PART 2 PACKAGE

CONSTRUCTION DRAWINGS
FOR
RIVERTOWN WATER TREATMENT PLANT

VOLUME I - WATER TREATMENT PLANT

JEA PROJ NO.: 8003981

RIVERTOWN WTP
7612 Longleaf Pine Parkway
St. Johns FL 32259

VICINITY MAP
NOT TO SCALE

PREPARED BY:

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FL COA No. EB-0000020
PROJECT NO. 6103-237938

JEA sm
Building Community sm

JACOBS®

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ISSUED FOR BID
DECEMBER 2020

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REV. NO.	DATE	DRWN	CHKD	REMARKS

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DRAWN BY: A. EDWARDS
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JEA

RIVERTOWN WATER TREATMENT PLANT PROJECT

INDEX SHEET

IOANNIS M. POLEMATIDIS LICENSE NO. PE75392 STATE OF FLORIDA PROFESSIONAL ENGINEER

DATE:
IOANNIS POLEMATIDIS
PE NO. 75392

PROJECT NO. 6103-237938
FILE NAME: G001NFIX.DWG

SHEET NO.
G-1

ISSUED FOR BID

GENERAL NOTES:

1. THE CONTRACTOR SHALL STRICTLY FOLLOW DESIGN STANDARDS AS GIVEN IN "WATER AND WASTERWATER STANDARDS MANUAL" BY JEA, JANUARY 2020 OR, LATEST EDITION FOR ALL UTILITY INSTALLATION.
2. THE INFORMATION PROVIDED IN THESE PLANS IS SOLELY TO ASSIST THE CONTRACTOR IN ASSESSING THE NATURE AND EXTENT OF CONDITIONS WHICH WILL BE ENCOUNTERED DURING THE COURSE OF THE WORK. THE CONTRACTORS ARE DIRECTED, PRIOR TO BIDDING, TO CONDUCT WHATEVER INVESTIGATIONS THEY DEEM NECESSARY TO ARRIVE AT THEIR OWN CONCLUSION REGARDING THE ACTUAL CONDITIONS THAT WILL BE ENCOUNTERED, AND UPON WHICH THEIR BIDS WILL BE BASED.
3. SUBMITTAL OF AS-BUILT SITE SURVEY, INCLUDING BENCHMARKS, IS REQUIRED PRIOR TO SCHEDULING FINAL INSPECTION.
4. ELEVATIONS SHOWN HEREON ARE RELATIVE TO THE NAVD OF 1988 AND ARE BASED ON BENCHMARKS AS SHOWN ON THE SURVEY. LOCATIONS, ELEVATIONS, AND DIMENSIONS OF EXISTING UTILITIES, STRUCTURES, AND OTHER FEATURES ARE SHOWN ACCORDING TO THE BEST INFORMATION AVAILABLE AT THE TIME OF PREPARATION OF THESE PLANS, BUT DO NOT PURPORT TO BE ABSOLUTELY CORRECT. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL VERIFY AND AGREE TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY HIS FAILURE TO EXACTLY LOCATE FEATURES AFFECTING HIS WORK.

   TOPOGRAPHIC SURVEY WAS PERFORMED BY:
   R.E. HOLLAND & ASSOCIATES INC
   4770 BAYMEADOWS RD., SUITE 105
   JACKSONVILLE, FLORIDA 32286
5. PRIOR TO BEGINNING CONSTRUCTION, THE CONTRACTOR SHALL PHYSICALLY VERIFY LOCATION OF ALL UTILITIES, ABOVE AND BELOW GROUND AND NOTIFY JEA 72 HOURS PRIOR TO DIGGING IN ANY PORTION OF THE SITE.
6. THE CONTRACTOR SHALL CONTACT THE ENGINEER'S OFFICE IMMEDIATELY UPON FINDING ANY CONFLICTS DURING CONSTRUCTION ON ANY IMPROVEMENTS SHOWN ON THE DRAWINGS.
7. THE CONTRACTOR SHALL NOTE ALL EXISTING UTILITIES ENCOUNTERED DURING EXCAVATION AND INCLUDE ON AS-BUILT DRAWINGS.
8. FOR UTILITY SEPARATION REQUIREMENTS, PLEASE REFER TO JEA'S WATER AND WASTEWATER STANDARDS MANUAL, JANUARY 1, 2020 OR LATEST EDITION.
9. THE CONTRACTOR SHALL, BY REPAIR OR REPLACEMENT, RETURN TO EQUAL OR BETTER CONDITION ALL PAVEMENT, SIDEWALK, LAWNS, UTILITIES AND OTHER OTHER ITEMS DAMAGED BY THIS CONSTRUCTION ACTIVITY.
10. ABSOLUTELY NO WORK WILL BE ALLOWED WITHIN ANY CONSERVATION AREA, BUFFER AREA, MITIGATION AREA, OWNER'S EASEMENTS OR DESIGNATED WETLAND AREA UNLESS SO SPECIFICALLY DESCRIBED BY THE PLANS.
11. MEASURES SHALL BE TAKEN BY THE CONTRACTOR TO ENSURE THAT ADEQUATE EROSION AND SEDIMENTATION CONTROL ARE MAINTAINED AT ALL TIMES DURING THE PROJECT.
12. ALL BRUSH, STRIPPING OR UNSUITABLE MATERIAL SHALL BE DISPOSED OF OFF-SITE AT THE CONTRACTOR'S EXPENSE. HOWEVER, NONE OF THE WASTE MATERIAL SHALL BE REMOVED FROM THE SITE WITHOUT PERMISSION OF THE OWNER. DISPOSAL OF ALL MATERIALS OFF-SITE SHALL BE IN A REGULATORY COMPLIANT MANNER.
13. NO REPRESENTATION IS MADE REGARDING BALANCED EARTHWORK. ANY EXCESS MATERIAL, OR MATERIAL NOT SUITABLE FOR USE AS BACKFILL, SHALL BE HAULED AWAY TO AN APPROVED DISPOSAL FACILITY AT THE CONTRACTOR'S EXPENSE, AND WHERE NECESSARY, SUITABLE FILL AND BACKFILL SHALL BE PROVIDED AND NO ADDITIONAL COMPENSATION SHALL BE ALLOWED.
14. THE LOCATION OF THE SOIL BORING, ARE APPROXIMATE AND AS SHOWN ON THE CIVIL SHEETS, ARE FOR THE CONTRACTOR'S CONVENIENCE. THE PLAN VIEW LOCATION IS APPROXIMATE. THE CONTRACTOR SHALL REFER TO THE GEOTECHNICAL REPORT PREPARED BY CSI GEO, INC., DATED JUNE 2020. THE CONTRACTOR IS RESPONSIBLE FOR ANY CONCLUSIONS, HE MAY DEVELOP, BASED UPON THE SOIL BORING INFORMATION, INCLUDING THE COMPOSITION OF THE MATERIAL TO BE ENCOUNTERED.
15. THE CONTRACTOR SHALL REFFER TO THE SUBSURFACE INVESTIGATIONS DATA FOR SOFT DIG LOCATIONS AND INFORMATION GATHERED DURING DESIGN. SUBSURFACE INVESTIGATIONS AND SOFT DIG DATA ARE INCLUDED ON THE CIVIL DRAWINGS AND AS AN APPENDIX IN THE TECHNICAL SPECIFICATIONS.
16. IN ALL CASES WHERE NOTES, SPECIFICATIONS, SKETCHES, DIAGRAMS, DETAILS OR SCHEDULES IN THE SPECIFICATIONS OR IN THE DRAWINGS, OR BETWEEN THE SPECIFICATIONS AND THE DRAWINGS, CONFLICT SUPPLIER, MODEL, CAPACITY, AND/OR MATERIALS OF CONSTRUCTION, THE HIGHER COST REQUIREMENT SHALL BE FURNISHED BY THE CONTRACTOR, UNLESS OTHERWISE DIRECTED BY ENGINEER AND AGREED TO BY THE OWNER."
17. CONTRACTOR'S WORK ON THIS PROJECT IS INCLUDED UNDER THE FOLLOWING VOLUMES DELINEATING THE SPECIFIC AREAS OF WORK ON THE SITE. REFER TO THESE SPECIFIC VOLUMES OF THE CONTRACT DOCUMENTS FOR SPECIFIC ACTIVITIES FOR CONSTRUCTION.
    A. VOLUME I – WATER TREATMENT PLANT
    B. VOLUME II – WELLHEAD MECHANICAL AND FACILITIES
    C. VOLUME III – RAW WATER PIPELINES
    D. VOLUME IV – TECHNICAL SPECIFICATIONS (INCLUDES ALL WORK AREAS)
        I. VOLUME IV.A – WATER TREATMENT PLANT
        II. VOLUME IV.B – WELLHEAD MECHANICAL AND FACILITIES
        III. VOLUME IV.C – RAW WATER MAIN
18. CONTRACTOR IS REQUIRED TO PROVIDE 8 FOOT TALL SECURITY CONSTRUCTION FENCE TO RESTRICT ACCESS TO THE WTP SITE (VOL I) AND THE OFF-SITE WELLS (WELLS 2 AND 3 – VOL II), DURING CONSTRUCTION ACTIVITIES AND UNTIL THE WORK IS COMPLETE AND THE PERMANENT FENCE IS IN PLACE.
19. AREAS FOR STAGING/STORAGE AND STOCKPILE AREA ARE SHOWN ON SHEET C-1. CONTRACTOR IS RESPONSIBLE TO COORDINATE WORK AND KEEP THESE AREAS ACCESSIBLE AND MAINTAIN ACCESS TO THE WORK AREAS. ADDITIONAL AREAS FOR STAGING/STORAGE AND STOCKPILE ARE TO BE COORDINATED WITH JEA.

UTILITY CONTACTS:

1. THE CONTRACTOR SHALL NOTIFY THE APPROPRIATE UTILITY COMPANY FORTY-EIGHT (48) HOURS IN ADVANCE OF ANY EXCAVATION INVOLVING ITS UTILITIES SO THAT A COMPANY REPRESENTATIVE CAN BE PRESENT. THE LOCATION OF THE UTILITIES SHOWN IN THE PLANS ARE APPROXIMATE ONLY THE EXACT LOCATION SHALL BE DETERMINED BY THE CONTRACTOR DURING CONSTRUCTION.

A.	AT&T – GENERAL NUMBER	904-519-2529
B.	AT&T – ADAM DUGAN – NORTH DISTRICT	904-781-0741
C.	AT&T – BILL LAKE – SOUTH DISTRICT	904-303-8754
D.	ST. JOHNS COUNTY – ENGINEERING	904-209-0110
E.	ST. JOHNS COUNTY – ROAD AND BRIDGE	904-209-0246
F.	FLORIDA DEPT. OF TRANSPORTATION	904-360-5200
G.	JEA – WATER COLLECTION & DISTRIBUTION	904-665-8484
H.	JEA – SEWER COLLECTION & DISTRIBUTION – JOSH PARKER	904-665-6052
I.	JEA – GENERAL INFORMATION	904-665-6000
J.	JEA – PROJECT OUTREACH	904-665-7500
K.	JEA – POWER OUTAGES	904-665-6000
L.	JEA – SEWER PROBLEMS	904-665-4802
M.	JEA – WATER PROBLEMS	904-665-4801
N.	JEA – WATER & SEWER LOCATES	904-665-8410
O.	ST. JOHNS COUNTY UTILITY DEPT.	904-209-2700
P.	SUNSHINE ONE CALL	811

2. THE CONTRACTOR SHALL USE THE SERVICES OF UTILITIES PROTECTION CENTER LOCATOR A MINIMUM OF 72 HOURS PRIOR TO THE COMMENCEMENT OF WORK. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO EMPLOY THE SERVICES OF A SUBCONTRACTOR TO LOCATE FACILITIES OTHER THAN WATER, SEWER AND REUSE WITHIN THE WTP SITE.
   CONTACT SUNSHINE ONE: (811) 432-4770.

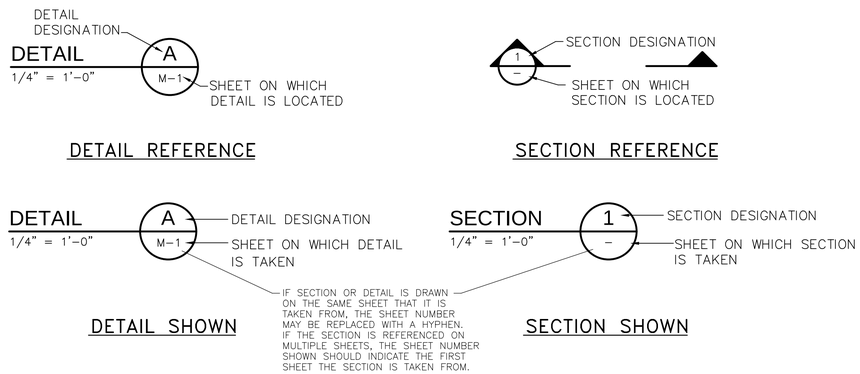
EROSION CONTROL NOTES:

1. IT IS THE CONTRACTOR'S RESPONSIBILITY TO IMPLEMENT EROSION AND TURBIDITY CONTROLS TO COMPLETELY ENCLOSE ANY EXCAVATION OR UNSTABILIZED SOIL. IT IS ALSO THE CONTRACTOR'S RESPONSIBILITY TO ENSURE THESE CONTROLS ARE PROPERLY INSTALLED, MAINTAINED AND FUNCTIONING TO PREVENT TURBIDITY OR POLLUTED WATER LEAVING THE SITE. THE CONTRACTOR WILL ADJUST THE EROSION AND TURBIDITY CONTROLS AND ADD CONTROL MEASURES AS REQUIRED TO ENSURE THE SITE MEETS ALL FEDERAL, STATE AND LOCAL EROSION AND TURBIDITY CONTROL REQUIREMENTS.
2. MATERIAL RESULTING FROM EXCAVATION WILL NOT BE PLACED IN SUCH MANNER THAT IT IS DISPERSED BY CURRENT OR OTHER FORCES. THE MATERIAL SHOULD BE COLLECTED AND CONTAINED AT ONE SITE AS APPROPRIATE.
3. CONTRACTOR IS RESPONSIBLE FOR CLEANING SEDIMENT OR DEBRIS CAUSED BY STORMWATER RUNOFF OR FAULTY EROSION CONTROL AS DIRECTED BY ENGINEER.

ABBREVIATIONS AND LEGEND:

ARV	– AIR RELEASE VALVE	
AVV	– AIR/VACUUM RELIEF VALVE	
BC	– BOTTOM OF CURVE	
℄	– BASE LINE	
B.M.	– BENCHMARK	
BOC	– BACK OF CURB	
C	– CUT	
CB	– CHORD BEARING	
C.B.	– CATCH BASIN	
C.E.P.	– CITY ELECTRIC POLE	
C.I.	– CAST IRON	
C&G	– CURB & GUTTER	
℄	– CENTERLINE	
CLA	– CENTERLINE OF ASPHALT	
CLDI	– CONCRETE LINED DUCTILE IRON	
CLF	– CHAIN LINK FENCE	
CH	– CHORD DISTANCE	
CPP	– CONCRETE POWER POLE	
CPP	– CORRUGATED PLASTIC PIPE	
CONC.	– CONCRETE	
CONST.	– CONSTRUCTION	
CULV.	– CULVERT	
D.B.I	– DITCH BOTTOM INVERT	
DB	– DIRECT BURY	
DI	– DUCTILE IRON	
D.W	– DRIVEWAY	
EA	– EDGE OF ASPHALT	
ECC	– ECCENTRIC	
ECO	– EXTERIOR CLEANOUT	
ED	– EQUIPMENT DRAIN	
RED	– REDUCER	
ELEC	– ELECTRIC	
ELEV	– ELEVATION	
E.O.P.	– EDGE OF PAVEMENT	
ERCP	– ELLIPTICAL REINFORCED CONC. PIPE	
EXP. JT	– EXPANSION JOINT	
F	– FILL	
FE	– FLOW METER	
FH	– FIRE HYDRANT	
FFE	– FINISHED FLOOR ELEVATION	
FL	– FLOW LINE	
FLG	– FLANGED	
FM	– FORCEMAIN	
FOC	– FIBER OPTIC CABLE	
FW	– FINISHED WATER	
GA	– GUY ANCHOR	
GLV	– GALVANIZED	
GPM	– GALLONS PER MINUTE	
GST	– GROUND STORAGE TANK	
GV	– GATE VALVE	
H.C.	– HIGH CURB	
HDPE	– HIGH DENSITY POLYETHYLENE PIPE	
HFAC	– HARNESS FLANGE ADAPTOR COUPLING	
ID	– IDENTIFICATION	
INT.	– INTERSECTION	
INV	– INVERT	
IP	– IRON PIPE	
IPF	– IRON PIPE FOUND	
IR	– IRON	
MEG	– MATCH EXISTING GRADE	
MES	– MITERED END SECTION	
MG	– MILLION GALLON	
MH	– MANHOLE	
MISC	– MISCELLANEOUS	
MJ	– MECHANICAL JOINT	
NAVD	– NORTH AMERICAN VERTICAL DATUM	
N.C.	– NORMALLY CLOSED	
N.T.S.	– NOT TO SCALE	
OC	– ON CENTER	
O.E.	– OVERHEAD ELECTRIC	
OR	– OFFICIAL RECORDS	
O.T.	– OVERHEAD TELEPHONE	
OVR	– OVERFLOW	
OW	– OZONATED WATER	
PI	– POINT OF INTERSECTION	
PC	– POINT OF CURVATURE	
PCC	– POINT OF COMPOUND VURVE	
PG	– PAGE	
PVC	– POLY VINYL CHLORIDE	
PRC	– POINT OF REVERSE CURVTURE	
P.R.M.	– PERMANENT REFERENCE MONUMENT	
PSI	– POUNDS PER SQUARE INCH	
PT	– POINT OF TANGENCY	
PW	– POTABLE WATER	
R	– RADIUS	
R.C.P.	– REINFORCED CONCRETE PIPE	
R.D.	– ROOF DRAIN	
RE#	– REAL ESTATE NUMBER	
REF	– REFERENCE	
RIO	– REMOTE INPUT/OUTPUT	
RJ	– RESTRAINED JOINT	
RT	– RIGHT	
R/W	– RIGHT OF WAY	
RAW	– RAW WATER	
RW	– RECLAIMED WATER	
SAN	– SANITARY SEWER	
SB	– SOIL BORING	
SD	– SOFT DIG	
SS	– STORM SEWER	
S/W	– SIDEWALK	
STA	– STATION	
TC	– TOP OF CURVE	
TEL	– TELEPHONE	
TOB	– TOP OF BANK	
TOP	– TOP OF PIPE	
TOS	– TOE OF SLOPE/TOP OF SLAB	
UG	– UNDERGROUND	
UGE	– UNDERGROUND ELETRIC	
UGT	– UNDERGROUND TELEPHONE	
UNK	– UNKNOWN	
USC & GS	– UNITED STATES COASTAL & GEODETIC SURVEY	
VERT.	– VERTICAL	
VPI	– VERTICAL POINT INFLECTION	
W	– WATER	
WLP	– WOOD LIGHT POLE	
WM	– WATER METER	
WPP	– WOOD POWER POLE	
WTP	– WOOD TELEPHONE POLE	

DETAIL AND SECTION IDENTIFICATION



GENERAL LEGEND

	EXISTING	PROPOSED
RIGHT OF WAY LINE		
PROPERTY LINE		
LIMITS OF CONSTRUCTION		L.O.C.
FENCE (HEIGHT & MAT'L. INDICATED)	6' CHAIN LINK	6' CHAIN LINK
DITCH OR SWALE		
DRAIN PIPE		
CATCH BASIN		
STORM DRAIN GRATE		
STORM SEWER (SIZE & MAT'L. INDICATED)	24" RCP	24" RCP
STORM SEWER, REPLACEMENT (IN CASE 10 TRENCH) SIZE, MAT'L. INDICATED		
STORM SEWER (SIZE & MAT'L. INDICATED)		SS
CULVERT W/ENDWALLS (SIZE & MAT'L. INDICATED)	18" CMP	SS 18" CMP
WATER MAIN SIZE, TYPE INDICATED	W 6" PVC W	W 6" PVC W
RAW WATER MAIN (IN CASE 10 TRENCH) SIZE, TYPE INDICATED		RAW
GRAVITY SEWER SIZE, TYPE INDICATED	SAN 8" PVC SAN	SS 8" PVC SS
SEWER FORCE MAIN SIZE, TYPE INDICATED	FM 10" PVC FM	FM 10" PVC FM
LINE VALVE		
CHECK VALVE		
FIRE HYDRANT		
VALVE (TYPE INDICATED)		
END CAP		
PLUG (AT END OF LINE)		
VALVE (TYPE INDICATED)		
REDUCER		
FIRE HYDRANT		OR
SPOT ELEVATION	OR × 100.00	
MANHOLE - TYPE (IF INDICATED) E - ELECTRIC S - SANITARY D - STORM T - TELEPHONE	× (100.00)	MH1
CLEAN OUT	C.O.	
SPRINKLER HEAD	SPR	
FLUSHING VALVE/MARV/SAMPLE TAP (BACTERIOLOGICAL SAMPLING POINT)		SAMPLE TAP NO. TAP NO.
SILT FABRIC BARRIER		
SIDEWALK		

UTILITY SYMBOLS

ELECTRIC POLE OR S.B.T. POLE (WOOD)	PP OR PP (WITH LIGHT)
WOOD POWER POLE	WPP
ELECTRIC POLE OR S.B.T. POLE (CONC.)	PP OR PP (WITH LIGHT)
CONCRETE POWER POLE	CPP
GUY WIRE	
IRON PIPE	I.P.
OVERHEAD ELECTRIC	OHE
UNDERGROUND ELECTRIC	UGE
OVERHEAD TELEPHONE	OT
UNDERGROUND TELEPHONE	UGT
GAS MAIN (SIZE & MAT'L. INDICATED)	GAS
CABLE TELEVISION	CATV
FIBER OPTIC LINE	FO
UNDERGROUND CABLE (TYPE UNDETERMINED)	UG
TELEPHONE BOX	T
CATV BOX	CATV
CONCRETE MONUMENT	CM
GAS VALVE	
SOIL BORING (NUMBER INDICATED)	B-1
SOFT DIG (NUMBER INDICATED)	SD1
MONITORING WELL (NUMBER INDICATED)	MW
TREE, SIZE & TYPE INDICATED	12" O
SIGN - TYPE INDICATED	OR SIGN
BUSH, SHRUB OR HEDGE	SHRUB
FULL DEPTH ASPHALT PAVEMENT REPLACEMENT	
ASPHALT PAVEMENT OVERLAY	
INDICATES DRIVEWAY/SIDEWALK TO BE AND REPLACED	
WETLANDS	
AUTOMATIC AIR RELEASE VALVE	A

IOANNIS M. POLEMATIDIS LICENSE NO. PE75392 STATE OF FLORIDA PROFESSIONAL ENGINEER

DATE:
IOANNIS POLEMATIDIS
PE NO. 75392

REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: A. NESS
DRAWN BY: A. EDWARDS
SHEET CHK'D BY: I. POLEMATIDIS
CROSS CHK'D BY: D. PRAH
APPROVED BY: I. POLEMATIDIS
DATE: DECEMBER 2020

CDM Smith
4651 Salisbury Road, Suite 420
Jacksonville, FL 32256
Tel: (904) 731-7109
FL COA No. EB-0000020

JACOBS
245 RIVERSIDE AVE, SUITE 300
JACKSONVILLE, FLORIDA 32202
EB0000072 AAC001992 LC26000188

JEA

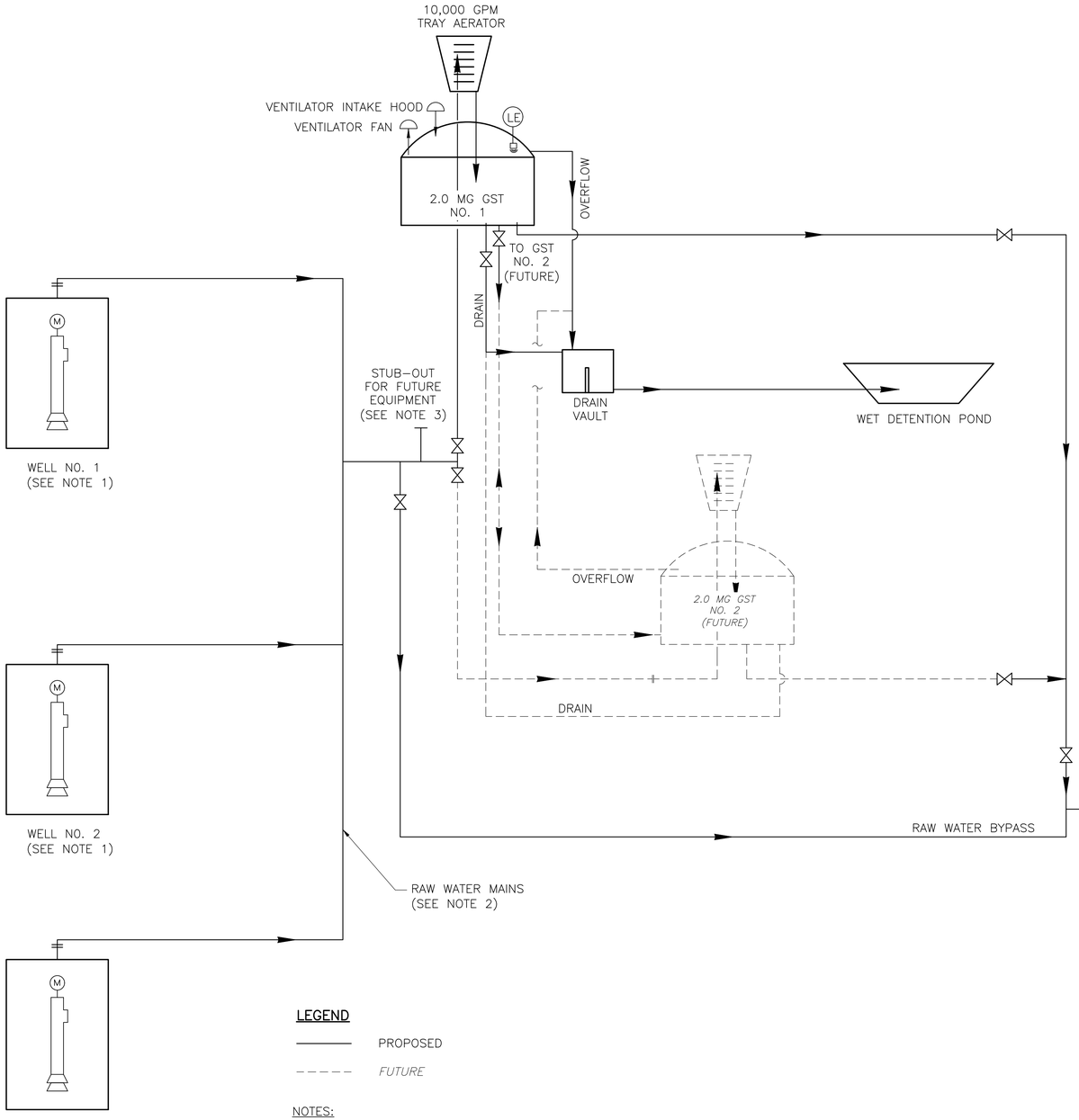
RIVERTOWN WATER TREATMENT PLANT PROJECT

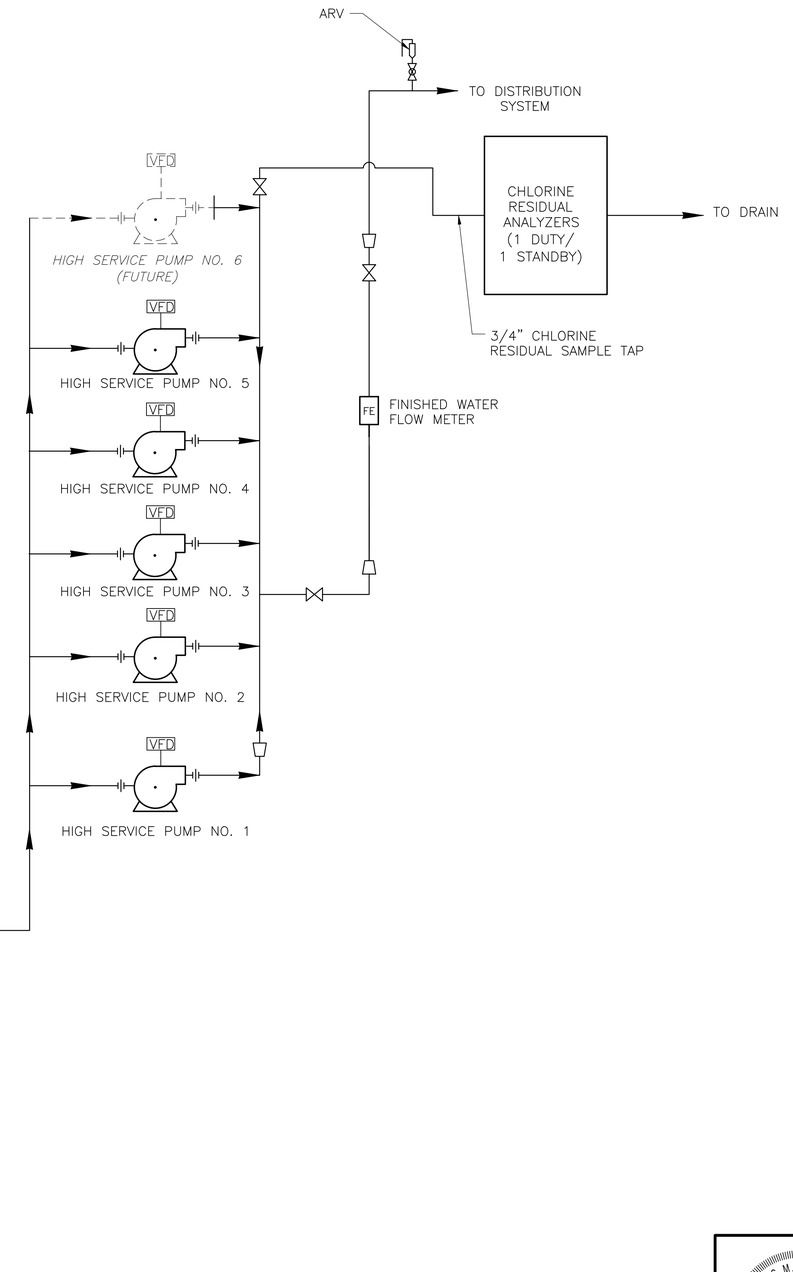
GENERAL NOTES, LEGEND, SYMBOLS AND ABBREVIATIONS

PROJECT NO. 6103-237938
FILE NAME: G002NFGE.DWG

SHEET NO.
G-2

ISSUED FOR BID





LEGEND

———— PROPOSED

– – – – – *FUTURE*

NOTES:

1. REFER TO VOLUME II FOR WELLHEAD MECHANICAL DRAWINGS.
2. REFER TO VOLUME III FOR RAW WATER MAIN DRAWINGS.
3. SPACE ALLOCATED ON SITE PLAN FOR FUTURE TREATMENT EQUIPMENT (IF REQUIRED).

IOANNIS M. POLEMATIDIS
LICENSE
NO. PE75392
STATE OF
FLORIDA
PROFESSIONAL ENGINEER

DATE:
IOANNIS POLEMATIDIS
PE NO. 75392

REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: A. NESS
DRAWN BY: A. EDWARDS
SHEET CHK'D BY: D. PRAH
CROSS CHK'D BY: R. HUGUENARD
APPROVED BY: I. POLEMATIDIS
DATE: DECEMBER 2020

CDM Smith
4651 Salisbury Road, Suite 420
Jacksonville, FL 32256
Tel: (904) 731-7109
FL COA No. EB-0000020

JACOBS
245 RIVERSIDE AVE, SUITE 300
JACKSONVILLE, FLORIDA 32202
EB0000072 AAC001992 LC26000188

JEA

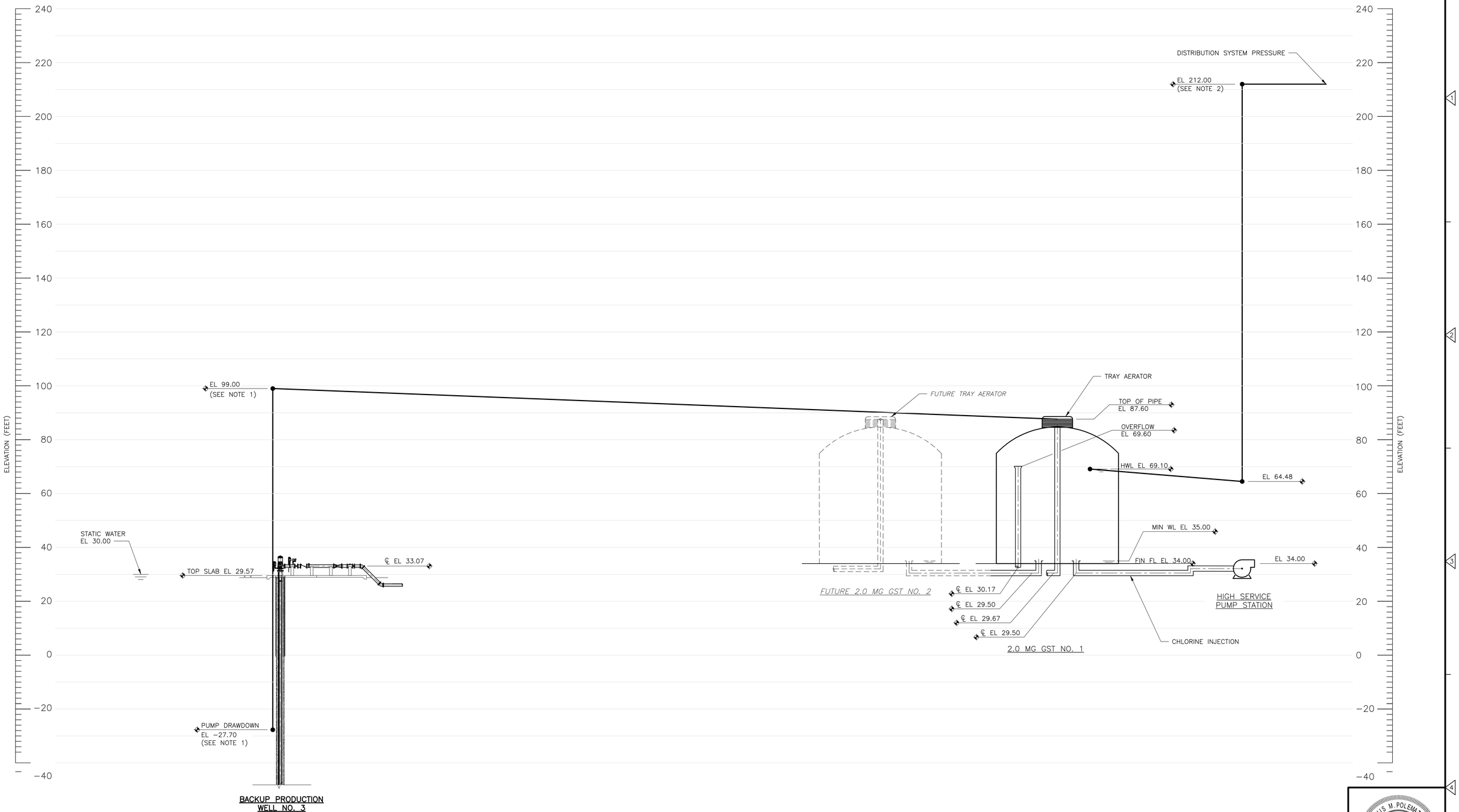
RIVERTOWN WATER TREATMENT PLANT PROJECT

PROCESS FLOW DIAGRAM

PROJECT NO. 6103-237938
FILE NAME: G003NFPF.DWG

SHEET NO.
G-3

ISSUED FOR BID



NOTES:

1. DRAWDOWN OF 61.6FT AT A FLOW RATE OF 1650 GPM. BASED ON ESTIMATED FUTURE HIGH HEAD SCENARIO.
2. MAXIMUM DISCHARGE PRESSURE AT 80 PSI.

IOANNIS M. POLEMATIDIS LICENSE NO. PE75392 STATE OF FLORIDA PROFESSIONAL ENGINEER

DATE:
IOANNIS POLEMATIDIS
PE NO. 75392

REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: D. PRAH
DRAWN BY: A. EDWARDS
SHEET CHK'D BY: D. PRAH
CROSS CHK'D BY: R. HUGUENARD
APPROVED BY: I. POLEMATIDIS
DATE: DECEMBER 2020

CDM Smith
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Tel: (904) 731-7109
FL COA No. EB-0000020

JACOBS
245 RIVERSIDE AVE, SUITE 300
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EB0000072 AAC001992 LC26000188

JEA

RIVERTOWN WATER TREATMENT PLANT PROJECT

HYDRAULIC PROFILE

PROJECT NO. 6103-237938
FILE NAME: G004NFHP.DWG

SHEET NO.
G-4

ISSUED FOR BID

MAP SHOWING A LIMITED TOPOGRAPHICAL SURVEY OF

A PORTION OF SECTION 39, TOWNSHIP 2 SOUTH, RANGE 27 EAST, ST. JOHNS COUNTY, FLORIDA

PREPARED FOR:
CDM SMITH

OFFICIAL RECORDS BOOK 2759, PAGE 1538

A PARCEL OF LAND BEING A PORTION OF THE FRANCIS P. FATIO GRANT, SECTION 39, TOWNSHIP 5 SOUTH, RANGE 27 EAST, ST JOHNS COUNTY, FLORIDA, SAID PARCEL BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCE AT THE MOST NORTHERLY CORNER OF THOSE LANDS CURRENTLY OWNED BY ST. JOHNS COUNTY SCHOOL BOARD, REAL ESTATE NUMBER 00710-0030, SAID LANDS ALSO KNOWN AS BARTRAM TRAIL HIGH SCHOOL; THENCE SOUTH 55°23'05" WEST, A DISTANCE OF 1788.14 FEET TO THE POINT OF BEGINNING; THENCE SOUTH 27°48'19" WEST, A DISTANCE OF 194.04 FEET TO A POINT ON A CURVE BEING CONCAVE SOUTHWESTERLY; THENCE ALONG AND AROUND THE ARC OF A CURVE TO THE LEFT, HAVING A RADIUS OF 25.00 FEET, AN ARC LENGTH OF 27.65 FEET TO THE POINT OF TANGENCY, SAID ARC BEING SUBTENDED BY A CHORD BEARING AND DISTANCE OF NORTH 38°49'30" WEST, 26.26 FEET; THENCE NORTH 70°30'33" WEST, A DISTANCE OF 56.73 FEET TO A POINT; THENCE NORTH 61°15'44" WEST, A DISTANCE OF 43.50 FEET TO A POINT; THENCE NORTH 57°17'55" WEST, A DISTANCE OF 51.76 FEET TO THE POINT OF CURVATURE OF A CURVE BEING CONCAVE SOUTHERLY; THENCE ALONG AND AROUND THE ARC OF A CURVE TO THE LEFT, HAVING A RADIUS OF 25.00 FEET, AN ARC LENGTH OF 5.52 FEET TO THE POINT OF TANGENCY, SAID ARC BEING SUBTENDED BY A CHORD BEARING AND DISTANCE OF NORTH 63°37'29" WEST, 5.51 FEET; THENCE NORTH 69°57'02" WEST, A DISTANCE OF 54.94 FEET TO A POINT; THENCE NORTH 51°23'17" WEST, A DISTANCE OF 35.35 FEET TO A POINT; THENCE NORTH 56°05'38" WEST, A DISTANCE OF 73.67 FEET TO A POINT; THENCE NORTH 69°49'18" WEST, A DISTANCE OF 71.43 FEET TO THE POINT OF CURVATURE OF A CURVE BEING CONCAVE SOUTHERLY; THENCE ALONG AND AROUND THE ARC OF A CURVE TO THE LEFT, HAVING A RADIUS OF 25.00 FEET, AN ARC LENGTH OF 7.44 FEET TO THE POINT OF TANGENCY, SAID ARC BEING SUBTENDED BY A CHORD BEARING AND DISTANCE OF NORTH 78°20'43" WEST, 7.41 FEET; THENCE NORTH 86°52'09" WEST, A DISTANCE OF 46.93 FEET TO A POINT; THENCE NORTH 73°59'32" WEST, A DISTANCE OF 25.51 FEET TO A POINT; THENCE NORTH 39°35'58" WEST, A DISTANCE OF 37.19 FEET TO THE POINT OF CURVATURE OF A CURVE BEING CONCAVE SOUTHERLY; THENCE ALONG AND AROUND THE ARC OF A CURVE TO THE LEFT, HAVING A RADIUS OF 25.00 FEET, AN ARC LENGTH OF 23.92 FEET TO THE POINT OF TANGENCY, SAID ARC BEING SUBTENDED BY A CHORD BEARING AND DISTANCE OF NORTH 67°00'52" WEST, 23.02 FEET; THENCE SOUTH 85°34'15" WEST, A DISTANCE OF 46.59 FEET TO A POINT; THENCE NORTH 72°22'36" WEST, A DISTANCE OF 26.69 FEET TO A POINT; THENCE NORTH 79°43'00" WEST, A DISTANCE OF 34.98 FEET TO A POINT; THENCE NORTH 25°15'22" WEST, A DISTANCE OF 57.81 FEET TO A POINT; THENCE NORTH 03°21'05" EAST, A DISTANCE OF 30.31 FEET TO A POINT; THENCE NORTH 57°10'39" EAST, A DISTANCE OF 36.95 FEET TO THE POINT OF CURVATURE OF A CURVE BEING CONCAVE NORTHWESTERLY; THENCE ALONG AND AROUND THE ARC OF A CURVE TO THE LEFT, HAVING A RADIUS OF 25.00 FEET, AN ARC LENGTH OF 10.01 FEET TO THE POINT OF TANGENCY, SAID ARC BEING SUBTENDED BY A CHORD BEARING AND DISTANCE OF NORTH 45°42'12" EAST, 9.95 FEET; THENCE NORTH 34°13'44" EAST, A DISTANCE OF 41.63 FEET TO A POINT; THENCE NORTH 64°49'05" EAST, A DISTANCE OF 54.86 FEET TO THE POINT OF CURVATURE OF A CURVE BEING CONCAVE NORTHWESTERLY; THENCE ALONG AND AROUND THE ARC OF A CURVE TO THE LEFT, HAVING A RADIUS OF 25.00 FEET, AN ARC LENGTH OF 6.12 FEET TO THE POINT OF TANGENCY, SAID ARC BEING SUBTENDED BY A CHORD BEARING AND DISTANCE OF NORTH 57°48'27" EAST, 6.10 FEET; THENCE NORTH 50°47'49" EAST, A DISTANCE OF 50.46 FEET TO A POINT; THENCE SOUTH 85°33'49" EAST, A DISTANCE OF 39.83 FEET TO THE POINT OF CURVATURE OF A CURVE BEING CONCAVE NORTHWESTERLY; THENCE ALONG AND AROUND THE ARC OF A CURVE TO THE LEFT, HAVING A RADIUS OF 25.00 FEET, AN ARC LENGTH OF 39.31 FEET TO A POINT ON SAID CURVE, SAID ARC BEING SUBTENDED BY A CHORD BEARING AND DISTANCE OF NORTH 49°23'39" EAST, 35.38 FEET; THENCE SOUTH 76°16'12" EAST, A DISTANCE OF 305.34 FEET TO A POINT; THENCE SOUTH 38°44'01" EAST, A DISTANCE OF 301.35 FEET TO THE POINT OF BEGINNING.

THE ABOVE DESCRIBED LANDS CONTAIN 175,455 SQUARE FEET, OR 4.00 ACRES, MORE OR LESS, IN AREA.

TOGETHER WITH,
A VARIABLE WIDTH EASEMENT FOR ACCESS, UTILITIES AND DRAINAGE, SAID EASEMENT BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:
COMMENCE AT THE MOST NORTHERLY CORNER OF THOSE LANDS CURRENTLY OWNED BY ST. JOHNS COUNTY SCHOOL BOARD, REAL ESTATE NUMBER 00710-0030, SAID LANDS ALSO KNOWN AS BARTRAM TRAIL HIGH SCHOOL; THENCE SOUTH 55°23'05" WEST, A DISTANCE OF 1788.14 FEET TO A POINT; THENCE SOUTH 27°48'19" WEST, A DISTANCE OF 98.72 FEET TO THE POINT OF BEGINNING; THENCE SOUTH 54°49'39" EAST, A DISTANCE OF 326.48 FEET TO A POINT; THENCE SOUTH 67°30'30" EAST, A DISTANCE OF 133.25 FEET TO A POINT; THENCE SOUTH 35°10'21" WEST, A DISTANCE OF 93.48 FEET TO A POINT; THENCE NORTH 54°17'15" WEST, A DISTANCE OF 448.74 FEET TO A POINT; THENCE NORTH 27°48'19" EAST, A DISTANCE OF 60.50 FEET TO THE POINT OF BEGINNING.

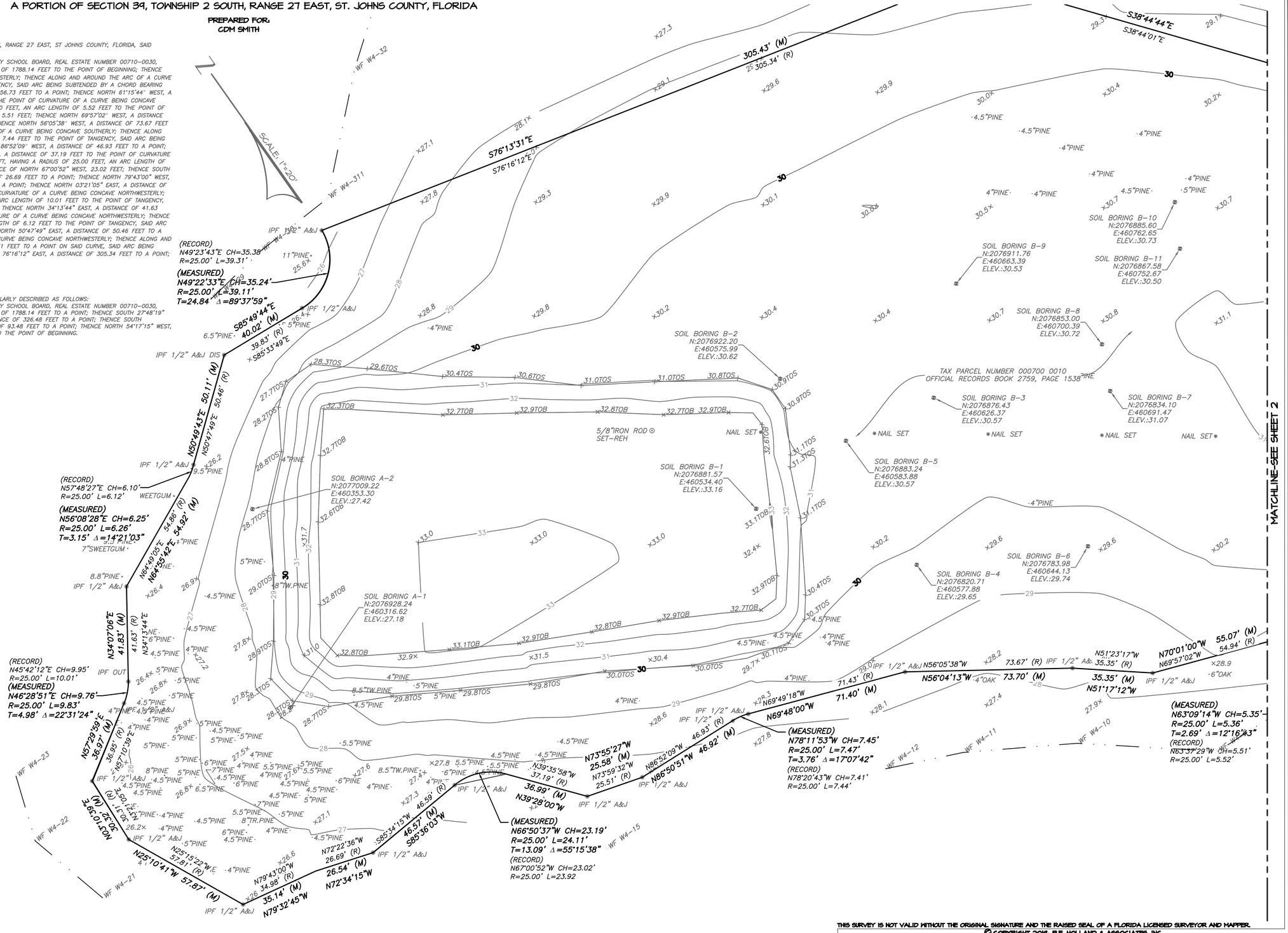
SAID EASEMENT CONTAINS 30,006 SQUARE FEET OR 0.69 ACRES, MORE OR LESS, IN AREA.

SURVEYOR'S NOTES:

1) THE UNDERSIGNED SURVEYOR HAS NOT BEEN PROVIDED A CURRENT TITLE OPINION OF MATTERS AFFECTING THE TITLE TO OR BOUNDARY OF THE SUBJECT PROPERTY. IT IS POSSIBLE THAT THERE ARE DEEDS OF RECORD, UNRECORDED DEEDS, EASEMENTS OR OTHER INSTRUMENTS WHICH COULD AFFECT THE BOUNDARIES.
2) THIS DOES NOT PURPORT TO BE A BOUNDARY SURVEY.
3) OWNERSHIP OF FENCES, IF ANY, IS UNDETERMINED.
4) THIS IS A SURFACE LOCATION SURVEY ONLY; UNDERGROUND UTILITIES WERE IDENTIFIED BY UTILITY MARKINGS PERFORMED BY OTHERS AND ABOVE GROUND APPURTENANCES ONLY.
5) THIS IS A COPYRIGHTED DOCUMENT; NO PORTION OF IT MAY BE REPRODUCED, WHOLLY OR IN PART, WITHOUT THE EXPRESSED WRITTEN PERMISSION OF R.E. HOLLAND & ASSOCIATES, INC.
6) THE STREET ADDRESS, IF SHOWN, IS AS FIELD POSTED ON DATE OF SURVEY.
7) THIS SURVEY MAP DOES NOT REFLECT OR DETERMINE OWNERSHIP.
8) THE RELATIVE LINEAR DISTANCE ACCURACY FOR THIS SURVEY EXCEEDS 1:10,000.
9) ALL MEASUREMENTS ARE IN U.S. STANDARD FEET AND WERE MADE WITH A THEODOLITE AND ELECTRONIC DISTANCE MEASURING DEVICE AND/OR STEEL TAPE.
10) THE FIELD WORK WAS COMPLETED ON 11-6-2019.
11) TREES NOT LOCATED EXCEPT AS SHOWN HEREON.
12) MEASUREMENTS SHOWN ON TREES REFER TO DIAMETER DIMENSIONS AT BREAST HEIGHT LEVEL. (DBH)
13) REFERENCE BENCHMARK: FOR THIS PROJECT IS AN X-CUT ON BACK OF CURB AND GUTTER, 30 FEET WEST FROM THE CENTERLINE OF SOUTHBOUND LANES OF LONGLEAF PINE PARKWAY, 10.6 FEET NORTH OF A CURB INLET AND GRATE, 0.2 MILES SOUTH FROM THE ENTRANCE TO BARTRAM HIGH SCHOOL. ST. JOHNS COUNTY SURVEY BENCHMARK, POINT ID 1334, ELEVATION 32.62 NAVD 1988.
14) COORDINATES SHOWN HEREON ARE IN US SURVEY FEET AND ARE REFERENCED TO THE FLORIDA STATE PLANE COORDINATE SYSTEM, EAST ZONE, NORTH AMERICAN DATUM OF 1983, 2011 ADJUSTMENT, AS DERIVED FROM TRIMBLE VIRTUAL REFERENCE STATION NETWORK.
15) BEARINGS SHOWN HEREON WERE CALCULATED FROM FOUND MONUMENTATION AND ARE REFERENCED TO THE FLORIDA STATE PLANE COORDINATE SYSTEM, EAST ZONE, NORTH AMERICAN DATUM OF 1983, 2011 ADJUSTMENT, AS DERIVED FROM THE TRIMBLE VIRTUAL REFERENCE STATION NETWORK.
16) ALL WETLAND FLAGGING SHOWN HEREON WAS PERFORMED BY OTHERS. WETLAND FLAG LOCATIONS WERE DETERMINED BY FIELD LOCATION ON DATE OF FIELD SURVEY. WETLAND JURISDICTION LINES WERE DETERMINED BASED ON FIELD LOCATION OF WETLAND FLAGGING.

LEGEND

E	=	ELECTRIC MANHOLE	CP	=	CONC. POST
D	=	DRAINAGE MANHOLE	WP	=	WOOD POST
S	=	SANITARY MANHOLE	MSP	=	METAL SIGN POST
-o-	=	SIGN	GA	=	GUY ANCHOR
⊿	=	GUY ANCHOR	WVV	=	WATER VALVE VAULT
M	=	WATER VALVE	WV	=	WATER VALVE
W	=	WELL	GV	=	GATE VALVE
SS	=	UNDERGROUND SANITARY	SV	=	SPRINKLER VALVE
W	=	UNDERGROUND WATER	FMV	=	FORCE MAIN VALVE
UGT	=	UNDERGROUND TELEPHONE	RMV	=	RECLAIM WATER VALVE
OHU	=	OVERHEAD UTILITY	WM	=	WATER METER
UGE	=	UNDERGROUND ELECTRIC	HB	=	HOSE BIB
UNK	=	UNDERGROUND UNKNOWN	JWM	=	JACKSONVILLE WATER WORKS
TH	=	TEST HOLE	WI	=	UNDERGROUND WATERMAIN
TBM	=	TEMPORARY BENCHMARK	CONC	=	CONCRETE
RCP	=	REINFORCED CONC. PIPE	NAVD	=	NORTH AMERICAN VERTICAL DATUM
CI	=	CAST IRON	FFE	=	FINISHED FLOOR ELEVATION
PVC	=	POLYVINYL CHLORIDE	PG.	=	PAGE
VCP	=	VITRIFIED CLAY PIPE	IPF	=	IRON PIPE FOUND
TCP	=	TERRA COTTA PIPE	ID.	=	IDENTIFICATION
ELEV	=	ELEVATION	ORB	=	OFFICIAL RECORDS BOOK
INV	=	INVERT	(P)	=	PLAT
CLF	=	CHAIN LINK FENCE	(C)	=	CALCULATED DISTANCE
RE	=	REAL ESTATE	FO	=	UNDERGROUND FIBER OPTIC
CPP	=	CONC. POWER POLE	SD	=	UNDERGROUND STORM DRAIN
WPP	=	WOOD POWER POLE	ELEC.	=	ELECTRIC
WSP	=	WOOD GUY POLE	VERT.	=	VERTICAL
BOC	=	BACK OF CURB	DN	=	UTILITY PIPING DOWN
FL	=	FLOWLINE	MC	=	METAL COVER
EA	=	EDGE OF ASPHALT	CLS	=	CENTERLINE OF SWALE
TR.	=	TRIPLE TREE TRUNK	TOB	=	TOP OF BANK
TW.	=	TWIN TREE TRUNK	TOS	=	TOE OF SLOPE
CL.	=	TREE TRUNK CLUSTER	BLDG	=	BUILDING
S/W	=	SIDEWALK	NO.	=	NUMBER
W	=	WITH	EL.	=	ELEVATION
NI	=	INVALID POINT ELEVATION	DIA.	=	DIAMETER
MISC.	=	MISCELLANEOUS	REH	=	ROBERT E. HOLLAND
ORN.	=	ORNAMENTAL	AB	=	AERATION BASIN
ECB	=	ELECTRIC CONTROL BOX	CL-CL4	=	CLARIFIERS
ESM	=	ELECTRIC SERVICE METER	FSB	=	FLOW SPLITTER BOX
CLP	=	CONCRETE LIGHT POLE	HW	=	HEADWORKS
FLP	=	FIBERGLASS LIGHT POLE	PA	=	POST AERATION
MLP	=	METAL LIGHT POLE	UV	=	ULTRAVIOLET
MP	=	METAL POST	UVS	=	ULTRAVIOLET SPLITTER



GRAPHIC SCALE
0 10 20 40 60

THIS SURVEY IS NOT VALID WITHOUT THE ORIGINAL SIGNATURE AND THE RAISED SEAL OF A FLORIDA LICENSED SURVEYOR AND MAPPER.

Professional Surveyors & Mappers
R. E. Holland & Associates, Inc.
9710 BAYMEADOWS ROAD, SUITE 125 PH# (904)260-6500
JACKSONVILLE, FLORIDA 32256 FAX (904)646-8272
FLORIDA CERTIFICATE OF AUTHORIZATION NO. LB 6755

ROBERT E. HOLLAND
FL REGISTRATION NO. 4242
THOMAS J. SMITH
PSM NO. 6500

DATE SIGNED: 7/28/2020

DATE: 9-23-2019
WORK ORDER NO.: 267-19
PROJECT NUMBER: 13419
SHEET 1 OF 7
DRAWING NO.: 13419

PARTY CHIEF: MH COMPUTED BY: DTS CADD TECH: DTS/ABP CADD FILE: 13419 RIVERTOWN MTP DC FILE NO.: 13419 F.B.: x PG.: x

MAP SHOWING A LIMITED TOPOGRAPHICAL SURVEY OF

A PORTION OF SECTION 39, TOWNSHIP 2 SOUTH, RANGE 27 EAST, ST. JOHNS COUNTY, FLORIDA

PREPARED FOR:
GDM SMITH

SCALE: 1"=20'

GRAPHIC SCALE
0 10 20 40 60

MATCHLINE-SEE SHEET 1

MATCHLINE-SEE SHEET 3

IPF 1/2" A&J

S38°44'44"E
S38°44'01"E
305.43' (M)
305.34' (R)

301.37' (M)
301.35' (R)

POINT OF BEGINNING
ORB 2759, PG 1538
"JEA RE-USE WATER TRACT"

POINT OF BEGINNING
ORB 2759, PG 1538
"ACCESS, UTILITY & DRAINAGE EASEMENT"

194.04' (M)
194.04' (R)
98.72' (R)

S54°49'39"E

S27°49'12"W
S27°48'19"W
60.50' (R)

SOIL BORING B-1
N:2076881.57
E:460534.40
ELEV.:33.16

SOIL BORING B-2
N:2076922.20
E:460575.99
ELEV.:30.62

SOIL BORING B-3
N:2076876.43
E:460626.37
ELEV.:30.57

SOIL BORING B-4
N:2076820.71
E:460577.88
ELEV.:29.65

SOIL BORING B-5
N:2076883.24
E:460583.88
ELEV.:30.57

SOIL BORING B-6
N:2076783.98
E:460644.13
ELEV.:29.74

SOIL BORING B-7
N:2076834.10
E:460691.47
ELEV.:31.07

SOIL BORING B-8
N:2076853.00
E:460700.39
ELEV.:30.72

SOIL BORING B-9
N:2076911.76
E:460663.39
ELEV.:30.53

SOIL BORING B-10
N:2076885.60
E:460762.65
ELEV.:30.73

SOIL BORING B-11
N:2076867.58
E:460752.67
ELEV.:30.50

TAX PARCEL NUMBER 000700 0010
OFFICIAL RECORDS BOOK 2759, PAGE 1538

BM SET X-CUT IN SW CORNER
OF TRANSFORMER PAD
ELEV.:33.20 NAVD 88

3.8' X 4.3' CONC.
TRANSFORMER PAD

TEST HOLE TH-10
N:2076668.45
E:460896.83
ELEV.:32.36

TEST HOLE TH-12
N:2076662.11
E:460929.70
ELEV.:30.62

TEST HOLE TH-11
N:2076656.12
E:460928.04
ELEV.:31.69

WATER VALVE
COVER ELEV.: 30.79
NUT ELEV.: 28.46

WATER VALVE
COVER ELEV.: 31.05
NUT ELEV.: 29.05

20" UNDERGROUND
WATER LINE

RECLAIM WATER VALVE
COVER ELEV.: 32.23
NUT ELEV.: 30.94

GRAVEL
ROAD

GATE

N69°49'18"W
N69°48'00"W
71.40' (M)
71.43' (R)

N56°05'38"W
N56°04'13"W
73.70' (M)
73.67' (R)

N51°23'17"W
N51°17'12"W
35.35' (M)
35.35' (R)

N70°01'00"W
N69°57'02"W
55.07' (M)
54.94' (R)

N57°21'01"W 51.92' (M)
N57°17'55"W 51.76' (R)

N61°15'44"W 43.50' (R)
N61°14'51"W 43.50' (M)

N70°30'33"W
N70°25'47"W
56.53' (M)
56.73' (R)

N86°52'09"W
N86°50'51"W
46.92' (M)
46.93' (R)

(MEASURED)
N78°11'53"W CH=7.45'
R=25.00' L=7.47'
T=3.76' Δ=17°07'42"
(RECORD)
N78°20'43"W CH=7.41'
R=25.00' L=7.44'

(MEASURED)
N63°09'14"W CH=5.35'
R=25.00' L=5.36'
T=2.69' Δ=12°16'33"
(RECORD)
N63°37'29"W CH=5.51'
R=25.00' L=5.52'

(MEASURED)
N39°09'47"W CH=26.40'
R=25.00' L=27.81'
T=15.54' Δ=63°44'45"
(RECORD)
N38°49'30"W CH=26.26'
R=25.00' L=27.65'

NAIL SET

IPF 1/2" A&J

IPF 1/2" A&J

Professional Surveyors & Mappers
R. E. Holland
& Associates, Inc.
9710 BAYMEADOWS ROAD, SUITE 125 PH# (904)260-6500
JACKSONVILLE, FLORIDA 32256 FAX (904)448-5272
FLORIDA CERTIFICATE OF AUTHORIZATION NO. LB 6758

ROBERT E. HOLLAND
FL REGISTRATION NO. 4242

THOMAS J. SMITH
PSM NO. 6500

DATE SIGNED: 7/28/2020

DATE: 9-25-2019
WORK ORDER NO.: 267-19
PROJECT NUMBER: 13419
SHEET 2 OF 7
DRAWING NO.: 13419

PARTY CHIEF: MH COMPUTED BY: DTS CADD TECH: DTS/ABP CADD FILE: 13419 RIVERTOWN MTP DC FILE NO.: 13419 F.B.: x PG.: x

MAP SHOWING A LIMITED TOPOGRAPHICAL SURVEY OF

A PORTION OF SECTION 39, TOWNSHIP 2 SOUTH, RANGE 27 EAST, ST. JOHNS COUNTY, FLORIDA

PREPARED FOR:
GDM SMITH

SCALE: 1"=20'

GRAPHIC SCALE
0 10 20 40 60

MATCHLINE-SEE SHEET 2

MATCHLINE-SEE SHEET 4

TEST HOLE TH-10
TEST HOLE TH-12
TEST HOLE TH-11
N:2076656.12
E:460928.04
ELEV.:31.69

TEST HOLE TH-9
N:2076458.22
E:461279.10
ELEV.:33.47

TEST HOLE TH-8
N:2076452.48
E:461274.63
ELEV.:33.44

TEST HOLE TH-6
N:2076426.90
E:461253.33
ELEV.:32.98

TEST HOLE TH-7
N:2076427.83
E:461251.78
ELEV.:33.12

TEST HOLE TH-4
N:2076412.68
E:461220.00
ELEV.:31.68

TEST HOLE TH-5
N:2076406.23
E:461215.48
ELEV.:31.61

TEST HOLE TH-1
N:2076378.90
E:461238.43
ELEV.:33.63

TEST HOLE TH-3
N:2076420.52
E:461262.01
ELEV.:33.03

TEST HOLE TH-2
N:2076407.61
E:461245.94
ELEV.:33.14

SOIL BORING B-1
N:2076439.38
E:461245.85
ELEV.:33.48

SOIL BORING B-5
N:2076355.35
E:461380.57
ELEV.:29.22

BM SET NAIL & DISK
ELEV.:33.11 NAVD 88

S54°49'39"E 326.48' (R)
S67°30'30"E 133.25' (R)
N54°17'15"W 448.74' (R)

20" UNDERGROUND WATER LINE
UNDERGROUND WATER LINE
20" RECLAIM WATER MAIN
VARIABLE WIDTH EASEMENT FOR ACCESS, UTILITIES AND DRAINAGE
GRAVEL ROAD
GATE
UNDERGROUND VAULT (CENTURY)
UNDERGROUND ELECTRIC LINE
UNDERGROUND FIBER OPTIC
UNDERGROUND FIBER OPTIC VAULT (UNITED)
UNDERGROUND COMCAST VAULT
UNDERGROUND AT&T VAULT
SANITARY ARV MANHOLE
N. RIM ELEV.: 33.19
7.3' X 7.3' CONC. TRANSFORMER PAD
(2) IRRIGATION CONTROL VALVE
FORCE MAIN VALVE
COVER ELEV.: 33.53
NUT ELEV.: 33.03
UNDERGROUND FIBER OPTIC VAULT (TOWER CLOUD)
2" FIRBER OPTIC CONDUIT
16" FORCEMAIN LINE
FIBER OPTIC MARKER POST
(3) FIBER OPTIC MARKER POST
RECLAIM WATER VALVE
COVER ELEV.: 33.39
NUT ELEV.: 30.83
RECLAIM WATER VALVE
COVER ELEV.: 33.42
NUT ELEV.: 31.59
RECLAIM WATER VALVE
COVER ELEV.: 33.44
NUT ELEV.: 31.50
WATER VALVE
COVER ELEV.: 33.86
NUT ELEV.: 31.96
WATER VALVE
COVER ELEV.: 33.90
NUT ELEV.: 32.09
WATER VALVE
COVER ELEV.: 33.82
NUT ELEV.: 33.52
UNDERGROUND ELECTRIC LINE
UNDERGROUND TELECOM LINE
UNDERGROUND WATER MAIN
MTL POST GAS LINE MARKER
NAIL & DISK FOUND
NAIL & DISK SET-REH
TOP GRATE ELEV.:
18"RCP SE INV.:
BOTTOM ELEV.:
MES 36"RCP W INV.:28.75
TOP GRATE ELEV.:33.00
FULL OF WATER
SIZE/TYPE UNK NE INV.:25.01
SIZE/TYPE UNK SW INV.:25.01
BOTTOM ELEV.:24.97
UNDERGROUND TELECOM LINE
SV@SV
LONGLEAF PINE PARKWAY
(COUNTY ROAD 244 130' RIGHT OF WAY)

THIS SURVEY IS NOT VALID WITHOUT THE ORIGINAL SIGNATURE AND THE RAISED SEAL OF A FLORIDA LICENSED SURVEYOR AND MAPPER.

Professional Surveyors & Mappers
R. E. Holland & Associates, Inc.
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FLORIDA CERTIFICATE OF AUTHORIZATION NO. LB 6755

ROBERT E. HOLLAND
FL REGISTRATION NO. 4242
THOMAS J. SMITH
PSM NO. 6500
DATE SIGNED: 7/28/2020

DATE: 9-23-2019
WORK ORDER NO.: 267-19
PROJECT NUMBER: 15419
SHEET 3 OF 7
DRAWING NO.: 15419

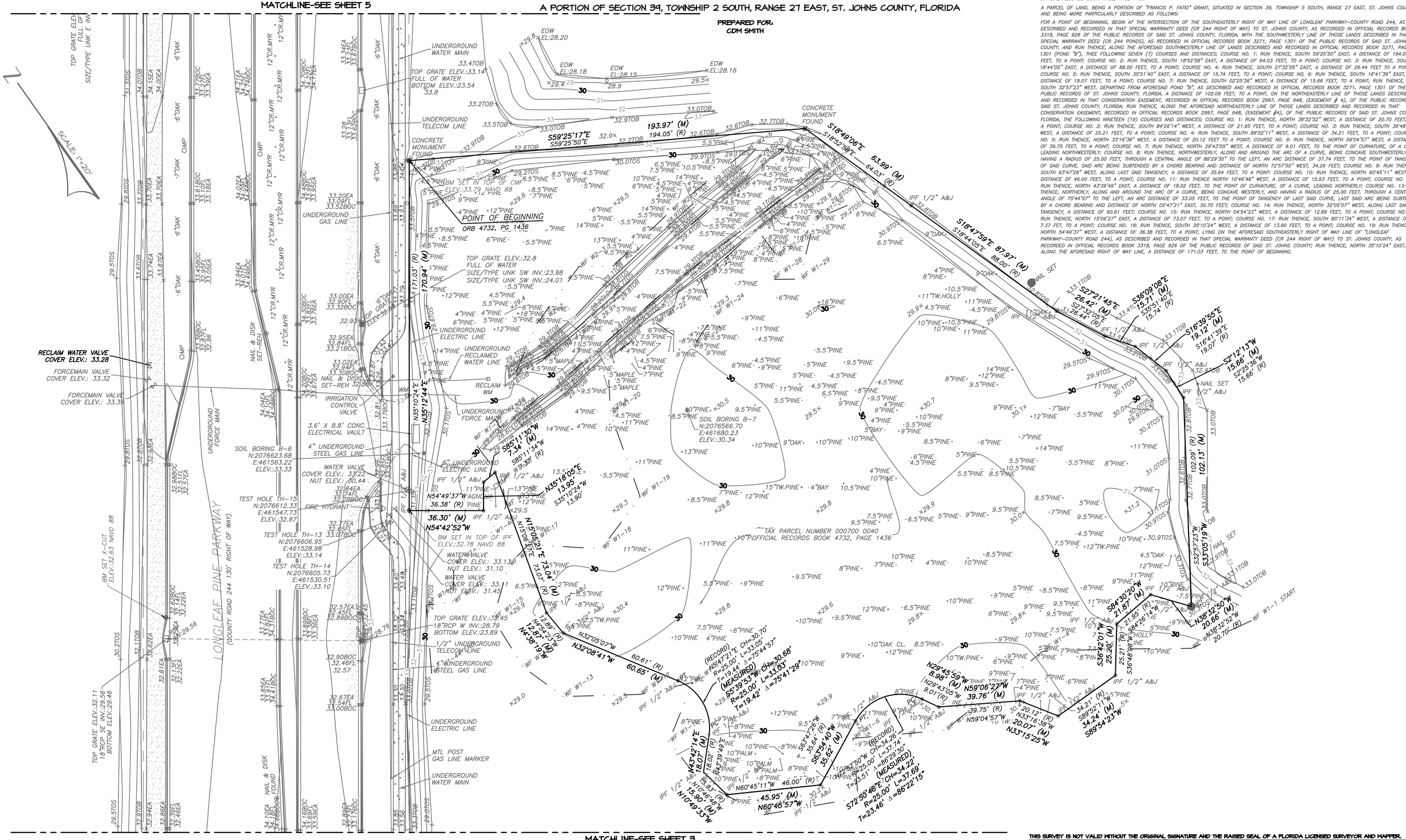
PARTY CHIEF: MH COMPUTED BY: DTS CADD TECH: DTS/ABP CADD FILE: 15419 RIVERTOWN MTP DG FILE NO.: 15419 F.B.: x PG.: x

MAP SHOWING A LIMITED TOPOGRAPHICAL SURVEY OF

A PORTION OF SECTION 39, TOWNSHIP 2 SOUTH, RANGE 27 EAST, ST. JOHNS COUNTY, FLORIDA

PREPARED FOR:
CDM SMITH

MATCHLINE-SEE SHEET 5



MATCHLINE-SEE SHEET 3

GRAPHIC SCALE
0 10 20 40 60

OFFICIAL RECORDS BOOK 4732, PAGE 1436

A PARCEL OF LAND, BEING A PORTION OF "FRANCIS P. FATIO" GRANT, SITUATED IN SECTION 39, TOWNSHIP 5 SOUTH, RANGE 27 EAST, ST. JOHNS COUNTY, AND BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

FOR A POINT OF BEGINNING, BEGIN AT THE INTERSECTION OF THE SOUTHEASTERLY RIGHT OF WAY LINE OF LONGLEAF PARKWAY–COUNTY ROAD 244, AS DESCRIBED AND RECORDED IN THAT SPECIAL WARRANTY DEED (CR 244 RIGHT OF WAY) TO ST. JOHNS COUNTY, AS RECORDED IN OFFICIAL RECORDS BOOK 3318, PAGE 926 OF THE PUBLIC RECORDS OF SAID ST. JOHNS COUNTY, FLORIDA, WITH THE SOUTHWESTERLY LINE OF THOSE LANDS DESCRIBED IN THAT SPECIAL WARRANTY DEED (CR 244 PONDS), AS RECORDED IN OFFICIAL RECORDS BOOK 3271, PAGE 1301 OF THE PUBLIC RECORDS OF SAID ST. JOHNS COUNTY AND RUN THENCE, ALONG THE AFORESAID SOUTHWESTERLY LINE OF LANDS DESCRIBED AND RECORDED IN OFFICIAL RECORDS BOOK 3271, PAGE 1301 (POND "B"), THEE FOLLOWING SEVEN (7) COURSES AND DISTANCES; COURSE NO. 1: RUN THENCE, SOUTH 59°25'50" EAST, A DISTANCE OF 194.05 FEET, TO A POINT; COURSE NO. 2: RUN THENCE, SOUTH 18°52'58" EAST, A DISTANCE OF 64.03 FEET, TO A POINT; COURSE NO. 3: RUN THENCE, SOUTH 18°44'05" EAST, A DISTANCE OF 88.00 FEET, TO A POINT; COURSE NO. 4: RUN THENCE, SOUTH 27°32'05" EAST, A DISTANCE OF 26.44 FEET TO A POINT; COURSE NO. 5: RUN THENCE, SOUTH 35°51'40" EAST, A DISTANCE OF 15.74 FEET, TO A POINT; COURSE NO. 6: RUN THENCE, SOUTH 16°41'39" EAST, A DISTANCE OF 19.07 FEET, TO A POINT; COURSE NO. 7: RUN THENCE, SOUTH 02°25'36" WEST, A DISTANCE OF 15.66 FEET, TO A POINT; RUN THENCE, SOUTH 32°57'23" WEST, DEPARTING FROM AFORESAID POND "B", AS DESCRIBED AND RECORDED IN OFFICIAL RECORDS BOOK 3271, PAGE 1301 OF THE PUBLIC RECORDS OF ST. JOHNS COUNTY, FLORIDA, A DISTANCE OF 102.09 FEET, TO A POINT, ON THE NORTHEASTERLY LINE OF THOSE LANDS DESCRIBED AND RECORDED IN THAT CONSERVATION EASEMENT, RECORDED IN OFFICIAL RECORDS BOOK 2997, PAGE 948, (EASEMENT # 4), OF THE PUBLIC RECORDS OF SAID ST. JOHNS COUNTY, FLORIDA; RUN THENCE, ALONG THE AFORESAID NORTHEASTERLY LINE OF THOSE LANDS DESCRIBED AND RECORDED IN THAT CONSERVATION EASEMENT, RECORDED IN OFFICIAL RECORDS BOOK 2997, PAGE 948, (EASEMENT # 4), OF THE PUBLIC RECORDS OF SAID ST. JOHNS COUNTY, FLORIDA, THE FOLLOWING NINETEEN (19) COURSES AND DISTANCES; COURSE NO. 1: RUN THENCE, NORTH 38°32'52" WEST, A DISTANCE OF 20.70 FEET, TO A POINT; COURSE NO. 2: RUN THENCE, SOUTH 84°26'14" WEST, A DISTANCE OF 21.95 FEET, TO A POINT; COURSE NO. 3: RUN THENCE, SOUTH 36°48'08" WEST, A DISTANCE OF 25.21 FEET, TO A POINT; COURSE NO. 4: RUN THENCE, SOUTH 89°52'11" WEST, A DISTANCE OF 34.21 FEET, TO A POINT; COURSE NO. 5: RUN THENCE, NORTH 33°16'38" WEST, A DISTANCE OF 20.12 FEET TO A POINT; COURSE NO. 6: RUN THENCE, NORTH 59°04'57" WEST, A DISTANCE OF 39.75 FEET, TO A POINT; COURSE NO. 7: RUN THENCE, NORTH 29°43'05" WEST, A DISTANCE OF 9.01 FEET, TO THE POINT OF CURVATURE, OF A CURVE, LEADING NORTHWESTERLY; COURSE NO. 8: RUN THENCE, NORTHWESTERLY, ALONG AND AROUND THE ARC OF A CURVE, BEING CONCAVE SOUTHWESTERLY, AND HAVING A RADIUS OF 25.00 FEET, THROUGH A CENTRAL ANGLE OF 86°29'30" TO THE LEFT, AN ARC DISTANCE OF 37.74 FEET, TO THE POINT OF TANGENCY OF SAID CURVE, SAID ARC BEING SUBTENDED BY A CHORD BEARING AND DISTANCE OF NORTH 72°57'50" WEST, 34.26 FEET; COURSE NO. 9: RUN THENCE, SOUTH 63°47'26" WEST, ALONG LAST SAID TANGENCY, A DISTANCE OF 35.64 FEET, TO A POINT: COURSE NO. 10: RUN THENCE, NORTH 60°45'11" WEST, A DISTANCE OF 46.00 FEET, TO A POINT; COURSE NO. 11: RUN THENCE NORTH 10°46'48" WEST, A DISTANCE OF 15.93 FEET, TO A POINT; COURSE NO. 12: RUN THENCE, NORTH 43°39'49" EAST, A DISTANCE OF 18.02 FEET, TO THE POINT OF CURVATURE, OF A CURVE, LEADING NORTHERLY; COURSE NO. 13: RUN THENCE, NORTHERLY, ALONG AND AROUND THE ARC OF A CURVE, BEING CONCAVE WESTERLY, AND HAVING A RADIUS OF 25.00 FEET, THROUGH A CENTRAL ANGLE OF 75°44'57" TO THE LEFT, AN ARC DISTANCE OF 33.05 FEET, TO THE POINT OF TANGENCY OF LAST SAID CURVE, LAST SAID ARC BEING SUBTENDED BY A CHORD BEARING AND DISTANCE OF NORTH 05°47'21" EAST, 30.70 FEET; COURSE NO. 14: RUN THENCE, NORTH 32°05'07" WEST, ALONG LAST SAID TANGENCY, A DISTANCE OF 60.61 FEET; COURSE NO. 15: RUN THENCE, NORTH 04°54'23" WEST, A DISTANCE OF 12.89 FEET, TO A POINT; COURSE NO. 16: RUN THENCE, NORTH 15°06'27" EAST, A DISTANCE OF 73.07 FEET, TO A POINT; COURSE NO. 17: RUN THENCE, SOUTH 85°11'34" WEST, A DISTANCE OF 7.37 FEET, TO A POINT; COURSE NO. 18: RUN THENCE, SOUTH 35°10'24" WEST, A DISTANCE OF 13.90 FEET, TO A POINT; COURSE NO. 19: RUN THENCE, NORTH 54°49'37" WEST, A DISTANCE OF 36.38 FEET, TO A POINT, LYING ON THE AFORESAID SOUTHEASTERLY RIGHT OF WAY LINE OF "LONGLEAF PARKWAY–COUNTY ROAD 244), AS DESCRIBED AND RECORDED IN THAT SPECIAL WARRANTY DEED (CR 244 RIGHT OF WAY) TO ST. JOHNS COUNTY, AS RECORDED IN OFFICIAL RECORDS BOOK 3318, PAGE 926 OF THE PUBLIC RECORDS OF SAID ST. JOHNS COUNTY; RUN THENCE, NORTH 35°10'24" EAST, ALONG THE AFORESAID RIGHT OF WAY LINE, A DISTANCE OF 171.03 FEET, TO THE POINT OF BEGINNING.

Professional Surveyors & Mappers
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FLORIDA CERTIFICATE OF AUTHORIZATION NO. LB 6735

ROBERT E. HOLLAND
FL REGISTRATION NO. 4242
THOMAS J. SMITH
PSM NO. 6500
DATE SIGNED: 7/28/2020

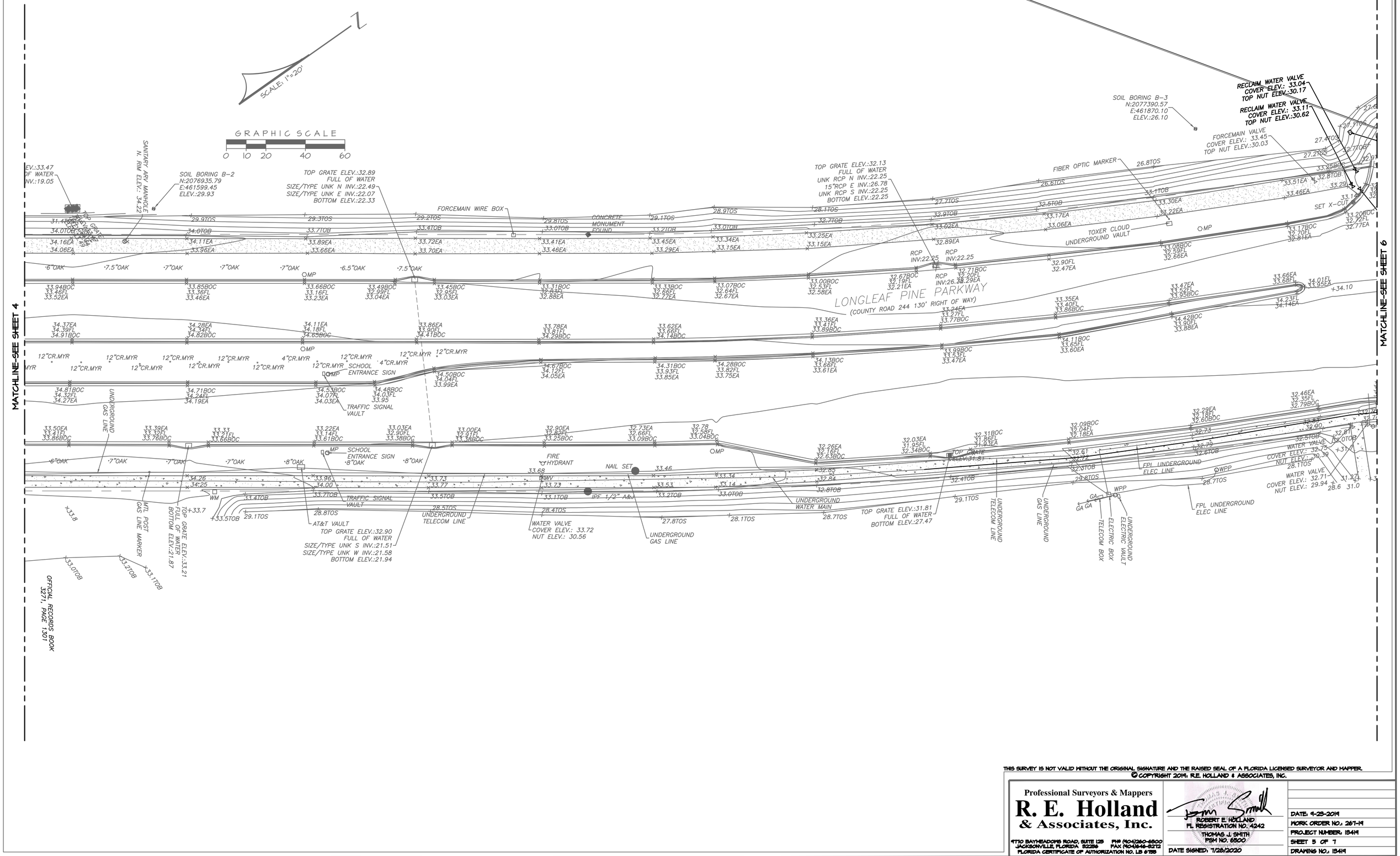
DATE:	9-23-2019
WORK ORDER NO.:	267-19
PROJECT NUMBER:	15419
SHEET	4 OF 7
DRAWING NO.:	15419

PARTY CHIEF: MH COMPUTED BY: DTS CADD TECH: DTS/ABP CADD FILE: 15419 RIVERTOWN MTP DC FILE NO.: 15419 F.B.: x PG.: x

MAP SHOWING A LIMITED TOPOGRAPHICAL SURVEY OF

A PORTION OF SECTION 39, TOWNSHIP 2 SOUTH, RANGE 27 EAST, ST. JOHNS COUNTY, FLORIDA

PREPARED FOR:
GDM SMITH



Professional Surveyors & Mappers
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JACKSONVILLE, FLORIDA 32256 FAX (904)646-5212
FLORIDA CERTIFICATE OF AUTHORIZATION NO. LB 6788

ROBERT E. HOLLAND
FL REGISTRATION NO. 4242

THOMAS J. SMITH
PSM NO. 6500

DATE SIGNED: 7/28/2020

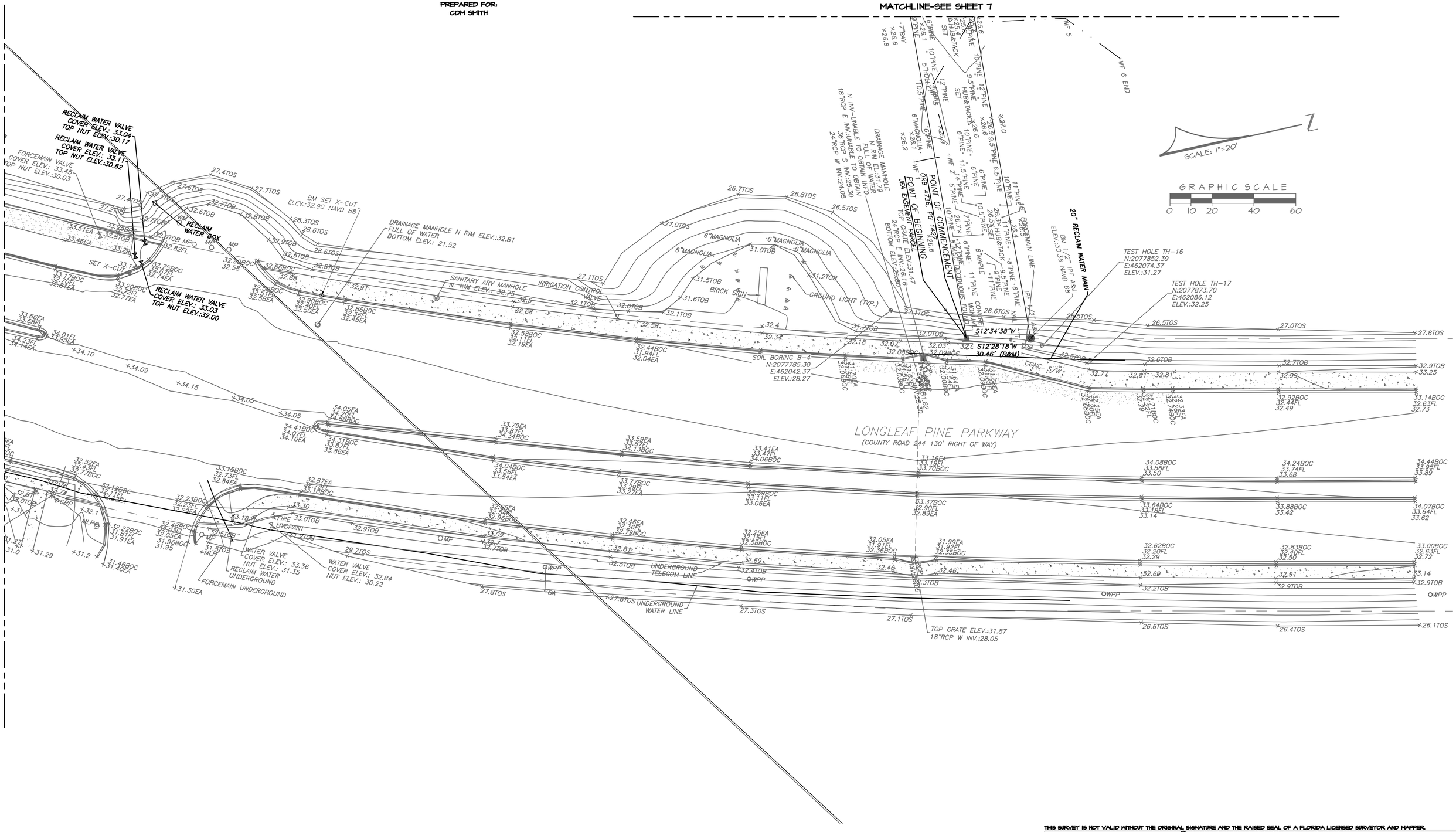
DATE: 9-23-2019	
WORK ORDER NO.: 267-19	
PROJECT NUMBER: 13419	
SHEET 5 OF 7	
DRAWING NO.: 13419	

PARTY CHIEF: MH COMPUTED BY: DTS CADD TECH: DTS/ABP CADD FILE: 13419 RIVERTOWN MTP DC FILE NO.: 13419 F.B.: x PG.: x

MAP SHOWING A LIMITED TOPOGRAPHICAL SURVEY OF

A PORTION OF SECTION 39, TOWNSHIP 2 SOUTH, RANGE 27 EAST, ST. JOHNS COUNTY, FLORIDA

PREPARED FOR:
CDM SMITH



THIS SURVEY IS NOT VALID WITHOUT THE ORIGINAL SIGNATURE AND THE RAISED SEAL OF A FLORIDA LICENSED SURVEYOR AND MAPPER.

Professional Surveyors & Mappers
R. E. Holland & Associates, Inc.
9710 BAYMEADOWS ROAD, SUITE 125 PH# (904)260-6500
JACKSONVILLE, FLORIDA 32256 FAX: (904)464-5212
FLORIDA CERTIFICATE OF AUTHORIZATION NO. LB 6725

ROBERT E. HOLLAND
FL REGISTRATION NO. 4242

THOMAS J. SMITH
PSM NO. 6500

DATE SIGNED: 7/28/2020

DATE: 9-23-2019	
WORK ORDER NO.: 267-19	
PROJECT NUMBER: 15419	
SHEET 6 OF 7	
DRAWING NO.: 15419	

PARTY CHIEF: MH COMPUTED BY: DTS CADD TECH: DTS/ABP CADD FILE: 15419 RIVERTOWN MTP DG FILE NO.: 15419 F.B.: x PG.: x

MAP SHOWING A LIMITED TOPOGRAPHICAL SURVEY OF

A PORTION OF SECTION 39, TOWNSHIP 2 SOUTH, RANGE 27 EAST, ST. JOHNS COUNTY, FLORIDA

PREPARED FOR:
GDM SMITH

OFFICIAL RECORDS BOOK 4736, PAGE 1427

A PARCEL OF LAND, BEING A PORTION OF "THE HILL TRACT", SITUATED IN THE FRANCIS P. FATIO GRANT, SECTION 39, TOWNSHIP 5 SOUTH, RANGE 27 EAST, ST. JOHNS COUNTY, FLORIDA, SAID PARCEL OF LAND BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

FOR A POINT OF REFERENCE, COMMENCE AT THE INTERSECTION OF THE SOUTHERLY LINE OF "THE HILL TRACT" SITUATED IN THE FRANCIS P. FATIO GRANT, SECTION 39, TOWNSHIP 5 SOUTH, RANGE 27 EAST, ST. JOHNS COUNTY, WITH THE WESTERLY RIGHT OF WAY LINE OF "LONGLEAF PARKWAY", AS PER THAT SPECIAL WARRANTY DEED (CR 244 RIGHT OF WAY), FROM MAIN STREET DEVELOPMENT COMMUNITY DEVELOPMENT DISTRICT TO ST. JOHNS COUNTY, FLORIDA, AS RECORDED IN OFFICIAL RECORDS BOOK 3318, PAGE 926 OF THE PUBLIC RECORDS OF ST. JOHNS COUNTY, FLORIDA; AND RUN THENCE NORTH 87°22'45" WEST, A DISTANCE OF 366.80 FEET, TO THE POINT OF BEGINNING.

FROM THE POINT OF BEGINNING THUS DESCRIBED, RUN THENCE NORTH 87°22'47" WEST, CONTINUING ALONG THE SOUTHERLY LINE OF "THE HILL TRACT", A DISTANCE OF 224.07 FEET, TO A POINT: RUN THENCE NORTH 00°05'17" EAST, A DISTANCE OF 131.74 FEET, TO A POINT; RUN THENCE NORTH 28°47'38" EAST A DISTANCE OF 76.20 FEET, TO A POINT: RUN THENCE SOUTH 87°22'45" EAST, A DISTANCE OF 187.43 FEET TO A POINT; RUN THENCE SOUTH 00°05'17" WEST, A DISTANCE OF 200.20 FEET, TO A POINT ON THE AFORESAID SOUTHERLY LINE OF "THE HILL TRACT", AND THE POINT OF BEGINNING.

AND

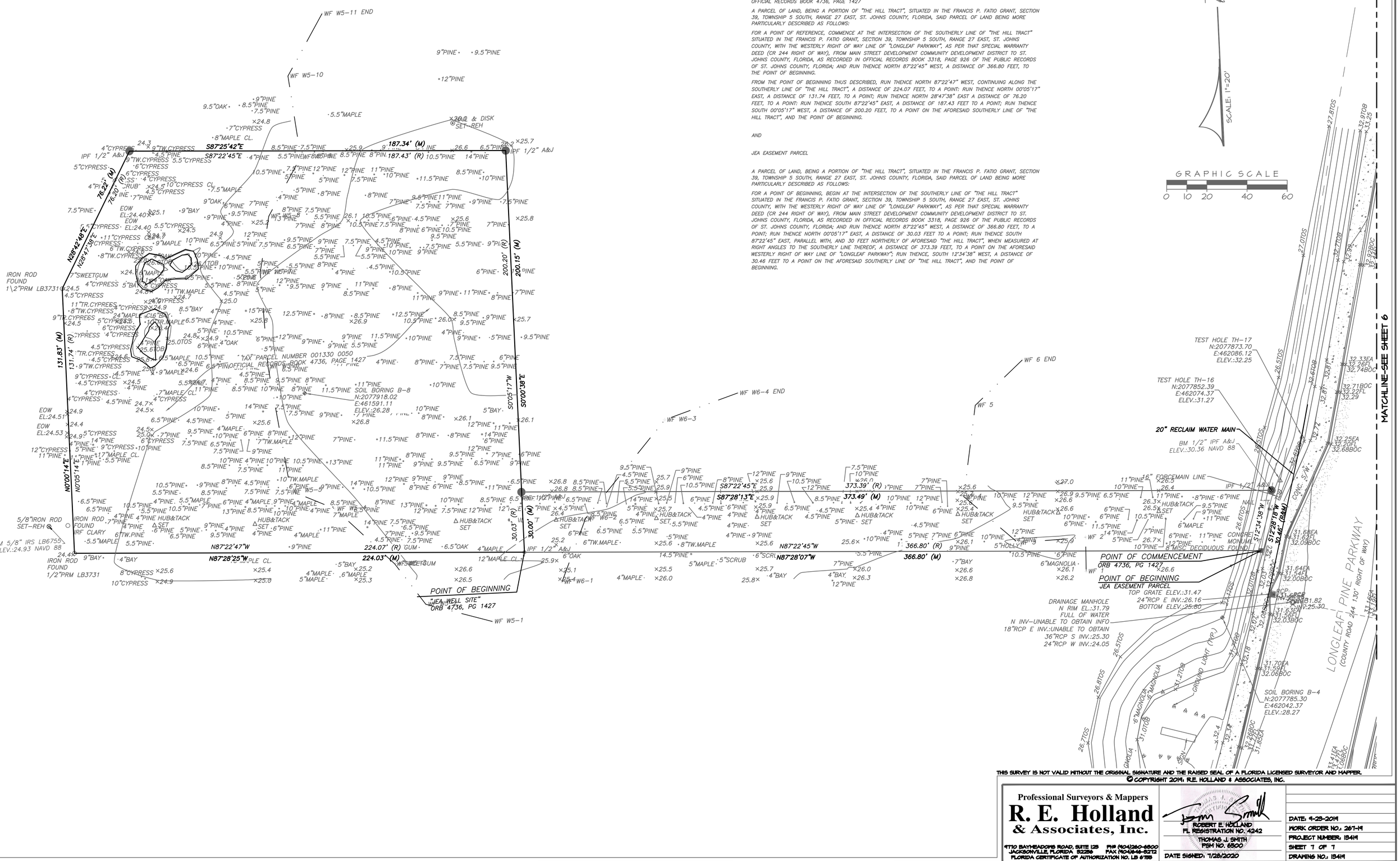
JEA EASEMENT PARCEL

A PARCEL OF LAND, BEING A PORTION OF "THE HILL TRACT", SITUATED IN THE FRANCIS P. FATIO GRANT, SECTION 39, TOWNSHIP 5 SOUTH, RANGE 27 EAST, ST. JOHNS COUNTY, FLORIDA, SAID PARCEL OF LAND BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

FOR A POINT OF BEGINNING, BEGIN AT THE INTERSECTION OF THE SOUTHERLY LINE OF "THE HILL TRACT" SITUATED IN THE FRANCIS P. FATIO GRANT, SECTION 39, TOWNSHIP 5 SOUTH, RANGE 27 EAST, ST. JOHNS COUNTY, WITH THE WESTERLY RIGHT OF WAY LINE OF "LONGLEAF PARKWAY", AS PER THAT SPECIAL WARRANTY DEED (CR 244 RIGHT OF WAY), FROM MAIN STREET DEVELOPMENT COMMUNITY DEVELOPMENT DISTRICT TO ST. JOHNS COUNTY, FLORIDA, AS RECORDED IN OFFICIAL RECORDS BOOK 3318, PAGE 926 OF THE PUBLIC RECORDS OF ST. JOHNS COUNTY, FLORIDA; AND RUN THENCE NORTH 87°22'45" WEST, A DISTANCE OF 366.80 FEET, TO A POINT; RUN THENCE NORTH 00°05'17" EAST, A DISTANCE OF 30.03 FEET TO A POINT; RUN THENCE SOUTH 87°22'45" EAST, PARALLEL WITH, AND 30 FEET NORTHERLY OF AFORESAID "THE HILL TRACT", WHEN MEASURED AT RIGHT ANGLES TO THE SOUTHERLY LINE THEREOF, A DISTANCE OF 373.39 FEET, TO A POINT ON THE AFORESAID WESTERLY RIGHT OF WAY LINE OF "LONGLEAF PARKWAY"; RUN THENCE, SOUTH 12°34'38" WEST, A DISTANCE OF 30.46 FEET TO A POINT ON THE AFORESAID SOUTHERLY LINE OF "THE HILL TRACT", AND THE POINT OF BEGINNING.

SCALE: 1"=20'

GRAPHIC SCALE
0 10 20 40 60



THIS SURVEY IS NOT VALID WITHOUT THE ORIGINAL SIGNATURE AND THE RAISED SEAL OF A FLORIDA LICENSED SURVEYOR AND MAPPER.

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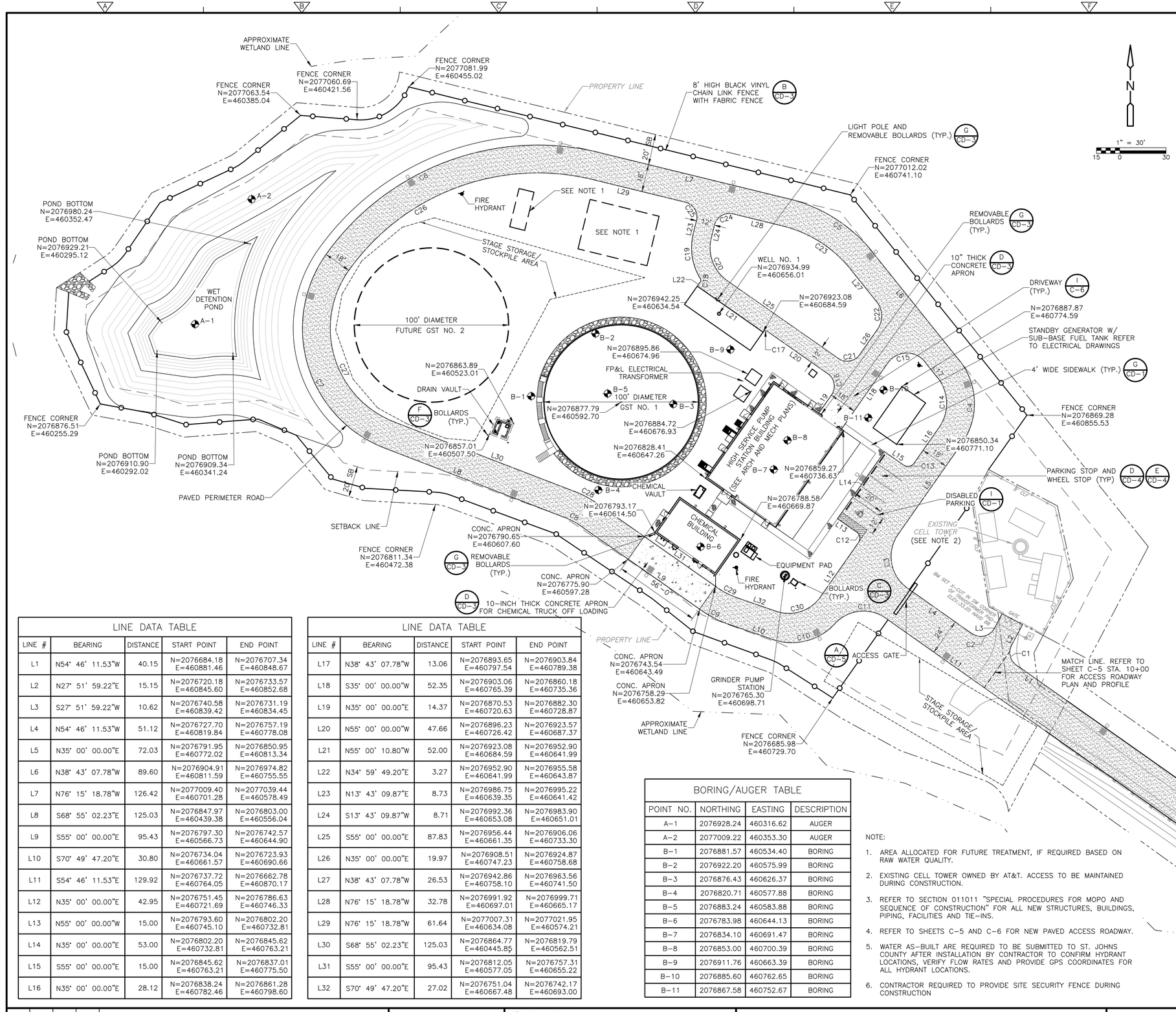
FLORIDA CERTIFICATE OF AUTHORIZATION NO. LB 6755

ROBERT E. HOLLAND
FL REGISTRATION NO. 4242
THOMAS J. SMITH
FSM NO. 6500

DATE SIGNED: 7/28/2020

DATE: 9-23-2019
WORK ORDER NO.: 267-19
PROJECT NUMBER: 13419
SHEET 7 OF 7
DRAWING NO.: 13419

PARTY CHIEF: MH COMPUTED BY: DTS CADD TECH: DTS/ABP CADD FILE: 13419 RIVERTOWN MTP DC FILE NO.: 13419 F.B.: x PG.: x



CURVE DATA TABLE

CURVE #	RADIUS	LENGTH	TANGENT	DELTA	CHORD LENGTH	START POINT	END POINT
C1	10.00	14.42	8.79	82°38'11"	13.20	N=2076707.34 E=460848.67	N=2076720.18 E=460845.60
C2	10.00	16.99	11.38	97°21'49"	15.02	N=2076731.19 E=460834.45	N=2076727.70 E=460819.84
C3	25.00	39.17	24.90	89°46'12"	35.28	N=2076757.19 E=460778.08	N=2076791.95 E=460772.02
C4	45.00	57.90	33.74	73°43'08"	53.99	N=2076850.95 E=460813.34	N=2076904.91 E=460811.59
C5	100.00	65.51	33.98	37°32'11"	64.35	N=2076974.82 E=460755.55	N=2077009.40 E=460701.28
C6	168.00	200.57	114.18	68°24'14"	188.87	N=2077039.44 E=460578.49	N=2076973.43 E=460401.53
C7	83.00	151.03	106.73	104°15'29"	131.04	N=2076973.43 E=460401.53	N=2076847.97 E=460439.38
C8	50.00	12.15	6.10	13°55'02"	12.12	N=2076803.00 E=460556.04	N=2076797.30 E=460566.73
C9	68.00	18.79	9.45	15°49'47"	18.73	N=2076742.57 E=460644.90	N=2076734.04 E=460661.57
C10	38.00	44.25	25.02	66°43'03"	41.79	N=2076723.93 E=460690.66	N=2076734.17 E=460731.18
C11	25.00	36.12	22.03	82°46'39"	33.06	N=2076734.17 E=460731.18	N=2076737.72 E=460764.05
C12	5.00	7.85	5.00	90°00'00"	7.07	N=2076786.63 E=460746.33	N=2076793.60 E=460745.10
C13	5.00	7.85	5.00	90°00'00"	7.07	N=2076837.01 E=460775.50	N=2076838.24 E=460782.46
C14	27.00	34.74	20.24	73°43'08"	32.39	N=2076861.28 E=460798.60	N=2076893.65 E=460797.54
C15	15.00	27.82	20.01	106°16'52"	24.00	N=2076903.84 E=460789.38	N=2076903.06 E=460765.39
C16	10.00	15.71	10.00	90°00'00"	14.14	N=2076882.30 E=460728.87	N=2076896.23 E=460726.42
C17	2.00	3.14	2.00	90°00'00"	2.83	N=2076923.57 E=460687.37	N=2076923.08 E=460684.59
C18	2.00	2.33	1.32	66°40'47"	2.20	N=2076955.58 E=460643.87	N=2076957.77 E=460643.93
C19	38.00	30.11	15.90	45°24'08"	29.33	N=2076957.77 E=460643.93	N=2076986.75 E=460639.35
C20	26.00	31.18	17.78	68°43'10"	29.35	N=2076983.90 E=460651.01	N=2076956.44 E=460661.35
C21	10.00	15.71	10.00	90°00'00"	14.14	N=2076906.06 E=460733.30	N=2076908.51 E=460747.23
C22	15.00	19.30	11.25	73°43'08"	18.00	N=2076924.87 E=460758.68	N=2076942.86 E=460758.10
C23	82.00	53.72	27.86	37°32'11"	52.77	N=2076963.56 E=460741.50	N=2076991.92 E=460697.01
C24	10.00	15.71	10.00	90°01'31"	14.15	N=2076999.71 E=460665.17	N=2076992.36 E=460653.08
C25	10.00	15.70	10.00	89°58'29"	14.14	N=2076995.22 E=460641.42	N=2077007.31 E=460634.08
C26	150.00	179.08	101.95	68°24'14"	168.63	N=2077021.95 E=460574.21	N=2076963.02 E=460416.21
C27	65.00	118.28	83.58	104°15'29"	102.62	N=2076963.02 E=460416.21	N=2076864.77 E=460445.85
C28	68.00	16.52	8.30	13°55'02"	16.48	N=2076819.79 E=460562.51	N=2076812.05 E=460577.05
C29	50.00	13.81	6.95	15°49'47"	13.77	N=2076757.31 E=460655.22	N=2076751.04 E=460667.48
C30	25.00	32.36	18.90	74°10'13"	30.15	N=2076742.17 E=460693.00	N=2076751.45 E=460721.69

LINE DATA TABLE

LINE #	BEARING	DISTANCE	START POINT	END POINT
L1	N54° 46' 11.53"W	40.15	N=2076684.18 E=460881.46	N=2076707.34 E=460848.67
L2	N27° 51' 59.22"E	15.15	N=2076720.18 E=460845.60	N=2076733.57 E=460852.68
L3	S27° 51' 59.22"W	10.62	N=2076740.58 E=460839.42	N=2076731.19 E=460834.45
L4	N54° 46' 11.53"W	51.12	N=2076727.70 E=460819.84	N=2076757.19 E=460778.08
L5	N35° 00' 00.00"E	72.03	N=2076791.95 E=460772.02	N=2076850.95 E=460813.34
L6	N38° 43' 07.78"W	89.60	N=2076904.91 E=460811.59	N=2076974.82 E=460755.55
L7	N76° 15' 18.78"W	126.42	N=2077009.40 E=460701.28	N=2077039.44 E=460578.49
L8	S68° 55' 02.23"E	125.03	N=2076847.97 E=460439.38	N=2076803.00 E=460556.04
L9	S55° 00' 00.00"E	95.43	N=2076797.30 E=460566.73	N=2076742.57 E=460644.90
L10	S70° 49' 47.20"E	30.80	N=2076734.04 E=460661.57	N=2076723.93 E=460690.66
L11	S54° 46' 11.53"E	129.92	N=2076737.72 E=460764.05	N=2076662.78 E=460870.17
L12	N35° 00' 00.00"E	42.95	N=2076751.45 E=460721.69	N=2076786.63 E=460746.33
L13	N55° 00' 00.00"W	15.00	N=2076793.60 E=460745.10	N=2076802.20 E=460732.81
L14	N35° 00' 00.00"E	53.00	N=2076802.20 E=460732.81	N=2076845.62 E=460763.21
L15	S55° 00' 00.00"E	15.00	N=2076845.62 E=460763.21	N=2076837.01 E=460775.50
L16	N35° 00' 00.00"E	28.12	N=2076838.24 E=460782.46	N=2076861.28 E=460798.60

LINE DATA TABLE

LINE #	BEARING	DISTANCE	START POINT	END POINT
L17	N38° 43' 07.78"W	13.06	N=2076893.65 E=460797.54	N=2076903.84 E=460789.38
L18	S35° 00' 00.00"W	52.35	N=2076903.06 E=460765.39	N=2076860.18 E=460735.36
L19	N35° 00' 00.00"E	14.37	N=2076870.53 E=460720.63	N=2076882.30 E=460728.87
L20	N55° 00' 00.00"W	47.66	N=2076896.23 E=460726.42	N=2076923.57 E=460687.37
L21	N55° 00' 10.80"W	52.00	N=2076923.08 E=460684.59	N=2076952.90 E=460641.99
L22	N34° 59' 49.20"E	3.27	N=2076952.90 E=460641.99	N=2076955.58 E=460643.87
L23	N13° 43' 09.87"E	8.73	N=2076986.75 E=460639.35	N=2076995.22 E=460641.42
L24	S13° 43' 09.87"W	8.71	N=2076992.36 E=460653.08	N=2076983.90 E=460651.01
L25	S55° 00' 00.00"E	87.83	N=2076956.44 E=460661.35	N=2076906.06 E=460733.30
L26	N35° 00' 00.00"E	19.97	N=2076908.51 E=460747.23	N=2076924.87 E=460758.68
L27	N38° 43' 07.78"W	26.53	N=2076942.86 E=460758.10	N=2076963.56 E=460741.50
L28	N76° 15' 18.78"W	32.78	N=2076991.92 E=460697.01	N=2076999.71 E=460665.17
L29	N76° 15' 18.78"W	61.64	N=2077007.31 E=460634.08	N=2077021.95 E=460574.21
L30	S68° 55' 02.23"E	125.03	N=2076864.77 E=460445.85	N=2076819.79 E=460562.51
L31	S55° 00' 00.00"E	95.43	N=2076812.05 E=460577.05	N=2076757.31 E=460655.22
L32	S70° 49' 47.20"E	27.02	N=2076751.04 E=460667.48	N=2076742.17 E=460693.00

BORING/AUGER TABLE

POINT NO.	NORTHING	EASTING	DESCRIPTION
A-1	2076928.24	460316.62	AUGER
A-2	2077009.22	460353.30	AUGER
B-1	2076881.57	460534.40	BORING
B-2	2076922.20	460575.99	BORING
B-3	2076876.43	460626.37	BORING
B-4	2076820.71	460577.88	BORING
B-5	2076883.24	460583.88	BORING
B-6	2076783.98	460644.13	BORING
B-7	2076834.10	460691.47	BORING
B-8	2076853.00	460700.39	BORING
B-9	2076911.76	460663.39	BORING
B-10	2076885.60	460762.65	BORING
B-11	2076867.58	460752.67	BORING

NOTE:

1. AREA ALLOCATED FOR FUTURE TREATMENT, IF REQUIRED BASED ON RAW WATER QUALITY.
2. EXISTING CELL TOWER OWNED BY AT&T. ACCESS TO BE MAINTAINED DURING CONSTRUCTION.
3. REFER TO SECTION 011011 "SPECIAL PROCEDURES FOR MOPO AND SEQUENCE OF CONSTRUCTION" FOR ALL NEW STRUCTURES, BUILDINGS, PIPING, FACILITIES AND TIE-INS.
4. REFER TO SHEETS C-5 AND C-6 FOR NEW PAVED ACCESS ROADWAY.
5. WATER AS-BUILT ARE REQUIRED TO BE SUBMITTED TO ST. JOHNS COUNTY AFTER INSTALLATION BY CONTRACTOR TO CONFIRM HYDRANT LOCATIONS, VERIFY FLOW RATES AND PROVIDE GPS COORDINATES FOR ALL HYDRANT LOCATIONS.
6. CONTRACTOR REQUIRED TO PROVIDE SITE SECURITY FENCE DURING CONSTRUCTION

REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: C. CERRETA
DRAWN BY: C. SCOTT
SHEET CHK'D BY: B. WILLIAMS
CROSS CHK'D BY: D. PRAH
APPROVED BY: I. POLEMATIDIS
DATE: DECEMBER 2020

CDM Smith
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Tel: (904) 731-7109
FL COA No. EB-0000020

JACOBS
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EB0000072 AAC001992 LC26000188

JEA

RIVERTOWN WATER TREATMENT PLANT PROJECT

WTP SITE PLAN AND ROADWAY GEMOMETRY

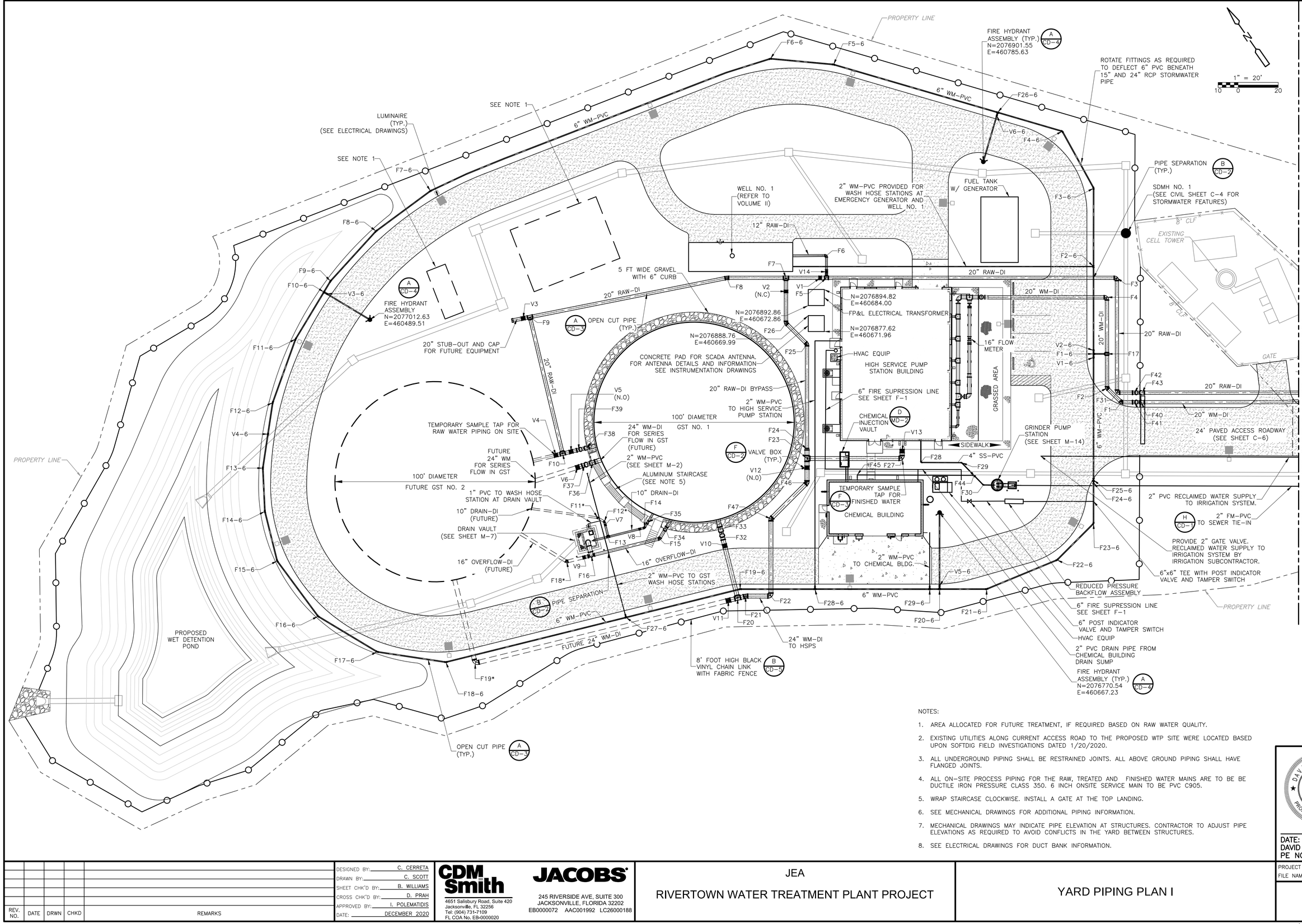
DAVID JOHN PRAH LICENSE NO. 43393 STATE OF FLORIDA PROFESSIONAL ENGINEER

DATE:
DAVID J PRAH
PE NO. 43393

PROJECT NO. 6103-237938
FILE NAME: C001STPL.DWG

SHEET NO.
C-1

ISSUED FOR BID



NOTES:

1. AREA ALLOCATED FOR FUTURE TREATMENT, IF REQUIRED BASED ON RAW WATER QUALITY.
2. EXISTING UTILITIES ALONG CURRENT ACCESS ROAD TO THE PROPOSED WTP SITE WERE LOCATED BASED UPON SOFTDIG FIELD INVESTIGATIONS DATED 1/20/2020.
3. ALL UNDERGROUND PIPING SHALL BE RESTRAINED JOINTS. ALL ABOVE GROUND PIPING SHALL HAVE FLANGED JOINTS.
4. ALL ON-SITE PROCESS PIPING FOR THE RAW, TREATED AND FINISHED WATER MAINS ARE TO BE BE DUCTILE IRON PRESSURE CLASS 350. 6 INCH ONSITE SERVICE MAIN TO BE PVC C905.
5. WRAP STAIRCASE CLOCKWISE. INSTALL A GATE AT THE TOP LANDING.
6. SEE MECHANICAL DRAWINGS FOR ADDITIONAL PIPING INFORMATION.
7. MECHANICAL DRAWINGS MAY INDICATE PIPE ELEVATION AT STRUCTURES. CONTRACTOR TO ADJUST PIPE ELEVATIONS AS REQUIRED TO AVOID CONFLICTS IN THE YARD BETWEEN STRUCTURES.
8. SEE ELECTRICAL DRAWINGS FOR DUCT BANK INFORMATION.

DAVID JOHN PRAH LICENSE NO. 43393 STATE OF FLORIDA PROFESSIONAL ENGINEER

DATE:
DAVID J PRAH
PE NO. 43393

REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: C. CERRETA
DRAWN BY: C. SCOTT
SHEET CHK'D BY: B. WILLIAMS
CROSS CHK'D BY: D. PRAH
APPROVED BY: I. POLEMATIDIS
DATE: DECEMBER 2020

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JEA

RIVERTOWN WATER TREATMENT PLANT PROJECT

YARD PIPING PLAN I

PROJECT NO. 6103-237938
FILE NAME: C002YPPL.DWG

SHEET NO.
C-2

ISSUED FOR BID

6" WM SERVICE				
IDENTIFIER	ELEVATION	NORTHING	EASTING	DESCRIPTION
F1–6	24.50	2076791.38	460775.69	6" TEE–DI
F2–6	24.50	2076827.11	460800.71	6"x4" TEE–DI
F3–6	24.50	2076859.12	460823.18	6"x22.5° BEND–DI
F4–6	24.50	2076891.39	460826.69	6"x45° BEND–DI
F5–6	27.00	2076984.24	460752.26	6"x11.25° BEND–DI
F6–6	27.00	2077004.70	460728.11	6"x22.5° BEND–DI
F7–6	28.00	2077047.96	460551.17	6"x11.25° BEND–DI
F8–6	28.00	2077047.10	460517.40	6"x11.25° BEND–DI
F9–6	28.00	2077039.68	460484.45	6"x11.25° BEND–DI
F10–6	28.00	2077037.10	460478.64	6" TEE–DI
F11–6	28.00	2077025.96	460453.56	6"x11.25° BEND–DI
F12–6	28.00	2077006.53	460426.01	6"x11.25° BEND–DI
F13–6	28.00	2076982.54	460403.20	6"x11.25° BEND–DI
F14–6	28.00	2076964.25	460391.64	6"x11.25° BEND–DI
F15–6	28.00	2076940.46	460382.48	6"x22.5° BEND–DI
F16–6	28.00	2076906.09	460383.35	6"x22.5° BEND–DI
F17–6	28.50	2076874.66	460397.31	6"x22.5° BEND–DI
F18–6	29.00	2076850.73	460422.48	6"x22.5° BEND–DI
F19–6	29.00	2076796.33	460563.77	6"x11.25° BEND–DI
F20–6	28.50	2076739.23	460645.30	6" TEE–DI
F21–6	28.50	2076725.76	460664.55	6"x22.5° BEND–DI
F22–6	28.50	2076717.50	460701.75	6"x22.5° BEND–DI
F23–6	28.00	2076721.96	460727.10	6"x45° BEND–DI
F24–6	28.00	2076738.72	460738.83	6"x45° BEND–DI
F25–6	24.95	2076739.77	460739.56	6"x45° BEND–DI
F26–6	25.80	2076917.62	460805.67	6" TEE–DI
F27–6	29.00	2076817.43	460508.96	6"x4" TEE, 4" GV, 4" PLUG W/2" THREADED CONNECTION–DI
F28–6	29.00	2076774.91	460594.35	6"x4" TEE, 4" GV, 4" PLUG W/2" THREADED CONNECTION–DI
F29–6	29.00	2076742.06	460641.27	6" x 4" TEE, 4" GV, 4" PLUG W/2" THREADED CONNECTION
V1–6	24.50	2076789.94	460774.68	6 GATE VALVE–DI
V2–6	24.50	2076792.82	460776.70	6 GATE VALVE–DI
V3–6	28.00	2077035.55	460479.32	6 GATE VALVE–DI
V4–6	28.00	2076995.01	460415.06	6 GATE VALVE–DI
V5–6	28.00	2076740.52	460646.20	6 GATE VALVE–DI
V6–6	25.30	2076916.64	460804.44	6 GATE VALVE–DI

PIPE FITTING DATA				
IDENTIFIER	ELEVATION	NORTHING	EASTING	DESCRIPTION
F1	27.00	2076763.70	460773.19	20"x45° BEND–DI
F2	27.00	2076773.52	460771.44	20"x45° BEND–DI
F3	26.00	2076815.80	460807.04	20"x90° BEND–DI
F4	27.00	2076810.71	460797.37	20"x90° BEND–DI
F5	27.00	2076898.97	460688.26	20"x12" RED TEE–DI
F6	27.00	2076908.09	460694.65	12"x90° BEND–DI
F7	27.00	2076910.57	460671.68	20" TEE–DI
F8	27.00	2076927.50	460647.50	20"x11.25° BEND–DI
F9	27.00	2076967.87	460555.77	20" TEE–DI
F10	27.00	2076902.60	460529.96	20" TEE–DI
F11*		2076866.39	460525.92	10"x22.5° BEND–DI
F12*		2076862.73	460527.55	10"x45° BEND–DI
F13	28.70	2076855.53	460524.77	10" TEE–DI
F14	28.70	2076848.82	460542.17	10"x45° BEND–DI
F15	28.50	2076840.05	460545.27	16"x45° BEND–DI
F16	28.50	2076852.69	460512.53	16" TEE–RCP
F17	27.00	2076787.52	460781.20	24"x6" RED TEE–DI
F18*		2076857.26	460500.72	16"x45° BEND–RCP
F19*		2076841.91	460434.20	24"x90° BEND–DI
F20	28.00	2076793.35	460560.15	24" TEE–DI
F21	28.00	2076791.87	460564.00	24"x11.25° BEND–DI
F22	28.00	2076784.69	460574.36	24"x90° BEND–DI
F23	27.50	2076830.66	460628.54	24" TEE–DI
F24	27.50	2076834.45	460631.19	24"x20" RED–DI
F25	27.50	2076877.43	460661.29	20"x45° BEND–DI
F26	27.50	2076892.05	460658.71	20"x45° BEND–DI
F27	27.50	2076803.43	460667.42	24"x90° BEND–DI
F28	28.00	2076796.41	460673.97	4"x90° BEND–PVC
F29	27.00	2076784.67	460690.55	4"x45° BEND–PVC
F30	26.00	2076769.33	460693.06	4"x45° BEND–PVC
F31	26.00	2076768.80	460774.17	20"x90° BEND–DI
F32	28.00	2076822.50	460571.39	24"x45° BEND–DI
F33	30.50	2076826.47	460572.92	24"x45° BEND–DI
F34	30.50	2076842.41	460550.59	16"x45° BEND–DI
F35	30.50	2076850.14	460545.16	10"x45° BEND–DI
F36	30.50	2076890.34	460539.68	24"x45° BEND–DI
F37	28.00	2076891.65	460535.52	24"x45° BEND–DI
F38	30.50	2076898.01	460541.56	20"x45° BEND–DI
F39	27.50	2076899.54	460537.69	20"x45° BEND–DI
F40	28.00	2076757.91	460781.47	20"x45° BEND–DI
F41	25.00	2076759.92	460778.58	20"x45° BEND–DI
F42	25.00	2076763.81	460781.30	20"x45° BEND–DI
F43	28.00	2076761.50	460784.58	20"x45° BEND–DI
F44	26.45	2076775.94	460691.98	4"x2" WYE–PVC
F45	26.45	2076809.49	460644.34	2"x45° BEND–PVC
F46	28.00	2076820.70	460621.56	24"x45° BEND–DI
F47	28.00	2076816.27	460596.47	24"x45° BEND–DI

* FUTURE FITTINGS NOT INCLUDED IN PROPOSED DESIGN BID ESTIMATE

PIPE VALVE DATA				
IDENTIFIER	ELEVATION	NORTHING	EASTING	DESCRIPTION
V1	27.00	2076900.78	460685.66	20" GATE VALVE–DI
V2	27.00	2076905.03	460667.79	20" GATE VALVE–DI
V3	27.00	2076969.27	460552.59	20" GATE VALVE–DI
V4	27.00	2076903.88	460526.74	20" GATE VALVE–DI
V5	27.00	2076901.00	460533.99	20" GATE VALVE–DI
V6	28.00	2076892.71	460532.17	24" GATE VALVE–DI
V7	28.70	2076861.23	460526.98	10" GATE VALVE–DI
V8	28.70	2076849.69	460539.90	10" GATE VALVE–DI
V9	28.50	2076854.04	460509.03	16" GATE VALVE–DI
V10	28.00	2076818.48	460569.84	24" GATE VALVE–DI
V11	28.00	2076795.07	460555.68	24" GATE VALVE–DI
V12	27.50	2076826.90	460625.91	24" GATE VALVE–DI
V13	27.50	2076806.42	460669.52	24" GATE VALVE–DI
V14	27.00	2076901.46	460690.00	20" GATE VALVE–DI

NOTES:

1. ALL PIPE ELEVATION REFER TO TOP OF PIPE ELEVATIONS, UNLESS OTHERWISE NOTED.
2. ALL VALVE ELEVATIONS REFER TO TOP OF VALVE BODY, NOT THE OPERATING NUT OR VALVE BONNET.
3. IF NO TOP PF PIPE ELEVATION IS PROVIDED, CONTRACTOR IS REQUIRED TO PROVIDE A MINIMUM OF 3 FT OF COVER TO TOP OF PIPE.
4. REFER TO M–7 DUCKBILL CHECK VALVE INFORMATION.
5. PROVIDE MJ PLUGS, TAPPED FOR BLOWOFF, PER DETAIL B/CD–3.
6. ALL ON–SITE PROCESS PIPING FOR THE RAW, TREATED AND FINISHED WATER MAINS ARE TO BE BE DUCTILE IRON PRESSURE CLASS 350. 6 INCH ONSITE WATER MAIN TO BE PVC C905.

REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: C. CERRETA
DRAWN BY: C. SCOTT
SHEET CHK'D BY: B. WILLIAMS
CROSS CHK'D BY: D. PRAH
APPROVED BY: I. POLEMATIDIS
DATE: DECEMBER 2020

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JEA

RIVERTOWN WATER TREATMENT PLANT PROJECT

YARD PIPING VALVE AND FITTING SCHEDULE

DAVID JOHN PRAH LICENSE NO. 43393 STATE OF FLORIDA PROFESSIONAL ENGINEER

DATE:
DAVID J PRAH
PE NO. 43393

PROJECT NO. 6103–237938
FILE NAME: C002YPPL.DWG

SHEET NO.
C-2A

ISSUED FOR BID

MATCH LINE SEE SHEET C-4 FOR CONTINUATION

1" = 20'
10 0 20

IPF 1/2" A&J

PROPOSED 20" RW-DI TO DISTRIBUTION SYSTEM

SAMPLE TAP (F / CD-3)

CONNECT TO EXIST. 20" WM AT 20" GATE VALVE

EXIST. WATER VALVE-PVC
COVER ELEV.: 30.79
NUT ELEV.: 28.46

EXIST. WATER VALVE-PVC
COVER ELEV.: 31.05
NUT ELEV.: 29.05

TEST HOLE TH-12

EXISTING 20" WM TO BE RE-PURPOSED AS 20" RAW WATER MAIN

20" UNDERGROUND WATER LINE

EXISTING 2" CONDUIT (FO)

20" WM-DI

TEST HOLE TH-10

TEST HOLE TH-11

24' PAVED ACCESS ROADWAY
(SEE SHEETS C-5 AND C-6)

VARIABLE WIDTH EASEMENT FOR ACCESS, UTILITIES AND DRAINAGE

RECLAIM WATER VALVE
COVER ELEV.: 32.23
NUT ELEV.: 30.94

UNDERGROUND VAULT (CENTURY)

CONNECT TO EXISTING 20" RECLAIMED PIPE. PROVIDE
20"x6" REDUCER
6" SPOOL PIECE
6"x4" REDUCER
4" PLUG WITH 2" THREADED CONNECTION. PROVIDE
2" PVC TO IRRIGATION SYSTEM

IPF 1/2" A&J

IPF 1/2" A&J

(H / CD-7) 2" FM-PVC TO SEWER TIE-IN

HDD DRILL AREA
(SEE VOLUME III, DRAWING C-3)

20" RW-DI FROM WELLS NO. 2 AND BACKUP NO. 3 (SEE VOLUME III FOR RAW WATER PIPELINE CONTINUATION)

TOP GRATE ELEV.:33.00
18"RCP W INV.:28.75
BOTTOM ELEV.:24.97

NAIL & DISK FOUND

MTL POST GAS LINE MARKER

UNDERGROUND WATER MAIN

UNDERGROUND TELECOM LINE

UNDERGROUND ELECTRIC LINE

EXISTING WATERMAINS (SEE NOTE 1)

SANITARY ARV MANHOLE
N. RIM ELEV.: 33.19

UNDERGROUND COMCAST VAULT

UNDERGROUND AT&T VAULT

TEST HOLE TH-9

TEST HOLE TH-8

FIBER OPTIC MARKER POST

WATER VALVE
COVER ELEV.: 33.86
NUT ELEV.: 31.96

WATER VALVE
COVER ELEV.: 33.90
NUT ELEV.: 32.09

WATER VALVE
COVER ELEV.: 33.82
NUT ELEV.: 33.52

UNDERGROUND FIBER OPTIC VAULT (UNITED)

2" FIRBER OPTIC CONDUIT
16" FM

TEST HOLE TH-4

TEST HOLE TH-5

CBL TRANSFORMER PAD
UNDERGROUND ELECTRIC LINE
TEA SET NAIL & DISK
ELEV.:33.11 NAVD 88

RECLAIM WATER VALVE
COVER ELEV.: 33.39
NUT ELEV.: 30.83

RECLAIM WATER VALVE
COVER ELEV.: 33.42
NUT ELEV.: 31.59

20" RECLAIM WATER MAIN

RECLAIM WATER VALVE
COVER ELEV.: 33.50
NUT ELEV.: 31.30

(3) FIBER OPTIC MARKER POST

TEST HOLE TH-1

CONNECT 2" FM-PVC TO 4" STUB OUT CAP. PROVIDE RESTRAINED JOINT CAP WITH 2" THREADED CONNECTION

4" PV-DI
4" PVC (TYP.)

12"x4" RED-DI

FIELD VERIFY LOCATION OF 12" GV AND STUB OUT

(2) IRRIGATION CONTROL VALVE

FORCE MAIN VALVE
COVER ELEV.: 33.53
NUT ELEV.: 30.83

UNDERGROUND FIBER OPTIC VAULT (TOWER CLOUD)

EXISTING 16" FM-PVC

EXISTING 20" RECLAIMED WATER-PVC

LONGLEAF PINE PARKWAY
(COUNTY ROAD 244 130' RIGHT OF WAY)

TOP GRATE ELEV.:33.00
FULL OF WATER
SIZE/TYPE UNK NE INV.:25.01
SIZE/TYPE UNK SW INV.:25.01
BOTTOM ELEV.:24.97

UNDERGROUND WATER MAIN

18"RCP W INV.:28.75

36"RCP W INV.:28.75

UNDERGROUND TELECOM LINE

SV

TEL

SV

TESTHOLE DATA TABLE				
	ELEVATION	NORTHING	EASTING	UTILITY
TH-1	33.63	2076378.90	461238.43	2" TELE FOC-PVC
TH-2	33.14	2076407.61	461245.94	16" FORCE MAIN-PVC
TH-3	33.03	2076420.52	461262.01	20" RECLAIM WM-PVC
TH-4	31.68	2076412.68	461220.00	20" RECLAIM WM-PVC
TH-5	31.61	2076406.23	461215.48	20" RECLAIM WM-PVC
TH-6	32.98	2076426.90	461253.33	2" FOC-PVC
TH-7	33.12	2076427.83	461251.78	ELECTRIC (SZ/MTL UNK)
TH-8	33.44	2076452.48	461274.63	20" WATER-PVC
TH-9	33.47	2076458.22	461279.10	20" WATER-PVC
TH-10	32.36	2076668.45	460896.83	(6)2" ELECTRIC & FOC-PVC
TH-11	31.69	2076656.12	460928.04	20" WATER-PVC
TH-12	30.62	2076662.11	460929.70	20" WATER-PVC

NOTE:

1. EXISTING UTILITIES ALONG CURRENT ACCESS ROAD TO THE PROPOSED WTP SITE WERE LOCATED BASED UPON SOFTDIG FIELD INVESTIGATIONS DATED 1/20/2020.
2. ALL UNDERGROUND PIPING SHALL BE RESTRAINED JOINTS. ALL ABOVE GROUND PIPING SHALL BE FLANGED JOINTS.

DAVID JOHN PRAH LICENSE NO. 43393 STATE OF FLORIDA PROFESSIONAL ENGINEER

DATE:
DAVID J PRAH
PE NO. 43393

REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: C. CERRETA
DRAWN BY: C. SCOTT
SHEET CHK'D BY: B. WILLIAMS
CROSS CHK'D BY: D. PRAH
APPROVED BY: I. POLEMATIDIS
DATE: DECEMBER 2020

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JEA

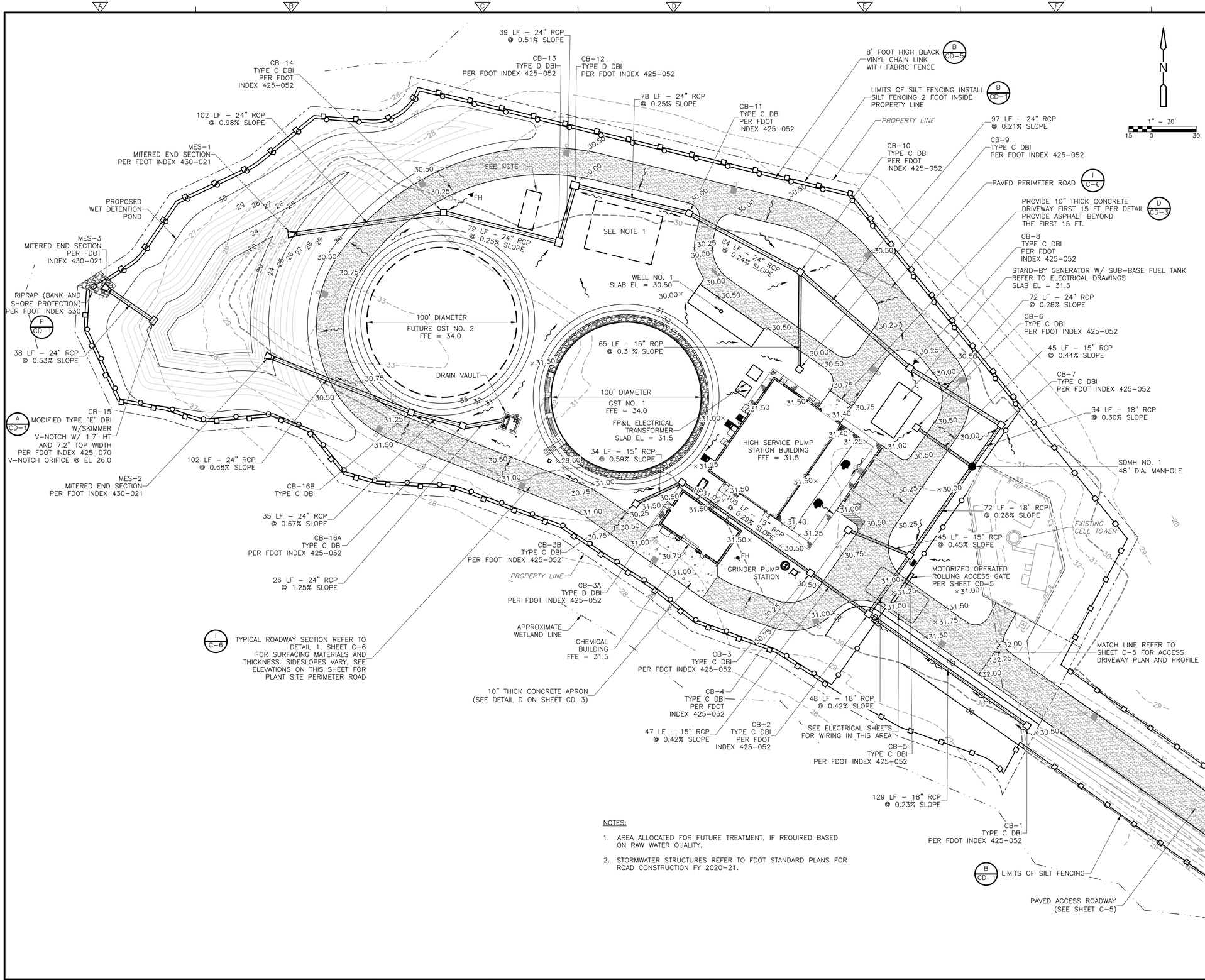
RIVERTOWN WATER TREATMENT PLANT PROJECT

YARD PIPING PIPING PLAN II

PROJECT NO. 6103-237938
FILE NAME: C003YPPL.DWG

SHEET NO.
C-3

ISSUED FOR BID



NOTES:

1. AREA ALLOCATED FOR FUTURE TREATMENT, IF REQUIRED BASED ON RAW WATER QUALITY.
2. STORMWATER STRUCTURES REFER TO FDOT STANDARD PLANS FOR ROAD CONSTRUCTION FY 2020–21.

STORM DRAIN STRUCTURE DATA			
STRUCTURE NAME	STRUCTURE DETAILS	NORTHING	EASTING
CB–1	GRATE = EL 29.50' INV OUT (18") = 27.00'	2076658.63	460860.14
CB–2	GRATE = EL 29.00' INV IN (15") = 26.70' INV IN (18") = 26.70' INV OUT (18") = 26.70'	2076733.15	460754.38
CB–3	GRATE = EL 29.00' INV IN (15") = 26.90' INV OUT (15") = 26.90'	2076760.49	460715.66
CB–3A	GRATE = EL 31.00' INV IN (15") = 27.20' INV OUT (15") = 27.20'	2076820.97	460630.00
CB–3B	GRATE = EL 29.75' INV OUT (15") = 27.40'	2076806.63	460599.19
CB–4	GRATE = EL 30.25' INV OUT (15") = 26.70'	2076789.06	460740.77
CB–5	GRATE = EL 29.80' INV IN (15") = 26.50' INV IN (18") = 26.50' INV OUT (18") = 26.50'	2076772.22	460781.96
CB–6	GRATE = EL 30.00' INV OUT (15") = 26.50'	2076857.43	460786.44
CB–7	GRATE = EL 29.50' INV IN (18") = 26.20' INV OUT (24") = 26.20'	2076859.20	460842.87
CB–8	GRATE = EL 29.50' INV IN (24") = 26.00' INV OUT (24") = 26.00'	2076897.14	460781.95
CB–9	GRATE = EL 30.00' INV OUT (15") = 26.00'	2076896.34	460708.20
CB–10	GRATE = EL 29.00' INV IN (24") = 25.80' INV IN (15") = 25.80' INV OUT (24") = 25.80'	2076961.17	460708.78
CB–11	GRATE = EL 29.50' INV IN (24") = 25.60' INV OUT (24") = 25.60'	2077000.40	460634.71
CB–12	GRATE = EL 29.50' INV IN (24") = 25.40' INV OUT (24") = 25.40'	2077019.00	460558.51
CB–13	GRATE = EL 29.50' INV IN (24") = 25.20' INV IN (18") = 25.20' INV OUT (24") = 25.20'	2076981.07	460547.82
CB–14	GRATE = EL 29.75' INV IN (24") = 25.00' INV OUT (24") = 25.00'	2077000.89	460470.96
CB–15	GRATE = EL 27.70' INV OUT (24") = 26.00'	2076928.76	460277.55
CB–16A	GRATE = EL 30.00' INV IN (24") = 24.93' INV OUT (24") = 24.93'	2076858.75	460483.70
CB–16B	GRATE = EL 31.00' INV IN (24") = 24.69' INV OUT (24") = 24.69'	2076867.66	460449.33
SDMH NO. 1	GRATE = EL 31.00' INV IN (18") = 26.30' INV IN (15") = 26.30' INV RIM(18") = 26.30'	2076831.49	460823.47

STORM DRAIN MES DATA			
STRUCTURE NAME	STRUCTURE DETAILS	NORTHING	EASTING
MES–1	INV IN (24") = 24.00'	2076986.33	460369.91
MES–2	INV IN (24") = 24.00'	2076904.84	460354.77
MES–3	INV IN (24") = 25.80'	2076950.31	460246.23

DAVID JOHN PRAH LICENSE NO. 43393 STATE OF FLORIDA PROFESSIONAL ENGINEER

DATE:
DAVID J PRAH
PE NO. 43393

REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: J. WITTIG
DRAWN BY: C. SCOTT
SHEET CHK'D BY: B. WILLIAMS
CROSS CHK'D BY: D. PRAH
APPROVED BY: J. WITTIG
DATE: DECEMBER 2020

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JEA

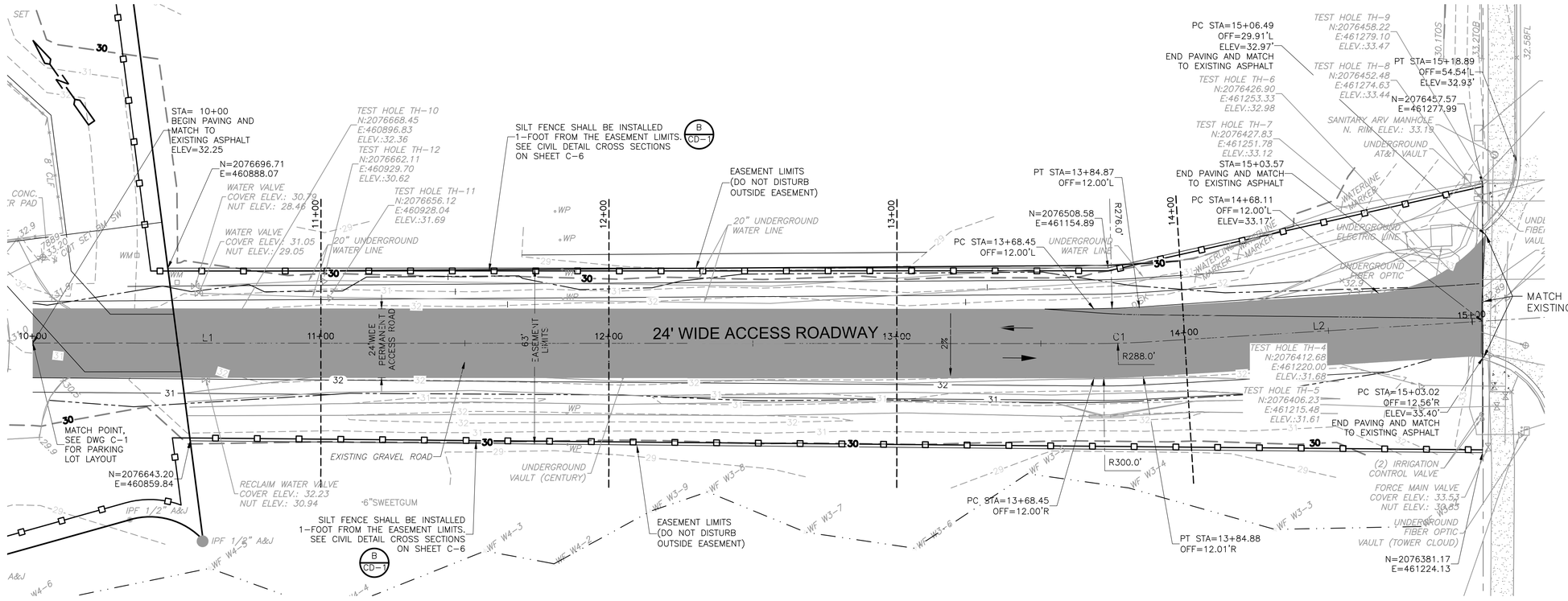
RIVERTOWN WATER TREATMENT PLANT PROJECT

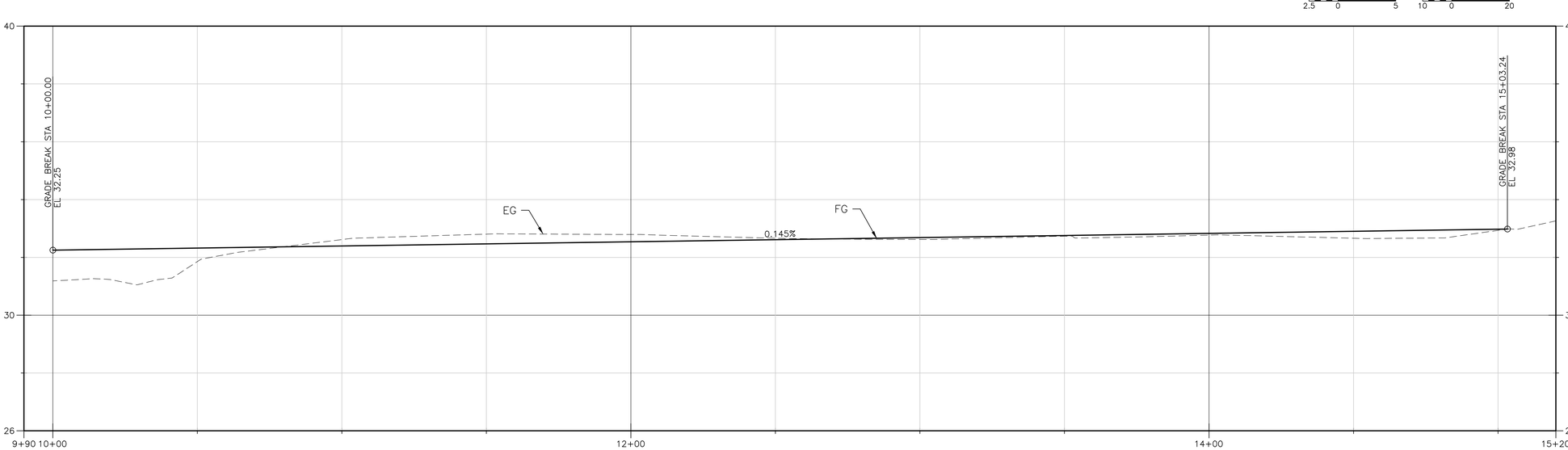
PAVING, GRADING AND DRAINAGE

PROJECT NO. 6103–237938
FILE NAME: C004GRPL.DWG

SHEET NO.
C-4

ISSUED FOR BID





GENERAL NOTES

CLEARING AND GRUBBING:

1. PERFORM IN GENERAL ACCORDANCE WITH THE LATEST EDITION OF THE FDOT STANDARD SPECIFICATIONS SECTION 110–CLEARING AND GRUBBING – UNLESS SPECIFIED OTHERWISE HEREIN.
2. CLEAR AND GRUB ONLY WITHIN THE SILT FENCE AS SHOWN ON THE DRAWINGS.
3. DO NOT STRIP TOPSOIL UNTIL ALL CLEARING AND GRUBBING IS COMPLETE. STOCKPILE STRIPPING FOR USE AS FINISHED TOPSOIL.
4. DISPOSE ALL DEBRIS FROM CLEARING AND GRUBBING OFFSITE IN LOCATIONS THAT ARE APPROVED BY FEDERAL, STATE, AND LOCAL AUTHORITIES, BURIAL OR BURNING OF DEBRIS ONSITE IS NO ALLOWED.

SUBGRADE PREPARATION:

1. PERFORM APPLICABLE TASKS IN GENERAL ACCORDANCE WITH THE LATEST EDITION OF THE FDOT STANDARD SPECIFICATIONS SECTION 120 – EXCAVATION AND EMBANKMENT – UNLESS SPECIFIED OTHERWISE HEREIN.
2. CONTRACTOR SHALL FURNISH, INSTALL, AND OPERATE GROUNDWATER CONTROL AND LOWERING MEASURES TO LOWER THE GROUNDWATER A MINIMUM OF 2 FEET BELOW THE BOTTOM OF EXCAVATION SUCH THAT COMPACTION REQUIREMENTS ARE ACHIEVED AS SPECIFIED.
3. BRING SUBGRADE TO PROPER GRADE AND CROSS–SECTION IN A UNIFORMLY COMPACTED SURFACE.
4. AFTER THE EXCAVATION GRADE IS OBTAINED AND IN THE PRESENCE OF THE ENGINEER, PROOF–ROLL THE SUBGRADE WITH A LOADED HAUL TRUCK (OR OTHER HEAVY EQUIPMENT ACCEPTABLE TO THE ENGINEER). TO IDENTIFY AREAS OF WEAK OR SOFT SUBGRADE. SUBGRADE SHALL BE FIRM AND UNYIELDING PRIOR TO COMMENCING PLACEMENT OF SUBSEQUENT FILL LIFTS.
5. THE TOP 12" INCHES OF SOIL BENEATH THE BASE COURSE SHALL BE STABILIZED SUBGRADE WITH A MINIMUM LIMEROCK BEARING RATIO (LBR) VALUE OF 40 AND COMPACTED TO AT LEAST 98 PERCENT RELATIVE COMPACTION AS DETERMINED BY ASTM D1557.
6. PERFORM FILL AND BACKFILL IN GENERAL ACCORDANCE WITH THE LATEST EDITION OF THE FDOT STANDARD SPECIFICATIONS SECTION 120 – EXCAVATION AND EMBANKMENT – UNLESS SPECIFIED OTHERWISE HEREIN.
7. PRODUCTS: EMBANKMENT FILL SHALL BE SAND TO SILTY SAND, WITH NO MORE THAN 5% NONPLASTIC FINES, CLASSIFIED AS SP TO SM IN ACCORDANCE WITH THE UNIFIED SOIL CLASSIFICATION SYSTEM (ASTM D2487).
8. PLACEMENT: PLACE AND COMPACT FILL ACROSS FULL WIDTH OF EMBANKMENT. FILL MATERIAL SHALL BE PLACED IN CONTINUOUS HORIZONTAL LIFTS EXTENDING THE FULL WIDTH OD THE CROSS SECTION WHERE PRACTICABLE.
9. LIFT THICKNESS: NOT TO EXCEED 12–INCHES LOOSE LIFT THICKNESS.
10. COMPACTION: COMPACT EACH LIFT TO A MINIMUM OF 95 PERCENT RELATIVE COMPACTION AS DETERMINED IN ACCORDANCE WITH ASTM D1557.

TESTING:

1. A. MODIFIED PROCTOR MAXIMUM DENSITY (ASTM D1557): ONE PER SOIL TYPE.
   B. SOIL CLASSIFICATION (ASTM D6913): ONE PER MODIFIED PROCTOR MAXIMUM DENSITY.
   C. DENSITY TESTING (ASTM D6928): TEST THE FULL THICKNESS OF THE LIFT A MINIMUM OF 2 TEST PER LIFT OR EVERY 500 CUBIC YARDS, WHICHEVER IS GREATER.
2. SUBMIT TEST RESULTS AS SOON AS AVAILABLE TO OWNER OR ENGINEER.

GRADING:

1. SHAPE, TRIM AND FINISHED SLOPES TO CONFORM WITH LINES, GRADES, AND CROSS–SECTIONS SHOWN, WITH PROPER ALLOWANCE FOR TOPSOIL OR SLOPE PROTECTION, WHERE SHOWN.
2. FINISH SLOPES WITH A MINIMUM OF 4 INCHES OF TOP SOIL IN ACCORDANCE WITH FDOT STANDARD SPECIFICATION SECTION 162 AND 987.
3. PRIOR TO COMMENCING ANY EXCAVATION OR GRADING, THE CONTRACTOR SHALL OBTAIN ALL GEOTECHNICAL AND TOPOGRAPHIC SURVEY DATA AND LOCATIONS OF ABOVE GROUND AND UNDERGROUND UTILITIES. SHOULD THE CONTRACTOR DISCOVER ANY INACCURACIES ERRORS, OR OMISSIONS IN THE SURVEY DATA, HE SHALL IMMEDIATELY NOTIFY THE DESIGN ENGINEER IN ORDER THAT PROPER ADJUSTMENTS CAN BE ANTICIPATED AND ORDERED.

SOD AND STAKE

1. SOD AND STAKE SIDE SLOPES OF NEWLY CONSTRUCTED SITE AREA AND ACCESS ROAD. SOD SHALL EXTENDED FROM THE TOE OF THE SLOPE TO 3' BEYOND THE INSIDE OF TOP OF SLOPE ALONG THE PERIMETER OF THE NEWLY CONSTRUCTED RAISED SITE. RESTORE ANY DISTURBED AREAS OF EXISTING RIGHT OF WAY. SEE CIVIL SECTIONS ON DRAWINGS SP–C–301 FOR GENERAL GUIDANCE ON SODDING LIMITS.
2. REFER TO LANDSCAPE DRAWINGS FOR TREE REMOVAL AND PROTECTION PLAN.

DAVID JOHN PRAH
LICENSE
NO. 43393
STATE OF FLORIDA
PROFESSIONAL ENGINEER

DATE:
DAVID J PRAH
PE NO. 43393

REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: EV
DRAWN BY: RF
SHEET CHK'D BY: SS
CROSS CHK'D BY: D. PRAH
APPROVED BY: I. POLEMATIDIS
DATE: DECEMBER 2020

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JEA

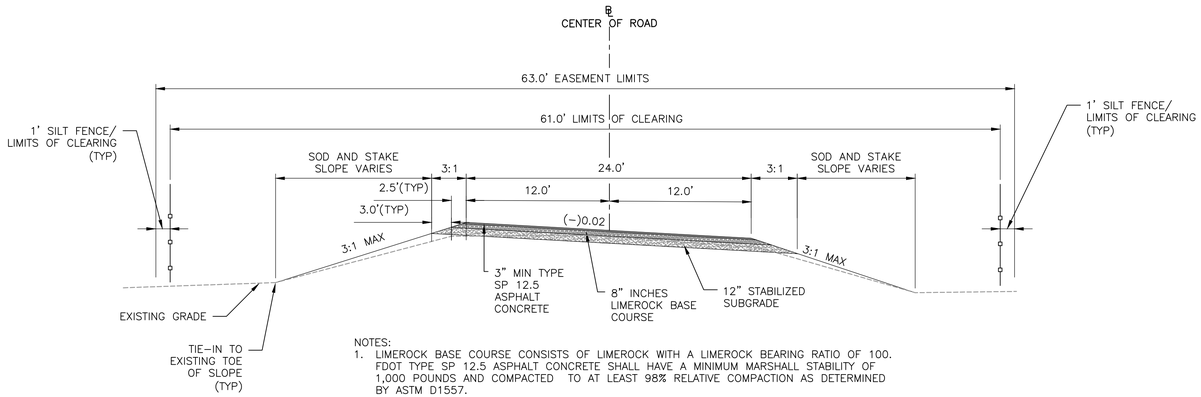
RIVERTOWN WATER TREATMENT PLANT PROJECT

WTP ENTRANCE ROAD AND ACCESS DRIVEWAY

PROJECT NO. 6103–237938
FILE NAME: C005STPL1.DWG

SHEET NO.
C-5

ISSUED FOR BID

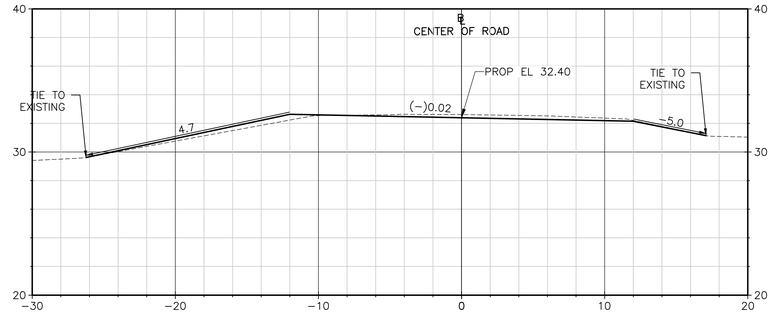


NOTES:
1. LIMEROCK BASE COURSE CONSISTS OF LIMEROCK WITH A LIMEROCK BEARING RATIO OF 100. FDOT TYPE SP 12.5 ASPHALT CONCRETE SHALL HAVE A MINIMUM MARSHALL STABILITY OF 1,000 POUNDS AND COMPACTED TO AT LEAST 98% RELATIVE COMPACTION AS DETERMINED BY ASTM D1557.
2. PERIMETER ROAD SIDE SLOPES VARY, SEE ELEVATIONS ON SHEET C−4 FOR DETAILS.

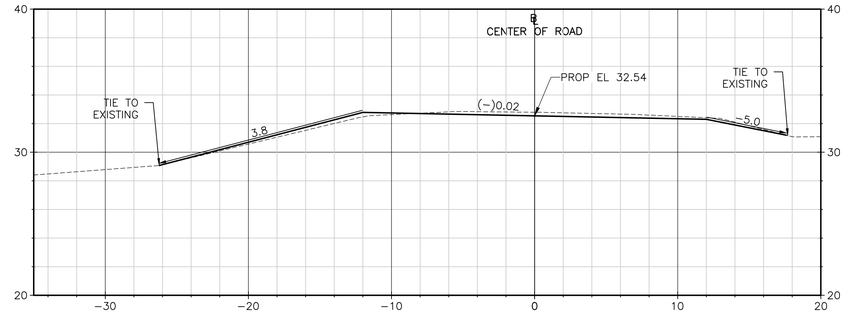
1 PLANT ACCESS DRIVEWAY AND PERIMETER ROAD TYPICAL SECTION
NTS

HORIZONTAL ALIGNMENT DATA

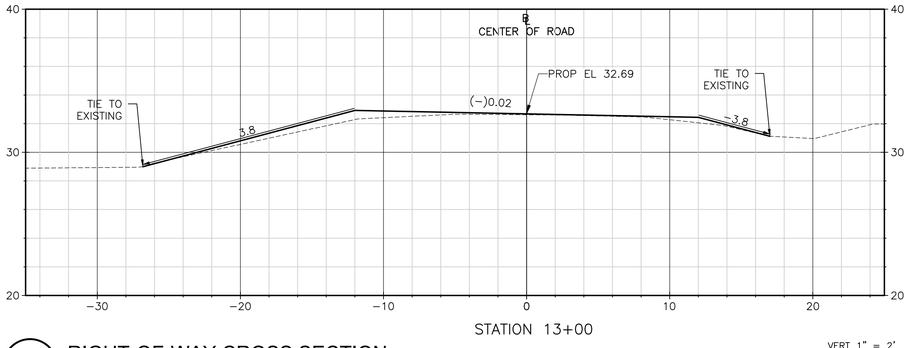
NO. NUMBER	PARAMETER	CONSTRAINT	LENGTH	RADIUS	DIRECTION	START STATION	END STATION	DELTA ANGLE	CHORD LENGTH	DEGREE OF CURVES BY ARC
L1	LINE	TWO POINTS	368.448'		46' 11.53"E	10+00.00'	13+68.45'			
C1	CURVE	RADIUS	16.453'	288.000'		13+68.45'	13+84.90'	3.2732 (D)	16.451'	19.8944 (D)
L2	LINE	TWO POINTS	182.317'		19' 52.61"E	13+84.90'	15+67.22'			



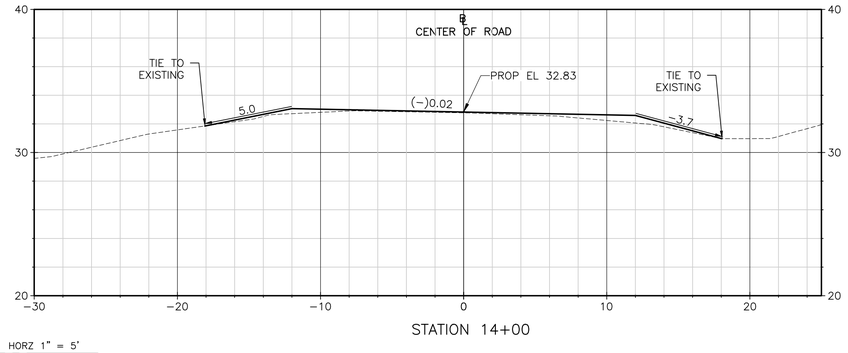
STATION 11+00



STATION 12+00



STATION 13+00



STATION 14+00

2 RIGHT-OF-WAY CROSS SECTION
SCALE=30

VERT 1" = 2'
1 0 2

HORZ 1" = 5'
2.5 0 5

REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: EV
DRAWN BY: RF
SHEET CHK'D BY: SS
CROSS CHK'D BY: D. PRAH
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JEA

RIVERTOWN WATER TREATMENT PLANT PROJECT

WTP ENTRANCE ROAD AND ACCESS DRIVEWAY SECTIONS

DAVID JOHN PRAH
LICENSE
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STATE OF
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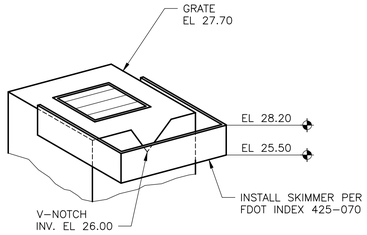
PROFESSIONAL ENGINEER

DATE:
DAVID J. PRAH
PE NO. 43393

PROJECT NO. 6103−237938
FILE NAME: C005STPL1.DWG

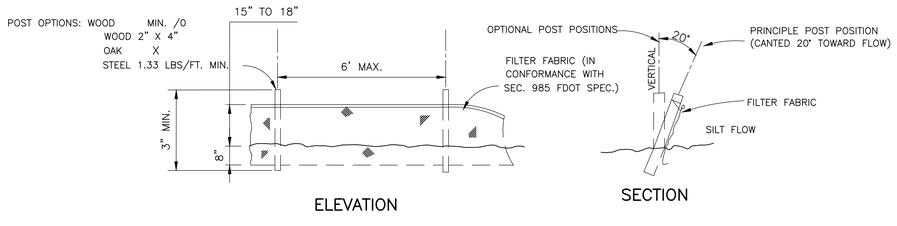
SHEET NO.
C-6

ISSUED FOR BID



PROPOSED POND DBI

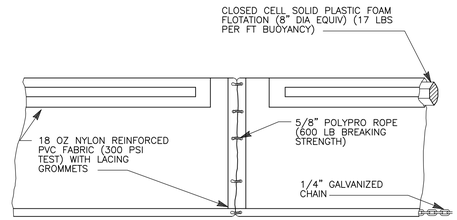
DETAIL A
NTS C-5



ELEVATION SECTION

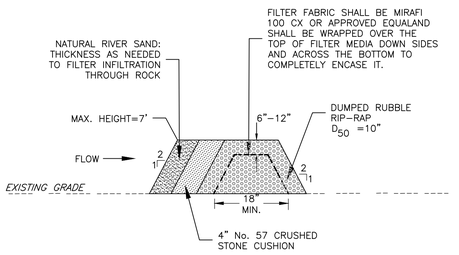
FDOT 102 TYPE III SILT FENCE

DETAIL B
NTS –



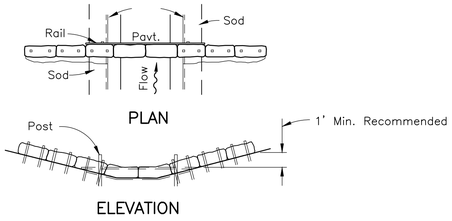
FLOATING TURBIDITY BARRIER
FDOT INDEX 103 TYPE II

DETAIL C
NTS –

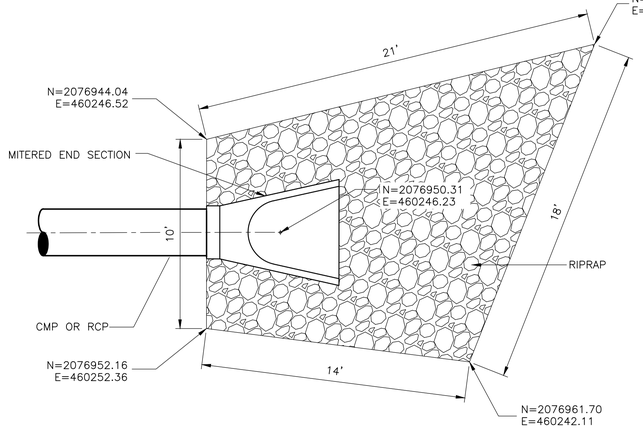


TEMPORARY GRAVEL FILTER WEIR

DETAIL D
NTS –

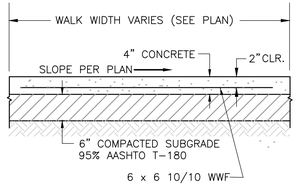


SYNTHETIC BALES OR BALE
TYPE BARRIERS FOR PAVED DITCHES

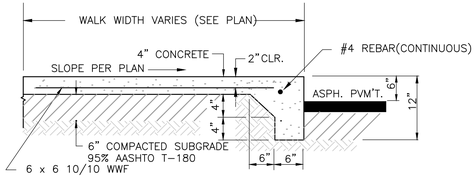


RIPRAP APRON

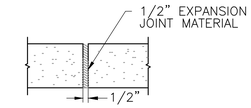
DETAIL F
NTS –



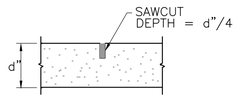
CONCRETE WALK



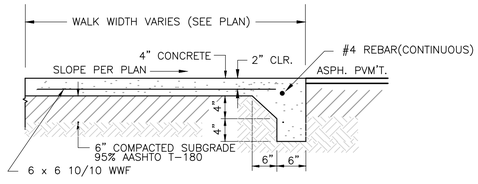
THICKENED EDGE RAISED CONCRETE WALK



EXPANSION JOINT



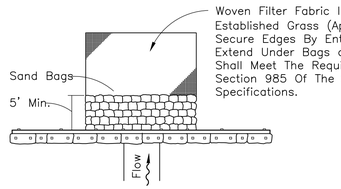
CONTRACTION JOINT

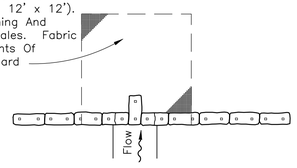


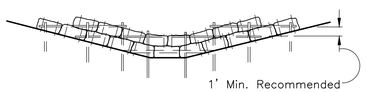
THICKENED EDGE FLUSH CONCRETE WALK

NOTES:

1. 4" THICK SIDEWALK W/LIGHT BROOM FINISH AND TROWELED EDGE.
2. ALL CONCRETE SIDEWALKS SHALL HAVE A FULL 1/2" EXPANSION JOINT AT A MAXIMUM DISTANCE OF 40 LINEAR FEET AND A SAW CUT OR FORMED DUMMY CONTRACTION JOINT AT EVENLY SPACED INTERVALS NOT TO EXCEED 8 LINEAR FEET.

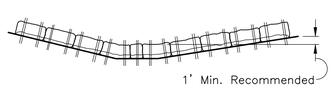






Anchor Top Bales To Lower Bales With 2 Stakes Per Bale.

ELEVATION
TYPE II



ELEVATION
TYPE I

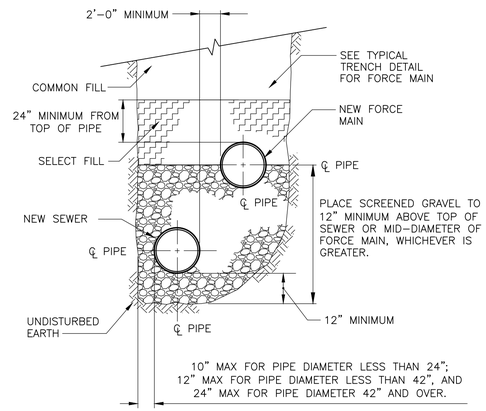
SYNTHETIC BALES OR BALE TYPE BARRIERS FOR UNPAVED DITCHED

NOTES FOR SYNTHETIC BALES OR BALE TYPE BARRIERS

1. Type I and II Synthetic Barrier should be spaced in accordance with Chart 1, sheet 1.
2. Bales shall be anchored with 2–1" x 2" (or 1" dia.) x 4' wood stakes. Stakes of other material or shape providing equivalent strength may be used if approved by the Engineer.
3. Rails and posts shall be 2" x 4" wood. Other materials providing equivalent strength may be used if approved by the Engineer.
4. Adjacent bales shall be butted firmly together.
5. Where used in conjunction with silt fence, bales shall be placed on the upstream side of the fence.
6. Bales to be paid for under the contract unit price for Synthetic Bales, LF. The unit price shall include the cost of filter fabric for Type I and II Barriers. Sandbags shall be paid for under the unit price for Sandbagging. CY. Rock bags to be paid for under the contract unit price for Rock Bags, EA.

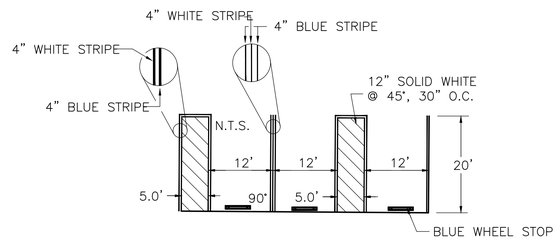
FDOT 102 SYNTHETIC BARRIER

DETAIL E
NTS –



COMMON TRENCH FOR SEWER AND FORCE MAIN

DETAIL H
NTS –

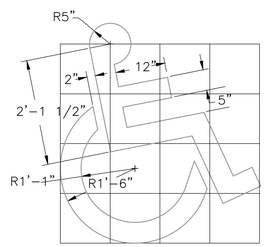


NOTE:
HANDICAP SPACE IS TO BE OUTLINED
IN A 4" BLUE PAINTED STRIPE.

TYPICAL DISABLED PARKING SECTION

DISABLED PARKING

DETAIL I
NTS –



HANDICAP SYMBOL DETAIL

TYPICAL SIDEWALK AND MANWAY DOOR LANDING

DETAIL G
NTS –

REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: J WITTIG
DRAWN BY: C. SCOTT
SHEET CHK'D BY: B. WILLIAMS
CROSS CHK'D BY: D. PRAH
APPROVED BY: J. WITTIG
DATE: DECEMBER 2020

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EB0000072 AAC001992 LC26000188

JEA

RIVERTOWN WATER TREATMENT PLANT PROJECT

MISCELLANEOUS DETAILS I

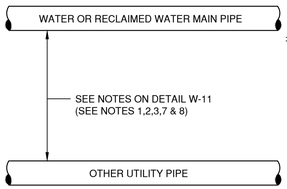
PROJECT NO. 6103-237938
FILE NAME: CD01CDTL.DWG

SHEET NO.
CD-1

DAVID JOHN PRAH LICENSE NO. 43393 STATE OF FLORIDA PROFESSIONAL ENGINEER

DATE:
DAVID J PRAH
PE NO. 43393

ISSUED FOR BID



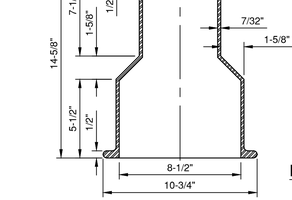
OTHER PIPING TYPE	MINIMUM HORIZONTAL SEPARATION (FEET)
1. GRAVITY SANITARY SEWER	6-10 (NOTE #2)
2. GRAVITY SANITARY SEWER (SPECIAL CASE, NOTE #3 ON DETAIL W-11)	3 (NOTE #2)
3. SEWAGE FORCE MAIN	6-10 (NOTE #2)
4. GRAVITY STORM SEWER	3 (NOTE #3)
5. RECLAIMED WATER	3
6. ELECTRIC, PHONE, CABLE, GAS	2

PLAN VIEW

NOTES:

1. THE PLANTING OF HARDWOOD TREES WITHIN 36 INCHES HORIZONTAL CLEARANCE OF THE MAIN SHALL BE PROHIBITED.
2. THE HORIZONTAL SEPARATION BETWEEN RECLAIMED WATER AND SEWAGE FORCE MAINS OR GRAVITY SANITARY SEWERS IS 2 FEET (MIN).
3. THE HORIZONTAL SEPARATION BETWEEN RECLAIMED WATER AND GRAVITY STORM SEWERS IS 3 FEET PER JEA RULES.

MINIMUM HORIZONTAL SEPARATION REQUIREMENTS



OTHER PIPING TYPE	MINIMUM VERTICAL SEPARATION (INCHES)
1. GRAVITY SANITARY SEWER	6-12 (NOTE 1 & 2)
2. SEWAGE FORCE MAIN	12
3. GRAVITY STORM SEWER	6-12 (NOTE #3)
4. RECLAIMED WATER	12 (NOTE #2)
5. ELECTRIC, PHONE, CABLE, GAS	6

SECTION VIEW

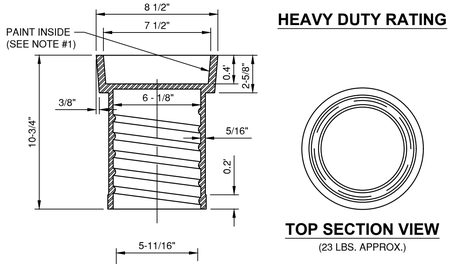
NOTES:

1. IF THE WATER MAIN IS BELOW THE SANITARY GRAVITY SEWER PIPE, RECLAIMED WATER MAIN OR STORM GRAVITY SEWER PIPE, THEN A MINIMUM OF 12" VERTICAL SEPARATION IS REQUIRED.
2. THE VERTICAL SEPARATION BETWEEN RECLAIMED WATER AND POTABLE WATER, GRAVITY SANITARY SEWER, OR SEWAGE FORCE MAIN IS 12-INCHES (MIN.)
3. THE VERTICAL SEPARATION BETWEEN RECLAIMED WATER AND GRAVITY STORM SEWER IS 6-INCHES (MIN.) PER JEA RULES.

MINIMUM VERTICAL SEPARATION REQUIREMENTS

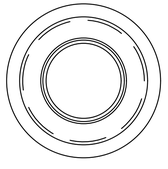
MINIMUM SEPARATION REQUIREMENTS FOR WATER MAINS

SEPTEMBER 2011 — DETAIL A — NTS — PLATE W-10



HEAVY DUTY RATING

TOP SECTION VIEW
(23 LBS. APPROX.)



BOTTOM SECTION VIEW
(26 LBS. APPROX.)

NOTES:

1. PAINT THE INSIDE OF THE TOP SECTION OF THE BOX WITH APPLICABLE COLOR (BLUE OR PURPLE)
2. HEAVY DUTY RATING (TOTAL WEIGHT APPROX. 50 LBS.).

WATER SYSTEM VALVE BOX

JANUARY 2015 — DETAIL D — NTS — PLATE W-17

HORIZONTAL & VERTICAL SEPARATION REQUIREMENTS

PROPOSED UTILITY

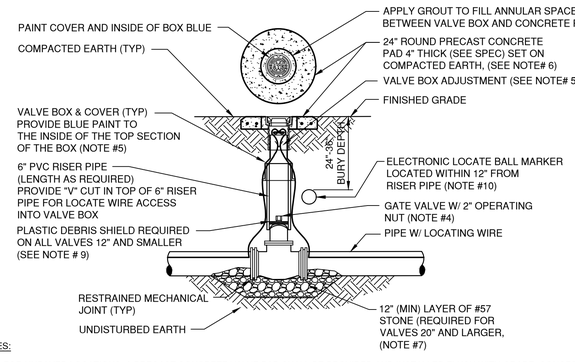
CONFLICTING UTILITY	POTABLE WATER			WASTEWATER			RECLAIMED WATER			VACUUM SEWERS		
	HORIZ.	VERT.	JOINT SPACING*	HORIZ.	VERT.	JOINT SPACING*	HORIZ.	VERT.	JOINT SPACING*	HORIZ.	VERT.	JOINT SPACING*
POTABLE WATER	3' NOTE 1	6"	3' NOTE 2	6' to 10'	12" NOTE 5	6' NOTE 2	3'	6"	6' NOTE 2	3' to 10'	12"	3' NOTE 2
RECLAIMED WATER	3'	6"	6' NOTE 2	3' NOTE 1	3' NOTE 1	3' NOTE 2	3'	6"	6' NOTE 2	3' NOTE 1	6"	3' NOTE 2
WASTEWATER (GRAVITY AND FORCE MAIN)	6' to 10'	12"	6' NOTE 2	3' NOTE 1	3' NOTE 1	6"	3' NOTE 1	6"	3' NOTE 2	3' NOTE 1	6"	3' NOTE 2
VACUUM SEWERS	3' to 10'	12"	3' NOTE 2	3' NOTE 1	3' NOTE 1	6"	3' NOTE 1	6"	3' NOTE 2	3' NOTE 1	6"	3' NOTE 2
RIGHT OF WAYS	3' NOTE 1	N/A	N/A	3' NOTE 1	N/A	N/A	3' NOTE 1	N/A	N/A	3' NOTE 1	N/A	N/A
PERMANENT STRUCTURES (SIGNS, TREES, POLES, ETC.)	3' NOTE 1	N/A	N/A	3' NOTE 1	N/A	N/A	3' NOTE 1	N/A	N/A	3' NOTE 1	N/A	N/A
STORM SEWERS	3' NOTE 1	12"	3' NOTE 2	3' NOTE 1	6"	3' NOTE 2	3' NOTE 1	6"	3' NOTE 2	3' NOTE 1	6"	3' NOTE 2
ALL OTHER UTILITIES	3' NOTE 1	12"	3' NOTE 2	3' NOTE 1	6"	3' NOTE 2	3' NOTE 1	6"	3' NOTE 2	3' NOTE 1	6"	3' NOTE 2

NOTES:

1. THE VERTICAL SEPARATION BETWEEN RECLAIMED WATER AND GRAVITY STORM SEWER IS 6-INCHES (MIN.) PER JEA RULES.THIS SEPARATION REQUIREMENT IS TO PROVIDE ACCESSIBILITY FOR CONSTRUCTION AND MAINTENANCE. THREE FEET OF HORIZONTAL SEPARATION IS THE MINIMUM FOR PIPES WITH THREE FEET OF COVER. FOR PIPES INSTALLED AT GREATER DEPTH, PROVIDE AN ADDITIONAL FOOT OF SEPARATION FOR EACH ADDITIONAL FOOT OF DEPTH.
2. THE MINIMUM JOINT SPACING REQUIRED FROM CROSSING FROM OTHER UTILITIES WHILE STILL MAINTAINING MINIMUM VERTICAL SEPARATION.
3. DISTANCES GIVEN ARE FROM OUTSIDE OF PIPE TO OUTSIDE OF PIPE.
4. NO WATER PIPE SHALL PASS THROUGH OR COME INTO CONTACT WITH ANY PART OF SANITARY OR STORM WATER MANHOLE OR STRUCTURES.
5. WATER MAIN SHOULD CROSS ABOVE OTHER PIPES WHENEVER POSSIBLE. WHEN WATER MAIN MUST BE BELOW OTHER UTILITY PIPING, THE MINIMUM SEPARATION SHALL BE 12 INCHES.

SEPARATION REQUIREMENTS FOR WATER, WASTEWATER AND RECLAIMED WATER MAINS

JANUARY 2015 — DETAIL B — NTS — PLATE W-10



NOTES:

1. FOR UNPAVED LOCATIONS, A PRECAST CONCRETE VALVE PAD SHALL BE PROVIDED AND INSTALLED FLUSH WITH GRADE. CONCRETE PAD IS NOT REQUIRED FOR VALVE LOCATED IN THE ROADWAY, UNLESS SHOWN OR NOTED OTHERWISE.
2. LOCATING WIRE IS REQUIRED ON ALL PRESSURE PIPING (SEE DETAILW-44).
3. A "V" CUT SHALL BE CARVED IN THE CURB CLOSEST/ADJACENT TO ALL BELOW GRADE VALVES. THE "V" CUT IS TO BE PAINTED GREEN.
4. IN PAVED AREAS, INSTALL VALVE AT A DEPTH TO ALLOW A 12" MIN. DISTANCE BETWEEN THE VALVE COVER PLATE AND THE TOP OF THE VALVE OPERATING NUT. OUTSIDE OF PAVED AREAS (GRASS), INSTALL VALVE AT A DEPTH TO ALLOW A 6" MINIMUM DISTANCE BETWEEN THE VALVE COVER AND THE TOP OF THE VALVE OPERATING NUT. OPERATING NUT/STEM EXTENSION SHALL BE PROVIDED (WHERE APPLICABLE) SO THAT THE OPERATING NUT WILL BE NO MORE THAN 30 INCHES BELOW FINISHED GRADE.
5. FOR NEW CONSTRUCTION, THE VALVE BOX SHALL BE ADJUSTED TO MIDRANGE TO ALLOW FOR FUTURE BOX ADJUSTMENTS. ROUTE LOCATE WIRES THRU A "V" CUT IN THE TOP OF THE 6" PVC RISER PIPE FOR LOCATE WIRE ACCESS INTO VALVE BOX. THE LOCATE WIRES WITH A 12" LONG PIG-TAIL AT THE TOP SHALL BE CONNECTED TOGETHER WITH A WIRE NUT.
6. BRASS IDENTIFICATION TAG INDICATING "WATER", VALVE SIZE, DIRECTION AND TURNS TO OPEN & VALVE TYPE. PROVIDE A ¼" HOLE IN BRASS TAG AND ATTACH TAG (TWIST WIRE AROUND TAG) TO THE END OF THE LOCATE WIRE. TAGS ARE NOT REQUIRED ON VALVES INSTALLED ON FIRE HYDRANT BRANCH LINES.
7. IN LIEU OF PRECAST CONCRETE PAD, A 6" THICK X 24" (ROUND OR SQUARE) POURED CONCRETE PAD W/2 - #4 REBAR AROUND PERIMETER, MAY BE USED.
8. GRAVEL SHALL BE PROVIDED UNDER ALL VALVES 20" AND LARGER. THE MINIMUM VERTICAL LIMIT OF GRAVEL IS 12" UNDER THE VALVE UP TO ⅓ THE OVERALL HEIGHT OF THE VALVE.
9. FOR VALVES 12 INCH AND SMALLER, PROVIDE A WHITE OR BLACK PLASTIC DEBRIS SHIELD WHICH INSTALLS BELOW THE OPERATING NUT. THIS SHIELD SHALL CENTER THE RISER PIPE BOX OVER THE OPERATING NUT AND MINIMIZE INFILTRATION. SHIELD SHALL BE BY AFC, BOXLOK OR APPROVED EQUAL.
10. ALL VALVES SHALL BE INSTALLED WITH AN ELECTRIC LOCATE MARKER. MARKER SHALL BE 4" DIA. COLOR CODED BALL MARKER (3M-1403XR FOR WATER AND 1408XR FOR RECLAIMED WATER).

WATER VALVE INSTALLATION DETAIL

JANUARY 2015 — DETAIL E — NTS — PLATE W-18

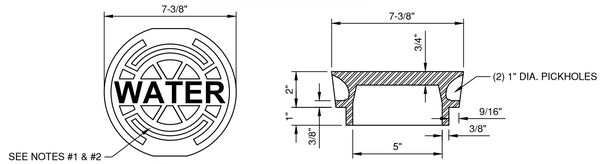
WATER MAIN AND NON-WATER MAIN SEPARATION REQUIREMENTS - NOTES

1. IT IS REQUIRED THAT " WATER MAINS" BE INSTALLED, CLEANED, DISINFECTED AND HAVE A SATISFACTORY BACTERIOLOGICAL SURVEY PERFORMED IN ACCORDANCE WITH THE LATEST APPLICABLE AWWA STANDARDS, CHAPTER 62-555, F.A.C. AND LATEST JEA WATER AND SEWER STANDARDS. FOR THE PURPOSE OF THIS SECTION, THE PHRASE " WATER MAINS" SHALL MEAN MAINS, INCLUDING TREATMENT PLANT PROCESS PIPING, CONVEYING EITHER RAW, PARTIALLY TREATED, OR FINISHED DRINKING WATER; FIRE HYDRANT LEADS; AND SERVICE LINES THAT HAVE AN INSIDE DIAMETER OF THREE (3) INCHES OR GREATER. IN ADDITION, THE PHRASE " RECLAIMED WATER" REFERS TO THE WATER REGULATED UNDER PART III OF CHAPTER 62-610, F.A.C.
2. NEW OR RELOCATED, UNDERGROUND WATER MAINS SHALL BE LAID TO PROVIDE A HORIZONTAL DISTANCE OF AT LEAST THREE (3) 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.
3. NEW OR RELOCATED, UNDERGROUND WATER MAINS SHALL BE LAID TO PROVIDE A HORIZONTAL DISTANCE OF AT LEAST SIX (6) FEET, AND PREFERABLY TEN (10) 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. THE MINIMUM HORIZONTAL SEPARATION DISTANCE BETWEEN WATER MAINS AND GRAVITY-TYPE SANITARY SEWERS MAY BE REDUCED TO THREE (3) FEET WHERE THE BOTTOM OF THE WATER MAIN IS LAID AT LEAST SIX (6) INCHES ABOVE THE TOP OF THE SEWER (SPECIAL CASE).
4. 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 (6) INCHES, AND PREFERABLE TWELVE (12) INCHES, ABOVE OR AT LEAST TWELVE (12) INCHES BELOW THE OUTSIDE OF THE OTHER PIPELINE. HOWEVER, IT IS PREFERABLE TO LAY THE WATER MAIN ABOVE THE OTHER PIPELINE.
5. 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 A LEAST TWELVE (12) INCHES ABOVE OR BELOW THE OUTSIDE OF THE OTHER PIPELINE. HOWEVER, IT IS PREFERABLE TO LAY THE WATER MAIN ABOVE THE OTHER PIPELINE.
6. AT THE UTILITY CROSSINGS DESCRIBED IN NOTES 4 AND 5 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 (3) FEET FROM ALL JOINTS IN VACUUM-TYPE SANITARY SEWERS, STORM SEWERS, STORMWATER FORCE MAINS, OR PIPELINES CONVEYING RECLAIMED WATER, AND AT LEAST SIX (6) FEET FROM ALL JOINTS IN GRAVITY OR PRESSURE-TYPE SANITARY SEWERS, WASTEWATER FORCE MAINS, OR PIPELINE CONVEYING RECLAIMED WATER.
7. NEW OR RELOCATED FIRE HYDRANTS SHALL BE LOCATED SO THAT THE HYDRANTS ARE AT LEAST THREE (3) FEET FROM ANY EXISTING OR PROPOSED STORM SEWER, STORMWATER FORCE MAIN, OR PIPELINE CONVEYING RECLAIMED WATER; AT LEAST THREE (3) FEET, AND PREFERABLY TEN (10) FEET, FROM ANY EXISTING OR PROPOSED VACUUM-TYPE SANITARY SEWER; AT LEAST SIX (6) FEET, AND PREFERABLY TEN (10) FEET, FROM ANY EXISTING OR PROPOSED GRAVITY OR PRESSURE-TYPE SANITARY SEWER OR WASTEWATER FORCE MAIN.
8. WHERE AN UNDERGROUND WATER MAIN IS BEING LAID LESS THAN THE REQUIRED MINIMUM HORIZONTAL DISTANCE FROM ANOTHER PIPELINE AND WHERE AN UNDERGROUND WATER MAIN IS CROSSING ANOTHER PIPELINE AND JOINTS IN THE WATER MAIN ARE BEING LOCATED LESS THAN THE REQUIRED MINIMUM DISTANCE FROM JOINTS IN THE OTHER PIPELINE, THE CONTRACTOR SHALL CONSULT THE DESIGN ENGINEER TO OBTAIN APPROVAL OF ANY ALTERNATIVE CONSTRUCTION METHODS, PRIOR TO CONSTRUCTION.

NOTES ON UTILITY SEPARATION REQUIREMENTS

JANUARY 2015 — DETAIL C — NTS — PLATE W-11

HEAVY DUTY RATING

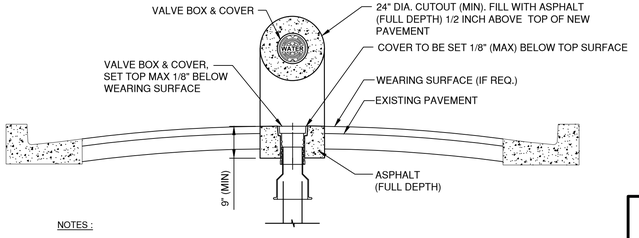


NOTES:

1. PAINT TOP OF THE COVER WITH ENAMEL PAINT (BLUE COLOR) FOR WATER.
2. FOR "REUSE" PAINT TOP PANTONE PURPLE.
3. LID WEIGHT: APPROX. 12 LBS.

WATER SYSTEM VALVE BOX COVER

JANUARY 2015 — DETAIL F — NTS — PLATE W-16



NOTES :

1. PROVIDE FULL DEPTH ASPHALT 1/2 INCH ABOVE TOP OF NEW PAVEMENT LEVEL, TO ALLOW FOR FUTURE ASPHALT MATERIAL COMPACTION. PLACE AND COMPACT ASPHALT IN 2" (MAX) LIFTS.

WATER VALVE JACKET ADJUSTED TO ROADWAY AFTER RE-SURFACING

JANUARY 2015 — DETAIL G — NTS — PLATE W-19

DAVID J PRAH LICENSE NO. 43393 STATE OF FLORIDA PROFESSIONAL ENGINEER

DATE:
DAVID J PRAH
PE NO. 43393

REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: C. CERRETA
DRAWN BY: C. SCOTT
SHEET CHK'D BY: B. WILLIAMS
CROSS CHK'D BY: D. PRAH
APPROVED BY: Y. POLEMATIDIS
DATE: DECEMBER 2020

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JEA

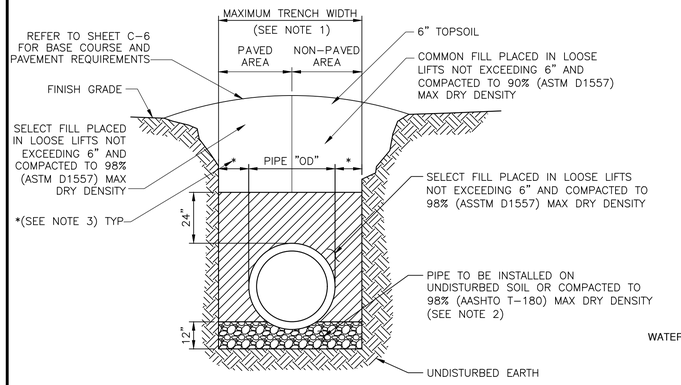
RIVERTOWN WATER TREATMENT PLANT PROJECT

MISCELLANEOUS DETAILS II

PROJECT NO. 6103-237938
FILE NAME: CDO2MCDT.DWG

SHEET NO.
CD-2

ISSUED FOR BID



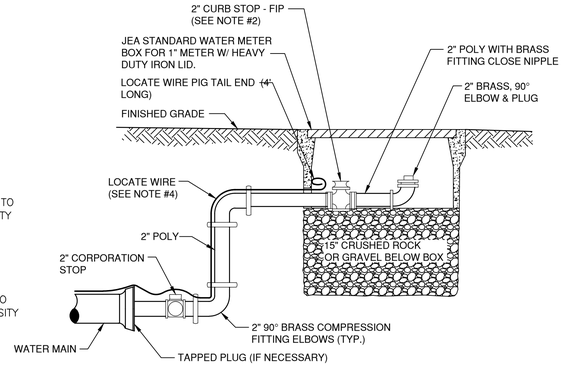
TYPICAL TRENCH

NOTES:

1. TRENCH SIDES SHALL BE APPROXIMATELY VERTICAL BETWEEN AN ELEVATION OF 1 FOOT ABOVE THE TOP OF THE PIPE AND THE CENTER LINE OF THE PIPE; OTHERWISE, TRENCH SIDES SHALL BE AS VERTICAL AS POSSIBLE OR AS REQUIRED BY OSHA STANDARDS. REFER TO THE MEASUREMENT AND PAYMENT SECTION (SECTION #801, PARAGRAPH #4)) TO DETERMINE MAXIMUM PAYLINE WIDTHS.
2. 10" MAX FOR PIPE DIAMETER LESS THAN 24"; 12" MAX FOR PIPE DIAMETER LESS THAN 42", AND 24" MAX FOR PIPE DIAMETER 42" AND OVER.

OPEN CUT TRENCH FOR PRESSURE PIPE

DETAIL A / NTS



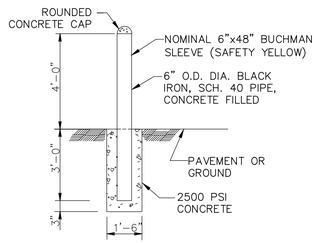
NOTES:

1. PIPE SHALL BE POLYETHYLENE. FITTINGS SHALL BE BRASS.
2. THE 2" CURB STOP SHALL BE ALL BRONZE. FITTINGS SHALL BE BRASS.
3. ANY RECLAIMED WATER VALVE SHALL HAVE RECLAIMED EMBLEM.
4. LOCATE WIRE FOR 10' OR GREATER IN LENGTH.
5. CANNOT BE PLACED UNDER CONCRETE OR PAVEMENT.
6. PLACE 2 FEET PAST LAST WATER MAIN SERVICE CONNECTION.

FLUSHING VALVE BELOW GRADE

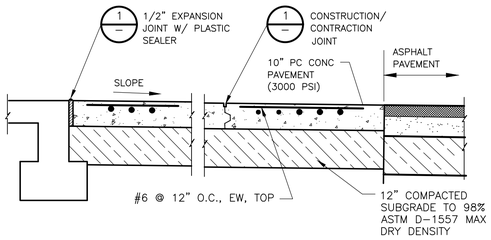
PLATE W-28

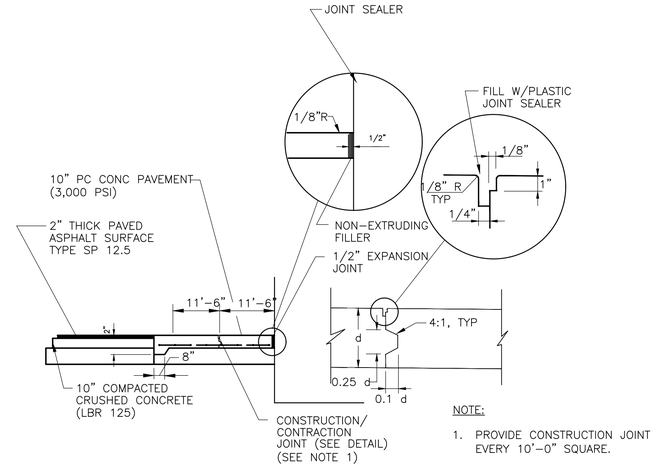
DETAIL B / NTS



FIXED BOLLARD

DETAIL C / NTS





NOTE:

1. PROVIDE CONSTRUCTION JOINT EVERY 10'-0" SQUARE.

CONCRETE JOINT DETAIL 1

HEAVY DUTY CONCRETE PAVEMENT

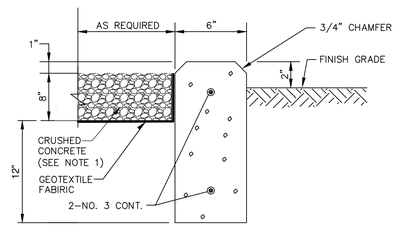
DETAIL D / NTS

NOTES:

1. PAINT WITH HIGHLY VISIBLE COLOR (DETERMINED BY OWNER). BELOW BOTTOM OF FINISHED FLOOR ONLY PRIMER AND SINGLE COAT OF PAINT REQUIRED.
2. IF AUGER OF HOLE CREATES A VOID IN THE SUBGRADE BENEATH SLAB, CONTRACTOR SHALL DETERMINE EXTENT OF UNDERMINING AND REPLACE WITH 2500 PSI GROUT/CONCRETE BY DRILLING 2" DIA PORT HOLES IN SLAB.

REMOVABLE BOLLARD DETAIL

DETAIL G / NTS

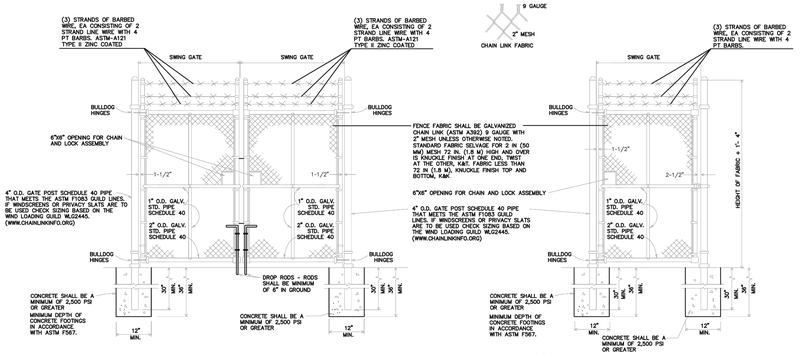


NOTE:

1. CRUSHED CONCRETE SHALL BE IN ACCORDANCE WITH FDOT STANDARD SPECIFICATION SECTION 285, OPTIONAL BASE COURSE, RECYCLED CONCRETE AGGREGATE (RCA) AND SECTION 911, CASE AND STABILIZED BASE MATERIALS.

CONTAINMENT CURB

DETAIL H / NTS

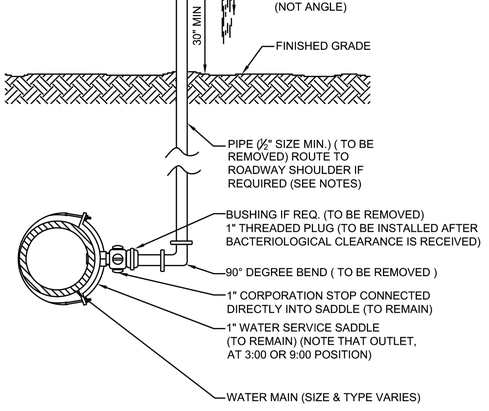


1 FENCE – DOUBLE SWING GATE / NO TO SCALE

2 FENCE – SINGLE SWING GATE / NO TO SCALE

FENCE DETAILS

DETAIL E / NTS



NOTES:

1. LOCATION OF SAMPLE POINT BIBB SHALL NOT BE WITHIN THE ROADWAY BUT ROUTED TO THE ROADWAY SHOULDERS (NON-TRAFFIC AREAS).
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REMOVAL OF ALL TEMPORARY PIPING & FITTINGS (AS NOTED), AFTER BACTERIOLOGICAL CLEARANCE IS RECEIVED.
3. PIPE AND FITTINGS SHALL BE PVC (SCH. 40) OR GALV. MATERIAL.
4. THE USE OF THE ABOVE CONSTRUCTION FOR A TEMPORARY SAMPLE POINT SHALL BE LIMITED TO AREAS WHERE A SAMPLE TAP BY ALTERNATIVE METHODS (SEE W-24) IS NOT FEASIBLE OR IF DIRECTED OTHERWISE BY JEA.
5. THE CONTRACTOR SHALL COMPLY WITH ALL JEA RULES AND POLICIES AS AS OUTLINED BY JEA'S ENVIRONMENTAL RESPONSE COORDINATOR (ERC) AND OTHER ASSOCIATED JEA STANDARDS.

TEMPORARY SAMPLE TAP

DETAIL F / NTS

REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: C. CERRETA
DRAWN BY: C. SCOTT
SHEET CHK'D BY: B. WILLIAMS
CROSS CHK'D BY: D. PRAH
APPROVED BY: Y. POLEMATIDIS
DATE: DECEMBER 2020

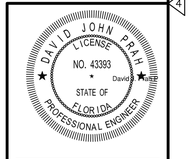
CDM Smith
4651 Salisbury Road, Suite 420
Jacksonville, FL 32256
Tel: (904) 731-7109
FL COA No. EB-0000020

JACOBS
245 RIVERSIDE AVE. SUITE 300
JACKSONVILLE, FLORIDA 32202
EB0000072 AAC001992 LC26000188

JEA

RIVERTOWN WATER TREATMENT PLANT PROJECT

MISCELLANEOUS DETAILS III

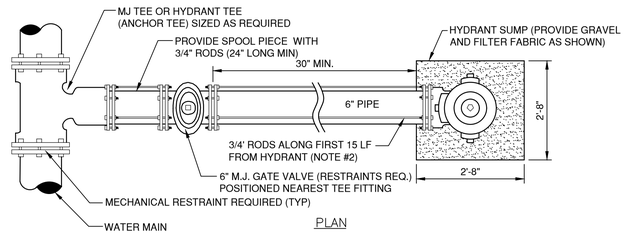


DATE:
DAVID J PRAH
PE NO. 43393

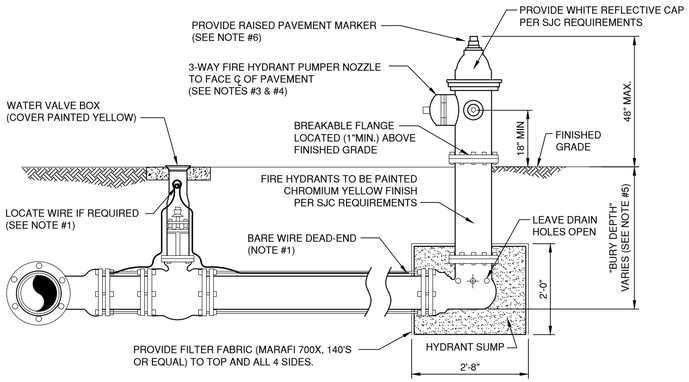
PROJECT NO. 6103-237938
FILE NAME: CD03MCDT.DWG

SHEET NO.
CD-3

ISSUED FOR BID



PLAN



SECTION

NOTES:

1. LOCATE WIRE IS ONLY REQUIRED IF THE DISTANCE BETWEEN VALVE AND HYDRANT IS OVER 15 LINEAR FEET IF REQUIRED, THE WIRE SHALL BE ROUTED FROM THE VALVE TO THE HYDRANT AS SHOWN ABOVE. THE END OF THE WIRE SHALL BE SECURED TO THE PIPE MAIN. SEE SECTION 350, LOCATE WIRE INSTALLATION PARAGRAPH.

2. FIRE HYDRANTS SHALL BE INSTALLED BETWEEN BACK OF CURB AND FACE OF SIDEWALK. ALL HYDRANTS SHALL BE LOCATED NO LESS THAN THREE (3) FEET FROM THE EDGE OF PAVEMENT OR BACK OF CURB OF THE ADJACENT ROADWAY AND NO LESS THAN THREE (3) FEET FROM ANY PHYSICAL FEATURE WHICH MAY OBSTRUCT ACCESS OR VIEW OF ANY HYDRANT UNLESS OTHERWISE APPROVED BY THE JEA. THE MAXIMUM DISTANCE (BACK OF CURB) SHALL BE IN COMPLIANCE WITH LOCAL COUNTY FIRE DEPARTMENT RULES AND AS APPROVED BY JEA. FOR OTHER LOCATION LIMITATIONS SEE PLATES W-10 AND W-11. IF PIPING BETWEEN TEE AND HYDRANT IS LONGER THAN 80 LF, AN ADDITIONAL 6" GATE VALVE IS REQUIRED AT THE HYDRANT LOCATION (PROVIDE 30" SEPARATION). ALL PIPING, VALVES AND FITTINGS ALONG THE HYDRANT BRANCH MAIN WHICH IS WITHIN 15 LF OF THE HYDRANT SHALL BE RESTRAINED UTILIZING ONLY TWO 3/4" DIA (THREADED ENDS) STEEL RODS AND EYE BOLTS (NO JOINT RESTRAINT DEVICES REQUIRED). A SPLIT SERRATED RING WITH RESTRAINT EARS (EBAA 15 PF06 or EQUAL) MAYBE USED IN THIS ASSEMBLY. ALL OTHER JOINTS ALONG THE HYDRANT BRANCH MAIN OUTSIDE OF THE FIRST 15 LF SHALL INCLUDE JOINT RESTRAINTS.

3. OPERATION OF THE FIRE HYDRANT SHALL BE EITHER FULL OPEN POSITION OR TOTALLY CLOSED POSITION. THE HYDRANT SHALL NOT BE UTILIZED TO THROTTLE OUTLET FLOW.

4. PRIOR TO PROJECT FINAL INSPECTION, THE HYDRANT AND ALL ABOVE GROUND PIPING SHALL BE RE-OILED, GREASED AND REPAINTED IN ACCORDANCE WITH ST. JOHNS COUNTY REQUIREMENTS.

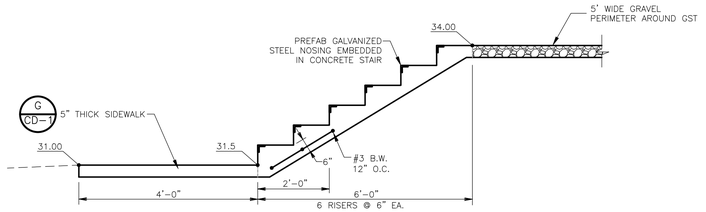
5. FIRE HYDRANTS SHALL BE ORDERED WITH PROPER "BURY DEPTH" TO MEET ACTUAL FIELD CONDITIONS. THIS IS ESPECIALLY IMPORTANT FOR BRANCH LINES WHICH TEE-OFF A 12" OR LARGER WATER MAIN. UNLESS APPROVED OTHERWISE BY JEA, THE INSTALLATION OF (45°) BENDS IS NOT ACCEPTABLE WHEN UTILIZED TO CORRECT AN IMPROPERLY FURNISHED HYDRANT. THE USE OF HYDRANT EXTENSIONS SHOULD BE MINIMIZED.

6. BLUE REFLECTIVE MARKERS SHALL BE INSTALLED IN SUCH A MANNER THAT THE REFLECTIVE FACE OF THE MARKER IS PERPENDICULAR TO A LINE PARALLEL TO THE ROADWAY CENTERLINE. THE BLUE REFLECTIVE MARKERS SHALL BE PLACED IN THE CENTER OF THE TRAVEL LANE, DIRECTLY ACROSS FROM AND ADJACENT TO EACH FIRE HYDRANT.

FIRE HYDRANT INSTALLATION USING MECHANICAL JOINT TEE

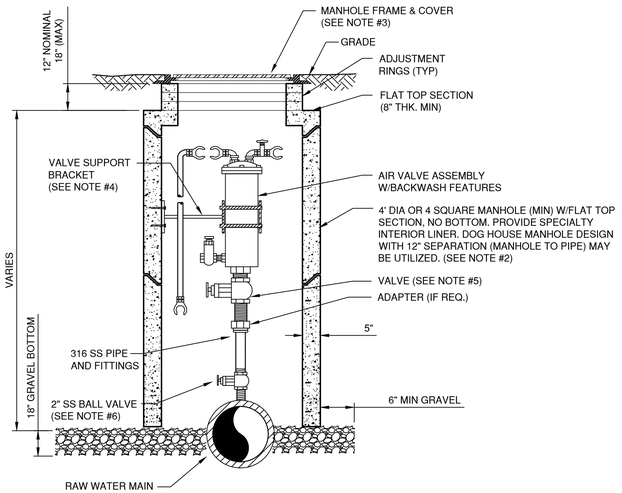
JANUARY 2016 PLATE W-13

DETAIL A
NTS



STAIRS

DETAIL B
NTS



NOTES:

1. THE AIR ASSEMBLY MANHOLE SHALL BE LOCATED OUTSIDE OF THE ROADWAY PAVEMENT AREA (I.E. LOCATED IN NON-TRAFFIC AREAS).

2. THE CONCRETE MANHOLE SHALL INCLUDE A POLYURETHANE SPECIALTY LINER (PER SPEC SECTION 446) TO BE INSTALLED ON THE INTERIOR SURFACES INCLUDING THE RISER SECTION TOP AND THE ADJUSTMENT RINGS. A BITUMINOUS WATERPROOFING MATERIAL SHALL BE PROVIDED ON THE OUTSIDE SURFACES OF THE MANHOLE.

3. FRAME AND COVER SHALL BE JEA STANDARD. THE COVER SHALL HAVE NO GASKET TO ALLOW AIR TO EXIT VAULT (REMOVE GASKET IF NECESSARY FROM THE UNDER SIDE OF STANDARD JEA COVER). THE COVER (WHEN FLIPPED OPEN) MUST CLEAR THE AIR VALVE ASSEMBLY AT ALL TIMES OR A SQUARE TOP WITH ALUMINUM DOOR SHALL BE PROVIDED (NON-TRAFFIC LOCATIONS ONLY).

4. A VALVE SUPPORT BRACKET IS ONLY REQUIRED FOR ASSEMBLIES WHICH INCLUDE OFF-SET PIPING. THE BRACKET SHALL BE WELDED AND FABRICATED FROM ALL 316 STAINLESS STEEL MATERIALS AND INCLUDE 6" x 6" x ½" THICK END PLATES (CONTOURED TO MATCH ATTACHING SURFACES), 3" ANGLE IRON FOR SUPPORT ARM AND TWO U-BOLTS ⅝" DIA TO ATTACH AROUND AIR VALVE. SECURE TO CONCRETE MANHOLE WITH FOUR ½" DIA X 2" LONG S/S ANCHOR (MIN). MODIFY THE ABOVE AS REQUIRED TO FIT SPECIFIC AIR VALVE AND TO ASSURE A SOLID SUPPORT BRACKET.

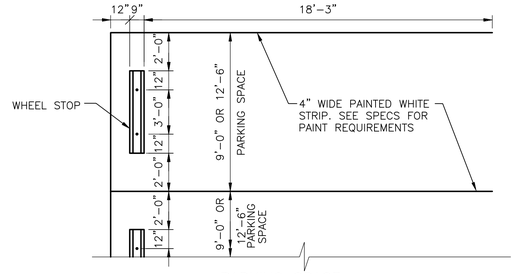
5. FOR PIPE SIZES 3 INCH AND SMALLER, PROVIDE A STAINLESS STEEL BALL VALVE (2" MIN), FOR PIPE SIZES 4 INCH AND LARGER, PROVIDE A FLANGE GATE VALVE (WHEEL OPERATOR) OR PLUG VALVE. (LEVER ARM OPERATOR) SEE SPECIFICATION FOR ADDITIONAL REQUIREMENTS.

6. FOR A 2" AIR VALVE, PROVIDE 2" STAINLESS STEEL BALL VALVE AT THE MAIN. FOR AIR VALVES LARGER THAN 2" SIZE, PROVIDE A TAPPING SLEEVE OR DUCTILE IRON TEE FITTING. ALSO, FOR OFF-SET PIPING LARGER THAN 2 INCH SIZE, PROVIDE A GATE VALVE (INSTALLED VERTICALLY NEAR MAIN). SEE SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.

AIR VALVE ASSEMBLY INSIDE MANHOLE IN ROW

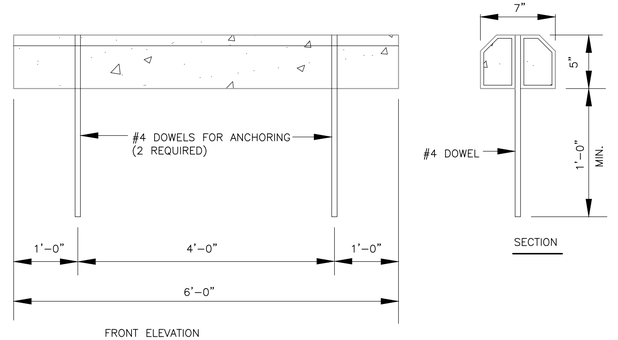
JANUARY 2015 PLATE S-29B

DETAIL C
NTS



PARKING SPACE

DETAIL D
NTS



FRONT ELEVATION

SECTION

PRE-CAST CONCRETE WHEEL STOP

DETAIL E
NTS

DAVID JOHN PRAH
LICENSE
NO. 43393
STATE OF
FLORIDA
PROFESSIONAL ENGINEER

DATE:
DAVID J PRAH
PE NO. 43393

REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: C. CERRETA
DRAWN BY: C. SCOTT
SHEET CHK'D BY: B. WILLIAMS
CROSS CHK'D BY: D. PRAH
APPROVED BY: Y. POLEMATIDIS
DATE: DECEMBER 2020

CDM Smith
4651 Salisbury Road, Suite 420
Jacksonville, FL 32256
Tel: (904) 731-7109
FL COA No. EB-0000020

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245 RIVERSIDE AVE, SUITE 300
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EB0000072 AAC001992 LC26000188

JEA

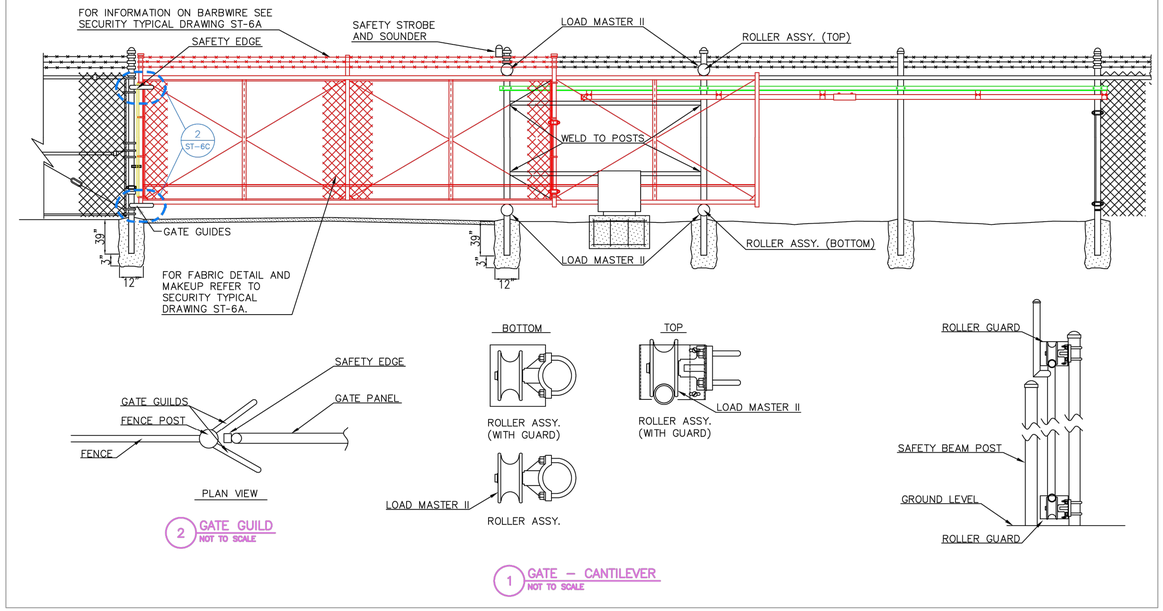
RIVERTOWN WATER TREATMENT PLANT PROJECT

MISCELLANEOUS DETAILS IV

PROJECT NO. 6103-237938
FILE NAME: CD04MCDT.DWG

SHEET NO.
CD-4

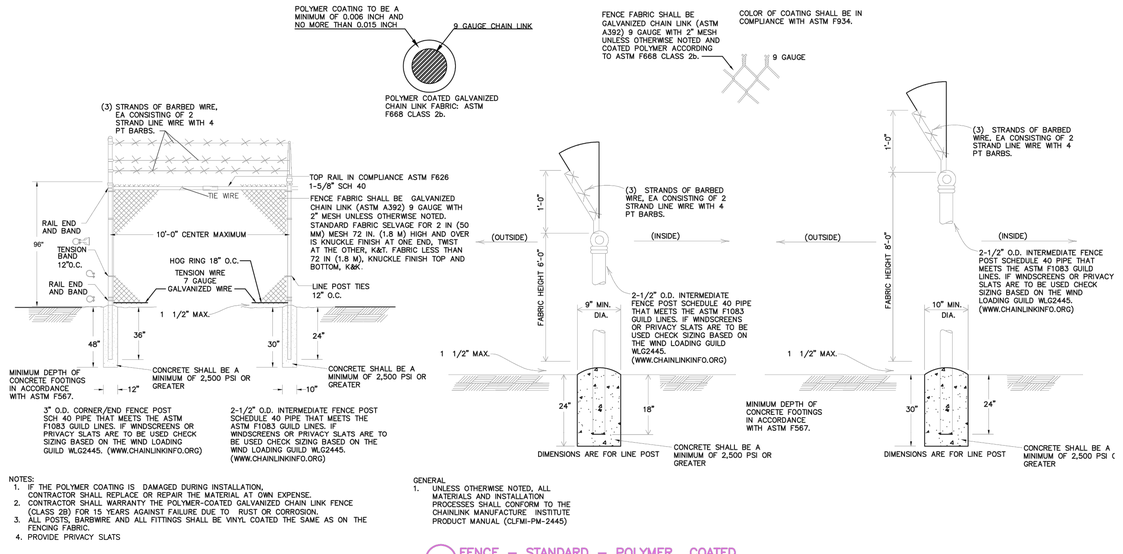
ISSUED FOR BID



2 GATE GUILD
NOT TO SCALE

1 GATE – CANTILEVER
NOT TO SCALE

DETAIL A
NTS



NOTES:
1. IF THE POLYMER COATING IS DAMAGED DURING INSTALLATION, CONTRACTOR SHALL REPLACE OR REPAIR THE MATERIAL AT OWN EXPENSE.
2. CONTRACTOR SHALL WARRANTY THE POLYMER-COATED GALVANIZED CHAIN LINK FENCE (CLASS 2B) FOR 15 YEARS AGAINST FAILURE DUE TO RUST OR CORROSION.
3. ALL POSTS, BARBWIRE AND ALL FITTINGS SHALL BE VINYL COATED THE SAME AS ON THE FENCING FABRIC.
4. PROVIDE PRIVACY SLATS

GENERAL
1. UNLESS OTHERWISE NOTED, ALL MATERIALS AND INSTALLATION PROCESSES SHALL CONFORM TO THE CHAINLINK MANUFACTURE INSTITUTE PRODUCT MANUAL (CLFMI-PM-2445)

1 FENCE – STANDARD – POLYMER COATED
NOT TO SCALE

DETAIL B
NTS

REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: C. CERRETA
DRAWN BY: C. SCOTT
SHEET CHK'D BY: B. WILLIAMS
CROSS CHK'D BY: D. PRAH
APPROVED BY: Y. POLEMATIDIS
DATE: DECEMBER 2020

CDM Smith
4651 Salisbury Road, Suite 420
Jacksonville, FL 32256
Tel: (904) 731-7109
FL COA No. EB-0000020

JACOBS
245 RIVERSIDE AVE, SUITE 300
JACKSONVILLE, FLORIDA 32202
EB0000072 AAC001992 LC26000188

JEA

RIVERTOWN WATER TREATMENT PLANT PROJECT

JEA SECURITY DETAILS

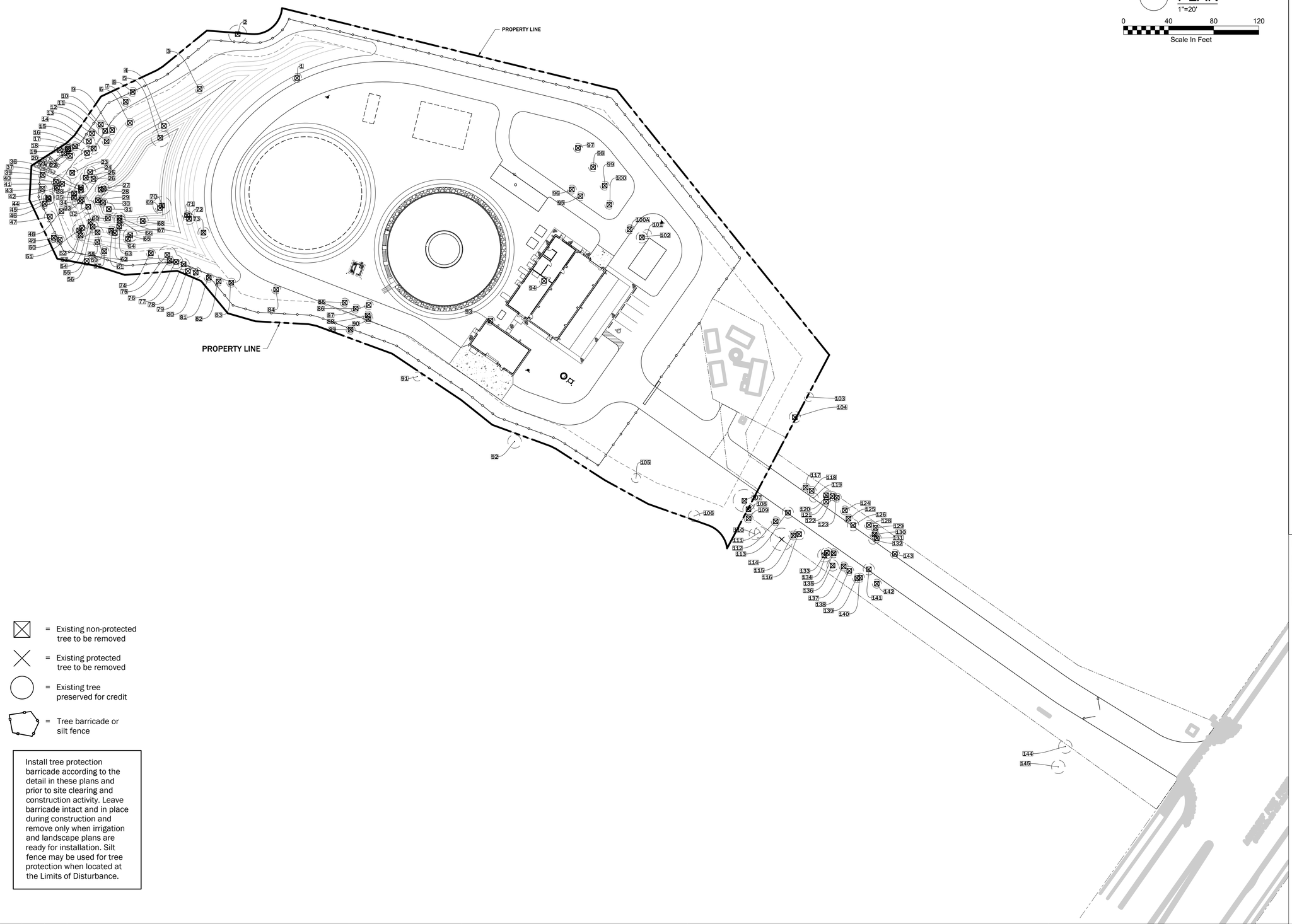
DAVID JOHN PRAH LICENSE NO. 43393 STATE OF FLORIDA PROFESSIONAL ENGINEER

DATE:
DAVID J PRAH
PE NO. 43393

PROJECT NO. 6103-237938
FILE NAME: CD05MCDT.DWG

SHEET NO.
CD-5

ISSUED FOR BID



N

PLAN
1"=20'

0 40 80 120
Scale In Feet

= Existing non-protected tree to be removed

= Existing protected tree to be removed

= Existing tree preserved for credit

= Tree barricade or silt fence

Install tree protection barricade according to the detail in these plans and prior to site clearing and construction activity. Leave barricade intact and in place during construction and remove only when irrigation and landscape plans are ready for installation. Silt fence may be used for tree protection when located at the Limits of Disturbance.

SHEET KEYNOTES

LANDSCAPE NOTES
(Sec. 6.06.02 D, E)

a. Vegetation that exceeds twenty-five (25) feet in height at maturity should not be planted closer than fifteen (15) feet of the vertical plan of an existing power line, excluding service wires.

b. Balled and burlapped strapping wire, and any synthetic material shall be removed prior to final inspection. Wire baskets should be cut away from the top $\frac{1}{3}$ of the root ball.

c. Non-canopy Trees shall not be planted closer than 10-feet from other Trees and Canopy Trees no closer than 20-30 feet, depending on species.

d. Plant material shall confirm to the standards of Grade #1 or better as given in the latest "Grades and Standards for Nursery Plants, Part I and II," Florida Department of Agriculture and Consumer Services or to the standards as given in the latest "American Standard for Nursery Stock," American National Standards Institute.

e. Pine bark or pine straw much shall be provided a minimum of three inches in depth around all newly planted landscaping.

f. A mulch ring for all newly planted trees shall be provided at least five (5) feet in diameter and not closer than six (6) inches from the tree trunk.

g. Shrubs are to be planted at the required minimum height, not by container size.

h. Tree islands shall have suitable soil at a minimum uniform depth of 18" and void of any construction debris or unsuitable materials.

i. Trees shall not be planted closer than 7.5' from the centerline of underground utilities.

j. Unless noted on plans, all disturbed areas shall be seeded or sodded with Argentine Bahiagrass.

k. Trees installed to meet code requirements shall have a minimum height of eight (8) to ten (10) feet and two (2) inches caliper.

811 Know what's **below.** **Call** before you dig.

Pittman
LANDSCAPE ARCHITECTURE
Landscape Architect Business LC26000443
ISA Certified Arborist FL-5742A
4049 San Servera Dr N
Jacksonville, Florida
32217
ph 904 327 7718
fax 904 739 3068
www.PittmanLA.com

ISSUED FOR BID

REGISTERED LANDSCAPE ARCHITECT
ALFRED BUCKNER PITTMAN
LA 1601
STATE OF FLORIDA

DATE: 12/2020
ALFRED B. PITTMAN
LA NO. LA-1601

REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: A. B. PITTMAN
DRAWN BY: A. B. PITTMAN
SHEET CHK'D BY: R MORRISON
CROSS CHK'D BY: X
APPROVED BY: R MORRISON
DATE: DECEMBER 2020
PLOT DATE: $PLOTDATE PLOT TIME: $PLOTTIME

CDM Smith
4651 Salisbury Road, Suite 420
Jacksonville, FL 32256
Tel: (904) 731-7109
FL COA No. EB-0000020

JACOBS
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EB0000072 AAC001992 LC26000188

JEA

RIVERTOWN WATER TREATMENT PLANT PROJECT

CIVIL/ELECTRICAL

WATER TREATMENT PLANT
TREE REMOVAL AND PROTECTION PLAN

PROJECT NO. 6103-237938
JACOBS FILE NAME:
2001_C-001_D3270100.dgn

SHEET NO.
L-1

Tree Inventory
Rivertown JEA Water Treatment Plant

Tree Number	Tree Size (DBH)	Botanical Name	Common Name	Protected Status Per Ordinance	Recommended Action	Tree Inches Removed From Lot Area	Tree Inches Preserved In Lot Area	Tree Inches Removed From Infrastructure Area	Tree Inches Preserved In Infrastructure Area	Bonus Inches Preserved In Infrastructure Area
1	4	Pinus, spp.	Pine	Non-Protected	Remove					
2	8	Pinus, spp.	Pine	Non-Protected	Remove					
3	4	Pinus, spp.	Pine	Non-Protected	Remove					
4	5	Pinus, spp.	Pine	Non-Protected	Remove					
5	8	Pinus, spp.	Pine	Non-Protected	Remove					
6	4	Pinus, spp.	Pine	Non-Protected	Remove					
7	4	Pinus, spp.	Pine	Non-Protected	Remove					
8	4	Pinus, spp.	Pine	Non-Protected	Remove					
9	4	Pinus, spp.	Pine	Non-Protected	Remove					
10	4	Pinus, spp.	Pine	Non-Protected	Remove					
11	6	Pinus, spp.	Pine	Non-Protected	Remove					
12	4	Pinus, spp.	Pine	Non-Protected	Remove					
13	4	Pinus, spp.	Pine	Non-Protected	Remove					
14	5	Pinus, spp.	Pine	Non-Protected	Remove					
15	5	Pinus, spp.	Pine	Non-Protected	Remove					
16	5	Pinus, spp.	Pine	Non-Protected	Remove					
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24	5	Pinus, spp.	Pine	Non-Protected	Remove					
25	5	Pinus, spp.	Pine	Non-Protected	Remove					
26	4	Pinus, spp.	Pine	Non-Protected	Remove					
27	5	Pinus, spp.	Pine	Non-Protected	Remove					
28	5	Pinus, spp.	Pine	Non-Protected	Remove					
29	4	Pinus, spp.	Pine	Non-Protected	Remove					
30	4	Pinus, spp.	Pine	Non-Protected	Remove					
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39	4	Pinus, spp.	Pine	Non-Protected	Remove					
40	4	Pinus, spp.	Pine	Non-Protected	Remove					
41	8	Pinus, spp.	Pine	Non-Protected	Remove					
42	4	Pinus, spp.	Pine	Non-Protected	Remove					
43	4	Pinus, spp.	Pine	Non-Protected	Remove					
44	6	Pinus, spp.	Pine	Non-Protected	Remove					
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89	4	Pinus, spp.	Pine	Non-Protected	Remove					
90	4	Pinus, spp.	Pine	Non-Protected	Remove					
91	4	Quercus, spp.	Oak	Non-Protected	Offsite					
92	6	Quercus, spp.	Oak	Non-Protected	Offsite					
93	4	Pinus, spp.	Pine	Non-Protected	Remove					
94	4	Pinus, spp.	Pine	Non-Protected	Remove					
95	4	Pinus, spp.	Pine	Non-Protected	Remove					
96	4	Pinus, spp.	Pine	Non-Protected	Remove					
97	4	Pinus, spp.	Pine	Non-Protected	Remove					
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99	4	Pinus, spp.	Pine	Non-Protected	Remove					
100	4	Pinus, spp.	Pine	Non-Protected	Remove					
100A	4	Pinus, spp.	Pine	Non-Protected	Remove					
101	4	Pinus, spp.	Pine	Non-Protected	Remove					
102	5	Pinus, spp.	Pine	Non-Protected	Remove					
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111	5	Pinus, spp.	Pine	Non-Protected	Offsite					
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130	4	Pinus, spp.	Pine	Non-Protected	Remove					
131	4	Pinus, spp.	Pine	Non-Protected	Remove					
132	4	Pinus, spp.	Pine	Non-Protected	Remove					
133	6	Pinus, spp.	Pine	Non-Protected	Remove					
134	5	Pinus, spp.	Pine	Non-Protected	Remove					
135	4	Pinus, spp.	Pine	Non-Protected	Remove					
136	5	Pinus, spp.	Pine	Non-Protected	Remove					
137	4	Pinus, spp.	Pine	Non-Protected	Remove					
138	4	Pinus, spp.	Pine	Non-Protected	Remove					
139	4	Pinus, spp.	Pine	Non-Protected	Remove					
140	4	Pinus, spp.	Pine	Non-Protected	Remove					
141	5	Pinus, spp.	Pine	Non-Protected	Remove					
142	4	Pinus, spp.	Pine	Non-Protected	Remove					
143	4	Pinus, spp.	Pine	Non-Protected	Remove					
144	6	Salix spp.	Willow	Non-Protected	Offsite					
145	6	Acer spp.	Maple	Non-Protected	Offsite					
				Total Removed Inches		0		10		0
				Total Preserved Inches			0		9	

SHEET KEYNOTES

LANDSCAPE NOTES
(Sec. 6.06.02 D, E)

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k. Trees installed to meet code requirements shall have a minimum height of eight (8) to ten (10) feet and two (2) inches caliper.

811 Know what's below. Call before you dig.

Pittman LANDSCAPE ARCHITECTURE
Landscape Architect Business LC26000443
ISA Certified Arborist FL-5742A
4049 San Servera Dr N
Jacksonville, Florida
32217
ph 904 327 7718
fax 904 739 3068
www.PittmanLA.com

REGISTERED LANDSCAPE ARCHITECT ALFRED BUCKNER PITTMAN LA 1601 STATE OF FLORIDA

ISSUED FOR BID

DATE: 12/2020
ALFRED B. PITTMAN
LA NO. LA-1601

REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: A. B. PITTMAN
DRAWN BY: A. B. PITTMAN
SHEET CHK'D BY: R. MORRISON
CROSS CHK'D BY: X
APPROVED BY: R. MORRISON
DATE: DECEMBER 2020
PLOT DATE: $PLOTDATE PLOT TIME: $PLOTTIME

CDM Smith
4651 Salisbury Road, Suite 420
Jacksonville, FL 32256
Tel: (904) 731-7109
FL COA No. EB-0000020

JACOBS
245 RIVERSIDE AVE, SUITE 300
JACKSONVILLE, FLORIDA 32202
EB0000072 AAC001992 LC26000188

JEA

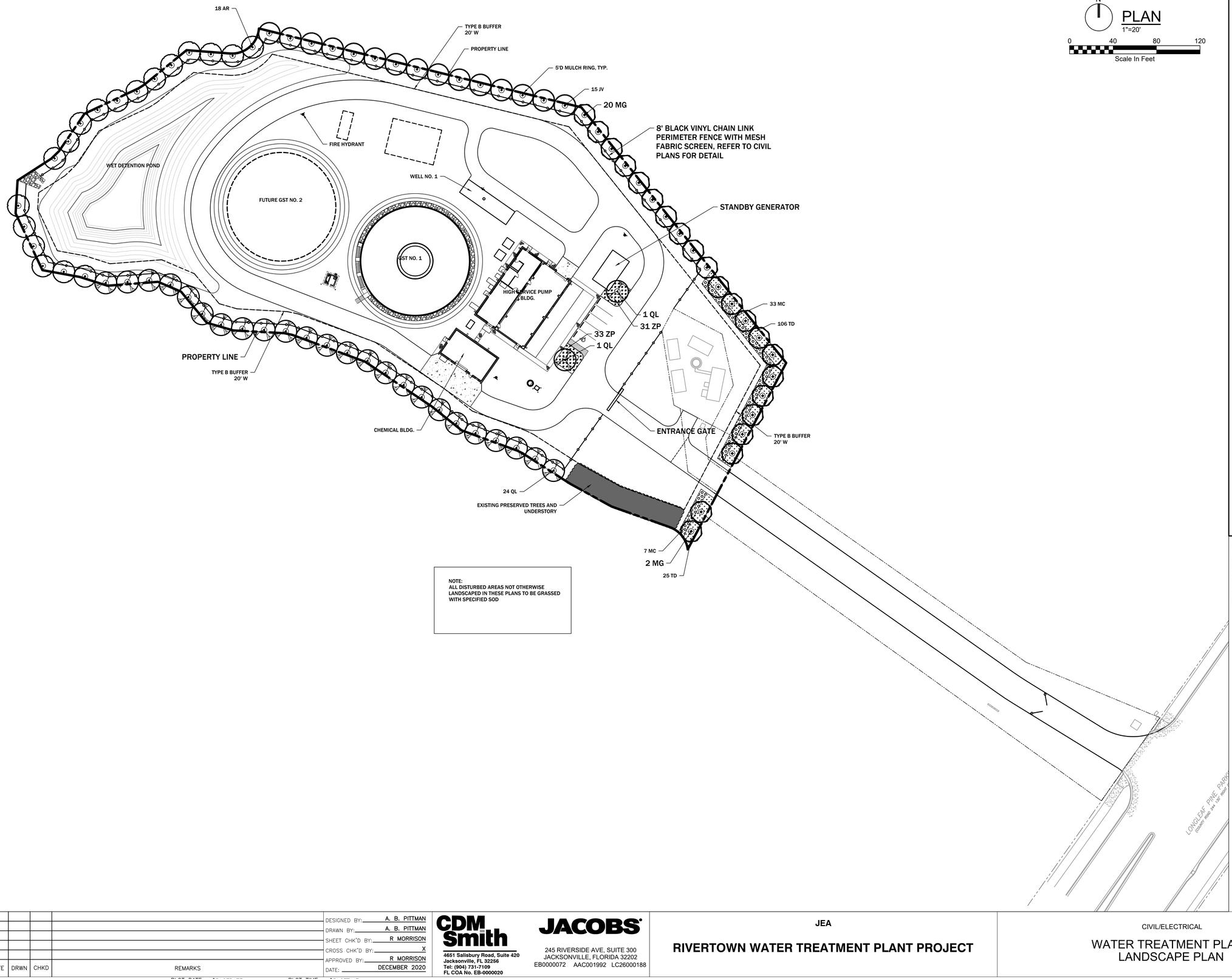
RIVERTOWN WATER TREATMENT PLANT PROJECT

CIVIL/ELECTRICAL

WATER TREATMENT PLANT
TREE INVENTORY TABLE

PROJECT NO. 6103-237938
JACOBS FILE NAME: 2001_C-001_D3270100.dgn

SHEET NO.
L-2



N

PLAN
1"=20'

0 40 80 120
Scale In Feet

NOTE:
ALL DISTURBED AREAS NOT OTHERWISE LANDSCAPED IN THESE PLANS TO BE GRASSED WITH SPECIFIED SOD

SHEET KEYNOTES

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LA NO. LA-1601

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PLOT DATE: $PLOTDATE PLOT TIME: $PLOTTIME

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SHEET CHK'D BY: R MORRISON
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JEA

RIVERTOWN WATER TREATMENT PLANT PROJECT

CIVIL/ELECTRICAL

WATER TREATMENT PLANT
LANDSCAPE PLAN

PROJECT NO. 6103-237938
JACOBS FILE NAME: 2001_C-001_D3270100.dgn

SHEET NO.
L-3

LANDSCAPE SPECIFICATIONS

GENERAL INSTALLATION INSTRUCTIONS

1. Contractor shall furnish all labor, materials, and insurance to complete the work as shown in the plan.
2. Contractor is responsible for acquiring all required permits and associated fees to complete the work.
3. Contractor shall locate and visibly mark all buried utilities prior to construction and notify the landscape architect of any conflicts.
4. Contractor shall demolish and remove from the premises all pavement, sod and other materials required to implement the plan.
5. All work shall be completed in a timely manner and in accordance with standard industry practices.
6. Contractor shall coordinate a work plan with the owner or agent and the landscape architect prior to starting work and shall comply with all state and federal requirements for work safety.
7. Contractor shall coordinate an approved staging area with the owner prior to starting the work and shall maintain a clean and orderly site throughout the construction period and shall properly dispose of all trash and removed materials.
8. Contractor shall proceed with approved work in an orderly and timely fashion.
9. Contractor shall prevent offsite erosion, both by wind and rain, during construction using adequate means such as silt fencing, hay bales, and drain socks.
10. Contractor shall provide all new materials in first quality condition.
11. Substitutions shall be rejected unless approved by the landscape architect prior to installation.
12. Contractor shall repair and/or replace at contractor's cost and in an expedient manner any utilities, pipes, conduit, cables, fences, pavement, plant material, or any other existing property within or abutting the project site damaged by contractor during the course of the project.
13. Contractor shall notify the owner and landscape architect at least one week in advance for a substantial completion inspection. The landscape architect shall provide a punch list to the contractor outlining items to be completed by the contractor. Contractor shall complete punch list items in timely manner before calling for a final inspection by the owner and the landscape architect.
14. Final payment for the work shall not be issued until a final inspection is completed and approved by the landscape architect and/or the owner.
15. All work shall be warranted against defects and failure for at least 1 year following the final acceptance.
16. Contractor shall clean site of all construction debris, materials, and trash. Disturbed areas shall be fine-graded and landscaped according to the plans, or sodded with specified sod. Site must be clean and neat before a final acceptance and payment will be issued.

TREE AND EXISTING VEGETATION PROTECTION

1. Contractor shall ensure protection of exiting trees and plants to be preserved within the project area and along the project boundaries prior to all clearing or construction activity using a tree barricade as specified in the plans, or if not specified in the plans, according to Florida Department of Transportation **index Number 544 Landscape Installation** (http://www.fdot.gov). A silt fence may serve as a barricade where such measures are required and provide full protection of the critical protection zone as defined in Index 544.
2. Provide 6" pine straw mulch to uniformly cover all bare, cleared, eroded, or disturbed areas within each tree protection area. Keep mulch 12" away from base of each tree.
3. Notify the landscape architect prior to any construction activity where protection cannot be provided or must be modified to due to conflicting construction activity.
4. Notify the landscape architect prior to site clearing and construction of any trees or otherwise valuable plants not noted on the plans that may warrant protection, especially large trees located on adjacent properties whose roots and canopy occupy space within the project area.
5. Tree barricade shall remain in place for the duration of the project until landscape installation commences whereupon the contractor may remove barricades as needed to prepare final grades and install landscaping according to the plans. Remaining tree barricades shall be removed at the completion of the project.

PLANT INSTALLATION

1. Install all plants according to Florida Department of Transportation **Index Number 544 Landscape Installation** (http://www.fdot.gov).
2. Do not install groundcovers or shrubs on top of or into the rootball of new trees.
3. Contractor shall verify project site conditinos and final quantities based on the plans prior to bidding and pricing. In the occurrence of a discrepancy between the plans and the plant list, the plans shall take precedence.
4. All plants shall conform to the specifications on the plant list or plant schedule.
5. All plants shall be Florida No. 1 Grade or better according to the Florida Grades and Standards Handbook.
6. All plants shall be nursery-grown containerized or b&b stock.
7. All plants shall be in good health, vigorous, evenly branched, and thickly foliated when in leaf. All plants shall be free of disease, insects, including eggs and larvae, as well as have a healthy, developed root system. They should also be free of physical damage or adverse conditions that would prevent thriving growth.
8. Plant material, tree locations, and bed outlines shall be staked or flagged on site by the contractor and shall be adjusted as required to fit actual as-built conditions on site and approved by the owner or owner's representative prior to installation.
9. Unless otherwise specified, all existing plant material within the areas of new construction as shown on the plans shall be removed and properly disposed of off of the project site. Plant material outside of these areas shall remain and shall be replaced with like kind if killed or damaged via landscape installation activities (see general installation instructions and tree and existing vegetation protection).
10. Planting beds shall be shovel-cut to form a uniform, clean line between beds and lawn areas.
11. Remove all synthetic material surrounding the rootball, including strapping, and remove all material including burlap and wire basket from top third of root ball prior to backfilling. Failure to take these measures will result in rejection of the installed tree.
12. Shade trees shall be planted a minimum of 4 feet from any edge of pavement and 15 feet from overhead electric lines as measured from the at-grade centerline (refer to local provider to verify specific requirements).
13. All plant material shall be warranted for a period of one year from the date of Final Acceptance of the work and not the date on which it was installed.
14. Contractor shall provide all fine surface grading preparation for planting and shall maintain all finished grade requirements according to the plans, and ensure positive drainage. Report any drainage problems associated with finished grade or finished soil characteristics to the owner and the landscape architect.
15. Coordinate construction of planting areas with installation of irrigation system or hose bibs as specified.
16. Contractor shall provide mulch for all newly installed landscape areas. Provide a minimum 5' diameter mulch ring for all installed trees. Provide uniform coverage for all landscape beds at the specified depth maintain at least 6" clearance from all woody trunks and stems.
    16.1. Mulch shall be pine straw.
    16.2. Mulch shall be 6" uniform depth.
17. Install sod as specified in the plans, according to the Florida Department of Transportation Standard Specification **Section 570 Performance Turf** (http://www.fdot.gov) unless otherwise stated herein.
18. Contractor shall provide certified, healthy sod, free of weeds, disease, fungus, insects, or nematodes.
    18.1. Sod shall be 18.1.2 below:
    18.1.1. Celebration bermuda (*Cynodon dactylon 'Celebration'*)
    18.1.2. Argentine bahia (*Paspalum notatum 'Argentine'*)
    18.1.3. Palmetto St. Augustine (*Stenotaphurum secundatum 'Palmetto'*)
    18.1.4. Empire zoysia (*Zoysia japonica 'Empire'*)
19. Contractor shall provide plant maintenance during the construction period through Final Acceptance and the owner shall provide maintenance during the warranty period following Final Acceptance, unless otherwise specified in the contract documents.
20. Contractor shall maintain all staking and guying materials and correct tree leaning or tilting during the warranty period. Contractor shall ensure that tree trunks and branches are not damaged or growth restricted by strapping or guying materials. Contractor shall be responsible for removal of all above-ground staking and guying material at the end of the warranty period.

SOILS

1. Contractor shall minimize soil compaction to all new planting areas by limiting access to those areas designated for planting purposes only. Contractor shall not store, clean, or empty equipment or materials within any area specified for preservation or new plant installation.
2. Prior to plant installation, contractor shall conduct a soil test in at least three locations on the site that best represent the plant distribution and conditions shown on the planting plan. The soil test shall be conducted by an independent laboratory qualified to test soils. The test shall be conducted to determine:
    2.1. Soil type
    2.2. Soil pH
    2.3. Nutrient content
    2.4. Recommended amendments
3. Contractor shall furnish a copy of the soil report(s) along with the contractor's recommended amendments to the landscape architect and the owner prior to initiating plant installation. Contractor shall not initiate plant installation without a written or verbal response from the landscape architect or owner indicating receipt of the report and agreement with the amendment approach.
4. At a minimum, contractor shall provide 5-8 percent organic pine bark compost uniformly throughout the planting soils prior to plant installation. Do not apply synthetic fertilizer to any planting area without the approval of the landscape architect or owner.

ST. JOHNS COUNTY
LAND DEVELOPMENT CODE
LANDSCAPE REQUIREMENTS

TREES AND OTHER VEGETATION (Sec. 4.01.05)

DEVELOPMENT TYPE

Public Utility

SITE AREAS

Total site area: 4.00 ac
Wetland preserve area: 0.0 ac
Upland Development Area: 4.00 ac.

TREE MITIGATION

Minimum Requirements
UDA @ 80" per acre = 4.00 x 80 = 320"
Removed protected tree inches: 10"
Preserved UDA inches: 9"
Additional replacement inches required: 311"
Replacement inches provided:
9" Preserved
317" Planted
326" Total
Replacement deficit: 0"

Tree Fund Payment @ $25 per inch: = $0.00

LANDSCAPE REQUIREMENTS
Maximum species distribution (50%): 31%
Minimum native species composition (50%): 100%
Minimum canopy tree composition (70%): 100%

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IRRIGATION SPECIFICATIONS

IRRIGATION INSTALLATION

1. Contractor shall provide a fully automatic irrigation system to deliver 100% head-to-head coverage of all required landscaping within the project area. Irrigation source shall be 6" FM-PVC.
2. Upon completion, contractor shall submit an as-built plan of the installed irrigation system, location of all components and sleeves to the owner (and municipal authority if required).
3. Contractor shall provide a double-check backflow preventer equal to a DCA-100 (or approved equal), mounted in a rectangular valve box on the serving side and adjacent to the meter, and shall provide freeze protection.
4. All pipe and wire under paving shall be placed in Schedule 40 PVC sleeves from the full pavement coverage length and shall be at least 24" below finished grade.
5. Main lines shall be installed at least 18" below finished grade and lateral lines shall be installed at least 12" below finished grade.
6. Contractor shall reroute piping to avoid existing plants and tree roots and hand-dig pipes under or through tree roots within the canopy area of existing trees that cannot be avoided. Mechanical trenching through tree roots within the canopy area of preserved trees shall not be permitted.
7. Contractor shall be responsible for all applicable permits and fees.
8. Contractor shall comply with all state and local codes and shall clarify any discrepancies on the plan prior to bidding.
9. Prior to final acceptance, contractor shall show owner or maintenance superintendent how to operate and maintain the system.
10. Contractor shall furnish all warranty, maintenance equipment, and operating instructions.

LANDSCAPE IRRIGATION AND WATERING SCHEDULE

All required landscaping show on these plans will be watered manually using hose bibbs dispursed throughout the development so that every required landscape area is within 75' of a hose bibb. Trees shall be watered as needed to prevent decline, and at a minimum three times weekly during no-rain periods for the first 60 days. Water thereafter according to the following 180-day schedule:

Large trees and palms: 30 gal/application
Small trees: 20 gal/application
Shrubs and sod: as needed to prevent wilting

1st 8 weeks: 3 waterings per week (24 total)
2nd 8 weeks: 2 waterings per week (16 total)
Final 10 weeks: 1 watering per week (10 total)

ST. JOHNS RIVER WATER MANAGEMENT DISTRICT
LAWN AND IRRIGATION RULE:

Irrigation of new landscape is allowed at any time of day on any day for the initial 30 days following installation, and every other day for the next 30 days, for a total of one 60-day period, provided the irrigation is limited to the minimum amount necessary for establishment.

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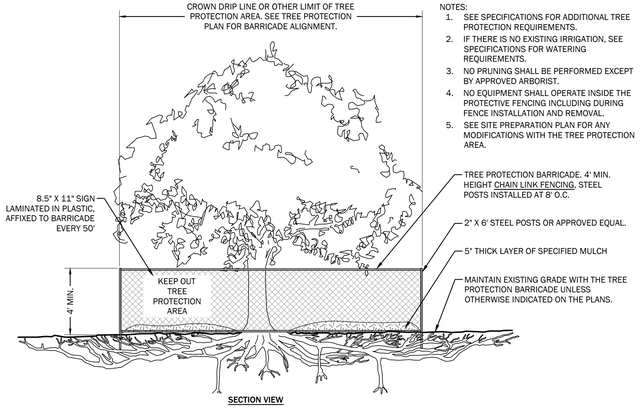

NOTES:
1. SEE SPECIFICATIONS FOR ADDITIONAL TREE PROTECTION REQUIREMENTS.
2. IF THERE IS NO EXISTING IRRIGATION, SEE SPECIFICATIONS FOR WATERING REQUIREMENTS.
3. NO PRUNING SHALL BE PERFORMED EXCEPT BY APPROVED ARBORIST.
4. NO EQUIPMENT SHALL OPERATE INSIDE THE PROTECTIVE FENCING INCLUDING DURING FENCE INSTALLATION AND REMOVAL.
5. SEE SITE PREPARATION PLAN FOR ANY MODIFICATIONS WITH THE TREE PROTECTION AREA.

SECTION VIEW

TREE PROTECTION BARRICADE

NTS

PLANT LIST

QTY	PCT	ABV	BOTANICAL NAME	COMMON NAME	SIZE / SPECS	SPACING	CANOPY	ORIGIN	INCHES/AREA
TREES									
18	22	AR	*Acer rubrum*	Red maple	4" cal / 14-16' ht	As shown	Yes	Native	72
26	32	QL	*Quercus laurifolia*	Laurel oak	4" cal / 14-16' ht	As shown	Yes	Native	104
15	19	JV	*Juniperus virginiana*	Eastern red cedar	3.5" cal / 12-14' ht	As shown	Yes	Native	53
22	27	MG	*Magnolia grandiflora 'Brackens'*	Brackens magnolia	4" cal / 14-16' ht	As shown	Yes	Native	88
81	100*							Total:	317
SHRUBS									
40		MC	*Myrica cerifera*	Wax myrtle	30 gal / 6' min ht	6' OC		Native	
131		TD	*Tripsacum dactyloides*	Fakahatchee grass	3 gal / 18-24" ht	4' OC		Native	
64		ZP	*Zamia pumila*	Coontie palm	3 gal / 18-24" ht	3.5' OC		Native	
GROUNDCOVERS									
		SOD	*Paspalum notatum 'Argentine'*	Argentine bahiagrass	Certified Solid Sod	SF		Exotic	

*May not equal 100% due to rounding

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RIVERTOWN WATER TREATMENT PLANT PROJECT

CIVIL/ELECTRICAL

WATER TREATMENT PLANT
LANDSCAPE SPECIFICATIONS

PROJECT NO. 6103-237938
JACOBS FILE NAME: 2001_C-001_D3270100.dgn

SHEET NO.
L-4

ABBREVIATIONS

&	AND	GB	GLASS BLOCK	REF	ROOF EXHAUST FAN
<	ANGLE	GRT	GRATING	REINF	REINFORCE (D, ING)
@	AT	GYP	GYPSUM	REQ'D	REQUIRED
AB	ANCHOR BOLT	GWB	GYPSUM WALL BOARD	REV	REVISED
ABV	ABOVE	HARD	HARDENER	RF	ROOF FAN
ACMU	ACOUSTICAL CONCRETE MASONRY UNIT	HD	HEAVY DUTY	RFG	ROOFING
AFF	ABOVE FINISHED FLOOR	HDWD	HARDWOOD	RGH	ROUGH
AFG	ABOVE FINISHED GRADE	HDWR	HARDWARE	RJ	REVEAL/RUSTICATION JOINT
AL. ALUM	ALUMINUM	HGR	HANGER	RL	RAIN LEADER
AMP	ACOUSTICAL METAL PANELS	HGT	HEIGHT	RLG	RAILING
ANOD	ANODIZE(D)	HM	HOLLOW METAL	RM	ROOM
ASSY	ASSEMBLY	HOR	HORIZONTAL	RO	ROUGH OPENING
BBT	BIOBASED TILE	HP	HIGH POINT	RT	RUBBER TILE
BD	BOARD	HR	HANDRAIL	RWL	RAIN WATER LEADER
BEV	BEVEL(ED)	IN	INCH	S	STEEL S-SHAPED DESIGNATION
BLDG	BUILDING	INST	INSTRUMENTATION	SAT	SUSPENDED ACOUSTICAL TILE
BLK	BLOCK	INSUL	ISULATION	SB	SEAMLESS BASE
BLKG	BLOCKING	JC	JANITOR'S CLOSET	SCHD	SCHEDULE
BRG	BEARING	JT	JOINT	SCRN	SCREEN(ED, ING)
BRK	BRICK	JT FLR	JOINT FILLER	SECT	SECTION
BRS	BRASS	L	LINE OF STRUCTURAL ANGLE DESIGNATION	SF	SEAMLESS FLOORING
BRZ	BRONZE	LAB	LABORATORY	SGFT	STRUCTURAL GLAZED FACING TILE
BTM	BOTTOM	LAD	LADDER	SHT	SHEET
C TO C	CENTER TO CENTER	LAM	LAMINIATED	SIM	SIMILAR
CAB	CABINET	LAV	LAVATORY	SK	SINK
CEM	CEMENT	LG	LAMINATED GLASS	SL	SLOPE
CF	COMPRESSIBLE FILLER	LINO	LINOLEUM	SLNT	SEALANT
CGFB	CEMENTITIOUS GLASS FIBER BOARD	LKR	LOCKER	SPEC	SPECIFICATION, SPECIFIED
CH	CONCRETE HARDENER	LNTL	LINTEL	SST	STAINLESS STEEL
CHAM	CHAMFER	LP	LOW POINT	STD	STANDARD
CHAN	CHANNEL	LT	LIGHT(S)	STL	STEEL
CIP	CAST IN PLACE	MAS	MASONRY	STOR	STORAGE
CJ	CONTROL JOINT	MATL	MATERIAL	STRU	STRUCTURE(S, URAL)
CL OR	CENTERLINE	MAX	MAXIMUM	STWY	STAIRWAY
CLG	CEILING	MEMB	MEMBRANE	SUPT	SUPERINTENDENT
CLKG	CAULKING	MFR	MANUFACTURER	SUSP	SUSPENDED
CMU	CONCRETE MASONRY UNIT	MIN	MINIMUM	T	TREAD(S)
COL	COLUMN	MISC	MISCELLANEOUS	TBM	TRAFFIC BEARING MEMBRANE
COMP	COMPRESSIBLE	MO	MASONRY OPENING	T&G	TONGUE AND GROOVE
CONC	CONCRETE	MR	MOISTURE RESISTANT	TEMP	TEMPERATURE
CONT	CONTINUOUS	MRAT	MOISTURE RESISTANT ACOUSTICAL TILE	TEMP	TEMPERED
CRPT	CARPET, CARPET TILE	MTD	MOUNTED	TEMP	TEMPORARY
CRS	COURSE(S)	MTG	MOUNTING	TER	TERRAZZO
CT	CERAMIC TILE	MTL	METAL	TERB	TERRAZZO BASE
CET	DETAIL	NIC	NOT IN CONTRACT	THK	THICK(NESS)
DF	DRINKING FOUNTAIN	NOM	MONINAL	THR	THRESHOLD
DIA	DIAMETER	NTS	NOT TO SCALE	TKBD	TACKBOARD
DIAG	DIAGONAL	OC	ON CENTER	TOB	TOP OF BRICK
DIM	DIMENSION	OH	OVERHANG	TOC	TOP OF CONCRETE
DISP	DISPENSER	OPNG	OPENING	TOIL	TOILET
DN	DOWN	OPP HD	OPPOSITE HAND	TOM	TOP OF MASONRY
DP	DAMPPROOFING	ORD	OVERFLOW ROOF DRAIN	TOPPG	TOPPING
DR	DRAIN	OSB	ORIENTED STRAND BOARD	TOS	TOP OF STEEL
ELEC	ELECTRICAL	OV	OVER	TS	STRUCTURAL TUBING (STEEL UNLESS NOTED)
ELEV	ELEVATION	OVHD	OVERHEAD	TSL	TOP OF SLAB
EQ	EQUAL(LY)	PERIM	PERIMETER	TWF	THROUGH WALL FLASHING
EQPT	EQUIPMENT	PL	PLATE	TYP	TYPICAL
EWC	ELECTRICAL WATER COOLER	PL	PROPERTY LINE	UC	UNDERCUT
EXP	EXPOSED	PLAS	PLASTER	UON	UNLESS OTHERWISE NOTED
EJ	EXPANSION JOINT	PLK	PLANK	UR	URINAL
EXIST, (E)	EXISTING	PLYWD	PLYWOOD	VB	VAPOR BARRIER
FD	FLOOR DRAIN	PM	PRESSED METAL	VCT	VINYL COMPOSITE TILE
FE	FIRE EXTINGUISHER	PR	PAIR	VERT	VERTICAL
FF	FACTORY FINISH	PRD	PROMENADE ROOF DRAIN	VEST	VESTIBULE
FGL	FIBERGLASS	PRCST	PRECAST	VTR	VENT THRU ROOF
FIN	FINISH(ED)	PREFAB	PRE-FABRICATED	W	WITH
FLG	FLASHING	PT	PREASSURE TREATED	W/	WITH
FL	FLOOR(ING)	PRMLD	PREMOLDED	W/A	WHERE APPLICABLE
FLR	FILLER	PSF	POUNDS PER SQUARE FOOT	W/O	WITHOUT
FR	FRAME	PTD	PAINTED	WC	WATER CLOSET
FRP	FIBERGLASS REINFORCED PLASTIC	QT	QUARRY TILE	WD	WOOD
FO	FRAME OPENING	QTB	QUARRY TILE BASE	WDW	WINDOW
FV	FIELD VERIFY	R	RISER(S)	WF	WIDE FLANGE
FXD	FIXED	R+S	BACKER ROD & SEALANT	WPG	WATERPROOFING
GA	GAGE, GAUGE	RB	RUBBER BASE	WT	STEEL TEE-SHAPE DESIGNATION
GALV	GALVANIZED	RD	ROOF DRAIN	WWF	WELDED WIRE FABRIC
GL	GLASS	RECT	RECEPTACLE		

GENERAL NOTES

HEIGHT OF INTERIOR STUD AND CMU PARTITIONS ARE FROM FLOOR TO THE UNDERSIDE OF ROOF DECK UNLESS OTHERWISE NOTED. PROVIDE DEFLECTION HEADS AT TOP OF WALL (TYPICAL).

NOT ALL EQUIPMENT IS SHOWN FOR CLARITY. REFER TO THE APPROPRIATE DISCIPLINE SHEETS FOR SPECIFIC EQUIPMENT LAYOUT AND OTHER REQUIREMENTS

SEE CIVIL SHEETS FOR SIDEWALK, ROAD PAVING AND FINISH GRADE ELEVATIONS.

SEE STRUCTURAL SHEETS FOR SIZE AND LOCATION OF CONCRETE PADS, TRENCHES, VAULTS, SUMPS, ETC

SEE STRUCTURAL SHEETS FOR CONCRETE AND MASONRY REINFORCEMENT

ALL INTERIOR CMU WALLS SHALL BE PROVIDED WITH INSULATION INSERTS (SEE SPEC 042000)

PATCH AND REPAIR ANY MATERIALS OR SURFACES DAMAGED DURING THE CONSTRUCTION PROCESS TO MATCH THE EXISTING ADJACENT SURFACES.

ALL ITEMS TO BE NEW UNLESS SPECIFICALLY NOTED OTHERWISE.

ALL JOINTS, VOIDS AND PENETRATIONS THROUGH FIRE-RATED WALL SYSTEMS ARE TO BE FILLED/SEALED WITH UL APPROVED FIRESAFING/FIRESTOPPING MATERIALS TO ACHIEVE THE REQUIRED FIRE-RATING (REFER TO CODE DRAWINGS FOR LOCATIONS).

DO NOT SCALE FROM THE DRAWINGS

NOTIFY ARCHITECT IF CONSTRUCTION DOCUMENTS DIFFER FROM ACTUAL FIELD CONDITIONS PRIOR TO FABRICATION OR NEW CONSTRUCTION

THIS DRAWING CONTAINS A GENERAL LIST OF SYMBOLS AND ABBREVIATIONS. NOT ALL ITEMS SHOWN HERE APPEAR ON THE CONTRACT DRAWINGS.

ARCHITECTURAL SHEET INDEX

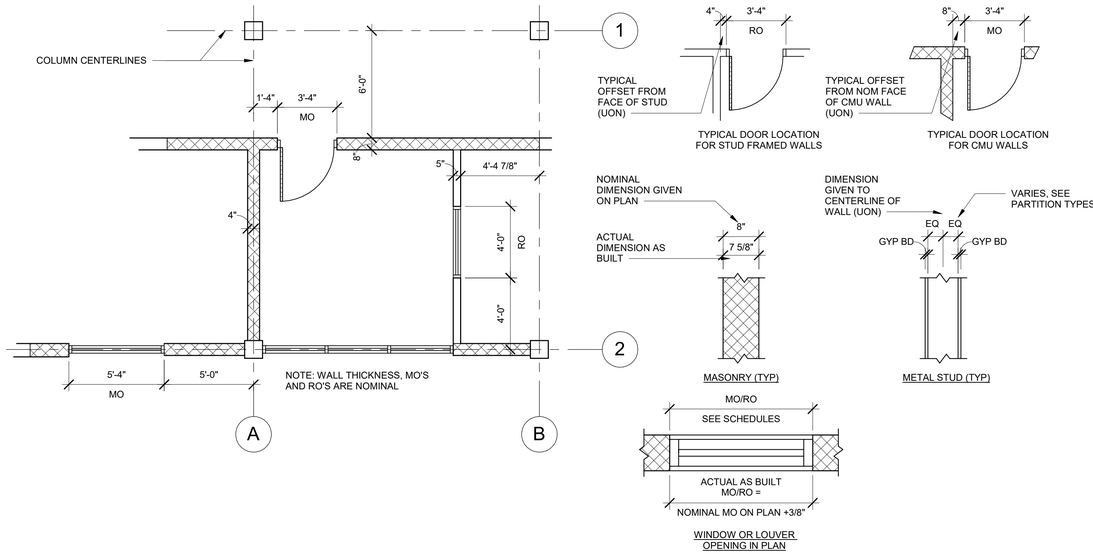
LINE TYPES (UNLESS OTHERWISE NOTED)

- CONTINUOUS - NEW CONSTRUCTION
- DASHED ON CONSTRUCTION PLAN/SHEETS - HIDDEN ELEMENTS BEYOND, ABOVE OR BELOW

MATERIAL SYMBOLS

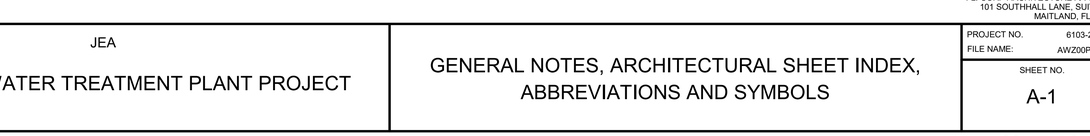
- EARTH
- GRAVEL
- BRICK
- CONCRETE MASONRY UNIT (CMU)
- PRECAST CONCRETE
- CAST-IN-PLACE CONCRETE
- WOOD BLOCKING
- WOOD FINISH
- PLYWOOD
- RIGID INSULATION
- BLANKET INSULATION
- STEEL
- ALUMINUM
- STUCCO / GROUT
- CAULK

DIMENSIONING SYSTEM

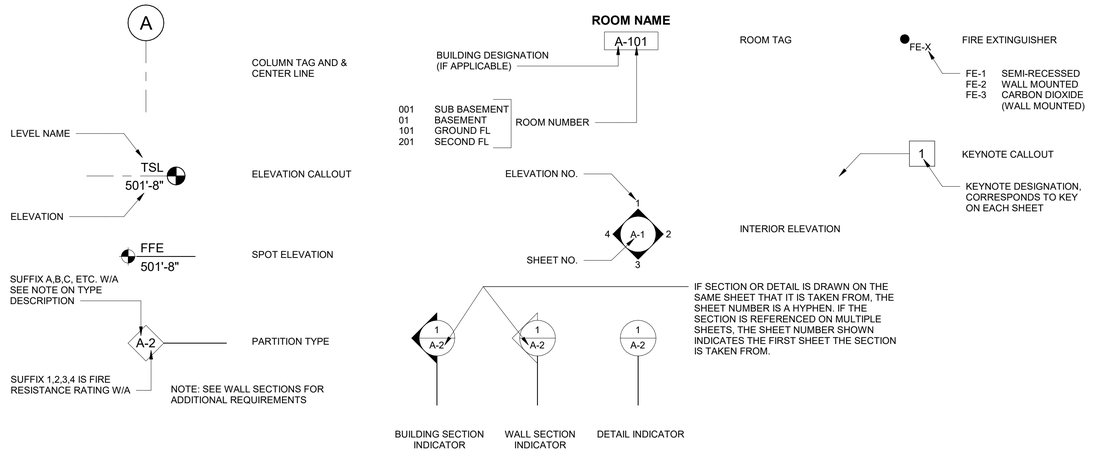


OPENINGS

USUALLY LABELED IN PLAN VIEW; HOWEVER, OPENINGS NOT SHOWN IN PLAN ARE LABELED ON ELEVATIONS



SYMBOLS



REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: C. SOLLOG
DRAWN BY: G. HOBDY
SHEET CHK'D BY: M. ALFORD
CROSS CHK'D BY: D. PRAH
APPROVED BY: C. SOLLOG
DATE: DECEMBER 2020

CDM Smith
4651 Salisbury Road, Suite 420
Jacksonville, FL 32256
Tel: (904) 731-7109
FL COA No. EB-0000020

JACOBS
245 RIVERSIDE AVE, SUITE 300
JACKSONVILLE, FLORIDA 32202
EB0000072 AAC001992 LC26000188

JEA

RIVERTOWN WATER TREATMENT PLANT PROJECT

GENERAL NOTES, ARCHITECTURAL SHEET INDEX, ABBREVIATIONS AND SYMBOLS

PROJECT NO. 6103-237938
FILE NAME: AWZ00PS.RVT

SHEET NO.
A-1

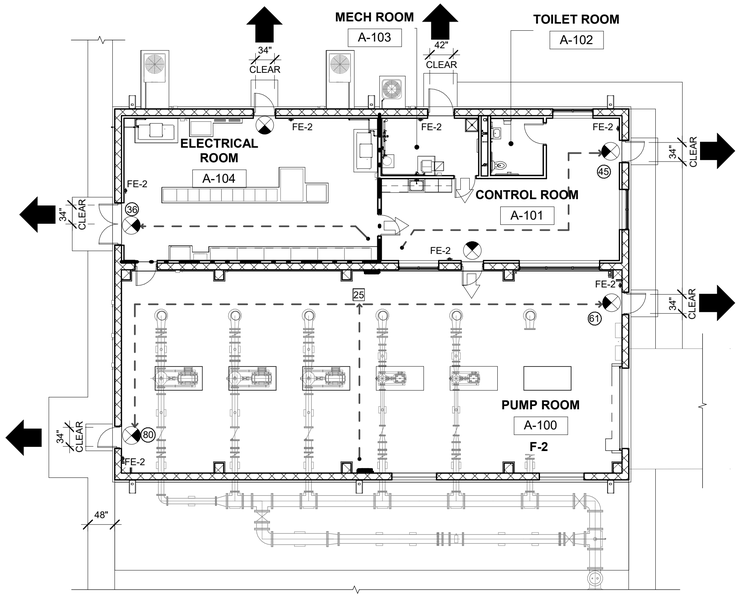
STATE OF FLORIDA
CLARICE ELIZABETH SOLLOG
AR 96709
REGISTERED ARCHITECT

CLARICE E. SOLLOG, AIA
NO. AR96709
FL. CORP ARCHITECTURE AA-002781
101 SOUTHHALL LANE, SUITE 200
MAITLAND, FL 32751

ISSUED FOR BID

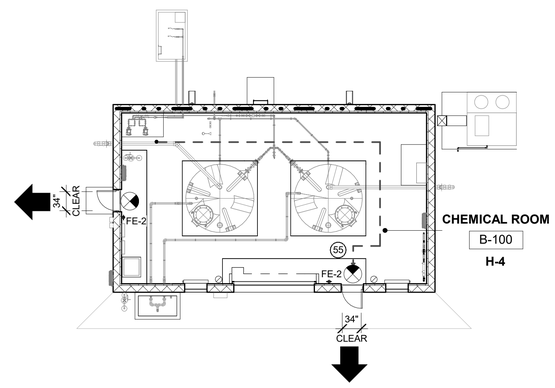
Building Code Summary			
Owner:	JEA	**Date:**	August, 2020
Project Name:	Rivertown Water Treatment Plant	**Location:**	St Johns County, FL
Project No:	6103-237938	**Architect of Record:**	Clarice E Sollog, AIA
Building Name:	High Service Pump Station (HSPS)		
Applicable Ordinances, Codes, and Standards			
Abbreviations	**ICC** - International Code Council; **IBC** - International Building Code; **IPC** - International Plumbing Code; **IMC** - International Mechanical Code; **IECC** - International Energy Conservation Code; **IFC** - International Fire Code; **NEC** - National Electrical Code; **FBC** - Florida Building Code		
Building Code	FBC Building, Seventh Edition		
Plumbing Code	FBC Plumbing, Seventh Edition		
Mechanical Code	FBC Mechanical , Seventh Edition		
Electrical Code	NFPA 70 - NEC 2014		
Energy Code	FBC Energy Conservation, Seventh Edition		
Fire / Life Safety Code	Florida Fire Prevention Code, Seventh Edition (NFPA 1 - Fire Code, Florida Edition and NFPA 101 - Life Safety Code, Florida Edition)		
Accessibility Code	FBC Accessibility, Seventh Edition		
Chapter 3	**Use and Occupancy Classification**		
	Mixed Use (Y/N)	No	
	Section 306 - Factory Group, F	Low Hazard Industrial, Group F-2	
Chapter 4	**Special Detailed Requirements Based on Use and Occupancy**		**Not Applicable**
Section 414	Hazardous Materials		
	Section 414.2 Control Areas	*N/A*	
	Section 414.5 Inside Storage, Dispensing and Use	*N/A*	
	Section 414.5.5 Spill Control, Drainage and Containment	*N/A*	
	Section 414.6 Outdoor Storage, Dispensing and Use	No. 2 Diesel Fuel	
	Florida Fire Protection Code/NFPA 30A	Storage of XXX Gallons at Generator Day Tank	
	Section 414.6.1.2 Separation Distance	275 - 30,000 gal, min 5 feet from building	Actual: 13'-6"
Chapter 5	**General Building Heights and Areas**		
503.1.1	Special Industrial Occupancies		N/A
503.1.2	Buildings on Same Lot		Yes
	Table 504.3 - Allowable Building Height Table 504.4 - Allowable Number of Stories Table 506.2 - Allowable Area	Allowable no. of stories/Allowable sq. ft. area per story	Proposed
	Use Group F-2: Type II-B Construction	3 Stories/23,000 SF (Gross)	1 Story/ 3,636 SF Gross)
		Maximum allowable height	Proposed
		55'	17'-4"
Chapter 6	**Types of Construction**		
	Paragraph 602.2 - Types I and II	Type II B	
Table 601	Fire-Resistance Rating Requirements (hours) for Building Elements		
	Building Element	Req'd Rating for Construction Type	Rating Provided
	Primary Structural Frame	0 HR	In compliance with required ratings
	Bearing Walls (Exterior)	0 HR but not less than the fire-resistance rating required by other sections of this code.	In compliance with required ratings
	Bearing Walls (Interior)	0 HR	In compliance with required ratings
	Non Bearing Walls and Partitions (Exterior)	See Table 602 requirements below	
	Non Bearing Walls and Partitions (Interior)	0 HR	In compliance with required ratings*
	Floor Construction including supporting structure	0 HR	In compliance with required ratings
	Roof Construction including supporting structure	0 HR	In compliance with required ratings
	*2-Hr Fire-rated walls provided at Electrical Room in compliance with NFPA 13, paragraph 8.15.11.2 as a result of building sprinkler system being requested. Full building sprinkler not required by code.		
Table 602	Fire-Resistance Rating Requirements (hours) for Exterior Walls based on Fire Separation Distance (feet)		
	Fire Separation Distance in feet	Req'd Rating for Occupancy	Rating Provided
	10 ≤ X < 30	0 HR	In compliance with required ratings
Chapter 7	**Fire and Smoke Protection Features**		
Section 705	Exterior Walls	Paragraph 705.2 Projections of eave overhangs = 24 inches plus 8 inches inches/foot beyond 3 feet with fire separation distance from other buildings of 3 ft or greater (Table 705.2)	In compliance with less than 48" of overhang
Table 705.8	Maximum percentage Area of Exterior Wall Openings based on Fire Separation Distance in feet		
	Unprotected openings in walls of non-sprinklered buildings with fire separation distance 5 ≤ X < 10	10%	In compliance
Section 714	Penetrations		As required at 2-Hr separation of dedicated Electrical Room.
Section 715	Fire-Resistant Joint System		
Chapter 8	**Interior Finishes**		
Section 803	Wall and Ceiling Finishes		
Table 803.11	Interior Wall and Ceiling Finish Requirements by Occupancy		
	Group F - Interior exit stairways and ramps and exit passageways	Class B required	N/A
	Group F - Corridors and enclosure for exit access stairways and ramps	Class C required	N/A
	Group F - Rooms and enclosed spaces	Class C required	In compliance
Chapter 9	**Fire Protection Systems**		
Section 903	Automatic Sprinkler Systems	Paragraph 903.2, Group F-2	Not Required / System Provided*
	*2-Hr Fire-rated walls provided at Electrical Room in compliance with NFPA 13, paragraph 8.15.11.2 as a result of building sprinkler system being requested. Full building sprinkler not required by code.		
Section 906	Portable Fire Extinguishers	Paragraph 906.1 - Required in use Group F	7 Provided
	Paragraph 906.3 Size and distribution	Pump Room - Class A fire hazard	2
		Control Room - Class A fire Hazard	2
		Electrical Room - Class C fire hazard	2
Section 907	Fire Alarm and Detection Systems	907.2.4 Group F	Not Required / System Provided
Chapter 10	**Means of Egress**		
		Required/Allowed	Proposed
Section 1004	Occupant Load		
	Table 1004.1.2 - Maximum Floor Area Allowances per Occupant	Industrial areas = 100 sq.ft. gross per occupant	
		Ground Level - 3,636 sq. ft. / 100 sq. ft. = 37 occupants*	
		*Occupant load shown is for means of egress calculations. Actual occupant load is 5 people.	
Section 1005	Means of Egress Sizing		
	Paragraph 1005.3.1 Stairway width	0.3 inches x occupant load = 0.3 x 37 = 11.1 in.	N/A
	Paragraph 1005.3.2 Other egress components = Doors width	0.2 inches x occupant load = 0.2 x 37 = 7.4in.	34 inches
Section 1006	Number of Exits	Table 1006.2.1 Group F	6
Section 1008	Means of Egress Illumination	Paragraph 1008.2 Illumination level	In compliance
Section 1009	Accessible Means of Egress	See Chapter 11 below	
Section 1010	Doors, Gates and Turnstiles		
	Parag. 1010.1.1 - Size of Doors	Minimum Width = 32 inches	34 inches
	Parag. 1010.1.2 - Door Swing	Pivoted or side-hinged swinging type	In compliance
Section 1011	Stairways		N/A
Section 1012	Ramps		N/A
Section 1013	Exit Signs	Required throughout	In compliance
Section 1014	Handrails		N/A
Section 1015	Guards		N/A
Section 1016	Exit Access		In compliance
Section 1017	Exit Access Travel Distance	Table 1017.2 - Group F-2, 300 feet maximum	80 feet maximum
Section 1018	Number of Exits and Continuity		In compliance
Section 1022	Exterior Exit Ramps and Stairways		In compliance
Section 1028	Exit Discharge		In compliance
Chapter 11	**Accessibility**		
	Paragraph 1101.1.1 - Designed in accordance with FBC Accessibility	FBC Accessibility 203.5 - Spaces frequented only be service personnel for maintenenace, repair or occasional monitoring of equipment shall not be required to comply	Pump Room, Control Room, Toilet Room, Electrical Room and Mechanical Room - Not Required
Chapter 12	**Interior Environment**		
Section 1203	Ventilation	Paragraph 1203.1 General	In compliance
Section 1204	Temperature Control	Paragraph 1204.1 Equipment and systems	In compliance
Section 1205	Lighting	Paragraph 1205.3 Artificial light	In compliance
Section 1208	Interior Space Dimensions	Paragraph 1208.2 Minimum Ceiling Heights	In compliance
Chapter 29	**Plumbing Systems**		
Section 2902	Table 2902.1 Minimum Plumbing Facilities	Water Closets - 1 per 100	1 provided
		Lavatories - 1 per 100	1 provided
		Section 2902.2 Separate Facilities, Exception 2	Separate Facilites not Required, occupant load less than 15.
		Drinking Fountain - FBC Plumbing Section 410	Not Required
		Other - 1 Service Sink	1 provided

Building Code Summary			
Owner:	JEA	**Date:**	August, 2020
Project Name:	Rivertown Water Treatment Plant	**Location:**	St Johns County, FL
Project No:	6103-237938	**Architect of Record:**	Clarice E Sollog, AIA
Building Name:	Chemical Building		
Applicable Ordinances, Codes, and Standards			
Abbreviations	**ICC** - International Code Council; **IBC** - International Building Code; **IPC** - International Plumbing Code; **IMC** - International Mechanical Code; **IECC** - International Energy Conservation Code; **IFC** - International Fire Code; **NEC** - National Electrical Code; **FBC** - Florida Building Code		
Building Code	FBC Building, Seventh Edition		
Plumbing Code	FBC Plumbing, Seventh Edition		
Mechanical Code	FBC Mechanical , Seventh Edition		
Electrical Code	NFPA 70 - NEC 2014		
Energy Code	FBC Energy Conservation, Seventh Edition		
Fire / Life Safety Code	Florida Fire Prevention Code, Seventh Edition (NFPA 1 - Fire Code, Florida Edition and NFPA 101 - Life Safety Code, Florida Edition)		
Accessibility Code	FBC Accessibility, Seventh Edition		
Chapter 3	**Use and Occupancy Classification**		
	Mixed Use (Y/N)	No	
	Section 307 - High Hazard, Group H	Group H-4, Chemical Storage in Excess of Control Area Max	
Chapter 4	**Special Detailed Requirements Based on Use and Occupancy**		**Not Applicable**
Section 414	Hazardous Materials		
	Section 414.2 Control Areas	4 Allowed	1 Provided
	Section 414.5 Inside Storage, Dispensing and Use	Bulk Sodium Hypochloride, 12,000 gallons (2 6,000 tanks)	
	Section 414.5.5 Spill Control, Drainage and Containment	Provided/In compliance	
	Section 414.6 Outdoor Storage, Dispensing and Use	*N/A*	
	Section 414.6.1.2 Separation Distance	*N/A*	
Chapter 5	**General Building Heights and Areas**		
503.1.1	Special Industrial Occupancies		N/A
503.1.2	Buildings on Same Lot		Yes
	Table 504.3 - Allowable Building Height Table 504.4 - Allowable Number of Stories Table 506.2 - Allowable Area	Allowable no. of stories/Allowable sq. ft. area per story	Proposed
	Use Group H-4: Type II-B Construction	4 Stories/70,000 SF (Gross)	1 Story/ 1,151 SF Gross
		Maximum allowable height	Proposed
		75'	*22'-0"*
Chapter 6	**Types of Construction**		
	Paragraph 602.2 - Types I and II	Type II B	
Table 601	Fire-Resistance Rating Requirements (hours) for Building Elements		
	Building Element	Req'd Rating for Construction Type	Rating Provided
	Primary Structural Frame	0 HR	In compliance with required ratings
	Bearing Walls (Exterior)	0 HR but not less than the fire-resistance rating required by other sections of this code.	In compliance with required ratings
	Bearing Walls (Interior)	0 HR	In compliance with required ratings
	Non Bearing Walls and Partitions (Exterior)	See Table 602 requirements below	
	Non Bearing Walls and Partitions (Interior)	0 HR	In compliance with required ratings
	Floor Construction including supporting structure	0 HR	In compliance with required ratings
	Roof Construction including supporting structure	0 HR	In compliance with required ratings
Table 602	Fire-Resistance Rating Requirements (hours) for Exterior Walls based on Fire Separation Distance (feet)		
	Fire Separation Distance in feet	Req'd Rating for Occupancy	Rating Provided
	5 < X < 10	2 HR	In compliance with required ratings
Chapter 7	**Fire and Smoke Protection Features**		
Section 705	Exterior Walls	Paragraph 705.2 Projections of eave overhangs = 24 inches plus 8 inches inches/foot beyond 3 feet with fire separation distance from other buildings of 3 ft or greater (Table 705.2)	In compliance with less than 48" of overhang
Table 705.8	Unprotected openings in walls of sprinklered buildings with fire separation distance 5 ≤ X < 10	25%	In compliance
Section 714	Penetrations		
Section 715	Fire-Resistant Joint System		
Chapter 8	**Interior Finishes**		
Section 803	Wall and Ceiling Finishes		
Table 803.11	Interior Wall and Ceiling Finish Requirements by Occupancy		
	Group H - Interior exit stairways and ramps and exit passageways	Class B required	N/A
	Group H - Corridors and enclosure for exit access stairways and ramps	Class B required	N/A
	Group H - Rooms and enclosed spaces	Class C required	In compliance
Chapter 9	**Fire Protection Systems**		
Section 903	Automatic Sprinkler Systems	Paragraph 903.2.5, Group H	In Compliance
Section 906	Portable Fire Extinguishers	Paragraph 906.1 - Required in use Group H	2 Provided
	Paragraph 906.3 Size and distribution	Chemical Room - Class A fire hazard	2
Section 907	Fire Alarm and Detection Systems	907.2.5 Group H - only required in H-5	Provided
Chapter 10	**Means of Egress**		
		Required/Allowed	Proposed
Section 1004	Occupant Load		
	Table 1004.1.2 - Maximum Floor Area Allowances per Occupant	Industrial areas = 100 sq.ft. gross per occupant	
		Ground Level - 1,151 sq. ft. / 100 sq. ft. = 12 occupants	
Section 1005	Means of Egress Sizing		
	Paragraph 1005.3.1 Stairway width	0.3 inches x occupant load = 0.3 x 12 = 3.6 in.	N/A
	Paragraph 1005.3.2 Other egress components = Doors width	0.2 inches x occupant load = 0.2 x 12 = 2.54 in.	34 inches
Section 1006	Number of Exits	Table 1006.2.1 Group H-4	2
Section 1008	Means of Egress Illumination	Paragraph 1008.2 Illumination level	In compliance
Section 1009	Accessible Means of Egress	Not required - See Chapter 11 below	
Section 1010	Doors, Gates and Turnstiles		
	Parag. 1010.1.1 - Size of Doors	Minimum Width = 32 inches	34 inches
	Parag. 1010.1.2 - Door Swing	Pivoted or side-hinged swinging type	In compliance
Section 1011	Stairways		N/A
Section 1012	Ramps		N/A
Section 1013	Exit Signs	Required throughout	In compliance
Section 1014	Handrails		N/A
Section 1015	Guards		N/A
Section 1016	Exit Access		In compliance
Section 1017	Exit Access Travel Distance	Table 1017.2 - Group F-2, 300 feet maximum	47 feet maximum
Section 1018	Number of Exits and Continuity		In compliance
Section 1022	Exterior Exit Ramps and Stairways		In compliance
Section 1028	Exit Discharge		In compliance
Chapter 11	**Accessibility**		
	Paragraph 1101.1.1 - Designed in accordance with FBC Accessibility	FBC Accessibility 203.5 - Spaces frequented only be service personnel for maintenenace, repair or occasional monitoring of equipment shall not be required to comply	Not Required
Chapter 12	**Interior Environment**		
Section 1203	Ventilation	Paragraph 1203.1 General	In compliance
Section 1204	Temperature Control	Paragraph 1204.1 Equipment and systems	In compliance
Section 1205	Lighting	Paragraph 1205.3 Artificial light	In compliance
Section 1208	Interior Space Dimensions	Paragraph 1208.2 Minimum Ceiling Heights	In compliance
Chapter 29	**Plumbing Systems**		
Section 2902	Paragraph 2902.3.2	No fixture requirements for Group H	Employee access to toilet facilities available and located within 500 feet travel distance HSPS Toilet within 90 feet



HIGH SERVICE PUMP STATION LIFE SAFETY PLAN

3/32" = 1'-0"



CHEMICAL BUILDING LIFE SAFETY PLAN

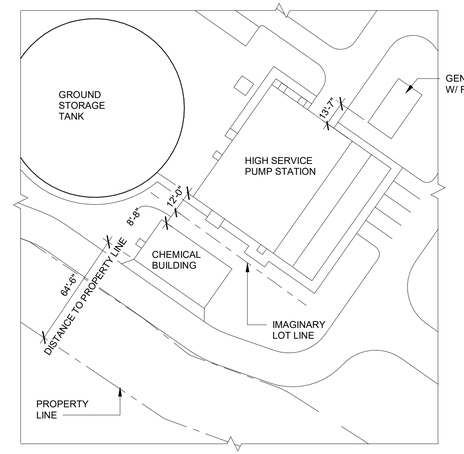
3/32" = 1'-0"

GENERAL NOTES

SEE SHEET A-1 FOR ADDITIONAL GENERAL NOTES

LIFE SAFETY LEGEND

- 2 HOUR FIRE RATING
- EXIT DISCHARGE
- AREA OR SPACE EXIT
- EXIT SIGN
- FE — FIRE EXTINGUISHER
- EGRESS PATH
- X — TRAVEL DISTANCE (FEET)
- X — COMMON PATH OF TRAVEL (FEET)

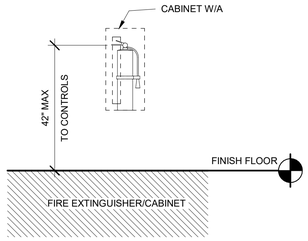


SITE PLAN

1" = 40'-0"

NOTE: SEE CIVIL DWG FOR ADDITIONAL SITE INFORMATION

FIRE EXTINGUISHER MOUNTING HEIGHT



HIGH SERVICE PUMP STATION FIRE EXTINGUISHER SCHEDULE				
TAG	**QTY**	**MODEL**	**MANUFACTURER**	**DESCRIPTION**
FE-2	7	COSMIC 10E UL RATED 4A-80BC	JL INDUSTRIES (ACTIVAR INC)	10 LB DRY CHEMICAL, BRACKET MOUNTED)

CHEMICAL BUILDING FIRE EXTINGUISHER SCHEDULE				
TAG	**QTY**	**MODEL**	**MANUFACTURER**	**DESCRIPTION**
FE-2	2	COSMIC 10E UL RATED 4A-80BC	JL INDUSTRIES (ACTIVAR INC)	10 LB DRY CHEMICAL, BRACKET MOUNTED)

CLARICE E. SOLLOG, AIA
NO. AR96709
FL. CORP ARCHITECTURE AA-002781
101 SOUTHHALL LANE, SUITE 200
MAITLAND, FL 32751

REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: C. SOLLOG
DRAWN BY: G. HOBDY
SHEET CHK'D BY: M. ALFORD
CROSS CHK'D BY: D. PRAH
APPROVED BY: C. SOLLOG
DATE: DECEMBER 2020

CDM Smith
4651 Salisbury Road, Suite 420
Jacksonville, FL 32256
Tel: (904) 731-7109
FL COA No. EB-0000020

JACOBS
245 RIVERSIDE AVE, SUITE 300
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EB0000072 AAC001992 LC26000188

JEA

RIVERTOWN WATER TREATMENT PLANT PROJECT

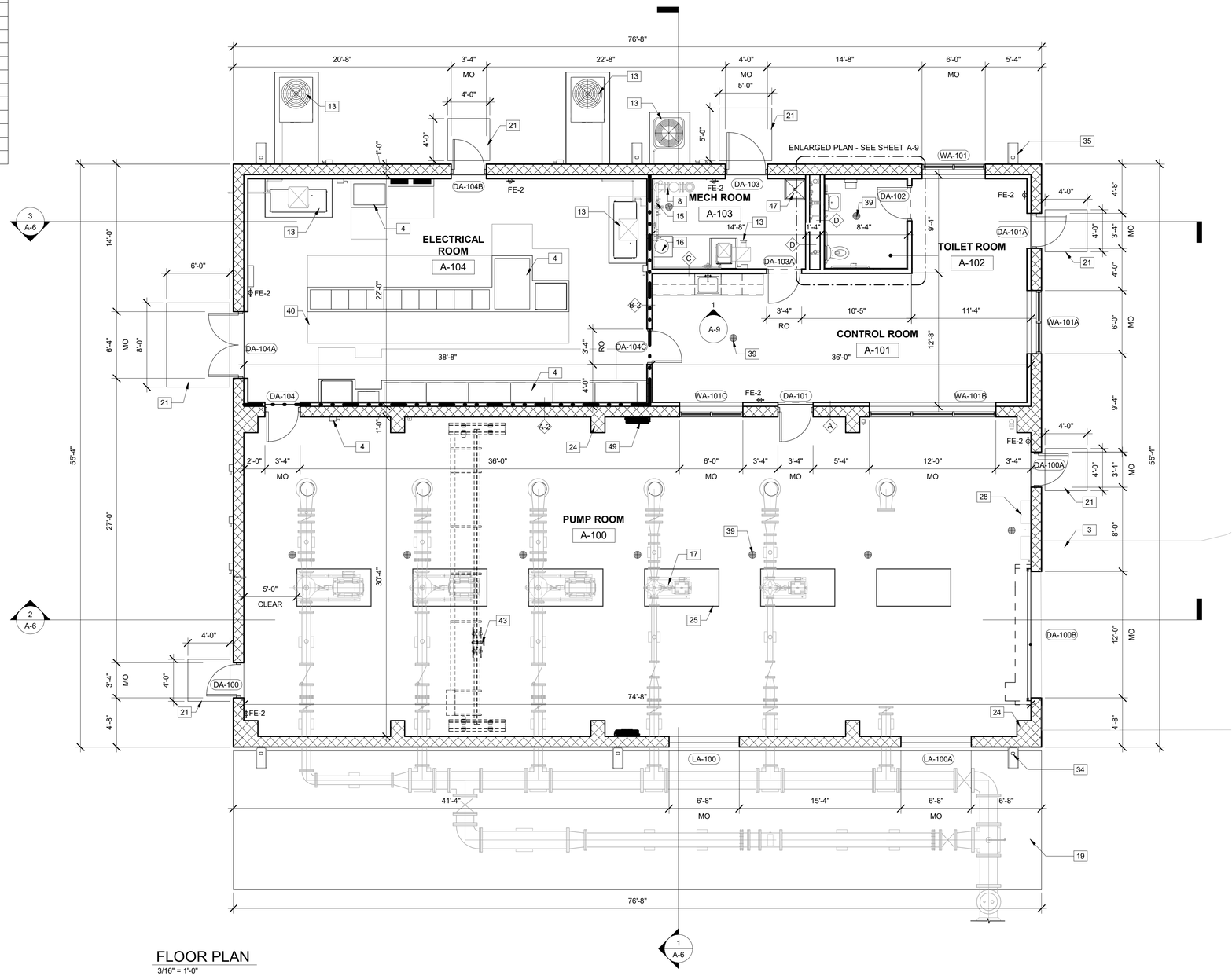
BUILDING CODE KEY DETERMINATIONS AND LIFE SAFETY PLANS

PROJECT NO. 6103-237938
FILE NAME: AWZ000PSCB.RVT

SHEET NO. A-2

ISSUED FOR BID

KEYNOTE LEGEND	
NUMBER	KEYNOTE DESCRIPTION
3	DRIVEWAY, SEE "C" DWGS
4	ELECTRICAL EQUIPMENT, SEE "E" DWGS
8	FIRE PROTECTION EQUIP, SEE "F" DWGS
13	HVAC EQUIPMENT, SEE "H" DWGS
15	PLUMBING PIPES, SEE "P" DWGS
16	PLUMBING EQUIPMENT, SEE "P" DWGS
17	PROCESS MECH EQUIPMENT, SEE "M" DWGS
19	CONCRETE SLAB, SEE "S" DWGS
21	CONCRETE LANDING, SEE "C" DWGS
24	CMU PILASTER, TYP, SEE "S" DWGS
25	PUMP PAD, TYP, SEE "S" DWGS
28	ANALYZER, SEE "I" DWGS
34	ALUMINUM DOWNSPOUT, TYP
35	CONCRETE SPLASHBLOCK, TYP
39	FLOOR DRAIN, TYP. SEE "P" DWGS
40	FLOOR MATS, TYP
43	BRIDGE CRANE, SEE "M" DWGS
47	MOP SINK, SEE "P" DWGS
49	WASH HOSE STATION, TYP, SEE "P" DWGS



FLOOR PLAN
3/16" = 1'-0"

GENERAL NOTES:
SEE SHEET A-1 FOR ADDITIONAL GENERAL NOTES

SEE SHEET A-2 FOR BUILDING CODE KEY DETERMINATIONS AND LIFE SAFETY PLAN

REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: C. SOLLOG
DRAWN BY: G. HOBDY
SHEET CHK'D BY: M. ALFORD
CROSS CHK'D BY: D. PRAH
APPROVED BY: C. SOLLOG
DATE: DECEMBER 2020

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RIVERTOWN WATER TREATMENT PLANT PROJECT

HIGH SERVICE PUMP STATION
FLOOR PLAN

PROJECT NO. 6103-237938
FILE NAME: AWZ000PS.RVT

SHEET NO.
A-3

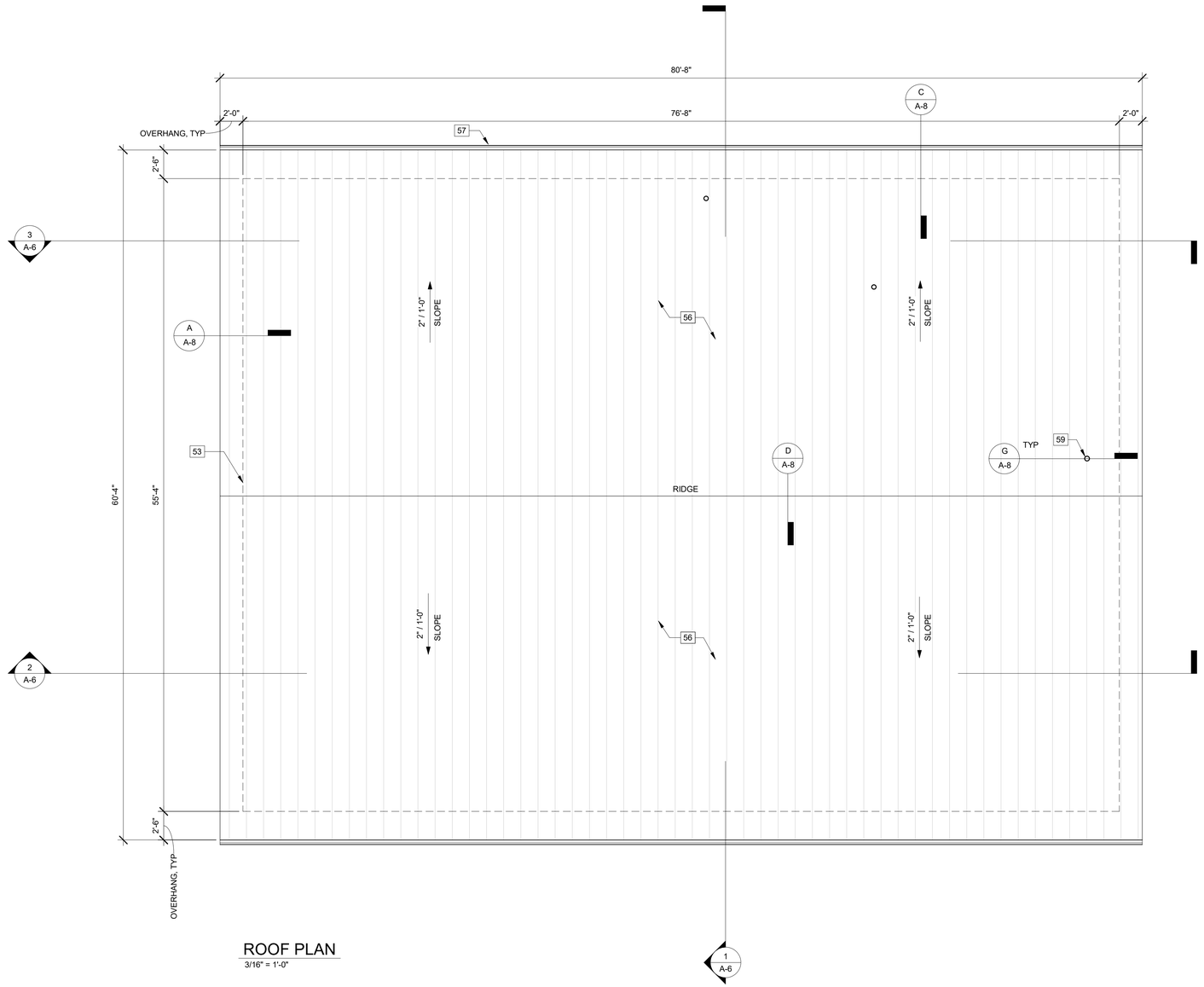
STATE OF FLORIDA
CLARICE ELIZABETH SOLLOG
AR 96709
REGISTERED ARCHITECT

CLARICE E. SOLLOG, AIA
NO. AR96709
FL. CORP ARCHITECTURE AA-002781
101 SOUTHHALL LANE, SUITE 200
MAITLAND, FL 32751

ISSUED FOR BID

KEYNOTE LEGEND	
NUMBER	KEYNOTE DESCRIPTION
53	BUILDING OUTLINE BELOW
56	STANDING SEAM METAL ROOF SYSTEM OVER RIGID INSULATION
57	ALUMINUM GUTTER, TYP
59	VENT THROUGH ROOF, TYP, SEE "P" DWGS

GENERAL NOTES:
SEE SHEET A-1 FOR ADDITIONAL GENERAL NOTES



ROOF PLAN
3/16" = 1'-0"

REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: C. SOLLOG
DRAWN BY: G. HOBDY
SHEET CHK'D BY: M. ALFORD
CROSS CHK'D BY: D. PRAH
APPROVED BY: C. SOLLOG
DATE: DECEMBER 2020

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JEA

RIVERTOWN WATER TREATMENT PLANT PROJECT

HIGH SERVICE PUMP STATION
ROOF PLAN

PROJECT NO. 6103-237938
FILE NAME: AWZ000PS.RVT

SHEET NO.
A-4

ISSUED FOR BID

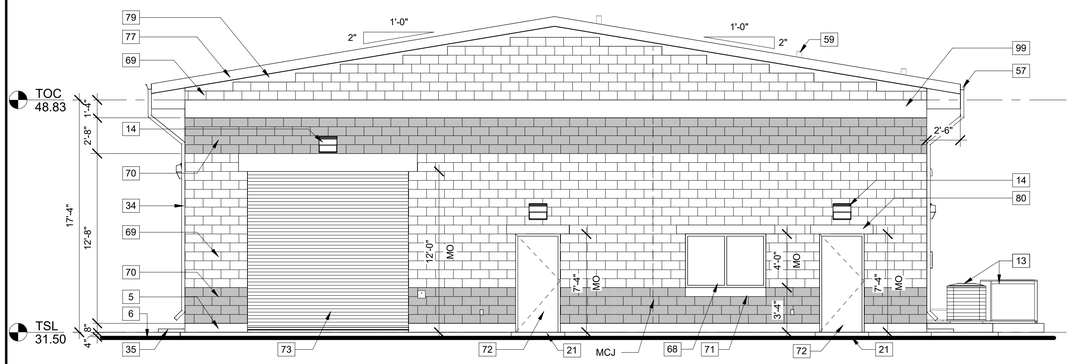
CLARICE E. SOLLOG, AIA
NO. AR96709
FL. CORP ARCHITECTURE AA-002781
101 SOUTHHALL LANE, SUITE 200
MAITLAND, FL 32751

KEYNOTE LEGEND	
NUMBER	KEYNOTE DESCRIPTION
4	ELECTRICAL EQUIPMENT, SEE "E" DWGS
5	CONCRETE CURB, SEE "S" DWGS
6	FINISH GRADE, SEE "C" DWGS
13	HVAC EQUIPMENT, SEE "H" DWGS
14	LIGHT FIXTURE, SEE "E" DWGS
21	CONCRETE LANDING, SEE "C" DWGS
34	ALUMINUM DOWNSPOUT, TYP
35	CONCRETE SPLASHBLOCK, TYP
55	EXHAUST FAN TYP, SEE "H" DWGS
56	STANDING SEAM METAL ROOF SYSTEM OVER RIGID INSULATION
57	ALUMINUM GUTTER, TYP
59	VENT THROUGH ROOF, TYP, SEE "P" DWGS
67	ALUMINUM LOUVER, SEE SCHD
68	ALUMINUM WINDOW SYSTEM, SEE SCHD
69	SPLIT-FACE CMU, FIELD COLOR
70	SPLIT-FACE CMU, ACCENT COLOR
71	PRECAST CONCRETE SILL, TYP
72	FRP DOOR WITH ALUM FRAME, SEE SCHD
73	MANUAL OVERHEAD COILING DOOR, SEE SCHD
74	FRAMED TRANSLUCENT PANEL SYSTEM, TYP SEE SCHD
75	PROCESS PIPE WALL PENETRATION, SEE "S" DWGS
77	ALUMINUM FASCIA, TYP
79	CONCRETE CAP BEAM, SEE "S" DWGS
80	PRECAST CONCRETE LINTEL, TYP, SEE "S" DWGS
99	CONCRETE TIE BEAM, SEE "S" DWGS

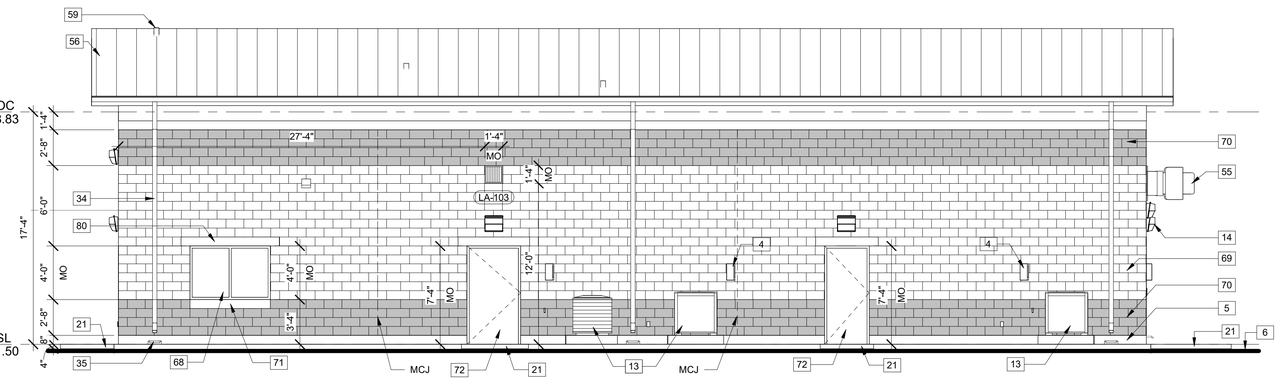
GENERAL NOTES:

SEE SHEET A-1 FOR ADDITIONAL GENERAL NOTES

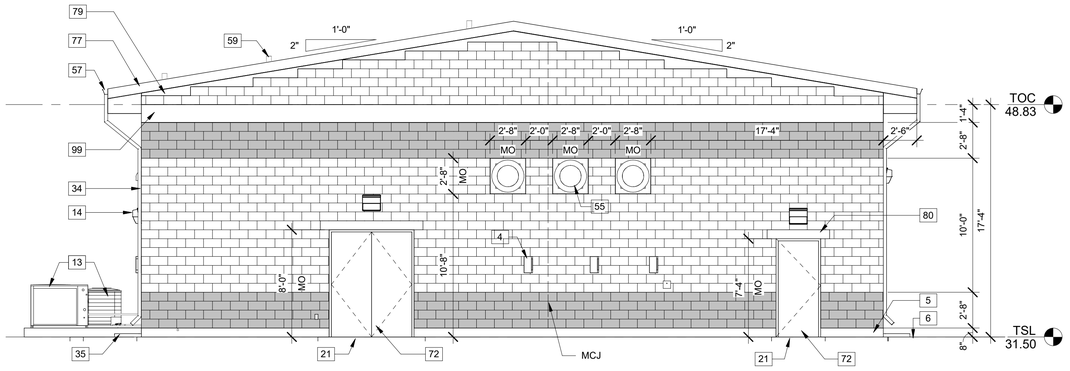
PROCESS MECHANICAL EQUIPMENT NOT SHOWN, REFER TO "M" DWGS FOR EXTENTS OF PROCESS EQUIPMENT AND PIPING.



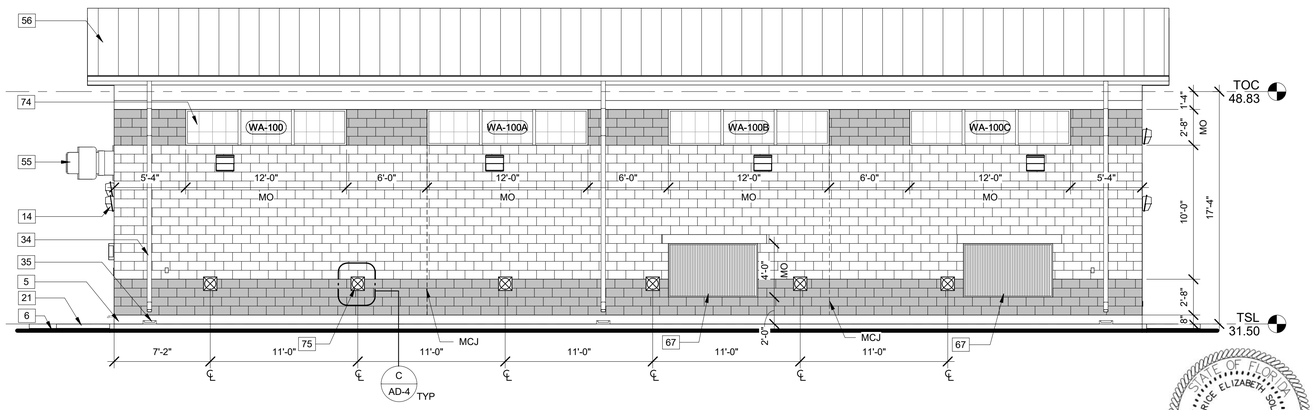
1 NORTH ELEVATION
3/16" = 1'-0"



2 WEST ELEVATION
3/16" = 1'-0"



4 SOUTH ELEVATION
3/16" = 1'-0"



3 EAST ELEVATION
3/16" = 1'-0"

CLARICE E. SOLLOG, AIA
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101 SOUTHHALL LANE, SUITE 200
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REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: C. SOLLOG
DRAWN BY: G. HOBDY
SHEET CHK'D BY: M. ALFORD
CROSS CHK'D BY: D. PRAH
APPROVED BY: C. SOLLOG
DATE: DECEMBER 2020

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JEA

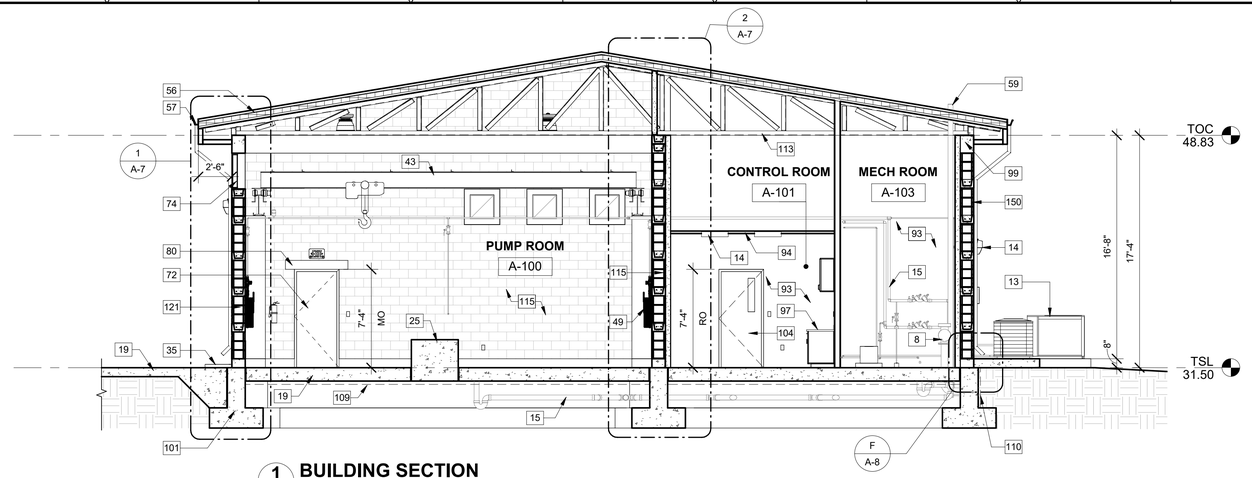
RIVERTOWN WATER TREATMENT PLANT PROJECT

HIGH SERVICE PUMP STATION
EXTERIOR ELEVATIONS

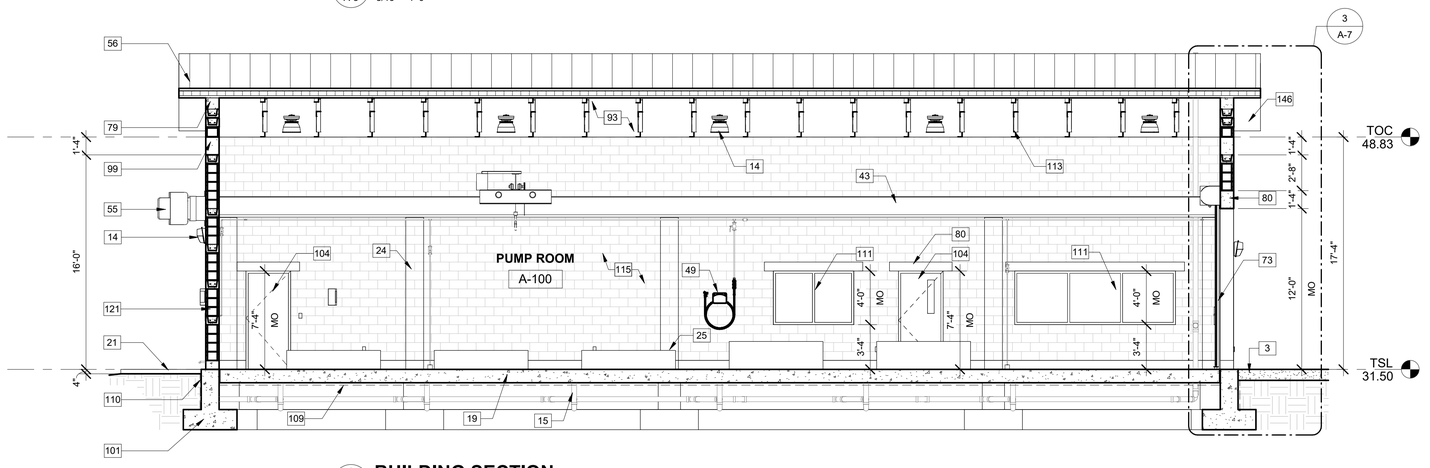
PROJECT NO. 6103-237938
FILE NAME: AWZ000PS.RVT
SHEET NO. A-5

ISSUED FOR BID

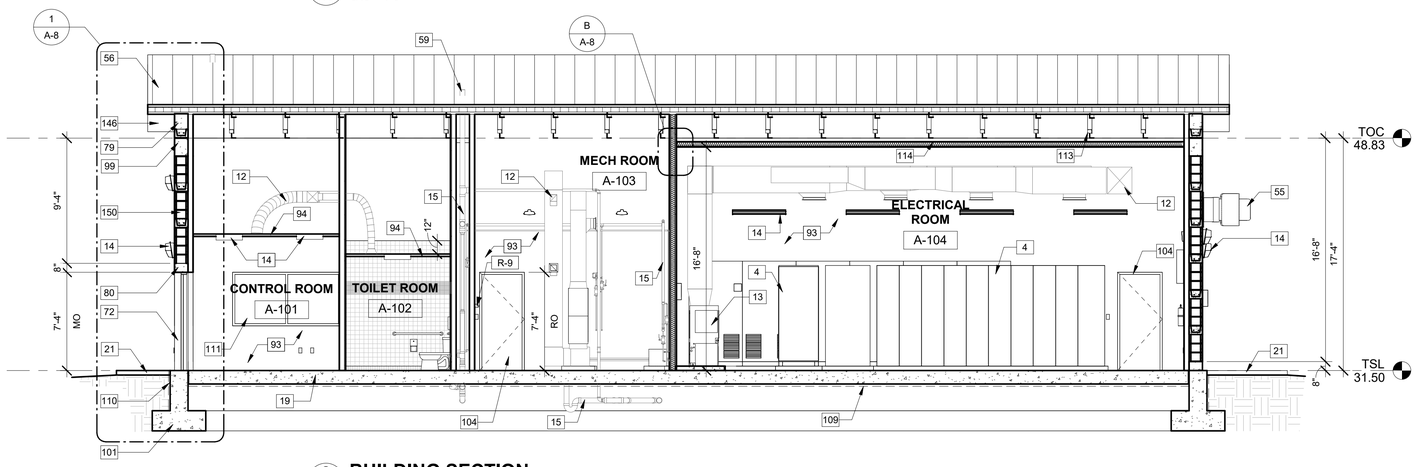
KEYNOTE LEGEND	
NUMBER	KEYNOTE DESCRIPTION
3	DRIVEWAY, SEE "C" DWGS
4	ELECTRICAL EQUIPMENT, SEE "E" DWGS
8	FIRE PROTECTION EQUIP, SEE "F" DWGS
12	HVAC DUCTWORK, SEE "H" DWGS
13	HVAC EQUIPMENT, SEE "H" DWGS
14	LIGHT FIXTURE, SEE "E" DWGS
15	PLUMBING PIPES, SEE "P" DWGS
19	CONCRETE SLAB, SEE "S" DWGS
21	CONCRETE LANDING, SEE "C" DWGS
24	CMU PILASTER, TYP, SEE "S" DWGS
25	PUMP PAD, TYP, SEE "S" DWGS
35	CONCRETE SPLASHBLOCK, TYP
43	BRIDGE CRANE, SEE "M" DWGS
49	WASH HOSE STATION, TYP, SEE "P" DWGS
55	EXHAUST FAN TYP, SEE "H" DWGS
56	STANDING SEAM METAL ROOF SYSTEM OVER RIGID INSULATION
57	ALUMINUM GUTTER, TYP
59	VENT THROUGH ROOF, TYP, SEE "P" DWGS
72	FRP DOOR WITH ALUM FRAME, SEE SCHD
73	MANUAL OVERHEAD COILING DOOR, SEE SCHD
74	FRAMED TRANSLUCENT PANEL SYSTEM, TYP SEE SCHD
79	CONCRETE CAP BEAM, SEE "S" DWGS
80	PRECAST CONCRETE LINTEL, TYP, SEE "S" DWGS
93	PAINTED GYPSUM BOARD, TYP
94	SAT CEILING, SEE SCHD FOR INSTALATION HEIGHT
97	STAINLESS STEEL COUNTERTOP WITH INTEGRAL BACKSPLASH
99	CONCRETE TIE BEAM, SEE "S" DWGS
101	CONCRETE FOUNDATION, SEE "S" DWGS
104	HOLLOW METAL DOOR AND FRAME, TYP
109	VAPOR RETARDER
110	DAMPPROOFING, TYP
111	HOLLOW METAL WINDOW SYSTEM, SEE SCHD
113	STEEL TRUSS, SEE "S" DWGS
114	2-HR FIRE-RATED METAL STUD AND DRYWALL CEILING ASSEMBLY
115	12" PAINTED CMU, TYP
121	12" SPLIT-FACE CMU, TYP
146	ALUM SOFFIT PANEL
150	12" SPLIT-FACE CMU WITH 3 5/8" STUDS AND GYPSUM BOARD OVER SPRAY FOAM INSULATION.



1 BUILDING SECTION A-3 — 3/16" = 1'-0"



2 BUILDING SECTION A-3 — 3/16" = 1'-0"



3 BUILDING SECTION A-3 — 3/16" = 1'-0"

GENERAL NOTES:

SEE SHEET A-1 FOR ADDITIONAL GENERAL NOTES

STRUCTURAL ITEMS SHOWN ON THIS SHEET ARE FOR GRAPHICAL PURPOSES ONLY. REFER TO STRUCTURAL DRAWINGS FOR SPECIFIC LOCATIONS A DETAILED REQUIREMENTS

PROCESS EQUIPMENT NOT SHOWN, REFER TO "M" DWGS FOR EXTENTS OF PROCESS EQUIPMENT AND PIPING

BRIDGE CRANE DEPICTED IS GENERIC IN NATURE, REFER TO "M" DWGS FOR BASIS OF DESIGN CONFIGURATION, REQUIRED CLEARANCES AND HOOK HEIGHTS.

CLARICE E. SOLLOG, AIA
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REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: C. SOLLOG
DRAWN BY: G. HOBDY
SHEET CHK'D BY: M. ALFORD
CROSS CHK'D BY: D. PRAH
APPROVED BY: C. SOLLOG
DATE: DECEMBER 2020

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JEA

RIVERTOWN WATER TREATMENT PLANT PROJECT

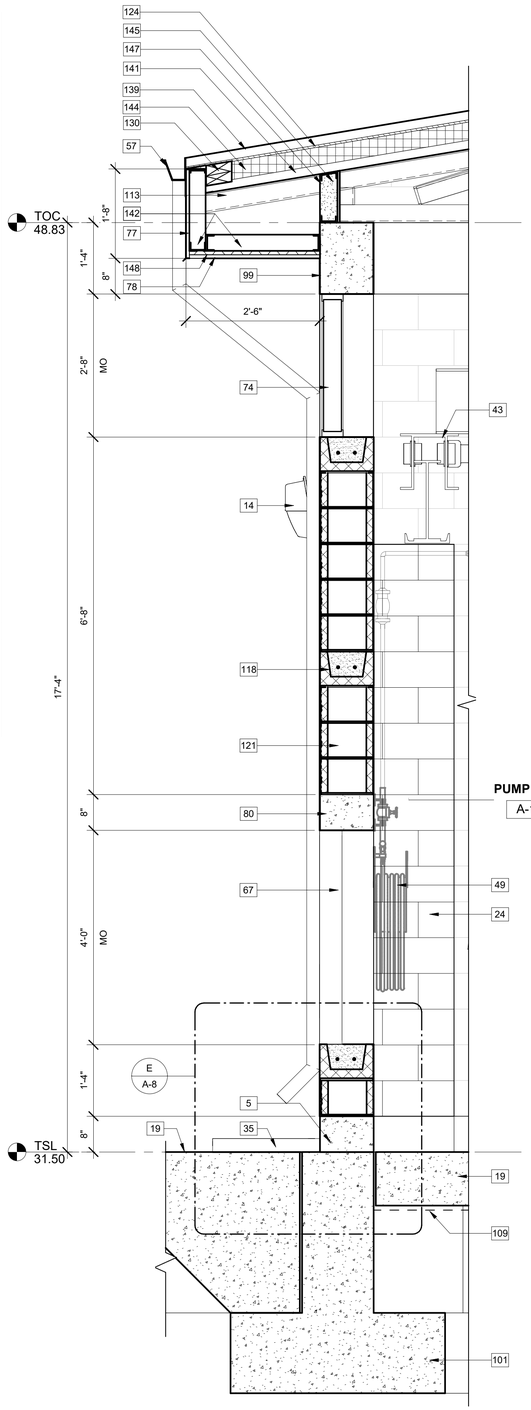
HIGH SERVICE PUMP STATION
BUILDING SECTIONS

PROJECT NO. 6103-237938
FILE NAME: AWZ000PS.RVT

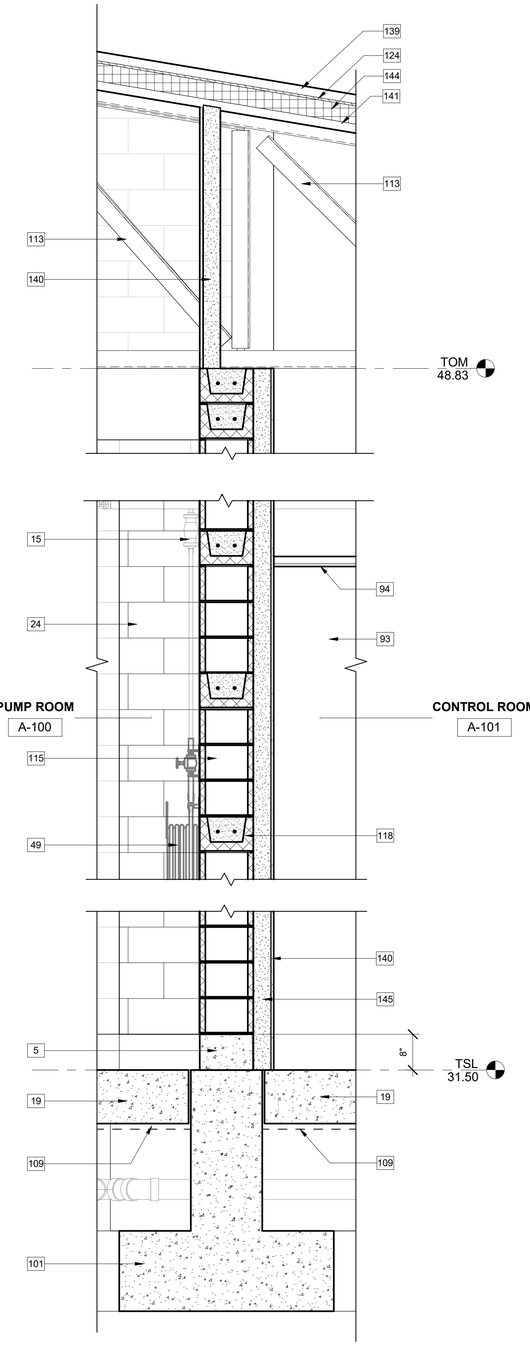
SHEET NO.
A-6

ISSUED FOR BID

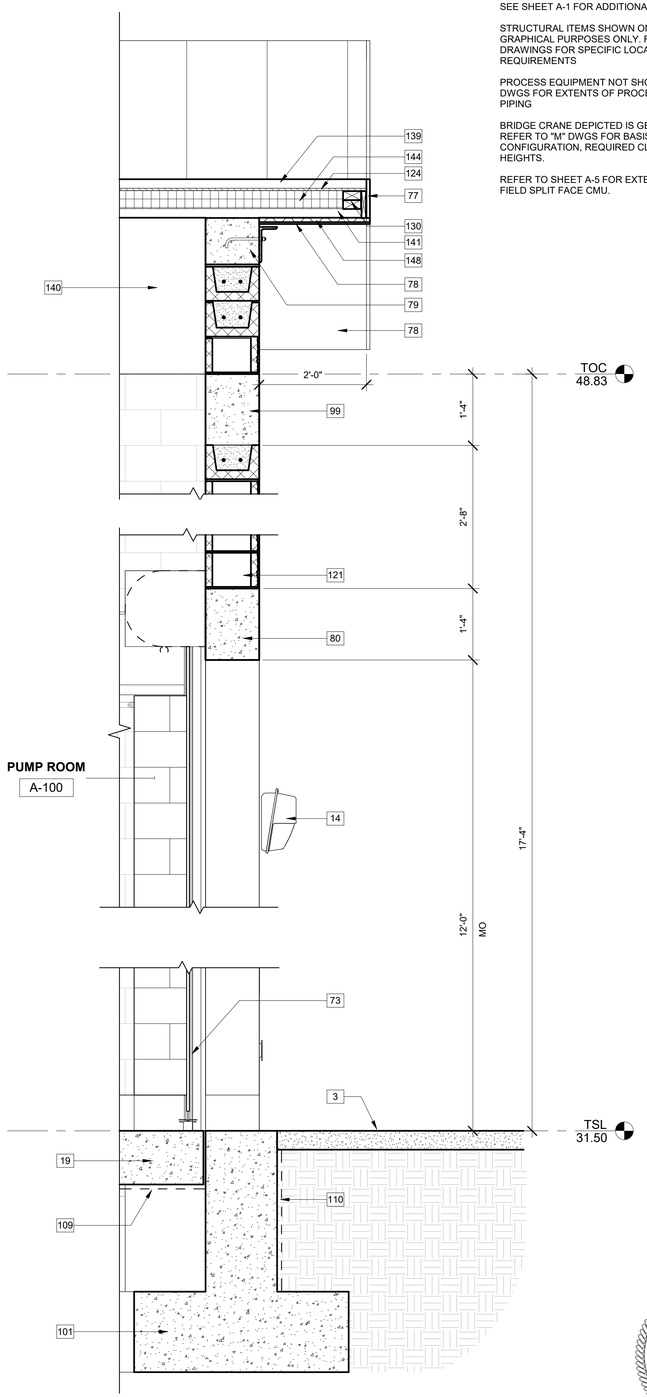
KEYNOTE LEGEND	
NUMBER	KEYNOTE DESCRIPTION
3	DRIVEWAY, SEE "C" DWGS
5	CONCRETE CURB, SEE "S" DWGS
14	LIGHT FIXTURE, SEE "E" DWGS
15	PLUMBING PIPES, SEE "P" DWGS
19	CONCRETE SLAB, SEE "S" DWGS
24	CMU PILASTER, TYP, SEE "S" DWGS
35	CONCRETE SPLASHBLOCK, TYP
43	BRIDGE CRANE, SEE "M" DWGS
49	WASH HOSE STATION, TYP, SEE "P" DWGS
57	ALUMINUM GUTTER, TYP
67	ALUMINUM LOUVER, SEE SCHD
73	MANUAL OVERHEAD COILING DOOR, SEE SCHD
74	FRAMED TRANSLUCENT PANEL SYSTEM, TYP SEE SCHD
77	ALUMINUM FASCIA, TYP
78	ALUMINUM SOFFIT PANEL
79	CONCRETE CAP BEAM, SEE "S" DWGS
80	PRECAST CONCRETE LINTEL, TYP, SEE "S" DWGS
93	PAINTED GYPSUM BOARD, TYP
94	SAT CEILING, SEE SCHD FOR INSTALATION HEIGHT
99	CONCRETE TIE BEAM, SEE "S" DWGS
101	CONCRETE FOUNDATION, SEE "S" DWGS
109	VAPOR RETARDER
110	DAMPPROOFING, TYP
113	STEEL TRUSS, SEE "S" DWGS
115	12" PAINTED CMU, TYP
118	BOND BEAM, SEE "S" DWGS
121	12" SPLIT-FACE CMU, TYP
124	COVERBOARD
130	WOOD BLOCKING, TYP
139	1 1/2" STANDING SEAM METAL ROOFING
140	5/8" GYPSUM BOARD OVER 3 5/8" METAL STUD, FRAME AROUND ROOF TRUSSES
141	METAL DECKING, SEE "S" DWGS
142	3 5/8" COLD FORMED METAL FRAMING
144	4" RIGID INSULATION, MIN R-20
145	SPRAY FOAM INSULATION, MIN R-18
147	3 5/8" COLD FORMED METAL FRAMING, FRAME AROUND ROOF TRUSSES, GYPSUM BOARD INSTALLED ON INTERIOR FACE
148	HAT CHANNELS AT 16" O.C.



1 WALL SECTION
A-6 3/4" = 1'-0"



2 WALL SECTION
A-6 3/4" = 1'-0"



3 WALL SECTION
A-6 3/4" = 1'-0"

GENERAL NOTES:

SEE SHEET A-1 FOR ADDITIONAL GENERAL NOTES

STRUCTURAL ITEMS SHOWN ON THIS SHEET ARE FOR GRAPHICAL PURPOSES ONLY. REFER TO STRUCTURAL DRAWINGS FOR SPECIFIC LOCATIONS A DETAILED REQUIREMENTS

PROCESS EQUIPMENT NOT SHOWN, REFER TO "M" DWGS FOR EXTENTS OF PROCESS EQUIPMENT AND PIPING

BRIDGE CRANE DEPICTED IS GENERIC IN NATURE, REFER TO "M" DWGS FOR BASIS OF DESIGN CONFIGURATION, REQUIRED CLEARANCES AND HOOK HEIGHTS.

REFER TO SHEET A-5 FOR EXTENTS OFF ACCENT AND FIELD SPLIT FACE CMU.

REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: C. SOLLOG
DRAWN BY: G. HOBDY
SHEET CHK'D BY: M. ALFORD
CROSS CHK'D BY: D. PRAH
APPROVED BY: C. SOLLOG
DATE: DECEMBER 2020

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EB0000072 AAC001992 LC26000188

JEA

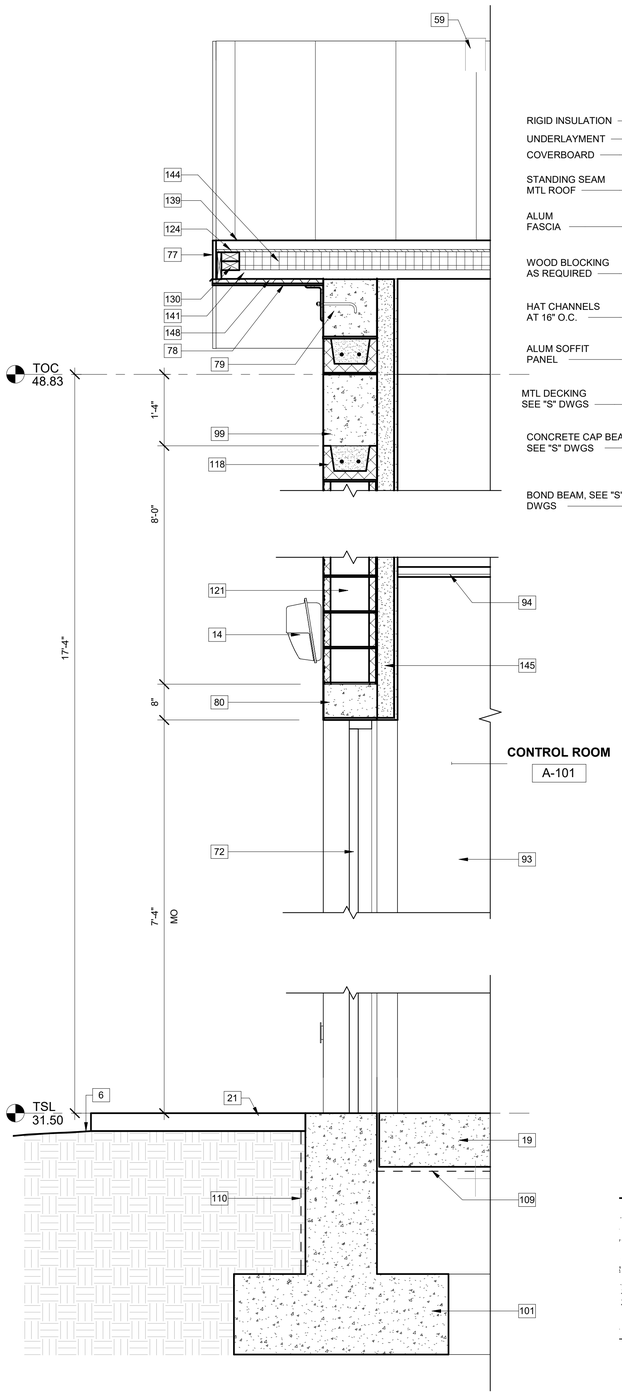
RIVERTOWN WATER TREATMENT PLANT PROJECT

HIGH SERVICE PUMP STATION
WALL SECTIONS

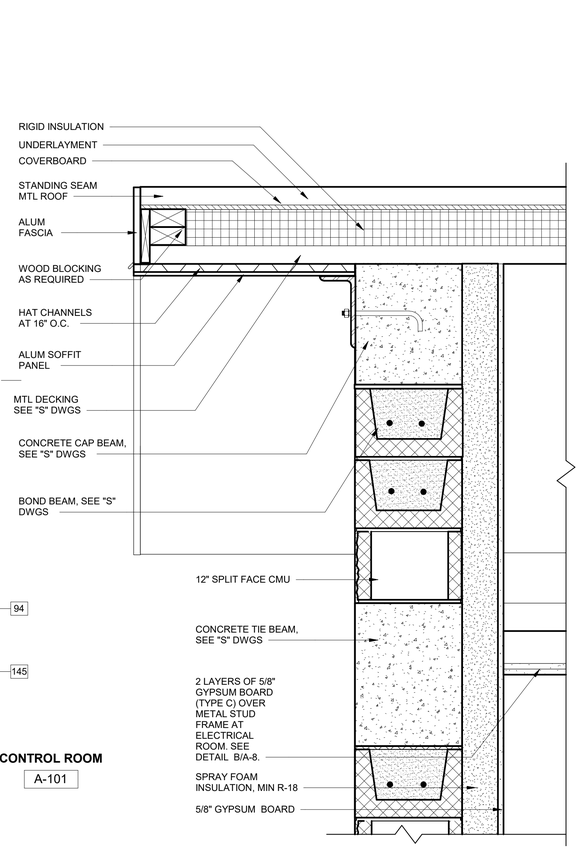
CLARICE E. SOLLOG, AIA
NO. AR96709
FL. CORP ARCHITECTURE AA-002781
101 SOUTHHALL LANE, SUITE 200
MAITLAND, FL 32751

PROJECT NO. 6103-237938
FILE NAME: AWZ000PS.RVT
SHEET NO. A-7

ISSUED FOR BID

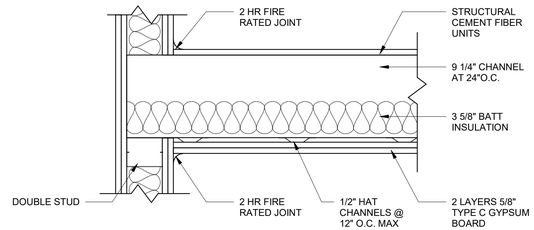


1 WALL SECTION
A-6 3/4" = 1'-0"



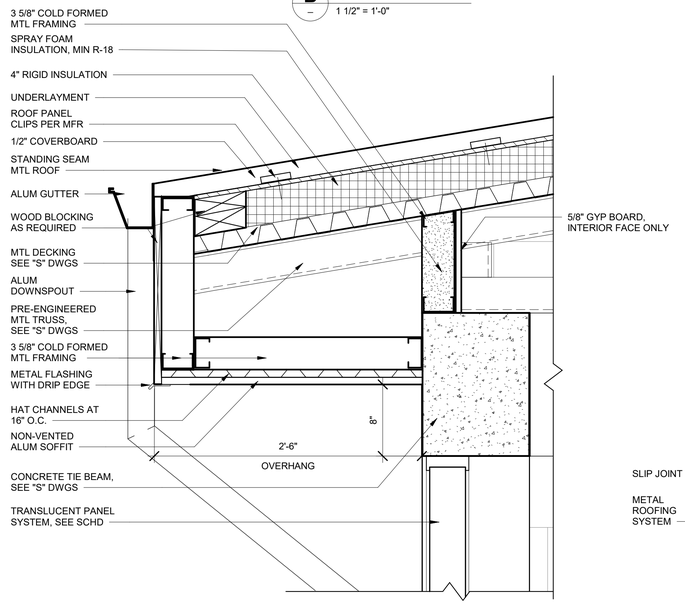
ROOF

A DETAIL
1 1/2" = 1'-0"



2 HR FIRE RATED CEILING - UL G536

B DETAIL
1 1/2" = 1'-0"

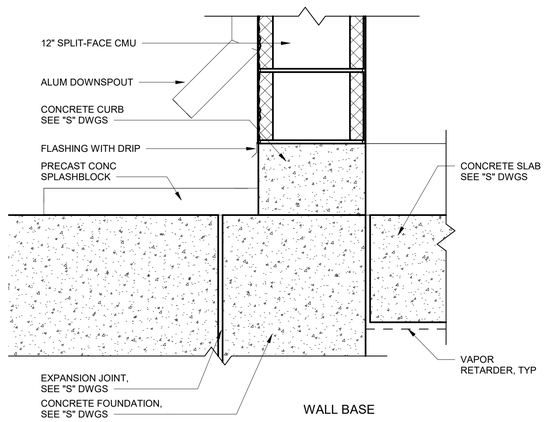


EAVE & GUTTER

C DETAIL
1 1/2" = 1'-0"

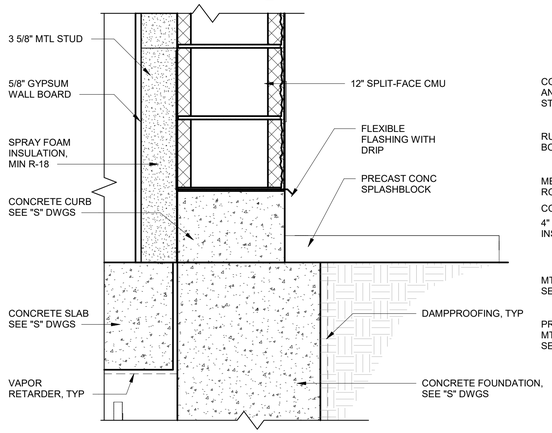
RIDGE CAP

D DETAIL
1 1/2" = 1'-0"



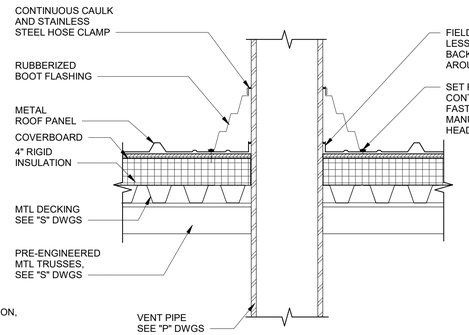
WALL BASE

E DETAIL
1 1/2" = 1'-0"



WALL BASE

F DETAIL
1 1/2" = 1'-0"



G VENT THRU ROOF
A-4 1 1/2" = 1'-0"

GENERAL NOTES:

SEE SHEET A-1 FOR ADDITIONAL GENERAL NOTES

STRUCTURAL ITEMS SHOWN ON THIS SHEET ARE FOR GRAPHICAL PURPOSES ONLY. REFER TO STRUCTURAL DRAWINGS FOR SPECIFIC LOCATIONS A DETAILED REQUIREMENTS

PROCESS EQUIPMENT NOT SHOWN, REFER TO "M" DWGS FOR EXTENTS OF PROCESS EQUIPMENT AND PIPING

KEYNOTE LEGEND	
NUMBER	KEYNOTE DESCRIPTION
6	FINISH GRADE, SEE "C" DWGS
14	LIGHT FIXTURE, SEE "E" DWGS
19	CONCRETE SLAB, SEE "S" DWGS
21	CONCRETE LANDING, SEE "C" DWGS
59	VENT THROUGH ROOF, TYP, SEE "P" DWGS
72	FRP DOOR WITH ALUM FRAME, SEE SCHD
77	ALUMINUM FASCIA, TYP
78	ALUMINUM SOFFIT PANEL
79	CONCRETE CAP BEAM, SEE "S" DWGS
80	PRECAST CONCRETE LINTEL, TYP, SEE "S" DWGS
93	PAINTED GYPSUM BOARD, TYP
94	SAT CEILING, SEE SCHD FOR INSTALATION HEIGHT
99	CONCRETE TIE BEAM, SEE "S" DWGS
101	CONCRETE FOUNDATION, SEE "S" DWGS
109	VAPOR RETARDER
110	DAMPPROOFING, TYP
118	BOND BEAM, SEE "S" DWGS
121	12" SPLIT-FACE CMU, TYP
124	COVERBOARD
130	WOOD BLOCKING, TYP
139	1 1/2" STANDING SEAM METAL ROOFING
141	METAL DECKING, SEE "S" DWGS
144	4" RIGID INSULATION, MIN R-20
145	SPRAY FOAM INSULATION, MIN R-18
148	HAT CHANNELS AT 16" O.C.

STATE OF FLORIDA — CLARICE ELIZABETH SOLLOG — AR 96709 — REGISTERED ARCHITECT

CLARICE E. SOLLOG, AIA
NO. AR96709
FL. CORP ARCHITECTURE AA-002781
101 SOUTHHALL LANE, SUITE 200
MAITLAND, FL 32751

REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: G. HOBDY
DRAWN BY: G. HOBDY
SHEET CHK'D BY: C. SOLLOG
CROSS CHK'D BY: D. PRAH
APPROVED BY: C. SOLLOG
DATE: DECEMBER 2020

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FL COA No. EB-0000020

JACOBS
245 RIVERSIDE AVE, SUITE 300
JACKSONVILLE, FLORIDA 32202
EB0000072 AAC001992 LC26000188

JEA

RIVERTOWN WATER TREATMENT PLANT PROJECT

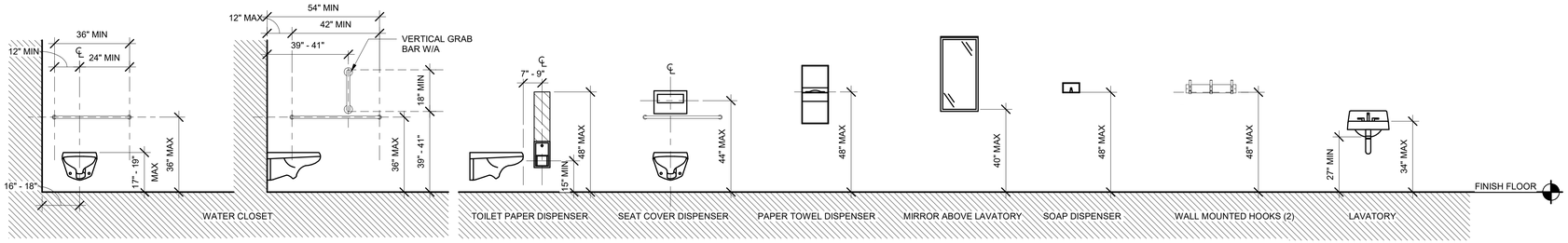
HIGH SERVICE PUMP STATION
WALL SECTION AND DETAILS

PROJECT NO. 6103-237938
FILE NAME: AWZ000PS.RVT

SHEET NO.
A-8

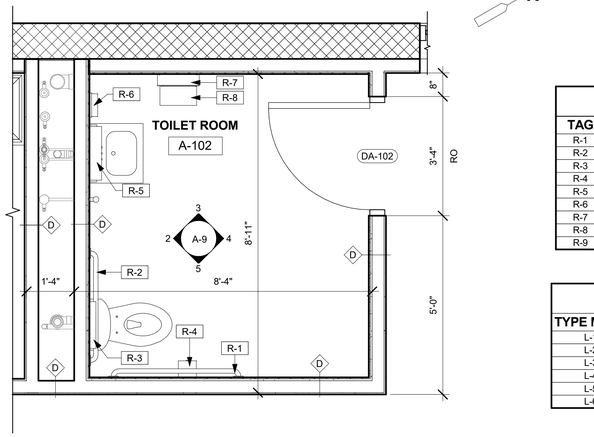
ISSUED FOR BID

ACCESSORY MOUNTING HEIGHTS



GENERAL NOTES:
SEE SHEET A-1 FOR ADDITIONAL GENERAL NOTES

KEYNOTE LEGEND	
NUMBER	KEYNOTE DESCRIPTION
14	LIGHT FIXTURE, SEE "E" DWGS
85	BUILT-UP CERAMIC TILE COVE BASE
86	CERAMIC WALL TILE, FIELD COLOR
87	CERAMIC WALL TILE, ACCENT COLOR
88	FAUCET, SEE "P" DWGS
89	METAL CASEWORK
90	INSULATED PLUMBING PIPE
95	STAINLESS STEEL SINK
97	STAINLESS STEEL COUNTERTOP WITH INTEGRAL BACKSPLASH
104	HOLLOW METAL DOOR AND FRAME, TYP

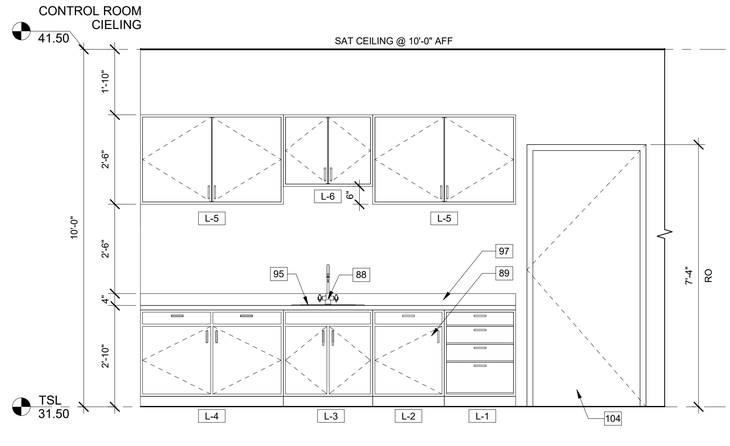


TOILET ACCESSORY SCHEDULE

TAG	QTY	MODEL	DESCRIPTION	MANUFACTURER
R-1	1	B-6806	1 1/2" DIAMETER STAINLESS STEEL HORIZONTAL WALL BAR	BOBRICK
R-2	1	B-6806	1 1/2" DIAMETER STAINLESS STEEL HORIZONTAL WALL BAR	BOBRICK
R-3	1	311080	TOILET SEAT COVER DISPENSER	TORK
R-4	1	B-4288	TWIN JUMBO BATH TISSUE ROLL DISPENSER	TORK
R-5	1	740-018302	FIXED-TILT MIRROR, WELDED CORNERS, 18 BY 30 INCHES	BOBRICK
R-6	1	FMX-12	SURFACE MOUNTED LIQUID SOAP DISPENSER	GOJO
R-7	1	5510282	ELEVATION MATIC PAPER TOWEL ROLL DISPENSER	TORK
R-8	1	B-2260	FLOOR STANDING WASTE RECEPTABLE WITH OPEN TOP	BOBRICK
R-9	1	B-239x34	SHELF WITH MOP AND BROOM HOLDERS AND HOOKS	BOBRICK

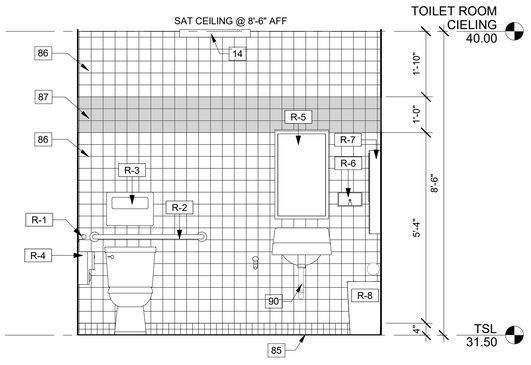
CASEWORK SCHEDULE

TYPE MARK	QUANTITY	MANUFACTURER	MODEL	DESCRIPTION
L-1	1	KEWAUNEE	D30W342224	24" 4 DRAWER UNIT
L-2	1	KEWAUNEE	E40W342224L	24" BASE CABINET SINGLE DOOR AND DRAWER UNIT
L-3	1	KEWAUNEE	G00W342230	30" BASE CABINET DOUBLE DOOR SINK UNIT
L-4	1	KEWAUNEE	E41W342248	48" BASE CABINET DOUBLE DOOR & 2 DRAWER UNIT
L-5	2	KEWAUNEE	W25C301348	48" UPPER CABINET DOUBLE DOOR UNIT
L-6	1	KEWAUNEE	W25C241330	30" UPPER CABINET DOUBLE DOOR SHORT UNIT

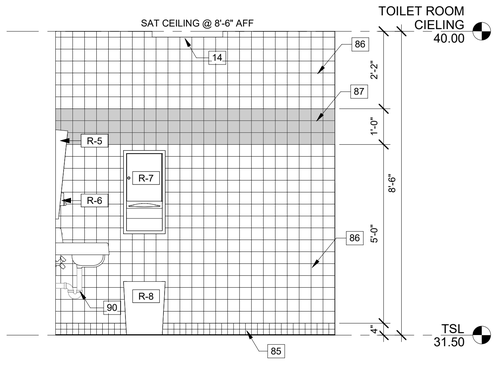


ENLARGED TOILET ROOM PLAN
1/2" = 1'-0"

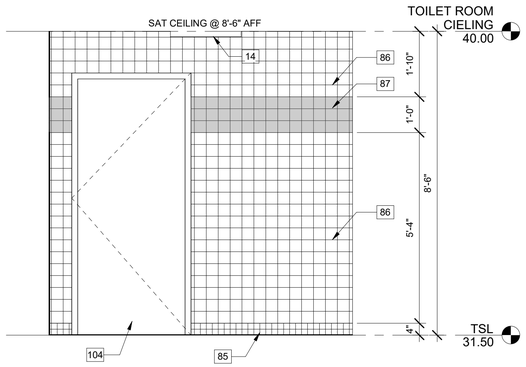
1 CONTROL ROOM PARTIAL NORTH ELEVATION
A-2 1/2" = 1'-0"



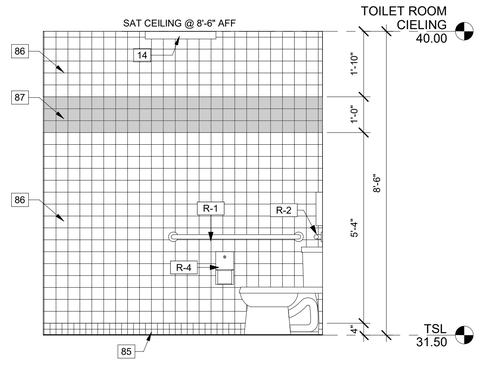
2 TOILET ROOM WEST ELEVATION
– 1/2" = 1'-0"



3 TOILET ROOM NORTH ELEVATION
– 1/2" = 1'-0"



4 TOILET ROOM EAST ELEVATION
– 1/2" = 1'-0"



5 TOILET ROOM SOUTH ELEVATION
– 1/2" = 1'-0"

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MAITLAND, FL 32751

REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: C. SOLLOG
DRAWN BY: G. HOBDY
SHEET CHK'D BY: M. ALFORD
CROSS CHK'D BY: D. PRAH
APPROVED BY: C. SOLLOG
DATE: DECEMBER 2020

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EB0000072 AAC001992 LC26000188

JEA

RIVERTOWN WATER TREATMENT PLANT PROJECT

HIGH SERVICE PUMP STATION
ENLARGED TOILET ROOM PLAN AND INTERIOR ELEVATIONS

PROJECT NO. 6103-237938
FILE NAME: AWZ000PS.RVT
SHEET NO. A-9

ISSUED FOR BID

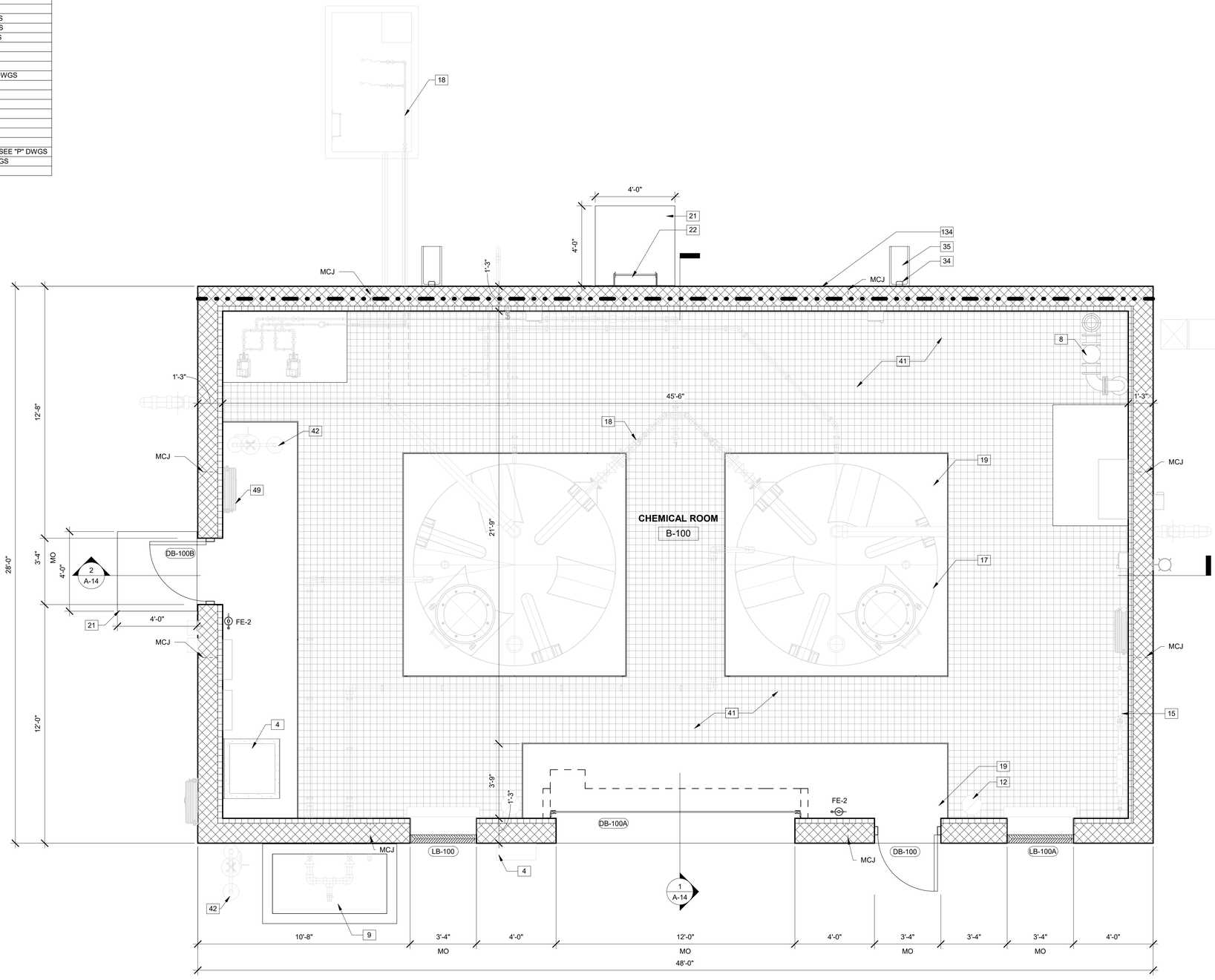
KEYNOTE LEGEND	
KEY VALUE	KEYNOTE TEXT
4	ELECTRICAL EQUIPMENT, SEE "E" DWGS
8	FIRE PROTECTION EQUIP, SEE "F" DWGS
9	CHEMICAL FILL STATION, SEE "M" DWGS
12	HVAC DUCTWORK, SEE "H" DWGS
13	HVAC EQUIPMENT, SEE "H" DWGS
15	PLUMBING PIPES, SEE "P" DWGS
17	PROCESS MECH EQUIPMENT, SEE "M" DWGS
18	PROCESS PIPING, SEE "M" DWGS
19	CONCRETE SLAB, SEE "S" DWGS
21	CONCRETE LANDING, SEE "C" DWGS
22	ROOF ACCESS LADDER, SEE "S" DWGS
34	ALUMINUM DOWNSPOUT, TYP
35	CONCRETE SPLASHBLOCK, TYP
41	FRP FLOOR GRATING, SEE "S" DWGS
42	EMERGENCY SHOWER AND EYEWASH, SEE "P" DWGS
49	WASH HOSE STATION, TYP, SEE "P" DWGS
134	2 HR FIRE RATED WALL

N

GENERAL NOTES:

SEE SHEET A-1 FOR ADDITIONAL GENERAL NOTES.

SEE SHEET A-2 FOR BUILDING CODE KEY DETERMINATIONS AND LIFE SAFETY PLAN.



FLOOR PLAN

3/8" = 1'-0"

REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: DD_DEVI
DRAWN BY: V_ARUN
SHEET CHK'D BY: C_SOLLOG
CROSS CHK'D BY: D_PRAH
APPROVED BY: C_SOLLOG
DATE: DECEMBER 2020

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JEA

RIVERTOWN WATER TREATMENT PLANT PROJECT

CHEMICAL BUILDING
FLOOR PLAN

PROJECT NO. 6103-237938
FILE NAME: AWZ000CB.rvt
SHEET NO. A-10

STATE OF FLORIDA
CLARICE ELIZABETH SOLLOG
AR 96709
REGISTERED ARCHITECT

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MAITLAND, FL 32751

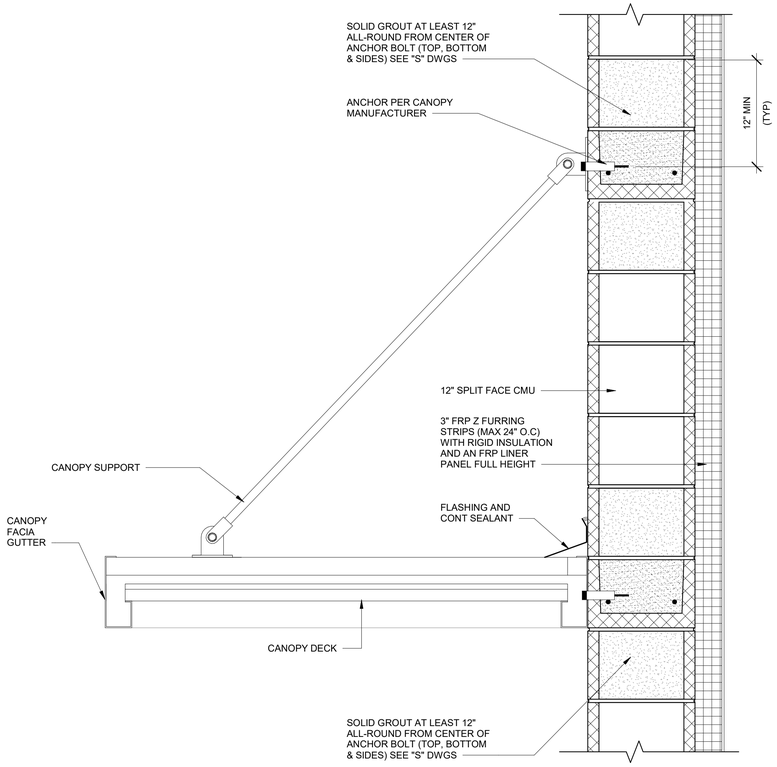
ISSUED FOR BID

KEYNOTE LEGEND	
KEY VALUE	KEYNOTE TEXT
22	ROOF ACCESS LADDER, SEE "S" DWGS
23	ALUMINUM GUARDRAIL, INSTALLED SO TOP RAIL IS MINIMUM OF 42" ABOVE ROOF SURFACE, SEE "S" DWGS
26	ALUMINUM GUARDRAIL SIDE MOUNTED TO PARAPET, SEE "S" DWGS
51	SBS MODIFIED BITUMEN ROOF SYSTEM OVER TAPERED INSULATION
52	ALUMINUM COPING, TYP
54	CRICKET, TYP
55	EXHAUST FAN TYP, SEE "H" DWGS
57	ALUMINUM GUTTER, TYP
76	WALL MOUNTED METAL CANOPY

N

GENERAL NOTES:

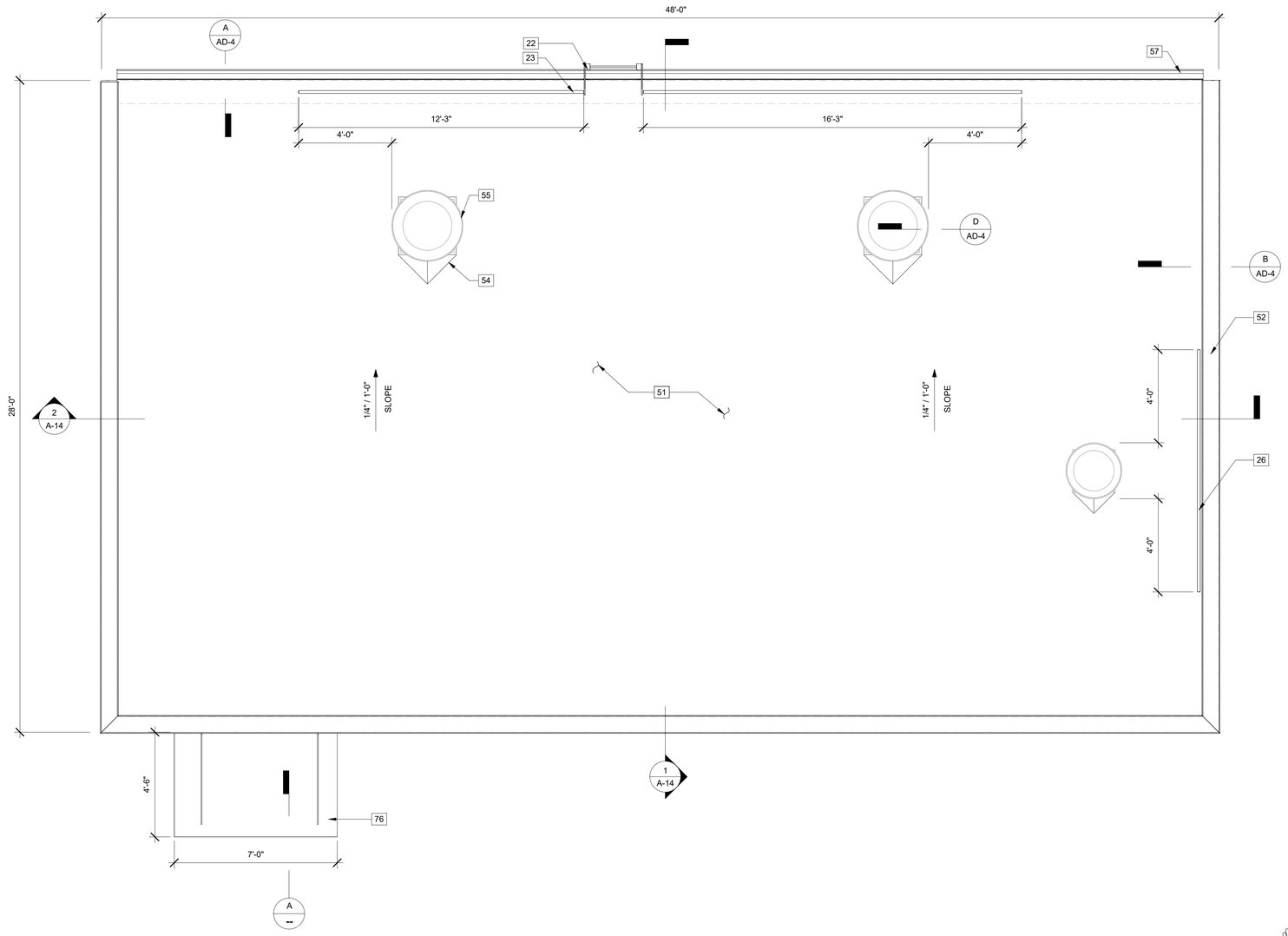
SEE SHEET A-1 FOR ADDITIONAL GENERAL NOTES.



NOTE: CANOPY MOUNTING HEIGHT TO BE COORDINATED WITH LIGHT FIXTURES AND MECHANICAL EQUIPMENT

WALL MOUNTED ALUMINUM CANOPY

A DETAIL
1 1/2" = 1'-0"



ROOF PLAN
3/8" = 1'-0"

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CLARICE ELIZABETH SOLLOG
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REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: DD. DEVI
DRAWN BY: V. ARUN
SHEET CHK'D BY: C. SOLLOG
CROSS CHK'D BY: D.PRAH
APPROVED BY: C. SOLLOG
DATE: DECEMBER 2020

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JEA

RIVERTOWN WATER TREATMENT PLANT PROJECT

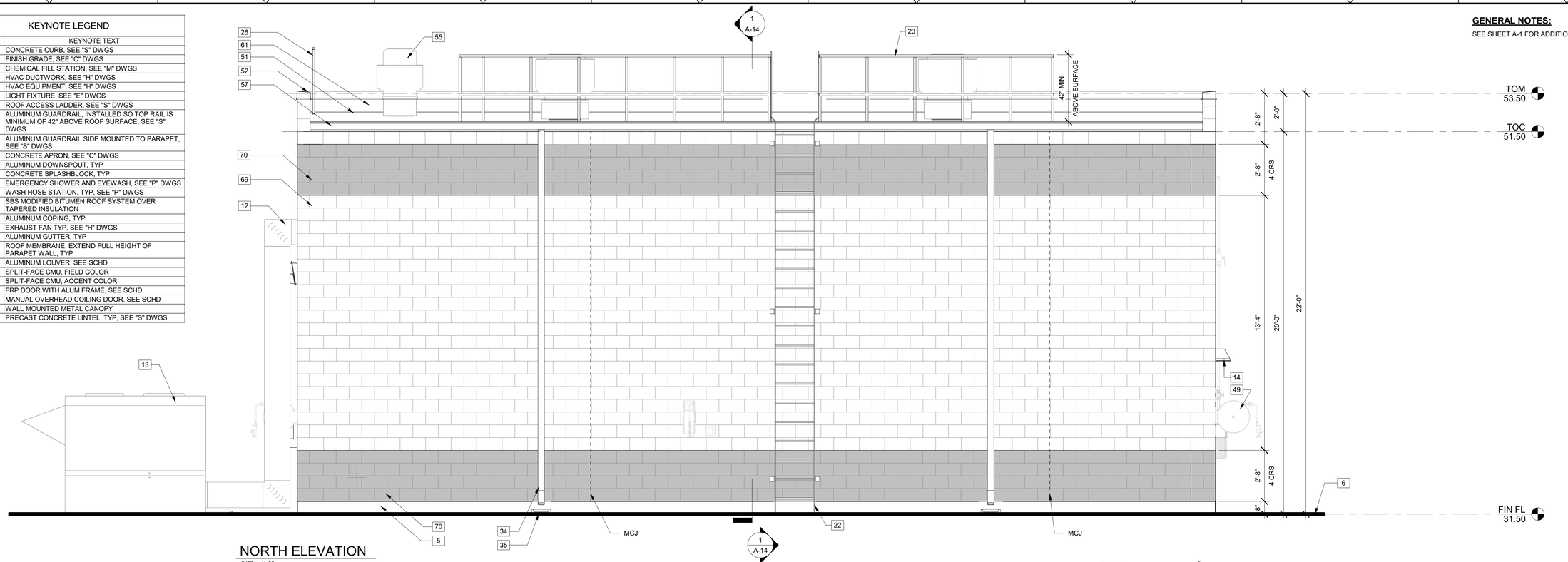
CHEMICAL BUILDING
ROOF PLAN

PROJECT NO. 6103-237938
FILE NAME: AWZ000CB.rvt

SHEET NO.
A-11

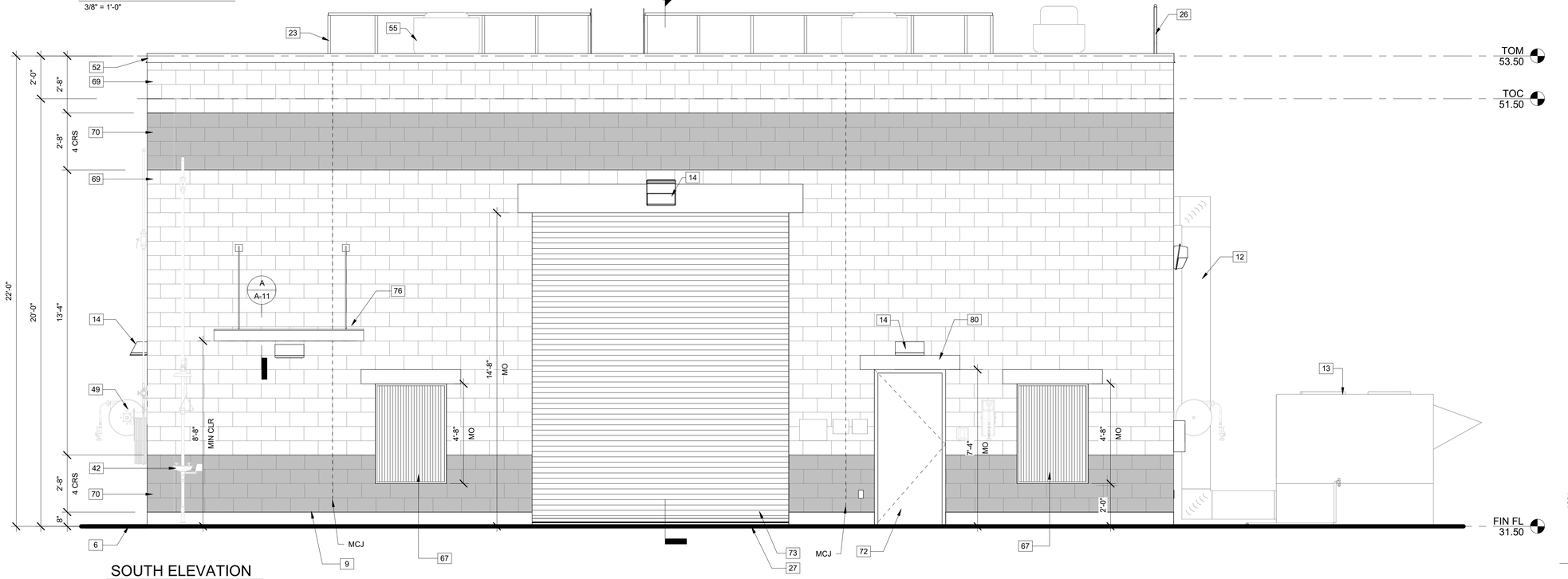
ISSUED FOR BID

KEYNOTE LEGEND	
KEY VALUE	KEYNOTE TEXT
5	CONCRETE CURB, SEE "S" DWGS
6	FINISH GRADE, SEE "C" DWGS
9	CHEMICAL FILL STATION, SEE "M" DWGS
12	HVAC DUCTWORK, SEE "H" DWGS
13	HVAC EQUIPMENT, SEE "H" DWGS
14	LIGHT FIXTURE, SEE "E" DWGS
22	ROOF ACCESS LADDER, SEE "S" DWGS
23	ALUMINUM GUARDRAIL, INSTALLED SO TOP RAIL IS MINIMUM OF 42" ABOVE ROOF SURFACE, SEE "S" DWGS
26	ALUMINUM GUARDRAIL SIDE MOUNTED TO PARAPET, SEE "S" DWGS
27	CONCRETE APRON, SEE "C" DWGS
34	ALUMINUM DOWNSPOUT, TYP
35	CONCRETE SPLASHBLOCK, TYP
42	EMERGENCY SHOWER AND EYEWASH, SEE "P" DWGS
49	WASH HOSE STATION, TYP, SEE "P" DWGS
51	SBS MODIFIED BITUMEN ROOF SYSTEM OVER TAPERED INSULATION
52	ALUMINUM COPING, TYP
55	EXHAUST FAN TYP, SEE "H" DWGS
57	ALUMINUM GUTTER, TYP
61	ROOF MEMBRANE, EXTEND FULL HEIGHT OF PARAPET WALL, TYP
67	ALUMINUM LOUVER, SEE SCHD
69	SPLIT-FACE CMU, FIELD COLOR
70	SPLIT-FACE CMU, ACCENT COLOR
72	FRP DOOR WITH ALUM FRAME, SEE SCHD
73	MANUAL OVERHEAD COILING DOOR, SEE SCHD
76	WALL MOUNTED METAL CANOPY
80	PRECAST CONCRETE LINTEL, TYP, SEE "S" DWGS



NORTH ELEVATION

3/8" = 1'-0"



SOUTH ELEVATION

3/8" = 1'-0"

GENERAL NOTES:

SEE SHEET A-1 FOR ADDITIONAL GENERAL NOTES.

REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: DD. DEVI
DRAWN BY: V. ARUN
SHEET CHK'D BY: C. SOLLOG
CROSS CHK'D BY: D.PRAH
APPROVED BY: C. SOLLOG
DATE: DECEMBER 2020

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EB0000072 AAC001992 LC26000188

JEA

RIVERTOWN WATER TREATMENT PLANT PROJECT

CHEMICAL BUILDING
EXTERIOR ELEVATIONS I

PROJECT NO. 6103-237938
FILE NAME: AWZ000CB.rvt

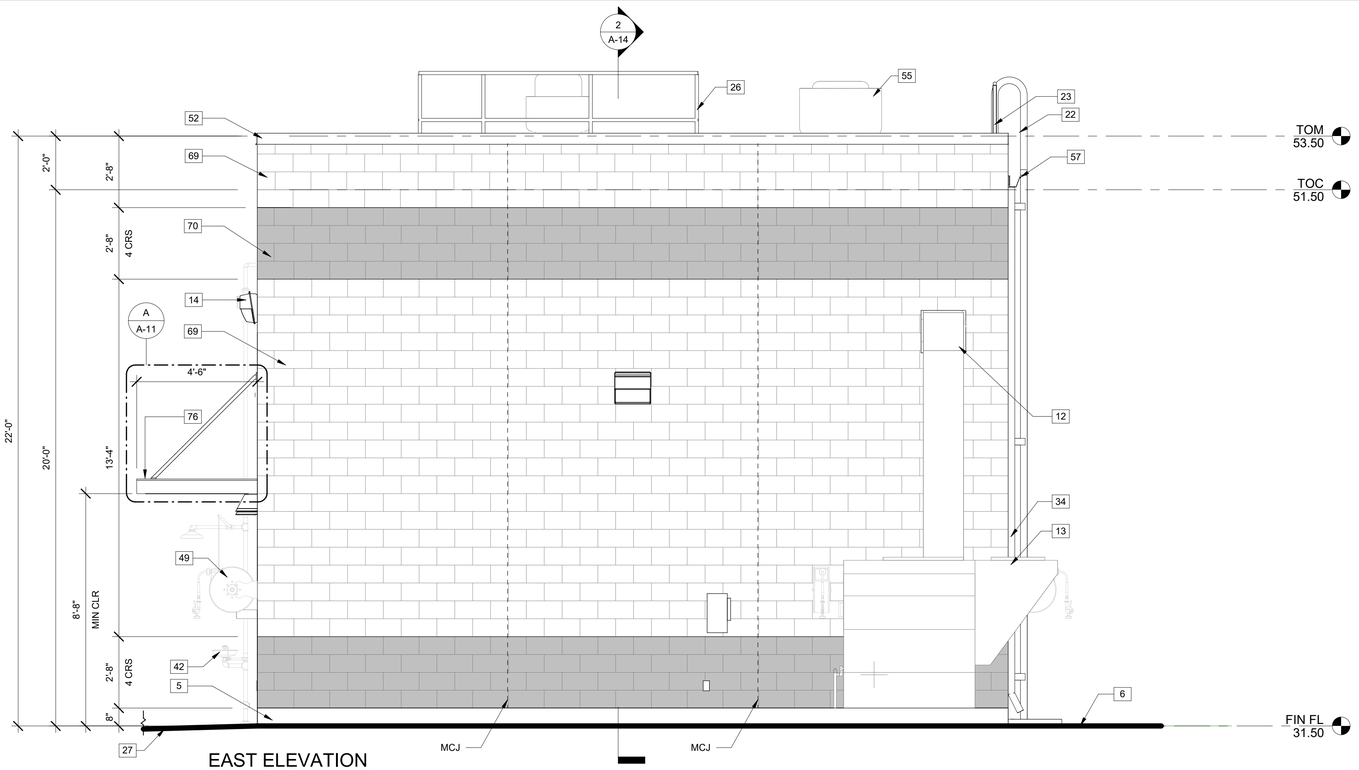
SHEET NO.
A-12

ISSUED FOR BID

STATE OF FLORIDA
CLARICE ELIZABETH SOLLOG
AR 96709
REGISTERED ARCHITECT

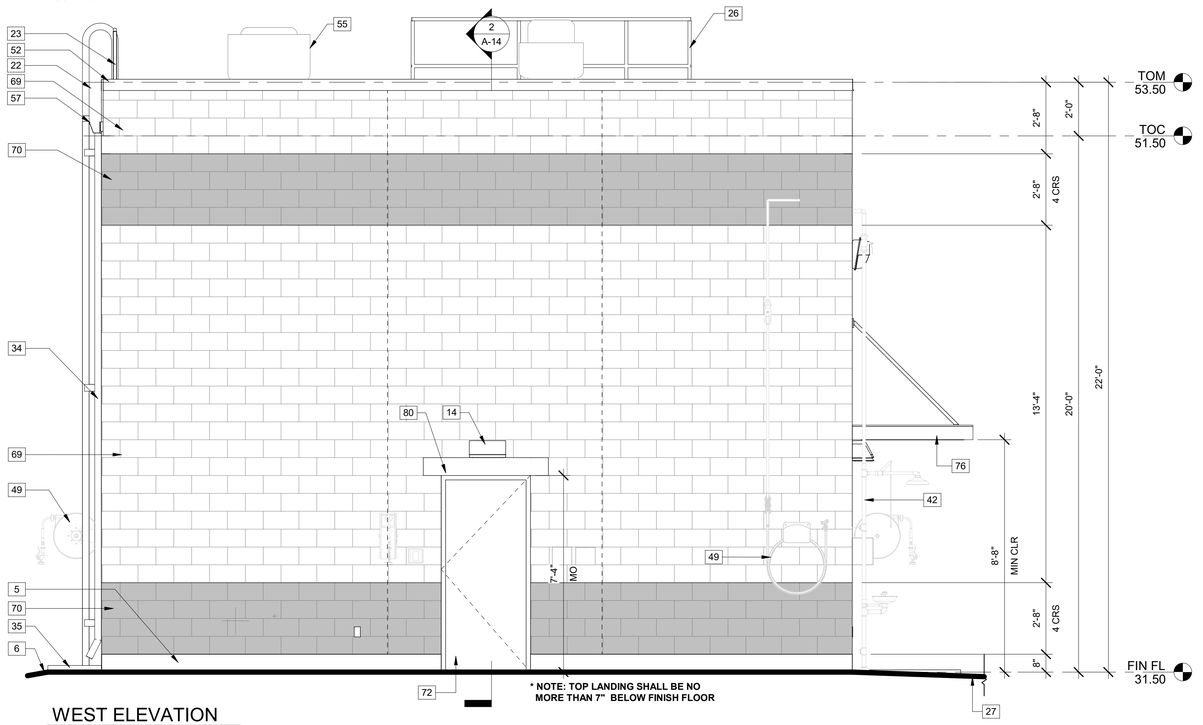
CLARICE E. SOLLOG, AIA
NO. AR96709
FL. CORP ARCHITECTURE AA-002781
101 SOUTHHALL LANE, SUITE 200
MAITLAND, FL 32751

KEYNOTE LEGEND	
KEY VALUE	KEYNOTE TEXT
5	CONCRETE CURB, SEE "S" DWGS
6	FINISH GRADE, SEE "C" DWGS
12	HVAC DUCTWORK, SEE "H" DWGS
13	HVAC EQUIPMENT, SEE "H" DWGS
14	LIGHT FIXTURE, SEE "E" DWGS
22	ROOF ACCESS LADDER, SEE "S" DWGS
23	ALUMINUM GUARDRAIL, INSTALLED SO TOP RAIL IS MINIMUM OF 42" ABOVE ROOF SURFACE, SEE "S" DWGS
26	ALUMINUM GUARDRAIL SIDE MOUNTED TO PARAPET, SEE "S" DWGS
27	CONCRETE APRON, SEE "C" DWGS
34	ALUMINUM DOWNSPOUT, TYP
35	CONCRETE SPLASHBLOCK, TYP
42	EMERGENCY SHOWER AND EYEWASH, SEE "P" DWGS
49	WASH HOSE STATION, TYP, SEE "P" DWGS
52	ALUMINUM COPING, TYP
55	EXHAUST FAN TYP, SEE "H" DWGS
57	ALUMINUM GUTTER, TYP
69	SPLIT-FACE CMU, FIELD COLOR
70	SPLIT-FACE CMU, ACCENT COLOR
72	FRP DOOR WITH ALUM FRAME, SEE SCHD
76	WALL MOUNTED METAL CANOPY
80	PRECAST CONCRETE LINTEL, TYP, SEE "S" DWGS



EAST ELEVATION

3/8" = 1'-0"



WEST ELEVATION

3/8" = 1'-0"

GENERAL NOTES:

SEE SHEET A-1 FOR ADDITIONAL GENERAL NOTES.

REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: DD. DEVI
DRAWN BY: V. ARUN
SHEET CHK'D BY: C. SOLLOG
CROSS CHK'D BY: D.PRAH
APPROVED BY: C. SOLLOG
DATE: DECEMBER 2020

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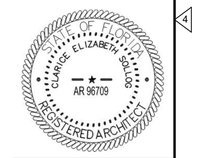
JEA

RIVERTOWN WATER TREATMENT PLANT PROJECT

CHEMICAL BUILDING
EXTERIOR ELEVATIONS II

PROJECT NO. 6103-237938
FILE NAME: AWZ000CB.rvt
SHEET NO. A-13



CLARICE E. SOLLOG, AIA
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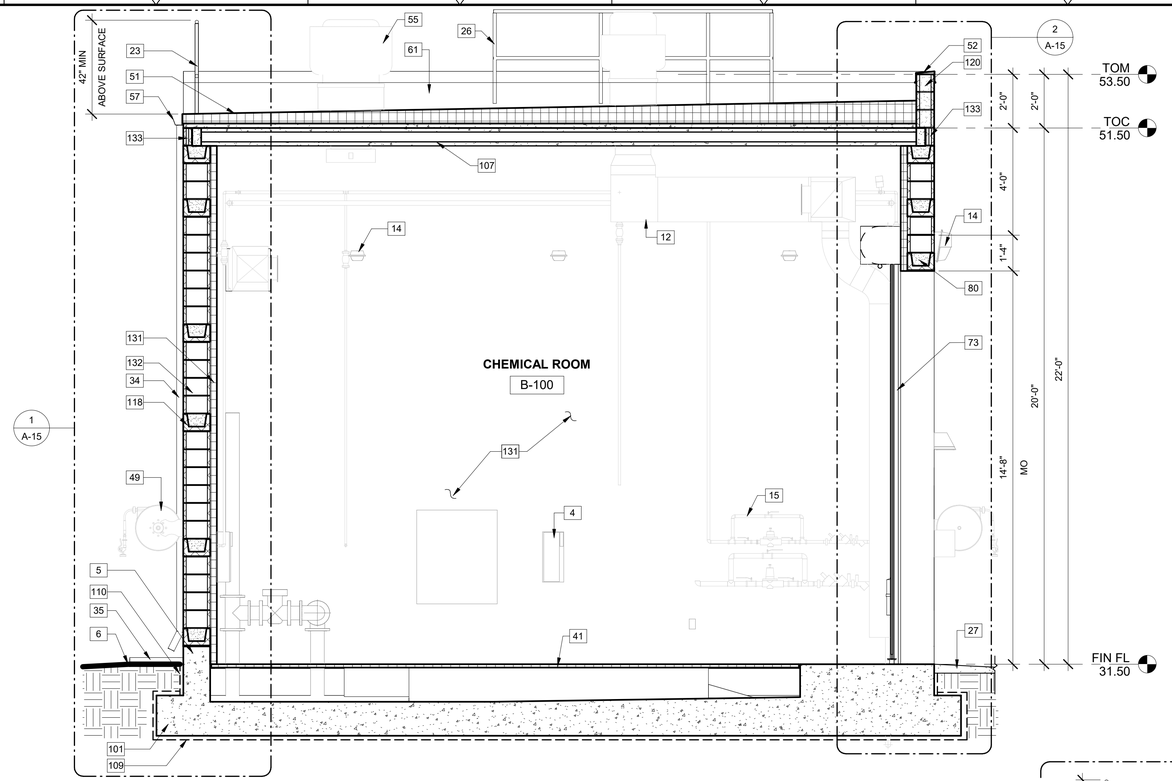
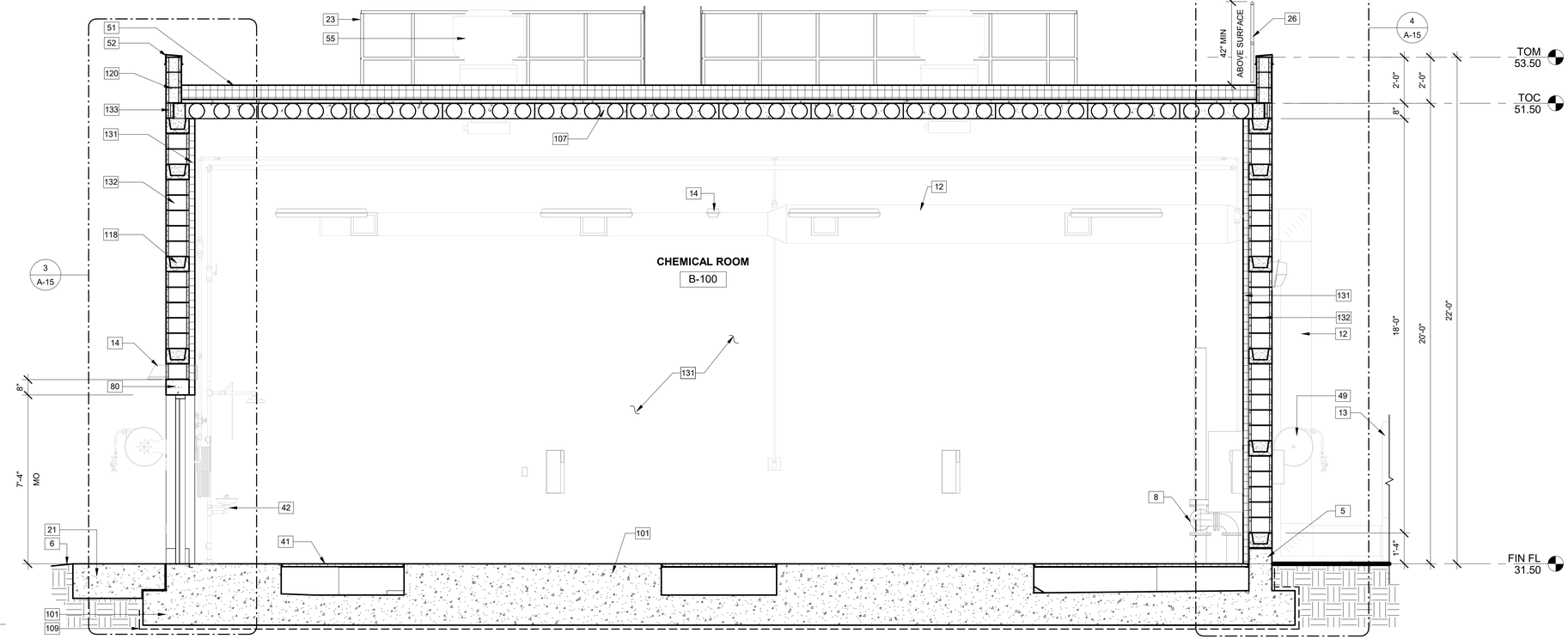
FL. CORP ARCHITECTURE AA-002781
101 SOUTHHALL LANE, SUITE 200
MAITLAND, FL 32751

ISSUED FOR BID

KEYNOTE LEGEND	
KEY VALUE	KEYNOTE TEXT
4	ELECTRICAL EQUIPMENT, SEE "E" DWGS
5	CONCRETE CURB, SEE "S" DWGS
6	FINISH GRADE, SEE "C" DWGS
8	FIRE PROTECTION EQUIP, SEE "F" DWGS
12	HVAC DUCTWORK, SEE "H" DWGS
13	HVAC EQUIPMENT, SEE "H" DWGS
14	LIGHT FIXTURE, SEE "E" DWGS
15	PLUMBING PIPES, SEE "P" DWGS
21	CONCRETE LANDING, SEE "C" DWGS
23	ALUMINUM GUARDRAIL, INSTALLED SO TOP RAIL IS MINIMUM OF 42" ABOVE ROOF SURFACE, SEE "S" DWGS
26	ALUMINUM GUARDRAIL SIDE MOUNTED TO PARAPET, SEE "S" DWGS
27	CONCRETE APRON, SEE "C" DWGS
34	ALUMINUM DOWNSPOUT, TYP
35	CONCRETE SPLASHBLOCK, TYP
41	FRP FLOOR GRATING, SEE "S" DWGS
42	EMERGENCY SHOWER AND EYEWASH, SEE "P" DWGS
49	WASH HOSE STATION, TYP, SEE "P" DWGS
51	SBS MODIFIED BITUMEN ROOF SYSTEM OVER TAPERED INSULATION
52	ALUMINUM COPING, TYP
55	EXHAUST FAN TYP, SEE "H" DWGS
57	ALUMINUM GUTTER, TYP
61	ROOF MEMBRANE, EXTEND FULL HEIGHT OF PARAPET WALL, TYP
73	MANUAL OVERHEAD COILING DOOR, SEE SCHD
80	PRECAST CONCRETE LINTEL, TYP, SEE "S" DWGS
101	CONCRETE FOUNDATION, SEE "S" DWGS
107	PRE-CAST HOLLOW CORE PLANKS, SEE "S" DWGS
109	VAPOR RETARDER
110	DAMPPROOFING, TYP
118	BOND BEAM, SEE "S" DWGS
120	8" SPLIT-FACE CMU, TYP
131	3" FRP Z FURRING STRIPS (MAX 24" O.C) WITH RIGID INSULATION, AND FRP LINER PANEL FULL HEIGHT
132	12" SPLIT-FACE CMU, TYP
133	4" SPLIT-FACE CMU, TYP



1 BUILDING SECTION
A-10 3/8" = 1'-0"



2 BUILDING SECTION
A-10 3/8" = 1'-0"

GENERAL NOTES:

SEE SHEET A-1 FOR ADDITIONAL GENERAL NOTES.

STRUCTURAL ITEMS SHOWN ON THIS SHEET ARE FOR GRAPHICAL PURPOSES ONLY. REFER TO THE STRUCTURAL DRAWINGS FOR SPECIFIC LOCATIONS AND DETAILED REQUIREMENTS.

PROCESS EQUIPMENT NOT SHOWN. REFER TO "M" DWGS FOR EXTENTS OF PROCESS EQUIPMENT AND CHEMICAL STORAGE TANKS.

SEE SHEETS A-12 AND A-13 FOR EXTENTS OF FIELD AND ACCENT SFCMU COLORS.

REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: DD. DEVI
DRAWN BY: V. ARUN
SHEET CHK'D BY: C. SOLLOG
CROSS CHK'D BY: D.PRAH
APPROVED BY: C. SOLLOG
DATE: DECEMBER 2020

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Jacksonville, FL 32256
Tel: (904) 731-7109
FL COA No. EB-0000020

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JACKSONVILLE, FLORIDA 32202
EB0000072 AAC001992 LC26000188

JEA

RIVERTOWN WATER TREATMENT PLANT PROJECT

CHEMICAL BUILDING
BUILDING SECTIONS

PROJECT NO. 6103-237938
FILE NAME: AWZ000CB.rvt

SHEET NO.
A-14

STATE OF FLORIDA
CLARICE ELIZABETH SOLLOG
AR 96709
REGISTERED ARCHITECT

CLARICE E. SOLLOG, AIA
NO. AR96709
FL. CORP ARCHITECTURE AA-002781
101 SOUTHHALL LANE, SUITE 200
MAITLAND, FL 32751

ISSUED FOR BID

KEYNOTE LEGEND	
KEY VALUE	KEYNOTE TEXT
4	ELECTRICAL EQUIPMENT, SEE "E" DWGS
5	CONCRETE CURB, SEE "S" DWGS
6	FINISH GRADE, SEE "C" DWGS
8	FIRE PROTECTION EQUIP, SEE "F" DWGS
12	HVAC DUCTWORK, SEE "H" DWGS
14	LIGHT FIXTURE, SEE "E" DWGS
15	PLUMBING PIPES, SEE "P" DWGS
20	CONCRETE GROUT, SEE "S" DWGS
21	CONCRETE LANDING, SEE "C" DWGS
23	ALUMINUM GUARDRAIL, INSTALLED SO TOP RAIL IS MINIMUM OF 42" ABOVE ROOF SURFACE, SEE "S" DWGS
26	ALUMINUM GUARDRAIL SIDE MOUNTED TO PARAPET, SEE "S" DWGS
27	CONCRETE APRON, SEE "C" DWGS
35	CONCRETE SPLASHBLOCK, TYP
41	FRP FLOOR GRATING, SEE "S" DWGS
42	EMERGENCY SHOWER AND EYEWASH, SEE "P" DWGS
49	WASH HOSE STATION, TYP, SEE "P" DWGS
52	ALUMINUM COPING, TYP
57	ALUMINUM GUTTER, TYP
61	ROOF MEMBRANE, EXTEND FULL HEIGHT OF PARAPET WALL, TYP
73	MANUAL OVERHEAD COILING DOOR, SEE SCHD
80	PRECAST CONCRETE LINTEL, TYP, SEE "S" DWGS

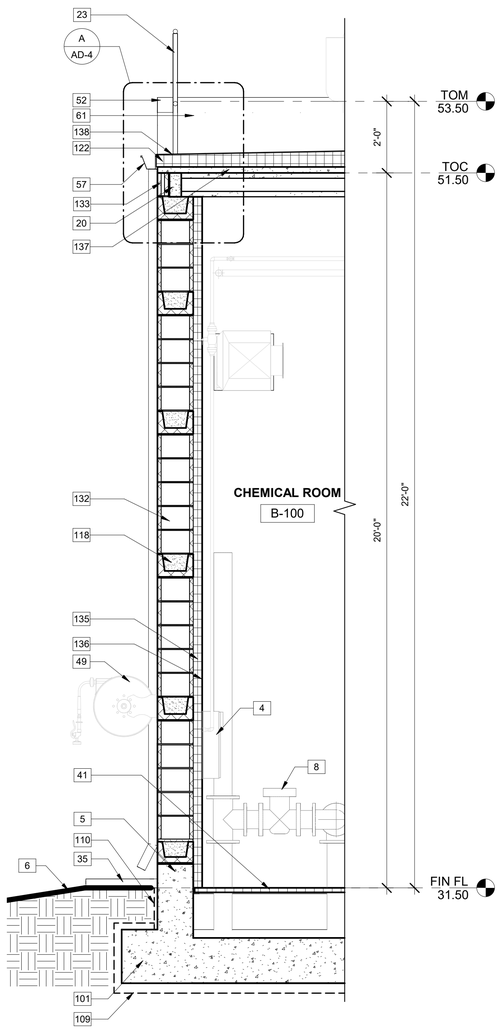
KEYNOTE LEGEND	
KEY VALUE	KEYNOTE TEXT
101	CONCRETE FOUNDATION, SEE "S" DWGS
107	PRE-CAST HOLLOW CORE PLANKS, SEE "S" DWGS
109	VAPOR RETARDER
110	DAMPPROOFING, TYP
118	BOND BEAM, SEE "S" DWGS
120	8" SPLIT-FACE CMU, TYP
121	12" SPLIT-FACE CMU, TYP
122	TAPERED INSUL, MIN 2" AT ROOF EDGE (TOTAL ROOF SYSTEM MIN R-VALUE 30)
132	12" SPLIT-FACE CMU, TYP
133	4" SPLIT-FACE CMU, TYP
135	3" FRP Z FURRING STRIPS (MAX 24" O.C) WITH RIGID INSUALTION (MIN R-VALUE 18)
136	FRP LINER PANEL FULL HEIGHT
137	CONCRETE TOPPING, SEE "S" DWGS
138	SBS MODIFIED BITUMEN ROOF SYSTEM

GENERAL NOTES:

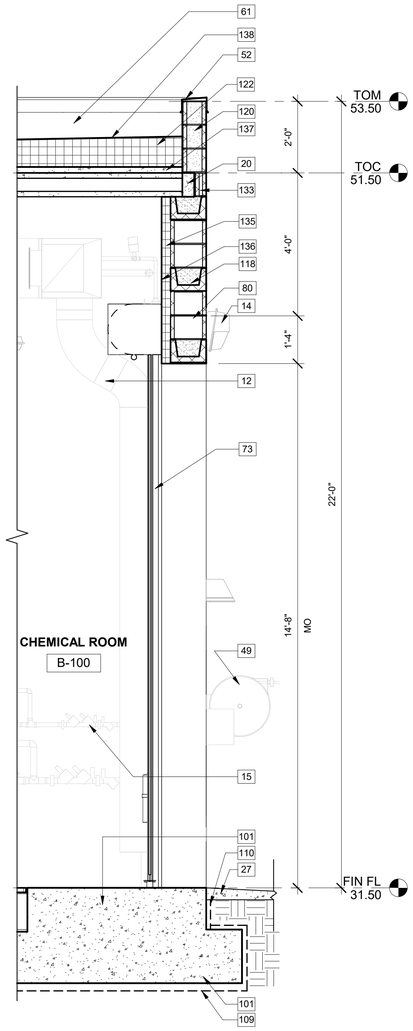
SEE SHEET A-1 FOR ADDITIONAL GENERAL NOTES.

STRUCTURAL ITEMS SHOWN ON THIS SHEET ARE FOR GRAPHICAL PURPOSES ONLY. REFER TO THE STRUCTURAL DRAWINGS FOR SPECIFIC LOCATIONS AND DETAILED REQUIREMENTS.

SEE SHEETS A-12 AND A-13 FOR EXTENTS OF FIELD AND ACCENT SFCMU COLORS.



1 WALL SECTION
A-14 1/2" = 1'-0"



2 WALL SECTION
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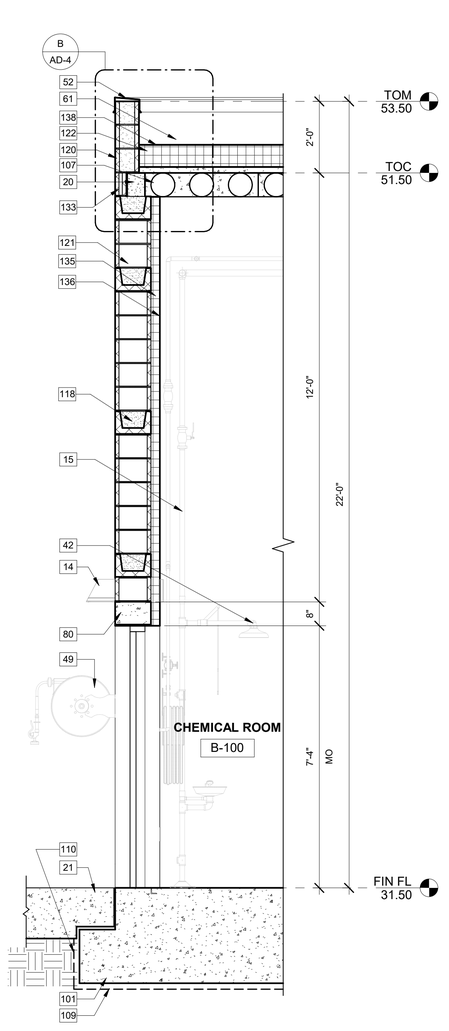

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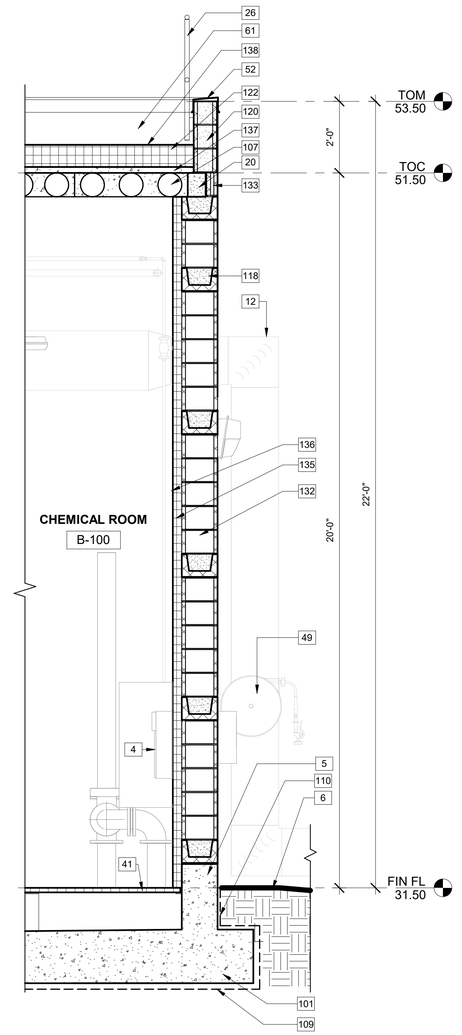

4 WALL SECTION
A-14 1/2" = 1'-0"

STATE OF FLORIDA
CLARICE ELIZABETH SOLLOG
AR 96709
REGISTERED ARCHITECT

CLARICE E. SOLLOG, AIA
NO. AR96709
FL. CORP ARCHITECTURE AA-002781
101 SOUTHHALL LANE, SUITE 200
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REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: DD. DEVI
DRAWN BY: V. ARUN
SHEET CHK'D BY: C. SOLLOG
CROSS CHK'D BY: D.PRAH
APPROVED BY: C. SOLLOG
DATE: DECEMBER 2020

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245 RIVERSIDE AVE, SUITE 300
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EB0000072 AAC001992 LC26000188

JEA

RIVERTOWN WATER TREATMENT PLANT PROJECT

CHEMICAL BUILDING
WALL SECTIONS

PROJECT NO. 6103-237938
FILE NAME: AWZ000CB.rvt

SHEET NO.
A-15

ISSUED FOR BID

HIGH SERVICE PUMP STATION FINISH SCHEDULE

ROOM NAME	ROOM NUMBER	FLOOR		WALL										CEILING			NOTES
				NORTH		EAST		SOUTH		WEST		BASE					
		MATERIAL	FINISH	MATERIAL	FINISH	MATERIAL	FINISH	MATERIAL	FINISH	MATERIAL	FINISH	MATERIAL	DETAIL	MATERIAL	FINISH	HEIGHT	
PUMP ROOM	A-100	CONC	RESINOUS	CMU	PTD	CMU	PTD	CMU	PTD	CMU	PTD	RESIONUS	3	STL	PTD		
CONTROL ROOM	A-101	CONC	VCT	GYP	PTD	GYP	PTD	GYP	PTD	GYP	PTD	RB	1	SAT	SPEC	10'-0"	
TOILET ROOM	A-102	CONC	CT	--	CT	--	CT	--	CT	--	CT	CT	2	SAT	SPEC	8'-6"	
MECH ROOM	A-103	CONC	SEALED	GYP	PTD	GYP	PTD	GYP	PTD	GYP	PTD	RB	1	STL	PTD		
ELECTRICAL ROOM	A-104	CONC	SEALED	GYP	PTD	GYP	PTD	GYP	PTD	GYP	PTD	RB	1	GYP	PTD	16'-8"	

CHEMICAL BUILDING FINISH SCHEDULE

ROOM NAME	ROOM NUMBER	FLOOR		WALL										CEILING			NOTES
				NORTH		EAST		SOUTH		WEST		BASE					
		MATERIAL	FINISH	MATERIAL	FINISH	MATERIAL	FINISH	MATERIAL	FINISH	MATERIAL	FINISH	MATERIAL	DETAIL	MATERIAL	FINISH	HEIGHT	
CHEMICAL ROOM	B-100	FRP / CONC	SPEC	FRP	SPEC	FRP	SPEC	FRP	SPEC	FRP	SPEC	--	--	CONC	PTD	18'-8"	

HIGH SERVICE PUMP STATION DOOR SCHEDULE

DOOR NUMBER	ROOM NAME	EXT DOOR		SIZE		DOOR				FRAME			DETAILS			FIRE RATING (MIN)	HARDWARE SET	NOTES
				WIDTH	HEIGHT	TYPE	MATERIAL	FINISH	GLAZING	TYPE	MATERIAL	FINISH	HEAD	JAMB	THRESHOLD			
DA-100	PUMP ROOM	*		3'-0"	7'-2"	F	FRP	SPEC	--	F1	ALUM	SPEC	A/ AD-2	B/AD-2	Q/AD-2	0	HW1	
DA-100A	PUMP ROOM	*		3'-0"	7'-2"	F	FRP	SPEC	--	F1	ALUM	SPEC	A/ AD-2	B/AD-2	Q/AD-2	0	HW1	
DA-100B	PUMP ROOM	*		12'-0"	12'-0"	OH	STL	SPEC	--	--	--	--	M/AD-2	N/AD-2	S/AD-21	0	--	
DA-101	CONTROL ROOM			3'-0"	7'-2"	NV	HM	PTD	TEMP	F1	HM	PTD	E/AD-2	F/AD-2	Q/AD-2	0	HW4	
DA-101A	CONTROL ROOM	*		3'-0"	7'-2"	F	FRP	SPEC	--	F1	ALUM	SPEC	C/AD-2	D/AD-2	Q/AD-2	0	HW1	
DA-102	TOILET ROOM			3'-0"	7'-2"	F	HM	PTD	--	F1	HM	PTD	G/AD-2	H/AD-2	R/AD-2	0	HW3	
DA-103	MECH ROOM	*		3'-8"	7'-2"	F	FRP	SPEC	--	F1	ALUM	SPEC	C/AD-2	D/AD-2	Q/AD-2	0	HW1	
DA-103A	MECH ROOM			3'-0"	7'-2"	F	HM	PTD	--	F1	HM	PTD	G/AD-2	H/AD-2	Q/AD-2	0	HW5	
DA-104	ELECTRICAL ROOM			3'-0"	7'-2"	F	HM	PTD	--	F1	HM	PTD	E/AD-2	F/AD-2	Q/AD-2	90	HW1	
DA-104A	ELECTRICAL ROOM	*	PR	3'-0"	7'-10"	F	FRP	SPEC	--	F2	ALUM	SPEC	C/AD-2	D/AD-2	Q/AD-2	0	HW2	
DA-104B	ELECTRICAL ROOM	*		3'-0"	7'-2"	F	FRP	SPEC	--	F1	ALUM	SPEC	C/AD-2	D/AD-2	Q/AD-2	0	HW1	
DA-104C	ELECTRICAL ROOM			3'-0"	7'-2"	NV	HM	PTD	WIRED	F1	HM	PTD	G/ AD-2	H/AD-2	Q/AD-2	90	HW1	

CHEMICAL BUILDING DOOR SCHEDULE

DOOR NUMBER	ROOM NAME	EXT DOOR		SIZE		DOOR				FRAME			DETAILS			FIRE RATING (MIN)	HARDWARE SET	NOTES
				WIDTH	HEIGHT	TYPE	MATERIAL	FINISH	GLAZING	TYPE	MATERIAL	FINISH	HEAD	JAMB	THRESHOLD			
DB-100	CHEMICAL ROOM	*		3'-0"	7'-2"	F	FRP	SPEC	--	F1	ALUM	SPEC	J/AD-2	K/AD-2	Q/AD-2	0	HW1	
DB-100A	CHEMICAL ROOM	*		12'-0"	14'-8"	OH	STL	SPEC		--	--	--	N/AD-2	P/AD-2	S/AD-2	0	--	
DB-100B	CHEMICAL ROOM	*		3'-0"	7'-2"	F	FRP	SPEC	--	F1	ALUM	SPEC	J/AD-2	K/AD-2	Q/AD-2	0	HW1	

HIGH SERVICE PUMP STATION WINDOW SCHEDULE

WINDOW NUMBER	ROOM NAME	SIZE		TYPE	FRAME		GLAZING	DETAILS			NOTES
		HEIGHT	WIDTH		MATERIAL	FINISH		HEAD	JAMB	SILL	
WA-100	PUMP ROOM	2'-8"	12'-0"	T1	ALUM	SPEC	TRANS PANEL	D/AD-3	E/AD-3	F/AD-3	
WA-100A	PUMP ROOM	2'-8"	12'-0"	T1	ALUM	SPEC	TRANS PANEL	D/AD-3	E/AD-3	F/AD-3	
WA-100B	PUMP ROOM	2'-8"	12'-0"	T1	ALUM	SPEC	TRANS PANEL	D/AD-3	E/AD-3	F/AD-3	
WA-100C	PUMP ROOM	2'-8"	12'-0"	T1	ALUM	SPEC	TRANS PANEL	D/AD-3	E/AD-3	F/AD-3	
WA-101	CONTROL ROOM	4'-0"	6'-0"	W1	ALUM	SPEC	LOW-E IMPACT	A/AD-3	B/AD-3	C/AD-3	1
WA-101A	CONTROL ROOM	4'-0"	6'-0"	W1	ALUM	SPEC	LOW-E IMPACT	A/AD-3	B/AD-3	C/AD-3	1
WA-101B	CONTROL ROOM	4'-0"	12'-0"	W2	ALUM	PTD	LOW-E IMPACT	A/AD-3	B/AD-3	S/AD-3	
WA-101C	CONTROL ROOM	4'-0"	6'-0"	W1	HM	PTD	SOUND INSUL	R/AD-3	S/AD-3	T/AD-3	

WINDOW NOTES:
1. INSTALL ROLLER SHADE PER SPECIFICATION 122413

HIGH SERVICE PUMP STATION LOUVER SCHEDULE

LOUVER NUMBER	ROOM NAME	R.O. SIZE		TYPE	PERFORMANCE	DEPTH	MATERIAL	FINISH	DETAIL			NOTES
		WIDTH	HEIGHT						HEAD	JAMB	SILL	
LA-100	PUMP ROOM	6'-8"	4'-0"	L1	VERTICAL BLADE WIND DRIVEN RAIN	5"	ALUM	SPEC	G/AD-3	H/AD-3	J/AD-3	1,2
LA-100A	PUMP ROOM	6'-8"	4'-0"	L1	VERTICAL BLADE WIND DRIVEN RAIN	5"	ALUM	SPEC	G/AD-3	H/AD-3	J/AD-3	1,2
LA-103	MECH ROOM	1'-4"	1'-4"	L1	VERTICAL BLADE WIND DRIVEN RAIN	5"	ALUM	SPEC	K/AD-3	L/AD-3	M/AD-3	1,2

LOUVER NOTES:
1. PROVIDE WITH BIRD SCREEN
2. PROVIDE WITH INSECT SCREEN

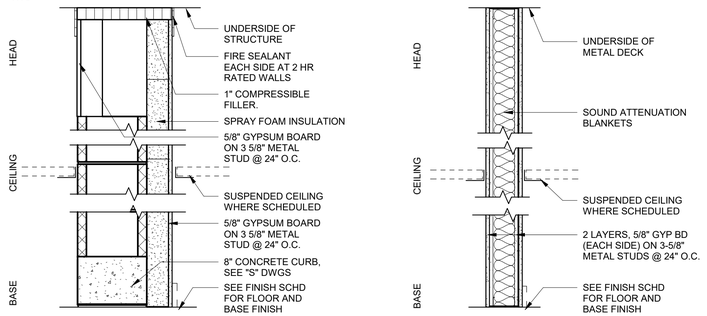
CHEMICAL BUILDING LOUVER SCHEDULE

LOUVER NUMBER	ROOM NAME	R.O. SIZE		TYPE	PERFORMANCE	DEPTH	MATERIAL	FINISH	DETAIL			NOTES
		WIDTH	HEIGHT						HEAD	JAMB	SILL	
LB-100	CHEMICAL ROOM	3'-4"	4'-8"	L1	VERTICAL BLADE WIND DRIVEN RAIN	5"	ALUM	SPEC	N/AD-3	P/AD-3	Q/AD-3	1,2
LB-100A	CHEMICAL ROOM	3'-4"	4'-8"	L1	VERTICAL BLADE WIND DRIVEN RAIN	5"	ALUM	SPEC	N/AD-3	P/AD-3	Q/AD-3	1,2

LOUVER NOTES:
1. PROVIDE WITH BIRD SCREEN
2. PROVIDE WITH INSECT SCREEN

PARTITION TYPES

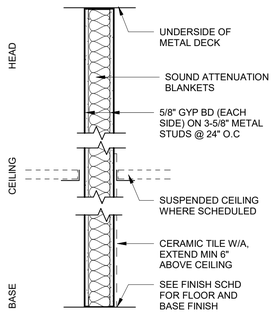
NTS



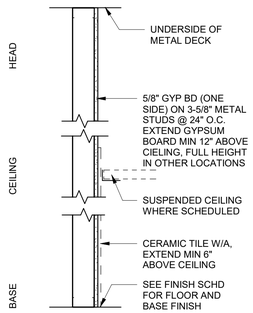
A — 12" CMU WALL WITH 3 5/8" MTL STUDS @ 24" O.C.

A-2 — 2-HR FIRE RATED WALL, 12" FIRE RATED CMU WITH 3/5" MTL STUDS @ 24" O.C. (ULU930 AND W456)

B-2 — 2-HR FIRE RATED WALL, UL 419 - 3 5/8" MTL STUDS @ 24" O.C.



C — 3 5/8" MTL STUDS @ 24" O.C. (CEMENT WALL BOARD AT CT WALLS)



D — CHASE WALL 3 5/8" MTL STUDS @ 24" O.C. (CEMENT WALL BOARD AT CT WALLS)

NOTES:

1. SEE TYPICAL WALL SECTIONS FOR ADDITIONAL INFORMATION. PARTITION TAGS SHOWN ON THE DRAWINGS INDICATE PARTITION TYPE FOR FULL LENGTH OF WALL (UNLESS OTHERWISE NOTED)

2. SEE FINISH SCHEDULE FOR INTERIOR FINISHES

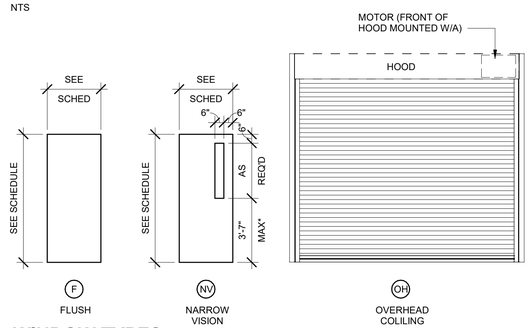
3. FOR ALL WALLS THAT INCLUDE GYPSUM BOARD AS PART OF THE ASSEMBLY: BOTTOM OF GYP BD SHALL NOT BE IN CONTACT WITH FLOOR SLAB, INSTALL SUCH THAT THERE IS A 1/4" GAP BETWEEN SLAB AND BOTTOM OF GYP BD

GENERAL NOTES

SEE SHEET A-1 FOR ADDITIONAL GENERAL NOTES

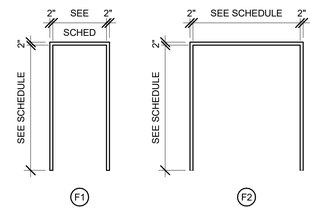
DOOR TYPES

NTS



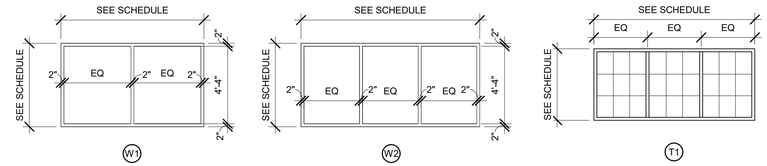
DOOR FRAME TYPES

NTS



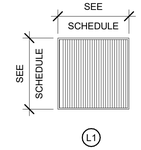
WINDOW TYPES

NTS



LOUVER TYPE

NTS



BASE DETAILS

NTS

APPROVED PRODUCTS LIST

PRODUCT NAME	MANUFACTURER	MODEL	FL PRODUCT APPROVAL	APPROVAL NUMBER	DESIGN PRESSURE	IMPACT RATED
DOUBLE WIDTH FRP DOOR AND ALUMINUM FRAME	SPECIAL-LITE	MODEL SL-17	Y	21856.2	+65/-65	Y
SINGLE WIDTH FRP DOOR AND ALUMINUM FRAME	SPECIAL-LITE	MODEL SL-17	Y	21856.2	+65/-66	Y
INSULATED OVERHEAD ROLL-UP DOOR	COOKSON	INSULATED ESD20	Y	17421.2	+120/-120	Y
WIND DRIVEN RAIN LOUVERS	GREENHECK	EVH-501D	Y	19277.1	+130/-130	Y
SBS MODIFIED BITUMEN ROOF SYSTEM	JOHN MANVILLE	SBS-ASPHALT APPLIED	Y	2948.1	+NA/-247.5	N/A
STANDING SEAM METAL ROOF SYSTEM	FIRESTONE	UNA-CLAD UC-3	Y	13629.1	+NA/-204.3	N/A
TRANSLUCENT PANEL	KALWALL	2-3/4" PANEL SYSTEM	Y	4230.1	+100/-100	Y
THERMALLY BROKEN ALUMINUM WINDOW SYSTEM	YKK	YFW 400 TUH	Y	13269.2	+90/-120	Y

NOTE: APPROVED PRODUCTS LIST IS A LISTING OF THE DESIGN BASIS PRODUCTS AND THE APPLICABLE APPROVED FLORIDA STATE PRODUCT DATA/TESTING. CONTRACTOR CAN SUBMIT "OR EQUAL" PRODUCTS BUT IS RESPONSIBLE FOR PRODUCT APPROVAL AND COORDINATION OF THAT INFORMATION WITH BUILDING DEPARTMENT.

REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: C. SOLLOG
DRAWN BY: G. HOBDY
SHEET CHK'D BY: M. ALFORD
CROSS CHK'D BY: D. PRAH
APPROVED BY: C. SOLLOG
DATE: DECEMBER 2020

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Tel: (904) 731-7109
FL COA No. EB-0000020

JACOBS
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JACKSONVILLE, FLORIDA 32202
EB0000072 AAC001992 LC26000188

JEA

RIVERTOWN WATER TREATMENT PLANT PROJECT

FINISH, DOOR, WINDOW AND LOUVER SCHEDULES, DOOR, FRAME, WINDOW, LOUVER AND PARTITION TYPES

PROJECT NO. 6103-237938
FILE NAME: AWZ000PSCB.RVT

SHEET NO.
AD-1

STATE OF FLORIDA
CLARICE ELIZABETH SOLLOG
AR 96709
REGISTERED ARCHITECT

CLARICE E. SOLLOG, AIA
NO. AR96709
FL. CORP ARCHITECTURE AA-002781
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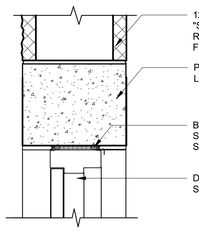
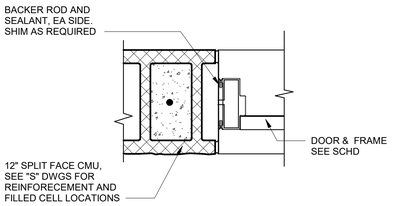
ISSUED FOR BID



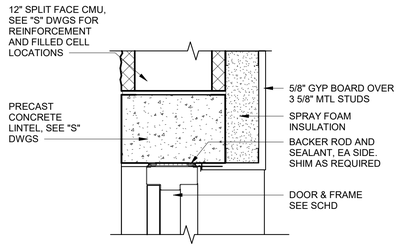
EXTERIOR DOOR HEAD

A DETAIL
1 1/2" = 1'-0"



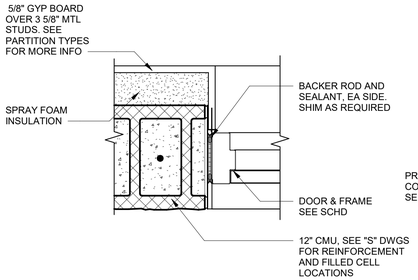
EXTERIOR DOOR JAMB

B DETAIL
1 1/2" = 1'-0"



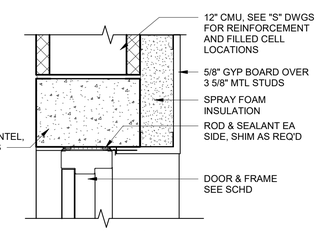
EXTERIOR DOOR HEAD

C DETAIL
1 1/2" = 1'-0"



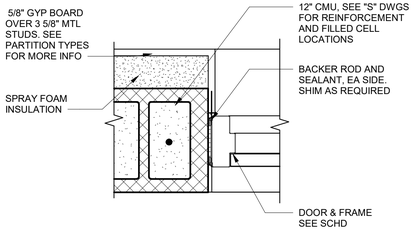
EXTERIOR DOOR JAMB

D DETAIL
1 1/2" = 1'-0"



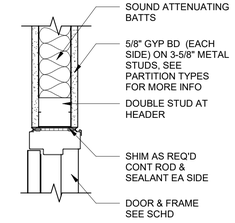
INTERIOR DOOR HEAD

E DETAIL
1 1/2" = 1'-0"



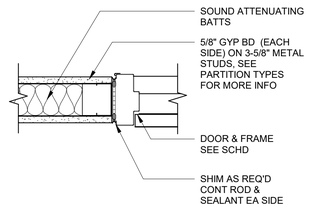
INTERIOR DOOR JAMB

F DETAIL
1 1/2" = 1'-0"



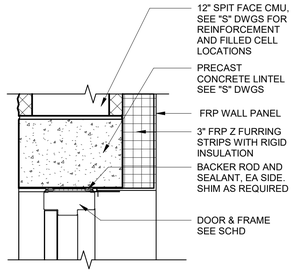
DOOR HEAD

G DETAIL
1 1/2" = 1'-0"



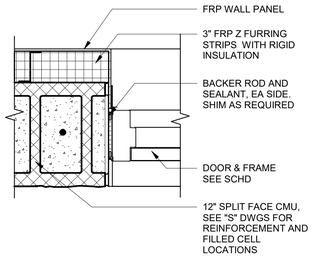
DOOR JAMB

H DETAIL
1 1/2" = 1'-0"



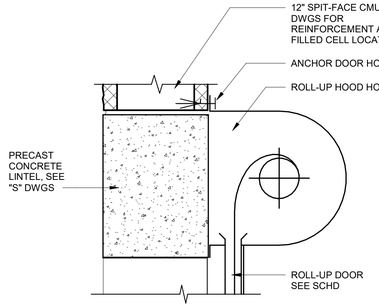
EXTERIOR DOOR HEAD

J DETAIL
1 1/2" = 1'-0"



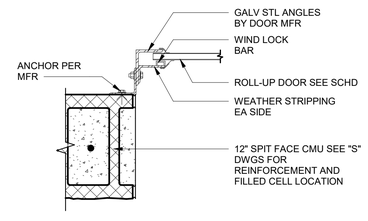
EXTERIOR DOOR JAMB

K DETAIL
1 1/2" = 1'-0"



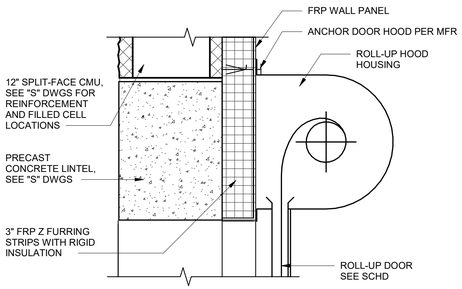
ROLL-UP DOOR HEAD

L DETAIL
1 1/2" = 1'-0"



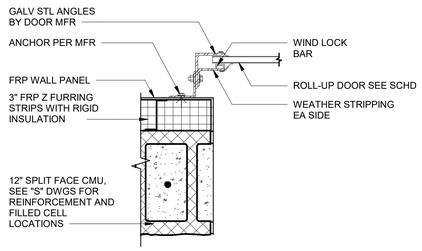
ROLL UP DOOR JAMB

M DETAIL
1 1/2" = 1'-0"



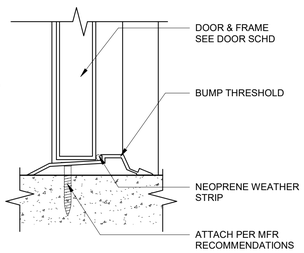
ROLL-UP DOOR HEAD

N DETAIL
1 1/2" = 1'-0"



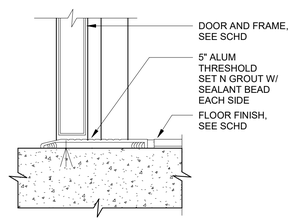
ROLL-UP DOOR JAMB

P DETAIL
1 1/2" = 1'-0"



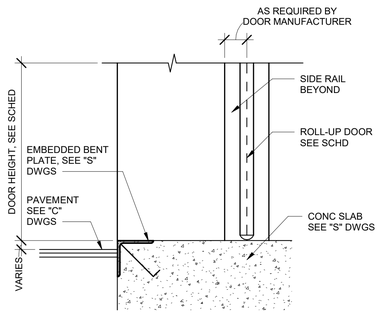
THRESHOLD

Q DETAIL
3" = 1'-0"



THRESHOLD

R DETAIL
1 1/2" = 1'-0"



THRESHOLD

S DETAIL
1 1/2" = 1'-0"

STATE OF FLORIDA
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REGISTERED ARCHITECT

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REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: C. SOLLOG
DRAWN BY: G. HOBDY
SHEET CHK'D BY: M. ALFORD
CROSS CHK'D BY: D. PRAH
APPROVED BY: C. SOLLOG
DATE: DECEMBER 2020

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EB0000072 AAC001992 LC26000188

JEA

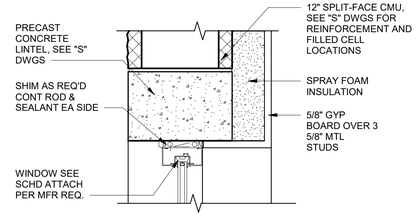
RIVERTOWN WATER TREATMENT PLANT PROJECT

DOOR DETAILS

PROJECT NO. 6103-237938
FILE NAME: AWZ000PSCB.RVT

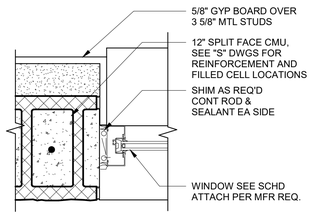
SHEET NO.
AD-2

ISSUED FOR BID



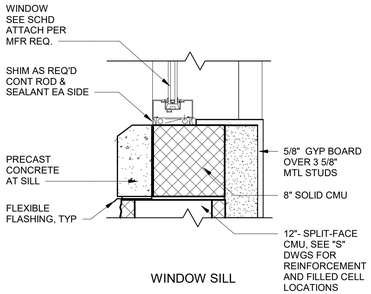
EXTERIOR WINDOW HEAD

A DETAIL 1 1/2" = 1'-0"



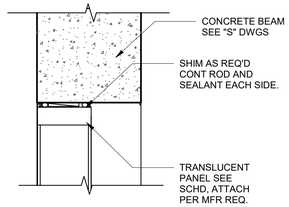
EXTEIROR WINDOW JAMB

B DETAIL 1 1/2" = 1'-0"



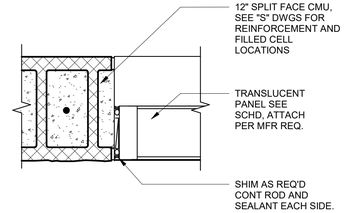
WINDOW SILL

C DETAIL 1 1/2" = 1'-0"



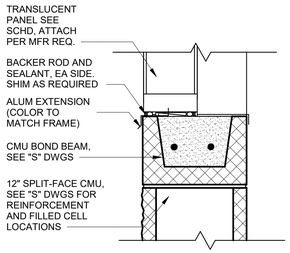
TRANSLUCENT PANEL HEAD

D DETAIL 1 1/2" = 1'-0"



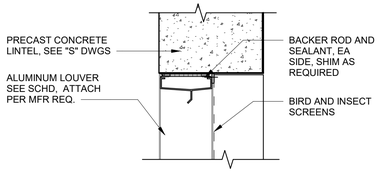
TRANSLUCENT PANEL JAMB

E DETAIL 1 1/2" = 1'-0"



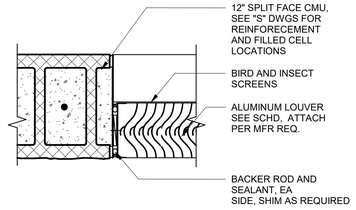
TRANSLUCENT PANEL SILL

F DETAIL 1 1/2" = 1'-0"



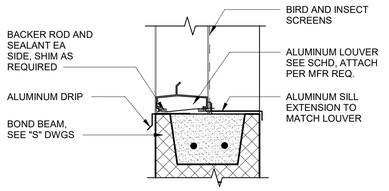
LOUVER HEAD

G DETAIL 1 1/2" = 1'-0"



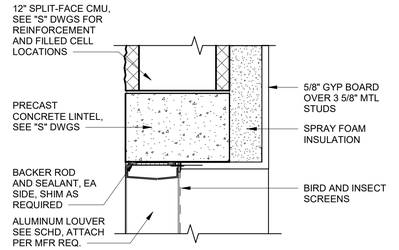
LOUVER JAMB

H DETAIL 1 1/2" = 1'-0"



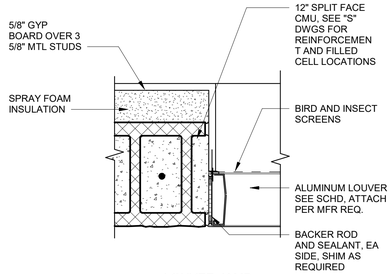
LOUVER SILL

J DETAIL 1 1/2" = 1'-0"



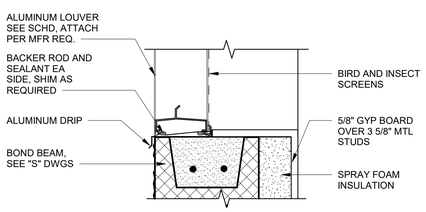
LOUVER HEAD

K DETAIL 1 1/2" = 1'-0"



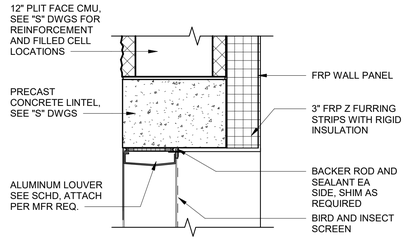
LOUVER JAMB

L DETAIL 1 1/2" = 1'-0"



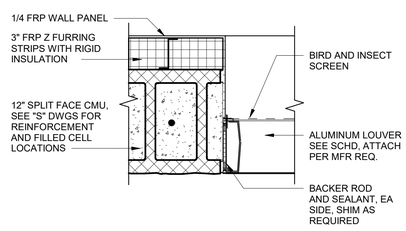
LOUVER SILL

M DETAIL 1 1/2" = 1'-0"



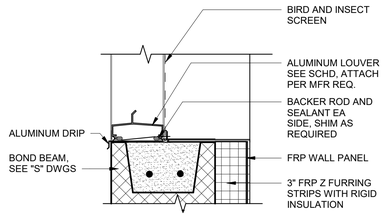
LOUVER HEAD

N DETAIL 1 1/2" = 1'-0"



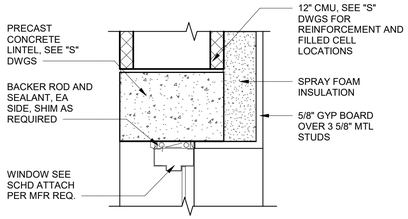
LOUVER JAMB

P DETAIL 1 1/2" = 1'-0"



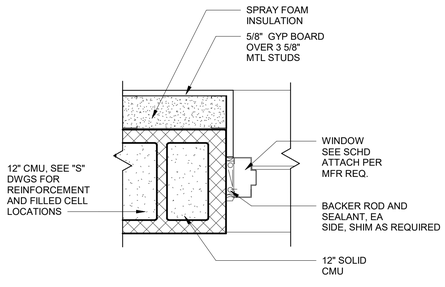
LOUVER SILL

Q DETAIL 1 1/2" = 1'-0"



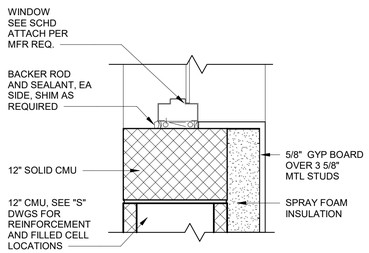
INTERIOR WINDOW HEAD

R DETAIL 1 1/2" = 1'-0"



SILL

S DETAIL 1 1/2" = 1'-0"



INTERIOR WINDOW SILL

T DETAIL 1 1/2" = 1'-0"

STATE OF FLORIDA
CLARICE ELIZABETH SOLLOG
AR 96709
REGISTERED ARCHITECT

CLARICE E. SOLLOG, AIA
NO. AR96709
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MAITLAND, FL 32751

REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: C. SOLLOG
DRAWN BY: G. HOBDY
SHEET CHK'D BY: M. ALFORD
CROSS CHK'D BY: D. PRAH
APPROVED BY: C. SOLLOG
DATE: DECEMBER 2020

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Jacksonville, FL 32256
Tel: (904) 731-7109
FL COA No. EB-0000020

JACOBS
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JACKSONVILLE, FLORIDA 32202
EB0000072 AAC001992 LC26000188

JEA

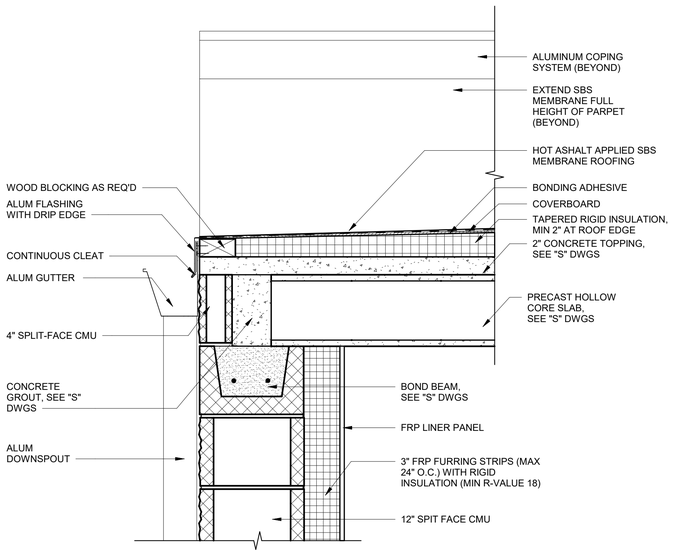
RIVERTOWN WATER TREATMENT PLANT PROJECT

WINDOW AND LOUVER DETAILS

PROJECT NO. 6103-237938
FILE NAME: AWZ000PSCB.RVT

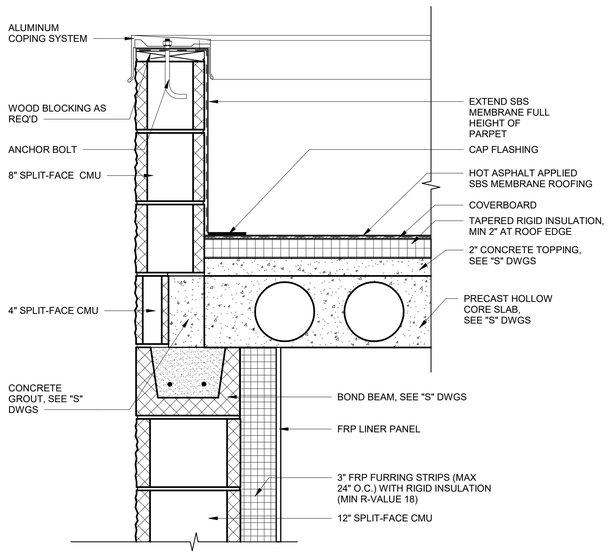
SHEET NO.
AD-3

ISSUED FOR BID



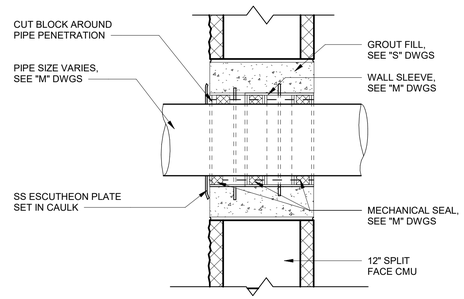
ROOF EDGE W/ GUTTER (CHEMICAL BUILDING)

A DETAIL
1 1/2" = 1'-0"



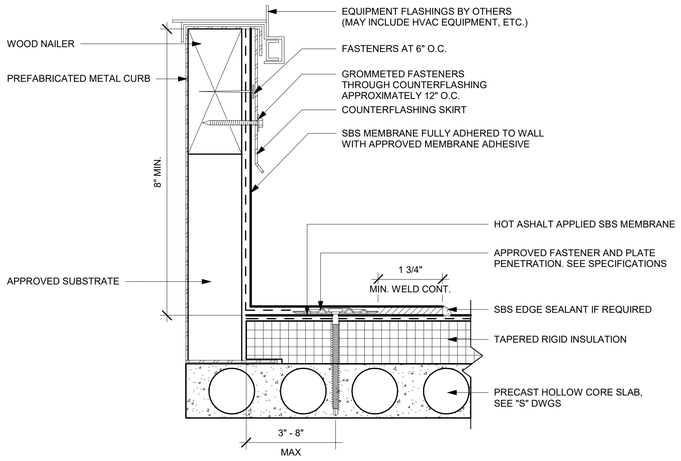
PARAPET (CHEMICAL BUILDING)

B DETAIL
1 1/2" = 1'-0"



LARGE DIAMETER PIPE PENETRATION

C DETAIL
1 1/2" = 1'-0"



PREFABRICATED METAL CURB BASE FLASHING

D DETAIL
6" = 1'-0"

REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: C. SOLLOG
DRAWN BY: G. HOBDY
SHEET CHK'D BY: M. ALFORD
CROSS CHK'D BY: D. PRAH
APPROVED BY: C. CLARICE
DATE: DECEMBER 2020

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EB0000072 AAC001992 LC26000188

JEA

RIVERTOWN WATER TREATMENT PLANT PROJECT

WALL AND ROOF DETAILS

PROJECT NO. 6103-237938
FILE NAME: AWZ000PSCB.RVT

SHEET NO.
AD-4

CLARICE E. SOLLOG, AIA
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ISSUED FOR BID

GENERAL NOTES

DESIGN CRITERIA:

CODES:

- FLORIDA BUILDING CODE SEVENTH EDITION (2020)
- ACI 318 "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE"
- TMS 402 BUILDING CODE FOR MASONRY STRUCTURES
- AISC 360 SPECIFICATIONS FOR STRUCTURAL STEEL BUILDINGS

DESIGN LOADS:

LIVE LOADS:

• WALKWAYS & PLATFORMS	100	PSF
• PROCESS SLABS ON GRADE	300	PSF
• STORAGE AREAS AND ELECTRICAL ROOM	300	PSF

SUPERIMPOSED DEADLOADS:

• ROOFS	AS NOTED
• FLOORS	AS NOTED

WIND DESIGN DATA: ASCE 7-16

• ULTIMATE DESIGN WIND SPEED, V_{ult} (3 SECOND GUST)	136 MPH
• NOMINAL DESIGN WIND SPEED, V_{asd}	106 MPH
• RISK CATEGORY	III
• WIND EXPOSURE CATEGORY	C
• ENCLOSURE CLASSIFICATION	SEE DESIGN DRAWINGS
• INTERNAL PRESSURE COEFFICIENT	SEE DESIGN DRAWINGS

FLOOD DESIGN DATA:

- PER NFIP FIRM MAP NO. 12109C0161K, PANEL 161 OF 560, DATED DECEMBER 7, 2018, NOT IN A FLOOD ZONE.

CONCRETE 28-DAY STRENGTH:

• SLABS, BEAMS, WALLS, COLUMNS AND FOUNDATIONS	4500 PSI
• PRESTRESSED ELEMENTS (HOLLOWCORE)	5000 PSI

FOUNDATIONS:

- ALLOWABLE BEARING PRESSURE FOR SPREAD FOOTINGS OVER SUBSURFACE PREPARED AS PER SPECIFICATIONS:

1. GROUND STORAGE TANK	2400 PSF
2. ALL OTHER STRUCTURES	2100 PSF

GENERAL CONDITIONS:

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

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

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

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

SIZE AND LOCATION OF EQUIPMENT PADS AND ANCHOR BOLTS SHALL BE PER EQUIPMENT MANUFACTURER'S REQUIREMENTS.

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

ALL PIPES UNDER SOIL SUPPORTED STRUCTURE SLABS AND FOOTINGS SHALL BE ENCASED IN CONCRETE AS SHOWN ON THE STRUCTURAL DRAWINGS. PIPES SHALL BE PRESSURE TESTED BEFORE ENCASING.

ELECTRICAL CONDUIT, PIPING, WASH HOSE STATIONS, HOSE RACKS, CONTROL PANELS, LIGHT FIXTURES, ENCLOSURES OR ANY OTHER APPURTENANCE, SHALL NOT BE DIRECTLY SUPPORTED OFF OF GUARDRAIL UNLESS EXPLICITLY ALLOWED BY THE STRUCTURAL ENGINEER OF RECORD.

CONCRETE:

ALL MATERIALS AND METHODS OF CONSTRUCTION SHALL BE IN ACCORDANCE WITH ACI 318 REQUIREMENTS.

ALL CONCRETE SHALL BE AIR-ENTRAINED.

WATER REDUCING AGENT SHALL BE IN ACCORDANCE WITH ASTM C494.

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

ALL EXPOSED CORNERS OF CONCRETE SHALL HAVE A MINIMUM CHAMFER OF 3/4" UNLESS OTHERWISE NOTED.

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

REINFORCING STEEL:

REINFORCEMENT SHALL CONFORM TO ASTM A615, GRADE 60 REQUIREMENTS.

ALL ACCESSORIES SHALL BE IN CONFORMANCE WITH ACI 315 REQUIREMENTS. REINFORCING STEEL SHALL HAVE THE FOLLOWING CLEAR COVER UNLESS OTHERWISE NOTED:

• CONCRETE CAST AGAINST EARTH	3"
• FORMED SURFACES IN CONTACT WITH SOIL, SEWAGE, WATER OR EXPOSED TO WEATHER	2"
• FORMED SURFACES NOT EXPOSED TO WEATHER OR IN CONTACT WITH SOIL:	
SLABS AND WALLS	3/4"
BEAMS AND COLUMNS	1-1/2"

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

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

CONCRETE MASONRY:

DESIGN CRITERIA:

• DESIGN COMPRESSIVE STRENGTH OF MASONRY AT 28 DAYS	f'm = 2000 PSI
• ALLOWABLE STEEL STRESS	fs = 32,000 PSI

CONTINUOUS INSPECTION IS REQUIRED FOR ALL MASONRY WORK.

ALL MATERIALS AND METHODS OF CONSTRUCTION SHALL BE IN ACCORDANCE WITH DRAWINGS AND SPECIFICATIONS AND:

- TMS 402, "BUILDING CODE FOR MASONRY STRUCTURES"

MATERIALS:

- BLOCK: CONFORM TO ASTM C90 - LOAD BEARING, NORMAL WEIGHT TWO CELL, 8"x8"x16", 6"x8"x16" AND 12"x8"x16" (COMPRESSIVE STRENGTH, NET AREA 2000 PSI)
- MORTAR: CONFORM TO ASTM C270, TYPE S. MINIMUM COMPRESSIVE STRENGTH AT 28 DAYS - 2000 PSI. UTILIZE TYPE II CEMENT AND TYPE S LIME.
- STEEL: DUR-O-WALL OR EQUAL LADDER TYPE JOINT REINFORCEMENT AT EVERY SECOND COURSE (16" OC). BOND BEAM AND FILLED CELL REINFORCEMENT AS PER DRAWINGS. (ASTM A615, GRADE 60).

CONSTRUCTION:

- ALL FILLED CELLS AND COLUMNS SHALL BE POURED AT LEAST (2) HOURS PRIOR TO POURING LINTEL BLOCK OR TIE BEAMS.
- MAXIMUM CONSTRUCTION HEIGHT OF MASONRY WALLS WITHOUT FILLED CELL OR COLUMN POURS IS TO BE 8'-0". THE CONCRETE FOR FILLED CELLS SHALL BE RODDED OR PUDDLED DURING PLACEMENT TO ENSURE COMPLETE FILLING TO THE BLOCK CORE.
- SEE STANDARD DETAILS AND ARCHITECTURAL DRAWINGS FOR LINTEL REQUIREMENTS OVER OPENINGS.
- PROVIDE CLEAN OUT AND INSPECTION BLOCK OUTS IN CELLS CONTAINING REINFORCEMENT.

STRUCTURAL STEEL:

DESIGN, FABRICATION, ERECTION MATERIALS AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH THE LATEST AISC SPECIFICATIONS AND DESIGN DRAWINGS.

ALL STRUCTURAL STEEL:

• W SHAPES -	ASTM A992
• M, S AND HP SHAPES -	ASTM A36
• CHANNELS AND ANGLES -	ASTM A36
• HSS (SQUARE, RECTANGULAR AND ROUND) -	ASTM A500
• PLATES -	ASTM A36
• HIGH-STRENGTH BOLTS -	ASTM F3125
• TENSION CONTROL BOLTS -	ASTM F1852
• NUTS -	ASTM A563
• HARDENED STEEL WASHER -	ASTM F436
• ANCHOR RODS -	ASTM F1554
• THREADED RODS -	ASTM A36

ALL PIPE: ASTM A53, GRADE B.

SHOP AND ERECTION DRAWINGS SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW.

WELDED CONNECTIONS SHALL BE IN ACCORDANCE WITH THE LATEST AWS STRUCTURAL WELDING CODE REQUIREMENTS. ELECTRODES SHALL BE E-70XX.

STRUCTURAL ALUMINUM:

DESIGN, FABRICATION, ERECTION MATERIALS AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH THE LATEST "ALUMINUM DESIGN MANUAL" (ADM) SPECIFICATIONS AND DESIGN DRAWINGS.

ALL STRUCTURAL ALUMINUM:

• ALUMINUM EXTRUDED PIPE -	ASTM B429, ALLOY 6063-T6 OR ALLOY 6061-T6
• ALUMINUM EXTRUDED SHAPE -	ASTM B221, ALLOY 6061-T6
• ALUMINUM SHEET AND PLATE -	ASTM B209, ALLOY 6061-T6
• ALUMINUM ALLOY ROLLED THREAD PLATE -	ASTM B209, ALLOY 6061-T6
• ALUMINUM CASTING -	ASTM B26/B36M, ALLOY 443.0-F

SHOP AND ERECTION DRAWINGS SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW.

WELDED CONNECTIONS SHALL BE IN ACCORDANCE WITH THE LATEST AWS D1.2/D1.2M "STRUCTURAL WELDING CODE - ALUMINUM".

WHERE ALUMINUM CONTACTS A DISSIMILAR METAL, APPLY TO THE DISSIMILAR METAL A HEAVY BRUSH COAT OF ZINC-CHROMATE PRIMER FOLLOWED BY TWO COATS OF ALUMINUM METAL PAINT.

WHERE ALUMINUM CONTACTS MASONRY OR CONCRETE, APPLY A HEAVY COAT OF BITUMASTIC OR EPOXY PAINT.

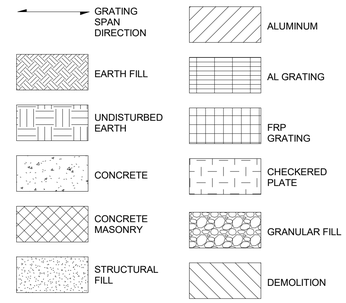
GEOTECHNICAL REPORT:

GEOTECHNICAL ENGINEERING REPORT ENTITLED, "GEOTECHNICAL EXPLORATION AND EVALUATION REPORT PHASE 2, RIVERTOWN WATER TREATMENT PLANT ST. JOHNS COUNTY, FLORIDA," BY CSI GEO, INC., DATED JULY 30, 2020.

DEFERRED SUBMITTALS:

1. THE FOLLOWING PORTIONS OF THE PROJECT ARE DEFFERED SUBMITTAL ITEMS AND HAVE NOT BEEN DESIGNED BY THE ENGINEER OF RECORD:
   a. EQUIPMENT, TANK AND PIPE SUPPORT ANCHORAGE
   b. RAILING SYSTEMS
   c. TANK RESTRAINTS
   d. PRECAST CONCRETE TANKS
   e. PRESTRESSED WIRE-WRAPPED GROUND STORAGE TANK
   f. FRP COMPONENTS
   g. WALL MOUNTED CANOPY
   h. PRE-ENGINEERED COLD FORMED STEEL TRUSS
2. DEFERRED SUBMITTAL ITEMS SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW DURING THE CONSTRUCTION PHASE OF THE PROJECT.
3. DEFERRED SUBMITTAL ITEMS SHALL BE STAMPED AND SEALED BY A CIVIL OR STRUCTURAL ENGINEER REGISTERED IN THE STATE OF FLORIDA.
4. DEFERRED SUBMITTAL ITEMS SHALL NOT BE ERECTED OR INSTALLED UNTL THE ENGINEER OF RECORD HAS REVIEWED THE SUBMITTAL DOCUMENTS AND INDICATED THAT THEY HAVE BEEN REVIEWED AND FOUND TO BE IN GENERAL CONFORMANCE WITH THE DESIGN OF THE STRUCTURE.

LEGEND AND SYMBOLS

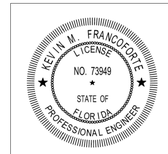


ABBREVIATIONS

#	NUMBER	INT	INTERIOR
&	AND	INV	INVERT
@	AT	JT	JOINT
AB	ANCHOR BOLT	KO	KNOCKOUT
ABV	ABOVE	LG	LENGTH
ACC	ACCELERATION	LLH	LONG LEG HORIZONTAL
ADDL	ADDITIONAL	LLV	LONG LEG VERTICAL
ALUM/AL	ALUMINUM	LNTL	LINTEL
ALT	ALTERNATE (ING)	LOC(S)	LOCATION(S)LOCATED
APPROX	APPROXIMATELY	LONG.	LONGITUDINAL
B TO B	BACK TO BACK	LP	LOW POINT
BEV	BEVEL (ED)	LT	LEFT
BLK	BLOCKING	LW	LIGHTWEIGHT
BOT	BOTTOM	LL	LIVE LOAD
BRG	BEARING	MAS	MASONRY
B/W	BETWEEN	MAX	MAXIMUM
CIRC	CIRCUMFERENTIAL	MB	MACHINE BOLTS
CONST	CONSTRUCTION JOINT	MCJ	MASONRY CONTROL JOINT
CL	CENTERLINE	MFR	MANUFACTURER
CLJ	CONTROL JOINT	MIN	MINIMUM
CLR	CLEAR	MO	MASONRY OPENING
CMU	CONCRETE MASONRY UNITS	MPH	MILES PER HOUR
COL	COLUMN	NF	NEAR FACE
CONC	CONCRETE	NS	NON-SHRINK
CONN	CONNECTION	NTS	NOT TO SCALE
CONT	CONTINUOUS	OC	ON CENTER
CPLG	COUPLING	OD	OUTSIDE DIAMETER
CRS	COURSE (S)	OF.	OUTSIDE FACE
CSK	COUNTERSINK	OH	OVERHANG
CTR	CENTER(ED)	OPNG	OPENING
DET	DETAIL	OPP	OPPOSITE
DIA	DIAMETER	OPT	OPTIONAL
DIAG	DIAGONAL	PCJ	PARTIAL CONTRACTION JOINT
DIR	DIRECTION	PJF	PREMOLDED JOINT FILLER
DL	DEAD LOAD	PLF	POUNDS PER LINEAR FOOT
DO.	DITTO	PLYWD	PLYWOOD
DWG	DRAWING	PREFAB	PREFABRICATED
DWL	DOWEL	PROJ	PROJECTION
EA	EACH	PSF	POUNDS PER SQUARE FOOT
EB	EXPANSION BOLT	PSI	POUNDS PER SQUARE INCH
EF	EACH FACE	PVMT	PAVEMENT
EL	ELEVATION	R	RISER(S)
EMBED	EMBEDMENT	RAD	RADIUS
EQ	EQUAL (LY)	RC	REINFORCED CONCRETE
EQUIP	EQUIPMENT	REF	REFERENCE/REFER
ES	EACH SIDE	REINF	REINFORCE (D, ING)
EW	EACH WAY	REQD	REQUIRED
EXST	EXISTING	REV	REVISION
EXP JT	EXPANSION JOINT	RLG	RAILING
EXT	EXTERIOR	RO	ROUGH OPENING
f'c	CONCRETE COMPRESSION STRESS	RT	RIGHT
f'm	MASONRY PRISM STRESS	SCJ	SLAB CONTROL JOINT
FAB	FABRICATE (OR, ED)	SECT	SECTION
FDN	FOUNDATION	SIM	SIMILAR
FF	FAR FACE	SP	SPACE (S, ED)
FHMS	FLATHEAD MACHINE SCREW	SQ	SQUARE
FHWS	FLATHEAD WOOD SCREW	SS	STAINLESS STEEL
FL	FLOOR	STD	STANDARD
FRP	FIBERGLASS REINFORCED PLASTIC	STIF	STIFFENER
FTG	FOOTING	STIR	STIRRUP (S)
GALV	GALVANIZED	STL	STEEL
GBT	GRAVITY BELT THICKENER	SYM	SYMMETRICAL
GLB	GLASS BLOCK	T	THICKNESS
GR	GRADE	T/	TOP OF
GRTG	GRATING	T&B	TOP AND BOTTOM
H	HIGH	TF	TOP FACE
HAS.	HEADED ANCHOR STUD	THD	THREADED
HDR	HEADER	TOC	TOP OF CONCRETE
HOR	HORIZONTAL	TRNSV	TRANSVERSE
HP	HIGH POINT	TYP	TYPICAL
ID	INSIDE	UNO	UNLESS NOTED OTHERWISE
I.E.	INVERT ELEVATION	VIF	VERIFY IN FIELD
IF.	INSIDE FACE	W	WIDE
		W/	WITH
		W/O	WITHOUT
		WP	WORKING POINT
		WWF	WELDED WIRE FABRIC

ABBREVIATION NOTES:

1. ABBREVIATIONS AND DESIGNATIONS FOR STEEL MEMBERS MAY BE FOUND IN THE CURRENT MANUAL OF STEEL CONSTRUCTION BY AISC.
2. ABBREVIATIONS OF TECHNICAL SOCIETIES AND TRADE ASSOCIATIONS MAY BE FOUND IN THE SPECIFICATIONS.
3. WELDING SYMBOLS AND ABBREVIATIONS MAY BE FOUND IN AWS 2.4.



DATE:
KEVIN M. FRANCOFORTE
PE NO. 73949

REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: M.TRAPP
DRAWN BY: M. TRAPP
SHEET CHK'D BY: K. FRANCOFORTE
CROSS CHK'D BY: T. VERWEY
APPROVED BY: K. FRANCOFORTE
DATE: DECEMBER 2020

CDM Smith
4651 Salisbury Road, Suite 420
Jacksonville, FL 32256
Tel: (904) 731-7109
FL COA No. EB-0000020

JACOBS
245 RIVERSIDE AVE, SUITE 300
JACKSONVILLE, FLORIDA 32202
EB0000072 AAC001992 LC26000188

JEA

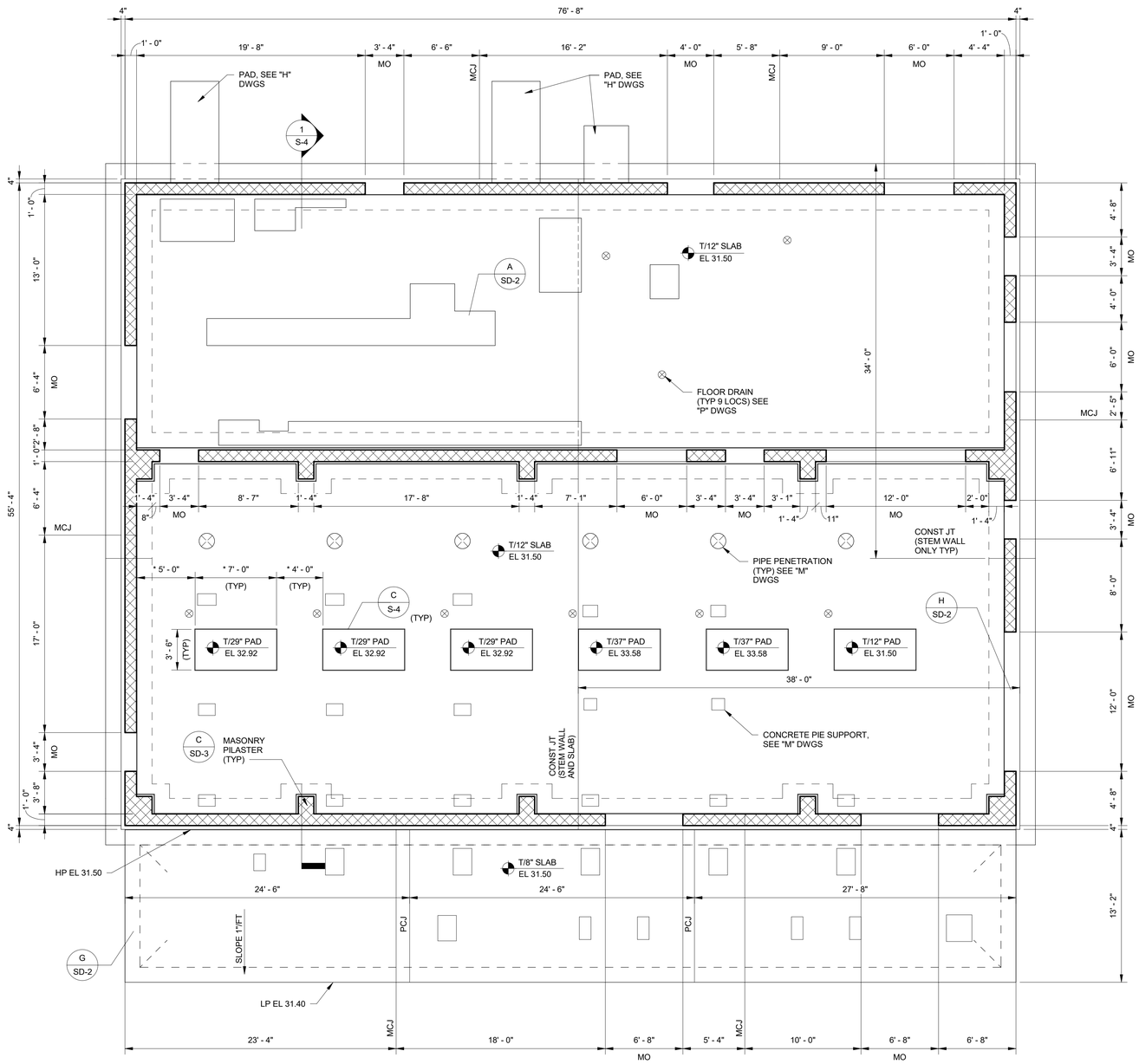
RIVERTOWN WATER TREATMENT PLANT PROJECT

GENERAL STRUCTURAL NOTES

PROJECT NO. 6103-237938
FILE NAME: S000STNT.RVT

SHEET NO.
S-1

ISSUED FOR BID



FOUNDATION PLAN

3/16" = 1'-0"

NOTE:

1. REFER TO SD-3 FOR STANDARD MASONRY DETAILS
2. LANDINGS NOT SHOWN SEE CIVIL DRAWINGS
3. * - COORDINATE PUMP PAD DIMENSIONS AND LOCATIONS WITH "M" DRAWINGS.

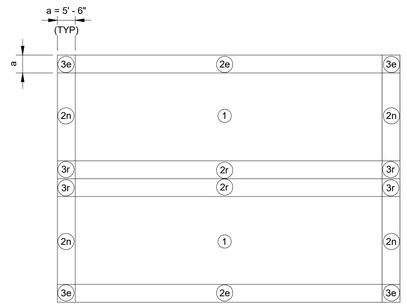
DESIGN LOAD DATA - HIGH SERVICE PUMP STATION

WIND DESIGN DATA:

ENCLOSURE CLASSIFICATION: PARTIALLY ENCLOSED

INTERNAL PRESSURE COEFFICIENT: +/- 0.55

REFER TO SHEET S-1 FOR DESIGN LOAD DATA THAT IS THE SAME FOR ALL STRUCTURES.



C&C ROOF PRESSURE PLAN

NTS

C&C WALL PRESSURE PLAN

NTS

WIND PRESSURE (PSF) PER FM GLOBAL STANDARD 1-28									
PRESSURE (+) / SUCTION (-)									
ROOF - WIND UPLIFT RATINGS (PSF)						WALL (PSF) (PER ASCE 7-16)			
						ZONE 4		ZONE 5	
ZONE 1	ZONE 2e	ZONE 2n	ZONE 2r	ZONE 3e	ZONE 3r				
-150	-150	-195	-195	-195	-225	51	-54.2	51	-63.7

TABLE NOTES:

1. OVERHANG PRESSURES COVERED IN ZONE 2e, 2n, 3e AND 3r WIND UPLIFT PRESSURES

KEVIN M. FRANCOFORTE LICENSE NO. 73949 STATE OF FLORIDA PROFESSIONAL ENGINEER

DATE:
KEVIN M. FRANCOFORTE
PE NO. 73949

REV. NO.	DATE	DRWN	CHKD	REMARKS

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SHEET CHK'D BY: K. FRANCOFORTE
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APPROVED BY: K. FRANCOFORTE
DATE: DECEMBER 2020

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JEA

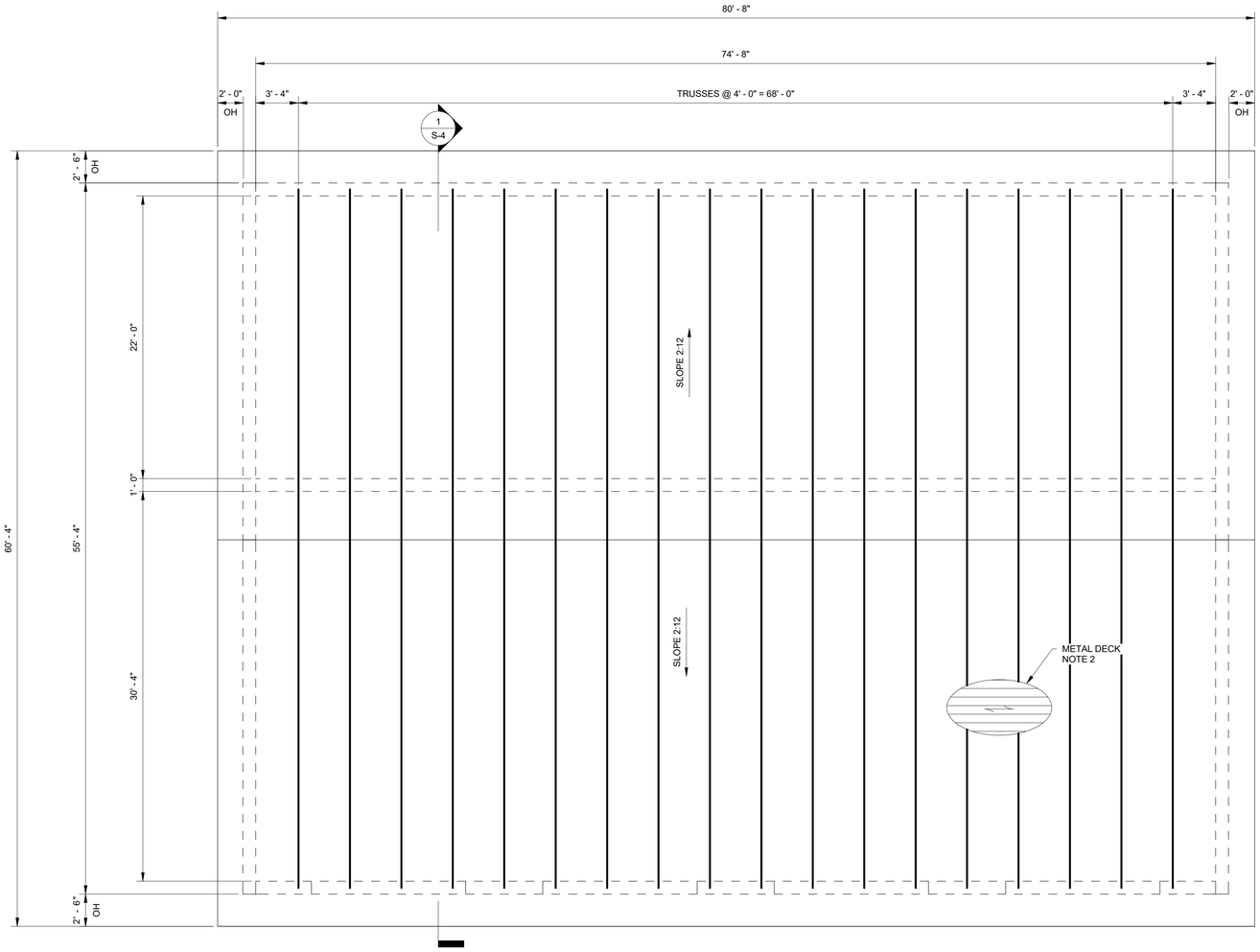
RIVERTOWN WATER TREATMENT PLANT PROJECT

HIGH SERVICE PUMP STATION
FOUNDATION PLAN

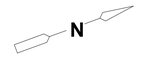
PROJECT NO. 6103-237938
FILE NAME: SWZ00PS.RVT

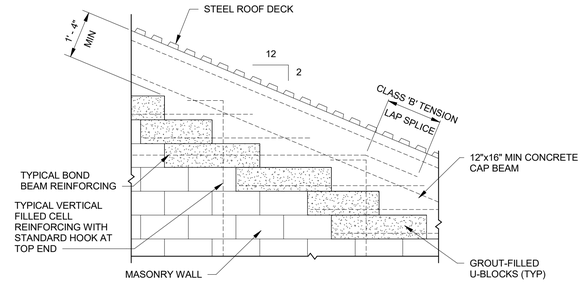
SHEET NO.
S-2

ISSUED FOR BID



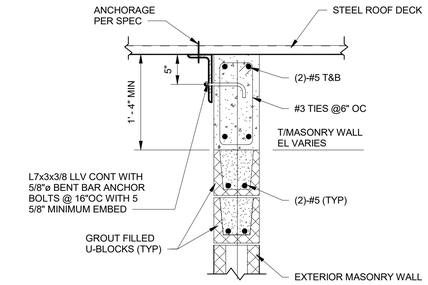
ROOF PLAN
3/16" = 1'-0"





TYPICAL EXTERIOR WALL CAP BEAM

A DETAIL
1/2" = 1'-0"



EXTERIOR WALL CONNECTION

B DETAIL
1" = 1'-0"

NOTE:

1. REFER TO SD-3 FOR STANDARD MASONRY DETAILS

PRE-ENGINEERED COLD FORM STEEL TRUSS NOTES:

TRUSS MANUFACTURER TO DESIGN TRUSS IN CONFORMANCE WITH FLORIDA BUILDING CODE SEVENTH EDITION (2021)

1. ROOF SYSTEM:

   ROOF SUPERIMPOSED LOADS:

DL (SUPERIMPOSED)	=	10	PSF
DL (DECK + SUPERIMPOSED)	=	41	PSF
SUPERIMPOSED LL (NON-REDUCIBLE)	=	20	PSF
NET WIND UPLIFT (ASD)	=	-44	PSF

2. ROOF DECK:

   A. GALVANIZED DECK: 1.5B, 20 GAGE, G90 BY VULCRAFT OR APPROVED EQUAL.

   B. SUPPORT FASTENERS:
   #12 SCREWS** 36/7 PATTERN OR APPROVED EQUAL.

   C. SIDELAP FASTENERS:
   (6)-#12 SCREWS SIDELAP CONNECTOR PER SPAN OR APPROVED EQUAL.

   ** COORDINATE FASTENER MODEL WITH TRUSS CHORD THICKNESS.

   ROOF FRAMING:

   GALVANIZED STEEL PRE-ENGINEERED COLD FORM STEEL TRUSSES BASED ON 4 FT. SPACING.

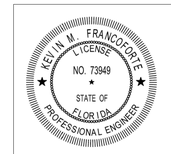
TOP CHORD SUPERIMPOSED DL	124 PLF
TOP CHORD SUPERIMPOSED LL	80 PLF
BOTTOM CHORD SUPERIMPOSED DL	40 PLF

3. PRE-ENGINEERED COLD FORMED STEEL TRUSS FRAMED CALCULATIONS (INCLUDING CONNECTIONS TO STRUCTURE) AND SHOP DRAWINGS, SHOWING ALL TEMPORARY AND PERMANENT BRACING, AND SHEAR BRACES/TRUSSES/BLOCKING TO TRANSFER DIAPHRAGM LOADS SHALL BE SIGNED AND SEALED BY A FLORIDA REGISTERED PROFESSIONAL ENGINEER AND SUBMITTED TO ENGINEER FOR REVIEW.

4. REFER TO ARCHITECTURAL, HVAC, PLUMBING AND ELECTRICAL DRAWINGS FOR ADDITIONAL EQUIPMENT TO BE SUPPORTED BY THE TRUSSES. TRUSS DESIGNER TO USE ACTUAL WEIGHT OF EQUIPMENT PROVIDED.

5. COORDINATE LOCATION AND SIZE OF ROOF OPENINGS WITH ARCHITECTURAL, HVAC AND PLUMBING DRAWINGS. FRAME ALL OPENINGS LARGER THAN 12" WITH COLD FORM STEEL FRAMING DESIGNED BY TRUSS MANUFACTURER.

6. SEE DESIGN DRAWINGS AND STANDARD DETAILS FOR FURTHER DESIGN AND LOAD REQUIREMENTS.



DATE:
KEVIN M. FRANCOFORTE
PE NO. 73949

REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: M. TRAPP
DRAWN BY: M. TRAPP
SHEET CHK'D BY: K. FRANCOFORTE
CROSS CHK'D BY: T. VERWEY
APPROVED BY: K. FRANCOFORTE
DATE: DECEMBER 2020

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JEA

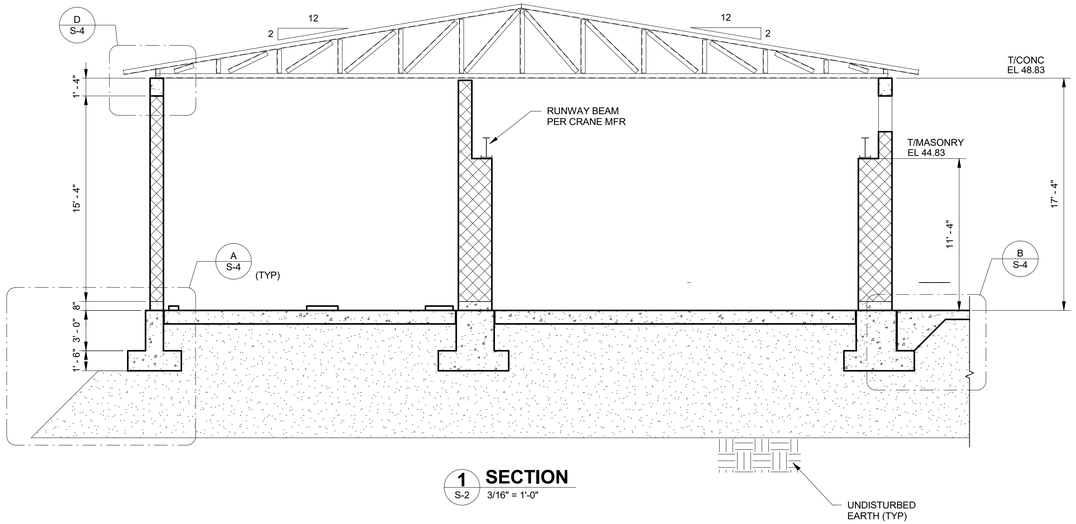
RIVERTOWN WATER TREATMENT PLANT PROJECT

HIGH SERVICE PUMP STATION
ROOF PLAN AND DETAILS

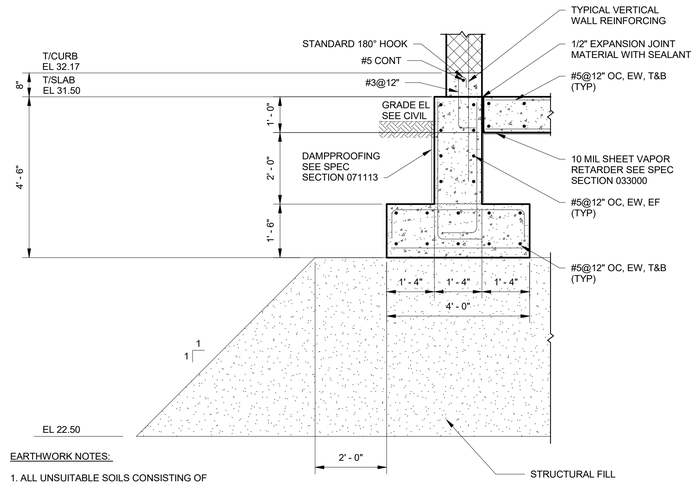
PROJECT NO. 6103-237938
FILE NAME: SWZ00PS.RVT

SHEET NO.
S-3

ISSUED FOR BID



1 SECTION S-2 — 3/16" = 1'-0"



A DETAIL — 1/2" = 1'-0"

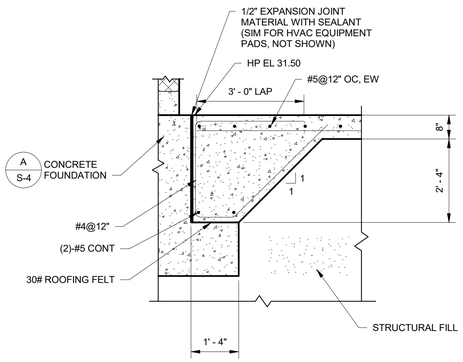
EARTHWORK NOTES:

1. ALL UNSUITABLE SOILS CONSISTING OF ORGANIC SOILS, HIGHLY ORGANIC SOILS, AND CLAYS SHALL BE COMPLETELY REMOVED TO NATIVE SUBGRADE MATERIALS. GEOTECHNICAL ENGINEER SHALL CONFIRM ALL UNSUITABLE SOILS HAVE BEEN REMOVED PRIOR TO BACKFILLING BY THE CONTRACTOR.

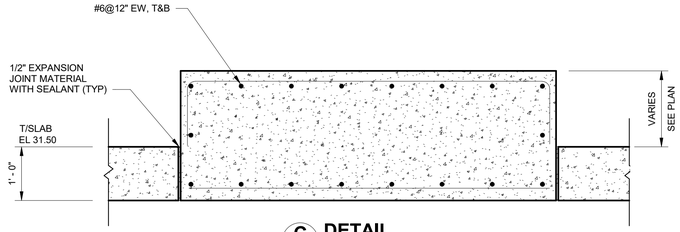
2. COMPACT STRUCTURAL FILL TO 95% OF THE MODIFIED PROCTOR MAXIMUM DRY DENSITY PER ASTM D1557.

NOTE:

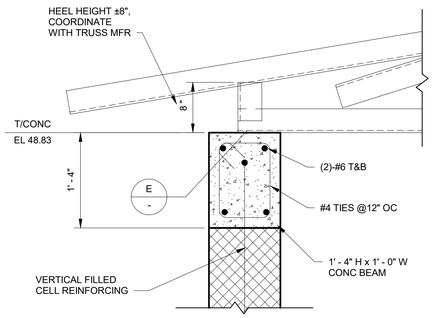
1. REFER TO SD-3 FOR STANDARD MASONRY DETAILS



B DETAIL — 1/2" = 1'-0"

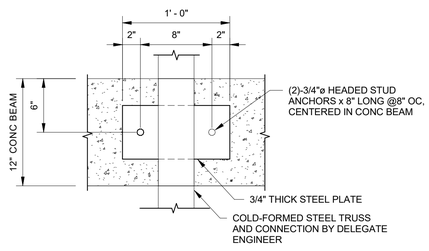


C DETAIL — 3/4" = 1'-0"



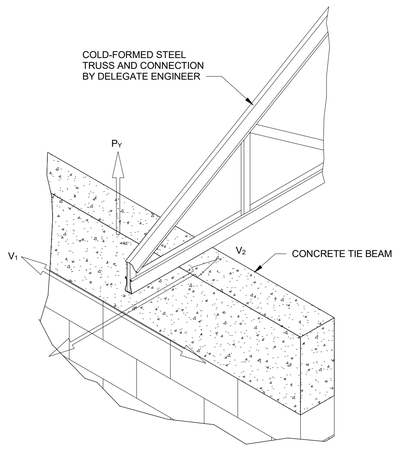
CONCRETE TIE BEAM

D DETAIL — 1" = 1'-0"



TYPICAL TRUSS BEARING AND ANCHORAGE

E DETAIL — 1 1/2" = 1'-0"



TRUSS CONNECTOR DESIGN FORCES

F DETAIL — 1" = 1'-0"

NOTES:

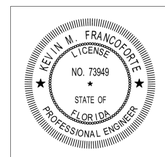
1. TRUSS TO WALL CONNECTIONS TO BE DESIGNED FOR THE FOLLOWING SIMULTANEOUS SERVICE LOADS:

   LOAD COMB 1: V_1=0.64 kip, V_2=1.9 kip, P_V=5.1 kip

2. LOADS FOR TYPICAL TRUSS @ 4' - 0" OC

3. TRUSS SYSTEM SHALL BE CAPABLE OF TRANSFERRING VERTICAL AND HORIZONTAL LOADS ABOVE FROM DECK TO CMU WALL. TRUSS SYSTEM BY DELEGATE ENGINEER SHALL INCLUDE SHEAR BRACES/TRUSSES TO TRANSFER DIAPHRAGM LOADS.

4. TRUSS TO BEARING CONNECTION AS DETAILED ON THESE DRAWINGS IS PRELIMINARY UNTIL FINAL REACTIONS FROM DELEGATE ENGINEER ARE REVIEWED AND APPROVED BY THE ENGINEER OF RECORD.



DATE:
KEVIN M. FRANCOFORTE
PE NO. 73949

REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: M.TRAPP
DRAWN BY: M.TRAPP
SHEET CHK'D BY: K. FRANCOFORTE
CROSS CHK'D BY: T. VERWEY
APPROVED BY: K. FRANCOFORTE
DATE: DECEMBER 2020

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JEA

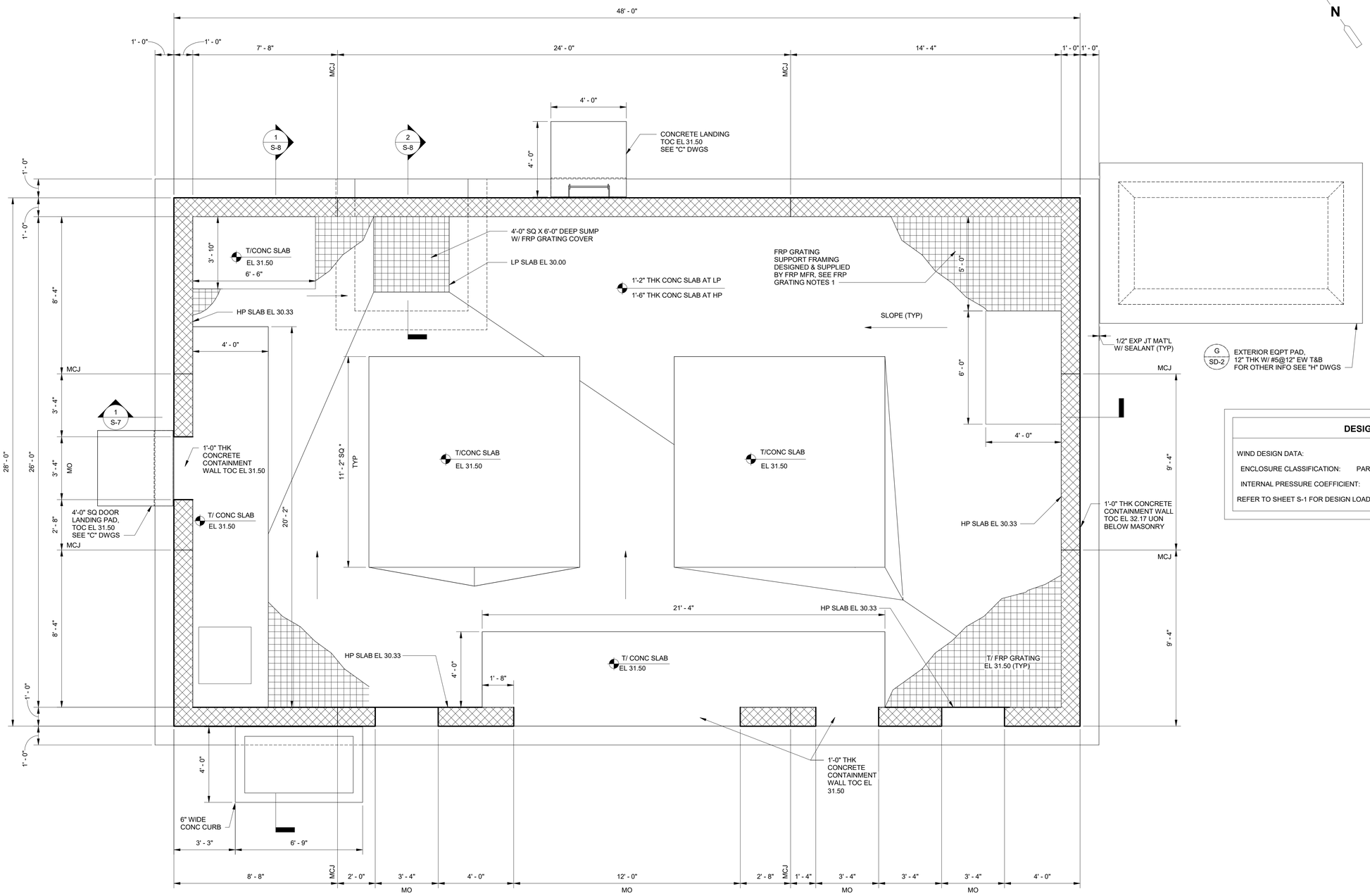
RIVERTOWN WATER TREATMENT PLANT PROJECT

HIGH SERVICE PUMP STATION
SECTIONS AND DETAILS

PROJECT NO. 6103-237938
FILE NAME: SWZ00PS.RVT

SHEET NO.
S-4

ISSUED FOR BID



FOUNDATION PLAN

3/8" = 1'-0"

N

NOTES:

1. * INDICATES DIMENSIONS AND/OR INFORMATION TO BE COORDINATED BY THE CONTRACTOR WITH THE MANUFACTURER OF THE APPROVED EQUIPMENT PRIOR TO FABRICATION AND CONSTRUCTION.
2. FOR PIPING LOCATIONS AND ELEVATIONS BELOW SOIL SUPPORTED CONCRETE SLABS SEE THE PLUMBING, MECHANICAL, ELECTRICAL AND HVAC DRAWINGS.

FRP GRATING NOTES:

1. FRP GRATING MANUFACTURER SHALL LAYOUT THE REQUIRED FRAMING MEMBERS TO SUPPORT THE FRP GRATING. FRP BEAMS SHALL BE SUPPORTED OFF THE CONCRETE WALL AND TANK CONCRETE PADS. IF NECESSARY USE FRP POST/COLUMN TO SUPPORT FRP BEAMS AND POSTS/COLUMNS SHALL BE SUPPORTED FROM BASE SLAB. ALL THE GRATING, MEMBER DESIGN, MEMBER CONNECTIONS, BEAM ANCHORAGE TO CONCRETE, POST/COLUMN BASE PLATE & ITS ANCHORAGE, ETC., SHALL BE DESIGNED/DETAILED AND SUPPLIED BY FRP MANUFACTURER. FRP GRATING PANEL SIZE SHALL BE 4'-0" X 4'-0" IN SUCH A WAY THAT OPERATORS CAN EASILY LIFT. SEE SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.

DESIGN LOAD DATA - CHEMICAL BUILDING

WIND DESIGN DATA:

ENCLOSURE CLASSIFICATION: PARTIALLY ENCLOSED

INTERNAL PRESSURE COEFFICIENT: +/- 0.55

REFER TO SHEET S-1 FOR DESIGN LOAD DATA THAT IS THE SAME FOR ALL STRUCTURES.

REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: A.G. KHALID
DRAWN BY: N. KRISHNA
SHEET CHK'D BY: S. SANKAR
CROSS CHK'D BY: T. VERWEY
APPROVED BY: K. FRANCOFORTE
DATE: DECEMBER 2020

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JEA

RIVERTOWN WATER TREATMENT PLANT PROJECT

CHEMICAL BUILDING
FOUNDATION PLAN

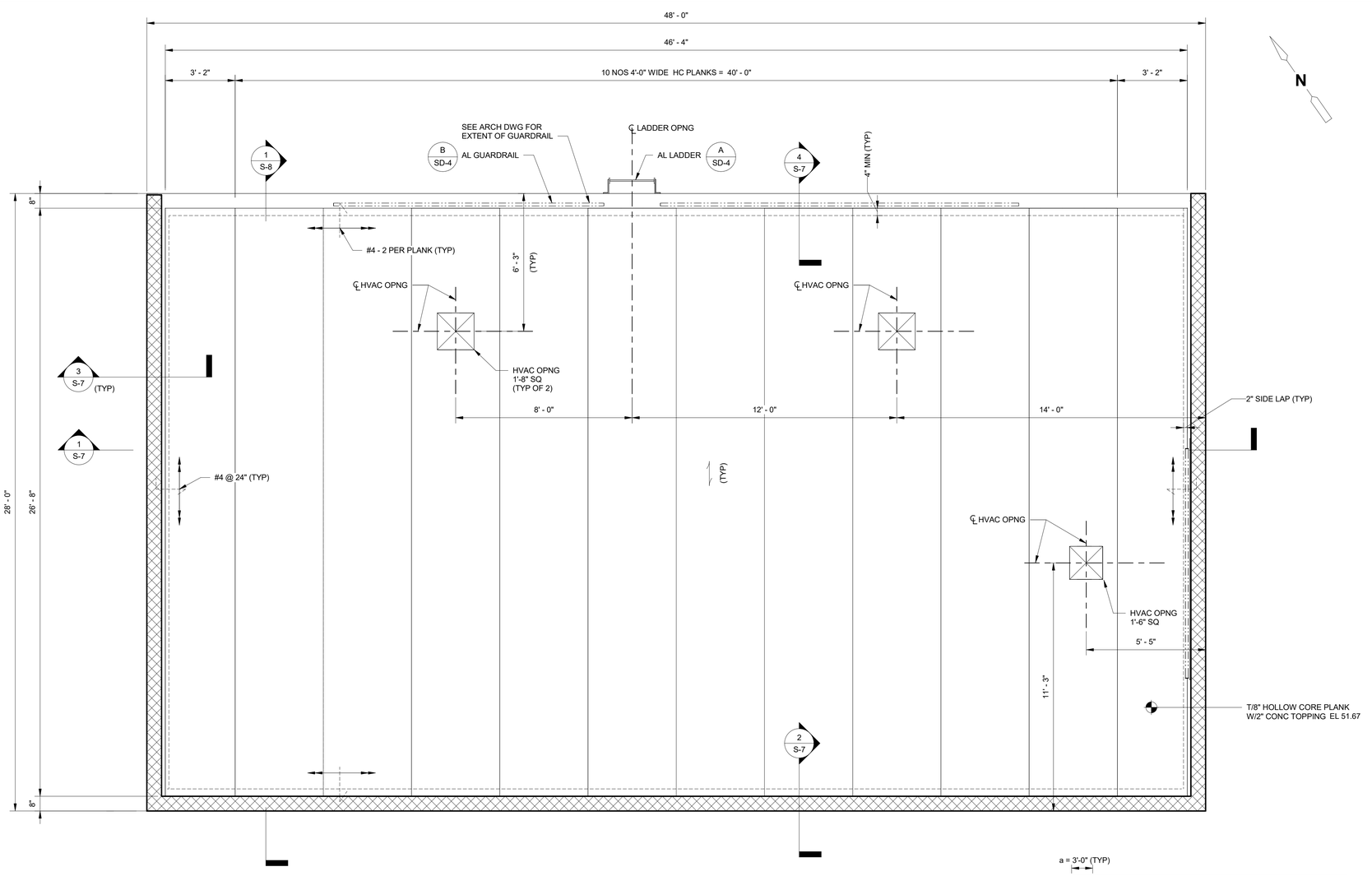
KEVIN M. FRANCOFORTE
LICENSE
NO. 73949
STATE OF
FLORIDA
PROFESSIONAL ENGINEER

DATE:
KEVIN M. FRANCOFORTE
PE NO. 73949

PROJECT NO. 6103-237938
FILE NAME: SWZ000CB.rvt

SHEET NO.
S-5

ISSUED FOR BID



ROOF PLAN
3/8" = 1'-0"

WIND PRESSURE (PSF) FOR COMPONENT AND CLADDING PER FM GLOBAL STANDARD 1-28						
PRESSURE (+) / SUCTION (-)						
ROOF - WIND UPLIFT RATINGS (PSF)			WALL (PSF) (PER ASCE 7-16)			
ZONE 1	ZONE 2	ZONE 3	ZONE 4		ZONE 5	
-135	-165	-210	+54	-57	+54	-67

PLANK ANCHORAGE NOTES:

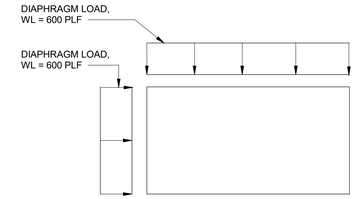
1. CONNECTION PLATES, WELD PLATES, EMBEDDED PLATES, AND WELDS NEEDED FOR PLANK TO PLANK CONNECTION SHALL BE DESIGNED, FURNISHED AND INSTALLED BY THE PRECAST MANUFACTURER TO RESIST DIAPHRAGM ACTION AS SPECIFIED AND AS INDICATED ON THIS SHEET, UNLESS OTHERWISE NOTED.
2. REINFORCING BARS CONNECTING CMU TO PLANK SHALL BE DESIGNED FOR AN ULTIMATE LEVEL WIND LOAD OF 750 PLF, ACTING PERPENDICULAR TO THE CMU WALL, TOWARDS OR AWAY FROM THE WALL AND ROOF DIAPHRAGM LOAD OF 750 PLF.
3. * INDICATES DIMENSION AND/ OR INFORMATION TO BE COORDINATED BY THE CONTRACTOR OF THE APPROVED EQUIPMENT PRIOR TO FABRICATION AND CONSTRUCTION OF THE PLANK.

HOLLOW-CORE PLANK NOTES:

1. ALL HOLLOW-CORE PLANK ANCHORAGE AND CONNECTION DETAILS SHOWN ONLY TO CONVEY THE INTENT OF THE DESIGN. ALL ANGLES, PLATES, HEADERS, BOLTS, REINFORCING BARS, WELDS AND OTHER ITEMS TO BE EMBEDDED IN THE HOLLOW-CORE PLANKS FOR THE TRANSFER OF THE INDICATED LOADS SHALL BE LOCATED AND DESIGNED BY THE HOLLOW-CORE PLANK MANUFACTURER.
2. HOLLOW-CORE PLANK SUPERIMPOSED DESIGN LOADS: (ALL LOADS ARE SERVICE LEVEL)

MINIMUM LIVE LOAD	20 PSF
2" CONCRETE TOPPING (NON-STRUCTURAL)	25 PSF
ROOFING DEAD LOAD	27 PSF
COLLATERAL (HUNG) LOAD	10 PSF
HUNG PIPING LOAD	PIPE SUPPORT REACTION PROVIDED BY CONTRACTOR

3. DESIGN OF HOLLOW-CORE PLANKS FOR COMBINATIONS OF THESE LOADS SHALL BE THE RESPONSIBILITY OF THE HOLLOW-CORE PLANK MANUFACTURER.
4. THE HOLLOW-CORE PLANKS SHALL BE DESIGNED BY THE PRECAST MANUFACTURER TO ACT AS A DIAPHRAGM INDEPENDENT OF THE 2" CONCRETE TOPPING. THE LOADS USED FOR THE DESIGN OF THE PLANKS AND THEIR CONNECTIONS FOR DIAPHRAGM ACTION SHALL BE PER ROOF-DIAPHRAGM LOADING DIAGRAM.
5. THE HOLLOW-CORE PLANKS ADJACENT TO OPENINGS (IF ANY) SHALL BE DESIGNED TO SUPPORT ALL LOADS FROM THE INTERRUPTED PLANKS.
6. THE HOLLOW-CORE PLANKS MANUFACTURER SHALL COORDINATE LOCATION OF ALL EMBEDDED ITEMS AND OPENINGS WITH THE GENERAL AND SUB-CONTRACTORS PRIOR TO FABRICATION.
7. ALL ITEMS EMBEDDED IN HOLLOW-CORE PLANKS SHALL BE GALV AND SUPPLIED BY THE HOLLOW-CORE PLANKS MANUFACTURER.
8. ALL PRECAST ITEMS AND CONNECTIONS NOT SPECIFICALLY DETAILED SHALL BE PROVIDED BY THE HOLLOW-CORE PLANK MANUFACTURER AS REQUIRED.
9. ⟷ INDICATES SPAN DIRECTION OF HOLLOW-CORE PLANKS.
10. REFER TO SPECIFICATION SECTION 034113 FOR ADDITIONAL REQUIREMENTS FOR PRECAST PRESTRESSED HOLLOW-CORE PLANKS.

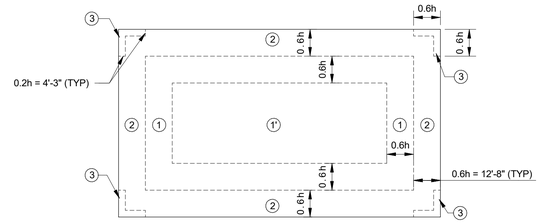


NOTE: DIAPHRAGM LOADS ARE DUE TO ULTIMATE WIND EFFECTS AND ARE REVERSIBLE

PLAN

ROOF DIAPHRAGM LOADING
NTS

WALL



ROOF

COMPONENT AND CLADDING WIND LOAD DIAGRAM
NTS

KEVIN M. FRANCOFORTE LICENSE NO. 73949 STATE OF FLORIDA PROFESSIONAL ENGINEER

DATE:
KEVIN M. FRANCOFORTE
PE NO. 73949

REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: A.G. KHALID
DRAWN BY: N. KRISHNA
SHEET CHK'D BY: S. SANKAR
CROSS CHK'D BY: T. VERWEY
APPROVED BY: K. FRANCOFORTE
DATE: DECEMBER 2020

CDM Smith
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Jacksonville, FL 32256
Tel: (904) 731-7109
FL COA No. EB-0000020

JACOBS
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EB0000072 AAC001992 LC26000188

JEA

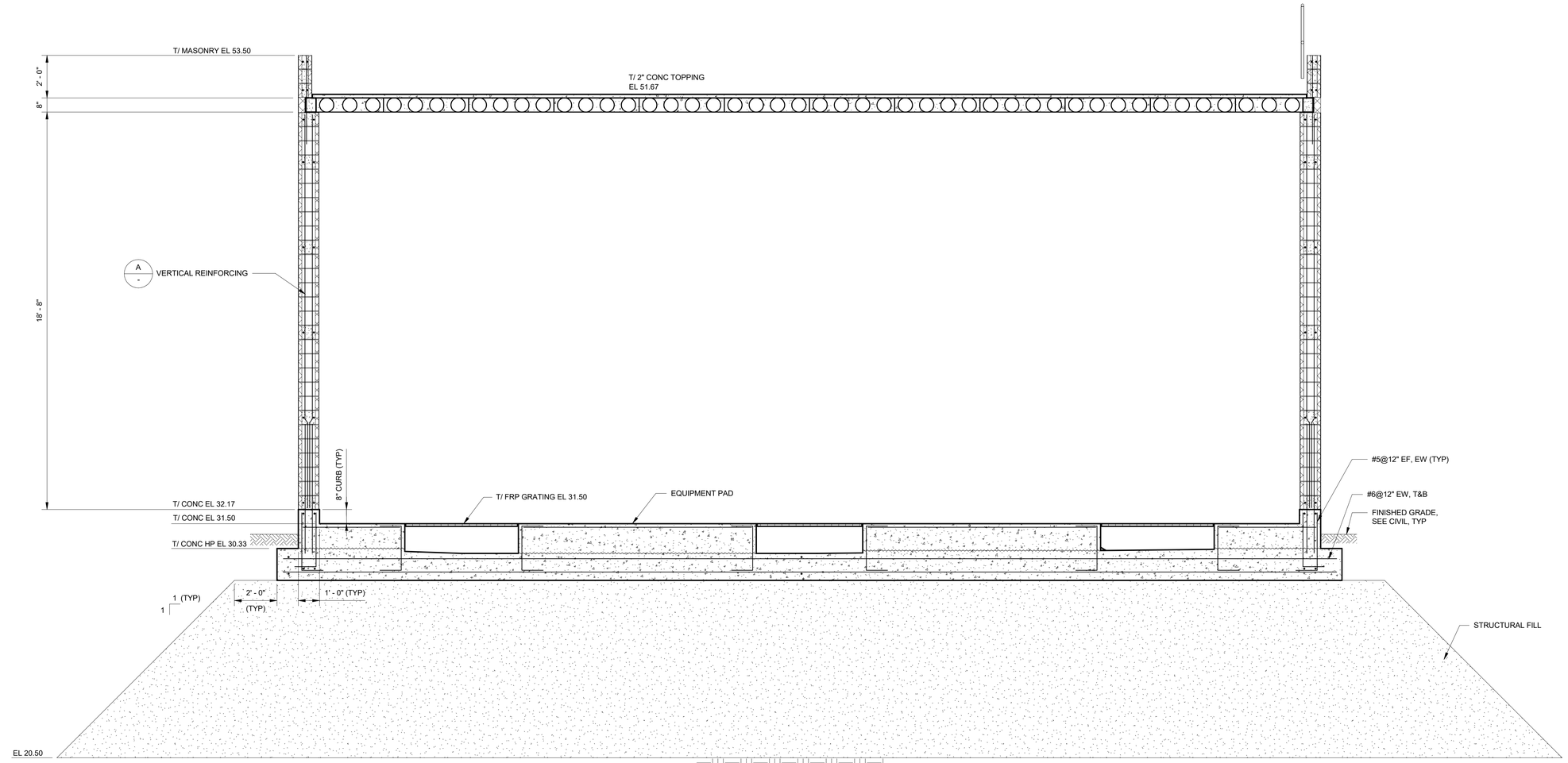
RIVERTOWN WATER TREATMENT PLANT PROJECT

CHEMICAL BUILDING
ROOF PLAN

PROJECT NO. 6103-237938
FILE NAME: SWZ000CB.rvt

SHEET NO.
S-6

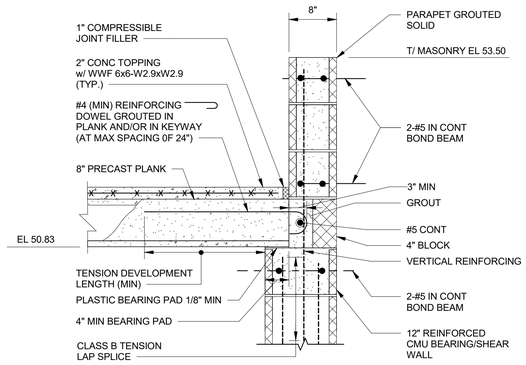
ISSUED FOR BID



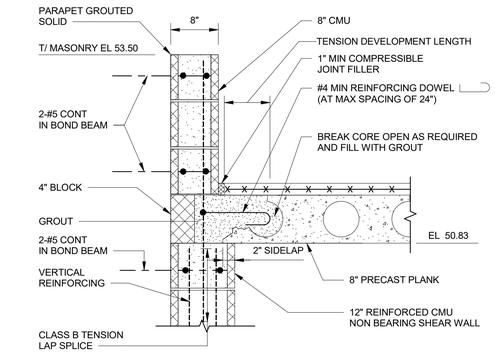
NOTES:

1. ALL UNSUITABLE SOILS CONSISTING OF ORGANIC SOILS, HIGHLY ORGANIC SOILS, AND CLAYS SHALL BE COMPLETELY REMOVED TO NATIVE SUBGRADE MATERIALS. ENGINEER SHALL CONFIRM ALL UNSUITABLE SOILS HAVE BEEN REMOVED PRIOR TO BACKFILLING BY THE CONTRACTOR.
2. COMPACT STRUCTURAL FILL TO 95% OF THE MODIFIED PROCTOR MAXIMUM DRY DENSITY PER ASTM D1557.

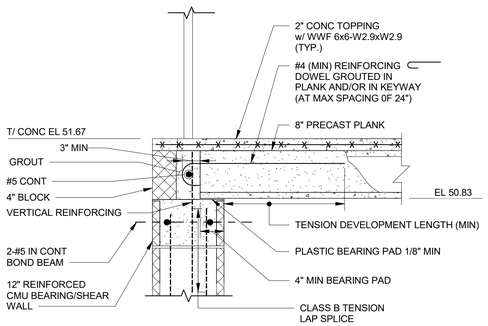
1 SECTION S-5 — 3/8" = 1'-0"



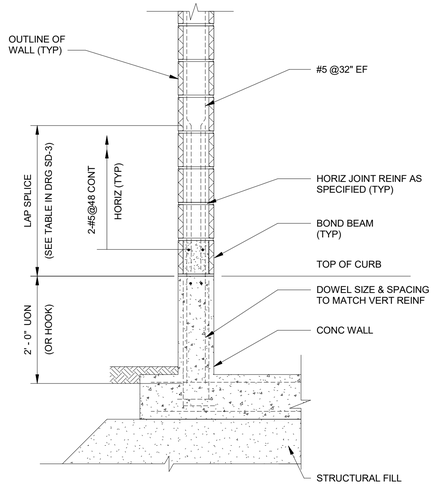
2 SECTION S-6 — 1" = 1'-0"



3 SECTION S-6 — 1" = 1'-0"



4 SECTION S-6 — 1" = 1'-0"



TYPICAL CMU WALL REINFORCING

A DETAIL — NTS

REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: A.G. KHALID
DRAWN BY: N. KRISHNA
SHEET CHK'D BY: S. SANKAR
CROSS CHK'D BY: T. VERWEY
APPROVED BY: K. FRANCOFORTE
DATE: DECEMBER 2020

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JEA

RIVERTOWN WATER TREATMENT PLANT PROJECT

CHEMICAL BUILDING SECTIONS AND DETAILS

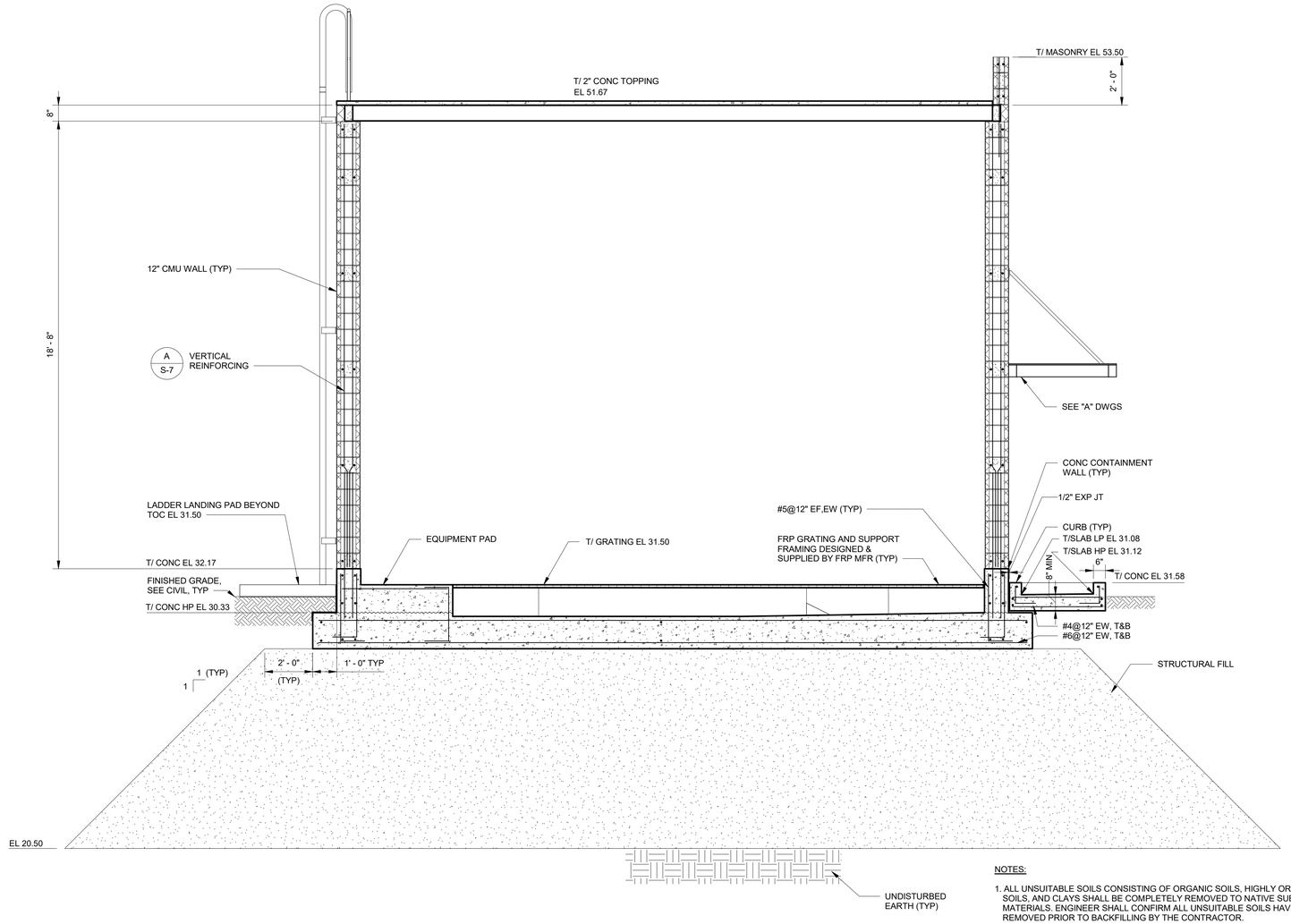
KEVIN M. FRANCOFORTE LICENSE NO. 73949 STATE OF FLORIDA PROFESSIONAL ENGINEER

DATE:
KEVIN M. FRANCOFORTE
PE NO. 73949

PROJECT NO. 6103-237938
FILE NAME: SWZ000CB.rvt

SHEET NO.
S-7

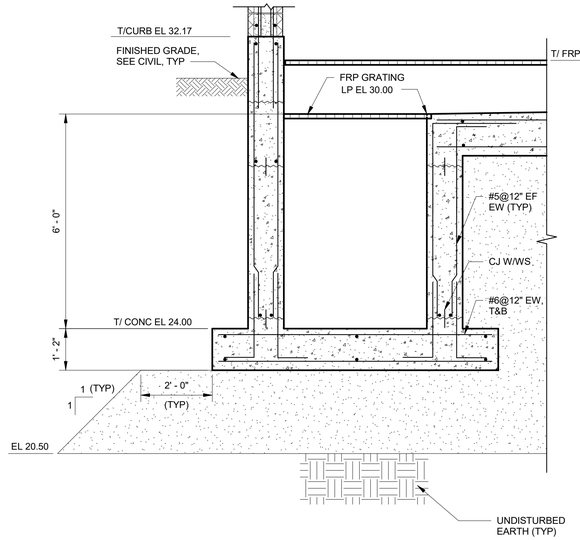
ISSUED FOR BID



1 SECTION S-5
3/8" = 1'-0"

NOTES:

1. ALL UNSUITABLE SOILS CONSISTING OF ORGANIC SOILS, HIGHLY ORGANIC SOILS, AND CLAYS SHALL BE COMPLETELY REMOVED TO NATIVE SUBGRADE MATERIALS. ENGINEER SHALL CONFIRM ALL UNSUITABLE SOILS HAVE BEEN REMOVED PRIOR TO BACKFILLING BY THE CONTRACTOR.
2. COMPACT STRUCTURAL FILL TO 95% OF THE MODIFIED PROCTOR MAXIMUM DRY DENSITY PER ASTM D1557.



2 SECTION S-5
1/2" = 1'-0"

KEVIN M. FRANCOFORTE
LICENSE
NO. 73949
STATE OF
FLORIDA
PROFESSIONAL ENGINEER

DATE:
KEVIN M. FRANCOFORTE
PE NO. 73949

REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: A.G. KHALID
DRAWN BY: A.G. KHALID
SHEET CHK'D BY: S. SANKAR
CROSS CHK'D BY: T. VERWEY
APPROVED BY: K. FRANCOFORTE
DATE: DECEMBER 2020

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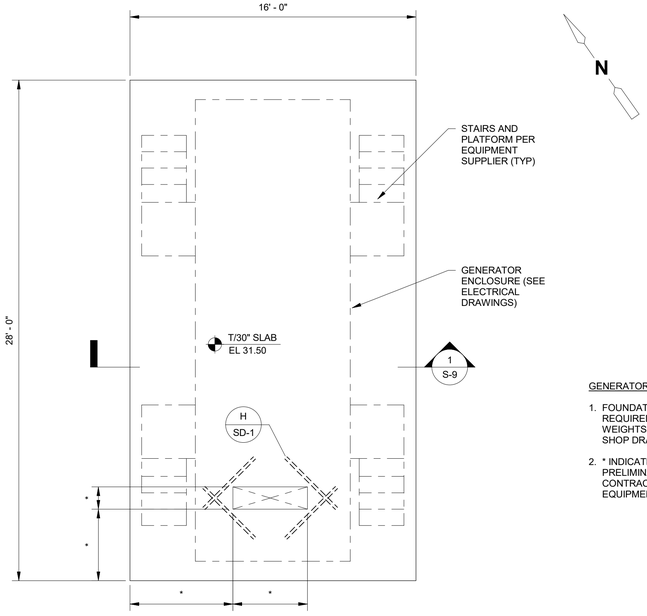
JEA

RIVERTOWN WATER TREATMENT PLANT PROJECT

CHEMICAL BUILDING
SECTIONS II

PROJECT NO. 6103-237938
FILE NAME: SWZ000CB.rvt
SHEET NO.
S-8

ISSUED FOR BID



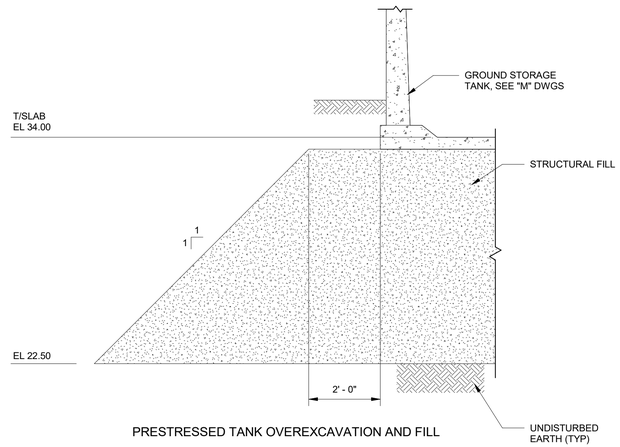
GENERATOR PAD

1/4" = 1'-0"

N

GENERATOR NOTES:

1. FOUNDATION SHOWN IS PRELIMINARY AND MINIMUM REQUIRED. FINAL DESIGN SHALL BE DEPENDENT ON FINAL WEIGHTS AND DIMENSIONS PER FINAL APPROVED EQUIPMENT SHOP DRAWINGS.
2. * INDICATED DIMENSIONS AND/OR INFORMATION IS PRELIMINARY AND IS TO BE COORDINATED BY THE CONTRACTOR WITH THE MANUFACTURER OF THE APPROVED EQUIPMENT PRIOR TO FABRICATION AND CONSTRUCTION.



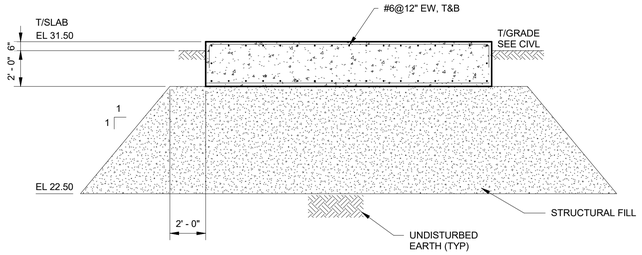
PRESTRESSED TANK OVEREXCAVATION AND FILL

A DETAIL

1/2" = 1'-0"

GEOTECHNICAL NOTES:

1. ALL UNSUITABLE SOILS CONSISTING OF ORGANIC SOILS, HIGHLY ORGANIC SOILS, AND CLAYS SHALL BE COMPLETELY REMOVED TO NATIVE SUBGRADE MATERIALS. ENGINEER SHALL CONFIRM ALL UNSUITABLE SOILS HAVE BEEN REMOVED PRIOR TO BACKFILLING BY THE CONTRACTOR.
2. COMPACT STRUCTURAL FILL TO 95% OF THE MODIFIED PROCTOR MAXIMUM DRY DENSITY PER ASTM D1557.



1 SECTION

1/4" = 1'-0"

KEVIN M. FRANCOFORTE LICENSE NO. 73949 STATE OF FLORIDA PROFESSIONAL ENGINEER

DATE:
KEVIN M. FRANCOFORTE
PE NO. 73949

REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: M. TRAPP
DRAWN BY: M. TRAPP
SHEET CHK'D BY: K. FRANCOFORTE
CROSS CHK'D BY: T. VERWEY
APPROVED BY: K. FRANCOFORTE
DATE: DECEMBER 2020

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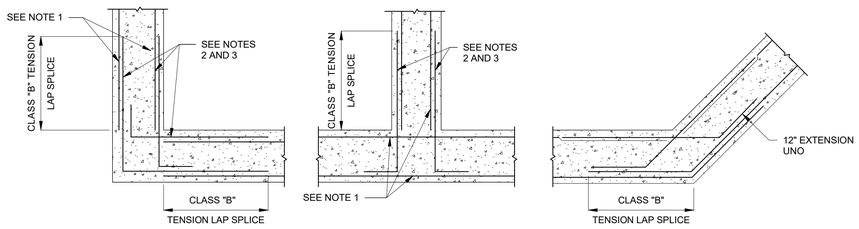
RIVERTOWN WATER TREATMENT PLANT PROJECT

MISCELLANEOUS PAD
SECTIONS AND DETAILS

PROJECT NO. 6103-237938
FILE NAME: SWZ000GP.RVT

SHEET NO.
S-9

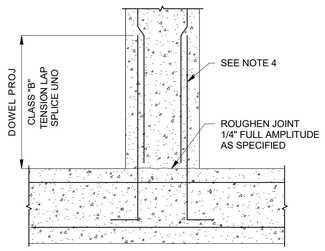
ISSUED FOR BID



CORNER | INTERSECTION | SKEWED CORNER

WALL CORNER AND INTERSECTION REINFORCEMENT

A DETAIL NTS

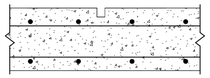


WALL BASE CONSTRUCTION JOINT

B DETAIL NTS

NOTES:

1. SAWCUT WIDTH 1/8" MIN - 1/4" MAX.
2. SAWCUT DEPTH 1" MIN - 1-1/2" MAX.
3. FILL JOINT TO FULL DEPTH WITH SELF-LEVELING SEALANT. USE BACKER ROD OR BOND BREAKER TAPE PER MANUFACTURER.

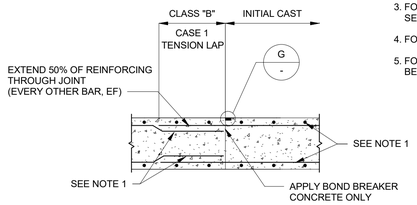


CONTROL JOINT

C DETAIL NTS

STANDARD DETAIL NOTES:

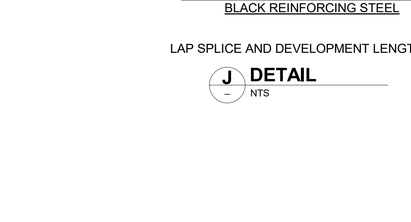
1. BASIC SLAB/WALL/BEAM REINFORCEMENT AS SHOWN ON DESIGN DRAWINGS.
2. SIZE AND SPACING OF BAR TO MATCH WALL/BEAM REINFORCEMENT AS SHOWN ON DESIGN DRAWINGS.
3. FOR ADDITIONAL BARS AT CORNERS AND INTERSECTIONS, SEE DESIGN DRAWINGS.
4. FOR DOWEL SIZE AND SPACING, SEE DESIGN DRAWINGS.
5. FOR WALLS, TERMINATE WATERSTOP AND KEYWAY 8" BELOW TOP OF WALL.



NOTE: SECOND POUR SHALL BE 24 HOURS AFTER INITIAL POUR.

SLAB PARTIAL CONTRACTION JOINT

D DETAIL NTS



NOTE: SECOND POUR SHALL BE 24 HOURS AFTER INITIAL POUR.

CONSTRUCTION JOINT

E DETAIL NTS

BAR SIZE	LAP LENGTH
#5	3'-0"
#6	3'-8"
#7	4'-6"
#8	6'-0"
#9	7'-6"

CORNER REINFORCING | INTERSECTION REINFORCING

BEAM/GRADE BEAM REINFORCING

F DETAIL NTS

PARTIAL CONTRACTION JOINT SEALANT

G DETAIL NTS

NOTES:

1. DETAIL IS TYPICAL FOR ALL OPENINGS 12" AND GREATER IN CONCRETE WALLS AND SLABS UNLESS OTHERWISE NOTED. SPREAD REINFORCING AT SMALLER OPENINGS.
2. BARS ARE NOT REQUIRED AT AN OPENING EDGE PARALLEL TO AND WITHIN 6 INCHES OF A WALL OR BEAM.
3. C = CLASS "B" CASE 1 TENSION LAP.
4. REINFORCING STEEL IS TO BE CARRIED ACROSS ALL CONSTRUCTION JOINTS.
5. WHERE OPENING IS WITHIN 4'-0" OF BASE SLAB, PROVIDE MATCHING DOWELS FOR ADDITIONAL BARS.

REINFORCING AT OPENINGS

H DETAIL NTS

CLASS B TENSION LAP SPLICE LENGTHS IN WALLS AND SLABS(INCHES)

BAR SIZE	BLACK STEEL f'c=4500 psi	
	TOP BARS	OTHER BARS
3	16	16
4	20	16
5	29	23
6	40	31
7	65	50
7*	43	33
8	81	62
8 *	49	37
9 *	60	46
10 *	74	57

TENSION DEVELOPMENT LENGTHS IN WALLS AND SLABS(INCHES)

BAR SIZE	BLACK STEEL f'c=4500 psi	
	TOP BARS	OTHER BARS
3	12	12
4	15	12
5	23	17
6	31	24
7	50	38
7*	33	25
8	62	48
8 *	37	29
9 *	46	36
10 *	57	44

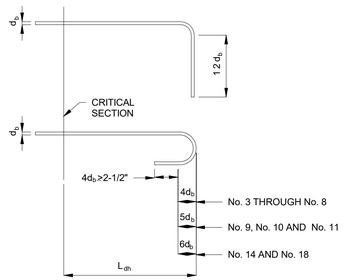
NOTES:

1. MINIMUM BAR SPACING = 6" ON CENTER.
2. MINIMUM CONCRETE COVER = 1", EXCEPT AS NOTED BY *.
   * INDICATES MINIMUM CONCRETE COVER = 2"
3. A TOP BAR IS A HORIZONTAL BAR WHERE MORE THAN 12" OF FRESH CONCRETE IS CAST DIRECTLY BELOW THE BAR. WHERE HORIZONTAL WALL REINFORCEMENT IS UNIFORMLY SPACED IN A VERTICAL PLANE AT 12" MAXIMUM SPACING, LENGTHS MAY BE AS FOR "OTHER BARS."
4. LENGTHS FOR BEAMS AND COLUMNS SHALL BE AS SHOWN ON THE DRAWINGS.

LAP SPLICE AND DEVELOPMENT LENGTHS
BLACK REINFORCING STEEL

LAP SPLICE AND DEVELOPMENT LENGTHS

J DETAIL NTS



HOOKED BAR DETAILS FOR DEVELOPMENT OF STANDARD HOOKS

REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: M. TRAPP
DRAWN BY: M. TRAPP
SHEET CHK'D BY: K. FRANCOFORTE
CROSS CHK'D BY: T. VERWEY
APPROVED BY: K. FRANCOFORTE
DATE: DECEMBER 2020

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JEA

RIVERTOWN WATER TREATMENT PLANT PROJECT

STANDARD CONCRETE DETAILS I

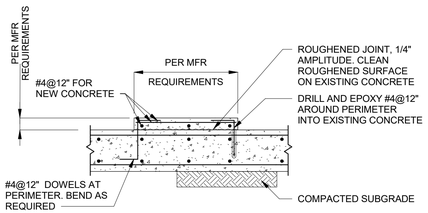
PROJECT NO. 6103-237938
FILE NAME: SD01STDT.RVT

SHEET NO.
SD-1

KEVIN M. FRANCOFORTE LICENSE NO. 73949 STATE OF FLORIDA PROFESSIONAL ENGINEER

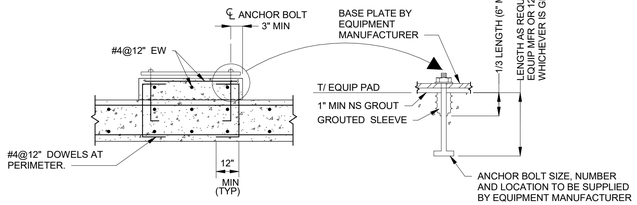
DATE:
KEVIN M. FRANCOFORTE
PE NO. 73949

ISSUED FOR BID



HOUSEKEEPING PAD FOR NEW OR EXISTING SLAB

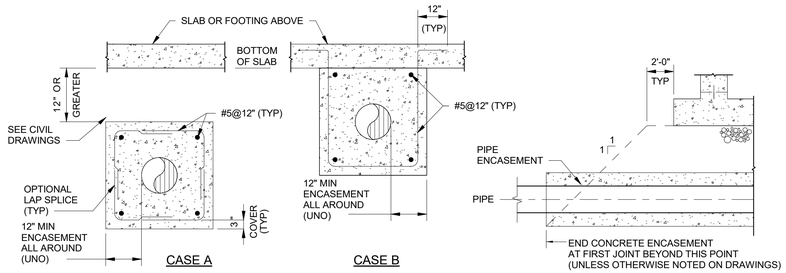
A DETAIL
NTS



NOTE: DIMENSIONS OF PAD AS REQUIRED TO SUIT EQUIPMENT (4" MIN HEIGHT UNLESS PAD IS CAST INTEGRALLY WITH SLAB)

EQUIPMENT PAD

B DETAIL
NTS

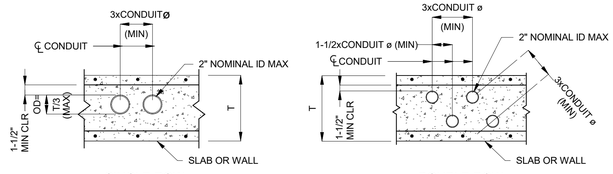


CONCRETE PIPE ENCASEMENT

C DETAIL
NTS

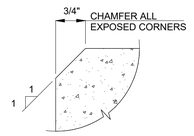
PIPE ENCASEMENT NOTES:

1. MINIMUM ENCASEMENT:
   PIPES LESS THAN 12" ø - 6"
   PIPES 12" ø AND GREATER - 12"
2. ALL PIPE SHALL BE PRESSURE TESTED BEFORE CONCRETE PLACEMENT.
3. ALL BELOW GRADE PIPES SHALL BE SUPPORTED ON CONCRETE BLOCKS PRIOR TO CASTING OF CONCRETE BEDDING. SIZE AND SPACING OF CONCRETE BLOCK SUPPORTS SHALL BE PER PIPE MANUFACTURER.
4. FOR ALL PIPES 12"ø AND LARGER, ENCASEMENT SHALL BE CAST IN TWO POURS. INITIAL CAST SHALL BE CURED FOR 12 HOURS BEFORE CASTING THE SECOND POUR.
5. THE DEPTH OF THE INITIAL POUR SHALL BE SELECTED TO PREVENT FLOTATION OF THE PIPE. CONTRACTOR SHALL TAKE ALL NECESSARY MEASURES TO PREVENT FLOTATION OF THE PIPE DURING CONCRETING.
6. ENCASE ALL PIPES BELOW SLABS AND FOOTINGS. EXTEND ENCASEMENT AS SHOWN IN DETAIL,MINIMUM 5'-0" BEYOND EDGE OF SLAB OR FOOTING AND EXTEND TO FIRST PIPE JOINT.
7. MAINTAIN MINIMUM COVER FOR LAPS FOR PIPES SMALLER THAN 6"ø.
8. FOR CASE "A", PROVIDE A PARTIAL CONTRACTION JOINT AT EACH PIPE JOINT. MAXIMUM SPACING BETWEEN PARTIAL CONTRACTION JOINTS 24'-0".
9. FOR CASE "B", PROVIDE A JOINT IN THE PIPE AT EACH JOINT IN STRUCTURE. PROVIDE CONSTRUCTION JOINTS IN ENCASEMENT AT LOCATIONS OF CONSTRUCTION JOINTS IN STRUCTURE. PROVIDE PARTIAL CONTRACTION JOINTS IN ENCASEMENT AT LOCATIONS OF CONTROL JOINTS AND EXPANSION JOINTS IN STRUCTURE.
10. PIPE ENCASEMENTS FOR PILE/PIER SUPPORTED STRUCTURES SHALL BE TIED TO PILE CAP SLAB PER CASE B.



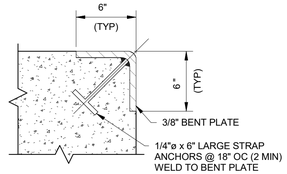
EMBEDDED CONDUIT SPACING

D DETAIL
NTS



CHAMFER

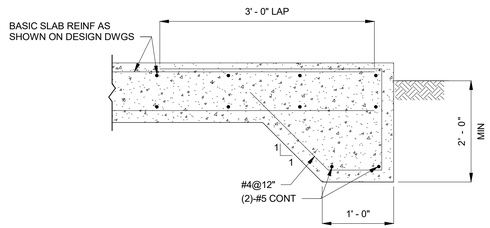
E DETAIL
NTS



NOTE: ALL ALUMINUM CONSTRUCTION

SLAB NOSING AT OVERHEAD DOOR

F DETAIL
NTS



THICKENED EDGE SLAB

G DETAIL
NTS

CONDUIT NOTES:

1. NO CONDUIT SHALL BE EMBEDDED IN STRUCTURAL BEAMS, COLUMNS, WALLS OR SLABS UNLESS SPECIFICALLY SHOWN ON THE STRUCTURAL DRAWING.
2. CONDUIT SHALL BE PLACED 6" BELOW SLAB.
3. WHERE CONDUIT MUST PASS THROUGH A SLAB OR WALL, MINIMUM SIZE AND SPACING REQUIREMENT PER ACI 318-SECTION 20.7 AND THIS DETAIL.
4. ALUMINUM SHALL NOT BE EMBEDDED IN CONCRETE UNLESS COATED TO PREVENT ALUMINUM-CONCRETE REACTION.

REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: M. TRAPP
DRAWN BY: M. TRAPP
SHEET CHK'D BY: K. FRANCOFORTE
CROSS CHK'D BY: T. VERWEY
APPROVED BY: K. FRANCOFORTE
DATE: DECEMBER 2020

CDM Smith
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Jacksonville, FL 32256
Tel: (904) 731-7109
FL COA No. EB-0000020

JACOBS
245 RIVERSIDE AVE, SUITE 300
JACKSONVILLE, FLORIDA 32202
EB0000072 AAC001992 LC26000188

JEA

RIVERTOWN WATER TREATMENT PLANT PROJECT

STANDARD CONCRETE DETAILS II

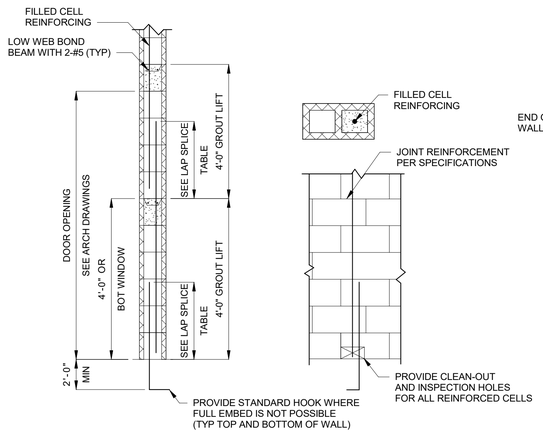
PROJECT NO. 6103-237938
FILE NAME: SD02STDT.RVT

SHEET NO.
SD-2

ISSUED FOR BID

KEVIN M. FRANCOFORTE LICENSE NO. 73949 STATE OF FLORIDA PROFESSIONAL ENGINEER

DATE:
KEVIN M. FRANCOFORTE
PE NO. 73949

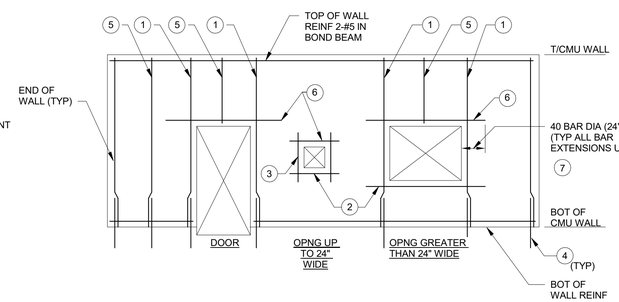


NOTES:

1. FILLED CELL REINFORCEMENT: 1-#5 @ 2'-8" OC, MAX FOR 12" CMU AND 1-#5 @ 3'-4" FOR 8" CMU WALL UNLESS OTHERWISE NOTED ON DESIGN DRAWINGS.
2. BOND BEAM REINFORCEMENT: 2-#5 @ 4'-0" OC MAX UNLESS OTHERWISE NOTED ON DESIGN DRAWINGS.

FILLED CELL

A DETAIL
NTS

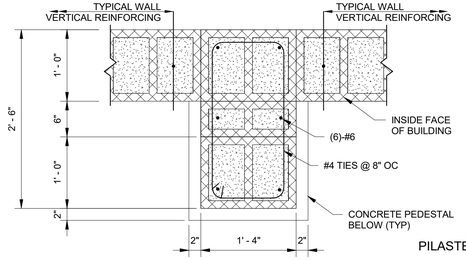


TYPICAL CMU WALL ELEVATION

B DETAIL
NTS

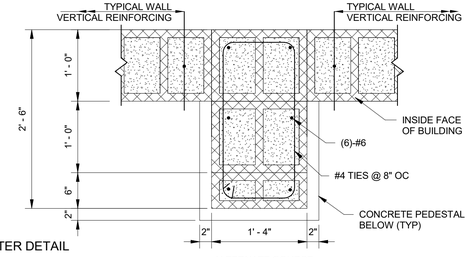
LEGEND

1. SEE TYPICAL CMU WALL OPENING DETAIL ON THIS SHEET.
2. SILL BARS, 2-#5 IN BOND BEAM.
3. 2-#5 EACH SIDE.
4. SEE TYPICAL CMU WALL CORNER AND END WALL DETAIL ON THIS SHEET.
5. BETWEEN BARS SHOWN, PROVIDE TYPICAL WALL REINFORCING PER DESIGN DRAWINGS.
6. SEE LINTEL REINFORCING SCHEDULE ON THIS SHEET AND THE ARCHITECTURAL DRAWINGS.
7. IF FULL LENGTH IS NOT AVAILABLE, EXTEND AS FAR AS POSSIBLE, HOOK 90 DEGREE, THEN EXTEND BEYOND BEND REMAINDER OF LENGTH REQUIRED (BUT NOT LESS THAN 12").

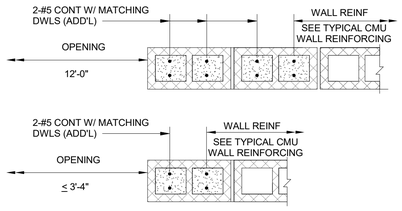


PILASTER DETAIL

C DETAIL
NTS



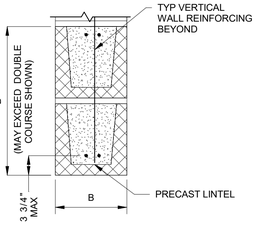
ALTERNATE COURSE



12" CMU EXTERIOR WALL

TYPICAL CMU WALL OPENING

D DETAIL
NTS



LINTEL LOCATION	TYPE[5]	CLEAR SPAN	B	D
HSPS	12F8-2B	TO 6'-8"	12"	8"
HSPS	12F8-2B	6'-9" TO 12'-0"	12"	16"
CHEMICAL BLDG	12F8-2B	TO 3'-4"	12"	8"
CHEMICAL BLDG	12F32-2B/4T	12'-0"	12"	32"

* PROVIDE 180° HOOK AT ENDS OF BARS

CMU LINTEL NOTES:

1. PROVIDE 8" MINIMUM BEARING AT EACH SIDE OF CLEAR SPAN UNLESS OTHERWISE SHOWN ON DESIGN DRAWINGS. PROVIDE 40 BAR ø (24" MIN) BAR EXTENSION PAST EACH SIDE OF OPENING.
2. PROVIDE REINFORCING AS INDICATED AT ALL OPENINGS.
3. REINFORCING TYPICAL UNLESS OTHERWISE NOTED.
4. LOCATIONS ARE FOR EXTERIOR LINTELS UNO.
5. LINTELS SHALL BE PRECAST/PRESTRESSED CONCRETE BY CAST-CRETE OR APPROVED EQUAL.

PRECAST LINTEL SCHEDULE

E DETAIL
NTS

BAR SIZE	CMU LAP SPLICE LENGTH (INCHES) PER TMS 402	
	12" BLOCK	
	CENTER	EF
4	12	26
5	14	40
6	26	74
7	35	101
8	52	152

NOTES:

1. SEE DRAWINGS OR CONTACT ENGINEER FOR LAP SPLICE LENGTHS NOT SHOWN.

MASONRY LAP SPLICE SCHEDULE

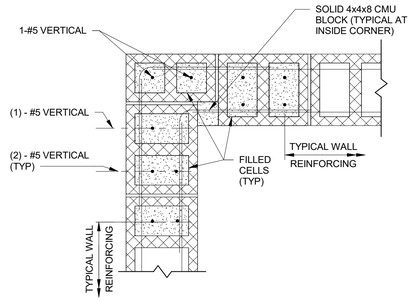
F DETAIL
NTS

CONTROL JOINT NOTES:

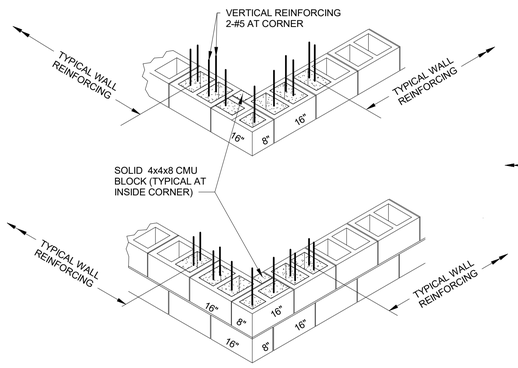
1. TERMINATE HORIZ REINFORCING W/ A STANDARD HOOK TWO INCHES FROM CONTROL JOINTS, UON.
2. PROVIDE SMOOTH DOWELS IDENTICAL TO HORIZONTAL BAR DIA ACROSS THE JOINT AT HORIZONTAL BAR LOCATIONS. PREVENT BOND BETWEEN BAR AND GROUT ON ONE SIDE OF JOINT WITH GREASE OR A PLASTIC SLEEVE. CAP ALL DOWELS TO ALLOW ONE INCH OF MOVEMENT.
3. PROVIDE STD HOOK ON SIDE WITH BOND IF 2'-0" LENGTH IS NOT POSSIBLE.
4. CONTINUE HORIZ REINF THROUGH MCJ @ ABOVE AND BELOW PLANK BEARING, T.O.W. BOND BEAMS AND LINTEL REINF.
5. DISCONTINUE HORIZONTAL JOINT REINFORCEMENT AT THE MCJ.
6. SEE ARCHITECTURAL DWGS FOR LOCATIONS.

MASONRY CONTROL JOINT (MCJ)

G DETAIL
NTS

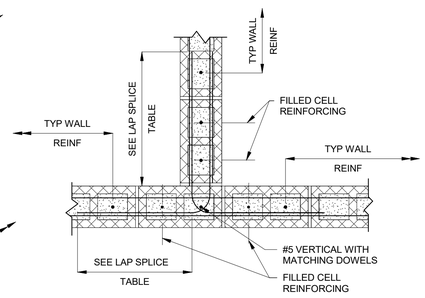


NOTE:
1. REINFORCEMENT AS DENOTED UNLESS OTHERWISE NOTED ON DESIGN DRAWINGS.



12" CORNER CMU/BOND BEAM/FILLED CELL

H DETAIL
NTS



12" CMU WALL INTERSECTION

I DETAIL
NTS

REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: A.G. KHALID
DRAWN BY: A.G. KHALID
SHEET CHK'D BY: K. FRANCOFORTE
CROSS CHK'D BY: T. VERWEY
APPROVED BY: K. FRANCOFORTE
DATE: DECEMBER 2020

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EB0000072 AAC001992 LC26000188

JEA

RIVERTOWN WATER TREATMENT PLANT PROJECT

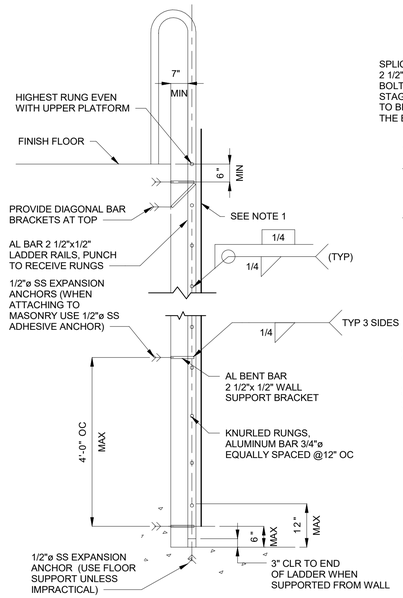
STANDARD MASONRY DETAILS

DATE:
KEVIN M. FRANCOFORTE
PE NO. 73949

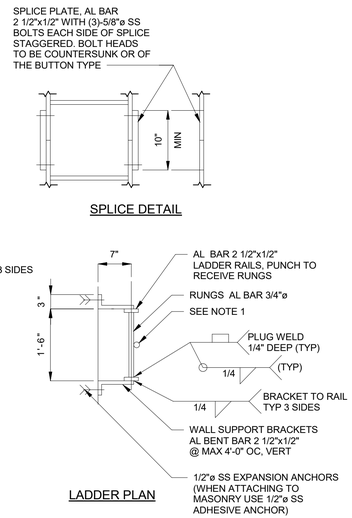
PROJECT NO. 6103-237938
FILE NAME: S00500DT.RVT

SHEET NO.
SD-3

ISSUED FOR BID



LADDER PLAN



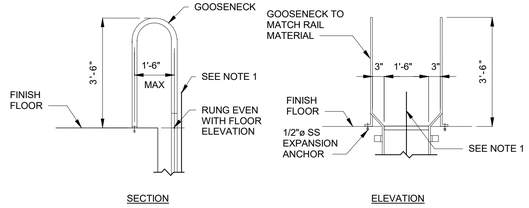
SPLICE DETAIL

NOTE:

1. PROVIDE LADDER SAFETY SYSTEM AT EACH LADDER MORE THAN 20'-0" IN HEIGHT.

ALUMINUM LADDER

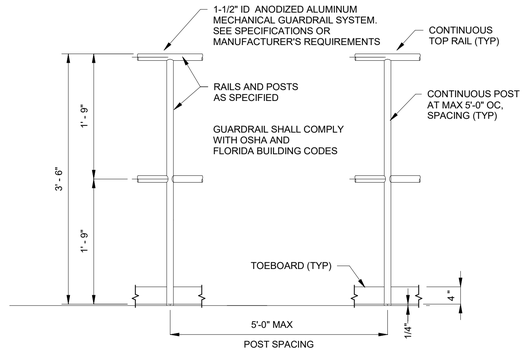
A DETAIL
NTS



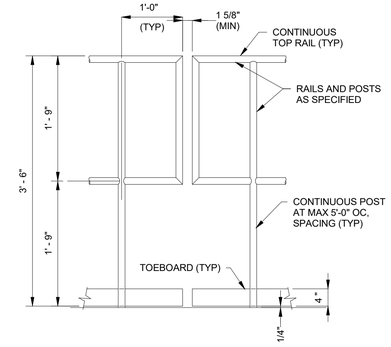
GOOSENECK

GUARDRAIL/HANDRAIL NOTES:

1. ALUMINUM EMBEDDED IN CONCRETE SHALL BE PAINTED WITH ONE SHOP COAT OF HEAVY BITUMASTIC.
2. ALUMINUM SHAPES IN CONTACT WITH CONCRETE SHALL BE SEPARATED BY A 1/32" NEOPRENE GASKET OR ANY CASE WHERE TWO DIFFERENT METALS ARE TO BE IN CONTACT, A NEOPRENE GASKET SHALL BE PROVIDED.
3. HANDRAILS, GUARDRAILS, POSTS, BRACKETS AND MOUNTING SHALL MEET THE FLORIDA BUILDING CODE AND OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) LOADING REQUIREMENTS.
4. TOP OF ALL GUARDRAILS SHALL BE 42" HIGH ABOVE THE FINISH FLOOR OR WALKWAY. THE CLEAR DISTANCE BETWEEN THE TOP AND INTERMEDIATE RAILS MEASURED AT RIGHT ANGLES TO THE RAILS SHALL NOT EXCEED 21".
5. CONNECT RAILING SYSTEM TO CONCRETE STRUCTURE WITH 1/2" 316 SS ADHESIVE ANCHORS USING HILTI HIT HY-200 ADHESIVE WITH 6" MINIMUM EMBEDMENT.



AT HORIZONTAL SURFACE

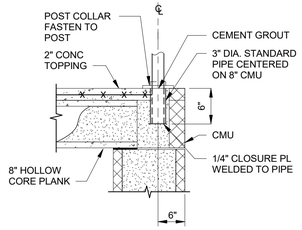


END POST

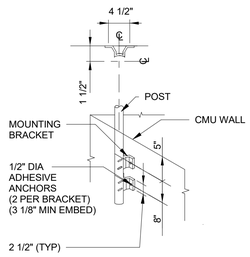
NOTE:
TOEBOARD SHALL BE PROVIDED UNLESS SPECIFICALLY NOTED OTHERWISE ON PLANS OR IN SPECIFICATIONS. TOEBOARD NOT REQUIRED WHEN CONCRETE CURBS 4" OR HIGHER ARE PROVIDED.

GUARDRAIL

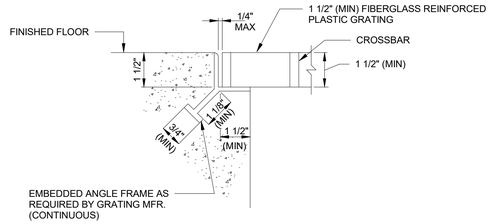
B DETAIL
NTS



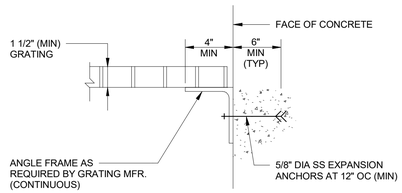
GUARDRAIL BASE ON CMU



SIDE MOUNTED GUARDRAIL



SEAT DETAIL



AT WALL SUPPORT

NOTES:

1. FIBERGLASS REINFORCED PLASTIC (FRP) GRATING SHALL BE PROVIDED AT LOCATIONS INDICATED ON THE DRAWINGS.
2. ANGLE FRAMES FOR FRP GRATING SHALL BE TYPE 316 STAINLESS STEEL OR FRP WITH STAINLESS STEEL FASTENERS.
3. FRP GRATING, CONNECTIONS AND APPURTENANCES SHALL BE DESIGNED BY THE GRATING MANUFACTURER AS SPECIFIED.

GUARDRAIL DETAILS

C DETAIL
NTS

FRP GRATING - DETAILS

D DETAIL
NTS

REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: A.G. KHALID
DRAWN BY: A.G. KHALID
SHEET CHK'D BY: S. SANKAR
CROSS CHK'D BY: T. VERWEY
APPROVED BY: K. FRANCOFORTE
DATE: DECEMBER 2020

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FL COA No. EB-0000020

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JACKSONVILLE, FLORIDA 32202
EB0000072 AAC001992 LC26000188

JEA

RIVERTOWN WATER TREATMENT PLANT PROJECT

STANDARD MISCELLANEOUS METAL AND FRP DETAILS

PROJECT NO. 6103-237938
FILE NAME: SD04STDT.RVT

SHEET NO.
SD-4

KEVIN M. FRANCOFORTE LICENSE NO. 73949 STATE OF FLORIDA PROFESSIONAL ENGINEER

DATE:
KEVIN M. FRANCOFORTE
PE NO. 73949

ISSUED FOR BID

PROCESS PIPE IDENTIFICATION

PROCESS FLOW STREAMS

CA	PLANT AIR (COMPRESSED)
CCW	CHEMICAL CARRIER WATER
D	DRAIN
DF	DIESEL FUEL
EX	EXHAUST
FILL	CHEMICAL FILL LINE
FINW	FINISHED WATER (POST STORAGE TANK
LPA	LOW PRESSURE AIR (FROM BLOWERS)
OG	OFF GAS
PW	PROTECTED WATER
RW	RAW WATER
SAN	SANITARY SEWER
SHC	SODIUM HYPOCHLORITE
SPL	SAMPLE LINE
SUC	SUCTION
TKD	TANK DRAIN
V	VENT

PIPE MATERIALS

CI	CAST IRON
STL	STEEL
CU	COPPER
CPVC	CHLORINATED POLYVINYL CHLORIDE
DI	DUCTILE IRON
FRP	FIBERGLASS REINFORCED PLASTIC
GS	GALVANIZED STEEL
HDPE	HIGH DENSITY POLYETHYLENE
IMFO	INTEGRALLY MOLDED FLANGED OUTLET
PCCP	PRESTRESSED CONCRETE CYLINDER PIPE
PVC	POLYVINYL CHLORIDE PRESSURE PIPE
POLYP	POLYPROPYLENE
RUB	RUBBER
SST	STAINLESS STEEL

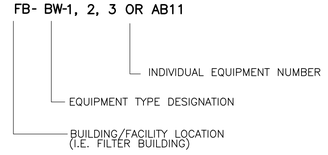
PIPE JOINTS

FLG	– FLANGE
PE	– PLAIN END
MJ	– MECHANICAL JOINT
HFAC	– HARNESSED FLANGE ADAPTER COUPLING

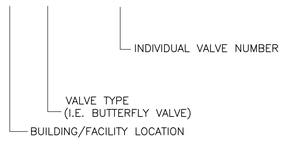
VALVES

BV	– BALL VALVE
GV	– GATE VALVE
CV	– CHECK VALVE
BFV	– BUTTERFLY VALVE
ARV	– AIR RELEASE VALVE
GLV	– GLOBE VALVE
SV	– SOLENOID VALVE
PRV	– PRESSURE REGULATING VALVE

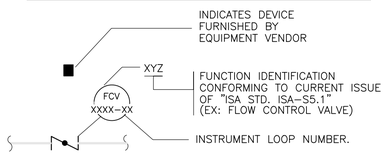
EQUIPMENT TAG



VALVE TAG



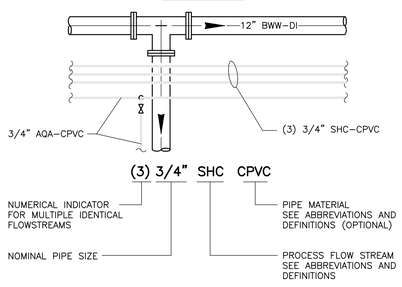
PROCESS VALVE LOOP IDENTIFICATION



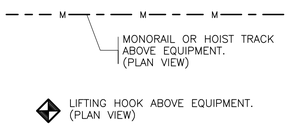
MECHANICAL DRAWINGS SHOW ONLY PRIMARY INSTRUMENT ELEMENTS. FOR ADDITIONAL DETAILS REFER TO INSTRUMENTATION SPECIFICATIONS.

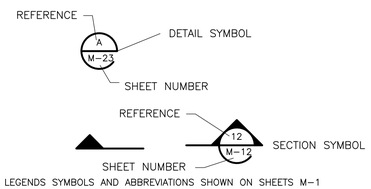
TYPICAL INSTRUMENTATION AND LOOP TAG

PIPE TAG



MISCELLANEOUS SYMBOLS

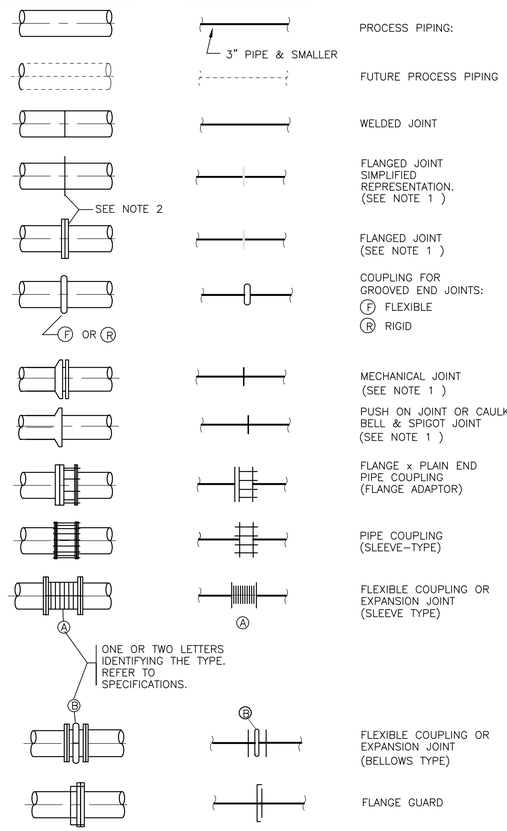




LEGENDS SYMBOLS AND ABBREVIATIONS SHOWN ON SHEETS M–1 INDICATE STANDARD SYMBOLS AND ABBREVIATIONS AND ARE PERTINENT TO THE CONDITIONS ON THIS SET OF DRAWINGS TO THE EXTENT APPLICABLE.

ADDITIONAL LEGENDS AND/OR ABBREVIATIONS MAY APPEAR IN THIS SET OF DRAWINGS TO INDICATE SPECIFIC CONDITIONS.

PIPE AND FITTING SYMBOLS



PIPE AND FITTING SYMBOLS NOTES:

1. GENERIC JOINT SYMBOL IS USED FOR ALL SINGLE LINE PIPING SHOWN ON THE INTERIOR AND EXTERIOR PIPING DRAWINGS.
2. BOTH, DETAILED AND SIMPLIFIED FLANGE REPRESENTATION SYMBOLS MAY BE SHOWN ON THE DRAWINGS.
3. UNLESS MODIFIED BY THE GENERAL PROJECT NOTES OR DETAILED ON THE LAYOUT AND SCHEMATIC DRAWINGS PIPE AND FITTING JOINT REQUIREMENTS FOR THE VARIOUS PIPE MATERIALS ARE DEFINED IN THE SPECIFICATIONS AND ARE INDICATED ON THE PROCESS PIPE SCHEDULES.

GENERAL NOTES

1. PROCESS EQUIPMENT DIMENSIONS, LOCATIONS AND PIPING SYSTEM LAYOUTS ARE 1. BASED ON EQUIPMENT SELECTED AND SPECIFIED BY THE DESIGN ENGINEER IF THE CONTRACTOR PROPOSES TO FURNISH EQUIPMENT THAT REQUIRES AN ARRANGEMENT OR SPACE DIFFERING FROM THAT INDICATED ON THE DRAWINGS OR SPECIFIED, THE CONTRACTOR SHALL PREPARE AND SUBMIT TO THE ENGINEER AND OWNER FOR APPROVAL DETAILED STRUCTURAL, MECHANICAL, PLUMBING, INSTRUMENTATION, AND ELECTRICAL DRAWINGS AND EQUIPMENT LISTS SHOWING ALL NECESSARY CHANGES AND EMBODYING ALL FEATURES OF THE EQUIPMENT AND/OR THIS INFORMATION SHALL INCLUDE BUT NOT BE LIMITED TO PROCESS SYSTEM PROPOSED. PLANS, SECTIONS, DETAILS AND SCHEMATICS OF ALL APPURTENANCES REQUIRED.
2. SIZES OF EQUIPMENT FOUNDATIONS AND EQUIPMENT PADS INDICATED ON THE DRAWINGS ARE APPROXIMATE. EXACT DIMENSIONS SHALL BE DETERMINED BY THE CONTRACTOR FOR THE EQUIPMENT FURNISHED. ALL FLOOR MOUNTED EQUIPMENT SHALL BE SET ON CONCRETE PADS CONFORMING TO DETAILS SHOWN ON THE STRUCTURAL AND/OR MECHANICAL DRAWINGS.
3. CONTRACTOR SHALL COORDINATE EXACT LOCATION AND LENGTHS REQUIRED FOR ALL PIPING CONNECTIONS WITH THE EQUIPMENT SUPPLIERS.
4. EXTERIOR PIPING IS SHOWN ON THE CIVIL DRAWINGS.
5. WATER SUPPLY CONNECTIONS TO PROCESS EQUIPMENT AND PROCESS PIPES ARE SHOWN ON THE MECHANICAL DRAWINGS. DETAILS OF CONTROL VALVE STATIONS, MAKE–UP WATER CONNECTIONS, FLUSHING CONNECTIONS etc. ARE SHOWN ON THE MECHANICAL DRAWINGS. IF APPLICABLE, LIMITS OF WORK ARE SHOWN ON THE MECHANICAL, INSTRUMENTATION, ELECTRICAL AND PLUMBING DRAWINGS.
6. DIELECTRIC COUPLINGS, FLANGES OR UNIONS SHALL BE INSTALLED AT ALL CONNECTIONS OF COPPER PIPE TO OTHER TYPES OF METALLIC PIPING.
7. MECHANICAL PLANS AND SECTIONS DO NOT SHOW ALL VALVES, GAUGES, SWITCHES, OPERATORS, DRAINS, VENTS, etc. REQUIRED FOR THE COMPLETE SYSTEM. CERTAIN SMALL DIAMETER PROCESS PIPING RUNS MAY NOT BE SHOWN IN THEIR ENTIRETY. GENERALLY SMALL PIPING IS SHOWN DIAGRAMMATICALLY. IN THE INSTRUMENTATION DRAWINGS, FIELD ROUTE TO AVOID INTERFERENCES, SUBJECT TO THE APPROVAL OF THE ENGINEER AND OWNER THE CONTRACTOR SHALL FURNISH, INSTALL AND TEST ALL PIPING SYSTEMS AS INDICATED ON THE INSTRUMENTATION DRAWINGS TO PROVIDE THE COMPLETE SYSTEM.
8. UNLESS OTHERWISE SHOWN ON THE MECHANICAL DRAWINGS ALL FLOORSLAB, WALL AND TANK PENETRATIONS SHALL BE AS SHOWN ON THE PENETRATION DETAILS INCLUDED IN THE MECHANICAL CONSTRUCTION DETAILS. ABOVE GROUND EXTERIOR WALL AND ROOF PENETRATIONS SHALL BE AS SHOWN ON THE ARCHITECTURAL DRAWINGS.
9. STANDARD PIPE SUPPORT DETAILS ARE PROVIDED IN THE MECHANICAL DETAIL DRAWINGS AND WILL BE REFERENCED IN THE PIPE SUPPORT DESIGN ADDENDUM.
10. ALL EQUIPMENT BASES AND PIPING HAVING DRAIN OUTLETS SHALL BE PIPED TO THE NEAREST OPEN END DRAIN (OED) OR TRENCH DRAIN USING STAINLESS STEEL PIPE OF APPROPRIATE DIAMETER AS INDICATED ON THE DRAWINGS AND AS DIRECTED BY THE ENGINEER.
11. UNLESS OTHERWISE SHOWN ALL PIPES UNDER CONCRETE SLABS SHALL BE ENCASED IN CONCRETE AS SHOWN ON THE STRUCTURAL DRAWINGS.
12. NOT ALL VALVE AND GATE OPERATORS ARE SHOWN (i.e. HANDWHEELS, CRANKS, CHAINWHEELS, MOTORS OR LEVERS). OPERATORS SHALL BE LOCATED TO ALLOW CONVENIENT OPENING AND CLOSING OF VALVES OR GATES.
13. PIPING SHALL BE INSTALLED SO THAT ANY PIPE, LAYER OF PIPING OR EQUIPMENT CAN BE REMOVED WITHOUT DISTURBING REMAINING PIPES AND SUPPORTS.
14. THE NUMBER OF UNIONS AND OTHER TYPES OF DISMANTLING COUPLINGS SHOWN IS APPROXIMATE. THE CONTRACTOR SHALL PROVIDE UNIONS OR DISMANTLING COUPLINGS WHETHER THEY ARE SHOWN ON THE DRAWINGS OR NOT ON ALL PIPELINES WITH WELDED, THREADED OR SOLVENT CEMENTED JOINTS: AT ALL EQUIPMENT CONNECTIONS, AT A MINIMUM EVERY 50 FEET AND IN BRANCH LINES TO ALLOW CONVENIENT REMOVAL OF PIPING, EQUIPMENT AND APPURTENANCES.
15. THE CONTRACTOR SHALL BE RESPONSIBLE FOR FIELD LOCATING AND TAGGING ALL PROCESS PIPING VALVES AND EQUIPMENT. PROCESS IDENTIFICATION SYSTEM SHALL BE AS DETAILED IN THE SPECIFICATIONS.
16. ALL PIPING ENCASED IN CONCRETE SHALL HAVE MECHANICAL JOINTS AT ALL STRUCTURAL EXPANSION JOINTS.
17. PORTIONS OF NONPROCESS PIPING (PLUMBING) ARE SHOWN FOR CLARITY AND FOR COORDINATION BETWEEN DISCIPLINES. REFER TO APPROPRIATE DRAWINGS AND SPECIFICATIONS.
18. TANK DETAILS SHOWN MAY VARY BY MANUFACTURER.
19. DURING THE STRESS TENSIONING OF THE TANK, ESTABLISH ZONED–OFF AREAS AROUND TANK AND INSTALL APPROPRIATE BARRIERS AS NEEDED TO PROTECT SURROUNDING STRUCTURES AND PERSONNEL IN THE EVENT OF A WIRE BREAK. TANK MANUFACTURER SHALL ADDRESS THE COMPLETE SAFETY REQUIREMENTS IN THEIR PROJECT SAFETY PLAN.

REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: A. NESS
DRAWN BY: A. EDWARDS
SHEET CHK'D BY: I. POLEMATIDIS
CROSS CHK'D BY: D. PRAH
APPROVED BY: I. POLEMATIDIS
DATE: DECEMBER 2020

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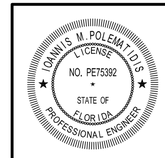
JEA

RIVERTOWN WATER TREATMENT PLANT PROJECT

MECHANICAL GENERAL NOTES AND LEGEND

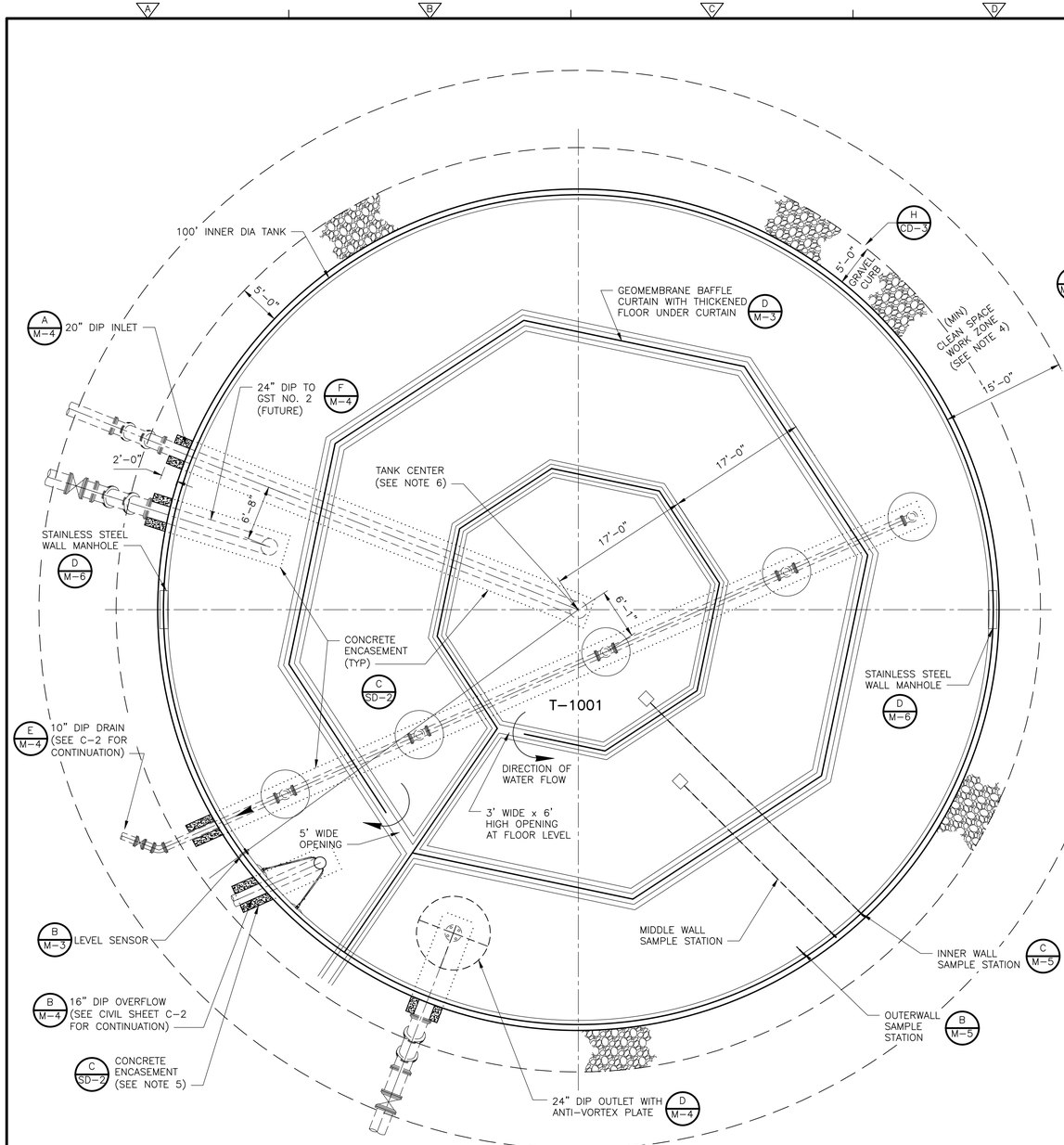


DATE:
IOANNIS POLEMATIDIS
PE NO. 75392

PROJECT NO. 6103–237938
FILE NAME: M001GNNT.DWG

SHEET NO.
M-1

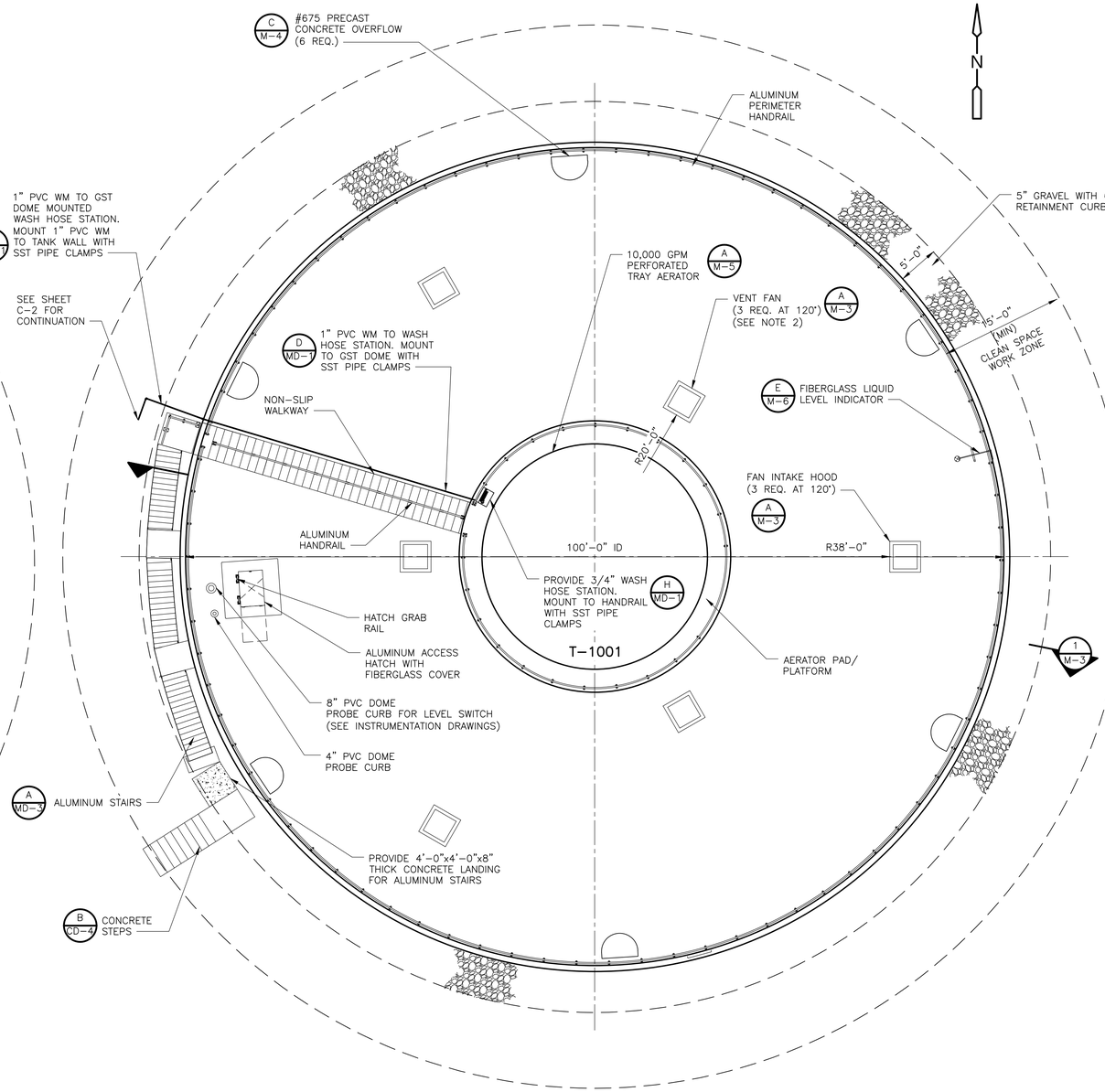
ISSUED FOR BID



FLOOR PLAN

PLAN

1/8" = 1'-0"



DOME PLAN

PLAN

1/8" = 1'-0"

NOTES:

1. FIELD VERIFY LOCATION AND ORIENTATION OF ALL PIPES AND ACCESSORIES PRIOR TO PLACEMENT.
2. SPACE VENT FANS AND FAN INTAKE HOODS SYMMETRICALLY AT 120 DEGREES KEEPING FANS AND HOODS 60 DEGREES APART. LOCATE FAN INTAKE HOODS AT 20 FOOT RADIUS AND VENT FANS AT 38 FOOT RADIUS.
3. EXTEND TANK DRAIN PIPE ACROSS THE FIVE BAFFLED SECTIONS. CENTER DRAIN INLET IN EACH BAFFLE SECTION.
4. MAINTAIN A MINIMUM LEVEL 15 FT WORK/ACCESS ROAD AROUND PERIMETER OF TANK DURING CONSTRUCTION. TANK TOP OF SLAB ELEVATION 34.00 ADDITIONAL FILL REQUIRED TO PROVIDE 15 FT WIDE LEVEL WORK/ACCESS ROAD AROUND ENTIRE TANK.
5. CONTRACTOR SHALL EXTEND THE CONCRETE ENCASEMENT 2-FEET OUTSIDE THE WALL OF THE GST OR BEFORE THE OUTSIDE JOINT. ALL PIPE LAYOUTS AND POSITIONS SHALL BE VERIFIED THROUGH SHOP DRAWINGS REVIEW PRIOR TO CONCRETE ENCASEMENT WORK.
6. CONTRACTOR SHALL VERIFY CENTER OF TANK WITH ENGINEER DURING SHOP DRAWING REVIEW PRIOR TO FINAL PIPE SETTING AND CONCRETE ENCASEMENT.
7. PRE-LOADING PROGRAM:
   A. THE CONTRACTOR SHALL PRE-LOAD THE GROUND STORAGE TANK BY FILLING THE TANK WITH WATER TO INDUCE TOTAL SETTLEMENT (ESTIMATED TO BE UP TO 5 INCHES) PRIOR TO MAKING PIPING CONNECTIONS AND PUTTING THE TANK INTO OPERATION.
   B. THE GROUND STORAGE TANK SHALL BE FILLED WITH WATER IN 25% INCREMENTS UNTIL FULL AND BE PERMITTED TO SETTLE FOR A MINIMUM OF FOUR WEEKS FOR EACH PRE-LOADING INCREMENT. THE GEOTECHNICAL ENGINEER WILL REVIEW THE SETTLEMENT DATA PROVIDED BY THE CONTRACTOR AND WILL PROVIDE WRITTEN CONFIRMATION OF WHEN THE CONTRACTOR IS PERMITTED TO PROCEED TO THE NEXT PRE-LOADING INCREMENT.
   C. THE CONTRACTOR SHALL ARRANGE FOR A LICENSED SURVEYOR TO MONITOR SETTLEMENT OF THE STRUCTURE TO A MINIMUM ACCURACY OF 0.01 FT. SETTLEMENT SHALL BE MONITORED AT EIGHT EVENLY SPACED LOCATIONS ON THE TANK THREE TIMES A WEEK DURING THE PRE-LOADING MONITORING PERIOD
   D. FOLLOWING COMPLETION OF THE PRE-LOADING PROGRAM AS APPROVED IN WRITING BY THE GEOTECHNICAL ENGINEER, THE CONTRACTOR MAY MAKE THE FINAL PIPING CONNECTIONS.
8. PROVIDE ONE WASH HOSE STATION. MOUNT TO AERATOR PLATFORM HANDRAIL.

IOANNIS M. POLEMATIDIS LICENSE NO. PE75392 STATE OF FLORIDA PROFESSIONAL ENGINEER

DATE:
IOANNIS POLEMATIDIS
PE NO. 75392

REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: A. NESS
DRAWN BY: A. EDWARDS
SHEET CHK'D BY: I. POLEMATIDIS
CROSS CHK'D BY: D. PRAH
APPROVED BY: I. POLEMATIDIS
DATE: DECEMBER 2020

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JEA

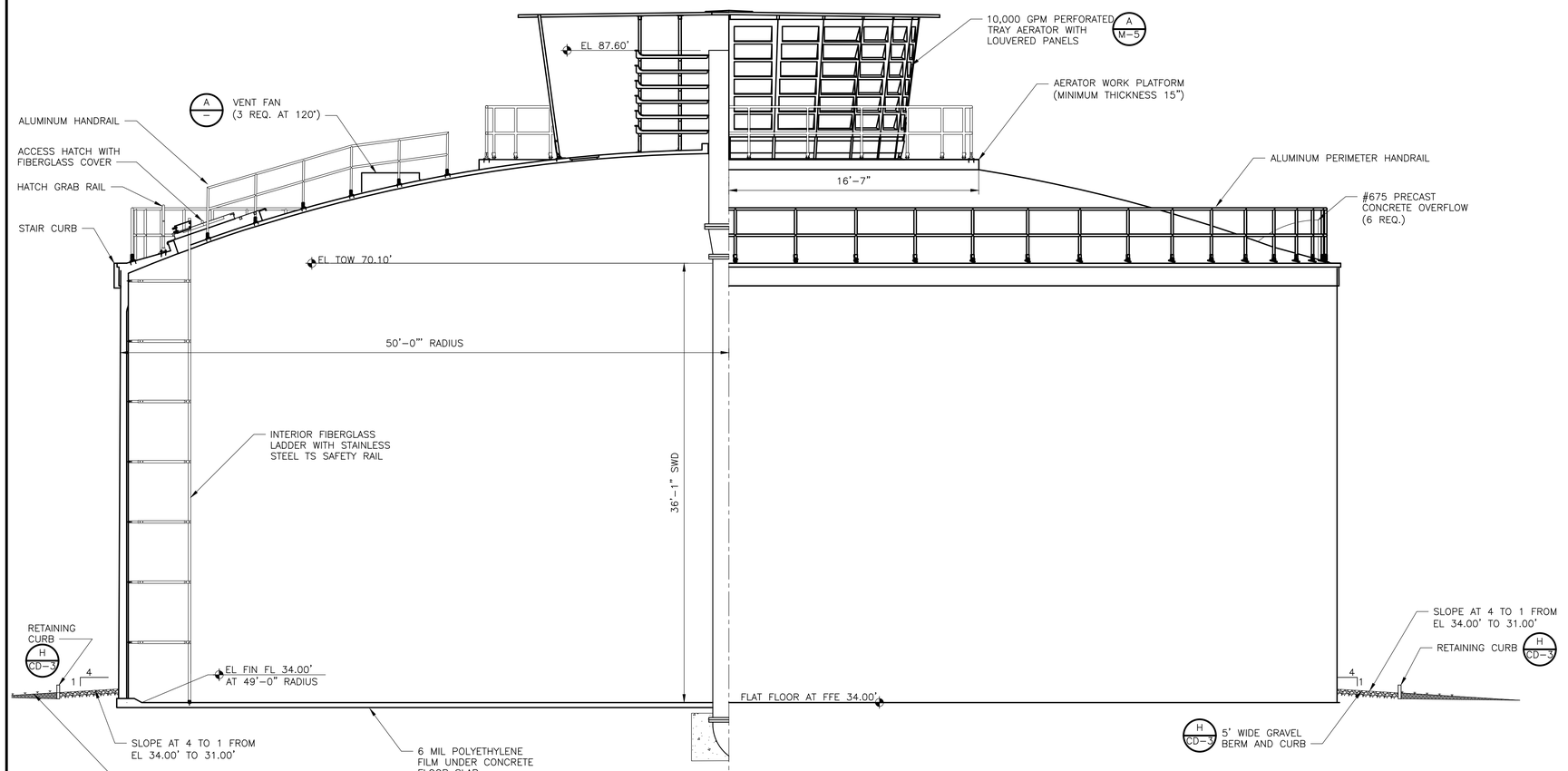
RIVERTOWN WATER TREATMENT PLANT PROJECT

GROUND STORAGE TANK PLANS

PROJECT NO. 6103-237938
FILE NAME: M002GSPL.DWG

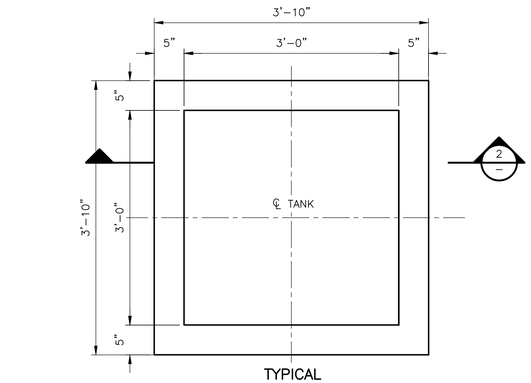
SHEET NO.
M-2

ISSUED FOR BID

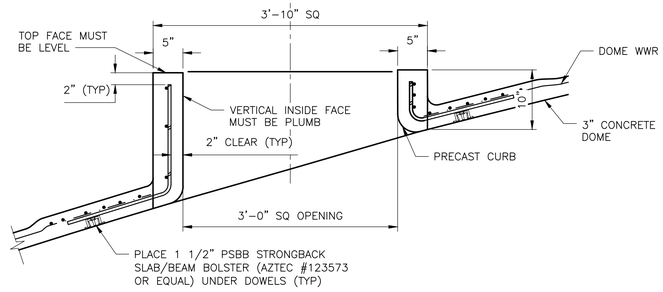


T-1001

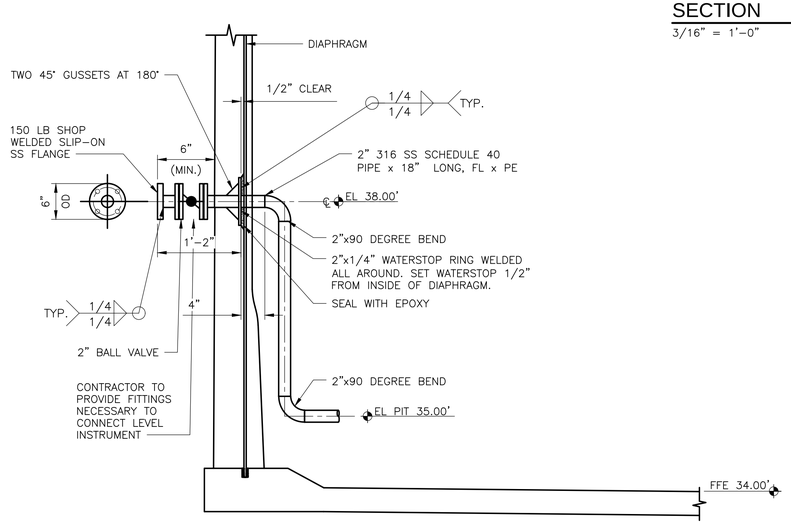
SECTION 1
3/16" = 1'-0" M-2



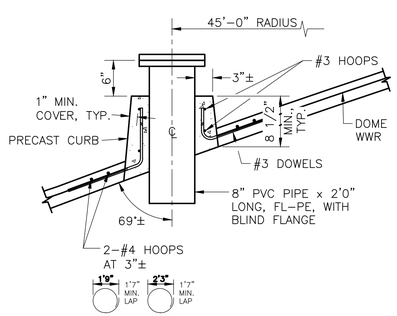
TYPICAL PLAN
NTS



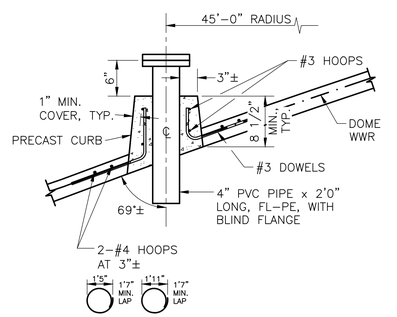
VENT CURB AND VENT FAN CURB
DETAIL A
1" = 1'-0" M-2



LEVEL SENSOR CONNECTION
DETAIL B
1" = 1'-0" M-2

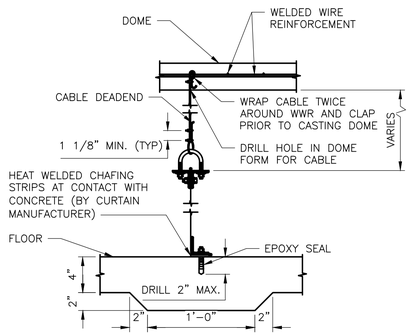


8" PVC DOME PROBE CURB



4" PVC DOME PROBE CURB

DETAIL C
NTS M-2



DOME/FLOOR SECTION
DETAIL D
NTS M-2

REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: A. NESS
DRAWN BY: A. EDWARDS
SHEET CHK'D BY: I. POLEMATIDIS
CROSS CHK'D BY: D. PRAH
APPROVED BY: I. POLEMATIDIS
DATE: DECEMBER 2020

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JEA

RIVERTOWN WATER TREATMENT PLANT PROJECT

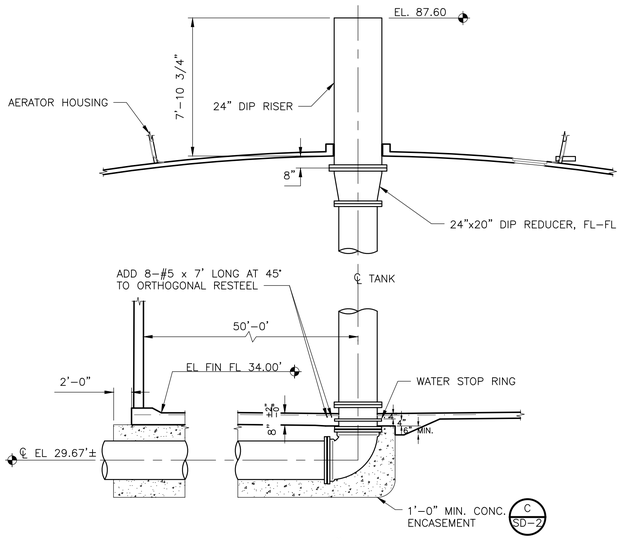
GROUND STORAGE TANK SECTION AND DETAILS

IOANNIS M. POLEMATIDIS LICENSE NO. PE75392 STATE OF FLORIDA PROFESSIONAL ENGINEER

DATE:
IOANNIS POLEMATIDIS
PE NO. 75392

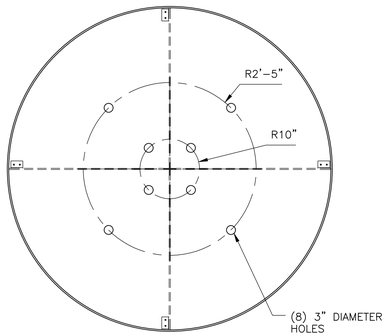
PROJECT NO. 6103-237938
FILE NAME: M003GSPL.DWG
SHEET NO. M-3

ISSUED FOR BID

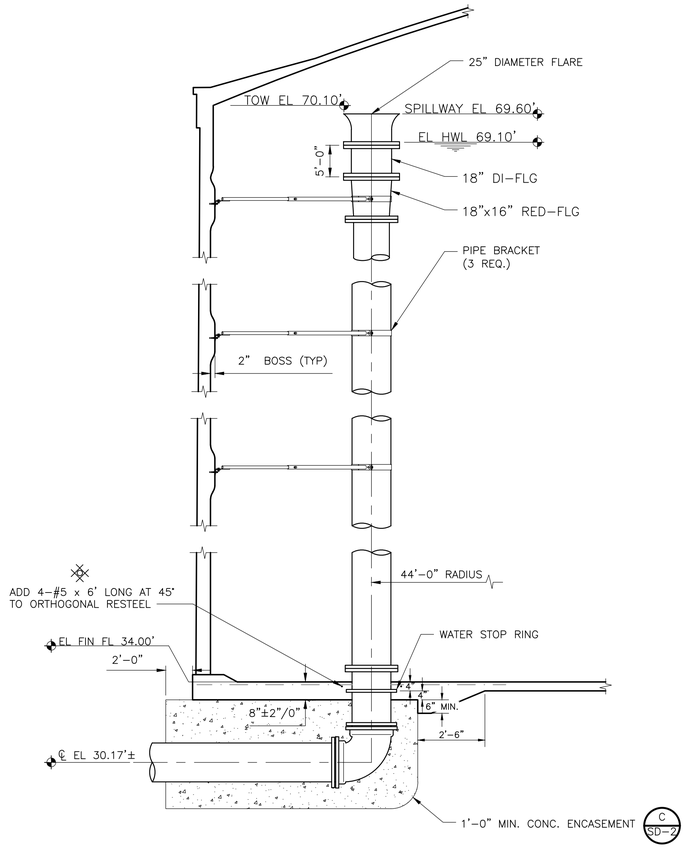


20" DIP INLET

DETAIL A
NTS M-2

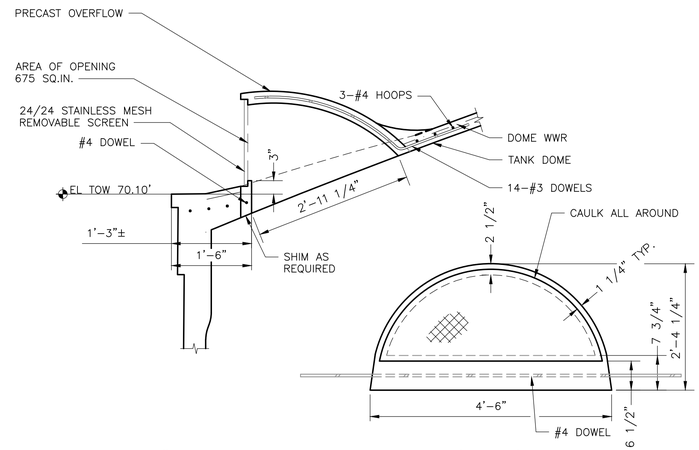


PLAN
NTS



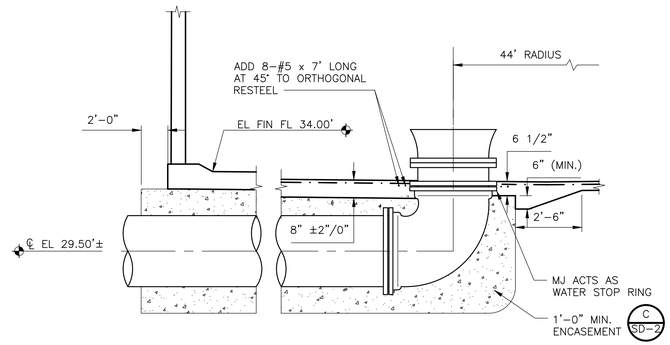
16" DIP OVERFLOW

DETAIL B
NTS M-2



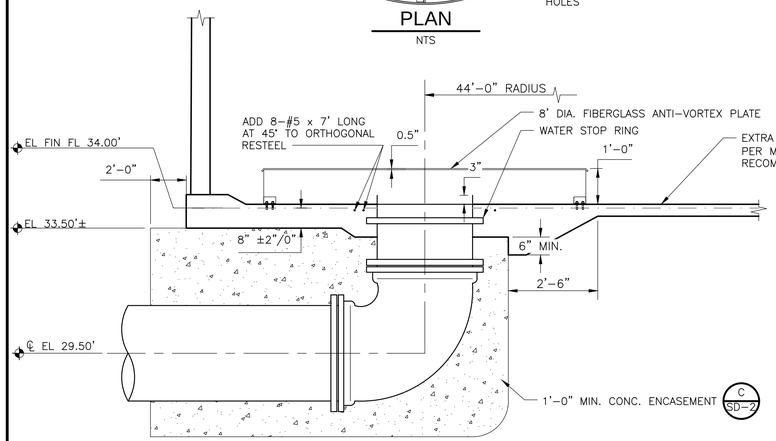
#675 PRECAST CONCRETE OVERFLOW (6 REQ.)

DETAIL C
NTS M-2



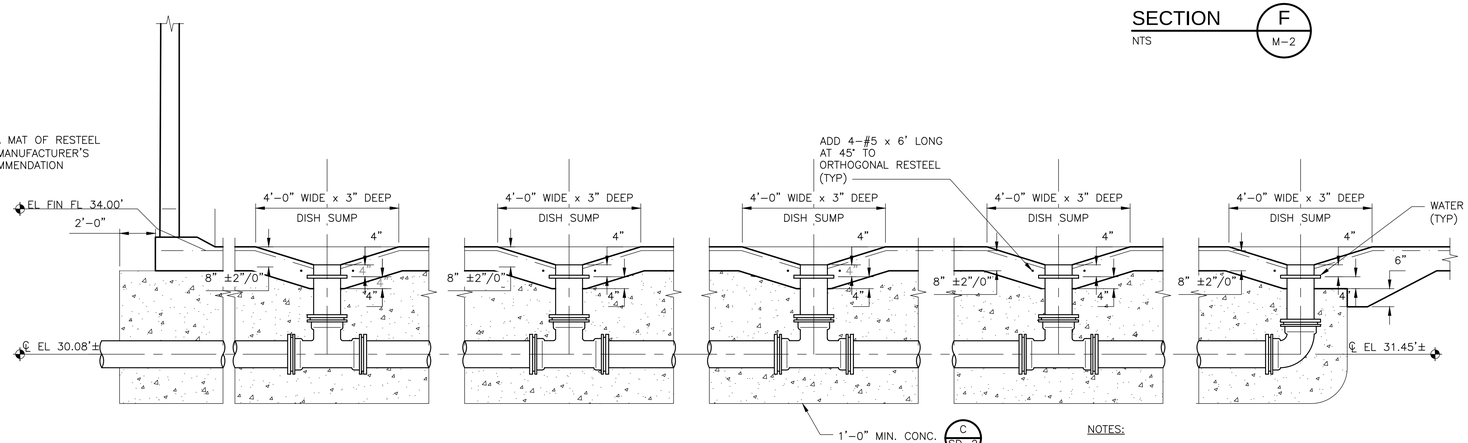
24" DIP INLET/OUTLET (FOR FUTURE SERIES OPERATION)

SECTION F
NTS M-2



24" DIP OUTLET

SECTION D
NTS M-2



10" DIP DRAIN

SECTION E
NTS M-2

NOTES:

1. SLOPE DRAIN PIPE AT APPROXIMATELY 0.01 FT/FT BELOW TANK SLAB.
2. CENTER DRAIN INLET IN EACH BAFFLED SECTION AS SHOWN ON SHEET M-2.

REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: A. NESS
DRAWN BY: A. EDWARDS
SHEET CHK'D BY: I. POLEMATIDIS
CROSS CHK'D BY: D. PRAH
APPROVED BY: I. POLEMATIDIS
DATE: DECEMBER 2020

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JEA

RIVERTOWN WATER TREATMENT PLANT PROJECT

GROUND STORAGE TANK
SECTION AND DETAILS

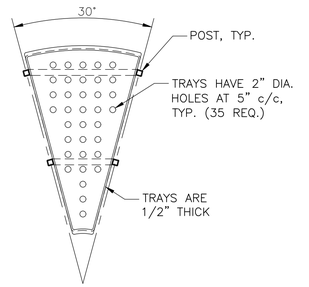
IOANNIS M. POLEMATIDIS LICENSE NO. PE75392 STATE OF FLORIDA PROFESSIONAL ENGINEER

DATE:
IOANNIS POLEMATIDIS
PE NO. 75392

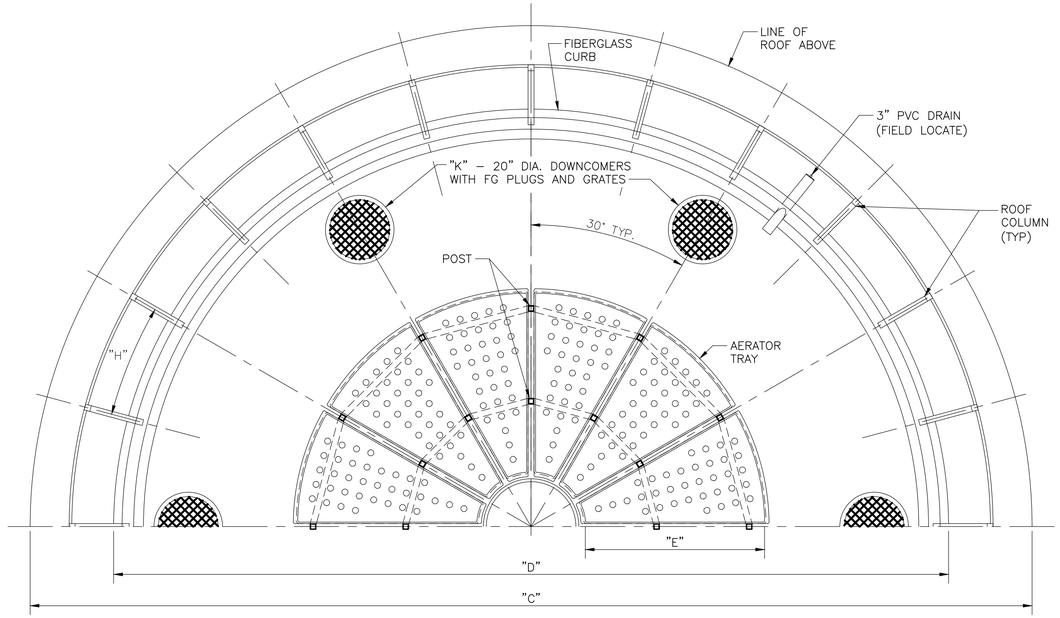
PROJECT NO. 6103-237938
FILE NAME: M004GSSD.DWG

SHEET NO.
M-4

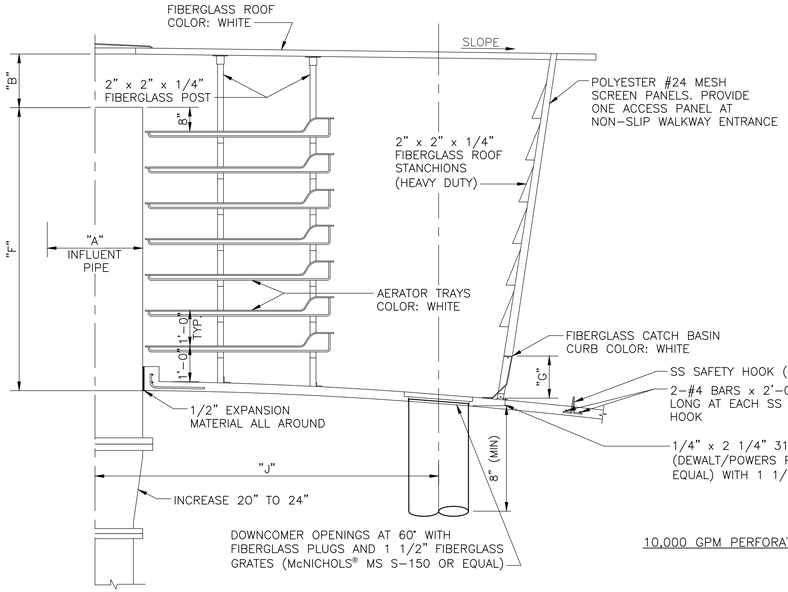
ISSUED FOR BID



AERATOR TRAY



AERATOR HALF–PLAN



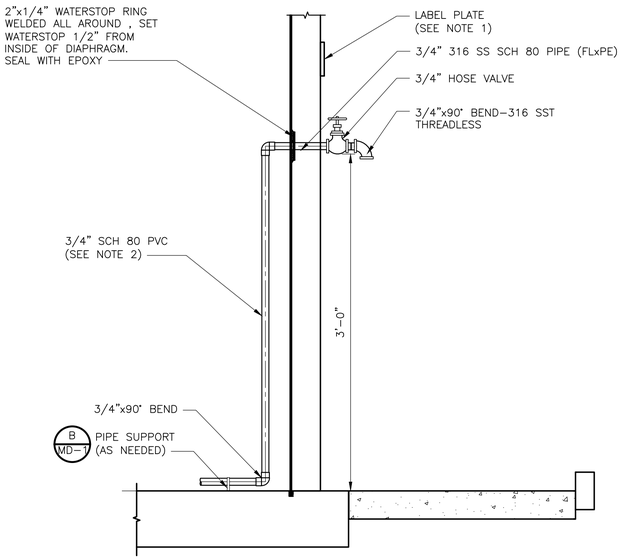
AERATOR HALF–SECTION THROUGH CENTER LINE

10,000 GPM PERFORATED TRAY AERATOR WITH LOUVERED PANELS

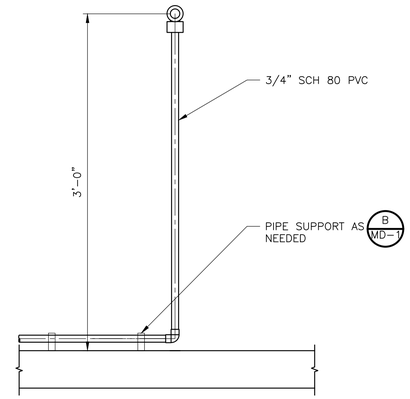
AERATOR
DETAIL A
NTS M–2

FLOW CAPACITY AND DIMENSION TABLE											
FLOW CAPACITY GPM	A PIPE SIZE	B CLEAR	C ROOF DIA.	D CURB DIA.	E TRAY RADIUS	F PIPE HEIGHT	G CURB HEIGHT	H ROOF COLUMN SPACING	I TOTAL TRAYS (LEVELS)	J DOWN–COMER RADIUS	K NUMBER DOWN–COMERS
10,000	30"	1'6"	28'0"	23'4"	5'0"	7'8 3/4"	1'6"	15 DEG.	84 (7)	9'7"	6
PERFORATED TRAY NATURAL DRAFT AERATORS											

ALL FIBERGLASS SHALL BE CONSTRUCTED WITH STAINLESS STEEL HARDWARE



SAMPLE STATION AT TANK WALL
DETAIL B
NTS M–2



NOTES:

1. PROVIDE LABELS ON TANK WALL FOR SAMPLE STATIONS (INNER WALL, MIDDLE WALL, OUTER WALL).
2. THE SAMPLE STATION PIPING INSIDE THE TANK SHALL BE SCHEDULE 80 PVC. THE SAMPLE PIPING THROUGH THE WALL AND OUTSIDE THE TANK SHALL BE SCHEDULE 80, TYPE 316 STAINLESS STEEL.

SAMPLE STATION AT BAFFLE CURTAIN
DETAIL C
NTS M–2

IOANNIS M. POLEMATIDIS LICENSE NO. PE75392 STATE OF FLORIDA PROFESSIONAL ENGINEER

DATE:
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PE NO. 75392

REV. NO.	DATE	DRWN	CHKD	REMARKS

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JEA

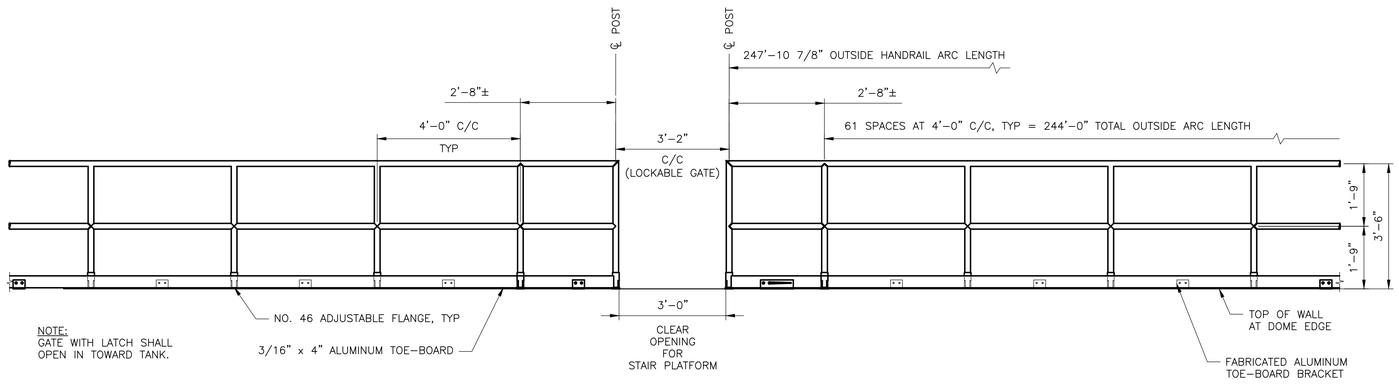
RIVERTOWN WATER TREATMENT PLANT PROJECT

GROUND STORAGE TANK
SECTION AND DETAILS

PROJECT NO. 6103–237938
FILE NAME: M005GSSD.DWG

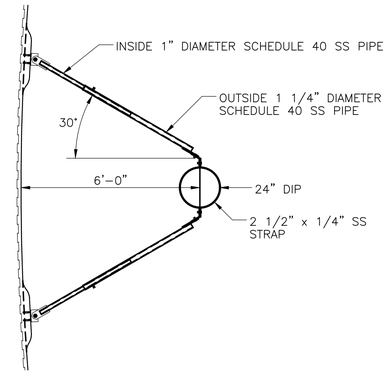
SHEET NO.
M-5

ISSUED FOR BID



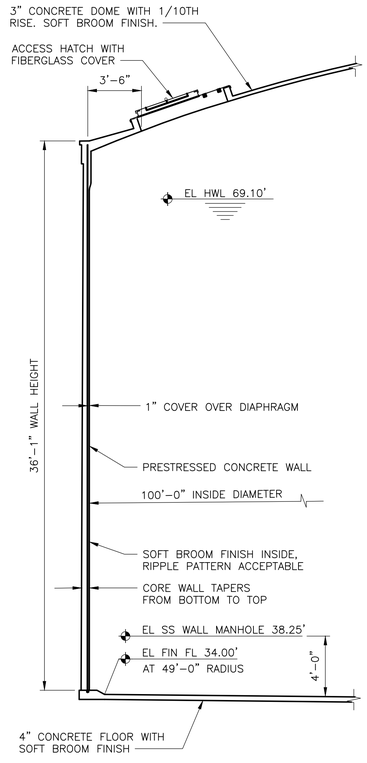
ALUMINUM PERIMETER HANDRAIL

DETAIL A — 1/2" = 1'–0"



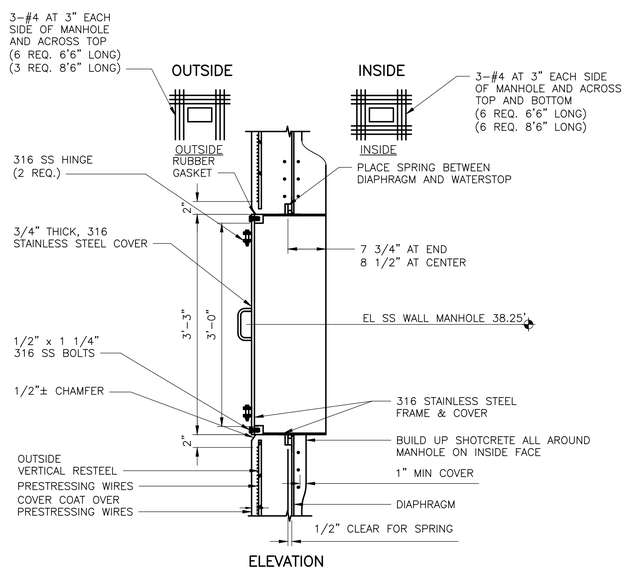
PIPE BRACKET (3 REQ.)

DETAIL B — 1/2" = 1'–0"



TYPICAL WALL SECTION

DETAIL C — 1/4" = 1'–0"

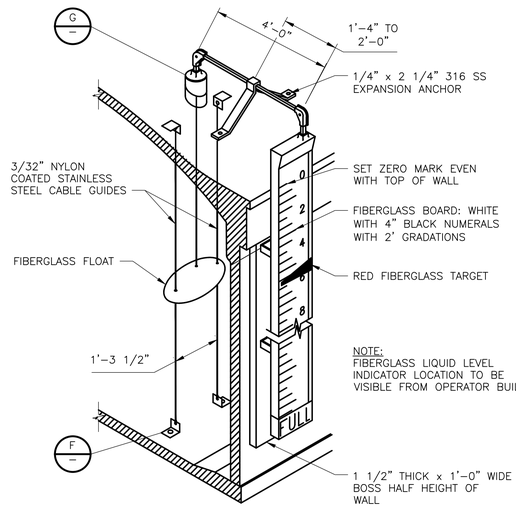


ELEVATION

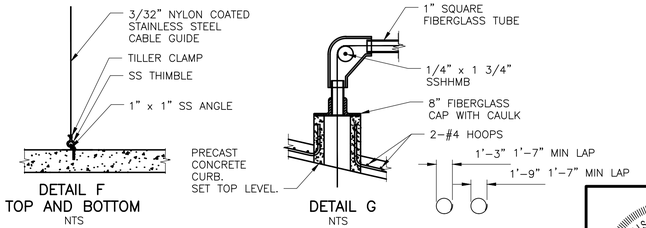
316 STAINLESS STEEL WALL MANHOLE
WITH HINGED COVER
(TYP OF 2)

PLAN

DETAIL D — NTS



ISOMETRIC



DETAIL F
TOP AND BOTTOM
NTS

DETAIL G
NTS

FIBERGLASS LIQUID LEVEL INDICATOR

DETAIL E — NTS

IOANNIS M. POLEMATIDIS
LICENSE
NO. PE75392
STATE OF
FLORIDA
PROFESSIONAL ENGINEER

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JEA

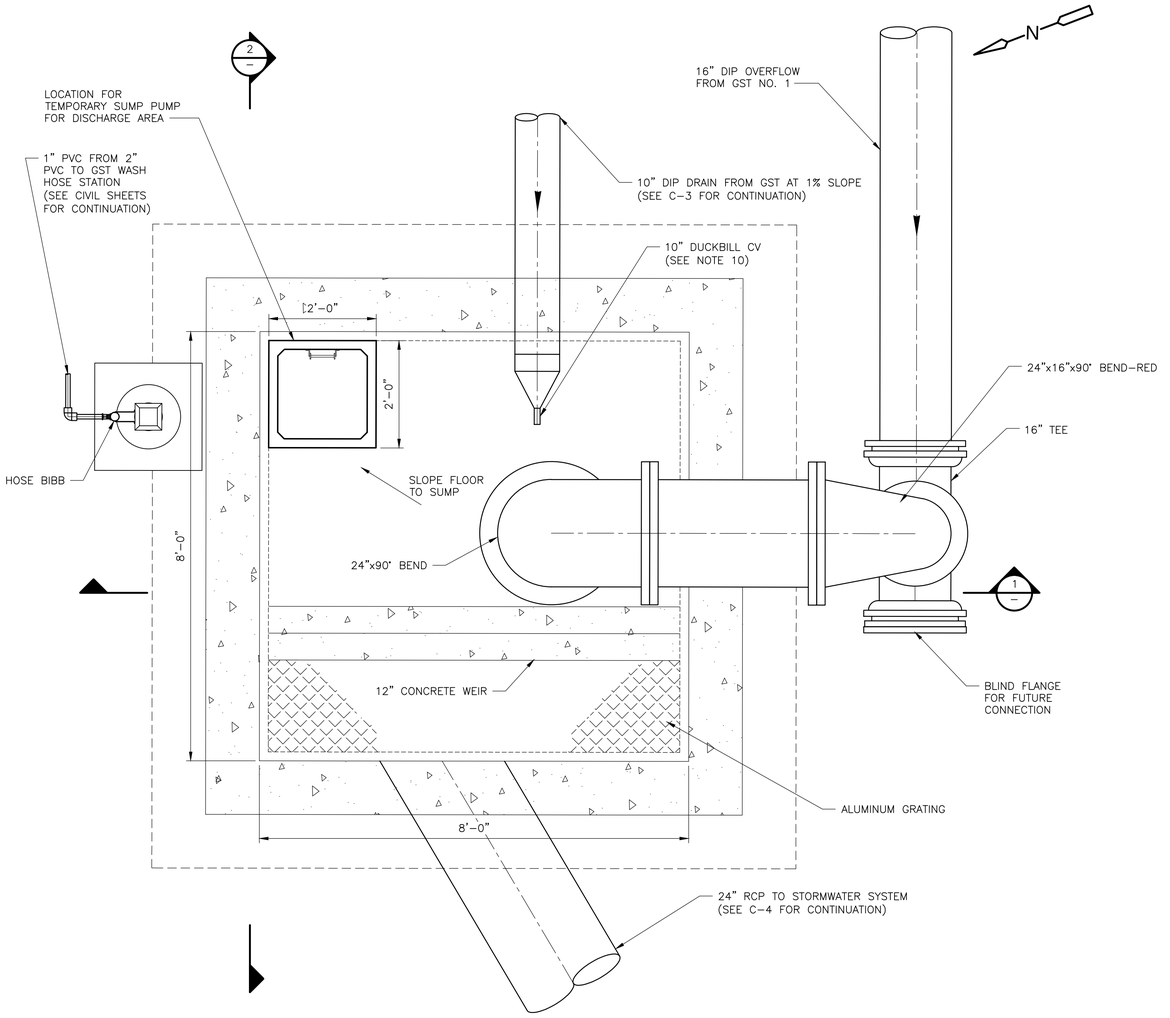
RIVERTOWN WATER TREATMENT PLANT PROJECT

GROUND STORAGE TANK
PLAN, SECTION AND DETAILS

PROJECT NO. 6103–237938
FILE NAME: M006GSSD.DWG

SHEET NO.
M-6

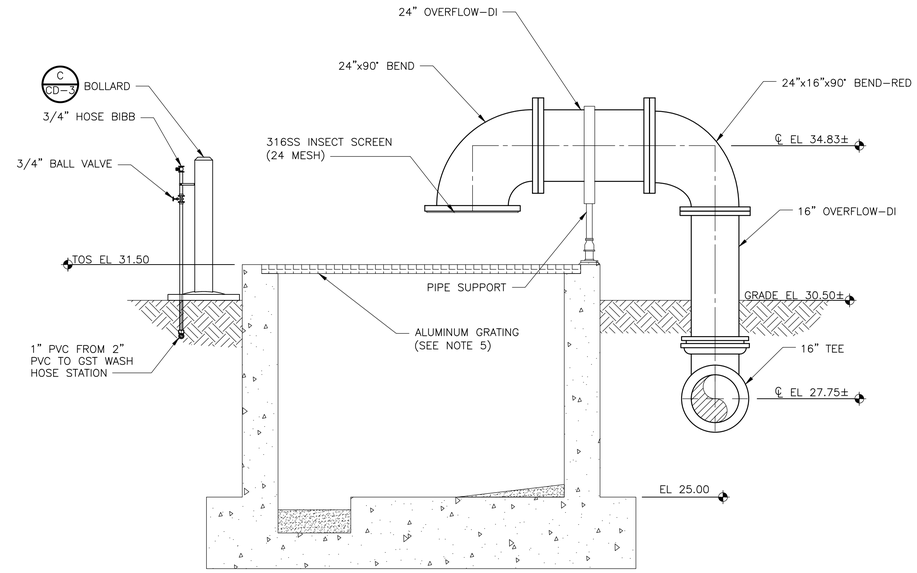
ISSUED FOR BID



GST DRAIN VAULT

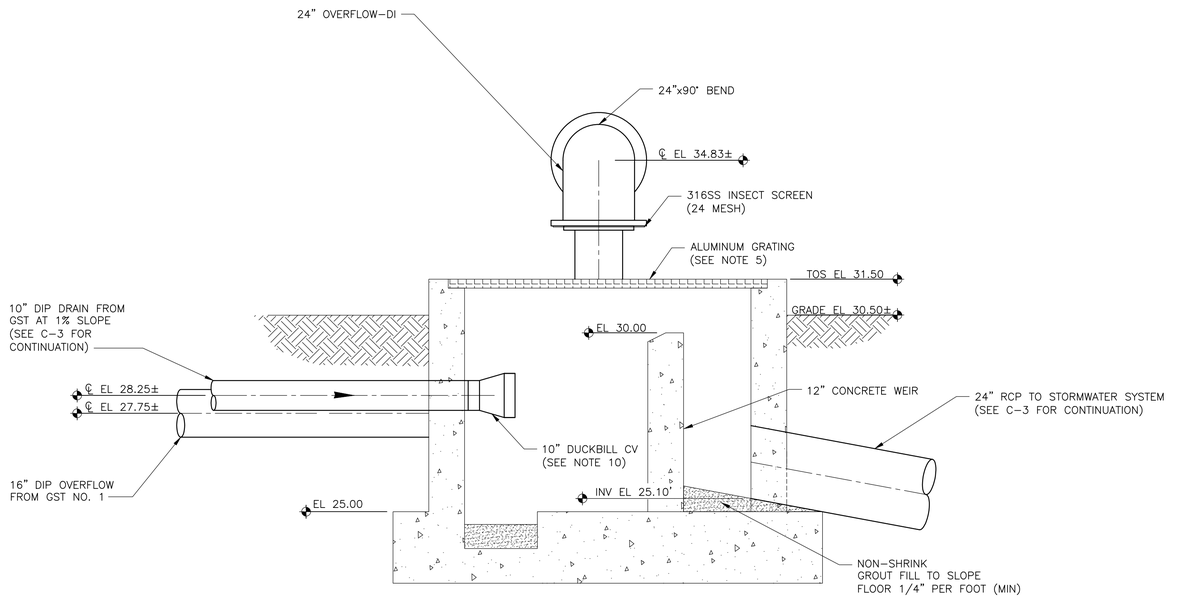
PLAN AT EL 32.00'

3/4" = 1'–0"



SECTION 1

1/2" = 1'–0"



SECTION 2

1/2" = 1'–0"

GRATING NOTES:

1. ALUMINUM GRATING SHALL BE 2–1/2" DEEP ALUMINUM SWAGE LOCK RECTANGULAR BAR GRATING TYPE 11–SG–4, BY OHIO GRATINGS, CANTON OHIO OR APPROVED EQUAL.
2. LIMIT GRATING DEFLECTION TO 1/4 INCH MAXIMUM FOR A UNIFORM LIVE LOAD OF 100 PSF ON MAXIMUM SPAN AND CONCENTRATED LIVE LOAD OF 300 LBS APPLIED AT THE MID–POINT OF THE MAXIMUM SPAN.
3. GRATING CLAMPS, NUTS, BOLTS, WASHERS AND OTHER FASTENING DEVICES FOR GRATING SHALL BE TYPE 316 STAINLESS STEEL. ANCHOR GRATING TO SUPPORTING SYSTEM USING SADDLE CLIPS.
4. FABRICATE CUTOUTS IN GRATING SECTIONS FOR PENETRATIONS INDICATED. ARRANGE CUTOUTS TO PERMIT GRATING REMOVAL WITHOUT DISTURBING ITEMS PENETRATING GRATINGS.
5. REMOVABLE GRATING SECTIONS: FABRICATE WITH BANDING BARS ATTACHED BY WELDING TO ENTIRE PERIMETER OF EACH SECTION. INCLUDE ANCHORS AND FASTENERS OF TYPE INDICATED OR, IF NOT INDICATED, AS RECOMMENDED BY MANUFACTURER FOR ATTACHING TO SUPPORTS.
6. FINISH: MILL

NOTES CONTINUED:

7. CONTRACTOR SHALL SUBMIT THE FOLLOWING TO THE EOR FOR REVIEW PRIOR TO CONSTRUCTION:

   A. MANUFACTURERS' PUBLISHED LOAD TABLES.
   B. CLIPS AND ANCHORAGE DEVICES FOR GRATINGS.
   C. SHOP DRAWINGS: INCLUDE PLANS, SECTIONS, DETAILS, AND ATTACHMENTS TO OTHER WORK. IDENTIFY SIZE, MATERIAL, AND LOCATION OF SUPPORTING MEMBERS.

8. DRAIN VAULT TO BE CONSTRUCTED OF PRECAST CONCRETE ENVIRONMENTAL STRUCTURES, AS REQUIRED BY ASTM C913. THE INTERIOR GEOMETRY AND DIMENSIONS SHALL BE AS NOTED, ON THE DRAWING.
9. ALL PIPING TO BE MECHANICAL JOINT, UNLESS OTHERWISE NOTED.
10. ACCEPTABLE DUCKBILL CHECK VALVES INCLUDE PROCO STYLE 710, PROCO STYLE 711, OR TIDEFLEX SERIES 35.
11. DRAIN OUTLET SHALL BE CAPABLE OF FULLY DRAINING THE GST. ADJUST ELEVATIONS AS APPROPRIATE.

REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: A. NESS
DRAWN BY: A. EDWARDS
SHEET CHK'D BY: D. PRAH
CROSS CHK'D BY: C. FRIZZELL
APPROVED BY: I. POLEMATIDIS
DATE: DECEMBER 2020

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RIVERTOWN WATER TREATMENT PLANT PROJECT

GROUND STORAGE TANK DRAIN VAULT PLAN AND SECTION

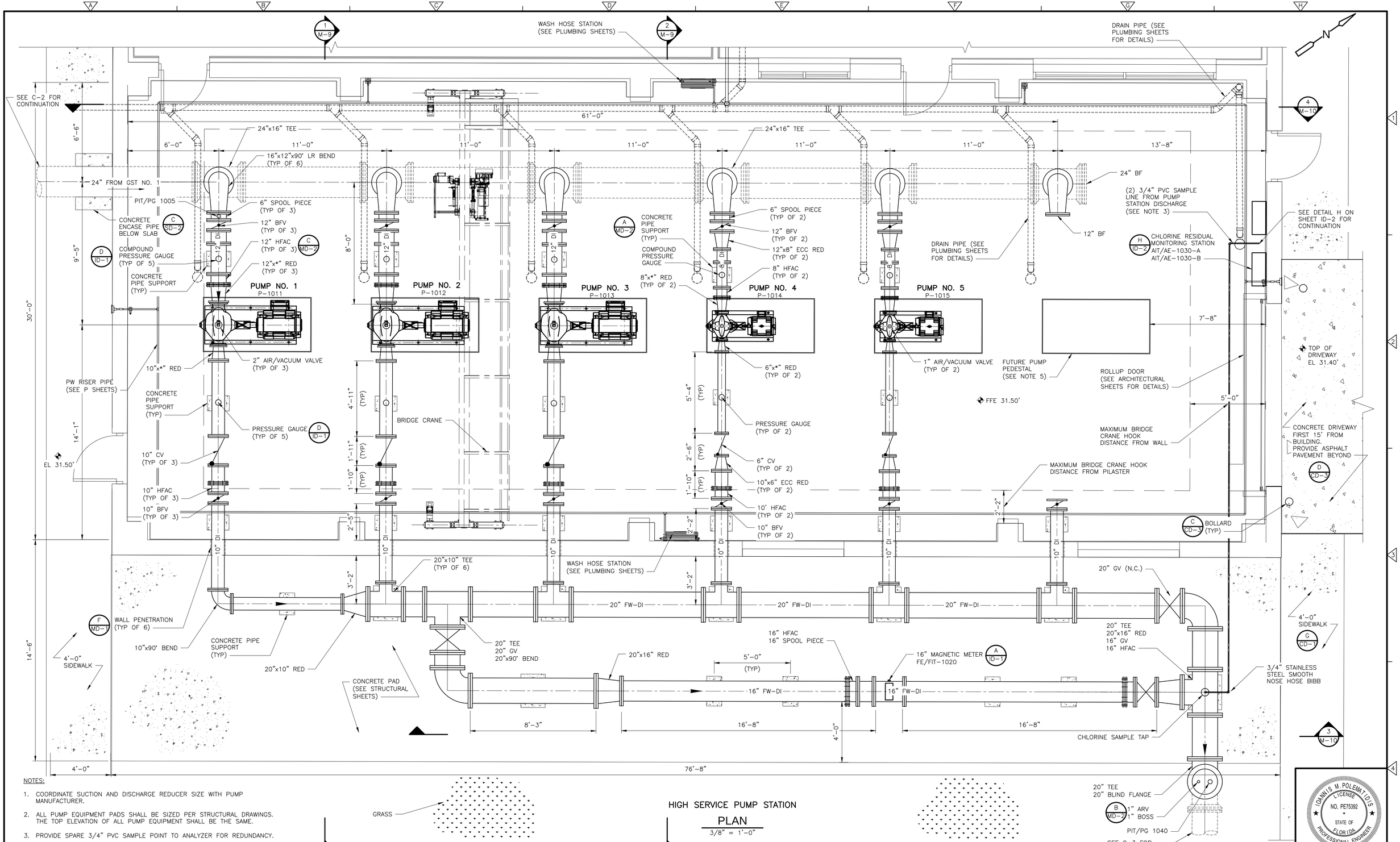
IOANNIS M. POLEMATIDIS LICENSE NO. PE75392 STATE OF FLORIDA PROFESSIONAL ENGINEER

DATE:
IOANNIS POLEMATIDIS
PE NO. 75392

PROJECT NO. 6103–237938
FILE NAME: M007GSTD.DWG

SHEET NO.
M-7

ISSUED FOR BID



NOTES:

1. COORDINATE SUCTION AND DISCHARGE REDUCER SIZE WITH PUMP MANUFACTURER.
2. ALL PUMP EQUIPMENT PADS SHALL BE SIZED PER STRUCTURAL DRAWINGS. THE TOP ELEVATION OF ALL PUMP EQUIPMENT SHALL BE THE SAME.
3. PROVIDE SPARE 3/4" PVC SAMPLE POINT TO ANALYZER FOR REDUNDANCY.
4. CONCRETE ENCASEMENT EXTENDS UNDER THE HIGH SERVICE PUMP BUILDING (NOT SHOWN FOR CLARITY).
5. FUTURE PUMP PEDESTAL SHALL BE INSTALLED PER DETAIL C ON S-4, BUT FLUSH WITH TOS ELEVATION OF 31.50'

HIGH SERVICE PUMP STATION

PLAN

3/8" = 1'-0"

REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: D. PRAH
DRAWN BY: L. BARTLEWSKI
SHEET CHK'D BY: D. PRAH
CROSS CHK'D BY: R. HUGUENARD
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JEA

RIVERTOWN WATER TREATMENT PLANT PROJECT

HIGH SERVICE PUMP STATION PLAN

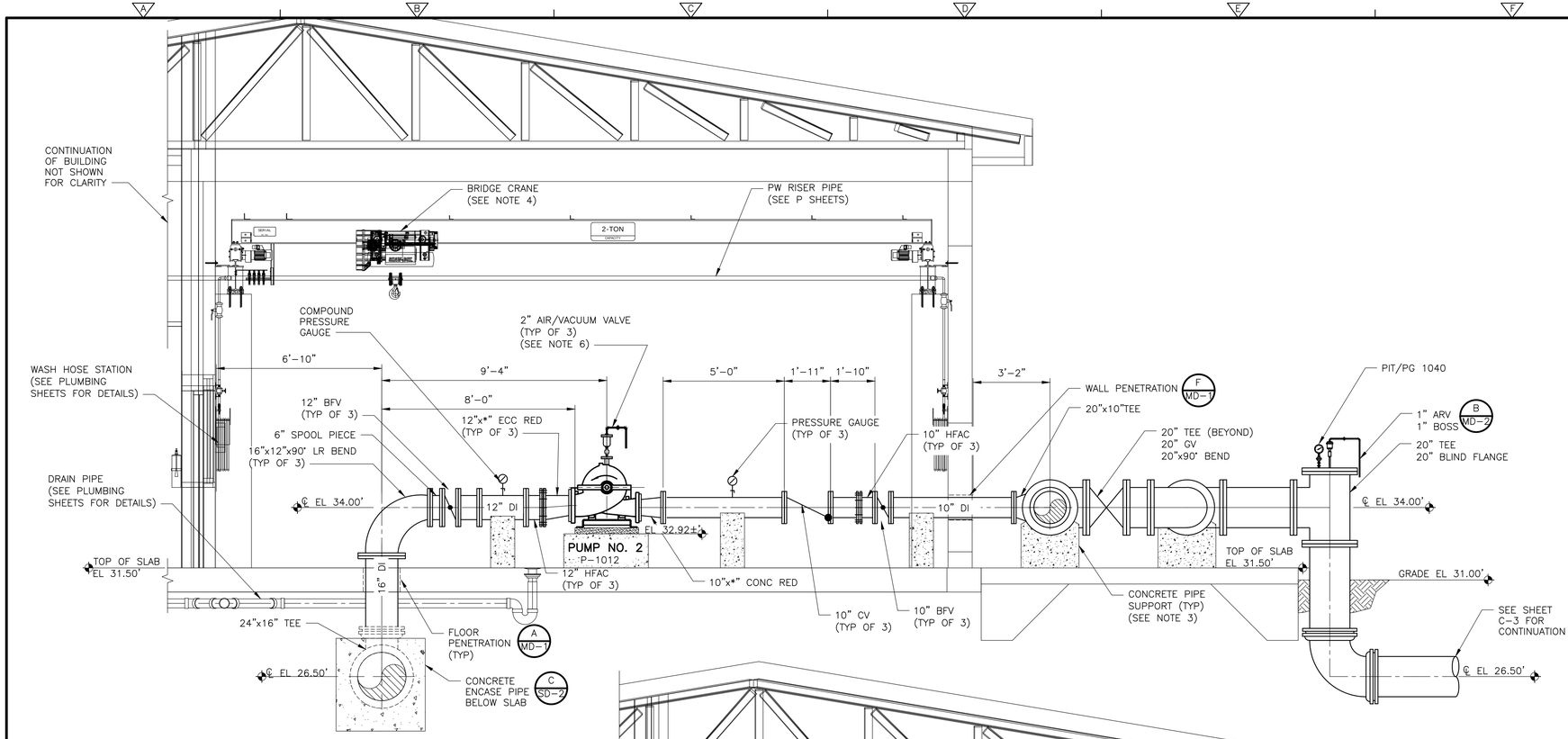
IOANNIS M. POLEMATIDIS LICENSE NO. PE75392 STATE OF FLORIDA PROFESSIONAL ENGINEER

DATE:
IOANNIS POLEMATIDIS
PE NO. 75392

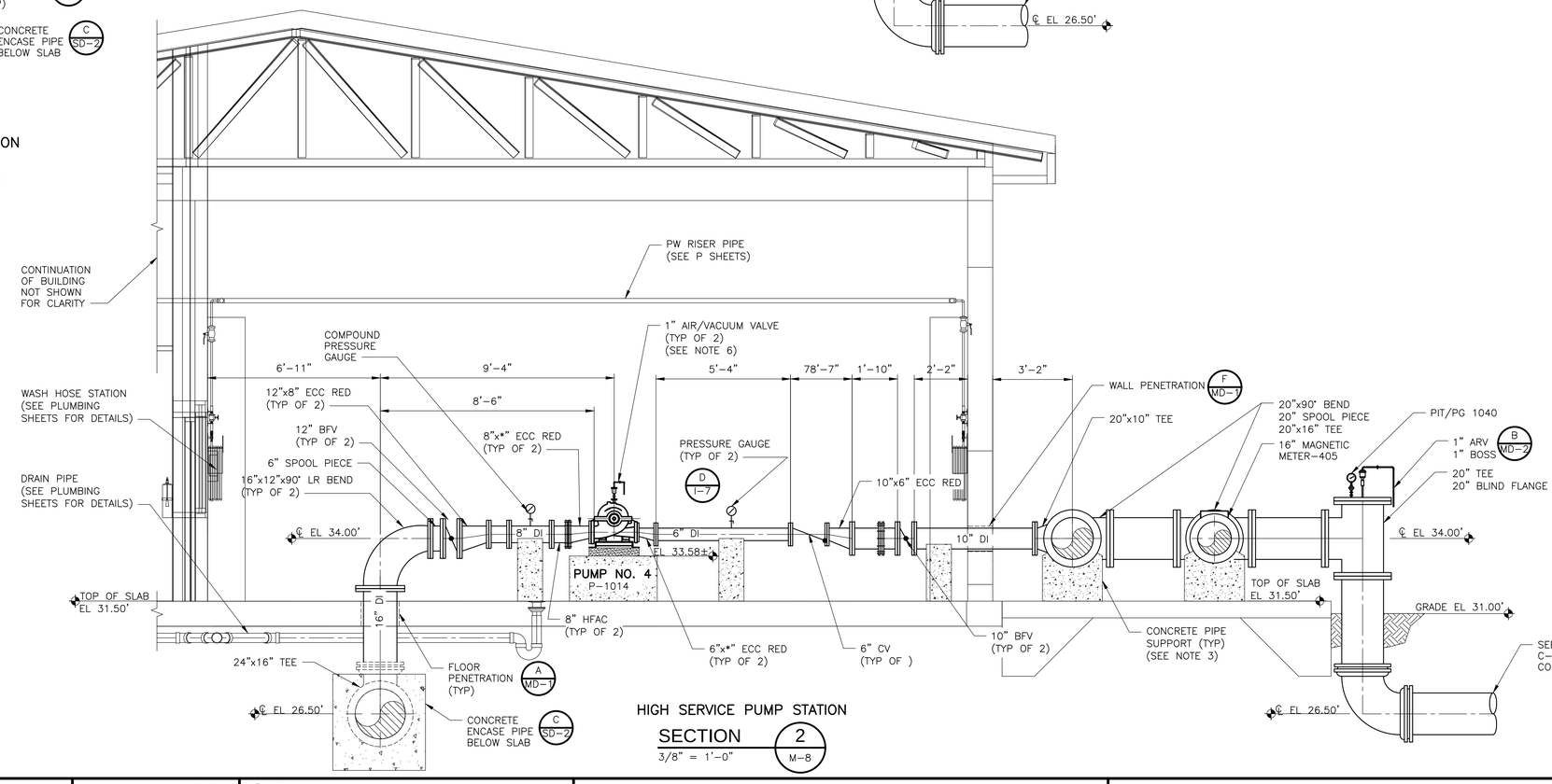
PROJECT NO. 6103-237938
FILE NAME: M008HSPL.DWG

SHEET NO.
M-8

ISSUED FOR BID



HIGH SERVICE PUMP STATION
SECTION 1
3/8" = 1'-0"
M-8



HIGH SERVICE PUMP STATION
SECTION 2
3/8" = 1'-0"
M-8

NOTES:

1. COORDINATE SUCTION AND DISCHARGE REDUCER SIZE WITH PUMP MANUFACTURER.
2. PROVIDE CONCRETE PIPE SUPPORTS FOR PIPING 10-INCH AND LARGER PER DETAIL E ON SHEET MD-1.
3. PROVIDE CONCRETE PIPE SUPPORTS FOR PIPING 8-INCH AND SMALLER PER DETAIL A ON SHEET MD-2.
4. MINIMUM CLEARANCE HEIGHT REQUIRED UNDER HOIST SHALL BE 11'-0". CONTRACTOR SHALL COORDINATE WITH BRIDGE CRANE MANUFACTURER TO ENSURE PROPER INSTALLATION AND CLEARANCE. REFER TO SPECIFICATION 412213.13 FOR ADDITIONAL INFORMATION.
5. PIPING SHALL BE SUPPORTED BY THE CONCRETE PIPE SUPPORTS, NOT THE WALL PENETRATIONS.
6. AIR RELEASE VALVE SHALL DRAIN VIA DRAIN PIPE TO FLOOR DRAIN.

REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: D. PRAH
DRAWN BY: A. EDWARDS
SHEET CHK'D BY: D. PRAH
CROSS CHK'D BY: R. HUGUENARD
APPROVED BY: I. POLEMATIDIS
DATE: DECEMBER 2020

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RIVERTOWN WATER TREATMENT PLANT PROJECT

HIGH SERVICE PUMP STATION BUILDING SECTIONS

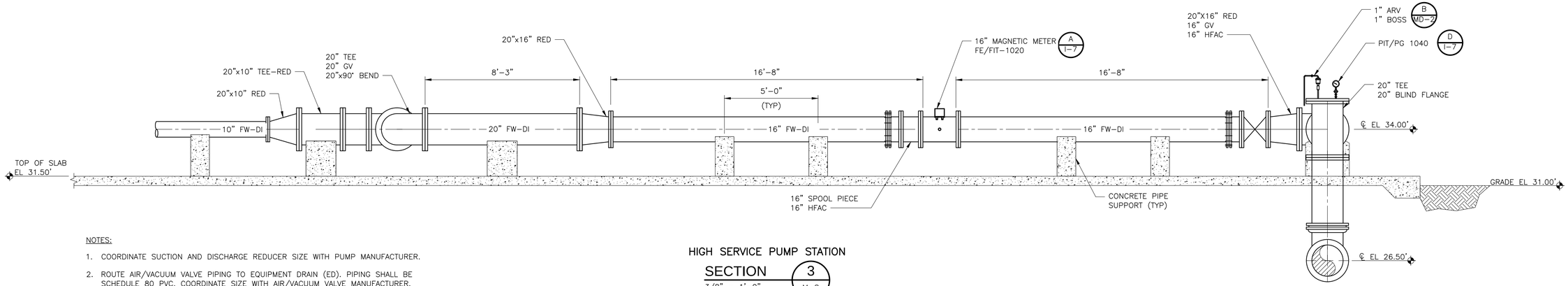
IOANNIS M. POLEMATIDIS LICENSE NO. PE75392 STATE OF FLORIDA PROFESSIONAL ENGINEER

DATE:
IOANNIS POLEMATIDIS
PE NO. 75392

PROJECT NO. 6103-237938
FILE NAME: M009HSSC.DWG

SHEET NO.
M-9

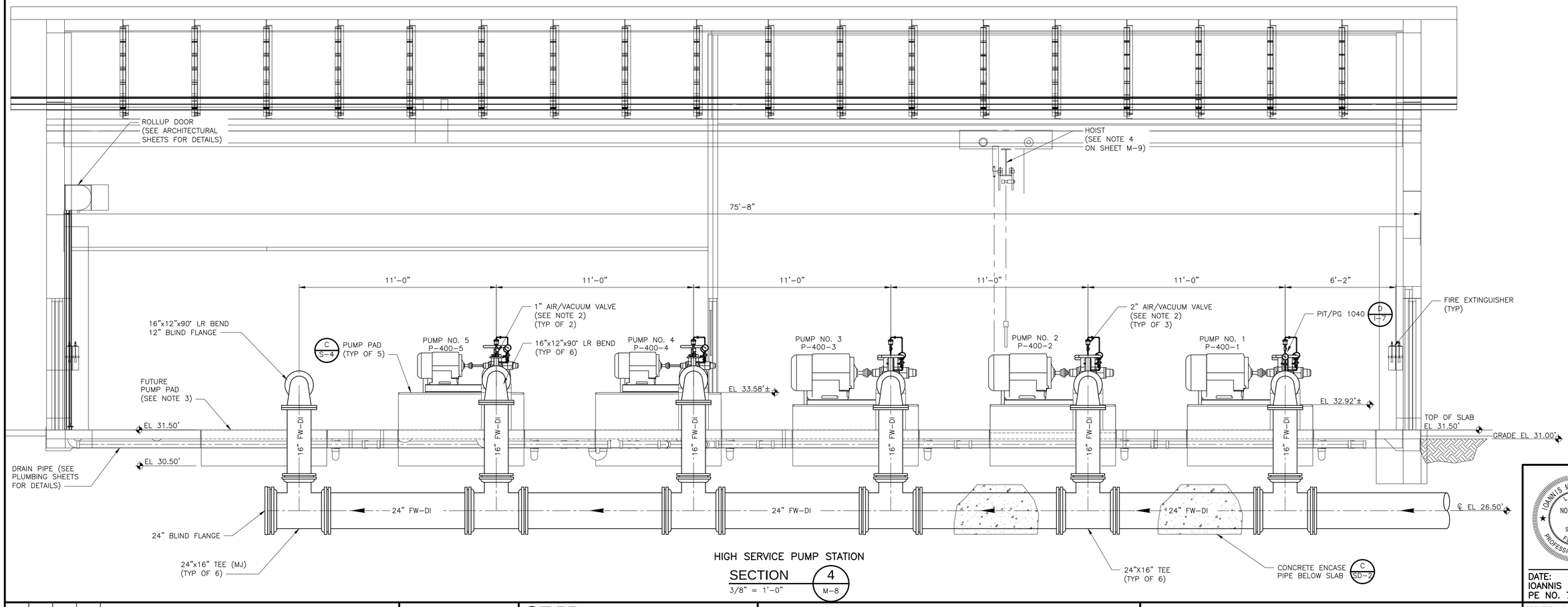
ISSUED FOR BID



NOTES:

1. COORDINATE SUCTION AND DISCHARGE REDUCER SIZE WITH PUMP MANUFACTURER.
2. ROUTE AIR/VACUUM VALVE PIPING TO EQUIPMENT DRAIN (ED). PIPING SHALL BE SCHEDULE 80 PVC, COORDINATE SIZE WITH AIR/VACUUM VALVE MANUFACTURER.
3. FUTURE PUMP PEDESTAL SHALL BE INSTALLED PER DETAIL C ON S-4, BUT FLUSH WITH TOS ELEVATION OF 31.50'

HIGH SERVICE PUMP STATION
SECTION 3 / M-8
3/8" = 1'-0"



HIGH SERVICE PUMP STATION
SECTION 4 / M-8
3/8" = 1'-0"

IOANNIS M POLEMATIDIS
LICENSE
NO. PE75392
STATE OF
FLORIDA
PROFESSIONAL ENGINEER

DATE:
IOANNIS POLEMATIDIS
PE NO. 75392

REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: D. PRAH
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SHEET CHK'D BY: D. PRAH
CROSS CHK'D BY: R. HUGUENARD
APPROVED BY: I. POLEMATIDIS
DATE: DECEMBER 2020

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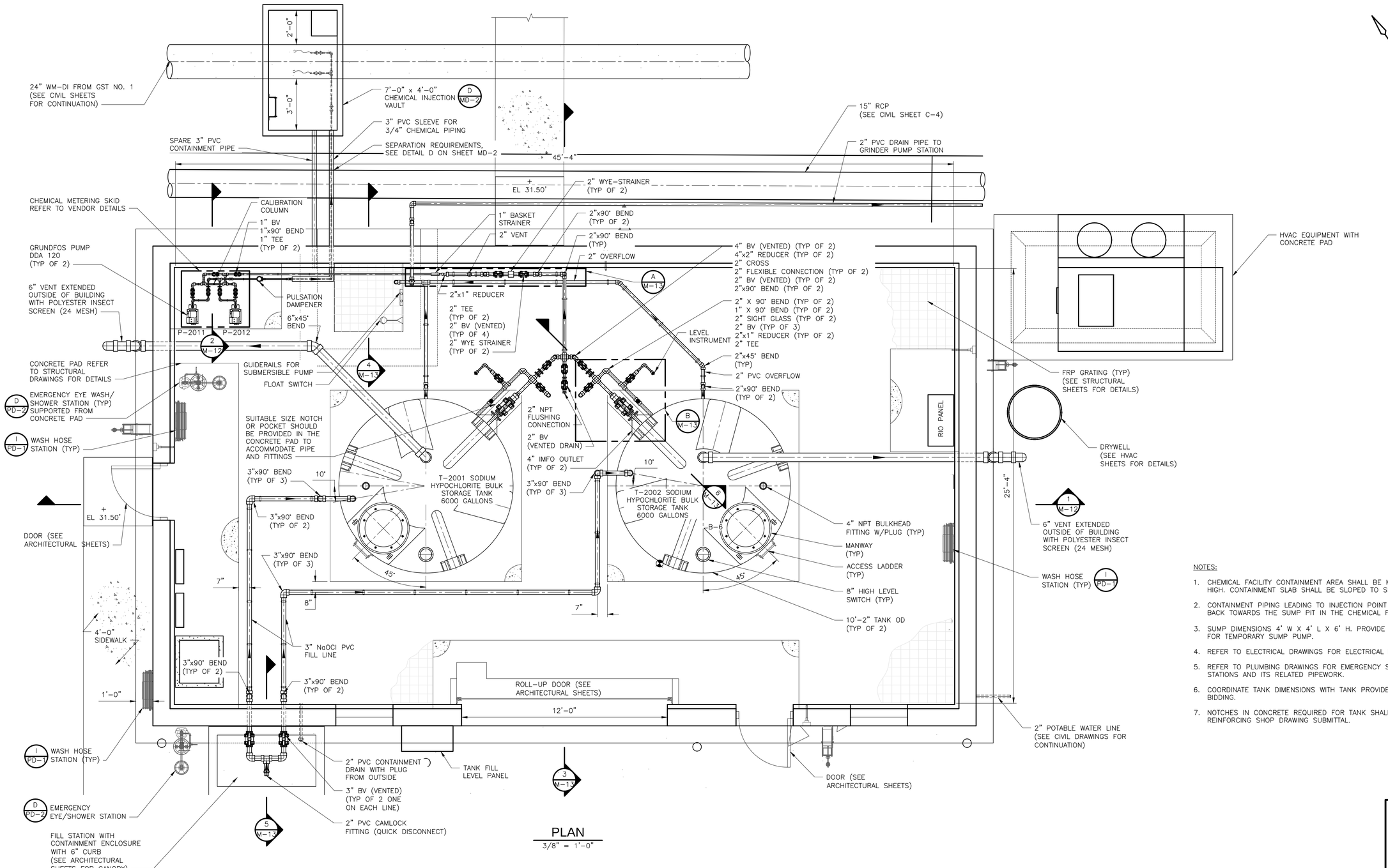
RIVERTOWN WATER TREATMENT PLANT PROJECT

HIGH SERVICE PUMP STATION
SECTIONS

PROJECT NO. 6103-237938
FILE NAME: M01OHSSC.DWG

SHEET NO.
M-10

ISSUED FOR BID



PLAN

3/8" = 1'-0"

3/8" = 1'- 0"

2 0 2 4

NOTES:

1. CHEMICAL FACILITY CONTAINMENT AREA SHALL BE MINIMUM 14-INCHES HIGH. CONTAINMENT SLAB SHALL BE SLOPED TO SUMP PIT.
2. CONTAINMENT PIPING LEADING TO INJECTION POINT SHALL BE SLOPED BACK TOWARDS THE SUMP PIT IN THE CHEMICAL FACILITY.
3. SUMP DIMENSIONS 4' W X 4' L X 6' H. PROVIDE TOGGLE ON/OFF SWITCH FOR TEMPORARY SUMP PUMP.
4. REFER TO ELECTRICAL DRAWINGS FOR ELECTRICAL PANEL DETAILS.
5. REFER TO PLUMBING DRAWINGS FOR EMERGENCY SHOWER AND HOSE STATIONS AND ITS RELATED PIPEWORK.
6. COORDINATE TANK DIMENSIONS WITH TANK PROVIDER SELECTED DURING BIDDING.
7. NOTCHES IN CONCRETE REQUIRED FOR TANK SHALL BE COORDINATED WITH REINFORCING SHOP DRAWING SUBMITTAL.

IOANNIS M. POLEMATIDIS LICENSE NO. PE75392 STATE OF FLORIDA PROFESSIONAL ENGINEER

DATE:
IOANNIS POLEMATIDIS
PE NO. 75392

REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: T. SREESHA
DRAWN BY: B. SMITA
SHEET CHK'D BY: D. PRAH
CROSS CHK'D BY: I. POLEMATIDIS
APPROVED BY: I. POLEMATIDIS
DATE: DECEMBER 2020

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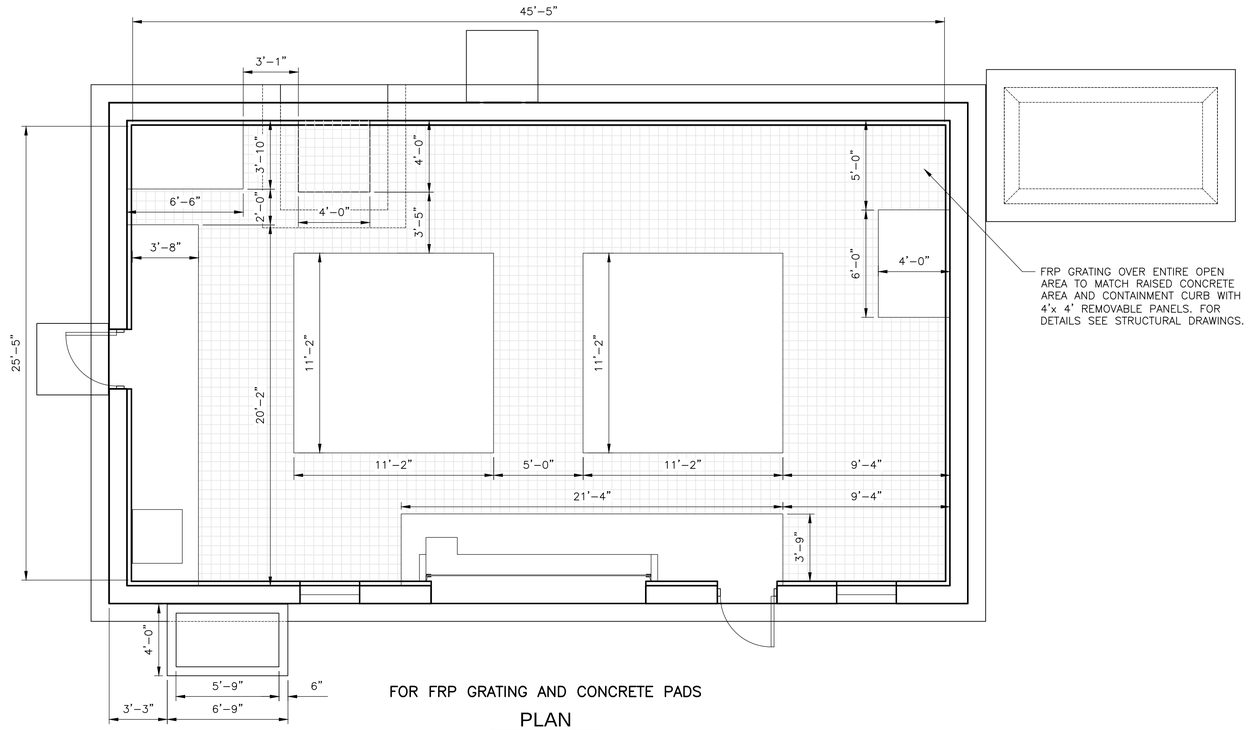
RIVERTOWN WATER TREATMENT PLANT PROJECT

CHEMICAL BUILDING PLAN

PROJECT NO. 6103-237938
FILE NAME: M011SHPL.DWG

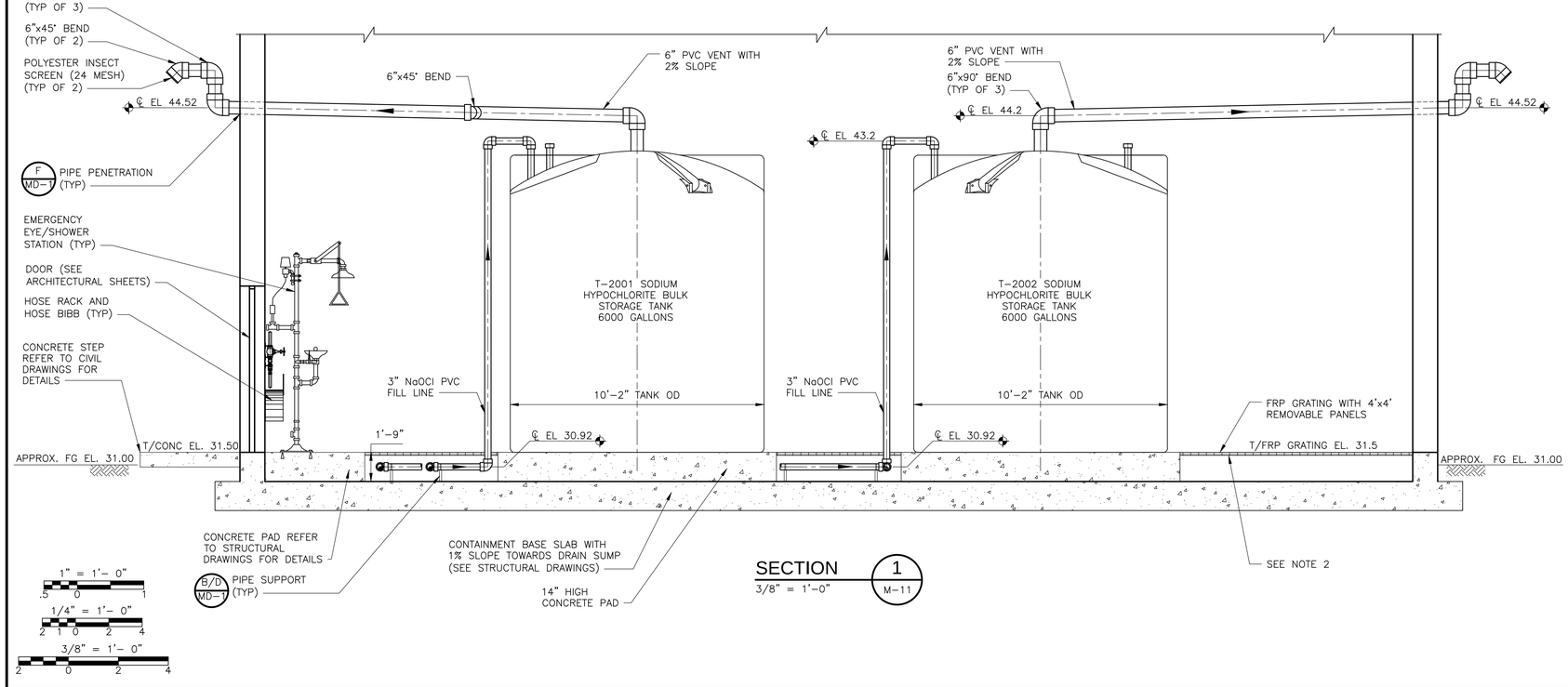
SHEET NO.
M-11

ISSUED FOR BID

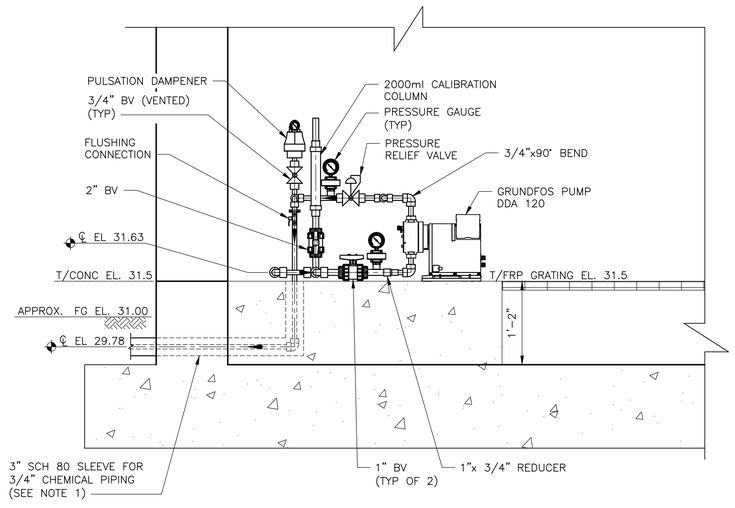


FOR FRP GRATING AND CONCRETE PADS

PLAN
1/4" = 1'-0"



SECTION 1
3/8" = 1'-0" — M-11



SECTION 2
1" = 1'-0" — M-11

NOTES
1. PROVIDE 3" SPARE SCH 80 CONTAINMENT PIPE. REFERENCE DETAIL D ON MD-2.
2. FRP GRATING AND SUPPORT FRAMING SHALL BE DESIGNED AND SUPPLIED BY FRP MANUFACTURER. SEE STRUCTURAL SHEET S-8 AND STRUCTURAL SPECIFICATIONS.

1" = 1'- 0"
.5 0 1
1/4" = 1'- 0"
2 1 0 2 4
3/8" = 1'- 0"
2 0 2 4

IOANNIS M. POLEMATIDIS LICENSE NO. PE75392 STATE OF FLORIDA PROFESSIONAL ENGINEER

DATE:
IOANNIS POLEMATIDIS
PE NO. 75392

REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: T. SREESHA
DRAWN BY: B. SMITA
SHEET CHK'D BY: D. PRAH
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APPROVED BY: I. POLEMATIDIS
DATE: DECEMBER 2020

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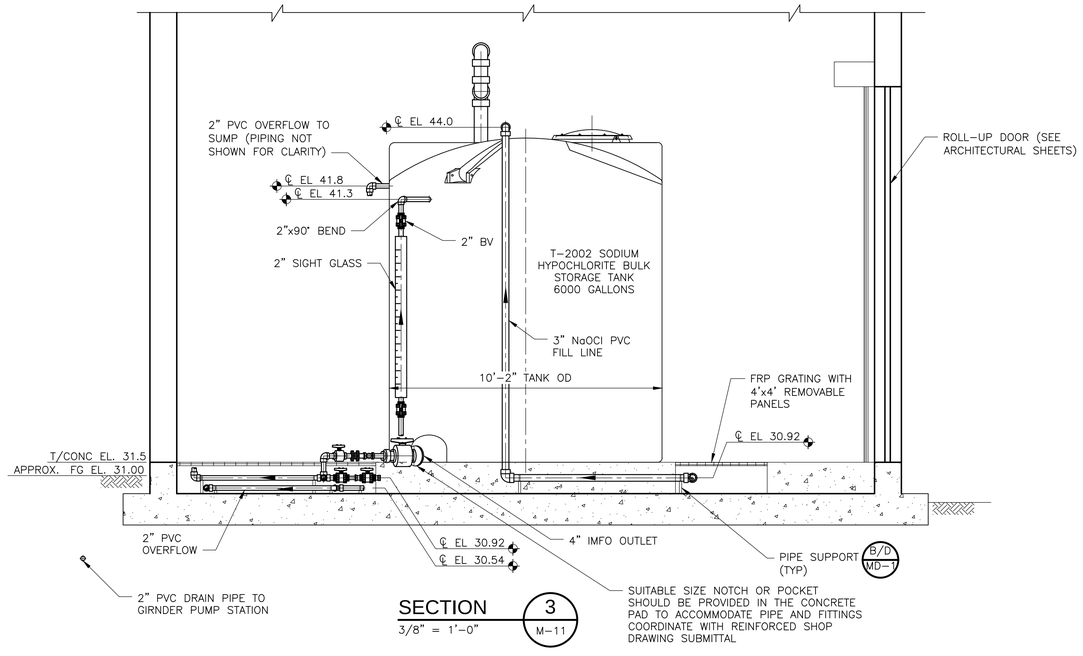
RIVERTOWN WATER TREATMENT PLANT PROJECT

CHEMICAL BUILDING SECTIONS

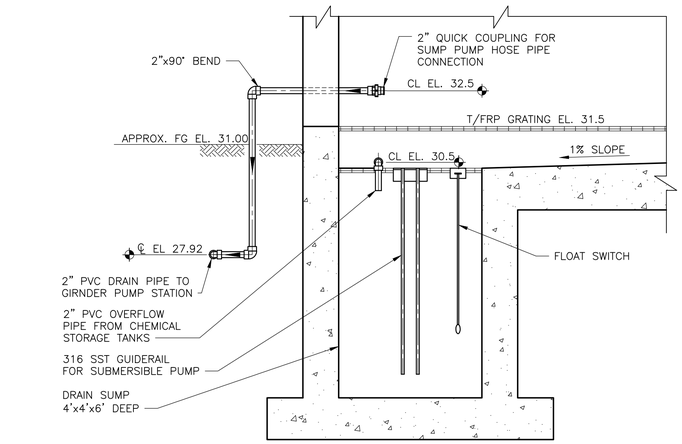
PROJECT NO. 6103-237938
FILE NAME: M012SHSS.DWG

SHEET NO.
M-12

ISSUED FOR BID



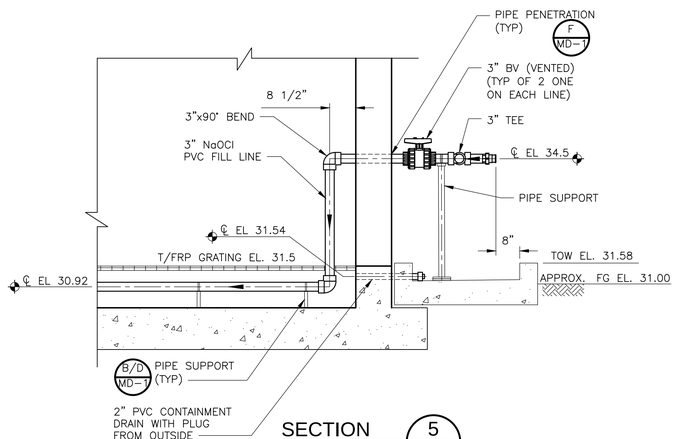
SECTION 3
3/8" = 1'-0"
M-11



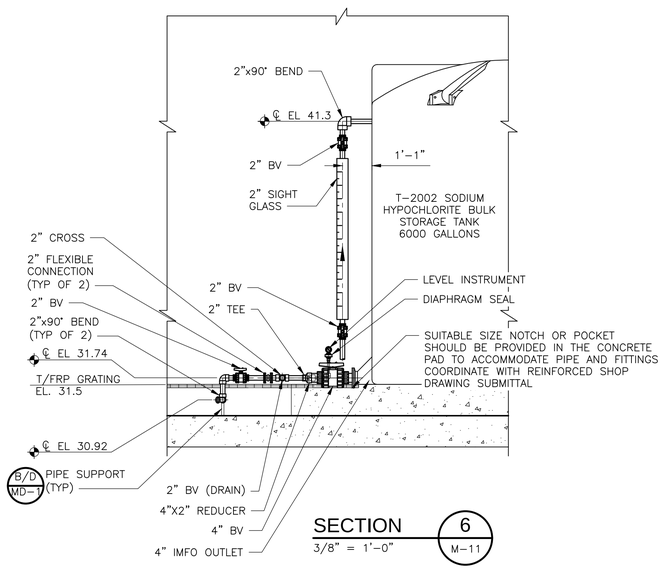
SECTION 4
1/2" = 1'-0"
M-11

NOTES:

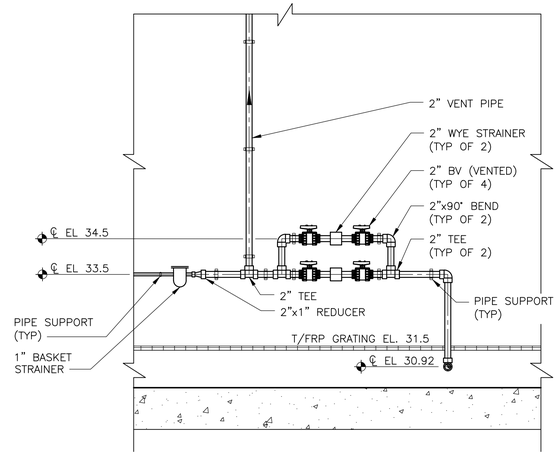
1. PORTABLE SUBMERSIBLE SUMP PUMP TO BE MODEL DS75 3/4 HP WITH RAILS, MANUFACTURED BY MYERS. MUST BE COMPATIBLE WITH 15 PERCENT SODIUM HYPOCHLORITE. PUMP DISCHARGE HEADER WILL HAVE CAMLOCK QUICK CONNECT INSTALLED.



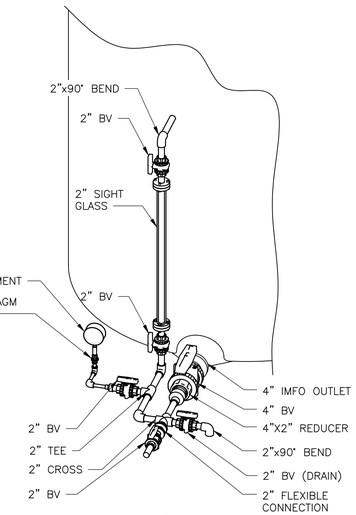
SECTION 5
1/2" = 1'-0"
M-11



SECTION 6
3/8" = 1'-0"
M-11



DETAIL A
1/2" = 1'-0"
M-11



(ISO VIEW)

DETAIL B
NTS
M-11
(TYP OF 2)

1/2" = 1'- 0"
1 0 1 2
3/8" = 1'- 0"
2 0 2 4

REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: T. SREESHA
DRAWN BY: B. SMITA
SHEET CHK'D BY: D. PRAH
CROSS CHK'D BY: I. POLEMATIDIS
APPROVED BY: I. POLEMATIDIS
DATE: DECEMBER 2020

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RIVERTOWN WATER TREATMENT PLANT PROJECT

CHEMICAL BUILDING SECTIONS

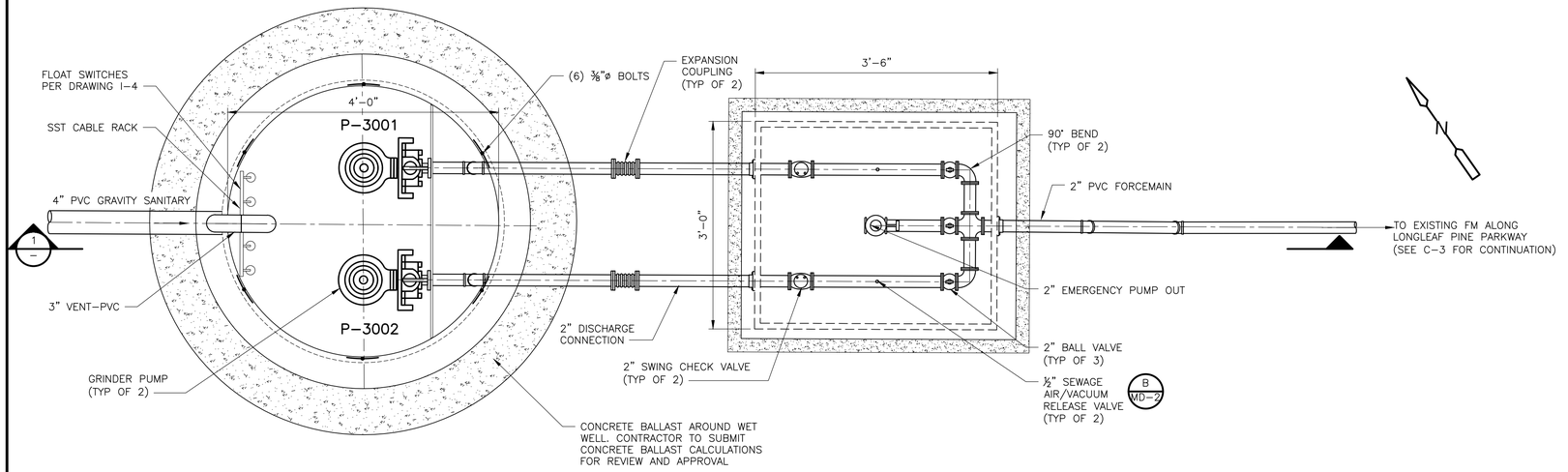
IOANNIS M. POLEMATIDIS LICENSE NO. PE75392 STATE OF FLORIDA PROFESSIONAL ENGINEER

DATE:
IOANNIS POLEMATIDIS
PE NO. 75392

PROJECT NO. 6103-237938
FILE NAME: M013SHSS.DWG

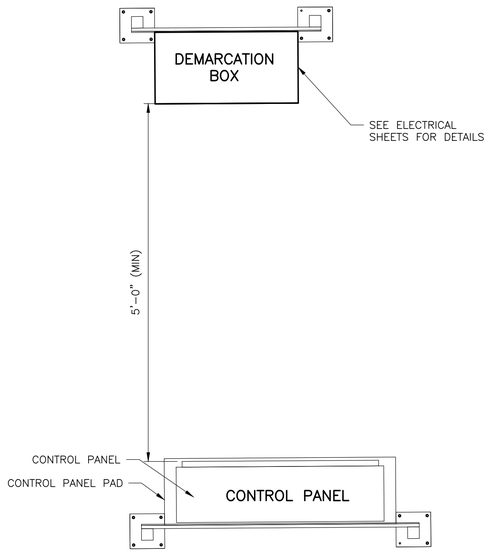
SHEET NO.
M-13

ISSUED FOR BID

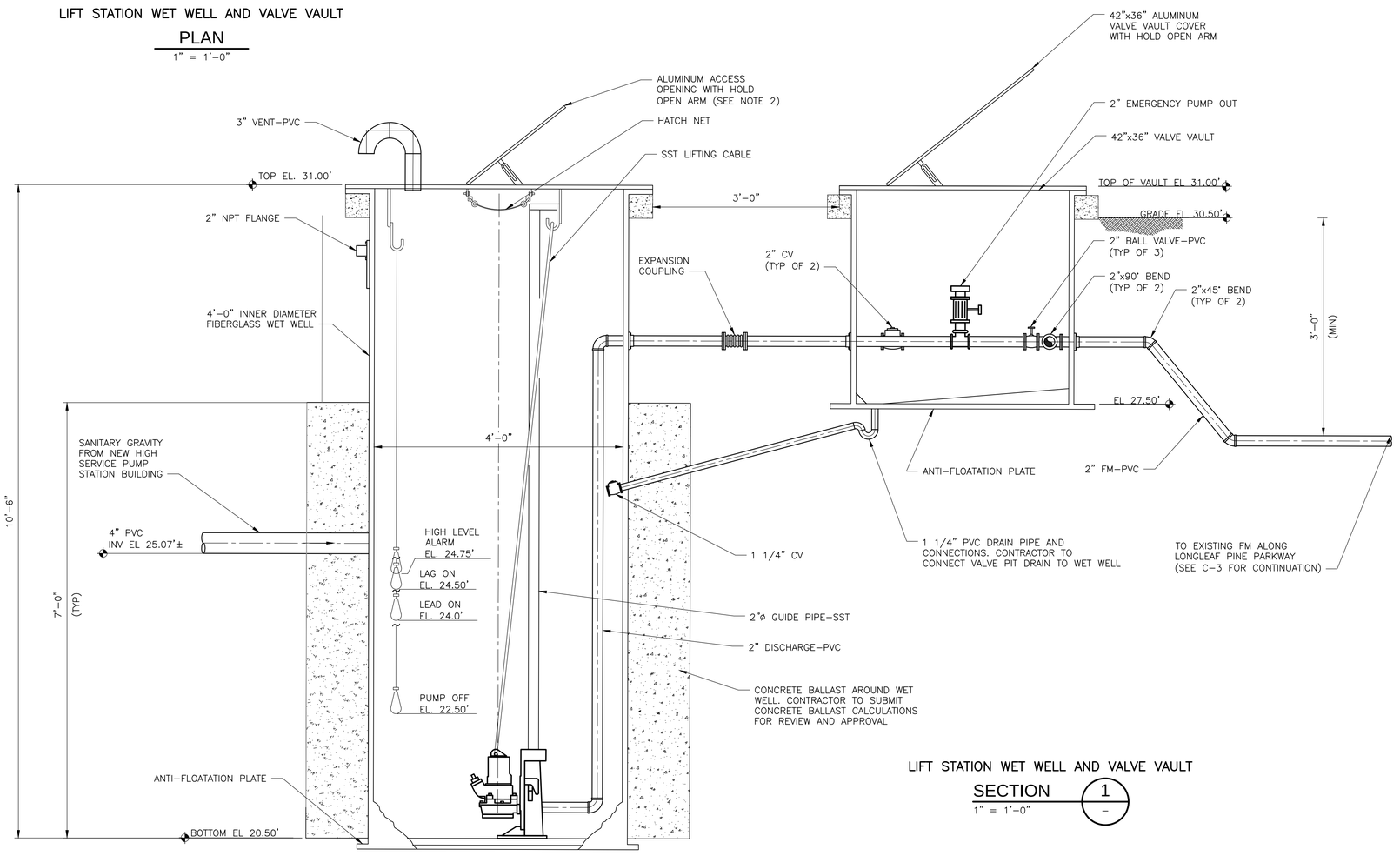


NOTES:

1. VENT AND ACCESS DOOR ARE NOT SHOWN ON THE GRINDER PUMP STATION PLAN VIEW FOR CLARITY.
2. CONTRACTOR SHALL COORDINATE ACCESS HATCH SIZE WITH THE GRINDER PUMP STATION SUPPLIER SO THE PUMPS CAN BE REMOVED FROM THE WET WELL FOR MAINTENANCE.
3. SEE SPECIFICATION 333216.13 FOR CONTROL PANEL REQUIREMENTS AND DETAILS ON ALTERNATING PUMPS, AUDIO AND VISUAL ALARMS, LIGHTNING AND SURGE PROTECTION.
4. SEE SPECIFICATION 333216.13 FOR PUMP SPECIFICATIONS AND DETAILS ON PUMP MAKE, MODEL, HORSEPOWER AND IMPELLER SIZE.
5. THE DEVELOPER OF RIVERTOWN AREA MAY INSTALL A WASTEWATER LIFT STATION NEAR THE SOUTHEAST CORNER OF THE WTP SITE AND MAY INSTALL A GRAVITY SEWER CONNECTION FOR WTP SANITARY AND PROCESS FLOWS. THIS CONNECTION WOULD NEGATE THE NEED TO INSTALL THE GRINDER PUMP STATION FOR THE WTP.



LIFT STATION WET WELL AND VALVE VAULT
PLAN
1" = 1'-0"



LIFT STATION WET WELL AND VALVE VAULT
SECTION 1
1" = 1'-0"

IOANNIS M. POLEMATIDIS LICENSE NO. PE75392 STATE OF FLORIDA PROFESSIONAL ENGINEER

DATE:
IOANNIS POLEMATIDIS
PE NO. 75392

REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: A. NESS
DRAWN BY: A. EDWARDS
SHEET CHK'D BY: D. PRAH
CROSS CHK'D BY: R. HUGUENARD
APPROVED BY: I. POLEMATIDIS
DATE: DECEMBER 2020

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JEA

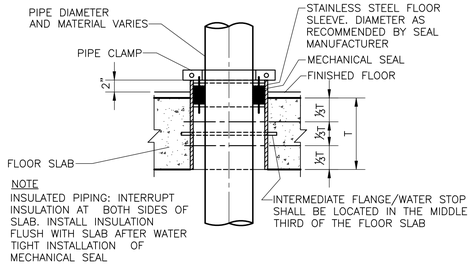
RIVERTOWN WATER TREATMENT PLANT PROJECT

SANITARY GRINDER PUMP STATION PLAN AND SECTION

PROJECT NO. 6103-237938
FILE NAME: M014PSPL.DWG

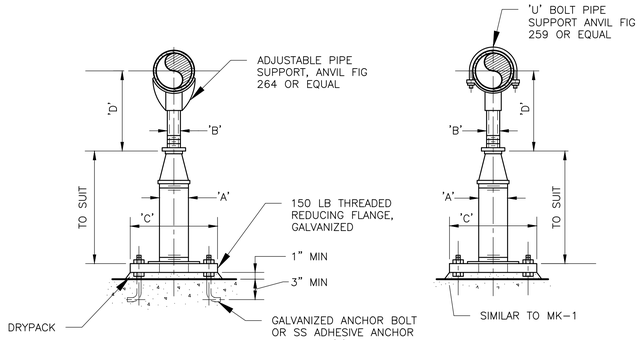
SHEET NO.
M-14

ISSUED FOR BID



FLOOR SLEEVE WITH MECHANICAL SEAL

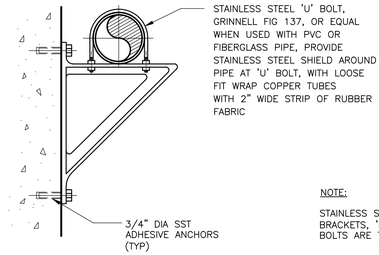
DETAIL A
NTS



ADJUSTABLE PIPE SUPPORT APPROX DIMENSIONS IN INCHES					
PIPE SIZE	A	B	C	D MIN	D MAX
2	2	1	9	8	11
3	2	1	9	8	11
3	2	1	9	8	12
4	3	2	9	10	14
6	3	2	9	11	15
8	3	2	9	13	16
10	3	2	9	14	18
12	3	2	9	15	19
14	4	3	11	18	20
16	4	3	11	19	22
18	6	3	13	21	24
20	6	3	13	23	25
24	6	4	13	26	28
30	6	4	13	29	31
32	6	4	13	30	32
36	6	4	13	32	34

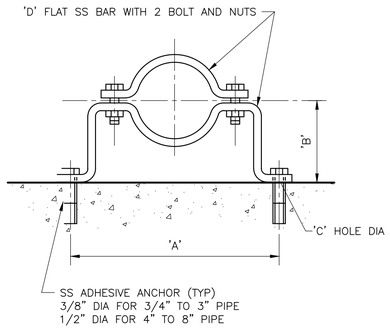
NOTES:

1. UNDER VALVES, METERS OR OTHER SPECIAL APPURTENANCES A FABRICATED SUPPORT PIECE MAY BE UTILIZED AS ACCEPTABLE TO ENGINEER



PIPE BRACKET

DETAIL C
NTS



DIMENSIONS IN INCHES					
PIPE DIA.	'A'	'B' SEE NOTE 3 BELOW	'C' HOLE DIA.	'D' FLAT BAR SIZE	LOAD RATING LBS.*
1-½	6-15/16	3	7/16	3/16 X 1-¼	300
2	8-5/16	3-3/16	7/16	¼ X 1-¼	500
2-½	8-7/8	3-7/16	7/16	¼ X 1-¼	500
3	9-⅛	3-¾	7/16	¼ X 1-¼	500

* SAFETY FACTOR OF 5

NOTES:

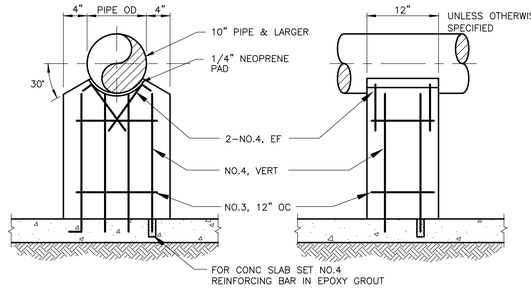
1. PIPE CLAMPS, WASHER AND SHIELD SHALL BE TYPE 316 STAINLESS STEEL. FOR CHEMICAL CONTAINMENT AREA, PIPE SUPPORT MATERIAL SHALL BE FRP.
2. WHEN USED WITH PVC PIPE PROVIDE STEEL SHIELD AROUND PIPE AT CLAMP, WITH LOOSE FIT.
3. FOR FLANGED PIPING INCREASE 'B' DIMENSION AS REQUIRED
4. ALL ANCHOR BOLTS SHALL BE TYPE 316 SS.

PIPE CLAMPS FOR INDIVIDUAL PIPES

DETAIL D
NTS

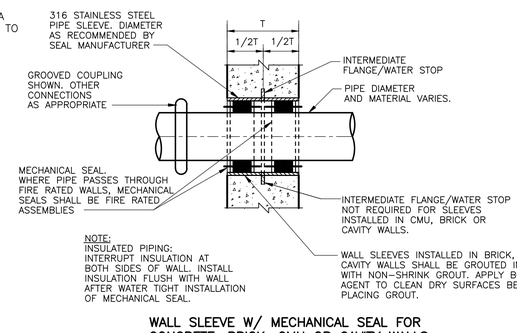
ADJUSTABLE PIPE SUPPORT

DETAIL B
NTS



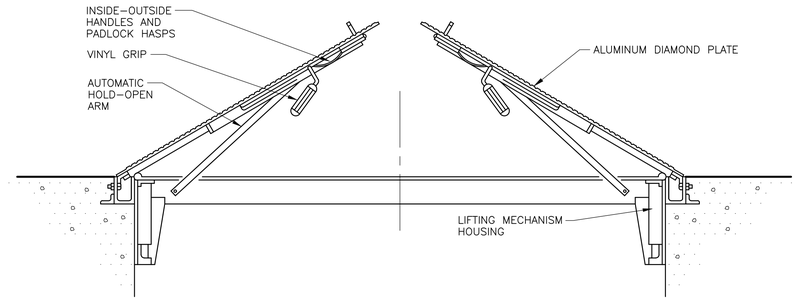
10" PIPE AND LARGER

DETAIL E
NTS



WALL SLEEVE W/ MECHANICAL SEAL FOR CONCRETE, BRICK, CMU OR CAVITY WALLS

DETAIL F
NTS



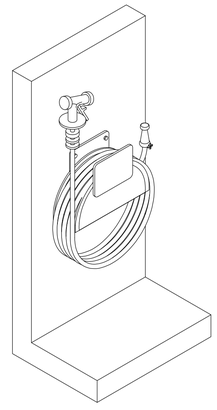
DOUBLE LEAF HATCH

DETAIL G
NTS

HATCH SCHEDULE					
NO	LOCATION	SIZE	LEAF	DRAIN	REMARKS
VAULT	CHEMICAL INJECTION VAULT	3.5'x4' EACH	DOUBLE	EXTERNAL	TRAFFIC RATED (H-20) HATCH. ROUTE DRAIN AWAY FROM GST.

HATCH NOTES:

1. ALUMINUM HATCHES TO BE SUPPLIED WITH TYPE 316 STAINLESS STEEL HARDWARE.
2. ALL HATCHES TO BE SUPPLIED WITH FALL PROTECTION GRATING SYSTEM.
3. REFER TO SPECIFICATION SECTION 083483 FOR ADDITIONAL REQUIREMENTS.
4. CONTRACTOR TO FIELD VERIFY DIMENSIONS FOR HATCH OPENINGS.
5. AREA OF FRAME IN CONTACT WITH CONCRETE TO BE PAINTED WITH BITUMINOUS COATING.



HANDRAIL MOUNTED WASH HOSE STATION

DETAIL H
NTS

REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: D. PRAH
DRAWN BY: A. EDWARDS
SHEET CHK'D BY: D. PRAH
CROSS CHK'D BY: R. HUGUENARD
APPROVED BY: I. POLEMATIDIS
DATE: DECEMBER 2020

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Jacksonville, FL 32256
Tel: (904) 731-7109
FL COA No. EB-0000020

JACOBS
245 RIVERSIDE AVE, SUITE 300
JACKSONVILLE, FLORIDA 32202
EB0000072 AAC001992 LC26000188

JEA

RIVERTOWN WATER TREATMENT PLANT PROJECT

MISCELLANEOUS MECHANICAL DETAILS I

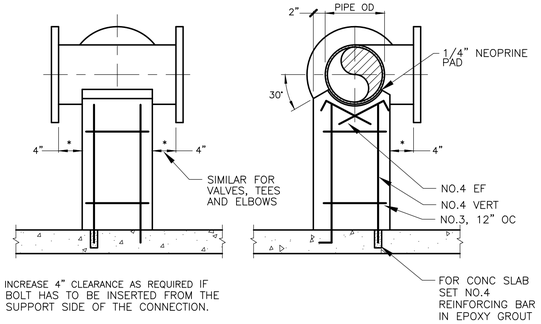
IOANNIS N. POLEMATIDIS LICENSE NO. PE75392 STATE OF FLORIDA PROFESSIONAL ENGINEER

DATE:
IOANNIS POLEMATIDIS
PE NO. 75392

PROJECT NO. 6103-237938
FILE NAME: MD01MDDT.DWG

SHEET NO.
MD-1

ISSUED FOR BID

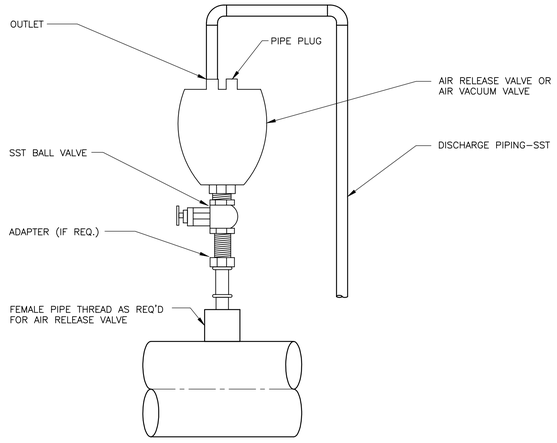


* INCREASE 4" CLEARANCE AS REQUIRED IF BOLT HAS TO BE INSERTED FROM THE SUPPORT SIDE OF THE CONNECTION.

8" PIPE AND SMALLER

DETAIL A

NTS



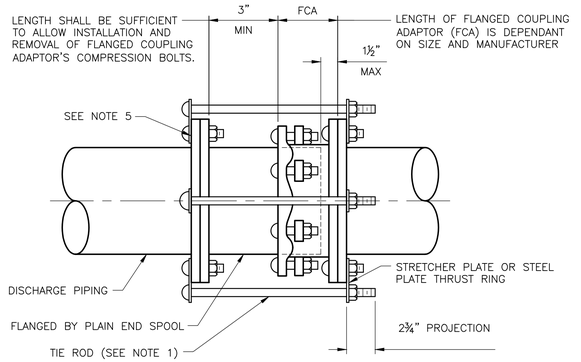
NOTES

1. ALL PIPE AND FITTINGS ON AIR ASSEMBLY VALVE SHALL BE 316 SST.
2. SEE SPECIFICATION SECTION 15100 FOR ADDITIONAL REQUIREMENTS.
3. ALL PIPE AND FITTINGS SHALL BE SAME NOMINAL SIZE AS THE ASSOCIATED AIR VALVE ASSEMBLY.
4. AN AIR RELEASE VALVE IS SHOWN IN THIS DETAIL.

AIR ASSEMBLY VALVE

DETAIL B

NTS



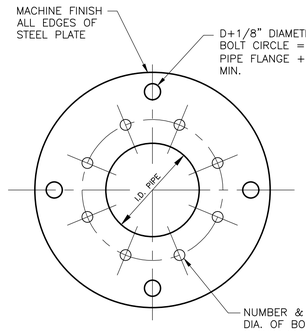
FOR FLANGED COUPLING ADAPTOR

NOTES:

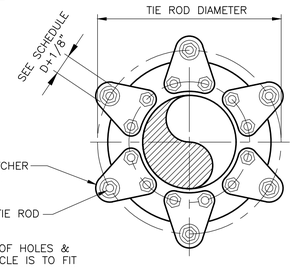
1. PROVIDE NUMBER OF TIE RODS PER SCHEDULE. EVENLY SPACE INSTALLATION OF THE TIE RODS. LENGTH OF TIE RODS TO BE DETERMINED BY CONTRACTOR BASED ON SIZE AND FLANGED COUPLING ADAPTOR AND FINAL LENGTH OF SPOOL PIECE.
2. TIE ROD SCHEDULE IS VALID FOR PRESSURES UP TO 150 PSI. FOR PRESSURES OVER 150 PSI SEE AWWA MANUAL 11.
3. PROVIDE STRETCHER PLATE OR STEEL PLATE THRUST RING FOR ATTACHMENT OF TIE RODS. FOR SIZE SEE TABLE.
4. MATERIALS – HARNESS RODS: ASTM A–307 HOT DIP GALVANIZED.
   STRETCHER PLATE: ASTM A36 STEEL HOT DIP GALVANIZED.
   FLEXIBLE COUPLING: PER SPECIFICATIONS
5. WELD TO DEVELOP MIN. THE STRENGTH OF PIPE. REPAIR COATINGS AS REQUIRED.
6. WRAP ALL COUPLING BURIED BELOW GRADE IN PROTECTIVE TAPE.

TIE ROD SCHEDULE FOR HARNESSED JOINTS

PIPE DIAMETER (IN)	TIE ROD DIAMETER (D) (IN)	NUMBER OF TIE RODS	STRETCHER PLATE THICKNESS (IN)
6	5/8	2	3/8
8	5/8	2	3/8
10	5/8	2	3/8
12	3/4	2	3/8
14	3/4	2	3/8
16	7/8	2	1/2
18	1	2	1/2
20	1	2	1/2
24	1–1/8	4	1/2
30	1–1/8	4	1/2
36	1–1/4	4	5/8
42	1–1/2	4	3/4
48	1–5/8	4	3/4
54	1–5/8	6	3/4



SECTION STEEL PLATE THRUST RING

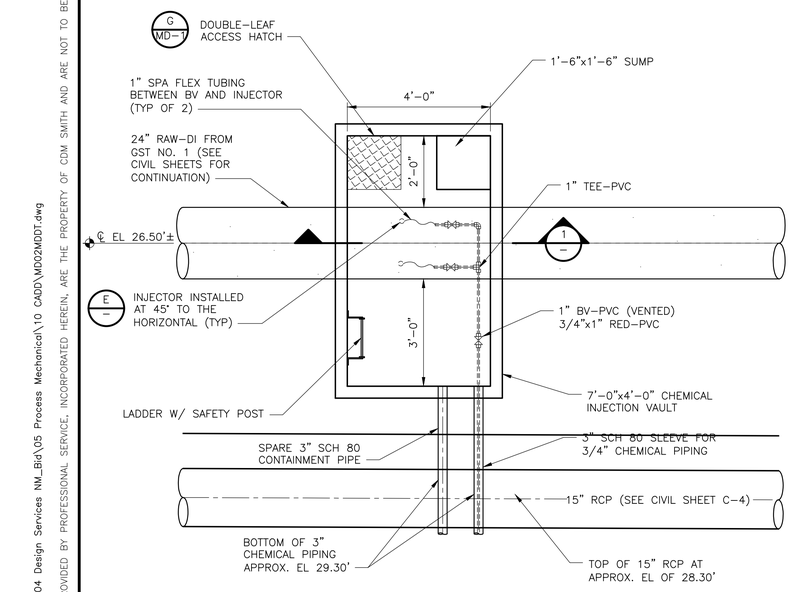


SECTION STRETCHER PLATE

HARNESSED FLANGE ADAPTER COUPLING (HFAC)

DETAIL C

NTS



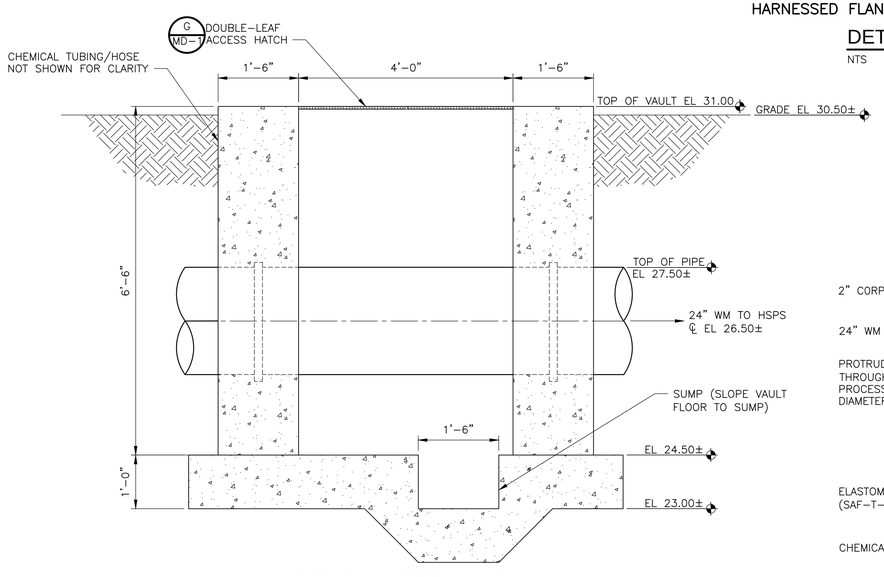
CHEMICAL INJECTION VAULT (PLAN VIEW)

DETAIL D

1/4" = 1'–0"

NOTES:

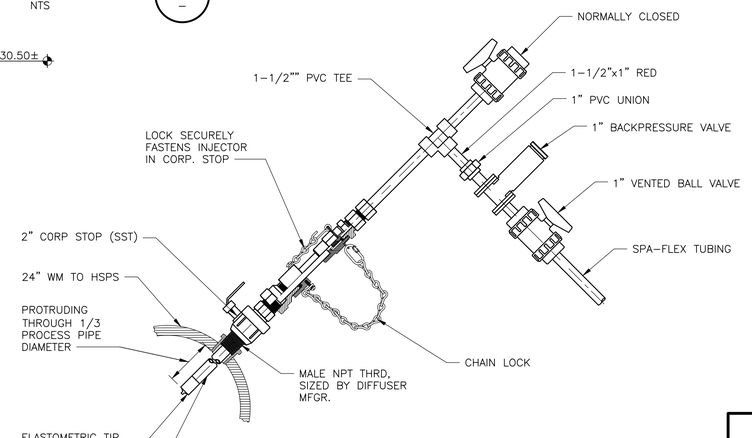
VAULT TO BE CONSTRUCTED OF PRECAST CONCRETE ENVIRONMENTAL STRUCTURES, AS REQUIRED BY ASTM C913. THE INTERIOR GEOMETRY AND DIMENSIONS SHALL BE AS NOTED ON THE DRAWING.



CHEMICAL INJECTION VAULT

SECTION 1

3/4" = 1'–0"



CHEMICAL INJECTOR

DETAIL E

NTS

NOTE:

1. PROVIDE 1 1/2" CHEMICAL INJECTION BY HYDRO INSTRUMENTS W/ 2" CORP STOP.

IOANNIS M. POLEMATIDIS LICENSE NO. PE75392 STATE OF FLORIDA PROFESSIONAL ENGINEER

DATE:
IOANNIS POLEMATIDIS
PE NO. 75392

REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: D. PRAH
DRAWN BY: A. EDWARDS
SHEET CHK'D BY: D. PRAH
CROSS CHK'D BY: R. HUGUENARD
APPROVED BY: I. POLEMATIDIS
DATE: DECEMBER 2020

CDM Smith
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Jacksonville, FL 32256
Tel: (904) 731-7109
FL COA No. EB-0000020

JACOBS
245 RIVERSIDE AVE, SUITE 300
JACKSONVILLE, FLORIDA 32202
EB0000072 AAC001992 LC26000188

JEA

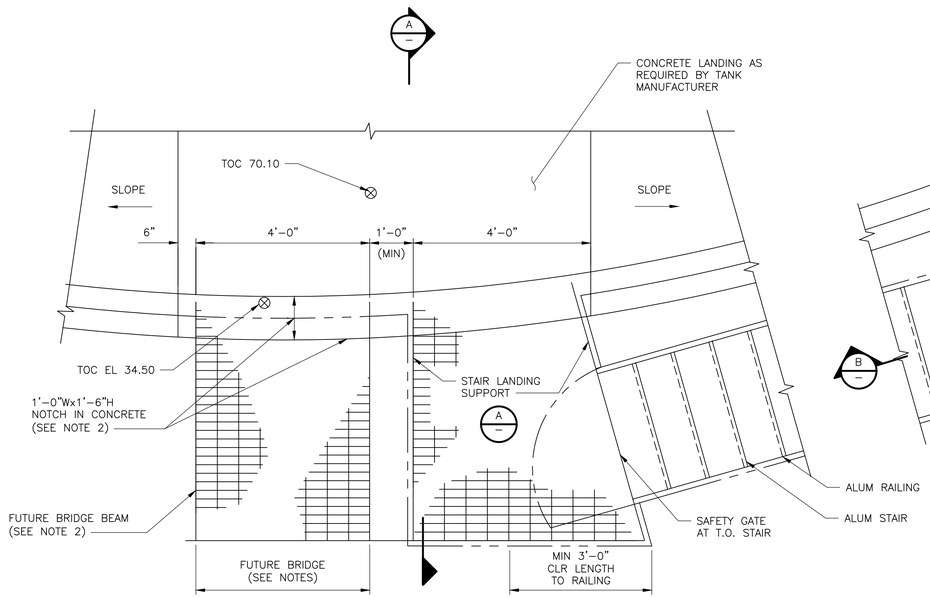
RIVERTOWN WATER TREATMENT PLANT PROJECT

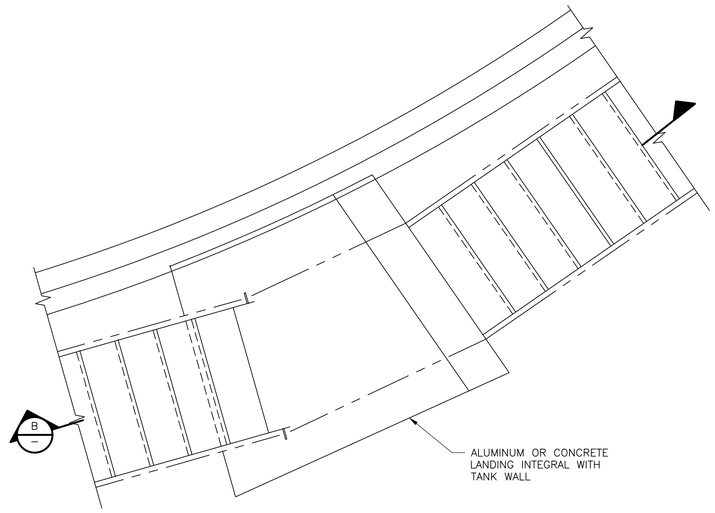
MISCELLANEOUS MECHANICAL DETAILS II

PROJECT NO. 6103–237938
FILE NAME: MD02MDDT.DWG

SHEET NO.
MD-2

ISSUED FOR BID



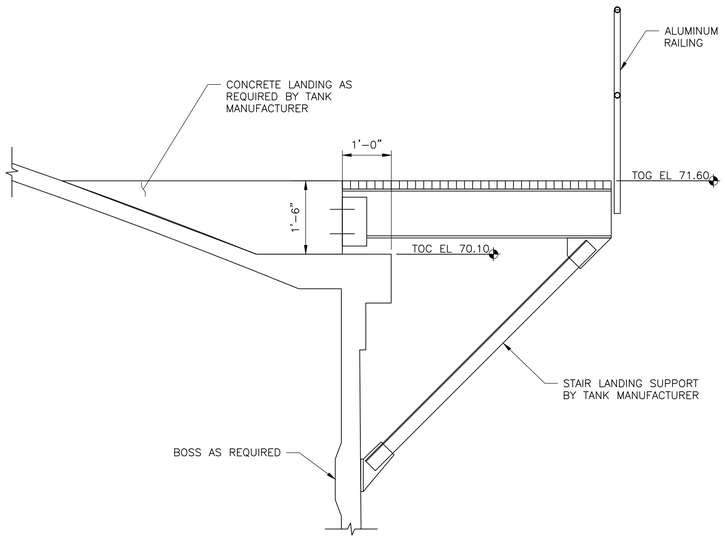


ALUMINUM STAIRWAY

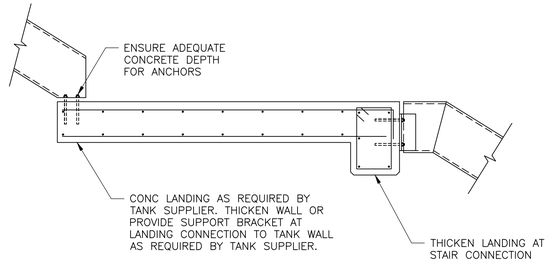
DETAIL A
NTS M–2

NOTES:

1. PROVIDE GRATING OR REMOVABLE CONCRETE FILL WHERE FUTURE BRIDGE TO BE LOCATED. ALTERNATIVELY, ROUTE RAILING AROUND TEMPORARY NOTCH.
2. TANK MANUFACTURER TO MAKE ALLOWANCE FOR FUTURE BRIDGE BEAM CONNECTION AT CONCRETE NOTCH.



SECTION A
NTS –



SECTION B
NTS –

IOANNIS M. POLEMATIDIS LICENSE NO. PE75392 STATE OF FLORIDA PROFESSIONAL ENGINEER

DATE:
IOANNIS POLEMATIDIS
PE NO. 75392

REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: A. NESS
DRAWN BY: A. EDWARDS
SHEET CHK'D BY: D. PRAH
CROSS CHK'D BY: R. HUGUENARD
APPROVED BY: I. POLEMATIDIS
DATE: DECEMBER 2020

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EB0000072 AAC001992 LC26000188

JEA

RIVERTOWN WATER TREATMENT PLANT PROJECT

GROUND STORAGE TANK STAIR DETAILS

PROJECT NO. 6103–237938
FILE NAME: MD03GSSD.DWG

SHEET NO.
MD-3

ISSUED FOR BID

HVAC SYMBOLS

T	THERMOSTAT
HT	HIGH TEMPERATURE SWITCH
LT	LOW TEMPERATURE SWITCH
SD	SMOKE DETECTOR
FS	FLOW SENSOR
H	HUMIDISTAT
MS	MOTION SENSOR
WT	WALL TIMER
BG	BREAK GLASS SWITCH
WS	WALL SWITCH
M	MOTOR OPERATED DAMPER
	EXTERIOR ALARM STATION
	INTERIOR ALARM STATION
CD	CONTROL DAMPER
FD	FIRE DAMPER
SD	SMOKE ACTUATED FIRE DAMPER
FC	FLEXIBLE CONNECTION
	ELBOW WITH TURNING VANES
EG	EXHAUST GRILLE
ER	EXHAUST REGISTER
RG	RETURN GRILLE

NOTE:

1. SYMBOLS AND ABBREVIATIONS SHOWN ON THE SHEET ARE GENERIC AND MAY NOT HAVE BEEN USED ON THE PROJECT.

HVAC SYMBOLS

SR	SUPPLY REGISTER
	SUPPLY DUCT
	RETURN/EXHAUST DUCT
DG	DOOR GRILLE
TG	TRANSFER GRILLE
RG	TRANFER DUCT
	SHOE-TAP
	DAMPER-EXTRACTOR DUCT CONNECTION
	CEILING DIFFUSER - TYPE VARIES
EF	ROOF MOUNTED EXHAUST FAN
EF	WALL MOUNTED EXHAUST FAN
VAV	VARIABLE AIR VOLUME REGULATOR W/ OUTLETS
	ROUND FLEXIBLE INSULATED DUCT
	SHEET METAL DUCT
EUH	ELECTRIC UNIT HEATER
EDH	ELECTRIC DUCT HEATER
ERU	ENERGY RECOVERY UNIT
WT	WT BOX WITH TRANSITION

HVAC ABBREVIATIONS

A	AIR
AABC	ASSOCIATED AIR BALANCE COUNCIL
ACCU	AIR COOLED CONDENSING UNIT
AD	ACCESS DOOR
AFF	ABOVE FINISHED FLOOR
AHU	AIR HANDLING UNIT
AL	ALUMINUM
APU	AIR PURIFICATION UNIT
AR	ACID RESISTING
ASHRAE	AMERICAN SOCIETY OF HEATING, REFRIGERATING, AND AIR-CONDITIONING ENGINEERS
ASME	AMERICAN SOCIETY OF MECHANICAL ENGINEERS
ATC	AUTOMATIC TEMPERATURE CONTROL
BDD	BACKDRAFT DAMPER
BEL	BELOW
BLDG	BUILDING
BS	BIRD SCREEN
BTU	BRITISH THERMAL UNITS
C	CONDENSATE
CD	CONTROL DAMPER
CENT	CENTRIFUGAL
CFM	CUBIC FEET PER MINUTE
CLG	CEILING
CONC	CONCRETE
CONN	CONNECTION
CW	CHILLED WATER
CWR	CHILLED WATER RETURN
CWS	CHILLED WATER SUPPLY
DB	DRY BULB
DG	DOOR GRILLE
DHU	DEHUMIDIFICATION UNIT
DIA	DIAMETER
DISC	DISCHARGE
DN	DOWN
DOAS	DEDICATED OUTSIDE AIR SYSTEM
DPR	DAMPER
DS	DISCONNECT SWITCH
EA	EACH
EDH	ELECTRIC DUCT HEATER
EER	ENERGY EFFICIENCY RATION
EF	EXHAUST FAN
EG	EXHAUST GRILLE
ER	EXHAUST REGISTER
ERU	ENERGY RECOVERY UNIT
ESP	EXTERNAL STATIC PRESSURE
EUH	ELECTRIC UNIT HEATER
EVAP	EVAPORATOR
FC	FLEXIBLE CONNECTION
FD	FIRE DAMPER
FIN	FINISH
FL	FLOOR
FLA	FULL LOAD AMPS
FRP	FIBERGLASS REINFORCED PLASTIC
FT	FEET
FT^2	SQUARE FEET
GA	GAUGE
GALV/GS	GALVANIZED
GFC	GAS FIRED CHILLER
GPH	GALLONS PER HOUR
GPM	GALLONS PER MINUTE
HG	HOT GAS
HP	HORSEPOWER
HR	HOUR

HVAC ABBREVIATIONS

HW	HOT WATER
KW	KILOWATT
LD	LINEAR DIFFUSER
LIQ	LIQUID
LVR	LOUVER
MAU	MAKE-UP AIR UNIT
MBH	THOUSANDS OF BRITISH THERMAL UNITS PER HOUR
MCA	MAXIMUM CURRENT AMPS
MCC	MOTOR CONTROL CENTER
MFR	MANUFACTURER
MOD	MOTOR OPERATED DAMPER
MS	MOTION SENSOR
MTD	MOUNTED
MTG	MOUNTING
NOM	NOMINAL
NTS	NOT TO SCALE
O/A	OUTSIDE AIR
OBD	OPPOSED BLADE DAMPER
OSA	OUTSIDE AIR
PAC	PACKAGED AIR CONDITIONING UNIT
PBD	PARALLEL BLADE DAMPER
PCD	PERFORATED CEILING DIFFUSER
PCF	POUNDS PER CUBIC FOOT
PPM	PARTS PER MILLION
PROP	PROPELLER
PSI	POUNDS PER SQUARE INCH
PVC	POLYVINYL CHLORIDE
R	REFRIGERANT
R/A	RETURN AIR
RG	RETURN GRILLE
RM	ROOM
RPM	REVOLUTIONS PER MINUTE
S/A	SUPPLY AIR
SAD	SUPPLY AIR DIFFUSER
SD	SMOKE DETECTOR
SEER	SEASONAL ENERGY EFFICIENCY RATIO
SHT	SHEET
SM	SHEET METAL
SMACNA	SHEET METAL AND AIR CONDITIONING CONTRACTORS NATIONAL ASSOCIATION
SP	STATIC PRESSURE
SR	SUPPLY REGISTER
SS	STAINLESS STEEL
ST	STEAM
STD	STANDARD
SUCT	SUCTION
SW	SWITCH
TDH	TOTAL DISCHARGE HEAD
TEMP	TEMPERATURE
TG	TRANSFER GRILLE
TSP	TOTAL STATIC PRESSURE
TV	TURNING VANES
TYP	TYPICAL
UH	UNIT HEATER
UL	UNDERWRITERS LABORATORY
VAP	VAPOR
VRF	VARIABLE REFRIGERANT FLOW
VVT	VARIABLE VOLUME TERMINAL
W/	WITH
WB	WET BULB
WG	WATER GAUGE
WT	AS IN WT BOX
WTR	WATER

HVAC NOTES

1. HVAC EQUIPMENT DIMENSIONS, LOCATIONS, DUCTWORK AND PIPING SYSTEM LAYOUTS ARE BASED ON EQUIPMENT SELECTED BY THE ENGINEER. IF THE CONTRACTOR PROPOSES TO FURNISH EQUIPMENT THAT REQUIRES AN ARRANGEMENT OR SPACE DIFFERING FROM THAT INDICATED ON THE DRAWINGS, OR SPECIFIED, THE CONTRACTOR SHALL PREPARE AND SUBMIT TO THE ENGINEER, FOR APPROVAL, DETAILED ARCHITECTURAL, STRUCTURAL, MECHANICAL, PLUMBING, INSTRUMENTATION, HVAC AND ELECTRICAL DRAWINGS AND EQUIPMENT LISTS SHOWING ALL NECESSARY CHANGES AND EMBODYING ALL FEATURES OF THE EQUIPMENT THE CONTRACTOR PROPOSES TO FURNISH. THIS INFORMATION SHALL INCLUDE BUT SHALL NOT BE LIMITED TO PLANS, SECTIONS, DETAILS, AND SCHEMATICS OF ALL APPURTENANCES REQUIRED. SUCH CHANGES, IF APPROVED BY THE ENGINEER, SHALL BE AT NO EXTRA COST TO THE OWNER. THE CONTRACTOR SHALL ASSUME THE COST OF, AND THE RESPONSIBILITY FOR, SATISFACTORILY ACCOMPLISHING ALL THE NECESSARY CHANGES CORRESPONDING TO THE DIMENSIONS AND CHARACTERISTICS OF THE EQUIPMENT SUBMITTED AND APPROVED BY THE ENGINEER. REFER TO SPECIFICATIONS FOR FURTHER DETAILS.
2. SIZES OF EQUIPMENT PADS INDICATED ON THE DRAWINGS ARE APPROXIMATE. EXACT DIMENSIONS SHALL BE DETERMINED BY THE CONTRACTOR FOR THE EQUIPMENT FURNISHED. ALL FLOOR MOUNTED EQUIPMENT SHALL BE SET ON CONCRETE PADS CONFORMING TO DETAILS SHOWN ON THE STRUCTURAL DRAWINGS.
3. DIELECTRIC COUPLINGS, FLANGES OR UNIONS SHALL BE INSTALLED AT ALL CONNECTIONS OF COPPER PIPE TO OTHER TYPES OF METALLIC PIPING.
4. HVAC PIPING AND DUCTWORK DRAWINGS DO NOT SHOW ALL DRAINS, VENTS, OFFSETS AND FITTINGS ETC. REQUIRED FOR THE COMPLETE SYSTEM. SMALL PIPING IS SHOWN APPROXIMATELY TO SCALE BUT NOT EVERY FITTING AND OFFSET IS SHOWN. SOME VALVES AND APPURTENANCES MAY BE OMITTED FOR THE SAKE OF CLARITY. THE CONTRACTOR SHALL FURNISH, INSTALL AND TEST ALL HVAC SYSTEMS SHOWN ON THE DRAWINGS AND DETAILS, AND/OR AS DEFINED IN THE SPECIFICATIONS TO PROVIDE THE COMPLETE SYSTEM.
5. UNLESS OTHERWISE SHOWN ON THE DRAWING, ALL WALL PENETRATIONS SHALL BE AS SHOWN ON THE WALL PENETRATION DETAILS. ABOVE GROUND EXTERIOR WALL AND ROOF PENETRATIONS SHALL BE AS SHOWN ON THE ARCHITECTURAL DRAWINGS. IF APPROVED BY THE ENGINEER, THE CONTRACTOR MAY SUBSTITUTE ALTERNATE METHODS PROVIDING THEY MEET INTENDED DESIGN REQUIREMENTS.
6. NOT ALL AND ONLY CERTAIN TYPES OF SUPPORTS ARE SHOWN ON THE HVAC DRAWINGS. UNLESS OTHERWISE DETAILED ON THE DRAWINGS ALL PIPE AND DUCT SUPPORTS SHALL BE DESIGNED, FURNISHED AND INSTALLED BY THE CONTRACTOR AS SPECIFIED AND TO THE APPROVAL OF THE ENGINEER.
7. FOR ALL ROOF MOUNTED EQUIPMENT, MAINTAIN A MINIMUM OF 10'-0" CLEARANCE FROM ANY ROOF EDGE UNLESS GUARDRAILS HAVE BEEN PROVIDED.
8. UNLESS OTHERWISE NOTED, MOUNT ALL DUCTWORK AND PIPING TIGHT TO STRUCTURE. MAINTAIN A MINIMUM 7'-6" CLEAR HEIGHT BELOW DUCTWORK, INCLUDING SUPPORTS. COORDINATE INSTALLATION OF DUCTWORK WITH ALL OTHER NEW AND EXISTING EQUIPMENT, PIPING, CONDUIT, ETC.
9. SEE ELECTRICAL DRAWINGS FOR AREA ELECTRICAL/CODE RATING. ALL HVAC EQUIPMENT SHALL COMPLY WITH THE REQUIREMENTS OF THOSE AREA CLASSIFICATIONS.

OUTDOOR AIR CALCULATIONS

BUILDING	SPACE	AREA (SQ. FT.)	VOLUME (CU. FT.)	ASHRAE 62.1 REQ'D VENTILATION RATE	ASHRAE 62.1 REQ'D VENTILATION	PROVIDED VENTILATION RATE	PROVIDED VENTILATION	VENTILATION PROVIDED BY	OUTDOOR AIR PROVIDED BY	ADDITIONAL VENTILATION PROVIDED BY	ADDITIONAL OUTDOOR AIR PROVIDED BY
CHEMICAL BUILDING	CHEMICAL BUILDING	1,151	22,249	1 CFM/SQ FT.	1,151 CFM	1.88 CFM/SQ FT.	2,000 CFM	EF-CB-1	MAU-CB-1	EF-CB-2 AND EF-CB-3	INTAKE LOUVERS
HIGH SERVICE PUMP STATION	ADMINISTRATION AREAS	667	8,152	0.06 CFM/SQ FT. + 5 CFM/PERSON	50 CFM	SEE NOTES 3 AND 4	75 CFM SEE NOTE 4	AHU-PS-3	AHU-PS-3	N/A	N/A
HIGH SERVICE PUMP STATION	ELECTRICAL ROOM	N/A	N/A	SEE NOTE 2	SEE NOTE 2	N/A	N/A	N/A	N/A	N/A	N/A
HIGH SERVICE PUMP STATION	PUMP ROOM	2,265	48,690	0.06 CFM/SQ. FT.	136 CFM	16.3 AC/HR	13,200 CFM	EF-PS-1, EF-PS-2, EF-PS-3	INTAKE LOUVERS	N/A	N/A
HIGH SERVICE PUMP STATION	TOILET ROOM	N/A	N/A	70 CFM/WC	70 CFM (1-WC)	N/A	75 CFM	EF-PS-4	AHU-PS-3	N/A	N/A

NOTES:

1. OUTDOOR AIR CALCULATIONS PROVIDED PER ASHRAE STANDARD 62 ARE PROVIDED FOR INFORMATIONAL AND CODE REVIEW PURPOSES ONLY. THE CALCULATIONS DO NOT CHANGE THE CONTRACT DOCUMENTS.
2. THIS AREA IS NORMALLY UNOCCUPIED AND IS NOT COVERED UNDER THE SCOPE OF ASHRAE 62.1.
3. TOTAL PEOPLE = 2; CFM = (5 CFM x 2 PEOPLE) + (0.06 CFM/SQ. FT x 667 SQ. FT) = 50 CFM
4. TOTAL OUTSIDE AIR REQUIRED = 50 CFM
   TOTAL OUTSIDE AIR PROVIDED = 75 CFM

ASHRAE - AMERICAN SOCIETY OF HEATING, REFRIGERATING, AND AIR-CONDITIONING ENGINEERS
AC/HR - AIR CHANGES PER HOUR
CFM/SQ. FT. - CUBIC FEET PER MINUTE PER SQUARE FOOT
N/A - NOT APPLICABLE
WC = WATER CLOSET

ENERGY CODE NOTES

1. THE ELECTRICAL ROOM IS A NORMALLY UNOCCUPIED AREA ON A WATER TREATMENT PLANT THAT HOUSES EQUIPMENT ESSENTIAL TO THE WATER TREATMENT PROCESS. THE ELECTRICAL ROOM IS EXEMPT FROM THE REQUIREMENTS OF THE FLORIDA BUILDING - ENERGY CONSERVATION, BY PARAGRAPH C101.4.2.4. PER EXEMPTION 4, THE ELECTRICAL ROOM COOLING EQUIPMENT PROVIDES SPACE CONDITIONING FOR THE ELECTRICAL EQUIPMENT ONLY IN ORDER TO KEEP THE FACILITY OPERATIONAL. NO HEATING SYSTEMS ARE PROVIDED.

2. THE PUMP ROOM IS A NORMALLY UNOCCUPIED AREA ON A WATER TREATMENT PLANT THAT HOUSES EQUIPMENT ESSENTIAL TO THE WATER TREATMENT PROCESS. THE PUMP ROOM IS EXEMPT FROM THE REQUIREMENTS OF THE FLORIDA BUILDING - ENERGY CONSERVATION, BY PARAGRAPH C101.4.2.4. THE VENTILATION SYSTEMS PROVIDED ARE INTERMITTENT/THERMOSTAT CONTROLLED FOR HEAT REMOVAL AS REQUIRED. NO COOLING OR HEATING SYSTEMS ARE PROVIDED.

3. THE CHEMICAL BUILDING IS A NORMALLY UNOCCUPIED AREA ON A WATER TREATMENT PLANT THAT HOUSES EQUIPMENT ESSENTIAL TO THE WATER TREATMENT PROCESS. THE CHEMICAL BUILDING IS EXEMPT FROM THE REQUIREMENTS OF THE FLORIDA BUILDING - ENERGY CONSERVATION, BY PARAGRAPH C101.4.2.4. THE VENTILATION SYSTEMS PROVIDED ARE CONTINUOUS AS REQUIRED BY THE FLORIDA MECHANICAL CODE, CHAPTER 5. ADDITIONAL EMERGENCY VENTILATION IS PROVIDED WITH PUSH BUTTON AND THERMOSTAT CONTROL. THE HEATING SYSTEMS PROVIDED ARE FOR FREEZE PROTECTION ONLY.

JOSHUA MEINIG LICENSE NO. 72454 STATE OF FLORIDA PROFESSIONAL ENGINEER

DATE:
JOSHUA H. MEINIG
PE NO. 72454

REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: J. MEINIG
DRAWN BY: A. STUART
SHEET CHK'D BY: P. POULIOT
CROSS CHK'D BY: D. PRAH
APPROVED BY: J. MEINIG
DATE: DECEMBER 2020

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JEA

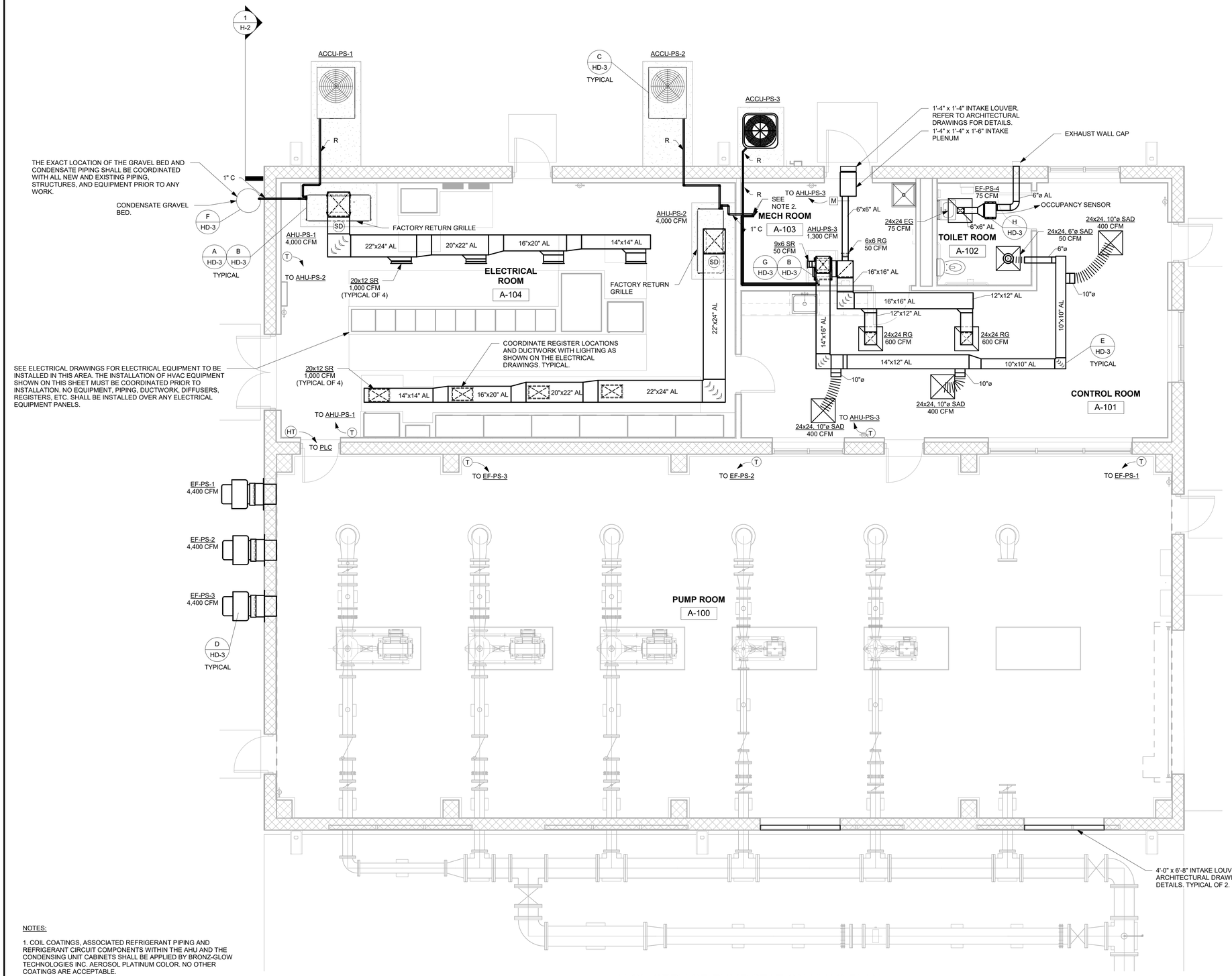
RIVERTOWN WATER TREATMENT PLANT PROJECT

HVAC SYMBOLS AND ABBREVIATIONS

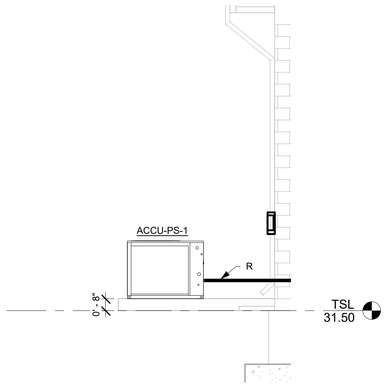
PROJECT NO. 6103-237938
FILE NAME: HWZ000PS.RVT

SHEET NO.
H-1

ISSUED FOR BID



HIGH SERVICE PUMP STATION HVAC PLAN
1/4" = 1'-0"



1 ACCU-PS-1 SECTION
1/4" = 1'-0"

NOTES:

1. COIL COATINGS, ASSOCIATED REFRIGERANT PIPING AND REFRIGERANT CIRCUIT COMPONENTS WITHIN THE AHU AND THE CONDENSING UNIT CABINETS SHALL BE APPLIED BY BRONZ-GLOW TECHNOLOGIES INC. AEROSOL PLATINUM COLOR. NO OTHER COATINGS ARE ACCEPTABLE.

2. 1" CONDENSATE DRAIN LINE DOWN TO FLOOR DRAIN (FD). REFER TO PLUMBING DRAWINGS.

REV. NO.	DATE	DRWN	CHKD	REMARKS

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RIVERTOWN WATER TREATMENT PLANT PROJECT

HIGH SERVICE PUMP STATION
HVAC PLAN

PROJECT NO. 6103-237938
FILE NAME: HWZ000PS.RVT

SHEET NO.
H-2

JOSHUA MEINIG LICENSE NO. 72454 STATE OF FLORIDA PROFESSIONAL ENGINEER

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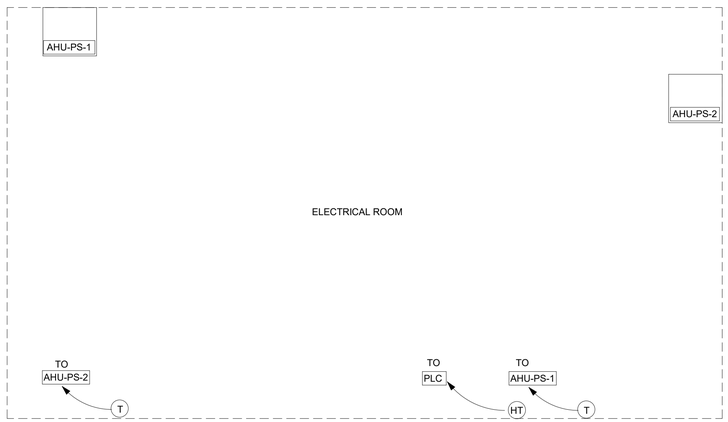


ELECTRICAL ROOM DESIGN TEMPERATURE AND VENTILATION RATES			
MODE	SUMMER INDOOR TEMP	WINTER INDOOR TEMP	VENTILATION
NORMAL	80°F	AMBIENT	N/A

CONTROL SEQUENCES:

1. AIR HANDLING UNITS AHU-PS-1,2 AND AIR-COOLED CONDENSING UNITS ACCU-PS-1,2

1.1. WHEN SMOKE IS SENSED BY THE SMOKE SENSOR (AHU-PS-1, AHU-PS-2), ALL OTHER CONTROL FUNCTIONS SHALL BE OVERRIDDEN AND THE SUPPLY FAN SHALL BE OFF, AND AN ALARM LIGHT IN THE SMOKE SENSOR SHALL BE ACTIVATED. SMOKE SENSORS SHALL BE MANUALLY RESET. WHEN MULTIPLE AIR HANDLING UNITS SERVE THE SAME SPACE, ANY SMOKE DETECTOR SHALL SHUT ALL UNITS DOWN IN THAT SPACE.

1.2. WHEN THE UNIT THERMOSTAT ON/OFF SWITCH IS PLACED IN THE OFF POSITION, THE TEMPERATURE CONTROLS SHALL BE INACTIVATED, THE SUPPLY FAN AND CONDENSING UNIT SHALL BE OFF.

1.3. WHEN THE UNIT THERMOSTAT IS PLACED IN THE ON POSITION AND THE SYSTEM FAN ON/AUTO SWITCH IS IN THE ON POSITION, THE TEMPERATURE CONTROLS SHALL BE ACTIVATED, AND THE FAN SHALL RUN CONTINUOUSLY.

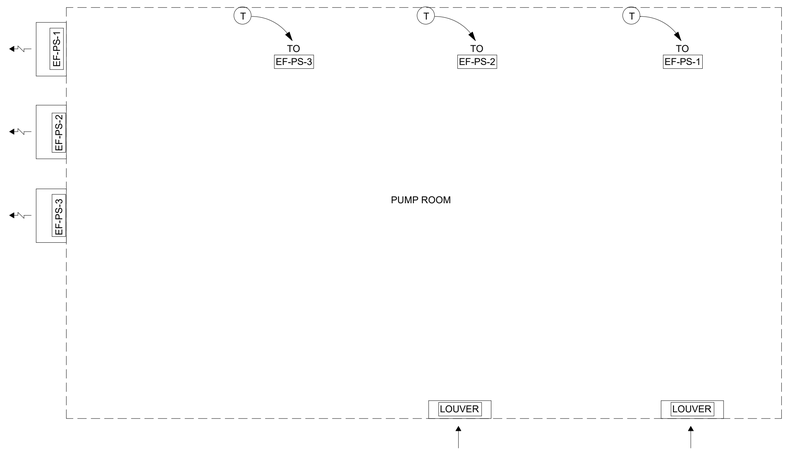
1.3.1. WHEN THE SPACE TEMPERATURE SENSED BY THE SPACE THERMOSTAT IS ABOVE THE COOLING SET POINT, THE CONDENSING UNIT SHALL BE ON IN COOLING MODE.

1.3.2. WHEN THE SPACE TEMPERATURE SENSED BY THE SPACE THERMOSTAT IS BELOW THE COOLING SET POINT, THE CONDENSING UNIT SHALL BE OFF.

1.4. THE SPACE THERMOSTAT SHALL HAVE AN ADJUSTABLE SET POINT. THE INITIAL COOLING SET POINT FOR PRIMARY (AHU-PS-1) UNITS SHALL BE 80ºF. THE INITIAL COOLING SET POINT FOR SECONDARY (AHU-PS-2) UNITS SHALL BE 85°F. THE CONTRACTOR SHALL INSTRUCT THE OWNER TO ALTERNATE SET POINTS IN ORDER TO ALTERNATE PRIMARY (70% OF TIME)/SECONDARY (30% OF TIME) UNIT OPERATION.

1.5. DUAL (OR TWO-SPEED) COMPRESSORS SHALL HAVE TWO STAGES OF COOLING.

1.6. PROVIDE A HIGH TEMPERATURE SWITCH. SET POINT SHALL BE 95°F. SWITCH SHALL SEND A HIGH SPACE TEMPERATURE ALARM SIGNAL TO THE INSTRUMENTATION SYSTEM. SEE ELECTRICAL AND INSTRUMENTATION DRAWINGS FOR ADDITIONAL DETAILS. COORDINATE INTERFACE WITH INSTRUMENTATION SYSTEM SUPPLIER.

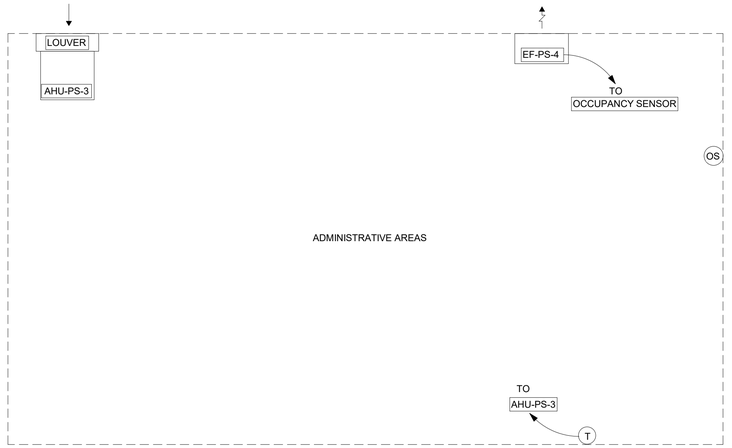


PUMP ROOM DESIGN TEMPERATURE AND VENTILATION RATES			
MODE	SUMMER INDOOR TEMP	WINTER INDOOR TEMP	VENTILATION
NORMAL	AMBIENT	AMBIENT	13,200 CFM

CONTROL SEQUENCES:

1. EXHAUST FAN WITH HAND-OFF-AUTO SWITCH, THERMOSTATS, (EF-PS-1 - EF-PS-3)

A. WHEN THE HAND-OFF-AUTO SWITCH IS IN THE HAND POSITION, THE FAN SHALL RUN.
B. WHEN THE HAND-OFF-AUTO SWITCH IS IN THE OFF POSITION, THE FAN SHALL BE OFF.
C. WHEN THE HAND-OFF-AUTO SWITCH IS IN THE AUTO POSITION AND THE TEMPERATURE SENSED BY THE SPACE THERMOSTAT IS ABOVE SET POINT (80°F), THE FAN SHALL RUN.
D. WHEN THE HAND-OFF-AUTO SWITCH IS IN THE AUTO POSITION AND THE TEMPERATURE SENSED BY THE SPACE THERMOSTAT IS BELOW SET POINT (80°F), THE FAN SHALL BE OFF.



ADMINISTRATIVE AREAS DESIGN TEMPERATURE AND VENTILATION RATES			
MODE	SUMMER INDOOR TEMP	WINTER INDOOR TEMP	VENTILATION
NORMAL	75°F	70°F	75 CFM

CONTROL SEQUENCES:

1. AIR COOLED UNIT WITH SPACE THERMOSTAT CONTROL UNITS (AHU-PS-3/ACCU-PS-3)

A. WHEN THE UNIT THERMOSTAT ON/OFF SWITCH IS PLACED IN THE OFF POSITION, THE TEMPERATURE CONTROLS SHALL BE INACTIVATED, THE SUPPLY FAN AND CONDENSING UNIT SHALL BE OFF.

B. WHEN THE UNIT THERMOSTAT IS PLACED IN THE ON POSITION AND THE SYSTEM FAN ON/AUTO SWITCH IS IN THE ON POSITION, THE TEMPERATURE CONTROLS SHALL BE ACTIVATED, AND THE FAN SHALL RUN CONTINUOUSLY.

1) WHEN THE SPACE TEMPERATURE SENSED BY THE SPACE THERMOSTAT IS ABOVE THE COOLING SET POINT, THE CONDENSING UNIT SHALL BE ON IN COOLING MODE.

2) WHEN THE SPACE TEMPERATURE SENSED BY THE SPACE THERMOSTAT IS BELOW THE COOLING SET POINT, THE CONDENSING UNIT SHALL BE OFF.

3) WHEN THE SPACE TEMPERATURE SENSED BY THE SPACE THERMOSTAT IS BELOW THE HEATING SET POINT, THE CONDENSING UNIT SHALL BE ON IN HEATING MODE. AT A CONTINUED DROP IN SPACE TEMPERATURE, THE AUXILIARY ELECTRIC HEAT SHALL BE ACTIVATED.

4) WHEN THE SPACE TEMPERATURE SENSED BY THE SPACE THERMOSTAT IS ABOVE THE HEATING SET POINT, THE CONDENSING UNIT SHALL BE OFF.

C. WHEN THE UNIT THERMOSTAT IS PLACED IN THE ON POSITION AND THE SYSTEM FAN ON/AUTO SWITCH IS IN THE AUTO POSITION, THE TEMPERATURE CONTROLS SHALL BE ACTIVATED.

1) WHEN THE SPACE TEMPERATURE SENSED BY THE SPACE THERMOSTAT IS ABOVE THE COOLING SET POINT, THE CONDENSING UNIT SHALL BE ON IN COOLING MODE, AND THE SUPPLY FAN SHALL BE ON.

2) WHEN THE SPACE TEMPERATURE SENSED BY THE SPACE THERMOSTAT IS BELOW THE COOLING SET POINT, THE CONDENSING UNIT SHALL BE OFF, AND THE SUPPLY FAN SHALL BE OFF.

3) WHEN THE SPACE TEMPERATURE SENSED BY THE SPACE THERMOSTAT IS BELOW THE HEATING SET POINT, THE CONDENSING UNIT SHALL BE ON IN HEATING MODE, AND THE SUPPLY FAN SHALL BE ON. AT A CONTINUED DROP IN SPACE TEMPERATURE, THE AUXILIARY ELECTRIC HEAT SHALL BE ACTIVATED.

4) WHEN THE SPACE TEMPERATURE SENSED BY THE SPACE THERMOSTAT IS ABOVE THE HEATING SET POINT, THE CONDENSING UNIT SHALL BE OFF, AND THE SUPPLY FAN SHALL BE OFF.

D. THE SPACE THERMOSTAT SHALL HAVE AN ADJUSTABLE SET POINT. THE COOLING SET POINT FOR AHU-PS-3 SHALL BE 75ºF. THERMOSTATS SHALL HAVE AUTOMATIC CHANGEOVER FROM HEATING TO COOLING. THE HEATING SET POINT FOR AHU-PS-3 SHALL BE 70ºF.

E. DUAL (OR TWO-SPEED) COMPRESSORS SHALL HAVE TWO STAGES OF COOLING.

2. EXHAUST FAN (EF-PS-4)

2.1. WHEN THE OCCUPANCY SENSOR IS NOT ACTIVATED, THE FAN SHALL BE OFF, AND THE BACKDRAFT DAMPERS SHALL BE CLOSED.

2.2. WHEN THE OCCUPANCY SENSOR IS ACTIVATED, THE FAN SHALL RUN, AND THE BACKDRAFT DAMPERS SHALL BE OPEN.

JOSHUA MEINIG
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DESIGNED BY: J. MEINIG
DRAWN BY: A. STUART
SHEET CHK'D BY: P. POULIOT
CROSS CHK'D BY: D. PRAH
APPROVED BY: J. MEINIG
DATE: DECEMBER 2020

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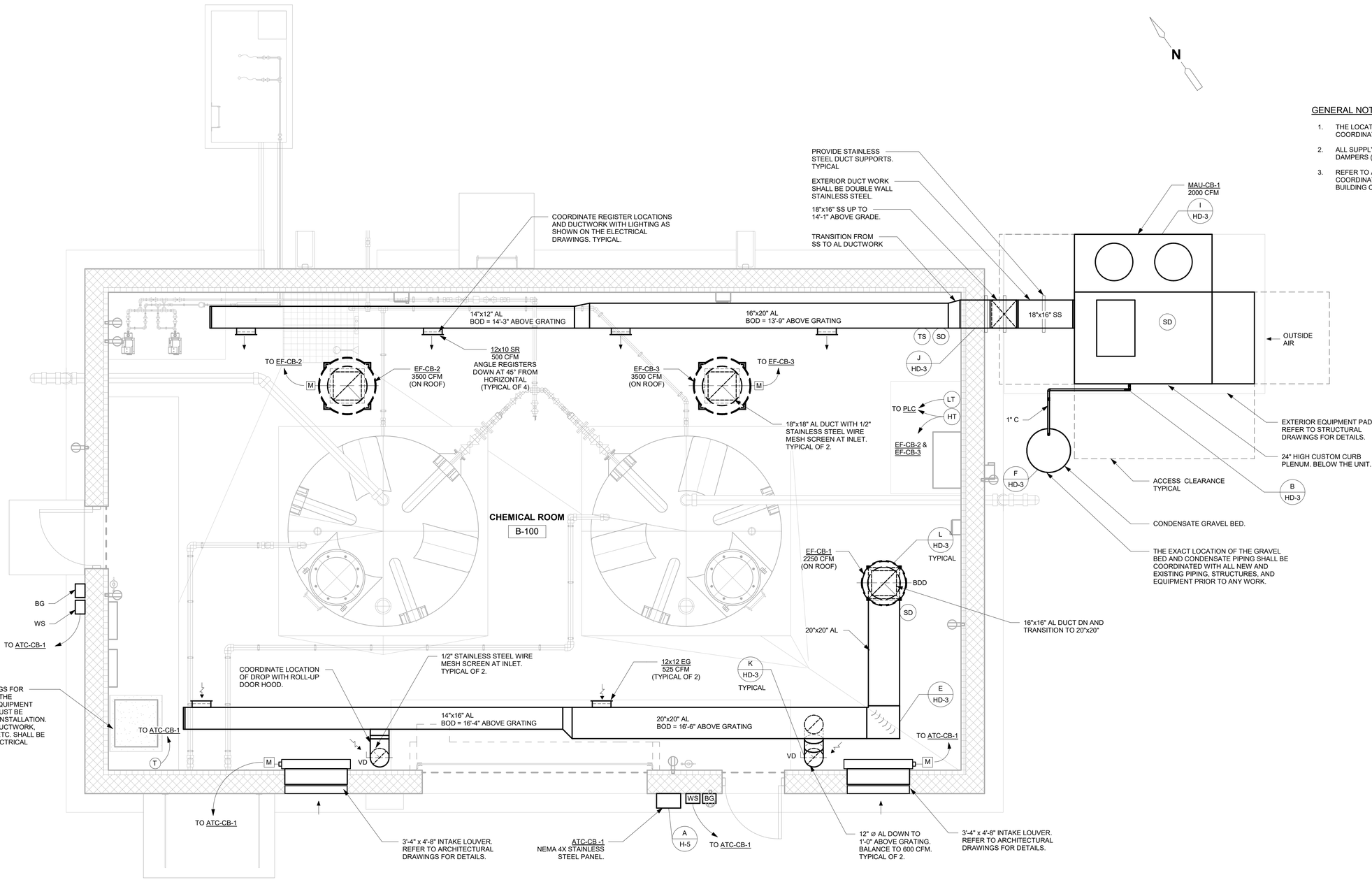
RIVERTOWN WATER TREATMENT PLANT PROJECT

HIGH SERVICE PUMP STATION
AIRFLOW SCHEMATICS

PROJECT NO. 6103-237938
FILE NAME: HWZ000PS.RVT

SHEET NO.
H-3

ISSUED FOR BID



CHEMICAL BUILDING HVAC PLAN

3/8" = 1'-0"

GENERAL NOTES:

1. THE LOCATION OF ALL HVAC EQUIPMENT, DUCT AND PIPING SHALL BE COORDINATED WITH OTHER DISCIPLINES PRIOR TO ANY WORK.
2. ALL SUPPLY AND EXHAUST GRILLES / REGISTERS SHALL HAVE VOLUME DAMPERS (VD) FOR SYSTEM AIR BALANCING.
3. REFER TO ARCHITECTURAL DRAWINGS FOR GUARDRAIL EXTENTS. COORDINATE FAN LOCATIONS WITH GUARDRAILS TO MEET FLORIDA BUILDING CODE.

3/8" = 1'- 0"
2 0 2 4

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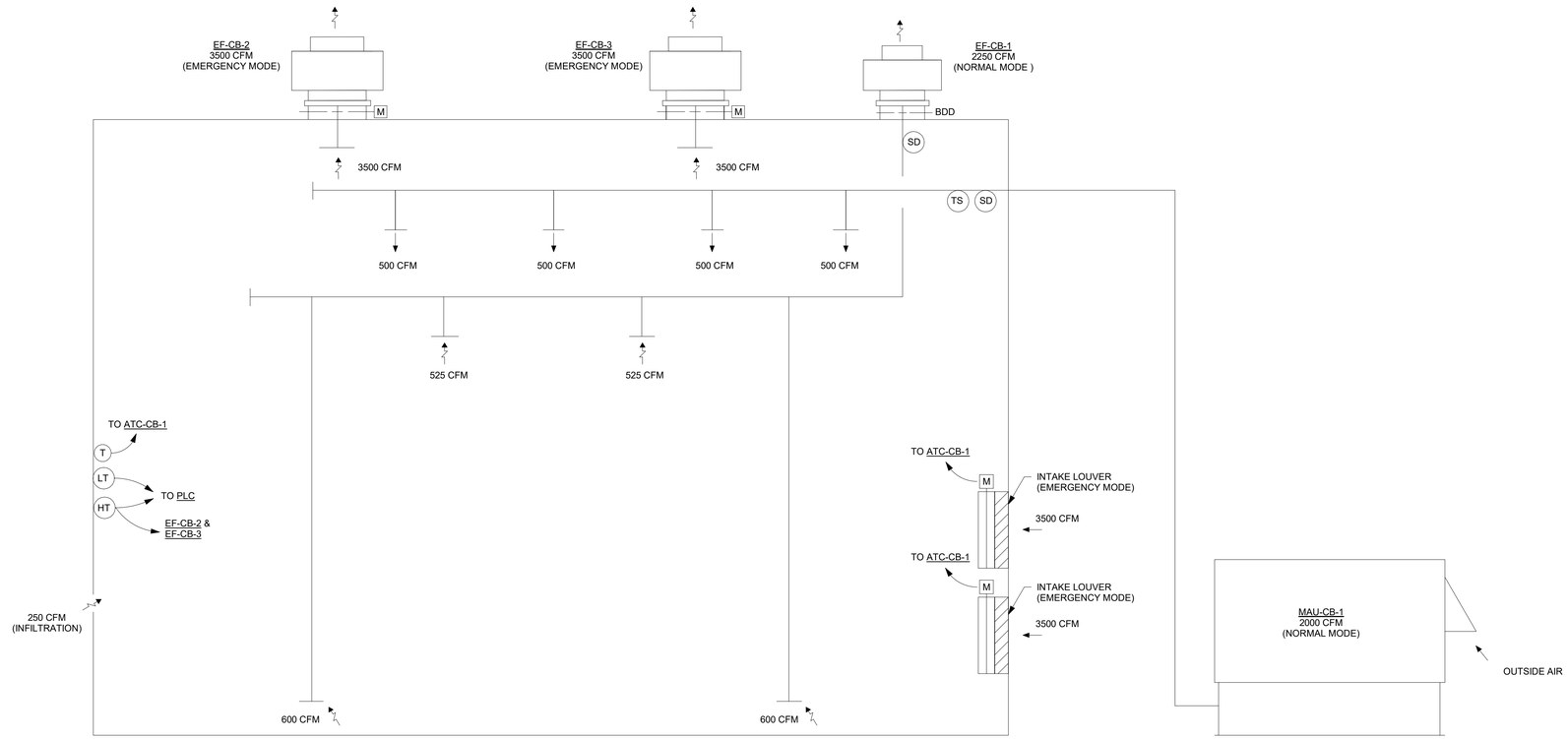
RIVERTOWN WATER TREATMENT PLANT PROJECT

CHEMICAL BUILDING HVAC PLAN

PROJECT NO. 6103-237938
FILE NAME: HWZ000CB.RVT

SHEET NO.
H-4

ISSUED FOR BID



AIR FLOW DIAGRAM

NTS

CHEMICAL BUILDING DESIGN TEMPERATURE AND VENTILATION RATES			
MODE	SUMMER INDOOR TEMP	WINTER INDOOR TEMP	VENTILATION
NORMAL	80°F	50°F	1.88 CFM/SQ.FT
EMERGENCY	AMBIENT	AMBIENT	18 AC/HR

CONTROL SEQUENCES:

NORMAL OPERATION:

SUPPLY FAN AND EXHAUST FAN WITH AUTOMATIC TEMPERATURE CONTROL PANEL, BREAKGLASS VENTILATION SHUTDOWN SWITCHES, AND ELECTRIC HEAT WITH SUPPLY AIR TEMPERATURE SENSOR CONTROL FOR CONTINUOUS OPERATION. (MAU-CB -1 AND EF-CB-1, WITH ATC-CB-1).

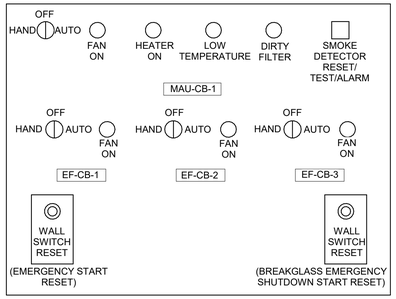
EXHAUST FAN EF-CB-1 SHALL BE INTERLOCKED WITH MAU-CB-1.

1. EXHAUST FAN WITH HAND-OFF-AUTO SWITCH - CONTINUOUS OPERATION (EF-CB-1).
   - A. WHEN THE HAND OFF AUTO SWITCH IS IN THE HAND POSITION, THE FAN SHALL RUN.
   - B. WHEN THE HAND OFF AUTO SWITCH IS IN THE OFF POSITION, THE FAN SHALL BE OFF.
2. MAKE-UP AIR UNIT WITH HAND-OFF-AUTO SWITCH – CONTINUOUS OPERATION (MAU-CB-1).
   - A. WHEN SMOKE IS SENSED BY ANY SUPPLY AIR OR EXHAUST AIR SMOKE SENSOR, ALL OTHER CONTROL FUNCTIONS SHALL BE OVERRIDDEN, AND THE SUPPLY FAN AND EXHAUST FAN SHALL BE OFF, AND AN ALARM LIGHT IN THE ATC PANEL SHALL BE ACTIVATED. SMOKE SENSORS SHALL BE MANUALLY RESET.
   - B. WHEN THE UNIT IS TURNED OFF AT THE MOTOR CONTROL CENTER, THE SUPPLY FAN MAU-CB- 1 AND EXHAUST FAN EF-CB-1 SHALL BE OFF, AND THE TEMPERATURE CONTROLS SHALL BE DEACTIVATED.
   - C. WHEN THE UNIT IS TURNED ON AT THE MOTOR CONTROL CENTER, THE SUPPLY FAN AND EXHAUST FAN SHALL BE ON, AND THE TEMPERATURE CONTROLS SHALL BE ACTIVATED.
   - D. WHEN DISCHARGE AIR TEMPERATURE IS BELOW 40° F AS SENSED BY FREEZESTAT, A LOW DISCHARGE TEMPERATURE ALARM SHALL BE ACTIVATED.
   - E. HEATING: WHEN THE SUPPLY AIR TEMPERATURE AS SENSED BY SUPPLY AIR TEMPERATURE SENSOR IS BETWEEN 50° F AND 55° F, ONE STAGE OF HEATING SHALL BE ACTIVATED. WHEN THE SUPPLY AIR TEMPERATURE AS SENSED BY THE SUPPLY AIR TEMPERATURE SENSOR IS BETWEEN 40° F AND 50° F, TWO STAGES OF HEATING SHALL BE ACTIVATED.
   - F. COOLING: WHEN THE SPACE TEMPERATURE SENSED BY THE SPACE THERMOSTAT IS ABOVE THE COOLING SET POINT (80°F), THE MAKEUP AIR UNIT SHALL BE ON IN COOLING MODE. WHEN THE SPACE TEMPERATURE SENSED BY THE SPACE THERMOSTAT IS BELOW THE COOLING SET POINT (80°F), THE MAKEUP AIR UNIT COOLING MODE SHALL BE OFF.
   - G. WHEN THE ROOM TEMPERATURE DROP TO 40° F BELOW, A LOW SPACE TEMPERATURE ALARM SHALL BE ACTIVATED.
   - H. WHEN THE ROOM TEMPERATURE RISE TO 95° F ABOVE, A HIGH TEMPERATURE ALARM SHALL BE ACTIVATED.

EMERGENCY OPERATION:

EXHAUST FAN WITH EXHAUST DAMPER AND OUTDOOR AIR INTAKE DAMPER(S), HAND-OFF-AUTO SWITCH, THERMOSTAT, EMERGENCY START (WALL SWITCHES), BREAKGLASS VENTILATION SHUTDOWN SWITCHES, AND AUTOMATIC TEMPERATURE CONTROL PANEL (ATC-CB-1, EF-CB-2 AND EF-CB-3).

1. EXHAUST FANS WITH WALL SWITCH AND HT THERMOSTAT (EF-CB-2 AND EF-CB-3).
   - A. WHEN THE SWITCH IS NOT ACTIVATED, THE FAN SHALL BE OFF, AND THE EXHAUST DAMPERS AND INTAKE DAMPERS SHALL BE CLOSED.
   - B. WHEN THE WALL SWITCH IS ACTIVATED, THE FAN SHALL RUN, AND THE EXHAUST DAMPERS AND INTAKE DAMPERS SHALL BE OPEN. EF-CB-1 AND MAU-CB-1 SHALL BE SHUTDOWN. WALL SWITCHES SHALL BE MANUALLY RESET.
   - C. WHEN ANY OF THE BREAK GLASS TYPE MANUAL SHUTOFF SWITCHES LOCATED AT THE AREA ENTRY DOORS IS ACTIVATED, ALL OTHER CONTROL FUNCTIONS SHALL BE OVERRIDDEN AND MAU-CB-1 SUPPLY FAN, COOLING/ HEATING, EXHAUST FAN EF-CB-1 AND EF-CB-2 AND EF-CB-3 SHALL BE OFF. BREAK GLASS SHUTOFF SHALL BE LABELED "VENTILATION SYSTEM EMERGENCY SHUTOFF." VENTILATION SYSTEMS SHALL BE MANUALLY RESET AT THE CONTROL PANEL.
   - D. WHEN THE HAND OFF AUTO SWITCH IS IN THE AUTO POSITION AND THE TEMPERATURE SENSED BY THE SPACE THERMOSTAT IS ABOVE SET POINT (95° F), THE FAN SHALL RUN (EF-CB-2 AND EF-CB-3).
   - E. WHEN THE HAND OFF AUTO SWITCH IS IN THE AUTO POSITION AND THE TEMPERATURE SENSED BY THE SPACE THERMOSTAT IS BELOW SET POINT (95° F), THE FAN SHALL BE OFF (EF-CB-2 AND EF-CB-3).



BG BREAKGLASS SWITCH. PROVIDED FOR FIRE DEPARTMENT USE TO SHUT DOWN MAKE-UP AIR UNIT AND ALL FANS IN AN EMERGENCY.

WS WALL SWITCH. PUSH BUTTON TYPE SWITCH. PROVIDED FOR PLANT OPERATOR TO TURN ON EMERGENCY FAN(S) FOR INCREASED VENTILATION IN AN EMERGENCY OR DURING ROUTINE MAINTENANCE OPERATIONS. RESET AT ATC PANEL.

ATC-CB-1 PANEL FACE

A – DETAIL

NTS

JOSHUA MEINIG LICENSE NO. 72454 STATE OF FLORIDA PROFESSIONAL ENGINEER

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RIVERTOWN WATER TREATMENT PLANT PROJECT

CHEMICAL BUILDING
AIRFLOW SCHEMATICS

PROJECT NO. 6103-237938
FILE NAME: HWZ000CB.RVT

SHEET NO.
H-5

ISSUED FOR BID

FAN SCHEDULE

ITEM NO.	AREA SERVED	SHEET NO.	CFM	S.P.	TYPE			H.P.	VOLT	PHASE	RPM	DB	MANUFACTURER	MODEL NO.	REMARKS	CONTROL
					SET	WHEEL	DRIVE									
EF-PS-1	HIGH SERVICE PUMP STATION PUMP ROOM	H-2	4,400 CFM	0.5"	WALL	CENT.	DIRECT	2	460 V	3ø	1725	78	GREENHECK	CUE-161-A	A,BDD,BS,DS,FC,HW,SS,T,TE	THERMOSTAT
EF-PS-2	HIGH SERVICE PUMP STATION PUMP ROOM	H-2	4,400 CFM	0.5"	WALL	CENT.	DIRECT	2	460 V	3ø	1725	78	GREENHECK	CUE-161-A	A,BDD,BS,DS,FC,HW,SS,T,TE	THERMOSTAT
EF-PS-3	HIGH SERVICE PUMP STATION PUMP ROOM	H-2	4,400 CFM	0.5"	WALL	CENT.	DIRECT	2	460 V	3ø	1725	78	GREENHECK	CUE-161-A	A,BDD,BS,DS,FC,HW,SS,T,TE	THERMOSTAT
EF-PS-4	HIGH SERVICE PUMP STATION TOILET ROOM	H-2	75 CFM	0.5"	INLINE	CENT.	DIRECT	87 WATTS	115 V	1ø	950	-	GREENHECK	CSP-B110	BDD, D, IH, ODP, SS, VI, VSC,WC	OCCUPANCY SENSOR

A = ALL ALUMINUM CONSTRUCTION
BDD = BADCKDRAFT DAMPER
BS = ALUMINUM BIRDSCREEN
D = FACTORY DISCONNECT SWITCH
DS = STAINLESS STEEL NEMA 4X DISCONNECT SWITCH
FC= EC COATED FACTORY ALUMINUM CURB
HW= HIGH WIND RATED
IH = INSULATED HOUSING
ODP = OPEN DRIP PROOF MOTOR
SS = STAINLESS STEEL FASTENERS
T = HEAVY DUTY LINE VOLTAGE THERMOSTAT
TE = TOTALLY ENCLOSED FAN COOLED MOTOR
VI = NEOPRENE VIBRATION ISOLATORS AND MOUNTING BRACKETS
VSC = VARIABLE SPEED CONTROLLER
WC = WALL CAP

AIR COOLED CONDENSING UNIT SCHEDULE

ITEM NO.	MATCH WITH	SYSTEM CAPACITY		PIPING		CONDENSER				COMPRESSOR					REMARKS	MANUFACTURER MODEL	HEATING CAP. @ 47° F	HSPF
		MBH	SEER	SUCT.	LIQ.	OSA °F	CFM	ROWS	FLA	NO.	TYPE	RLA COMP	VOLT	PHASE				
ACCU-PS-1	AHU-PS-1	114.6	10.3 (EER)	SEE NOTE C	SEE NOTE C	95	-	SEE NOTE C	2.7	2	SCROLL	9.4	460 V	3ø	SEE NOTES B, C, AND D.	TRANE TTA120B4	-	-
ACCU-PS-2	AHU-PS-2	114.6	10.3 (EER)	SEE NOTE C	SEE NOTE C	95	-	SEE NOTE C	2.7	2	SCROLL	9.4	460 V	3ø	SEE NOTES B, C, AND D.	TRANE TTA120B4	-	-
ACCU-PS-3	AHU-PS-3	33.2	16.5	SEE NOTE C	SEE NOTE C	95	-	SEE NOTE C	0.74	1	SCROLL	17.0	208 V	1ø	SEE NOTES A, C, AND D.	TRANE 4TTR6036	-	-

NOTE A: PROVIDE UNIT WITH THE FOLLOWING OPTIONS: BRONZ-GLOW HUSKY PLATINUM DIPPED COIL COATING ON THE CONDENSER COILS, ON ALL ASSOCIATED REFRIGERANT TUBING WITHIN THE UNIT, AND ON ALL INTERCONNECTING REFRIGERANT PIPING BETWEEEN THE CONDENSING UNIT AND THE AIR HANDLING UNIT, 30° F LOW AMBIENT TEMPERATURE KIT, LIQUID LINE FILTER DRIER, LIQUID LINE SIGHT GLASS, VIBRATION ISOLATION PADS, ANTI SHORT CYCLE TIMER, EVAPORATOR DEFROST CONTROL, CRANKCASE HEATER, HARD START KIT, STAINLESS STEEL HARDWARE (EXTERNAL HARDWARE ONLY), NON-RUST BASE PAN, SERVICE VALVES, HIGH AND LOW PRESSURE SWITCHES, AND THERMOSTATIC EXPANSION VALVES.

NOTE B: PROVIDE UNIT WITH THE FOLLOWING OPTIONS: BRONZ-GLOW HUSKY PLATINUM DIPPED COIL COATING ON THE CONDENSER COILS, ON ALL ASSOCIATED REFRIGERANT TUBING WITHIN THE UNIT, AND ON ALL INTERCONNECTING REFRIGERANT PIPING BETWEEN THE CONDENSING UNIT AND THE AIR HANDLING UNIT, STAINLESS STEEL HARDWARE (EXTERNAL HARDWARE ONLY), NON-RUST BASE PAN, COMPRESSOR SOUND INSULATOR, HIGH PRESSURE CONTROL, LOW PRESSURE CONTROL, TEMPERATURE PROTECTION, LIQUID LINE FILTER DRIER, LIQUID LINE AND SUCTION LINE SERVICE VALVES, LIQUID LINE SIGHT GLASS, 30°F LOW AMBIENT CONTROL, THERMOSTATIC EXPANSION VALVE, TIME DELAY RELAY, START KIT, VIBRATION ISOLATORS, AND EXTREME CONDITIONS MOUNTING KIT. TRANE CONDENSING UNITS TO BE DUAL COMPRESSOR/ DUAL CIRCUIT WITH ELECTROMECHANICAL CONTROLS.

NOTE C: FOR ALL UNITS, PROVIDE REFRIGERANT PIPING SIZES, COIL ROWS, CONDENSER FAN CFM, AND FINS PER THE MANUFACTURER'S RECOMMENDATIONS.

NOTE D: UNITS SHALL BE TRANE OR AMERICAN STANDARD.

AIR HANDLING UNIT SCHEDULE

ITEM NO.	AREA SERVED	SHEET NO.	COOLING COIL DATA							CFM	OSA CFM	ESP	HP	VOLTAGE	PHASE	DRIVE	FILTERS		REMARKS	MANUFACTURER MODEL	AUX. ELECTRIC HEAT			
			ENTERING AIR		LEAVING AIR		TOTAL MBH	SENSIBLE MBH	ROWS FINS								TYPE	SIZE NO.			KW	VOLT	PHASE	NO. OF STAGES
			DB	WB	LDB	LWB																		
AHU-PS-1	ELECTRICAL ROOM	H-2	80	61	-	-	114.6	108.2	SEE NOTE C	4,000	0	1.0"	2	460 V	3ø	BELT	SEE NOTE B	SEE NOTE B	SEE NOTES B, C, AND D.	TRANE TWE120B4	-	-	-	-
AHU-PS-2	ELECTRICAL ROOM	H-2	80	61	-	-	114.6	108.2	SEE NOTE C	4,000	0	1.0"	2	460 V	3ø	BELT	SEE NOTE B	SEE NOTE B	SEE NOTES B, C, AND D.	TRANE TWE120B4	-	-	-	-
AHU-PS-3	ADMINISTRATION AREAS	H-2	75	63	-	-	33.2	27.3	SEE NOTE C	1,300	75	0.5"	1/2	208 V	1ø	DIRECT	SEE NOTE A	SEE NOTE A	SEE NOTES A, C, AND D.	TRANE TEM6A0C36	5	208 V	1ø	1

NOTE A: PROVIDE UNIT WITH THE FOLLOWING OPTIONS:BRONZ-GLOW HUSKY PLATINUM DIPPED COIL COATING ON THE EVAPORATOR COILS, ON ALL ASSOCIATED REFRIGERANT TUBING WITHIN THE UNIT, AND ON ALL INTERCONNECTING REFRIGERANT PIPING BETWEEN THE CONDENSING UNIT AND THE AIR HANDLING UNIT, STAINLESS STEEL HARDWARE (EXTERNAL HARDWARE ONLY), 1" THICK FARR 30/30 FILTERS (SEE DETAIL G/HD-3), CORROSION RESISTANT CONDENSATE PAN, NON-RUST BASE PAN, CORROSION RESISTANT COIL CASING, TIME DELAY RELAY, UPBLAST DISCHARGE, FACTORY ELECTRIC HEATER, AND 1-STAGE COOLING THERMOSTAT.

NOTE B: PROVIDE UNIT WITH THE FOLLOWING OPTIONS: BRONZ-GLOW HUSKY PLATINUM DIPPED COIL COATING ON THE EVAPORATOR COILS, ON ALL ASSOCIATED REFRIGERANT TUBING WITHIN THE UNIT, AND ON ALL INTERCONNECTING REFRIGERANT PIPING BETWEEN THE CONDENSING UNIT AND THE HANDLING UNIT, VIBRATION ISOLATION PADS, STAINLESS STEEL HARDWARE (EXTERNAL HARDWARE ONLY), DOUBLE WALL CABINET, CONDENSATE TRAP, AND 2-STAGE COOLING THERMOSTAT.

NOTE C: FOR ALL UNITS, PROVIDE SAFE-T-SWITCH MODEL SS2, OR EQUAL, CONDENSATE OVERFLOW SHUT-OFF SWITCH ON THE AUXILIARY DRAIN CONNECTIONS OF EACH AIR HANDLING UNIT. INSTALL PER THE MANUFACTURER'S INSTRUCTIONS. PROVIDE ALL NECESSARY RELAYS, FITTINGS, WIRING, CONTACTS, ETC. FOR ALL UNITS, PROVIDE REFRIGERANT PIPING SIZES, COIL ROWS, AND FINS PER THE MANUFACTURER'S RECOMMENDATIONS.

NOTE D: UNITS SHALL BE TRANE OR AMERICAN STANDARD.

CONTROL COMPONENT SCHEDULE

SYMBOL	DESCRIPTION
T	HEAVY DUTY, NEMA 4X CORROSION RESISTANT LINE VOLTAGE THERMOSTAT JOHNSON CONTROLSA19BAF-1C OR EQUAL WITH CLEAR LOCKING COVER. SET AT 85'F FOR THE PUMP ROOM. HONEYWELL T6 PROSERIES HP/CONVENTIONAL, (NON-PROGRAMMABLE FOR THE ELECTRICAL ROOM AND THE CONTROL ROOM).
SD	IONIZATION TYPE SMOKE DETECTOR SYSTEM SENSOR INNOVAIR MODEL DH100ACDCI OR EQUAL. REFER TO THE SPECIFICATIONS.
HT	HEAVY DUTY, CORROSION RESISTANT LINE VOLTAGE THERMOSTAT/HIGH TEMPERATURE SWITCH JOHNSON CONTROLS A19BAF-1C OR EQUAL WITH CLEAR LOCKING COVER. SET AT 95°F.
LT	HEAVY DUTY, CORROSION RESISTANT LINE VOLTAGE THERMOSTAT/LOW TEMPERATURE SWITCH JOHNSON CONTROLS A19BAF-1C OR EQUAL WITH CLEAR LOCKING COVER. SET AT 40°F.

DUCTWORK MATERIAL SCHEDULE

SYMBOL	DESCRIPTION
———	GALVANIZED INSULATED DUCTWORK PER SMACNA STANDARDS.
AL	ALUMINUM DUCTWORK PER SMACNA STANDARDS.

AIR DISTRIBUTION DEVICE SCHEDULE

SYMBOL	DESCRIPTION	MODEL	FRAME TYPE	MATERIAL	FINISH	REMARKS
VD	VOLUME DAMPER	RUSKIN MD-35	CHANNEL	GALV STEEL	-	LOCKING HAND QUADRANT
RG	RETURN GRILLE HINGED	METAL*AIRE RHEF	PLASTER OR LAY-IN	ALUMINUM	OFF-WHITE ENAMEL	HINGED FILTER GRILLE
SR	SUPPLY REGISTER HIGH VELOCITY	METAL*AIRE RLD-DF	PLASTER	ALUMINUM	OFF-WHITE ENAMEL	OPPOSED BLADE DAMPER
SAD	SUPPLY AIR DIFFUSER	METAL*AIRE 5000 SERIES	PLASTER OR LAY-IN	ALUMINUM	OFF-WHITE ENAMEL	OPPOSED BLADE DAMPER

JOSHUA MEINIG LICENSE NO. 72454 STATE OF FLORIDA PROFESSIONAL ENGINEER

DATE:
JOSHUA H. MEINIG
PE NO. 72454

REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: J. MEINIG
DRAWN BY: A. STUART
SHEET CHK'D BY: P. POULIOT
CROSS CHK'D BY: D. PRAH
APPROVED BY: J. MEINIG
DATE: DECEMBER 2020

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EB0000072 AAC001992 LC26000188

JEA

RIVERTOWN WATER TREATMENT PLANT PROJECT

HIGH SERVICE PUMP STATION
HVAC SCHEDULES

PROJECT NO. 6103-237938
FILE NAME: HWZ000PS.RVT

SHEET NO.
HD-1

ISSUED FOR BID

FAN SCHEDULE

TAG	AREA SERVED	SHEET NO.	CFM	E.S.P	TYPE			ELECTRICAL DATA			FAN DATA		MANUFACTURER	MODEL NO.	REMARKS	CONTROL
					SET	WHEEL	DRIVE	H.P.	VOLT	PHASE	MOTOR RPM	MAX SONE VALUE				
EF-CB-1	CHEMICAL BUILDING	H-4	2250	0.75	ROOF	CENT.	DIRECT	0.75	460 V	3ø	1140	13.4	GREENHECK	CUE-161-B	A,BDD,BS,DS,EC,FC,HW,IH,SS,T,TE,VI	CONTINUOUS / ATC-CB-1
EF-CB-2	CHEMICAL BUILDING	H-4	3500	0.5	ROOF	CENT.	DIRECT	1	460 V	3ø	860	12.7	GREENHECK	CUE-200-C	A,BS,DS,EC,FC,HW,IH,MOD,SS,T,TE,VI,WS	WALL SWITCH / HT THERMOSTAT / ATC-CB-1
EF-CB-3	CHEMICAL BUILDING	H-4	3500	0.5	ROOF	CENT.	DIRECT	1	460 V	3ø	860	12.7	GREENHECK	CUE-200-C	A,BS,DS,EC,FC,HW,IH,MOD,SS,T,TE,VI,WS	WALL SWITCH / HT THERMOSTAT / ATC-CB-1

A = ALL ALUMINUM CONSTRUCTION
BDD = BACKDRAFT DAMPER
BS = PVC COATED ALUMINUM BIRD SCREEN
DS = STAINLESS STEEL NEMA 4X DISCONNECT SWITCH
EC = HI-PRO POLYESTER TO MATCH BUILDING COLOR
FC = 12" HIGH FACTORY ALUMINUM ROOF CURB
HW = HIGH WIND RATED
IH = INSULATED HOUSING
MOD = MOTOR OPERATED DAMPER (ALUMINUM)
SS = STAINLESS STEEL FASTENERS AND SHAFT
T = HEAVY DUTY LINE VOLTAGE THERMOSTAT
TE = TOTALLY ENCLOSED FAN COOLED MOTOR
VI = NEOPRENE VIBRATION ISOLATORS AND MOUNTING BRACKETS
WS = WALL SWITCH

MAKEUP AIR UNIT SCHEDULE

TAG	AREA SERVED	SHEET NO.	COOLING DATA							SUPPLY FAN DATA					CONDENSER				COMPRESSOR			SEER	VOLTAGE	PHASE	FILTERS		AUX. ELECTRIC HEAT				MANUFACTURER	MODEL	REMARKS
			ENTERNG AIR		LEAVING AIR		TOTAL MBH	SENSIBLE MBH	ROWS FINS	CFM	OSA CFM	E.S.P	HP	DRIVE	OSA (F)	HP	ROWS	FLA	NO.	TYPE	RLA				TYPE	SIZE NO.	HEAT KW	VOLT	PHASE	NO. OF STAGES			
			DB	WB	LDB	LWB																											
MAU-CB-1	CHEMICAL BUILDING	H-4	95	75	57.7	57.5	113.62	77.28	SEE NOTE B	2000	2000	1	2	BELT	95	.333	SEE NOTE B	1.6	2	SCROLL	7.8/ 6.4	MFR. STD.	460	3	SEE NOTE A	SEE NOTE A	20	460	3	2	AAON	RN-009-3-0-CB02-122	SEE NOTES A AND B

NOTE A: PROVIDE UNIT WITH THE FOLLOWING OPTIONS: BRONZ-GLOW HUSKY PLATINUM DIPPED COIL COATING ON THE EVAPORATOR AND CONDENSING COILS, ON ALL ASSOCIATED REFRIGERANT COMPONENTS AND TUBING WITHIN THE UNIT, FACTORY ELECTRIC HEATER, V-BANK ALUMINUM MESH FILTERS, 2" PLEATED MERV 8 FITLERS, NEOPRENE VIBRATION ISOLATORS, DOUBLE WALL CONSTRUCTION WITH INSULATION LINER, WEATHERHOOD, OUTDOOR AIR TEMPERATURE SENSOR, WEATHERIZATION, DUCT ADAPTER, HI-PRO POLYESTER COATING (CABINET EXTERIOR AND INTERIOR), PHOTO ELECTRIC SMOKE DETECTOR WITH WEATHER PROOF COVER, TIME DELAY RELAY, LEFT HAND ACCESS, AUXILIARY CONTACTS, LOW TEMPERATURE SENSOR (ALARM ONLY), DISCHARGE AIR TEMPERATURE SENSOR, SCR CONTROLS, SS FASTENERS, LEFT-HAND UNIT ACCESS CONFIGURATION, AND TOTALLY ENCLOSED FAN COOLED MOTOR. REFER TO THE SPECIFICATIONS FOR MORE REQUIREMENTS.

NOTE B: PROVIDE REFRIGERANT PIPING SIZES, COIL ROWS, AND FINS PER THE MANUFACTURER'S RECOMMENDATIONS.

DUCTWORK MATERIAL SCHEDULE

SYMBOL	DESCRIPTION
AL	ALUMINUM DUCTWORK PER SMACNA STANDARDS.
SS	STAINLESS STEEL DUCTWORK PER SMACNA STANDARDS.

CONTROL COMPONENT SCHEDULE

SYMBOL	DESCRIPTION
(T)	HEAVY DUTY, NEMA 4X CORROSION RESISTANT LINE VOLTAGE THERMOSTAT HONEYWELL T631F/G. REFER TO THE SPECIFICATIONS.
(SD)	IONIZATION TYPE SMOKE DETECTOR SYSTEM SENSOR INNOVAIR MODEL DH100ACDCI OR EQUAL. REFER TO THE SPECIFICATIONS.
(HT)	HEAVY DUTY, CORROSION RESISTANT LINE VOLTAGE THERMOSTAT/HIGH TEMPERATURE SWITCH JOHNSON CONTROLS A19BAF-1C OR EQUAL WITH CLEAR LOCKING COVER. SET AT 95°F.
(LT)	HEAVY DUTY, CORROSION RESISTANT LINE VOLTAGE THERMOSTAT/HIGH TEMPERATURE SWITCH JOHNSON CONTROLS A19BAF-1C OR EQUAL WITH CLEAR LOCKING COVER. SET AT 40°F.
TS	SUPPLY AIR TEMPERATURE SENSOR. PER MANUFACTURER
M	LOW LEAKAGE DAMPER, GREENHECK MODEL VCD-43 WITH BELIMO MODEL AFBUP WITH NEMA 4X HOUSING. COORDINATE FINAL VOLTAGE WITH ELECTRICAL AND AUTOMATIC TEMPERATURE CONTROL CONTRACTORS/SUPPLIERS.
BG	BREAK GLASS
WS	WALL SWITCH

AIR DISTRIBUTION DEVICE SCHEDULE

SYMBOL	DESCRIPTION	MODEL	FRAME TYPE	MATERIAL	FINISH	REMARKS
VD	VOLUME DAMPER	RUSKIN CDRS82	CHANNEL	ALUMINUM	-	LOCKING HAND QUADRANT
EG	EXHAUST GRILLE	TITUS 300 RL	CHANNEL	ALUMINUM	WHITE	ALUMINUM OPPOSED BLADE DAMPER
SR	SUPPLY REGISTER	TITUS 300 FL	CHANNEL	ALUMINUM	WHITE	ALUMINUM OPPOSED BLADE DAMPER

REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: S. SATHEESH
DRAWN BY: G. NITHIYAN
SHEET CHK'D BY: P. POULIOT
CROSS CHK'D BY: D. PRAH
APPROVED BY: J. MEINIG
DATE: DECEMBER 2020

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JEA

RIVERTOWN WATER TREATMENT PLANT PROJECT

CHEMICAL BUILDING
HVAC SCHEDULES

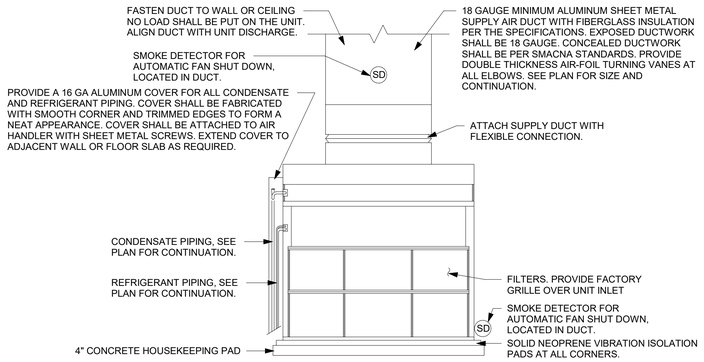
JOSHUA MEINIG LICENSE NO. 72454 STATE OF FLORIDA PROFESSIONAL ENGINEER

DATE:
JOSHUA H. MEINIG
PE NO. 72454

PROJECT NO. 6103-237938
FILE NAME: HW2000CB.RVT

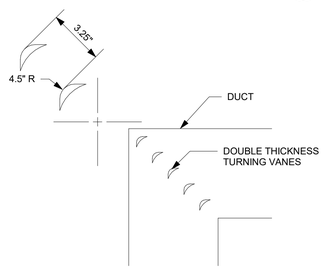
SHEET NO.
HD-2

ISSUED FOR BID



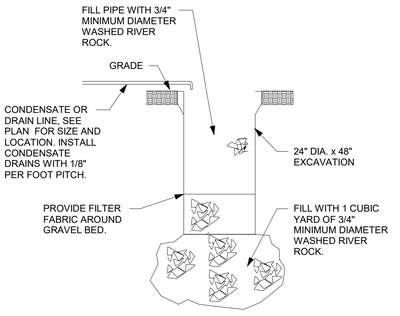
AHU MOUNTING

A DETAIL
NTS



SHEET METAL
DUCT TURNING VANES

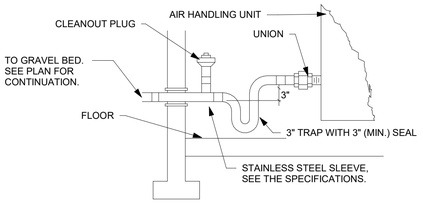
E DETAIL
NTS



NOTE: GROUNDWATER LEVELS WERE ENCOUNTERED 6-7 FEET BELOW EXISTING GRADE.

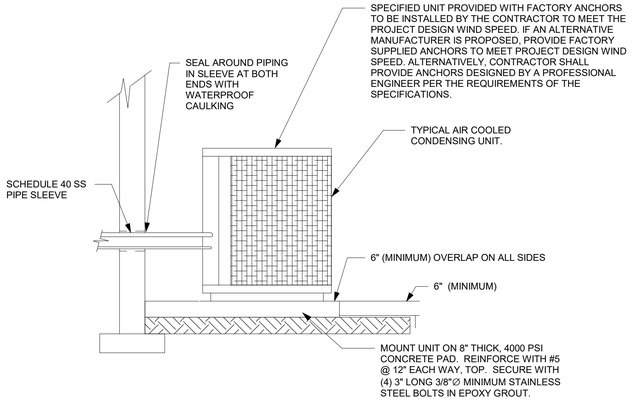
GRAVEL BED

F DETAIL
NTS



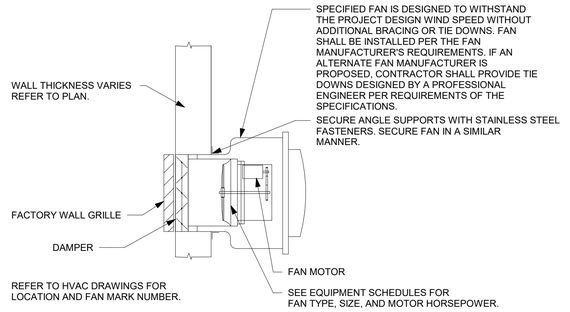
CONDENSATE DRAIN

B DETAIL
NTS



THROUGH WALL PIPING AND CONDENSER MOUNTING

C DETAIL
NTS

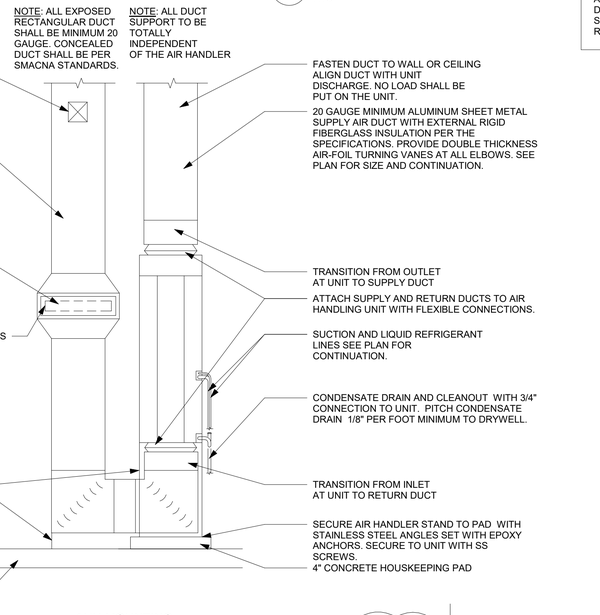


WALL FAN MOUNTING

D DETAIL
NTS

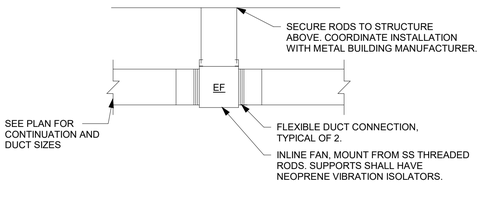
NOTE:

FOR EQUIPMENT TIE DOWNS SHOWN ON DETAIL C/HD-3, D/HD-3, AND L/HD-3, AT THE CONTRACTOR'S OPINION, ALTERNATE TIE DOWN METHODS MAY BE PROPOSED. ALTERNATE TIE DOWNS SHALL BE DESIGNED BY A PROFESSIONAL ENGINEER PER THE REQUIREMENTS OF THE SPECIFICATIONS.



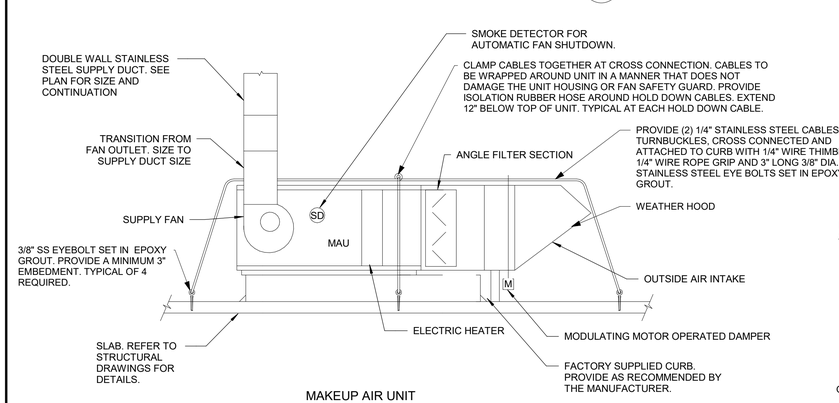
AHU MOUNTING

G DETAIL
NTS



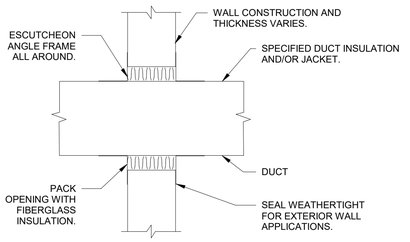
INLINE FAN MOUNTING

H DETAIL
NTS



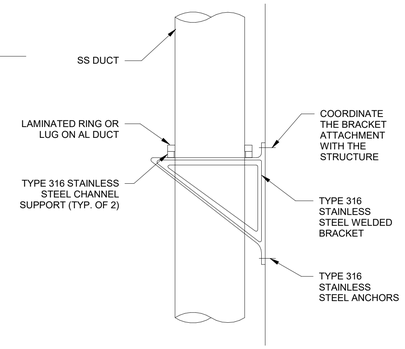
MAKEUP AIR UNIT

I DETAIL
NTS



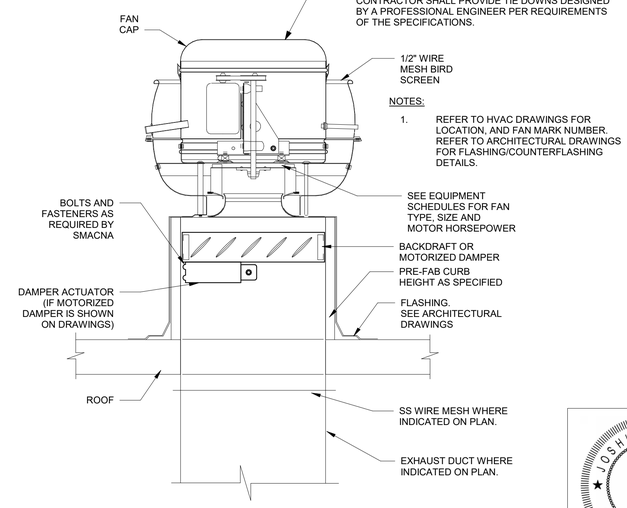
DUCT PENETRATION THROUGH PARTITION

J DETAIL
NTS



VERTICAL DUCT SUPPORT

K DETAIL
NTS



ROOF FAN

L DETAIL
NTS

REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: J. MEINIG
DRAWN BY: A. STUART
SHEET CHK'D BY: P. POULIOT
CROSS CHK'D BY: D. PRAH
APPROVED BY: J. MEINIG
DATE: DECEMBER 2020

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EB0000072 AAC001992 LC26000188

JEA

RIVERTOWN WATER TREATMENT PLANT PROJECT

HVAC DETAILS

PROJECT NO. 6103-237938
FILE NAME: HWZ000PS.RVT

SHEET NO.
HD-3

JOSHUA MEINIG LICENSE NO. 72454 STATE OF FLORIDA PROFESSIONAL ENGINEER

DATE:
JOSHUA H. MEINIG
PE NO. 72454

ISSUED FOR BID

PLUMBING ABBREVIATIONS	
@	AT
AD	AREA DRAIN
AFF	ABOVE FINISHED FLOOR
AV	ACID VENT
AW	ACID WASTE
BFF	BELOW FINISHED FLOOR
BFP	BACKFLOW PREVENTER
BWV	BACKWATER VALVE
BLDG	BUILDING
CL	CENTERLINE
CA	COMPRESSED AIR
CD	CAVITY DRAIN
CI	CAST IRON
CO	CLEANOUT
CONT	CONTINUOUS, CONTINUE
CS	CUP SINK
CU. FT.	CUBIC FEET
CV	CHECK VALVE
CW	COLD WATER
DI	DUCTILE IRON
DN	DOWN
DW	DISHWASHER
DWG	DRAWING
DWV	DRAIN WASTE VENT
E	EMERGENCY WATER
(E)	EXISTING, TO REMAIN
ECO	EXTERIOR CLEANOUT
ED	EQUIPMENT DRAIN
EL	ELEVATION
ES	EMERGENCY SHOWER
ES/EW	EMERGENCY SHOWER AND EYEWASH
EWC	ELECTRIC WATER COOLER
EWST	EMERGENCY WATER STORAGE TANK
EWU	EYEWASH UNIT
FAS	FLOW ALARM SWITCH
FCO	FLUSH FLOOR CLEANOUT
FD	FLOOR DRAIN
FE	FIRE EXTINGUISHER
FHV&C	FIRE HOSE VALVE AND CABINET
FS	FLOW SWITCH
FV	FIRE VALVE
F/BS	FACE/BODY SPRAY
G	GAS
GPM	GALLONS PER MINUTE
HB	HOSE BIBB
HD	HUB DRAIN
HEV	HOSE END VALVE
HP	HANDICAPPED
HW	HOT WATER
HWR	HOT WATER RETURN
INV	INVERT
IOS	INSTALLED BY OTHER SECTION
IPS	IRON PIPE SIZE
KS	KITCHEN SINK
KU	KITCHEN UNIT
LAB	LABORATORY
LAV	LAVATORY

PLUMBING ABBREVIATIONS	
LBV	LOCKABLE BALL VALVE
LCW	LAB COLD WATER
LHW	LAB HOT WATER
LS	LAB SINK
MAX	MAXIMUM
MB	MOP BASIN
MIN	MINIMUM
MXV	MIXING VALVE
NO	NUMBER
OED	OPEN END OR OPEN EQUIPMENT DRAIN
ORD	OVERFLOW ROOF DRAIN
ORL	OVERFLOW RAIN LEADER
PD	PUMP DISCHARGE
PG	PRESSURE GAUGE
PH	POST HYDRANT
PHW	PROTECTED HOT WATER
PP	POLYPROPYLENE
PRW	PRESSURE WASTE
PSI	POUNDS PER SQUARE INCH
P&T	PRESSURE & TEMPERATURE
PVC	POLYVINYL CHLORIDE
PW	PROTECTED WATER
RD	ROOF DRAIN
RL	RAINLEADER
RM	ROOM
RPZ	REDUCED PRESSURE ZONE BACKFLOW PREVENTER
S	SOIL
SH	SHOWER
SHT	SHEET
SP	SPRINKLER
SQ	SQUARE
SS	STAINLESS STEEL
SSK	SERVICE SINK
ST	SAND TRAP
TD	TRENCH DRAIN
THK	THICKNESS
TP	TRAP PRIMER
TW	TEPID WATER
TYP	TYPICAL
UR	URINAL
V	VENT
VAC	VACUUM
VB	VACUUM BREAKER
VE	VACUUM EXHAUST
VTR	VENT THROUGH ROOF
W	WASTE
W/	WITH
WC	WATER CLOSET
WCO	WALL CLEANOUT
WF	WASH FOUNTAIN
WH	WALL HYDRANT
WHA	WATER HAMMER ARRESTOR
WHS	WASH HOSE STATION
W&V	WASTE & VENT

NOTE:

1. SYMBOLS AND ABBREVIATIONS SHOWN ON THE SHEET ARE GENERIC AND MAY NOT HAVE BEEN USED ON THE PROJECT.

PLUMBING SYMBOLS

- SOIL/SANITARY
- VENT
- COLD WATER (POTABLE)
- HOT WATER (POTABLE)
- HOT WATER RETURN (POTABLE)
- A — COMPRESSED AIR
- AV — ACID VENT
- AW — ACID WASTE
- CW — COLD WATER (POTABLE)
- E — EMERGENCY WATER
- ES — EMERGENCY WATER (EMERGENCY SHOWER-LAB ONLY)
- FL — FIRE LINE
- FS — FIRE SERVICE WATER (POTABLE)
- G — GAS
- HW — HOT WATER (POTABLE)
- LCW — LABORATORY COLD WATER (NON-POTABLE)
- LHW — LABORATORY HOT WATER (NON-POTABLE)
- PD — PUMP DISCHARGE
- PHW — PROTECTED HOT WATER (NON-POTABLE)
- PRW — PRESSURE WASTE
- RL — RAIN LEADER
- PW — POTABLE (PROTECTED) WATER
- SP — SPRINKLER LINE
- V — VACUUM
- VE — VACUUM EXHAUST

- VALVE
- LOCKABLE BALL VALVE
- CHECK VALVE
- FLOW ALARM SWITCH
- ES/EW - EMERGENCY SHOWER/EYEWASH / FP-ES/EW - "FREEZE PROOF" ES/EW
- WHA — WATER HAMMER ARRESTOR
- CLEANOUTS
- FLUSH FLOOR CLEANOUT
- WATER PROOF SLEEVE
- FLOOR DRAIN OR ROOF DRAIN
- 1 — PROTECTED WATER CONNECTION IDENTIFICATION NUMBER
- OPEN END DRAIN
- EQUIPMENT PROVIDED UNDER PLUMBING SECTION
- EQUIPMENT PROVIDED BY OTHERS REQUIRING PLUMBING CONNECTIONS
- DN OR DROP — "DN" DENOTES PIPES WHICH PENETRATE THR FLOOR BELOW. "DROP" DENOTES PIPES WHICH DO NOT.
- UP OR RISE — "UP" DENOTES PIPES WHICH PENETRATE THR FLOOR ABOVE. "RISE" DENOTES PIPES WHICH DO NOT.

THE TERMS "DN", "DROP", "UP", & "RISE" ARE USED TO INDICATE THE VERTICAL DIRECTION IN WHICH A PIPE LINE CONTINUES FROM THE IMAGINARY PLANE OF VIEW. THE TERMS HAVE NO RELEVANCE TO THE DIRECTION OF THE FLOW WITHIN THE PIPE LINE.

- POINT WHERE NEW CONSTRUCTION CONNECTS TO EXISTING CONSTRUCTION
- POINT BETWEEN EXISTING CONSTRUCTION TO REMAIN AND EXISTING CONSTRUCTION TO BE DEMOLISHED
- MIXING VALVE

FIXTURE SCHEDULE

FIXTURE	DESCRIPTION	WASTE	HOT WATER	COLD WATER	POTABLE WATER
ES/EW	EMERGENCY SHOWER/EYEWASH	1-1/2"	1-1/2" (TEPID)	-	-
HB	HOSE BIBB	-	-	-	3/4"
LAV-HP-B	LAVATORY, HANDICAPPED	1-1/4"	1/2"	1/2"	-
MB	MOP BASIN	3"	3/4"	3/4"	-
SSK	SINK	2"	1/2"	1/2"	-
WC-HP	TOILET, HANDICAPPED	3"	-	1-1/2"	-
WH	WALL HYDRANT	-	-	-	3/4"
WHS	WASH HOSE STATION	-	-	-	3/4"

TANK TYPE WATER HEATER SCHEDULE

ITEM NO.	LOCATION	TANK SIZE	ENTERING WATER TEMP	LEAVING WATER TEMP	NUMBER OF ELEMENTS	INPUT RATING EACH ELEMENT	TOTAL KW	VOLTAGE	PHASE	CYCLE	REMARKS
EWH-PS-1	MECHANICAL ROOM	6 GAL	67°-72°F	140°F	1	2 KW	2	120 V	1ø	60 HZ	SEE NOTE 1

NOTE 1: BASIS OF DESIGN IS RHEEM XE06P06PU20U0 OR EQUAL. REFER TO THE SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.

JOSHUA MEINIG — LICENSE — NO. 72454 — STATE OF FLORIDA — PROFESSIONAL ENGINEER

DATE:
JOSHUA H. MEINIG
PE NO. 72454

REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: J. MEINIG
DRAWN BY: A. STUART
SHEET CHK'D BY: P. POULIOT
CROSS CHK'D BY: D. PRAH
APPROVED BY: J. MEINIG
DATE: DECEMBER 2020

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Jacksonville, FL 32256
Tel: (904) 731-7109
FL COA No. EB-0000020

JACOBS
245 RIVERSIDE AVE, SUITE 300
JACKSONVILLE, FLORIDA 32202
EB0000072 AAC001992 LC26000188

JEA

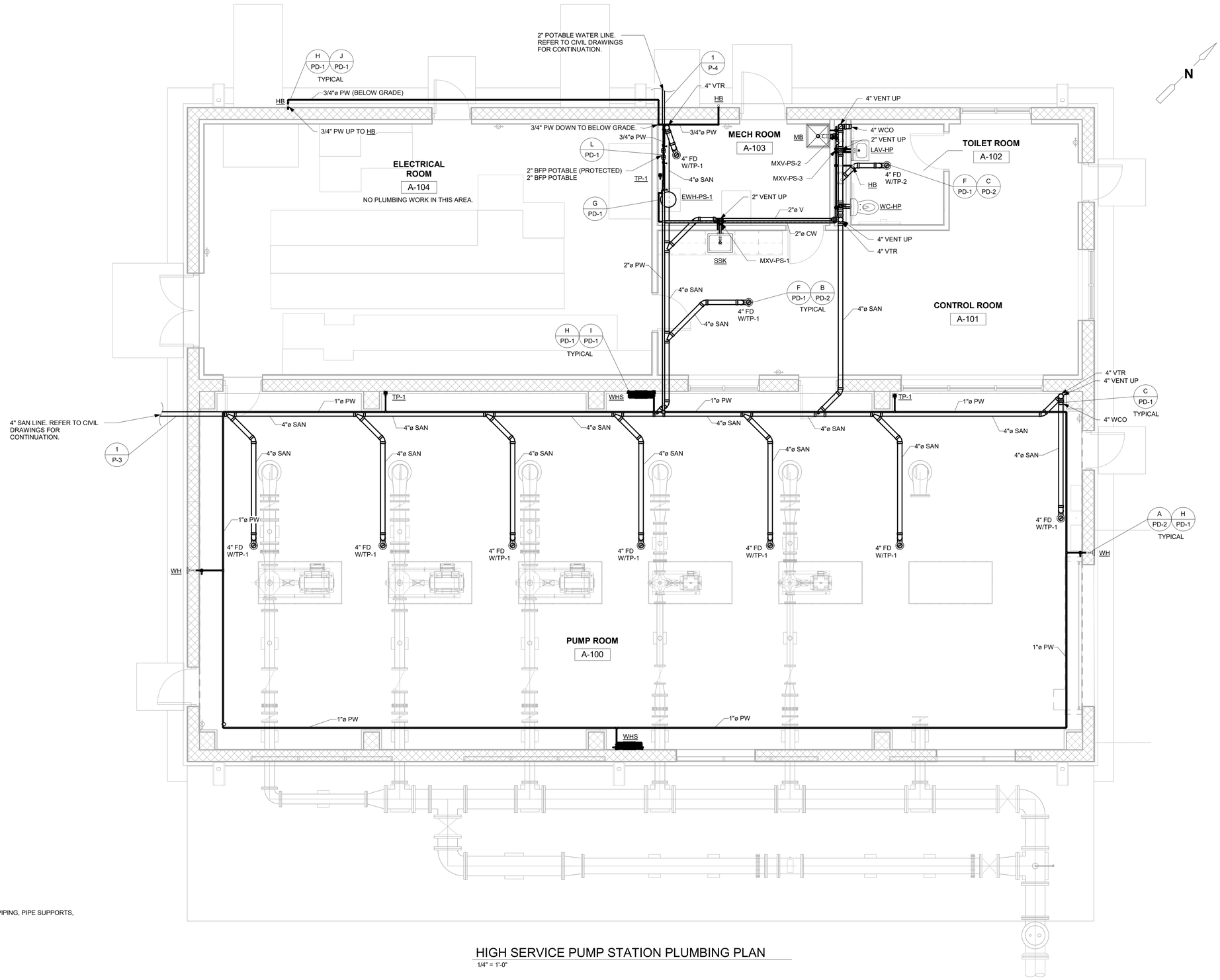
RIVERTOWN WATER TREATMENT PLANT PROJECT

PLUMBING SYMBOLS AND ABBREVIATIONS

PROJECT NO. 6103-237938
FILE NAME: PWZ000PS.RVT

SHEET NO.
P-1

ISSUED FOR BID



NOTES:

1. COORDINATE INSTALLATION OF PIPING, PIPE SUPPORTS, ETC. WITH THE BRIDGE CRANE.

HIGH SERVICE PUMP STATION PLUMBING PLAN

1/4" = 1'-0"

JOSHUA MEINIG LICENSE NO. 72454 STATE OF FLORIDA PROFESSIONAL ENGINEER

DATE:
JOSHUA H. MEINIG
PE NO. 72454

REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: J. MEINIG
DRAWN BY: C. JOHNSON
SHEET CHK'D BY: P. POULIOT
CROSS CHK'D BY: D. PRAH
APPROVED BY: J. MEINIG
DATE: DECEMBER 2020

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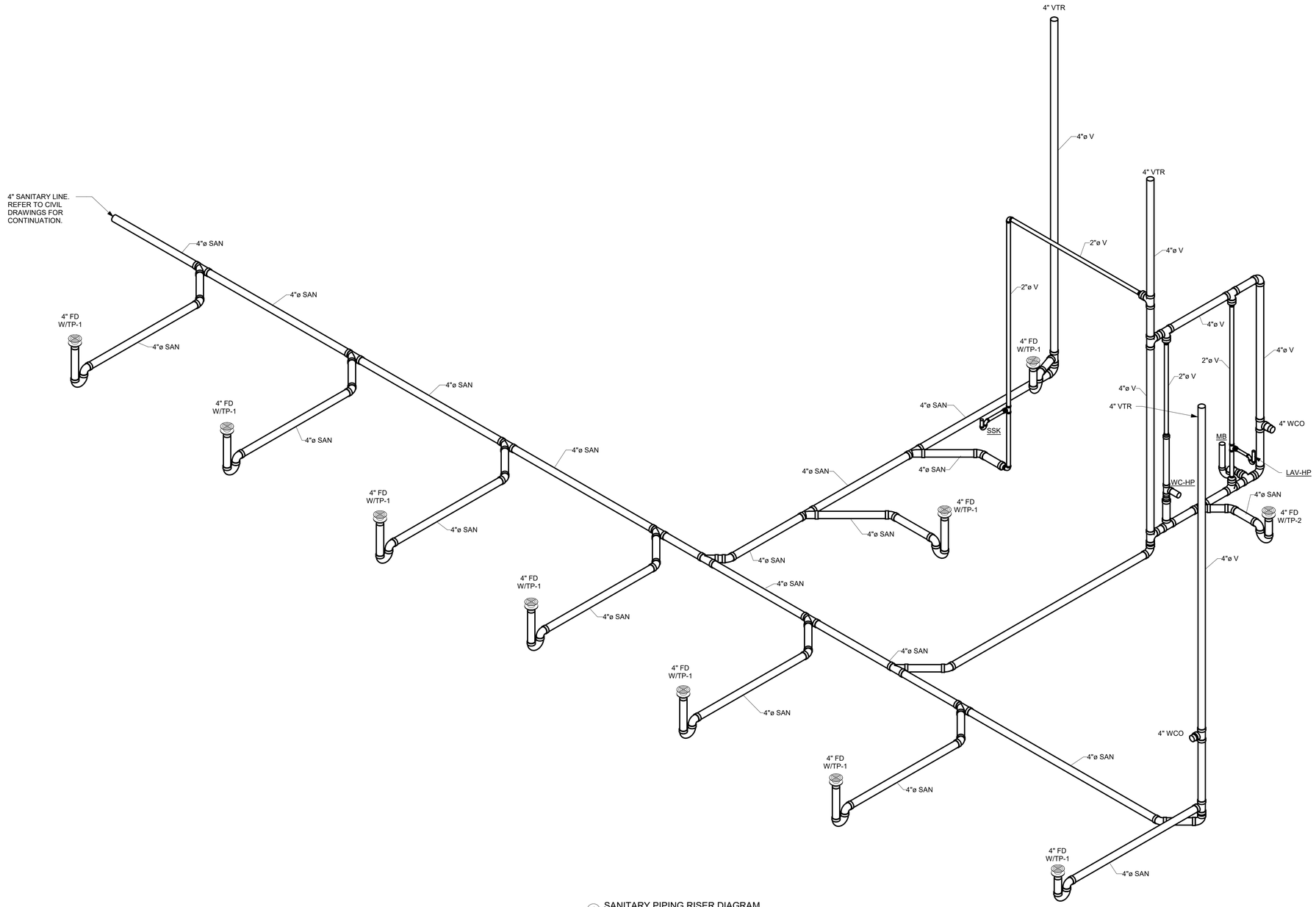
RIVERTOWN WATER TREATMENT PLANT PROJECT

HIGH SERVICE PUMP STATION PLUMBING PLAN

PROJECT NO. 6103-237938
FILE NAME: PWZ000PS.RVT

SHEET NO.
P-2

ISSUED FOR BID



1 SANITARY PIPING RISER DIAGRAM

JOSHUA MEINIG LICENSE NO. 72454 STATE OF FLORIDA PROFESSIONAL ENGINEER

DATE:
JOSHUA H. MEINIG
PE NO. 72454

REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: J. MEINIG
DRAWN BY: A. STUART
SHEET CHK'D BY: P. POULIOT
CROSS CHK'D BY: D. PRAH
APPROVED BY: J. MEINIG
DATE: DECEMBER 2020

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JEA

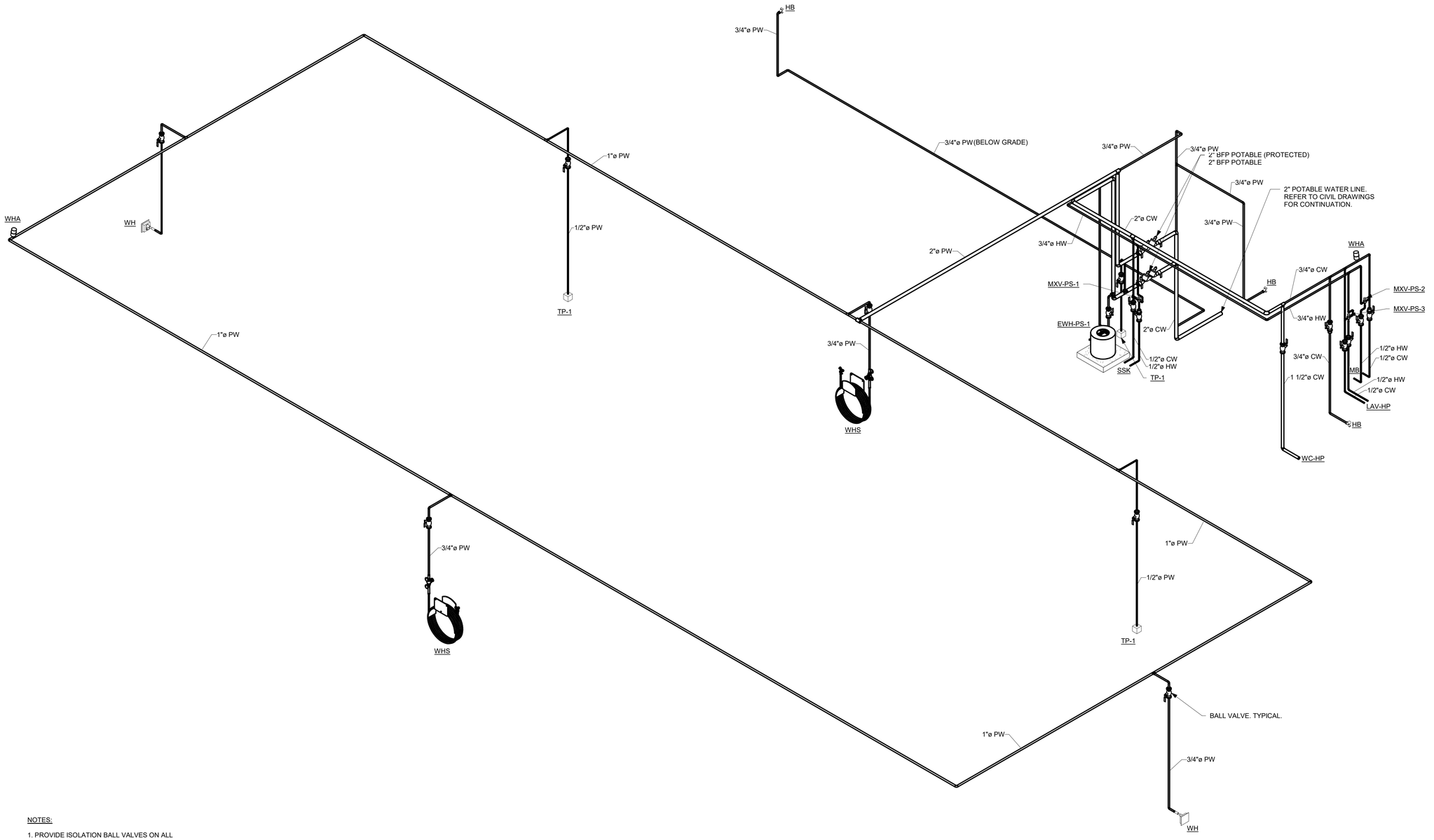
RIVERTOWN WATER TREATMENT PLANT PROJECT

HIGH SERVICE PUMP STATION
SANITARY RISER DIAGRAM

PROJECT NO. 6103-237938
FILE NAME: PWZ000PS.RVT

SHEET NO.
P-3

ISSUED FOR BID



NOTES:

1. PROVIDE ISOLATION BALL VALVES ON ALL DROPS TO FIXTURES AND EQUIPMENT.

2. PROVIDE WATER HAMMER ARRESTORS SIZED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.

1 WATER PIPING RISER DIAGRAM

JOSHUA MEINIG
LICENSE
NO. 72454
STATE OF
FLORIDA
PROFESSIONAL ENGINEER

DATE:
JOSHUA H. MEINIG
PE NO. 72454

REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: J. MEINIG
DRAWN BY: A. STUART
SHEET CHK'D BY: P. POULIOT
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APPROVED BY: J. MEINIG
DATE: DECEMBER 2020

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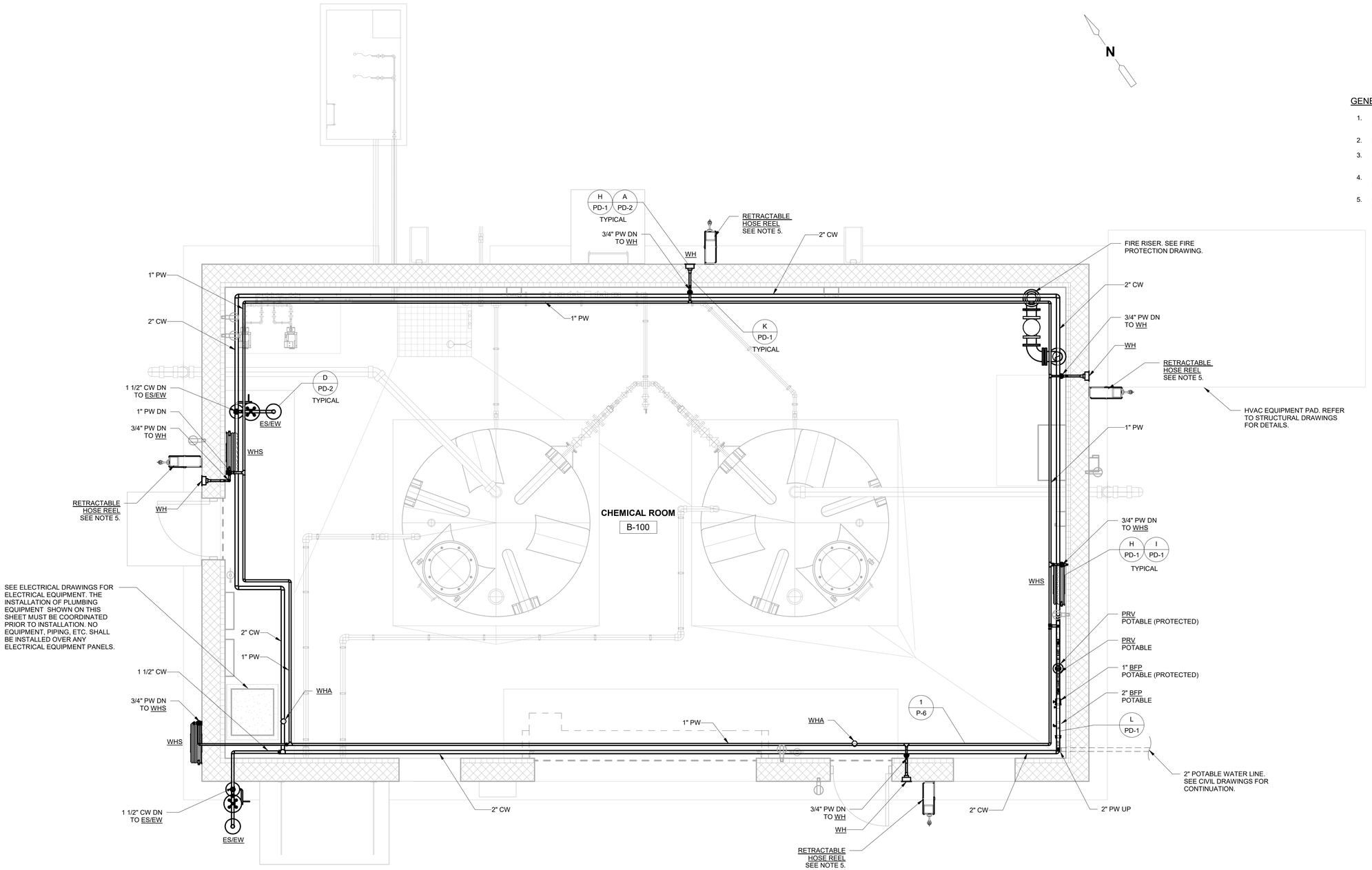
RIVERTOWN WATER TREATMENT PLANT PROJECT

HIGH SERVICE PUMP STATION
WATER RISER DIAGRAM

PROJECT NO. 6103-237938
FILE NAME: PWZ000PS.RVT

SHEET NO.
P-4

ISSUED FOR BID



GENERAL NOTES:

1. THE LOCATION OF ALL PLUMBING EQUIPMENT AND PIPING SHALL BE COORDINATED WITH OTHER DISCIPLINES PRIOR TO ANY WORK.
2. REFER SPECIFICATION SECTION 221116 FOR PIPING MATERIAL.
3. ISOLATION BALL VALVES SHALL BE PROVIDED ON ALL DROPS TO FIXTURES AND EQUIPMENTS.
4. WATER HAMMER ARRESTORS (WHA) SHALL BE SIZED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
5. RETRACTABLE HOSE REEL, BLUBIRD MODEL BLUSEAL, WITH 3/4" 50 FOOT HOSE AND 6 FOOT LEAD IN HOSE.

CHEMICAL BUILDING PLUMBING PLAN

3/8" = 1'-0"

3/8" = 1'- 0"
2 0 2 4

JOSHUA MEINIG LICENSE NO. 72454 STATE OF FLORIDA PROFESSIONAL ENGINEER

DATE:
JOSHUA H. MEINIG
PE NO. 72454

REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: S. SATHEESH
DRAWN BY: G. NITHIYAN
SHEET CHK'D BY: P. POULIOT
CROSS CHK'D BY: D. PRAH
APPROVED BY: J. MEINIG
DATE: DECEMBER 2020

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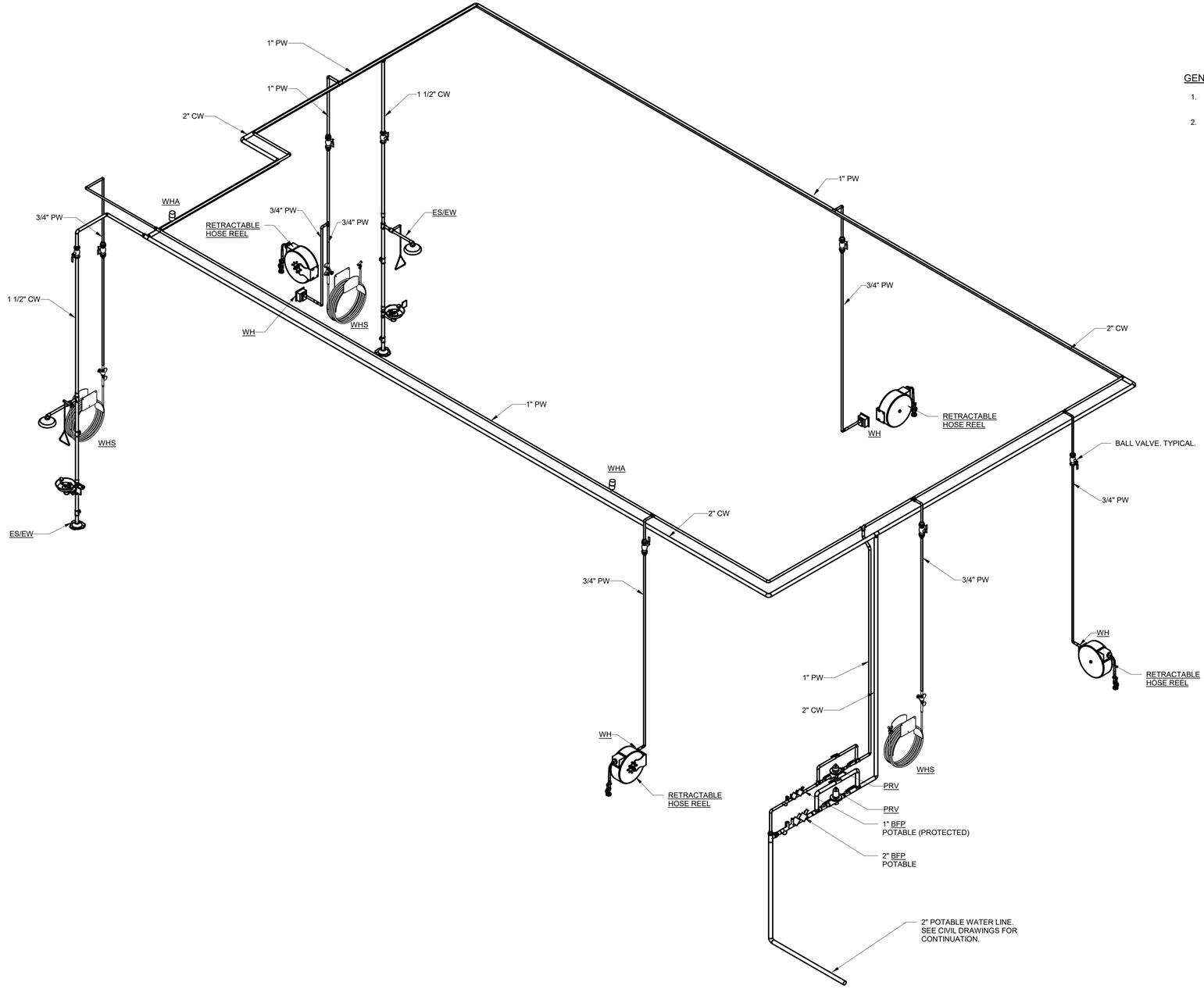
RIVERTOWN WATER TREATMENT PLANT PROJECT

CHEMICAL BUILDING PLUMBING PLAN

PROJECT NO. 6103-237938
FILE NAME: PWZ000CB.RVT

SHEET NO.
P-5

ISSUED FOR BID



1 WATER PLUMBING RISER DIAGRAM
NTS

GENERAL NOTES:

1. ISOLATION BALL VALVES SHALL BE PROVIDED ON ALL DROPS TO FIXTURES AND EQUIPMENTS.
2. WATER HAMMER ARRESTORS (WHA) SHALL BE SIZED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.

JOSHUA MEINIG LICENSE NO. 72454 STATE OF FLORIDA PROFESSIONAL ENGINEER

DATE:
JOSHUA H. MEINIG
PE NO. 72454

REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: S. SATHEESH
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APPROVED BY: J. MEINIG
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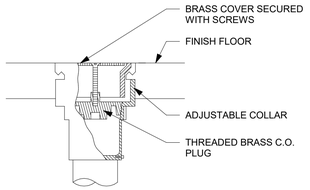
RIVERTOWN WATER TREATMENT PLANT PROJECT

CHEMICAL BUILDING
PLUMBING RISER DIAGRAM

PROJECT NO. 6103-237938
FILE NAME: PWZ000CB.RVT

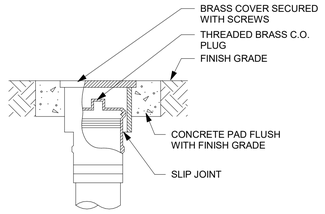
SHEET NO.
P-6

ISSUED FOR BID



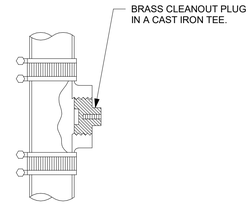
FLOOR CLEANOUT (FCO)

A DETAIL NTS



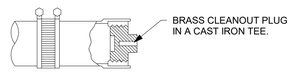
EXTERIOR CLEANOUT (ECO)

B DETAIL NTS



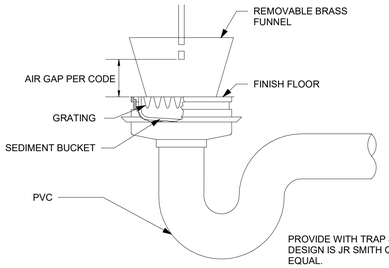
WALL CLEANOUT (WCO)

C DETAIL NTS



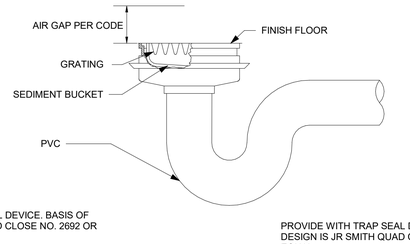
INLINE CLEANOUT (ICO)

D DETAIL NTS



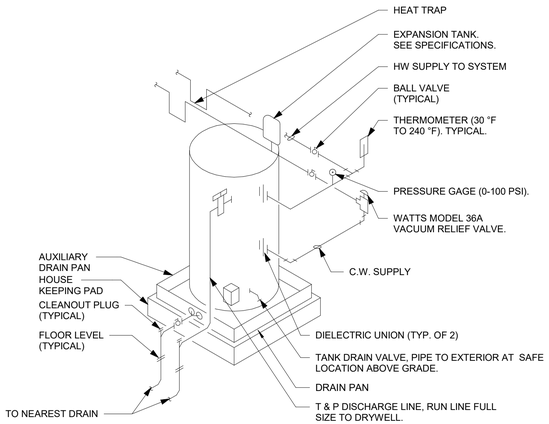
EQUIPMENT FLOOR DRAIN (ED)

E DETAIL NTS



FLOOR DRAIN

F DETAIL NTS



TANK TYPE WATER HEATER PIPING SCHEMATIC

G DETAIL NTS

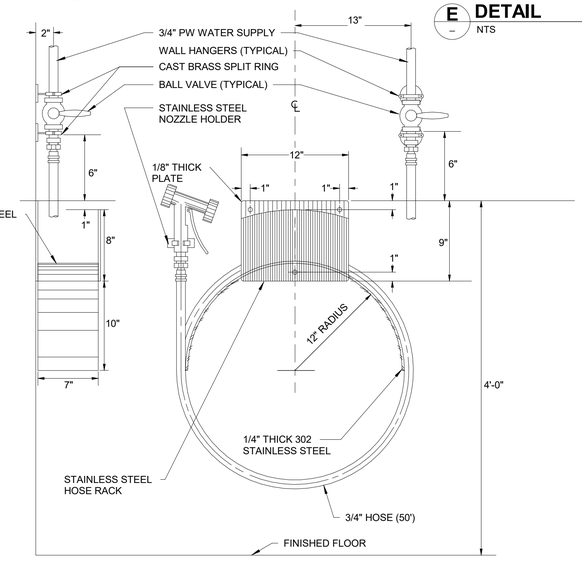
COLORS: BACKGROUND SHALL BE OSHA SAFETY YELLOW, LETTERS SHALL BE RECESSED BLACK

NOTES:
1. FURNISH & INSTALL THE ABOVE SIGN ABOVE ALL (EXISTING & NEW) POTABLE (PROTECTED) WATER HOSE BIBBS, WALL HYDRANTS, AND WASH HOSE STATIONS. ATTATCH THE SIGN TO THE STRUCTURE, GUARDRAIL OR POST WITH STAINLESS STEEL HARDWARE & MOUNTING BRACKET.

2. FURNISH ONE SIGN & RECEIVE APPROVAL FROM OWNER PRIOR TO ORDERING REMAINDER OF SIGNS.

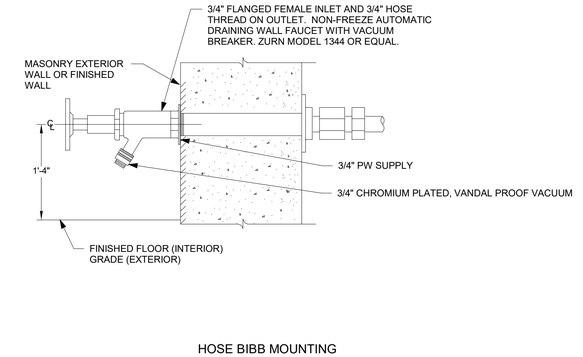
CAUTION SIGN

H DETAIL NTS



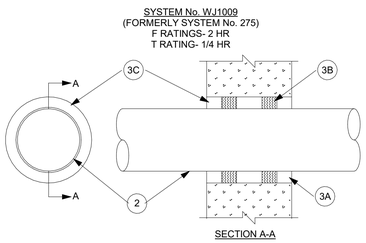
WASH HOSE STATION (WHS)

I DETAIL NTS



HOSE BIBB MOUNTING

J DETAIL NTS



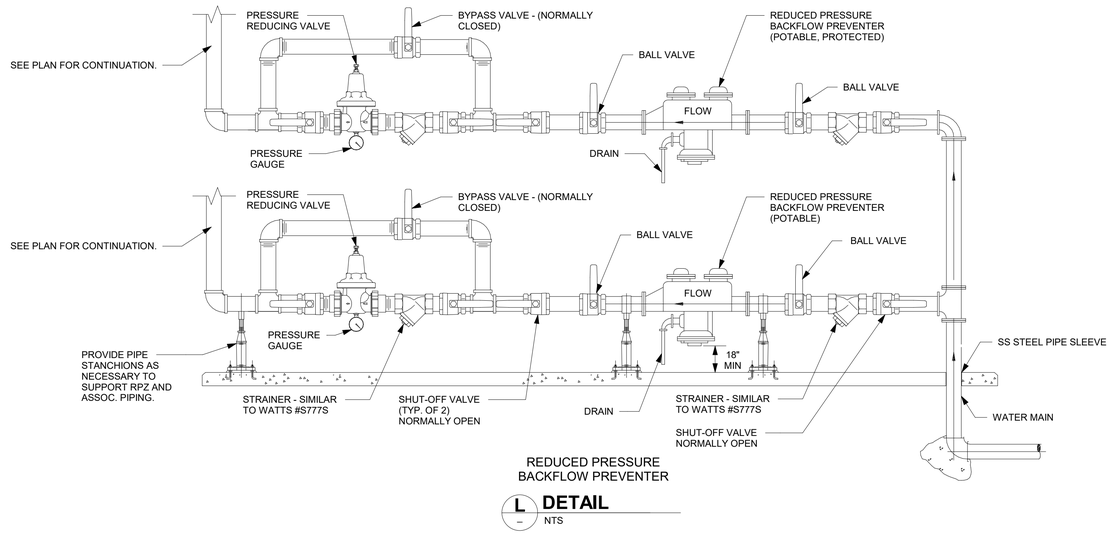
SECTION A-A

1. WALL ASSEMBLY - MIN 7-5/8" THICK WALL ASSEMBLY CONSTRUCTED OF ANY UL CLASSIFIED CONCRETE BLOCKS* OR COMMON BRICKS, LAID UP WITH MORTAR. MAX DIAMETER OF OPENING IS 6-1/2". SEE CONCRETE BLOCK (CAZT) CATEGORY IN THE FIRE RESISTANCE DIRECTORY FOR NAMES OF MANUFACTURERS.
2. STEEL PIPE- NOM 4" DIAMETER (OR SMALLER) SCHEDULE 5 (OR HEAVIER) STEEL PIPE. ONE PIPE TO BE CENTERED WITHIN THE FIRE STOP SYSTEM AND RIGIDLY SUPPORTED ON BOTH SIDES OF WALL ASSEMBLY.
3. FIRE STOP SYSTEM- THE FIRE STOP SYSTEM SHALL CONSIST OF THE FOLLOWING:
   A. STEEL WIRE MESH- CYLINDRICAL SLEEVE FABRICATED FROM No. 8 STEEL WHITE MESH HAVING A MIN 1" LAP ALONG THE LONGITUDINAL SEAM. LENGTH OF STEEL WIRE MESH TO BE MIN 7", CENTERED AND FORMED TO FIT PERIPHERY OF THROUGH OPENING. THE DIAMETER OF THE OPENINGS CUT IN EACH SIDE OF THE WALL ASSEMBLY TO BE 2" LARGER THAN OUTSIDE DIAMETER OF PIPE SUCH THAT, WHEN THE STEEL WIRE MESH IS INSTALLED, A 1" ANNULAR SPACE WILL BE PRESENT BETWEEN THE STEEL WIRE MESH AND THE PIPE AROUND THE ENTIRE CIRCUMFERENCE OF THE PIPE.
   B. PACKING MATERIAL- MIN 1-1/4" THICKNESS OF BACKER ROD AND/OR FOAMED PLASTIC BACKER MATERIAL OR MIN 4.4 PCF MATERIAL WOOL BATT INSULATION FIRMLY PACKED INTO OPENING AS A PERMANENT FORM. PACKING MATERIAL TO BE RECESSED FROM BOTH SURFACES OF WALL AS REQUIRED TO ACCOMMODATE THE REQUIRED THICKNESS OF FILL MATERIAL.
   C. FILL VOID OR CAVITY MATERIAL*- CAULK- MIN 1-1/4" THICKNESS OF FILL MATERIAL APPLIED WITHIN THE ANNULUS, FLUSH WITH BOTH SURFACES OF WALL.
   CARBORUNDUM CO., FIBERS DIV.- TYPE FP

*BEARING THE UL CLASSIFICATION MARKING.

FIRE RATED PIPE PENETRATION

K DETAIL NTS



REDUCED PRESSURE BACKFLOW PREVENTER

L DETAIL NTS

REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: J. MEINIG
DRAWN BY: A. STUART
SHEET CHK'D BY: P. POULIOT
CROSS CHK'D BY: D. PRAH
APPROVED BY: J. MEINIG
DATE: DECEMBER 2020

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JEA

RIVERTOWN WATER TREATMENT PLANT PROJECT

PLUMBING DETAILS I

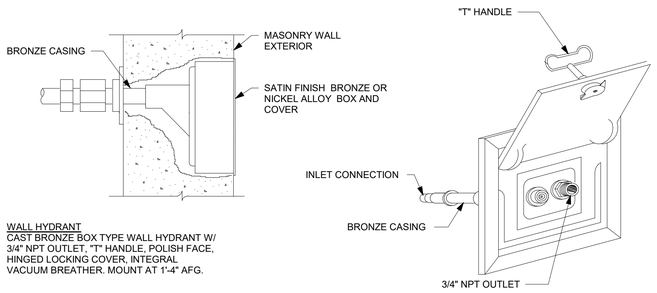
JOSHUA MEINIG LICENSE NO. 72454 STATE OF FLORIDA PROFESSIONAL ENGINEER

DATE:
JOSHUA H. MEINIG
PE NO. 72454

PROJECT NO. 6103-237938
FILE NAME: PEZ000PS.RVT

SHEET NO.
PD-1

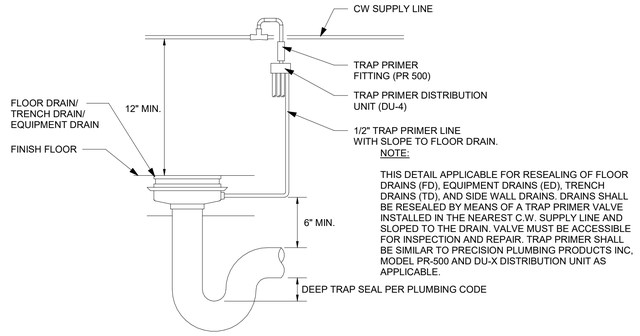
ISSUED FOR BID



WALL HYDRANT
CAST BRONZE BOX TYPE WALL HYDRANT W/ 3/4" NPT OUTLET, "T" HANDLE, POLISH FACE, HINGED LOCKING COVER, INTEGRAL VACUUM BREATHER. MOUNT AT 1'-4" AFG.

WALL HYDRANT (WH)

A DETAIL
NTS

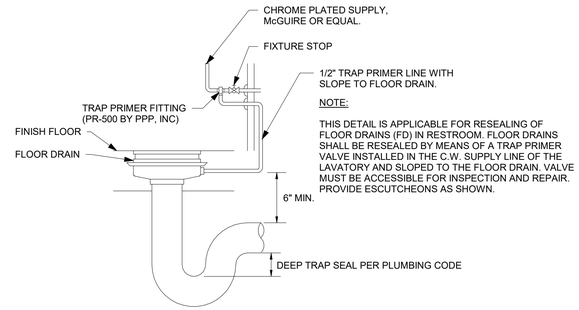


NOTE:

THIS DETAIL APPLICABLE FOR RESEALING OF FLOOR DRAINS (FD), EQUIPMENT DRAINS (ED), TRENCH DRAINS (TD), AND SIDE WALL DRAINS. DRAINS SHALL BE RESEALED BY MEANS OF A TRAP PRIMER VALVE INSTALLED IN THE NEAREST C.W. SUPPLY LINE AND SLOPED TO THE DRAIN. VALVE MUST BE ACCESSIBLE FOR INSPECTION AND REPAIR. TRAP PRIMER SHALL BE SIMILAR TO PRECISION PLUMBING PRODUCTS INC, MODEL PR-500 AND DU-X DISTRIBUTION UNIT AS APPLICABLE.

TRAP PRIMER RESEAL CONNECTION DIAGRAM (TP-1)

B DETAIL
NTS

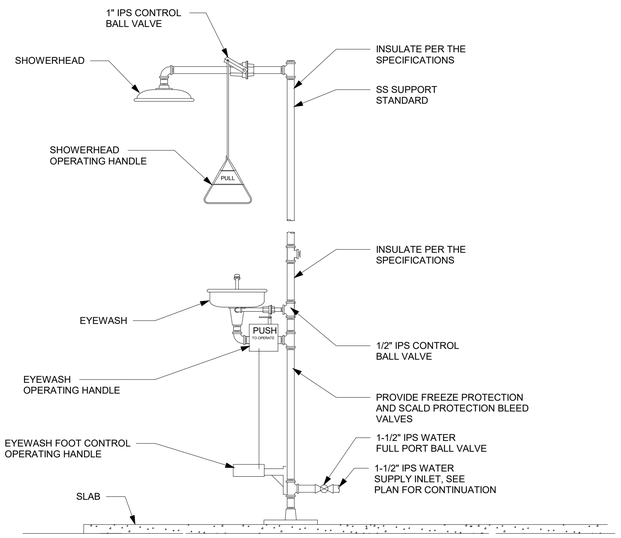


NOTE:

THIS DETAIL IS APPLICABLE FOR RESEALING OF FLOOR DRAINS (FD) IN RESTROOM. FLOOR DRAINS SHALL BE RESEALED BY MEANS OF A TRAP PRIMER VALVE INSTALLED IN THE C.W. SUPPLY LINE OF THE LAVATORY AND SLOPED TO THE FLOOR DRAIN. VALVE MUST BE ACCESSIBLE FOR INSPECTION AND REPAIR. PROVIDE ESCUTCHEONS AS SHOWN.

TRAP PRIMER RESEAL CONNECTION DIAGRAM (TP-2)

C DETAIL
NTS



FREE STANDING EMERGENCY SHOWER AND EYEWASH (ES/EW)

D DETAIL
NTS

REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: J. MEINIG
DRAWN BY: A. STUART
SHEET CHK'D BY: P. POULIOT
CROSS CHK'D BY: D. PRAH
APPROVED BY: J. MEINIG
DATE: DECEMBER 2020

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JEA

RIVERTOWN WATER TREATMENT PLANT PROJECT

PLUMBING DETAILS II

PROJECT NO. 6103-237938
FILE NAME: PWZ000PS.RVT

SHEET NO.
PD-2

JOSHUA MEINIG LICENSE NO. 72454 STATE OF FLORIDA PROFESSIONAL ENGINEER

DATE:
JOSHUA H. MEINIG
PE NO. 72454

ISSUED FOR BID

FIRE PROTECTION SYMBOLS	
SYMBOL	DESCRIPTION
	PIPING
	CHECK VALVE
FS	FLOW SWITCH WITH ADJUSTABLE RETARD
	ANGLE VALVE
	FLANGED OR GROOVED CONNECTION
	PRESSURE GAGUE WITH COCK
	OS&Y VALVE WITH TAMPER SWITCH
	RISER CHECK WITH INTEGRAL MAIN DRAIN AND PRESSURE GAUGE TAPPINGS
	REDUCER
AHJ	AUTHORITY HAVING JURISDICTION
SPDT	SINGLE POLE DOUBLE THROW
FM	FACTORY MUTUAL
UL	UNDERWRITERS LABORATORY
NFPA	NATIONAL FIRE PROTECTION ASSOCIATION
IN	INCHES
MM or mm	MILLIMETERS
k	KILO
PSI	POUNDS PER SQUARE INCH
GPM	GALLONS PER MINUTE
TS	TAMPER SWITCH

GENERAL NOTES:

1. FLUSHING SHOULD BE CONDUCTED AS FOLLOWS:

A. PIPE SIZE: 4 IN.; MINIMUM FLOW RATE: 390 GPM
B. PIPE SIZE: 6 IN.; MINIMUM FLOW RATE: 880 GPM
C. PIPE SIZE: 8 IN.; MINIMUM FLOW RATE: 1,560 GPM
D. PIPE SIZE: 10 IN.; MINIMUM FLOW RATE: 2,440 GPM
E. PIPE SIZE: 12 IN.; MINIMUM FLOW RATE: 3,520 GPM

2. A CONTRACTOR'S MATERIAL AND TEST CERTIFICATE, FM GLOBAL FORM 85B, SHOULD BE COMPLETED AND SUBMITTED TO FM GLOBAL.

FIRE PROTECTION GENERAL NOTES	
A.	INSTALL SYSTEM IN ACCORDANCE WITH NFPA 13 & 14, FLORIDA FIRE PREVENTION CODE AND THE REQUIREMENTS OF THE LOCAL AUTHORITY HAVING JURISDICTION. ALL MATERIALS SHALL BE FM GLOBAL/UL LISTED FOR USE IN FIRE PROTECTION SYSTEMS.
B.	ABOVE GROUND PIPING SHALL BE SCHEDULE 40 BLACK STEEL. UNDERGROUND PIPING SHALL BE AS SHOWN ON THE CIVIL DRAWINGS.
C.	HANGER LOCATIONS SHALL BE COORDINATED WITH THE BUILDING STRUCTURAL STEEL. SUPPORT PIPING IN ACCORDANCE WITH NFPA-13, PROVIDE ALL MISCELLANEOUS STEEL FRAMING AS REQUIRED TO SUPPORT PIPING FROM STRUCTURE. HANG ALL PIPING TIGHT TO STRUCTURE FOR MAXIMUM WORKING CLEARANCE IN SPACE.
D.	PROVIDE CHROME ESCUTCHEONS WHERE PIPING PENETRATES WALLS IN EXPOSED AREAS.
E.	SPRINKLERS SHALL BE FROM A SINGLE MANUFACTURER.
F.	ALL MEASUREMENTS AND ELEVATIONS SHALL BE ESTABLISHED BY THE CONTRACTOR PRIOR TO FABRICATION OF PIPE AND COORDINATED WITH THE BUILDING STRUCTURE, DUCTWORK SHOP DRAWINGS, AND THE WORK OF OTHER TRADES. PROVIDE OFFSETS WHERE REQUIRED DUE TO OBSTRUCTIONS OR INTERFERENCE AT NO ADDITIONAL COST TO THE OWNER.
G.	THE CONTRACTOR SHALL PREPARE FABRICATION/WORKING PLANS AS DEFINED BY NFPA-13 WHICH CLEARLY INDICATE ALL CUT PIPE DIMENSIONS, HANGER TYPES AND LOCATIONS, ANY TRAPPED SECTIONS OF PIPING, AND DEVIATIONS FROM THIS LAYOUT REQUIRED FOR COORDINATION. PROVIDE AUXILARY DRAINS FOR ANY TRAPPED PIPING.
H.	TIE-IN OF FLOW SWITCH AND TAMPER SWITCHES TO FIRE ALARM SYSTEM SHALL BE PERFORMED PER THE SPECIFICATIONS.
I.	SYSTEMS SHALL BE HYDRAULICALLY DESIGNED BY A PROFESSIONAL ENGINEER LICENSED TO PRACTICE IN THE STATE OF FLORIDA. REFER TO THE NOTES ON THE DRAWINGS FOR DENSITIES AND AREA OF APPLICATION.
J.	ALL SPRINKLER PIPING SHALL BE PAINTED RED, WITH ONE PRIMER COAT AND TWO ADDITIONAL COATS OF PAINT. REFER TO DIVISION 9.
K.	SEE CIVIL DRAWINGS FOR SITE PIPING.
L.	TEST SYSTEMS IN ACCORDANCE WITH NFPA-13 AND 24 AND REQUIREMENTS OF AUTHORITY HAVING JURISDICTION (AHJ) AND PREPARE "CONTRACTORS MATERIAL AND TEST CERTIFICATE" AS PRESCRIBED BY NFPA-13 AND NFPA-24.
M.	PROVIDE SPRINKLER HEAD CABINET WITH EACH TYPE AND TEMPERATURE RATING USED ON THE PROJECT, MINIMUM QUANTITY AS PER NFPA-13.
N.	LABEL DRAIN PIPING, INSPECTOR'S TEST, MAIN DRAIN, FIRE DEPARTMENT CONNECTION, RISER SHUT-OFF VALVE AND SIMILAR COMPONENTS.
O.	ALL PIPE SIZES ARE INDUSTRY STANDARD ASTM A53 PIPE DESIGNATED BY THEIR NOMINAL DIAMETER.
P.	THE BUILDING SHALL BE FULLY SPRINKLED, UNLESS OTHERWISE NOTED ON THE DRAWINGS.
Q.	PIPE SIZES INDICATED ARE THE MINIMUM ALLOWABLE. ACTUAL SIZES TO BE BASED UPON HYDRAULIC CALCULATIONS.
R.	FLOW TEST DATA: (SEE NOTE 1) PSI STATIC PRESSURE, (SEE NOTE 1) PSI RESIDUAL PRESSURE AT (SEE NOTE 1) GPM RESIDUAL FLOW. TEST DATE = (SEE NOTE 1). FLOW HYDRANT LOCATION (SEE NOTE 1). RESIDUAL HYDRANT LOCATION (SEE NOTE 1). FLOW TEST DATA IS PROVIDED FOR INFORMATION ONLY. CONTRACTOR SHALL PERFORM A NEW FLOW TEST AS PART OF THIS SCOPE OF WORK. REFER TO THE SPECIFICATIONS.

NOTE:

1. CONTRACTOR SHALL PROVIDE FIRE FLOW TEST AT NEAREST HYDRANT.

FIRE PROTECTION

1. FIRE PROTECTION FOR THE PURPOSE OF THESE PLANS IS ANY UNDERGROUND WATER LINE NOT OWNED AND MAINTAINED BY A PUBLIC UTILITY AS WELL AS ANY PRIVATE FIRE SERVICE MAIN AND PIPE AND ITS APPURTENANCES ON PRIVATE PROPERTY (1) BETWEEN A SOURCE OF WATER AND THE BASE OF THE SYSTEM RISER FOR WATER-BASED FIRE PROTECTION SYSTEMS, (2) BETWEEN A SOURCE OF WATER AND INLETS TO FOAM-MAKING SYSTEMS, (3) BETWEEN A SOURCE OF WATER AND THE BASE ELBOW OF PRIVATE HYDRANTS OR MONITOR NOZZLES AND (4) USED AS FIRE PUMP SUCTION AND DISCHARGE PIPING, (5) BEGINNING AT THE INLET SIDE OF THE CHECK VALVE ON A GRAVITY OR PRESSURE TANK.

2. POINT OF SERVICE FOR FIRE PROTECTION MEANS THE POINT AT WHICH THE UNDERGROUND PIPING FOR A FIRE PROTECTION SYSTEM AS DEFINED IN FS 633 USING WATER AS THE EXTINGUISHING AGENT BECOMES USED EXCLUSIVELY FOR THE FIRE PROTECTION SYSTEM.

3. STANDARDS TO BE REFERENCED ARE TO BE THE MOST CURRENT AS ADOPTED BY THE FLORIDA FIRE PREVENTION CODE:
NFPA 24, INSTALLATION OF PRIVATE FIRE SERVICE MAINS & THEIR APPURTENANCES
NFPA 20, STANDARD FOR INSTALLATION OF STATIONARY PUMPS FOR FIRE PROTECTION
NFPA 22, STANDARD FOR WATER TANKS FOR PRIVATE FIRE PROTECTION
NFPA 16, STANDARD ON DELUGE FOAM-WATER SPRINKLER & FOAM-WATER SPRAY SYSTEMS
NFPA 1963 STANDARD FOR FIRE HOSE CONNECTIONS

4. ITEMS ON THE CONSTRUCTION PLANS SHALL INCLUDE BUT NOT LIMITED TO SCALE DRAWINGS AND DETAILS AND TO INCLUDE THE FOLLOWING ITEMS WHEN THEY ARE APPLICABLE TO THE SYSTEM BEING INSTALLED:

1. NAME OF OWNER AND OCCUPANT.
2. LOCATION, INCLUDING STREET ADDRESS.
3. POINT OF COMPASS.
4. A GRAPHIC REPRESENTATION OF THE SCALE USED ON ALL PLANS.
5. NAME AND ADDRESS OF CONTRACTOR.
6. SIZE AND LOCATION OF ALL WATER SUPPLIES.
7. SIZE AND LOCATION OF ALL PIPING, INDICATING THE CLASS AND TYPE AND DEPTH OF EXISTING PIPE, THE CLASS AND TYPE OF NEW PIPE TO BE INSTALLED, AND THE DEPTH TO WHICH IT IS TO BE BURIED.
8. SIZE, TYPE, AND LOCATION OF VALVES. INDICATE IF LOCATED IN PIT OR IF OPERATION IS BY POST INDICATOR OR KEY WRENCH THROUGH A CURB BOX.
9. LOCATION OF FIRE DEPARTMENT CONNECTIONS, IF PART OF PRIVATE FIRE SERVICE MAIN SYSTEM, INCLUDING DETAIL OF CONNECTIONS.
10. SPRINKLER AND STANDPIPE RISERS AND MONITOR NOZZLES TO BE SUPPLIED BY THE SYSTEM.
11. ALL COMPONENTS MUST HAVE LISTING WITH FIRE PROTECTION PER NFPA 24.
12. ALL FIRE HYDRANTS INSTALLED IN ST. JOHNS COUNTY MUST HAVE A SINGLE 4.5 INCH HOSE OUTLET, AND TWO (2.5) INCH HOUSE OUTLETS, ALL WITH MALE NH STANDARD THREADS, IN ACCORDANCE WITH NFPA 1963.

5. A COPY THESE APPROVED ENGINEERED PLANS SHALL ACCOMPANY A REQUIRED FIRE MARSHAL UNDERGROUND PERMIT SUBMITTED BY A CERTIFIED CONTRACTOR. THIS UNDERGROUND PERMIT WILL REQUIRE ADDITIONAL DETAILS AND SPECS AT THE TIME OF SUBMITTAL TO THE FIRE MARSHALS' OFFICE.

6. CONTRACTORS INSTALLING THE UNDERGROUND PIPING IN ACCORDANCE WITH THE ABOVE REFERENCE STANDARDS FOR A FIRE PROTECTION SYSTEM USING WATER AS THE EXTINGUISHING AGENT BEGINNING AT THE POINT AT WHICH THE PIPING IS USED EXCLUSIVELY FOR FIRE PROTECTION AND ENDING NO MORE THAN 1 FOOT ABOVE THE FLOOR SHALL BE REQUIRED TO HAVE A CLASS I, II, OR V FIRE PROTECTION CONTRACTORS LICENSE PURSUANT TO CHAPTER 633, FLORIDA STATUTES. GENERAL CONTRACTORS ARE REMINDED THAT THEY ARE RESPONSIBLE FOR VERIFYING THAT THEIR SUBCONTRACTORS HOLD THE REQUIRED LICENSES. CONTRACTORS FOUND TO BE VIOLATING THIS REQUIREMENT MAY BE REPORTED TO THE DEPARTMENT OF BUSINESS AND PROFESSIONAL REGULATION AND/OR THE STATE FIRE MARSHAL'S REGULATORY LICENSING SECTION.

7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING A PERMIT FROM THE FIRE MARSHAL'S OFFICE PRIOR TO THE START OF SITE CONSTRUCTION IN ACCORDANCE WITH THE ABOVE REFERENCED STANDARDS.

8. NOTE: MINIMUM WORKING PRESSURE OF THE UNDERGROUND PIPING SHALL BE 150 PSI. NFPA 24 REQUIRES SPECIFIC PVC PIPING TO MEET TABLE C-900 WITH MANUFACTURING LISTING FOR FIRE PROTECTION.

9. ALL FIRE LINES MUST BE INSPECTED BY THE FIRE MARSHAL'S OFFICE PRIOR TO BACKFILL. THE CODE REQUIRES ALL JOINTS EXPOSED FOR INSPECTION WITH FILL IN-BETWEEN JOINTS. ALL PIPING AND ATTACHED APPURTENANCES SUBJECTED TO SYSTEM WORKING PRESSURE SHALL BE HYDROSTATICALLY TESTED AT 200 PSI OR 50 PSI IN EXCESS OF THE SYSTEM WORKING PRESSURE, WHICHEVER IS GREATER, AND SHALL MAINTAIN THAT PRESSURE WITHOUT LOSS FOR 2 HOURS.

FIRE SUPPRESSION SYSTEM SCHEDULE						
SUPPRESSION SYSTEM ZONE NO.	BUILDING DESCRIPTION	SYSTEM TYPE	OCCUPANCY HAZARD CLASSIFICATION	WATER APPLICATION DENSITY	MINIMUM CALCULATED AREA	COMBINED HOSE STREAM
1	HIGH SERVICE PUMP STATION	WET SPRINKLER	ORDINARY HAZARD GROUP 2	0.20 GPM/SQ FT	2500 SQ FT	250 GPM SEE NOTE 3
2	CHEMICAL BUILDING	WET SPRINKLER	ORDINARY HAZARD GROUP 2	0.20 GPM/SQ FT	2500 SQ FT	250 GPM SEE NOTE 3

NOTES:

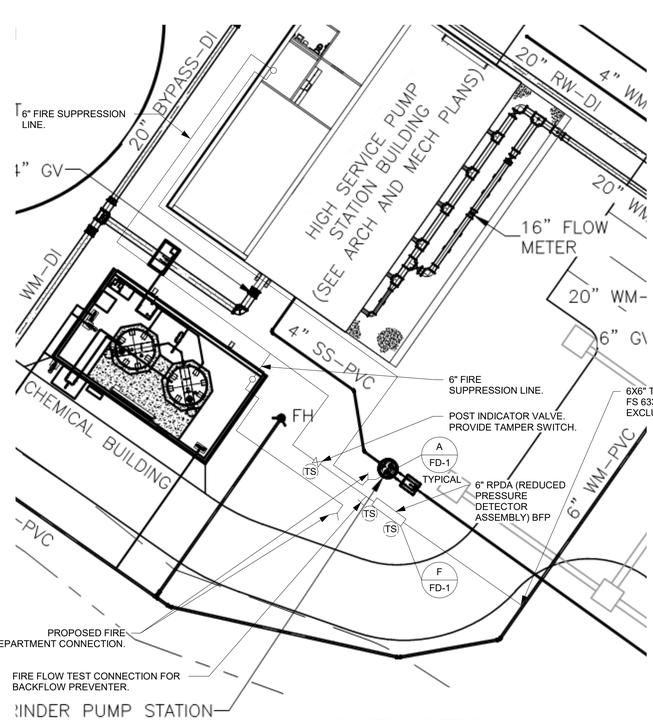
1. LOCATE FIRE DEPARTMENT CONNECTIONS PER THE REQUIREMENTS OF THE LOCAL FIRE DEPARTMENT. PROPOSED LOCATION IS SHOWN ON THE FIRE PROTECTION DRAWINGS. VERIFY SIZE AND THREADS OF THE FDC REQUIRED BY THE AHJ.
2. CONTRACTOR SHALL VERIFY WITH THE AUTHORITY HAVING JURISDICTION AND THE OWNER'S INSURANCE CARRIER (IF APPLICABLE) THE DENSITIES AND OCCUPANCY CLASSIFICATIONS IN THIS BUILDING.
3. HOSE STREAM ALLOWANCE SHALL BE APPLIED AT EACH RISER. TOTALS ARE NOT CUMULATIVE.
4. BACKFLOW PREVENTER PRESSURE DROP IS NOT CUMULATIVE.
5. CONTRACTOR SHALL PROVIDE A 10% SAFETY MARGIN BETWEEN THE SPRINKLER DEMAND AND THE WATER SUPPLY WHERE IT DOES NOT STRESS THE DESIGN OF THE PROJECT TOO GREATLY IN ORDER TO ACCOUNT FOR ERROR IN WATER SUPPLY TESTS, CHANGES TO THE WATER SYSTEM (PUBLIC), OR NEARBY WATER CUSTOMERS.

INSTALLATION NOTES:

1. CONTRACTOR SHALL PROVIDE FIRE FLOW TEST AT NEAREST INSTALLED HYDRANT.
2. ALL PIPING PENETRATIONS OF RATED WALLS SHALL BE SEALED PER DETAIL E/FD-1 OR OTHER UL LISTED ASSEMBLY. REFER TO SHEET ARCHITECTURAL DRAWINGS FOR LOCATIONS OF FIRE RATED WALLS.
3. ALL MATERIALS USED IN SPRINKLER INSTALLATION SHALL BE FM GLOBAL APPROVED.
4. COORDINATE LOCATIONS OF ALL FIRE PROTECTION PIPING AND EQUIPMENT WITH ALL OTHER UTILITIES, PIPING, DUCTWORK, ELECTRICAL DUCT BANKS, CONDUIT, WIRING, LIGHTING, BUILDING STRUCTURES, ETC.

REQUIRED DOCUMENTATION FOR:
61G15-32.004 DESIGN OF WATER BASED FIRE PROTECTION SYSTEMS.

(1) WATER BASED FIRE PROTECTION SYSTEMS INCLUDE, BUT ARE NOT LIMITED TO, AUTOMATIC SPRINKLER SYSTEMS OF WET, DRY, FINE WATER SPRAY (MIST), MANUAL, AND DELUGE VALVE CONTROLLED TYPES, PUMPING SYSTEMS, STANDPIPES, FIRE WATER MAINS AND DEDICATED FIRE PROTECTION WATER SOURCES. - **ACKNOWLEDGED.**
(2) TO ENSURE MINIMUM DESIGN QUALITY IN FIRE PROTECTION SYSTEM ENGINEERING DOCUMENTS, SAID DOCUMENTS SHALL INCLUDE AS A MINIMUM THE FOLLOWING INFORMATION WHEN APPLICABLE:
(A) THE POINT OF SERVICE FOR THE FIRE PROTECTION WATER SUPPLY AS DEFINED BY SECTION 633.021(18), F.S. - **REFER TO PARTIAL SITE PLAN ON DRAWING F-1 AND THE YARD PIPING PLAN ON CIVIL DRAWINGS FOR LOCATION.**
(B) APPLICABLE NFPA STANDARD TO BE APPLIED, OR IN THE CASE WHERE NO SUCH STANDARD EXISTS, THE ENGINEERING STUDY, JUDGMENTS, AND/OR PERFORMANCE BASED ANALYSIS AND CONCLUSIONS. - **NFPA 13-2019.**
(C) CLASSIFICATION OF HAZARD OCCUPANCY FOR EACH ROOM OR AREA. - **REFER TO THE FIRE SUPPRESSION SYSTEM SCHEDULE ON DRAWING F-1.**
(D) DESIGN APPROACH, WHICH INCLUDES SYSTEM TYPE, DENSITIES, DEVICE TEMPERATURE RATING, AND SPACING FOR EACH SEPARATE HAZARD OCCUPANCY. - **REFER TO THE FIRE SUPPRESSION SYSTEM SCHEDULE ON SHEET F-1.**
(E) CHARACTERISTICS OF WATER SUPPLY TO BE USED, SUCH AS MAIN SIZE AND LOCATION, WHETHER IT IS DEAD-END OR CIRCULATING; AND IF DEAD-END, THE DISTANCE TO THE NEAREST CIRCULATING MAIN, AS WELL AS ITS MINIMUM DURATION AND RELIABILITY FOR THE MOST HYDRAULICALLY DEMANDING DESIGN AREA. - **NEW 6" TAP TO 6" FINISHED WATER MAIN. REFER TO PARTIAL SITE PLAN ON DRAWING F-1 AND THE YARD PIPING PLAN ON CIVIL DRAWINGS FOR LOCATION. NEW 6" TAP IS A DEAD-END LINE CONNECTED TO 6" FINISHED WATER MAIN APPROXIMATELY 90'-0" FROM DISCHARGE OF HIGH SERVICE PUMP STATION. DUE TO THE PROXIMITY OF THE NEW FIRE SERVICE TO THE HIGH SERVICE DISTRIBUTION PUMPS, SYSTEM WILL HAVE ADEQUATE CAPABILITY TO MEET MINIMUM DURATION OF 60 MINUTES AND RELIABILITY FOR THE HAZARD AREA (MOST HYDRAULICALLY DEMANDING DESIGN AREA). ALL PUMPS ARE PROVIDED WITH EMERGENCY BACK-UP POWER.**
(F) WHEN PRIVATE OR PUBLIC WATER SUPPLIES ARE USED, THE FLOW TEST DATA, INCLUDING DATE AND TIME OF TEST, WHO CONDUCTED TEST OR SUPPLIED INFORMATION, TEST ELEVATION, STATIC GAUGE PRESSURE AT NO FLOW, FLOW RATE WITH RESIDUAL GAUGE PRESSURE, HYDRANT BUTT COEFFICIENT, AND LOCATION OF TEST IN RELATION TO THE HYDRAULIC POINT OF SERVICE. - **CONTRACTOR TO PERFORM FIRE FLOW TEST AT NEAREST INSTALLED HYDRANT.**
(G) VALVING AND ALARM REQUIREMENTS TO MINIMIZE POTENTIAL FOR IMPAIRMENTS AND UNRECOGNIZED FLOW OF WATER. - **ALL SYSTEM VALVES ARE SHOWN ON DRAWINGS F-1 (SITE PLAN), F-2 AND F-3. ALL VALVES ARE PROVIDED WITH TAMPER/SUPERVISORY SWITCHES WHICH ARE SUPERVISED BY THE BUILDING FIRE ALARM SYSTEM.**
(H) MICROBIAL INDUCED CORROSION (MIC). THE ENGINEER OF RECORD SHALL MAKE REASONABLE EFFORTS TO IDENTIFY WATER SUPPLIES THAT COULD LEAD TO MICROBIAL INDUCED CORROSION (MIC). SUCH EFFORTS MAY CONSIST OF DISCUSSIONS WITH THE LOCAL WATER PURVEYOR AND/OR FIRE OFFICIAL, FAMILIARITY WITH CONDITIONS IN THE LOCAL AREA, OR LABORATORY TESTING OF WATER SUPPLIES. WHEN CONDITIONS ARE FOUND THAT MAY RESULT IN MIC CONTAMINATION OF THE FIRE PROTECTION PIPING, THE ENGINEER SHALL DESIGN CORRECTIVE MEASURES. - **THE LOCAL WATER UTILITY WILL MAINTAIN AND FLUSH THE SYSTEM ON A REGULAR BASIS.**
(I) BACKFLOW PREVENTION AND METERING SPECIFICATIONS AND DETAILS TO MEET LOCAL WATER PURVEYOR REQUIREMENTS INCLUDING MAXIMUM ALLOWABLE PRESSURE DROP. - **REFER TO PARTIAL SITE PLAN ON DRAWING F-1 FOR LOCATION OF BACKFLOW PREVENTER. REFER TO SPECIFICATIONS FOR DOUBLE CHECK BACKFLOW PREVENTER SPECIFICATIONS.**
(J) QUALITY AND PERFORMANCE SPECIFICATIONS OF ALL YARD AND INTERIOR FIRE PROTECTION COMPONENTS. - **YARD FIRE PROTECTION PIPING WILL BE DUCTILE IRON. REFER TO THE SPECIFICATIONS FOR DETAILS. INTERIOR FIRE SERVICE PIPING WILL BE SCHEDULE 40 BLACK STEEL. REFER TO THE SPECIFICATIONS FOR DETAILS. REFER TO THE SPECIFICATIONS FOR FIRE HYDRANT AND YARD PIPING VALVE SPECIFICATIONS. REFER TO THE SPECIFICATIONS FOR REMAINING FIRE PROTECTION COMPONENT SPECIFICATIONS - INCLUDING VALVES, SLEEVES, HANGERS, SPRINKLER HEADS, FIRE DEPARTMENT PUMPER CONNECTION, FLOW SWITCHES, TAMPER/SUPERVISORY SWITCHES, ALARM CHECK VALVE, WATER MOTOR GONG, POST INDICATOR VALVE, AND OTHER REQUIRED COMPONENTS.**
(K) A DETERMINATION OF WHETHER A FIRE PUMP IS REQUIRED AND IF SO, THE SPECIFIC VOLUMETRIC FLOW AND PRESSURE RATING OF THE PUMP. - **FIRE PUMP NOT REQUIRED.**
(L) A VERIFICATION OF WHETHER A FIREWATER STORAGE TANK IS REQUIRED ON SITE AND IF SO, A DETERMINATION OF THE SIZE AND CAPACITY REQUIRED. - **FIREWATER STORAGE TANK NOT REQUIRED.**
(M) OWNER'S CERTIFICATE. IN STORAGE OCCUPANCIES, THE OWNER'S INFORMATION CERTIFICATE IS REQUIRED FROM THE PROPERTY OWNER AS IT CLEARLY DEFINES THE STORAGE CONFIGURATION OF THE SPACE FOR THE CURRENT AND FUTURE USE OF THE PROPERTY, AS REQUIRED BY THE CODES AND STANDARDS SET FORTH IN SUBSECTION 61G15-32.002(7), F.A.C. - **NOT APPLICABLE.**
(N) CONTRACTOR SUBMITTALS WHICH DEVIATE FROM THE ABOVE MINIMUM DESIGN PARAMETERS SHALL BE CONSIDERED MATERIAL DEVIATIONS AND REQUIRE SUPPLEMENTAL ENGINEERING APPROVAL AND DOCUMENTATION. - **ACKNOWLEDGED.**
(O) IN THE EVENT THE ENGINEER OF RECORD PROVIDES MORE INFORMATION AND DIRECTION THAN IS ESTABLISHED ABOVE, HE OR SHE SHALL BE HELD RESPONSIBLE FOR THE TECHNICAL ACCURACY OF THE WORK IN ACCORDANCE WITH APPLICABLE CODES, STANDARDS, AND SOUND ENGINEERING PRINCIPLES. - **ACKNOWLEDGED.**



PARTIAL SITE PLAN
NTS

NOTES:

1. FIRE SPRINKLER LINES WILL FINISH 1 FOOT ABOVE FINISH FLOOR PER FS 633.334.
2. FIRE SPRINKLER LINES MUST BE LISTED AND COMPLY WITH NFPA 24 AND AWWA C-900.

JOSHUA MEINIG LICENSE NO. 72454 STATE OF FLORIDA PROFESSIONAL ENGINEER

DATE:
JOSHUA H. MEINIG
PE NO. 72454

REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: J. MEINIG
DRAWN BY: C. JOHNSON
SHEET CHK'D BY: P. POULIOT
CROSS CHK'D BY: D. PRAH
APPROVED BY: J. MEINIG
DATE: DECEMBER 2020

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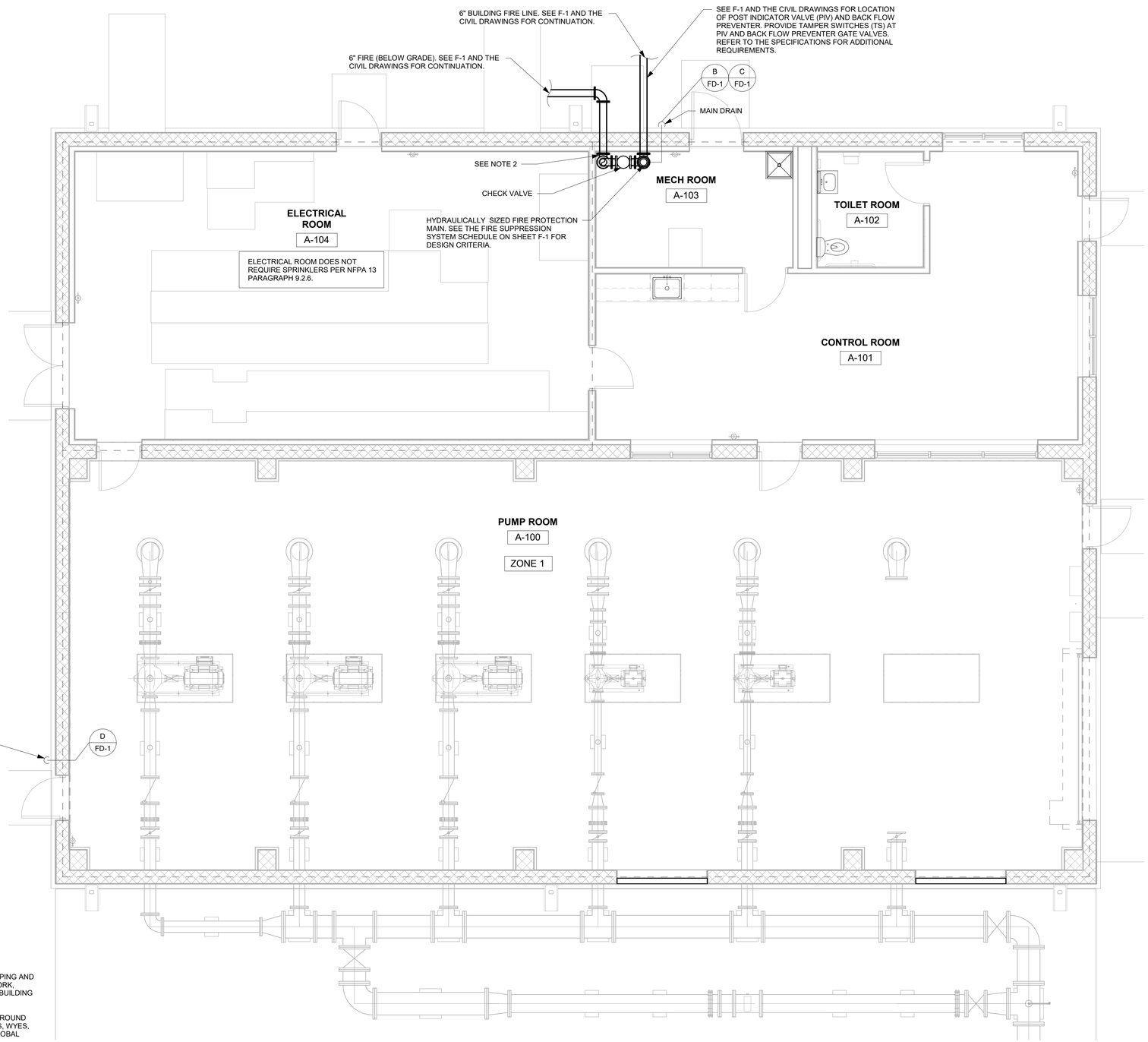
RIVERTOWN WATER TREATMENT PLANT PROJECT

FIRE PROTECTION
SYMBOLS AND ABBREVIATIONS

PROJECT NO. 6103-237938
FILE NAME: FWZ000CB.RVT
SHEET NO. F-1

ISSUED FOR BID



GENERAL NOTES:

1. COORDINATE LOCATIONS OF ALL FIRE PROTECTION PIPING AND EQUIPMENT WITH ALL OTHER UTILITIES, PIPING, DUCTWORK, ELECTRICAL DUCT BANKS, CONDUIT, WIRING, LIGHTING, BUILDING STRUCTURES, ETC.

2. PROVIDE THRUST BLOCKS OR TIE-RODS FOR UNDERGROUND PIPING AT BENDS, HYDRANTS, REDUCERS, TEES, VALVES, WYES, DEAD-ENDS AND OFFSETS ON PIPE SYSTEMS PER FM GLOBAL PROPERTY LOSS PREVENTION DATA SHEET 3-10 INSTALLATION/MAINTENANCE OF FIRE SERVICE MAINS.

HIGH SERVICE PUMP STATION FIRE PROTECTION PLAN

1/4" = 1'-0"

JOSHUA MEINIG LICENSE NO. 72454 STATE OF FLORIDA PROFESSIONAL ENGINEER

DATE:
JOSHUA H. MEINIG
PE NO. 72454

REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: J. MEINIG
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SHEET CHK'D BY: P. POULIOT
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APPROVED BY: J. MEINIG
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JEA

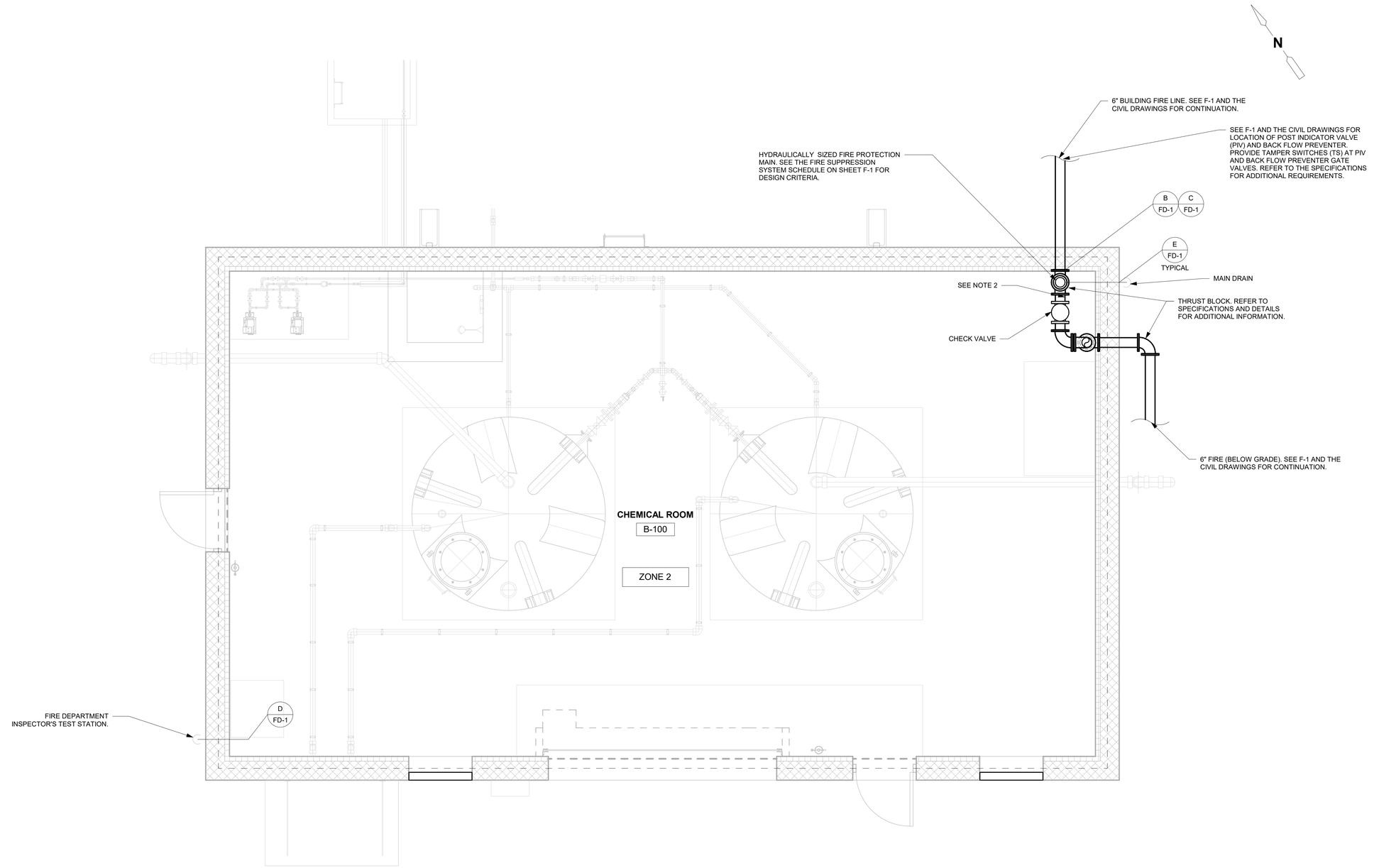
RIVERTOWN WATER TREATMENT PLANT PROJECT

HIGH SERVICE PUMP STATION
FIRE PROTECTION PLAN

PROJECT NO. 6103-237938
FILE NAME: FWZ000PS.RVT

SHEET NO.
F-2

ISSUED FOR BID



GENERAL NOTES:

1. COORDINATE LOCATIONS OF ALL FIRE PROTECTION PIPING AND EQUIPMENT WITH ALL OTHER UTILITIES, PIPING, DUCTWORK, ELECTRICAL DUCT BANKS, CONDUIT, WIRING, LIGHTING, BUILDING STRUCTURES, ETC.

2. PROVIDE THRUST BLOCKS OR TIE-RODS FOR UNDERGROUND PIPING AT BENDS, HYDRANTS, REDUCERS, TEES, VALVES, WYES, DEAD-ENDS AND OFFSETS ON PIPE SYSTEMS PER FM GLOBAL PROPERTY LOSS PREVENTION DATA SHEET 3-10 INSTALLATION/MAINTENANCE OF FIRE SERVICE MAINS.

CHEMICAL BUILDING FIRE PROTECTION PLAN

3/8" = 1'-0"

JOSHUA MEINIG LICENSE NO. 72454 STATE OF FLORIDA PROFESSIONAL ENGINEER

DATE:
JOSHUA H. MEINIG
PE NO. 72454

REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: J. MEINIG
DRAWN BY: C. JOHNSON
SHEET CHK'D BY: P. POULIOT
CROSS CHK'D BY: D. PRAH
APPROVED BY: J. MEINIG
DATE: DECEMBER 2020

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JEA

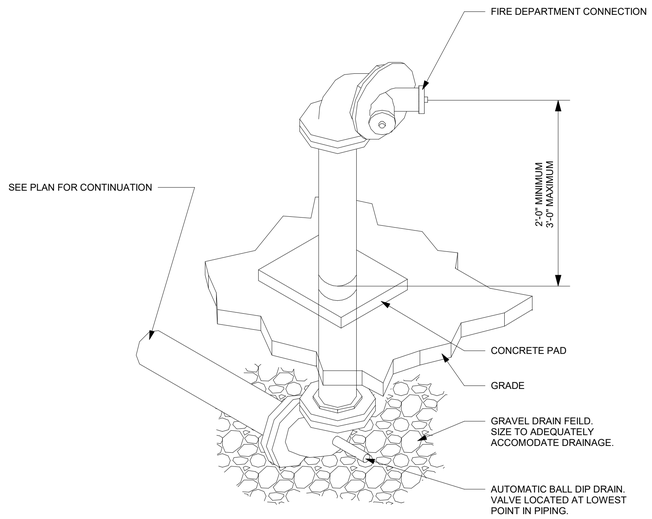
RIVERTOWN WATER TREATMENT PLANT PROJECT

CHEMICAL BUILDING
FIRE PROTECTION PLAN

PROJECT NO. 6103-237938
FILE NAME: FWZ000CB.RVT

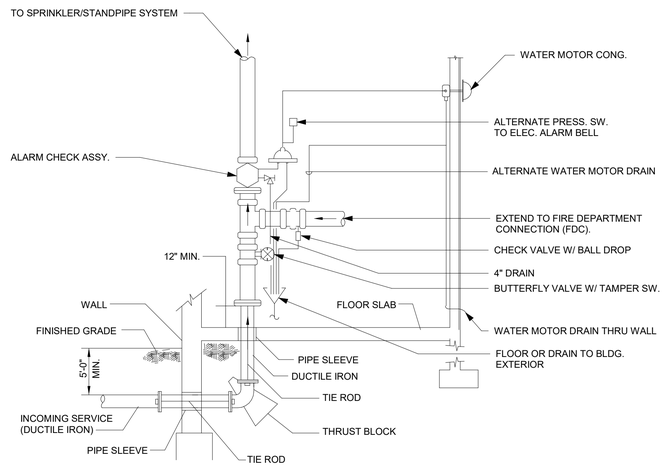
SHEET NO.
F-3

ISSUED FOR BID



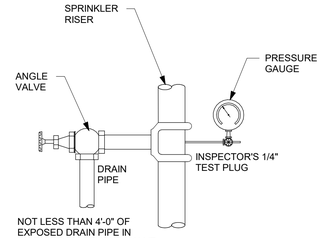
YARD FIRE DEPARTMENT CONNECTION

A DETAIL NTS



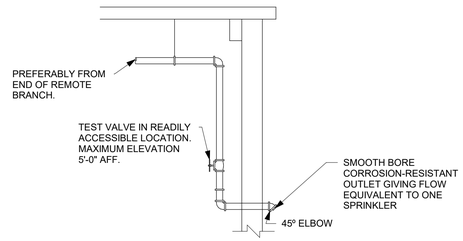
FIRE SERVICE ENTRANCE

B DETAIL NTS



DRAIN CONNECTION FOR SYSTEM RISER

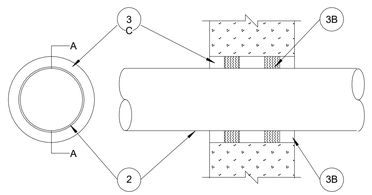
C DETAIL NTS



SYSTEM TEST CONNECTION ON WET PIPE SYSTEM

D DETAIL NTS

SYSTEM No. WJ1009
(FORMERLY SYSTEM No. 275)
F RATINGS-2 HR
T RATING-1/4 HR



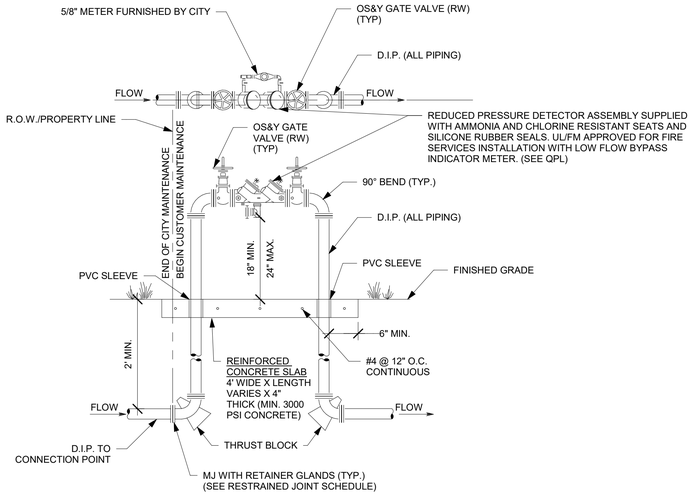
SECTION A-A

1. WALL ASSEMBLY - MIN 7-5/8" THICK WALL ASSEMBLY CONSTRUCTED OF ANY UL CLASSIFIED CONCRETE BLOCKS* OR COMMON BRICKS, LAID UP WITH MORTAR. MAX DIAMETER OF OPENING IS 6-1/2".
   SEE CONCRETE BLOCK (CAZT) CATEGORY IN THE FIRE RESISTANCE DIRECTORY FOR NAMES OF MANUFACTURERS.
2. STEEL PIPE - NOM 4" DIAMETER (OR SMALLER) SCHEDULE 5 (OR HEAVIER) STEEL PIPE. ONE PIPE TO BE CENTERED WITHIN THE FIRE STOP SYSTEM AND RIGIDLY SUPPORTED ON BOTH SIDES OF WALL ASSEMBLY.
3. FIRE STOP SYSTEM - THE FIRE STOP SYSTEM SHALL CONSIST OF THE FOLLOWING:
   A. STEEL WIRE MESH - CYLINDRICAL SLEEVE FABRICATED FROM No. 8 STEEL WHITE MESH HAVING A MIN 1" LAP ALONG THE LONGITUDINAL SEAM. LENGTH OF STEEL WIRE MESH TO BE MIN 7", CENTERED AND FORMED TO FIT PERIPHERY OF THROUGH OPENING. THE DIAMETER OF THE OPENINGS CUT IN EACH SIDE OF THE WALL ASSEMBLY TO BE 2" LARGER THAN OUTSIDE DIAMETER OF PIPE SUCH THAT, WHEN THE STEEL WIRE MESH IS INSTALLED, A 1" ANNULAR SPACE WILL BE PRESENT BETWEEN THE STEEL WIRE MESH AND THE PIPE AROUND THE ENTIRE CIRCUMFERENCE OF THE PIPE.
   B. PACKING MATERIAL - MIN 1-1/4" THICKNESS OF BACKER ROD AND/OR FOAMED PLASTIC BACKER MATERIAL OR MIN 4.4 PFC WOOL BATT INSULATION FIRMLY PACKED INTO OPENING AS A PERMANENT FORM. PACKING MATERIAL TO BE RECESSED FROM BOTH SURFACES OF WALL AS REQUIRED TO ACCOMMODATE THE REQUIRED THICKNESS OF FILL MATERIAL.
   C. FILL, VOID OR CAVITY MATERIAL* - CAULK - MIN 1-1/4" THICKNESS OF FILL MATERIAL APPLIED WITHIN THE ANNULUS, FLUSH WITH BOTH SURFACES OF WALL.
   CARBORUNDUM CO., FIBERS DIV. - TYPE FP

*BEARING THE UL CLASSIFICATION MARKING.

2 HR FIRE RATED PENETRATION

E DETAIL NTS



REDUCED PRESSURE DETECTOR ASSEMBLY

F DETAIL NTS

REV. NO.	DATE	DRWN	CHKD	REMARKS

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RIVERTOWN WATER TREATMENT PLANT PROJECT

FIRE PROTECTION DETAILS

JOSHUA MEINIG LICENSE NO. 72454 STATE OF FLORIDA PROFESSIONAL ENGINEER

DATE:
JOSHUA H. MEINIG
PE NO. 72454

PROJECT NO. 6103-237938
FILE NAME: FWZ000CB.RVT

SHEET NO.
FD-1

ISSUED FOR BID

ONE LINE OR CONTROL DIAGRAM	PLAN	DESCRIPTION
S2 CS	—	MEDIUM VOLTAGE DRAWOUT TYPE POWER CIRCUIT BREAKER CS=CONTROL SWITCH
FRAME TRIP	CB	LOW VOLTAGE AIR OR MOLDED CASE CIRCUIT BREAKER, 3 POLE UNLESS OTHERWISE NOTED.
SIZE # AMPS TYPE *		COMBINATION MOTOR CIRCUIT PROTECTOR AND MAGNETIC MOTOR STARTER, FULL VOLTAGE NON–REVERSING UNLESS OTHERWISE NOTED: * FVR – FULL VOLTAGE REVERSING RVNR – REDUCED VOLTAGE NON–REVERSING RVAT – REDUCED VOLTAGE AUTOTRANSFORMER RVSS – REDUCED VOLTAGE SOLID STATE 2S1W – TWO SPEED, ONE WINDING 2S2W – TWO SPEED, TWO WINDING (DIAGRAMMATICALLY SHOWN, CONTRACTOR SHALL FIELD LOCATE)
*/		NON–FUSIBLE DISCONNECT SWITCH, 600 VOLT, 3 POLE * AMPERE RATING NOTED IF OTHER THAN 30A (DIAGRAMMATICALLY SHOWN, CONTRACTOR SHALL FIELD LOCATE)
*/	F	FUSIBLE DISCONNECT SWITCH, 600 VOLT, 3 POLE. * AMPERE RATING AND FUSE SIZE AS NOTED * AMPERE RATING NOTED IF OTHER THAN 30A FUSE RATING (DIAGRAMMATICALLY SHOWN, CONTRACTOR SHALL FIELD LOCATE)
	P 2	MANUAL MOTOR STARTER WITH THERMAL OVERLOAD HEATER, 1 POLE UNLESS OTHERWISE NOTED "P" INDICATES WITH PILOT LIGHT "2" INDICATES TWO POLE (DIAGRAMMATICALLY SHOWN, CONTRACTOR SHALL FIELD LOCATE)
	—	DRAWOUT TYPE EQUIPMENT OR DEVICE
	—	MEDIUM VOLTAGE CABLE TERMINATION
	—	MEDIUM VOLTAGE AIR INTERRUPTER SWITCH
*	—	MEDIUM VOLTAGE FUSED AIR INTERRUPTER SWITCH * FUSE RATING
	—	MEDIUM VOLTAGE FUSED MOTOR CONTROLLER
XFMR NO. 1 480V Δ KVA 120/208V 3P, 4W	T	TRANSFORMER, RATINGS AND CONNECTIONS AS NOTED. UNLESS OTHERWISE NOTED ON THE SINGLE LINE DIAGRAMS, ALL DRY TYPE TRANSFORMERS SERVICING ADMINISTRATIVE AND LABORATORY SPACES SHALL HAVE A K FACTOR OF 4. ISOLATION TRANSFORMERS SHALL HAVE A K–20 RATING
* A TO 5	—	CURRENT TRANSFORMER * QUANTITY A = PRIMARY AMPERES
* V TO 120	—	POTENTIAL TRANSFORMER * QUANTITY V = PRIMARY VOLTAGE
	G	GENERATOR, RATINGS AND CONNECTIONS AS NOTED
ATS N S 100A	—	AUTOMATIC OR MANUAL TRANSFER SWITCH NO.1 (ATS–1), (MTS–1) "N" INDICATES NORMAL OR PREFERRED SOURCE "S" INDICATES STANDBY OR ALTERNATE SOURCE 100A INDICATES CONTINUOUS CURRENT RATING
*	*	VARIABLE SPEED DRIVE CONTROLLER * D.C. = D.C. DRIVE CONTROLLER SCR = SILICON CONTROLLED RECTIFIER VFD = VARIABLE FREQUENCY DRIVE
#KW	E	UNIT HEATER – ELECTRIC HEATING COIL AND FAN # – RATING
—	U	UNIT HEATER – GAS FIRED, STEAM OR WATER HEATING COIL AND FAN
5	M	MOTOR, NUMERAL INDICATES HORSEPOWER
VS VM *	—	VOLTMETER WITH SWITCH, 3 PHASE
AS AM *	—	AMMETER WITH SWITCH, 3 PHASE

ONE LINE OR CONTROL DIAGRAM	PLAN	DESCRIPTION
*	—	METER * WM – WATTMETER WHM – WATTHOUR METER WHDM – WATTHOUR DEMAND METER WHDR – WATTHOUR DEMAND RECORDER PF – POWER FACTOR METER DMU – DIGITAL METERING UNIT TRANSDUCER AX – CURRENT TRANSDUCER WX – WATT TRANSDUCER WHX – WATTHOUR TRANSDUCER
*	*	RELAY, NO. AS INDICATED 25 – SYNCHRONISM CHECK RELAY 27 – UNDERVOLTAGE RELAY 32 – DIRECTIONAL POWER RELAY 38 – BEARING PROTECTIVE DEVICE 40 – LOSS OF EXCITATION RELAY 42 – RUNNING CONTACTOR/PILOT RELAY 46 – REVERSE PHASE/PHASE BALANCE/CURRENT RELAY 47 – PHASE SEQUENCE VOLTAGE RELAY 49 – MACHINE OR TRANSFORMER THERMAL RELAY 50/51 – INSTANTANEOUS/TIME OVERCURRENT RELAY 50G – INSTANTANEOUS GROUND 51 – TIME OVERCURRENT RELAY 51G – TIME OVERCURRENT RELAY, GROUNDING RESISTOR TYPE 51N – TIME OVERCURRENT RELAY, RESIDUAL TYPE 51V – TIME OVERCURRENT RELAY WITH VOLTAGE RESTRAINT 51X – AUXILIARY RELAY (TRIPS CB AND ALARMS) 59 – OVERVOLTAGE RELAY 60 – NEGATIVE SEQUENCE VOLTAGE RELAY 62 – TIME DELAY RELAY 63 – OVERPRESSURE RELAY 64 – GENERATOR FIELD GROUND RELAY 67 – AC DIRECTIONAL OVERCURRENT RELAY 74 – ALARM LATCHING RELAY 83 – AUTOMATIC SELECTIVE CONTROL OR TRANSFER RELAY 86 – LOCKING–OUT RELAY 87 – DIFFERENTIAL PROTECTIVE RELAY B – SUFFIX INDICATES "BUS" G – SUFFIX INDICATES "GENERATOR" GF – GROUND FAULT ST – SHUNT TRIP T – SUFFIX INDICATES "TRANSFORMER" X – SUFFIX INDICATES "AUXILIARY"
*	—	SPECIAL CAPACITOR * SC – SURGE CAPACITOR PF – POWER FACTOR CORRECTION CAPACITOR
*	—	TUNED POWER FACTOR CORRECTION CAPACITOR
	—	PUSHBUTTON, MOMENTARY CONTACT, SPRING RETURN, NORMALLY CLOSED
	—	PUSHBUTTON, MOMENTARY CONTACT, SPRING RETURN, NORMALLY OPEN
	ES	EMERGENCY STOP PUSHBUTTON WITH RED MUSHROOM HEAD OPERATOR (MAINTAINED CONTACT)
STOP START	PBL	START–STOP PUSHBUTTON CONTROL STATION (MOMENTARY CONTACT) WITH LOCKOUT DEVICE ON STOP
	PBM	START–STOP PUSHBUTTON CONTROL STATION, MAINTAINED CONTACT WITH LOCKOUT DEVICE ON STOP
OFF ON	S/S	OFF/ON SELECTOR SWITCH
L R (XO) (OX)	LR	LOCAL/REMOTE SELECTOR SWITCH
A B C* (XOO) (OXO) (OOX)	*	3 POSITION SELECTOR SWITCH, MAINTAINED CONTACT O–OPEN X–CLOSED POSITION / TOP CONTACT / MIDDLE CONTACT / BOTTOM CONTACT A / X / O / O B / O / X / O C / O / O / X NAMEPLATE (A/B/C) HOA – HAND/OFF/AUTO HOR – HAND/OFF/REMOTE LOR – LOCAL/OFF/REMOTE RSL – RAISE/STOP/LOWER TOA – TEST/OFF/AUTO

GD/VF #	GD/VF #	GAS DETECTOR / VENTILATION FAILURE ALARM
		# INDICATES TYPE OF UNIT
		1=MASTER, 2=REMOTE

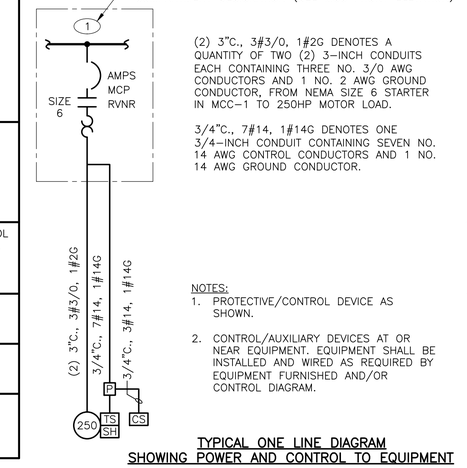
42 #	—	MOTOR STARTER COIL, NUMBER AS INDICATED TO DENOTE INTERLOCKING ONLY
CR #	—	CONTROL RELAY COIL, NUMBER AS INDICATED

ONE LINE OR CONTROL DIAGRAM	PLAN	DESCRIPTION
*	—	PILOT LIGHT, COLOR AS NOTED * R – RED G – GREEN B – BLUE W – WHITE A – AMBER
*	—	PILOT LIGHT, PUSH–TO–TEST TYPE, COLOR AS NOTED ABOVE.
* # RANGE SETPOINT		TIME DELAY RELAY RANGE AS NOTED SETPOINT AS NOTED # NUMBER AS INDICATED * TDE – TIME DELAY AFTER ENERGIZATION ON DELAY TDD – TIME DELAY AFTER DE–ENERGIZATION OFF DELAY
* NOTC		NOTC– NORMALLY OPEN, TIMED CLOSING WHEN ENERGIZED
NCTO		NCTO– NORMALLY CLOSED, TIMED OPENING WHEN ENERGIZED
NOTO		NOTO– NORMALLY OPEN, TIMED OPENING WHEN DE–ENERGIZED
NCTC		NCTC– NORMALLY CLOSED, TIMED CLOSING WHEN DE–ENERGIZED
—	* – ##	FIELD INSTRUMENT, TAG NO. AS INDICATED * INDICATES INSTRUMENT TYPE DEFINED ON LOOP SHEETS OR P & ID ## INDICATES LOOP NO.
	LS OR ■	LIQUID LEVEL (FLOAT) SWITCH NORMALLY OPEN, CLOSES ON RISING LEVEL NORMALLY CLOSED, OPENS ON RISING LEVEL
	PS OR ■	PRESSURE OR VACUUM SWITCH NORMALLY OPEN, CLOSES ON RISING PRESSURE NORMALLY OPEN, CLOSES ON DROPPING PRESSURE NORMALLY CLOSED, OPENS ON RISING PRESSURE NORMALLY CLOSED, OPENS ON DROPPING PRESSURE
	TS OR T OR ■	TEMPERATURE SWITCH OR THERMOSTAT NORMALLY OPEN, CLOSES ON RISING TEMPERATURE NORMALLY OPEN, CLOSES ON DROPPING TEMPERATURE NORMALLY CLOSED, OPENS ON RISING TEMPERATURE NORMALLY CLOSED, OPENS ON DROPPING TEMPERATURE
	FS OR ■	FLOW SWITCH (AIR, WATER, ETC.) NORMALLY OPEN, CLOSES ON INCREASED FLOW NORMALLY CLOSED, OPENS ON INCREASED FLOW
	ZS OR ■	POSITION (LIMIT) SWITCH NORMALLY OPEN NORMALLY OPEN – HELD CLOSED NORMALLY CLOSED NORMALLY CLOSED – HELD OPEN
	WS OR ■	TORQUE SWITCH NORMALLY OPEN, CLOSES ON HIGH TORQUE NORMALLY CLOSED, OPENS ON HIGH TORQUE
#	—	UTILIZED IN CONJUNCTION WITH OTHER CONTROL SCHEMATIC SYMBOLS TO DEPICT THE PHYSICAL LOCATION OF THE DEVICE # REPRESENTS LOCATION SEE LOCATION LEGEND ON DRAWING
	—	CONDUCTORS OR CONDUITS CROSSING PATHS BUT NOT CONNECTED
	—	CONDUCTORS ELECTRICALLY CONNECTED
	S	SOLENOID VALVE

ONE LINE OR CONTROL DIAGRAM	PLAN	DESCRIPTION
LA	—	LIGHTNING ARRESTER
		GROUND OR GROUND ROD
30A	—	FUSE, AMPERE RATING AS NOTED
	HTR	STRIP HEATER OR HEATING ELEMENT
	—	INDUCTOR
TG	TG	TACHOMETER GENERATOR
	—	CONTACT, NORMALLY OPEN (NO)
	—	CONTACT, NORMALLY CLOSED (NC)
	—	OVERLOAD RELAY HEATER
	—	* K = KEY INTERLOCK E = ELECTRICAL INTERLOCK
TB	—	TERMINAL OR TEST BLOCK
RTD	—	RESISTANCE TEMPERATURE DETECTOR
VE OR VE	—	VIBRATION DETECTOR
DM	DM	DAMPER MOTOR
ETM	—	ELAPSED TIME METER
M	M	MOTOR OPERATED VALVE OR GATE
	—	INDICATES LIMITS OF ELECTRICAL EQUIPMENT OR WIRING ENCLOSURE

EXISTING WORK | NEW WORK | FUTURE EXPANSION

EXISTING, NEW OR FUTURE CONDITION DESIGNATION



(2) 3"C., 3#3/0, 1#2G DENOTES A QUANTITY OF TWO (2) 3–INCH CONDUITS EACH CONTAINING THREE NO. 3/0 AWG CONDUCTORS AND 1 NO. 2 AWG GROUND CONDUCTOR, FROM NEMA SIZE 6 STARTER IN MCC–1 TO 250HP MOTOR LOAD.

3/4"C., 7#14, 1#14G DENOTES ONE 3/4–INCH CONDUIT CONTAINING SEVEN NO. 14 AWG CONTROL CONDUCTORS AND 1 NO. 14 AWG GROUND CONDUCTOR.

NOTES:
1. PROTECTIVE/CONTROL DEVICE AS SHOWN.
2. CONTROL/AUXILIARY DEVICES AT OR NEAR EQUIPMENT. EQUIPMENT SHALL BE INSTALLED AND WIRED AS REQUIRED BY EQUIPMENT FURNISHED AND/OR CONTROL DIAGRAM.

TYPICAL ONE LINE DIAGRAM SHOWING POWER AND CONTROL TO EQUIPMENT

NOTES:

1. IN GENERAL CONDUIT ROUTING FOR EQUIPMENT AND DEVICES IS NOT SHOWN ON THE PLANS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ROUTING ALL CONDUITS WHICH SHALL INCLUDE CONDUITS SHOWN ON ONE–LINE AND RISER DIAGRAMS AND HOME–RUNS SHOWN ON PLAN DRAWINGS. REFER TO SPECIFICATIONS FOR MATERIALS AND INSTALLATION REQUIREMENTS.
2. THE WIRING DIAGRAMS, QUANTITY AND SIZE OF WIRES AND CONDUITS REPRESENT A SUGGESTED ARRANGEMENT BASED UPON SELECTED STANDARD COMPONENTS OF ELECTRICAL EQUIPMENT. MODIFICATIONS ACCEPTABLE TO THE ENGINEER MAY BE MADE BY THE CONTRACTOR TO ACCOMMODATE EQUIPMENT ACTUALLY PURCHASED. THE BASIC SEQUENCE AND METHOD OF CONTROL MUST BE MAINTAINED AS INDICATED ON THE DRAWINGS AND/OR SPECIFICATIONS.
3. SWITCHGEAR AND MOTOR CONTROL CENTER COMPARTMENT DESIGNATIONS AS INDICATED BELOW:
   - BLANK: NOT INTENDED FOR USE. PLATE ONLY
   - SPACE: EQUIPPED WITH REQUIRED BUS AND HARDWARE FOR THE FUTURE ADDITION OF BREAKERS AND/OR STARTERS WITHIN THE SIZE AND RANGE SHOWN
   - SPARE: CONTAINS A COMPLETELY INSTALLED BREAKER AND/OR STARTER OF SIZE AND TYPE INDICATED FOR FUTURE USE.
4. INTERPRETATION OF ELECTRICAL DRAWINGS: CIRCUIT IDENTIFICATION, ROUTING, AND SIZES OF CONDUITS AND WIRES ARE SHOWN ON THE FOLLOWING DRAWINGS:

A. ONE LINE POWER DIAGRAMS: POWER, CONTROL AND SIGNAL WIRING REQUIREMENTS FOR ELECTRICAL DISTRIBUTION EQUIPMENT AND UTILIZATION EQUIPMENT POWERED FROM SWITCHGEAR, SWITCHBOARDS, MOTOR CONTROL CENTERS AND MAJOR POWER DISTRIBUTION PANELBOARDS ARE TYPICALLY SHOWN ON THE ONE LINE DIAGRAMS. THE PARAMETERS IDENTIFIED ON THE ONE LINE DIAGRAMS ARE: CIRCUIT IDENTIFICATION, CIRCUIT ORIGIN AND DESTINATION, CONDUIT SIZE, WIRE SIZE AND QUANTITY FOR COMPLETE CIRCUIT LENGTH, AND AUXILIARY DEVICES ASSOCIATED WITH THE CONTROL/PROTECTION OF THE POWERED EQUIPMENT, AND SIZE OF THE GROUNDING ELECTRODE CONDUCTORS.

B. INSTRUMENTATION AND CONTROL RISER DIAGRAMS: POWER, CONTROL, SIGNAL AND DATA HIGHWAY WIRING REQUIREMENTS FOR INSTRUMENTS AND CONTROL DEVICES CONTROLLED/MONITORED FROM INSTRUMENTATION AND CONTROL PANELS SUCH AS RTUS, PLCS, TERMINAL CABINETS, AND REMOTE I/O PANELS ARE TYPICALLY SHOWN ON THE INSTRUMENTATION AND CONTROL ONE LINE DIAGRAMS. THE PARAMETERS IDENTIFIED ON THE ONE LINE DIAGRAMS ARE: CIRCUIT IDENTIFICATION, CIRCUIT ORIGIN AND DESTINATION, CONDUIT SIZE, WIRE SIZE, QUANTITY AND TYPE FOR COMPLETE CIRCUIT LENGTH, AND AUXILIARY DEVICES ASSOCIATED WITH THE CONTROL/PROTECTION OF THE POWERED EQUIPMENT.

C. FLOOR PLANS: FOR DETERMINING THE LENGTH OF CIRCUITS LOCATED WITHIN STRUCTURES, FLOOR PLANS SHOW THE LOCATION OF ELECTRICAL DISTRIBUTION EQUIPMENT, CONTROL PANELS, UTILIZATION EQUIPMENT, INSTRUMENTS, ANCILLARY EQUIPMENT AND DEVICES AND THE ANTICIPATED PENETRATION LOCATIONS WHERE CONDUITS EXIT/ENTER THE STRUCTURE. HOMERUNS MAY ALSO BE SHOWN FROM MISCELLANEOUS EQUIPMENT NOT SHOWN ON A ONE LINE OR RISER DIAGRAM.

D. SITE PLANS: FOR DETERMINING THE LENGTH OF CIRCUITS EXTERIOR TO STRUCTURES AND TO IDENTIFY THE SPECIFIC REQUIREMENTS OF THE UNDERGROUND CONDUITS OR DUCT BANKS, SITE PLANS SHOW THE GENERAL ROUTING OF UNDERGROUND CONDUITS AND DUCT BANKS WITH SECTIONS INDICATING THE CONDUIT SIZE, ARRANGEMENT AND CIRCUIT ROUTING.

E. NOTE THAT CONDUIT SIZE WITHIN THE STRUCTURE IS INDICATED ON ONE–LINE DIAGRAM AND UNDERGROUND SIZE IS INDICATED ON DUCT BANK SECTIONS.

GENERAL NOTE
THIS IS A STANDARD LEGEND. SOME SYMBOLS MAY NOT APPEAR ON THE DRAWINGS.

SPENCER J. PERRY JR LICENSE NO. 62587 STATE OF FLORIDA PROFESSIONAL ENGINEER

DATE:
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PE NO. 62587

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DESIGNED BY: J. SANCHEZ
DRAWN BY: R. CARTER
SHEET CHK'D BY: S. PERRY
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RIVERTOWN WATER TREATMENT PLANT PROJECT

ELECTRICAL LEGEND I

PROJECT NO. 6103–237938
FILE NAME: E001NFLG.DWG

SHEET NO.
E-1

ISSUED FOR BID

SYMBOL	DESCRIPTION
A 3 b	LIGHTING FIXTURE "A" – FIXTURE TYPE (SEE LIGHTING FIXTURE SCHEDULE) "b" – CONTROLLED BY SWITCH "b" "3" – CIRCUIT NUMBER
A 3 b	LIGHTING FIXTURE, NOTATIONS SAME AS ABOVE
A 3 b	WALL MOUNTED TYPE LIGHTING FIXTURE, NOTATIONS SAME AS ABOVE
A 3 OR A 3	CROSS HATCH INDICATES LIGHTING FIXTURE THAT IS UNSWITCHED AND SHALL REMAIN ON AT ALL TIMES. NOTATIONS SAME AS ABOVE.
A 3 b OR A 3 b	SHADED AREA INDICATES LIGHTING FIXTURE THAT IS EQUIPPED WITH EMERGENCY BACKUP POWER SOURCE. NOTATIONS SAME AS ABOVE.
A 3	POLE MOUNTED AREA TYPE LIGHTING FIXTURE, NOTATIONS SAME AS ABOVE
A 3	POLE MOUNTED ROADWAY TYPE LIGHTING FIXTURE, NOTATIONS SAME AS ABOVE
EM 3 (*)	EMERGENCY LIGHTING BATTERY UNIT WITH TWO LAMP HEADS "EM" – FIXTURE TYPE (SEE LIGHTING FIXTURE SCHEDULE) "3" – SUPERVISORY CIRCUIT * – FIXTURE TAG #
R-2 BU-1(*)	REMOTE EMERGENCY ADJUSTABLE WALL LIGHTING FIXTURE WITH TWO LAMP HEADS "R-2" – FIXTURE TYPE (SEE LIGHTING FIXTURE SCHEDULE) * – HOME RUN TO BATTERY UNIT INDICATED. CONDUIT SHALL BE 3/4" AND CONTAIN (2) NO. 12 AWG BRANCH CIRCUIT CONDUCTORS AND (1) NO. 12 AWG GROUND CONDUCTOR UNLESS OTHERWISE INDICATED.
A 3	COMBINATION BATTERY UNIT AND EXIT SIGN. FILLED QUADRANT REPRESENTS FACE SIDE OF SIGN.
A 3	CEILING MOUNTED EXIT SIGN, NOTATIONS SAME AS ABOVE. WHEN USED, ARROW INDICATES DIRECTION OF EGRESS. FILLED QUADRANT REPRESENTS FACE SIDE OF SIGN. (DOUBLE FACE DOUBLE CHEVRONS SHOWN)
A 3	WALL MOUNTED EXIT SIGN, NOTATIONS SAME AS ABOVE. WHEN USED, ARROW INDICATES DIRECTION OF EGRESS. FILLED QUADRANT REPRESENTS FACE SIDE OF SIGN.
RH-3 E 3 BU-1(*)	REMOTE EMERGENCY CEILING LIGHTING FIXTURE. "RH-3" – FIXTURE TYPE (SEE LIGHTING FIXTURE SCHEDULE) "3" – SUPERVISORY CIRCUIT * – HOME RUN TO BATTERY UNIT INDICATED. CONDUIT SHALL BE 3/4" AND CONTAIN 2 NO. 12 AWG BRANCH CIRCUIT CONDUCTORS AND 1 NO. 12 AWG GROUND CONDUCTOR UNLESS OTHERWISE INDICATED.
	HOME RUN TO DESIGNATED EQUIPMENT. BRANCH CIRCUIT CONDUIT WITH 2 NO. 12 AWG BRANCH CIRCUIT CONDUCTORS AND 1 NO. 12 AWG GROUND CONDUCTOR UNLESS OTHERWISE NOTED. NUMBER OF ARROWS INDICATE NUMBER OF CIRCUITS. FOR MINIMUM SIZE CONDUIT PERMITTED REFER TO THE SPECIFICATIONS.
	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.
	'X' INDICATES EXPLOSION PROOF CONDUIT SEAL FITTING.
	CONCRETE ENCASED DUCTBANK. WIDTH VARIES, SEE DUCTBANK SECTION/DETAILS FOR REQUIREMENTS AND WIDTH
	CONDUIT STUBBED OUT AND CAPPED
(2) 3"C., 3#3/0, 1#2G	DENOTES A QUANTITY OF TWO (2) 3–INCH CONDUITS EACH CONTAINING THREE NO. 3/0 AWG CONDUCTORS AND 1 NO. 2 AWG GROUND CONDUCTOR.
2-2/C#16 SH	DENOTES A QUANTITY OF TWO INSTRUMENT CABLES. EACH CABLE TO CONSIST OF TWO NO. 16 AWG CONDUCTORS TWISTED TOGETHER AND COVERED WITH A METALLIC SHIELD AND AN OVERALL PROTECTIVE JACKET. REFER TO THE SPECIFICATIONS FOR THE EXACT CABLE TO BE PROVIDED.
2-3/C#16 SH	SAME AS ABOVE EXCEPT CABLE TO CONSIST OF THREE NO. 16 AWG CONDUCTORS TWISTED, SHIELDED AND COVERED WITH AN OVERALL PROTECTIVE JACKET. REFER TO THE SPECIFICATIONS FOR THE EXACT CABLE TO BE PROVIDED.
(3) 4"C.	THREE 4–INCH CONDUITS
	FLEXIBLE METAL CONDUIT "WHIP" (3/4"C., 2#12, 1#12G UNLESS OTHERWISE NOTED) FOR LIQUID TIGHT MOTOR CONNECTIONS
	'X' INDICATES CONDUIT SEAL FITTING IN OTHER THAN CODE REQUIRED LOCATIONS.
⊠	INDICATES MOTOR STARTER AND/OR MOTOR CONTROL EQUIPMENT WITHIN THE ENCLOSURE.

SYMBOL	DESCRIPTION
$a	SINGLE POLE SWITCH "a" INDICATES FIXTURES CONTROLLED.
$a 2	DOUBLE POLE SWITCH "a" INDICATES FIXTURES CONTROLLED.
$c 3	THREE WAY SWITCH "c" INDICATES FIXTURES CONTROLLED.
$a 4	FOUR WAY SWITCH "a" INDICATES FIXTURES CONTROLLED.
$a D	DIMMER SWITCH "a" INDICATES FIXTURES CONTROLLED
$OS	SINGLE POLE SWITCH "OS" INDICATES A PASSIVE INFRARED OCCUPANCY SENSOR
$OS 2	DOUBLE POLE SWITCH "OS" INDICATES PROGRAMMABLE OCCUPANCY SENSOR CAPABLE OF INBOARD/OUTBOARD SWITCHING
$DT	SINGLE POLE SWITCH "DT" INDICATES DUAL TECHNOLOGY PROGRAMMABLE OCCUPANCY SENSOR CAPABLE OF SENSING MOTION AND SOUND
C 3	LIGHTING CONTACTOR WITH NUMBER OF POLES AS INDICATED
TM	TIME SWITCH
	PUSH BUTTON STATION
TYPE A	INDICATES ALL LIGHTING FIXTURES WITHIN THE ROOM OR AREA IN WHICH THIS NOTATION APPEARS SHALL BE TYPE "A" UNLESS OTHERWISE NOTED. SEE LIGHTING FIXTURE SCHEDULE FOR TYPES
	LIGHTING PANELBOARD (LP–#) SHOWN ON PLAN PER ACTUAL PANEL DIMENSIONS
	POWER PANELBOARD (PP–#) OR DISTRIBUTION PANELBOARD (DP–#) SHOWN ON PLAN PER ACTUAL PANEL DIMENSIONS
	LIGHTING CONTACTOR PANELBOARD (LCP–#) SHOWN ON PLAN PER ACTUAL PANEL DIMENSIONS
* 4	DUPLEX RECEPTACLE, 20A, 120V, 2P, 3W * GFCI – GROUND FAULT CIRCUIT INTERRUPTER TYPE WP – WEATHERPROOF XP – EXPLOSION PROOF T – TRANSIENT VOLTAGE SURGE SUPPRESSOR IC – ISOLATED GROUND 4 – CIRCUIT NUMBER
* 4	DUPLEX RECEPTACLE, 20A, 120V, 2P, 3W MOUNTED ABOVE COUNTER–TOP OR 42" AFF * NOTATIONS SAME AS ABOVE
* 60 3 4W	SPECIAL PURPOSE RECEPTACLE * – VOLT RATING "3" – NUMBER OF POLES "60" – AMPERE RATING "4W" – 4 WIRES IN ADDITION TO GROUND
	MULTI–OUTLET ASSEMBLY, SYMBOL DENOTES RECEPTACLE TYPE
	FLUSH FLOOR OUTLET BOX WITH TYPE OUTLET INDICATED
	UNDER FLOOR DUCT SYSTEM WITH TYPE OUTLETS INDICATED
	THREE CELL UNDER FLOOR DUCT SYSTEM JUNCTION BOX
J OR J	JUNCTION BOX
P	PULL BOX
TC	TERMINAL CABINET
OS	OCCUPANCY SENSOR
PC	PHOTOCELL
ESA	EMERGENCY EYEWASH/SHOWER ALARM STATION WITH FLOW SWITCH(ES)
	INDICATED EQUIPMENT AND MATERIALS TO BE DEMOLISHED
DUST	INDICATES THAT ALL ELECTRICAL EQUIPMENT AND MATERIALS INSTALLED WITHIN THE ROOM OR AREA IN WHICH THIS NOTATION APPEARS SHALL BE OF NEMA 12 CONSTRUCTION (OR GASKETED AND SUITABLE FOR USE IN A WET LOCATION WHERE NEMA STANDARDS DO NOT APPLY) UNLESS OTHERWISE NOTED.
DAMP OR WET	INDICATES THAT ALL ELECTRICAL EQUIPMENT AND MATERIALS INSTALLED WITHIN THE ROOM OR AREA IN WHICH THIS NOTATION APPEARS SHALL BE OF NEMA 4X CONSTRUCTION (OR GASKETED AND SUITABLE FOR USE IN A WET LOCATION WHERE NEMA STANDARDS DO NOT APPLY) UNLESS OTHERWISE NOTED.
CORROSIVE	INDICATES THAT ALL ELECTRICAL EQUIPMENT AND MATERIALS INSTALLED WITHIN THE ROOM OR AREA IN WHICH THIS NOTATION APPEARS SHALL BE OF NEMA 4X CONSTRUCTION (OR CORROSION RESISTANT CONSTRUCTION SUITABLE FOR USE IN A WET LOCATION WHERE NEMA STANDARDS DO NOT APPLY) UNLESS OTHERWISE NOTED.
CLASS I, DIV. 1 GROUP D	INDICATES THAT ALL ELECTRICAL EQUIPMENT AND MATERIALS INSTALLED WITHIN THE ROOM OR AREA IN WHICH THIS NOTATION APPEARS SHALL CONFORM TO N.E.C. REQUIREMENTS FOR THE HAZARDOUS AREA CLASSIFICATION SHOWN.

SYMBOL	DESCRIPTION
	GROUND SYSTEM GRID OR LOOP, 36" BELOW FINISHED GRADE UNLESS OTHERWISE NOTED.
	EXOTHERMIC WELD CONNECTION
	3/4" x 10'–0" GROUND ROD. UNLESS SPECIFIED OTHERWISE.
	GROUND ROD TEST WELL STATION (SEE DETAIL SHEET FOR REQUIREMENTS)
	COMMUNICATION SYSTEMS
K	TELEPHONE OUTLET FOR DESK TYPE HANDSET K = KEY SYSTEM
K	TELEPHONE OUTLET FOR WALL TYPE HANDSET (MOUNT UP 4'–6") K = KEY SYSTEM
	PAGE/PARTY TELEPHONE OUTLET FOR DESK TYPE HANDSET
	PAGE/PARTY TELEPHONE OUTLET FOR WALL TYPE HANDSET, MOUNT UP 4'–6"
S H W	PAGING SPEAKER, WALL MOUNTED H = HORN TYPE W = WIDE ANGLE TYPE
S W	PAGING SPEAKER, WALL MOUNTED, BI–DIRECTIONAL, HORN TYPE W = WIDE ANGLE TYPE
S	PAGING SPEAKER, FLUSH MOUNTED CEILING TYPE
S	PAGING SPEAKER, SURFACE MOUNTED CEILING TYPE
VC	REMOTE WALL MOUNTED VOLUME CONTROL FOR CEILING SPEAKER, MOUNT UP 5'–0"
A	PAGING SPEAKER AMPLIFIER ASSEMBLY
TM	TELEPHONE CABINET OR BACKBOARD AS NOTED
P OR C	"C" – DATA INPUT/OUTPUT CABLE OUTLET "P" – PROCESS COMPUTER SYSTEM (CAT6 RJ–45 JACK)

GD/VF #	GAS DETECTOR/VENTILATION FAILURE ALARM,
	# INDICATES TYPE OF UNIT.
	1 = MASTER, 2 = REMOTE

GB	GAS DETECTION/VENTILATION FAILURE WEATHERPROOF DUAL–LITE BEACON MOUNT TOP OF DEVICE UP 6'–8" A.F.F.
15 G	GAS DETECTION/VENTILATION FAILURE HORN/STROBE MOUNT TOP OF DEVICE UP 6'–8" A.F.F.
G	GAS DETECTION/VENTILATION FAILURE HORN, MOUNT TOP OF DEVICE UP 6'–8" A.F.F.
G	GAS DETECTION/VENTILATION FAILURE STROBE, MOUNT TOP OF DEVICE UP 6'–8" A.F.F.
	SECURITY SYSTEMS
SACP	SECURITY ALARM CONTROL PANEL
DS	SECURITY ALARM DOOR SWITCH
K	SECURITY ALARM KEY PAD
R	SECURITY SYSTEM CARD ACCESS READER
WS	SECURITY ALARM WINDOW SWITCH
	SECURITY ALARM MOTION DETECTOR
CCTV	CLOSED CIRCUIT TV CAMERA
PTZ	PAN, TILT, ZOOM CAMERA LENS CONTROLS
GB	GLASS BREAK DETECTOR
	FIRE ALARM SYSTEMS
H 200 R	FIRE ALARM HEAT DETECTOR 135 FIXED TEMPERATURE UNLESS OTHERWISE NOTED. "200" – 200 FIXED TEMPERATURE "R" – FIXED TEMPERATURE RATE–OF–RISE TYPE
I	FIRE ALARM SMOKE DETECTOR PHOTOELECTRIC TYPE UNLESS OTHERWISE NOTED. "I" – IONIZATION TYPE.
D	FIRE ALARM DUCT SMOKE DETECTOR
FACP	FIRE ALARM CONTROL PANEL
FV	FIRE ALARM VENTILATION PANEL WITH GRAPHIC PANEL
FA	REMOTE FIRE ALARM ANNUNCIATOR PANEL

SYMBOL	DESCRIPTION
F	FIRE ALARM MASTER BOX
F	FIRE ALARM HORN, MOUNT UP 7'–6"
15 F	FIRE ALARM STROBE, MOUNT UP 6'–8" 15 = CANDELA RATING
15 F	FIRE ALARM HORN AND STROBE LIGHT COMBINATION, MOUNT UP 6'–8" 15 = CANDELA RATING
F	FIRE ALARM MANUAL PULL STATION, MOUNT UP 4'–0"
VSS	SPRINKLER VALVE SUPERVISORY SWITCH
SFS	SPRINKLER FLOW ALARM SWITCH
F	FIRE ALARM BELL
FB	WEATHERPROOF HI–INTENSITY FIRE ALARM STROBE LIGHT WITH HORN
PIR	PASSIVE INFRARED DETECTOR
R	SMOKE BEAM DETECTOR (RECEIVER)
T	SMOKE BEAM DETECTOR (TRANSMITTER)
	FIRE ALARM SMOKE DETECTOR REMOTE INDICATOR AND TEST SWITCH

ABBREVIATIONS	
A	AMPS
AC	ALTERNATING CURRENT
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AL	ALUMINUM
AIC	AMPERE INTERRUPTING CAPACITY
AMP	AMPERE
ATS	AUTOMATIC TRANSFER SWITCH
AUTO	AUTOMATIC
AUX	AUXILIARY
AWG	AMERICAN WIRE GAUGE
BKR	BREAKER
BLDG	BUILDING
C	CONDUIT
CB	CIRCUIT BREAKER
CGD	COMBUSTIBLE GAS DETECTOR
CKT	CIRCUIT
CLB	CURRENT LIMITING BREAKER
CLF	CURRENT LIMITING FUSE
CP	CONTROL PANEL
CPT	CONTROL POWER TRANSFORMER
CR	CONTROL RELAY
CS	CONTROL SWITCH/CONTROL STATION
CT	CURRENT TRANSFORMER
CU	COPPER
CWS	CONDUIT WALL SEAL
DC	DIRECT CURRENT
DIA	DIAMETER
DMU	DIGITAL METERING UNIT
DN	DOWN
EC	EMPTY CONDUIT
ELEC	ELECTRICAL
ELEV	ELEVATION

ABBREVIATIONS (CONTINUED)	
EM	EMERGENCY
ENCL	ENCLOSURE OR ENCLOSED
EQUIP	EQUIPMENT
ES	EMERGENCY STOP
EWC	ELECTRIC WATER COOLER
EWH	ELECTRIC WATER HEATER
EX	EXISTING
FO	FIBER OPTIC
FU	FUSE
GCP	GENERATOR CONTROL PANEL
GEN	GENERATOR
G, GND	GROUND
GFI	GROUND FAULT INTERRUPTER
GRS	GALVANIZED RIGID STEEL
HACR	HEATING & AIR CONDITIONING RATED
HH	HANDHOLE
HT	HEIGHT
HID	HIGH INTENSITY DISCHARGE
HP	HORSEPOWER
HZ	HERTZ
ID	IDENTIFICATION
INSTR	INSTRUMENT
K	KILO (PREFIX)
kcmil	1000 CIRCULAR MILS
KVA	KILOVOLT AMPERES
KW	KILOWATTS
LA	LIGHTNING ARRESTER
LTG	LIGHTING
LP	LIGHTING PANEL
LV	LOW VOLTAGE
MAX	MAXIMUM
MCB	MAIN CIRCUIT BREAKER
MCC	MOTOR CONTROL CENTER
MCP	MOTOR CIRCUIT PROTECTOR
MDP	MAIN DISTRIBUTION PANEL
MFR	MANUFACTURER
MH	MANHOLE
MIN	MINIMUM
MLO	MAIN LUGS ONLY
MTD	MOUNTED
MTS	MANUAL TRANSFER SWITCH
MV	MEDIUM VOLTAGE
N	NEUTRAL
NC	NORMALLY CLOSED
NO	NORMALLY OPEN OR NUMBER
NTS	NOT TO SCALE
OH	OVERHEAD
OL	OVERLOAD
PB	PULL BOX
PCP	PUMP CONTROL PANEL
PH	PHASE
PMH	POWER MANHOLE
PNL	PANEL OR PANELBOARD
PR	PAIR
PRI	PRIMARY
PT	POTENTIAL TRANSFORMER
PVC	POLYVINYL CHLORIDE
RECPT	RECEPTACLE
REQD	REQUIRED
QTY	QUANTITY
SA	SURGE ARRESTER
SEC	SECONDS OR SECONDARY
SH	SHIELDED OR SPACE HEATER
SHH	SIGNAL HANDHOLE
SPD	SURGE PROTECTIVE DEVICE
SS	STAINLESS STEEL
SV	SOLENOID VALVE
SW	SWITCH
SWBD	SWITCHBOARD
SWGR	SWITCHGEAR
TC	TIME TO CLOSE OR TRAY CABLE
TEL	TELEPHONE
TO	TIME TO OPEN
TS	TWISTED SHIELDED OR THERMAL SWITCH
TYP	TYPICAL
UG	UNDERGROUND
UON	UNLESS OTHERWISE NOTED
UPS	UNINTERRUPTIBLE POWER SUPPLY
V	VOLTS
VA	VOLT AMPS
VFD	VARIABLE FREQUENCY DRIVE
W	WATTS, WIDTH, WITH, WIRE
WP	WEATHERPROOF
XP	EXPLOSION PROOF
XFMR	TRANSFORMER

A / E–4 — SHEET NO. WHERE DETAIL IS DRAWN

SYMBOL WHERE THERE IS A DETAIL

DETAIL A, 1/4" = 1'–0" — E–3 — SHEET NO. WHERE THERE IS A DETAIL

SYMBOL WHERE DETAIL IS DRAWN

DETAIL SYMBOL

1 / E–4 — SHEET NO. WHERE SECTION IS DRAWN

SYMBOL WHERE THERE IS A SECTION

SECTION 1, 1/4" = 1'–0" — E–3 — SHEET NO. WHERE SECTION IS TAKEN

SYMBOL WHERE SECTION IS DRAWN

SECTION SYMBOL

GENERAL NOTE
THIS IS A STANDARD LEGEND. SOME SYMBOLS MAY NOT APPEAR ON THE DRAWINGS.

SPENCER J. PERRY JR LICENSE NO. 62587 STATE OF FLORIDA PROFESSIONAL ENGINEER

DATE:
SPENCER J. PERRY JR
PE NO. 62587

REV. NO.	DATE	DRWN	CHKD	REMARKS

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JEA

RIVERTOWN WATER TREATMENT PLANT PROJECT

ELECTRICAL LEGEND II

PROJECT NO. 6103–237938
FILE NAME: E002NFLG.DWG

SHEET NO.
E-2

ISSUED FOR BID

SCOPE OF WORK:

1. FURNISH ALL LABOR, MATERIALS, EQUIPMENT AND INCIDENTALS REQUIRED AND INSTALL COMPLETE AND MAKE OPERATIONAL, ELECTRICAL AND PROCESS INSTRUMENTATION SYSTEMS AT THE JEA RIVERTOWN WATER TREATMENT PLANT INSTALLATION PROJECT AS SHOWN ON THE DRAWINGS AND AS SPECIFIED IN DIVISION 26.
2. THE WORK SHALL INCLUDE FURNISHING, INSTALLING AND TESTING THE EQUIPMENT AND MATERIALS SPECIFIED IN OTHER SECTIONS OF THE DIVISION 26 SPECIFICATIONS AND SHOWN ON THE DRAWINGS.
3. CONDUIT, WIRE AND FIELD CONNECTIONS FOR ALL MOTORS, MOTOR CONTROLLERS, CONTROL DEVICES, CONTROL PANELS AND ELECTRICAL EQUIPMENT FURNISHED UNDER OTHER DIVISIONS OF THE SPECIFICATIONS.
4. CONDUIT, WIRING AND TERMINATIONS FOR ALL FIELD_MOUNTED INSTRUMENTS FURNISHED UNDER OTHER DIVISIONS, INCLUDING PROCESS INSTRUMENTATION PRIMARY ELEMENTS, TRANSMITTERS, LOCAL INDICATORS AND CONTROL PANELS. LIGHTNING AND SURGE PROTECTION EQUIPMENT WIRING AT PROCESS INSTRUMENTATION TRANSMITTERS. INSTALL VENDOR FURNISHED CABLES SPECIFIED UNDER OTHER DIVISIONS.
5. POWER WIRING FOR ALL HEATING, VENTILATING, AND AIR CONDITIONING (HVAC) EQUIPMENT FURNISHED UNDER OTHER DIVISIONS OF THE SPECIFICATIONS, INCLUDING POWER WIRING FOR 120V UNIT HEATER MOTORS, THERMOSTATS, FAN MOTORS, DAMPERS AND OTHER HVAC INLINE UNIT WIRING SHOWN ON THE DRAWINGS.
6. A COMPLETE RACEWAY SYSTEM FOR THE DATA HIGHWAY CABLES AND SPECIALTY CABLE SYSTEMS. INSTALL THE DATA HIGHWAY (FIBER OPTIC, ETHERNET, ETC.) CABLES AND OTHER SPECIALTY CABLE SYSTEMS FURNISHED UNDER DIVISION 40 IN ACCORDANCE WITH THE SYSTEM MANUFACTURERS' INSTALLATION INSTRUCTIONS. REVIEW THE RACEWAY LAYOUT, PRIOR TO INSTALLATION, WITH THE SCADA/COMPUTER INSTRUMENTATION SYSTEM SUPPLIER (ISS) AND THE CABLE MANUFACTURER TO ENSURE RACEWAY COMPATIBILITY WITH THE SYSTEMS AND MATERIALS BEING FURNISHED. WHERE REDUNDANT CABLES ARE FURNISHED, INSTALL CABLES IN SEPARATE RACEWAYS.
7. PROVIDE PRECAST MANHOLES, PRECAST HANDHOLES AND LIGHT POLE BASES.
8. PROVIDE MANHOLE AND HANDHOLE FRAMES AND COVERS.
9. IT IS THE INTENT OF THE DIVISION 26 SPECIFICATIONS THAT THE ELECTRICAL SYSTEM SHALL BE SUITABLE IN EVERY WAY FOR THE SERVICE REQUIRED. ALL MATERIAL AND ALL WORK WHICH MAY BE REASONABLY IMPLIED AS BEING INCIDENTAL TO THE WORK OF THE DIVISION 26 SPECIFICATIONS SHALL BE FURNISHED AT NO EXTRA COST.
10. COORDINATE THE SEQUENCE OF DEMOLITION WITH THE SEQUENCE OF CONSTRUCTION TO MAINTAIN PLANT OPERATION IN EACH AREA. REMOVE AND DEMOLISH EQUIPMENT AND MATERIALS IN SUCH A SEQUENCE THAT THE EXISTING AND PROPOSED PLANT WILL FUNCTION PROPERLY WITH NO DISRUPTION OF TREATMENT.
11. MODIFICATIONS TO EXISTING MOTOR CONTROL CENTERS, SWITCHBOARDS, PANELBOARDS AND MOTOR CONTROLLERS INCLUDING INSTALLATION OF CIRCUIT BREAKERS, ETC, OR DISCONNECTION OF CIRCUITS AS REQUIRED TO PROVIDE THE POWER SUPPLIES TO NEW AND EXISTING EQUIPMENT TO MAINTAIN THE PLANT IN OPERATION.
12. EACH BIDDER OR THEIR AUTHORIZED REPRESENTATIVES SHALL, BEFORE PREPARING THEIR BID, VISIT ALL AREAS OF THE EXISTING SITE, BUILDINGS AND STRUCTURES IN WHICH WORK UNDER THIS DIVISION IS TO BE PERFORMED AND INSPECT CAREFULLY THE PRESENT INSTALLATION. THE SUBMISSION OF THE BID BY THIS BIDDER SHALL BE CONSIDERED EVIDENCE THAT THEIR REPRESENTATIVE HAS VISITED THE SITE, BUILDINGS AND STRUCTURES AND NOTED THE LOCATIONS AND CONDITIONS UNDER WHICH THE WORK WILL BE PERFORMED AND THAT HE/SHE TAKES FULL RESPONSIBILITY FOR A COMPLETE KNOWLEDGE OF ALL FACTORS GOVERNING HIS/HER WORK.
13. PROVIDE ALL ELECTRICAL DEMOLITION WORK ASSOCIATED WITH THE REMOVAL OF EQUIPMENT FROM THE EXISTING FACILITIES, INCLUDING DISCONNECTING AND REMOVING ALL ELECTRICAL WIRING AND CONDUIT TO EQUIPMENT BEING REMOVED UNDER OTHER DIVISIONS. SURVEY THE EXISTING ELECTRICAL SYSTEMS WITH REPRESENTATIVES FROM OTHER TRADES PRIOR TO PERFORMING ANY DEMOLITION WORK. IDENTIFY ALL CONDUIT AND EQUIPMENT TO BE REMOVED WITH TAGS OR PAINT.
14. PROVIDE ALL ELECTRICAL RELOCATION WORK ASSOCIATED WITH THE RELOCATION OF EQUIPMENT FOR THE EXISTING AND NEW FACILITIES, INCLUDING DISCONNECTING ALL EXISTING WIRING AND CONDUITS AND PROVIDING NEW WIRING AND CONDUIT TO THE RELOCATED EQUIPMENT. WHERE 3-PHASE CONNECTIONS TO EXISTING PLANT 3-PHASE LOADS ARE MADE, CONTRACTOR SHALL VERIFY PHASE SEQUENCE PRIOR TO DISCONNECTION AND AFTER RECONNECTION. ALL PHASING SHALL MATCH EXISTING.
15. ALL POWER INTERRUPTIONS TO ELECTRICAL EQUIPMENT SHALL BE AT THE OWNER'S CONVENIENCE WITH 72 HOURS (MINIMUM) NOTICE. EACH INTERRUPTION SHALL HAVE OWNER'S PRIOR WRITTEN APPROVAL.
16. THE CONTRACTOR SHALL MAINTAIN THE EXISTING PLANT IN OPERATION AT ALL TIMES. TEMPORARY POWER CONNECTIONS AS REQUIRED SHALL BE PROVIDED BY THE CONTRACTOR AT NO ADDITIONAL EXPENSE TO THE OWNER. ALL TEMPORARY WIRING SHALL BE IN ACCORDANCE WITH THE NEC. ANY TEMPORARY EQUIPMENT FEEDERS (120V, 208V, 480V, 15KV, ETC.) SHALL BE INSTALLED IN CONDUIT. THE CONTRACTOR SHALL PROVIDE TO THE ENGINEER DETAILS, METHODS, MATERIALS ETC. PRIOR TO MAKING TEMPORARY CONNECTIONS. FURNISH AND INSTALL ALL EQUIPMENT AND MATERIALS INCLUDING CONTROL EQUIPMENT, MOTOR STARTERS, BRANCH AND FEEDER CIRCUIT BREAKERS, PANELBOARDS, TRANSFORMERS, ETC., FOR TEMPORARY POWER.
17. FIELD VERIFY ALL EXISTING UNDERGROUND ELECTRICAL AND MECHANICAL PIPING.
18. PROVIDE ELECTRICAL AND INSTRUMENTATION CONDUIT LAYOUT SHOP DRAWINGS FOR YARD ELECTRICAL, WITHIN AND UNDER ALL ROADS, BUILDINGS AND STRUCTURES TO THE ENGINEER FOR APPROVAL PRIOR TO COMMENCING WORK. LAYOUTS SHALL INCLUDE BUT NOT BE LIMITED TO EQUIPMENT, PULL BOXES, MANHOLES, CONDUIT ROUTING, DIMENSIONING, METHODS AND LOCATIONS OF SUPPORTS, REINFORCING, ENCASEMENT, MATERIALS, CONDUIT SIZING, EQUIPMENT ACCESS, POTENTIAL CONFLICTS, BUILDING AND YARD LIGHTING, AND ALL OTHER PERTINENT TECHNICAL SPECIFICATIONS FOR ALL ELECTRICAL AND INSTRUMENTATION CONDUITS AND EQUIPMENT TO BE FURNISHED. THE LAYOUTS SHALL BE BASED ON APPROVED MANUFACTURERS' EQUIPMENT SHOP DRAWINGS. ALL LAYOUTS SHALL BE DRAWN TO SCALE ON 24" X 36" SHEETS.
19. IN ADDITION TO MANUFACTURER'S EQUIPMENT SHOP DRAWINGS, SUBMIT ELECTRICAL INSTALLATION WORKING DRAWINGS CONTAINING THE FOLLOWING:
    a. CONCEALED AND BURIED CONDUIT LAYOUTS, SHOWN ON FLOOR PLANS DRAWN AT NOT LESS THAN 1/4" = 1' – 0" SCALE. THE LAYOUTS SHALL INCLUDE LOCATIONS OF PROCESS EQUIPMENT, MOTOR CONTROL CENTERS, SWITCHBOARDS, TRANSFORMERS, PANELBOARDS, CONTROL PANELS AND EQUIPMENT, MOTORS, SWITCHES, MOTOR STARTERS, LARGE JUNCTION OR PULL BOXES, INSTRUMENTS AND ANY OTHER ELECTRICAL DEVICES CONNECTED TO CONCEALED OR BURIED CONDUITS. THE LAYOUTS SHALL BE BASED ON APPROVED MANUFACTURERS EQUIPMENT SHOP DRAWINGS.
    b. PLANS SHALL BE DRAWN ON HIGH QUALITY REPRODUCIBLE PAPER AND SHALL BE PRESENTED IN A NEAT, PROFESSIONAL MANNER. IN ADDITION TO THE HARD COPIES, LAYOUT DRAWINGS SHALL BE SUBMITTED IN PDF FORMAT.
    c. CONCRETE FLOORS AND/OR WALLS CONTAINING CONCEALED CONDUITS SHALL NOT BE POURED UNTIL CONDUIT LAYOUTS ARE APPROVED.
21. THE WORK SHALL INCLUDE COMPLETE TESTING OF ALL EQUIPMENT AND WIRING AT THE COMPLETION OF WORK AND MAKING ANY MINOR CORRECTION CHANGES OR ADJUSTMENTS NECESSARY FOR THE PROPER FUNCTIONING OF THE ENTIRE SYSTEM AND ALL EQUIPMENT. ALL WORKMANSHIP SHALL BE OF THE HIGHEST QUALITY; SUBSTANDARD WORK WILL BE REJECTED.
22. A SINGLE MANUFACTURER SHALL PROVIDE SWITCHBOARDS, MOTOR STARTERS, TRANSFORMERS, DISCONNECT SWITCHES, PANELBOARDS, ETC. THIS MANUFACTURER SHALL ALSO PROVIDE A SHORT CIRCUIT/COORDINATION/ARC FLASH STUDY SPECIFIED IN SECTION 260573 POWER SYSTEM STUDIES.
23. CONTRACTOR SHALL PROVIDE THEIR OWN TEMPORARY POWER FOR MISCELLANEOUS POWER (DRILLS, PUMPS, ETC.). NO FACILITY CIRCUITS SHALL BE USED UNLESS APPROVED IN WRITING BY THE ENGINEER. ANY TEMPORARY ADDED SHALL BE REMOVED AT JOB COMPLETION.
24. COMPLETE COORDINATION WITH OTHER CONTRACTORS. CONTRACTOR SHALL COORDINATE WITH ALL OTHER CONTRACTORS EQUIPMENT SUBMITTALS AND OBTAIN ALL RELEVANT SUBMITTALS.
25. MOUNT TRANSMITTERS, CONTROL PANELS, PROCESS INSTRUMENTS, OPERATORS STATIONS, ETC. FURNISHED UNDER OTHER DIVISIONS OF THE SPECIFICATIONS.
26. CONCRETE ELECTRICAL DUCT ENCASEMENT, INCLUDING BUT NOT LIMITED TO EXCAVATION, CONCRETE, CONDUIT, REINFORCEMENT, BACKFILLING, GRADING AND SEEDING IS INCLUDED IN DIVISION 26. ALL WORK SHALL BE DONE IN ACCORDANCE WITH DIVISIONS 2 AND 3 OF THE SPECIFICATIONS.

GENERAL NOTES:

1. ELECTRICAL DRAWINGS ARE INTENDED TO SHOW THE GENERAL LAYOUT OF WORK TO BE INSTALLED UNDER THIS CONTRACT WITHOUT ATTEMPTING TO SHOW ALL DETAILS. FURNISH LABOR, MATERIALS, EQUIPMENT AND INCIDENTALS REQUIRED FOR A COMPLETE AND OPERATIONAL ELECTRICAL SYSTEM AS SHOWN ON THE CONTRACT DOCUMENTS.
2. COORDINATE WORK WITH OTHER TRADES AND THE OWNER.
3. MAINTAIN EXISTING PROCESS OPERATIONS. POWER INTERRUPTIONS TO ELECTRICAL EQUIPMENT SHALL BE AT OWNER'S CONVENIENCE WITH 72 HOURS MINIMUM NOTICE. EACH INTERRUPTION SHALL HAVE PRIOR WRITTEN APPROVAL.
4. FIELD VERIFY EXISTING UNDERGROUND ELECTRICAL CONDUIT, CONCRETE DUCT BANKS, MANHOLES, PULL BOXES, ETC. AND MECHANICAL PIPING. CONTRACTOR SHALL INCLUDE IN BID COSTS ASSOCIATED WITH RELOCATION OR REMOVAL OF UNDERGROUND EQUIPMENT AS REQUIRED BY THIS CONTRACT. USE DUE CARE IN CONGESTED AREAS TO AVOID DAMAGE TO EXISTING UNDERGROUND UTILITIES.
5. CONTRACTOR'S WORK SHALL INCLUDE COMPLETE TESTING OF EQUIPMENT AND WIRING INCLUDING MAKING MINOR CORRECTIONS, CHANGES, OR ADJUSTMENTS NECESSARY FOR THE PROPER FUNCTIONING OF THE SYSTEM AND EQUIPMENT. WORKMANSHIP SHALL BE OF THE HIGHEST QUALITY; SUBSTANDARD WORK WILL BE REJECTED.
6. DO NOT SCALE ELECTRICAL DRAWINGS. REFER TO MECHANICAL, STRUCTURAL DRAWINGS, AND APPROVED MANUFACTURER'S SHOP DRAWINGS FOR EXACT LOCATION OF EQUIPMENT. EXCEPT WHERE DIMENSIONS ARE SHOWN, LOCATIONS OF EQUIPMENT, FIXTURES, OUTLETS, AND SIMILAR DEVICES ARE APPROXIMATE.
7. WORK SHALL COMPLY WITH NEC AND LOCAL CODES.
8. DO NOT SPLICE CONDUCTORS EXCEPT AS NOTED.
9. POWER AND CONTROL CONDUITS SHALL HAVE AN EQUIPMENT GROUNDING CONDUCTOR WIRE SIZED PER TABLE 250.122 OF THE NEC (UON).
10. COORDINATE SEQUENCE OF CONSTRUCTION WITH CIVIL, MECHANICAL, AND STRUCTURAL DISCIPLINES. PROVIDE TEMPORARY POWER AND CONTROL CIRCUITS AS REQUIRED TO MAINTAIN FACILITY OPERATION. VERIFY EXISTING UTILITIES IN AREA OF CONSTRUCTION. REFER TO CIVIL DRAWINGS FOR ADDITIONAL UNDERGROUND INFORMATION.
11. REPAIR, IN ACCORDANCE WITH SPECIFICATIONS, SIDEWALKS, WALLS, ROADWAYS, ETC. DISTURBED BY CONSTRUCTION ACTIVITIES WHETHER OR NOT SHOWN FOR REPAIR/REPAVING ON CIVIL DRAWINGS.
12. CONCEAL CONDUITS TO GREATEST EXTENT PRACTICABLE. CONDUITS RUN AT EXISTING STRUCTURES SHALL BE RUN EXPOSED.
13. WHERE LOCAL DISCONNECTS AND CONTROL PANELS ARE SHOWN ON PLAN VIEWS, LOCATIONS ARE APPROXIMATE. ADJUST LOCATION AS REQUIRED TO COMPLY WITH NEC ARTICLE 110 FOR WORKING CLEARANCES.
14. DO NOT INSTALL MAJOR CONDUIT RUNS THROUGH AREAS DESIGNATED FOR FUTURE STRUCTURES.

SUBMITTALS:

1. SUBMIT SHOP DRAWINGS FOR EQUIPMENT, MATERIALS AND OTHER ITEMS FURNISHED UNDER DIVISION 26.
2. SUBMIT CONDUIT SHOP DRAWINGS FOR YARD ELECTRICAL, WITHIN AND UNDER ROADS, BUILDINGS AND STRUCTURES PRIOR TO COMMENCING WORK. DO NOT POUR CONCRETE UNTIL ENGINEER HAS APPROVED THE ASSOCIATED SHOP DRAWING.
3. SUBMIT POWER SYSTEM STUDIES IN ACCORDANCE WITH SECTION 260573.
4. SUBMIT OPERATION AND MAINTENANCE MANUALS FOR EQUIPMENT FURNISHED UNDER DIVISION 26.
5. SUBMIT STARTUP/COMMISSIONING PLANS FOR EQUIPMENT FURNISHED UNDER DIVISION 26.
6. SUBMIT TESTING AND SERVICE REPORTS FOR EQUIPMENT AND MATERIALS FURNISHED UNDER DIVISION 26.
7. SUBMIT TRAINING PLANS FOR EQUIPMENT FURNISHED UNDER DIVISION 26.
8. SUBMIT RECORD DOCUMENTATION TO ACCURATELY SHOW COMPLETED INSTALLATION. INCLUDE MODIFICATIONS TO CONTRACT DOCUMENTS (ONE LINE POWER DIAGRAMS, EQUIPMENT ELEVATIONS, PANEL SCHEDULES, ELEMENTARY CONTROL DIAGRAMS, RISER DIAGRAMS, PLANS, CONDUIT AND DUCTBANK ROUTING, ETC) ALONG WITH ADDITIONAL DRAWINGS OR SKETCHES CREATED TO CONVEY COMPLETED INSTALLATION.

CLEANING:

1. REMOVE ALL RUBBISH AND DEBRIS FROM INSIDE AND AROUND ELECTRICAL EQUIPMENT AND ENCLOSURES.
2. REMOVE DIRT, DUST OR CONCRETE SPATTER FROM INTERIOR AND EXTERIOR OF EQUIPMENT USING BRUSHES, VACUUM CLEANER OR CLEAN LINT-FREE RAGS. DO NOT USE COMPRESSED AIR.

DELEGATED DESIGN / PROFESSIONAL ENGINEERING SERVICES:

1. WHEN ENGINEERING SERVICES ARE SPECIFIED TO BE PROVIDED BY CONTRACTOR, CONTRACTOR SHALL RETAIN A LICENSED PROFESSIONAL ENGINEER TO PERFORM THE SERVICES. ENGINEER SHALL BE LICENSED AT THE TIME SERVICES ARE PERFORMED AND LICENSED IN THE STATE IN WHICH PROJECT IS LOCATED. IF THE STATE ISSUES DISCIPLINE SPECIFIC LICENSES, ENGINEER SHALL BE LICENSED IN THE APPLICABLE DISCIPLINE. ENGINEER SHALL BE EXPERIENCED IN THE TYPE OF WORK BEING PERFORMED.
2. ENGINEERING WORK SHALL BE DONE ACCORDING TO THE APPLICABLE REGULATIONS FOR PROFESSIONAL ENGINEERS TO INCLUDE SIGNING, SEALING AND DATING DOCUMENTS.

NEC CLASSIFIED HAZARDOUS AREAS:

1. THIS PROJECT INCLUDES NEC CLASSIFIED HAZARDOUS AREAS. THE FOLLOWING NATIONAL FIRE PROTECTION ASSOCIATION (NFPA) STANDARD APPLY:
    - NFPA 820 – STANDARD FOR FIRE PROTECTION IN WASTEWATER TREATMENT AND COLLECTION FACILITIES.
2. EQUIPMENT, MATERIALS, AND INSTALLATION SHALL COMPLY WITH NEC ARTICLES 500, 501, 502, AND 503.

INTERPRETATION OF CONTRACT DOCUMENTS:

1. IF DURING PERFORMANCE OF WORK, THERE IS A CONFLICT, ERROR, OR DISCREPANCY BETWEEN OR AMONG CONTRACT DOCUMENTS AND LAWS AND REGULATIONS, PROVIDE THE HIGHER PERFORMANCE STANDARD UNLESS OTHERWISE DIRECTED BY ENGINEER.
2. PRIORITY OF DOCUMENTS: FIGURED DIMENSIONS GOVERN OVER SCALED DIMENSIONS, DETAILED DRAWINGS GOVERN OVER GENERAL DRAWINGS, LARGER SCALE DRAWINGS TAKE PRECEDENCE OVER SMALLER SCALE DRAWINGS, CHANGE ORDER DRAWINGS SUPERCEDE ORIGINAL CONTRACT DRAWINGS, AND CONTRACT DRAWINGS GOVERN SHOP DRAWINGS.
3. IN GENERAL, DRAWINGS DO NOT SHOW CONDUIT ROUTING. PLAN AND ROUTE CONDUITS IN COMPLIANCE WITH SPECIFICATIONS AND DRAWING DETAILS. COORDINATE INSTALLATION WITH OTHER TRADES AND ACTUAL SUPPLIED EQUIPMENT.
4. DUCTBANK ROUTING SHOWN ON ELECTRICAL SITE PLANS IS DIAGRAMMATIC IN NATURE AND MAY NOT INCLUDE INTERFERENCES THAT MAY BE PRESENT.
5. SEE ADDITIONAL NOTES ON ELECTRICAL LEGEND II SHEET.

ENCLOSURE TYPES:

PROVIDE THE FOLLOWING NEMA TYPE ELECTRICAL ENCLOSURES, UNLESS OTHERWISE NOTED:

1. NEMA 1 IN DRY, NON-PROCESS INDOOR LOCATIONS.
2. NEMA 12 IN "DUST" LOCATIONS SHOWN ON THE DRAWINGS.
3. NEMA 4X 316 STAINLESS STEEL IN OUTDOOR LOCATIONS, ROOMS BELOW GRADE INCLUDING BASEMENTS AND BURIED VAULTS AND "DAMP" OR "WET" LOCATIONS SHOWN ON THE DRAWINGS.
4. NEMA 4X 316 STAINLESS STEEL IN "CORROSIVE" LOCATIONS SHOWN ON THE DRAWINGS.
5. NEMA 7 AND LISTED FOR THE SPECIFIC NEC HAZARDOUS AREA CLASSIFICATION AS SHOWN ON THE DRAWINGS.

MATERIALS AND EQUIPMENT:

1. PROVIDE NEW MATERIALS AND EQUIPMENT UNLESS SPECIFICALLY NOTED OTHERWISE.
2. ELECTRICAL EQUIPMENT AND MATERIALS SHALL BE LISTED BY UNDERWRITER'S LABORATORIES, INC., AND SHALL BEAR APPROPRIATE UL LISTING MARK OR CLASSIFICATION MARKING. EQUIPMENT, MATERIALS, ETC. UTILIZED NOT BEARING A UL CERTIFICATION SHALL BE FIELD OR FACTORY UL CERTIFIED PRIOR TO EQUIPMENT ACCEPTANCE AND USE.
3. PROVIDE MAJOR ELECTRICAL EQUIPMENT BY A SINGLE MANUFACTURER: I.E. UNIT SUBSTATIONS, SWITCHGEAR, MOTOR CONTROL CENTERS, DISCONNECT SWITCHES, TRANSFORMERS, PANELBOARDS, ETC.

EQUIPMENT SIZE, HANDLING AND STORAGE:

1. COORDINATE WITH EQUIPMENT MANUFACTURER SHIPPING SPLITS TO PERMIT SAFE HANDLING AND PASSAGE OF EQUIPMENT TO FINAL INSTALLATION LOCATION.
2. COMPLY WITH MANUFACTURER'S INSTRUCTIONS FOR UPRIGHT EQUIPMENT ORIENTATION DURING TRANSPORTATION.
3. PROTECT EQUIPMENT FROM MECHANICAL INJURY, OR EXPOSURE TO MOISTURE, CHEMICALS, OR CORROSIVE GASES. DO NOT STORE ELECTRICAL EQUIPMENT OUTDOORS.
4. PROVIDE AND ENERGIZE TEMPORARY SPACE HEATERS IF REQUIRED TO CONTROL MOISTURE DURING STORAGE.

CUTTING AND PATCHING:

1. CUT AND PATCH IN A WORKMANLIKE MANNER AS REQUIRED TO INSTALL ELECTRICAL WORK.
2. CUTTING OF STRUCTURAL MEMBERS SUCH AS JOISTS, BEAMS, GIRDERS OR COLUMNS IS PROHIBITED.
3. PATCH SURFACES TO RESTORE TO ORIGINAL INTEGRITY (WATERPROOF OR FIREPROOF AS REQUIRED) AND APPEARANCE.

SERVICE AND METERING:

1. ELECTRIC POWER COMPANY SERVING THIS PROJECT IS FLORIDA POWER & LIGHT (FPL). POWER COMPANY TELEPHONE 386-329-5158. COMPLY WITH POWER COMPANY STANDARDS.
2. PAY FOR FEES AND CHARGES AS REQUIRED FOR TEMPORARY/CONSTRUCTION POWER FOR CONTRACTOR'S USE.
3. POWER COMPANY WORK:
    - FURNISH CONDUIT MATERIALS FOR UNDERGROUND SERVICE TO UTILITY TRANSFORMER(S).
    - PROVIDE PRIMARY CONDUCTORS (UNDERGROUND) TO UTILITY TRANSFORMER(S).
    - PROVIDE UTILITY TRANSFORMER PAD(S) AND GROUNDING.
    - PROVIDE UTILITY TRANSFORMER(S).
    - TERMINATE UNDERGROUND PRIMARY CABLES AT THE UTILITY TRANSFORMER(S).
    - TERMINATE UNDERGROUND SECONDARY CABLES AT THE UTILITY TRANSFORMER(S).
    - PROVIDE METERING CURRENT TRANSFORMERS (CT'S), METER(S) AND METER WIRING.
4. CONTRACTOR WORK:
    - MAKE ALL ARRANGEMENTS WITH POWER COMPANY TO OBTAIN SERVICE, PAY POWER COMPANY FEES, AND PROVIDE LABOR AND MATERIALS REQUIRED FOR ELECTRICAL SERVICE.
    - INSTALL PRIMARY UNDERGROUND CONDUITS.
    - PROVIDE SECONDARY UNDERGROUND CONDUITS AND CABLE FROM UTILITY TRANSFORMER(S) TO SERVICE ENTRANCE EQUIPMENT.
    - PROVIDE POWER COMPANY APPROVED METERING CURRENT TRANSFORMER (CT) ENCLOSURE.
    - INSTALL METER BASE ENCLOSURE.
    - PROVIDE EMPTY CONDUIT WITH PULL LINE FROM THE METERING CT ENCLOSURE TO THE METER BASE ENCLOSURE.
    - COORDINATE REQUIREMENTS AND INSTALLATION WITH POWER COMPANY.

SPENCER J. PERRY JR LICENSE NO. 62587 STATE OF FLORIDA PROFESSIONAL ENGINEER

DATE:
SPENCER J. PERRY JR
PE NO. 62587

REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: J. SANCHEZ
DRAWN BY: R. CARTER
SHEET CHK'D BY: S. PERRY
CROSS CHK'D BY: Y. POLEMATIDIS
APPROVED BY: S. PERRY
DATE: DECEMBER 2020

CDM Smith
4651 Salisbury Road, Suite 420
Jacksonville, FL 32256
Tel: (904) 731-7109
FL COA No. EB-0000020

JACOBS
245 RIVERSIDE AVE, SUITE 300
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JEA

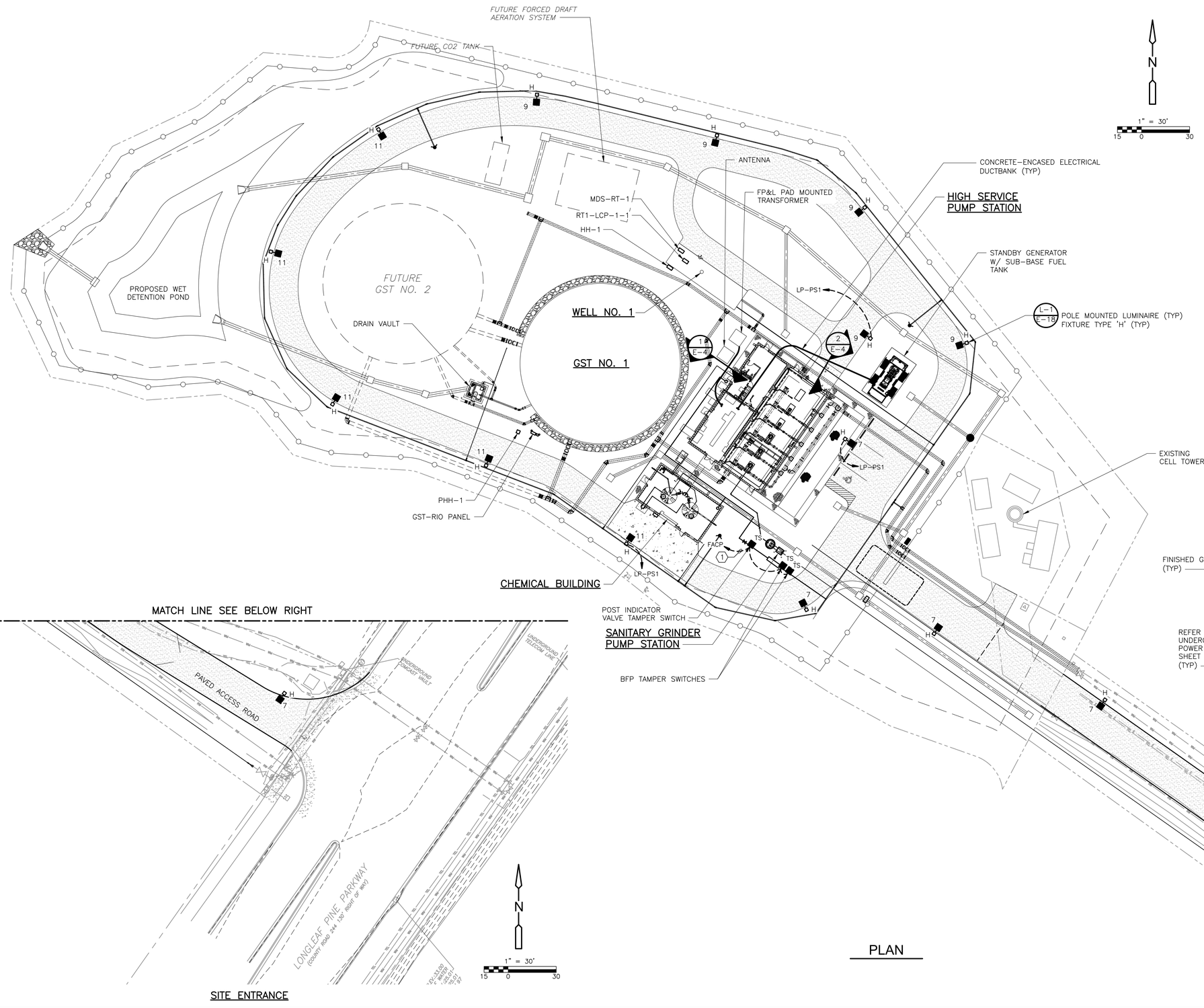
RIVERTOWN WATER TREATMENT PLANT PROJECT

ELECTRICAL NOTES

PROJECT NO. 6103-237938
FILE NAME: E003NFNT.DWG

SHEET NO.
E-3

ISSUED FOR BID



GENERAL NOTES:

A. DO NOT SCALE THE ELECTRICAL DRAWINGS REFER TO THE CIVIL, MECHANICAL, STRUCTURAL DRAWINGS, AND APPROVED MANUFACTURER'S SHOP DRAWINGS FOR THE EXACT LOCATION OF ALL EQUIPMENT.

B. ALL WORK SHALL COMPLY WITH NEC AND LOCAL CODES.

C. CONDUCTORS SHALL NOT BE SPLICED EXCEPT AS NOTED IN SPECS.

D. ALL CONDUITS SHALL HAVE A BOND WIRE SIZED PER TABLE 250.122 OF THE NEC (UNLESS OTHERWISE NOTED).

E. THE CONSTRUCTION CONTRACTOR SHALL FIELD VERIFY EXISTING UNDERGROUND UTILITIES, PIPING, ETC. REROUTE NEW CONDUITS, DUCTBANK, MANHOLES, PULL BOXES, ETC., AS REQUIRED AT NO ADDITIONAL COST TO THE OWNER.

F. DO NOT INSTALL ANY CONDUITS, DUCTBANKS, PULLBOXES, MANHOLES, ETC. IN THE AREAS DESIGNATED FOR FUTURE STRUCTURES.

G. CONDUITS EMBEDDED IN CONCRETE SLABS SHALL MEET THE INSTALLATION AND SPACING REQUIREMENTS SPECIFIED IN DIVISION 3 AND AS SHOWN ON THE STRUCTURAL DRAWINGS.

H. REFER TO THE STRUCTURAL DRAWING DETAILS FOR EQUIPMENT PAD REQUIREMENTS.

I. REFER TO STRUCTURAL DRAWING S-1 FOR THE PROJECT WIND LOADS CRITERIA.

J. REFER TO SPECIFICATION SECTION 264113 FOR LIGHTNING PROTECTION SYSTEM REQUIREMENTS.

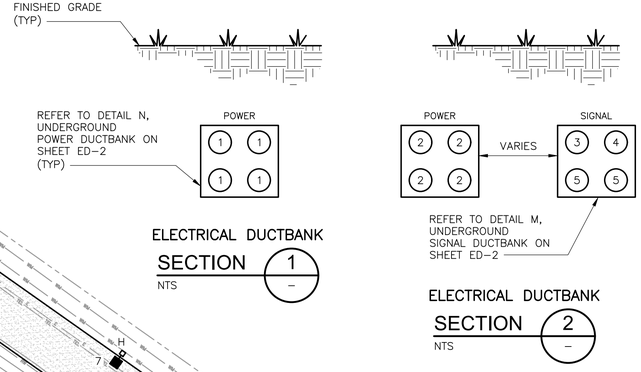
K. REFER TO SPECIFICATION SECTION 284621.15 FOR FIRE ALARM SYSTEM REQUIREMENTS.

CONDUIT AND WIRE LEGEND
(NUMBERS REFERENCE THIS SHEET ONLY)

NO.	DESCRIPTION
1	3/4"C., 6#14, 1#14G

DUCTBANK LEGEND
(NUMBERS REFERENCE THIS SHEET ONLY)

NO.	DESCRIPTION
1	4"C., TO SE MCB (480V).
2	4"C., TO STANDBY GENERATOR (480V).
3	2"C., TO STANDBY GENERATOR (CONTROLS).
4	1"C., TO MPZ-GEN (480V).
5	1"C., TO FIBER OPTIC INTERFACE PANEL.



SPENCER J. PERRY JR LICENSE NO. 62587 STATE OF FLORIDA PROFESSIONAL ENGINEER

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PE NO. 62587

REV. NO.	DATE	DRWN	CHKD	REMARKS

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DRAWN BY: R. RUCK
SHEET CHK'D BY: S. PERRY
CROSS CHK'D BY: Y. POLEMATIDIS
APPROVED BY: S. PERRY
DATE: DECEMBER 2020

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JEA

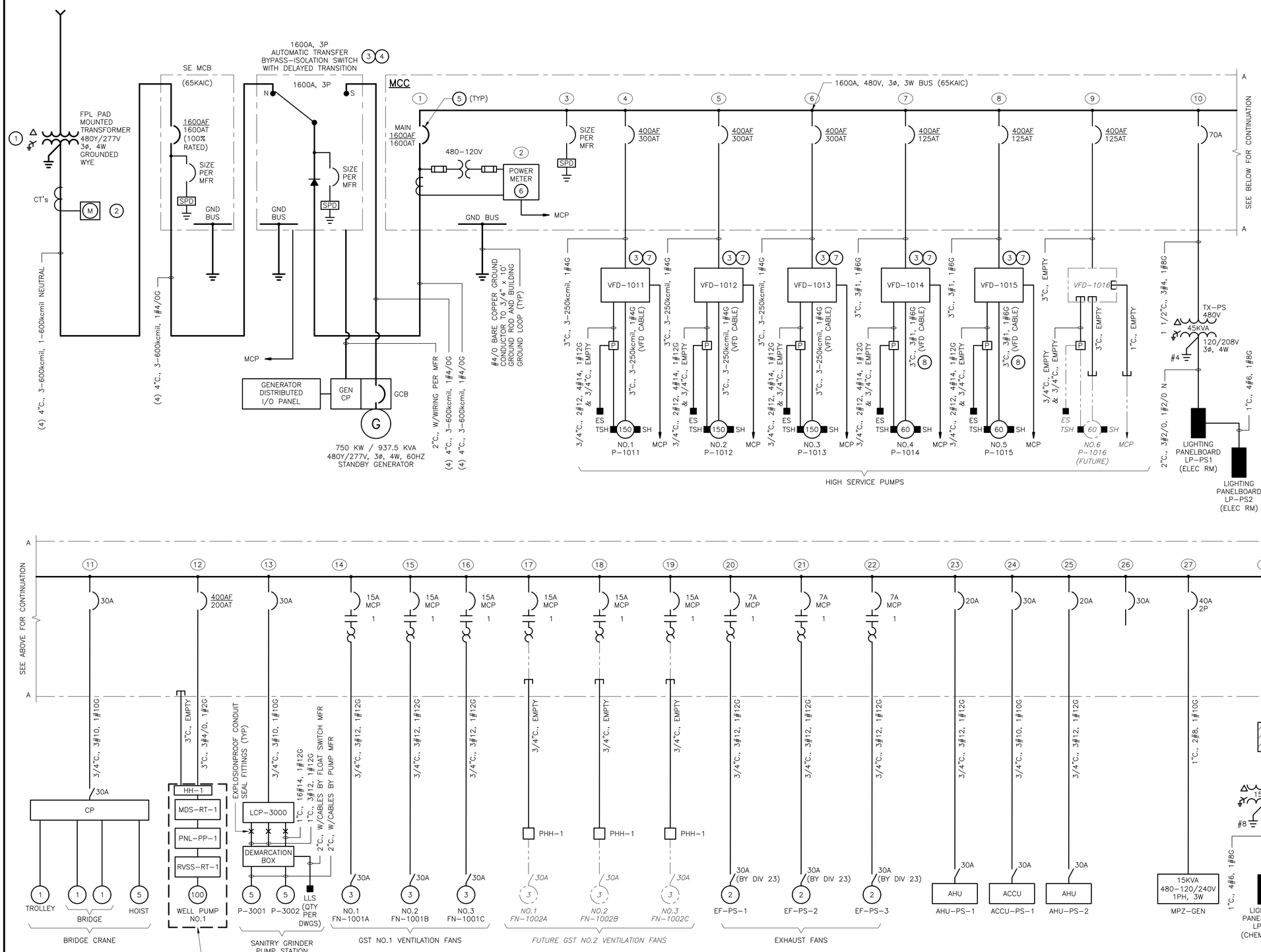
RIVERTOWN WATER TREATMENT PLANT PROJECT

ELECTRICAL SITE PLAN

PROJECT NO. 6103-237938
FILE NAME: E004STPL.DWG

SHEET NO.
E-4

ISSUED FOR BID



KEYED NOTES:

1. THE ESTIMATED MAXIMUM AVAILABLE FAULT CURRENT AT THE SECONDARY TERMINALS OF THE TRANSFORMER IS 25,700 AMPS. BASED ON 1000 KVA, 5.75% Z TRANSFORMER.
2. PROVIDE METER SOCKET AND PEDESTAL PER FPL REQUIREMENTS FOR ELECTRIC SERVICE.
3. PROVIDE DIESEL ENGINE DRIVEN GENERATOR, AUTOMATIC TRANSFER SWITCH AND VARIABLE FREQUENCY DRIVES IN ACCORDANCE WITH THE LATEST JEA WATER & WASTEWATER STANDARDS AND JEA FACILITIES STANDARDS.
4. JEA STANDARD ASCO 7000 SERIES AUTOMATIC TRANSFER BYPASS–ISOLATION SWITCH WITH DELAYED TRANSITION, FRONT CONNECTED AND FRONT ACCESS. PROVIDE ASCO 5410 POWER QUALITY METER WITH 150BT1 TECHNOLOGY PACKAGE.
5. ALL CIRCUIT BREAKERS RATED 400A AND LARGER SHALL BE 100% RATED.
6. THE POWER METER SHALL BE SIEMENS PAC4200 WITH PROFINET DATA LINK MODULE.
7. THE 6–PULSE VFD SHALL BE EQUIPPED WITH A MINIMUM 5% INPUT LINE REACTOR AND DV/DT OUTPUT FILTER. VFD's SHALL BE EATON SVX 9000 SERIES. REFER TO SECTION 262923 FOR ADDITIONAL REQUIREMENTS.
8. CONDUITS FOR PUMPS NO. 4, AND 5 WILL BE SIZED FOR FUTURE 150 HP PUMPS.

SE MCB CONNECTED LOAD SCHEDULE

DESCRIPTION	LOAD (AMPERES)
MCC	1089
TOTAL CONNECTED LOAD (AMPERES @ 480V, 3-PHASE) =	**1089**

MCC CONNECTED LOAD SCHEDULE

DESCRIPTION	LOAD (AMPERES)
HIGH SERVICE PUMP 1	180
HIGH SERVICE PUMP 2	180
HIGH SERVICE PUMP 3	180
HIGH SERVICE PUMP 4	77
HIGH SERVICE PUMP 5	77
WELL PUMP 1 (MDS-RT1/PNL-PP-1)	135
GST 1 VENTILATION FAN 1	5
GST 1 VENTILATION FAN 2	5
GST 1 VENTILATION FAN 3	5
BRIDGE CRANE	14
GRINDER PUMP STATION	14
EXHAUST FAN EF-PS-1	3
EXHAUST FAN EF-PS-2	3
EXHAUST FAN EF-PS-3	3
AHU-PS-1	5
ACCU-PS-1	15
AHU-PS-2	5
ACCU-PS-2	15
TRANSFORMER TX-PS	54
PANELBOARD PP-CB	80
MPZ-GEN	31
ENTRANCE GATE OPERATOR CP	2
TOTAL CONNECTED LOAD (AMPERES @ 480V, 3-PHASE) =	**1089**

NOTE:

ONE LINE POWER DIAGRAM

SPENCER J. PERRY JR
LICENSE
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STATE OF
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SHEET CHK'D BY: S. PERRY
CROSS CHK'D BY: Y. POLEMATIDIS
APPROVED BY: S. PERRY
DATE: DECEMBER 2020

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JEA

RIVERTOWN WATER TREATMENT PLANT PROJECT

ONE LINE POWER DIAGRAM

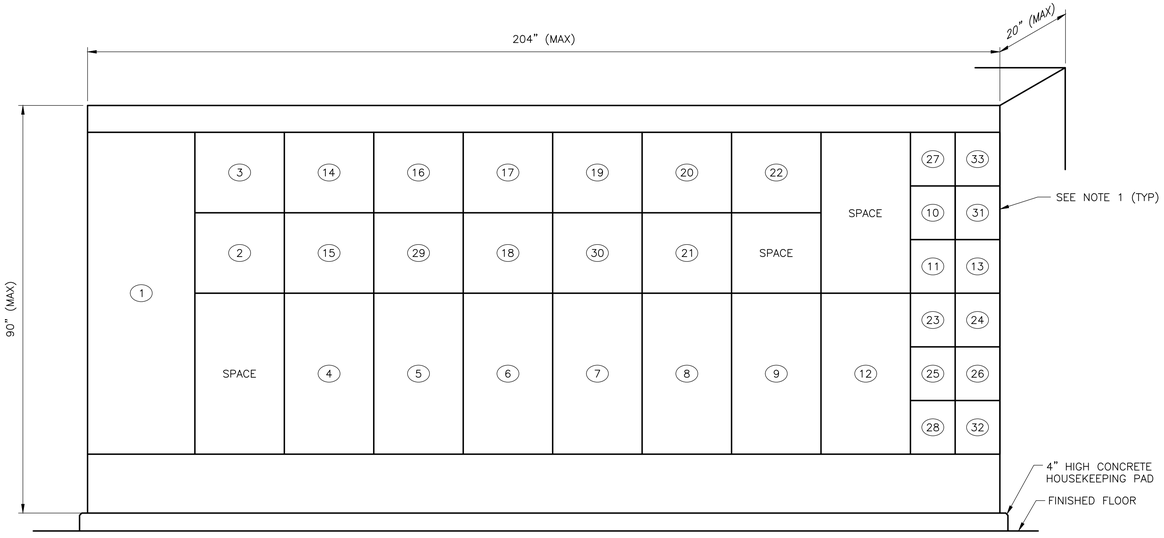
PROJECT NO. 6103–237938
FILE NAME: E005NFOL.DWG

SHEET NO.
E-5

ISSUED FOR BID

NOTE:

1. CIRCUIT BREAKER OPERATING HANDLE HEIGHT NOT TO EXCEED NEC REQUIREMENTS WHEN MCC IS LOCATED ON 4–INCH HIGH HOUSEKEEPING PAD.



MCC

FRONT ELEVATION

NTS

REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: J. SANCHEZ
DRAWN BY: R. RUCK
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RIVERTOWN WATER TREATMENT PLANT PROJECT

MCC FRONT ELEVATION

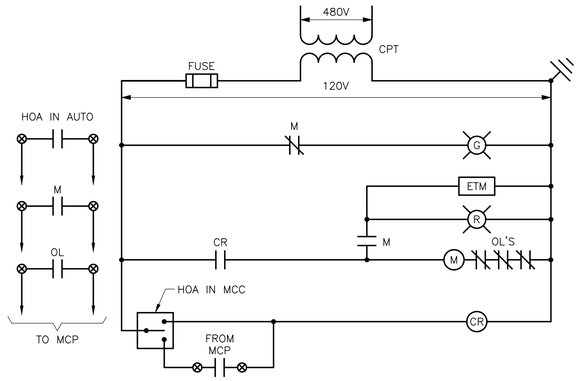
SPENCER J. PERRY JR LICENSE NO. 62587 STATE OF FLORIDA PROFESSIONAL ENGINEER

DATE:
SPENCER J. PERRY JR
PE NO. 62587

PROJECT NO. 6103–237938
FILE NAME: E006NFEL.DWG

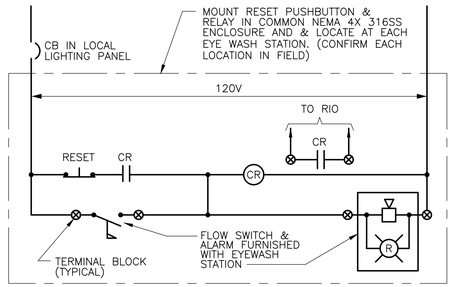
SHEET NO.
E-6

ISSUED FOR BID



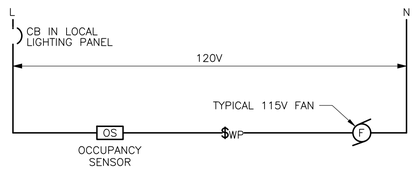
SIZE 1 SPARES

ELEMENTARY CONTROL DIAGRAM



EYE WASH ALARM AND RESET

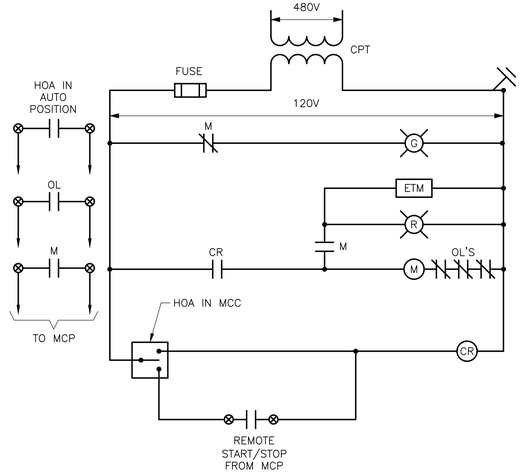
ELEMENTARY CONTROL DIAGRAM



115V EXHAUST FAN

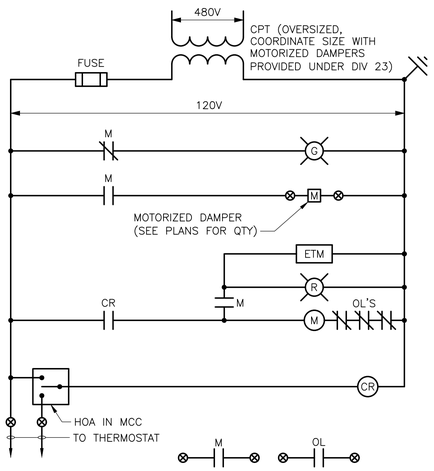
ELEMENTARY CONTROL DIAGRAM

(EF-PS-4)



GROUND STORAGE TANK VENTILATION FANS

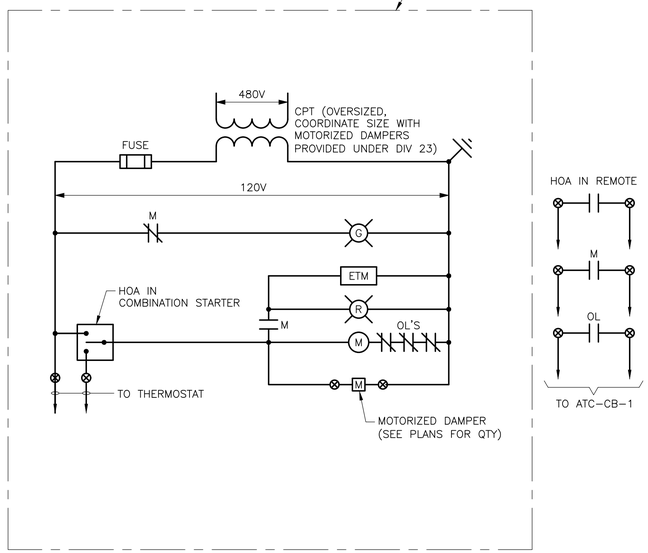
ELEMENTARY CONTROL DIAGRAM



EXHAUST FANS

ELEMENTARY CONTROL DIAGRAM

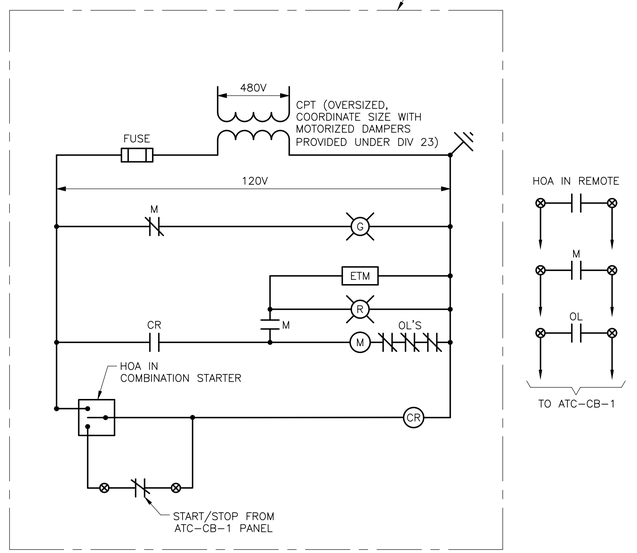
(EF-PS-1, EF-PS-2, EF-PS-3)



EXHAUST FANS

ELEMENTARY CONTROL DIAGRAM

(EF-CB-2, EF-CB-3)



EXHAUST FANS

ELEMENTARY CONTROL DIAGRAM

(EF-CB-1)

SPENCER J. PERRY JR
LICENSE NO. 62587
STATE OF FLORIDA
PROFESSIONAL ENGINEER

DATE:
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PE NO. 62587

REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: J. SANCHEZ
DRAWN BY: R. RUCK
SHEET CHK'D BY: S. PERRY
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APPROVED BY: S. PERRY
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JEA

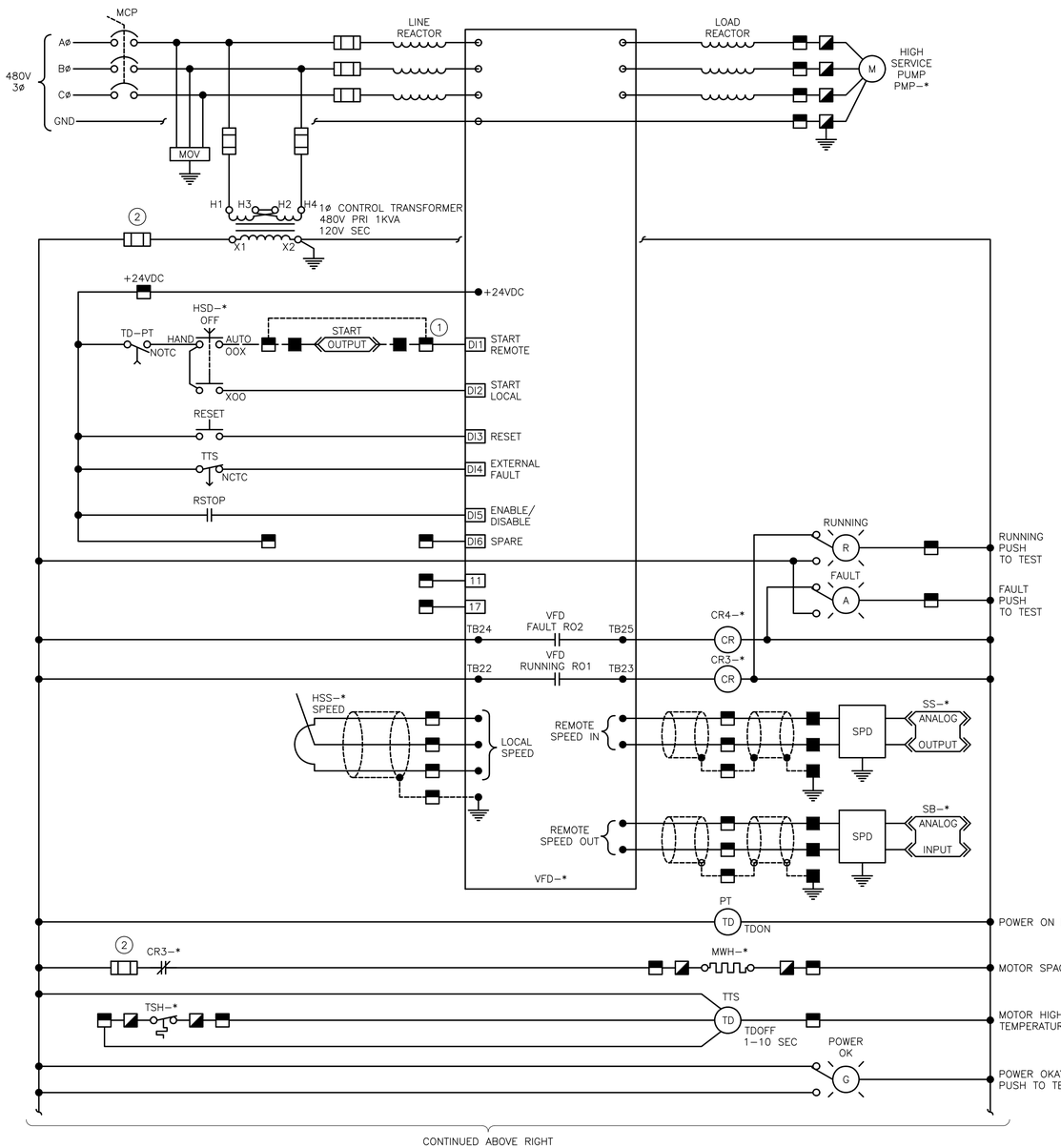
RIVERTOWN WATER TREATMENT PLANT PROJECT

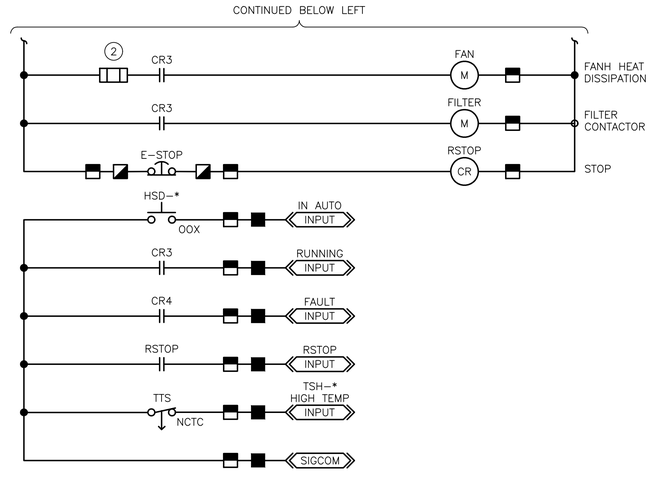
ELEMENTARY CONTROL DIAGRAMS I

PROJECT NO. 6103-237938
FILE NAME: E007NFCD.DWG

SHEET NO.
E-7

ISSUED FOR BID





GENERAL NOTES:

A. SCHEMATIC TO BE REVIEWED FOR SPECIFIC PROJECT REQUIREMENTS AND APPROVED BY JEA PRIOR TO FABRICATION OF ANY KIND.

B. VFD CIRCUIT BOARD SHALL HAVE CONFORMAL COATING.

KEYED NOTES:

(1) JUMPER IS NEEDED IF COMMUNICATION CONTROL IS SELECTED BY USER.

(2) SIZE BASED ON PROTECTION REQUIREMENT FOR LOAD(S) SERVED.

TERMINAL BLOCK LEGEND:

- MOTOR CONTROL CENTER
- FIELD DEVICE
- FIELD PANEL
- LOCAL STARTER CONTROL PANEL/VFD

HIGH SERVICE PUMP VARIABLE FREQUENCY DRIVES

ELEMENTARY CONTROL DIAGRAM

SPENCER J. PERRY JR LICENSE NO. 62587 STATE OF FLORIDA PROFESSIONAL ENGINEER

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JEA

RIVERTOWN WATER TREATMENT PLANT PROJECT

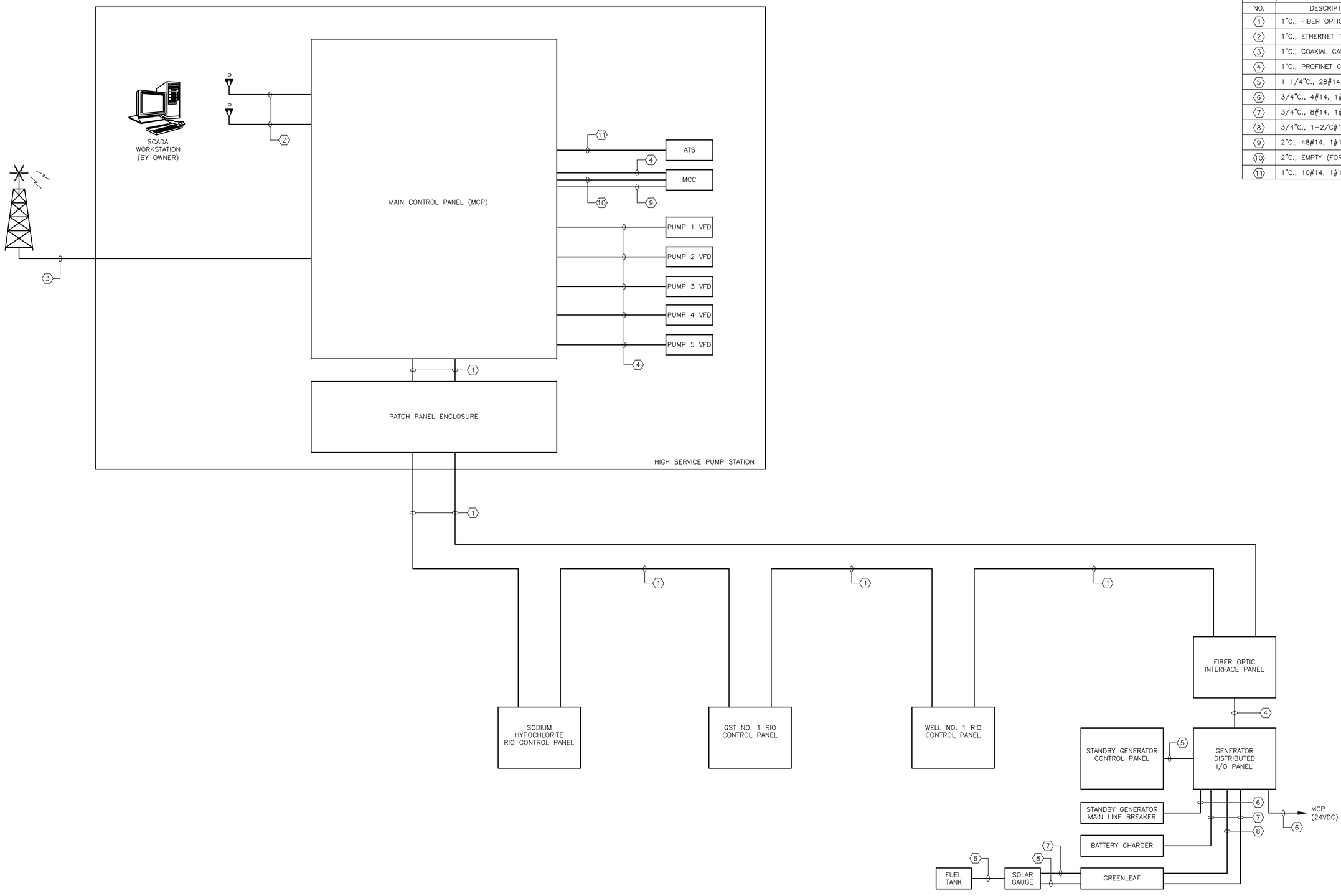
ELEMENTARY CONTROL DIAGRAMS II

PROJECT NO. 6103–237938
FILE NAME: E008NFCD.DWG
SHEET NO. E-8

ISSUED FOR BID

CONDUIT AND WIRE LEGEND
(NUMBERS REFERENCE THIS SHEET ONLY)

NO.	DESCRIPTION
1	1"C., FIBER OPTIC CABLE
2	1"C., ETHERNET TCP/IP CAT6 CABLE
3	1"C., COAXIAL CABLE
4	1"C., PROFINET CAT6 CABLE
5	1 1/4"C., 28#14, 1#14G
6	3/4"C., 4#14, 1#14G
7	3/4"C., 8#14, 1#14G
8	3/4"C., 1-2/C#16SH
9	2"C., 48#14, 1#14G
10	2"C., EMPTY (FOR FUTURE GST FANS SIGNALS)
11	1"C., 10#14, 1#14G



SPENCER J. PERRY JR
LICENSE
NO. 62587
STATE OF FLORIDA
PROFESSIONAL ENGINEER

DATE:
SPENCER J. PERRY JR
PE NO. 62587

REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: J. SANCHEZ
DRAWN BY: R. RUCK
SHEET CHK'D BY: S. PERRY
CROSS CHK'D BY: Y. POLEMATIDIS
APPROVED BY: S. PERRY
DATE: DECEMBER 2020

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FL COA No. EB-0000020

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EB0000072 AAC001992 LC26000188

JEA

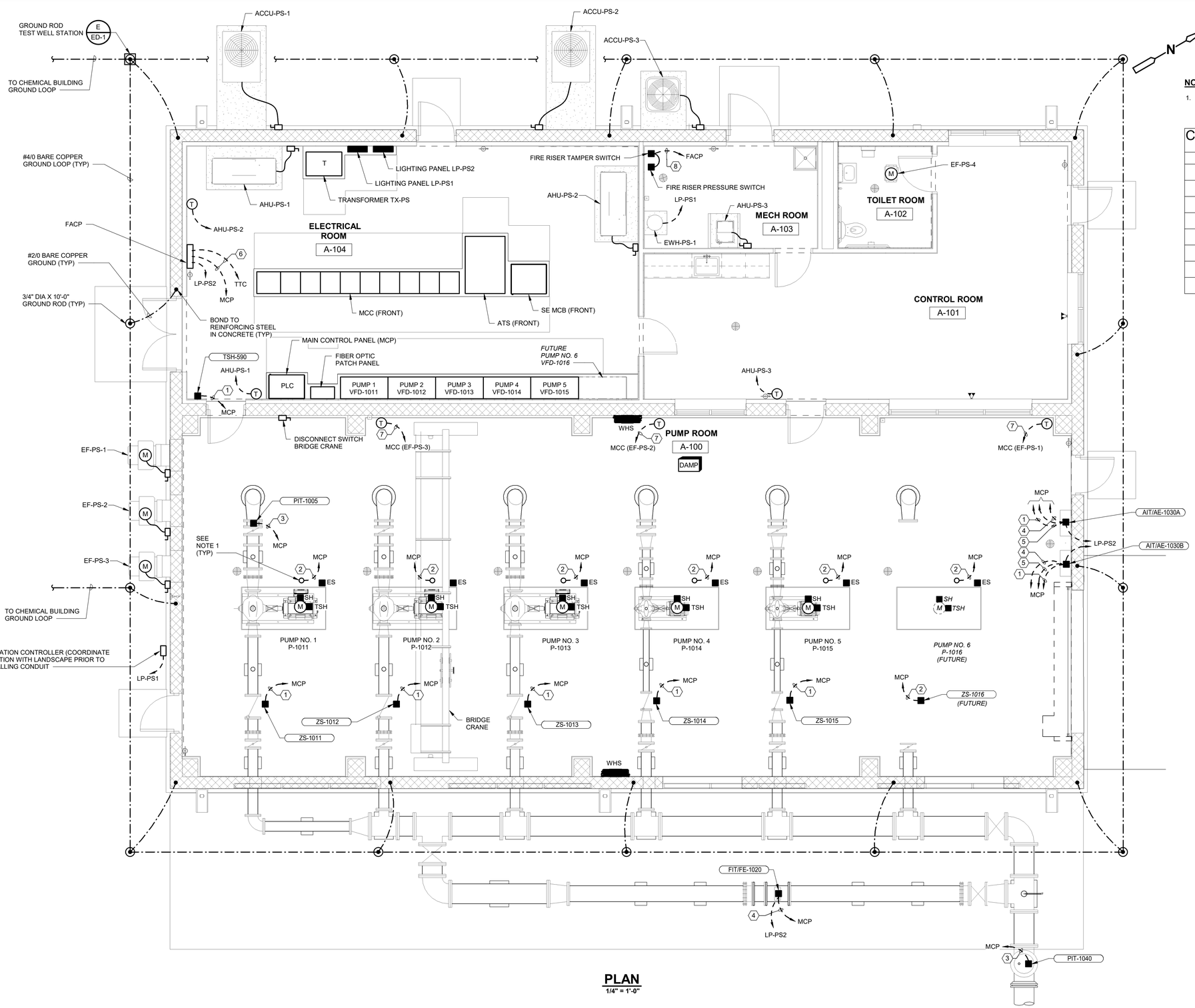
RIVERTOWN WATER TREATMENT PLANT PROJECT

INSTRUMENTATION AND CONTROL RISER DIAGRAM

PROJECT NO. 6103-237938
FILE NAME: E009NFRD.DWG

SHEET NO.
E-9

ISSUED FOR BID



NOTE:

1. COORDINATE CONDUIT STUB-UP LOCATIONS WITH PUMP PAD AND PIPING PRIOR TO INSTALLING CONDUITS.

CONDUIT AND WIRE LEGEND
(NUMBERS REFERENCE THIS SHEET ONLY)

NO.	DESCRIPTION
1	3/4"C., 2#14, 1#14G
2	3/4"C., EMPTY
3	3/4"C., 1-2/C#16SH
4	1"C., ETHERNET CAT6 CABLE
5	1 1/2"C., 3-2/C#16SH
6	1"C., WIRING PER MANUFACTURER
7	3/4"C., 2#12, 1#12G
8	3/4"C., 4#14, 1#14G

PLAN
1/4" = 1'-0"

REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: J. SANCHEZ
DRAWN BY: R. RUCK
SHEET CHK'D BY: S. PERRY
CROSS CHK'D BY: Y. POLEMATIDIS
APPROVED BY: S. PERRY
DATE: DECEMBER 2020

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JEA

RIVERTOWN WATER TREATMENT PLANT PROJECT

HIGH SERVICE PUMP STATION
POWER PLAN

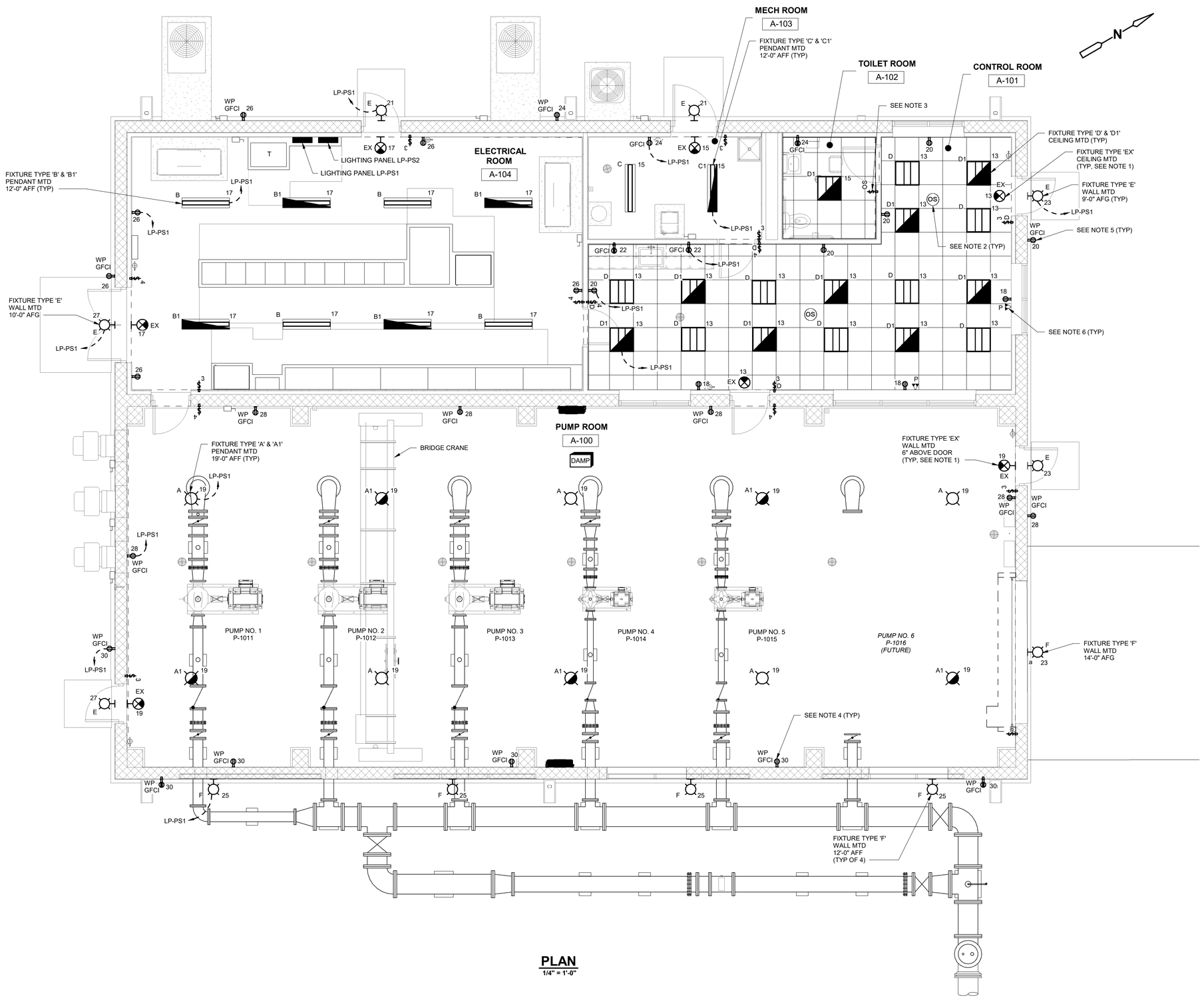
SPENCER J. PERRY JR LICENSE NO. 62587 STATE OF FLORIDA PROFESSIONAL ENGINEER

DATE:
SPENCER J. PERRY JR
PE NO. 62587

PROJECT NO. 6103-237938
FILE NAME: EWZ000PS.RVT

SHEET NO.
E-10

ISSUED FOR BID



PLAN
1/4" = 1'-0"

NOTES:

1. EXIT SIGNS 'EX' WILL BE WIRED TO THE NORMAL LIGHTING CIRCUIT OF THE ROOM IT SERVES AND TO THE LINE-SIDE OF THE LIGHT SWITCH.
2. WATTSTOPPER MODEL NO. DT-355 360 DEGREE DUAL TECHNOLOGY LINE VOLTAGE CEILING MOUNTED OCCUPANCY SENSOR WITH LIGHT LEVEL FEATURE. TURNS LIGHTING SYSTEMS ON AND OFF BASED ON OCCUPANCY AND AMBIENT LIGHT LEVELS. LIGHT LEVEL FEATURE CAN BE USED TO KEEP LIGHTS FROM TURNING ON IF THE AMBIENT LIGHT LEVEL IS SUFFICIENT. REFER TO AND FOLLOW MANUFACTURERS INSTALLATION INSTRUCTIONS FOR MORE INFORMATION.
3. WATTSTOPPER MODEL NO. UW-100 LINE VOLTAGE ULTRASONIC WALL MOUNTED OCCUPANCY SENSOR LIGHT SWITCH. TURNS LIGHTING SYSTEMS ON AND HOLDS IT ON AS LONG AS THE SENSOR DETECTS OCCUPANCY. AFTER NO MOVEMENT IS DETECTED FOR THE SELECTED TIME DELAY, THE LIGHTS SWITCH OFF. REFER TO AND FOLLOW MANUFACTURERS INSTALLATION INSTRUCTIONS FOR MORE INFORMATION.
4. ALL RECEPTACLES LOCATED IN AREAS DESIGNATED AS "DAMP" SHALL BE GFCI TYPE WITH WEATHERPROOF WHILE-IN-USE COVER.
5. ALL RECEPTACLES LOCATED OUTDOORS SHALL BE GFCI TYPE WITH WEATHERPROOF WHILE-IN-USE COVER.
6. COORDINATE LOCATION OF ETHERNET TCP/IP CAT6 JACK WITH JEA PRIOR TO INSTALLATION.

REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: J. SANCHEZ
DRAWN BY: R. RUCK
SHEET CHK'D BY: S. PERRY
CROSS CHK'D BY: Y. POLEMATIDIS
APPROVED BY: S. PERRY
DATE: DECEMBER 2020

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JEA

RIVERTOWN WATER TREATMENT PLANT PROJECT

HIGH SERVICE PUMP STATION
LIGHTING PLAN

SPENCER J. PERRY JR LICENSE NO. 62587 STATE OF FLORIDA PROFESSIONAL ENGINEER

DATE:
SPENCER J. PERRY JR
PE NO. 62587

PROJECT NO. 6103-237938
FILE NAME: EWZ000PS.RVT

SHEET NO.
E-11

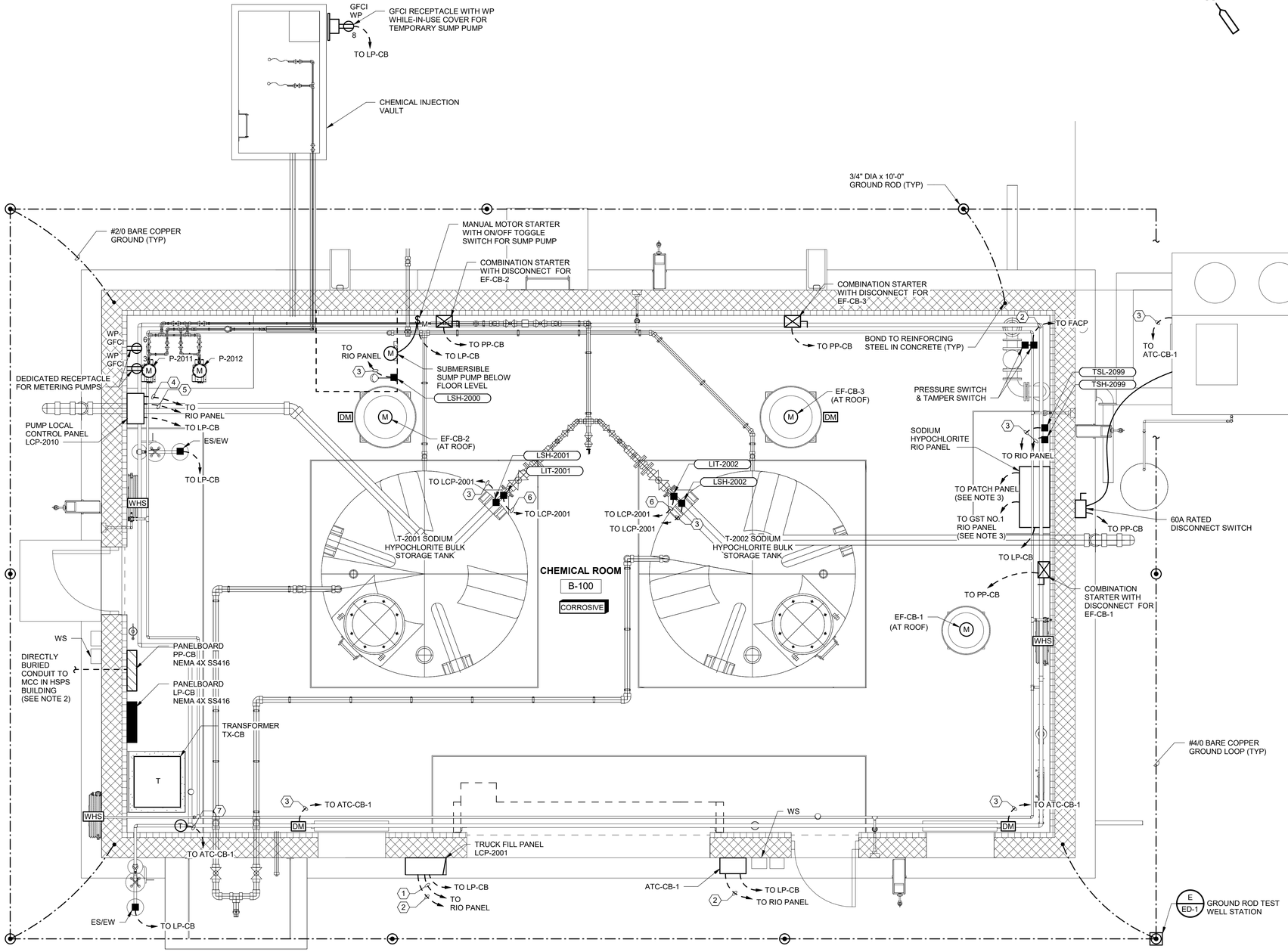
ISSUED FOR BID

NOTES:

1. REFER E-20 FOR PANELBOARD SCHEDULE.
2. REFER E-5 ONE LINE DIAGRAM FOR CABLE SIZES.
3. REFER E-9 CONTROL RISER DIAGRAM FOR CABLE SIZES.
4. ALL GFCI RECEPTACLES SHALL HAVE A WP WHILE-IN-USE COVER.

CONDUIT AND WIRE LEGEND
(NUMBERS REFERENCE THIS SHEET ONLY)

NO.	DESCRIPTION
1	3/4"C.,2-2/C#16SH
2	3/4"C.,6#14, 1#14G
3	3/4"C.,2#14, 1#14G
4	1-1/2"C.,4-2/C#16SH
5	1-1/2"C.,18#14, 1#12G
6	3/4"C, 1-2/C#16SH
7	3/4"C.,2#12, 1#12G



PLAN
3/8" = 1'-0"

REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: S. SHREERAM
DRAWN BY: M. ELANGOVAN
SHEET CHK'D BY: S. PERRY
CROSS CHK'D BY: Y. POLEMATIDIS
APPROVED BY: S. PERRY
DATE: DECEMBER 2020

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JEA

RIVERTOWN WATER TREATMENT PLANT PROJECT

CHEMICAL BUILDING POWER PLAN

SPENCER J. PERRY JR LICENSE NO. 62587 STATE OF FLORIDA PROFESSIONAL ENGINEER

DATE:
SPENCER J. PERRY JR
PE NO. 62587

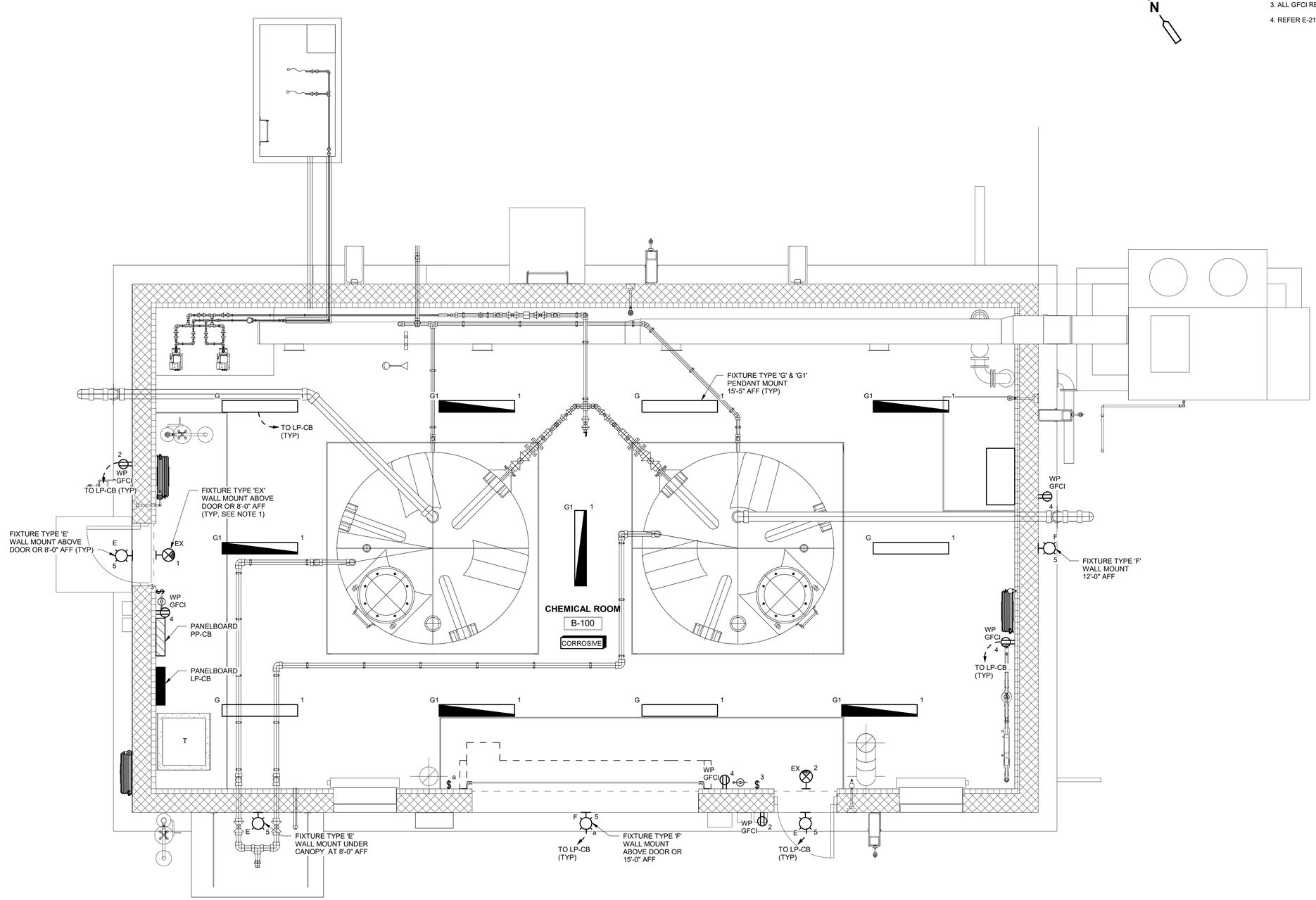
PROJECT NO. 6103-237938
FILE NAME: EWZ000CH.RVT

SHEET NO.
E-12

ISSUED FOR BID

NOTES:

1. EXIT SIGNS 'EX' WILL BE WIRED TO THE NORMAL LIGHTING CIRCUIT OF THE ROOM IT SERVES AND TO THE LINE-SIDE OF THE LIGHT SWITCH.
2. REFER E-20 FOR PANELBOARD SCHEDULE.
3. ALL GFCI RECEPTACLES SHALL HAVE A WP WHILE-IN-USE COVER.
4. REFER E-21 FOR LIGHT FIXTURE SCHEDULE.



PLAN
3/8" = 1'-0"

REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: S. SHREERAM
DRAWN BY: M. ELANGOVAN
SHEET CHK'D BY: S. PERRY
CROSS CHK'D BY: Y. POLEMATIDIS
APPROVED BY: S. PERRY
DATE: DECEMBER 2020

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JEA

RIVERTOWN WATER TREATMENT PLANT PROJECT

CHEMICAL BUILDING
LIGHTING PLAN

SPENCER J. PERRY JR
LICENSE
NO. 62587
STATE OF
FLORIDA
PROFESSIONAL ENGINEER

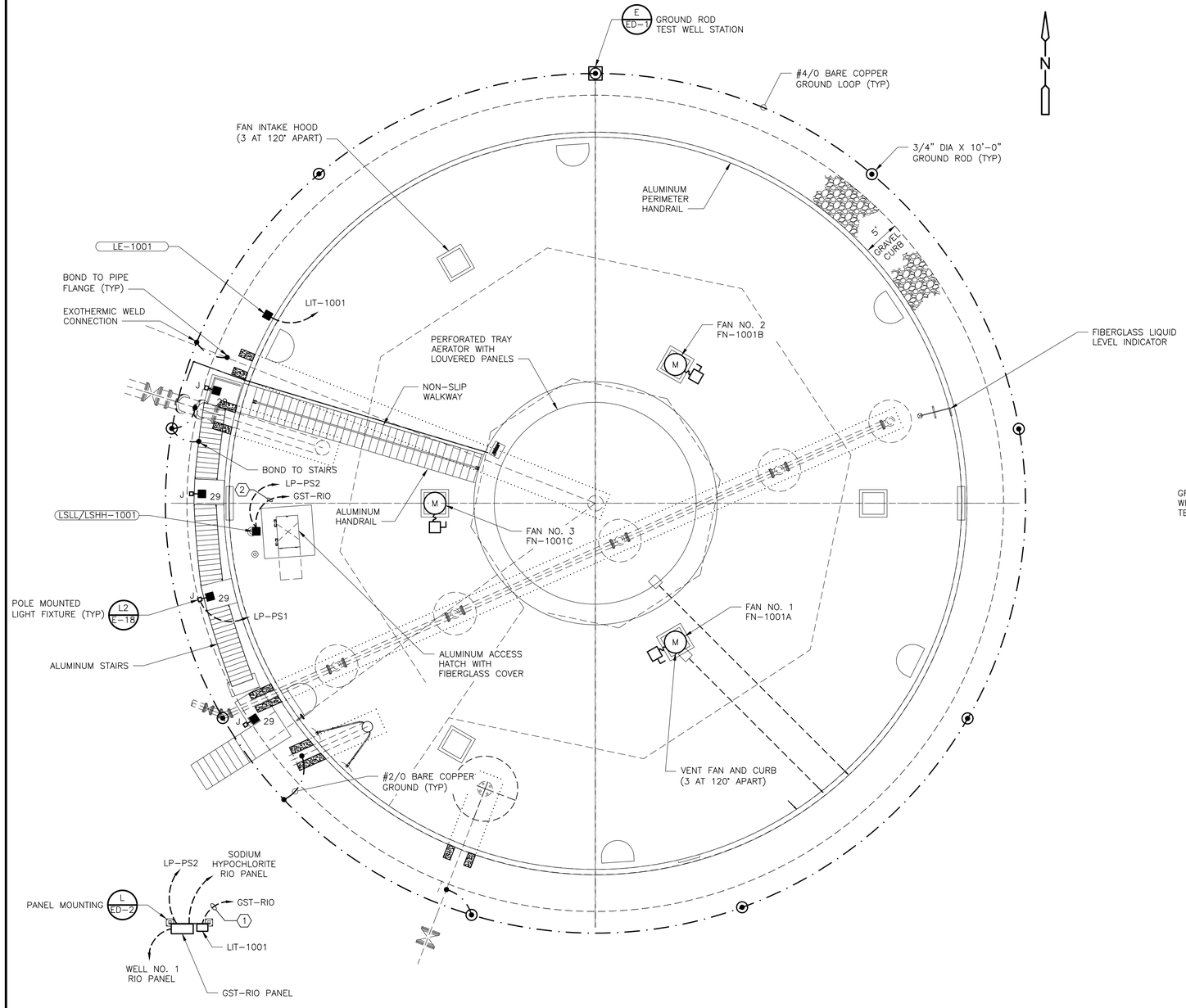
DATE:
SPENCER J. PERRY JR
PE NO. 62587

PROJECT NO. 6103-237938
FILE NAME: EWZ000CH.RVT

SHEET NO.
E-13

ISSUED FOR BID

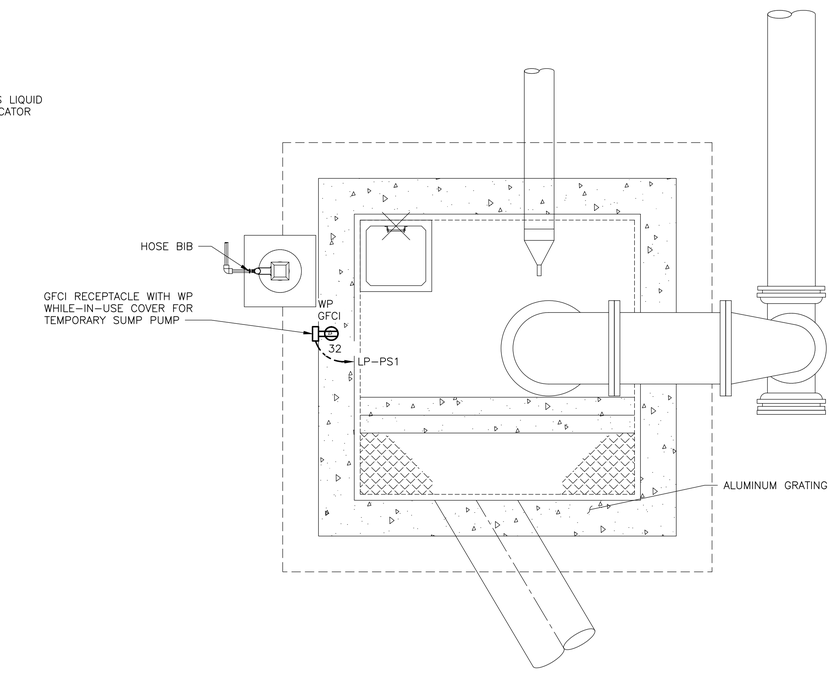
CONDUIT AND WIRE LEGEND (NUMBERS REFERENCE THIS SHEET ONLY)	
NO.	DESCRIPTION
1	3/4"C., 1-2/C#16SH
2	3/4"C., 4#14, 1#14G



GST NO. 1

PLAN

1/8" = 1'-0"



GST DRAIN VAULT

PLAN

1/2" = 1'-0"

SPENCER J. PERRY JR
LICENSE
NO. 62587
STATE OF
FLORIDA
PROFESSIONAL ENGINEER

DATE:
SPENCER J. PERRY JR
PE NO. 62587

REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: J. SANCHEZ
DRAWN BY: R. RUCK
SHEET CHK'D BY: S. PERRY
CROSS CHK'D BY: Y. POLEMATIDIS
APPROVED BY: S. PERRY
DATE: DECEMBER 2020

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EB0000072 AAC001992 LC26000188

JEA

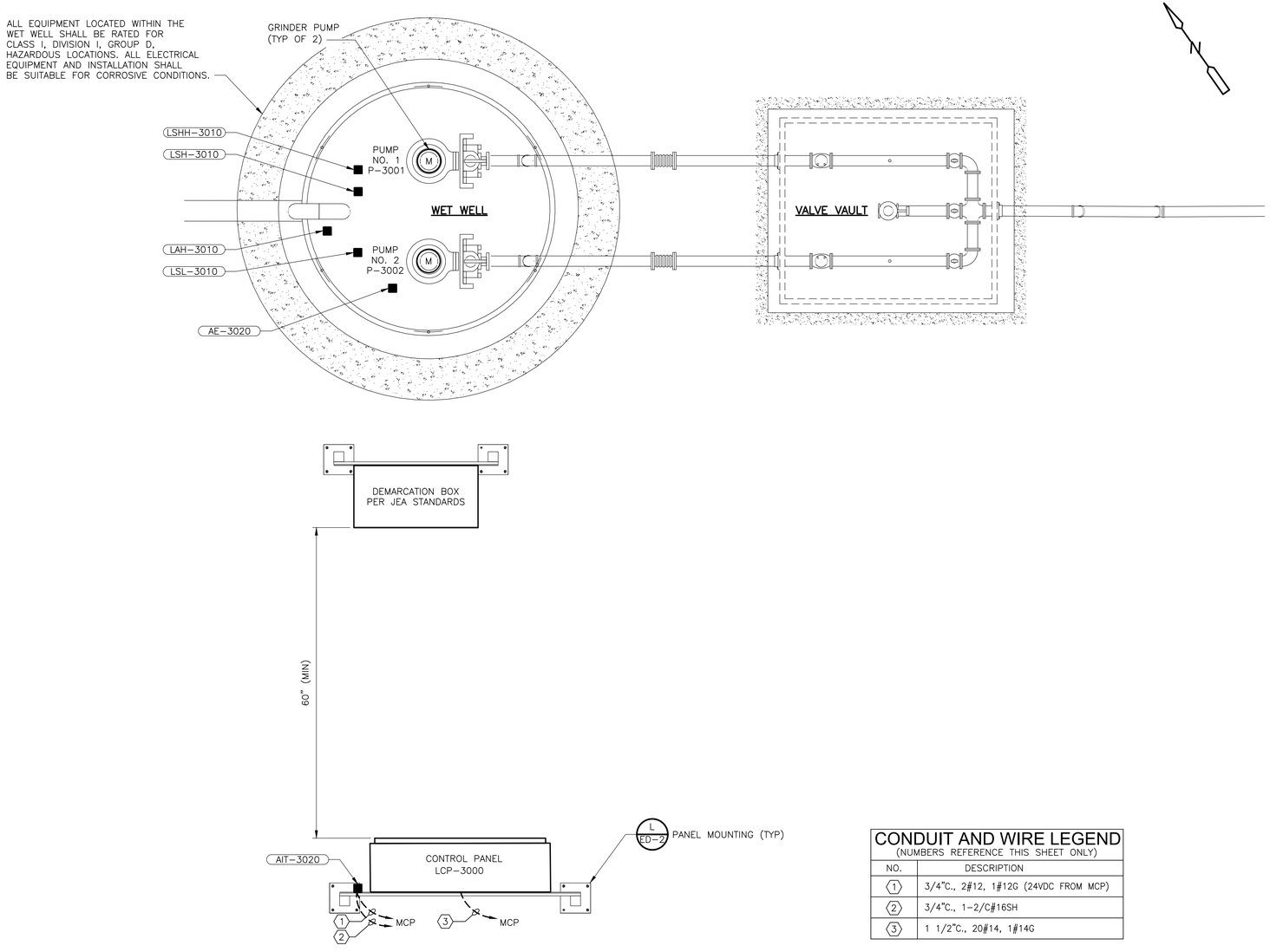
RIVERTOWN WATER TREATMENT PLANT PROJECT

GROUND STORAGE TANK NO. 1
AND GST DRAIN VAULT
ELECTRICAL PLANS

PROJECT NO. 6103-237938
FILE NAME: E014GSPL.DWG

SHEET NO.
E-14

ISSUED FOR BID



SANITARY GRINDER PUMP STATION WET WELL AND VALVE VAULT

PLAN

1" = 1-0"

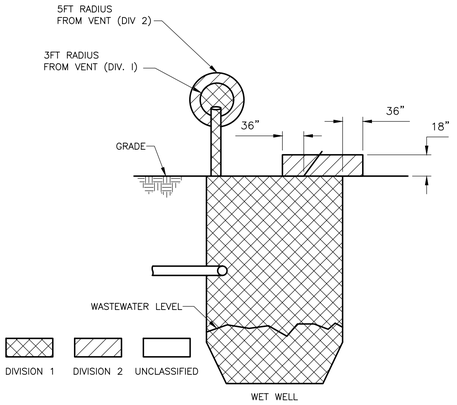
CONDUIT AND WIRE LEGEND (NUMBERS REFERENCE THIS SHEET ONLY)	
NO.	DESCRIPTION
1	3/4"C., 2#12, 1#12G (24VDC FROM MCP)
2	3/4"C., 1-2/C#16SH
3	1 1/2"C., 20#14, 1#14G

NEC HAZARDOUS AREAS:

THERE ARE MULTIPLE LOCATIONS WITHIN THE FACILITY THAT ARE CLASSIFIED AS NEC CLASS 1 HAZARDOUS AREAS IN ACCORDANCE WITH NFPA 820. THE FOLLOWING ARE THE NEC HAZARDOUS AREAS AND THEIR BOUNDARIES THAT THE CONTRACTOR IS ANTICIPATED TO ENCOUNTER ON THIS PROJECT.

SANITARY GRINDER PUMP STATION WET WELL:
CLASS I, DIVISION 1: SEE DETAIL 'A' BELOW.
CODE REFERENCE: TABLE 4.2.2, ROW 14(a).

SANITARY GRINDER PUMP STATION VALVE VAULT:
CLASS I, DIVISION 2: SEE DETAIL 'B' BELOW.
CODE REFERENCE: TABLE 4.2.2, ROW 29(a).

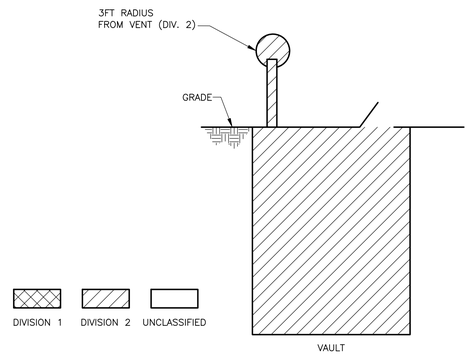


VENTILATION (A): NO VENTILATION OR VENTILATED AT LESS THAN 12 AIR CHANGES PER HOUR

PUMP STATION WET WELL HAZARDOUS AREA CLASSIFICATION

DETAIL 'A'

NTS



VENTILATION (NNV): NORMALLY NOT VENTILATED

PUMP STATION VALVE VAULT HAZARDOUS AREA CLASSIFICATION

DETAIL 'B'

NTS

SPENCER J. PERRY JR LICENSE NO. 62587 STATE OF FLORIDA PROFESSIONAL ENGINEER

DATE:
SPENCER J. PERRY JR
PE NO. 62587

REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: J. SANCHEZ
DRAWN BY: R. RUCK
SHEET CHK'D BY: S. PERRY
CROSS CHK'D BY: Y. POLEMATIDIS
APPROVED BY: S. PERRY
DATE: DECEMBER 2020

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JEA

RIVERTOWN WATER TREATMENT PLANT PROJECT

SANITARY GRINDER PUMP STATION
ELECTRICAL PLAN

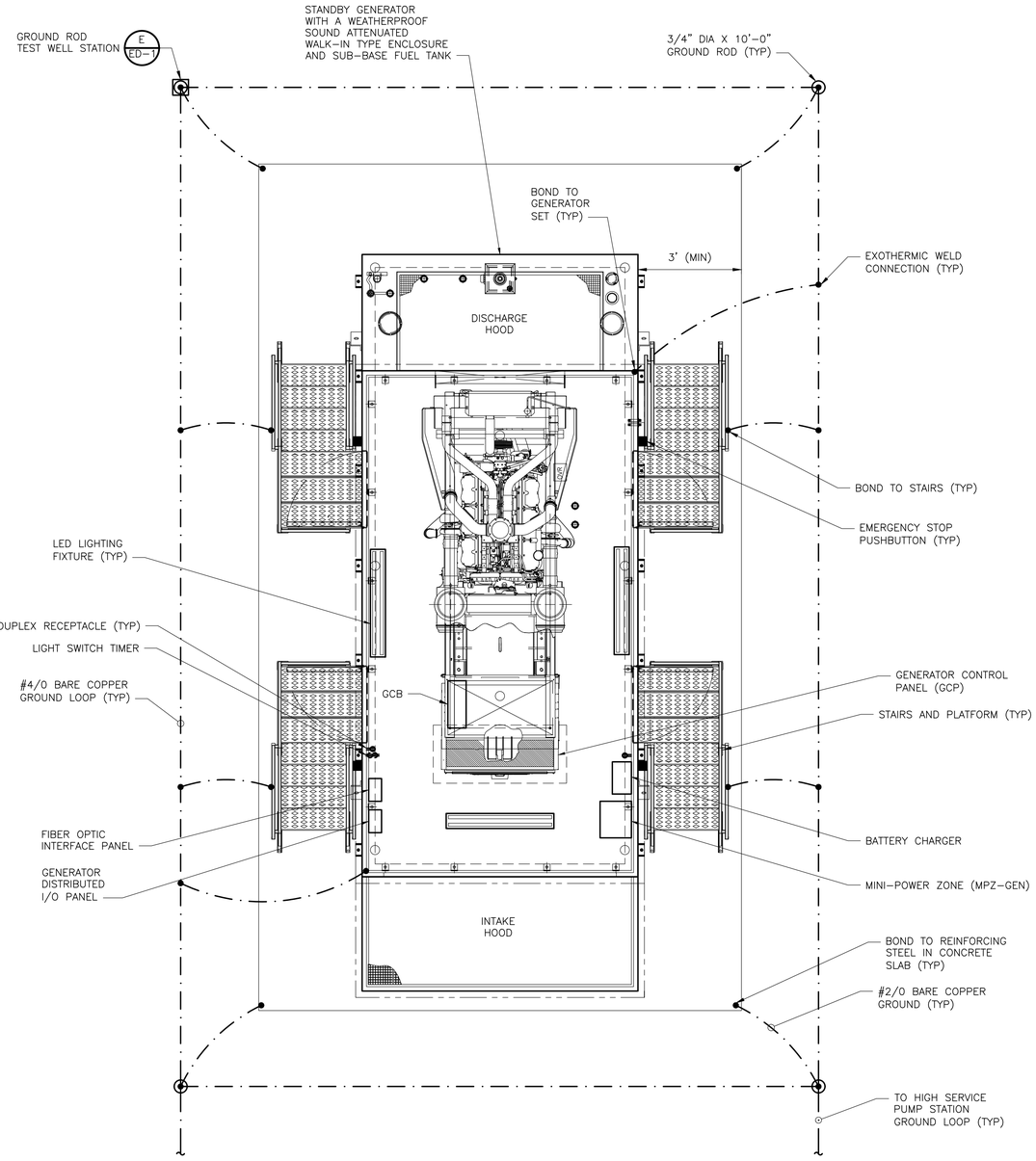
PROJECT NO. 6103-237938
FILE NAME: E015PSPL.DWG

SHEET NO.
E-15

ISSUED FOR BID

NOTES:

1. INSTALL GENERATOR SET IN ACCORDANCE WITH JEA FACILITIES STANDARDS.
2. COORDINATE CONDUIT STUB-UPS WITH THE APPROVED STANDBY GENERATOR SHOP DRAWING SUBMITTAL.



PLAN
3/8" = 1'-0"

REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: J. SANCHEZ
DRAWN BY: R. RUCK
SHEET CHK'D BY: S. PERRY
CROSS CHK'D BY: Y. POLEMATIDIS
APPROVED BY: S. PERRY
DATE: DECEMBER 2020

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JEA

RIVERTOWN WATER TREATMENT PLANT PROJECT

STANDBY GENERATOR ELECTRICAL PLAN

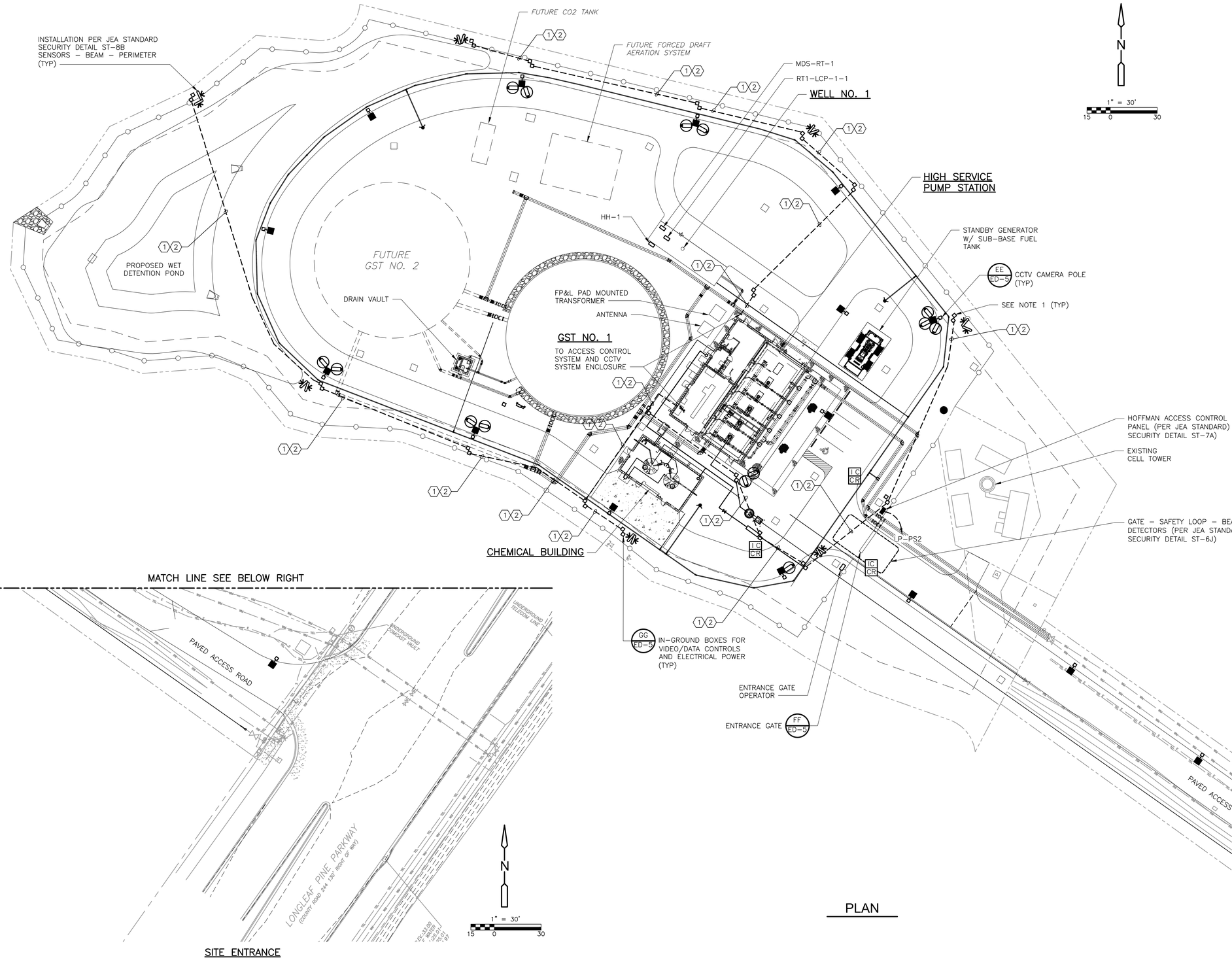
SPENCER J. PERRY JR LICENSE NO. 62587 STATE OF FLORIDA PROFESSIONAL ENGINEER

DATE:
SPENCER J. PERRY JR
PE NO. 62587

PROJECT NO. 6103-237938
FILE NAME: E016GBPL.DWG

SHEET NO.
E-16

ISSUED FOR BID



SYMBOLS – JEA SECURITY DEVICES:

- PERIMETER BEAM DETECTOR (BY OTHERS)
- IC INTERCOM (BY OTHERS)
- CR CARD READER (BY OTHERS)

NOTE:

1. COORDINATE LOCATION OF IN-GROUND BOXES WITH JEA SECURITY PRIOR TO INSTALLATION.

CONDUIT AND WIRE LEGEND
(NUMBERS REFERENCE THIS SHEET ONLY)

NO.	DESCRIPTION
1	(2) 2"C EMPTY FOR COMMUNICATIONS
2	(2) 2"C EMPTY FOR ELECTRICAL POWER

SPENCER J. PERRY JR LICENSE NO. 62587 STATE OF FLORIDA PROFESSIONAL ENGINEER

DATE:
SPENCER J. PERRY JR
PE NO. 62587

REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: J. SANCHEZ
DRAWN BY: R. RUCK
SHEET CHK'D BY: S. PERRY
CROSS CHK'D BY: Y. POLEMATIDIS
APPROVED BY: S. PERRY
DATE: DECEMBER 2020

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JEA

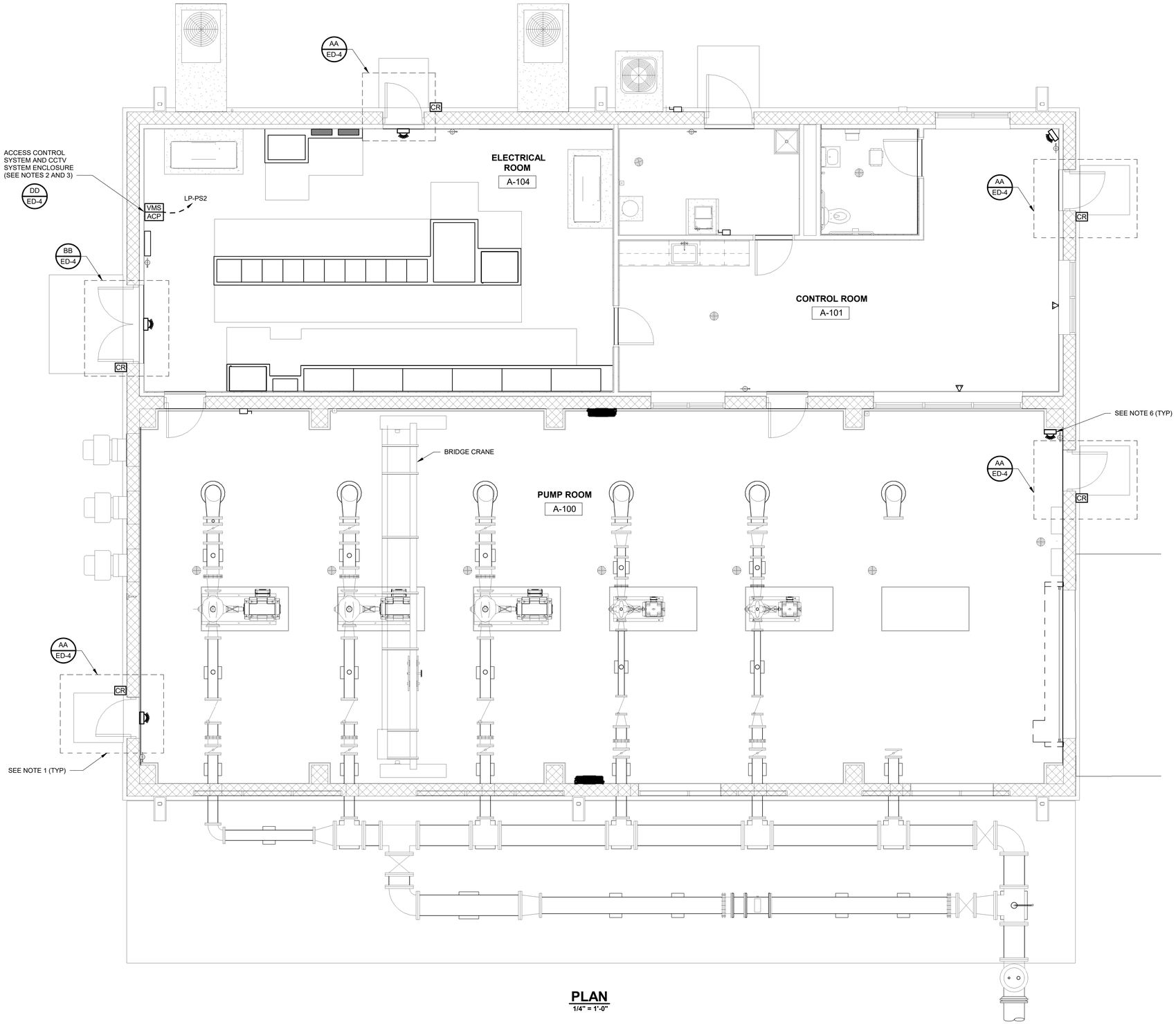
RIVERTOWN WATER TREATMENT PLANT PROJECT

SITE SECURITY PLAN

PROJECT NO. 6103-237938
FILE NAME: E017SPPL.DWG

SHEET NO.
E-17

ISSUED FOR BID



PLAN
1/4" = 1'-0"

N

SYMBOLS - JEA SECURITY DEVICES:

CR CARD READER (BY OTHERS)

MOTION DETECTOR (BY OTHERS)

NOTES:

1. PROVIDE ALL RACEWAY INFRASTRUCTURE FOR THE ACCESS CONTROL SYSTEM. COORDINATE WITH JEA SECURITY PRIOR TO INSTALLATION.
2. COORDINATE LOCATION WITH JEA SECURITY PRIOR TO INSTALLATION.
3. PROVIDE JUNCTION BOX ABOVE SUSPENDED CEILING TO TERMINATE ALL FIELD NETWORK CONDUITS. THE JUNCTION BOX SHALL BE SIZED IN ACCORDANCE WITH THE NEC.
4. ALL CONDUITS SHALL BE INSTALLED EXPOSED/SURFACE MOUNTED.
5. CONDUITS FOR ACCESS CONTROL SYSTEM CARD READERS AND MOTION DETECTORS SHALL BE SEPARATE FROM THE CONDUITS FOR THE CCTV SYSTEM CAMERAS.
6. COORDINATE RACEWAY INSTALLATION WITH OVERHEAD BRIDGE CRANE.

REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: J. SANCHEZ
DRAWN BY: N. MONTGOMERY
SHEET CHK'D BY: S. PERRY
CROSS CHK'D BY: Y. POLEMATIDIS
APPROVED BY: S. PERRY
DATE: DECEMBER 2020

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RIVERTOWN WATER TREATMENT PLANT PROJECT

HIGH SERVICE PUMP STATION
ACCESS CONTROL SYSTEM RACEWAY PLAN

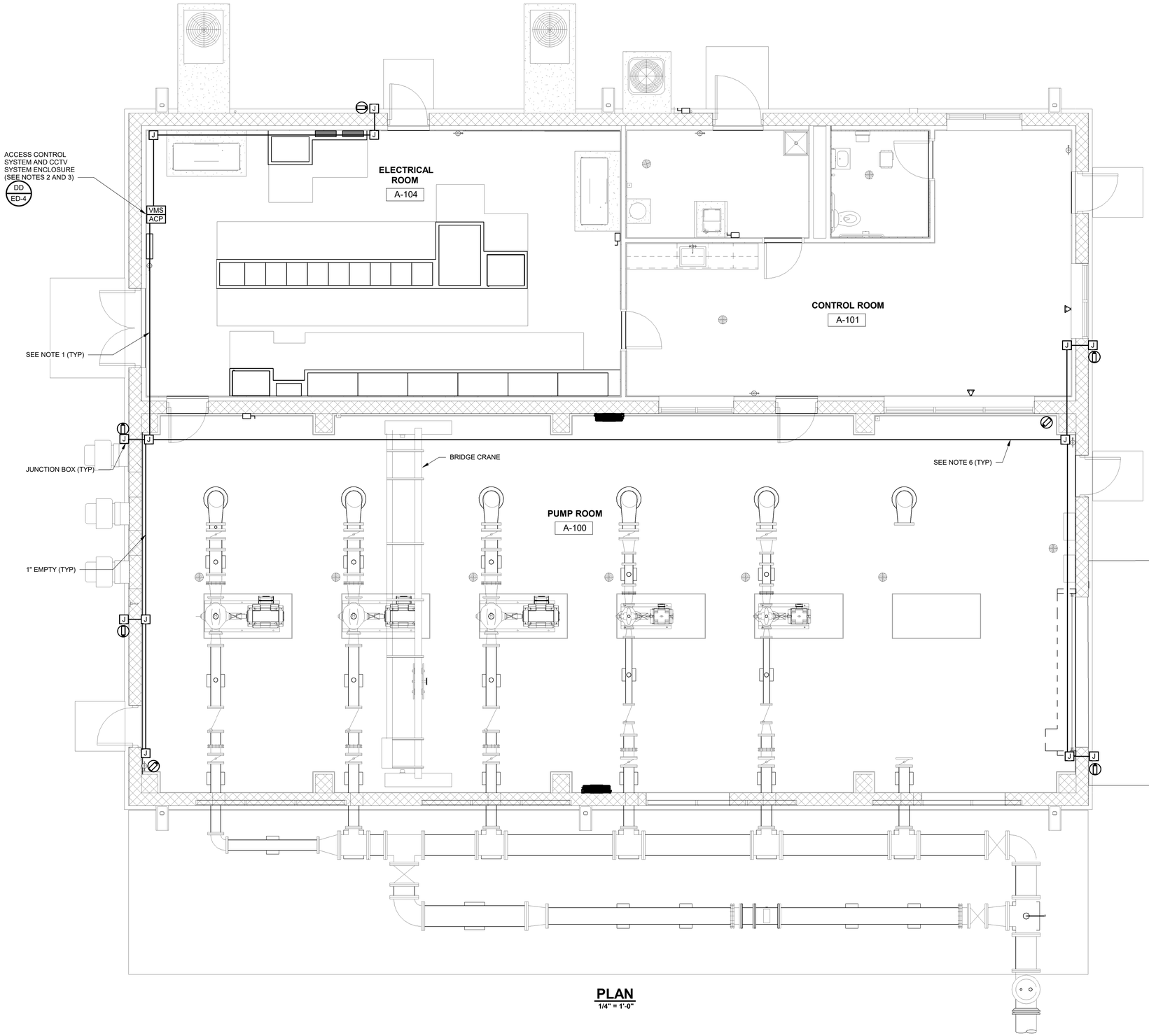
SPENCER J. PERRY JR
LICENSE
NO. 62587
STATE OF
FLORIDA
PROFESSIONAL ENGINEER

DATE:
SPENCER J. PERRY JR
PE NO. 62587

PROJECT NO. 6103-237938
FILE NAME:

SHEET NO.
E-18

ISSUED FOR BID



PLAN
1/4" = 1'-0"

N

SYMBOLS - JEA SECURITY DEVICES:

CCTV CAMERA (BY OTHERS)

NOTES:

1. PROVIDE ALL RACEWAY INFRASTRUCTURE FOR THE CCTV SYSTEM. COORDINATE WITH JEA SECURITY PRIOR TO INSTALLATION.
2. COORDINATE LOCATION WITH JEA SECURITY PRIOR TO INSTALLATION.
3. PROVIDE JUNCTION BOX ABOVE SUSPENDED CEILING TO TERMINATE ALL FIELD NETWORK CONDUITS. THE JUNCTION BOX SHALL BE SIZED IN ACCORDANCE WITH THE NEC.
4. ALL CONDUITS SHALL BE INSTALLED EXPOSED/SURFACE MOUNTED.
5. CONDUITS FOR ACCESS CONTROL SYSTEM CARD READERS AND MOTION DETECTORS SHALL BE SEPARATE FROM THE CONDUITS FOR THE CCTV SYSTEM CAMERAS.
6. COORDINATE RACEWAY INSTALLATION WITH OVERHEAD BRIDGE CRANE.

REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: J. SANCHEZ
DRAWN BY: N. MONTGOMERY
SHEET CHK'D BY: S. PERRY
CROSS CHK'D BY: Y. POLEMATIDIS
APPROVED BY: S. PERRY
DATE: DECEMBER 2020

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JEA

RIVERTOWN WATER TREATMENT PLANT PROJECT

HIGH SERVICE PUMP STATION
CCTV SYSTEM RACEWAY PLAN

SPENCER J. PERRY JR. LICENSE NO. 62587 STATE OF FLORIDA PROFESSIONAL ENGINEER

DATE:
SPENCER J. PERRY JR
PE NO. 62587

PROJECT NO. 6103-237938
FILE NAME:

SHEET NO.
E-19

ISSUED FOR BID

PANELBOARD PP-CB

100 AMP MAIN BREAKER | **250** AMP BUS RATING | **480** VOLTS | **3** PHASE **3** WIRE **60 Hz.** | **42** POLES | **65** KA SHORT CIRCUIT RATING | ELECTRONIC GRADE: **NO**

LOCATION: **CHEMICAL BUILDING** | ENCLOSURE RATING: **NEMA 4X** , | MOUNTING: **SURFACE**

CIRCUIT NO.	DESCRIPTION	LOAD KVA PHASE A	LOAD KVA PHASE B	LOAD KVA PHASE C	BREAKER AMPS/ POLES	NOTES
1	EF-CB-1	0.25				
3			0.25		20 /3	5
5				0.25		
7	EF-CB-3	0.33				
9			0.33		20 /3	5
11				0.33		
13	TX-CB	5				
15			5		30 /3	6
17				5		
19	SPARE					
21					40 /3	
23						
25	SPARE				20 /2	
27						
29	SPACE					
31	SPACE					
33	SPACE					
35	SPACE					
37	SPACE					
39	SPACE					
41	SPACE					
	TOTAL PHASE KVA THIS SIDE	5.58	5.58	5.58		

CIRCUIT NO.	DESCRIPTION	LOAD KVA PHASE A	LOAD KVA PHASE B	LOAD KVA PHASE C	BREAKER AMPS/ POLES	NOTES
2	EF-CB-2	0.33				
4			0.33		20 /3	5
6				0.33		
8	MAU-CB-1	5.6				
10			5.6		40 /3	6
12				5.6		
14	SPARE					
16					30 /3	
18						
20	SPARE				20 /2	
22						
24	SPACE					
26	SPACE					
28	SPACE					
30	SPACE					
32	SPACE					
34	SPACE					
36	SPACE					
38	SPACE					
40	SPACE					
42	SPACE					
	TOTAL PHASE KVA THIS SIDE	5.93	5.93	5.93		
	TOTAL KVA PER PHASE	11.51	11.51	11.51		
	TOTAL THREE PHASE KVA		34.53			

NOTES:
1. PROVIDE LOCKING HARDWARE
3. 30 ma GFI CIRCUIT BREAKER FOR EQUIPMENT PROTECTION ONLY (HEAT TRACE)
5. BRANCH CIRCUIT WIRING: 3/4"C, 3#12 & 1#12G
7. BRANCH CIRCUIT WIRING: 3/4"C, 2#12 & 1#12G

NOTES CONT.:
2. 5 ma GROUND FAULT INTERRUPTER (GFI) CIRCUIT BREAKER
4. PROVIDE LOCKING HARDWARE & PAINT BREAKER HANDLE RED (FACP)
6. BRANCH CIRCUIT WIRING: 3/4"C, 3#10 & 1#10G
8.

PANELBOARD LP-PS1

175 AMP MAIN BREAKER | **225** AMP BUS RATING | **208/120** VOLTS | **3** PHASE **4** WIRE **60 Hz.** | **42** POLES | **10** KA SHORT CIRCUIT RATING | ELECTRONIC GRADE: **NO**

LOCATION: **ELECTRICAL ROOM** | ENCLOSURE RATING: **NEMA 1** , | MOUNTING: **SURFACE**

CIRCUIT NO.	DESCRIPTION	LOAD KVA PHASE A	LOAD KVA PHASE B	LOAD KVA PHASE C	BREAKER AMPS/ POLES	NOTES
1						
3	LIGHTING PANELBOARD LP-PS2	0.75	0.55	4.1	60 /3	
5						
7	LTG - ROADWAY	0.88			20 /1	9
9	LTG - ROADWAY		0.63		20 /1	9
11	LTG - ROADWAY			0.63	20 /1	9
13	LTG - CONTROL RM	0.64			20 /1	7
15	LTG - MECH RM & TOILET		0.15		20 /1	7
17	LTG - ELETRICAL RM			0.8	20 /1	7
19	LTG- PUMP RM	1.05			20 /1	7
21	LTG - BLDG EXTERIOR NORTH		0.1		20 /1	7
23	LTG - BLDG EXTERIOR EAST			0.15	20 /1	7
25	LTG - BLDG EXTERIOR SOUTH	0.36			20 /1	7
27	LTG - BLDG EXTERIOR WEST		0.1		20 /1	7
29	LTG - GST NO.1			0.15	20 /1	9
31	SPARE				20 /1	
33	SPARE				20 /1	
35	SPARE				20 /1	
37	SPARE				20 /1	
39	SPARE				20 /1	
41	SPARE				20 /1	
	TOTAL PHASE KVA THIS SIDE	3.68	1.53	5.83		

CIRCUIT NO.	DESCRIPTION	LOAD KVA PHASE A	LOAD KVA PHASE B	LOAD KVA PHASE C	BREAKER AMPS/ POLES	NOTES
2	AHU-PS-3	2.22			30 /2	
4			2.22			6
6	SPARE				20 /1	
8	ACCU-PS-3	1.11			20 /2	
10			1.11			5
12	SPARE				20 /1	
14	EF-PS-4	0.08			20 /1	5
16	EWH-PS-1		2		25 /1	6
18	RECPT - CONTROL RM			0.54	20 /1	7
20	RECPT - CONTROL RM	0.9			20 /1	7
22	RECPT - CONTROL RM		0.36		20 /1	7
24	RECPT - MECH RM & TOILET			0.54	20 /1	7
26	RECPT - ELECTRICAL RM	1.08			20 /1	7
28	RECPT - PUMP RM		1.08		20 /1	7
30	RECPT - PUMP RM			1.08	30 /1	7
32	RECPT - GST DRAIN VAULT	0.18			20 /1	6
34	IRRIGATION CONTROLLER		0.2		20 /1	7
36	SPARE				20 /1	
38	SPARE				20 /1	
40	SPARE				20 /1	
42	SPARE				20 /1	
	TOTAL PHASE KVA THIS SIDE	5.57	6.97	2.16		
	TOTAL KVA PER PHASE	9.25	8.5	7.99		
	TOTAL THREE PHASE KVA		25.74			

NOTES:
1. PROVIDE LOCKING HARDWARE
3. 30 ma GFI CIRCUIT BREAKER FOR EQUIPMENT PROTECTION ONLY (HEAT TRACE)
5. BRANCH CIRCUIT WIRING: 3/4"C, 3#12 & 1#12G
7. BRANCH CIRCUIT WIRING: 3/4"C, 2#12 & 1#12G
9. BRANCH CIRCUIT WIRING: 1"C, 2#6 & 1#6G

NOTES CONT.:
2. 5 ma GROUND FAULT INTERRUPTER (GFI) CIRCUIT BREAKER
4. PROVIDE LOCKING HARDWARE & PAINT BREAKER HANDLE RED (FACP)
6. BRANCH CIRCUIT WIRING: 3/4"C, 2#10 & 1#10G
8.
10.

PANELBOARD LP-CB

60 AMP MAIN BREAKER | **100** AMP BUS RATING | **208/120** VOLTS | **3** PHASE **4** WIRE **60 Hz.** | **42** POLES | **10** KA SHORT CIRCUIT RATING | ELECTRONIC GRADE: **NO**

LOCATION: **CHEMICAL BUILDING** | ENCLOSURE RATING: **NEMA 4X 316 SS** | MOUNTING: **SURFACE**

CIRCUIT NO.	DESCRIPTION	LOAD KVA PHASE A	LOAD KVA PHASE B	LOAD KVA PHASE C	BREAKER AMPS/ POLES	NOTES
1	LIGHTING-INDOOR	0.8			20 /1	5
3	RECPT.METERING PUMP-2011		0.18		20 /1	5
5	LIGHTING-OUTDOOR			0.26	20 /1	5
7	SUBM.SUMP PUMP (HARDWIRED)	1			20 /1	5
9	SODIUM HYPO. RIO PANEL		0.5		20 /1	5
11	LCP-2010			0.5	20 /1	5
13	EMERGENCY SHOWER	0.1			20 /1	5
15	SPARE				20 /1	5
17	SPARE				20 /1	
19	SPARE				20 /1	
21	SPARE				20 /1	
23	SPARE				20 /1	
25	SPARE				20 /1	
27	SPARE				20 /1	
29	SPARE				20 /1	
31	SPARE				20 /1	
33	SPARE				20 /1	
35	SPARE				20 /1	
37	SPARE				20 /1	
39	SPARE				20 /1	
41	SPARE				20 /1	
	TOTAL PHASE KVA THIS SIDE	1.9	0.68	0.76		

CIRCUIT NO.	DESCRIPTION	LOAD KVA PHASE A	LOAD KVA PHASE B	LOAD KVA PHASE C	BREAKER AMPS/ POLES	NOTES
2	RECPT-OUTDOOR	0.18			20 /1	5
4	RECPT-INDOOR		0.36		20 /1	5
6	RECPT.METERING PUMP P-2012			0.18	20 /1	5
8	RECPT.CHEM.INJECTON VAULT	0.18			20 /1	5
10	LCP-2001		0.5		20 /1	5
12	ATC-CB-1			0.5	20 /1	5
14	EMERGENCY SHOWER	0.1			20 /1	5
16	SPARE				20 /1	5
18	SPARE				20 /1	
20	SPARE				20 /1	
22	SPARE				20 /1	
24	SPARE				20 /1	
26	SPARE				20 /1	
28	SPARE				20 /1	
30	SPARE				20 /1	
32	SPARE				20 /1	
34	SPARE				20 /1	
36	SPARE				20 /1	
38	SPARE				20 /1	
40	SPARE				20 /1	
42	SPARE				20 /1	
	TOTAL PHASE KVA THIS SIDE	0.46	0.86	0.68		
	TOTAL KVA PER PHASE	2.36	1.54	1.44		
	TOTAL THREE PHASE KVA		5.34			

NOTES:
1. PROVIDE LOCKING HARDWARE
3. 30 ma GFI CIRCUIT BREAKER FOR EQUIPMENT PROTECTION ONLY (HEAT TRACE)
5. BRANCH CIRCUIT WIRING: 3/4"C, 2#12, 1#12G
7. BRANCH CIRCUIT WIRING: 1"C, 2#8, 1#10G

NOTES CONT.:
2. 5 ma GROUND FAULT INTERRUPTER (GFI) CIRCUIT BREAKER
4. PROVIDE LOCKING HARDWARE & PAINT BREAKER HANDLE RED (FACP)
6. BRANCH CIRCUIT WIRING: 3/4"C, 2#10, 1#10G
8. BRANCH CIRCUIT WIRING: 3/4"C, 3#12, 1#12G

PANELBOARD LP-PS2

60 AMP MAIN LUG ONLY | **225** AMP BUS RATING | **208/120** VOLTS | **3** PHASE **4** WIRE **60 Hz.** | **42** POLES | **10** KA SHORT CIRCUIT RATING | ELECTRONIC GRADE: **NO**

LOCATION: **ELECTRICAL ROOM** | ENCLOSURE RATING: **NEMA 1** | MOUNTING: **SURFACE**

CIRCUIT NO.	DESCRIPTION	LOAD KVA PHASE A	LOAD KVA PHASE B	LOAD KVA PHASE C	BREAKER AMPS/ POLES	NOTES
1	MCP/PLC	0.5			20 /1	5
3	GST-RIO		0.2		20 /1	5
5	AIT/AE-1030A			0.05	20 /1	5
7	AIT/AE-1030B	0.05			20 /1	5
9	FIT/FE-1020		0.05		20 /1	5
11	LSLL/LSHH-1001			0.05	20 /1	5
13	FACP	0.2			20 /1	5
15	ACCESS/CCTV SYSTEM ENCLOSURE		0.3		20 /1	5
17	HOFFMAN ACCESS CP			4	50 /1	7
19	SPARE				20 /1	
21	SPARE				20 /1	
23	SPARE				20 /1	
25	SPARE				20 /1	
27	SPARE				20 /1	
29	SPARE				20 /1	
31	SPARE				20 /1	
33	SPARE				20 /1	
35	SPARE				20 /1	
37	SPARE				20 /1	
39	SPARE				20 /1	
41	SPARE				20 /1	
	TOTAL PHASE KVA THIS SIDE	0.75	0.55	4.1		

CIRCUIT NO.	DESCRIPTION	LOAD KVA PHASE A	LOAD KVA PHASE B	LOAD KVA PHASE C	BREAKER AMPS/ POLES	NOTES
2	SPARE				20 /1	
4	SPARE				20 /1	
6	SPARE				20 /1	
8	SPARE				20 /1	
10	SPARE				20 /1	
12	SPARE				20 /1	
14	SPARE				20 /1	
16	SPARE				20 /1	
18	SPARE				20 /1	
20	SPARE				20 /1	
22	SPARE				20 /1	
24	SPARE				20 /1	
26	SPARE				20 /1	
28	SPARE				20 /1	
30	SPARE				20 /1	
32	SPARE				20 /1	
34	SPARE				20 /1	
36	SPARE				20 /1	
38	SPARE				20 /1	
40	SPARE				20 /1	
42	SPARE				20 /1	
	TOTAL PHASE KVA THIS SIDE	0	0	0		
	TOTAL KVA PER PHASE	0.75	0.55	4.1		
	TOTAL THREE PHASE KVA		5.4			

NOTES:
1. PROVIDE LOCKING HARDWARE
3. 30 ma GFI CIRCUIT BREAKER FOR EQUIPMENT PROTECTION ONLY (HEAT TRACE)
5. BRANCH CIRCUIT WIRING: 3/4"C, 2#12, 1#12G
7. BRANCH CIRCUIT WIRING: 1"C, 2#6 1#6G

NOTES CONT.:
2. 5 ma GROUND FAULT INTERRUPTER (GFI) CIRCUIT BREAKER
4. PROVIDE LOCKING HARDWARE & PAINT BREAKER HANDLE RED (FACP)
6. BRANCH CIRCUIT WIRING: 3/4"C, 2#10, 1#10G
8.

REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: J. SANCHEZ
DRAWN BY: R. RUCK
SHEET CHK'D BY: S. PERRY
CROSS CHK'D BY: Y. POLEMATIDIS
APPROVED BY: S. PERRY
DATE: DECEMBER 2020

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JEA

RIVERTOWN WATER TREATMENT PLANT PROJECT

PANELBOARD SCHEDULES

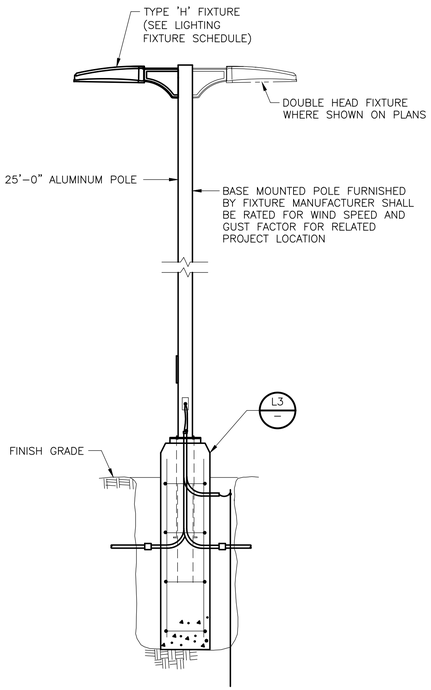
SPENCER J. PERRY JR LICENSE NO. 62587 STATE OF FLORIDA PROFESSIONAL ENGINEER

DATE:
SPENCER J. PERRY JR
PE NO. 62587

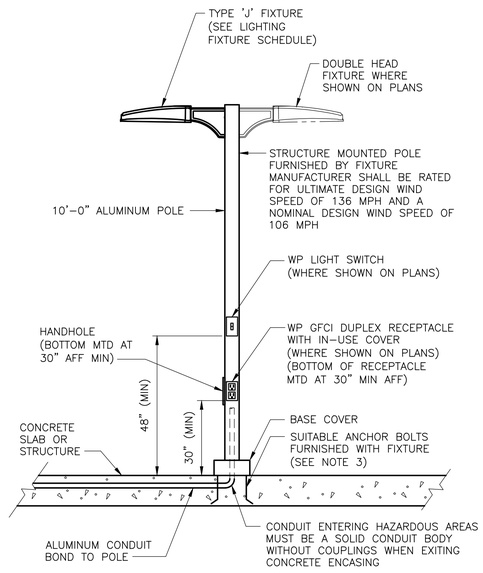
PROJECT NO. 6103-237938
FILE NAME: E020PBSH.DWG

SHEET NO.
E-20

ISSUED FOR BID



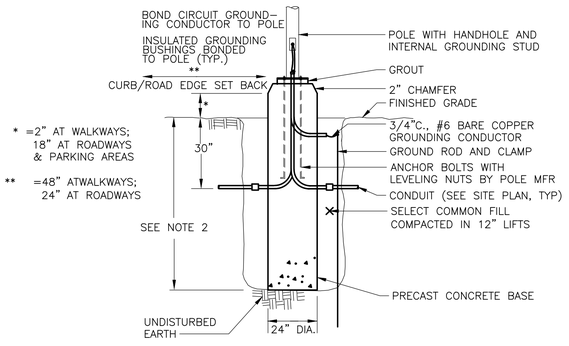
POLE MOUNTED LUMINAIRE
DETAIL L1
NTS E-4



NOTES:

1. NOT ALL SEAL OFF FITTINGS SHOWN. PROVIDE EXPLOSION-PROOF SEAL OFF FITTINGS AT ALL AREAS REQUIRED BY THE NEC FOR THE NOTED CLASSIFIED AREA. FITTINGS SHALL BE CAST ALUMINUM.
2. PROVIDE SEAL OFF FITTING AT CONDUIT TO POLE LIGHT.
3. WHERE POLES ARE MOUNTED TO EXISTING STRUCTURES, POLE MANUFACTURE SHALL PROVIDE DESIGN FOR ANCHOR TO MEET THE SPECIFIED WIND RATINGS.

POLE MOUNTED LUMINAIRE
DETAIL L2
NTS –



NOTES:

1. LIGHT POLE FOUNDATION SHALL BE A PRECAST CONCRETE FOUNDATION DESIGNED BY A FLORIDA REGISTERED PROFESSIONAL ENGINEER ENGAGED AT THE EXPENSE OF THE CONTRACTOR. DESIGN SPEED SHALL BE IN ACCORDANCE WITH ASCE 7-16 FOR THE PROJECT SPECIFIC SITE. CONTRACTOR SHALL CONFIRM SOIL CONDITIONS WITH A FLORIDA REGISTERED PROFESSIONAL GEOTECHNICAL ENGINEER. DESIGN SHALL BE SIGNED & SEALED BY A REGISTERED PROFESSIONAL ENGINEER, REGISTERED IN THE STATE OF FLORIDA.
2. EMBEDMENT DEPTH AS REQUIRED PER DELEGATE ENGINEER. MIN. EMBEDMENT IN CLAYEY SOILS 6'-6", MIN EMBEDMENT IN SANDY SOILS 4'-6".
3. REFER TO SPECIFICATIONS FOR MATERIALS.

STANDARD LIGHTING BASE
DETAIL L3
NTS –

LIGHTING FIXTURE SCHEDULE

TYPE	WATT	DESCRIPTION	MFR (OR APPROVED EQUAL)
A	84	LED HIGH BAY FIXTURE; 12,000 NOMINAL LUMENS; 4000K CCT; 80 CRI; ALUMINUM HEAT SINK; GLASS OPTICAL ENCLOSURE; PRISMATIC CLEAR ACRYLIC REFLECTOR; DROP PRISMATIC LENS; 0-10V DIMMING; PENDANT MOUNTED; MULTIVOLT (120-277V); UL LISTED FOR DAMP LOCATION; 5 YEAR WARRANTY	LITHONIA LIGHTING: JCBL-12000LM-ACCR-ACRDRP-MVOLT-GZ10-40K-80CRI-PM
A1	84	SAME AS TYPE 'A' ABOVE WITH INTEGRAL 10W EMERGENCY LED BATTERY	LITHONIA LIGHTING: JCBL-12000LM-ACCR-ACRDRP-MVOLT-GZ10-40K-80CRI-PM-PS1055CP
B	74	LED 4' LENGTH LOW BAY FIXTURE. 10000 NOMINAL LUMENS; STANDARD EFFICIENCY; 4000K CCT; 80 CRI; COLD ROLLED STEEL FULL BODY HOUSING AND OPTICAL ASSEMBLY; DIFFUSE ACRYLIC LENS; ACESS PLATE ON THE BACK OF CHANNEL FOR ACCESS TO THE WIRING COMPARTMENT; HIGH-GLOSS BAKED WHITE ENAMEL FINISH. FIVE-STAGE IRON PHOSPHATE PRETREATMENT; HIGH-OUTPUT LEDS INTEGRATED ON A TWO-LAYER CIRCUIT BOARD; ELECTRONIC LED DRIVER; 0-10V DIMMING; DESIGNED TO WITHSTAND A MAXIMUM LINE SURGE OF 2.5KV AT 0.75KA; PENDANT MOUNTED; MULTIVOLT (120-277V); UL LISTED FOR DAMP LOCATION; 5 YEAR WARRANTY	LITHONIA LIGHTING: UFIT-L48-10000LM-SEF-MVOLT-GZ10-40K 80CRI-WH
B1	74	SAME AS TYPE 'B' ABOVE WITH INTEGRAL 10W EMERGENCY LED BATTERY	LITHONIA LIGHTING: UFIT-10000LM-MVOLT-GZ10-40K-80CRI-WH -PS1055LCP
C	44	LED 4' LENGTH LOW BAY FIXTURE. 6000 NOMINAL LUMENS; STANDARD EFFICIENCY; 4000K CCT; 80 CRI; COLD ROLLED STEEL FULL BODY HOUSING AND OPTICAL ASSEMBLY; DIFFUSE ACRYLIC LENS; ACESS PLATE ON THE BACK OF CHANNEL FOR ACCESS TO THE WIRING COMPARTMENT; HIGH-GLOSS BAKED WHITE ENAMEL FINISH. FIVE-STAGE IRON PHOSPHATE PRETREATMENT; HIGH-OUTPUT LEDS INTEGRATED ON A TWO-LAYER CIRCUIT BOARD; ELECTRONIC LED DRIVER; 0-10V DIMMING; DESIGNED TO WITHSTAND A MAXIMUM LINE SURGE OF 2.5KV AT 0.75KA; PENDANT MOUNTED; MULTIVOLT (120-277V); UL LISTED FOR DAMP LOCATION; 5 YEAR WARRANTY	LITHONIA LIGHTING: UFIT-L48-6000LM-SEF-MVOLT-GZ10-40K-80CRI-WH
C1	44	SAME AS TYPE 'C' ABOVE WITH INTEGRAL 10W EMERGENCY LED BATTERY	LITHONIA LIGHTING: UFIT-6000LM-MVOLT-GZ10-40K-80CRI-WH -PS1055LCP
D	31.6	2'x2' LED TROFFER; 3719.41 NOMINAL DELIVERED LUMENS; 83 CRI, 4,000K; HIGH-EFFICIENCY ACRYLIC CENTER LENS AND RECTANGULAR SHIELDING; UNIVERSAL VOLTAGE (120-277V); 0-10V DIMMING; DIE-FORMED-CODE-GAUGE COLD-ROLLED STEEL HOUSING; MATTE WHITE FINISH; FIVE YEAR WARRANTY; CSA CERTIFIED; UL STANDARDS FOR DAMP LOCATIONS	COLUNBIA LIGHTING: LCAT22-40HLG-R-EDU
D1	31.6	SAME AS TYPE 'D' ABOVE WITH 1400 LUMENS EMERGENCY LED BATTERY	COLUNBIA LIGHTING: LCAT22-40HLG-R-EDU-ELL14
E	39	LED EMERGENCY WALL PACK; DIE-CAST ALUMINUM; IMPACT-RESISTANT, TEMPERED GLASS LENS; FULLY GASKETED; HOUSING IS COMPLETELY SEALED AGAINST MOISTURE AND ENVIRONMENTAL CONTAMINANTS; TGIC THERMOSET POWDER COAT DARK BRONZE FINISH; METAL-CORE CIRCUIT BOARD AND INTEGRAL ALUMINUM HEAT SINK; (L87/100,000 HRS AT 25°C); ELECTRONIC DRIVER HAS A POWER FACTOR OF >90%, THD <20%, AND A MINIMUM 2.5 KV SURGE RATING; 3377 INITIAL LUMENS, 4000K, TYPE 3 MEDIUM LIGHT DISTRIBUTION; LED THERMAL MANAGEMENT; UNIVERSAL VOLTAGE (120-277V); PHOTOCELL; INTEGRAL EMERGENCY BATTERY PACK; UL LISTED FOR USE IN WET LOCATIONS; RATED FOR -40°C MINIMUM OPERATING TEMPERATURE; WARRANTY 5-YEAR LIMITED WARRANTY	LITHONIA LIGHTING: TWH LED SERIES PART #: TWH LED 10C 1000 40K T3M MVOLT PE ELCW DDBXD
F	72	LED EMERGENCY WALL PACK; DIE-CAST ALUMINUM; IMPACT-RESISTANT, TEMPERED GLASS LENS; FULLY GASKETED; HOUSING IS COMPLETELY SEALED AGAINST MOISTURE AND ENVIRONMENTAL CONTAMINANTS; TGIC THERMOSET POWDER COAT DARK BRONZE FINISH; METAL-CORE CIRCUIT BOARD AND INTEGRAL ALUMINUM HEAT SINK; (L87/100,000 HRS AT 25°C); ELECTRONIC DRIVER HAS A POWER FACTOR OF >90%, THD <20%, AND A MINIMUM 2.5 KV SURGE RATING; 6983 INITIAL LUMENS, 4000K, TYPE 3 MEDIUM LIGHT DISTRIBUTION; LED THERMAL MANAGEMENT; UNIVERSAL VOLTAGE (120-277V); PHOTOCELL; UL LISTED FOR USE IN WET LOCATIONS; RATED FOR -40°C MINIMUM OPERATING TEMPERATURE; WARRANTY 5-YEAR LIMITED WARRANTY	LITHONIA LIGHTING: TWH LED SERIES PART #: TWH LED 20C 1000 40K T3M MVOLT PE DDBXD
G	73	1'x4' FULLY ENCLOSED, GASKETED INDUSTRIAL LED LUMINAIRE; 7,300 NOMINAL LUMENS; 82 CRI, 4,000K; 5VA (F1) FIBERGLASS HOUSING, RATED FOR FLAME AND WEATHER RESISTANCE; .050" ALUMINUM INTERNAL HOUSING; STAINLESS STEEL LATCHES; REFLECTIVE WHITE POLYESTER POWDER COAT FINISH; WATERTIGHT HUBS; FROSTED, RIBBED, UV STABILIZED POLYCARBONATE LENS; HIGH QUALITY MID-POWER LED'S AND LED BOARDS ARE REPLACEABLE ;SURFACE OR SUSPENDED MOUNTING; UNIVERSAL VOLTAGE (120-277V); ETL CONFORMS TO UL STD 1598 AND UL STD 8750; LISTED AS SUITABLE FOR WET LOCATIONS CERTIFIED, IP65, IP66, AND IP67 CERTIFIED, AND RATED FOR NEMA 4X; 5 YEAR WARRANTY	HE WILLIAMS: 96 SERIES LED 96-4-L62/840-HIAFR-WET/2-SS LATCH-DRV-UNV
G1	73	SAME AS TYPE 'G' ABOVE WITH INTEGRAL 10W EMERGENCY LED BATTERY	HE WILLIAMS: 96 SERIES LED 96-4-L62/840-HIAFR-EM/10W-WET/2-SS LATCH-DRV-UNV
H	110	POLE MOUNTED LED LIGHT FIXTURE; 48 LED's (12029 LUMENS, 111 LUMENS PER WATT); DIE CAST ALUMINUM HOUSING; PLATINUM SILVER POLYESTER POWDER-COAT FINISH; UNIVERSAL VOLTAGE (120-277V); CORROSION RESISTANT HARDWARE; TWO-PIECE SILICONE AND MICRO-CELLULAR POLYURETHANE FOAM GASKET; 700 mA HIGH-PERFORMANCE LED DRIVER; TYPE III LIGHT DISTRIBUTION; CRI OF 70 FOR 4000K; ROUND POLE PLATE ADAPTER; PHOTOCELL CONTROL; UL LISTED 1598 AND 8750; CSA CERTIFIED; 5 YEAR WARRANTY ON ENTIRE SYSTEM	HUBBELL LIGHTING: VIPER S STRIKE VPS-48L-110-4K7-3-UNV-AD-PS-7PR-TL SEE NOTE 1
J	55	POLE MOUNTED LED LIGHT FIXTURE; 24 LED's (6015 LUMENS, 111 LUMENS PER WATT); DIE CAST ALUMINUM HOUSING; PLATINUM SILVER POLYESTER POWDER-COAT FINISH; UNIVERSAL VOLTAGE (120-277V); CORROSION RESISTANT HARDWARE; TWO-PIECE SILICONE AND MICRO-CELLULAR POLYURETHANE FOAM GASKET; 700 mA HIGH-PERFORMANCE LED DRIVER; TYPE III LIGHT DISTRIBUTION; CRI OF 70 FOR 4000K; ROUND POLE PLATE ADAPTER; PHOTOCELL CONTROL; UL LISTED 1598 AND 8750; CSA CERTIFIED; 5 YEAR WARRANTY ON ENTIRE SYSTEM	HUBBELL LIGHTING: VIPER S STRIKE VPS-24L-55-4K7-3-UNV-AD-PS-7PR-TL SEE NOTE 1
EX	3.2	EXIT SIGN W/ DIE CAST ALUMINUM HOUSING, WHITE BODY, STENCIL FACE, RED LED LAMPS; SEALED NICKEL CADMIUM BATTERY; SINGLE-POINT MICROCOMPUTER DIAGNOSTICS; UNIVERSAL MOUNTING; DUAL VOLTAGE 120V/277; UL LISTED FOR DAMP LOCATIONS	LITHONIA LIGHTING: LE AND LRE LE-S-W-1-R-ELN

NOTE:

1. FIXTURE MANUFACTURER SHALL FURNISH A 25' ROUND TAPERED ALUMINUM POLE. POLE SHALL HAVE A CLEAR ANODIZED FINISH AND MEET WIND LOADS AND GUST FACTOR FOR RELATED PROJECT LOCATION. POLE SHALL BE MOUNTED TO A CONCRETE BASE PER DETAIL 'L1'. SUITABLE ANCHOR BOLTS, BASE COVER, GROUND LUG, AND VIBRATION PAD FURNISHED WITH POLE.

SPENCER J. PERRY JR LICENSE NO. 62587 STATE OF FLORIDA PROFESSIONAL ENGINEER

DATE:
SPENCER J. PERRY JR
PE NO. 62587

REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: J. SANCHEZ
DRAWN BY: R. RUCK
SHEET CHK'D BY: S. PERRY
CROSS CHK'D BY: Y. POLEMATIDIS
APPROVED BY: S. PERRY
DATE: DECEMBER 2020

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JACKSONVILLE, FLORIDA 32202
EB0000072 AAC001992 LC26000188

JEA

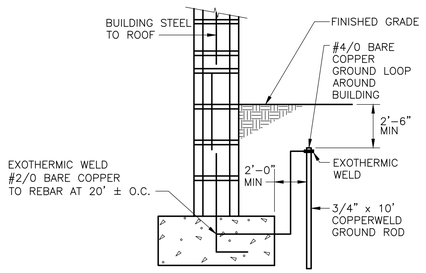
RIVERTOWN WATER TREATMENT PLANT PROJECT

LIGHT FIXTURE SCHEDULE AND DETAILS

PROJECT NO. 6103-237938
FILE NAME: E021NFLF.DWG

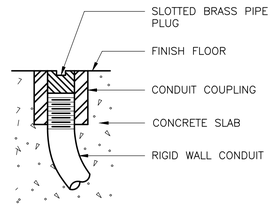
SHEET NO.
E-21

ISSUED FOR BID



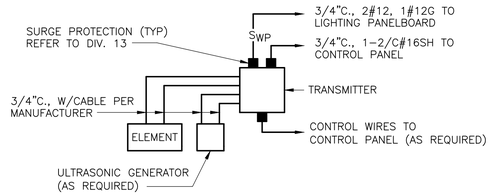
BULIDING STRUCTURE BONDING

DETAIL A / NTS



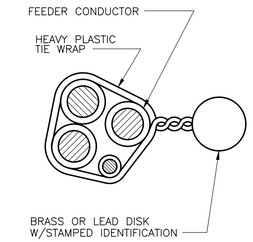
CONDUIT TERMINATION STUB OUT

DETAIL B / NTS



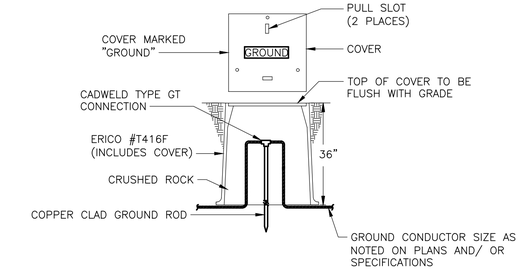
TYPICAL TRANSMITTER

DETAIL C / NTS



U.G. CABLE TAG

DETAIL D / NTS

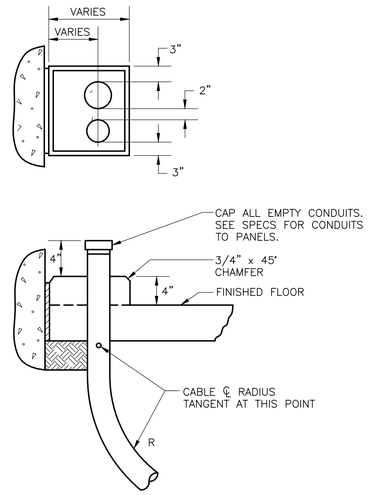


NOTE:

1. TO IMPROVE SYSTEM RESISTANCE, ERICO GEM MAY BE USED AS A BACKFILL MATERIAL IN AN AUGERED HOLE.

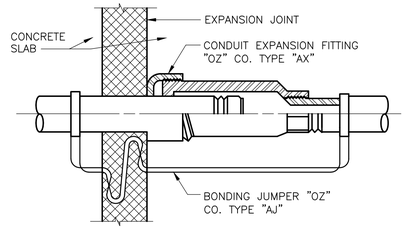
GROUND ROD TEST WELL STATION

DETAIL E / NTS



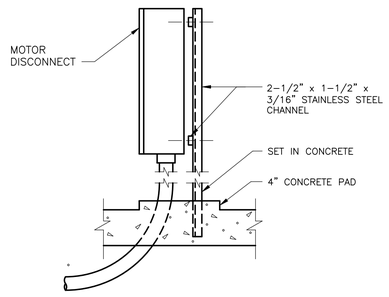
TYPICAL CONDUIT THROUGH SLAB

DETAIL F / NTS



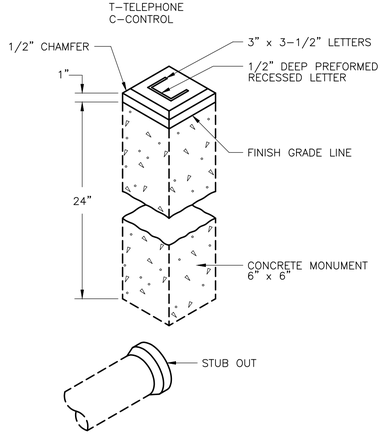
EXPANSION FITTING

DETAIL G / NTS



TYPICAL DISCONNECT

DETAIL H / NTS



CONDUIT STUB MONUMENT

DETAIL J / NTS

SPENCER J. PERRY JR LICENSE NO. 62587 STATE OF FLORIDA PROFESSIONAL ENGINEER

DATE:
SPENCER J. PERRY JR
PE NO. 62587

REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: J. SANCHEZ
DRAWN BY: R. RUCK
SHEET CHK'D BY: S. PERRY
CROSS CHK'D BY: Y. POLEMATIDIS
APPROVED BY: S. PERRY
DATE: DECEMBER 2020

CDM Smith
4651 Salisbury Road, Suite 420
Jacksonville, FL 32256
Tel: (904) 731-7109
FL COA No. EB-0000020

JACOBS
245 RIVERSIDE AVE, SUITE 300
JACKSONVILLE, FLORIDA 32202
EB0000072 AAC001992 LC26000188

JEA

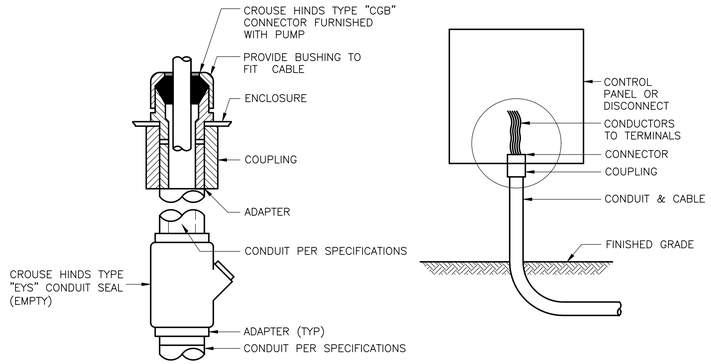
RIVERTOWN WATER TREATMENT PLANT PROJECT

ELECTRICAL DETAILS I

PROJECT NO. 6103-237938
FILE NAME: EDO1NFDT.DWG

SHEET NO.
ED-1

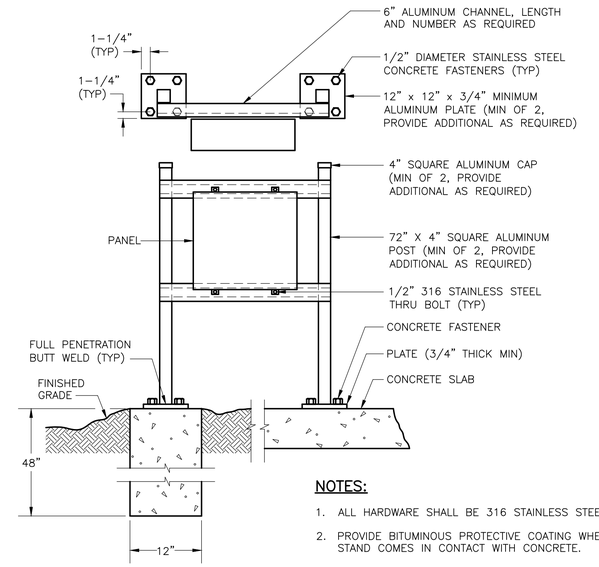
ISSUED FOR BID



WATER–TIGHT CONNECTION

DETAIL K

NTS



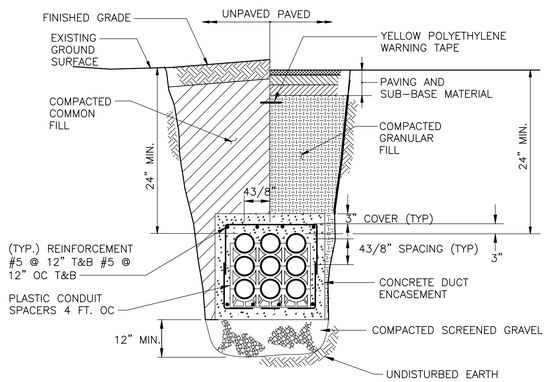
NOTES:

1. ALL HARDWARE SHALL BE 316 STAINLESS STEEL.
2. PROVIDE BITUMINOUS PROTECTIVE COATING WHERE STAND COMES IN CONTACT WITH CONCRETE.

PANEL MOUNTING

DETAIL L

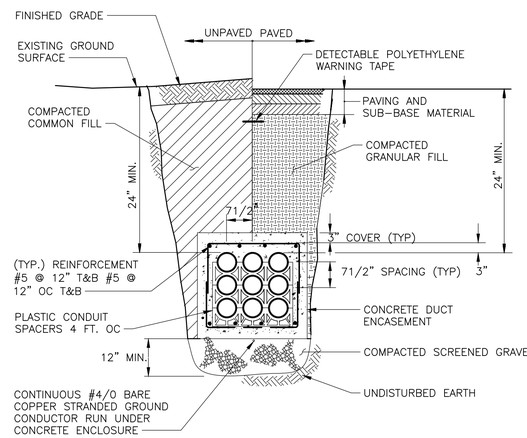
NTS



UNDERGROUND SIGNAL DUCTBANK

DETAIL M

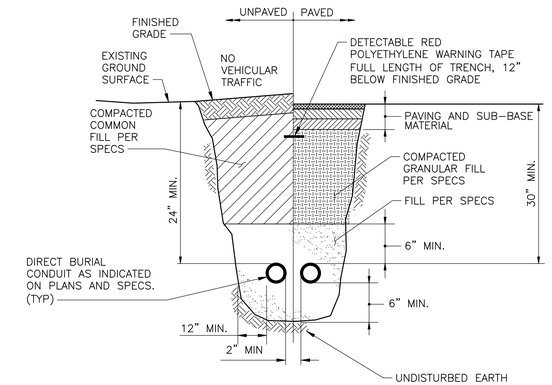
N.T.S.



UNDERGROUND POWER DUCTBANK

DETAIL N

N.T.S.



TYPICAL DIRECT BURIED CONDUIT INSTALLATION

DETAIL R

NTS

REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: J. SANCHEZ
DRAWN BY: R. RUCK
SHEET CHK'D BY: S. PERRY
CROSS CHK'D BY: Y. POLEMATIDIS
APPROVED BY: S. PERRY
DATE: DECEMBER 2020

CDM Smith
4651 Salisbury Road, Suite 420
Jacksonville, FL 32256
Tel: (904) 731-7109
FL COA No. EB-0000020

JACOBS
245 RIVERSIDE AVE, SUITE 300
JACKSONVILLE, FLORIDA 32202
EB0000072 AAC001992 LC26000188

JEA

RIVERTOWN WATER TREATMENT PLANT PROJECT

ELECTRICAL DETAILS II

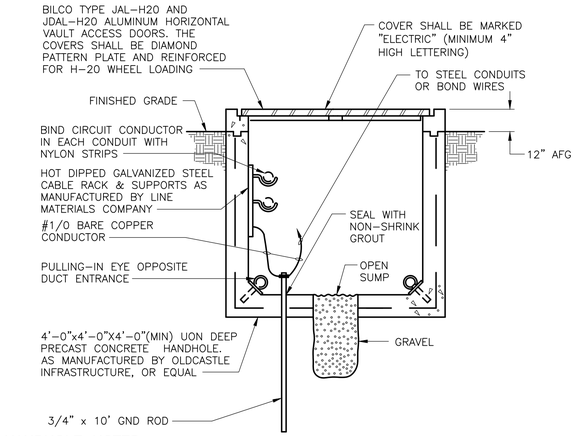
SPENCER J. PERRY JR
LICENSE NO. 62587
STATE OF FLORIDA
PROFESSIONAL ENGINEER

DATE:
SPENCER J. PERRY JR
PE NO. 62587

PROJECT NO. 6103–237938
FILE NAME: ED02NFDT.DWG

SHEET NO.
ED-2

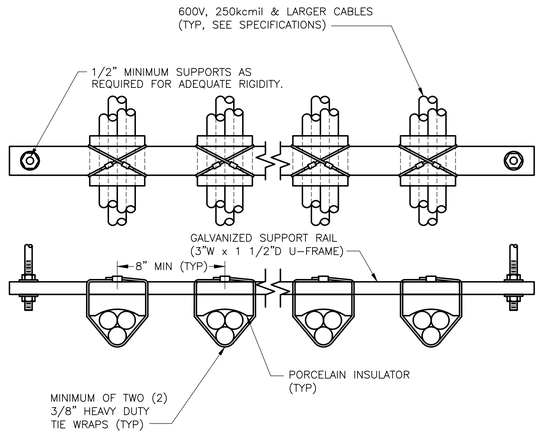
ISSUED FOR BID



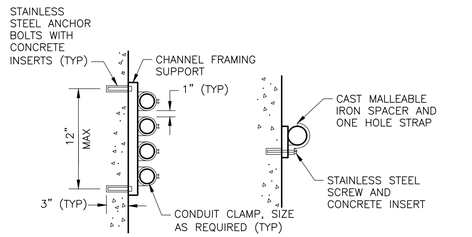
HANDHOLE NOTES:

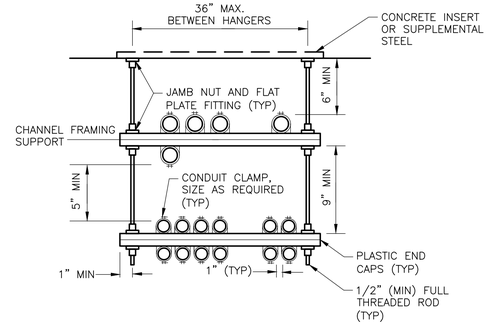
1. DO NOT SPLICE CABLES IN HANDHOLES UNLESS OTHERWISE NOTED.
2. ALL MOUNTING HARDWARE SHALL BE 316 SS.
3. HANDHOLE TO BE PLACED ON 6" BASE OF NO. 57 STONE.

HANDHOLE
DETAIL U
NTS



HANDHOLE CABLE SUPPORT
DETAIL V
NTS





CONDUIT MOUNTING
DETAIL W
NTS

REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: J. SANCHEZ
DRAWN BY: R. RUCK
SHEET CHK'D BY: S. PERRY
CROSS CHK'D BY: Y. POLEMATIDIS
APPROVED BY: S. PERRY
DATE: DECEMBER 2020

CDM Smith
4651 Salisbury Road, Suite 420
Jacksonville, FL 32256
Tel: (904) 731-7109
FL COA No. EB-0000020

JACOBS
245 RIVERSIDE AVE, SUITE 300
JACKSONVILLE, FLORIDA 32202
EB0000072 AAC001992 LC26000188

JEA

RIVERTOWN WATER TREATMENT PLANT PROJECT

ELECTRICAL DETAILS III

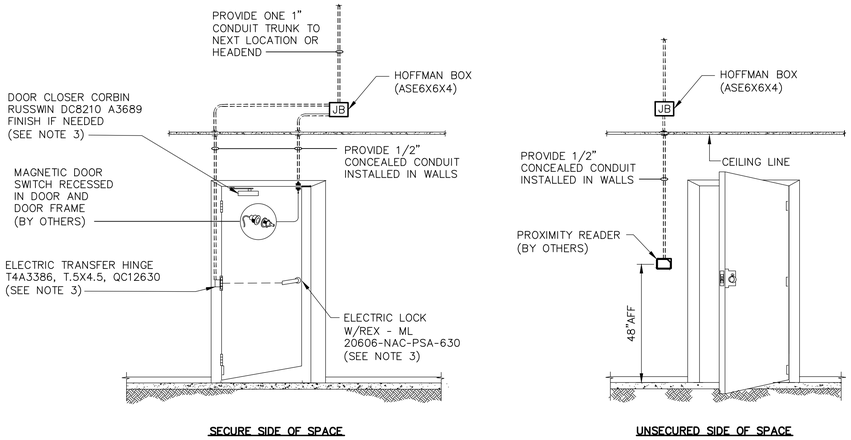
SPENCER J. PERRY JR LICENSE NO. 62587 STATE OF FLORIDA PROFESSIONAL ENGINEER

DATE:
SPENCER J. PERRY JR
PE NO. 62587

PROJECT NO. 6103–237938
FILE NAME: ED03NFDT.DWG

SHEET NO.
ED-3

ISSUED FOR BID



SECURE SIDE OF SPACE

UNSECURED SIDE OF SPACE

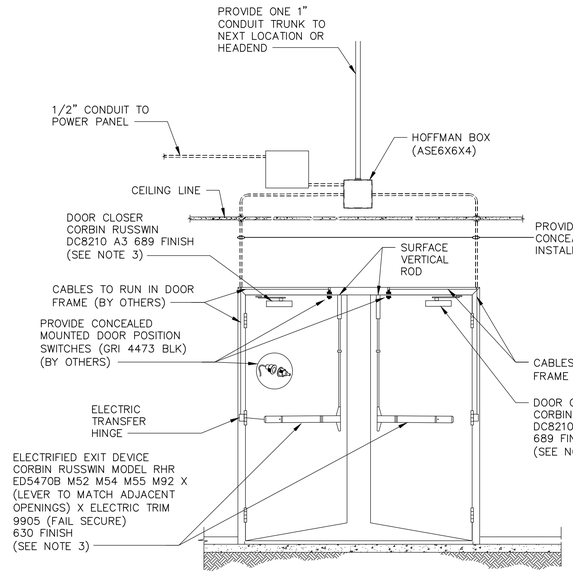
NOTES:

1. MEDECO CYLINDER CORE BY OWNER.
2. PROVIDE ELECTRO-LYNX CABLE SYSTEM TO JUNCTION BOX.
3. REFER TO SECTION 087100 DOOR HARDWARE FOR THE REQUIREMENTS SPECIFIC TO THIS PROJECT.

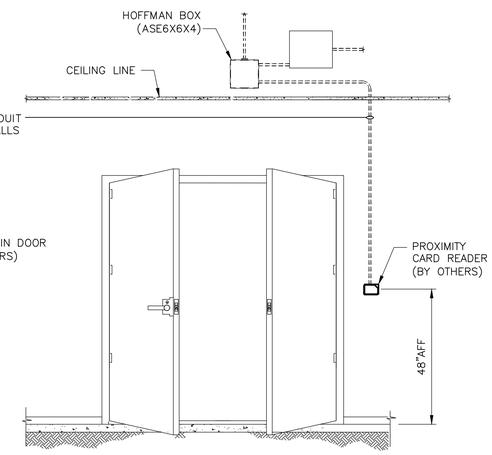
SINGLE DOOR – CARD IN – ELECTRIC LOCK

DETAIL AA / – NTS

(ADAPTED FROM JEA STANDARD SECURITY DETAIL ST-1J)



SECURE SIDE OF SPACE



UNSECURED SIDE OF SPACE

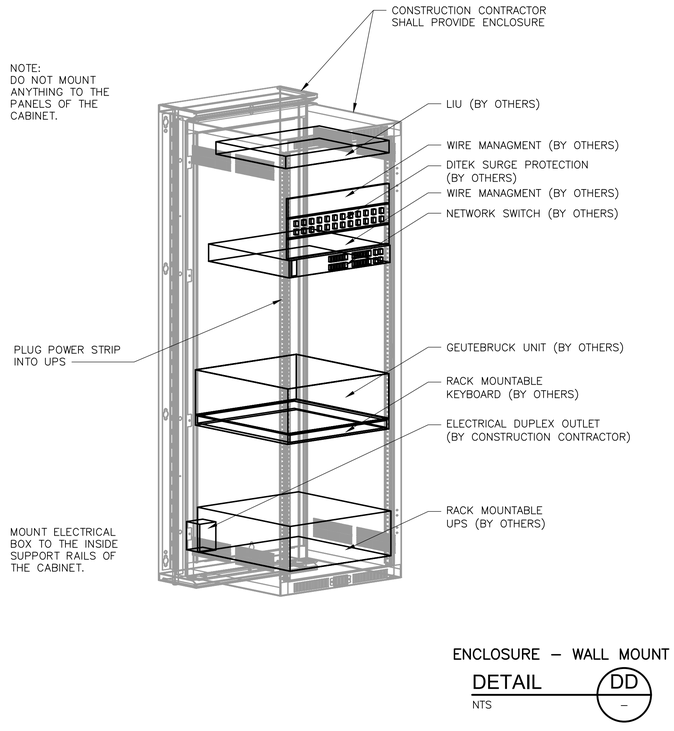
NOTES:

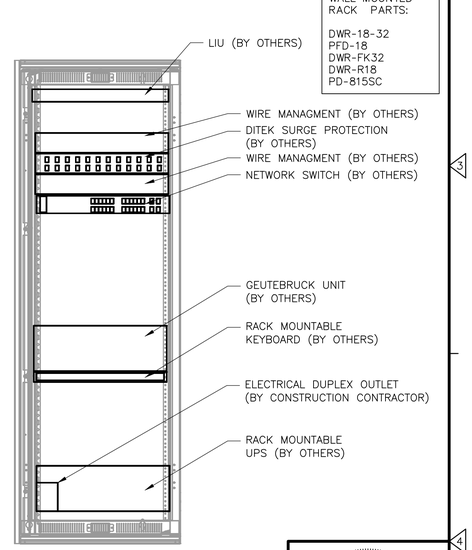
1. MEDECO CYLINDER CORE BY OWNER.
2. PROVIDE ELECTRO-LYNX CABLE SYSTEM TO JUNCTION BOX.
3. REFER TO SECTION 087100 DOOR HARDWARE FOR THE REQUIREMENTS SPECIFIC TO THIS PROJECT.

DOUBLE DOOR – CARD IN – ELECTRIC LOCK – CRASH BAR – REX

DETAIL BB / – NTS

(ADAPTED FROM JEA STANDARD SECURITY DETAIL ST-2K)





ENCLOSURE – WALL MOUNT

DETAIL DD / – NTS

SPENCER J. PERRY JR LICENSE NO. 62587 STATE OF FLORIDA PROFESSIONAL ENGINEER

DATE:
SPENCER J. PERRY JR
PE NO. 62587

REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: J. SANCHEZ
DRAWN BY: R. RUCK
SHEET CHK'D BY: S. PERRY
CROSS CHK'D BY: Y. POLEMATIDIS
APPROVED BY: S. PERRY
DATE: DECEMBER 2020

CDM Smith
4651 Salisbury Road, Suite 420
Jacksonville, FL 32256
Tel: (904) 731-7109
FL COA No. EB-0000020

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EB0000072 AAC001992 LC26000188

JEA

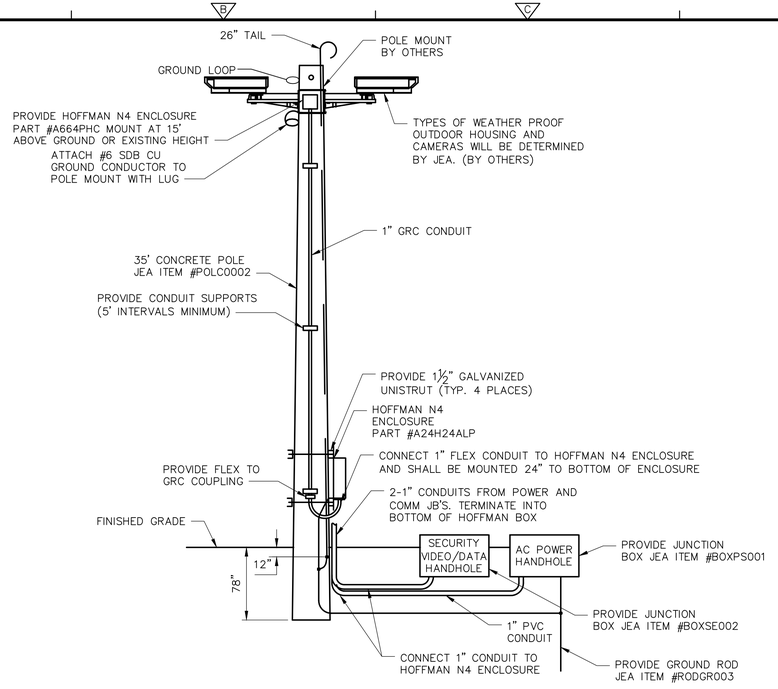
RIVERTOWN WATER TREATMENT PLANT PROJECT

SECURITY DETAILS I

PROJECT NO. 6103-237938
FILE NAME: ED04NFDT.DWG

SHEET NO.
ED-4

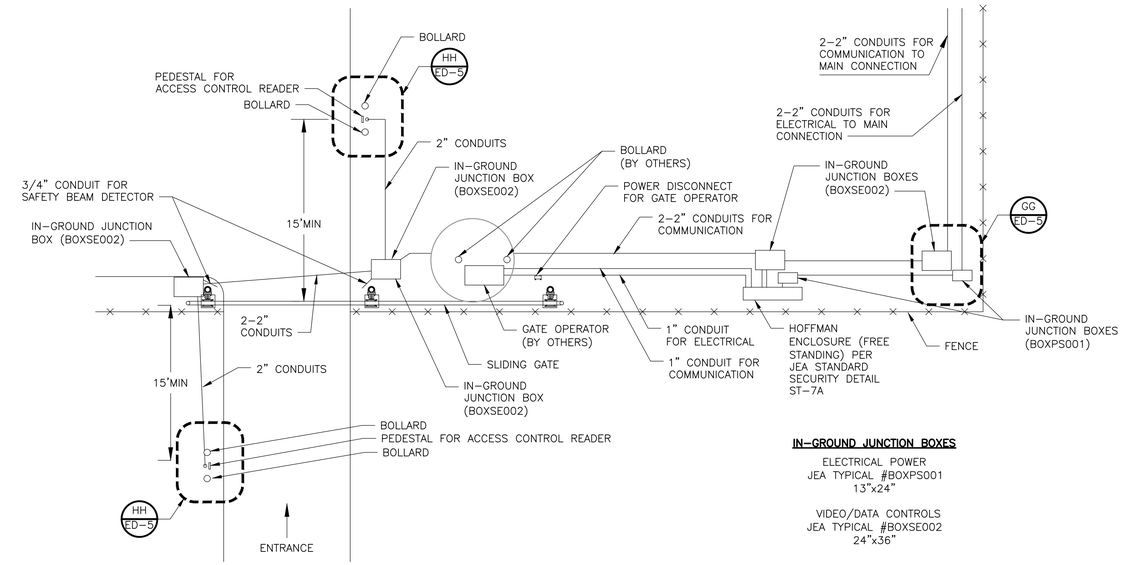
ISSUED FOR BID



INFRASTRUCTURE – CAMERA POLE

DETAIL EE
NTS –

(ADAPTED FROM JEA STANDARD SECURITY DETAIL ST-5A)



IN-GROUND JUNCTION BOXES

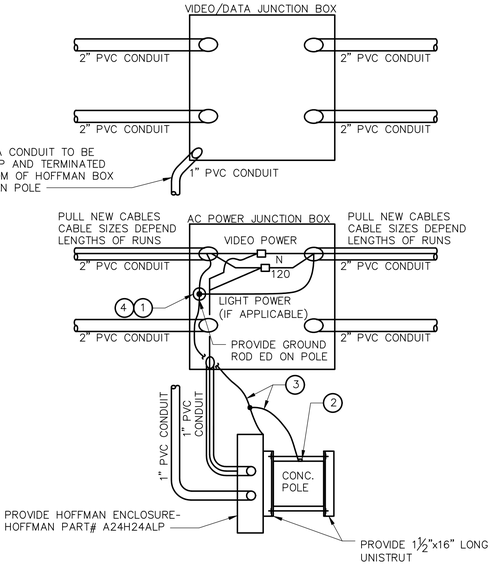
ELECTRICAL POWER
JEA TYPICAL #BOXPS001
13"x24"

VIDEO/DATA CONTROLS
JEA TYPICAL #BOXSE002
24"x36"

INFRASTRUCTURE–GATE

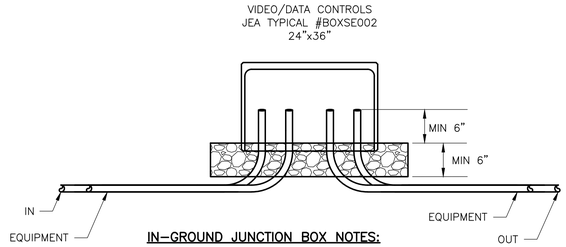
DETAIL FF
NTS –

(ADAPTED FROM JEA STANDARD SECURITY DETAIL ST-5B)



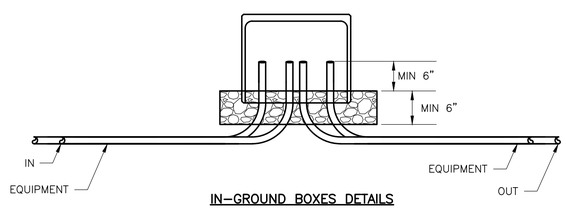
NO.	ITEM ID	QTY	DESCRIPTION
1	RODGR003	1	GROUND ROD, ⅝" DIA. x 8' LONG, THREADLESS
2	CNNVG003	1	CONNECTOR, VISE TYPE, 6-2 SOL, 10-2
3	COBC0028	2	CONDUCTOR, COPPER, #4 SOFT DRAWN BARE
4	CLAGR001	3	CLAMP, GROUND ROD, FOR ⅝" GROUND ROD

IN-GROUND BOXES POLE CONNECTION DETAILS



IN-GROUND JUNCTION BOX NOTES:

1. BOXES WILL BE SET IN GRAVEL, MIN. 6", FOR DRAINAGE AND TO PREVENT MUD FROM ENTERING CONDUITS.
2. CONDUITS WILL BE 6" ABOVE GRAVEL.
3. PROVIDE ONE NYLON PULL STRING IN EVERY CONDUIT.

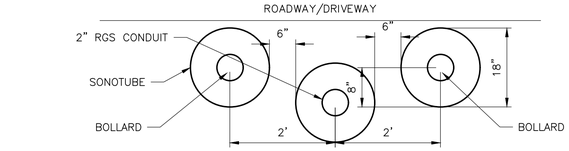


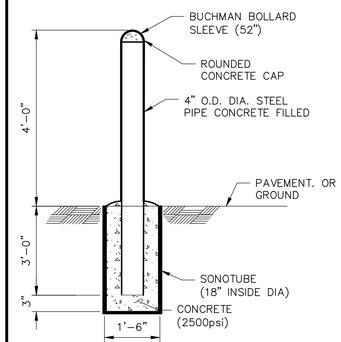
IN-GROUND BOXES DETAILS

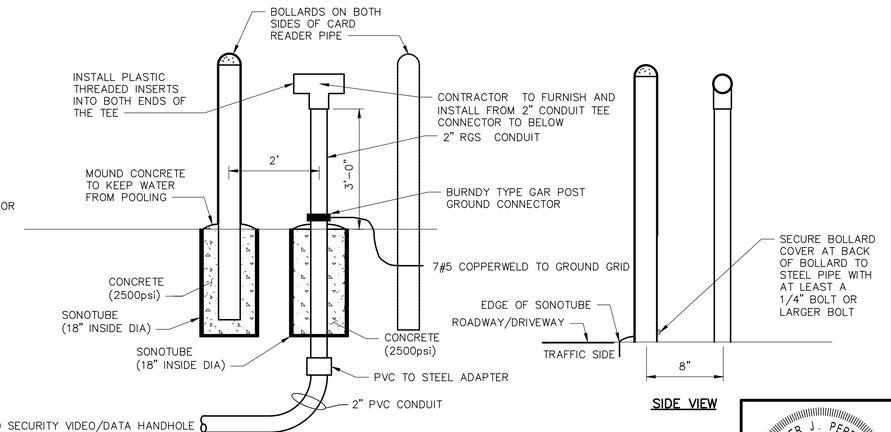
INFRASTRUCTURE – IN-GROUND BOXES

DETAIL GG
NTS –

(ADAPTED FROM JEA STANDARD SECURITY DETAIL ST-5C)







SIDE VIEW

INFRASTRUCTURE – PEDESTAL – BOLLARDS

DETAIL HH
NTS –

(ADAPTED FROM JEA STANDARD SECURITY DETAIL ST-5D)

SPENCER J. PERRY JR LICENSE NO. 62587 STATE OF FLORIDA PROFESSIONAL ENGINEER

DATE:
SPENCER J. PERRY JR
PE NO. 62587

REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: J. SANCHEZ
DRAWN BY: R. RUCK
SHEET CHK'D BY: S. PERRY
CROSS CHK'D BY: Y. POLEMATIDIS
APPROVED BY: S. PERRY
DATE: DECEMBER 2020

CDM Smith
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Tel: (904) 731-7109
FL COA No. EB-0000020

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EB0000072 AAC001992 LC26000188

JEA

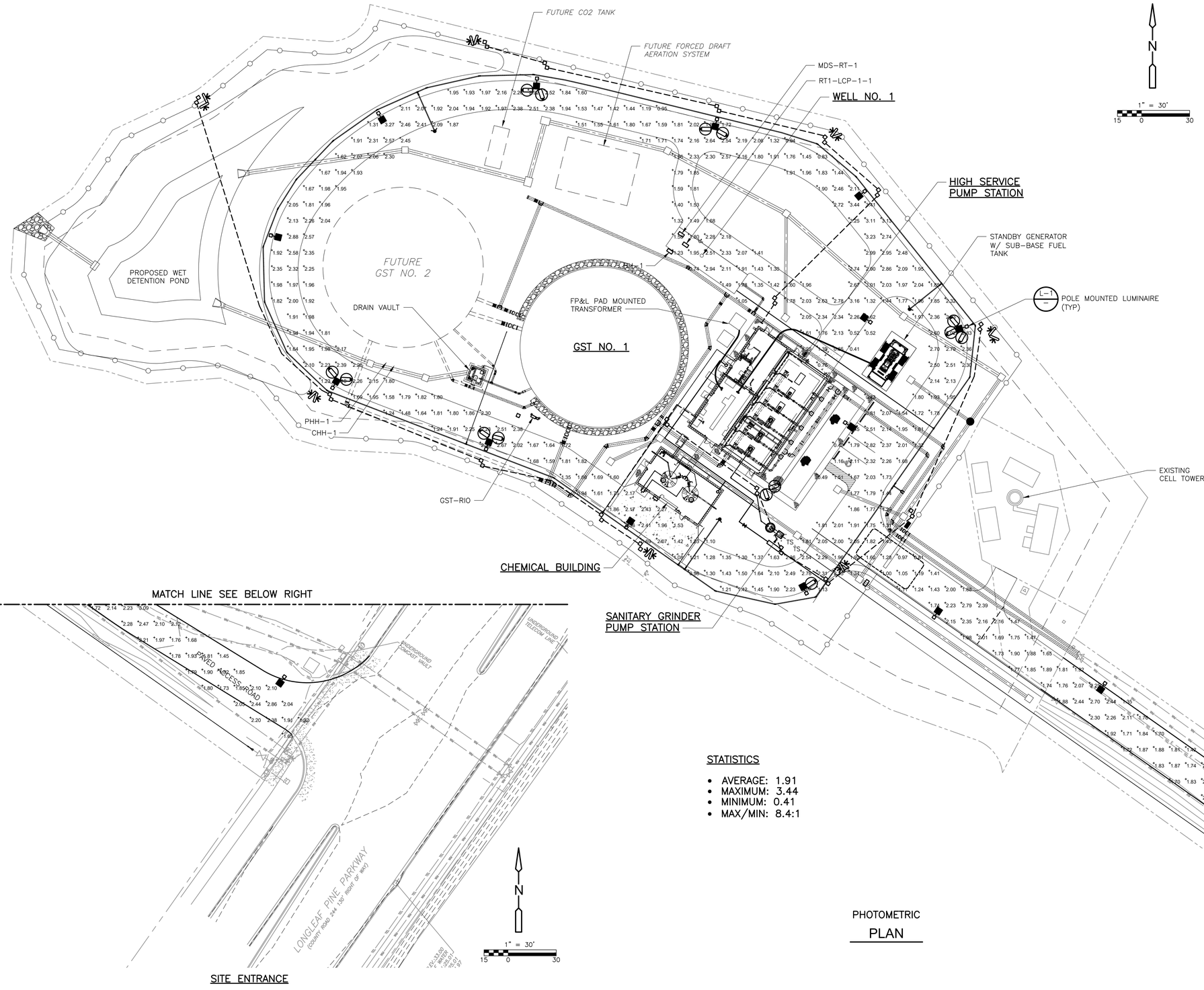
RIVERTOWN WATER TREATMENT PROJECT

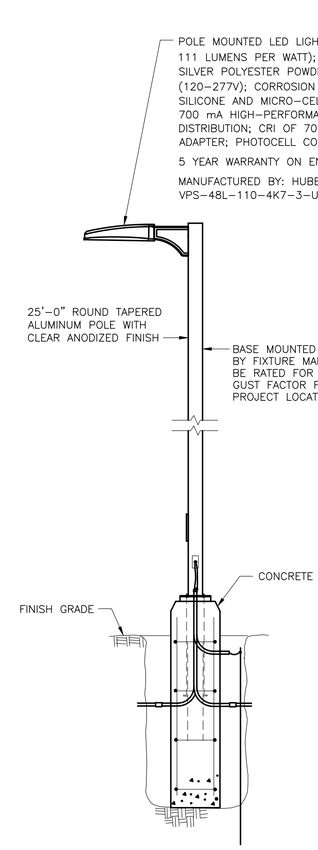
SECURITY DETAILS II

PROJECT NO. 6103-237938
FILE NAME: ED05NFDT.DWG

SHEET NO.
ED-5

ISSUED FOR BID





POLE MOUNTED LUMINAIRE
DETAIL L1
NTS

STATISTICS

- AVERAGE: 1.91
- MAXIMUM: 3.44
- MINIMUM: 0.41
- MAX/MIN: 8.4:1

PHOTOMETRIC
PLAN

SPENCER J. PERRY JR
LICENSE
NO. 62587
STATE OF FLORIDA
PROFESSIONAL ENGINEER

DATE:
SPENCER J. PERRY JR
PE NO. 62587

REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: J. SANCHEZ
DRAWN BY: R. RUCK
SHEET CHK'D BY: S. PERRY
CROSS CHK'D BY: Y. POLEMATIDIS
APPROVED BY: S. PERRY
DATE: DECEMBER 2020

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Jacksonville, FL 32256
Tel: (904) 731-7109
FL COA No. EB-0000020

JACOBS
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JACKSONVILLE, FLORIDA 32202
EB0000072 AAC001992 LC26000188

JEA

RIVERTOWN WATER TREATMENT PLANT PROJECT

PHOTOMETRIC SITE PLAN

PROJECT NO. 6103-237938
FILE NAME: E004STPL.DWG

SHEET NO.
EP-1

ISSUED FOR BID

GENERAL INSTRUMENT OR FUNCTION SYMBOLS

PILOT LIGHT ON FIELD MOUNTED INSTRUMENT

PILOT LIGHT ON INSTRUMENT OR DEVICE LOCATED IN OR ON FRONT OF CENTRAL OR MAIN PANEL/CONSOLE. OPERATOR ACCESSIBLE

PILOT LIGHT ON INSTRUMENT OR DEVICE LOCATED IN OR ON FRONT OF MCC OR REMOTE PANEL/CONSOLE. OPERATOR ACCESSIBLE

FIELD MOUNTED INSTRUMENT

INSTRUMENT OR DEVICE LOCATED IN OR ON FRONT OF CENTRAL OR MAIN PANEL/CONSOLE. OPERATOR ACCESSIBLE

INSTRUMENT OR DEVICE LOCATED IN OR ON FRONT OF MCC OR REMOTE PANEL/CONSOLE. OPERATOR ACCESSIBLE

INSTRUMENTS SHARING COMMON HOUSING

VISIBLE ON VIDEO DISPLAY LOCATED ON FRONT OF CENTRAL OR MAIN PANEL/CONSOLE (SCADA). OPERATOR ACCESSIBLE

VISIBLE ON VIDEO DISPLAY LOCATED ON FRONT OF MCC. OPERATOR ACCESSIBLE

PN

FIELDBUS IMPLEMENTED FUNCTION LOCATED ON FIELD DEVICE. PB = PROFIBUS, PN = PROFINET, EN = ETHERNET, MB = MODBUS, MAY OR MAY NOT BE OPERATOR ACCESSIBLE

PN

PLC IMPLEMENTED FUNCTION

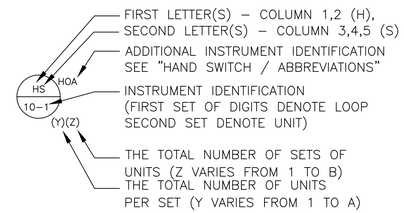
PN

FIELDBUS IMPLEMENTED FUNCTION LOCATED ON MCC. PB = PROFIBUS, PN = PROFINET, EN = ETHERNET, MB = MODBUS, MAY OR MAY NOT OPERATOR ACCESSIBLE

INSTRUMENTATION FUNCTION CODE

	FIRST LETTERS		SECOND LETTERS		
	COLUMN 1	COLUMN 2	COLUMN 3	COLUMN 4	COLUMN 5
	MEASURED/INITIATING VARIABLE	VARIABLE MODIFIER	READOUT/PASSIVE	OUTPUT/ACTIVE FUNCTION	FUNCTION MODIFIER
A	ANALYSIS		ALARM		
B	BURNER, COMBUSTION		USER'S CHOICE	USER'S CHOICE	USER'S CHOICE
C	USER'S CHOICE				
D	USER'S CHOICE	DIFFERENCE, DIFFERENTIAL			DEVIATION
E	VOLTAGE		SENSOR, PRIMARY ELEMENT		
F	FLOW, FLOW RATE	RATIO			
G	USER'S CHOICE		GLASS, GAUGE, VIEWING DEVICE		
H	HAND				HIGH
I	CURRENT		INDICATE		
J	POWER		SCAN		
K	TIME, SCHEDULE	TIME RATE OF CHANGE		CONTROL STATION	
L	LEVEL		LIGHT		LOW
M	USER'S CHOICE				MIDDLE, INTERMEDIATE
N	USER'S CHOICE		USER'S CHOICE	USER'S CHOICE	USER'S CHOICE
O	USER'S CHOICE		ORIFICE, RESTRICTION		OPEN
P	PRESSURE		POINT (TEST CONNECTION)		
Q	QUANTITY	INTEGRATE, TOTALIZE	INTEGRATE, TOTALIZE		
R	RADIATION		RECORD		RUN
S	SPEED, FREQUENCY	SAFETY		SWITCH	STOP
T	TEMPERATURE			TRANSMIT	
U	MULTIVARIABLE		MULTIFUNCTION	MULTIFUNCTION	
V	VIBRATION, MECHANICAL ANALYSIS			VALVE, DAMPER, LOUVER	
W	WEIGHT, FORCE		WELL, PROBE		
X	UNCLASSIFIED	X-AXIS	ACCESSORY DEVICES, UNCLASSIFIED	UNCLASSIFIED	UNCLASSIFIED
Y	EVENT, STATE, PRESENCE	Y-AXIS		AUXILLARY DEVICES	
Z	POSITION, DIMENSION	Z-AXIS, SAFETY INSTRUMENTED SYSTEM		DRIVER, ACTUATOR, UNCLASSIFIED FINAL CONTROL ELEMENT	

TYPICAL TAG NUMBERS & DESIGNATION



HAND SWITCH ABBREVIATIONS

AO = AUTO/OFF
AM = AUTO/MANUAL
CAM = COMPUTER/AUTO/MANUAL
CM = COMPUTER/MANUAL
CL = COMPUTER/LOCAL
DOP = DOPPLER
E-STOP = EMERGENCY STOP
ED = ENABLE/DISABLE
FR = FORWARD/REVERSE
FOR = FORWARD/OFF/REVERSE
FS = FAST/SLOW
FOS = FAST/OFF/SLOW
HOA = HAND/OFF/AUTO
LLS = LEAD/LAG/STANDBY
LOC = LOCAL/OFF/COMPUTER
LOR = LOCAL/OFF/REMOTE
LOS = LOCKOUT/STOP
LA = LOCAL/AUTO
LR = LOCAL/REMOTE
OC = OPEN/CLOSED
OCA = OPEN/CLOSED/AUTO
OCR = OPEN/CLOSE/REMOTE
OOA = ON/OFF/AUTO
OOR = ON/OFF/REMOTE
OSC = OPEN/STOP/CLOSED
RSL = RAISE/STOP/LOWER
SS = START/STOP
SSR = SUPERVISORY SET-POINT (BY COMPUTER), AUTO/MANUAL CONTROL STATION
SOR = START/OFF/RESET

INSTRUMENT LINE SYMBOLS

PROCESS (CLOSED CONDUIT, DASHED LINE INDICATES ALTERNATE FLOW STREAM)

PROCESS (EXISTING)

PROCESS (OPEN CHANNEL)

DOUBLE WALL CONTAINMENT

ANALOG SIGNAL (4 TO 20 mA dc, ETC.)

DISCRETE SIGNAL (ON/OFF, ETC.)

PNEUMATIC SIGNAL

CAPILLARY TUBE

DATA LINK

PN PROFINET DATA LINK

PB PROFIBUS DATA LINK

S SERIAL SIGNAL

FO FIBER OPTIC

PN PROFINET ON FIBER OPTIC

PB PROFIBUS ON FIBER OPTIC

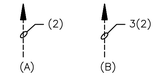
PACKAGE SYSTEM EQUIPMENT

EQUIPMENT/PROCESS BOUNDARY

BUILDING OR FACILITY BOUNDARY

HEAT TRACED

PARALLELING LINES



(A) TOTAL OF 2 SIGNALS

(B) 3 TYPICAL SETS OF 2 SIGNALS EACH. TOTAL OF 6 SIGNALS.

NON-CONNECTING LINES

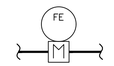
DISCRETE INPUT

DISCRETE OUTPUT

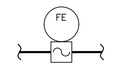
X ANALOG INPUT (X=TC – THERMOCOUPLE INPUT, RTD – RTD INPUT)

ANALOG OUTPUT

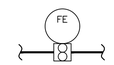
PRIMARY ELEMENTS



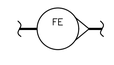
MAGNETIC FLOW METER



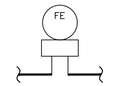
ULTRASONIC FLOW METER



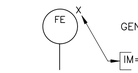
TURBINE OR PROPELLER FLOW METER



ROTAMETER



THERMAL MASS FLOW METER



GENERAL INSERTION FLOW METER

FLOAT SWITCH

DIFFERENTIAL PRESSURE SWITCH

ULTRASONIC LEVEL SENSOR

CAPACITANCE LEVEL SENSOR

PRESSURE GAUGE

TEMPERATURE GAUGE

GENERAL ANALYZER

GENERAL NOTES

1. IN GENERAL THIS LEGEND SHEET AND THE P&IDS ARE BASED ON THE INTERNATIONAL SOCIETY OF AUTOMATION (ISA) STANDARDS AND RECOMMENDED PRACTICES FOR INSTRUMENTATION AND CONTROL. SOME MODIFICATIONS, ADDITIONS, AND ALTERATIONS HAVE BEEN MADE AS REQUIRED TO ACCOMMODATE PROJECT REQUIREMENTS

2. SOME PROCESS ITEMS SUCH AS EQUIPMENT ISOLATION VALVES, BYPASS LINES, ETC., WHICH ARE NOT CRITICAL FOR AN UNDERSTANDING OF THE INSTRUMENTATION FUNCTIONS ARE NOT SHOWN ON THE P&IDS.

3. SEE ELECTRICAL AND MECHANICAL SHEETS AND SPECIFICATIONS FOR ADDITIONAL CONTROL AND INTERLOCK REQUIREMENTS.

GENERAL ABBREVIATIONS

AI	ANALOG IN
AO	ANALOG OUT
CPU	CENTRAL PROCESSOR UNIT
DI	DIGITAL OR DISCRETE INPUT
DO	DIGITAL OUTPUT
FC	FAIL CLOSED
FO	FAIL OPEN OR FIBER OPTIC
HMI	HUMAN MACHINE INTERFACE
MCC	MOTOR CONTROL CENTER
NC	NORMALLY CLOSED
NPW	NON-POTABLE WATER
NO	NORMALLY OPEN
PLC	PROGRAMMABLE LOGIC CONTROLLER
PW	PLANT WATER
RIO	REMOTE INPUT/OUTPUT
UPS	UNINTERRUPTIBLE POWER SUPPLY
UVI	UV INTENSITY
UVT	UV TRANSMITTANCE
VFD	VARIABLE FREQUENCY DRIVE

WILLIAM SCOTT WHITMORE LICENSE NO. 58215 STATE OF FLORIDA PROFESSIONAL ENGINEER

DATE:
WILLIAM SCOTT WHITMORE
PE NO. 58215

REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: W. WHITMORE
DRAWN BY: A. CARTER
SHEET CHK'D BY: W. WHITMORE
CROSS CHK'D BY: D. UBERT
APPROVED BY: W. WHITMORE
DATE: DECEMBER 2020

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EB0000072 AAC001992 LC26000188

JEA

RIVERTOWN WATER TREATMENT PLANT PROJECT

INSTRUMENTATION LEGEND I

PROJECT NO. 6103-237938
FILE NAME: I001SYMB.DWG

SHEET NO.
I-1

ISSUED FOR BID

TYPICAL PIPE TAG NUMBERS & DESIGNATION

41– 1014–AAB–6"–ST(lh)(2–3/8")

- 41 – AREA NUMBER
- 1014 – LINE NUMBER
- AAB – LINE CLASS DESIGNATION
- 6" – LINE SIZE
- ST – HEAT TRACING OR INSULATION I.D.
- (lh) – PURPOSE OF TRACING (*)
- (2–3/8") – QUANTITY AND SIZE OF TRACER

HEAT TRACING AND INSULATION I.D.

ET(*) – ELECTRICALLY TRACED AND INSULATED
ETT(*) – ELECTRICALLY TRACED WITH HEAT TRANSFER CEMENT AND INSULATION

(*) – (lh), HEAT CONSERVATION
(*) – (W), WINTERIZATION

TB – HEAT TRACED VALVE BODY, INSULATED
TBB – HEAT TRACED VALVE BODY AND BONNET, INSULATED

VALVE SYMBOLS

- GATE VALVE (GV)
- PLUG VALVE (PV)
- BUTTERFLY VALVE (BFV)
- BALL VALVE (BV)
- CHECK VALVE
- GLOBE VALVE (GLV)
- SOLENOID VALVE (SV)
- NEEDLE VALVE (NV)
- PRESSURE REGULATING VALVE (PREGV)
- PRESSURE RELIEF VALVE (PRV)
- AIR RELEASE VALVE (ARV)

VALVE ACTUATORS

- M – ROTARY MOTOR. (SHOWN TYPICALLY WITH ELECTRIC SIGNAL. MAY BE HYDRAULIC OR PNEUMATIC)
- S – SOLENOID

PIPE LINE SYMBOLS

- PIPE UNION
- FLEXIBLE BELLOWS TYPE COUPLING
- FLEXIBLE COUPLING (GENERAL SYMBOL)
- QUICK CONNECT TYPE COUPLING
- HOSE CONNECTION
- REMOVABLE PLUG
- Y–STRAINER
- REDUCER/ENLARGER
- BLIND FLANGE
- CONTINUED PIPE
- CONCENTRIC FLANGE MOUNTED DIAPHRAGM SEAL
- THREADED DIAPHRAGM SEAL
- OPEN EQUIPMENT DRAIN
- BASKET STRAINER
- MAJOR PROCESS LINE
- MINOR PROCESS LINE
- E (S) – ELECTRIC (OR STEAM) TRACING
- PROCESS FLUID / DWG NO. / TO/FROM LOCATION – DRAWING CONTINUATION

TYPICAL EQUIPMENT TAG NUMBERS & DESIGNATION

P–1000–1A

- P – EQUIPMENT TYPE
- 10 – EQUIPMENT IDENTIFICATION (FIRST TWO DIGITS DENOTE ASSOCIATED AREA)
- 00 – WHEN USED, LETTER DISTINGUISHES BETWEEN MULTIPLE, SIMILAR DEVICES. USED WHEN MULTIPLE TRAINS ARE USED AND REPRESENTS THE TRAIN NUMBER.
- 1A – EQUIPMENT IDENTIFICATION (FIRST TWO DIGITS DENOTE ASSOCIATED AREA)

GATE SYMBOLS

- SLUICE GATE (SLG)
- SLIDE GATE (SG)
- WEIR GATE (WG)

PROCESS EQUIPMENT

PARTIAL LIST
ADDITIONAL SYMBOLS MAY BE SHOWN ON THE FLOW DIAGRAMS

- CENTRIFUGAL PUMP
- CENTRIFUGAL BLOWER
- ROTARY PUMP
- ROTARY BLOWER
- SUBMERSIBLE PUMP
- SCUM PUMP
- VERTICAL PUMP
- BAR SCREEN
- SCREENING CONVEYOR
- MIXER
- SPRAY NOZZLE
- SILENCER
- WEIR
- THICKENER

WILLIAM SCOTT WHITMORE LICENSE NO. 58215 STATE OF FLORIDA PROFESSIONAL ENGINEER

DATE:
WILLIAM SCOTT WHITMORE
PE NO. 58215

REV. NO.	DATE	DRWN	CHKD	REMARKS

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SHEET CHK'D BY: W. WHITMORE
CROSS CHK'D BY: D. UBERT
APPROVED BY: W. WHITMORE
DATE: DECEMBER 2020

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JEA

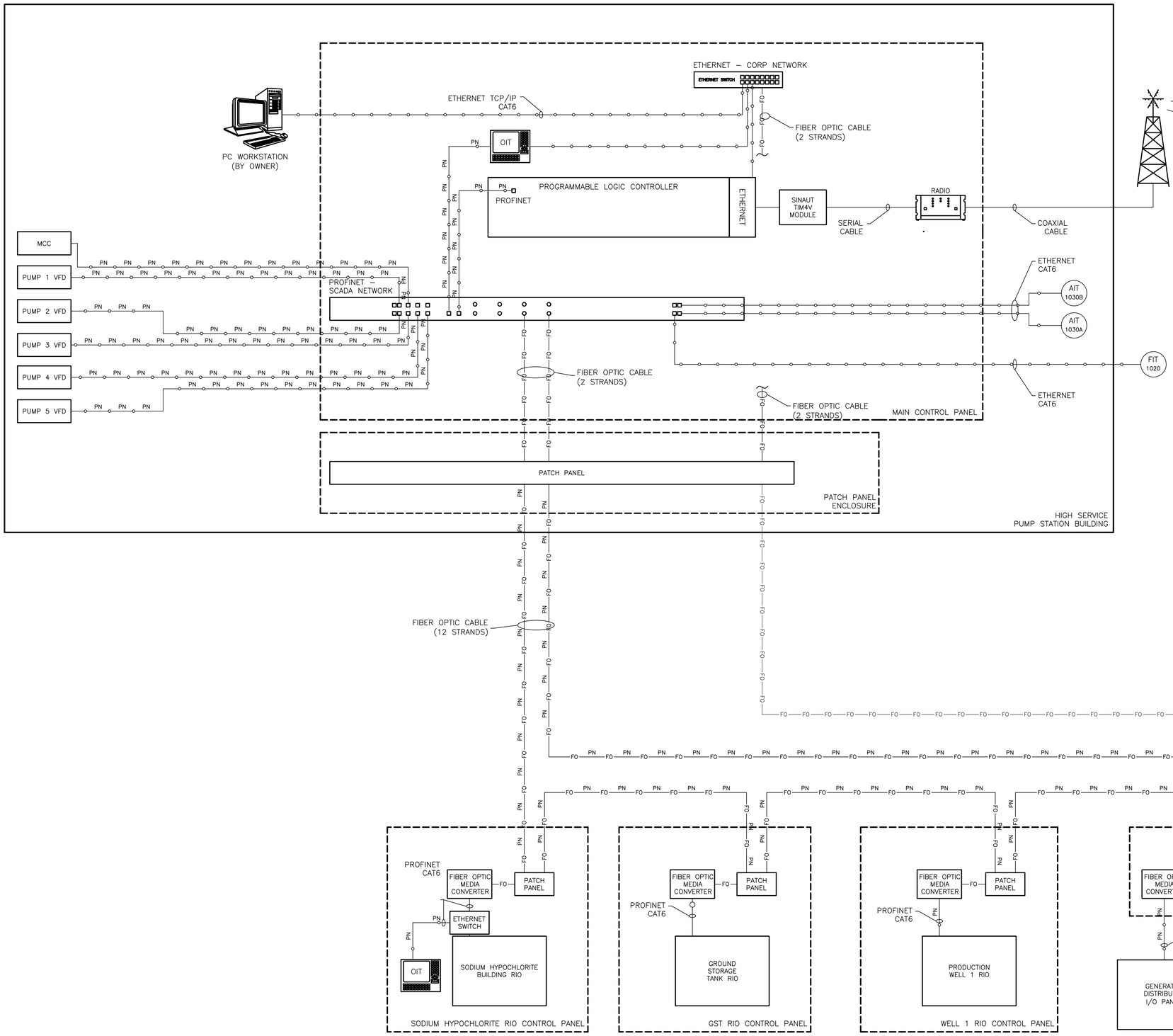
RIVERTOWN WATER TREATMENT PLANT PROJECT

INSTRUMENTATION LEGEND II

PROJECT NO. 6103–237938
FILE NAME: I002SYMB.DWG

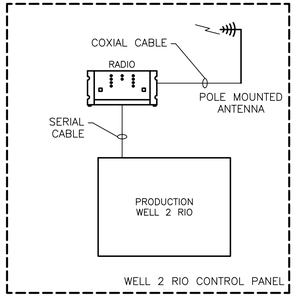
SHEET NO.
I-2

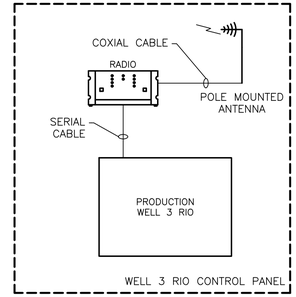
ISSUED FOR BID



NOTES:

1. RS–232 AND RS–485 SERIAL CABLES SHALL BE MINIMUM 1 METER IN LENGTH.
2. PROFIBUS DP CABLE SEGMENTS SHALL HAVE A MINIMUM LENGTH OF 1.5 METERS.
3. BROADBAND FIBER INTERFACE PANEL, ALL INTERNAL COMPONENTS, AND CONNECTION TO HIGH SERVICE PUMP STATION BUILDING AND MONOPOLE ARE FUTURE.





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APPROVED BY: W. WHITMORE
DATE: DECEMBER 2020

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RIVERTOWN WATER TREATMENT PLANT PROJECT

SYSTEM ARCHITECTURE

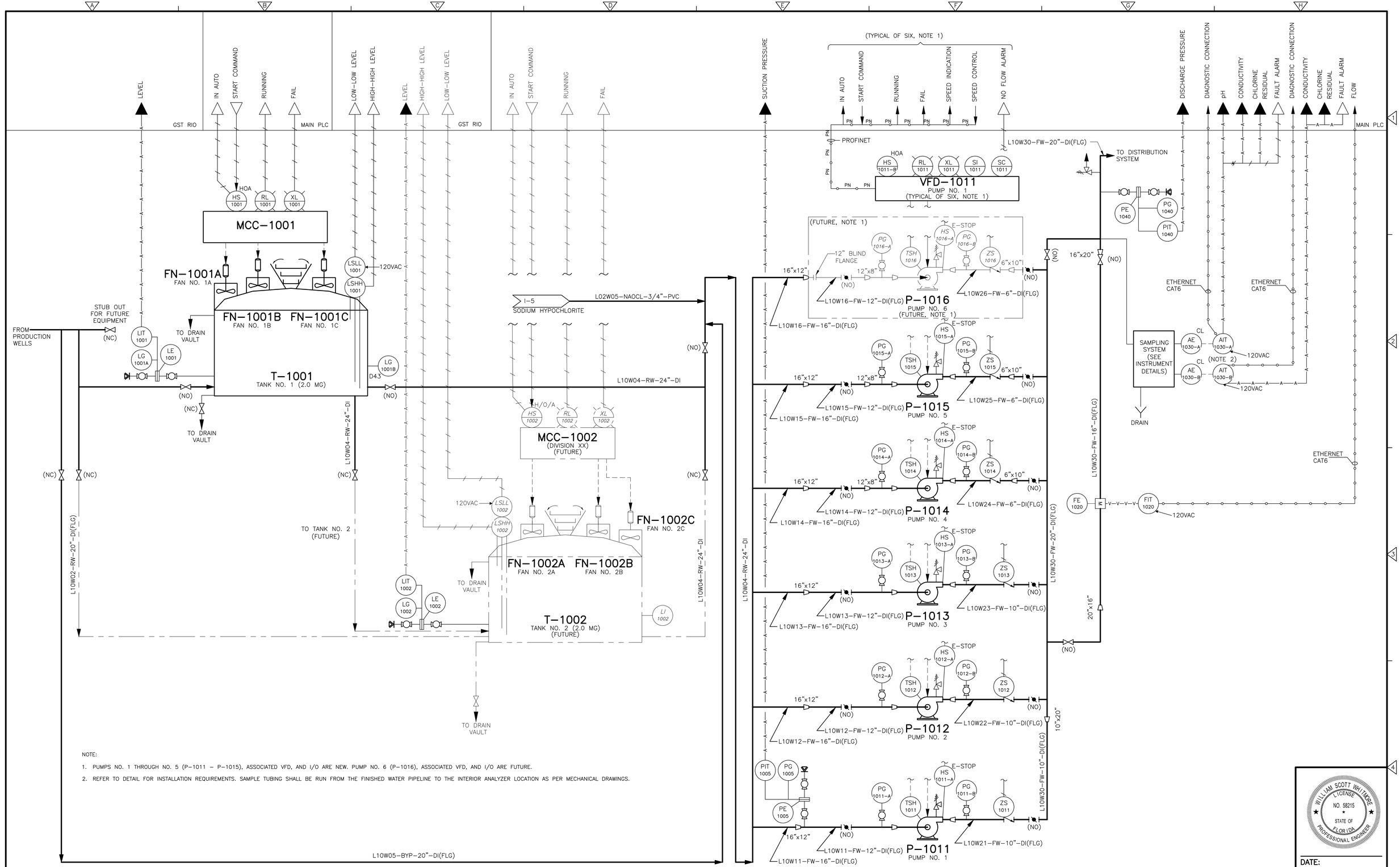
WILLIAM SCOTT WHITMORE LICENSE NO. 58215 STATE OF FLORIDA PROFESSIONAL ENGINEER

DATE:
WILLIAM SCOTT WHITMORE
PE NO. 58215

PROJECT NO. 6103–237938
FILE NAME: I003PIDT.DWG

SHEET NO.
I-3

ISSUED FOR BID



NOTE:

1. PUMPS NO. 1 THROUGH NO. 5 (P-1011 – P-1015), ASSOCIATED VFD, AND I/O ARE NEW. PUMP NO. 6 (P-1016), ASSOCIATED VFD, AND I/O ARE FUTURE.
2. REFER TO DETAIL FOR INSTALLATION REQUIREMENTS. SAMPLE TUBING SHALL BE RUN FROM THE FINISHED WATER PIPELINE TO THE INTERIOR ANALYZER LOCATION AS PER MECHANICAL DRAWINGS.

REV. NO.	DATE	DRWN	CHKD	REMARKS

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RIVERTOWN WATER TREATMENT PLANT PROJECT

PROCESS AND INSTRUMENTATION DIAGRAM
GROUND STORAGE AND HIGH SERVICE PUMPS

WILLIAM SCOTT WHITMORE LICENSE NO. 58215 STATE OF FLORIDA PROFESSIONAL ENGINEER

DATE:
WILLIAM SCOTT WHITMORE
PE NO. 58215

PROJECT NO. 6103-237938
FILE NAME: I004PIDI.DWG

SHEET NO.
I-4

ISSUED FOR BID

HIGH LEVEL ALARM
LEVEL
LEVEL
HIGH LEVEL ALARM
HIGH LEVEL ALARM
CHEMICAL BUILDING HIGH TEMPERATURE
CHEMICAL BUILDING LOW TEMPERATURE
START/STOP
IN AUTO
RUNNING
COMMON FAIL
SPEED INDICATION
SPEED CONTROL
START/STOP
IN AUTO
RUNNING
COMMON FAIL
SPEED INDICATION
SPEED CONTROL
WALL SWITCH EMERGENCY MODE ACTIVATE
BREAK GLASS SWITCH BROKEN
SODIUM HYPOCHLORITE RIO

LI 2001 | LI 2002 | LAH 2001 | LAH 2002 | HS 2001 (SILENCE) | XA 2001 (BEACON/HORN)

LCP-2001
TRUCK FILL PANEL

TSH 2099 | TSL 2099
(FURNISHED BY HVAC)

HOA
HS 2011 | RL 2011 | XL 2011 | PLL 2011 | SI 2011 | SC 2011
HOA
HS 2012 | RL 2012 | XL 2012 | PLL 2012 | SI 2012 | SC 2012

LCP-2010
PUMP LOCAL CONTROL PANEL

ATC-CB-001

6" PVC VENT TO OUTSIDE OF BUILDING
L02W01-NAOCL-3"-PVC
2" LG PIPE
LG 2002-B
LSH 2002 | LIT 2002
L02W13-OVERFLOW-2"-PVC
4"x2"
4"-BV
2" FLEX CONNECTION
2" DRAIN

T-2002
SODIUM HYPOCHLORITE
BULK STORAGE TANK NO. 2

(NOTE 1)
PG 2011-A
PG 2011-B
L02W04-NAOCL-1"-PVC
1"x3/4"
P-2011
PUMP NO. 1
L02W05-NAOCL-3/4"-PVC
I-4
HIGH SERVICE PUMP STATION SUCTION
FLUSHING CONNECTION

NOTES:
1. WIRING BETWEEN EACH PUMP AND LOCAL CONTROL PANEL SHALL CONSIST OR FOUR CABLES:
   -GENIBUS SERIAL
   -4-20mA SPEED INPUT
   -4-20mA SPEED OUTPUT
   -RELAY OUTPUT

2" VENT
2"X1"
BASKET STRAINER
2" FLUSHING CONNECTION
L02W10-NAOCL-2"-PVC

6" PVC VENT TO OUTSIDE OF BUILDING
TANK FILL (QUICK CONNECT)
L02W01-NAOCL-3"-PVC
2" LG PIPE
LG 2001-B
LSH 2001 | LIT 2001
L02W010-OVERFLOW-2"-PVC
4"x2"
4"-BV
2" FLEX CONNECTION
2" DRAIN

T-2001
SODIUM HYPOCHLORITE
BULK STORAGE TANK NO. 1

LSH 2000
CONTAINMENT AREA AND SUMP

(NOTE 1)
PG 2012-A
PG 2012-B
1"-NAOCL-PVC-L02W04
1"x3/4"
P-2012
PUMP NO. 2
3/4"-NAOCL-PVC-L02W09

SODIUM HYPOCHLORITE FEED PUMP SKID (PS-2010)
LIMITS OF VENDOR PACKAGE

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JEA

RIVERTOWN WATER TREATMENT PLANT PROJECT

PROCESS AND INSTRUMENTATION DIAGRAM SODIUM HYPOCHLORITE SYSTEM

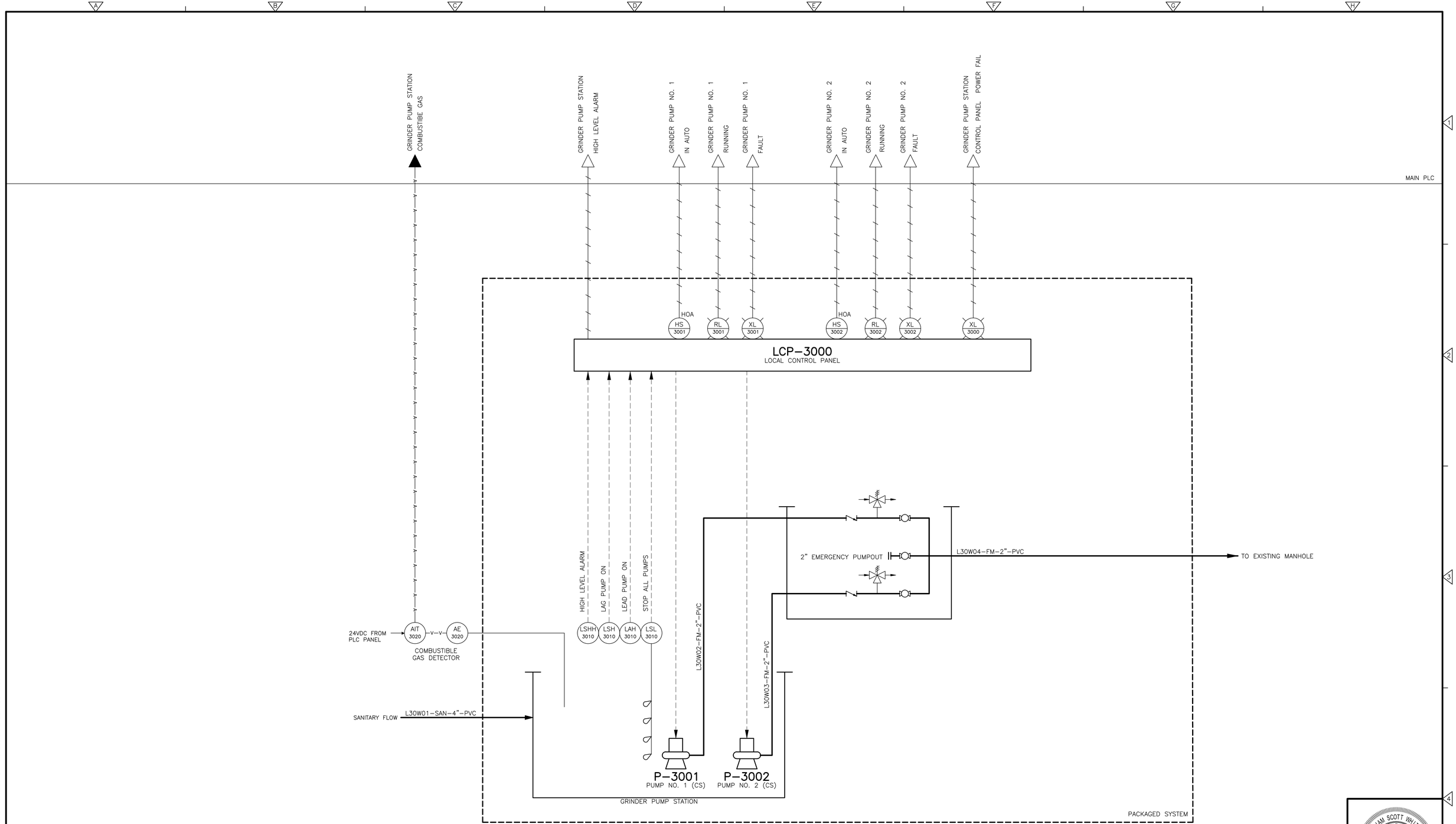
WILLIAM SCOTT WHITMORE LICENSE NO. 58215 STATE OF FLORIDA PROFESSIONAL ENGINEER

DATE:
WILLIAM SCOTT WHITMORE
PE NO. 58215

PROJECT NO. 6103-237938
FILE NAME: I005PIDI.DWG

SHEET NO.
I-5

ISSUED FOR BID



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JEA

RIVERTOWN WATER TREATMENT PLANT PROJECT

PROCESS AND INSTRUMENTATION DIAGRAM SANITARY GRINDER PUMP STATION

WILLIAM SCOTT WHITMORE LICENSE NO. 58215 STATE OF FLORIDA PROFESSIONAL ENGINEER

DATE:
WILLIAM SCOTT WHITMORE
PE NO. 58215

PROJECT NO. 6103-237938
FILE NAME: I006PIDI.DWG

SHEET NO.
I-6

ISSUED FOR BID

VOLTAGE L-L
CURRENT (PHASE A)
CURRENT (PHASE B)
CURRENT (PHASE C)
TOTAL POWER FACTOR
TOTAL APPARENT POWER
TOTAL ACTIVE POWER
REACTIVE POWER
PHASE UNBALANCE ALARM

NORMAL POWER AVAILABLE
GENERATOR POWER AVAILABLE
TRANSFER SWITCH ON NORMAL
TRANSFER SWITCH ON GENERATOR

FUEL LEVEL
FUEL LEVEL HIGH
FUEL LEVEL LOW
FUEL TANK LEAK
GENERATOR FAULT
GENERATOR RUN
GENERATOR ETM
BATTERY FAIL

ELECTRICAL BUILDING
HIGH TEMPERATURE ALARM

MAIN PLC

PROFINET

PROFINET

AUTOMATIC TRANSFER SWITCH

FIBER OPTIC INTERFACE PANEL

GENERATOR DISTRIBUTED I/O PANEL

GCP-1
GENERATOR CONTROL PANEL

GENERATOR MAIN LINE BREAKER

BATTERY CHARGER

CP-580
LEAK/LEVEL ALARM PANEL

LT 580
(PANEL MOUNTED)

PSL 310-3
LSH 580
PSH 310-3
LE 580

T-580
GENERATOR FUEL TANK

TSH 590
(FURNISHED BY HVAC)

MCC

WILLIAM SCOTT WHITMORE
LICENSE NO. 58215
STATE OF FLORIDA
PROFESSIONAL ENGINEER

REV. NO.	DATE	DRWN	CHKD	REMARKS

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JEA

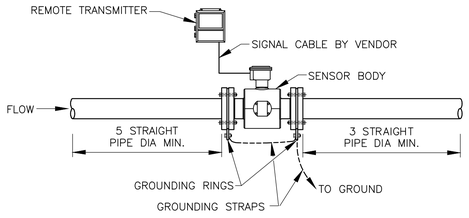
RIVERTOWN WATER TREATMENT PLANT PROJECT

PROCESS & INSTRUMENTATION DIAGRAM
ELECTRICAL

PROJECT NO. 6103-237938
FILE NAME: I007PIDI.DWG

SHEET NO.
I-7

ISSUED FOR BID

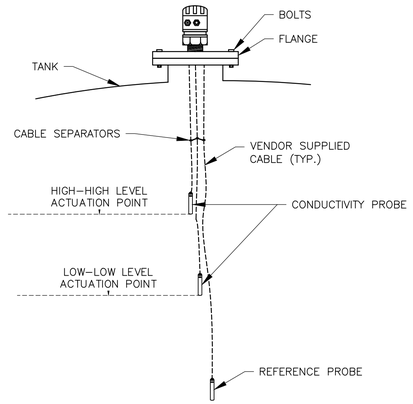


NOTES:

1. PROVIDE GROUNDING RING(S) AS RECOMMENDED BY MANUFACTURER.
2. PROVIDE SENSOR LINING TO PREVENT BUILDUP ON METER.

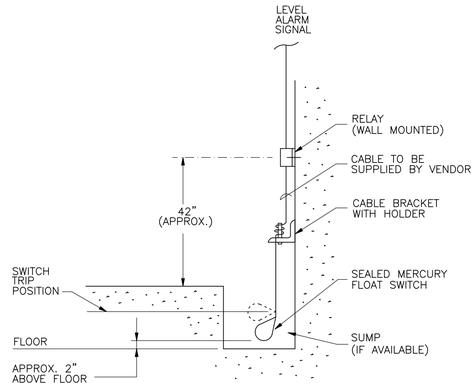
MAGNETIC FLOW METER

DETAIL A / NTS



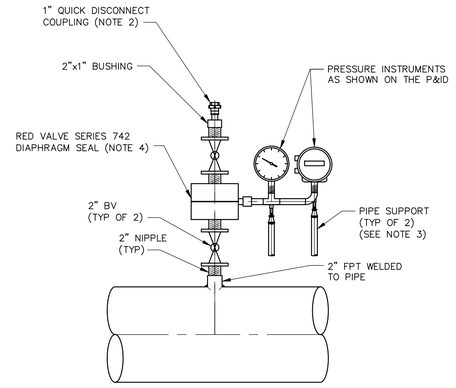
CONDUCTIVITY LEVEL PROBE (ON TANK)

DETAIL B / NTS



FLOAT SWITCH (SUMP PIT)

DETAIL C / NTS

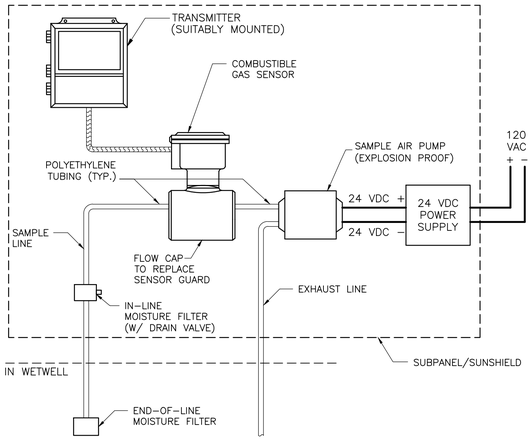


NOTES:

1. ALL PIPING, FITTINGS AND VALVES SHALL BE 316 STAINLESS STEEL.
2. CONFIRM QUICK DISCONNECT COUPLING SIZE W/ OWNER.
3. SUPPORT INSTRUMENT PIPING FROM THE SLAB W/ STAINLESS STEEL UNISTRUT, MOUNT AND CLAMP.
4. WETTED MATERIALS SHALL BE 316 STAINLESS STEEL AND BUNA–N.

PRESSURE SENSOR ASSEMBLY

DETAIL D / NTS

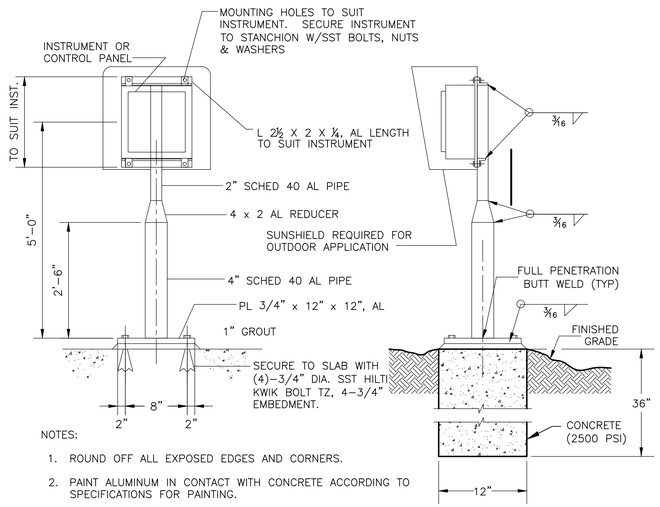


NOTES:

1. PROVIDE BACKBOARD BOLTED TO POST AND CHANNEL MOUNTING, PER SHEET ED–2, DETAIL L.
2. PROVIDE SUNSHIELD COVERING ALL COMPONENTS PER DETAIL B, THIS SHEET.
3. ALL COMPONENTS SHALL BE RATED NEMA 4X OR SHALL BE MOUNTED IN NEMA 4X ENCLOSURES.

COMBUSTIBLE GAS DETECTOR

DETAIL E / NTS



NOTES:

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

STANCHION SUPPORT FOR CASE MOUNTED INSTRUMENTS

DETAIL F / NTS

REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: W. WHITMORE
DRAWN BY: A. CARTER
SHEET CHK'D BY: W. WHITMORE
CROSS CHK'D BY: D. UBERT
APPROVED BY: W. WHITMORE
DATE: DECEMBER 2020

CDM Smith
4651 Salisbury Road, Suite 420
Jacksonville, FL 32256
Tel: (904) 731-7109
FL COA No. EB-0000020

JACOBS
245 RIVERSIDE AVE, SUITE 300
JACKSONVILLE, FLORIDA 32202
EB0000072 AAC001992 LC26000188

JEA

RIVERTOWN WATER TREATMENT PLANT PROJECT

INSTRUMENTATION DETAILS I

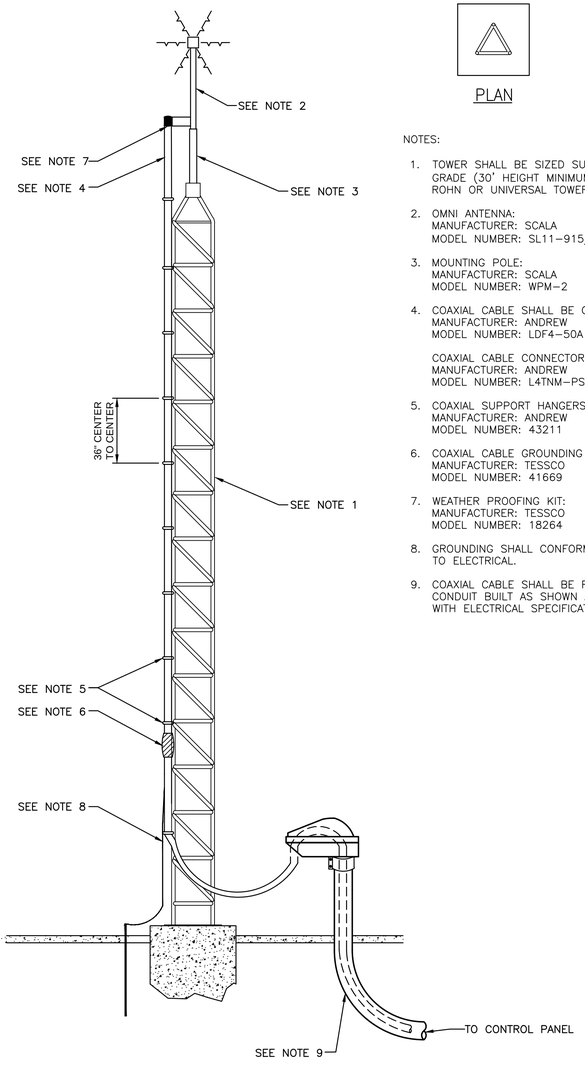
WILLIAM SCOTT WHITMORE LICENSE NO. 58215 STATE OF FLORIDA PROFESSIONAL ENGINEER

DATE:
WILLIAM SCOTT WHITMORE
PE NO. 58215

PROJECT NO. 6103–237938
FILE NAME: ID01PIDT.DWG

SHEET NO.
ID-1

ISSUED FOR BID



PLAN

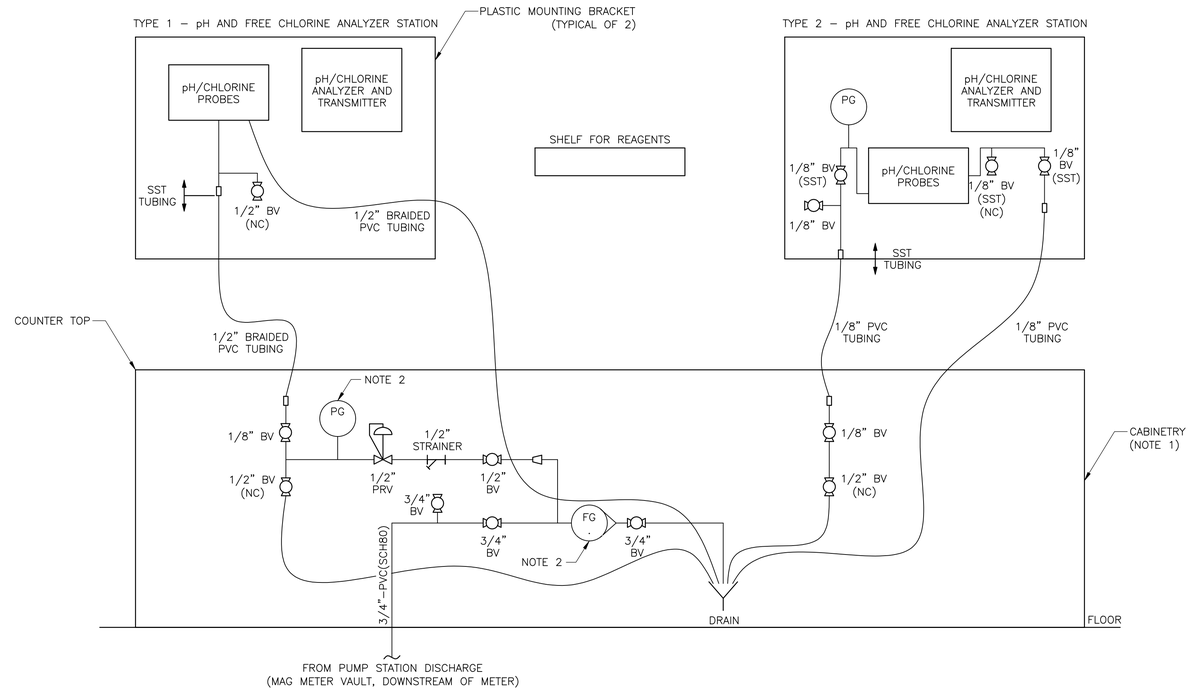
NOTES:

1. TOWER SHALL BE SIZED SUCH THAT THE ANTENNA IS MOUNTED 20' ABOVE GRADE (30' HEIGHT MINIMUM). ACCEPTABLE MANUFACTURERS OF TOWERS ARE ROHN OR UNIVERSAL TOWERS.
2. OMNI ANTENNA:
   MANUFACTURER: SCALA
   MODEL NUMBER: SL11-915/DT2
3. MOUNTING POLE:
   MANUFACTURER: SCALA
   MODEL NUMBER: WPM-2
4. COAXIAL CABLE SHALL BE ONE CONTINUOUS PIECE
   MANUFACTURER: ANDREW
   MODEL NUMBER: LDF4-50A

   COAXIAL CABLE CONNECTORS:
   MANUFACTURER: ANDREW
   MODEL NUMBER: L4TNM-PSA
5. COAXIAL SUPPORT HANGERS:
   MANUFACTURER: ANDREW
   MODEL NUMBER: 43211
6. COAXIAL CABLE GROUNDING KIT:
   MANUFACTURER: TESSCO
   MODEL NUMBER: 41669
7. WEATHER PROOFING KIT:
   MANUFACTURER: TESSCO
   MODEL NUMBER: 18264
8. GROUNDING SHALL CONFORM TO THE REQUIREMENTS OF NFPA 780. REFER TO ELECTRICAL.
9. COAXIAL CABLE SHALL BE RUN INTO A WEATHERHEAD AND UNDERGROUND CONDUIT BUILT AS SHOWN AND SEALED AGAINST MOISTURE IN CONFORMANCE WITH ELECTRICAL SPECIFICATIONS.

RADIO TOWER INSTALLATION
(FOR POLE HEIGHTS 20 FEET AND ABOVE – NOT TO SCALE)

DETAIL G
NTS



NOTES:

1. CABINETRY SHALL INCLUDE A SLIDING DOOR TO PROVIDE FULL ACCESS TO SAMPLE PIPING. ADEQUATE LIGHTING SHALL BE PROVIDED WITH THE CABINETRY.
2. ROTAMETER SHALL BE VANE INDICATOR TYPE BY EDCO OR EQUAL, RANGE 0.5 – 5.0 GPM .
3. PRESSURE GAUGES SHALL BE PER SECTION 407313, RANGES AS RECOMMENDED BY ANALYZER MANUFACTURER.

pH AND FREE CHLORINE SAMPLE AND ANALYZER STATION

DETAIL H
NTS

REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: W. WHITMORE
DRAWN BY: A. CARTER
SHEET CHK'D BY: W. WHITMORE
CROSS CHK'D BY: D. UBERT
APPROVED BY: W. WHITMORE
DATE: DECEMBER 2020

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EB0000072 AAC001992 LC26000188

JEA

RIVERTOWN WATER TREATMENT PLANT PROJECT

INSTRUMENTATION DETAILS II

WILLIAM SCOTT WHITMORE LICENSE NO. 58215 STATE OF FLORIDA PROFESSIONAL ENGINEER

DATE:
WILLIAM SCOTT WHITMORE
PE NO. 58215

PROJECT NO. 6103-237938
FILE NAME: ID02PIDT.DWG

SHEET NO.
ID-2

ISSUED FOR BID