



City of Belle Isle
 Universal Engineering Sciences 3532 Maggie Blvd., Orlando, FL 32817
 Tel 407-581-8161 * Fax 407-581-0313 * www.universalengineering.com

RECEIVED
 JUN 21 2019

APPLICATION FOR PLUMBING PERMIT

WARNING TO OWNER: YOUR FAILURE TO RECORD A NOTICE OF COMMENCEMENT MAY RESULT IN YOUR PAYING TWICE FOR IMPROVEMENTS TO YOUR PROPERTY. A NOTICE OF COMMENCEMENT MUST BE RECORDED AND POSTED ON THE JOB SITE BEFORE THE FIRST INSPECTION. IF YOU INTEND TO OBTAIN FINANCING, CONSULT WITH YOUR LENDER OR AN ATTORNEY BEFORE RECORDING YOUR NOTICE OF COMMENCEMENT.

DATE OF APPLICATION: 6/11/19 PERMIT NUMBER 2019-06-075
 The undersigned hereby applies for a permit to make plumbing installations as indicated below. PLEASE PRINT

Project Address 3116 CULLEN LAKE SHORE PR Belle Isle FL 32809 32812

Property Owner ORANGE COUNTY BCC Phone 407-836-7350

Property Owner's Mailing Address PO Box 1343 City ORLANDO

State FL Zip Code 32802 Parcel Id Number: 17-23 30-4379-01-850

To obtain this information, please visit <http://www.ocpafl.org/Searches/ParcelSearch.aspx>

Class of Building: Old New Type of Building: Residential Commercial Other
 Type of Work: New Alteration Addition Repair Type of System: Sewer Septic Re-pipe

YOU MAY BE REQUIRED TO PROVIDE SEPTIC SYSTEM VERIFICATION FOR NEW / ALTERED / ADDITION to Septic System - **ORANGE COUNTY DOCUMENT 64E-6**

VALUATION OF JOB (labor & materials) \$ 558,196.00

INSTALL NEW PUMP STATION

FIXTURES	Quantity
Water Closets (Toilet)	0
Bathtubs	0
Urinals	0
Disposals	0
Washing Machines	0
Water Heaters	0
Sewer	0
Catch Basins/Sumps	0
Service Sink	0
Lavatory (Bathroom Sink)	0
Showers	0
Sinks	0

FIXTURES	Quantity
Dishwashers	0
Laundry Tubs	0
Floor Drains	0
Grease Traps	0
Trailer Connections	0
Spa	0
Solar	0
Pool Piping	0
*Irrigation: (# Systems / # Heads)	0
Water Softener	0
Re-pipe	0
Miscellaneous (Specify)	0

*Per FBC, Sec. 608, a Backflow Preventer must be installed & tested, the report must be posted with permit for final inspection

Building Official: [Signature] Date 6-25-19
 Verified Contractor's Licenses & Insurance are on file _____ Date _____

Permit Fee	
Review Fee	
1% BCAIB Fee	
1.5% DCA Fee	
Total Permit Fee	

I hereby certify that the above is true and correct to the best of my knowledge and make Application for Permit as outlined above, and if same is granted I agree to conform to all Florida Building Code Regulations and City Ordinances regulating same and in accordance with plans submitted. The issuance of this permit does not grant permission to violate any applicable Town and/or State of Florida codes and/or ordinances.

LICENSE HOLDER SIGNATURE [Signature] LICENSE # 57402
 LICENSE HOLDER NAME GUY BREITENSTEIN COMPANY NAME CPH, Inc
 Street Address 1117 E ROBINSON ST
 City ORLANDO State FL Zip Code 32801 Phone Number 407-425-0450
 Email Address GBREITENSTEIN@CPH.CORP.COM

NOTE: The Building Permit Number is required if the Plumbing Installation is associated with any construction or alteration where a Building Permit has been issued.

Building Permit Number _____

(48821)



Full Service A&E Firm
Facebook | LinkedIn

From: Susan Manchester [<mailto:SManchester@universalengineering.com>]
Sent: Tuesday, October 15, 2019 8:18 AM
To: Tarifa, Zachary
Cc: CobiPermits
Subject: 3116 Cullen Lake Shore Dr - Utility Pump Station# 3085 Repairs - plans approved - CPH Inc Engineering

Hi Zachary,

Can you please give me status on this project? The app is still here incomplete in our office. Is this work moving forward or has it been cancelled or placed on hold at this time?

Thank you,

Susan Manchester

Permit Administration for the City of Belle Isle
Building Inspections and
Code Compliance Department
407-423-0504 X23309 or 407-581-8161 option permits
E-mail: smanchester@universalengineering.com
Website: www.universalengineering.com



UNIVERSAL ENGINEERING SCIENCES, INC.
3532 Maggie Blvd. | Orlando, FL 32811
Tel: (407) 423-0504 | Fax: (407) 423-3106

From: Tarifa, Zachary [<mailto:ztarifa@cphcorp.com>]
Sent: Thursday, June 27, 2019 3:22 PM
To: Susan Manchester <SManchester@universalengineering.com>
Cc: CobiPermits <CobiPermits@universalengineering.com>
Subject: RE: 3116 Cullen Lake Shore Dr - Utility Pump Station Repairs - plans approved - CPH Inc Engineering

Sounds good, thanks!

From: Susan Manchester [<mailto:SManchester@universalengineering.com>]
Sent: Thursday, June 27, 2019 3:06 PM
To: Tarifa, Zachary
Cc: CobiPermits
Subject: RE: 3116 Cullen Lake Shore Dr - Utility Pump Station Repairs - plans approved - CPH Inc Engineering

Hi Mr. Tarifa,

Susan Manchester

From: April Fisher <aprilfisher73@gmail.com>
Sent: Monday, June 24, 2019 9:02 AM
To: Susan Manchester
Cc: Yolanda Quiceno; Heidi Peacock (hpeacock@belleislefl.gov); CobiPermits; Bob Francis
Subject: Re: 3116 Cullen Lake Shore Dr - Utility Pump Station Repairs - CPH Inc Engineering

Good morning Susan, you are correct. There is no zoning review for this. I don't know anything about the permit costs though.

Thank you,

April

April Fisher, AICP
Fisher Planning and Development Services
407-494-8789

On Fri, Jun 21, 2019 at 3:23 PM Susan Manchester <SManchester@universalengineering.com> wrote:

Hi April and Yolanda,

Attached are two applications from Orange County BCC (plumbing and electrical) to make repairs to the pump station on the county owned land at 3116 Cullen Lake Shore Drive. I don't believe that this requires any **zoning** approval as the needs for the utility would supersede any zoning criteria, and it appears the equipment is existing (but I could be wrong). However – I do need to know how much – if anything – we are charging for these two permits. As attached – the COBI fee schedule addresses items such as these “as incurred”. They have listed the cost of BOTH permits at \$558,196.00. I am sure this is an error as that is probably the **combined** cost of both permits – **total** cost for the project. The submitter will need to break out the costs separately on each app (for example \$550,000 for the plumbing and \$8,196.00 for the electrical). I will get with them to correct the pricing on each permit but I will still need some guidance on how to configure permit costs.

Any light you can shed on pricing is much appreciated.

Thank you,

Susan Manchester

From: Susan Manchester
Sent: Wednesday, June 26, 2019 9:22 AM
To: Bob Francis
Cc: Yolanda Quiceno; Heidi Peacock (hpeacock@belleislefl.gov); CobiPermits
Subject: RE: 3116 Cullen Lake Shore Dr - Utility Pump Station Repairs - CPH Inc Engineering

Thank you, Bob!

Susan Manchester

Permit Administration for the City of Belle Isle
Building Inspections and
Code Compliance Department
407-423-0504 X23309 or 407-581-8161 option permits
E-mail: smanchester@universalengineering.com
Website: www.universalengineering.com



UNIVERSAL ENGINEERING SCIENCES, INC.
3532 Maggie Blvd. | Orlando, FL 32811
Tel: (407) 423-0504 | Fax: (407) 423-3106

From: Bob Francis [mailto:bfrancis@belleislefl.gov]
Sent: Wednesday, June 26, 2019 8:41 AM
To: Susan Manchester <SManchester@universalengineering.com>
Cc: Yolanda Quiceno <yquiceno@belleislefl.gov>; Heidi Peacock (hpeacock@belleislefl.gov) <hpeacock@belleislefl.gov>; CobiPermits <CobiPermits@universalengineering.com>
Subject: Re: 3116 Cullen Lake Shore Dr - Utility Pump Station Repairs - CPH Inc Engineering

I don't know if Yolanda answered this yet, but you can use the regular COBI fee schedule.

Sincerely,

Bob

Bob Francis, ICMA-CM
City Manager
City of Belle Isle, FL

1600 Nela Ave.
Belle Isle, FL 32809
(407) 851-7730 (O)
(407) 450-6272 (C)
bfrancis@belleislefl.gov

On Tue, Jun 25, 2019 at 10:05 AM Susan Manchester <SManchester@universalengineering.com> wrote:



UNIVERSAL ENGINEERING SCIENCES

Consultants In: Geotechnical Engineering • Environmental Sciences
Geophysical Services • Materials Testing • Threshold Inspection
Building Code Administration, Compliance Inspection & Plan Review

3532 Maggie Blvd, Orlando, FL 32811 - P: 407.423.0504 - F: 407.423.3106

Work Order No. 148821

Inspection Report

Project Name: 3116 Cullen Lake Shore Dr. Orange County Utility Pump
Startion

Date: 06/25/2019 Any any

Address: 3116 Cullen Lake Shore Dr. OC Utility, Belle Isle, Orange
County, FL

Permit No: 2019-06-075

Client: City of Belle Isle

Lot No.:

ProjectNo.: 0115.1900198.0000-0115-001

Contact: Susan Manchester at 407 581
8161

Scope of Inspection: REVIEW Plumbing app from Orange County BCC for pump station

Inspection Type:

Disposition of Inspection:

Approved
DB

Comments:

I hereby affirm that to the best of my knowledge and belief, the above listed inspection was performed as indicated and the work was reviewed for compliance with the approved plans, and all pertinent sections of the Florida Building Code.

Inspector: Dale Baker, BN 3927

Dale Baker



UNIVERSAL ENGINEERING SCIENCES

Consultants In: Geotechnical Engineering • Environmental Sciences
Geophysical Services • Materials Testing • Threshold Inspection
Building Code Administration, Compliance Inspection & Plan Review

3532 Maggie Blvd, Orlando, FL 32811 - P: 407.423.0504 - F: 407.423.3106

Work Order No. 148822

Inspection Report

Project Name: 3116 Cullen Lake Shore Dr. Orange County Utility Pump Station

Date: 06/25/2019 Any any

Address: 3116 Cullen Lake Shore Dr. OC Utility, Belle Isle, Orange County, FL

Permit No: 2019-06-076

Client: City of Belle Isle

Lot No.:

ProjectNo.: 0115.1900198.0000-0115-002

Contact: Susan Manchester at 407 581 8161

Scope of Inspection: REVIEW Electrical app from Orange County BCC for pump station

Inspection Type:

Disposition of Inspection:

*Approved
ob*

Comments:

I hereby affirm that to the best of my knowledge and belief, the above listed inspection was performed as indicated and the work was reviewed for compliance with the approved plans, and all pertinent sections of the Florida Building Code.

Inspector: Dale Baker, BN 3927

Dale Baker



RICK SINGH, CFA - ORANGE COUNTY PROPERTY APPRAISER

- [Searches](#)
- [Sales Search](#)
- [Results](#)
- [Property Record Card](#)
- [My Favorites](#)

Sign up for e-Notify...

3116 Cullen Lake Shore Dr < 17-23-30-4379-01-850 >

Name(s) Physical Street Address
 Orange County BCC 3116 Cullen Lake Shore Dr
 Property Name Postal City and Zipcode
 N/A. Click information icon to contribute. Orlando, FL 32812
 Mailing Address On File Property Use
 C/O Real Estate Mngt Dept 8620 - Utility
 Po Box 1393 Municipality
 Orlando, FL 32802-1393 Belle Isle
 Incorrect Mailing Address?



View 2018 Property Record Card

- [Property Features](#)
- [Values, Exemptions and Taxes](#)
- [Sales Analysis](#)
- [Location Info](#)
- [Market Stats](#)
- [Update Information](#)

2019 values will be available in August of 2019.

Property Description [View Plat](#)

LAKE CONWAY ESTATES SECTION 3 Y/19 LOT 185

Total Land Area 3,950 sqft (+/-) | 0.09 acres (+/-) GIS Calculated Notice

Land

Land Use Code	Zoning	Land Units	Unit Price	Land Value	Class Unit Price	Class Value
8620 - Utility	R-1-AA	1 UNIT(S)	working...	working...	working...	working...

Page 1 of 1 (1 total records)

Buildings

Important Information

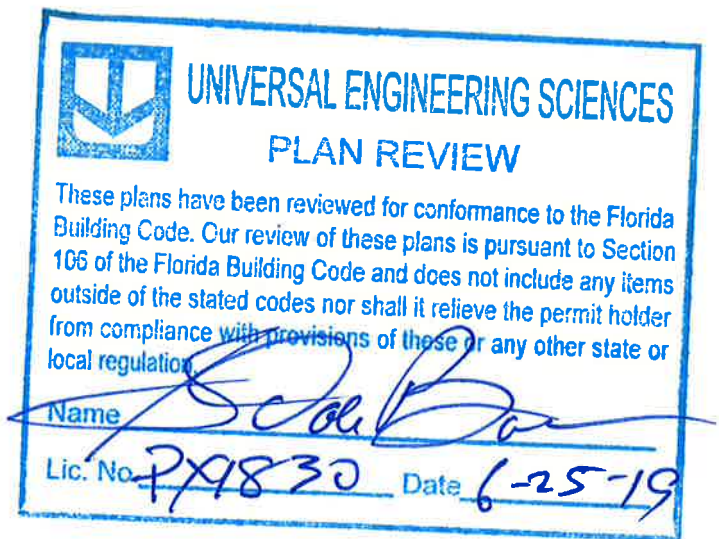
There are no buildings associated with this parcel.

Structure

PUMP STATION R/R PACKAGE No. 21

Station #, NOT address

- P.S. 3085 Cullen Lake Shore
 - ~~P.S. 3086 Shenandoah School~~
 - ~~P.S. 3241 Gatlin Drive~~
 - ~~P.S. 3705 Pineridge Hollow 1~~
 - ~~P.S. 3739 Natoma~~
- Improvements



BOARD OF COUNTY COMMISSIONERS

TERESA JACOBS
ORANGE COUNTY MAYOR

BETSY VANDERLEY
DISTRICT 1

ROD A. LOVE
DISTRICT 2

PETE CLARKE
DISTRICT 3

JENNIFER THOMPSON
DISTRICT 4

EMILY BONILLA
DISTRICT 5

VICTORIA P. SIPLIN
DISTRICT 6



AJIT LALCHANDANI, P.E.
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.

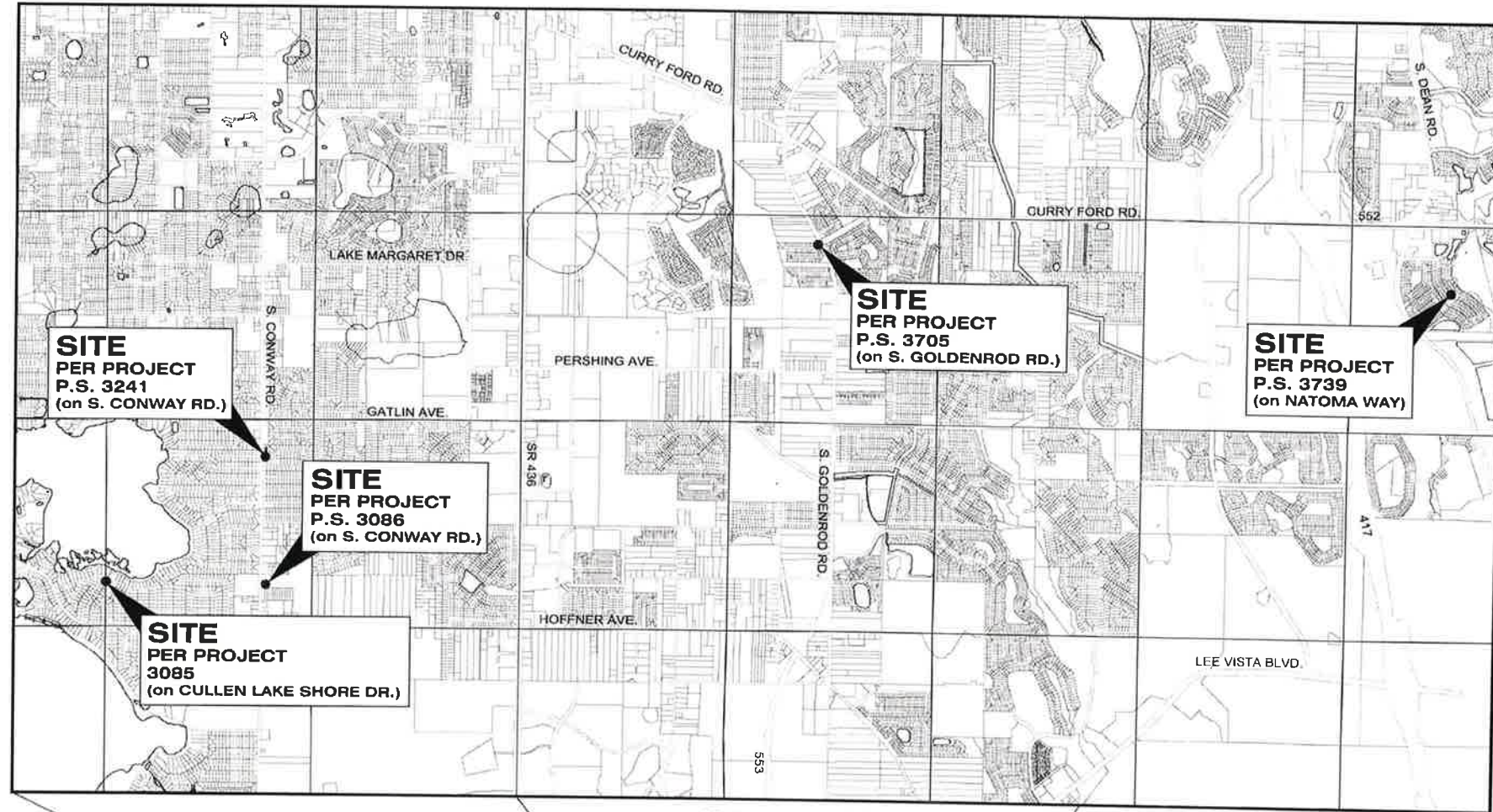
ORANGE COUNTY UTILITIES DEPARTMENT
ENGINEERING DIVISION
ORANGE COUNTY, FLORIDA

May 2019

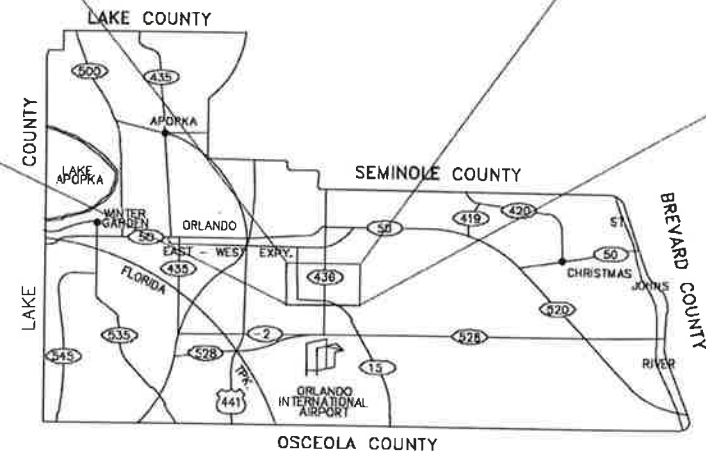
60% SUBMITTAL

- OCU FILE NO.: 93687
- CIP FUNDING CODE:
- (PS 3085) 1559-0113
 - (PS 3086) 1559-0114
 - (PS 3241) 1503-97
 - (PS 3705) 1559-0115
 - (PS 3739) 1559-0129

LOCATION MAP



ORANGE COUNTY, FLORIDA
SCALE: 1" = 2,000'

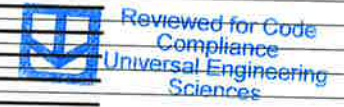


ORANGE COUNTY, FLORIDA
SCALE: 1" = 50,000'

NOTE:
SEE SURVEYS FOR SPECIFIC LOCATIONS

DRAWING INDEX

SHEET NO	DWG. NO.	TITLE
1 OF 62	G100	COVER SHEET
2 OF 62	G200	LOCATION MAP AND DRAWING INDEX
3 OF 62	G300	GENERAL NOTES, ABBREVIATIONS AND LEGEND
4 OF 62	G400	OCU ENGINEERING NOTES
5 OF 62	V100	PUMP STATION 3085 CULLEN LAKE SHORE - TOPOGRAPHIC SURVEY
6 OF 62	V101	PUMP STATION 3085 CULLEN LAKE SHORE - TOPOGRAPHIC SURVEY
7 OF 62	V102	PUMP STATION 3085 CULLEN LAKE SHORE - TOPOGRAPHIC SURVEY
8 OF 62	V103	PUMP STATION 3085 CULLEN LAKE SHORE - TOPOGRAPHIC SURVEY
9 OF 62	V104	PUMP STATION 3085 CULLEN LAKE SHORE - TOPOGRAPHIC SURVEY
10 OF 62	V105	PUMP STATION 3085 CULLEN LAKE SHORE - TOPOGRAPHIC SURVEY
11 OF 62	V106	PUMP STATION 3085 CULLEN LAKE SHORE - TOPOGRAPHIC SURVEY
12 OF 62	V107	PUMP STATION 3085 CULLEN LAKE SHORE - TOPOGRAPHIC SURVEY
13 OF 62	V108	PUMP STATION 3085 CULLEN LAKE SHORE - TOPOGRAPHIC SURVEY
14 OF 62	V109	PUMP STATION 3085 CULLEN LAKE SHORE - TOPOGRAPHIC SURVEY
15 OF 62	C100	P.S. 3085 CULLEN LAKE SHORE - DEMOLITION SITE PLAN
16 OF 62	C101	P.S. 3085 CULLEN LAKE SHORE - SITE PLAN
17 OF 62	C102	P.S. 3085 CULLEN LAKE SHORE - SITE GRADING PLAN
18 OF 62	D300	P.S. 3085 CULLEN LAKE SHORE - DEMOLITION SITE PLAN
19 OF 62	D301	P.S. 3085 CULLEN LAKE SHORE - DEMOLITION SITE PLAN
20 OF 62	D302	P.S. 3085 CULLEN LAKE SHORE - DEMOLITION SITE PLAN
21 OF 62	D303	P.S. 3085 CULLEN LAKE SHORE - DEMOLITION SITE PLAN
22 OF 62	D304	P.S. 3085 CULLEN LAKE SHORE - DEMOLITION SITE PLAN
23 OF 62	D305	P.S. 3085 CULLEN LAKE SHORE - DEMOLITION SITE PLAN
24 OF 62	D306	P.S. 3085 CULLEN LAKE SHORE - DEMOLITION SITE PLAN
25 OF 62	D307	P.S. 3085 CULLEN LAKE SHORE - DEMOLITION SITE PLAN
26 OF 62	D308	P.S. 3085 CULLEN LAKE SHORE - DEMOLITION SITE PLAN
27 OF 62	D309	P.S. 3085 CULLEN LAKE SHORE - DEMOLITION SITE PLAN
28 OF 62	D310	P.S. 3085 CULLEN LAKE SHORE - DEMOLITION SITE PLAN
29 OF 62	D311	P.S. 3085 CULLEN LAKE SHORE - DEMOLITION SITE PLAN
30 OF 62	D312	P.S. 3085 CULLEN LAKE SHORE - DEMOLITION SITE PLAN
31 OF 62	D313	P.S. 3085 CULLEN LAKE SHORE - DEMOLITION SITE PLAN
32 OF 62	D314	P.S. 3085 CULLEN LAKE SHORE - DEMOLITION SITE PLAN
33 OF 62	D315	P.S. 3085 CULLEN LAKE SHORE - DEMOLITION SITE PLAN
34 OF 62	D316	P.S. 3085 CULLEN LAKE SHORE - DEMOLITION SITE PLAN
35 OF 62	D317	P.S. 3085 CULLEN LAKE SHORE - DEMOLITION SITE PLAN
36 OF 62	D318	P.S. 3085 CULLEN LAKE SHORE - DEMOLITION SITE PLAN
37 OF 62	D319	P.S. 3085 CULLEN LAKE SHORE - DEMOLITION SITE PLAN
38 OF 62	D320	P.S. 3085 CULLEN LAKE SHORE - DEMOLITION SITE PLAN
39 OF 62	D321	P.S. 3085 CULLEN LAKE SHORE - DEMOLITION SITE PLAN
40 OF 62	D322	P.S. 3085 CULLEN LAKE SHORE - DEMOLITION SITE PLAN
30 OF 62	P100	P.S. 3085 CULLEN LAKE SHORE - PUMP PLAN, SECTION AND DETAIL
41 OF 62	P101	P.S. 3085 CULLEN LAKE SHORE - PUMP PLAN, SECTION AND DETAIL
42 OF 62	P102	P.S. 3085 CULLEN LAKE SHORE - PUMP PLAN, SECTION AND DETAIL
43 OF 62	P103	P.S. 3085 CULLEN LAKE SHORE - PUMP PLAN, SECTION AND DETAIL
44 OF 62	P104	P.S. 3085 CULLEN LAKE SHORE - PUMP PLAN, SECTION AND DETAIL
45 OF 62	P105	P.S. 3085 CULLEN LAKE SHORE - PUMP PLAN, SECTION AND DETAIL
46 OF 62	P106	P.S. 3085 CULLEN LAKE SHORE - PUMP PLAN, SECTION AND DETAIL
47 OF 62	P107	P.S. 3085 CULLEN LAKE SHORE - PUMP PLAN, SECTION AND DETAIL
48 OF 62	P108	P.S. 3085 CULLEN LAKE SHORE - PUMP PLAN, SECTION AND DETAIL
49 OF 62	P109	P.S. 3085 CULLEN LAKE SHORE - PUMP PLAN, SECTION AND DETAIL
50 OF 62	P110	P.S. 3085 CULLEN LAKE SHORE - PUMP PLAN, SECTION AND DETAIL
51 OF 62	D400	CONSTRUCTION DETAILS - MANHOLE AND PIPE INSTALLATION
52 OF 62	D401	CONSTRUCTION DETAILS - MANHOLE AND PIPE INSTALLATION
53 OF 62	D402	CONSTRUCTION DETAILS - MANHOLE AND PIPE INSTALLATION
54 OF 62	D403	CONSTRUCTION DETAILS - MANHOLE AND PIPE INSTALLATION
55 OF 62	D404	CONSTRUCTION DETAILS - MANHOLE AND PIPE INSTALLATION
56 OF 62	D405	CONSTRUCTION DETAILS - WET WELL INSTALLATION
57 OF 62	D406	CONSTRUCTION DETAILS - WET WELL INSTALLATION
41 OF 62	E001	ELECTRICAL NOTES, SYMBOLS AND ABBREVIATIONS
42 OF 62	E100	P.S. 3085 CULLEN LAKE SHORE - DUPLEX PUMP CONTROL PANEL SINGLE LINE DIAGRAM
43 OF 62	E101	P.S. 3085 CULLEN LAKE SHORE - ELECTRICAL DEMOLITION PLAN
44 OF 62	E102	P.S. 3085 CULLEN LAKE SHORE - ELECTRICAL PLAN
45 OF 62	E103	P.S. 3085 CULLEN LAKE SHORE - DUPLEX PUMP CONTROL PANEL SINGLE LINE DIAGRAM
46 OF 62	E104	P.S. 3085 CULLEN LAKE SHORE - ELECTRICAL DEMOLITION PLAN
47 OF 62	E105	P.S. 3085 CULLEN LAKE SHORE - ELECTRICAL PLAN
48 OF 62	E106	P.S. 3085 CULLEN LAKE SHORE - DUPLEX PUMP CONTROL PANEL SINGLE LINE DIAGRAM
49 OF 62	E107	P.S. 3085 CULLEN LAKE SHORE - ELECTRICAL DEMOLITION PLAN
50 OF 62	E108	P.S. 3085 CULLEN LAKE SHORE - ELECTRICAL PLAN
51 OF 62	E109	P.S. 3085 CULLEN LAKE SHORE - DUPLEX PUMP CONTROL PANEL SINGLE LINE DIAGRAM
52 OF 62	E110	P.S. 3085 CULLEN LAKE SHORE - ELECTRICAL DEMOLITION PLAN
53 OF 62	E111	P.S. 3085 CULLEN LAKE SHORE - ELECTRICAL PLAN
54 OF 62	E112	P.S. 3085 CULLEN LAKE SHORE - DUPLEX PUMP CONTROL PANEL SINGLE LINE DIAGRAM
55 OF 62	E113	P.S. 3085 CULLEN LAKE SHORE - ELECTRICAL DEMOLITION PLAN
56 OF 62	E114	P.S. 3085 CULLEN LAKE SHORE - ELECTRICAL PLAN
57 OF 62	E115	P.S. 3085 CULLEN LAKE SHORE - DUPLEX PUMP CONTROL PANEL SINGLE LINE DIAGRAM
58 OF 62	E116	P.S. 3085 CULLEN LAKE SHORE - ELECTRICAL DEMOLITION PLAN
59 OF 62	E117	P.S. 3085 CULLEN LAKE SHORE - ELECTRICAL PLAN
60 OF 62	E118	P.S. 3085 CULLEN LAKE SHORE - DUPLEX PUMP CONTROL PANEL SINGLE LINE DIAGRAM
61 OF 62	E119	P.S. 3085 CULLEN LAKE SHORE - ELECTRICAL DEMOLITION PLAN
62 OF 62	E120	P.S. 3085 CULLEN LAKE SHORE - ELECTRICAL PLAN
63 OF 62	V100	P.S. 3085 CULLEN LAKE SHORE - TOPOGRAPHIC SURVEY



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, Engineers, Environmental, Landscape Architects, Structural, Surveyors, Traffic/Transportation

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

LOCATION MAP AND DRAWING INDEX

SCOTT A BREITENSTEIN
 PROFESSIONAL ENGINEER
 FLORIDA LICENSE #57402

OCU FILE NO.: 93687
 DESIGNED BY: SAB
 DRAWN BY: RAS
 CHECKED BY: SAB/DEM
 CADD FILE: Location Sheet.dwg

60% SUBMITTAL
 SCALE: AS SHOWN
 DRAWING NO.: **G200**
 SHEET: 2 OF 62

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).
 - ALL PROPOSED DRIVEWAY AND SIDEWALK IMPROVEMENTS MUST COMPLY WITH CURRANT ADA STANDARDS.
 - ELEVATIONS SHOWN ARE BASED ON NAVD 1988 DATUM.
 - NEW OR RELOCATED, UNDERGROUND WATER MAINS SHALL BE LAID TO PROVIDE A HORIZONTAL DISTANCE OF AT LEAST SIX FEET, AND PREFERABLY TEN FEET, BETWEEN THE OUTSIDE OF THE WATER MAIN AND THE OUTSIDE OF ANY EXISTING OR PROPOSED GRAVITY- OR PRESSURE-TYPE SANITARY SEWER, WASTEWATER FORCE MAIN, OR PIPELINE CONVEYING RECLAIMED WATER NOT REGULATED UNDER PART III OF CHAPTER 62-610, F.A.C. THE MINIMUM HORIZONTAL SEPARATION DISTANCE BETWEEN WATER MAINS AND GRAVITY-TYPE SANITARY SEWERS SHALL BE REDUCED TO THREE FEET WHERE THE BOTTOM OF THE WATER MAIN IS LAID AT LEAST SIX INCHES ABOVE THE TOP OF THE SEWER. NEW OR RELOCATED, UNDERGROUND WATER MAINS CROSSING ANY EXISTING OR PROPOSED GRAVITY-OR VACUUM-TYPE SANITARY SEWER SHALL BE LAID SO THE OUTSIDE OF THE WATER MAIN IS AT LEAST SIX INCHES, AND PREFERABLY 12 INCHES, ABOVE OR AT LEAST 12 INCHES BELOW THE OUTSIDE OF THE OTHER PIPELINE. HOWEVER, IT IS PREFERABLE TO LAY THE WATER MAIN ABOVE THE OTHER PIPELINE. NEW OR RELOCATED, UNDERGROUND WATER MAINS CROSSING ANY EXISTING OR PROPOSED PRESSURE TYPE SANITARY SEWER, WASTEWATER OR STORMWATER FORCE MAIN, OR PIPELINE CONVEYING RECLAIMED WATER SHALL BE LAID SO THE OUTSIDE OF THE WATER MAIN IS AT LEAST 12 INCHES ABOVE OR BELOW THE OUTSIDE OF THE OTHER PIPELINE. HOWEVER, IT IS PREFERABLE TO LAY THE WATER MAIN ABOVE THE OTHER PIPELINE.
- AT THE UTILITY CROSSINGS DESCRIBED 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 THE ALL WATER MAIN JOINTS ARE AT LEAST THREE FEET FROM ALL JOINTS IN VACUUM-TYPE SANITARY SEWERS, OR PIPELINES CONVEYING RECLAIMED WATER REGULATED UNDER PART III OF CHAPTER 62-610, F.A.C., AND AT LEAST SIX FEET FROM ALL JOINTS IN GRAVITY-OR PRESSURE-TYPE SANITARY SEWERS, WASTEWATER FORCE MAINS, OR PIPELINES CONVEYING RECLAIMED WATER NOT REGULATED UNDER PART III OF CHAPTER 62-610, F.A.C.
- 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 TANKERS AND SIGNED DOCUMENT ACKNOWLEDGING THE UNDERSTANDING OF THE ORANGE COUNTY UTILITY **"EMERGENCY WASTEWATER SPILL AND WATER MAIN BREAK PROCEDURES"**, IN THE PRE-CONSTRUCTION PACKET FOR THE MEETING.
 - 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 FORTY-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.
 - THE CONTRACTOR SHALL MAKE EXPLORATORY EXCAVATIONS AT ALL INTERSECTIONS OF PROPOSED WORK AND EXISTING UTILITIES. THE EXPLORATORY EXCAVATIONS SHALL BE MADE FORTY-EIGHT (48) HOURS IN ADVANCE OF THE WORK. IF THERE IS A POTENTIAL CONFLICT, THE CONTRACTOR SHALL NOTIFY THE COUNTY RESIDENT PROJECT REPRESENTATIVE IMMEDIATELY WITH INFORMATION WHICH SHALL INCLUDE LOCATION, ELEVATION, UTILITY TYPE, MATERIAL AND SIZE.
 - 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 PROVIDE TEMPORARY BY-PASS PUMPING AS NEEDED FOR EACH PUMP STATION AND/OR MANHOLE TO BE REHABILITATED AND/OR REPLACED PRIOR TO THE START OF ANY WORK. BOTH THE PRIMARY AND THE BACKUP BY-PASS PUMPING SYSTEMS SHALL BE OF ADEQUATE CAPACITIES AND SIZES TO HANDLE THE FLOW AND SHALL MAINTAIN CONTINUOUS SERVICE DURING THE ENTIRE CONSTRUCTION PROCESS UNTIL THE NEW OR REHABILITATED PUMP STATION OR MANHOLE HAS BEEN ACCEPTED BY THE COUNTY. THE BY-PASS PUMPING SYSTEMS SHALL BE APPROVED AND ACCEPTED BY THE COUNTY PRIOR TO INSTALLATION. THE CONTRACTOR SHALL NOT MAINTAIN MORE THAN TWO (2) PUMP STATION BY-PASS OPERATIONS AT THE SAME TIME DURING THE CONSTRUCTION PROCESS.
- BY-PASS PUMPING SHALL BE LOW NOISE SUITABLE FOR RESIDENTIAL NEIGHBORHOODS (SEE SECTION 01001.1.05B OF THE TECHNICAL SPECIFICATIONS).
- 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.
- THE CONTRACTOR SHALL FURNISH AND INSTALL ALL TEMPORARY PLUGS, BLOCKING, TAPS, AND TESTING EQUIPMENT REQUIRED TO COMPLETE PRESSURE TESTING, AS SPECIFIED.
- THE CONTRACTOR SHALL PREPARE AND SUBMIT FOR APPROVAL BY THE COUNTY, A COMPREHENSIVE WRITTEN PROCEDURE THAT DESCRIBES THE INTENDED CONSTRUCTION SEQUENCE FOR MAINTAINING AND TRANSFERRING SERVICE FROM THE EXISTING PUMP STATION TO THE NEW PUMP STATION. ITEMS TO ADDRESS SHALL INCLUDE THE FOLLOWING AS A MINIMUM:
 - LOCATION AND METHOD OF BY-PASS PUMPING.
 - STATION START-UP AND DRAW-DOWN PROCEDURES.
 - TIE IN OF THE NEW PUMP STATION.
 - DISMANTLING OF EQUIPMENT AND CONVERSION OR REMOVAL OF OLD WET WELL.
 THIS PROCEDURE SHALL BE SUBMITTED WITH THE PROJECT SCHEDULE.
- THE CONTRACTOR SHALL NOTIFY THE COUNTY SEVEN (7) WORKING DAYS IN ADVANCE OF ANY SANITARY FORCE MAIN SHUT-DOWN.
- ALL CONNECTIONS TO EXISTING FORCE MAINS SHALL BE MADE BY THE CONTRACTOR ONLY AFTER THE CONNECTION PROCEDURE AND THE WORK SCHEDULING HAS BEEN REVIEWED AND APPROVED BY THE COUNTY. THE CONTRACTOR SHALL SUBMIT A WRITTEN REQUEST TO THE COUNTY A MINIMUM OF SEVEN (7) WORKING DAYS PRIOR TO SCHEDULING SAID CONNECTIONS. THE REQUEST SHALL OUTLINE THE FOLLOWING:
 - POINTS OF CONNECTION, FITTINGS TO BE USED, AND METHOD OF FLUSHING.
 - ESTIMATED CONSTRUCTION TIME FOR SAID CONNECTIONS.
- THE COUNTY SHALL REVIEW THE SUBMITTAL WITHIN SEVEN (7) WORKING DAYS AFTER RECEIPT AND INFORM THE CONTRACTOR REGARDING APPROVAL OR DENIAL OF THE REQUEST. IF THE REQUEST IS REJECTED BY THE COUNTY, THE CONTRACTOR SHALL RESUBMIT THE WRITTEN REQUEST, WHICH HAS BEEN MODIFIED IN A MANNER ACCEPTABLE TO THE COUNTY. ALL CONNECTIONS SHALL BE MADE ONLY ON THE AGREED UPON DATE AND TIME. IF THE CONTRACTOR DOES NOT INITIATE AND COMPLETE THE CONNECTION WORK IN THE AGREED UPON MANNER, HE SHALL BE REQUIRED TO RESCHEDULE THE SAID CONNECTIONS BY FOLLOWING THE PROCEDURE OUTLINED IN NOTE 29.
- ADVANCE NOTIFICATION OF PENDING CONNECTION**
THE ORANGE COUNTY UTILITY WATER DIVISION AND THE ORANGE COUNTY UTILITY WATER RECLAMATION DIVISION SHALL BE NOTIFIED AT LEAST SEVEN (7) DAYS IN ADVANCE TO SCHEDULE MAIN TIE-INS AND VALVE OPERATIONS.
- ANY WORK PROPOSED FOR THE POTABLE WATER SYSTEM SHALL BE PERFORMED IN ACCORDANCE WITH THE STANDARDS AND DETAILS OF THE APPROPRIATE UTILITY PROVIDER.
- 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.

EMERGENCY NUMBERS

FIBER OPTIC	COMMCAS COMMUNICATIONS	407-312-5944
FIBER OPTIC	LEVEL 3 COMMUNICATIONS	720-888-2061
PHONE	BRIGHT HOUSE NETWORKS	407-532-8509, 407-532-8520
PHONE	CENTURY LINK	407-815-5344, 407-557-6766
PHONE	MCI	972-729-8016
PHONE	SMART CITY TELECOM	407-828-6646
PHONE	TW TELECOM	407-215-6895
ELECTRIC	DUKE ENERGY	407-398-6670
GAS	TECO PEOPLES GAS	407-420-6609
LOCATES	SUNSHINE ONE CALL	800-432-4777
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
WATER/ELE	ORLANDO UTILITIES COMMISSION (O. U. C.)	407-423-9100

LEGEND

	GUY WIRE AND ANCHOR		EXISTING STORM PIPE
	CAP		EXISTING BURIED TELEPHONE
	PLUG		EXISTING FIBER OPTIC CABLE
	BENCHMARK		EXISTING BURIED ELECTRIC
	TREE (TYPE & SIZE NOTED)		EXISTING OVERHEAD ELECTRIC
	SHRUB		EXISTING CABLE TV (BURIED)
	PROPOSED ELEVATION		EXISTING ELEVATION
	PROPOSED FORCE MAIN		EXISTING FORCE MAIN
	PROPOSED GRAVITY MAIN		EXISTING GRAVITY MAIN
	PROPOSED WATER SERVICE		EXISTING WATER MAIN
	PROPOSED CHAIN-LINK FENCE		EXISTING CHAN-LINK FENCE
	PROPOSED WOOD FENCE		EXISTING WOOD FENCE
	PROPOSED POWER POLE		EXISTING POWER POLE
	PROPOSED MANHOLE (SPECIFY)		EXISTING MANHOLE (SPECIFY)
	PROPOSED VALVE (SPECIFY)		EXISTING VALVE (SPECIFY)
	PROPOSED WATER METER		EXISTING WATER METER
	PROPOSED BACK-FLOW PREVENTER		EXISTING BACK-FLOW PREVENTER

PRECAST STRUCTURAL NOTES

- PRECAST STRUCTURES SHALL BE ENGINEERED PRODUCTS OF A PRECAST MANUFACTURER AND SHALL BE SPECIFICALLY DESIGNED FOR THE SERVICE AND APPLICATION AS SHOWN ON THESE DRAWINGS. THE PRECAST MANUFACTURER IS SOLELY RESPONSIBLE FOR DESIGN AND MANUFACTURE OF EACH STRUCTURE. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR INSTALLATION OF THESE PRODUCTS AND CONFORMANCE OF SAME WITH ALL PROJECT DOCUMENTS. THE CONTRACTOR SHALL SUBMIT COMPLETE SHOP DRAWINGS FOR ALL SUCH PRECAST STRUCTURES ON THE PROJECT FOR REVIEW AND APPROVAL, PRIOR TO THE ORDERING OF ANY STRUCTURES OR MATERIALS.
- THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS OF THE CAST-IN-PLACE REINFORCEMENT AND CONCRETE PLACEMENT USED IN THE INSTALLATION OF SADDLE MANHOLES FOR REVIEW AND APPROVAL BY THE COUNTY, PRIOR TO THE ORDERING OF ANY MATERIALS.
- STRUCTURAL DESIGN STANDARDS - ACI STANDARD 318-89 BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE AND ACI 350R-83, "CONCRETE SANITARY ENGINEERING STRUCTURES". PRECAST WALL SECTIONS ASTM C478.
- ALL CONCRETE SHALL HAVE A SPECIFIED MINIMUM COMPRESSIVE STRENGTH OF $f'_c = 4000$ P.S.I. AT 28 DAYS, UNLESS NOTED ON DRAWINGS.
- ALL REINFORCING BARS SHALL CONFORM TO ASTM A615 GRADE 60. MINIMUM YIELD STRENGTH SHALL BE 60,000 P.S.I.
- CONTRACTOR SHALL COORDINATE WET WELL HATCH OPENING SIZE AND LOCATION AS REQUIRED BY PUMP MANUFACTURER/SUPPLIER WITH THE PRECAST CONCRETE SUPPLIER PRIOR TO CASTING. SHOP DRAWINGS OF THE PRECAST SHALL BE PROVIDED TO THE COUNTY FOR REVIEW.
- THE FLOOR GROUT (FILLET) SHALL BE FULL CIRCUMFERENCE OF THE STRUCTURE.

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	(P.S. 3085)
DUKE ENERGY	(P.S. 3086)
DUKE ENERGY	(P.S. 3241)
DUKE ENERGY	(P.S. 3705)
DUKE ENERGY	(P.S. 3739)
- WATER SUPPLIER:

O.C.U.	(P.S. 3085)
O.C.U.	(P.S. 3086)
O.C.U.	(P.S. 3241)
O.C.U.	(P.S. 3705)
O.C.U.	(P.S. 3739)

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	M.H.	MANHOLE
BE	BURIED ELECTRIC	MIN.	MINIMUM
BL	BASELINE	MOD	MODIFIED
B.M.	BENCHMARK	M.O.T.	MAINTENANCE OF TRAFFIC
B.O.	BLOWOFF	M.J.	MECHANICAL JOINT
BCL	BURIED 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.	CONSTRUCTION	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
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	SHT.	SHEET
F.D.E.P.	FLORIDA DEPT. OF ENVIRONMENTAL PROTECTION	SHT.	SHEET
F.D.O.T.	FLORIDA DEPT. OF TRANSPORTATION	SHT.	SHEET
F.F.	FINISHED FLOOR	SPECS.	SPECIFICATIONS
F.H.	FIRE HYDRANT	SQ.	SQUARE
FKA	FORMALLY KNOWN AS	SS	STAINLESS STEEL
FLG.	FLANGE	STA.	STATION
FL	FLOW LINE	STD.	STANDARD
FM	FORCEMAIN	STL.	STEEL
FT.	FEET	S.Y.	SQUARE YARDS
FTG.	FOOTING	TEL	TELEPHONE
GA	GAUGE	T&B	TOP AND BOTTOM
GAL.	GALLONS	TBM	TEMPORARY BENCH MARK
GEN.	GENERATOR	TCE	TEMPORARY CONSTRUCTION
GRD.	GROUND	TEMP.	TEMPORARY
G.S.P.	GALVANIZED STEEL PIPE	THD.	THREADED
GM	GAS MAIN	THK.	THICK
GPM	GALLONS PER MINUTE	TPM.	TYPICAL
GV	GATE VALVE	U.G.	UNDERGROUND
HB	HOSE BIBB	VAC	VOLTAGE ALTERNATING CURRENT
HDWL.	HEADWALL	VCP	VITRIFIED CLAY PIPE
HT.	HEIGHT	VDC	VOLTAGE DIRECT CURRENT
HP	HIGH POINT	VERT.	VERTICAL
HORIZ.	HORIZONTAL	V.V.H.	VERIFIED VERTICALLY & HORIZONTALLY
H.W.L.	HIGH WATER LEVEL	W/	WITH
I.E.	INVERT ELEVATION	WM	WATERMAIN
I.D.	INSIDE DIAMETER	WM	WATER METER
IN.	INCHES	WP	WALL PIPE
INV.	INVERT	WS	WATER SERVICE
I.P.	IRON PIPE	W.S.	WATER SURFACE
I.R.	IRON ROD	WWF	WELDED WIRE FABRIC
J.B.	JUNCTION BOX	"X"	SPOT ELEVATION
JUNC.	JUNCTION		
LAT.	LATERAL		
LF	LINEAR FEET		

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

ADDRESSES FOR THE PUMP STATIONS:

- P.S. 3085 - 3116 CULLEN LAKE SHORE DRIVE BELLE ISLE, FL 32812
- P.S. 3086 - 4839 CONWAY ROAD ORLANDO, FL 32809
- P.S. 3241 - 4125 S. CONWAY ROAD ORLANDO, FL 32802
- P.S. 3705 - 2692 GOLDENROD ROAD ORLANDO, FL 32822
- P.S. 3739 - 10425 NATOMA WAY ORLANDO, FL 32825

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

GENERAL NOTES, ABBREVIATIONS AND LEGEND

OCU FILE NO.: 93687
DESIGNED BY: SAB
DRAWN BY: RAS
CHECKED BY: SAB/DEM
CADD FILE: General Notes

SCALE: AS SHOWN
DRAWING NO.: **G300**
SHEET: 3 OF 62

60% SUBMITTAL

OUW WATER ENGINEERING NOTES (REV. 05/12/09):

THE DEVELOPER/CUSTOMER SHALL ACCOMPLISH ALL WATER MAIN AND SERVICE WORK THROUGH THE POINT OF SERVICE/CONTROL VALVE AND WATER METERS AND DEED TO OUC. OUC WILL OWN AND OPERATE UP TO AND INCLUDING THE OUC POINT OF SERVICE/CONTROL VALVE AND METERS ONLY. THE REQUIRED WORK SHALL BE PERFORMED PER CURRENT OUC GUIDELINES, OUC WATER DISTRIBUTION STANDARD SPECIFICATIONS AND OUC WATER DISTRIBUTION MATERIAL SPECIFICATIONS AND WATER DETAIL SHEET UNDER OUC INSPECTION. THE DEVELOPER/CUSTOMER MUST CONTACT OUC INSPECTION AT 407-649-4436 TO SCHEDULE A PRE-CONSTRUCTION MEETING PRIOR TO ANY WATER CONSTRUCTION.

A MINIMUM 4' CLEARANCE (INCLUDING LANDSCAPING) MUST BE MAINTAINED AROUND METER ASSEMBLY.

THE DEVELOPER/CUSTOMER SHALL FIELD VERIFY THE HORIZONTAL AND VERTICAL LOCATION OF EXISTING OUC WATER FACILITIES BEFORE COMMENCEMENT OF CONSTRUCTION.

FOR WATER WET TAPS, USE ONLY OUC APPROVED TAPPING CONTRACTORS:

ACTION INDUSTRIES, INC. 352-732-6941 OR 800-216-4464
 CENTRAL FLORIDA TAPPING AND CONSTRUCTION SERVICES, INC. 407-834-8271
 MAC TAPPING, INC. 407-468-0557
 RANGLINE TAPPING SERVICES, INC. 800-346-5971
 TDW SERVICES, INC. 407-843-2800
 T & R TAPPING SERVICE, INC. 407-339-3685

EASEMENTS:

ALL ON-SITE OUC WATER FACILITIES (MAINS, SERVICES, METERS, AND FIRE HYDRANTS) SHALL BE LOCATED WITHIN A UTILITY EASEMENT IN ACCORDANCE WITH CURRENT OUC PRIVATE PROPERTY GUIDELINES. THE DEVELOPER IS TO FURNISH ALL NECESSARY INFORMATION, INCLUDING LEGAL DESCRIPTION(S) TO PREPARE AND DOCUMENT THIS EASEMENT. ANY QUESTIONS OR COMMENTS PLEASE CONTACT OUC PROPERTY AND RIGHT OF WAY DEPARTMENT AT 407-423-9190.

CONNECTION TO EXISTING VALVE

CONTRACTOR TO VERIFY CONDITION AND PRESSURE TEST EXISTING VALVE PRIOR TO CONNECTION. IF VALVE DOES NOT HOLD REQUIRED PRESSURE TEST ADDITIONAL VALVE WILL BE REQUIRED AT DEVELOPER/CONTRACTOR'S EXPENSE.

OUW BACKFLOW PREVENTION REQUIREMENTS:

BACKFLOW DEVICES WILL BE OWNED AND MAINTAINED BY CUSTOMER UNLESS OTHERWISE NOTED. ANY QUESTIONS CONTACT OUC BACKFLOW PREVENTION DEPARTMENT AT 407-649-4436.

DOMESTIC AND IRRIGATION

THE DEVELOPER/CUSTOMER IS RESPONSIBLE FOR THE REQUIRED REDUCED PRESSURE BACKFLOW PREVENTER. RESIDENTIAL DOMESTIC BACKFLOW PREVENTERS ARE REQUIRED IN AREAS WHERE RECLAIMED OR OTHER WATER SUPPLY, I.E. WELL, IS PROVIDED TO THE SITE.

AS - BUILT DRAWINGS

THE CUSTOMER/DEVELOPER SHALL PROVIDE VERTICAL AND HORIZONTAL AS-BUILT INFORMATION RELATIVE TO ALL CONSTRUCTED UTILITIES AND STRUCTURES. THE SUBMITTAL WILL INCLUDE A SIGNED AND SEALED DRAWING AND A CD WITH THE AS BUILT INFORMATION IN AUTOCAD 2004 FORMAT.

STATE PLANES COORDINATES, EAST FLORIDA, NAD 1983-90 IS THE PREFERRED COORDINATE SYSTEM. IF A PROJECT COORDINATE SYSTEM IS USED, ALL DRAWINGS WILL BE BASED ON THIS SYSTEM AND EXISTING FEATURES I.E. EDGE OF PAVEMENT, ROAD INTERSECTIONS, BUILDINGS MUST BE REFERENCED TO AID IN THE LOCATING OF PROJECT INFRASTRUCTURE IN OUC'S GEOGRAPHIC INFORMATION SYSTEM. IF NO EXISTING FEATURES ARE SHOWN AT LEAST 2 STATE PLANE COORDINATE POINTS MUST BE SURVEYED AND BENCH MARKED.

AS-BUILT INFORMATION FOR THE WATER SYSTEM SHALL INCLUDE, BUT NOT BE LIMITED TO, THE FOLLOWING:

1. LOCATION OF ALL VALVES, FITTINGS, HYDRANTS, AND SERVICES.
2. LOCATION OF THE WATER MAIN TIED HORIZONTALLY TO THE BACK OF CURB OR EDGE OF PAVEMENT.
3. CERTIFICATION AS TO THE SYSTEM MEETING THE MINIMUM COVER REQUIREMENTS.
4. HORIZONTAL AND VERTICAL DATA FOR ANY CONSTRUCTION WHICH DEVIATES FROM THE APPROVED ENGINEERING PLANS.

THE CONTRACTOR SHALL CUT "W" IN THE TOP CURB OF EACH WATER SERVICE AND A "V" AT ALL VALVE LOCATIONS. CUT WS AND VS SHALL BE HIGHLIGHTED WITH BLUE PAINT.

M.O.T. PLAN PROCESSING PROCEDURE FOR NON-EMERGENCY ROAD CLOSURES:

1. M.O.T. PLANS ARE TO BE SUBMITTED TO THE ORANGE COUNTY ENGINEERING FOR APPROVAL.
2. THE DETOUR PLAN WILL BE REVIEWED BY THE SUPERVISOR OF THE PERMITS SECTION, ORANGE COUNTY ENGINEERING DEPARTMENT AND SUBMITTED AS SHOP DRAWINGS AT PRE-CONSTRUCTION.
3. THE DETOUR PLAN WILL THEN BE REVIEWED BY THE ORANGE COUNTY TRAFFIC ENGINEER FOR COMPLETENESS.
4. A COVER LETTER FOR THE TRAFFIC DETOUR PLAN SHALL BE SUBMITTED AND SHALL INCLUDE:
 - A. DATES AND ANTICIPATED DURATION OF ROAD CLOSURE.
 - B. DATE AND TIME THE ROAD CLOSURE WILL BEGIN.
 - C. LOCATION OF ROAD CLOSURE.
 - D. REASON FOR ROAD CLOSURE.
 - E. COMPLETE ALTERNATE AND DETOUR ROUTES.
 - F. ALL SIGNAGE SHALL BE IN ACCORDANCE WITH THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" PUBLISHED BY THE U.S. DEPARTMENT OF TRANSPORTATION, AND THE STATE OF FLORIDA'S "MANUAL ON TRAFFIC CONTROL AND SAFE PRACTICES FOR STREET AND HIGHWAY CONSTRUCTION, MAINTENANCE AND UTILITY OPERATIONS."
 - G. ALL SIGNS SHALL BE SHOWN ON A SCALED DETOUR PLAN SHEET WITH THE APPROPRIATE REFERENCE NUMBERS AS NOTED IN THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.
 - H. THE PLACEMENT OF EACH SIGN SHALL BE DIMENSIONED FROM REFERENCE POINTS THAT CAN BE IDENTIFIED IN THE FIELD.
 - I. FLASHERS SHALL BE PLACED ON ALL BARRICADES AND CONSTRUCTION WARNING SIGNAGE IF THE DETOUR PLAN IS TO EXTEND INTO THE EVENING HOURS.
 - J. THE PLANS SHALL BE SIGNED AND SEALED BY A REGISTERED ENGINEER IN THE STATE OF FLORIDA WHO IS EXPERIENCED IN TRANSPORTATION ENGINEERING.
5. ONCE THE ORANGE COUNTY TRAFFIC ENGINEER APPROVES THE PLAN, THE PLAN WILL BE RECOMMENDED FOR APPROVAL TO THE ORANGE COUNTY COMMISSION BY THE TRAFFIC ENGINEER. COMPLETE BACK-UP INFORMATION COPIES WILL BE TRANSMITTED TO THE PERMITS SECTION.
6. THE PERMITS SECTION SHALL BE RESPONSIBLE TO NOTIFY THE APPLICANT OF THE ORANGE COUNTY COMMISSION'S DECISION.
7. ONCE THE DETOUR PLAN IS PROCESSED, THE APPLICANT SHALL BE RESPONSIBLE TO NOTIFY THE MEDIA, I.E., RADIO, TELEVISION, AND THE NEWSPAPER(S) AT LEAST 7 DAYS IN ADVANCE OF THE CLOSURE. APPLICANT SHALL PLACE IN THE LOCAL NEWSPAPER, A NOTICE OF CONSIDERABLE SIZE, NOTIFYING THE PUBLIC OF THE LOCATION AND DURATION OF CLOSURE. ALL EMERGENCY RESPONSE AGENCIES, AMBULANCE SERVICES, FIRE DEPARTMENT, POLICE AUTHORITIES (SPECIFICALLY THE FLORIDA HIGHWAY PATROL AND THE ORANGE COUNTY SHERIFF'S DEPARTMENT) AND THE COUNTY SCHOOL BOARD'S TRANSPORTATION DEPARTMENT SHALL BE NOTIFIED BY TELEPHONE, FOLLOWED BY A LETTER.
8. QUESTIONS PERTAINING TO THE DETOUR PLAN SHALL BE ADDRESSED TO THE ENGINEERING DEPARTMENT'S PERMITS SECTION.
9. THE CONTRACTOR SHALL BE REQUIRED TO MAINTAIN INGRESS/ EGRESS TO EXISTING RESIDENCES AT ALL TIMES.



60% SUBMITTAL

REV	DATE	DESCRIPTION	 ORANGE COUNTY UTILITIES DEPARTMENT ENGINEERING DIVISION 9150 CURRY FORD ROAD ORLANDO, FL 32825		 A Full Service A & E Firm Architects Engineers Environmental Landscape Architects Traffic/Transportation M/E/P Pipelines Structural Surveyors 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. AA2600926 Landscp. Lic. No. LC0000298		OUC ENGINEERING NOTES		OCU FILE NO.: 93687 DESIGNED BY: SAB DRAWN BY: RAS CHECKED BY: SAB/DEM CADD FILE: General Notes		SCALE: AS SHOWN DRAWING NO.: G400 SHEET: 4 OF 62	
			LINE IS 2 INCHES AT FULL SIZE (IF NOT SCALE ACCORDINGLY)											

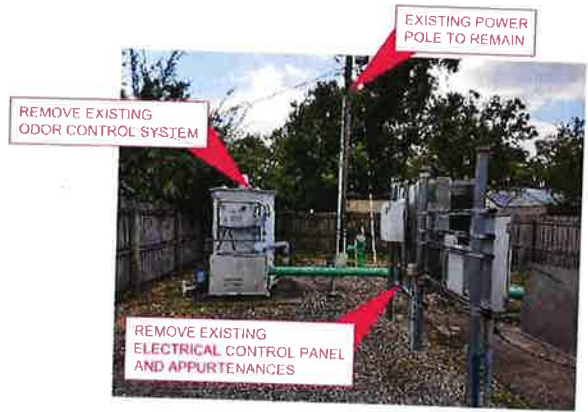


REMOVE EXISTING VALVE VAULT AND CONCRETE TOP SLAB

REMOVE EXISTING WOOD POST FENCE

REMOVE EXISTING WET WELL TOP SLAB

WET WELL, VALVE VAULT, AND FENCING



REMOVE EXISTING ODOR CONTROL SYSTEM

REMOVE EXISTING ELECTRICAL CONTROL PANEL AND APPURTENANCES

EXISTING POWER POLE TO REMAIN

ELECTRICAL AND ODOR CONTROL SYSTEM



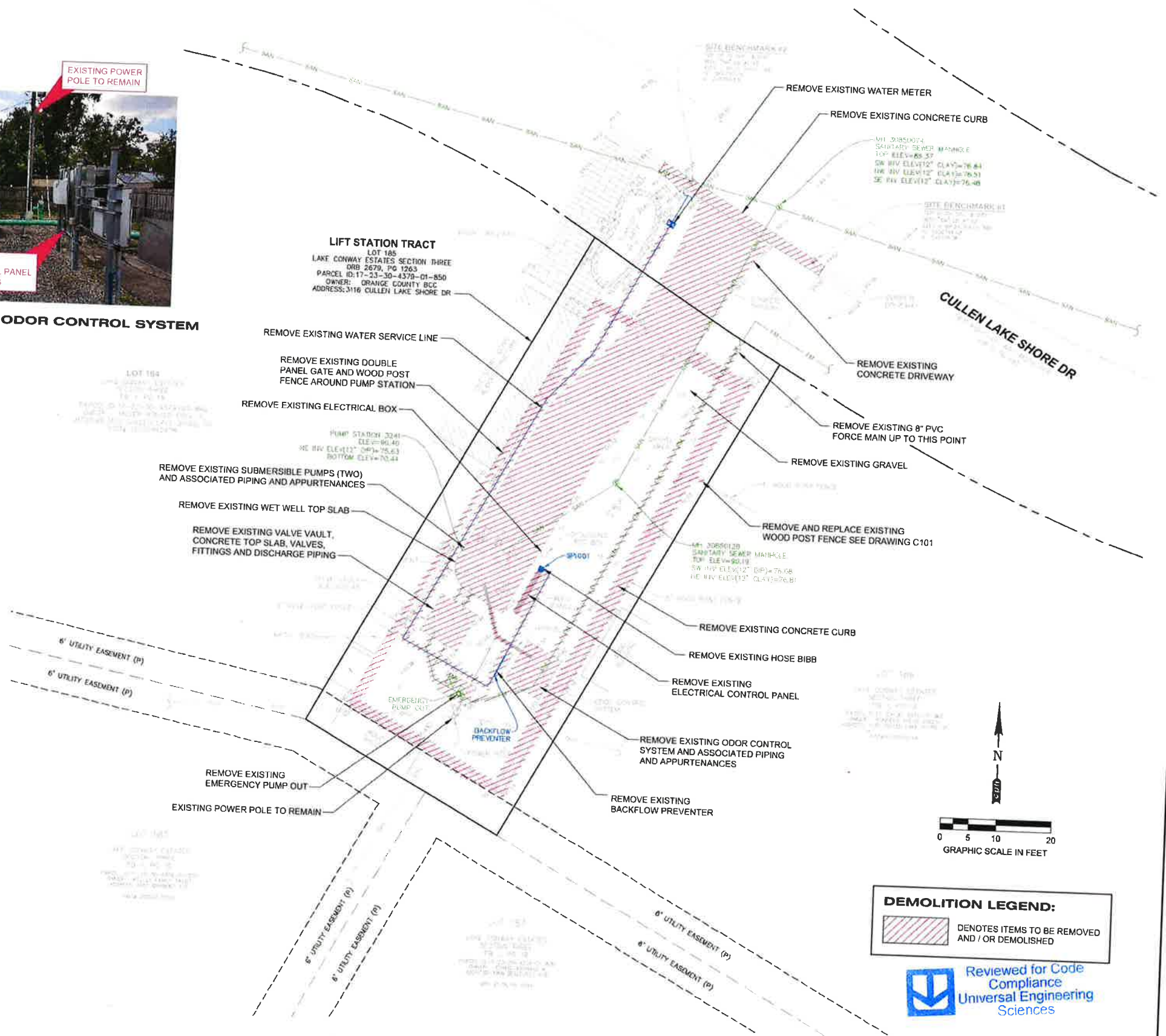
REMOVE EXISTING PUMPS, FITTINGS, PIPING, AND ASSOCIATED APPURTENANCES

WET WELL PUMPS AND PIPING



REMOVE EXISTING VALVE VAULT, VALVES, FITTINGS, AND DISCHARGE PIPING

VALVE VAULT AND DISCHARGE PIPING



DEMOLITION LEGEND:

DENOTES ITEMS TO BE REMOVED AND / OR DEMOLISHED

Reviewed for Code Compliance
Universal Engineering Sciences

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
 Licenses:
 Eng. C.O.A. No. 3215
 Survey L.B. No. 7143
 Arch. Lic. No. AA2600926
 Landscp. Lic. No. LC0000268

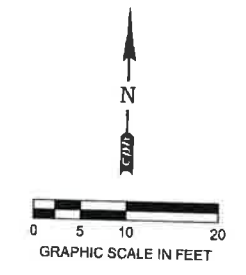
P.S. 3085 CULLEN LAKE SHORE
 DEMOLITION SITE PLAN

SCOTT A. BREITENSTEIN
 PROFESSIONAL ENGINEER
 FLORIDA LICENSE #57402

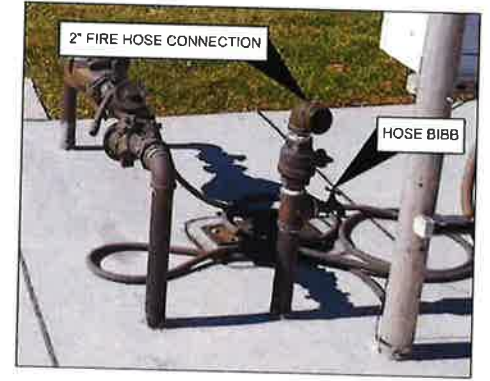
OCU FILE NO.: 93887
 DESIGNED BY: SAB
 DRAWN BY: RAS
 CHECKED BY: SAB/DEM
 CADD FILE: Site Plans

SCALE: AS SHOWN
 DRAWING NO.: **C100**
 SHEET: 15 OF 62

60% SUBMITTAL



- NOTES:**
1. FINISHED GRADE SHALL MATCH EXISTING GRADE.
 2. ALL DISTURBED AREA TO BE SODDED, UNLESS GRAVEL OR CONCRETE IS SHOWN.
 3. REFER TO DRAWING P100 FOR ADDITIONAL DETAILS ON THE ACCESS HATCH, WET WELL, AND PIPING.
 4. FOR ALL EXISTING MAN HOLES TO BE LINED: CONTRACTOR SHALL FIX ALL LEAKS IN THE BENCHING AND PREPARE FOR COATING.
 5. PRIOR TO CONTROL PANEL INSTALLATION, CONTRACTOR TO COORDINATE FINAL LOCATION WITH RPR.
 6. ALL WORK WITHIN PUMP STATION PROPERTY IS INCLUDED IN LUMP SUM PAY ITEM.
 7. THE LIMITS OF THE POST-CONSTRUCTION BOUNDARY SURVEY FOR THE PUMP STATION REQUIRED BY SECTION 01720 "PROJECT RECORD DOCUMENTS" (2.02) (A) (1) (C) OF THE TECHNICAL SPECIFICATIONS FOR THE PROJECT SHALL BE BASED ON THE DESCRIPTION OF PUMP STATION 3085, AS SHOWN ON THE PREVIOUS BOUNDARY SURVEY INCLUDED IN APPENDIX E OF THE TECHNICAL SPECIFICATION FOR THE PROJECT.



2" FIRE HOSE CONNECTION WITH HOSE BIBB



60% SUBMITTAL

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



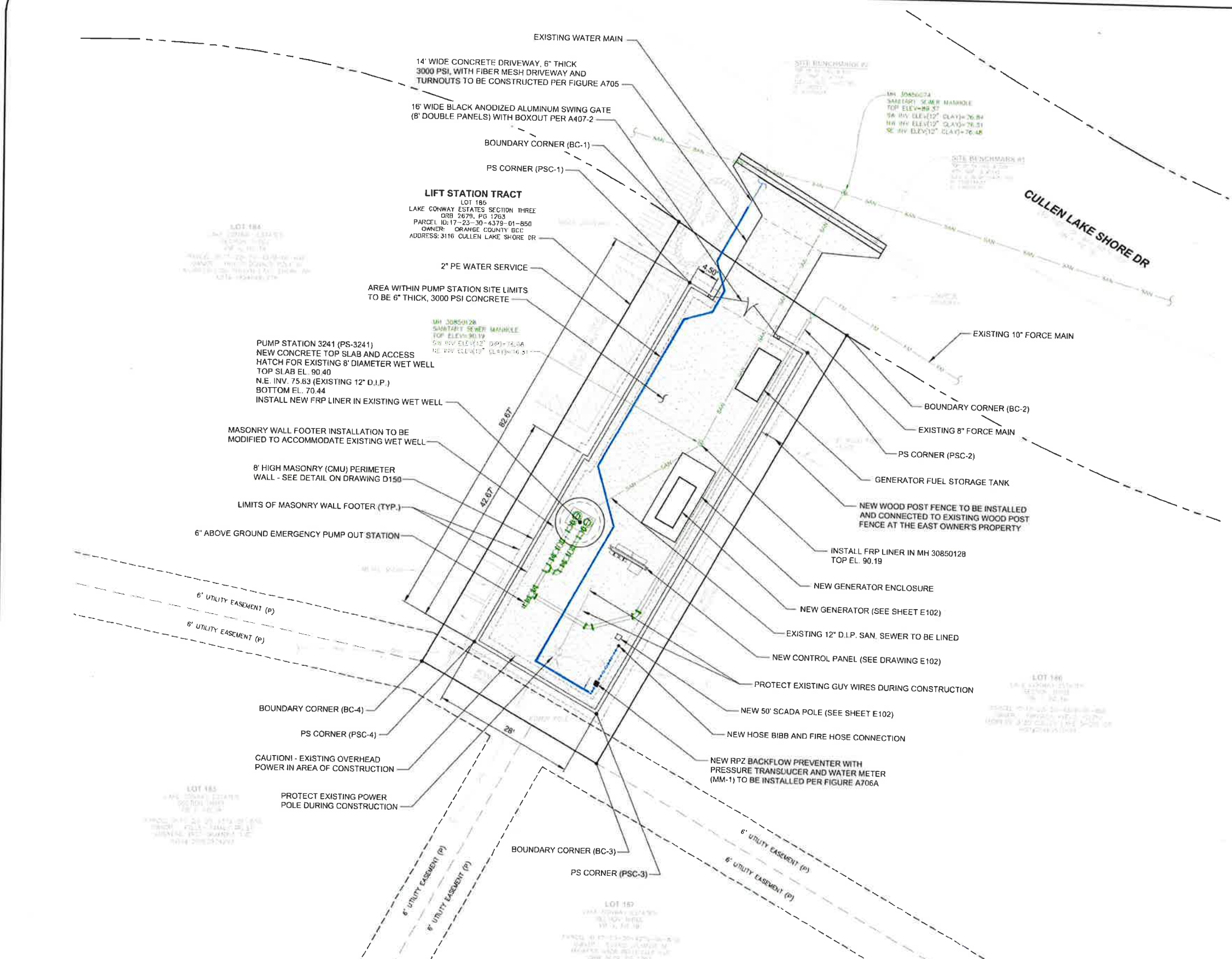
A Full Service A & E Firm
 Architects, Engineers, Planners, Surveyors, Landscape Architects, Traffic/Transportation
 Licenses:
 Eng. C.D.A. No. 3215
 Survey L.B. No. T143
 Arch. Lic. No. AA2600926
 Lndscp. Lic. No. LC6000268
 1117 East Robinson Street - Orlando, FL 32801 - Phone: 407.425.0452

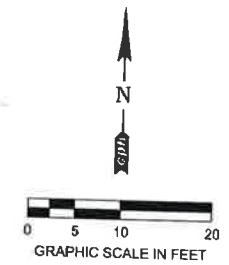
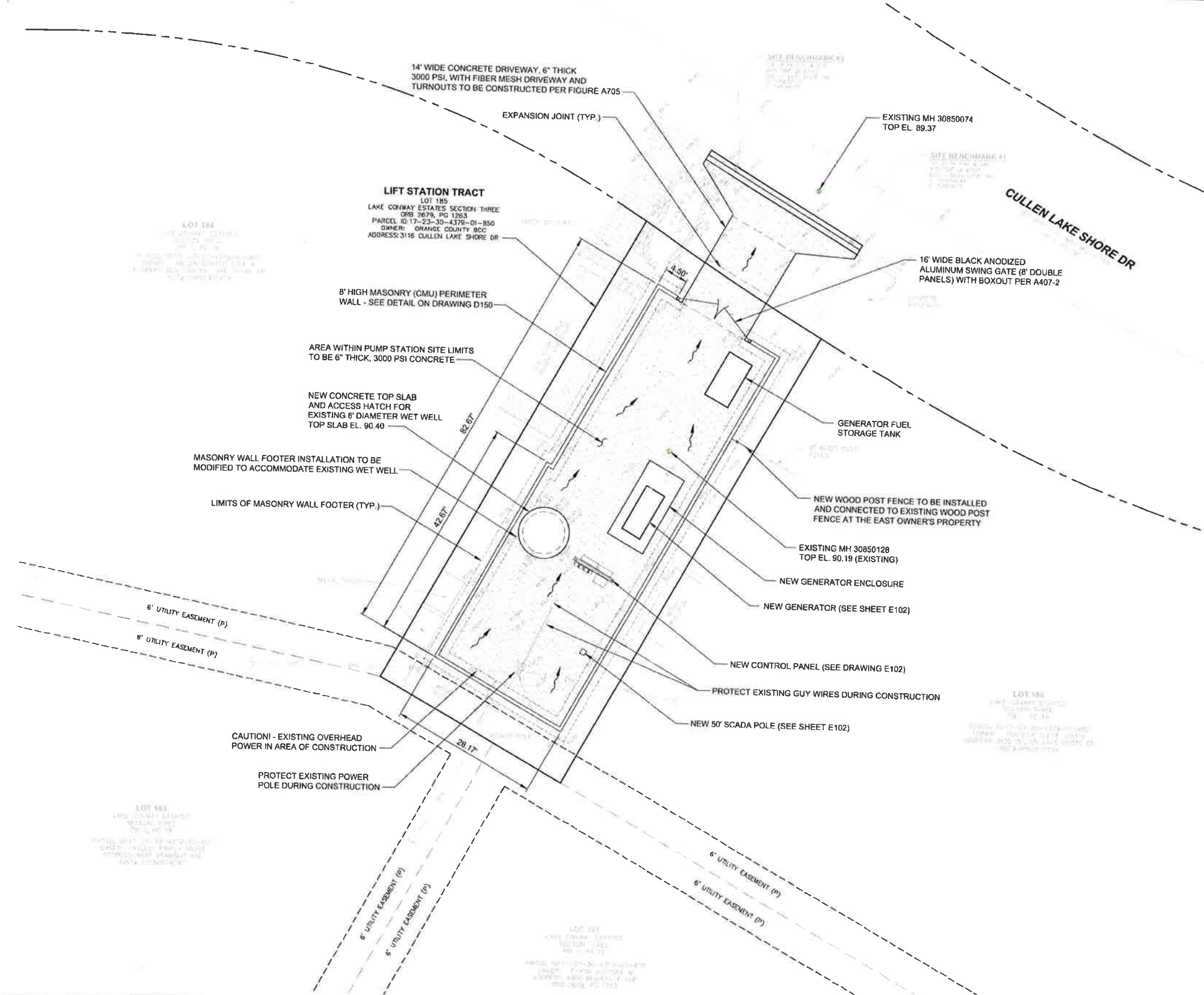
P.S. 3085 CULLEN LAKE SHORE
 SITE PLAN

SCOTT A. BREITENSTEIN
 PROFESSIONAL ENGINEER
 FLORIDA LICENSE #57402

OCU FILE NO.: 93867
 DESIGNED BY: SAB
 DRAWN BY: RAS
 CHECKED BY: SAB/DEM
 CADD FILE: Site Plans

SCALE: AS SHOWN
 DRAWING NO.: C101
 SHEET: 16 OF 82





NOTE:
ALL DISTURBED AREAS TO BE SODDED.

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 Engineers Environmental Landscape Architects Traffic/Transportation

Eng. C.O.A. No. 3215
Survey L.B. No. 7143
Arch. Lic. No. AA2600926
Landscape Lic. No. LC6000298

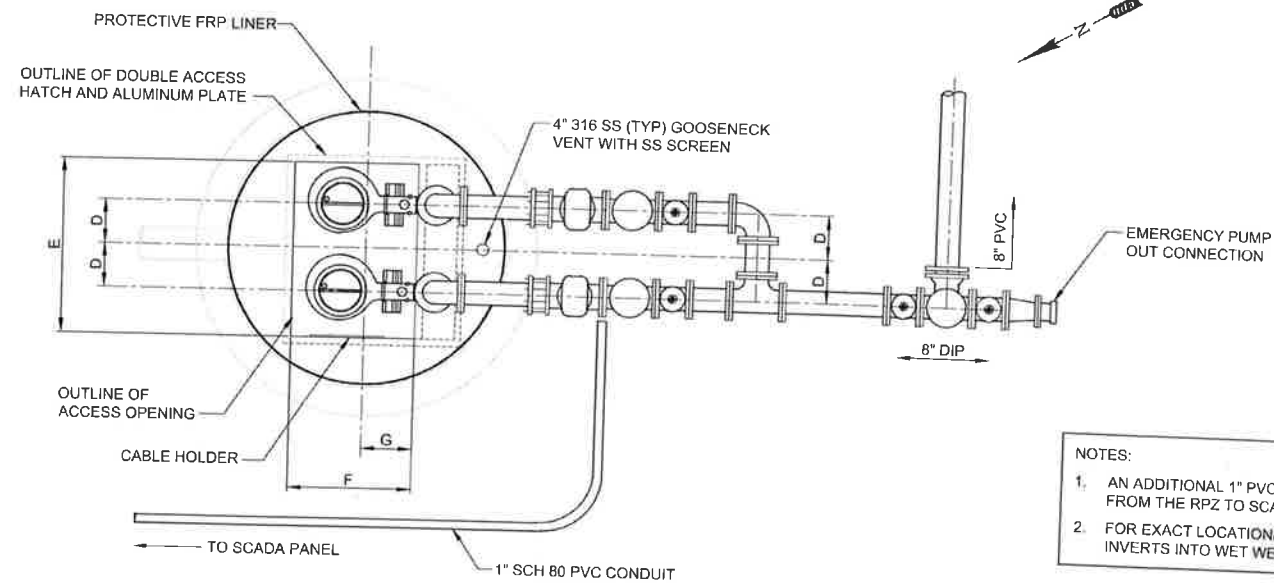
P.S. 3085 CULLEN LAKE SHORE
SITE GRADING PLAN

SCOTT A BREITENSTEIN
PROFESSIONAL ENGINEER
FLORIDA LICENSE #57402

OCU FILE NO.: 93687
DESIGNED BY: SAB
DRAWN BY: RAS
CHECKED BY: SAB/DEM
CADD FILE: Site Plans

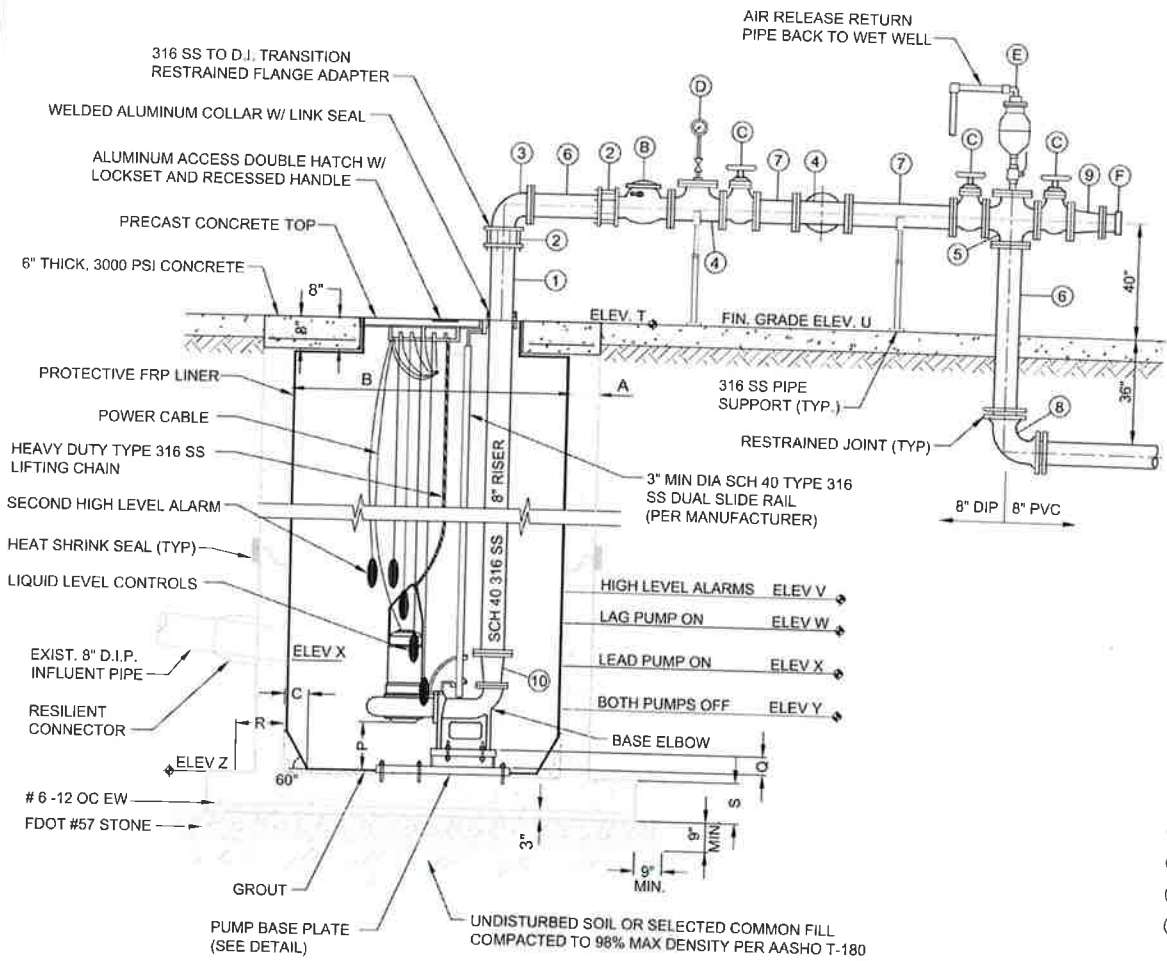
60% SUBMITTAL
SCALE: AS SHOWN
DRAWING NO.: **C102**
SHEET: 17 OF 82





NOTES:
 1. AN ADDITIONAL 1" PVC CONDUIT IS NEEDED FROM THE RPZ TO SCADA PANEL.
 2. FOR EXACT LOCATION/ORIENTATION OF INVERTS INTO WET WELL SEE SHEET C101.

- GENERAL NOTES:**
- ALL MATERIALS AND CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE ORANGE COUNTY UTILITIES STANDARDS AND SPECIFICATIONS MANUAL (LATEST EDITION), AND/OR AS SPECIFIED HEREIN.
 - ALL EXPOSED METAL OUTSIDE OF THE WET WELL SHALL BE IN ACCORDANCE WITH THE ORANGE COUNTY UTILITIES STANDARDS AND SPECIFICATIONS MANUAL.
 - A CRYSTALLINE WATER PROOFING ADMIXTURE SHALL BE ADDED TO THE CONCRETE DURING THE MIXING CYCLE FOR THE WET WELL AND VALVE VAULT PRECAST STRUCTURES. THE CRYSTALLINE WATER PROOFING ADMIXTURE SHALL BE APPROVED PRODUCT AS LISTED IN OCU APPENDIX D.
 - FOR EXISTING WET WELL AND MANHOLES, THE INSIDE SHALL BE LINED WITH A FIBERGLASS REINFORCED POLYESTHER (FRP) LINER, FINAL SEALS AND SEALING TO BE MADE IN THE FIELD.
 - FOR NEW CONSTRUCTION, THE INSIDE OF THE WET WELL, VALVE VAULT AND MANHOLES SHALL BE LINED WITH EITHER A HIGH DENSITY POLYETHYLENE (HDPE) LINER A FIBERGLASS REINFORCED POLYESTHER (FRP) LINER, OR AN ACCEPTABLE EQUAL AS LISTED IN OCU APPENDIX D. FINAL SEALS AND SEALING TO BE MADE IN THE FIELD.
 - WET WELL ACCESS OPENING SHALL BE COVERED ON ALL FOUR VERTICAL SIDES WITH A PROTECTIVE LINER.
 - WET WELL ACCESS HATCH AND COVER SHALL BE ALUMINUM, WITH 316 STAINLESS STEEL HARDWARE AND LOCK BRACKET PLATE WITH THE WORDS "CONFINED SPACE" STAMPED (ETCHED) ON THE TOP SIDE.
 - ALL HARDWARE IN THE WET WELL SHALL BE 316 STAINLESS STEEL.
 - THERE SHALL BE NO VALVES OR ELECTRICAL JUNCTION BOXES IN THE WET WELL.
 - ALL PIPING AND CONDUIT PENETRATIONS THROUGH CONCRETE SHALL BE WATERTIGHT. CAST-IN-PLACE SLEEVES SHALL BE PLACED IN ALL OPENINGS WHERE PRESSURE PIPE ENTER OR LEAVE THE WET WELL AND/OR VALVE VAULT. PENETRATIONS THROUGH WET WELL AND VALVE VAULT SHALL BE A COMPRESSION TYPE SEAL, SUCH AS "LINK-SEAL", OR AN ACCEPTABLE EQUAL AS LISTED IN OCU APPENDIX D.
 - ALL CONNECTIONS WITHIN THE WET WELL AND THE VALVE VAULT SHALL BE FLANGED JOINTS. ALL REMAINING JOINTS BETWEEN THE WET WELL AND THE CONNECTION TO THE EXISTING FORCE MAIN SHALL BE RESTRAINED MECHANICAL JOINTS. (SEE TABLE ON DETAIL SHEET D110)
 - ALL PIPING WITHIN THE WET WELL AND VALVE VAULT SHALL BE STAINLESS STEEL 316 SCHEDULE 40.
 - VALVE VAULT SHALL BE SIZED TO PERMIT EASY REMOVAL OF CHECK VALVE SPINDLES, WITH MINIMUM CLEARANCE, AS SHOWN FOR 6" DIAMETER PIPE, OR SMALLER.
 - PIPE SUPPORTS SHALL BE 316 STAINLESS STEEL, PROVIDED AND INSTALLED TO SUPPORT AND ANCHOR THE PIPING SECURELY IN THE VALVE VAULT.
 - CONTRACTOR SHALL, AS DIRECTED BY THE COUNTY REPRESENTATIVE, REMOVE AND SALVAGE TO THE COUNTY, ALL EXISTING PUMP STATION EQUIPMENT, INCLUDING PUMPS, CHECK VALVES, SHUTOFF VALVES, AND CONTROL PANEL.
 - CONTRACTOR SHALL DEMOLISH AND REMOVE FROM SITE ALL DEBRIS RESULTING FROM THE REMOVAL OF THE EXISTING STRUCTURES.
 - CONTRACTOR SHALL GROUT FLOOR OF WET WELL, AS REQUIRED BY MANUFACTURER'S SPECIFICATIONS, TO ACCOMMODATE INSTALLATION OF THE NEW PUMPS.
 - STRUCTURAL DESIGN OF THE PRECAST WET WELL, TOP, AND VALVE VAULT SHALL BE THE RESPONSIBILITY OF THE PRECAST MANUFACTURER. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR THE PRECAST WET WELL, THE PRECAST WET WELL TOP AND HATCH COVER, RISERS AND THE VALVE VAULT, TO THE ENGINEER.
 - 100-YEAR FLOOD ELEVATION: OUT OF THE 100-YEAR FLOOD ZONE, (100 YEAR FLOOD ELEVATION IS 53).
 - ALL EXTERNAL JOINTS SHALL BE COVERED WITH A HIGH STRENGTH, WATER TIGHT, PRESS-TO-SEAL TYPE TAPE/AS LISTED IN OCU APPENDIX D.
 - A SECOND HIGH LEVEL ALARM LIQUID FLOAT SHALL BE INSTALLED TO PROVIDE DRY CONTACT FOR SCADA. REFER TO PUMP CONTROL SCHEMATIC.
 - ALL SPOOLS SHALL BE MINIMUM OF SIX INCHES WHERE SPACE ALLOWS.
 - CONTRACTOR SHALL BE RESPONSIBLE FOR ALIGNMENT FROM THE BASE PLATE TO THE RISER PLATE AT NO EXTRA COST TO OCU.



NOTE:
 PUMP STATION DISCHARGE PIPING FROM EMERGENCY PUMP OUT IS SHOWN ROTATED FOR CLARITY IN PROFILE VIEW. SEE ABOVE FOR EXACT ORIENTATION.

PIPE AND FITTING LEGEND:

- 8" FLANGED x PLAIN END 316 S.S. SCH. 40 SPOOL PIECE - (2)
- 8" FLANGED COUPLING ADAPTER (4)
- 8" FLANGED 90° BEND - (3)
- 8" FLANGED TEE - (3)
- 8" FLANGED CROSS - (1)
- 8" FLANGED x PLAIN END D.I. SPOOL PIECE - (3)
- 8" FLANGED D.I. SPOOL PIECE - (4)
- 8" M.J. 90° BEND - (1)
- 8" x 6" FLANGED REDUCER - (1)
- 8" x 6" 316 S.S. SCH. 40 REDUCER - (2)

EQUIPMENT TAG NUMBERS:

- SUBMERSIBLE PUMP - (2)
- 8" CHECK VALVE WITH LEVER AND WEIGHT - (2)
- 8" PLUG VALVE - (4)
- PRESSURE GAUGE/DIAPHRAGM ASSEMBLY
- AUTOMATIC AIR AND VACUUM VALVE ASSEMBLY
- 6" CAM-LOCK FEMALE QUICK DISCONNECT, DUST COVER AND CHAIN LOCK PLUG/CAP - ALL ALUMINUM - (1)

DESIGN SPECIFICATIONS

MANUFACTURER: ABS/SULZER
 MODEL: XFP100G CB1 60 HZ
 IMP: XXX
 DIA: 288 MM.
 SPEED: 1763 RPM
 DISCHARGE SIZE: X IN

VOLTAGE: 480 V
 PHASE: 3
 H.P.: 33.5
 MAX. SOLID SIZE (3 IN MIN): 3.93 IN
 CURVE NUMBER: XXX

SHUT OFF HEAD: 145 FEET TDH
 HIGH HEAD CONDITION: 510 GPM AT 110 FEET TDH
 MINIMUM HEAD CONDITION: 750 GPM AT 95 FEET TDH

DESCRIPTION	SYMBOL	DIMENSION	ELEVATION
THICKNESS OF WALL	A	8"	-
DIAMETER OF WET WELL	B	8"	-
WIDTH OF BOTTOM FILLET	C	SEE NOTE 9	-
C/L OF WET WELL TO C/L OF PIPES	D	SEE NOTE 9	-
LENGTH OF PUMP ACCESS OPENING	E	SEE NOTE 9	-
WIDTH OF PUMP ACCESS OPENING	F	SEE NOTE 9	-
CENTER OF WET WELL TO EDGE OF HATCH	G	SEE NOTE 9	-
VALVE BOX HATCH OPENING	H	N/A	-
VALVE BOX HATCH OPENING	I	N/A	-
LIP WIDTH OF WETWELL BASE	R	18"	-
THICKNESS OF WETWELL BASE	S	12"	-
TOP OF WET WELL	T	-	90.40
FINISHED GRADE	U	-	90.40
HIGH LEVEL ALARMS	V	-	76.63
LAG PUMP ON	W	-	76.63
LEAD PUMP ON / INFLUENT PIPE INVERT	X	-	76.13
PUMPS OFF (TOP OF PUMP VOLUTE)	Y	-	75.63
BOTTOM OF PUMP TO FLOOR OF WET WELL	P	XXX	-
STEP HEIGHT (IF REQUIRED)	Q	XXX	-
FLOOR OF WET WELL	Z	-	70.44

DESIGN SPECIFICATIONS

MANUFACTURER: XYLEM/FLYGT
 MODEL: NP 3202 HT 3
 IMP: 462
 DIA: 278 MM.
 SPEED: 1770 RPM
 DISCHARGE SIZE: 6 IN

VOLTAGE: 480 V
 PHASE: 3
 H.P.: 45
 MAX. SOLID SIZE (3 IN MIN): 3 IN
 CURVE NUMBER: NP 3202 HT 462

SHUT OFF HEAD: 144 FEET TDH
 HIGH HEAD CONDITION: 535 GPM AT 113 FEET TDH
 MINIMUM HEAD CONDITION: 710 GPM AT 104 FEET TDH

DESCRIPTION	SYMBOL	DIMENSION	ELEVATION
THICKNESS OF WALL	A	8"	-
DIAMETER OF WET WELL	B	8"	-
WIDTH OF BOTTOM FILLET	C	SEE NOTE 9	-
C/L OF WET WELL TO C/L OF PIPES	D	SEE NOTE 9	-
LENGTH OF PUMP ACCESS OPENING	E	SEE NOTE 9	-
WIDTH OF PUMP ACCESS OPENING	F	SEE NOTE 9	-
CENTER OF WET WELL TO EDGE OF HATCH	G	SEE NOTE 9	-
VALVE BOX HATCH OPENING	H	-	-
VALVE BOX HATCH OPENING	I	-	-
LIP WIDTH OF WETWELL BASE	R	18"	-
THICKNESS OF WETWELL BASE	S	12"	-
TOP OF WET WELL	T	-	90.40
FINISHED GRADE	U	-	90.40
HIGH LEVEL ALARMS	V	-	76.63
LAG PUMP ON	W	-	76.63
LEAD PUMP ON / INFLUENT PIPE INVERT	X	-	75.63
PUMPS OFF (TOP OF PUMP VOLUTE)	Y	-	75.63
BOTTOM OF PUMP TO FLOOR OF WET WELL	P	XXX	-
STEP HEIGHT (IF REQUIRED)	Q	XXX	-
FLOOR OF WET WELL	Z	-	70.44

- NOTES:**
- EACH PUMP SHALL BE FITTED WITH 6 FEET (6'-0") OF TYPE 316 SS 3/4" CHAIN ATTACHED TO THE LIFTING MECHANISM AND AIRCRAFT RATED 1/4" SS CABLE PROVIDED BETWEEN THE CABLE HOLDER AND THE CHAIN.
 - WALL SLEEVE AND COMPRESSION SEALS SHALL BE COMPATIBLE WITH LINER.
 - IF PV=4 IN, LEVER OPERATED, IF PV>4 IN, WHEEL OPERATED.
 - ELEVATION X - ELEVATION Z ≥ 5 FEET.
 - PUMP OFF ELEVATION TO BE PER MANUFACTURER'S MINIMUM SUBMERGENCE.
 - SEE FIGURE A402-1 FOR DESCRIPTIONS OF DIMENSION SYMBOLS.
 - INSTALLED TO PROVIDE DRY CONTACT FOR SCADA.
 - ALL FLANGES: PIPE, VALVES AND APPURTENANCES SHALL HAVE 316 S.S. HARDWARE.
 - PER PUMP MANUFACTURER'S REQUIREMENTS.

- NOTES:**
- EACH PUMP SHALL BE FITTED WITH 6 FEET (6'-0") OF TYPE 316 SS 3/4" CHAIN ATTACHED TO THE LIFTING MECHANISM AND AIRCRAFT RATED 1/4" SS CABLE PROVIDED BETWEEN THE CABLE HOLDER AND THE CHAIN.
 - WALL SLEEVE AND COMPRESSION SEALS SHALL BE COMPATIBLE WITH LINER.
 - IF PV=4 IN, LEVER OPERATED, IF PV>4 IN, WHEEL OPERATED.
 - ELEVATION X - ELEVATION Z ≥ 5 FEET.
 - PUMP OFF ELEVATION TO BE PER MANUFACTURER'S MINIMUM SUBMERGENCE.
 - SEE FIGURE A402-1 FOR DESCRIPTIONS OF DIMENSION SYMBOLS.
 - INSTALLED TO PROVIDE DRY CONTACT FOR SCADA.
 - ALL FLANGES: PIPE, VALVES AND APPURTENANCES SHALL HAVE 316 S.S. HARDWARE.
 - PER PUMP MANUFACTURER'S REQUIREMENTS.

REV	DATE	DESCRIPTION



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



Licenses:
 Eng. C.O.A. No. 3215
 Survey L.B. No. 7143
 Arch. Lic. No. AA260926
 Landsc. Lic. No. LC9000298

P.S. 3085 CULLEN LAKE SHORE
 PUMP PLAN, SECTION AND DETAIL

OCU FILE NO.: 93687
 DESIGNED BY: SAB
 DRAWN BY: RAS
 CHECKED BY: SAB/DEM
 CADD FILE: Pump Station Details

SCALE: AS SHOWN
 DRAWING NO.: P100
 SHEET: 30 OF 62

60% SUBMITTAL



EXISTING SCADA PANEL TO BE DISCONNECTED AND REMOVED
 EXISTING UTILITY METER TO BE DISCONNECTED AND REMOVED
 EXISTING UTILITY DISCONNECT TO BE DISCONNECTED AND REMOVED

P.S. 3085 FIGURE NO. 1
 SCALE: N.T.S.



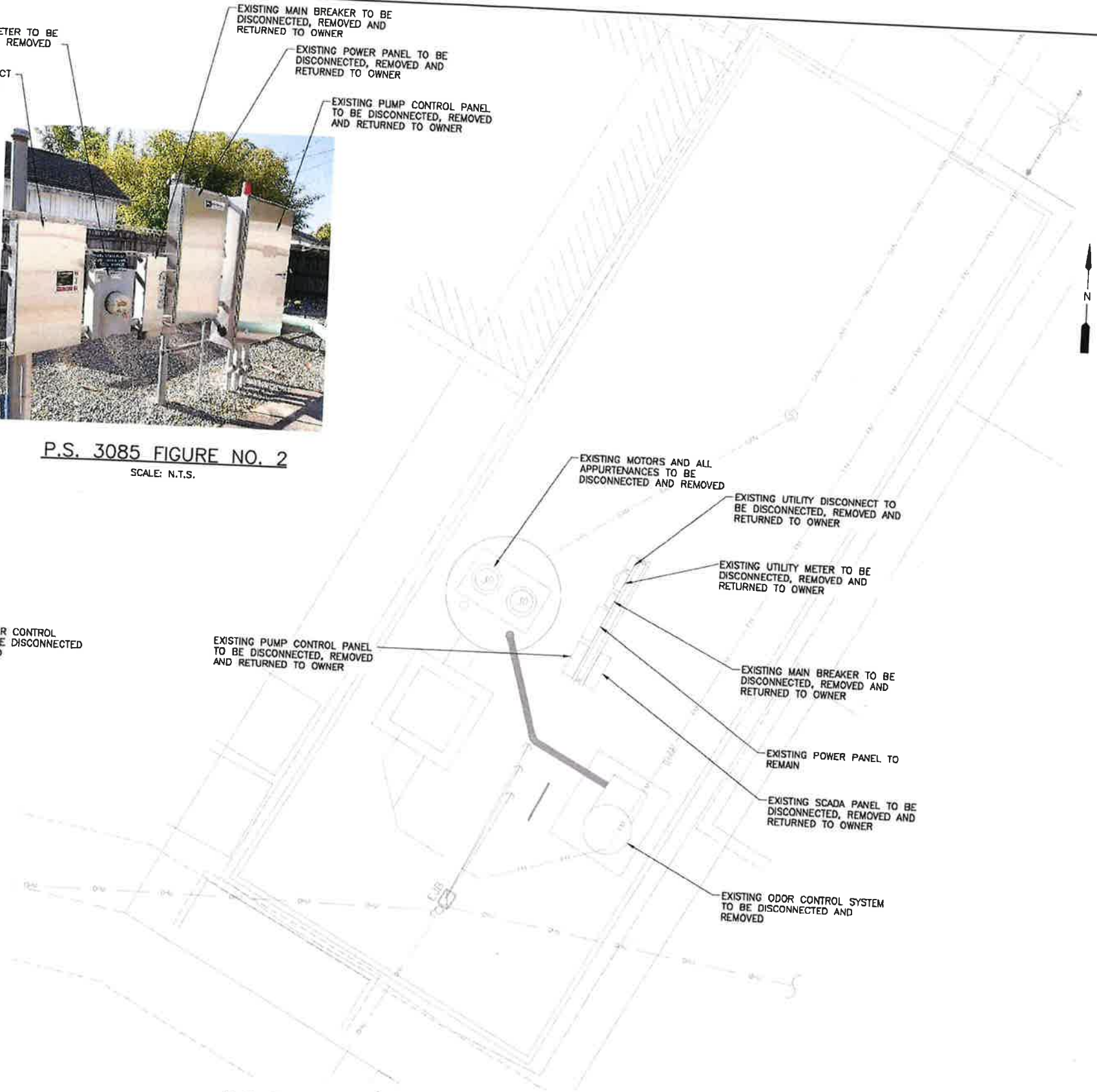
EXISTING MAIN BREAKER TO BE DISCONNECTED, REMOVED AND RETURNED TO OWNER
 EXISTING PUMP CONTROL PANEL TO BE DISCONNECTED, REMOVED AND RETURNED TO OWNER

P.S. 3085 FIGURE NO. 2
 SCALE: N.T.S.



EXISTING ODOR CONTROL SYSTEM TO BE DISCONNECTED AND REMOVED

P.S. 3085 FIGURE NO. 3
 SCALE: N.T.S.



OCU ADDRESS:
 PUMP STATION #3085
 3116 CULLEN LAKE SHORE DR.

DUKE ADDRESS:
 PUMP STATION #3085
 3116 CULLEN LAKE SHORE DR.

DUKE ENERGY CONTACT:
 -

P.S. 3085 DUPLEX PUMP CONTROL PANEL ELECTRICAL DEMOLITION PLAN

SCALE: 1"=5'-0"
 5 2.5 0 5'



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
 License: Eng. C.O.A. No. 5215 Survey L.B. No. 1143 Arch. Lic. No. AA2600920 Lndscp Lic. No. LC0000299
 1117 East Robinson Street - Orlando, FL 32801 - Phone: 407.425.0452

P.S. 3085 CULLEN LAKE SHORE ELECTRICAL DEMOLITION PLAN

60% SUBMITTAL

OCU FILE NO.: XXXXX	SCALE:
DESIGNED BY: AHH	DRAWING NO.:
DRAWN BY: SDV	E101
CHECKED BY: WCN	SHEET: 43 OF 62
CADD FILE: E101 PS 3085 DEMO	

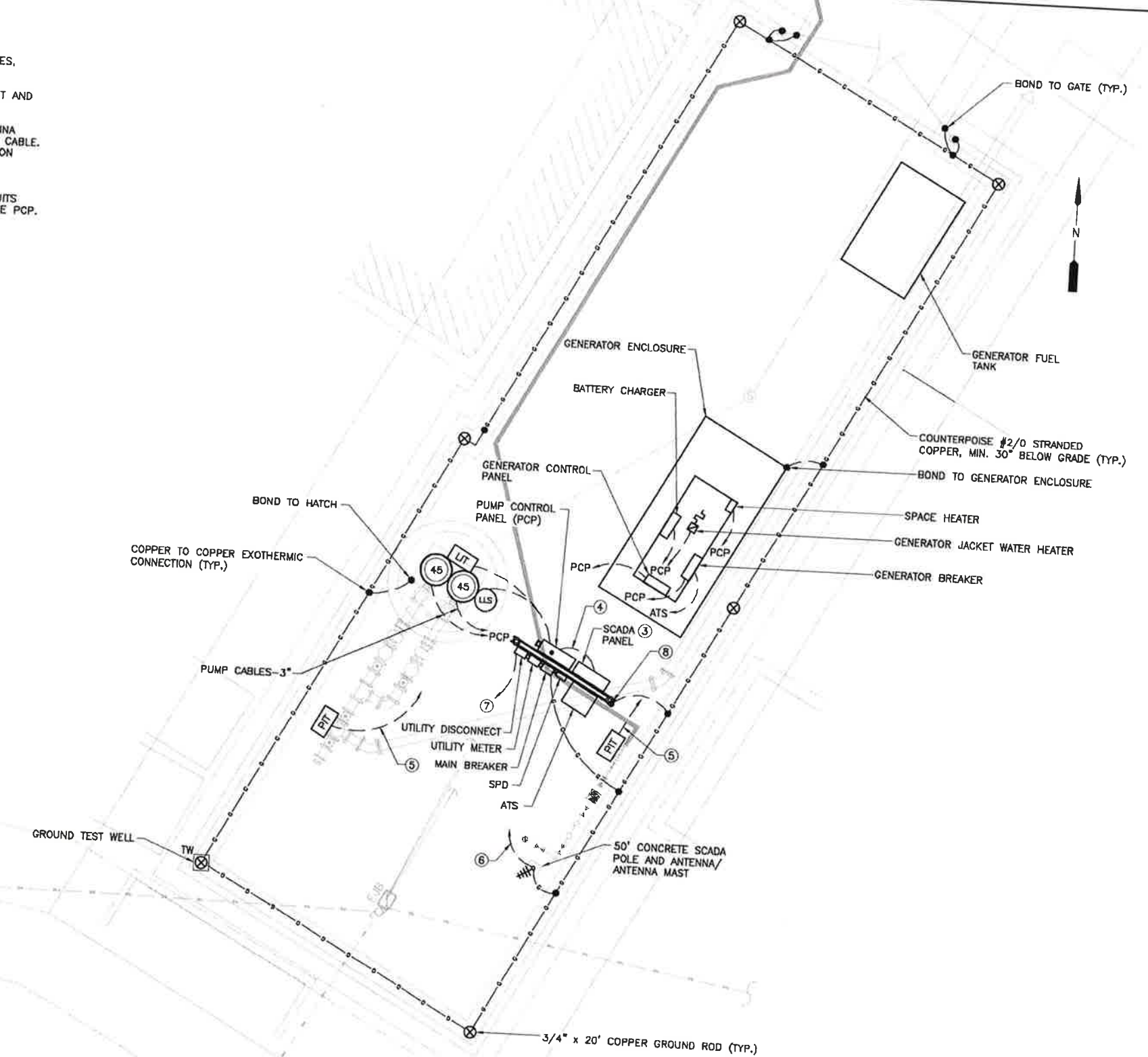
WILLIAM C. NELSON
 PROFESSIONAL ENGINEER
 FLORIDA LICENSE #42017

EDA
 Electrical Design Associates
 6005 PIAZZA GRANDE AVE., STE. 311
 ORLANDO, FLORIDA 32835
 PHONE (407) 245-3804
 FAX (407) 245-5603
 C.O.A. No. 8078
 WILLIAM C. NELSON, P.E.
 Florida P.E. No. 42017

- NOTES:**
- ① REFER TO SHEET E001 FOR ELECTRICAL NOTES, SYMBOLS AND ABBREVIATIONS.
 - ② REFER TO SINGLE LINE DIAGRAM FOR CONDUIT AND WIRE REQUIREMENTS.
 - ③ CONTRACTOR TO FURNISH AND INSTALL ANTENNA MAST, SCADA PANEL, ANTENNA, AND ANTENNA CABLE. CONTRACTOR TO PROVIDE THE INTERCONNECTION BETWEEN THE PCP AND THE SCADA PANEL, INCLUDING TERMINATION OF THE ANTENNA.
 - ④ CONTRACTOR TO FURNISH AND INSTALL CONDUITS WITH CABLING FROM THE SCADA PANEL TO THE PCP.
 - ⑤ 1" WITH CABLING TO SCADA PANEL.
 - ⑥ 2" WITH CABLING TO SCADA PANEL.
 - ⑦ TO 480V-3 ϕ SERVICE POINT.
 - ⑧ BOND EQUIPMENT RACK TO GROUND GRID.

OCU ADDRESS:
PUMP STATION #3085
3116 CULLEN LAKE SHORE DR.

DUKE ADDRESS:
PUMP STATION #3085
3116 CULLEN LAKE SHORE DR.
DUKE ENERGY CONTACT:
-



P.S. 3085 DUPLEX PUMP CONTROL PANEL ELECTRICAL PLAN

SCALE: 1"=5'-0"
5 2.5 0 5'

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
Landscape Architects Traffic/Transportation
1117 East Robinson Street - Orlando, FL 32801 - Phone: 407.425.0452

License:
Eng. C.O.A. No. 5215
Survey L.B. No. 7143
Arch. Lic. No. AA280926
Landscape Lic. No. LC000298

WILLIAM C. NELSON
PROFESSIONAL ENGINEER
FLORIDA LICENSE #42017

60% SUBMITTAL

OCU FILE NO.: XXXXX
DESIGNED BY: AHH
DRAWN BY: SDV
CHECKED BY: WCN
CADD FILE: E102 PS 3085

SCALE:
DRAWING NO.:
E102
SHEET: 44 OF 62



Reviewed for Code Compliance
Universal Engineering Sciences



EDA
Electrical Design Associates
6965 PIAZZA GRANDE AVE., STE. 311
ORLANDO, FLORIDA 32835
PHONE: (407) 745-5804
FAX: (407) 745-5803
C.O.A. No. 8070
WILLIAM C. NELSON, P.E.
FLORIDA P.E. No. 42817

Y:\C:\Orange County\1117_EPR\Project\102_P.S. 3085 Duplex Aug. 22, 2011 10:20:15.3 AM DWG.dwg