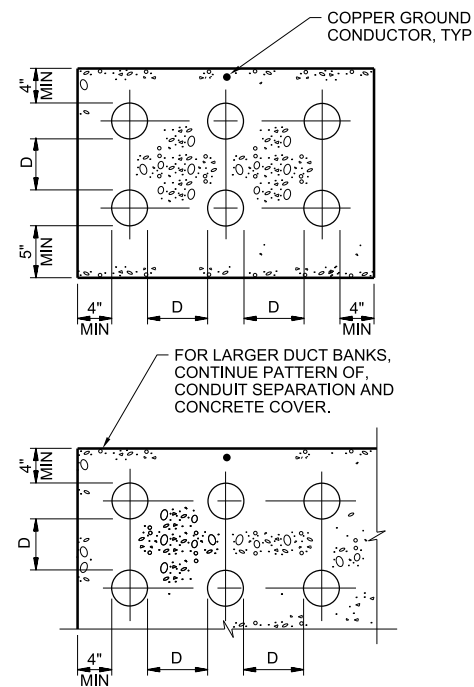


D = 3" FOR 2" AND LARGER CONDUITS  
 D = 2" FOR 1 1/2" AND SMALLER CONDUITS



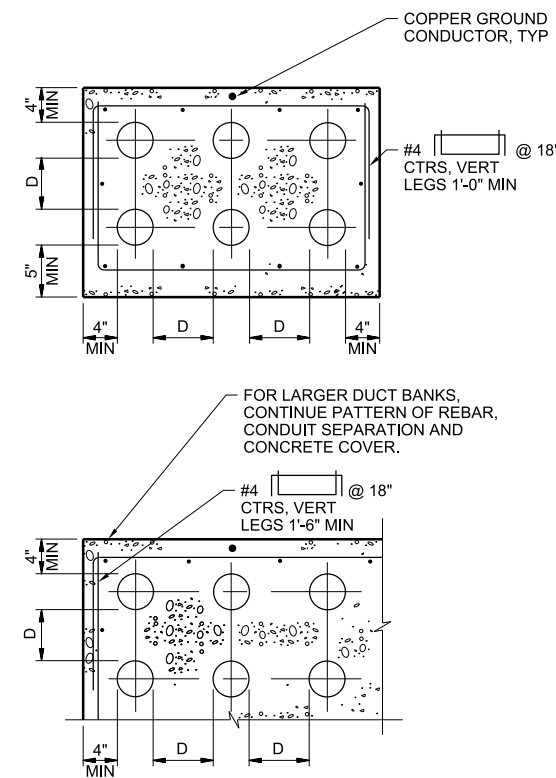
NOTES:

1. PROVIDE COMPACTED GRAVEL, 3/4" MINUS, UNDER ALL CONCRETE ENCASED DUCT RUNS.
2. IN LIEU OF STEEL REINFORCEMENT FIBROUS REINFORCING MAY BE INCLUDED IN THE CONCRETE MIX WHERE INDICATED.

**DUCT BANK - FIBROUS REINFORCED**

NTS

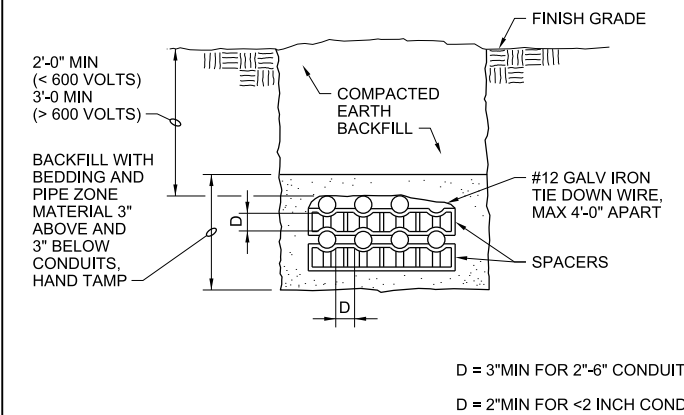
2605-400z



**DUCT BANK**

NTS

2605-400c



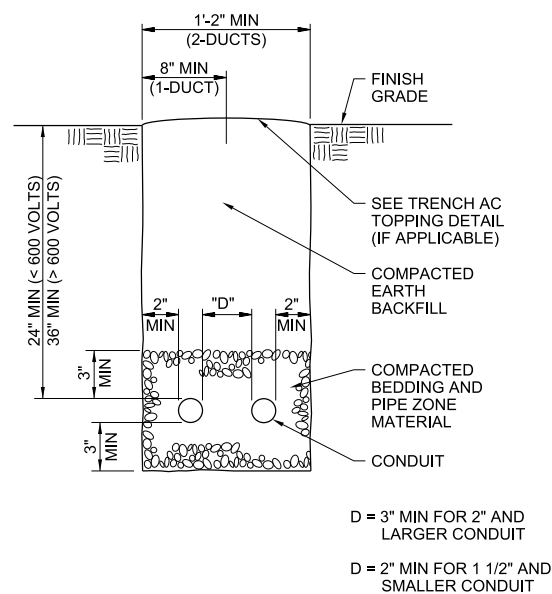
NOTE:

INSTALLATION OF DIRECT BURIAL DUCT BANKS WHICH INCLUDE THREE OR MORE CONDUITS OR DUCTS SHALL BE MADE IN ACCORDANCE WITH THIS DETAIL.

**TYPICAL UNDERGROUND CONDUIT NON-TRAFFIC LOCATIONS ONLY**

NTS

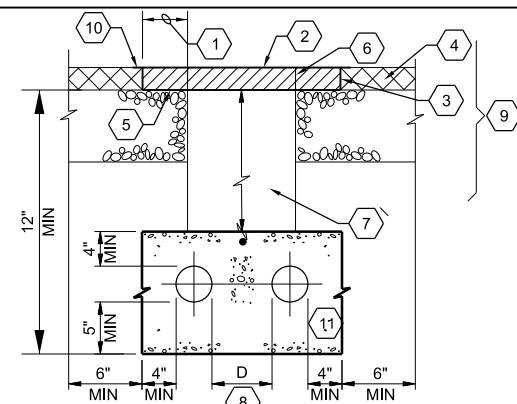
2605-420



D = 3" MIN FOR 2" AND LARGER CONDUIT  
 D = 2" MIN FOR 1 1/2" AND SMALLER CONDUIT

**TRENCH AND CONDUIT PLACEMENT**

2605-423a



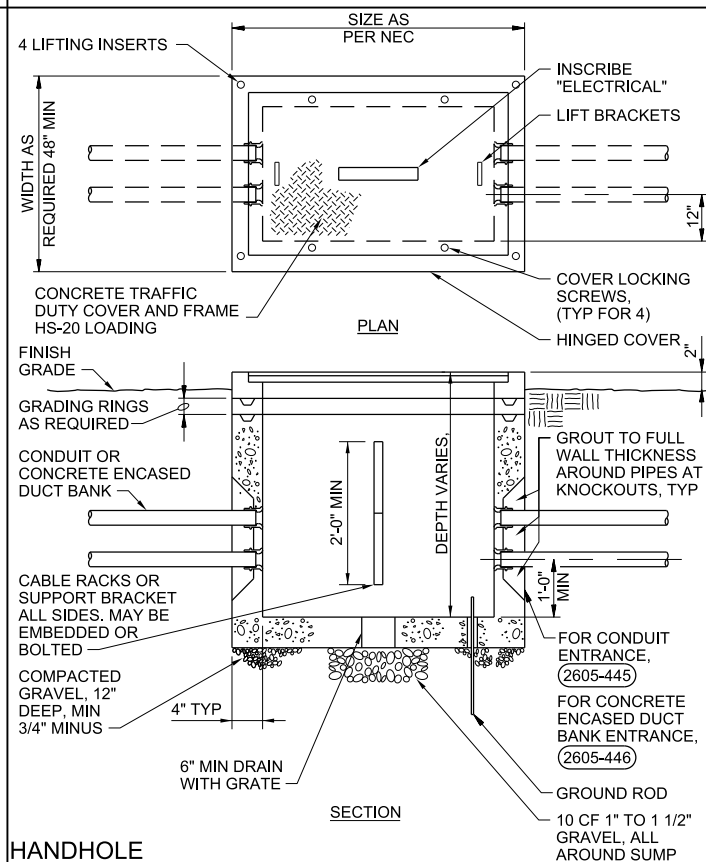
NOTE:

1. 1'-0" MIN SETBACK.
2. 6" AC PAVEMENT MIN. MATCH OR EXCEED EXISTING CONDITIONS.
3. SAW CUT JUST PRIOR TO PAVING.
4. AC PAVEMENT.
5. PRIME COAT IF SPECIFIED.
6. CUT PRIOR TO TRENCHING.
7. TRENCH BACKFILL.
8. D = 3" MIN FOR 2" AND LARGER CONDUIT  
D = 2" MIN FOR 1-1/2" AND SMALLER CONDUIT
9. EXISTING SURFACING SHOWN FOR REFERENCE ONLY, ACTUAL CONDITIONS WILL VARY.
10. SEALED COVER COAT IF SPECIFIED.
11. 2605-400z

**NON-TRAFFIC TRENCH AC TOPPING**

NTS

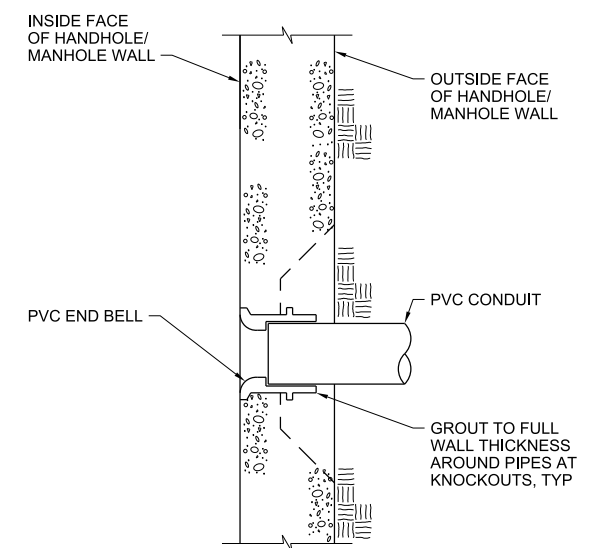
2605-425



**HANDHOLE**

NTS

2605-444



**DIRECT BURIED CONDUIT HANDHOLE/MANHOLE ENTRANCE**

NTS

2605-445

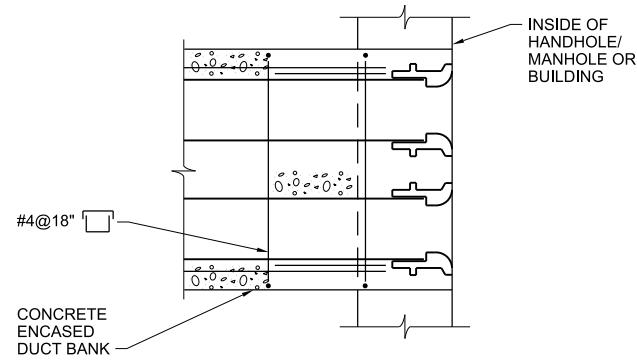
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PLOT DATE: 8/29/2019

VERIFY SCALE	CH2M HILL ENGINEERS, INC 225 EAST ROBINSON ST SUITE 505 ORLANDO, FL 32801 FL COA: 25861 FL AB: AAC001992	NEEL-SCHAFFER, INC 2301 LUCIEN WAY, SUITE 300 MAITLAND, FLORIDA 32751 FL COA: 8556	DESIGNED	EC	DATE	APR 2019
BAR IS ONE INCH ON ORIGINAL DRAWINGS. IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.	NOT TO BE USED FOR CONSTRUCTION UNTIL APPROVED.		DRAWN	EC	DATE	APR 2019
			CHECKED	DN	DATE	AUG 2019
			APPROVED	DN	DATE	AUG 2019
	NO.	BY	REVISIONS	DATE	FILE NAME	095-E-5005_676802.dgn

**ch2m** **NEEL-SCHAFFER**  
 SOLUTIONS YOU CAN BUILD UPON

CONSTRUCTION PLANS FOR  
 ORANGE COUNTY LANDFILL CELL 11 BAY 17 - 19 EXPANSION  
 ORANGE COUNTY SOLID WASTE DIVISION  
 ORANGE COUNTY, FLORIDA

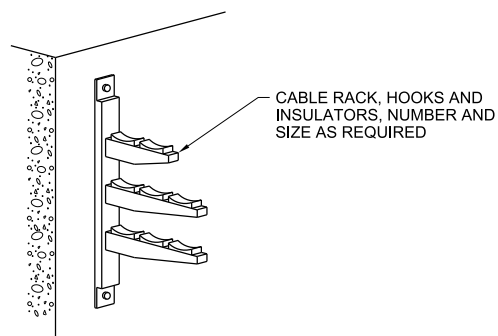
ORANGE COUNTY LANDFILL CELL 11 BAY 17-19 EXPANSION		SHEET NO.
<b>ELECTRICAL STANDARD DETAILS</b>		<b>E-13</b>
SCALE:		
PROJ. NO.	676802	



**NOTES:**  
1. EXTEND REBAR A MINIMUM OF 2' BEYOND THE LIMIT OF EXCAVATION.

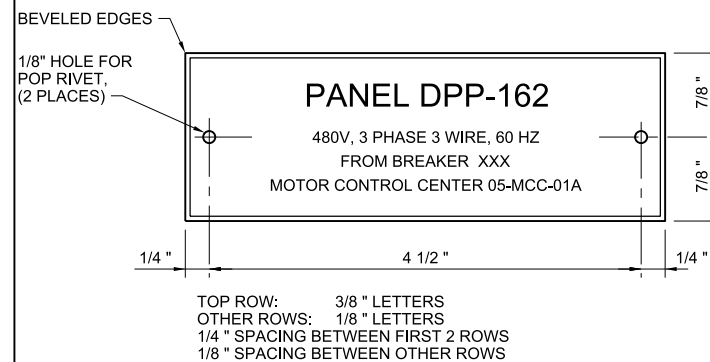
**CONCRETE ENCASED CONDUIT HANDHOLE/MANHOLE ENTRANCE**

NTS 2605-446



**CABLE RACK**

NTS 2605-448

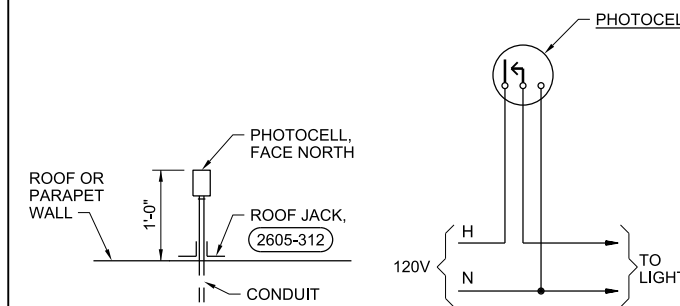


COLOR SCHEDULE		
PANEL TYPE	BACKGROUND	LETTERING
208/120 VOLT, 60 HZ	WHITE	BLACK
480 VOLT, 60 HZ	WHITE	BLACK
EMERGENCY SERVICES	RED	BLACK

**REQUIRED DATA**  
FIRST LINE: PANEL DESIGNATION  
SECOND LINE: PHASE, VOLTAGE, FREQUENCY  
THIRD AND FOURTH LINES: POWER SOURCE AND BREAKER  
XXX = BASED ON FINAL DESIGN SHOP DRAWING

**PANELBOARD NAMEPLATE**

NTS 2605-500

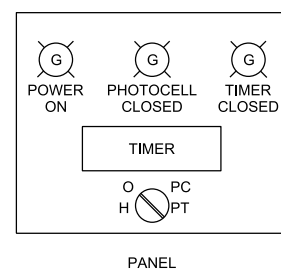
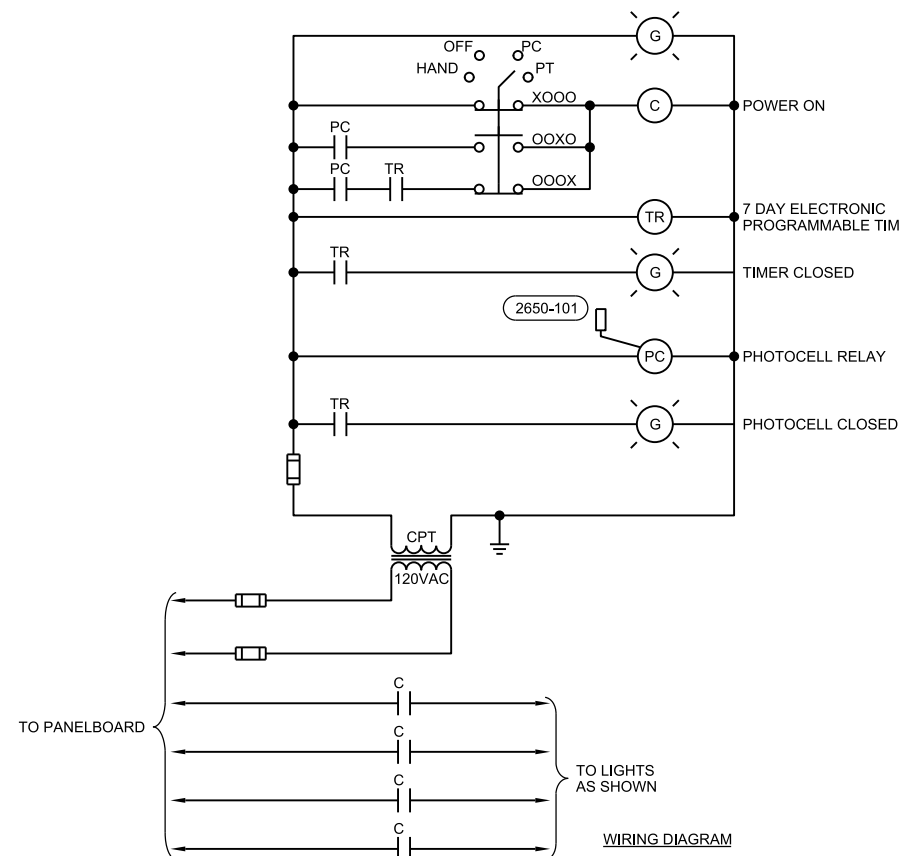


**ELEVATION CONTROL DIAGRAM**

**NOTE:**  
PHOTOCELLS SHALL BE INSTALLED IN ACCORDANCE WITH THE REQUIREMENTS OF THIS DETAIL UNLESS OTHER MOUNTING ARRANGEMENTS ARE SHOWN ON THE DRAWINGS.

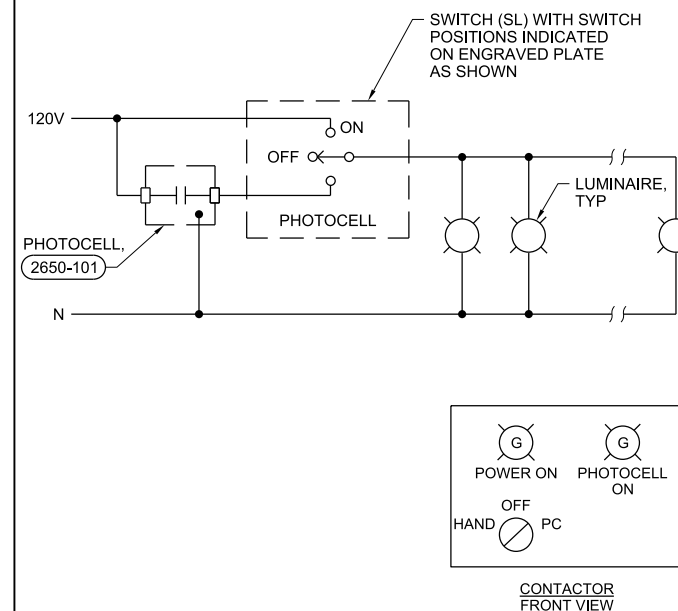
**PHOTOCELL MOUNTING AND CONTROL DIAGRAM**

NTS 2650-101



**YARD LIGHTING CONTROL DIAGRAM/CONTROLLER PANEL**

NTS 2624-024

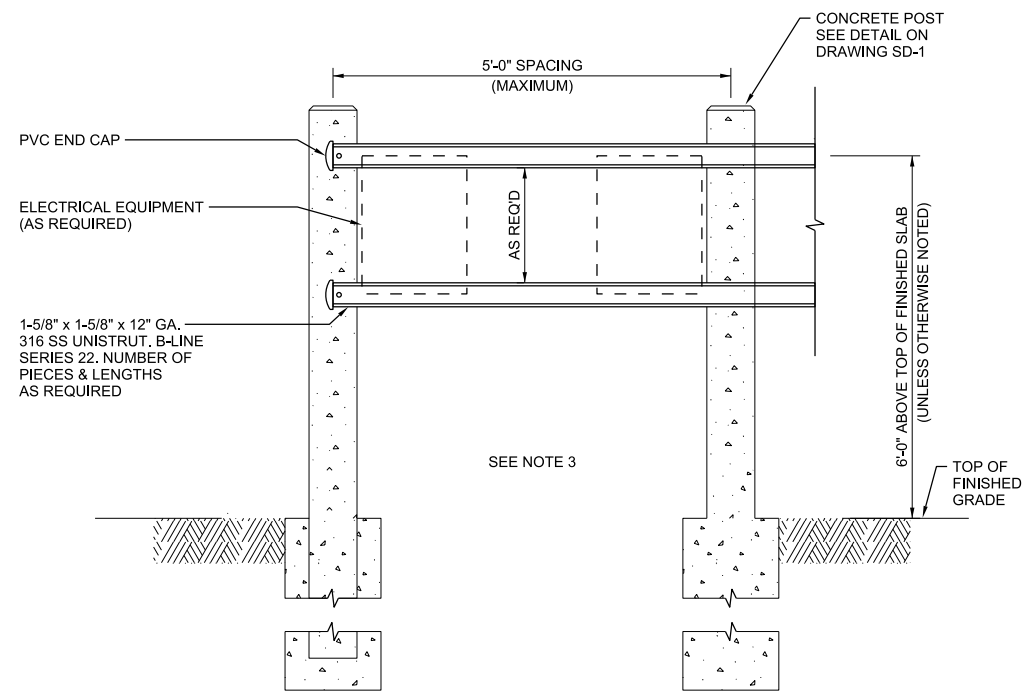


**EXTERIOR BUILDING LIGHT CONTROL**

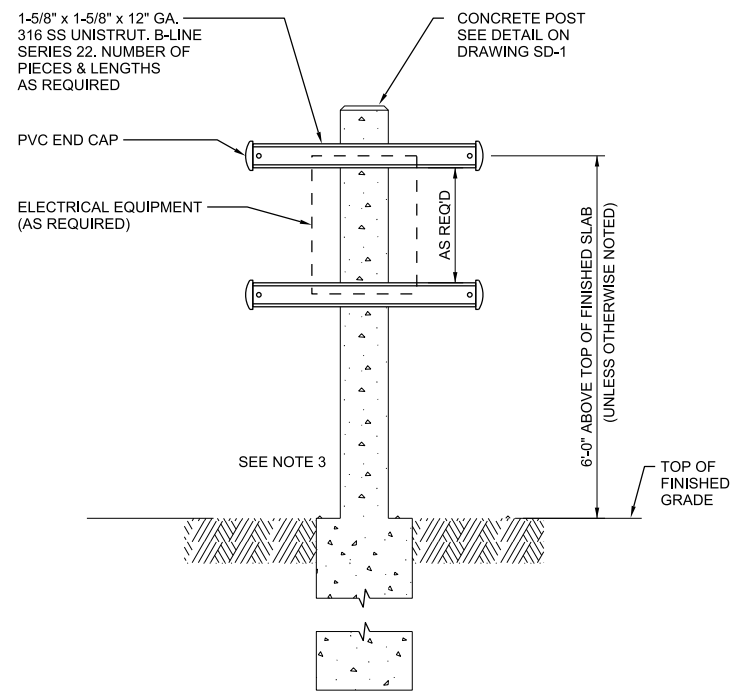
NTS 2650-102

PLOT DATE: 8/29/2019 PLOT TIME: 11:31:56 AM

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BAR IS ONE INCH ON ORIGINAL DRAWINGS. IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.	NOT TO BE USED FOR CONSTRUCTION UNTIL APPROVED.		DRAWN	EC	DATE	APR 2019		<b>ELECTRICAL STANDARD DETAILS</b>	<b>E-14</b>
			CHECKED	DN	DATE	AUG 2019			SCALE:
			APPROVED	DN	DATE	AUG 2019		PROJ. NO.	676802
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**MOUNTING FOR MULTIPLE OR LARGE ENCLOSURES**



**MOUNTING FOR SINGLE SMALL ENCLOSURES**

**NOTES:**

1. ALL EDGE OF UNISTRUT SHALL BE FILED SMOOTH.
2. ALL FASTENING AND MOUNTING HARDWARE SHALL BE 316 SS.
3. PROVIDE CONCRETE MAINTENANCE PAD EXTENDING 4 INCHES BEYOND THE FRONT OF THE ELECTRICAL EQUIPMENT.

**TYPICAL ELECTRICAL EQUIPMENT MOUNTING DETAILS**

NTS

2605-501

PLOT TIME: 11:33:14 AM

PLOT DATE: 8/29/2019

VERIFY SCALE	CH2M HILL ENGINEERS, INC 225 EAST ROBINSON ST SUITE 505 ORLANDO, FL 32801 FL COA: 25861 FL AB: AAC001992	NEEL-SCHAFFER, INC 2301 LUCIEN WAY, SUITE 300 MAITLAND, FLORIDA 32751 FL COA: 8556			DESIGNED	EC	DATE	APR 2019
BAR IS ONE INCH ON ORIGINAL DRAWING. IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.					DRAWN	EC	DATE	APR 2019
					CHECKED	DN	DATE	AUG 2019
					APPROVED	DN	DATE	AUG 2019
NOT TO BE USED FOR CONSTRUCTION UNTIL APPROVED.	NO.	BY	REVISIONS	DATE	FILE NAME	095-E-5007_676802.dgn		



CONSTRUCTION PLANS FOR  
ORANGE COUNTY LANDFILL CELL 11 BAY 17 - 19 EXPANSION  
ORANGE COUNTY SOLID WASTE DIVISION  
ORANGE COUNTY, FLORIDA

ORANGE COUNTY LANDFILL CELL 11 BAY 17-19 EXPANSION

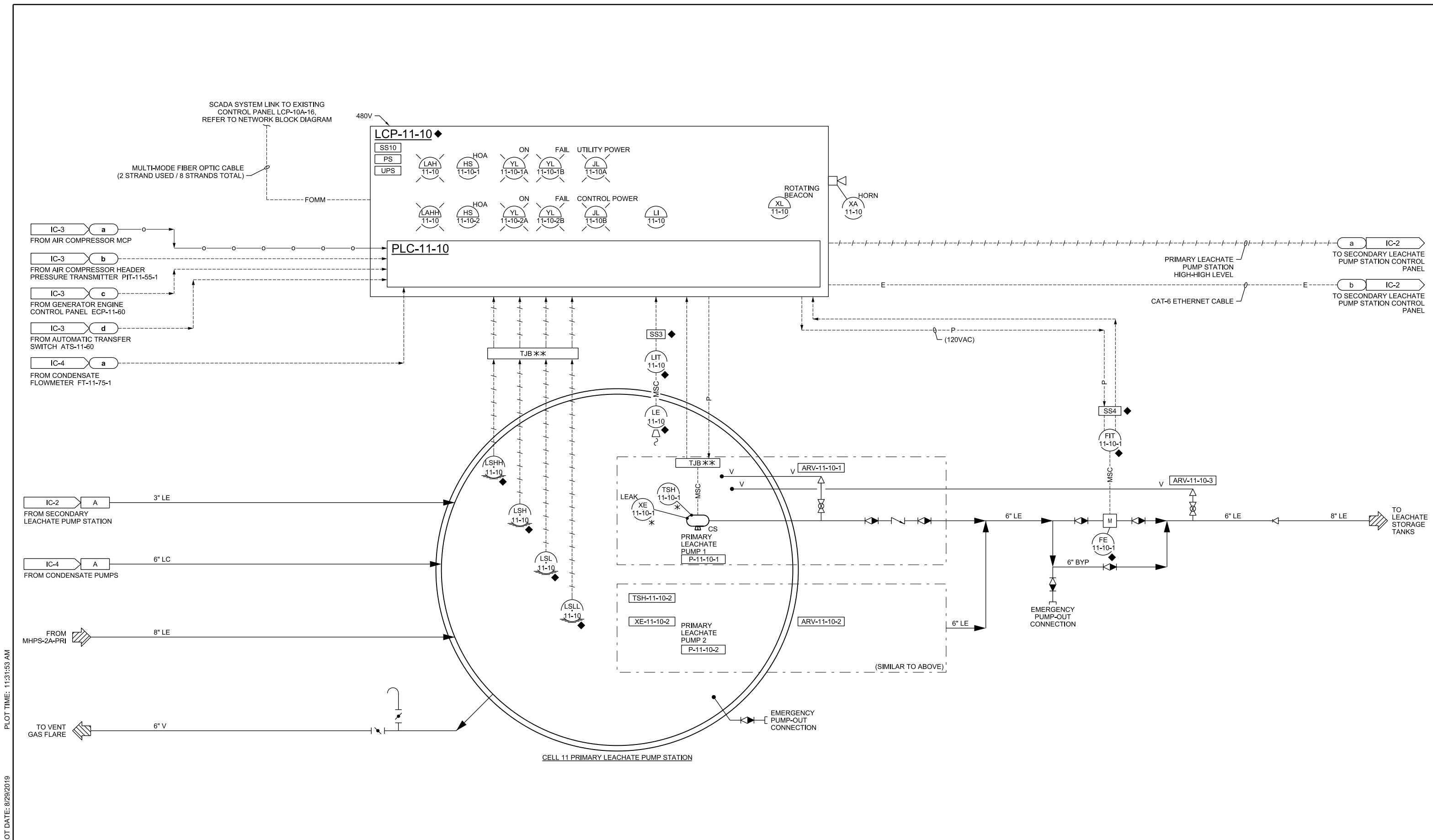
SHEET NO.

**ELECTRICAL  
STANDARD DETAILS**

**E-15**

SCALE:

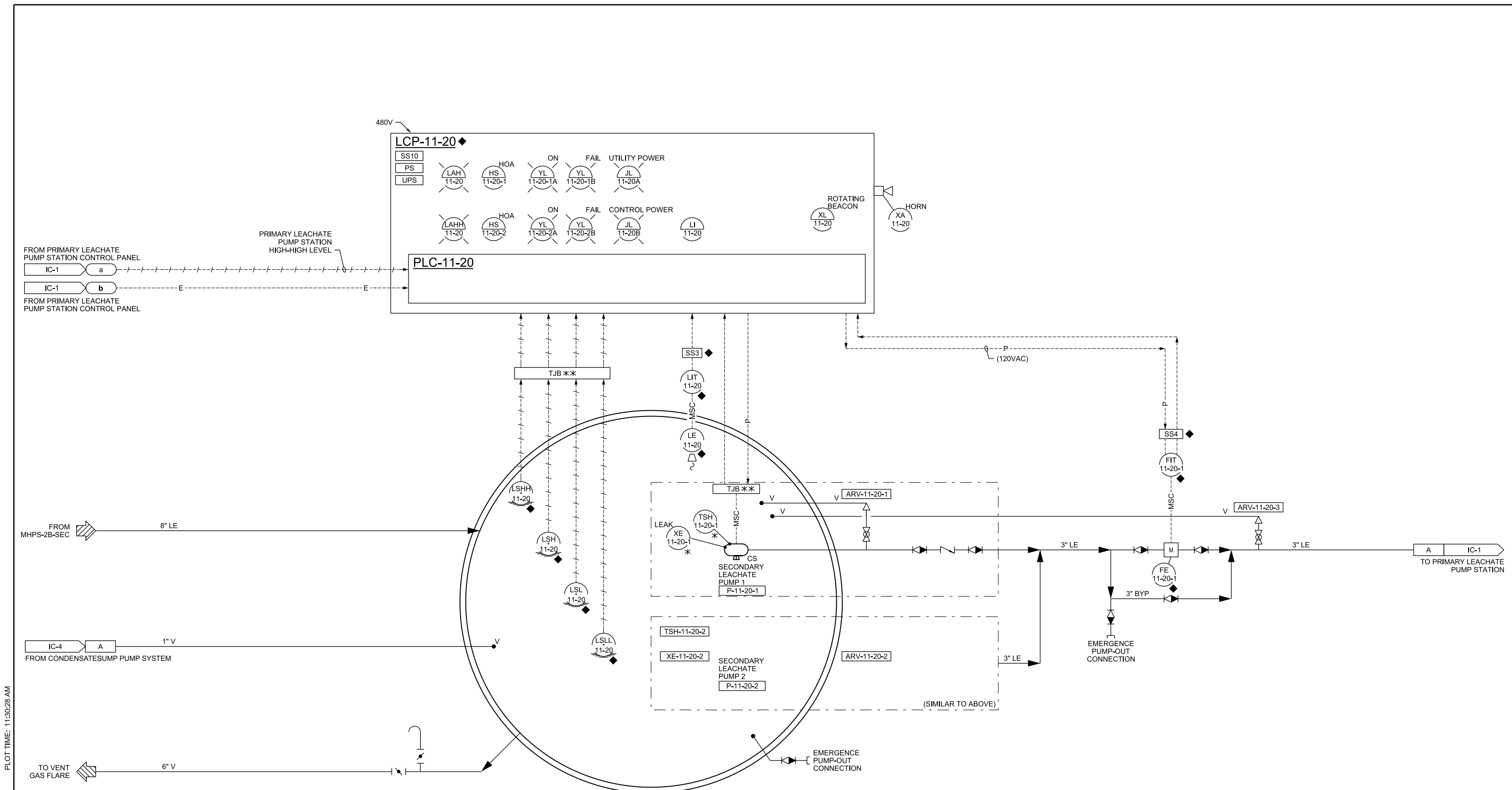
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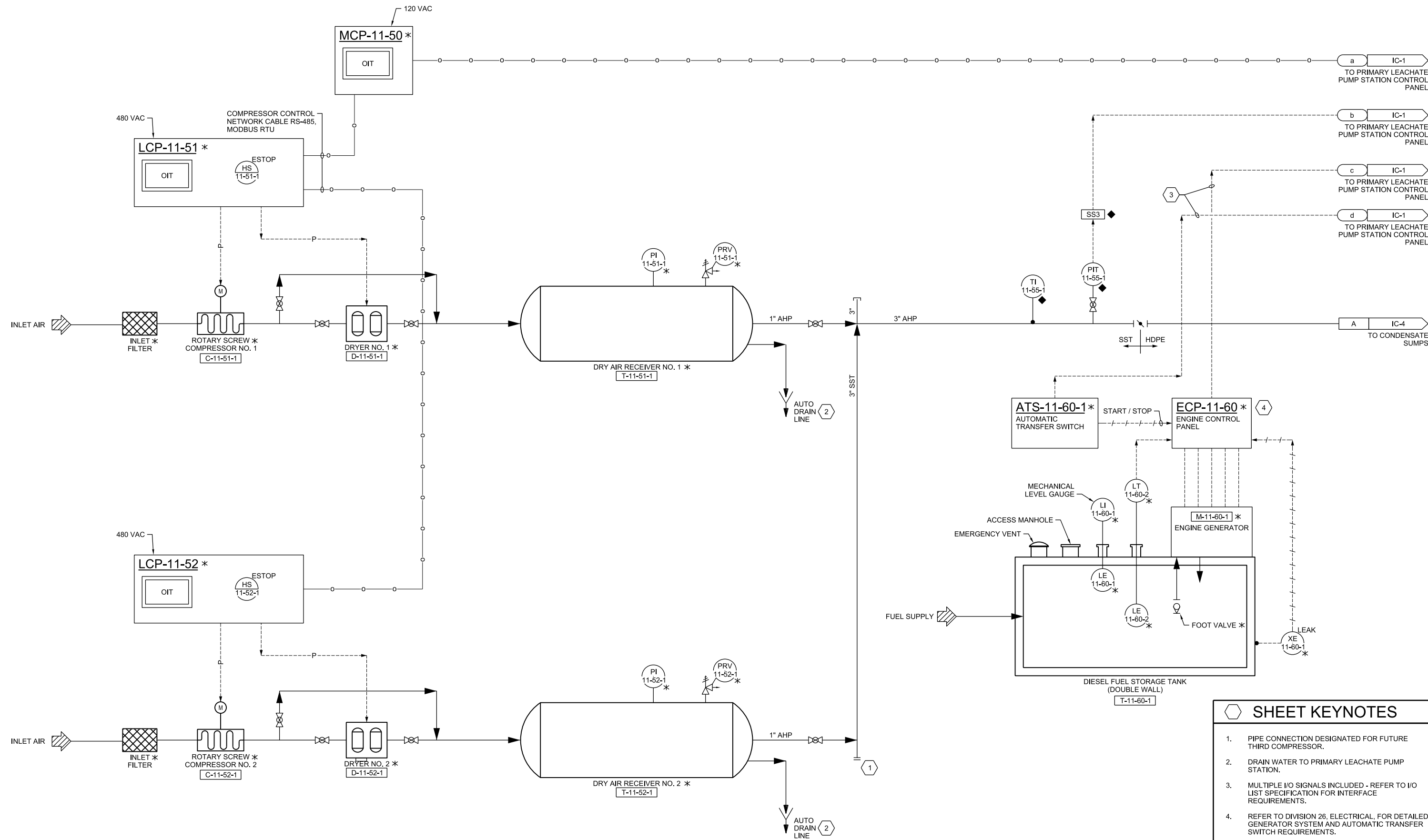
VERIFY SCALE BAR IS ONE INCH ON ORIGINAL DRAWING. IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.	CH2M HILL ENGINEERS, INC 225 EAST ROBINSON ST SUITE 505 ORLANDO, FL 32801 FL COA: 25861 FL AB: AAC001992	NEEL-SCHAFFER, INC 2301 LUCIEN WAY, SUITE 300 MAITLAND, FLORIDA 32751 FL COA: 8556	DESIGNED CS DATE AUG 2019 DRAWN ALP DATE AUG 2019 CHECKED CS DATE AUG 2019 APPROVED CS DATE AUG 2019	FILE NAME 008-N-PH1-01_676802.dgn	<p>CONSTRUCTION PLANS FOR          ORANGE COUNTY LANDFILL CELL 11 BAY 17 - 19 EXPANSION          ORANGE COUNTY SOLID WASTE DIVISION          ORANGE COUNTY, FLORIDA</p>	ORANGE COUNTY LANDFILL CELL 11 BAY 17-19 EXPANSION INSTRUMENTATION AND CONTROL P&ID PRIMARY LEACHATE PUMP STATION NO 2	SHEET NO. <b>IC-1</b> SCALE: PROJ. NO. 676802
	NOT TO BE USED FOR CONSTRUCTION UNTIL APPROVED.			NO. BY REVISIONS DATE		REUSE OF DOCUMENTS: THIS DOCUMENT, AND THE IDEAS AND DESIGNS INCORPORATED HEREIN, AS AN INSTRUMENT OF PROFESSIONAL SERVICE, IS THE PROPERTY OF CH2M HILL AND IS NOT TO BE USED, IN WHOLE OR IN PART, FOR ANY OTHER PROJECT WITHOUT THE WRITTEN AUTHORIZATION OF CH2M HILL.	CH2M HILL 2019. ALL RIGHTS RESERVED.





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	NOT TO BE USED FOR CONSTRUCTION UNTIL APPROVED.			NO. BY REVISIONS DATE		REUSE OF DOCUMENTS: THIS DOCUMENT, AND THE IDEAS AND DESIGNS INCORPORATED HEREIN, AS AN INSTRUMENT OF PROFESSIONAL SERVICE, IS THE PROPERTY OF CH2M HILL AND IS NOT TO BE USED, IN WHOLE OR IN PART, FOR ANY OTHER PROJECT WITHOUT THE WRITTEN AUTHORIZATION OF CH2M HILL.	CH2M HILL 2019. ALL RIGHTS RESERVED.



SHEET KEYNOTES	
1.	PIPE CONNECTION DESIGNATED FOR FUTURE THIRD COMPRESSOR.
2.	DRAIN WATER TO PRIMARY LEACHATE PUMP STATION.
3.	MULTIPLE I/O SIGNALS INCLUDED - REFER TO I/O LIST SPECIFICATION FOR INTERFACE REQUIREMENTS.
4.	REFER TO DIVISION 26, ELECTRICAL, FOR DETAILED GENERATOR SYSTEM AND AUTOMATIC TRANSFER SWITCH REQUIREMENTS.

PLOT DATE: 8/29/2019 PLOT TIME: 11:29:44 AM

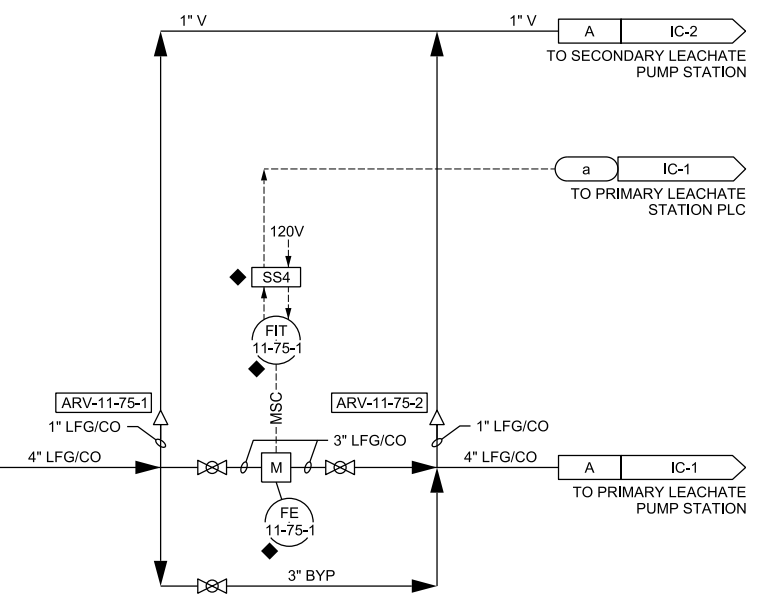
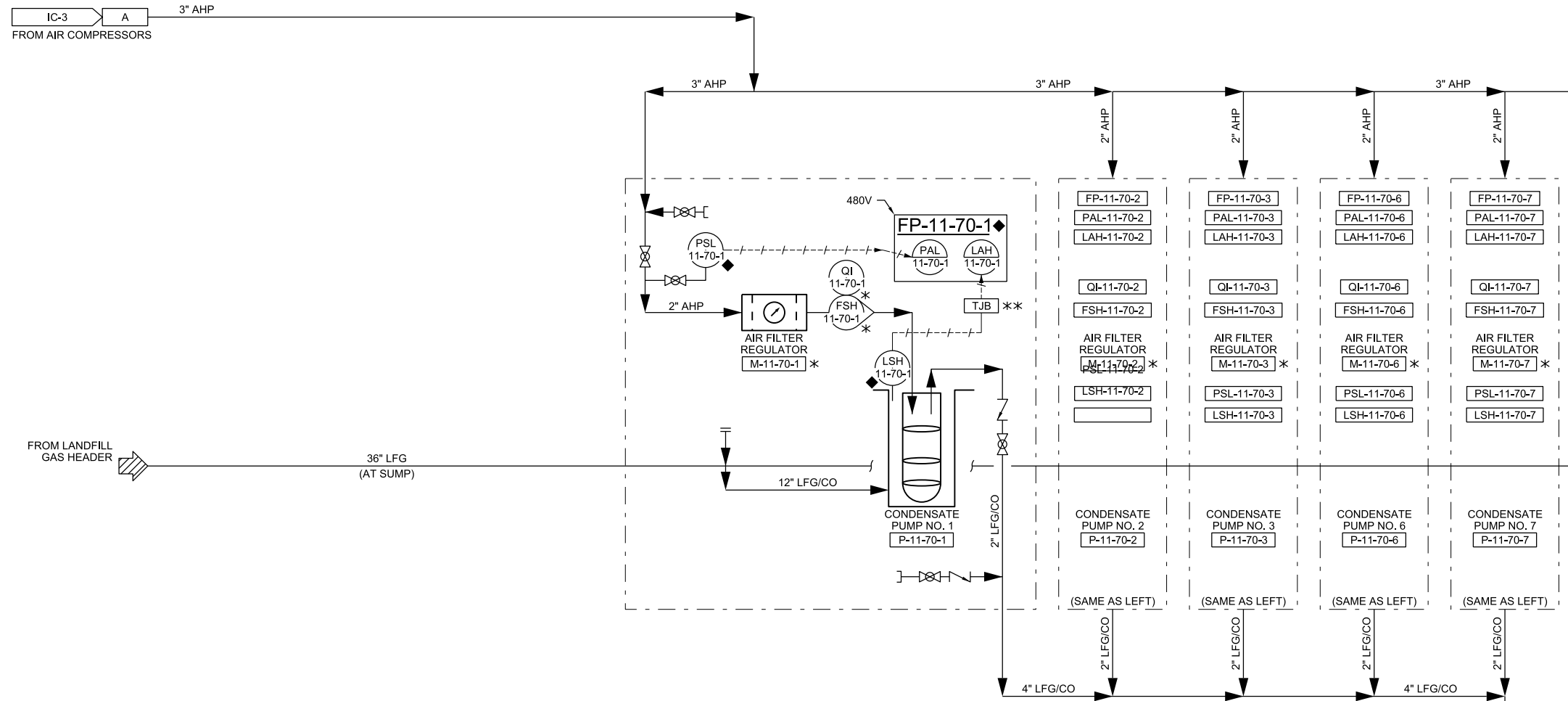
VERIFY SCALE	CH2M HILL ENGINEERS, INC 225 EAST ROBINSON ST SUITE 505 ORLANDO, FL 32801 FL COA: 25861 FL AB: AAC001992	NEEL-SCHAFFER, INC 2301 LUCIEN WAY, SUITE 300 MAITLAND, FLORIDA 32751 FL COA: 8556	DESIGNED	CS	DATE	AUG 2019
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			APPROVED	CS	DATE	AUG 2019
	NO.	BY	REVISIONS	DATE	FILE NAME	008-N-PH1-03_676802.dgn

**ch2m** **NEEL-SCHAFFER**  
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CONSTRUCTION PLANS FOR  
ORANGE COUNTY LANDFILL CELL 11 BAY 17 - 19 EXPANSION  
ORANGE COUNTY SOLID WASTE DIVISION  
ORANGE COUNTY, FLORIDA

ORANGE COUNTY LANDFILL CELL 11 BAY 17-19 EXPANSION		SHEET NO.
INSTRUMENTATION AND CONTROL		IC-3
P&ID		SCALE:
CELL 11 AIR COMPRESSOR AND STANDBY GENERATOR		PROJ. NO. 676802

CELL 11



PLOT DATE: 8/29/2019 PLOT TIME: 11:32:44 AM

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BAR IS ONE INCH ON ORIGINAL DRAWING. IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.	NOT TO BE USED FOR CONSTRUCTION UNTIL APPROVED.		DRAWN	ALP	DATE	AUG 2019
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	NO.	BY	REVISIONS	DATE	FILE NAME	008-N-PH11-04_676802.dgn

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CONSTRUCTION PLANS FOR  
ORANGE COUNTY LANDFILL CELL 11 BAY 17 - 19 EXPANSION  
ORANGE COUNTY SOLID WASTE DIVISION  
ORANGE COUNTY, FLORIDA

ORANGE COUNTY LANDFILL CELL 11 BAY 17-19 EXPANSION

INSTRUMENTATION AND CONTROL

P&ID

CELL 11 & 12

CONDENSATE SUMP PUMP SYSTEM

SHEET NO. IC-4

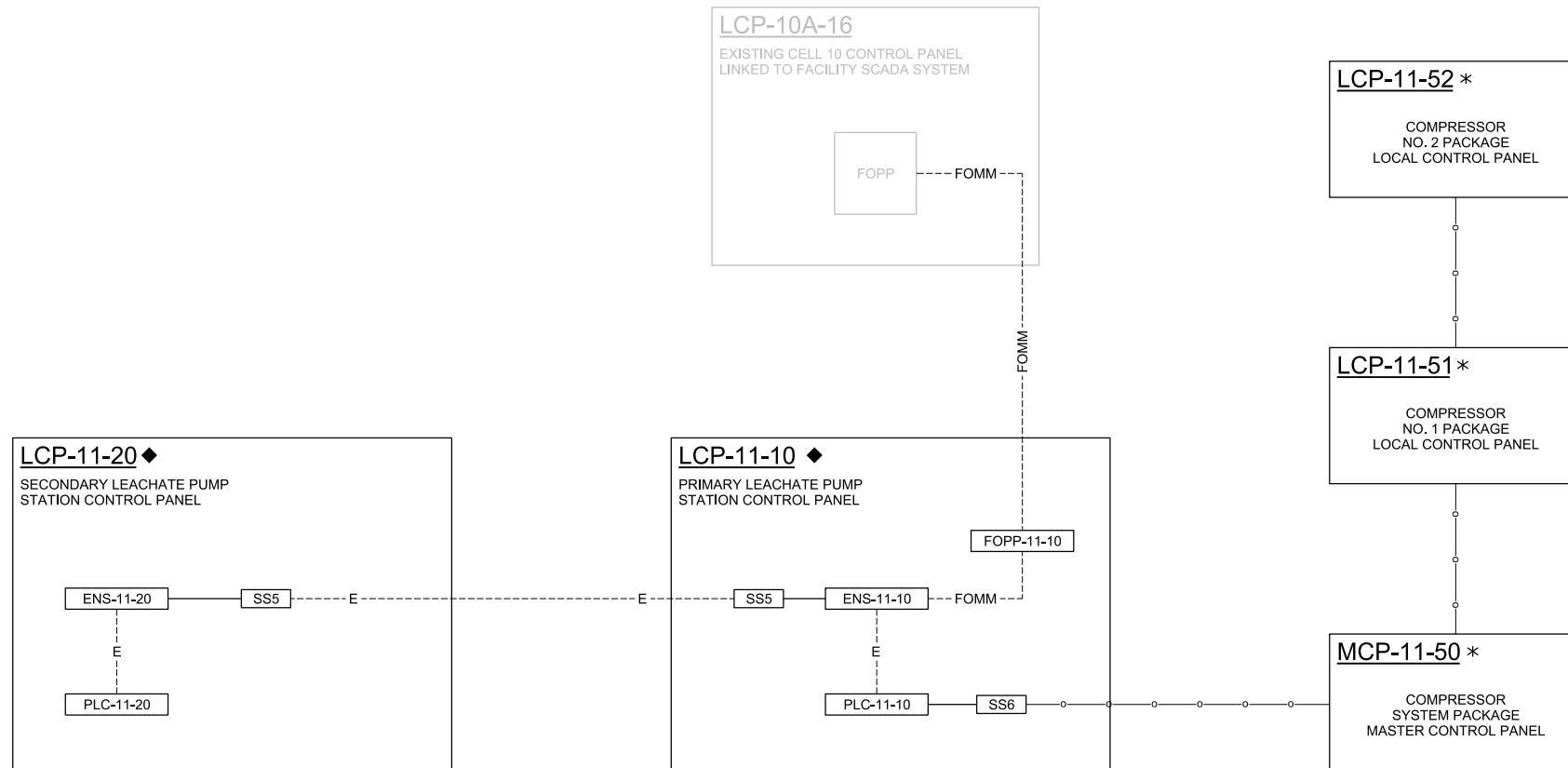
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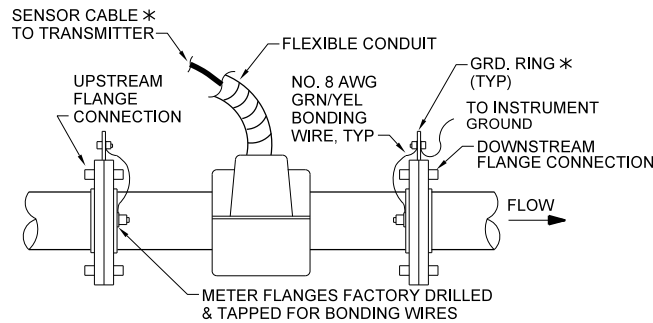
**LEGEND:**

- ENS = ETHERNET SWITCH
- FOPP = FIBER-OPTIC PATCH PANEL
- LCP = LOCAL CONTROL PANEL
- MCP = MASTER CONTROL PANEL
- PLC = PROGRAMMABLE LOGIC CONTROLLER
- SS5 = SURGE SUPPRESSOR, TYPE 5 (ETHERNET)
- SS6 = SURGE SUPPRESSOR, TYPE 6 (RS-485)

**CABLE LEGEND**

- SERIAL, RS-485 MODBUS RTU
- E----- COPPER ETHERNET, CAT-6
- FOMM--- FIBER-OPTIC, MULTI-MODE, 62.5 MICRON

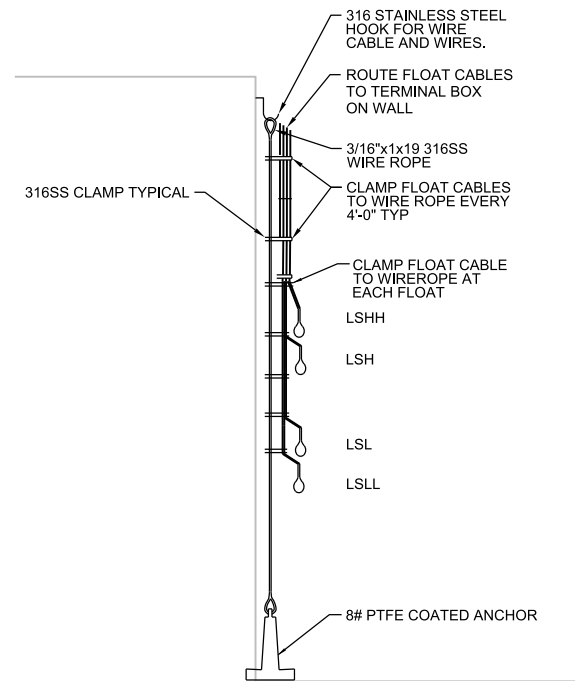
VERIFY SCALE	CH2M HILL ENGINEERS, INC 225 EAST ROBINSON ST SUITE 505 ORLANDO, FL 32801 FL COA: 25861 FL AB: AAC001992	NEEL-SCHAFFER, INC 2301 LUCIEN WAY, SUITE 300 MAITLAND, FLORIDA 32751 FL COA: 8556				DESIGNED	CS	DATE	AUG 2019	<p>CONSTRUCTION PLANS FOR ORANGE COUNTY LANDFILL CELL 11 BAY 17 - 19 EXPANSION ORANGE COUNTY SOLID WASTE DIVISION ORANGE COUNTY, FLORIDA</p>	ORANGE COUNTY LANDFILL CELL 11 BAY 17-19 EXPANSION	SHEET NO.
BAR IS ONE INCH ON ORIGINAL DRAWING. IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.	NOT TO BE USED FOR CONSTRUCTION UNTIL APPROVED.		NO.	BY	REVISIONS	DATE	FILE NAME	008-N-PH1-05_676802.dgn			INSTRUMENTATION AND CONTROL P&ID NETWORK BLOCK DIAGRAM CELL 11 SCADA SYSTEM TIE-IN	IC-5
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- NOTES:**
- COMPONENTS DESIGNATED BY \* ARE SUPPLIED BY INSTRUMENT MANUFACTURER.
  - IF PIPE IS NON-CONDUCTIVE BOND MAGMETER TO ONE OF THE FOLLOWING ACCEPTABLE GROUNDS:  
A) METALLIC WATER PIPE IF BURIED PORTION IS MORE THAN 10'.  
B) STRUCTURAL STEEL.
  - TRANSMITTER SHOWN AS REMOTE, MAY BE INTEGRAL.

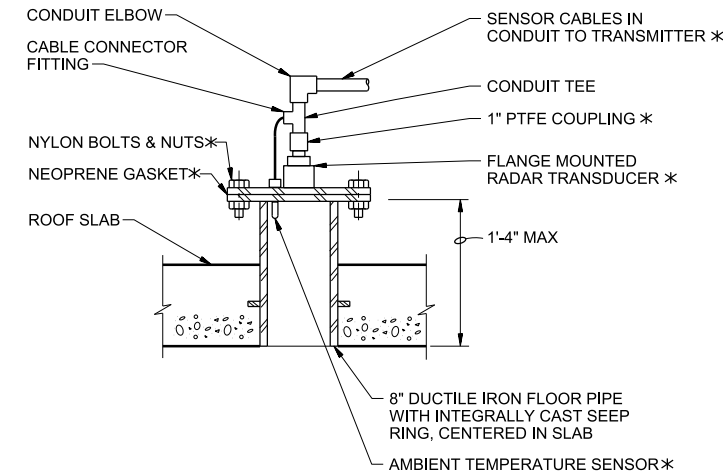
**MAGNETIC FLOWMETER INSTALLATION**  
NTS

4091-220G



**FLOAT SWITCH DETAIL**  
NTS

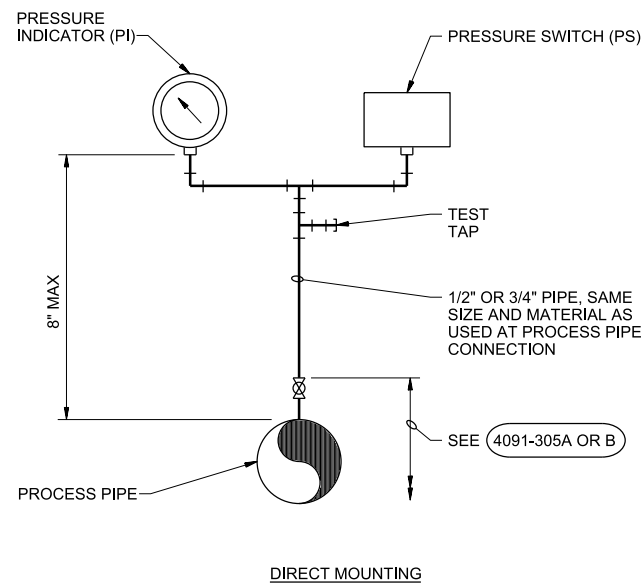
4091-230



- NOTES:**
- COMPONENTS DESIGNATED BY AN ASTERISK (\*) ARE SUPPLIED BY INSTRUMENT MANUFACTURER.
  - COAT FLOOR PIPE WITH SPECIFIED PAINT SYSTEM PRIOR TO CONCRETE PLACEMENT.

**RADAR LEVEL ELEMENT INSTALLATION - CONCRETE ROOF**  
NTS

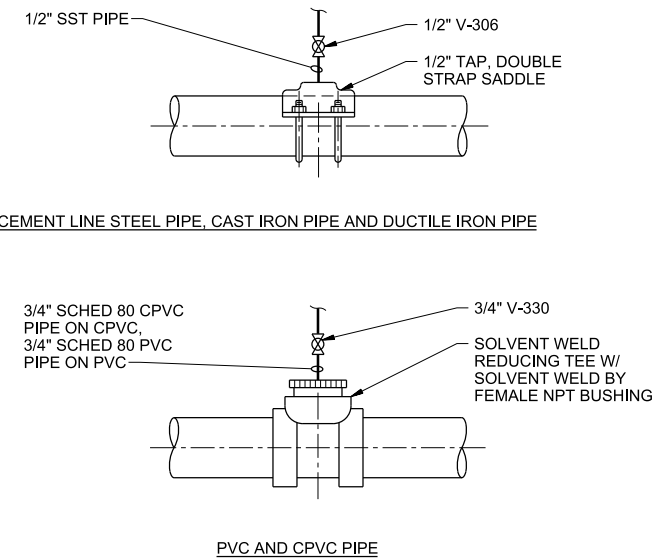
4091-253



- NOTES:**
- INDICATOR AND SWITCH INSTALLATION SHOWN. FOR SINGLE INSTRUMENT INSTALLATIONS, MOUNT DEVICE DIRECTLY ABOVE TEST TAP.

**PRESSURE SWITCH & INDICATOR INSTALLATION**  
NTS

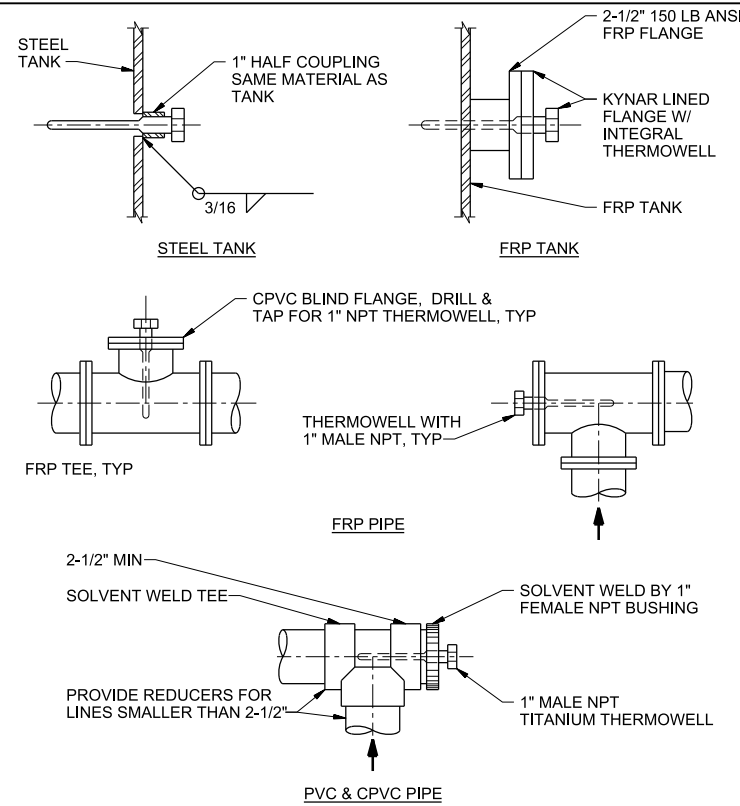
4091-304A



- NOTES:**
- FOR LIQUID FILLED PIPING, DO NOT TAP AT THE TOP OF THE PIPE. BOTTOM TAP IS MOST PREFERABLE.
  - FOR AIR FILLED PIPING, DO NOT TAP AT THE BOTTOM OF THE PIPE. TOP TAP IS MOST PREFERABLE.

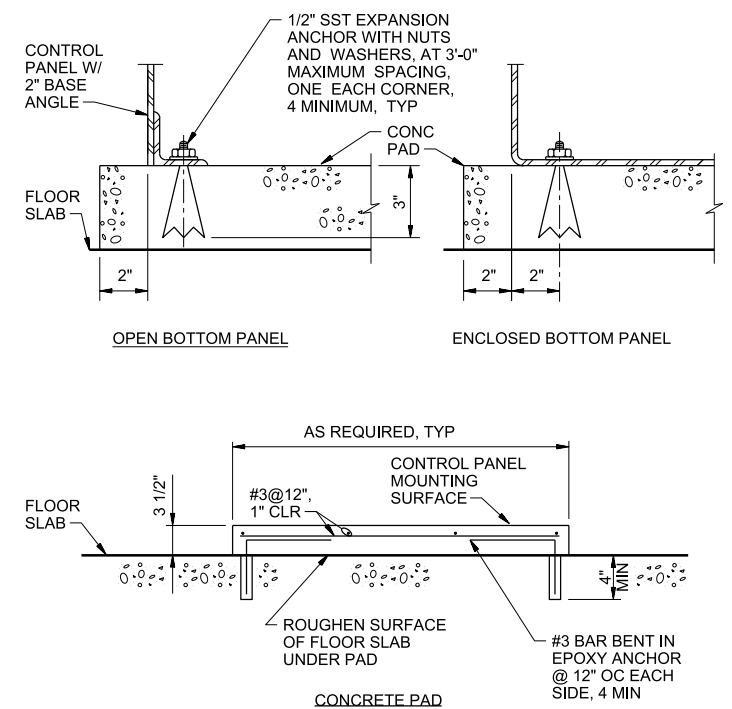
**PRESSURE CONNECTION INSTALLATION**  
NTS

4091-305A



**THERMOWELL INSTALLATION**  
NTS

4091-361



**STANDARD FREESTANDING PANEL MOUNTING**  
NTS

4091-382

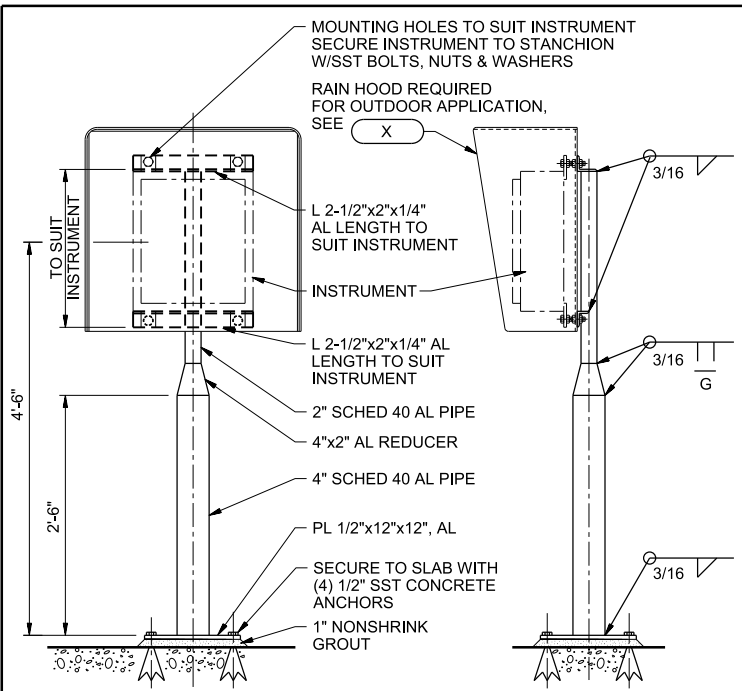
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VERIFY SCALE	CH2M HILL ENGINEERS, INC 225 EAST ROBINSON ST SUITE 505 ORLANDO, FL 32801 FL COA: 25861 FL AB: AAC001992	NEEL-SCHAFFER, INC 2301 LUCIEN WAY, SUITE 300 MAITLAND, FLORIDA 32751 FL COA: 8556	DESIGNED	CS	DATE	AUG 2019
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			CHECKED	CS	DATE	AUG 2019
			APPROVED	CS	DATE	AUG 2019
	NO.	BY	REVISIONS	DATE	FILE NAME	090-N-PH1-01_676802.dgn

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CONSTRUCTION PLANS FOR  
ORANGE COUNTY LANDFILL CELL 11 BAY 17 - 19 EXPANSION  
ORANGE COUNTY SOLID WASTE DIVISION  
ORANGE COUNTY, FLORIDA

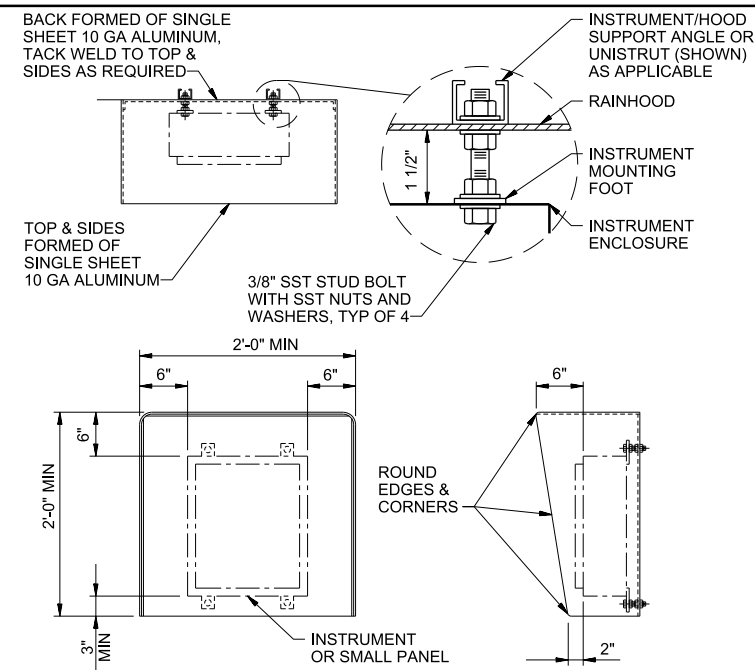
ORANGE COUNTY LANDFILL CELL 11 BAY 17-19 EXPANSION	SHEET NO.
INSTRUMENTATION AND CONTROL STANDARD DETAILS	IC-6
SCALE:	
PROJ. NO.	676802



- NOTES:**
1. ROUND OFF ALL EXPOSED EDGES AND CORNERS.
  2. PAINT ALUMINUM IN CONTACT WITH CONCRETE ACCORDING TO SPECIFICATIONS FOR PAINTING.

**STANCHION SUPPORT FOR CASE MOUNTED INSTRUMENTS**  
NTS

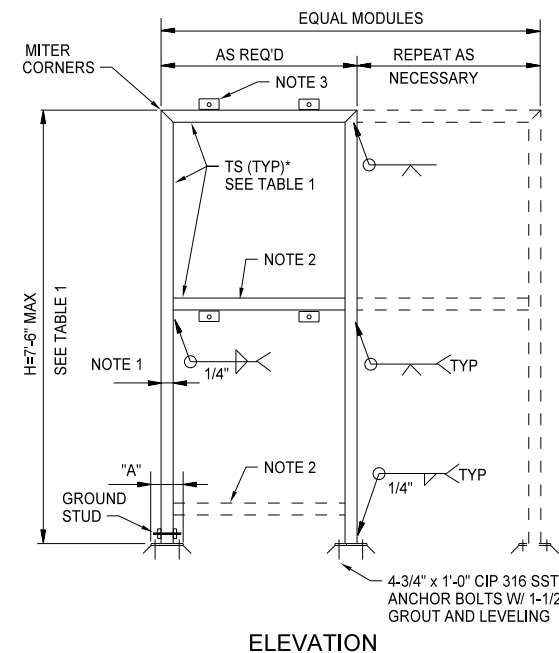
4091-383



- NOTES:**
1. ALL EXPOSED EDGES TO BE GROUND SMOOTH AND BURR FREE.
  2. MOUNT RAIN HOOD BETWEEN INSTRUMENT AND MOUNTING BRACKET. DRILL HOLES IN RAIN HOOD AS PER MOUNTING HOLES FOR INSTRUMENT.

**RAINHOOD INSTALLATION**  
NTS

4091-384



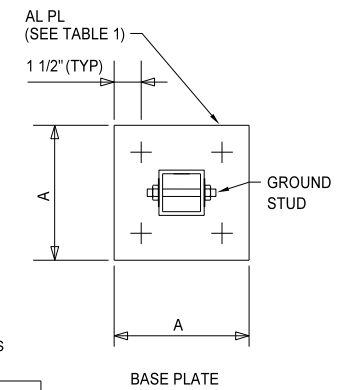
**ELEVATION**

- NOTES:**
1. PROVIDE ONE 3/8" DIA. SILICON BRONZE GROUND STUD WITH SILICON BRONZE NUTS AND WASHERS. (NOTE 8)

**PLAN**  
NTS

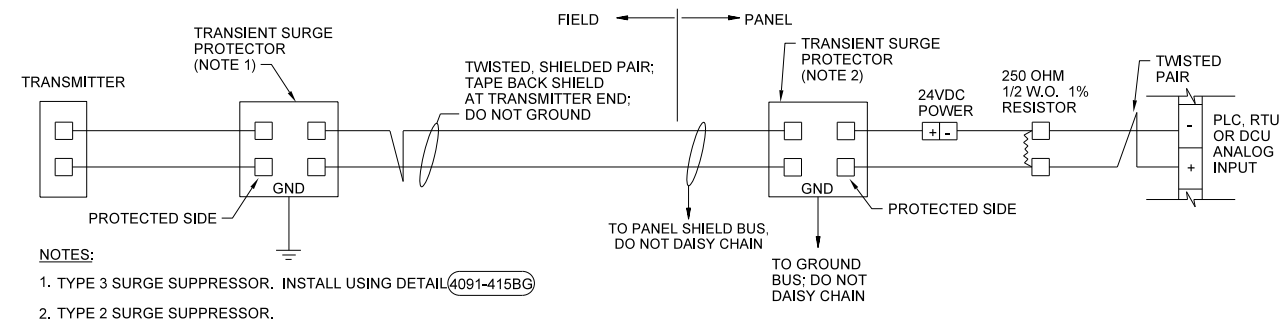
- NOTES:**
1. TOTAL WEIGHT OF PANEL(S) SHALL NOT EXCEED 750 LB IN EACH MODULE.
  2. FOR PANELS WITH "H" GREATER THAN 4'-0", ONE HORIZONTAL MEMBER MUST BE LOCATED WITHIN THE MIDDLE THIRD OF THE FRAME HEIGHT. PROVIDE ADD'L MEMBERS AS NECESSARY FOR PANEL MOUNTING.
  3. PROVIDE L 2 1/2"x 2 1/2"x 1/4"x 0'-3" WELD ALL AROUND TO TS: TYP AT EACH PANEL MOUNT.
  4. GRIND ALL WELDS AND SHARP CORNERS SMOOTH.
  5. THIS DETAIL APPLIES TO NON-FREE STANDING ELECTRICAL EQUIPMENT OVER 25 LB WHICH IS NOT MOUNTED ON A FREE STANDING FRAME OR IS NOT WALL MOUNTED.
  6. PANEL OR INSTRUMENT FRONT FACES NORTH, UNLESS OTHERWISE NOTED.

HEIGHT "H"	ALUMINUM FRAME		BASE PLATE (IN)	
	TS (MIN SIZE)		A	t
5'-0" MAX.	TS 3 x 3 x .188		8	1/2
7'-6" MAX.	TS 4 x 4 x .188		9	5/8



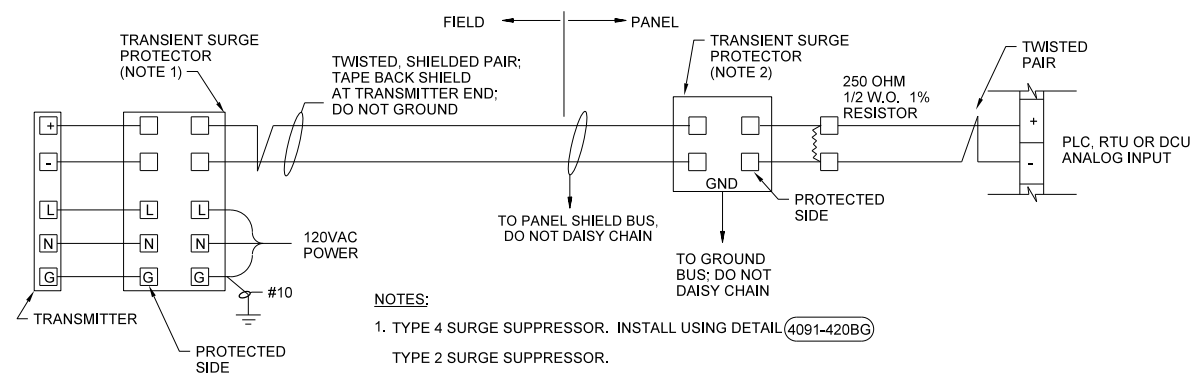
**PANEL MOUNTING RACK**  
NTS

4091-402BG



- NOTES:**
1. TYPE 3 SURGE SUPPRESSOR. INSTALL USING DETAIL 4091-415BG
  2. TYPE 2 SURGE SUPPRESSOR.

**2-WIRE TRANSMITTER**

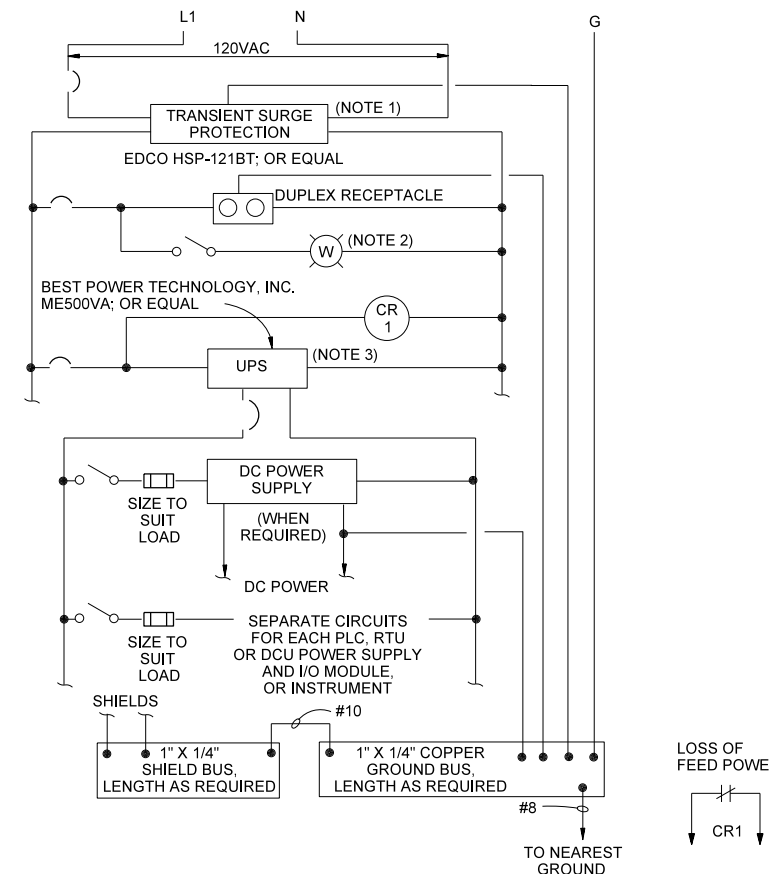


- NOTES:**
1. TYPE 4 SURGE SUPPRESSOR. INSTALL USING DETAIL 4091-420BG
  - TYPE 2 SURGE SUPPRESSOR.

**4-WIRE TRANSMITTER**

**TYPICAL OUTDOOR TRANSMITTERS**  
NTS

4091-405BG



- NOTES:**
1. IF LOAD EXCEEDS 15 AMPS PROVIDE ADDITIONAL PARALLEL CIRCUITS WITH TRANSIENT SURGE PROTECTION AS SHOWN.
  2. PROVIDE APPROPRIATE LIGHTING PACKAGE FOR PANEL SIZE HOFFMAN BULLETIN A-80, OR EQUAL.
  3. FOR LOADS OVER 400VA, PROVIDE SIMILAR UPS SIZED FOR 125 PERCENT OF THE CONNECTED LOAD.

**TYPICAL PANEL POWER DISTRIBUTION FOR PANELS WITH INTERNAL UPS**  
NTS

4091-406AG

PLOT DATE: 8/29/2019 PLOT TIME: 11:29:55 AM

VERIFY SCALE	CH2M HILL ENGINEERS, INC 225 EAST ROBINSON ST SUITE 505 ORLANDO, FL 32801 FL COA: 25861 FL AB: AAC001992	NEEL-SCHAFFER, INC 2301 LUCIEN WAY, SUITE 300 MAITLAND, FLORIDA 32751 FL COA: 8556	DESIGNED	CS	DATE	APR 2019
BAR IS ONE INCH ON ORIGINAL DRAWINGS. IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.			DRAWN	GM	DATE	APR 2019
			CHECKED	CS	DATE	APR 2019
			APPROVED	CS	DATE	APR 2019
			FILE NAME			090-N-PH1-02_676802.dgn
			NO.	BY	REVISIONS	DATE

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**ch2m**

**NEEL-SCHAFFER**  
SOLUTIONS YOU CAN BUILD UPON

CONSTRUCTION PLANS FOR  
ORANGE COUNTY LANDFILL CELL 11 BAY 17 - 19 EXPANSION  
ORANGE COUNTY SOLID WASTE DIVISION  
ORANGE COUNTY, FLORIDA

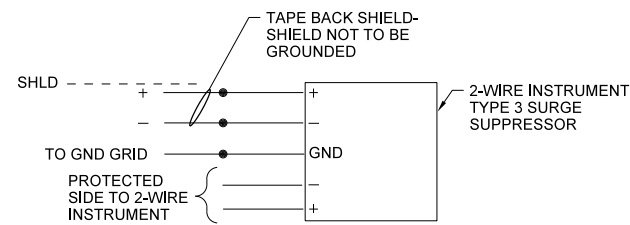
ORANGE COUNTY LANDFILL CELL 11 BAY 17-19 EXPANSION

SHEET NO.

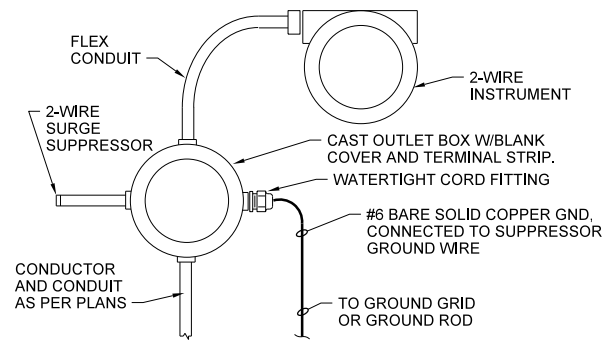
INSTRUMENTATION AND CONTROL  
STANDARD DETAILS

IC-7

SCALE:  
PROJ. NO. 676802

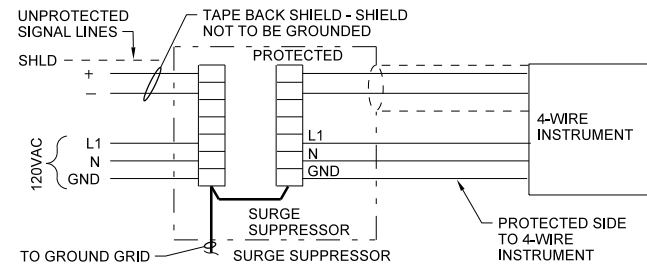


**WIRING DIAGRAM**

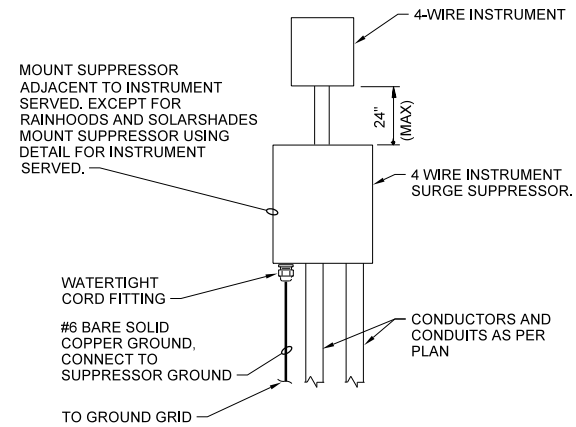


**TYPE "3" SURGE SUPPRESSOR  
INSTALLATION 2-WIRE INSTRUMENT**  
NTS

4091-415BG



**WIRING DIAGRAM**



**SURGE SUPPRESSOR  
INSTALLATION 4-WIRE INSTRUMENT**  
NTS

4091-420BG

PLOT TIME: 11:30:38 AM

PLOT DATE: 8/29/2019

VERIFY SCALE	CH2M HILL ENGINEERS, INC 225 EAST ROBINSON ST SUITE 505 ORLANDO, FL 32801 FL COA: 25861 FL AB: AAC001992	NEEL-SCHAFFER, INC 2301 LUCIEN WAY, SUITE 300 MAITLAND, FLORIDA 32751 FL COA: 8556	DESIGNED	CS	DATE	AUG 2019
BAR IS ONE INCH ON ORIGINAL DRAWINGS. IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.			DRAWN	GM	DATE	AUG 2019
			CHECKED	CS	DATE	AUG 2019
			APPROVED	CS	DATE	AUG 2019
NOT TO BE USED FOR CONSTRUCTION UNTIL APPROVED.	NO.	BY	REVISIONS	DATE	FILE NAME	090-N-PH1-03_676802.dgn



CONSTRUCTION PLANS FOR  
ORANGE COUNTY LANDFILL CELL 11 BAY 17 - 19 EXPANSION  
ORANGE COUNTY SOLID WASTE DIVISION  
ORANGE COUNTY, FLORIDA

ORANGE COUNTY LANDFILL CELL 11 BAY 17-19 EXPANSION

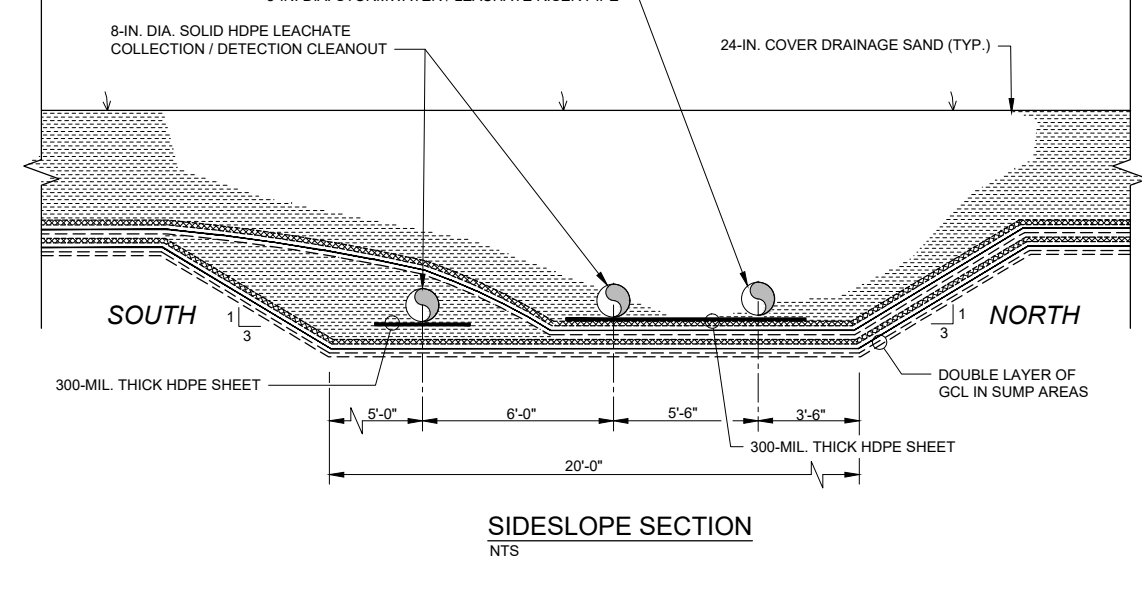
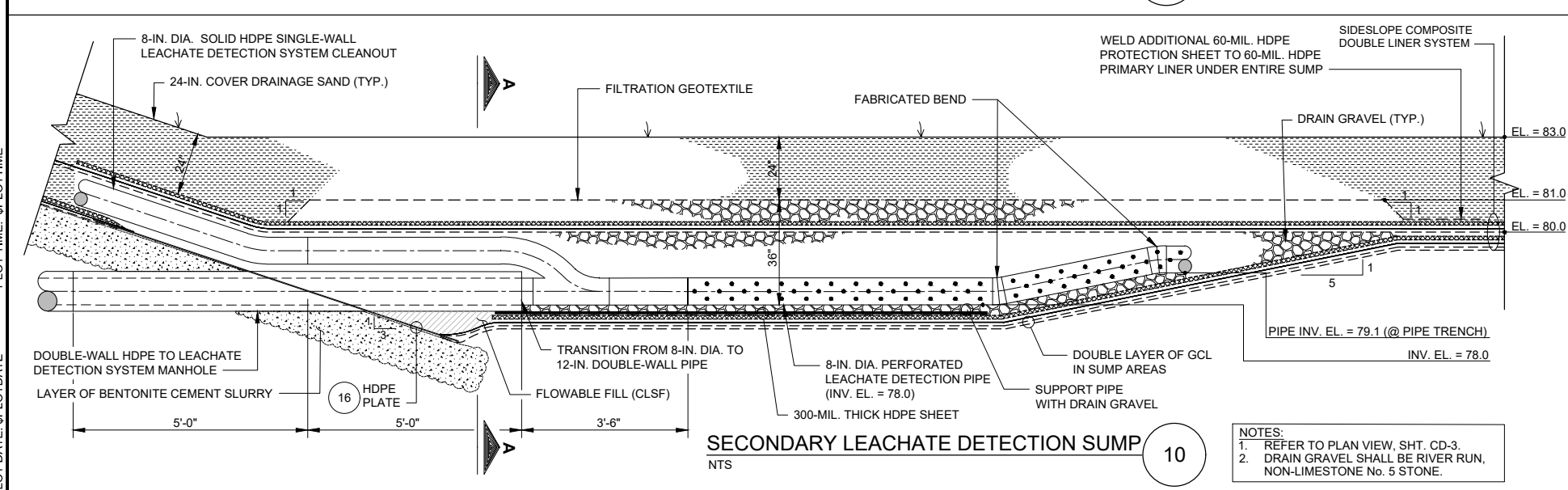
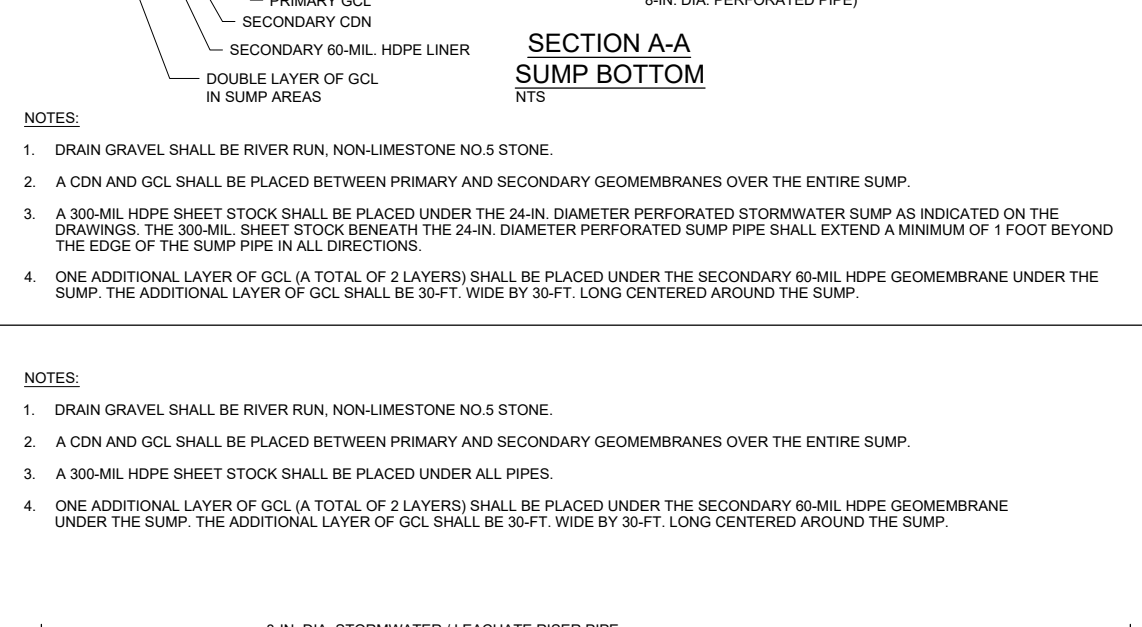
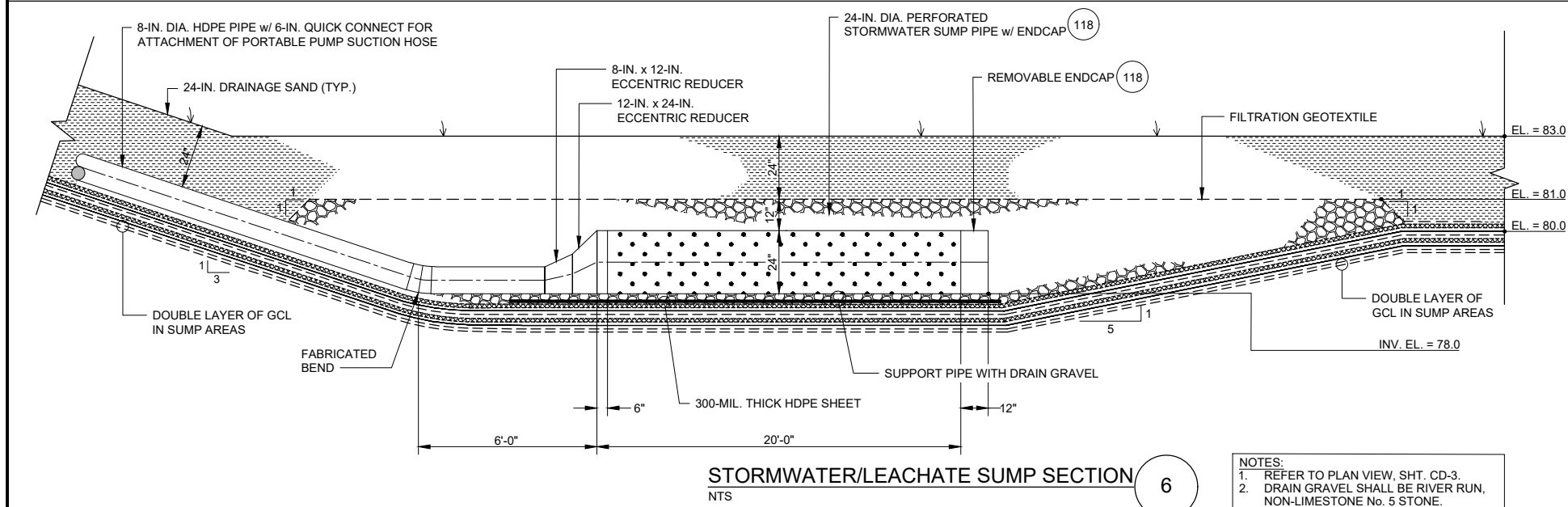
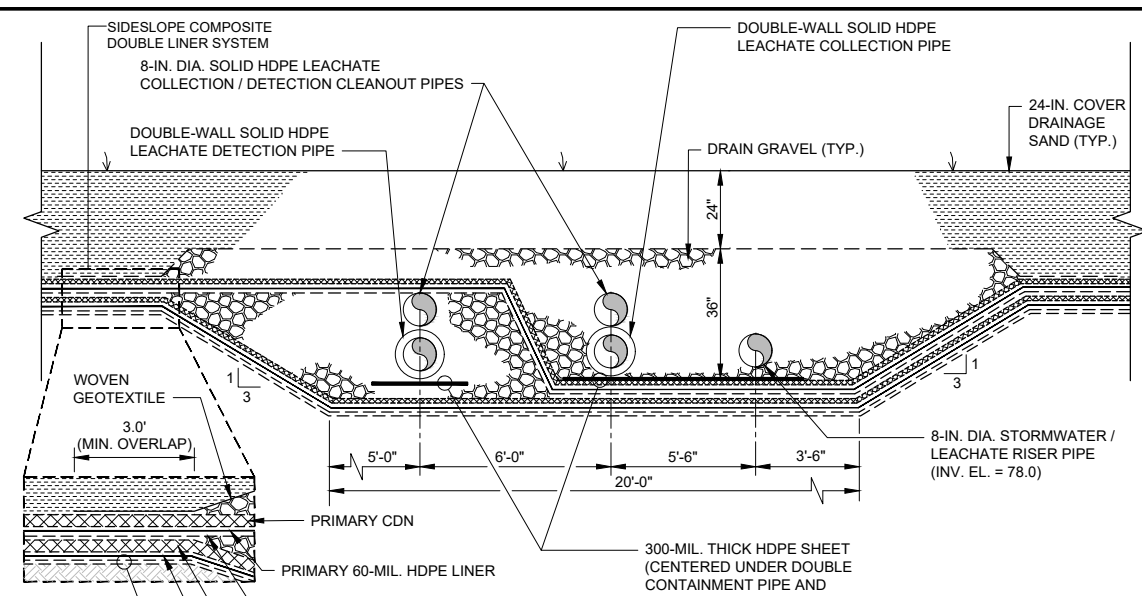
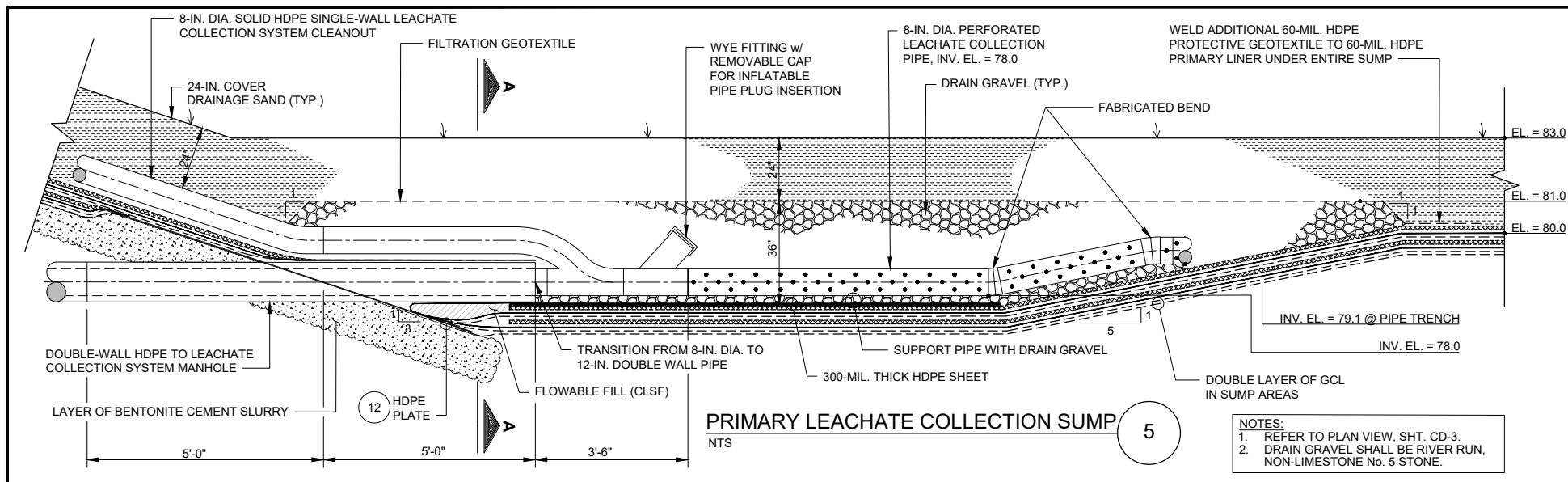
SHEET NO.

INSTRUMENTATION AND CONTROL  
STANDARD DETAILS

IC-8

SCALE:

PROJ. NO. 676802

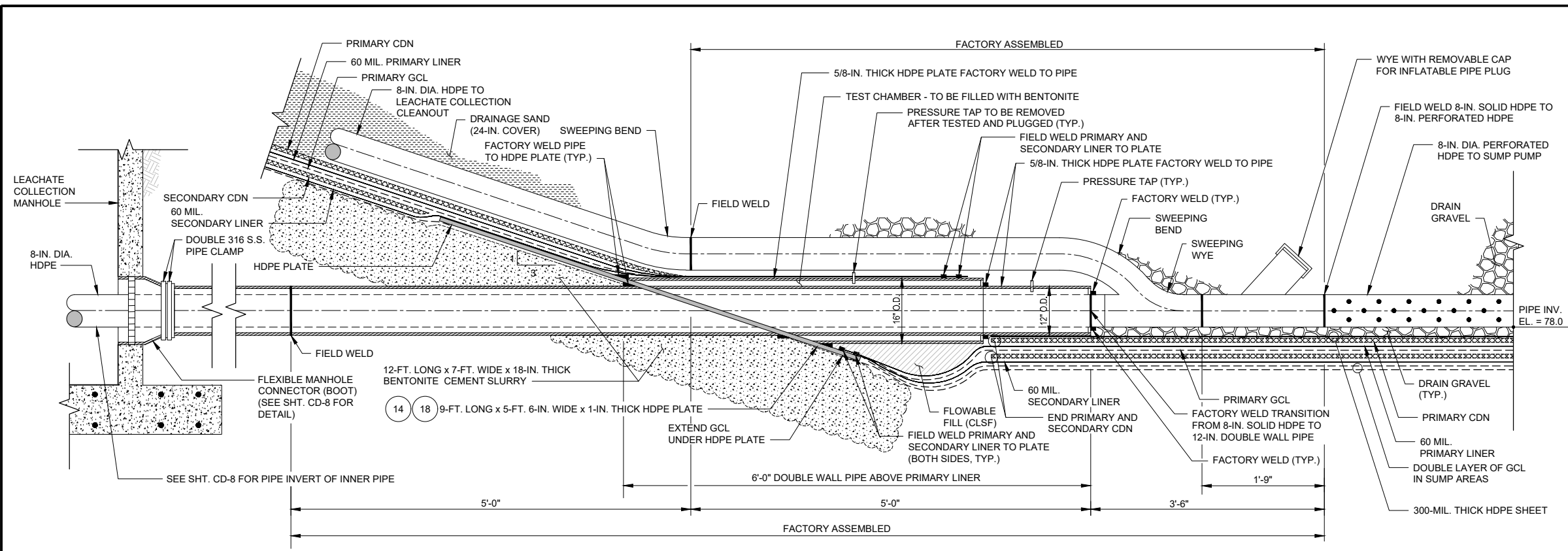


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PLOT DATE: \$PLOTDATE

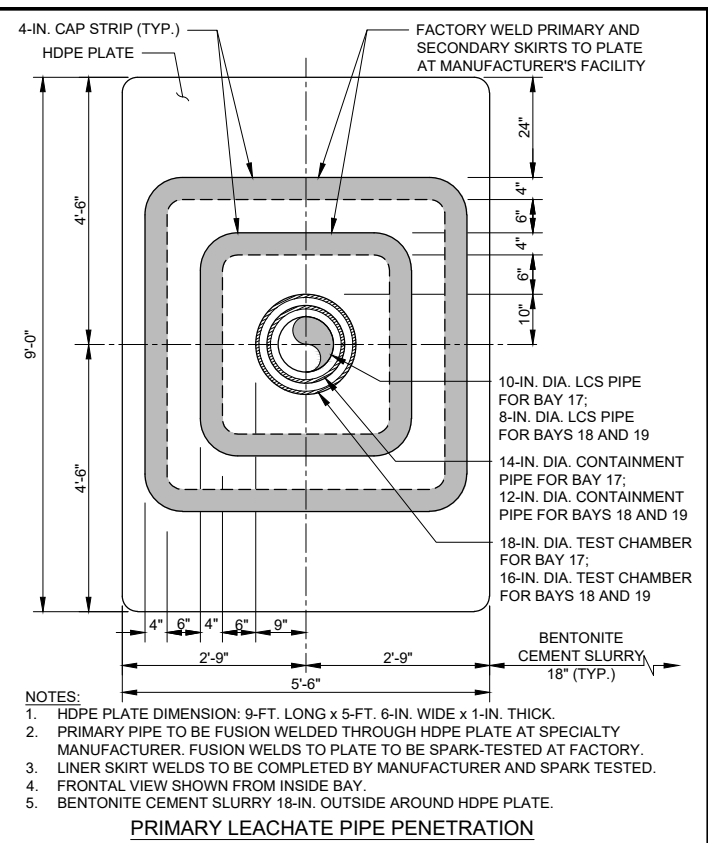
VERIFY SCALE	CH2M HILL ENGINEERS, INC 225 EAST ROBINSON ST SUITE 505 ORLANDO, FL 32801 FL COA: 25861 FL AB: AAC001992	NEEL-SCHAFFER, INC 2301 LUCIEN WAY, SUITE 300 MAITLAND, FLORIDA 32751 FL COA: 8556	DESIGNED	JML	DATE	AUG 2019		ORANGE COUNTY LANDFILL CELL 11 BAY 17-19 EXPANSION	SHEET NO.	
BAR IS ONE INCH ON ORIGINAL DRAWING. 1" = 0' IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.	NOT TO BE USED FOR CONSTRUCTION UNTIL APPROVED.		DRAWN	MAR	DATE	AUG 2019		CIVIL <b>BAYS 18 - 19</b> <b>PRIMARY AND SECONDARY SUMP SYSTEM DETAILS</b>	CD-1	
			CHECKED	RB	DATE	AUG 2019			SCALE:	N.T.S.
			APPROVED	RB	DATE	AUG 2019			PROJ. NO.	
			NO.	BY	REVISIONS	DATE	FILE NAME	005-D-1001_676802.dwg		

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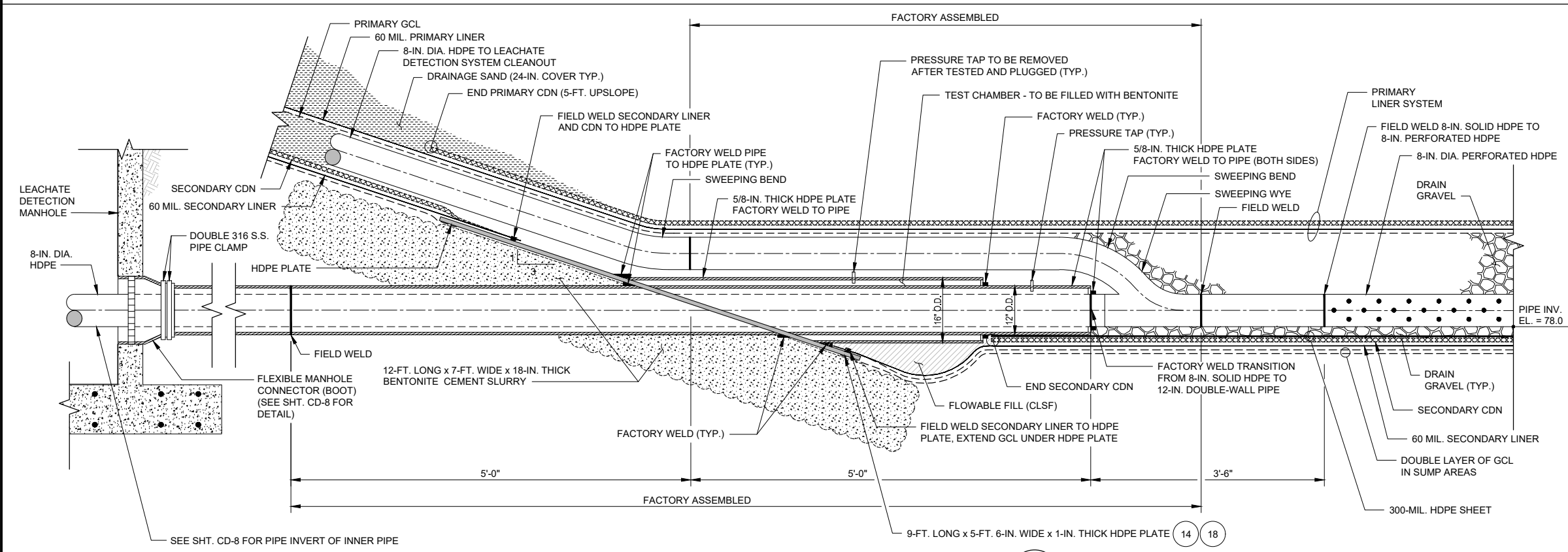




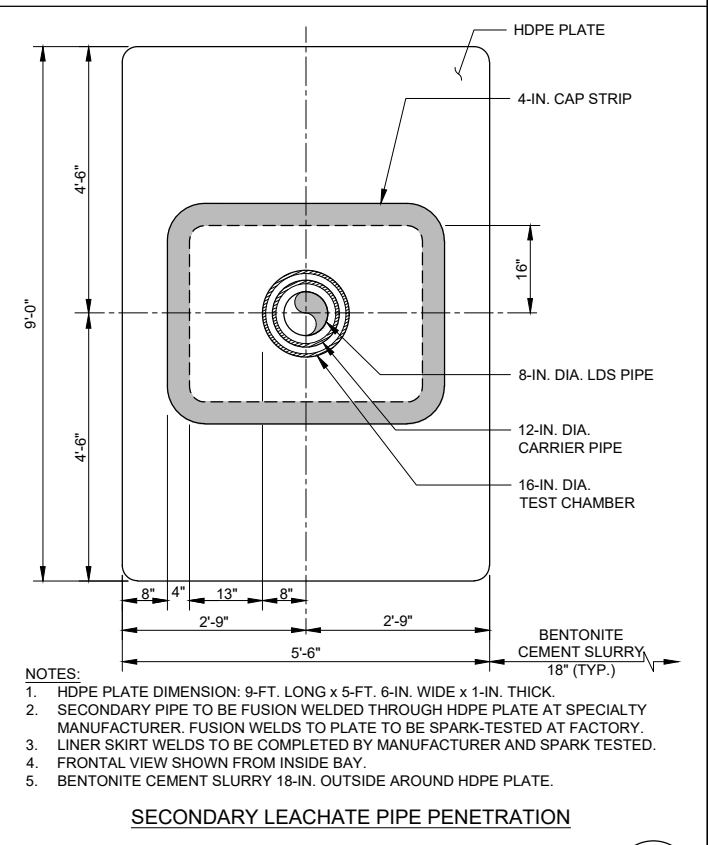
PRIMARY LINER PENETRATION DETAIL 12  
NTS



BAYS 17 - 36 PIPE PENETRATION PLATE DETAIL 14  
NTS



SECONDARY LINER PENETRATION DETAIL 16  
NTS

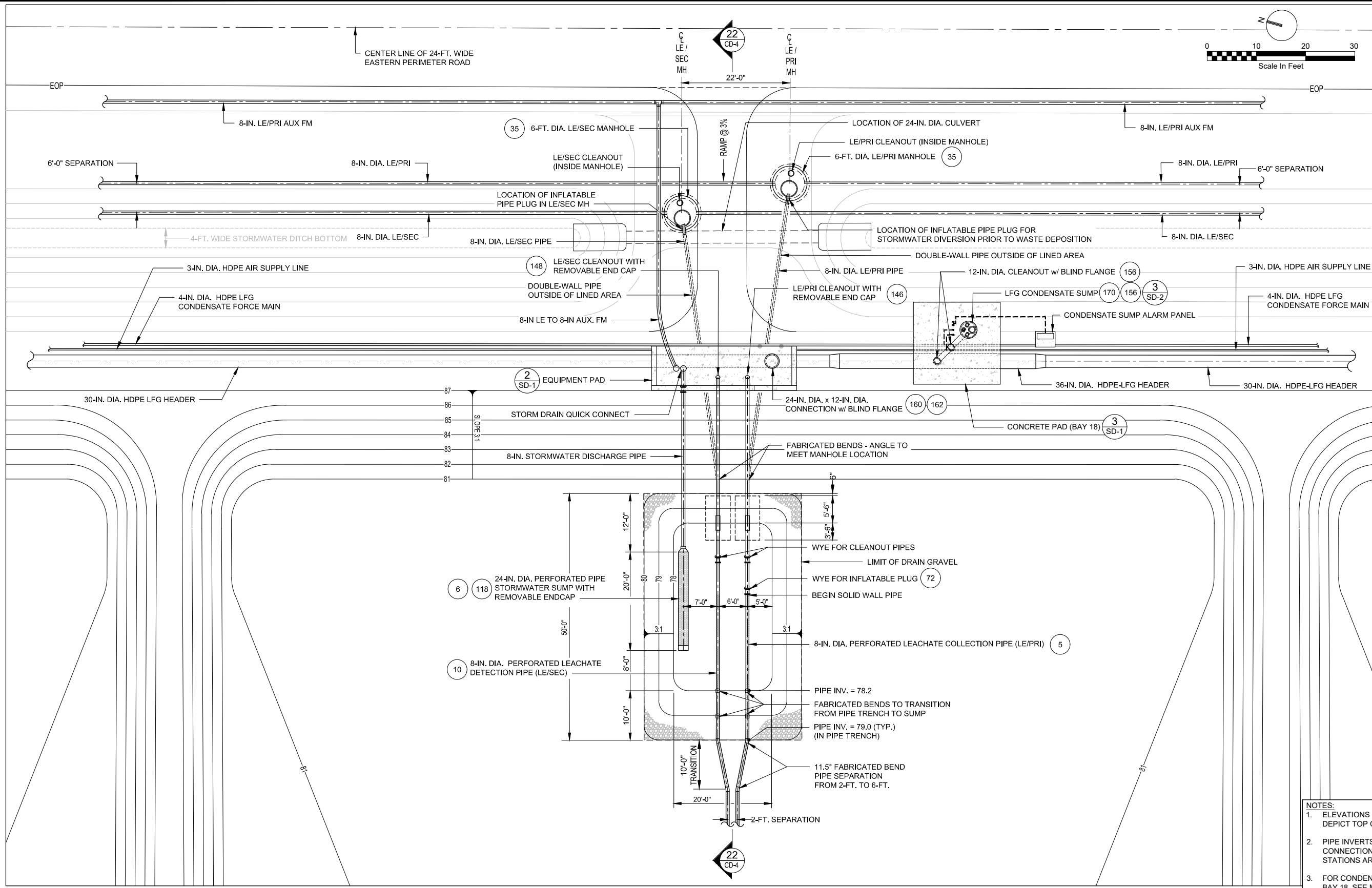
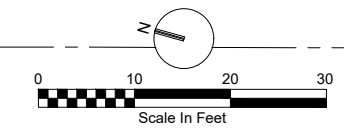


BAYS 17 - 36 PIPE PENETRATION PLATE DETAIL 18  
NTS

PLOT TIME: \$PLOTTIME  
PLOT DATE: \$PLOTDATE

VERIFY SCALE	CH2M HILL ENGINEERS, INC 225 EAST ROBINSON ST SUITE 505 ORLANDO, FL 32801 FL COA: 25861 FL AB: AAC001992	NEEL-SCHAFFER, INC 2301 LUCIEN WAY, SUITE 300 MAITLAND, FLORIDA 32751 FL COA: 8556	DESIGNED JML DATE AUG 2019	DRAWN MAR DATE AUG 2019	CHECKED RB DATE AUG 2019	APPROVED RB DATE AUG 2019	FILE NAME 005-D-1002_676802.dwg		ORANGE COUNTY LANDFILL CELL 11 BAY 17-19 EXPANSION CIVIL BAYS 18 - 19 PRIMARY AND SECONDARY LINER PENETRATION DETAILS	SHEET NO. CD-2 SCALE: N.T.S. PROJ. NO.
NOT TO BE USED FOR CONSTRUCTION UNTIL APPROVED.			NO.	BY	REVISIONS	DATE	FILE NAME	CONSTRUCTION PLANS FOR ORANGE COUNTY LANDFILL CELL 11 BAY 17 - 19 EXPANSION ORANGE COUNTY SOLID WASTE DIVISION ORANGE COUNTY, FLORIDA		

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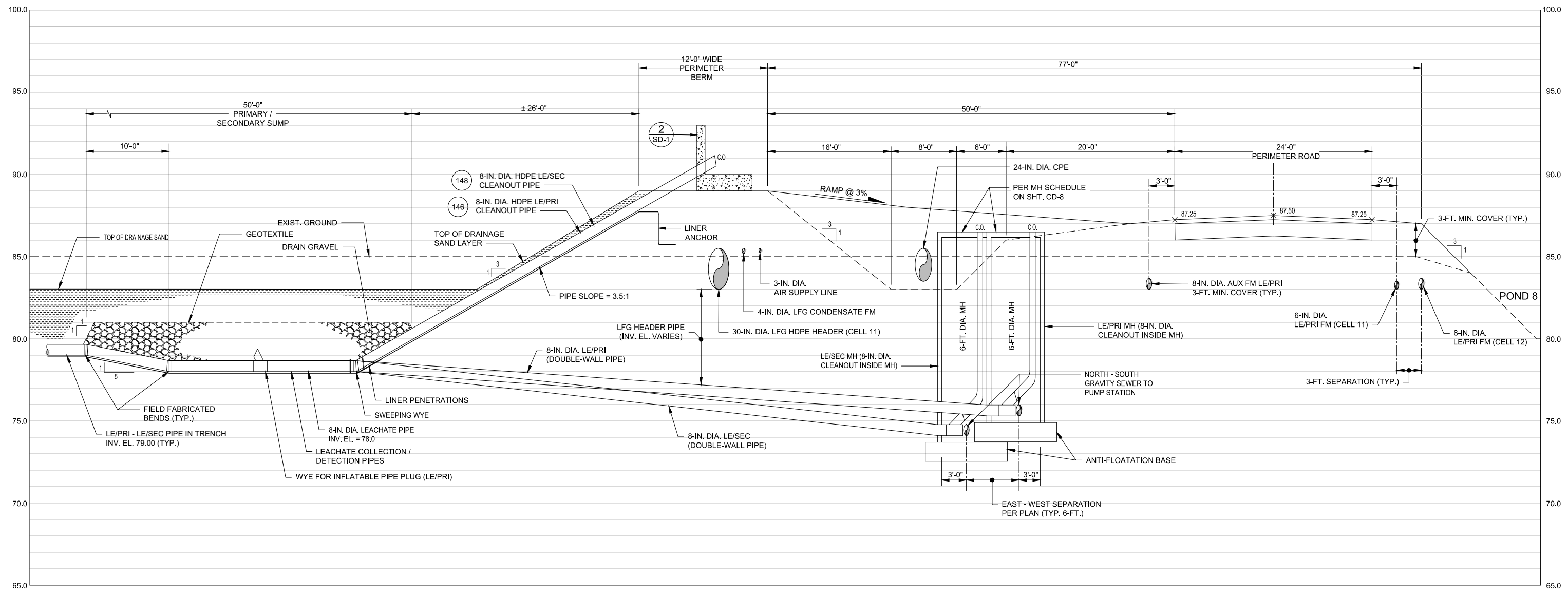
**BAYS 18 - 19 LEACHATE COLLECTION & DETECTION LAYOUT** 20  
SCALE: 1" = 10'

- NOTES:**
- ELEVATIONS SHOWN ON THIS SHEET DEPICT TOP OF SUBGRADE LAYER.
  - PIPE INVERTS FOR LE/PRI AND LE/SEC PIPE CONNECTIONS TO MANHOLES AND PUMP STATIONS ARE LISTED ON SHEET CD-8.
  - FOR CONDENSATE SUMP LOCATION IN BAY 18, SEE MECHANICAL SHEETS.
  - FOR LFG TRANSMISSION SYSTEM COMPONENTS, SEE MECHANICAL SHEETS.

PLOT DATE: \$PLOTDATE PLOT TIME: \$PLOTTIME

VERIFY SCALE	CH2M HILL ENGINEERS, INC 225 EAST ROBINSON ST SUITE 505 ORLANDO, FL 32801 FL COA: 25861 FL AB: AAC001992	NEEL-SCHAFFER, INC 2301 LUCIEN WAY, SUITE 300 MAITLAND, FLORIDA 32751 FL COA: 8556	DESIGNED JML DATE AUG 2019	JML	DATE AUG 2019		ORANGE COUNTY LANDFILL CELL 11 BAY 17-19 EXPANSION	SHEET NO.	
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			NO.	BY	REVISIONS		DATE		FILE NAME

PLOT DATE: \$PLOTDATE PLOT TIME: \$PLOTTIME



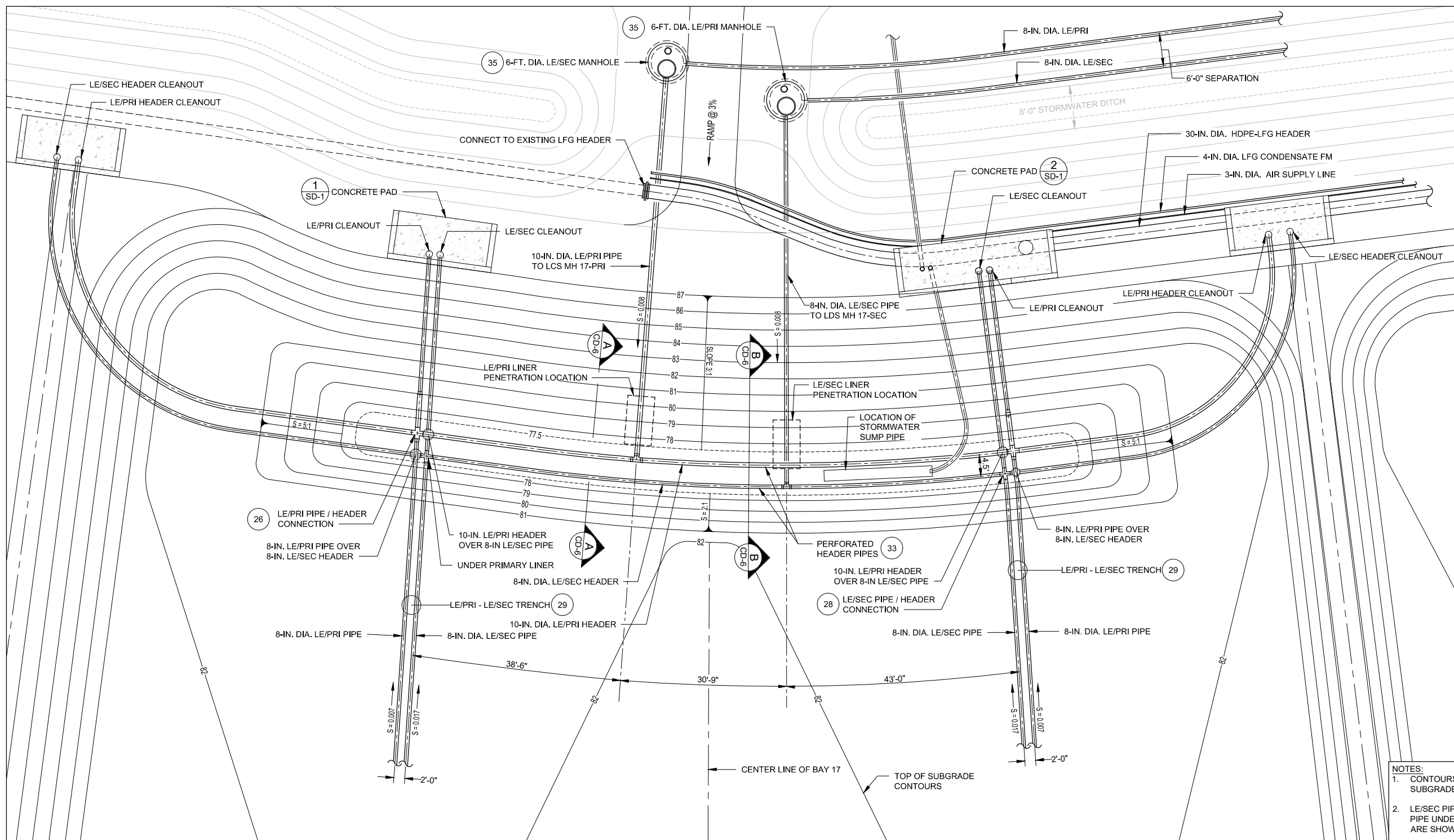
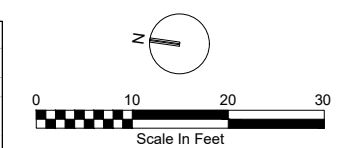
**SECTION FOR BAYS 18 - 19 BERM AND LEACHATE COLLECTION SYSTEM**  
 NTS

22

- NOTES:**
- SECTION SHOWN IS AT NON-STORMWATER LETDOWN LOCATION.
  - CONTRACTOR TO PROVIDE STRUCTURAL AND BUOYANCY CALCULATIONS FOR CONCRETE MANHOLES PER SPECIFICATION 33 05 13 REQUIREMENTS.
  - SEE SHT. CD-8 FOR LEACHATE COLLECTION / LEACHATE DETECTION PIPE INVERTS AT MANHOLES AND LIFT STATIONS.

VERIFY SCALE BAR IS ONE INCH ON ORIGINAL DRAWING IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.	CH2M HILL ENGINEERS, INC 225 EAST ROBINSON ST SUITE 505 ORLANDO, FL 32801 FL COA: 25861 FL AB: AAC001992	NEEL-SCHAFFER, INC 2301 LUCIEN WAY, SUITE 300 MAITLAND, FLORIDA 32751 FL COA: 8556	DESIGNED JML DATE AUG 2019 DRAWN MAR DATE AUG 2019 CHECKED RB DATE AUG 2019 APPROVED RB DATE AUG 2019	CH2M HILL 2019. ALL RIGHTS RESERVED.		ORANGE COUNTY LANDFILL CELL 11 BAY 17-19 EXPANSION CIVIL <b>BAYS 18 - 19          BERM AND LEACHATE COLLECTION/          DETECTION SYSTEM SECTION</b>	SHEET NO. <b>CD-4</b> SCALE: N.T.S. PROJ. NO.
NOT TO BE USED FOR CONSTRUCTION UNTIL APPROVED.			NO. BY REVISIONS DATE FILE NAME 005-D-1004_676802.dwg	CONSTRUCTION PLANS FOR ORANGE COUNTY LANDFILL CELL 11 BAY 17 - 19 EXPANSION ORANGE COUNTY SOLID WASTE DIVISION ORANGE COUNTY, FLORIDA			

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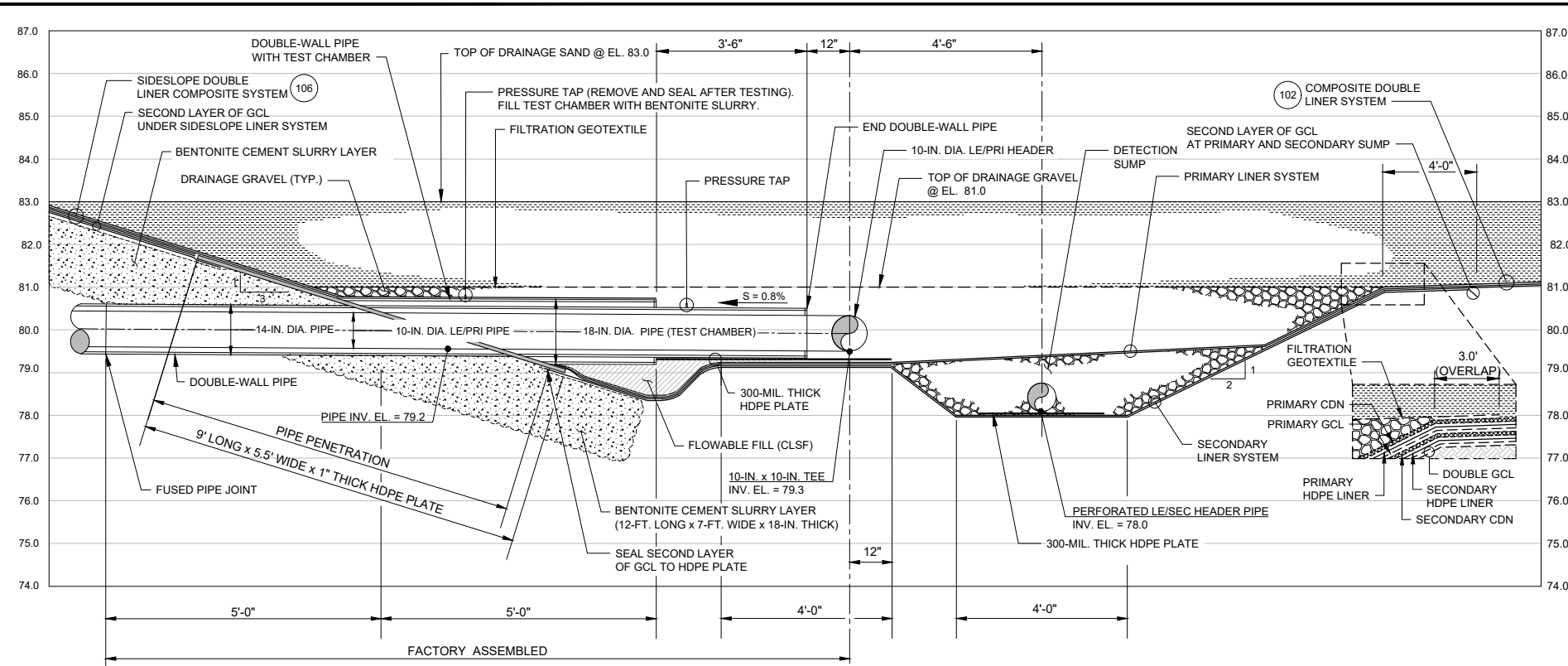


- NOTES:**
1. CONTOURS SHOWN ON THIS SHEET ARE TOP OF SUBGRADE ELEVATIONS.
  2. LE/SEC PIPE, LE/SEC HEADER AND LE/SEC CLEANOUT PIPE UNDER PRIMARY LINER. THESE COMPONENTS ARE SHOWN FOR LOCATIONS.
  3. SEE DETAIL No. 30 FOR PRIMARY LINER SUMP ELEVATIONS. SEE DETAIL No. 32 FOR SECONDARY SUMP ELEVATIONS.
  4. DRAINAGE ROCK OR PROTECTIVE LAYER SAND TO BE PLACED TO ACHIEVE CONTOURS SHOWN ON CIVIL GRADING PLANS.
  5. MINIMUM TOP OF SAND ELEVATION = 83.00 FT. NGVD.
  6. FOR LFG TRANSMISSION SYSTEM COMPONENTS, SEE MECHANICAL SHEETS.
  7. LE/PRI AND LE/SEC PIPE INVERTS AT MANHOLES AND PUMP STATIONS ARE PROVIDED ON SHEET CD-8

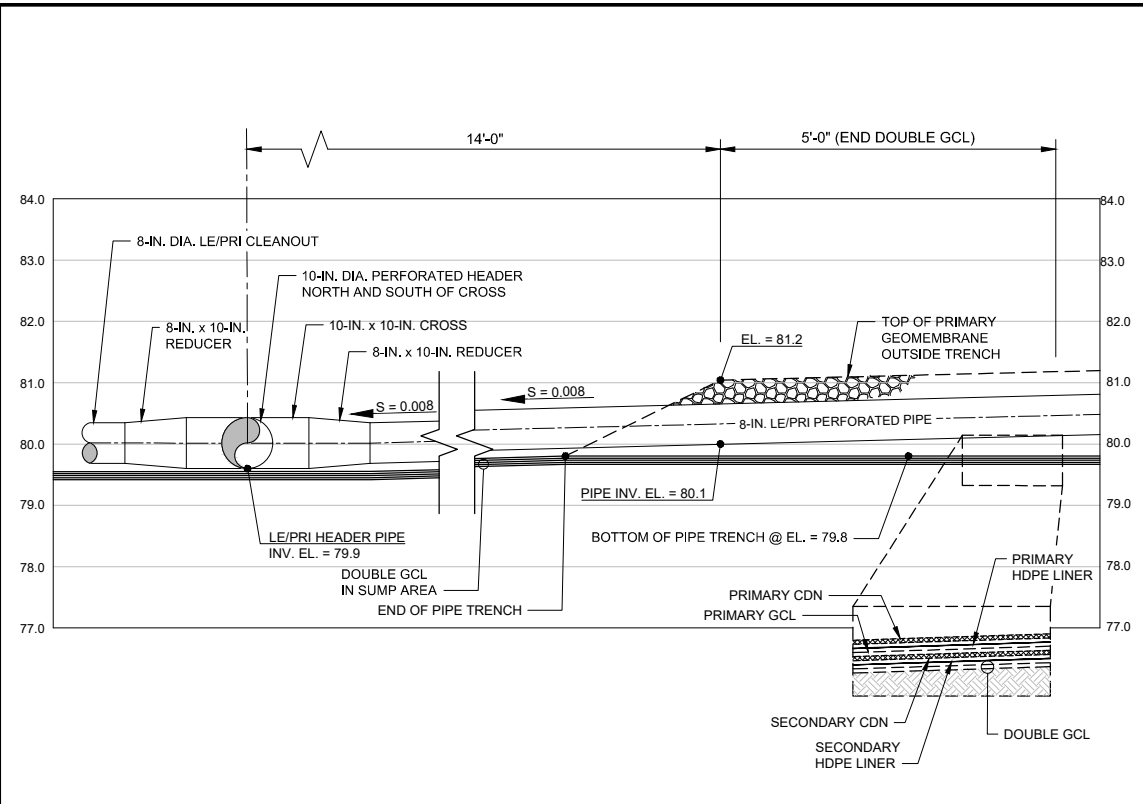
**BAY 17 LEACHATE COLLECTION & DETECTION SYSTEM**  
SCALE: 1" = 10'

PLOT TIME: \$PLOTTIME  
PLOT DATE: \$PLOTDATE

VERIFY SCALE	CH2M HILL ENGINEERS, INC 225 EAST ROBINSON ST SUITE 505 ORLANDO, FL 32801 FL COA: 25861 FL AB: AAC001992	NEEL-SCHAFFER, INC 2301 LUCIEN WAY, SUITE 300 MAITLAND, FLORIDA 32751 FL COA: 8556	DESIGNED JML DATE AUG 2019	JML	DATE AUG 2019		ORANGE COUNTY LANDFILL CELL 11 BAY 17-19 EXPANSION	SHEET NO.	
BAR IS ONE INCH ON ORIGINAL DRAWING. IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.	NOT TO BE USED FOR CONSTRUCTION UNTIL APPROVED.	NO.	BY	REVISIONS	DATE		FILE NAME 005-D-1005_676802.dwg	CIVIL <b>BAY 17</b> <b>LEACHATE COLLECTION AND DETECTION SYSTEM PLAN</b>	CD-5
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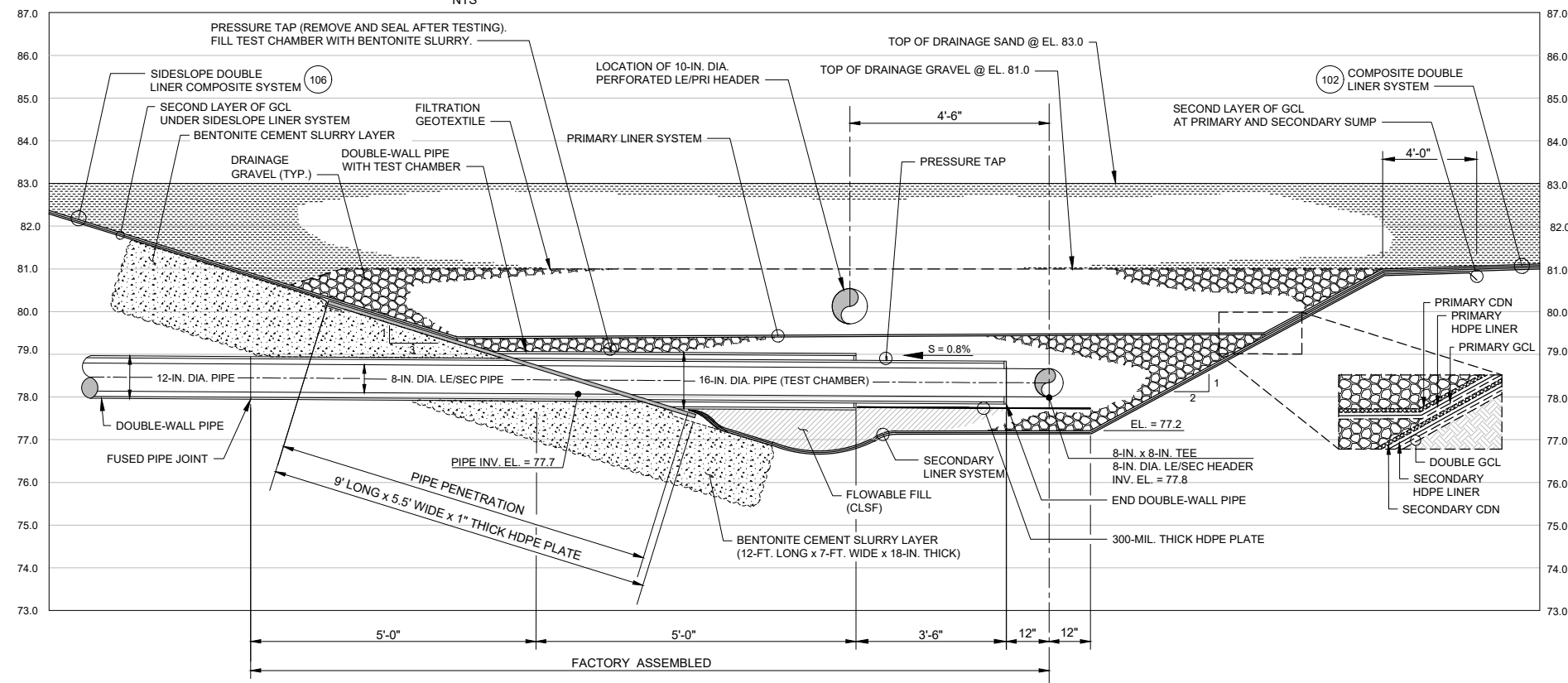


**SECTION A-A**  
**BAY 17 COLLECTION SUMP SECTION AT LE/PRI PIPE PENETRATION**  
 NTS

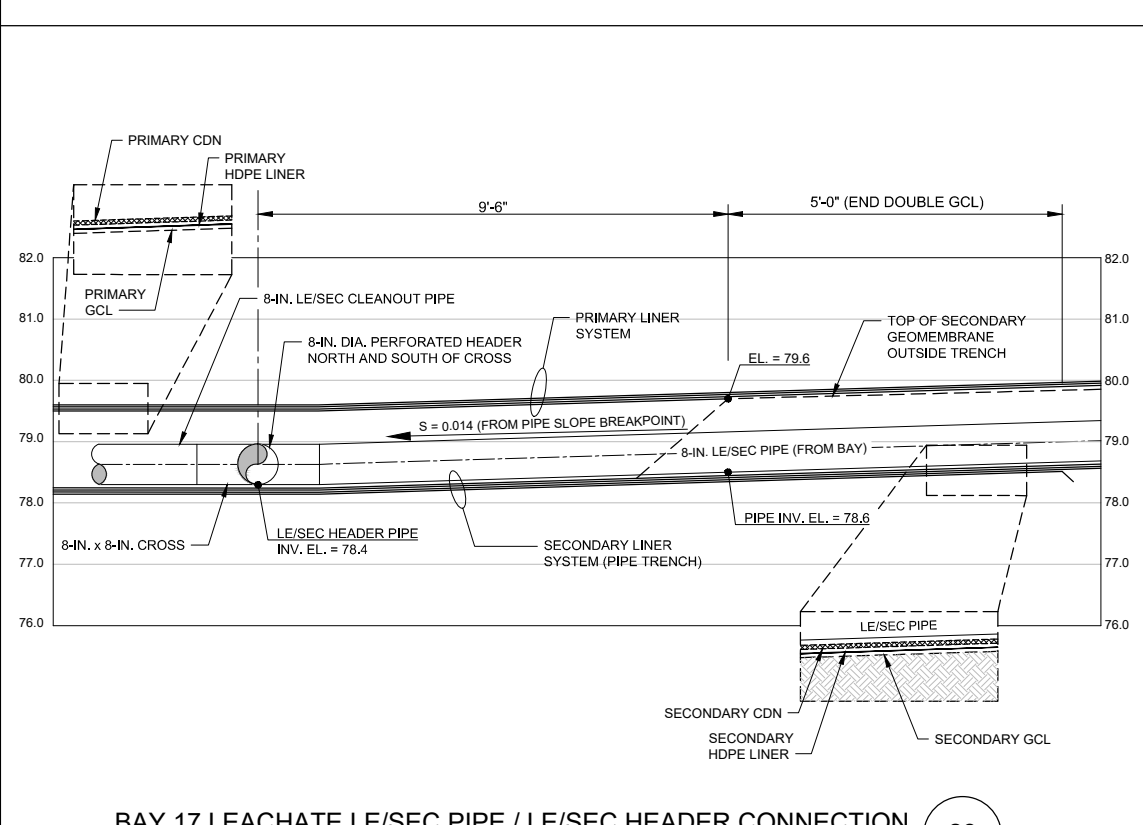


**BAY 17 LEACHATE LE/PRI PIPE / LE/PRI HEADER CONNECTION**  
 NTS

26



**SECTION B-B**  
**BAY 17 DETECTION SUMP SECTION AT LE/SEC PIPE PENETRATION**  
 NTS



**BAY 17 LEACHATE LE/SEC PIPE / LE/SEC HEADER CONNECTION**  
 NTS

28

PLOT TIME: \$PLOTTIME  
 PLOT DATE: \$PLOTDATE

VERIFY SCALE	CH2M HILL ENGINEERS, INC 225 EAST ROBINSON ST SUITE 505 ORLANDO, FL 32801 FL COA: 25861 FL AB: AAC001992	NEEL-SCHAFFER, INC 2301 LUCIEN WAY, SUITE 300 MAITLAND, FLORIDA 32751 FL COA: 8556	DESIGNED	JML	DATE	AUG 2019		ORANGE COUNTY LANDFILL CELL 11 BAY 17-19 EXPANSION	SHEET NO.	
BAR IS ONE INCH ON ORIGINAL DRAWING. 1" = 0' IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.	NOT TO BE USED FOR CONSTRUCTION UNTIL APPROVED.		DRAWN	MAR	DATE	AUG 2019		CIVIL <b>BAY 17 LEACHATE COLLECTION AND LEACHATE DETECTION SYSTEM SECTIONS AND DETAILS</b>	CD-6	
			CHECKED	RB	DATE	AUG 2019			SCALE:	N.T.S.
			APPROVED	RB	DATE	AUG 2019			PROJ. NO.	
			NO.	BY	REVISIONS	DATE	FILE NAME	005-D-1006_676802.dwg		

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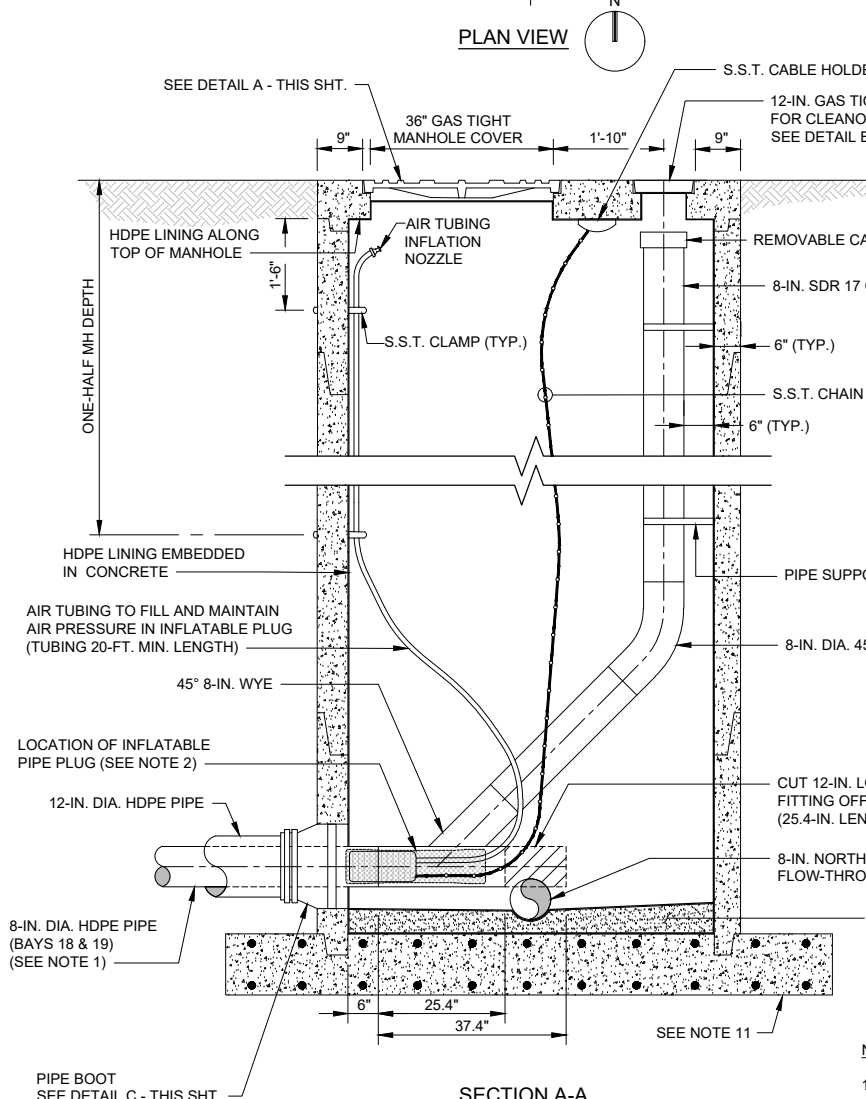
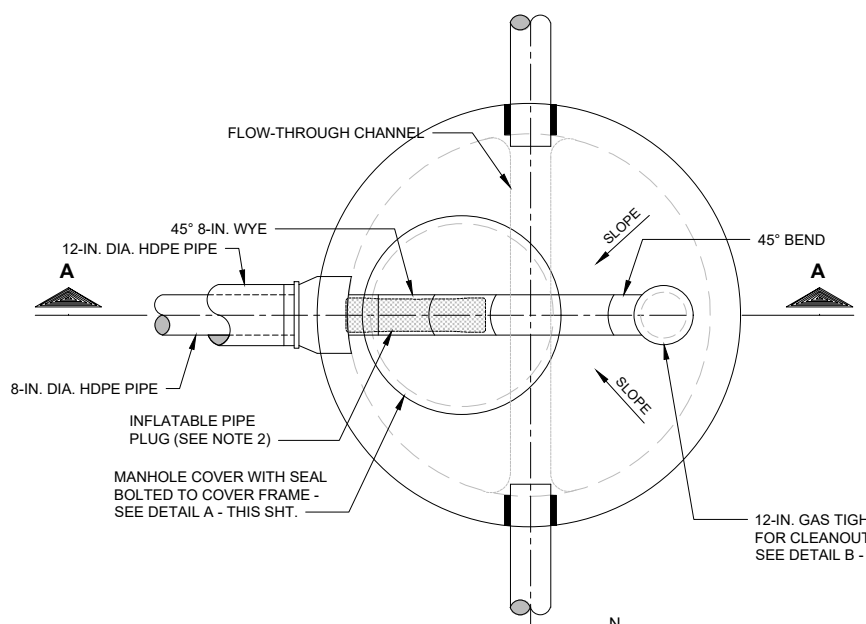


**CELL 11 BAY 17 - 19 PRIMARY (LE / PRI) GRAVITY LEACHATE COLLECTION SYSTEM**

**CELL 11 - 12 - SECONDARY (LE / SEC) GRAVITY LEACHATE DETECTION SYSTEM**

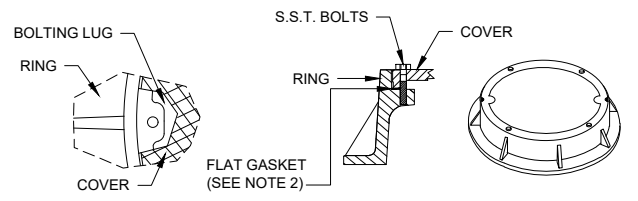
BAY	MANHOLE & PUMP STATION DESIGNATION	PIPE PENETRATION INVERT (INSIDE BAY)	PIPE INVERT WEST	PIPE INVERT SOUTH	PIPE INVERT NORTH	PIPE INVERT EAST	TOP OF MH	MH INVERT	COORDINATE (CENTER OF MH)	
									NORTHING	EASTING
17	MH17 PRI	79.20 (SEE TABLE NOTE 1)	76.60	76.50	---	---	86.50	76.20	1503508.66	585408.75
18	MH18 PRI	78.00	75.30	75.20	75.40	---	86.50	74.90	1503300.18	585464.12
19	MH19 PRI	78.00	74.00	73.90	74.10	---	86.50	73.60	1503082.81	585522.23
20	MH20 PRI	78.00	72.70	72.60	72.80	---	86.50	72.30	1502865.41	585580.21
21	MH21 PRI	78.00	71.40	71.30	71.50	---	86.50	71.00	1502648.01	585638.20
22	MH22 PRI	78.00	72.70	72.80	72.60	---	86.50	72.30	1502430.61	585696.18
PS PIPE INV. @ PS-2A		---	70.20	---	---	---	---	---	---	---
MH PS-2A		---	---	70.80	70.80	70.70	88.00	70.50	1502546.30	585665.31

BAY	MANHOLE & PUMP STATION DESIGNATION	PIPE PENETRATION INVERT (INSIDE BAY)	PIPE INVERT WEST	PIPE INVERT SOUTH	PIPE INVERT NORTH	PIPE INVERT EAST	TOP OF MH	MH INVERT	COORDINATE (CENTER OF MH)	
									NORTHING	EASTING
17	MH17 SEC	77.70 (SEE TABLE NOTE 2)	75.40	75.30	---	---	86.50	75.00	1503508.66	585404.70
18	MH18 SEC	78.00	74.10	74.00	74.20	---	86.50	73.70	1503319.88	585452.64
19	MH19 SEC	78.00	72.80	72.70	72.90	---	86.50	72.40	1503102.51	585510.76
20	MH20 SEC	78.00	71.50	71.40	71.60	---	86.50	71.10	1502885.11	585568.74
21	MH21 SEC	78.00	70.20	70.30	70.10	---	86.50	69.80	1502667.71	585626.73
22	MH22 SEC	78.00	71.50	71.60	71.40	---	86.50	71.10	1502450.31	585684.70
PS PIPE INV. @ PS-2B		---	68.80	---	---	---	---	---	---	---
MH PS-2B		---	---	69.60	69.50	69.50	88.00	69.20	1502575.67	585651.27



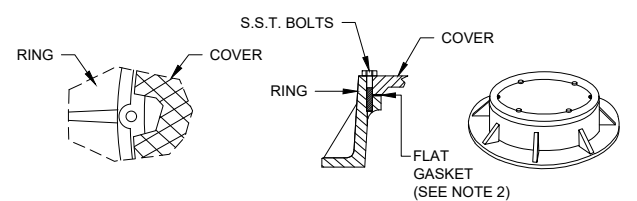
STRUCTURE	INSIDE DIA.
MANHOLES	6 FEET
PUMP STATION WET WELLS	8 FEET

- NOTES:**
- 10-IN. DIA. HDPE PIPE WITH 14-IN. DIA. OUTER PIPE FOR BAY 17 (MH-17 PRI).
  - INFLATABLE PIPE PLUG TO BE INSERTED INTO INFLUENT PIPE TO BLOCK STORMWATER FLOW (PRIOR TO WASTE DEPOSITION).
  - PROVIDE INFLATABLE PIPE PLUG AIR TUBING, CONNECTION NOZZLE AND CHAINS PER SPECIFICATION 33-05-13 PART 2.11.



- NOTES:**
- CASTINGS WITH BOLTING LUGS INTEGRATED ON THE RING WITH CORED HOLES IN THE COVER.
  - CLEARANCE OF RING OPENING IS 1 1/2-IN. AT BOLTING LUGS.
  - GASKET SEAL TO BE BUNA N (OR APPROVED EQUAL).

**DETAIL A**  
TYPE BWTL COVER  
NTS

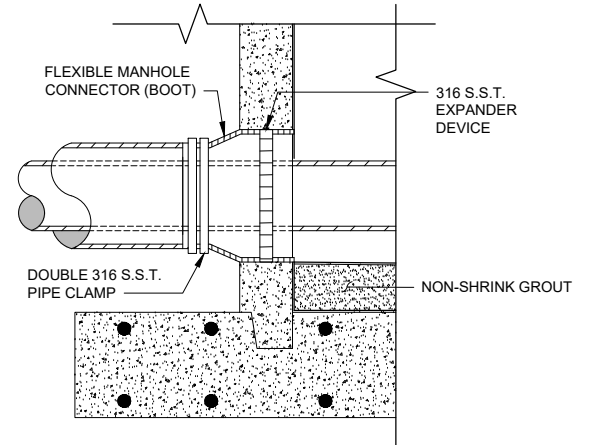


- NOTES:**
- CASTINGS ARE DRILLED AND TAPPED 1/2 ON RING AND 1/2 ON COVER.
  - GASKET SEAL TO BE BUNA N (OR APPROVED EQUAL).

**DETAIL B**  
TYPE BWT COVER  
NTS

**GENERAL NOTES:**

- ALL EXPOSED METAL OUTSIDE OF THE MANHOLE SHALL BE PRIMED AND PAINTED WITH APPROVED COATING SYSTEM PER SPECIFICATIONS SECTIONS.
- THE INSIDE OF THE MANHOLE SHALL BE LINED WITH AN HDPE LINER AS LISTED IN SPECIFICATION 33 05 13. FINAL SEALS AND SEALING TO BE MADE IN THE FIELD.
- MANHOLE ACCESS OPENING SHALL BE COVERED ON ALL VERTICAL SIDES WITH A PROTECTIVE HDPE LINER.
- WARNINGS TO BE LABELED ON 36-IN. MANHOLE COVER STATING: "WARNING - CONFINED SPACE ENTRY" AND "WARNING - COMBUSTIBLE GASES AND HYDROGEN SULFIDE".
- ALL HARDWARE IN THE MANHOLE SHALL BE 316 STAINLESS STEEL.
- THERE SHALL BE NO VALVES OR ELECTRICAL JUNCTION BOXES IN THE MANHOLE.
- ALL PIPING THROUGH CONCRETE SHALL BE WATER TIGHT. CAST-IN-PLACE SLEEVES.
- PIPE SUPPORTS SHALL BE 316 STAINLESS STEEL.
- CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND ELEVATIONS PRIOR TO ORDERING ANY MATERIALS OR EQUIPMENT.
- CONTRACTOR SHALL GROUT FLOOR OF MANHOLE, AS REQUIRED BY MANUFACTURER'S SPECIFICATIONS, TO ACCOMMODATE INSTALLATION OF PIPING.
- STRUCTURAL DESIGN OF THE PRE-CAST MANHOLE AND TOP SHALL BE THE RESPONSIBILITY OF THE PRE-CAST MANUFACTURER. THICKNESS OF BASE OF SLAB TO BE DETERMINED BY MANHOLE MANUFACTURER BASED ON BUOYANCY CALCULATIONS TO PREVENT UPLIFT. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR THE PRE-CAST MANHOLE, THE PRE-CAST MANHOLE TOP AND COVER, TO THE ENGINEER. PRECAST - MANUFACTURER TO PROVIDE SIGNED AND SEALED STRUCTURAL AND BUOYANCY CALCULATIONS WITH STRUCTURAL DESIGN. REFER TO SPECIFICATION SECTION 33-05-13 FOR SUBMITTAL REQUIREMENTS.
- ALL MANHOLE EXTERNAL JOINTS SHALL BE COVERED WITH A HIGH STRENGTH, WATER TIGHT, PRESS-TO-SEAL TYPE TAPE.
- ALL SPOOLS SHALL BE MINIMUM OF SIX INCHES WHERE SPACE ALLOWS.

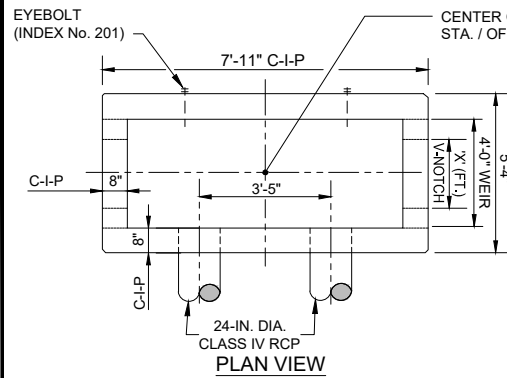


**DETAIL C**  
PIPE BOOT DETAIL  
NTS

PLOT TIME: SPLITIME  
PLOT DATE: SPLITDATE

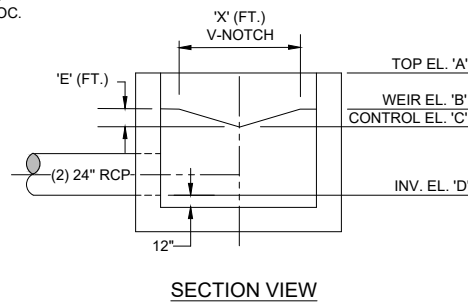
VERIFY SCALE	CH2M HILL ENGINEERS, INC 225 EAST ROBINSON ST SUITE 505 ORLANDO, FL 32801 FL COA: 25861 FL AB: AAC001992	NEEL-SCHAFFER, INC 2301 LUCIEN WAY, SUITE 300 MAITLAND, FLORIDA 32751 FL COA: 8556	DESIGNED JML DATE AUG 2019	DRAWN MAR DATE AUG 2019	CHECKED JML DATE AUG 2019	APPROVED RB DATE AUG 2019	FILE NAME 005-D-1008_676802.dwg		ORANGE COUNTY LANDFILL CELL 11 BAY 17-19 EXPANSION	SHEET NO.
NOT TO BE USED FOR CONSTRUCTION UNTIL APPROVED.								CONSTRUCTION PLANS FOR ORANGE COUNTY LANDFILL CELL 11 BAY 17 - 19 EXPANSION ORANGE COUNTY SOLID WASTE DIVISION ORANGE COUNTY, FLORIDA	CIVIL <b>LEACHATE MANHOLE DETAILS</b>	CD-8 SCALE: N.T.S. PROJ. NO.





**CONTROL STRUCTURE CS9A-1  
(TYPE H FDOT INDEX No. 232)**

REFER TO TABLE 4 SHEET 2 OF 7 OF FDOT INDEX No. 232 FOR OTHER STEEL REQUIREMENTS

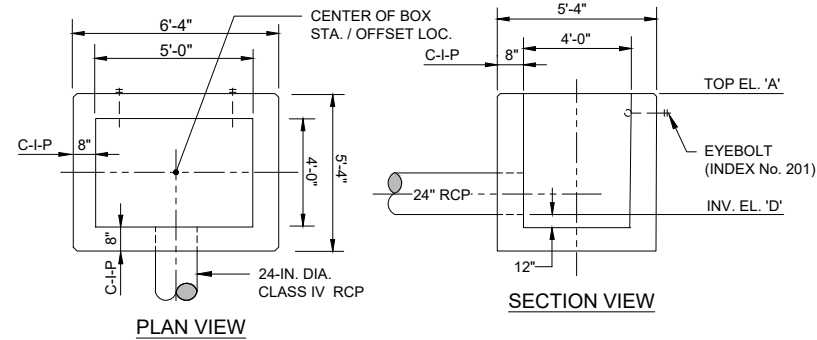


SECTION VIEW

STR. NO.	EL. 'A'	EL. 'B'	EL. 'C'	INV. EL. 'D'	'E' (FT.)	'E' (FT.)
CS9A-1	85.00	83.07	82.50	82.00	0.57	3.73
CS9A-2	83.10			79.00		

ELEVATIONS ARE NGVD

**CONTROL STRUCTURE DETAILS FOR POND 9A**  
NTS



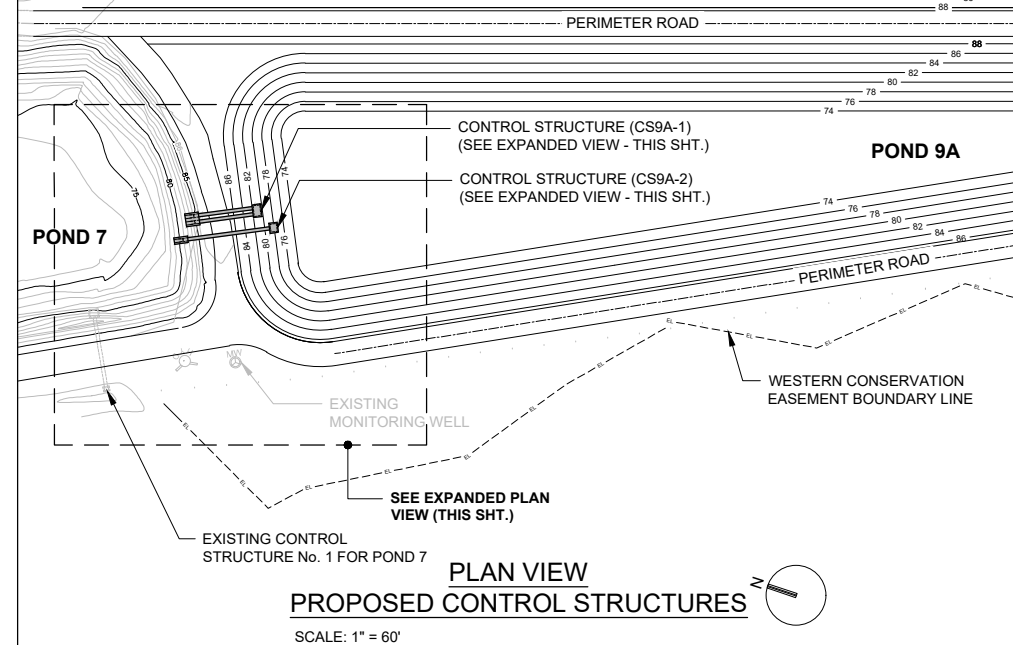
PLAN VIEW

SECTION VIEW

**CONTROL STRUCTURE CS9A-2  
(TYPE E FDOT INDEX No. 232)**

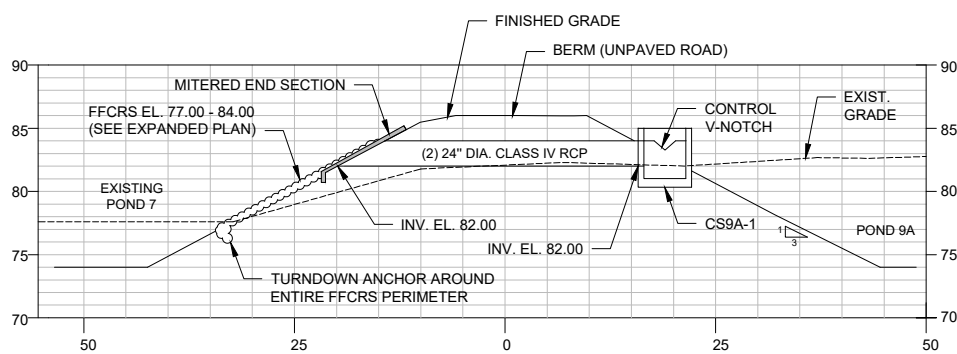
REFER TO TABLE 3 SHEET 1 OF 7 OF FDOT INDEX No. 232 FOR OTHER STEEL REQUIREMENTS

**CONTROL STRUCTURE DETAILS FOR POND 9A**  
NTS



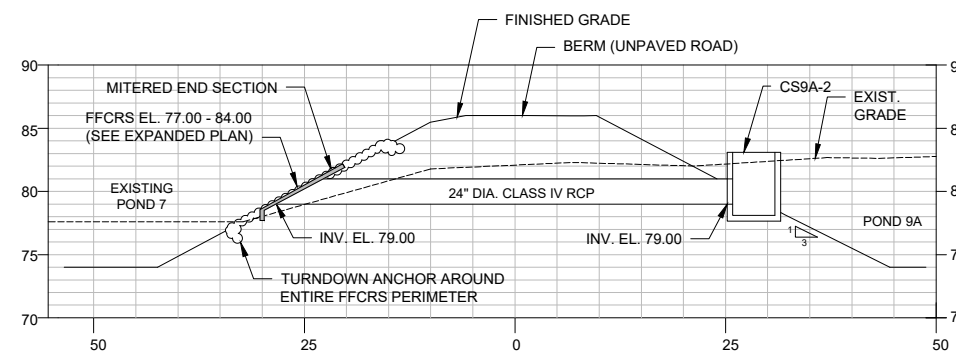
**PLAN VIEW  
PROPOSED CONTROL STRUCTURES**

SCALE: 1" = 60'



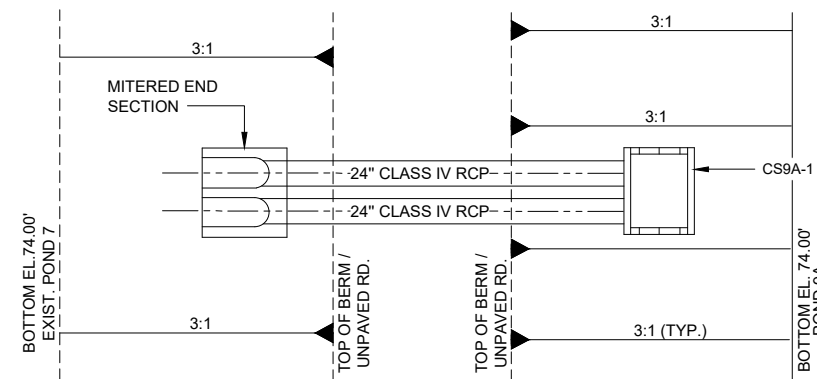
**SECTION VIEW  
POND 9A CONTROL STRUCTURE No. CS9A-1**

NTS



**SECTION VIEW  
POND 9A CONTROL STRUCTURE No. CS9A-2**

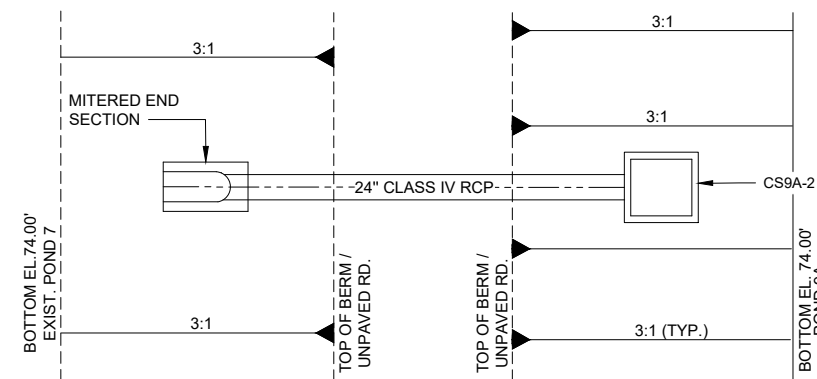
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**PLAN VIEW  
POND 9A CONTROL STRUCTURE No. CS9A-1**

NTS

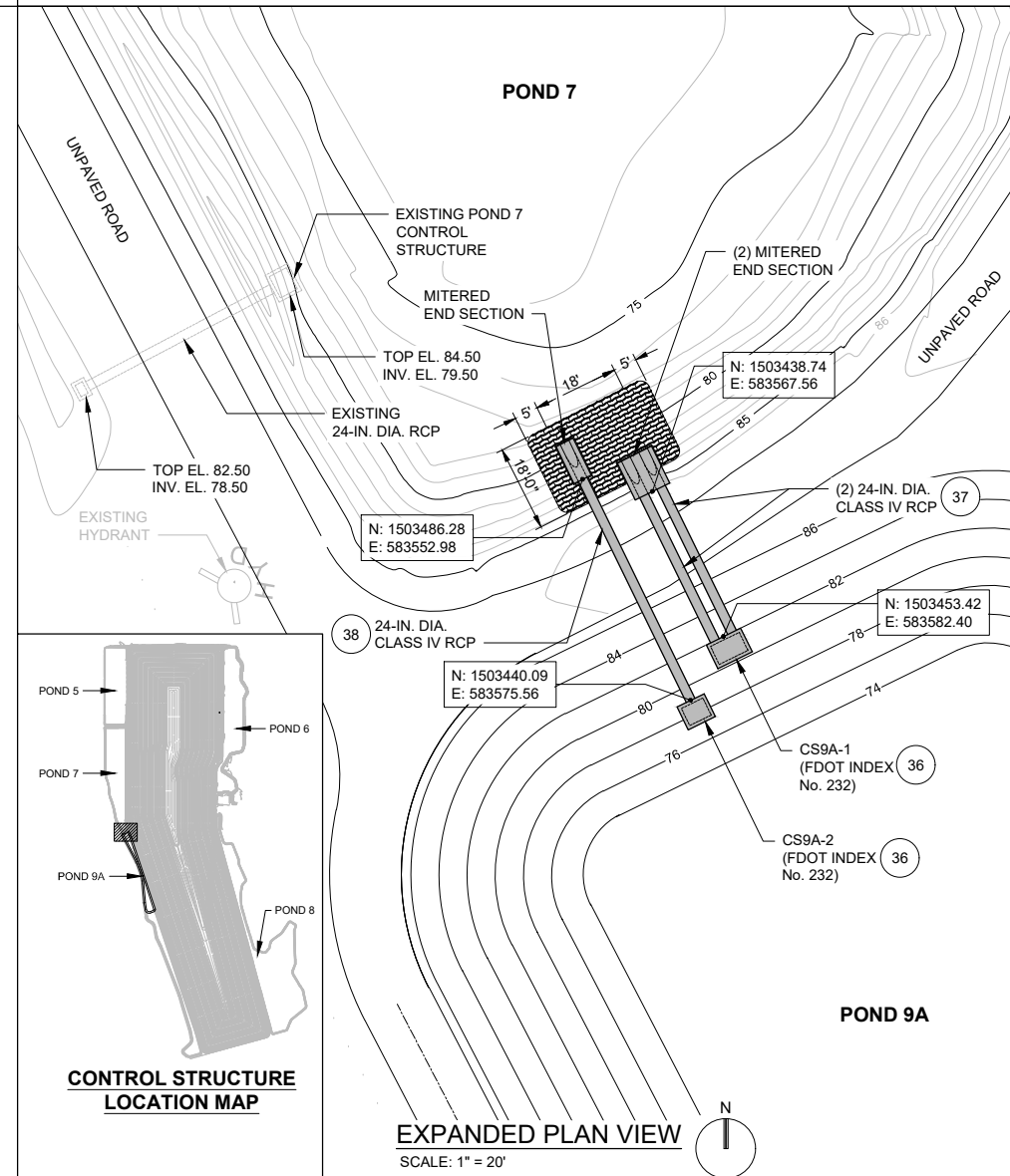
37



**PLAN VIEW  
POND 9A CONTROL STRUCTURE No. CS9A-2**

NTS

38



**CONTROL STRUCTURE  
LOCATION MAP**

**EXPANDED PLAN VIEW**

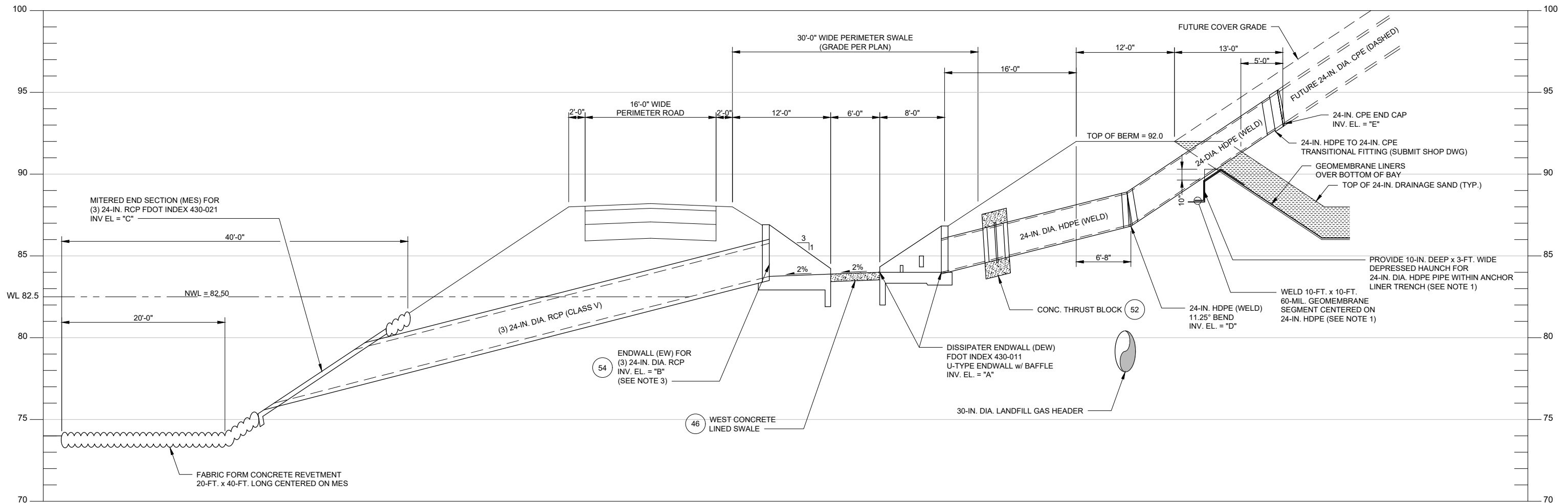
SCALE: 1" = 20'

PLOT DATE: \$PLOTDATE PLOT TIME: \$PLOTTIME

VERIFY SCALE BAR IS ONE INCH ON ORIGINAL DRAWING. 1" = 0' 0" IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.	CH2M HILL ENGINEERS, INC 225 EAST ROBINSON ST SUITE 505 ORLANDO, FL 32801 FL COA: 25861 FL AB: AAC001992	NEEL-SCHAFFER, INC 2301 LUCIEN WAY, SUITE 300 MAITLAND, FLORIDA 32751 FL COA: 8556	DESIGNED: JML DATE: AUG 2019 DRAWN: MAR DATE: AUG 2019 CHECKED: JML DATE: AUG 2019 APPROVED: RB DATE: AUG 2019	FILE NAME: 005-D-1009_676802.dwg	<b>ch2m</b> <b>NEEL-SCHAFFER</b> SOLUTIONS YOU CAN BUILD UPON	ORANGE COUNTY LANDFILL CELL 11 BAY 17-19 EXPANSION CIVIL <b>POND 9A</b> <b>CONTROL STRUCTURE DETAILS</b>	SHEET NO. <b>CD-9</b> SCALE: AS SHOWN PROJ. NO.
	NOT TO BE USED FOR CONSTRUCTION UNTIL APPROVED.			NO. BY REVISIONS DATE	REUSE OF DOCUMENTS: THIS DOCUMENT, AND THE IDEAS AND DESIGNS INCORPORATED HEREIN, AS AN INSTRUMENT OF PROFESSIONAL SERVICE, IS THE PROPERTY OF CH2M HILL AND IS NOT TO BE USED, IN WHOLE OR IN PART, FOR ANY OTHER PROJECT WITHOUT THE WRITTEN AUTHORIZATION OF CH2M HILL.	ORANGE COUNTY, FLORIDA	CD-9



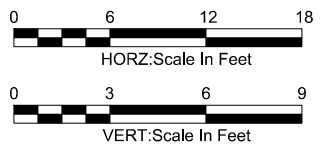
WEST BERM STORMWATER					
DISSIPATER HEADWALL (DEW) #	DISSIPATER HEADWALL (DEW) INV. EL. "A"	ENDWALL (EW) (3) 24" RCP INV. EL. "B"	MITERED END (MES) (3) 24" RCP INV. EL. "C"	24-IN. HDPE 11.25° BEND INV. EL. "D"	24-IN. CPE STUB AND CAP INV. EL. "E"
DEW-23	84.00	83.75	76.00	86.92	93.00
DEW-25	84.00	83.75	76.00	86.92	93.00
DEW-27	84.00	83.75	76.00	86.92	93.00
DEW-29	84.00	83.75	76.00	86.92	93.00
DEW-31	84.00	83.75	76.00	86.92	93.00



**NOTES:**

- THE GEOMEMBRANE LINER ANCHOR TRENCH FOR THE BAYS SHALL BE INSTALLED PER DETAIL 126. TO ACCOMMODATE THE 24-IN. DIA. HDPE PIPE, THE TYPICAL ANCHOR TRENCH SHALL HAVE A DEPRESSED HAUNCH THAT IS APPROXIMATELY 10 INCHES DEEP AND 3 FEET WIDE. A 10-FT. x 10-FT. 60-MIL GEOMEMBRANE PAD (TO PROVIDE A PROTECTIVE LAYER) CENTERED ON THE 24-IN. DIA. HDPE SHALL BE WELDED TO THE GEOMEMBRANE COVERING THE BAY.
- BURIED UTILITIES SHALL HAVE A MINIMUM OF 4 INCHES OF SEPARATION FROM STORM PIPING AND ENCASED WITH CONCRETE PER DETAIL 50 IF THE SEPARATION IS LESS THAN 12 INCHES. THE CONCRETE ENCASEMENT SHALL EXTEND OVER THE ENTIRE WIDTH OF THE (3) 24-IN. DIA. RCP PIPES AND WHERE COVER IS LESS THAN 36 INCHES.
- DETAIL 54 IS FOR THE CONCRETE ENDWALL (EW) DISCHARGING TO THE POND. THE EW IS A MODIFIED ENDWALL PER FDOT INDEX 430-011. THE MODIFICATIONS INCLUDE ACCOMMODATING THREE PIPES (RATHER THAN ONE) AND A SLOPED APRON (RATHER THAN FLAT).

**WESTERN STORMWATER SYSTEM PROFILE 40**

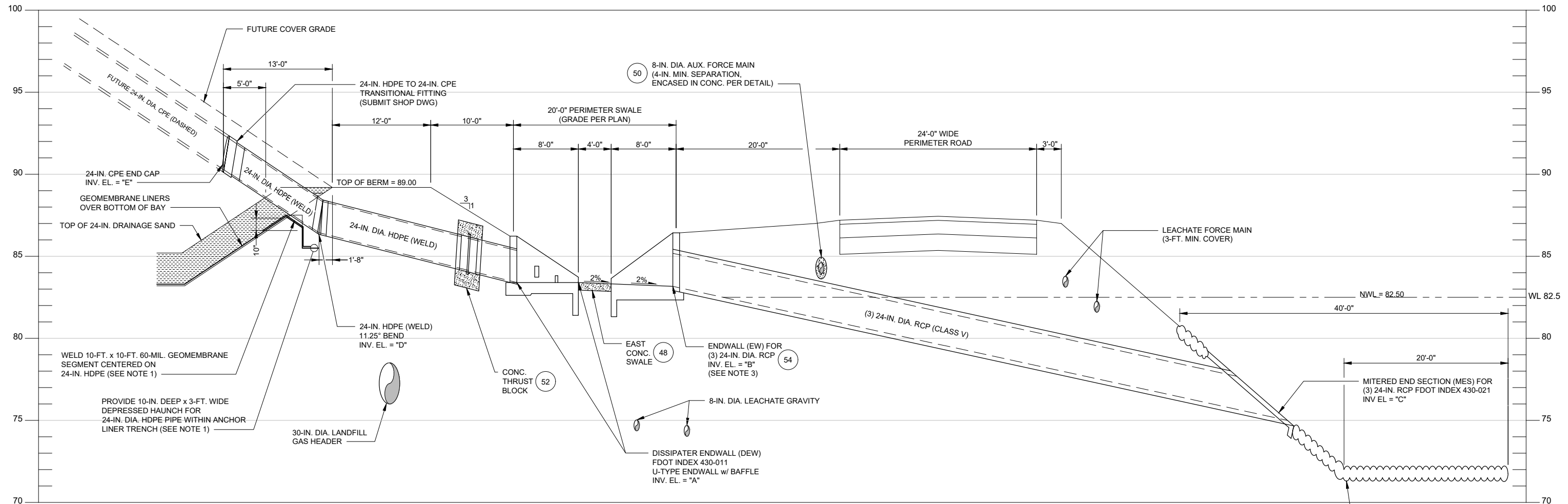


PLOT DATE: \$PLOTDATE PLOT TIME: \$PLOTTIME

VERIFY SCALE	CH2M HILL ENGINEERS, INC 225 EAST ROBINSON ST SUITE 505 ORLANDO, FL 32801 FL COA: 25861 FL AB: AAC001992	NEEL-SCHAFFER, INC 2301 LUCIEN WAY, SUITE 300 MAITLAND, FLORIDA 32751 FL COA: 8556	DESIGNED	TM	DATE	AUG 2019		ORANGE COUNTY LANDFILL CELL 11 BAY 17-19 EXPANSION	SHEET NO.
BAR IS ONE INCH ON ORIGINAL DRAWING			DRAWN	MAR	DATE	AUG 2019		<b>CIVIL</b> <b>CELL 11 BAYS 17 - 22</b> <b>STORMWATER DRAINAGE</b> <b>SYSTEM PROFILE - WEST</b>	<b>CD-10</b>
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.			CHECKED	JML	DATE	AUG 2019			SCALE: AS SHOWN
			APPROVED	TM	DATE	AUG 2019			PROJ. NO.
NOT TO BE USED FOR CONSTRUCTION UNTIL APPROVED.			NO.	BY	REVISIONS	DATE	FILE NAME	005-D-1010_676802.dwg	

REUSE OF DOCUMENTS: THIS DOCUMENT, AND THE IDEAS AND DESIGNS INCORPORATED HEREIN, AS AN INSTRUMENT OF PROFESSIONAL SERVICE, IS THE PROPERTY OF CH2M HILL AND IS NOT TO BE USED, IN WHOLE OR IN PART, FOR ANY OTHER PROJECT WITHOUT THE WRITTEN AUTHORIZATION OF CH2M HILL. CH2M HILL 2019. ALL RIGHTS RESERVED.

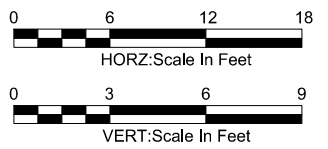
EAST BERM STORMWATER					
DISSIPATER HEADWALL (DEW) #	DISSIPATER HEADWALL (DEW) INV. EL. "A"	ENDWALL (EW) (3) 24" RCP INV. EL. "B"	MITERED END (MES) (3) 24" RCP INV. EL. "C"	24-IN. HDPE 11.25° BEND INV. EL. "D"	24-IN. CPE STUB AND CAP INV. EL. "E"
DEW-22	83.35	83.17	75.00	86.44	90.00
DEW-24	83.35	83.17	75.00	86.44	90.00
DEW-26	83.35	83.17	75.00	86.44	90.00
DEW-26.5	83.35	83.17	75.00	86.44	90.00
DEW-28	83.35	83.17	75.00	86.44	90.00



**NOTES:**

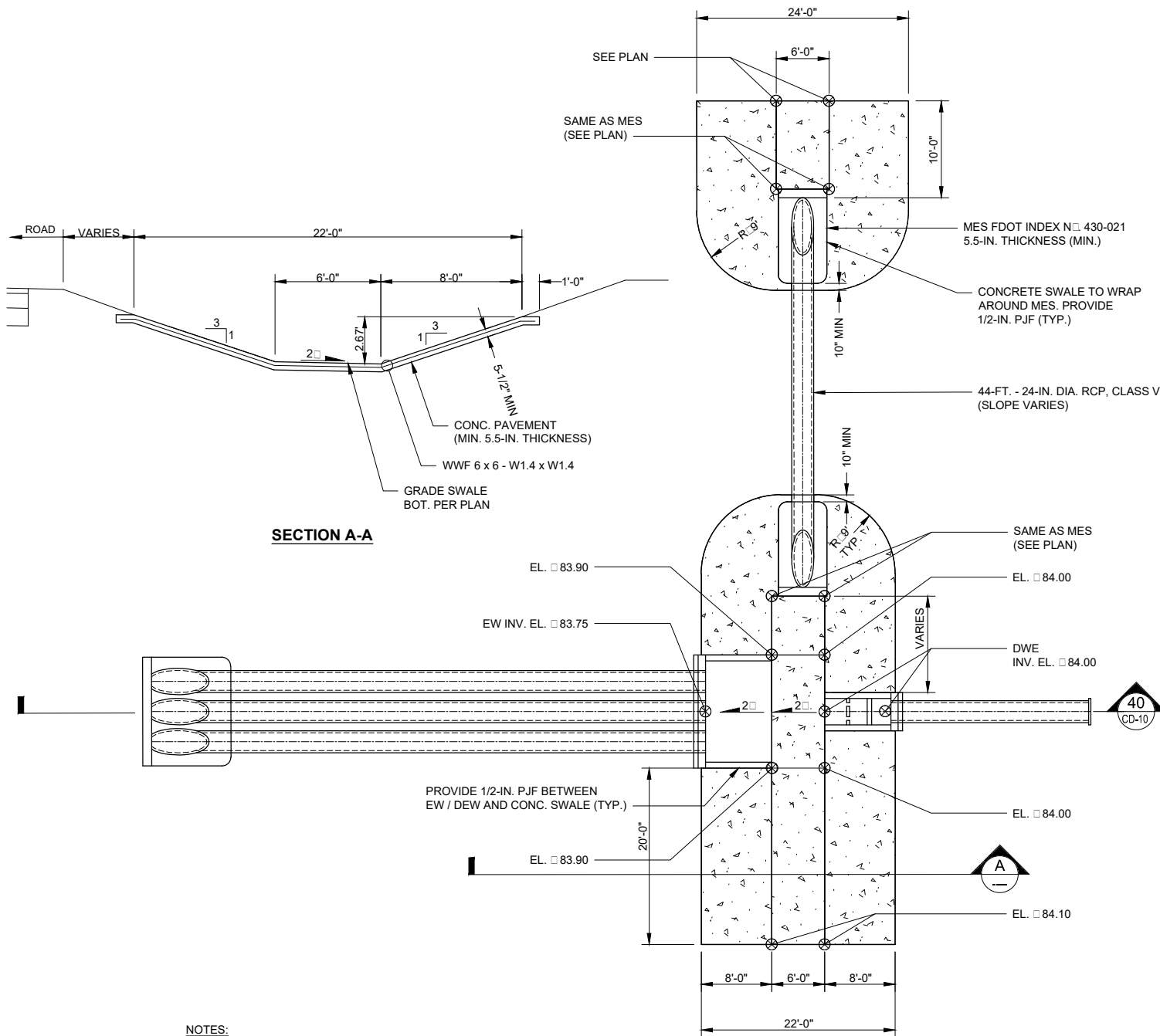
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**EASTERN STORMWATER SYSTEM PROFILE 41**



PLOT TIME: \$PLOTTIME  
PLOT DATE: \$PLOTDATE

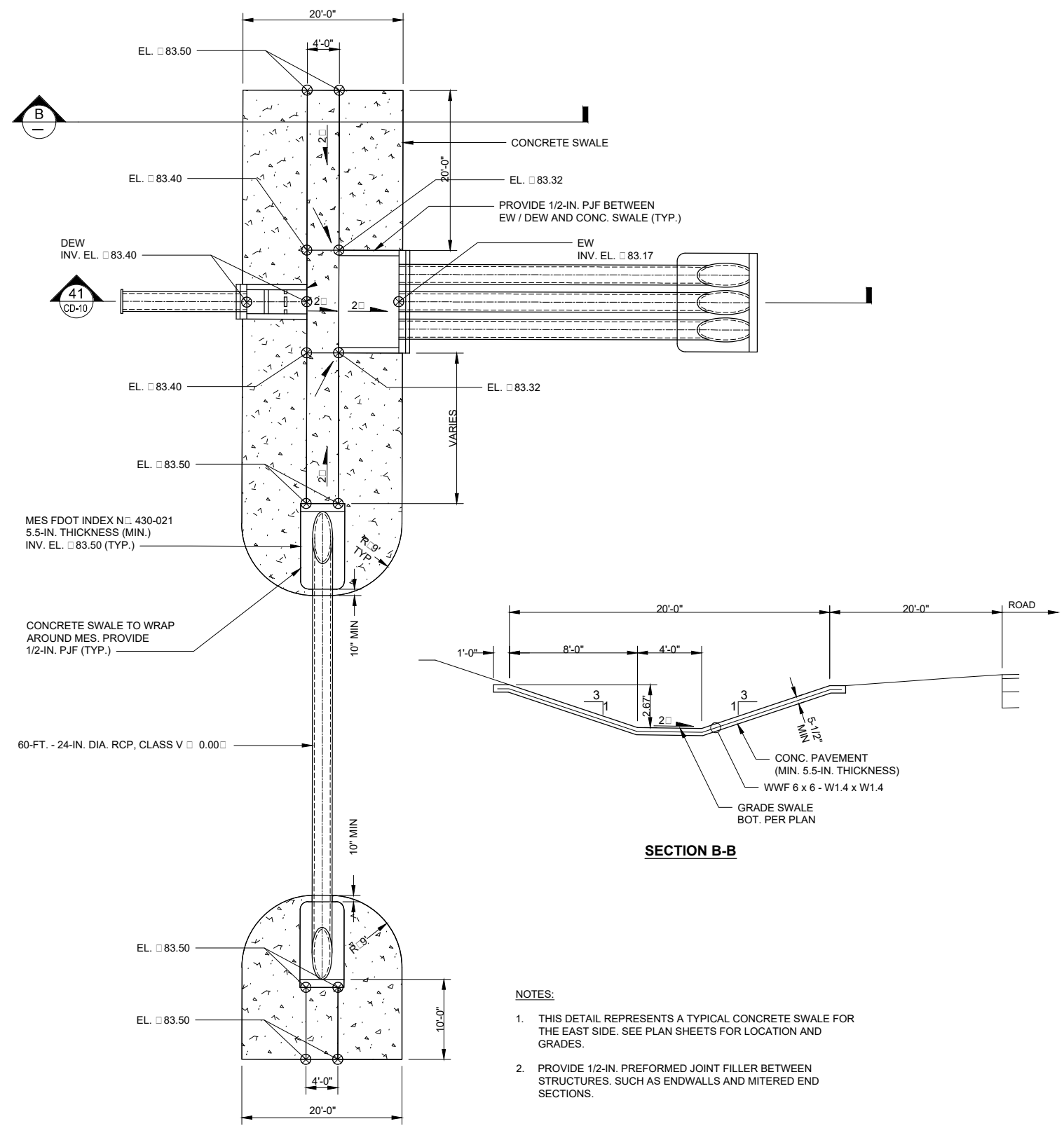
VERIFY SCALE	CH2M HILL ENGINEERS, INC 225 EAST ROBINSON ST SUITE 505 ORLANDO, FL 32801 FL COA: 25861 FL AB: AAC001992	NEEL-SCHAFFER, INC 2301 LUCIEN WAY, SUITE 300 MAITLAND, FLORIDA 32751 FL COA: 8556	DESIGNED	TM	DATE	AUG 2019		ORANGE COUNTY LANDFILL CELL 11 BAY 17-19 EXPANSION	SHEET NO.
BAR IS ONE INCH ON ORIGINAL DRAWING. IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.	NOT TO BE USED FOR CONSTRUCTION UNTIL APPROVED.		DRAWN	MAR	DATE	AUG 2019		<b>CIVIL</b> <b>CELL 11 BAYS 17 - 22</b> <b>STORMWATER DRAINAGE</b> <b>SYSTEM PROFILE - EAST</b>	<b>CD-11</b>
		CHECKED	JML	DATE	AUG 2019	CONSTRUCTION PLANS FOR ORANGE COUNTY LANDFILL CELL 11 BAY 17 - 19 EXPANSION ORANGE COUNTY SOLID WASTE DIVISION ORANGE COUNTY, FLORIDA			SCALE: AS SHOWN
		APPROVED	TM	DATE	AUG 2019	005-D-1011_676802.dwg			PROJ. NO.



**SECTION A-A**

- NOTES:**
- THIS DETAIL REPRESENTS A TYPICAL CONCRETE SWALE FOR THE WEST SIDE. SEE PLAN SHEETS FOR LOCATION AND GRADES.
  - PROVIDE 1/2-IN. PREFORMED JOINT FILLER BETWEEN STRUCTURES. SUCH AS ENDWALLS AND MITERED END SECTIONS.

**WEST CONCRETE SWALE DETAIL** 46  
NTS



**SECTION B-B**

- NOTES:**
- THIS DETAIL REPRESENTS A TYPICAL CONCRETE SWALE FOR THE EAST SIDE. SEE PLAN SHEETS FOR LOCATION AND GRADES.
  - PROVIDE 1/2-IN. PREFORMED JOINT FILLER BETWEEN STRUCTURES. SUCH AS ENDWALLS AND MITERED END SECTIONS.

**EAST CONCRETE SWALE DETAIL** 48  
NTS

PLOT TIME: \$PLOTTIME  
PLOT DATE: \$PLOTDATE

VERIFY SCALE	CH2M HILL ENGINEERS, INC 225 EAST ROBINSON ST SUITE 505 ORLANDO, FL 32801 FL COA: 25861 FL AB: AAC001992	NEEL-SCHAFFER, INC 2301 LUCIEN WAY, SUITE 300 MAITLAND, FLORIDA 32751 FL COA: 8556	DESIGNED	TM	DATE	AUG 2019
BAR IS ONE INCH ON ORIGINAL DRAWING. 1" IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.	NOT TO BE USED FOR CONSTRUCTION UNTIL APPROVED.		DRAWN	MAR	DATE	AUG 2019
			CHECKED	JML	DATE	AUG 2019
			APPROVED	TM	DATE	AUG 2019
	NO.	BY	REVISIONS	DATE	FILE NAME	005-D-1012_676802.dwg

**ch2m** **NEEL-SCHAFFER**  
SOLUTIONS YOU CAN BUILD UPON

CONSTRUCTION PLANS FOR  
ORANGE COUNTY LANDFILL CELL 11 BAY 17 - 19 EXPANSION  
ORANGE COUNTY SOLID WASTE DIVISION  
ORANGE COUNTY, FLORIDA

ORANGE COUNTY LANDFILL CELL 11 BAY 17-19 EXPANSION		SHEET NO.
CIVIL		CD-12
STORMWATER DETAILS		SCALE: N.T.S.
		PROJ. NO.