

CONSTRUCTION PLANS FOR: SOUTHWEST MARRIOTT PUMP STATION #3597 ODOR CONTROL SYSTEM

BOARD OF COUNTY COMMISSIONERS

JERRY L. DEMINGS
ORANGE COUNTY MAYOR

BETSY VANDERLAY
DISTRICT 1

MARIBEL GOMEZ CORDERO
DISTRICT 4

CHRISTINE MOORE
DISTRICT 2

EMILY BONILLA
DISTRICT 5

MAYRA URIBE
DISTRICT 3

VICTORIA P. SIPLIN
DISTRICT 6



BYRON W. BROOKS, A.I.C.P.
COUNTY ADMINISTRATOR

RAYMOND E. HANSON, P.E.
DIRECTOR ORANGE COUNTY UTILITIES DEPARTMENT

PLANS PREPARED BY:



ATTENTION IS DIRECTED TO THE FACT THAT THESE PLANS MAY HAVE BEEN REDUCED IN SIZE BY REPRODUCTION. THIS MUST BE CONSIDERED WHEN OBTAINING SCALED DATA. DIMENSION INFORMATION SHOULD NOT BE OBTAINED BY SCALING THE PLANS. DIMENSION INFORMATION NOT PROVIDED HEREIN CAN BE OBTAINED BY CONTACTING ORANGE COUNTY UTILITIES ENGINEERING DIVISION, AT (407)254-9900

*ORANGE COUNTY UTILITIES DEPARTMENT
ENGINEERING DIVISION
ORANGE COUNTY, FLORIDA*

OCU FILE NO.: 80046

CIP FUNDING CODE:
• 1559-75

August 2019

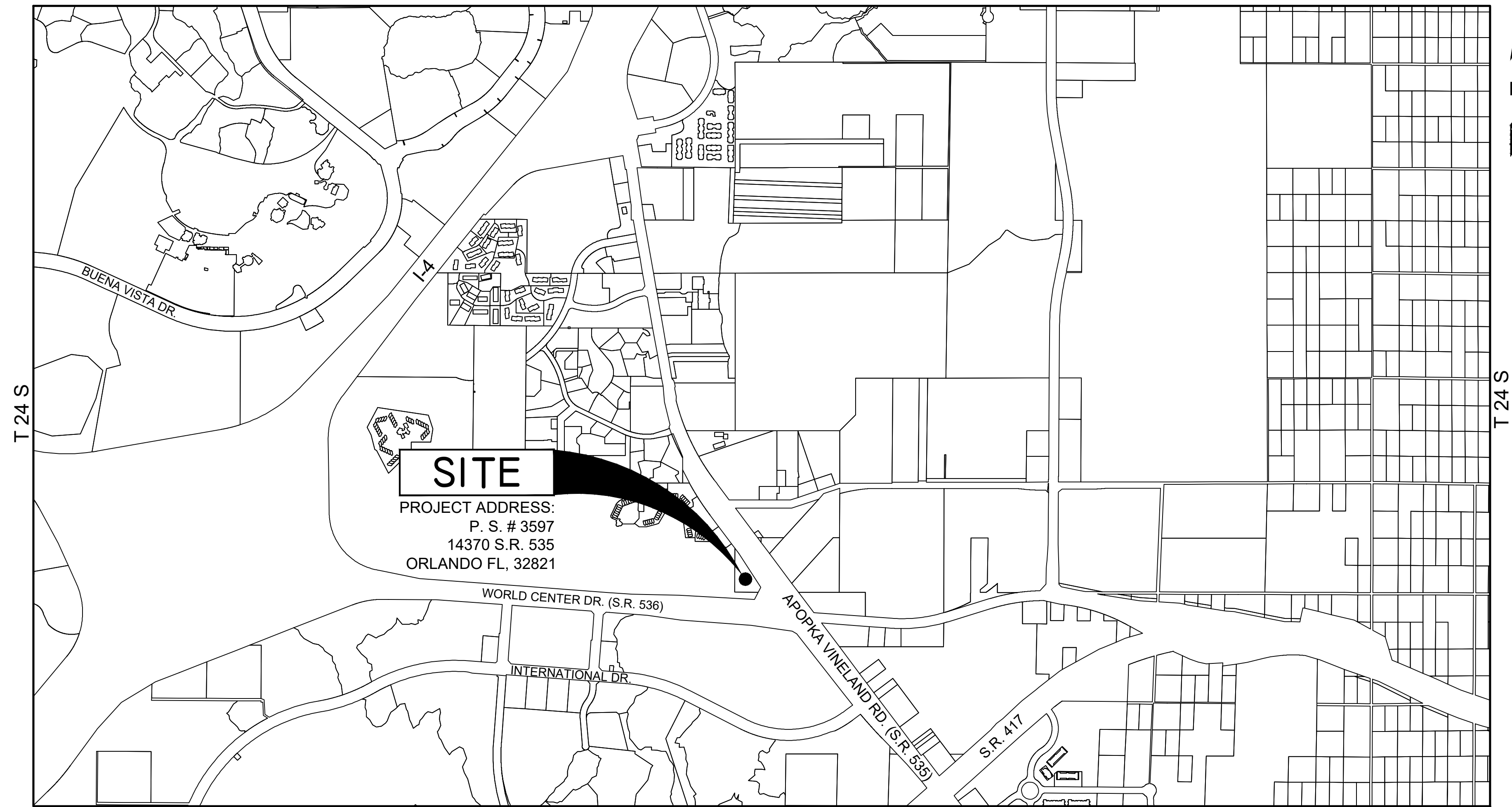
MASON GARDBERG, P.E.
PROFESSIONAL ENGINEER
FLORIDA LICENSE # 86595

BID SET

DRAWING INDEX

SHEET NO.	DWG. NO.	TITLE
1 OF 13	G-100	COVER SHEET
2 OF 13	G-200	LOCATION MAP & DRAWING INDEX
3 OF 13	G-300	LEGEND AND SYMBOLS
4 OF 13	C-100	SITE PLAN - DEMOLITION
5 OF 13	C-200	SITE PLAN - ODOR CONTROL SYSTEM
6 OF 13	C-300	SITE PLAN - CONCRETE PAVING
7 OF 13	S-100	ODOR CONTROL EQUIPMENT SUPPORT SLAB DESIGN
8 OF 13	D-100	DETAILS
9 OF 13	D-200	SCHEMATIC LAYOUT - ODOR CONTROL SYSTEMS
10 OF 13	E-001	ELECTRICAL NOTES, SYMBOLS AND ABBREVIATIONS
11 OF 13	E-100	SINGLE LINE DIAGRAM
12 OF 13	E-101	ELECTRICAL PLAN
13 OF 13	E-102	ELECTRICAL DETAILS

LOCATION MAP



SITE

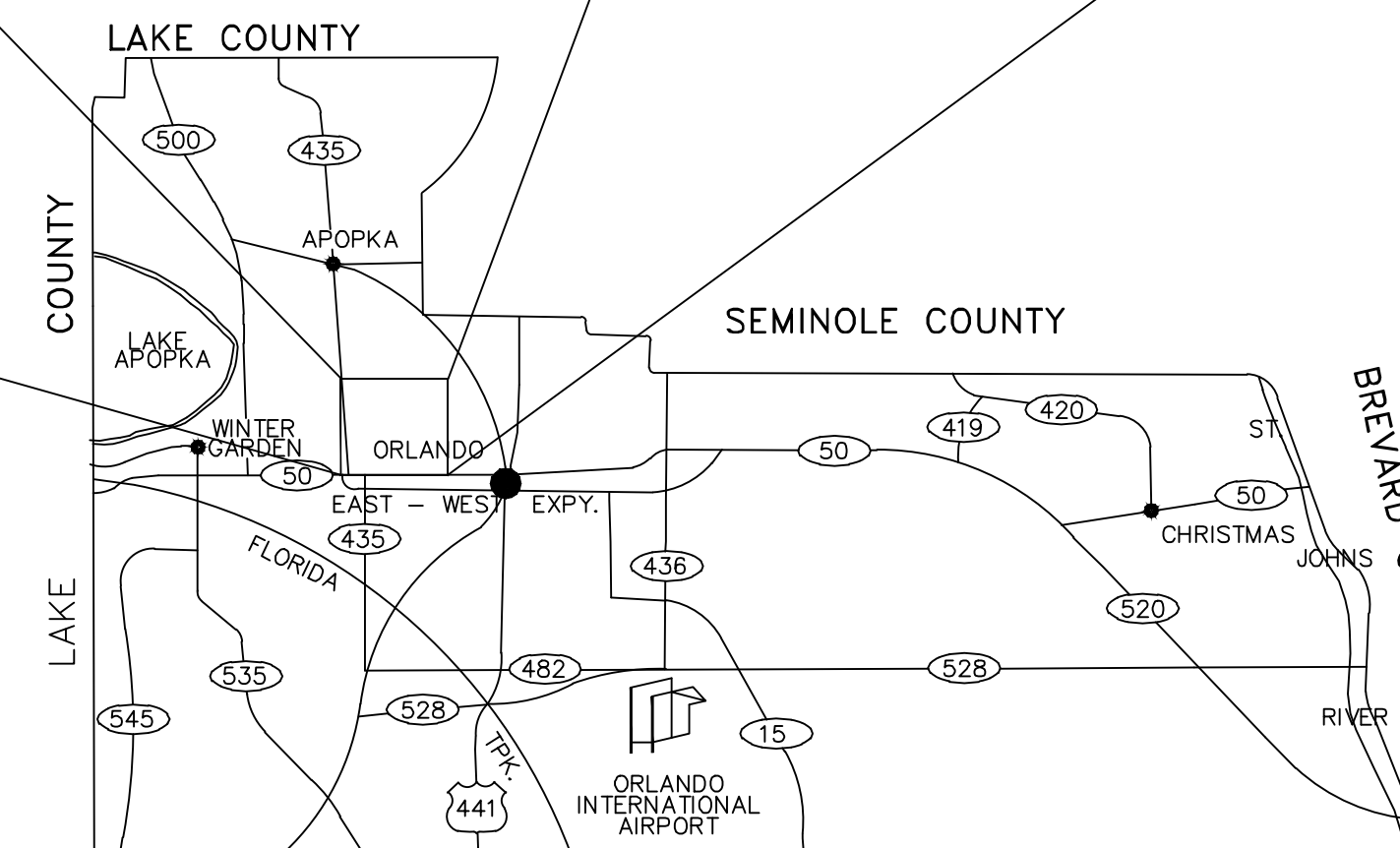
PROJECT ADDRESS:
P. S. # 3597
14370 S.R. 535
ORLANDO FL, 32821

R 28 E

ORANGE COUNTY, FLORIDA

SCALE: 1" = 1,000'

NOTE:
SEE SURVEYS FOR SPECIFIC LOCATIONS

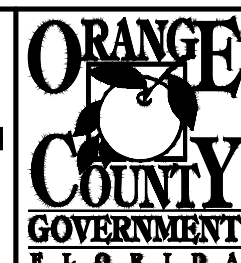


ORANGE COUNTY, FLORIDA

SCALE: 1" = 50,000'

REV	DATE	DESCRIPTION

LINE IS 2 INCHES
AT FULL SIZE
(IF NOT SCALE ACCORDINGLY)



ORANGE COUNTY UTILITIES DEPARTMENT ENGINEERING DIVISION
9150 CURRY FORD ROAD ORLANDO, FL. 32825



A Full Service A & E Firm
Architects M/E/P
Engineers Planners
Environmental Surveyors
Landscape Architects Traffic/Transportation

Licenses:
Eng. C.O.A. No. 3215
Survey L.B. No. 7143
Arch. Lic. No. AA2600926
Landscape Lic. No. LC0000298

**DRAWING INDEX AND LOCATION MAPS
SOUTHWEST MARRIOTT PUMP STATION #3597
ODOR CONTROL SYSTEM**

MASON GARDBERG, P.E.
PROFESSIONAL ENGINEER
FLORIDA LICENSE # 86595

OCU FILE NO.: 80046
DESIGNED BY: MG
DRAWN BY: CKJ
CHECKED BY: DEM
CADD FILE: O28518 G-200.dwg

SCALE: AS SHOWN
DRAWING NO.:
G-200
SHEET: 2 OF 13

BID SET

GENERAL NOTES

- EXCAVATE CAUTIOUSLY** LOCATIONS OF EXISTING UTILITIES INDICATED HERE IN ARE BASED ON BEST AVAILABLE INFORMATION AND ARE NOT TO BE CONSIDERED ALL INCLUSIVE. CONTRACTOR SHALL VERIFY EXACT LOCATION, CHARACTER AND NATURE OF ALL EXISTING AND PROPOSED UTILITIES PRIOR TO BEGINNING CONSTRUCTION AND PRIOR TO FABRICATION OF PIPING AND EQUIPMENT TO ENSURE PROPER ASSEMBLY OF ALL ITEMS.
- LOCATIONS AND DIMENSION OF EXISTING RIGHTS-OF-WAY AND EASEMENTS ARE BASED ON BEST AVAILABLE INFORMATION. CONTRACTOR SHALL VERIFY THE LIMITS OF THE RIGHTS-OF-WAY AND EASEMENTS IN ORDER TO AVOID ENCROACHMENTS.
- COVER OVER ALL PIPES SHALL BE THREE (3) FEET MINIMUM, OR AS SHOWN.
- PIPES SHALL NOT BE DEFLECTED.
- ALL EXCAVATIONS SHALL BE BACK FILLED AT THE END OF EACH WORK DAY. ALL FINAL BACK FILL IS TO BE COMPACTED TO 98% OF MAXIMUM MODIFIED PROCTOR.
- ALL SITE WORK SHALL BE COORDINATED WITH THE COUNTY RESIDENT PROJECT REPRESENTATIVE (RPR).
- THE ELEVATIONS SHOWN ARE BASED ON NGVD 1929 DATUM.
- ALL PROPOSED DUCTILE IRON M.J. FITTINGS, PIPES, OR RESTRAINTS WITHIN FORTY (40) FEET OF EXISTING GAS MAINS SHALL BE POLYETHYLENE ENCASED.
- ALL EXISTING AND PROPOSED WATER, WASTEWATER AND REUSE VALVES SHALL BE OPERATED BY ORANGE COUNTY UTILITIES AUTHORIZED REPRESENTATIVES. EXISTING VALVE BOXES AND MANHOLES, WHICH ARE TO REMAIN, SHALL BE ADJUSTED TO THE FINISHED GRADE. ALL VALVES UNDER CONSTRUCTION SHALL REMAIN CLOSED DURING CONSTRUCTION.
- THE CONTRACTOR SHALL PROVIDE AND MAINTAIN ON-SITE DURING THE LIFE OF THE PROJECT, A WEATHERPROOF ENCLOSURE CONTAINING A READILY ACCESSIBLE LIST OF EMERGENCY CONTACTS AND PHONE NUMBERS.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE SATISFACTION OF ALL REQUIREMENTS OF REGULATORY AGENCY PERMITS WITH REGARD TO CONSTRUCTION ACTIVITIES AND RELATED CONDITIONS.
- THE CONTRACTOR SHALL CALL SUNSHINE STATE ONE CALL NO LESS THAN FOURTY-EIGHT (48) HOURS PRIOR TO THE START OF CONSTRUCTION. - PHONE - 800-432-4777.
- ADVANCE NOTIFICATION OF CONSTRUCTION**
THE ORANGE COUNTY UTILITY CONSTRUCTION SECTION (407) 254-9798, SHALL BE NOTIFIED AT LEAST SEVEN (7) DAYS PRIOR TO ANY CONSTRUCTION ACTIVITY.
- IN AREAS WHERE CONSTRUCTION ACTIVITIES RESTRICT NORMAL ACCESS TO PROPERTIES, THE CONTRACTOR SHALL PROVIDE AND MAINTAIN ALTERNATE ACCESS ROUTES WHICH ARE SUBJECT TO APPROVAL BY THE ENGINEER, AS PART OF THE M.O.T. PLAN.
- THE DISPOSAL OF ANY EXCESS EARTH WORK MATERIAL SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
- THE CONTRACTOR SHALL REPLACE WITH EQUAL MATERIAL, OR AS DIRECTED BY THE RPR, ALL PAVING, GRASSED AREAS, STABILIZED EARTH, DRIVEWAYS, ETC., DISTURBED OR DAMAGED BY THE CONSTRUCTION OR RELATED ACTIVITIES. ALL DISTURBED AREAS SHALL BE SODDED, EXCEPT DIRT DRIVES AND WHERE INDICATED IN THE DRAWINGS.
- SALVAGE AND/OR DISPOSAL OF ALL EXISTING EQUIPMENT SHALL BE AT THE DIRECTION OF THE RPR.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROPER DISPOSAL OF ALL STRUCTURES, PIPE, CONDUIT, WIRE, FITTINGS, PANELS, ETC. THAT ARE DEMOLISHED, DISASSEMBLED, OR REMOVED, PER SECTION 02080 OF THE SPECIFICATION MANUAL OF THIS PROJECT.
- OPERATION OF ORANGE COUNTY PUMP STATIONS** THE CONTRACTOR SHALL COORDINATE ALL PUMP STATION OPERATIONS AND SHUT DOWN CONTROL WITH THE ORANGE COUNTY RPR.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DE-WATERING REQUIRED DURING CONSTRUCTION AND TO OBTAIN AND PAY FOR ALL PERMITS REQUIRED FOR THE TEMPORARY DEWATERING OF DRAINAGE STRUCTURES.
- REPAIR IMMEDIATELY**
ALL DAMAGE TO ORANGE COUNTY MAINS SHALL BE REPAIRED IMMEDIATELY BY THE CONTRACTOR AT THE CONTRACTOR'S EXPENSE. IF THE REPAIR IS NOT DONE IN A TIMELY MANNER, AS DETERMINED BY THE ORANGE COUNTY UTILITY INSPECTOR, ORANGE COUNTY MAY PERFORM REPAIRS AND THE CONTRACTOR WILL BE CHARGED FOR SAID REPAIRS.
- TELEPHONE NOTIFICATIONS**
THE ORANGE COUNTY DISPATCH OPERATOR SHALL BE NOTIFIED IMMEDIATELY IN THE EVENT OF A FORCEMAIN, GRAVITY SEWER, OR WATER MAIN BREAK OR DAMAGE AT (407)836-2777 (24-HOURS ASSISTANCE).
- ALL WORK AND MATERIAL SHALL CONFORM TO THE ORANGE COUNTY UTILITIES STANDARDS AND CONSTRUCTION SPECIFICATIONS MANUAL, LATEST EDITION OR AS INDICATED IN THE PROJECT SPECIFICATIONS OR DRAWINGS.

POWER AND WATER SUPPLY NOTES:

- THE CONTRACTOR SHALL CONTACT THE APPROPRIATE UTILITY PROVIDER FOR POWER AND WATER SERVICE, AND SHALL INCLUDE IN HIS BID ALL PROVIDER CHARGES FOR MATERIALS, LABOR, ONE-TIME NONRECURRING CONSTRUCTION COSTS AND OTHER COSTS, INCLUDING WATER METER, ASSESSED BY THE PROVIDER, WHETHER OR NOT INDICATED ON THE DRAWINGS, OR SPECIFIED.
- THE CONTRACTOR SHALL COORDINATE THE INSTALLATION OF THE POWER SUPPLY AND THE WATER SYSTEM RELOCATION AND INSTALLATION WITH THE SUPPLIER.
- THE POWER PROVIDER SHALL MAKE ALL SECONDARY TERMINATIONS AT POWER TRANSFORMERS.
- THE WATER SUPPLIER WILL PERFORM THE REQUIRED RELOCATIONS AND MAKE ALL CONNECTIONS TO THE EXISTING WATER SYSTEM, INCLUDING WATER METER INSTALLATION.
- POWER SUPPLIER: DUKE ENERGY (REFER TO SECTION 1610)
- WATER SUPPLIER: O. C. U. EXISTING

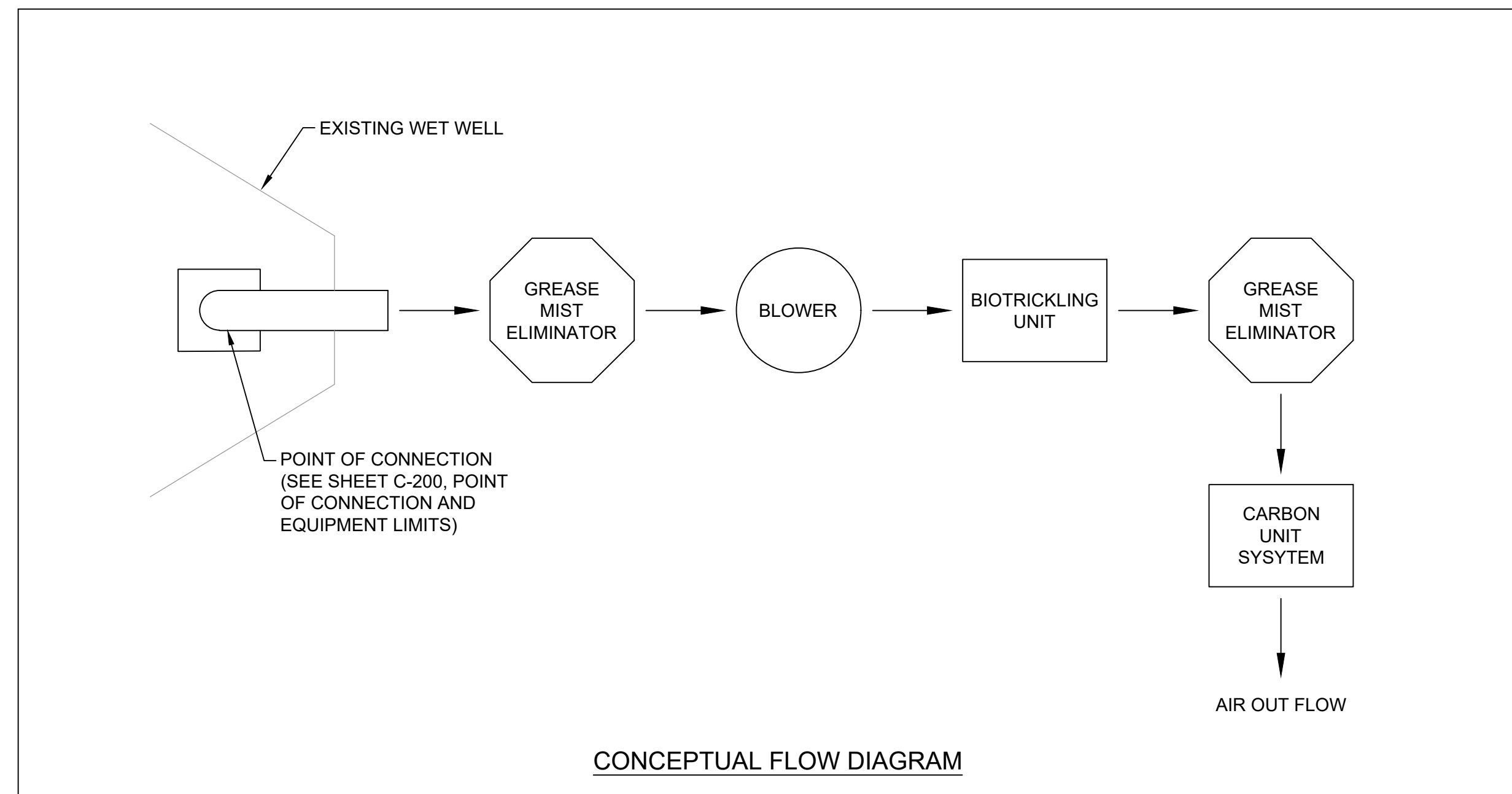
LEGEND

→	GUY WIRE AND ANCHOR	=====	EXISTING STORM PIPE
[CAP	— BT —	EXISTING BURIED TELEPHONE
⊥	PLUG	— FO —	EXISTING FIBER OPTIC CABLE
⊕	BENCHMARK	— BEL —	EXISTING BURIED ELECTRIC
⊗	TREE (TYPE & SIZE NOTED)	— OE —	EXISTING OVERHEAD ELECTRIC
⊙	SHRUB	— BCL —	EXISTING CABLE TV (BURIED)
XX.XX	PROPOSED ELEVATION	XX.XX	EXISTING ELEVATION
FM	PROPOSED FORCE MAIN	=====	EXISTING FORCE MAIN
SAN	PROPOSED GRAVITY MAIN	=====	EXISTING GRAVITY MAIN
WS	PROPOSED WATER SERVICE	=====	EXISTING WATER MAIN
○	PROPOSED CHAIN-LINK FENCE	○	EXISTING CHAN-LINK FENCE
□	PROPOSED WOOD FENCE	□	EXISTING WOOD FENCE
POLE_ID	PROPOSED POWER POLE	POLE_ID	EXISTING POWER POLE
⊙	PROPOSED MANHOLE (SPECIFY)	⊙	EXISTING MANHOLE (SPECIFY)
⊕	PROPOSED VALVE (SPECIFY)	⊕	EXISTING VALVE (SPECIFY)
WM	PROPOSED WATER METER	WM	EXISTING WATER METER
⊕	PROPOSED BACK-FLOW PREVENTER	⊕	EXISTING BACK-FLOW PREVENTER
—	PROPOSED SILT FENCE		

ABBREVIATIONS

AKA	ALSO KNOWN AS	L.S.	LIFT STATION
AC	ASBESTOS CEMENT	LT	LEFT
ALUM.	ALUMINUM	L.W.L.	LOW WATER LEVEL
APPROX.	APPROXIMATELY	MAX.	MAXIMUM
ASPH.	ASPHALT	MATL	MATERIAL
ASSEM.	ASSEMBLY	MANH.	MANHOLE
BE	BURIED ELECTRIC	MIN.	MINIMUM
B.L.	BASELINE	MOD.	MODIFIED
B.M.	BENCHMARK	M.O.T.	MAINTENANCE OF TRAFFIC
B.O.	BLOWOFF	M.J.	MECHANICAL JOINT
BCL	BURRIED CABLE LINE	N.G.	NATURAL GROUND
BT	BURIED TELEPHONE	NO.	NUMBER
B.F.V.	BUTTERFLY VALVE	NPW	NON-POTABLE WATER
CATV	CABLE TELEVISION	N.T.S.	NOT TO SCALE
C.B.	CATCH BASIN	O.C.U.	ORANGE COUNTY UTILITIES
C.F.S.	CUBIC FEET PER SECOND	O.D.	OUTSIDE DIAMETER
CIP	CAST IRON PIPE	O.H.E.	OVERHEAD ELECTRIC
CL	CENTERLINE	O.U.C.	ORLANDO UTILITY COMMISSION
C.M.	CONCRETE MONUMENT	PAVT.	PAVEMENT
C.M.P.	CORRUGATED METAL PIPE	P.B.	PULL BOX
CONC.	CONCRETE	PG.	PAGE
CONN.	CONNECTION	P.I.	POINT OF INTERSECTION
CONST.	CONSTRUCT	PL	PROPERTY LINE
CONT.	CONTINUOUS	POLY.	POLYETHYLENE
CORP.	CORPORATION	PP	POWER POLE
C.V.	CHECK VALVE	PROP.	PROPOSED
C.Y.	CUBIC YARD	PS	PUMP STATION
DBL.	DOUBLE	P.S.I.	POUNDS PER SQUARE INCH
DHW.	DESIGN HIGH WATER	P.U.E.	PERMANENT UTILITY EASEMENT
DIA.	DIAMETER	PV	PLUG VALVE
DIP	DUCTILE IRON PIPE	RAD. PT.	RADIUS POINT
DWLS.	DOWELS	R	RADIUS
DWG.	DRAWING	RCP	REINFORCED CONCRETE PIPE
ELEC	ELECTRIC	REINF.	REINFORCED
EA.	EACH	REQ.	REQUIRED
EFF	EFFLUENT	RPZ	REDUCED PRESSURE ZONE BACKFLOW PREVENTER
ELEV.	ELEVATION	RT.	RIGHT
EMB.	EMBED OR EMBEDDED	RW	RECLAIMED WATER
E/P	EDGE OF PAVEMENT	R/W	RIGHT OF WAY
ESMT.	EASEMENT	SAN.	SANITARY SEWER
E.W.	EACH WAY	SCH.	SCHEDULE
EXIST.	EXISTING	S.D.	STORM DRAIN
EXP. JT.	EXPANSION JOINT	S.F.	SQUARE FEET
F.D.	FLOOR DRAIN	S.F.	ENVIRONMENTAL PROTECTION SHEET
F.D.E.P.	FLORIDA DEPT. OF ENVIRONMENTAL PROTECTION	SHT.	SHEET
F.D.O.T.	FLORIDA DEPT. OF TRANSPORTATION	SPECS.	SPECIFICATIONS
F.F.	FINISHED FLOOR	SQ.	SQUARE
F.H.	FIRE HYDRANT	SS	STAINLESS STEEL
FKA	FORMALLY KNOWN AS	STA.	STATION
FLG.	FLANGE	STD.	STANDARD
FL.	FLOW LINE	STL.	STEEL
FM	FORCEMAIN	S.Y.	SQUARE YARDS
FT.	FEET	TEL	TELEPHONE
FTG.	FOOTING	T&B	TOP AND BOTTOM
GA	GAUGE	TBM	TEMPORARY BENCH MARK
GAL.	GALLONS	TCE	TEMPORARY CONSTRUCTION EASEMENT
GEN.	GENERATOR	TEMP.	TEMPORARY
GRD.	GROUND	THD.	THREADED
G.S.P.	GALVANIZED STEEL PIPE	THK.	THICK
GM	GAS MAIN	TYP.	TYPICAL
GPM	GALLONS PER MINUTE	U.G.	UNDERGROUND
GV	GATE VALVE	VAC	VOLTAGE ALTERNATING CURRENT
HB	HOSE BIBB	VCP	VITRIFIED CLAY PIPE
HDWL.	HEADWALL	VDC	VOLTAGE DIRECT CURRENT
HT.	HEIGHT	VERT.	VERTICAL
HP	HIGH POINT	V.V.H.	VERIFIED VERTICALLY & HORIZONTALLY
HORIZ.	HORIZONTAL	W/	WITH
H.W.L.	HIGH WATER LEVEL	WM	WATERMAIN
I.E.	INVERT ELEVATION	WM	WATER METER
I.D.	INSIDE DIAMETER	WP	WALL PIPE
IN.	INCHES	WS	WATER SERVICE
INV.	INVERT	W.S.	WATER SURFACE
I.P.	IRON PIPE	WWF	WELDED WIRE FABRIC
I.R.	IRON ROD	"X"	SPOT ELEVATION
J.B.	JUNCTION BOX		
JUNC.	JUNCTION		
LAT.	LATERAL		
LF	LINEAR FEET		

REF:NNNN REFERENCE MADE TO AN APPLICABLE SECTION(S) OF THE TECHNICAL SPECIFICATIONS FOR THIS PROJECT.



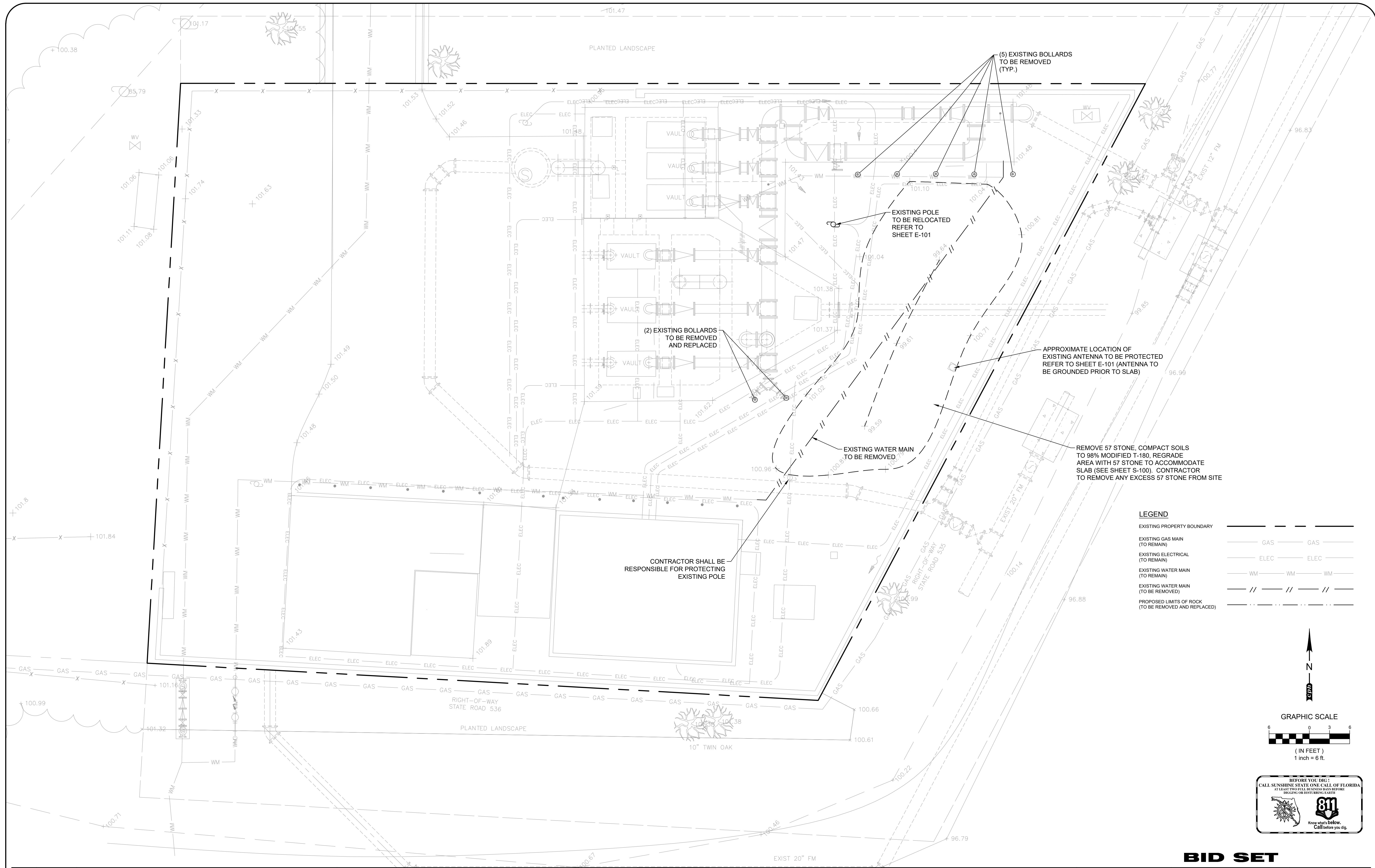
CONCEPTUAL FLOW DIAGRAM

EMERGENCY NUMBER

CABLE	ADELPHIA-----	877-321-5465
CABLE	INTERMEDIA COMMUNICATIONS (MCI)-----	800-624-9675
CABLE	BRIGHT HOUSE NETWORKS-----	407-295-9119 --- EXT - 8583
ELECTRIC	PROGRESS ENERGY FLORIDA-----	800-700-8744
GAS	TECO PEOPLES GAS-----	877-832-6747
LOCATES	SUNSHINE ONE CALL-----	800-432-4770
TELEPHONE	BELL SOUTH-----	800-432-1424
UTILITIES	ORANGE COUNTY DISPATCH -----	407-836-2777 (24-HR ASSISTANCE)
WASTEWATER	ORANGE COUNTY UTILITIES (O. C. U.)-----	407-254-9680
WATER	ORANGE COUNTY UTILITIES (O. C. U.)-----	407-254-9850
ELECTRICAL	DUKE ENERGY -----	407-938-6685

BID SET

REV	DATE	DESCRIPTION			ORANGE COUNTY UTILITIES DEPARTMENT ENGINEERING DIVISION 9150 CURRY FORD ROAD ORLANDO, FL. 32825	A Full Service A & E Firm Architects M/E/P Engineers Planners Environmental Surveyors Landscape Architects Traffic/Transportation	Licenses: Eng. C.O.A. No. 3215 Survey L.B. No. 7143 Arch. Lic. No. AA2600926 Lndscp. Lic. No. LC0000298	GENERAL NOTES, ABBREVIATIONS AND LEGEND SOUTHWEST MARRIOTT PUMP STATION #3597 ODOR CONTROL SYSTEM	OCU FILE NO.: 80046 DESIGNED BY: MG DRAWN BY: CKJ CHECKED BY: DEM CADD FILE: O28518 G-300.dwg	SCALE: NONE DRAWING NO.: G-300 SHEET: 3 OF 13
-----	------	-------------	--	--	---	--	---	---	---	---



(5) EXISTING BOLLARDS TO BE REMOVED (TYP.)

EXISTING POLE TO BE RELOCATED REFER TO SHEET E-101

(2) EXISTING BOLLARDS TO BE REMOVED AND REPLACED

APPROXIMATE LOCATION OF EXISTING ANTENNA TO BE PROTECTED REFER TO SHEET E-101 (ANTENNA TO BE GROUNDED PRIOR TO SLAB)

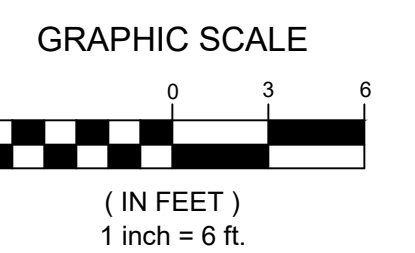
EXISTING WATER MAIN TO BE REMOVED

REMOVE 57 STONE, COMPACT SOILS TO 98% MODIFIED T-180, REGRADE AREA WITH 57 STONE TO ACCOMMODATE SLAB (SEE SHEET S-100). CONTRACTOR TO REMOVE ANY EXCESS 57 STONE FROM SITE

CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING EXISTING POLE

LEGEND

- EXISTING PROPERTY BOUNDARY
- EXISTING GAS MAIN (TO REMAIN)
- EXISTING ELECTRICAL (TO REMAIN)
- EXISTING WATER MAIN (TO REMAIN)
- EXISTING WATER MAIN (TO BE REMOVED)
- PROPOSED LIMITS OF ROCK (TO BE REMOVED AND REPLACED)



BID SET

REV	DATE	DESCRIPTION

LINE IS 2 INCHES AT FULL SIZE (IF NOT SCALE ACCORDINGLY)

ORANGE COUNTY GOVERNMENT
ORANGE COUNTY UTILITIES DEPARTMENT ENGINEERING DIVISION
 9150 CURRY FORD ROAD ORLANDO, FL. 32825

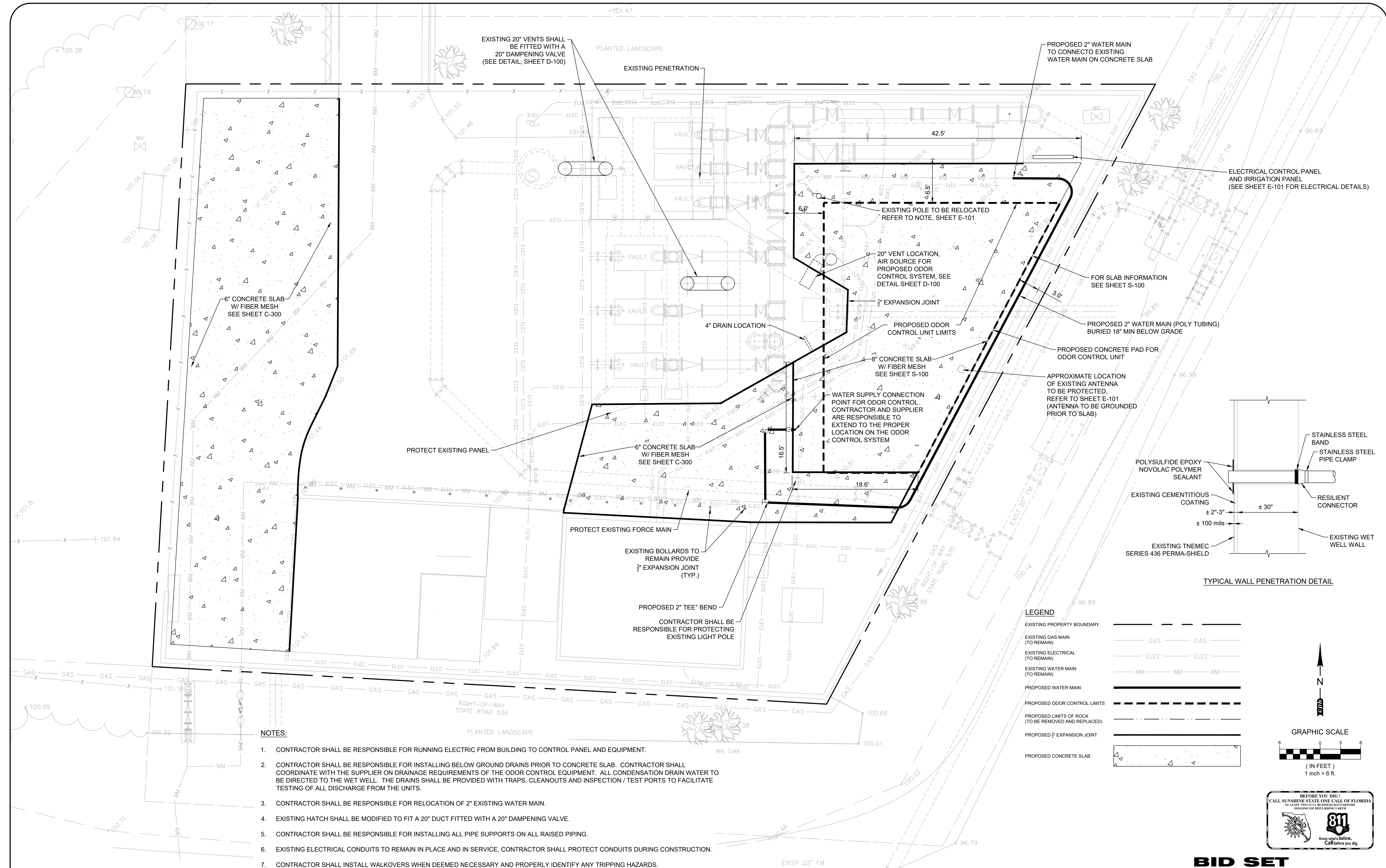
cph
 www.cphcorp.com

A Full Service A & E Firm
 Architects M/E/P Planners Environmental Surveyors Landscape Architects Traffic/Transportation
 Licenses: Eng. C.O.A. No. 3215 Survey L.B. No. 7143 Arch. Lic. No. AA2600926 Lndscp. Lic. No. LC0000298
 1117 East Robinson Street - Orlando, FL 32801 - Phone: 407.425.0452

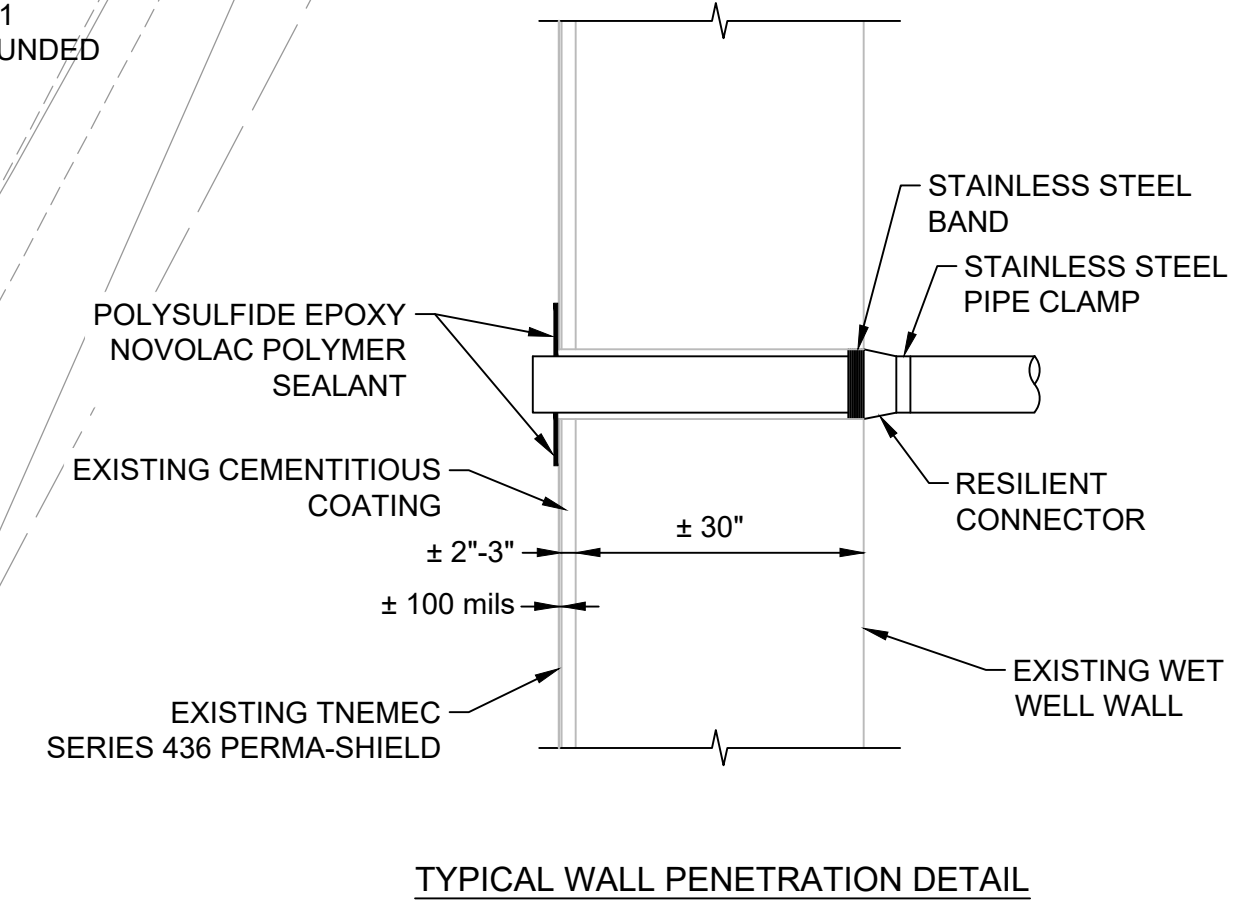
SITE PLAN - DEMOLITION
SOUTHWEST MARRIOTT PUMP STATION #357
ODOR CONTROL SYSTEM

OCU FILE NO.: 80046	SCALE: As Shown
DESIGNED BY: MG	DRAWING NO.: C-100
DRAWN BY: CKJ	SHEET: 4 OF 13
CHECKED BY: DEM	
CADD FILE: O28518 C-100.dwg	

MASON GARDBERG, P.E.
 PROFESSIONAL ENGINEER
 FLORIDA LICENSE # 86595

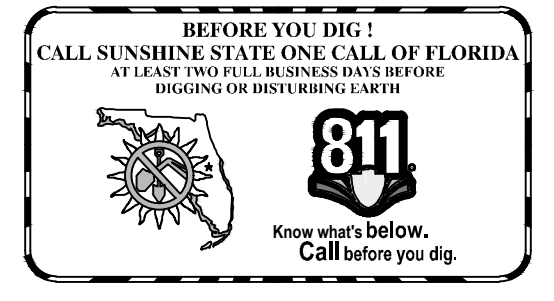
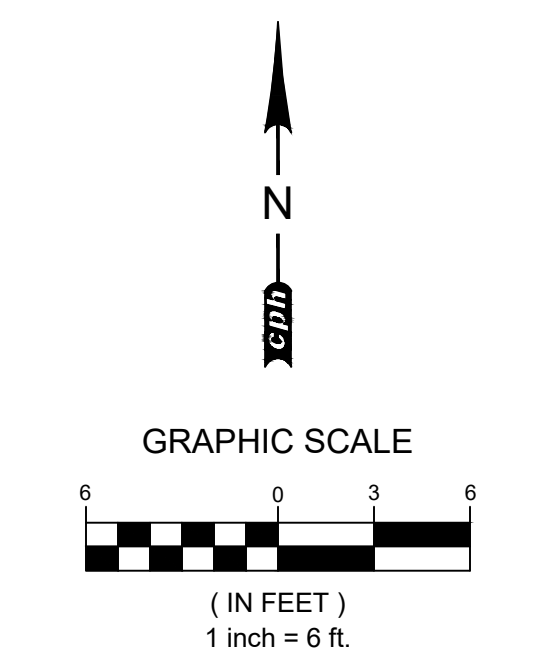


- NOTES:**
- CONTRACTOR SHALL BE RESPONSIBLE FOR RUNNING ELECTRIC FROM BUILDING TO CONTROL PANEL AND EQUIPMENT.
 - CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLING BELOW GROUND DRAINS PRIOR TO CONCRETE SLAB. CONTRACTOR SHALL COORDINATE WITH THE SUPPLIER ON DRAINAGE REQUIREMENTS OF THE ODOR CONTROL EQUIPMENT. ALL CONDENSATION DRAIN WATER TO BE DIRECTED TO THE WET WELL. THE DRAINS SHALL BE PROVIDED WITH TRAPS, CLEANOUTS AND INSPECTION / TEST PORTS TO FACILITATE TESTING OF ALL DISCHARGE FROM THE UNITS.
 - CONTRACTOR SHALL BE RESPONSIBLE FOR RELOCATION OF 2" EXISTING WATER MAIN.
 - EXISTING HATCH SHALL BE MODIFIED TO FIT A 20" DUCT FITTED WITH A 20" DAMPENING VALVE.
 - CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLING ALL PIPE SUPPORTS ON ALL RAISED PIPING.
 - EXISTING ELECTRICAL CONDUITS TO REMAIN IN PLACE AND IN SERVICE. CONTRACTOR SHALL PROTECT CONDUITS DURING CONSTRUCTION.
 - CONTRACTOR SHALL INSTALL WALKOVERS WHEN DEEMED NECESSARY AND PROPERLY IDENTIFY ANY TRIPPING HAZARDS.



LEGEND

EXISTING PROPERTY BOUNDARY	---
EXISTING GAS MAIN (TO REMAIN)	GAS --- GAS
EXISTING ELECTRICAL (TO REMAIN)	ELEC --- ELEC
EXISTING WATER MAIN (TO REMAIN)	WM --- WM
PROPOSED WATER MAIN	---
PROPOSED ODOR CONTROL LIMITS	---
PROPOSED LIMITS OF ROCK (TO BE REMOVED AND REPLACED)	---
PROPOSED 1/2" EXPANSION JOINT	---
PROPOSED CONCRETE SLAB	---



BID SET

REV	DATE	DESCRIPTION

LINE IS 2 INCHES
AT FULL SIZE
(IF NOT SCALE ACCORDINGLY)

ORANGE COUNTY GOVERNMENT
ORANGE COUNTY UTILITIES DEPARTMENT ENGINEERING DIVISION
 9150 CURRY FORD ROAD ORLANDO, FL. 32825

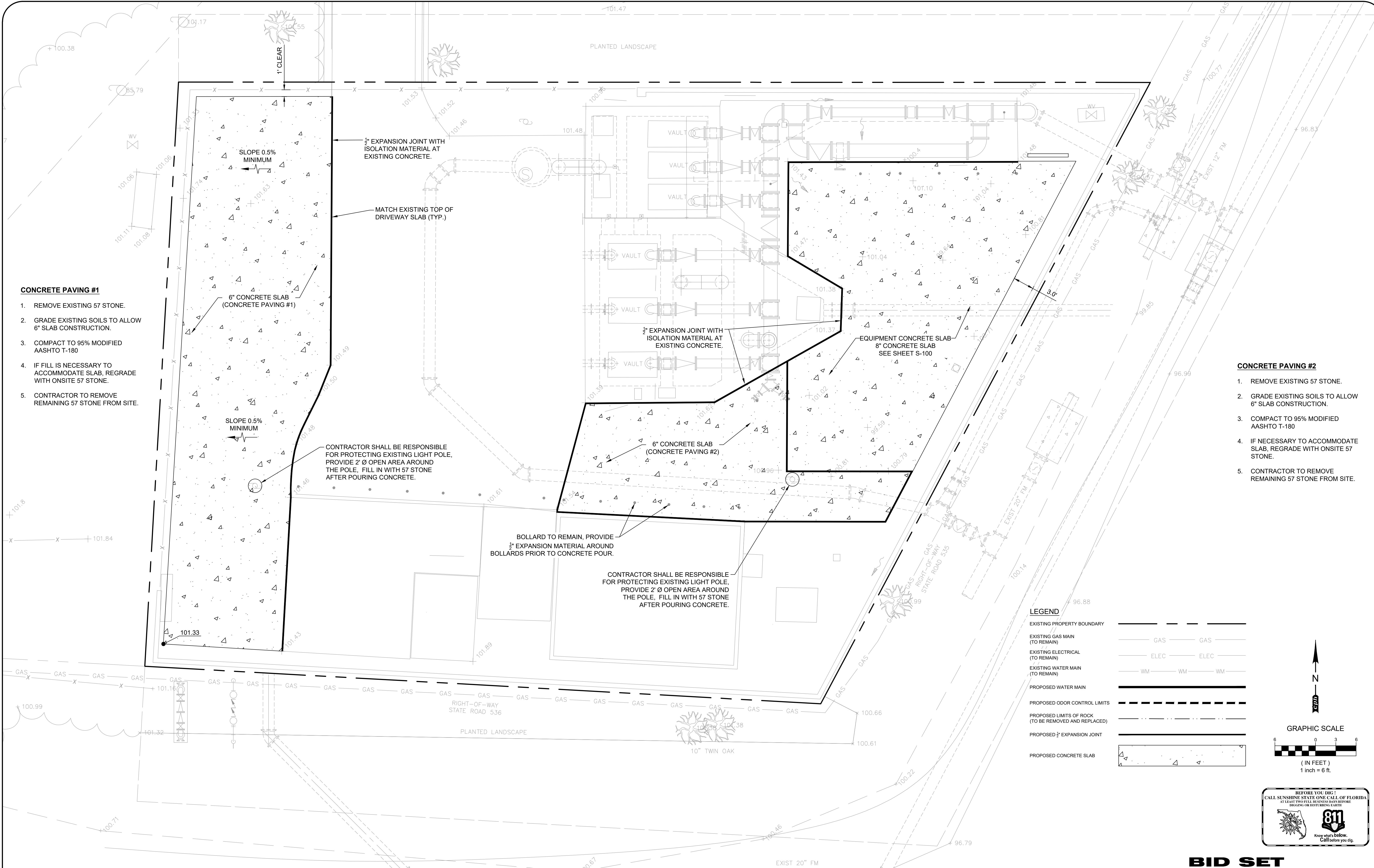
cph
 www.cphcorp.com

A Full Service A & E Firm
 Architects M/E/P
 Engineers Planners
 Environmental Surveyors
 Landscape Architects Traffic/Transportation
 Licenses:
 Eng. C.O.A. No. 3216
 Survey L.B. No. 7143
 Arch. Lic. No. AA2600926
 Lndscp. Lic. No. LC0000298

SITE PLAN - ODOR CONTROL SYSTEM
SOUTHWEST MARRIOTT PUMP STATION #3597
ODOR CONTROL SYSTEM

OCU FILE NO.: 80046	SCALE: x
DESIGNED BY: MG	DRAWING NO.: C-200
DRAWN BY: CKJ	SHEET: 5 OF 13
CHECKED BY: DEM	
CADD FILE: O28518 C-200.dwg	

MASON GARDBERG, P.E.
 PROFESSIONAL ENGINEER
 FLORIDA LICENSE # 86595



CONCRETE PAVING #1

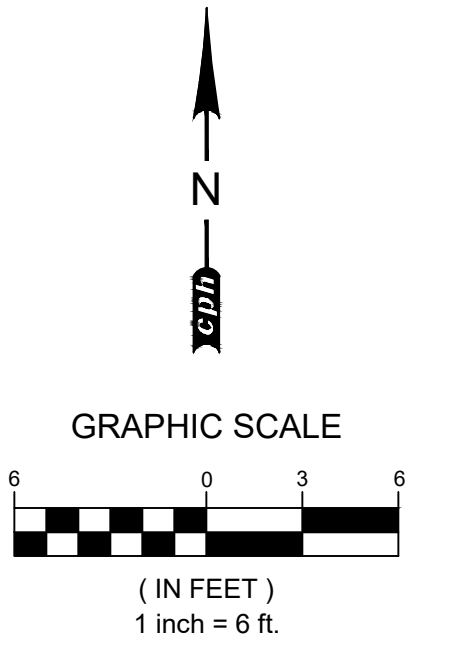
1. REMOVE EXISTING 57 STONE.
2. GRADE EXISTING SOILS TO ALLOW 6" SLAB CONSTRUCTION.
3. COMPACT TO 95% MODIFIED AASHTO T-180
4. IF FILL IS NECESSARY TO ACCOMMODATE SLAB, REGRADE WITH ONSITE 57 STONE.
5. CONTRACTOR TO REMOVE REMAINING 57 STONE FROM SITE.

CONCRETE PAVING #2

1. REMOVE EXISTING 57 STONE.
2. GRADE EXISTING SOILS TO ALLOW 6" SLAB CONSTRUCTION.
3. COMPACT TO 95% MODIFIED AASHTO T-180
4. IF NECESSARY TO ACCOMMODATE SLAB, REGRADE WITH ONSITE 57 STONE.
5. CONTRACTOR TO REMOVE REMAINING 57 STONE FROM SITE.

LEGEND

EXISTING PROPERTY BOUNDARY	---
EXISTING GAS MAIN (TO REMAIN)	GAS GAS
EXISTING ELECTRICAL (TO REMAIN)	ELEC ELEC
EXISTING WATER MAIN (TO REMAIN)	WM WM WM
PROPOSED WATER MAIN	---
PROPOSED ODOR CONTROL LIMITS	---
PROPOSED LIMITS OF ROCK (TO BE REMOVED AND REPLACED)	---
PROPOSED 3/4" EXPANSION JOINT	---
PROPOSED CONCRETE SLAB	▲



BID SET

REV	DATE	DESCRIPTION

LINE IS 2 INCHES
AT FULL SIZE
(IF NOT SCALE ACCORDINGLY)

ORANGE COUNTY GOVERNMENT
ORANGE COUNTY UTILITIES DEPARTMENT ENGINEERING DIVISION
 9150 CURRY FORD ROAD ORLANDO, FL. 32825

cph
 www.cphcorp.com

A Full Service A & E Firm
 Architects M/E/P
 Engineers Planners
 Environmental Surveyors
 Landscape Architects Traffic/Transportation
 Licenses:
 Eng. C.O.A. No. 3215
 Survey L.B. No. 7143
 Arch. Lic. No. AA260926
 Lndscp. Lic. No. LC0000298

SITE PLAN - CONCRETE PAVING
SOUTHWEST MARRIOTT PUMP STATION #3597
ODOR CONTROL SYSTEM

OCU FILE NO.: 80046	SCALE: x
DESIGNED BY: MG	DRAWING NO.:
DRAWN BY: CKJ	C-300
CHECKED BY: DEM	SHEET: 6 OF 13
CADD FILE: O28518 C-300.dwg	

MASON GARDBERG, P.E.
 PROFESSIONAL ENGINEER
 FLORIDA LICENSE # 86595

GENERAL CONDITIONS:

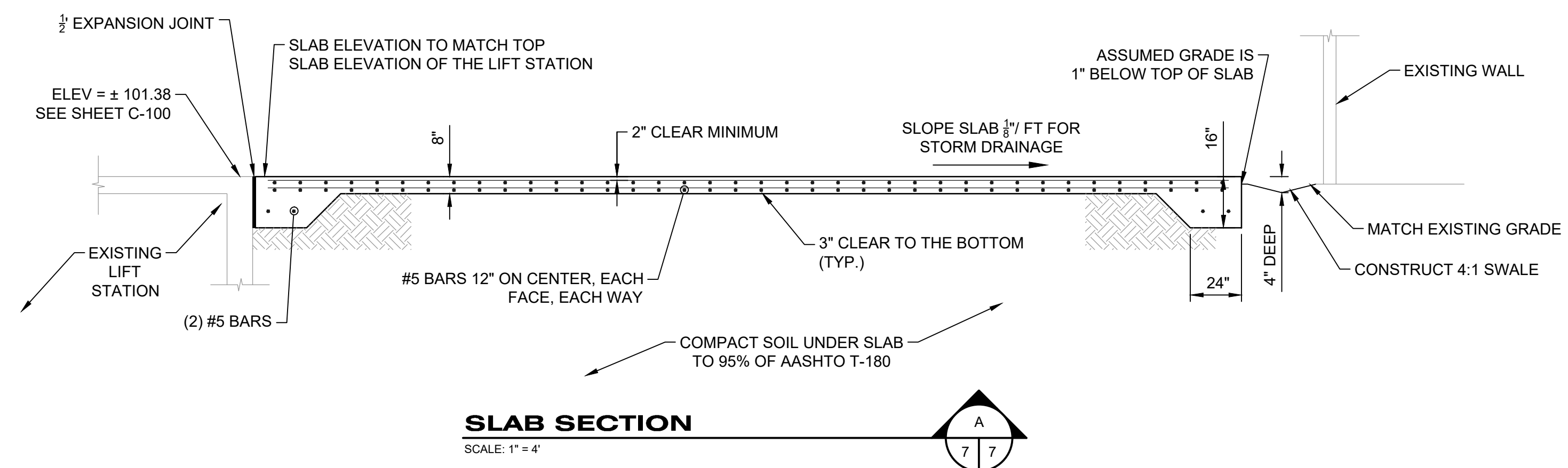
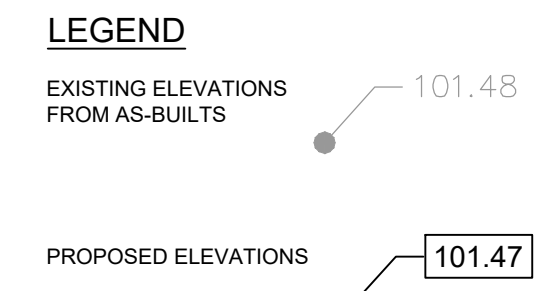
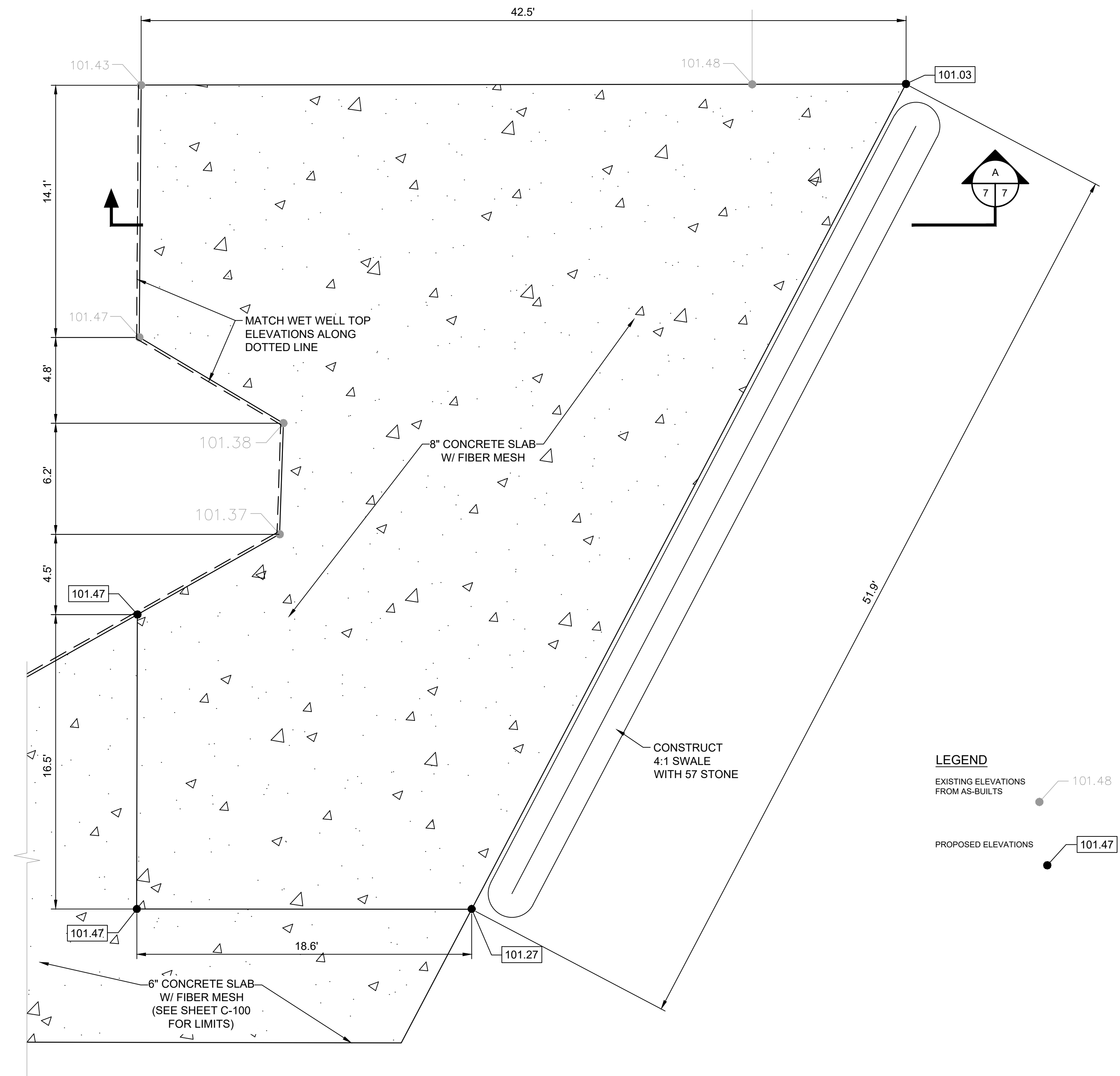
- THE FOLLOWING NOTES SHALL APPLY TO ALL STRUCTURAL DRAWINGS.
- ALL DESIGN AND CONSTRUCTION SHALL BE BASED ON AND IN ACCORDANCE WITH THE FLORIDA BUILDING CODE (FBC) 2014 - FIFTH EDITION.
- THE GENERAL CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND SITE CONDITIONS AND NOTIFY THE ENGINEER OF ALL DEVIATIONS PRIOR TO FABRICATION AND CONSTRUCTION.
- IF MATERIAL QUANTITIES, STRENGTHS OR SIZES INDICATED BY THE DRAWINGS OR SPECIFICATIONS ARE NOT IN AGREEMENT WITH THESE NOTES, THE BETTER QUALITY AND/OR QUANTITY, STRENGTH OR NOTED SHALL BE PROVIDED.
- IT IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO DETERMINE ERECTION PROCEDURE AND SEQUENCE TO ENSURE THE SAFETY OF THE STRUCTURE AND ITS COMPONENT PARTS DURING ERECTION. THIS INCLUDES, BUT IS NOT LIMITED TO, THE ADDITION OF TEMPORARY BRACING, GUYS, TIE-DOWNS OR SHORING MAY BE NECESSARY. SUCH MATERIAL SHALL BE REMOVED AND SHALL REMAIN THE PROPERTY OF THE CONTRACTOR AFTER THE COMPLETION OF THE PROJECT.
- IT SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR FOR INITIATING, MAINTAINING AND SUPERVISING ALL SAFETY PROCEDURES. THE STRUCTURAL ENGINEER OF RECORD IS NOT RESPONSIBLE FOR MEANS AND METHODS OF CONSTRUCTION OR FOR RELATED SAFETY PROCEDURES.
- THE STRUCTURAL DRAWINGS ARE ONE DISCIPLINE OF THE CONTRACT DOCUMENTS AND DO NOT BY THEMSELVES CONTAIN ALL THE INFORMATION REQUIRED TO PROPERLY COMPLETE THE PROJECT. THE GENERAL CONTRACTOR SHALL REFER TO THE CIVIL, MECHANICAL, ELECTRICAL AND PLUMBING DRAWINGS AND COORDINATE THE INFORMATION INDICATED IN THESE CONSTRUCTION DOCUMENTS WITH THE STRUCTURAL DRAWINGS TO PROPERLY CONSTRUCT THE PROJECT.
- ALL DETAILS, SECTIONS AND NOTES INDICATED ON THE CONSTRUCTION DOCUMENTS ARE INTENDED TO BE TYPICAL AND SHALL APPLY TO SIMILAR SITUATIONS ELSEWHERE UNLESS OTHERWISE SHOWN.
- DESIGN LIVE LOADS:
 - SLAB - 100 PSF
 - DESIGN WIND LOAD: (IN ACCORDANCE WITH 2012 FBC SECTION 1606)
 - ULTIMATE WIND SPEED (3 SECOND GUST): 145 MPH
 - BUILDING CATEGORY: III
 - WIND EXPOSURE CATEGORY: B
- SHOP DRAWINGS:
 - THE CONTRACTOR SHALL SUBMIT, SHOP DRAWINGS FOR ALL FABRICATED MATERIALS TO OWNER FOR REVIEW. REPRODUCTION OF CONTRACT DRAWINGS FOR SHOP DRAWINGS WILL NOT BE PERMITTED.
 - REVIEW OF SHOP DRAWINGS BY THE OWNER DOES NOT RELIEVE THE CONTRACTOR OF THE SOLE RESPONSIBILITY FOR ERRORS AND OMISSIONS ASSOCIATED WITH THE PREPARATION OF THOSE SHOP DRAWINGS.
- THE FOLLOWING SHOP DRAWINGS SHALL BE SUBMITTED:
 - CONCRETE MIX DESIGN
 - CONCRETE REINFORCING STEEL
- IT IS THE REQUIREMENT OF THE CONTRACTOR AND EQUIPMENT SUPPLIER TO MODIFY THE SLAB AS NECESSARY TO ACCOMMODATE THE PARTICULAR NEEDS OF THE SPECIFIC EQUIPMENT USED FOR THE ODOR CONTROL.
- SUPPLIER IS RESPONSIBLE FOR PROVIDING TIE DOWNS AND WIND LOAD RESTRAINTS (INCLUDING CALCULATIONS BY FLORIDA LICENSED ENGINEER) FOR THE STATED WIND LOAD ABOVE.

FOUNDATION:

- AREA SHALL BE FILLED AND GRADED TO BE APPROXIMATELY 8 INCHES BELOW THE TOP OF EXISTING CONCRETE SLAB.
- FILL SHALL BE PLACED IN MAXIMUM 3" LIFTS AND COMPACTED TO 95% AASHTO T-180.
- ALL EXCAVATION SHALL BE KEPT DRY. TAKE EVERY PRECAUTION TO GUARD AGAINST ANY MOVEMENT OR SETTLEMENT OF ADJACENT STRUCTURES, UTILITIES, PIPING, ETC.
- PROVIDE ANY BRACING OR SHORING NECESSARY TO AVOID SETTLEMENT OR DISPLACEMENT OF EXISTING FOUNDATION OR STRUCTURES.

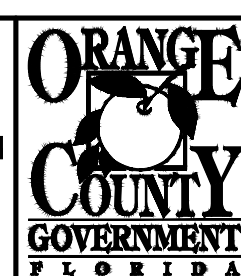
CONCRETE:

- CONCRETE SHALL HAVE THE FOLLOWING MINIMUM COMPRESSIVE STRENGTH AT 28 DAYS:
 - SLAB - 5000 PSI WITH MAXIMUM WATER/CEMENT RATIO OF 0.54
 - TYPE 5 CEMENT REQUIRED
 - XYPEX ADDITIVE REQUIRED. NO COLORATION FOR THE XYPEX. CONCRETE SUPPLIER TO SEND CERTIFICATION OF XYPEX ADDITIVE.
- ALL CONCRETE SHALL BE READY MIX AND SHALL BE IN ACCORDANCE WITH APPROVED CONCRETE DESIGN MIXES
- CONCRETE MIX SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF ACI 301 CHAPTER 3, METHOD 1 OR METHOD 3. CONTRACTOR SHALL SUBMIT BACKUP DATA PER CHAPTER 5 SECTION 5.3 OF ACI 318 LATEST EDITION.
- ALL REINFORCING STEEL SHALL BE NEW DOMESTIC DEFORMED BILLET STEEL CONFORMING TO ASTM A-615 GRADE 60. SUBMIT ALL SHOP DRAWINGS FOR APPROVAL PRIOR TO ANY FABRICATION.
- CONCRETE COVER FOR REINFORCING STEEL SHALL BE AS REQUIRED BY ACI SPECIFICATIONS.
- LAP ALL BARS MINIMUM 48 DIAMETERS UNLESS OTHERWISE NOTED ON DRAWINGS.
- ALL CONCRETE WORK SHALL CONFORM TO ACI 318 LATEST EDITION "THE BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE STRUCTURES", AND ACI 301 "SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS."
- ALL CONCRETE DETAILS SHALL CONFORM TO ACI 315 LATEST EDITION "MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES" UNLESS NOTED OTHERWISE ON THE DRAWINGS.
- CONTRACTOR SHALL VERIFY ANCHOR BOLT SIZES AND LOCATIONS PRIOR TO CONCRETE PLACEMENT.
- CONTRACTOR SHALL PROVIDE CHAIRS, BOLSTERS, SPACERS, ETC. AS REQUIRED TO SECURELY SUPPORT REINFORCEMENT.



REV	DATE	DESCRIPTION

LINE IS 2 INCHES
AT FULL SIZE
(IF NOT SCALE ACCORDINGLY)



ORANGE COUNTY UTILITIES DEPARTMENT ENGINEERING DIVISION
9150 CURRY FORD ROAD ORLANDO, FL. 32825



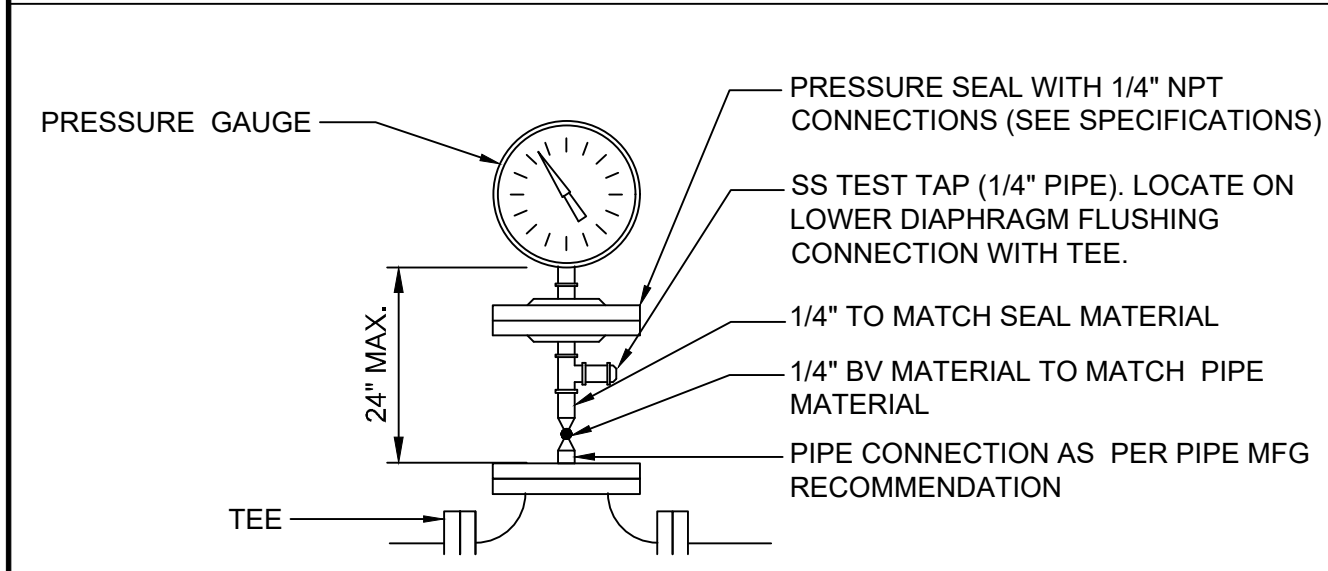
A Full Service A & E Firm
Architects M/E/P
Engineers Planners
Environmental Surveyors
Landscape Architects Traffic/Transportation
Licenses:
Eng. C.O.A. No. 3215
Survey L.B. No. 7143
Arch. Lic. No. AA2600926
Landscape Lic. No. LC0000298

**ODOR CONTROL EQUIPMENT SUPPORT SLAB DESIGN
SOUTHWEST MARRIOTT PUMP STATION #3597
ODOR CONTROL SYSTEM**

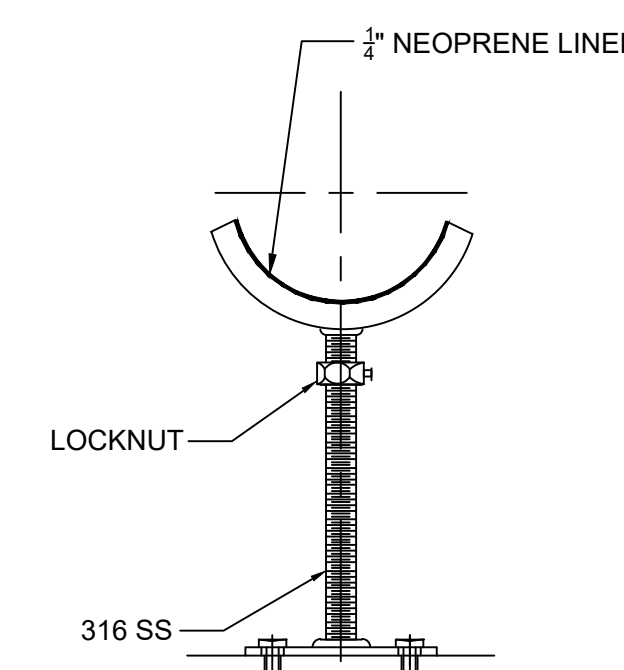
OCU FILE NO.: 80046	SCALE: As Shown
DESIGNED BY: MG	DRAWING NO.: S-100
DRAWN BY: CKJ	CHECKED BY: DEM
CADD FILE: O28518 S-100.dwg	SHEET: 7 OF 13

BID SET

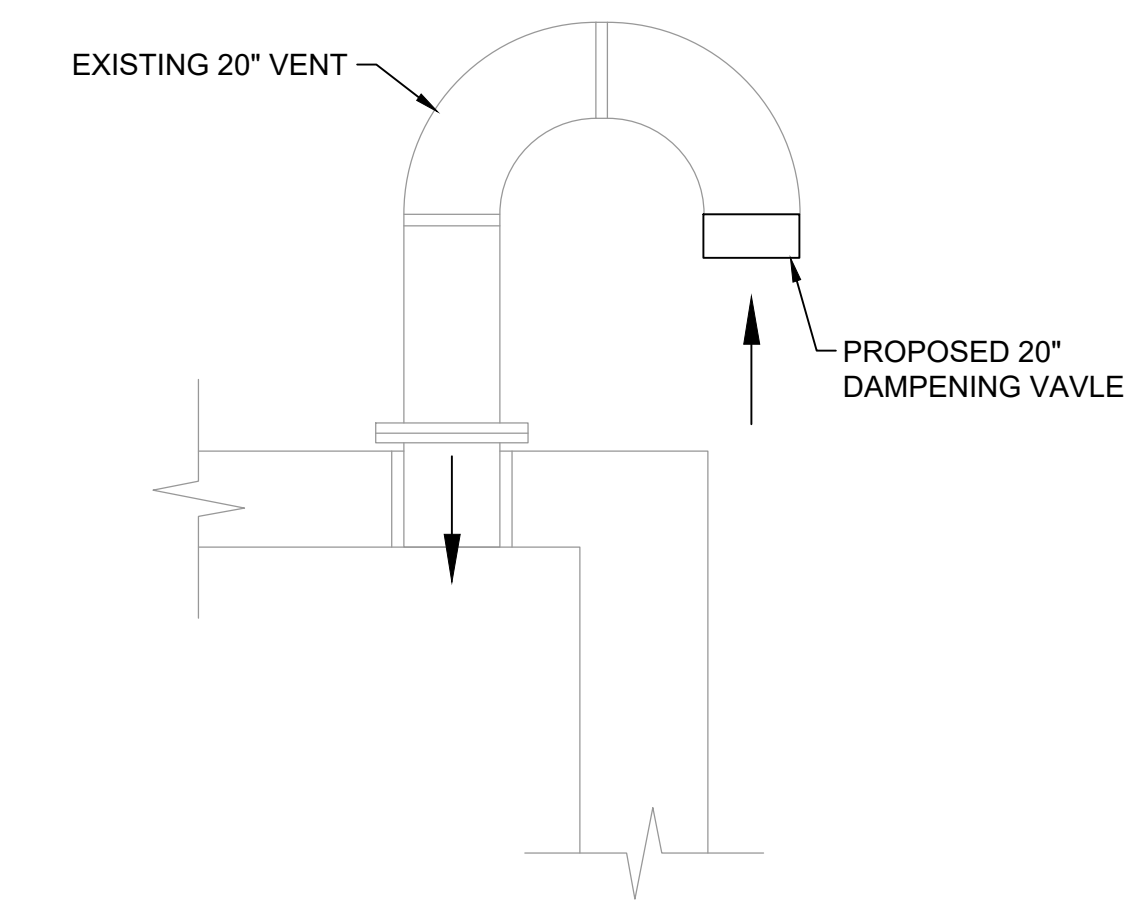
MASON GARDBERG, P.E.
PROFESSIONAL ENGINEER
FLORIDA LICENSE # 86595



GAUGE / DIAPHRAGM ASSEMBLY NTS



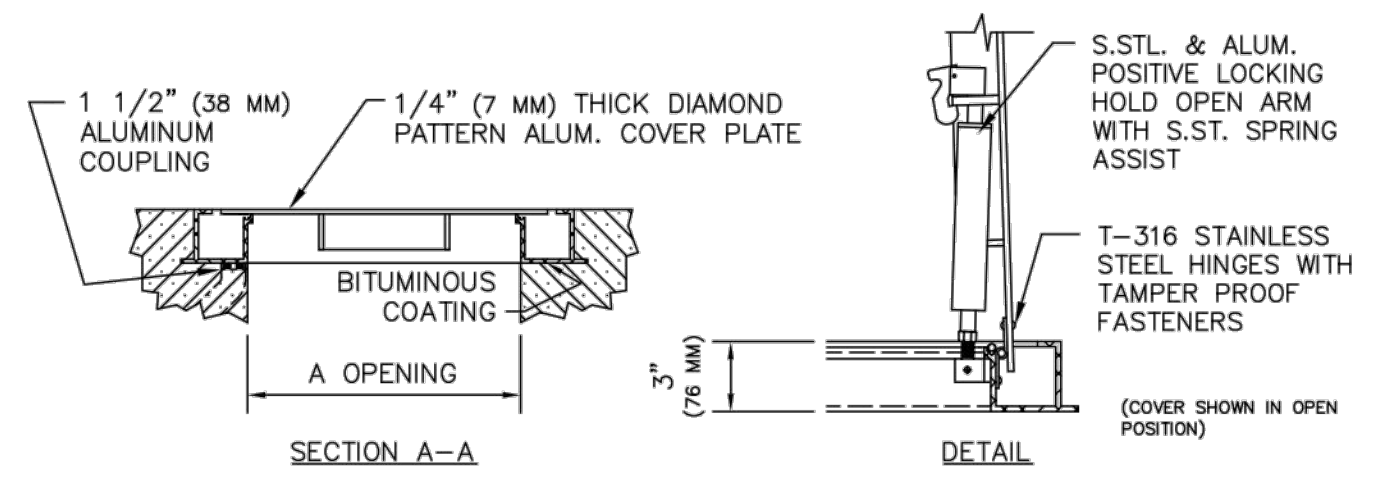
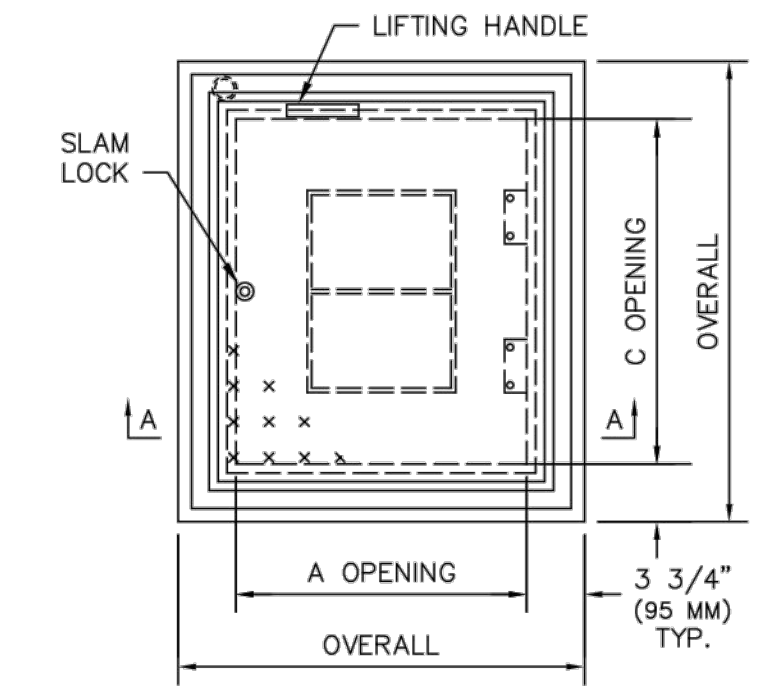
PIPE SUPPORT NTS



VENT DAMPENING VALVE

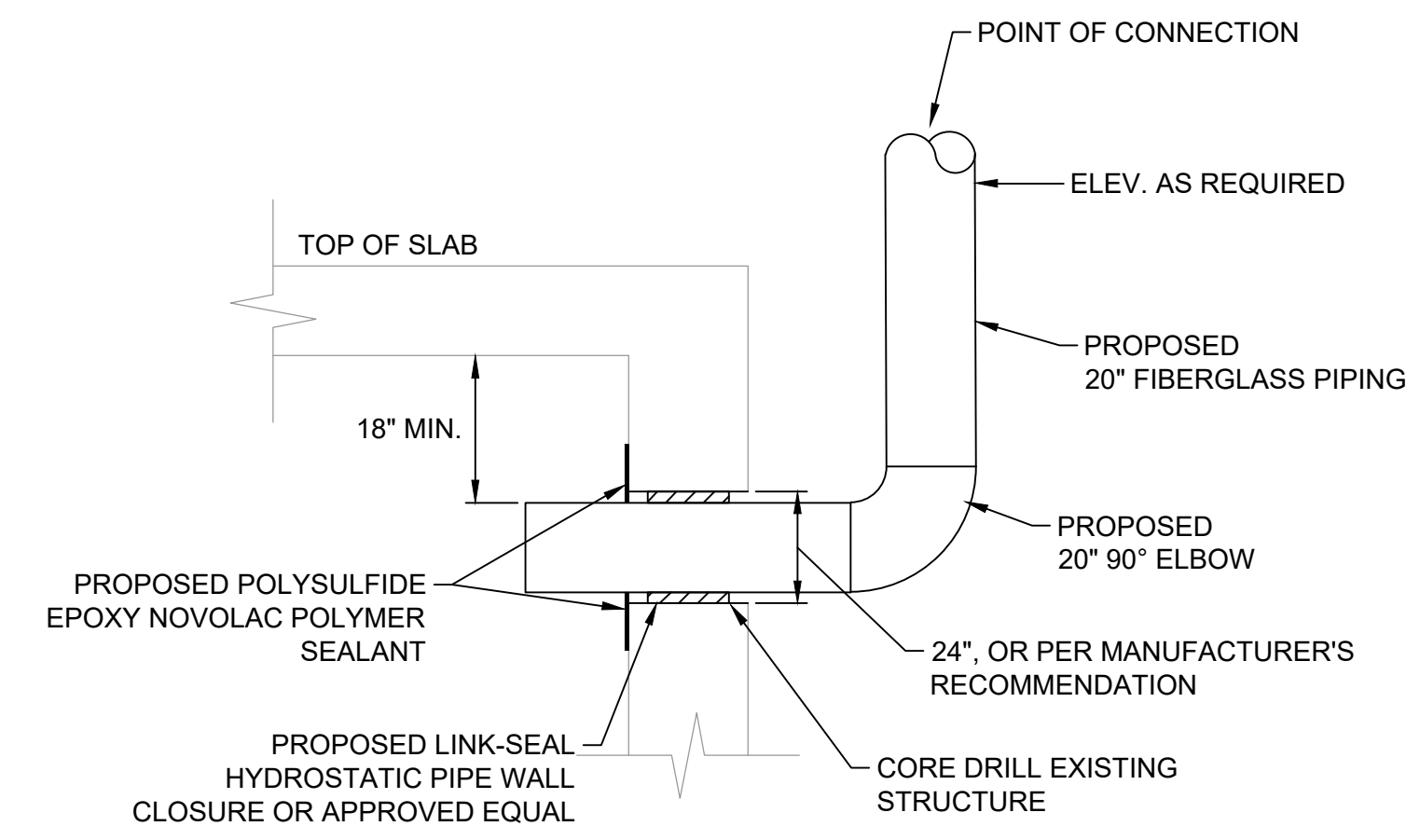
NOT TO SCALE

STANDARD SIZES				
QTY.	MODEL NO.	A DIM. INCHES (MM)	C DIM. INCHES (MM)	UNIT WT. LBS. (KG.)
	WIS2424	24 (610)	24 (610)	46 (20)
	WIS2430	24 (610)	30 (762)	51 (23)
	WIS2436	24 (610)	36 (914)	61 (28)
	WIS2442	24 (610)	42 (1067)	77 (35)
	WIS2448	24 (610)	48 (1219)	85 (39)
	WIS3030	30 (762)	30 (762)	62 (28)
	WIS3036	30 (762)	36 (914)	69 (31)
	WIS3042	30 (762)	42 (1067)	77 (35)
	WIS3048	30 (762)	48 (1219)	85 (39)
	WIS3054	30 (762)	54 (1372)	99 (45)
	WIS3060	30 (762)	60 (1524)	102 (46)
	WIS3636	36 (914)	36 (914)	78 (35)
	WIS3642	36 (914)	42 (1067)	89 (40)
	WIS3648	36 (914)	48 (1219)	97 (44)
	WIS3654	36 (914)	54 (1372)	107 (49)
	WIS3660	36 (914)	60 (1524)	116 (53)
	WIS3666	36 (914)	66 (1676)	126 (57)
	WIS3672	36 (914)	72 (1829)	135 (61)
	WIS4242	42 (1067)	42 (1067)	108 (49)



EXISTING HATCH (FOR REFERENCE ONLY)

NOT TO SCALE



WALL PENETRATION 20" AIR VENT

NOT TO SCALE

REV	DATE	DESCRIPTION

LINE IS 2 INCHES AT FULL SIZE (IF NOT SCALE ACCORDINGLY)



ORANGE COUNTY UTILITIES DEPARTMENT ENGINEERING DIVISION
9150 CURRY FORD ROAD ORLANDO, FL. 32825



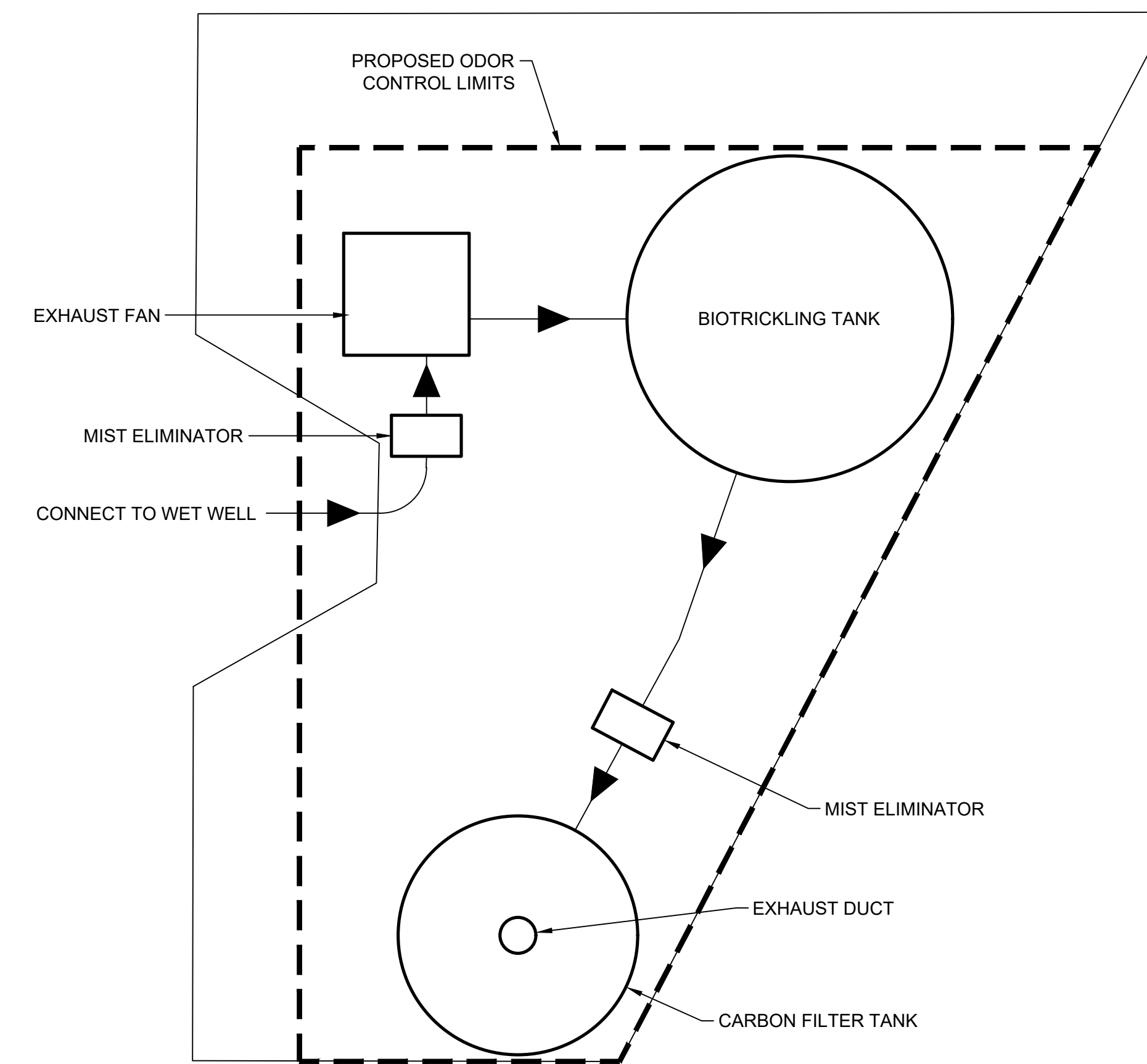
A Full Service A & E Firm
Architects M/E/P Engineers Planners Surveyors
Environmental Landscapes Architects Traffic/Transportation
Licenses: Eng. C.O.A. No. 3216 Survey L.B. No. 7143 Arch. Lic. No. AA2600926 Lndscp. Lic. No. LC0000298

DETAILS
SOUTHWEST MARRIOTT PUMP STATION #3597
ODOR CONTROL SYSTEM

MASON GARDBERG, P.E.
PROFESSIONAL ENGINEER
FLORIDA LICENSE # 86595

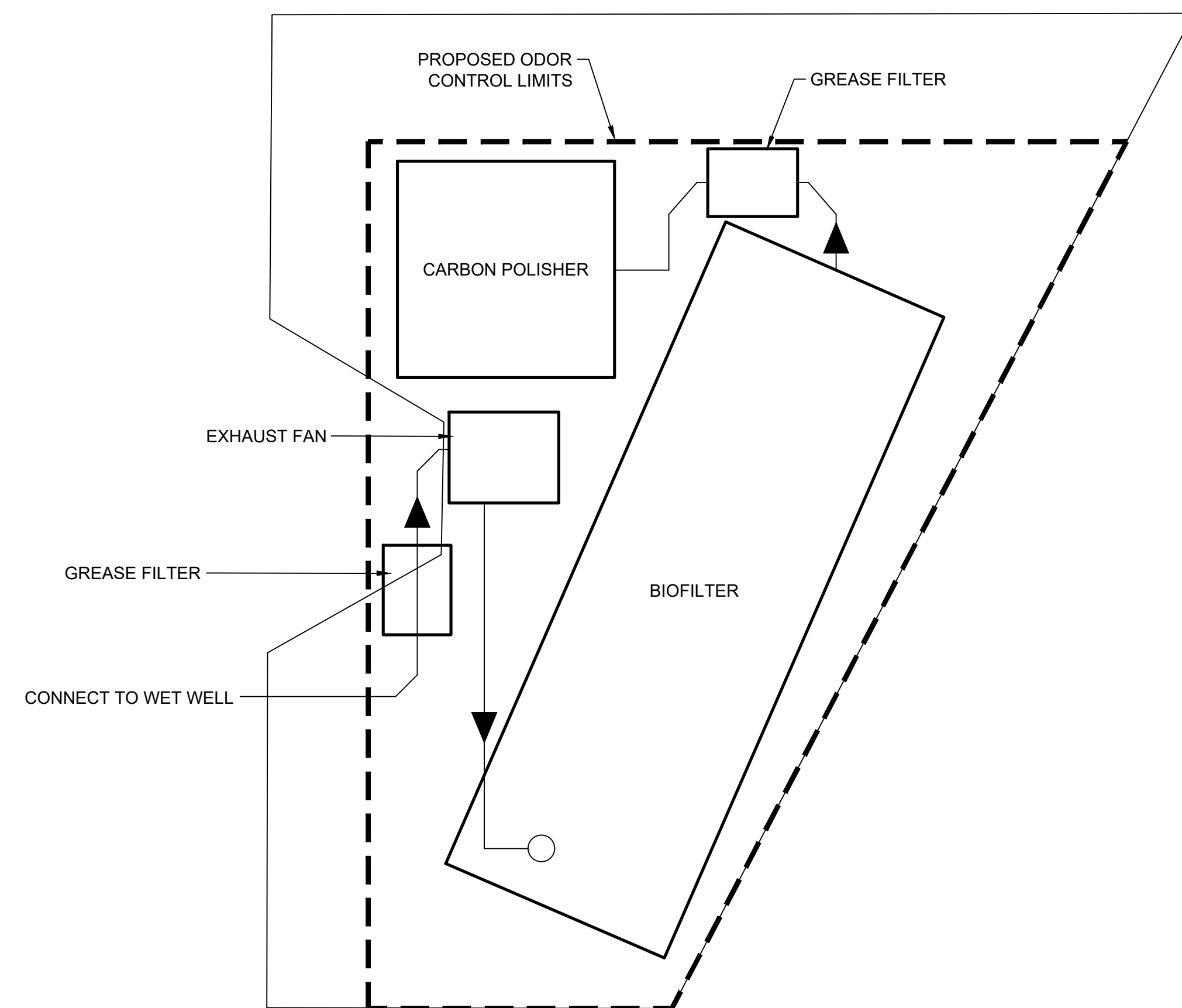
OCU FILE NO.: 80046
DESIGNED BY: MG
DRAWN BY: CKJ
CHECKED BY: DEM
CADD FILE: O28518 D-100.dwg
SCALE: As Shown
DRAWING NO.: D-100
SHEET: 8 OF 13

BID SET



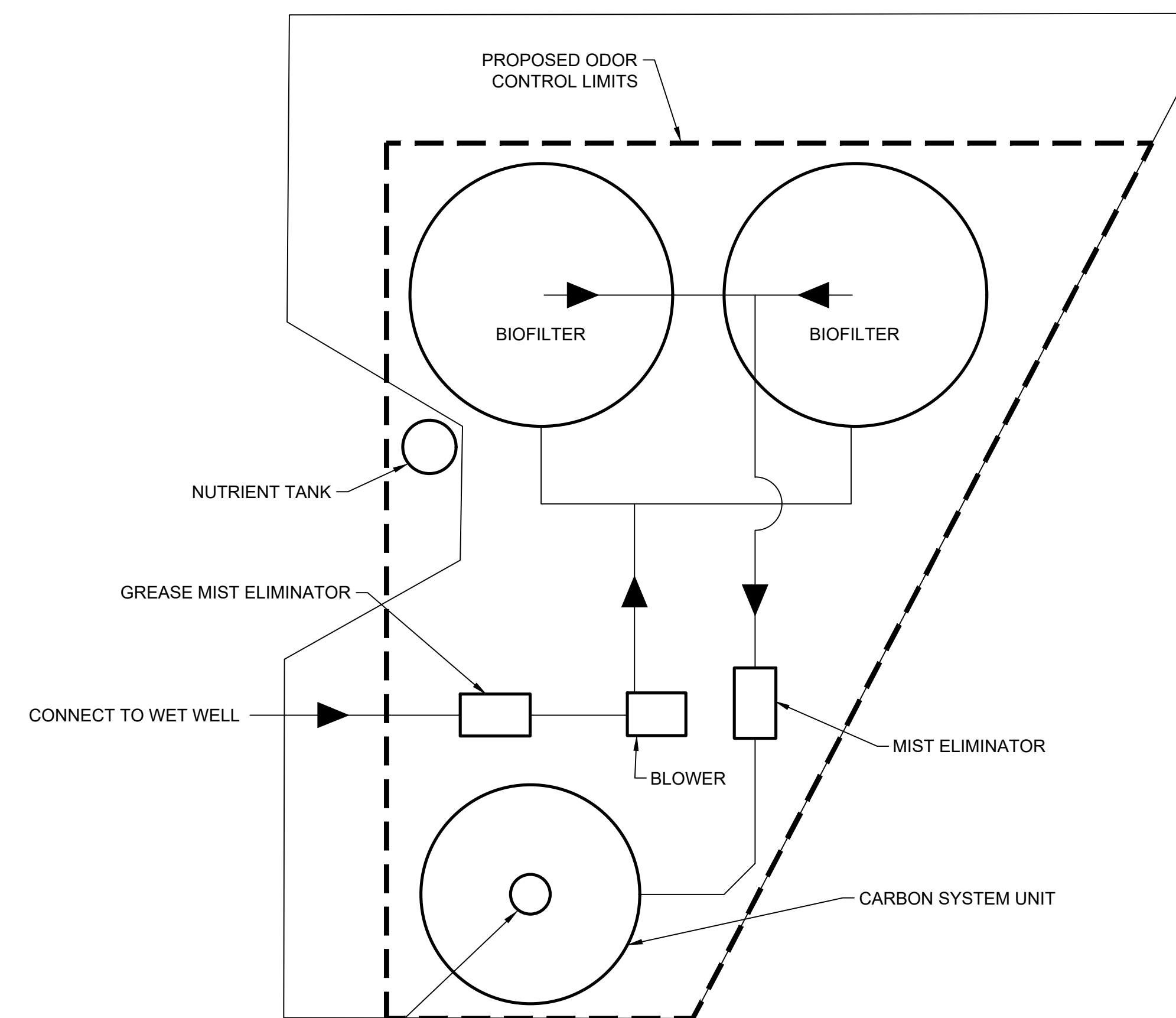
SCHEMATIC #1

NOT TO SCALE



SCHEMATIC #3

NOT TO SCALE



SCHEMATIC #2

NOT TO SCALE

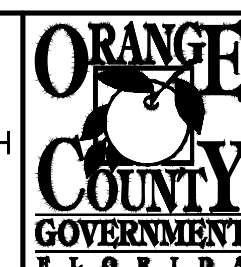
NOTE:

THESE ARE THE SCHEMATIC LAYOUTS OF THE FOUR (4) MANUFACTURER'S LISTED IN THE SPECIFICATIONS. INFORMATION IS BEING PROVIDED TO ASSIST THE CONTRACTOR IN THE PREPARATION OF THE BID.

BID SET

REV	DATE	DESCRIPTION

LINE IS 2 INCHES
AT FULL SIZE
(IF NOT SCALE ACCORDINGLY)



ORANGE COUNTY UTILITIES DEPARTMENT ENGINEERING DIVISION
9150 CURRY FORD ROAD ORLANDO, FL. 32825



A Full Service A & E Firm
Architects M/E/P
Engineers Planners
Environmental Surveyors
Landscape Architects Traffic/Transportation
Licenses:
Eng. C.O.A. No. 3215
Survey L.B. No. 7143
Arch. Lic. No. AA2600926
Landscape Lic. No. LC0000298

SCHEMATIC LAYOUT - ODOR CONTROL SYSTEMS
SOUTHWEST MARRIOTT PUMP STATION #3597
ODOR CONTROL SYSTEM

OCU FILE NO.: 80046
DESIGNED BY: MG
DRAWN BY: CKJ
CHECKED BY: DEM
CADD FILE: O28518 D-100.dwg

SCALE: As Shown
DRAWING NO.: **D-200**
SHEET: 9 OF 13

MASON GARDBERG, P.E.
PROFESSIONAL ENGINEER
FLORIDA LICENSE # 86595

PLAN SYMBOLS

	HOME RUN TO PANELBOARD. NO. OF ARROWS INDICATE NO. OF CIRCUITS, HASH MARKS INDICATE NO. OF #12 AWG. CONDUCTORS. NO HASH MARKS INDICATE 2 #12 CONDUCTORS.
	CONDUIT CONCEALED IN WALL, IN SLAB ABOVE, OR ABOVE CEILING
	CONDUIT CONCEALED IN OR BELOW FLOOR OR UNDERGROUND.
	CONDUIT RUN EXPOSED. RUN PARALLEL OR PERPENDICULAR TO STRUCTURE OR WALL.
	FLEXIBLE CONDUIT WITH EQUIPMENT CONNECTION.
	POLE MOUNTED LIGHTING FIXTURE.
	ELECTRIC A.C. MOTOR, NO. INDICATES HORSEPOWER.
	ELECTRIC HEATER
	FLOW ELEMENT
	LEVEL ELEMENT
	LIMIT SWITCH
	PRESSURE SWITCH
	SOLENOID VALVE
	LEVEL INDICATING TRANSMITTER
	LIQUID LEVEL SWITCH
	FLOAT SWITCH
	FLOW INDICATING TRANSMITTER

RISER & CONTROL DIAGRAM SYMBOLS

	NORMALLY OPEN, TIMED TO CLOSE CONTACT
	NORMALLY CLOSED, TIMED TO OPEN CONTACT
	NORMALLY CLOSED, TIMED TO CLOSE CONTACT
	NORMALLY OPEN, TIMED TO OPEN CONTACT
	HYDROGEN SULFIDE SENSOR
	LIMIT SWITCH
	TORQUE SWITCH
	PRESSURE SWITCH
	ZERO SPEED SWITCH
	SOLENOID VALVE
	LIQUID LEVEL SWITCH
	VIBRATION SWITCH
	ALARM RELAY
	ALARM TIMER
	CONTROL RELAY
	MOTOR STARTER
	TIMING RELAY
	ALARM INDICATING LIGHT
	RUN INDICATING LIGHT
	MOMENTARY CONTACT PUSHBUTTON
	MOMENTARY BREAK PUSHBUTTON OR RESET
	KEYED SWITCH
	MAINTAINED CONTACT ON-OFF SWITCH
	START/STOP(S/S) CONTROL SWITCH MAINTAINED CONTACT
	THREE POSITION MAINTAINED CONTACT SELECTOR SWITCH
	CONTROL POWER TRANSFORMER
	REMOTE TERMINAL BLOCK POINT
	MINI-POWER ZONE

ABBREVIATIONS

A	AMPERES
AFF	ABOVE FINISHED FLOOR
AH	ALARM HORN
AIC	AMPS INTERRUPTING CURRENT
AL	ALARM LIGHT
ATS	AUTOMATIC TRANSFER SWITCH
ASB	ALTERNATOR TEST SWITCH
BKR	BREAKER
CCB	CONTROL CIRCUIT BREAKER
CCT	CONTROL CIRCUIT TRANSFORMER
CP	CONTROL PANEL
CPT	CONTROL POWER TRANSFORMER
CU	COPPER
DE	DUKE ENERGY
DH	DATA HIGHWAY
DISC	DISCONNECT
DR	DUPLEX RECEPTACLE
EFF	EFFLUENT
ELEC	ELECTRICAL
ELR	EMERGENCY LOCK-OUT RELAY
EM	EMERGENCY
ENCL	ENCLOSURE
EP	EXPLOSION PROOF
ESB	ENERGY SAVING BALLAST
ETM	ELAPSED TIME METER
EXH	EXHAUST
EXIST	EXISTING
F	FUSE
FL	FLASHER
FVNR	FULL VOLTAGE NON-REVERSING GENERATOR
GEN	GENERATOR
GFR	GROUND FAULT RECEPTACLE
GFI	GROUND FAULT INTERRUPTER
GND	GROUND
GRS	GALVANIZED RIGID STEEL
HOA	HAND-OFF-AUTOMATIC
HOLR	HAND-OFF-LOCAL-REMOTE
HOR	HAND-OFF-REMOTE
HP	HORSEPOWER
HPS	HIGH PRESSURE SODIUM
HSS	HORN SILENCE SWITCH
HWY	HIGHWAY
KVA	KILO VOLT-AMPERES
KW	KILOWATT
LA	LIGHTNING ARRESTOR
LF	LINEAR FEET
LTG	LIGHTING
MAX	MAXIMUM
MB	MOTOR BREAKER
MCB	MAIN CIRCUIT BREAKER
MPZ	MINI POWER ZONE
MIN	MINIMUM
MLO	MAIN LUGS ONLY
MTD	MOUNTED
MS	MOTOR STARTER
MT	MOISTURE AND TEMPERATURE FAIL LIGHT
NEC	NATIONAL ELECTRICAL CODE
N	NEUTRAL
NTS	NOT TO SCALE
OCU	ORANGE COUNTY UTILITIES
OH	OVERHEAD
OL	OVERLOAD HEATER
P	POLE
PA	POWER AVAILABLE LIGHT
PCP	PUMP CONTROL PANEL
PL	PILOT LIGHT
PM	PHASE MONITOR
PNL	PANEL
PRI	PRIMARY
PVC	POLYVINYL CHLORIDE
R	RELAY
RL	RUNNING LIGHT
RTS	REGULATOR TERMINAL STRIP
PRI	PRIMARY
SC	SURGE CAPACITOR
SEC	SECONDARY
SH	SHIELDED
SS	STAINLESS STEEL
STR	STARTER
SUPP	SUPPRESSOR
SW	SWITCH
TBR	TO BE REMOVED
TC	TIME CLOCK
TLS	TROUBLE LIGHT SWITCH
TS	TERMINAL STRIP
TTS	THERMAL TERMINAL STRIP
TYP	TYPICAL
UG	UNDERGROUND
V	VOLT
W	WATT
W/	WITH
WP	WEATHERPROOF
Ø	PHASE

NOTES

- ELECTRICAL CONTRACTOR SHALL SUPPLY AND INSTALL ALL NEW ELECTRICAL WORK INDICATED.
- ELECTRICAL CONTRACTOR SHALL VISIT JOB SITE AND FAMILIARIZE HIMSELF WITH ALL CONDITIONS AFFECTING ELECTRICAL INSTALLATION AND MAKE PROVISIONS AS TO THE COST THEREOF. EXISTING CONDITIONS OF ELECTRICAL EQUIPMENT, LIGHT FIXTURES, ETC... THAT ARE PART OF THE FINAL SYSTEM SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO SUBMITTING HIS BID.
- ALL WORK SHALL BE DONE IN ACCORDANCE WITH NATIONAL ELECTRICAL CODE, ORANGE COUNTY STANDARDS AND SHALL COMPLY WITH ALL LOCAL RULES AND ORDINANCES.
- MINIMUM WIRE SIZE SHALL BE #12 A.W.G. EXCLUDING CONTROL WIRING, UNLESS OTHERWISE NOTED. ALL CONDUCTORS SHALL BE COPPER.
- IT IS NOT THE INTENT OF THESE PLANS TO SHOW EVERY MINOR DETAIL OF CONSTRUCTION. THE CONTRACTOR IS EXPECTED TO FURNISH AND INSTALL ALL ITEMS FOR A COMPLETE ELECTRICAL SYSTEM AND PROVIDE ALL REQUIREMENTS NECESSARY FOR THE EQUIPMENT TO BE PLACED IN PROPER WORKING ORDER.
- ELECTRICAL SYSTEM SHALL BE COMPLETE AND EFFECTIVELY GROUNDED AS REQUIRED BY THE LATEST EDITION OF THE N.E.C. OR LOCAL CODES. ALL CONDUITS SHALL HAVE A BOND WIRE SIZED PER TABLE 250 OF THE NATIONAL ELECTRIC CODE.
- ALL MATERIALS SHALL BE NEW AND BEAR UNDERWRITERS' LABELS WHERE APPLICABLE.
- ALL WORK SHALL BE PERFORMED BY A LICENSED ELECTRICAL CONTRACTOR IN A FIRST CLASS WORKMANLIKE MANNER. THE COMPLETED SYSTEM SHALL BE FULLY OPERATIVE AND ACCEPTED BY ENGINEER/OWNER.
- CONTRACTOR SHALL GUARANTEE ALL MATERIALS AND WORKMANSHIP FREE FROM DEFECTS FOR A PERIOD OF NOT LESS THAN TWO YEARS FROM DATE OF ACCEPTANCE.
- CORRECTION OF ANY DEFECTS SHALL BE COMPLETED WITHOUT ADDITIONAL CHARGE AND SHALL INCLUDE REPLACEMENT OR REPAIR OF ANY OTHER PHASE OF THE INSTALLATION WHICH MAY HAVE BEEN DAMAGED.
- THE ELECTRICAL INSTALLATION SHALL MEET ALL STANDARD REQUIREMENTS OF THE NATIONAL ELECTRICAL CODE AND THE FLORIDA BUILDING CODE.
- CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CUTTING AND PATCHING REQUIRED OF HIS WORK.
- ELECTRICAL CONTRACTOR SHALL LABEL ALL PANELS W/ TYPEWRITTEN DIRECTORIES (NEW & EXISTING).
- ALL ELECTRICAL WIRING SHALL BE THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR.
- DO NOT SCALE THE ELECTRICAL DRAWINGS. REFER TO THE MECHANICAL DRAWINGS & THE APPROVED MANUFACTURER'S SHOP DRAWINGS FOR THE EXACT LOCATION OF ALL EQUIPMENT.
- SHADED TEXT DENOTES EXISTING EQUIPMENT OR STRUCTURES. NON-SHADED TEXT DENOTES NEW EQUIPMENT, STRUCTURES AND WORK. SLANTED TEXT (NOT SHADED) DENOTES FUTURE EQUIPMENT, STRUCTURES AND WORK.
- ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE 2014 NATIONAL ELECTRICAL CODE, ELECTRICAL SAFETY IN THE WORKPLACE (NFPA 70E), LOCAL COUNTY AND CITY CODES, AND THE 2017 FLORIDA BUILDING CODE 6TH EDITION WITH AMENDMENTS.
- PROVIDE CONDUIT DUCT SEAL AT ALL CONDUIT ENDS.
- ALL REFERENCES TO SS OR STAINLESS STEEL SHALL BE 316 STAINLESS STEEL.

RISER & CONTROL DIAGRAM SYMBOLS

	VOLTMETER
	AMMETER
	THREE PHASE VOLT SWITCH
	THREE PHASE AMP SWITCH
	GROUND FAULT INTERRUPTER
	FUSE
	MOLDED CASE CIRCUIT BREAKER
	SERVICE OR EQUIPMENT GROUND.
	OTHERWISE INDICATED.
	CURRENT TRANSFORMERS
	POTENTIAL TRANSFORMERS
	DUPLEX RECEPTACLE
	NORMALLY OPEN CONTACT
	NORMALLY CLOSED CONTACT
	FLOAT SWITCH, NORMALLY OPEN
	FLOAT SWITCH, NORMALLY CLOSED
	FLOW SWITCH, NORMALLY OPEN
	FLOW SWITCH, NORMALLY CLOSED
	TEMPERATURE SWITCH, NORMALLY OPEN
	TEMPERATURE SWITCH, NORMALLY CLOSED

REV	DATE	DESCRIPTION

LINE IS 2 INCHES
AT FULL SIZE
(IF NOT SCALE ACCORDINGLY)

ORANGE COUNTY UTILITIES DEPARTMENT ENGINEERING DIVISION
 9150 CURRY FORD ROAD ORLANDO, FL. 32825

cph A Full Service A & E Firm
 Architects M/E/P
 Engineers Planners
 Environmental Surveyors
 Landscape Architects Traffic/Transportation
 www.cphcorp.com
 1117 East Robinson Street - Orlando, FL 32801 - Phone: 407.425.0452

Licenses:
 Eng. C.O.A. No. 3215
 Survey L.B. No. 7143
 Arch. Lic. No. AA2800926
 Lndscp. Lic. No. LC0000298

ELECTRICAL NOTES, SYMBOLS AND ABBREVIATIONS
 SOUTHWEST MARRIOTT PUMP STATION #3597
 ODOR CONTROL SYSTEM

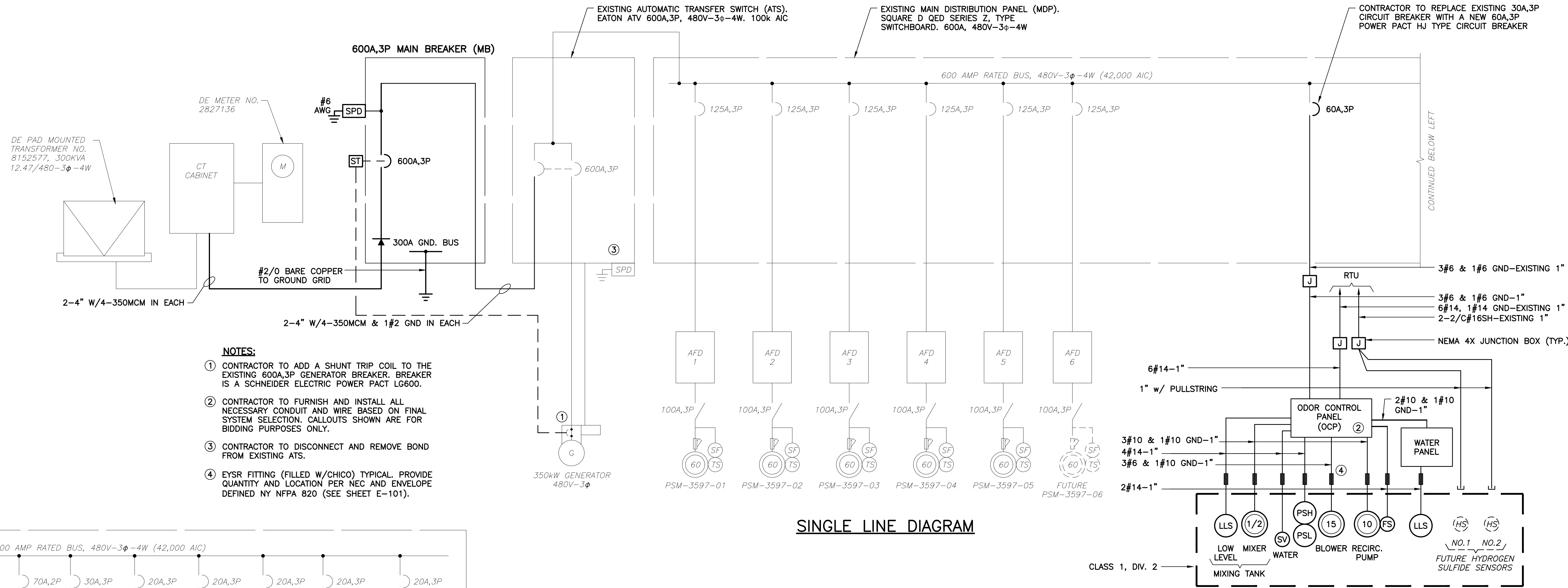
WILLIAM C. NELSON
 PROFESSIONAL ENGINEER
 FLORIDA LICENSE #42017

OCU FILE NO.: 80046	SCALE: AS NOTED:
DESIGNED BY: LMR	DRAWING NO.:
DRAWN BY: RRM	E-001
CHECKED BY: WCN	SHEET: 10 OF 13
CADD FILE: E-001 NOTES	

EDA
 Electrical Design Associates
 6865 PLAZZA GRANDE AVE., STE. 311
 ORLANDO, FLORIDA 32835
 PHONE: (407) 745-5604
 FAX: (407) 745-5603
 C.O.A. No. 8079
 WILLIAM C. NELSON, P.E.
 Florida P.E. No. 42017

BID SET

Y:\PH\Orange County\Y14-906\LS 3597 Odor Control.dwg, 8/20/2018 3:16:59 PM, AutoCAD PDF (General Documentation).plotted



- NOTES:**
- CONTRACTOR TO ADD A SHUNT TRIP COIL TO THE EXISTING 600A,3P GENERATOR BREAKER. BREAKER IS A SCHNEIDER ELECTRIC POWER PACT LG600.
 - CONTRACTOR TO FURNISH AND INSTALL ALL NECESSARY CONDUIT AND WIRE BASED ON FINAL SYSTEM SELECTION. CALLOUTS SHOWN ARE FOR BIDDING PURPOSES ONLY.
 - CONTRACTOR TO DISCONNECT AND REMOVE BOND FROM EXISTING ATS.
 - EYSR FITTING (FILLED W/CHICO) TYPICAL. PROVIDE QUANTITY AND LOCATION PER NEC AND ENVELOPE DEFINED NY NFPA 820 (SEE SHEET E-101).

SINGLE LINE DIAGRAM

PANEL: 'LP-1'		BUS: 100 AMP		VOLT: 120/240-1φ-3W						
LOCATION: ELECTRICAL ROOM		MAINS: 80A,3P MB		REMARKS: -						
MOUNTING: SURFACE		POLES: 30		A.I.C. SYMM: 10,000						
AMPS	POLE	WIRE	GND. COND.	LOAD SERVED	BUS A B C	LOAD SERVED	WIRE	GND. COND.	POLE	AMPS
20	1	-	-	INTERIOR LIGHTING	1	RECEPTACLES	-	-	1	20
20	1	-	-	EXTERIOR LIGHTING	3	UPS RECEPTACLE	-	-	1	20
20	1	-	-	WALL PACK	5	EXIT LIGHTS	-	-	1	20
60	2	-	-	GEN SUB PANEL	7	EXIT LIGHT	-	-	1	20
-	-	-	-	-	9	WALL PACK	-	-	1	20
60	2	-	-	SPARE	11	FLOW METER	-	-	1	20
-	-	-	-	-	13	SPD	-	-	2	30
20	1	-	-	BACK UP FLOAT PANEL	15	-	-	-	-	-
20	1	-	-	POLE LIGHTS	17	FUEL CONTROL PANEL	-	-	1	20
20	1	-	-	SPARE	19	SPARE	-	-	1	20
20	1	-	-	SPARE	21	SPARE	-	-	1	20
20	1	-	-	SPARE	23	SPARE	-	-	1	20
20	1	-	-	SPARE	25	SPARE	-	-	1	20
80	2	-	-	MAIN BREAKER	27	SPARE	-	-	1	20
-	-	-	-	-	29	SPARE	-	-	1	20
TOTAL (PHASE):				-	-	NOTES:				
TOTAL KVA:				-	-	SHOWN FOR REFERENCE ONLY.				
TOTAL AMPS:				-	-					
TOTAL DEMAND AMPS:				-	-					

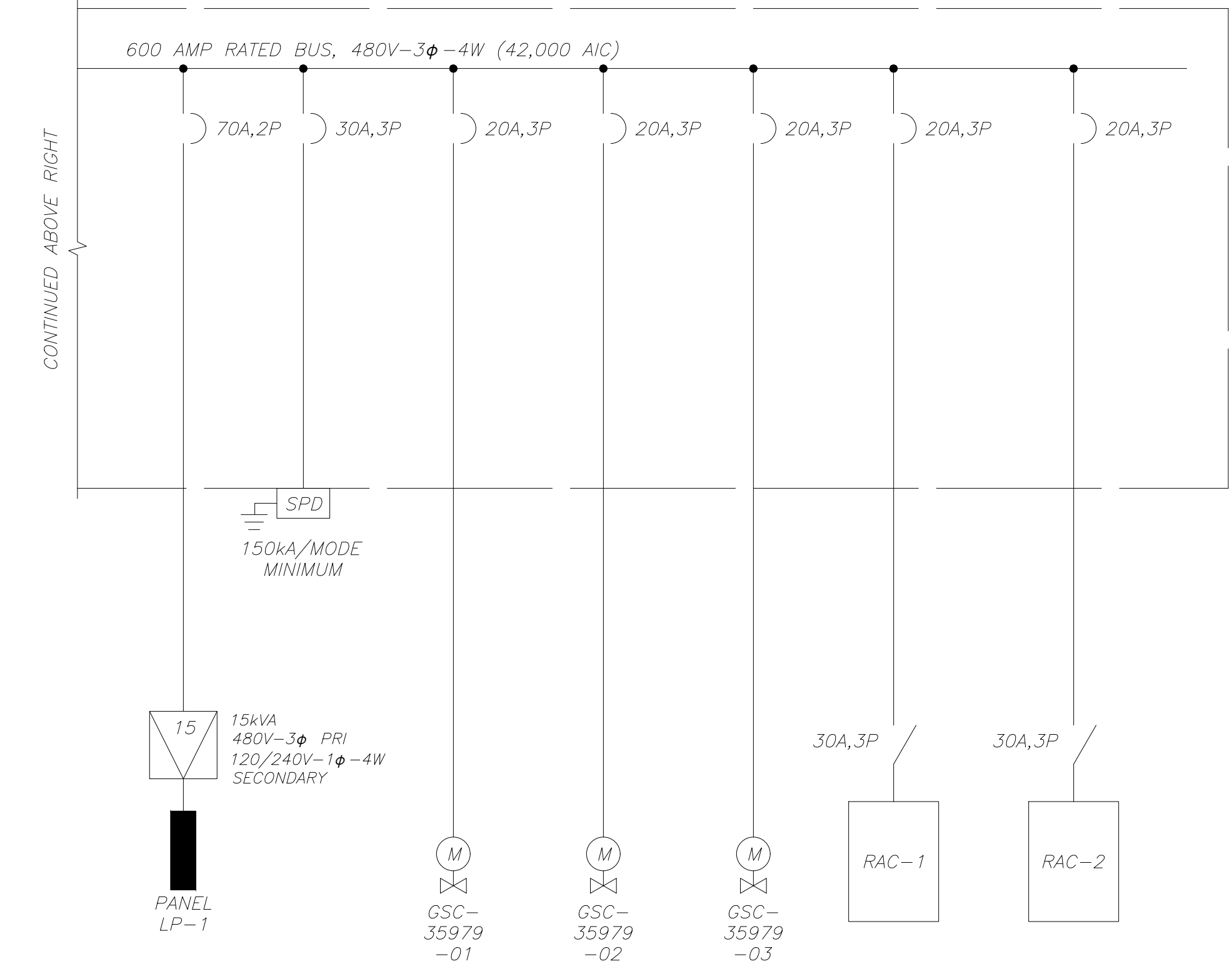
MDP LOAD TABULATION

480V-3φ

DESCRIPTION	LOAD	AMPACITY
① SUBMERSIBLE PUMPS	5 @ 60.0 HP	= 385.00 AMPS
① FUTURE SUBM. PUMP	1 @ 60.0 HP	= 77.00 AMPS
PANEL LP-1 VIA XFMR	1 @ 15.0 kVA	= 18.04 AMPS
① MOV	3 @ 1.0 HP	= 6.30 AMPS
① RAC UNIT	2 @ 2.0 HP	= 6.80 AMPS
① ODOR CONTROL	1 @ 15.0 HP	= 21.00 AMPS
① BLOWER	1 @ 10.0 HP	= 14.00 AMPS
① RECIRC PUMP	1 @ 0.5 HP	= 1.10 AMPS
① MIXER		
CONNECTED LOAD		= 529.24 AMPS
③ SERVICE ENTRANCE = 529.24 AMPS + (0.25)(77.0)		= 548.49 AMPS

NOTES:

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



REV	DATE	DESCRIPTION

LINE IS 2 INCHES AT FULL SIZE (IF NOT SCALE ACCORDINGLY)

ORANGE COUNTY UTILITIES DEPARTMENT ENGINEERING DIVISION

9150 CURRY FORD ROAD ORLANDO, FL. 32825

cph A Full Service A & E Firm

Architects M/E/P Engineers Planners Environmental Surveyors Landscape Architects Traffic/Transportation

www.cphcorp.com

1117 East Robinson Street - Orlando, FL 32801 - Phone: 407.425.0452

SINGLE LINE DIAGRAM

SOUTHWEST MARRIOTT PUMP STATION #3597

ODOR CONTROL SYSTEM

OCU FILE NO.: 80046

DESIGNED BY: LMR

DRAWN BY: RRM

WILLIAM C. NELSON PROFESSIONAL ENGINEER FLORIDA LICENSE #42017

BID SET

SCALE: AS NOTED

DRAWING NO.: **E-100**

SHEET: 11 OF 13

EDA Electrical Design Associates

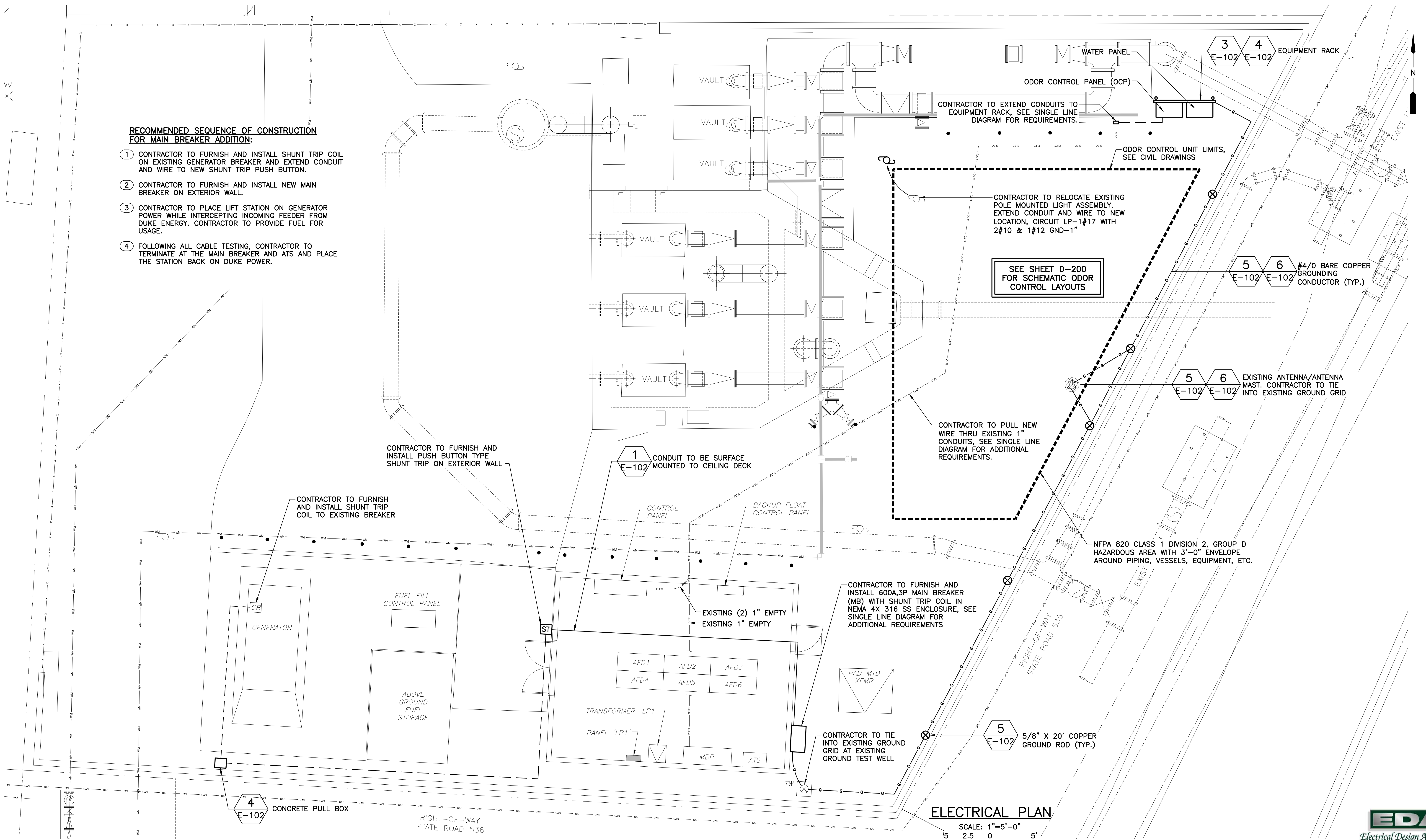
6865 PIAZZA GRANDE AVE., STE. 311 ORLANDO, FLORIDA 32835

PHONE: (407) 745-5604 FAX: (407) 745-5603

C.O.A. No. 8079 WILLIAM C. NELSON, P.E. Florida P.E. No. 42017

RECOMMENDED SEQUENCE OF CONSTRUCTION FOR MAIN BREAKER ADDITION:

- 1 CONTRACTOR TO FURNISH AND INSTALL SHUNT TRIP COIL ON EXISTING GENERATOR BREAKER AND EXTEND CONDUIT AND WIRE TO NEW SHUNT TRIP PUSH BUTTON.
- 2 CONTRACTOR TO FURNISH AND INSTALL NEW MAIN BREAKER ON EXTERIOR WALL.
- 3 CONTRACTOR TO PLACE LIFT STATION ON GENERATOR POWER WHILE INTERCEPTING INCOMING FEEDER FROM DUKE ENERGY. CONTRACTOR TO PROVIDE FUEL FOR USAGE.
- 4 FOLLOWING ALL CABLE TESTING, CONTRACTOR TO TERMINATE AT THE MAIN BREAKER AND ATS AND PLACE THE STATION BACK ON DUKE POWER.



ELECTRICAL PLAN

SCALE: 1"=5'-0"

5 2.5 0 5'



6865 PLAZZA GRANDE AVE., STE. 311
ORLANDO, FLORIDA 32835
PHONE: (407) 745-5604
FAX: (407) 745-5603
C.O.A. No. 8079
WILLIAM C. NELSON, P.E.
Florida P.E. No. 42017

BID SET

REV	DATE	DESCRIPTION

LINE IS 2 INCHES
AT FULL SIZE
(IF NOT SCALE ACCORDINGLY)

ORANGE COUNTY UTILITIES DEPARTMENT ENGINEERING DIVISION
9150 CURRY FORD ROAD ORLANDO, FL. 32825

cph
www.cphcorp.com

A Full Service A & E Firm
Architects M/E/P
Engineers Planners
Environmental Surveyors
Landscape Architects Traffic/Transportation

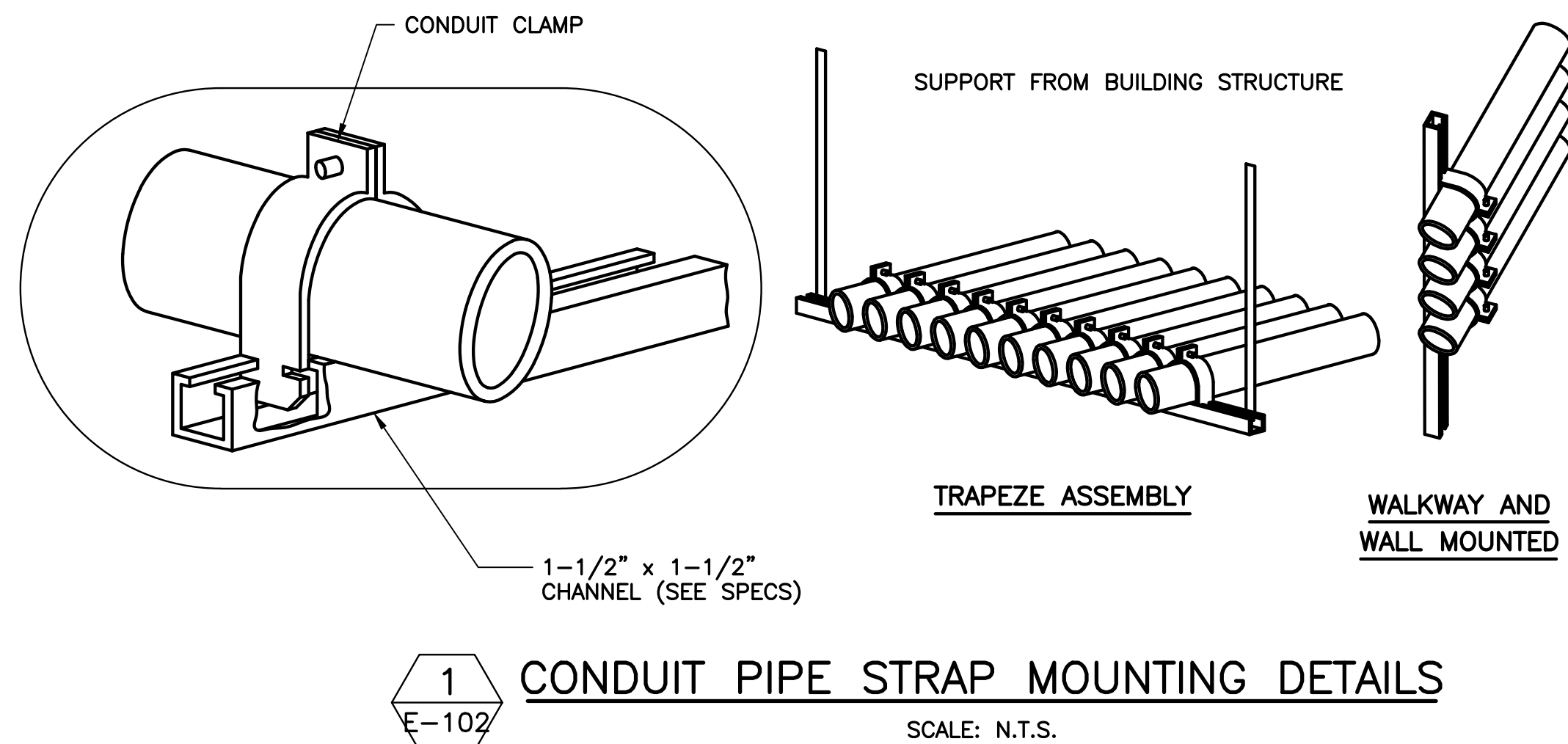
Licenses:
Eng. C.O.A. No. 3215
Survey L.B. No. 7143
Arch. Lic. No. AA2800926
Landscape Lic. No. LC0000298

**ELECTRICAL PLAN
SOUTHWEST MARRIOTT PUMP STATION #3597
ODOR CONTROL SYSTEM**

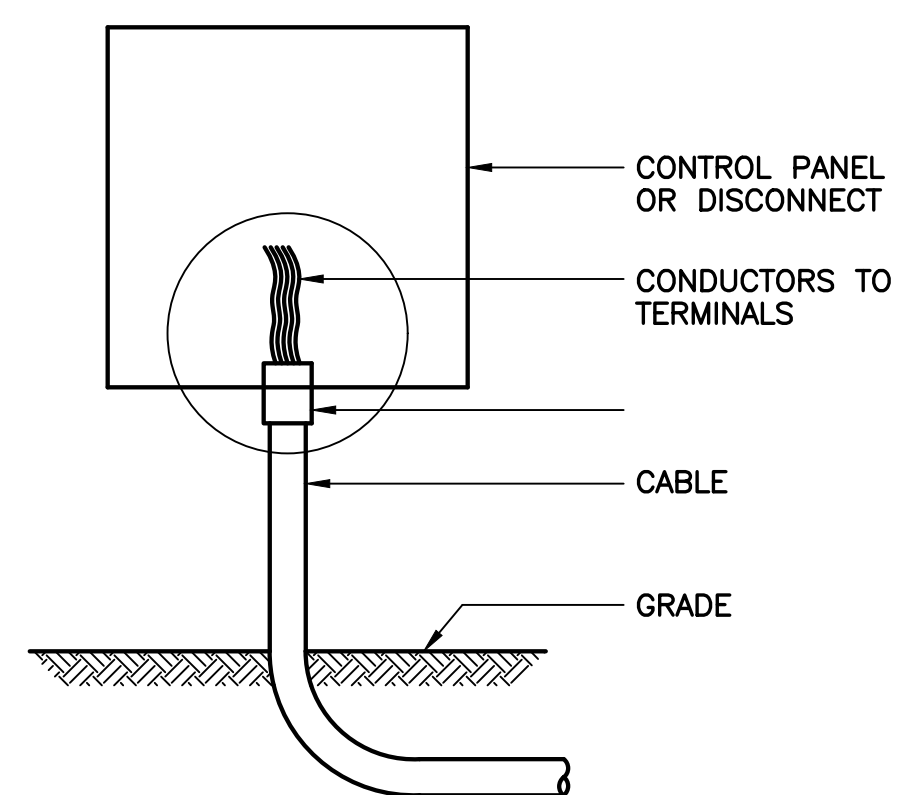
WILLIAM C. NELSON
PROFESSIONAL ENGINEER
FLORIDA LICENSE #42017

OCU FILE NO.: 80046
DESIGNED BY: LMR
DRAWN BY: RRM
CHECKED BY: WCN
CADD FILE: E-101 PLAN

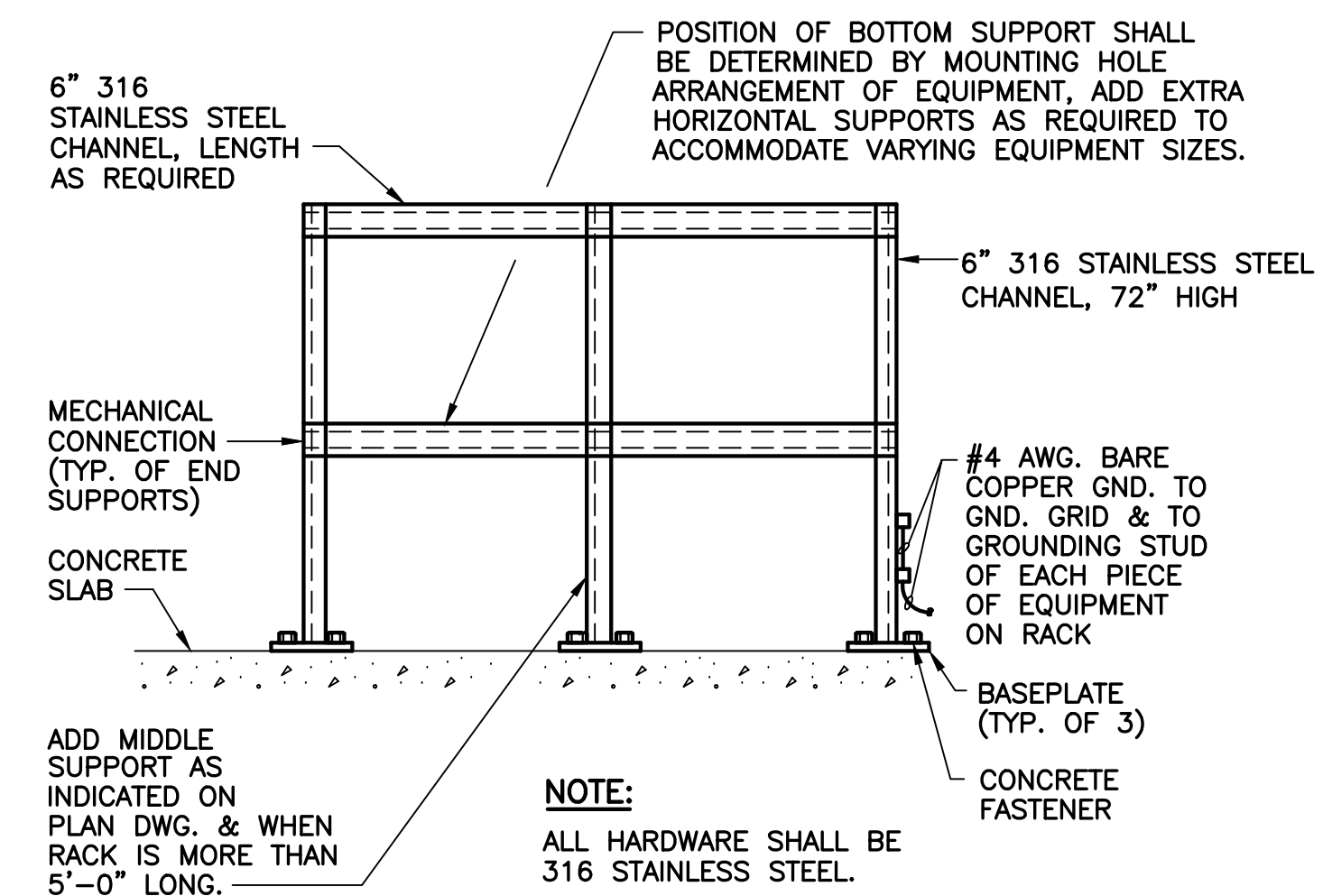
SCALE: AS NOTED:
DRAWING NO.:
E-101
SHEET: 12 OF 13



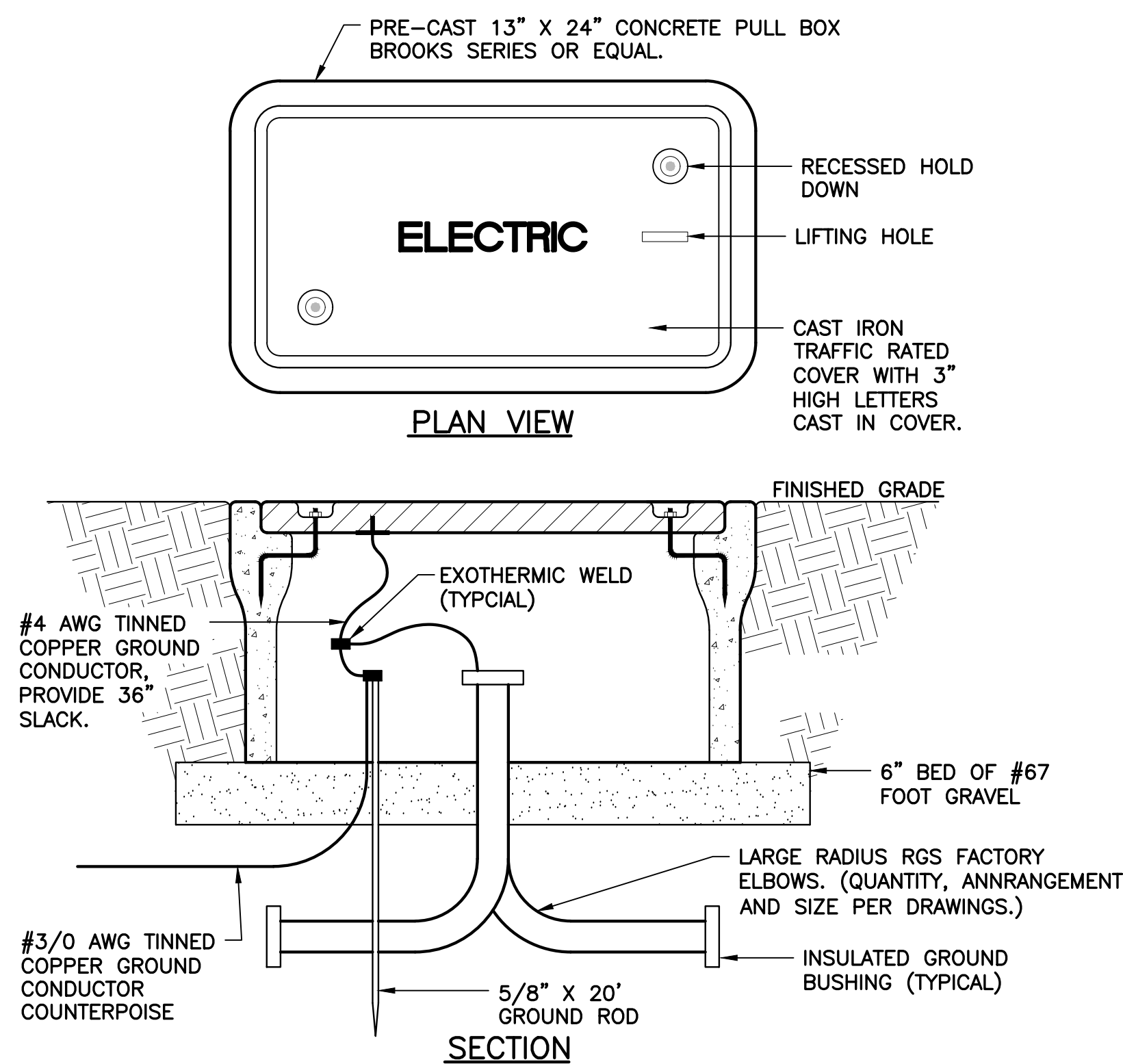
1 CONDUIT PIPE STRAP MOUNTING DETAILS
E-102 SCALE: N.T.S.



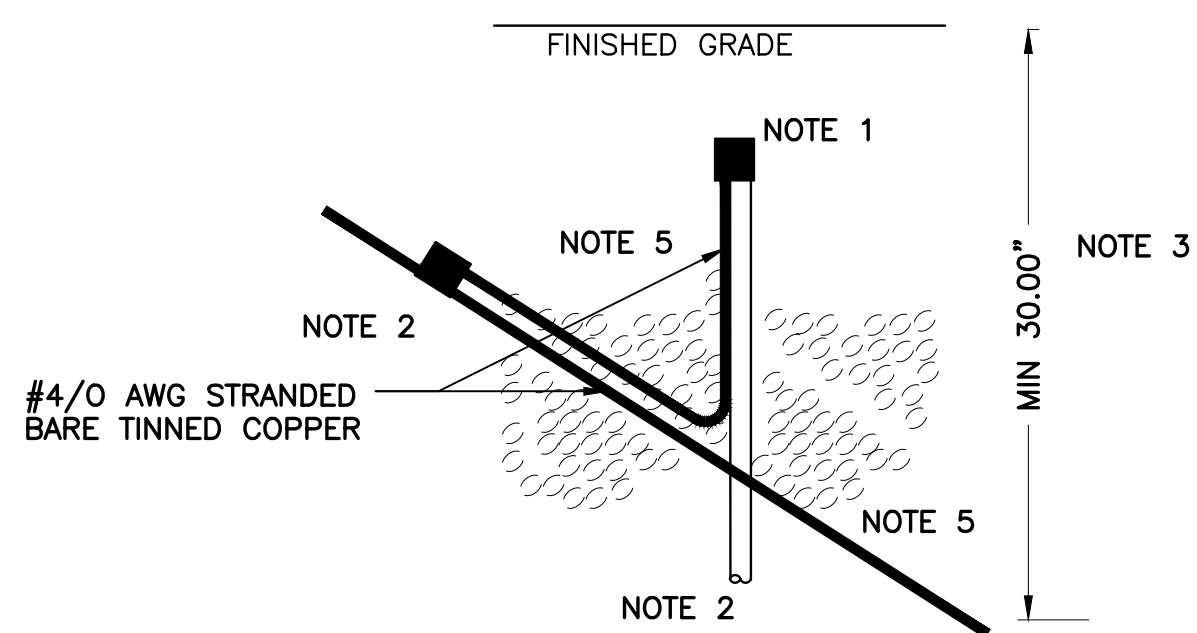
2 WATER TIGHT CONNECTION DETAIL
E-102 SCALE: N.T.S.



3 EQUIPMENT RACK DETAIL
E-102 SCALE: N.T.S.

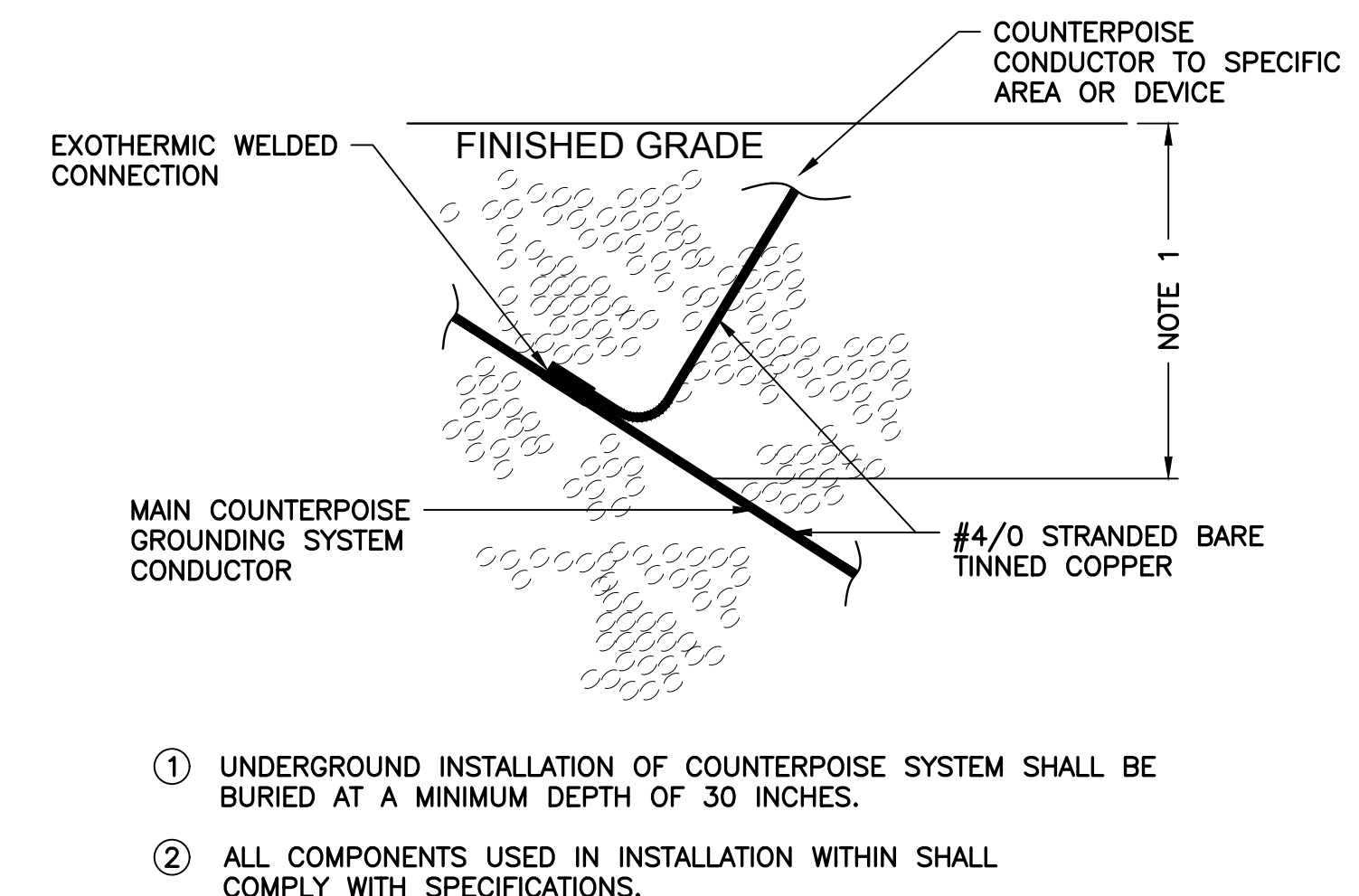


4 PRE-CAST JUNCTION BOX DETAIL
E-102 SCALE: N.T.S.



- ① GROUND ROD TO COUNTERPOISE CONDUCTOR SHALL BE CONNECTED BY MEANS OF AN EXOTHERMIC WELD. GROUND ROD SHALL BE 5/8 INCH IN DIAMETER AND 20 FOOT LENGTH MINIMUM.
- ② COUNTERPOISE CONDUCTOR TO CONDUCTOR CONNECTION SHALL BE CONNECTED BY MEANS OF EXOTHERMIC WELD AND THE CONDUCTOR FROM COUNTERPOISE LENGTH TO GROUND ROD SHALL HAVE A MINIMUM OF 36 INCHES.
- ③ UNDERGROUND INSTALLATION OF COUNTERPOISE SYSTEM SHALL BE BURIED AT A MINIMUM DEPTH OF 30 INCHES.
- ④ ALL COMPONENTS USED IN INSTALLATION WITHIN SHALL COMPLY WITH SPECIFICATIONS.
- ⑤ #4/0 AWG STRANDED BARE TINNED COPPER CONDUCTOR

5 COUNTERPOISE GROUND ROD CONNECTION DETAIL
E-102 SCALE: N.T.S.



- ① UNDERGROUND INSTALLATION OF COUNTERPOISE SYSTEM SHALL BE BURIED AT A MINIMUM DEPTH OF 30 INCHES.
- ② ALL COMPONENTS USED IN INSTALLATION WITHIN SHALL COMPLY WITH SPECIFICATIONS.

6 COUNTERPOISE CONDUCTOR CONNECTION DETAIL
E-102 SCALE: N.T.S.

REV	DATE	DESCRIPTION

LINE IS 2 INCHES
AT FULL SIZE
(IF NOT SCALE ACCORDINGLY)

ORANGE COUNTY
UTILITIES DEPARTMENT
ENGINEERING DIVISION
9150 CURRY FORD ROAD ORLANDO, FL. 32825

cph
A Full Service A & E Firm
Architects M/E/P
Engineers Planners
Environmental Surveyors
Landscape Architects Traffic/Transportation
www.cphcorp.com
Licenses:
Eng. C.O.A. No. 3215
Survey L.B. No. 7143
Arch. Lic. No. AA2600926
Landscape Lic. No. LC0000298

ELECTRICAL DETAILS
SOUTHWEST MARRIOTT PUMP STATION #3597
ODOR CONTROL SYSTEM

WILLIAM C. NELSON
PROFESSIONAL ENGINEER
FLORIDA LICENSE #42017

OCU FILE NO.: 80046
DESIGNED BY: LMR
DRAWN BY: RRM
CHECKED BY: WCN
CADD FILE: E-102 DTLs

SCALE: AS NOTED:
DRAWING NO.:
E-102
SHEET: 13 OF 13

EDA
Electrical Design Associates
6965 PIAZZA GRANDE AVE., STE. 311
ORLANDO, FLORIDA 32835
PHONE: (407) 745-5604
FAX: (407) 745-5603
C.O.A. No. 8079
WILLIAM C. NELSON, P.E.
Florida P.E. No. 42017

BID SET

Y:\CPH\Orange County\14-906\LS 3597 Odor Control - Add Submittal\Drawings\E-102 DTLs.dwg, 8/20/2019 3:17:18 PM, AutoCAD PDF (General Documentation).pc3