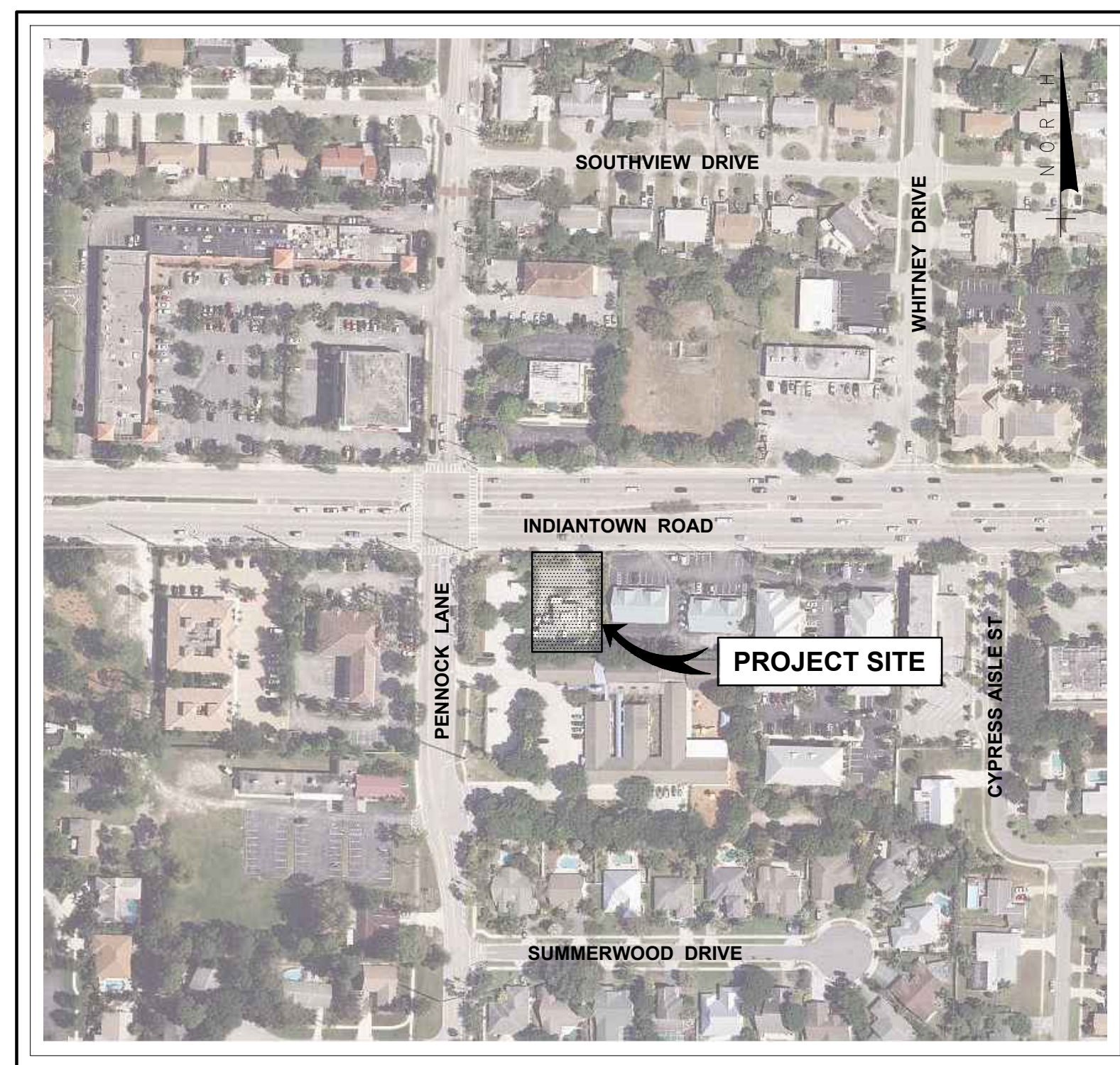


GOVERNING BOARD

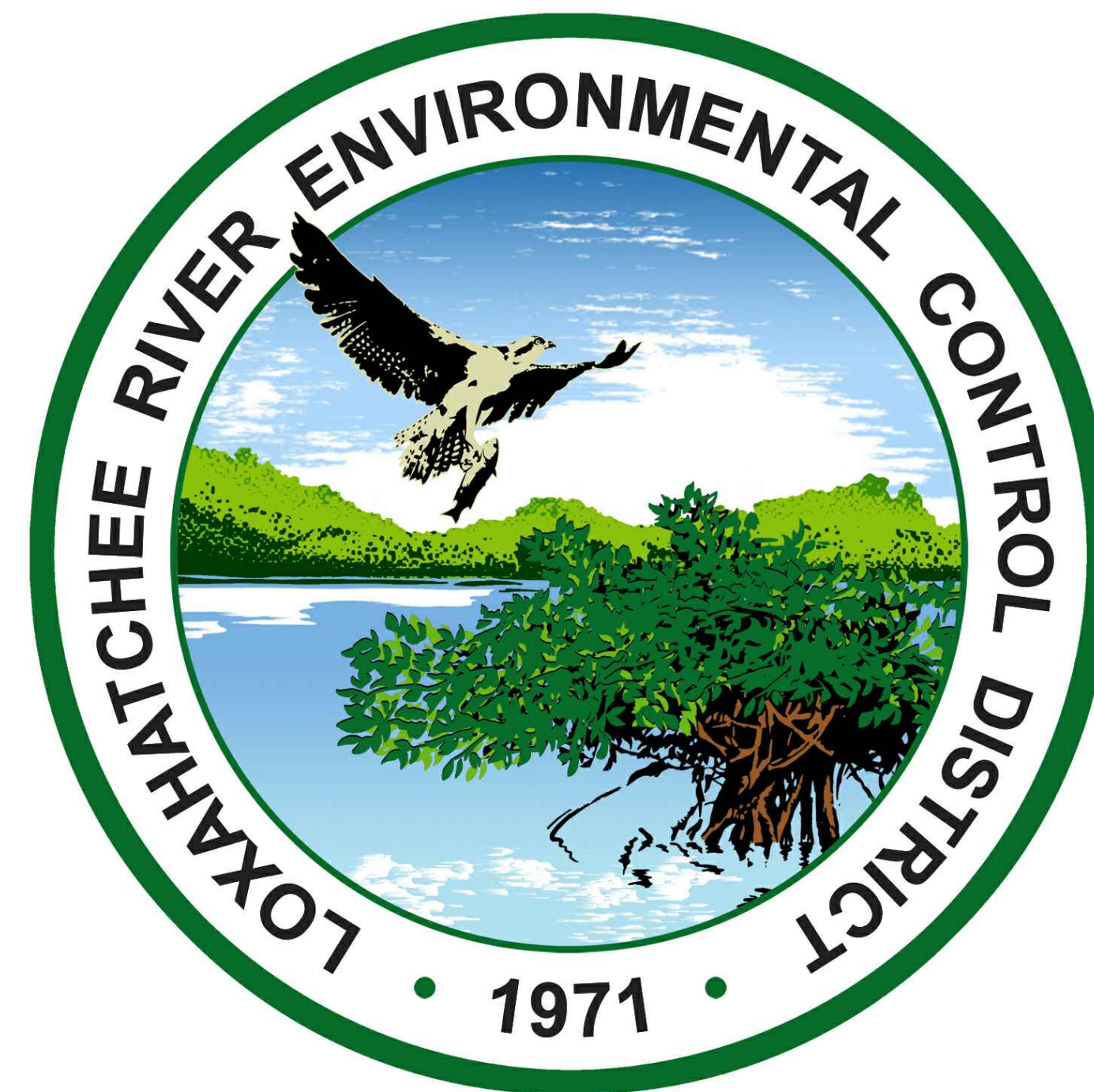
**CHAIRMAN** JAMES D. SNYDER  
**TREASURER** STEPHEN B. ROCKOFF  
**VICE CHAIRMAN** DR. MATT H. ROSTOCK  
**SECRETARY** GORDON M. BOGGIE  
**ASST. SEC'Y/TREASURER** HARVEY M. SILVERMAN

# RECORD DRAWING LOXAHATCHEE RIVER ENVIRONMENTAL CONTROL DISTRICT MASTER LIFT STATION No. 1 REHABILITATION

**AS-BID SET  
 (ISSUED FOR CONSTRUCTION)  
 APRIL 2018**



LOCATION MAP  
NTS



DRAWING LIST

SHEET	DRAWING	TITLE
<b>GENERAL</b>		
1	G-1	TITLE SHEET, LOCATION MAP AND DRAWING LIST
2	G-2	SURVEY LEGEND AND NOTES
3	G-3	GENERAL NOTES AND INFORMATION
<b>CIVIL</b>		
4	C-1	EXISTING SITE PLAN AND SURVEY
5	C-2	PROPOSED SITE DEMOLITION PLAN
6	C-3	PROPOSED SITE PLAN
7	C-4	CIVIL DETAILS - SHEET 1
8	C-5	CIVIL DETAILS - SHEET 2
9	C-6	CIVIL DETAILS - SHEET 3
<b>MECHANICAL</b>		
10	M-1	OPERATIONS FLOOR PLAN - DEMOLITION
11	M-2	LOWER AND INTERMEDIATE FLOOR PLANS - DEMOLITION
12	M-3	MECHANICAL SECTIONS - DEMOLITION
13	M-4	OPERATIONS FLOOR PLAN - PROPOSED
14	M-5	LOWER AND INTERMEDIATE FLOOR PLANS - PROPOSED
15	M-6	MECHANICAL SECTIONS - PROPOSED
16	M-7	MECHANICAL DETAILS - SHEET 1
<b>STRUCTURAL</b>		
17	S-1	GENERAL NOTES AND OPERATIONS ROOM STRUCTURAL FLOOR PLAN
18	S-2	STRUCTURAL SECTIONS - DEMOLITION
19	S-3	STRUCTURAL SECTIONS - PROPOSED
20	S-4	CMU INFILL AND RAILING DETAILS
21	S-5	CMU INFILL DETAILS AND ELEVATIONS
22	S-6	PUMP AND PIPING SUPPORT DETAILS
23	S-7	CONCRETE REPAIR PROCEDURES
<b>ELECTRICAL</b>		
24	E-1	ELECTRICAL NOTES, SYMBOLS AND ABBREVIATIONS
25	E-2	ELECTRICAL SITE DEMOLITION PLAN
26	E-3	PROPOSED ELECTRICAL PLAN
27	E-4	DEMOLITION SINGLE LINE DIAGRAM
28	E-5	PROPOSED SINGLE LINE DIAGRAM
29	E-6	OPERATIONS ROOM ELECTRICAL DEMOLITION PLAN
30	E-7	OPERATIONS ROOM PROPOSED ELECTRICAL PLAN
31	E-8	LOWER FLOOR PROPOSED ELECTRICAL PLAN AND DETAILS

**B Betsy Lindsay, Inc.**  
**SURVEYING AND MAPPING**  
 7997 S.W. JACK JAMES DRIVE STUART, FLORIDA 34997  
 (772)286-5753 (772)286-5933 FAX  
 LICENSED BUSINESS NO. 6852  
**RECORD DRAWING**  
 JOB NO. 18-111

DATE	FIELD BOOK/PAGE
10/7/2019	JUPITER 6 / PAGE 49
12/17/2019	JUPITER 6 / PG 53
12/31/2019	EDIT PER CLIENT
1/29/2020	EDIT PER CLIENT
2/20/2020	EDIT PER CLIENT

**SURVEYOR'S CERTIFICATE**

I HEREBY CERTIFY THAT THE "RECORD SURVEY" AS SHOWN HEREON IS A TRUE AND CORRECT REPRESENTATION OF A FIELD SURVEY MADE UNDER MY DIRECTION AND CHARGE ON OCTOBER 7, 2019 AND UPDATED DECEMBER 17, 2019 AND SAID "RECORD SURVEY" IS TRUE AND ACCURATE TO THE BEST OF MY KNOWLEDGE AND BELIEF. IT IS FURTHER CERTIFIED THAT THIS "RECORD SURVEY" COMPLIES WITH THE STANDARDS OF PRACTICE FOR "RECORD SURVEY" SET FORTH BY THE FLORIDA BOARD OF PROFESSIONAL SURVEYORS AND MAPPERS IN CHAPTER 5J-17, FLORIDA ADMINISTRATIVE CODE, PURSUANT TO SECTION 472.027, FLORIDA STATUTES.

BETSY LINDSAY, INC.  
 SURVEYING AND MAPPING

ELIZABETH A. LINDSAY, P.L.S.  
 FLORIDA REGISTRATION NO. 4724

NOT VALID WITHOUT THE SIGNATURE  
 AND ORIGINAL SEAL OF A FLORIDA  
 LICENSED SURVEYOR AND MAPPER  
 UNLESS DIGITALLY SIGNED

**SURVEYOR'S NOTES**

- BEARINGS AS SHOWN HEREON ARE BASED ON STATE PLANE COORDINATES, U.S. SURVEY FEET, NORTH AMERICAN DATUM OF 1983/1990 (N.A.D. 83/90), FLORIDA EAST ZONE.
- ELEVATIONS AS SHOWN HEREON WERE PROVIDED BY THE CLIENT AND REFERENCE THE NORTH AMERICAN VERTICAL DATUM OF 1929 (N.A.V.D. 29), REFERENCE THE EXISTING ON-SITE BENCHMARKS "CP #1", ELEVATION = 10.22 FEET AND "CP #4", ELEVATION = 11.01 FEET. ELEVATIONS AS SHOWN HAVE BEEN MEASURED TO AN ESTIMATED VERTICAL POSITIONAL ACCURACY OF 0.05 FEET.
- WELL-IDENTIFIED FEATURES IN THIS SURVEY AND MAP HAVE BEEN MEASURED TO AN ESTIMATED HORIZONTAL POSITIONAL ACCURACY OF 0.10 FEET.
- THIS SURVEY IS NOT VALID WITHOUT THE SIGNATURE AND ORIGINAL SEAL OF A FLORIDA LICENSED SURVEYOR UNLESS DIGITALLY SIGNED.
- THIS IS NOT A BOUNDARY SURVEY.
- THE RECORD DATA AS SHOWN HEREON WAS OVERLAIED ONTO A DIGITAL FILE PERFORMED BY MATHEWS CONSULTING, A BAXTER & WOODMAN COMPANY FOR THE LOXAHATCHEE RIVER ENVIRONMENTAL CONTROL DISTRICT MASTER LIFT STATION NO. 1 REHABILITATION. REFERENCE PROJECT NO. 160963, SHEET NO.'S 1 (G-1), 6 (C-3), 9 (C-6), 13 (M-4), 14 (M-5), 15 (M-6), (M-6B) AND 26 (E-3), LAST DATED JANUARY 18, 2019.

**RECORD LEGEND**

D.I.P.	DUCTILE IRON PIPE
EL. OR ELEV.	ELEVATION
INV.	INVERT
LB	LICENSED BUSINESS NUMBER
PK NAIL	PARKER KALON NAIL
P.S.M.	PROFESSIONAL SURVEYOR & MAPPER
PVC	POLY VINYL CHLORIDE PIPE
T.O.N.	TOP OF NUT
T.O.P.	TOP OF PIPE
W/	WITH
	RECORD DATA
x(12.12)	FIELD LOCATED POINT WITH RECORD ELEVATION

Date\Time : Thu, 20 Feb 2020 12:41pm Path\Name : S:\18 PROJECTS\18-111-11c-18-111-VAS\_BUILT\18-160963-CR.dwg Acad Version : R22.06 (LMS Tech) User Name : User

FOR INFORMATION REGARDING THIS PROJECT, CONTACT:

JASON A. PUGSLEY, P.E.  
 MATHEWS CONSULTING, A BAXTER & WOODMAN COMPANY  
 477 S. ROSEMARY AVENUE, SUITE 330  
 WEST PALM BEACH, FL 33401  
 561/655-6175



477 S. Rosemary Avenue, Suite 330, West Palm Beach, Florida 33401  
 Phone: 561-655-6175 Fax: 561-655-6179  
 www.baxterwoodman.com EB-31795

JASON A. PUGSLEY, P.E.  
 No. 67426 (CIVIL & MECHANICAL)

JEFFREY R. BERGMANN, P.E.  
 No. 50159 (STRUCTURAL)

LILLIAN M. REYES, P.E.  
 No. 50780 (ELECTRICAL, INSTRUMENTATION)

TITLE SHEET, LOCATION MAP AND DRAWING LIST

SHEET: 1 of 31

DRAWING: G-1

# SURVEYOR'S REPORT

## TYPE OF SURVEY:

TOPOGRAPHIC SURVEY  
MASTER LIFT STATION #1 REHABILITATION, JUPITER, PALM BEACH COUNTY, FLORIDA

## SURVEY PREPARED BY:

MATHEWS CONSULTING, A BAXTER & WOODMAN COMPANY, 477 S. ROSEMARY AVE, #330, WEST PALM BEACH, FLORIDA 33401, OFFICE: 561-655-6175

## MAP OF SURVEY:

THE MAP AND REPORT ARE NOT FULL AND COMPLETE WITHOUT THE OTHER.

## LEGAL DESCRIPTION:

NOT APPLICABLE.

## ACCURACY:

- ALL MEASUREMENTS, DISTANCES, ELEVATIONS AND FEATURES WERE PERFORMED IN STRICT ACCORDANCE WITH THE MINIMUM TECHNICAL STANDARDS SET FORTH IN CHAPTER 5J-17.050, 5J-17.051 AND 5J-17.052 FLORIDA ADMINISTRATIVE CODE.
- METHODS FOR ALL CONTROL MEASUREMENTS WERE MADE WITH A TRANSIT AND STEEL TAPE, OR DEVICES WITH EQUIVALENT OR HIGHER DEGREES OF ACCURACY.
- THE ACCURACY STANDARD USED FOR THIS SURVEY, AS CLASSIFIED IN THE MINIMUM TECHNICAL STANDARDS 5J-17.050, 5J-17.051 AND 5J-17.052 F.A.C. IS "COMMERCIAL HIGH RISK". THE MINIMUM RELATIVE DISTANCE ACCURACY FOR THIS TYPE OF SURVEY IS 1 FOOT IN 10,000 FEET. THIS SURVEY IS BASED ON REPETITIVE RTK GPS AND ROBOTIC TOTAL STATION OBSERVATIONS ON MULTIPLE PROJECT HORIZONTAL AND VERTICAL CONTROL POINTS TO OBTAIN A REDUNDANCY OF MEASUREMENT. HORIZONTAL AND VERTICAL CLOSURE ACHIEVED, EXCEED THE MINIMUM ACCURACY REQUIREMENTS FOR THIS SURVEY.

## DATA SOURCES:

- THOSE CERTAIN PLATS AND DATA WERE UTILIZED IN THE PREPARATION OF THIS SURVEY:
  - SUMMERWOOD, P.B. 62, PG. 45
  - PALM BEACH COUNTY GIS DATA
- MULTIRESOLUTION SEAMLESS IMAGES (M-SID), DOWNLOADED FROM LAND BOUNDARY INFORMATION SYSTEM (LABINS) WWW.LABINS.ORG, WERE UTILIZED IN THE PREPARATION OF THIS SURVEY.
- ELEVATIONS SHOWN HEREON ARE IN FEET AND REFERENCED TO NATIONAL GEODETIC VERTICAL DATUM OF 1929 (NGVD 29). PARENT BENCH MARK: PALM BEACH COUNTY VERTICAL CONTROL STATION, DESIGNATION TOPENN JU-HIGH, ELEVATION = 6.355 FEET.
- BEARINGS AND COORDINATES SHOWN HERE ON ARE IN FEET AND REFERENCED TO THE FLORIDA STATE PLANE COORDINATE SYSTEM, FLORIDA EAST ZONE, NATIONAL GEODETIC SURVEY (NGS) NORTH AMERICAN DATUM (NAD) OF 1983/1990, UTILIZING THE GPS RTK NETWORK. PARENT CONTROL STATIONS: PALM BEACH COUNTY CONTROL STATION TOPENN JU-HIGH NETWORK POINTS: E90, NORTHING = 943,514.8820 FEET, EASTING = 948,713.9210 FEET.
- HORIZONTAL / VERTICAL CONTROL POINTS USED FOR THIS SURVEY: CONTROL POINT 1, SET NAIL, "NO ID", NORTHEAST CORNER OF PROPERTY IN DRIVEWAY, NORTHING 946,088.05 FEET, EASTING 946,351.89 FEET, ELEVATION = 10.22 FEET AND CONTROL POINT 4, SET NAIL, SOUTHWEST CORNER OF PROPERTY IN PAVEMENT, NORTHING 946,048.13 FEET, EASTING 946,297.29 FEET, ELEVATION = 11.01 FEET, AS SHOWN ON THE MAP OF SURVEY.
- BY GRAPHIC PLOTTING ONLY, THE SUBJECT PROPERTY LIES WITH ZONE C, AREAS OF MINIMAL FLOODING (NO SHADING), AS SHOWN ON THE FLOOD INSURANCE RATE MAP COMMUNITY PANEL NUMBER 125119 0002 D, PANEL 2 OF 6, MAP EFFECTIVE DATE: SEPTEMBER 30, 1982.
- ALL SUBSURFACE LOCATIONS DEPICTED HEREON ARE AS MARKED OUT IN THE FIELD BY LOXAHATCHEE ROVER ENVIRONMENTAL CONTROL DISTRICT, MATHEWS CONSULTING, INC. ASSUMES NO LIABILITY AS TO THE ACCURACY OF THE SUBSURFACE LOCATIONS AS MARKED OUT BY OTHERS.

## LIMITATIONS:

- PURPOSE OF SURVEY: LOCATE SELECTED NATURAL AND ARTIFICIAL FEATURES OF A PART OF THE EARTH'S SURFACE TO DETERMINE HORIZONTAL AND VERTICAL SPATIAL RELATIONS TO BE UTILIZED FOR THE PURPOSE OF DESIGN.
- LAST FIELD DATE OF SURVEY: 10/07/2016, AS REFERENCED IN ELECTRONIC SURVEY DATA FILES.
- THIS IS NOT A BOUNDARY SURVEY.
- PRINTED DIMENSIONS SHOWN ON THE SURVEY SUPERSEDE SCALED DIMENSIONS. THERE MAY BE ITEMS DRAWN OUT OF SCALE TO GRAPHICALLY SHOW THEIR LOCATION.
- USE OF THIS SURVEY BY ANYONE OTHER THAN THOSE PREPARED FOR OR CERTIFIED TO, WILL BE THE RE-USERS SOLE RISK WITHOUT LIABILITY TO THE SURVEYOR.
- SHOWN ANYWHERE ON THIS SURVEY, THE WORD "CERTIFY" IS UNDERSTOOD TO BE AN EXPRESSION OF A PROFESSIONAL OPINION BASED UPON THE SURVEYOR'S BEST KNOWLEDGE, INFORMATION AND BELIEF, AND THAT IT CONSTITUTES NEITHER A GUARANTEE NOR A WARRANTY.

## BOUNDARY INCONSISTENCIES:

NOT APPLICABLE.

## LEGEND:

- |                                                 |                                       |                                   |
|-------------------------------------------------|---------------------------------------|-----------------------------------|
| ASPH. = ASPHALT                                 | GAR. = GARAGE                         | RCP = REINFORCED CONCRETE PIPE    |
| BPP = BLACK PLASTIC PIPE                        | HDPE = HIGH DENSITY POLYETHYLENE PIPE | R/W = RIGHT OF WAY                |
| ATT = AT&T TELEPHONE                            | INV = INVERT                          | RWM = RIGHT OF WAY MAP            |
| C/L = CENTERLINE                                | I.R.C. = IRON ROD & CAP               | RLS = REGISTERED LAND SURVEYOR    |
| C = CALCULATED                                  | L. = LENGTH                           | SEC. = SECTION                    |
| CFT = CALCULATED FROM FIELD TRAVERSE            | L.F. = LINEAR FEET                    | STA. = STATION                    |
| CLF = CHAIN LINK FENCE                          | LSA = LANDSCAPE AREA                  | T.O.N. = TOP OF NUT               |
| CLP = CONCRETE LIGHT POLE                       | L.W.D.D. LAKE WORTH DRAINAGE DISTRICT | T.O.P. = TOP OF PIPE              |
| CMP = CORRUGATED METAL PIPE                     | MP = METAL PIPE                       | T.O.W. = TOP OF WALL              |
| CONC. = CONCRETE                                | N/A = NOT ACCESSIBLE                  | U.E. = UTILITY EASEMENT           |
| CP = CONCRETE PIPE                              | N/D = NAIL AND DISK                   | UNK = UNKNOWN                     |
| D = CENTRAL ANGLE                               | OHW = OVERHEAD WIRE                   | VERT. = VERTICAL                  |
| DIP = DUCTILE IRON PIPE                         | PRK MTR = PARKING METER               | V.G. = VALLEY GUTTER              |
| DEP. = DEPRESSED (CURB)                         | P.B. = PLAT BOOK                      | VCP = VITRIFIED CLAY PIPE         |
| EL. = ELEVATION                                 | PBC = PALM BEACH COUNTY               | WPP = WOOD POWER POLE             |
| EP = EDGE OF PAVEMENT                           | P.B.C.R. = PALM BEACH COUNTY RECORDS  | PP = PLASTIC PIPE                 |
| EOW = EDGE OF WATER                             | PG. = PAGE                            | G.U.E. = GENERAL UTILITY EASEMENT |
| F.D.O.T. = FLORIDA DEPARTMENT OF TRANSPORTATION | PP = PLASTIC PIPE                     | S.E. = SEWER EASEMENT             |
| F.P.L. = FLORIDA POWER AND LIGHT                | PK = PARKER-KALON BRAND               | W.E. = WATER EASEMENT             |
| FND = FOUND                                     | PRM = PERMANENT REFERENCE MARKER      | P.E. = PUBLIC EASEMENT            |
|                                                 | PVC = POLYVINYL CHLORIDE              |                                   |
|                                                 | R = RADIUS                            |                                   |
|                                                 | R/C = ROD AND CAP                     |                                   |

## SITE BENCHMARK:

BM #1  
FINISH FLOOR ELEVATION OF BUILDING  
ELEV.=11.67 (NGVD 29)

## SITE CONTROL:

CP #1  
SET PK NAIL  
ELEV.=10.22 (NGVD 29)  
N 946,088.05  
E 946,351.89

CP #4  
SET PK NAIL  
ELEV.=11.01 (NGVD 29)  
N 946,048.13  
E 946,297.29

## SYMBOL LEGEND:

- |                                             |                                 |                                     |
|---------------------------------------------|---------------------------------|-------------------------------------|
| Ø = DIAMETER                                | ⊕ = ELECTRIC OUTLET             | Ⓐ = AIR RELEASE VALVE               |
| BFP = BACK FLOW PREVENTER                   | ⊞ = CATCH BASIN                 | ⓕ = FPL MANHOLE                     |
| W = WATER METER                             | ⚑ = RED FLAG                    | Ⓜ = MANHOLE UNKNOWN TYPE            |
| IV = IRRIGATION VALVE                       | ⚑ = WHITE FLAG                  | Ⓜ = DECORATIVE MAILBOX              |
| SV = SANITARY VALVE                         | ⚑ = BLUE FLAG                   | Ⓢ = SANITARY MANHOLE                |
| WV = WATER VALVE                            | ⚑ = YELLOW FLAG                 | Ⓣ = STORM MANHOLE                   |
| SP = SPIGOT                                 | ⚑ = ORANGE FLAG                 | ⋯ = LIMITS OF LANDSCAPING           |
| —OHW— = OVERHEAD UTILITY WIRE               | ⚑ = GREEN FLAG                  | ⋯ : LSA : ⋯ = LIMITS OF TREE CANOPY |
| X 0.00 = EXISTING ELEVATION                 | —BPM— = BLUE PAINT MARKS        | ⊙ = CLEAN OUT                       |
| ⚡ = FIRE HYDRANT                            | —RPM— = RED PAINT MARKS         | ⊙ = GUY WIRE ANCHOR                 |
| ⊞ = WOOD POWER POLE                         | —GPM— = GREEN PAINT MARKS       | ⊙ = SITE BENCHMARK                  |
| CPP = CONCRETE POWER POLE                   | —OPM— = ORANGE PAINT MARKS      | ⊙ = MONITORING WELL                 |
| ⬆ = GROUND LIGHT                            | —PPM— = PURPLE PAINT MARKS      | ⊙ = SET NAIL AND DISC LB #6599      |
| ⊞ = WOOD POLE STREET LIGHT                  | —WPM— = WHITE PAINT MARKS       | ⊙ = RIGHT-OF-WAY LINE               |
| ⊞ = CONCRETE POLE STREET LIGHT              | —YPM— = YELLOW PAINT MARKS      | ⊙ = GUARD RAIL                      |
| FOV = FIBER OPTIC MARKER                    | ⊞ = SPRINKLER HEAD              | ⊙ = DECORATIVE LIGHT POST           |
| EM = ELECTRIC METER                         | ⊞ = LIGHT POST                  | ⊙ = CONCRETE LIGHT POST             |
| EH = ELECTRIC HANDHOLE                      | ⊞ = MAILBOX                     | ⊙ = GAS LID                         |
| EH = UNKNOWN HANDHOLE                       | ⊞ = WOOD GUIDE POLE             | ⊞ = TRAFFIC SIGNAL BOX              |
| EH = CABLE/TV HANDHOLE                      | ⊞ = TRAFFIC SIGNAL POLE         | ⊞ = FIBER OPTIC HANDHOLE            |
| EBB = ELECTRIC BOX                          | ⊞ = TRASH CAN                   | ⊞ = UNDERGROUND GAS MARKER          |
| ICV = IRRIGATION CONTROL VALVE IN CONC. BOX | ⊞ = MONITORING WELL             | ⊞ = YARD DRAIN                      |
| ⊞ = PARKING METER                           | ELECT. PANEL = ELECTRICAL PANEL | ⊞ = SQUARE YARD DRAIN               |
| RCWV = RECLAIMED WATER VALVE                | ⊞ = TRAFFIC HANDHOLD            |                                     |
| KP = KEY PAD                                | ⊞ = GAS TEST BOX                |                                     |
| Ⓜ = AT&T TELEPHONE MANHOLE                  | G.T. BOX = GAS TEST BOX         |                                     |
|                                             | RISER BOX = UNKNOWN RISER BOX   |                                     |
|                                             | ⊞ = CONCRETE UTILITY POLE       |                                     |
|                                             | ⊞ = CONCRETE PARKING STOP       |                                     |

## TREE LEGEND:

- |                    |                   |              |                   |
|--------------------|-------------------|--------------|-------------------|
| 00" - ACACIA       | 00" - UNKNOWN     | 00" - CITRUS | 00" - PAPAYA      |
| 00" - PALM SPECIES | 00" - BOTTLEBRUSH | 00" - CACTUS | 00" - CYPRESS     |
| 00" - BANANA       | 00" - MAPLE       | 00" - MANGO  | 00" - GUMBO-LIMBO |
| 00" - FIGUS        | 00" - MAHOGANY    | 00" - HEDGE  | 00" - BUSH        |
| 00" - SEAGRAPE     | 00" - OAK         |              |                   |

↑ Indicates trunk diameter  
NOTE: VERIFICATION OF TREE SPECIES SHOULD BE CONDUCTED BY A PROFESSIONAL ENGAGED IN THE FIELD OF NATURAL SCIENCE.

Acad Version : R20.1s (LMS Tech) User Name : 756jg Date\Time : Wed, 25 Apr 2018 - 2:20pm Current Plotstyle : B\Color Layout Tab: G-2 Path Name : I:\WestPalmBeach\PROJECTS\160963-MS No. 1 Final\Drawn\CAD\Working\Folder\160963G-SV.dwg

NO.	DATE	ISSUED FOR	APRVD BY
		DESIGNED: J.A.P.	
		DRAWN: J.A.J.	
		CHECKED: A.C.	
		APPROVED: D.L.M.	

  
**MATHEWS CONSULTING**  
 a BAXTER & WOODMAN company  
 477 S. Rosemary Avenue, Suite 330, West Palm Beach, Florida 33401  
 Phone: 561-655-6175 Fax: 561-655-6179  
 www.baxterwoodman.com EB-31795

VERIFY SCALE

1"

BAR IS ONE INCH ON FULL SIZE (22x34) ORIGINAL DRAWING. ADJUST SCALES AS NECESSARY.

ENGINEER NO.: 160963

CLIENT PROJECT NO.: 160963

CAD REF.: 160963G-SVY

**LOXAHATCHEE RIVER ENVIRONMENTAL CONTROL DISTRICT**  
**MASTER LIFT STATION No. 1 REHABILITATION**

SURVEY LEGEND AND NOTES

DATE: APRIL 2018
SHEET: 2 of 31
DRAWING: G-2

**CONSTRUCTION**

**GENERAL NOTES**

- ALL CONSTRUCTION AND MATERIALS SHALL CONFORM TO THE STANDARDS AND SPECIFICATIONS OF THE LOXAHATCHEE RIVER DISTRICT, PALM BEACH COUNTY, FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION, PALM BEACH COUNTY HEALTH DEPARTMENT, FLORIDA DEPARTMENT OF TRANSPORTATION, AND NATIONAL CODES WHERE APPLICABLE.
- ALL CONSTRUCTION SHALL BE DONE IN A SAFE MANNER, SPECIFICALLY, THE RULES AND REGULATIONS OF THE OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION AND THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES SHALL BE STRICTLY OBSERVED.
- ALL CONSTRUCTION SHALL CONFORM TO THE STANDARDS AND REQUIREMENTS OF THE AGENCIES HAVING JURISDICTION OVER THE R/W WHERE THE PROJECT IS CONSTRUCTED.
- CONTRACTOR SHALL MAINTAIN LOCAL TRAFFIC AT ALL TIMES DURING CONSTRUCTION AND SHALL BE REQUIRED TO PROVIDE ALL BARRICADES, LIGHTING, SIGNS AND FLAGMEN AS NECESSARY TO PROVIDE FOR THE SAFETY OF THE PUBLIC IN THE WORK AREA. THE CONTRACTOR SHALL SUBMIT A DETAILED TRAFFIC CONTROL PLAN FOR APPROVAL. THE TRAFFIC CONTROL PLAN SHALL BE SUBMITTED TO AND APPROVED BY THE APPROPRIATE AGENCIES A MINIMUM OF 2 WEEKS PRIOR TO START OF CONSTRUCTION.
- CONTRACTOR SHALL PREPARE AND SUBMIT MOT PLANS TO TOWN OF JUPITER OR FDOT (AS APPROPRIATE) & LOXAHATCHEE RIVER DISTRICT FOR REVIEW AND APPROVAL FOR WORK TO BE DONE WITHIN OR ADJACENT TO IMPROVED RIGHT-OF-WAY.
- CONTRACTOR SHALL MAINTAIN ACCESS TO PRIVATE PROPERTY AT ALL TIMES.
- LOCATIONS OF EXISTING FACILITIES AS SHOWN ON CONSTRUCTION DRAWINGS ARE APPROXIMATE AND ARE DRAWN FROM AVAILABLE RECORDS. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR THE ACCURACY OF THE FACILITIES SHOWN NOR FOR ANY FACILITY NOT SHOWN. THE CONTRACTOR SHALL LOCATE OR EXPOSE ALL UTILITIES WITHIN THE PROPOSED WORK AREAS AND AT CRITICAL LOCATIONS TO VERIFY UTILITY LOCATIONS AND PIPE LAYING SCHEDULES PRIOR TO SUBMITTING SHOP DRAWINGS. THIS SHALL BE DONE WITHIN 30 DAYS AFTER NOTICE TO PROCEED. THE INFORMATION OBTAINED (ELEVATION, SEPARATION DISTANCE, PIPE MATERIAL AND SIZE, ETC.) SHALL BE MADE PART OF THE CONTRACTOR'S SUBMITTAL FOR ALL PIPING.
- CONTRACTOR SHALL OBTAIN THE SERVICES OF SUNSHINE STATE ONE CALL OF FLORIDA (811), INC. AS REQUIRED BY FLORIDA STATUTES. CONTRACTOR SHALL BE RESPONSIBLE FOR DAMAGE TO ANY EXISTING UTILITIES.
- FORCEMAINS ARE TO BE LAID WITHIN 0.2 FEET OF THE DESIGN PROFILE.
- COVER SHALL BE A MINIMUM OF 3.0 FEET (TYPICAL) FOR FORCEMAINS UNLESS OTHERWISE NOTED ON DRAWINGS.
- ALL DELETERIOUS MATERIAL SHALL BE PROPERLY DISPOSED OF BY THE CONTRACTOR AT HIS EXPENSE.
- IF UPON EXCAVATION, AN EXISTING UTILITY IS FOUND TO BE IN CONFLICT WITH THE PROPOSED CONSTRUCTION OR TO BE OF A SIZE OR MATERIAL DIFFERENT FROM THAT SHOWN ON THE DRAWINGS, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER.
- ALL OPEN TRENCHES AND HOLES ADJACENT TO ROADWAY OR WALKWAY SHALL BE PROPERLY MARKED AND BARRICADED TO ASSURE THE SAFETY OF BOTH VEHICULAR AND PEDESTRIAN TRAFFIC.
- NO TRENCHES OR HOLES NEAR WALKWAYS, IN ROADWAYS OR THEIR SHOULDERS ARE TO BE LEFT OPEN DURING NIGHTTIME HOURS WITHOUT EXPRESS PERMISSION FROM PALM BEACH COUNTY.
- CONTRACTOR SHALL MAINTAIN HIS WORK WITHIN R/W AND EASEMENT LIMITS UNLESS OTHERWISE NOTED ON DRAWINGS.
- CONTRACTOR SHALL PROMPTLY REPAIR AND RESTORE EXISTING PAVEMENT, SIDEWALKS, CURB, DRIVEWAYS, PIPES, RESIDENTIAL AND COMMERCIAL SPRINKLER LINES, CONDUIT, CABLES, ETC. AND LANDSCAPE AREAS DAMAGED AS A RESULT OF THE CONSTRUCTION ACTIVITIES. THIS WORK SHALL BE CONSIDERED INCIDENTAL. ALL SIDEWALK REPAIRS AND RESTORATIONS SHALL BE CONSTRUCTED PER THE FLORIDA ACCESSIBILITY CODE FOR BUILDING CONSTRUCTION LATEST EDITION.
- EXISTING TRAFFIC SIGNS TO BE RESET PER FDOT STANDARDS.
- CONTRACTOR SHALL ADJUST ALL UTILITY CASTING INCLUDING SANITARY SEWER MANHOLE TOPS, INLETS, VALVE BOXES AND SIMILAR STRUCTURES AS REQUIRED TO MEET FINAL GRADES.
- CONTRACTOR SHALL PERFORM ALL WORK NECESSARY TO LOCATE, EXCAVATE AND PREPARE FOR CONNECTIONS TO THE EXISTING SYSTEMS ALL AS SHOWN ON THE DRAWINGS.
- THE CONTRACTOR SHALL SCHEDULE INSPECTIONS AND TESTS WITH THE DISTRICT & ENGINEER A MINIMUM OF 48 HOURS IN ADVANCE.
- CONTRACTOR SHALL NOT DISTURB EXISTING TOWN OF JUPITER (TOJ) WATER MAINS OR FDOT DRAINAGE FACILITIES WITHOUT THE PRESENCE OF A DISTRICT, CITY OR FDOT INSPECTOR. TOJ UTILITY SYSTEM VALVES AND APPURTENANCES MAY ONLY BE OPERATED BY TOJ PERSONNEL.
- SITE INFORMATION BASED ON A SURVEY PREPARED BY: BAXTER & WOODMAN
- CLEARING AND GRUBBING SHALL INCLUDE REMOVAL OF ALL VEGETATION WITHIN RIGHT-OF-WAY AS REQUIRED TO CONSTRUCT THE REQUIRED IMPROVEMENTS.
- PROJECT SITE SAFETY:
  - THE ENGINEER/OWNER OR THEIR EMPLOYEES HAVE NO AUTHORITY TO EXERCISE ANY CONTROL OVER THE CONTRACTOR, ANY SUB-CONTRACTOR OR OTHER ENTITY OR THEIR EMPLOYEES IN CONNECTION WITH THEIR WORK OR ANY JOBSITE HEALTH OR SAFETY PRECAUTIONS.
  - THE CONTRACTOR IS SOLELY RESPONSIBLE FOR JOBSITE SAFETY, AND WARRANTS THAT THIS INTENT IS MADE EVIDENT BY THE AGREEMENT BETWEEN OWNER AND CONTRACTOR.
  - ALL EXISTING OVERHEAD AND UNDERGROUND UTILITIES SHOWN ON THESE DRAWINGS OR ENCOUNTERED THROUGH THE PROGRESSION OF WORK AT THIS PROJECT SITE ARE ASSUMED TO BE LIVE, CONTRACTOR SHALL BE RESPONSIBLE FOR ALL SAFETY PRECAUTIONS WHEN WORKING AROUND EXISTING OVERHEAD OR UNDERGROUND UTILITIES.
- THE CONTRACTOR SHALL COORDINATE AND EMPLOY THE SERVICES OF FPL TO SUPPORT ANY EXISTING POWER POLES WITHIN THE IMMEDIATE VICINITY OF TRENCHES OR AS REQUIRED TO ALTER OR MODIFY THE EXISTING SITE ELECTRICAL SERVICE.
- CONTRACTOR SHALL LIMIT THE CONSTRUCTION IMPACTS TO PUMP STATION AS SHOWN ON THE PLANS. THE COST OF THE SHEETING, SHORING, ETC. FOR TRENCHING SHALL BE INCLUDED IN THE LUMP SUM PROJECT COST.
- CONTRACTOR TO ACQUIRE STAGING AREA(S) AS REQUIRED. COORDINATE WITH THE DISTRICT OR PRIVATE LAND-OWNERS. THE CONTRACTOR SHALL VERIFY THE OWNERSHIP OF THE LAND TO BE USED AS THE STAGING AREA. THE LAND-OWNER SHALL BE COMPENSATED FOR SUCH USE OF THE LAND.
- SURVEY INFORMATION TAKEN FROM EXISTING RECORD DRAWINGS PROVIDED BY THE DISTRICT AND ADDITIONAL FIELD SURVEY. PIPE SIZES (OUTSIDE AND INSIDE DIAMETERS) SHOULD BE FIELD VERIFIED PRIOR TO CONSTRUCTION. NOT ALL EXISTING PIPE WAS ACCESSIBLE FOR VERIFICATION AND ASSUMPTIONS WERE MADE.
- NO CONNECTIONS FOR THE PURPOSE OF OBTAINING WATER SUPPLY DURING CONSTRUCTION SHALL BE MADE TO ANY FIRE HYDRANT OR BLOW-OFF STRUCTURE WITHOUT FIRST OBTAINING PERMISSION AND A CONSTRUCTION METER FROM THE TOWN OF JUPITER.
- IN GENERAL, EXISTING STRUCTURES AND UTILITIES ARE NOTED AS EXISTING AND/ OR SHOWN IN LIGHT LINE WEIGHT. NEW CONSTRUCTION IS SHOWN IN HEAVY LINE WEIGHT.
- CONTRACTOR SHALL BE RESPONSIBLE FOR DAMAGE TO ANY EXISTING UTILITIES.
- A VIDEO TAPE SHALL BE MADE OF THE ENTIRE CONSTRUCTION AREA. THE TAPE SHALL DOCUMENT THE CONDITIONS OF ALL ADJACENT PROPERTY, FENCES, DRIVEWAYS, IRRIGATION, MAIL BOXES AND OTHER SUCH FEATURES. PARTICULAR ATTENTION SHOULD BE PAID TO ITEMS BROKEN OR IN DISREPAIR PRIOR TO CONSTRUCTION, SUCH THAT THERE WILL BE FULL UNDERSTANDING OF THE REQUIREMENTS FOR RESTORATION AFTER CONSTRUCTION IS COMPLETED.

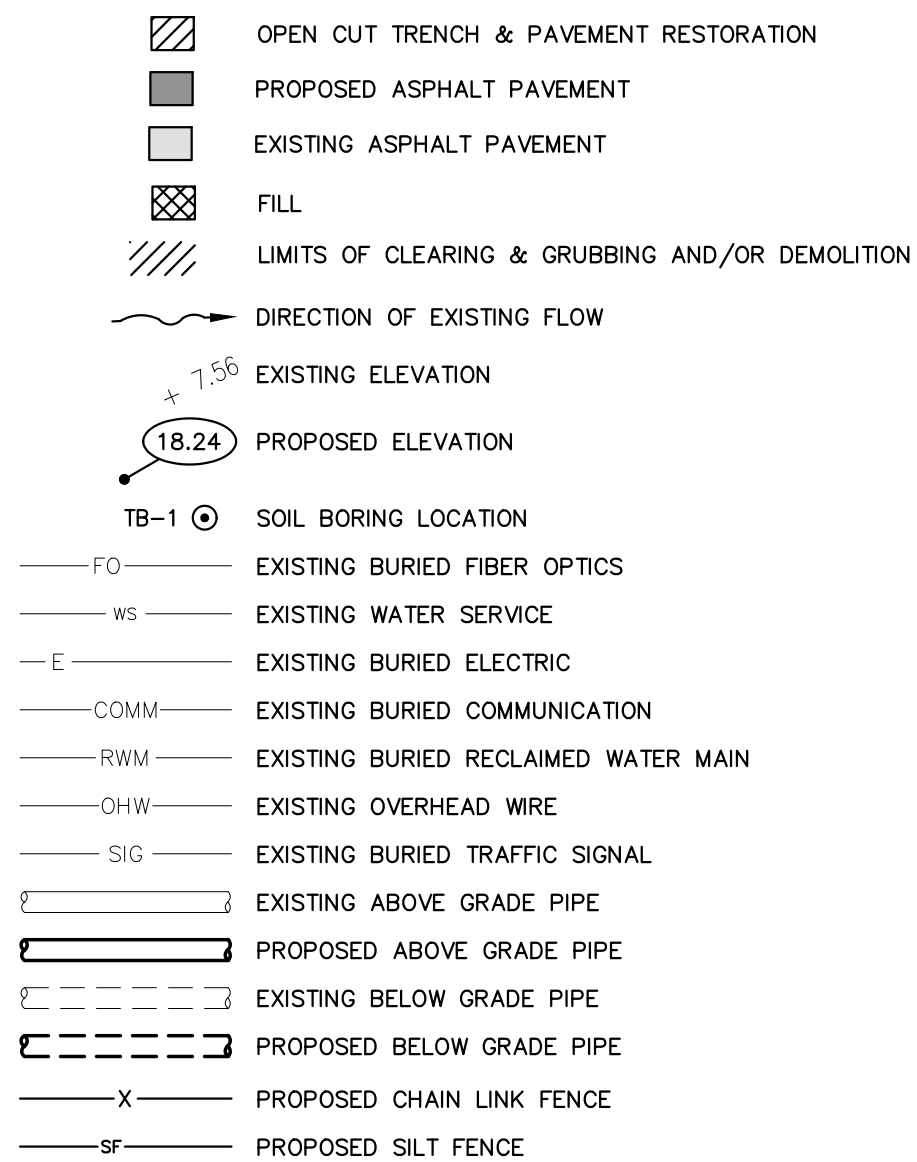
**GENERAL INFORMATION**

- AT&T TELEPHONE, FLORIDA POWER AND LIGHT, CABLE TV, GAS, ETC. ARE TAKEN FROM FIELD INSPECTIONS AND SKETCHES PROVIDED BY UTILITIES AND ARE SHOWN FOR THE CONVENIENCE OF THE CONTRACTOR ONLY. THE CONTRACTOR SHALL CONTACT ALL UTILITY OWNERS AND CONFIRM LOCATIONS OF UTILITIES NO LESS THAN 48 HOURS BEFORE BEGINNING CONSTRUCTION. THE CONTRACTOR SHALL ACCURATELY LOCATE AND UNCOVER ALL EXISTING UTILITIES BEFORE BEGINNING CONSTRUCTION WHERE CROSSING OR PARALLELING OF EXISTING UTILITIES OCCUR. ANY DAMAGE RESULTING FROM THE CONTRACTORS OPERATION SHALL BE REPAIRED AT THE CONTRACTORS EXPENSE.
- ALL MATERIALS SHALL CONFORM TO LOXAHATCHEE RIVER DISTRICT OR TOWN OF JUPITER CONSTRUCTION STANDARDS & TECHNICAL SPECIFICATIONS, AS APPROPRIATE.

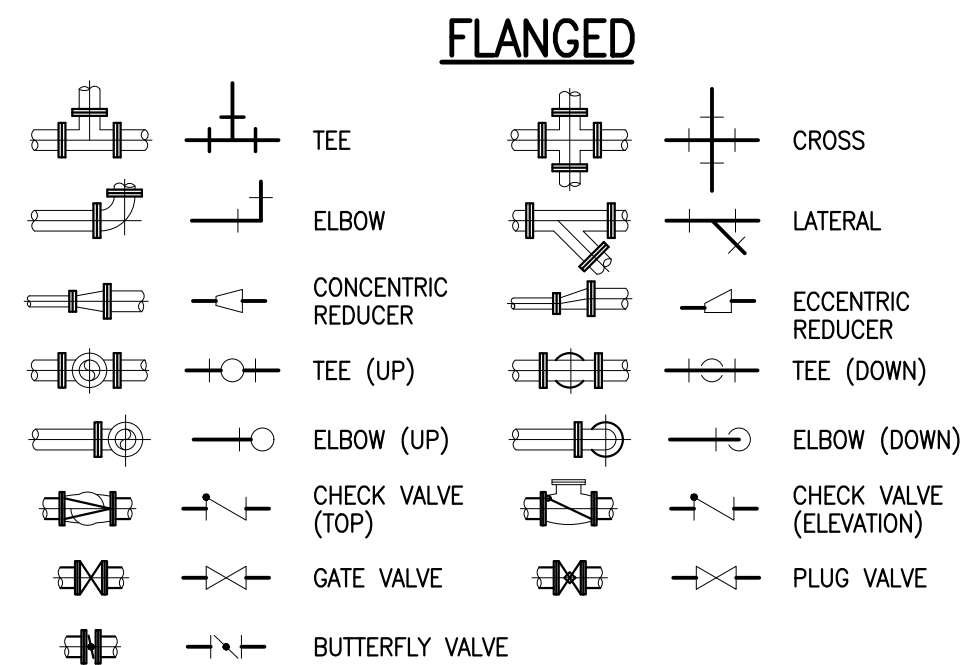
**EROSION CONTROL**

- ALL STORM SEWER INLET GRATES TO BE COVERED WITH FILTER FABRIC DURING CONSTRUCTION.
- CUT AND FILL SLOPES TO BE CONSTRUCTED IN A MANNER THAT WILL MINIMIZE EROSION. SILT FENCES TO BE USED WHERE NECESSARY.
- CONSTRUCTION VEHICLE ACCESS ROUTES SHALL BE SWEEPED CLEAN OF SEDIMENT, CONCRETE AND OTHER CONSTRUCTION MATERIALS AS NEEDED.
- ALL BERMS, DIKES AND SPOIL PILES SUBJECT TO EROSION MUST BE STABILIZED OR CONTAINED TO PREVENT EROSION AND RUNOFF FROM THE PROJECT.
- THE QUALITY OF THE DISCHARGE WATER FROM DEWATERING AND CONSTRUCTIONS ACTIVITIES SHALL MEET STATE WATER QUALITY STANDARDS.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PREPARATION AND PERMITTING OF A STORMWATER POLLUTION PREVENTION PLAN FOR THE PROJECT.

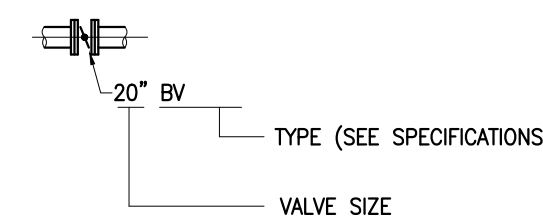
**ENGINEERING LEGEND**



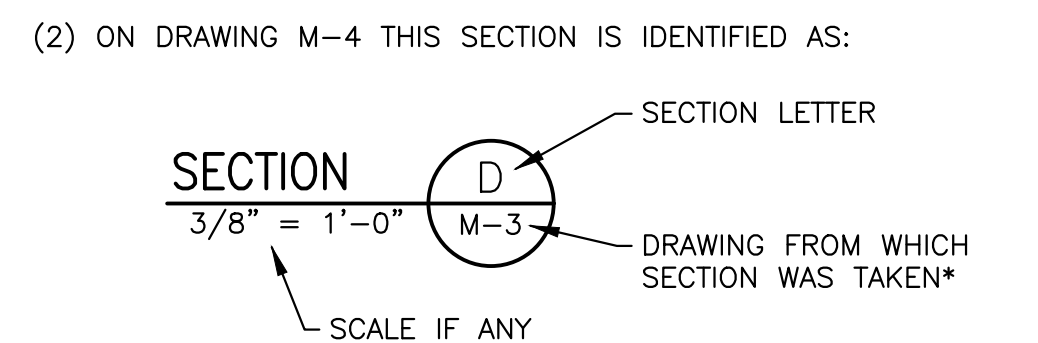
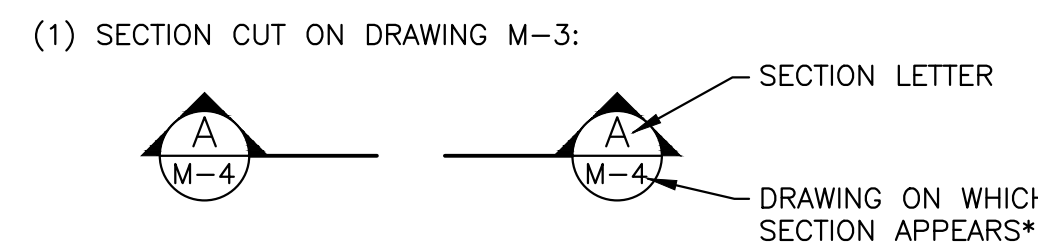
**PIPE FITTING SYMBOLS**



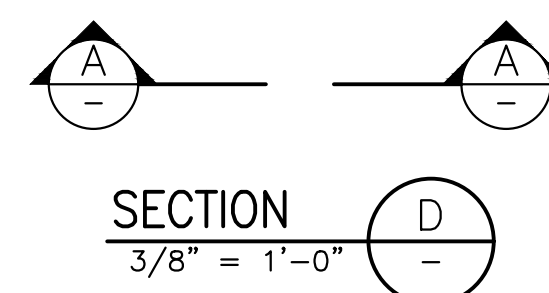
**VALVE IDENTIFICATION (MANUAL & CHECK)**



**SECTION IDENTIFICATION**



NOTE: IF PLAN AND SECTION ARE SHOWN ON SAME DRAWING, DRAWING NUMBER IS REPLACED BY A DASH. AS SHOWN BELOW.



**ENGINEERING ABBREVIATIONS**

AASHTO	AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS	INV EL	INVERT ELEVATION
A/C	AIR CONDITIONER	IPS	IRON PIPE SIZE
AG	AMMONIA GAS	IRR	IRRIGATION
AL OR ALUM	ALUMINUM	ISO	ISOMETRIC
ADDIT	ADDITIONAL	JT	JOINT
AL ORALUM	ALUMINUM	LBS/FT	POUNDS PER FOOT
APPROX	APPROXIMATELY	LF	LINEAR FEET
ARV	AIR RELEASE VALVE	LG	LONG
ASPH	ASPHALT	LME	LAKE MAINTENANCE EASEMENT
ASSY	ASSEMBLY	LP	LOW POINT
BCSCHFP	BITUMINOUS COATED CORRUGATED STEEL HIGH FLOW PIPE	LWL	LOW WATER LEVEL
BFP	BACKFLOW PREVENTOR	MANUF	MANUFACTURER
BLDG	BUILDING	MAX	MAXIMUM
BLK	BLOCK	MC	MEMBRANE CONCENTRATE
BOP	BOTTOM OF PIPE	MECH	MECHANICAL
BOTT OR BTM	BOTTOM	MH	MANHOLE
BV	BUTTERFLY VALVE	MIN	MINIMUM
CBTV	CABLE TELEVISION	MJ	MECHANICAL JOINT
CB	CATCH BASIN	NIC	NOT IN CONTRACT
CBS	CONCRETE BLOCK STRUCTURE	NO	NUMBER
CC	CENTER TO CENTER	NPT	NATIONAL PIPE THREAD
CV	CHECK VALVE	NTS	NOT TO SCALE
CHATT	CHAITTAHOOCHE	OC	ON CENTER
CHL	CHLORINE	OD	OUTSIDE DIAMETER
CL	CLEARANCE	OF	OUTSIDE FACE
CLR	CLEAR OR CLEARANCE	OPNG	OPENING
CLS	CHLORINE SOLUTION LINE	PE	PLANT EFFLUENT
CO	CLEAN OUT	PI	PLANT INFLUENT
COL	COLUMN	PL	PLAT
CONC	CONCRETE	P/L	PROPERTY LINE
CONST	CONSTRUCT OR CONSTRUCTION	PR	PAIR
CONT	CONTINUOUS	PRB	POLLUTION RETARDANT BAFFLE
DBL	DOUBLE	PRV	PRESSURE RELIEF VALVE
DE	DRAINAGE EASEMENT	PVC	POLYVINYLCHLORIDE
DET	DETAIL	PW	POTABLE WATER
DFM	PLANT DRAIN FORCE MAIN	R OR RAD	RADIUS
DIA	DIAMETER	RAS	RETURN ACTIVATED SLUDGE
DIAG	DIAGONAL	RC	RECLAIMED WATER
DIM	DIMENSION	RCP	REINFORCED CONCRETE PIPE
DIP	DUCTILE IRON PIPE	RED	REDUCER
DIPS	DUCTILE IRON PIPE SIZE	REINF	REINFORCING
DWG	DRAWING	REQ'D	REQUIRED
DWN	DOWN	RPR	RESIDENT PROJECT
DR	DIAMETER RATIO		REPRESENTATIVE
EA	EACH	RJ	RESTRAINED JOINT
ECC	ECCENTRIC	R/W	RIGHT OF WAY
EP OR EOP	EDGE OF PAVEMENT	RWM	RECLAIMED WATER MAIN
EF	EACH FACE	SAN	SANITARY
EFF	EFFLUENT	SAN	SANITARY SEWER
ELECT	ELECTRIC	SCH	SCHEDULE
EL OR ELEV	ELEVATION	SECT	SECTION
EQUIP	EQUIPMENT	SHT	SHEET
EQUIP MFRS	EQUIPMENT MANUFACTURER(S)	SIG	TRAFFIC SIGNAL CONDUIT
ER	EQUALIZATION RETURN	SPEC	SPECIFICATION
EW	EACH WAY	SQ	SQUARE
EXIST	EXISTING	SS	STORM SEWER
EXP	EXPANSION	SS OR SST	STAINLESS STEEL
EXT	EXTERIOR	STA	STATION
FF	FINISH FLOOR	STD	STANDARD
FH	FIRE HYDRANT	STL	STEEL
FIN	FINISH	STORM	STORM DRAINAGE
FL	FLOOR	STRUCT	STRUCTURE
FLG	FLANGE	STY	STORY
FM	FORCE MAIN OR FIRE MAIN	S/W	SIDEWALK
FO	FIBER OPTIC	TB	TEST BORING
FTG	FOOTING	TELE	TELEPHONE
GAL	GALVANIZED OR GALLON	TEMP	TEMPERATURE OR TEMPORARY
GAS	NATURAL GAS MAIN	TH	TEST HOLE
GR	GRADE	THD	THREADED
GSP	GALVANIZED STEEL PIPE	THK	THICK
GST	GROUND STORAGE TANK	TOP	TOP OF PIPE
GV	GATE VALVE	TOS	TOP OF SLAB OR TOP OF STEEL
H	HIGH	TYP	TYPICAL
HDD	HORIZONTAL DIRECTIONAL DRILL	VERT	VERTICAL
HDPE	HIGH DENSITY POLY ETHYLENE	W	WIDE
HP	HIGH POINT	W/	WITH
HORIZ	HORIZONTAL	WAS	WASTE ACTIVATED SLUDGE
HWL	HIGH WATER LEVEL	WTR	WATER
ID	INSIDE DIAMETER	W/L	WATER LEVEL
IE	INVERT ELEVATION	WM	WATER MAIN
INF	INFLUENT	WWF	WELDED WIRE FABRIC
INJ	INJECTION		
INSUL	INSULATION		

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NO.	DATE	ISSUED FOR	APRVD BY	DESIGNED:	J.A.P.
				DRAWN:	J.A.J.
				CHECKED:	A.C.
				APPROVED:	D.L.M.

**MATHEWS CONSULTING**  
a BAXTER & WOODMAN company

JASON A. PUGSLEY, P.E.  
No. 67426

477 S. Rosemary Avenue, Suite 330, West Palm Beach, Florida 33401  
Phone: 561-655-6175 • Fax: 561-655-6179  
www.baxterwoodman.com EB-31795

VERIFY SCALE

BAR IS ONE INCH ON FULL SIZE (22x34) ORIGINAL DRAWING. ADJUST SCALES AS NECESSARY.

ENGINEER NO.: 160963  
CLIENT PROJECT NO.: 160963  
CAD REF.: 160963G-L&N

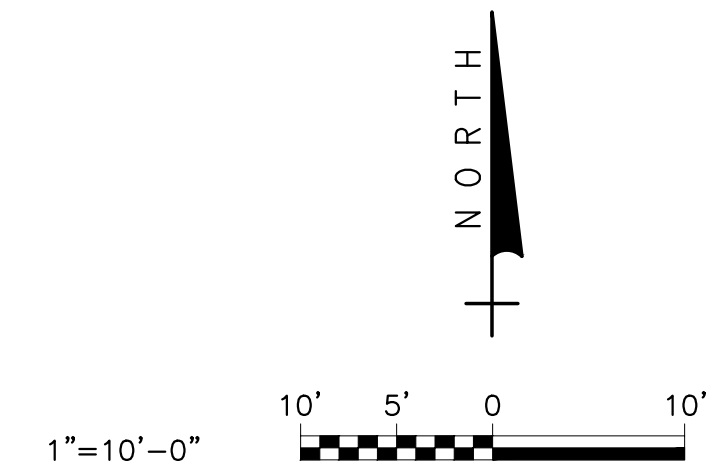
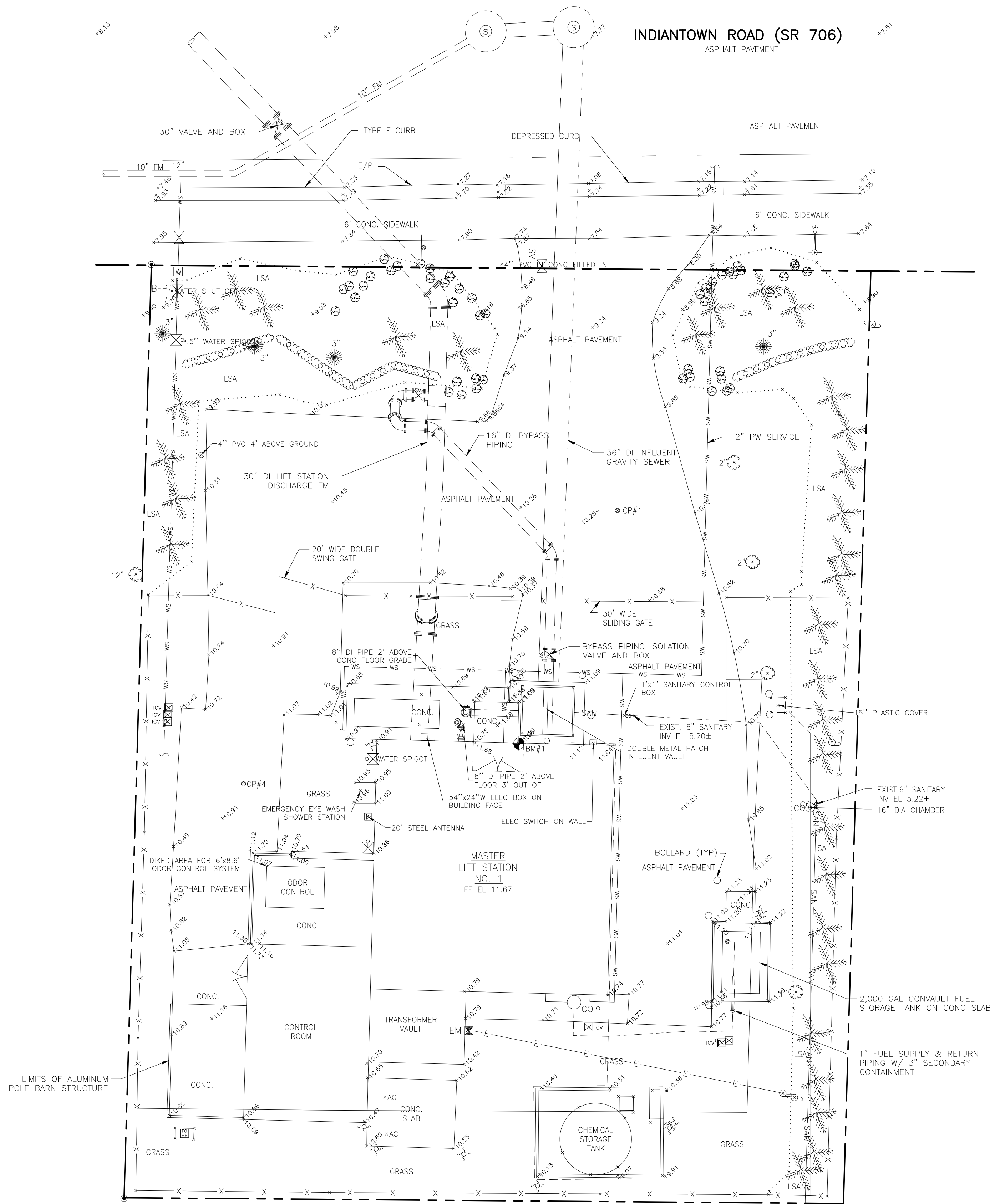
**LOXAHATCHEE RIVER ENVIRONMENTAL CONTROL DISTRICT MASTER LIFT STATION No. 1 REHABILITATION**

GENERAL NOTES AND INFORMATION

DATE:	APRIL 2018
SHEET:	3 of 31
DRAWING:	G-3

**CONSTRUCTION**

Acad Version : R20.1s (LMS Tech) User Name : 756jg  
 Date/Time : Wed, 25 Apr 2018 - 2:20pm  
 Current Plotstyle : ByColor Layout Tab: C-1  
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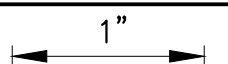
**CONSTRUCTION**

NO.	DATE	ISSUED FOR	APRVD BY

DESIGNED: J.A.P.  
 DRAWN: J.A.J.  
 CHECKED: A.C.  
 APPROVED: D.L.M.

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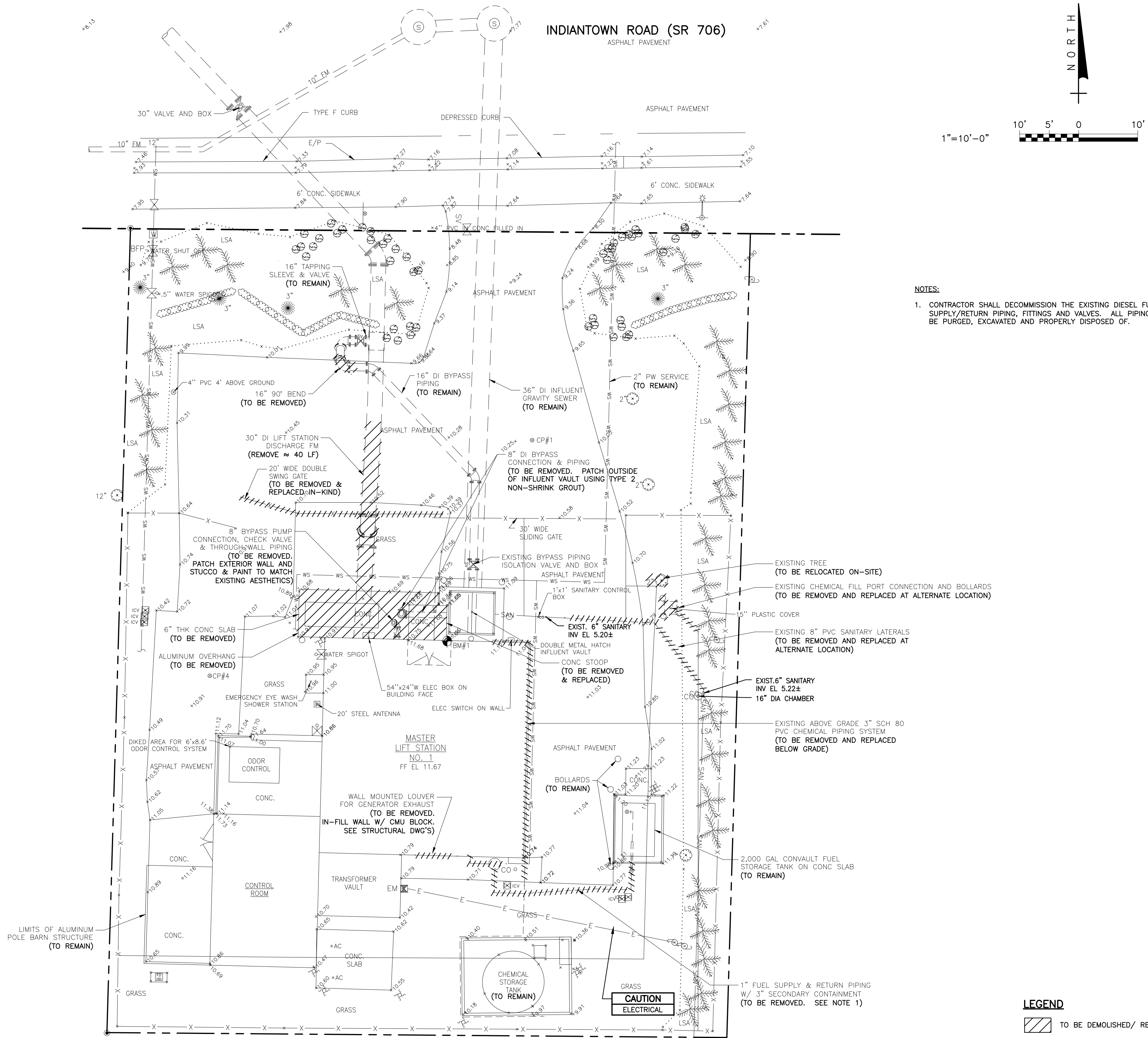
VERIFY SCALE  
  
 BAR IS ONE INCH ON FULL SIZE (22x34) ORIGINAL DRAWING. ADJUST SCALES AS NECESSARY.

ENGINEER NO.: 160963  
 CLIENT PROJECT NO.: 160963  
 CAD REF.: 160963C-X-SP

**LOXAHATCHEE RIVER ENVIRONMENTAL CONTROL DISTRICT**  
**MASTER LIFT STATION No. 1 REHABILITATION**  
 EXISTING SITE PLAN AND SURVEY

DATE: APRIL 2018  
 SHEET: 4 of 31  
 DRAWING: C-1

Acad Version : R20.1s (LMS Tech) User Name : 756jg  
 Date/Time : Wed, 25 Apr 2018 - 2:20pm  
 Current Plotstyle : ByColor  
 Path Name : I:\WestPalmBeach\PROJECTS\160963-MLS No. 1 Final Design\CAD\Working Folder\160963-D-SP.dwg



- NOTES:**
- CONTRACTOR SHALL DECOMMISSION THE EXISTING DIESEL FUEL SYSTEM SUPPLY/RETURN PIPING, FITTINGS AND VALVES. ALL PIPING SYSTEMS SHALL BE PURGED, EXCAVATED AND PROPERLY DISPOSED OF.

**LEGEND**  
 TO BE DEMOLISHED/ REMOVED



**CONSTRUCTION**

NO.	DATE	ISSUED FOR	APR'D BY

DESIGNED: J.A.P.  
 DRAWN: J.A.J.  
 CHECKED: A.C.  
 APPROVED: D.L.M.

JASON A. PUGSLEY, P.E.  
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VERIFY SCALE  
  
 BAR IS ONE INCH ON FULL SIZE (22x34) ORIGINAL DRAWING. ADJUST SCALES AS NECESSARY.

ENGINEER NO.: 160963  
 CLIENT PROJECT NO.: 160963  
 CAD REF.: 160963-D-SP

LOXAHATCHEE RIVER ENVIRONMENTAL CONTROL DISTRICT  
 MASTER LIFT STATION No. 1 REHABILITATION  
 PROPOSED SITE DEMOLITION PLAN

DATE: APRIL 2018  
 SHEET: 5 of 31  
 DRAWING: C-2



THE FOLLOWING SHALL BE USED AS A GUIDE FOR SUBMITTAL OF RECORD DRAWINGS TO THE LOXAHATCHEE RIVER DISTRICT

1. TWO (2) SETS OF PRINTS SHALL BE SUBMITTED TO THE DISTRICT FOR REVIEW 48 HOURS PRIOR TO REQUESTING INSPECTIONS SUCH AS: FINAL INSPECTION, PRESSURE TESTS, SANITARY SEWER LAMPING OR ANY OTHER ELEMENT OF THE SYSTEM WHICH IS DETERMINED BY THE DISTRICT TO REQUIRE CLARIFICATION.
2. THE DRAWINGS WILL BE REVIEWED BY THE DISTRICT FOR DEFICIENCIES. DEFICIENCIES WILL BE INDICATED ON ONE (1) SET OF PRINTS WHICH WILL BE RETURNED TO THE E.O.R. OR CONTRACTOR FOR NECESSARY CORRECTIVE ACTION.
3. UPON CORRECTION, TWO (2) SETS OF PRINTS (SIGNED/SEALED BY A FLORIDA LICENSED SURVEYOR) SHALL BE SUBMITTED.
4. NO DISCLAIMERS ON DRAWINGS WILL BE ACCEPTED.
5. UPON FINAL SUBMITTAL OF RECORD DRAWINGS, AN AUTOCAD VER. 2009 OR LATER AND ADOBE PDF (24"x36") ELECTRONIC DATA FILE SHALL BE FURNISHED ON A CD-R DISK TO THE DISTRICT. ONLY ONE CAD FILE WITH ALL SHEETS OF RECORD DRAWINGS ALLOWED.
6. ALL SEWER ITEMS SHALL BE CATEGORIZED AND ASSIGNED TO THE DRAWING LAYERS SUCH AS: AB-MANHOLES, AB-FORCEMAIN, AB-VALVE, AB-GRAVITY MAIN, ETC.
7. REDRAW ALL SEWER LINES AND INFRASTRUCTURE ON RECORD DRAWINGS AS CONSTRUCTED HORIZONTALLY & VERTICALLY USING ORIGINAL DESIGN LINENWORK & ONLY UPDATING THE CORRESPONDING TEXT CALLOUTS WILL NOT BE ACCEPTED AS RECORD DRAWINGS.

**REQUIRED INFORMATION ON RECORD DRAWINGS**

**GENERAL**

1. DRAWINGS ON 24" X 36" BOND PAPER THAT WILL REPRODUCE LEGIBLY.
2. LABEL DRAWINGS "RECORD DRAWINGS" WITH DATE, COMPLETE TITLE BLOCK WITH CURRENT FILE NAME.
3. DRAWINGS SHALL BE SIGNED / SEALED BY A FLORIDA LICENSED PROFESSIONAL LAND SURVEYOR.
4. CORRECT STREET/ROAD NAMES AND LOT AND BLOCK NUMBERS.
5. SHOW AS-BUILT CONSTRUCTED SEWER FACILITIES HEAVED UP, BOLD OR BOXED OUT TO STAND OUT FROM REST OF EACH DRAWING.
6. ALL ITEMS LISTED BELOW MUST BE CORRECTLY GEOREFERENCED WITH NORTHINGS/EASTINGS CLEARLY SHOW. THE AS BUILTS SHALL BE GEOREFERENCED TO THE STATE PLANE COORDINATES IN NAD 83, FLORIDA EAST ZONE, WHILE THE VERTICAL DATUM SHALL BE NGVD 29.

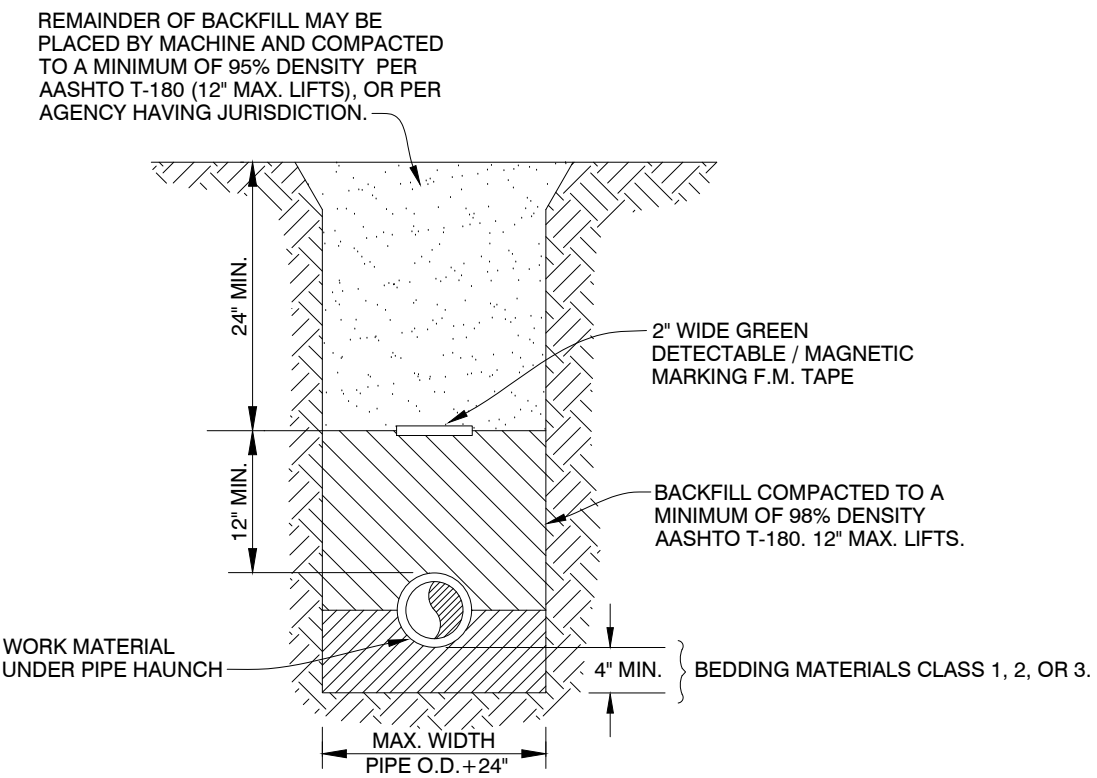
**GRAVITY SEWER**

1. AS-BUILT DISTANCE OF GRAVITY MAIN FROM CENTER LINE OF ROAD OR EASEMENT RIGHT-OF-WAY LINE, BUILDINGS, OR AS DETERMINED BY THE LOXAHATCHEE RIVER DISTRICT. EXTENSIONS OF AN IMAGINARY LINE WILL NOT BE ACCEPTABLE AS REFERENCED POINTS.
2. TYPE OF MATERIALS INSTALLED - MAINS AND SERVICES.
3. SHOW EACH SEWER SERVICE LATERAL INCLUDING THE CONNECTION TO THE MAIN AND PROVIDE THE NORTHING & EASTING POINTS FOR EACH CLEANOUT & INDICATE CLEANOUT DIAMETER.
4. AS-BUILT LOCATIONS OF MANHOLES WITH A NORTHING & EASTING PROVIDED.
5. AS-BUILT ELEVATIONS, RIM ELEVATION, EACH INVERT AND PIPE ELEVATION.
6. UPDATE LIFT STATION DETAILS/ELEVATIONS INCLUDING START UP DATA.
7. LIFT STATION AND UTILITY EASEMENTS, INCLUDING LOCATION OF F.P.S.L. SERVICE TO CONTROL PANEL.

**PRESSURE PIPE**

1. AS-BUILT DISTANCE OF MAINS AT 100' INTERVALS FROM CENTER LINE OF ROAD, EASEMENT, RIGHT-OF-WAY LINE, BUILDINGS, SEWER MAINS OR AS DETERMINED BY THE LOXAHATCHEE RIVER DISTRICT. EXTENSIONS OF AN IMAGINARY LINE WILL NOT BE ACCEPTABLE AS REFERENCED POINTS.
2. SHOW ELEVATIONS, NORTHING/EASTING OF EACH VALVE, FITTING, AIR RELEASE VALVE, SERVICE LINE, TAP, ETC., AND RADIAL DIMENSIONS (TIES) FROM A NEARBY PERMANENT OBJECT WHERE POSSIBLE. (SEE NOTE NO. 6 IN GENERAL).
3. TYPE OF MATERIALS INSTALLED - PIPE AND APPURTENANCES. INDICATE ALL LOCATIONS OF CHANGE OF MATERIAL INCLUDING JOINT TYPE (M.J., SLIP, RESTRAINED).
4. VALVE TYPE (BUTTERFLY, GATE, PLUG) INCLUDING THE NORTHING & EASTING POINT.
5. AS-BUILT LENGTH OF ALL JACK AND BORE CASINGS INDICATING DISTANCE FROM CENTER LINE OF PAVING TO EACH END OF CASING. THE AS-BUILT INVERT ELEVATION OF EACH END OF CASING, (INCLUDING NORTHING/EASTING) AND AS-BUILT DISTANCE FROM EACH END OF CASING TO LIMITS OF MECHANICAL JOINT PIPE IS ALSO REQUIRED.
6. AS-BUILT ELEVATIONS AT 100' INTERVALS AS WELL AS ANY MAJOR CHANGES IN DIRECTION AND/OR ELEVATION. ELEVATIONS SHOWN AT THESE INTERVALS AND CHANGES MUST SHOW TOP OF PIPE ELEVATION, NORTHING/EASTING AND FINISHED GRADE ELEVATION AT THAT LOCATION. SHOW LOCATION OF EMS MARKERS.
7. UTILITY EASEMENTS SHALL BE CORRECTLY SHOWN AND DIMENSIONED WITH REFERENCED SEWER FACILITY.

**RECORD DRAWING SUBMITTAL GUIDE (SD-29)**



**NOTES:**

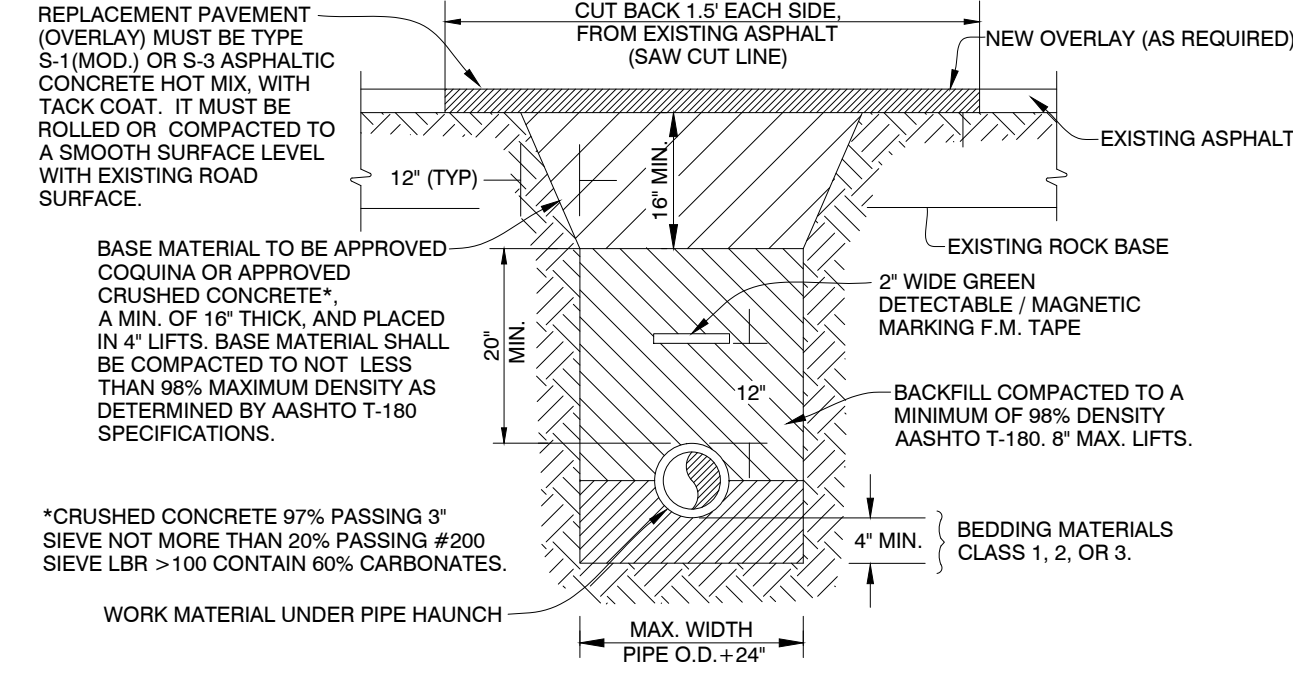
CLASS 1 MATERIAL - ANGULAR .25" TO .75" GRADED STONE SUCH AS CORAL, CRUSHED STONE, OR CRUSHED SHELLS OR BEDDING ROCK (100% PASSING 1" SIEVE).

CLASS 2 MATERIAL - COURSE SAND AND GRAVELS WITH MAXIMUM PARTICLE SIZE OF .25 INCH WITH SMALL PERCENTAGE OF FINES. COMPACT TO A MIN. 98% DENSITY PER AASHTO T-180.

CLASS 3 MATERIAL - FINE SAND AND CLAYEY GRAVELS, INCLUDING FINE SANDS, SAND-CLAY MIXTURES AND GRAVEL-CLAY MIXTURES. INCLUDED IN CLASS 3 ARE EXISTING SOIL TYPES CLASSIFIED AS SELECT BACKFILL. COMPACT TO A MIN. 98% DENSITY PER AASHTO T-180.

1. IF CLASS 1 MATERIAL IS USED FOR BEDDING, IT MUST BE USED FOR THE ENTIRE EMBEDMENT. A DRY TRENCH SHALL BE MAINTAINED WHEN USING CLASS 2 AND CLASS 3 MATERIAL.
2. DENSITY TESTING IS REQUIRED IN 1 FOOT LIFTS ABOVE PIPELINE AT INTERVALS OF 400' MAXIMUM.
3. UNSUITABLE IN-SITU MATERIAL SUCH AS MUCK, DEBRIS AND LARGER ROCKS SHALL BE REMOVED.
4. THE AFFECTED AREA SHALL BE RESTORED TO EQUAL OR BETTER CONDITION OR AS SPECIFIED IN PERMIT / CONTRACT DOCUMENTS.

**TYPICAL TRENCH DETAIL FOR NON - PAVED AREAS (SD-1)**



**NOTES:**

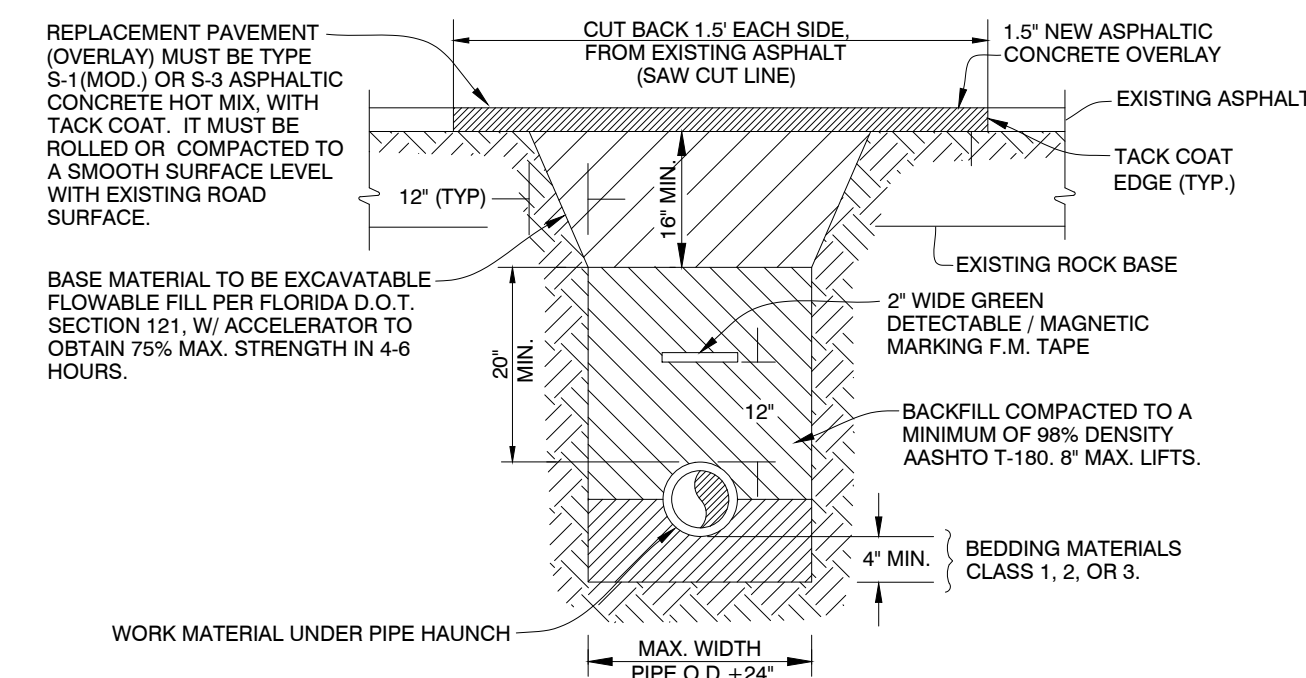
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1. ALL CUTS WILL REQUIRE COMPACTION TO DENSITY SPECIFICATIONS.
2. SAW CUT ASPHALT BEFORE EXCAVATING.
3. COMPACTION MUST BE DONE BY A MECHANICAL VIBRATORY COMPACTOR. EACH LIFT MUST RECEIVE 5 PASSES OF THE COMPACTOR OVER ENTIRE SURFACE. BEFORE COMPACTING EACH LIFT, WATER MUST BE APPLIED AT THE RATE OF 1 GAL. PER LINEAL FOOT OF THE TRENCH FOR COQUINA BASE. WATER TO BE SPRINKLED EVENLY OVER TRENCH WIDTH.
4. UNSUITABLE IN-SITU MATERIAL SUCH AS MUCK, DEBRIS AND LARGER ROCKS SHALL BE REMOVED.
5. THE AFFECTED AREA SHALL BE RESTORED TO EQUAL OR BETTER CONDITION OR AS SPECIFIED IN PERMIT / CONTRACT DOCUMENTS.

**TYPICAL TRENCH & PAVEMENT RESTORATION DETAIL (SD-2)**



**NOTES:**

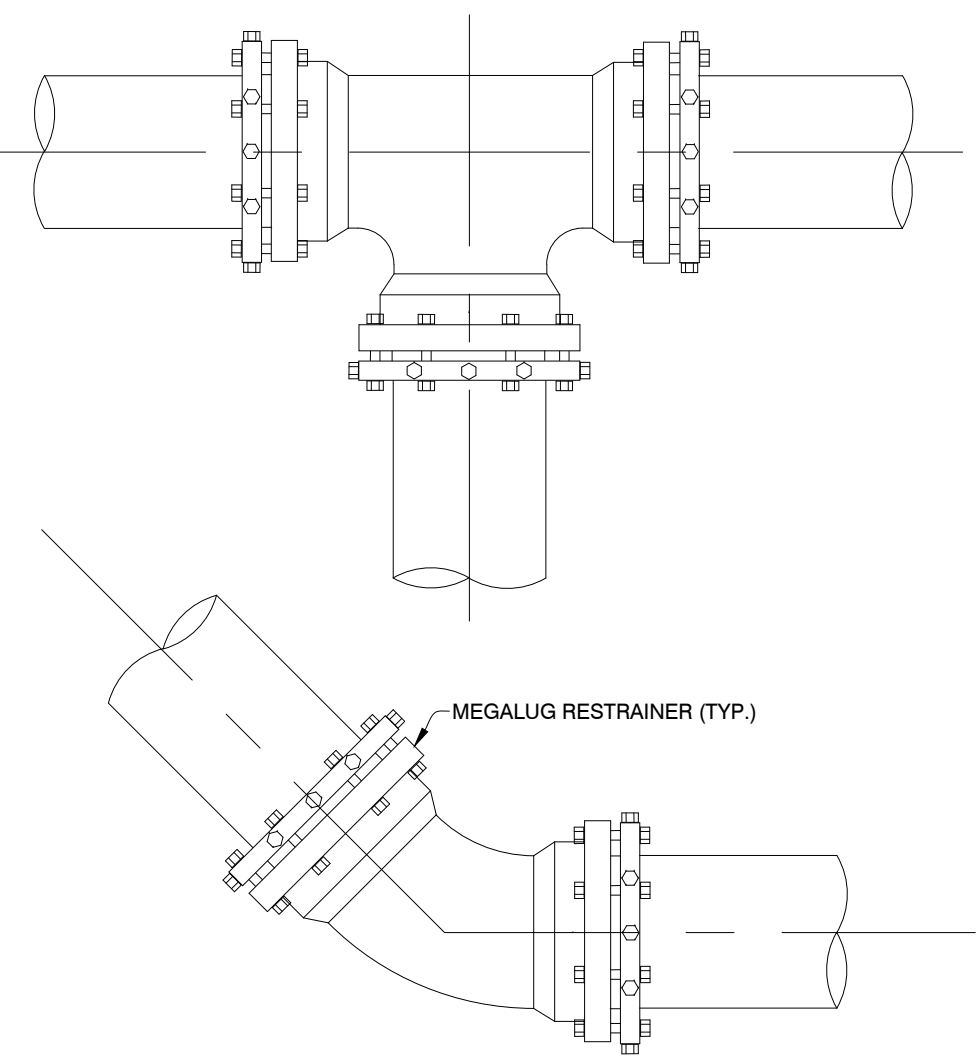
CLASS 1 MATERIAL - ANGULAR .25" TO .75" GRADED STONE SUCH AS CORAL, CRUSHED STONE, OR CRUSHED SHELLS OR BEDDING ROCK (100% PASSING 1" SIEVE).

CLASS 2 MATERIAL - COURSE SAND AND GRAVELS WITH MAXIMUM PARTICLE SIZE OF .25 INCH WITH SMALL PERCENTAGE OF FINES. COMPACT TO A MIN. 98% DENSITY PER AASHTO T-180.

CLASS 3 MATERIAL - FINE SAND AND CLAYEY GRAVELS, INCLUDING FINE SANDS, SAND-CLAY MIXTURES AND GRAVEL-CLAY MIXTURES. INCLUDED IN CLASS 3 ARE EXISTING SOIL TYPES CLASSIFIED AS SELECT BACKFILL. COMPACT TO A MIN. 98% DENSITY PER AASHTO T-180.

1. ALL CUTS WILL REQUIRE COMPACTION TO DENSITY SPECIFICATIONS.
2. SAW CUT ASPHALT BEFORE EXCAVATING.
3. COMPACTION MUST BE DONE BY A MECHANICAL VIBRATORY COMPACTOR. EACH LIFT MUST RECEIVE 5 PASSES OF THE COMPACTOR OVER ENTIRE SURFACE. BEFORE COMPACTING EACH LIFT, WATER MUST BE APPLIED AT THE RATE OF 1 GAL. PER LINEAL FOOT OF THE TRENCH FOR BACKFILL AND 0.5 GAL. PER LINEAL FOOT OF TRENCH FOR COQUINA BASE. WATER TO BE SPRINKLED EVENLY OVER TRENCH WIDTH.
4. UNSUITABLE IN-SITU MATERIAL SUCH AS MUCK, DEBRIS AND LARGER ROCKS SHALL BE REMOVED.
5. THE AFFECTED AREA SHALL BE RESTORED TO EQUAL OR BETTER CONDITION OR AS SPECIFIED IN PERMIT / CONTRACT DOCUMENTS.

**TYPICAL TRENCH & PAVEMENT RESTORATION W/ FLOWABLE FILL DETAIL (SD-3)**



**NOTES:**

1. RETAINER GLANDS FOR PVC PIPE OR DUCTILE IRON PIPE SHALL BE USED AT BENDS OR TEES; RETAINER GLANDS SHALL BE MANUFACTURED BY UNI-FLANGE CORP., OR "MEGALUG" BY EBAA IRON SALES INC. OR DISTRICT APPROVED EQUAL.
2. THE NUMBER OF JOINTS RESTRAINED EACH SIDE OF ANY FITTING OR VALVE SHALL BE IN ACCORDANCE WITH THE MANUFACTURER RECOMMENDATION.
3. ALL BENDS & TEES SHALL HAVE AN EMS INSTALLED.

**FORCE MAIN THRUST RESTRAINT DETAIL (SD-19)**

TYPE	MINIMUM LENGTH (FT) TO BE RESTRAINED ON EACH SIDE OF FITTING(S)									
	4"	6"	8"	10"	12"	16"	20"	24"	30"	36"
90° BEND	18	24	31	38	43	55	65	75	88	100
45° BEND	8	10	13	15	18	23	26	31	38	43
22-1/2° BEND	4	5	6	8	9	11	13	15	18	20
11-1/4° BEND	2	3	4	5	6	8	9	10	11	13
PLUG OR BRANCH OF TEE	38	50	65	79	90	117	139	163	194	223
VALVE	19	25	32	40	45	59	70	82	98	112
REDUCER	VARIES BY SIZE; TO BE DETERMINED BY THE DESIGN ENGINEER									

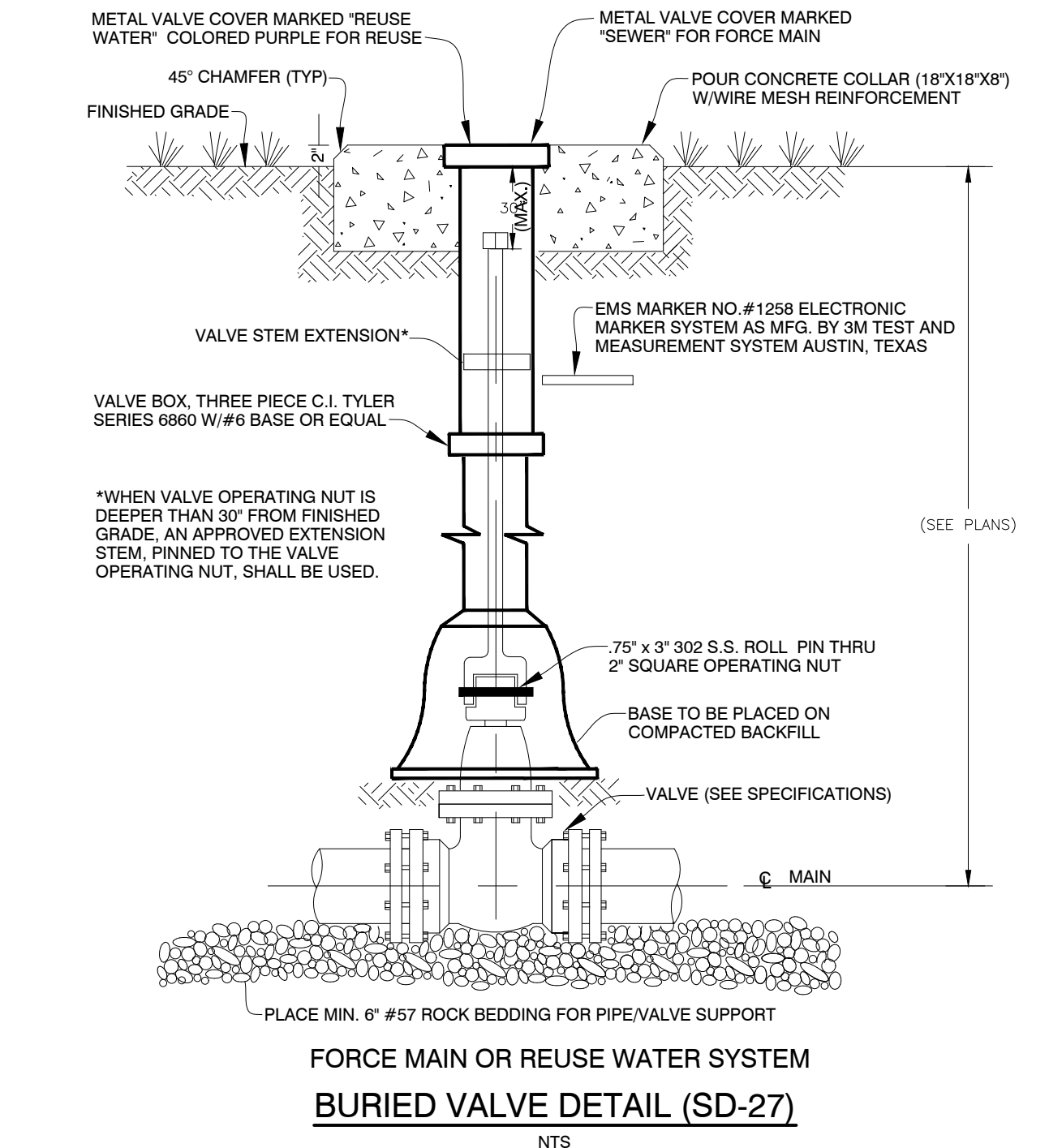
**NOTES:**

1. FITTINGS SHALL HAVE RESTRAINED JOINTS UNLESS OTHERWISE INDICATED.
2. INSTALL FULL LENGTH JOINTS WITH TOTAL LENGTH EQUAL TO OR GREATER THAN LENGTH SHOWN IN THE TABLE.
3. WHERE TWO OR MORE FITTINGS ARE IN SERIES, SELECT FITTING RESTRAINT LENGTH THAT YIELDS THE LONGEST RESTRAINT DISTANCE.
4. ALL INLINE VALVES SHALL BE RESTRAINED.
5. WHERE INTERNAL RESTRAINED JOINTS ARE USED, THE ENTIRE BELL SHALL BE PAINTED RED.
6. LENGTHS SHOWN IN THE TABLE WERE CALCULATED IN ACCORDANCE WITH PROCEDURES OUTLINED IN "THRUST RESTRAINT DESIGN FOR DUCTILE IRON PIPE" GUIDELINES PUBLISHED BY DIPRA, USING THE ASSUMPTIONS SHOWN BELOW:

WORKING PRESSURE: 100 PSI  
 SOIL DESIGNATION: SM (SAND SILT)  
 LAYING CONDITIONS: 3  
 DEPTH OF COVER: 3 FT  
 SAFETY FACTOR: 1.5  
 CONVERSION FACTOR FOR PVC PIPE: 1.25

THE DESIGN ENGINEER SHALL INCREASE THE VALUES IN THE TABLE AS WARRANTED BY SITE-SPECIFIC PARAMETERS, SUCH AS SOIL DESIGNATIONS AND LAYING CONDITIONS.

**FORCE MAIN THRUST RESTRAINT CHART (SD-18)**



**NOTES:**

\*WHEN VALVE OPERATING NUT IS DEEPER THAN 30" FROM FINISHED GRADE, AN APPROVED EXTENSION STEM, PINNED TO THE VALVE OPERATING NUT, SHALL BE USED.

PLACE MIN. 6" #57 ROCK BEDDING FOR PIPE/VALVE SUPPORT

**FORCE MAIN OR REUSE WATER SYSTEM BURIED VALVE DETAIL (SD-27)**

VERIFY SCALE

1"

BAR IS ONE INCH ON FULL SIZE (22x34) ORIGINAL DRAWING. ADJUST SCALES AS NECESSARY.

ENGINEER NO.: 160963

CLIENT PROJECT NO.: 160963

CAD REF.: 160963C-P-DLS

**SEPARATION REQUIREMENTS**

62-555.314 F.A.C. AUGUST 28, 2003

1. HORIZONTAL SEPARATION BETWEEN UNDERGROUND WATER MAINS AND SANITARY OR STORM SEWERS, WASTEWATER OR STORMWATER FORCE MAINS, RECLAIMED WATER PIPELINES, AND ON-SITE SEWAGE TREATMENT AND DISPOSAL SYSTEMS.
  - A. NEW OR RELOCATED UNDERGROUND WATER MAINS SHALL BE LAID TO PROVIDE A HORIZONTAL DISTANCE OF AT LEAST THREE FEET BETWEEN THE OUTSIDE OF THE WATER MAIN AND THE OUTSIDE OF ANY EXISTING OR PROPOSED STORM SEWER, STORMWATER FORCE MAIN, OR PIPELINE CONVEYING RECLAIMED WATER REGULATED UNDER PART III OF CHAPTER 62-610, F.A.C.
  - B. NEW OR RELOCATED, UNDERGROUND WATER MAINS SHALL BE LAID TO PROVIDE A HORIZONTAL DISTANCE OF AT LEAST THREE FEET, AND PREFERABLY TEN FEET, BETWEEN THE OUTSIDE OF THE WATER MAIN AND THE OUTSIDE OF ANY EXISTING OR PROPOSED VACUUM-TYPE SANITARY SEWER.
  - C. NEW OR RELOCATED, UNDERGROUND WATER MAINS SHALL BE LAID TO PROVIDE A HORIZONTAL DISTANCE OF AT LEAST SIX FEET, AND PREFERABLY TEN FEET, BETWEEN THE OUTSIDE OF THE WATER MAIN AND THE OUTSIDE OF ANY EXISTING OR PROPOSED GRAVITY, OR PRESSURE-TYPE SANITARY SEWER, WASTEWATER FORCE MAIN, OR PIPELINE CONVEYING RECLAIMED WATER NOT REGULATED UNDER PART III OF CHAPTER 62-610, F.A.C. THE MINIMUM HORIZONTAL SEPARATION DISTANCE BETWEEN WATER MAINS AND GRAVITY-TYPE SANITARY SEWERS SHALL BE REDUCED TO THREE FEET WHERE THE BOTTOM OF THE WATER MAIN IS LAID AT LEAST SIX INCHES ABOVE THE TOP OF THE SEWER.
2. VERTICAL SEPARATION BETWEEN UNDERGROUND WATER MAINS AND SANITARY OR STORM SEWERS, WASTEWATER OR STORMWATER FORCE MAINS, AND RECLAIMED WATER PIPELINES.
  - A. NEW OR RELOCATED, UNDERGROUND WATER MAINS CROSSING ANY EXISTING OR PROPOSED GRAVITY, OR VACUUM-TYPE SANITARY SEWER OR STORM SEWER SHALL BE LAID SO THE OUTSIDE OF THE WATER MAIN IS AT LEAST SIX INCHES, AND PREFERABLY 12 INCHES, ABOVE OR AT LEAST 12 INCHES BELOW THE OUTSIDE OF THE OTHER PIPELINE. HOWEVER, IT IS PREFERABLE TO LAY THE WATER MAIN ABOVE THE OTHER PIPELINE.
  - B. NEW OR RELOCATED, UNDERGROUND WATER MAINS CROSSING ANY EXISTING OR PROPOSED PRESSURE-TYPE SANITARY SEWER, WASTEWATER OR STORMWATER FORCE MAIN, OR PIPELINE CONVEYING RECLAIMED WATER SHALL BE LAID SO THE OUTSIDE OF THE WATER MAIN IS AT LEAST 12 INCHES ABOVE OR BELOW THE OUTSIDE OF THE OTHER PIPELINE. HOWEVER, IT IS PREFERABLE TO LAY THE WATER MAIN ABOVE THE OTHER PIPELINE.
  - C. AT THE UTILITY CROSSING DESCRIBED IN PARAGRAPHS (A) AND (B) ABOVE, ONE FULL LENGTH OF WATER MAIN PIPE SHALL BE CENTERED ABOVE OR BELOW THE OTHER PIPELINE SO THE WATER MAIN JOINTS WILL BE AS FAR AS POSSIBLE FROM THE OTHER PIPELINE. ALTERNATIVELY, AT SUCH CROSSINGS, THE PIPES SHALL BE ARRANGED SO THAT ALL WATER MAIN JOINTS ARE AT LEAST THREE FEET FROM ALL JOINTS IN VACUUM-TYPE SANITARY SEWERS, STORM SEWERS, STORMWATER FORCE MAINS, OR PIPELINES CONVEYING RECLAIMED WATER REGULATED UNDER PART III OF CHAPTER 62-610, F.A.C., AND AT LEAST SIX FEET FROM ALL JOINTS IN GRAVITY, OR PRESSURE-TYPE SANITARY SEWERS, WASTEWATER FORCE MAINS, OR PIPELINES CONVEYING RECLAIMED WATER NOT REGULATED UNDER PART III OF CHAPTER 62-610, F.A.C.

\*REQUIRED BY: HRS, STATE OF FLORIDA, PALM BEACH COUNTY PUBLIC HEALTH UNIT

**STANDARD WATER AND SEWER SEPARATION STATEMENT (SD-30)**

NO.	DATE	ISSUED FOR	APRVD BY

DESIGNED: J.A.P.  
 DRAWN: J.A.J.  
 CHECKED: A.C.  
 APPROVED: D.L.M.

JASON A. PUGSLEY, P.E.  
 No. 67426

**MATHEWS CONSULTING**

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ENGINEER NO.: 160963

CLIENT PROJECT NO.: 160963

CAD REF.: 160963C-P-DLS

LOXAHATCHEE RIVER ENVIRONMENTAL CONTROL DISTRICT MASTER LIFT STATION No. 1 REHABILITATION

CIVIL DETAILS - SHEET 1

DATE: APRIL 2018

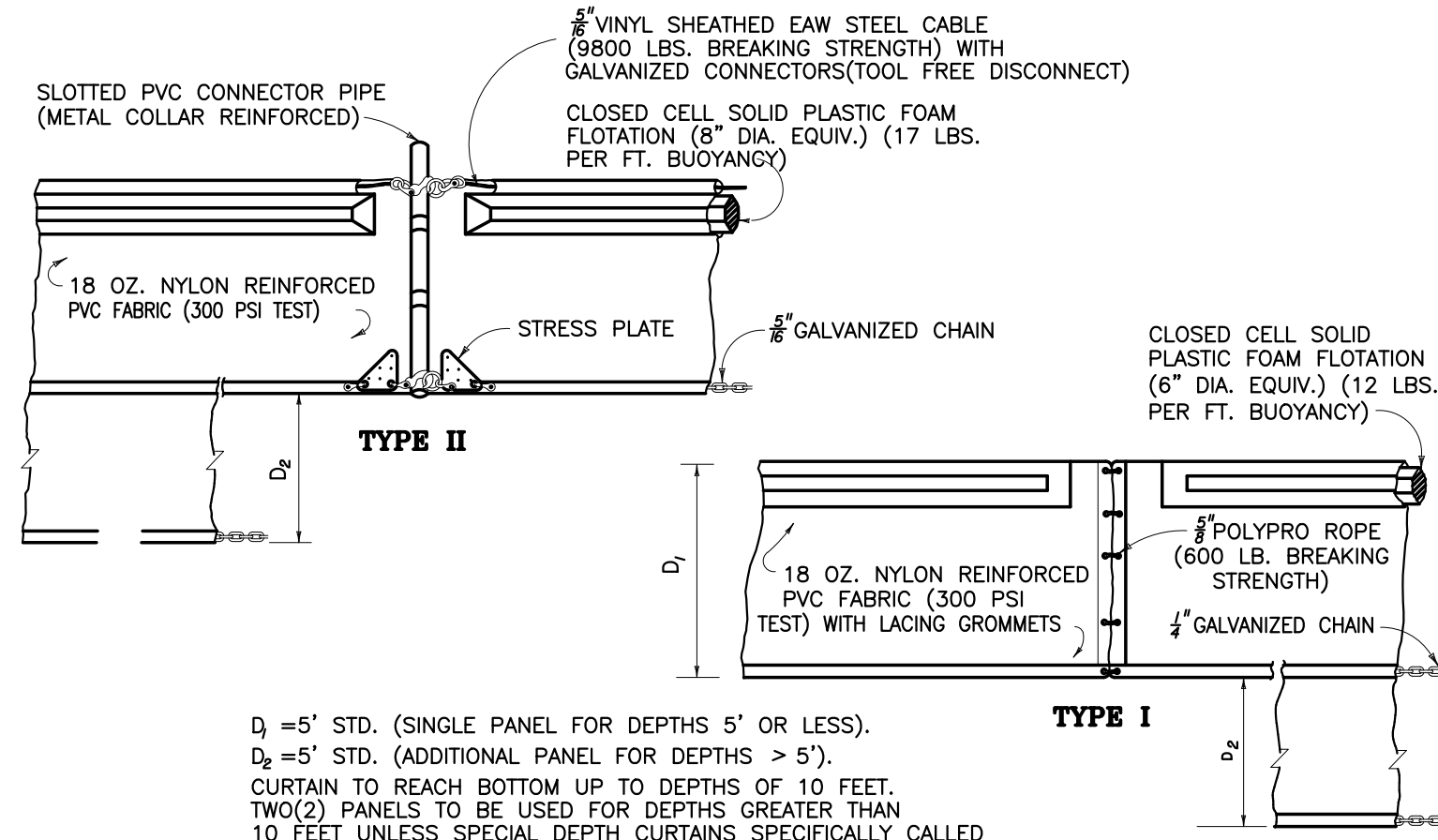
SHEET: 7 of 31

DRAWING: C-4

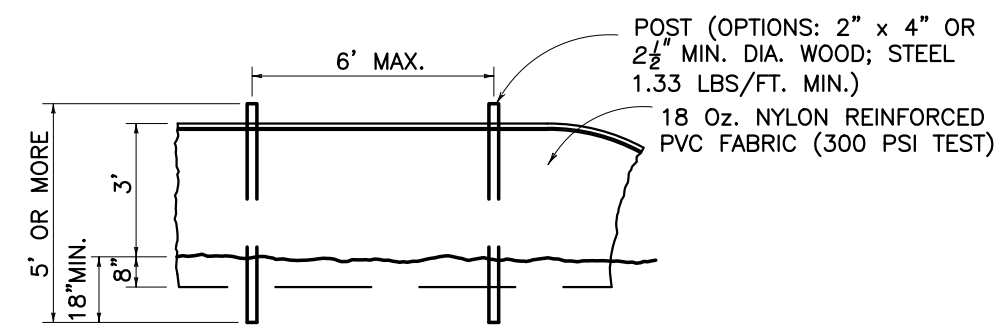
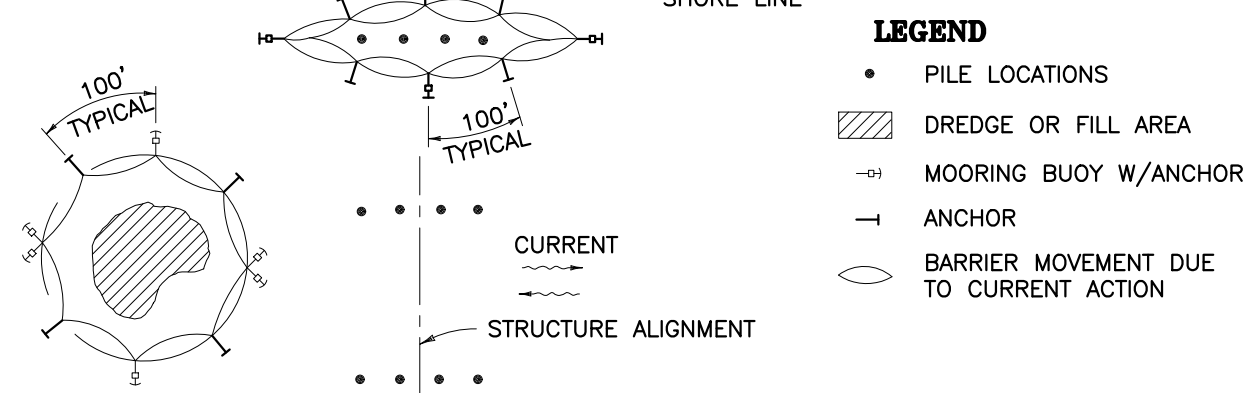
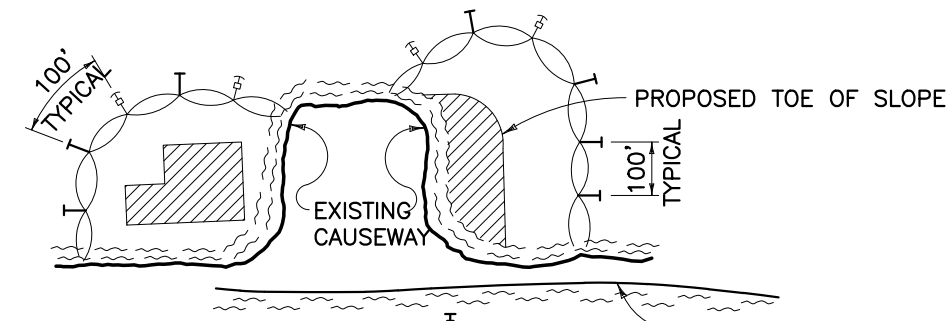
**CONSTRUCTION**

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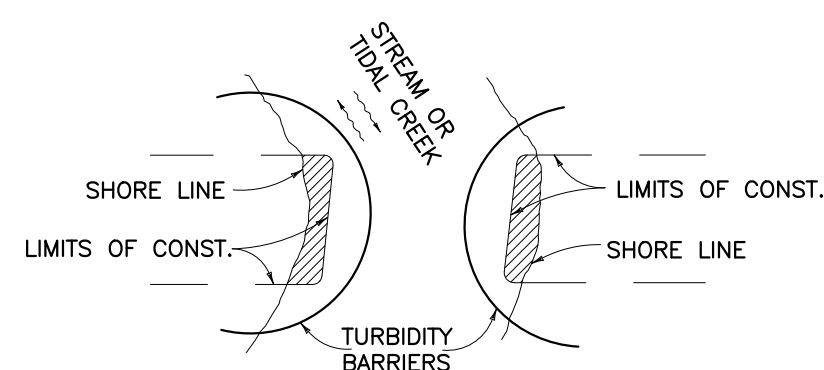
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 Current Plotstyle: ByColor Layout Tab: C-5  
 Acad Version: R201s (LMS Tech) User: Name: 756jg



**NOTE:**  
 COMPONENTS OF TYPES I AND II MAY BE SIMILAR OR IDENTICAL TO PROPRIETARY DESIGNS. ANY INFRINGEMENT ON THE PROPRIETARY RIGHTS OF THE DESIGNER SHALL BE THE SOLE RESPONSIBILITY OF THE USER. SUBSTITUTIONS FOR TYPES I AND II SHALL BE AS APPROVED BY THE ENGINEER.

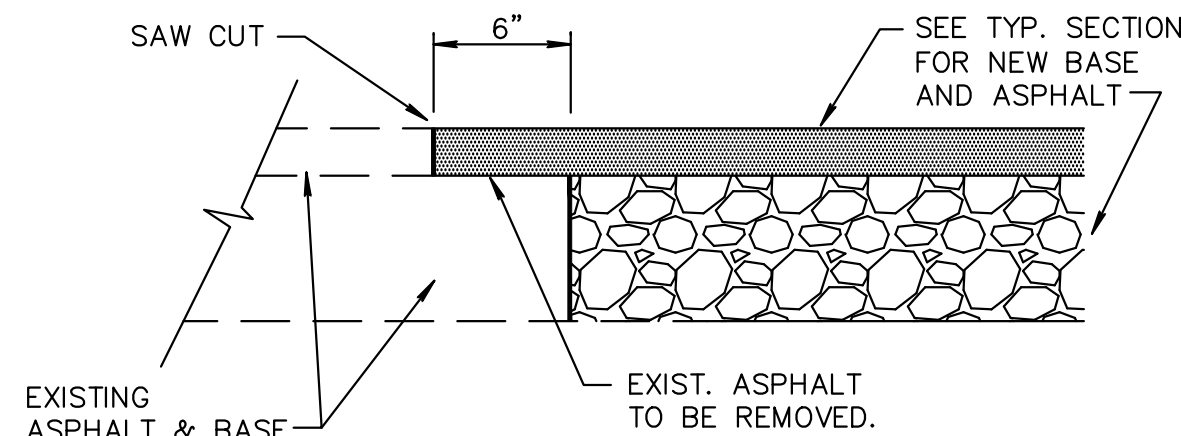


**STAKED TURBIDITY BARRIER**



**FLOATING TURBIDITY BARRIERS**

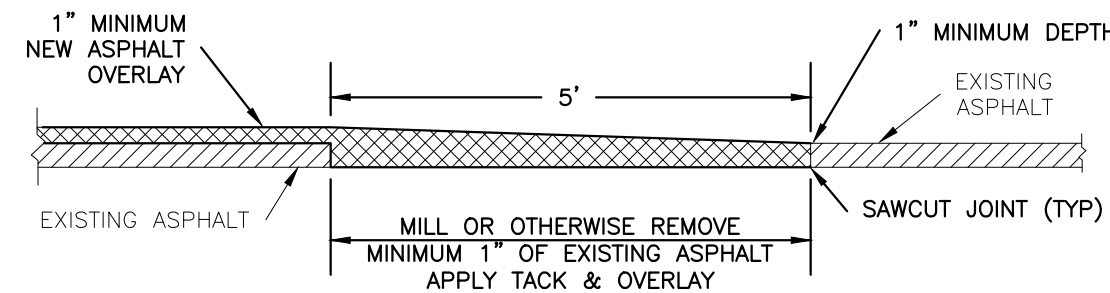
- NOTES:**
- TURBIDITY BARRIERS FOR FLOWING STREAMS AND TIDAL CREEKS MAY BE EITHER FLOATING, OR STAKED TYPES OR ANY COMBINATION OF TYPES THAT WILL SUIT SITE CONDITIONS AND MEET EROSION CONTROL AND WATER QUALITY REQUIREMENTS. THE BARRIER TYPE(S) WILL BE AT THE CONTRACTORS OPTION UNLESS OTHERWISE SPECIFIED IN THE PLANS. POSTS IN STAKED TURBIDITY BARRIERS TO BE INSTALLED IN VERTICAL POSITION UNLESS OTHERWISE DIRECTED BY THE ENGINEER.
  - TURBIDITY BARRIERS ARE TO BE USED IN ALL PERMANENT BODIES OF WATER REGARDLESS OF WATER DEPTH.
  - NUMBER AND SPACING OF ANCHORS DEPENDENT ON CURRENT VELOCITIES.
  - DEPLOYMENT OF BARRIER AROUND PILE LOCATIONS MAY VARY TO ACCOMMODATE CONSTRUCTION OPERATIONS.
  - NAVIGATION MAY REQUIRE SEGMENTING BARRIER DURING CONSTRUCTION OPERATIONS.
  - FOR ADDITIONAL INFORMATION SEE SECTION 104 OF THE STANDARD SPECIFICATIONS.



**NEW CONSTRUCTION PAVEMENT JOINT**

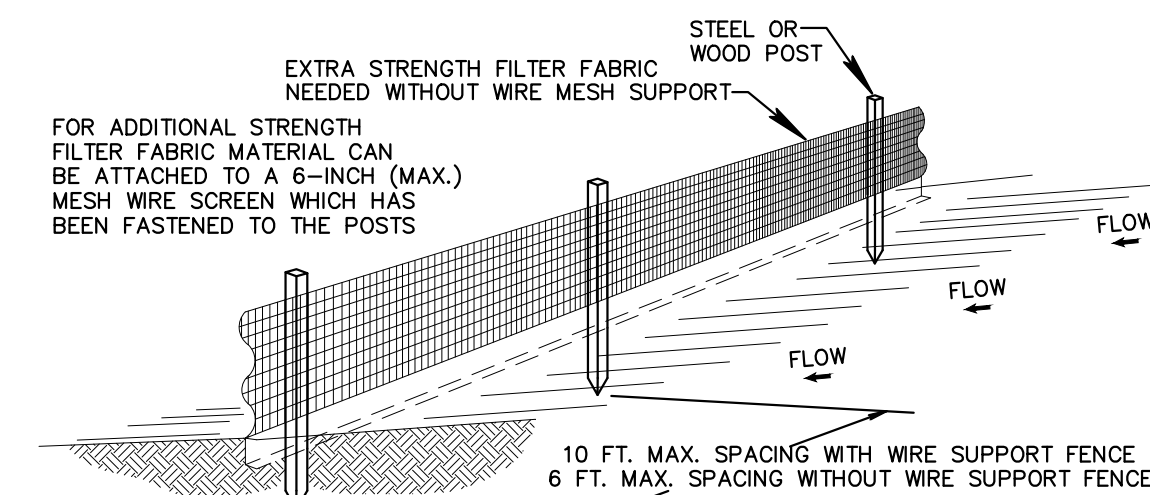
**NOTE:**  
 THIS METHOD OF PAVEMENT JOINT SHALL BE USED FOR ANY APPLICATION OR CONSTRUCTION WHERE PROPOSED PAVEMENT AND BASE WILL BE CONNECTED TO EXISTING PAVEMENT AND BASE.

**PAVEMENT JOINT DETAIL**  
N.T.S.



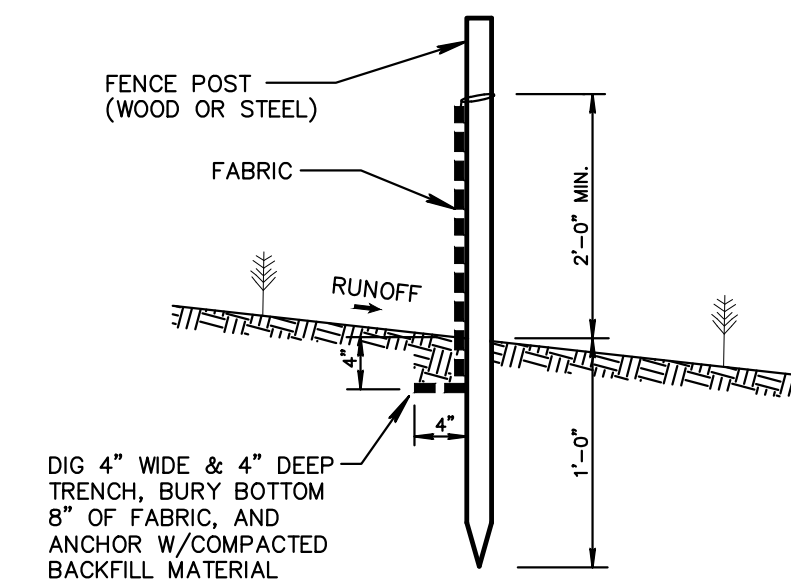
**NOTE:**  
 IF EXISTING BASE IS DISTURBED, BASE SHALL BE GRADED AND RE-COMPACTED PRIOR TO PRIME/TACK COAT PLACEMENT AND OVERLAY.

**TRANSITION OF ASPHALT OVERLAY TO EXISTING PAVEMENT ELEVATION**  
N.T.S.

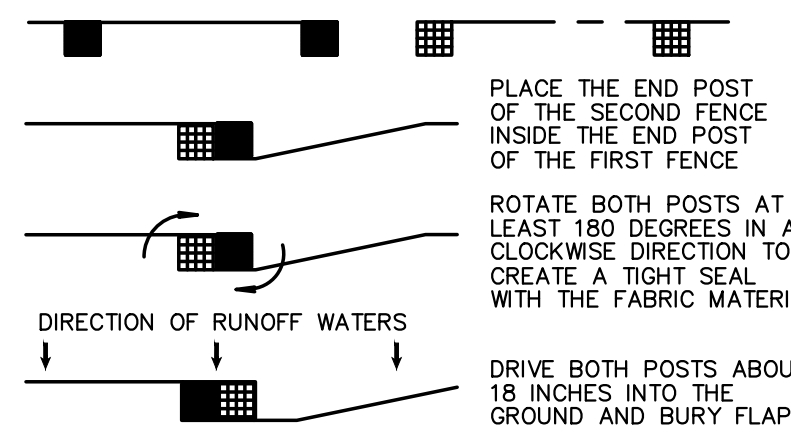


- NOTES:**
- THE HEIGHT OF A SILT FENCE SHALL NOT EXCEED 36 INCHES (90 CM).
  - THE FILTER FABRIC SHALL BE PURCHASED IN A CONTINUOUS ROLL CUT TO THE LENGTH OF THE BARRIER TO AVOID THE USE OF JOINTS.
  - POSTS SHALL BE SPACED A MAXIMUM OF 10 FEET (3 M) APART AT THE BARRIER LOCATION AND DRIVEN SECURELY INTO THE GROUND A MINIMUM OF 12 INCHES (30 CM). WHEN EXTRA STRENGTH FABRIC IS USED WITHOUT THE WIRE SUPPORT FENCE, POST SPACING SHALL NOT EXCEED 6 FEET (1.8 M).
  - A TRENCH SHALL BE EXCAVATED APPROXIMATELY 4 INCHES (10 CM) WIDE AND 4 INCHES (10 CM) DEEP ALONG THE LINE OF POSTS AND UPSLOPE FROM THE BARRIER.
  - WHEN STANDARD STRENGTH FILTER FABRIC IS USED, A WIRE MESH SUPPORT FENCE SHALL BE FASTENED SECURELY TO THE UPSLOPE SIDE OF THE POSTS USING HEAVY DUTY WIRE STAPLES AT LEAST 1 INCH (25 MM) LONG, TIE WIRES, OR HOG RINGS. THE WIRE SHALL EXTEND INTO THE TRENCH A MINIMUM OF 2 INCHES (5 CM) AND SHALL NOT EXTEND MORE THAN 36 INCHES (90 CM) ABOVE THE ORIGINAL GROUND SURFACE.
  - THE STANDARD STRENGTH FILTER FABRIC SHALL BE STAPLED OR WIRED TO THE FENCE, AND 8 INCHES (20 CM) OF THE FABRIC SHALL BE EXTENDED INTO THE TRENCH. THE FABRIC SHALL NOT EXTEND MORE THAN 36 INCHES (90 CM) ABOVE THE ORIGINAL GROUND SURFACE.
  - THE TRENCH SHALL BE BACKFILLED AND THE SOIL COMPACTED OVER THE FILTER FABRIC.
  - ALL PROJECTS REQUIRE SUBMITTAL OF POLLUTION PREVENTION PLAN (PPP).
  - ALL PROJECTS 1 AC. OR MORE MUST SUBMIT NOTICE OF INTENT (NOI) TO FDEP.

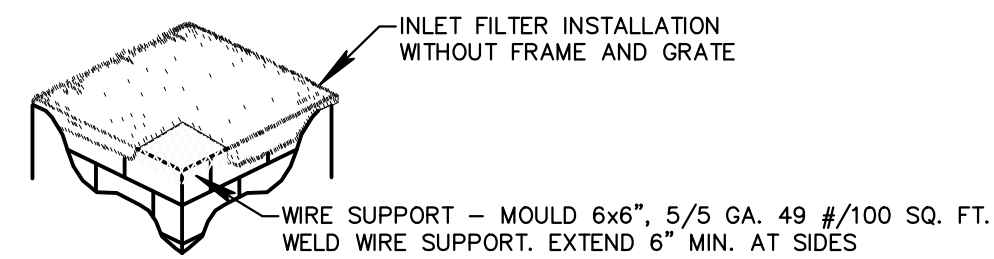
**SILT FENCE DETAIL**  
N.T.S.



**SILT FENCE SECTION**  
NOT TO SCALE



**ATTACHING TWO SILT FENCES**  
N.T.S.

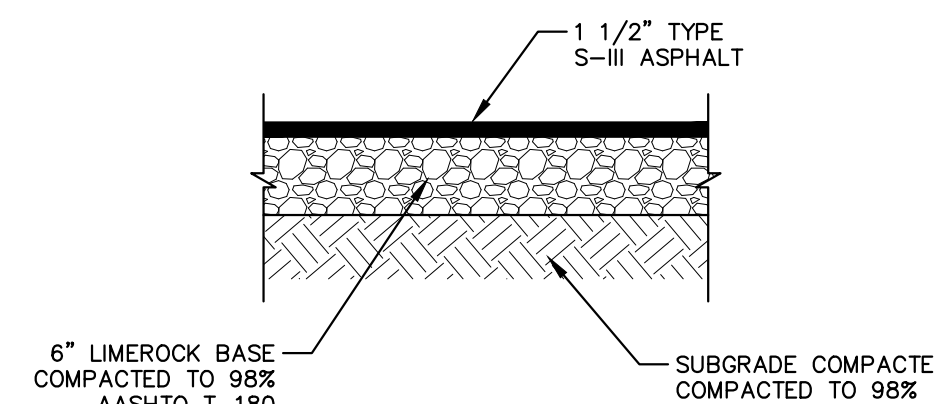


- NOTES:**
- CONTRACTOR IS TO CLEAN INLET FILTER AFTER EVERY STORM.
  - CONTRACTOR TO REMOVE FABRIC JUST PRIOR TO PAVING.

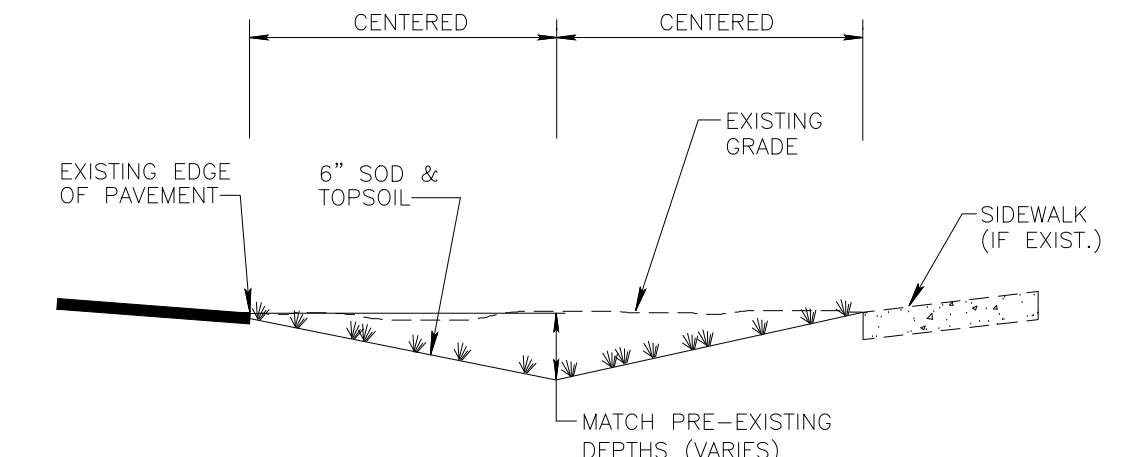
A SEDIMENT TRAP WILL BE EXCAVATED BEHIND THE CURB AT THE INLET. THE BASIN SHALL BE AT LEAST 12 TO 14 INCHES IN DEPTH, APPROXIMATELY 36 INCHES IN WIDTH, AND APPROXIMATELY 7 TO 10 FEET IN LENGTH PARALLEL TO THE CURB.

STORM WATER WILL REACH THE SEDIMENT TRAP VIA CURB CUTS ADJACENT TO EACH SIDE OF THE INLET STRUCTURE. THESE OPENINGS SHALL BE AT LEAST 12 INCHES IN LENGTH. STORM WATER MAY ALSO REACH THE BASIN VIA OVERLAND FLOW LAND AREA BEHIND THE CURB. THE CURB CUTS SHALL BE REPAIRED WHEN THE SEDIMENT TRAP IS REMOVED.

**INLET FILTER DETAIL**  
N.T.S.

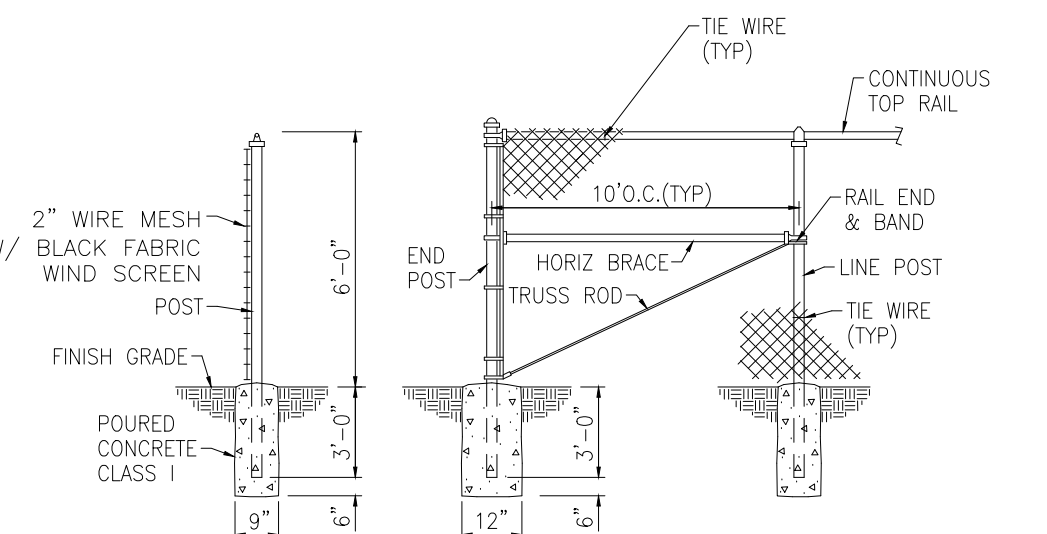


**ASPHALT DRIVEWAY DETAIL**  
N.T.S.



- NOTES:**
- CONTRACTOR TO REPLACE ALL IRRIGATION, TREES & SHRUBBERY IN SWALES DAMAGED DURING CONSTRUCTION.
  - SWALE FLOW LINES SHALL BE CONSTRUCTED 0.1' BELOW DRIVEWAY FLOW LINE.

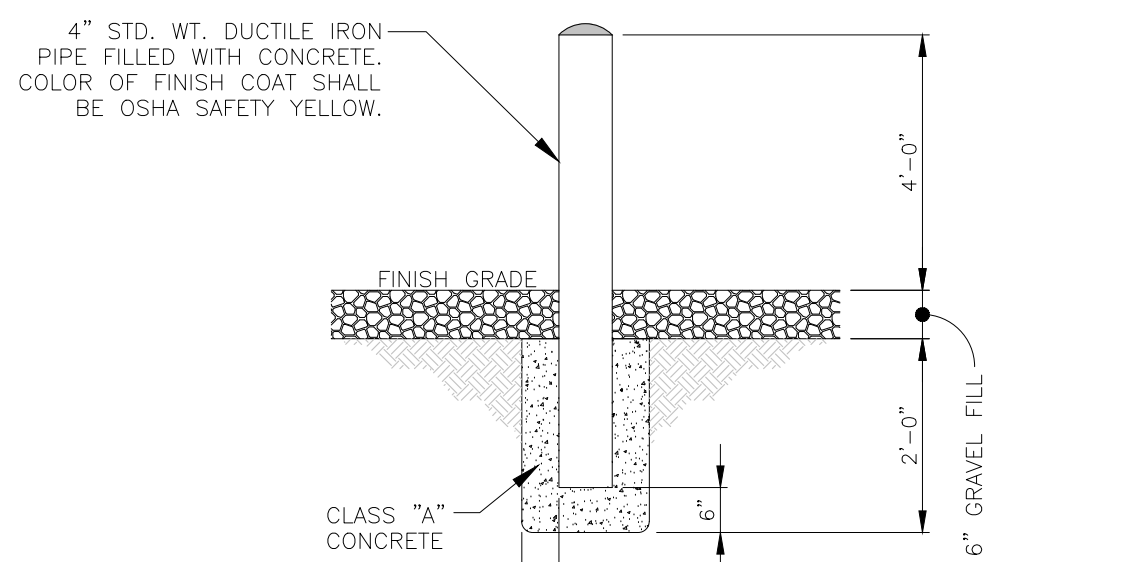
**SWALE REPLACEMENT DETAIL**  
N.T.S.



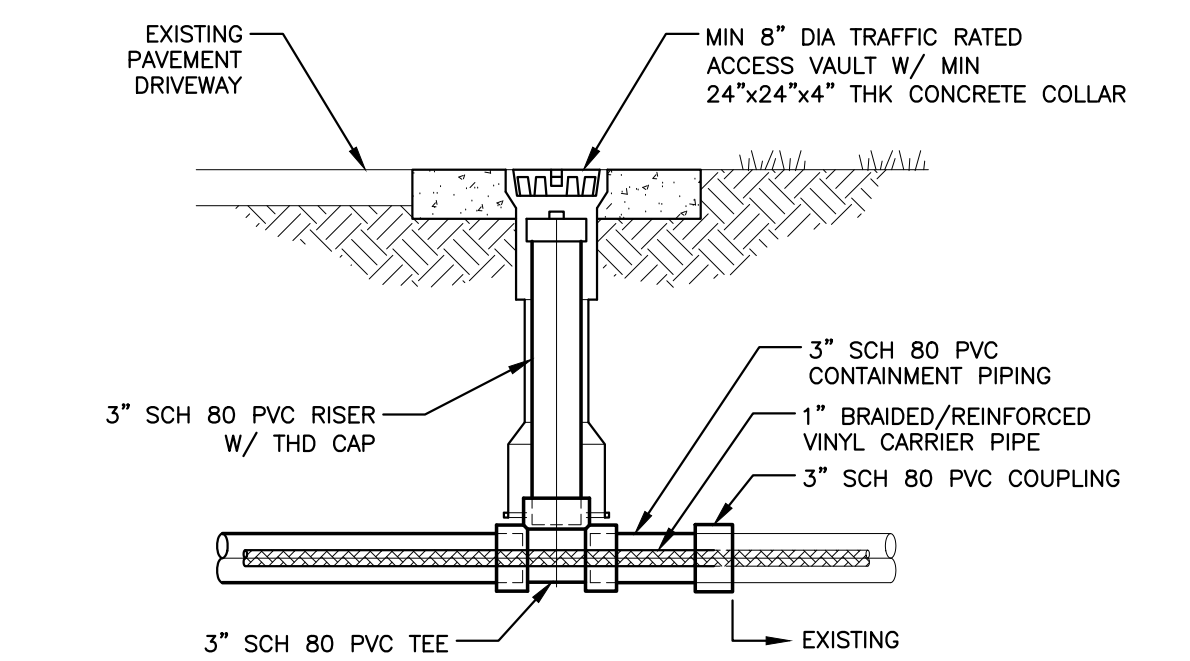
**TYPICAL LINE POST**      **TYPICAL FENCE**

**NOTE:**  
 FENCE FABRIC, POSTS, BRACES, RAILS & ACCESSORIES SHALL BE BLACK VINYL COATED.

**CHAIN LINK FENCE INSTALLATION DETAILS**  
N.T.S.



**BOLLARD**  
SCALE: N.T.S.



**TYPICAL FIELD INSPECTION PORT DETAIL**  
N.T.S.

NO.	DATE	ISSUED FOR	APRVD BY

DESIGNED:	J.A.P.
DRAWN:	J.A.J.
CHECKED:	A.C.
APPROVED:	D.L.M.

JASON A. PUGSLEY, P.E.  
 No. 67426

**MATHEWS CONSULTING**  
 a BAXTER & WOODMAN company  
 477 S. Rosemary Avenue, Suite 330, West Palm Beach, Florida 33401  
 Phone: 561-655-6175 • Fax: 561-655-6179  
 www.baxterwoodman.com EB-31795

VERIFY SCALE  
 1" = 1'  
 BAR IS ONE INCH ON FULL SIZE (22x34) ORIGINAL DRAWING. ADJUST SCALES AS NECESSARY.

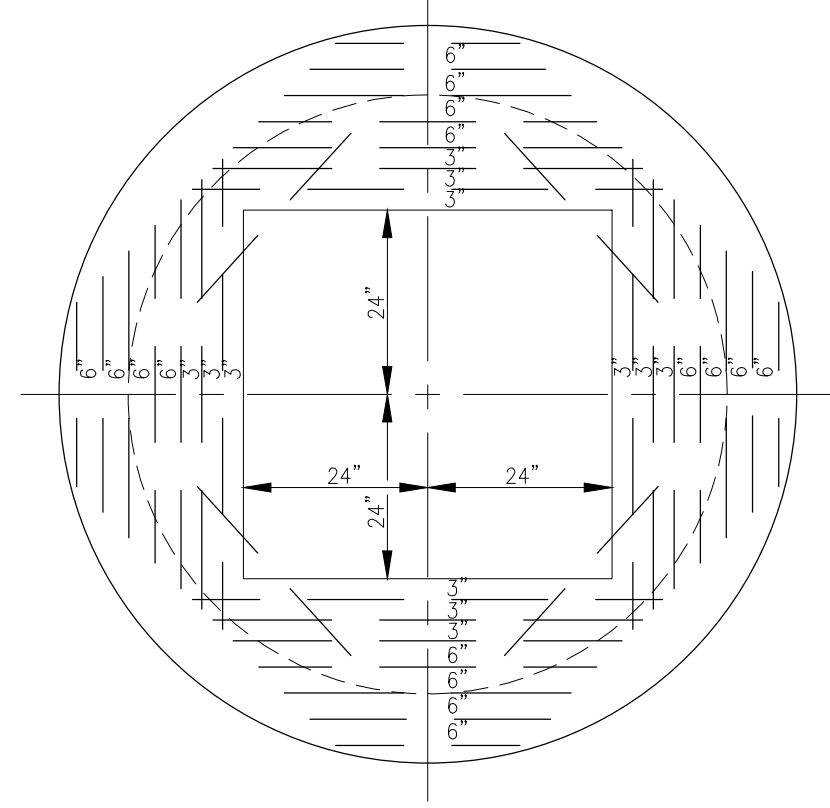
ENGINEER NO.: 160963  
 CLIENT PROJECT NO.: 160963  
 CAD REF.: 160963C-P-DTL5

LOXAHATCHEE RIVER ENVIRONMENTAL CONTROL DISTRICT  
 MASTER LIFT STATION No. 1 REHABILITATION  
 CIVIL DETAILS - SHEET 2

DATE: APRIL 2018  
 SHEET: 8 of 31  
 DRAWING: C-5

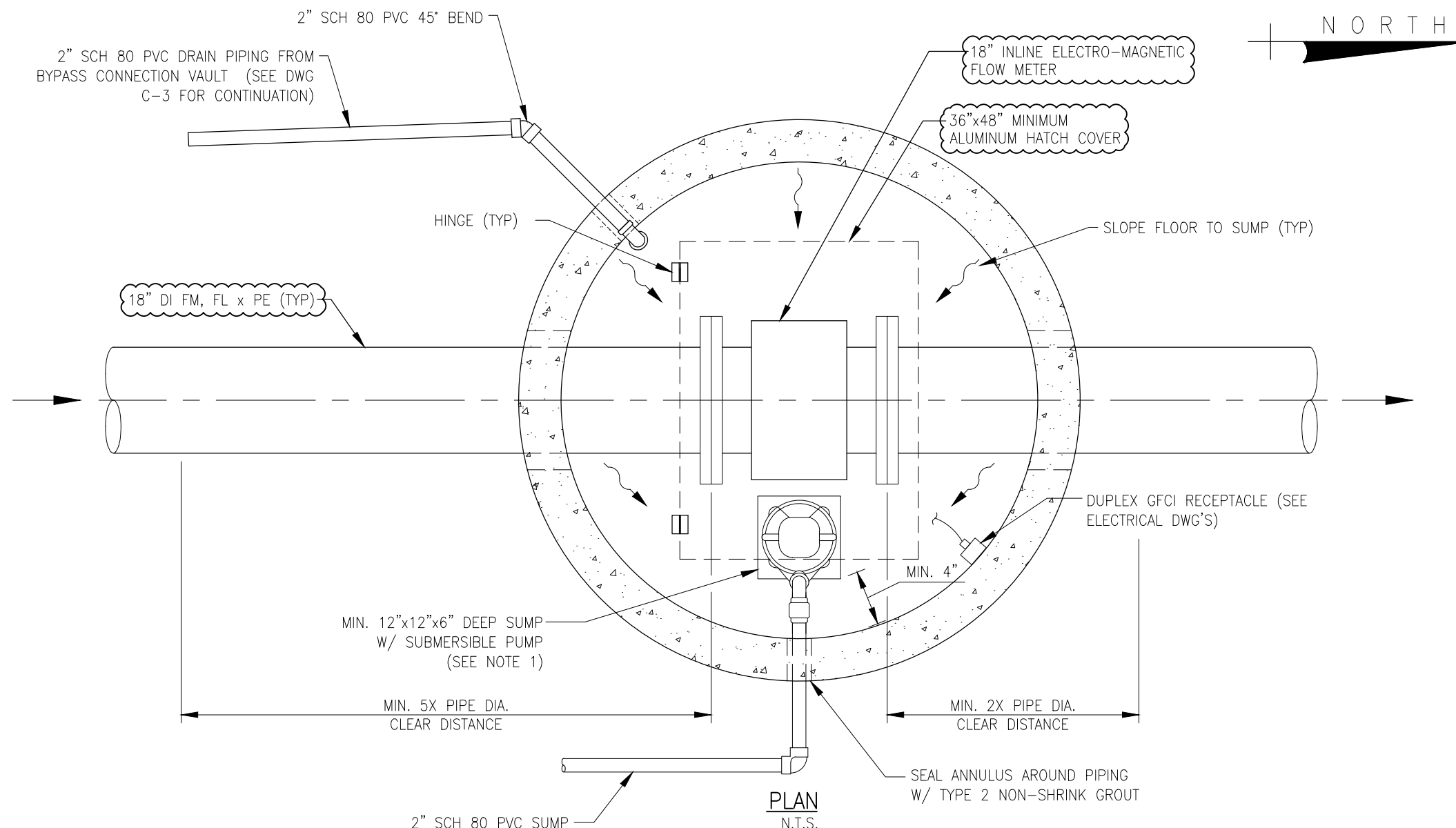
**CONSTRUCTION**





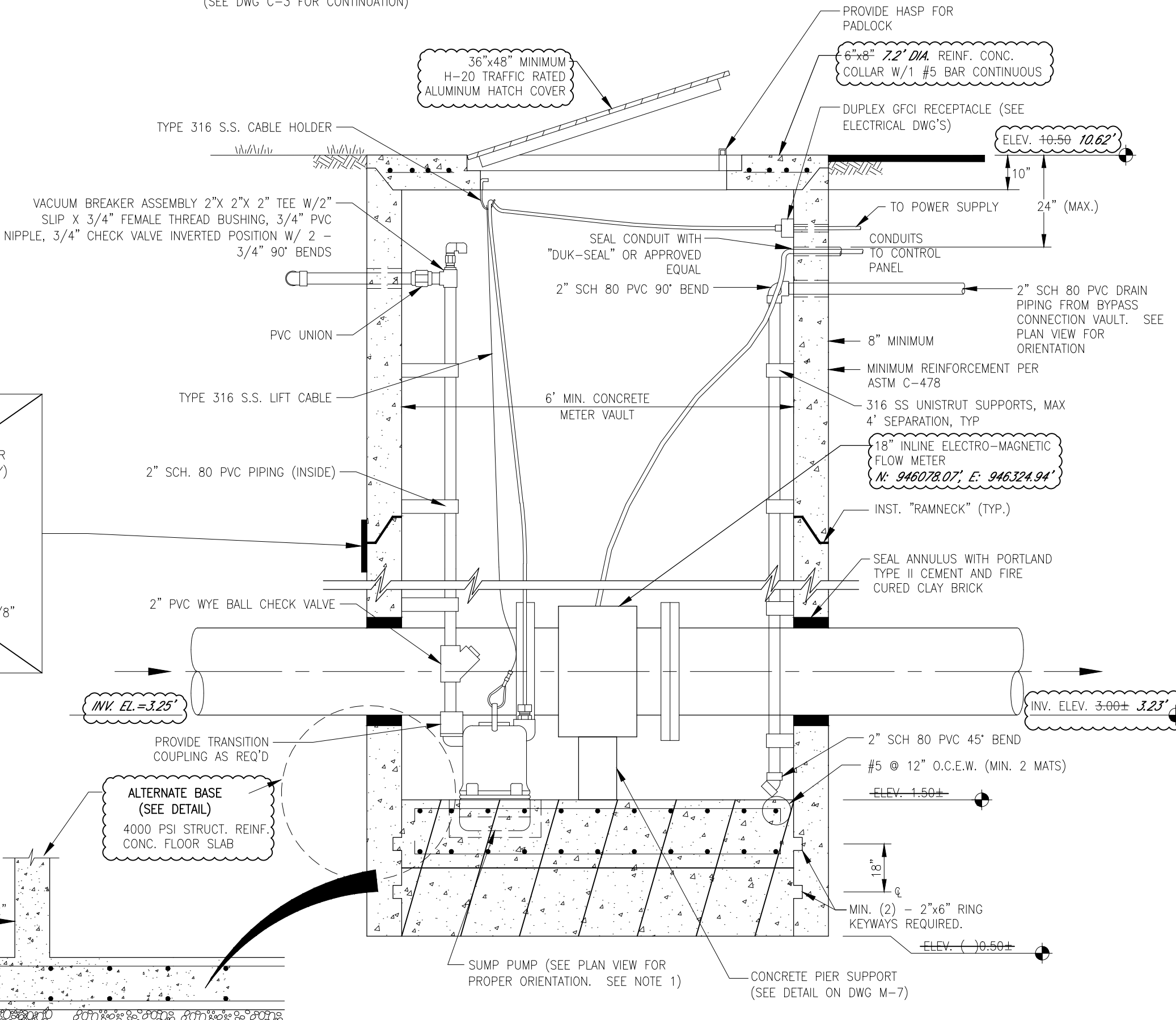
NOTES:  
1. ALL BARS IN TOP SLAB TO BE #5 LOCATION OF OPENING IN TOP SLAB TO BE VERIFIED BY DESIGN ENGINEER WITH REQUIREMENT OF PUMP MANUFACTURER.

TOP SLAB DETAIL  
N.T.S.

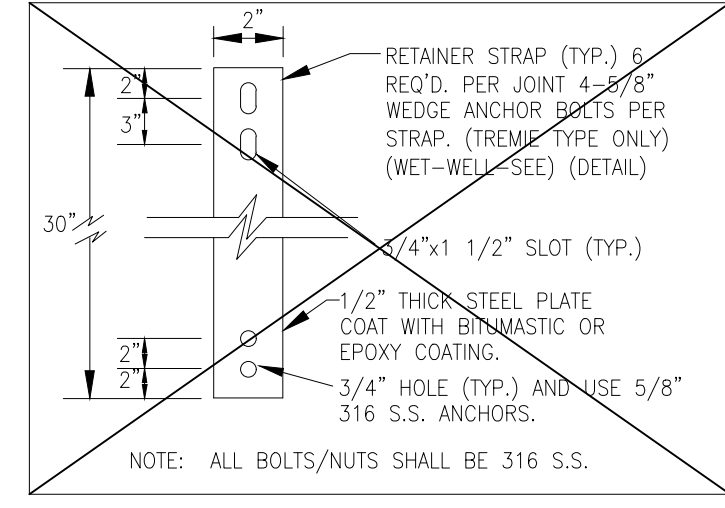


PLAN  
N.T.S.

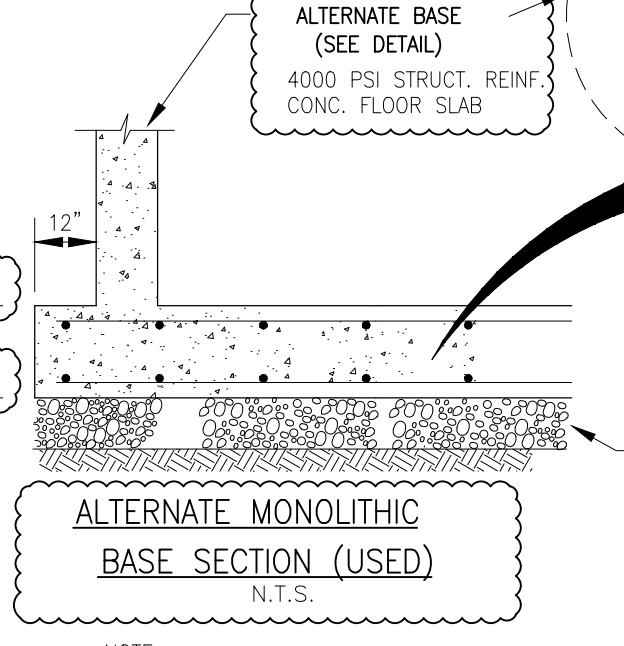
NOTES:  
1. PUMP SPECIFICATIONS:  
FLYGT READY 8 (BS-2008.211 1.1HP, 115V, 1PH, 60HZ) WITH AN INTEGRAL FLOAT SWITCH FOR LEVEL CONTROL. NO SUBSTITUTIONS.



METER VAULT  
ILLUSTRATIVE SECTION  
(INSTALLATION VIA CAISSON METHOD)  
N.T.S.



RETAINER STRAP DETAIL  
N.T.S.



ALTERNATE MONOLITHIC  
BASE SECTION (USED)  
N.T.S.

**B Betsy Lindsay, Inc.**  
SURVEYING AND MAPPING  
7997 SW JACK JAMES DRIVE STUART, FLORIDA 34997  
(772)286-5753 (772)286-5933 FAX  
LICENSED BUSINESS NO. 6852  
**RECORD DRAWING**  
JOB NO. 18-111

NO.	DATE	ISSUED FOR	APRVD BY

DESIGNED: J.A.P.  
DRAWN: J.A.J.  
CHECKED: A.C.  
APPROVED: D.L.M.

JASON A. PUGSLEY, P.E.  
No. 67426

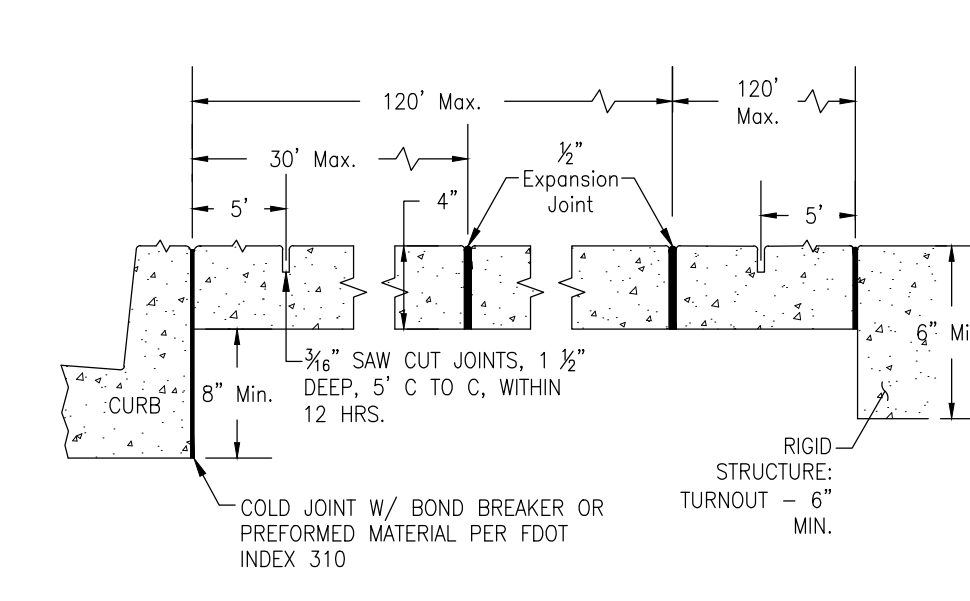
**MATHEWS CONSULTING**  
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VERIFY SCALE  
1" = 1'  
BAR IS ONE INCH ON FULL SIZE (22x34) ORIGINAL DRAWING. ADJUST SCALES AS NECESSARY.

ENGINEER NO.: 160963  
CLIENT PROJECT NO.: 160963  
CAD REF.: 160963C-P-DTL5

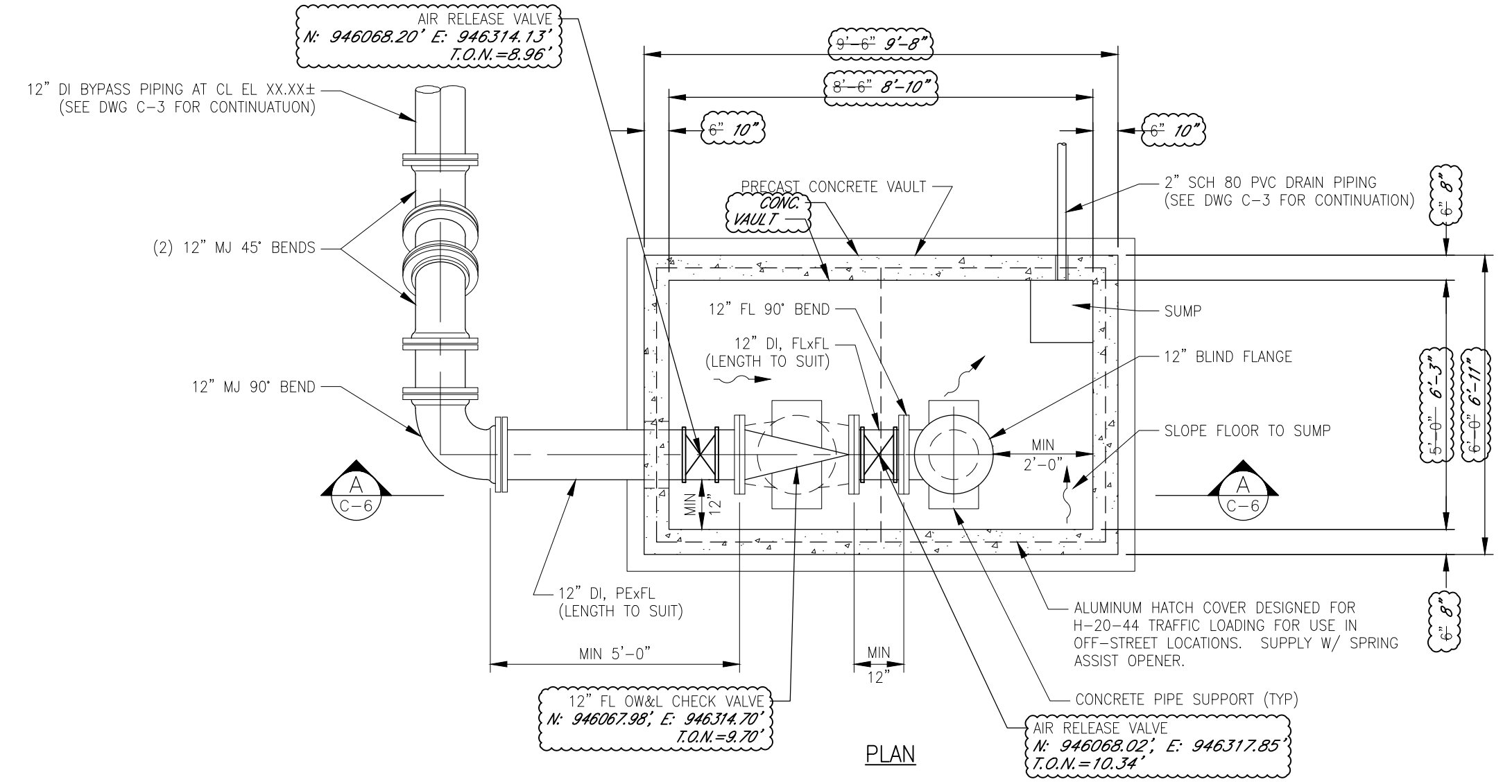
**LOXAHATCHEE RIVER ENVIRONMENTAL CONTROL DISTRICT MASTER LIFT STATION No. 1 REHABILITATION**  
CIVIL DETAILS - SHEET 3

DATE: APRIL 2018  
SHEET: 9 of 31  
DRAWING: C-6

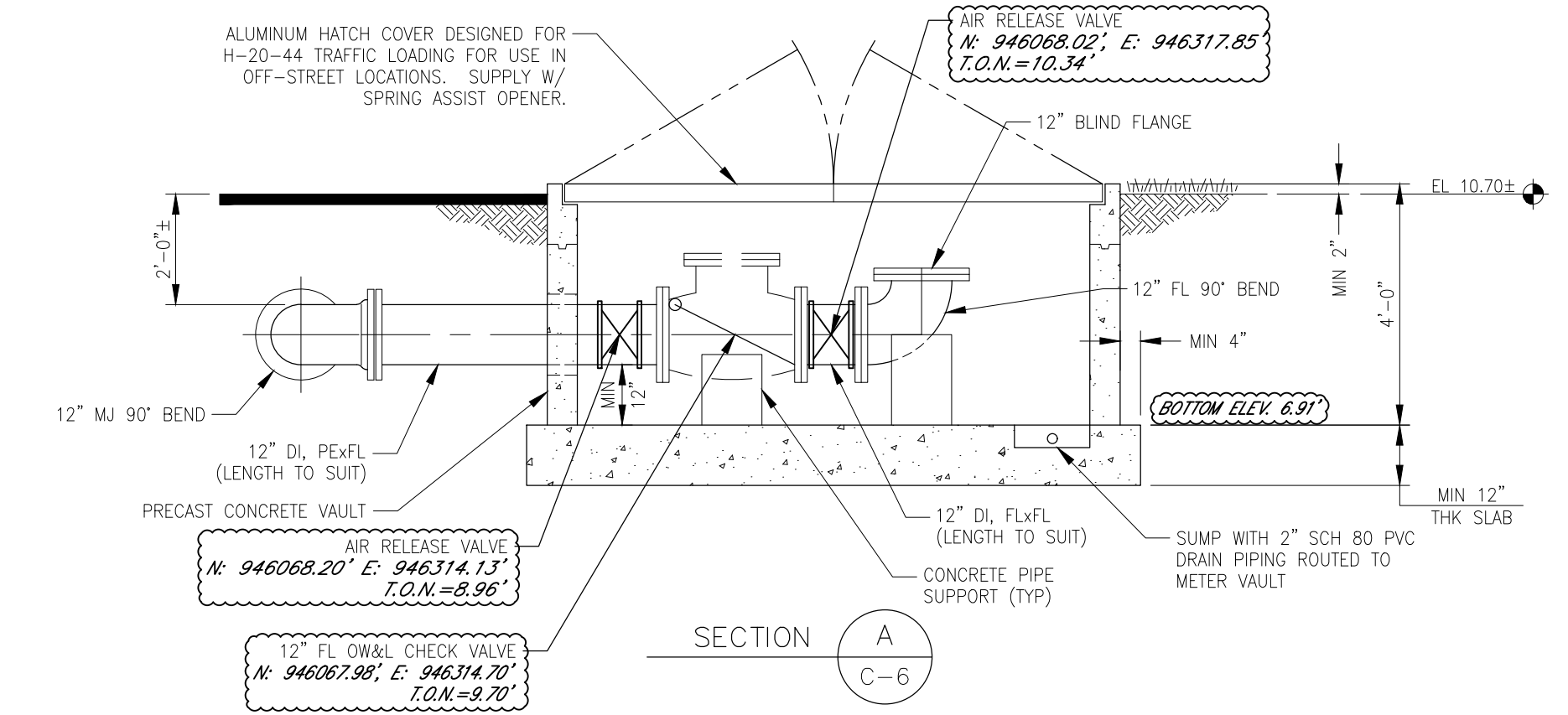


CONCRETE SIDEWALK DETAIL  
N.T.S.

1. PROVIDE COLD JOINTS BETWEEN SIDEWALK AND CURB OR AT ANY OTHER RIGID STRUCTURE.
2. EXPANSION JOINTS SHALL BE PROVIDED AT 30 FT. MAXIMUM SPACING.
3. ULTIMATE COMPRESSIVE STRENGTH OF CONCRETE SHALL BE 3,000 P.S.I. @ 28 DAYS FOR SIDEWALKS.
4. MINIMUM THICKNESS OF SIDEWALK SHALL BE 4 INCHES. CONCRETE DRIVEWAYS SHALL BE 6 INCHES THICK. ALL SIDEWALKS SHALL BE REINFORCED WITH 6x6-W2.1xW2.1 WELDED WIRE FABRIC.
5. FOR SIDEWALKS OR DRIVEWAYS WITHIN R.O.W., COMPACT SUBGRADE TO 98% OF MAXIMUM DENSITY AS DETERMINED BY ASTM 1557.
6. MUST PROVIDE APPROVED MAINTENANCE OF TRAFFIC (MOT) FOR SIDEWALK CLOSURE.
7. BROOM FINISH SURFACE. NO PAINT OR OTHER FINISHES ALLOWED.
8. NO PATCH REPAIRS ALLOWED. FULL FLAG OF SIDEWALK MUST BE REMOVED.
9. FOR ALL OTHER, USE FDOT INDEX #310 AND SECTION 522 STANDARD SPECIFICATIONS.
10. ALL CONCRETE IN RIGHT-OF-WAY TO BE PROVIDED FROM A CONCRETE MIX PLANT. NO BAG CONCRETE ALLOWED.
11. IF SIDEWALK SECTION EXCEEDS 6 FT. WIDE, JOINT SPACING TO BE DETERMINED BY ENGINEER OF RECORD OR HIS / HER DESIGNEE.
12. ALL BATCH TICKETS TO BE PROVIDED TO INSPECTOR.
13. BOND BREAKER MATERIAL CAN BE ANY IMPERMEABLE COATED OR SHEET MEMBRANE OR PREFORMED MATERIAL HAVING A THICKNESS OF NOT LESS THAN 6 MILS NOR MORE THAN 1/8".



PLAN

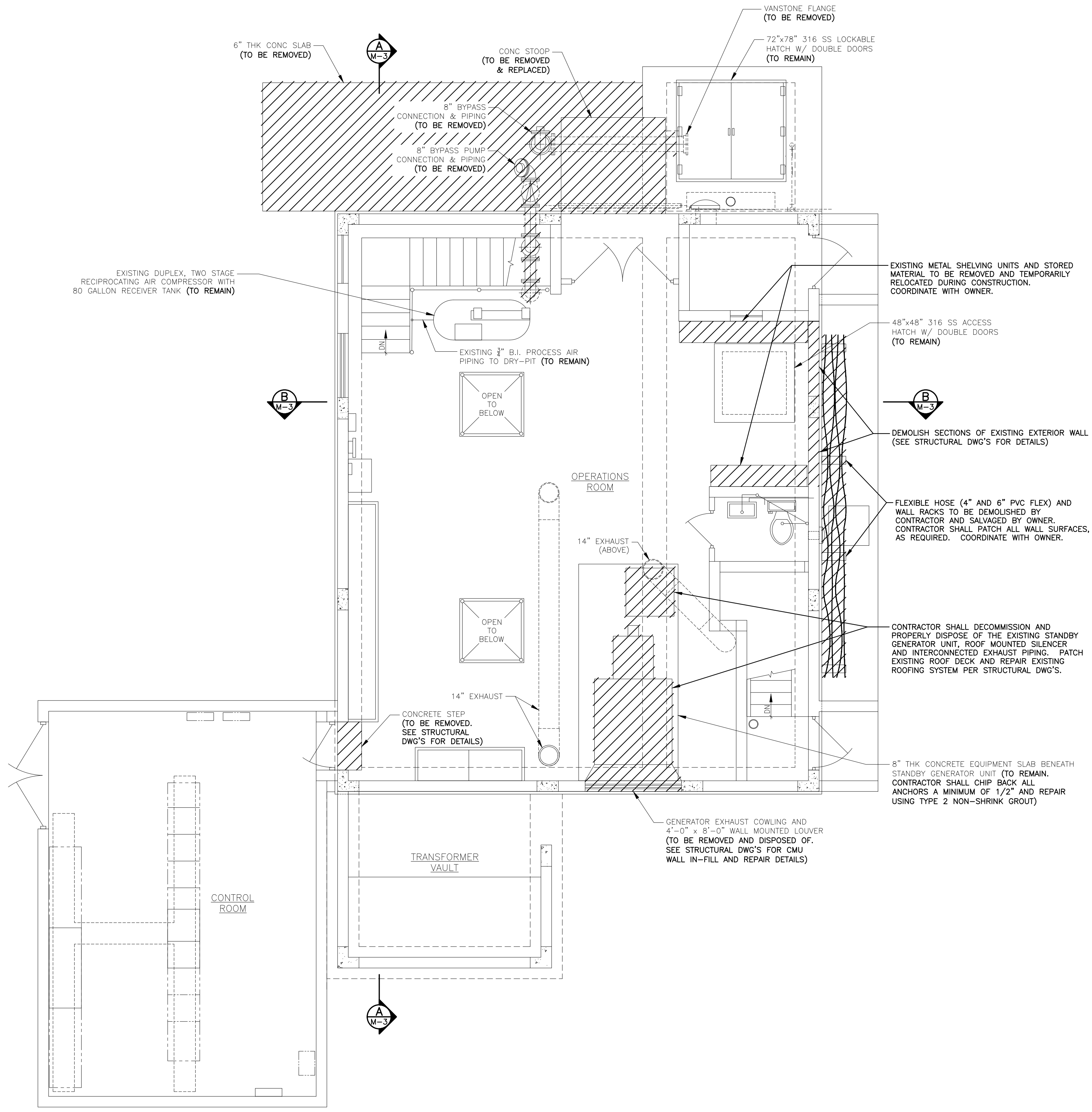


SECTION A-C

BYPASS CONNECTION VAULT DETAIL  
SCALE: N.T.S.

CONSTRUCTION

Acad Version : R20.1s (LMS Tech) User Name : 756jg  
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 Current Plotstyle : ByColor  
 Layout Tab: M-1



**OPERATIONS FLOOR PLAN - DEMOLITION**  
 SCALE: 1/4"=1'-0"

**LEGEND**

TO BE DEMOLISHED/ REMOVED  
 SEE SPEC. 02050 FOR LIST OF ITEMS TO BE SALVAGED

1/4"=1'-0"

NO.	DATE	ISSUED FOR	APRV'D BY

DESIGNED:	J.A.P.
DRAWN:	J.A.J.
CHECKED:	A.C.
APPROVED:	D.L.M.

JASON A. PUGSLEY, P.E.  
 No. 67426

**MATHEWS CONSULTING**  
 a BAXTER & WOODMAN company

477 S. Rosemary Avenue, Suite 330, West Palm Beach, Florida 33401  
 Phone: 561-655-6175 • Fax: 561-655-6179  
 www.baxterwoodman.com EB-31795

VERIFY SCALE

BAR IS ONE INCH ON FULL SIZE (22x34) ORIGINAL DRAWING. ADJUST SCALES AS NECESSARY.

ENGINEER NO.: 160963  
 CLIENT PROJECT NO.: 160963  
 CAD REF.: 160963M-D-P&S

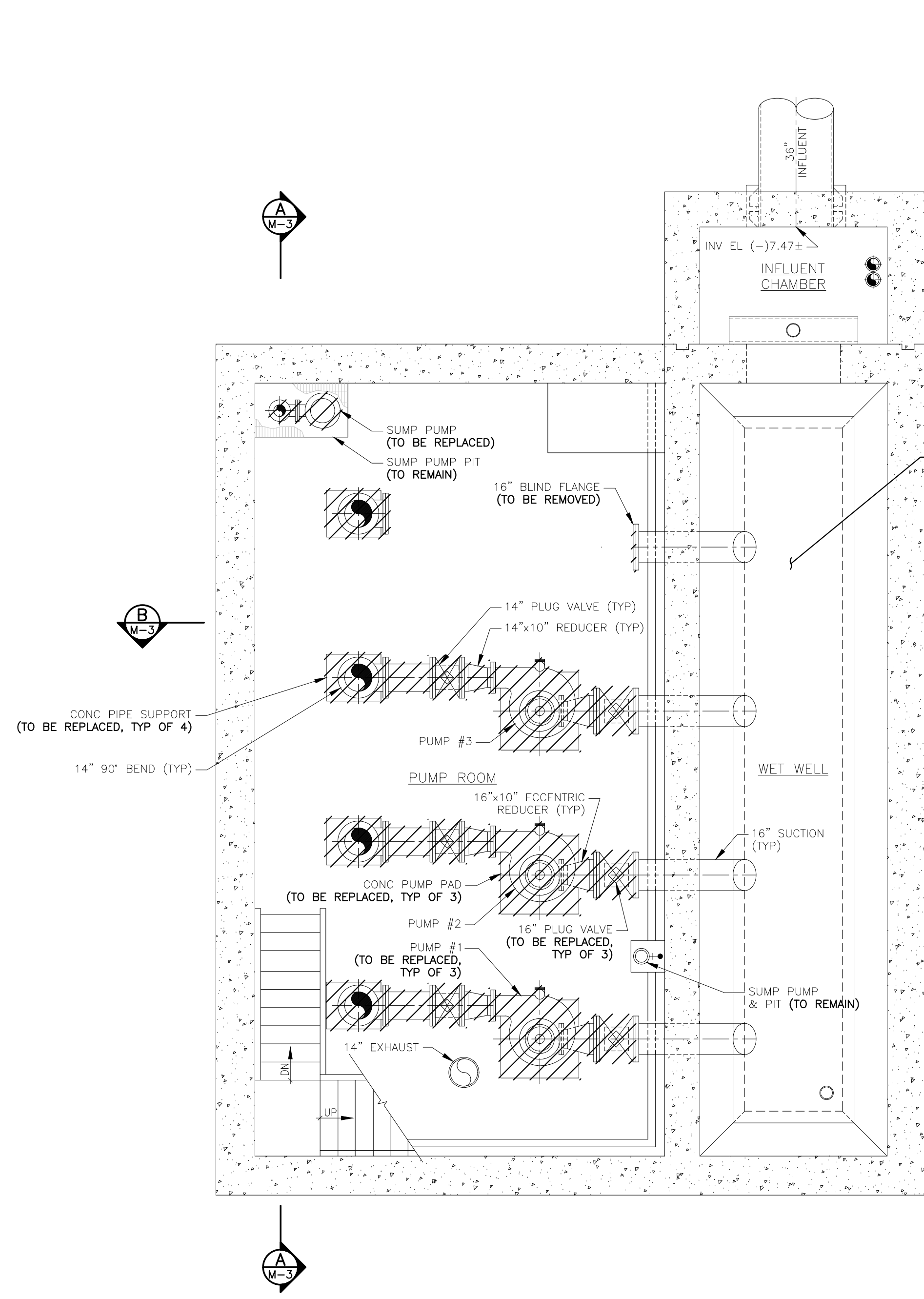
LOXAHATCHEE RIVER ENVIRONMENTAL CONTROL DISTRICT  
 MASTER LIFT STATION No. 1 REHABILITATION

**OPERATIONS ROOM FLOOR PLAN - DEMOLITION**

DATE: APRIL 2018  
 SHEET: 10 of 31  
 DRAWING: M-1

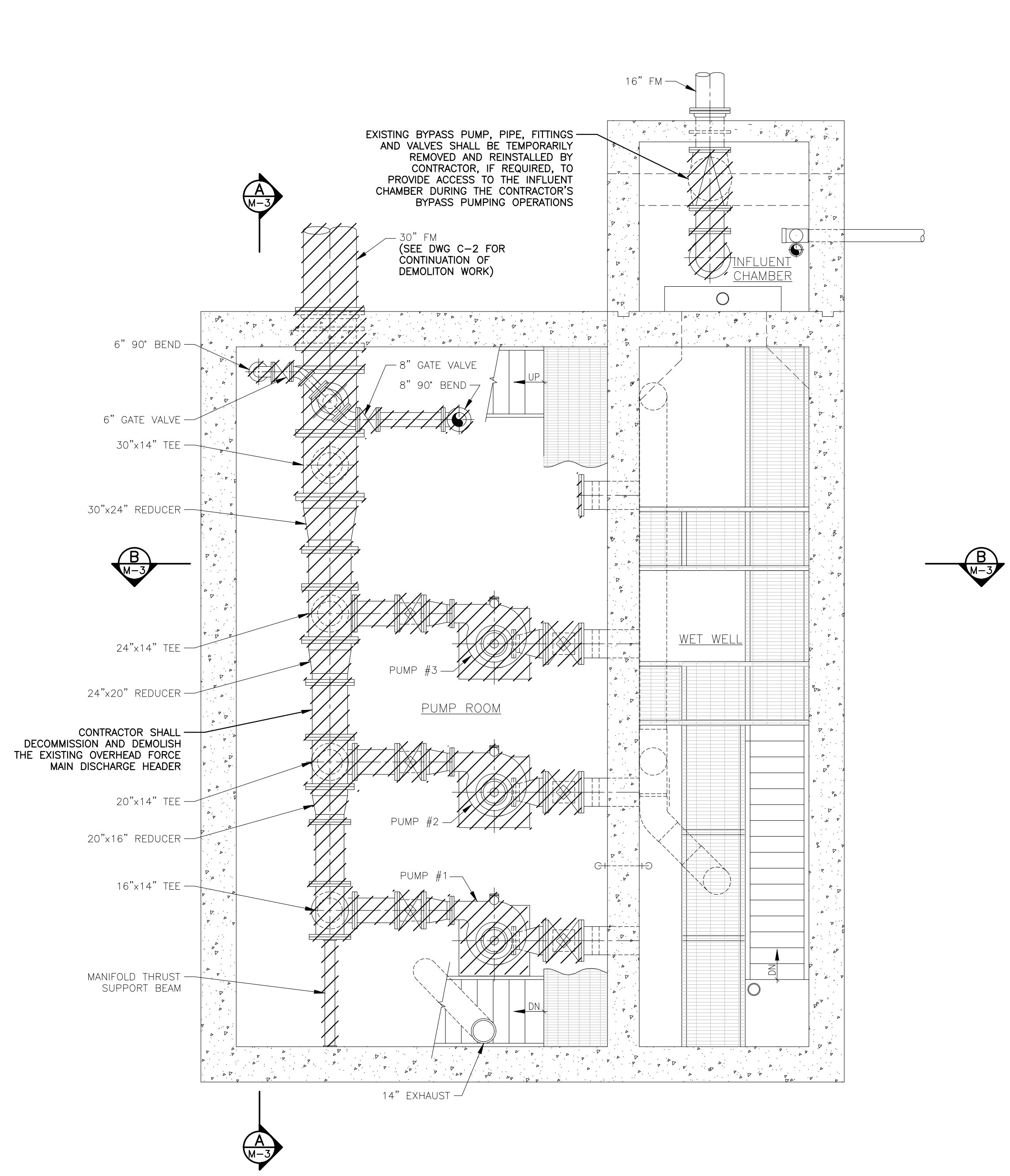
**CONSTRUCTION**

Acad Version : R20.1s (LMS Tech) User Name : 756jg  
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


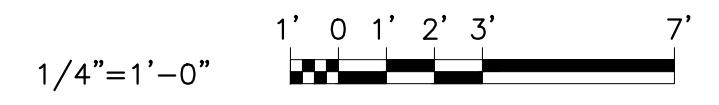
**LOWER FLOOR PLAN - DEMOLITION**  
 SCALE: 1/4"=1'-0"

CONTRACTOR SHALL CLEAN OUT AND PRESSURE WASH THE INTERIOR OF THE WET WELL. CONTRACTOR SHALL REMOVE AND PROPERLY DISPOSE OF ALL ACCUMULATED SOLIDS. CONTRACTOR SHALL INCLUDE WITHIN HIS BID THE COST TO REMOVE AND DISPOSE OF A TOTAL OF 25 CY OF SOLIDS AND LIQUID DOMESTIC WASTEWATER. RECOATING OF THE INTERIOR OF THE WET WELL IS NOT INCLUDED IN THE PROJECT.



**INTERMEDIATE FLOOR PLAN - DEMOLITION**  
 SCALE: 1/4"=1'-0"

**LEGEND**  
 TO BE DEMOLISHED/ REMOVED  
 SEE SPEC. 02050 FOR LIST OF ITEMS TO BE SALVAGED

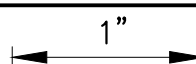


NO.	DATE	ISSUED FOR	APRVD BY

DESIGNED: J.A.P.  
 DRAWN: J.A.J.  
 CHECKED: A.C.  
 APPROVED: D.L.M.

JASON A. PUGSLEY, P.E.  
 No. 67426

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 a BAXTER & WOODMAN company  
 477 S. Rosemary Avenue, Suite 330, West Palm Beach, Florida 33401  
 Phone: 561-655-6175 • Fax: 561-655-6179  
 www.baxterwoodman.com EB-31795

VERIFY SCALE  
  
 BAR IS ONE INCH ON FULL SIZE (22x34) ORIGINAL DRAWING. ADJUST SCALES AS NECESSARY.

ENGINEER NO.: 160963  
 CLIENT PROJECT NO.: 160963  
 CAD REF.: 160963M-D-P&S

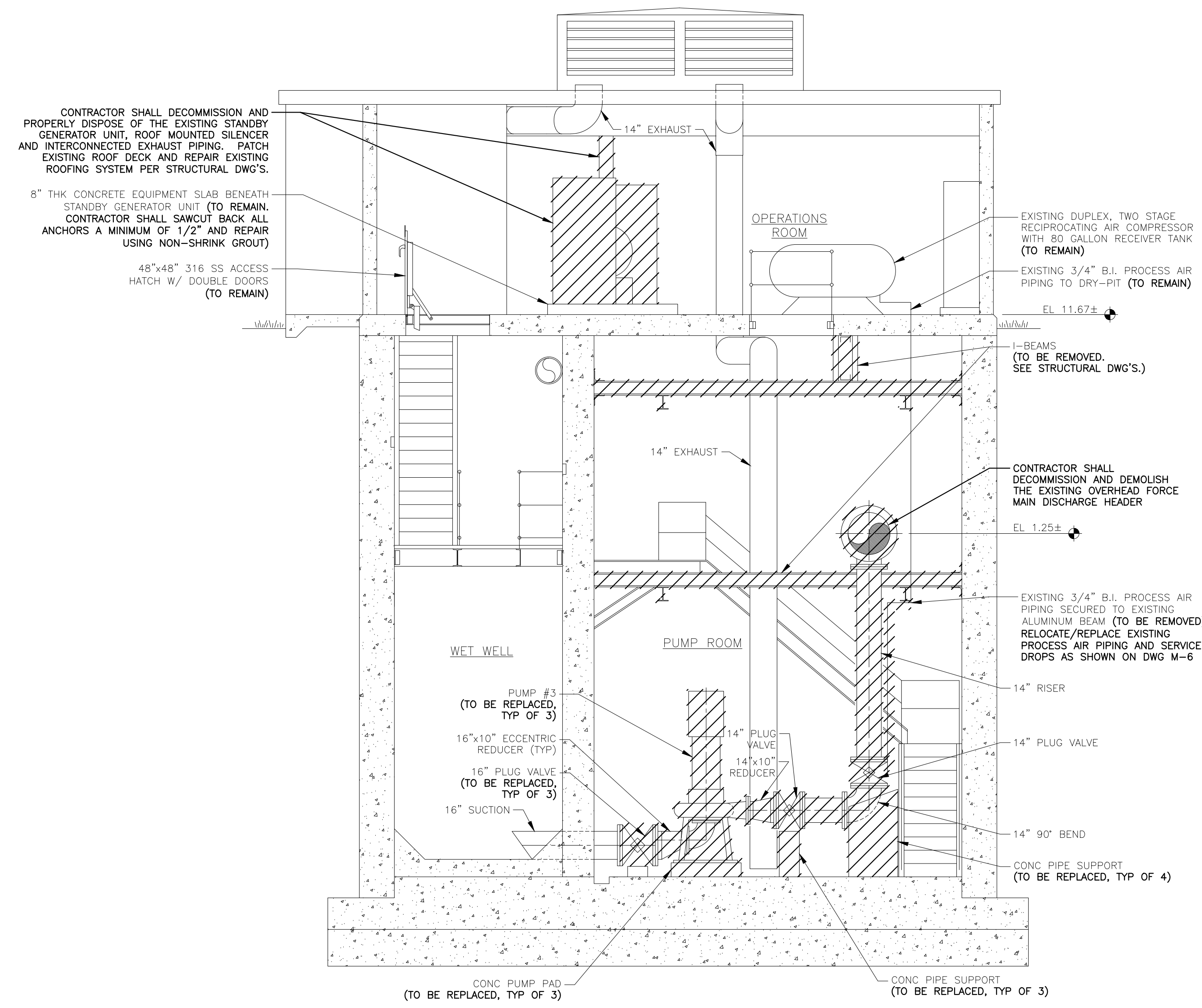
**LOXAHATCHEE RIVER ENVIRONMENTAL CONTROL DISTRICT MASTER LIFT STATION No. 1 REHABILITATION**

**LOWER AND INTERMEDIATE FLOOR PLANS DEMOLITION**

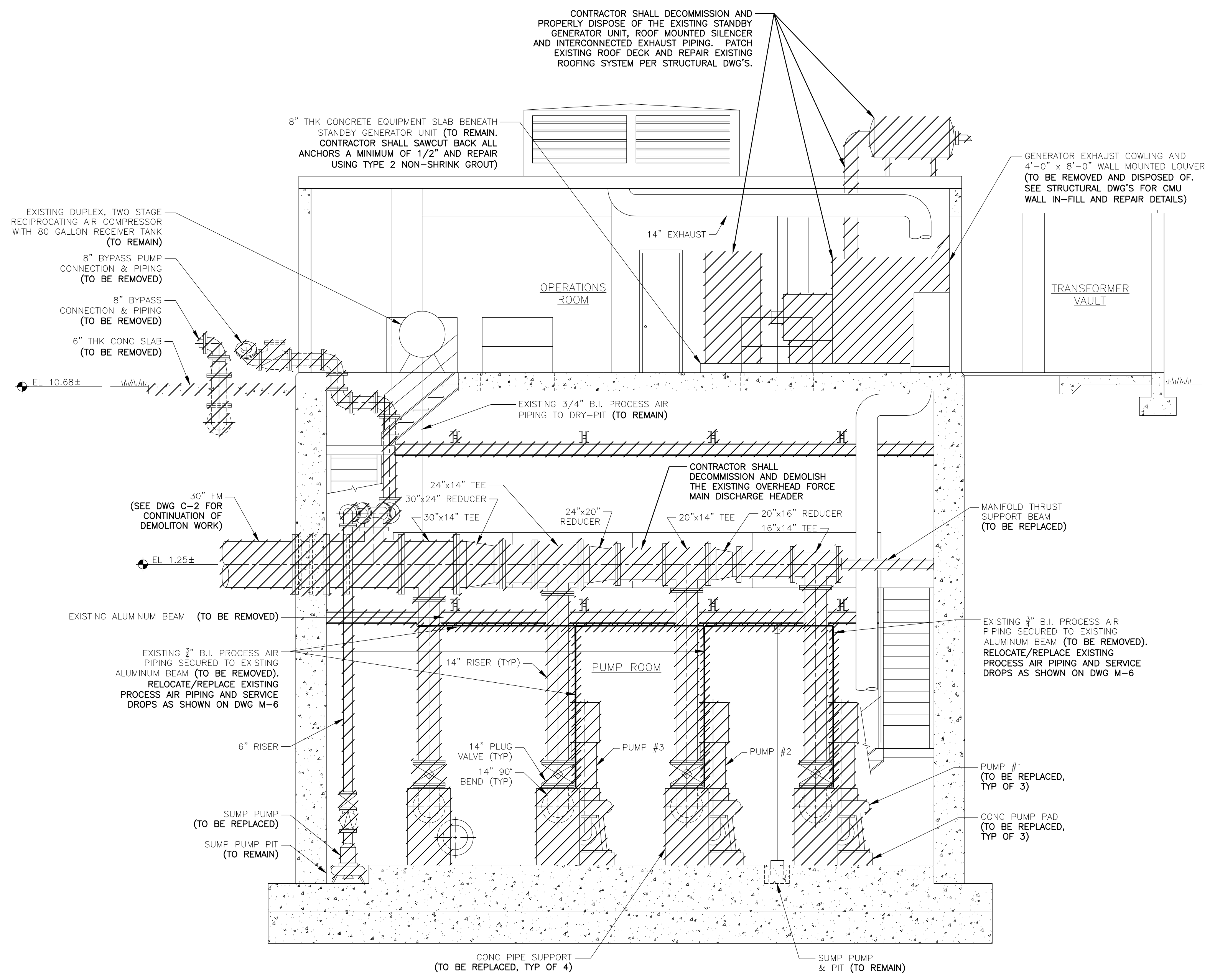
DATE: APRIL 2018  
 SHEET: 11 of 31  
 DRAWING: M-2

**CONSTRUCTION**

Acad Version : R20.1s (LMS Tech) User Name : 756jg Date/Time : Wed, 25 Apr 2018 - 2:21pm Path Name : I:\WestPalmBeach\PROJECTS\160963-MS No. 1 Final Design\CAD Working Folder\160963M-D-P&S.dwg

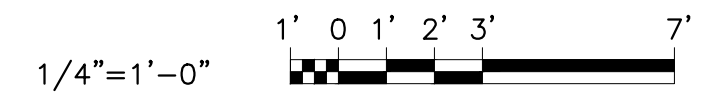


SECTION A  
1/4" = 1'-0" M-1 & M-2



SECTION B  
1/4" = 1'-0" M-1 & M-2

**LEGEND**  
 TO BE DEMOLISHED/ REMOVED  
 SEE SPEC. 02050 FOR LIST OF ITEMS TO BE SALVAGED



**CONSTRUCTION**

NO.	DATE	ISSUED FOR	APRVD BY	DESIGNED:	J.A.P.
				DRAWN:	J.A.J.
				CHECKED:	A.C.
				APPROVED:	D.L.M.

JASON A. PUGSLEY, P.E.  
No. 67426

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 a BAXTER & WOODMAN company

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 Phone: 561-655-6175 Fax: 561-655-6179  
 www.baxterwoodman.com EB-31795

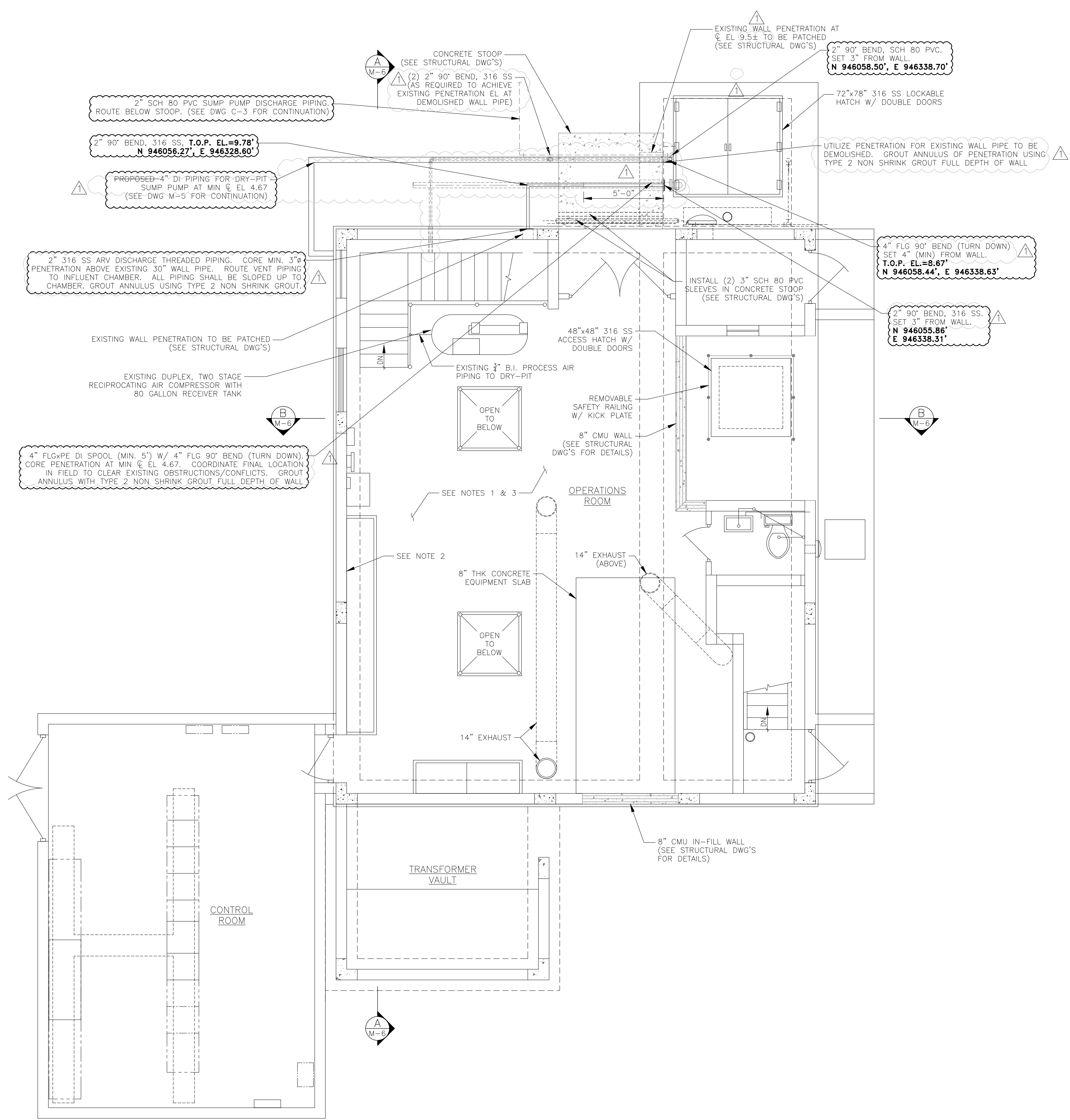
VERIFY SCALE  
  
 BAR IS ONE INCH ON FULL SIZE (22x34) ORIGINAL DRAWING. ADJUST SCALES AS NECESSARY.

ENGINEER NO.: 160963  
 CLIENT PROJECT NO.: 160963  
 CAD REF.: 160963M-D-P&S

LOXAHATCHEE RIVER ENVIRONMENTAL CONTROL DISTRICT  
 MASTER LIFT STATION No. 1 REHABILITATION

MECHANICAL SECTIONS - DEMOLITION

DATE:	APRIL 2018
SHEET:	12 of 31
DRAWING:	M-3



OPERATIONS FLOOR PLAN - PROPOSED  
SCALE: 1/4"=1'-0"



- NOTES:
- CONTRACTOR SHALL PAINT ALL NEW & EXISTING FERROUS SURFACES INCLUDING BUT NOT LIMITED TO PIPING, FITTINGS, CONDUIT & RACEWAYS LOCATED WITHIN THE INTERIOR OF THE PUMP STATION BUILDING. PREVIOUSLY PAINTED NON-FERROUS SURFACES SHALL ALSO BE PAINTED (SEE SPEC 09900).
  - CONTRACTOR SHALL PAINT ALL NEW & EXISTING INTERIOR CONCRETE AND MASONRY WALL SURFACES (SEE SPEC 09900). RE-COATING OF THE INTERIOR OF THE WET WELL IS NOT REQUIRED.
  - CONTRACTOR SHALL PAINT ALL EXISTING CONCRETE FLOOR SURFACES (INTERIOR AND EXTERIOR) USING A RESINOUS EPOXY COATING SYSTEM (SEE SPEC 09672). CONTRACTOR SHALL TEMPORARILY REMOVE AND REINSTALL ALL SHELVING UNITS, RACKS, NON-PERMANENT EQUIPMENT, ETC. AS REQUIRED TO ACCESS, PREPARE AND COAT ALL FLOORING SURFACES.
  - CONTRACTOR SHALL PAINT THE NORTH AND EAST ELEVATIONS OF THE PUMP STATION BUILDING EXTERIOR AND ALL LOCATIONS WHERE NEW CMU WALLS ARE CONSTRUCTED OR WHERE MODIFICATIONS TO THE EXISTING CMU WALL ARE COMPLETED. MATCH EXISTING COLOR.
  - PRIOR TO PAINTING ALL NEW CMU WALLS, CONTRACTOR SHALL STUCCO THE EXTERIOR OF ALL WALL SURFACES TO MATCH EXISTING STUCCO TYPE, APPEARANCE AND AMPLITUDE.

**B** BETSY LINDSAY, INC.  
SURVEYING AND MAPPING  
7907 S.W. JACK JAMES DRIVE STUART, FLORIDA 34997  
(772)286-5753 (772)286-5933 FAX  
LICENSED BUSINESS NO. 6852  
**RECORD DRAWING**  
JOB NO. 18-111

**CONSTRUCTION**

Date\Time : Tue, 31 Dec 2019 1:04PM  
 Path\Name : S:\18 PROJECTS\18-111-lic-lor-1\180963-lic-lor-1\180963-lic-lor-1-P&S.dwg  
 User\Name : J.P. Uber  
 Acad Version : R22.0.6 (LMS Tech)  
 User Name : J.P. Uber

NO.	DATE	ISSUED FOR	APRVD BY
1	01/18/19	EMERGENCY SUMP PUMP DISCHARGE PIPING MODIFICATION	J.A.P

DESIGNED: J.A.P.  
DRAWN: J.A.J.  
CHECKED: A.C.  
APPROVED: D.L.M.

JASON A. PUGSLEY, P.E.  
No. 67426

  
**MATHEWS CONSULTING**  
 a BAXTER & WOODMAN company  
 477 S. Rosemary Avenue, Suite 330, West Palm Beach, Florida 33401  
 Phone: 561-655-6175 • Fax: 561-655-6179  
 www.baxterwoodman.com EB-31795

VERIFY SCALE  
1"  
BAR IS ONE INCH ON FULL SIZE (22x34) ORIGINAL DRAWING. ADJUST SCALES AS NECESSARY.

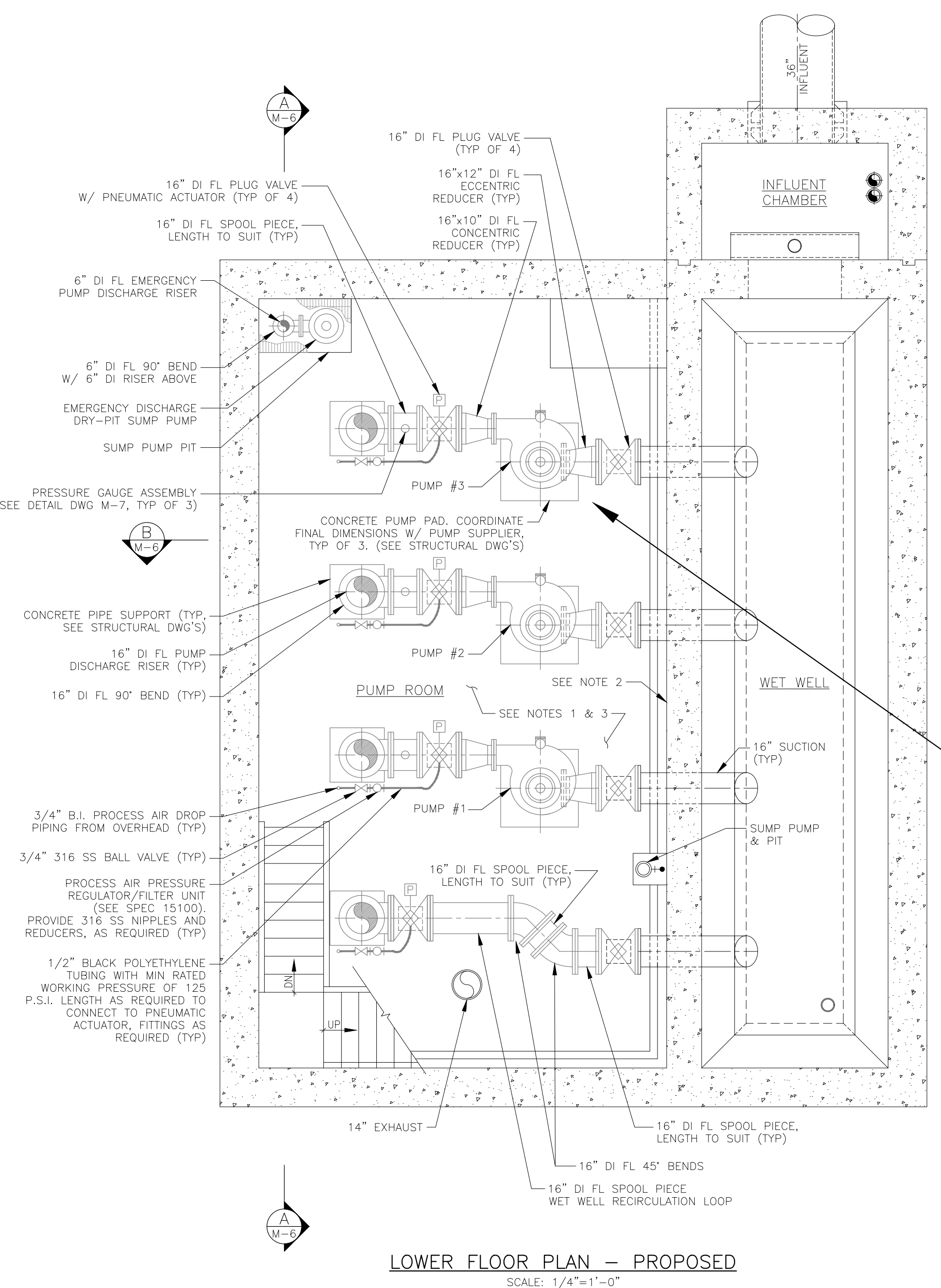
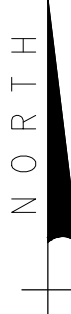
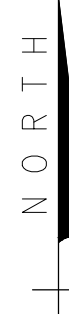
ENGINEER NO.: 160963  
CLIENT PROJECT NO.: 160963  
CAD REF.: 160963M-P&S

**LOXAHATCHEE RIVER ENVIRONMENTAL CONTROL DISTRICT**  
**MASTER LIFT STATION No. 1 REHABILITATION**  
 OPERATIONS ROOM FLOOR PLAN - PROPOSED  
**RECORD DRAWING**

DATE: APRIL 2018  
SHEET: 13 of 31  
DRAWING: M-4

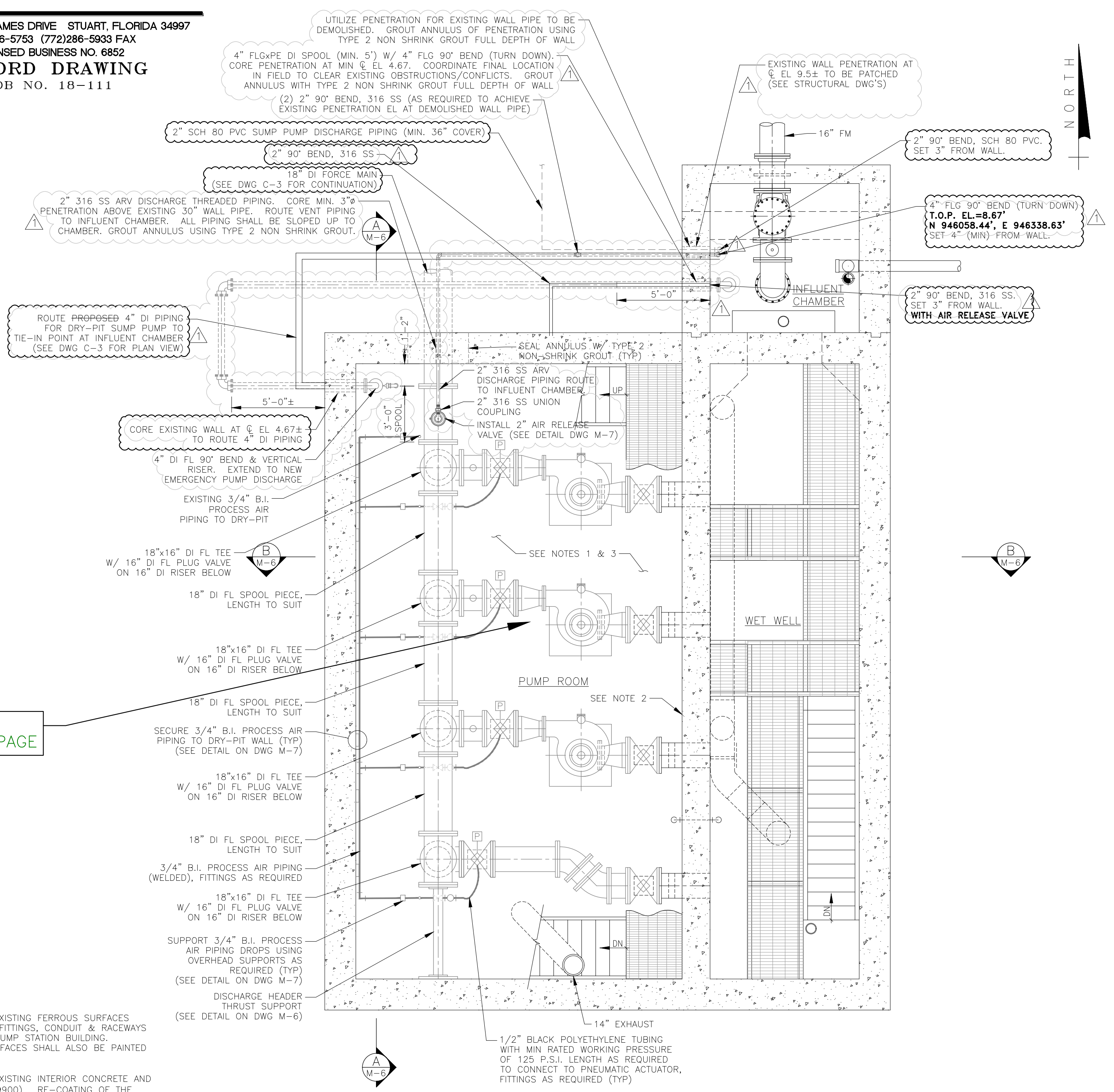
**B** BETSY LINDSAY, INC.  
SURVEYING AND MAPPING

7997 S.W. JACK JAMES DRIVE STUART, FLORIDA 34997  
(772)286-5753 (772)286-5933 FAX  
LICENSED BUSINESS NO. 6852  
**RECORD DRAWING**  
JOB NO. 18-111



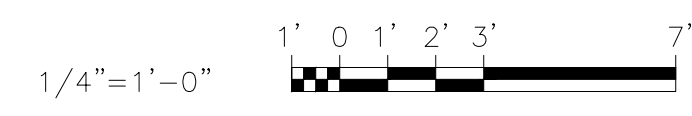
**LOWER FLOOR PLAN - PROPOSED**  
SCALE: 1/4"=1'-0"

FOR CONFIGURATION OF PIPE PLEASE SEE NEXT PAGE



**INTERMEDIATE FLOOR PLAN - PROPOSED**  
SCALE: 1/4"=1'-0"

- NOTES:**
- CONTRACTOR SHALL PAINT ALL NEW & EXISTING FERROUS SURFACES INCLUDING BUT NOT LIMITED TO PIPING, FITTINGS, CONDUIT & RACEWAYS LOCATED WITHIN THE INTERIOR OF THE PUMP STATION BUILDING. PREVIOUSLY PAINTED NON-FERROUS SURFACES SHALL ALSO BE PAINTED (SEE SPEC 09900).
  - CONTRACTOR SHALL PAINT ALL NEW & EXISTING INTERIOR CONCRETE AND MASONRY WALL SURFACES (SEE SPEC 09900). RE-COATING OF THE INTERIOR OF THE WET WELL IS NOT REQUIRED.
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  - CONTRACTOR SHALL PAINT THE NORTH AND EAST ELEVATIONS OF THE PUMP STATION BUILDING EXTERIOR AND ALL LOCATIONS WHERE NEW CMU WALLS ARE CONSTRUCTED OR WHERE MODIFICATIONS TO THE EXISTING CMU WALL ARE COMPLETED. MATCH EXISTING COLOR.
  - PRIOR TO PAINTING ALL NEW CMU WALLS, CONTRACTOR SHALL STUCCO THE EXTERIOR OF ALL WALL SURFACES TO MATCH EXISTING STUCCO TYPE, APPEARANCE AND AMPLITUDE.



**CONSTRUCTION**

Acad Version: iR22.0a (LMS Tech)  
 User Name: user  
 Date/Time: Fri, 20 Mar 2020, 10:12am  
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 Current Path: B:\c\ Layout Tab: M-5  
 Plot Name: SA\B PROJECTS\18-111-loc-1\AS BUIL\18-111-loc-1-P&S.dwg

NO.	DATE	ISSUED FOR	APRVD BY
1	01/18/19	EMERGENCY SUMP PUMP DISCHARGE PIPING MODIFICATION	J.A.P

DESIGNED: J.A.P.  
DRAWN: J.A.J.  
CHECKED: A.C.  
APPROVED: D.L.M.

JASON A. PUGSLEY, P.E.  
No. 67426

**MATHEWS CONSULTING**  
a BAXTER & WOODMAN company

477 S. Rosemary Avenue, Suite 330, West Palm Beach, Florida 33401  
Phone: 561-655-6175 • Fax: 561-655-6179  
www.baxterwoodman.com EB-31795

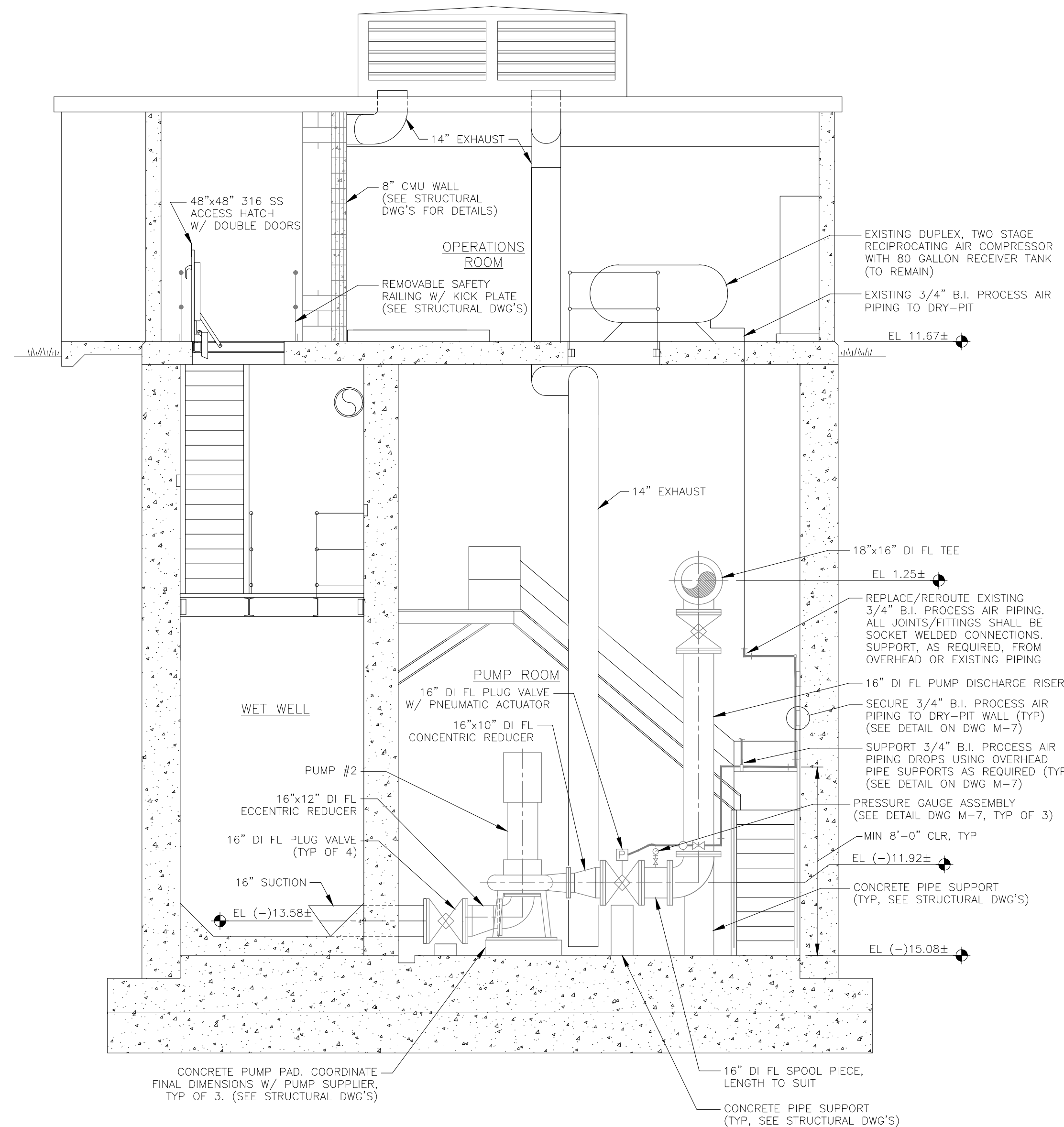
VERIFY SCALE  
1"  
BAR IS ONE INCH ON FULL SIZE (22x34) ORIGINAL DRAWING. ADJUST SCALES AS NECESSARY.

ENGINEER NO.: 160963  
CLIENT PROJECT NO.: 160963  
CAD REF.: 160963M-P&S

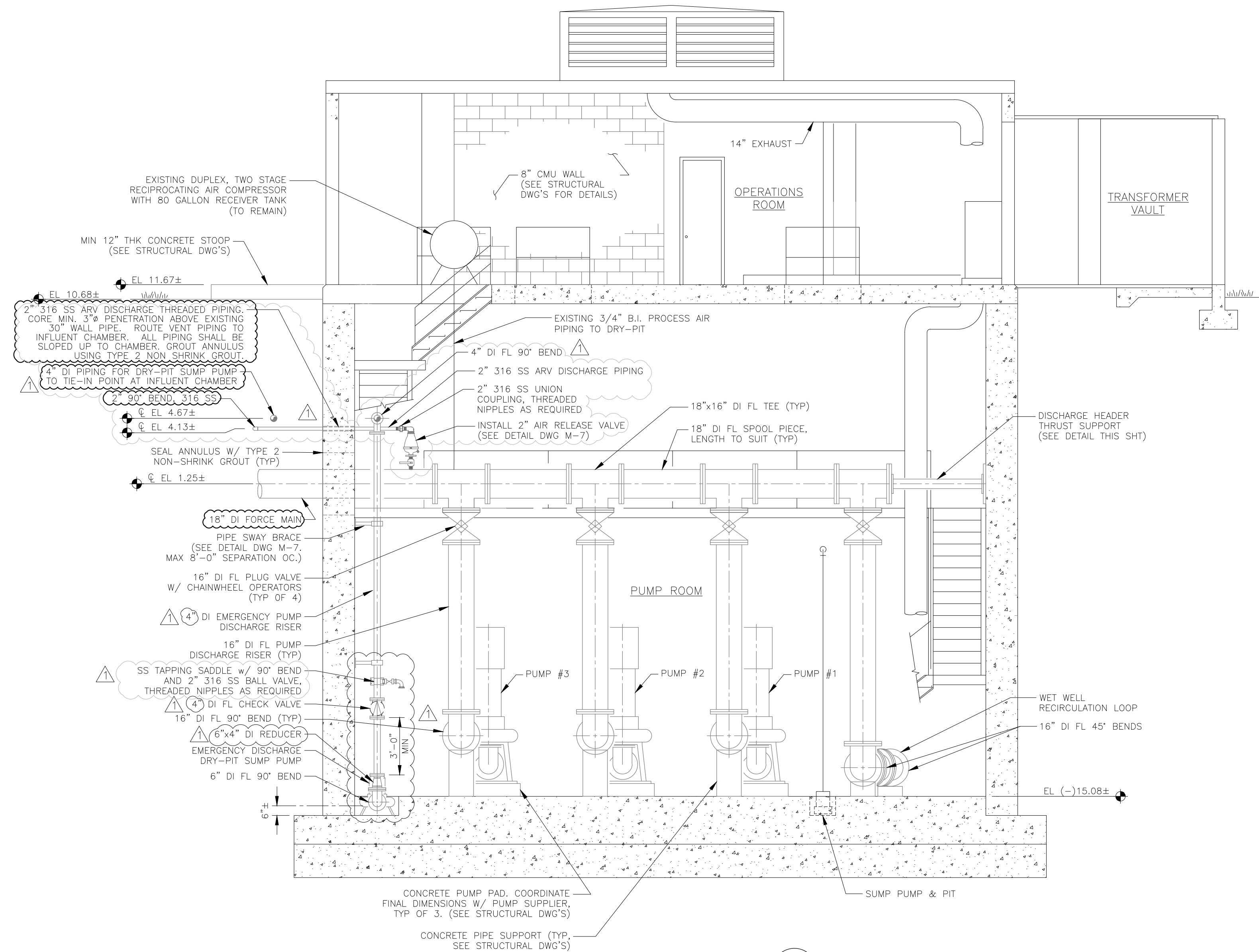
**LOXAHATCHEE RIVER ENVIRONMENTAL CONTROL DISTRICT MASTER LIFT STATION No. 1 REHABILITATION**

**RECORD DRAWING**  
LOWER AND INTERMEDIATE FLOOR PLANS  
~~PROPOSED~~

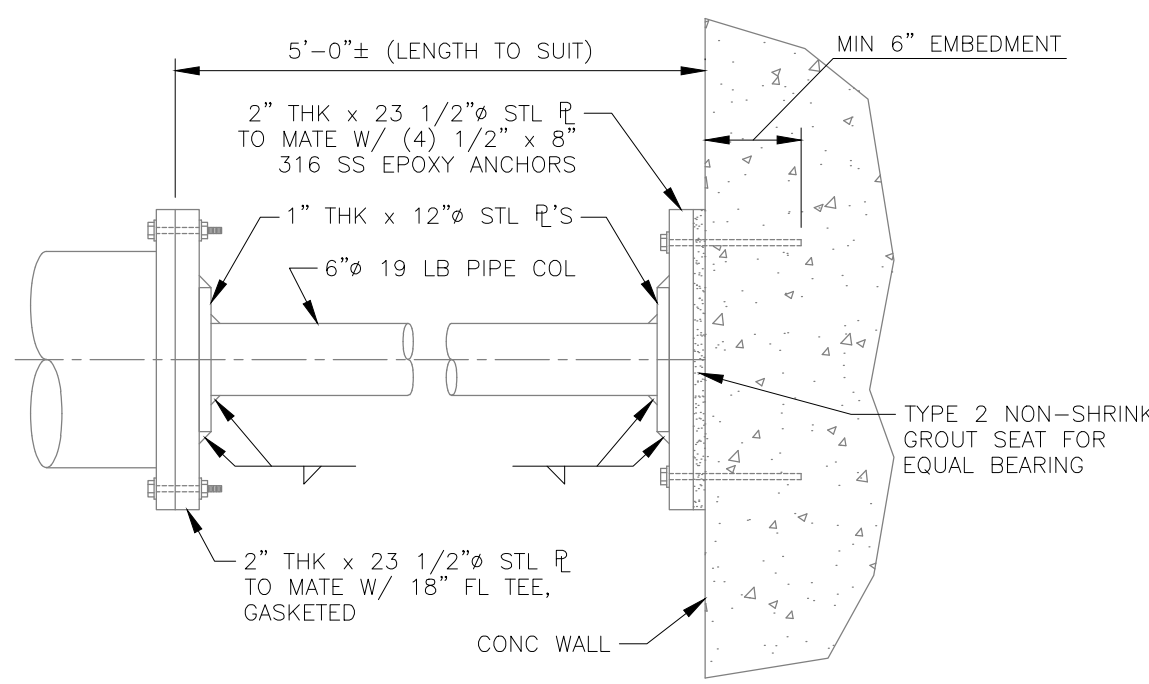
DATE: APRIL 2018  
SHEET: 14 of 31  
DRAWING: M-5



SECTION B  
1/4" = 1'-0" M-4 & M-5

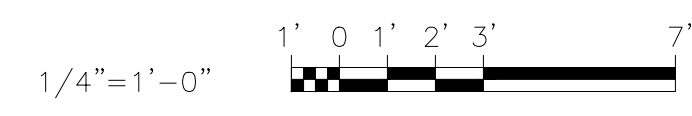


SECTION A  
1/4" = 1'-0" M-4 & M-5



DISCHARGE HEADER  
THRUST SUPPORT DETAIL  
SCALE: 3/4" = 1'-0"

**B** BETSY LINDSAY, INC.  
SURVEYING AND MAPPING  
7997 S.W. JACK JAMES DRIVE STUART, FLORIDA 34997  
(772)286-5753 (772)286-5933 FAX  
LICENSED BUSINESS NO. 6852  
RECORD DRAWING  
JOB NO. 18-111



Acad Version: R22.06 (LMS Tech) User Name: user  
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 User: Tech M-6  
 Date: 01/18/19  
 Title: M-6

NO.	DATE	ISSUED FOR	APRVD BY
1	01/18/19	EMERGENCY SUMP PUMP DISCHARGE PIPING MODIFICATION	J.A.P.

DESIGNED:	J.A.P.
DRAWN:	J.A.J.
CHECKED:	A.C.
APPROVED:	D.L.M.

JASON A. PUGSLEY, P.E.  
No. 67426

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www.baxterwoodman.com EB-31795

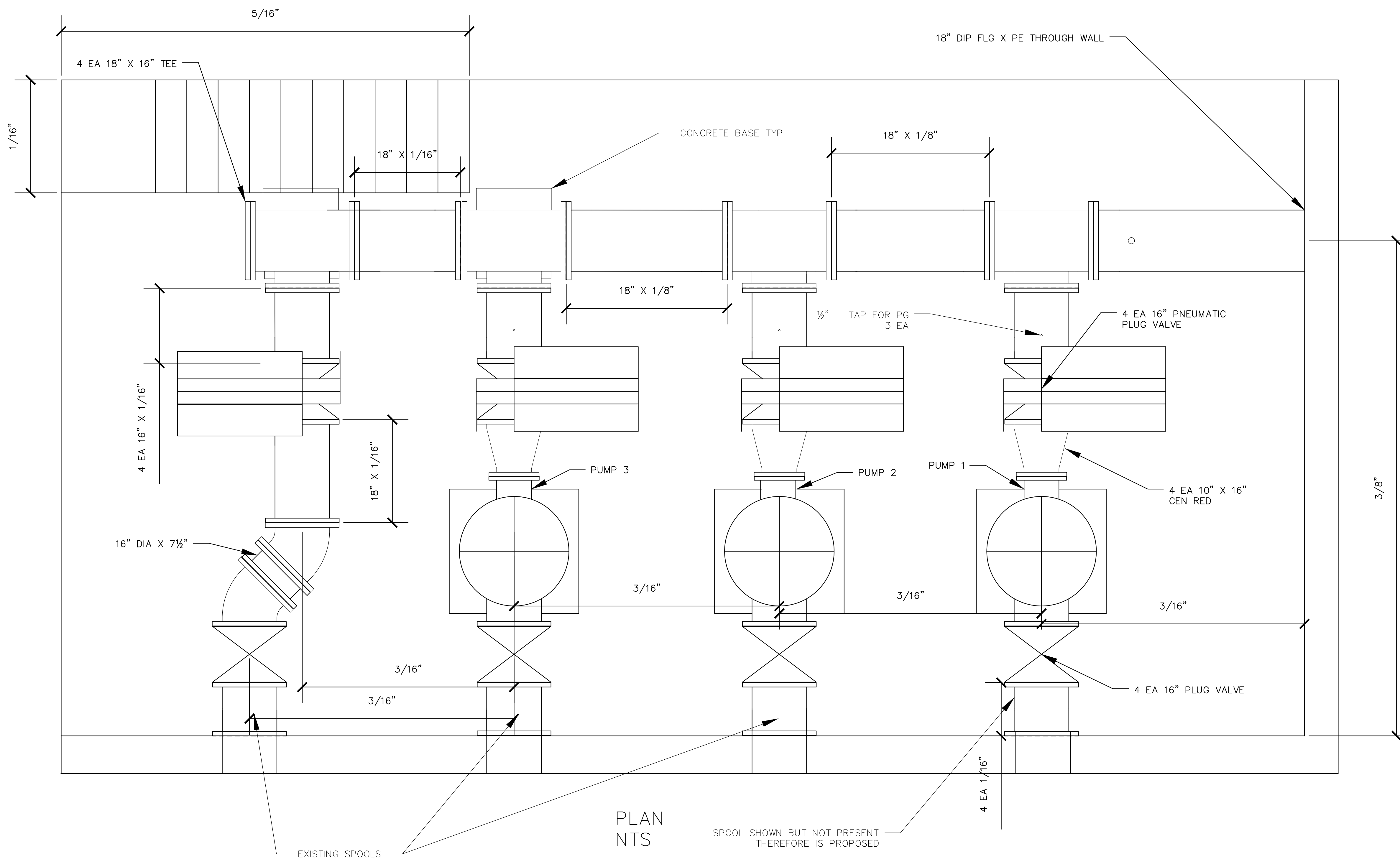
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BAR IS ONE INCH ON FULL SIZE (22x34) ORIGINAL DRAWING. ADJUST SCALES AS NECESSARY.

ENGINEER NO.: 160963  
CLIENT PROJECT NO.: 160963  
CAD REF.: 160963M-P&S

LOXAHATCHEE RIVER  
ENVIRONMENTAL CONTROL DISTRICT  
MASTER LIFT STATION No. 1 REHABILITATION  
MECHANICAL SECTIONS - ~~PROPOSED~~  
**RECORD DRAWING**

DATE: APRIL 2018  
SHEET: 15 of 31  
DRAWING: M-6

**CONSTRUCTION**



PLAN  
NTS  
EXISTING SPOOLS  
SPOOL SHOWN BUT NOT PRESENT  
THEREFORE IS PROPOSED

**B** BETSY LINDSAY, INC.  
SURVEYING AND MAPPING  
7997 S.W. JACK JAMES DRIVE STUART, FLORIDA 34997  
(772)286-5753 (772)286-5933 FAX  
LICENSED BUSINESS NO. 6852  
**RECORD DRAWING**  
JOB NO. 18-111

1/4"=1'-0"

NO.	DATE	ISSUED FOR	APRVD BY

DESIGNED: J.A.P.  
DRAWN: J.A.J.  
CHECKED: A.C.  
APPROVED: D.L.M.

JASON A. PUGSLEY, P.E.  
No. 67426

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VERIFY SCALE  
  
BAR IS ONE INCH ON FULL SIZE (22x34) ORIGINAL DRAWING. ADJUST SCALES AS NECESSARY.

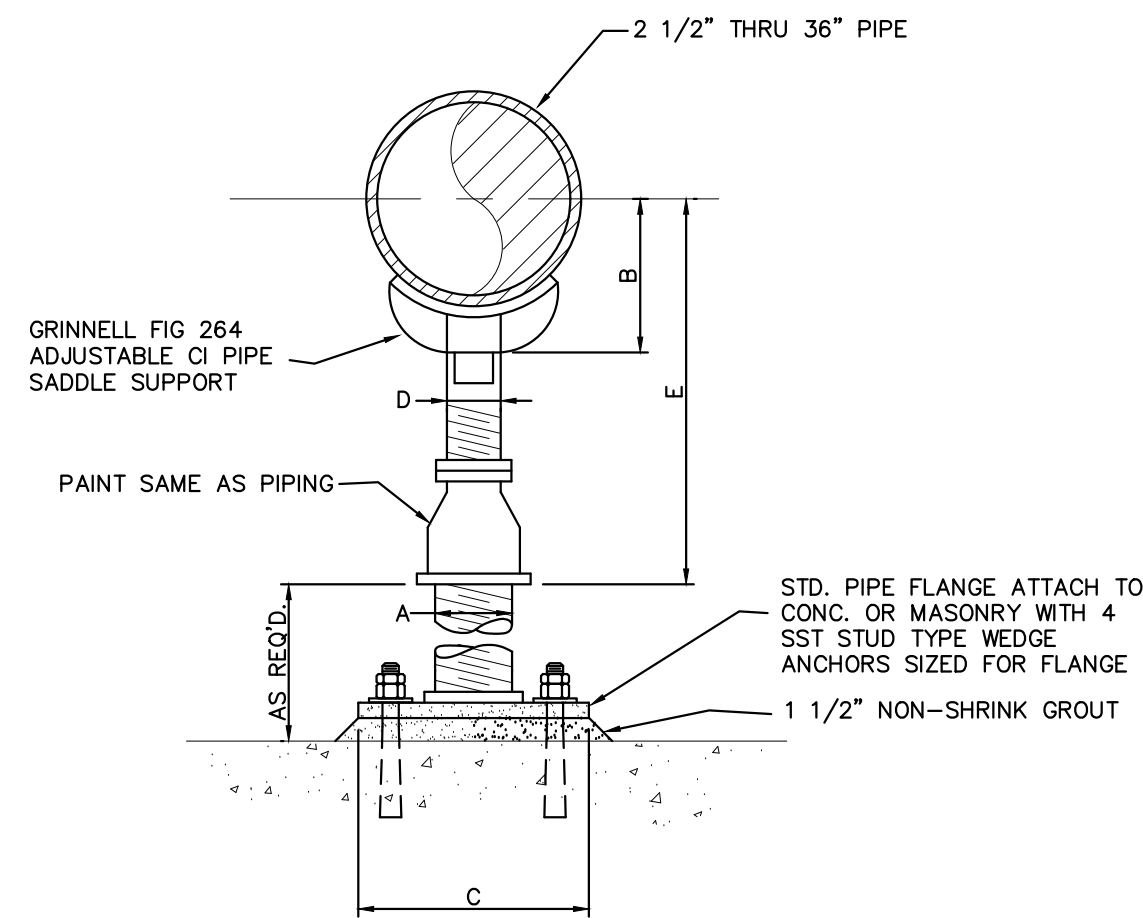
ENGINEER NO.: 160963  
CLIENT PROJECT NO.: 160963  
CAD REF.: 160963M-P-P&S

**LOXAHATCHEE RIVER ENVIRONMENTAL CONTROL DISTRICT MASTER LIFT STATION No. 1 REHABILITATION**  
(PER TLC DIVERSIFIED, INC)  
**PLAN VIEW FOR PIPE LOWER & INTERMEDIATE FLOOR**  
**RECORD DRAWING**

DATE: APRIL 2018  
SHEET: 15 of 31  
DRAWING: M-6B

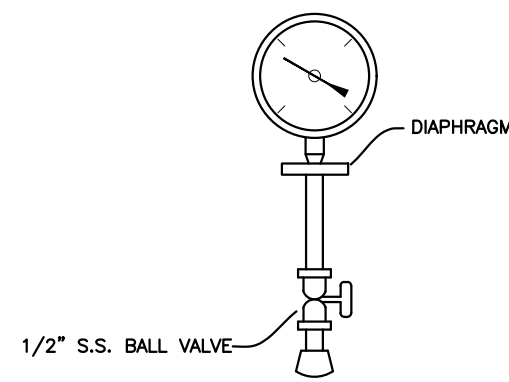
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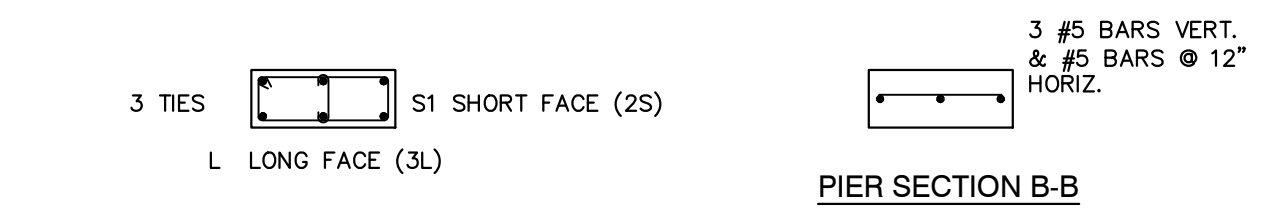
**PIPE SUPPORT DETAIL**  
SCALE: N.T.S.

PIPE SIZE	A	B	C	D	E	
					MIN.	MAX.
2 1/2"	2 1/2"	3 1/2"	9"	1 1/2"	8"	13"
3"	2 1/2"	3 3/4"	9"	1 1/2"	8 1/4"	13 1/4"
3 1/2"	2 1/2"	4"	9"	1 1/2"	8 1/2"	13 1/2"
4"	3"	4 1/4"	9"	2 1/2"	9 1/4"	14"
5"	3"	4 7/8"	9"	2 1/2"	10"	14 3/4"
6"	3"	5 1/2"	9"	2 1/2"	10 1/2"	15 1/4"
8"	3"	6 7/8"	9"	2 1/2"	11 3/4"	16 1/2"
10"	3"	8 1/2"	9"	2 1/2"	13 1/2"	18 1/4"
12"	3"	9 15/16"	9"	2 1/2"	15"	19 3/4"
14"	4"	10 15/16"	11"	3"	16 1/4"	20 3/4"
16"	4"	12 3/8"	11"	3"	17 1/2"	22 1/4"
18"	6"	13 7/8"	13 1/2"	3 1/2"	19 1/2"	24"
20"	6"	15 3/8"	13 1/2"	3 1/2"	21"	25 1/2"
24"	6"	17 15/16"	13 1/2"	4"	23 3/4"	28 1/4"
30"	6"	21 5/16"	13 1/2"	4"	27"	31 1/2"
32"	6"	22 1/2"	13 1/2"	4"	28 1/4"	32 3/4"
36"	6"	24 1/2"	13 1/2"	4"	30 1/4"	34 3/4"

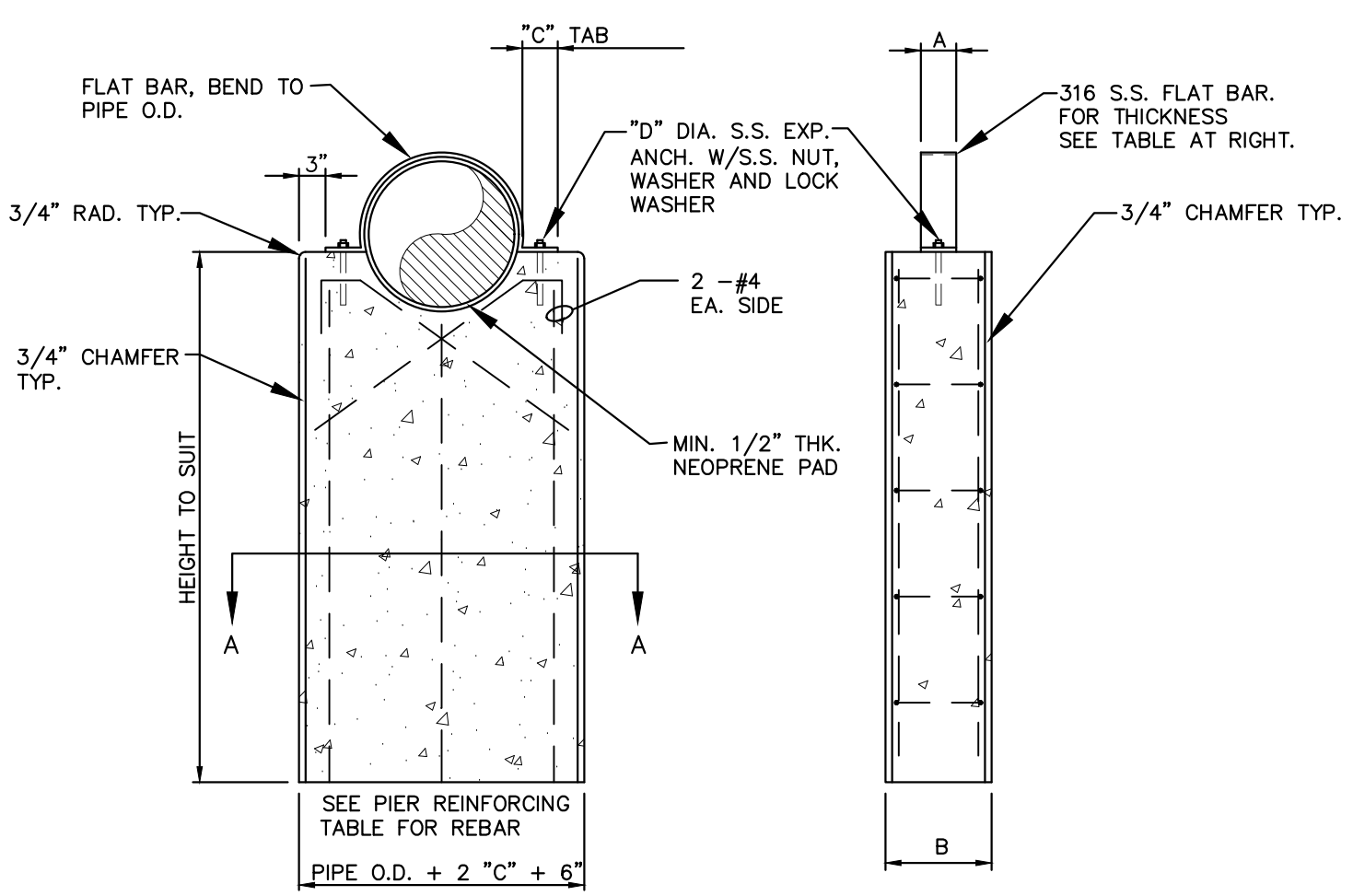


**PRESSURE GAUGE DETAIL**  
SCALE: N.T.S.

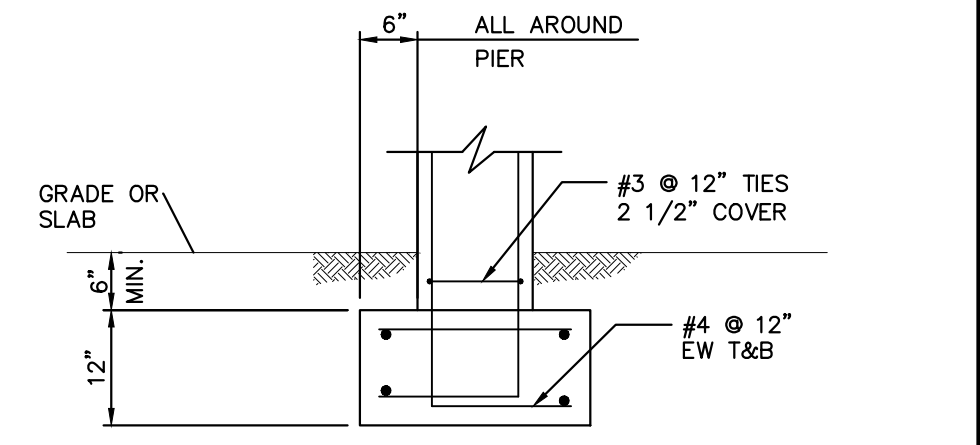
NOMINAL PIPE O.D.	FLAT BAR				FNDN LW	FNDN REBAR SW	PIER SIZE W x L	PIER REBAR EACH FACE	TIES
	"A"	"B"	"C"	"D"					
4	8	4	5/8	1/4	2'-0"x2'-8"x12"	2- #5	2- #5	1'-0" x 1'-6"	PIER SEC. BB
6	12	4	5/8	1/4	2'-0"x2'-8"x12"	2- #5	2- #5	1'-0" x 1'-6"	4- #5 2L2S 1- #3 @ 12"
8	12	4	5/8	1/4	2'-0"x2'-8"x12"	2- #5	2- #5	1'-0" x 1'-6"	4- #5 2L2S 1- #3 @ 12"
10	12	4	5/8	1/4	3'-0"			2'-0"	6- #5 3L2S 2- #3 @ 12"
12	12	4	5/8	1/4	3'-2"			2'-2"	6- #5 3L2S 2- #3 @ 12"
14	12	4	5/8	1/4	3'-4"			2'-4"	6- #5 3L2S 2- #3 @ 12"
16	12	4	5/8	1/4	3'-6"			2'-6"	6- #5 3L2S 2- #3 @ 12"
18	12	4	5/8	1/4	3'-8"			2'-8"	8- #5 4L2S 3- #3 @ 12"
20	12	5	5/8	3/8	4'-0"			3'-0"	8- #5 4L2S 3- #3 @ 12"
22	12	5	5/8	3/8	4'-2"			3'-2"	8- #5 4L2S 3- #3 @ 12"
24	12	5	5/8	3/8	4'-4"			3'-4"	8- #5 4L2S 3- #3 @ 12"
26	12	5	3/4	3/8	4'-6"			3'-6"	10- #5 5L2S 4- #3 @ 12"
30	12	5	5/8	3/8	2'-0"x5'-0"			1'-0" x 3'-10"	10- #5 5L2S 4- #3 @ 12"
34	15	5	3/4	3/8	2'-3"x5'-2"	3- #5		1'-3" x 4'-2"	12- #5 5L3S 4- #3 @ 12"
36	15	6	3/4	3/8	2'-3"x5'-6"			1'-3" x 4'-6"	12- #5 5L3S 4- #3 @ 12"
42	18	6		3/8	2'-6"x6'-0"			1'-6" x 5'-0"	14- #6 5L3S 5- #3 @ 12"
48	18	6		3/8	6'-6"			5'-6"	14- #6 6L3S 6- #3 @ 12"
54	18	6		3/8	7'-0"			6'-0"	16- #6 7L3S 6- #3 @ 12"
60	18	6	1 1/8	3/8	7'-6"			6'-6"	16- #6 7L3S 6- #3 @ 12"
66	18	6	1 1/8	3/8	8'-0"			7'-0"	16- #7 7L3S 6- #3 @ 12"
72	18	6	1 1/8	3/8	2'-6"x8'-6"x12"	3- #5	6- #5	1'-6" x 7'-6"	16- #7 7L3S 6- #3 @ 12"



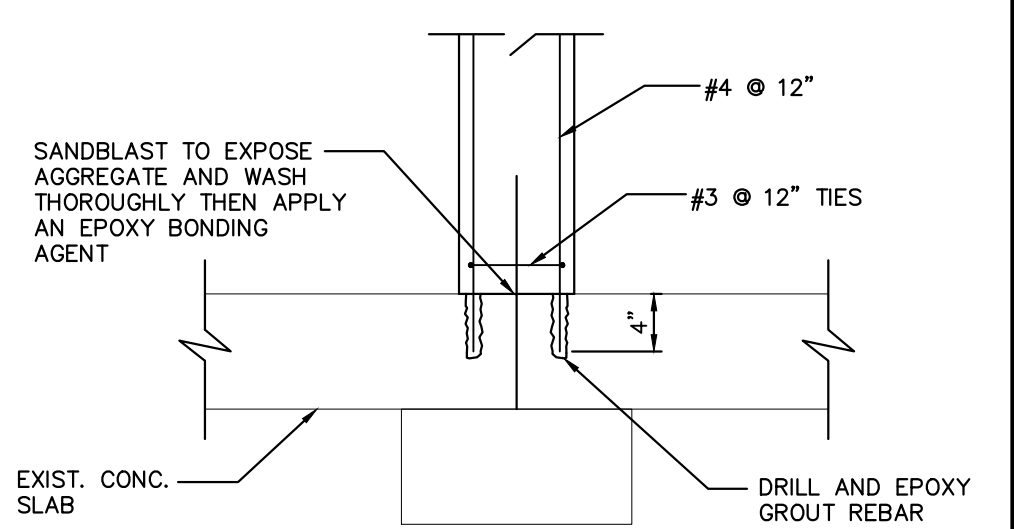
**NOTE:**  
1. SEE PIER DETAILS FOR ADDITIONAL #4 REBAR AT TOP.



**PIER DETAILS**



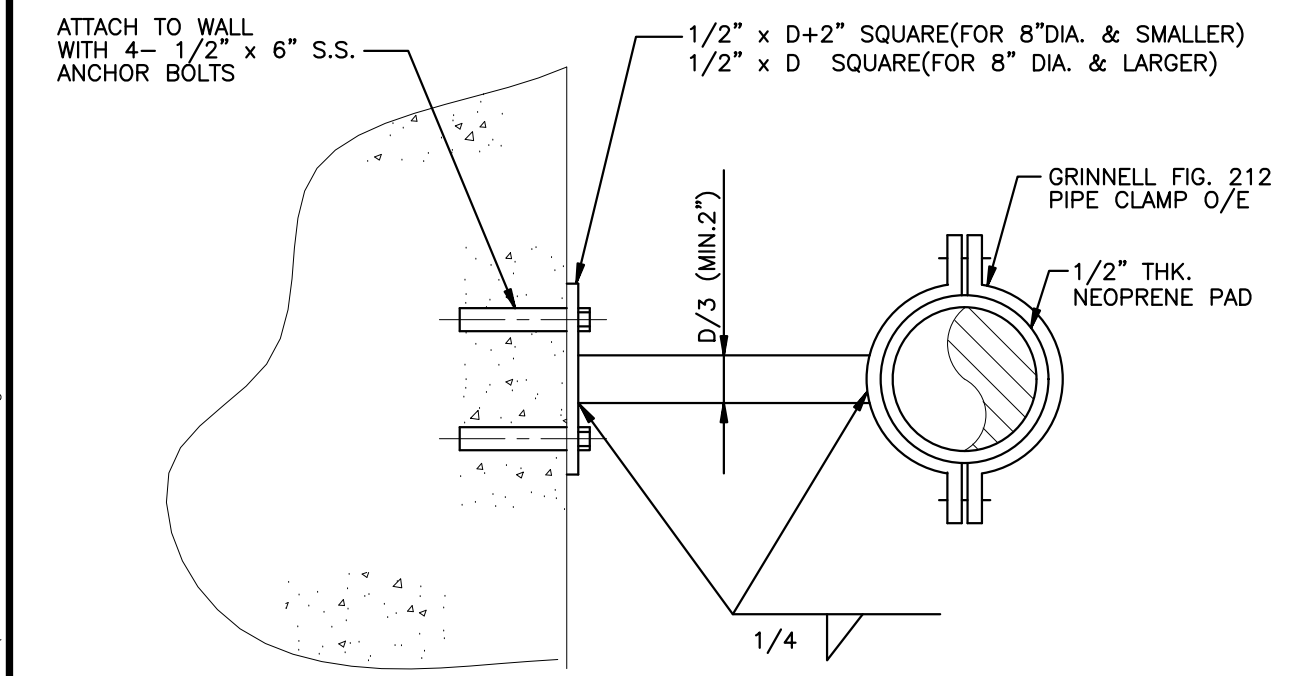
**PIER ON GRADE**



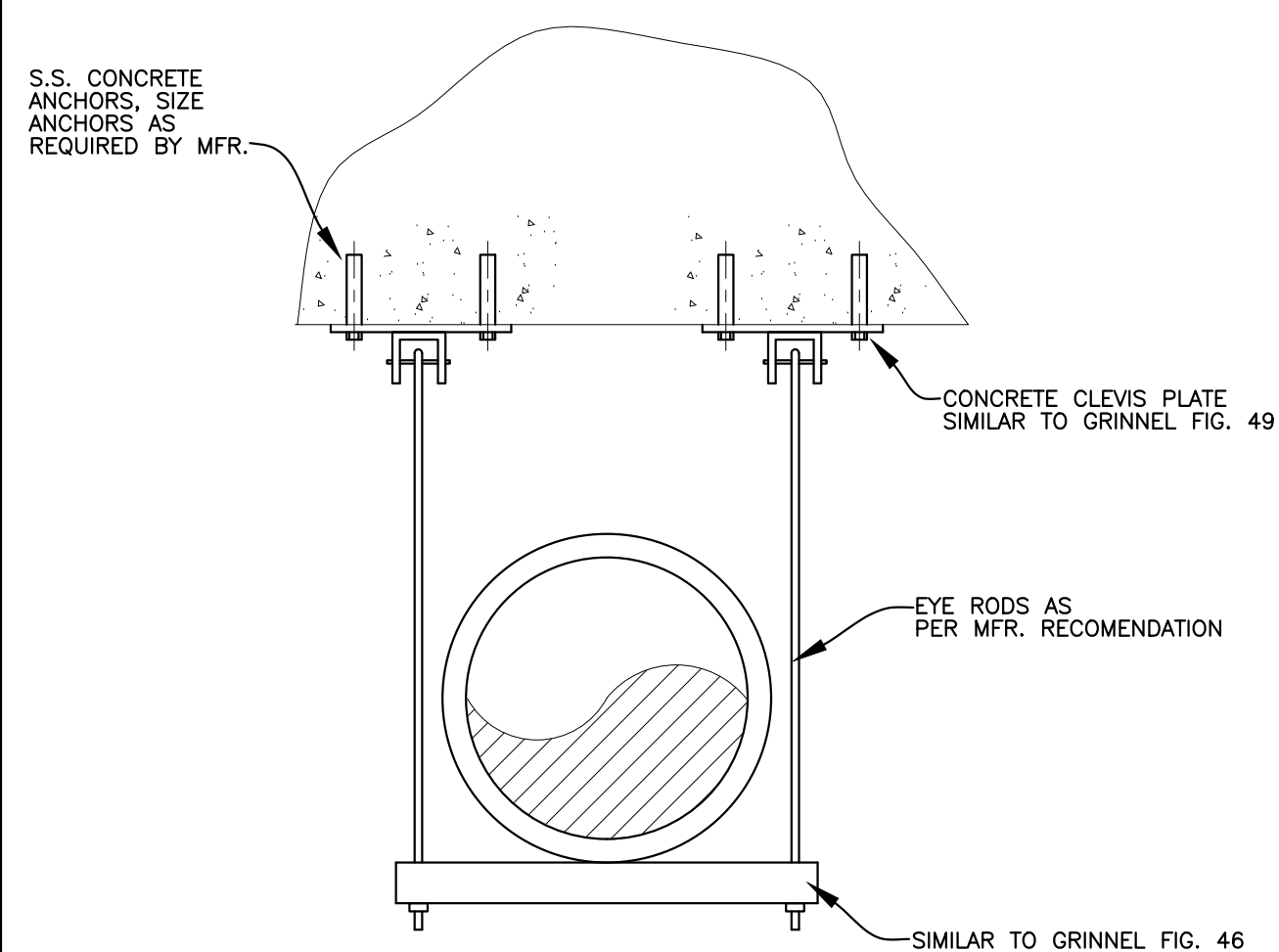
**PIER OVER EXISTING SLAB AND OR FOOTING**

**PIER FOUNDATION DETAILS**

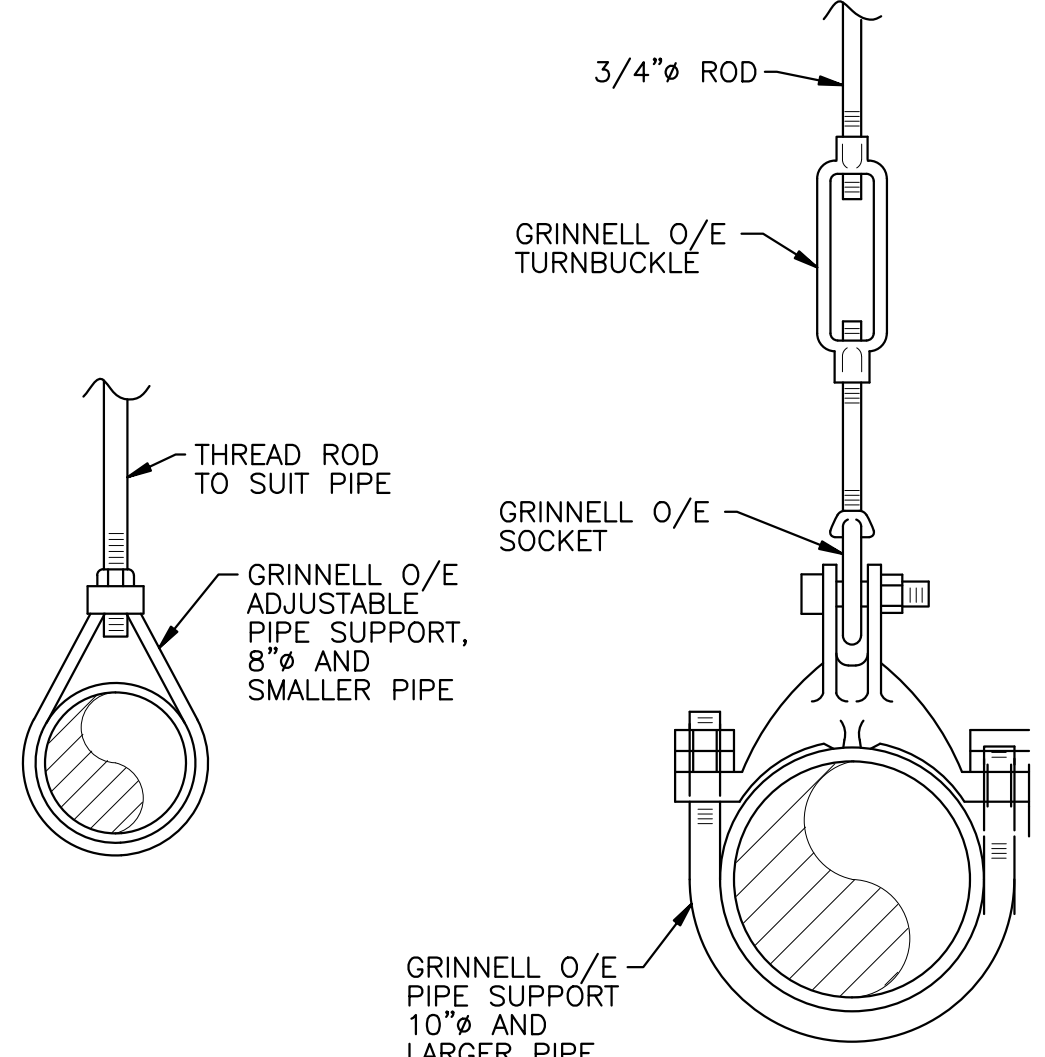
**CONCRETE PIER PIPE SUPPORT**  
SCALE: N.T.S.



**PIPE SWAY BRACE**  
SCALE: N.T.S.

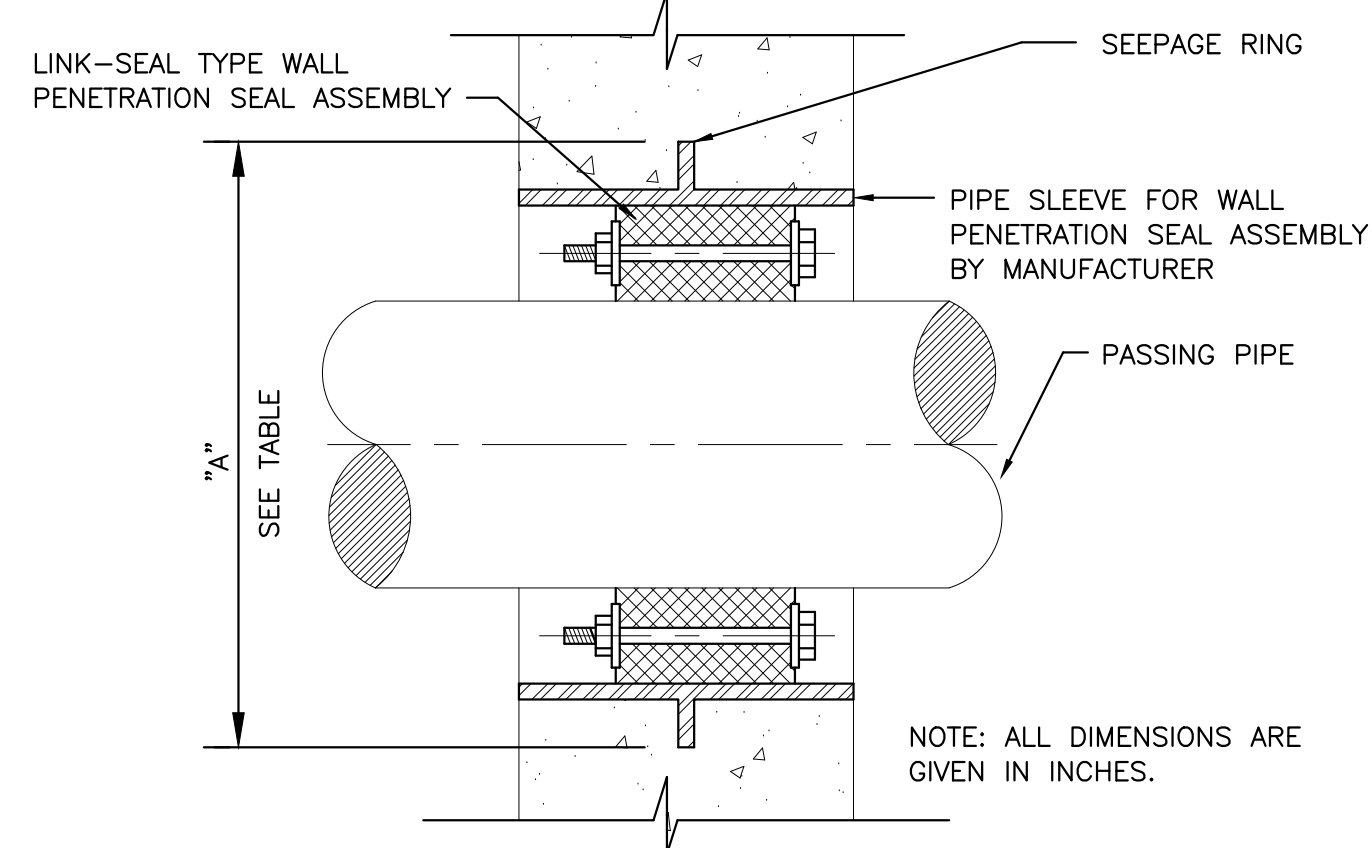


**PIPE HANGER - TRAPEZE STYLE**  
SCALE: N.T.S.



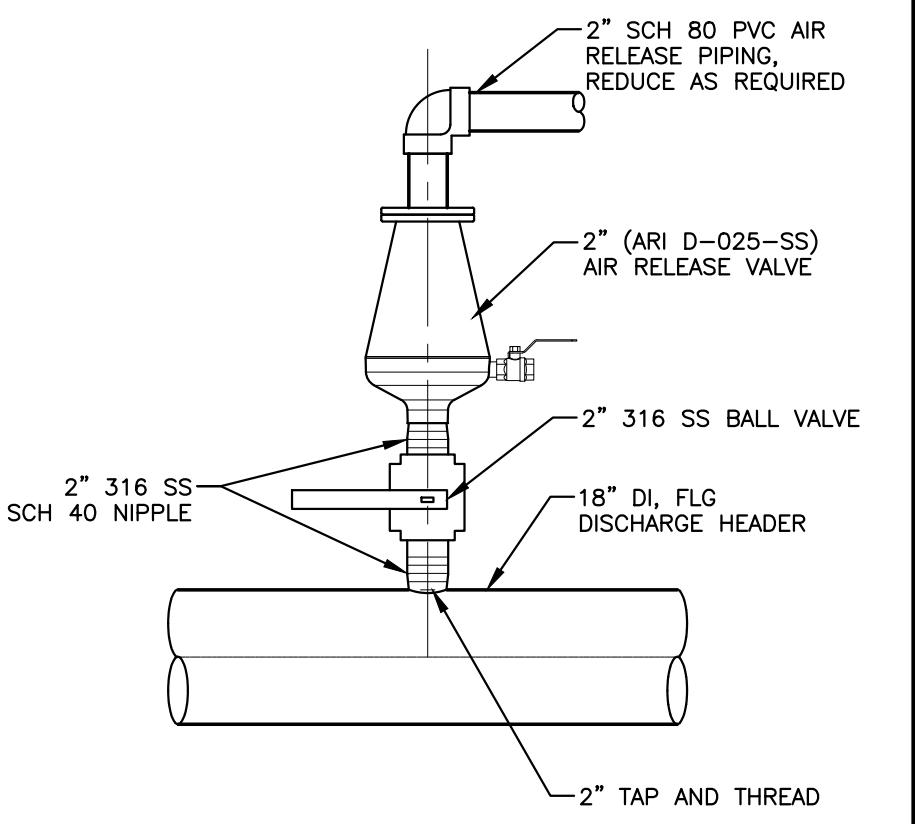
**PIPE HANGER**  
SCALE: N.T.S.

**NOTE:**  
ALL ITEMS SHALL BE TYPE 316 SS.

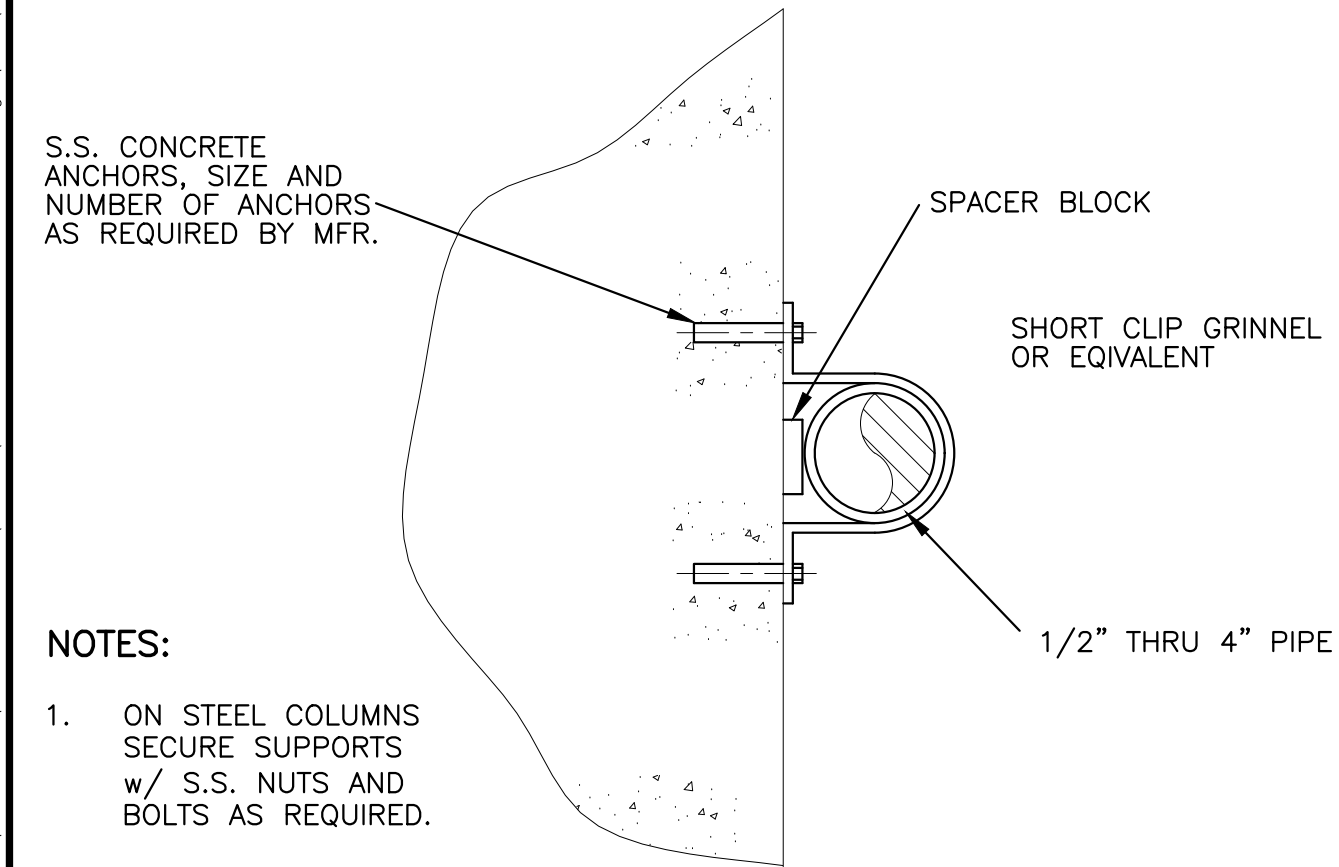


PIPE SIZE	NOMINAL SLEEVE DIA	"A"	PIPE SIZE	NOMINAL SLEEVE DIA	"A"
2	4	6	12	16	19
2-1/2	4	7	14	18	21
3	5	7-1/2	16	20	23-1/2
4	6	9	18	24	25
6	10	13	20	24	27-1/2
8	12	15	24	30	32
10	14	17			

**LINK SEAL DETAIL**  
SCALE: N.T.S.



**AIR RELEASE VALVE DETAIL**  
NTS



**PIPE HANGER - WALL**  
SCALE: N.T.S.

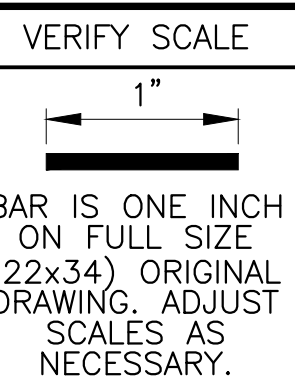
- NOTES:**
- ON STEEL COLUMNS SECURE SUPPORTS w/ S.S. NUTS AND BOLTS AS REQUIRED.
  - ALL ITEMS SHALL BE TYPE 316 SS.

Date: Wed, 25 Apr 2018 - 2:21pm  
User: J:\WestPalmBeach\URECD\160963-MLS No. 1 Final Design\CD\Working Folder\160963M-P-DTL.dwg  
Layout Tab: M-7  
Acad Version: R20.1s (LMS Tech)  
User Name: 756jg

NO.	DATE	ISSUED FOR	APR'D BY

DESIGNED: J.A.P.  
DRAWN: J.A.J.  
CHECKED: A.C.  
APPROVED: D.L.M.  
JASON A. PUGSLEY, P.E.  
No. 67426

**MATHEWS CONSULTING**  
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Phone: 561-655-6175 Fax: 561-655-6179  
www.baxterwoodman.com EB-31795



ENGINEER NO.: 160963  
CLIENT PROJECT NO.: 160963  
CAD REF.: 160963M-P-DLS

LOXAHATCHEE RIVER ENVIRONMENTAL CONTROL DISTRICT  
MASTER LIFT STATION No. 1 REHABILITATION  
MECHANICAL DETAILS - SHEET 1

DATE: APRIL 2018  
SHEET: 16 of 31  
DRAWING: M-7

**CONSTRUCTION**

**GENERAL NOTES**

DESIGNED IN ACCORDANCE WITH FLORIDA BUILDING CODE 2017 (FBC)

**WIND DESIGN IN ACCORDANCE WITH ASCE 7-10:**

VELOCITY<sub>ULT</sub> = 180 MPH (3 SEC.)  
 VELOCITY<sub>ASD</sub> = 139 MPH (3 SEC.)  
 RISK CATEGORY III  
 K<sub>d</sub> = 0.85  
 K<sub>z</sub> = 0.85  
 K<sub>zt</sub> = 1.0  
 EXPOSURE = C  
 GC<sub>pi</sub> = ±0.18  
 q<sub>z</sub> = 36 PSF (SERVICE)

**SEISMIC DESIGN DATA:**

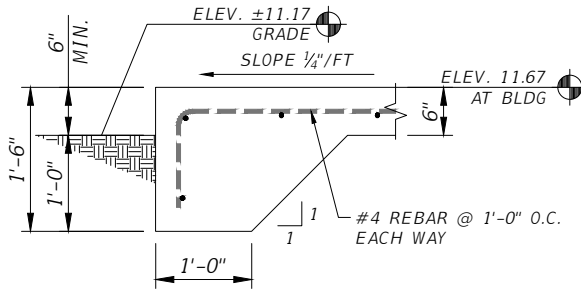
RISK CATEGORY III  
 I<sub>s</sub> = 1.25  
 S<sub>s</sub> = 0.05  
 S<sub>1</sub> = 0.03  
 SITE CLASS = D  
 S<sub>ps</sub> = 0.053  
 S<sub>o1</sub> = 0.048  
 SEISMIC DESIGN CATEGORY = A  
 R = 1.25  
 C<sub>s</sub> = 0.053  
 V = 0.053W

**GEOTECHNICAL DESIGN DATA:**

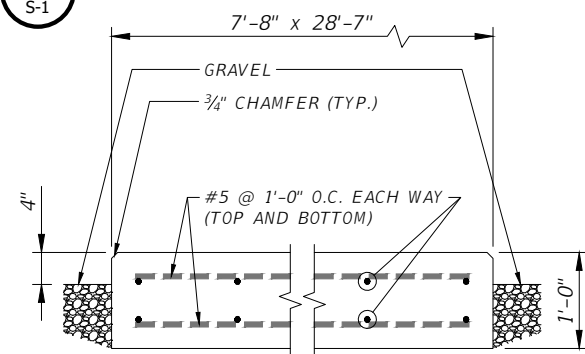
ALLOWABLE VERTICAL FOUNDATION PRESSURE = 2,000 PSF  
 ALLOWABLE LATERAL BEARING PRESSURE = N/A

GROUND SNOW LOAD = 0 PSF

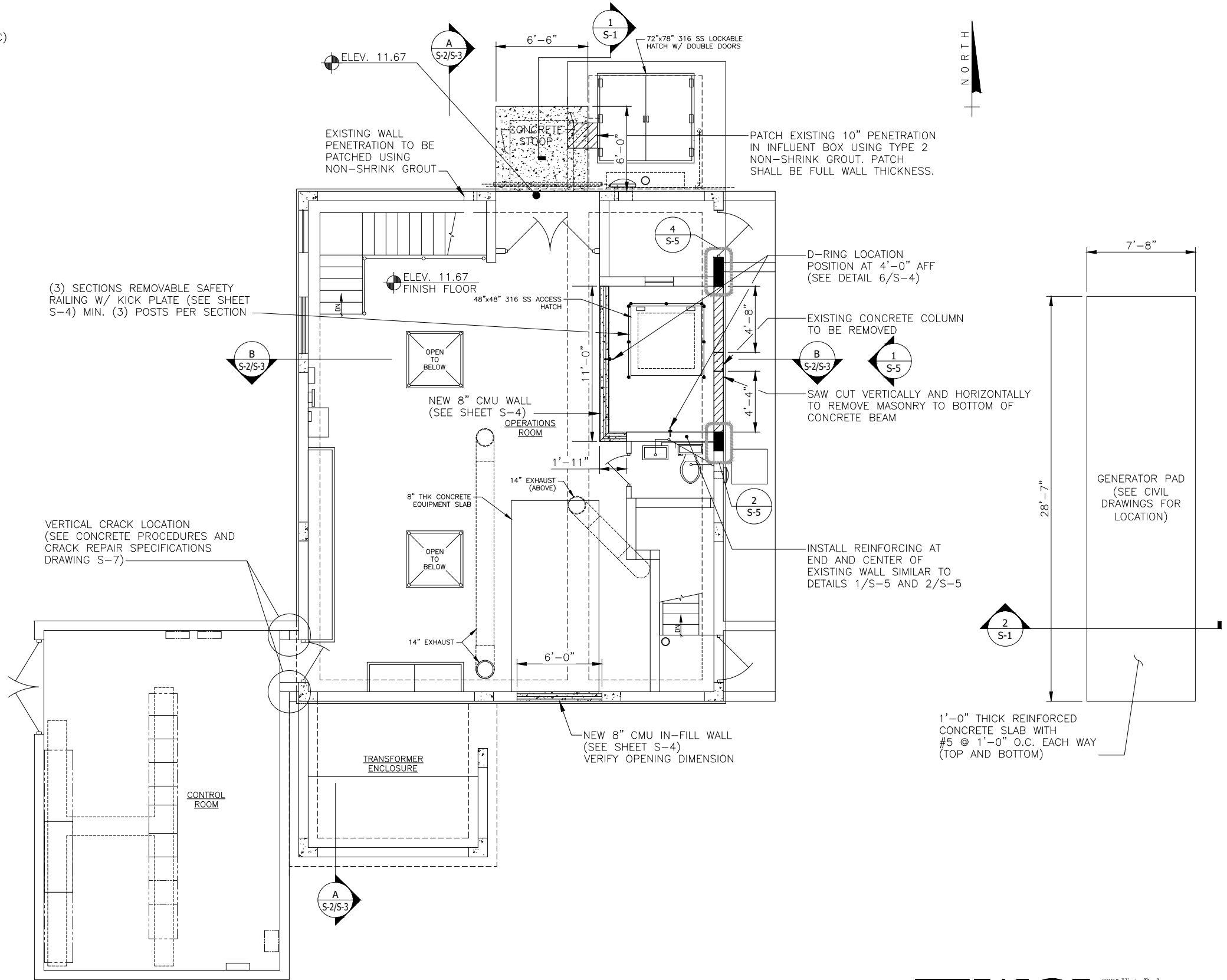
FLOOD ZONE A5 (EL 6)



**1 THICKENED SLAB EDGE DETAIL**



**2 GENERATOR SLAB SECTION**



**OPERATIONS FLOOR PLAN - PROPOSED**

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

**WGI**  
 WGI PROJECT NO. 08151866.01  
 2035 Vista Parkway  
 West Palm Beach, FL 33411  
 Phone No. 561.687.2220  
 Fax No. 561.687.1110  
 Cert No. 6091 - LB No. 7055

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**CONSTRUCTION**

Acad Version : R21.0a (LMS Tech)  
 User Name : Dore.Mirelle

NO.	DATE	ISSUED FOR	APRVD BY

DESIGNED:	J.R.B.
DRAWN:	C.A.B.
CHECKED:	J.R.B.
APPROVED:	J.R.B.

JEFFREY R. BERGMANN  
 No. 50159

**MATHEWS CONSULTING**  
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 477 S. Rosemary Avenue, Suite 330, West Palm Beach, Florida 33401  
 Phone: 561-655-6175 • Fax: 561-655-6179  
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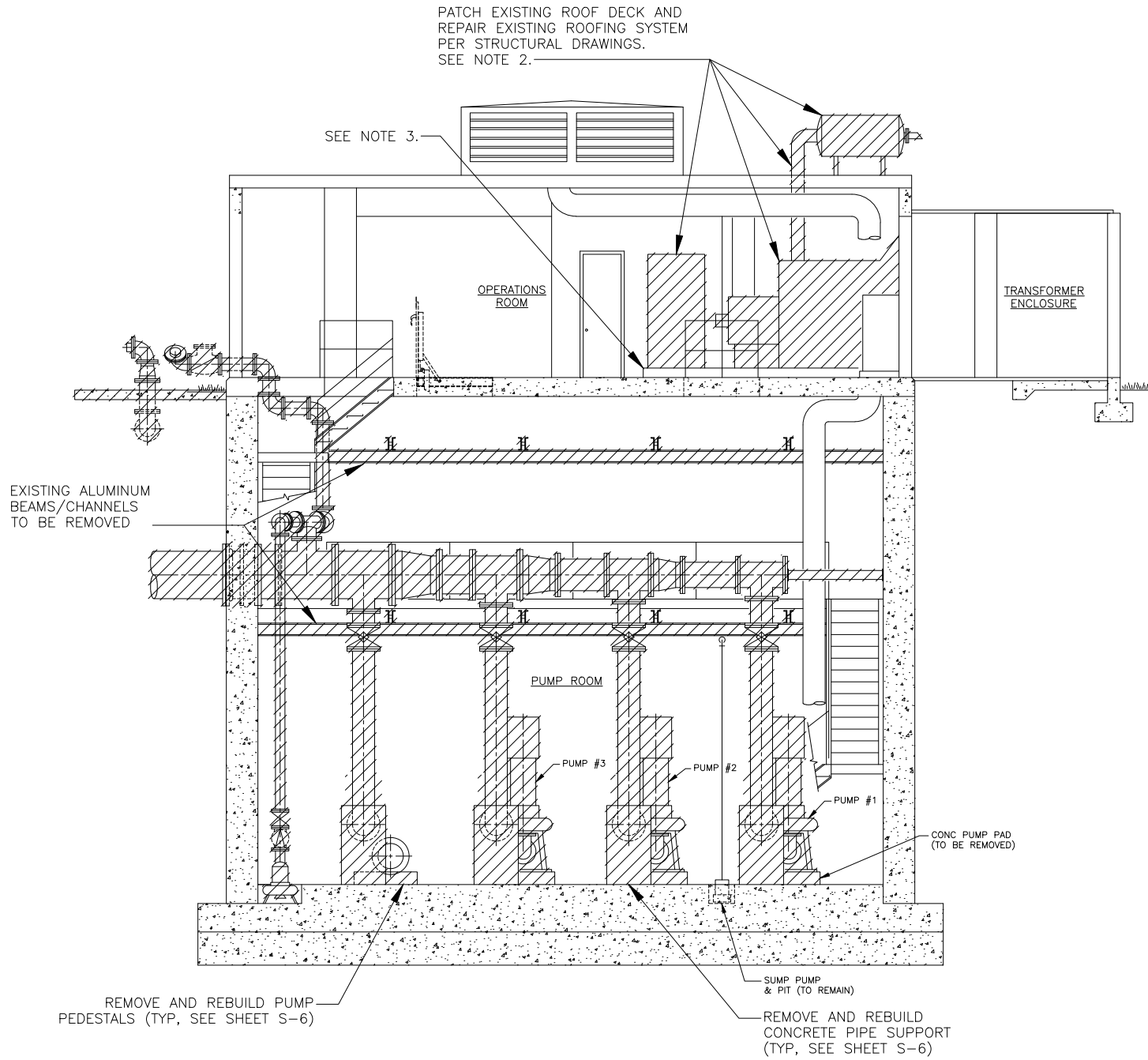
VERIFY SCALE  
  
 BAR IS ONE INCH ON FULL SIZE (22x34) ORIGINAL DRAWING. ADJUST SCALES AS NECESSARY.

ENGINEER NO.:	160963
CLIENT PROJECT NO.:	160963
CAD REF.:	160963M-P-P&S-WGI

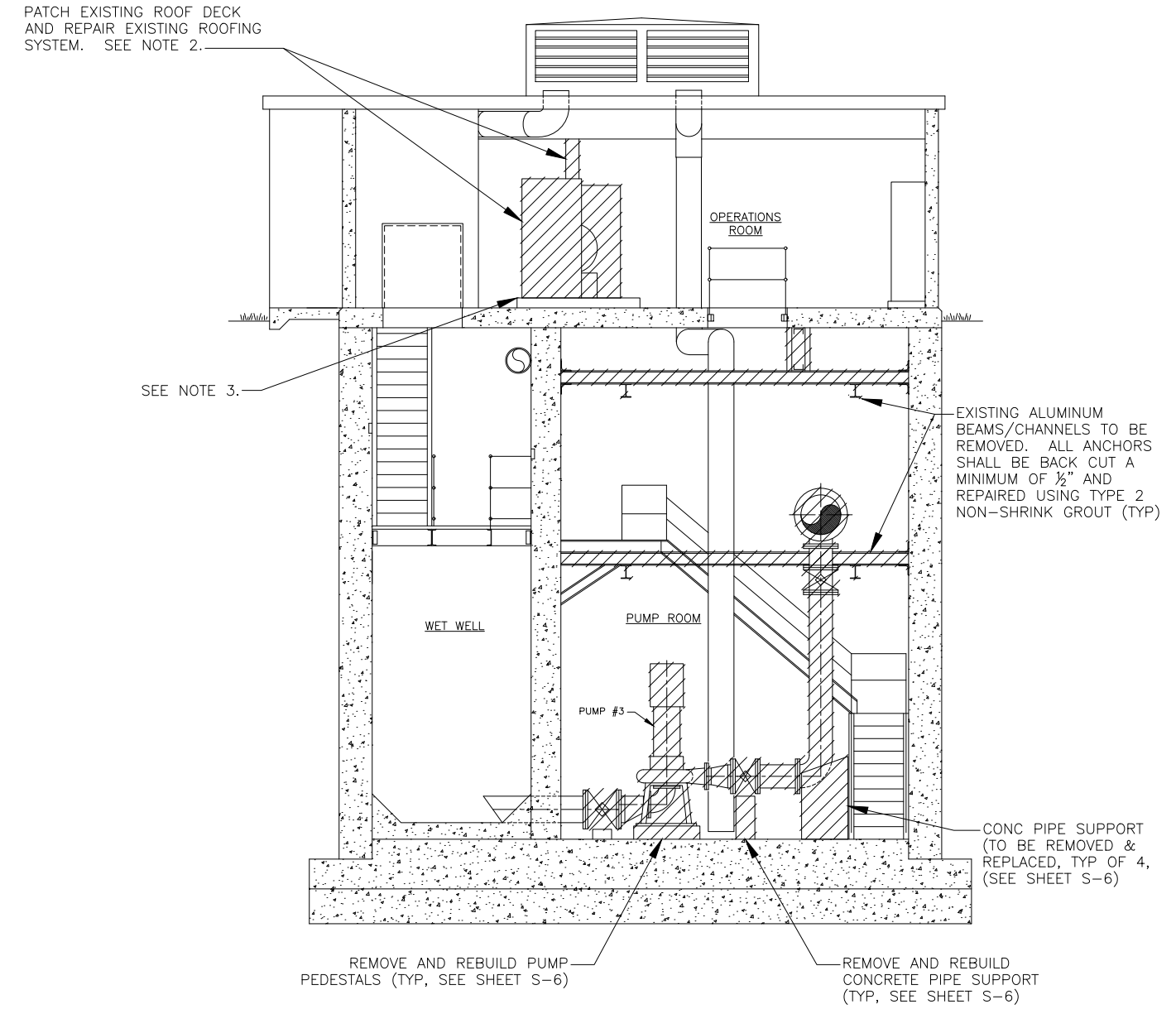
**LOXAHATCHEE RIVER ENVIRONMENTAL CONTROL DISTRICT**  
 MASTER LIFT STATION No. 1 REHABILITATION  
 GENERAL NOTES AND OPERATIONS ROOM STRUCTURAL FLOOR PLAN

DATE:	APRIL 2018
SHEET:	17 of 31
DRAWING:	S-1

Date: Time: Wed, 25 Apr 2018 - 2:04pm  
 Path: Name: S:\2015-jobs\1866.01\rec-lift station #1-design\07 structural dwgs\CAD\master lift station no. 1\S-2 STRUCTURAL SECTIONS - DEMOLITION.dwg  
 Current Plotstyle: ByColor  
 Layout Tab: S-2 STRUCTURAL SECTIONS - DEMOLITION  
 Acad Version: R21.0a (LMS Tech)  
 User Name: Dore.Mirelle



**A SECTION**  
S-2 Scale: 1/4" = 1'-0"



**B SECTION**  
S-2 Scale: 1/4" = 1'-0"

- NOTES:**
- REFER TO MECHANICAL SHEETS FOR MECHANICAL DEMOLITION.
  - CONTRACTOR SHALL DECOMMISSION AND PROPERLY DISPOSE OF THE EXISTING STANDBY GENERATOR UNIT, ROOF MOUNTED SILENCER AND INTERCONNECTED EXHAUST PIPING. CONTRACTOR TO SUBMIT A ROOF PATCHING DETAIL AND PROCEDURE FOR ENGINEER REVIEW AND APPROVAL.
  - 8" THICK CONCRETE EQUIPMENT SLAB BENEATH STANDBY GENERATOR UNIT TO REMAIN. CONTRACTOR SHALL SAWCUT BACK ALL ANCHORS A MINIMUM OF 1/2" AND REPAIR USING NON-SHRINK GROUT.
  - CONTRACTOR SHALL BE REQUIRED TO INSTALL SUPPORTS (AS REQUIRED) TO RIGIDLY SUPPORT ALL EXISTING CONDUIT, PIPING, ETC. WHICH IS CURRENTLY SECURED/SUPPORTED BY THE ALUMINUM MEMBERS TO BE DEMOLISHED.

**LEGEND**  
 TO BE DEMOLISHED/ REMOVED



NO.	DATE	ISSUED FOR	APRVD BY

DESIGNED:	J.R.B.
DRAWN:	C.A.B.
CHECKED:	J.R.B.
APPROVED:	J.R.B.

JEFFREY R. BERGMANN  
No. 50159

**MATHEWS CONSULTING**  
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 Phone: 561-655-6175 • Fax: 561-655-6179  
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VERIFY SCALE  
  
 BAR IS ONE INCH ON FULL SIZE (22x34) ORIGINAL DRAWING. ADJUST SCALES AS NECESSARY.

ENGINEER NO.: 160963  
 CLIENT PROJECT NO.: 160963  
 CAD REF.: 160963M-P-P&S

LOXAHATCHEE RIVER  
 ENVIRONMENTAL CONTROL DISTRICT  
 MASTER LIFT STATION No. 1 REHABILITATION

STRUCTURAL SECTIONS - DEMOLITION

**WGI**  
 WGI PROJECT NO. 08151866.01

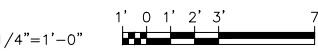
2035 Vista Parkway  
 West Palm Beach, FL 33411  
 Phone No. 561.687.2220  
 Fax No. 561.687.1110  
 Cert No. 6091 - LB No. 7055

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DATE: APRIL 2018  
 SHEET: 18 of 31  
 DRAWING: S-2

**CONSTRUCTION**

Date: Time: Wed, 25 Apr 2018 -- 2:04pm  
 Path: Name: S:\2015-jobs\1866\01 structural dwgs\CAD\master lift station no. 1\S-3 STRUCTURAL SECTIONS - PROPOSED.dwg  
 Current Plot Style: ByColor  
 Acad Version: R21.0a (LMS Tech)  
 User Name: Dave.Mirelle



NO.	DATE	ISSUED FOR	APRVD BY

DESIGNED:	J.R.B.
DRAWN:	C.A.B.
CHECKED:	J.R.B.
APPROVED:	J.R.B.

JEFFREY R. BERGMANN  
 No. 50159

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VERIFY SCALE  
  
 BAR IS ONE INCH ON FULL SIZE (22x34) ORIGINAL DRAWING. ADJUST SCALES AS NECESSARY.

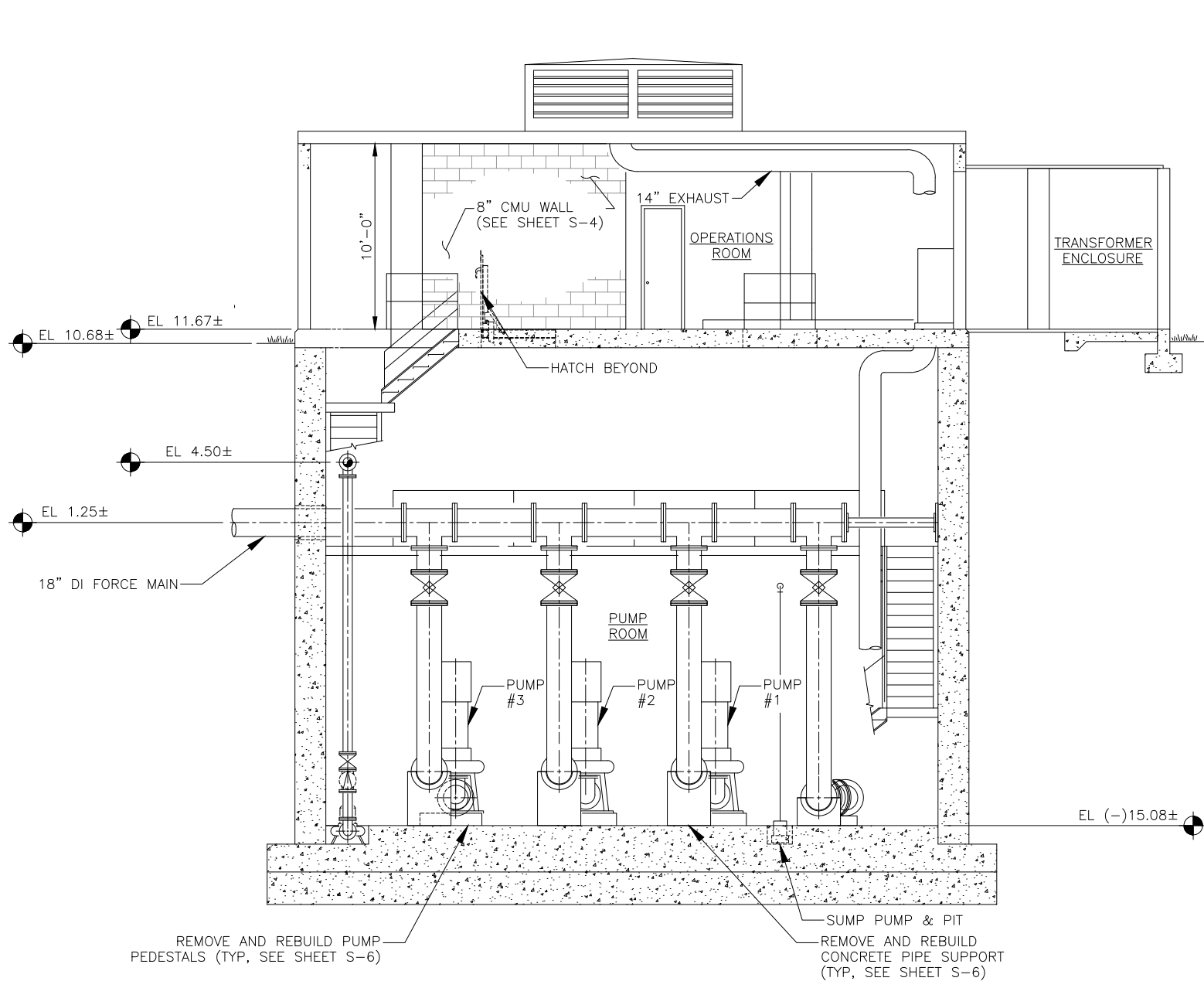
ENGINEER NO.: 160963  
 CLIENT  
 PROJECT NO.: 160963  
 CAD REF.: 160963M-P-P&S

**WGI**  
 WGI PROJECT NO. 08151866.01

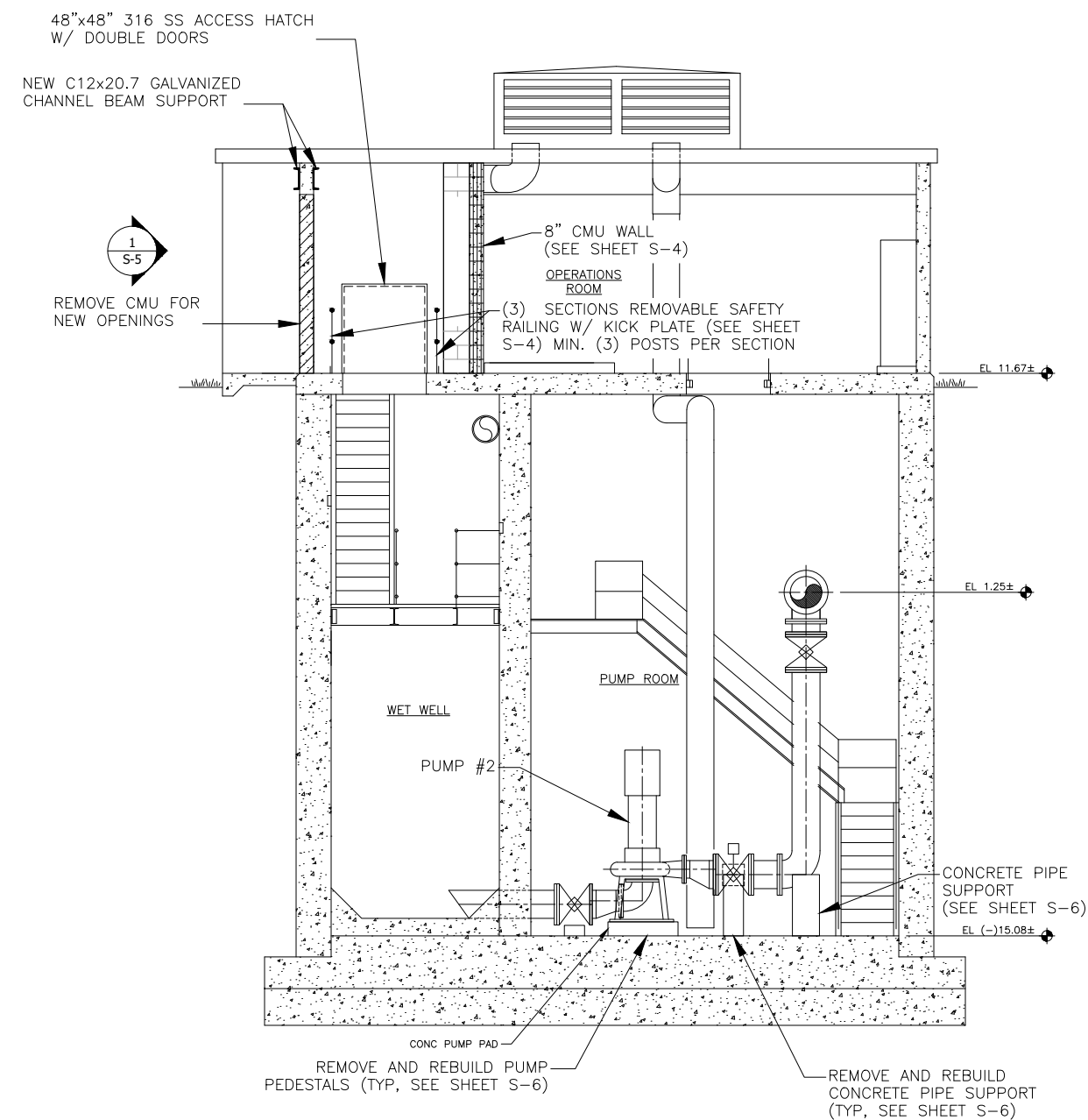
LOXAHATCHEE RIVER  
 ENVIRONMENTAL CONTROL DISTRICT  
 MASTER LIFT STATION No. 1 REHABILITATION

STRUCTURAL SECTIONS - PROPOSED

DATE: APRIL 2018  
 SHEET: 19 of 31  
 DRAWING: S-3

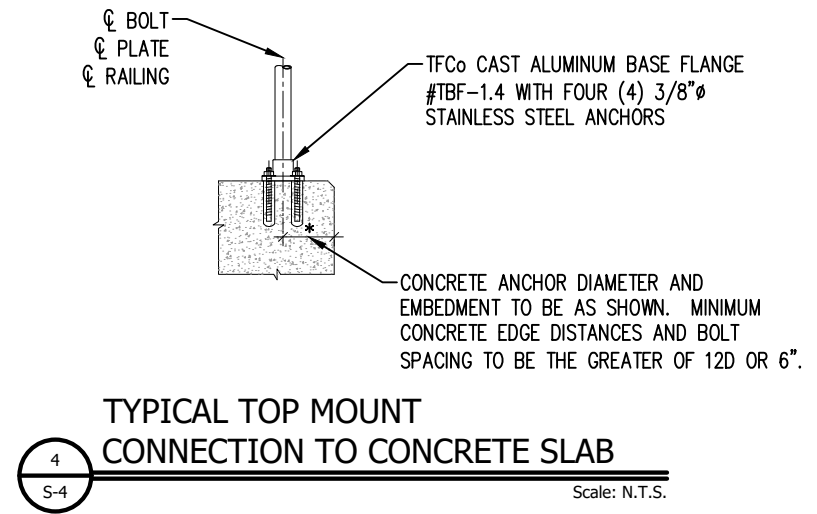
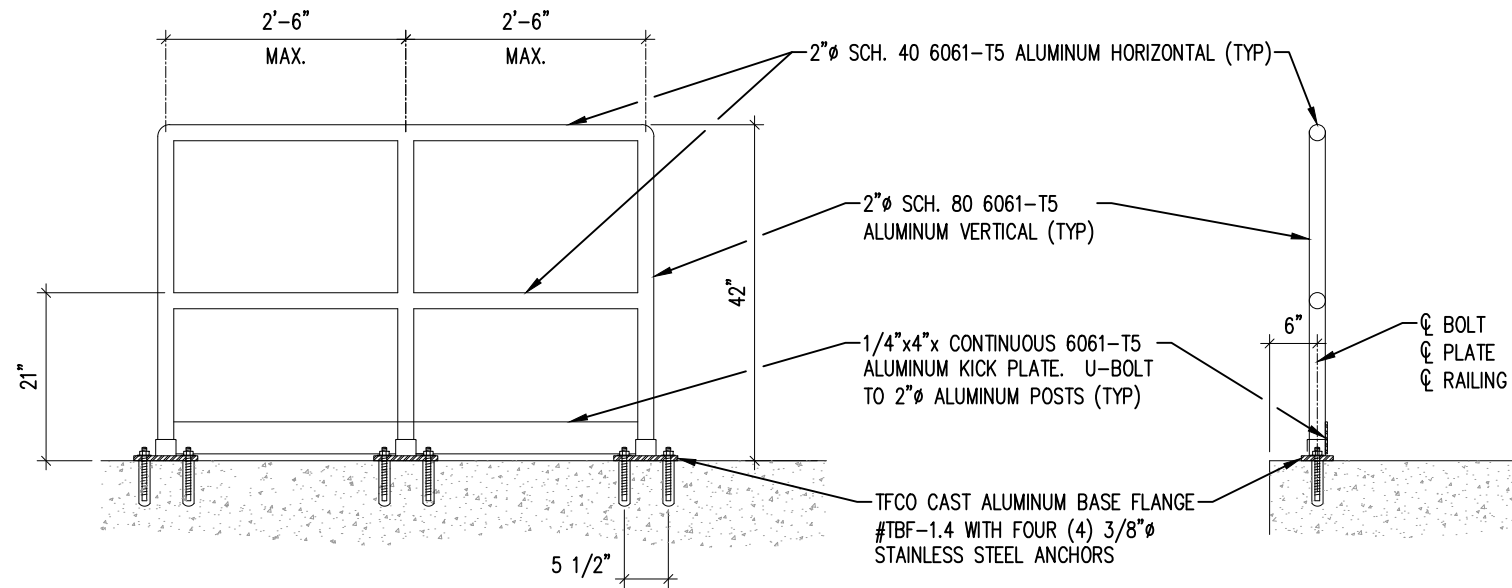


**A SECTION**  
 S-3 Scale: 1/4" = 1'-0"



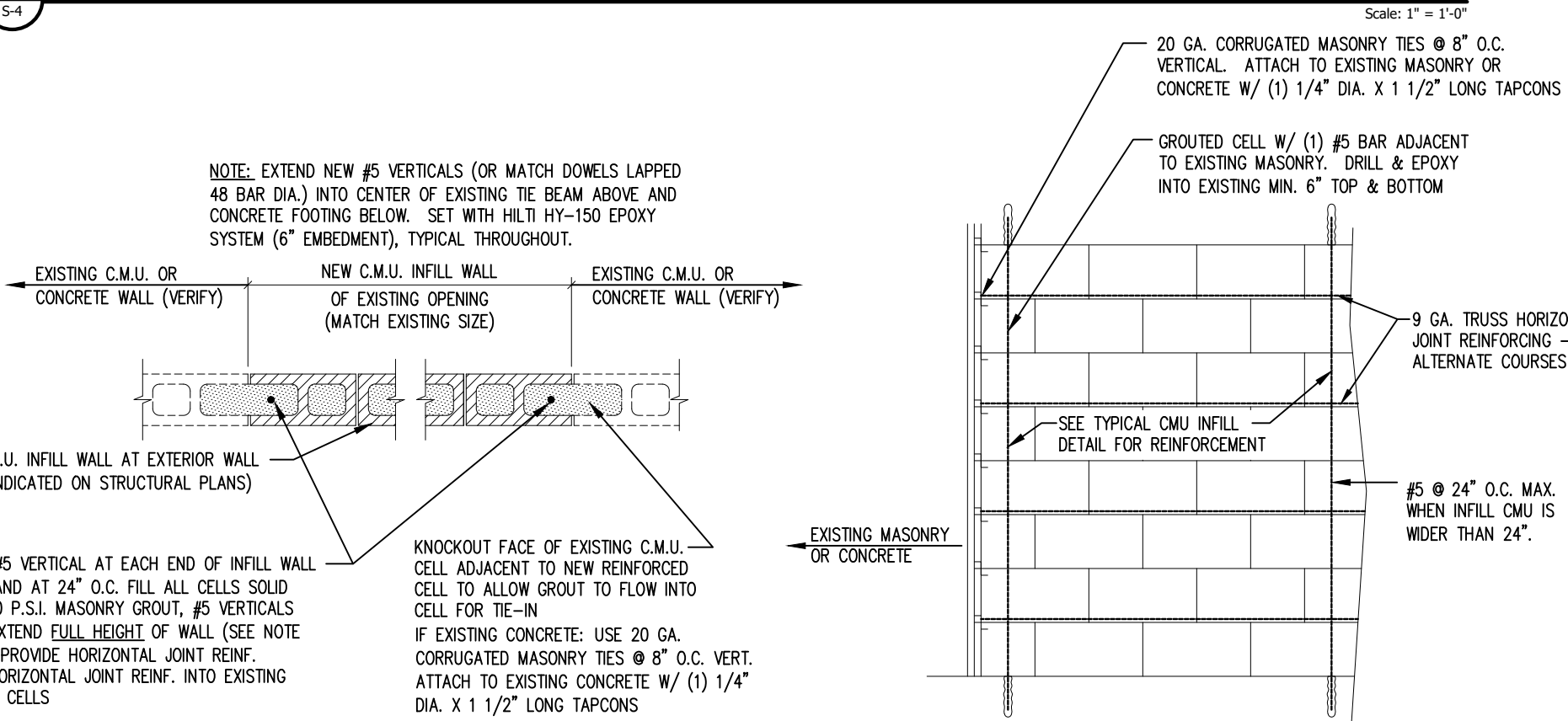
**B SECTION**  
 S-3 Scale: 1/4" = 1'-0"

**CONSTRUCTION**

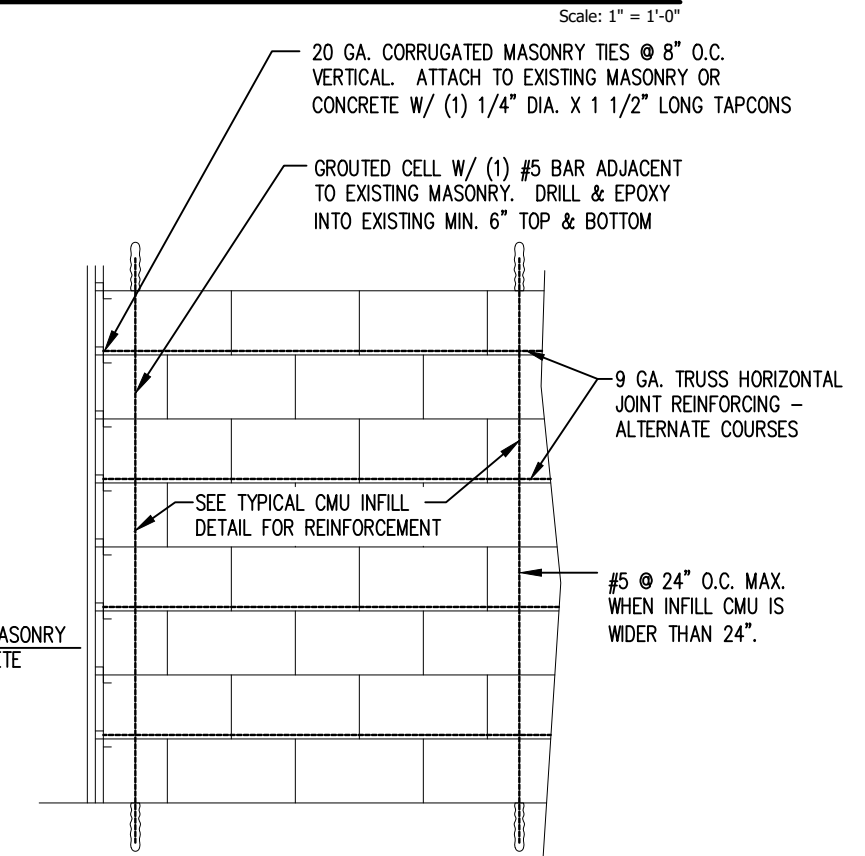


1 TYPICAL RAILING TO CONCRETE DETAIL  
S-4 Scale: 1" = 1'-0"

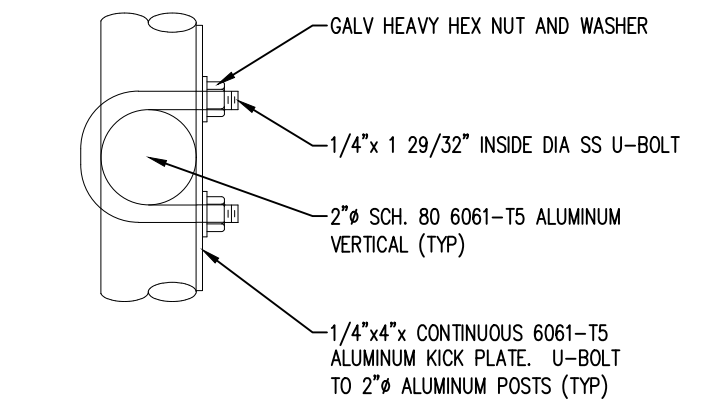
4 TYPICAL TOP MOUNT CONNECTION TO CONCRETE SLAB  
S-4 Scale: N.T.S.



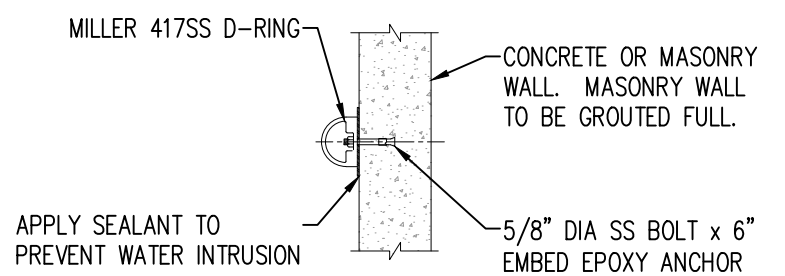
2 TYPICAL CMU INFILL DETAIL  
S-4 Scale: N.T.S.



3 NEW MASONRY ADJACENT TO EXISTING DETAIL  
S-4 Scale: N.T.S.



5 TYPICAL U-BOLT DETAIL  
S-4 Scale: N.T.S.



6 TYPICAL D-RING SECTION  
S-4 Scale: N.T.S.

Date/Time : Wed, 25 Apr 2018 -- 2:04pm  
 User Name : S:\2015-jobs\1866\1\1-design\07\_structural dwgs\CAD\master lift station no. 1\S-4 CMU INFILL AND RAILING DETAILS.dwg  
 Current Plotstyle : ByColor  
 Layout Tab: S-4 CMU INFILL AND RAILING DETAILS  
 Acad Version : R21.0a (LMS Tech)  
 User Name : Dave.Mirelle

NO.	DATE	ISSUED FOR	APRVD BY

DESIGNED:	J.R.B.
DRAWN:	C.A.B.
CHECKED:	J.R.B.
APPROVED:	J.R.B.

JEFFREY R. BERGMANN  
No. 50159

**MATHEWS CONSULTING**  
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 www.baxterwoodman.com EB-31795

VERIFY SCALE	ENGINEER NO.: 160963
1" = 22x34 ORIGINAL DRAWING. ADJUST SCALES AS NECESSARY.	CLIENT PROJECT NO.: 160963
	CAD REF.: 160963M-P-P&S

**WGI**  
 WGI PROJECT NO. 08151866.01

2035 Vista Parkway  
 West Palm Beach, FL 33411  
 Phone No. 561.687.2220  
 Fax No. 561.687.1110  
 Cert No. 6091 - LB No. 7055

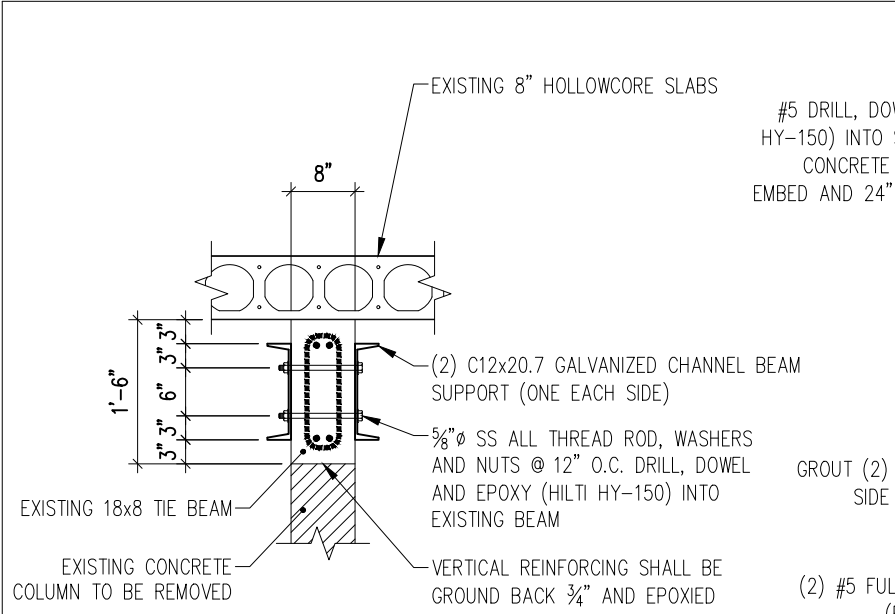
LOXAHATCHEE RIVER ENVIRONMENTAL CONTROL DISTRICT  
 MASTER LIFT STATION No. 1 REHABILITATION

CMU INFILL AND RAILING DETAILS

DATE:	APRIL 2018
SHEET:	20 of 31
DRAWING:	S-4

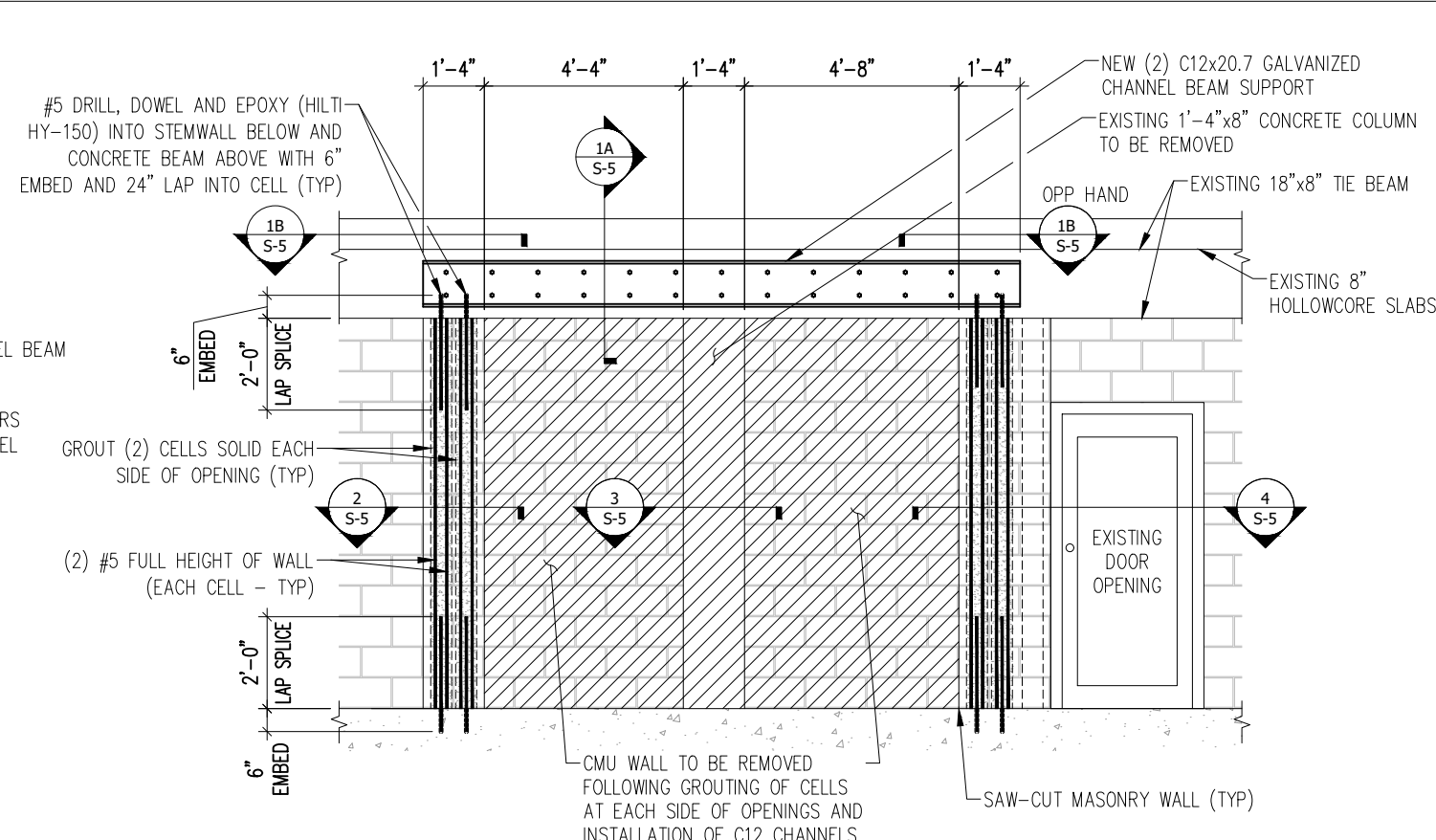
CONSTRUCTION

Date\Time : Wed, 25 Apr 2018 -- 2:04pm  
 User Name : Dore,Mireille  
 Acad Version : R21.0a (LMS Tech)  
 Path\Name : S:\2015-jobs\1866.01 Inec-lift station #1-design\07 structural dwgs\CADD\master lift station no. 1\5-4 CMU INFILL AND RAILING DETAILS.dwg  
 Current Plotstyle : ByColor  
 Layout Tab: 5-5 CMU INFILL DETAILS AND ELEVATION

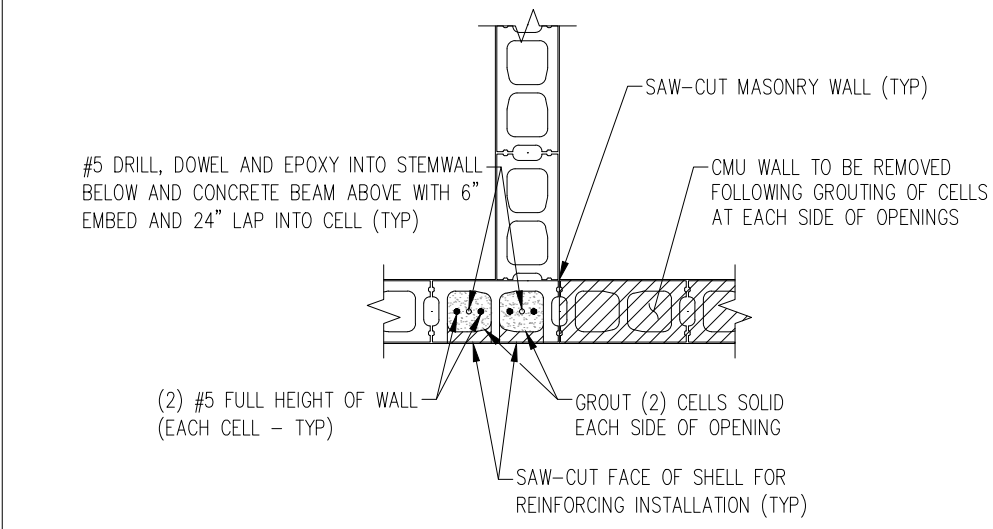


**1A BEAM SUPPORT SECTION**  
Scale: N.T.S.

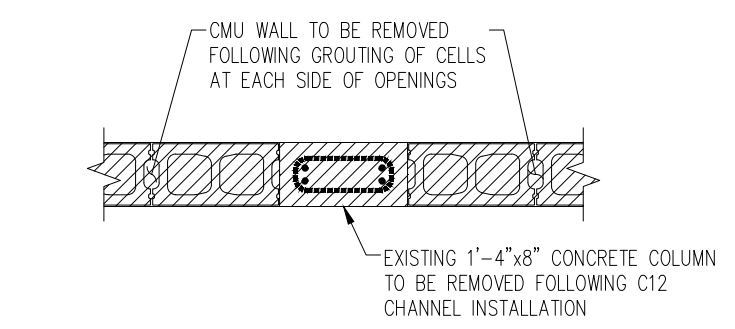
NOTE:  
CONTRACTOR TO RELOCATE ALL CONDUIT AND OTHER APPURTENANCES TO INSTALL C12 CHANNELS



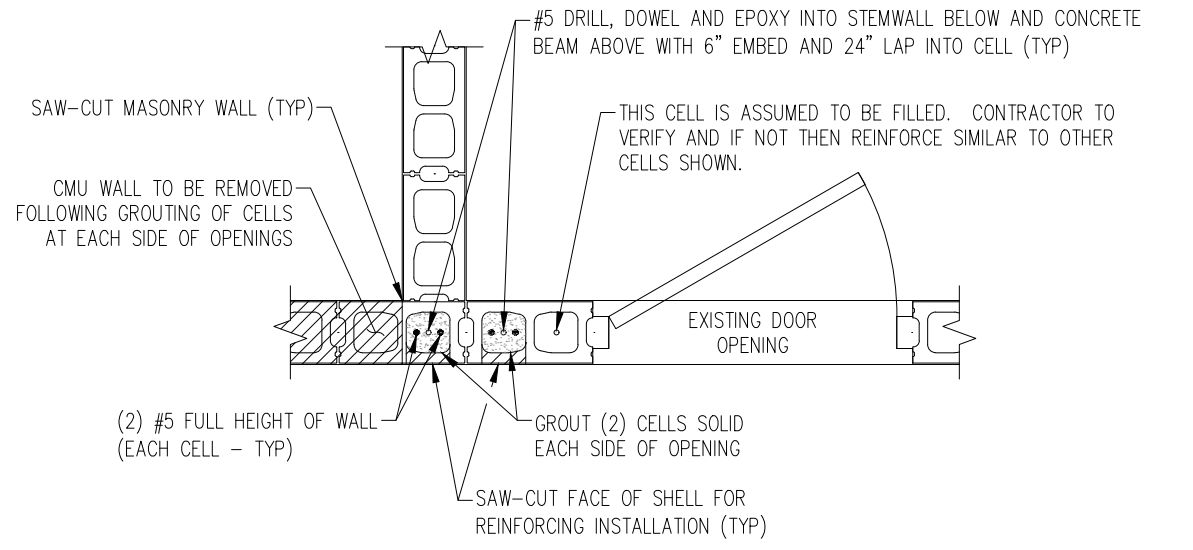
**1 NEW MASONRY OPENINGS**  
Scale: N.T.S.



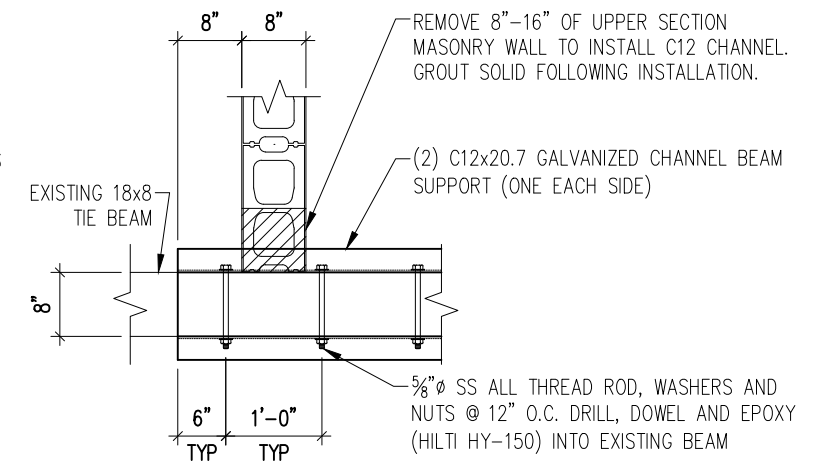
**2 NEW COLUMN AT MASONRY OPENINGS**  
Scale: N.T.S.



**3 EXISTING COLUMN TO BE REMOVED AT NEW MASONRY OPENINGS**  
Scale: N.T.S.



**4 NEW COLUMN AT EXISTING DOOR**  
Scale: N.T.S.



**1B BEAM SUPPORT SECTION**  
Scale: N.T.S.

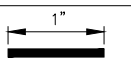
**WGI**  
 WGI PROJECT NO. 08151866.01  
 2035 Vista Parkway  
 West Palm Beach, FL 33411  
 Phone No. 561.687.2220  
 Fax No. 561.687.1110  
 Cert No. 6091 - LB No. 7055

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NO.	DATE	ISSUED FOR	APRVD BY

DESIGNED: J.R.B.  
 DRAWN: C.A.B.  
 CHECKED: J.R.B.  
 APPROVED: J.R.B.

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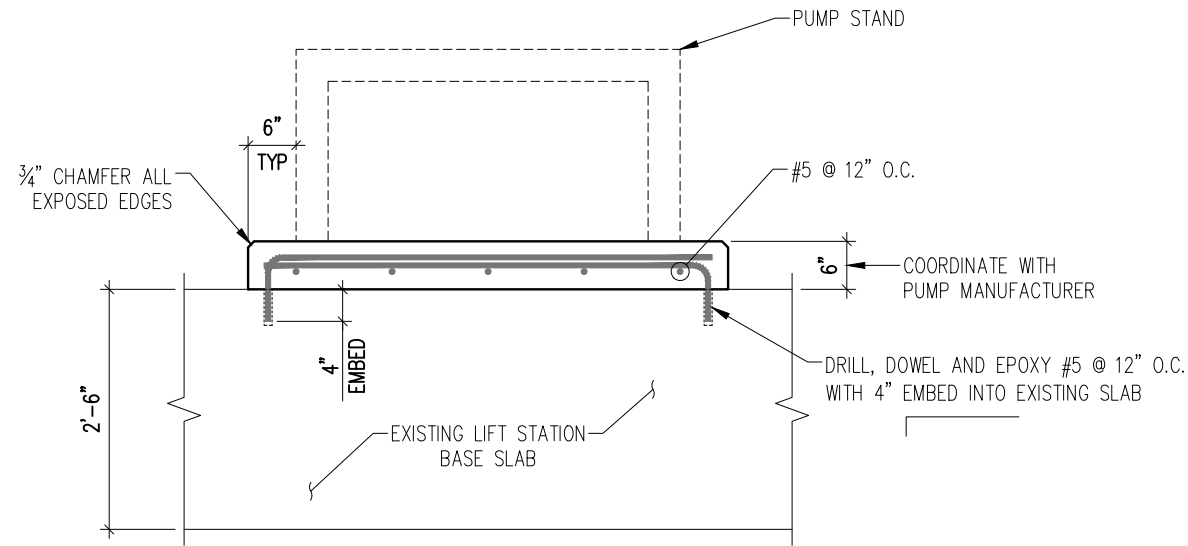
VERIFY SCALE  
  
 BAR IS ONE INCH ON FULL SIZE (22x34) ORIGINAL DRAWING. ADJUST SCALES AS NECESSARY.  
 ENGINEER NO.: 160963  
 CLIENT PROJECT NO.: 160963  
 CAD REF.: 160963M-P-&S

**LOXAHATCHEE RIVER ENVIRONMENTAL CONTROL DISTRICT**  
**MASTER LIFT STATION No. 1 REHABILITATION**  
 CMU INFILL DETAILS AND ELEVATION

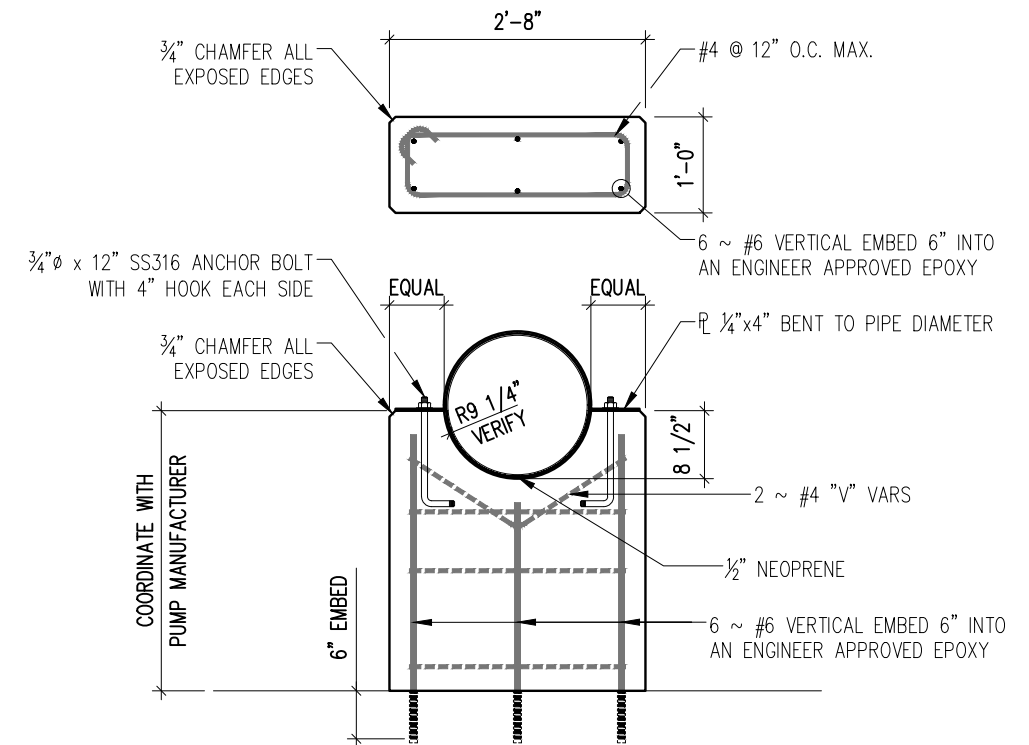
DATE: APRIL 2018  
 SHEET: 21 of 31  
 DRAWING: S-5

**CONSTRUCTION**

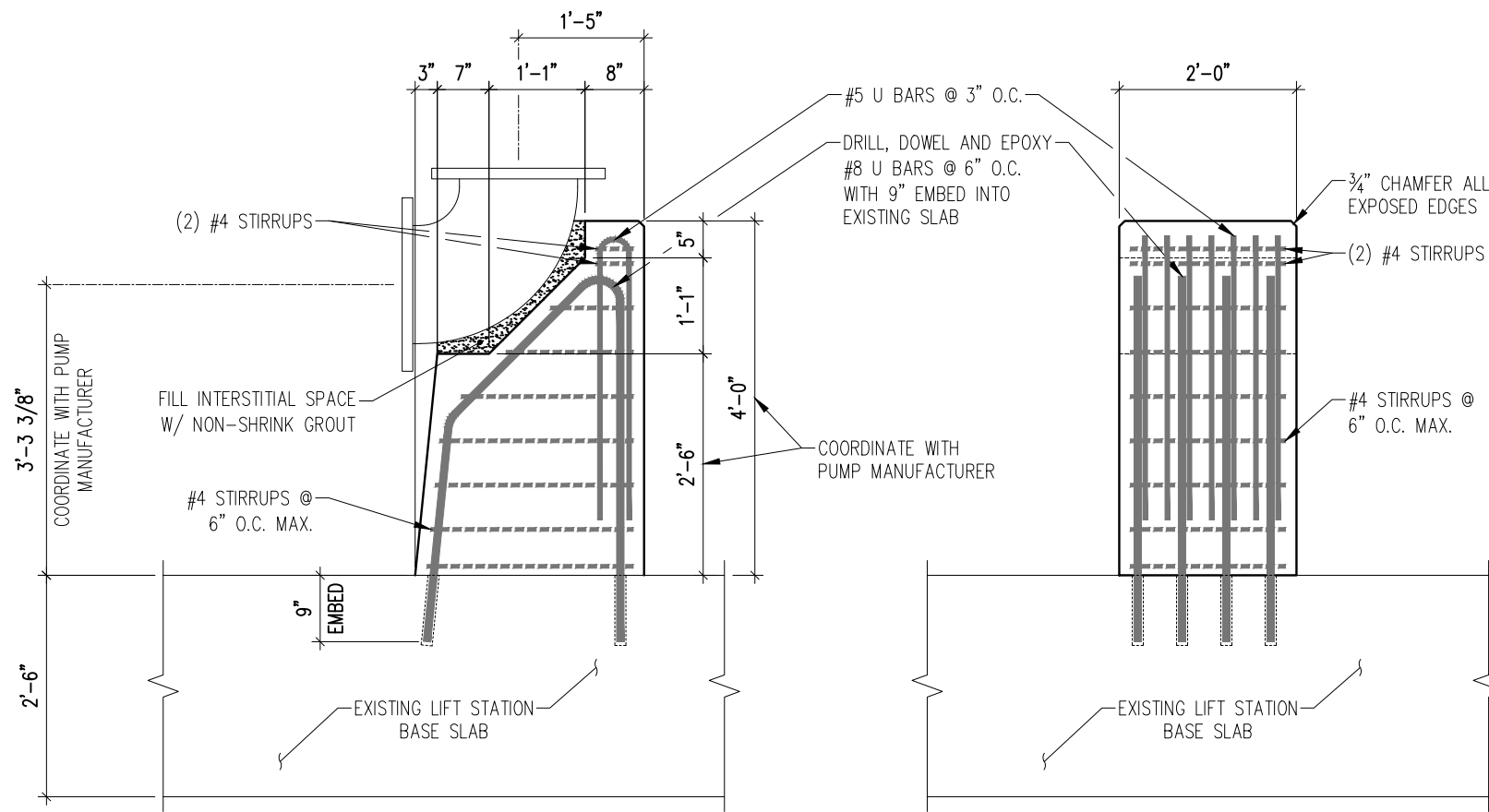
Date/Time : Wed, 25 Apr 2018 - 2:04pm  
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 Current Plotstyle : ByColor  
 Layout Tab: 5-6 PUMP AND PIPING SUPPORT DETAILS  
 User Name : Dore.Mirelle



**1 PUMP SUPPORT SLAB**  
 Scale: 1" = 1'-0"



**2 PIPE SUPPORT DETAIL**  
 Scale: 1" = 1'-0"



**3 16" PIPE THRUST BLOCK DETAIL**  
 Scale: 1" = 1'-0"

**WGI**  
 WGI PROJECT NO. 08151866.01  
 2035 Vista Parkway  
 West Palm Beach, FL 33411  
 Phone No. 561.687.2220  
 Fax No. 561.687.1110  
 Cert No. 6091 - LB No. 7055



**CONSTRUCTION**

Acad Version : R21.0a (LMS Tech)  
 User Name : Dore.Mirelle

NO.	DATE	ISSUED FOR	APRVD BY
			DESIGNED: J.R.B.
			DRAWN: C.A.B.
			CHECKED: J.R.B.
			APPROVED: J.R.B.

JEFFREY R. BERGMANN  
 No. 50159

**MATHEWS CONSULTING**  
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 Phone: 561-655-6175 • Fax: 561-655-6179  
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 BAR IS ONE INCH ON FULL SIZE (22x34) ORIGINAL DRAWING. ADJUST SCALES AS NECESSARY.

ENGINEER NO.: 160963  
 CLIENT PROJECT NO.: 160963  
 CAD REF.: 160963M-P-P&S

LOXAHATCHEE RIVER  
 ENVIRONMENTAL CONTROL DISTRICT  
 MASTER LIFT STATION No. 1 REHABILITATION  
 PUMP AND PIPING SUPPORT DETAILS

DATE: APRIL 2018  
 SHEET: 22 of 31  
 DRAWING: S-6

Date: Time : Wed, 25 Apr 2018 -- 2:04pm  
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 Layout Tab: S-7 CONCRETE REPAIR PROCEDURES  
 Acad Version : R21.0a (LMS Tech)  
 User Name : Dave.Mirelle

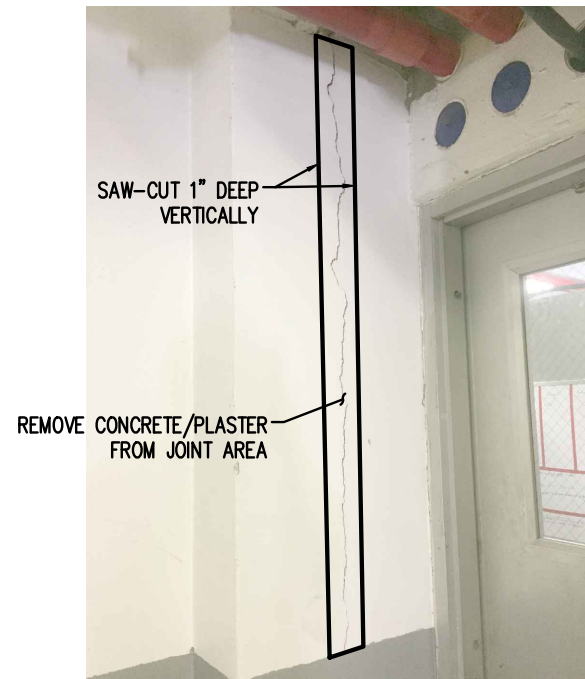


PHOTO S-7.1

1. CRACKED AND DELAMINATED CONCRETE TO BE REPAIRED USING REPAIR PROCEDURE 2.

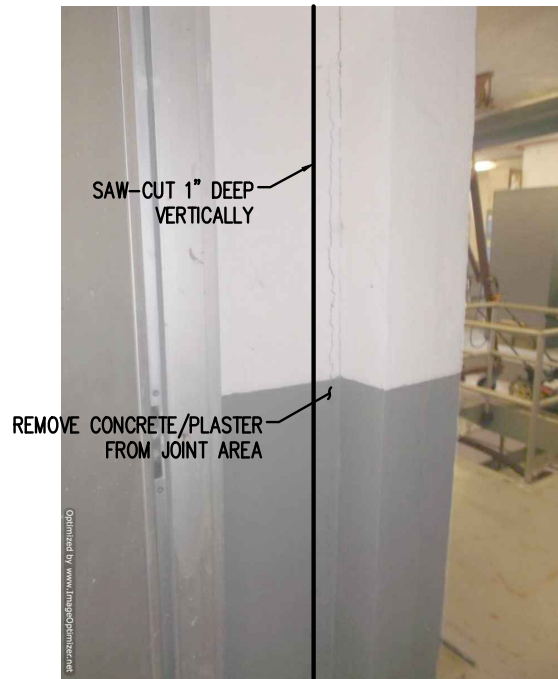


PHOTO S-7.2

1. CRACKED AND DELAMINATED CONCRETE TO BE REPAIRED USING REPAIR PROCEDURE 2.

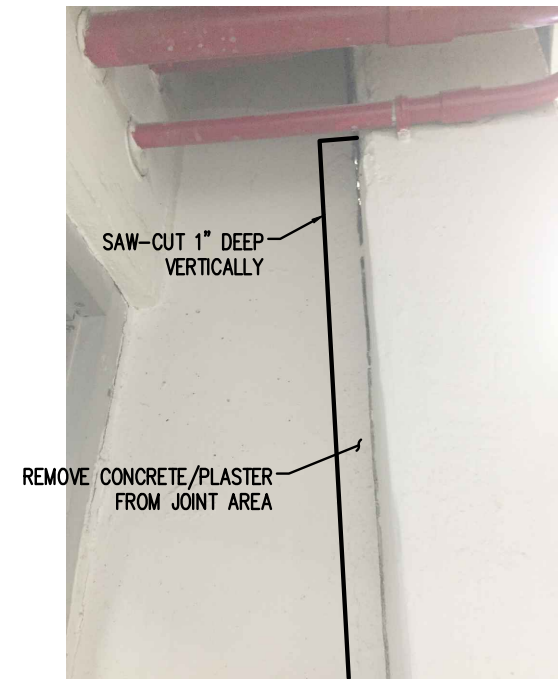


PHOTO S-7.3

1. CRACKED AND DELAMINATED CONCRETE TO BE REPAIRED USING REPAIR PROCEDURE 2.

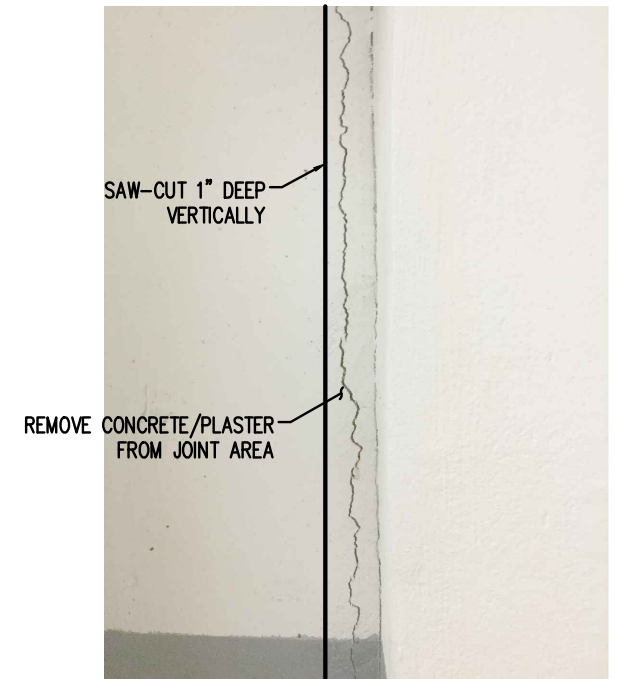
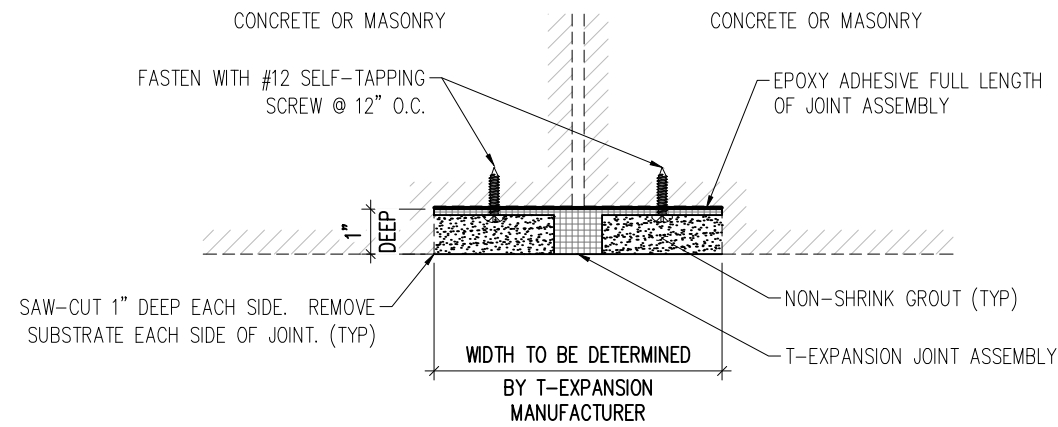
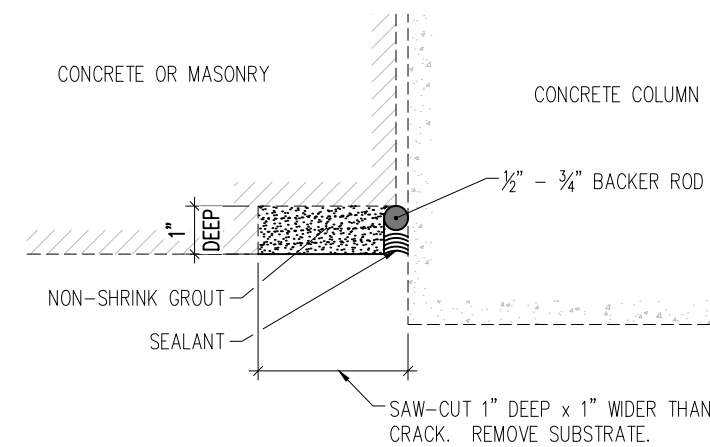


PHOTO S-7.4

1. CRACKED AND DELAMINATED CONCRETE TO BE REPAIRED USING REPAIR PROCEDURE 2.



1 EXPANSION JOINT DETAIL  
S-7 Scale: N.T.S.



2 BACKER ROD DETAIL  
S-7 Scale: N.T.S.

**WGI**  
 WGI PROJECT NO. 08151866.01  
 2035 Vista Parkway  
 West Palm Beach, FL 33411  
 Phone No. 561.687.2220  
 Fax No. 561.687.1110  
 Cert No. 6091 - LB No. 7055




NO.	DATE	ISSUED FOR	APRVD BY

DESIGNED:	J.R.B.
DRAWN:	C.A.B.
CHECKED:	J.R.B.
APPROVED:	J.R.B.

JEFFREY R. BERGMANN  
 No. 50159

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ENGINEER NO.: 160963  
 CLIENT PROJECT NO.: 160963  
 CAD REF.: 160963M-P-P&S

LOXAHATCHEE RIVER  
 ENVIRONMENTAL CONTROL DISTRICT  
 MASTER LIFT STATION No. 1 REHABILITATION  
 CONCRETE REPAIR PROCEDURES

DATE: APRIL 2018  
 SHEET: 23 of 31  
 DRAWING: S-7

CONSTRUCTION



W:\2\_Active Projects\Mathews Consulting\ENCONILS #19\_Construction\DWGS\E-01 NOTE.dwg, 24 X 36, 4/25/2018 3:03:51 PM, RMeeks

Acad Version : R20.0s (LMS Tech) User Name : RMeeks Date/Time : Wed, 25 Apr 2018 - 3:03pm Current Plot Style : BColor Layout Tab: 24 X 36 Path Name : W:\2\_Active Projects\Mathews Consulting\ENCONILS #19\_Construction\DWGS\E-01 NOTE.dwg

GENERAL SYMBOLS (Tags)		PLAN SYMBOLS		SINGLE LINE DIAGRAM SYMBOLS		ABBREVIATIONS		ABBREVIATIONS (CONTINUED)	
	ALARM INDICATING LIGHT		HOME RUN TO PANELBOARD. NO. OF ARROWS INDICATE NO. OF CIRCUITS, HASH MARKS INDICATE NO. OF #12 AWG. CONDUCTORS. NO HASH MARKS INDICATE 2 #12 CONDUCTORS.		MOLDED CASE CIRCUIT BREAKER	A	AMPERES	SSC	SOLID STATE CONTACTOR
	AMMETER		CONDUIT CONCEALED IN WALL, IN SLAB ABOVE, OR ABOVE CEILING		TYPICAL SELECTOR SWITCH AND CONTROL. SEE ELEMENTARY DIAGRAMS FOR EXACT TYPE.	AE	AIR COOLED CONDENSING UNIT	SSM	SOLID STATE MODE
	ANALYZING INDICATING TRANSMITTER		CONDUIT CONCEALED IN OR BELOW FLOOR OR UNDERGROUND.		SERVICE OR EQUIPMENT GROUND.	AER	AERATOR	SSS	SOLID STATE STARTER
	ALARM RELAY (LOW OIL)		CONDUIT RUN EXPOSED. RUN PARALLEL OR PERPENDICULAR TO STRUCTURE OR WALL.		NON-FUSIBLE DISCONNECT SWITCH, 30A,3P UNLESS OTHERWISE INDICATED.	AFF	ABOVE FINISHED FLOOR	STR	STARTER
	THREE PHASE AMP SWITCH		FLEXIBLE CONDUIT WITH EQUIPMENT CONNECTION.		CURRENT TRANSFORMERS	AHU	AIR HANDLING UNIT	SUPP	SUPPRESSOR
	ALARM TIMER		90A, 208V, 1Ø WELDING OUTLET		POTENTIAL TRANSFORMERS	AIC	AMPS INTERRUPTING CURRENT	SW	SWITCH
	CONTROL RELAY		20A, 125V, 3W DUPLEX RECEPTACLE IN FLUSH OUTLET BOX, 18" ABOVE FINISHED FLOOR.		CONTROL DIAGRAM SYMBOLS	AIT	ANALYZER INDICATING TRANSMITTER	SWGR	SWITCHGEAR
	ELAPSED TIME METER		20A, 125V, 3W DUPLEX RECEPTACLE IN FLUSH OUTLET BOX, 48" ABOVE FINISHED FLOOR OR 2" ABOVE COUNTER AS REQUIRED.		FLOW SWITCH, NORMALLY OPEN	ATS	AUTOMATIC TRANSFER SWITCH	TBR	TO BE REMOVED
	FUSED DISCONNECT SWITCH (30/20: 30=SWITCH RATING, 20=FUSE RATING)		20A, 125V, 3W DUPLEX RECEPTACLE, SURFACE MOUNTED.		FLOW SWITCH, NORMALLY CLOSED	AUX	AUXILIARY	TC	TERMINATION CABINET
	FLOW ELEMENT		20A, 125V, 3W DUPLEX RECEPTACLE IN NEMA 4 SERVICE OUTLET BOX. RECEPTACLES SHALL BE GFI TYPE, EXCEPT FOR RECEPTACLES DEDICATED TO HEAT TRACING, WHICH SHALL BE POWERED FROM A GFI BREAKER.		TEMPERATURE SWITCH, NORMALLY OPEN	BKR	BREAKER	TR	TRANSFORMER
	FLOW INDICATING TRANSMITTER		SINGLE POLE SWITCH IN FLUSH OUTLET BOX, 48" ABOVE FINISHED FLOOR, UNLESS OTHERWISE NOTED (TYPICAL).		TEMPERATURE SWITCH, NORMALLY CLOSED	BLDG	BUILDING	TYP	TYPICAL
	FLOW SWITCH		NON-FUSIBLE DISCONNECT SWITCH, 30A,3P UNLESS OTHERWISE INDICATED.		NORMALLY OPEN, TIMED TO CLOSE CONTACT	CB	CABINET	UG	UNDERGROUND
	JUNCTION BOX N.E.C. SURFACE MTD UNLESS INDICATED OTHERWISE.		MOTOR DUTY, SINGLE PHASE DISCONNECT, NEMA 4X STAINLESS STEEL		NORMALLY CLOSED, TIMED TO OPEN CONTACT	CDCP	CIRCUIT BREAKER	UON	UNLESS OTHERWISE NOTED
	JUNCTION BOX PER N.E.C., FLUSH MTD UNLESS INDICATED OTHERWISE.		POWER MANHOLE. SEE "MANHOLE DETAIL"		NORMALLY CLOSED, TIMED TO CLOSE CONTACT	CU	CLARIFIER DRIVE CONTROL PANEL	UPS	UNINTERRUPTIBLE POWER SUPPLY
	LEVEL INDICATING TRANSMITTER		DISCONNECT RACK MOUNTED		NORMALLY OPEN, TIMED TO OPEN CONTACT	DH	COPPER	UV	ULTRAVIOLET
	LIQUID LEVEL SWITCH		REMOTE CONTROL DEVICE AND DISCONNECT RACK MOUNTED		DUPLEX RECEPTACLE	DISC	DISCONNECT	V	VOLT
	LIMIT SWITCH				NORMALLY OPEN CONTACT	DO	DIGITAL OUTPUT	VFD	VARIABLE FREQUENCY DRIVE
	HIGH LEVEL FLOAT SWITCH				NORMALLY CLOSED CONTACT	DPDT	DOUBLE POLE DOUBLE THROW	W	WATT
	MOTOR STARTER				LIMIT SWITCH, NORMALLY OPEN	DPIT	DIFFERENTIAL PRESSURE INDICATING TRANSMITTER	W/	WITH
	MOTORIZED VALVE				LIMIT SWITCH, NORMALLY CLOSED	DPST	DOUBLE POLE SINGLE THROW	WP	WEATHERPROOF
	OFF REMOTE				PRESSURE SWITCH, NORMALLY OPEN	DWG	DRAWING	Ø	PHASE
	PHOTOCELL				PRESSURE SWITCH, NORMALLY CLOSED	EA	EACH		
	PUMP FAIL TIMER				FLOAT SWITCH, NORMALLY OPEN	EFF	EFFLUENT		
	PRESSURE INDICATING TRANSMITTER				MOMENTARY CONTACT PUSHBUTTON	ELEC	ELECTRICAL		
	PRESSURE SWITCH				MOMENTARY BREAK PUSHBUTTON OR RESET	ELR	EMERGENCY LOCK-OUT RELAY		
	RUN INDICATING LIGHT				KEYED SWITCH	EM	EMERGENCY		
	CEILING MOUNTED SPEAKER				MAINTAINED CONTACT ON-OFF SWITCH	ENCL	ENCLOSURE		
	SEAL FAIL SWITCH				START/STOP (S/S) CONTROL SWITCH MAINTAINED CONTACT	ESB	ENERGY SAVING BALLAST		
	THERMOSTAT				THREE POSITION MAINTAINED CONTACT SELECTOR SWITCH	ETM	ELAPSED TIME METER		
	TERMINATION CABINET				MOLDED CASE CIRCUIT BREAKER	EUH	ELECTRIC UNIT HEATER		
	TIMING RELAY				CONTROL POWER TRANSFORMER	EVA	ELECTRIC VALVE ACTUATOR		
	TEMPERATURE SWITCH				MCC OR VFD TERMINAL FOR REMOTE FIELD WIRING	EXH	EXHAUST		
	VOLTMETER					EXIST	EXISTING		
	ELECTRIC A.C. MOTOR, NO. INDICATES HORSEPOWER.					F&I	FURNISH AND INSTALL		
	FLUSH OR SURFACE MOUNTED LIGHTING PANELBOARD.					FBPC	FILTER BACKWASH CONTROL PANEL		
	FLUSH OR SURFACE MOUNTED POWER PANELBOARD.					FCP	FILTER CONTROL PANEL		
	FUSE					FE	FLOW ELEMENT		
	EXISTING					FIT	FLOW INDICATING TRANSMITTER		
	FUTURE					FSL	FLOW SWITCH LOW		
	PROPOSED					FVC	FULL VOLTAGE CONTACTOR		

- ### GENERAL NOTES
- ALL WORK SHALL COMPLY WITH 2014 N.E.C., FLORIDA BUILDING CODE 6th ADDITION (2017) AND LOCAL CODES.
  - CONDUCTORS SHALL NOT BE SPLICED EXCEPT AS NOTED IN SPECS.
  - ALL CONDUITS SHALL HAVE A BOND WIRE SIZED PER TABLE 250-122 OF THE N.E.C. (UNLESS OTHERWISE NOTED).
  - PROVIDE 4 INCH CONCRETE EQUIPMENT PADS FOR ALL FREE-STANDING PANELS, MCC'S ETC.
  - ALL CONTROL PANELS SHALL BE UL LISTED, AND SHALL COMPLY WITH ARTICLE 409 OF N.E.C.

NO.	DATE	ISSUED FOR	APRV'D BY

DESIGNED: LMR  
 DRAWN: RRM  
 CHECKED: DD  
 APPROVED: LMR

LILLIAN M. REYES, P.E.  
 No. 50780

**MATHEWS CONSULTING**  
 a BAXTER & WOODMAN company

477 S. Rosemary Avenue, Suite 330, West Palm Beach, Florida 33401  
 Phone: 561-655-8175 • Fax: 561-655-8179  
 www.baxterwoodman.com EB-31795

VERIFY SCALE

1" = 1"

BAR IS ONE INCH ON FULL SIZE (22x34) ORIGINAL DRAWING. ADJUST SCALES AS NECESSARY.

ENGINEER NO.: 160963  
 CLIENT PROJECT NO.: 160963  
 CAD REF.: E-01 NOTE

LOXAHATCHEE RIVER ENVIRONMENTAL CONTROL DISTRICT MASTER LIFT STATION No. 1 REHABILITATION

ELECTRICAL NOTES, SYMBOLS AND ABBREVIATIONS

DATE: APRIL 2018  
 SHEET: 24 of 31  
 DRAWING: E-1

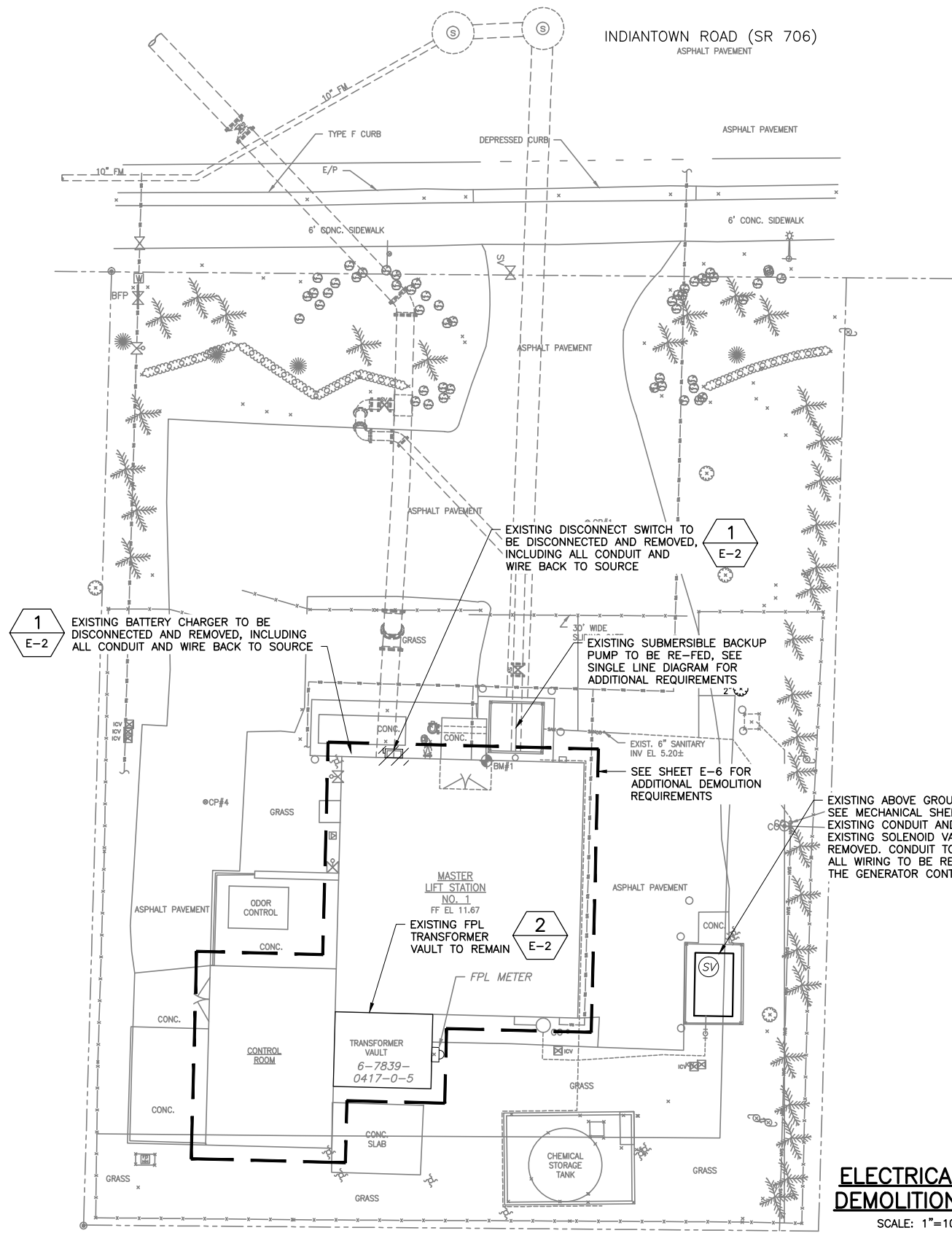
**EDA**  
 Electrical Design Associates  
 8401 LAKE WORTH ROAD, SUITE 221  
 LAKE WORTH, FLORIDA 33467  
 PHONE: (561) 819-5556  
 FAX: (561) 819-5557  
 C.O.A. No. 8079  
 LILLIAN M. REYES, P.E.  
 Florida P.E. No. 50780

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W:\2\_Active Projects\Mathews Consulting\ENCONILS #19\_Construction\dwgs\E-02 SITE.dwg, 24 X 36, 4/25/2018 3:03:57 PM, RMeeks

Date/Time : Wed, 25 Apr 2018 - 3:03pm  
 Path Name : W:\2\_Active Projects\Mathews Consulting\ENCONILS #19\_Construction\dwgs\E-02 SITE.dwg  
 User Name : RMeeks



NOTES:  
 1. CONTRACTOR TO COORDINATE POWER INTERRUPTION WITH FPL SERVICE PLANNER AND THE OWNER.

**ELECTRICAL SITE DEMOLITION PLAN**  
 SCALE: 1"=10'-0"  
 10' 5' 0' 10'

EXISTING BATTERY CHARGER TO BE DISCONNECTED AND REMOVED, INCLUDING ALL CONDUIT AND WIRE BACK TO SOURCE

EXISTING DISCONNECT SWITCH TO BE DISCONNECTED AND REMOVED, INCLUDING ALL CONDUIT AND WIRE BACK TO SOURCE



**1**  
E-2  
**FIGURE NO. 1**  
SCALE: N.T.S.

EXISTING FPL TRANSFORMER VAULT TO REMAIN



**2**  
E-2  
**FIGURE NO. 2**  
SCALE: N.T.S.

**EDA**  
 Electrical Design Associates  
 8401 LAKE WORTH ROAD, SUITE 221  
 LAKE WORTH, FLORIDA 33467  
 PHONE: (561) 819-5556  
 FAX: (561) 819-5557  
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				DRAWN:	RRM
				CHECKED:	DD
				APPROVED:	LMR

LILLIAN M. REYES, P.E.  
No. 50780

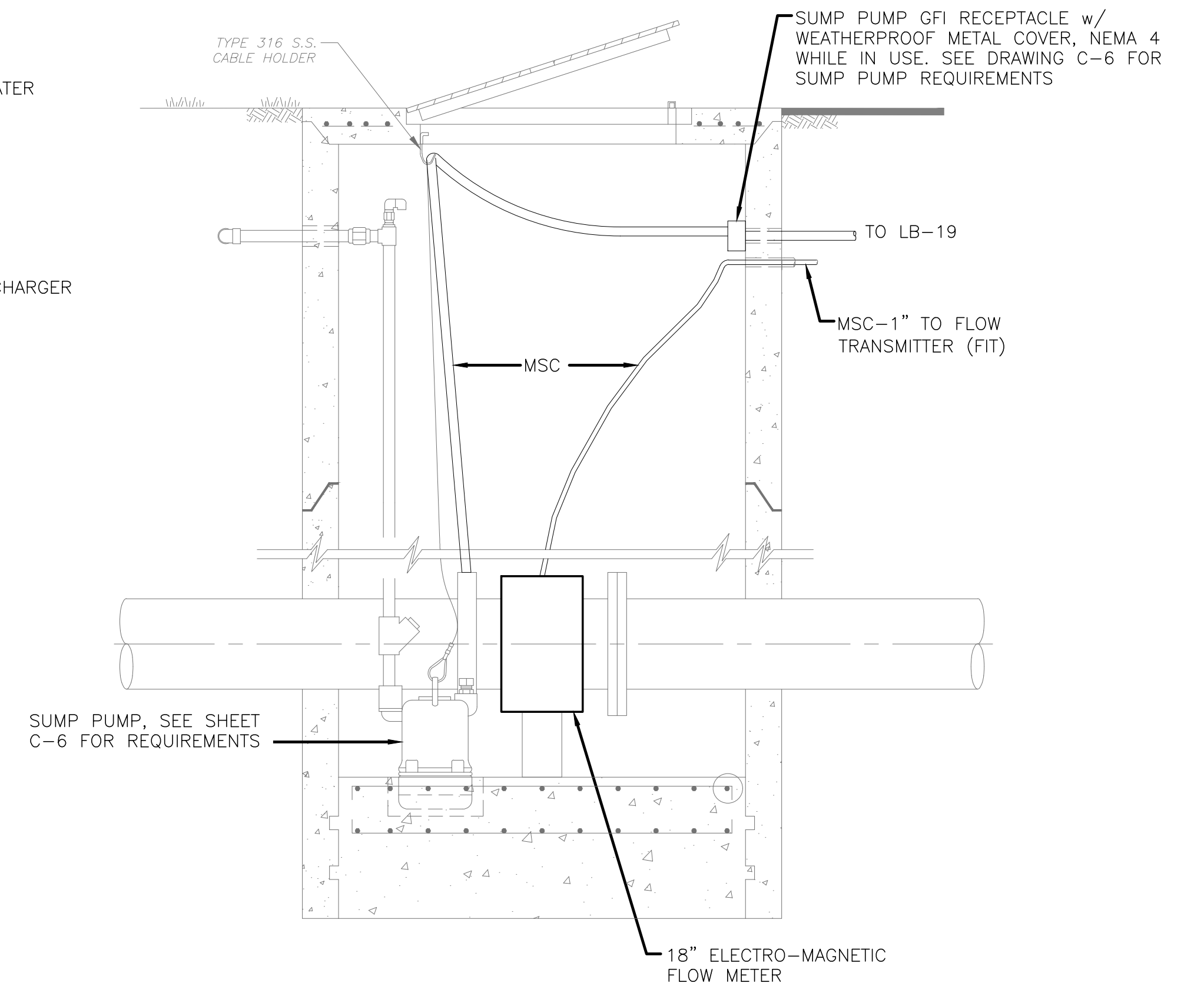
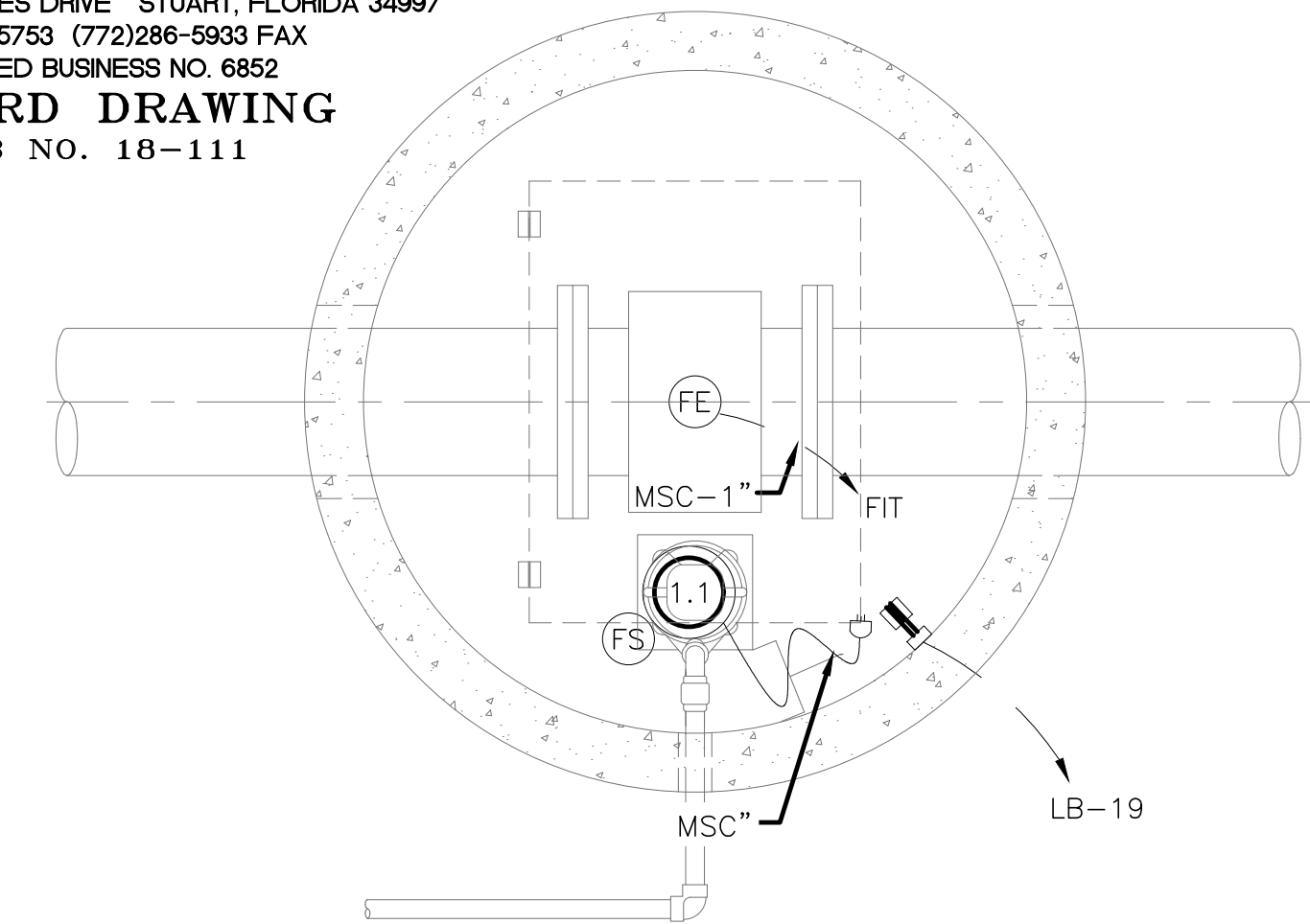
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 477 S. Rosemary Avenue, Suite 330, West Palm Beach, Florida 33401  
 Phone: 561-655-6175 Fax: 561-655-6179  
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 1"  
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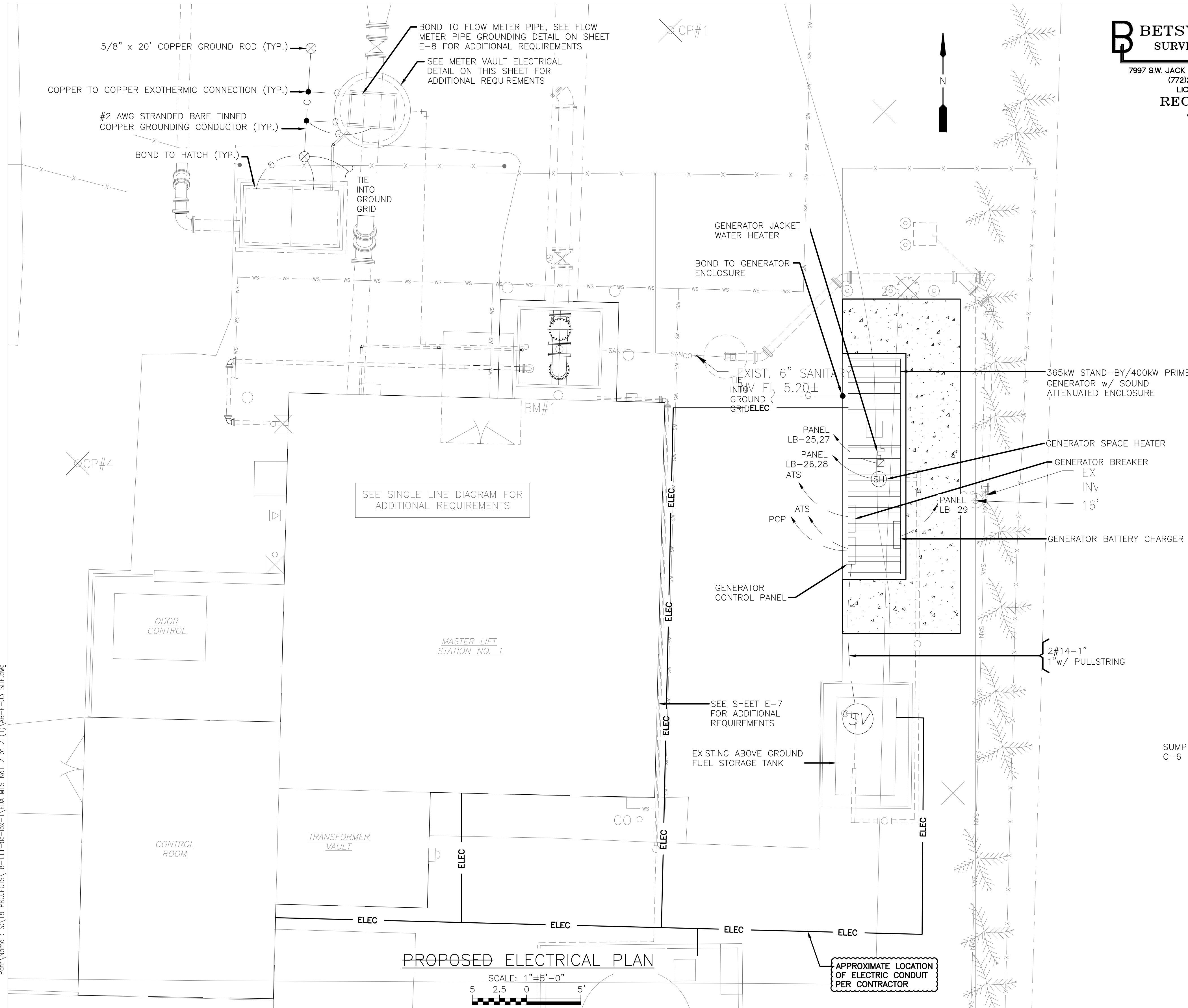
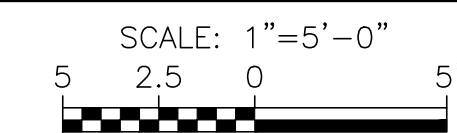
ENGINEER NO.: 160963  
 CLIENT  
 PROJECT NO.: 160963  
 CAD REF.: E-02 SITE

**LOXAHATCHEE RIVER ENVIRONMENTAL CONTROL DISTRICT**  
**MASTER LIFT STATION No. 1 REHABILITATION**  
 ELECTRICAL SITE DEMOLITION PLAN

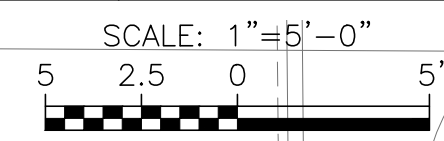
DATE: APRIL 2018  
 SHEET: 25 of 31  
 DRAWING: E-2



METER VAULT ELECTRICAL DETAIL



PROPOSED ELECTRICAL PLAN



APPROXIMATE LOCATION OF ELECTRIC CONDUIT PER CONTRACTOR

Acad Version : R22.0s (LMS Tech)  
User Name : User  
Date\Time : Wed, 29 Jun 2020 - 4:03pm  
Path Name : S:\18 - PROJECTS\18-111-HC-10X-1\EDA\MLS No. 2 of 2 (7)AB-E-03 SITE.dwg  
Current Plot Style : Bicolor  
Layout Tab: 22 x 34

NO.	DATE	ISSUED FOR	APRVD BY

DESIGNED: J.A.P.  
DRAWN: J.A.J.  
CHECKED: R.L.M.  
APPROVED: D.L.M.

JASON A. PUGSLEY, P.E.  
No. 67426

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ENGINEER NO.:  
CLIENT PROJECT NO.:  
CAD REF.:

**LOXAHATCHEE RIVER ENVIRONMENTAL CONTROL DISTRICT**

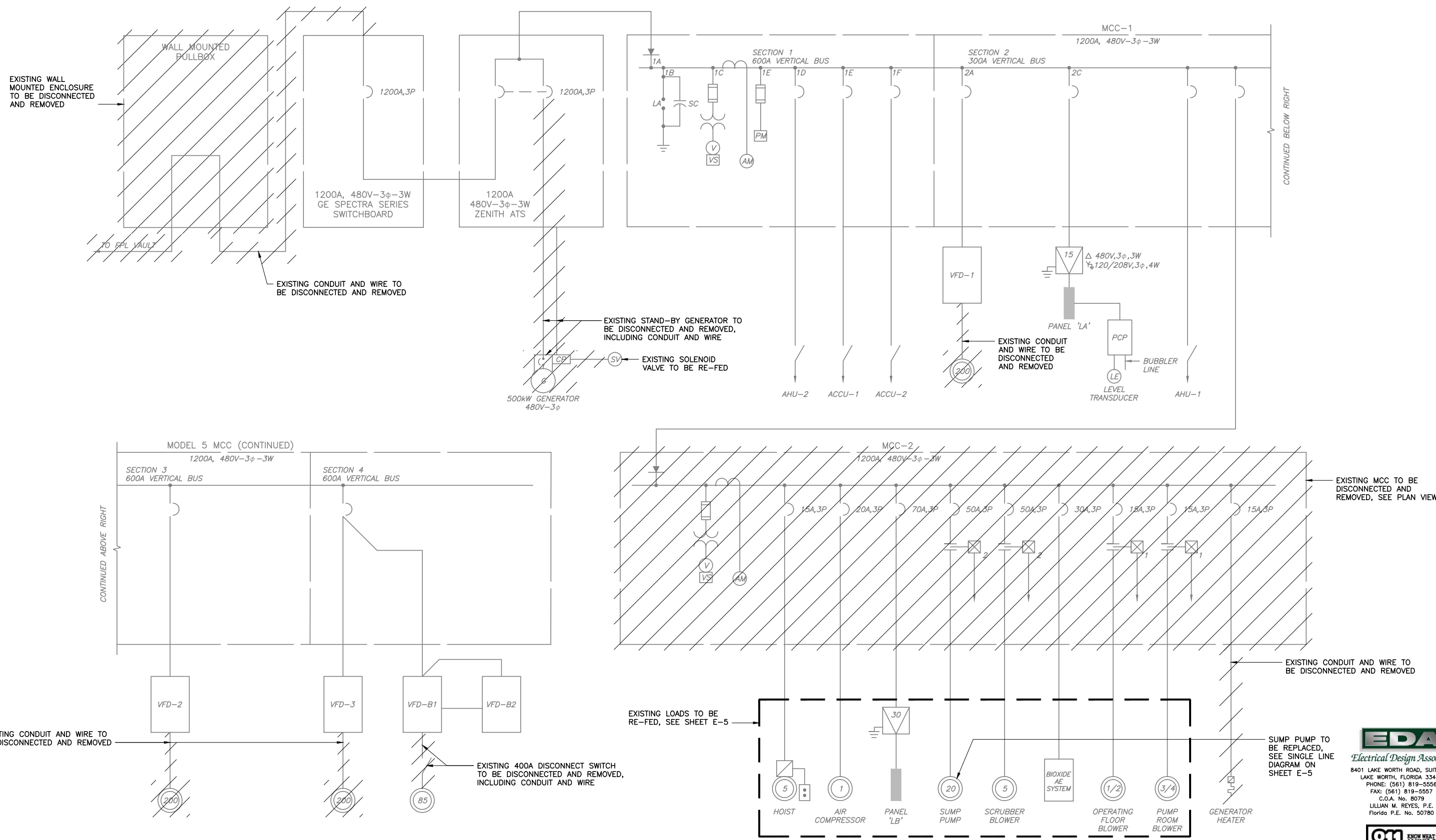
MASTER LIFT STATION NO. 1 REHABILITATION

PROPOSED ELECTRICAL PLAN  
**RECORD DRAWING**

DATE:
SHEET: 26 of
DRAWING: E-3

W:\12\_Active Projects\Mathews Consulting\ENCONILS #19\_Construction\DWG\IE-04 DEMO SLD.dwg, 22 X 34, 4/25/2018 3:04:06 PM, RMeeks

Acad Version : R20.0s (LMS Tech) User Name : RMeeks Date/Time : Wed, 25 Apr 2018 - 3:04pm Current Plot Style : BColor Layout Tab: 22 X 34 Path Name : W:\12\_Active Projects\Mathews Consulting\ENCONILS #19\_Construction\DWG\IE-04 DEMO SLD.dwg



NO.	DATE	ISSUED FOR	APRV'D BY

DESIGNED: LMR  
 DRAWN: RRM  
 CHECKED: DD  
 APPROVED: LMR

LILLIAN M. REYES, P.E.  
 No. 50780

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ENGINEER NO.: 160963  
 CLIENT PROJECT NO.: 160963  
 CAD REF.: E-04 DEMO SLD

LOXAHATCHEE RIVER ENVIRONMENTAL CONTROL DISTRICT  
 MASTER LIFT STATION No. 1 REHABILITATION

DEMOLITION SINGLE LINE DIAGRAM

DATE: APRIL 2018  
 SHEET: 27 of 31  
 DRAWING: E-4

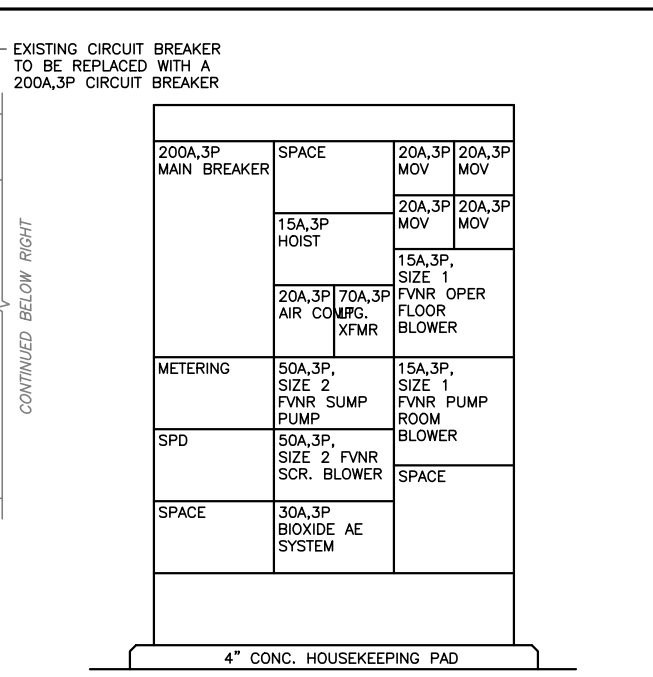
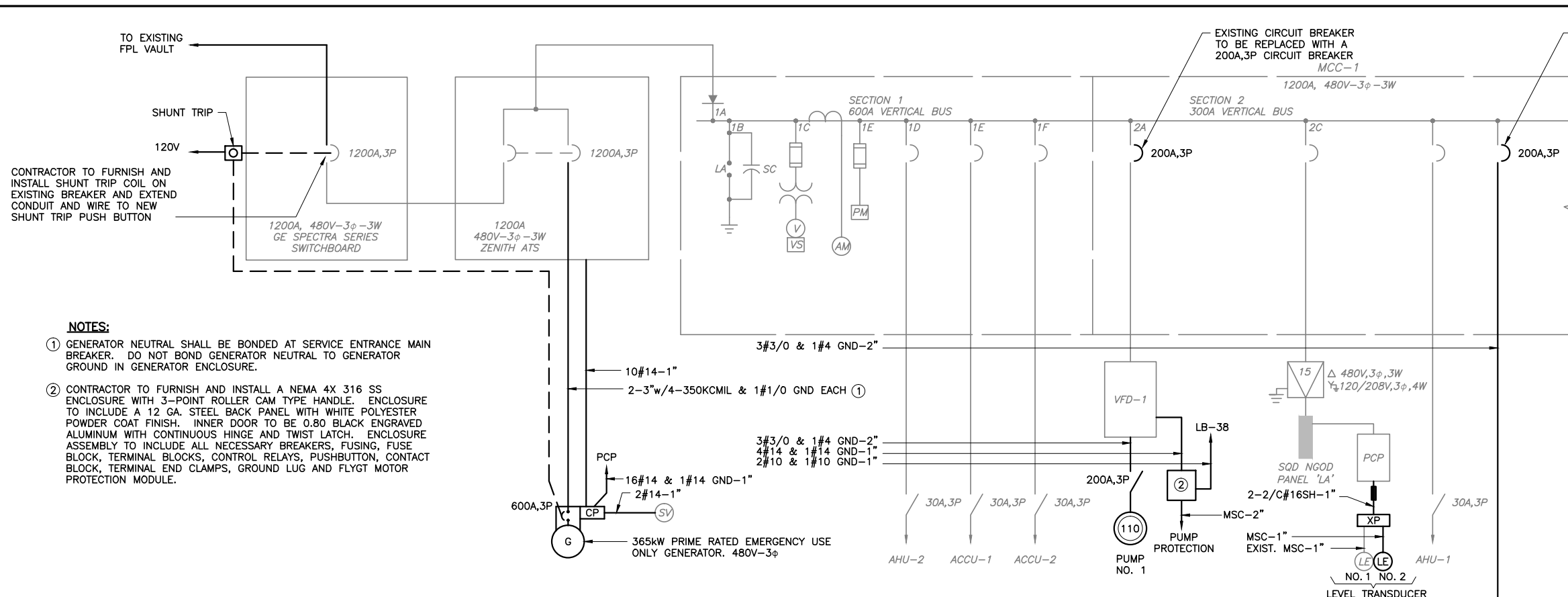
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Date/Time: Wed, 25 Apr 2018 - 3:04pm  
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 Layout Tab: 22 X 34

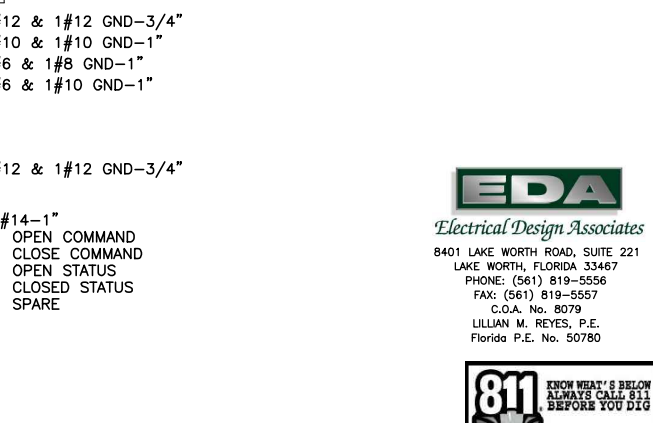
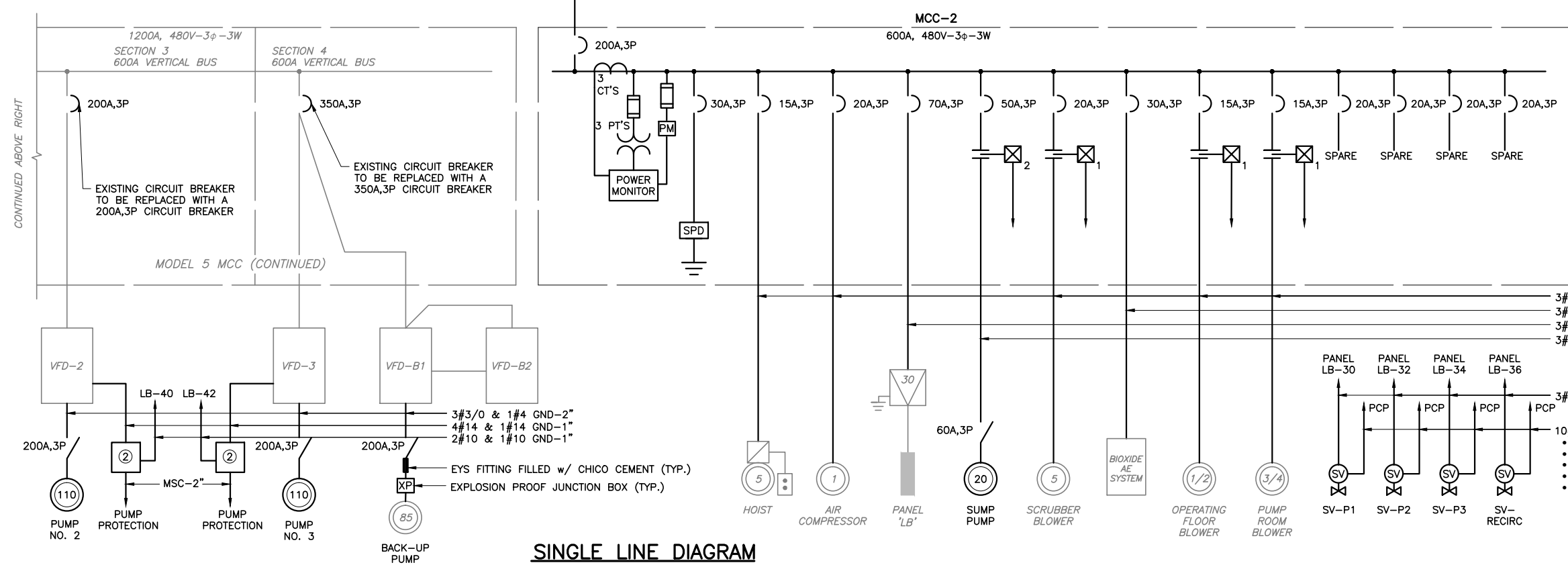


**LOAD TABULATION**  
480V-3φ

DESCRIPTION	LOAD	AMPACITY
<b>MCC-1</b>		
PUMPS	3 @ 110.0 HP	= 396.00 AMPS
BACKUP PUMP	1 @ 85.0 HP	= 102.00 AMPS
① AHU	2 @ 2.0 HP	= 6.80 AMPS
① ACCU	2 @ 2.0 HP	= 6.80 AMPS
① PANEL LA	- @ 15.0 kVA	= 18.04 AMPS
<b>MCC-2</b>		
① HOIST	1 @ 5.0 HP	= 7.60 AMPS
① AIR COMP.	1 @ 1.0 HP	= 2.10 AMPS
① PANEL LB	1 @ 15.0 kVA	= 18.04 AMPS
① SUMP PUMP	1 @ 20.0 HP	= 27.00 AMPS
① SCRUB BLOWER	1 @ 5.0 HP	= 7.60 AMPS
① BIOXIDE SYSTEM	1 @ 5.0 HP	= 7.60 AMPS
① FLOOR BLOWER	1 @ 0.5 HP	= 1.10 AMPS
① PUMP ROOM BLOWER	1 @ 0.75 HP	= 1.60 AMPS
	CONNECTED LOAD	= 602.28 AMPS
	DEMAND LOAD @ 70%	= 421.60 AMPS

**NOTES:**

- AMPACITIES PER TABLE 430-250 OF THE NATIONAL ELECTRICAL CODE.
- SERVICE ENTRANCE MINIMUM SIZE AS PER ARTICLE 230 OF THE NATIONAL ELECTRICAL CODE.



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 LAKE WORTH, FLORIDA 33467  
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 FAX: (561) 819-5557  
 C.O.A. No. 8079  
 LILLIAN M. REYES, P.E.  
 Florida P.E. No. 50780

**CONSTRUCTION**

NO.	DATE	ISSUED FOR	APRV'D BY

DESIGNED: LMR  
 DRAWN: RRM  
 CHECKED: DD  
 APPROVED: LMR

LILLIAN M. REYES, P.E.  
 No. 50780

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 a BAXTER & WOODMAN company

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VERIFY SCALE  
  
 BAR IS ONE INCH ON FULL SIZE (22x34) ORIGINAL DRAWING. ADJUST SCALES AS NECESSARY.

ENGINEER NO.: 160963  
 CLIENT PROJECT NO.: 160963  
 CAD REF.: E-05\_SLD

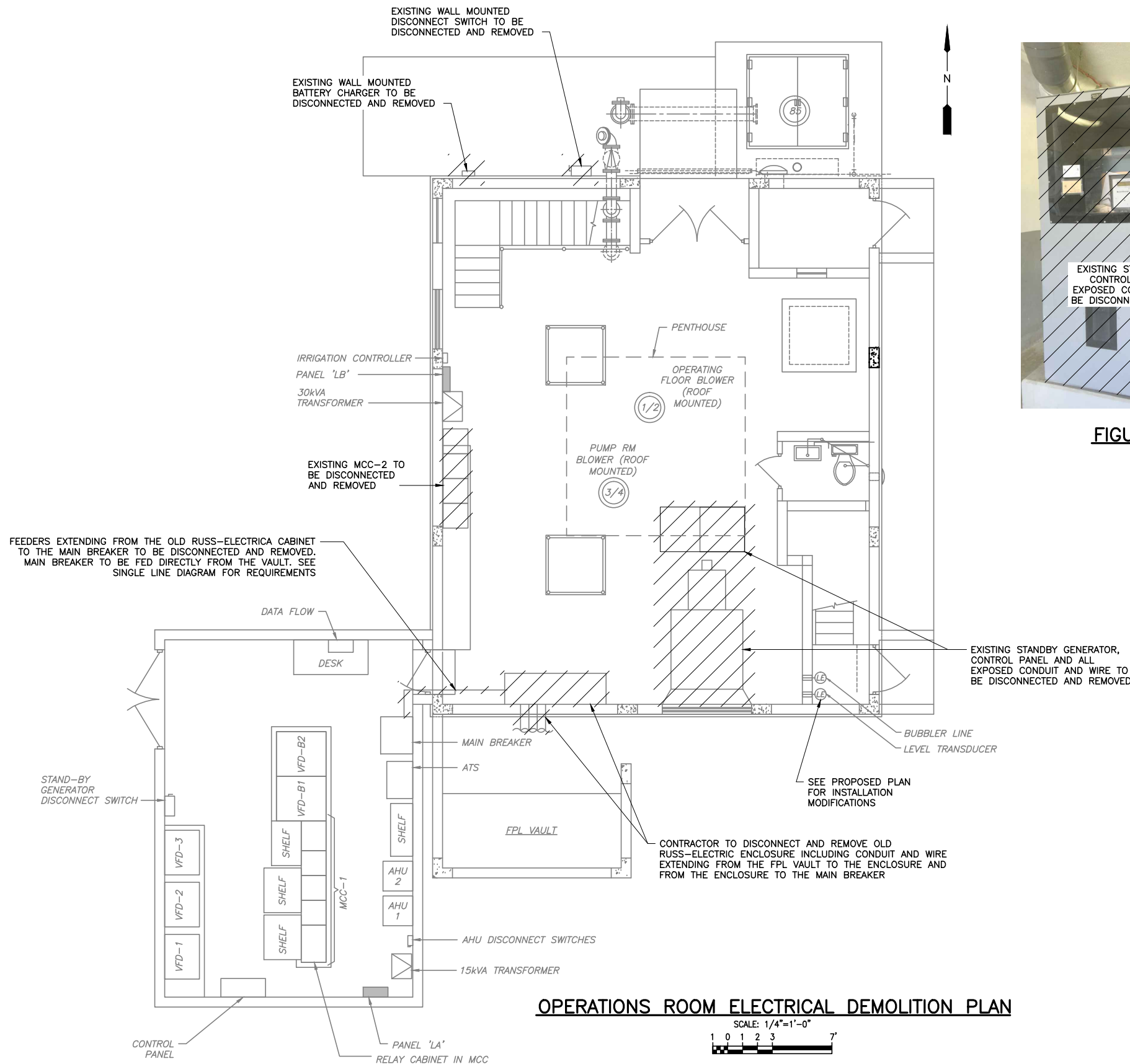
**LOXAHATCHEE RIVER ENVIRONMENTAL CONTROL DISTRICT**  
**MASTER LIFT STATION No. 1 REHABILITATION**

PROPOSED SINGLE LINE DIAGRAM

DATE: APRIL 2018  
 SHEET: 28 of 31  
 DRAWING: E-5

W:\12\_Active Projects\Mathews Consulting\ENCONILS #19\_Construction\DWG\19\_06 DEMO PLAN.dwg, 22 X 34, 4/25/2018 3:04:16 PM, RMWeeks

Acad Version : R20.0s (LMS Tech) User Name : RMWeeks Date/Time : Wed, 25 Apr 2018 - 3:04pm Path Name : W:\12\_Active Projects\Mathews Consulting\ENCONILS #19\_Construction\DWG\19\_06 DEMO PLAN.dwg

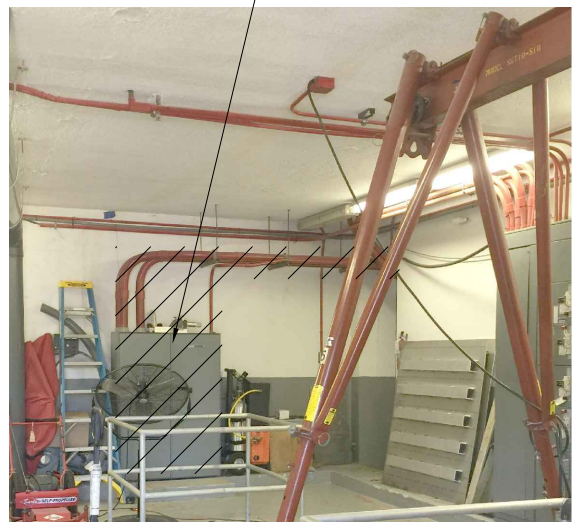


**OPERATIONS ROOM ELECTRICAL DEMOLITION PLAN**

SCALE: 1/4"=1'-0"  
1 0 1 2 3 4 5 6 7



**FIGURE NO. 3**  
SCALE: N.T.S.



**FIGURE NO. 4**  
SCALE: N.T.S.



**FIGURE NO. 5**  
SCALE: N.T.S.

EXISTING BUBBLER LINE AND LEVEL TRANSDUCER TO BE DISCONNECTED AND REMOVED, SEE SINGLE LINE DIAGRAM FOR REQUIREMENTS

NO.	DATE	ISSUED FOR	APRVD BY

DESIGNED:	LMR
DRAWN:	RRM
CHECKED:	DD
APPROVED:	LMR

LILLIAN M. REYES, P.E.  
No. 50780

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VERIFY SCALE  
1" = 1'  
BAR IS ONE INCH ON FULL SIZE (22x34) ORIGINAL DRAWING. ADJUST SCALES AS NECESSARY.

ENGINEER NO.:	160963
CLIENT	
PROJECT NO.:	160963
CAD REF.:	E-06 DEMO PLAN

**LOXAHATCHEE RIVER ENVIRONMENTAL CONTROL DISTRICT**  
MASTER LIFT STATION No. 1 REHABILITATION

**OPERATIONS ROOM ELECTRICAL DEMOLITION PLAN**

DATE:	APRIL 2018
SHEET:	29 of 31
DRAWING:	E-6

**EDA**  
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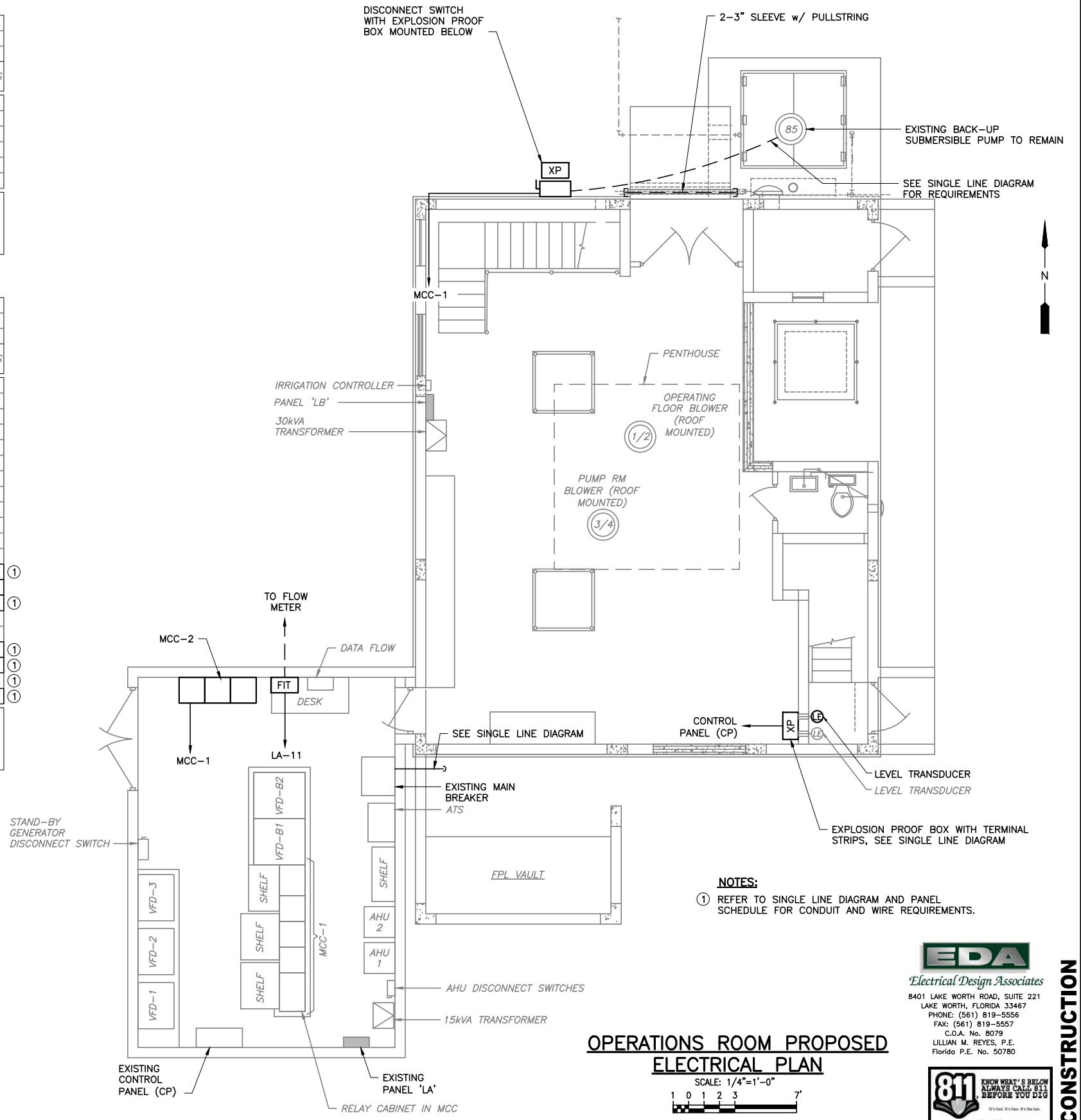
Date/Time : Wed, 25 Apr 2018 - 3:04pm  
 Path Name : W:\2\_Active Projects\Mathews Consulting\ENCONILS #19\_Construction\Drawings\07 PLAN.dwg  
 User Name : RMeeks

PANEL: 'LA'													BUS: 60 AMP			VOLT: 120/208-3φ-4W		
LOCATION: ELECTRICAL ROOM													MAINS: 60A, 3P MB			REMARKS: FED FROM MCC-1		
MOUNTING: SURFACE													POLES: 12			A.I.C. SYMM: -		
AMPS	POLE	WIRE	GND.	COND.	LOAD SERVED	BUS KVA			BUS KVA			LOAD SERVED	WIRE	GND.	COND.	POLE	AMPS	
						A	B	C	A	B	C							
20	1	-	-	-	S. WALL RECEPTACLES	0.36			1	2	0.36					2	20	
20	1	-	-	-	UPS - COMPUTER		0.72		3	4	0.36					-	-	
20	1	-	-	-	CONTROL PANEL LIGHT			0.72	5	6	0.72					1	20	
20	1	-	-	-	ELEC. ROOM LIGHTING	0.72			7	8						-	-	
20	1	-	-	-	COUNTY FIBER BOX		0.10		9	10	0.18					1	20	
20	1	10	10	1"	FIT			0.20	11	12	0.18					1	20	
TOTAL (PHASE):						1.08	0.82	0.92			0.36	0.54	0.90					
TOTAL KVA:									4.62									
TOTAL AMPS:									12.82									
TOTAL DEMAND AMPS:									12.82									

**NOTES:**  
 ① CONTRACTOR TO FURNISH AND INSTALL A 20A, 1P BREAKER IN EXISTING SPACE.

PANEL: 'LB'													BUS: 100 AMP			VOLT: 120/208-3φ-4W		
LOCATION: PUMP ROOM													MAINS: 100A, MB			REMARKS: -		
MOUNTING: SURFACE													POLES: 42			A.I.C. SYMM: -		
AMPS	POLE	WIRE	GND.	COND.	LOAD SERVED	BUS KVA			BUS KVA			LOAD SERVED	WIRE	GND.	COND.	POLE	AMPS	
						A	B	C	A	B	C							
20	1	-	-	-	SPARE				1	2						1	20	
20	1	-	-	-	RECEPT., SUMP BY SCRUBBER	0.36			3	4	0.36					1	20	
20	1	-	-	-	SPARE				5	6	0.72					1	20	
20	1	-	-	-	OPER. FLOOR INT. LTG.	0.72			7	8	0.72					1	20	
20	1	-	-	-	PHOS. PUMP	0.36			9	10	0.72					1	20	
20	1	-	-	-	OPER. FLOOR RECEPT.		0.36		11	12	0.72					1	20	
20	1	-	-	-	PUMP ROOM LIGHTS	0.72			13	14						-	-	
20	1	-	-	-	CHLORINATION FAN/LTG.	0.36			15	16	0.72					1	20	
20	1	-	-	-	S. WALL SPOT LIGHT		0.36		17	18	0.72					1	20	
20	1	10	10	1"	SUMP PUMP	10.80			19	20						-	-	
40	1	-	-	-	SPARE				21	22						1	20	
20	1	-	-	-	SPARE				23	24	0.18					1	20	
30	2	10	10	1"	GEN. SPACE HEATER	1.90			25	26	1.90				2	30		
							1.90		27	28	1.90					-	-	
20	1	12	12	1"	GEN. BATTERY CHARGER		0.36		29	30	0.18				1	20		
20	1	-	-	-	SPARE				31	32	0.18				1	20		
20	1	-	-	-	SPARE				33	34	0.18				1	20		
					SPACE				35	36	0.18				1	20		
100	3	-	-	-	MAIN BREAKER				37	38	0.18				1	20		
									39	40	0.18				1	20		
									41	42	0.18				1	20		
TOTAL (PHASE):						14.14	2.98	1.08			2.98	4.06	2.88					
TOTAL KVA:									28.12									
TOTAL AMPS:									78.05									
TOTAL DEMAND AMPS:									78.05									

**NOTES:**  
 ① CONTRACTOR TO FURNISH AND INSTALL A NEW CIRCUIT BREAKER IN EXISTING SPACE.



**OPERATIONS ROOM PROPOSED ELECTRICAL PLAN**  
 SCALE: 1/4"=1'-0"  
 1 0 1 2 3 7'

**NOTES:**  
 ① REFER TO SINGLE LINE DIAGRAM AND PANEL SCHEDULE FOR CONDUIT AND WIRE REQUIREMENTS.

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				LMR	RRM	DD	LMR

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VERIFY SCALE  
 1"  
 BAR IS ONE INCH ON FULL SIZE (22x34) ORIGINAL DRAWING. ADJUST SCALES AS NECESSARY.  
 ENGINEER NO.: 160963  
 CLIENT PROJECT NO.: 160963  
 CAD REF.: E-07 PLAN

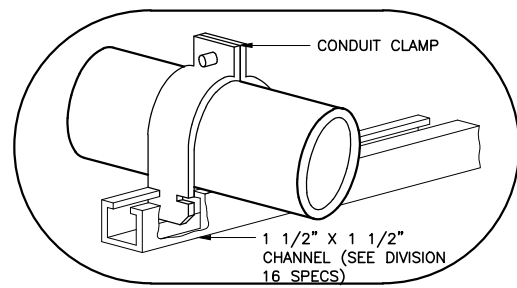
**LOXAHATCHEE RIVER ENVIRONMENTAL CONTROL DISTRICT MASTER LIFT STATION No. 1 REHABILITATION**  
**OPERATIONS ROOM PROPOSED ELECTRICAL PLAN**

DATE:	APRIL 2018
SHEET:	30 of 31
DRAWING:	E-7

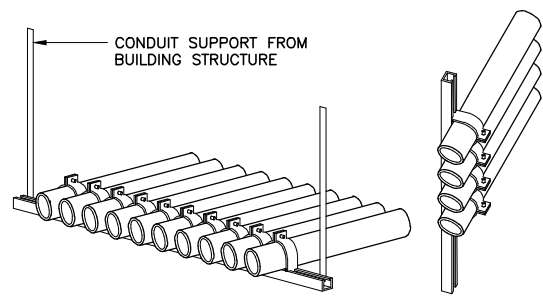
**CONSTRUCTION**

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ENLARGED VIEW

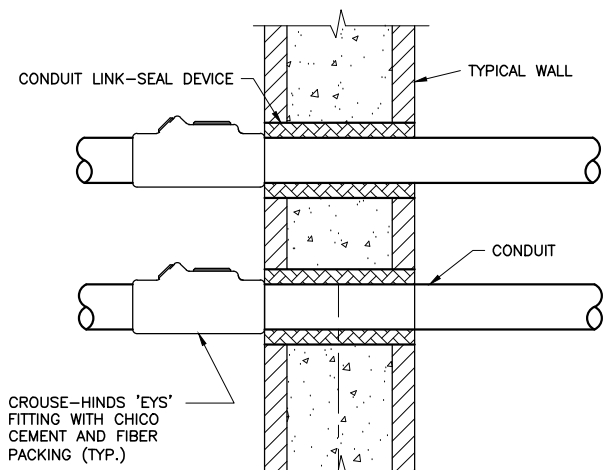


TRAPEZE ASSEMBLY

WALKWAY AND WALL MOUNTED

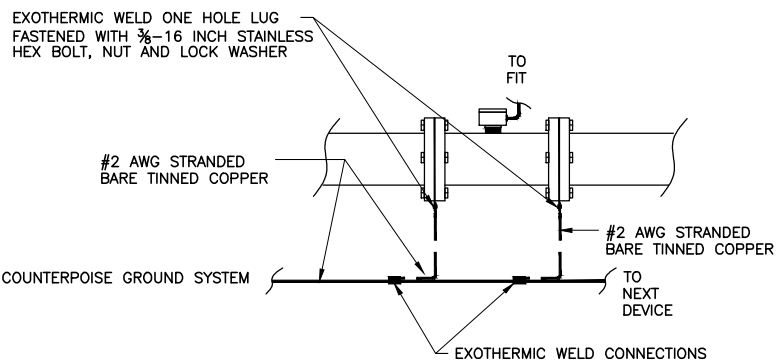
**CONDUIT PIPE STRAP MOUNTING DETAILS**

SCALE: N.T.S.



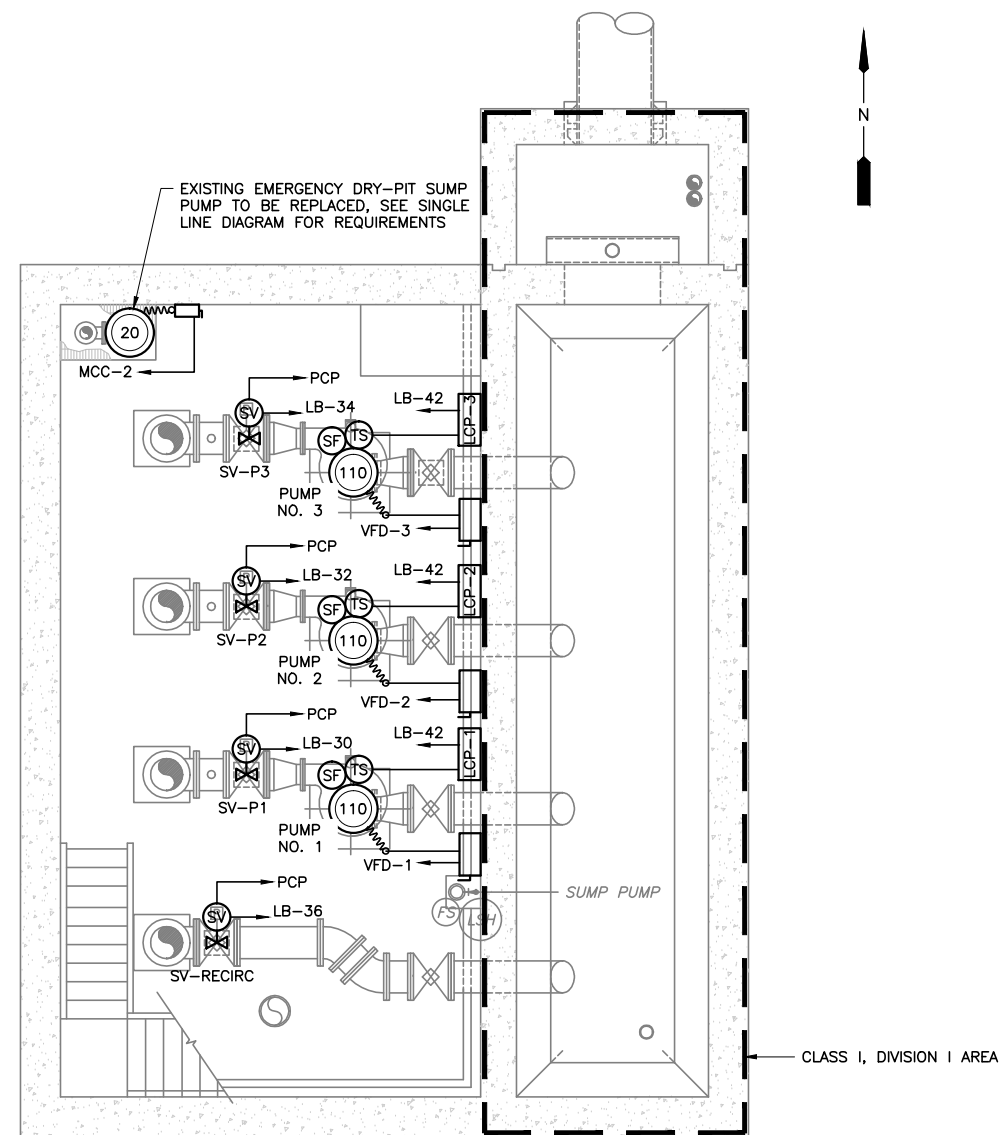
**WALL PENETRATION DETAIL**

N.T.S.



**FLOW METER PIPE GROUNDING DETAIL**

NOT TO SCALE



**LOWER FLOOR PROPOSED ELECTRICAL PLAN**

SCALE: 1/4"=1'-0"  
1 0 1 2 3 7'



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FAX: (561) 819-5557  
C.O.A. No. 8079  
LILLIAN M. REYES, P.E.  
Florida P.E. No. 50780



**CONSTRUCTION**

NO.	DATE	ISSUED FOR	APRV'D BY	DESIGNED: LMR
				DRAWN: RRM
				CHECKED: DD
				APPROVED: LMR

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No. 50780

VERIFY SCALE  
1"  
BAR IS ONE INCH ON FULL SIZE (22x34) ORIGINAL DRAWING. ADJUST SCALES AS NECESSARY.

ENGINEER NO.: 160963  
CLIENT  
PROJECT NO.: 160963  
CAD REF.: E-08 PLAN

**LOXAHATCHEE RIVER ENVIRONMENTAL CONTROL DISTRICT MASTER LIFT STATION No. 1 REHABILITATION**

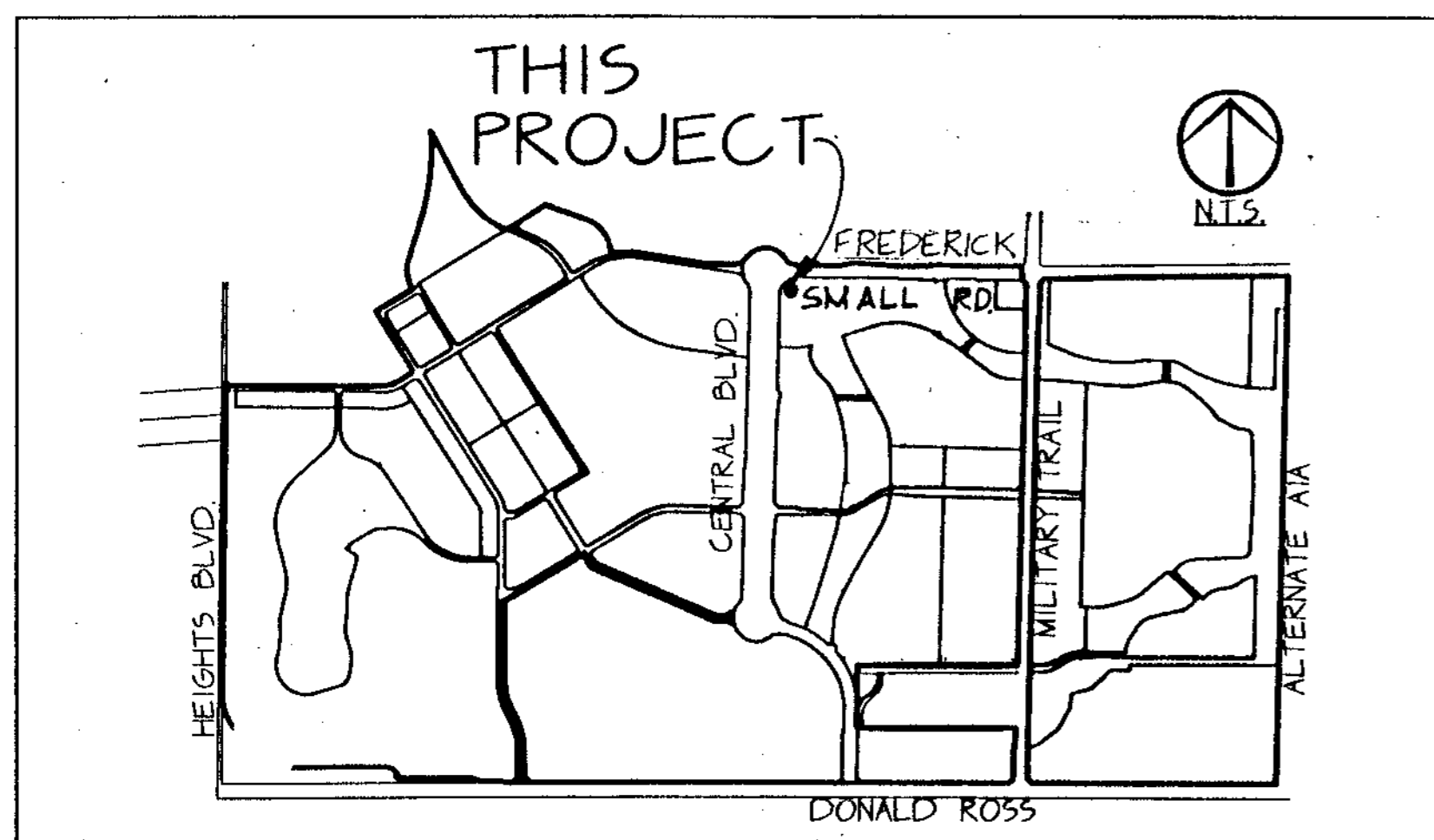
**LOWER FLOOR PROPOSED ELECTRICAL PLAN AND DETAILS**

DATE: APRIL 2018  
SHEET: 31 of 31  
DRAWING: E-8

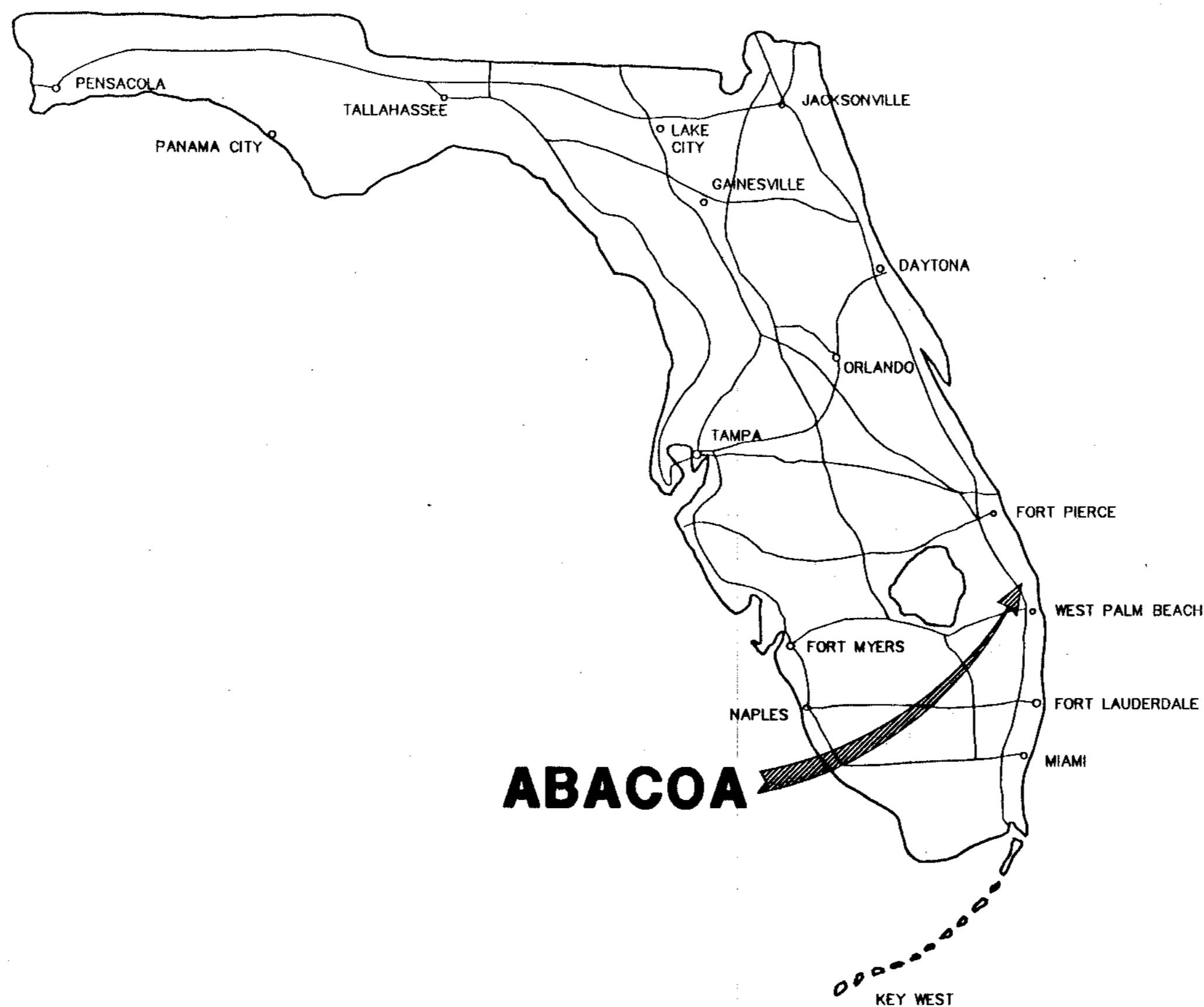


# ABACOA WMP 9A

## MASTER LIFT STATION



**LOCATION MAP**  
(N.T.S.)



### INDEX OF SHEETS

1	COVER SHEET
2	SITE PLAN & DETAILS
3	YARD PIPING
4	MECHANICAL PLAN
5	MECHANICAL SECTIONS
6	GRINDER PUMP STATION & DETAILS
7	MECHANICAL & PIPE DETAILS
8	ELEVATIONS
9	STRUCTURAL PLAN & DETAILS
9	STRUCTURAL DETAILS
E-1	ELECTRICAL SYMBOLS & ABBREVIATIONS
E-2	ELECTRICAL SITE PLAN
E-3	MCC SINGLE LINE DIAGRAM
E-4	ELEMENTARY CONTROL DIAGRAMS
E-5	PUMP CONTROL PANEL DIAGRAM
E-6	ELECTRICAL PLANS
E-7	LIGHTING FIXTURE SCHEDULE & DETAILS
E-8	ELECTRICAL DETAILS
H-1	HVAC SYMBOLS, ABBREVIATIONS & DETAILS
H-2	HVAC PLAN & DETAILS
P-1	PLUMBING SYMBOLS ABBREVIATIONS, SCHEDULES & DETAILS
P-2	PLUMBING PLAN & RISERS



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 CONSULTING ENGINEERS PLANNERS SURVEYORS  
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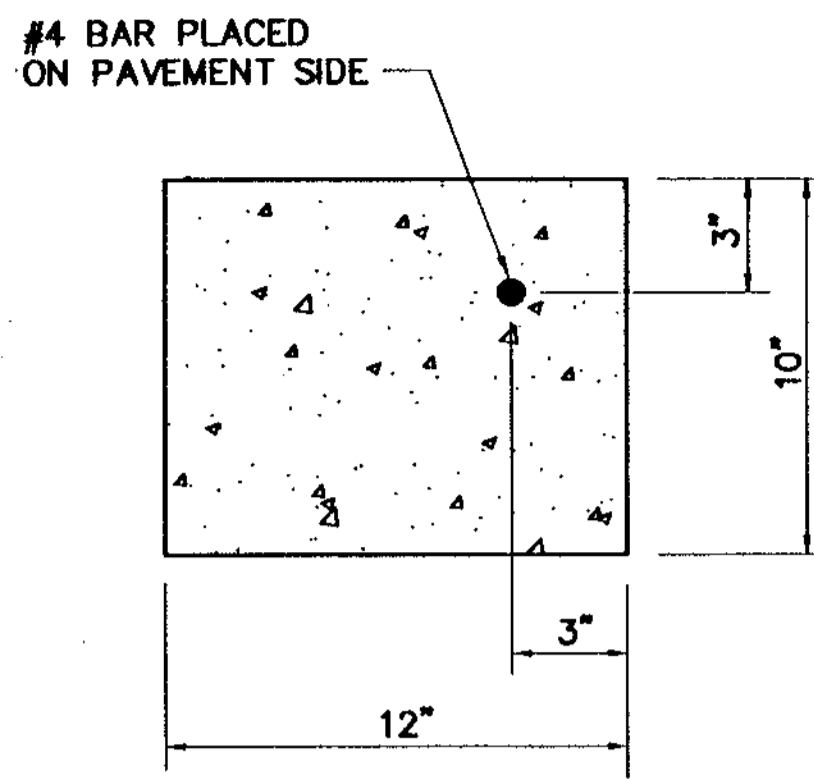
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 REVIEWED BY: \_\_\_\_\_

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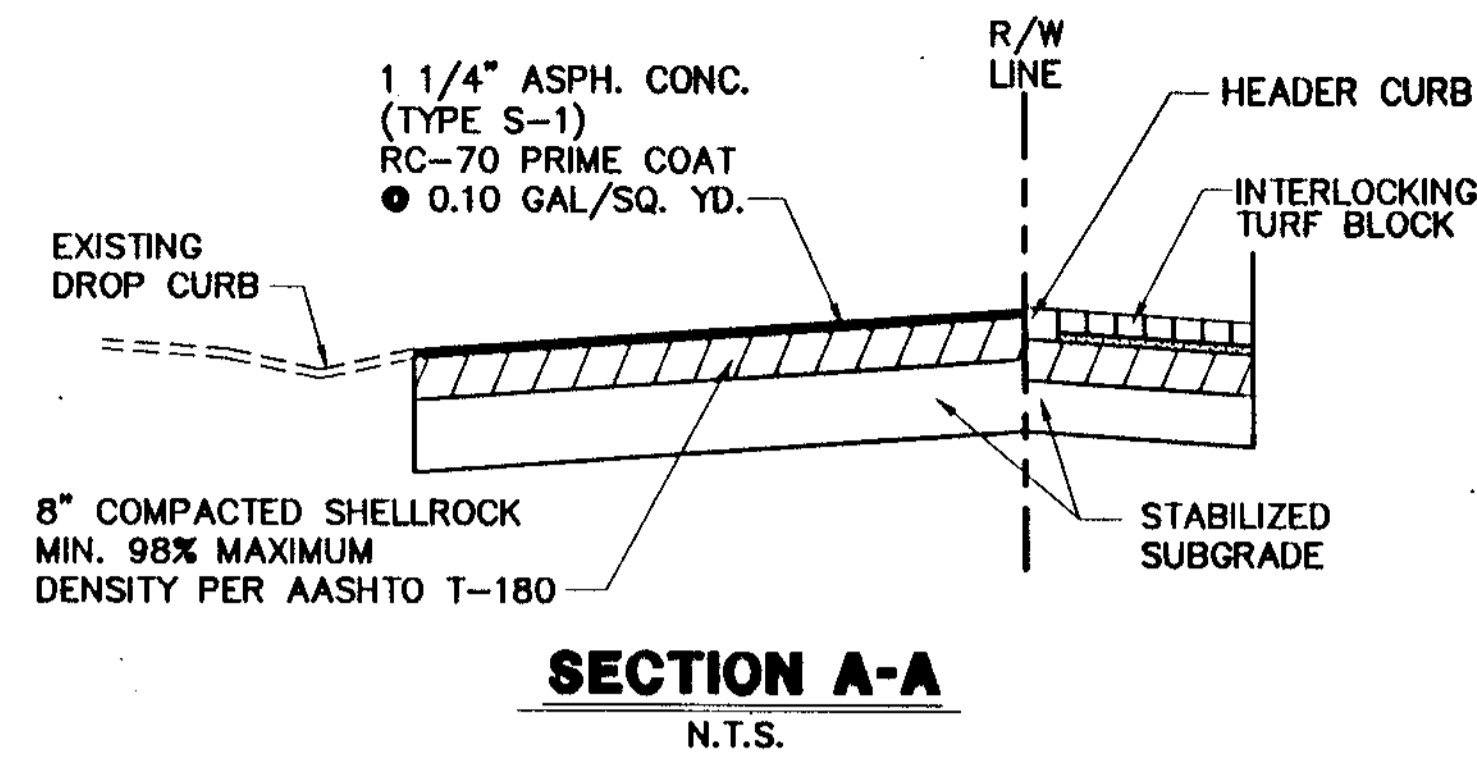
CHANGES MADE DURING CONSTRUCTION AND/OR RECORD LOCATION OF CONSTRUCTED WORK AS FURNISHED BY CONTRACTOR (WHARTON SMITH AND CO.) TO THE ENGINEER ARE NOTED HEREIN. ANY USE OF RECORD INFORMATION CONTAINED HEREIN WITHOUT CONSULTING WITH MOCK, ROOS & ASSOCIATES, INC. WILL BE AT USER'S SOLE RISK AND WITHOUT LIABILITY OR LEGAL EXPOSURE TO MOCK, ROOS & ASSOCIATES, INC.

ENGINEERS PROJECT NO. 4068.59

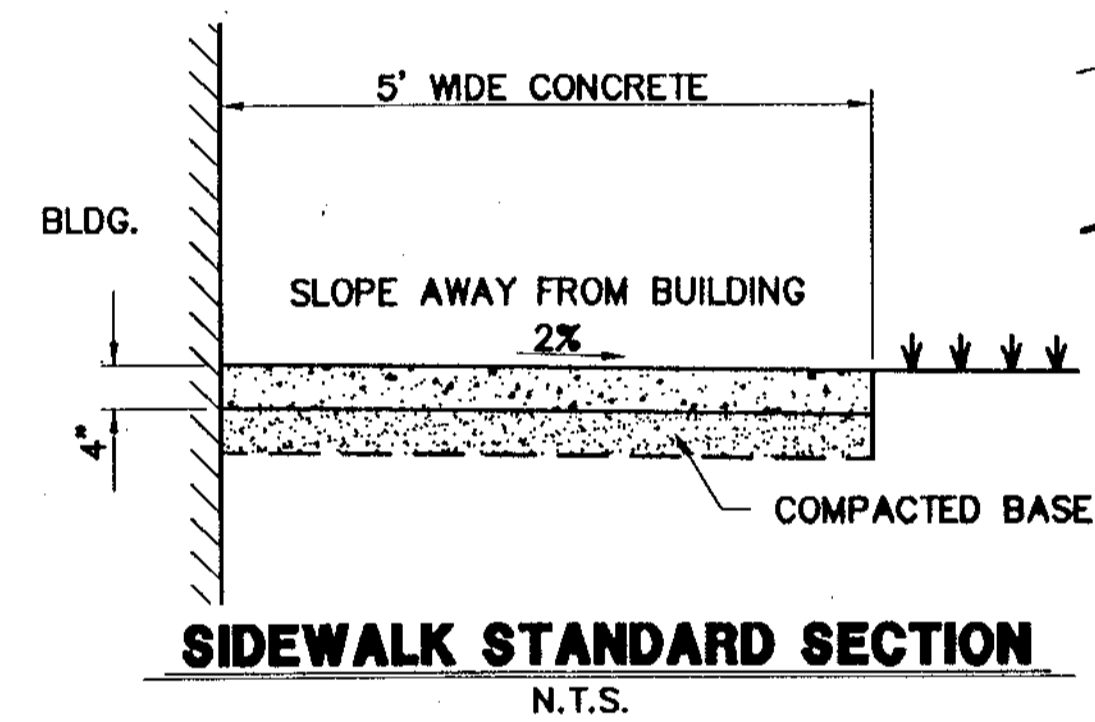
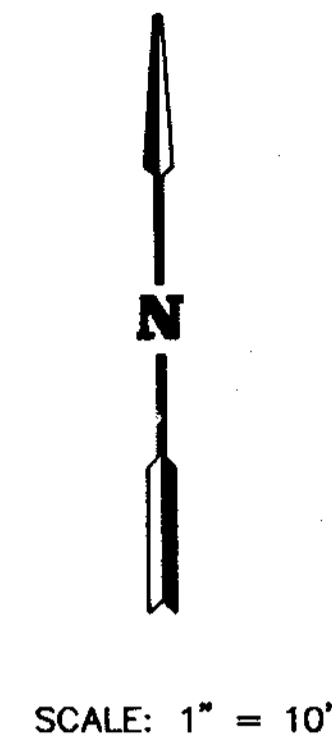
RECORD DRAWING



**FLUSH HEADER CURB**  
N.T.S.

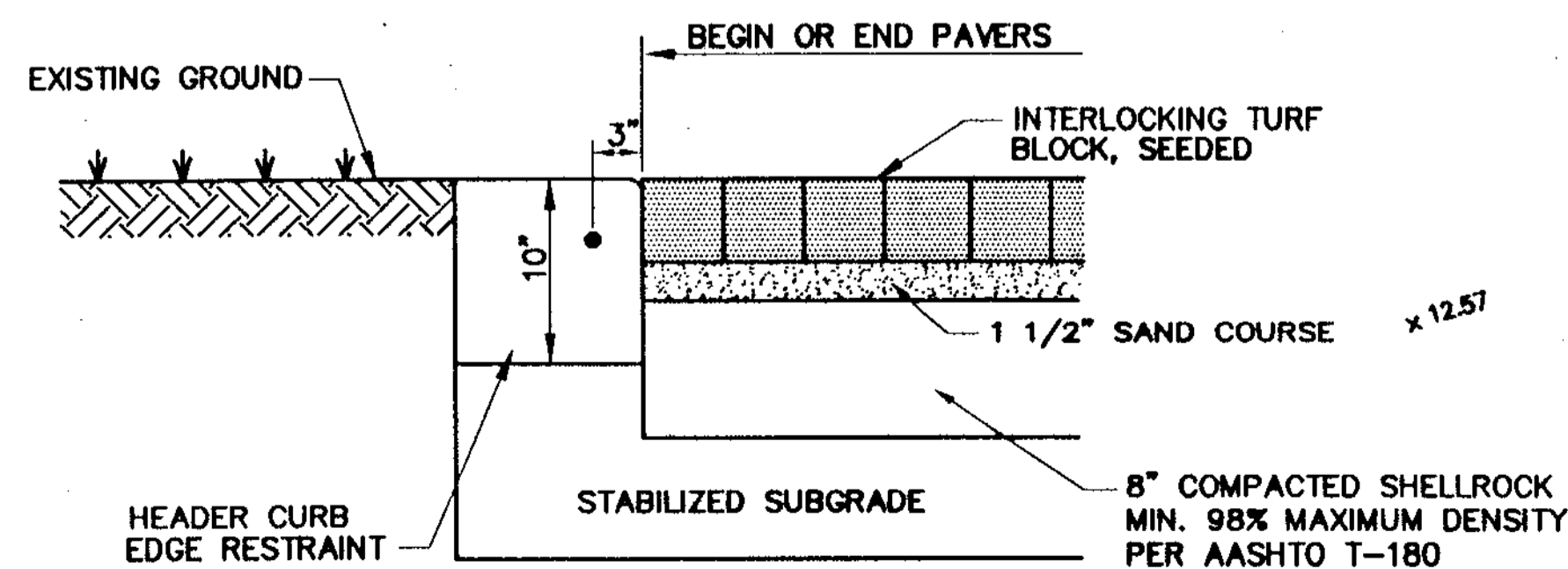


**SECTION A-A**  
N.T.S.

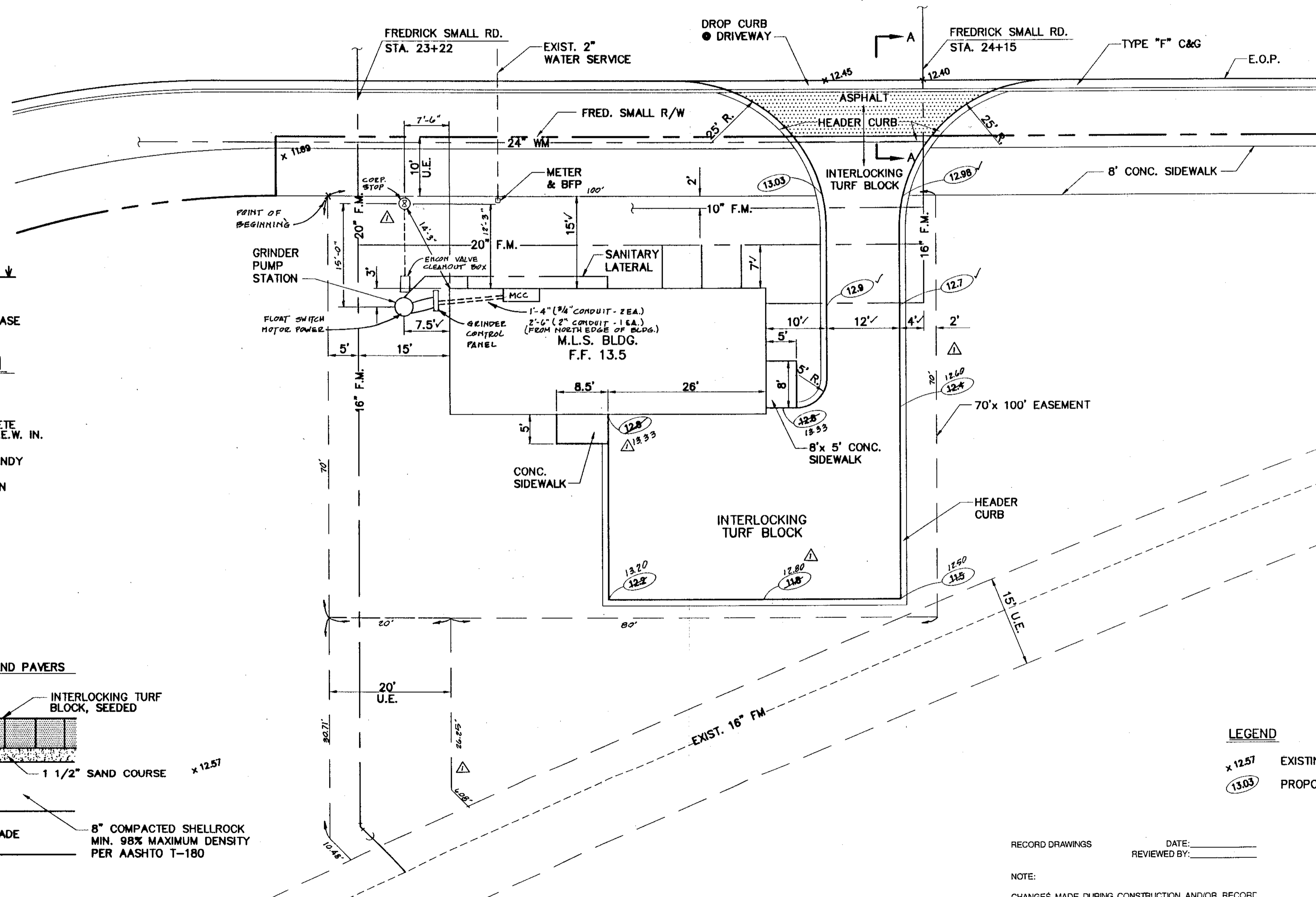


**SIDEWALK STANDARD SECTION**  
N.T.S.

- NOTES:**
1. SIDEWALKS TO BE PORTLAND CEMENT CONCRETE, MIN. 2500 PSI @ 28 DAYS, W/#3 @ 12" C.C.E.W. IN. CENTER OF SLAB.
  2. BASE TO BE MIN. 4" OF CLEAN SAND OR SANDY LOAM, FULLY COMPACTED, FULL WIDTH.
  3. SIDEWALKS TO BE BROOM FINISHED WITH EVEN DUSTLESS SURFACE.



**PAVER EDGE RESTRAINT DETAIL**  
N.T.S.



**LEGEND**  
 x 12.57 EXISTING GRADE  
 (13.03) PROPOSED GRADE

RECORD DRAWINGS DATE: \_\_\_\_\_  
 REVIEWED BY: \_\_\_\_\_

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DATE	7/5/05
DRAWN	M.S.B.
CHECKED	M.R.T.
MANAGER	M.R.T.
FIELD BOOK	

PROJECT: **4068.59**  
 SHEET: **1**

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 MIAMI

BOYNTON BEACH  
 PORT ST. LUCIE

ABACO/WASTEWATER COLLECTION SYSTEM  
 WMP 9A MASTER LIFT STATION  
 SITE PLAN & DETAILS

SCALE: 1" = 10'

RECORD DRAWING

M/R DWG. NO. 41-42-23-03

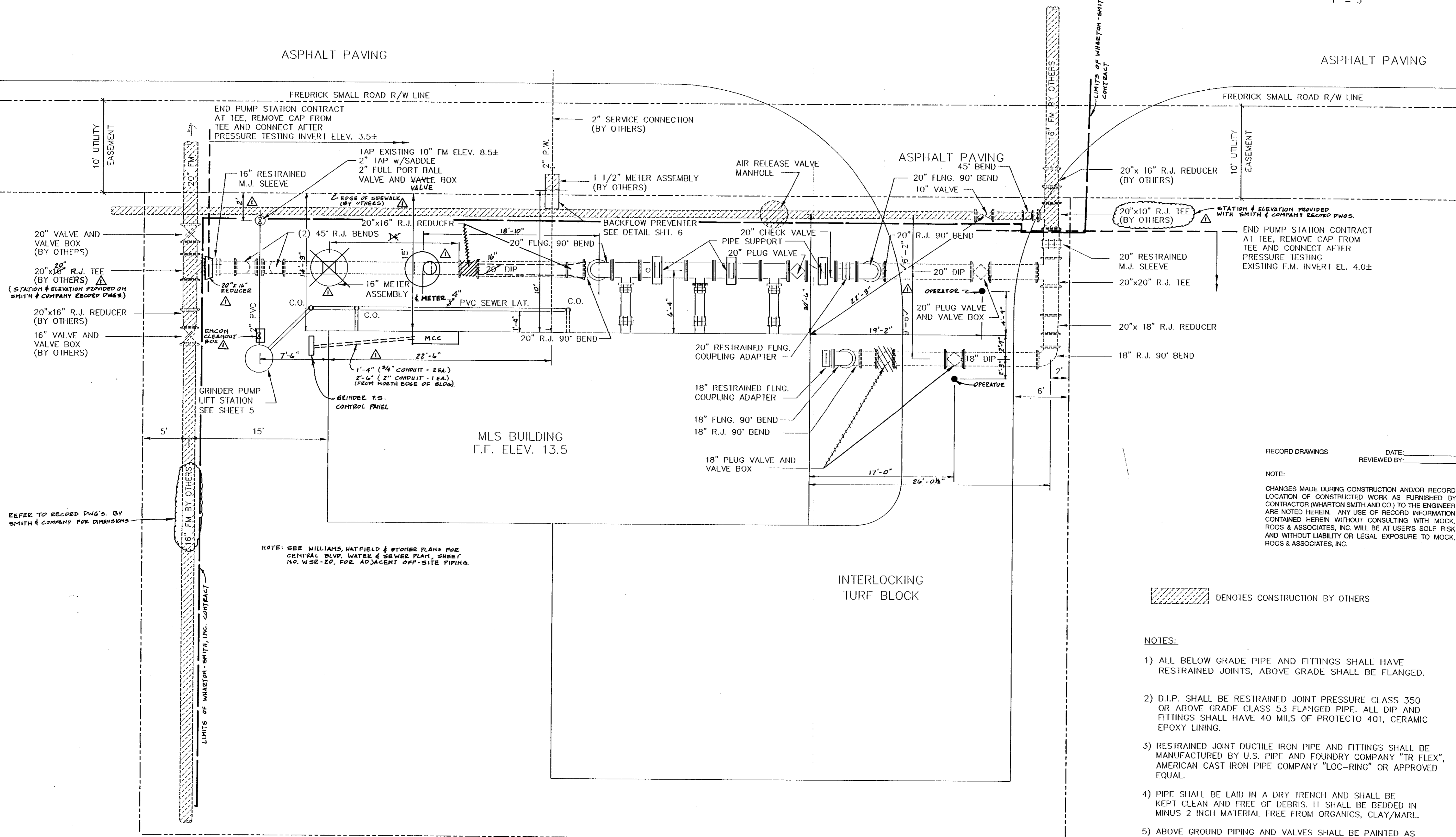


ASPHALT PAVING

ASPHALT PAVING

FREDRICK SMALL ROAD R/W LINE

FREDRICK SMALL ROAD R/W LINE



END PUMP STATION CONTRACT  
AT TEE, REMOVE CAP FROM  
TEE AND CONNECT AFTER  
PRESSURE TESTING INVERT ELEV. 3.5±

END PUMP STATION CONTRACT  
AT TEE, REMOVE CAP FROM  
TEE AND CONNECT AFTER  
PRESSURE TESTING  
EXISTING F.M. INVERT EL. 4.0±

MLS BUILDING  
F.F. ELEV. 13.5

INTERLOCKING  
TURF BLOCK

NOTE: SEE WILLIAMS, HATFIELD & STONER PLANS FOR  
CENTRAL BLDG. WATER & SEWER PLAN, SHEET  
NO. WSR-20, FOR ADJACENT OFF-SITE PIPING.

RECORD DRAWINGS DATE: \_\_\_\_\_  
REVIEWED BY: \_\_\_\_\_

NOTE:  
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LOCATION OF CONSTRUCTED WORK AS FURNISHED BY  
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DENOTES CONSTRUCTION BY OTHERS

NOTES:

- 1) ALL BELOW GRADE PIPE AND FITTINGS SHALL HAVE RESTRAINED JOINTS, ABOVE GRADE SHALL BE FLANGED.
- 2) D.I.P. SHALL BE RESTRAINED JOINT PRESSURE CLASS 350 OR ABOVE GRADE CLASS 53 FLANGED PIPE. ALL DIP AND FITTINGS SHALL HAVE 40 MILS OF PROTECTO 401, CERAMIC EPOXY LINING.
- 3) RESTRAINED JOINT DUCTILE IRON PIPE AND FITTINGS SHALL BE MANUFACTURED BY U.S. PIPE AND FOUNDRY COMPANY "TR FLEX", AMERICAN CAST IRON PIPE COMPANY "LOC-RING" OR APPROVED EQUAL.
- 4) PIPE SHALL BE LAID IN A DRY TRENCH AND SHALL BE KEPT CLEAN AND FREE OF DEBRIS. IT SHALL BE BEDDED IN MINUS 2 INCH MATERIAL FREE FROM ORGANICS, CLAY/MARL.
- 5) ABOVE GROUND PIPING AND VALVES SHALL BE PAINTED AS PER SPECIFICATIONS.
- 6) BURIED VALVES, M.J. SLEEVES AND CONNECTIONS TO EXISTING PIPING SHALL BE RESTRAINED WITH EBBA IRON MEGA LUGS.

REFER TO RECORD DWG'S. BY  
SMITH & COMPANY FOR DIMENSIONS

LIMITS OF WHARTON SMITH, INC. CONTRACT

LIMITS OF WHARTON SMITH, INC. CONTRACT

REVISION	DATE	BY

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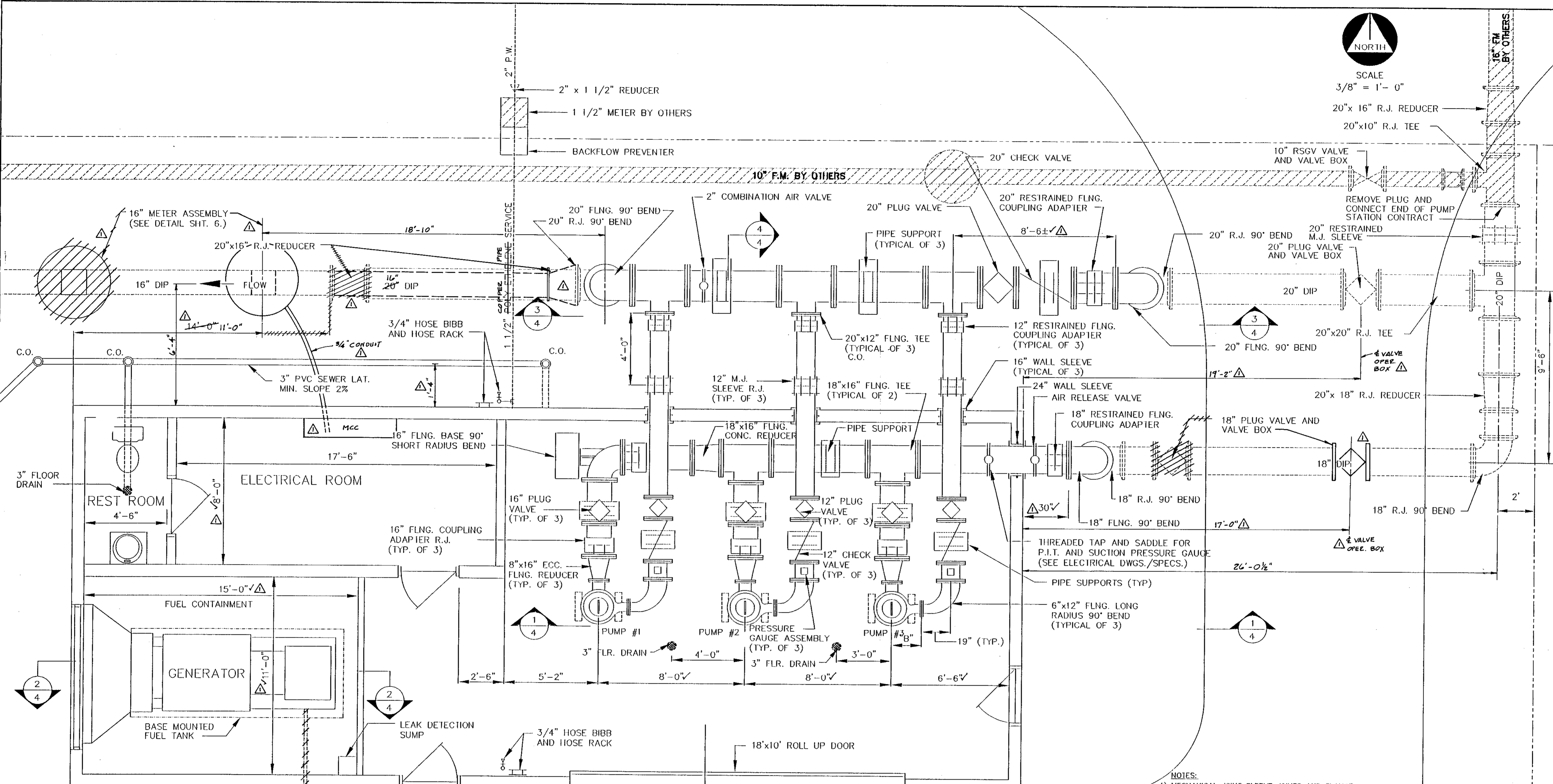
ABACOA WASTEWATER COLLECTION SYSTEM  
WMP 9A MASTER LIFT STATION  
YARD PIPING

Date	9/5/96
Drawn	EWG
Checked	JCD
Manager	MRT
Dwg. Name	

PROJECT No.  
4068.59  
SHEET No.  
2

RECORD DRAWING  
M/R DWG. NO. 41-42-23-03

MS= PS=SHT-2



SCALE  
3/8" = 1' - 0"

REVISION  
DATE 07/20/18  
APPROVED BY: [Signature]  
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CONSULTING ENGINEERS • PLANNERS • SURVEYORS  
FORT LAUDERDALE • BOYNTON BEACH • PORT ST. LUCIE • MIAMI

ABACO/WASTEWATER COLLECTION SYSTEM  
WMP 9A MASTER LIFT STATION  
MECHANICAL PLAN

Date	EWG
Drawn	?
Checked	?
Manager	?
Dwg Name	?

PROJECT No.  
**4068.59**  
SHEET No.  
**3**

- NOTES:
- MECHANICAL JOINT SLEEVE JOINTS AND FLANGE COUPLING ADAPTER JOINTS SHALL BE RESTRAINED. USE AMERICAN M.J. COUPLED JOINT OR APPROVED EQUAL OR WHERE APPROPRIATE THREADED RODS.
  - SEE PUMP MANUFACTURE FOR "B" DIMENSION. VERIFY CLEARANCE FOR PARALLEL VALVES.
  - ALL VALVES SHALL BE EPOXY LINED FOR USE WITH RAW SEWAGE.
  - MECHANICAL JOINT SLEEVES SHALL BE LONG PATTERN.
  - CHECK VALVES SHALL BE AIR CUSHIONED SWING CHECKS WITH ADJUSTABLE COUNTER WEIGHT. EXTERIOR CHECK VALVES SHALL HAVE A MANUAL AIR RELEASE BALL VALVE IN TOP OF VALVE. USE APCO SERIES 6000 OR APPROVED EQUAL.
  - ABOVE GROUND VALVES SHALL HAVE AN OPERATING WHEEL. BURIED VALVES SHALL HAVE AN OPERATING NUT AND CAST IRON VALVE BOX.
  - SEWER LATERAL CLEAN OUTS SHALL CONFORM TO ENCON STANDARD DETAILS.
  - INTERIOR AND EXTERIOR ABOVE GROUND PIPING AND VALVES SHALL BE PAINTED AS PER SPECIFICATIONS.
  - PLUG VALVES SHALL BE DeZURIK SERIES 100 ECCENTRIC VALVES OR APPROVED EQUAL.
  - USE CUMMINS 250 KW DIESEL GENERATOR PACKAGE ASSEMBLY WITH 550 GALLON BASE MOUNTED FUEL TANK, SKIDS, VIBRATION ISOLATORS ETC. OR APPROVED EQUAL, SEE SPECIFICATIONS.
  - REDUCER SIZES ON SUCTION AND DISCHARGE OF PUMP MAY VARY SEE PUMP SUPPLIER SHOP DRAWINGS.
  - A 2 TON GANTRY CRANE SHALL BE SUPPLIED AS PART OF THIS CONTRACT SEE SPECIFICATIONS.

**PUMP DATA:**

I. VARIABLE SPEED DRIVES, TWO PUMPS :

PUMP DESIGN POINT:  
TDH 108 FT  
GPM 1800 GPM  
BHP @ 70% EFF. 70 HP  
SPEED VARIATION: 100% to 50% ±  
OPERATING RANGE, LOW PUMP HEAD CONDITIONS, ONE PUMP ON:  
LOW 1500 GPM RUN OUT RIGHT HAND SIDE OF CURVE, LOW SPEED  
HIGH 2500 GPM @ 34 FT. OR RUN OUT RIGHT HAND SIDE OF CURVE, HIGH SPEED  
OPERATING RANGE, HIGH PUMP HEAD CONDITIONS FLOW PER PUMP, TWO PUMPS ON: 100% speed  
LOW 1500 GPM @ 132 FT.  
HIGH 2000 GPM @ 103 FT.

II. FIXED SPEED, ONE PUMP :

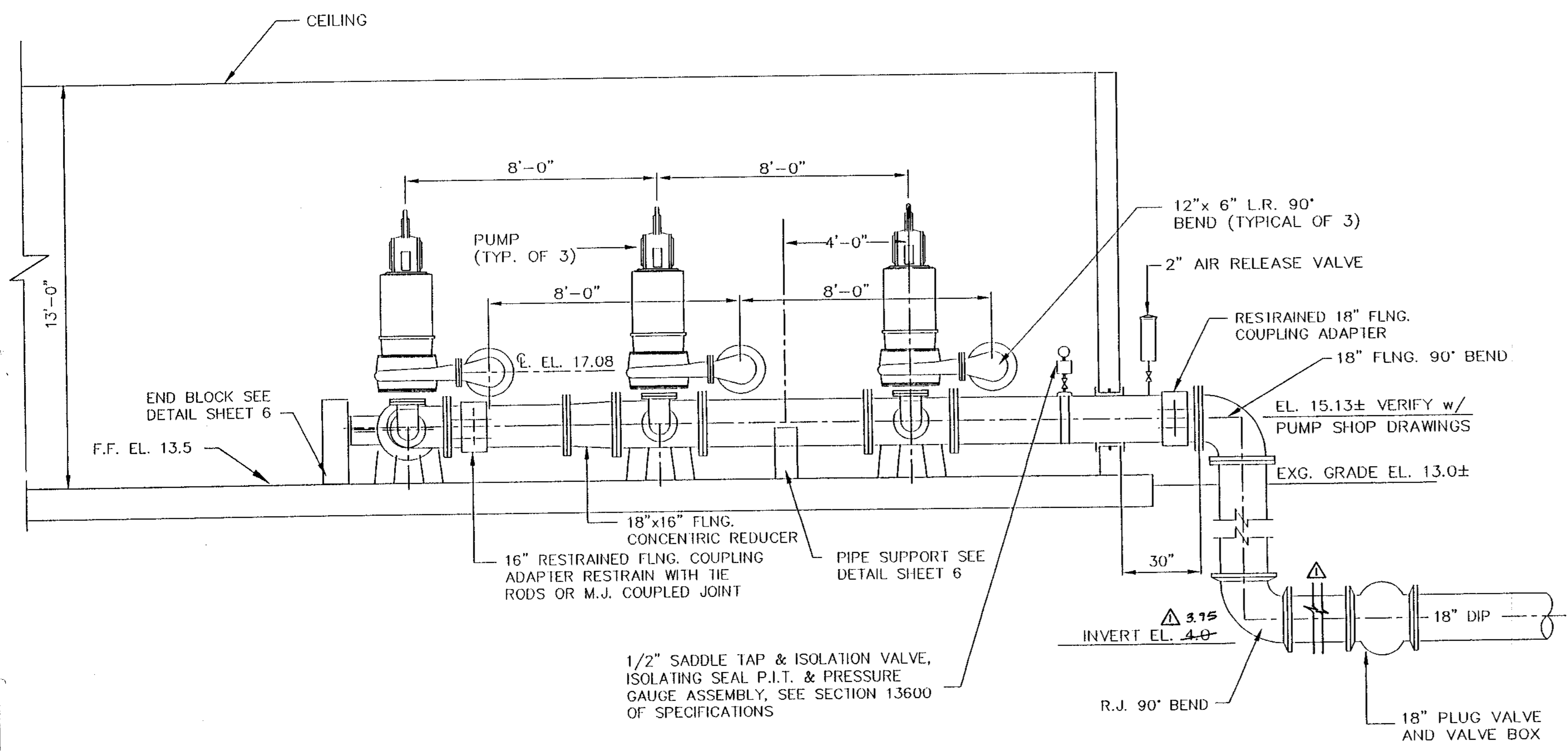
PUMP DESIGN POINT:  
TDH 100 FT  
GPM 1400 GPM  
BHP @ 70% EFF. 51 HP  
OPERATING RANGE 1000 TO 2500 GPM

III. OTHER DATA :

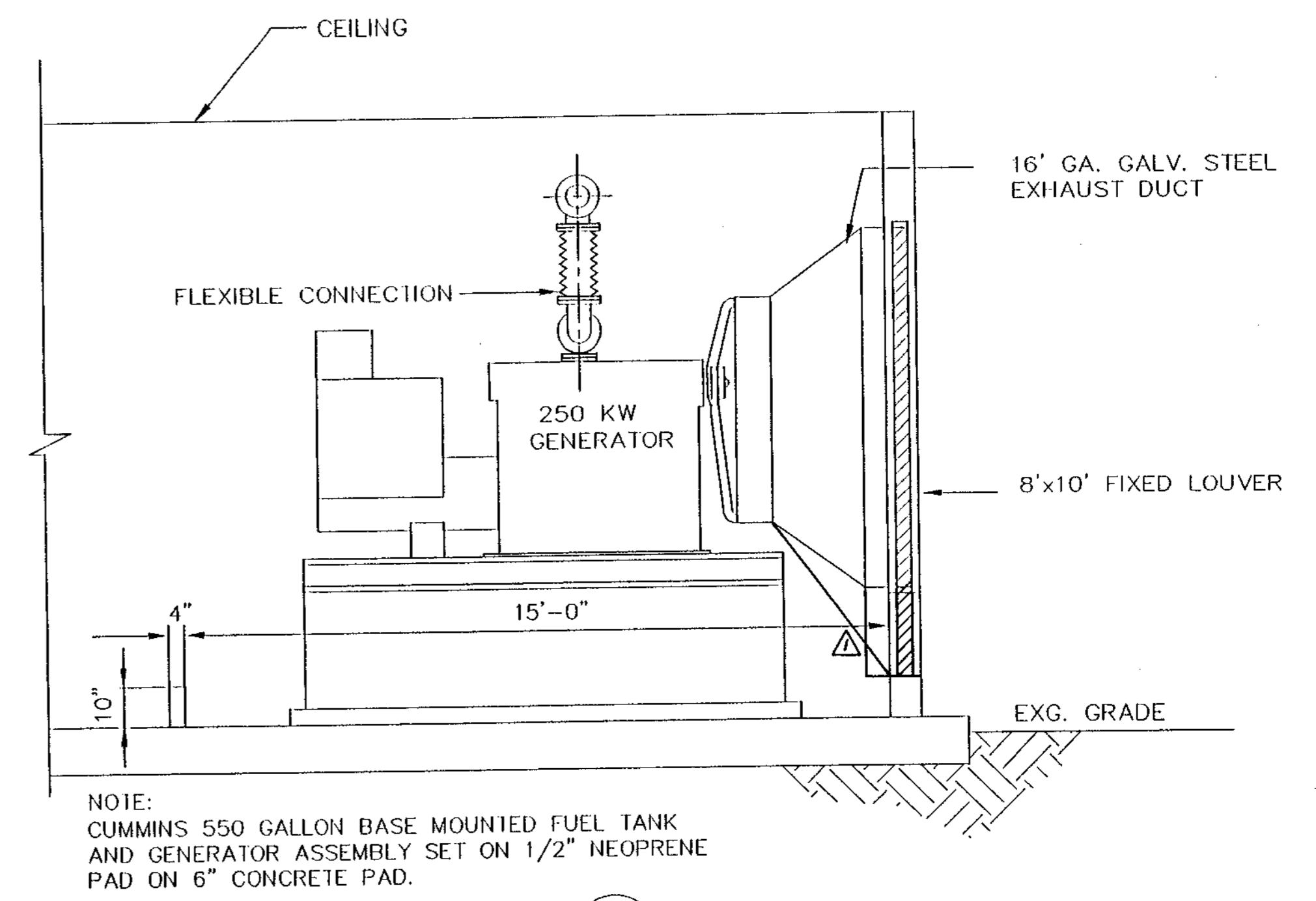
AVAILABLE NPSH: 45 FT. @ 2500 GPM, 20 FT. OF SUCTION HGEAD  
FLUID: RAW SEWAGE  
PUMP: FLYGT 3300 OR APPROVED BY ENCON  
DISCHARGE DIA. 6" to 12"  
SUCTION DIA.: 8" to 16"  
MAX. MOTOR SIZE: 100 HP.  
ALARM SIGNALS: SEE SECTION 13600 SPECIFICATIONS  
SUCTION OPERATING RANGE, FEET OF HEAD:  
20 FT. to 40 FT.

RECORD DRAWINGS  
DATE: \_\_\_\_\_  
REVIEWED BY: \_\_\_\_\_

NOTE:  
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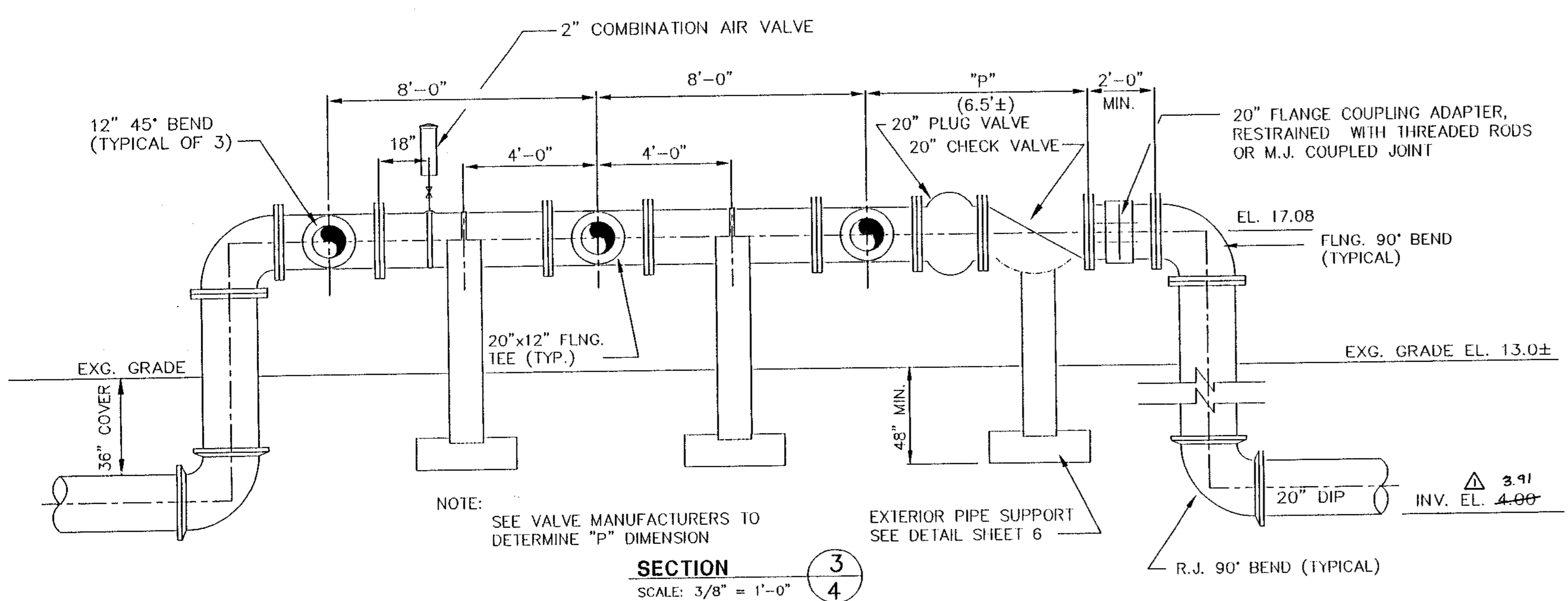
**SECTION 1**  
SCALE: 3/8" = 1'-0"



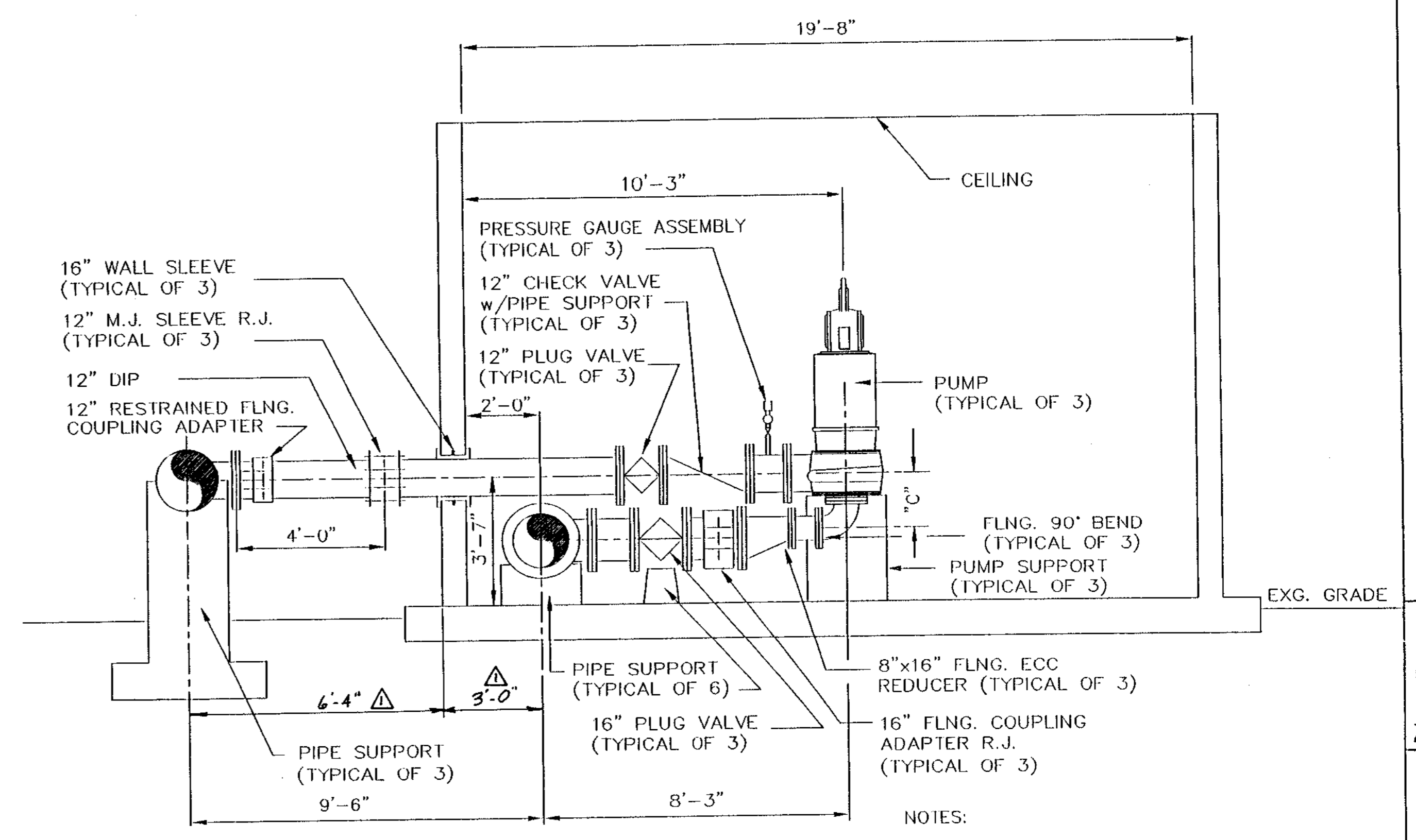
**SECTION 2**  
SCALE: 3/8" = 1'-0"

RECORD DRAWINGS DATE: \_\_\_\_\_  
REVIEWED BY: \_\_\_\_\_

NOTE:  
CHANGES MADE DURING CONSTRUCTION AND/OR RECORD LOCATION OF CONSTRUCTED WORK AS FURNISHED BY CONTRACTOR (WHARTON SMITH AND CO.) TO THE ENGINEER ARE NOTED HEREIN. ANY USE OF RECORD INFORMATION CONTAINED HEREIN WITHOUT CONSULTING WITH MCK, ROOS & ASSOCIATES, INC. WILL BE AT USER'S SOLE RISK AND WITHOUT LIABILITY OR LEGAL EXPOSURE TO MCK, ROOS & ASSOCIATES, INC.



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

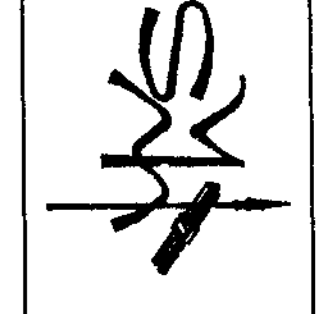


**SECTION 4**  
SCALE: 3/8" = 1'-0"

NOTES:  
1) SEE PUMP MANUFACTURER FOR "C" DIMENSION

REVISION	DATE	BY
ADDED RECORD DATA	07-24-98	

**WILLIAMS, HATFIELD & STONER, INC.**  
CONSULTING ENGINEERS • PLANNERS • SURVEYORS  
FORT LAUDERDALE • BOYNTON BEACH • PORT ST. LUCIE • MIAMI



**ABACO WASTEWATER COLLECTION SYSTEM**  
**WMP 9A MASTER LIFT STATION**  
**MECHANICAL SECTIONS**

Date	EWG	Checked	Manager	Dwg Name

PROJECT No. 4068.59  
SHEET No. 4

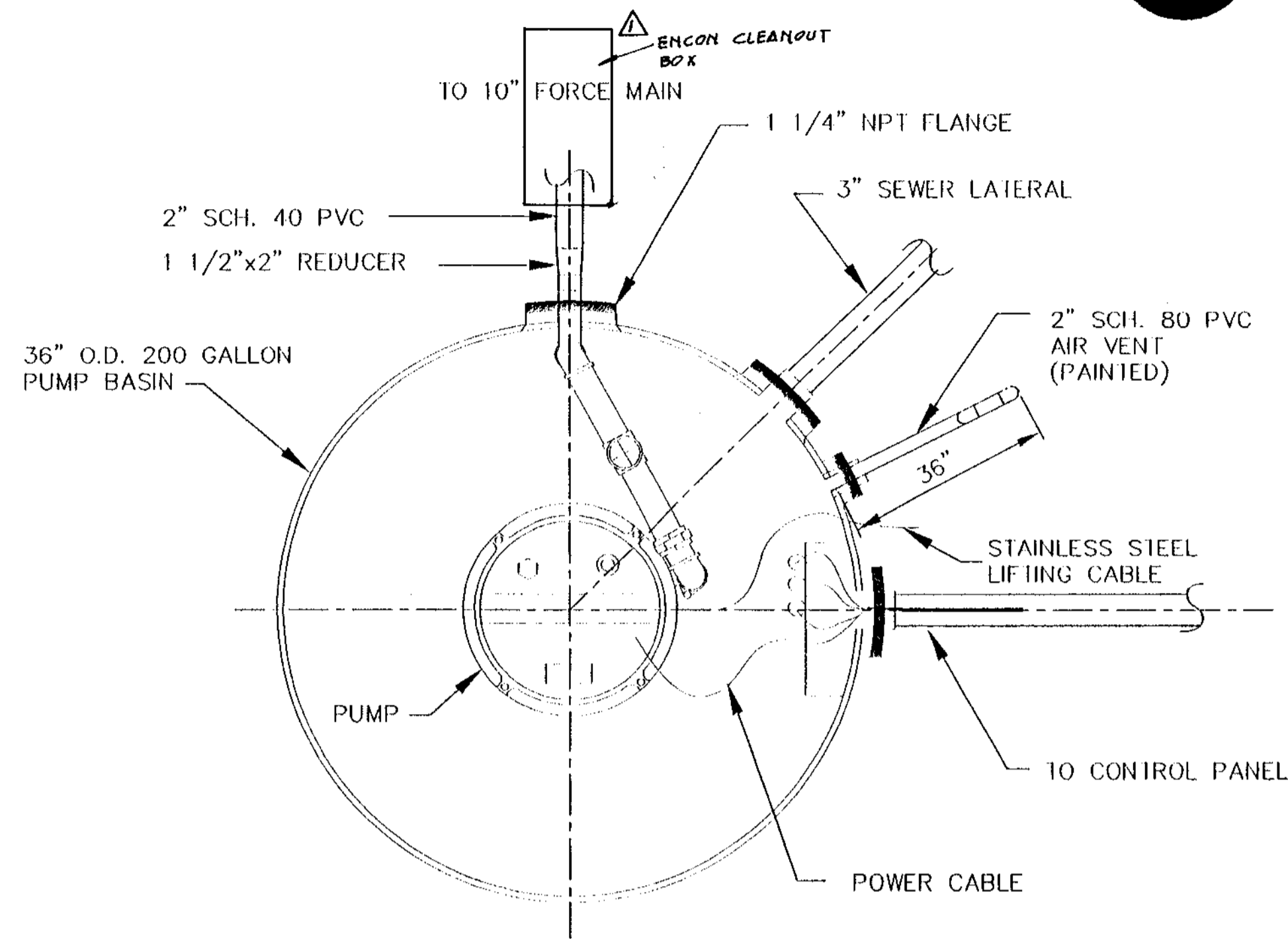
**ABACOA #9 MASTER LIFT STATION - GRINDER**

MF0130852580334

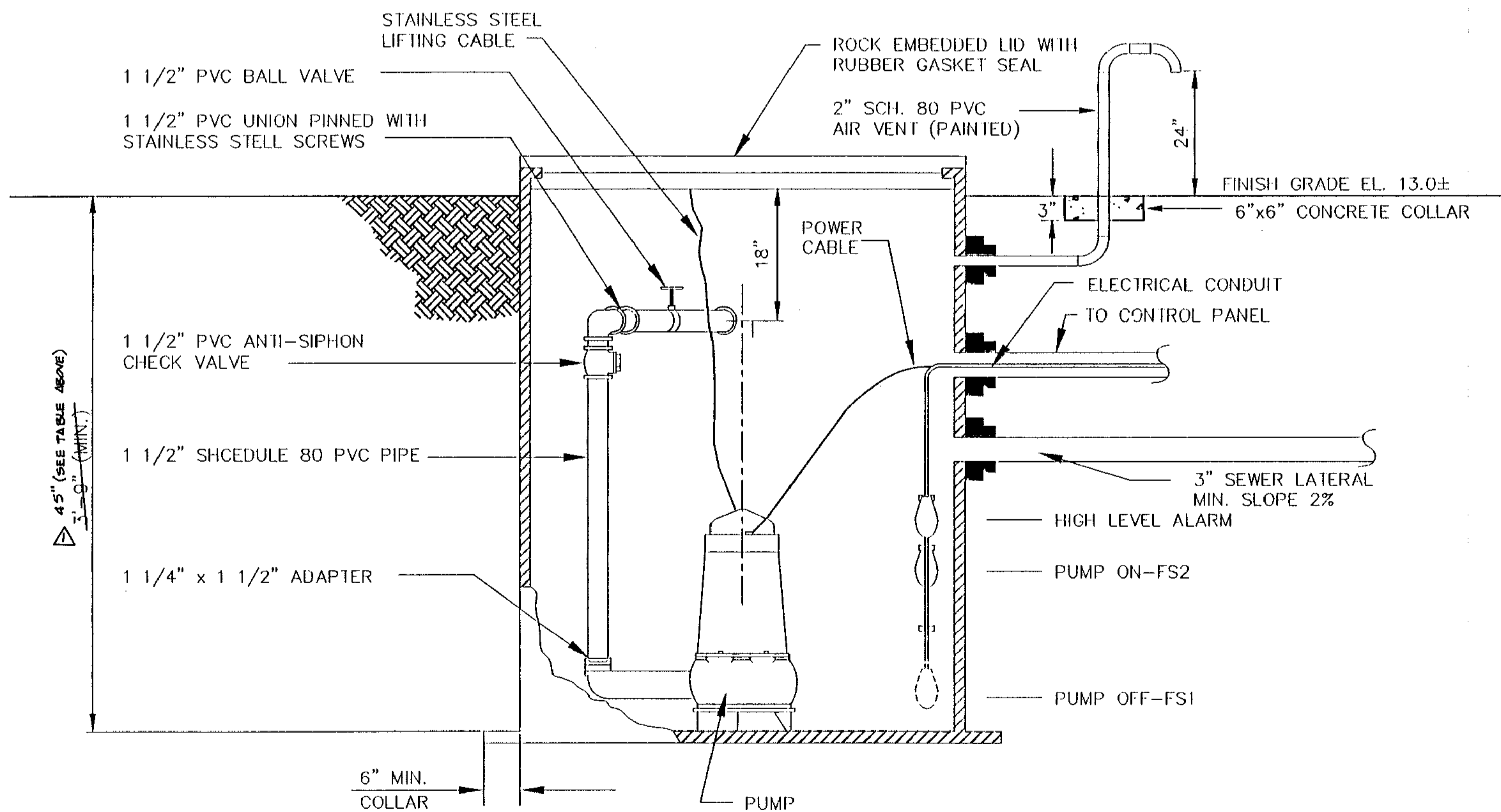
1.5" MF3085/258 FLYGT  
GRINDER 3HP 3/60/460 VOLT  
SERIAL # 1729530025

PPFG36WN

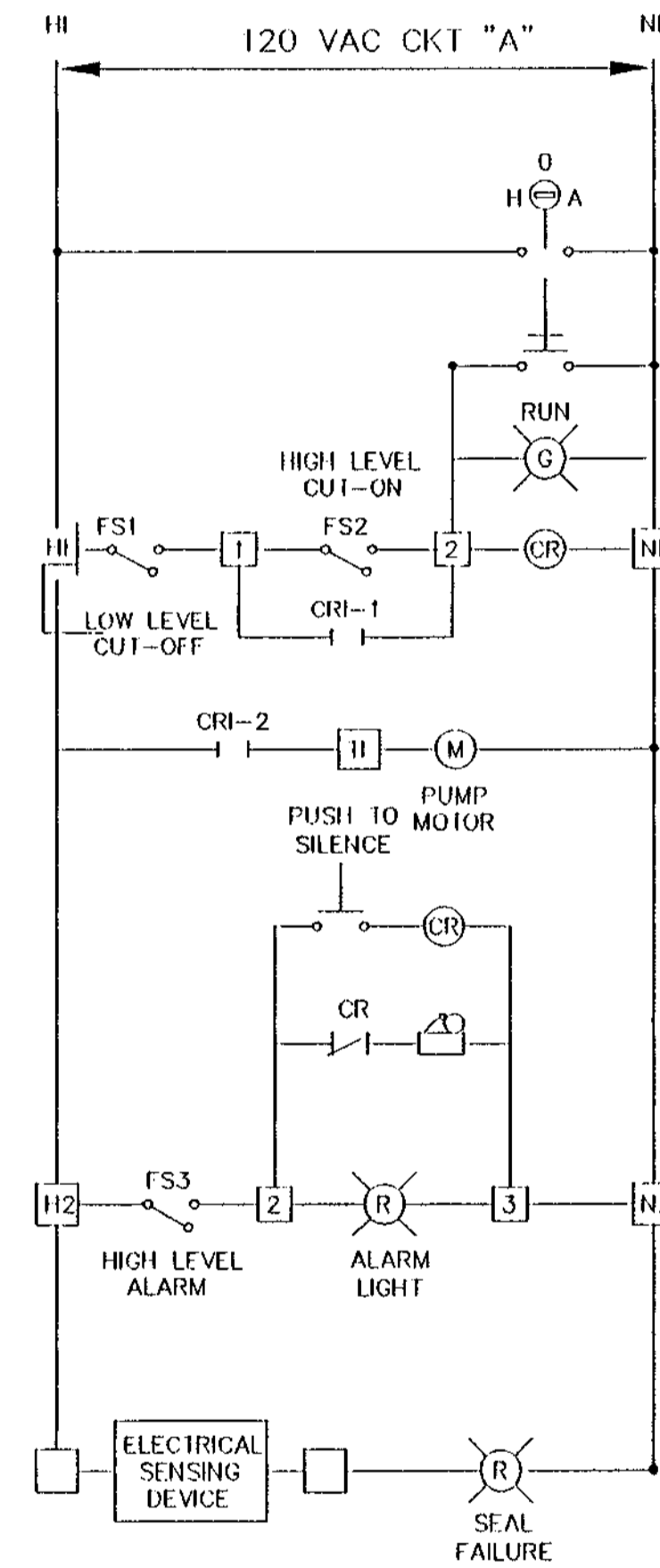
36" DIA. FIBERGLASS WEIWEELL  
45" DEEP



**PLAN VIEW**  
NOT TO SCALE



**TYPICAL SECTION**  
NOT TO SCALE



**PUMP RUN & ALARM CIRCUIT**

**ELECTRICAL NOTES:**

- HIGH WATER LEVEL ALARM BOX SHALL HAVE A SEPARATE 120 VAC SUPPLY SOURCE FROM THE PUMP MOTOR SUPPLY SOURCE.
- WIRING CONNECTIONS SHALL BE FURNISHED BY ELECTRICAL CONTRACTOR.
- ELECTRICAL INSTALLATION SHALL COMPLY WITH THE NEC, NESC, AND LOCAL CODES.
- HIGH WATER BELL/BUZZER ALARM AND FLASHING LIGHT SHALL BE LOCATED NEXT TO THE UTILITY BOX OF THE BUILDING.
- PUMP SHALL HAVE SEAL FAILURE ELECTRIC PROBE IN OIL CHAMBER.
- PUMP ON/OFF SETTINGS SHALL BE SET AS PER MANUFACTURER'S RECOMMENDATIONS.

**GRINDER PUMP**  
**CONTROL SCHEMATIC DIAGRAM**

RECORD DRAWINGS DATE: \_\_\_\_\_  
REVIEWED BY: \_\_\_\_\_

**NOTE:**

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DATE	01-21-16
REVISION	APPROVED RECORD DATA

**WILLIAMS, HATFIELD & STONER, INC.**  
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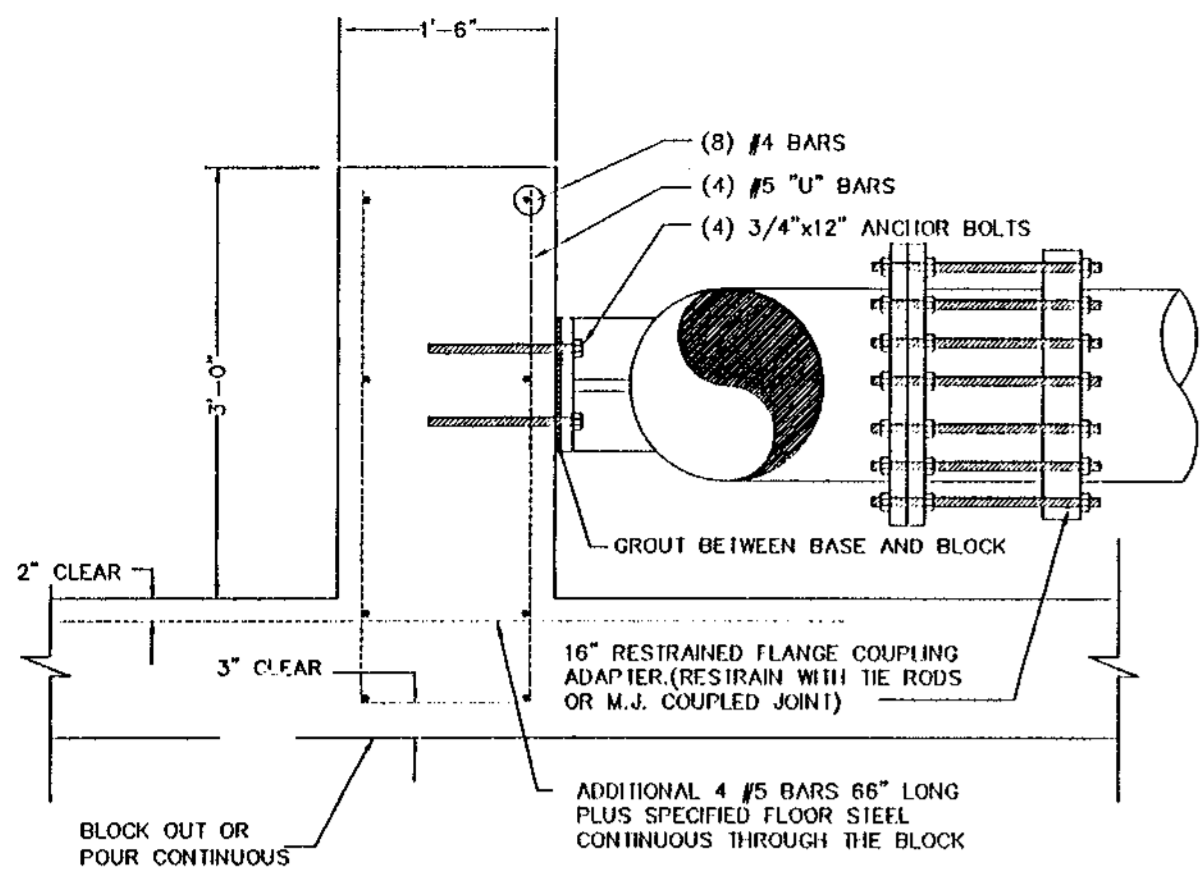


**ABACOA WASTEWATER COLLECTION SYSTEM**  
**WMP 9A MASTER LIFT STATION**  
**GRINDER PUMP STATION PLAN, SECTION, AND SCHEMATIC**

Date	9/6/96
Drawn	EWG
Checked	JCD
Manager	MRT
Dwg Name	

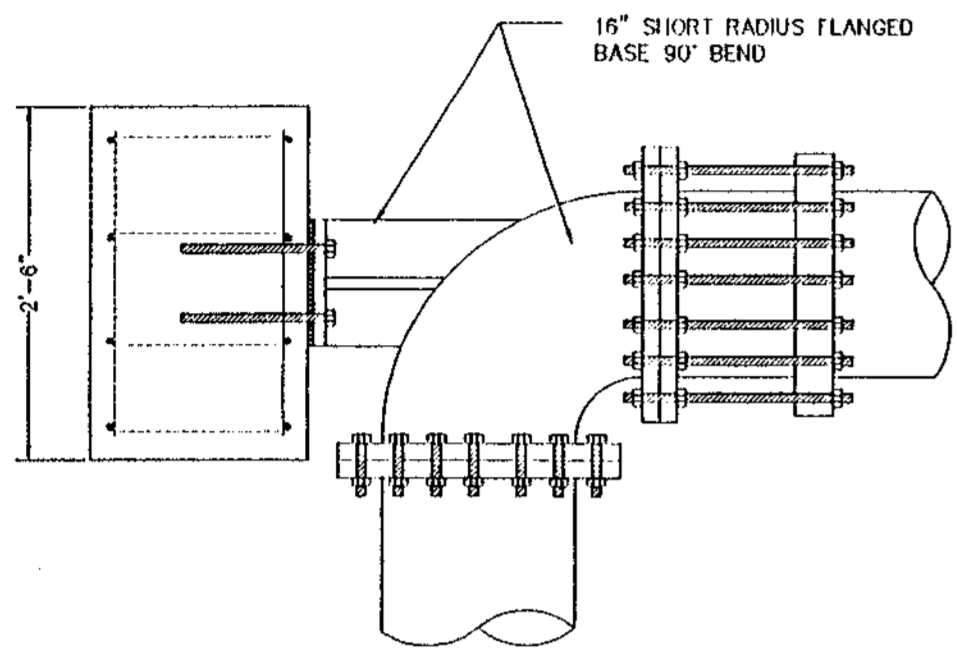
PROJECT No.  
**4068.59**  
SHEET No.  
**5**

**RECORD DRAWING**



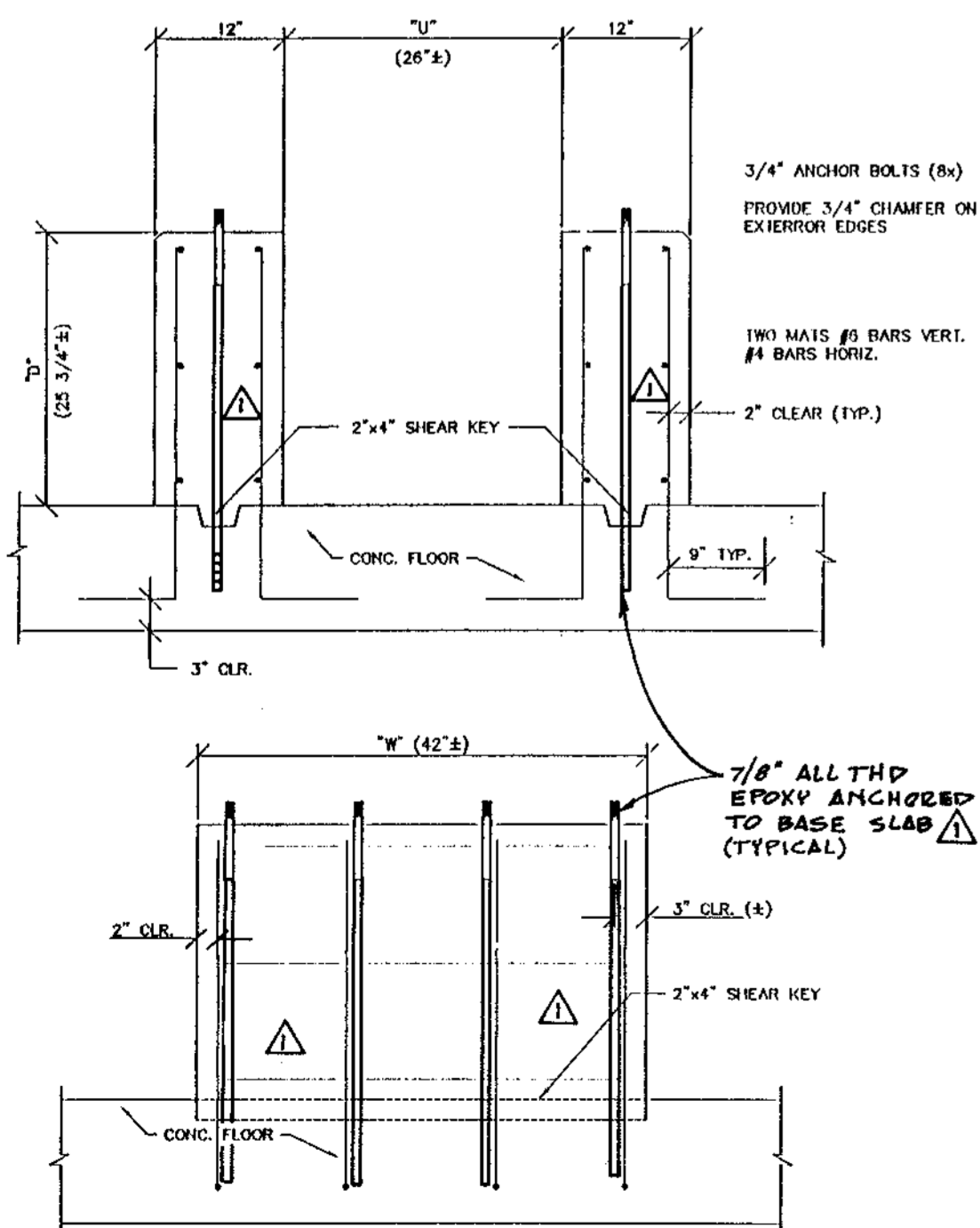
**SUCTION END BLOCK DETAIL**

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



RECORD DRAWINGS DATE: \_\_\_\_\_ REVIEWED BY: \_\_\_\_\_

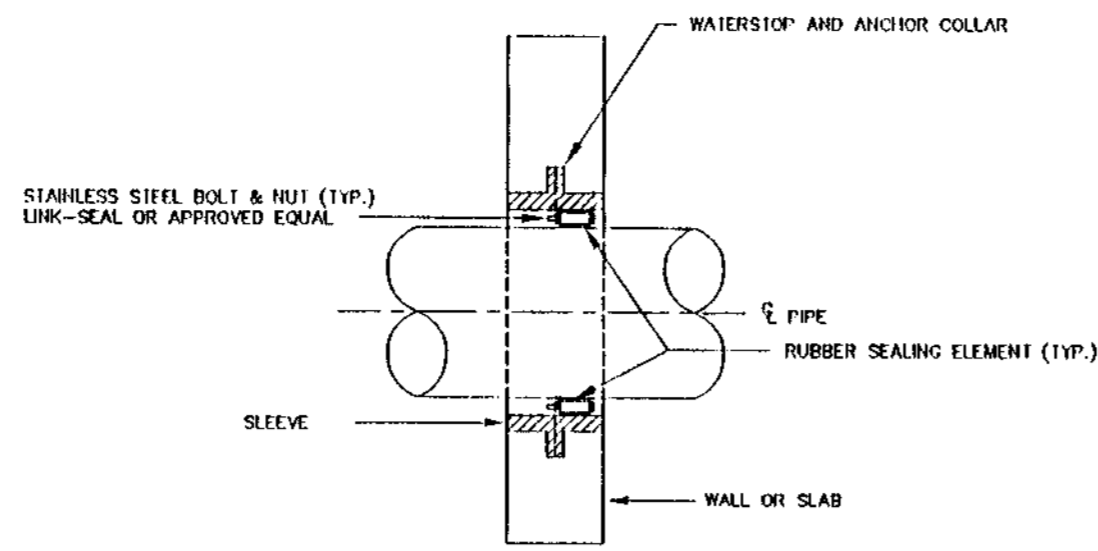
NOTE:  
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**PUMP SUPPORT DETAIL**

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

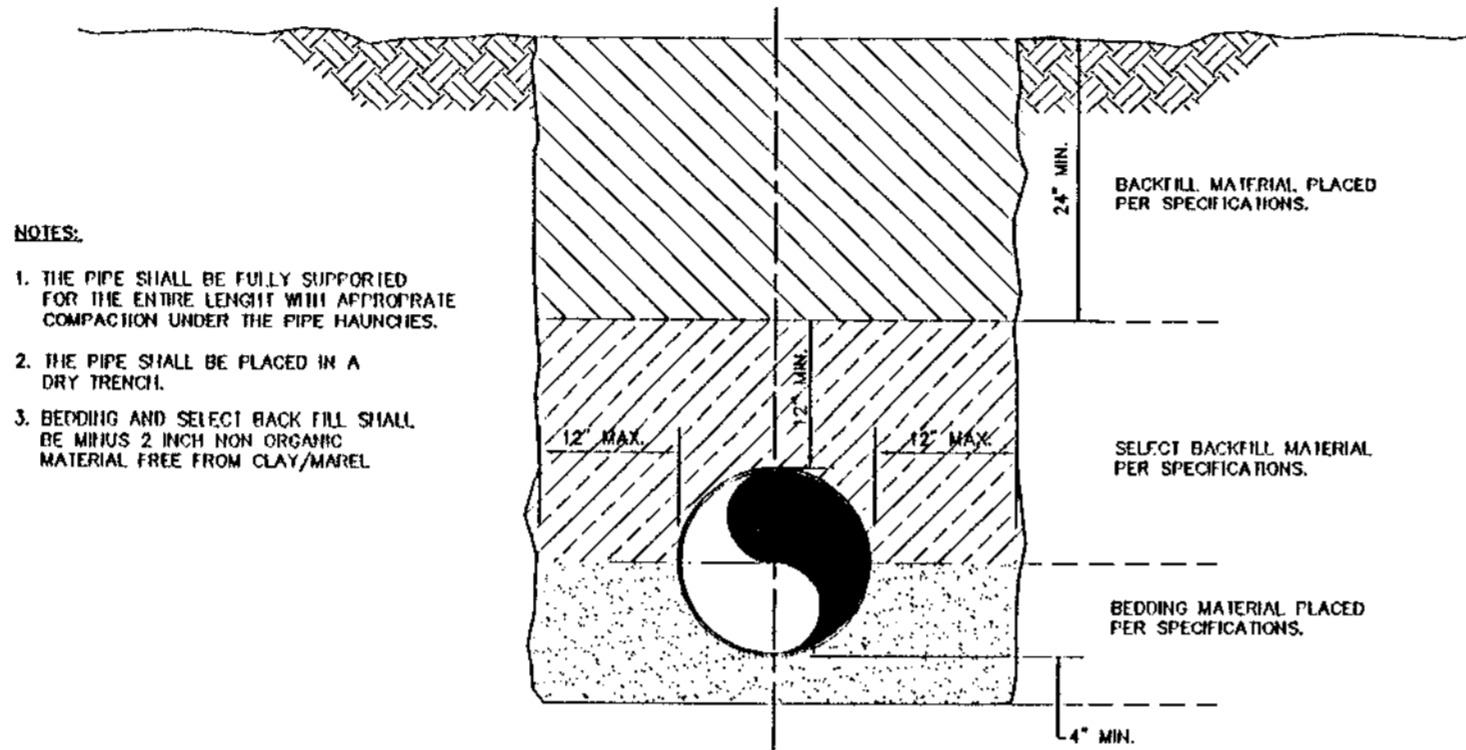
MS-DTL1,2,3,4,5,6,7, & 8  
PS-SHT-6



**WALL SLEEVE WITH SEAL DETAIL**

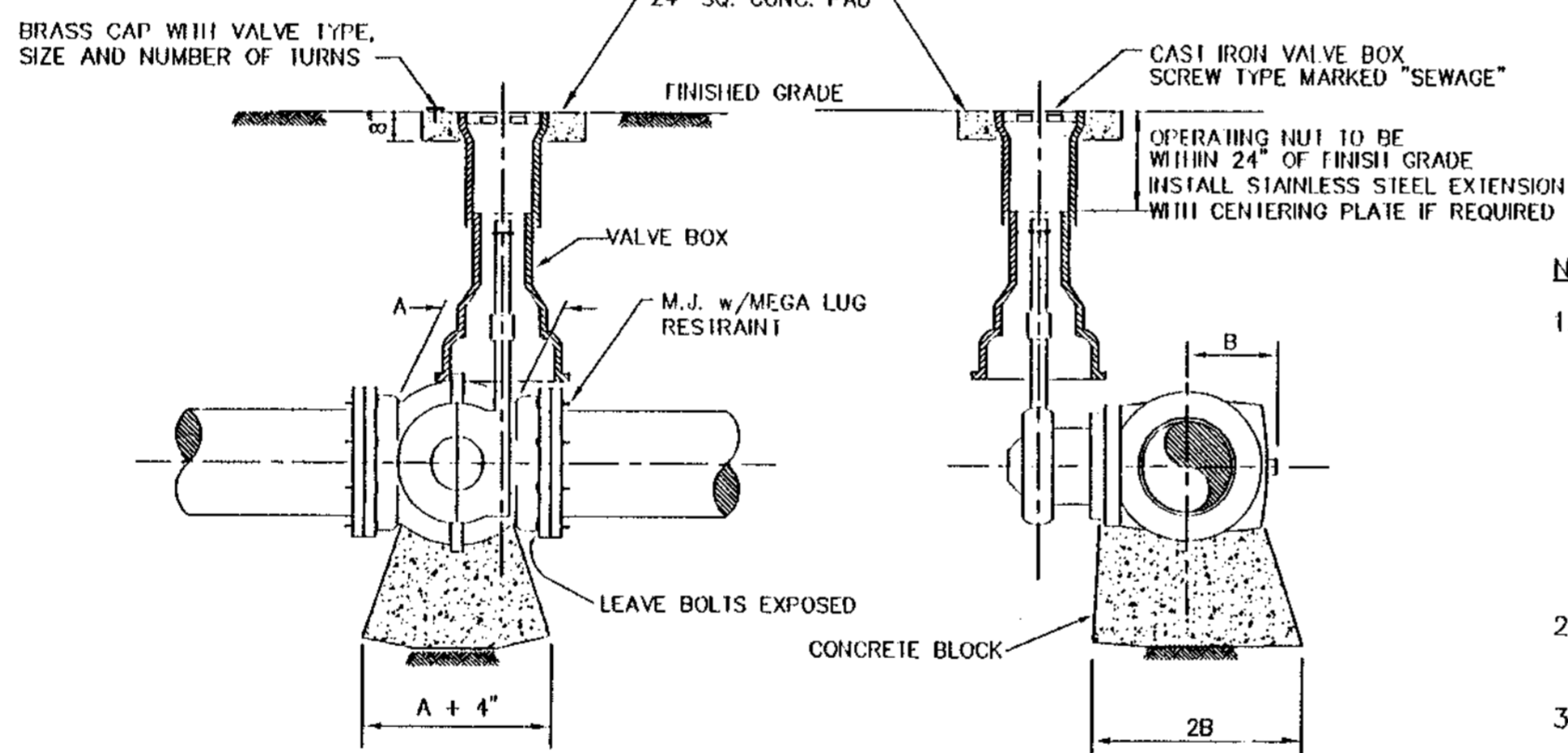
NOT TO SCALE

- NOTE:
1. WALL SLEEVE DIMENSION VARIES DEPENDING ON PIPE SIZE & MATERIAL COORDINATE WITH SEAL MANUFACTURE FOR APPROPRIATE SLEEVE SIZE.
  2. PROVIDE SEALS ON BOTH SIDES FOR WALLS 16" THICK OR LARGER.
  3. SLEEVE MAY BE PLASTIC OR STEEL AS MANUFACTURED BY LINK-SEAL OR APPROVED EQUAL.



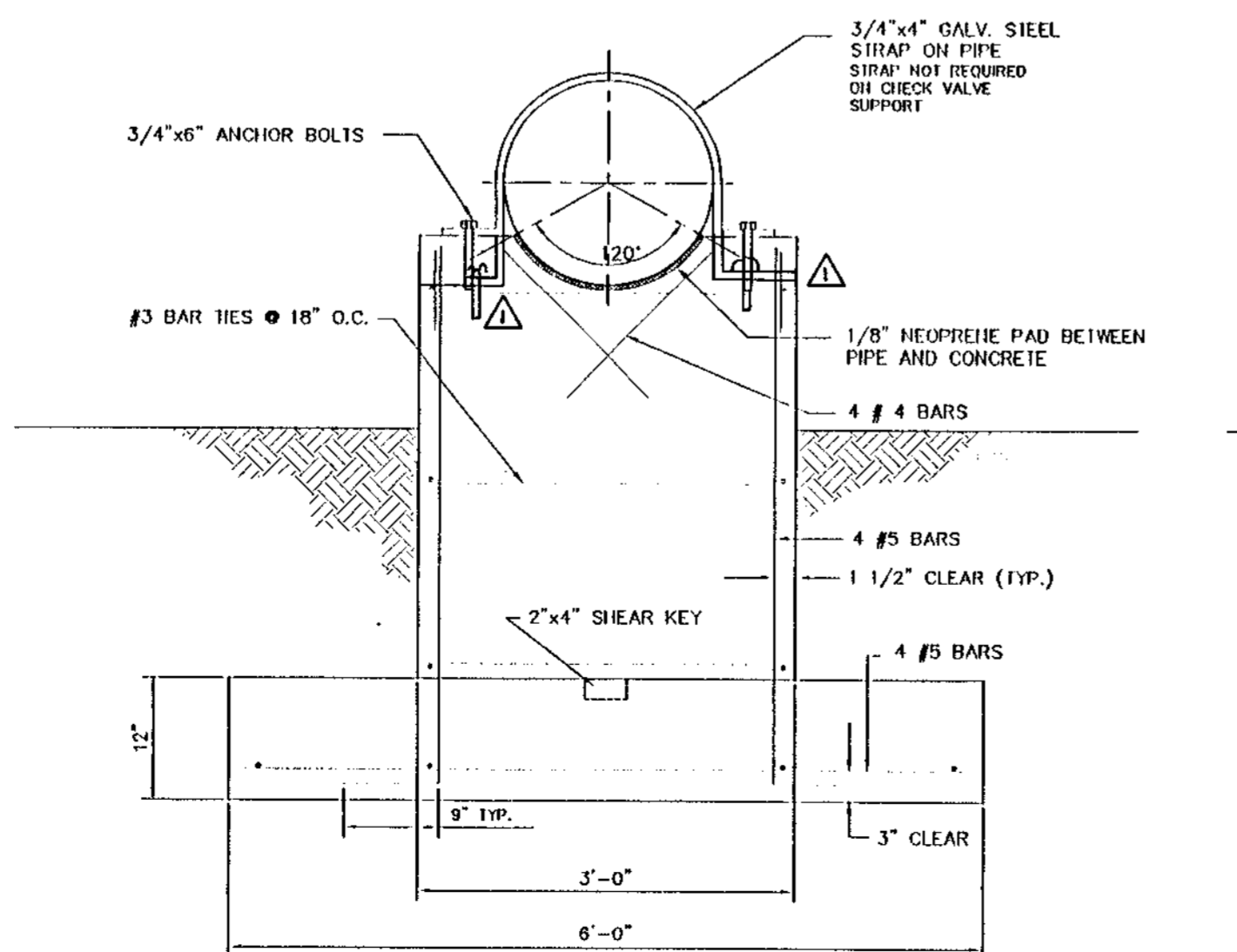
**PIPE TRENCH DETAIL**

NOT TO SCALE



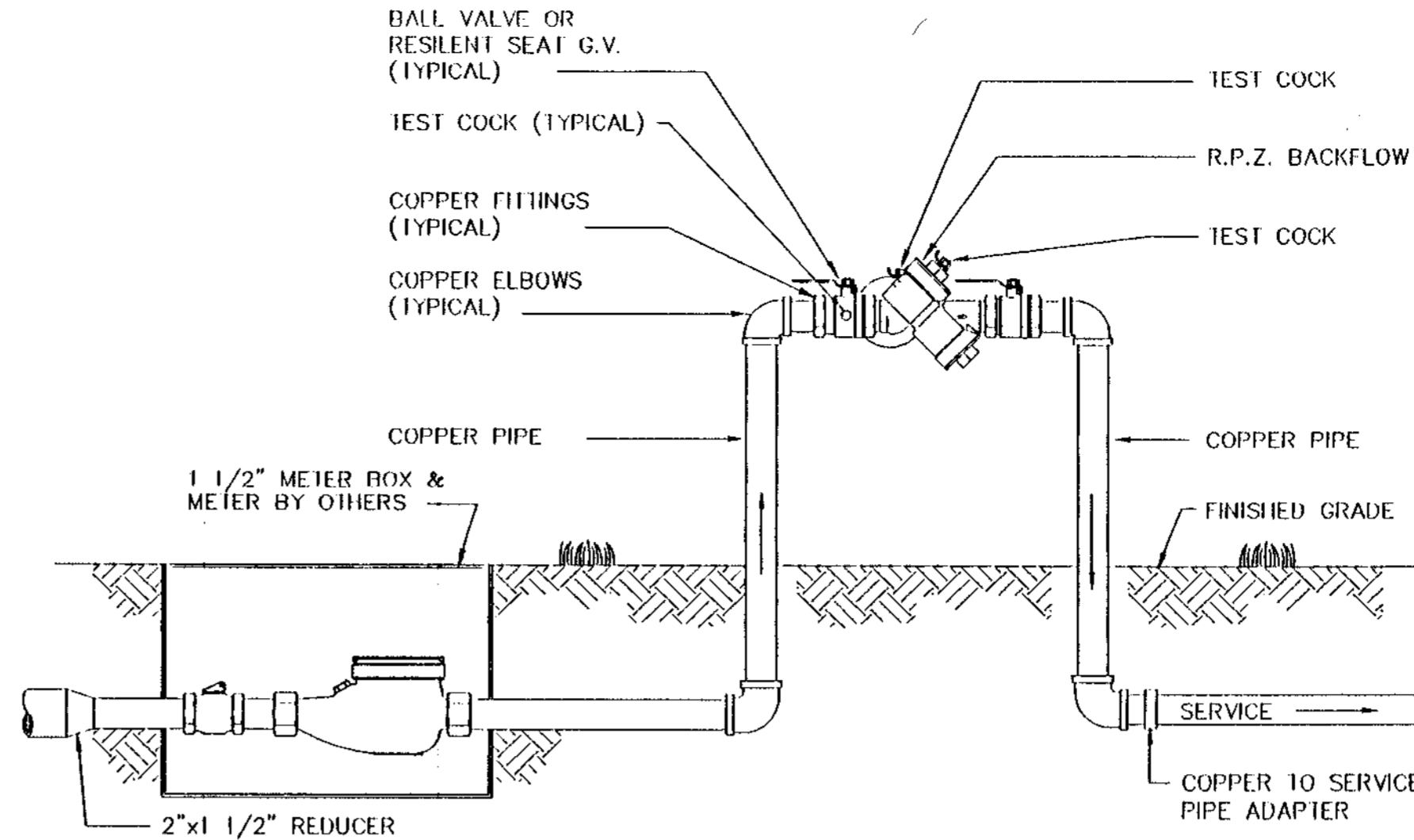
**BURIED PLUG VALVE**

NOT TO SCALE



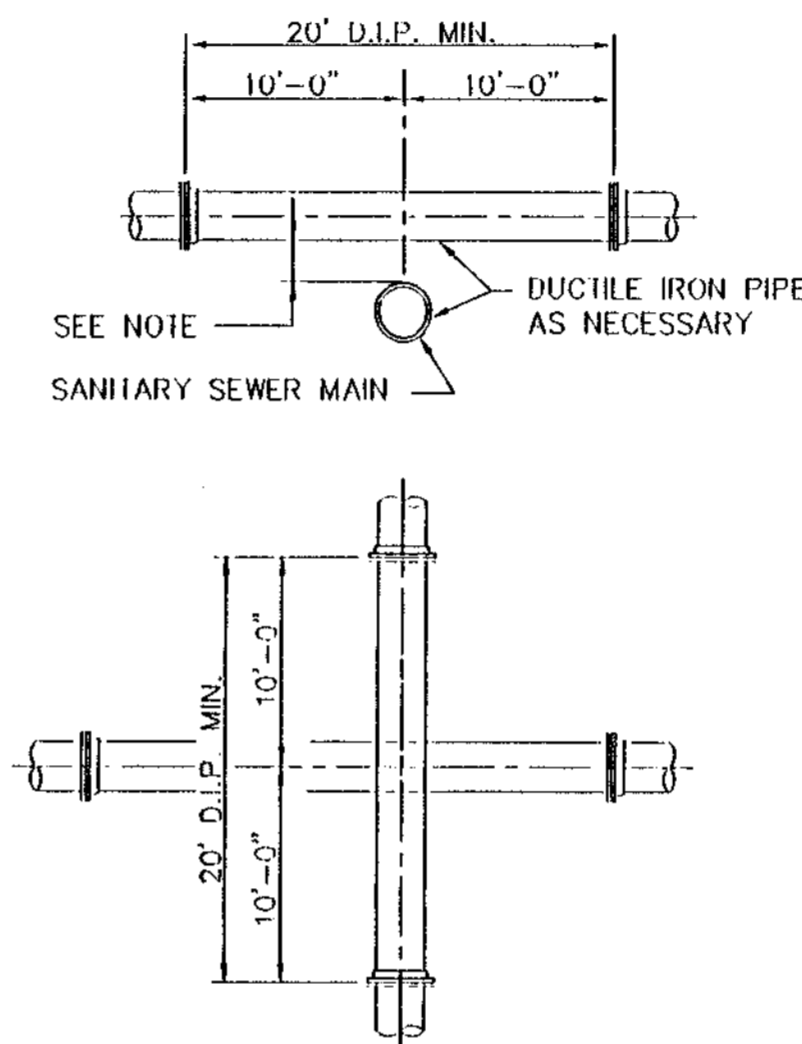
**EXTERIOR PIPE SUPPORT**

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



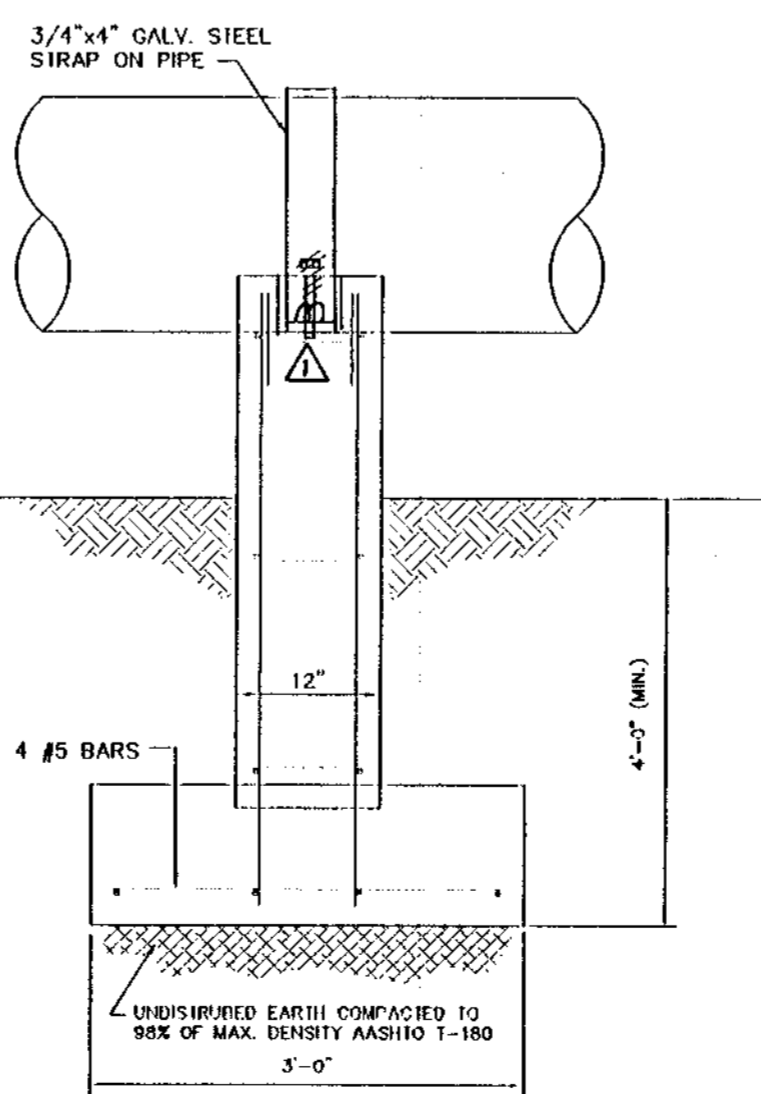
**1 1/2\"/>**

NOT TO SCALE



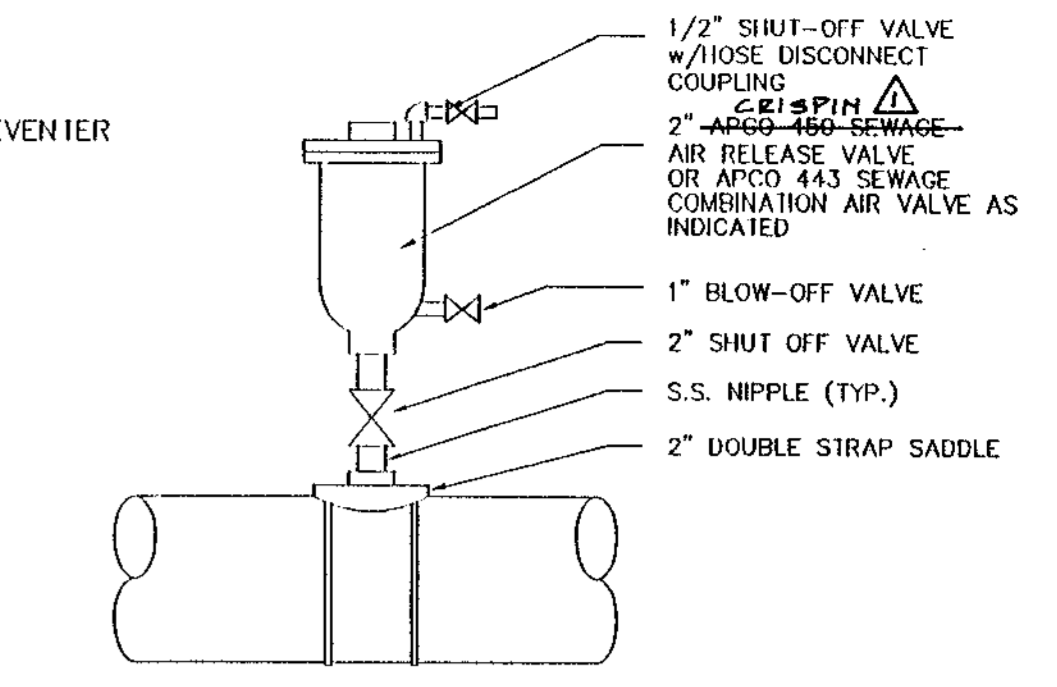
**CONFLICT DETAIL**

- NOTE:
1. STORM AND SANITARY SEWERS CROSSING UNDER WATER MAINS SHALL BE LAID TO PROVIDE A MINIMUM VERTICAL DISTANCE OF EIGHTEEN (18) INCHES BETWEEN THE INVERT OF THE UPPER PIPE AND THE CROWN OF THE LOWER PIPE. WHERE THIS MINIMUM SEPARATION CANNOT BE MAINTAINED, THE CROSSING SHALL BE ARRANGED SO THAT THE SEWER PIPE JOINTS AND WATER MAIN JOINTS ARE EQUIDISTANT FROM THE POINT OF CROSSING WITH NO LESS THAN TEN (10) FEET BETWEEN ANY TWO JOINTS AND BOTH PIPES SHALL BE D.I.P. WHERE THERE IS NO ALTERNATIVE TO SEWER PIPES CROSSING OVER A WATER MAIN, THE CRITERIA FOR MINIMUM SEPARATION BETWEEN LINES AND JOINTS IN THE ABOVE, SHALL BE REQUIRED AND BOTH PIPES SHALL BE D.I.P. IRRESPECTIVE OF SEPARATION, D.I.P. IS NOT REQUIRED FOR STORM SEWERS.
  2. MAINTAIN TEN (10) FEET HORIZONTAL DISTANCE BETWEEN WATER MAIN AND STORM SEWER, SANITARY SEWER, OR FORCE MAIN, AS A MINIMUM.
  3. FORCE MAIN CROSSING WATER MAIN SHALL BE LAID TO PROVIDE A MINIMUM VERTICAL DISTANCE OF EIGHTEEN (18) INCHES BETWEEN THE OUTSIDE OF THE FORCE MAIN AND OUTSIDE OF THE WATER MAIN WITH THE WATER MAIN CROSSING OVER THE FORCE MAIN.



**INTERIOR VALVE OR PIPE SUPPORT**

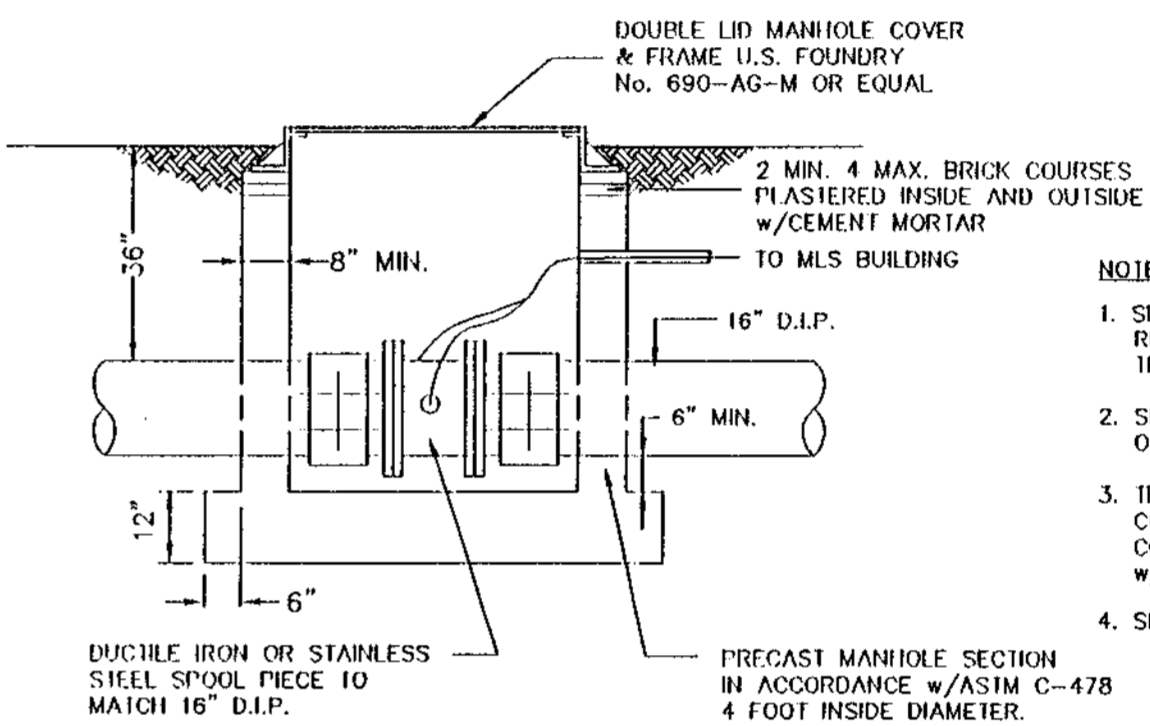
SCALE: 3/4" = 1'-0"



**SEWAGE AIR RELEASE OR COMBINATION AIR RELEASE VALVE DETAIL**

NOT TO SCALE

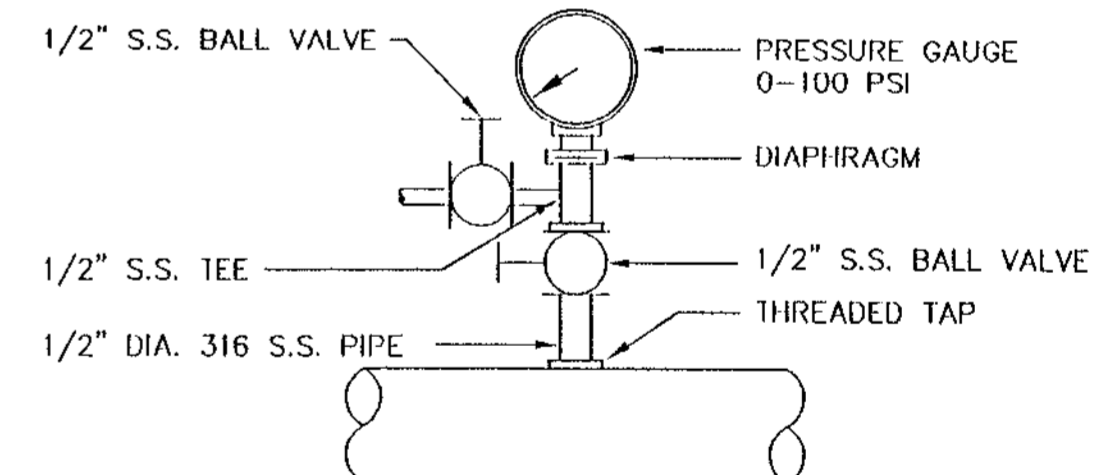
NOTE: ALL TUBING SHALL BE STAINLESS STEEL



**TRANSIT TIME ULTRASONIC FLOW METER DETAIL**

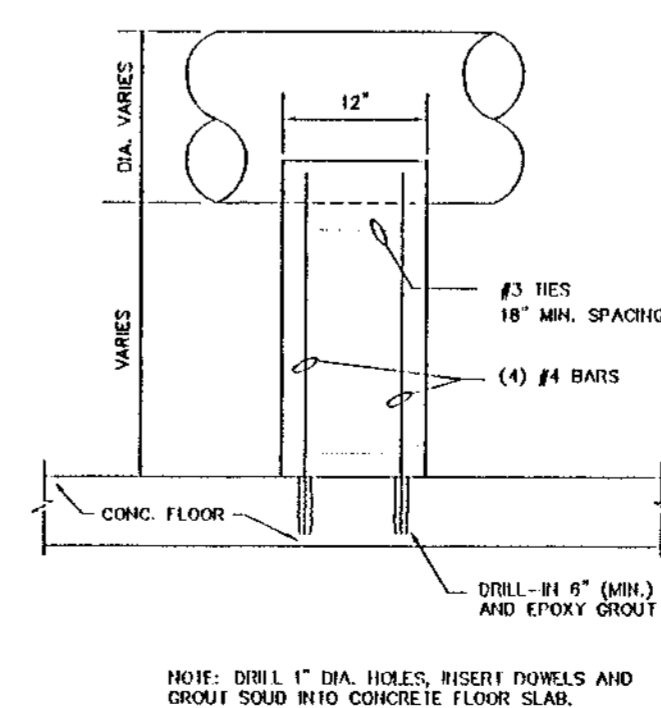
NOT TO SCALE

- NOTE:
1. SPOOL PIECE SHALL ALLOW SENSOR REMOVAL WITHOUT DEWATERING THE LINE.
  2. SENSORS SHALL BE DESIGNED TO OPERATE UNDER SUBMERGED CONDITIONS.
  3. THE SPOOL PIECE SHALL BE FLANGED, CONNECTED TO D.I.P. w/RESTRAINED FLANGE COUPLING ADAPTERS OR M.J. RESTRAINED w/MEGA LUGS.
  4. SEE ELECTRICAL DRAWINGS FOR SUMP PUMP DETAIL.



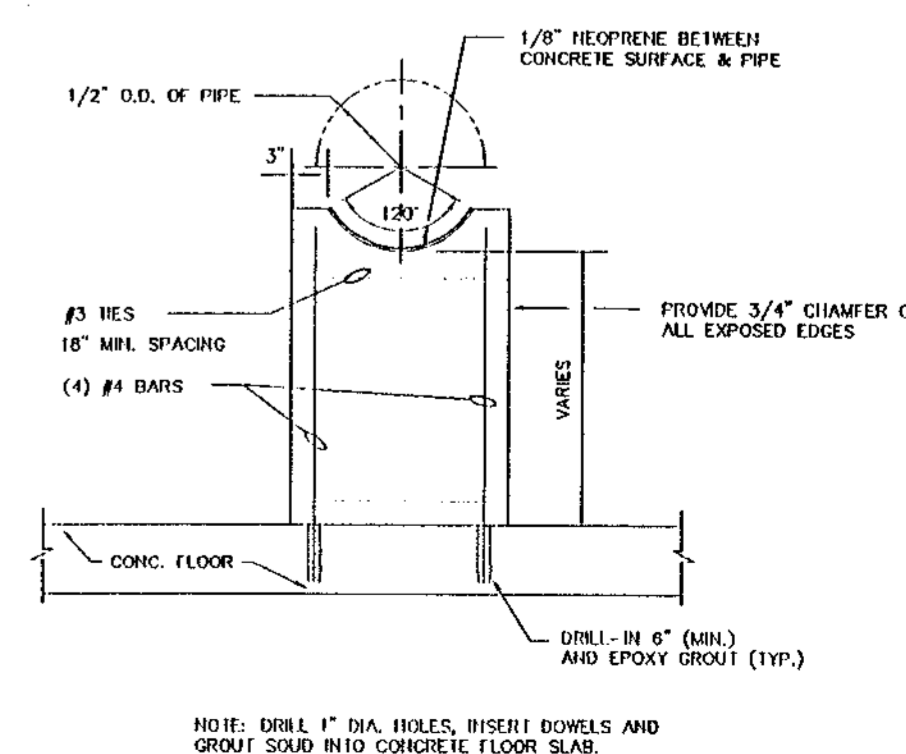
**ASSEMBLY FOR PRESSURE GAUGE, INSTRUMENT OR SWITCH**

NTS



**INTERIOR VALVE OR PIPE SUPPORT**

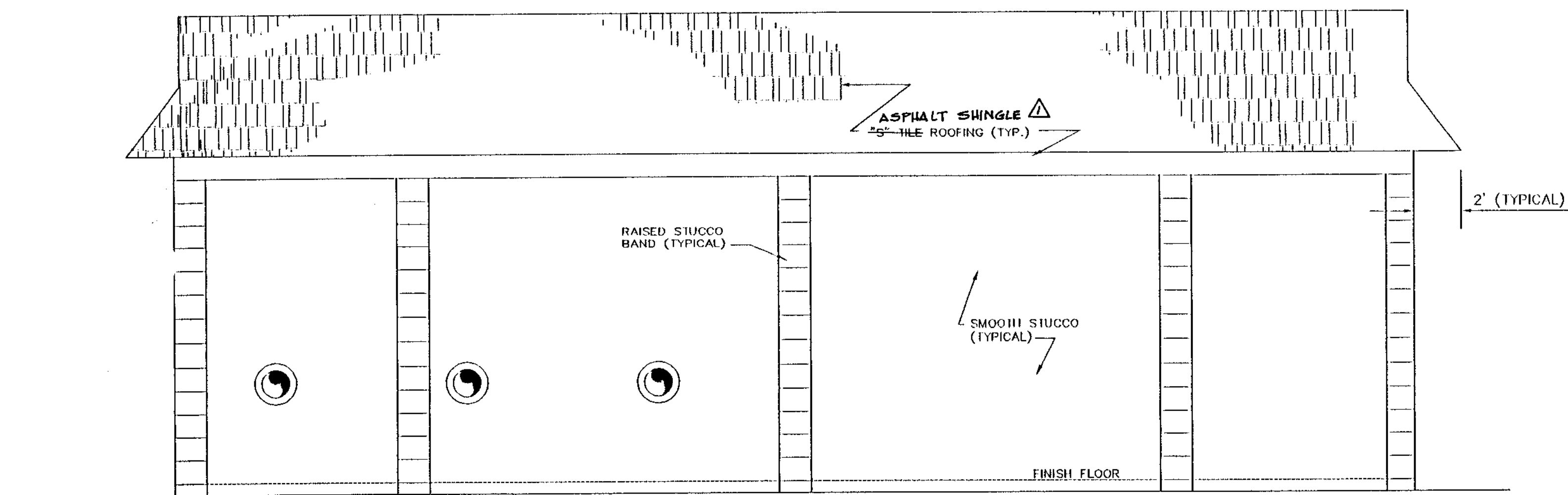
SCALE: 3/4" = 1'-0"



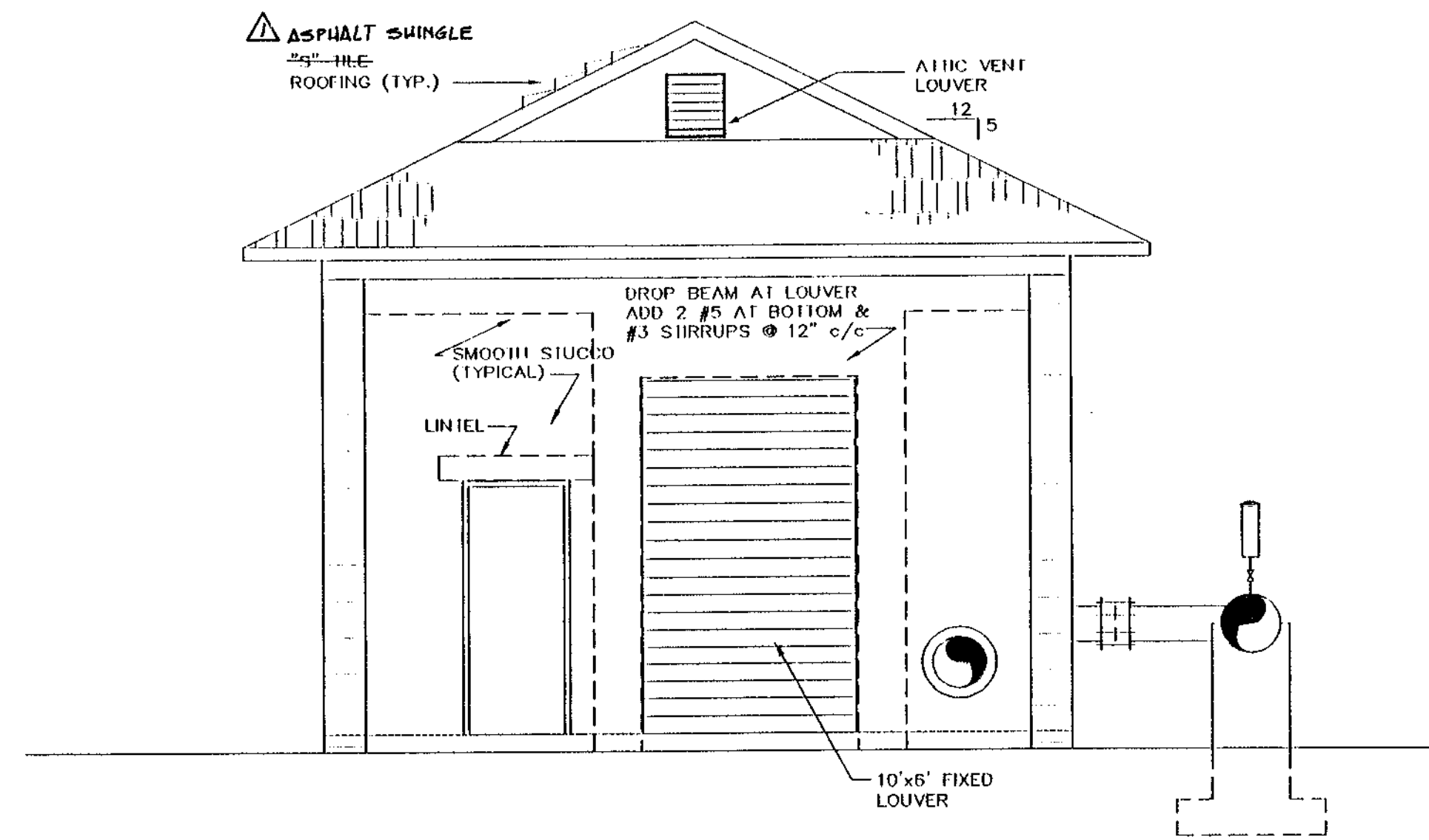
NOTE: DRILL 1\"/>

RECORD DRAWING

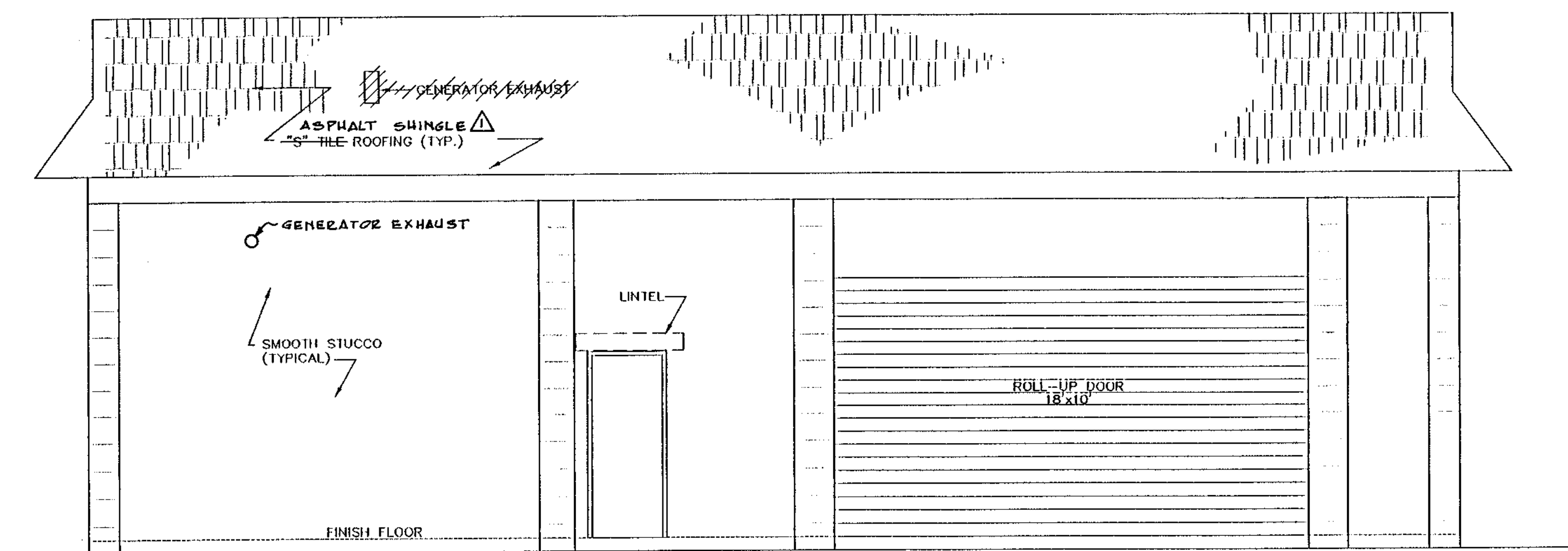
DATE	REVISION
01/16/16	APPROVED RECORD DATA
<b>WILLIAMS, HATFIELD &amp; STONER, INC.</b> CONSULTING ENGINEERS • PLANNERS • SURVEYORS FORT LAUDERDALE • BOYNTON BEACH • PORT ST. LUCIE • MIAMI	
<b>ABACOA WASTEWATER COLLECTION SYSTEM</b> <b>WMP 9A MASTER LIFT STATION</b> <b>PIPE DETAILS</b>	
DATE	ENG
9/6/96	JCD
Drawn	Checked
Checked	Managed
Managed	MRT
Dwg Name	Dwg Number
PROJECT No. 4068.59	
SHEET No. 6	



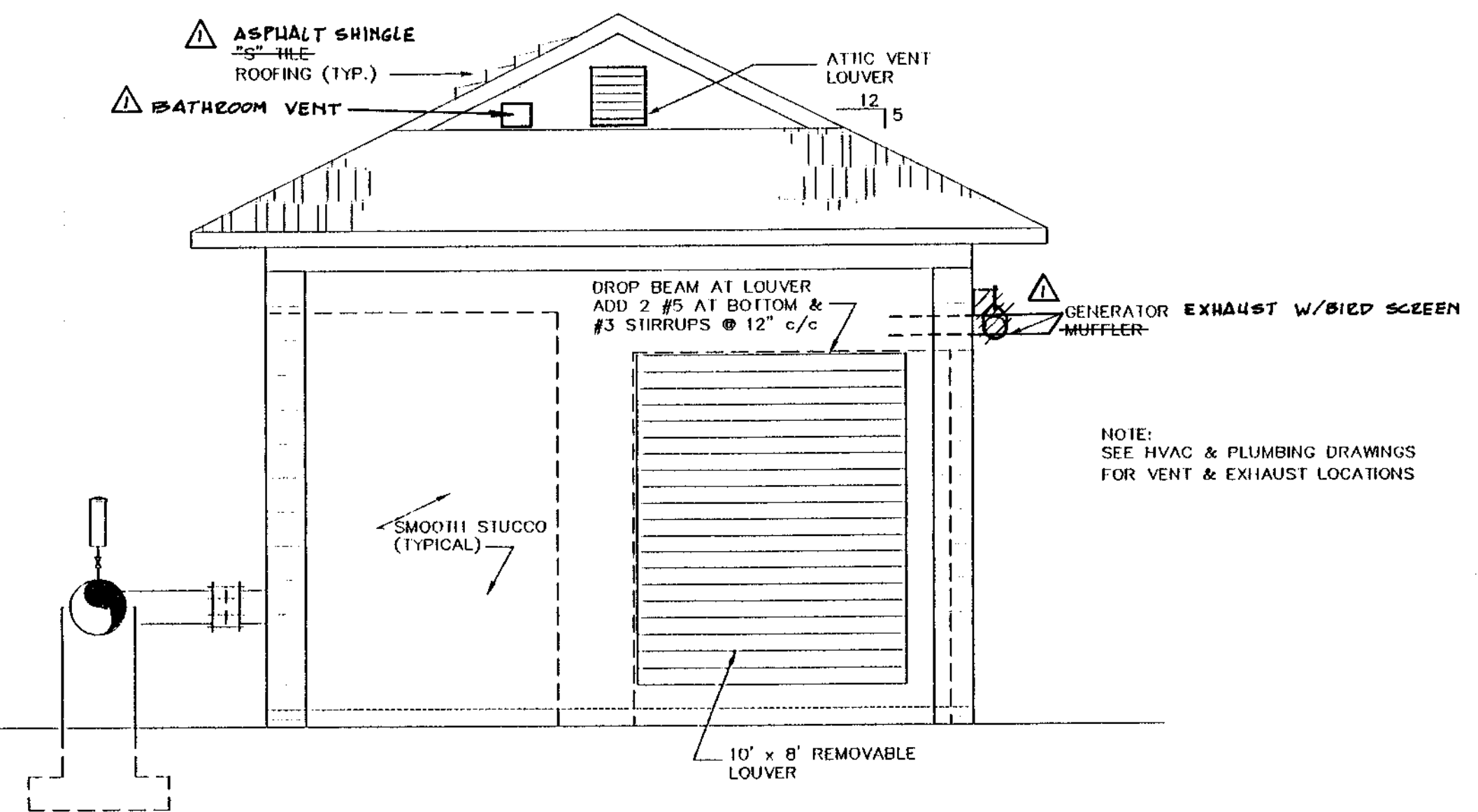
**NORTH ELEVATION**  
SCALE: 1/4" = 1'-0"



**EAST ELEVATION**  
SCALE: 1/4" = 1'-0"



**SOUTH ELEVATION**  
SCALE: 1/4" = 1'-0"



**WEST ELEVATION**  
SCALE: 1/4" = 1'-0"

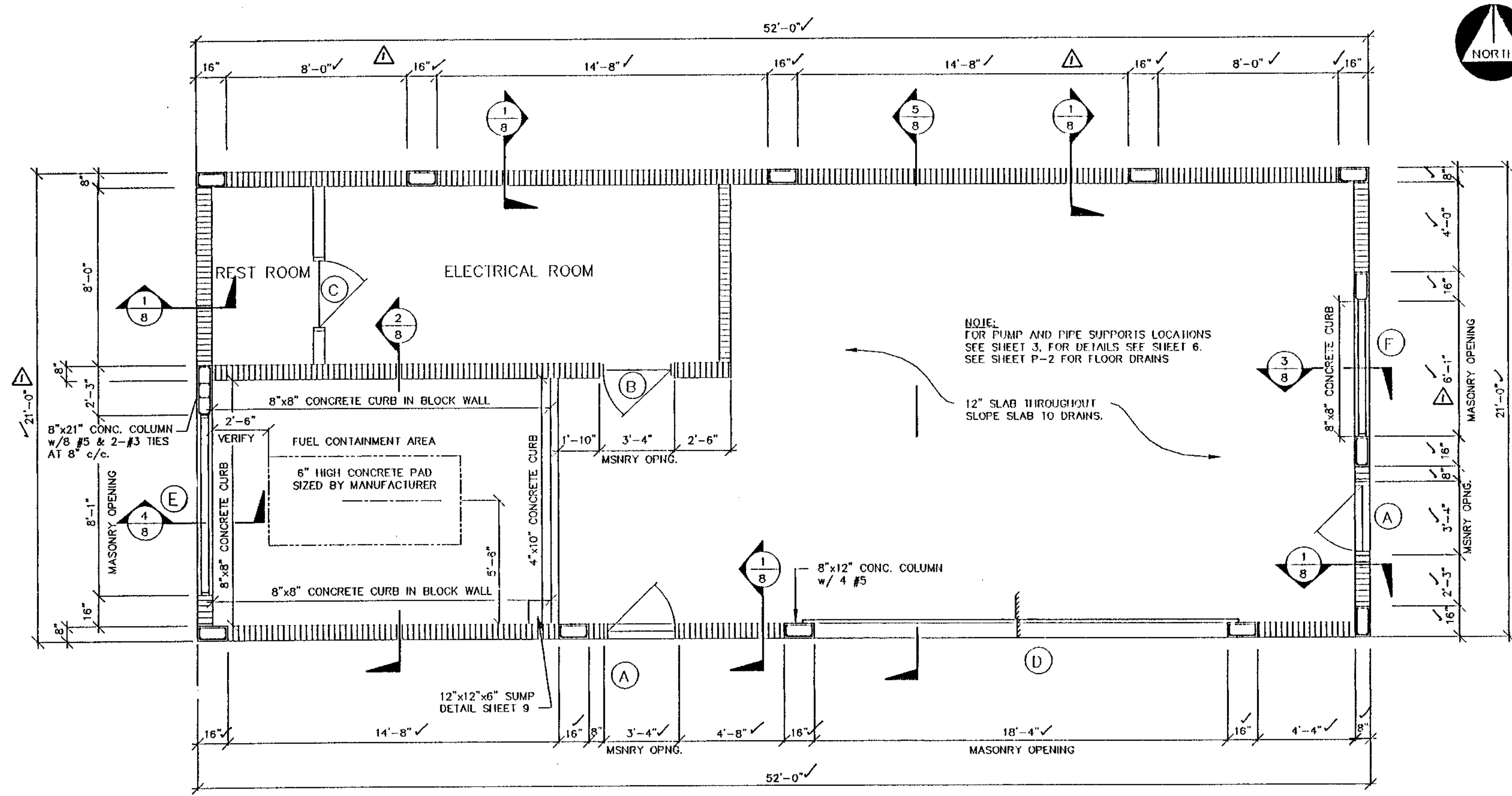
RECORD DRAWINGS DATE: \_\_\_\_\_  
REVIEWED BY: \_\_\_\_\_

NOTE:

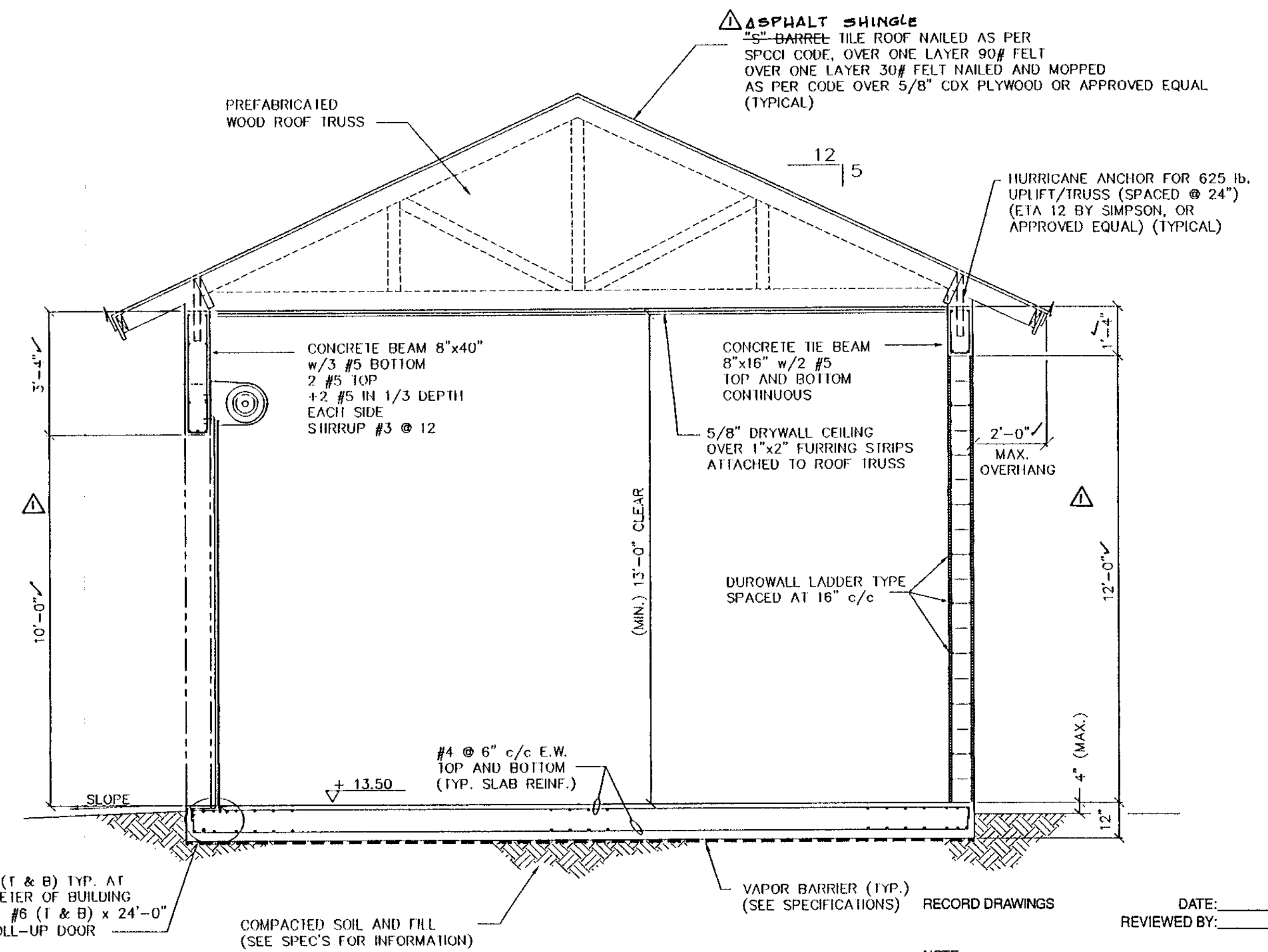
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Date	9/6/06
Drawn	EWG
Checked	JCD
Manager	MRT
Dwg Name:	



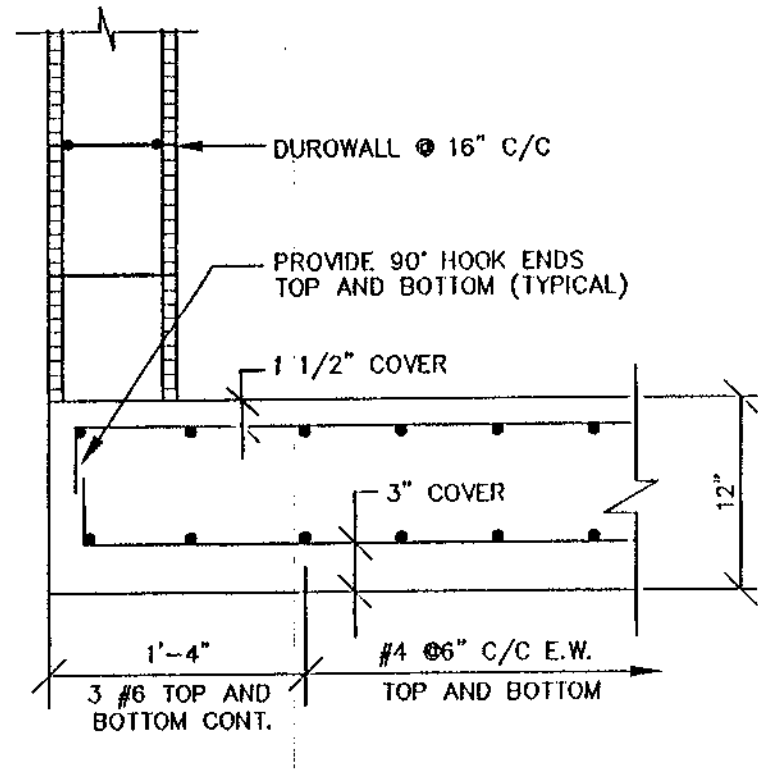


**STRUCTURAL PLAN**  
SCALE: 1/4" = 1'-0"

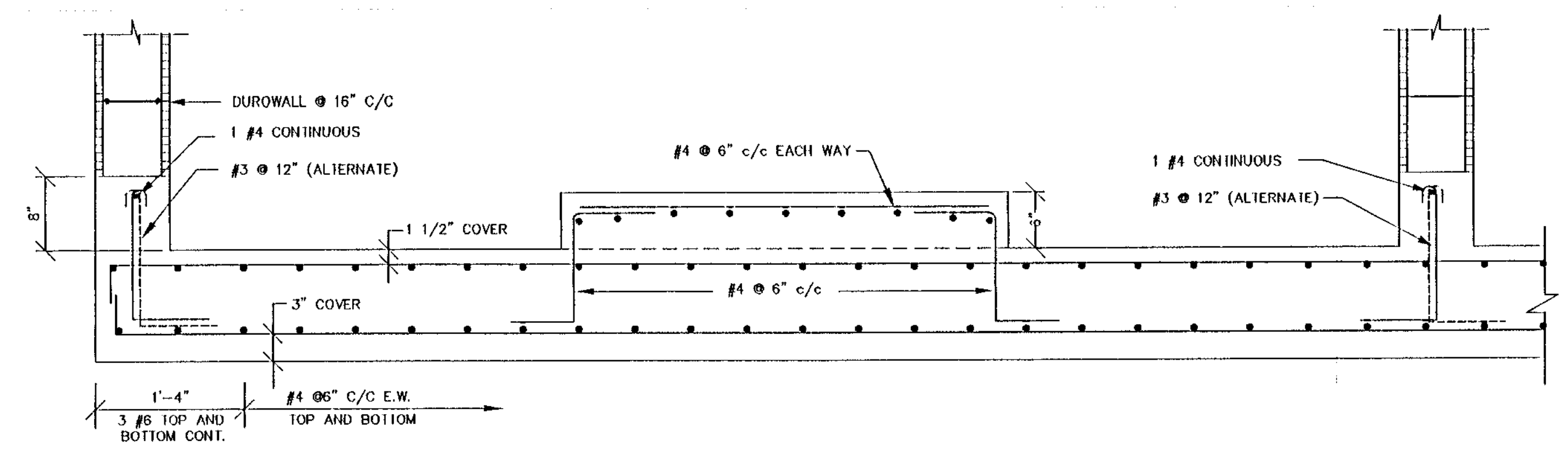


**SECTION 5**  
SCALE: 3/8" = 1'-0"

RECORD DRAWINGS  
DATE: \_\_\_\_\_  
REVIEWED BY: \_\_\_\_\_  
NOTES:  
CHANGES MADE DURING CONSTRUCTION AND/OR RECORD LOCATION OF CONSTRUCTED WORK AS FURNISHED BY CONTRACTOR (WHARTON SMITH AND CO.) TO THE ENGINEER ARE NOTED HEREIN. ANY USE OF RECORD INFORMATION CONTAINED HEREIN WITHOUT CONSULTING WITH MOCK, ROOS & ASSOCIATES, INC. WILL BE AT USER'S SOLE RISK AND WITHOUT LIABILITY OR LEGAL EXPOSURE TO MOCK, ROOS & ASSOCIATES, INC.



**SECTION 1**  
SCALE: 1" = 1'-0"

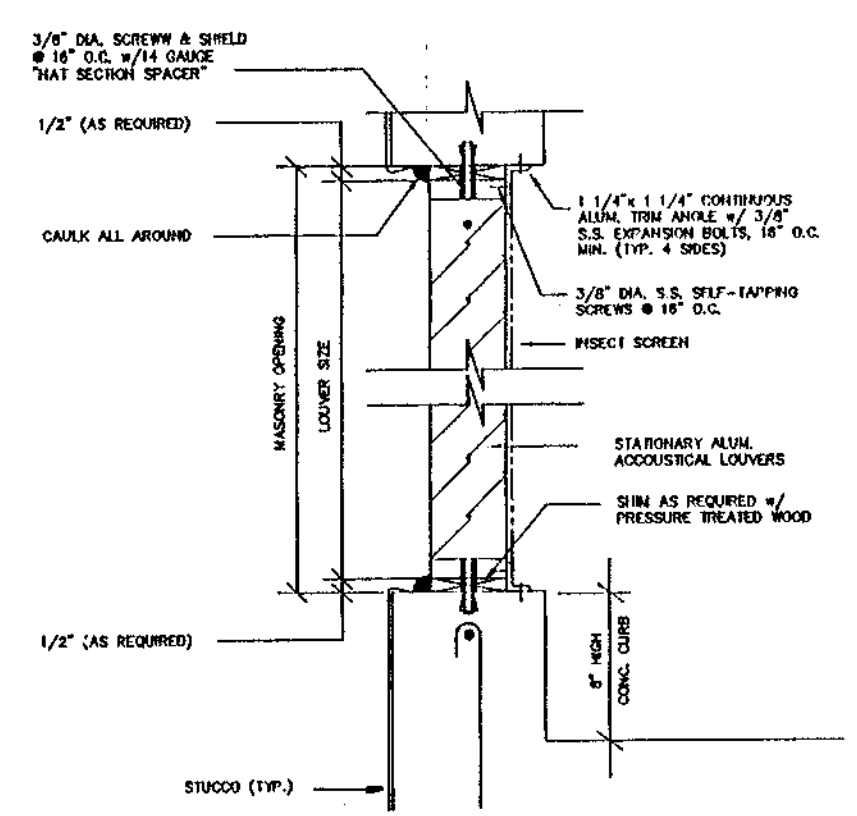
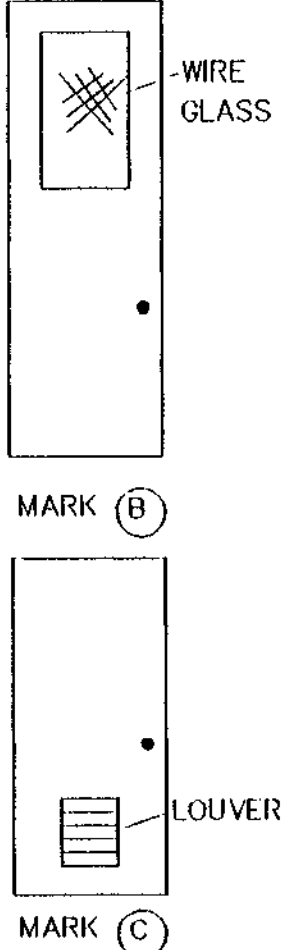


**SECTION 2**  
SCALE: 1" = 1'-0"

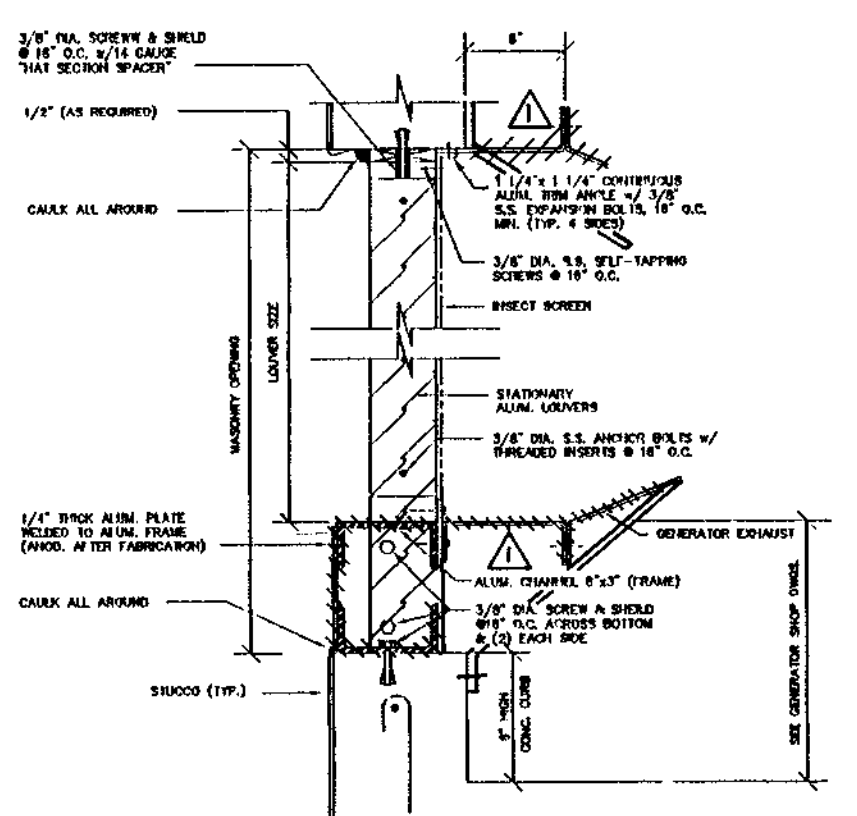
INTERIOR FINISH SCHEDULE					
ROOM	FLOOR	BASE	WALLS	CEILING	REMARKS
REST ROOM	VINYL TILE	VINYL TILE	DRYWALL	DRYWALL	WALLS AND CEILING PAINTED SEE SPECIFICATIONS
ELECTRICAL RM.	CONCRETE	-	MASONRY BLOCK	DRYWALL	WALLS AND CEILING PAINTED SEE SPECIFICATIONS
PUMP ROOM	CONCRETE	-	MASONRY BLOCK	DRYWALL	WALLS AND CEILING PAINTED SEE SPECIFICATIONS
FUEL CONTAINMENT	CONCRETE	-	MASONRY BLOCK	DRYWALL	WALLS AND CEILING PAINTED SEE SPECIFICATIONS

- NOTES:**
- SEE ELEVATIONS SHEET 7 FOR CLEAR MASONRY OPENINGS.
  - LINTEL OVER DOORS WITH SPANS UP TO 4'-0" SHALL BE 8"x8" PRECAST CONCRETE WITH 2 #4 AT TOP AND BOTTOM.
  - SLAB ON GRADE SHALL BE 12" THICK CONCRETE SLAB WITH #4 @ 6" CENTER TO CENTER EACH WAY, TOP AND BOTTOM ON VISQUEEN VAPOR BARRIER ON COMPACTED SOIL AND FILL.
  - CONCRETE SHALL REACH MINIMUM ULTIMATE STRENGTH  $f_c' = 3,000$  psi IN 28 DAYS UNLESS OTHERWISE NOTED ON PLANS AND SCHEDULES. ALL CONCRETE SHALL BE READY-MIXED WITH A MAXIMUM AGGREGATE 3/4" (ASTM C-33) IN CONFORMANCE WITH ASTM C-94, MINIMUM CEMENT CONTENT EQUALS 5 BAG/YARD TYPE I PER ASTM C-150, AND MIXTURES SHALL CONFORM TO ASTM C-494. SEE PROJECT SPECIFICATIONS.
  - REINFORCING STEEL SHALL BE DEFORMED, NEW BILLET STEEL ASTM A-615, GRADE 60. ALL SPLICES TO BE IN ACCORDANCE TO CHAPTER 12 ACI 318-89, UNLESS OTHERWISE NOTED.
  - ALL COLUMN BARS SHALL LAP 5 TIMES BAR NUMBER UNLESS OTHERWISE NOTED. COLUMN BARS SHALL TERMINATE WITH 90 DEGREE HOOK AT THE BEAMS AND FLOOR SLAB.
  - TIE-BEAM BARS SHALL BE CONTINUOUS AND SHALL TERMINATE AT CORNERS WITH 90 DEGREE HOOKS, AND HORIZONTAL CORNER BARS OF SAME SIZE.
  - TIE BEAM BOTTOM MAY BE DROPPED AT DOOR HEADS A MAXIMUM OF 24". ADD TWO #5 BOTTOM BARS AND EXTEND 8" BEYOND EACH END OF OPENING. ADD U-FORMED SHIRUPS OF SIZE AND SPACING AS BEAM ABOVE.
  - LOAD BEARING MASONRY SHALL BE TWO CELL HOLLOW CONCRETE MASONRY REGULAR SIZE BLOCK, MANUFACTURED IN CONFORMANCE WITH ASTM C-90 WITH A MINIMUM PRISM STRENGTH  $f_m = 1,500$  psi IN 28 DAYS.
  - CONTRACTOR SHALL VERIFY ALL DIMENSIONS PRIOR TO CONSTRUCTION.
  - ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH ALL CODES, REGULATIONS AND RESTRICTIONS HAVING JURISDICTION.

DOOR/LOUVER SCHEDULE								
MARK	MATERIAL		DIMENSIONS			MASONRY OPENING		REMARKS
	DOOR	FRAME	WIDTH	HEIGHT	THICK	WIDTH	HEIGHT	
(A)	ANODIZED ALUMINUM	ANODIZED ALUMINUM	3'-0"	7'-0"	1 3/4"	3'-4"	7'-2"	W/ DEAD BOLT LOCK AND DOOR KNOB LOCK
(B)	ANODIZED ALUMINUM	ANODIZED ALUMINUM	3'-0"	9'-0"	1 3/4"	3'-4"	9'-2"	W/ 24"x 36" WINDOW AND DOOR KNOB LOCK
(C)	ANODIZED ALUMINUM	ANODIZED ALUMINUM	3'-0"	7'-0"	1 3/4"	3'-4"	7'-2"	W/ 16"x 16" FIXED ALUMINUM LOUVER
(D)	GALVANIZED STEEL	GALVANIZED STEEL	SEE ROLL UP DOOR MANUF. SPECIFICATIONS			18'-0"	10'-0"	ROLL UP DOOR W/ HAND CHAIN OPERATOR W/ LOCK
(E)	ANODIZED ALUMINUM	ANODIZED ALUMINUM	8'-0"	10'-0"	-	8'-1"	10'-8 1/2"	REMOVABLE LOUVER
(F)	ANODIZED ALUMINUM	ANODIZED ALUMINUM	6'-0"	10'-0"	-	6'-1"	10'-1"	FIXED LOUVER

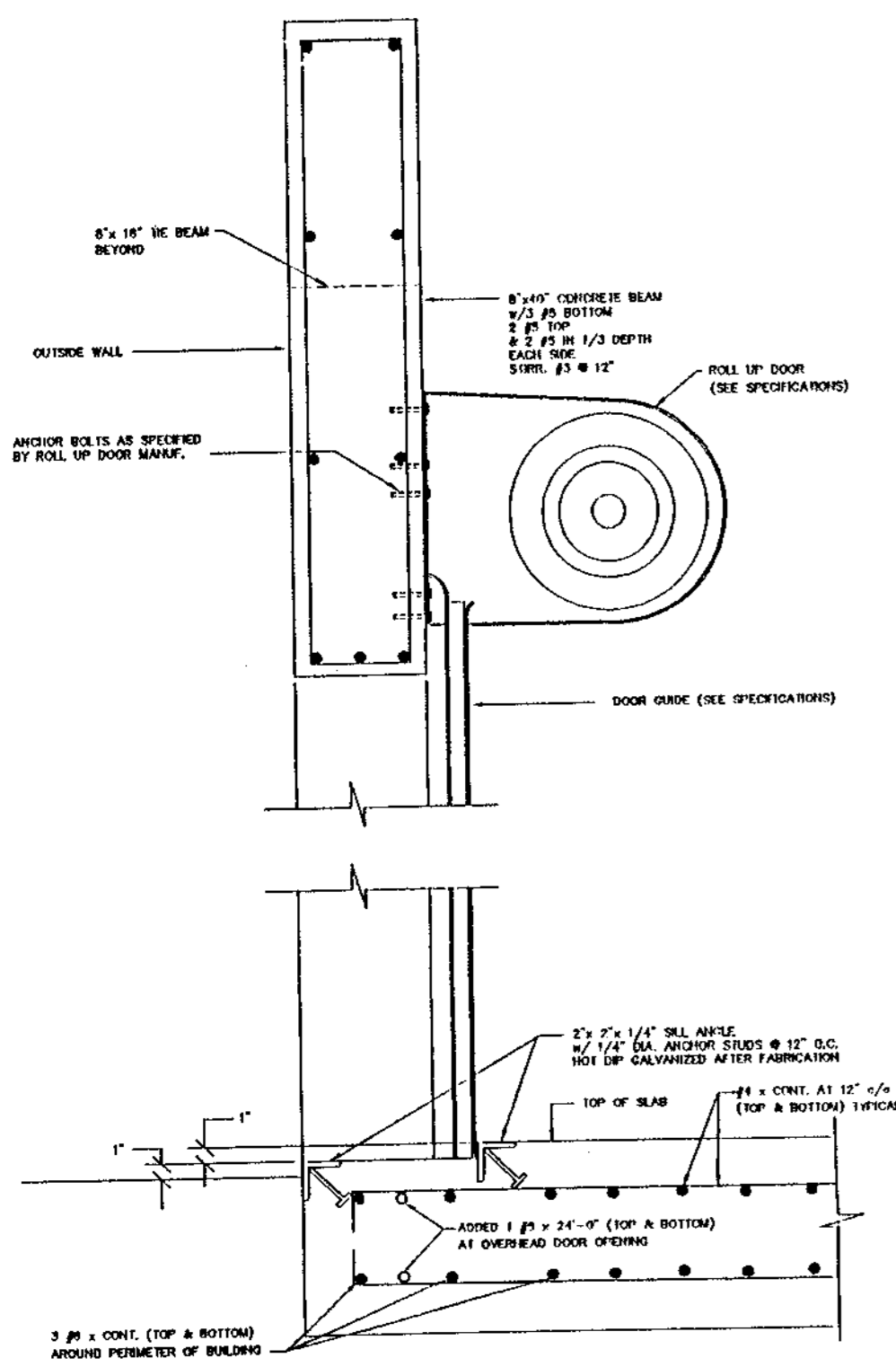


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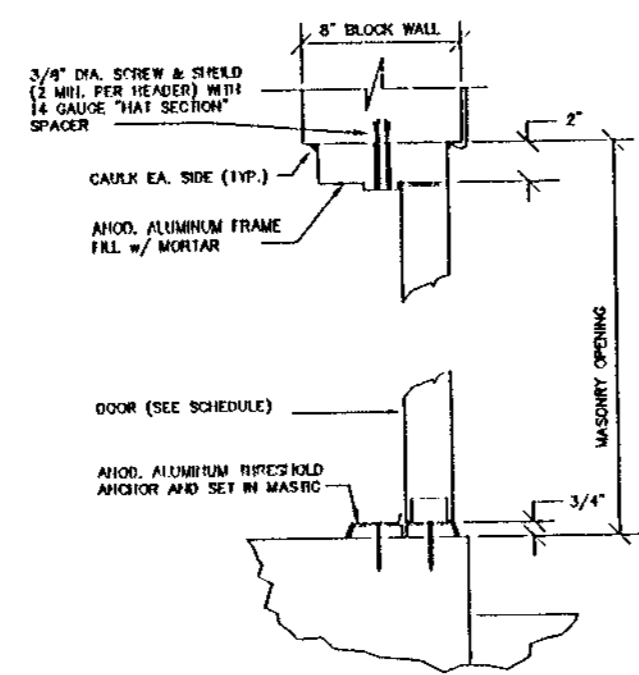


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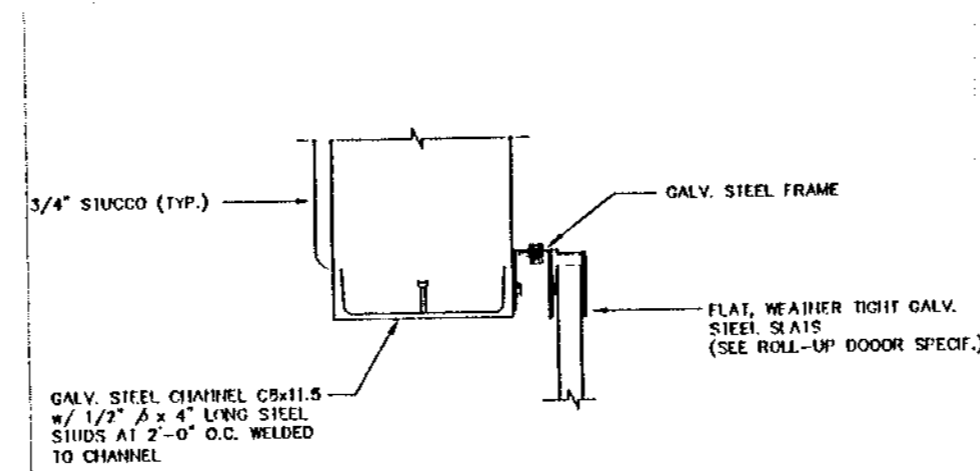
WILLIAMS, HATFIELD & STONER, INC.  
 CONSULTING ENGINEERS • PLANNERS • SURVEYORS  
 FORT LAUDERDALE • BOYNTON BEACH • PORT ST. LUCE • MIAMI  
 ABACOA/WASTEWATER COLLECTION SYSTEM  
 WMP 9A MASTER LIFT STATION  
 STRUCTURAL PLAN & SECTIONS  
 PROJECT No. 4068.59  
 SHEET No. 8  
 Date: 7/31/86  
 Drawn: EWG  
 Checked: HJP  
 Manager: JVD  
 Dwg Name: PUMPS.DWG



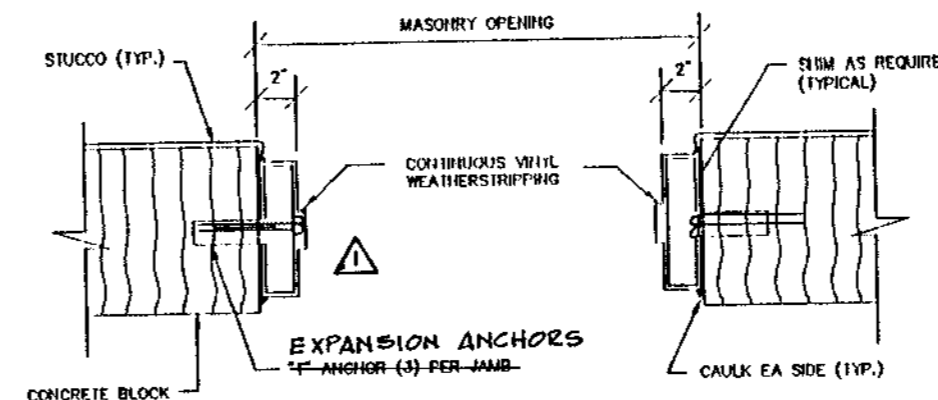
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NOT TO SCALE



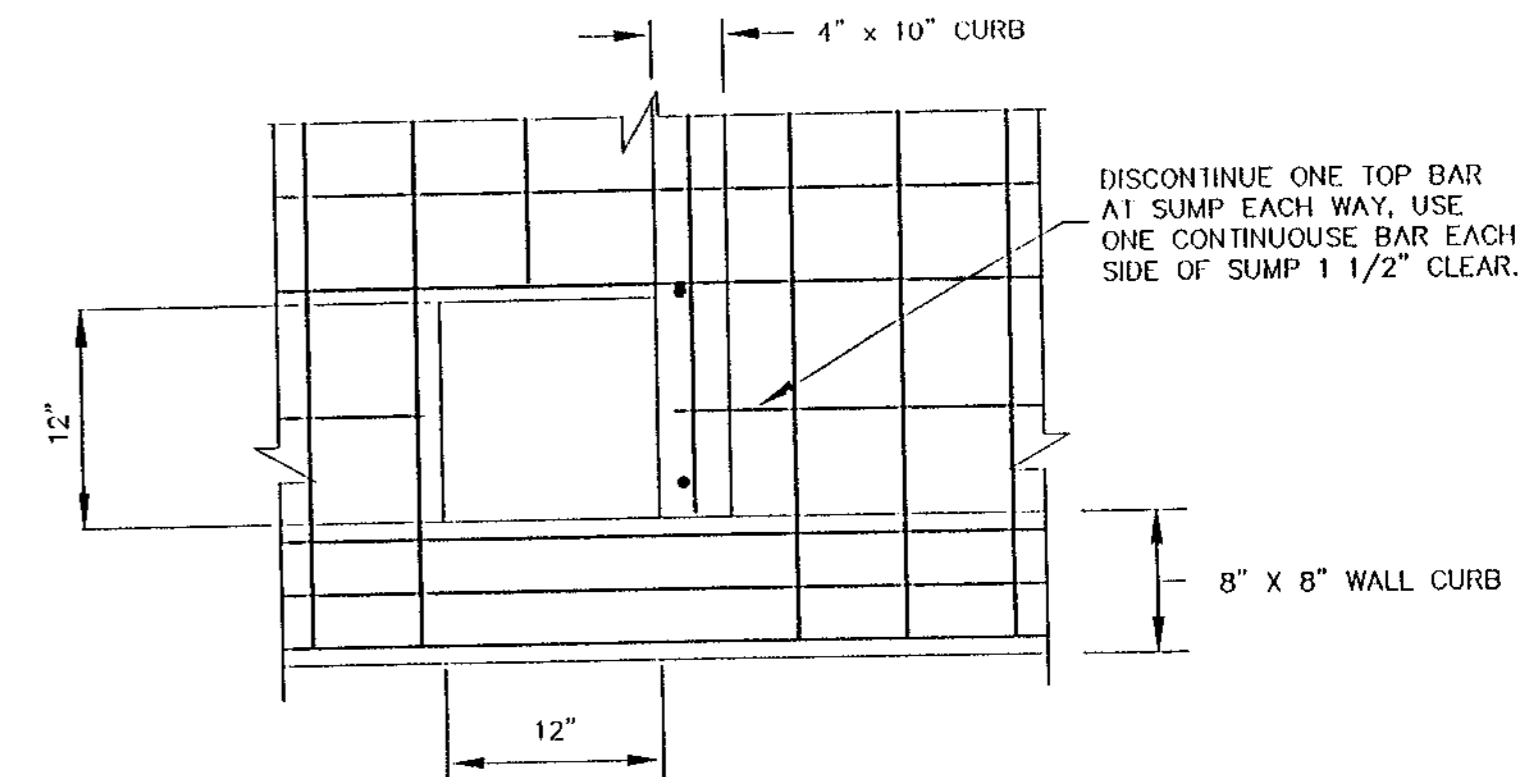
**DOOR HEAD AND SILL DETAIL**  
NOT TO SCALE



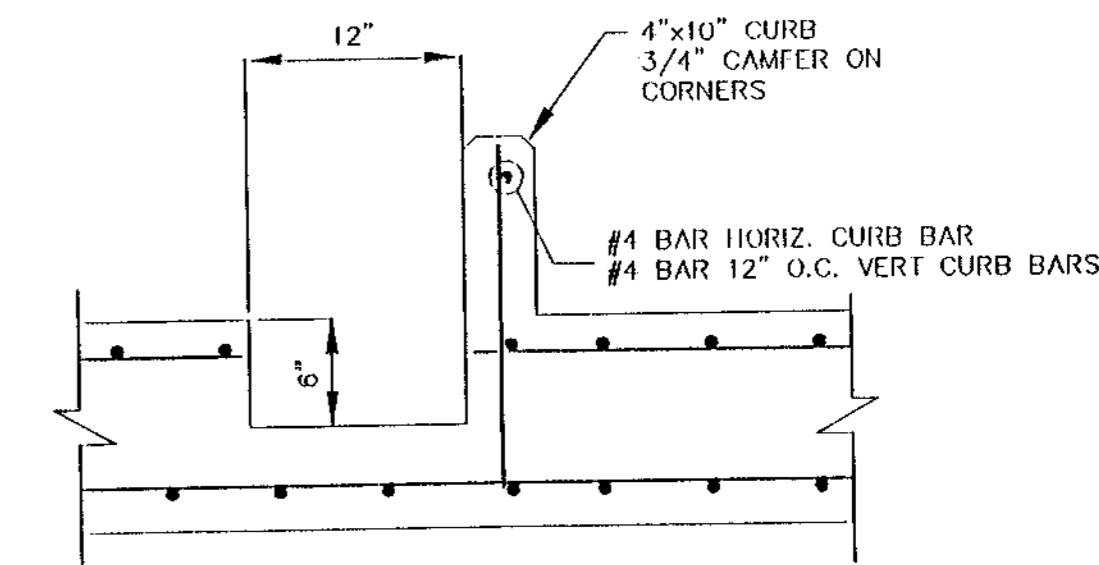
**ROLL UP DOOR JAMB DETAIL**  
NOT TO SCALE



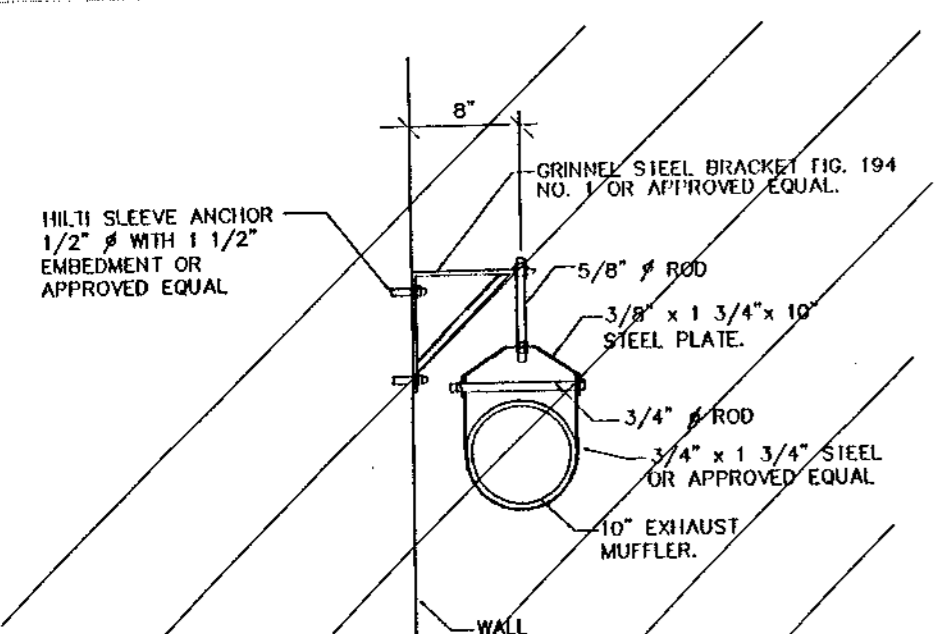
**DOOR JAMB DETAIL**  
NOT TO SCALE



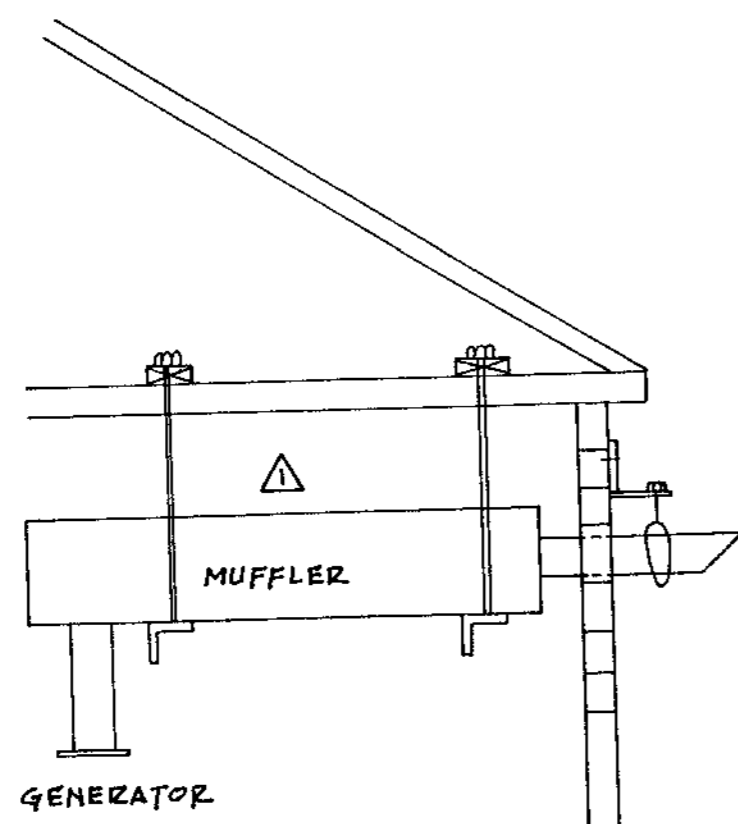
**LEAK DETECTION SUMP PLAN VIEW**  
NOT TO SCALE



**LEAK DETECTION SUMP SECTION**  
NOT TO SCALE



**GENERATOR MUFFLER HANGER DETAIL**  
NOT TO SCALE



REVISION	DATE	APPROVED	RECORDED	DATE
	07/26/18			

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ABACOA/WASTEWATER COLLECTION SYSTEM  
WMP 9A MASTER LIFT STATION  
STRUCTURAL DETAILS

Date	7/31/96
Drawn	EWG
Checked	HJP
Manager	JVO
Dwg. Name:	PUMPS.DWG

RECORD DRAWINGS DATE: \_\_\_\_\_  
REVIEWED BY: \_\_\_\_\_

NOTE:  
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PROJECT No.  
**4068.59**  
SHEET No.  
**9**

PLAN SYMBOLS

SINGLE LINE DIAGRAM SYMBOLS

CONTROL DIAGRAM SYMBOLS

NOTES

	HOME RUN TO PANELBOARD. NO. OF ARROWS INDICATE NO. OF CIRCUITS, HASH MARKS INDICATE NO. OF #12 AWG. CONDUCTORS. NO HASH MARKS INDICATE 2 #12 CONDUCTORS.
	CONDUIT CONCEALED IN WALL, IN SLAB ABOVE, OR ABOVE CEILING
	CONDUIT CONCEALED IN OR BELOW FLOOR OR UNDERGROUND.
	CONDUIT RUN EXPOSED. RUN PARALLEL OR PERPENDICULAR TO STRUCTURE OR WALL.
	FLEXIBLE CONDUIT WITH EQUIPMENT CONNECTION.
	CONCRETE ENCASED DUCTBANK.
	CEILING MOUNTED LIGHTING FIXTURE, LETTER INDICATES TYPE (TYPICAL).
	WALL MOUNTED LIGHTING FIXTURE.
	FLUORESCENT LIGHTING FIXTURE, CEILING MOUNTED.
	EXTERIOR LUMINARE AND MOUNTING STANDARD.
	EMERGENCY BATTERY PACK LIGHTING FIXTURE.
	CEILING OR WALL MOUNTED EXIT LIGHT FIXTURE WITH BATTERY PACK. PROVIDE ARROWS AS REQUIRED.
	FLUORESCENT LIGHTING FIXTURE, WALL MOUNTED.
	JUNCTION BOX PER N.E.C., FLUSH MOUNTED UNLESS INDICATED OTHERWISE.
	FLUSH OR SURFACE MOUNTED LIGHTING PANELBOARD.
	FLUSH OR SURFACE MOUNTED POWER PANELBOARD.
	DRY TYPE TRANSFORMER. NO. INDICATES KVA RATING.
	25A, 208V, 3p SINGLE RECEPTACLE.
	20A, 125V, 3W DUPLEX RECEPTACLE IN FLUSH OUTLET BOX, 18" ABOVE FINISHED FLOOR.
	20A, 125V, 3W DUPLEX RECEPTACLE IN FLUSH OUTLET BOX, 48" ABOVE FINISHED FLOOR OR 2" ABOVE COUNTER AS REQUIRED.
	WIREMOLD SURFACE METAL RACEWAY SYSTEM WITH 20A, 125V, 3W RECEPTACLES.
	20A, 125V, 3W DUPLEX RECEPTACLE IN FLUSH FLOOR MOUNTED OUTLET BOX.
	20A, 125V, 3W DUPLEX RECEPTACLE, SURFACE MOUNTED.
	50A, 250V, 1p, 3W SINGLE RECEPTACLE IN FLUSH OUTLET BOX, 18" ABOVE FINISHED FLOOR.
	SINGLE POLE SWITCH IN FLUSH OUTLET BOX, 48" ABOVE FINISHED FLOOR, UNLESS OTHERWISE NOTED (TYPICAL).
	SINGLE POLE SWITCH, SURFACE MOUNTED.
	THREE-WAY SWITCH IN FLUSH OUTLET BOX.
	FOUR-WAY SWITCH IN FLUSH OUTLET BOX.
	NON-FUSIBLE DISCONNECT SWITCH, 30A, 3P UNLESS OTHERWISE INDICATED.
	NON-FUSIBLE DISCONNECT SWITCH, 30A, 3P UNLESS OTHERWISE INDICATED, WITH REMOTE CONTROL STATION AS REQUIRED BY ELEMENTARY DIAGRAMS OR SPECS
	ELECTRIC A.C. MOTOR, NO. INDICATES HORSEPOWER.
	ELECTRIC D.C. MOTOR, NO. INDICATES HORSEPOWER.
	MOTORIZED VALVE
	COMBIN. MOTOR STARTER
	THERMOSTAT
	ELECTRIC HEATER
	FLUSH OUTLET BOX AND TELEPHONE COVER PLATE 48" ABOVE FINISHED FLOOR. PROVIDE SUITABLE OUTLET
	LIMIT SWITCH
	PRESSURE SWITCH
	SOLENOID VALVE
	FLOAT SWITCH
	FLOW INDICATING TRANSMITTER
	LEVEL INDICATING TRANSMITTER
	COMBINATION MOTOR STARTER
	VOLTMETER
	AMMETER
	THREE PHASE VOLT SWITCH
	THREE PHASE AMP SWITCH
	GROUND FAULT INTERRUPTER
	WAIT HOUR METER
	FUSE
	MOLDED CASE CIRCUIT BREAKER
	TYPICAL REFLECTOR SWITCH AND CONTROL. SEE ELEMENTARY DIAGRAMS FOR EXACT TYPE.

	ELECTRIC A.C. MOTOR, NO. INDICATES HORSEPOWER.
	SERVICE OR EQUIPMENT GROUND.
	NON-FUSIBLE DISCONNECT SWITCH, 30A, 3P UNLESS OTHERWISE INDICATED.
	NON-FUSIBLE DISCONNECT SWITCH, 30A, 3P UNLESS OTHERWISE INDICATED, WITH REMOTE CONTROL STATION AS REQUIRED BY ELEMENTARY DIAGRAMS OR SPECS
	LIGHTING PANELBOARD
	POWER PANELBOARD
	REDUCED VOLTAGE, NON-REVERSING STARTER

CONTROL DIAGRAM SYMBOLS	
	DUPLEX RECEPTACLE
	NORMALLY OPEN CONTACT
	NORMALLY CLOSED CONTACT
	LIMIT SWITCH, NORMALLY OPEN
	LIMIT SWITCH, NORMALLY CLOSED
	PRESSURE SWITCH, NORMALLY OPEN
	PRESSURE SWITCH, NORMALLY CLOSED
	FLOAT SWITCH, NORMALLY OPEN
	FLOAT SWITCH, NORMALLY CLOSED
	FLOW SWITCH, NORMALLY OPEN
	FLOW SWITCH, NORMALLY CLOSED
	TEMPERATURE SWITCH, NORMALLY OPEN
	TEMPERATURE SWITCH, NORMALLY CLOSED
	NORMALLY OPEN, TIMED TO CLOSE CONTACT
	NORMALLY CLOSED, TIMED TO OPEN CONTACT
	NORMALLY CLOSED, TIMED TO CLOSE CONTACT
	NORMALLY OPEN, TIMED TO OPEN CONTACT
	RUN TIME INDICATOR
	INLINE TIME DELAY
	LIMIT SWITCH
	PRESSURE SWITCH
	SOLENOID VALVE
	LIQUID LEVEL SWITCH
	VIBRATION SWITCH
	ALARM RELAY
	ALARM TIMER
	CONTROL RELAY
	MOTOR STARTER
	TIMING RELAY
	ALARM INDICATING LIGHT
	RUN INDICATING LIGHT
	MOMENTARY CONTACT PUSHBUTTON
	MOMENTARY BREAK PUSHBUTTON OR RESET

	KEYED SWITCH
	MAINTAINED CONTACT ON-OFF SWITCH
	START/STOP (S/S) CONTROL SWITCH MAINTAINED CONTACT
	THREE POSITION MAINTAINED CONTACT SELECTOR SWITCH
	FUSE
	MOLDED CASE CIRCUIT BREAKER
	CONTROL POWER TRANSFORMER
	REMOTE TERMINAL BLOCK POINT

ABBREVIATIONS	
A	AMPERES
ACCU	AIR COOLED CONDENSING UNIT
AFF	ABOVE FINISHED FLOOR
AHU	AIR HANDLING UNIT
AIC	AMPS INTERRUPTING CURRENT
ALR	ALARM RELAY
APR	ACID PUMP RELAY
ATS	AUTOMATIC TRANSFER SWITCH
BKR	BREAKER
BLDG	BUILDING
CAB	CABINET
CIR	CIRCUIT
CPR	CAUSTIC PUMP RELAY
CU	COPPER
ELEC	ELECTRICAL
EM	EMERGENCY
ENCL	ENCLOSURE
ETM	ELAPSED TIME METER
EUH	ELECTRIC UNIT HEATER
EWC	ELECTRIC WATER COOLER
EWV	ELECTRIC WATER HEATER
EXH	EXHAUST
EXIST	EXISTING
FVNR	FULL VOLTAGE NON-REVERSING
FVR	FEED/FLUSH VALVE RELAY
GEN	GENERATOR
GFI	GROUND FAULT INTERRUPTER
GND	GROUND
GRS	GALVANIZED RIGID STEEL
HOA	HAND-OFF-AUTOMATIC
HOR	HAND-OFF-REMOTE
HP	HORSEPOWER
HPR	HIGH PRESSURE RELAY
HPS	HIGH PRESSURE SODIUM
HSP	HIGH SERVICE PUMP
INST	INSTRUMENTATION
ISO	ISOLATION
KVA	KILOVOLT-AMPERES
KW	KILOWATT
LCR	LOW CHEMICAL RELAY
LPT	LOW PRESSURE TIMER
LTG	LIGHTING
MAX	MAXIMUM
MCC	MOTOR CONTROL CENTER
MFR	MANUFACTURER
MIN	MINIMUM
MLO	MAIN LUGS ONLY
MTD	MOUNTED
NEC	NATIONAL ELECTRIC CODE
NEUT	NEUTRAL
NTS	NOT TO SCALE
OC	ON CENTER
OH	OVERHEAD
P	POLE
PCP	PUMP CONTROL PANEL
PNL	PANEL
PS	PUMP STATION
PTR	PRODUCT TANK RELAY
PVC	POLYVINYL CHLORIDE
RECP	RECEPTACLE
RVNR	REDUCED VOLTAGE, NON-REVERSING
SH	SHEILD
SS	STAINLESS STEEL
SSR	SYSTEM START RELAY
STR	STARTER
SW	SWITCH
SWGR	SWITCHGEAR
TC	TIME CLOCK
TR	TRANSFORMER
TYP	TYPICAL
UG	UNDERGROUND
UPS	UNINTERRUPTABLE POWER SUPPLY
V	VOLT
VFD	VARIABLE FREQUENCY DRIVE
W	WATT
W/	WITH
WP	WEATHERPROOF
Ø	PHASE

1. DO NOT SCALE THE ELECTRICAL DRAWINGS. REFER TO THE MECHANICAL DRAWINGS & APPROVED MANUFACTURER'S SHOP DRAWINGS FOR THE EXACT LOCATION OF ALL EQUIPMENT.

2. ALL WORK SHALL COMPLY WITH THE NATIONAL ELECTRIC CODE & LOCAL CODES.

3. ALL CONDUITS SHALL HAVE A BOND WIRE SIZED PER TABLE 250-95 OF THE NATIONAL ELECTRIC CODE (UNLESS OTHERWISE NOTED).

4. *SLANTED TEXT* DENOTES EXISTING EQUIPMENT OR STRUCTURES. NON-SLANTED TEXT DENOTES NEW EQUIPMENT, STRUCTURES, & WORK.

LOCATION MAP

RECORD DRAWINGS DATE: \_\_\_\_\_ REVIEWED BY: \_\_\_\_\_

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ELECTRICAL - MECHANICAL INSTRUMENTATION  
2101 N. ANDREWS AVE., SUITE 100  
FORT LAUDERDALE, FLORIDA 33311  
PHONE: (954) 564-3111  
FAX: (954) 564-3040

**RECORD DRAWING**  
1/4" DWG. NO. 41-42-23-03

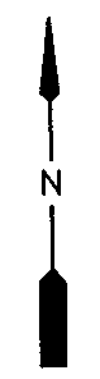
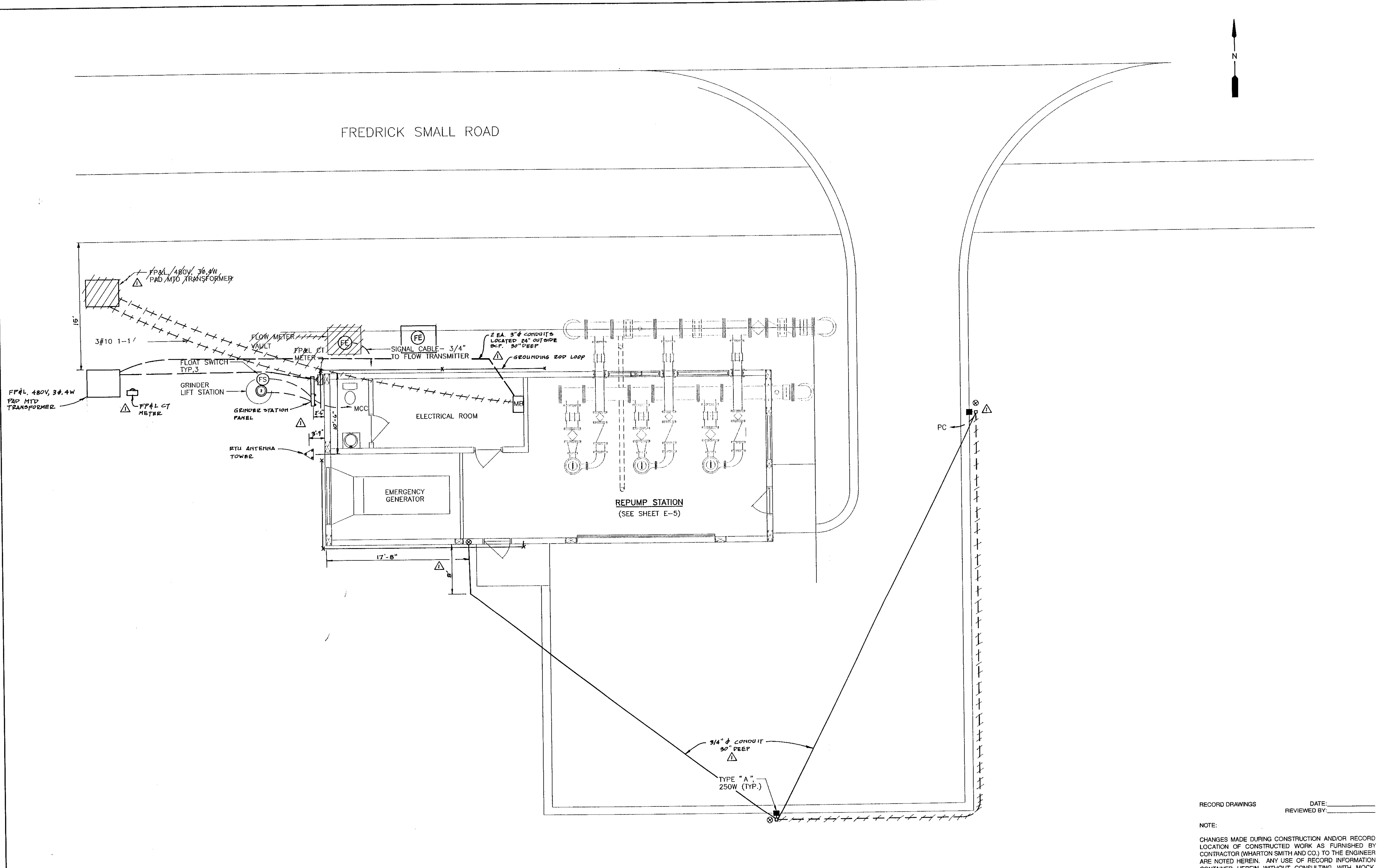
PROJECT No. **4068.59**  
SHEET No. **E-1**

REVISION  
DATE  
DATE  
DATE

DATE 10/10/96  
Drawn MF  
Checked LMR  
Manager SEB  
Dwg Name: ABS-SYM.DWG  
ABS-SYM.DWG

WILLIAMS, HATFIELD & STONER, INC.  
CONSULTING ENGINEERS • PLANNERS • SURVEYORS  
FORT LAUDERDALE • BOYNTON BEACH • PORT ST. LUCIE • MIAMI

ABACOA/WASTEWATER COLLECTION SYSTEM  
WMP 9A MASTER LIFT STATION  
ELECTRICAL SYMBOLS & ABBREVIATIONS



**SITE PLAN**  
SCALE: 1"=5'-0"

RECORD DRAWINGS DATE: \_\_\_\_\_  
REVIEWED BY: \_\_\_\_\_

NOTE:  
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ELECTRICAL - MECHANICAL INSTRUMENTATION  
2101 N. ANDREWS AVE., SUITE 100  
FORT LAUDERDALE, FLORIDA 33311  
PHONE: (954) 564-3111  
FAX: (954) 564-3040



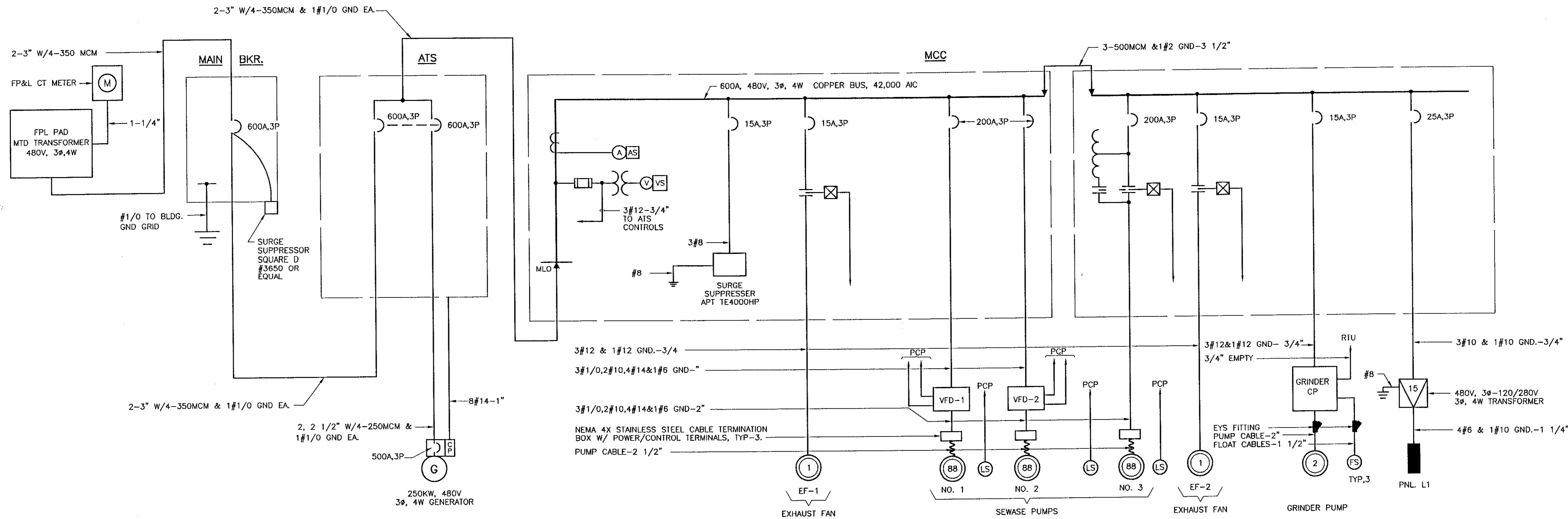
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M/R DWG. NO. 41-42-23-03

REVISION	DATE	BY
ADDED RECORD DATA	01-24-98	

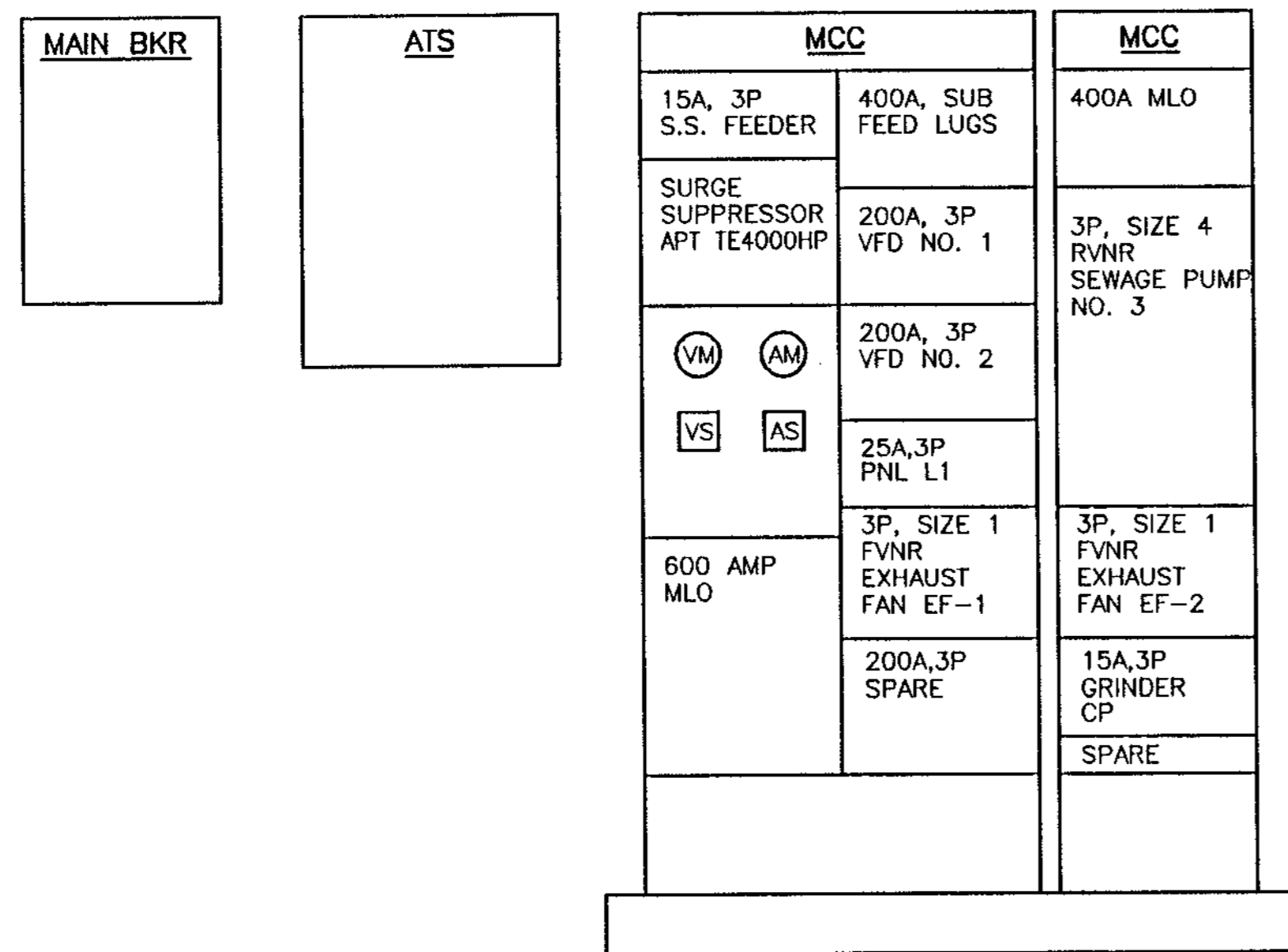
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FORT LAUDERDALE • BOYNTON BEACH • PORT ST. LUCIE • MIAMI

**ABACOA/WASTEWATER COLLECTION SYSTEM**  
**WMP 9A MASTER LIFT STATION**  
**ELECTRICAL SITE PLAN**

Date	10/10/96
Drawn	MF
Checked	LMR
Manager	SEB
Dwg. Name	ABS-SITE.DWG
PROJECT No.	<b>4068.59</b>
SHEET No.	<b>E-2</b>

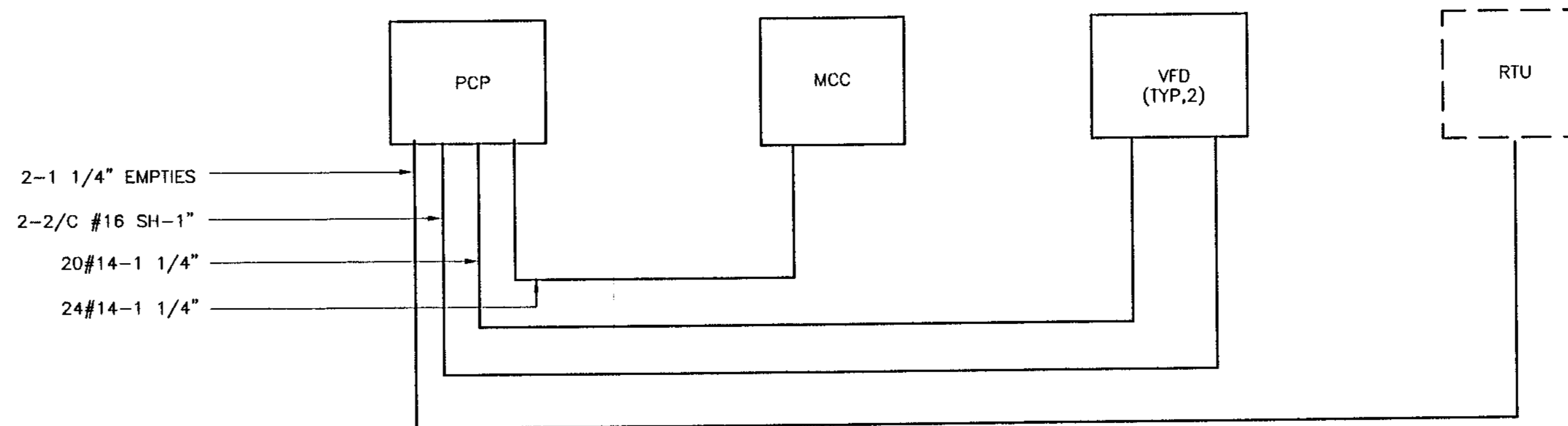


**SINGLE LINE DIAGRAM**



**MCC FRONT VIEW**

N.T.S.



**CONTROL CONDUIT RISER DIAGRAM**

RECORD DRAWINGS DATE: \_\_\_\_\_  
 REVIEWED BY: \_\_\_\_\_

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ELECTRICAL - MECHANICAL INSTRUMENTATION  
 2101 N. ANDREWS AVE., SUITE 100  
 FORT LAUDERDALE, FLORIDA 33311  
 PHONE: (954) 564-3111  
 FAX: (954) 564-3040



**RECORD DRAWING**

M/R DWG. NO. 41-42-23-03

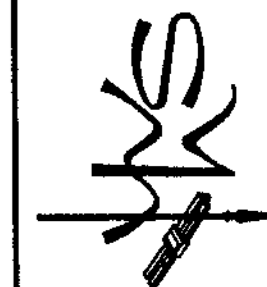
**ABACOA/WASTEWATER COLLECTION SYSTEM**  
**WMP 9A MASTER LIFT STATION**  
**MCC SINGLE LINE DIAGRAM**

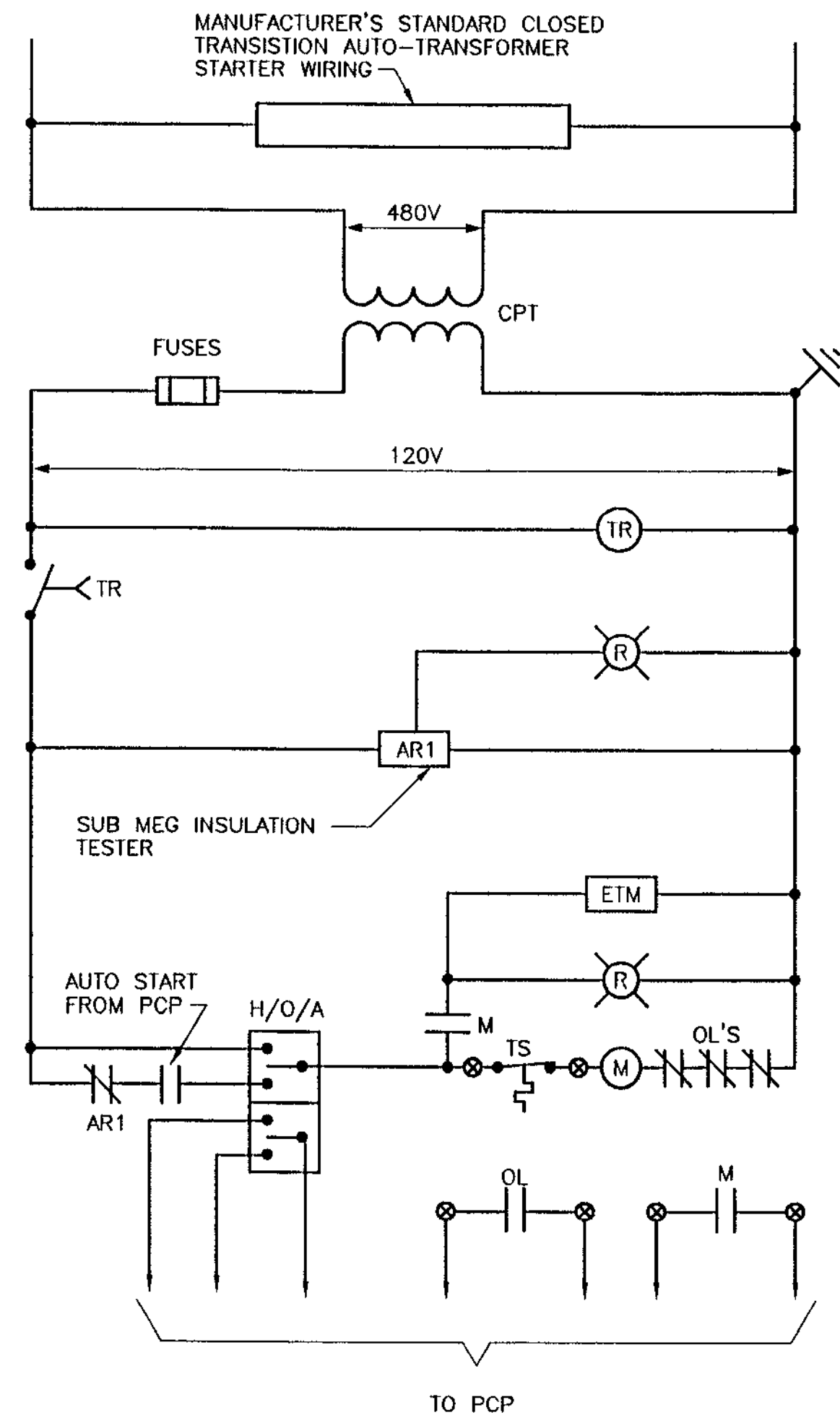
Date: 10/10/96  
 Drawn: MF  
 Checked: LMR  
 Manager: SEB  
 Dwg Name: ABS-SLLDWC

PROJECT No. **4068.59**  
 SHEET No. **E-3**

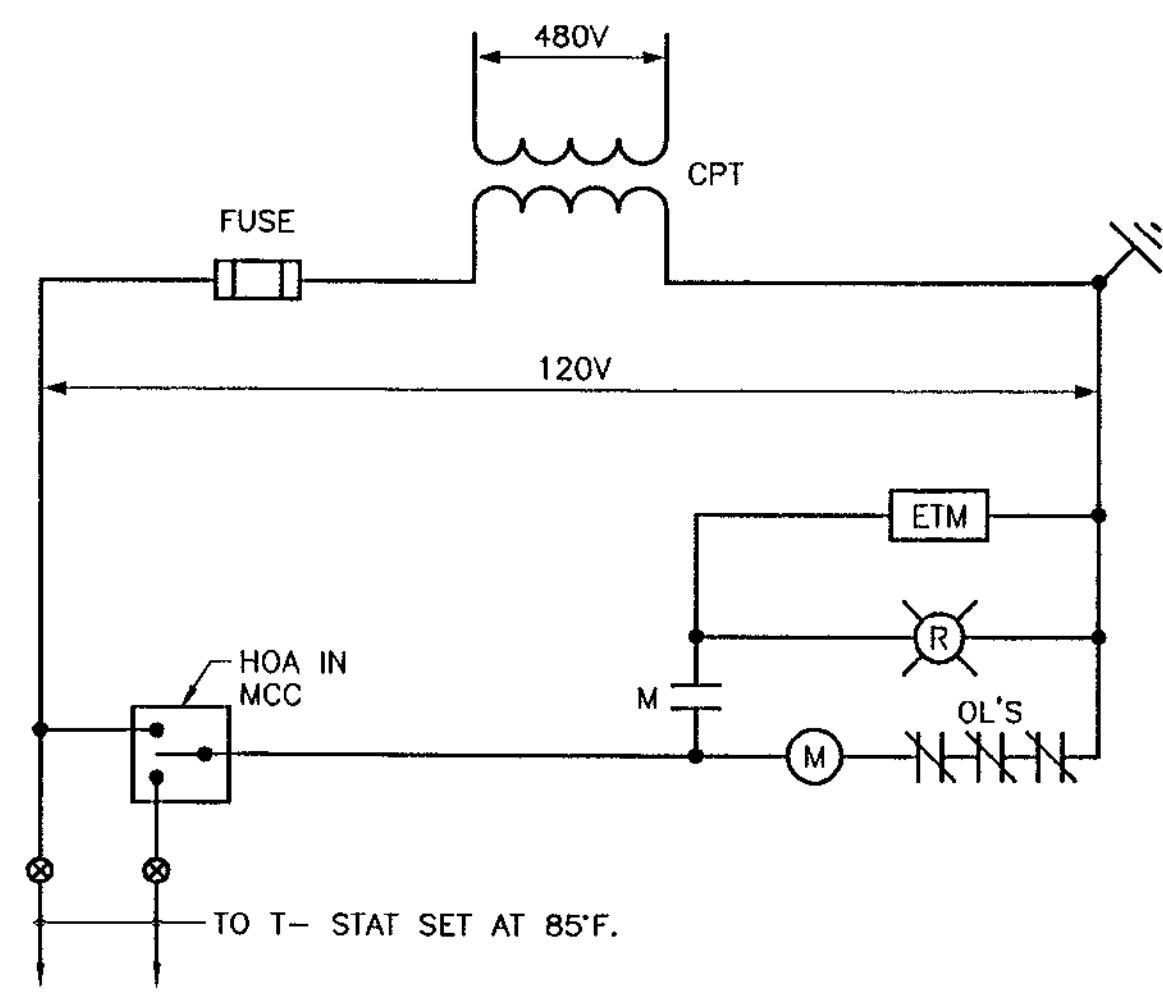
REVISION  
 DATE  
 01/24/98 APPROVED 2/EG/CP DATA

**WILLIAMS, HATFIELD & STONER, INC.**  
 CONSULTING ENGINEERS • PLANNERS • SURVEYORS  
 FORT LAUDERDALE • BOYNTON BEACH • PORT ST. LUCE • MIAMI

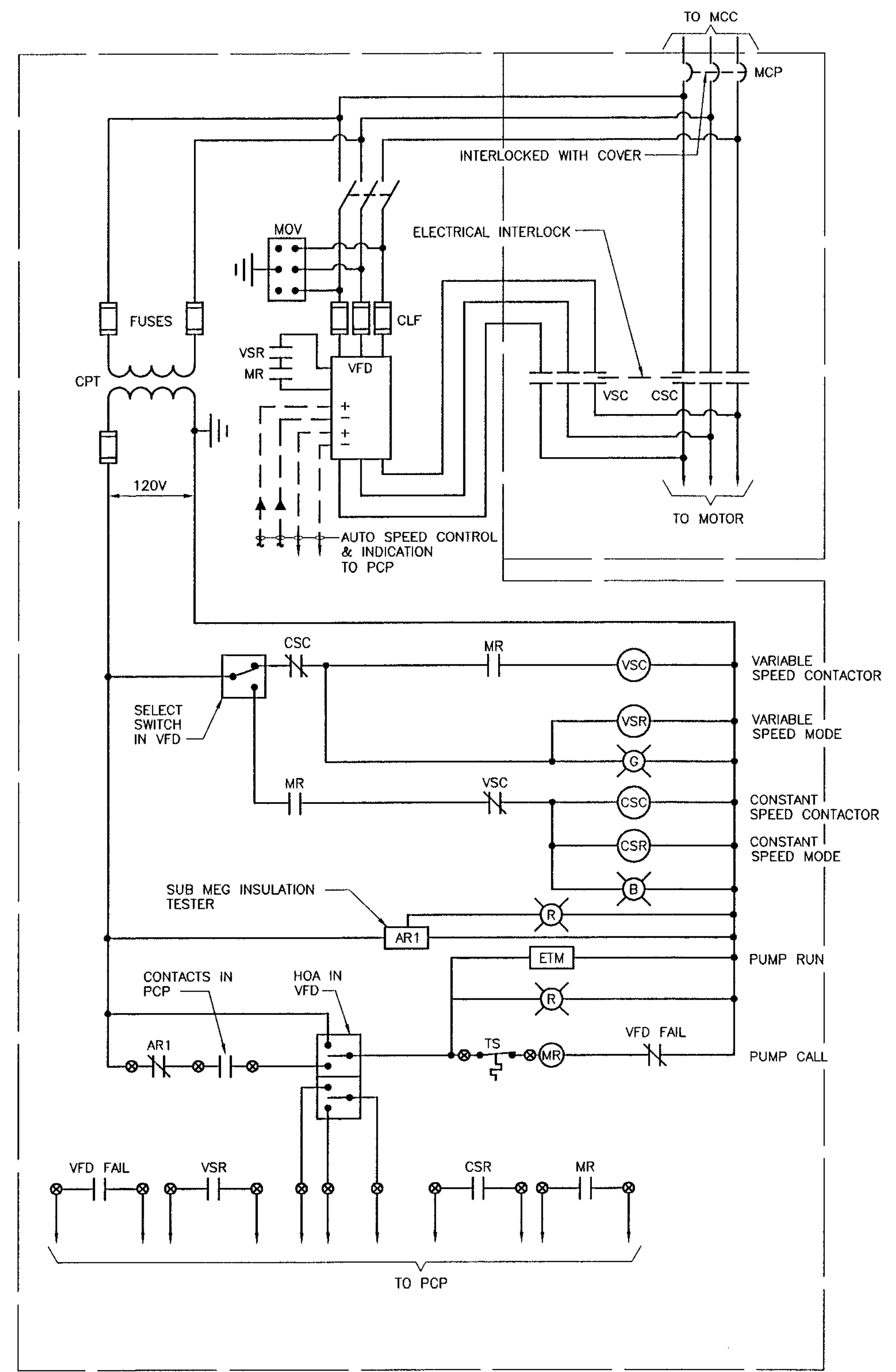




**SEWAGE PUMP NO.3**



**EXHAUST FANS**



**TYPICAL VFD**

RECORD DRAWINGS DATE: \_\_\_\_\_  
 REVIEWED BY: \_\_\_\_\_

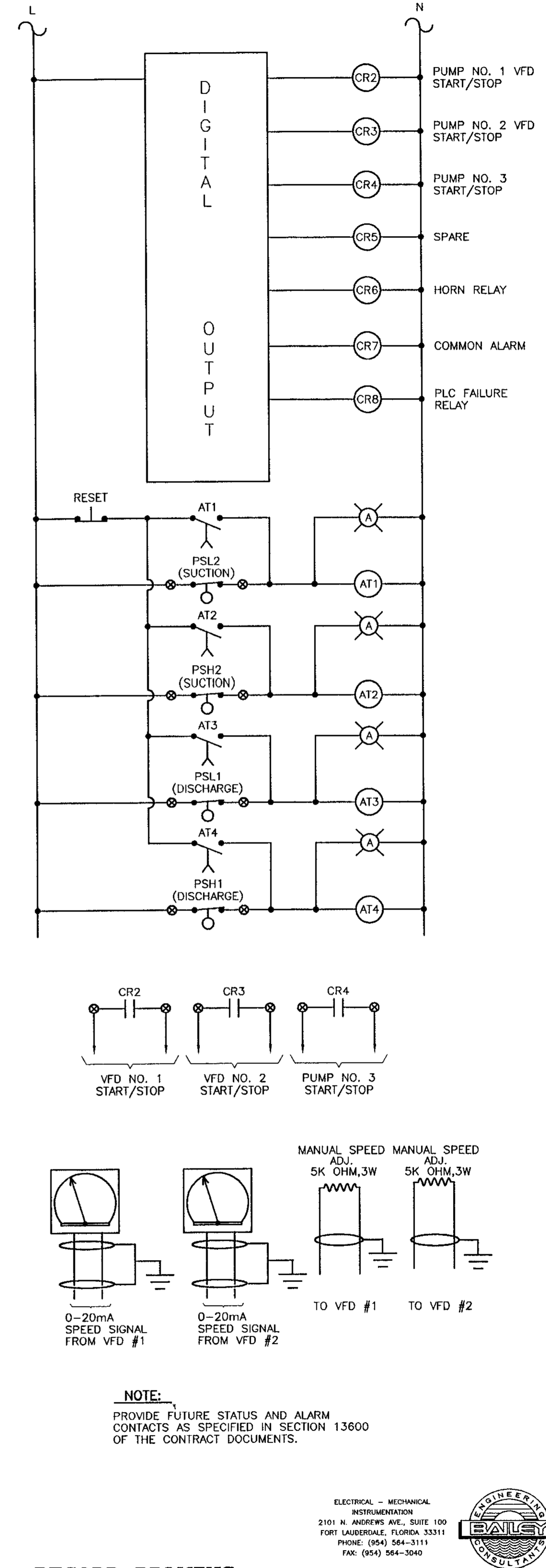
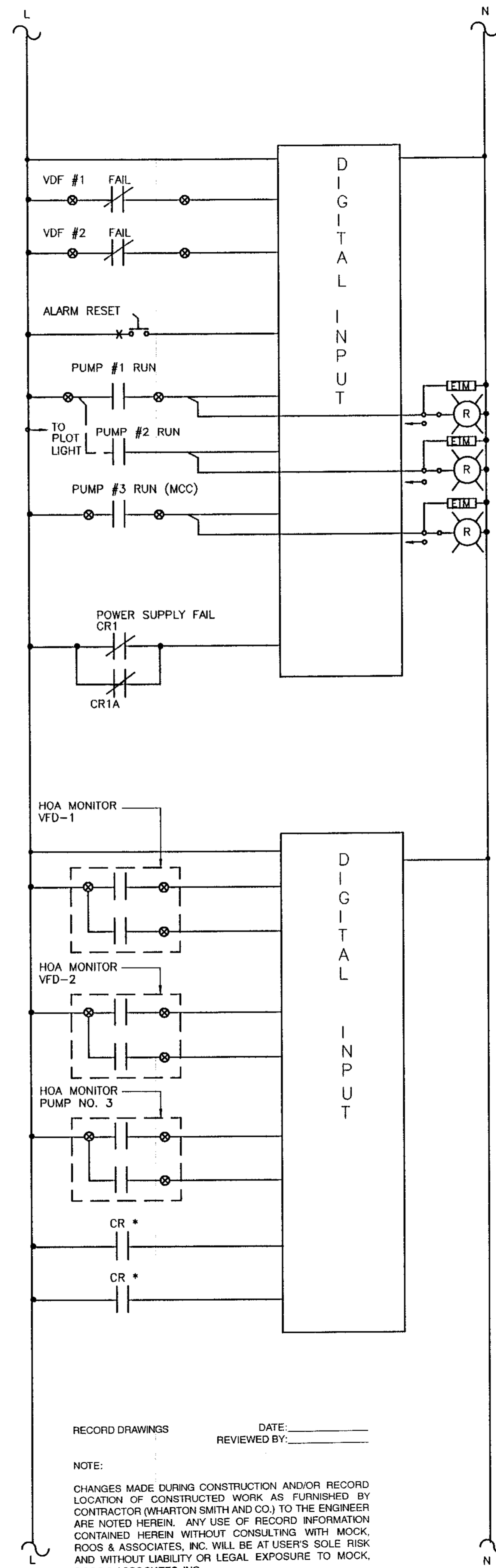
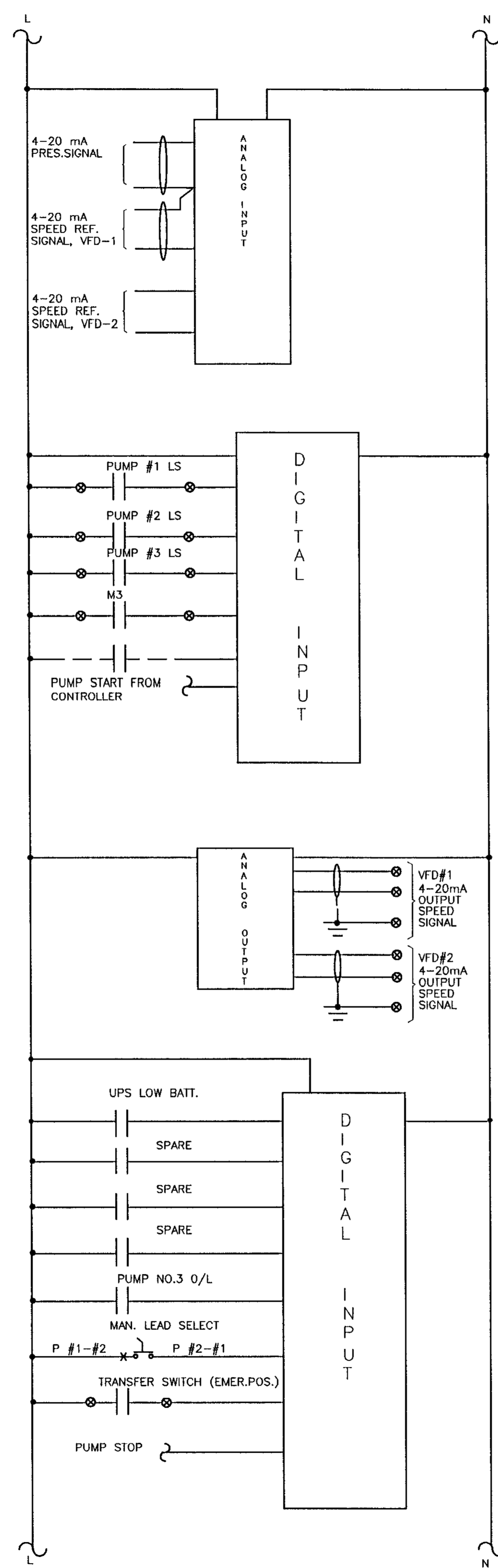
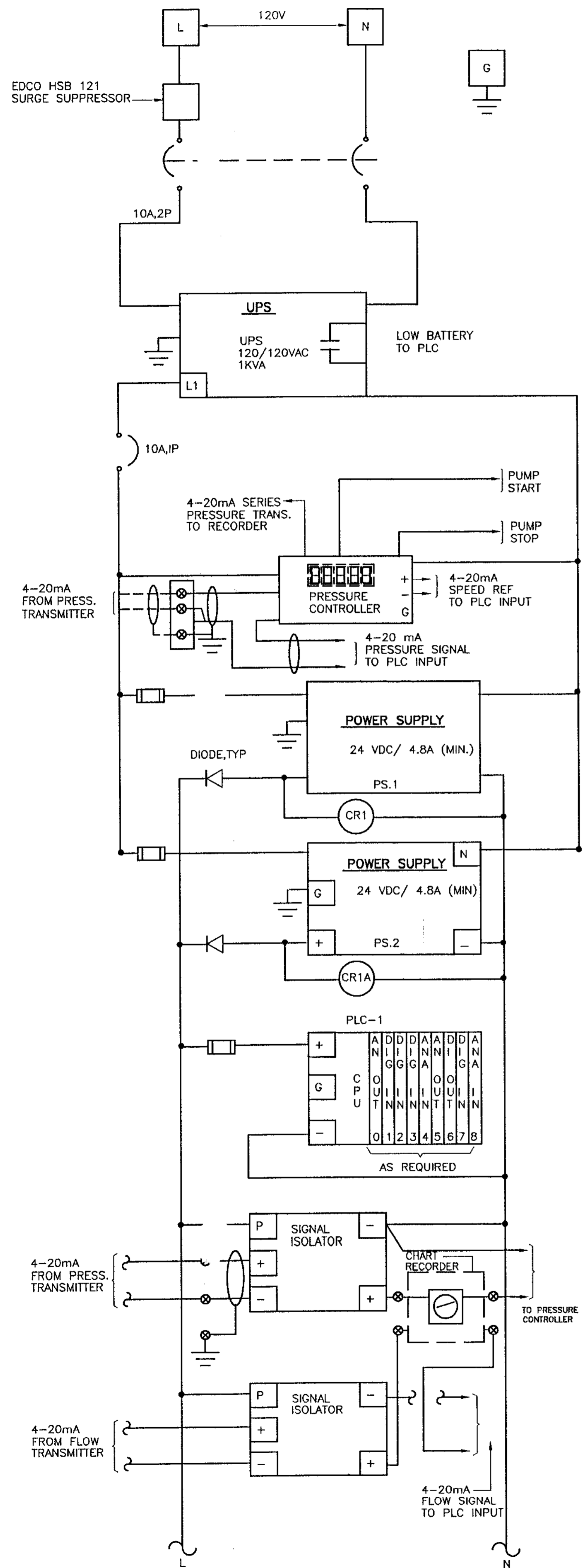
NOTE:  
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**RECORD DRAWING**

ELECTRICAL - MECHANICAL INSTRUMENTATION  
 2101 N. ANDREWS AVE., SUITE 100  
 FORT LAUDERDALE, FLORIDA 33311  
 PHONE: (954) 564-3111  
 FAX: (954) 564-3040



REVISION	DATE	DATE	DATE
	07-24-96		
APPROVED	RECORDED	DATA	
<b>WILLIAMS, HATFIELD &amp; STONER, INC.</b>			
CONSULTING ENGINEERS • PLANNERS • SURVEYORS			
FORT LAUDERDALE • BOYNTON BEACH • PORT ST. LUCIE • MIAMI			
ABACOA/WASTEWATER COLLECTION SYSTEM			
WMP 9A MASTER LIFT STATION			
ELEMENTARY CONTROL DIAGRAMS			
Date	10/10/96		
Drawn	MF		
Checked	LVR		
Manager	SEB		
Dwg Name	ABS-ELM.DWG		
PROJECT No.	4068.59		
SHEET No.	E-4		



**RECORD DRAWING**  
 ELECTRICAL - MECHANICAL INSTRUMENTATION  
 2101 N. ANDREWS AVE., SUITE 100  
 FORT LAUDERDALE, FLORIDA 33311  
 PHONE: (954) 564-3111  
 FAX: (954) 564-3040

REVISION	DATE	APPROVED	RECEIVED	DATA
	01-14-98			

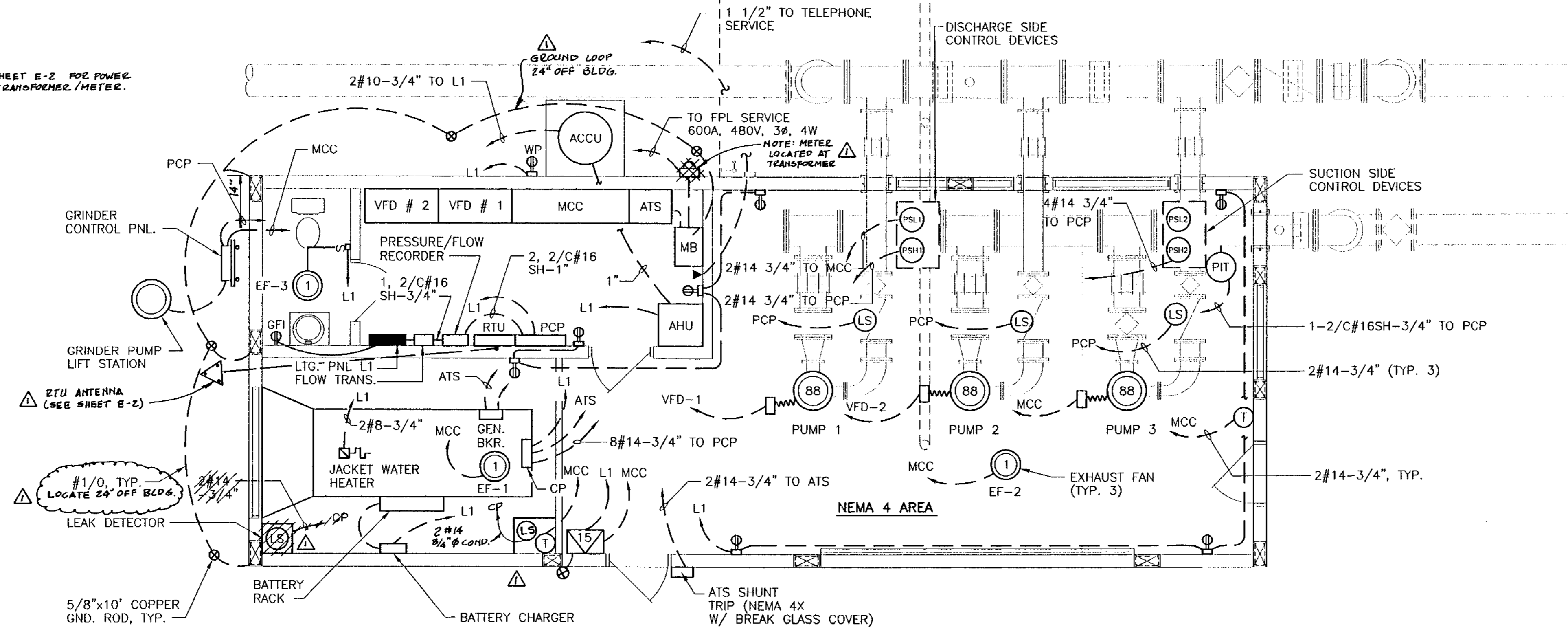
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ABACOA/WASTEWATER COLLECTION SYSTEM  
 WMP 9A MASTER LIFT STATION  
 PUMP CONTROL PANEL DIAGRAM

Date	10/10/96
Drawn	MF
Checked	SEB
Manager	SEB
Dwg. Name	MF-ELEM.DWG

PROJECT No. **4068.59**  
 SHEET No. **F-5**

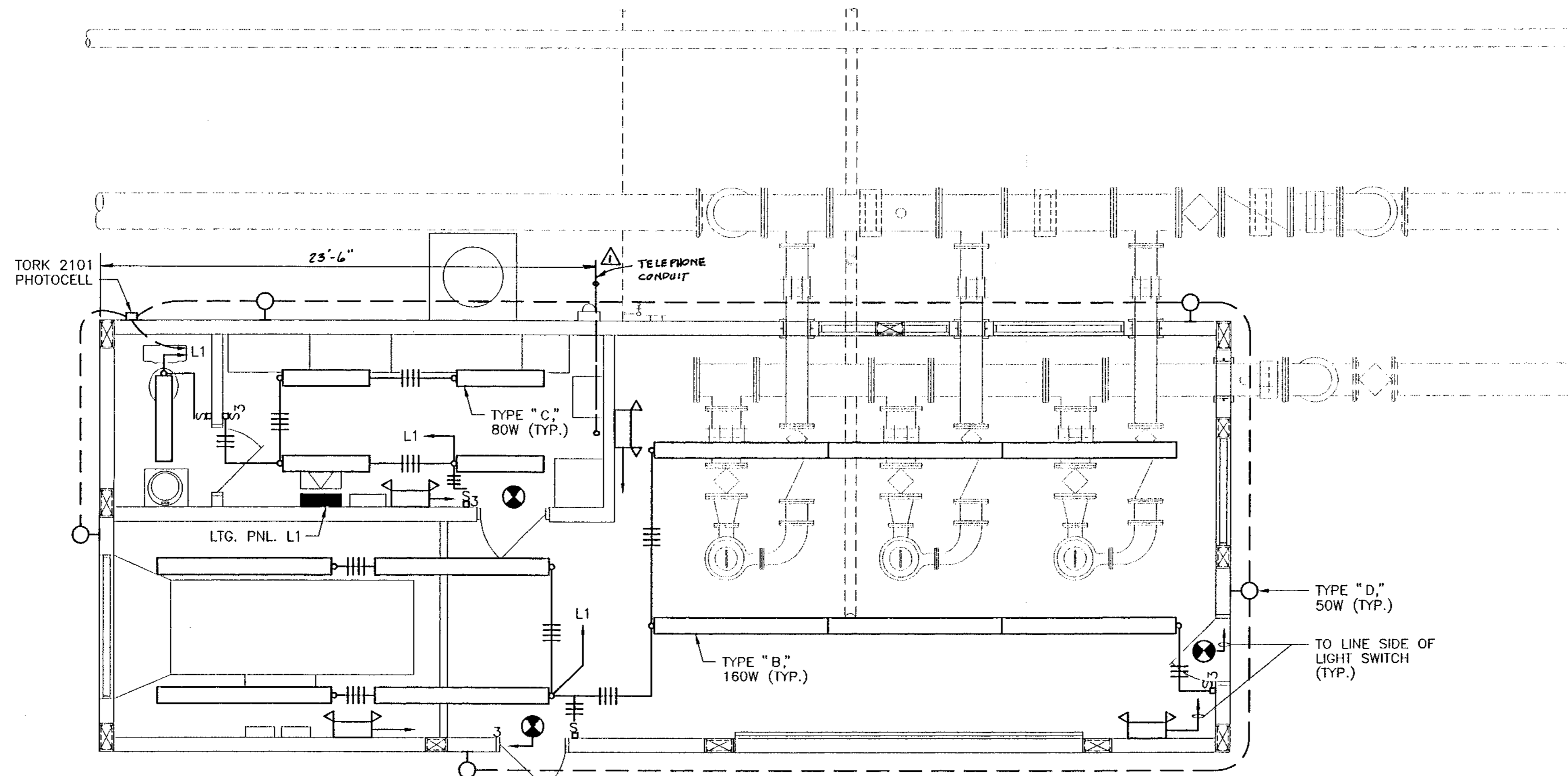
NOTE: SEE SHEET E-2 FOR POWER FROM TRANSFORMER/METER.



**POWER PLAN**

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

NOTE:  
INSTALL PRESSURE SWITCHES AND TRANSMITTER IN PROCESS PIPING. SEE SPECIFICATIONS FOR INSTALLATION REQUIREMENTS.



**LIGHTING PLAN**

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

NOTE: SEE SHEET E-2 FOR YARD LIGHT CONDUIT LOCATION.

RECORD DRAWINGS DATE: \_\_\_\_\_  
REVIEWED BY: \_\_\_\_\_

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FORT LAUDERDALE, FLORIDA 33311  
PHONE: (954) 564-3111  
FAX: (954) 564-3040



**RECORD DRAWING**  
M/R DWG. NO. 41-42-23-03

**ABACO/WASTEWATER COLLECTION SYSTEM  
WMP 9A MASTER LIFT STATION  
ELECTRICAL PLANS**

Date	10/10/96
Drawn	MF
Checked	LMR
Manager	SEB
Dwg Name	ABS-PLAN.DWG

PROJECT No. **4068.59**  
SHEET No. **E-6**

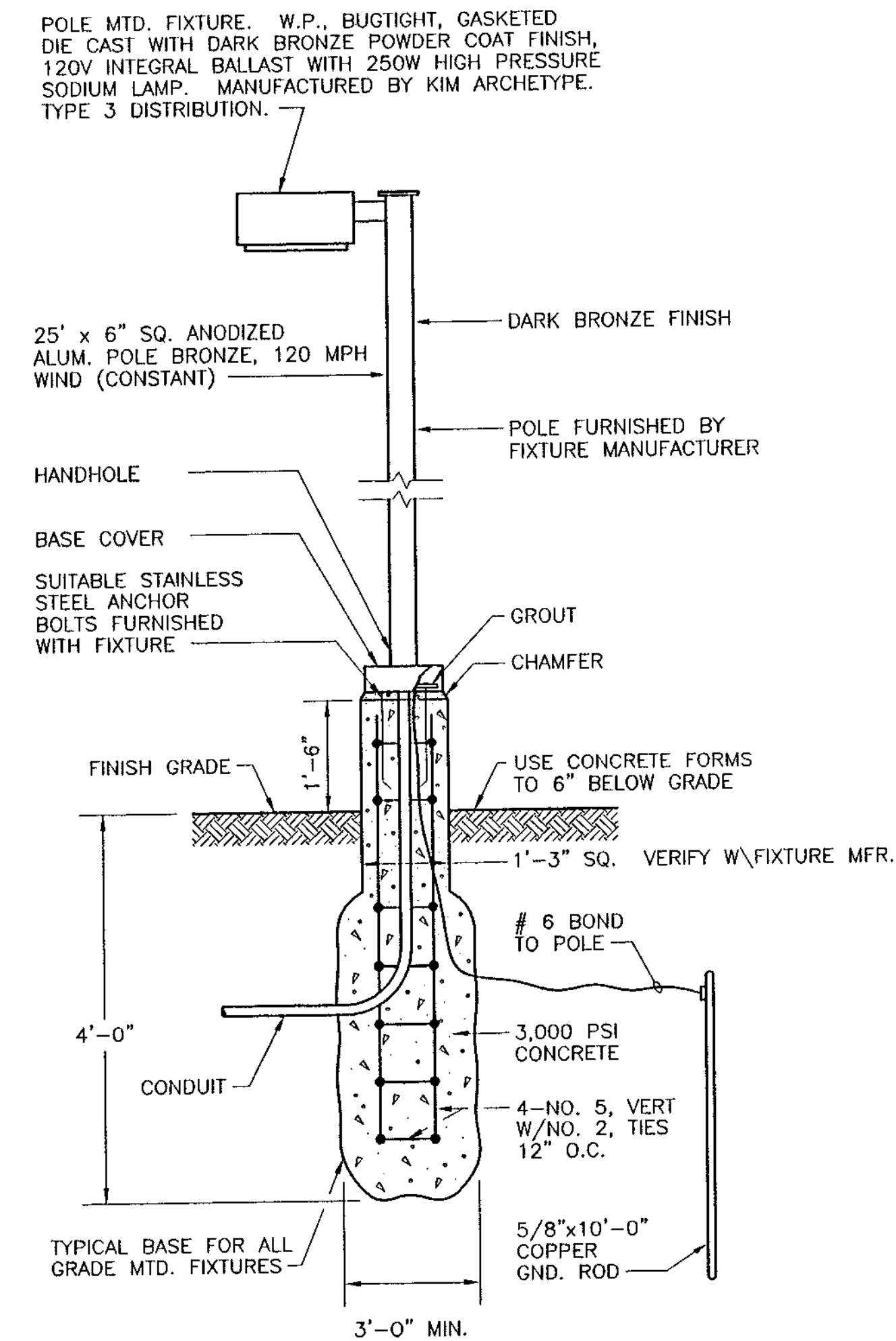
REVISION  
DATE 01-24-18  
APPROVED RECORD DATA

**WILLIAMS, HATFIELD & STONER, INC.**  
CONSULTING ENGINEERS • PLANNERS • SURVEYORS  
FORT LAUDERDALE • BOYNTON BEACH • PORT ST. LUCIE • MIAMI



LIGHTING FIXTURE SCHEDULE				
TYPE	WATT	DESCRIPTION	MANUFACTURER	CATALOG NUMBER
A	250	SEE POLE MOUNTED FIXTURE DETAIL, THIS SHEET		
B	160	8'-0" LONG, VAPOR-TIGHT, GASKETED FLUORESCENT FIXTURE W/4-40 WATT R.S. LAMPS, NON-CORROSIVE NON-METALLIC HOUSING, HIGH IMPACT ACRYLIC LENS SUITABLE FOR WET LOCATIONS, FULLY ENCLOSED WIRING, 120V, ESB.	COLUMBIA HOLOPHANE DAY-BRITE	LUN240-8-WL 7200812HODR8P18 VR28W120
C	80	4'-0" LONG, VAPOR-TIGHT, GASKETED FIXTURE W/2-40 WATT R.S. FLUORESCENT LAMPS, NON-CORROSIVE NON-METALLIC HOUSING, HIGH IMPACT ACRYLIC LENS. SUITABLE FOR WET LOCATIONS. FULLY ENCLOSED WIRING, 120V, ESB.	H.E. WILLIAMS HOLOPHANE DAY-BRITE	8622-A 7200412W5DR4P14 VR2-4W-120
D	50	WALL MOUNTED OUTDOOR FIXTURE W/50 WATT H.P.S. LAMP AND 120V LOW LOSS BALLAST. GASKETED, DIE-CAST ALUMINUM HOUSING, PRISMATIC REFRACTOR, PHOTOCCELL CONTROL, ALUMINUM BACKPLATE, SHARP CUTOFF, TYPE III DISTRIBUTION.	GENERAL ELECTRIC HOLOPHANE EMCO LIGHTING	W1LG05S1APECITLASN3DB WP2A050HP12BZP STS-50S-120-DB-PCB
		EXIT SIGN W/CAST ALUMINUM HOUSING & ALUMINUM STENCIL FACE, BLACK BAKED ENAMEL FINISH, SEALED NICKEL CADMIUM BATTERY, SELF CONTAINED AUTO-CHARGING, WALL OR CEILING MOUNTED AS REQUIRED. 120V-AC, 12V-DC.	EMERGI-LITE HOLOPHANE	TPXL-1R/TPXL-2R HW1-LA1R11
		EMERGENCY LIGHTING UNIT, SELF CONTAINED AUTO-CHARGING BATTERY BACK-UP W/TEST SWITCH & PILOT LIGHT, SEALED NICKEL CADMIUM BATTERY, (2) EF-18 HEADS W/9 WATT HIT LAMP PER HEAD. 120V-AC, 12V-DC.	EMERGI-LITE HOLOPHANE	12JSC36-2(1E) EH-12-2A

PANEL: L1		BUS: 225A W/50A MB		VOLTAGE: 120/208V, 3Ø, 4W	
MOUNTING: SURFACE		POLES: 42			
LOCATION: ELECTRICAL ROOM		REMARKS:			
CIR. NO.	DESCRIPTION	TRIP	POLES	REMARKS	
1-4	RECEPTACLES	20	1		
5-8	LIGHTING	20	1		
9	BATTERY CHARGER	20	1		
10	LEAK DETECTION PANEL	20	1		
11,13	JACKET WATER HEATER	30	2		
12	EXHAUST FAN	20	1		
14-18	INSTRUMENTATION	20	1		
19,20	METER VAULT	20	1		
21,23	ACCU	30	2		
22,24	AHU	20	2		
25-42	SPARE	20	1		



POLE MOUNTED FIXTURE DETAIL  
N.T.S.

RECORD DRAWINGS DATE: \_\_\_\_\_  
REVIEWED BY: \_\_\_\_\_

NOTE:

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INSTRUMENTATION  
2101 N. ANDREWS AVE., SUITE 100  
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PHONE: (954) 564-3111  
FAX: (954) 564-3040

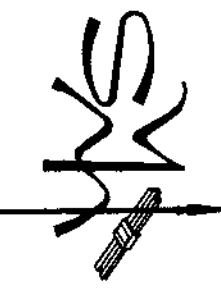


RECORD DRAWING

M/R DWG. NO. 41-42-23-03

ABACOA/WASTEWATER COLLECTION SYSTEM  
WMP 9A MASTER LIFT STATION  
LIGHTING FIXTURE SCHEDULE & DETAILS

WILLIAMS, HATFIELD & STONER, INC.  
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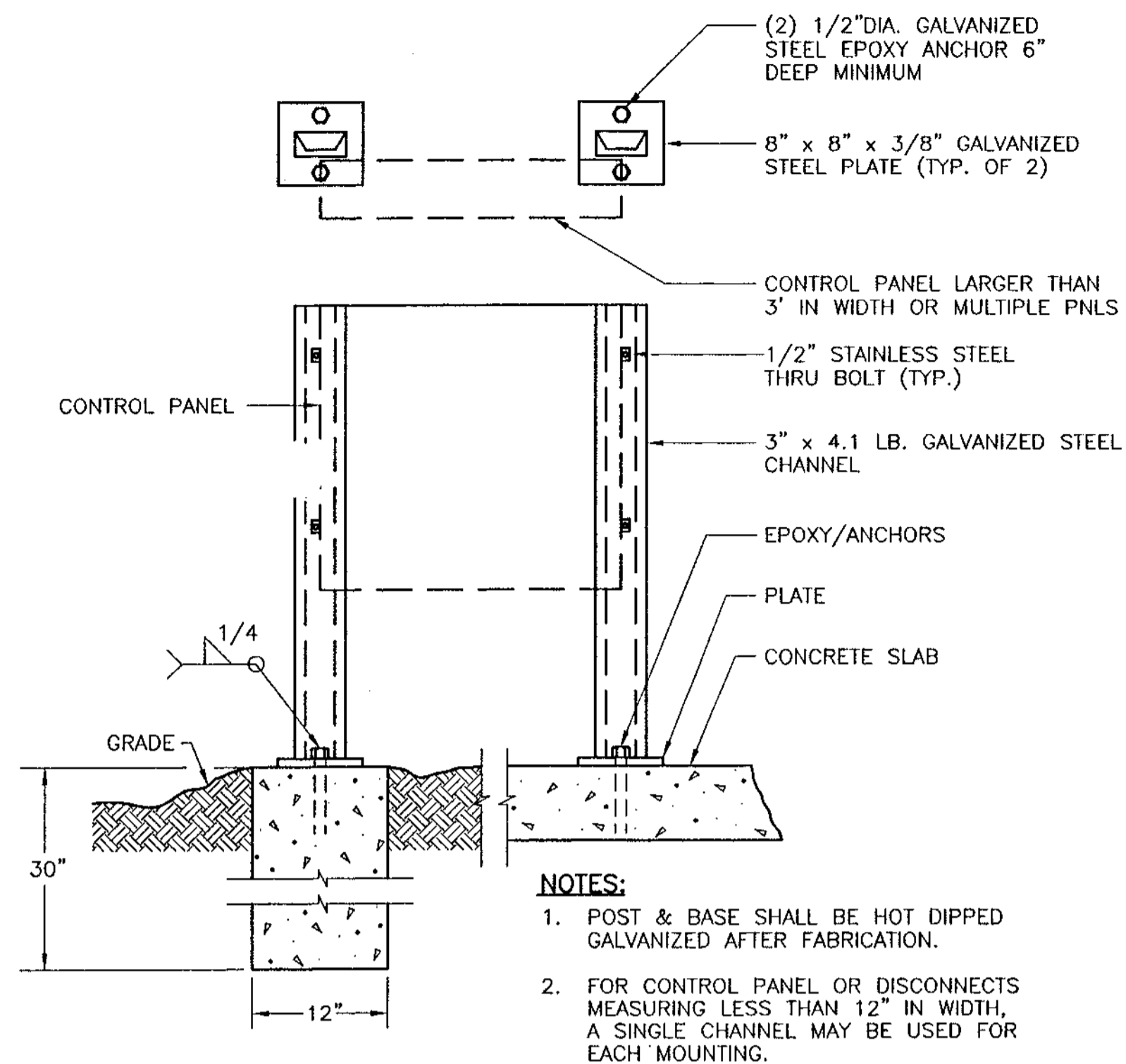
FORT LAUDERDALE • BOYNTON BEACH • FORT ST. LUCIE • MIAMI

Date	10/10/96
Drawn	MF
Checked	LMR
Monitored	SEB
Dwg Name	ABS-L10.DWG

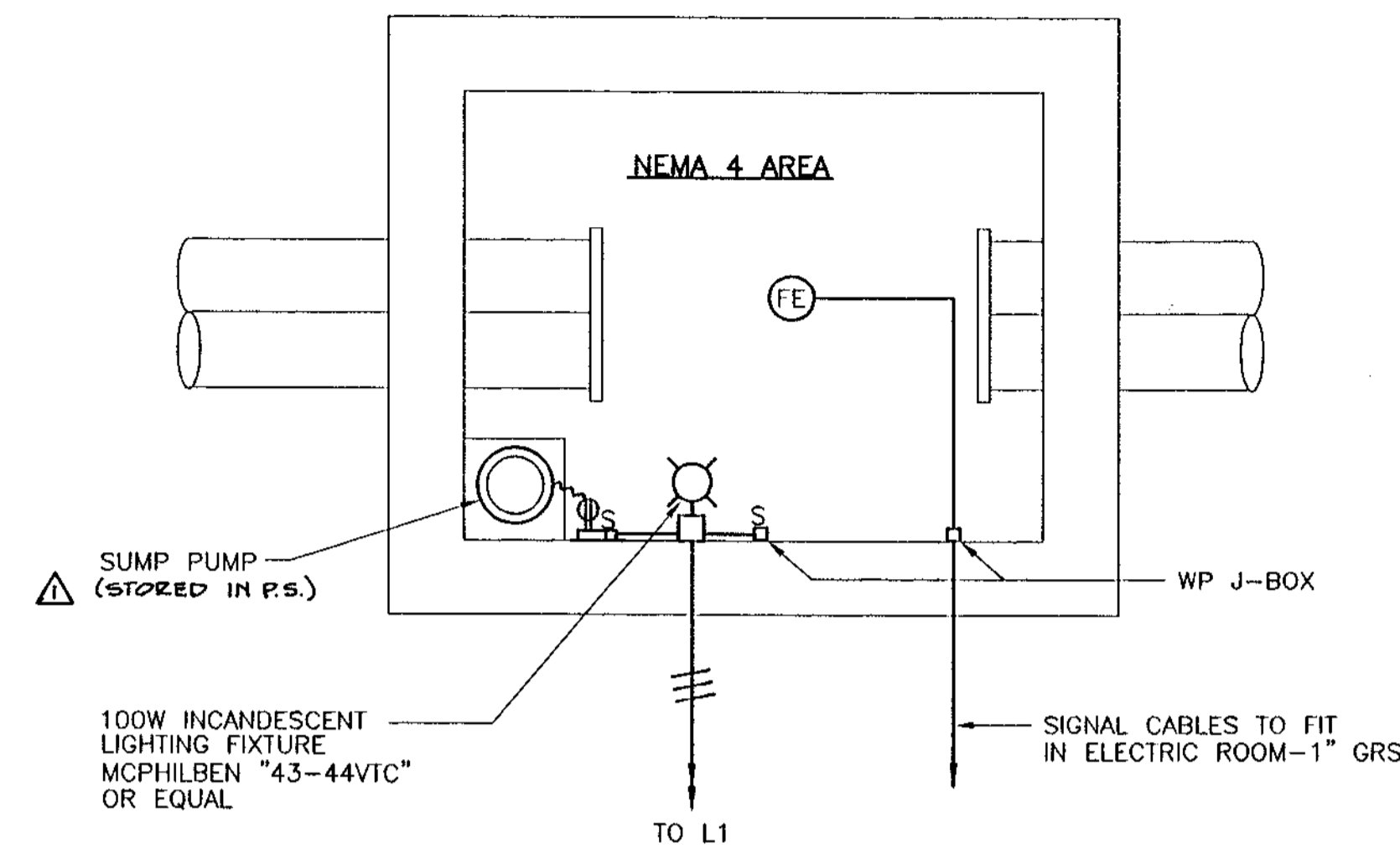
PROJECT No.  
4068.59

SHEET No.  
E-7

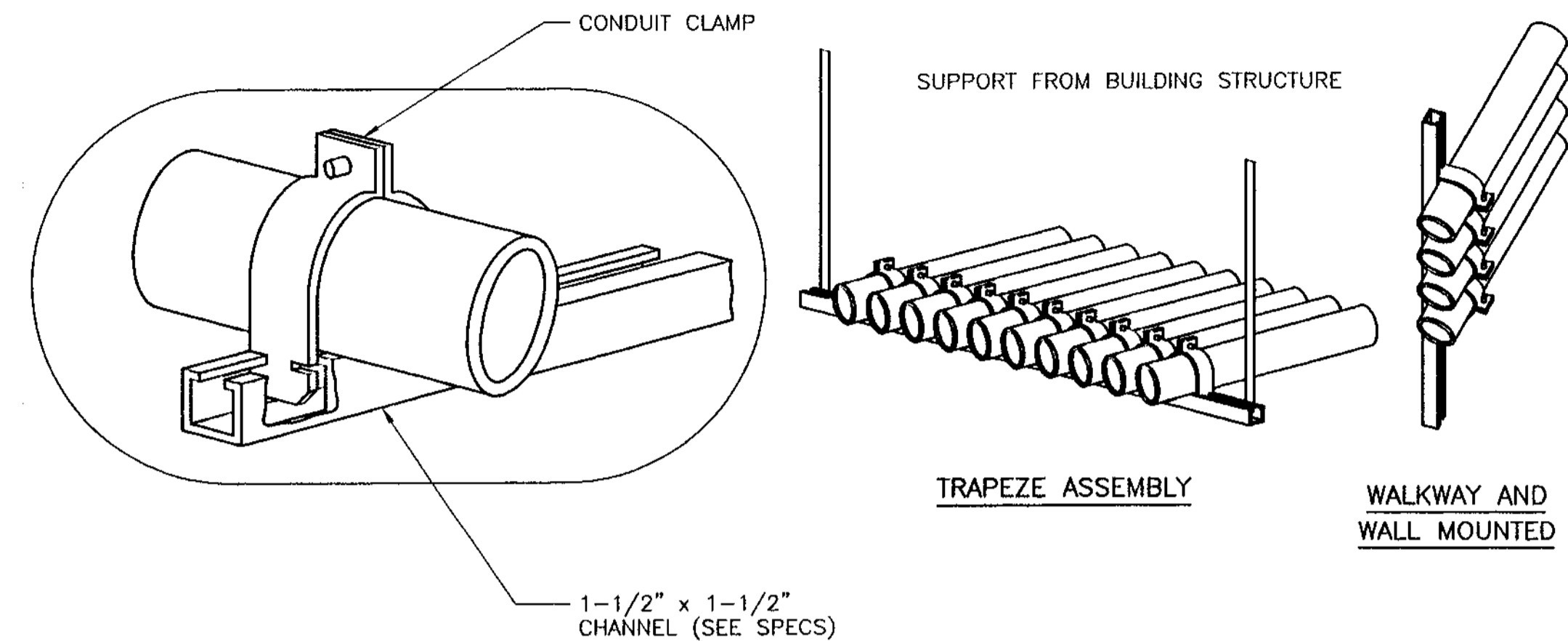
REVISION  
DATE  
01/24/98  
APPROVED RECORD DATA



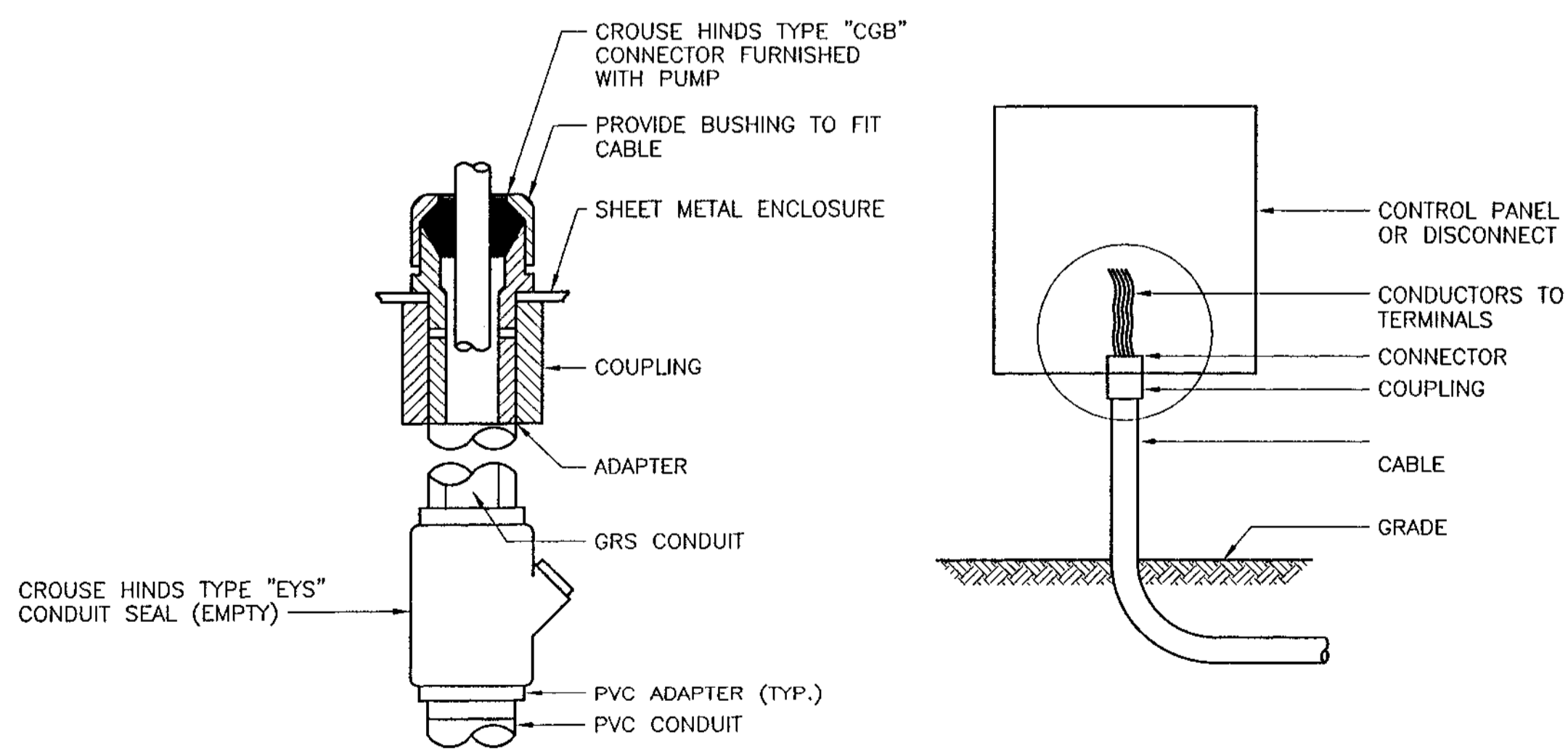
**TYPICAL DISCONNECT AND CONTROL PANEL MOUNTING DETAIL**



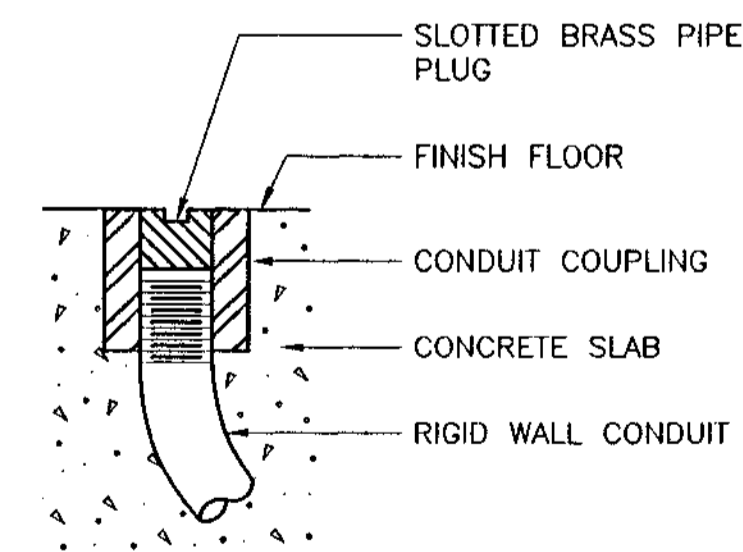
**FLOW METER VAULT**  
N.T.S.



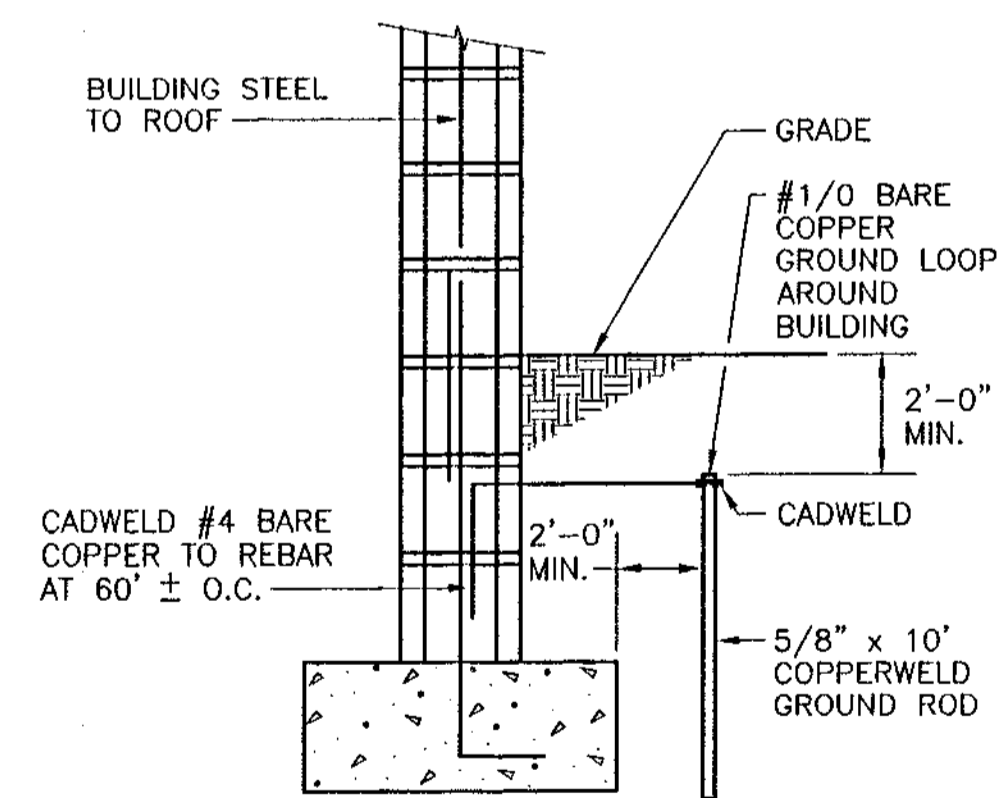
**CONDUIT PIPE STRAP MOUNTING DETAILS**



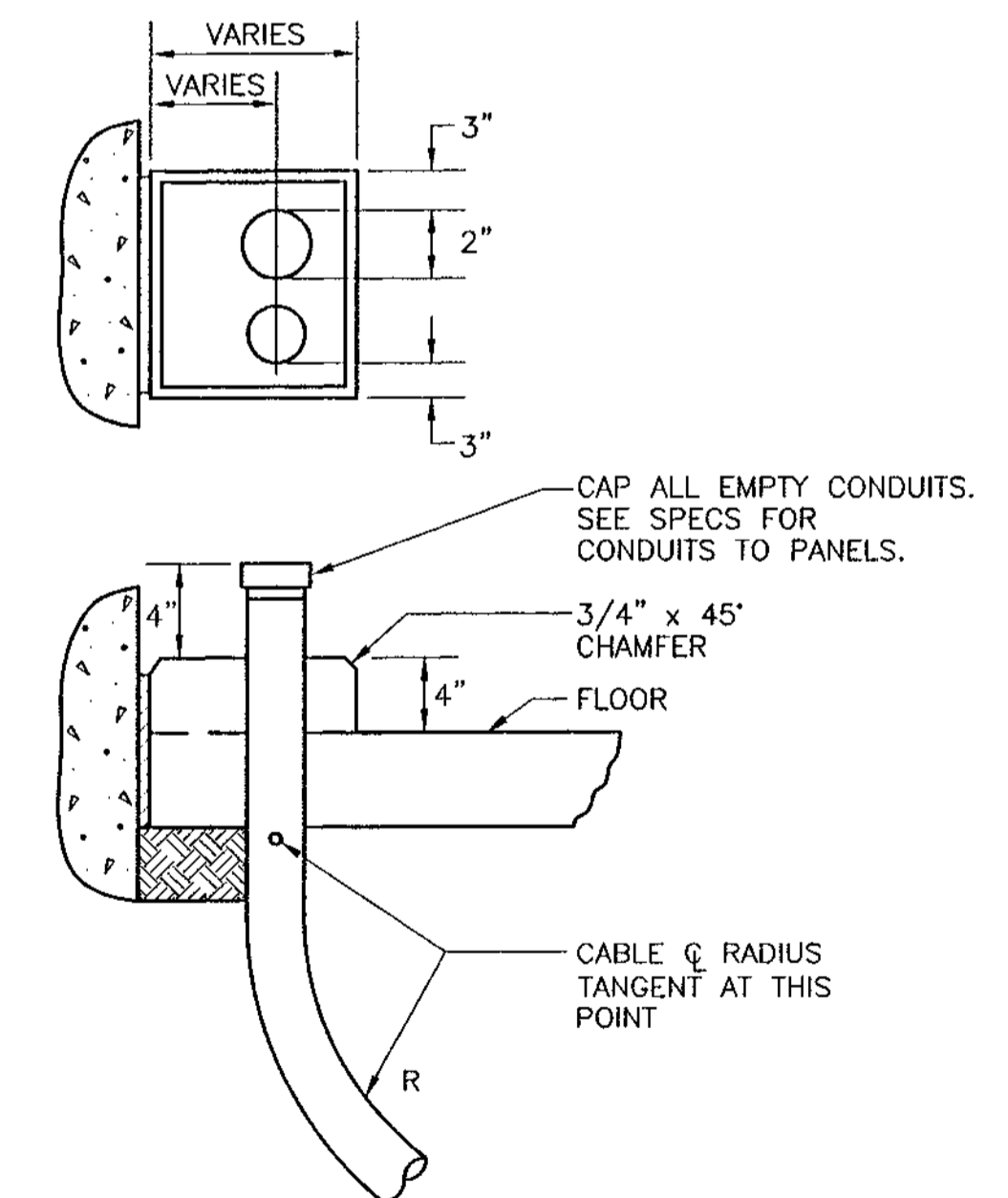
**WATER TIGHT CONNECTION DETAIL**



**DETAIL OF CONDUIT TERMINATION STUB OUT**



**BUILDING STRUCTURE BONDING**



**TYPICAL CONDUIT THRU SLAB**

RECORD DRAWINGS DATE: \_\_\_\_\_  
REVIEWED BY: \_\_\_\_\_

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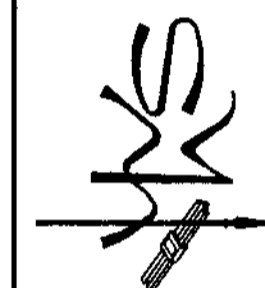
**RECORD DRAWING**

ABACO/WASTEWATER COLLECTION SYSTEM  
WMP 9A MASTER LIFT STATION  
ELECTRICAL DETAILS

Date	10/10/96
Drawn	MF
Checked	LVR
Manager	SEB
Draw Name	ABS-BE1.DWG

PROJECT No.  
**4088.59**  
SHEET No.  
**E-8**

WILLIAMS, HATFIELD & STONER, INC.  
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REVISION	
DATE	08-21-95
APPROVED	
RECORD DATA	

**SYMBOLS**

- THERMOSTAT
- SMOKE DETECTOR
- VOLUME DAMPER
- FIRE DAMPER
- ER EXHAUST REGISTER
- RG RETURN GRILLE
- SR SUPPLY REGISTER
- WALL MOUNT EXHAUST FAN
- ROUND FLEXIBLE INSULATED DUCT
- SHEET METAL DUCT
- ELECTRIC UNIT HEATER

**NOTES**

1. WORK SHALL BE COORDINATED WITH BUILDING CONDITIONS AND THE WORK OF OTHER TRADES PRIOR TO STARTING ANY WORK.
2. WORK IN THIS CONTRACT INVOLVES NEW BUILDINGS AND EQUIPMENT. ADJUSTMENTS TO DESIGN LAYOUTS REQUIRED BY FIELD CONDITIONS SHALL BE MADE AT NO ADDITIONAL COST TO THE OWNER.

**ABBREVIATIONS**

<p>A AIR</p> <p>ACC AIR COOLED CONDENSING UNIT</p> <p>AHU AIR HANDLING UNIT</p> <p>ALUM ALUMINUM</p> <p>AFF ABOVE FINISHED FLOOR</p> <p>ASHRAE AMERICAN SOCIETY OF HEATING, REFRIGERATING AND AIR-CONDITIONING ENGINEERS</p> <p>BDD BACKDRAFT DAMPER</p> <p>BS BIRDSCREEN</p> <p>BTU BRITISH THERM UNIT</p> <p>CFM CUBIC FEET PER MINUTE</p> <p>CD CEILING DIFFUSER</p> <p>COND CONDENSATE</p> <p>DB DRY BULB</p> <p>DG DOOR GRILLE</p> <p>DN DOWN</p> <p>DS DISCONNECT SWITCH</p> <p>DIA DIAMETER</p> <p>EA EACH</p> <p>EAG EXHAUST AIR GRILLE</p> <p>EDH ELECTRIC DUCT HEATER</p> <p>EUH ELECTRIC UNIT HEATER</p> <p>EER ENERGY EFFICIENCY RATIO</p> <p>EF EXHAUST FAN</p> <p>ER EXHAUST REGISTER</p> <p>FD FIRE DAMPER</p> <p>FRI FIBERGLASS REINFORCED PLASTIC</p> <p>FT FEET</p>	<p>GS GALVANIZED STEEL</p> <p>GPM GALLONS PER MINUTE</p> <p>HP HORSEPOWER</p> <p>HW HOT WATER</p> <p>KW KILOWATT</p> <p>LD LINEAR DIFFUSER</p> <p>NTS NOT TO SCALE</p> <p>OA OUTSIDE AIR</p> <p>PCD PERFORATED CEILING DIFFUSER</p> <p>PAC PACKAGED AIR CONDITIONING UNIT</p> <p>PSI POUNDS PER SQUARE INCH</p> <p>PVC POLYVINYL CHLORIDE</p> <p>RA RETURN AIR</p> <p>RG RETURN GRILLE</p> <p>REF REFRIGERANT</p> <p>SEER SEASONAL ENERGY EFFICIENCY RATIO</p> <p>SP STATIC PRESSURE</p> <p>SS STAINLESS STEEL</p> <p>SR SUPPLY REGISTER</p> <p>SMACNA SHEET METAL AND AIR CONDITIONING CONTRACTORS NATIONAL ASSOCIATION</p> <p>TG TRANSFER GRILLE</p> <p>TYP TYPICAL</p> <p>UH UNIT HEATER</p> <p>UL UNDERWRITERS LABORATORY</p> <p>WB WET BULB</p> <p>WG WATER GAUGE</p>	
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**AIR COOLED CONDENSING UNIT SCHEDULE**

ITEM NO.	NO. REQ'D	LOCATION	MATCH WITH	SYSTEM CAPACITY		PIPING		CONDENSER				COMPRESSOR				REMARKS	WEATHERKING MODEL	
				BTUH	SEER	SUCT.	LIQ.	OSA F	CFM	ROWS	RLA	NO.	TYPE	RLA	VOLT			PHASE
ACCU-1	1	ELECTRICAL ROOM	AHU-1	35,600	13.1	7/8	3/8	95	3100	2	1.2	1	HERMETIC	18.0	208	1	SEE NOTE A BELOW	WANLA-036JA

**NOTE A:** PROVIDE OPTIONAL LOW AMBIENT SWITCH, FACTORY LOW PRESSURE SWITCH, AND LIQUID LINE FILTER-DRIER.

**AIR HANDLING UNIT SCHEDULE**

ITEM NO.	NO. REQ'D	AREA SERVED	SHEET NO.	COIL DATA				FAN DATA				FILTERS		REMARKS	WEATHERKING MODEL					
				ENTERING AIR DB	LEAVING AIR WB	TOTAL MBH	SENSIBLE MBH	ROWS/FINS	CFM	OSA CFM	ESP	HP	DRIVE			VOLT PHASE	TYPE	SIZE NO.		
AHU-1	1	MASTER LIFT STA ELECTRICAL ROOM	H-2	80	67	-	-	35.6	26.0	-	1250	0	0.1"	1/4"	DIRECT	208/1	-	-	SEE NOTE A BELOW	AHMA-13

**NOTE A:** PROVIDE HEAVY DUTY CORROSION RESISTANT SINGLE STAGE COOLING ONLY THERMOSTAT WITH INTEGRAL LOCKING COVER.

**EXHAUST FAN SCHEDULE**

ITEM NO.	NO. REQ'D	AREA SERVED	SHEET NO.	CFM	S.P.	TYPE			H.P.	VOLT PHASE	FAN RPM	MAX SONE VALUE	GREENHECK MODEL NO.	REMARKS	CONTROL
						SET	WHEEL	DRIVE							
EF-1,2	2	PUMP ROOM MASTER LIFT STA.	H-2	4000	0.5"	ROOF	CENT.	BELT	1	460 3ø	614	9.3	GB-240-10	BS,T,EC,SRC,TE,DS	T or WS
EF-3	1	TOILET MASTER LIFT STA.	H-2	50	0.375"	WALL	CENT.	DIRECT	40 W	115 1ø	1500	3.0	SP-6	WC	LIGHT SWITCH

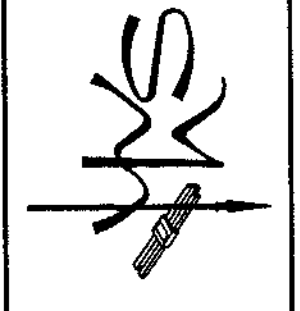
- BS = ALUMINUM BIRD SCREEN
- T = LINE VOLTAGE THERMOSTAT - HONEYWELL T631
- WS = WALL SWITCH OR MCC HOA SWITCH
- EC = HERESITE AIR DRIED EPOXY PHENOLIC FINISH ON FAN & ACCESSORIES
- WC = WALL CAP FOR EXTERIOR WALL OPENING
- TE = TEFC MOTOR, SEE DIVISION 16 FOR ADDITIONAL REQUIREMENTS.
- DS = NEMA 4X STAINLESS STEEL DISCONNECT SWITCH
- SRC = ALUMINUM CONSTRUCTION SLANT ROOF CURB

**AIR DISTRIBUTION DEVICE SCHEDULE**

SYMBOL	DESCRIPTION	MODEL	FRAME TYPE	MATERIAL	FINISH	REMARKS
SR	SUPPLY REGISTER DOUBLE DEFLECTION	METAL*AIRES VH	PLASTER	ALUMINUM	OFF-WHITE ENAMEL	-
RG	RETURN GRILLE LOUVERED FILTER BACK	METAL*AIRES RH-F	PLASTER	ALUMINUM	OFF-WHITE ENAMEL	1" THICK FARR 30/30 FILTER
ER	EXHAUST REGISTER 45° CURVED VANE	METAL*AIRES RHD	PLASTER	ALUMINUM	OFF-WHITE ENAMEL	OPPOSED BLADE DAMPER
CD	MANUAL CONTROL DAMPER	RUSKIN MD-35	CHANNEL	GALVANIZED	MILL FINISH	ADJ. LOCKING QUADRANT

REVISION  
DATE: 01-26-98  
APP'D: [Signature]

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ABACOA/WASTEWATER COLLECTION SYSTEM  
WMP 9A MASTER LIFT STATION  
HVAC SYMBOLS, ABBREVIATIONS, & SCHEDULES

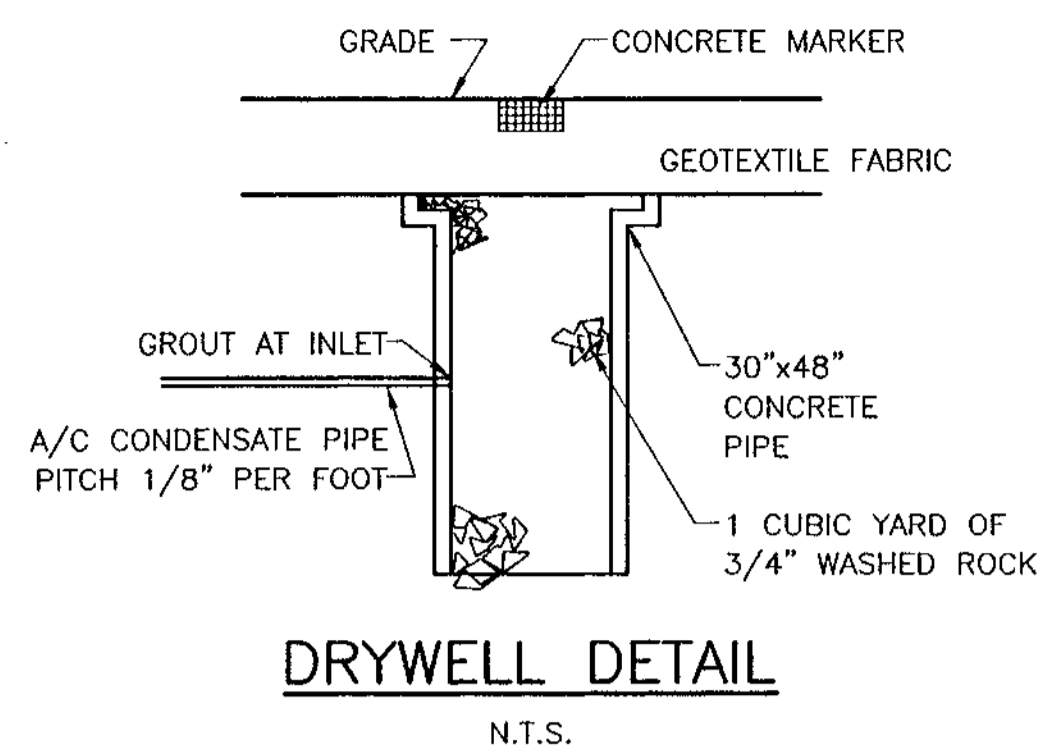
RECORD DRAWINGS DATE: \_\_\_\_\_  
REVIEWED BY: \_\_\_\_\_

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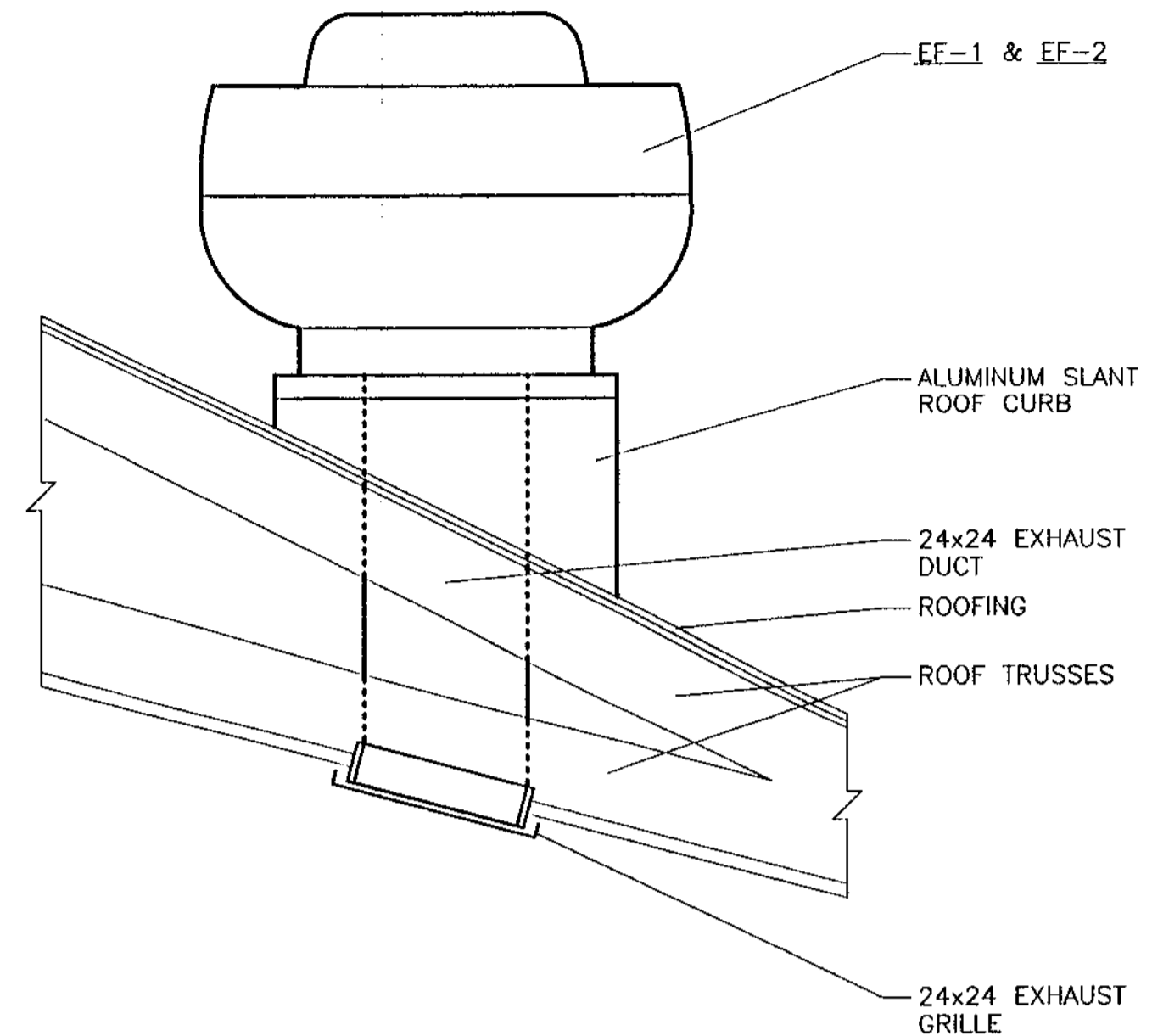
ELECTRICAL - MECHANICAL INSTRUMENTATION  
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FORT LAUDERDALE, FLORIDA 33311  
PHONE: (954) 564-3111  
FAX: (954) 564-3040



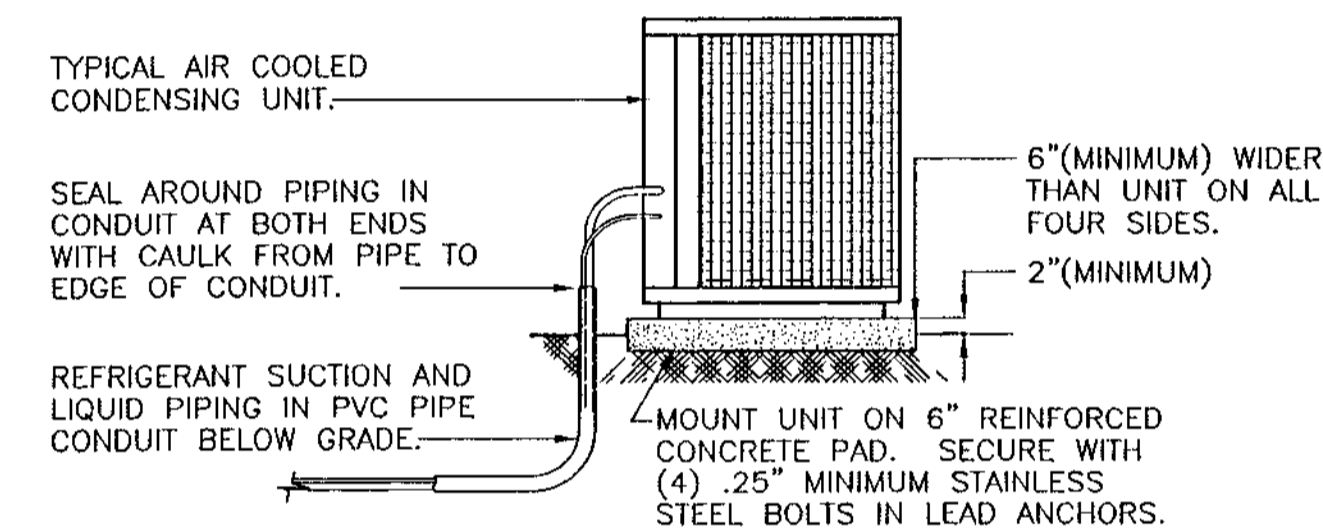
Date	Drawn	Checked	Manager	Dwg Name
10/10/96	MF	LMR	SEB	ABACOA.H1.DWG



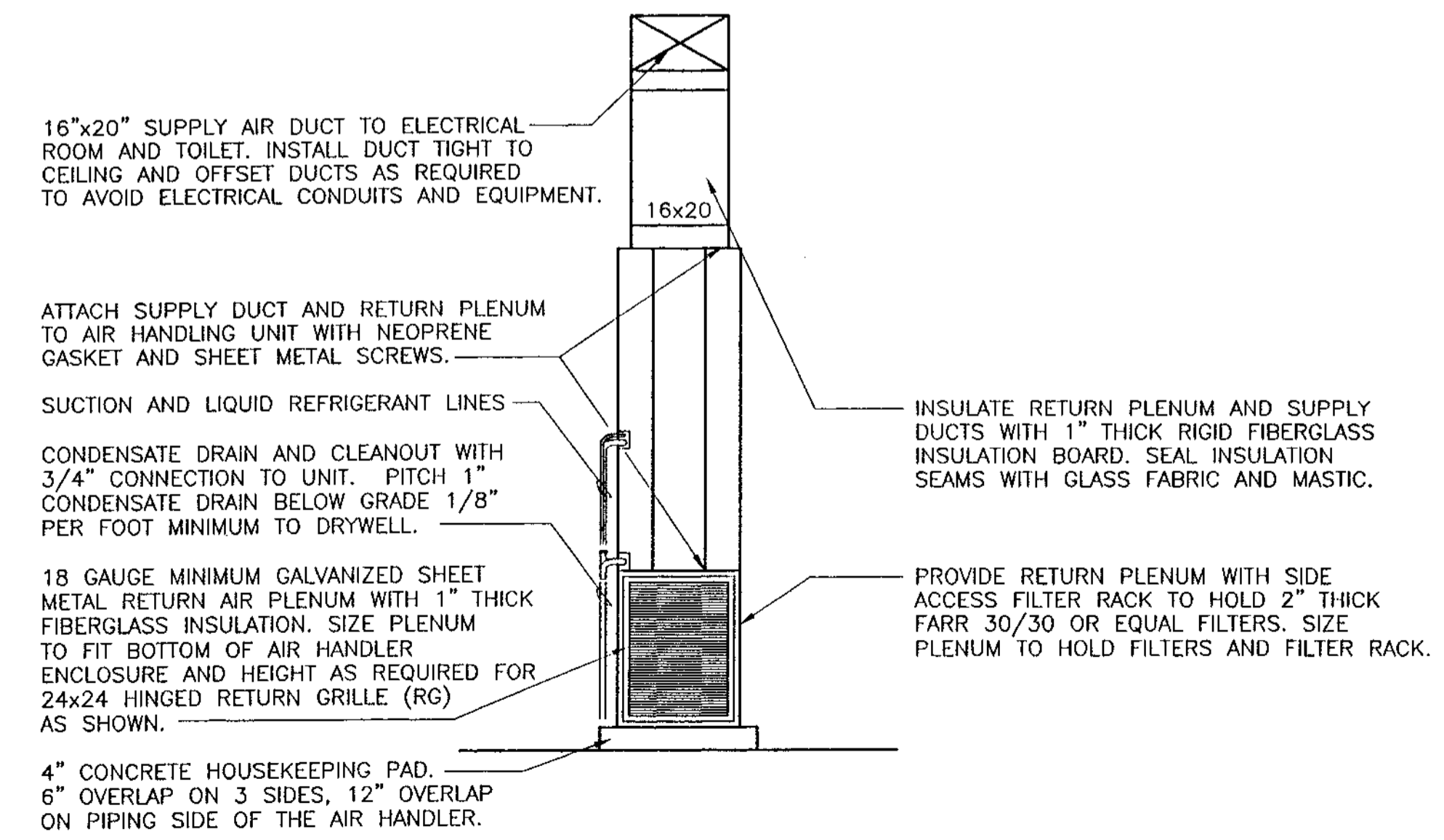
**DRYWELL DETAIL**  
N.T.S.



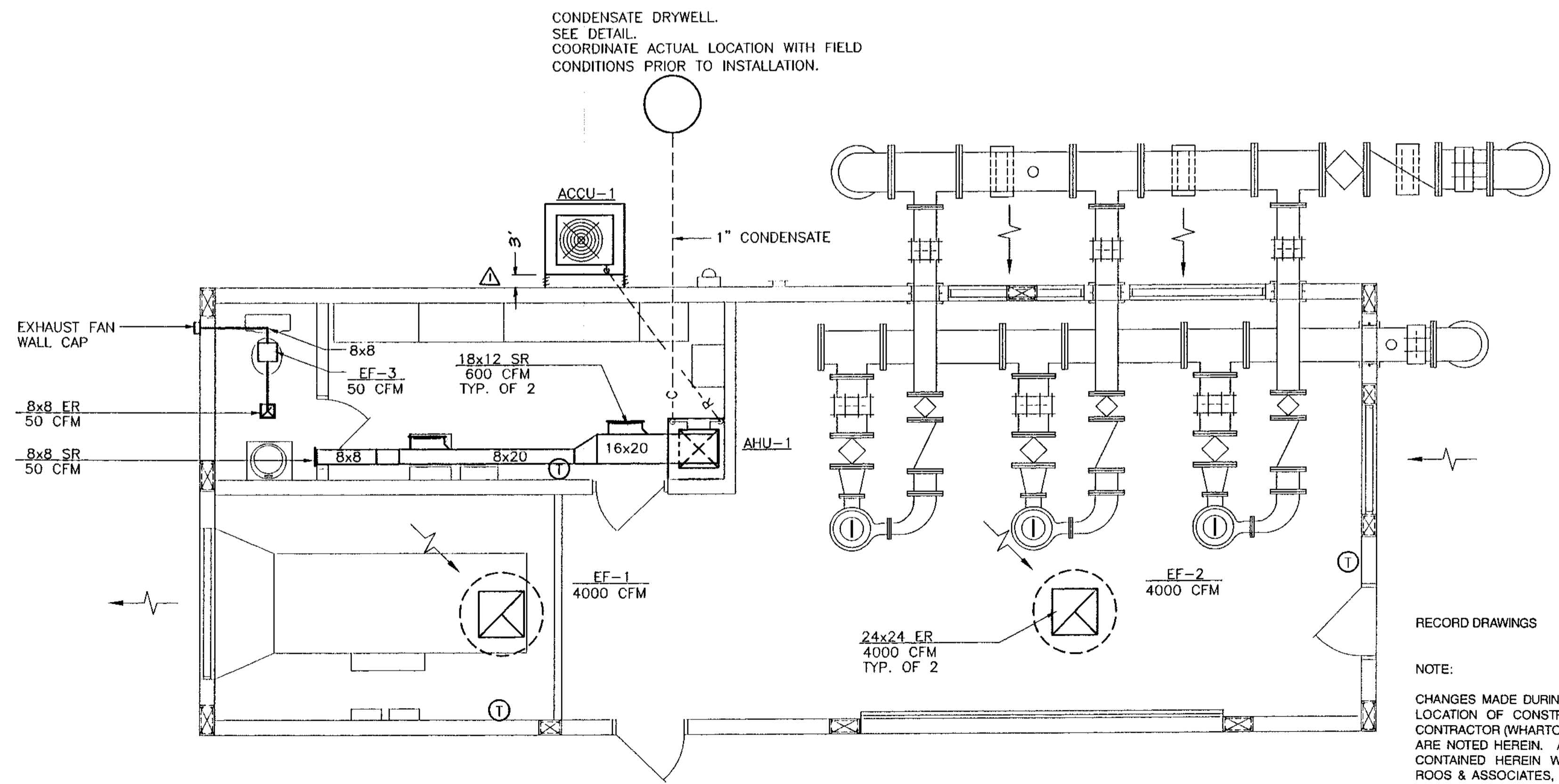
**ROOF FAN MOUNTING DETAIL**  
N.T.S.



**BELOW GRADE REFRIGERANT PIPING DETAIL**  
N.T.S.



**AHU-1 DETAIL**  
N.T.S.



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

RECORD DRAWINGS DATE: \_\_\_\_\_  
REVIEWED BY: \_\_\_\_\_

NOTE:  
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FORT LAUDERDALE, FLORIDA 33311  
PHONE: (954) 364-3111  
FAX: (954) 584-3040



**RECORD DRAWING**  
M/R DWG. NO. 41-42-23-03

ABACOA/WASTEWATER COLLECTION SYSTEM  
WMP 9A MASTER LIFT STATION  
HVAC PLAN AND DETAILS

Date: 10/10/96  
Drawn: MF  
Checked: LMR  
Manager: SEB  
Dwg Name: ABACOA2.DWG

PROJECT No. **4068.59**

SHEET No. **H-2**

REVISION	
DATE	07/26/96
APPROVED	
RECORDED	
DATA	

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**ABBREVIATIONS**

A	AIR	ER	EXHAUST REGISTER	RA	RETURN AIR
ACCU	AIR COOLED CONDENSING UNIT	ES	EMERGENCY SHOWER	RD	ROOF DRAIN
AFF	ABOVE FINISHED FLOOR	EUH	ELECTRIC UNIT HEATER	REF	REFRIGERANT
AHU	AIR HANDLING UNIT	EW	EYE WASH	RG	RETURN GRILLE
AR	ACID RESISTANT	EWC	ELECTRIC WATER COOLER	SEER	SEASONAL ENERGY EFFICIENCY RATIO
ALUM	ALUMINUM	EWH	ELECTRIC WATER HEATER	SMACNA	SHEET METAL AND AIR CONDITIONING CONTRACTORS NATIONAL ASSOCIATION
ASHRAE	AMERICAN SOCIETY OF HEATING, REFRIGERATING AND AIR-CONDITIONING ENGINEERS	FCO	FLOOR CLEANOUT	SP	STATIC PRESSURE
BDD	BACKDRAFT DAMPER		FIRE DAMPER OR FLOOR DRAIN	SR	SUPPLY REGISTER
BS	BIRDSCREEN	FRP	FIBERGLASS REINFORCED PLASTIC	SS	STAINLESS STEEL
BTU	BRITISH THERMAL UNITS	FT	FEET	TG	TRANSFER GRILLE
CD	CEILING DIFFUSER	GS	GALVANIZED STEEL	TYP	TYPICAL
CFM	CUBIC FEET PER MINUTE	GPM	GALLONS PER MINUTE	UH	UNIT HEATER
CO	CLEANOUT	HP	HORSEPOWER	UL	UNDERWRITERS LABORATORY
COND	CONDENSATE	HW	HOT WATER	V	VENT
CW	COLD WATER	HWR	HOT WATER RECIRCULATION	VS	VENT STACK
CU	COPPER	IE	INVERT ELEVATION	VTR	VENT THROUGH ROOF
DB	DRY BULB	KW	KILOWATT	WB	WET BULB
DG	DOOR GRILLE	LD	LINEAR DIFFUSER	WG	WATER GAUGE
DIA	DIAMETER	NTS	NOT TO SCALE		
DN	DOWN	OA	OUTSIDE AIR		
DS	DISCONNECT SWITCH	P/T	PRESSURE/TEMPERATOR RELIEF		
EA	EACH	PAC	PACKAGED AIR CONDITIONING UNIT		
EAG	EXHAUST AIR GRILLE	PCD	PERFORATED CEILING DIFFUSER		
ECO	EXTERIOR CLEANOUT	PIV	POST INDICATOR VALVE		
EDH	ELECTRIC DUCT HEATER	PSI	POUNDS PER SQUARE INCH		
EER	ENERGY EFFICIENCY RATIO	PVC	POLYVINYL CHLORIDE		
EF	EXHAUST FAN	PW	POTABLE WATER		

**PLUMBING SYMBOLS**

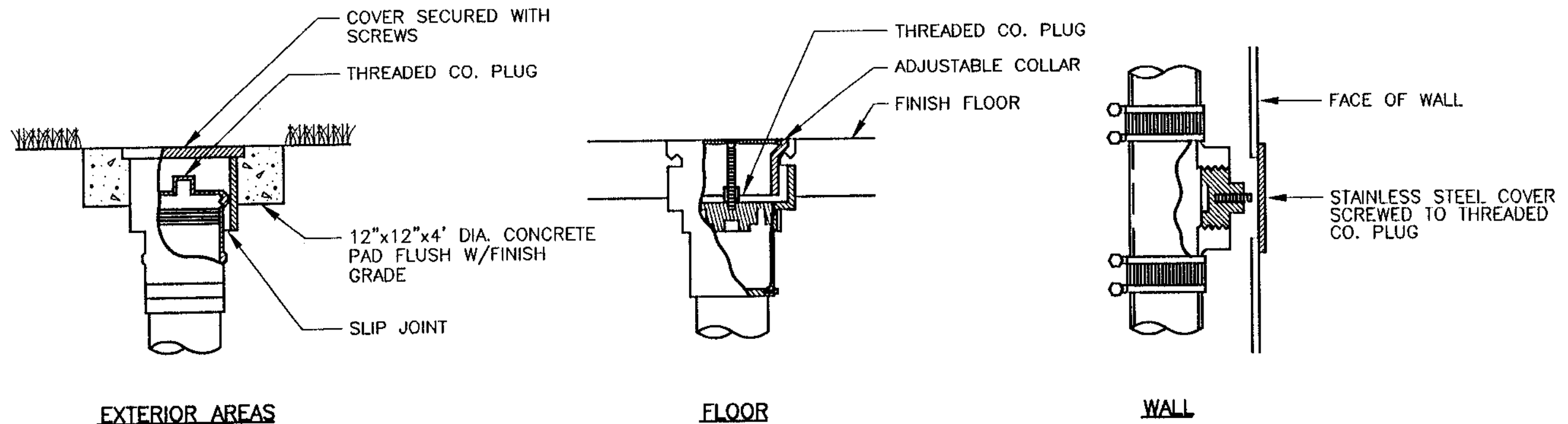
	FLOOR DRAIN
	FLOOR CLEANOUT
	WALL CLEANOUT
	EXTERIOR CLEANOUT
	HOSE BIBB
	COLD WATER
	HOT WATER
	SANITARY
	VENT
	STORM DRAIN
	ROOF DRAIN
	GATE VALVE
	VENT THROUGH ROOF
	SHOCK ARRESTOR
	GATE VALVE IN YARD BOX
	VENT THROUGH ROOF
	SHOCK ARRESTOR
	GATE VALVE IN YARD BOX
	CONDENSATE

**PLUMBING FIXTURE SCHEDULE**

ITEM NO.	ITEM	DESCRIPTION (AMERICAN STANDARD OR AS NOTED)
WCT	WATER CLOSET TANK TYPE	MODEL 2812.053 OR CURRENT MODEL FLOOR MOUNTED WATER SAVER VITREOUS CHINA TOILET, INTEGRAL VITREOUS CHINA TANK, CHROME PLATED SUPPLY VALVE, EXTRA HEAVY DUTY WHITE PLASTIC SEAT; BENEKE OR EQUAL, BOLT CAPS.
LW	LAVATORY WALL MOUNTED	MODEL 4869.020 OR CURRENT MODEL ENAMELED CAST IRON LAVATORY, 20"x18"; DELTA 523 HDF FAUCET WITH .5 GPM FLOW CONTROL, 1 1/4" P-TRAP CHROME PLATED BRASS, AND 3/8" CHROME PLATED BRASS ANGLE STOPS, ZURN WALL SUPPORT.

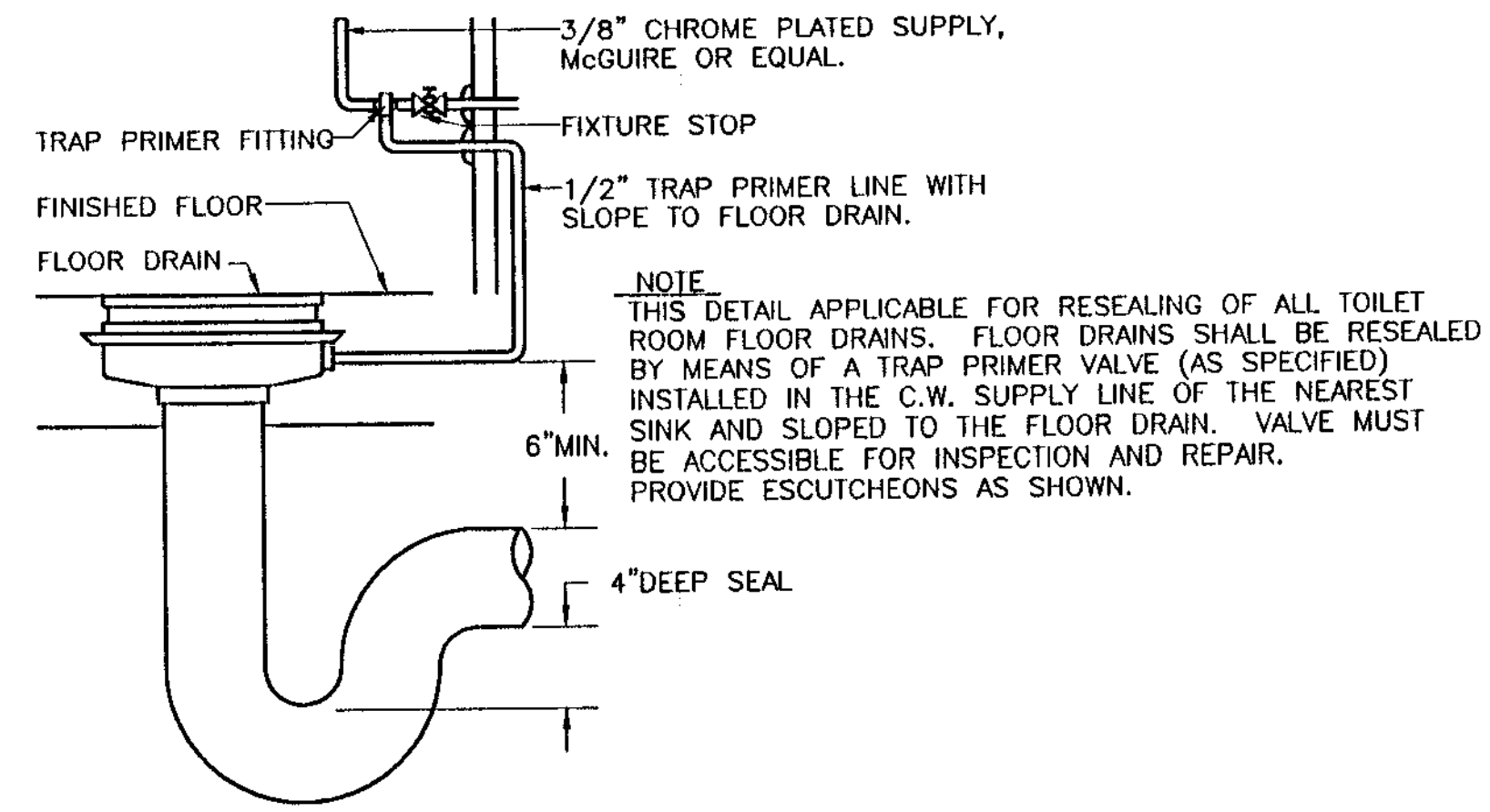
**PLUMBING EQUIPMENT SCHEDULE**

ITEM NO.	ITEM	DESCRIPTION
FD	FLOOR DRAIN	ZURN ZN-415 COATED CAST IRON FLOOR DRAIN WITH NICKEL BRONZE ROUND STRAINER, TRAP PRIMER CONNECTION.
ECO	EXTERIOR CLEANOUT	PROVIDE CLEANOUT AS DETAILED IN FCO ABOVE, ENCASE IN CONCRETE PAD AT FINISHED GRADE, SEE DETAIL.
FCO	FLOOR CLEANOUT	ZURN ZN-1400 SERIES COATED CAST IRON CLEANOUT, ROUND NICKEL-BRONZE ADJUSTABLE TOP, GASKETED COVER, BRONZE PLUG, TOP TO MATCH FLOOR FINISH.
WCO	WALL CLEANOUT	ZURN Z-1460-8 BRONZE PLUG AND STAINLESS STEEL ACCESS PLATE. PROVIDE LINE TEE FOR INSTALLATION OF WALL CLEANOUT.
TP	TRAP PRIMER	ZURN Z-1022 TRAP PRIMER. PROVIDE FOR EACH FLOOR DRAIN SHOWN WITH PRIMER CONNECTION.
HB	HOSE BIBB	CHICAGO 593 CHROME PLATED HOSE BIBB WITH INTEGRAL VACUUM BREAKER-3/4" HOSE CONNECTION.



**TYPICAL CLEAN-OUT DETAIL**

N.T.S.



**TRAP PRIMER RESEAL DIAGRAM**

N.T.S.

RECORD DRAWINGS DATE: \_\_\_\_\_  
REVIEWED BY: \_\_\_\_\_

NOTE:  
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ELECTRICAL - MECHANICAL INSTRUMENTATION  
2101 N. ANDREWS AVE., SUITE 100  
FORT LAUDERDALE, FLORIDA 33311  
PHONE: (954) 564-3111  
FAX: (954) 564-3040



**RECORD DRAWING**  
M/R DWG. NO. 41-42-23-03

**ABACOA/WASTEWATER COLLECTION SYSTEM**  
**WMP 9A MASTER LIFT STATION**  
**SYMBOLS, ABBREVIATIONS, SCHEDULES, & DETAILS**

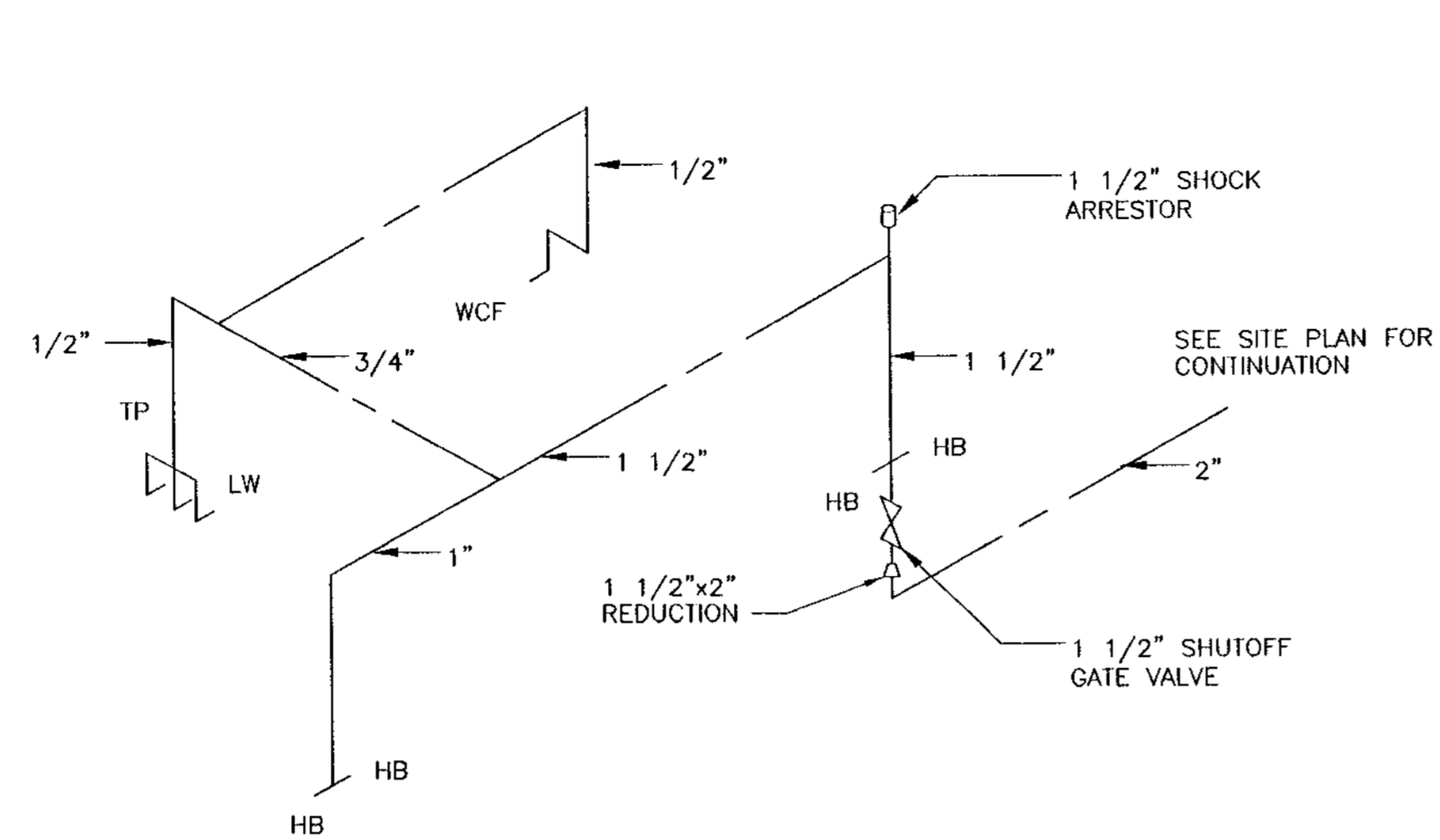
Date	10/10/96
Drawn	MF
Checked	LWR
Manager	SEB
Eng. Name:	ABACOA.P1.DWG

PROJECT No.  
**4068.59**  
SHEET No.  
**P-1**

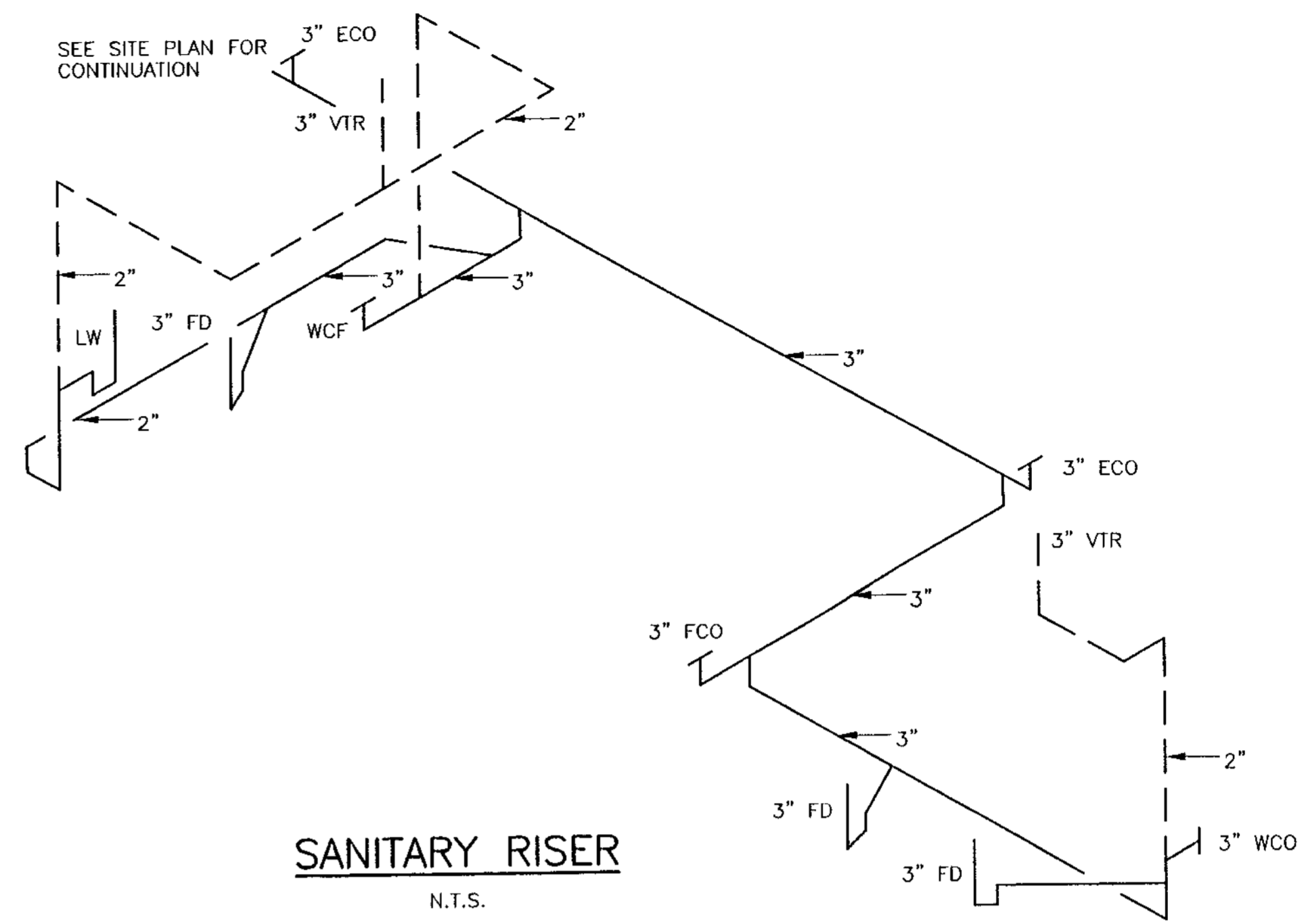
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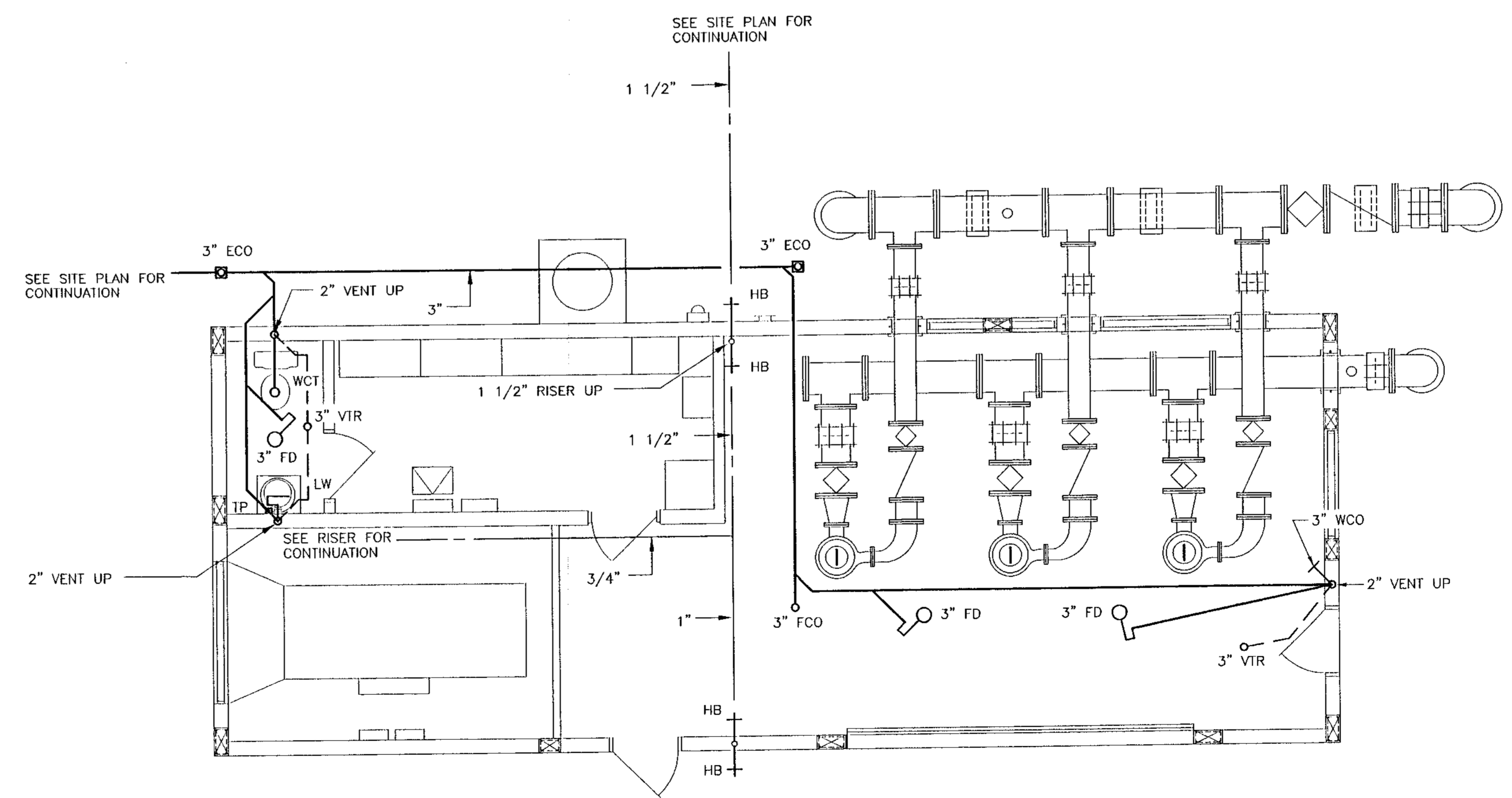
REVISION	
DATE	01/25/98
APP'D	ELC/DPK



**POTABLE RISER**  
N.T.S.



**SANITARY RISER**  
N.T.S.



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

RECORD DRAWINGS DATE: \_\_\_\_\_  
REVIEWED BY: \_\_\_\_\_

NOTE:  
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**RECORD DRAWING**  
M/R DWG. NO. 41-42-23-03

REVISION	DATE	BY
	01-24-19	ESG/DB

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ABACO/WASTEWATER COLLECTION SYSTEM  
WMP 9A MASTER LIFT STATION  
PLUMBING PLAN & RISERS

Date	10/10/96
Drawn	MF
Checked	LMR
Manager	SEB
Dwg Name	ABACOP2.DWG

PROJECT No. **4068.59**  
SHEET No. **P-2**