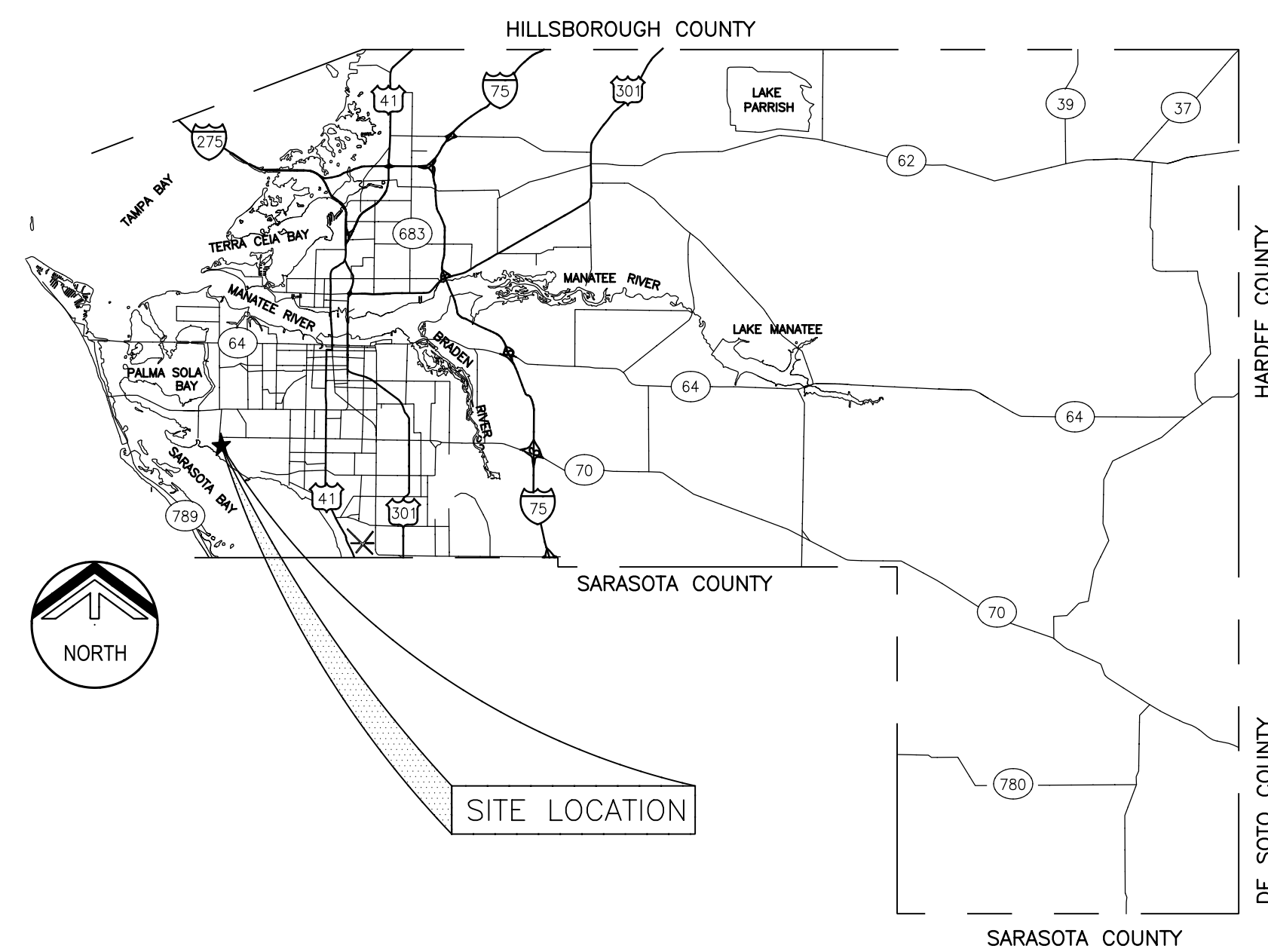


MANATEE COUNTY GOVERNMENT PUBLIC WORKS DEPARTMENT (MANATEE COUNTY, FLORIDA)

SOUTHWEST WATER RECLAMATION FACILITY HEADWORKS REHABILITATION

MANATEE COUNTY PROJECT NO. 6036084

OCTOBER 2012



LOCATION MAP

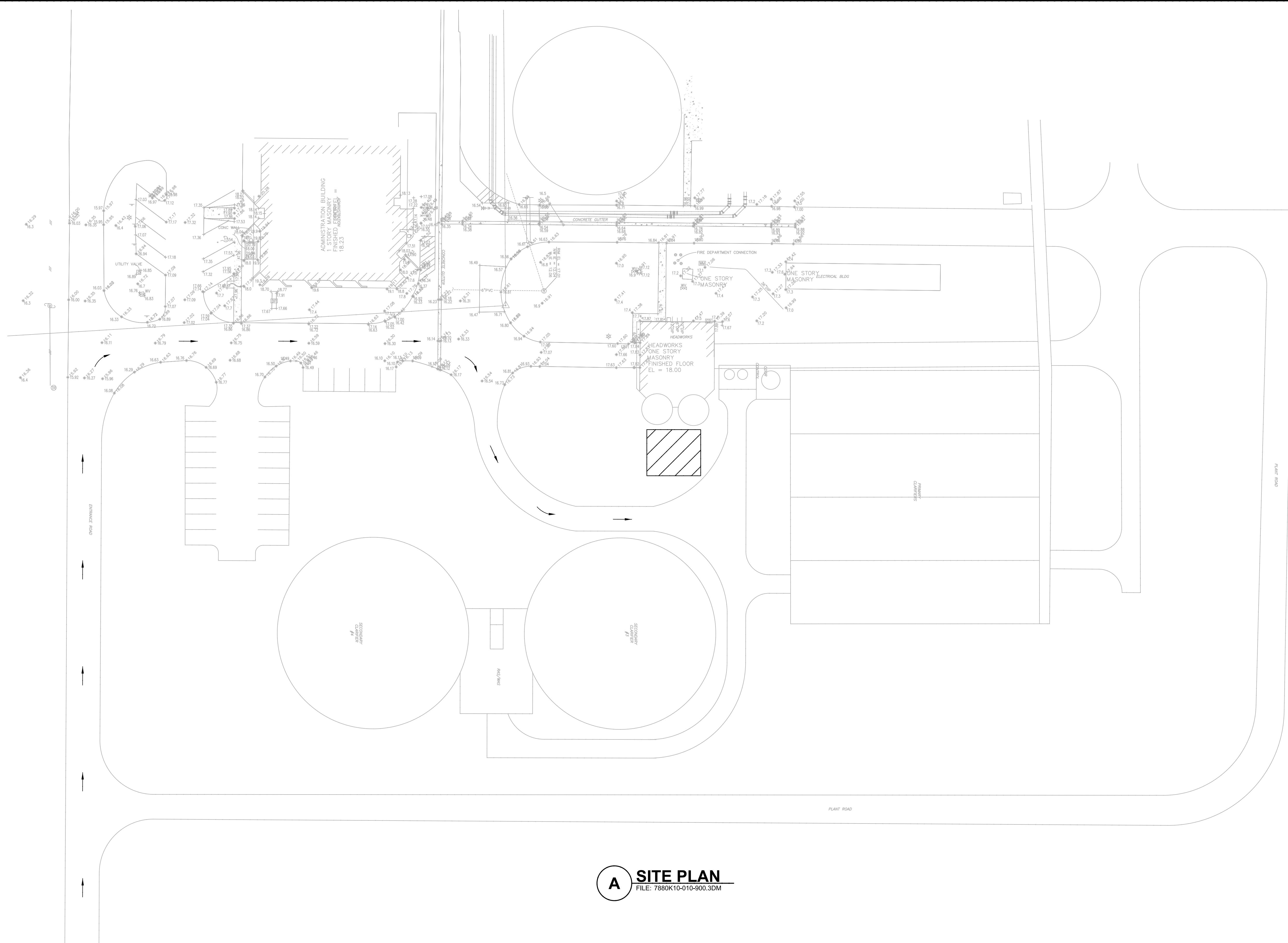
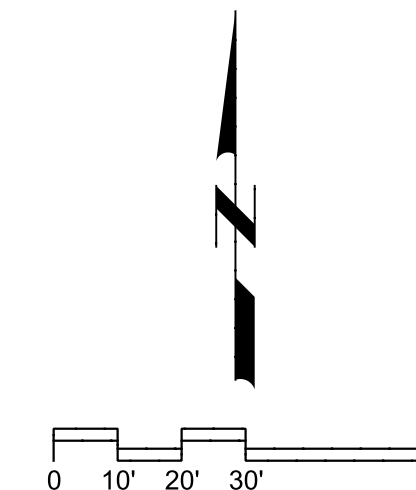
DWG	DISCIPLINE / TITLE
	<u>GENERAL</u>
G-01	COVER SHEET AND DRAWING INDEX
G-02	EXISTING SITE PLAN
	<u>TYPICALS</u>
T-01	TYPICAL DETAILS
	<u>DEMOLITION</u>
D-01	DEMOLITION PLAN
D-02	CONVEYORS AND CLASSIFIERS DETAILS
	<u>STRUCTURAL</u>
S-01	TOP PLAN
S-02	INTERMEDIATE PLAN
	<u>MECHANICAL</u>
M-01	TOP PLAN
M-02	SECTIONS
	<u>ELECTRICAL</u>
E-01	LEGEND AND SYMBOLS
E-02	GENERAL NOTES
E-03	EXISTING MCC-HW1 ONE LINE
E-04	EXISTING MCC-HW1 ONE LINE - DEMOLITION
E-05	HEADWORKS TOP LEVEL - DEMOLITION PLAN
E-06	HEADWORKS TOP LEVEL - PLAN
E-07	HEADWORKS LOWER LEVEL - PLAN
E-08	SCHEDULES
E-09	DETAILS - SHEET 1
E-10	DETAILS - SHEET 2
	<u>INSTRUMENTATION</u>
N-01	LEGEND AND SYMBOLS
N-02	P&ID - GRIT CLASSIFIERS AND CONVEYORS
N-03	EXISTING PLC PANEL PHOTOS AND DETAILS

Last Opened By: 8-28-12 09:45am DP:wy

FILENAME: Last Saved By: \$(GETPROP)??

carollo[®]
401 NORTH CATTLEMEN ROAD, SUITE 306
SARASOTA, FL 34232
PHONE: (941) 371-9832 FAX: (941) 371-9873
CA 00008571

JOB NO. 788010
DRAWING NO. G-01



- GENERAL NOTES:**
1. ALL WORK TO BE IN ACCORDANCE WITH MANATEE COUNTY PUBLIC WORKS UTILITY STANDARDS, LATEST EDITION IN AFFECT AT TIME OF BID.
 2. CONTRACTOR SHALL COORDINATE WITH OWNER ON ACCESSING THE PLANT SITE AND MOVEMENT WITHIN THE PLANT SITE. OTHER CONSTRUCTION PROJECTS WILL BE ON GOING DURING WORK UNDER THIS CONTRACT.
 3. EXISTING FACILITY AND UTILITY INFORMATION SHOWN ON THE DRAWINGS WAS OBTAINED FROM EXISTING OWNER'S RECORDS. NEITHER THE OWNER NOR ENGINEER ASSUMES ANY RESPONSIBILITY FOR FACILITIES AND UTILITIES NOT SHOWN OR NOT IN THE LOCATION SHOWN. THE CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFYING ALL LOCATIONS, MATERIALS, AND ELEVATIONS IN THE AREAS OF CONSTRUCTION.
 4. THE CONTRACTOR SHALL CONTACT THE ENGINEER IMMEDIATELY CONCERNING ANY CONFLICTS ARISING DURING CONSTRUCTION OF ANY IMPROVEMENTS SHOWN ON THESE DRAWINGS.
 5. THE CONTRACTOR SHALL TAKE ALL PRECAUTIONARY MEASURES NECESSARY TO PROTECT EXISTING FACILITIES AND UTILITIES SHOWN OR NOT SHOWN WHICH ARE TO REMAIN IN PLACE FROM DAMAGE. ALL FACILITIES DAMAGED BY THE CONTRACTOR'S OPERATIONS SHALL BE REPAIRED IMMEDIATELY TO THE ENGINEER'S SATISFACTION AT THE CONTRACTOR'S EXPENSE WITHOUT ADDITIONAL COMPENSATION.
 6. CONTRACTOR SHALL RESTORE STAGING AREA TO ORIGINAL CONDITION. SOD ALL AREAS DISTURBED BY CONSTRUCTION.
 7. ELEVATIONS ARE BASED ON SITE DATUM NATIONAL GEODETIC VERTICAL DATUM 1929 (NGVD 29).



CONTRACTOR STAGING AREA

A SITE PLAN
FILE: 7880K10-010-900.3DM



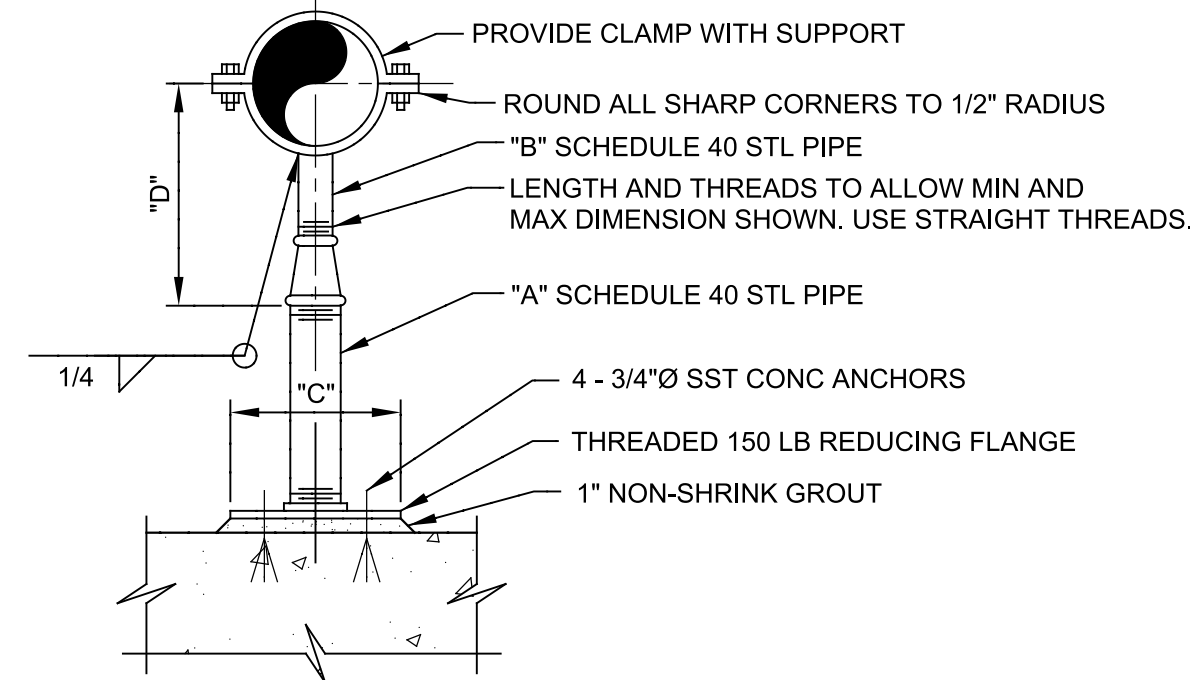
MANATEE COUNTY
SWWRF HEADWORKS REHABILITATION
GENERAL
EXISTING SITE PLAN

VERIFY SCALES	JOB NO. 7880K10
BAR IS ONE INCH ON ORIGINAL DRAWING	DRAWING NO. G-02
0 1"	
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY	

REV	DATE	BY	DESCRIPTION

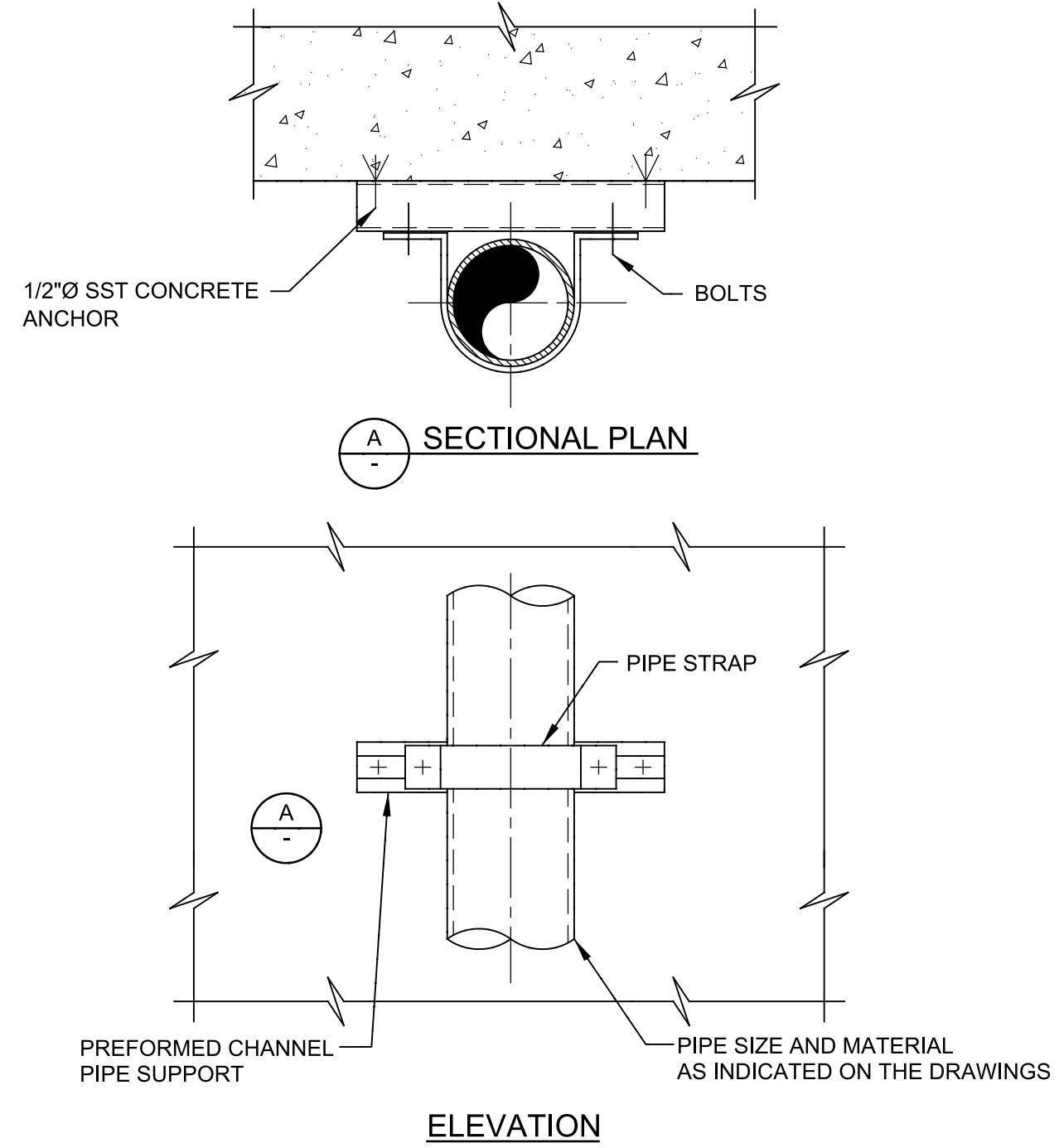
DESIGNED	MV
DRAWN	DVP
CHECKED	EP
DATE	SEPTEMBER 2012

ADJUSTABLE PIPE SADDLE SUPPORT SCHEDULE (INCHES)					
SIZE OF SUPPORTED PIPE	PIPE SIZE "A"	PIPE SIZE "B"	"C"	"D"	
				MINIMUM	MAXIMUM
2 1/2 *	2 1/2	1 1/2	9	8	13
3	2 1/2	1 1/2	9	8 1/2	13 1/2
3 1/2	2 1/2	1 1/2	9	8 1/2	13 1/2
4	3	2 1/2	9	9 1/2	14
6	3	2 1/2	9	10 1/2	15 1/2
8	3	2 1/2	9	11 1/2	16 1/2
10	3	2 1/2	9	13 1/2	18 1/2
12	3	2 1/2	9	15	19 1/2
14	4	3	11	16 1/2	20 1/2
16	4	3	11	17 1/2	22 1/2
18	6	3 1/2	13 1/2	19 1/2	24
20	6	3 1/2	13 1/2	21	25 1/2
24	6	4	13 1/2	23 1/2	28 1/2
30	6	4	13 1/2	27	31 1/2
32	6	4	13 1/2	28 1/2	32 1/2
36	6	4	13 1/2	30 1/2	34 1/2



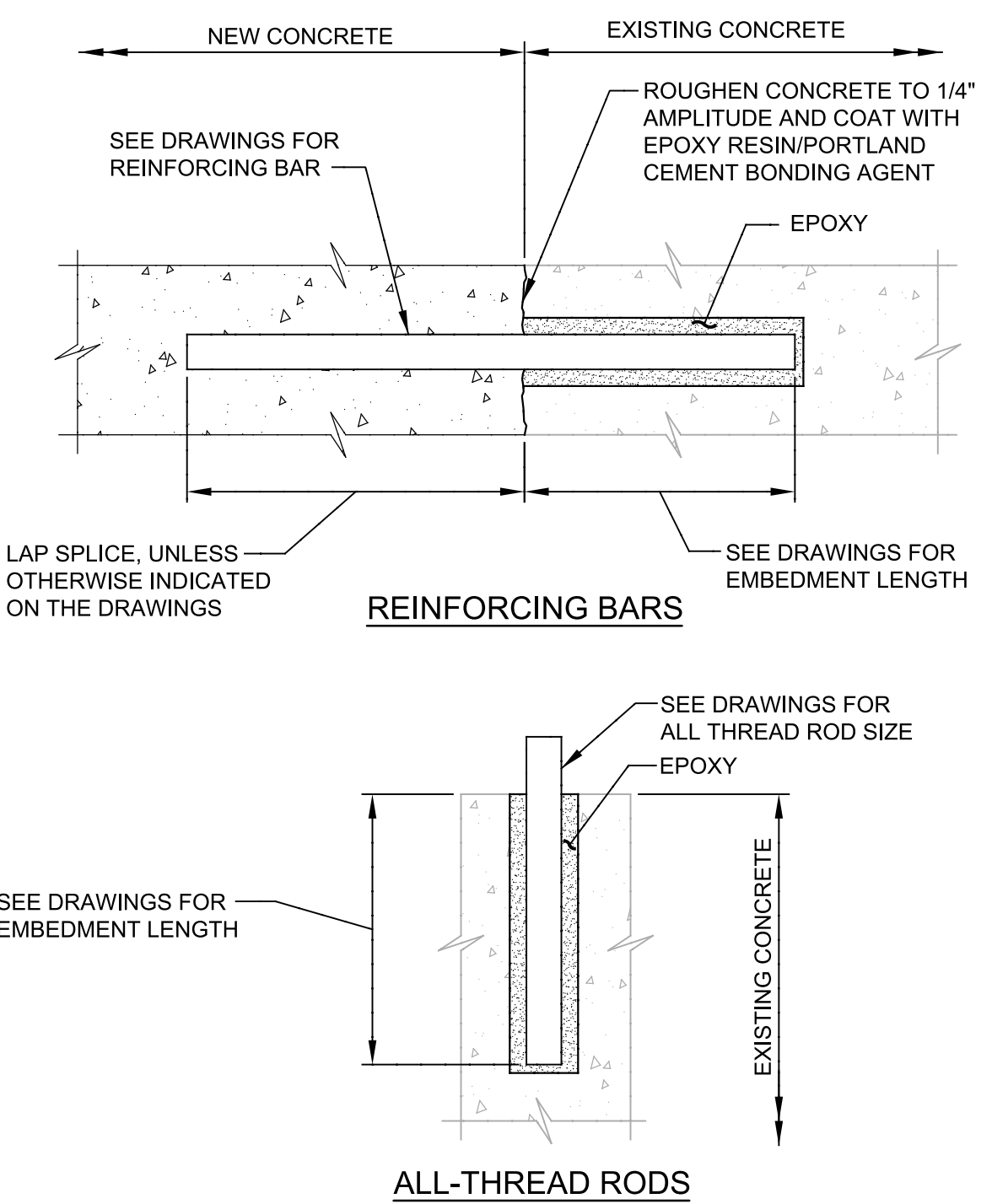
- NOTES:
- 316SS SUPPORT AFTER FABRICATION.
 - * = USE 2 1/2\"/>

P624 ADJUSTABLE PIPE SUPPORT
TYP R 05/16/09



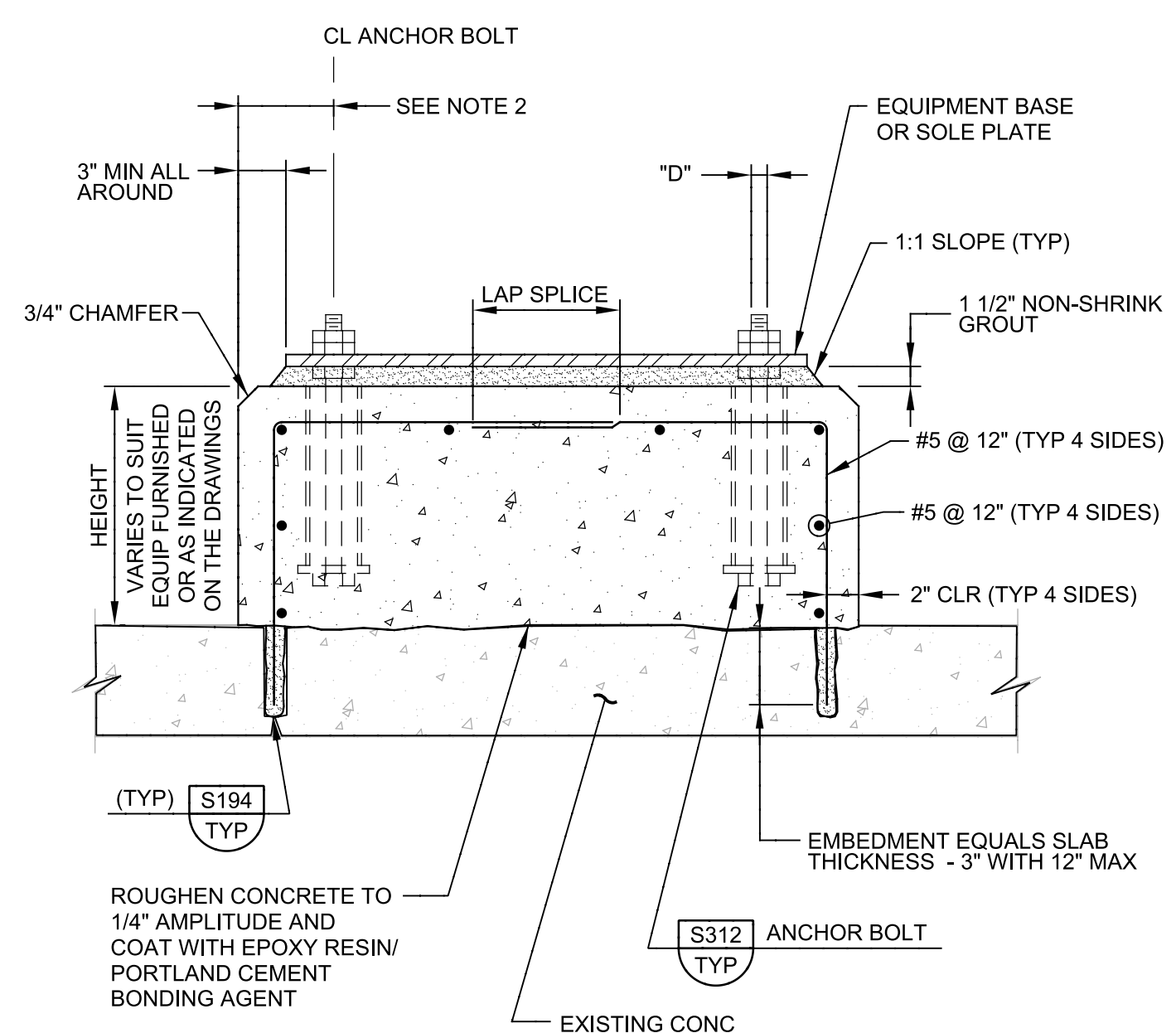
- NOTE:
- IF SUPPORT IS SUBMERGED OR LOCATED BELOW THE TOP OF WALL IN WATER BEARING STRUCTURE, ALL MATERIAL SHALL BE STAINLESS STEEL. IN ALL OTHER AREAS, THE MATERIALS SHALL BE HOT-DIP GALVANIZED STEEL UNLESS OTHERWISE INDICATED ON THE DRAWINGS.

P662 PIPE SUPPORT FOR ONE VERTICAL RISER
TYP N 07/31/08



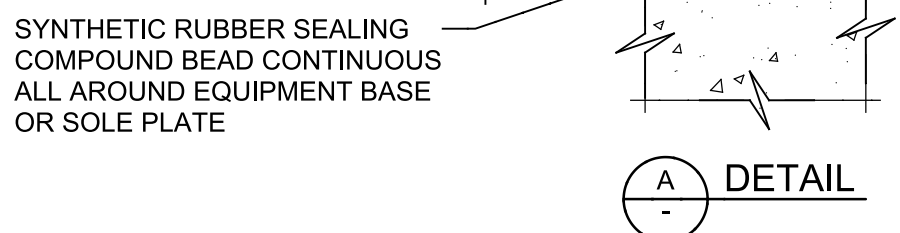
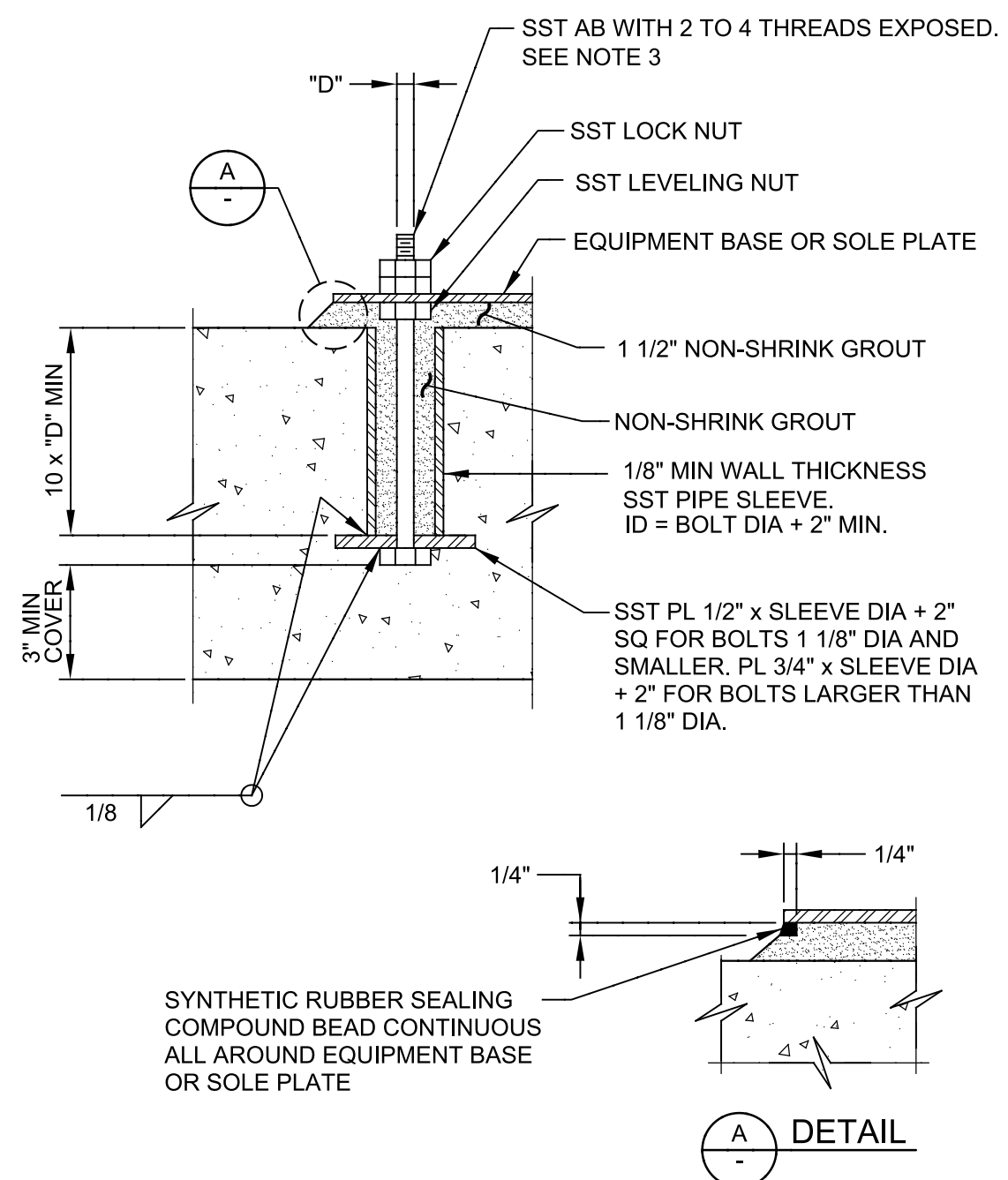
- NOTE:
- INSTALLATION OF REINFORCING BARS AND ALL THREAD RODS AS INDICATED IN THE SPECIFICATIONS.

S194 EPOXY BONDED REINFORCING BARS OR ALL-THREAD RODS
TYP N 04/30/07



- NOTES:
- "D" = DIAMETER OF ANCHOR BOLT.
 - THE EDGE DISTANCE ON THE ANCHOR BOLTS SHALL NOT BE LESS THAN 6" OR 8 x "D".

S304 EQUIPMENT BASE ON EXISTING CONCRETE SLAB
TYP N 07/31/08



- NOTES:
- "D" = DIAMETER OF ANCHOR BOLT.
 - ANCHOR BOLT DIAMETER AS INDICATED ON THE DRAWINGS. IF NOT INDICATED ON THE DRAWINGS, THE ANCHOR BOLT SIZE SHALL BE AS RECOMMENDED BY THE EQUIPMENT MANUFACTURER.
 - DO NOT USE ALL THREAD RODS AS A SUBSTITUTE FOR BOLTS WITH A BOLT HEAD.

S312 ANCHOR BOLT - IN SLEEVE
TYP N 07/31/08

REV	DATE	BY	DESCRIPTION

DESIGNED	MV
DRAWN	DVP
CHECKED	EP
DATE	SEPTEMBER 2012



MANATEE COUNTY
SWWRF HEADWORKS REHABILITATION
DETAILS
TYPICAL DETAILS

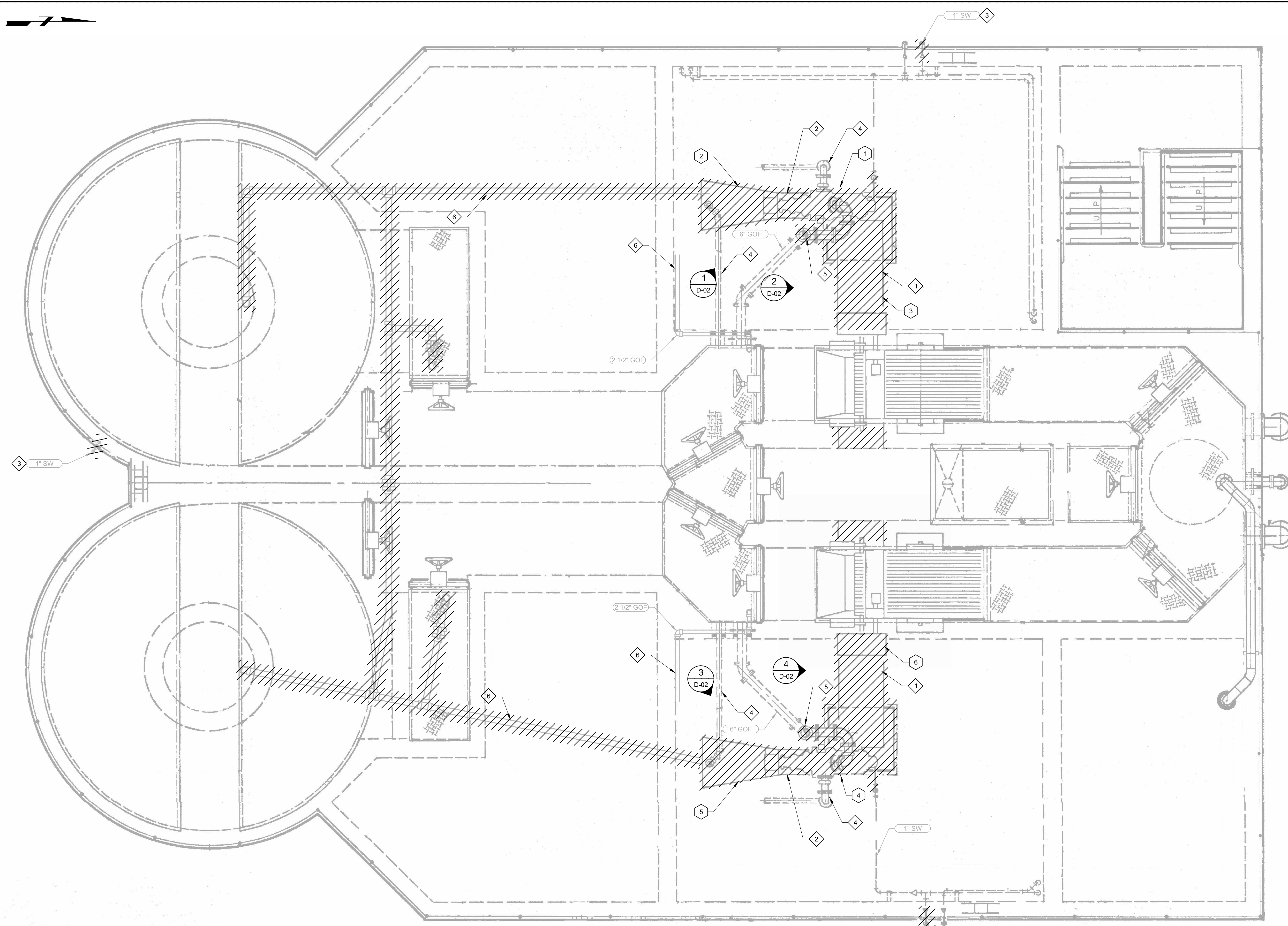
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IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY	

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User: DPerry

Model: Layout1 ColorTable: gshade.ctb DesignScript: Carollo_Std_Pen_v0905.pen PlotScale: 1:1

LAST SAVED BY: dperry



- GENERAL NOTES:**
- CONTRACTOR SHALL FIELD VERIFY EXISTING CONDITIONS PRIOR TO CONSTRUCTION AND NOTIFY ENGINEER OF ANY DISCREPANCIES.
 - CONTRACTOR IS RESPONSIBLE FOR DISPOSAL OF DEMOLISHED MATERIAL.
 - CONTRACTOR SHALL TAKE ALL PRECAUTIONARY MEASURES NECESSARY TO PROTECT EXISTING EQUIPMENT, PERSONNEL, ETC. ALL EXISTING EQUIPMENT DAMAGED BY CONTRACTOR SHALL BE EXPEDITIOUSLY REPAIRED OR REPLACED AT EXPENSE OF CONTRACTOR WITHOUT ADDITIONAL COMPENSATION.
 - CONSTRUCTION SEQUENCING SHALL BE COORDINATED TO TAKE ONE GRIT SYSTEM AND CONVEYOR OUT OF SERVICE AT A TIME TO AVOID ANY TREATMENT PROCESS INTERRUPTION.

- KEY NOTES:**
- 1 EXISTING SCREW CONVEYORS TO BE REMOVED.
 - 2 EXISTING CYCLONES, GRIT CLASSIFIER, CLASSIFIERS PADS, AND PIPING TO BE REMOVED INCLUDING PIPE ALONG THE WALL TO GRADE.
 - 3 EXISTING HOSE BIBS SERVICE WATER BRASS PIPING TO BE REMOVED. INCLUDING PIPE ALONG THE WALL TO GRADE.
 - 4 EXISTING PIPE ALREADY ABANDONED IN PLACE AND PLUGGED.
 - 5 CONNECTION FOR CYCLONE OVERFLOW.
 - 6 NO RECORD DRAWINGS AVAILABLE. PIPE SHOWN FOR INFORMATION ONLY.

KEY TAGS:

1	CYCLONE NO.1	GC-1011
2	GRIT CLASSIFIER NO.1	GC-1012
3	CONVEYOR NO. 1	SC-1013
4	CYCLONE NO.2	GC-1021
5	GRIT CLASSIFIER NO.2	GC-1022
6	CONVEYOR NO.2	SC-1023

A PLAN
SCALE: 3/8" = 1'-0"
FILE:



REV	DATE	BY	DESCRIPTION

DESIGNED	MV
DRAWN	DVP
CHECKED	EP
DATE	SEPTEMBER 2012

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MANATEE COUNTY
SWWRF HEADWORKS REHABILITATION
DEMOLITION
HEADWORKS DEMOLITION PLAN

VERIFY SCALES
BAR IS ONE INCH ON ORIGINAL DRAWING
0 1"
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

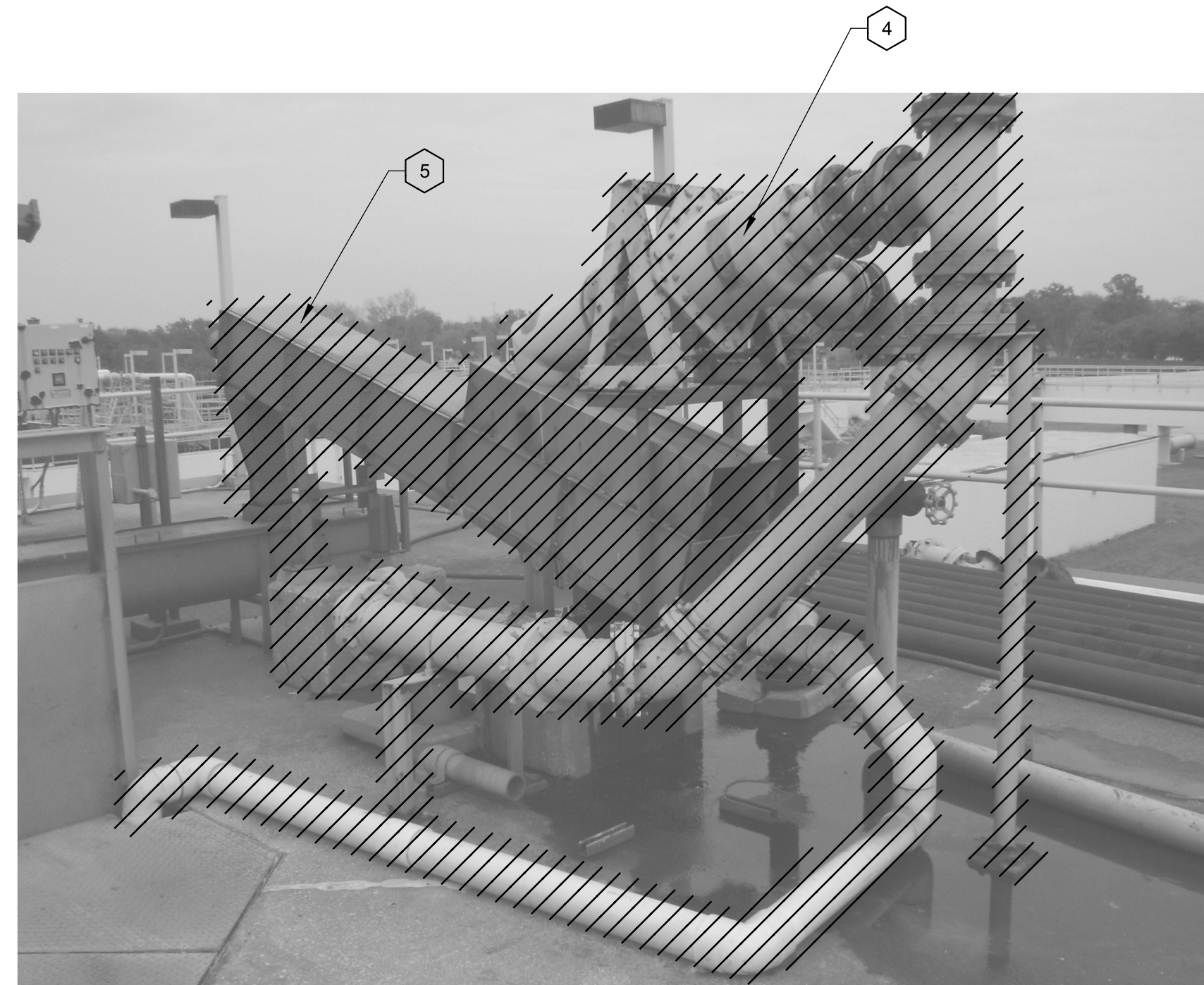
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DRAWING NO.	D-01



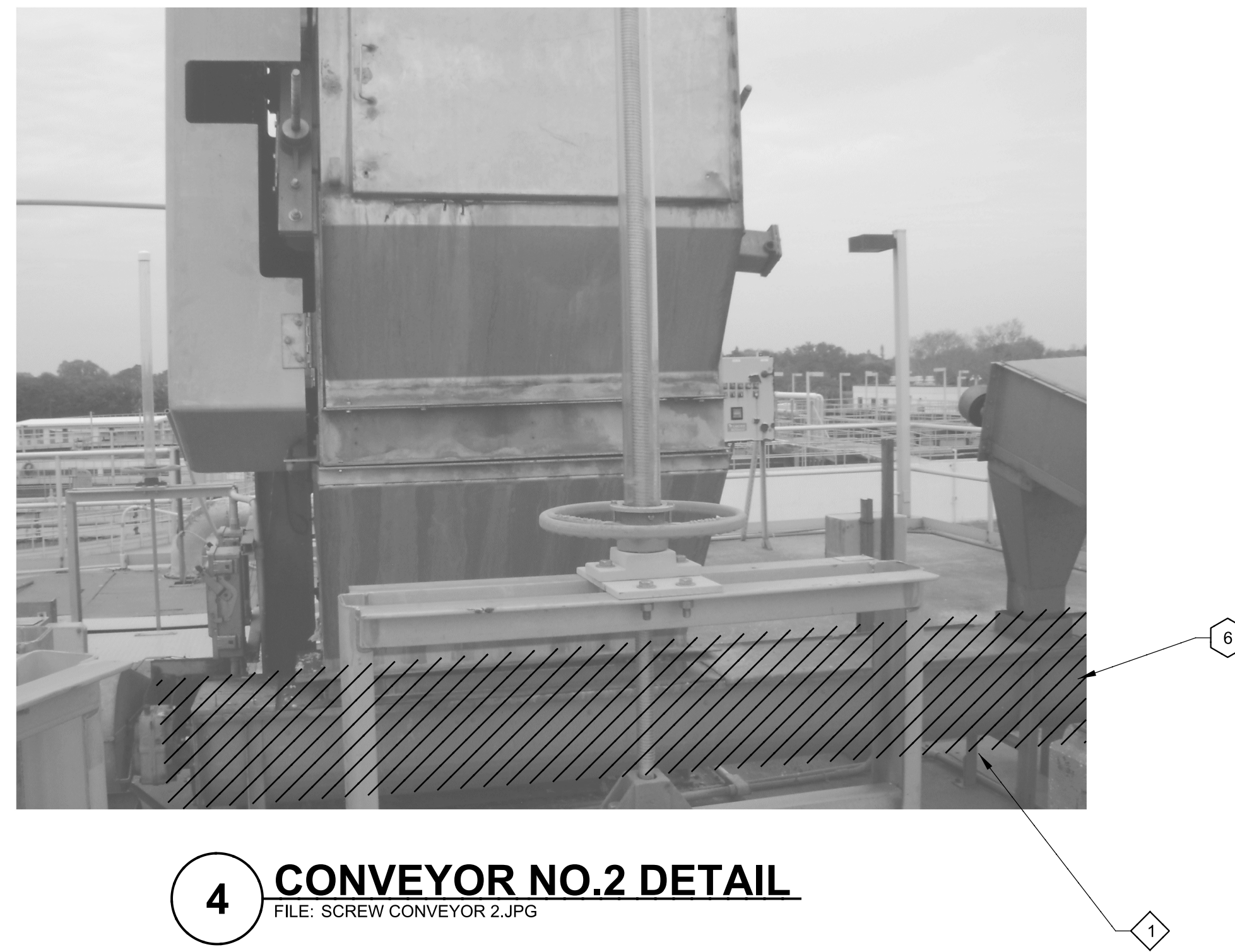
1 CYCLONE CLASSIFIER NO.1 DETAIL
FILE: CLASSIFIER 1.JPG



2 CONVEYOR NO.1 DETAIL
FILE: SCREW CONVEYOR 1.JPG



3 CYCLONE CLASSIFIER NO.2 DETAIL
FILE: CLASSIFIER 2.JPG



4 CONVEYOR NO.2 DETAIL
FILE: SCREW CONVEYOR 2.JPG

GENERAL NOTES:

1. CONTRACTOR SHALL FIELD VERIFY EXISTING CONDITIONS PRIOR TO CONSTRUCTION AND NOTIFY ENGINEER OF ANY DISCREPANCIES.
2. CONTRACTOR IS RESPONSIBLE FOR DISPOSAL OF DEMOLISHED MATERIAL.
3. CONTRACTOR SHALL TAKE ALL PRECAUTIONARY MEASURES NECESSARY TO PROTECT EXISTING EQUIPMENT. ALL EXISTING EQUIPMENT DAMAGED BY CONTRACTOR SHALL BE EXPEDITIOUSLY REPAIRED OR REPLACED AT EXPENSE OF CONTRACTOR WITHOUT ADDITIONAL COMPENSATION.

KEY NOTES:

- 1 EXISTING SCREW CONVEYORS TO BE REMOVED.
- 2 EXISTING CYCLONES, GRIT CLASSIFIER, CLASSIFIERS PADS, AND PIPING TO BE REMOVED.

KEY TAGS:

1	CYCLONE NO.1	GC-1011
2	GRIT CLASSIFIER NO.1	GC-1012
3	CONVEYOR NO. 1	SC-1013
4	CYCLONE NO.2	GC-1021
5	GRIT CLASSIFIER NO.2	GC-1022
6	CONVEYOR NO.2	SC-1023

REV	DATE	BY	DESCRIPTION

DESIGNED	MV
DRAWN	DVP
CHECKED	EP
DATE	SEPTEMBER 2012

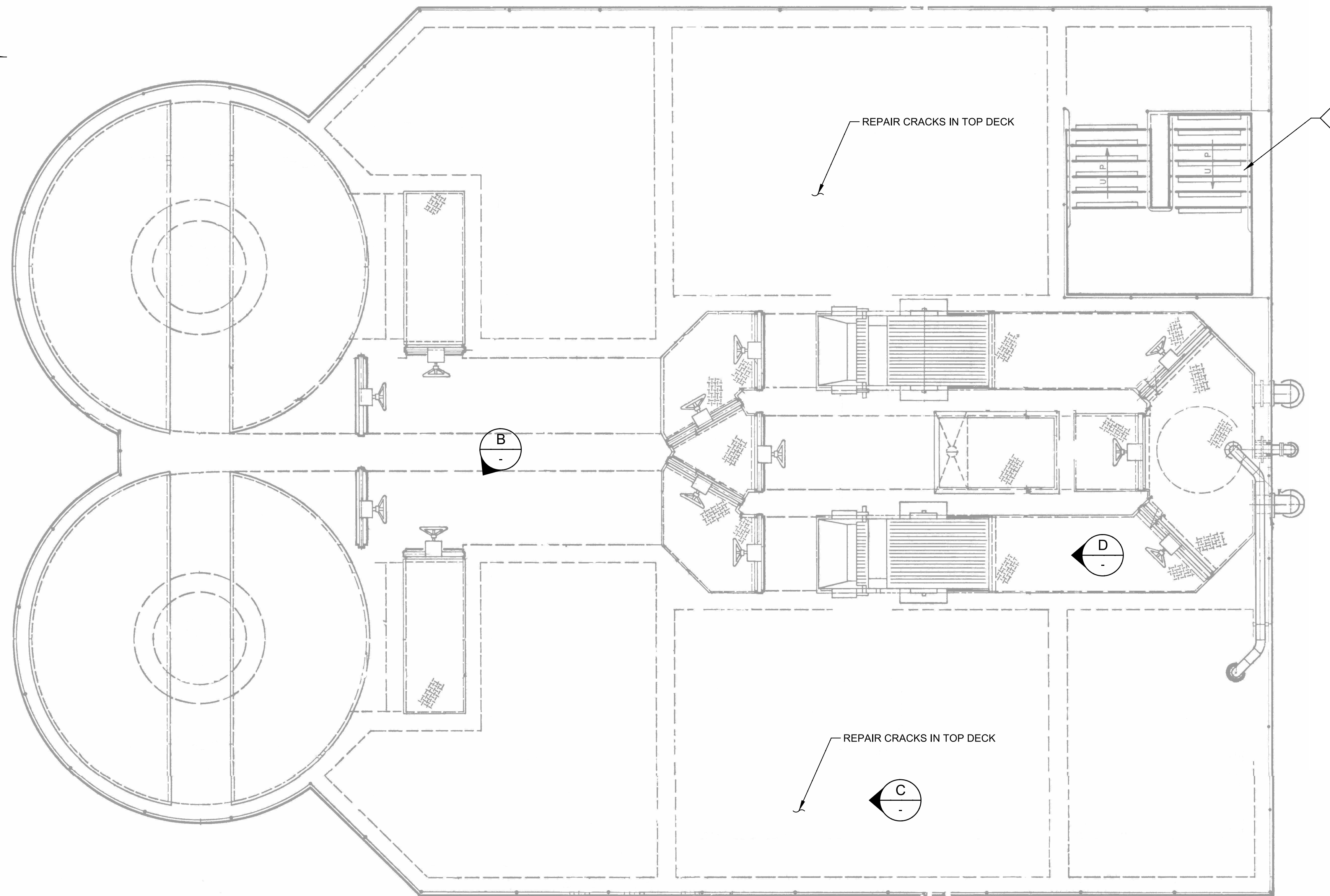


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MANATEE COUNTY
SWWRF HEADWORKS REHABILITATION
DEMOLITION
CONVEYORS AND CLASSIFIERS DEMOLITION DETAILS

VERIFY SCALES
BAR IS ONE INCH ON ORIGINAL DRAWING
0 1"
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

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DRAWING NO.	D-02

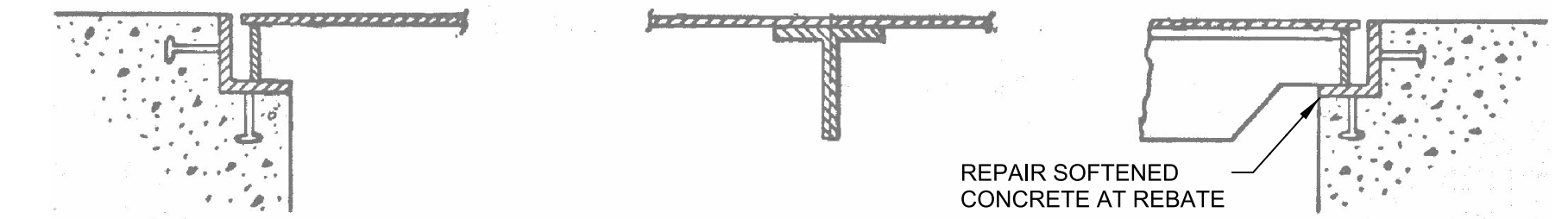


GENERAL NOTES:

1. DETERMINE DAMAGED AREAS BY:
A. CHECKING FOR SOFT MATERIAL WITH HAMMER.
B. OBVIOUS SIGNS OF DAMAGE.
2. MARK DAMAGED AREAS
3. REMOVE INFLUENT CHANNELS FLOORS AND WALLS LINER.
4. REMOVE ALL SOFT OR BAD CONCRETE TO SOUND MATERIAL.
5. REPAIR CONCRETE WITH REPAIR MATERIAL TO ORIGINAL SURFACE.
6. ATTACH EDGES OF LINER TO SOUND CONCRETE USING EPOXY.
7. LINE INFLUENT CHANNELS FLOORS, AND WALLS WITH HYDROGEN SULFIDE RESISTANT COATING PER SPECIFICATION 09984.
8. HOLIDAY TEST ENTIRE CHANNEL, INCLUDING REPAIRED REGIONS, AND REPAIR PINHOLES AND OTHER INDICATIONS.

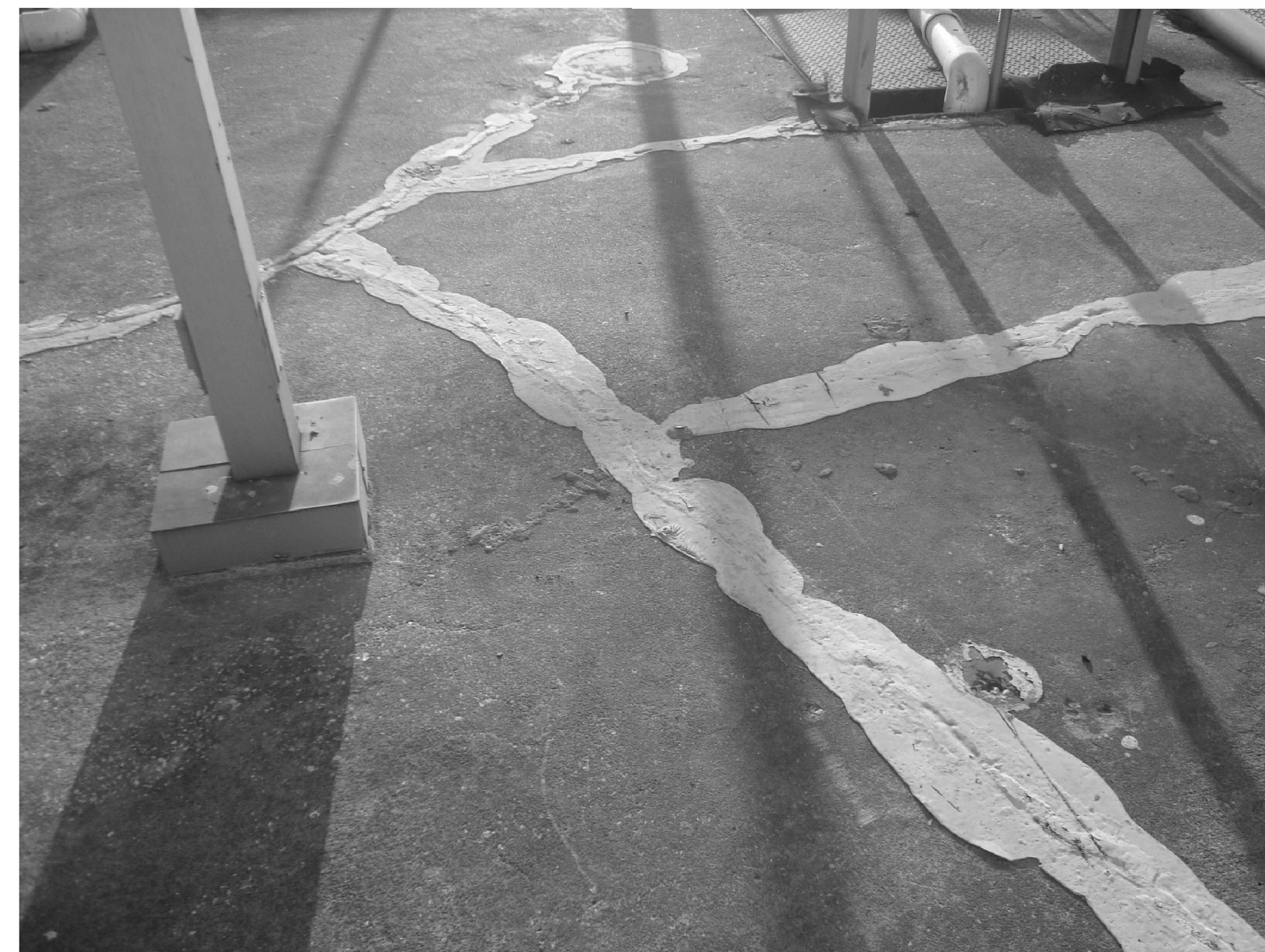
KEY NOTES:

1. INSTALL ANTI-SLIP SAFETY TREADS ON STAIRS FROM WOOSTER PRODUCTS STARMASTER TYPE 333 WITH TAPCON SCREWS WITH RIE COATING FOR CORROSIVE ENVIRONMENT AND GRAINGER SURE-FOOT STAR TREAD ADHESIVE. CONTRACTOR TO ENSURE THAT STAIRS AND LANDING ARE SLOPED TO PROVIDE DRAINAGE TO ELIMINATE PONDING. THE SLOPE SHALL NOT BE MORE THAN 1:48 OR 1/4 INCH PER 12 INCHES



A **DETAIL**
SCALE: NOT TO SCALE
FILE:

A **PLAN**
SCALE: 1/4" = 1'-0"
FILE:



B REPAIR DAMAGED AREAS



C REPAIR CRACKS IN CONCRETE



D REPAIR SOFTENED CONCRETE AT REBATE

REV	DATE	BY	DESCRIPTION

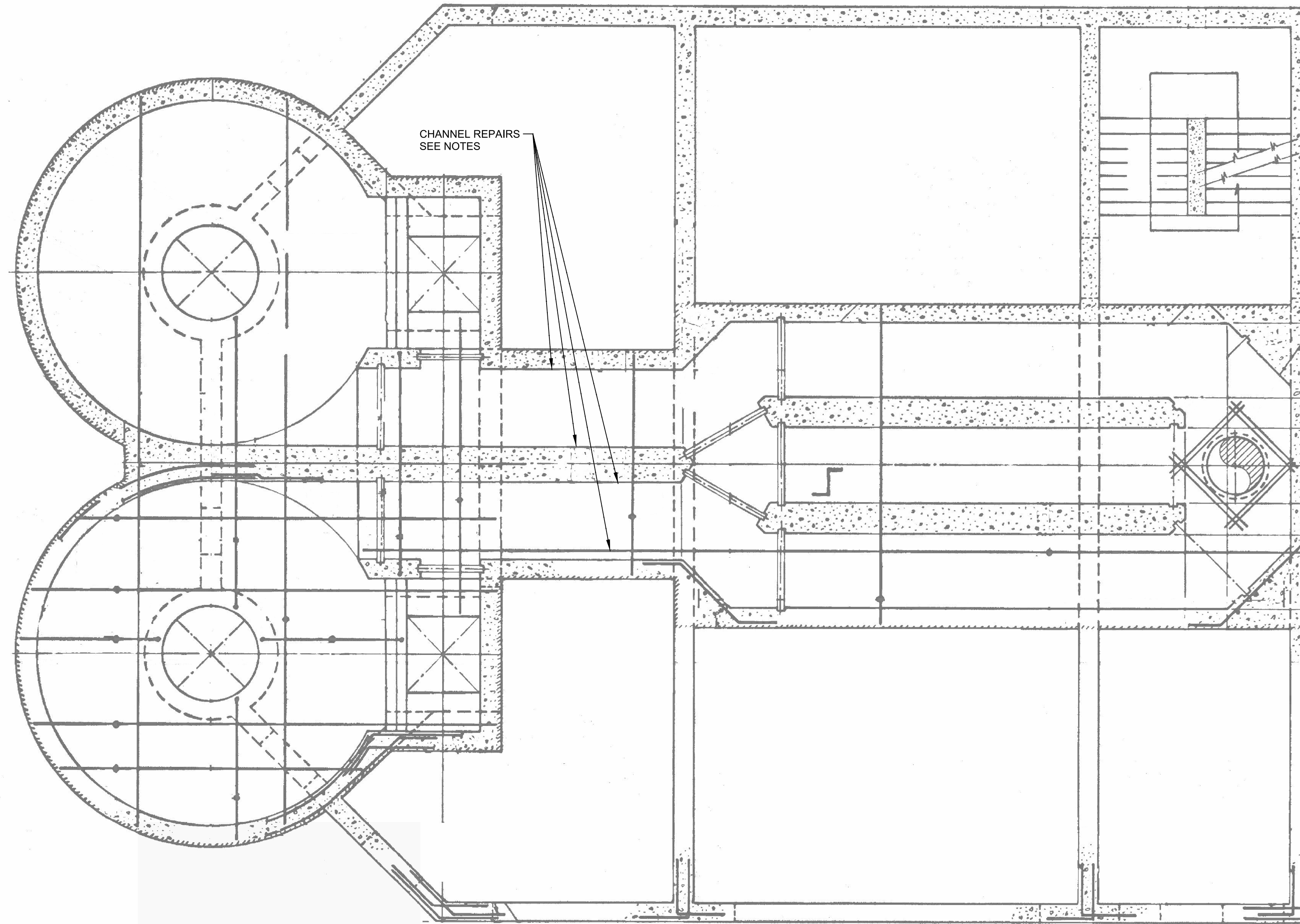
DESIGNED	JS
DRAWN	DVP
CHECKED	EP
DATE	SEPTEMBER 2012



MANATEE COUNTY
SWWRF HEADWORKS REHABILITATION
STRUCTURAL
TOP OF STRUCTURE PLAN

VERIFY SCALES
BAR IS ONE INCH ON ORIGINAL DRAWING
0 1"
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

JOB NO.
7880K10
DRAWING NO.
S-01



A PLAN
 SCALE: 1/4" = 1'-0"
 FILE:

GENERAL NOTES:

1. DETERMINE DAMAGED AREAS BY:
 A. CHECKING FOR SOFT MATERIAL WITH HAMMER.
 B. OBVIOUS SIGNS OF DAMAGE.
2. MARK DAMAGED AREAS
3. REMOVE INFLUENT CHANNELS FLOORS AND WALLS LINER.
4. REMOVE ALL SOFT OR BAD CONCRETE TO SOUND MATERIAL.
5. REPAIR CONCRETE WITH REPAIR MATERIAL TO ORIGINAL SURFACE.
6. ATTACH EDGES OF LINER TO SOUND CONCRETE USING EPOXY.
7. LINE INFLUENT CHANNELS FLOORS, AND WALLS WITH HYDROGEN SULFIDE RESISTANT COATING PER SPECIFICATION 09984.
8. HOLIDAY TEST ENTIRE CHANNEL, INCLUDING REPAIRED REGIONS, AND REPAIR PINHOLES AND OTHER INDICATIONS.

Plot Date: 28-SEP-2012 9:47:04 AM

User: DPerry

Model: Layout1 ColorTable: gshade.ctb DesignScript: Carollo Std Pen_v0905.pen PlotScale: 1:1

LAST SAVED BY: dperry

REV	DATE	BY	DESCRIPTION

DESIGNED	JS
DRAWN	DVP
CHECKED	EP
DATE	SEPTEMBER 2012



MANATEE COUNTY
 SWWRF HEADWORKS REHABILITATION
 STRUCTURAL
 INTERMEDIATE PLAN

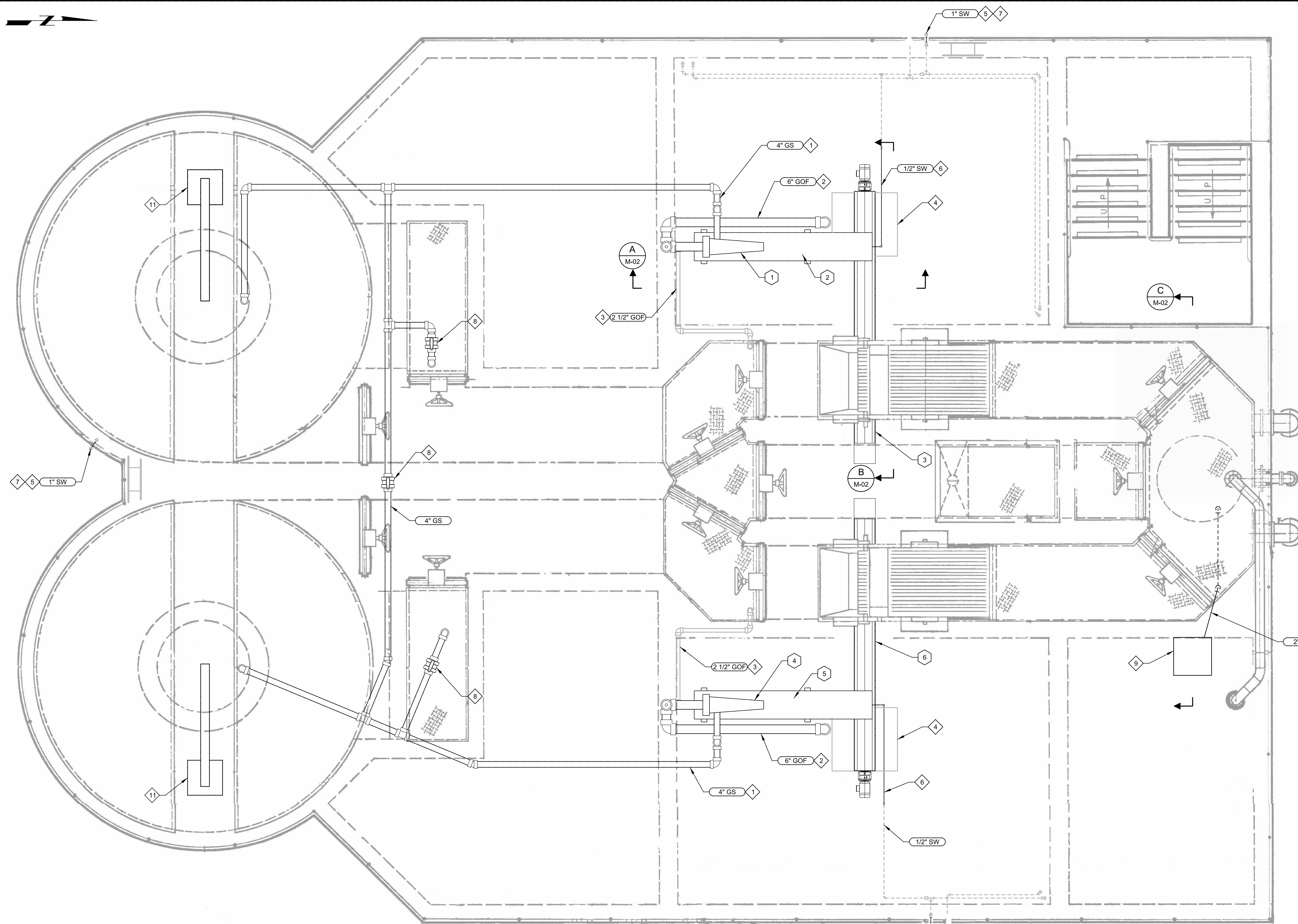
VERIFY SCALES	JOB NO. 7880K10
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IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY	

Plot Date: 28-SEP-2012 9:47:55 AM

User: DPerry

Model: Layout1 ColorTable: gshade.ctb DesignScript: Carollo_Std_Pen_v0905.pen PlotScale: 1:1

LAST SAVED BY: newberry



GENERAL NOTES:

1. CONTRACTOR SHALL FIELD VERIFY EXISTING CONDITIONS PRIOR TO CONSTRUCTION AND NOTIFY ENGINEER OF ANY DISCREPANCIES.
2. CONTRACTOR SHALL TAKE ALL PRECAUTIONARY MEASURES NECESSARY TO PROTECT EXISTING EQUIPMENT. ALL EXISTING EQUIPMENT DAMAGED BY CONTRACTOR SHALL BE EXPEDITIOUSLY REPAIRED OR REPLACED AT EXPENSE OF CONTRACTOR WITHOUT ADDITIONAL COMPENSATION.
3. LOCATION AND POSITION OF CLASSIFIER, AND CONVEYOR DEPENDS UPON EQUIPMENT FURNISHED TO MAINTAIN MINIMUM SPACING REQUIREMENTS.

KEY NOTES:

- 1 PROVIDE ADDITIONAL FITTINGS AND PIPING REQUIRED TO ALIGN NEW 4" GRIT SLURRY LINE TO CYCLONE. INSTALL LINES THROUGH EXISTING FLOOR PENETRATIONS.
- 2 PROVIDE ADDITIONAL FITTINGS AND PIPING REQUIRED TO ALIGN NEW 6" CYCLONE OVERFLOW WITH EXISTING 6" LINE TO INFLUENT CHANNEL.
- 3 PROVIDE ADDITIONAL FITTINGS AND PIPING REQUIRED TO ALIGN NEW 2.5" CLASSIFIER OVERFLOW WITH EXISTING 2.5" LINE TO INFLUENT CHANNEL.
- 4 EXISTING CHUTE TO REMAIN IN PLACE.
- 5 REMOVE AND REPLACE EXISTING RAW WATER BRASS PIPING WITH PVC SCH. 80 INCLUDING PIPE ALONG THE WALL TO THE GROUND.
- 6 WASH WATER LINE SHOULD BE ROUTED THROUGH EXISTING FLOOR PENETRATIONS.
- 7 HOSE BIBB
- 8 ECCENTRIC PLUG VALVE
- 9 EXISTING COMPOSITE REFRIGERATED SAMPLER
- 10 ROUTE SAMPLER TUBING THROUGH 2" SCHEDULE 80 PVC.
- 11 PROVIDE A 500 LB. CAPACITY FLOOR MOUNTED JIB CRANE WITH MANUAL HOIST MANUFACTURED BY DAVID ROUND OR APPROVED EQUAL. THE CRANE, HOIST, AND CABLE SHALL BE STAINLESS STEEL SUITABLE FOR THIS ENVIRONMENT. THE CRANE SPAN AND UNDER CLEARANCE SHALL BE 8 FT WITH A 360° ROTATING ARM AND A CHAIN HOIST LIFT HEIGHT OF 30 FT.

KEY TAGS:

- | | | |
|---|----------------------|---------|
| 1 | CYCLONE NO.1 | GC-1011 |
| 2 | GRIT CLASSIFIER NO.1 | GC-1012 |
| 3 | CONVEYOR NO. 1 | SC-1013 |
| 4 | CYCLONE NO.2 | GC-1021 |
| 5 | GRIT CLASSIFIER NO.2 | GC-1022 |
| 6 | CONVEYOR NO.2 | SC-1023 |

A PLAN
 SCALE: 3/8" = 1'-0"
 FILE:

REV	DATE	BY	DESCRIPTION

DESIGNED	MV
DRAWN	DVP
CHECKED	EP
DATE	SEPTEMBER 2012



MANATEE COUNTY
 SWWRF HEADWORKS REHABILITATION
 MECHANICAL
 HEADWORKS TOP PLAN

VERIFY SCALES	JOB NO. 7880K10
BAR IS ONE INCH ON ORIGINAL DRAWING	DRAWING NO. M-01
0 1"	
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY	

GENERAL NOTES:

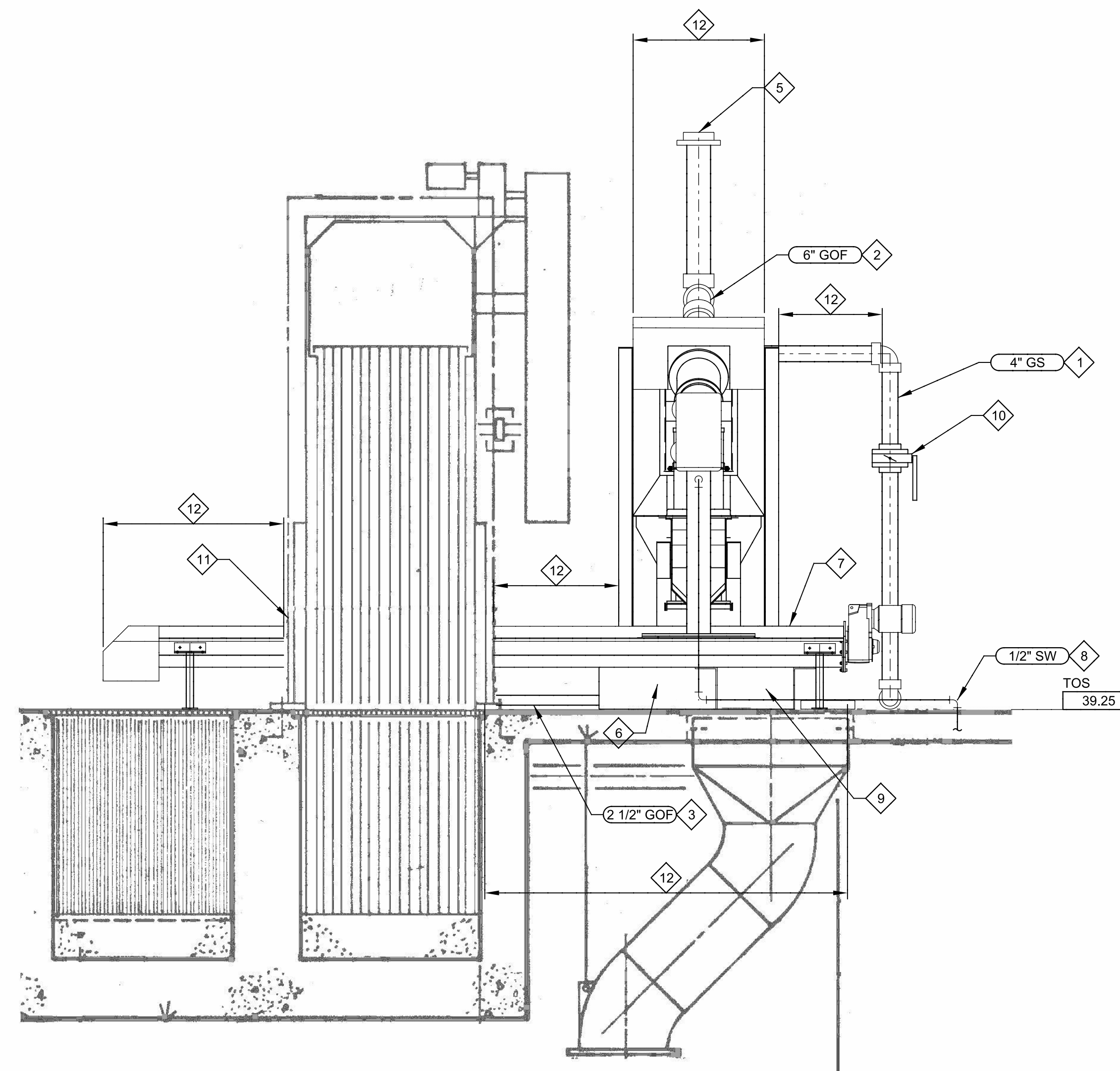
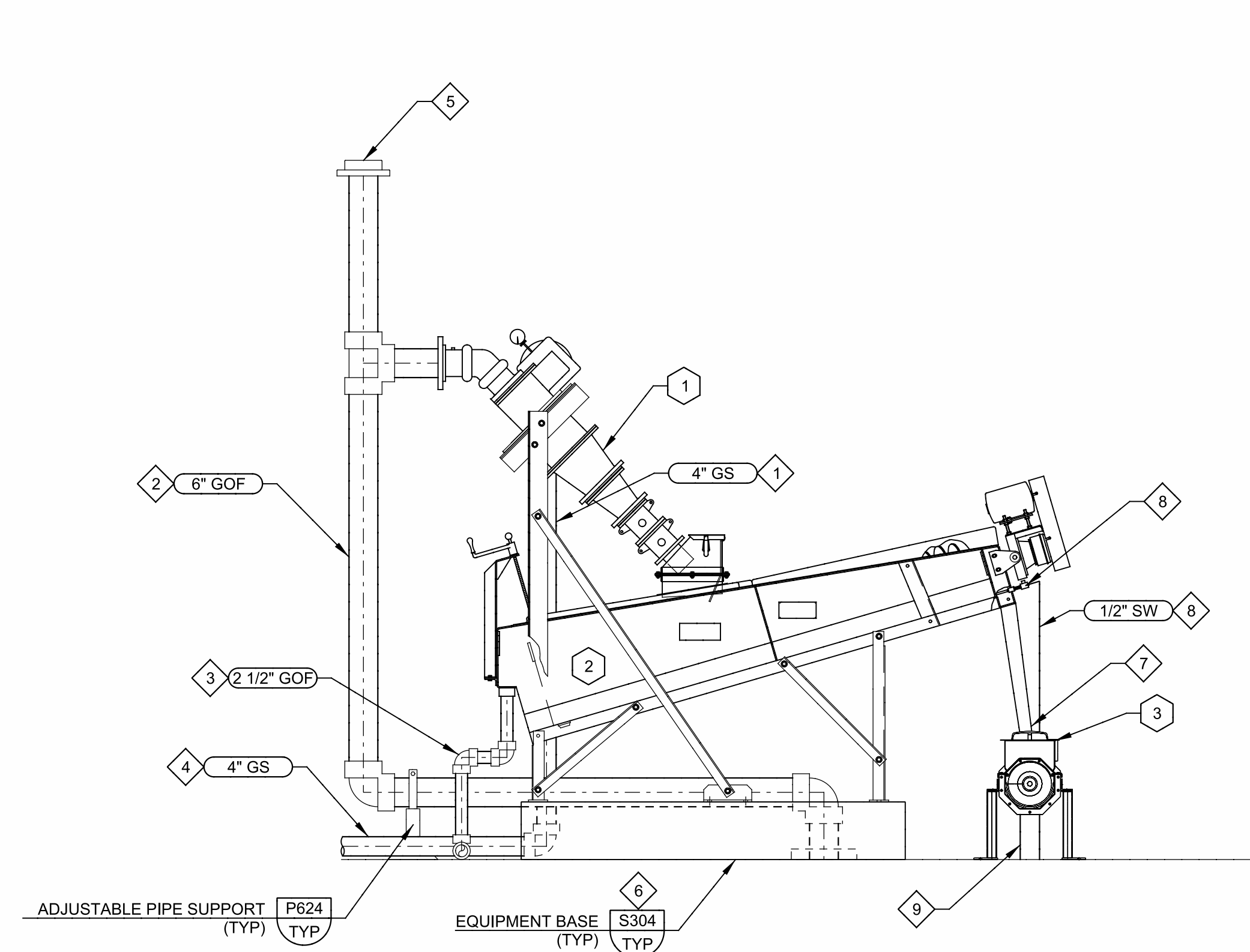
- CONTRACTOR SHALL FIELD VERIFY EXISTING CONDITIONS PRIOR TO CONSTRUCTION AND NOTIFY ENGINEER OF ANY DISCREPANCIES.
- CONTRACTOR SHALL TAKE ALL PRECAUTIONARY MEASURES NECESSARY TO PROTECT EXISTING EQUIPMENT. ALL EXISTING EQUIPMENT DAMAGED BY CONTRACTOR SHALL BE EXPEDITIOUSLY REPAIRED OR REPLACED AT EXPENSE OF CONTRACTOR WITHOUT ADDITIONAL COMPENSATION.
- LOCATION AND POSITION OF CLASSIFIER, AND CONVEYOR DEPENDS UPON EQUIPMENT FURNISHED TO MAINTAIN MINIMUM SPACING REQUIREMENTS.

KEY NOTES:

- PROVIDE ADDITIONAL FITTINGS AND PIPING REQUIRED TO ALIGN NEW 4" GRIT SLURRY LINE TO CYCLONE.
- PROVIDE ADDITIONAL FITTINGS AND PIPING REQUIRED TO ALIGN NEW 6" CYCLONE OVERFLOW WITH EXISTING 6" LINE TO INFLUENT CHANNEL.
- PROVIDE ADDITIONAL FITTINGS AND PIPING REQUIRED TO ALIGN NEW 2.5" CLASSIFIER OVERFLOW WITH EXISTING 2.5" LINE TO INFLUENT CHANNEL.
- FROM GRIT PUMP NO.1
- CYCLONE VENT.
- INSTALL CONCRETE PAD FOR CLASSIFIER. S304
TYP
- CONTRACTOR SHALL COORDINATE AND VERIFY THE ACTUAL DIMENSIONS REQUIRED TO CONSTRUCT THE CONVEYOR ASSEMBLY WITH THE EXISTING MECHANICAL SCREEN AND NEW CLASSIFIER DIMENSIONS & ELEVATIONS WITH MANUFACTURER. MANUFACTURER SHOULD PROVIDE OPENINGS AND REQUIRED CONNECTIONS FOR THE CHUTE, GRIT CLASSIFIER, AND MECHANICAL SCREEN DISCHARGE.
- INSTALL WASH WATER LINE THROUGH EXISTING FLOOR PENETRATION. LOCATION OF NEW LINE DEPENDS ON EQUIPMENT FURNISHED
- CONNECT CONVEYOR DROP CHUTE TO EXISTING DROP CHUTE OPENING TO MATCH EXISTING.
- ECCENTRIC PLUG VALVE
- CONNECT MECHANICAL SCREEN FLANGED DROP CHUTE TO CONVEYOR PORT TO MATCH EXISTING.
- DIMENSION TO BE BASED ON SELECTED MANUFACTURER.
- EXISTING COMPOSITE REFRIGERATED SAMPLER. NO RECORD DRAWING AVAILABLE. LOCATION SHOWN FOR INFORMATION ONLY.
- ROUTE SAMPLER TUBING THROUGH 2" SCHEDULE 80 PVC

KEY TAGS:

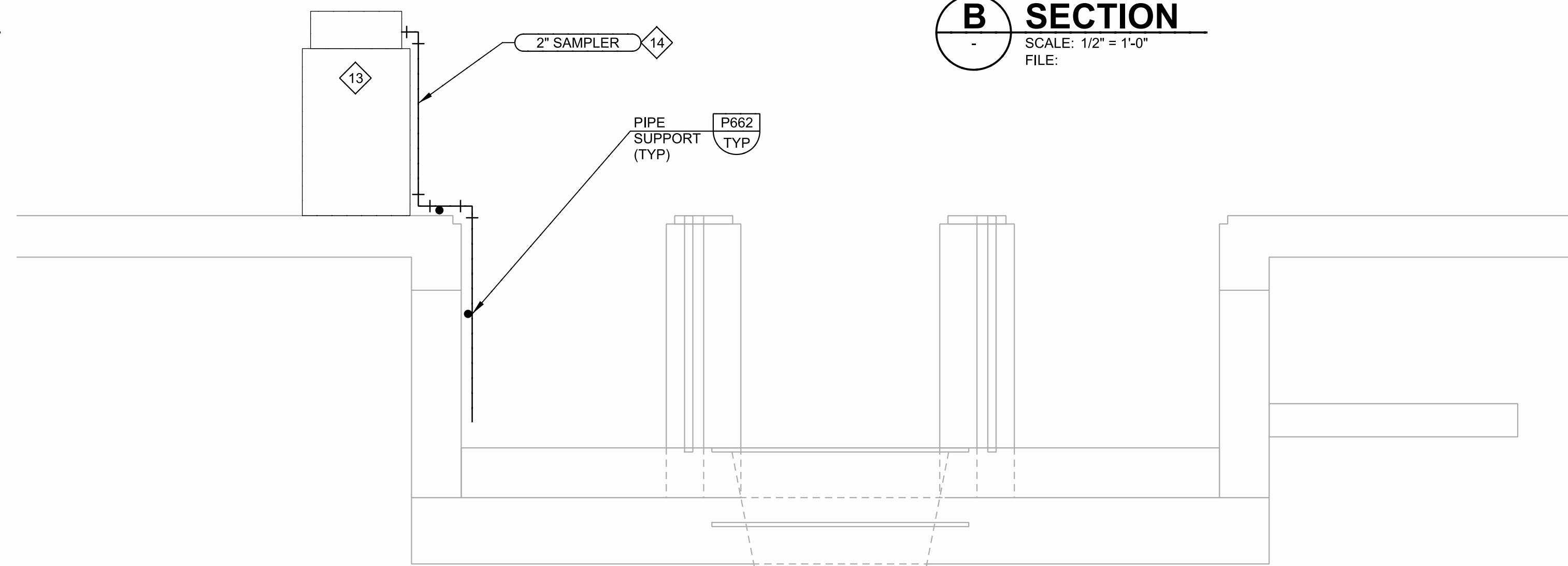
- | | | |
|---|----------------------|---------|
| 1 | CYCLONE NO.1 | GC-1011 |
| 2 | GRIT CLASSIFIER NO.1 | GC-1012 |
| 3 | CONVEYOR NO. 1 | SC-1013 |



A SECTION
SCALE: 1/2" = 1'-0"
FILE:

B SECTION
SCALE: 1/2" = 1'-0"
FILE:

C SECTION
M-01 SCALE: 1/2" = 1'-0"
FILE:



LAST SAVED BY: jhenbery

REV	DATE	BY	DESCRIPTION

DESIGNED	MV
DRAWN	DVP
CHECKED	EP
DATE	SEPTEMBER 2012



MANATEE COUNTY
SWWRF HEADWORKS REHABILITATION
MECHANICAL
SECTIONS

VERIFY SCALES
BAR IS ONE INCH ON ORIGINAL DRAWING
0 1"
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

JOB NO.
7880K10
DRAWING NO.
M-02

ELECTRICAL PLAN/LAYOUT

ONE LINE DIAGRAMS, RISER DIAGRAMS AND SCHEMATICS

SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION														
	TELEPHONE TERMINAL CABINET		FIRE ALARM SMOKE DETECTOR EC- MOUNTED TO EXPOSED CEILING H- HARSH ENVIRONMENT RATED		MOTOR, SQUIRREL CAGE INDUCTION UNLESS OTHERWISE NOTED - HORSEPOWER INDICATED		MANUAL MOTOR STARTER SWITCH, NEMA 4X UNLESS OTHERWISE NOTED. NUMBER OF POLES AS REQUIRED														
	TERMINAL JUNCTION BOX		FIRE ALARM HEAT DETECTOR EC- MOUNTED TO EXPOSED CEILING		OVERLOAD RELAY HEATER		PUSH-BUTTON STATION, NEMA 12 ENCLOSURE UNLESS INDICATED OTHERWISE. 4X = NEMA 4X 316 STAINLESS STEEL ENCLOSURE. SEE CONTROL DIAGRAMS FOR TYPE PUSH BUTTON REQUIRED														
	ELECTRICAL EQUIPMENT		BEAM DETECTOR, T=TRANSMITTER, R=RECEIVER		MAGNETIC STARTER WITH NEMA SIZE INDICATED		NONFUSED DISCONNECT SWITCH, SIZE INDICATED, 3 POLE UNLESS INDICATED OTHERWISE, NEMA 12 ENCLOSURE, 4X = NEMA 4X 316 STAINLESS STEEL														
	CEILING MOUNTED DOWNLIGHT LUMINAIRE - SEE SCHEDULE FOR TYPE		DUCT SMOKE DETECTOR		MOTOR CIRCUIT PROTECTOR, MAGNETIC, 3 POLE UNLESS INDICATED OTHERWISE.		FUSED DISCONNECT SWITCH, SIZE INDICATED (60 = SWITCH RATING; 40 = FUSE RATING) 3 POLE UNLESS INDICATED OTHERWISE, NEMA 12 ENCLOSURE, 4X = NEMA 4X 316 STAINLESS STEEL														
	FLOURESCENT LUMINAIRE, SURFACE OR LAY IN TYPE SEE SCHEDULE FOR TYPE		REMOTE TEST UNIT		CIRCUIT BREAKER, THERMAL MAGNETIC TRIP SHOWN, 3 POLE UNLESS INDICATED OTHERWISE.		LIGHTING CONTACTOR, CURRENT RATING INDICATED, NEMA 12 ENCLOSURE UNLESS INDICATED OTHERWISE. SEE CONTROL DIAGRAM FOR NUMBER OF POLES. 4X = NEMA 4X 316 STAINLESS STEEL														
	LUMINAIRE AND POLE - SEE SCHEDULE FOR TYPE		SECURITY CARD READER		FUSED SWITCH, SWITCH AND FUSE CURRENT RATING INDICATED, 3 POLE UNLESS INDICATED OTHERWISE.		MAGNETIC STARTER, NEMA SIZE INDICATED, NEMA 12 ENCLOSURE, UNLESS INDICATED OTHERWISE. SEE CONTROL DIAGRAM. 4X = NEMA 4X 316 STAINLESS STEEL														
	WALL MOUNTED LUMINAIRE - SEE SCHEDULE FOR TYPE	ABBREVIATIONS			SWITCH - CURRENT RATING INDICATED, 3 POLE UNLESS INDICATED OTHERWISE.		ELECTRIC RESISTANCE HEATER														
	FLOOD LIGHTS - AIM IN THE DIRECTION SHOWN SEE SCHEDULE FOR TYPE	ABBREVIATIONS			DRAWOUT CIRCUIT BREAKER, LOW VOLTAGE 600= FRAME RATING, 400=TRIP SETTING		ELAPSED TIME METER														
	EXIT LIGHTS - SOLID SECTION IS DIRECTION OF FACE SEE SCHEDULE FOR TYPE	ABBREVIATIONS	DESCRIPTION		DRAWOUT CIRCUIT BREAKER, MEDIUM VOLTAGE 600= FRAME RATING, 400=TRIP SETTING		CONTACT - NORMALLY OPEN WITH COIL INDICATED														
	EMERGENCY LIGHT WITH BATTERY PACK SEE SCHEDULE FOR TYPE	A	AMMETER, AMPERE		DRAWOUT FUSED SWITCH, LOW OR MEDIUM VOLTAGE 600= FRAME RATING, 400=FUSE RATING		CONTACT - NORMALLY CLOSED WITH COIL INDICATED														
LIGHTING FIXTURE POWER AND SWITCHING LEGEND		AC	ALTERNATING CURRENT		CURRENT TRANSFORMER, NUMBER OF WINDINGS INDICATED		CONTROL RELAY, X=SEQUENTIAL NUMBER														
	X=FIXTURE TYPE Y= PANEL-CIRCUIT BRKR Z=SWITCH IF NO Z INDICATED, CONNECT DIRECTLY TO CIRCUIT BREAKER.	AF	AMPERE FRAME		TRANSFORMER, VOLTAGES, PHASE AND RATING INDICATED AS APPLICABLE		LATCHING RELAY, X=SEQUENTIAL NUMBER L - LATCH, U - UNLATCH														
	CONDUIT/CONDUCTOR - REFER TO CIRCUIT SCHEDULE	AFG	ABOVE FINISHED GRADE		LIGHTNING ARRESTER		TIME DELAY RELAY, X=SEQUENTIAL NUMBER NOTC=NORMALLY OPEN TIMED CLOSED NOTO=NORMALLY OPEN TIMED OPEN AFTER CLOSE NCTO=NORMALLY CLOSED TIMED OPEN NCTC=NORMALLY CLOSED TIMED CLOSED AFTER OPEN														
	HOME RUN - PANEL AND CIRCUIT NUMBER SHOWN	AS	AMMETER SWITCH, AMPERE SENSOR		CAPACITOR OR SURGE CAPACITOR		TEMPERATURE OPENS ON RISING TEMPERATURE, CLOSES ON FALLING TEMPERATURE														
	EXPOSED CONDUIT AND CONDUCTORS*	ASU	AIR SUPPLY UNIT		UTILITY METER		OPENS ON RISING TEMPERATURE, CLOSES ON FALLING TEMPERATURE														
	UNDERGROUND CONDUIT AND CONDUCTORS* NOTE: * ALL UNMARKED CONDUIT RUNS CONSIST OF 2#12, 1#12G IN 3/4" C.	ATS	AUTOMATIC TRANSFER SWITCH		GENERATOR		CLOSES ON RISING TEMPERATURE, OPENS ON FALLING TEMPERATURE														
	YARD CONDUIT. REFER TO YARD CONDUIT SCHEDULE	BC	BYPASS CONTACTOR		METER SCALE RANGE SHOWN IF REQUIRED A - AMPS PM - PHASE MONITOR V - VOLTS P - POWER METER		SELECTOR SWITCH: MAINTAINED CONTACT WITH CONTACT POSITION INDICATED, CHART IDENTIFIES OPERATION														
	DIRECT BURIED CONDUIT	BRKR	BREAKER		SURGE PROTECTION DEVICE	<table border="1"> <thead> <tr> <th rowspan="2">CKT.</th> <th colspan="3">POSITION</th> </tr> <tr> <th>HAND</th> <th>OFF</th> <th>AUTO</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>X</td> <td>O</td> <td>O</td> </tr> <tr> <td>2</td> <td>O</td> <td>O</td> <td>X</td> </tr> </tbody> </table>	CKT.	POSITION			HAND	OFF	AUTO	1	X	O	O	2	O	O	X
CKT.	POSITION																				
	HAND	OFF	AUTO																		
1	X	O	O																		
2	O	O	X																		
	CONDUIT, STUBBED AND CAPPED AS SHOWN	C	CONDUIT, CONTACTOR		GROUND		INDICATES RACEWAY AND CIRCUIT CONDUCTORS. FIRST NUMBER IS RACEWAY SIZE. THE FOLLOWING NUMBERS ARE THE CONDUCTOR QUANTITIES, SIZES, AND TYPES.														
	GROUND WIRE, 4/0 UNLESS OTHERWISE NOTED	CB	CIRCUIT BREAKER		CONTROL TRANSFORMER		DEMOLITION TO BE REMOVED OR DELETED														
	6 FOOT GROUND WIRE PIGTAIL, 4/0 UNLESS OTHERWISE NOTED	CKT	CIRCUIT		GROUND FAULT RELAY WITH C.T.	LINE WEIGHT	NEW														
	GROUND ROD - 5/8" x 20' COPPER CLAD UNLESS OTHERWISE NOTED	CMS	COMBINATION MOTOR STARTER		PUSH-BUTTON SWITCH, MOMENTARY CONTACT, NORMALLY OPEN		EXISTING														
	GROUND TEST WELL, SEE DETAIL	CPT	CONTROL POWER TRANSFORMER		PUSH-BUTTON SWITCH, MOMENTARY CONTACT, NORMALLY CLOSED	NOTE: THIS IS A STANDARD LEGEND SHEET. SOME SYMBOLS OR ABBREVIATIONS MAY APPEAR ON THIS SHEET AND NOT BE UTILIZED ON PROJECT.															
	WALL SWITCH: 2- DOUBLE POLE 3- THREE WAY 4- FOUR WAY WP- WEATHERPROOF	CR	CONTROL RELAY		PUSH BUTTON SWITCH, MAINTAINED CONTACTS WITH MECHANICAL INTERLOCK																
	CONVENIENCE RECEPTACLE - 20A DUPLEX UNLESS SPECIFIED OTHERWISE WP- WEATHERPROOF TL- TWIST LOCK GFI-GROUND FAULT INTERRUPTER	CRE	CORROSION RESISTANT		REMOTE DEVICE																
	CONVENIENCE RECEPTACLE - 20A QUADROPLEX UNLESS SPECIFIED OTHERWISE	CT	CURRENT TRANSFORMER		INDICATING LIGHT - LETTER INDICATES COLOR A - AMBER G - GREEN B - BLUE R - RED C - CLEAR W - WHITE																
	CONVENIENCE RECEPTACLE - 20A DUPLEX UNLESS SPECIFIED OTHERWISE. MOUNTED FLUSH IN FLOOR.	DC	DIRECT CURRENT		PUSH TO TEST AND CONNECT INDICATING LIGHT SCHEMATIC DIAGRAMS ONLY																
	RECEPTACLE, SPECIAL PURPOSE - AMPERAGE AS INDICATED.	DIV	DIVISION		INDICATING LIGHT - LETTER INDICATES COLOR A - AMBER G - GREEN B - BLUE R - RED C - CLEAR W - WHITE																
	TELEPHONE/DATA RECEPTACLE (OUTLET BOX, 18" AFF) W - WALL MOUNTED, 54" AFF	DP	DISTRIBUTION PANEL (480V)		INDICATING LIGHT - LETTER INDICATES COLOR A - AMBER G - GREEN B - BLUE R - RED C - CLEAR W - WHITE																
	TELEPHONE/DATA RECEPTACLE MOUNTED FLUSH IN FLOOR	EF	EXHAUST FAN		INDICATING LIGHT - LETTER INDICATES COLOR A - AMBER G - GREEN B - BLUE R - RED C - CLEAR W - WHITE																
	JUNCTION BOX NEMA 12 ENCLOSURE UNLESS INDICATED OTHERWISE. 4X = NEMA 4X SS	EG	ELECTRICAL GROUND		INDICATING LIGHT - LETTER INDICATES COLOR A - AMBER G - GREEN B - BLUE R - RED C - CLEAR W - WHITE																
	FIRE ALARM PULL STATION	ETM	ELAPSED TIME METER		INDICATING LIGHT - LETTER INDICATES COLOR A - AMBER G - GREEN B - BLUE R - RED C - CLEAR W - WHITE																
	FIRE ALARM HORN/STROBE LIGHT	EXST	EXISTING		INDICATING LIGHT - LETTER INDICATES COLOR A - AMBER G - GREEN B - BLUE R - RED C - CLEAR W - WHITE																
	FIRE ALARM STROBE LIGHT	FDR	FEEDER		INDICATING LIGHT - LETTER INDICATES COLOR A - AMBER G - GREEN B - BLUE R - RED C - CLEAR W - WHITE																
	FIRE ALARM CONTROL PANEL	F, FU	FUSE		INDICATING LIGHT - LETTER INDICATES COLOR A - AMBER G - GREEN B - BLUE R - RED C - CLEAR W - WHITE																
	FIRE ALARM ANNUNCIATOR PANEL	FI	FLOW INDICATOR		INDICATING LIGHT - LETTER INDICATES COLOR A - AMBER G - GREEN B - BLUE R - RED C - CLEAR W - WHITE																
		FLR	FLOOR		INDICATING LIGHT - LETTER INDICATES COLOR A - AMBER G - GREEN B - BLUE R - RED C - CLEAR W - WHITE																
		FLUOR	FLUORESCENT		INDICATING LIGHT - LETTER INDICATES COLOR A - AMBER G - GREEN B - BLUE R - RED C - CLEAR W - WHITE																
		FM	FLOW METER		INDICATING LIGHT - LETTER INDICATES COLOR A - AMBER G - GREEN B - BLUE R - RED C - CLEAR W - WHITE																
		FO	FIBER OPTIC		INDICATING LIGHT - LETTER INDICATES COLOR A - AMBER G - GREEN B - BLUE R - RED C - CLEAR W - WHITE																
		FS	FLOAT SWITCH, FLOW SWITCH		INDICATING LIGHT - LETTER INDICATES COLOR A - AMBER G - GREEN B - BLUE R - RED C - CLEAR W - WHITE																
		FT	FLOW TRANSMITTER		INDICATING LIGHT - LETTER INDICATES COLOR A - AMBER G - GREEN B - BLUE R - RED C - CLEAR W - WHITE																
		FUT	FUTURE		INDICATING LIGHT - LETTER INDICATES COLOR A - AMBER G - GREEN B - BLUE R - RED C - CLEAR W - WHITE																
		FVNR	FULL VOLTAGE NON-REVERSING STARTER		INDICATING LIGHT - LETTER INDICATES COLOR A - AMBER G - GREEN B - BLUE R - RED C - CLEAR W - WHITE																
		G	GREEN, GROUND		INDICATING LIGHT - LETTER INDICATES COLOR A - AMBER G - GREEN B - BLUE R - RED C - CLEAR W - WHITE																
		GEN	GENERATOR		INDICATING LIGHT - LETTER INDICATES COLOR A - AMBER G - GREEN B - BLUE R - RED C - CLEAR W - WHITE																
		GFI	GROUND FAULT INTERRUPTER		INDICATING LIGHT - LETTER INDICATES COLOR A - AMBER G - GREEN B - BLUE R - RED C - CLEAR W - WHITE																
		GFR	GROUND FAULT RELAY		INDICATING LIGHT - LETTER INDICATES COLOR A - AMBER G - GREEN B - BLUE R - RED C - CLEAR W - WHITE																
		GND	GROUND		INDICATING LIGHT - LETTER INDICATES COLOR A - AMBER G - GREEN B - BLUE R - RED C - CLEAR W - WHITE																
		HH	HANDHOLE		INDICATING LIGHT - LETTER INDICATES COLOR A - AMBER G - GREEN B - BLUE R - RED C - CLEAR W - WHITE																
		HID	HIGH INTENSITY DISCHARGE		INDICATING LIGHT - LETTER INDICATES COLOR A - AMBER G - GREEN B - BLUE R - RED C - CLEAR W - WHITE																
		HOA	HAND/OFF/REMOTE		INDICATING LIGHT - LETTER INDICATES COLOR A - AMBER G - GREEN B - BLUE R - RED C - CLEAR W - WHITE																
		HOR	HIGH PRESSURE SODIUM		INDICATING LIGHT - LETTER INDICATES COLOR A - AMBER G - GREEN B - BLUE R - RED C - CLEAR W - WHITE																
		HPS	HEATING, VENTILATING & AIR CONDITIONING		INDICATING LIGHT - LETTER INDICATES COLOR A - AMBER G - GREEN B - BLUE R - RED C - CLEAR W - WHITE																
		HVAC	HEATING, VENTILATING & AIR CONDITIONING		INDICATING LIGHT - LETTER INDICATES COLOR A - AMBER G - GREEN B - BLUE R - RED C - CLEAR W - WHITE																
		IC	INTERRUPTING CAPACITY		INDICATING LIGHT - LETTER INDICATES COLOR A - AMBER G - GREEN B - BLUE R - RED C - CLEAR W - WHITE																
		I & C	INSTRUMENTATION AND CONTROL		INDICATING LIGHT - LETTER INDICATES COLOR A - AMBER G - GREEN B - BLUE R - RED C - CLEAR W - WHITE																
		IMH	INSTRUMENTATION MANHOLE		INDICATING LIGHT - LETTER INDICATES COLOR A - AMBER G - GREEN B - BLUE R - RED C - CLEAR W - WHITE																
		INST	INSTANTANEOUS		INDICATING LIGHT - LETTER INDICATES COLOR A - AMBER G - GREEN B - BLUE R - RED C - CLEAR W - WHITE																
		IP	INSTRUMENT PANEL (PANELBOARD)		INDICATING LIGHT - LETTER INDICATES COLOR A - AMBER G - GREEN B - BLUE R - RED C - CLEAR W - WHITE																
		J, J-BOX	JUNCTION BOX		INDICATING LIGHT - LETTER INDICATES COLOR A - AMBER G - GREEN B - BLUE R - RED C - CLEAR W - WHITE																
		K	KEY INTERLOCK		INDICATING LIGHT - LETTER INDICATES COLOR A - AMBER G - GREEN B - BLUE R - RED C - CLEAR W - WHITE																
		KK	KIRK KEY INTERLOCK		INDICATING LIGHT - LETTER INDICATES COLOR A - AMBER G - GREEN B - BLUE R - RED C - CLEAR W - WHITE																
		LA	LIGHTNING ARRESTER		INDICATING LIGHT - LETTER INDICATES COLOR A - AMBER G - GREEN B - BLUE R - RED C - CLEAR W - WHITE																
		LC	LIGHTING CONTACTOR		INDICATING LIGHT - LETTER INDICATES COLOR A - AMBER G - GREEN B - BLUE R - RED C - CLEAR W - WHITE																
		LP	LIGHTING PANEL (PANELBOARD)		INDICATING LIGHT - LETTER INDICATES COLOR A - AMBER G - GREEN B - BLUE R - RED C - CLEAR W - WHITE																
		LR	LOCAL/REMOTE, LATCHING RELAY		INDICATING LIGHT - LETTER INDICATES COLOR A - AMBER G - GREEN B - BLUE R - RED C - CLEAR W - WHITE																
		LS	LIMIT SWITCH		INDICATING LIGHT - LETTER INDICATES COLOR A - AMBER G - GREEN B - BLUE R - RED C - CLEAR W - WHITE																
		LT FLEX	LIQUID TIGHT FLEX CONDUIT		INDICATING LIGHT - LETTER INDICATES COLOR A - AMBER G - GREEN B - BLUE R - RED C - CLEAR W - WHITE																
		LTG	LIGHTING		INDICATING LIGHT - LETTER INDICATES COLOR A - AMBER G - GREEN B - BLUE R - RED C - CLEAR W - WHITE																
		M	MAGNETIC CONTACTOR COIL OR MOTOR		INDICATING LIGHT - LETTER INDICATES COLOR A - AMBER G - GREEN B - BLUE R - RED C - CLEAR W - WHITE																
		MA	MILLIAMPS		INDICATING LIGHT - LETTER INDICATES COLOR A - AMBER G - GREEN B - BLUE R - RED C - CLEAR W - WHITE																
		MCB	MAIN CIRCUIT BREAKER		INDICATING LIGHT - LETTER INDICATES COLOR A - AMBER G - GREEN B - BLUE R - RED C - CLEAR W - WHITE																
		MCC	MOTOR CONTROL CENTER		INDICATING LIGHT - LETTER INDICATES COLOR A - AMBER G - GREEN B - BLUE R - RED C - CLEAR W - WHITE																
		MDP	MAIN DISTRIBUTION PANEL		INDICATING LIGHT - LETTER INDICATES COLOR A - AMBER G - GREEN B - BLUE R - RED C - CLEAR W - WHITE																
		MERC	MERCURY VAPOR		INDICATING LIGHT - LETTER INDICATES COLOR A - AMBER G - GREEN B - BLUE R - RED C - CLEAR W - WHITE																
		MH	MOTOR HEATER, MANHOLE		INDICATING LIGHT - LETTER INDICATES COLOR A - AMBER G - GREEN B - BLUE R - RED C - CLEAR W - WHITE																
		MLO	MAIN LUGS ONLY		INDICATING LIGHT - LETTER INDICATES COLOR A - AMBER G - GREEN B - BLUE R - RED C - CLEAR W - WHITE																
		MPZ	MINI POWER ZONE		INDICATING LIGHT - LETTER INDICATES COLOR A - AMBER G - GREEN B - BLUE R - RED C - CLEAR W - WHITE																
		MPR	MOTOR PROTECTION RELAY		INDICATING LIGHT - LETTER INDICATES COLOR A - AMBER G - GREEN B - BLUE R - RED C - CLEAR W - WHITE																
		MS	MOTOR STARTER		INDICATING LIGHT - LETTER INDICATES COLOR A - AMBER G - GREEN B - BLUE R - RED C - CLEAR W - WHITE																
		MSC	MANUFACTURER SUPPLIED CABLE		INDICATING LIGHT - LETTER INDICATES COLOR A - AMBER G - GREEN B - BLUE R - RED C - CLEAR W - WHITE																
		MT	MOUNT		INDICATING LIGHT - LETTER INDICATES COLOR A - AMBER G - GREEN B - BLUE R - RED C - CLEAR W - WHITE																
		MTD	MOTOR TEMPERATURE DETECTOR		INDICATING LIGHT - LETTER INDICATES COLOR A - AMBER G - GREEN B - BLUE R - RED C - CLEAR W - WHITE																
		N	NEUTRAL		INDICATING LIGHT - LETTER INDICATES COLOR A - AMBER G - GREEN B - BLUE R - RED C - CLEAR W - WHITE																
		NC	NORMALLY CLOSED		INDICATING LIGHT - LETTER INDICATES COLOR A - AMBER G - GREEN B - BLUE R - RED C - CLEAR W - WHITE																
		NEMA	NATIONAL ELECTRIC MANUFACTURER'S ASSOCIATION		INDICATING LIGHT - LETTER INDICATES COLOR A - AMBER G - GREEN B - BLUE R - RED C - CLEAR W - WHITE																
		NO	NORMALLY OPEN		INDICATING LIGHT - LETTER INDICATES COLOR A - AMBER G - GREEN B - BLUE R - RED C - CLEAR W - WHITE																
		NP	NAMEPLATE		INDICATING LIGHT - LETTER INDICATES COLOR A - AMBER G - GREEN B - BLUE R - RED C - CLEAR W - WHITE																
		NTS	NOT TO SCALE		INDICATING LIGHT - LETTER INDICATES COLOR A - AMBER G - GREEN B - BLUE R - RED C - CLEAR W - WHITE																
		OL	OVERLOAD RELAY		INDICATING LIGHT - LETTER INDICATES COLOR A - AMBER G - GREEN B - BLUE R - RED C - CLEAR W - WHITE																
		OLM	OPTICAL LINK MODULE		INDICATING LIGHT - LETTER INDICATES COLOR A - AMBER G - GREEN B - BLUE R - RED C - CLEAR W - WHITE																
		P	POLE		INDICATING LIGHT - LETTER INDICATES COLOR A - AMBER G - GREEN B - BLUE R - RED C - CLEAR W - WHITE																
		PB	PULL BOX		INDICATING LIGHT - LETTER INDICATES COLOR A - AMBER G - GREEN B - BLUE R - RED C - CLEAR W - WHITE																
		PC	PHOTOCELL		INDICATING LIGHT - LETTER INDICATES COLOR A - AMBER G - GREEN B - BLUE R - RED C - CLEAR W - WHITE																
		PH	PHASE		INDICATING LIGHT - LETTER INDICATES COLOR A - AMBER G - GREEN B - BLUE R - RED C - CLEAR W - WHITE																
		PM	PHASE MONITOR, POWER METER		INDICATING LIGHT - LETTER INDICATES COLOR A - AMBER G - GREEN B - BLUE R - RED C - CLEAR W - WHITE																
		PNL	PANEL		INDICATING LIGHT - LETTER INDICATES COLOR A - AMBER G - GREEN B - BLUE R - RED C - CLEAR W - WHITE																
		PP	POWER PANEL (480VAC)		INDICATING LIGHT - LETTER INDICATES COLOR A - AMBER G - GREEN B - BLUE R - RED C - CLEAR W - WHITE																
		PR	PAIR		INDICATING LIGHT - LETTER INDICATES COLOR A - AMBER G - GREEN B - BLUE R - RED C - CLEAR W - WHITE																
		PS	PRESSURE SWITCH		INDICATING LIGHT - LETTER INDICATES COLOR A - AMBER G - GREEN B - BLUE R - RED C - CLEAR W - WHITE																
		PT	POTENTIAL TRANSFORMER		INDICATING LIGHT - LETTER INDICATES COLOR A - AMBER G - GREEN B - BLUE R - RED C - CLEAR W - WHITE																
		PVC	POLYVINYL CHLORIDE CONDUIT		INDICATING LIGHT - LETTER INDICATES COLOR A - AMBER G - GREEN B - BLUE R - RED C - CLEAR W - WHITE																
		RCPT	RECEPTACLE		INDICATING LIGHT - LETTER INDICATES COLOR A - AMBER G - GREEN B - BLUE R - RED C - CLEAR W - WHITE																
		RMS	ROOT MEAN SQUARE		INDICATING LIGHT - LETTER INDICATES COLOR A - AMBER G - GREEN B - BLUE R - RED C - CLEAR W - WHITE																
		RS	RIGID STEEL CONDUIT		INDICATING LIGHT - LETTER INDICATES COLOR A - AMBER G - GREEN B - BLUE R - RED C - CLEAR W - WHITE																
		RGS	RIGID GALVANIZED STEEL CONDUIT		INDICATING LIGHT - LETTER INDICATES COLOR A - AMBER G - GREEN B - BLUE R - RED C - CLEAR W - WHITE																
		RTU	REMOTE TELEMETRY UNIT																		

