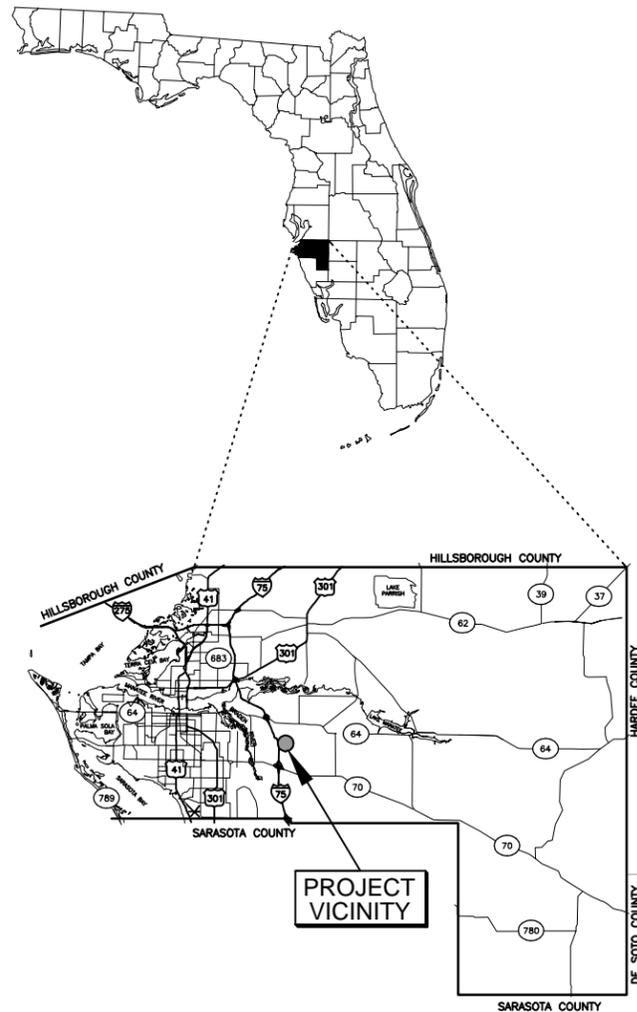


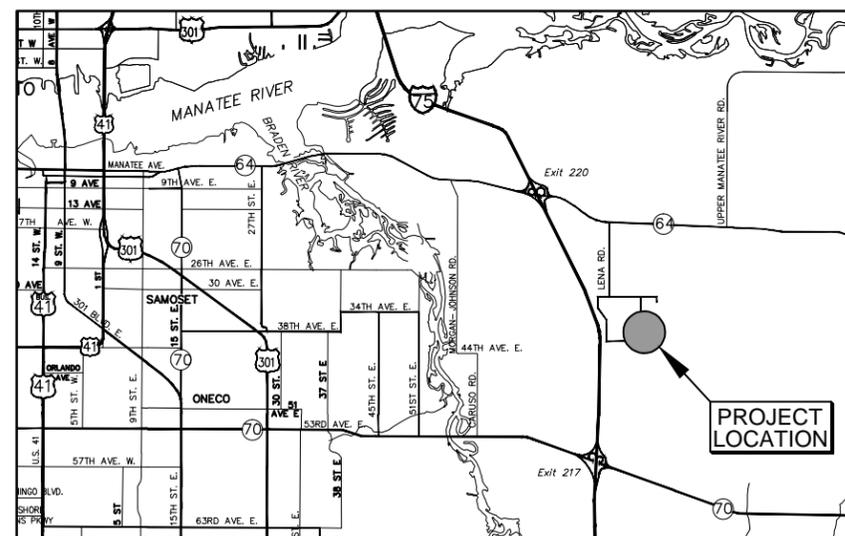
# CONTRACT DRAWINGS

# SOUTHEAST WATER RECLAMATION FACILITY (SEWRF) DEDICATED REJECT LINE

**MANATEE COUNTY, FLORIDA**  
COUNTY PROJECT No. 6083680



**VICINITY MAP**  
NOT TO SCALE



**LOCATION MAP**

NOT TO SCALE  
3331 LENA ROAD BRADENTON, FLORIDA 34206  
SECTION 1, TOWNSHIP 35-S, RANGE 18-E  
PARCEL: 567110051  
MANATEE COUNTY, FLORIDA

PLANS PREPARED BY:



DAVID A. O'CONNOR, PE      DATE  
LIC. NO. 56803

ELECTRICAL PLANS  
PREPARED BY:



771 S. Harbour Blvd., Suite 870, TAMPA, FL 33602  
813.227.9190 FAX 813.227.9195  
Certificate of Authorization No. 00008363

STRUCTURAL PLANS  
PREPARED BY:



114 W. FIRST STREET, SUITE 230  
SANFORD, FLORIDA 32771  
PHONE: (407) 322-0500 FAX: (407) 322-0023

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NO.	REVISION	BY	DATE

Always call 811 two full business days before you dig

**Sunshine811.com**

PROJECT NO: 00193-009-01
DATE: NOVEMBER 2013
SHEET NO: <b>G-1</b>

**GENERAL NOTES**

1. MATERIALS USED IN THE CONSTRUCTION OF THIS PROJECT SHALL BE NEW AND CONFORM TO THE MANATEE COUNTY DEPARTMENT OF PUBLIC WORKS UTILITIES DEPARTMENT AND THE LATEST LOCAL JURISDICTION STANDARDS, UNLESS OTHERWISE NOTED.
2. WHERE REFERENCED STANDARDS CONFLICT, OR WHERE THERE ARE DISCREPANCIES BETWEEN THE PROJECT MANUAL (TECH SPECS) AND CONTRACT DRAWINGS, THE MORE STRINGENT STANDARD SHALL APPLY.
3. THE CONTRACTOR SHALL CALL "SUNSHINE STATE ONE CALL 811" A MINIMUM OF 2-DAYS AND A MAXIMUM OF 5-DAYS PRIOR TO START OF CONSTRUCTION.
4. THE CONTRACTOR SHALL CONTACT THE ENGINEER OF RECORD AT (727) 639-5567 IMMEDIATELY ON ANY CONFLICTS ARISING DURING CONSTRUCTION.
5. ALL WORK PERFORMED SHALL COMPLY WITH THE REGULATIONS AND ORDINANCES OF THE VARIOUS GOVERNMENTAL AGENCIES HAVING JURISDICTION OVER THE WORK.
6. THESE DRAWINGS DO NOT INCLUDE NECESSARY COMPONENTS FOR CONSTRUCTION SAFETY AND THE CONTRACTOR IS SOLELY RESPONSIBLE FOR THE CONSTRUCTION SAFETY. SPECIAL PRECAUTIONS MAY BE REQUIRED IN THE VICINITY OF POWER LINES AND OTHER UTILITIES.
7. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO CONTROL AND PREVENT EROSION AND THE TRANSPORTATION OF SEDIMENT TO SURFACE DRAINS AND OUTFALLS.
8. ALL SECTION CORNERS OR PROPERTY CORNERS DISLOCATED OR DISTURBED BY THE CONSTRUCTION ACTIVITIES SHALL BE RESET BY A REGISTERED LAND SURVEYOR AT THE CONTRACTORS EXPENSE.
9. UNLESS SHOWN OTHERWISE, FINAL GRADE IS TO GENERALLY BE THE SAME AS EXISTING GRADE. ALL DISTURBED LANDSCAPED AND/OR GRASSED AREAS SHALL BE RESTORED IN-KIND.
10. ALL SODDING, SEEDING AND MULCHING SHALL INCLUDE WATERING AND FERTILIZATION AND CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING THESE AREAS UP TO AND INCLUDING THE INITIAL MOWING.
11. ALL VOIDS AFTER PLACEMENT OF SOD SHALL BE FILLED WITH PREPARED SOIL MIX. THE SOD SHALL BE ROLLED TO MEET THE PROPOSED GRADES, SOD PLACED ON SLOPES (3:1 OR STEEPER) SHALL BE PEGGED.
12. ALL EXCESS SOIL RESULTING FROM CONSTRUCTION ACTIVITIES THAT IS NOT CLAIMED BY THE OWNER SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND PROPERLY DISPOSED OF OFFSITE BY THE CONTRACTOR.
13. AREAS OF EXPOSED EARTH RESULTING FROM CONSTRUCTION SHALL BE SODDED IN KIND UNLESS OTHERWISE NOTED ON PLANS.
14. THE LOWEST PIPE SHALL BE INSTALLED FIRST WHERE UTILITIES CROSS.
15. THE CONTRACTOR SHALL BE RESPONSIBLE FOR TESTING OF ALL MAINS IN ACCORDANCE WITH CURRENT STANDARDS OF LOCAL JURISDICTION. CONTRACTOR SHALL NOTIFY THE LOCAL JURISDICTION AND THE OWNER OR HIS AUTHORIZED REPRESENTATIVE AT LEAST 48 HOURS IN ADVANCE OF PERFORMING TESTS.
16. THE CONTRACTOR SHALL PROVIDE ALL SHEETING, SHORING AND BRACING REQUIRED TO PROTECT ADJACENT STRUCTURES AND TO MINIMIZE TRENCH WIDTH. WHERE A SEPARATE PAY ITEM IS NOT PROVIDED, THE COST OF ALL SHEETING AND BRACING REQUIRED SHALL BE INCLUDED IN THE CONTRACT PRICE FOR THE ITEM OF WORK FOR WHICH SHEETING, SHORING AND BRACING IS ANTICIPATED TO BE REQUIRED IN ACCORDANCE WITH "TRENCH SAFETY ACT".
17. ALL CONCRETE SHALL HAVE A MINIMUM ULTIMATE COMPRESSIVE STRENGTH OF 3,000 PSI (28 DAY STRENGTH), UNLESS OTHERWISE NOTED ON DRAWINGS. ACCESS DRIVES SHALL MEET H - 20 TRAFFIC LOADING REQUIREMENTS.
18. LOCATIONS, ELEVATIONS AND DIMENSIONS OF EXISTING UTILITIES, STRUCTURES AND OTHER FEATURES ARE SHOWN ACCORDING TO THE BEST INFORMATION AVAILABLE AT THE TIME OF THE PREPARATION OF THESE PLANS, BUT DO NOT PURPORT TO BE ABSOLUTELY CORRECT. THE CONTRACTOR SHALL VERIFY THE LOCATION, ELEVATIONS AND DIMENSIONS OF ALL EXISTING UTILITIES, STRUCTURES AND OTHER FEATURES AFFECTING HIS WORK PRIOR TO CONSTRUCTION.
19. THE CONTRACTOR SHALL VERIFY IN THE FIELD THE LOCATION AND ELEVATION OF ALL EXISTING UTILITY CONNECTION POINTS PRIOR TO STARTING CONSTRUCTION AND SHALL IMMEDIATELY NOTIFY THE ENGINEER AND OWNER OF ANY DISCREPANCIES FOUND.
20. ALL POTABLE, FIRE AND IRRIGATION SYSTEM COMPONENTS SHALL REMAIN OPERATIONAL DURING CONSTRUCTION. THE CONTRACTOR SHALL REPAIR ANY DAMAGE TO THESE SYSTEMS IMMEDIATELY.
21. THE CONTRACTOR SHALL ENSURE THAT EXCAVATIONS ARE FREE OF DEBRIS AND ORGANIC MATERIAL PRIOR TO BACKFILLING.
22. THE CONTRACTOR SHALL NOT ENTER OR OCCUPY ANY LAND OUTSIDE THE RIGHTS-OF-WAY OR PRIVATE PROPERTY WITHOUT THE WRITTEN CONSENT OF THE PROPERTY OWNER.

23. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING A NPDES NOI PERMIT FROM EPA, AS WELL AS PREPARING AND MAINTAINING A STORMWATER POLLUTION PREVENTION PLAN FOR BOTH ON-SITE AND OFF-SITE IMPROVEMENTS. THE CONTRACTOR SHALL BECOME FAMILIAR WITH AND COMPLY WITH ALL REQUIREMENTS OF THE EPA NPDES PERMIT FOR THIS PROJECT. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY STORMWATER DISCHARGE PERMIT AND/OR DEWATERING PLAN, AND SHALL BE RESPONSIBLE TO COMPLY WITH ALL CONDITIONS SET FORTH IN THE PERMIT.
24. THE CONTRACTOR SHALL TAKE ALL REASONABLE MEANS TO ELIMINATE THE TRANSPORT OF DUST FROM THE PROJECT SITE. SPECIAL MEASURES, SUCH AS PERIODICALLY APPLYING WATER TO THE WORK SITE TO PREVENT DUST SHALL BE INCORPORATED INTO THE CONTRACTORS WORK PLAN.
25. MAINTAIN ACCESS TO AND OPERATION OF ALL EXISTING PLANT OPERATIONS UNTIL NEW OPERATIONS HAVE BEEN ACCEPTED BY OWNER AND ENGINEER.
26. SURVEY PREPARED BY:  
HYATT SURVEY SERVICES, INC.  
11007 8TH AVENUE EAST, BRADENTON, FLORIDA 34212  
(941) 748.4693
27. GEOTECHNICAL INVESTIGATION PREPARED BY:  
MC SQUARED, INC. (MC2)  
5808-A BRECKENRIDGE PARKWAY, TAMPA, FLORIDA 33610  
(813) 623.3399
28. VERTICAL AND HORIZONTAL CLEARANCES FOR WATER, SEWER, FORCE MAIN, AND RECLAIMED WATER MAINS SHALL MEET FDEP MINIMUM SEPARATION.
29. ALL PLANT SERVICE WATER SPIGOTS (HOSE BIBS, IRRIGATION SYSTEM) SHALL HAVE APPROPRIATE SAFETY PLACARDS.
30. UNLESS OTHERWISE NOTES, ALL STAINLESS STEEL SHALL BE TYPE 316L.
31. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR SAFEKEEPING OF EQUIPMENT AND MATERIALS LEFT ON-SITE DURING CONSTRUCTION
32. PIPE DEFLECTION AT THE JOINTS SHALL NOT EXCEED 75% OF MANUFACTURER'S RECOMMENDATION.
33. ALL PIPE SHALL BE INSTALL AT A MINIMUM OF 3-FOOT OF COVER AND MAINTAIN CONSISTENT SLOPE BETWEEN INVERTS.
34. THE CONTRACTOR SHALL EXCAVATE TO CONFIRM THE LOCATIONS OF EXISTING UTILITIES ADJACENT TO OR CROSSING PROPOSED LINework BEFORE STARTING CONSTRUCTION.
35. ALL BELOW GROUND DUCTILE IRON PIPE SHALL BE ENCASED IN A POLYETHYLENE WRAP IN ACCORDANCE WITH AWWA C105.
36. ALL EXISTING FENCE DISTURBED DURING CONSTRUCTION SHALL BE REPAIRED OR REPLACED AND REINSTALLED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER UNLESS SHOWN TO BE REMOVED ON CONSTRUCTION PLANS.
37. OTHER CONSTRUCTION PROJECTS MAY BE ONGOING AT THE FACILITY DURING THE TIME OF THIS PROJECT. THE CONTRACTOR SHALL COOPERATE WITH OTHER CONTRACTORS THAT MAY BE ON SITE. THE CONTRACTOR SHALL COORDINATE ALL WORK THROUGH THE PLANT SUPERINTENDENT.
38. THE CONTRACTOR SHALL RECEIVE A DESIGNATED AREA FOR STORAGE OF MATERIALS. THE CONTRACTOR IS ULTIMATELY RESPONSIBLE FOR THE SECURITY AND SAFEKEEPING OF CONTRACTOR'S OWN TOOLS AND PROJECT MATERIALS STORED ON SITE.
39. THE CONTRACTOR SHALL MAINTAIN ON-SITE ONE FULL-SIZE SET OF CONTRACT DRAWINGS RED-LINED TO DOCUMENT CONFIRMATION OF ALL PROPOSED WORK AND ANY DEVIATIONS FROM PROPOSED WORK. THESE RED-LINED DRAWINGS SHALL BE MADE AVAILABLE TO OWNER AND ENGINEER UPON REQUEST.
40. THE CONTRACTOR SHALL PROVIDE CERTIFIED "AS-BUILT" DRAWINGS, SIGNED AND SEALED BY A PROFESSIONAL LAND SURVEYOR, THE RECORD DRAWINGS SHALL SHOW CONFIRMATION OF ALL PROPOSED WORK AND ANY DEVIATIONS FROM THE PROPOSED WORK. THE CONTRACTOR SHALL PROVIDE FIVE HARD COPIES AND ONE ELECTRONIC AUTOCAD COPY OF THE "AS-BUILT" DRAWINGS TO THE ENGINEER.

**SURVEY NOTES**

1. THIS IS NOT A BOUNDARY SURVEY.
2. THIS SURVEY IS REFERENCED TO A PROJECTION OF THE FLORIDA STATE PLANE COORDINATE SYSTEM (WEST ZONE NAD 1983/2007 ADJUSTMENT).
3. ALL ELEVATIONS REFER TO NATIONAL GEODETIC VERTICAL DATUM OF 1929 (NGVD 29).
4. THE FOLLOWING BENCHMARK WAS RECOVERED AND UTILIZED FOR THIS SURVEY: RAILROAD SPIKE IN THE NE SIDE OF A POWER POLE WITH A PK NAIL AND MANATEE COUNTY BM DISK ABOVE IT, 45± WEST OF SW CORNER PHASE 1 LENA LANDFILL (NGVD 1929 ELEVATION 38.671'). FOR CONVERSION TO NAVD 1988 ELEVATIONS, A VALUE OF (-0.96') SHOULD BE APPLIED. THIS VALUE WAS DERIVED USING CORPSCON 6 AND IS APPROXIMATE.
5. SITE LIES WITHIN FLOOD ZONES "A" AND "X" AS SCALED FROM THE FEDERAL EMERGENCY MANAGEMENT AGENCY FLOOD INSURANCE RATE MAP: COMMUNITY PANEL NUMBER 120153 0352 C DATED JULY 15, 1992. SUBJECT TO FIELD VERIFICATION.
6. THIS SURVEY IS SUBJECT TO PERTINENT EASEMENTS, RIGHTS-OF-WAY AND RESTRICTIONS OF RECORD, IF ANY.
7. THIS SURVEY DRAWING WAS PREPARED FOR THE EXCLUSIVE USE OF THE PARTY OR PARTIES CERTIFIED TO BELOW FOR THE EXPRESS PURPOSE STATED HEREON AND/OR CONTAINED IN THE CONTRACT BETWEEN HYATT SURVEY SERVICES, INC. AND THE CLIENT FOR THIS PROJECT. COPYING, DISTRIBUTING AND/OR USING THIS DRAWING, IN WHOLE OR IN PART FOR ANY PURPOSE OTHER THAN ORIGINALLY INTENDED WITHOUT WRITTEN CONSENT FROM HYATT SURVEY SERVICES, INC. IS STRICTLY PROHIBITED AND RENDERS THE SURVEYOR'S CERTIFICATION, SIGNATURE AND SEAL NULL AND VOID. ANY QUESTIONS CONCERNING THE CONTENT OR PURPOSE OF THIS DRAWING SHOULD BE DIRECTED TO HYATT SURVEY SERVICES, INC.

**HORIZONTAL/VERTICAL CONTROL**

DESIGNATION (SEE PLAN)	NORTHING	EASTING	ELEVATION
BM # 200 (PKND LB 7203)	1139596.539	510507.125	37.66'
BM # 204 (PKND LB 7203)	1139279.956	510481.022	35.81'
BM # 208 (PKND LB 7203)	1139366.878	511102.444	37.17'

NO.	DESCRIPTION	BY	DATE

**SEWRF  
DEDICATED REJECT LINE**



**MANATEE COUNTY**  
DEPARTMENT OF PUBLIC WORKS  
UTILITIES DEPARTMENT  
4410 66th Street West Bradenton, Florida 34210  
(941) 792-8811



DAVID A. O'CONNOR, PE DATE  
LIC. NO.: 56803

DESIGNED	DOC
DRAWN	ALS
C.C.	
APPROVED	

**GENERAL NOTES**

PROJECT NO:	00193-009-01
DATE:	NOVEMBER 2013
SHEET NO:	<b>G-2</b>

**GENERAL ABBREVIATIONS**

@	AT	JT.	JOINT
AC	ACRES	LG.	LONG
AC	ASPHALTIC CONCRETE	LN.	LANE
ABD	ABANDONED	LP	LIGHT POLE
AL/ALUM.	ALUMINUM	MAX.	MAXIMUM
ANCH.	ANCHOR	MB	MAILBOX
APPROX.	APPROXIMATE	MCC	MOTOR CONTROL CENTER
AVE.	AVENUE	MES	MITERED END SECTION
BLDG.	BUILDING	MON.	MONUMENT
BLVD.	BOULEVARD	NG	NATURAL GROUND
BM	BENCHMARK	N.T.S.	NOT TO SCALE
BOT./BOTT.	BOTTOM	NO.	NUMBER
C	CHANNEL	Ø	DIAMETER/PHASE
C.	CONDUIT	OPNG.	OPENING
C.B.	CATCH BASIN	PKND	PK NAIL W/ DISK
CHKR	CHECKERED	PLCS.	PLACES
CJR.	CIRCLE	POT	POTABLE
CLF	CHAIN LINK FENCE	PP	POWER POLE
CL	CENTERLINE	PROP.	PROPOSED
CMF	CORRUGATED METAL PIPE	P.V.	PLUG VALVE
COL.	COLUMN	PVMT	PAVEMENT
CONN.	CONNECTOR/CONNECTION	R.	RADIUS/RISER/RELAY
CONC.	CONCRETE	RCP	REINFORCED CONCRETE PIPE
CU.	COPPER	REF.	REFERENCE
D.	DEEP/DRAIN	REINF.	REINFORCED/REINFORCING
DBL.	DOUBLE	REQ'D	REQUIRED
DHW.	DESIGN HIGH WATER	RESTR.	RESTRAINED
DISCH.	DISCHARGE	RFH	RECLAIM FIRE HYDRANT
DLW.	DESIGN LOW WATER	RW/RW	RIGHT-OF-WAY
DN.	DOWN	SAN.	SANITARY
DR.	DRIVE	SEC.	SECTION
DRWY	DRIVEWAY	SGL	SINGLE
E.W.	EACH WAY	SPRK	SPRINKLER
EA.	EACH	SQ.	SQUARE
EL/ELEV.	ELEVATION	SN	SIGN
ELEC.	ELECTRICAL CONDUIT	ST.	STREET
ETC.	AND SO FORTH	STL.	STEEL
EXIST.	EXISTING	S.U.E.	SUBSURFACE UTILITY ENGINEERING
EXP.	EXPANSION	SW/SWK	SIDEWALK
FF.	FOOT	SYM.	SYMMETRICAL
FT.	FINISHED FLOOR	TOB	TOP OF BANK (DITCH)
FTG.	FOOTING	T.&B.	TOP & BOTTOM
GALV.	GALVANIZED	TEL	TELEPHONE
GDRL	GUARDRAIL	TEMP.	TEMPORARY
GEN	GENERATOR	THK	THICK
GI	GRADED INLET	TOS	TOE OF SLOPE (DITCH)
GPM	GALLONS PER MINUTE	TYP.	TYPICAL
GRTG.	GRATING	UG	UNDERGROUND GAS
GRND	GROUND	UP	UTILITY POLE
G.S.	GALVANIZED STEEL	UT	UNDERGROUND TELEPHONE
GR./GRD.	GRADE	VERT.	VERTICAL
GWP	GUY WIRE POLE	W	WIDE FLANGE/WIDE/WATT
HDWALL	HEADWALL	W/	WITH
H.R.	HANDRAIL	WL	WATER LINE
IN.	INCH	WL.	WATER LEVEL
INV.	INVERT	WM	WATER MAIN
IP	IRON PIPE	W.M.	WATER METER
IR	IRON ROD	W.P.	WEATHER PROOF
J.B.	JUNCTION BOX	W.S.	WALL SLEEVE/WATER STOP/ WATER SERVICE
		WTR.	WATER

**FLOW ABBREVIATIONS**

AD	AIR DUCT
AL	ALUM
BW	BACKWASH
CA	COMPRESSED AIR
CLE	CLARIFIER EFFLUENT
CL2G	CHLORINE GAS
CL2S	CHLORINE SOLUTION
DR	DRAIN
FBW	SAND FILTER BACKWASH
FE	SAND FILTER EFFLUENT
FEQ	FLOW EQUALIZATION
FM	FORCE MAIN
GR	GRIT
LC	LEACHATE COLLECTION
MHE	MANHOLE ELECTRIC
ML	MIXED LIQUOR
OF	OVERFLOW
OF P	OVERFLOW POLYMER
P	???
PDFM	PLANT DRAIN FORCE MAIN
PW	POTABLE WATER
RAS	RETURN ACTIVATED SLUDGE
RCW	RECLAIMED WATER
REJ	REJECT
RML	RECIRCULATED MIXED LIQUOR
RW	RECLAIMED WATER
SAM	SAMPLE
SC	SCUM
SC	STORMWATER COLLECTION
SPW	STORAGE POND WATER
SS	SANITARY SEWER
SWV	SANITARY WATER VALVE
TS	THICKENED SLUDGE
UN	UNDERDRAIN
WAS	WASTE ACTIVATED SLUDGE
WW	WASTEWATER

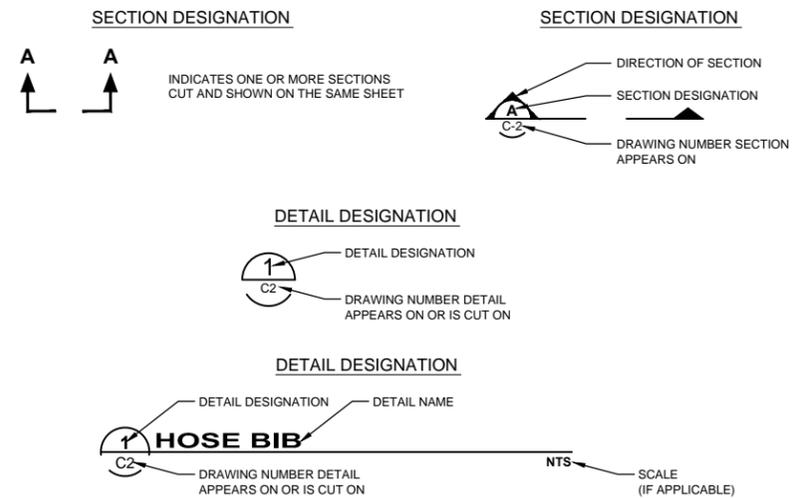
**PIPING ABBREVIATIONS**

ABD	ABANDONED
CO	CLEANOUT
CORP	CORPORATION
CV	CHECK VALVE
DI	DUCTILE IRON
DIA	DIAMETER
DIP	DUCTILE IRON PIPE
ELEC	ELECTRICAL
EXIST	EXISTING
FH	FIRE HYDRANT
FL	FLANGED
GV	GATE VALVE
HB	HOSE BIBB
HDPE	HIGH DENSITY POLYETHYLENE
MH	MANHOLE
MJ	MECHANICAL JOINT
PE	PLAIN END
PS	PUMP STATION
PVC	POLYVINYLCHLORIDE
RED	REDUCER
SCH	SCHEDULE
SS	STAINLESS STEEL
TBR	TO BE REMOVED
UE	UNDERGROUND ELECTRIC
VERT	VERTICAL

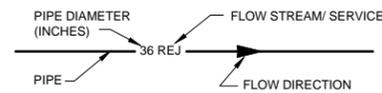
**LEGEND**

EXISTING		PROPOSED
---	PIPELINE	---
---	GATE VALVE	---
---	BUTTERFLY VALVE	---
---	BALL VALVE	---
---	PLUG VALVE	---
---	REDUCER	---
---	AIR RELEASE VALVE	---
---	GAS VALVE	---
---	MANHOLE	---
---	CATCH BASIN	---
---	FIRE HYDRANT	---
---	TOP OR TOE OF BANK	---
---	CHAIN LINK FENCE	---
---	R/W OR PROPERTY LINE	---
////	PIPING, STRUCTURES OR EQUIPMENT TO BE REMOVED	
●	BENCHMARK	
○	FIRE HYDRANT	
⊙	LIGHT POLE	
⊗	VALVE	
⊕	SANITARY WATER VALVE	
⊖	RECLAIMED WATER METER	
⊗	SANITARY MANHOLE	
⊕	ELECTRIC MANHOLE	
⊙	BOLLARD	
⊗	POWER POLE	
⊕	UTILITY RISER	
⊖	IRRIGATION HEAD	
⊗	S.U.E. TEST HOLE LOCATION	

**DRAFTING LEGEND**



**PIPE IDENTIFICATION**



NOTE: THE LEGEND LISTED REPRESENT A COMPREHENSIVE STANDARD GUIDE INTENDED FOR GENERAL USE. THEREFORE, NOT ALL OF THE SYMBOLS AND ABBREVIATIONS CONTAINED ON THIS SHEET ARE NECESSARILY USED ON THIS PARTICULAR CONTRACT.

NO.	DESCRIPTION	BY	DATE

**SEWRF DEDICATED REJECT LINE**



**MANATEE COUNTY**  
 DEPARTMENT OF PUBLIC WORKS  
 UTILITIES DEPARTMENT  
 4410 66th Street West Bradenton, Florida 34210  
 (941) 792-8811

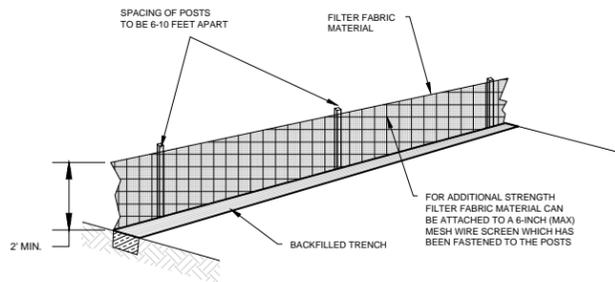


DAVID A. O'CONNOR, PE DATE  
 LIC. NO.: 56803

DESIGNED	DOC
DRAWN	ALS
C.C.	
APPROVED	

**LEGEND AND ABBREVIATIONS**

PROJECT NO:	00193-009-01
DATE:	NOVEMBER 2013
SHEET NO:	<b>G-3</b>



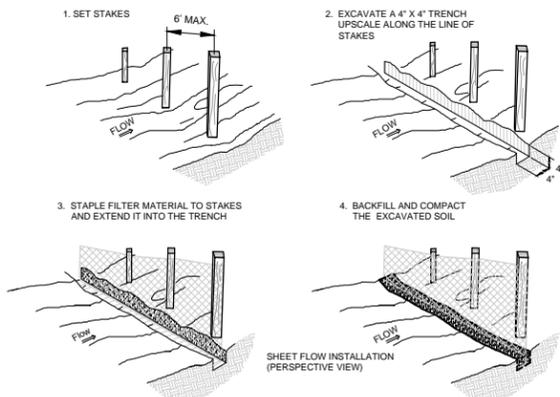
FILTER FABRIC MATERIAL SECURELY FASTENED TO THE POSTS OR IF USED THE WIRE MESH



ATTACHING TWO SILT FENCES

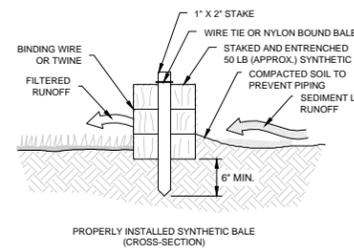
**INSTALLING A FILTER FABRIC SILT FENCE**

NOT TO SCALE

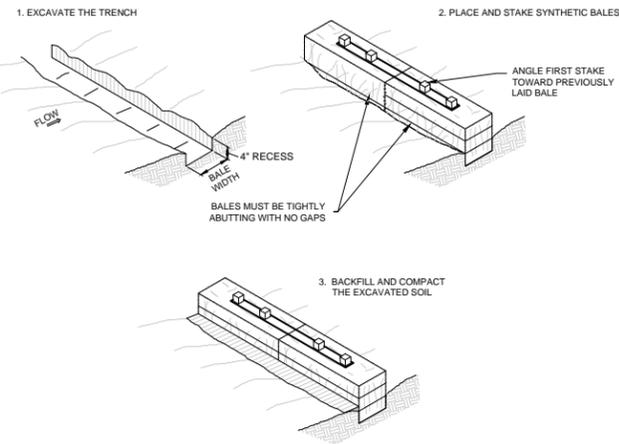


POINTS 'A' SHOULD BE HIGHER THAN POINT 'B'

DRAINAGE INSTALLATION (FRONT ELEVATION)

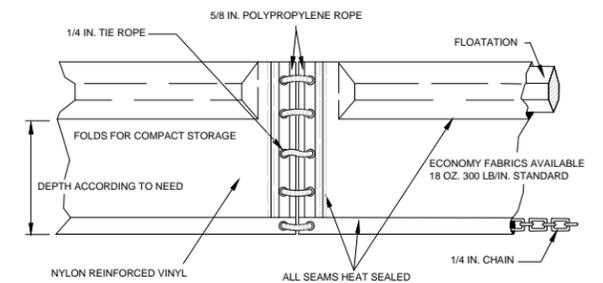


PROPERLY INSTALLED SYNTHETIC BALES (CROSS-SECTION)

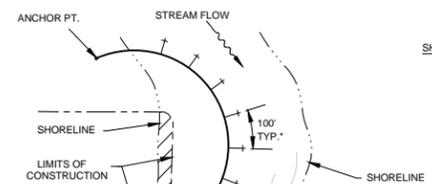


**TEMPORARY SYNTHETIC BALE SEDIMENT BARRIER**

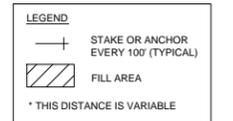
NOT TO SCALE



TYPE I (FRONT ELEVATION)

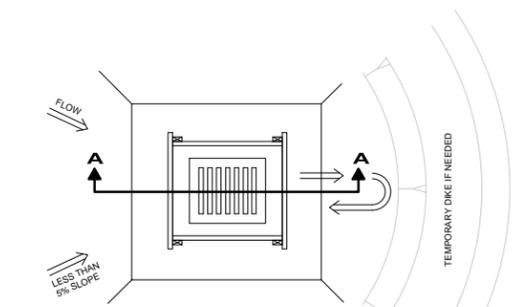


TYPICAL LAYOUT (PLAN VIEW)

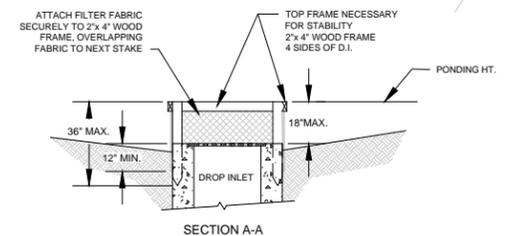


**TEMPORARY FLOATING TURBIDITY BARRIER**

NOT TO SCALE



PLAN VIEW

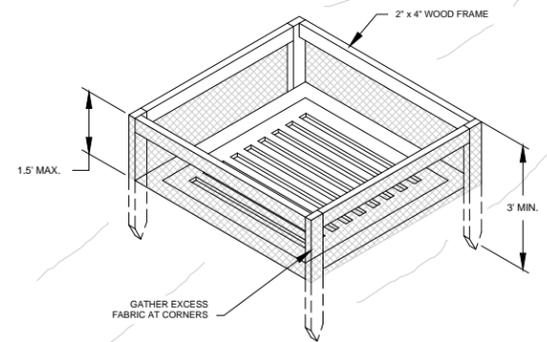


SECTION A-A

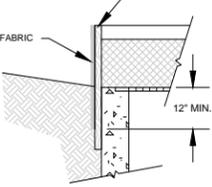
- NOTES:
- DROP INLET SEDIMENT BARRIERS ARE TO BE USED FOR SMALL, NEARLY LEVEL DRAINAGE AREAS. (LESS THAN 5%)
  - USE 2"x 4" WOOD OR EQUIVALENT METAL STAKES. (3 FT. MIN. LENGTH)
  - INSTALL 2"x 4" WOOD TOP FRAME TO INSURE STABILITY.
  - THE TOP OF THE FRAME (PONDING HEIGHT) MUST BE WELL BELOW THE GROUND ELEVATION DOWNSLOPE TO PREVENT RUNOFF FROM BYPASSING THE INLET. A TEMPORARY DIKE MAY BE NECESSARY ON THE DOWNSLOPE SIDE OF THE STRUCTURE.

**TEMPORARY SEDIMENT BARRIER AT DROP INLET**

NOT TO SCALE

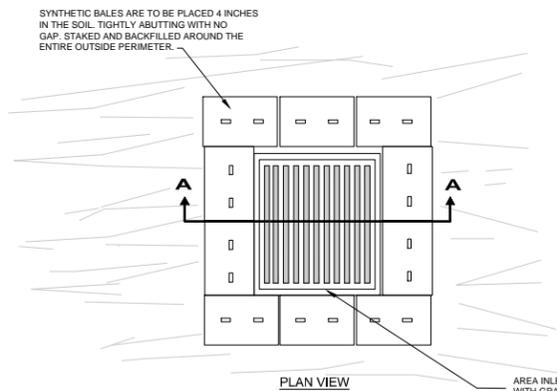


ISOMETRIC VIEW

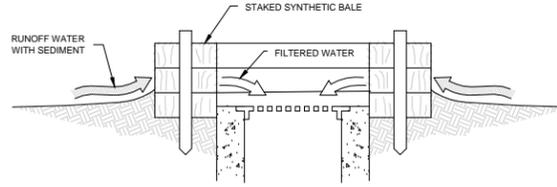


ELEVATION OF STAKE AND FABRIC ORIENTATION

SPECIFIC APPLICATION  
THIS METHOD OF INLET PROTECTION IS APPLICABLE WHERE THE INLET DRAINS IN A RELATIVELY FLAT AREA (SLOPE NO GREATER THAN 5%) WHERE THE INLET SHEET OF OVERLAND FLOWS (NOT EXCEEDING 1 C.F.S.) ARE TYPICAL. THE METHOD SHALL NOT APPLY TO INLETS RECEIVING CONCENTRATED FLOWS, SUCH AS IN STREET OR HIGHWAY MEDIANS.



PLAN VIEW



SECTION A-A

THIS METHOD OF INLET PROTECTION IS APPLICABLE WHERE THE INLET DRAINS A RELATIVELY FLAT AREA (SLOPES NO GREATER THAN 5%) WHERE SHEET OR OVERLAND FLOWS (NOT EXCEEDING 0.5 CFS) ARE TYPICAL. THE METHOD SHALL NOT APPLY TO INLETS RECEIVING CONCENTRATED FLOWS, SUCH AS STREET OR HIGHWAY MEDIANS.

**TEMPORARY SYNTHETIC BALE SEDIMENT BARRIER AT STORM DRAIN DROP INLET**

NOT TO SCALE

**EROSION CONTROL NOTES**

- IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO CONTROL AND PREVENT EROSION AND THE TRANSPORTATION OF SEDIMENT TO SURFACE DRAINS AND OUTFALLS.
- THE CONTRACTOR SHALL PROVIDE SILT BARRIERS TO CONTROL EROSION AND SEDIMENTATION FROM TAKING PLACE OUTSIDE THE LIMITS OF THE PROJECT. THE SILT BARRIERS SHALL BE PLACED IN ACCORDANCE WITH THE REQUIREMENTS OF FDOT INDEX NO. 102, 103 AND 104 OR AS DIRECTED BY THE CITY ENGINEER.
- REQUIRED EROSION CONTROL MEASURES SHALL REMAIN INTACT THROUGHOUT CONSTRUCTION. FAILURE TO INSTALL OR PROPERLY MAINTAIN REQUIRED EROSION CONTROL WILL RESULT IN ENFORCEMENT ACTION WHICH MAY INCLUDE CITATIONS AS PROVIDED BY APPLICABLE LOCAL ORDINANCE AND CHAPTERS 40D-4 AND 40D-40, F.A.C. INITIATION OF CIVIL PENALTY PROCEDURES PURSUANT TO SECTION 373.129, F.A.C. CAN RESULT IN A PENALTY NOT TO EXCEED \$10,000 PER OFFENSE WITH EACH DATE DURING WHICH SUCH VIOLATION OCCURS CONSTITUTING A SEPARATE OFFENSE.
- ALL WORK PERFORMED SHALL COMPLY WITH THE REGULATIONS AND ORDINANCES OF THE VARIOUS GOVERNMENTAL AGENCIES HAVING JURISDICTION OVER THE WORK.
- CONTRACTOR SHALL CONSTRUCT TURBIDITY BARRIERS APPROXIMATELY 25 FEET DOWNSTREAM OF END SECTIONS AT POND LOCATIONS SHOWN ON PLAN SHEETS. CONTRACTOR TO INSPECT AND MAINTAIN EACH TURBIDITY BARRIER DAILY.
- CONTRACTOR MAY USE OTHER ACCEPTABLE EROSION CONTROL DEVICES AROUND INLETS AS APPROVED BY THE ENGINEER.

NO.	DESCRIPTION	BY	DATE

**SEWRF DEDICATED REJECT LINE**



**MANATEE COUNTY**  
DEPARTMENT OF PUBLIC WORKS  
UTILITIES DEPARTMENT  
4410 66th Street West Bradenton, Florida 34210  
(941) 792-8811



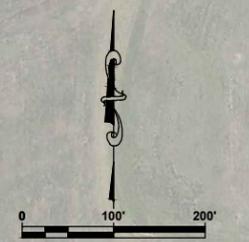
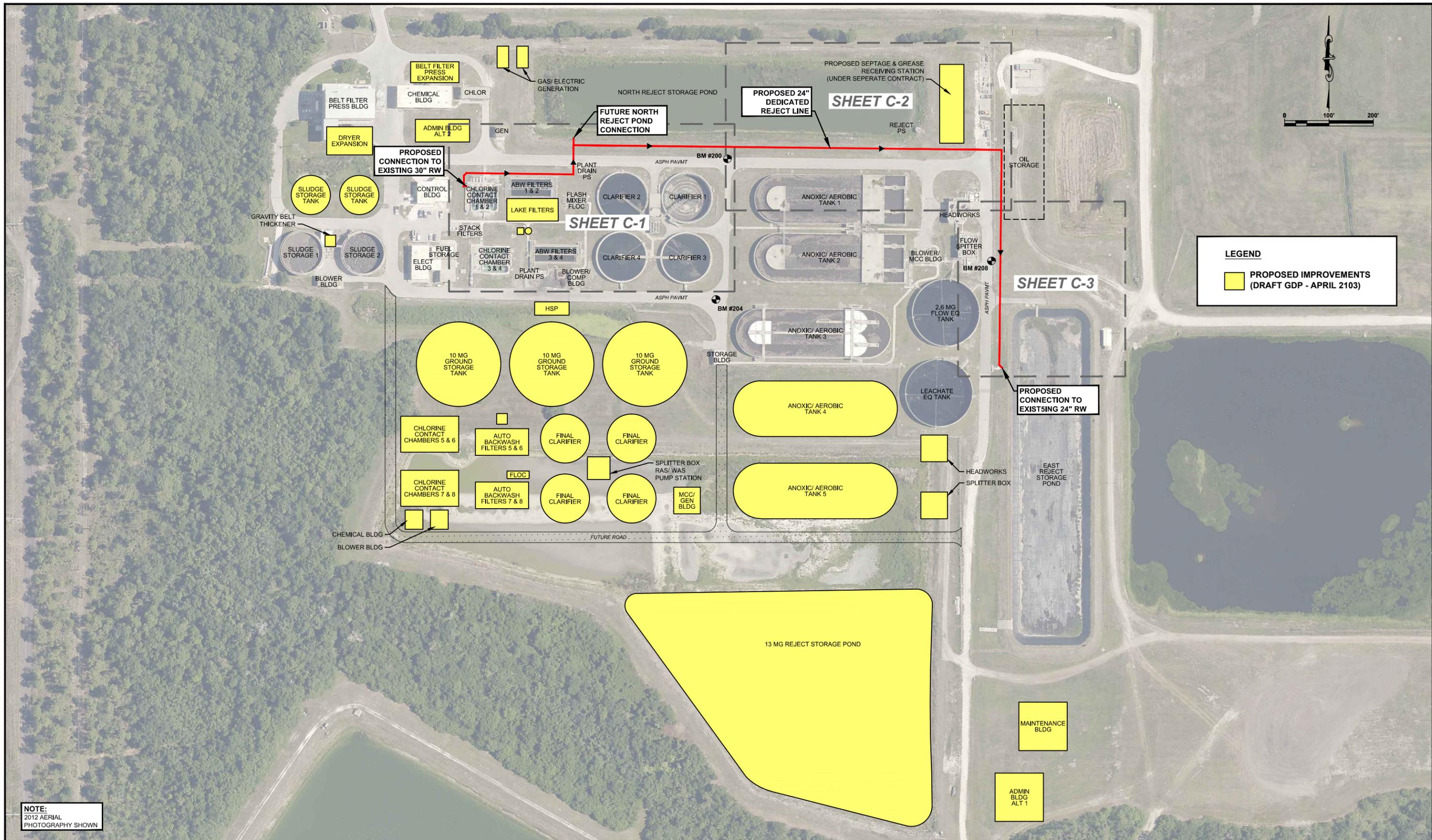
380 Park Place Blvd., Suite 300, Clearwater, Florida, 33759  
www.cardnotbe.com - 727.531.3505  
Certificate of Authorization No. 3843

DESIGNED \_\_\_\_\_ DATE \_\_\_\_\_  
DRAWN \_\_\_\_\_  
O.C. \_\_\_\_\_  
APPROVED \_\_\_\_\_  
DAVID A. O'CONNOR, PE  
LIC. NO.: 56803

DESIGNED DOC  
DRAWN ALS  
O.C.  
APPROVED

**EROSION CONTROL DETAILS AND NOTES**

PROJECT NO:  
00193-009-01  
DATE:  
NOVEMBER 2013  
SHEET NO:  
**G-4**



**LEGEND**

PROPOSED IMPROVEMENTS (DRAFT GDP - APRIL 2103)

**NOTE:**  
2012 AERIAL PHOTOGRAPHY SHOWN

NO.	DESCRIPTION	BY	DATE

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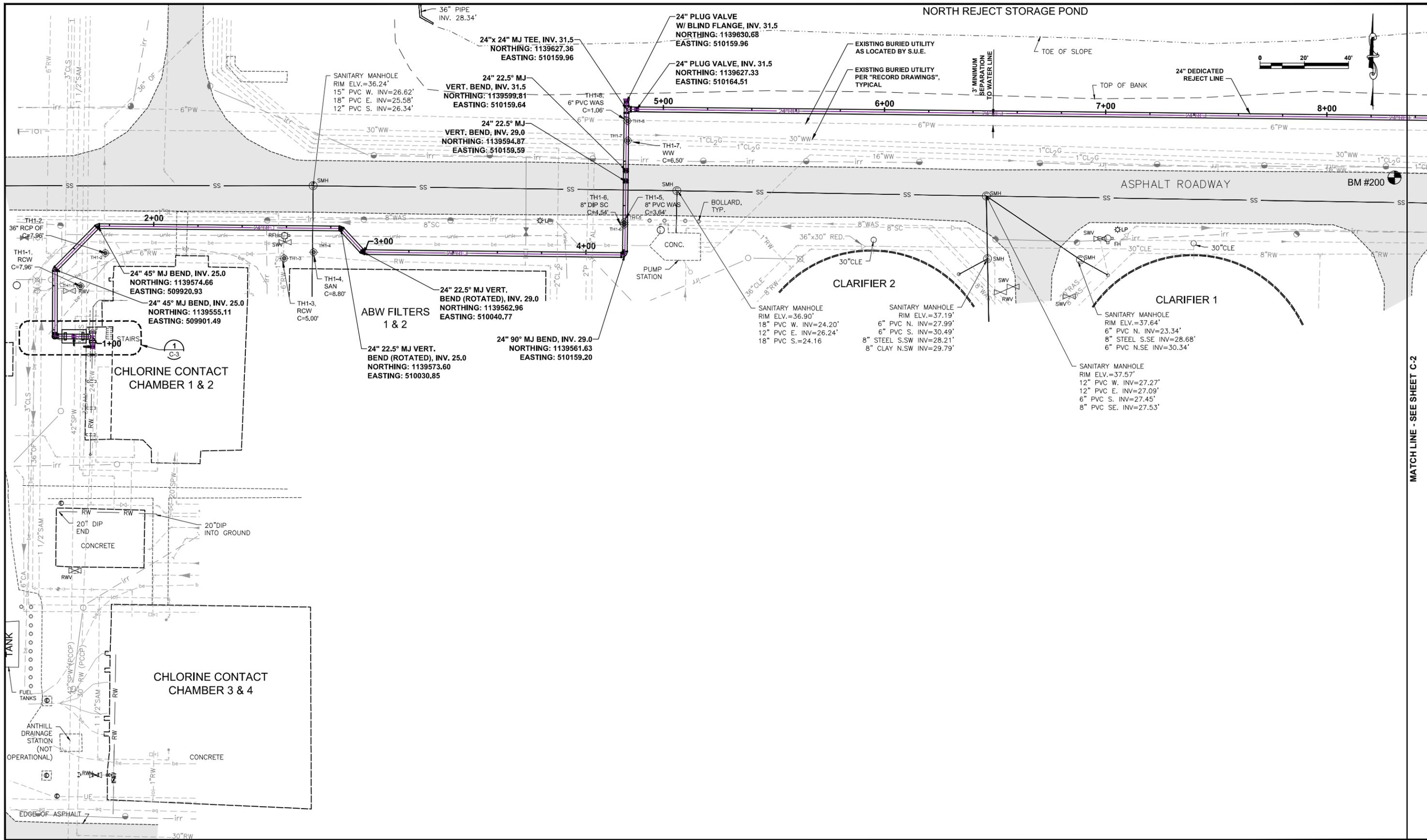
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DAVID A. O'CONNOR, PE  
LIC. NO.: 56803

DESIGNED	DOC
DRAWN	ALS
C.C.	
APPROVED	

**OVERALL PROJECT AREA  
AND SHEET LAYOUT KEY**

PROJECT NO:  
00193-009-01  
DATE:  
NOVEMBER 2013  
SHEET NO:  
**G-5**



MATCH LINE - SEE SHEET C-2

NO.	DESCRIPTION	BY	DATE

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UTILITIES DEPARTMENT  
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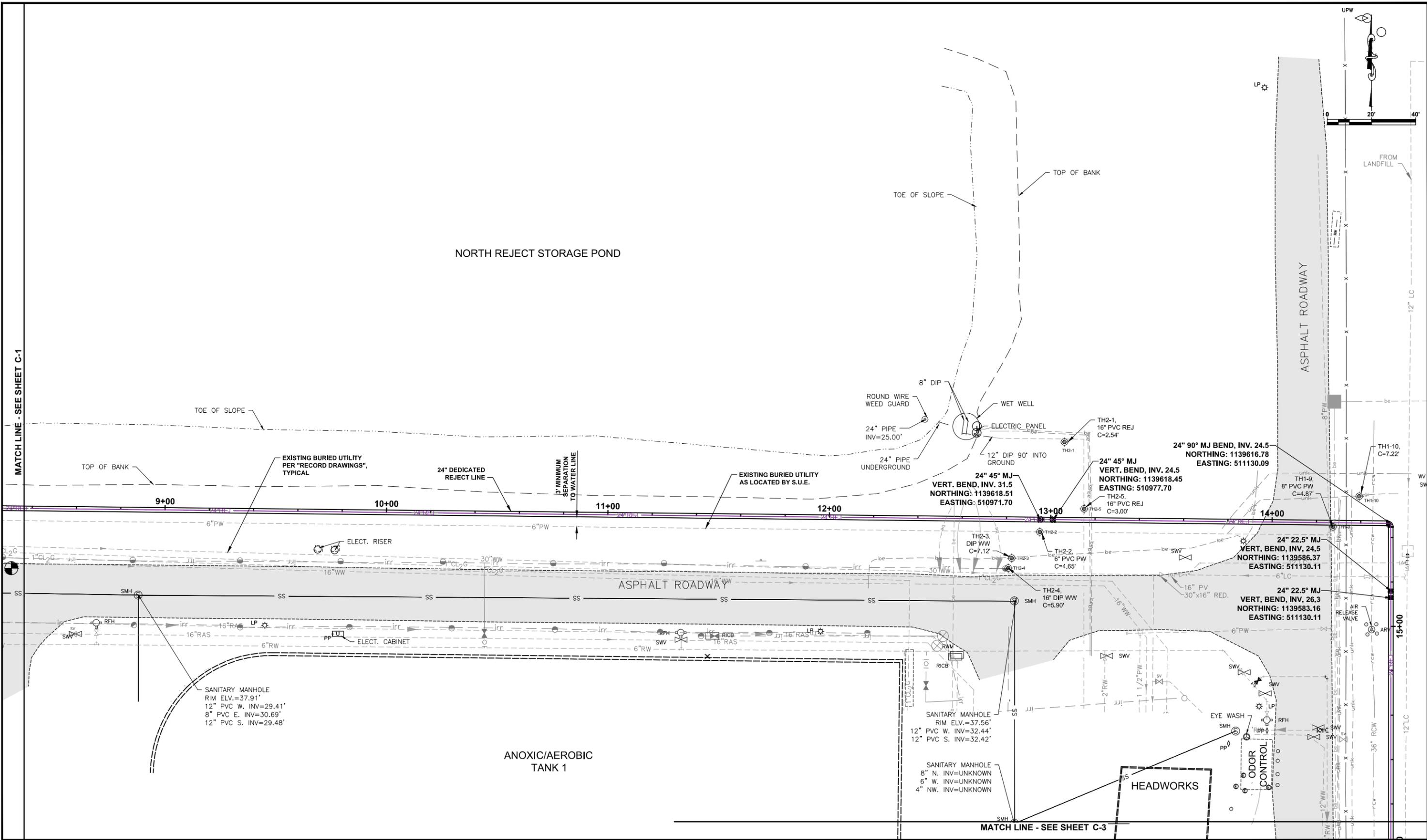
DAVID A. O'CONNOR, PE DATE  
LIC. NO.: 56803

DESIGNED \_\_\_\_\_  
DRAWN \_\_\_\_\_  
O.C. \_\_\_\_\_  
APPROVED \_\_\_\_\_

**YARD PIPING (1)**

PROJECT NO:  
00193-009-01  
DATE:  
NOVEMBER 2013  
SHEET NO:  
**C-1**

FILE: J:\00193\00193009\01\ACAD\dwg\Sheets\YARD PIPING.dwg LAST SAVED: Fri, 11/08/13 2:46p PLOTTED: Fri, 11/08/13 3:04p BY: alan.schaffer



MATCH LINE - SEE SHEET C-1

MATCH LINE - SEE SHEET C-3

NO.	DESCRIPTION	BY	DATE

**SEWRF  
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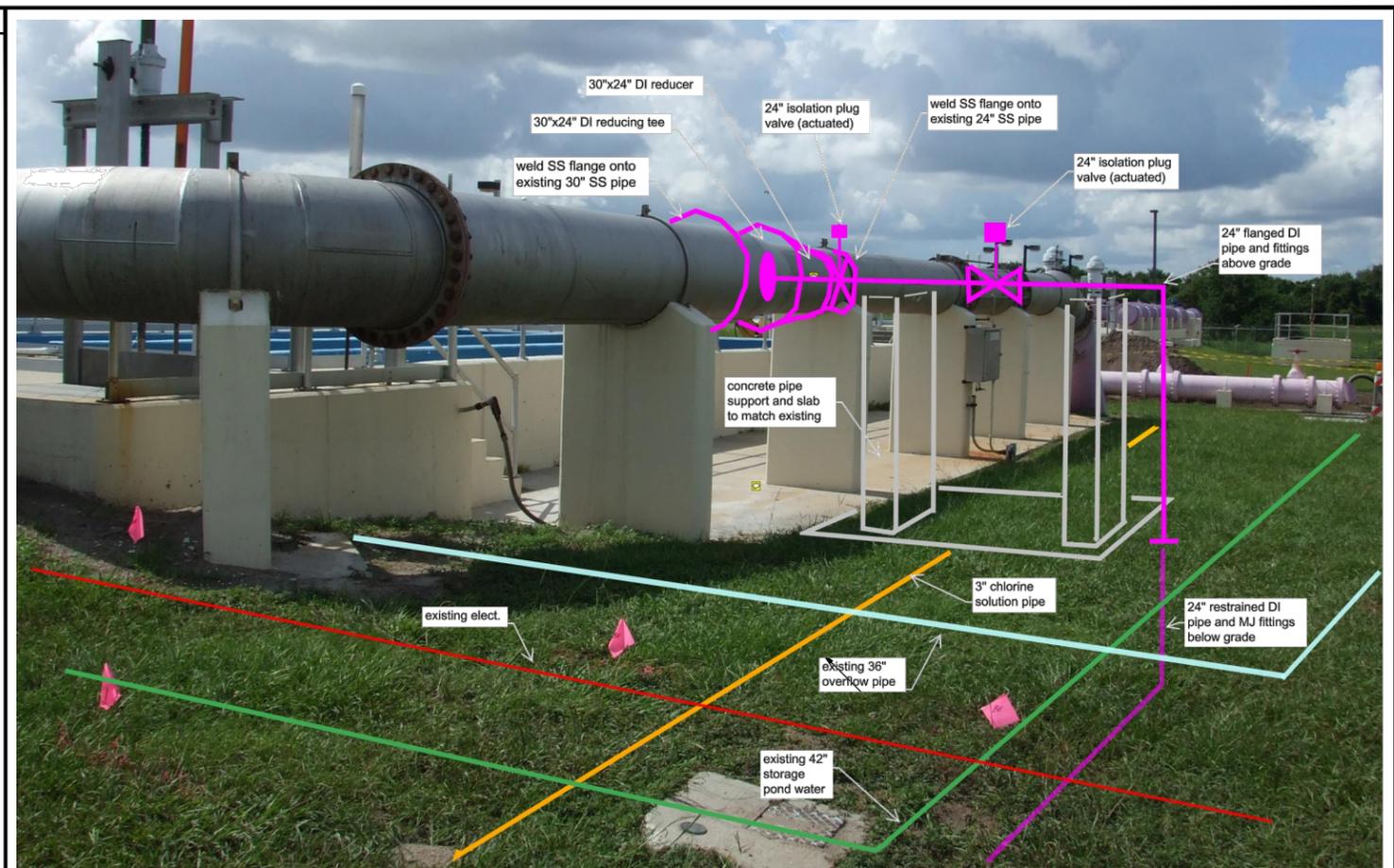
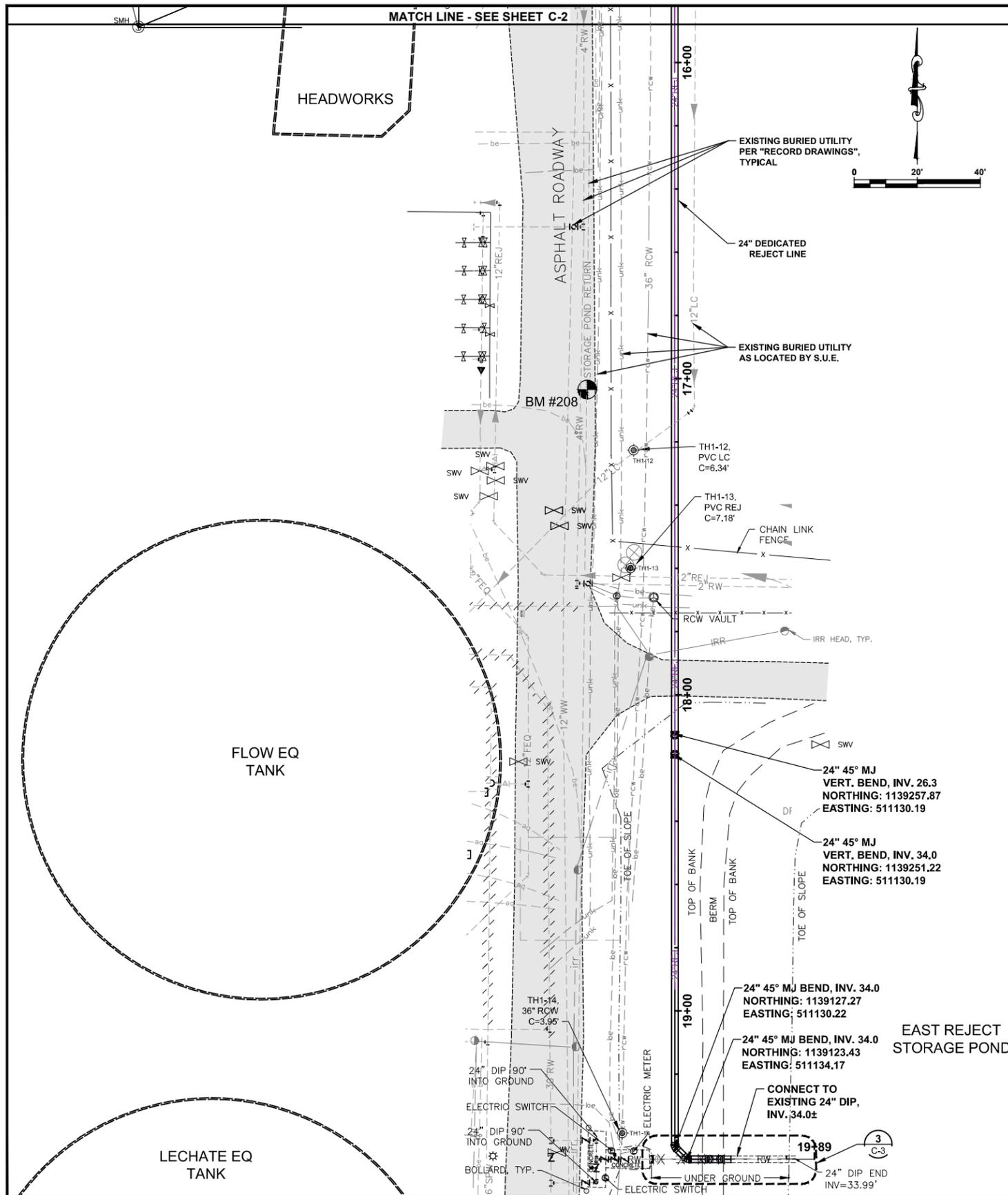
DAVID A. O'CONNOR, PE  
LIC. NO.: 56803

DESIGNED \_\_\_\_\_  
DRAWN \_\_\_\_\_  
O.C. \_\_\_\_\_  
APPROVED \_\_\_\_\_

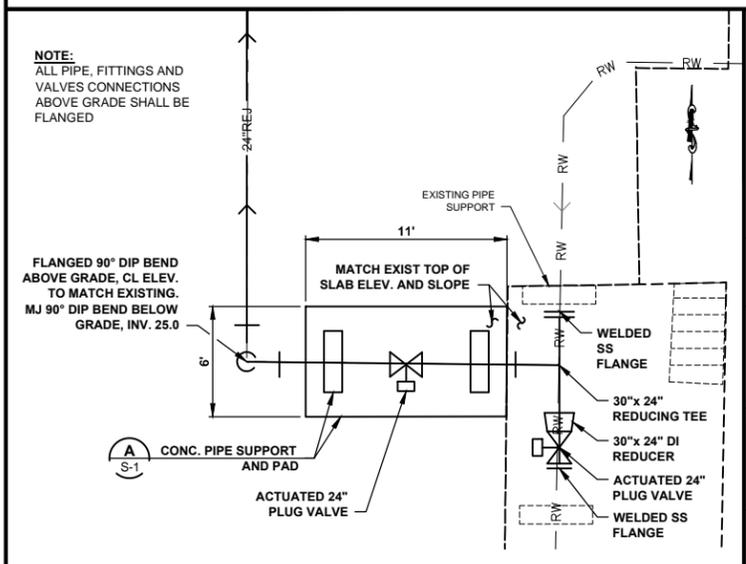
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PROJECT NO:  
00193-009-01  
DATE:  
NOVEMBER 2013  
SHEET NO:  
**C-2**

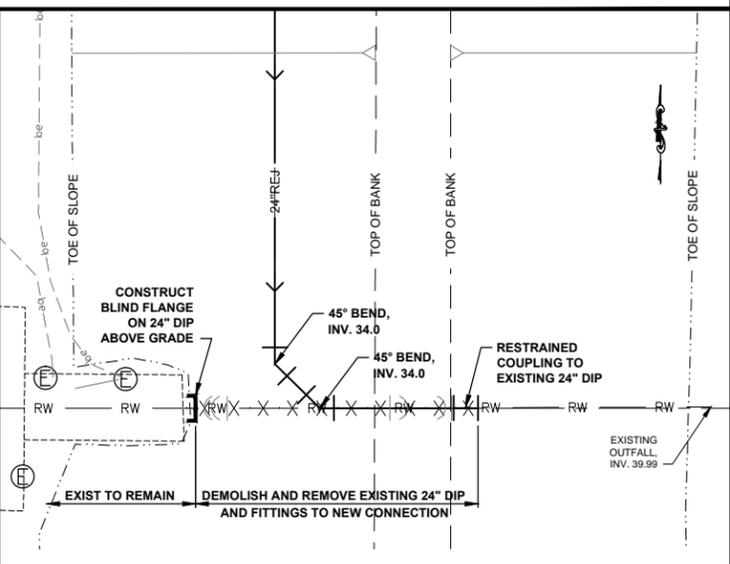
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**1 WESTERLY CONNECTION TO EXISTING**  
C-3 NTS



**2 WESTERLY CONNECTION TO EXISTING DETAIL**  
C-3 NTS



**3 EASTERLY CONNECTION TO EXISTING DETAIL**  
C-3 NTS

NO.	DESCRIPTION	BY	DATE

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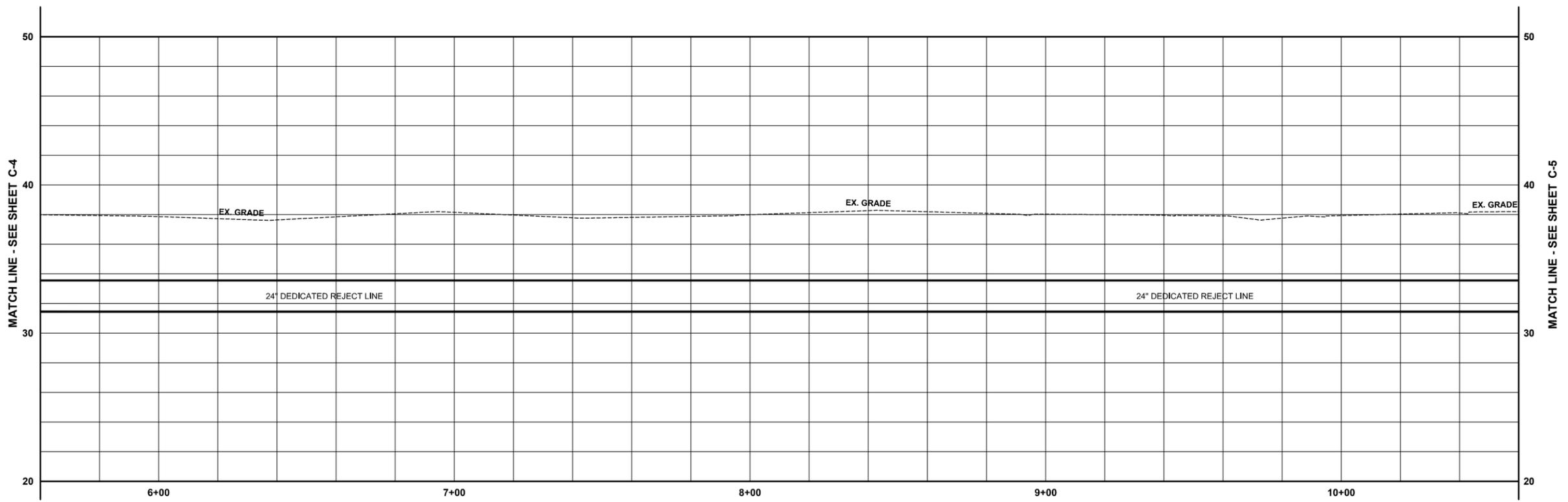
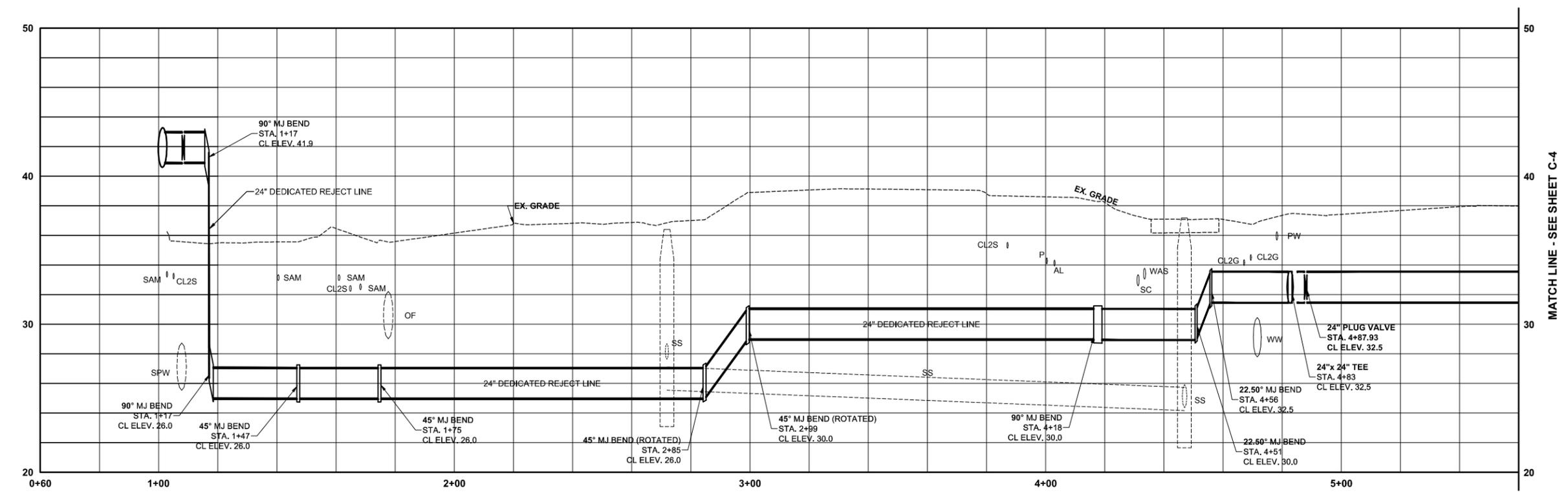
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DESIGNED: \_\_\_\_\_  
DRAWN: \_\_\_\_\_  
O.C. \_\_\_\_\_  
APPROVED: \_\_\_\_\_  
DATE: \_\_\_\_\_

**YARD PIPING (3)**

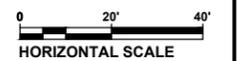
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DATE: NOVEMBER 2013  
SHEET NO: **C-3**

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MATCH LINE - SEE SHEET C-4

MATCH LINE - SEE SHEET C-5



NO.	DESCRIPTION	BY	DATE

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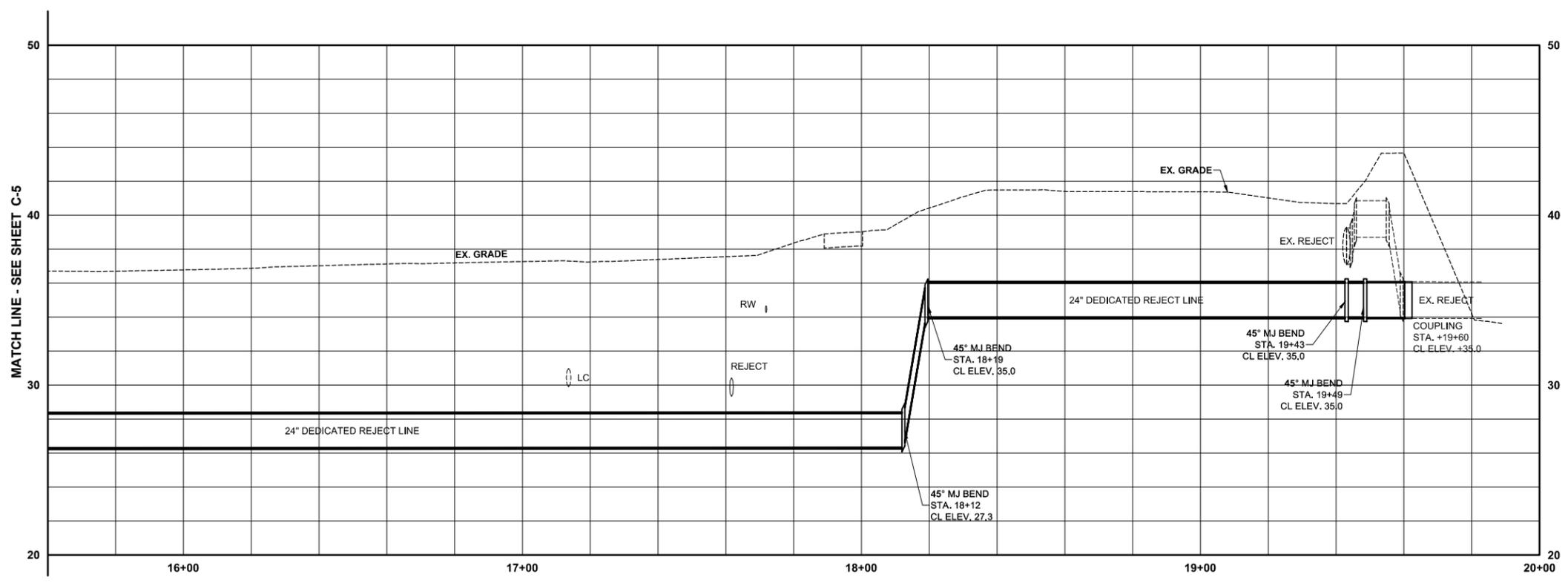
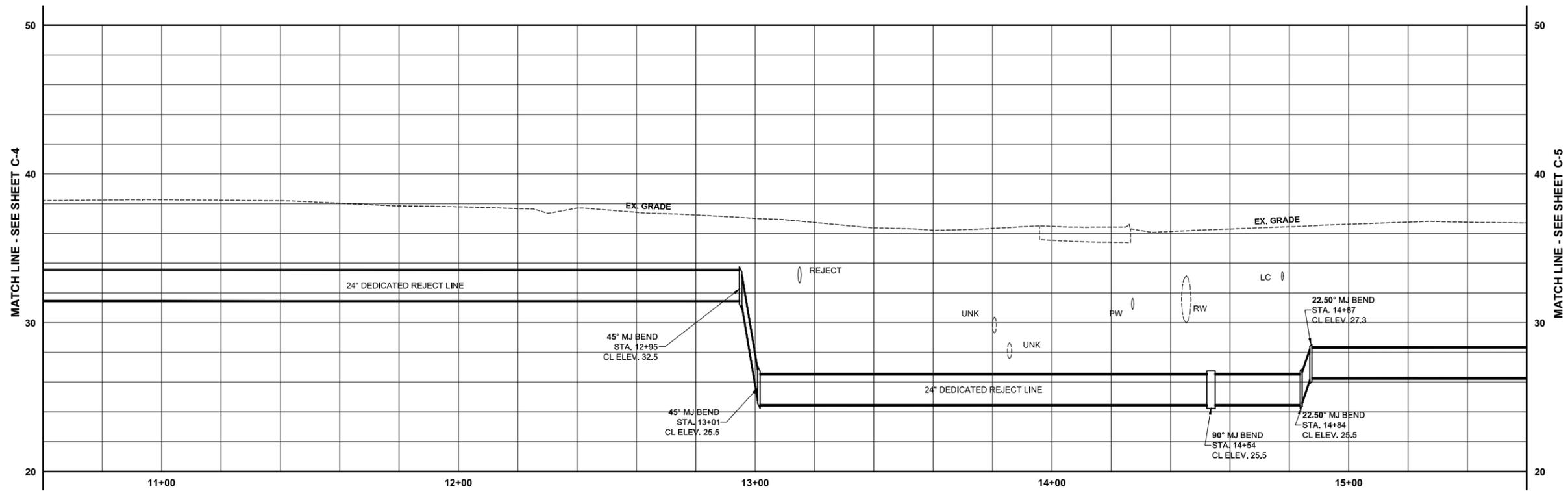


DESIGNED \_\_\_\_\_ DATE \_\_\_\_\_  
 DRAWN \_\_\_\_\_  
 O.C. \_\_\_\_\_  
 APPROVED \_\_\_\_\_  
 DAVID A. O'CONNOR, PE LIC. NO.: 56803

**PROFILE SHEET (1)**

PROJECT NO:  
00193-009-01  
 DATE:  
NOVEMBER 2013  
 SHEET NO:  
**C-4**

FILE: J:\00193\00193009\01\ACAD\dwg\Sheets\YARD PIPING.dwg LAST SAVED: Fri, 11/08/13 2:46p PLOTTED: Fri, 11/08/13 3:06p BY: alan.schaffer



NO.	DESCRIPTION	BY	DATE

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DAVID A. O'CONNOR, PE  
LIC. NO.: 56803

DESIGNED \_\_\_\_\_  
DRAWN \_\_\_\_\_  
O.C. \_\_\_\_\_  
APPROVED \_\_\_\_\_

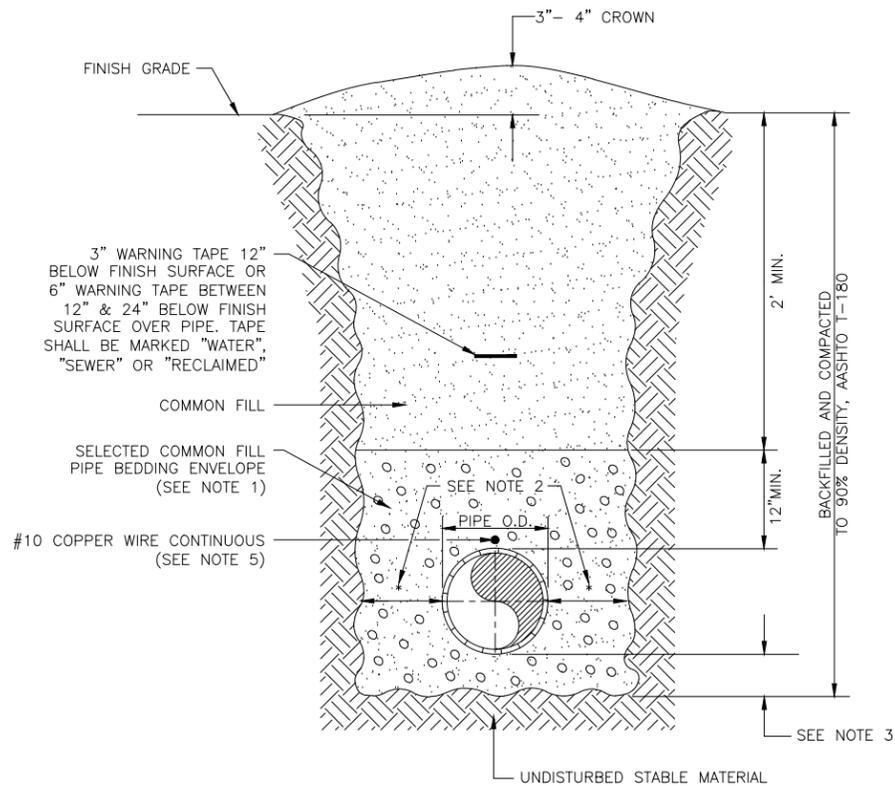
**PROFILE SHEET (2)**

PROJECT NO:  
00193-009-01  
DATE:  
NOVEMBER 2013  
SHEET NO:  
**C-5**

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**NOTES:**

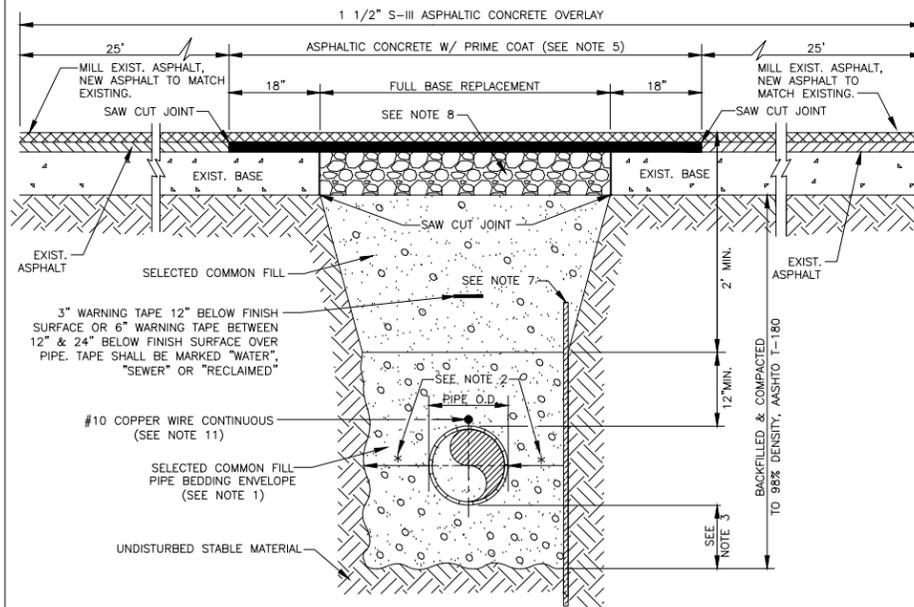
1. USE OF TYPE A-2 AND A-3 PIPE BEDDING TO BE DETERMINED IN THE FIELD BY THE ENGINEER.
2. PROVIDE ADEQUATE CLEARANCE TO PLACE AND COMPACT STAGE 1 BEDDING MATERIAL IN TRENCH AREA BELOW PIPE SPRINGLINE. PIPE EMBEDMENT MUST BE COMPACTED OUT TO THE TRENCH WALL OR 2.5 TIMES THE PIPE OD, WHICHEVER IS LESS.
3. TYPICALLY 4" TO 6".
4. PIPE INSTALLATION SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S WRITTEN INSTRUCTIONS.
5. TRACER WIRE NOT REQUIRED FOR GRAVITY SEWERS.



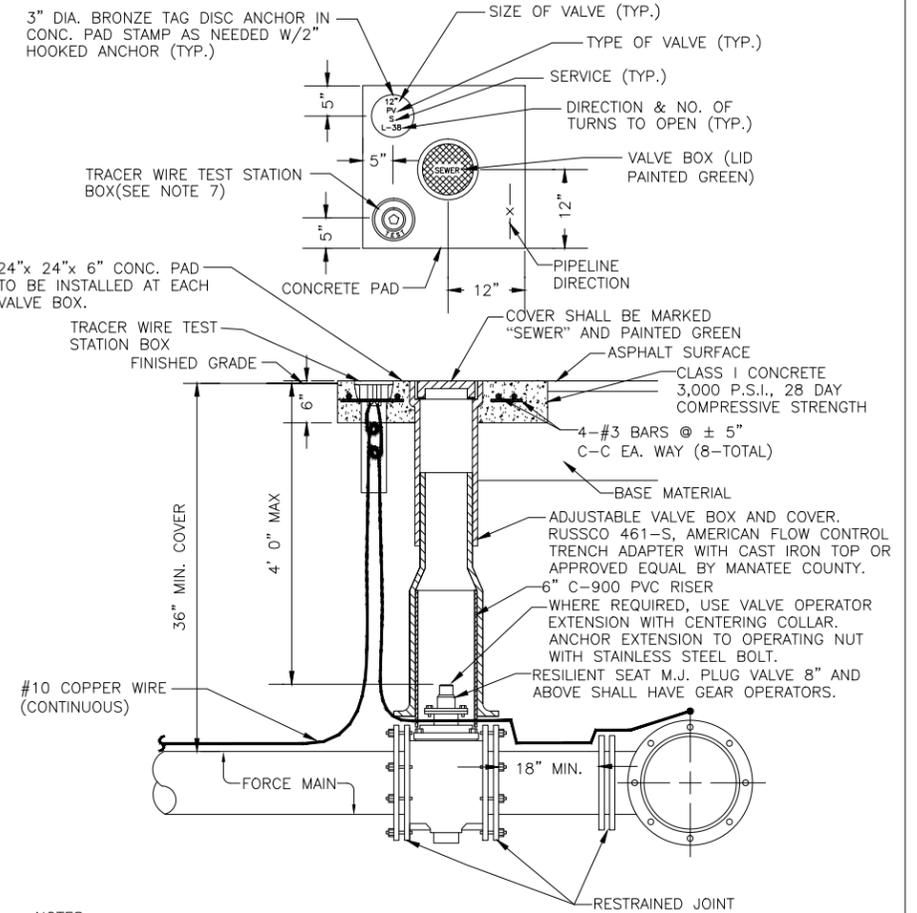
<b>MANATEE COUNTY</b> PUBLIC WORKS DEPARTMENT		TRENCH WITH UNIMPROVED SURFACE TYPE A-1 PIPE BEDDING	UG-11
REV. BY WRT/KE	DATE 03/11	MAY 10, 2011 DATE OF APPROVAL	PAGE 111

**NOTES:**

1. USE OF TYPE A-2 AND A-3 PIPE BEDDING TO BE DETERMINED IN THE FIELD BY THE ENGINEER.
2. PROVIDE ADEQUATE CLEARANCE TO PLACE AND COMPACT STAGE 1 BEDDING MATERIAL IN TRENCH AREA BELOW PIPE SPRINGLINE. PIPE EMBEDMENT MUST BE COMPACTED OUT TO THE TRENCH WALL OR 2.5 TIMES THE PIPE OD, WHICHEVER IS LESS.
3. TYPICALLY 4" TO 6".
4. PIPE INSTALLATION SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S WRITTEN INSTRUCTIONS.
5. ASPHALTIC CONCRETE STRUCTURE COURSE WITH PRIME COAT SHALL BE THE SAME DEPTH AND TYPE AS EXISTING OR A MINIMUM OF 1 1/4 INCH, WHICHEVER IS GREATER.
6. MILL 25' BACK FROM TRENCH SAW CUT. ADJUST MILLING PER INDIVIDUAL SITE TO NOT IMPACT BASE. BUTT JOINT TO EXIST ASPHALT. FINAL OVERLAY LIMITS ARE FROM EDGE OF PAVEMENT TO EDGE OF PAVEMENT. FINAL OVERLAY TO MATCH EXISTING WITH NO DISCERNABLE "BUMP" AT JOINT. MILLING LIMITS THAT IMPACT INTERSECTION SHALL BE ADDRESSED ON A CASE BY CASE BASIS AND APPROVED BY MANATEE COUNTY.
7. SHEETING ORDERED LEFT IN PLACE TO BE CUT OFF 24" BELOW FINISHED GRADE OR 12" BELOW SUBGRADE.
8. BASE SHALL BE 8" MINIMUM THICKNESS CRUSHED CONCRETE.
9. TEMPORARY PATCHES WILL BE INSTALLED TO PROVIDE A SMOOTH ALL WEATHER SURFACE AT ALL TIMES. PERMANENT REPLACEMENT TO BE MADE AS SOON AS POSSIBLE.
10. RESTORE SIGNAGE & MARKING WITH THERMOPLASTIC PER FDOT STANDARDS, LATEST EDITION.
11. TRACER WIRE NOT REQUIRED FOR GRAVITY SEWERS.
12. NOTES 5. THRU 10. ARE MINIMUM REQUIREMENTS FOR A TRENCH IN A ROAD. REFER TO LATEST EDITION OF MANATEE COUNTY HIGHWAY AND TRAFFIC STANDARDS FOR ADDITIONAL REQUIREMENTS.



<b>MANATEE COUNTY</b> PUBLIC WORKS DEPARTMENT		TRENCH WITH ASPHALT PAVEMENT SURFACE TYPE A-1 PIPE BEDDING	UG-12
REV. BY WRT/KE	DATE 03/11	MAY 10, 2011 DATE OF APPROVAL	PAGE 112



**NOTES:**

1. "SV" TO BE IMPRESSED INTO THE NEWLY-POURED CONCRETE CURB, ALONG WITH DISTANCE IN FEET TO THE VALVE. IF NO CURB, INSTALL A GREEN DISC WITH "SV" AND A 1/8"x1" GALVANIZED STEEL SCREW IN THE EDGE OF PAVEMENT WITH THE DISTANCE (FT.) FROM THE DISC TO THE VALVE.
2. ALL EXISTING AND PROPOSED VALVE BOXES SHALL BE ADJUSTED TO FINISHED GRADES AS ESTABLISHED IN THE FIELD.
3. SEWER VALVES SHALL NOT BE PLACED IN HANDICAPPED RAMPS.
4. PRECAST CONCRETE PADS SHALL NOT BE USED.
5. ALL EXPOSED EDGES OF CONCRETE SHALL BE CHAMFERED 1/2".
6. PLUG VALVES SHALL NOT BE USED AS A TAPPING VALVE. WHERE AN EXISTING FORCE MAIN IS TO BE TAPPED, USE A TAPPING GATE VALVE PER THE TAPPING SLEEVE AND VALVE DETAIL.
7. TEST BOX TO BE BINGHAM & TAYLOR P200NFG OR EQUAL FOR NORMAL YARD SERVICE. WHERE VALVE WILL BE IN STREET OR UNDER VEHICLE TRAFFIC, USE P525RD CENTERED IN SEPARATE CONCRETE PAD SIMILAR TO STANDARD VALVE BOX PAD.

<b>MANATEE COUNTY</b> PUBLIC WORKS DEPARTMENT		PLUG VALVE, BOX, COVER AND TAG	US-12
REV. BY CLB/DOM	DATE 11/10	MAY 10, 2011 DATE OF APPROVAL	PAGE 152

**SEWRF DEDICATED REJECT LINE**



**MANATEE COUNTY**  
DEPARTMENT OF PUBLIC WORKS  
UTILITIES DEPARTMENT  
4410 66th Street West Bradenton, Florida 34210  
(941) 792-8811

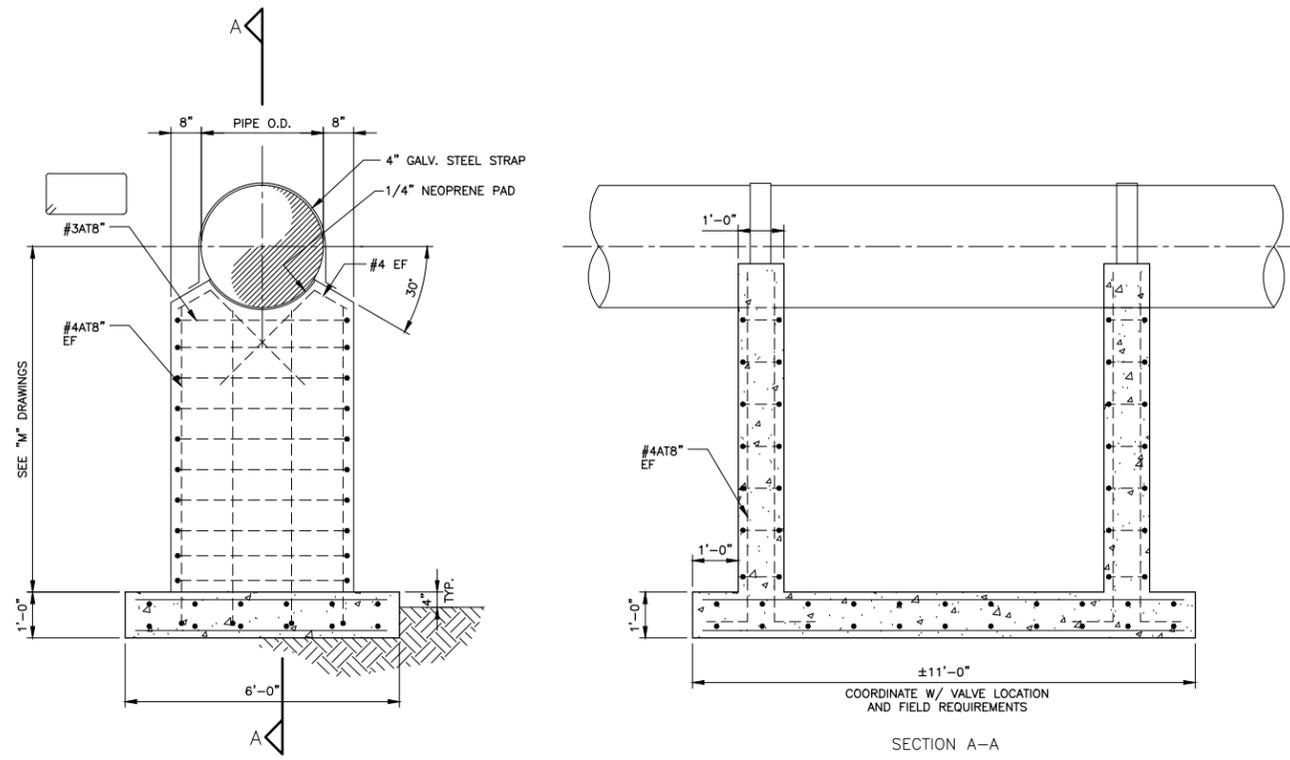


DAVID A. O'CONNOR, PE  
LIC. NO.: 56803

DESIGNED  
DRAWN  
O.C.  
APPROVED

**DETAILS (1)**

PROJECT NO:  
00193-009-01  
DATE:  
NOVEMBER 2013  
SHEET NO:  
C-6



TYPICAL PIPE SUPPORT  
 DETAIL  
 1/2" = 1'-0"  
 A  
 S-1

**GENERAL CONDITIONS**

ALL STRUCTURAL DRAWINGS SHALL BE USED IN CONJUNCTION WITH THE MECHANICAL, CIVIL, ELECTRICAL, AND SHOP DRAWINGS AND SPECIFICATIONS.

THE CONTRACTOR SHALL REVIEW AND VERIFY DIMENSIONS SHOWN IN ALL PLANS AND REVIEW ALL FIELD CONDITIONS THAT MAY AFFECT THE INSTALLATION OF THE FACILITY. SHOULD DISCREPANCIES APPEAR, THE CONTRACTOR SHALL NOTIFY THE ENGINEER IN WRITING TO OBTAIN ENGINEER'S CLARIFICATION BEFORE COMMENCING WITH THE WORK.

FOR ALL ITEMS EMBEDDED IN OR PASSED THROUGH CONCRETE, THE CONTRACTOR SHALL INITIALLY REFER TO MECHANICAL, HEATING, AND VENTILATION DRAWINGS FOR TYPE, SIZE, LOCATION, AND SPECIAL INSTALLATION REQUIREMENTS FOR THESE ITEMS.

THE CONTRACTOR SHALL TAKE ANY AND ALL NECESSARY MEASURES TO PROTECT EXISTING STRUCTURES FROM DAMAGE WHEN WORKING IN AND AROUND EXISTING STRUCTURES PERFORMING WORK SUCH AS DEMOLITION, FOUNDATION EXCAVATION, AND OTHERS.

SIZE AND LOCATION OF EQUIPMENT PADS AND ANCHOR BOLTS SHALL BE PER EQUIPMENT MANUFACTURERS REQUIREMENTS.

ANY EQUIPMENT THAT MAY INDUCE VIBRATION TO THE STRUCTURE SHALL BE ADEQUATELY ISOLATED FROM THE STRUCTURE.

ALL DETAILS AND SECTIONS SHOWN ON THE DRAWINGS ARE INTENDED TO BE TYPICAL AND SHALL BE CONSTRUED TO APPLY TO ANY SIMILAR SITUATION ELSEWHERE ON THE PROJECT, EXCEPT WHERE A DIFFERENT DETAIL IS SHOWN.

STANDARD DETAILS APPLY TO ALL SIMILAR SITUATIONS ON THE PROJECT EXCEPT WHERE A DIFFERENT DETAIL IS SHOWN.

**REINFORCING STEEL**

REINFORCEMENT SHALL CONFORM TO ASTM A615, GRADE 60 REQUIREMENTS. WELDED WIRE FABRIC, ASTM A185. ALL ACCESSORIES SHALL BE IN CONFORMANCE WITH ACI 315 REQUIREMENTS. REINFORCING STEEL SHALL HAVE THE FOLLOWING CLEAR COVER UNLESS OTHERWISE NOTED:

- CONCRETE CAST AGAINST EARTH
- FORMED SURFACES IN CONTACT WITH SOIL, SEWAGE, WATER OR EXPOSED TO WEATHER
- FORMED SURFACES NOT EXPOSED TO WEATHER OR IN CONTACT WITH SOIL:
  - SLABS, WALLS, AND JOIST
  - BEAMS AND COLUMNS

LAP SPLICES SHALL BE AS SHOWN ON THE DRAWINGS. FOR LAP SPLICES NOT SHOWN ON THE DRAWINGS, THE CONTRACTOR SHALL OBTAIN ENGINEERS APPROVAL.

THE CONTRACTOR SHALL PREPARE PLACING DRAWINGS AND SCHEDULES IN CONFORMANCE WITH ACI 315 REQUIREMENTS.

UNLESS OTHERWISE NOTED, THE MINIMUM REINFORCING FOR ALL CONCRETE WALL AND SLABS SHALL BE AS FOLLOWS:

**CONCRETE**

ALL MATERIALS AND METHODS OF CONSTRUCTION SHALL BE IN ACCORDANCE WITH ACI 318 REQUIREMENTS (LATEST EDITION)

ALL CONCRETE SHALL BE AIR-ENTRAINED WITH 4000 PSI COMPRESSIVE STRENGTH AT 28 DAYS UNLESS OTHERWISE NOTED.

WATER REDUCING AGENT SHALL BE IN ACCORDANCE WITH ASTM C494

ALL CONCRETE SURFACES EXPOSED TO AIR, UNLESS OTHERWISE NOTED IN SPECIFICATIONS, SHALL BE TREATED WITH AN APPROPRIATE CURING COMPOUND AS SOON AS CEMENT FINISHING IS COMPLETED OR FORMS ARE REMOVED.

ALL EXPOSED CORNERS SHALL HAVE A MINIMUM CHAMFER OF 3/8" UNLESS OTHERWISE NOTED.

THE CONTRACTOR SHALL OBTAIN ENGINEER'S APPROVAL FOR THE LOCATIONS OF CONSTRUCTION JOINTS THAT ARE NOT SHOWN ON THE DRAWINGS.

**e/T ENGINEERING TECHNOLOGIES, INC.**  
 3551 W. LAKE MARY BLVD., SUITE 210  
 LAKE MARY, FL 32746  
 PHONE: (407) 322-0500 FAX: (407) 322-0023  
 ET PROJECT NO. - 10-104

**SEWRF  
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**MANATEE COUNTY**  
 DEPARTMENT OF PUBLIC WORKS  
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 (941) 792-8811

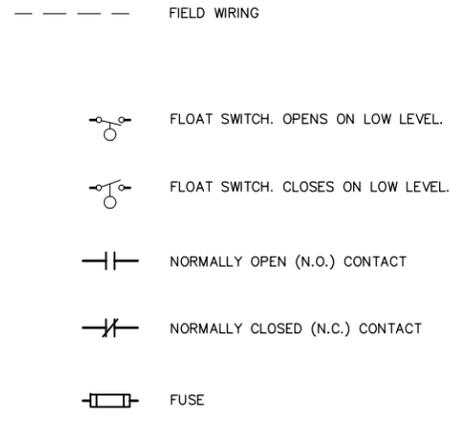
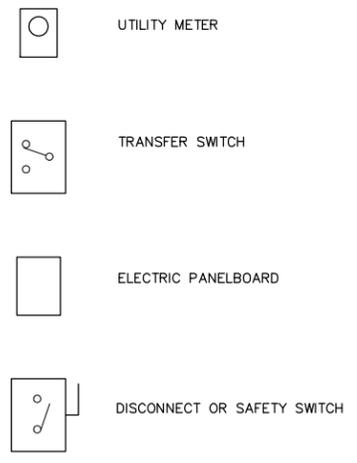
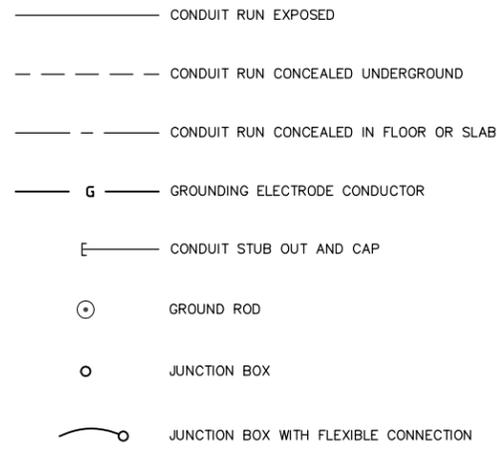
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 www.cardnotbe.com - 727.531.3505  
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BILGIN EREL, PE  
 LIC. NO.: 34053  
 DATE

DESIGNED  
 DRAWN  
 O.C.  
 APPROVED

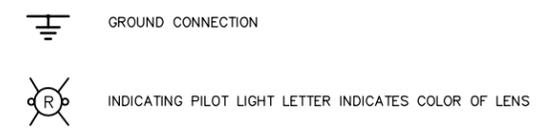
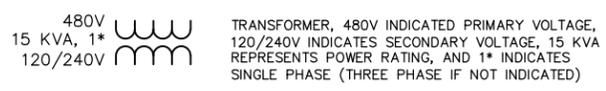
**PIPE SUPPORTS**

PROJECT NO:  
 00193-009-01  
 DATE:  
 NOVEMBER 2013  
 SHEET NO:  
**S-1**

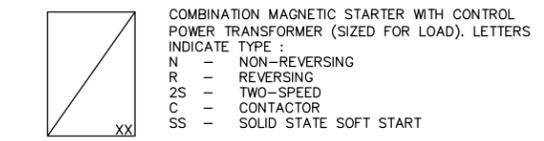
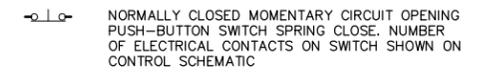
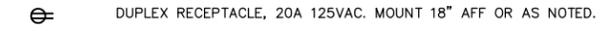
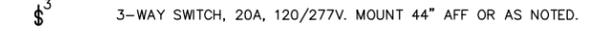
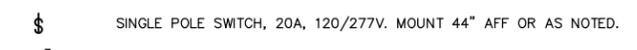
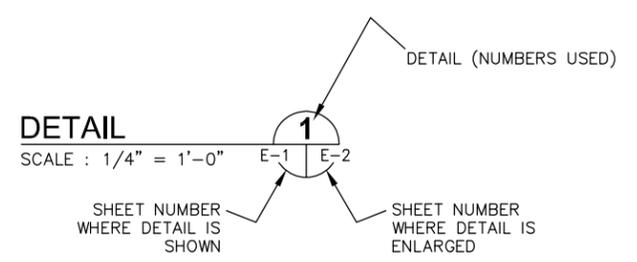
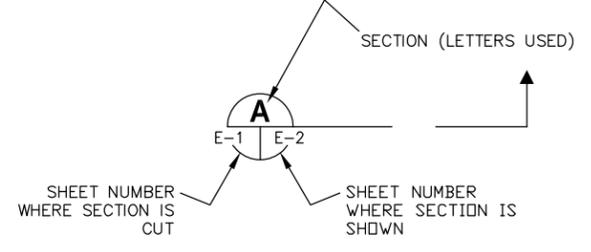
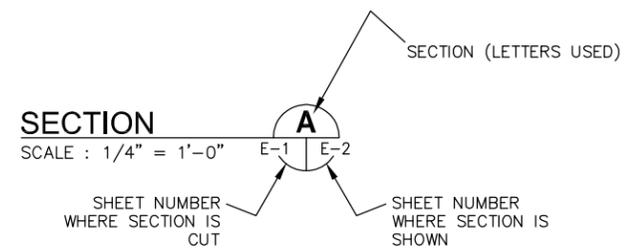


**ABBREVIATIONS:**

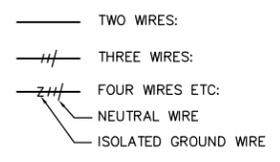
A	AMPS
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
C	CONDUIT
EX	EXISTING
ELEC	ELECTRICAL
EXP	EXPLOSION PROOF
GFI	GROUND FAULT INTERRUPTER
GND	GROUNDING CONDUCTOR
HP	HORSEPOWER
HZ	HERTZ
IG	ISOLATED GROUND
KVA	KILOVOLT AMPERES
KW	KILOWATTS
MAX	MAXIMUM
MIN	MINIMUM
N/A	NOT APPLICABLE
PH	PHASE
RECP	RECEPTACLE
RPM	REVOLUTIONS PER MINUTE
RTU	REMOTE TERMINAL UNIT
SS	STAINLESS STEEL
SPD	SURGE PROTECTION DEVICE
TYP	TYPICAL
V	VOLTS
WP	WEATHERPROOF



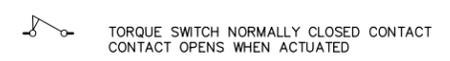
**EXAMPLE OF SECTION CUT AND DETAIL**



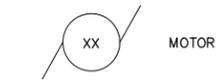
WIRES INDICATED AS FOLLOWS :



OVIDE 2-#12 THWN CU IN 1/2" C. UNLESS OTHERWISE NOTED, AND GROUND WIRE (NOT INDICATED) IN ALL POWER AND LIGHTING RACEWAYS.



XXX	XXX_DEVICE	DESCRIPTION
HLS	HLS	HIGH LEVEL SWITCH
HOA	HOA	HAND-OFF-AUTO
LD	LD	LEAK DETECTION
LLS	LLS	LOW LEVEL SWITCH
LOR	LOR	LOCAL-OFF-REMOTE
PB	PB	PUSH BUTTON
RTU	RTU	REMOTE TERMINAL UNIT
SS	SS	SOFT STARTER
SS/B	SS/B	SOFT START OR BYPASS
TS	TS	TEMPERATURE SWITCH
TVSS	TVSS	TRANSIENT VOLTAGE SURGE SUPPRESSOR
ZS	ZS	POSITION SENSOR (LIMIT SWITCH)



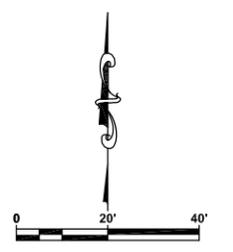
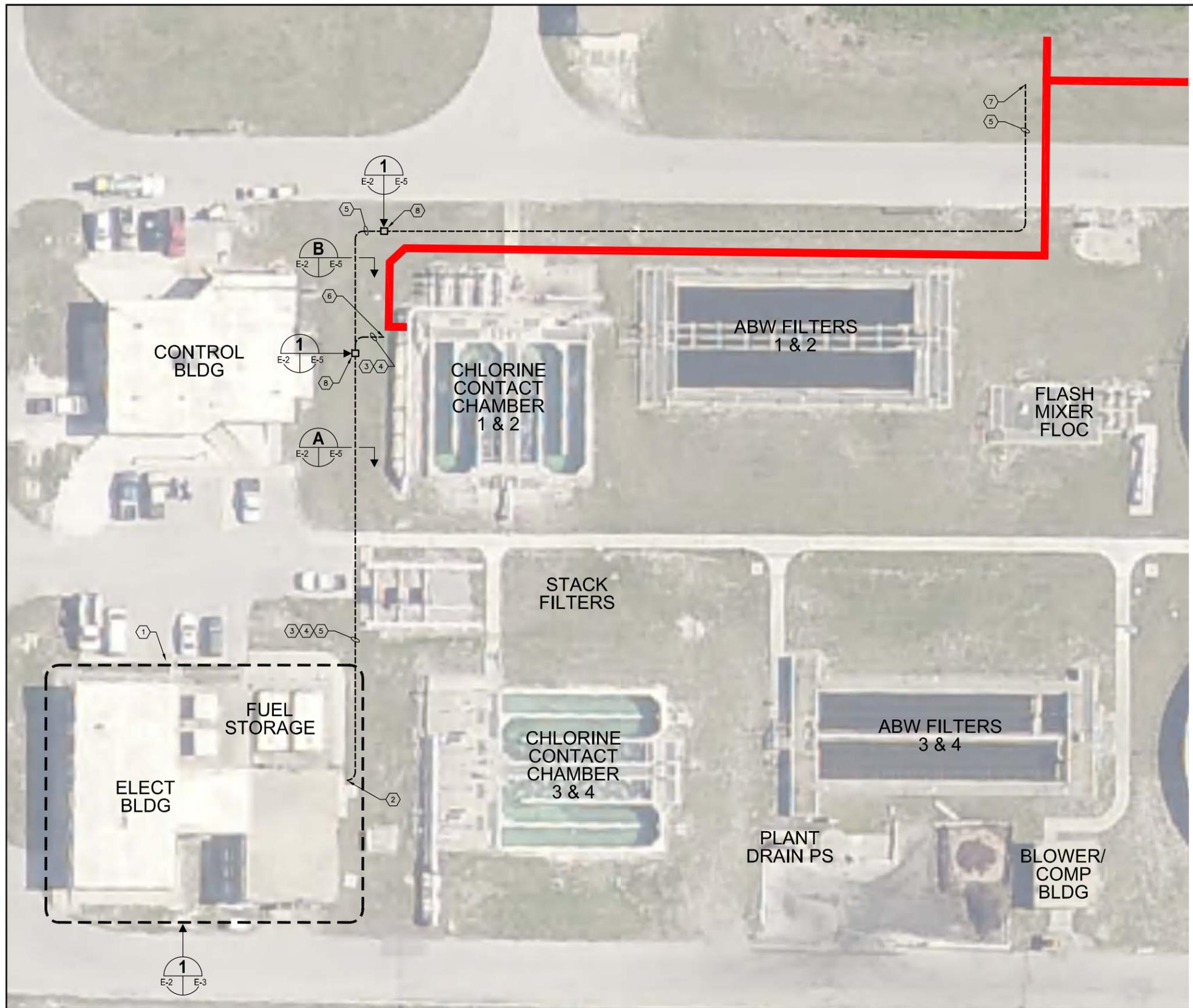
NO.	DESCRIPTION	BY	DATE

**SEWRP  
DEDICATED REJECT LINE**

DESIGNED: TDT  
DRAWN: EAK  
Q.C.  
APPROVED: TIMOTHY THOMAS, PE  
DATE: LIC. NO.: 47079

**ELECTRICAL LEGEND  
AND ABBREVIATIONS**

PROJECT NO: 00193-009-01  
DATE: NOVEMBER 2013  
SHEET NO: E-1



- KEYED NOTES:**
- ① EXISTING MAIN ELECTRICAL BUILDING. REFER TO PLAN ON SHEET E-3.
  - ② CONTRACTOR TO PROVIDE AND INSTALL NEW NEMA 4X SS JUNCTION BOX ON EXTERIOR OF MAIN ELECTRICAL BUILDING. REFER TO SHEET E-3 FOR DETAILS.
  - ③ PROVIDE AND INSTALL 3/4" C. WITH 3-#12 + 1-#12 GND AND 3/4" C. WITH 12-#14 + 1-#14 GND FOR MOV 101.
  - ④ PROVIDE AND INSTALL 3/4" C. WITH 3-#12 + 1-#12 GND AND 3/4" C. WITH 12-#14 + 1-#14 GND FOR MOV 102.
  - ⑤ PROVIDE AND INSTALL FOUR (4) 3/4" SPARE CONDUITS FOR FUTURE MOV'S.
  - ⑥ PROVIDE AND INSTALL 30A, 480V, 3-POLE, NON-FUSED DISCONNECTS IN NEMA 4X STAINLESS STEEL ENCLOSURES FOR MOV 101 AND MOV 102 DISCONNECTING MEANS. INSTALL DISCONNECTS ON 4" SQUARE CONCRETE POSTS. COORDINATE EXACT MOV LOCATIONS WITH CIVIL DRAWINGS.
  - ⑦ CAP SPARE CONDUITS BELOW GROUND AND PROVIDE MARKER POST TO IDENTIFY LOCATION.
  - ⑧ PROVIDE AND INSTALL PULL BOX. REFER TO SHEET E-5 FOR DETAILS.

- GENERAL NOTES :**
1. CONTRACTOR SHALL CUT, PATCH AND REPAIR ALL ROAD AND SIDEWALK CROSSINGS AS REQUIRED TO INSTALL NEW ELECTRICAL DUCTBANK. REFER TO SPECIFICATIONS FOR REPAIR REQUIREMENTS.
  2. DUCTBANKS SHALL BE A MINIMUM OF 36" FROM NEWLY INSTALLED REJECT PIPING.
  3. REFER TO CIVIL DRAWINGS TO IDENTIFY KNOWN UNDERGROUND UTILITIES.
  4. CONTRACTOR SHALL HAND DIG TRENCHES IN AREAS OF KNOWN CONFLICTS.



NO.	DESCRIPTION	BY	DATE

**SOUTHEAST WRF  
DEDICATED REJECT LINE**

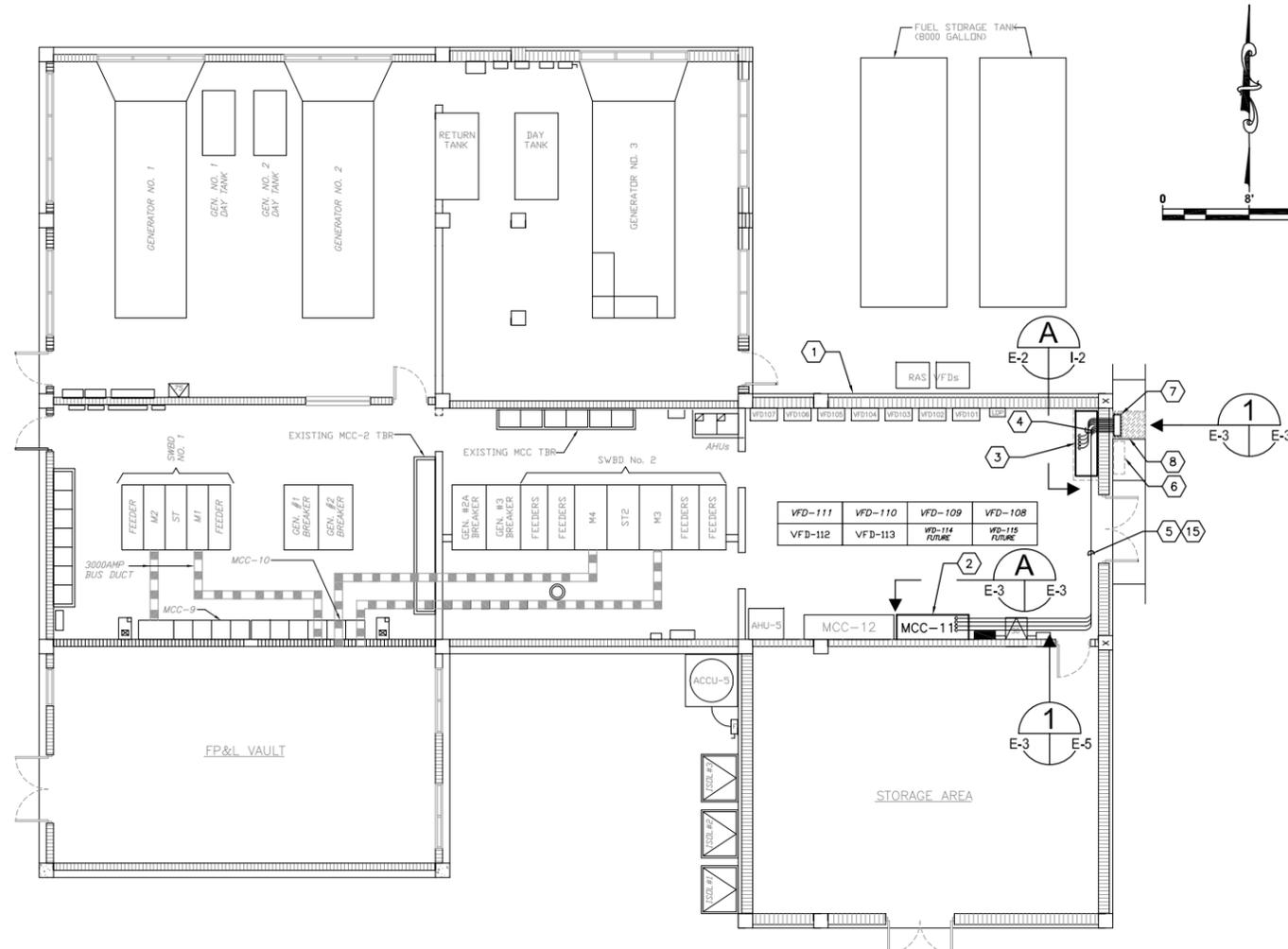


**TIMOTHY THOMAS, PE**  
LIC. NO.: 47079

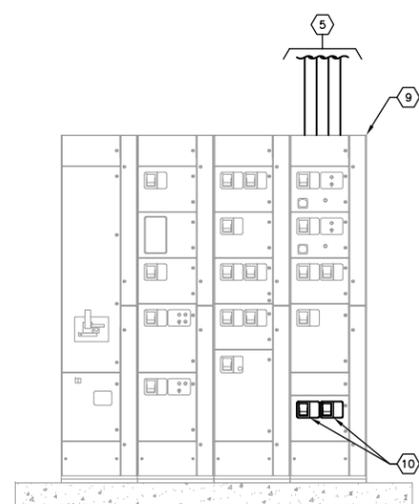
DESIGNED: TDT  
DRAWN: EAK  
Q.C.  
APPROVED:

**ELECTRICAL SITE PLAN**

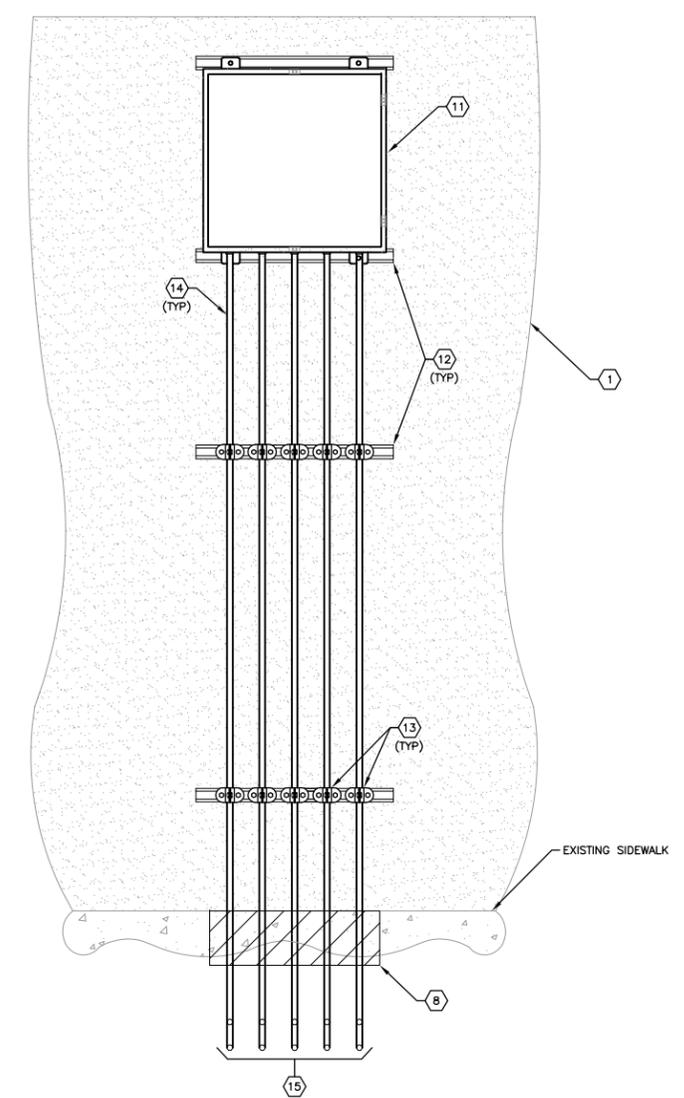
PROJECT NO:  
00193-009-01  
DATE:  
**NOVEMBER 2013**  
SHEET NO:  
**E-2**



**MAIN ELECTRICAL BUILDING PLAN** 1  
SCALE : 1/8" = 1'-0"



**MCC-11 ELEVATION** A  
SCALE : N.T.S.



**JUNCTION BOX DETAIL** 1  
SCALE : N.T.S.

**KEYED NOTES :**

- 1 EXISTING MAIN ELECTRICAL BUILDING.
- 2 EXISTING MOTOR CONTROL CENTER : MCC-11. REFER TO ELEVATION ON THIS SHEET.
- 3 EXISTING SCADA PANEL No. 1. REFER TO ELEVATION ON SHEET I-2.
- 4 CONTRACTOR SHALL PROVIDE AND INSTALL TWO (2) 3/4" CONDUITS, EACH CONTAINING 12-#14 THWN CU + 1-#14 THWN CU GND FOR MOV 101 AND MOV 102 I/O CIRCUITS. CONTRACTOR SHALL ALSO PROVIDE AND INSTALL TWO (2) SPARE 3/4" CONDUITS FOR FUTURE USE.
- 5 CONTRACTOR SHALL PROVIDE AND INSTALL TWO (2) 3/4" CONDUITS, EACH CONTAINING 3-#12 THWN CU + 1-#12 THWN CU GND FOR MOV 101 AND MOV 102 480V, 3Ø POWER. CONTRACTOR SHALL ALSO PROVIDE AND INSTALL TWO (2) SPARE 3/4" CONDUITS FOR FUTURE USE.
- 6 EXISTING EXTERIOR JUNCTION BOX. NO WORK REQUIRED.
- 7 CONTRACTOR SHALL PROVIDE AND INSTALL NEW 24"W X 24"H X 12"D NEMA 4X, STAINLESS STEEL JUNCTION BOX, HOFFMAN CAT # A24H2408SS6LP. CONTRACTOR SHALL ATTACH JUNCTION BOX (AND ASSOCIATED CONDUIT) TO EXTERIOR WALL WITH 1-5/8" X 1-5/8" STAINLESS STEEL UNISTRUT.
- 8 CONTRACTOR TO CUT CONCRETE SIDEWALK. REPLACE IN KIND AFTER CONDUIT INSTALLATION.
- 9 EXISTING MCC-11. 800A, 480V, 3Ø, 3-WIRE. CUTLER HAMMER FREEDOM SERIES 2100.
- 10 EXISTING 12" SPACE TO BE REPLACED WITH FREEDOM 2100 DUAL TAP FEEDER UNIT. EACH UNIT SHALL BE PROVIDED WITH A 3-POLE, 15 AMPERE CIRCUIT BREAKER EATON HFD3015. CIRCUIT BREAKERS TO BE DESIGNATED TO SERVE MOV 101 AND MOV 102. CONTRACTOR SHALL PROVIDE NEW DOOR, BUCKET, HANDLES, OR ANY OTHER ACCESSORIES AS REQUIRED TO PROVIDE A COMPLETE AND FUNCTIONING SYSTEM.
- 11 NEW 24"W X 24"H X 12"D NEMA 4X, STAINLESS STEEL JUNCTION BOX. INSTALL JUNCTION BOX AT APPROXIMATELY THE SAME HEIGHT AS THE ADJACENT, EXISTING JUNCTION BOX TO ACCOMMODATE THE NEW CONDUITS EXITING THE BUILDING.
- 12 PROVIDE AND INSTALL 1-5/8" X 1-5/8" STAINLESS STEEL UNISTRUT.
- 13 PROVIDE AND INSTALL STAINLESS STEEL CONDUIT CLAMPS.
- 14 NEW CONDUITS TO NEW MOTOR ACTUATED VALVES. REFER TO SHEET E-2 FOR CONTINUATION.
- 15 NEW CONDUITS TO BE TRAPEZE HUNG FROM CEILING UTILIZING 1-5/8" X 1-5/8" STAINLESS STEEL UNISTRUT WITH STAINLESS STEEL HARDWARE. TYPICAL FOR ALL CONDUITS AT CEILING. REFER TO DETAIL ON SHEET E-5.

NO.	DESCRIPTION	BY	DATE

**SEWRP  
DEDICATED REJECT LINE**



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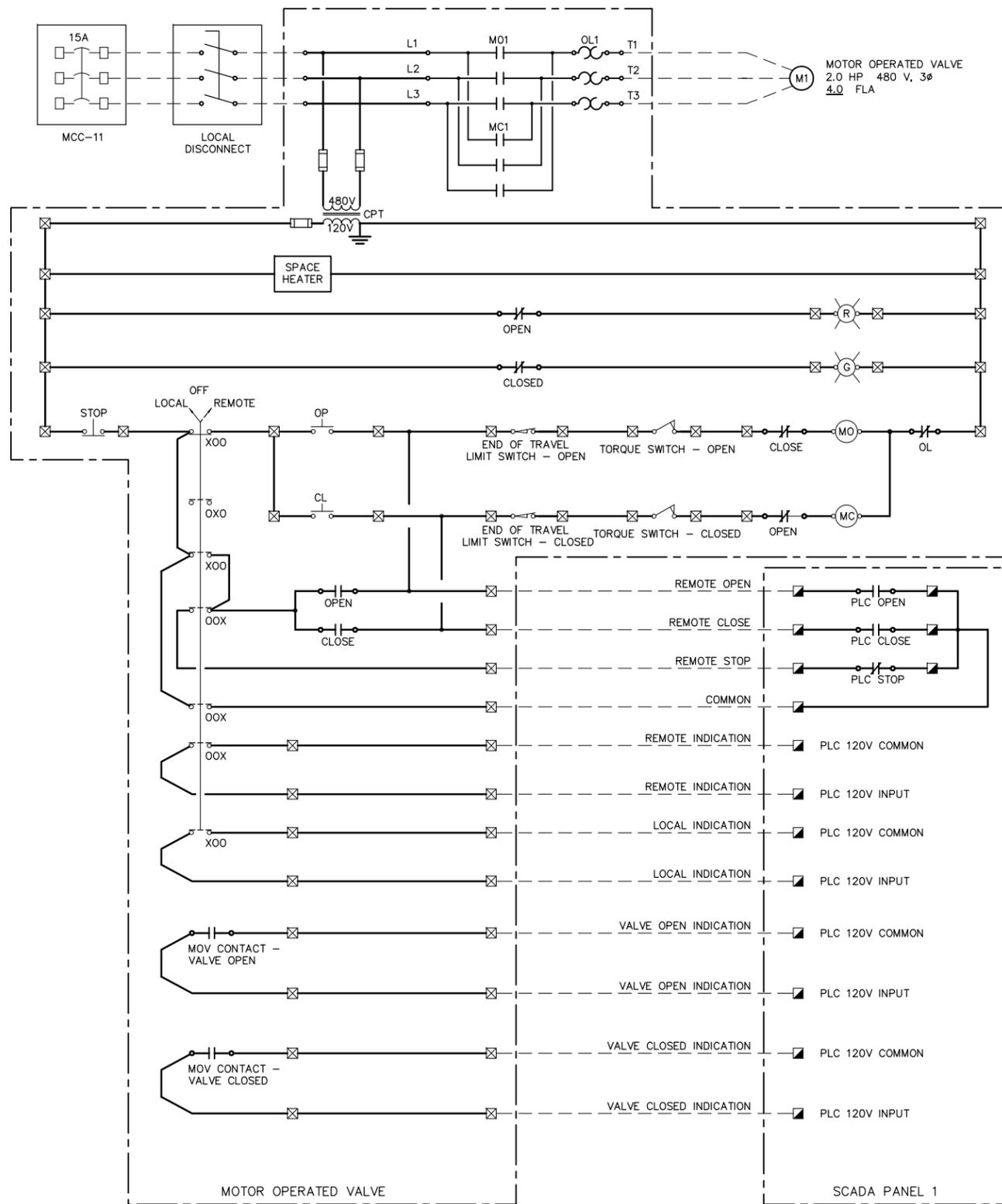
TIMOTHY THOMAS, PE  
LIC. NO. : 47079

DESIGNED TDT  
DRAWN EAK  
Q.C.  
APPROVED

**MAIN ELECTRICAL BUILDING  
FLOOR PLAN AND DETAILS**

PROJECT NO:  
00193-009-01  
DATE:  
NOVEMBER 2013  
SHEET NO:  
E-3





**LEGEND :**

- ⊠ TERMINAL POINT IN NEW MOTOR OPERATED VALVE
- ▣ TERMINAL POINT IN EXISTING SCADA PANEL 1 (SP-1)
- FIELD WIRING
- |— NORMALLY OPEN (N.O.) CONTACT
- |/— NORMALLY CLOSED (N.C.) CONTACT
- |— FUSE
- |— GROUND CONNECTION
- ⊙ INDICATING PILOT LIGHT LETTER INDICATES COLOR OF LENS
- |— DISCONNECT OR TOGGLE SWITCH
- |— NORMALLY OPEN MOMENTARY CIRCUIT CLOSING PUSH-BUTTON SWITCH SPRING OPEN. NUMBER OF ELECTRICAL CONTACTS ON SWITCH SHOWN ON CONTROL SCHEMATIC
- |— NORMALLY CLOSED MOMENTARY CIRCUIT OPENING PUSH-BUTTON SWITCH SPRING CLOSE. NUMBER OF ELECTRICAL CONTACTS ON SWITCH SHOWN ON CONTROL SCHEMATIC
- |— LIMIT SWITCH NORMALLY CLOSED CONTACT CONTACT OPENS WHEN ACTUATED
- |— TORQUE SWITCH NORMALLY CLOSED CONTACT CONTACT OPENS WHEN ACTUATED
- INDIVIDUAL DEVICE TERMINAL

**GENERAL NOTES:**

1. THE MOTOR OPERATED VALVE WIRING SCHEMATIC PRESENTED IS BASED ON THE TYPICAL CONFIGURATION OF A SPECIFIC MANUFACTURER. THE SCHEMATIC FOR THE MOTOR OPERATED VALVE SELECTED AND PURCHASED BY THE CONTRACTOR MAY VARY FROM WHAT IS SHOWN. THE WIRING SCHEMATIC SHOWN IS INTENDED SOLELY TO PROVIDE THE REQUIRED INPUTS AND OUTPUTS (I/O) AND BASIC CONTROL METHODOLOGY TO BE UTILIZED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING ALL REQUIRED WIRING WITH THE MOV MANUFACTURER.

**TYPICAL MOTOR OPERATED VALVE WIRING SCHEMATIC**



7715 Nelson Man Rd, STE 470, TAMPA, FL 33602  
813.227.9190 FAX 813.227.9195  
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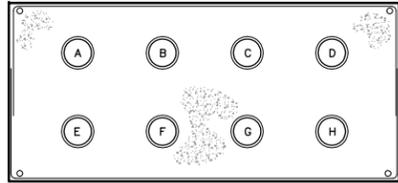
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**MOTOR OPERATED VALVE  
ELECTRICAL DETAILS**

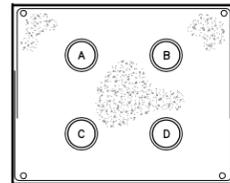
PROJECT NO:  
00193-009-01  
DATE:  
NOVEMBER 2013  
SHEET NO:  
E-4



**DUCTBANK SECTION 'A'**  
SCALE : N.T.S

**DUCTBANK 'A' SCHEDULE:**

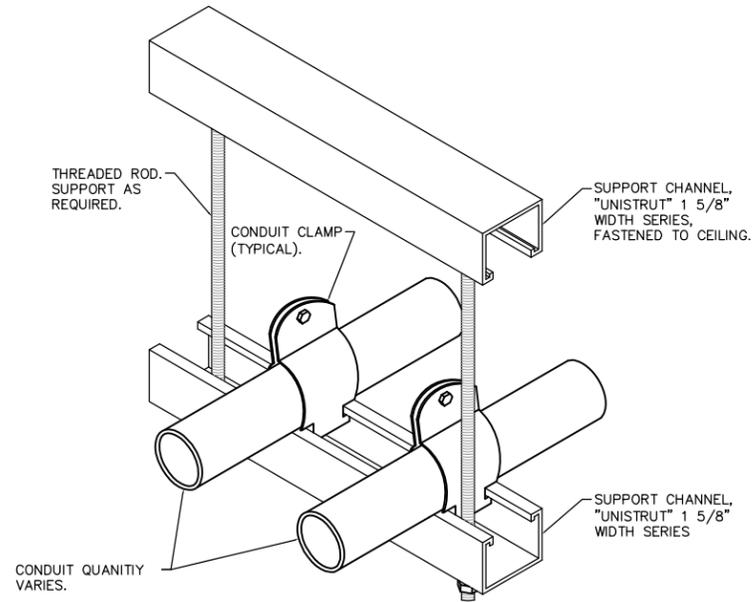
- A. 3/4"C. WITH 3-#12 + 1-#12 GND : MOV 101 480V POWER.
- B. 3/4"C. WITH 12-#14 + 1-#14 GND : MOV 101 CONTROLS.
- C. 3/4"C. SPARE CONDUIT FOR FUTURE MOV.
- D. 3/4"C. SPARE CONDUIT FOR FUTURE MOV.
- E. 3/4"C. WITH 3-#12 + 1-#12 GND : MOV 102 480V POWER.
- F. 3/4"C. WITH 12-#14 + 1-#14 GND : MOV 102 CONTROLS.
- G. 3/4"C. SPARE CONDUIT FOR FUTURE MOV.
- H. 3/4"C. SPARE CONDUIT FOR FUTURE MOV.



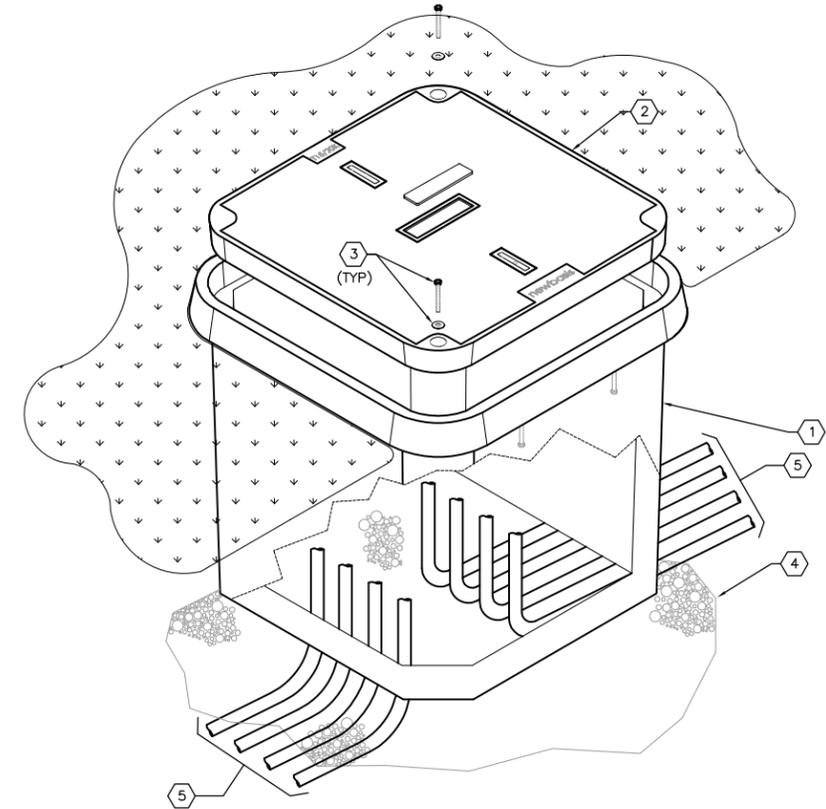
**DUCTBANK SECTION 'B'**  
SCALE : N.T.S

**DUCTBANK 'B' SCHEDULE:**

- A. 3/4"C. SPARE CONDUIT FOR FUTURE MOV.
- B. 3/4"C. SPARE CONDUIT FOR FUTURE MOV.
- C. 3/4"C. SPARE CONDUIT FOR FUTURE MOV.
- D. 3/4"C. SPARE CONDUIT FOR FUTURE MOV.



**CONDUIT TRAPEZE SUPPORT DETAIL**  
SCALE : NONE



**PULL BOX DETAIL**  
SCALE : N.T.S

**KEYED NOTES:**

- 1 36" x 36" x 36" FIBER-REINFORCED POLYMER CONCRETE VAULT.
- 2 "HH" TRAFFIC-RATED LID. PROVIDE RECESSED IDENTIFICATION MARKING OF "ELECTRIC" PERMANENTLY INDENTED IN THE COVER. LID SHALL BE PROVIDED WITH NON-SKID SURFACE.
- 3 STAINLESS STEEL BOLTS AND ASSOCIATED HARDWARE. BOLTS SHALL BE A MINIMUM OF 5/8".
- 4 PROVIDE A BED OF PEA ROCK GRAVEL (6" MINIMUM DEPTH, 3" MINIMUM EXTERIOR OF PULL BOX) INSIDE THE BOTTOM OF THE PULL BOX.
- 5 3/4" CONDUITS AS REQUIRED. CONDUIT QUANTITY VARIES PER PULL BOX. REFER TO SHEET E-2 FOR CONDUITS REQUIRED.

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TIMOTHY THOMAS, PE  
LIC. NO.: 47079

DESIGNED TDT  
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Q.C.  
APPROVED

**DUCTBANK SECTIONS AND  
ELECTRICAL DETAILS**

PROJECT NO:  
00193-009-01  
DATE:  
NOVEMBER 2013  
SHEET NO:  
E-5



FUNCTION SYMBOL SCHEDULE

IDENTIFICATION LETTERS					
	FIRST LETTER		SUCCEEDING LETTERS		
	MEASURED OR INITIATING VARIABLE	MODIFIER	READOUT OR PASSIVE FUNCTION	OUTPUT FUNCTION	MODIFIER
A	ANALYSIS		ALARM		
B	BURNER, COMBUSTION		PROGRAMMER		
C	CONDUCTIVITY			CONTROL	CLOSED
D	DENSITY	DIFFERENTIAL			
E	VOLTAGE		SENSOR (PRIMARY ELEMENT)		
F	FLOW RATE	RATIO (FRACTION)			
G	GAGING		GLASS VIEWING DEVICE		
H	HAND				HIGH
I	CURRENT (ELECTRICAL)		INDICATE		
J	POWER	SCAN			
K	TIME, TIME SCHEDULE	TIME RATE OF CHANGE		CONTROL STATION	
L	LEVEL		LIGHT (PILOT)		LOW
M	MOTOR	MOMENTARY			MIDDLE, INTERMEDIATE
N	VIBRATION		IGNITOR	ISOLATOR	
O	OPERATION	OFFSET	ORIFICE, RESTRICTION		OPEN
P	PRESSURE, VACUUM		POINT (TEST) CONNECTION		
Q	QUANTITY, EVENT	INTEGRATE, TOTALIZE	INTEGRATE		
R	RADIATION		RECORD, PRINT		
S	SPEED, FREQUENCY	SAFETY		SWITCH	
T	TEMPERATURE			TRANSMIT	
U	MULTIVARIABLE	TREND	MULTIFUNCTION	MULTIFUNCTION	MULTIFUNCTION
V	VISCOSITY	VACUUM		VALVE, DAMPER, LOUVER, GATE	
W	WEIGHT, FORCE, TORQUE		WELL		
X	UNCLASSIFIED		UNCLASSIFIED	UNCLASSIFIED	UNCLASSIFIED
Y			RELAY, COMPUTE, CONVERT		
Z	POSITION		FINAL CONTROL ELEMENT		UNCLASSIFIED

LINE DESIGNATIONS

INSTRUMENTATION SIGNAL ———  
 ELECTRICAL POWER — . —  
 DATA LINK — D — D —  
 RADIO LINK — R — R —  
 FIBER OPTIC DATA — F — F —

MISCELLANEOUS NOTATIONS

S/D = SHUTDOWN  
 O/R = OVERRIDE  
 MCS = MASTER CONTROL STATION  
 VFD = VARIABLE FREQUENCY DRIVE  
 PCC = PROCESS CONTROL CABINET  
 LCP = LOCAL CONTROL PANEL  
 ES = ELECTRICAL SUPPLY (120VAC)

CONTROLLER NOTATION

PV= PROCESS VARIABLE INPUT  
 SP= SET POINT INPUT  
 C= CONTROL OUTPUT

EQUIPMENT NOTATION

B = BLOWER OR FAN  
 E = ENGINE  
 G = GENERATOR  
 F = FILTER  
 GS = GRINDER/SCREEN  
 K = COMPRESSOR  
 H = HOIST  
 ME = MECHANICAL EQUIPMENT  
 MX = MIXER  
 P = PUMP  
 T = TANK OR SUMP

INPUT/OUTPUT NOTATIONS

AI = ANALOG INPUT  
 AO = ANALOG OUTPUT  
 DI = DISCRETE INPUT  
 DO = DISCRETE OUTPUT

HAND SWITCH NOTATION

HOA = HAND-OFF-AUTO  
 S/S = START/STOP  
 SEL = SELECTOR  
 O/C = OPEN/CLOSE  
 O/O = ON/OFF  
 LOS = LOCKOUT-START  
 LOR = LOCAL-OFF-REMOTE  
 OAC = OPEN-AUTO CLOSE  
 CAO = CLOSED-AUTO OPEN

VALVE DESIGNATIONS

MOV = MOTOR OPERATED VALVE

GENERAL ABBREVIATIONS

SCADA - SUPERVISORY CONTROL AND DATA ACQUISITION.  
 PLC - PROGRAMMABLE LOGIC CONTROL  
 SA - SURGE SUPPRESSOR DEVICE

 INTERLOCK

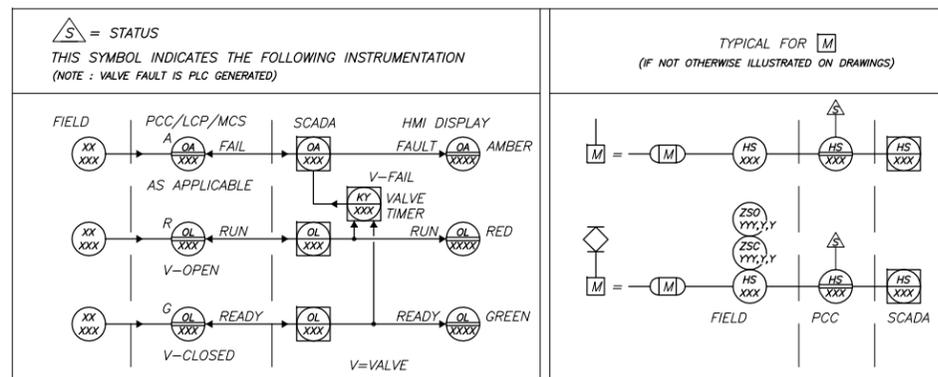
 CONTINUATION OF SIGNAL OR DATA TO/FROM SHEET NUMBER INDICATED

BASIC SYMBOLS

SINGLE FUNCTION

MULTIPLE FUNCTION

-  OR  FIELD MOUNTED INSTRUMENT OR DEVICE
-  OR  FRONT OF PANEL MOUNTED INSTRUMENT ON LCP, PCC, MCS, OR VFD
-  OR  REAR OF PANEL MOUNTED INSTRUMENT ON LCP, PCC, MCS, OR VFD
-  OR  FRONT OF PANEL MOUNTED INSTRUMENT ON MAIN PANEL
-  OR  REAR OF PANEL MOUNTED INSTRUMENT ON MAIN PANEL
-  OR  PLC AND/OR COMPUTER SOFTWARE COMPONENT (OPERATOR ACCESSIBLE UNDER NORMAL CONDITIONS) OR
-  OR  PLC AND/OR COMPUTER GENERATED COMPONENT (NOT OPERATOR ACCESSIBLE UNDER NORMAL CONDITIONS)
-  OR  DATA FLOW SYSTEMS RTU INPUT/OUTPUT



NO.	DESCRIPTION	BY	DATE

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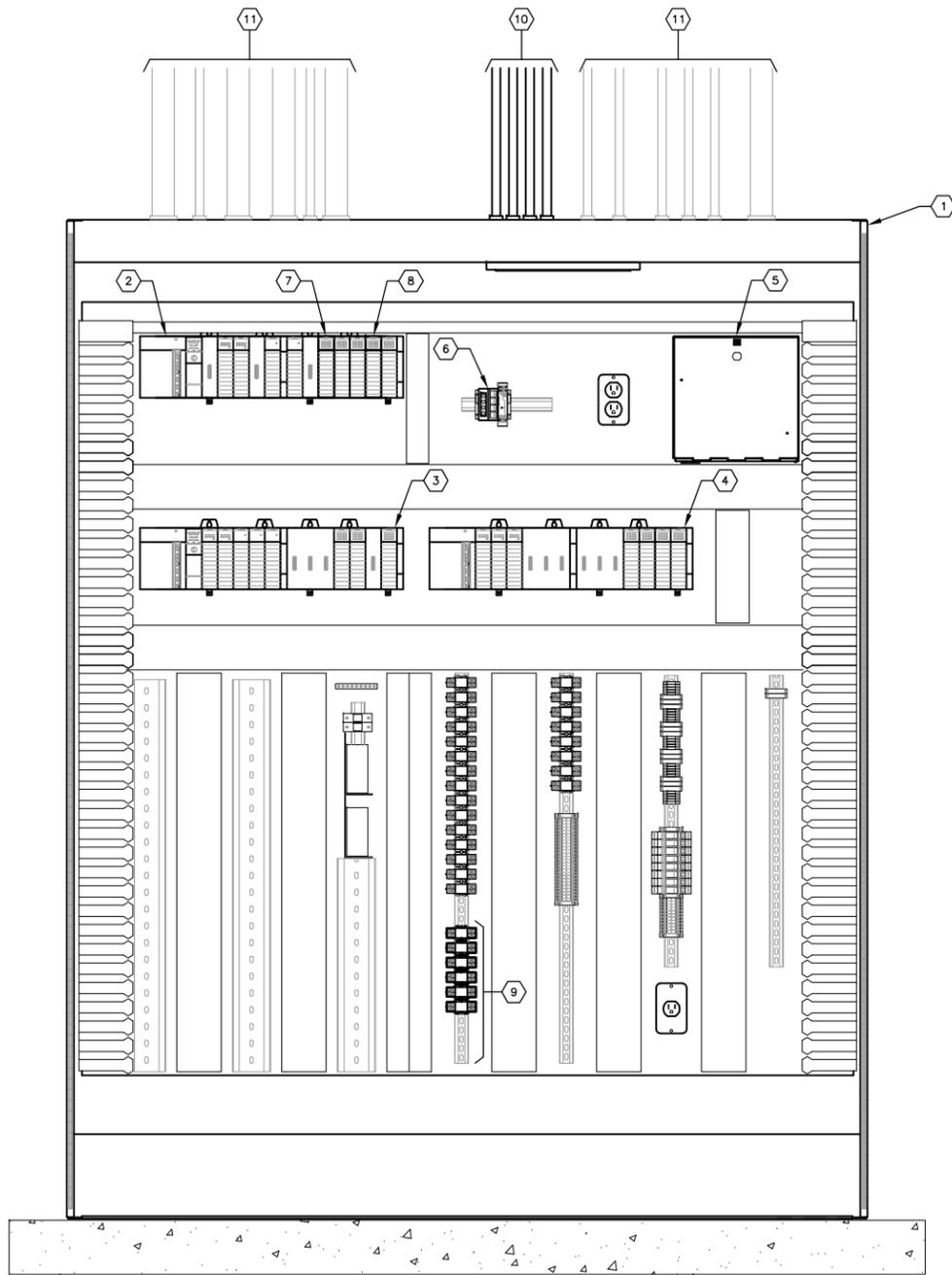
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 DRAWN EAK  
 Q.C.  
 APPROVED  
**TIMOTHY THOMAS, PE** DATE  
 LIC. NO.: 47079

**INSTRUMENTATIO AND CONTROLS  
LEGEND**

PROJECT NO:  
00193-009-01  
 DATE:  
**NOVEMBER 2013**  
 SHEET NO:  
**I-1**



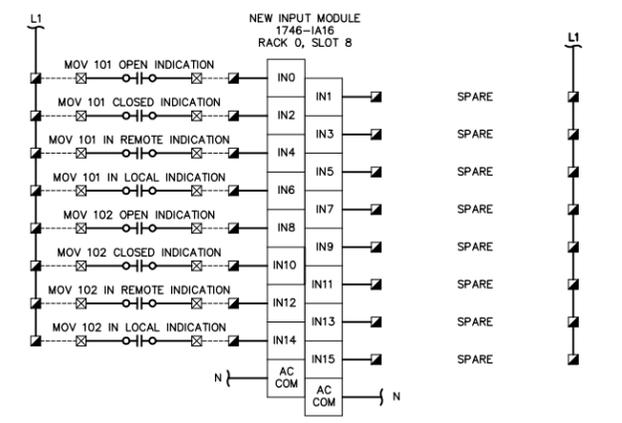
7715 Nelson Manatee Blvd. STE 470 TAMPA, FL 33602  
 813.227.9190 FAX 813.227.9195  
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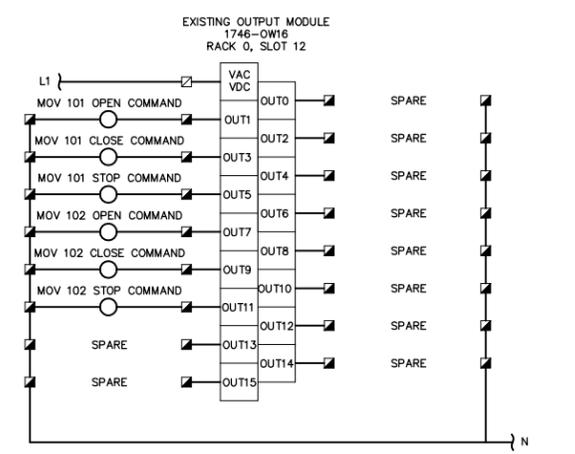
**SCADA PANEL 1 ELEVATION**  
SCALE : N.T.S.

- KEYED NOTES :**
- 1 EXISTING SCADA PANEL 1 (SHOWN WITH DOORS OPEN).
  - 2 EXISTING ALLEN-BRADLEY PLC (PLC-1, RACK 0). SLC 5/05 PROCESSOR; TWO (2) ANALOG INPUT MODULES: 1746-NI8; TWO (2) ANALOG OUTPUT MODULES: 1746-NO4; TWO (2) A/C INPUT MODULES: 1746-IA16; ONE (1) DIGITAL CONTACT OUTPUT MODULE: 1746-OW16; POWER SUPPLY: 1746-P4; 13-SLOT RACK: 1746-A13. FOUR (5) SPARE I/O MODULE SPACES AVAILABLE.
  - 3 EXISTING ALLEN-BRADLEY PLC (PLC-2, RACK 1). SLC 5/05 PROCESSOR; TWO (2) ANALOG INPUT MODULES: 1746-NI8; THREE (3) ANALOG OUTPUT MODULES: 1746-NO4; TWO (2) A/C INPUT MODULES: 1746-IA16; ONE (1) DIGITAL CONTACT OUTPUT MODULE: 1746-OW16; POWER SUPPLY: 1746-P4; 13-SLOT RACK: 1746-A13. FOUR (4) SPARE I/O MODULE SPACES AVAILABLE.
  - 4 EXISTING ALLEN-BRADLEY REMOTE I/O RACK (RACK 2). THREE (3) ANALOG INPUT MODULES: 1746-NI8; FOUR (4) A/C INPUT MODULES: 1746-IA16; POWER SUPPLY: 1746-P4; 13-SLOT RACK: 1746-A13. CHASSIS INTERCONNECT CABLE: 1746-C7; SIX (6) SPARE I/O MODULE SPACES AVAILABLE.
  - 5 EXISTING FIBER OPTIC PATCH PANEL.
  - 6 EXISTING PHOENIX CONTACT ETHERNET SWITCH WITH FOUR (4) FIBER OPTIC PORTS AND FOUR (4) UTP COPPER PORTS.
  - 7 PROVIDE AND INSTALL NEW 120V A/C INPUT MODULE (RACK 0, SLOT 8) IN EXISTING EMPTY (SPARE) SLOT. ALLEN-BRADLEY 1746-IA16. MODULE TO BE UTILIZED FOR NEW MOTOR ACTUATED VALVE(S) I/O. REFER WIRING SCHEMATIC ON THIS SHEET.
  - 8 PROVIDE AND INSTALL NEW 120V A/C RELAY OUTPUT MODULE (RACK 0, SLOT 11) IN EXISTING EMPTY (SPARE) SLOT. ALLEN-BRADLEY 1746-OW16. MODULE TO BE UTILIZED FOR NEW VFD OUTPUTS. REFER WIRING SCHEMATIC ON THIS SHEET.
  - 9 PROVIDE AND INSTALL NEW DPST RELAYS WITH 120V COILS AND RELAY BASES. NEW RELAYS TO MATCH EXISTING.
  - 10 CONTRACTOR SHALL PROVIDE AND INSTALL TWO (2) 3/4" CONDUITS, EACH CONTAINING 12-#14 THWN CU + 1-#14 THWN CU GND FOR MOV 101 AND MOV 102 I/O CIRCUITS. CONTRACTOR SHALL ALSO PROVIDE AND INSTALL TWO (2) SPARE 3/4" CONDUITS FOR FUTURE USE. REFER TO SHEET E-3 FOR CONTINUATION.
  - 11 EXISTING CONDUIT/CONDUCTORS. NO WORK REQUIRED.

- KEYED NOTES :**
1. CONTRACTOR SHALL FIELD VERIFY EXISTING CONDITIONS PRIOR TO BEGINNING CONSTRUCTION. CONTRACTOR SHALL NOTIFY ENGINEER OF DISCREPANCIES.
  2. CONSTRUCTION SEQUENCE SHALL BE COORDINATED TO AVOID ANY TREATMENT PROCESS INTERRUPTION.
  3. CONTRACTOR TO PROVIDE AND INSTALL ANY NEW MATERIALS (TERMINAL BLOCKS, SURGE ARRESTERS, INTERPOSING RELAYS, ETC.) AS REQUIRED TO ACCOMMODATE NEW SCADA PANEL 1 I/O. ALL NEW MATERIALS TO MATCH EXISTING.



**120V INPUT MODULE WIRING SCHEMATIC**



**RELAY OUTPUT MODULE WIRING SCHEMATIC**

- LEGEND :**
- ☒ TERMINAL POINT IN NEW MOTOR OPERATED VALVE
  - ☑ TERMINAL POINT IN EXISTING SCADA PANEL 1 (SP-1)
  - FIELD WIRING

NO.	DESCRIPTION	BY	DATE

**SEWRF  
DEDICATED REJECT LINE**



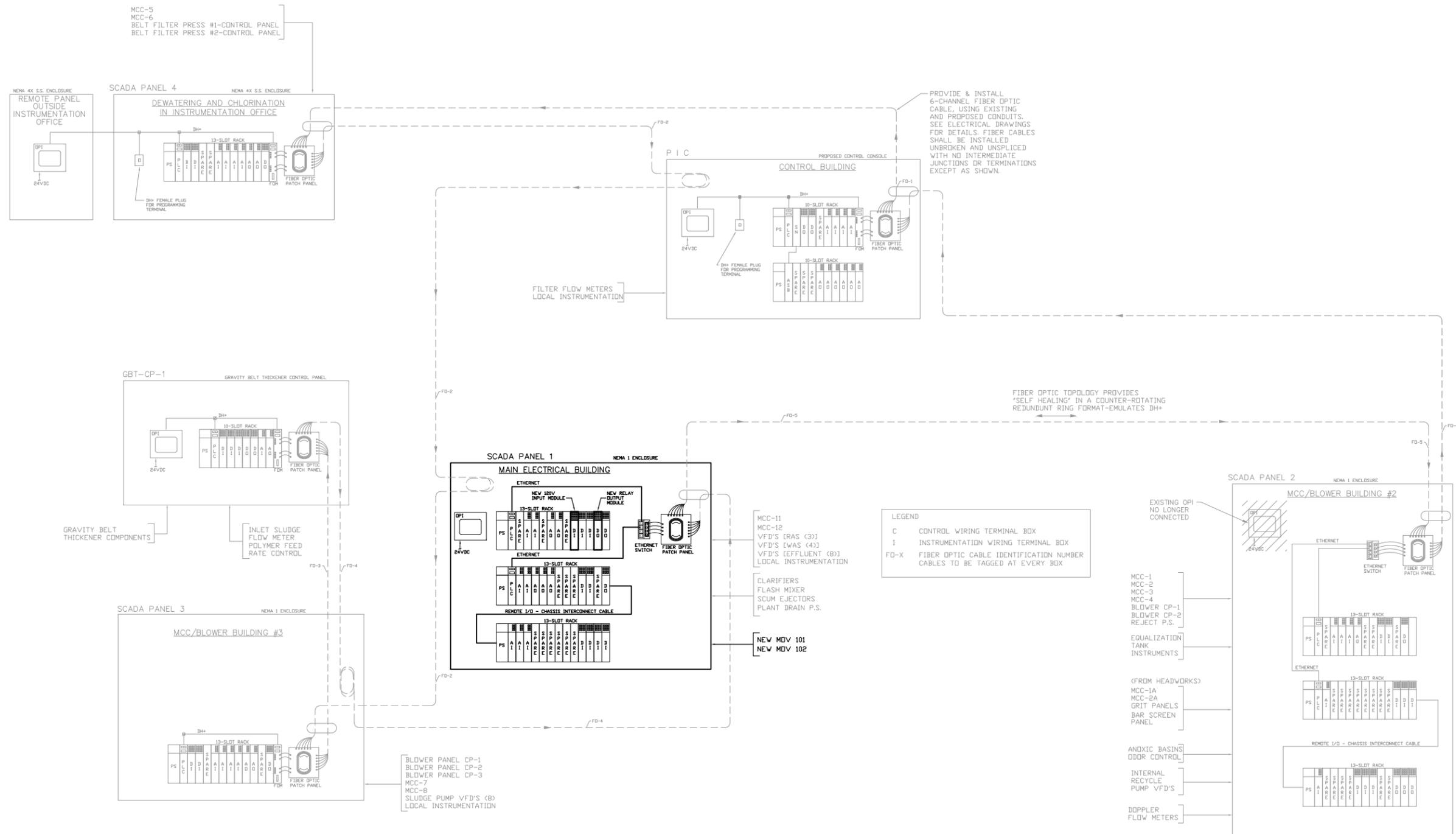
**TIMOTHY THOMAS, PE**  
LIC. NO.: 47079

DESIGNED: TDT  
DRAWN: EAK  
Q.C.  
APPROVED:

**SCADA PANEL 1 ELEVATION  
AND WIRING SCHEMATICS**

PROJECT NO:  
00193-009-01  
DATE:  
**NOVEMBER 2013**  
SHEET NO:  
**I-2**





NO.	DESCRIPTION	BY	DATE

**SEWRP  
DEDICATED REJECT LINE**



**TIMOTHY THOMAS, PE** DATE  
LIC. NO.: 47079 APPROVED

DESIGNED TDT  
DRAWN EAK  
Q.C.  
APPROVED

**EXISTING FIBER OPTIC TOPOLOGY  
AND PLC CONFIGURATIONS**

PROJECT NO:  
00193-009-01  
DATE:  
NOVEMBER 2013  
SHEET NO:  
**I-3**