AND ENVELOPE FROM 3-FOOT TO 5-FOOT AROUND WET WELL VENT OPENING IS A  

CLASS I, DIVISION 2  
GROUP D  
HAZARDOUS CLASSIFIED LOCATION

  
 SEE NFPA 820 FOR INFORMATION.
- 5. 4" W3 AND 1" W3 THROUGH FLOOR, SEE (P914). EXTEND UP TO 2'-0" AFF, ELBOW TO HORIZONTAL, INSTALL 4" GATE VALVE, 4" CROSS WITH 1" UP AND 1" DOWN BRANCH, AND 4" CAP AT RUN. ALL 4" COMPONENTS, INCLUDING FLOOR PENETRATION SHALL BE STAINLESS STEEL. TRANSITION TO PVC AFTER SIZE REDUCTION.
- 6. 10"x10" DOWN WITH MANUAL VOLUME DAMPER IN DROP. TRANSITION TO 10"Ø AT FLOOR. ROUTE 10"Ø PVC PIPE THROUGH FLOOR AND INTO CHANNEL.

- 7. 1" W3 WITH 1" BALL VALVE IN DROP, REDUCE TO 3/4" AND CONNECT TO WALL HYDRANT.
- 8. PIPING THROUGH FLOOR AND THROUGH ISOLATION VALVE SHALL BE OF STAINLESS STEEL MATERIALS. PROVIDE 4" GATE VALVE AT 3'-0" AFF. TRANSITION TO 2" ABOVE GATE VALVE.
- 9. INSTALL UNIT SUCH THAT BOTTOM OF UPPER GRILLE (SUPPLY GRILLE) IS 9'-0" AFF. PROVIDE 1" PVC DRAIN PIPE FROM CONDENSATE DRAIN PAN AND EXTEND DOWN TO 6" ABOVE FINISHED GRADE.
- 10. CONCENTRIC VENT ADAPTER AND VENT TERMINATION KIT FURNISHED WITH UNIT HEATER. INSTALL AND SIZE PER MANUFACTURERS RECOMMENDATIONS.
- 11. 1-1/2" THROUGH ROOF TO 100-MAU-3. CORE DRILL HOLE AS REQUIRED FOR PASSING PIPE AND SEAL ROOF PENETRATION WITH ELASTOMERIC FLASHING BOOT.
- 12. SUPPLY DUCT THROUGH ROOF FROM 100-MAU-3. TRANSITION TO 24"x28" IN DROP. COORDINATE LOCATION TO ENSURE THAT PENETRATION IS ENTIRELY CONTAINED WITHIN A SINGLE ROOF PANEL.
- 13. RETURN DUCT THROUGH ROOF FROM 100-MAU-3. TERMINATE WITH RETURN GRILLE RG-1, FLUSH WITH CEILING. GRILLE SIZE SHALL BE FULL SIZE OF UNIT CONNECTION OR A MINIMUM OF 8 SQUARE FEET IN TOTAL AREA. NORTH-SOUTH DIMENSION OF GRILLE SHALL BE NO LARGER THAN 24". ANY REQUIRED TRANSITION SHALL BE MADE WITHIN EQUIPMENT CURB. COORDINATE LOCATION TO ENSURE THAT PENETRATION IS ENTIRELY CONTAINED WITHIN A SINGLE ROOF PANEL.
- 14. 4" STM, ROUTE ALONG FACE OF WALL (DEPICTED INSIDE WALL FOR CLARITY) WITH ELEVATION AT SOUTHWEST WALL PENETRATION AT 10'-6" AFF. SLOPE PIPE DOWNWARD AT 1/8"/FT TO NORTHEAST STORM DROP.
- 15. TO GREATEST EXTENT POSSIBLE, ROUTE STM PIPING WITHIN ELECTRICAL ROOM TO AVOID ANY LOCATION DIRECTLY ABOVE ELECTRICAL EQUIPMENT. WHEN NOT AVOIDABLE, OBTAIN PERMISSION FROM ENGINEER AND PROVIDE DRIP PAN BELOW PIPE AS IS PASSED OVER EQUIPMENT.



Date	
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Revision Description	
Revision Number	
Designed By	JLW
Drawn By	JLW
Checked By	EPC
Approved By	EPC
Filename	100PH1.DWG
Project No.	12614
Project Date	JUNE 2014

**CITY OF JOLIET**  
**EAST SIDE WASTEWATER TREATMENT PLANT**  
**INFLUENT PUMP STATION AND SCREEN REPLACEMENT**  
**JOLIET, IL**

**PUMP STATION AND SCREEN FACILITY**  
**PLAN**

*Jeffrey W. White*  
 7/19/14  
 Ext: 1179415

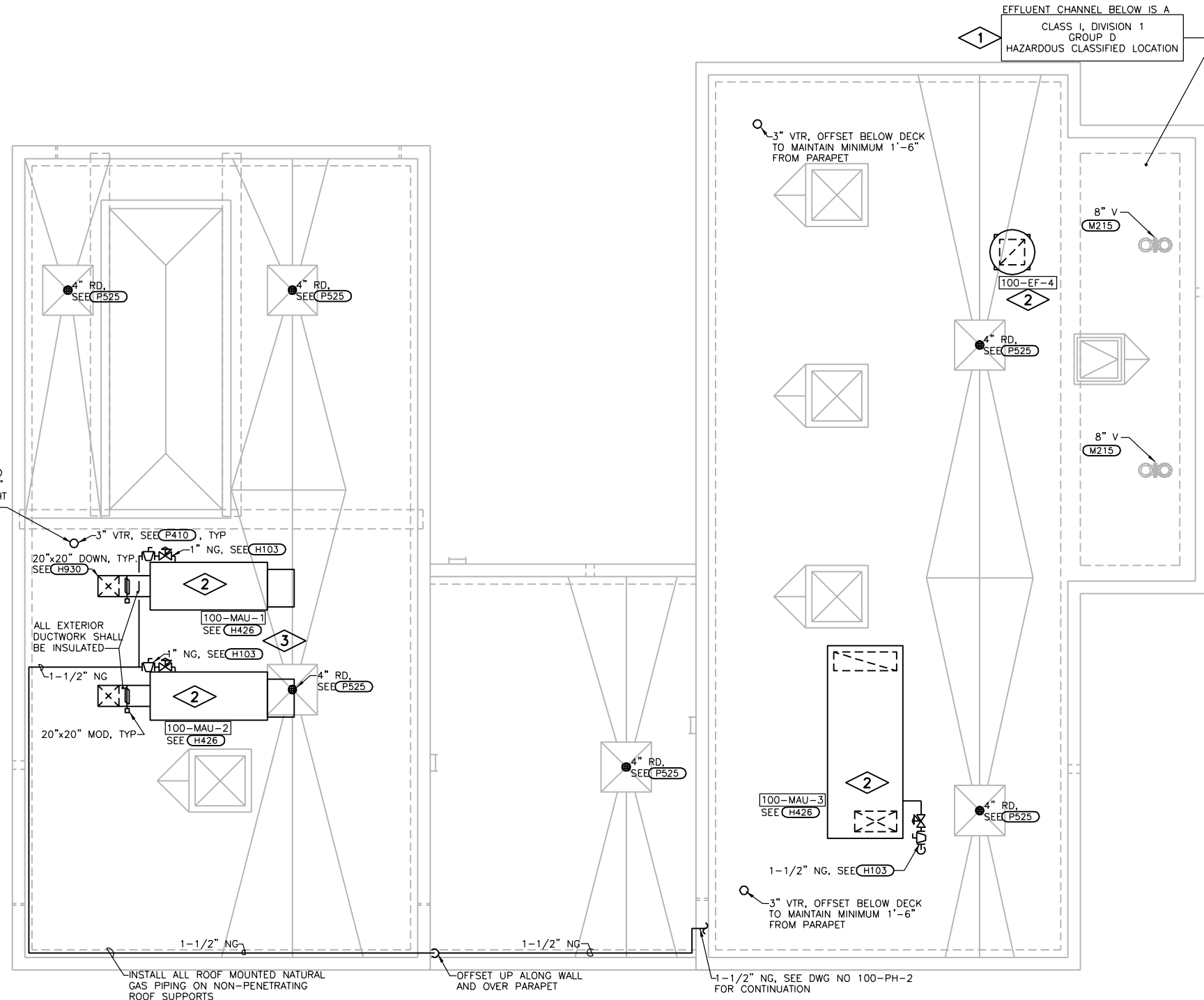
Sheet No.	64
Drawing No.	100-PH-2





**PLAN NOTES:**

1. ENVELOPES 18-INCHES ABOVE AND 3-FOOT OUT FROM ASSOCIATED ACCESS HATCHES ARE A CLASS I, DIVISION 2 GROUP D HAZARDOUS CLASSIFIED LOCATION SEE NFPA 820 FOR INFORMATION.
2. EQUIPMENT SHALL BE LOCATED SUCH THAT NO PORTION OF EQUIPMENT IS CLOSER THAN 10'-0" FROM THE OUTSIDE FACE OF ANY WALL.
3. MAINTAIN A MINIMUM 4'-0" CLEAR ACCESS SPACE BETWEEN UNITS.



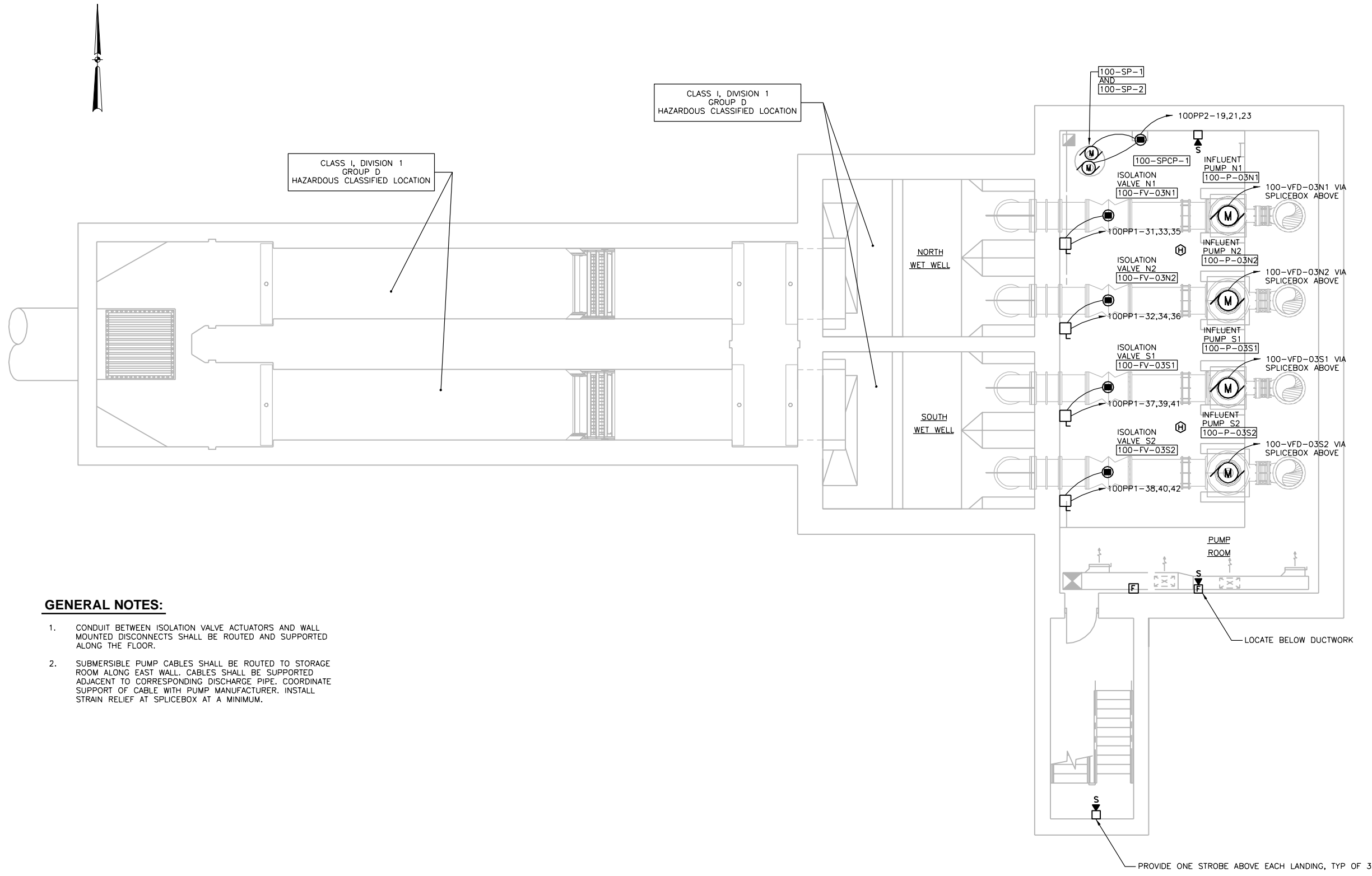
JEFFREY L. WELLS  
081-018245  
STATE OF ILLINOIS  
MECHANICAL ENGINEERING

Jeffrey L. Wells  
7/19/14  
Exp: 11/9/15

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**CITY OF JOLIET**  
EAST SIDE WASTEWATER TREATMENT PLANT  
INFLUENT PUMP STATION AND SCREEN REPLACEMENT  
JOLIET, IL  
PUMP STATION AND SCREEN FACILITY  
PLAN



**GENERAL NOTES:**

1. CONDUIT BETWEEN ISOLATION VALVE ACTUATORS AND WALL MOUNTED DISCONNECTS SHALL BE ROUTED AND SUPPORTED ALONG THE FLOOR.
2. SUBMERSIBLE PUMP CABLES SHALL BE ROUTED TO STORAGE ROOM ALONG EAST WALL. CABLES SHALL BE SUPPORTED ADJACENT TO CORRESPONDING DISCHARGE PIPE. COORDINATE SUPPORT OF CABLE WITH PUMP MANUFACTURER. INSTALL STRAIN RELIEF AT SPLICEBOX AT A MINIMUM.



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**CITY OF JOLIET**  
**EAST SIDE WASTEWATER TREATMENT PLANT**  
**JOLIET, IL**  
**INFLUENT PUMP STATION AND SCREEN REPLACEMENT**  
**PUMP STATION AND SCREEN FACILITY**  
**PLAN**

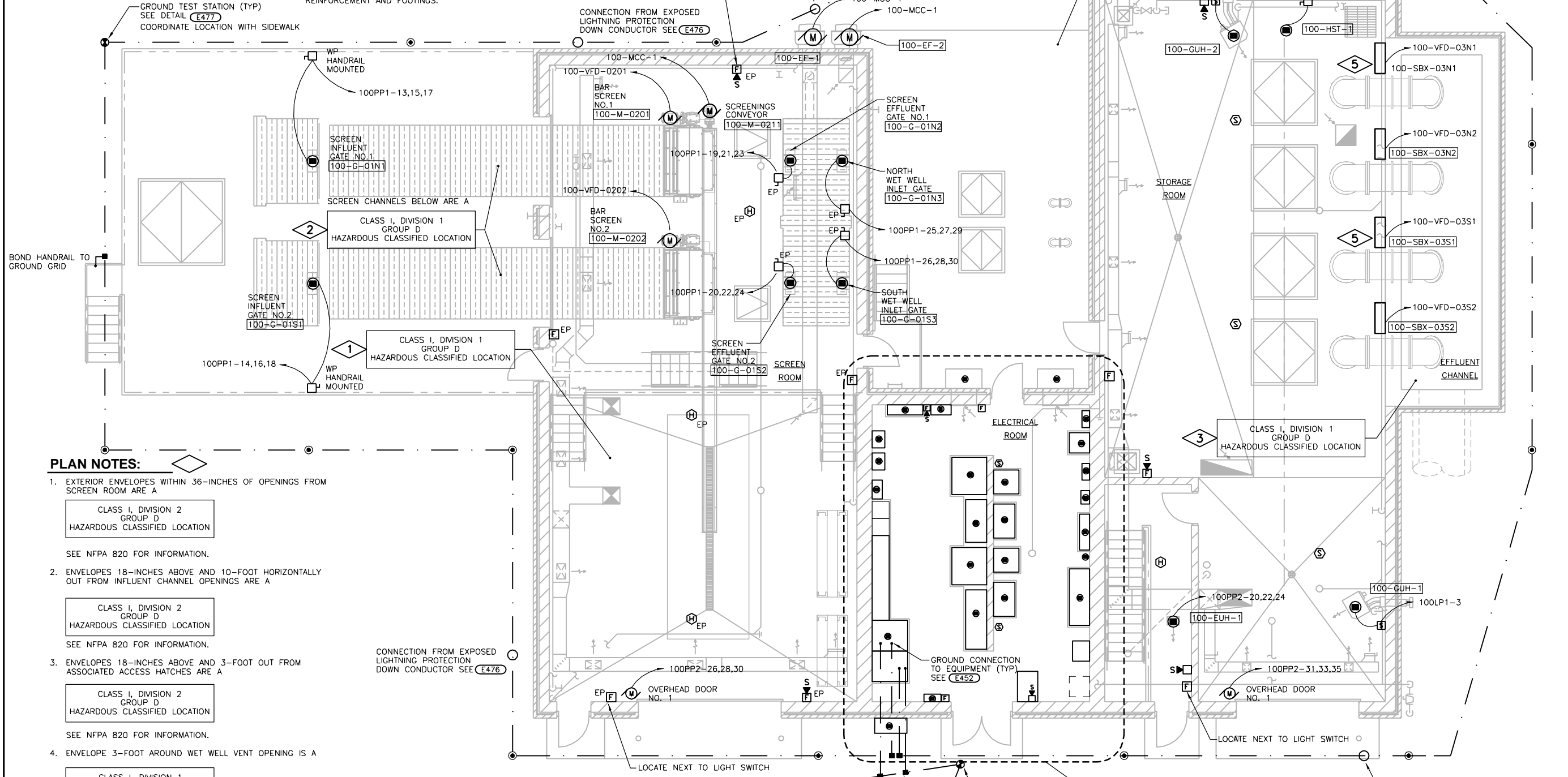
**DONOHUE**

Sheet No. 66

Drawing No. 100-E-1

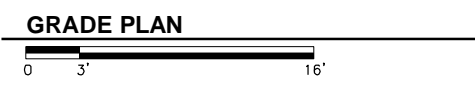
**GENERAL NOTES:**

- LIQUDTIGHT FLEXIBLE METAL CONDUIT SHALL BE USED ONLY FOR CONNECTIONS TO VIBRATING EQUIPMENT AND LIMITED TO 3'-0" IN LENGTH, SEE SECTION 26 05 33.
- NOTCH PLANKING WEST OF GATE/ACTUATOR AS REQUIRED FOR CONDUIT TO BE ROUTED FROM SCREEN INFLUENT GATE ACTUATORS TO DISCONNECTS. AREA EAST OF GATE SHALL REMAIN FREE OF CONDUITS, SUPPORTS, ETC. TO AVOID PREVENTING THE REMOVAL OF THE SCREEN AND PIVOT.
- CONDUIT STUB-UPS SHALL BE PVC-COATED GRS, SEE SECTIONS 26 05 33 AND 26 05 43.
- FOR CONDUIT SUPPORTS ON ROOF, USE CADDY PYRAMID ST SERIES (OR EQUAL) STRUT-BASED THERMOPLASTIC SUPPORTS.
- SUBMITTAL IS REQUIRED FOR CONDUIT ENTRY INTO STRUCTURE, SEE SECTIONS 26 05 33 AND 26 05 43. CORE DRILL FROST WALL FOR CONDUITS OR PROVIDE CONDUIT SLEEVES; LOCATE TO AVOID REINFORCEMENT AND FOOTINGS.



**PLAN NOTES:**

- EXTERIOR ENVELOPES WITHIN 36-INCHES OF OPENINGS FROM SCREEN ROOM ARE A
  - CLASS I, DIVISION 2 GROUP D HAZARDOUS CLASSIFIED LOCATION
  - SEE NFPA 820 FOR INFORMATION.
- ENVELOPES 18-INCHES ABOVE AND 10-FOOT HORIZONTALLY OUT FROM INFLUENT CHANNEL OPENINGS ARE A
  - CLASS I, DIVISION 2 GROUP D HAZARDOUS CLASSIFIED LOCATION
  - SEE NFPA 820 FOR INFORMATION.
- ENVELOPES 18-INCHES ABOVE AND 3-FOOT OUT FROM ASSOCIATED ACCESS HATCHES ARE A
  - CLASS I, DIVISION 2 GROUP D HAZARDOUS CLASSIFIED LOCATION
  - SEE NFPA 820 FOR INFORMATION.
- ENVELOPE 3-FOOT AROUND WET WELL VENT OPENING IS A
  - CLASS I, DIVISION 1 GROUP D HAZARDOUS CLASSIFIED LOCATION
  - AND ENVELOPE FROM 3-FOOT TO 5-FOOT AROUND WET WELL VENT OPENING IS A
    - CLASS I, DIVISION 2 GROUP D HAZARDOUS CLASSIFIED LOCATION
    - SEE NFPA 820 FOR INFORMATION.
- SIZE SPLICE BOX BASED ON MOTOR AND CABLE CHARACTERISTICS OF LARGER 100-P-03S2, -03N2 PUMP MOTORS.



MICHAEL STONE  
 7-9-14  
 EXP. 11-30-15

Date	
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Drawn By	
Revision Description	
Revision Number	
Designed By	MBS
Drawn By	MBS
Checked By	JAB
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Project Date	JUNE 2014
CITY OF JOLIET EAST SIDE WASTEWATER TREATMENT PLANT INFLUENT PUMP STATION AND SCREEN REPLACEMENT JOLIET, IL PUMP STATION AND SCREEN FACILITY PLAN	
Sheet No.	67
Drawing No.	100-E-2



**GENERAL NOTES:**

1. FOR CONDUIT ROOF PENETRATIONS, SEE ARCHITECTURAL PLANS AND E070.
2. FOR CONDUIT SUPPORTS ON ROOF, USE CADDY PYRAMID ST SERIES (OR EQUAL) STRUT-BASED THERMOPLASTIC SUPPORTS. CONDUITS SHALL BE ROUTED OVER THE LIGHTNING PROTECTION SYSTEM CONDUCTORS.
3. ROOF TOP EQUIPMENT NOT IDENTIFIED ON THIS DRAWING SHALL BE PROTECTED AS REQUIRED TO MEET THE REQUIREMENTS OF SECTION 26 05 26 INCLUDING THE INSTALLATION OF AIR TERMINALS AND OR BONDING.
4. SEE E479 FOR APPROVED CONNECTIONS.
5. ADJUST PART NUMBERS AS REQUIRED TO PROVIDE A COMPLETE UL LISTED LIGHTNING PROTECTION SYSTEM. COORDINATE WITH MANUFACTURER.

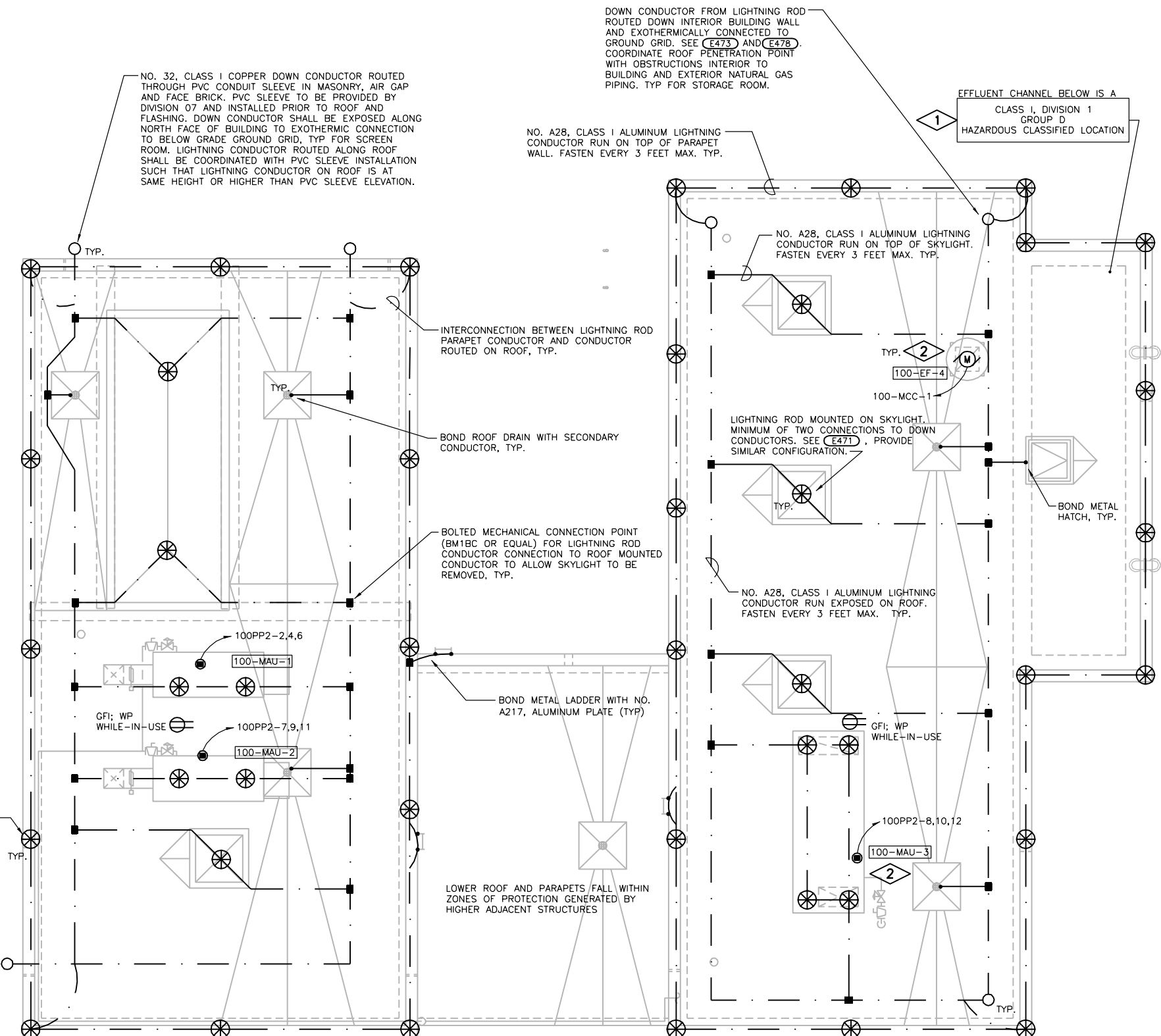
**PLAN NOTES:**

1. ENVELOPES 18-INCHES ABOVE AND 3-FOOT OUT FROM ASSOCIATED ACCESS HATCHES ARE A

CLASS I, DIVISION 2  
GROUP D  
HAZARDOUS CLASSIFIED LOCATION

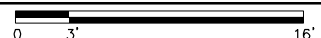
SEE NFPA 820 FOR INFORMATION.

2. PROVIDE ALUMINUM AIR TERMINAL FOR EXHAUST FAN AND MAKE-UP AIR UNITS. CONNECT AIR TERMINAL TO LIGHTNING CONDUCTOR ROUTED ON ROOF WITH NO. 28, CLASS I ALUMINUM LIGHTNING CONDUCTOR SUPPORTED EVERY 3 FEET MAX. PROVIDE AIR TERMINAL AT HIGH POINT OF EQUIPMENT.



LIGHTNING ROD MOUNTED ON PARAPET WALL. LIGHTNING RODS INTERCONNECTED WITH CONDUCTOR ROUTED ALONG PARAPET WALL. SEE E470

**ROOF PLAN**



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Revision Number	

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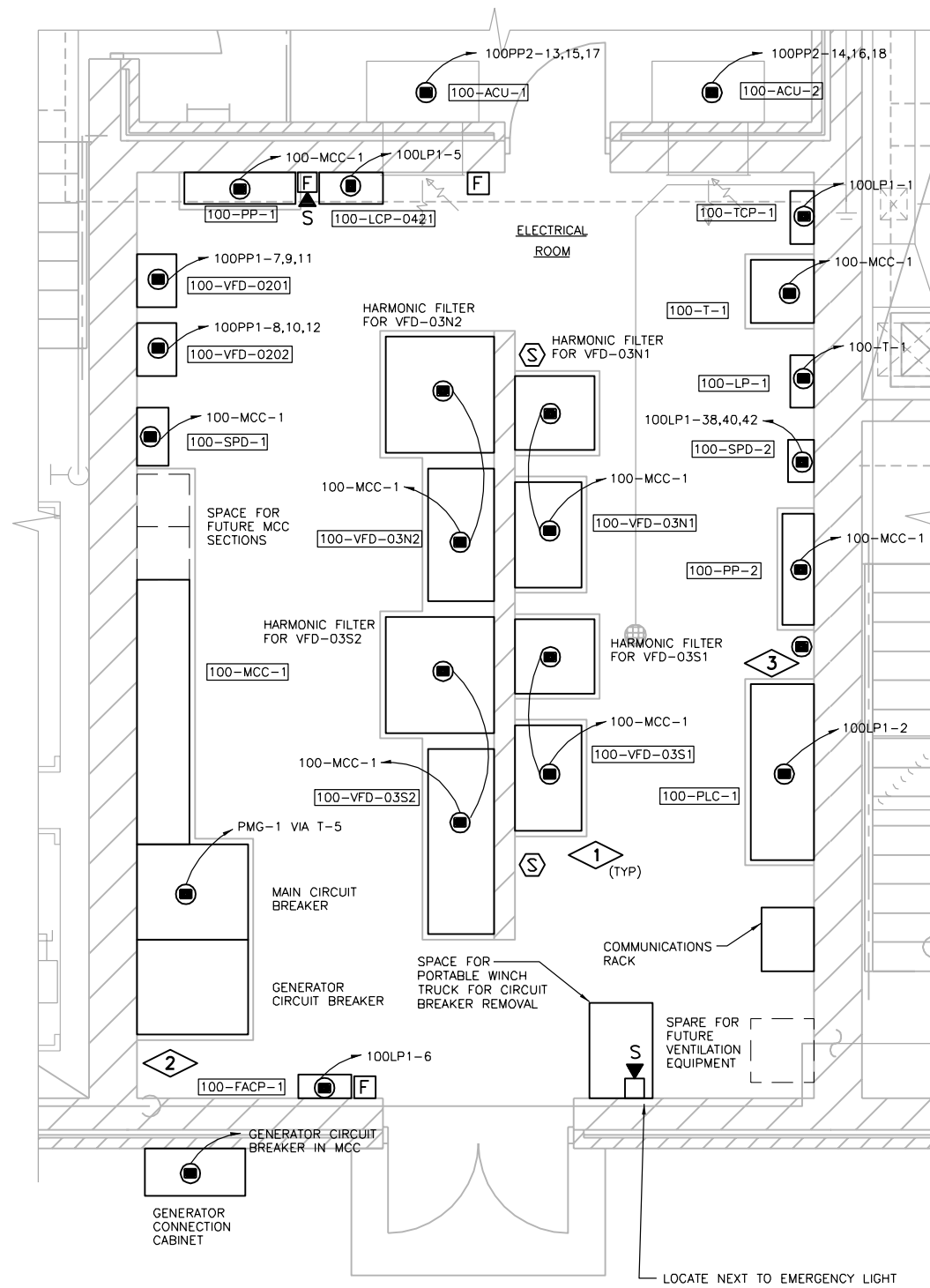
CITY OF JOLIET  
EAST SIDE WASTEWATER TREATMENT PLANT  
INFLUENT PUMP STATION AND SCREEN REPLACEMENT  
JOLIET, IL  
PUMP STATION AND SCREEN FACILITY  
PLAN

REGISTERED PROFESSIONAL ENGINEER  
MICHAEL STONK  
002-000000  
STATE OF ILLINOIS  
Mike Stahl  
7-9-14  
Exp. 11-30-15

**DONOHUE**

Sheet No. 68

Drawing No. 100-E-3



ENLARGED GRADE PLAN



**GENERAL NOTES:**

1. SUBMITTAL IS REQUIRED FOR CONDUIT ENTRY INTO STRUCTURE. SEE SECTIONS 26 05 33 AND 26 05 43. CORE DRILL FROST WALL FOR CONDUITS OR PROVIDE CONDUIT SLEEVES; LOCATE TO AVOID REINFORCEMENT AND FOOTINGS.
2. EQUIPMENT NAMEPLATES SHALL INCLUDE EQUIPMENT NAMES ONLY. TAG NUMBER SHALL BE OMITTED. SEE SECTION 26 05 53.

**PLAN NOTES:**

1. NOTE THAT EQUIPMENT INSTALLED ON THE EAST SIDE OF THE MASONRY ISLAND WALL WILL BE REPLACED IN THE FUTURE WITH LARGER VARIABLE FREQUENCY DRIVES AND HARMONIC FILTERS. INSTALL EQUIPMENT SUCH THAT NEC REQUIRED WORKSPACES CAN BE ACCOMMODATED WITH LARGER EQUIPMENT ON THE EAST SIDE OF THE WALL. LARGER EQUIPMENT FOOTPRINTS SHALL BE BASED ON EQUIPMENT INSTALLED ON WEST SIDE OF WALL.
2. 24" WIDE BY 42" DEEP SPACE SHALL BE RESERVED IN THE CORNER NEXT TO THE GENERATOR CIRCUIT BREAKER SECTION. MOTOR CONTROL CENTER MANUFACTURER SHALL PROVIDE AN INCOMING CABLE SECTION TO TRANSITION FROM GENERATOR CONNECTION CABINET TO GENERATOR CIRCUIT BREAKER AS REQUIRED BY MANUFACTURER. SOME MCC MANUFACTURER'S REQUIRE INCOMING CABLE SECTION; CONTRACTOR RESPONSIBLE FOR RELOCATING 100-FACP-1 TO AN ALTERNATE LOCATION WITHIN ELECTRICAL ROOM SO THAT THERE IS ADEQUATE SPACE IN FRONT OF THE INCOMING CABLE SECTION FOR ACCESS IF MCC MANUFACTURER REQUIRING INCOMING CABLE SECTION IS SELECTED.
3. POWER CONNECTION IS TYPICAL OF FOUR FOR THE FOLLOWING:  
 100-FIT-03N1 POWERED FROM 100LP1-7  
 100-FIT-03N2 POWERED FROM 100LP1-8  
 100-FIT-03S1 POWERED FROM 100LP1-9  
 100-FIT-03S2 POWERED FROM 100LP1-10

Revision Number	Revision Description	Drawn By	Checked By	Date

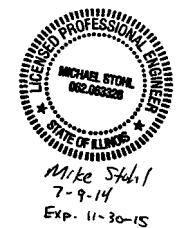
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Filename	100EP1.DWG
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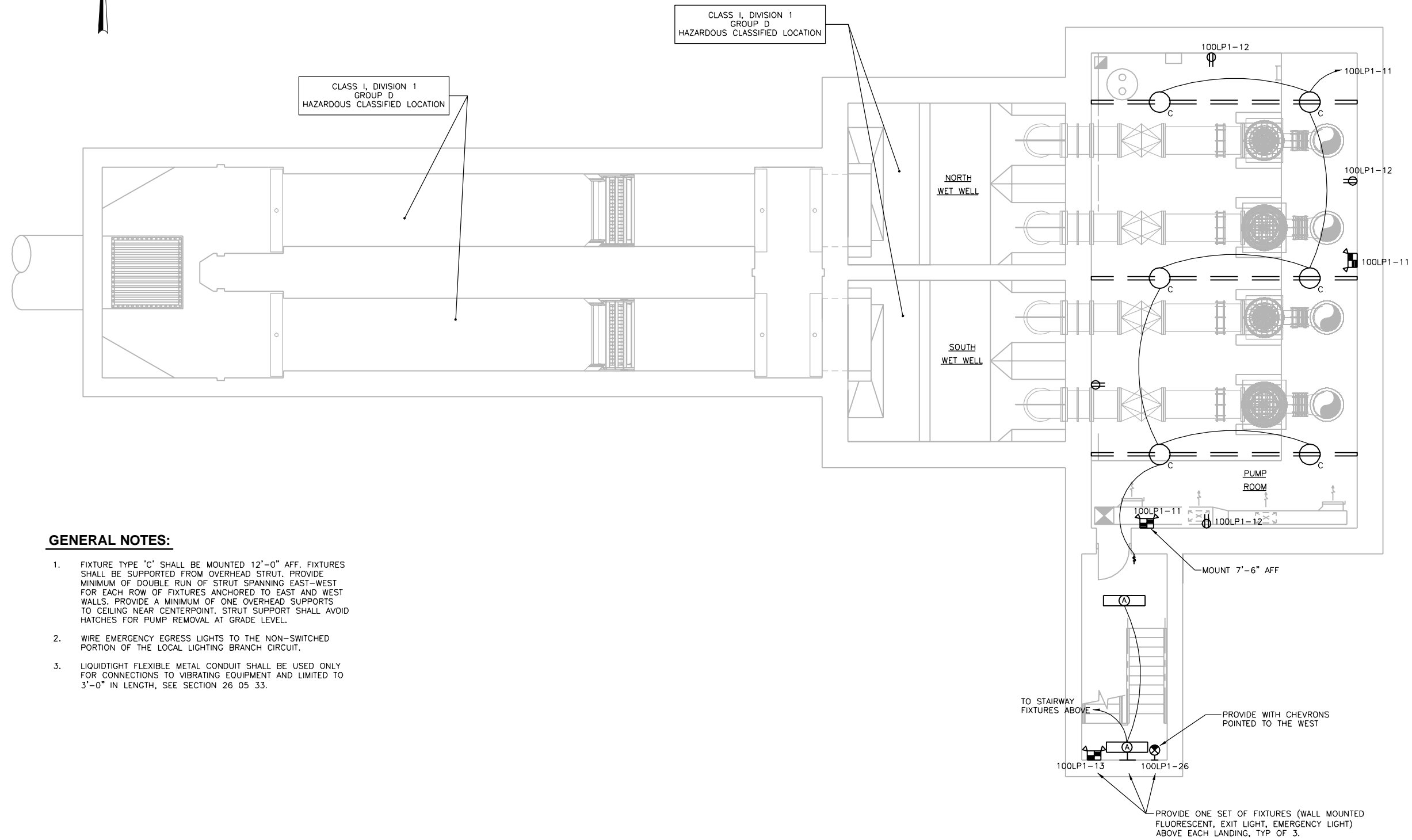
CITY OF JOLIET  
 EAST SIDE WASTEWATER TREATMENT PLANT  
 INFLUENT PUMP STATION AND SCREEN REPLACEMENT  
 JOLIET, IL  
 PUMP STATION AND SCREEN FACILITY  
 PARTIAL PLAN



Sheet No. 69  
 Drawing No.

100-E-4





**GENERAL NOTES:**

1. FIXTURE TYPE 'C' SHALL BE MOUNTED 12'-0" AFF. FIXTURES SHALL BE SUPPORTED FROM OVERHEAD STRUT. PROVIDE MINIMUM OF DOUBLE RUN OF STRUT SPANNING EAST-WEST FOR EACH ROW OF FIXTURES ANCHORED TO EAST AND WEST WALLS. PROVIDE A MINIMUM OF ONE OVERHEAD SUPPORTS TO CEILING NEAR CENTERPOINT. STRUT SUPPORT SHALL AVOID HATCHES FOR PUMP REMOVAL AT GRADE LEVEL.
2. WIRE EMERGENCY EGRESS LIGHTS TO THE NON-SWITCHED PORTION OF THE LOCAL LIGHTING BRANCH CIRCUIT.
3. LIQUIDTIGHT FLEXIBLE METAL CONDUIT SHALL BE USED ONLY FOR CONNECTIONS TO VIBRATING EQUIPMENT AND LIMITED TO 3'-0" IN LENGTH, SEE SECTION 26 05 33.

**LOWER PLAN - LIGHTING**



Revision Number	Revision Description	Drawn By	Checked By	Date

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Approved By	JAB
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Project Date	JUNE 2014

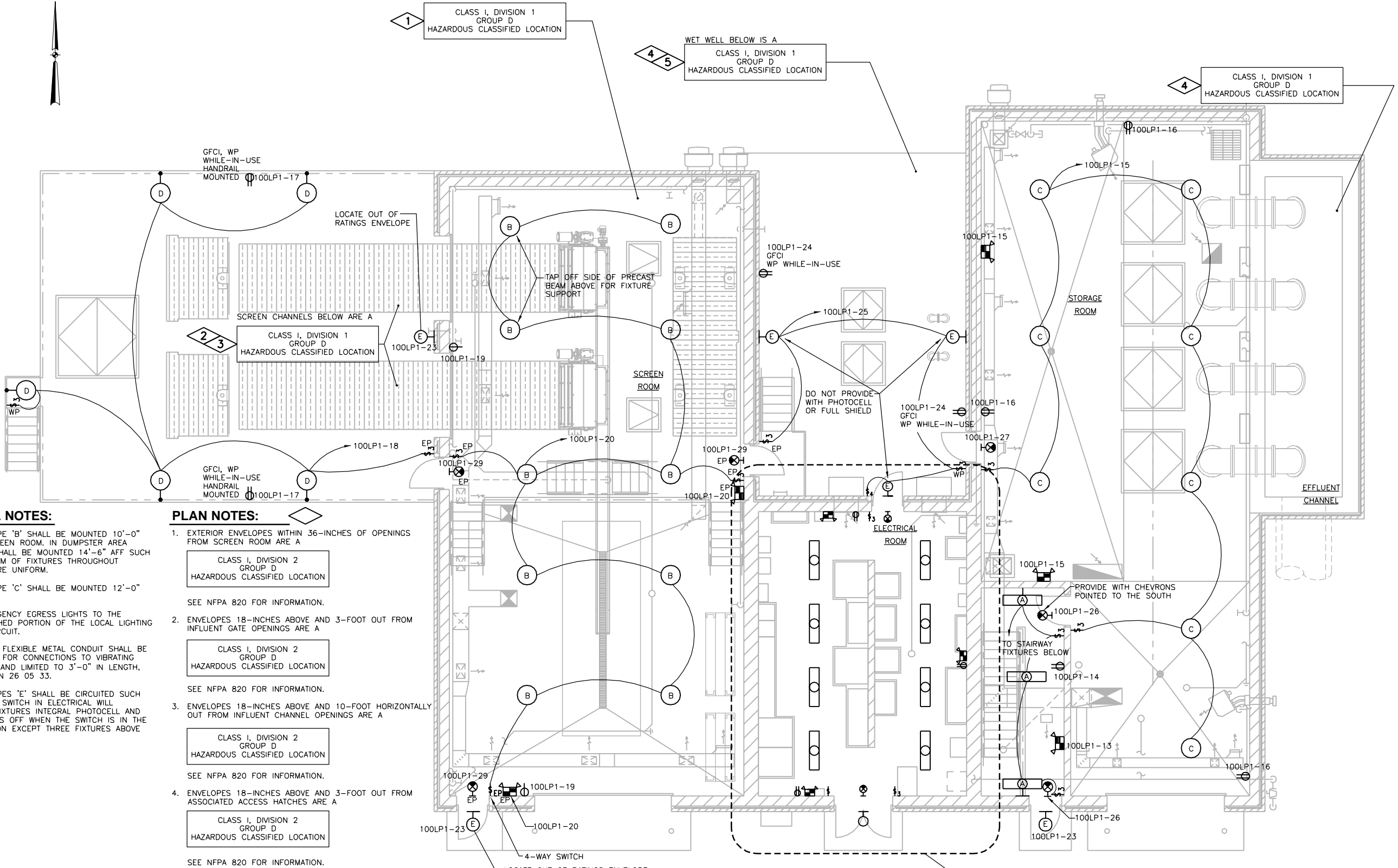
**CITY OF JOLIET**  
**EAST SIDE WASTEWATER TREATMENT PLANT**  
**JOLIET, IL**  
**INFLUENT PUMP STATION AND SCREEN REPLACEMENT**  
**PUMP STATION AND SCREEN FACILITY PLAN**



**DONOHUE**

Sheet No. 70

Drawing No. 100-E-5



**GENERAL NOTES:**

1. FIXTURE TYPE 'B' SHALL BE MOUNTED 10'-0" AFF IN SCREEN ROOM. IN DUMPSTER AREA FIXTURES SHALL BE MOUNTED 14'-6" AFF SUCH THAT BOTTOM OF FIXTURES THROUGHOUT BUILDING ARE UNIFORM.
2. FIXTURE TYPE 'C' SHALL BE MOUNTED 12'-0" AFF.
3. WIRE EMERGENCY EGRESS LIGHTS TO THE NON-SWITCHED PORTION OF THE LOCAL LIGHTING BRANCH CIRCUIT.
4. LIQUIDTIGHT FLEXIBLE METAL CONDUIT SHALL BE USED ONLY FOR CONNECTIONS TO VIBRATING EQUIPMENT AND LIMITED TO 3'-0" IN LENGTH. SEE SECTION 26 05 33.
5. FIXTURE TYPES 'E' SHALL BE CIRCUITED SUCH THAT LIGHT SWITCH IN ELECTRICAL WILL OVERRIDE FIXTURES INTEGRAL PHOTOCELL AND TURN LIGHTS OFF WHEN THE SWITCH IS IN THE OFF POSITION EXCEPT THREE FIXTURES ABOVE WET WELL.

**PLAN NOTES:**

1. EXTERIOR ENVELOPES WITHIN 36-INCHES OF OPENINGS FROM SCREEN ROOM ARE A
  - CLASS I, DIVISION 2 GROUP D HAZARDOUS CLASSIFIED LOCATION
  - SEE NFPA 820 FOR INFORMATION.
2. ENVELOPES 18-INCHES ABOVE AND 3-FOOT OUT FROM INFLUENT GATE OPENINGS ARE A
  - CLASS I, DIVISION 2 GROUP D HAZARDOUS CLASSIFIED LOCATION
  - SEE NFPA 820 FOR INFORMATION.
3. ENVELOPES 18-INCHES ABOVE AND 10-FOOT HORIZONTALLY OUT FROM INFLUENT CHANNEL OPENINGS ARE A
  - CLASS I, DIVISION 2 GROUP D HAZARDOUS CLASSIFIED LOCATION
  - SEE NFPA 820 FOR INFORMATION.
4. ENVELOPES 18-INCHES ABOVE AND 3-FOOT OUT FROM ASSOCIATED ACCESS HATCHES ARE A
  - CLASS I, DIVISION 2 GROUP D HAZARDOUS CLASSIFIED LOCATION
  - SEE NFPA 820 FOR INFORMATION.
5. ENVELOPE 3-FOOT AROUND WET WELL VENT OPENING IS A
  - CLASS I, DIVISION 1 GROUP D HAZARDOUS CLASSIFIED LOCATION
  - AND ENVELOPE FROM 3-FOOT TO 5-FOOT AROUND WET WELL VENT OPENING IS A
    - CLASS I, DIVISION 2 GROUP D HAZARDOUS CLASSIFIED LOCATION
    - SEE NFPA 820 FOR INFORMATION.

**GRADE PLAN - LIGHTING**



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Revision Number	

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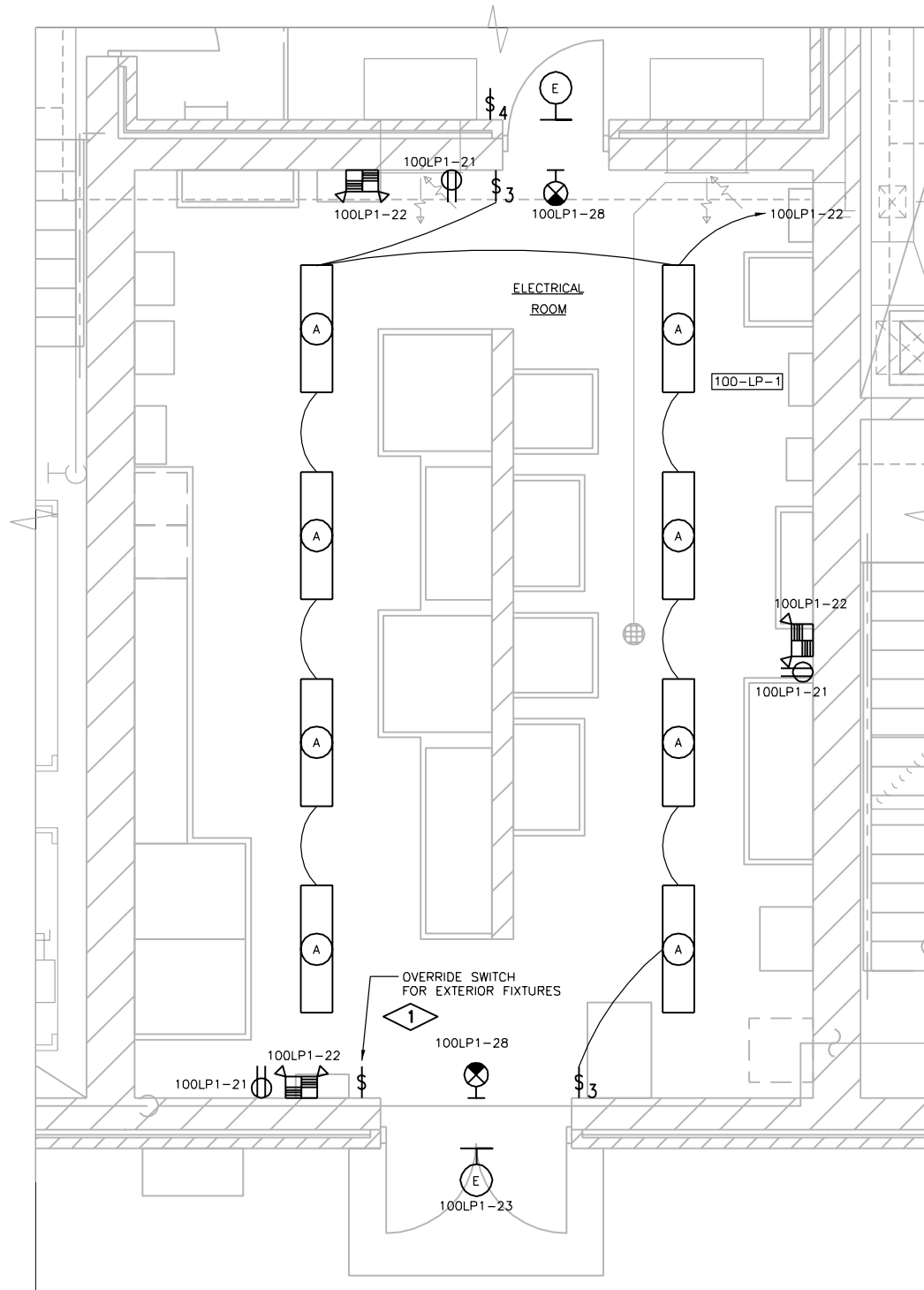
**CITY OF JOLIET**  
**EAST SIDE WASTEWATER TREATMENT PLANT**  
**JOLIET, IL**  
**INFLUENT PUMP STATION AND SCREEN REPLACEMENT**  
**PUMP STATION AND SCREEN FACILITY**  
**PLAN**



**DONOHUE**

Sheet No. 71

Drawing No. 100-E-6



**ENLARGED GRADE PLAN - LIGHTING**



**GENERAL NOTES:**

1. EQUIPMENT NAMEPLATES SHALL INCLUDE EQUIPMENT NAMES ONLY, TAG NUMBER SHALL BE OMITTED. SEE SECTION 26 05 53.
2. FIXTURE TYPE 'A' SHALL BE MOUNTED 10'-0" AFF.
3. WIRE EMERGENCY EGRESS LIGHTS TO THE NON-SWITCHED PORTION OF THE LOCAL LIGHTING BRANCH CIRCUIT.
4. LIQUIDTIGHT FLEXIBLE METAL CONDUIT SHALL BE USED ONLY FOR CONNECTIONS TO VIBRATING EQUIPMENT AND LIMITED TO 3'-0" IN LENGTH, SEE SECTION 26 05 33.

**PLAN NOTES:**



1. FIXTURE TYPES 'E' SHALL BE CIRCUITED SUCH THAT LIGHT SWITCH IN ELECTRICAL WILL OVERRIDE FIXTURES INTEGRAL PHOTOCCELL AND TURN LIGHTS OFF WHEN THE SWITCH IS IN THE OFF POSITION.

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**CITY OF JOLIET**  
**EAST SIDE WASTEWATER TREATMENT PLANT**  
**INFLUENT PUMP STATION AND SCREEN REPLACEMENT**  
**JOLIET, IL**  
**PUMP STATION AND SCREEN FACILITY**  
**PARTIAL PLAN**

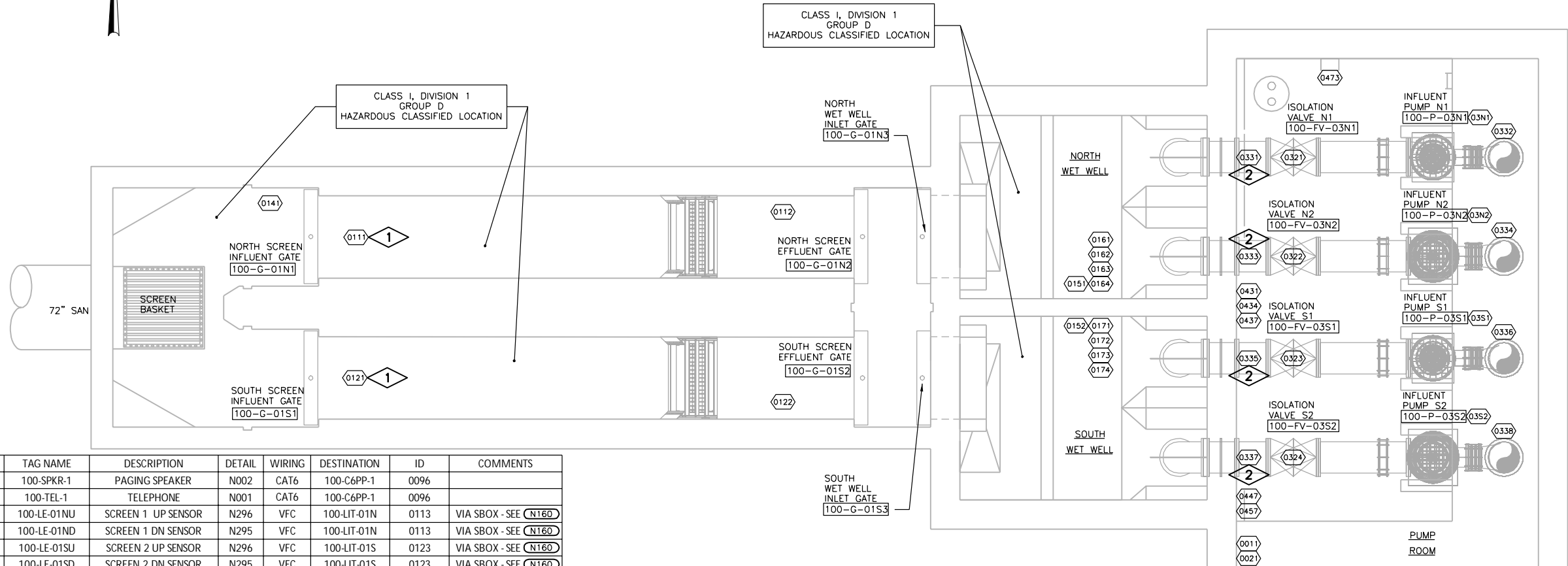
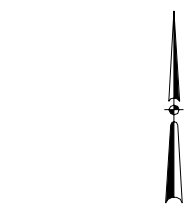


**DONOHUE**

Sheet No. 72

Drawing No. 100-E-7





ID	TAG NAME	DESCRIPTION	DETAIL	WIRING	DESTINATION	ID	COMMENTS
0011	100-SPKR-1	PAGING SPEAKER	N002	CAT6	100-C6PP-1	0096	
0021	100-TEL-1	TELEPHONE	N001	CAT6	100-C6PP-1	0096	
0111	100-LE-01NU	SCREEN 1 UP SENSOR	N296	VFC	100-LIT-01N	0113	VIA SBOX - SEE (N160)
0112	100-LE-01ND	SCREEN 1 DN SENSOR	N295	VFC	100-LIT-01N	0113	VIA SBOX - SEE (N160)
0121	100-LE-01SU	SCREEN 2 UP SENSOR	N296	VFC	100-LIT-01S	0123	VIA SBOX - SEE (N160)
0122	100-LE-01SD	SCREEN 2 DN SENSOR	N295	VFC	100-LIT-01S	0123	VIA SBOX - SEE (N160)
0141	100-LSHH-0141	ALARM FLOAT	N276	VFC	100-PLC-1	0199	VIA SBOX - SEE (N160)
0151	100-LE/LT-01N1	NORTH WETWELL SENSOR	N266	VFC	100-PLC-1	0199	VIA SBOX - SEE (N160)
0152	100-LE/LT-01S1	SOUTH WETWELL SENSOR	N266	VFC	100-PLC-1	0199	VIA SBOX - SEE (N160)
0161	100-LSL-01N1	NORTH LSL FLOAT	N276	VFC	100-PLC-1	0199	VIA SBOX - SEE (N160)
0162	100-LSH-01N2	NORTH LSH FLOAT	N276	VFC	100-PLC-1	0199	VIA SBOX - SEE (N160)
0163	100-LSH-01N3	NORTH LSH FLOAT	N276	VFC	100-PLC-1	0199	VIA SBOX - SEE (N160)
0164	100-LSHH-01N4	NORTH LSHH FLOAT	N276	VFC	100-PLC-1	0199	VIA SBOX - SEE (N160)
0171	100-LSL-01S1	SOUTH LSL FLOAT	N276	VFC	100-PLC-1	0199	VIA SBOX - SEE (N160)
0172	100-LSH-01S2	SOUTH LSH FLOAT	N276	VFC	100-PLC-1	0199	VIA SBOX - SEE (N160)
0173	100-LSH-01S3	SOUTH LSH FLOAT	N276	VFC	100-PLC-1	0199	VIA SBOX - SEE (N160)
0174	100-LSHH-01S4	SOUTH LSHH FLOAT	N276	VFC	100-PLC-1	0199	VIA SBOX - SEE (N160)
03N1	100-P-03N1	INFLUENT PUMP N1	MFR.	VFC	100-SBX-03N1	0381	
03N2	100-P-03N2	INFLUENT PUMP N2	MFR.	VFC	100-SBX-03N2	0382	
03S1	100-P-03S1	INFLUENT PUMP S1	MFR.	VFC	100-SBX-03S1	0383	
03S2	100-P-03S2	INFLUENT PUMP S2	MFR.	VFC	100-SBX-03S2	0384	
0321	100-FV-03N1	ISOLATION VALVE N1	MFR.	10#14	100-PLC-1	0199	
0322	100-FV-03N2	ISOLATION VALVE N2	MFR.	10#14	100-PLC-1	0199	
0323	100-FV-03S1	ISOLATION VALVE S1	MFR.	10#14	100-PLC-1	0199	
0324	100-FV-03S2	ISOLATION VALVE S2	MFR.	10#14	100-PLC-1	0199	
0331	100-PI-0301	PRESSURE GAUGE	N591	N/A	N/A	N/A	
0332	100-PI-0302	PRESSURE GAUGE	N590	N/A	N/A	N/A	IN VERTICAL
0333	100-PI-0303	PRESSURE GAUGE	N591	N/A	N/A	N/A	
0334	100-PI-0304	PRESSURE GAUGE	N590	N/A	N/A	N/A	IN VERTICAL
0335	100-PI-0305	PRESSURE GAUGE	N591	N/A	N/A	N/A	
0336	100-PI-0306	PRESSURE GAUGE	N590	N/A	N/A	N/A	IN VERTICAL
0337	100-PI-0307	PRESSURE GAUGE	N591	N/A	N/A	N/A	
0338	100-PI-0308	PRESSURE GAUGE	N590	N/A	N/A	N/A	IN VERTICAL
0431	100-AE/AIT-0431	COMBUSTIBLE GAS SENSOR	N610	3C-S	100-LCP-0421	0421	
0434	100-AE/AIT-0434	O2 GAS SENSOR	N610	3C-S	100-LCP-0421	0421	
0437	100-AE/AIT-0437	H2S GAS SENSOR	N610	3C-S	100-LCP-0421	0421	
0447	100-YA-0447	GAS ALARM STROBE	N110	2#14	100-YA-0446	0446	
0457	100-YA-0457	LOSS OF AIR FLOW ALARM STROBE	N110	2#14	100-YA-0456	0456	
0473	100-FC-0473	DUPLEX SUMP PUMP	N170	4#14	100-PLC-1	0199	

LOWER PLAN



**PLAN NOTES:**

- CENTER ON A SINGLE FIBERGLASS GRATING 36" (MINIMUM) FROM INFLUENT GATE. PROVIDE AN ADDITIONAL 12FT OF CABLE TO REMOVE ENTIRE ASSEMBLY FROM CHANNEL WHEN SCREEN IS PIVOTED FOR MAINTENANCE. SEE (N296)
- SEE 100-M-1 FOR EXACT PROCESS PIPE TAP LOCATION. MOUNT PRESSURE GAUGE ON WALL ABOVE GRATING, ALLOWING THE REMOVAL OF ALL GRATING WITHOUT PRESSURE GAUGE DISASSEMBLY. SEE (N591)

Revision Number	Revision Description	Drawn By	Checked By	Date

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**CITY OF JOLIET  
EAST SIDE WASTEWATER TREATMENT PLANT  
INFLUENT PUMP STATION AND SCREEN REPLACEMENT  
JOLIET, IL  
PUMP STATION AND SCREEN FACILITY  
PLAN**



Sheet No.	73
Drawing No.	100-N-1

**GENERAL NOTES:**

FOR (ID) NOTES SEE DRAWING 100-N-3.

**PLAN NOTES:**

- 1. EXTERIOR ENVELOPES WITHIN 36-INCHES OF OPENINGS FROM SCREEN ROOM ARE A

CLASS I, DIVISION 2  
GROUP D  
HAZARDOUS CLASSIFIED LOCATION

SEE NFPA 820 FOR INFORMATION.

- 2. ENVELOPES 18-INCHES ABOVE AND 10-FOOT HORIZONTALLY OUT FROM INFLUENT CHANNEL OPENINGS ARE A

CLASS I, DIVISION 2  
GROUP D  
HAZARDOUS CLASSIFIED LOCATION

SEE NFPA 820 FOR INFORMATION.

- 3. ENVELOPES 18-INCHES ABOVE AND 3-FOOT OUT FROM ASSOCIATED ACCESS HATCHES ARE A

CLASS I, DIVISION 2  
GROUP D  
HAZARDOUS CLASSIFIED LOCATION

SEE NFPA 820 FOR INFORMATION.

- 4. ENVELOPE 3-FOOT AROUND WET WELL VENT OPENING IS A

CLASS I, DIVISION 1  
GROUP D  
HAZARDOUS CLASSIFIED LOCATION

AND ENVELOPE FROM 3-FOOT TO 5-FOOT AROUND WET WELL VENT OPENING IS A

CLASS I, DIVISION 2  
GROUP D  
HAZARDOUS CLASSIFIED LOCATION

SEE NFPA 820 FOR INFORMATION.

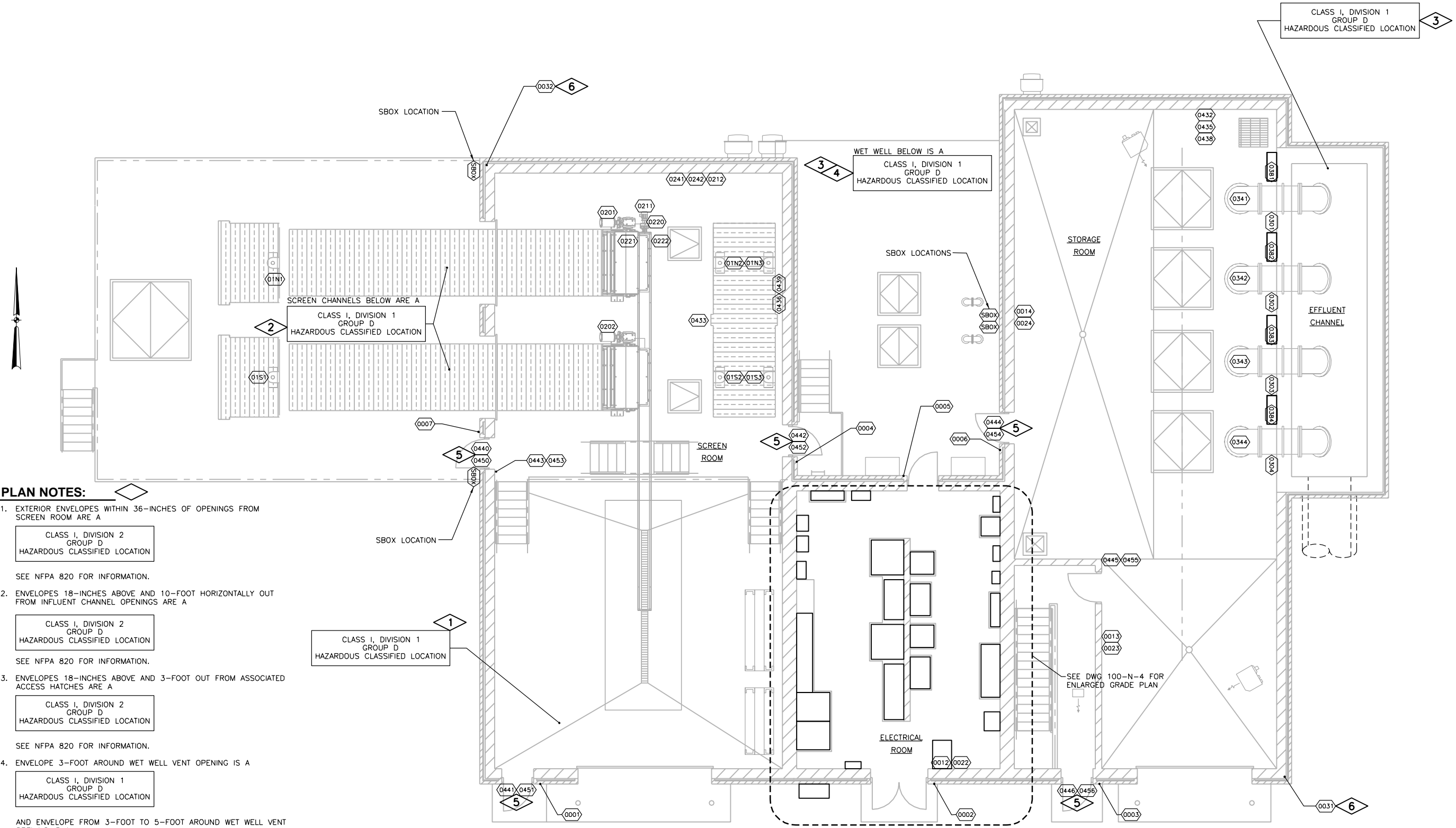
- 5. LIGHTS MOUNTED 18" (MINIMUM) ABOVE DOOR. COORDINATE LOCATIONS WITH LIGHT FIXTURES SHOWN ON ELECTRICAL DRAWINGS.

- 6. FUTURE CCTV'S ARE ROOFTOP MOUNTED AT CORNER OF STRUCTURE. COORDINATE LOCATIONS WITH AIR TERMINALS AND LIGHTNING PROTECTION SYSTEM. PROVIDE CONDUITS ALONG INSIDE FACE OF PARAPET WALLS. TO SE CORNER OF ELECTRICAL ROOM AND PENETRATE PER (E07D). USE CONDUIT SLEEVES BETWEEN UPPER ROOF AREAS AND ELECTRICAL ROOM.

**GENERAL NOTES:**

- NOTCH PLANKING WEST OF GATE/ACTUATOR AS REQUIRED FOR CONDUIT TO BE ROUTED TO SCREEN INFLUENT GATE ACTUATORS. AREA EAST OF GATE SHALL REMAIN FREE OF CONDUITS, SUPPORTS, ETC. TO AVOID PREVENTING THE REMOVAL OF THE SCREEN AND PIVOT.
- FOR CONDUIT SUPPORTS ON ROOF. USE CADDY PYRAMID ST SERIES (OR EQUAL) STRUT-BASED THERMOPLASTIC SUPPORTS.

**GRADE PLAN**



Date	Checked By	Drawn By	Revision Description	Revision Number

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CITY OF JOLIET  
EAST SIDE WASTEWATER TREATMENT PLANT  
INFLUENT PUMP STATION AND SCREEN REPLACEMENT  
JOLIET, IL  
PUMP STATION AND SCREEN FACILITY  
PLAN

**DONOHUE**

Sheet No. 74  
Drawing No. 100-N-2

**GENERAL NOTES:**

FOR DEVICE LOCATIONS SEE DRAWING 100-N-2.

**PLAN NOTES:**

1. BLACK SPARES WILL BE COLOR CODED WHEN FUTURE DEVICE VOLTAGES ARE DETERMINED (NOT PART OF THIS CONTRACT).
2. VENDOR FURNISHED CABLE OR VENDOR APPROVED WIRING AT CONTRACTOR'S OPTION.

ID	TAG NAME	DESCRIPTION	DETAIL	WIRING	DESTINATION	ID	COMMENTS
0001	100-XKT-1	FOB READER1	N003	CAT6	100-C6PP-1	0096	
				3#14	100-PLC-1	0199	3 BLACK SPARES
0003	100-XKT-3	FOB READER3	N003	CAT6	100-C6PP-1	0096	
				3#14	100-PLC-1	0199	3 BLACK SPARES
0004	100-XKT-4	FOB READER4	N003	CAT6	100-C6PP-1	0096	
				3#14	100-PLC-1	0199	3 BLACK SPARES
0005	100-XKT-5	FOB READER5	N003	CAT6	100-C6PP-1	0096	
				3#14	100-PLC-1	0199	3 BLACK SPARES
0006	100-XKT-6	FOB READER6	N003	CAT6	100-C6PP-1	0096	
				3#14	100-PLC-1	0199	3 BLACK SPARES
0007	100-XKT-7	FOB READER7	N003	CAT6	100-C6PP-1	0096	
				3#14	100-PLC-1	0199	3 BLACK SPARES
0013	100-SPKR-3	PAGING SPEAKER2	N002	CAT6	100-C6PP-1	0096	
				3#14	100-PLC-1	0199	3 BLACK SPARES
0014	100-SPKR-4	PAGING SPEAKER3	N002	CAT6	100-C6PP-1	0096	
				3#14	100-PLC-1	0199	3 BLACK SPARES
0023	100-TEL-3	TELEPHONE	N001	CAT6	100-C6PP-1	0096	
0024	100-TEL-4	TELEPHONE	N001	CAT6	100-C6PP-1	0096	
0031	100-CCTV-1	CCTV1	N002	CAT6	100-C6PP-1	0096	
				3#14	100-PLC-1	0199	3 BLACK SPARES
0032	100-CCTV-2	CCTV2	N002	CAT6	100-C6PP-1	0096	
				3#14	100-PLC-1	0199	3 BLACK SPARES

ID	TAG NAME	DESCRIPTION	DETAIL	WIRING	DESTINATION	ID	COMMENTS
01N1	100-G-01N1	SCREEN INFLUENT GATE NO.1	MFR.	6#14	100-PLC-1	0199	
				2TSP			
01N2	100-G-01N2	SCREEN EFFLUENT GATE NO.1	MFR.	10#14	100-PLC-1	0199	
01N3	100-G-01N3	NORTH WETWELL INLET GATE	MFR.	10#14	100-PLC-1	0199	
01S1	100-G-01S1	SCREEN INFLUENT GATE NO.2	MFR.	6#14	100-PLC-1	0199	
				2TSP			
01S2	100-G-01S2	SCREEN EFFLUENT GATE NO.2	MFR.	10#14	100-PLC-1	0199	
01S3	100-G-01S3	SOUTH WETWELL INLET GATE	MFR.	10#14	100-PLC-1	0199	
0201	100-M-0201	BAR SCREEN NO.1	MFR.	2#14	100-PLC-1	0199	
0202	100-M-0202	BAR SCREEN NO. 2	MFR.	2#14	100-PLC-1	0199	
0211	100-M-0211	SCREENINGS CONVEYOR	MFR.	2#14	100MCC-1	0299	
				8#14	100-PLC-1	0199	
0212	100-CS-0211	SCREENINGS CONVEYOR CS	N170	10#14	100MCC-1	0299	
				4#14	100-PLC-1	0199	
0220	100-SSL-0220	SPEED SWITCH	MFR.	4#14	100-PLC-1	0199	
0221	100-HS-0221	EMERG STOP PULL SWITCH	MFR.	2#14	100-HS-0222	0222	
0222	100-HS-0222	EMERG STOP PULL SWITCH	MFR.	2#14	100-CS-0211	0221	
0241	100-CS-0201	BAR SCREEN NO.1 CS	N170	4#14	100-PLC-1	0199	
				12#14	100-VFD-0201	0203	
0242	100-CS-0202	BAR SCREEN NO.2 CS	N170	4#14	100-PLC-1	0199	
				12#14	100-VFD-0202	0204	
0381	100-SBX-03N1	SPLICE BOX	E045	2	100-PLC-1	0199	
0382	100-SBX-03N2	SPLICE BOX	E045	2	100-PLC-1	0199	
0383	100-SBX-03S1	SPLICE BOX	E045	2	100-PLC-1	0199	
0384	100-SBX-03S2	SPLICE BOX	E045	2	100-PLC-1	0199	

ID	TAG NAME	DESCRIPTION	DETAIL	WIRING	DESTINATION	ID	COMMENTS
0301	100-CS-03N1	INFLUENT PUMP N1 CS	N170	4#14	100-PLC-1	0199	
				1TSP			
				10#14			100-VFD-03N1
0302	100-CS-03N2	INFLUENT PUMP N2 CS	N170	4#14	100-PLC-1	0199	
				1TSP			
				10#14			100-VFD-03N2
0303	100-CS-03S1	INFLUENT PUMP S1 CS	N170	4#14	100-PLC-1	0199	
				1TSP			
				10#14			100-VFD-03S1
0304	100-CS-03S2	INFLUENT PUMP S2 CS	N170	4#14	100-PLC-1	0199	
				1TSP			
				10#14			100-VFD-03S2
0341	100-FE-03N1	INFLUENT PUMP N1 FLOWMETER	N382	VFC'S	100-FIT-03N1	0351	IN VERTICAL
0342	100-FE-03N2	INFLUENT PUMP N2 FLOWMETER	N382	VFC'S	100-FIT-03N2	0352	IN VERTICAL
0343	100-FE-03S1	INFLUENT PUMP S1 FLOWMETER	N382	VFC'S	100-FIT-03S1	0353	IN VERTICAL
0344	100-FE-03S2	INFLUENT PUMP S2 FLOWMETER	N382	VFC'S	100-FIT-03S2	0354	IN VERTICAL
0432	100-AE/AIT-0432	COMBUSTIBLE GAS SENSOR	N610	3C-S	100-LCP-0421	0421	
0433	100-AE/AIT-0433	COMBUSTIBLE GAS SENSOR	N610	3C-S	100-LCP-0421	0421	
0435	100-AE/AIT-0435	O2 GAS SENSOR	N610	3C-S	100-LCP-0421	0421	
0436	100-AE/AIT-0436	O2 GAS SENSOR	N610	3C-S	100-LCP-0421	0421	
0438	100-AE/AIT-0438	H2S GAS SENSOR	N610	3C-S	100-LCP-0421	0421	
0439	100-AE/AIT-0439	H2S GAS SENSOR	N610	3C-S	100-LCP-0421	0421	
0440	100-YA-0440	GAS ALARM STROBE	N110	2#14	100-LCP-0421	0421	
0441	100-YA-0441	GAS ALARM STROBE	N110	2#14	100-YA-0440	0440	
0442	100-YA-0442	GAS ALARM STROBE	N110	2#14	100-YA-0441	0441	
0443	100-YA-0443	GAS ALARM STROBE	N110	2#14	100-YA-0442	0442	
0444	100-YA-0444	GAS ALARM STROBE	N110	2#14	100-LCP-0421	0421	
0445	100-YA-0445	GAS ALARM STROBE	N110	2#14	100-YA-0444	0444	
0446	100-YA-0446	GAS ALARM STROBE	N110	2#14	100-YA-0445	0445	
0450	100-YA-0450	LOSS OF AIR FLOW ALARM STROBE	N110	2#14	100-PLC-1	0199	
0451	100-YA-0451	LOSS OF AIR FLOW ALARM STROBE	N110	2#14	100-YA-0450	0450	
0452	100-YA-0452	LOSS OF AIR FLOW ALARM STROBE	N110	2#14	100-YA-0451	0451	
0453	100-YA-0453	LOSS OF AIR FLOW ALARM STROBE	N110	2#14	100-YA-0452	0452	
0454	100-YA-0454	LOSS OF AIR FLOW ALARM STROBE	N110	2#14	100-PLC-1	0199	
0455	100-YA-0455	LOSS OF AIR FLOW ALARM STROBE	N110	2#14	100-YA-0454	0454	
0456	100-YA-0456	LOSS OF AIR FLOW ALARM STROBE	N110	2#14	100-YA-0455	0455	

Date	
Checked By	
Drawn By	
Revision Description	
Revision Number	

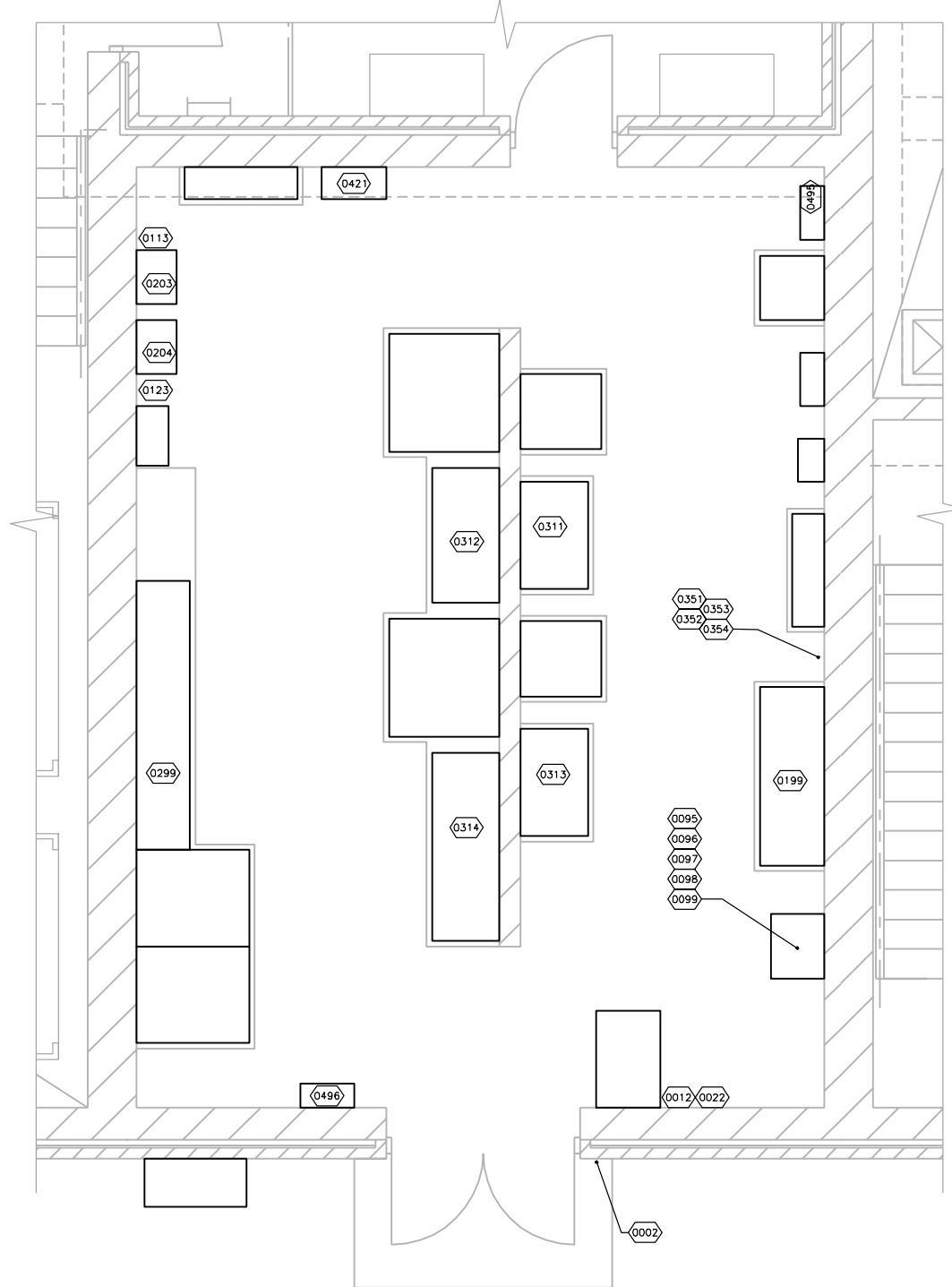
Designed By	DWG
Drawn By	DWG
Checked By	LET
Approved By	LET
Filename	100NP1.DWG
Project No.	12614
Project Date	JUNE 2014

**CITY OF JOLIET**  
**EAST SIDE WASTEWATER TREATMENT PLANT**  
**JOLIET, IL**  
**INFLUENT PUMP STATION AND SCREEN REPLACEMENT**  
**PUMP STATION AND SCREEN FACILITY**  
**SCHEDULES**



**PLAN NOTES:**

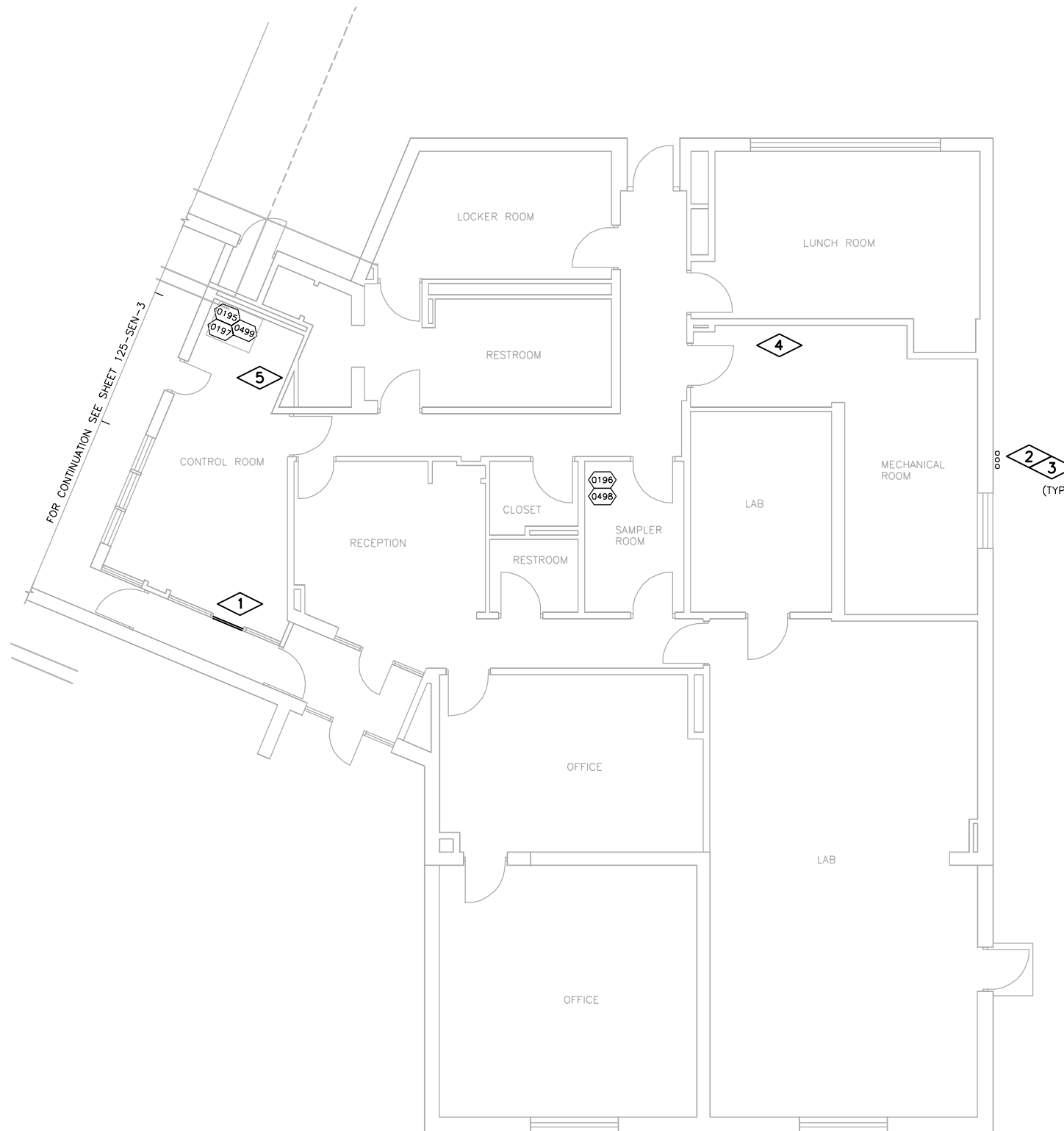
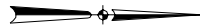
1. BLACK SPARES WILL BE COLOR CODED WHEN FUTURE DEVICE VOLTAGES ARE DETERMINED (NOT PART OF THIS CONTRACT).



**ENLARGED GRADE PLAN**  
 0 3' 8'

ID	TAG NAME	DESCRIPTION	DETAIL	WIRING	DESTINATION	ID	COMMENTS
0002	100-XKT-2	FOB READER2	N003	CAT6 3#14	100-C6PP-1	0096	3 BLACK SPARES
0012	100-SPKR-2	PAGING SPEAKER1	N002	CAT6 3#14	100-PLC-1	0199	3 BLACK SPARES
0022	100-TEL-2	TELEPHONE	N001	CAT6	100-C6PP-1	0096	
0095	100-UPS-1	UPS	N/A	8#14	100-PLC-1	0199	
0096	100-C6PP-1	CAT6 PATCH PANEL	N/A	N/A	N/A	N/A	
0097	100-FOPP-1	FOC PATCH PANEL	N/A	FOC	120-FOPP-1	0196	
				FOC	120-FOPP-2	1097	
0098	100-SW-1	ETHERNET SWITCH	N/A	3CAT6	100-PLC-1	0199	
				FOC	100-FOPP-1	0097	
0099	100-NET-1	HOME RUN NETWORK RACK	N170	N/A	N/A	N/A	
0113	100-LIT-01N	SCREEN 1 LEVEL TRANSMITTER	N171	2TSP 2#14	100-PLC-1	0199	
0123	100-LIT-01S	SCREEN 2 LEVEL TRANSMITTER	N171	2TSP 2#14	100-PLC-1	0199	
0199	100-PLC-1	PLC PANEL	N180	FOC	100-FOPP-1	0198	
0203	100-VFD-0201	BAR SCREEN NO.1 VFD	MFR	10#14 CAT6	100-PLC-1	0199	
				10#14	100-SW-1	0098	
0204	100-VFD-0202	BAR SCREEN NO.2 VFD	MFR	10#14 CAT6	100-PLC-1	0199	
				CAT6	100-SW-1	0098	
0299	100-MCC-1	MCC	MFR	28#14	100-PLC-1	0199	
0311	100-VFD-03N1	INFLUENT PUMP N1 VFD	MFR	1TSP 6#14	100-PLC-1	0199	
				CAT6	100-SW-1	0098	
0312	100-VFD-03N2	INFLUENT PUMP N2 VFD	MFR	1TSP 6#14	100-PLC-1	0199	
				CAT6	100-SW-1	0098	
0313	100-VFD-03S1	INFLUENT PUMP S1 VFD	MFR	1TSP 6#14	100-PLC-1	0199	
				CAT6	100-SW-1	0098	
0314	100-VFD-03S2	INFLUENT PUMP S2 VFD	MFR	1TSP 12#14	100-PLC-1	0199	
				CAT6	100-SW-1	0098	
0351	100-FIT-03N1	INFLUENT PUMP N1 FLOW TRANSMITTER	N171	1TSP 2#14	100-PLC-1	0199	
0352	100-FIT-03N2	INFLUENT PUMP N2 FLOW TRANSMITTER	N171	1TSP 2#14	100-PLC-1	0199	
0353	100-FIT-03S1	INFLUENT PUMP S1 FLOW TRANSMITTER	N171	1TSP 2#14	100-PLC-1	0199	
0354	100-FIT-03S2	INFLUENT PUMP S2 FLOW TRANSMITTER	N171	1TSP 2#14	100-PLC-1	0199	
0421	100-LCP-0421	GAS MONITOR LOCAL CONTROL PANEL	N170	10TSP 4#14	100-PLC-1	0199	
0495	100-TCP-1	HVAC PANEL	N170	10#14	100-PLC-1	0199	
0496	100-FACP-1	FIRE ALARM CONTROL PANEL	N170	4#14 2#14	100-PLC-1	0199	LOCATED IN STR. 120

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Checked By	
Drawn By	
Revision Description	
Revision Number	
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Project Date	JUNE 2014
<b>CITY OF JOLIET</b> <b>EAST SIDE WASTEWATER TREATMENT PLANT</b> <b>INFLUENT PUMP STATION AND SCREEN REPLACEMENT</b> <b>JOLIET, IL</b> <b>PUMP STATION AND SCREEN FACILITY</b> <b>PARTIAL PLAN</b>	
Sheet No.	76
Drawing No.	100-N-4



**GENERAL NOTES:**

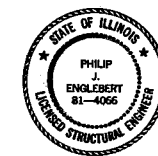
1. FIELD VERIFY DIMENSIONS AND ELEVATIONS PRIOR TO CONSTRUCTION AND/OR FABRICATION. ADJUST CONDUIT DUCT BANK AND STUB UP LOCATIONS AS REQUIRED TO SUIT FIELD CONDITIONS.
2. COORDINATE EXACT HEIGHT OF CONDUIT PENETRATIONS WITH EXISTING OBSTRUCTIONS AND FIELD CONDITIONS.
3. SEE DRAWING 125-SEN-3 FOR SEAL OFF FITTING REQUIREMENTS.

**PLAN NOTES:**

1. REMOVE OPERATING HARDWARE ON EXISTING DOOR AND DISABLE LOCKING HARDWARE SO THAT IT BECOMES LOCKED AND INOPERABLE IN THE CLOSED POSITION. THIS DOOR WILL NO LONGER BE USED AS A DOOR AND BECOMES A PART OF THE WALL.
2. COORDINATE CONDUIT ENTRY LOCATION WITH EXISTING BUILDING OPENINGS. LOCATE DUCT BANK AND STUB UPS SUCH THAT BUILDING PENETRATIONS WILL NOT INTERFERE WITH EXISTING EQUIPMENT WITHIN THE MECHANICAL ROOM. PROVIDE LB FITTING FOR CONDUIT PENETRATION INTO BUILDING.
3. CORE DRILL WALLS AS REQUIRED FOR CONDUITS; CONDUIT PENETRATIONS SHALL BE GROUTED IN AND WALL SHALL BE PATCHED TO MATCH EXISTING. COORDINATE ROUTING OF INTERNAL CONDUIT WITH FIELD CONDITIONS AND ENGINEER.
4. MECHANICAL ROOM CONTAINS ELECTRICAL EQUIPMENT INCLUDING: PANEL P-3, 30 KVA LIGHTING TRANSFORMER, PANEL LP-D, 15 KVA LIGHTING TRANSFORMER AND PANEL LP-L.
5. CONTROL ROOM CONTAINS ELECTRICAL EQUIPMENT INCLUDING: LIGHTING TRANSFORMER, UPS SYSTEM AND PANEL LP-U.

ID	TAG NAME	DESCRIPTION	DETAIL	WIRING	DESTINATION	ID	COMMENTS
0195	120-SW-1	ETHERNET SWITCH	DIN	N/A	N/A	N/A	
0196	120-FOPP-1	FOC PATCH PANEL	N171	N/A	N/A	N/A	
0197	120-FOPP-2	FOC PATCH PANEL	N172	FOC	120-SW-1	0195	
0498	TELE-PAG	TELEPHONE/PAGING PANEL	N/A	N/A	N/A	N/A	
0499	SCC-MAIN	PLC PANEL	N/A	N/A	N/A	N/A	

**GRADE LEVEL PLAN**



*Philip Englebert*  
7-9-14  
Expires 11-30-19



*Michael Stone*  
7-9-14  
Exp. 11-30-15

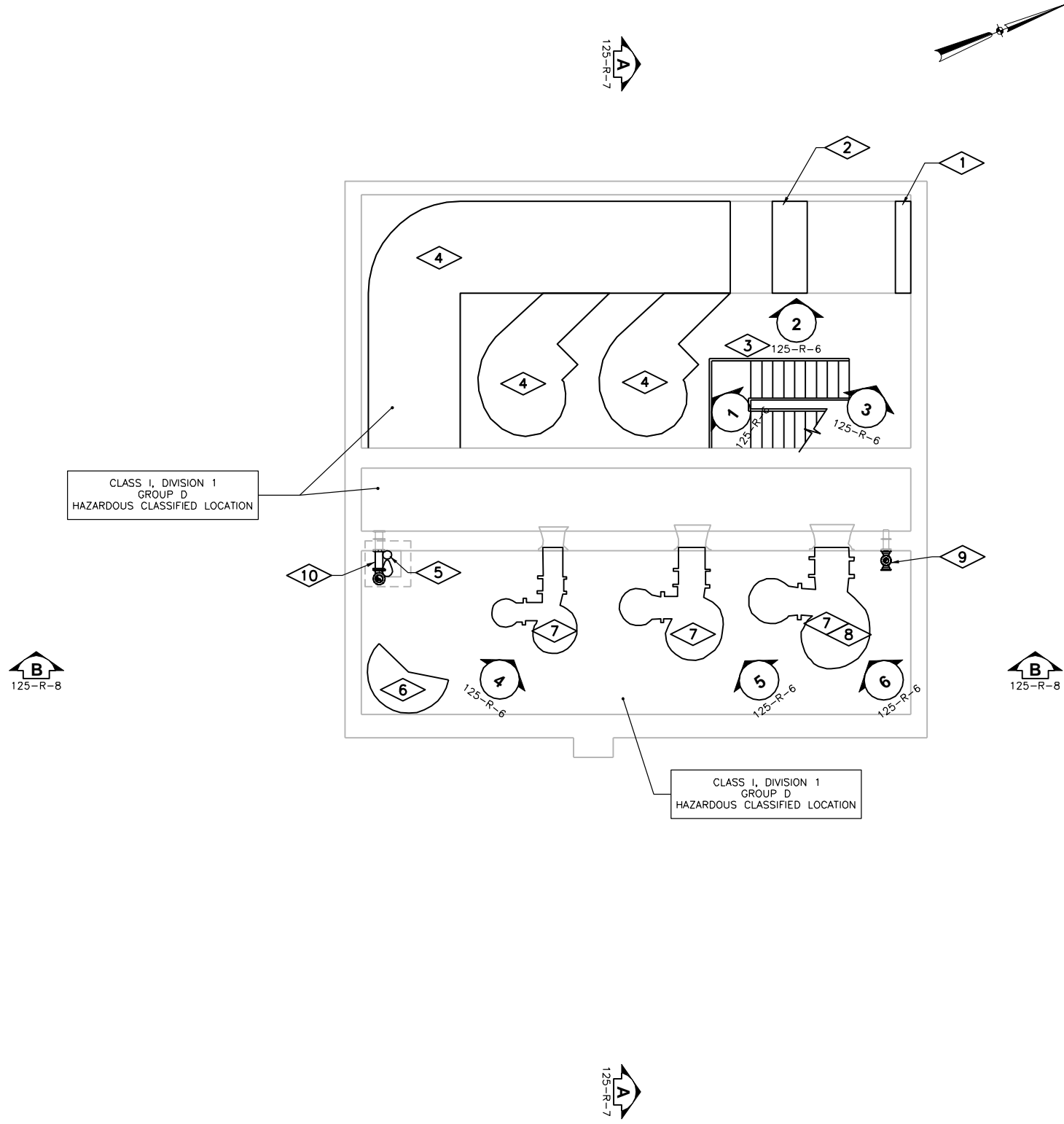
Revision Number	Revision Description	Drawn By	Checked By	Date

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**CITY OF JOLIET**  
**EAST SIDE WASTEWATER TREATMENT PLANT**  
**INFLUENT PUMP STATION AND SCREEN REPLACEMENT**  
**JOLIET, IL**  
**ADMINISTRATION BUILDING**  
**PLAN**



Sheet No.	77
Drawing No.	120-AEN-1



**PLAN NOTES:**

1. REMOVE EXISTING SLUICE GATE AND BULKHEAD OPENING.
2. REMOVE EXISTING CLIMBER SCREEN.
3. REMOVE EXISTING STAIR.
4. REMOVE EXISTING GRATING.
5. REMOVE EXISTING SUMP PUMP AND ASSOCIATED PIPING.
6. REMOVE EXISTING SPIRAL STAIR.
7. REMOVE EXISTING INFLUENT PUMPS AND ASSOCIATED PIPING AND ELECTRICAL EQUIPMENT. THIS INCLUDES ALL NATURAL GAS, EXHAUST, COOLING, AND DIGESTER GAS PIPING. REMOVE PIPING AS SHOWN ON THE DRAWINGS AND FIELD MARKED BY OWNER.
8. SALVAGE PUMP AND PROVIDE TO OWNER.
9. REMOVE EXISTING 4" SAN PIPING.
10. REMOVE EXISTING 6" DS PIPING.

**GENERAL NOTES:**

1. NOT ALL EXISTING CONDITIONS ARE SHOWN. FOR MORE INFORMATION SEE THE REFERENCE DRAWINGS PROVIDED WITH THE CONTRACT DOCUMENTS. CONTRACTOR SHALL FIELD VERIFY EXISTING CONDITIONS PRIOR TO BID.
2. NOT ALL REMOVALS ARE SHOWN ON DRAWINGS. REMOVALS SHALL BE PERFORMED AS NOTED ON THE DRAWINGS, AS SPECIFIED, AND AS FIELD MARKED TO BE REMOVED. THE COMBINATION OF ALL THREE REPRESENT THE FULL SCOPE OF REMOVALS. CONTRACTOR SHALL VERIFY EXISTING CONDITIONS PRIOR TO SUBMITTING BID.
3. ALL EQUIPMENT, PIPING, AND VALVE LOCATIONS ARE APPROXIMATE. CONTRACTOR SHALL FIELD VERIFY DIMENSIONS AND ELEVATIONS PRIOR TO CONSTRUCTION AND/OR FABRICATION.
4. REMOVE ALL CONCRETE ANCHORS, ANCHOR BOLTS, AND OTHER EMBEDMENTS A MINIMUM OF 1" BEYOND FINISHED SURFACE AND PATCH SURFACE WITH PATCHING MORTAR TO MATCH EXISTING.
5. REMOVE EXISTING CONCRETE PADS OF ANY EQUIPMENT BEING REMOVED. REMOVE CONCRETE AND REINFORCEMENT A MINIMUM OF 1" BEYOND FINISHED SURFACE AT ANY LOCATION WHERE NEW CONCRETE PAD WILL NOT COVER ROUGH SURFACE OF REMOVAL. PATCH BACK TO FINISHED SURFACE WITH PATCHING MORTAR.
6. WHERE EQUIPMENT IS INDICATED TO BE REMOVED, REMOVE ALL ASSOCIATED POWER AND CONTROL WIRING AND CONDUIT BACK TO SOURCE. WHERE CONDUIT SYSTEM CONTAINS CIRCUITS TO OTHER EQUIPMENT, RETAIN THESE CIRCUITS AND RELOCATE EXISTING CONDUITS AND EXTEND EXISTING CIRCUITS AS REQUIRED FOR THE INSTALLATION OF NEW EQUIPMENT. PLUG ALL PIPE AND CONDUITS AT FLOOR AND WALL PENETRATIONS WITH NON-SHRINK GROUT WHERE OPENINGS ARE LESS THAN 12" DIAMETER.
7. REMOVE PIPE SUPPORTS.
8. PLUG ABANDONED PIPE PENETRATIONS WITH NON-SHRINK GROUT.
9. SEE SECTION 01 11 00 FOR PROJECT CONSTRAINTS.

**LOWER LEVEL PLAN**



Revision Number	Revision Description	Drawn By	Checked By	Date

Designed By	KDS
Drawn By	KDS
Checked By	NWC
Approved By	EPC
Filename	125RP1.DWG
Project No.	12614
Project Date	JUNE 2014

**CITY OF JOLIET**  
**EAST SIDE WASTEWATER TREATMENT PLANT**  
**INFLUENT PUMP STATION AND SCREEN REPLACEMENT**  
**JOLIET, IL**  
**ABANDONED INFLUENT PUMP STATION**  
**PLAN**



Sheet No. 78

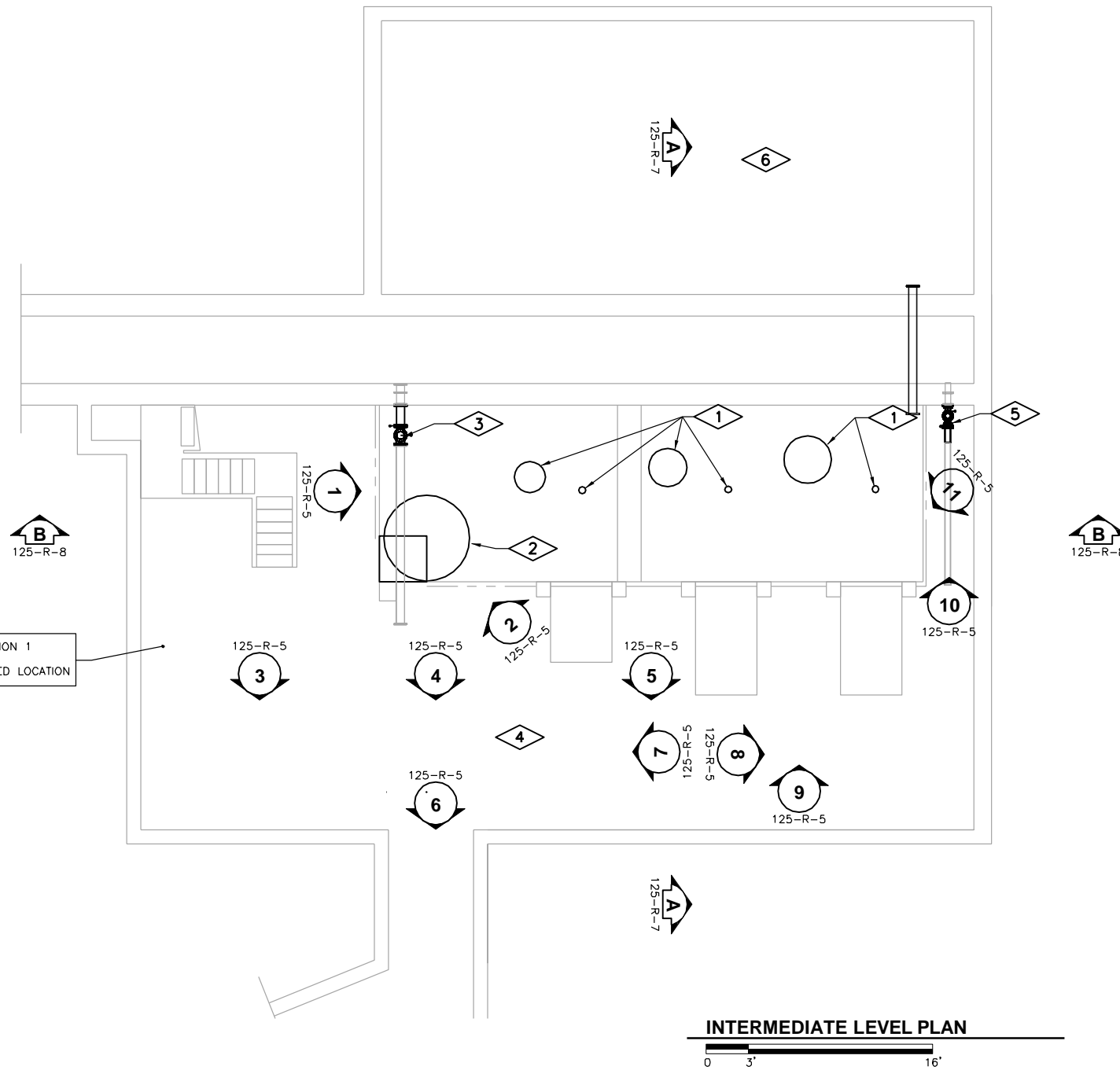
Drawing No.

125-R-1



*Eric P. Cockerill*  
 07/02/2014  
 Expires: 11/30/2015

CLASS I, DIVISION 1  
GROUP D  
HAZARDOUS CLASSIFIED LOCATION



INTERMEDIATE LEVEL PLAN



**PLAN NOTES:**

1. REMOVE EXISTING INFLUENT PUMPS, ENGINES, AND ASSOCIATED PIPING AND ELECTRICAL EQUIPMENT. THIS INCLUDES ALL NATURAL GAS, EXHAUST, COOLING, AND DIGESTER GAS PIPING. REMOVE PIPING AS SHOWN ON THE DRAWINGS AND FIELD MARKED BY OWNER.
2. REMOVE EXISTING SPIRAL STAIRCASE.
3. REMOVE 6" DIGESTER SUPERNATANT PIPING.
4. EXISTING PIPING AND EQUIPMENT ARE NOT SHOWN. OWNER HAS FIELD MARKED PIPING TO BE REMOVED. CONTRACTOR SHALL FIELD VERIFY EXTENT OF REMOVALS PRIOR TO BID.
5. REMOVE 4" SAN PIPING.
6. REMOVE ALL CONDUIT AND LIGHTING IN THE WET WELL.

**GENERAL NOTES:**

1. NOT ALL EXISTING CONDITIONS ARE SHOWN. FOR MORE INFORMATION SEE THE REFERENCE DRAWINGS PROVIDED WITH THE CONTRACT DOCUMENTS. CONTRACTOR SHALL FIELD VERIFY EXISTING CONDITIONS PRIOR TO BID.
2. NOT ALL REMOVALS ARE SHOWN ON DRAWINGS. REMOVALS SHALL BE PERFORMED AS NOTED ON THE DRAWINGS, AS SPECIFIED, AND AS FIELD MARKED TO BE REMOVED. THE COMBINATION OF ALL THREE REPRESENT THE FULL SCOPE OF REMOVALS. CONTRACTOR SHALL VERIFY EXISTING CONDITIONS PRIOR TO SUBMITTING BID.
3. ALL EQUIPMENT, PIPING, AND VALVE LOCATIONS ARE APPROXIMATE. CONTRACTOR SHALL FIELD VERIFY DIMENSIONS AND ELEVATIONS PRIOR TO CONSTRUCTION AND/OR FABRICATION.
4. REMOVE ALL CONCRETE ANCHORS, ANCHOR BOLTS, AND OTHER EMBEDMENTS A MINIMUM OF 1" BEYOND FINISHED SURFACE AND PATCH SURFACE WITH PATCHING MORTAR TO MATCH EXISTING.
5. REMOVE EXISTING CONCRETE PADS OF ANY EQUIPMENT BEING REMOVED. REMOVE CONCRETE AND REINFORCEMENT A MINIMUM OF 1" BEYOND FINISHED SURFACE AT ANY LOCATION WHERE NEW CONCRETE PAD WILL NOT COVER ROUGH SURFACE OF REMOVAL. PATCH BACK TO FINISHED SURFACE WITH PATCHING MORTAR.
6. WHERE EQUIPMENT IS INDICATED TO BE REMOVED, REMOVE ALL ASSOCIATED POWER AND CONTROL WIRING AND CONDUIT BACK TO SOURCE. WHERE CONDUIT SYSTEM CONTAINS CIRCUITS TO OTHER EQUIPMENT, RETAIN THESE CIRCUITS AND RELOCATE EXISTING CONDUITS AND EXTEND EXISTING CIRCUITS AS REQUIRED FOR THE INSTALLATION OF NEW EQUIPMENT. PLUG ALL PIPE AND CONDUITS AT FLOOR AND WALL PENETRATIONS WITH NON-SHRINK GROUT WHERE OPENINGS ARE LESS THAN 12" DIAMETER.
7. REMOVE PIPE SUPPORTS.
8. PLUG ABANDONED PIPE PENETRATIONS WITH NON-SHRINK GROUT.
9. SEE SECTION 01 11 00 FOR PROJECT CONSTRAINTS.

Revision Number	Revision Description	Drawn By	Checked By	Date

Designed By	KDS
Drawn By	KDS
Checked By	NWC
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Filename	125RP1.DWG
Project No.	12614
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**CITY OF JOLIET  
 EAST SIDE WASTEWATER TREATMENT PLANT  
 INFLUENT PUMP STATION AND SCREEN REPLACEMENT  
 JOLIET, IL  
 ABANDONED INFLUENT PUMP STATION  
 PLAN**

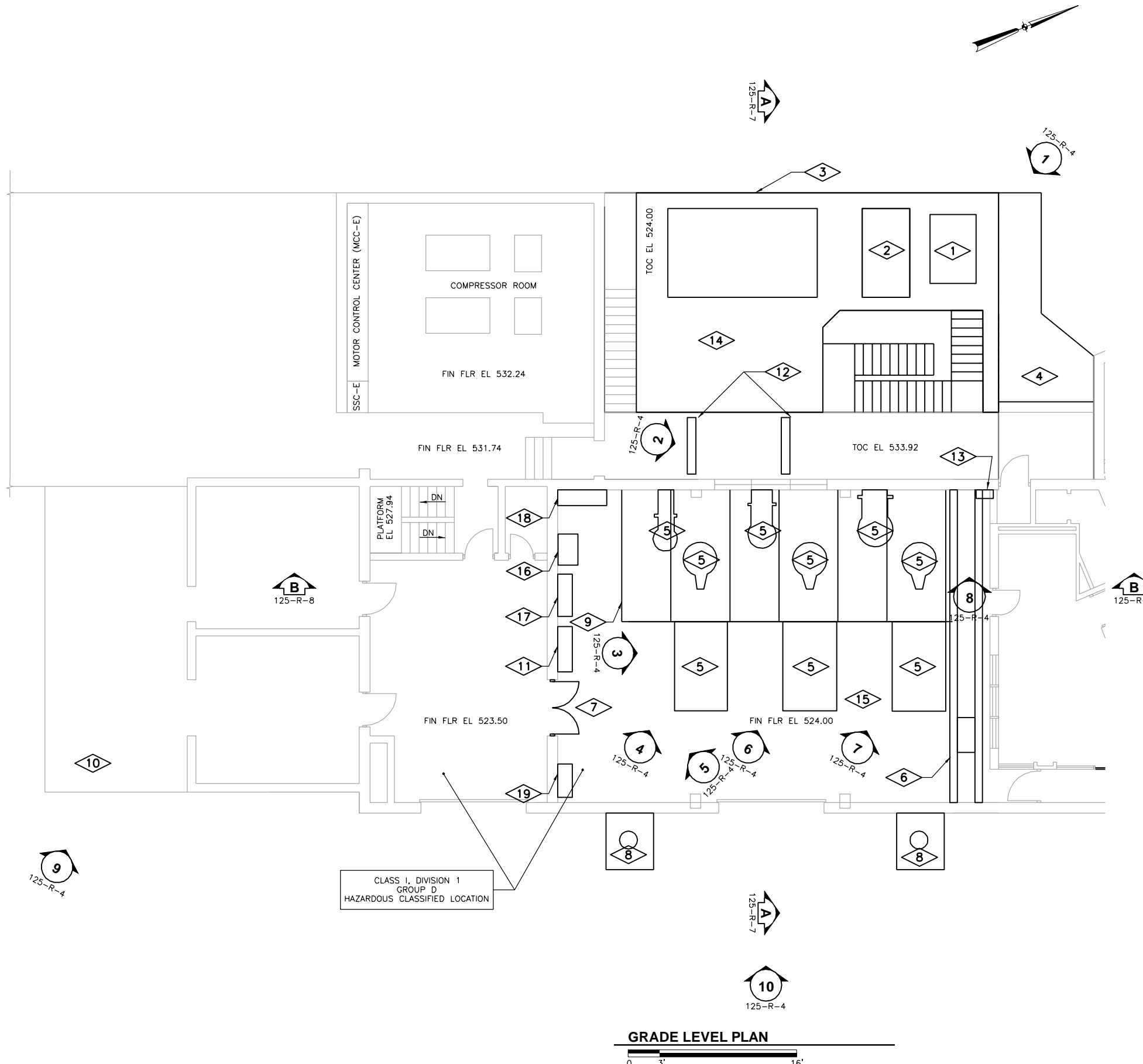
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*Eric P. Cockrell*  
 07/02/2014  
 Expires: 11/30/2015

Sheet No. 79  
 Drawing No.

125-R-2



**PLAN NOTES:**

1. REMOVE EXISTING SLUICE GATE OPERATOR.
2. REMOVE EXISTING MECHANICAL BAR SCREEN.
3. REMOVE EXISTING CONCRETE SLAB AND WALLS TO 36" BELOW GRADE.
4. REMOVE AND REPLACE EXISTING SIDEWALK TO ROUTE NEW PIPING TO SSMH-2 AS SHOWN ON 002-CR-3 AND 002-CF-3.
5. REMOVE EXISTING INFLUENT PUMPS, ENGINES, AND ASSOCIATED PIPING AND ELECTRICAL EQUIPMENT.
6. REMOVE EXISTING OVERHEAD CRANE AND SUPPORT BEAMS.
7. REMOVE EXISTING DOUBLE DOOR.
8. REMOVE COOLING FANS AND ALL PIPING.
9. REMOVE GRATING AND SUPPORTS IN OPENING.
10. REMOVE MUFFLERS ON THE ROOF. CUT AND CAP PIPING ABOVE ROOF MEMBRANE. CONTRACTOR SHALL PROTECT ROOFING MEMBRANE FROM DAMAGE.
11. REMOVE LOCKERS
12. REMOVE SLIDE GATES AND OPERATORS.
13. REMOVE SCREEN CONTROL PANEL AND ASSOCIATES CONDUIT AND WIRING.
14. REMOVE ALL CONDUIT AND LIGHTING IN THE WET WELL.
15. REMOVE TILE AND GROUT. GRIND AS REQUIRED FOR SMOOTH FINISH.
16. REMOVE TRANSFORMER.
17. REMOVE VARIABLE FREQUENCY DRIVE.
18. REMOVE EQUIPMENT.
19. REMOVE LOCKERS.

**GENERAL NOTES:**

1. NOT ALL EXISTING CONDITIONS ARE SHOWN. FOR MORE INFORMATION SEE THE REFERENCE DRAWINGS PROVIDED WITH THE CONTRACT DOCUMENTS. CONTRACTOR SHALL FIELD VERIFY EXISTING CONDITIONS PRIOR TO BID.
2. NOT ALL REMOVALS ARE SHOWN ON DRAWINGS. REMOVALS SHALL BE PERFORMED AS NOTED ON THE DRAWINGS, AS SPECIFIED, AND AS FIELD MARKED TO BE REMOVED. THE COMBINATION OF ALL THREE REPRESENT THE FULL SCOPE OF REMOVALS. CONTRACTOR SHALL VERIFY EXISTING CONDITIONS PRIOR TO SUBMITTING BID.
3. ALL EQUIPMENT, PIPING, AND VALVE LOCATIONS ARE APPROXIMATE. CONTRACTOR SHALL FIELD VERIFY DIMENSIONS AND ELEVATIONS PRIOR TO CONSTRUCTION AND/OR FABRICATION.
4. REMOVE ALL CONCRETE ANCHORS, ANCHOR BOLTS, AND OTHER EMBEDMENTS A MINIMUM OF 1" BEYOND FINISHED SURFACE AND PATCH SURFACE WITH PATCHING MORTAR TO MATCH EXISTING.
5. REMOVE EXISTING CONCRETE PADS OF ANY EQUIPMENT BEING REMOVED. REMOVE CONCRETE AND REINFORCEMENT A MINIMUM OF 1" BEYOND FINISHED SURFACE AT ANY LOCATION WHERE NEW CONCRETE PAD WILL NOT COVER ROUGH SURFACE OF REMOVAL. PATCH BACK TO FINISHED SURFACE WITH PATCHING MORTAR.
6. WHERE EQUIPMENT IS INDICATED TO BE REMOVED, REMOVE ALL ASSOCIATED POWER AND CONTROL WIRING AND CONDUIT BACK TO SOURCE. WHERE CONDUIT SYSTEM CONTAINS CIRCUITS TO OTHER EQUIPMENT, RETAIN THESE CIRCUITS AND RELOCATE EXISTING CONDUITS AND EXTEND EXISTING CIRCUITS AS REQUIRED FOR THE INSTALLATION OF NEW EQUIPMENT. PLUG ALL PIPE AND CONDUITS AT FLOOR AND WALL PENETRATIONS WITH NON-SHRINK GROUT WHERE OPENINGS ARE LESS THAN 12" DIAMETER.
7. REMOVE PIPE SUPPORTS.
8. PLUG ABANDONED PIPE PENETRATIONS WITH NON-SHRINK GROUT.
9. SEE SECTION 01 11 00 FOR PROJECT CONSTRAINTS.

GRADE LEVEL PLAN



Revision Number	Revision Description	Checked By	Drawn By	Date

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Drawn By	KDS
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Project Date	JUNE 2014

CITY OF JOLIET  
 EAST SIDE WASTEWATER TREATMENT PLANT  
 INFLUENT PUMP STATION AND SCREEN REPLACEMENT  
 JOLIET, IL  
 ABANDONED INFLUENT PUMP STATION  
 PLAN



07/01/2014  
Expires: 11/30/2015



Sheet No. 80  
Drawing No.

125-R-3





**PHOTO 1**  
NTS 125-R-3



**PHOTO 2**  
NTS 125-R-3



**PHOTO 3**  
NTS 125-R-3



**PHOTO 4**  
NTS 125-R-3



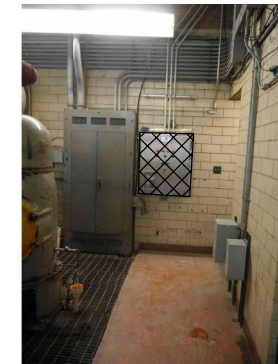
**PHOTO 5**  
NTS 125-R-3



**PHOTO 6**  
NTS 125-R-3



**PHOTO 7**  
NTS 125-R-3



**PHOTO 8**  
NTS 125-R-3



**PHOTO 9**  
NTS 125-R-3



**PHOTO 10**  
NTS 125-R-3

**GENERAL NOTES:**

1. NOT ALL EXISTING CONDITIONS ARE SHOWN. FOR MORE INFORMATION SEE THE REFERENCE DRAWINGS PROVIDED WITH THE CONTRACT DOCUMENTS. CONTRACTOR SHALL FIELD VERIFY EXISTING CONDITIONS PRIOR TO BID.
2. NOT ALL REMOVALS ARE SHOWN ON DRAWINGS. REMOVALS SHALL BE PERFORMED AS NOTED ON THE DRAWINGS, AS SPECIFIED, AND AS FIELD MARKED TO BE REMOVED. THE COMBINATION OF ALL THREE REPRESENT THE FULL SCOPE OF REMOVALS. CONTRACTOR SHALL VERIFY EXISTING CONDITIONS PRIOR TO SUBMITTING BID.
3. ALL EQUIPMENT, PIPING, AND VALVE LOCATIONS ARE APPROXIMATE. CONTRACTOR SHALL FIELD VERIFY DIMENSIONS AND ELEVATIONS PRIOR TO CONSTRUCTION AND/OR FABRICATION.
4. REMOVE ALL CONCRETE ANCHORS, ANCHOR BOLTS, AND OTHER EMBEDMENTS A MINIMUM OF 1" BEYOND FINISHED SURFACE AND PATCH SURFACE WITH PATCHING MORTAR TO MATCH EXISTING.
5. REMOVE EXISTING CONCRETE PADS OF ANY EQUIPMENT BEING REMOVED. REMOVE CONCRETE AND REINFORCEMENT A MINIMUM OF 1" BEYOND FINISHED SURFACE AT ANY LOCATION WHERE NEW CONCRETE PAD WILL NOT COVER ROUGH SURFACE OF REMOVAL. PATCH BACK TO FINISHED SURFACE WITH PATCHING MORTAR.
6. WHERE EQUIPMENT IS INDICATED TO BE REMOVED, REMOVE ALL ASSOCIATED POWER AND CONTROL WIRING AND CONDUIT BACK TO SOURCE. WHERE CONDUIT SYSTEM CONTAINS CIRCUITS TO OTHER EQUIPMENT, RETAIN THESE CIRCUITS AND RELOCATE EXISTING CONDUITS AND EXTEND EXISTING CIRCUITS AS REQUIRED FOR THE INSTALLATION OF NEW EQUIPMENT. PLUG ALL PIPE AND CONDUITS AT FLOOR AND WALL PENETRATIONS WITH NON-SHRINK GROUT WHERE OPENINGS ARE LESS THAN 12" DIAMETER.
7. REMOVE PIPE SUPPORTS.
8. PLUG ABANDONED PIPE PENETRATIONS WITH NON-SHRINK GROUT.
9. SEE SECTION 01 11 00 FOR PROJECT CONSTRAINTS.



07/09/2014  
Expires: 11/30/2015

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Drawn By	KDS
Checked By	EPC
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Project No.	12614
Project Date	JUNE 2014

**CITY OF JOLIET**  
**EAST SIDE WASTEWATER TREATMENT PLANT**  
**INFLUENT PUMP STATION AND SCREEN REPLACEMENT**  
**JOLIET, IL**  
**ABANDONED INFLUENT PUMP STATION**  
**PLAN**



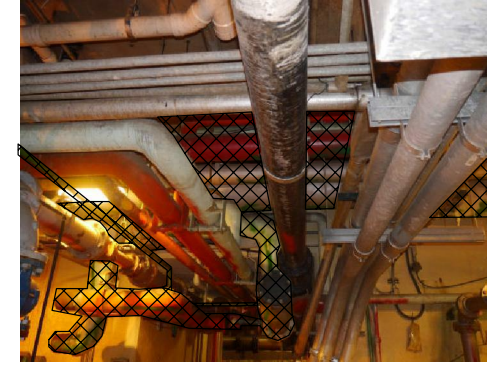
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NTS 125-R-2



**PHOTO 2**  
NTS 125-R-2



**PHOTO 3**  
NTS 125-R-2



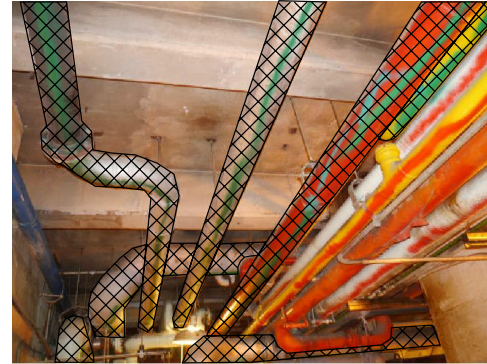
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NTS 125-R-2



**PHOTO 5**  
NTS 125-R-2



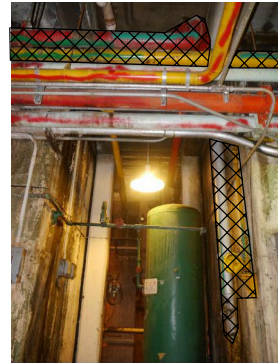
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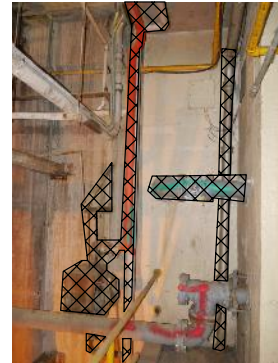
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NTS 125-R-2



**PHOTO 8**  
NTS 125-R-2



**PHOTO 9**  
NTS 125-R-2



**PHOTO 10**  
NTS 125-R-2



**PHOTO 11**  
NTS 125-R-2

**GENERAL NOTES:**

1. NOT ALL EXISTING CONDITIONS ARE SHOWN. FOR MORE INFORMATION SEE THE REFERENCE DRAWINGS PROVIDED WITH THE CONTRACT DOCUMENTS. CONTRACTOR SHALL FIELD VERIFY EXISTING CONDITIONS PRIOR TO BID.
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3. ALL EQUIPMENT, PIPING, AND VALVE LOCATIONS ARE APPROXIMATE. CONTRACTOR SHALL FIELD VERIFY DIMENSIONS AND ELEVATIONS PRIOR TO CONSTRUCTION AND/OR FABRICATION.
4. REMOVE ALL CONCRETE ANCHORS, ANCHOR BOLTS, AND OTHER EMBEDMENTS A MINIMUM OF 1" BEYOND FINISHED SURFACE AND PATCH SURFACE WITH PATCHING MORTAR TO MATCH EXISTING.
5. REMOVE EXISTING CONCRETE PADS OF ANY EQUIPMENT BEING REMOVED. REMOVE CONCRETE AND REINFORCEMENT A MINIMUM OF 1" BEYOND FINISHED SURFACE AT ANY LOCATION WHERE NEW CONCRETE PAD WILL NOT COVER ROUGH SURFACE OF REMOVAL. PATCH BACK TO FINISHED SURFACE WITH PATCHING MORTAR.
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7. REMOVE PIPE SUPPORTS.
8. PLUG ABANDONED PIPE PENETRATIONS WITH NON-SHRINK GROUT.
9. SEE SECTION 01 11 00 FOR PROJECT CONSTRUCTION.

  
 Eric P. Cockrell  
 07/09/2014  
 Expires: 11/30/2015

Revision Number	Revision Description	Drawn By	Checked By	Date

CITY OF JOLIET  
 EAST SIDE WASTEWATER TREATMENT PLANT  
 INFLUENT PUMP STATION AND SCREEN REPLACEMENT  
 JOLIET, IL  
 ABANDONED INFLUENT PUMP STATION  
 PLAN



**PHOTO 1**  
NTS 125-R-1



**PHOTO 2**  
NTS 125-R-1



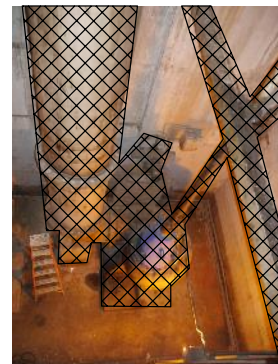
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NTS 125-R-1



**PHOTO 4**  
NTS 125-R-1



**PHOTO 5**  
NTS 125-R-1



**PHOTO 6**  
NTS 125-R-1

**GENERAL NOTES:**

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7. REMOVE PIPE SUPPORTS.
8. PLUG ABANDONED PIPE PENETRATIONS WITH NON-SHRINK GROUT.
9. SEE SECTION 01 11 00 FOR PROJECT I

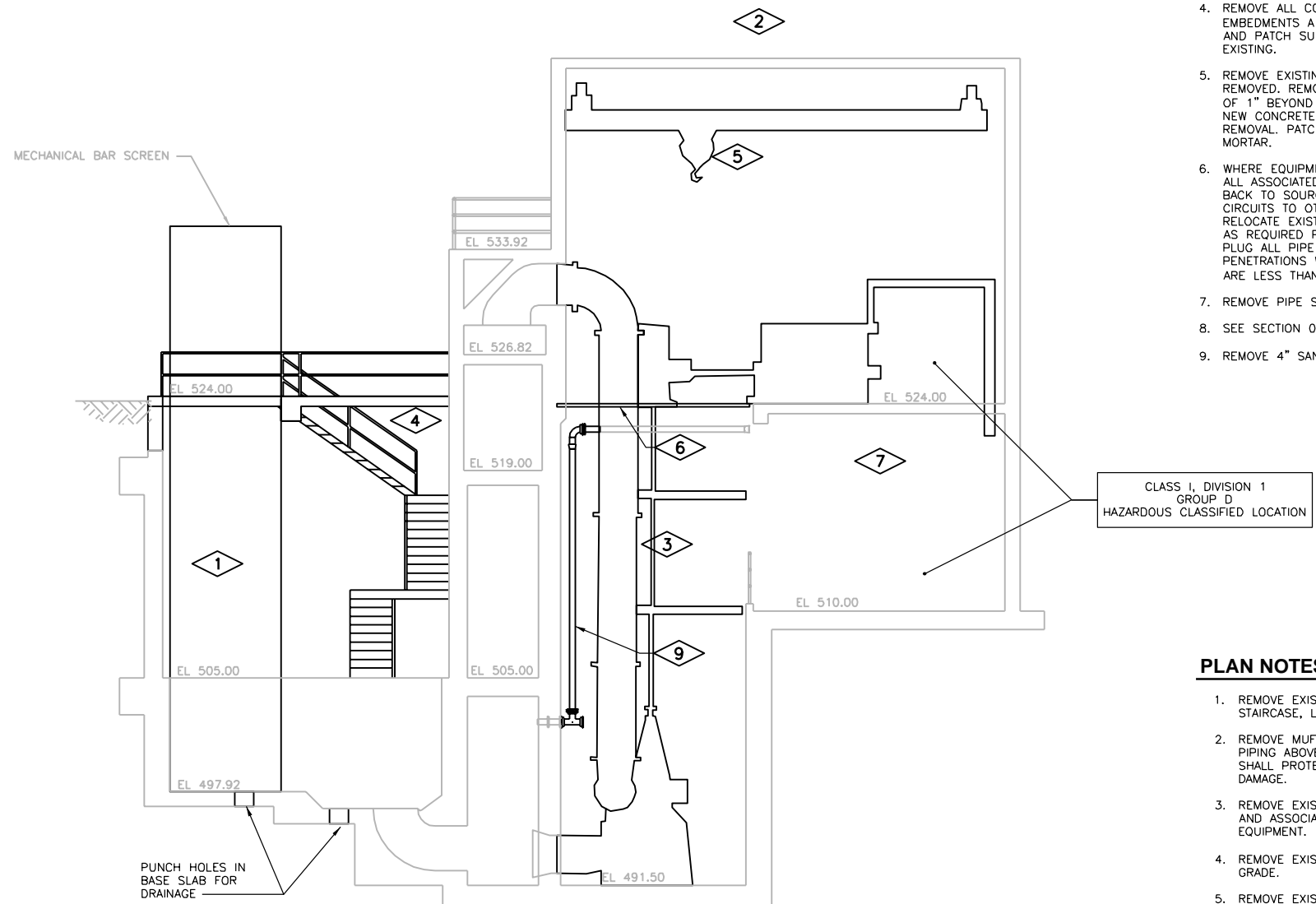


*Eric P. Cockerill*  
07/09/2014  
Expires: 11/30/2015

Revision Number	Revision Description	Drawn By	Checked By	Date

Designed By	KDS
Drawn By	KDS
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Approved By	EPC
Filename	125RP2.DWG
Project No.	12614
Project Date	JUNE 2014

CITY OF JOLIET  
EAST SIDE WASTEWATER TREATMENT PLANT  
INFLUENT PUMP STATION AND SCREEN REPLACEMENT  
JOLIET, IL  
ABANDONED INFLUENT PUMP STATION  
PLAN



**GENERAL NOTES:**

1. NOT ALL ITEMS TO BE REMOVED ARE SHOWN. FULL REMOVALS SHALL BE PERFORMED AS NOTED ON THE DRAWINGS AND AS SPECIFIED. CONTRACTOR SHALL VERIFY EXISTING CONDITIONS PRIOR TO SUBMITTING BID.
2. FOR MORE INFORMATION ON THE EXISTING CONDITIONS SEE THE REFERENCE DRAWINGS PROVIDED WITH THE CONTRACT DOCUMENTS.
3. ALL EQUIPMENT, PIPING, AND VALVE LOCATIONS ARE APPROXIMATE. CONTRACTOR SHALL FIELD VERIFY DIMENSIONS AND ELEVATIONS PRIOR TO CONSTRUCTION AND/OR FABRICATION.
4. REMOVE ALL CONCRETE ANCHORS, ANCHOR BOLTS, AND OTHER EMBEDMENTS A MINIMUM OF 1" BEYOND FINISHED SURFACE AND PATCH SURFACE WITH PATCHING MORTAR TO MATCH EXISTING.
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7. REMOVE PIPE SUPPORTS.
8. SEE SECTION 01 11 00 FOR PROJECT CONSTRAINTS.
9. REMOVE 4" SAN PIPING.

**PLAN NOTES:**

1. REMOVE EXISTING SCREENING EQUIPMENT, STAIRCASE, LIGHTING, AND ELECTRICAL CONDUIT.
2. REMOVE MUFFLERS ON THE ROOF. CUT AND CAP PIPING ABOVE ROOF MEMBRANE. CONTRACTOR SHALL PROTECT ROOFING MEMBRANE FROM DAMAGE.
3. REMOVE EXISTING INFLUENT PUMPS, ENGINES, AND ASSOCIATED PIPING AND ELECTRICAL EQUIPMENT.
4. REMOVE EXISTING SLAB AND WALL 36" BELOW GRADE.
5. REMOVE EXISTING OVERHEAD CRANE.
6. REMOVE GRATING AND SUPPORTS IN FLOOR OPENING.
7. EXISTING PIPING AND EQUIPMENT NOT SHOWN. OWNER HAS FIELD MARKED ADDITIONAL PIPING TO BE REMOVED.



*Eric P. Cockerill*  
07/02/2014  
Expires: 11/30/2015

Revision Number	Revision Description	Drawn By	Checked By	Date

Designed By	KDS
Drawn By	KDS
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Filename	125RS1.DWG
Project No.	12614
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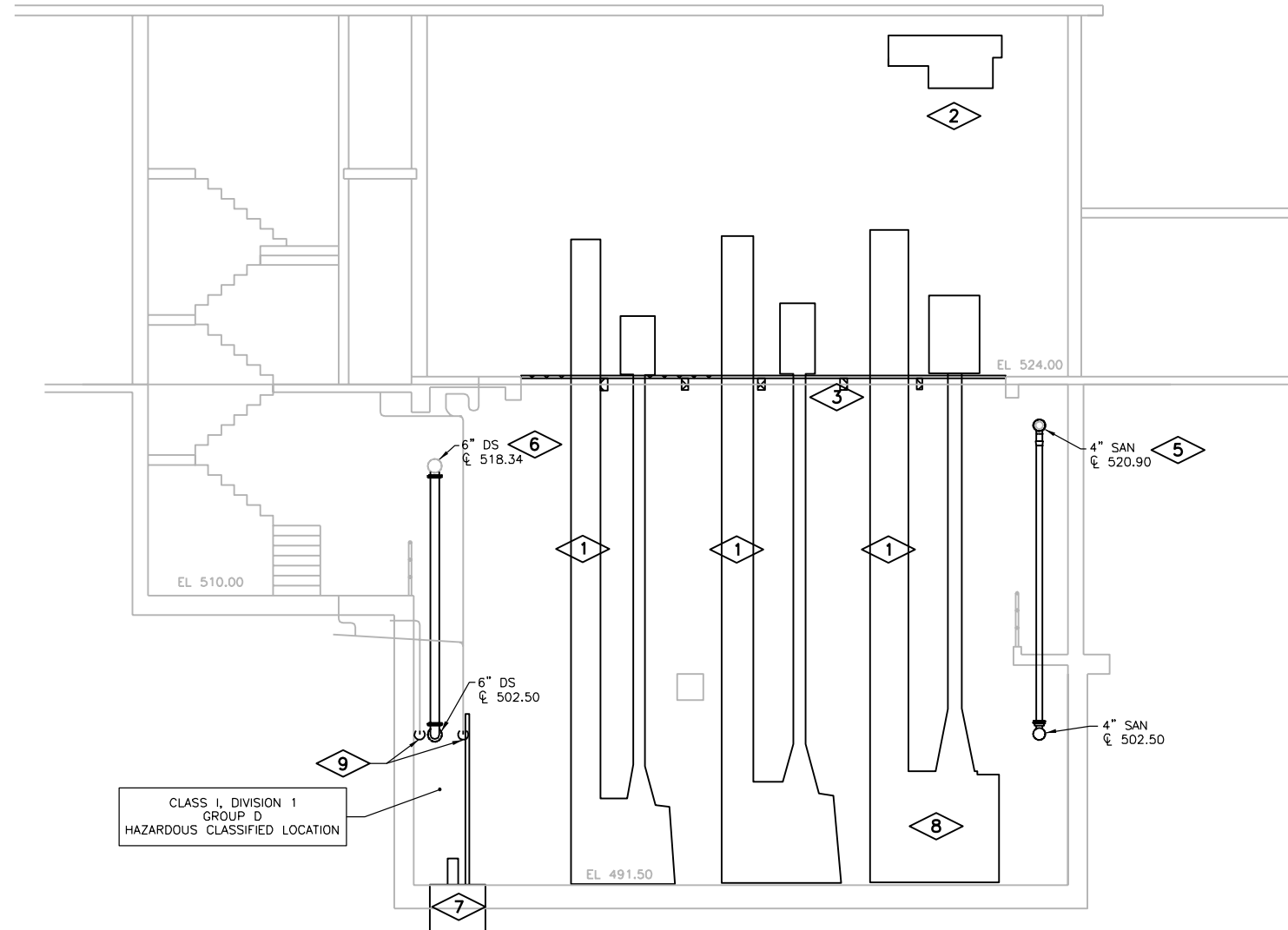
CITY OF JOLIET  
EAST SIDE WASTEWATER TREATMENT PLANT  
INFLUENT PUMP STATION AND SCREEN REPLACEMENT  
JOLIET, IL  
ABANDONED INFLUENT PUMP STATION  
SECTION



Sheet No. 84

Drawing No. 125-R-7

4



CLASS I, DIVISION 1  
GROUP D  
HAZARDOUS CLASSIFIED LOCATION



**GENERAL NOTES:**

- NOT ALL ITEMS TO BE REMOVED ARE SHOWN. FULL REMOVALS SHALL BE PERFORMED AS NOTED ON THE DRAWINGS AND AS SPECIFIED. CONTRACTOR SHALL VERIFY EXISTING CONDITIONS PRIOR TO SUBMITTING BID.
- FOR MORE INFORMATION ON THE EXISTING CONDITIONS SEE THE REFERENCE DRAWINGS PROVIDED WITH THE CONTRACT DOCUMENTS.
- ALL EQUIPMENT, PIPING, AND VALVE LOCATIONS ARE APPROXIMATE. CONTRACTOR SHALL FIELD VERIFY DIMENSIONS AND ELEVATIONS PRIOR TO CONSTRUCTION AND/OR FABRICATION.
- REMOVE ALL CONCRETE ANCHORS, ANCHOR BOLTS, AND OTHER EMBEDMENTS A MINIMUM OF 1" BEYOND FINISHED SURFACE AND PATCH SURFACE WITH PATCHING MORTAR TO MATCH EXISTING.
- REMOVE EXISTING CONCRETE PADS OF ANY EQUIPMENT BEING REMOVED. REMOVE CONCRETE AND REINFORCEMENT A MINIMUM OF 1" BEYOND FINISHED SURFACE AT ANY LOCATION WHERE NEW CONCRETE PAD WILL NOT COVER ROUGH SURFACE OF REMOVAL. PATCH BACK TO FINISHED SURFACE WITH PATCHING MORTAR.
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- REMOVE PIPE SUPPORTS.
- SEE SECTION 01 11 00 FOR PROJECT CONSTRAINTS.

**PLAN NOTES:**

- REMOVE EXISTING INFLUENT PUMPS, ENGINES, AND ASSOCIATED PIPING AND ELECTRICAL EQUIPMENT. THIS INCLUDES ALL NATURAL GAS, EXHAUST, COOLING, AND DIGESTER GAS PIPING. ALL PIPING TO BE REMOVED WILL BE FIELD MARKED BY OWNER.
- REMOVE EXISTING OVERHEAD CRANE.
- REMOVE GRATING AND SUPPORTS IN FLOOR OPENING.
- REMOVE MUFLERS ON THE ROOF. CUT AND CAP PIPING ABOVE ROOF MEMBRANE. CONTRACTOR SHALL PROTECT ROOFING MEMBRANE FROM DAMAGE.
- REMOVE 4" SAN.
- REMOVE 6" DS.
- REMOVE EXISTING SUMP PUMP AND ASSOCIATED PIPING AND ELECTRICAL EQUIPMENT.
- SALVAGE INFLUENT PUMP AND PROVIDE PUMP TO OWNER.
- REMOVE SANITARY PIPING FROM GRADE AND INTERMEDIATE LEVEL FLOOR DRAINS FROM PENETRATION INTO WETWELL TO LOCATION REQUIRED TO EXTEND PIPING SYSTEM DOWN TO SUMP BELOW. FILL PIPE THROUGH WETWELL WALL WITH NON-SHRINK GROUT.



*Eric P. Cockerill*  
07/09/2014  
Expires: 11/30/2015

Revision Number	Revision Description	Drawn By	Checked By	Date

**DESIGNED BY:** KDS  
**DRAWN BY:** KDS  
**CHECKED BY:** NWC  
**APPROVED BY:** EPC  
**FILENAME:** 125RS1.DWG  
**PROJECT NO.:** 12614  
**PROJECT DATE:** JUNE 2014

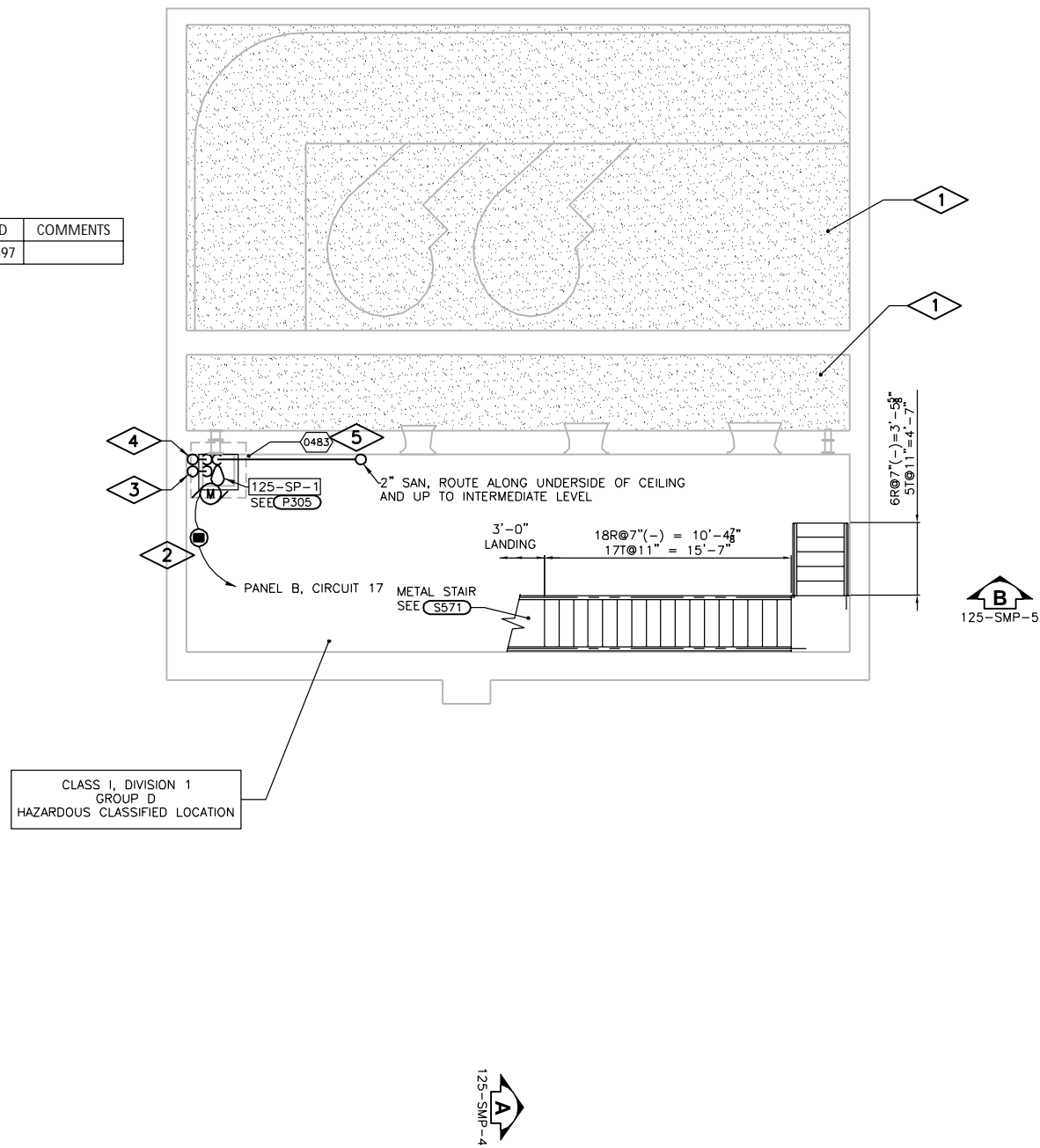
**CITY OF JOLIET**  
**EAST SIDE WASTEWATER TREATMENT PLANT**  
**INFLUENT PUMP STATION AND SCREEN REPLACEMENT**  
**JOLIET, IL**  
**ABANDONED INFLUENT PUMP STATION**  
**SECTION**

**DONOHUE**

Sheet No. **85**  
 Drawing No. **125-R-8**

ID	TAG NAME	DESCRIPTION	DETAIL	WIRING	DESTINATION	ID	COMMENTS
0483	125-LSH-0483	VERTICAL FLOAT SWITCH	N275	2#14	SCC-E	0497	

125-SMP-5  
B



LOWER LEVEL PLAN

0 3' 16'

**GENERAL NOTES:**

1. NOT ALL EQUIPMENT AND PIPING IS SHOWN. REFERENCE DRAWINGS HAVE BEEN PROVIDED WITH THE CONTRACT DOCUMENTS. CONTRACTOR SHALL FIELD VERIFY EXISTING CONDITIONS PRIOR TO BIDDING.

**PLAN NOTES:**

1. FILL AREA WITH STRUCTURAL FILL. OPENINGS MAY BE CUT IN CHANNEL SLABS TO FACILITATE FILLING OPERATIONS.
2. PROVIDE NEMA 7 JUNCTION BOX ON NORTH WALL ABOVE SUMP PUMP - POWER CONNECTION SHOWN ON WEST WALL FOR DRAWING CLARITY ONLY. LOCATE JUNCTION BOX TO RE-USE EXISTING RACEWAY TO PANEL B. JUNCTION BOX TO SERVE AS SPLICE POINT BETWEEN VENDOR SUPPLIED SUMP PUMP CABLE AND CONTRACTOR PROVIDED WIRE. PROVIDE NEW CONDUCTORS IN EXISTING RACEWAY. PROVIDE SEAL OFF FITTINGS PER NEC.
3. 4" SAN, CONNECT TO EXISTING SANITARY PIPING WHICH PREVIOUSLY DISCHARGED TO WET WELL. EXTEND DOWN AND DISCHARGE INTO SUMP. PROVIDE UNION OR FLANGED CONNECTION IN PIPING OUTSIDE OF THE VERTICAL PROJECTION OF THE COVER TO ALLOW FOR COVER REMOVAL. PROVIDE FLANGED CONNECTION AT COVER INTERFACE.
4. 2" V FROM SUMP COVER. EXTEND UP TO INTERMEDIATE LEVEL AND CONNECT TO EXISTING PLUMBING VENT SYSTEM.
5. VERIFY AND USE EXISTING CONDUIT TO SCC-E. PROVIDE SEAL-OFFS AS REQUIRED DUE TO RATED SPACE. PROVIDE INTRINSICALLY SAFE RELAY IN PLC PANEL.

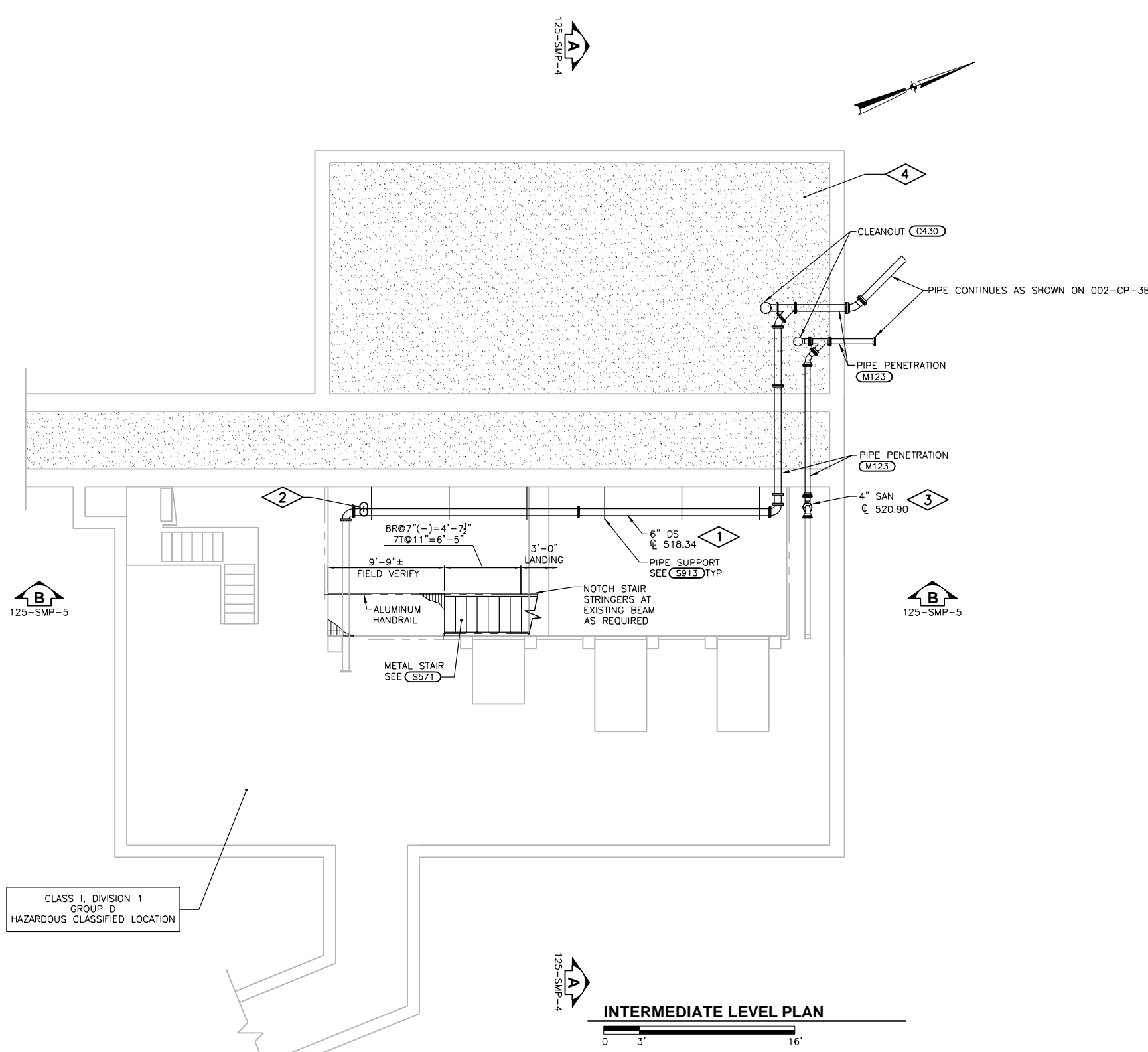
Revision Number	Revision Description	Date

**CITY OF JOLIET  
EAST SIDE WASTEWATER TREATMENT PLANT  
INFLUENT PUMP STATION AND SCREEN REPLACEMENT  
JOLIET, IL  
ABANDONED INFLUENT PUMP STATION  
PLAN**

Jeffery A. Willis  
7/9/14  
Exp: 11/30/15

Michael Stone  
7-9-14  
Exp: 11-30-15

Philip Englebert  
7-9-14  
Exp: 11-30-14



**GENERAL NOTES:**

1. NOT ALL EQUIPMENT AND PIPING IS SHOWN. REFERENCE DRAWINGS HAVE BEEN PROVIDED WITH THE CONTRACT DOCUMENTS. CONTRACTOR SHALL FIELD VERIFY EXISTING CONDITIONS PRIOR TO BIDDING.

**PLAN NOTES:**

1. REROUTE 6" DIGESTER SUPERNATANT LINE TO SSMH-2.
2. 2" SAN FROM SUMP PUMP BELOW. ROUTE UP ALONG WALL, OVER 6" SUPERNATANT, AND DOWN INTO 6" SUPERNATANT. CONNECT WITH SERVICE SADDLE.
3. REROUTE 4" SAN LINE TO SSMH-2.
4. FILL AREA WITH STRUCTURAL FILL. OPENING MAY BE CUT IN CHANNEL SLABS TO FACILITATE FILLING OPERATIONS.

CLASS 1, DIVISION 1  
GROUP D  
HAZARDOUS CLASSIFIED LOCATION

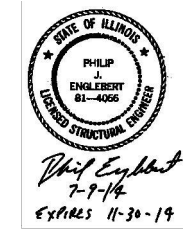
**INTERMEDIATE LEVEL PLAN**



Revision Number	Revision Description	Drawn By	Checked By	Date

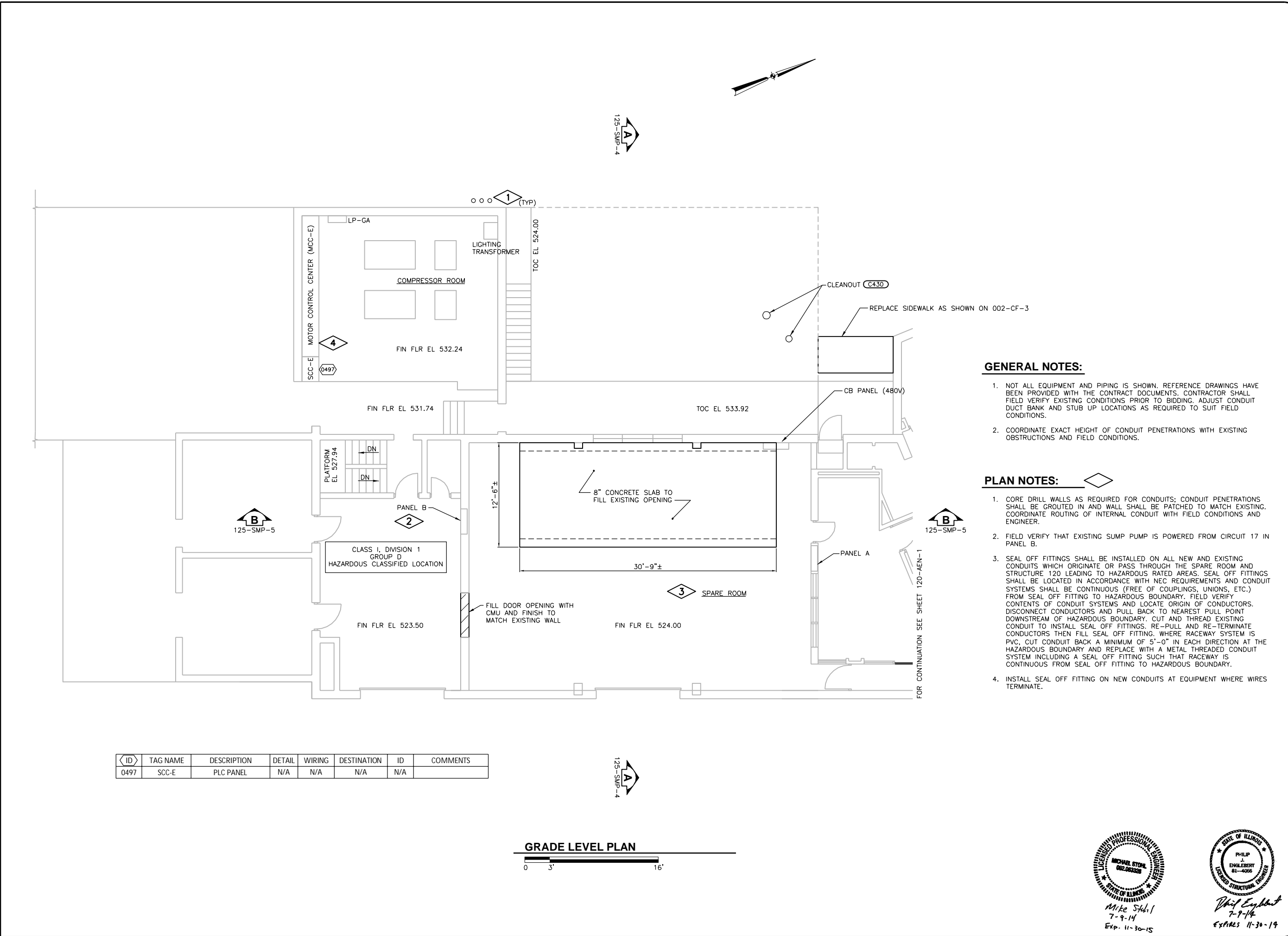
Designed By	KDS
Drawn By	KDS
Checked By	EPC
Approved By	EPC
Filename	125MP1.DWG
Project No.	12614
Project Date	JUNE 2014

CITY OF JOLIET  
EAST SIDE WASTEWATER TREATMENT PLANT  
INFLUENT PUMP STATION AND SCREEN REPLACEMENT  
JOLIET, IL  
ABANDONED INFLUENT PUMP STATION  
PLAN



Sheet No. 87

Drawing No. 125-SMP-2



**GENERAL NOTES:**

1. NOT ALL EQUIPMENT AND PIPING IS SHOWN. REFERENCE DRAWINGS HAVE BEEN PROVIDED WITH THE CONTRACT DOCUMENTS. CONTRACTOR SHALL FIELD VERIFY EXISTING CONDITIONS PRIOR TO BIDDING. ADJUST CONDUIT DUCT BANK AND STUB UP LOCATIONS AS REQUIRED TO SUIT FIELD CONDITIONS.
2. COORDINATE EXACT HEIGHT OF CONDUIT PENETRATIONS WITH EXISTING OBSTRUCTIONS AND FIELD CONDITIONS.

**PLAN NOTES:**

1. CORE DRILL WALLS AS REQUIRED FOR CONDUITS; CONDUIT PENETRATIONS SHALL BE GROUTED IN AND WALL SHALL BE PATCHED TO MATCH EXISTING. COORDINATE ROUTING OF INTERNAL CONDUIT WITH FIELD CONDITIONS AND ENGINEER.
2. FIELD VERIFY THAT EXISTING SUMP PUMP IS POWERED FROM CIRCUIT 17 IN PANEL B.
3. SEAL OFF FITTINGS SHALL BE INSTALLED ON ALL NEW AND EXISTING CONDUITS WHICH ORIGINATE OR PASS THROUGH THE SPARE ROOM AND STRUCTURE 120 LEADING TO HAZARDOUS RATED AREAS. SEAL OFF FITTINGS SHALL BE LOCATED IN ACCORDANCE WITH NEC REQUIREMENTS AND CONDUIT SYSTEMS SHALL BE CONTINUOUS (FREE OF COUPLINGS, UNIONS, ETC.) FROM SEAL OFF FITTING TO HAZARDOUS BOUNDARY. FIELD VERIFY CONTENTS OF CONDUIT SYSTEMS AND LOCATE ORIGIN OF CONDUCTORS. DISCONNECT CONDUCTORS AND PULL BACK TO NEAREST PULL POINT DOWNSTREAM OF HAZARDOUS BOUNDARY. CUT AND THREAD EXISTING CONDUIT TO INSTALL SEAL OFF FITTINGS. RE-PULL AND RE-TERMINATE CONDUCTORS THEN FILL SEAL OFF FITTING. WHERE RACEWAY SYSTEM IS PVC, CUT CONDUIT BACK A MINIMUM OF 5'-0" IN EACH DIRECTION AT THE HAZARDOUS BOUNDARY AND REPLACE WITH A METAL THREADED CONDUIT SYSTEM INCLUDING A SEAL OFF FITTING SUCH THAT RACEWAY IS CONTINUOUS FROM SEAL OFF FITTING TO HAZARDOUS BOUNDARY.
4. INSTALL SEAL OFF FITTING ON NEW CONDUITS AT EQUIPMENT WHERE WIRES TERMINATE.

ID	TAG NAME	DESCRIPTION	DETAIL	WIRING	DESTINATION	ID	COMMENTS
0497	SCC-E	PLC PANEL	N/A	N/A	N/A	N/A	

**GRADE LEVEL PLAN**



Revision Number	Revision Description	Drawn By	Checked By	Date

Designed By	AJT
Drawn By	AJT
Checked By	PEJ
Approved By	PEJ
Filename	125MP1.DWG
Project No.	12614
Project Date	JUNE 2014

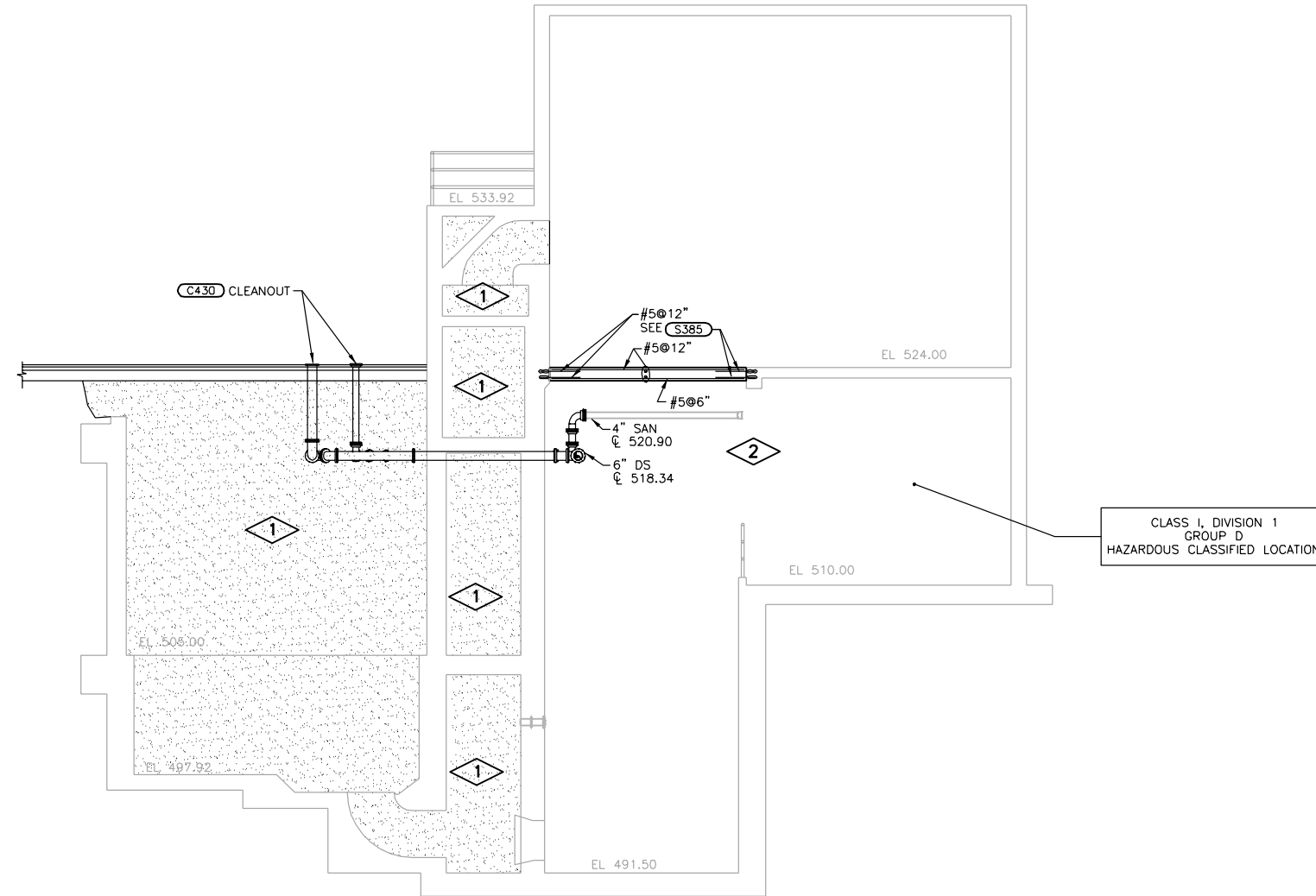
**CITY OF JOLIET  
EAST SIDE WASTEWATER TREATMENT PLANT  
INFLUENT PUMP STATION AND SCREEN REPLACEMENT  
JOLIET, IL  
ABANDONED INFLUENT PUMP STATION  
PLAN**

MICHAEL STUHL  
 002.063326  
 7-9-14  
 Exp. 11-30-15

PHILIP J. ENLEBERT  
 01-4066  
 7-9-14  
 Expires 11-30-14

Sheet No. 88  
 Drawing No. 125-SEN-3





**GENERAL NOTES:**

1. NOT ALL EQUIPMENT AND PIPING IS SHOWN. REFERENCE DRAWINGS HAVE BEEN PROVIDED WITH THE CONTRACT DOCUMENTS. CONTRACTOR SHALL FIELD VERIFY EXISTING CONDITIONS PRIOR TO BIDDING.

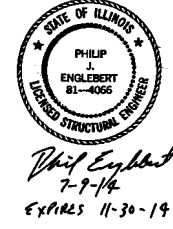
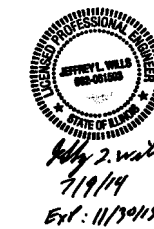
**PLAN NOTES:**

1. FILL AREA WITH STRUCTURAL FILL. OPENINGS MAY BE CUT IN CHANNEL SLABS TO FACILITATE FILLING OPERATIONS.
2. SEE REFERENCE DRAWINGS FOR PIPING CONTINUATION.

CLASS 1, DIVISION 1  
GROUP D  
HAZARDOUS CLASSIFIED LOCATION



125-SPEN-1  
125-SMP-2  
125-SEN-3

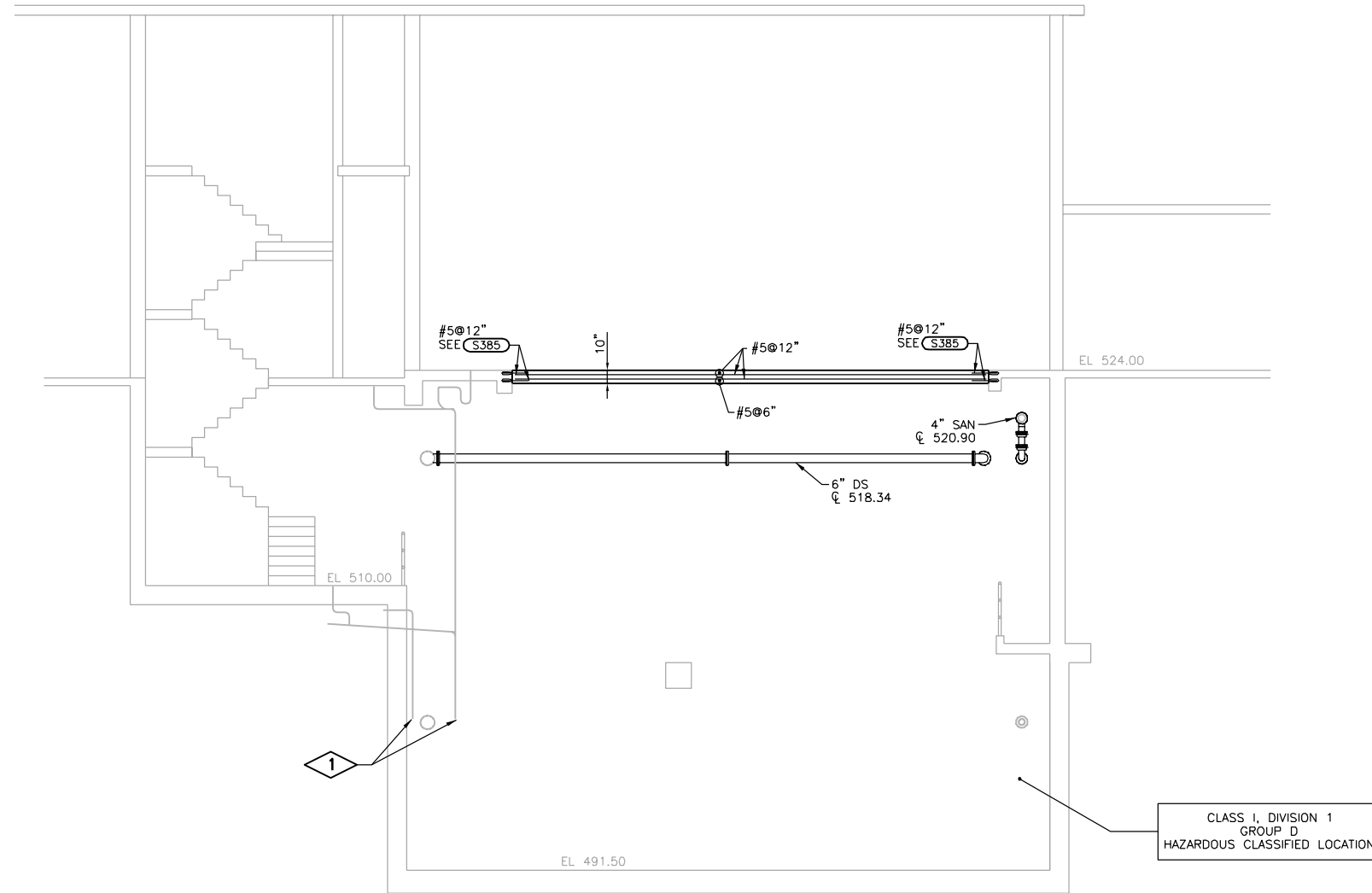


Revision Number	Revision Description	Checked By	Date

Designed By	AJT
Drawn By	AJT
Checked By	PJE
Approved By	PJE
Filename	125MS1.DWG
Project No.	12614
Project Date	JUNE 2014

CITY OF JOLIET  
EAST SIDE WASTEWATER TREATMENT PLANT  
INFLUENT PUMP STATION AND SCREEN REPLACEMENT  
JOLIET, IL  
ABANDONED INFLUENT PUMP STATION  
SECTION

Sheet No.	89
Drawing No.	125-SMP-4



**GENERAL NOTES:**

1. NOT ALL EQUIPMENT AND PIPING IS SHOWN. REFERENCE DRAWINGS HAVE BEEN PROVIDED WITH THE CONTRACT DOCUMENTS. CONTRACTOR SHALL FIELD VERIFY EXISTING CONDITIONS PRIOR TO BIDDING.

**PLAN NOTES:**



1. EXTEND PIPING SYSTEM DOWN TO SUMP BELOW.

CLASS 1, DIVISION 1  
GROUP D  
HAZARDOUS CLASSIFIED LOCATION



APPROVED  
  
 Jeffrey L. Wells  
 7/9/14  
 Exp: 11/30/15

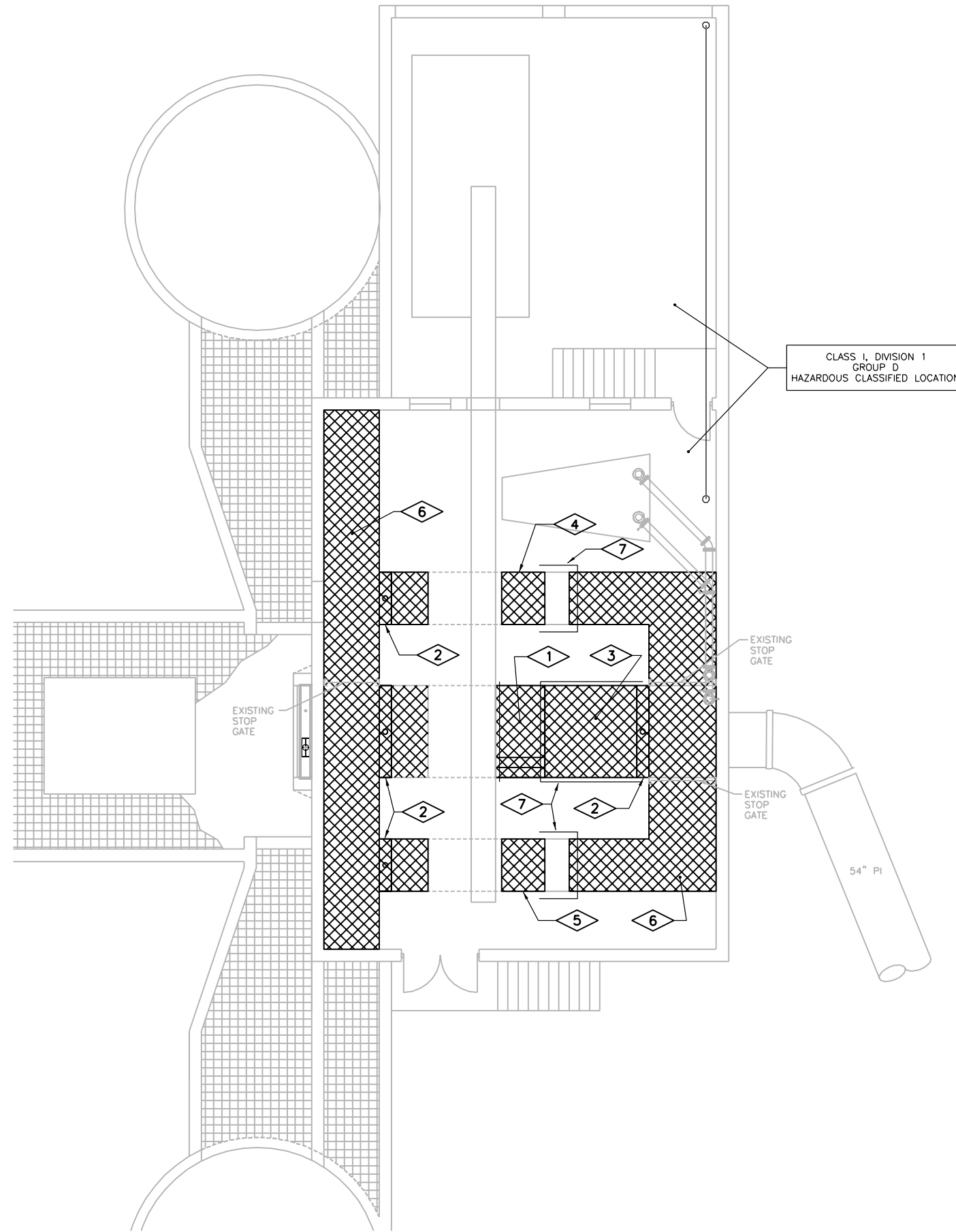
Eric P. Cockerill  
 07/09/2014  
 Expires 11/30/2015

Philip J. Englebert  
 7-9-14  
 EXPIRES 11-30-19

Revision Number	Revision Description	Drawn By	Checked By	Date

Designed By	AJT
Drawn By	AJT
Checked By	PJE
Approved By	PJE
Filename	125MS1.DWG
Project No.	12614
Project Date	JUNE 2014

CITY OF JOLIET  
 EAST SIDE WASTEWATER TREATMENT PLANT  
 INFLUENT PUMP STATION AND SCREEN REPLACEMENT  
 JOLIET, IL  
 ABANDONED INFLUENT PUMP STATION  
 SECTION



CLASS 1, DIVISION 1  
GROUP D  
HAZARDOUS CLASSIFIED LOCATION

**PLAN NOTES:**

- 1. REMOVE EXISTING STEPS AND CONCRETE PLATFORM IN CHANNEL.
- 2. REMOVE EXISTING GATES.
- 3. REMOVE EXISTING TRASH RACK.
- 4. REMOVE EXISTING MECHANICAL BAR SCREEN AND TURN OVER TO OWNER.
- 5. REMOVE EXISTING MECHANICAL BAR SCREEN.
- 6. REMOVE ALL EXISTING GRATING.
- 7. REMOVE ALL EXISTING HANDRAIL.

**GENERAL NOTES:**

- 1. NOT ALL EQUIPMENT AND PIPING IS SHOWN. REFERENCE DRAWINGS HAVE BEEN PROVIDED WITH THE CONTRACT DOCUMENTS. CONTRACTOR SHALL FIELD VERIFY EXISTING CONDITIONS PRIOR TO BIDDING.
- 2. ALL EQUIPMENT, PIPING, AND VALVE LOCATIONS ARE APPROXIMATE. CONTRACTOR SHALL FIELD VERIFY DIMENSIONS AND ELEVATIONS PRIOR TO CONSTRUCTION AND/OR FABRICATION.
- 3. REMOVE ALL CONCRETE ANCHORS, ANCHOR BOLTS, AND OTHER EMBEDMENTS A MINIMUM OF 1" BEYOND FINISHED SURFACE AND PATCH SURFACE WITH PATCHING MORTAR TO MATCH EXISTING.
- 4. WHERE EQUIPMENT IS INDICATED TO BE REMOVED, REMOVE ALL ASSOCIATED POWER AND CONTROL WIRING AND CONDUIT BACK TO SOURCE. WHERE CONDUIT SYSTEM CONTAINS CIRCUITS TO OTHER EQUIPMENT, RETAIN THESE CIRCUITS AND RELOCATE EXISTING CONDUITS AND EXTEND EXISTING CIRCUITS AS REQUIRED FOR THE INSTALLATION OF NEW EQUIPMENT. PLUG ALL PIPE AND CONDUITS AT FLOOR AND WALL PENETRATIONS WITH NON-SHRINK GROUT WHERE OPENINGS ARE LESS THAN 12" DIAMETER.

**PLAN**



Revision Number	Revision Description	Drawn By	Checked By	Date

Designed By	KDS
Drawn By	KDS
Checked By	EPC
Approved By	EPC
Filename	13ORP1.DWG
Project No.	12614
Project Date	JUNE 2014

CITY OF JOLIET  
EAST SIDE WASTEWATER TREATMENT PLANT  
INFLUENT PUMP STATION AND SCREEN REPLACEMENT  
JOLIET, IL  
PRELIMINARY TREATMENT BUILDING  
PLAN



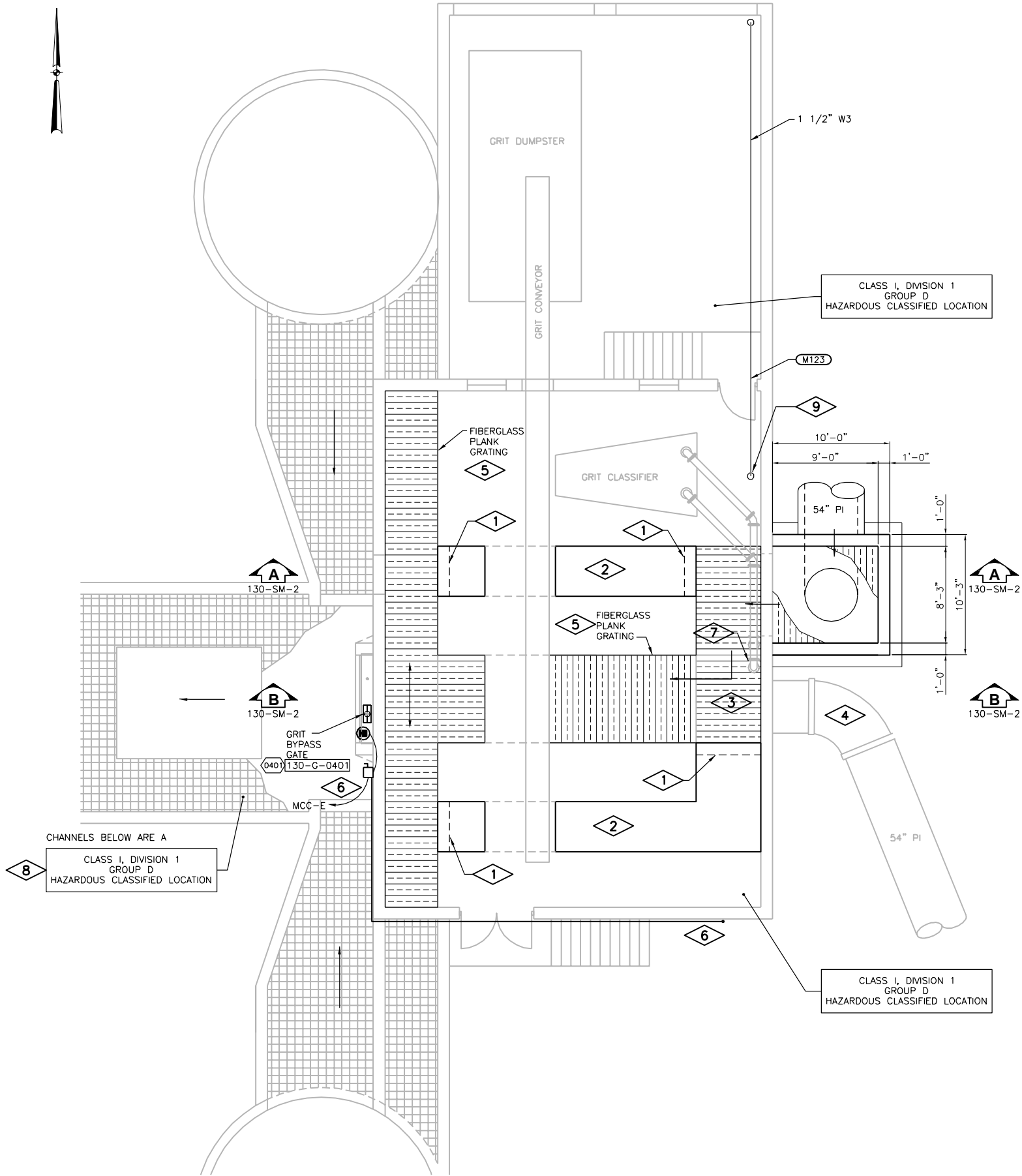
Sheet No. 91  
Drawing No.

130-R-1



*Eric P. Cockerill*  
07/09/2014  
Expires 11/30/2015

ID	TAG NAME	DESCRIPTION	DETAIL	WIRING	DESTINATION	ID	COMMENTS
0401	130-G-0401	GRIT BYPASS GATE	MFR.	10#14	SCC-E	0497	LOCATED IN STR. 125



**GENERAL NOTES:**

1. NOT ALL EQUIPMENT AND PIPING IS SHOWN. REFERENCE DRAWINGS HAVE BEEN PROVIDED WITH THE CONTRACT DOCUMENTS. CONTRACTOR SHALL FIELD VERIFY EXISTING CONDITIONS PRIOR TO BIDDING. ADJUST CONDUIT DUCT BANK AND STUB UP LOCATIONS AS REQUIRED TO SUIT FIELD CONDITIONS.
2. SEE SECTION 01 11 00 FOR CONSTRUCTION CONSTRAINTS.

**PLAN NOTES:**

1. 8" CONCRETE WALL WITH #5@12" EW. DOWEL TO EXISTING WALLS WITH #5@12".
2. FILL CHANNEL WITH FLOWABLE FILL AND CAP WITH 6" CONCRETE SLAB.
3. FILL SUMP WITH FLOWABLE FILL AND CAP WITH 6" CONCRETE SLAB.
4. FILL PIPE WITH FLOWABLE FILL.
5. FIBERGLASS GRATING SUPPORTS TO BE PROVIDED BY GRATING MANUFACTURER.
6. WALL MOUNTED DISCONNECT. ROUTE CONDUITS EXPOSED ALONG WEST AND SOUTH FACES OF STRUCTURES ABOVE DOOR OPENINGS BEFORE ENTERING UNDERGROUND DUCTBANK ON SOUTHEAST CORNER OF STRUCTURE.
7. CUT HOLE IN FIBERGLASS PLANK GRATING AT PIPE PENETRATION.
8. ENVELOPES 18-INCHES ABOVE AND 10-FOOT HORIZONTALLY OUT FROM CHANNEL OPENINGS ARE A

CLASS I, DIVISION 2  
GROUP D  
HAZARDOUS CLASSIFIED LOCATION

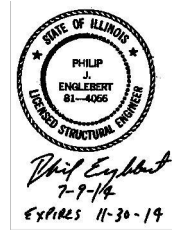
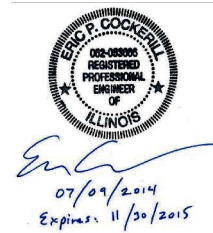
SEE NFPA 820 FOR INFORMATION.

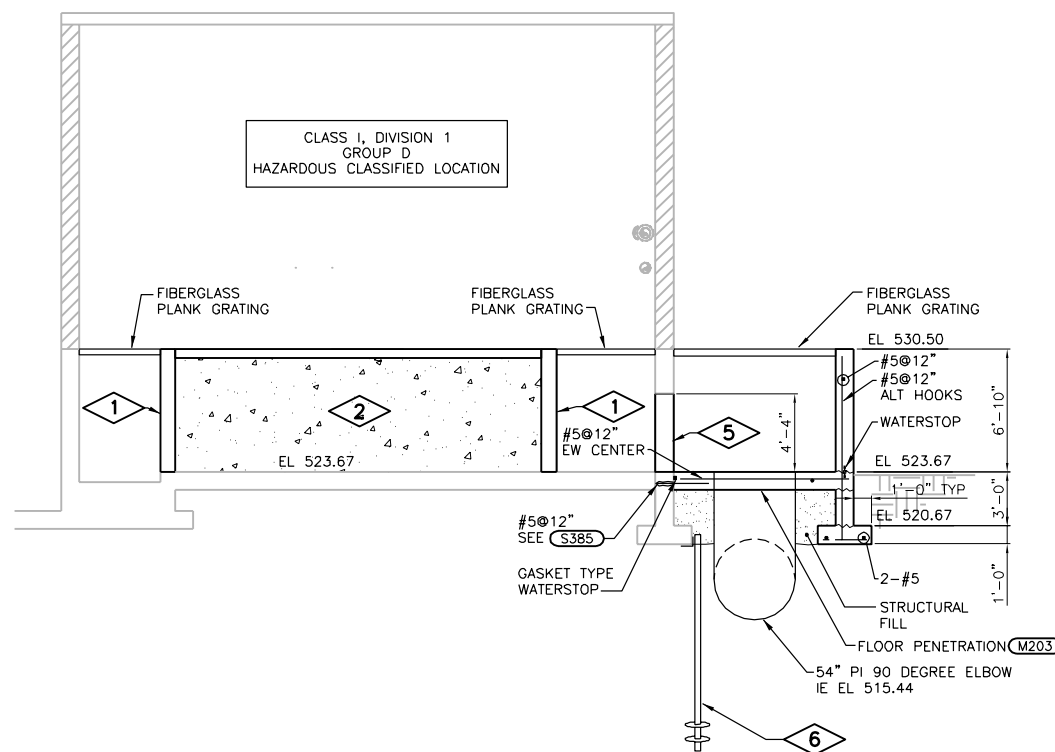
9. ROUTE 1 1/2" W3 TO LOCATION APPROVED BY OWNER. PROVIDE FITTINGS AND ISOLATION VALVES REQUIRED TO CONNECT TO EXISTING PIPING.

Date	Checked By	Drawn By	Revision Description	Revision Number

Designed By	AJT
Drawn By	AJT
Checked By	PJE
Approved By	PJE
Filename	130SMENP1.DWG
Project No.	12614
Project Date	JUNE 2014

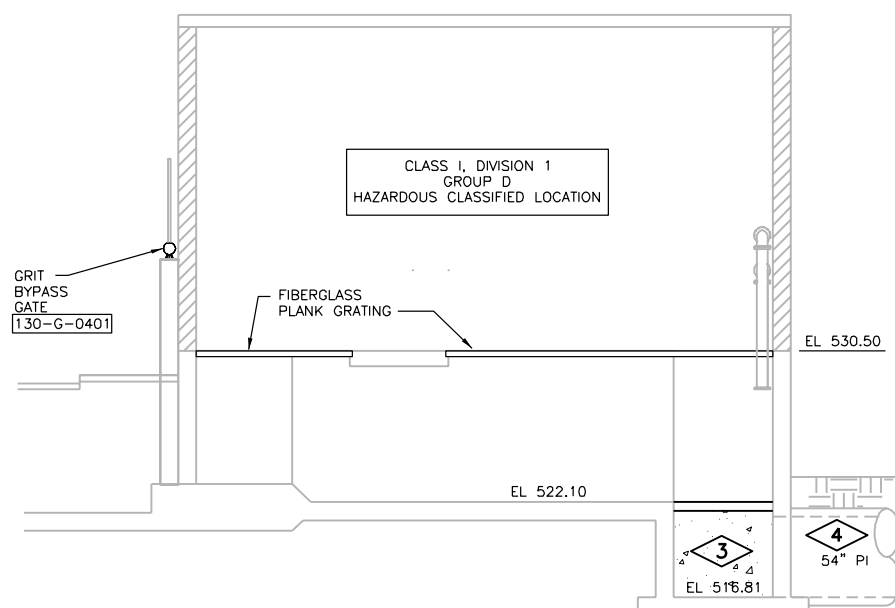
**CITY OF JOLIET  
EAST SIDE WASTEWATER TREATMENT PLANT  
INFLUENT PUMP STATION AND SCREEN REPLACEMENT  
JOLIET, IL  
PRELIMINARY TREATMENT BUILDING  
PLAN**





**SECTION A**

130-SM-1



**SECTION B**

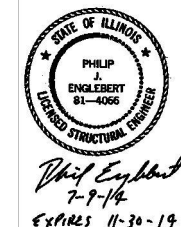
130-SM-1

**PLAN NOTES:**

- 8" CONCRETE WALL WITH #5@12" EW. DOWEL TO EXISTING WALLS WITH #5@12". INSTALL WALL AFTER STARTUP OF NEW PUMP STATION.
- FILL CHANNEL TO ELEVATION 530.00 WITH FLOWABLE FILL AND CAP WITH 6" CONCRETE SLAB.
- FILL SUMP WITH FLOWABLE FILL AND CAP WITH 6" CONCRETE SLAB.
- FILL PIPE WITH FLOWABLE FILL.
- SAWCUT 7'-0" WIDE OPENING.
- UNDERPIN BUILDING FOUNDATION WITH HELICAL PIERS IN LOCATION OF NEW PIPE.

**GENERAL NOTES:**

- NOT ALL EQUIPMENT AND PIPING IS SHOWN. REFERENCE DRAWINGS HAVE BEEN PROVIDED WITH THE CONTRACT DOCUMENTS. CONTRACTOR SHALL FIELD VERIFY EXISTING CONDITIONS PRIOR TO BIDDING.



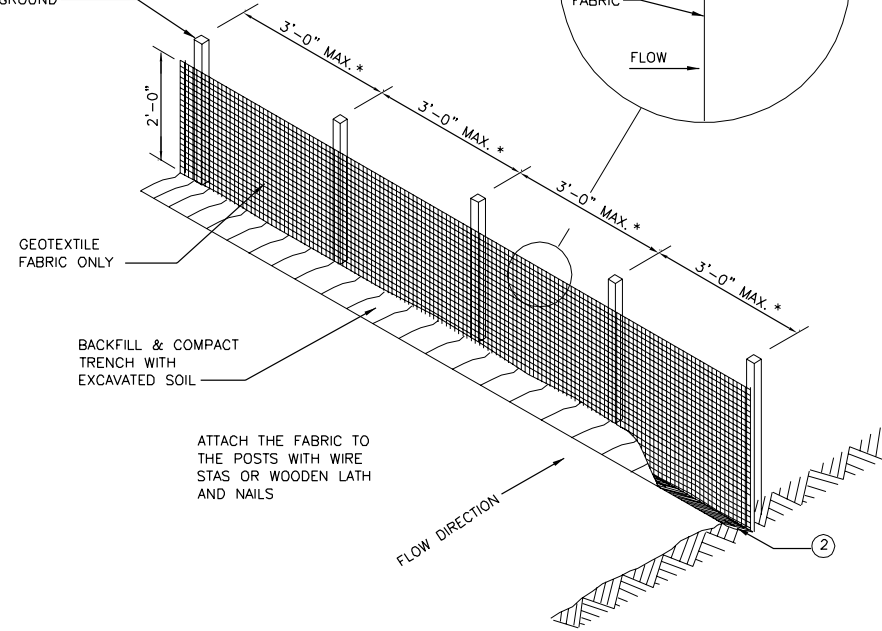
Revision Number	Revision Description	Checked By	Date

Designed By	AJT
Drawn By	AJT
Checked By	PJE
Approved By	PJE
Filename	130SMS1.DWG
Project No.	12614
Project Date	JUNE 2014

CITY OF JOLIET  
 EAST SIDE WASTEWATER TREATMENT PLANT  
 INFLUENT PUMP STATION AND SCREEN REPLACEMENT  
 JOLIET, IL  
 PRELIMINARY TREATMENT BUILDING SECTIONS

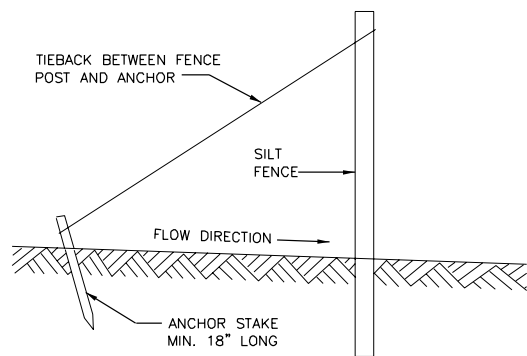
NOTE: ADDITIONAL POST DEPTH OF TIE BACKS MAY BE REQUIRED IN UNSTABLE SOILS

WOOD POSTS OR (3)  
STEEL POSTS  
LENGTH 5'-0"  
20" DEPTH  
IN GROUND

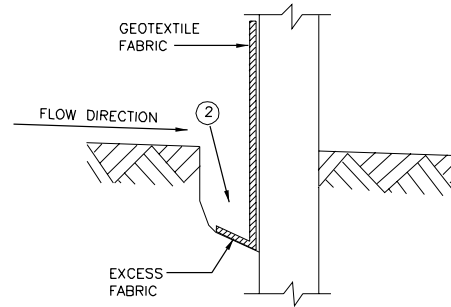


\* NOTE: 8'-0" POST SPACING ALLOWED IF A WOVEN GEOTEXTILE FABRIC IS USED.

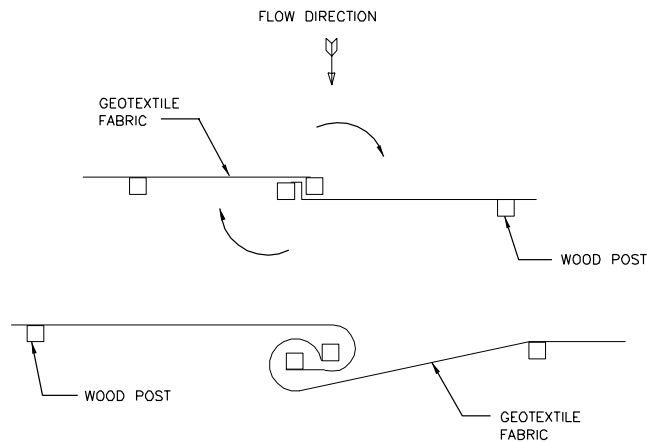
**SILT FENCE**



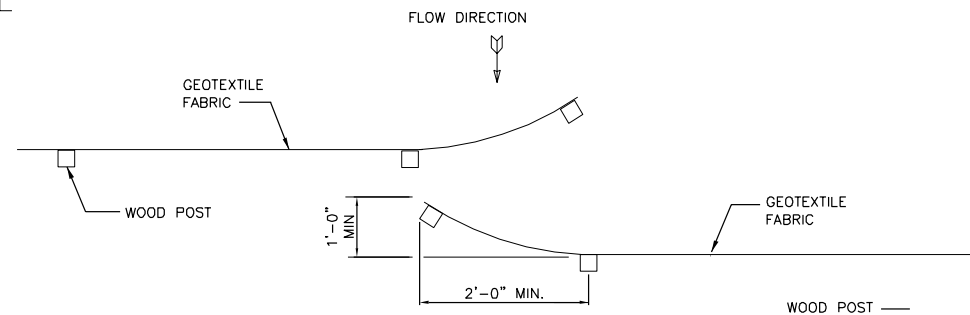
**SILT FENCE TIE BACK**  
(WHEN ADDITIONAL SUPPORT REQUIRED)



**TRENCH DETAIL**



**TWIST METHOD**



**HOOK METHOD**

JOINING TWO LENGTHS OF SILT FENCE (5)

**SILT FENCE DETAIL C031**

NTS

- ① HORIZONTAL BRACE REQUIRED WITH 2" X 4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS.
- ② TRENCH SHALL BE A MINIMUM OF 4" WIDE & 6" DEEP TO BURY AND ANCHOR THE GEOTEXTILE FABRIC. FOLD MATERIAL TO FIT TRENCH AND BACKFILL & COMPACT TRENCH WITH EXCAVATED SOIL.
- ③ WOOD POSTS SHALL BE A MINIMUM SIZE OF 1" X 1" OF OAK OR HICKORY. 3 FT. LONG FOR 24" SILT FENCE AND 4 FT. LONG FOR 36" SILT FENCE.
- ④ SILT FENCE TO EXTEND ACROSS THE TOP OF THE PIPE.
- ⑤ CONSTRUCT SILT FENCE FROM A CONTINUOUS ROLL IF POSSIBLE BY CUTTING LENGTHS TO AVOID JOINTS. IF A JOINT IS NECESSARY USE ONE OF THE FOLLOWING TWO METHODS; A) OVERLAP THE END POSTS AND TWIST, OR ROTATE, AT LEAST 180 DEGREES, B) HOOK THE END OF EACH SILT FENCE LENGTH.

Revision Number	Revision Description	Drawn By	Checked By	Date

Designed By	TLW
Drawn By	TLW
Checked By	JVP
Approved By	JVP
Filename	999CD.DWG
Project No.	12614
Project Date	JUNE 2014

**CITY OF JOLIET**  
**EAST SIDE WASTEWATER TREATMENT PLANT**  
**INFLUENT PUMP STATION AND SCREEN REPLACEMENT**  
**JOLIET, IL**

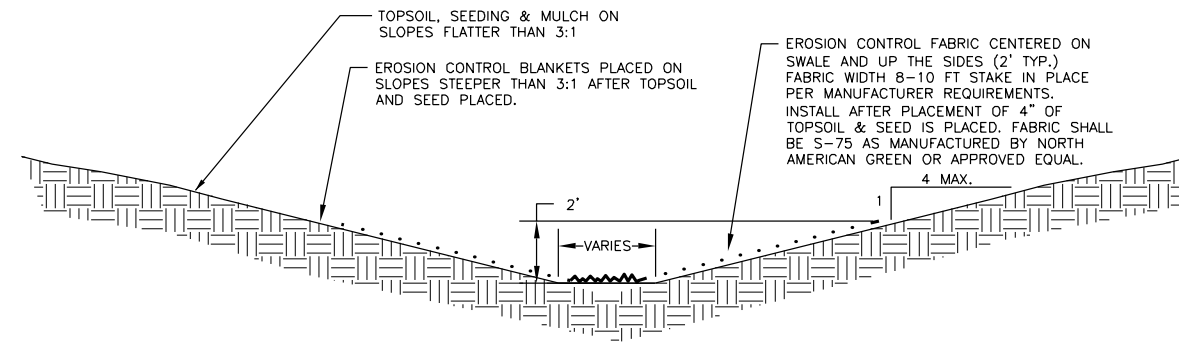
**CIVIL**  
**STANDARD DETAILS**



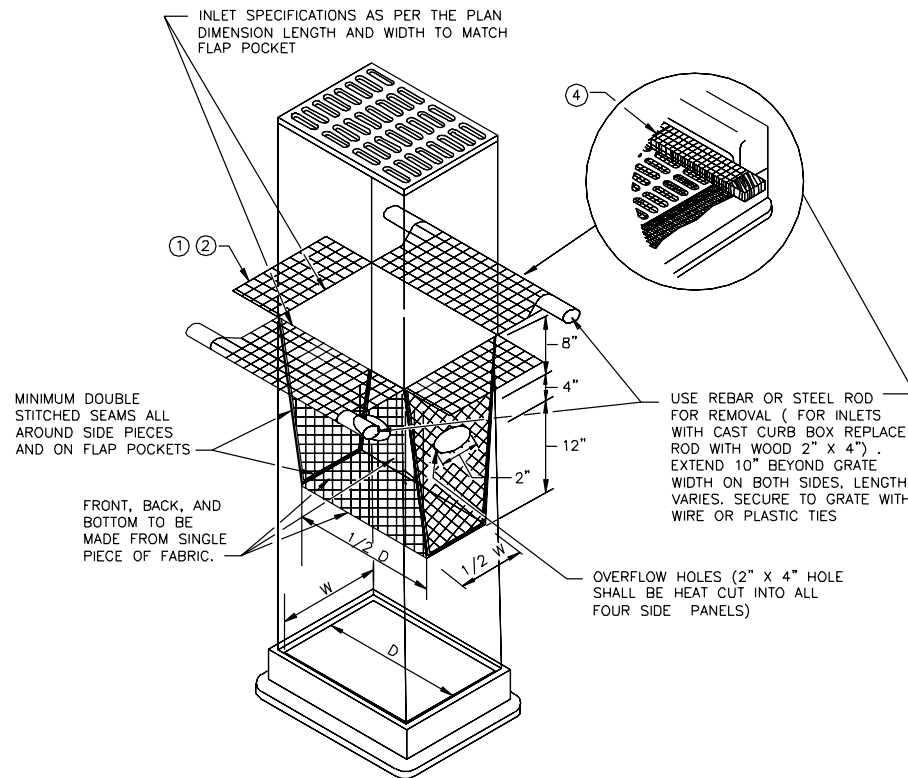
**DONOHUE**

Sheet No. 94

Drawing No. 999-C-1



**TYPICAL SLOPE AND DITCH BOTTOM RESTORATION C051**  
NTS

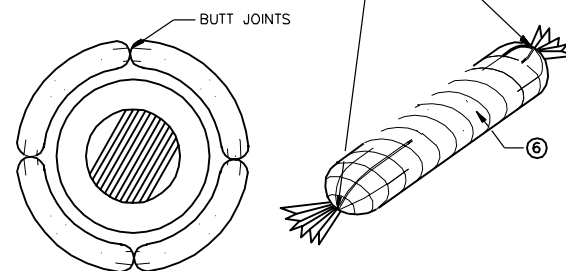


**FILTER BAG INSERT ③**  
(CAN BE INSTALLED IN ANY INLET TYPE WITH OR WITHOUT A CURB BOX)

**FILTER BAG INSERT C046**  
NTS

- ① ALL GEOTEXTILE USED FOR INLET PROTECTION SHALL BE MONOFILAMENT IN BOTH DIRECTIONS.
- ② FINISHED SIZE, INCLUDING POCKETS WHERE REQUIRED SHALL EXTEND A MINIMUM OF 10 INCHES AROUND THE PERIMETER TO FACILITATE MAINTENANCE OR REMOVAL.
- ③ INSTALLATION NOTES:  
DO NOT INSTALL FILTER BAG INSERT IN INLETS SHALLOWER THAN 30 INCHES, MEASURED FROM THE BOTTOM OF THE INLET TO THE TOP OF THE GRATE. THE INSTALLED BAG SHALL HAVE A MINIMUM SIDE CLEARANCE OF 3 INCHES BETWEEN THE INLET WALLS AND THE BAG, MEASURED AT THE BOTTOM OF THE OVERFLOW HOLES. WHERE NECESSARY THE CONTRACTOR SHALL CLINCH THE BAG, USING PLASTIC ZIP TIES, TO ACHIEVE THE 3 INCH SIDE CLEARANCE.
- ④ FLAP POCKETS SHALL BE LARGE ENOUGH TO ACCEPT WOOD 2 INCH X 4 INCH OR USE A ROCK SOCK OR SAND BAGS IN PLACE OF THE FLAP POCKETS.

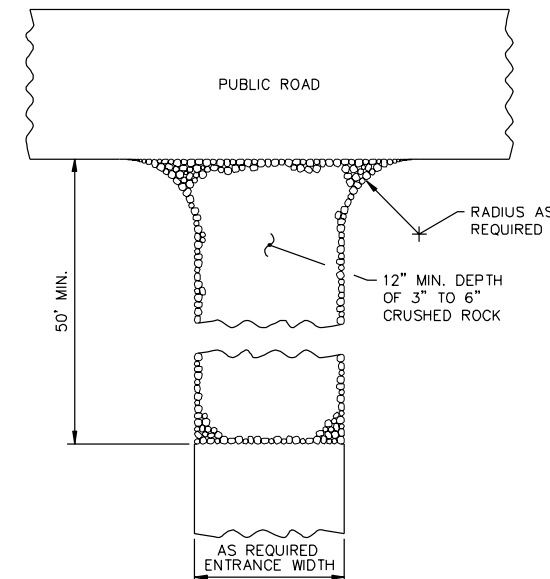
ENDS SECURELY CLOSED TO PREVENT LOSS OF OPEN GRADED AGGREGATE FILL. SECURED WITH 50 PSI. ZIP TIE.



**ROCK LOG/COMPOST LOG**

GEOTEXTILE SOCK BETWEEN 4-10 FEET LONG AND 4-6 INCH DIAMETER. SEAM TO BE JOINED BY TWO ROWS OF STITCHING WITH A PLASTIC MESH BACKING OR PROVIDE A HEAT BONDED SEAM (OR APPROVED EQUIVALENT). FILL ROCK LOG WITH OPEN GRADED AGGREGATE CONSISTING OF SOUND DURABLE PARTICLES OF COARSE AGGREGATE.

**INLET PROTECTION DETAIL  
ROCK LOG/COMPOST LOG C047**  
NTS



- NOTES:
1. FULL WIDTH OF EGRESS DRIVE
  2. TRACKING PAD SHALL BE IN PLACE PRIOR TO BEGINNING ANY GRADING ACTIVITIES.
  3. INSPECT WEEKLY AND AFTER RAINFALL EVENTS.
  4. MAINTAIN BY SCRAPING OR TOPDRESSING WITH ADDITIONAL AGGREGATE IF NECESSARY.

**TRACKING PAD DETAIL C061**  
NTS

Date	
Checked By	
Drawn By	
Revision Description	

Revision Number	
Designed By	TLW
Drawn By	TLW
Checked By	JVP
Approved By	JVP
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Project No.	12614
Project Date	JUNE 2014

**CITY OF JOLIET**  
**EAST SIDE WASTEWATER TREATMENT PLANT**  
**INFLUENT PUMP STATION AND SCREEN REPLACEMENT**  
**JOLIET, IL**

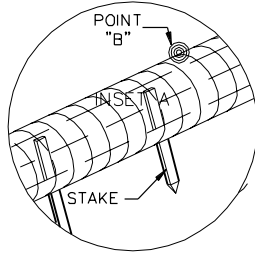
**CIVIL**  
**STANDARD DETAILS**

**DONOHUE**

Sheet No. 95

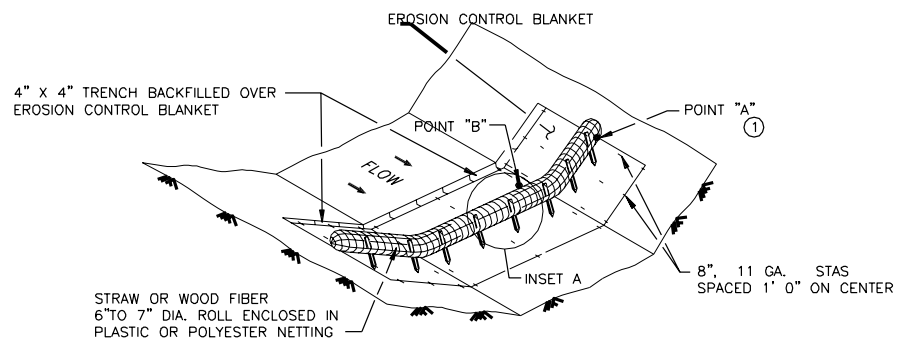
Drawing No. 999-C-2

JOSEPH V. PISULA  
 40825  
 STATE OF ILLINOIS  
 Prof. P  
 7-9-14  
 Expires: 11-30-15

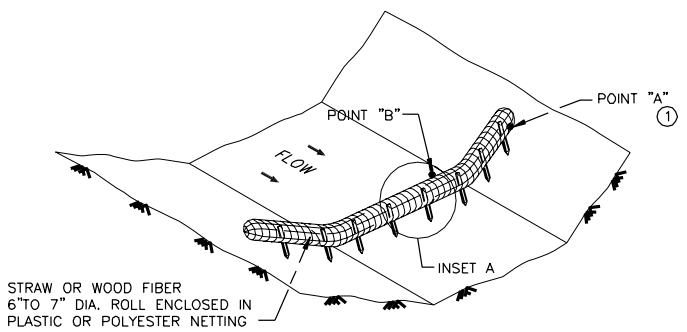


APPROXIMATE SPACING BETWEEN EACH DITCH CHECK SHOULD BE DETERMINED FROM THE FOLLOWING SPACING FORMULA:  
 APPROXIMATE SPACING OF DITCH CHECKS (FT.) =  $Y = \frac{\text{DITCH CHECK HEIGHT (FT)}}{\% \text{ CHANNEL SLOPE}} \times 100$

① POINT "A" MUST BE A MINIMUM OF 6 INCHES HIGHER THAN POINT "B" TO ENSURE THAT WATER FLOWS OVER THE DIKE AND NOT AROUND THE ENDS.

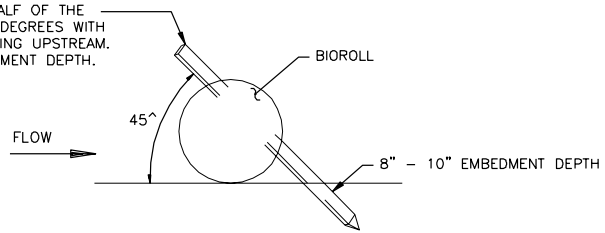


**TYPE 3: BIOROLL BLANKET SYSTEM DITCH CHECK**



**TYPE 2: BIOROLL DITCH CHECK**  
 USE ON ROUGH GRADED AREAS

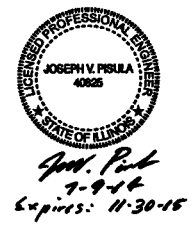
1" X 2" X 18" LONG WOODEN STAKES AT 1' 0" SPACING MAXIMUM. STAKES SHALL BE DRIVEN THROUGH THE BACK HALF OF THE BIOROLL AT AN ANGLE OF 45 DEGREES WITH THE TOP OF THE STAKE POINTING UPSTREAM. PROVIDE 8" TO 10" OF EMBEDMENT DEPTH.



**BIOROLL STAKING DETAIL**

**BIOROLL DITCH CHECK**      **C064**  
 NTS

Date	
Checked By	
Drawn By	
Revision Description	
Revision Number	
Designed By	TLW
Drawn By	TLW
Checked By	JVP
Approved By	JVP
Filename	999CD.DWG
Project No.	12614
Project Date	JUNE 2014
<b>CITY OF JOLIET</b> <b>EAST SIDE WASTEWATER TREATMENT PLANT</b> <b>INFLUENT PUMP STATION AND SCREEN REPLACEMENT</b> <b>JOLIET, IL</b> <b>CIVIL</b> <b>STANDARD DETAILS</b>	

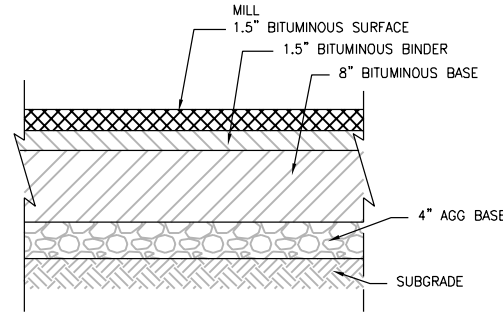


**DONOHUE**

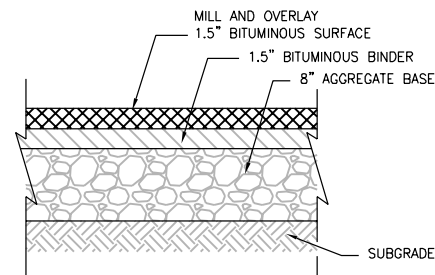
Sheet No. **96**

Drawing No. **999-C-3**

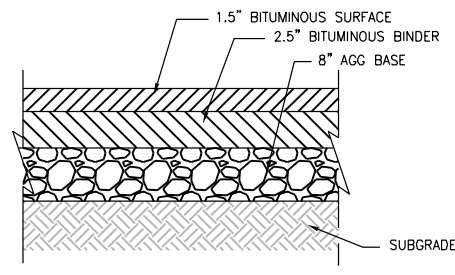
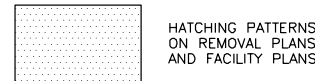




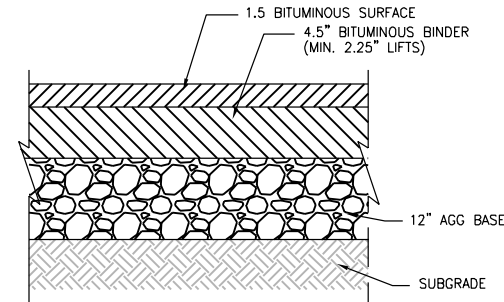
**McKINLEY AVENUE  
PROPOSED MILL**



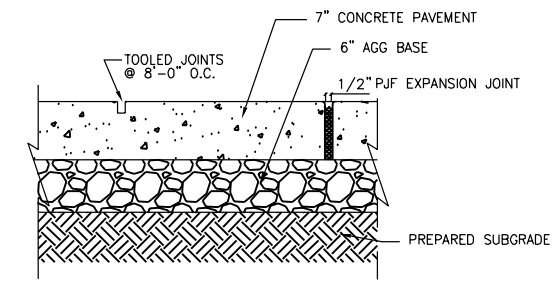
**PLANT DRIVES & PARKING AREAS  
PROPOSED MILL & OVERLAY**



**PLANT DRIVES & PARKING AREAS  
PROPOSED PAVEMENT SECTION**



**PLANT HAUL ROAD  
PROPOSED PAVEMENT SECTION**



- NOTES:**
1. USE 3/4" P.J.F. WHERE CONC. MEETS BUILDING.
  2. CONCRETE SHALL BE REINFORCED WITH WELDED WIRE REINFORCING.

**CONCRETE PAVEMENT SECTION**



**PAVEMENT SECTION C110**

NTS

**PAVEMENT SECTION C112**

NTS

**PAVEMENT SECTION C114**

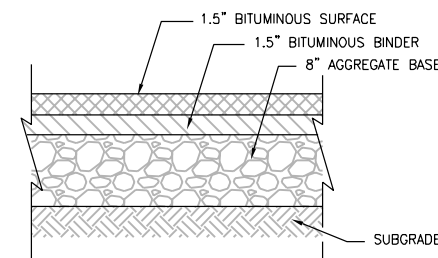
NTS

**PAVEMENT SECTION C116**

NTS

**PAVEMENT SECTION C118**

NTS

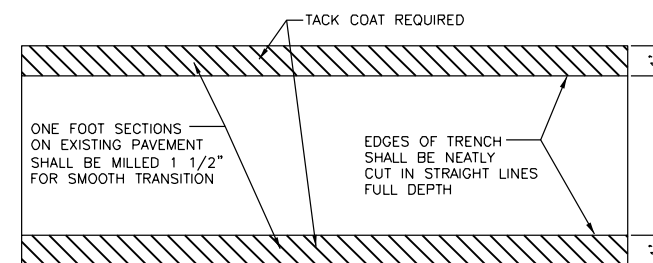


**EXISTING ASPHALT  
PAVEMENT SECTION**

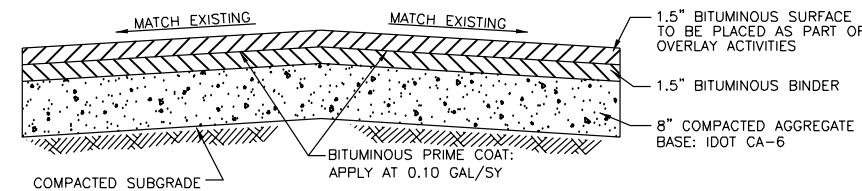


**PAVEMENT SECTION C119**

NTS



**TOP VIEW**

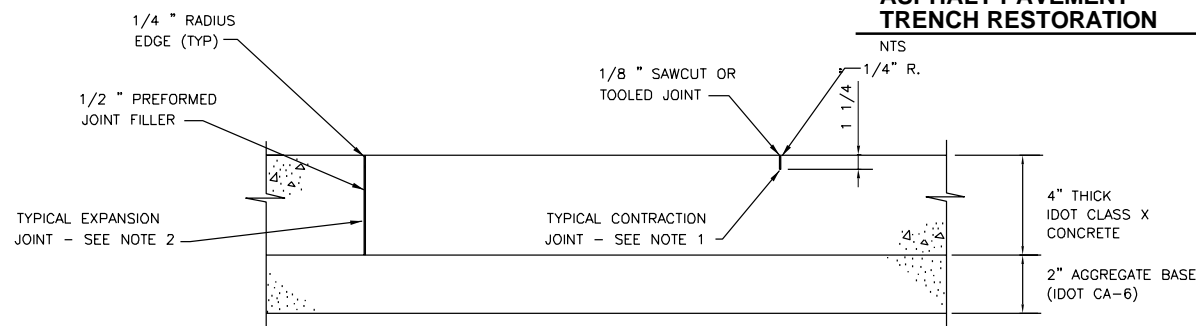


**SECTION**



**ASPHALT PAVEMENT  
TRENCH RESTORATION C120**

NTS

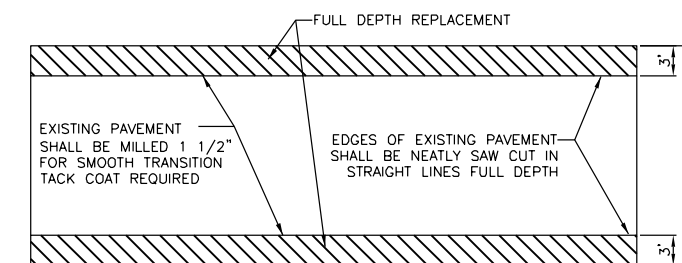


**NOTE:**

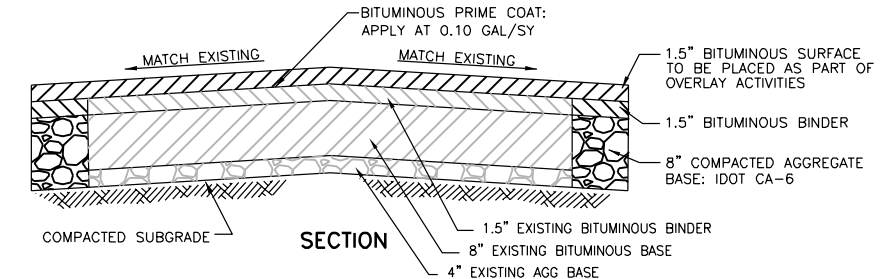
1. CONTRACTION JOINTS TO BE SPACED 6'-0" O.C. MAXIMUM EACH DIRECTION
2. EXPANSION JOINTS TO BE SPACED AT 50' MAXIMUM EACH DIRECTION AND WHERE SIDEWALK MEETS BUILDINGS, CURBS, AND EXISTING SIDEWALKS WHICH REMAIN IN PLACE.
3. ALL MATERIALS AND WORKMANSHIP TO BE IN ACCORDANCE WITH IDOT STANDARD SPECIFICATIONS.
4. LONGITUDINAL SLOPES TO MATCH EXISTING, CROSS SLOPE OF NEW SIDEWALK TO BE 0.5% MINIMUM AND 2% MAXIMUM.

**UNREINFORCED CONCRETE  
SIDEWALK C150**

NTS



**TOP VIEW**

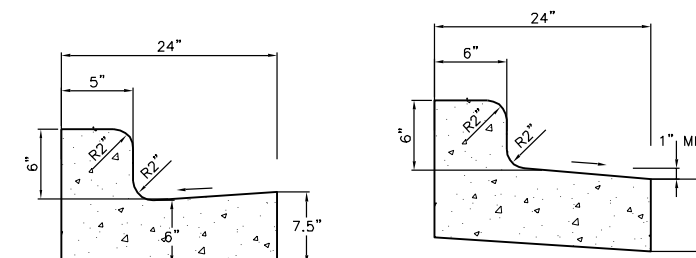


**SECTION**



**McKINLEY AVENUE  
PAVEMENT RESTORATION C125**

NTS



**STANDARD**

**INVERTED**

**CURB SECTION C167**

NTS



*Joseph V. Pisula*  
7-9-14  
Expires: 11-30-15

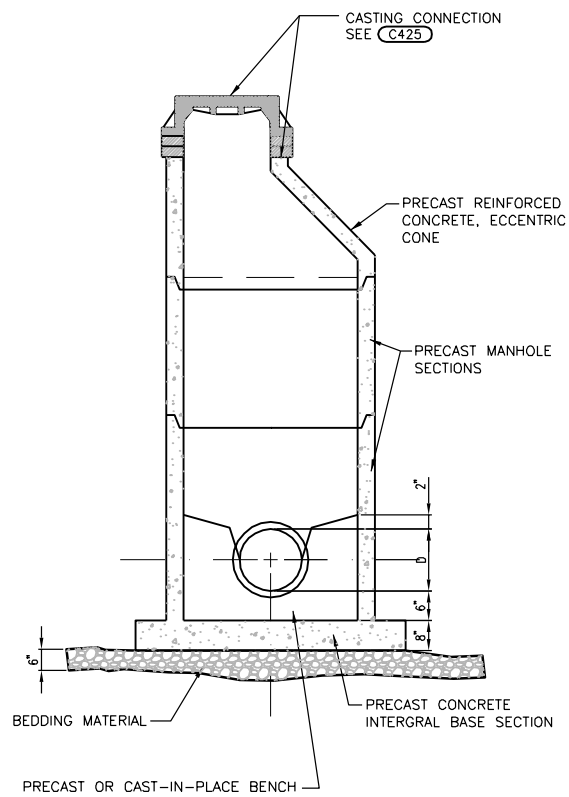
Date	8/19/14
Checked By	J.P.
Drawn By	K.S.
Revision Description	ADD NOTE 2 TO DETAIL C11B
Revision Number	1

Designed By	TLW
Drawn By	TLW
Checked By	JVP
Approved By	JVP
Filename	999CD.DWG
Project No.	12614
Project Date	JUNE 2014

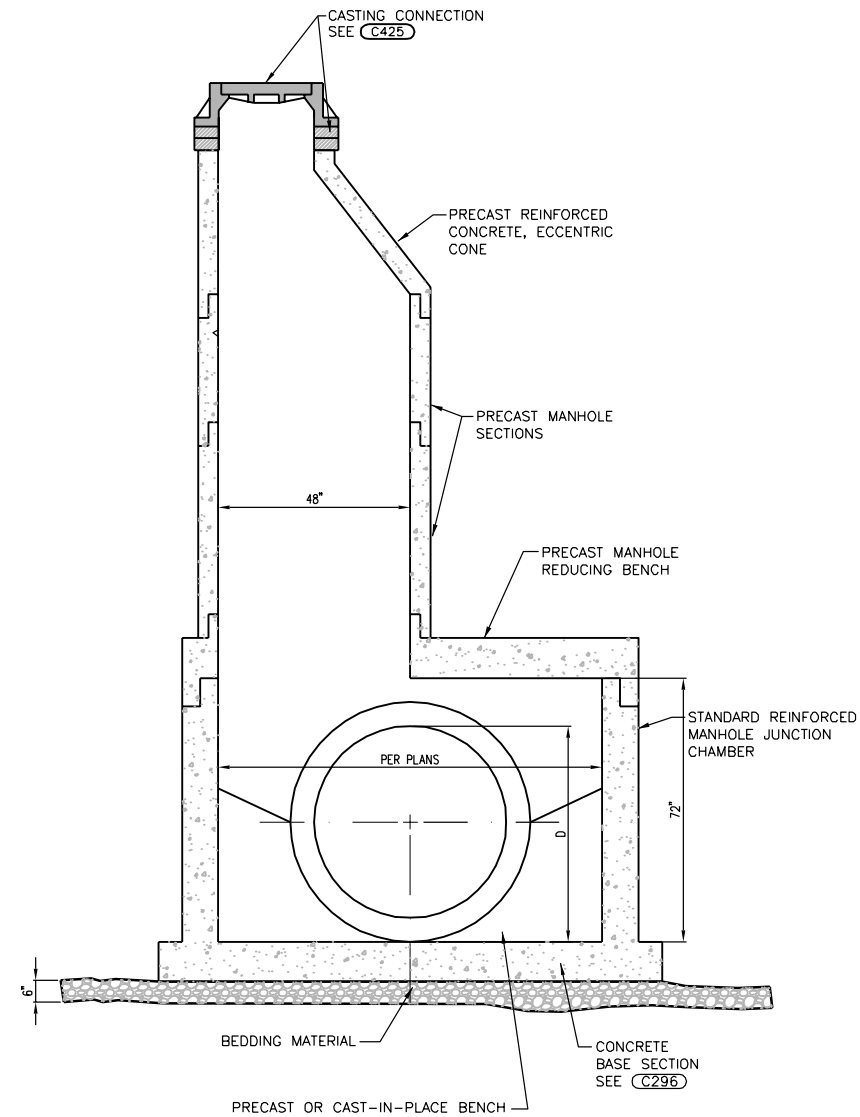
**CITY OF JOLIET**  
**EAST SIDE WASTEWATER TREATMENT PLANT**  
**INFLUENT PUMP STATION AND SCREEN REPLACEMENT**  
**JOLIET, IL**

**CIVIL  
STANDARD DETAILS**

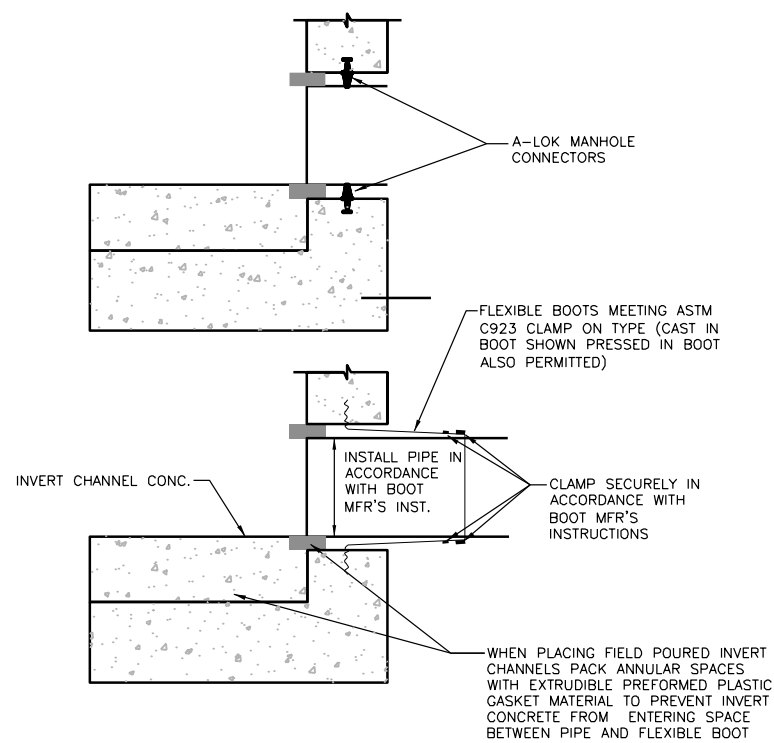
<b>DONOHUE</b>
Sheet No.
Drawing No.
999-C-4



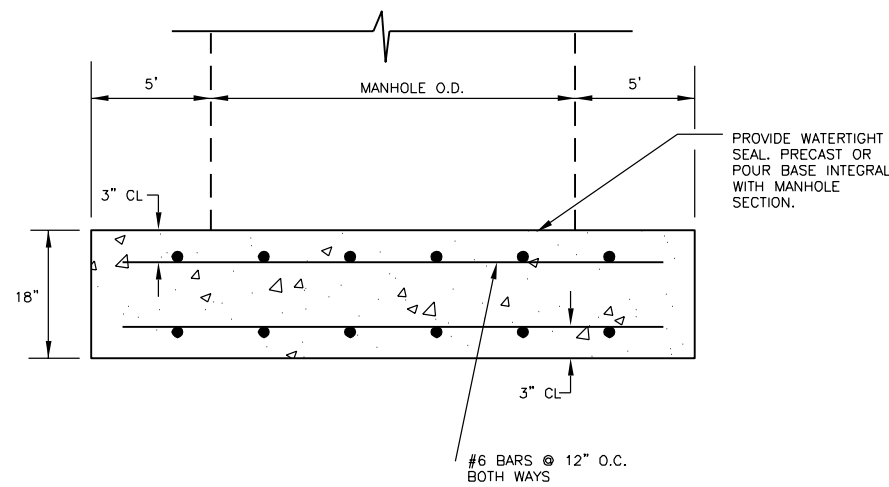
**48-INCH & 60-INCH STANDARD CONCRETE MANHOLE DETAIL C200**  
NTS



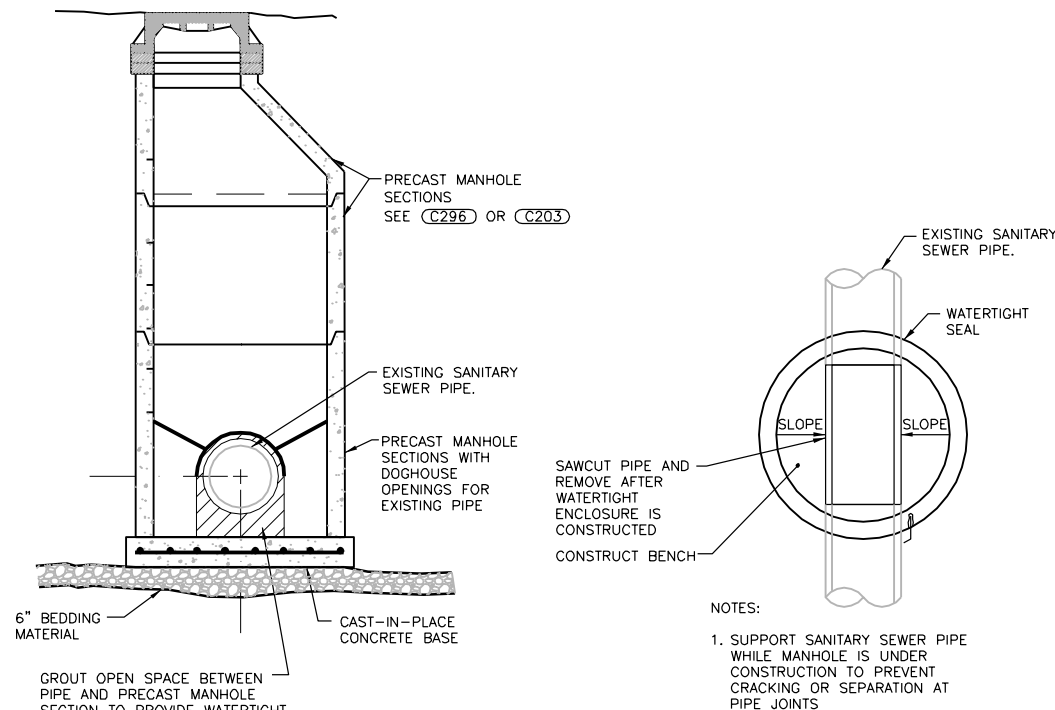
**STANDARD MANHOLE WITH JUNCTION CHAMBER C203**  
NTS



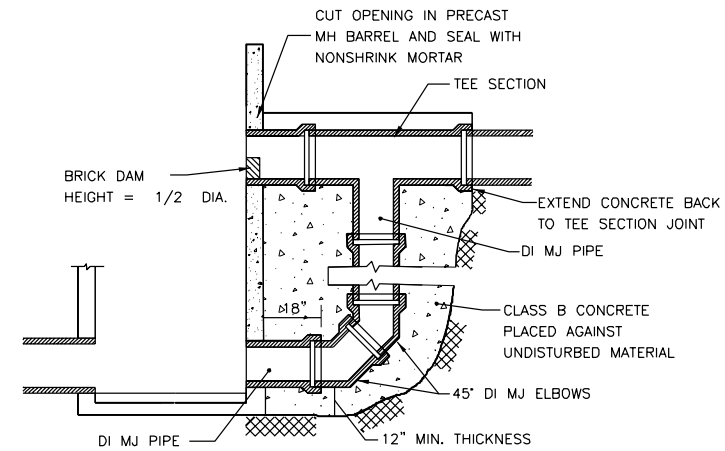
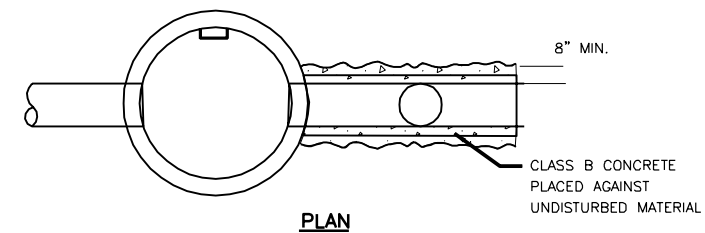
**MANHOLE PIPE CONNECTION DETAILS C210**  
NTS



**BASE SLAB FOR MANHOLES C215**  
NTS



**MANHOLE CONSTRUCTION OVER EXISTING SEWER C205**  
NTS



**OUTSIDE DROP MANHOLE DETAIL C220**  
NTS

Revision Number	Revision Description	Checked By	Drawn By	Date

Designed By	TLW
Drawn By	TLW
Checked By	JVP
Approved By	JVP
Filename	999CD.DWG
Project No.	12614
Project Date	JUNE 2014

CITY OF JOLIET  
EAST SIDE WASTEWATER TREATMENT PLANT  
INFLUENT PUMP STATION AND SCREEN REPLACEMENT  
JOLIET, IL

CIVIL  
STANDARD DETAILS

<b>DONOHUE</b>
Sheet No. 98
Drawing No. 999-C-5

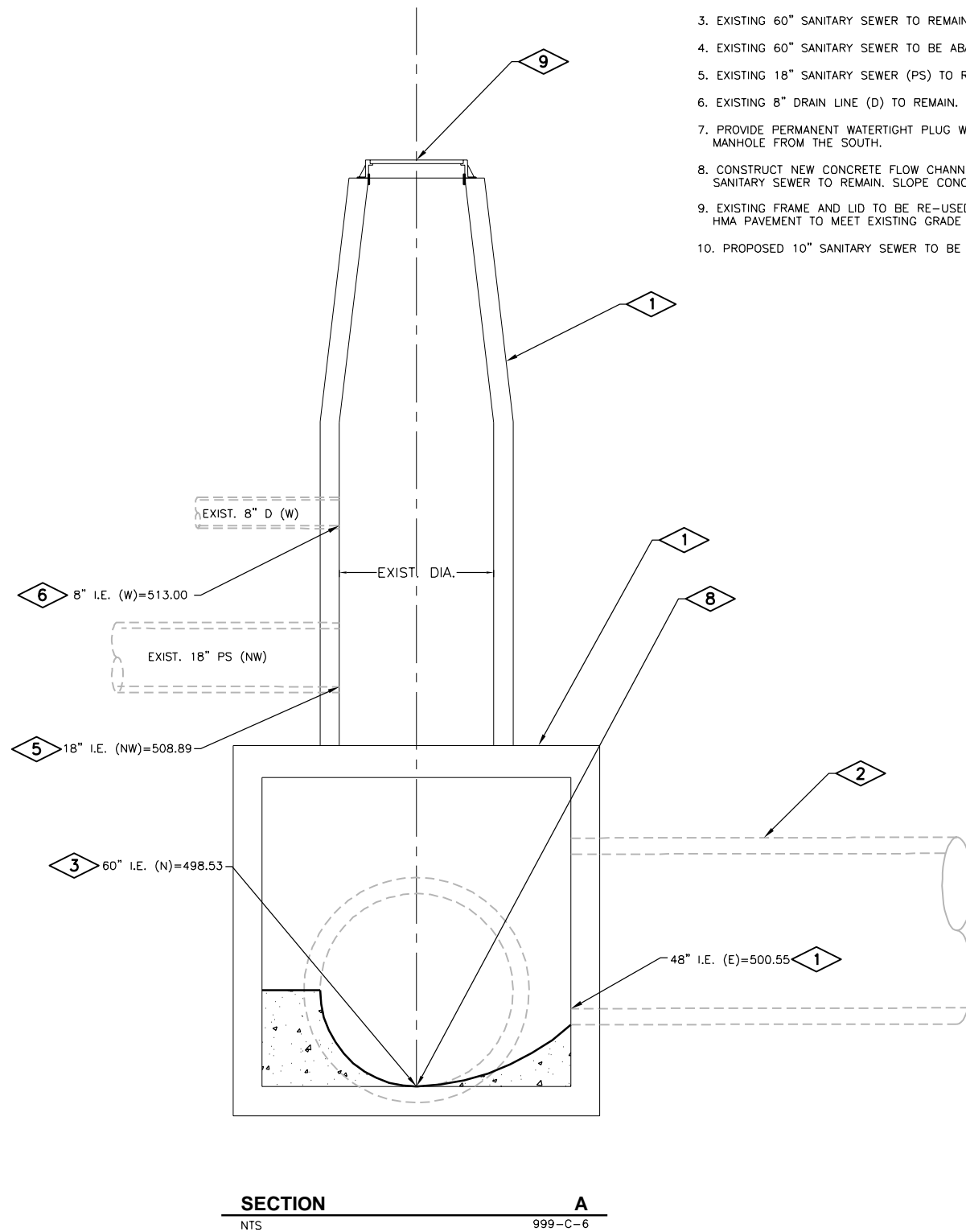


**PLAN NOTES:**

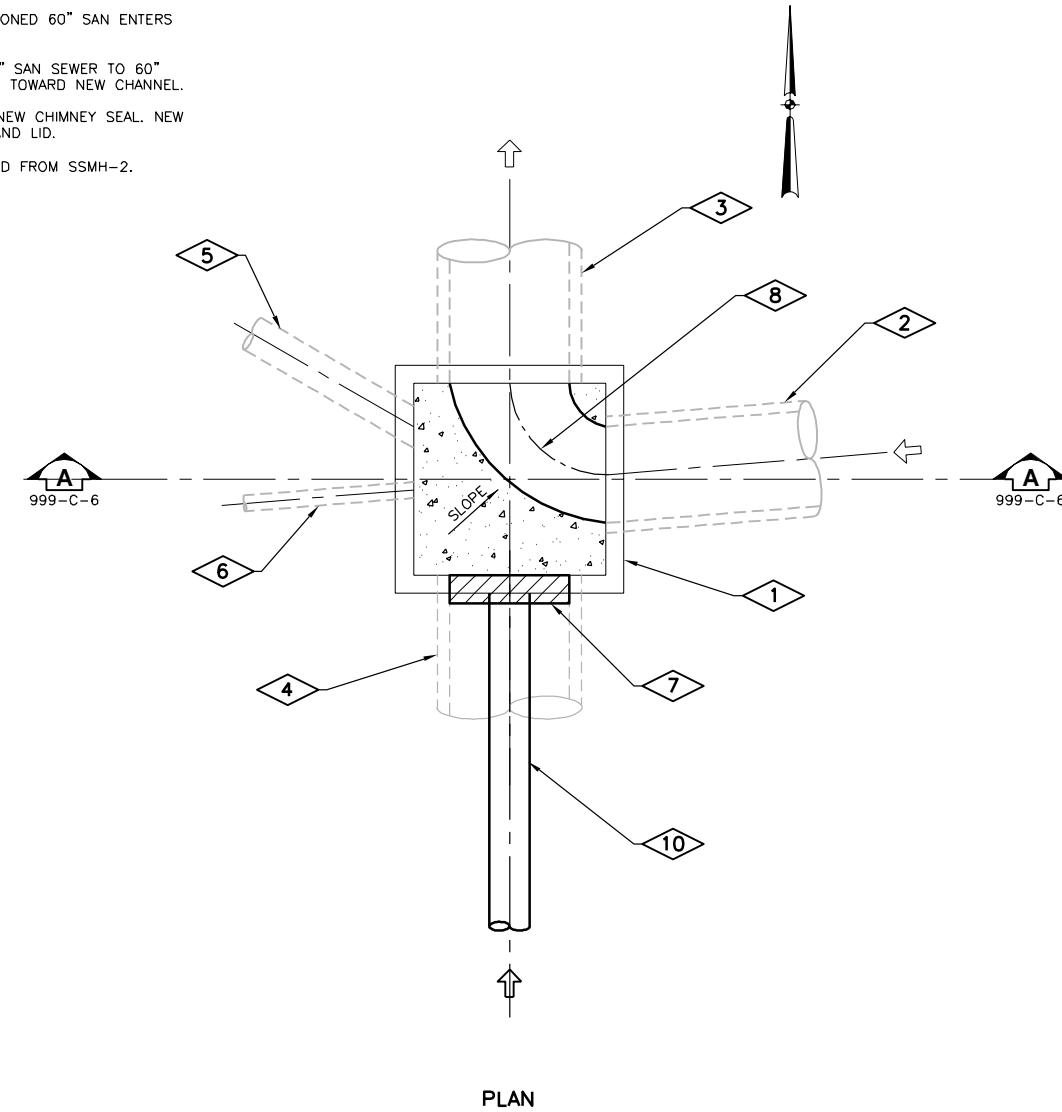
1. EXISTING SANITARY MANHOLE (SSMH-1) TO REMAIN WITH MODIFICATIONS.
2. EXISTING 48" SANITARY SEWER TO REMAIN.
3. EXISTING 60" SANITARY SEWER TO REMAIN.
4. EXISTING 60" SANITARY SEWER TO BE ABANDONED.
5. EXISTING 18" SANITARY SEWER (PS) TO REMAIN.
6. EXISTING 8" DRAIN LINE (D) TO REMAIN.
7. PROVIDE PERMANENT WATERTIGHT PLUG WHERE ABANDONED 60" SAN ENTERS MANHOLE FROM THE SOUTH.
8. CONSTRUCT NEW CONCRETE FLOW CHANNEL FROM 48" SAN SEWER TO 60" SANITARY SEWER TO REMAIN. SLOPE CONCRETE BENCH TOWARD NEW CHANNEL.
9. EXISTING FRAME AND LID TO BE RE-USED. PROVIDE NEW CHIMNEY SEAL. NEW HMA PAVEMENT TO MEET EXISTING GRADE OF FRAME AND LID.
10. PROPOSED 10" SANITARY SEWER TO BE CONSTRUCTED FROM SSMH-2.

**GENERAL NOTES:**

1. ALL EXISTING PIPING SHALL BE FIELD VERIFIED FOR LOCATION AND ELEVATION AT CONNECTION OR CROSSING LOCATIONS.



**SECTION A**  
NTS 999-C-6



**PLAN**

**DETAIL OF EXISTING SSMH-1 RENOVATION**  
NTS

**C251**



*Joseph V. Pisula*  
7-9-14  
Expires: 11-30-15

Revision Number	Revision Description	Drawn By	Checked By	Date

Designed By	TLW
Drawn By	TLW
Checked By	JVP
Approved By	JVP
Filename	999CD.DWG
Project No.	12614
Project Date	JUNE 2014

**CITY OF JOLIET**  
**EAST SIDE WASTEWATER TREATMENT PLANT**  
**INFLUENT PUMP STATION AND SCREEN REPLACEMENT**  
**JOLIET, IL**  
**CIVIL**  
**SSMH-1 DETAILS**



Sheet No. 99

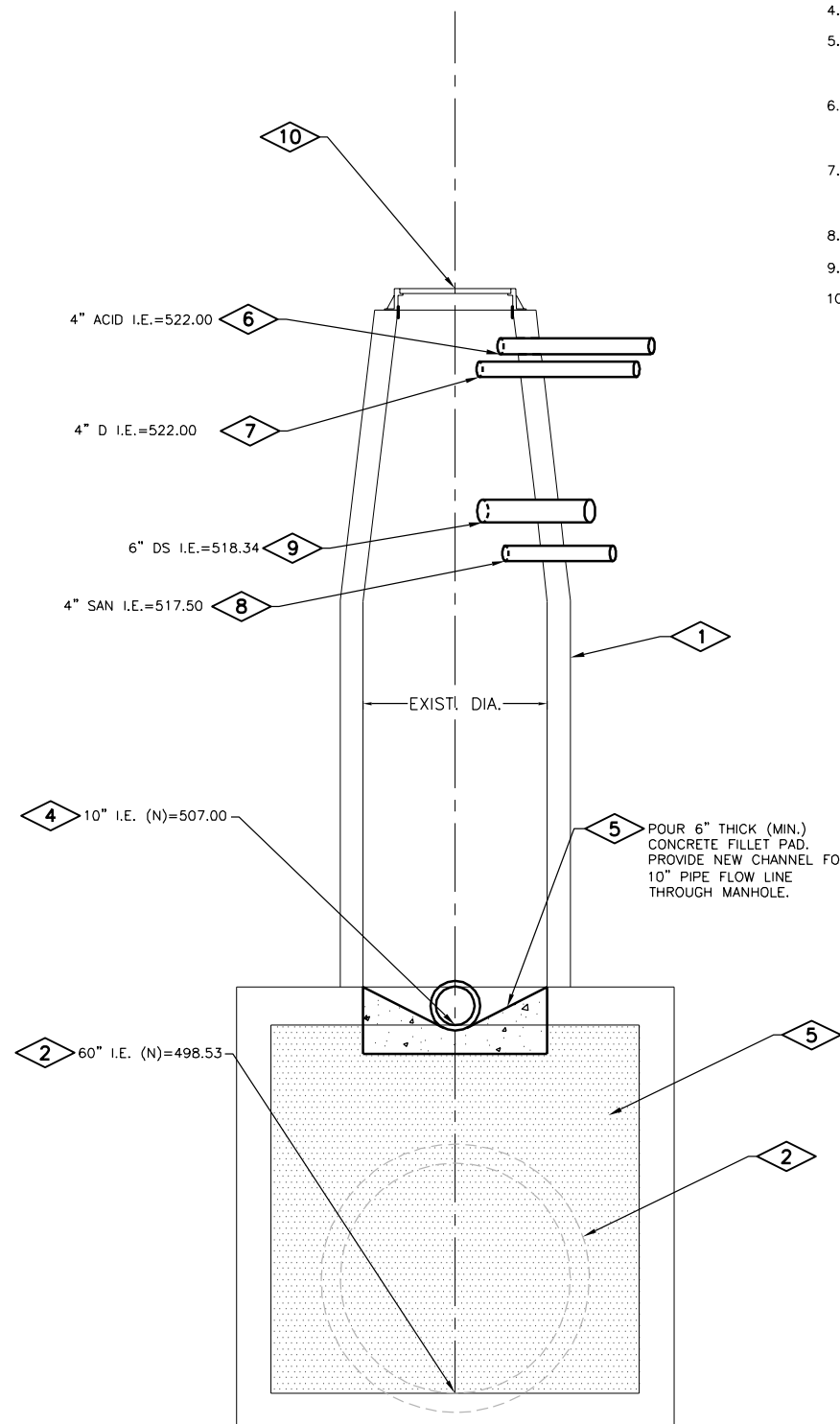
Drawing No. 999-C-6

**PLAN NOTES:**

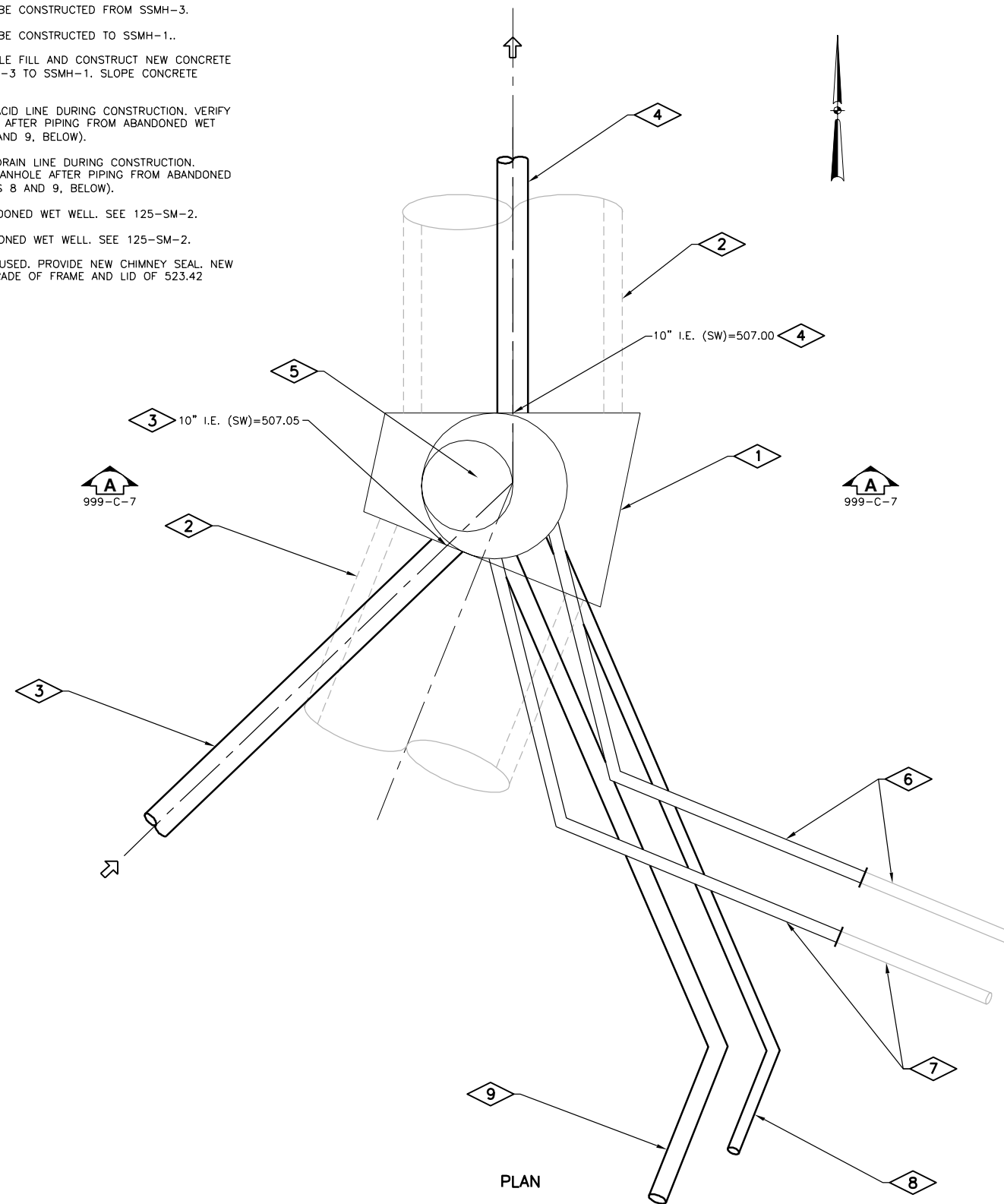
1. EXISTING SANITARY MANHOLE (SSMH-2) TO REMAIN.
2. EXISTING 60" SANITARY SEWER TO BE ABANDONED. PLUG ENDS WATERTIGHT.
3. PROPOSED 10" SANITARY SEWER TO BE CONSTRUCTED FROM SSMH-3.
4. PROPOSED 10" SANITARY SEWER TO BE CONSTRUCTED TO SSMH-1..
5. FILL EXISTING MANHOLE WITH FLOWABLE FILL AND CONSTRUCT NEW CONCRETE FLOW LINE FOR 10' SAN FROM SSMH-3 TO SSMH-1. SLOPE CONCRETE BENCH TOWARD NEW CHANNEL.
6. TEMPORARILY REROUTE EXISTING 4" ACID LINE DURING CONSTRUCTION. VERIFY DEPTH AND RECONNECT TO MANHOLE AFTER PIPING FROM ABANDONED WET WELL IS COMPLETED (SEE NOTES 8 AND 9, BELOW).
7. TEMPORARILY REROUTE EXISTING 4" DRAIN LINE DURING CONSTRUCTION. VERIFY DEPTH AND RECONNECT TO MANHOLE AFTER PIPING FROM ABANDONED WET WELL IS COMPLETED (SEE NOTES 8 AND 9, BELOW).
8. CONNECT 4" SAN FROM INSIDE ABANDONED WET WELL. SEE 125-SM-2.
9. CONNECT 6" DS FROM INSIDE ABANDONED WET WELL. SEE 125-SM-2.
10. EXISTING FRAME AND LID TO BE RE-USED. PROVIDE NEW CHIMNEY SEAL. NEW HMA PAVEMENT TO MEET EXISTING GRADE OF FRAME AND LID OF 523.42 (VERIFY FRAME ELEVATION).

**GENERAL NOTES:**

1. ALL EXISTING AND PROPOSED PIPING SHALL BE FIELD VERIFIED FOR LOCATION AND ELEVATION AT CONNECTION OR CROSSING LOCATIONS.



**SECTION A**  
NTS 999-C-7

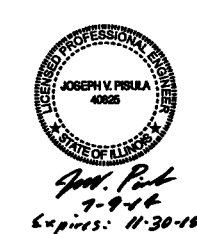


**DETAIL OF EXISTING SSMH-2 RENOVATION**  
NTS C252

Revision Number	Revision Description	Drawn By	Checked By	Date

Designed By	TLW
Drawn By	TLW
Checked By	JVP
Approved By	JVP
Filename	999CD.DWG
Project No.	12614
Project Date	JUNE 2014

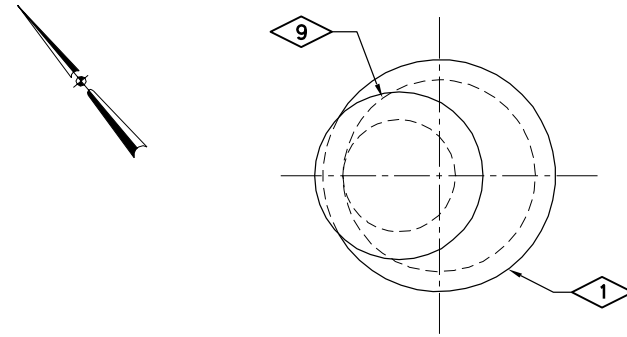
CITY OF JOLIET  
EAST SIDE WASTEWATER TREATMENT PLANT  
INFLUENT PUMP STATION AND SCREEN REPLACEMENT  
JOLIET, IL  
CIVIL  
SSMH-3 DETAILS



**DONOHUE**

Sheet No. 100

Drawing No. 999-C-7



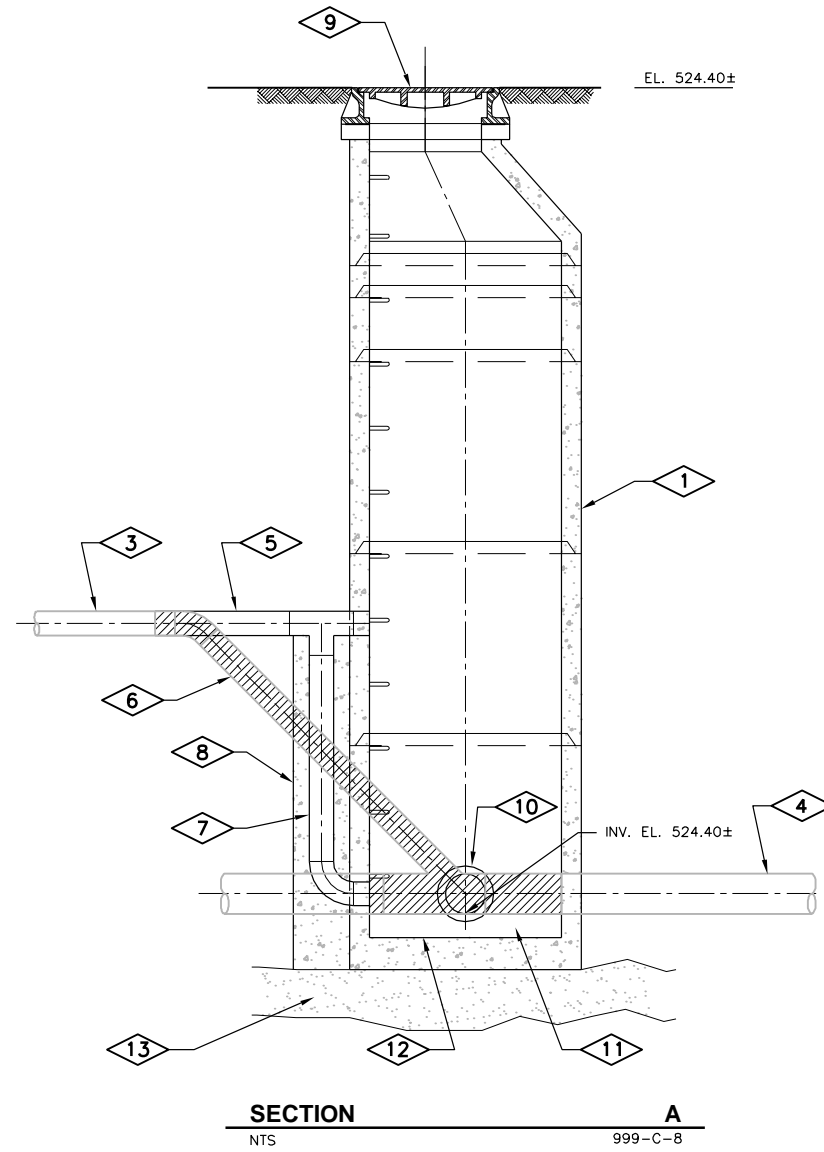
PLAN

**GENERAL NOTES:**

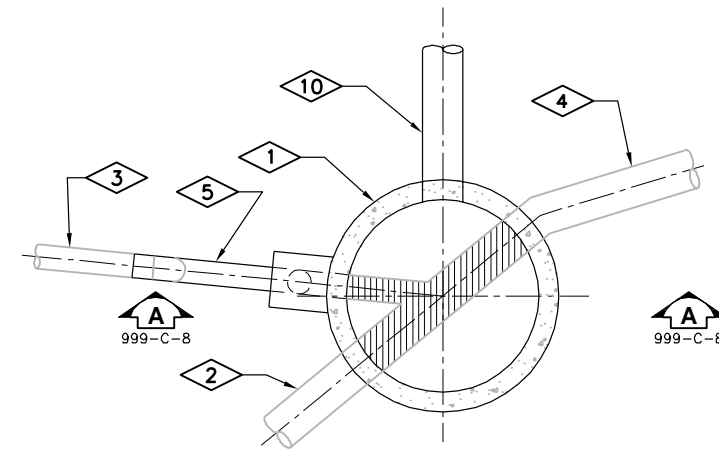
1. ALL EXISTING PIPING SHALL BE FIELD VERIFIED FOR LOCATION AND ELEVATION AT CONNECTION OR CROSSING LOCATIONS.
2. CONTRACTOR SHALL ADJUST SURROUNDING GRADES TO BLEND INTO MANHOLE FRAME AND COVER. FRAME AND COVER TO REMAIN LEVEL.

**PLAN NOTES:**

1. PROPOSED SANITARY 48"Ø DROP MANHOLE (SSMH-3)
2. EXISTING 10" PRIMARY DRAIN TO REMAIN.
3. EXISTING 6" DRAIN TO REMAIN.
4. EXISTING 10" PRIMARY DRAIN TO BE PLUGGED AND ABANDONED.
5. PROPOSED 6" DRAIN CONNECTED TO DROP MANHOLE.
6. EXISTING 6" DRAIN TO BE REMOVED.
7. DROP PIPE TO BE THE SAME DIAMETER AS THE INFLUENT PIPE.
8. CONCRETE ENCASEMENT, 4" MINIMUM ALL AROUND.
9. FRAME AND LID WITH ELEVATION TO MEET EXISTING GRADE OF FRAME AND LID.
10. PROPOSED 10" SANITARY SEWER TO BE CONSTRUCTED FROM SSMH-3.
11. PRECAST OR CAST-IN-PLACE BENCH.
12. PRECAST CONCRETE INTEGRAL BASE SECTION.
13. BEDDING MATERIAL.



SECTION  
NTS  
A  
999-C-8



SECTIONAL PLAN

DETAIL OF SSMH-3  
CONSTRUCTION  
NTS

C253



*Joseph V. Pisula*  
7-9-14  
Expires: 11-30-15

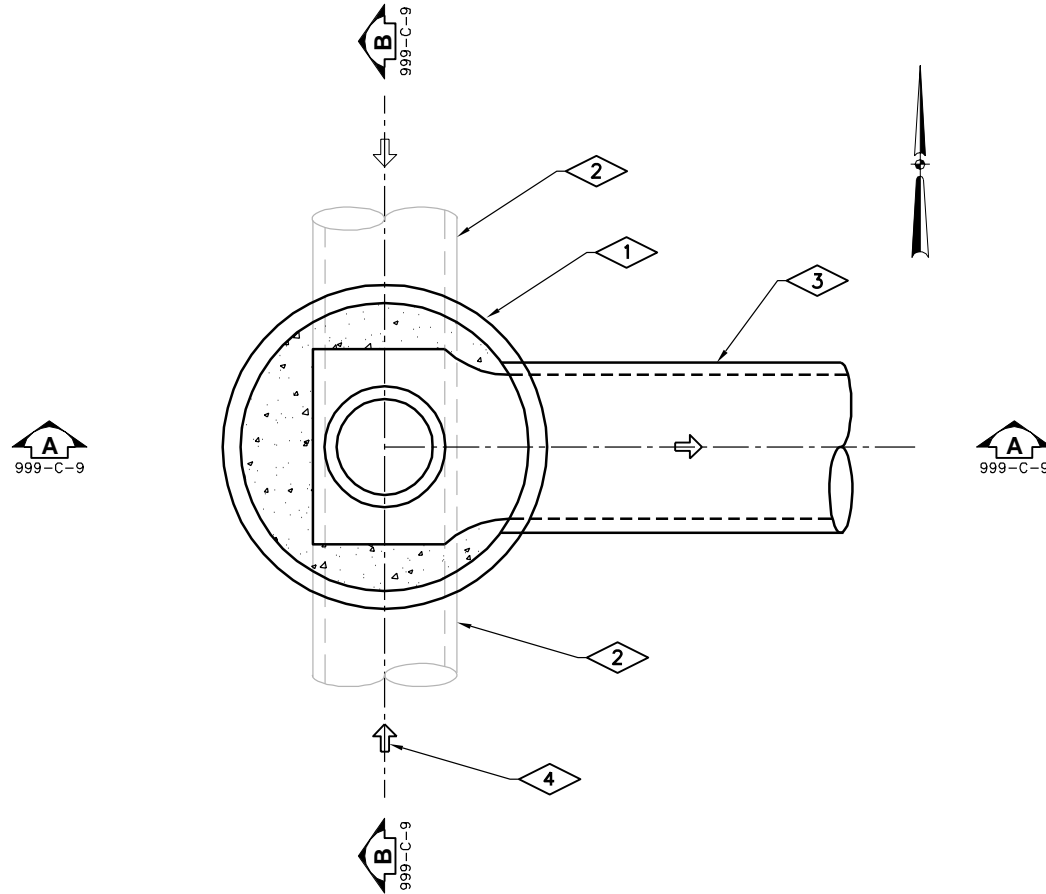
Revision Number	Revision Description	Date

Designed By	TLW
Drawn By	TLW
Checked By	JVP
Approved By	JVP
Filename	999CD.DWG
Project No.	12614
Project Date	JUNE 2014

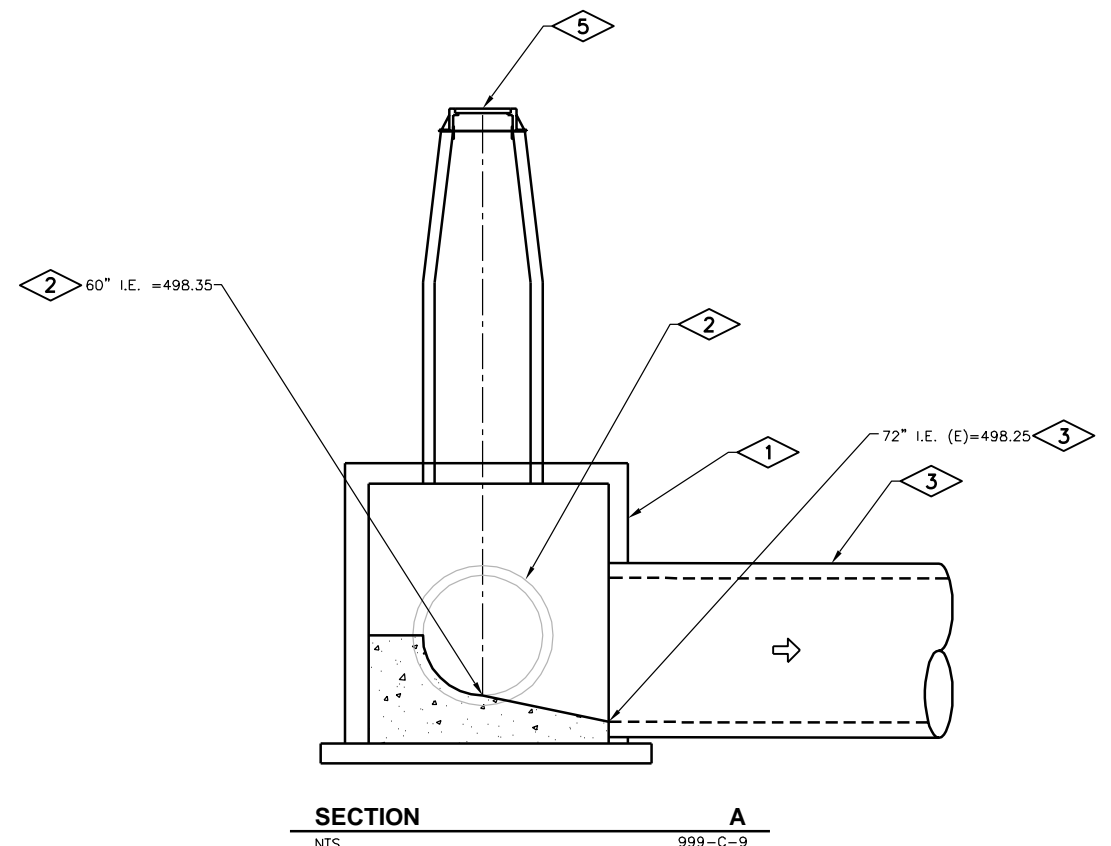
CITY OF JOLIET  
EAST SIDE WASTEWATER TREATMENT PLANT  
INFLUENT PUMP STATION AND SCREEN REPLACEMENT  
JOLIET, IL  
CIVIL  
SSMH-3 DETAILS

**DONOHUE**

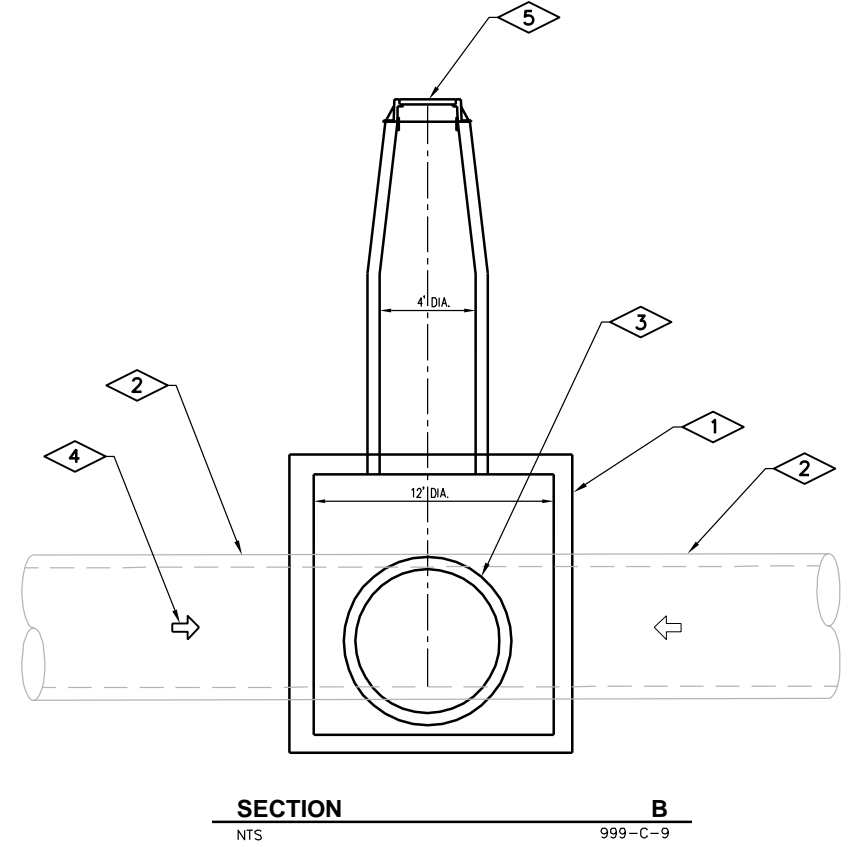
Sheet No. 101  
Drawing No. 999-C-8



PLAN



SECTION A  
NTS 999-C-9



SECTION B  
NTS 999-C-9

**GENERAL NOTES:**

1. ALL EXISTING PIPING SHALL BE FIELD VERIFIED FOR LOCATION AND ELEVATION AT CONNECTION OR CROSSING LOCATIONS.

**PLAN NOTES:**

1. 10" DIAMETER RCP MANHOLE SSMH-4 CONSTRUCTED OVER TOP OF EXISTING 60" SANITARY SEWER. SEE DETAIL 205 ON SHEET 999-C-5 FOR MANHOLE BUILT OVER EXISTING SANITARY SEWER.
2. EXISTING 60" SANITARY SEWER LEFT IN PLACE AND SUPPORTED. CONSTRUCT CONCRETE FILLET TO DIRECT FLOW TOWARDS THE PROPOSED 72" DIA. SANITARY SEWER.
3. PROPOSED 72" SANITARY SEWER TO BE CONSTRUCTED TO STR 100.
4. AS CONSTRUCTION IS COMPLETED, FLOW IN THE EXISTING 60" SANITARY SEWER SHALL BE DIRECTED FROM SSMH-1 TO SSMH-4.
5. SEE SPECIFICATIONS FOR FRAME AND LID.

**DETAIL OF SSMH-4 CONSTRUCTION** C254  
NTS

**JOSEPH V. PISULA**  
4025  
REGISTERED PROFESSIONAL ENGINEER  
STATE OF ILLINOIS

*Joseph V. Pisula*  
7-9-14  
Expires: 11-30-18

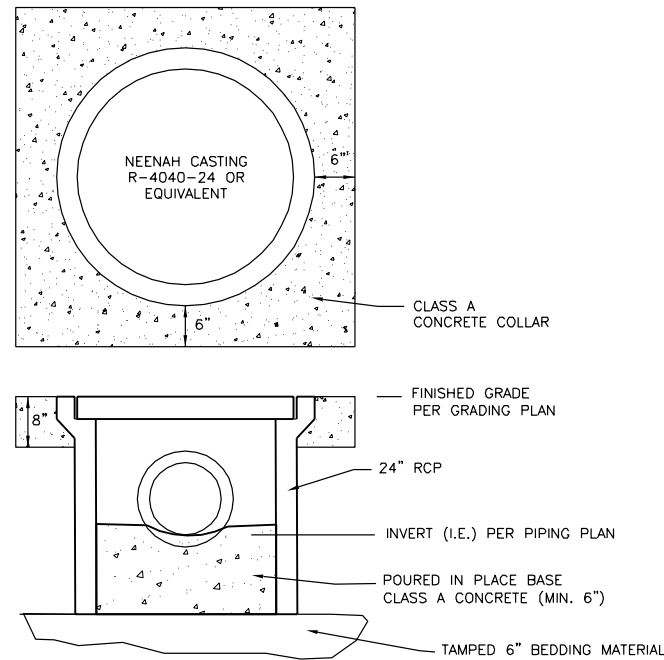
Revision Number	Revision Description	Drawn By	Checked By	Date

CITY OF JOLIET  
EAST SIDE WASTEWATER TREATMENT PLANT  
INFLUENT PUMP STATION AND SCREEN REPLACEMENT  
JOLIET, IL

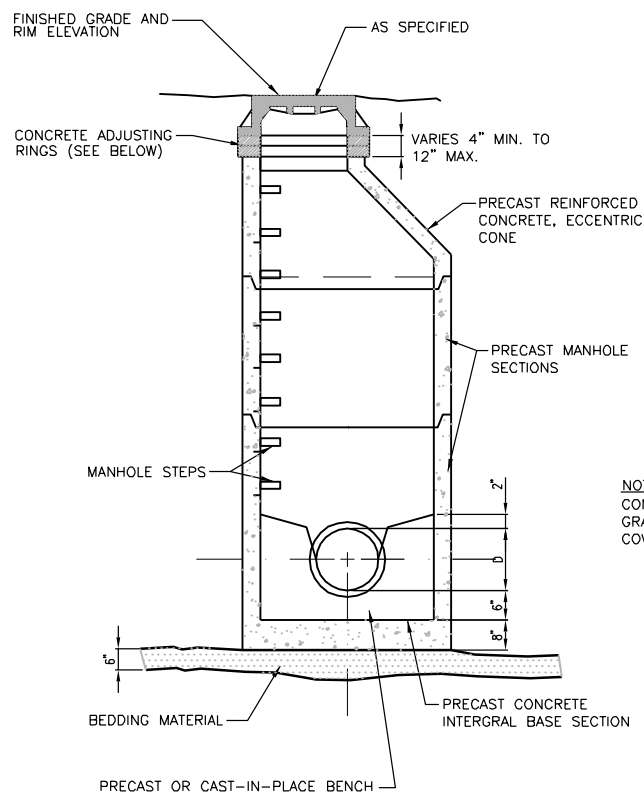
CIVIL  
SSMH-4 DETAILS

**DONOHUE**

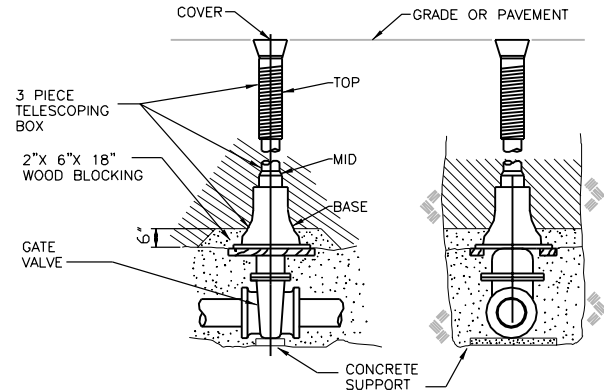
Sheet No. 102  
Drawing No. 999-C-9



**STORM INLET C340**  
NTS

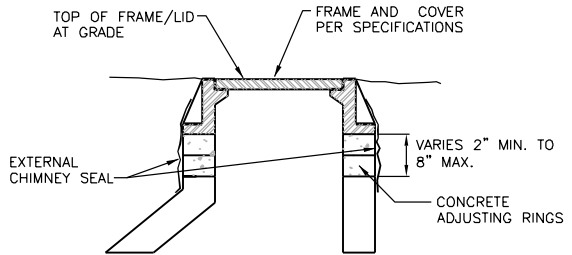


**48-INCH STANDARD STORM MANHOLE DETAIL C380**  
NTS

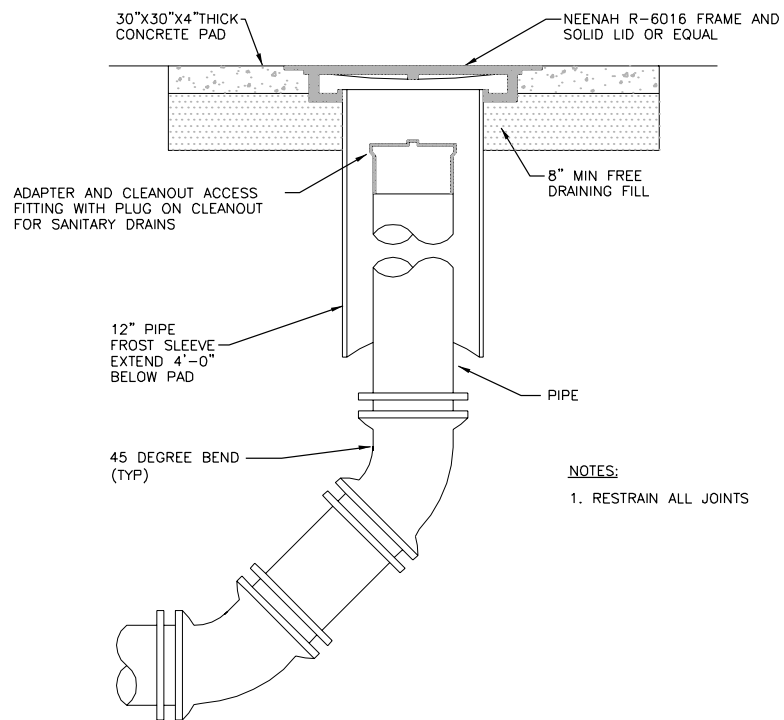


PIPE DIA. INCHES	X=SETTING INCHES
2	6
3	7
4	8
6	12
8	13
12	21

**GATE VALVE IN A BOX DETAIL C405**  
NTS



**CASTING CONNECTION C425**  
NTS



**SANITARY CLEANOUT - END OF RUN C430**  
NTS

**NOTE:**  
CONTRACTOR SHALL ADJUST SURROUNDING GRADES TO BLEND INTO MANHOLE FRAME AND COVER. FRAME AND COVER TO REMAIN LEVEL.

**NOTE:**  
GRADES TO BLEND INTO MANHOLE FRAME AND COVER. FRAME AND COVER TO REMAIN LEVEL.

**NOTES:**  
1. RESTRAIN ALL JOINTS

Revision Number	Revision Description	Drawn By	Checked By	Date

Designed By	TLW
Drawn By	TLW
Checked By	JVP
Approved By	JVP
Filename	999CD.DWG
Project No.	12614
Project Date	JUNE 2014

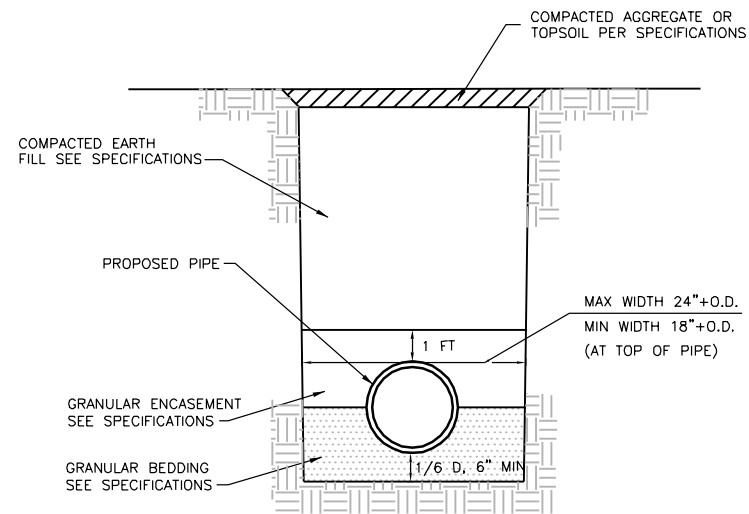
**CITY OF JOLIET  
EAST SIDE WASTEWATER TREATMENT PLANT  
INFLUENT PUMP STATION AND SCREEN REPLACEMENT  
JOLIET, IL  
CIVIL  
STANDARD DETAILS**



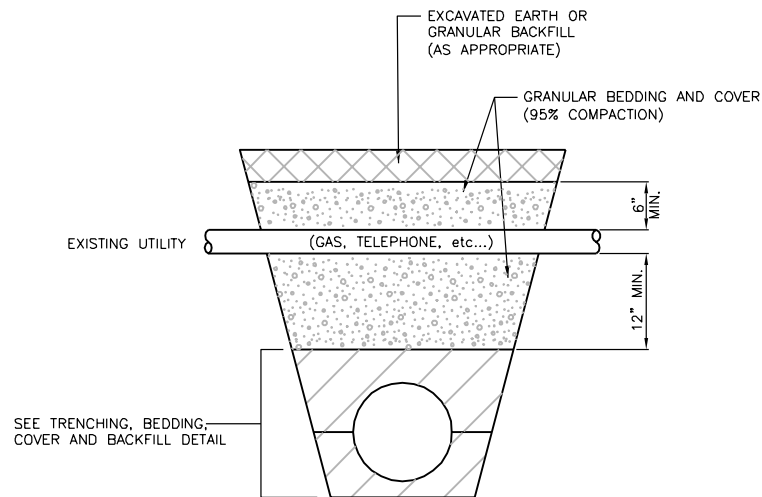
**DONOHUE**

Sheet No. 103

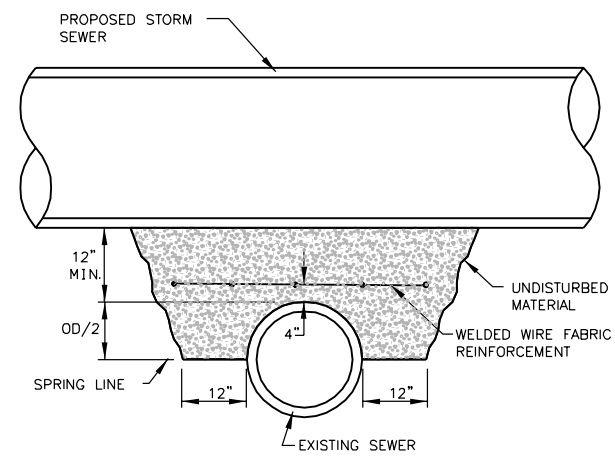
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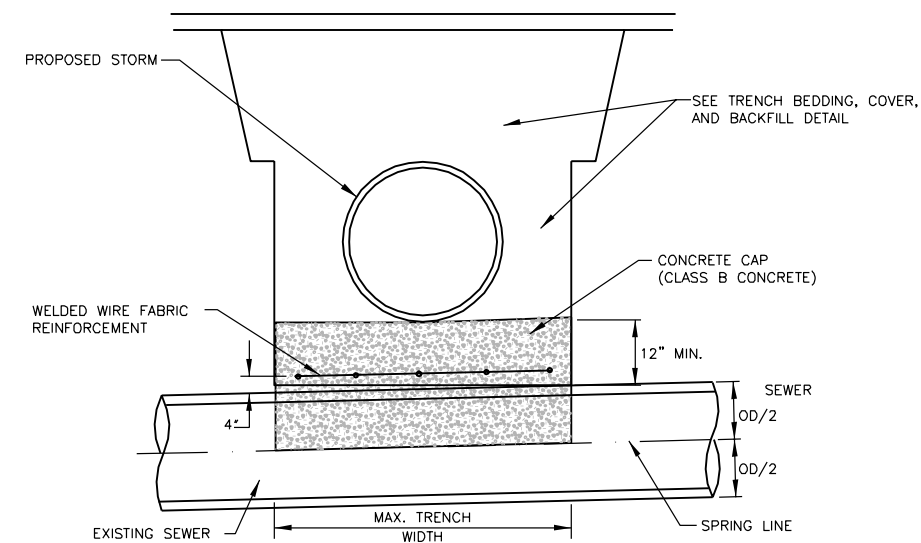
**TRENCH BEDDING  
COVER & BACKFILL C501**  
NTS



**BACKFILLING DETAIL  
AROUND EXISTING UTILITIES C507**  
NTS

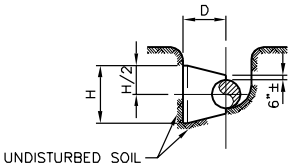
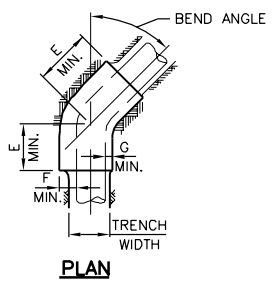
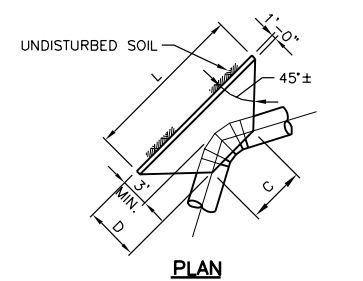


**SECTION**

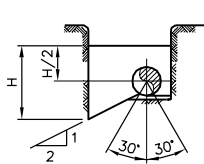


**SECTION**

**SEWER CROSSING DETAIL C560**  
NTS

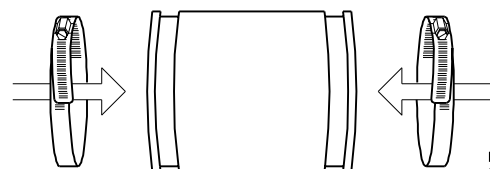


**SECTION**



**SECTION**

**BEND BLOCK DETAILS**  
NOT TO SCALE



NOTE: THIS METHOD OF JOINING IS FOR GRAVITY SEWER 24" AND SMALLER. COUPLING CLAMPS SHALL BE STAINLESS STEEL.

FLEXIBLE ELASTOMERIC COUPLING SUITABLE FOR PVC, RCP, OR DIP PIPING SHALL BE RESISTANT TO CHEMICALS, ULTRAVIOLET RAYS, FUNGUS GROWTH, NORMAL SEWER GASES AND ROOTS. COUPLING SHALL SEAL DRIPTIGHT AGAINST INFILTRATION AND EXFILTRATION.

**FLEXIBLE COUPLINGS DETAIL C550**  
NTS

**THRUST BLOCK AND RESTRAINT TABLE**

PIPE SIZE	54"							RESTRAINT LENGTH EACH WAY
	BLOCK (FT.)							
	L	H	C	D	E	F	G	
90° AND SMALLER	-	9	-	-	12	5	2	400
75° AND SMALLER	-	9	-	-	11	5	2	340
60° AND SMALLER	-	9	-	-	9	5	2	280
45° AND SMALLER	18	10	10	6	-	-	-	210
22 1/2" AND SMALLER	11	8	7	6	-	-	-	110
11 1/4" AND SMALLER	8	8	5	6	-	-	-	60

**THRUST BLOCKING DETAIL C530**  
NTS

**NOTES:**

1. RESTRAINT LENGTHS SHOWN ARE FOR EACH WAY OF BENDS OR BEVEL PIPES.
2. IN AREA WHERE THRUST BLOCK CAN NOT BE PROVIDED AS SHOWN IN TABLE, CONTRACTOR SHALL SUBMIT ALTERNATIVE THRUST BLOCK DESIGN FOR ENGINEER'S REVIEW.
3. THE PLAN AND PROFILE SHEETS DO NOT SHOW THE REQUIRED THRUST BLOCKS

Date	Checked By	Drawn By	Revision Description	Revision Number

Designed By	TLW
Drawn By	TLW
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**CITY OF JOLIET**  
**EAST SIDE WASTEWATER TREATMENT PLANT**  
**INFLUENT PUMP STATION AND SCREEN REPLACEMENT**  
**JOLIET, IL**  
**CIVIL STANDARD DETAILS**



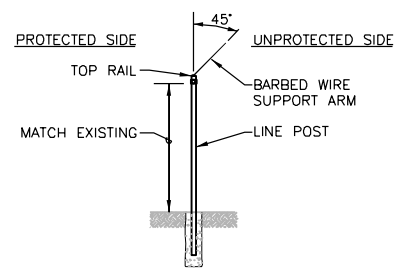
*Joseph V. Pisula*  
7-9-14  
Expires: 11-30-15



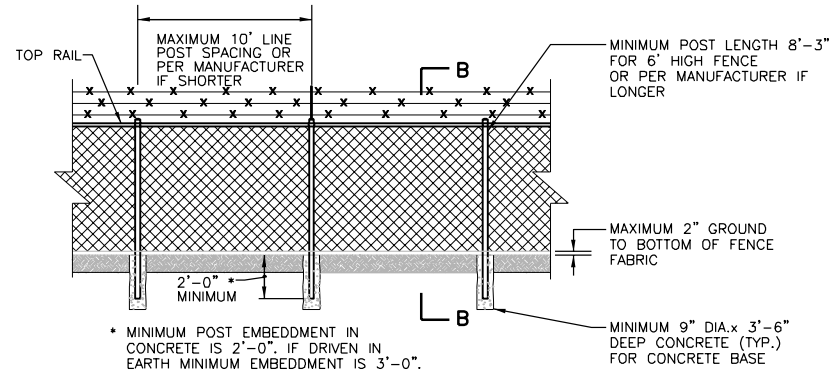
Sheet No. 104  
Drawing No.

999-C-11



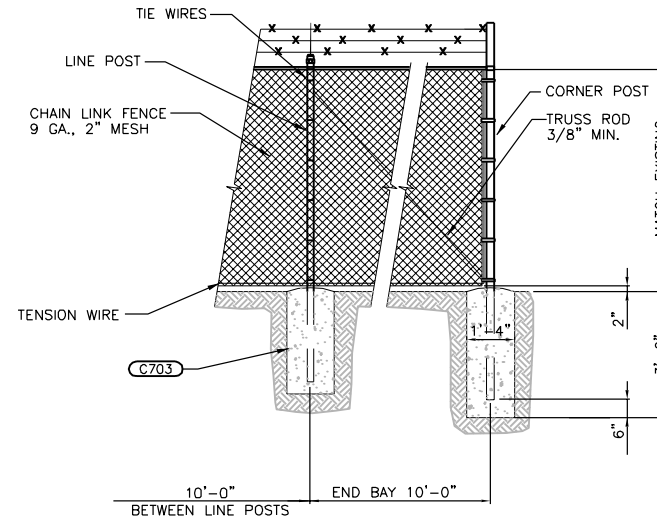


**SECTION "B"**



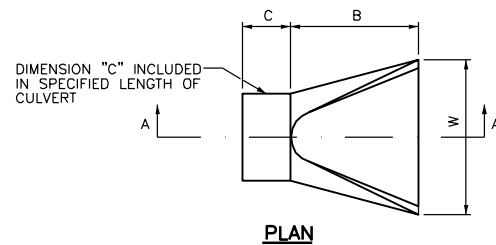
**CHAIN LINK FENCING WITH BARBED WIRE DETAIL C703**

NTS

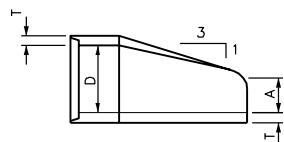


**CHAIN LINK FENCE END POST WITH BARBED WIRE C705**

NTS



**PLAN**



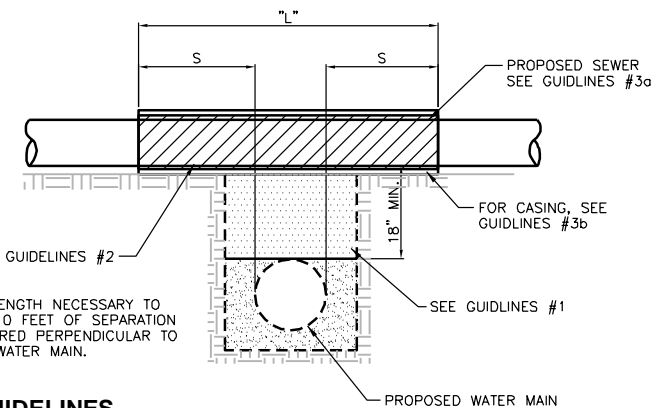
**PROFILE**

**APPROXIMATE SECTION DIMENSIONS**

- A = 1/2 PIPE DIAMETER
- B = 1.5x PIPE DIAMETER
- C = 18" MINIMUM
- D = PIPE DIAMETER REQUIRED
- T = PIPE WALL THICKNESS OF ADJOINING CONCRETE CULVERT
- W = 2x PIPE DIAMETER

**CONCRETE CULVERT FLARED END SECTION DETAIL C810**

NTS



NOTE: "S" THE LENGTH NECESSARY TO PROVIDE 10 FEET OF SEPARATION AS MEASURED PERPENDICULAR TO EXISTING WATER MAIN.

**GUIDELINES**

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

**IL 19 WATER AND SEWER SEPARATION C910**

NTS

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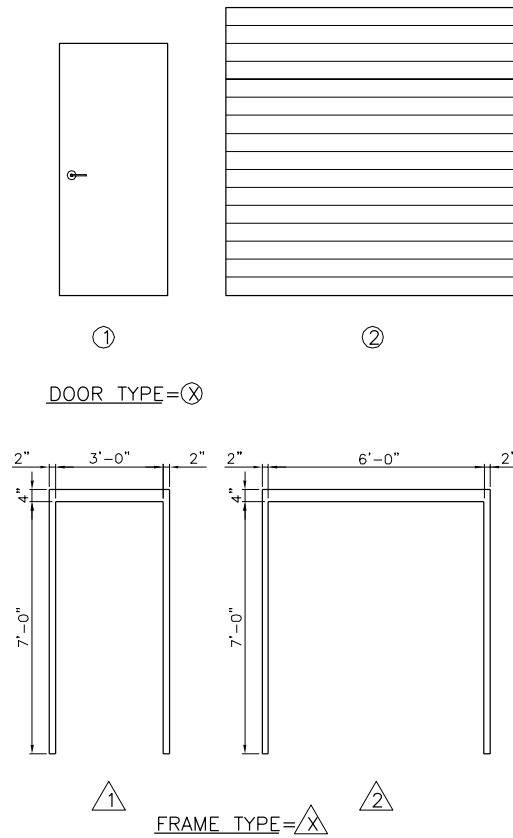
**CITY OF JOLIET  
EAST SIDE WASTEWATER TREATMENT PLANT  
INFLUENT PUMP STATION AND SCREEN REPLACEMENT  
JOLIET, IL  
CIVIL  
STANDARD DETAILS**



*Joseph V. Pisula*  
7-9-14  
Expires: 11-30-15

DOOR SCHEDULE											A020	
STRUC. NO.	DOOR NO.	DOOR *						FRAME			REMARKS	
		TYPE	LINTEL	SIZE		MAT'L.	FINISH	H.W.SET	TYPE	MAT'L.		FINISH
				WIDTH X HEIGHT	THK							
100	001	1	-	3'-0"X7'-0"	1-3/4"	AL	-	1	1	AL	-	
	101	1	L-2	3'-0"X7'-0"	1-3/4"	AL	-	2	1	AL	-	
	102	2	L-5	14'-0"X12'-0"	-	AL	-	-	-	-	-	OVERHEAD COILING DOOR
	103	1	L-2	(2) 3'-0"X7'-0"	1-3/4"	AL	-	3	2	AL	-	
	104	1	L-2	3'-0"X7'-0"	1-3/4"	AL	-	2	1	AL	-	
	105	2	L-4	12'-0"X12'-0"	-	AL	-	-	-	-	-	OVERHEAD COILING DOOR
	106	1	L-1	3'-0"X7'-0"	1-3/4"	AL	-	1	1	AL	-	
	107	1	L-2	3'-0"X7'-0"	1-3/4"	AL	-	2	1	AL	-	
	108	1	L-2	3'-0"X7'-0"	1-3/4"	AL	-	2	1	AL	-	
	109	1	L-2	3'-0"X7'-0"	1-3/4"	AL	-	2	1	AL	-	
	110	2	L-3	8'-8"X10'-0"	-	AL	-	-	-	-	-	OVERHEAD COILING DOOR
	111	2	L-3	8'-8"X10'-0"	-	AL	-	-	-	-	-	OVERHEAD COILING DOOR
	112	1	L-2	3'-0"X7'-0"	1-3/4"	AL	-	2	1	AL	-	

**KEY**  
AL = ALUMINUM  
GHM = GALVANIZED HOLLOW METAL  
EXST = EXISTING  
FRP = FIBERGLASS REINFORCED PLASTIC  
PNT = PAINT  
\* ALL DOORS ARE TO BE INSULATED



ROOM FINISH SCHEDULE						A010	ABBREVIATIONS	
STRUC. NO	STRUCTURE/ROOM NAME	FLOOR		WALLS		CEILING		REMARKS
		MAT'L	FINISH	MAT'L	FINISH	MAT'L	FINISH	
100	PUMP STATION AND SCREENING FACILITY							
	CHANNELS	CONC	EXP	CONC	COAT	CONC	COAT	
	NORTH WET WELL	CONC	EXP	CONC	COAT	CONC	COAT	
	SOUTH WET WELL	CONC	EXP	CONC	COAT	CONC	COAT	
	PUMP ROOM	CONC	EXP	CONC	EXP	CONC	EXP	NOTE NO. 1
	STAIRWELL - LOWER LEVEL	CONC	SC	CONC	EXP	CONC	EXP	NOTE NO. 1
	EFFLUENT CHANNEL	CONC	EXP	CONC	COAT	CONC	COAT	
	SCREEN ROOM	CONC	SC	CMU	GLAZED	PCONC	COAT	
	ELECTRICAL ROOM	CONC	SC	CMU	GLAZED	PCONC	COAT	NOTE NO. 3
	STAIRWELL - UPPER LEVEL	CONC	SC	CMU	COAT	PCONC	COAT	
	STORAGE ROOM	CONC	SC	CMU	GLAZED	PCONC	COAT	

**ABBREVIATIONS**  
CMU CONCRETE MASONRY UNIT  
COAT COATING  
CONC CONCRETE  
EXP EXPOSED  
MDECK METAL DECK  
PCONC PRECAST CONCRETE  
SC SEALED CONCRETE  
STLTR STEEL TRUSS

**NOTES:**  
1. CONCRETE WALLS AND CEILINGS TO BE LEFT AS EXPOSED CONCRETE WHERE NOTED.  
2. SEE SPECIFICATION SECTION 09 96 00 FOR COATING SCHEDULE.  
3. INTERIOR PARTITION WALL TO BE COATED CMU.

Date	
Checked By	
Drawn By	
Revision Description	
Revision Number	
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Drawn By	TJW
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CITY OF JOLIET  
EAST SIDE WASTEWATER TREATMENT PLANT  
INFLUENT PUMP STATION AND SCREEN REPLACEMENT  
JOLIET, IL  
ARCHITECTURAL  
STANDARD DETAILS

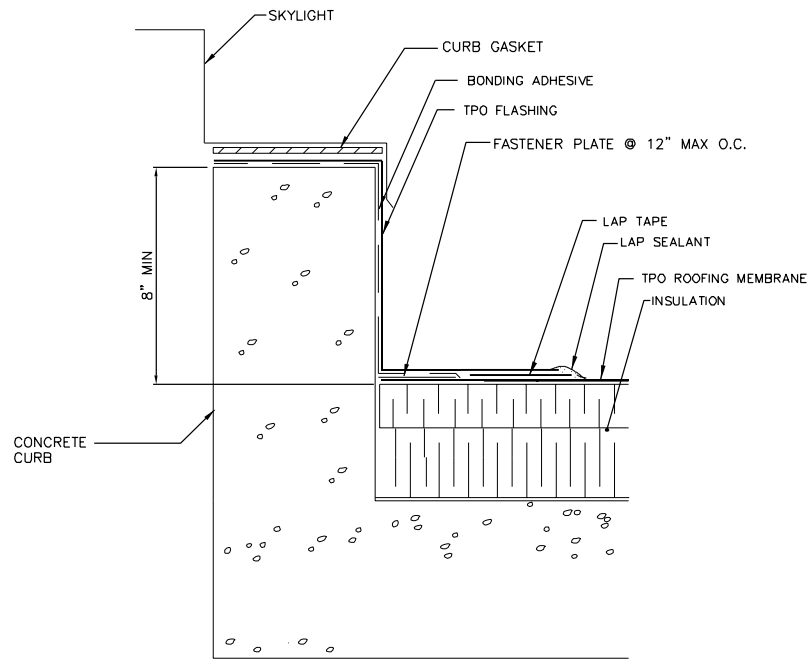


*Philip Enlebert*  
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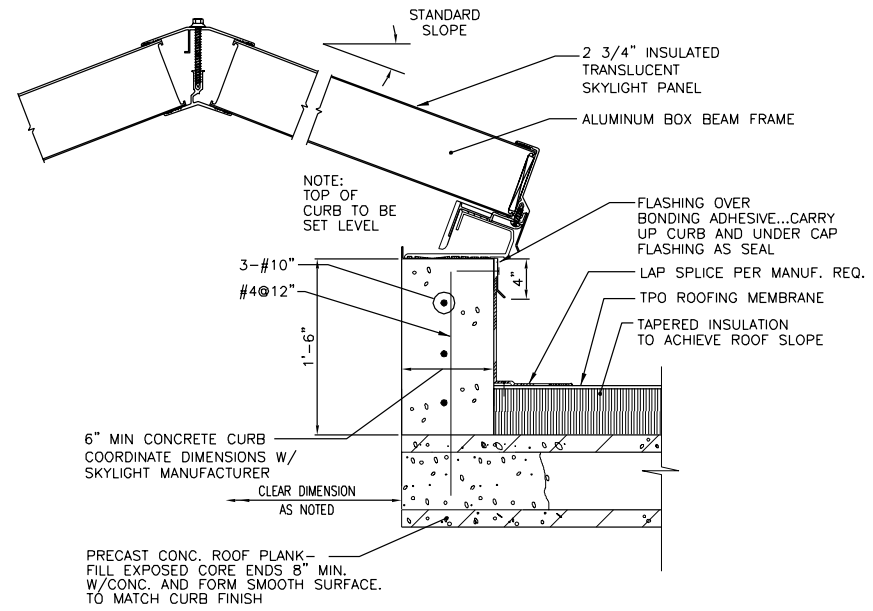
Sheet No. 106  
Drawing No.

999-A-1



**SKYLIGHT CURB DETAIL A776**

NTS



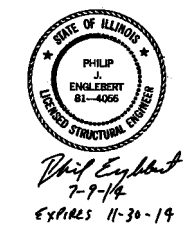
**REMOVABLE SKYLIGHT DETAIL A778**

NTS

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**JOLIET, IL**  
**ARCHITECTURAL**  
**STANDARD DETAILS**



<b>DONOHUE</b>
Sheet No. 107
Drawing No. 999-A-2

**GENERAL STRUCTURAL NOTES**

GENERAL

- 1. THE GENERAL STRUCTURAL NOTES AND STANDARD STRUCTURAL DETAILS APPLY TO THE ENTIRE PROJECT UNLESS SPECIFICALLY NOTED OTHERWISE.

DESIGN CRITERIA

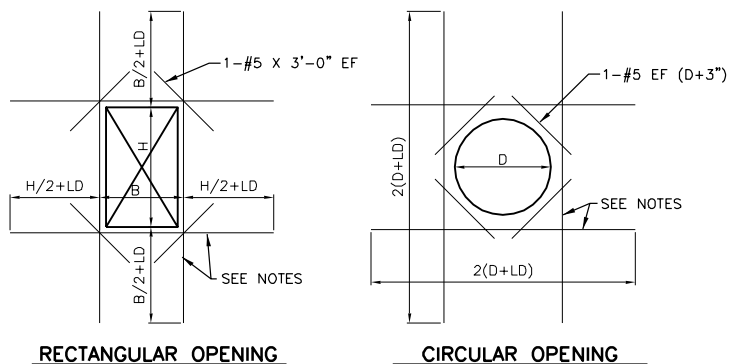
- 1. DESIGN AND CONSTRUCT IN CONFORMANCE WITH THE INTERNATIONAL BUILDING CODE, 2003 EDITION.
- 2. SUPERIMPOSED DESIGN LOADS
  - A. WIND LOAD 90 MPH
  - B. SNOW LOAD (GROUND): 25 PSF
  - C. ROOFING DEAD LOAD: (EQMT AND PIPING ADDT'L) 30 PSF
  - D. MECHANICAL EQUIPMENT: VERIFY WITH EQUIPMENT SUPPLIER
  - E. STAIRS AND WALKWAYS: 100 PSF OR 1000 LBS CONCENTRATED
  - F. FLOOR SLABS (OTHER THAN SLABS ON GRADE)
    - 1. PUMP STATION AND SCREEN FACILITY 100: 200 PSF
    - 2. ABANDONED INFLUENT PUMP STATION 125 NEW SLAB: 200 PSF
  - G. HOIST CAPACITY
    - 1. PUMP STATION AND SCREEN FACILITY 100: 5 TON

FOUNDATIONS

- 1. GEOTECHNICAL INVESTIGATION BY SEECO CONSULTANTS INC.
- 2. NET SOIL BEARING CAPACITIES PER GEOTECHNICAL INVESTIGATION DATED MARCH 24, 2013:
  - A. SHALLOW FOUNDATIONS 4000 PSF
  - B. DEEP FOUNDATIONS BEARING ON ROCK 10000 PSF
- 3. PLACE FOOTINGS ON NATURAL UNDISTURBED EARTH OR STRUCTURAL FILL
- 4. PLACE FILL AGAINST FOUNDATION WALLS ENCLOSING INTERIOR SPACES AFTER CONSTRUCTION SUCH AS CROSS WALLS, BEAMS OR SLABS ARE IN PLACE TO BRACE WALL AND SUCH CONSTRUCTION HAS REACHED ITS DESIGN STRENGTH.
- 5. TO MINIMIZE LATERAL FORCES AGAINST THE STRUCTURE DUE TO WEDGING ACTION OF THE SOIL, BEGIN COMPACTION OF EACH LAYER AT THE STRUCTURE WALL.

REINFORCEMENT

- 1. REINFORCEMENT STEEL
  - A. DEFORMED BARS: ASTM A615 - GRADE 60
- 2. UNLESS NOTED OTHERWISE PROVIDE CLEAR COVER FOR REINFORCEMENT AS FOLLOWS:
  - A. CAST AGAINST:
    - 1. EARTH: 3 INCHES
    - B. EXPOSED TO EARTH, WEATHER, OR WATER
      - 1. SLABS
        - A. #5 BARS OR SMALLER: 1 1/2 INCHES
        - B. #6 THROUGH #11 BARS: 2 INCHES
      - 2. WALLS AND BEAMS: 2 INCHES
    - C. NOT EXPOSED TO EARTH, WEATHER, OR WATER
      - 1. SLABS AND WALLS
        - A. #3 THROUGH #7 BARS: 1 INCH
        - B. #8 THROUGH #11 BARS: 1 1/2 INCHES
      - 2. BEAMS: 1 1/2 INCHES
- 3. PLACE DOWELS BEFORE PLACING CONCRETE.
- 4. DO NOT FIELD WELD OR FIELD BEND REINFORCING BARS.



- NOTES:**
1. THESE DETAILS APPLY TO ALL OPENINGS IN CONCRETE WALLS AND SLABS WHEN THE LARGEST OPENING DIMENSION IS GREATER THAN TWO TIMES SECTION THICKNESS OR GREATER THAN REINFORCING SPACING IN THE SECTION, UNLESS OTHERWISE INDICATED IN THE DRAWINGS.
  2. THE AREA OF ADDITIONAL REINFORCING REQUIRED IN EACH FACE ON EACH SIDE OF AN OPENING SHALL EQUAL OR EXCEED ONE-HALF OF THE AREA OF THE INTERCEPTED BARS IN EACH FACE, IN EACH DIRECTION, RESPECTIVELY WITH A MINIMUM OF 1-#5 BAR EACH FACE.
  3. PLACE THE ADDED BARS IN THE SAME LAYERS AS THE WALL OR SLAB REINFORCING.
  4. LD = EMBEDMENT LENGTH. SEE (S010)

**ADDITIONAL REINFORCEMENT AT OPENINGS IN WALLS AND SLABS DETAIL S020**

NTS

CONCRETE

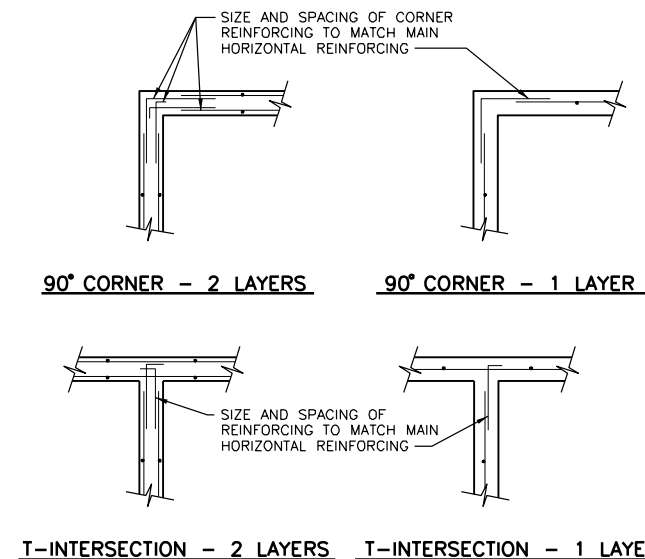
- 1. DESIGN STRENGTH
  - A. INTERIOR EQUIPMENT BASES FENCE POST PIERS, CONCRETE FILLETS IN TANKS, AND WHERE SPECIFICALLY NOTED
    - CLASS B: F'C = 3000 PSI
  - B. ALL LOCATIONS, EXCEPT WHERE CLASS B SPECIFIED
    - CLASS A: F'C = 4000 PSI
    - CONCRETE TOPPING: F'C = 4000 PSI
    - STRUCTURAL PRECAST CONCRETE: F'C = 4000 PSI
- 2. PROVIDE WATERSTOP IN CONSTRUCTION JOINTS IN
  - A. WALLS AND SLABS SEPARATING DRY INTERIOR FROM EARTH OR LIQUID.
  - B. EXTERIOR WALLS AND SLABS OF LIQUID HOLDING TANKS
  - C. SLABS ABOVE OCCUPIED AREAS.
  - D. OTHER LOCATIONS SHOWN.
- 3. UNLESS NOTED OTHERWISE, CONSTRUCTION JOINTS SHOWN ARE OPTIONAL CONSTRUCTION JOINTS NOT SHOWN SHALL BE APPROVED BY ENGINEER.
- 4. LIMIT SIZE OF CONCRETE POURS. MAXIMUM LENGTH OF WALL AND SLAB POURS SHALL NOT EXCEED 60 FT.
- 5. BEFORE CONCRETE IS PLACED, CONSTRUCTION JOINTS SHALL BE CLEANED, LAITANCE REMOVED, AND SURFACE WETTED. REMOVE STANDING WATER.
- 6. LOCATE CONSTRUCTION JOINTS IN FLOORS WITHIN MIDDLE THIRD OF SPAN. CONSTRUCTION JOINTS IN FLOORS SUPPORTED BY WALLS MAY BE LOCATED AT CENTER OF WALL.
- 7. CONSTRUCTION JOINTS IN BEAMS SHALL BE OFFSET MIN DISTANCE OF 2 TIMES WIDTH OF INTERSECTING BEAM.
- 8. LOCATE VERTICAL JOINTS IN WALL A MIN OF ONE-HALF WALL HEIGHT FROM CORNERS OR OTHER INTERSECTING WALLS. LOCATE HORIZONTAL JOINTS IN WALLS WITHIN THE MIDDLE THIRD OF WALL HEIGHT.
- 9. BEAMS, HAUNCHES, DROP PANELS, AND CAPITALS SHALL BE PLACED MONOLITHICALLY AS PART OF SLAB SYSTEM, UNLESS DETAILED OTHERWISE.
- 10. CONSTRUCTION JOINTS SHALL HAVE KEYS OR ROUGHENED SURFACES. WHERE ROUGHENED SURFACE IS USED, SURFACE SHALL HAVE AMPLITUDE OF 1/4 IN. MIN.
- 11. PROVIDE 3/4 IN. CHAMFER ON EXTERNAL CORNERS OF EXPOSED EDGES OF CONSTRUCTION JOINTS.
- 12. VERIFY EQUIPMENT PAD AND CURB LOCATIONS, DIMENSIONS, AND ELEVATIONS WITH EQUIPMENT MANUFACTURERS.

MASONRY

- 1. MASONRY OPENINGS LESS THAN 4 FT IN WIDTH THAT DO NOT HAVE A LINTEL SCHEDULED SHALL HAVE AN 8 IN. HIGH REINFORCED MASONRY LINTEL WITH 2-#5 BARS OR DOUBLE ANGLE STEEL ANGLE LINTEL.
- 2. UNLESS NOTED OTHERWISE, PROVIDE A CONTINUOUS BOND BEAM REINFORCED WITH 2-#5 AROUND THE TOP OF BUILDINGS.
- 3. UNLESS NOTED OTHERWISE, PROVIDE HORIZONTAL MASONRY REINFORCING IN WALLS AT 16 IN. ON CENTER.
- 4. FILL JAMB CORES OR OPENINGS OVER 3 FT IN WIDTH WITH MASONRY GROUT FROM BOTTOM OF LINTEL TO BOTTOM OF WALL. REINFORCE CORES WHERE NOTED.
- 5. BRACE MASONRY WALLS UNTIL ROOF OR FLOOR SYSTEM IS IN PLACE.

METALS

- 1. STEEL
  - A. STRUCTURAL STEEL: ASTM A36 OR A992
  - B. SQUARE OR RECTANGULAR TUBE: ASTM A500
  - C. PIPE: ASTM A53
  - D. BOLTED CONNECTIONS: ASTM A325
- 2. ALUMINUM
  - A. SHAPES AND PLATES: ALLOY 6061-T6 OR 6063-T6
- 3. WELD STRUCTURAL STEEL WITH E70XX ELECTRODES IN ACCORDANCE WITH AWS REQUIREMENTS.
- 4. WELD ALUMINUM IN ACCORDANCE WITH AWS AND AA REQUIREMENTS.
- 5. BRIDGE JOISTS BEFORE APPLYING CONSTRUCTION LOADS.
- 6. COAT ALUMINUM SURFACES IN CONTACT WITH CONCRETE IN ACCORDANCE WITH AA REQUIREMENTS. UNDER NO CIRCUMSTANCES SHALL ALUMINUM CONTACT DISSIMILAR METALS.



**HORIZONTAL REINFORCEMENT DETAIL S030**

NTS

MISCELLANEOUS

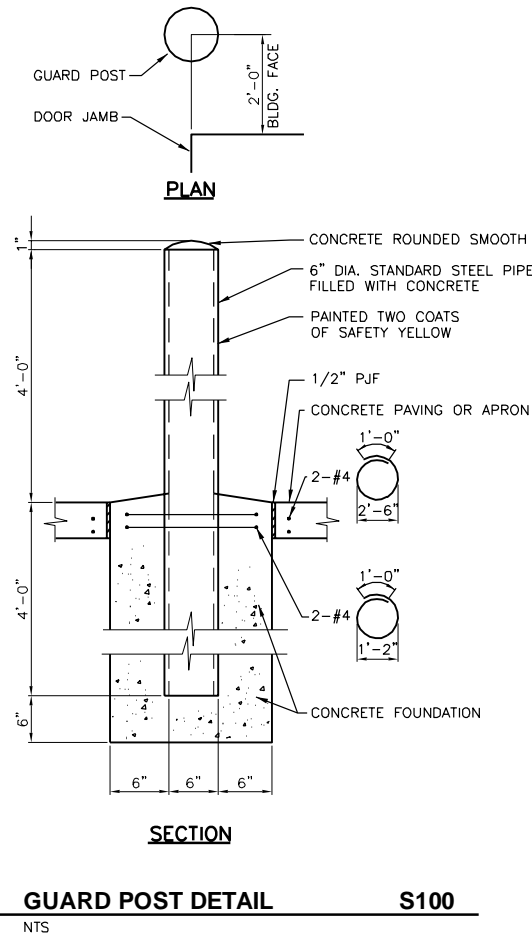
- 1. VERIFY PERTINENT EXISTING CONDITIONS AND DIMENSIONS BEFORE STARTING CONSTRUCTION AND/OR FABRICATION.
- 2. DO NOT FIELD CUT PRESTRESSING STRANDS IN PRECAST PRESTRESSED CONCRETE MEMBERS WITHOUT WRITTEN APPROVAL OF FABRICATOR AND ENGINEER.
- 3. FOR ADDITIONAL OPENINGS, ANCHORS, AND EMBEDDED ITEMS SEE ARCHITECTURAL, PROCESS, PLUMBING, MECHANICAL, AND ELECTRICAL DRAWINGS.

**MINIMUM REINFORCEMENT BAR SPLICE AND ANCHORAGE LENGTH (INCHES) S010**

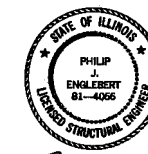
BAR SIZE	LAPPED SPLICE LENGTH		EMBEDMENT LENGTH		COMPRESSION LAP LENGTH
	TOP BARS	OTHERS	TOP BARS	OTHERS	
3	24	19	19	15	12
4	32	25	25	19	15
5	40	31	31	24	19
6	48	37	37	29	23
7	70	54	54	42	26
8	80	62	62	48	30
9	91	70	70	54	34

**NOTES:**

- 1. TOP BARS ARE HORIZONTAL BARS SO PLACED THAT MORE THAN 12" OF CONCRETE IS CAST IN THE MEMBER BELOW THE BAR.
- 2. FOR BARS SPACED LESS THAN 6 BAR DIAMETER OC INCREASE LENGTH BY 25%.
- 3. WHEN LAPPING TWO DIFFERENT SIZE BARS USE THE LAP LENGTH OF THE SMALLER BAR UNLESS NOTED OTHERWISE.
- 4. EMBEDMENT LENGTH IS MINIMUM LENGTH OF EMBEDMENT FOR STRAIGHT DOWELS WHERE END HOOK IS NOT SHOWN, UNLESS OTHERWISE NOTED.
- 5. HOOKS SHALL BE ACI STANDARD UNLESS OTHERWISE NOTED.



NTS



*Philip J. Emblebert*  
7-9-14  
EXPIRES 11-30-14



Sheet No. 108

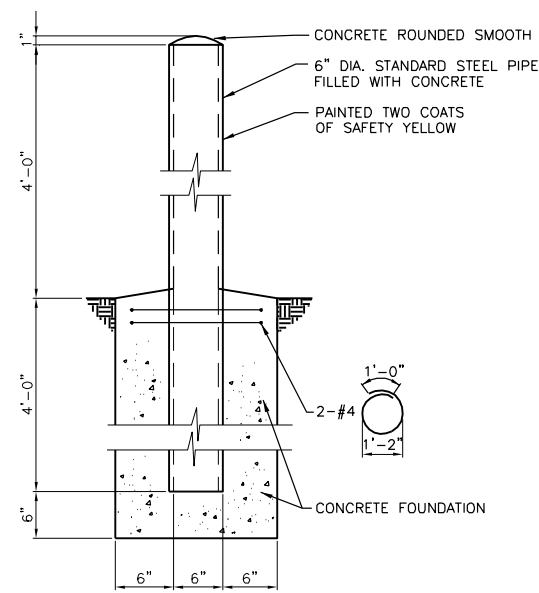
Drawing No.

999-S-1

**CITY OF JOLIET**  
**EAST SIDE WASTEWATER TREATMENT PLANT**  
**INFLUENT PUMP STATION AND SCREEN REPLACEMENT**  
**JOLIET, IL**  
**STRUCTURAL**  
**STANDARD DETAILS**

Revision Number	Revision Description	Drawn By	Checked By	Date

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Project No.	12614
Project Date	JUNE 2014

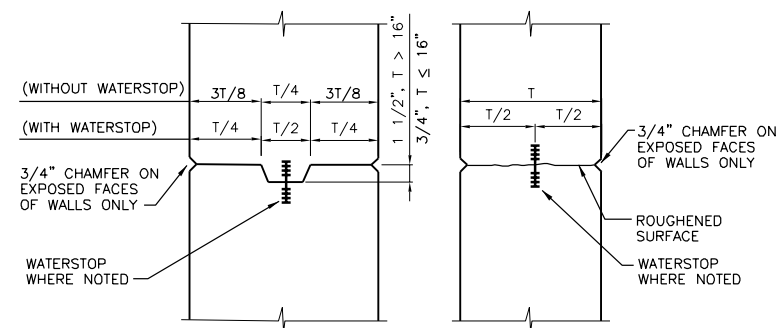


**SECTION GUARD POST DETAIL S101**

NTS

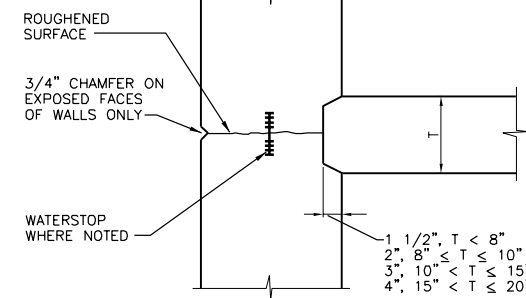
**NOTES:**  
 1. IF KEY DEPTH EXCEEDS COVER ON REINFORCING, PROVIDE FULL DEPTH KEY BETWEEN BARS

**SLAB/WALL JOINT**

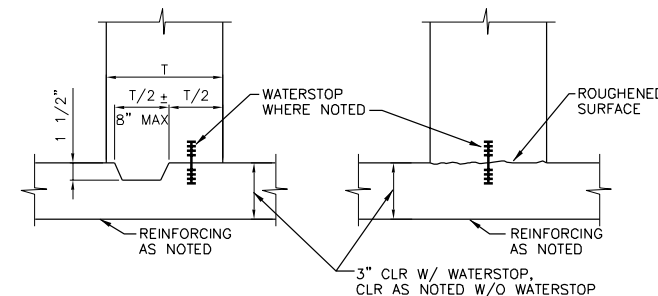


**WITH KEYWAY WITHOUT KEYWAY**

**JOINT IN WALLS OR SLABS**



**SLAB / WALL**

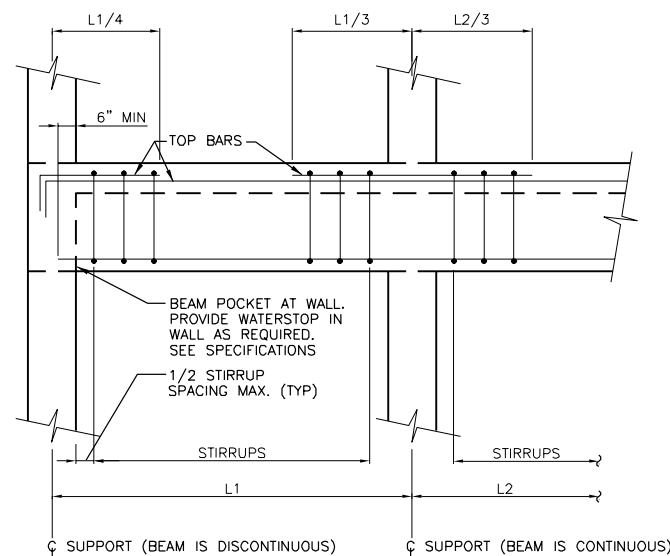


**WITH KEYWAY WITHOUT KEYWAY**

**BASE OF WALL**

**CONSTRUCTION JOINT DETAILS S300**

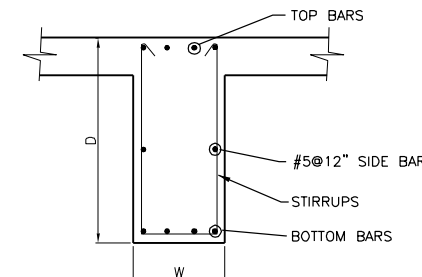
NTS



**NOTES:**  
 1. WALL REINFORCING SHALL BE CONTINUOUS THRU BEAM POCKETS. TOP BARS MAY BE SPLICED AT MID SPAN. BOTTOM BARS MAY BE SPLICED AT SUPPORT.

**BEAM REINFORCING DETAIL S316**

NTS



**BEAM WITH SLAB**

**TYPICAL BEAM SECTIONS S3**

NTS



*Philip Enlebert*  
 7-9-14  
 EXPIRES 11-30-14

CONCRETE BEAM SCHEDULE S315														
MARK	SIZE W x D	REINFORCEMENT								STIRRUPS	LEFT	SKETCH	RIGHT	REMARKS
		A	B	C	D	E	F	G						
B-1	16X30	2-#7	4-#8							#4@12"				

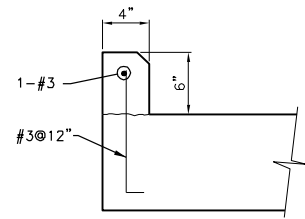
**NOTES:**  
 1. LEFT SUPPORT IS DESIGNATED AS THE SUPPORT CLOSEST THE LEFT SIDE OR BOTTOM OF DRAWING ON WHICH FRAMING PLAN IS DRAWN, UNLESS NOTED OTHERWISE.  
 2. FOR TYPICAL BEAM REINFORCEMENT SEE (S316) & (S317)  
 3. THE BEAM DEPTH NOTED IS MINIMUM REQUIRED. CONTRACTOR SHALL INCREASE DEPTH AS REQUIRED TO PROVIDE FOR FLOOR AND / OR ROOF SLOPES.

Revision Number	Revision Description	Drawn By	Checked By	Date

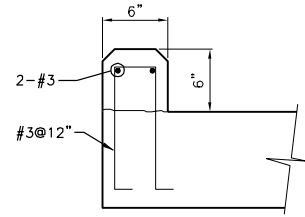
Designed By: AJT  
 Drawn By: AJT  
 Checked By: PJE  
 Approved By: PJE  
 Filename: 999SD1.DWG  
 Project No.: 12614  
 Project Date: JUNE 2014

CITY OF JOLIET  
 EAST SIDE WASTEWATER TREATMENT PLANT  
 INFLUENT PUMP STATION AND SCREEN REPLACEMENT  
 JOLIET, IL  
 STRUCTURAL  
 STANDARD DETAILS

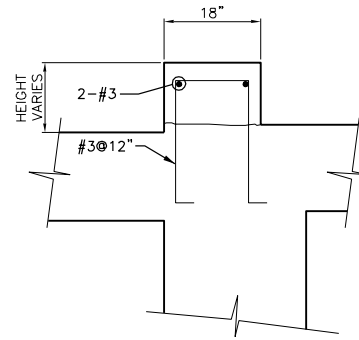
**DONOHUE**  
 Sheet No. 109  
 Drawing No. 999-S-2



**4" CURB**



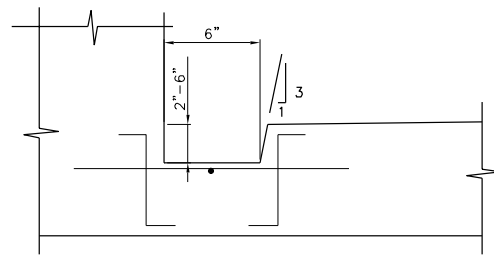
**6" CURB**



**18" CURB**

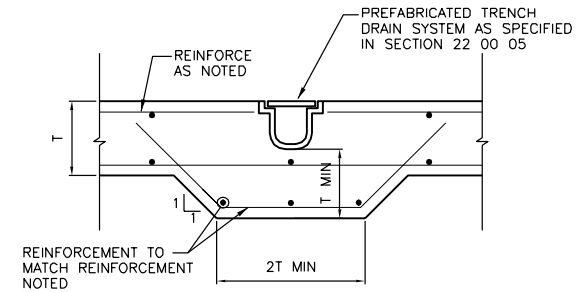
**NOTE:**  
1. EXTEND DOWEL BAR A MINIMUM OF 6" INTO SLAB.  
FOR SLABS LESS THAN 8" THICK, PROVIDE 90° HOOK END.

**CURB DETAILS S325**  
NTS

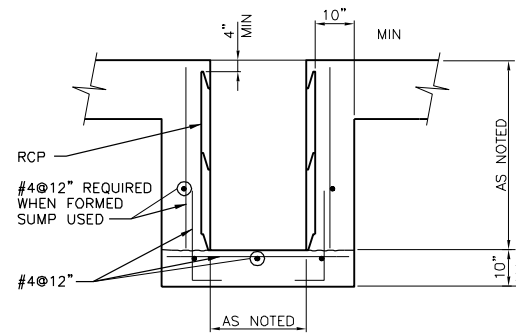


**NOTES:**  
1. REINFORCEMENT #5@ 12" AS SHOWN.  
2. PROVIDE A MINIMUM DEPTH OF 1/2" AT HIGH POINTS.  
SLOPE TOWARD DISCHARGE AT 1/8" PER FOOT UNLESS OTHERWISE NOTED.

**SUMP DETAIL S335**  
NTS

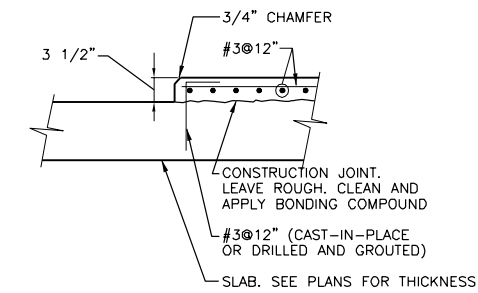


**TRENCH DRAIN DETAIL S336**  
NTS

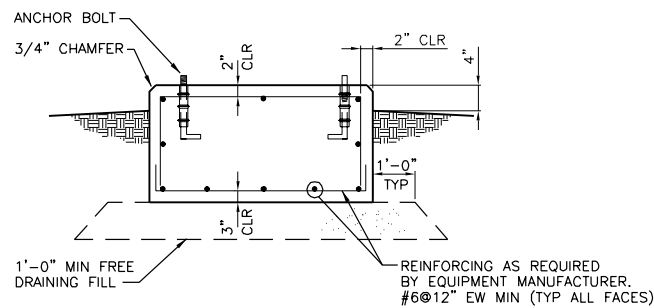


**NOTES:**  
1. FORMED SUMP OPTIONAL.

**SUMP DETAIL S338**  
NTS

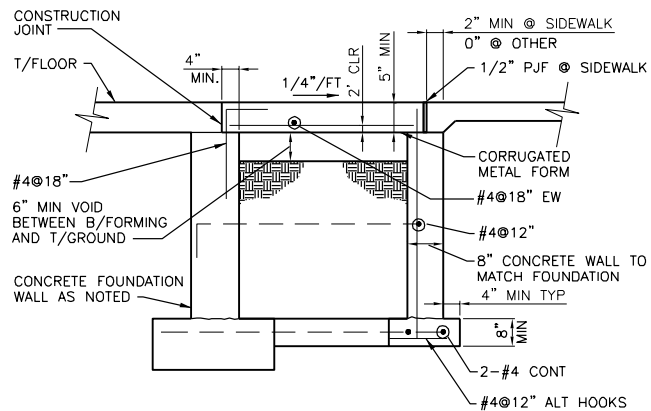


**EQUIPMENT PAD DETAIL S340**  
NTS

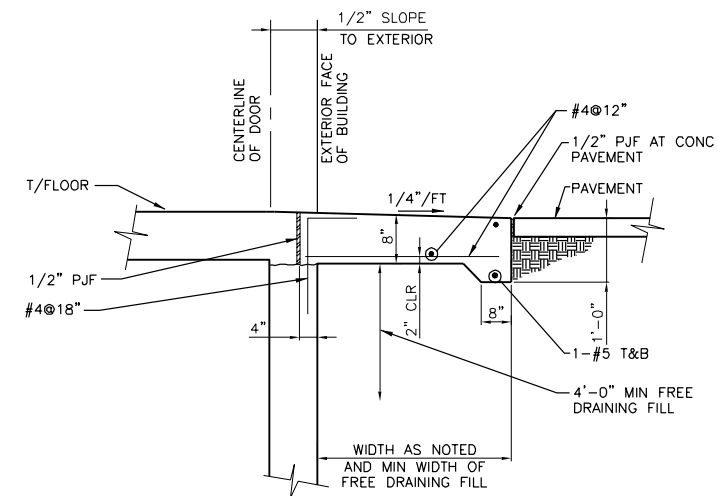


**NOTES:**  
1. CONCRETE BASE AS REQUIRED BY EQUIPMENT MANUFACTURER.  
MINIMUM OF 2 TIMES THE MASS OF EQUIPMENT SUPPORTED OR  
10 TIMES THE MASS OF MOVING PARTS, WHICHEVER IS GREATER.

**EQUIPMENT PAD DETAIL S348**  
NTS



**DOOR STOOP DETAIL S362**  
NTS



**NOTES:**  
1. FREE DRAINING FILL MUST BE KEPT CLEAN  
UNTIL SLAB IS POURED.

**APPROACH SLAB DETAIL S365**  
NTS



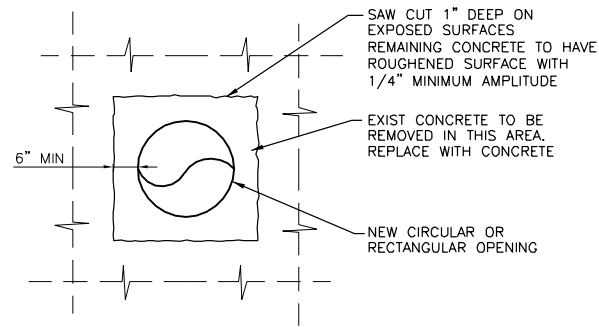
*Philip Enlebert*  
7-9-14  
EXPIRES 11-30-14

Revision Number	Revision Description	Drawn By	Checked By	Date

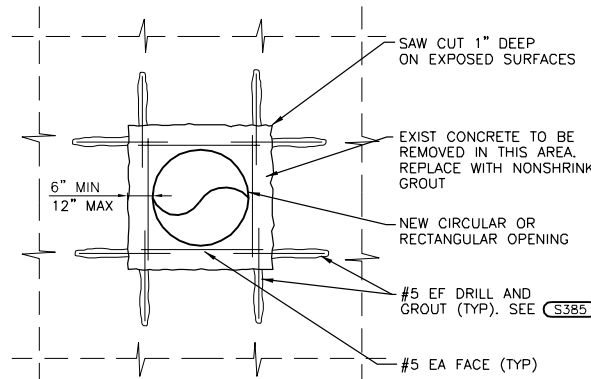
Designed By	AJT
Drawn By	AJT
Checked By	PJE
Approved By	PJE
Filename	999SD1.DWG
Project No.	12614
Project Date	JUNE 2014

**CITY OF JOLIET  
EAST SIDE WASTEWATER TREATMENT PLANT  
INFLUENT PUMP STATION AND SCREEN REPLACEMENT  
JOLIET, IL  
STRUCTURAL  
STANDARD DETAILS**

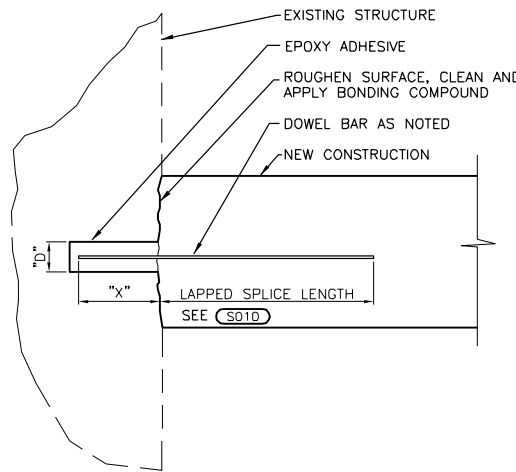
<b>DONOHUE</b>	
Sheet No.	110
Drawing No.	999-S-3



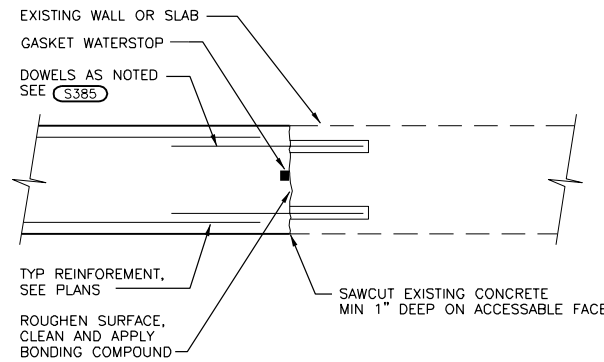
**NEW OPENING THRU EXISTING WALL OR SLAB DETAIL** S370  
NTS



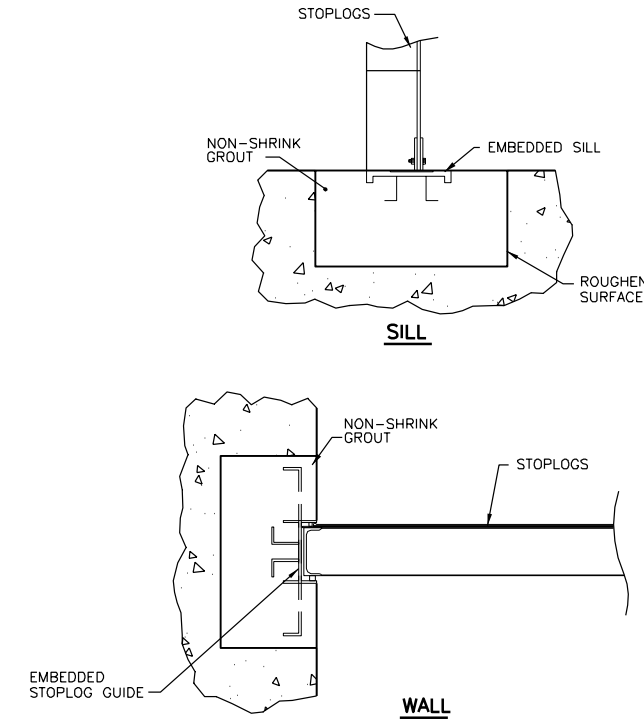
**NEW OPENING THRU EXISTING WALL OR SLAB DETAIL** S371  
NTS



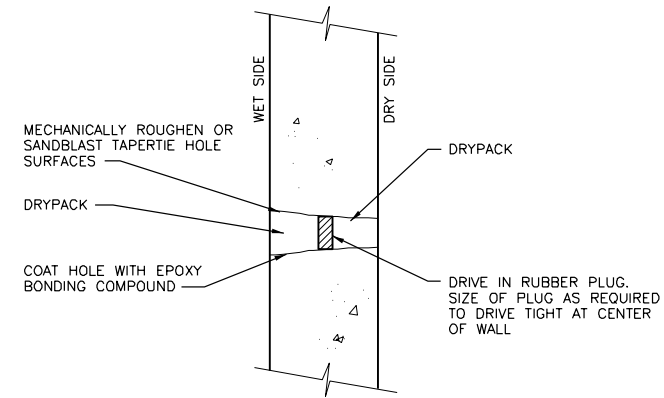
**DRILLED IN DOWEL DETAIL** S385  
NTS



**NEW CONCRETE TO EXISTING CONCRETE DETAIL** S388  
NTS



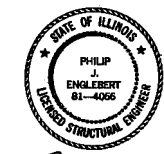
**BOX OUT AT STOPLOG** S376  
NTS



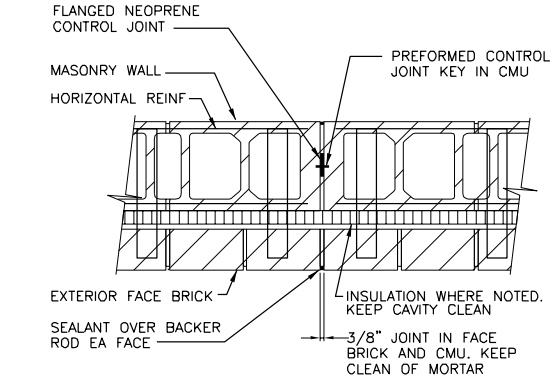
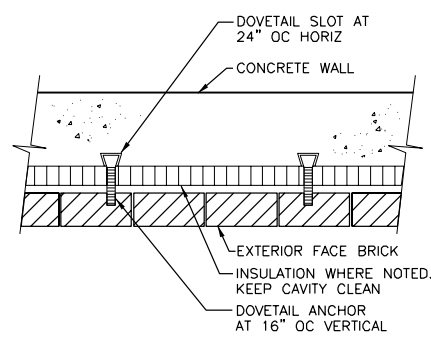
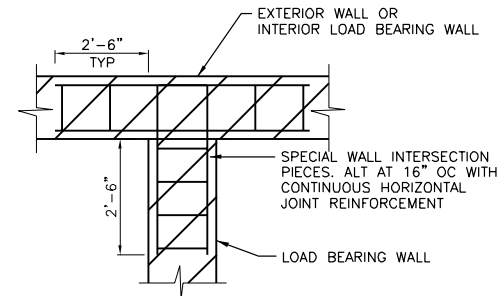
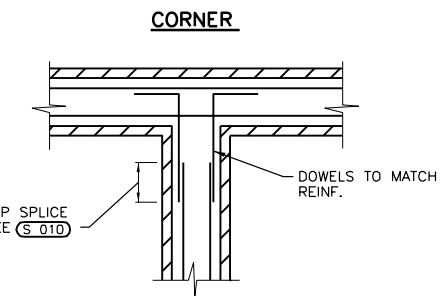
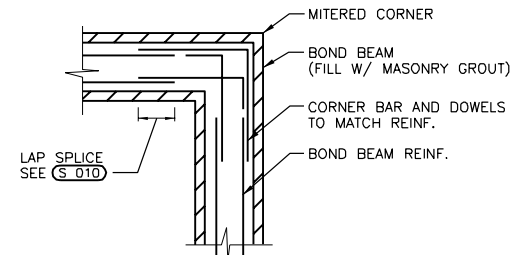
**ALTERNATE FORM TIE-THROUGH BOLT DETAIL** S395  
NTS

Date	
Checked By	
Drawn By	
Revision Description	
Revision Number	
Designed By	AJT
Drawn By	AJT
Checked By	PJE
Approved By	PJE
Filename	999SD1.DWG
Project No.	12614
Project Date	JUNE 2014

CITY OF JOLIET  
EAST SIDE WASTEWATER TREATMENT PLANT  
INFLUENT PUMP STATION AND SCREEN REPLACEMENT  
JOLIET, IL  
STRUCTURAL  
STANDARD DETAILS



Philip J. Enlebert  
7-9-14  
EXPIRES 11-30-19



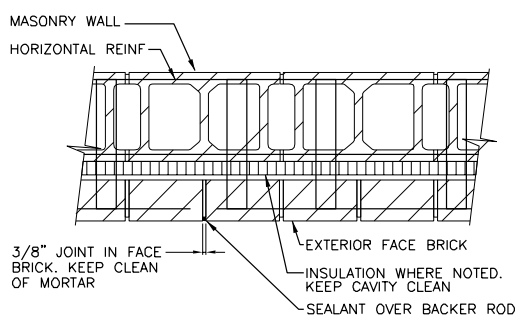
**BOND BEAM REINFORCEMENT DETAIL S400**  
NTS

**LOAD BEARING MASONRY WALL INTERSECTION REINFORCING DETAIL S401**  
NTS

**BRICK WALL ANCHOR DETAIL S425**  
NTS

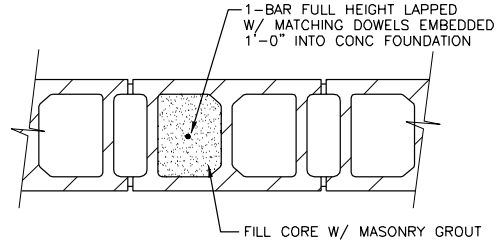
**BRICK AND CMU CONTROL JOINT DETAIL S431**  
NTS

NOTES:  
1. DISCONTINUE HORIZONTAL REINFORCING AT CONTROL JOINT.



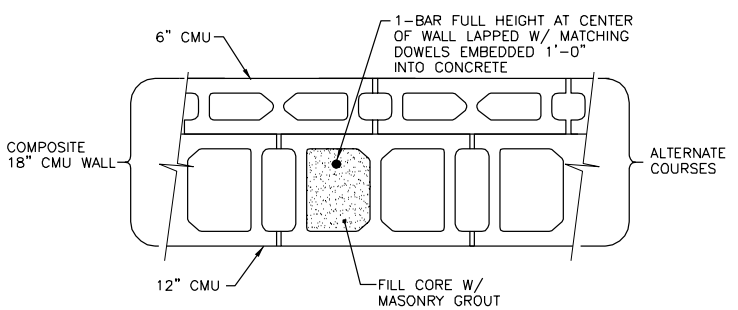
NOTES:  
1. DISCONTINUE HORIZONTAL REINFORCING AT BRICK CONTROL JOINT.

**BRICK CONTROL JOINT DETAIL S432**  
NTS



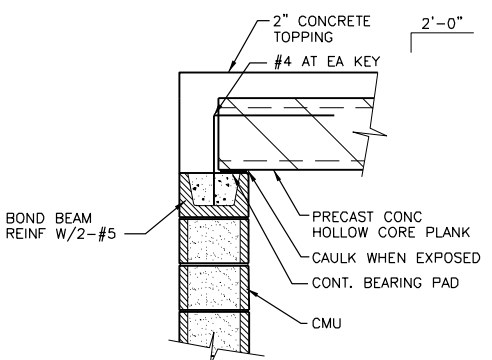
NOTES:  
1. REINFORCING SIZE AND SPACING AS NOTED.

**REINFORCED MASONRY DETAIL S451**  
NTS



NOTES:  
1. REINFORCING SIZE AND SPACING AS NOTED.

**REINFORCED MASONRY DETAIL S452**  
NTS



NOTES:  
1. AT NON-BEARING WALLS ANCHOR PLANK TO MASONRY AT 4'-0\"/>

**INTERIOR BEARING WALL DETAIL S462**  
NTS

Revision Number	Revision Description	Drawn By	Checked By	Date

Designed By	AJT
Drawn By	AJT
Checked By	PJE
Approved By	PJE
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Project No.	12614
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**CITY OF JOLIET  
EAST SIDE WASTEWATER TREATMENT PLANT  
INFLUENT PUMP STATION AND SCREEN REPLACEMENT  
JOLIET, IL  
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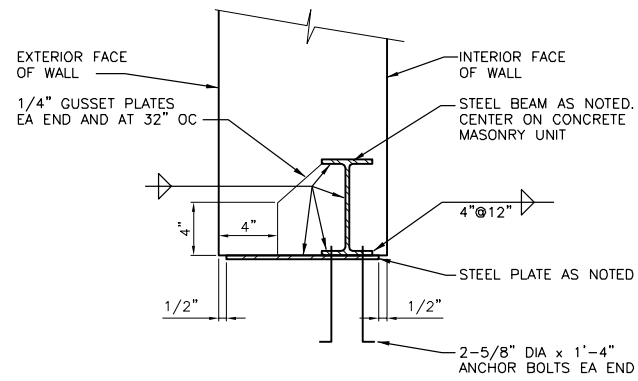
*Philip Enlebert*  
7-9-14  
EXPIRES 11-30-14



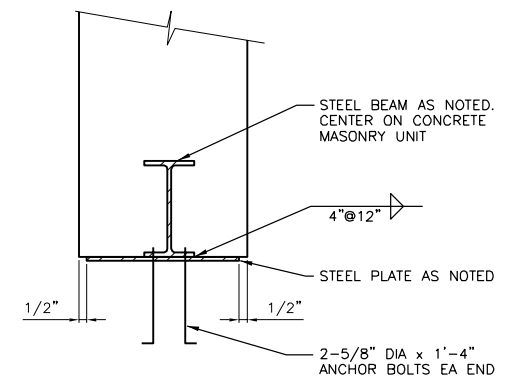
LINTEL SCHEDULE S510			
MARK	DESCRIPTION	TYPE	REMARKS
L-1	W8x13 W/ 5/16" R	I	8" BEARING EACH END. SEE (S513)
L-2	W8x13 W/ 5/16" R	I	8" BEARING EACH END. SEE (S511)
L-3	W8x24 W/ 5/16" R	I	8" BEARING EACH END. SEE (S514)
L-4	W8x40 W/ 5/16" R	I	8" BEARING EACH END. SEE (S514)
L-5	W8x58 W/ 5/16" R	I	8" BEARING EACH END. SEE (S514)

**NOTES:**

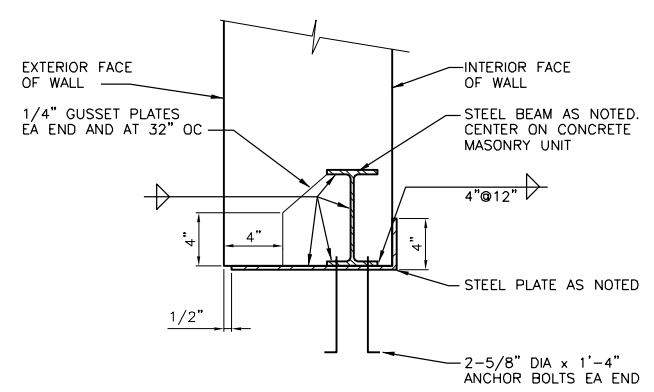
- MASONRY OPENINGS LESS THAN 4'-0" IN WIDTH THAT DO NOT HAVE A LINTEL SCHEDULED SHALL HAVE A BOND BEAM WITH 2-#5 BARS OR STEEL ANGLE LINTEL WITH A TOTAL WIDTH OF HORIZONTAL LEGS APPROXIMATELY 1" LESS THAN WALL THICKNESS.
- PROVIDE A MINIMUM OF 8" BEARING AT EACH END FOR STEEL BEAM LINTELS AND BOND BEAM LINTELS AND 6" BEARING AT EACH END FOR ANGLE LINTELS UNLESS NOTED OTHERWISE.



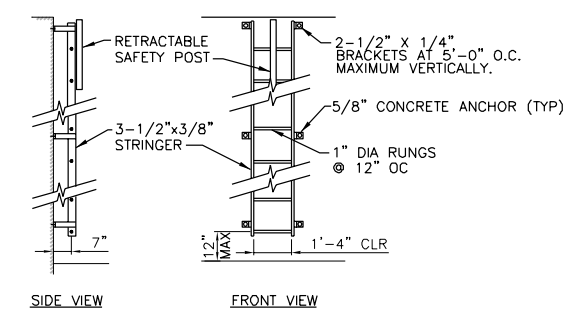
**STEEL LINTEL DETAIL S511**  
NTS



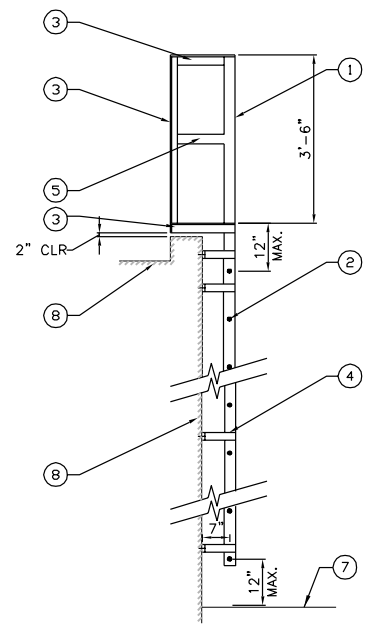
**STEEL LINTEL DETAIL S513**  
NTS



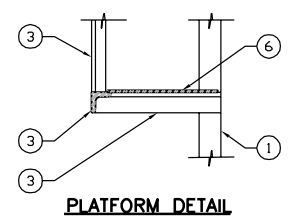
**STEEL LINTEL DETAIL S514**  
NTS



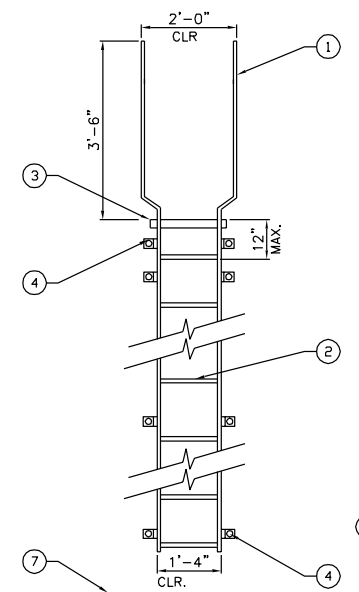
**LADDER DETAIL S525**  
NTS



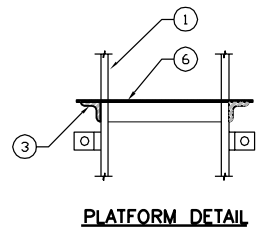
**SIDE VIEW**



**PLATFORM DETAIL**



**FRONT VIEW**



**PLATFORM DETAIL**

- NOTES:**
- 3-1/2" x 3/8" BAR STRINGERS.
  - 1" DIA RUNGS AT 12" O.C.
  - 2-1/2" x 2-1/2" x 3/8" ANGLE.
  - 2-1/2" x 1/4" BRACKETS AT 5'-0" O.C. MAXIMUM VERTICALLY. ANCHOR TO WALL WITH 5/8" DIA CONCRETE ANCHORS
  - 3-1/2" x 3/8" BAR
  - 1/4" THICK CHECKERED PLATE, WELD TO CORNER ANGLES
  - GRADE
  - EXTERIOR WALL & ROOF OF STRUCTURE

**LADDER DETAIL S527**  
NTS

Revision Number	Revision Description	Drawn By	Checked By	Date

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Drawn By	AJT
Checked By	PJE
Approved By	PJE
Filename	999SD1.DWG
Project No.	12614
Project Date	JUNE 2014

CITY OF JOLIET  
EAST SIDE WASTEWATER TREATMENT PLANT  
INFLUENT PUMP STATION AND SCREEN REPLACEMENT  
JOLIET, IL  
STRUCTURAL  
STANDARD DETAILS

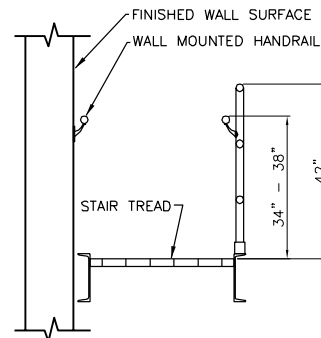


*Philip Enlebert*  
7-9-14  
EXPIRES 11-30-14

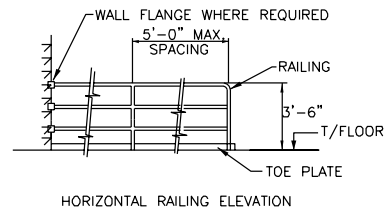
**DONOHUE**

Sheet No. 113

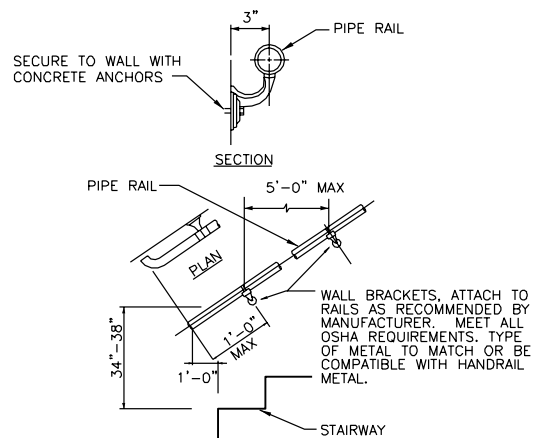
Drawing No. 999-S-6



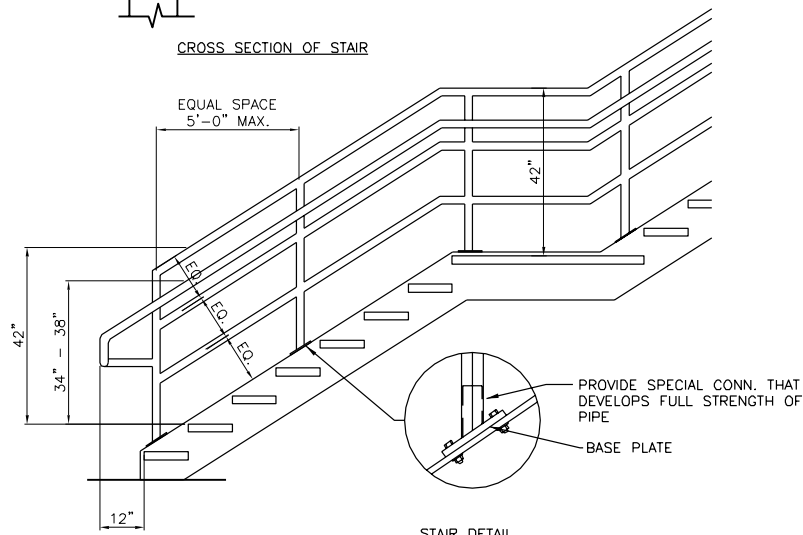
CROSS SECTION OF STAIR



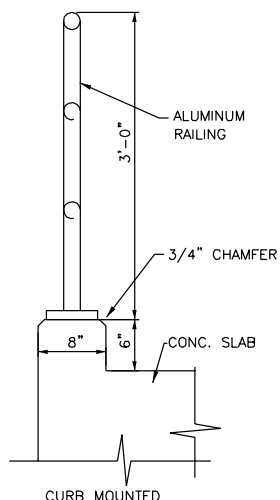
HORIZONTAL RAILING ELEVATION



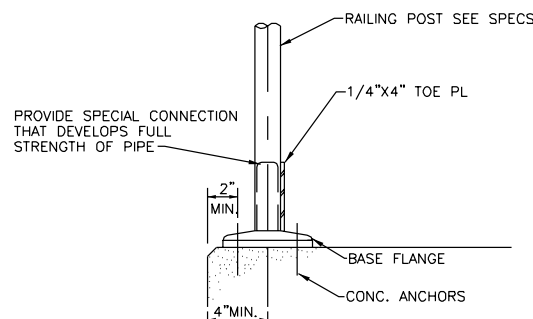
WALL MOUNTED



STAIR DETAIL



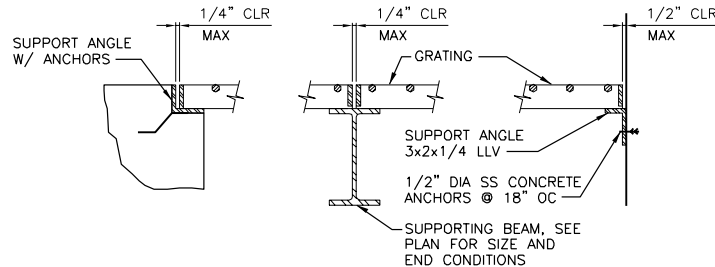
CURB MOUNTED



SURFACE MOUNTED

RAILING DETAIL S530

NTS

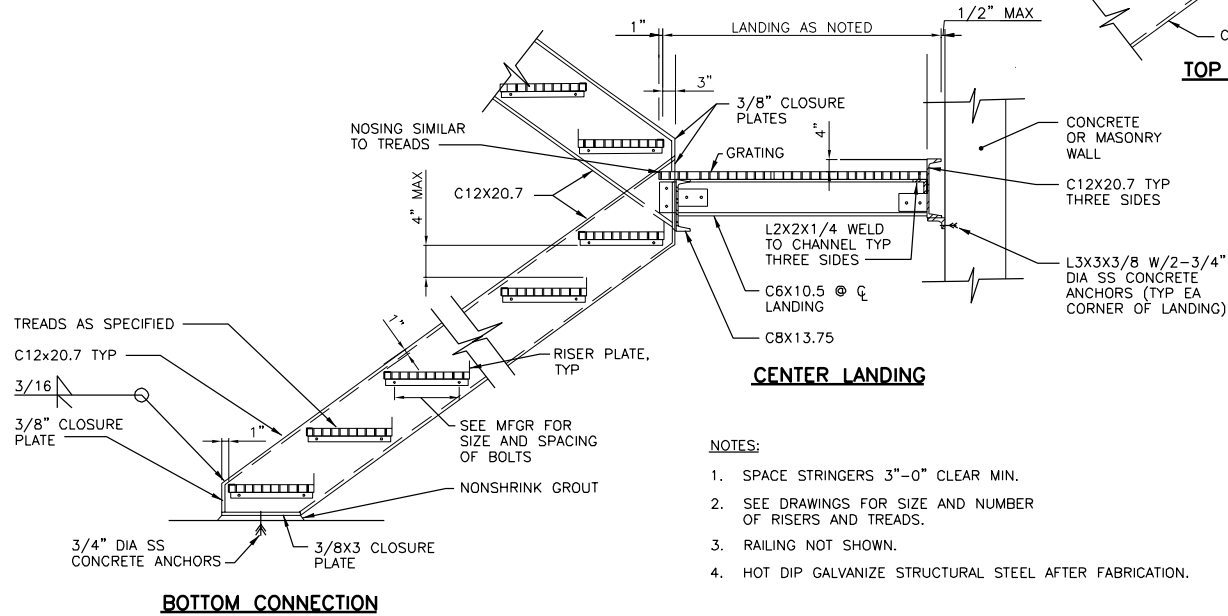


NOTES:

- 1. SUPPORT MATERIAL TO MATCH GRATING MATERIAL UNLESS OTHERWISE NOTED.
- 2. PROVIDE GRATING SUPPORTS ALL AROUND OPENING UNLESS OTHERWISE NOTED.
- 3. GRATING MAY BE CONTINUOUS OVER INTERIOR SUPPORT UNLESS OTHERWISE NOTED.

GRATING SUPPORT DETAIL S540

NTS



NOTES:

- 1. SPACE STRINGERS 3\"/>

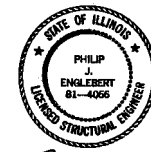
METAL STAIR DETAILS S570

NTS

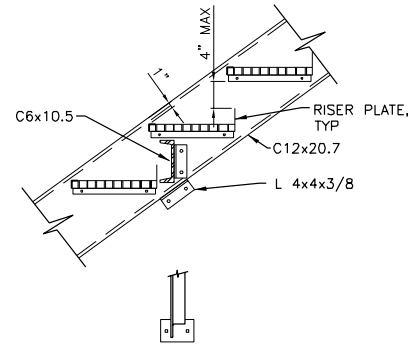
Date	
Checked By	
Drawn By	
Revision Description	
Revision Number	

Designed By	AJT
Drawn By	AJT
Checked By	PJE
Approved By	PJE
Filename	999SD1.DWG
Project No.	12614
Project Date	JUNE 2014

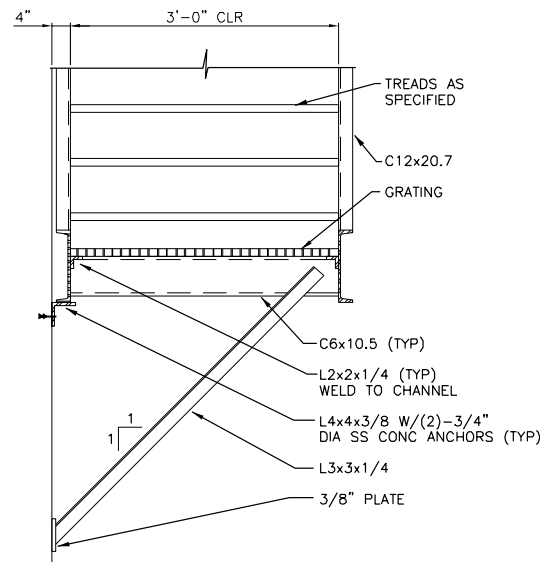
CITY OF JOLIET  
EAST SIDE WASTEWATER TREATMENT PLANT  
INFLUENT PUMP STATION AND SCREEN REPLACEMENT  
JOLIET, IL  
STRUCTURAL  
STANDARD DETAILS



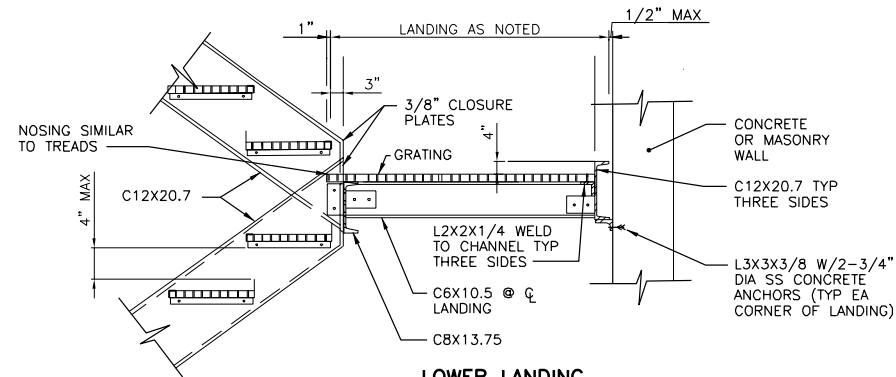
*Philip Enlebert*  
7-9-14  
EXPIRES 11-30-14



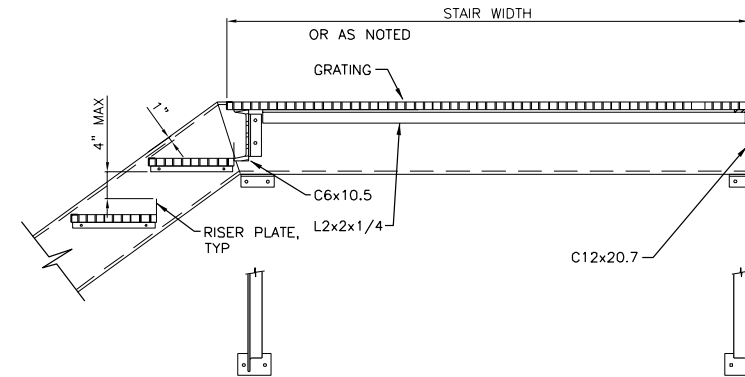
**INTERMEDIATE SUPPORT**



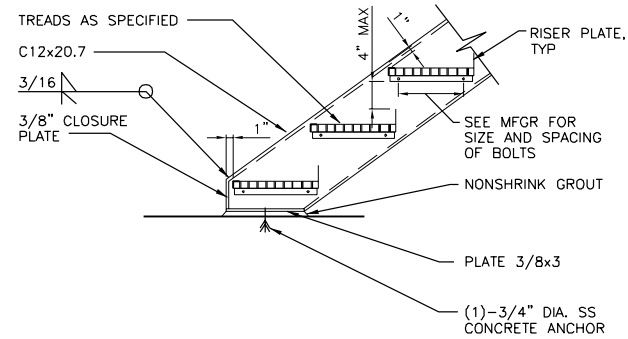
**TYPICAL SECTION**



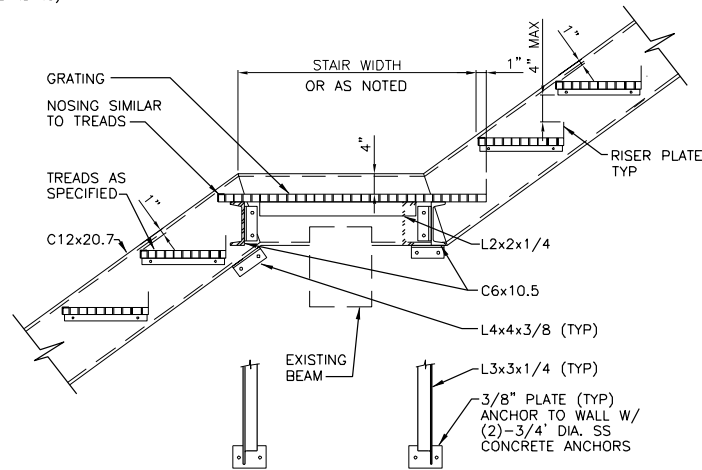
**LOWER LANDING**



**TOP LANDING**



**BOTTOM CONNECTION**



**CENTER LANDING**

- NOTES:**
- HOT DIP GALVANIZE STRUCTURAL STEEL AFTER FABRICATION
  - PROVIDE PROTECTION FOR DISSIMILAR METALS
  - SEE DRAWINGS FOR SIZE AND NUMBER OF RISERS AND TREADS
  - RAILING NOT SHOWN.

**METAL STAIR DETAIL S571**  
NTS

Revision Number	Revision Description	Drawn By	Checked By	Date

Designed By	AJT
Drawn By	AJT
Checked By	PJE
Approved By	PJE
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Project Date	JUNE 2014

**CITY OF JOLIET  
EAST SIDE WASTEWATER TREATMENT PLANT  
INFLUENT PUMP STATION AND SCREEN REPLACEMENT  
JOLIET, IL**

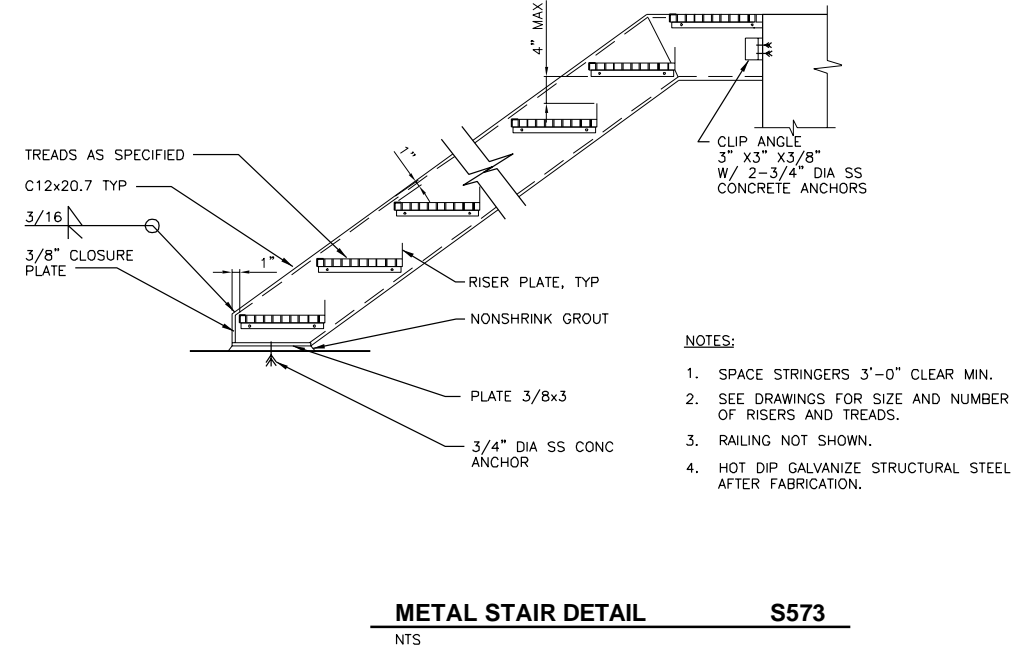
**STRUCTURAL  
STANDARD DETAILS**



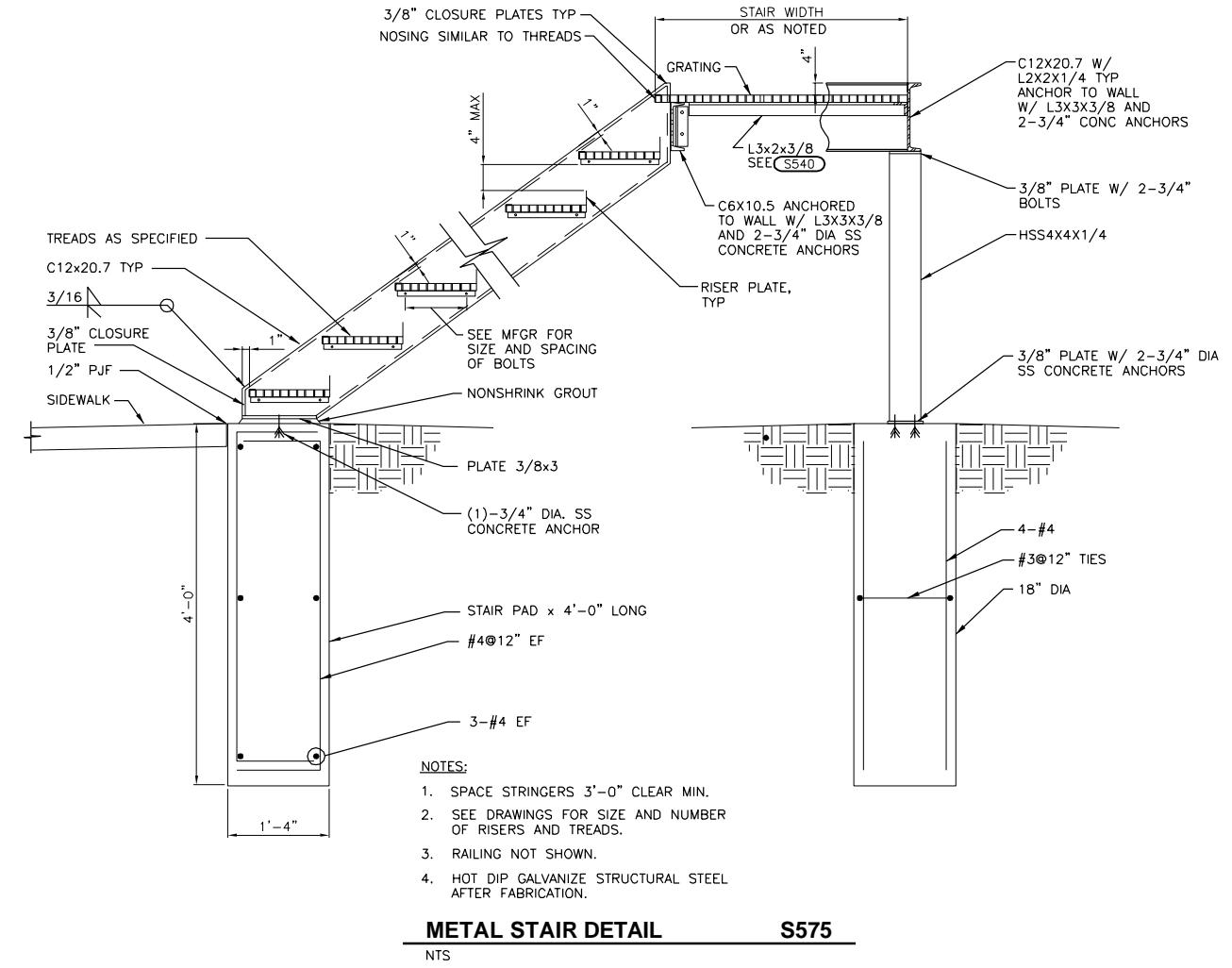
*Philip Englebert*  
7-9-14  
EXPIRES 11-30-14

**DONOHUE**

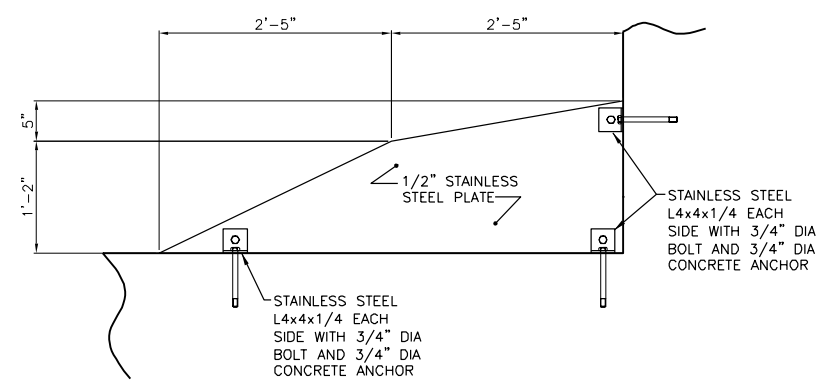
Sheet No. 115  
Drawing No. 999-S-8



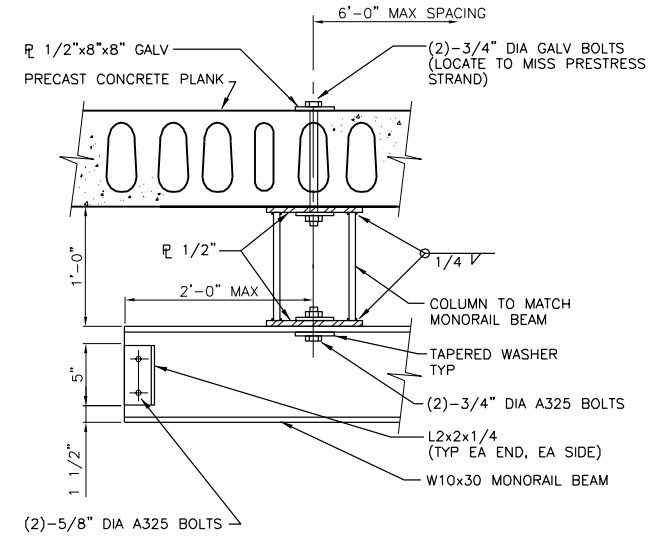
**METAL STAIR DETAIL S573**  
NTS



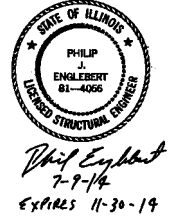
**METAL STAIR DETAIL S575**  
NTS



**SPLITTER PLATE DETAIL S591**  
NTS



**MONORAIL SUPPORT DETAIL S802**  
NTS



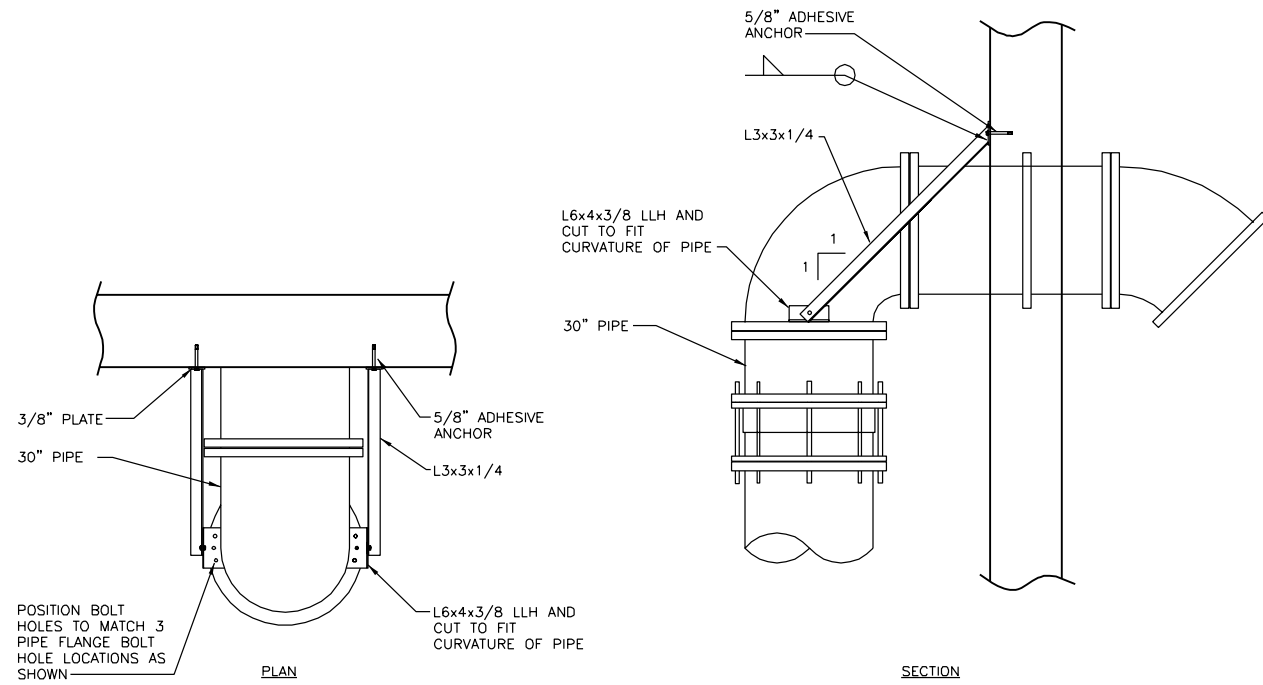
Revision Number	Revision Description	Checked By	Date

Designed By	AJT
Drawn By	AJT
Checked By	PJE
Approved By	PJE
Filename	999SD1.DWG
Project No.	12614
Project Date	JUNE 2014

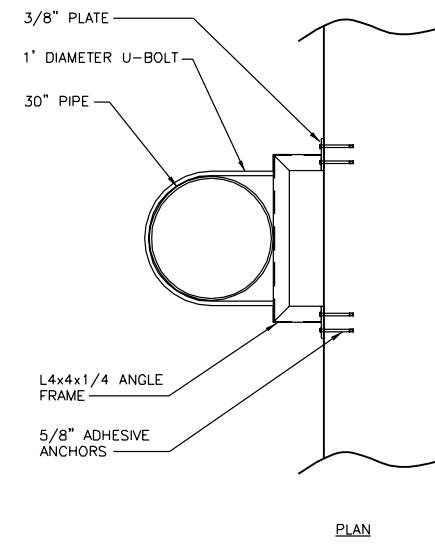
**CITY OF JOLIET**  
**EAST SIDE WASTEWATER TREATMENT PLANT**  
**INFLUENT PUMP STATION AND SCREEN REPLACEMENT**  
**JOLIET, IL**

**STRUCTURAL**  
**STANDARD DETAILS**



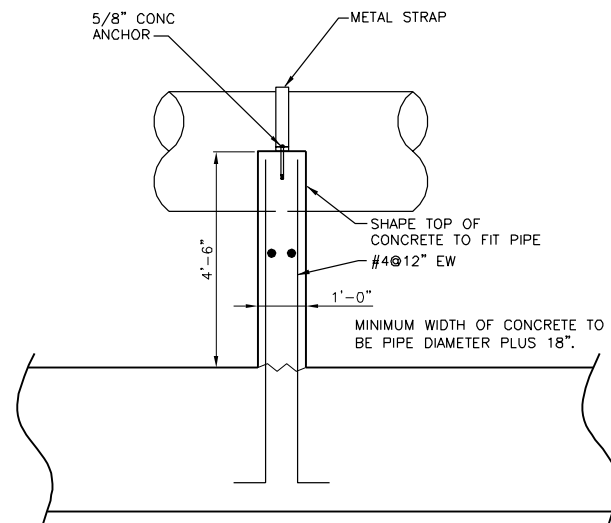


**PIPE SUPPORT DETAIL S910**  
NTS

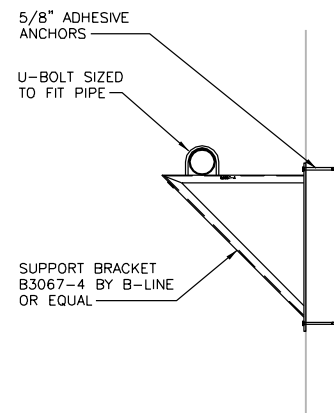


**PIPE SUPPORT DETAIL S911**  
NTS

- NOTES:**
1. COAT PIPE SUPPORTS IN ACCORDANCE WITH SECTION 09 96 00.
  2. L4x4x1/4 LENGTH SHALL BE BASED ON FIELD MEASUREMENT OF PIPE LOCATION.



**PIPE SUPPORT DETAIL S912**  
NTS



- NOTES:**
1. COAT PIPE SUPPORTS IN ACCORDANCE WITH SECTION 09 96 00.

**PIPE SUPPORT DETAIL S913**  
NTS

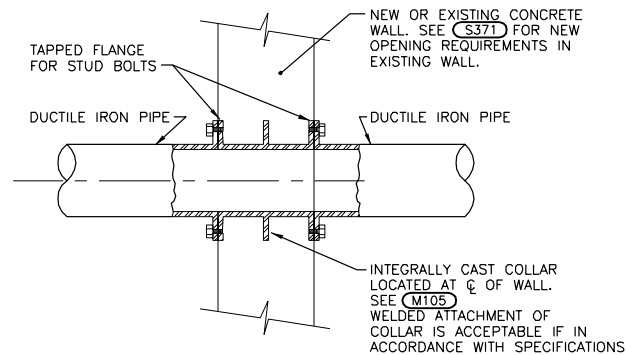
Revision Number	Revision Description	Drawn By	Checked By	Date

Designed By	AJT
Drawn By	AJT
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Filename	999SD1.DWG
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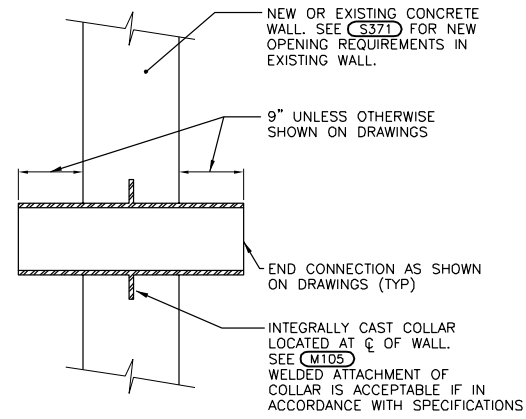
CITY OF JOLIET  
EAST SIDE WASTEWATER TREATMENT PLANT  
INFLUENT PUMP STATION AND SCREEN REPLACEMENT  
JOLIET, IL  
STRUCTURAL  
STANDARD DETAILS



*Philip Enlebert*  
7-9-14  
EXPIRES 11-30-14



**FLG / FLG DUCTILE IRON WALL PIPE DETAIL M103**  
NTS

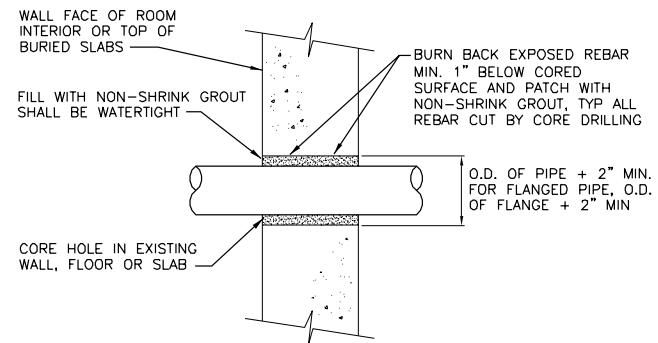


**DUCTILE IRON WALL PIPE DETAIL M104**  
NTS

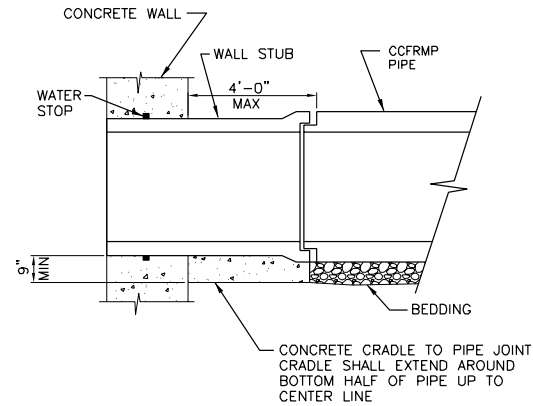
MINIMUM DIMENSIONS

NOMINAL PIPE DIA (INCHES)	T THICKNESS (INCHES)	C DIAMETER (INCHES)
4	0.50	8.00
6	0.50	10.00
8	0.50	12.50
10	0.50	14.50
12	0.50	16.50
14	0.75	19.50
16	0.75	21.75
18	0.75	23.75
20	0.75	25.75
24	0.75	30.25
30	1.00	36.50
36	1.00	43.00
42	1.25	49.50
48	1.25	56.50
54	1.50	63.00

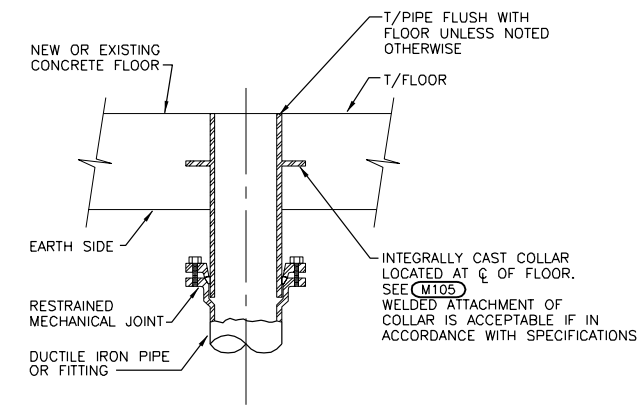
**DUCTILE IRON WALL AND FLOOR PIPE COLLAR DIMENSIONS DETAIL M105**  
NTS



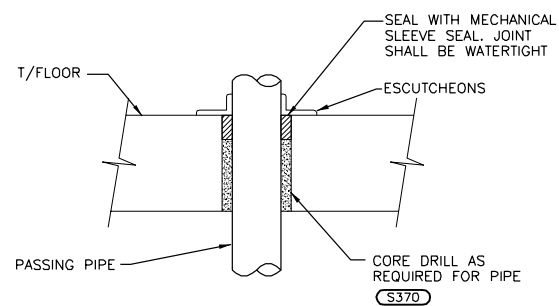
**CORE HOLE PIPE PENETRATION DETAIL M123**  
NTS



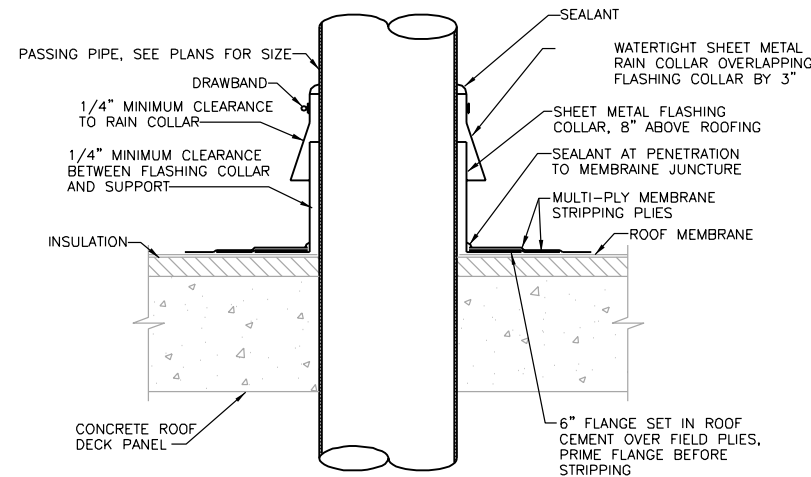
**CENTRIFUGALLY CAST FIBERGLASS REINFORCED MORTAR PIPE (CCFRMP) WALL PIPE DETAIL M130**  
NTS



**MJ / PLAIN END DUCTILE IRON FLOOR PIPE DETAIL M203**  
NTS



**FLOOR PENETRATION DETAIL M213**  
NTS



**PIPE THRU ROOF DETAIL M215**  
NTS



07/09/2014  
Expires: 11/30/2015

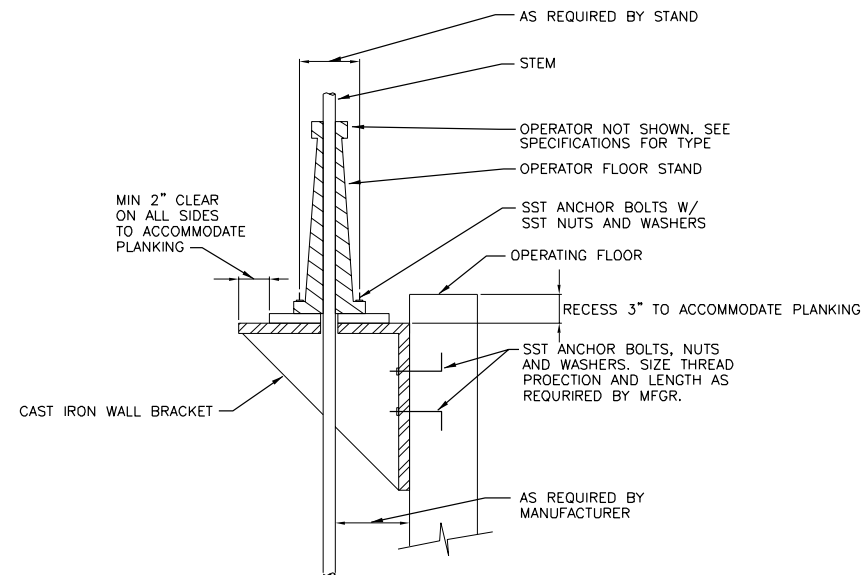
Date	Checked By	Drawn By	Revision Description

Designed By	KDS
Drawn By	KDS
Checked By	EPC
Approved By	EPC
Filename	999MD1.DWG
Project No.	12614
Project Date	JUNE 2014

CITY OF JOLIET  
EAST SIDE WASTEWATER TREATMENT PLANT  
INFLOW PUMP STATION AND SCREEN REPLACEMENT  
JOLIET, IL  
PROCESS-MECHANICAL  
STANDARD DETAILS

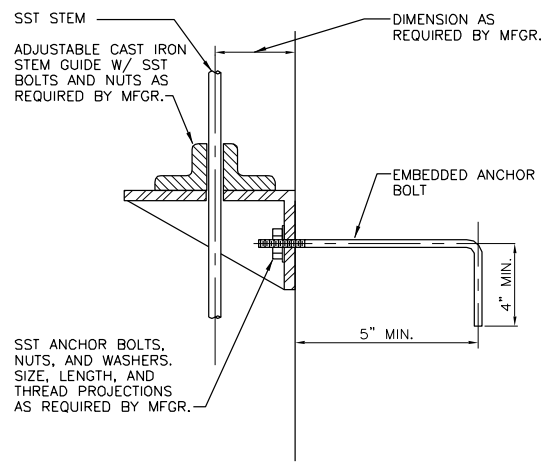


Sheet No.	118
Drawing No.	999-M-1

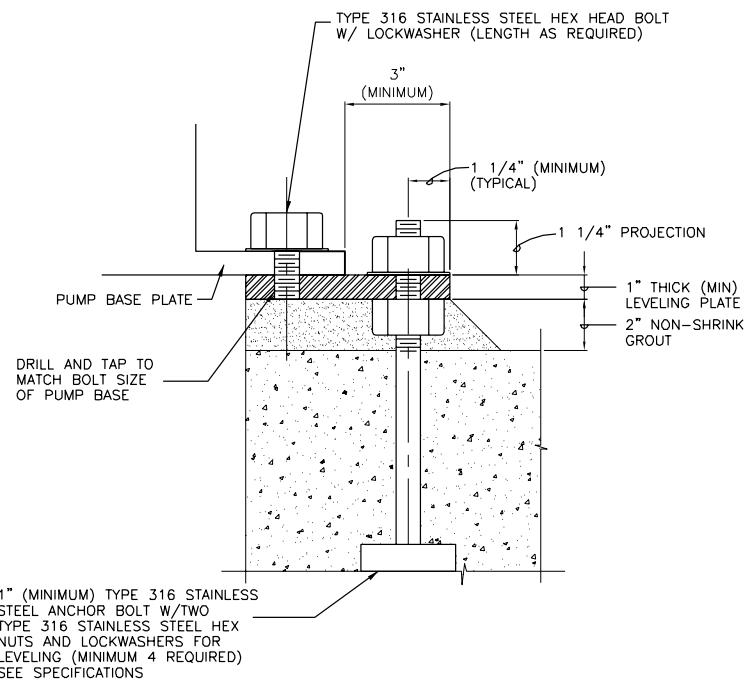


**NOTES:**  
 1. PROVIDE STEM GUIDES AS REQUIRED BY MANUFACTURER. SEE (M380)

**FLOOR STAND DETAIL M351**  
 NTS

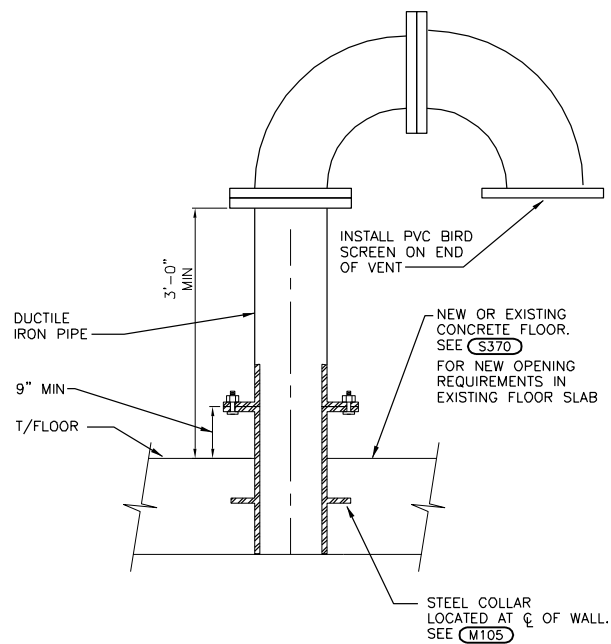


**STEM GUIDE DETAIL M380**  
 NTS



1" (MINIMUM) TYPE 316 STAINLESS STEEL ANCHOR BOLT W/TWO TYPE 316 STAINLESS STEEL HEX NUTS AND LOCKWASHERS FOR LEVELING (MINIMUM 4 REQUIRED) SEE SPECIFICATIONS

**PUMP MOUNTING BASE M400**  
 NTS



**VENT DETAIL M700**  
 NTS

Revision Number	Revision Description	Drawn By	Checked By	Date

Designed By	KDS
Drawn By	KDS
Checked By	EPC
Approved By	EPC
Filename	999MD1.DWG
Project No.	12614
Project Date	JUNE 2014

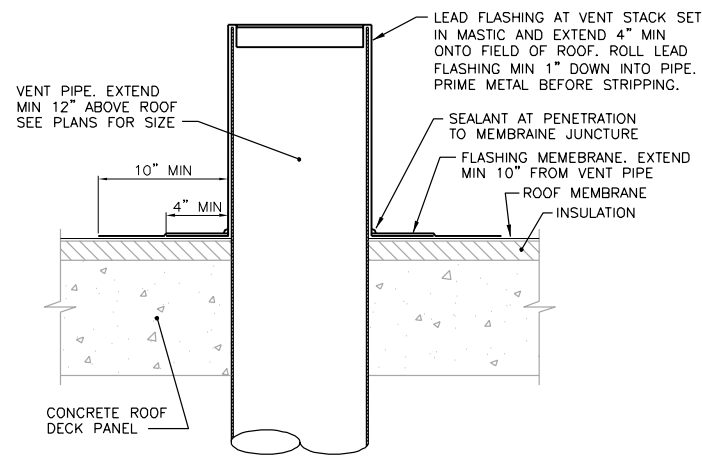
**CITY OF JOLIET  
 EAST SIDE WASTEWATER TREATMENT PLANT  
 INFLUENT PUMP STATION AND SCREEN REPLACEMENT  
 JOLIET, IL  
 PROCESS-MECHANICAL  
 STANDARD DETAILS**



*Eric P. Cockerill*  
 07/09/2014  
 Expires: 11/30/2015

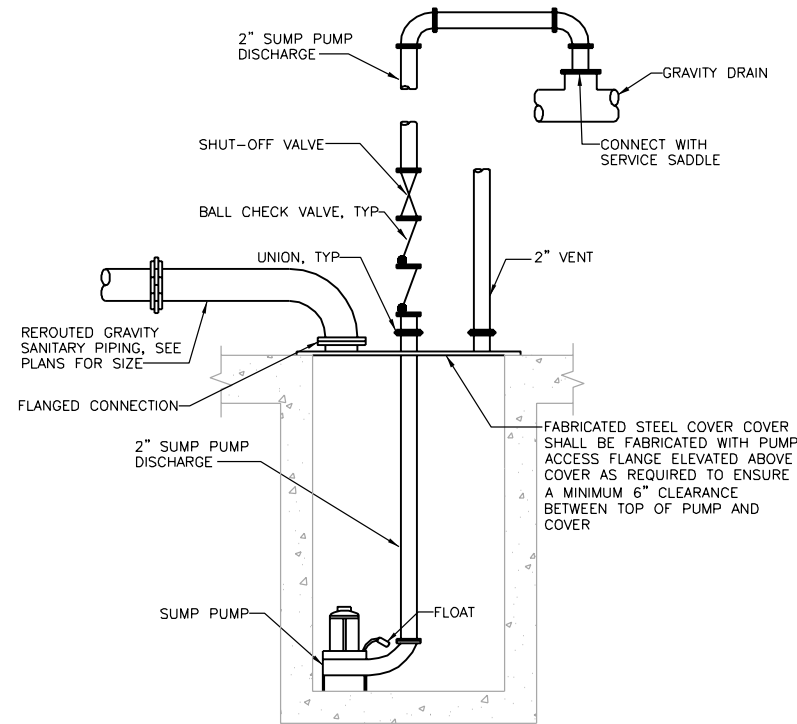
**DONOHUE**

Sheet No. 119  
 Drawing No. 999-M-2

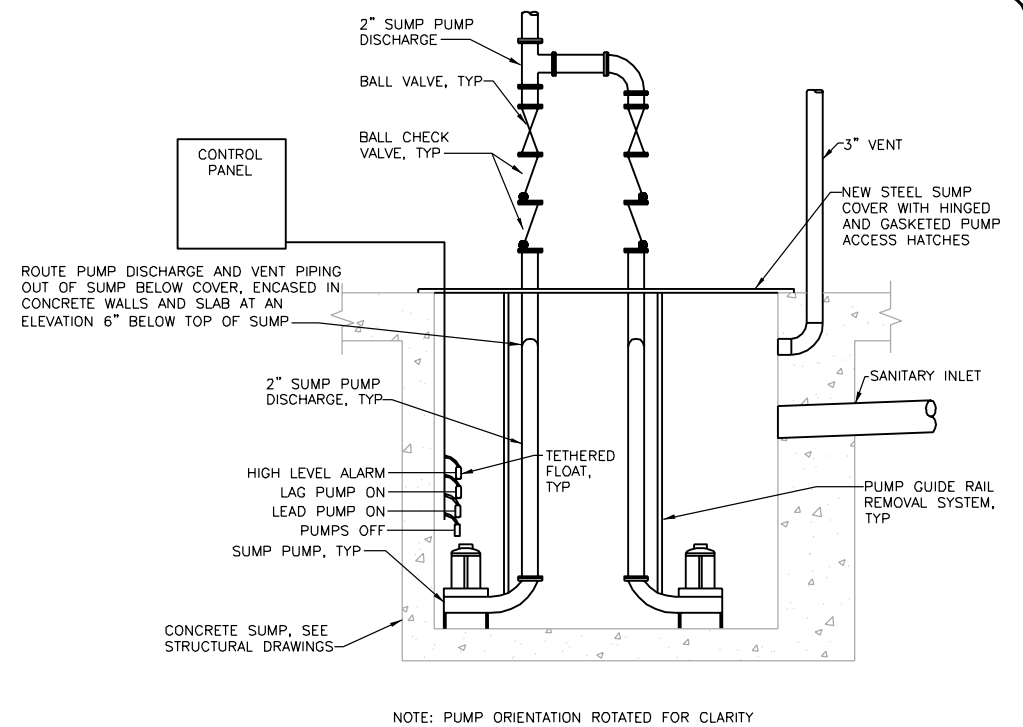


NOTE: PROVIDE WHEREVER NOTED AS VTR ON PLANS AND ISOMETRICS

**VENT THRU ROOF DETAIL P210**  
NTS



**SUBMERSIBLE SUMP PUMP DETAIL P305**  
NTS

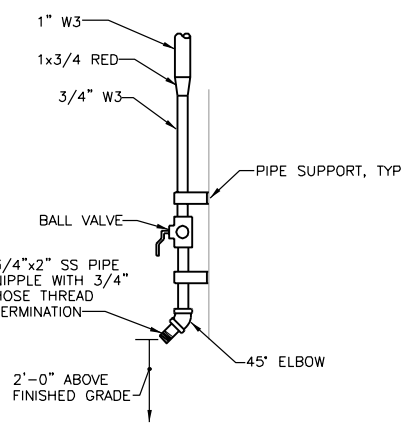


**DUPLEX SUBMERSIBLE SUMP PUMP DETAIL P312**  
NTS



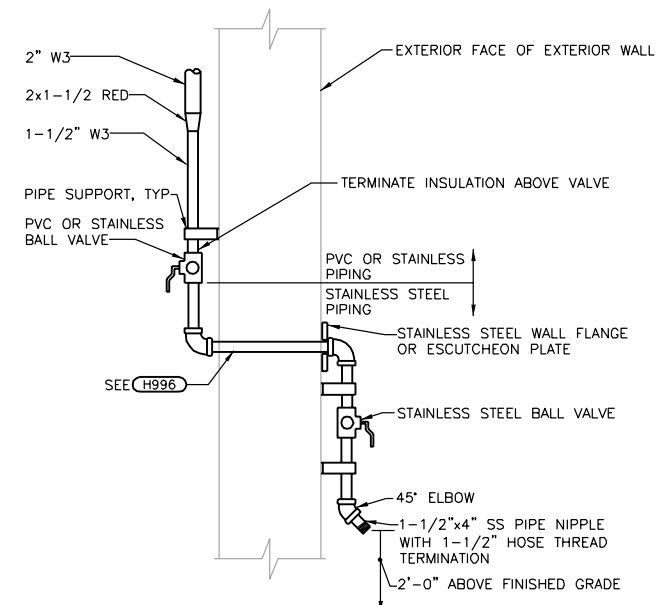
NOTES:  
1. PROVIDE NON-POTABLE SIGN AT EACH SERVICE WATER (W3) WALL HYDRANT.

**NON-POTABLE WATER SIGN P420**  
NTS



NOTES:  
1. PROVIDE WHERE HB OR HOSE BIB IDENTIFIED ON PLANS.  
2. PROVIDE NON-POTABLE WATER WARNING SIGN, SEE (P420).

**HOSE CONNECTION DETAIL P442**  
NTS



NOTES:  
1. PROVIDE WHERE WH OR WALL HYDRANT IDENTIFIED ON PLANS.  
2. PROVIDE NON-POTABLE WATER WARNING SIGN, SEE (P420).

**HOSE CONNECTION DETAIL P443**  
NTS

Date	
Checked By	
Drawn By	
Revision Number	
Revision Description	

Designed By	JLW
Drawn By	JLW
Checked By	EPC
Approved By	EPC
Filename	999PHD1.DWG
Project No.	12614
Project Date	JUNE 2014

CITY OF JOLIET  
EAST SIDE WASTEWATER TREATMENT PLANT  
INFLUENT PUMP STATION AND SCREEN REPLACEMENT  
JOLIET, IL

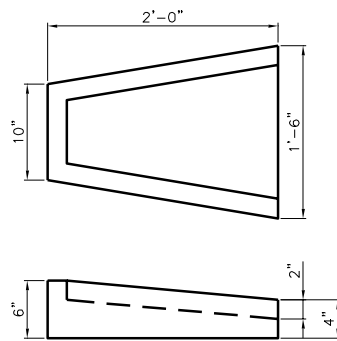
PLUMBING  
STANDARD DETAILS



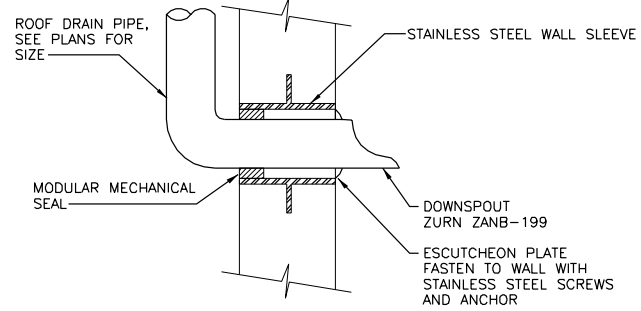
July 2, 2014  
7/19/14  
Est: 1179415



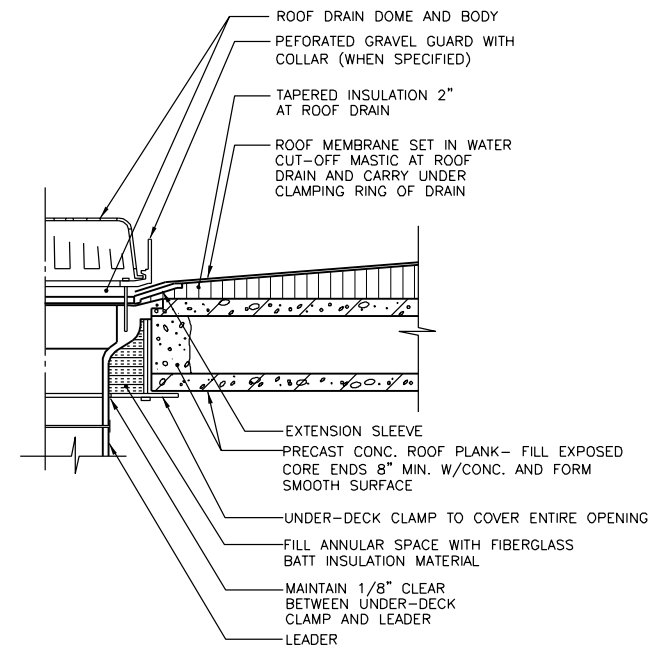




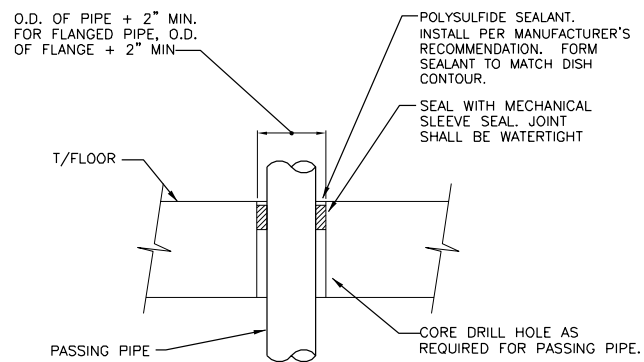
**CONCRETE SPLASH PAD P500**  
NTS



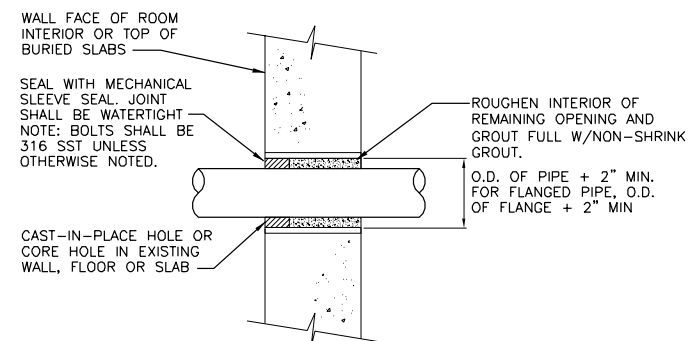
**DOWNSPOUT NOZZLE DETAIL P510**  
NTS



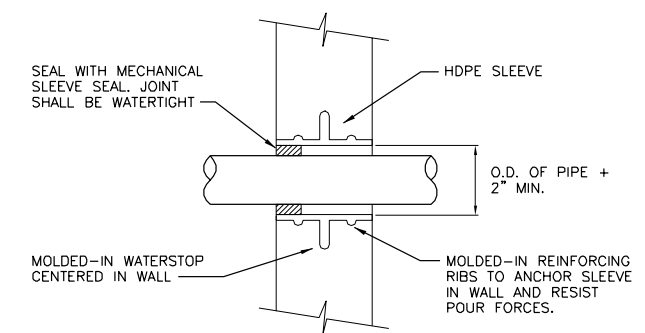
**ROOF DRAIN DETAIL P525**  
NTS



**FLOOR SLEEVE DETAIL P914**  
NTS



**PIPE PENETRATION DETAIL P915**  
NTS



**PLASTIC WALL SLEEVE DETAIL P916**  
NTS

Date	Checked By	Drawn By	Revision Description

Revision Number	Revision Description

Designed By	JLW
Drawn By	JLW
Checked By	EPC
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Filename	999PHD1.DWG
Project No.	12614
Project Date	JUNE 2014

**CITY OF JOLIET  
EAST SIDE WASTEWATER TREATMENT PLANT  
INFLUENT PUMP STATION AND SCREEN REPLACEMENT  
JOLIET, IL**

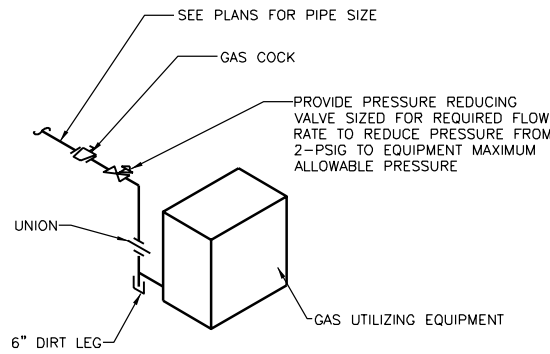
**PLUMBING  
STANDARD DETAILS**



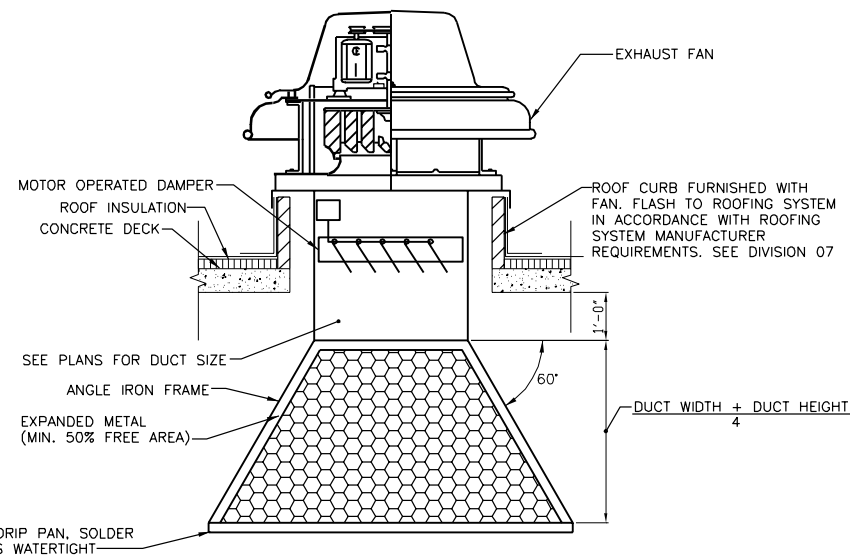
Jeffrey L. Walters  
7/19/14  
Exp: 11/2015

**DONOHUE**

Sheet No. 121  
Drawing No. 999-P-2



**TYPICAL GAS CONNECTION DETAIL H103**  
NTS



**EXHAUST FAN DETAIL H221**  
NTS

**MAKE-UP AIR UNIT SCHEDULE**

SECTION 23 75 23

TAG NO.	MANUF.	MODEL NUMBER	TYPE	HEATING INPUT (MBH)	HEATING OUTPUT (MBH)	FILTER	AIR DATA						MOTOR DATA			REMARKS	
							CFM	MINIMUM (CFM)	OA (F)	EAT (F)	LAT (F)	ESP* (IN. W.C.)	TSP (IN. W.C.)	FAN RPM	HP		VOLT/Ø
100-MAU-1	TITAN	TA-112	OUTDOOR DIRECT	350	325	2" TA	3250	3250	-10	82	0.75/0.50	2.0	2,325	3	480/3	1750	1,2,3,4,5,6,8,9,10,13,14
100-MAU-2	TITAN	TA-112	OUTDOOR DIRECT	350	325	2" TA	3250	3250	-10	82	0.75/0.50	2.0	2,325	3	480/3	1750	1,2,3,4,5,6,8,9,10,13,14
100-MAU-3	TITAN	TAH-115	OUTDOOR INDIRECT	800	640	2" TA	7350	7350	-10	70	0.90	2.5	1,650	7.5	480/3	1750	1,3,4,5,6,7,8,9,11,12

- \*ESP IS DUCTWORK LOSSES MANUFACTURER SHALL INCLUDE CALCULATED MIDLIFE FILTER LOSSES TO OBTAIN TSP.
- = 2-PART EPOXY COATED DOUBLE WALL CONSTRUCTION WITH 1" INSULATION WITH UV TOPCOAT.
  - = MOTORIZED INLET DAMPERS.
  - = FILTER SECTION WITH 2" T.A. FILTERS WITH METAL FRAMES.
  - = HORIZONTAL OR VERTICAL OUTSIDE AIR HOOD WITH ALUMINUM BIRDSCREEN.
  - = 18" TALL ROOF CURB.
  - = NEMA 4X DISCONNECT SWITCH.
  - = VERTICAL DOWN DISCHARGE.
  - = CONTROLS AS SPECIFIED.
  - = BACKWARD INCLINED BLOWER.
  - = HORIZONTAL DISCHARGE.
  - = MOTORIZED OUTSIDE AIR AND RETURN DAMPERS.
  - = 409 STAINLESS STEEL HEAT EXCHANGER AND BURNER.
  - = INVERTER DUTY MOTOR WITH VFD WITHIN ELECTRICAL ENCLOSURE.
  - = TWO VALUES PROVIDED FOR ESP ARE THE HIGH (TWO UNITS RUNNING) AND LOW (ONE UNIT RUNNING) DUCT SYSTEM PRESSURES VFD MUST RESPOND TO.

**WALL MOUNTED AIR CONDITIONING UNIT SCHEDULE**

SECTION 23 81 19

TAG NO.	MANUF.	MODEL	CFM	TSP (IN WC)	MIN OA (CFM)	HP	VOLTAGE	FLA (AMP)	COOLING DATA			HEATING DATA			FILTER TYPE	REMARKS
									TOT CAP (MBH)	EAT (F)	LAT (F)	HEAT COIL INPUT (KW)	EAT (F)	LAT (F)		
100-ACU-1	BARD	W-5S	1700	---	---	3/4	460/3	17	56.5	80/67	55/54	6	65	82	2" TA	1,2,3,4,5,6,8
100-ACU-2	BARD	W-5S	1700	---	---	3/4	460/3	17	56.5	80/67	55/54	6	65	82	2" TA	1,2,3,4,5,6,7

- = ELECTRIC HEATER OF SCHEDULED CAPACITY.
- = 75% OUTSIDE AIR ECONOMIZER.
- = SCROLL COMPRESSOR.
- = INTEGRAL DISCONNECT SWITCH.
- = CONTROL AS SPECIFIED.
- = ALUMINUM SUPPLY AND RETURN GRILLES.
- = RIGHT HAND ACCESS.
- = LEFT HAND ACCESS.

**FAN SCHEDULE**

SECTION 23 34 23

TAG NO.	MANUFACTURER	MODEL NUMBER	TYPE	SERVICE	AIR FLOW DATA			FAN RPM	DRIVE	SONES	ELECTRICAL DATA				REMARKS
					CFM	ESP (IN. W.C.)	BHP				HP/WATTS	VOLTS	PHASE	RPM	
100-EF-1	GREENHECK	CWB-200	CENTRI WALL	EXHAUST	4000	0.60	0.96	925	BELT	15	1-1/2	480	3	1725	1,2,3,4,6,7,9
100-EF-2	GREENHECK	CWB-180	CENTRI WALL	EXHAUST	3450	0.35	0.67	1020	BELT	16	1	480	3	1725	1,2,3,4,6,7,9
100-EF-3	GREENHECK	CWB-161	CENTRI WALL	EXHAUST	1850	0.35	0.25	835	BELT	10	1/2	480	3	1725	1,2,5,6,7
100-EF-4	GREENHECK	GB-240	CENTRI ROOF DOME	EXHAUST	5500	0.20	0.78	655	BELT	12	1	480	3	1725	1,2,5,6,7,8

- = ALUMINUM CONSTRUCTION.
- = STAINLESS STEEL FAN SHAFT AND FASTENERS.
- = AMCA TYPE B SPARK RESISTANT CONSTRUCTION.
- = EXPLOSION PROOF INTEGRAL DISCONNECT.
- = NEMA 4X INTEGRAL DISCONNECT.
- = ALUMINUM BIRDSCREEN.
- = GRAVITY OPERATED DAMPER.
- = 18" ALUMINUM ROOF CURB WITH 1" INSULATION AND ALUMINUM INSULATION LINER.
- = HI-PRO POLYESTER (HERESITE) COATING ON FAN AND DAMPER.

**ELECTRIC HEATER SCHEDULE**

SECTION 23 82 40

TAG NO.	MANUF.	MODEL NUMBER	TYPE	OUTPUT (MBH)	MOUNT HEIGHT (FT)	AIR DATA			ELECTRICAL DATA			MOTOR DATA			REMARKS
						CFM	THROW (FT)	ΔT (F)	KW	VOLT/Ø	AMP	HP	VOLT/Ø	RPM	
100-EUH-1	QMARK	MUH-03	PROP UNIT	10.2	8	350	---	27	3	480/3	3.6	1/100	480	1600	WALL MOUNTED THERMOSTAT INTEGRAL DISCONNECT SWITCH

**GAS-FIRED UNIT HEATER SCHEDULE**

SECTION 23 55 33

TAG NO.	MANUFACTURER	MODEL NUMBER	TYPE	INPUT (MBH)	OUTPUT (MBH)	MOUNT HEIGHT (FT)	AIR DATA				ELECTRICAL DATA				REMARKS	
							CFM	ESP (IN. W.C.)	THROW (FT)	EAT (F)	LAT (F)	HP	VOLTS	PHASE		RPM
100-GUH-1	REZTOR	UDAS-60	PROP	60	49.8	PLANS	769	---	---	50	110	0.06	115	1	1550	1,2,3,4
100-GUH-2	REZTOR	UDAS-60	PROP	60	49.8	PLANS	769	---	---	50	110	0.06	115	1	1550	1,2,3,4

- = STAINLESS STEEL HEAT EXCHANGER AND BURNER.
- = TEFC MOTOR.
- = WALL MOUNTED THERMOSTAT.
- = HORIZONTAL COMBUSTION AIR/VENT KIT.

**AIR INLET AND OUTLET SCHEDULE**

SECTION 23 37 13

TAG NO.	MANUF	MODEL	SERVICE	MAX. APD (IN. W.C.)	MAX. NC	PATTERN	FINISH	MATERIAL	REMARKS
EG-1	AJ MANUF	550 H	EXHAUST	0.10	30	SD	MATTE	SST	
RG-1	CARNES	RAAMH	RETURN	0.10	30	SD	ANOD	ALUM	
SG-1	CARNES	RADM	SUPPLY	0.10	35	DD	MATTE	ALUM	
SG-2	AJ MANUF	250	SUPPLY	0.10	35	DD	MATTE	SST	

- ANOD = ANODIZED FINISH.  
DD = 3/4" BLADE DOUBLE DEFLECTION.  
SD = 3/4" BLADE SINGLE DEFLECTION.

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CITY OF JOLIET  
EAST SIDE WASTEWATER TREATMENT PLANT  
INFLUENT PUMP STATION AND SCREEN REPLACEMENT  
JOLIET, IL

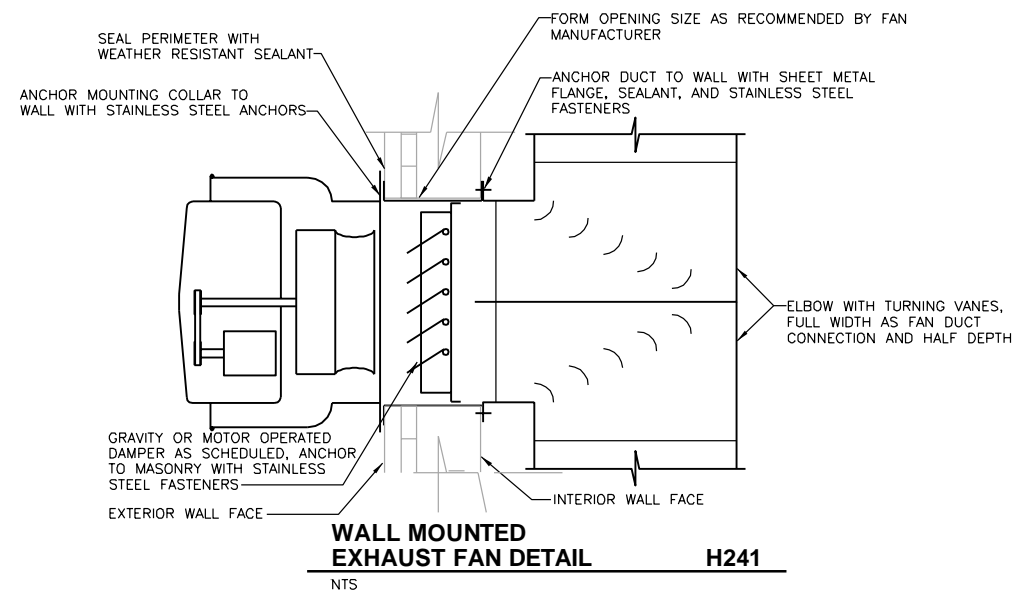
HVAC  
SCHEDULES AND STANDARD DETAILS

**DONOHUE**

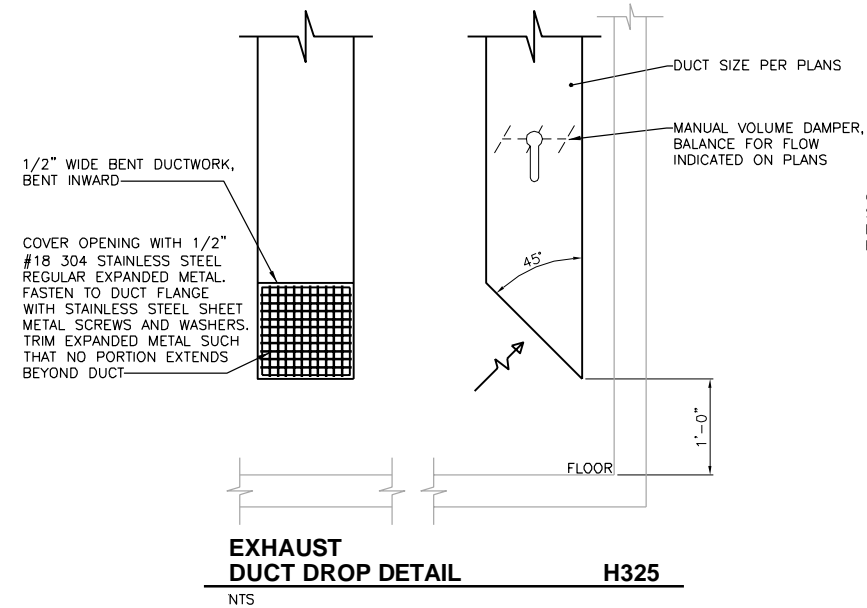
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Drawing No. 999-H-1

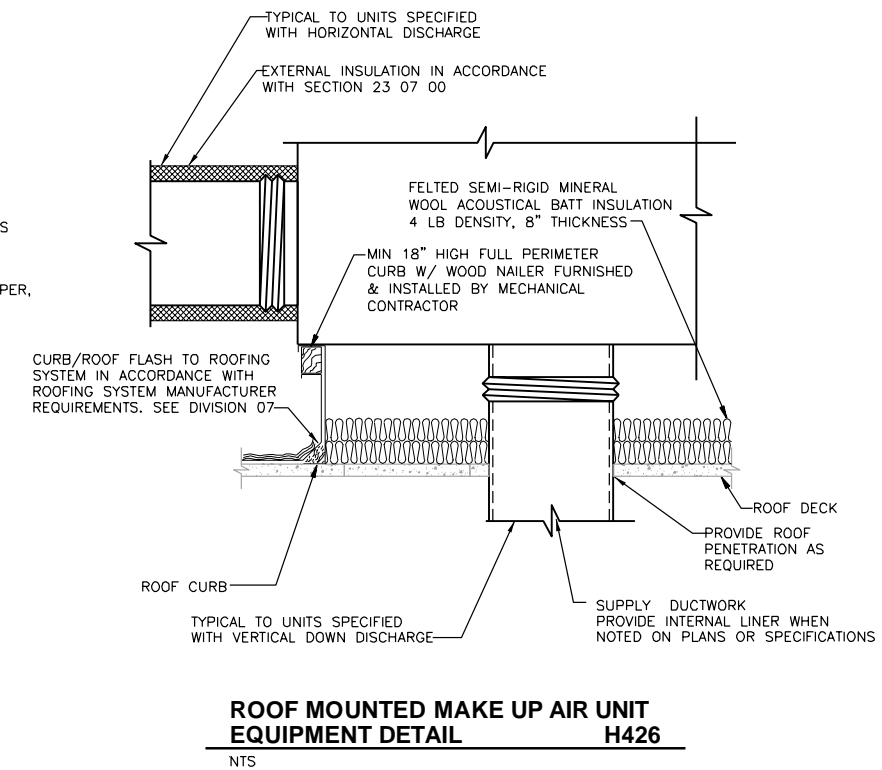
  
 Jeffrey J. Wicks  
 7/19/14  
 Exp: 11/19/15



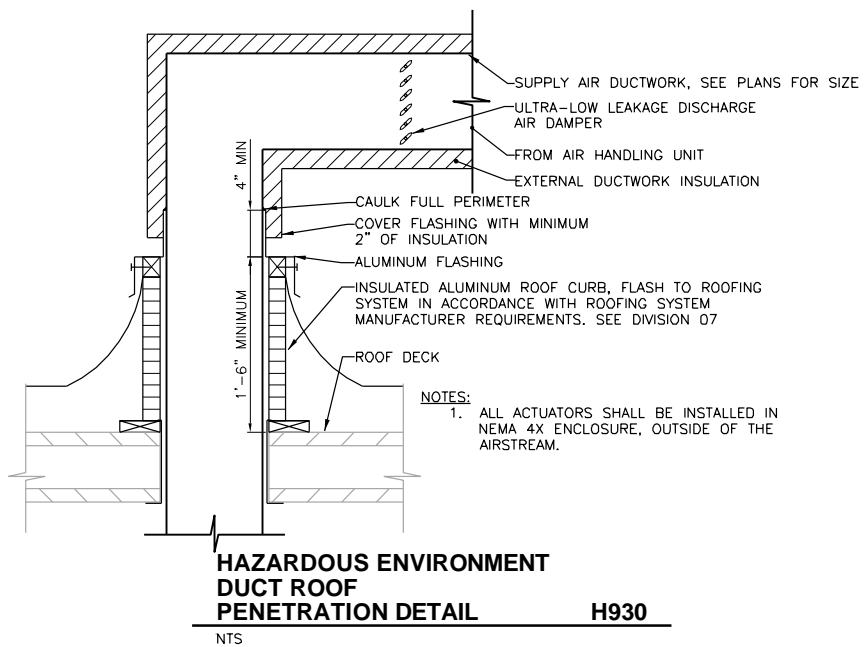
**WALL MOUNTED EXHAUST FAN DETAIL H241**  
NTS



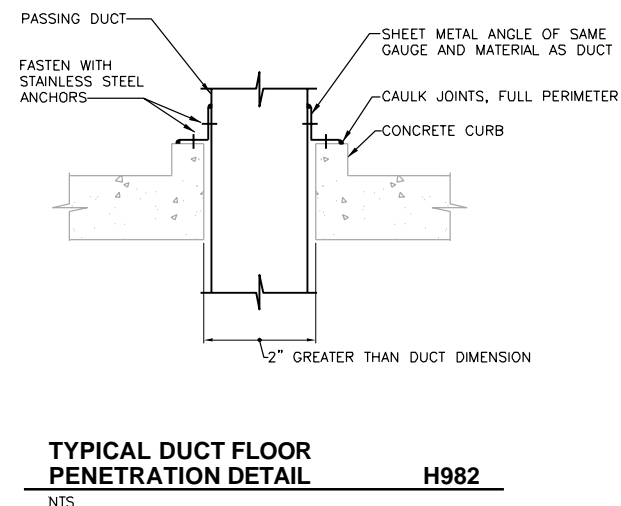
**EXHAUST DUCT DROP DETAIL H325**  
NTS



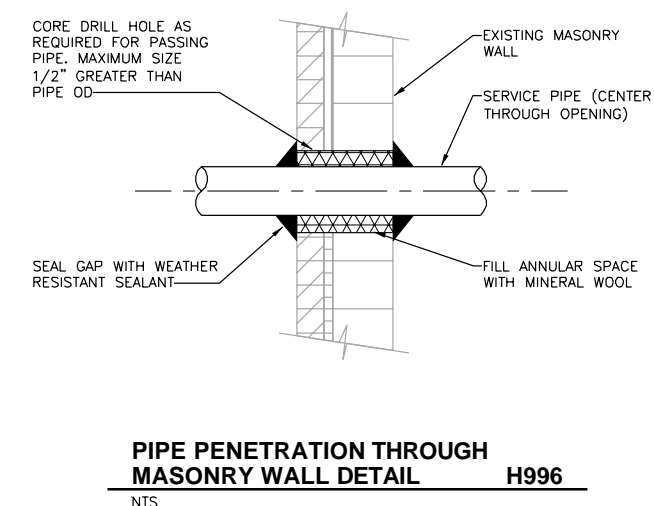
**ROOF MOUNTED MAKE UP AIR UNIT EQUIPMENT DETAIL H426**  
NTS



**HAZARDOUS ENVIRONMENT DUCT ROOF PENETRATION DETAIL H930**  
NTS



**TYPICAL DUCT FLOOR PENETRATION DETAIL H982**  
NTS



**PIPE PENETRATION THROUGH MASONRY WALL DETAIL H996**  
NTS

Date	
Checked By	
Drawn By	
Revision Description	
Revision Number	

Designed By	JLW
Drawn By	JLW
Checked By	EPC
Approved By	EPC
Filename	999PHD1.DWG
Project No.	12614
Project Date	JUNE 2014

**CITY OF JOLIET**  
**EAST SIDE WASTEWATER TREATMENT PLANT**  
**INFLUENT PUMP STATION AND SCREEN REPLACEMENT**  
**JOLIET, IL**

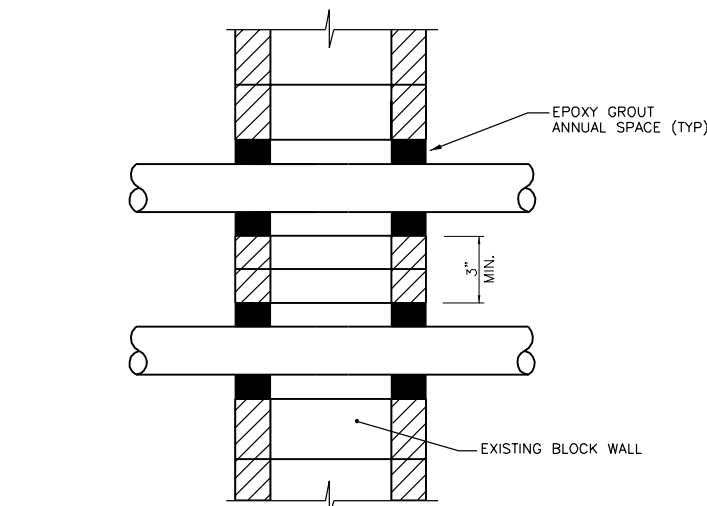
**HVAC**  
**STANDARD DETAILS**



Sheet No. 123  
Drawing No.

999-H-2

Jeffrey J. Wicks  
 7/19/14  
 Ext: 1179415



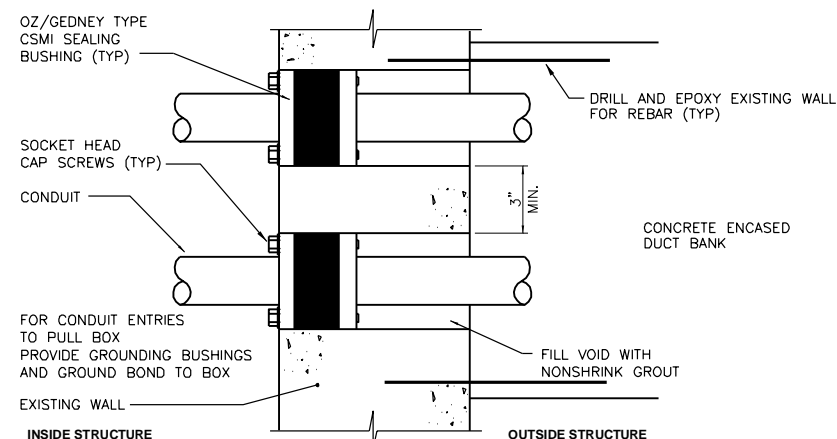
INSIDE STRUCTURE      OUTSIDE STRUCTURE

NOTE: CORE DRILL THE EXISTING WALL TO INSTALL CONDUITS.

ABOVE GRADE INSTALLATIONS

**CONDUIT ENTRY THRU EXISTING WALL E012**

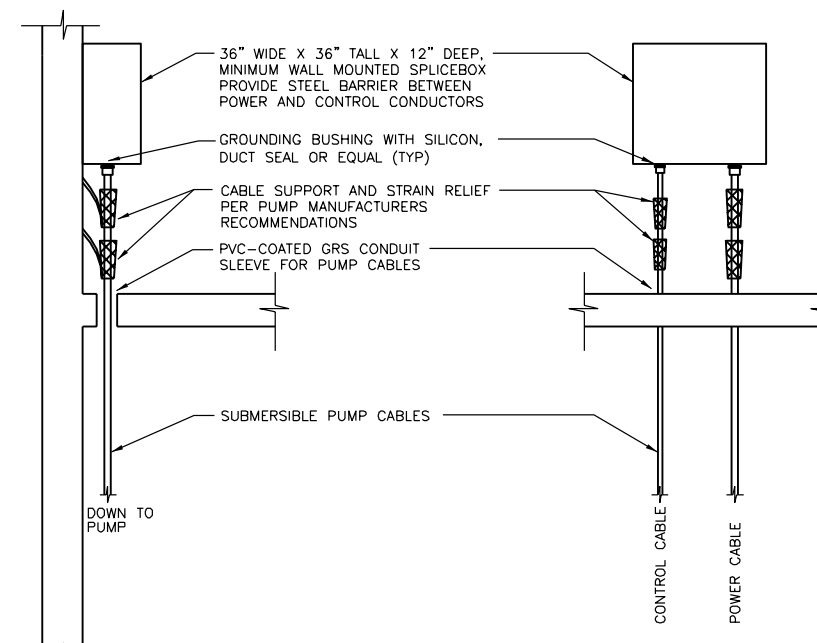
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NOTE: CORE DRILL THE EXISTING WALL TO INSTALL THIS SEALING BUSHING.

**CONDUIT ENTRY THRU EXISTING WALL E013**

NTS

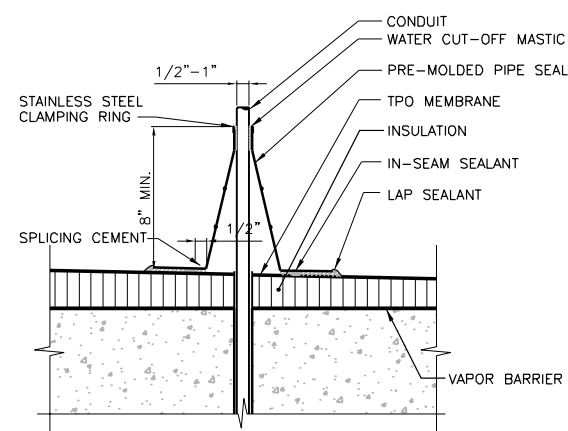


SIDE VIEW

FRONT VIEW

**RWW PUMP SPLICEBOX DETAIL E045**

NTS



**PIPE FLASHING DETAIL E070**

NTS

Date	Checked By	Drawn By	Revision Description	Revision Number

Designed By	MBS
Drawn By	MBS
Checked By	JAB
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Filename	999ED1.DWG
Project No.	12614
Project Date	JUNE 2014

CITY OF JOLIET  
EAST SIDE WASTEWATER TREATMENT PLANT  
INFLUENT PUMP STATION AND SCREEN REPLACEMENT  
JOLIET, IL  
ELECTRICAL  
STANDARD DETAILS

**DONOHUE**

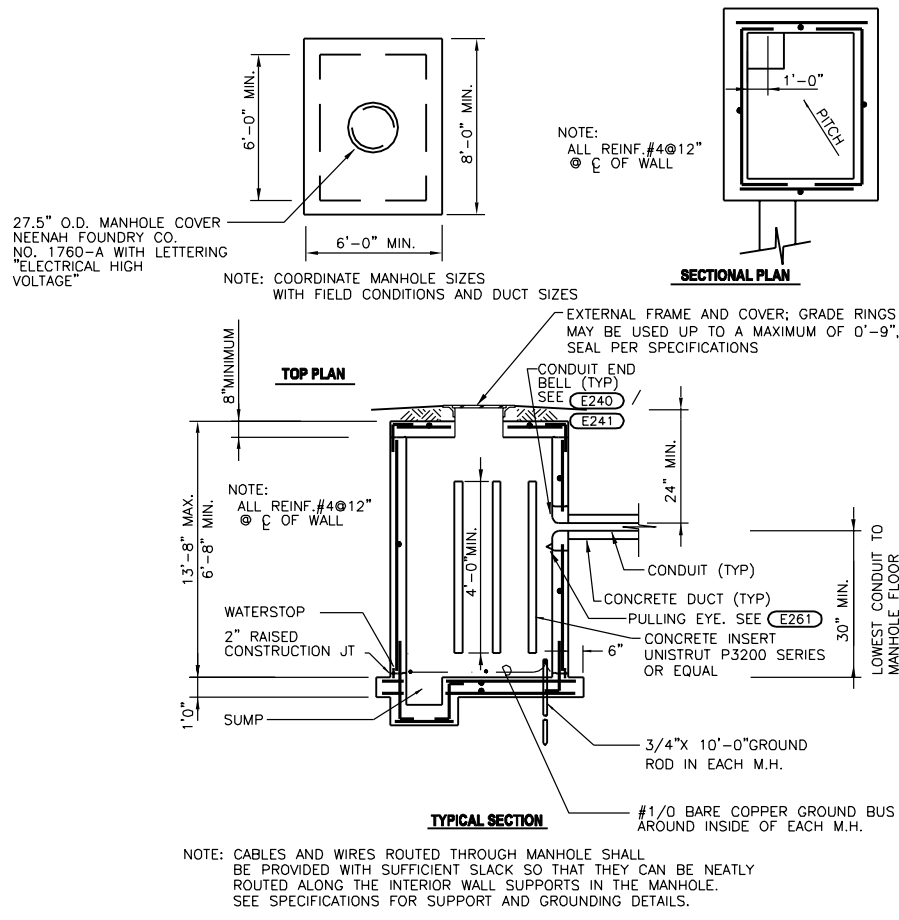
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Drawing No.

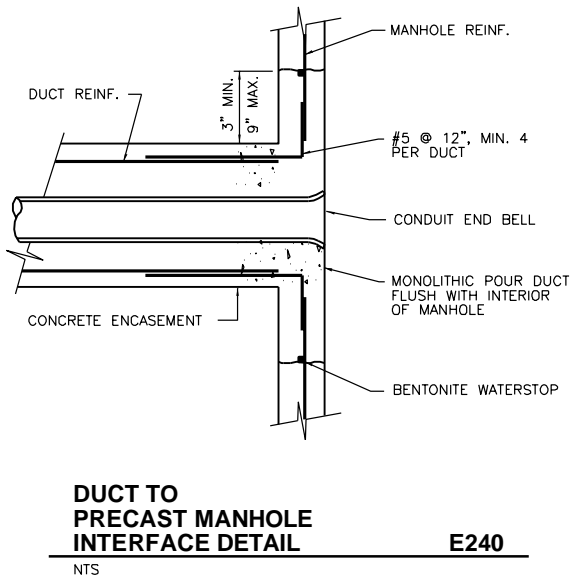
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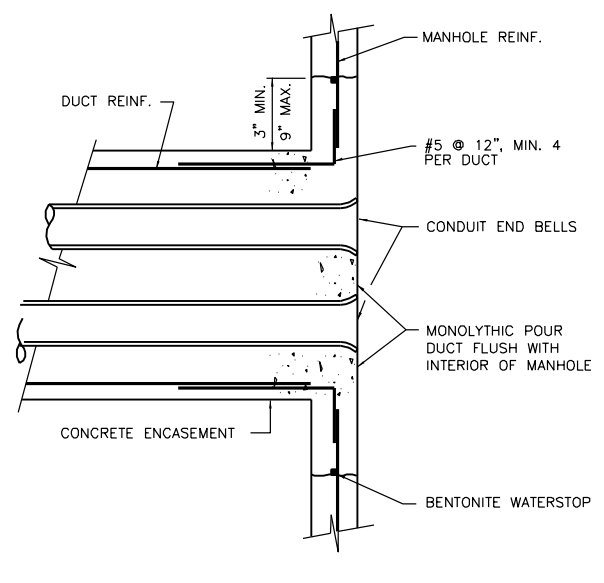
Mike Stahl  
7-9-14  
Exp. 11-30-15



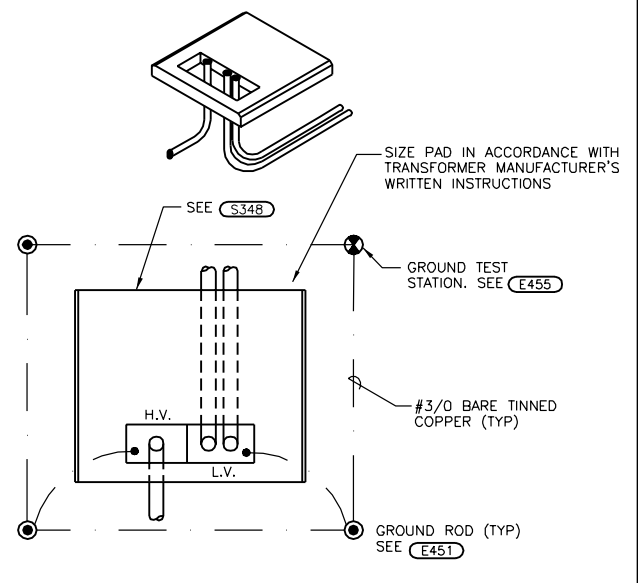
**MEDIUM VOLTAGE MANHOLE DETAIL**  
E230  
NTS



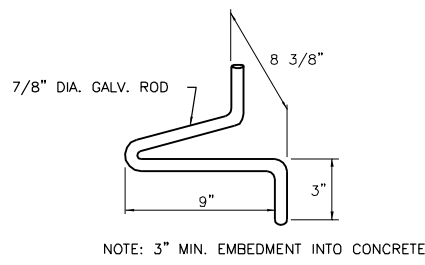
**DUCT TO PRECAST MANHOLE INTERFACE DETAIL**  
E240  
NTS



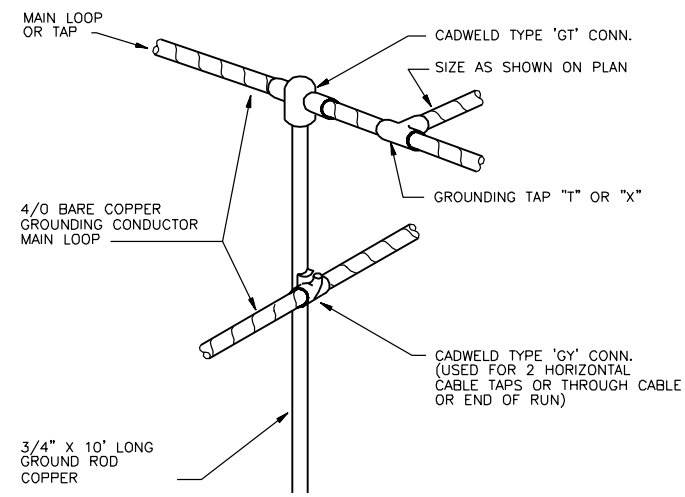
**DUCT TO MANHOLE INTERFACE DETAIL**  
E241  
NTS



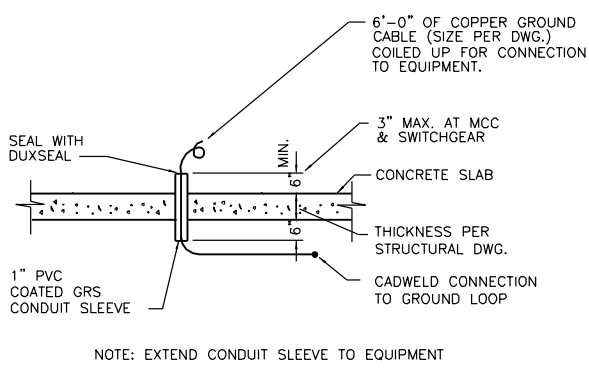
**TRANSFORMER PAD DETAIL**  
E272  
NTS



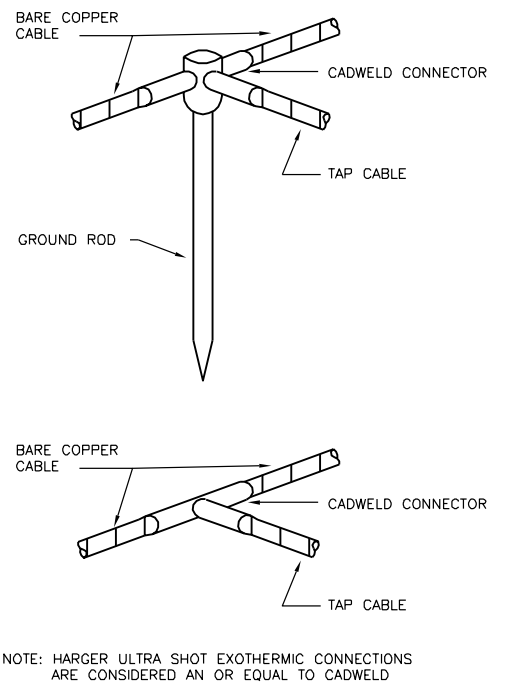
**PULLING EYE DETAIL**  
E261  
NTS



**CONDUCTOR TO GROUND ROD CONNECTION DETAIL**  
E451  
NTS



**EQUIPMENT GROUND CABLE STUB-UP**  
E452  
NTS



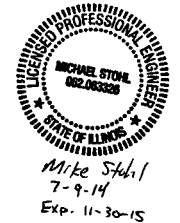
**GROUNDING CONNECTION DETAIL**  
E463  
NTS

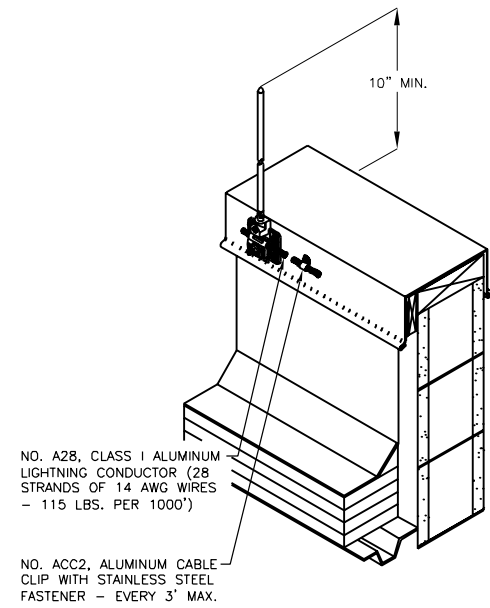
NOTE: HARGER ULTRA SHOT EXOTHERMIC CONNECTIONS ARE CONSIDERED AN OR EQUAL TO CADWELD

Date	
Checked By	
Drawn By	
Revision Description	
Revision Number	

Designed By	MBS
Drawn By	MBS
Checked By	JAB
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Filename	999ED1.DWG
Project No.	12614
Project Date	JUNE 2014

**CITY OF JOLIET**  
**EAST SIDE WASTEWATER TREATMENT PLANT**  
**INFLUENT PUMP STATION AND SCREEN REPLACEMENT**  
**JOLIET, IL**  
**ELECTRICAL STANDARD DETAILS**

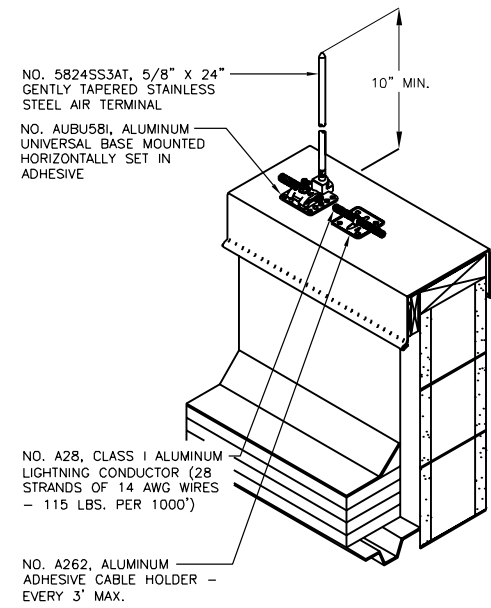




**METAL COPING  
AIR TERMINAL  
DETAIL**

**E470**

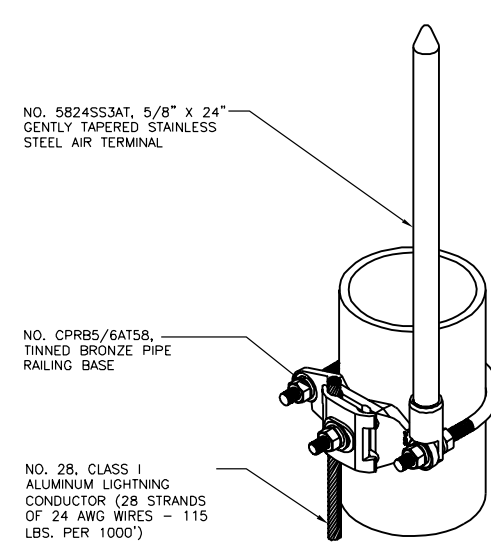
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**SKYLIGHT  
AIR TERMINAL  
DETAIL**

**E471**

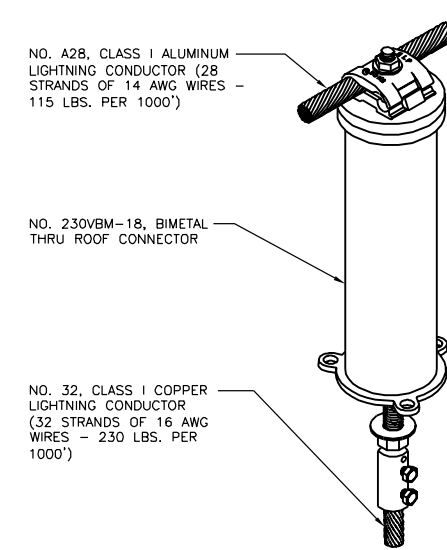
NTS



**AIR TERMINAL  
DETAIL**

**E472**

NTS

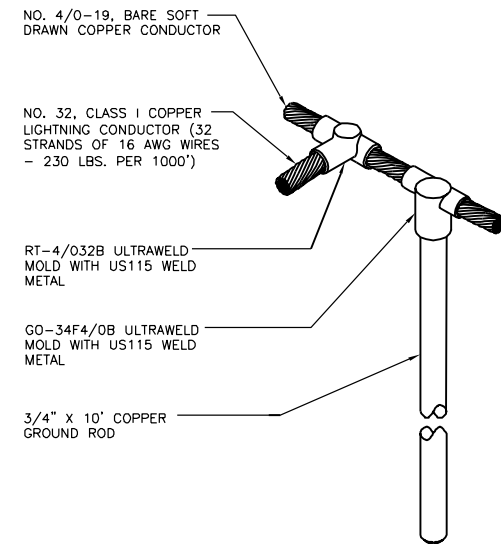


NOTE: PROVIDE MEMBRANE BOOT FLASHING AROUND PENETRATION

**THRU ROOF  
DETAIL**

**E473**

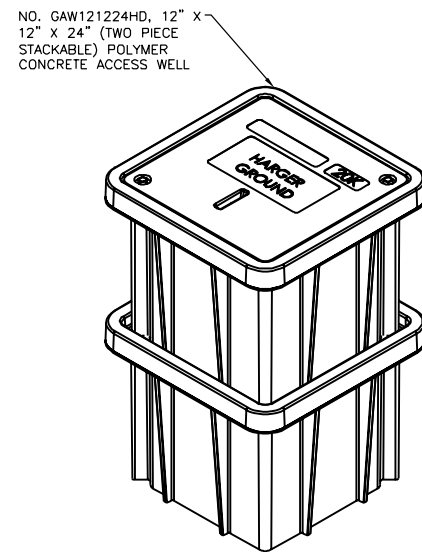
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**GROUND ROD  
DETAIL**

**E476**

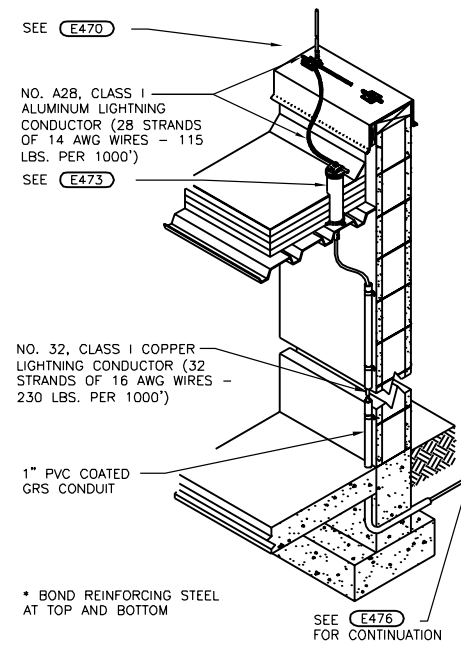
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**GROUND ROD  
TEST WELL DETAIL**

**E477**

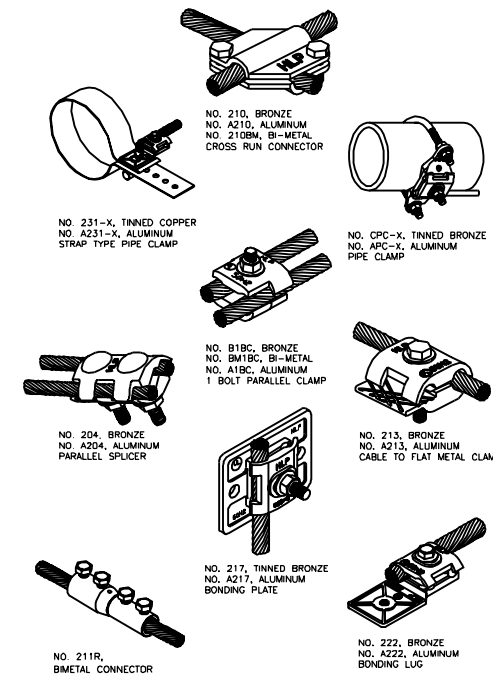
NTS



**DOWN CONDUCTOR  
DETAIL**

**E478**

NTS



**TYPICAL BONDING  
SPLICING DETAIL**

**E479**

NTS

**GENERAL NOTES:**

1. ADJUST PART NUMBERS AS REQUIRED TO PROVIDE A COMPLETE UL LISTED LIGHTNING PROTECTION SYSTEM. COORDINATE WITH MANUFACTURER.



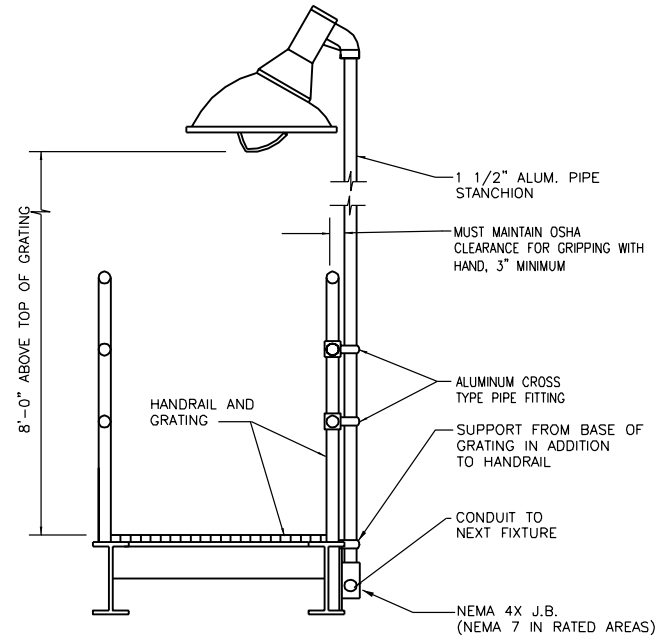
Mike Stone  
7-9-14  
Exp. 11-30-15

Revision Number	Revision Description	Drawn By	Checked By	Date

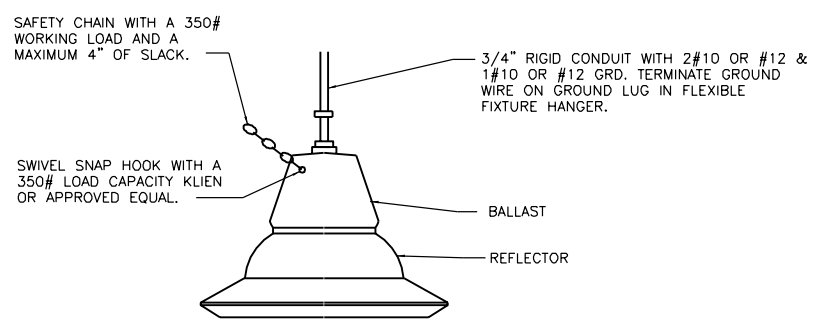
Designed By	MBS
Drawn By	MBS
Checked By	JAB
Approved By	JAB
Filename	999ED1.DWG
Project No.	12614
Project Date	JUNE 2014

**CITY OF JOLIET  
EAST SIDE WASTEWATER TREATMENT PLANT  
INFLUENT PUMP STATION AND SCREEN REPLACEMENT  
JOLIET, IL**

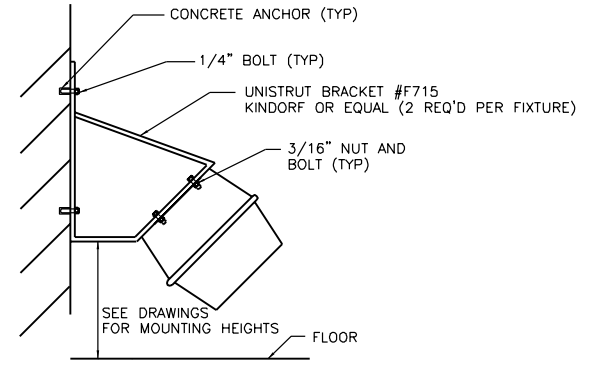
**ELECTRICAL  
STANDARD DETAILS**



**FIXTURE MOUNTING DETAIL E522**  
NTS



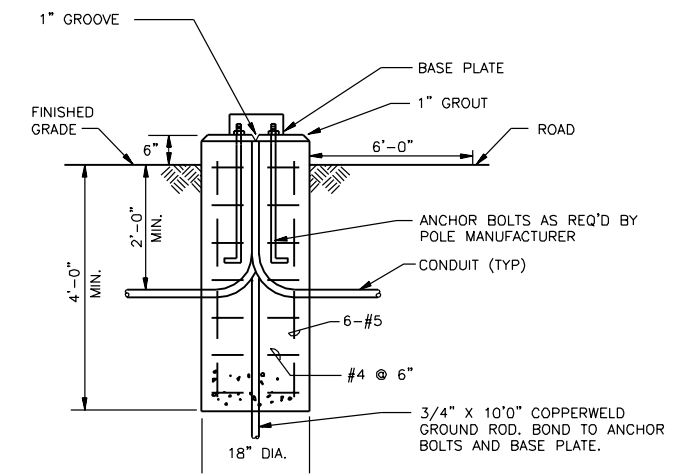
NOTE: FIXTURES SHALL BE SUPPORTED PER SPECIFICATIONS  
**FIXTURE TYPE "C" MOUNTING DETAIL E530**  
NTS



SEE DRAWINGS FOR MOUNTING HEIGHTS  
**FIXTURE TYPE "A" MOUNTING DETAIL E550**  
NTS

**PLAN NOTES:**

1. PROVIDE FIXTURES WITH QUARTZ EMERGENCY LAMP WHERE INDICATED ON DRAWINGS. INCLUDE QUARTZ LAMP.



**FIXTURE MOUNTING DETAIL E575**  
NTS

**FIXTURE SCHEDULE**

TYPE	DESCRIPTION	LAMPS		MANUFACTURER	CATALOG NUMBER	REMARKS
		NO	ORD ABB			
A	1X4 ENCLOSED FLUORESCENT FIXTURE	2	T8 32W	LITHONIA	DMW-2-32-120-GEB10IS	MOUNTING AS NOTED ON PLANS SEE <b>E550</b> FOR WALL MOUNTING
B	PULSE START METAL HALIDE FIXTURE SUITABLE FOR C1 D1 LOCATION	1	175MH	APPLETON	CPC1775MT-CMR-4ST-CGU-2	CEILING MOUNTED; SEE DRAWING FOR MOUNTING HEIGHT
C	HIGH INTENSITY DISCHARGE PULSE START METAL HALIDE LOW BAY FIXTURE	1	175MH	LITHONIA	TX-175M-A23-TB-SCWA-SCK W/LAMP	SEE <b>E530</b>
D	POLE MOUNTED OUTDOOR LED FIXTURE	1	LED	HOLOPHANE	PLED2-05L-5K-AS-UN-G-L5-P3US-GR	SEE <b>E522</b>
E	LED WALL PACK WITH INTEGRAL PHOTO CELL WITH FULL SHIELD	1	10 LED	HOLOPHANE	W4GLED-10C-1000-50K-T3M-MVOLT-PE-BK	WALL MOUNTED AS INDICATED
	LED EXIT LIGHT WITH RED LETTERS, WHITE HOUSING, CHEVRONS AS REQUIRED; NICKEL CADMIUM BATTERY	-	WITH UNIT	LITHONIA	LQM-S-W-3-R-120/277-EL N	MOUNTED ABOVE DOOR
	EMERGENCY BATTERY LIGHT WITH UNIT WITH (2) 12W HALOGEN LAMP HEADS	2	WITH UNIT	LITHONIA	ELM1254-H1212-SD-TD-DL	WALL MOUNTED 8'-0" ABOVE FLOOR UNLESS OTHERWISE NOTED
	INDUSTRIAL EMERGENCY LIGHTING UNIT WITH (2) 20W HALOGEN LAMP HEADS; DAMP LOCATION LABEL	2	WITH UNIT	LITHONIA	IND1254-H2012-SEL	WALL MOUNTED 8'-0" ABOVE FLOOR
	LED EXIT LIGHT WITH RED LETTERS, WHITE HOUSING, CHEVRONS AS REQUIRED	-	WITH UNIT	RIG-A-LITE	XPEX-1-R-DT-WP-EM-SD	MOUNTED ABOVE DOOR SUITABLE FOR C1 D1 ENVIRONMENT
	EMERGENCY BATTERY LIGHT WITH TWO UNIT MOUNTED LAMP HEADS SUITABLE FOR C1 D1 ENVIRONMENT	2	WITH UNIT	LITHONIA	ZX685-TD1-ELA-SEA-ELA-ZX-CF0706PM	WALL MOUNTED 8'-0" ABOVE FLOOR



Mike Stahl  
7-9-14  
Exp. 11-30-15

Revision Number	Revision Description	Drawn By	Checked By	Date

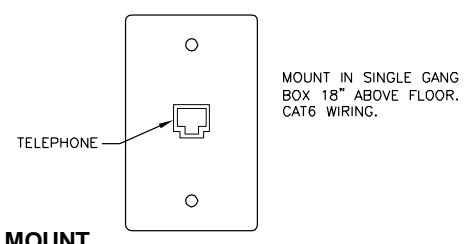
Designed By	MBS
Drawn By	MBS
Checked By	JAB
Approved By	JAB
Filename	999ED1.DWG
Project No.	12614
Project Date	JUNE 2014

CITY OF JOLIET  
EAST SIDE WASTEWATER TREATMENT PLANT  
INFLUENT PUMP STATION AND SCREEN REPLACEMENT  
JOLIET, IL  
ELECTRICAL  
STANDARD DETAILS



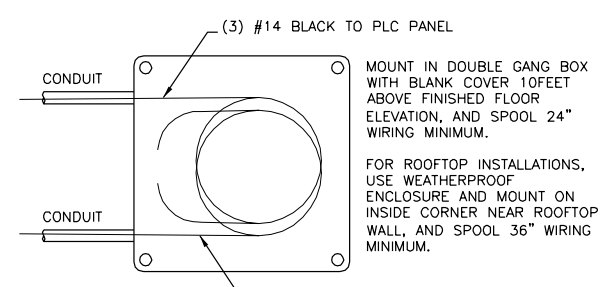
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Drawing No.	

Date	
Checked By	
Drawn By	
Revision Description	
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Designed By	DWG
Drawn By	DWG
Checked By	LET
Approved By	LET
Filename	999ND1.DWG
Project No.	12614
Project Date	JUNE 2014



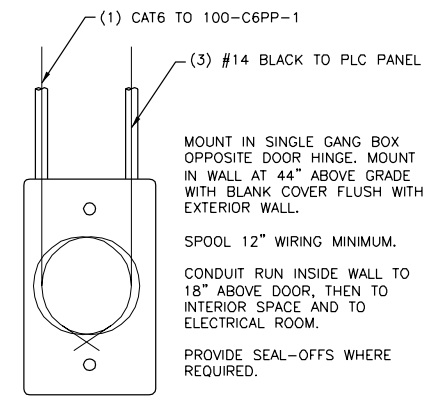
**WALL MOUNT TELEPHONE JACK** **N001**  
NTS

MOUNT IN SINGLE GANG BOX 18" ABOVE FLOOR. CAT6 WIRING.



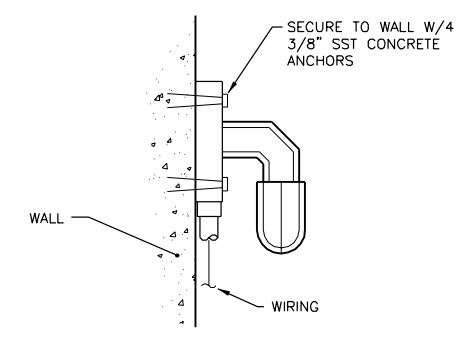
**WALL MOUNT ROUGH IN** **N002**  
NTS

MOUNT IN DOUBLE GANG BOX WITH BLANK COVER 10 FEET ABOVE FINISHED FLOOR ELEVATION, AND SPOOL 24" WIRING MINIMUM.  
FOR ROOFTOP INSTALLATIONS, USE WEATHERPROOF ENCLOSURE AND MOUNT ON INSIDE CORNER NEAR ROOFTOP WALL, AND SPOOL 36" WIRING MINIMUM.



**TYPICAL ACCESS CONTROL/CARD READER ROUGH IN** **N003**  
NTS

MOUNT IN SINGLE GANG BOX OPPOSITE DOOR HINGE. MOUNT IN WALL AT 44" ABOVE GRADE WITH BLANK COVER FLUSH WITH EXTERIOR WALL.  
SPOOL 12" WIRING MINIMUM.  
CONDUIT RUN INSIDE WALL TO 18" ABOVE DOOR, THEN TO INTERIOR SPACE AND TO ELECTRICAL ROOM.  
PROVIDE SEAL-OFFS WHERE REQUIRED.



**WALL MOUNT ALARM LIGHT** **N110**  
NTS

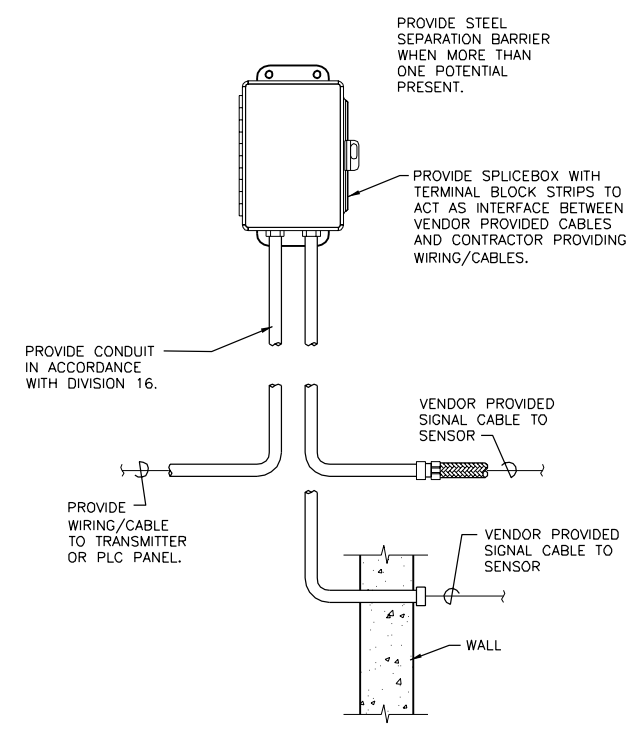
NOTE: PROVIDE SEAL-OFF CONNECTORS AS REQUIRED TO COMPLY WITH NEC REQUIREMENTS.

**INSTRUMENT PLAN GENERAL NOTES**

- DRAWING SHOWS CONTROL, SIGNAL AND ASSOCIATED SINGLE PHASE POWER WIRING REQUIREMENTS.
- CONTRACTOR SHALL BE RESPONSIBLE FOR ALL WIRING, WHETHER SHOWN OR NOT, NECESSARY FOR A COMPLETE AND OPERABLE SYSTEM.
- THIS DRAWING SHOWS APPROXIMATE LOCATIONS OF DEVICES AND PANELS AND IS DRAWN TO SCALE.
- SHIELDED AND UNSHIELDED CONDUCTORS SHALL BE RUN IN CONDUIT. SHIELDED CONDUCTORS SHALL NOT BE COMBINED WITH UNSHIELDED CONDUCTORS IN ANY CONDUIT. NEITHER SHIELDED NOR UNSHIELDED CONDUCTORS SHALL BE INCLUDED IN THE SAME CONDUIT AS POWER WIRING.
- SHIELDED AND UNSHIELDED CONDUCTORS SHALL HAVE A MINIMUM OF 6" SEPARATION BETWEEN CONDUIT ON PARALLEL RUNS.
- SHIELDED AND UNSHIELDED CONDUCTORS SHALL BE SEPARATED BY STEEL BARRIERS IN ALL COMBINED SIGNAL JUNCTION BOXES AND INSTRUMENT TERMINATION CABINETS.
- CONDUCTORS SHALL NOT BE SPLICED EXCEPT AT TERMINALS OR AS DESIGNATED BY ENGINEER.
- ONLY REQUIRED CONDUCTORS ARE SHOWN ON PLAN. SPARE CONDUCTORS NOT SHOWN.
- FOR EACH CONDUIT CONTAINING MORE THAN TWO CONDUCTORS, PROVIDE A MINIMUM OF TWO CONDUCTORS OR 10% OF TOTAL CONDUCTORS IN CONDUIT, WHICHEVER IS GREATER AS SPARES. TAG BOTH ENDS OF EACH SPARE. TERMINATE EACH END OF SPARE CONDUCTOR AT TERMINALS WHENEVER POSSIBLE.
- CONDUIT SHALL BE SIZED TO ACCOMMODATE REQUIRED CONDUCTORS AND ANTICIPATED SPARES.
- THIS DRAWING DOES NOT SHOW CONDUIT SYSTEMS. PROVIDE, AS A MINIMUM, PULL BOXES AS RECOMMENDED BY CONDUCTOR MANUFACTURER. CONDULETS SHALL NOT BE USED AS PULL BOXES.
- PROVIDE EXPLOSION-PROOF SEAL-OFF FITTINGS ON ALL CONDUIT EXITING CLASSIFIED OR RATED LOCATIONS. FITTINGS SHALL BE INSTALLED IN THE CLASSIFIED OR RATED LOCATION.

**INSTRUMENT PLAN LEGEND**

- ( ) #14 (QUANTITY) #14 THHN/THWN CONDUCTORS.
- ( ) TSP (QUANTITY) #16 TWISTED SHIELDED PAIR.
- ( ) 3C-S (QUANTITY) #16 SHIELDED 3-CONDUCTOR.
- ( ) RTD (QUANTITY) 3-WIRE RTD CABLE.
- ( ) FOC (QUANTITY) FIBER OPTIC CABLE (SEE 27 13 00 FOR DETAILS).
- ( ) CE (QUANTITY) COPPER ETHERNET (SEE 27 13 00 FOR DETAILS).
- ( ) VFC (QUANTITY) VENDOR FURNISHED CABLE.
- ( ) TEL (QUANTITY) #18 TELEPHONE CABLE 4-CONDUCTOR.
- ( ) RG62 (QUANTITY) RG62 A/U COAXIAL CABLE.



**SPLICE BOX** **N130**  
NTS

PROVIDE STEEL SEPARATION BARRIER WHEN MORE THAN ONE POTENTIAL PRESENT.

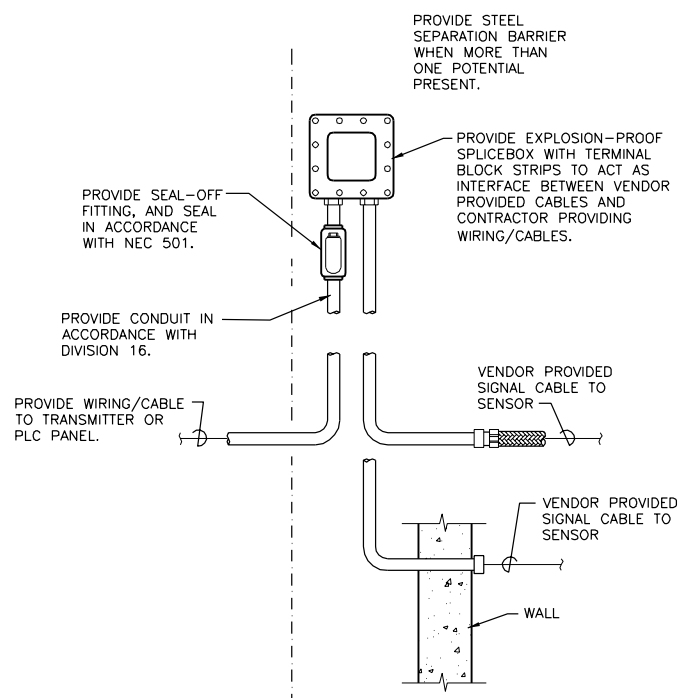
PROVIDE SPLICEBOX WITH TERMINAL BLOCK STRIPS TO ACT AS INTERFACE BETWEEN VENDOR PROVIDED CABLES AND CONTRACTOR PROVIDING WIRING/CABLES.

PROVIDE CONDUIT IN ACCORDANCE WITH DIVISION 16.

PROVIDE WIRING/CABLE TO TRANSMITTER OR PLC PANEL.

VENDOR PROVIDED SIGNAL CABLE TO SENSOR

VENDOR PROVIDED SIGNAL CABLE TO SENSOR



**EXPLOSION-PROOF SPLICE BOX** **N160**  
NTS

PROVIDE STEEL SEPARATION BARRIER WHEN MORE THAN ONE POTENTIAL PRESENT.

PROVIDE EXPLOSION-PROOF SPLICEBOX WITH TERMINAL BLOCK STRIPS TO ACT AS INTERFACE BETWEEN VENDOR PROVIDED CABLES AND CONTRACTOR PROVIDING WIRING/CABLES.

PROVIDE SEAL-OFF FITTING, AND SEAL IN ACCORDANCE WITH NEC 501.

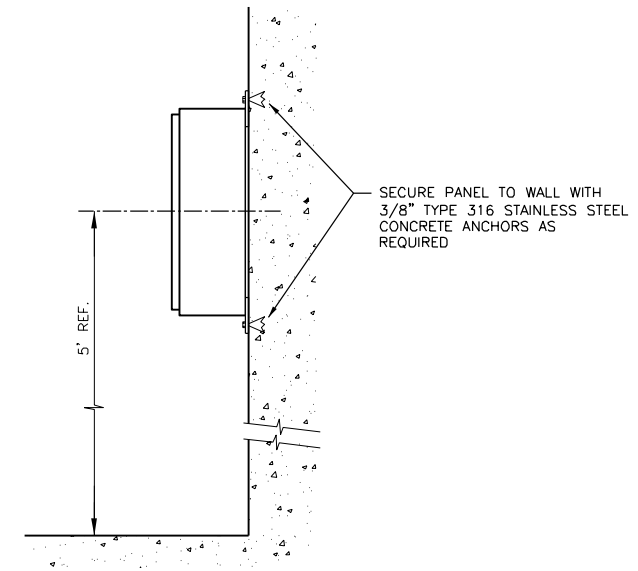
PROVIDE CONDUIT IN ACCORDANCE WITH DIVISION 16.

PROVIDE WIRING/CABLE TO TRANSMITTER OR PLC PANEL.

VENDOR PROVIDED SIGNAL CABLE TO SENSOR

VENDOR PROVIDED SIGNAL CABLE TO SENSOR

NON-HAZARDOUS AREA | CLASSIFIED OR CORROSIVE AREA



**WALL MOUNT CONTROL PANEL** **N170**  
NTS

SECURE PANEL TO WALL WITH 3/8" TYPE 316 STAINLESS STEEL CONCRETE ANCHORS AS REQUIRED



Mike Stohel  
7-9-14  
Exp. 11-30-15

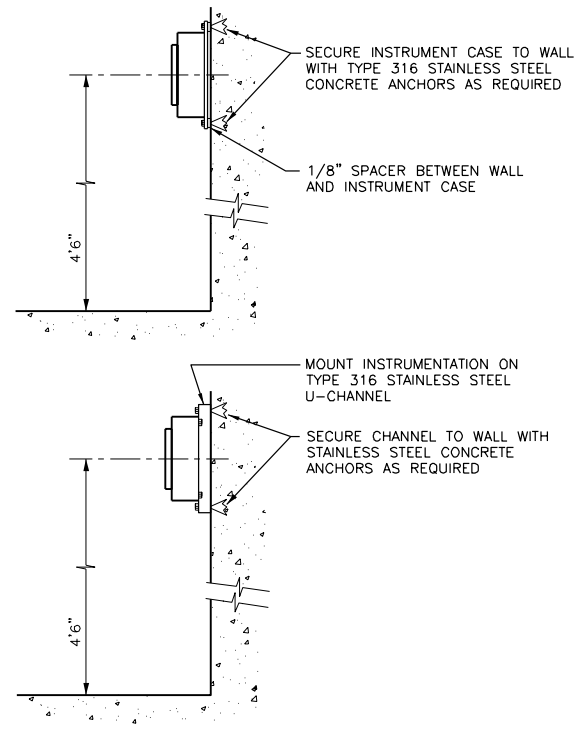
**CITY OF JOLIET**  
**EAST SIDE WASTEWATER TREATMENT PLANT**  
**INFLUENT PUMP STATION AND SCREEN REPLACEMENT**  
**JOLIET, IL**  
**INSTRUMENTATION AND CONTROL**  
**STANDARD DETAILS**

**DONOHUE**

Sheet No. 128

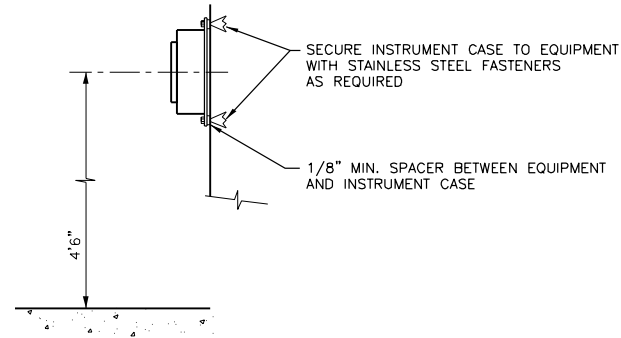
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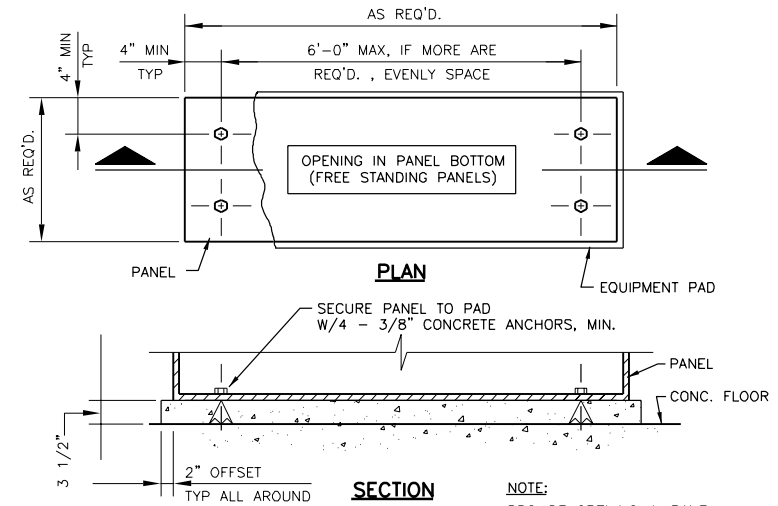
**WALL MOUNT SMALL CASE INSTRUMENTATION N171**

NTS



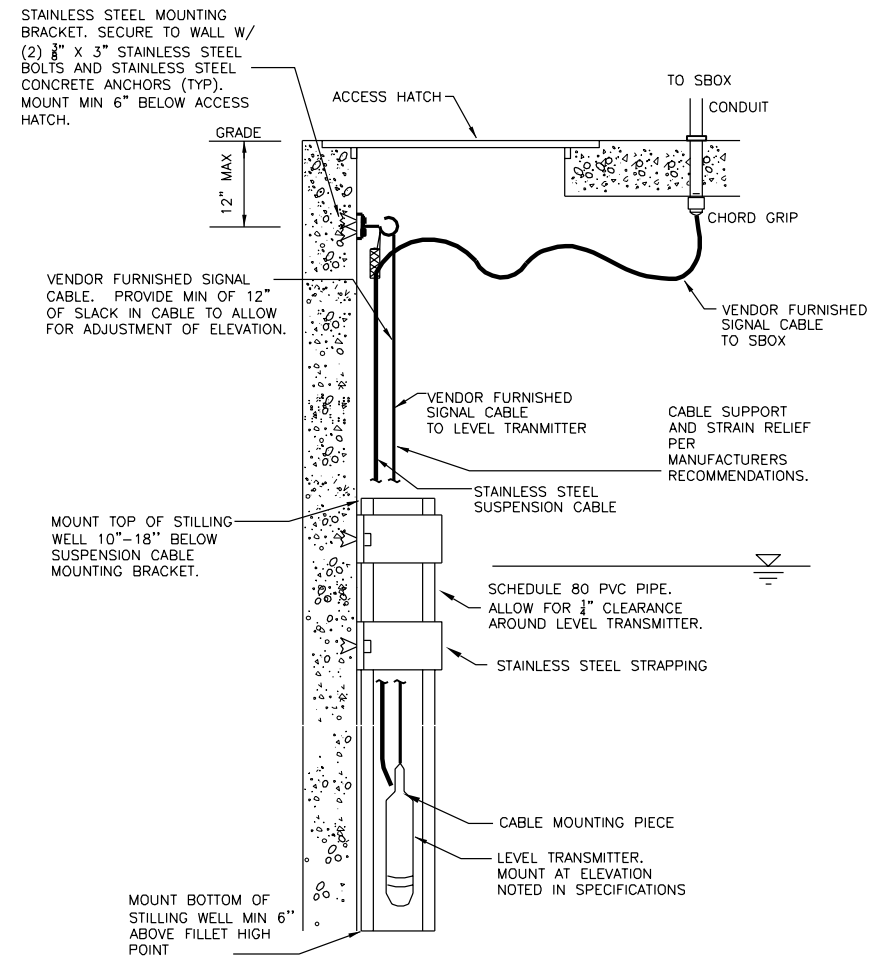
**EQUIPMENT MOUNT SMALL CASE INSTRUMENTATION N172**

NTS



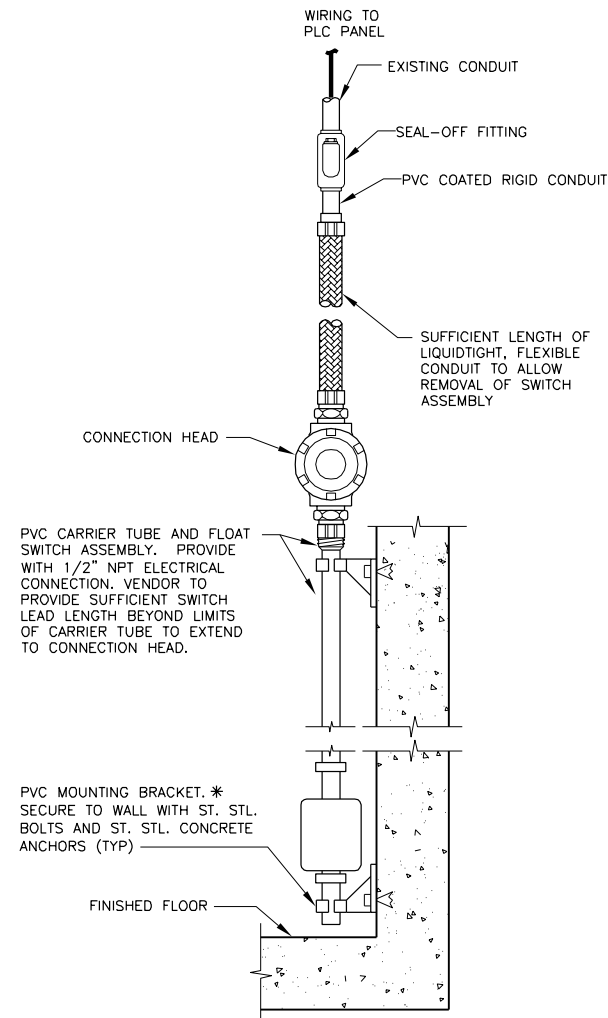
**FREE STANDING CONTROL PANEL N180**

NTS



**SUBMERSIBLE LEVEL TRANSMITTER N266**

NTS



**VERTICAL FLOAT LEVEL SWITCH WALL MOUNTED N275**

NTS

Date	
Checked By	
Drawn By	
Revision Description	
Revision Number	

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Drawn By	DWG
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**CITY OF JOLIET  
EAST SIDE WASTEWATER TREATMENT PLANT  
INFLUENT PUMP STATION AND SCREEN REPLACEMENT  
JOLIET, IL  
INSTRUMENTATION AND CONTROL  
STANDARD DETAILS**

**DONOHUE**

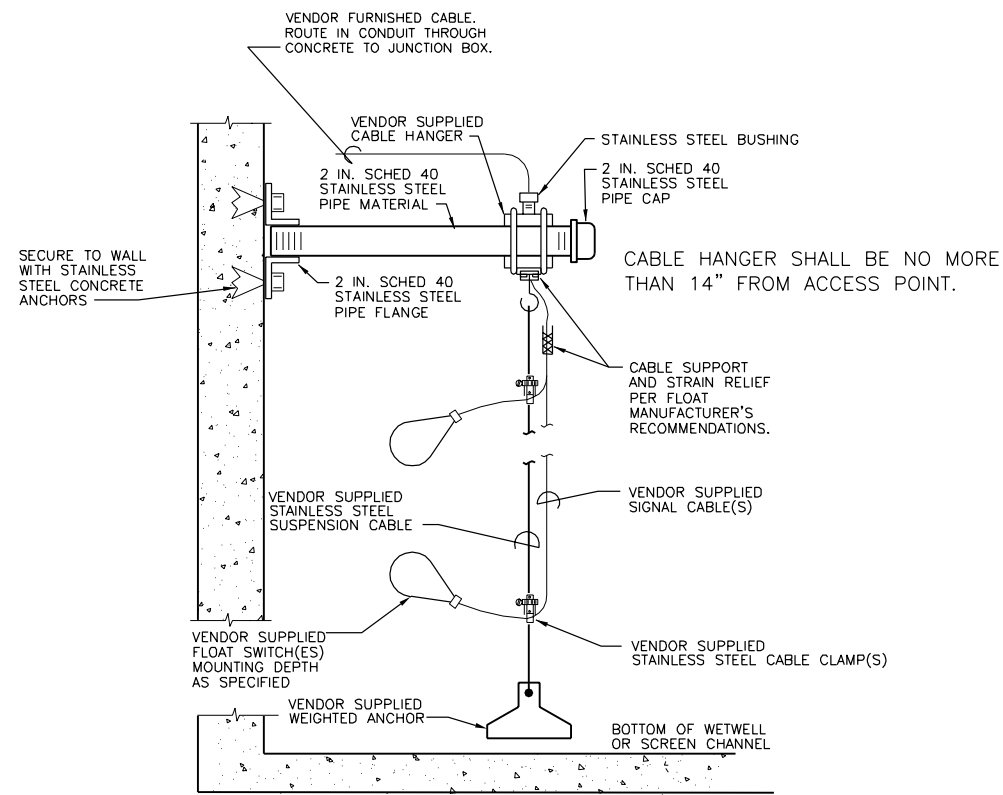
Sheet No. 129

Drawing No.

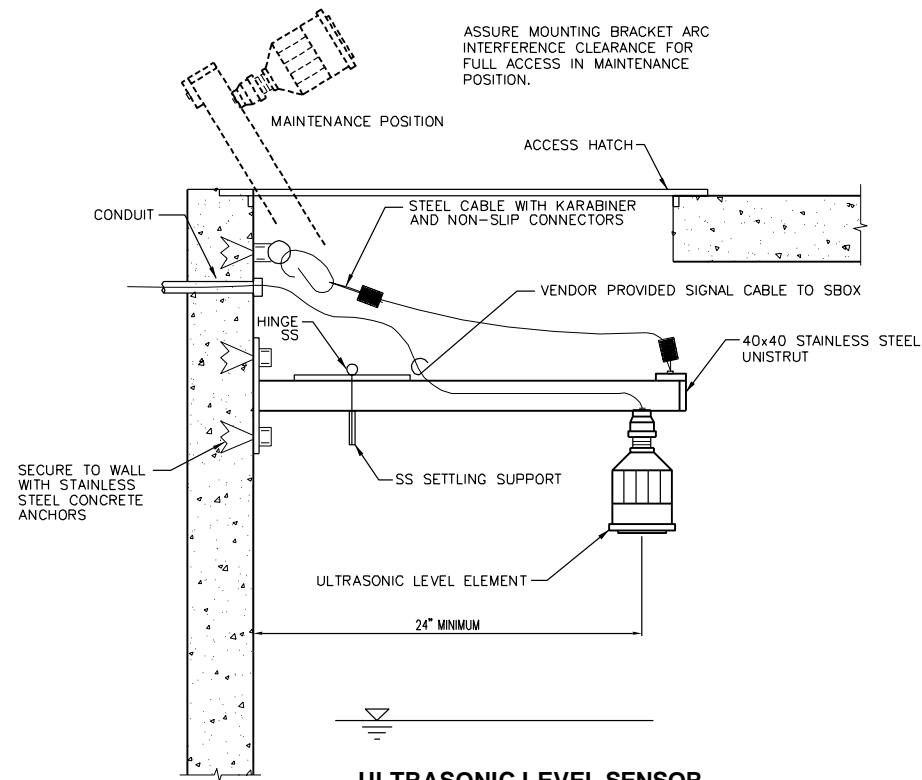
999-N-2



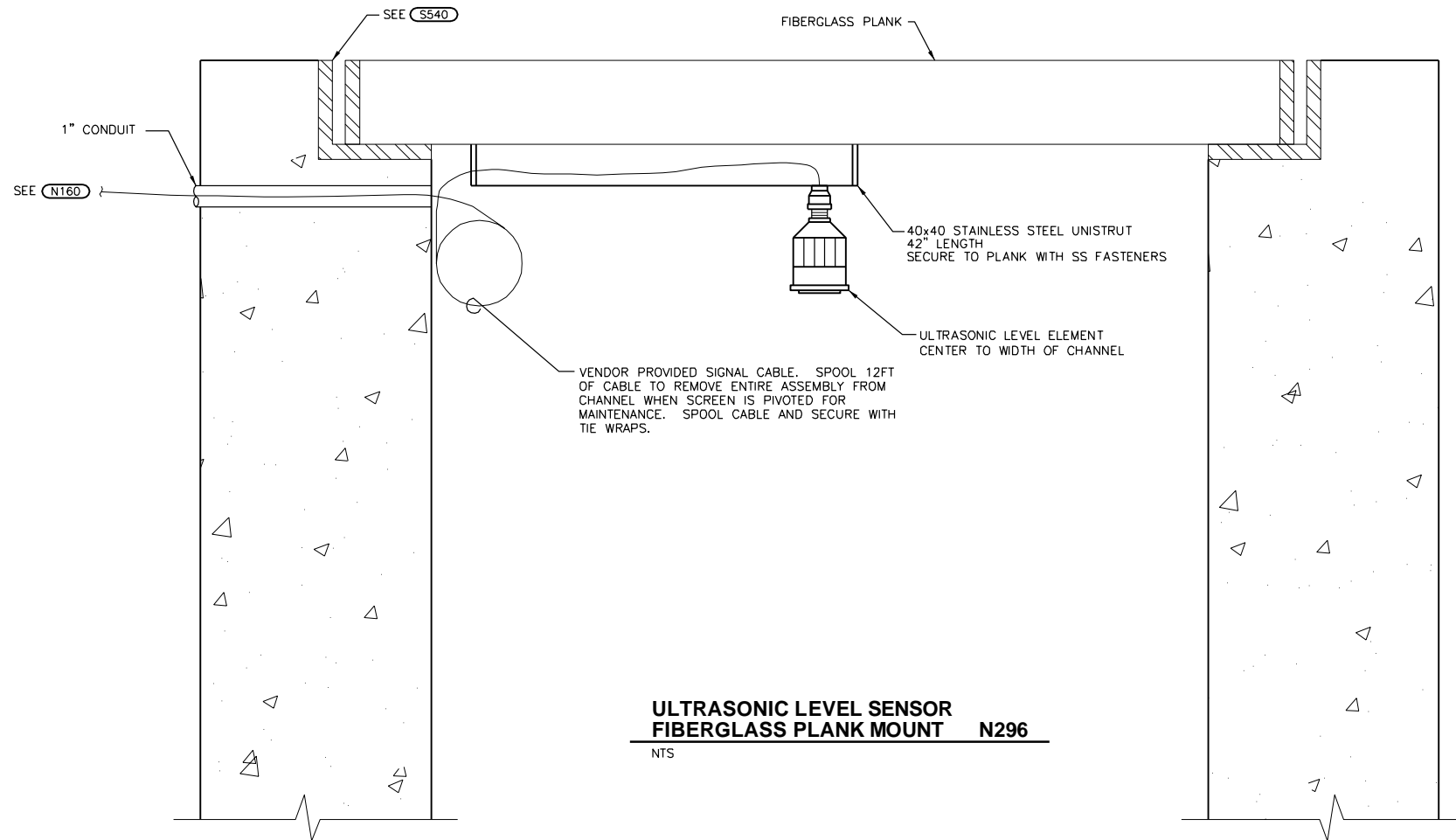
Mike Stohel  
7-9-14  
Exp. 11-30-15



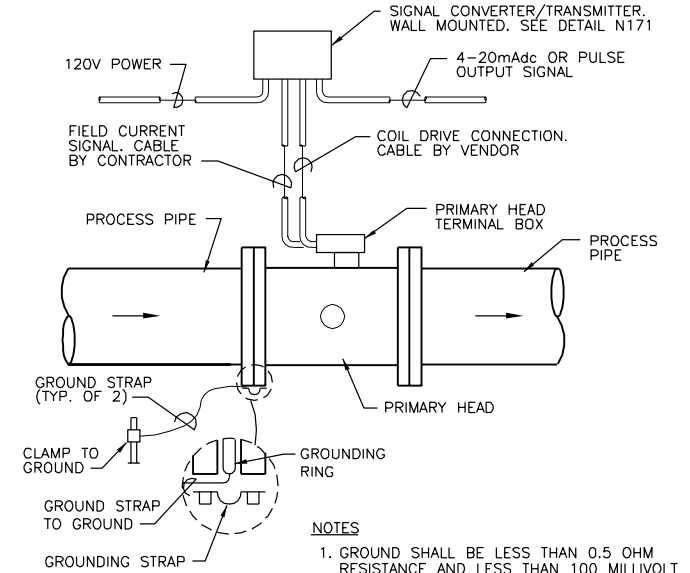
**FLOAT TYPE  
SIDEWALL MOUNTED** **N276**  
NTS



**ULTRASONIC LEVEL SENSOR  
SIDEWALL HINGE MOUNT** **N295**  
NTS



**ULTRASONIC LEVEL SENSOR  
FIBERGLASS PLANK MOUNT** **N296**  
NTS



- NOTES**
1. GROUND SHALL BE LESS THAN 0.5 OHM RESISTANCE AND LESS THAN 100 MILLIVOLT WHEN TESTED WITH STANDARD METHODS.
  2. LENGTH OF COIL DRIVE AND FIELD CURRENT CABLES SHALL NOT EXCEED MAXIMUM LENGTH AS ESTABLISHED BY MANUFACTURER.
  3. RUN COIL DRIVE AND FIELD CURRENT CABLES IN SEPARATE CONDUITS.

**MAGNETIC  
FLOWMETER W/ REMOTE  
CONVERTOR/TRANSMITTER** **N382**  
NTS

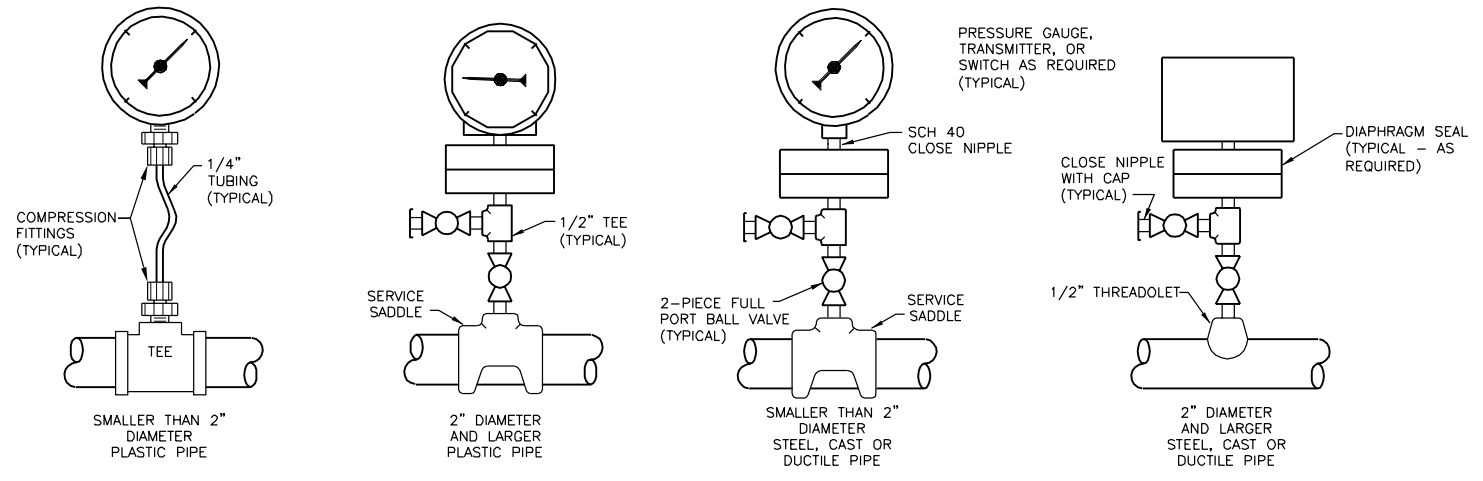


Mike Stohel  
7-9-14  
Exp. 11-30-15

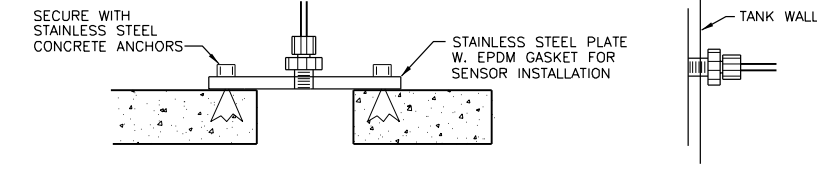
Date	
Checked By	
Drawn By	
Revision Description	
Revision Number	
Designed By	DWG
Drawn By	DWG
Checked By	LET
Approved By	ELT
Filename	999ND1.DWG
Project No.	12614
Project Date	JUNE 2014

CITY OF JOLIET  
EAST SIDE WASTEWATER TREATMENT PLANT  
INFLUENT PUMP STATION AND SCREEN REPLACEMENT  
JOLIET, IL

INSTRUMENTATION AND CONTROL  
STANDARD DETAILS

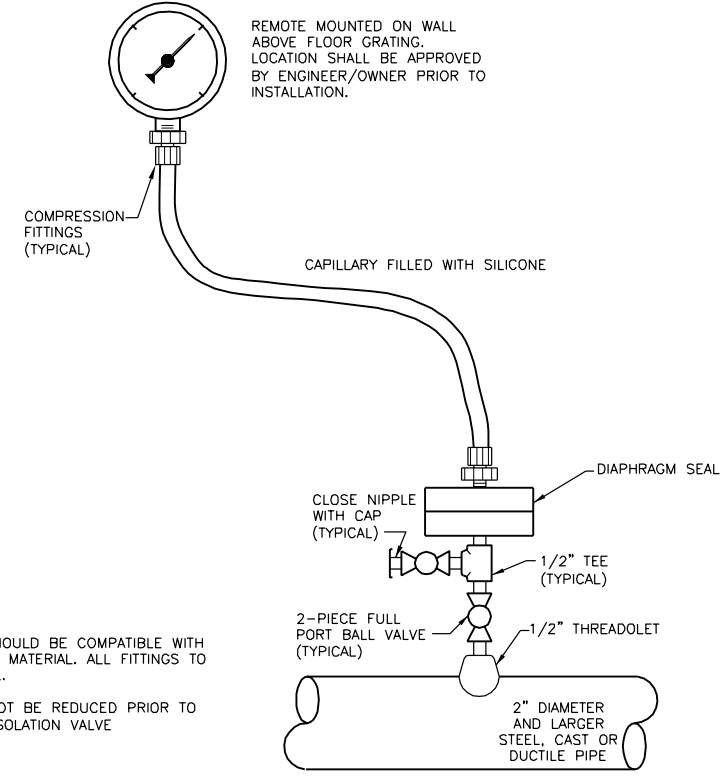


- FITTING MATERIAL SHOULD BE COMPATIBLE WITH MAIN PROCESS PIPE MATERIAL. ALL FITTINGS TO BE STAINLESS STEEL.
- 1/2" PIPE SHALL NOT BE REDUCED PRIOR TO FLUSHING TEE OR ISOLATION VALVE



**PRESSURE ELEMENTS  
PIPE MOUNTED - W OR  
WO DIAPHRAGM SEAL** N590

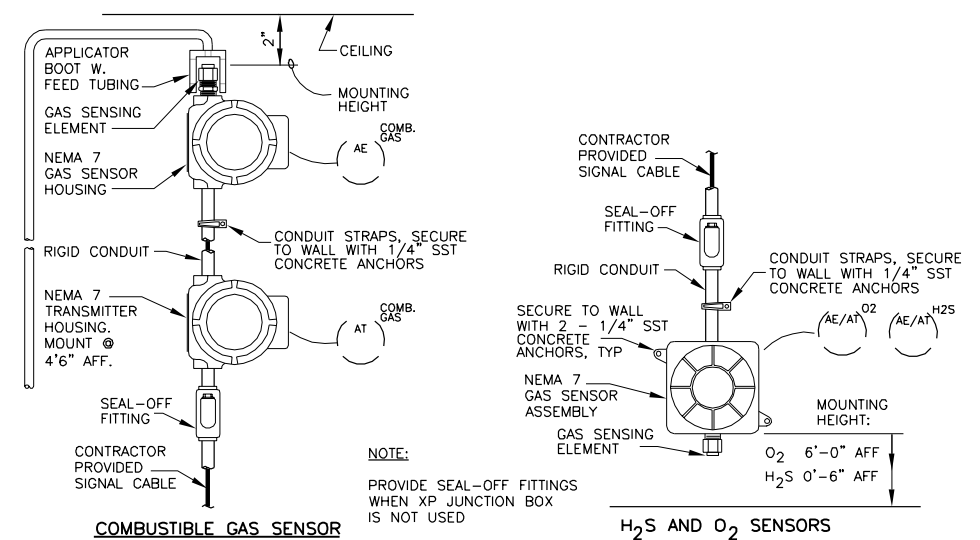
NTS



- FITTING MATERIAL SHOULD BE COMPATIBLE WITH MAIN PROCESS PIPE MATERIAL. ALL FITTINGS TO BE STAINLESS STEEL.
- 1/2" PIPE SHALL NOT BE REDUCED PRIOR TO FLUSHING TEE OR ISOLATION VALVE

**PRESSURE ELEMENT PIPE  
MOUNTED - WITH DIAPHRAGM  
SEAL AND CAPILLARY** N591

NTS



NOTE:  
PROVIDE SEAL-OFF FITTINGS WHEN XP JUNCTION BOX IS NOT USED

**HAZARDOUS GAS  
SENSOR/TRANSMITTER** N610

NTS

Date	
Checked By	
Drawn By	
Revision Description	
Revision Number	
Designed By	DWG
Drawn By	DWG
Checked By	LET
Approved By	LET
Filename	999ND1.DWG
Project No.	12614
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**CITY OF JOLIET**  
**EAST SIDE WASTEWATER TREATMENT PLANT**  
**INFLUENT PUMP STATION AND SCREEN REPLACEMENT**  
**JOLIET, IL**

**INSTRUMENTATION AND CONTROL  
STANDARD DETAILS**

**DONOHUE**

Sheet No. 131

Drawing No. 999-N-4

Mike Stona  
7-9-14  
Exp. 11-30-15