

CONSTRUCTION DRAWINGS FOR THE EASTERN WATER RECLAMATION FACILITY GENERATOR CONVERSION PROJECT ORANGE COUNTY, FLORIDA

PROJECT TEAM



REISS ENGINEERING, INC.
CONSULTING ENGINEERS

1016 SPRING VILLAS PT.
WINTER SPRINGS, FLORIDA 32708
TEL: (407) 679-5358
FAX: (407) 679-5003

Curtis I. Kunihiro, P.E.
Florida P.E. No. 33688
Reiss Engineering, Inc.
Certificate of Authorization No. 8181
1016 Spring Villas Pt.
Winter Springs, FL 32708

ELECTRICAL & INSTRUMENTATION

ELECTRICAL DESIGN ASSOCIATES

4763 SOUTH CONWAY ROAD, STE. E
ORLANDO, FLORIDA 32812
PHONE: (407) 745-5604
FAX: (407) 745-5603
C.O.A. No. 8079
LILLIAN M. REYES, P.E.
Florida P.E. No. 50780

STRUCTURAL

ENGINEERING TECHNOLOGIES, INC.

Bilgin Erel, P.E.
Florida P.E. No. 34053
Certificate of Authorization No. 8414
3551 W. Lake Mary Blvd, Suite 210
Lake Mary, FL 32746
(407) 322-0500

PREPARED FOR:



DRAWING INDEX		
SHEET	DRAWING	DESCRIPTION
GENERAL		
01	G01	COVER SHEET
02	G02	GENERAL NOTES AND LOCATION MAP
03	G03	STANDARD LEGEND AND ABBREVIATIONS
CIVIL		
04	C01	EXISTING SITE PLAN
05	C02	DEMOLITION
06	C03	SITE PLAN AND PAVING AND GRADING
07	C04	CIVIL DETAILS
STRUCTURAL		
08	S01	SHELVING STORAGE, OVERHEAD DOORS, GENERATOR BUILDING PLAN AND NOTES
09	S02	GENERATOR BUILDING PLAN AND NOTES
10	S03	CODE REVIEW AND LIFE SAFETY
ELECTRICAL		
11	E01	ELECTRICAL SYMBOLS, NOTES AND ABBREVIATIONS
12	E02	SINGLE LINE DIAGRAMS
13	E03	GENERATOR BUILDING ELECTRICAL DEMOLITION PLAN
14	E04	GENERATOR BUILDING PROPOSED ELECTRICAL PLAN
15	E05	GENERATOR BUILDING PROPOSED LIGHTING PLAN
16	E06	ELECTRICAL DETAILS

ISSUED FOR BID

ORANGE COUNTY UTILITIES

9150 CURRY FORD ROAD, 2ND FLOOR
ORLANDO, FL 32825 PHONE:407-254-9900

BOARD OF COUNTY COMMISSIONERS

ORANGE COUNTY MAYOR TERESA JACOBS
DISTRICT 1 : COMMISSIONER SCOTT BOYD
DISTRICT 2 : COMMISSIONER FRED BRUMMER
DISTRICT 3 : COMMISSIONER PETE CLARKE
DISTRICT 4 : COMMISSIONER JENNIFER THOMPSON
DISTRICT 5 : COMMISSIONER TED EDWARDS
DISTRICT 6 : COMMISSIONER TIFFANY MOORE RUSSELL

COUNTY ADMINISTRATOR: AJIT LALCHANDANI

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

ORANGE COUNTY CONTRACT # Y11-902B

BLB #B120

SEQUENCE #71785

CAP #1538-10

REI Project No. 110016



Parent Sheet: Sct:110016_EWRF_GENERATOR_CONVERSION_DRAWINGS_FINALDESIGN_01_001.DWG
Individual File Path: \\REF501\SHARE\COMPANY\PROJECTS\110016_ORANGE_COUNTY_UTILITIES\EMRF_GEN_BLDG_CONVERSION\DESIGN_DRAWINGS_FINALDESIGN_01_001.DWG
Rev. on: 10/29/2014 2:46 PM

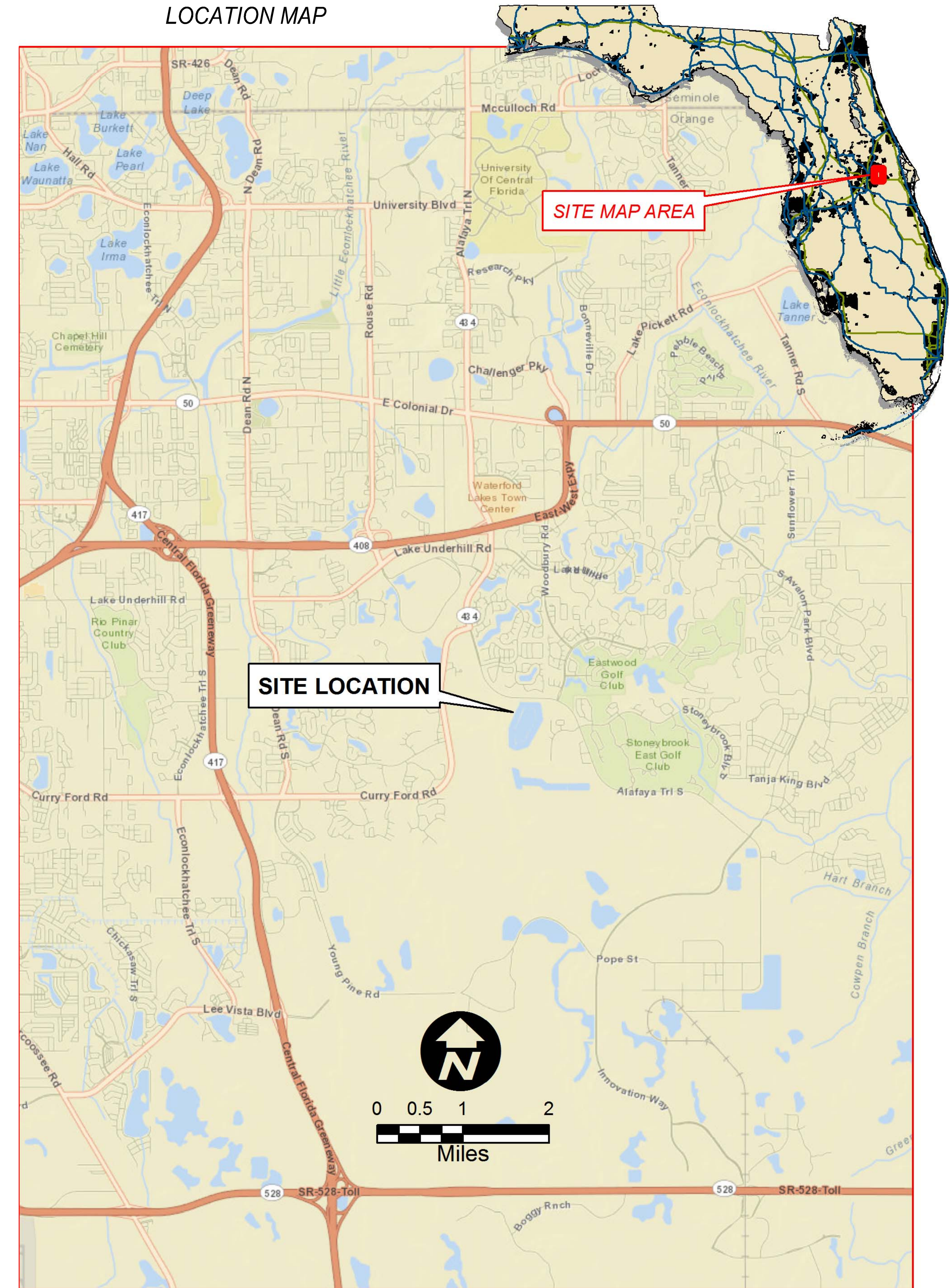
REV	DATE	DESCRIPTION	BY
0	10/2014	ISSUED FOR BID	RLL

Parent Sheet: Set: 110016_EWRF_EWRF_GENERAL NOTES AND LOCATION MAP LUPD Rev on: 10/29/2014 1:48 PM Individual File Path: \\REISS01\SHARE\COMPANY PROJECTS\110016_ORANGE COUNTY UTILITIES EWRF GEN BLDG CONVERSION\DESIGN\DRAWINGS\FINAL\DESIGN_02_G02.DWG

OCU GENERAL NOTES:

1. THE CONTRACTOR SHALL EXERCISE EXTREME CAUTION WHEN EXCAVATING IN PROXIMITY OF WATER MAINS, WASTEWATER FORCE MAINS, GRAVITY MAINS, RECLAIMED WATER MAINS, HYPOCHLORITE PIPING, ELECTRICAL DUCTBANKS, CONTROL AND COMMUNICATION CONDUITS, AND OTHER BURIED UTILITIES. MAIN LOCATIONS SHOWN ON PLANS MAY NOT BE EXACT.
2. SHOULD A PIPE EMERGENCY OCCUR, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE OCU DISPATCH OPERATOR (407-836-2777), THE OCU RPR, AND THE EWRF PLANT MANAGER (407-254-7724).
3. CONTRACTOR SHALL DIRECT ALL CORRESPONDENCE TO THE RPR ON SITE ONLY.
4. THE CONTRACTOR SHALL NOTIFY THE OCU CONSTRUCTION DIVISION AT LEAST SEVEN DAYS PRIOR TO COMMENCEMENT OF THE CONSTRUCTION PROJECT BY CALLING (407) 254-9798.
5. THE CONTRACTOR SHALL NOTIFY THE OCU CONSTRUCTION DIVISION AT LEAST 48 HOURS PRIOR TO ANY UTILITIES CONSTRUCTION BY CALLING (407) 254-9798.
6. THE MATERIALS, PRODUCTS, AND CONSTRUCTION OF ALL UTILITIES CONNECTING TO THE OCU SYSTEM SHALL BE IN CONFORMANCE WITH THE ORANGE COUNTY UTILITIES STANDARDS AND CONSTRUCTION SPECIFICATIONS MANUAL.
7. ALL OCU MAINS AND FACILITIES WITHIN THE LIMITS OF THE PROJECT SHALL BE SUPPORTED AND PROTECTED AGAINST DAMAGE DURING CONSTRUCTION.
8. THE CONTRACTOR, AT THE CONTRACTOR'S EXPENSE, SHALL IMMEDIATELY REPAIR ALL DAMAGES TO OCU MAINS AND FACILITIES. IF THE REPAIR IS NOT MADE IN A TIMELY MANNER, AS DETERMINED BY OCU, OCU MAY PERFORM REQUIRED REPAIRS AND CLEANUP. THE CONTRACTOR WILL BE CHARGED FOR ALL EXPENSES ASSOCIATED WITH THE REPAIR.
9. ONLY OCU SHALL OPERATE OCU WATER, WASTEWATER, AND RECLAIMED WATER VALVES. THE CONTRACTOR SHALL COORDINATE VALVE OPERATION WITH THE OCU INSPECTOR. FOR OPERATION OF MAINS NOT OWNED BY OCU, IT IS THE CONTRACTOR'S RESPONSIBILITY TO COORDINATE WITH THE APPROPRIATE UTILITY REPRESENTATIVE.
10. CONSTRUCTION ACTIVITIES SHALL NOT CAUSE INTERRUPTIONS IN WATER, WASTEWATER, OR RECLAIMED WATER SERVICE OR PLANT OPERATION WITHOUT PRIOR APPROVAL FROM OCU. THE CONTRACTOR SHALL COORDINATE PRE-APPROVED INTERRUPTIONS OF SERVICE WITH THE OCU INSPECTOR A MINIMUM OF 7 WORKING DAYS IN ADVANCE.
11. FOR PIPE THAT WILL BE OWNED AND MAINTAINED BY OCU, NO PIPE BENDING IS ALLOWED. THE MAXIMUM ALLOWABLE TOLERANCE FOR JOINT DEFLECTION IS 0.75 DEGREES (3-INCHES PER JOINT PER 20 FT STICK OF PIPE.) ALIGNMENT CHANGE SHALL BE MADE ONLY WITH SLEEVES AND FITTINGS.
12. FOR NON-PVC PIPE THAT WILL BE OWNED AND MAINTAINED BY OCU. MAXIMUM DEFLECTIONS AT PIPE JOINTS, FITTINGS AND LAYING RADIUS FOR THE VARIOUS PIPE LENGTHS SHALL NOT EXCEED 75 PERCENT OF THE PIPE MANUFACTURER'S RECOMMENDATION.

LOCATION MAP



REV	DATE	DESCRIPTION	BY
0	10/2014	ISSUED FOR BID	RLL

Issue Certification
 Curtis I. Kunihiro, P.E.
 Florida P.E. No. 33688
 Reiss Engineering, Inc.
 Certificate of Authorization No. 8181
 1016 Spring Villas Pt.
 Winter Springs, FL 32708

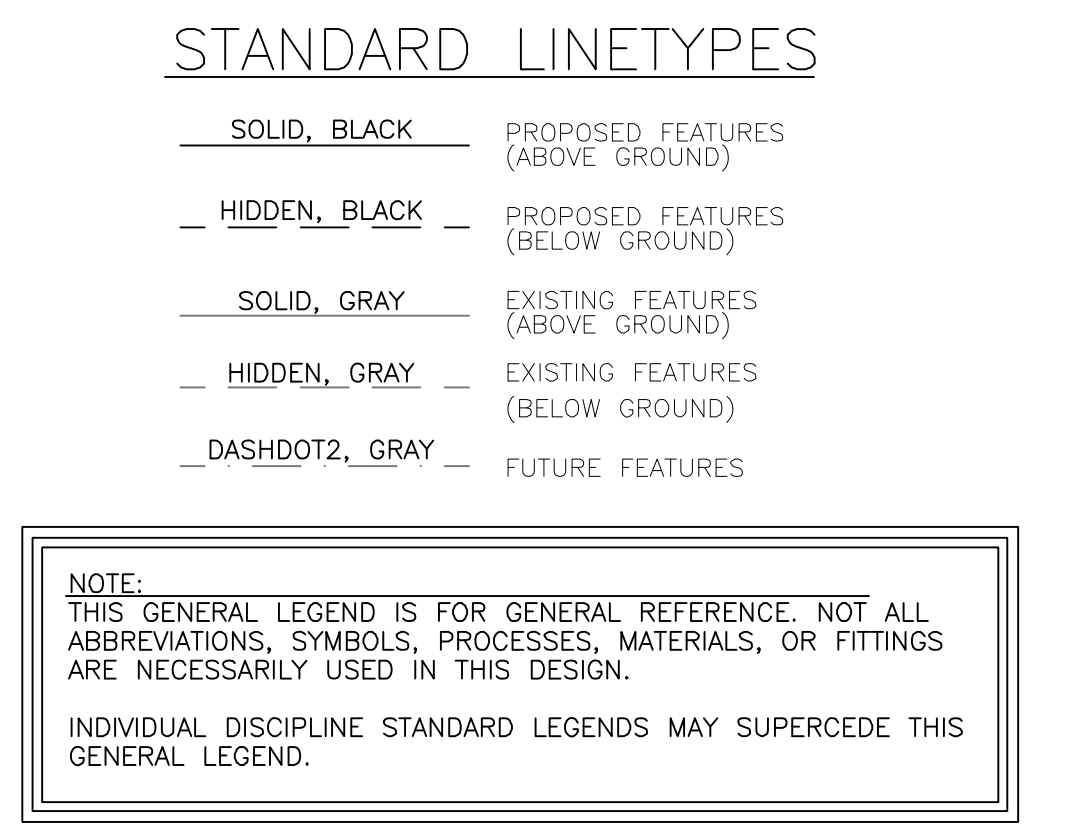
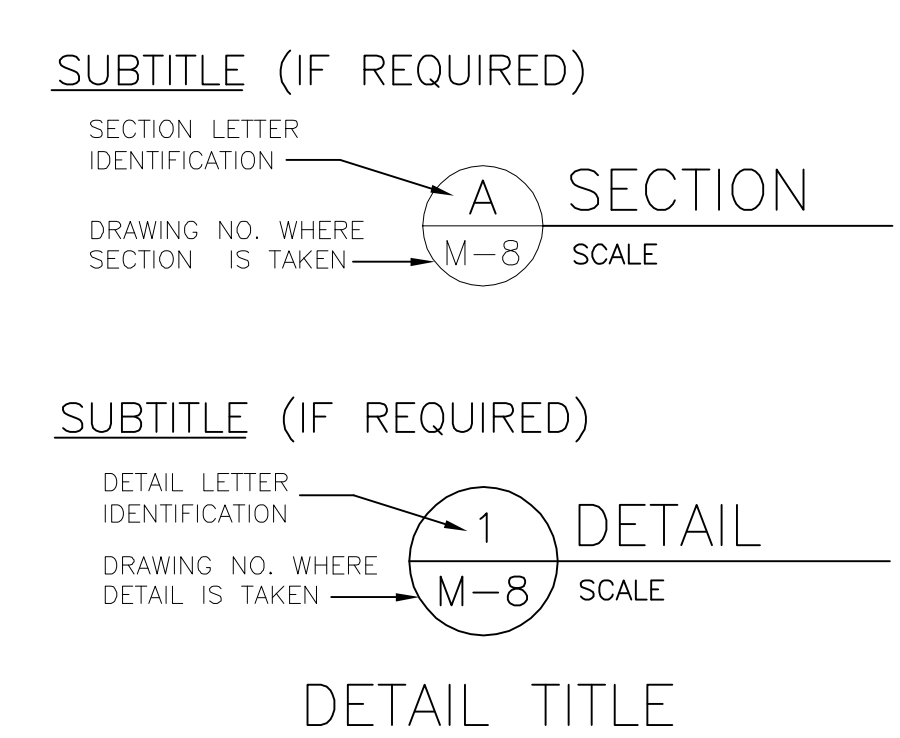
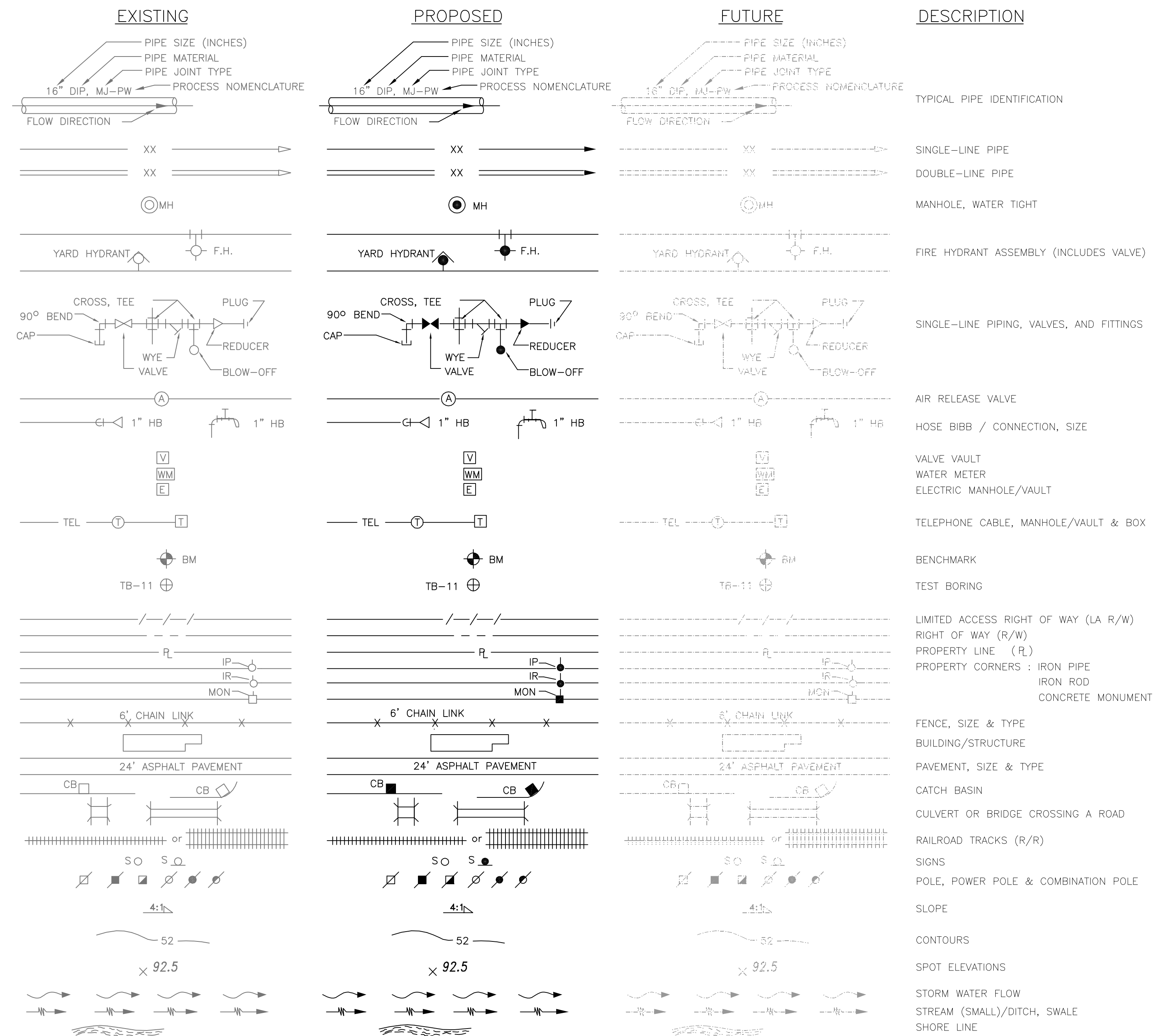
Designed DNN
 Drawn RLL
 Checked DNN
 Reviewed CLK
 Approved CLK
 Date 10/2014

ORANGE COUNTY UTILITIES
 EASTERN WATER RECLAMATION FACILITY
 GENERAL
 GENERAL NOTES AND LOCATION MAP

PROJECT NO.: 110016	
SCALE: NOTED	REVISION: 0
DRAWING NO. G02	SHEET NO.: 02 OF 16



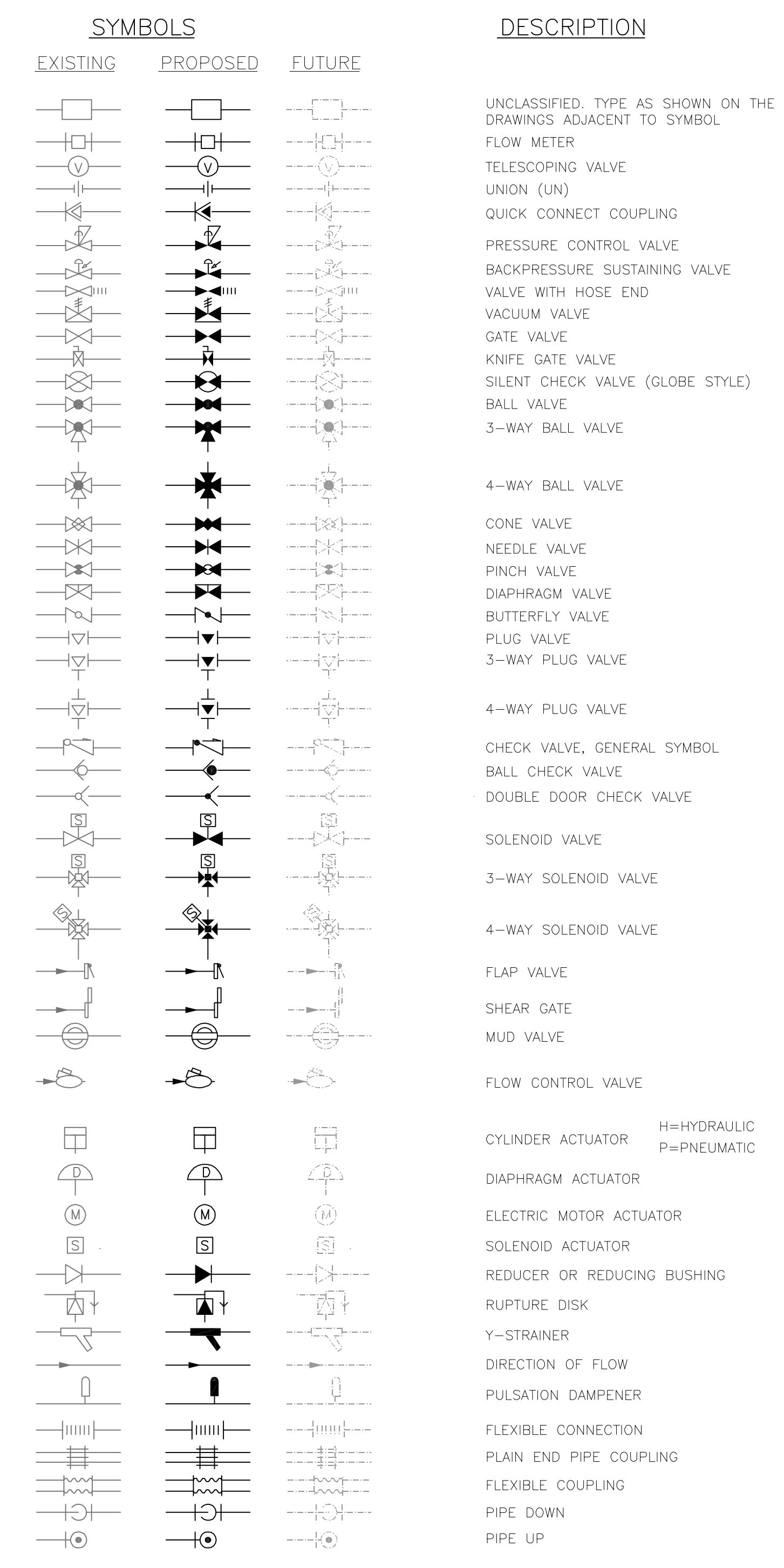
SYMBOLS, STRUCTURES & FEATURES



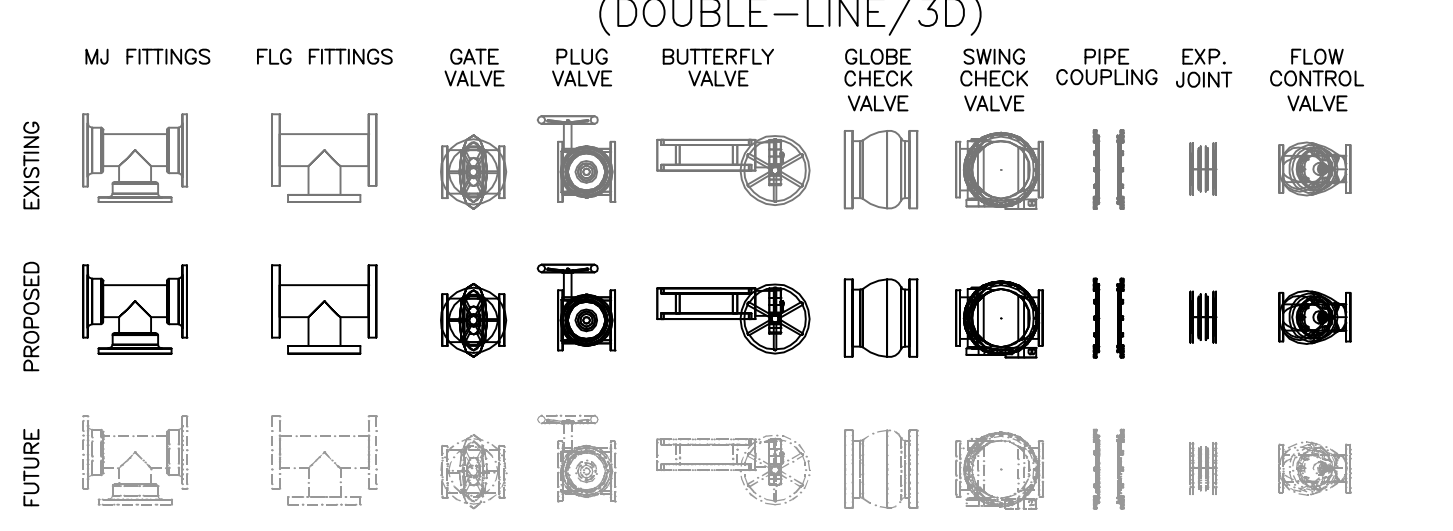
ABBREVIATIONS

GENERAL	SYMBOLS	PIPE / JOINTS	SYMBOLS
ADJUSTABLE	ADJ.	BLACK IRON PIPE	BIP
ANGLE	∠	BLACK STEEL PIPE	BSP
APPROXIMATE	APPROX.	BUTT WELD	BW
BENCH MARK	BM	CAST IRON	CI
BETWEEN	BTWN.	CAST IRON PIPE	CIP
BOTTOM OF SLAB	B.O.S.	CAST IRON SOIL PIPE	CISP
BUILDING	BLDG.	CONCRETE PRESSURE PIPE	CPP
CAPACITY	CAP.	COPPER PIPE	COP
CENTER LINE	CL	CORRUGATED METAL PIPE	CMP
CENTER TO CENTER	C.C.	DUCTILE IRON PIPE	DIP
CLEANOUT	C.O.	DUCTILE IRON PIPE	DI
CONCRETE	CONC.	EXPANSION	EXP
CONDITION	COND.	FLANGE	FLG
CONTINUATION	CONT.	GALVANIZED STEEL PIPE	GS
CONNECTION	CONN.	HIGH-DENSITY POLYETHYLENE	HDPE
CUBIC FOOT	CU. FT.	JOINT	JT
CUBIC INCH	CU. IN.	MECHANICAL JOINT	MJ
CUBIC YARD	CU. YD.	METAL REINFORCED PLASTIC PIPE	MRPP
DEGREE	DEG.	POLYETHYLENE PIPE	PE
DIAMETER	DIA.	POLYVINYLCHLORIDE	PVC
DIAGONAL	DIAG.	POLYVINYLCHLORIDE (DOUBLE CONTAINED)	PVC-D
DIMENSION	DIM.	PUSH-ON JOINT	POJ
DISCHARGE	DISC.	REINFORCED CONCRETE PIPE	RCP
DRAWING	DWG.	SCHEDULE	SCH
EACH	EA.	STAINLESS STEEL	S.S.
EACH WAY	E.W.	STEEL PIPE	STL
EACH FACE	E.F.	TIED JOINT	TJ
ELEVATION	EL., ELEV.	VITRIFIED CLAY PIPE	VCP
EQUIPMENT	EQUIP.	RESTRAINED JOINT	RJ
EXISTING	EXIST.	WALL SLEEVE	WS
FINISH	FIN.	WALL PIPE (WITH WATER STOP)	WP
FINISH FLOOR	F.F.		
FLEXIBLE	FLEX.		
FLOOR DRAIN	F.D.		
GAUGE	GA.		
GRADE	GR.		
HIGH	H.		
HIGH POINT	H.P.T.		
HIGH WATER LEVEL	H.W.L.		
HORIZONTAL	HORIZ.		
HORSEPOWER	H.P.		
INSIDE DIAMETER	I.D.		
INTERMEDIATE	INT.		
LINEAR FOOT	L.F.		
LONG	LG., L.		
LOW WATER LEVEL	L.W.L.		
LOW POINT	L.P.T.		
MANHOLE	MH		
MANUFACTURER	MFR.		
MATERIAL	MTL.		
MAXIMUM	MAX.		
MECHANICAL	MECH.		
MINIMUM	MIN.		
MOUNTED	MTD.		
NOMINAL	NOM.		
NOT IN CONTRACT	N.I.C.		
NOT TO SCALE	N.T.S.		
NUMBER	NO., #		
ON CENTERS	O.C.		
OPERATOR	OPER.		
OPTION	OPT.		
OPPOSITE	OPP.		
OPENING	OPNG.		
OR EQUAL	O/E		
OUTSIDE DIAMETER	O.D.		
PLATE	PL.		
POINT	PT.		
POUND	LB.		
PRESSURE	PRES.		
PROPOSED	PROP.		
RADIUS	RAD., R.		
REQUIRED	REQ'D.		
RIGHT OF WAY	R/W, R.O.W.		
ROOM	RM.		
REVOLUTIONS PER MINUTE	R.P.M.		
SECTION	SEC.		
SHEET	SH., SHT.		
SIDEWALK	SDWK.		
SIMILAR	SIM.		
SPECIFICATIONS	SPECS.		
SQUARE	SO.		
SQUARE FOOT	SO. FT.		
SQUARE INCH	SO. IN.		
SQUARE YARD	SO. YD.		
STANDARD	STD.		
STANDARD DIMENSION RATIO	S.D.R.		
STATION	STA.		
SYMMETRICAL	SYMM.		
TEMPORARY	TEMP.		
THICK	THK.		
THREADED	THD.		
TOP OF CONCRETE	T.O.C.		
TOP OF SLAB	T.O.S.		
TYPICAL	TYP.		
UNLESS NOTED OTHERWISE	U.N.O.		
ULTRAVIOLET	UV		
VERTICAL	VERT.		
VENT	VT.		
VENT THROUGH ROOF	V.T.R.		
WASTE ACTIVATED SLUDGE	W.A.S.		
WATER LEVEL	W.L.		
WEATHERPROOF	WPF.		
WIDE	W.		
WITH	W/		
EQUIPMENT			
HIGH SERVICE PUMP	HSP		
CHLORINATOR	CHL		
AMMONIATOR	AMM		
FLUORINATOR	FL		
CHLORINE BOOSTER PUMP	CBP		
		VALVES, FITTINGS, ETC.	
		ACTUATED BUTTERFLY VALVE	ABFV
		AIR CUSHION CHECK VALVE	ACCV
		AIR RELEASE VALVE	ARV
		BALL CHECK VALVE	BACV
		BALL VALVE	BV
		BLIND FLANGE	BF
		BUTTERFLY VALVE	BFV
		BURIED GEAR OPERATOR	BGO
		CHECK VALVE, SWING/GLOBE	CV
		ELBOW	ELL
		ELECTRIC VALVE ACTUATOR	EVA
		ELEVATED GEAR OPERATOR	EGO
		EXPANSION JOINT	EJ
		FIRE HYDRANT	FH
		FITTING	FTG
		FLANGE	FLG
		FLANGED ADAPTOR	FA
		FLEXIBLE COUPLING	FC
		GATE VALVE	GV
		HARNESSED FLANGED COUPLING ADAPTER	HFCOA
		HYDRAULIC VALVE ACTUATOR	HVA
		KNIFE GATE VALVE	KGV
		MECHANICAL JOINT	MJ
		ORIFICE PLATE	O.P.
		PLASTIC BALL VALVE	PBAV
		PLUG VALVE	PV
		REDUCER	RED
		SILENT CHECK VALVE	SCV
		SOLENOID VALVE	SV
		VALVE BOX	VB
		PROCESS NOMENCLATURE	
		LIQUID & GAS PROCESS	
		AIR PIPE	AIR
		AMMONIA GAS	AG
		AMMONIA SOLUTION	AS
		CHLORINE GAS	CG
		CHLORINE SOLUTION	CS
		DISINFECTED WATER	DW
		EFFLUENT	EFF
		FILTER EFFLUENT	FE
		FINISHED WATER	FW
		FORCE MAIN	FM
		INFLUENT	INF
		INFLUENT RECYCLE	IR
		MICROFILTRATION	MF
		MIXED LIQUOR	ML
		NON-POTABLE WATER	NPW
		PERMEATE	PERM
		POTABLE WATER	PW
		RAW SEWAGE	RS
		RAW WATER	RAW
		RECIRCULATION PUMP	RP
		RECLAIMED WATER	RW
		RETURN ACTIVATED SLUDGE	RAS
		RETURN EFFLUENT WATER	REW
		REUSE EFFLUENT WATER	REW
		RO REJECT	RJ
		SECONDARY EFFLUENT	SE
		WASTE ACTIVATED SLUDGE	WAS
		STORMWATER	
		DRAIN	D
		SANITARY SEWER	SS
		STORM DRAIN	SD
		STORMWATER	SW
		POWER & FUEL	
		ELECTRIC CABLE/DUCT BANK	E
		FUEL LINE	FL
		NATURAL GAS LINE	GAS
		COMMUNICATION	
		FIBER OPTIC	FO
		TELEVISION CABLE	TV

VALVES, PIPES & FITTINGS (SINGLE-LINE)



VALVES, PIPES & FITTINGS (DOUBLE-LINE/3D)



REV	DATE	DESCRIPTION	BY
0	10/2014	ISSUED FOR BID	RLL

Issue Certification
Curtis I. Kunihiro, P.E.
Florida P.E. No. 33688
Reiss Engineering, Inc.
Certificate of Authorization No. 8181
1016 Spring Villas Pt.
Winter Springs, FL 32708

Designed DNN
Drawn RLL
Checked DNN
Reviewed CLK
Approved CLK
Date 10/2014

ORANGE COUNTY UTILITIES
EASTERN WATER RECLAMATION FACILITY
GENERAL
STANDARD LEGEND AND ABBREVIATIONS

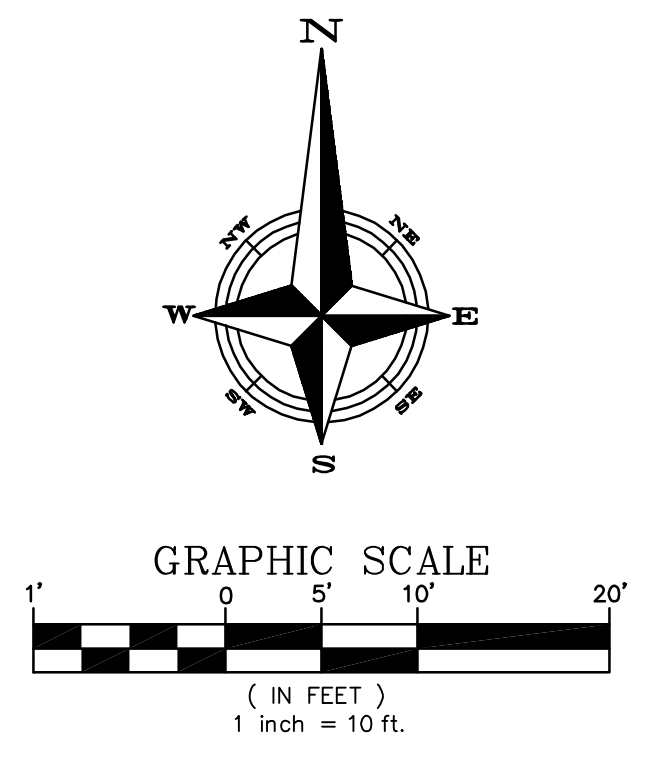
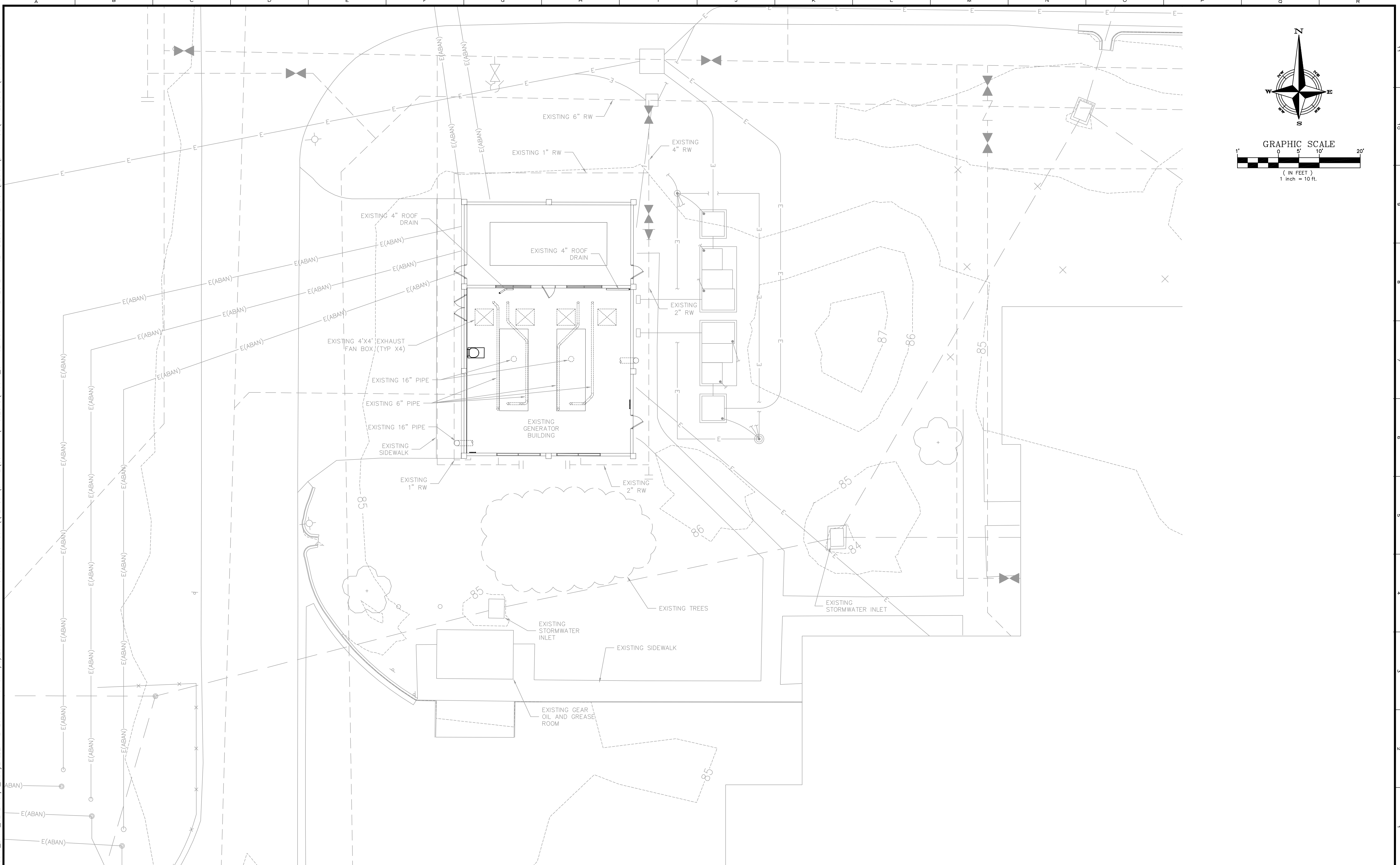
PROJECT NO.: 110016	REVISION: 0
SCALE: NOTED	SHEET NO.: 03 OF 16
DRAWING NO. G03	



REISS ENGINEERING, INC.
1016 SPRING VILLAS PT.
WINTER SPRINGS, FL 32708
(407) 679-5358

Parent Sheet Set: 110016_EWRF_GENERAL\GEN\DRAWINGS\110016_ORANGE COUNTY UTILITIES EWRF GEN BLDG CONVERSION DESIGN\DRAWINGS\FINAL\DESIGN_03_G03.DWG

Parent Sheet Set: 110016_EWRF_GENERATOR_BUILDING_VENUE_DRAWING L. LUPO Rev on: 7/8/2014 8:23 AM Individual File Path: \\REIFS01\SHARE_COMPANY\PROJECTS\110016_ORANGE_COUNTY_UTILITIES_EWRF_GEN_BLDG_CONVERSION_DESIGN\FINALDESIGN_04_C01.DWG



REV	DATE	DESCRIPTION	BY
0	10/2014	ISSUED FOR BID	RLI

Issue Certification
 Curtis I. Kunihiro, P.E.
 Florida P.E. No. 33688
 Reiss Engineering, Inc.
 Certificate of Authorization No. 8181
 1016 Spring Villas Pt.
 Winter Springs, FL 32708

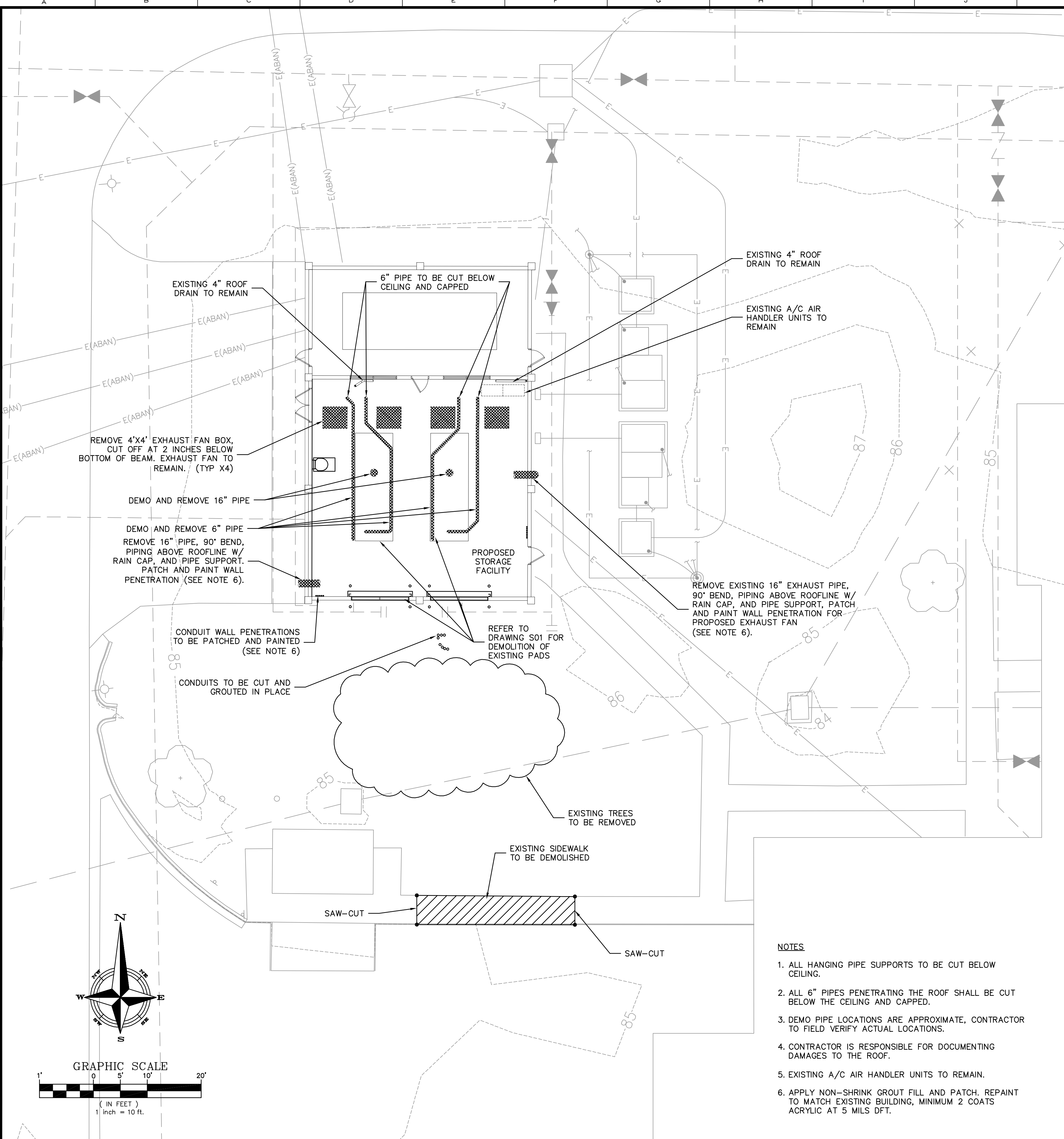
Designed DNN
 Drawn RLI
 Checked DNN
 Reviewed CLK
 Approved CLK
 Date 10/2014

ORANGE COUNTY UTILITIES
 EASTERN WATER RECLAMATION FACILITY
 CIVIL
 EXISTING SITE PLAN

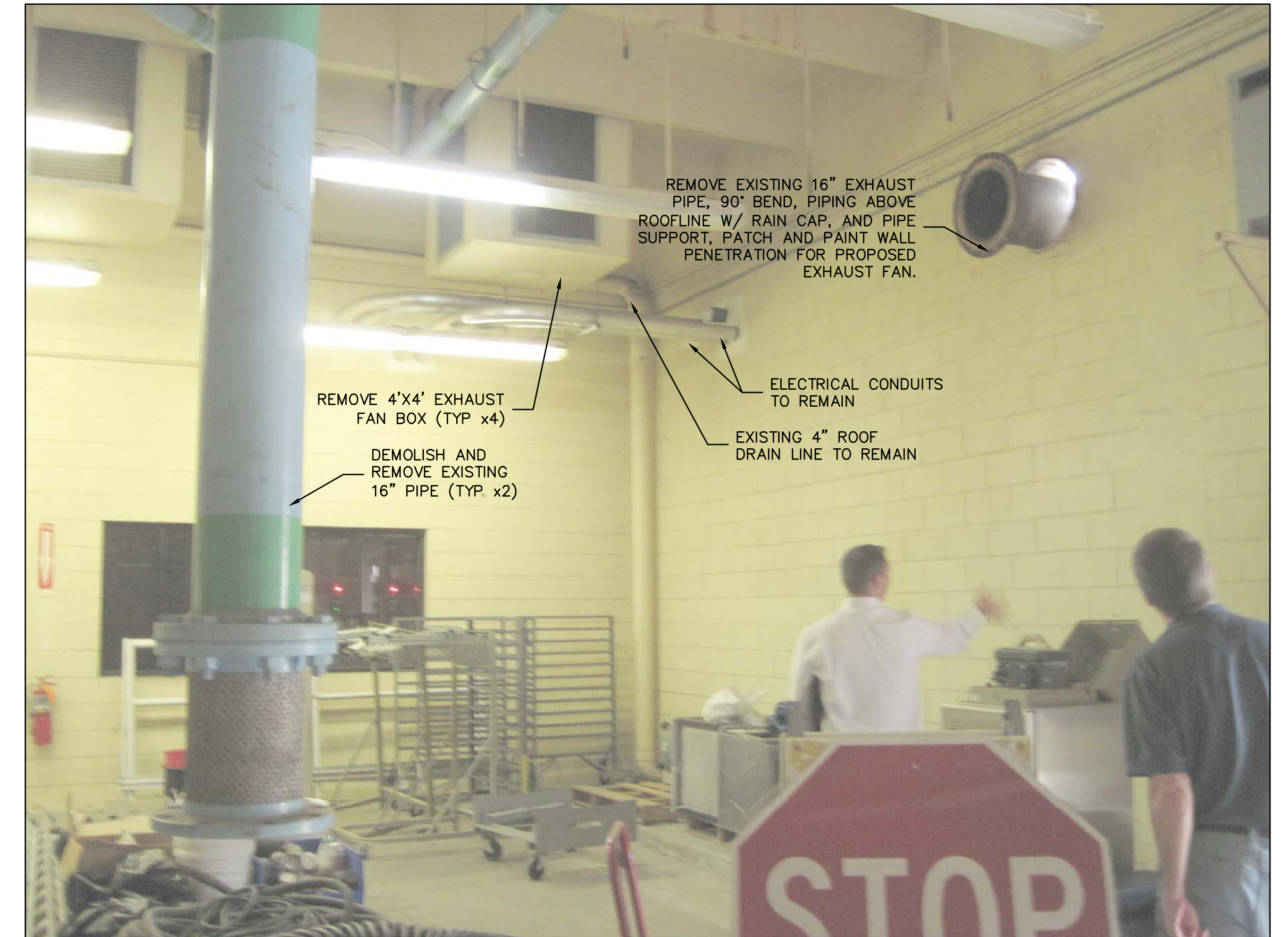
PROJECT NO.: 110016	
SCALE: NOTED	REVISION: 0
DRAWING NO. C01	SHEET NO.: 04 OF 16



Parent: Set: 110016_EWRP_GENERAL\ORANGE COUNTY UTILITIES EWRP GEN BLDG CONVERSION\DESIGN\DRAWINGS\FINAL\DESIGN_05_C02.DWG
 Individual File Path: \\REISS\01\SHARE\COMPANY\PROJECTS\110016_ORANGE COUNTY UTILITIES EWRP GEN BLDG CONVERSION\DESIGN\DRAWINGS\FINAL\DESIGN_05_C02.DWG
 Rev on: 10/29/2014 1:49 PM
 L. LUPO



- NOTES**
1. ALL HANGING PIPE SUPPORTS TO BE CUT BELOW CEILING.
 2. ALL 6" PIPES PENETRATING THE ROOF SHALL BE CUT BELOW THE CEILING AND CAPPED.
 3. DEMO PIPE LOCATIONS ARE APPROXIMATE, CONTRACTOR TO FIELD VERIFY ACTUAL LOCATIONS.
 4. CONTRACTOR IS RESPONSIBLE FOR DOCUMENTING DAMAGES TO THE ROOF.
 5. EXISTING A/C AIR HANDLER UNITS TO REMAIN.
 6. APPLY NON-SHRINK GROUT FILL AND PATCH. REPAINT TO MATCH EXISTING BUILDING, MINIMUM 2 COATS ACRYLIC AT 5 MILS DFT.



REV	DATE	DESCRIPTION	BY
0	10/2014	ISSUED FOR BID	RLL

Issue Certification
 Curtis I. Kunihiro, P.E.
 Florida P.E. No. 33688
 Reiss Engineering, Inc.
 Certificate of Authorization No. 8181
 1016 Spring Villas Pt.
 Winter Springs, FL 32708

Designed DNN
 Drawn RLL
 Checked DNN
 Reviewed CLK
 Approved CLK
 Date 10/2014

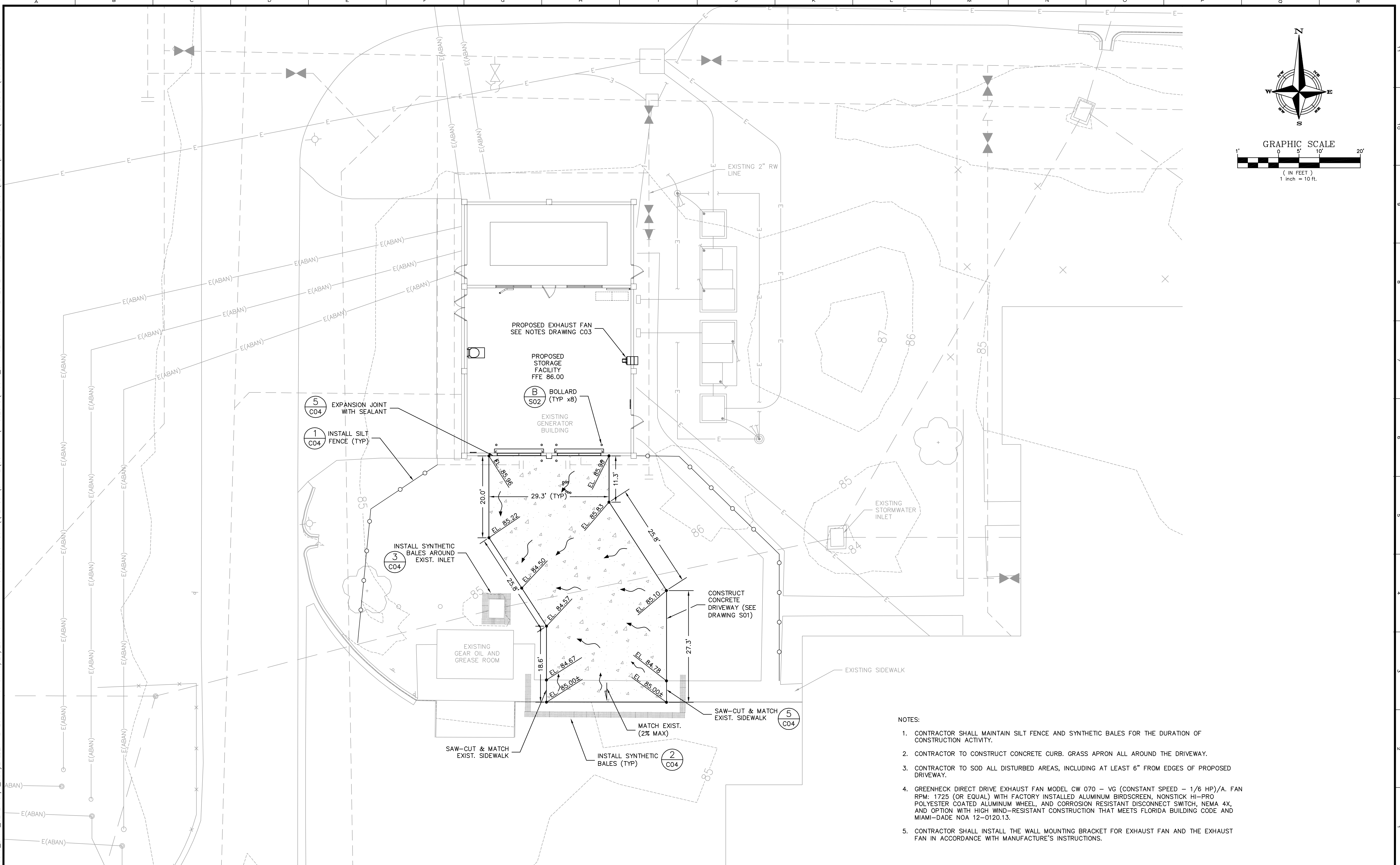
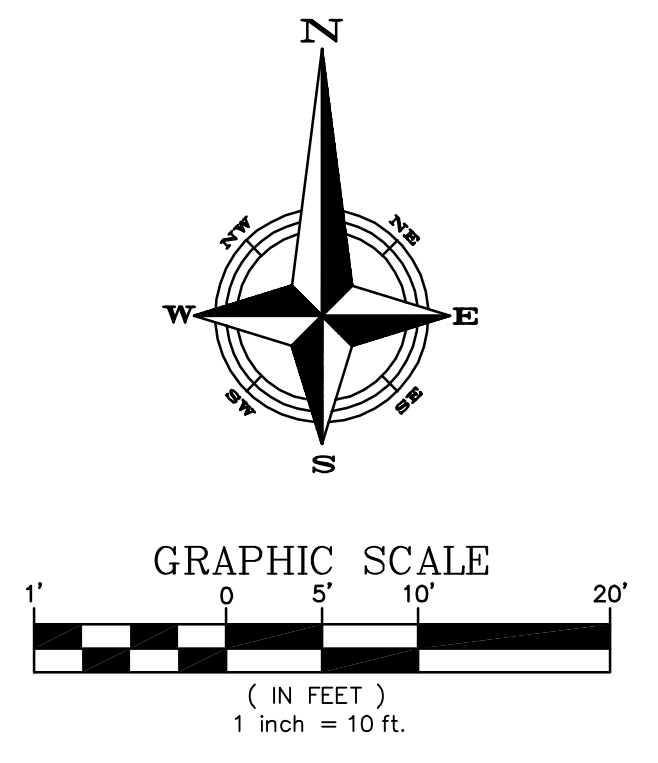
ORANGE COUNTY UTILITIES
 EASTERN WATER RECLAMATION FACILITY

CIVIL
 DEMOLITION

PROJECT NO.: 110016	
SCALE: NOTED	REVISION: 0
DRAWING NO. C02	SHEET NO.: 05 OF 16



Parent: Sheet: Set: 110016_EWRF_GENERATOR_FACILITY_CONVERSION_DRAWING_FINALDESIGN_06_C03.DWG
 Individual File Path: \\REISS\01\SHARE_COMPANY\PROJECTS\110016_ORANGE_COUNTY_UTILITIES_EWRF_GEN_BLDG_CONVERSION_DRAWING_FINALDESIGN_06_C03.DWG
 Rev on: 10/29/2014 3:01 PM
 LUPLO



- NOTES:
1. CONTRACTOR SHALL MAINTAIN SILT FENCE AND SYNTHETIC BALES FOR THE DURATION OF CONSTRUCTION ACTIVITY.
 2. CONTRACTOR TO CONSTRUCT CONCRETE CURB. GRASS APRON ALL AROUND THE DRIVEWAY.
 3. CONTRACTOR TO SOD ALL DISTURBED AREAS, INCLUDING AT LEAST 6" FROM EDGES OF PROPOSED DRIVEWAY.
 4. GREENHECK DIRECT DRIVE EXHAUST FAN MODEL CW 070 - VG (CONSTANT SPEED - 1/6 HP)/A. FAN RPM: 1725 (OR EQUAL) WITH FACTORY INSTALLED ALUMINUM BIRDSCREEN, NONSTICK HI-PRO POLYESTER COATED ALUMINUM WHEEL, AND CORROSION RESISTANT DISCONNECT SWITCH, NEMA 4X, AND OPTION WITH HIGH WIND-RESISTANT CONSTRUCTION THAT MEETS FLORIDA BUILDING CODE AND MIAMI-DADE NOA 12-0120.13.
 5. CONTRACTOR SHALL INSTALL THE WALL MOUNTING BRACKET FOR EXHAUST FAN AND THE EXHAUST FAN IN ACCORDANCE WITH MANUFACTURE'S INSTRUCTIONS.



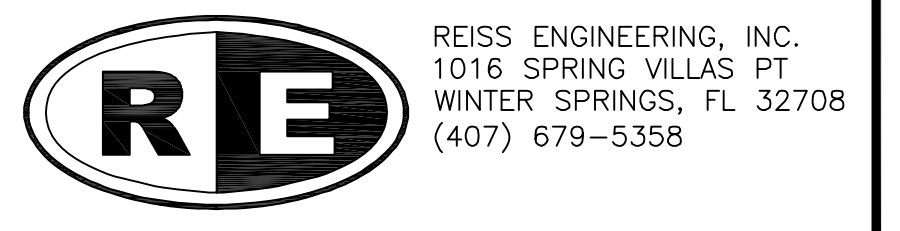
REV	DATE	DESCRIPTION	BY
0	10/2014	ISSUED FOR BID	RLL

Issue Certification
 Curtis I. Kunihiro, P.E.
 Florida P.E. No. 33688
 Reiss Engineering, Inc.
 Certificate of Authorization No. 8181
 1016 Spring Villas Pt.
 Winter Springs, FL 32708

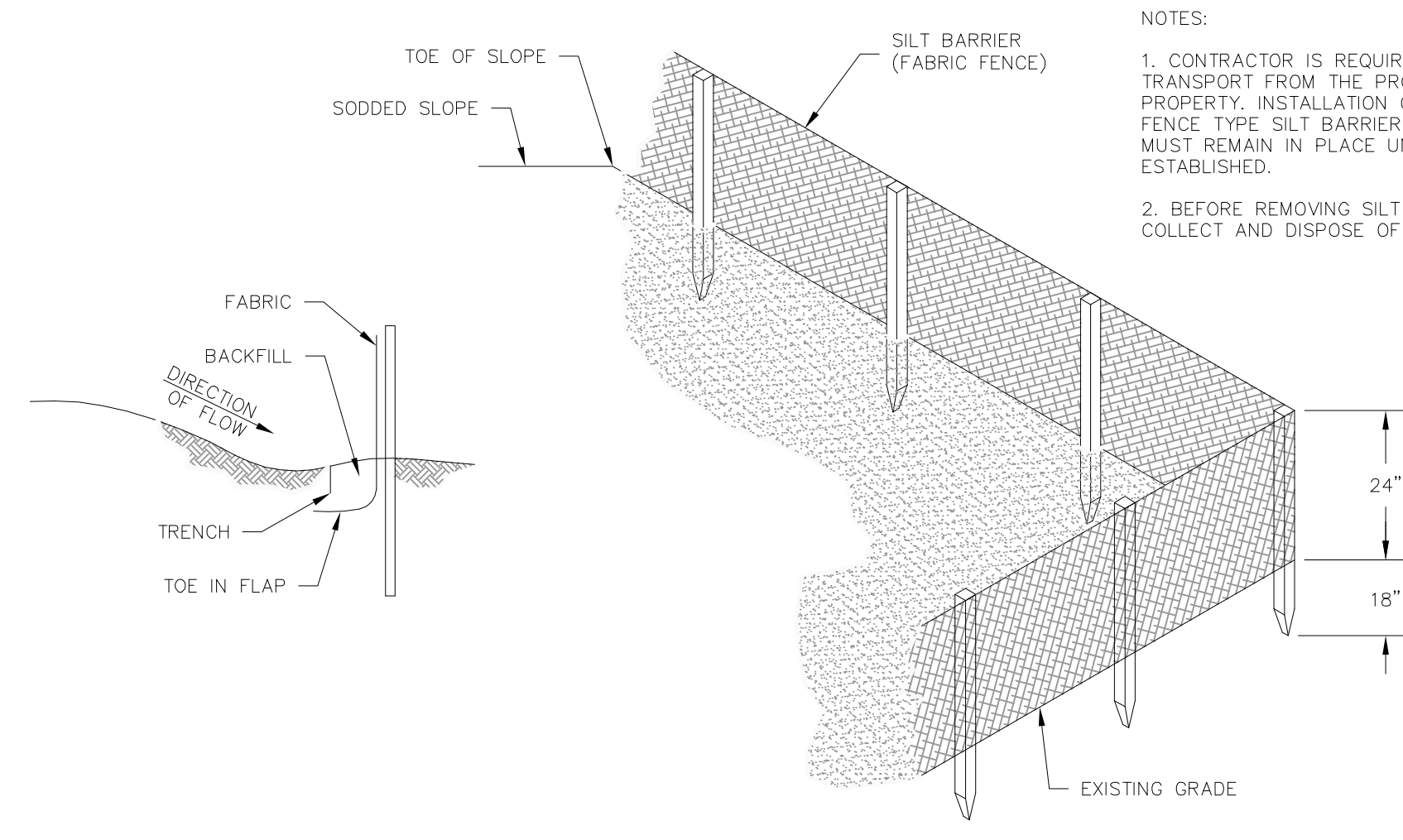
Designed DNN
 Drawn RLL
 Checked DNN
 Reviewed CLK
 Approved CLK
 Date 10/2014

ORANGE COUNTY UTILITIES
 EASTERN WATER RECLAMATION FACILITY
 CIVIL
 SITE PLAN AND PAVING AND GRADING

PROJECT NO.: 110016	
SCALE: NOTED	REVISION: 0
DRAWING NO. C03	SHEET NO.: 06 OF 16

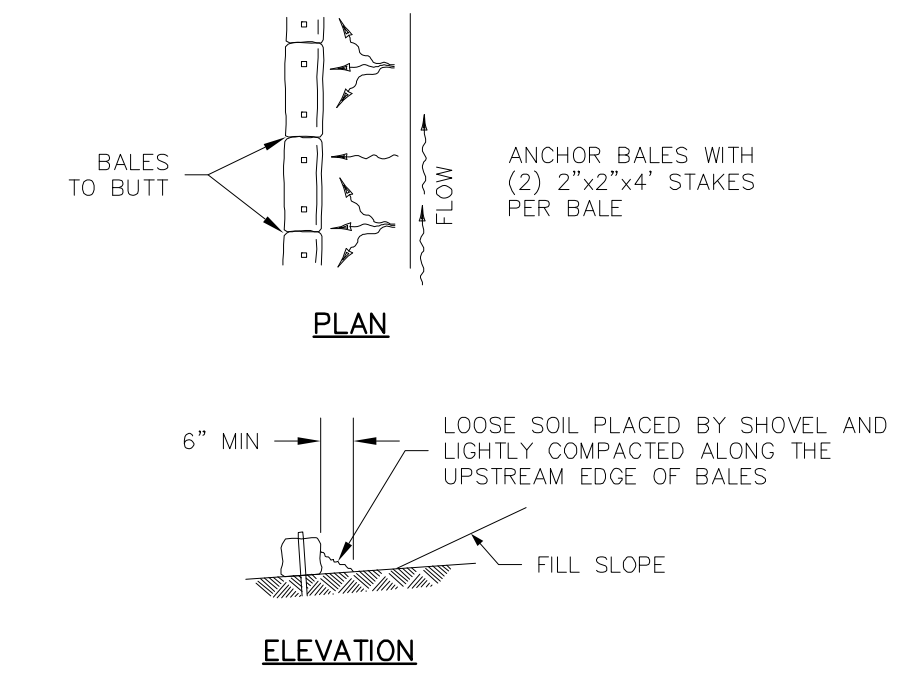


Parent Sheet Set: 110016_EWRF_GENERAL_DETAILS.dwg
 Individual File Path: \\REISS01\SHARE\COMPANY\PROJECTS\110016_ORANGE COUNTY UTILITIES EWRF GEN BLDG CONVERSION\DESIGN\DRAWINGS\FINAL\DESIGN_07_C04.DWG
 Rev on: 10/29/2014 3:04 PM
 LUPLO



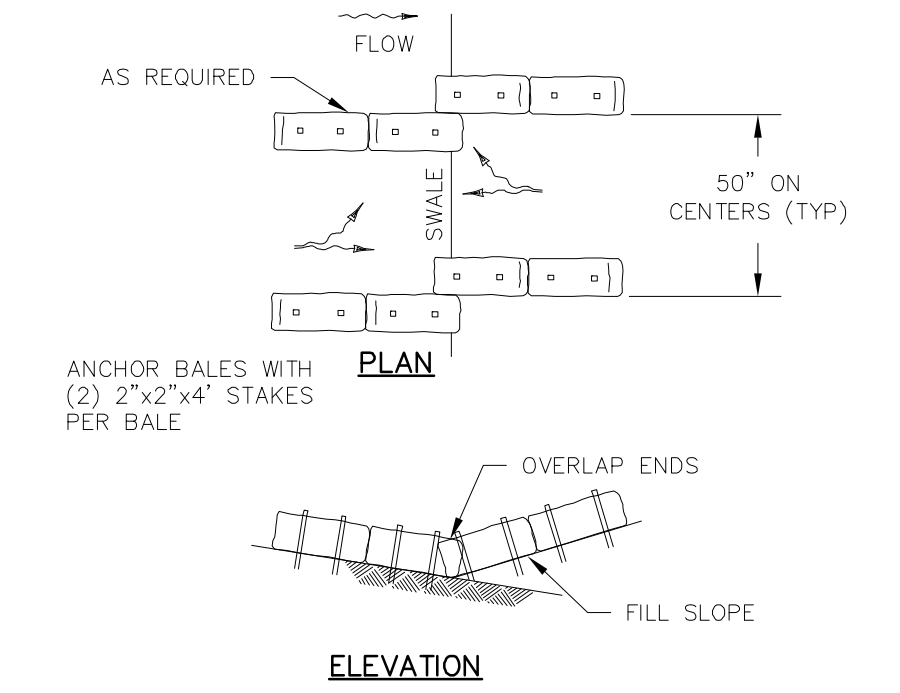
1 SILT FENCE
SCALE: NTS

NOTES:
 1. CONTRACTOR IS REQUIRED TO PREVENT ANY SEDIMENT TRANSPORT FROM THE PROJECT SITE ON TO ADJACENT PROPERTY. INSTALLATION OF EITHER BALED HAY OR FABRIC FENCE TYPE SILT BARRIER IS ACCEPTABLE. THE BARRIER MUST REMAIN IN PLACE UNTIL UPLAND VEGETATION IS ESTABLISHED.
 2. BEFORE REMOVING SILT BARRIER, CONTRACTOR SHALL COLLECT AND DISPOSE OF ANY ACCUMULATED SILT.

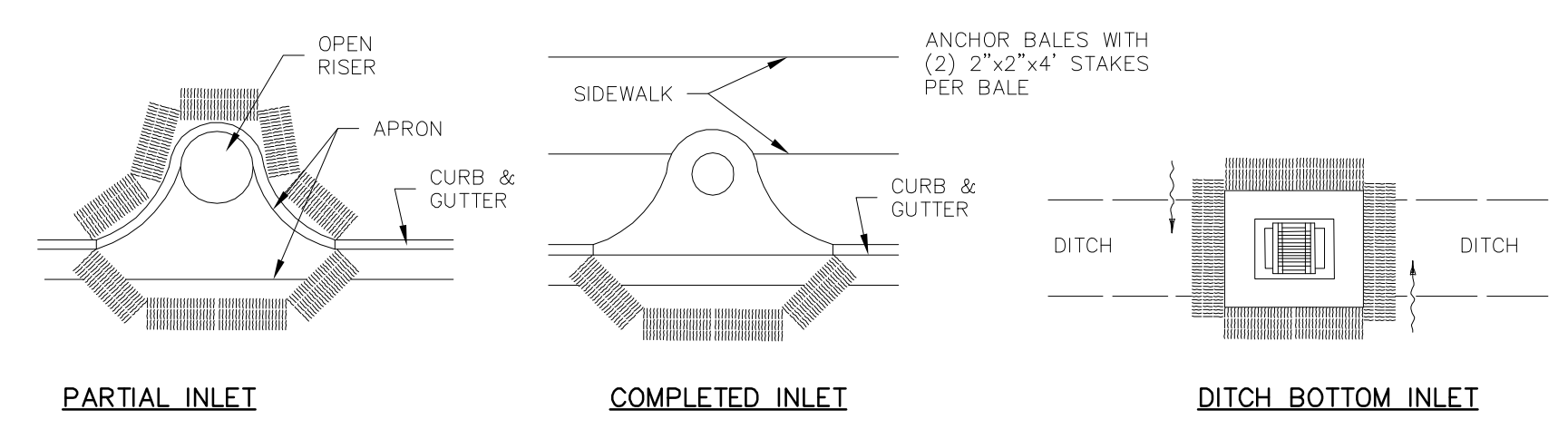


2 BARRIER FOR FILL SLOPE PROTECTION
SCALE: NTS

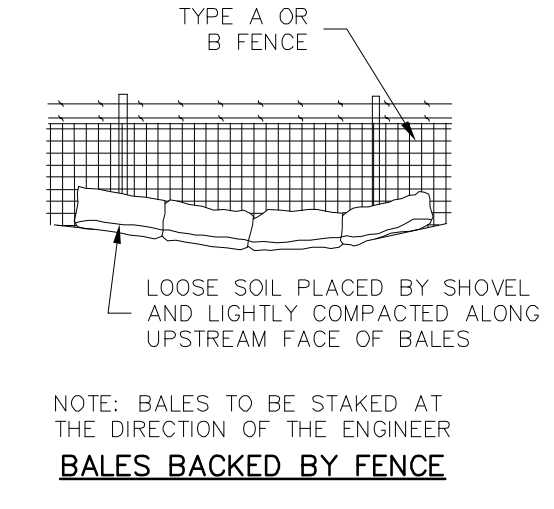
TO BE USED AT SELECTED SITES WHERE THE NATURAL GROUND SLOPES AWAY FROM THE TOE OF SLOPE



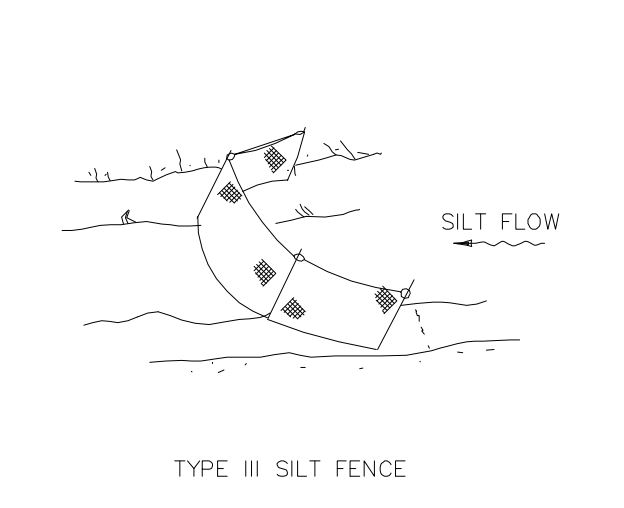
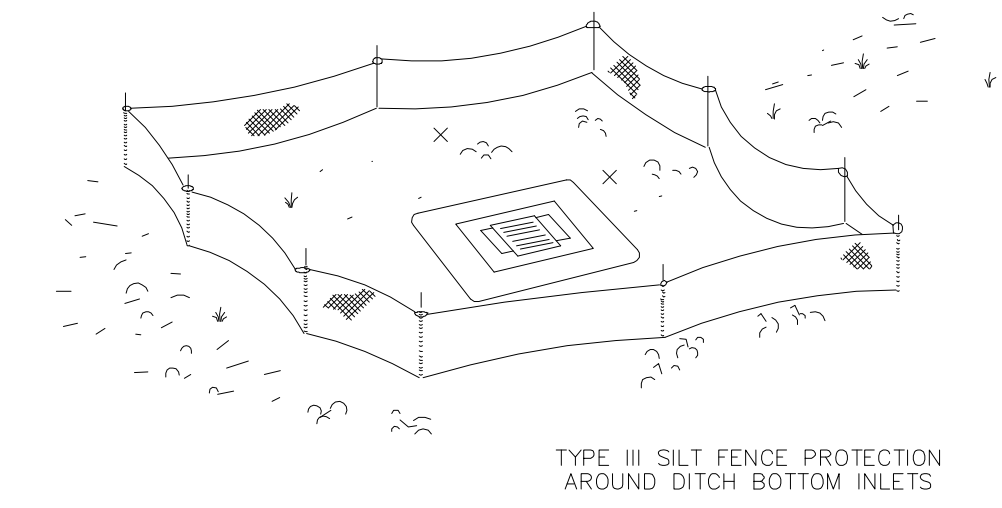
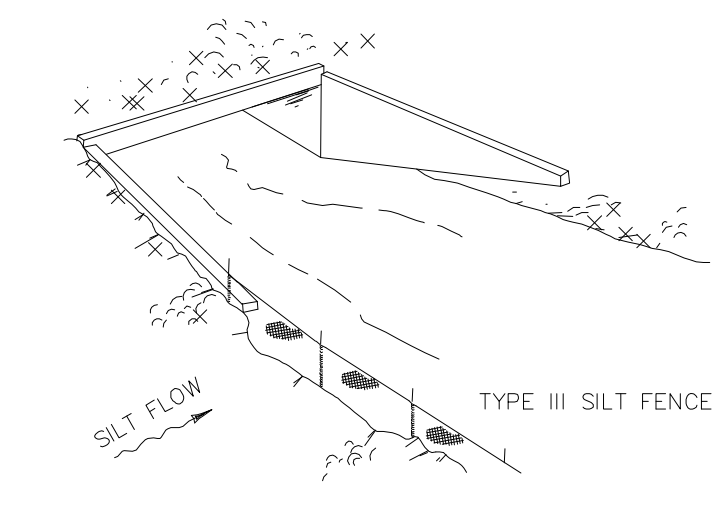
TO BE USED AT SELECTED SITES WHERE THE NATURAL GROUND SLOPES TOWARD THE TOE OF SLOPE



3 INLET PROTECTION
SCALE: NTS

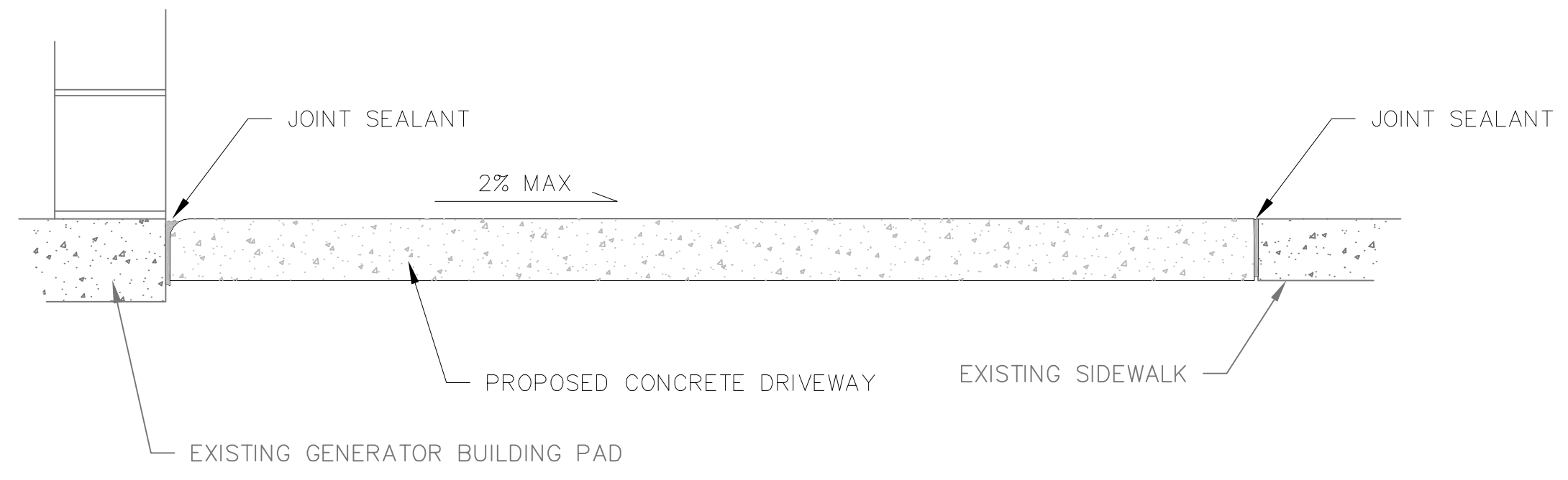


NOTE: BALES TO BE STAKED AT THE DIRECTION OF THE ENGINEER
BALES BACKED BY FENCE



DO NOT DEPLOY IN A MANNER THAT SILT FENCES WILL ACT AS A DAM ACROSS PERMANENT FLOWING WATERCOURSES. SILT FENCES ARE TO BE USED AT UPLAND LOCATIONS AND TURBIDITY BARRIERS USED AT PERMANENT BODIES OF WATER.

4 SILT FENCE APPLICATIONS
SCALE: NTS



5 EXPANSION JOINT WITH SEALANT DETAIL
SCALE: N.T.S.

NOTES:
 1. REMOVE TEMPORARY EROSION CONTROLS WHEN PERMANENT EROSION CONTROLS ARE IN PLACE.



REV	DATE	DESCRIPTION	BY
0	10/2014	ISSUED FOR BID	RLL

Issue Certification
 Curtis I. Kunihiro, P.E.
 Florida P.E. No. 33688
 Reiss Engineering, Inc.
 Certificate of Authorization No. 8181
 1016 Spring Villas Pt.
 Winter Springs, FL 32708

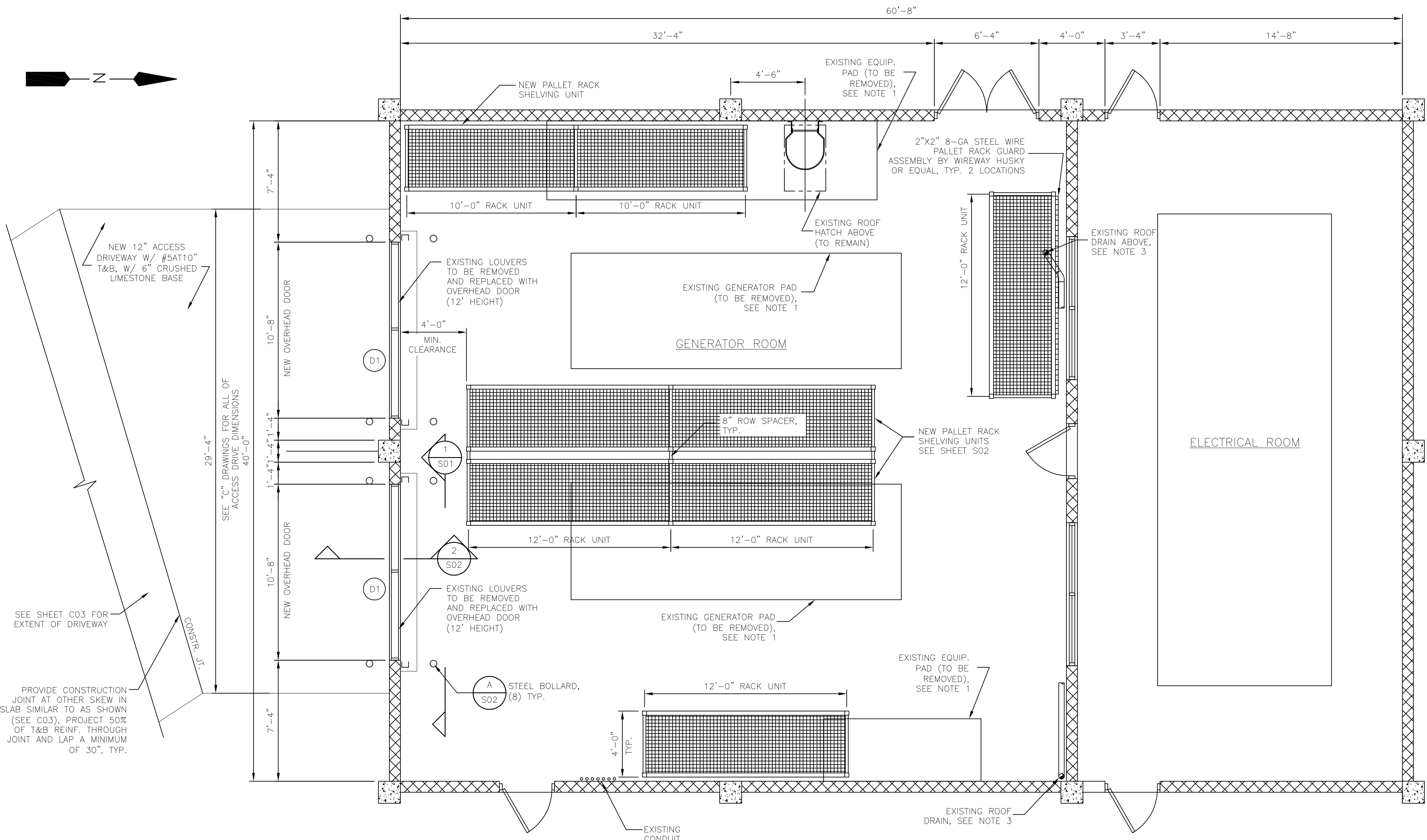
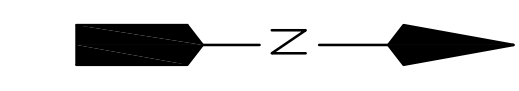
Designed_DNN
 Drawn_RLL
 Checked_DNN
 Reviewed_CIK
 Approved_CIK
 LINE IS 1" AT FULL SIZE
 Date 10/2014

ORANGE COUNTY UTILITIES
 EASTERN WATER RECLAMATION FACILITY
 CIVIL
 CIVIL DETAILS

PROJECT NO.: 110016	
SCALE: NOTED	REVISION: 0
DRAWING NO. C04	SHEET NO.: 07 OF 16



Parent Sheet: Set: 110016_EWRP_GENERAL NOTES FOR CONSTRUCTION L. LUPO Rev. on: 11/7/2014 12:52 PM Individual File Path: \\REISS01\SHARE\COMPANY PROJECTS\110016_ORANGE COUNTY UTILITIES EWRP GEN BLDG CONVERSION\DESIGN DRAWINGS\FINAL\DESIGN_07_S01.DWG



GENERATOR BUILDING
MODIFICATION PLAN
1/4"=1'-0"

GENERAL STRUCTURAL NOTES

GENERAL CONDITIONS

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

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

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

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

REINFORCING STEEL

REINFORCEMENT SHALL CONFORM TO ASTM A615, GRADE 60 REQUIREMENTS. WELDED WIRE FABRIC, ASTM A185, ALL ACCESSORIES SHALL BE IN CONFORMANCE WITH ACI 315 REQUIREMENTS. REINFORCING STEEL SHALL HAVE THE FOLLOWING CLEAR COVER UNLESS OTHERWISE NOTED:

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

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

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

CONCRETE

ALL MATERIALS AND METHODS OF CONSTRUCTION SHALL BE IN ACCORDANCE WITH ACI 318 REQUIREMENTS (LATEST EDITION)

ALL CONCRETE SHALL BE AIR-ENTRAINED WITH 4000 PSI COMPRESSIVE STRENGTH AT 28 DAYS UNLESS OTHERWISE NOTED.

WATER REDUCING AGENT SHALL BE IN ACCORDANCE WITH ASTM C494

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

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

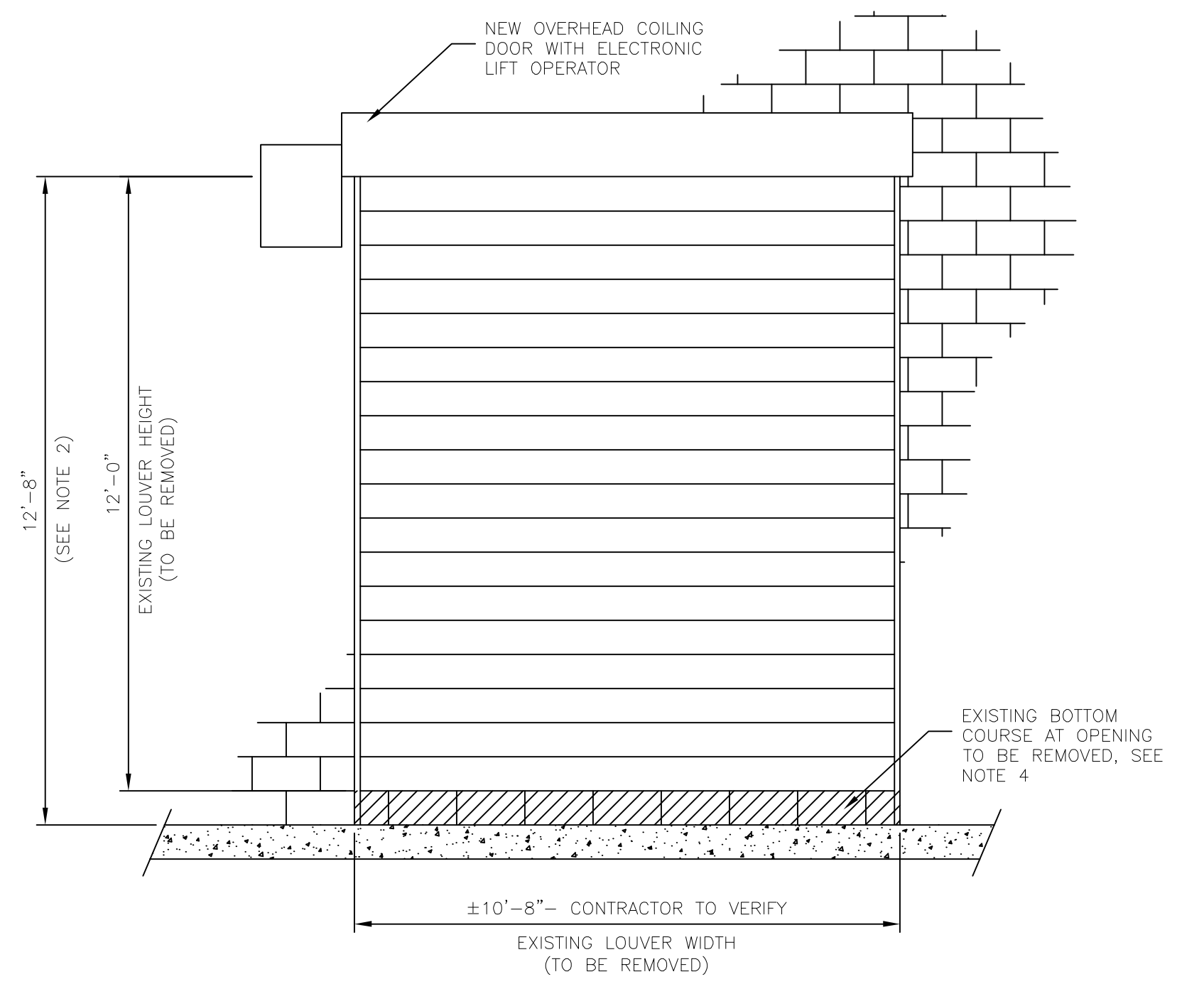
THE CONTRACTOR SHALL OBTAIN ENGINEER'S APPROVAL FOR THE LOCATIONS OF CONSTRUCTION JOINTS THAT ARE NOT SHOWN ON THE DRAWINGS.

WIND LOADS:

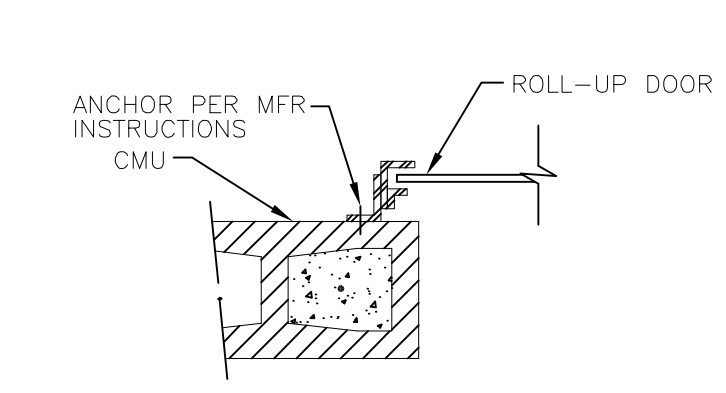
- ULTIMATE DESIGN WIND SPEED, V_{ULT} (3-SECOND GUST)	145 MPH
- NOMINAL DESIGN WIND SPEED, V_{50}	112 MPH
- RISK CATEGORY	III
- EXPOSURE CATEGORY	B
- ENCLOSURE CLASSIFICATION	PARTIALLY ENCLOSED
- INTERNAL PRESSURE COEFFICIENT, G_{CPI}	± 0.55
- DESIGN PRESSURES: PER ASCE 7-10	

COMPONENTS AND CLADDING DESIGN WIND PRESSURES

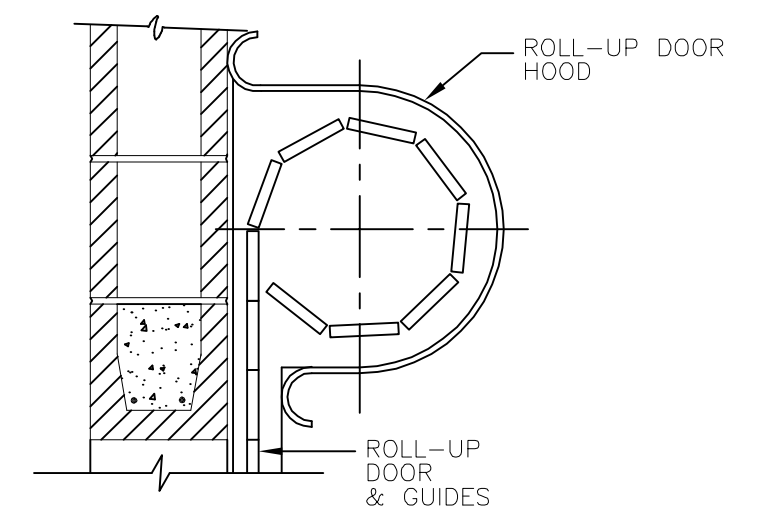
DOOR	PRESSURE (PSF)
D1	+45/-50



TYPICAL NEW OVERHEAD DOOR - D1
SECTION
3/8"=1'-0"



ROLL-UP DOOR JAMB
DETAIL
1 1/2"=1'-0"



ROLL UP DOOR HEAD
DETAIL
1 1/2"=1'-0"

- NOTES**
1. WIRE SAWCUT AND REMOVE EXISTING GENERATOR PAD FLUSH WITH EXISTING FLOOR. PROVIDE LEVEL SURFACE, BURN OR GRIND BACK EXPOSED REBAR WHERE NECESSARY AND APPLY ARMATEC 110 BY SIKA TO ALL REINFORCEMENT. PAINT ENTIRE EQUIPMENT PAD AREA WITH 2 COATS OF SIKAGARD 62 BY SIKA. 2ND COAT TO BE BROADCAST WITH DRY SANDBLASTING SAND TO PROVIDE NON-SLIP SURFACE.
 2. NEW OVERHEAD DOOR DIMENSIONS TO MATCH EXISTING LOUVER OPENING DIMENSIONS FOLLOWING REMOVAL OF BOTTOM MASONRY COURSE UNDER OPENING.
 3. EXISTING 4" DIA. ROOF DRAIN PIPE TO REMAIN. COORDINATE INSTALLATION OF PALLET RACK SHELVING UNITS WITH EXISTING PIPE.
 4. SAWCUT AND REMOVE EXISTING BOTTOM MASONRY COURSE BELOW OPENING. SEE SECTION 2 ON S02.



REV	DATE	DESCRIPTION	BY
0	10/2014	ISSUED FOR BID	JS

Issue Certification
Bilgin Erel, P.E.
Florida P.E. No. 34053
e/T Engineering Technologies, Inc.
Certificate of Authorization No. 8414
3551 W. Lake Mary Blvd, Suite 210
Lake Mary, FL 32746

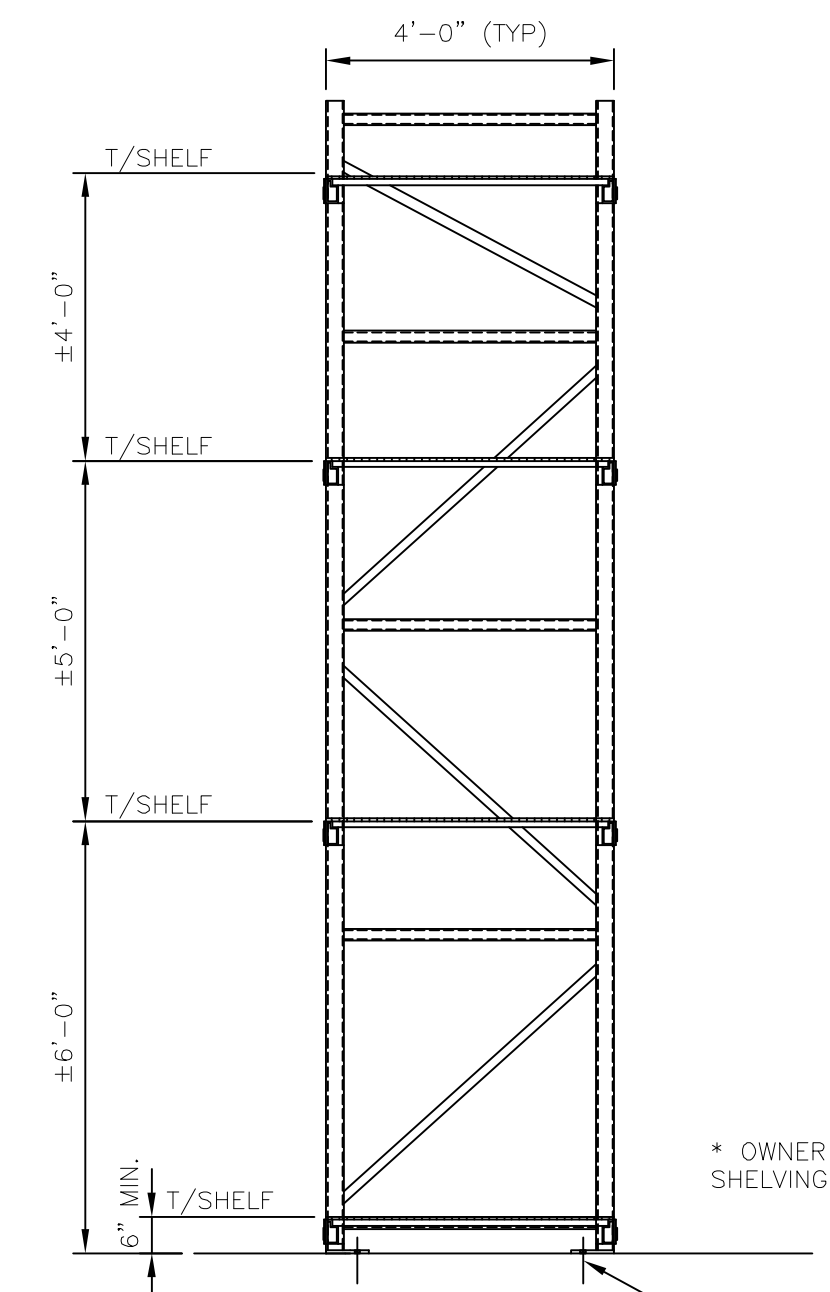
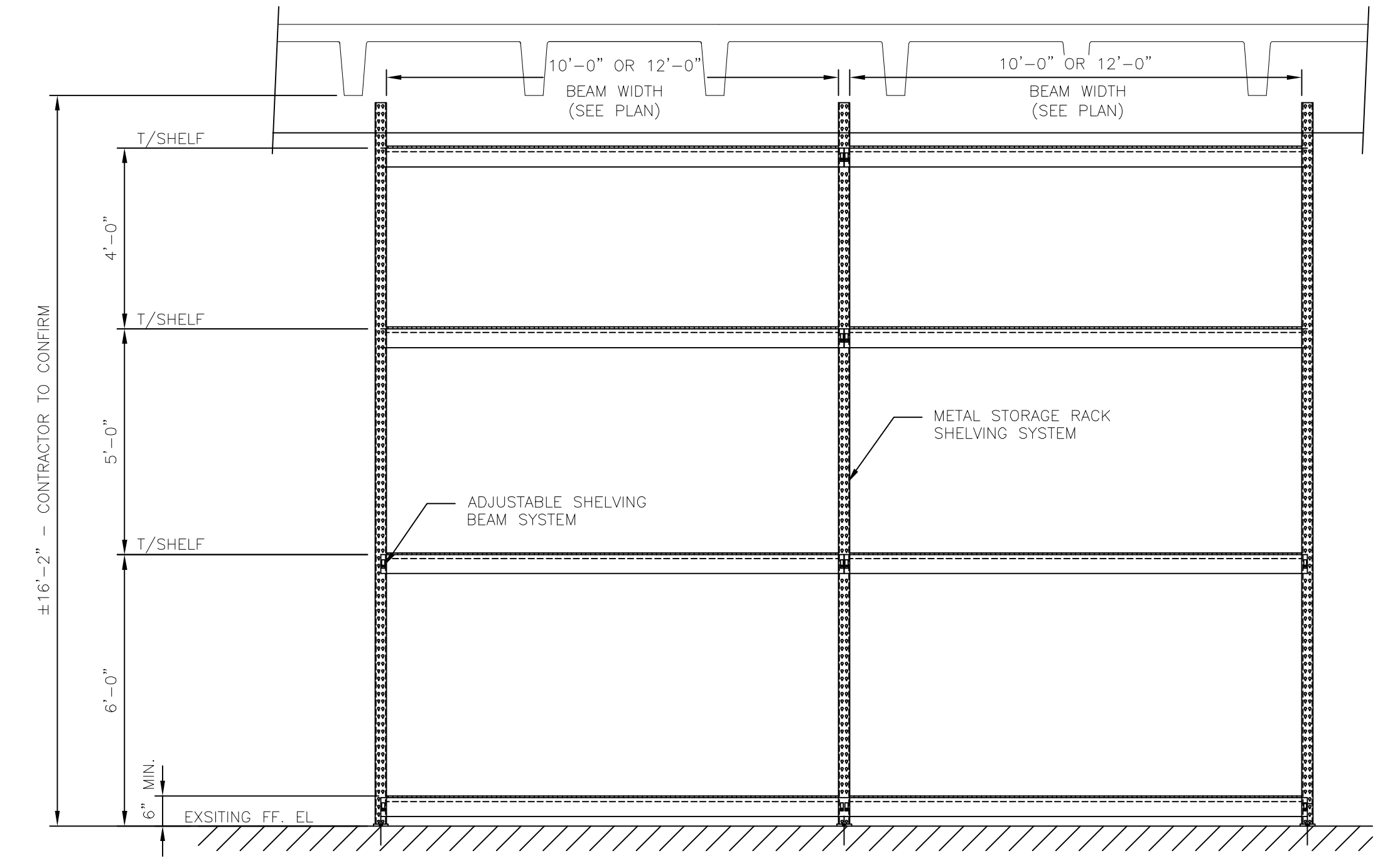
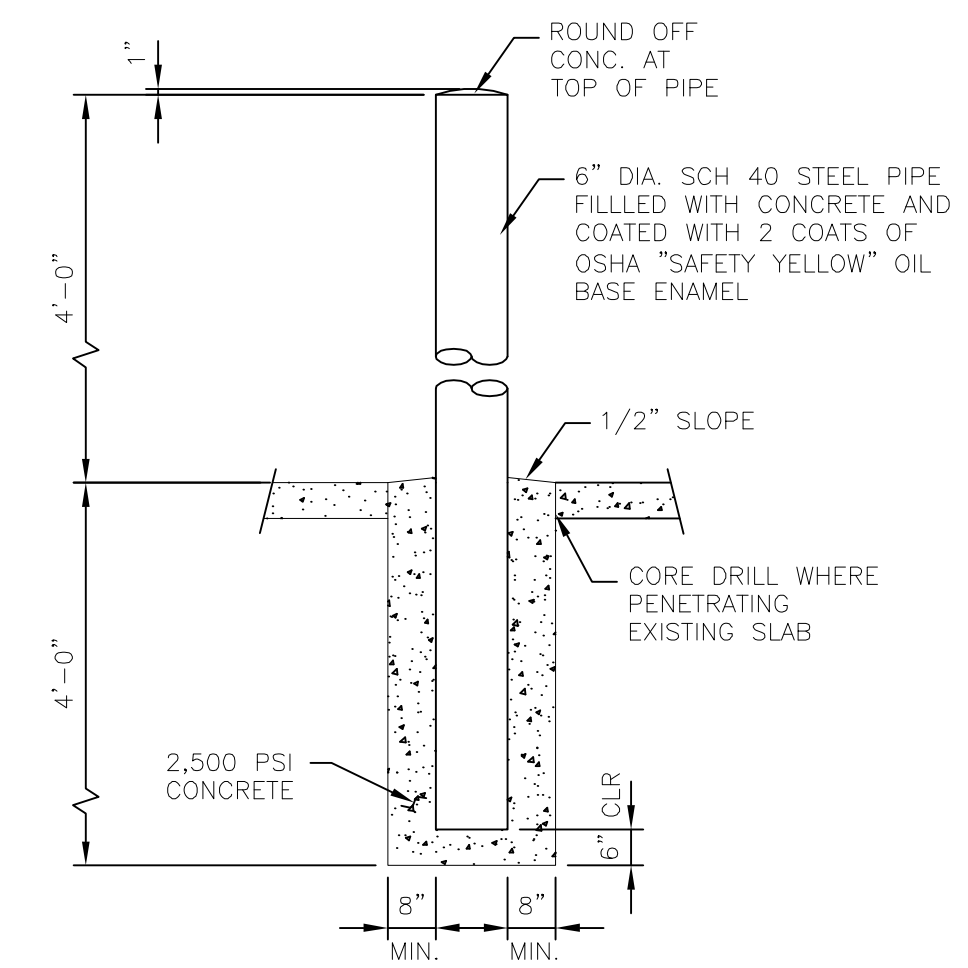
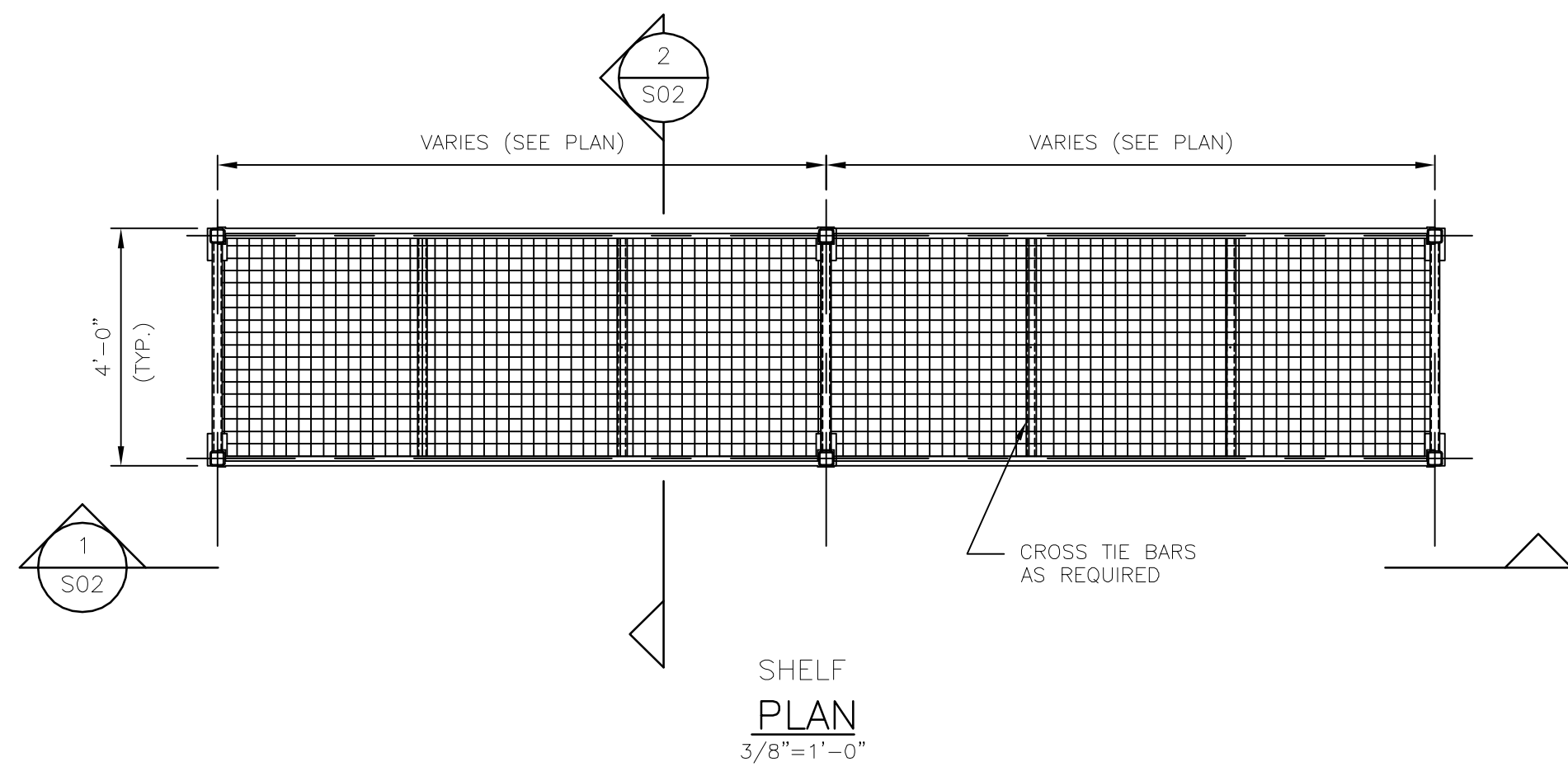
Designed JS
Drawn JS
Checked DNN
Reviewed LRL
Approved BE
Date 10/2014

ORANGE COUNTY UTILITIES
EASTERN WATER RECLAMATION FACILITY
STRUCTURAL
SHELVING STORAGE, OVERHEAD DOORS,
GENERATOR BUILDING PLAN AND NOTES

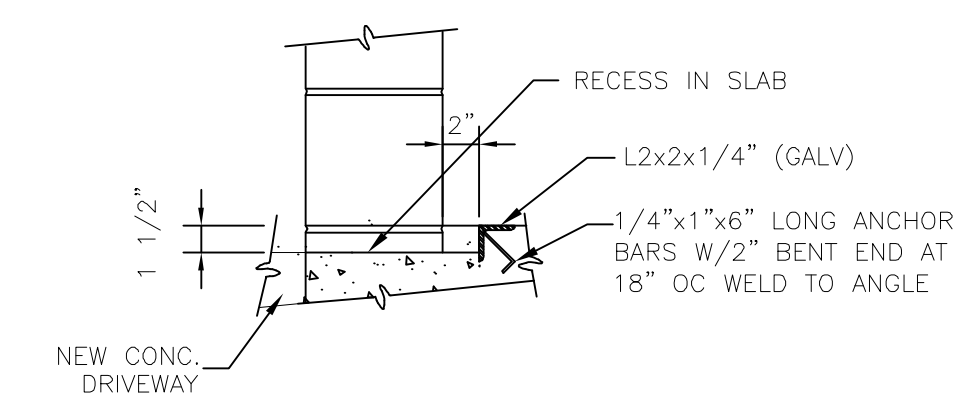
PROJECT NO.: 110016	
SCALE: NOTED	REVISION: 0
DRAWING NO. S01	SHEET NO.: 08 OF 16



Parent Sheet Set: 110016_EWRP_GENERATOR BUILDING PLAN AND NOTES LUPLO Rev on: 11/7/2014 12:52 PM Individual File Path: \\REISS\01\SHARE\COMPANY PROJECTS\110016_ORANGE COUNTY UTILITIES EWRP GEN BLDG CONVERSION\DESIGN\DRAWINGS\FINAL\DESIGN_08_S02.DWG



BOLLARD
DETAIL A
3/8"=1'-0"



ROLL-UP DOOR THRESHOLD
DETAIL B
1/2"=1'-0"

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

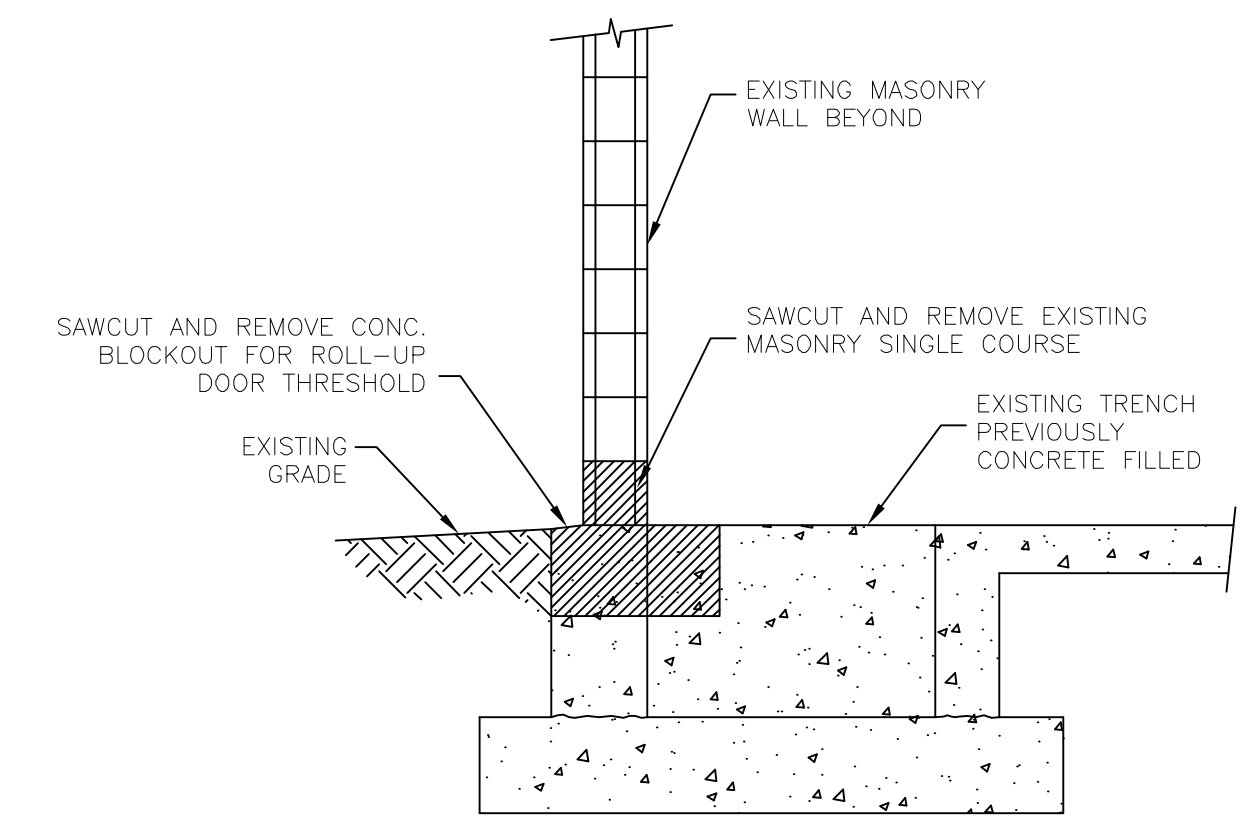
SECTION 2
3/8"=1'-0"

* OWNER TO CONFIRM PREFERRED SHELVING SPACING
BOLTS SHALL BE LOCATED AT INTERIOR SIDE OF POST TO PREVENT TRIPPING HAZARD, TYPICAL AT ALL LOCATIONS; ANCHORS TO BE SS 316.

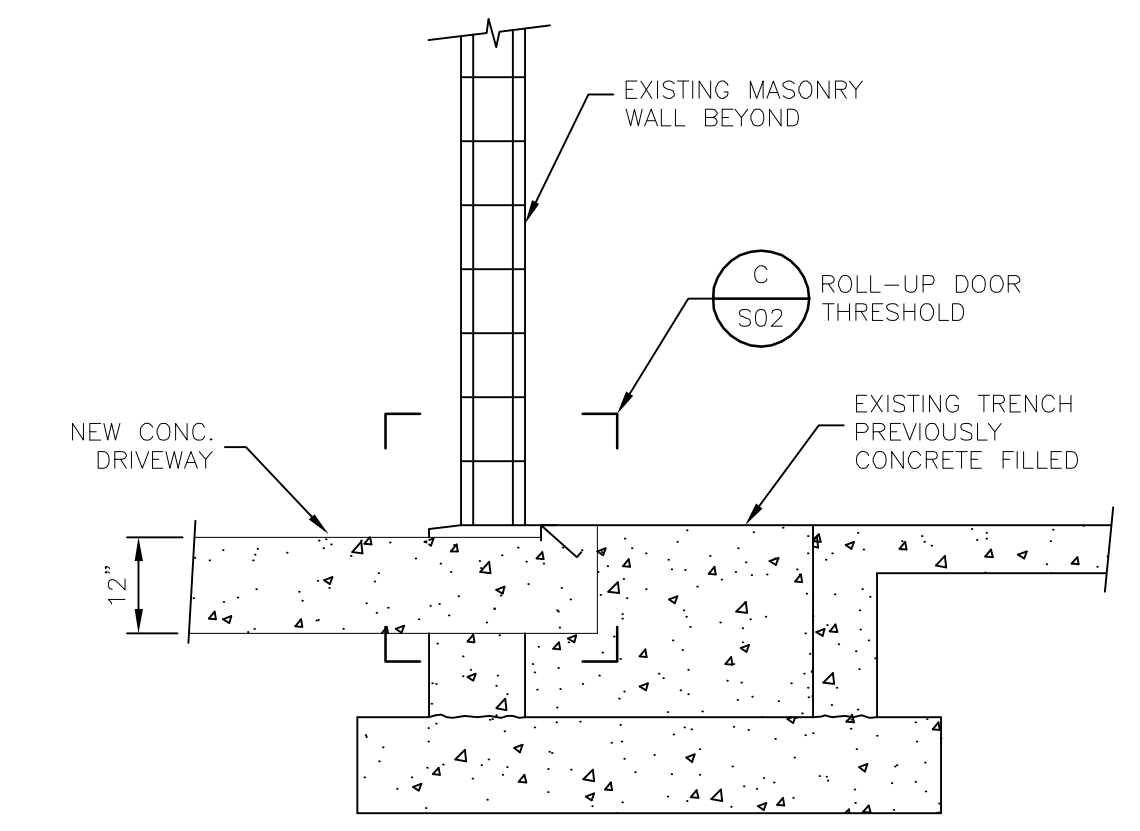
PALLET RACK NOTES:

FURNISH ALL LABOR, MATERIALS, EQUIPMENT AND INCIDENTALS REQUIRED TO DELIVER TO JOB SITE AND ERECT THE PALLET RACK AS INDICATED ON THE DRAWINGS.
REFURBISHED OR USED PALLET RACKS ARE UNACCEPTABLE.
PALLET RACK FRAMING SYSTEM AND HARDWARE TO BE SUPPLIED BY SAME MANUFACTURER, WITH THE EXCEPTION OF WIRE DECKING, OR UNLESS OTHERWISE NOTED.
PALLET RACK TO BE OF INDUSTRY STANDARD TEARDROP TYPE DESIGN WITH TWO TEARDROP PUNCHES SIDE BY SIDE ON 2" CENTERS AND BE RACK MANUFACTURER'S INSTITUTE (RM) CERTIFIED.
RACK DESIGN TO CONFORM TO THE LATEST AMERICAN IRON AND STEEL INSTITUTE (AISI) COLD FORMED STEEL DESIGN MANUAL.
MANUFACTURERS:
WIREWAY HUSKY CORP., DENVER, NORTH CAROLINA; STEEL KING INDUSTRIES, ST. STEVENS POINT, WISCONSIN; UNARCO MATERIAL HANDLING, INC., SPRINGFIELD, TENNESSEE; RIDG-U-RACK, NORTH EAST, PENNSYLVANIA; INTERLAKE METCALUX, CHICAGO, ILLINOIS; BULLDOG RACK COMPANY, WEIRTON, WEST VIRGINIA; FOLDING GUARD CORPORATION, BEDFORD PARK, ILLINOIS; NASHVILLE WIRE PRODUCTS, NASHVILLE, TENNESSEE.
MATERIALS:
UPRIGHT FRAMING - UPRIGHT FRAMING UNIT SHALL CONSIST OF TWO (2) UPRIGHT FRAME POSTS CONNECTED BY FULL DIAGONAL AND HORIZONTAL BRACING

THROUGHOUT THE UPRIGHT FRAME HEIGHT, UPRIGHT FRAME CAPACITY AT A MAX VERTICAL BEAM SPACING OF 72" SHALL BE A MINIMUM OF 16,000 LB. UPRIGHT FRAME POSTS SHALL BE 3"x3" POST WITH ATTACHED ALL-WELDED FOOTPADS. FOOTPADS SHALL HAVE MULTIPLE OFFSET ANCHOR HOLES.
BEAMS - BEAMS SHALL BE SEAMLESSLY WELDED TUBULAR STEP-TYPE BEAM WITH SMOOTH EDGES. CONNECTION PLATE TO HAVE TO FULL VERTICAL FILLET WELD CONNECTION. BEAM CAPACITY PER BEAM PAIR TO BE A MINIMUM OF 4,000 LB. BEAM STEP TO BE A MINIMUM OF 3/4" HORIZONTALLY.
MISCELLANEOUS - INSTALL CROSSBARS/LATERAL TIES BETWEEN BEAMS TO PREVENT BEAM SPREAD AS REQUIRED BY PALLET RACK MANUFACTURER TO ACHIEVE SPECIFIED CAPACITIES. INSTALL ROW SPACERS WHERE SHOWN PER MANUFACTURER REQUIREMENTS.
DECKING - PALLET RACK SHELVES TO HAVE WATERFALL STYLE WIRE MESH DECKING SPANNING FULL SHELF WIDTH. WELDED WIRE TO HAVE A 2-1/2" X 4-1/2" MESH PATTERN AND HAVE STANDARD SUPPORT U-CHANNELS COMPATIBLE WITH SELECTED STEP BEAMS. WIRE DECKING TO BE A MINIMUM 4-GA. AND HAVE A PRE-GALVANIZED FINISH.
ANCHOR BOLTS- MINIMUM OF TWO (2) 1/2" DIA. SS CONCRETE EXPANSION ANCHOR PER COLUMN FOOTPAD WITH MIN 3 1/2" EMBED.
FINISHING:
ALL STRUCTURAL STEEL FRAMING SHALL BE SHOP PREPARED AND PAINTED WITH A POWDER COAT FINISH. PAINT COLOR TO BE APPROVED BY THE OWNER.



DEMOLITION PLAN



MODIFICATION PLAN

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



REV	DATE	DESCRIPTION	BY
0	10/2014	ISSUED FOR BID	JS

Issue Certification
Bilgin Erel, P.E.
Florida P.E. No. 34053
e/T Engineering Technologies, Inc.
Certificate of Authorization No. 8414
3551 W. Lake Mary Blvd, Suite 210
Lake Mary, FL 32746

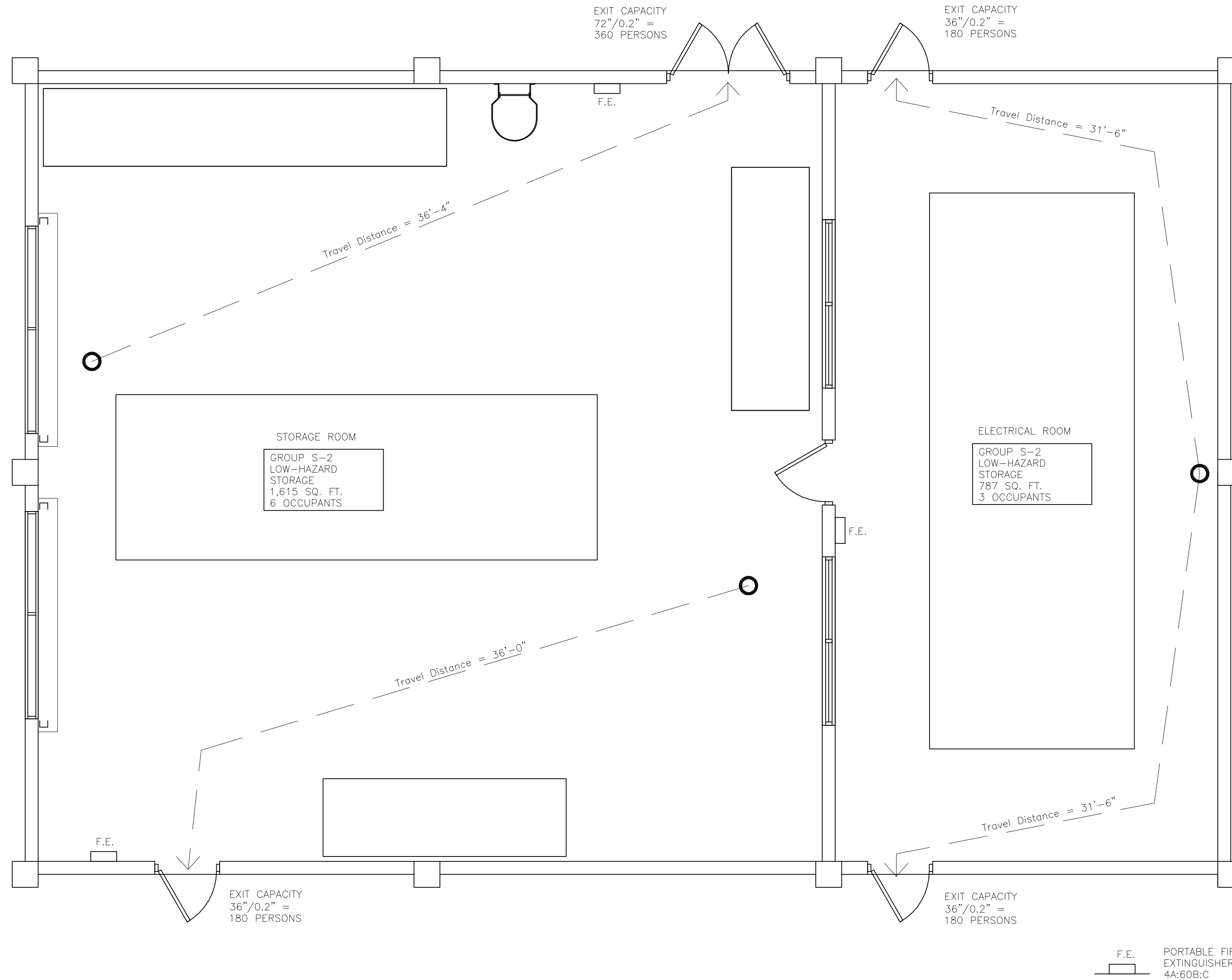
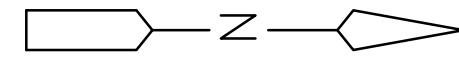
Designed JS
Drawn JS
Checked DNN
Reviewed LRL
Approved BE
Date 10/2014

ORANGE COUNTY UTILITIES
EASTERN WATER RECLAMATION FACILITY
STRUCTURAL
GENERATOR BUILDING PLAN AND NOTES

PROJECT NO.: 110016	
SCALE: NOTED	REVISION: 0
DRAWING NO.: S02	SHEET NO.: 09 OF 16



Parent Sheet Set: 110016_EWRF_GENERAL_UTILITY_COMPANY_PROJECTS\110016_ORANGE_COUNTY_UTILITIES_EWRF_GEN_BLDG_CONVERSION\DESIGN\DRAWINGS\FINAL\DESIGN_09_S03.DWG



LIFE SAFETY PLAN
PLAN
1/4"=1'-0"

NOTE: SEE ELECTRICAL PLANS FOR EXIT LIGHTS AND EMERGENCY LIGHTS

APPLICABLE CODE REQUIREMENTS

		GROUP S-2 STORAGE (STORAGE ROOM & ELECTRICAL ROOM)	
		FLORIDA BUILDING CODE 2010	FLORIDA FIRE PREVENTION CODE 2012 - NFPA 101, L.S.C.
BUILDING	CLASSIFICATION OF OCCUPANCY	GROUP S-2 - LOW-HAZARD STORAGE (311.3)	STORAGE, ORDINARY HAZARD (CHAPTER 42) (6.2.2.3)
	MINIMUM TYPE OF CONSTRUCTION	TYPE II-B (TABLE 503)	NO REQUIREMENT (42.1.6)
	MAXIMUM AREA PER FLOOR	26,000 SQ. FT. PER STORY (TABLE 503)	N/A
	MAXIMUM HEIGHT	3 STORIES (TABLE 503)	N/A
	DETAILED CONSTRUCTION REQUIREMENTS - TABLE 601 FOR TYPE II-B		N/A
	REQUIRED FIRE RESISTANCE RATINGS OF VARIOUS MEMBERS		
		STRUCTURAL FRAME	0 HOURS
		EXTERIOR BEARING WALLS	0 HOURS
		EXTERIOR NON-BEARING WALLS	0 HOURS
		INTERIOR NON-BEARING WALLS	0 HOURS
		FLOORS	0 HOURS
		ROOF	0 HOURS
OCCUPANCY SEPARATION		NOT REQUIRED (TABLE 508.4)	NONE (6.1.14.1.3(2))
EGRESS	MINIMUM OCCUPANT LOAD	1/300 GROSS SQ. FT. (1004.1) STORAGE	MAXIMUM NUMBER PROBABLE (42.1.7)
	MINIMUM NUMBER OF EXITS	ONE (TABLE 1021.2) LESS THAN 29 OCCUPANTS	ONE (7.4.1.1, 42.2.4.1(2))
	MAXIMUM TRAVEL DISTANCE	200 FEET (TABLE 1016.1)	200 FEET (TABLE 42.2.6)
	MAXIMUM DEAD END	N/A (1018.4)	N/A
	MAXIMUM COMMON PATH OF TRAVEL	100 FEET (1014.3)	N/A
	EGRESS WIDTH PER PERSON LEVEL STAIRS	(SECTION 1005.1) 0.2" / PERSON N/A	(TABLE 7.3.3.1) 0.2" / PERSON N/A
	MINIMUM EXIT DOOR WIDTH	32" (1008.1.1)	32" (7.2.1.2.4)
	CORRIDOR RATING	N/A	N/A
FIRE PROTECTION	FIRE ALARM	NOT REQUIRED (907)	NOT REQUIRED (42.3.4.1.2)
	FIRE SPRINKLERS	NOT REQUIRED (SECTION 903)	NOT REQUIRED (42.3.5)
	STANDPIPES	NOT REQUIRED (SECTION 905)	NO MENTION
	CLASSIFICATION OF HAZARD OF CONTENTS	N/A	ORDINARY HAZARD (42.15, 6.2.2.3)

SUMMARY OF DESIGN REQUIREMENTS:

- BUILDING TO BE CLASSIFIED LOW-HAZARD STORAGE. NO OCCUPANCY SEPARATION IS REQUIRED BETWEEN THE TWO (2) NONSEPARATED OCCUPANCIES, AS PER SECTION 508.3.3.
- BUILDING TO BE MINIMUM TYPE II-B CONSTRUCTION (FBC, TABLE 503).
- THE BUILDING WILL NOT HAVE FIRE SPRINKLERS.



REV	DATE	DESCRIPTION	BY
0	10/2014	ISSUED FOR BID	JS

Issue Certification
Bilgin Erel, P.E.
Florida P.E. No. 34053
e/T Engineering Technologies, Inc.
Certificate of Authorization No. 8414
3551 W. Lake Mary Blvd, Suite 210
Lake Mary, FL 32746

Designed JS
Drawn JS
Checked DNN
Reviewed LRL
Approved BE
Date 10/2014

ORANGE COUNTY UTILITIES
EASTERN WATER RECLAMATION FACILITY
STRUCTURAL
CODE REVIEW AND LIFE SAFETY

PROJECT NO.: 110016	
SCALE: NOTED	REVISION: 0
DRAWING NO. S03	SHEET NO.: 10 OF 16



Parent: Sheet: 110016_EWRP_GENERAL_SYMBOLS_LAYOUT_VENUE_DRAWING L. LUPO Rev on: 10/29/2014 3:04 PM Individual File Path: \\REISS\01\SHARE_COMPANY_PROJECTS\110016_ORANGE_COUNTY_UTILITIES_EWRP_GEN_BLDG_CONFESION_DESIGN_DRAWINGS\FINAL\DESIGN\11 E01.DWG

PLAN SYMBOLS	SINGLE LINE DIAGRAM SYMBOLS	CONTROL DIAGRAM SYMBOLS	ABBREVIATIONS	NOTES
HOME RUN TO PANELBOARD. NO. OF ARROWS INDICATE NO. OF CIRCUITS, HASH MARKS INDICATE NO. OF #12 AWG. CONDUCTORS. NO HASH MARKS INDICATE 2#12 CONDUCTORS & 1#12 GND IN 3/4" CONDUIT. CONDUIT CONCEALED IN WALL, IN SLAB ABOVE, OR ABOVE CEILING CONDUIT CONCEALED IN OR BELOW FLOOR OR UNDERGROUND. CONDUIT RUN EXPOSED. RUN PARALLEL OR PERPENDICULAR TO STRUCTURE OR WALL. FLEXIBLE CONDUIT WITH EQUIPMENT CONNECTION. CONCRETE ENCASED DUCTBANK. WALL MOUNTED LIGHTING FIXTURE. FLUORESCENT LIGHTING FIXTURE, CEILING MOUNTED. EXTERIOR LUMINAIRE AND MOUNTING STANDARD. EXISTING EXTERIOR LIGHTING. EMERGENCY BATTERY PACK LIGHTING FIXTURE. JUNCTION BOX N.E.C. SURFACE MOUNTED UNLESS INDICATED OTHERWISE. NEMA 4X STAINLESS STEEL JUNCTION BOX PER N.E.C., FLUSH MOUNTED UNLESS INDICATED OTHERWISE. FLUSH OR SURFACE MOUNTED LIGHTING PANELBOARD. FLUSH OR SURFACE MOUNTED POWER PANELBOARD. DRY TYPE TRANSFORMER. NO. INDICATES KVA RATING. LIQUID FILLED TRANSFORMER, KVA RATING AS SHOWN SINGLE RECEPTACLE, RATING AS SHOWN 20A, 125V, 3W DUPLEX RECEPTACLE IN FLUSH OUTLET BOX, 18" ABOVE FINISHED FLOOR. 20A, 125V, 3W DUPLEX RECEPTACLE IN FLUSH OUTLET BOX, 48" ABOVE FINISHED FLOOR OR 6" ABOVE FINISHED COUNTER AS REQUIRED (AFC) 20A, 125V, 3W DUPLEX RECEPTACLE IN FLUSH, FLOOR MOUNTED OUTLET BOX. 20A, 125V, 3W DUPLEX RECEPTACLE, SURFACE MOUNTED, UNLESS OTHERWISE NOTED. SURFACE MOUNTED GROUND FAULT DUPLEX WEATHERPROOF RECEPTACLE 20A, 125V, 3W - MOUNTED 48" ABOVE FINISHED GRADE, UNLESS OTHERWISE NOTED. 20A, 125V, 3W DOUBLE DUPLEX RECEPTACLE IN FLUSH OUTLET BOX. FLUSH MOUNTED GROUND FAULT DUPLEX RECEPTACLE 20A, 125V, 3W -MOUNTED 48" ABOVE FINISHED FLOOR. DISCONNECT RACK MOUNTED. HANDS/OFF/AUTOMATIC & DISCONNECT RACK MOUNTED WITH JUNCTION BOX MOUNTED BELOW OFF REMOTE SINGLE POLE SWITCH IN FLUSH OUTLET BOX, 48" ABOVE FINISHED FLOOR, UNLESS OTHERWISE NOTED (TYPICAL). SINGLE POLE SWITCH, SURFACE MOUNTED. THREE-WAY SWITCH IN FLUSH OUTLET BOX. FOUR-WAY SWITCH IN FLUSH OUTLET BOX. NON-FUSIBLE DISCONNECT SWITCH, 30A,3P UNLESS OTHERWISE INDICATED. NON-FUSIBLE DISCONNECT SWITCH, 30A,3P UNLESS OTHERWISE INDICATED, WITH REMOTE CONTROL STATION AS REQUIRED BY ELEMENTARY DIAGRAMS OR SPECS. ELECTRIC A.C. MOTOR, NO. INDICATES HORSEPOWER. FUSED DISCONNECT SWITCH(30/20: 30=SWITCH RATING, 20=FUSE RATING) 3 POLE-UNLESS NOTED OTHERWISE. COMBINATION MOTOR STARTER, DISCONNECT SWITCH	FUSE CAPACITOR DRAW-OUT CIRCUIT BREAKER MOLDED CASE CIRCUIT BREAKER TYPICAL SELECTOR SWITCH AND CONTROL. SEE ELEMENTARY DIAGRAMS FOR EXACT TYPE. ELECTRIC A.C. MOTOR, NO. INDICATES HORSEPOWER. SERVICE OR EQUIPMENT GROUND. NON-FUSIBLE DISCONNECT SWITCH, 30A,3P UNLESS OTHERWISE INDICATED. NON-FUSIBLE DISCONNECT SWITCH, 30A,3P UNLESS OTHERWISE INDICATED, WITH REMOTE CONTROL STATION AS REQUIRED BY ELEMENTARY DIAGRAMS OR SPECS. CROUSE HINDS EYSR FITTING CURRENT TRANSFORMERS POTENTIAL TRANSFORMERS.	DUPLEX RECEPTACLE NORMALLY OPEN CONTACT NORMALLY CLOSED CONTACT LIMIT SWITCH, NORMALLY OPEN LIMIT SWITCH, NORMALLY CLOSED PRESSURE SWITCH, NORMALLY OPEN PRESSURE SWITCH, NORMALLY CLOSED FLOAT SWITCH, NORMALLY OPEN FLOAT SWITCH, NORMALLY CLOSED FLOW SWITCH, NORMALLY OPEN FLOW SWITCH, NORMALLY CLOSED TEMPERATURE SWITCH, NORMALLY OPEN TEMPERATURE SWITCH, NORMALLY CLOSED NORMALLY OPEN, TIMED TO CLOSE CONTACT NORMALLY CLOSED, TIMED TO OPEN CONTACT NORMALLY CLOSED, TIMED TO CLOSE CONTACT NORMALLY OPEN, TIMED TO OPEN CONTACT ALARM RELAY ALARM TIMER CONTROL RELAY MOTOR STARTER TIMING RELAY TORQUE SWITCH ALARM INDICATING LIGHT RUN INDICATING LIGHT MOMENTARY CONTACT PUSHBUTTON MOMENTARY BREAK PUSHBUTTON OR RESET EMERGENCY LOCKOUT SWITCH. LOCKABLE IN THE OFF POSITION KEYED SWITCH MAINTAINED CONTACT ON-OFF SWITCH START/STOP(S/S) CONTROL SWITCH MAINTAINED CONTACT FUSE MOLDED CASE CIRCUIT BREAKER CONTROL POWER TRANSFORMER REMOTE TERMINAL BLOCK POINT	<p>A AMPERES AFF ABOVE FINISHED FLOOR AIC AMPS INTERRUPTING CURRENT ATS AUTOMATIC TRANSFER SWITCH BKR BREAKER BLDG BUILDING CKT CIRCUIT CMH CONTROL MANHOLE CPT CONTROL POWER TRANSFORMER CT CURRENT TRANSFORMER DH DATA HIGHWAY DISC DISCONNECT EFF EFFLUENT ELEC ELECTRICAL EM EMERGENCY ENCL ENCLOSURE ESB ENERGY SAVING BALLAST ETM ELAPSED TIME METER EUH ELECTRIC UNIT HEATER EXH EXHAUST EXIST EXISTING FO FIBER OPTIC FVNR FULL VOLTAGE NON-REVERSING GFR GROUND FAULT RECEPTACLE GFI GROUND FAULT INTERRUPTER GND GROUND GRS GALVANIZED RIGID STEEL HOA HAND-OFF-AUTOMATIC HOR HAND-OFF-REMOTE HP HORSEPOWER HPS HIGH PRESSURE SODIUM HWY HIGHWAY KVA KILO VOLT-AMPERES KW KILOWATT LA LIGHTNING ARRESTOR LCP LOCAL CONTROL PANEL LED LIGHT EMITTING DIODE LF LINEAR FEET LTG LIGHTING LOS LOCK OUT SWITCH MAX MAXIMUM MCB MAIN CIRCUIT BREAKER MDP MAIN DISTRIBUTION PANEL MFR MANUFACTURER MIN MINIMUM MLO MAIN LUGS ONLY MOV MOTORIZED VALVE MTD MOUNTED NEC NATIONAL ELECTRICAL CODE N NEUTRAL NTS NOT TO SCALE OH OVERHEAD P POLE PCP PROCESS CONTROL PANEL PM PHASE MONITOR PMH POWER MANHOLE PNL PANEL PS PUMP STATION PVC POLYVINYL CHLORIDE RTU REMOTE TELEMETRY UNIT SC SURGE CAPACITOR SCADA SUPERVISORY CONTROL & DATA ACQUISITION SH SHIELDED SLD SINGLE LINE DIAGRAM SPD SURGE PROTECTIVE DEVICE SS STAINLESS STEEL STR STARTER SW SWITCH TBR TO BE REMOVED TC TERMINATION CABINET TYP TYPICAL UG UNDERGROUND UPS UNINTERRUPTABLE POWER SUPPLY V VOLT VFD VARIABLE FREQUENCY DRIVE W WATT w/ WITH WP WEATHERPROOF XFMR TRANSFORMER ø PHASE</p>	<ol style="list-style-type: none"> 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, THE FLORIDA BUILDING CODE 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 ELECTRICAL 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. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CUTTING AND PATCHING REQUIRED OF HIS WORK. ELECTRICAL CONTRACTOR SHALL LABEL ALL PANELS W/ TYPE WRITTEN DIRECTORIES (NEW & EXISTING). ALL ELECTRICAL WIRING SHALL BE THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR. REFER TO THE MECHANICAL DRAWINGS AND THE APPROVED MANUFACTURER'S SHOP DRAWINGS FOR THE EXACT LOCATION OF ALL EQUIPMENT. NON-SHADED TEXT DENOTES NEW EQUIPMENT, STRUCTURES AND WORK. SHADED/SKANTED TEXT DENOTES EXISTING EQUIPMENT OR STRUCTURES. SLANTED TEXT (NOT SHADED) DENOTES FUTURE EQUIPMENT, STRUCTURES AND WORK.

EDA
Electrical Design Associates
4763 SOUTH CONWAY ROAD, STE. E
ORLANDO, FLORIDA 32812
PHONE: (407) 745-5604
FAX: (407) 745-5603
C.O.A. No. 8079
LILLIAN M. REYES, P.E.
Florida P.E. No. 50780



0	10/2014	ISSUED FOR BID	LMR
REV	DATE	DESCRIPTION	BY

Issue Certification
Lillian M. Reyes, P.E.
Florida P.E. No. 50780
Electrical Design Associates
Certificate of Authorization No. 8079
4763 South Conway Road, Suite E
Orlando, FL 32812

Designed DD
Drawn RRM
Checked LMR
Reviewed DD
Approved LMR

LINE IS 1" AT FULL SIZE

Date 10/2014

ORANGE COUNTY UTILITIES
EASTERN WATER RECLAMATION FACILITY

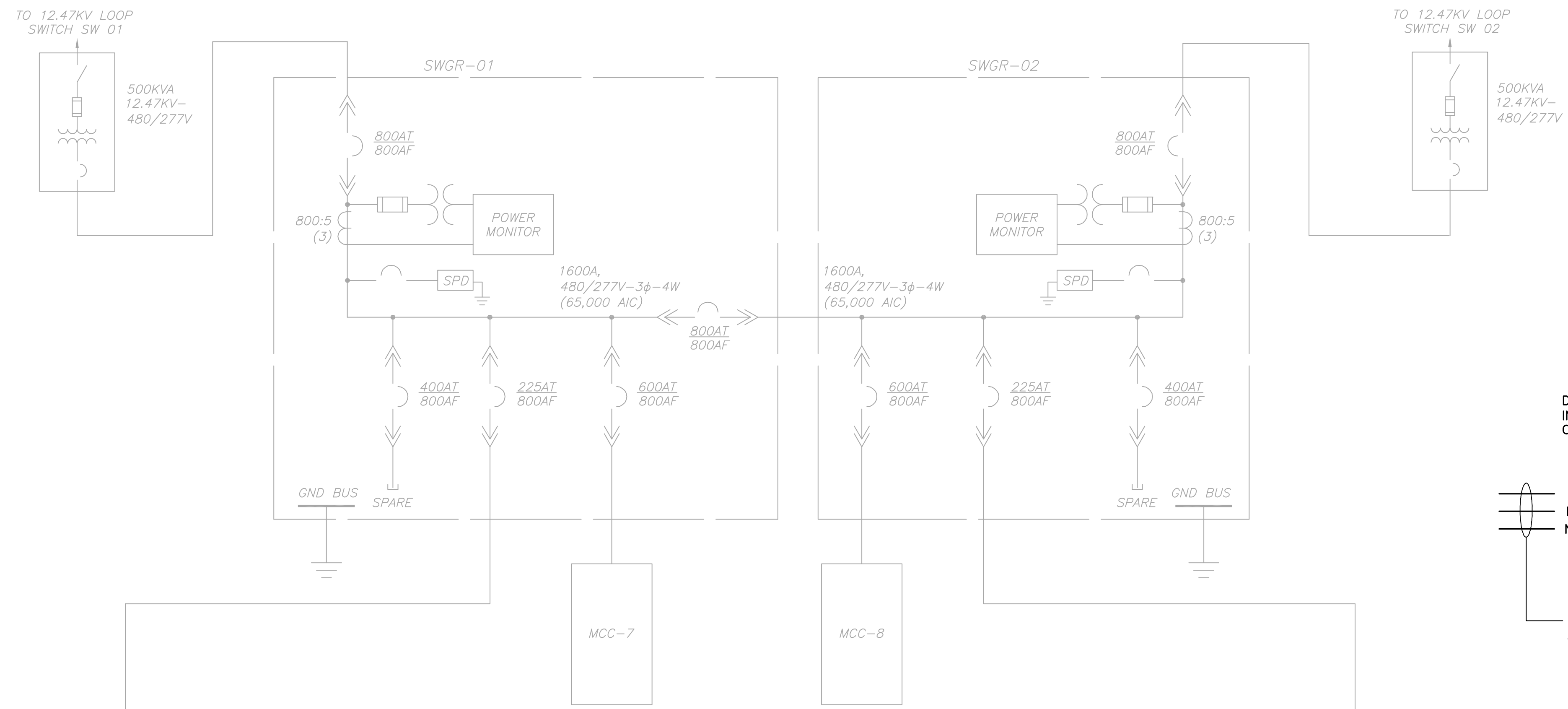
ELECTRICAL

ELECTRICAL SYMBOLS, NOTES AND ABBREVIATIONS

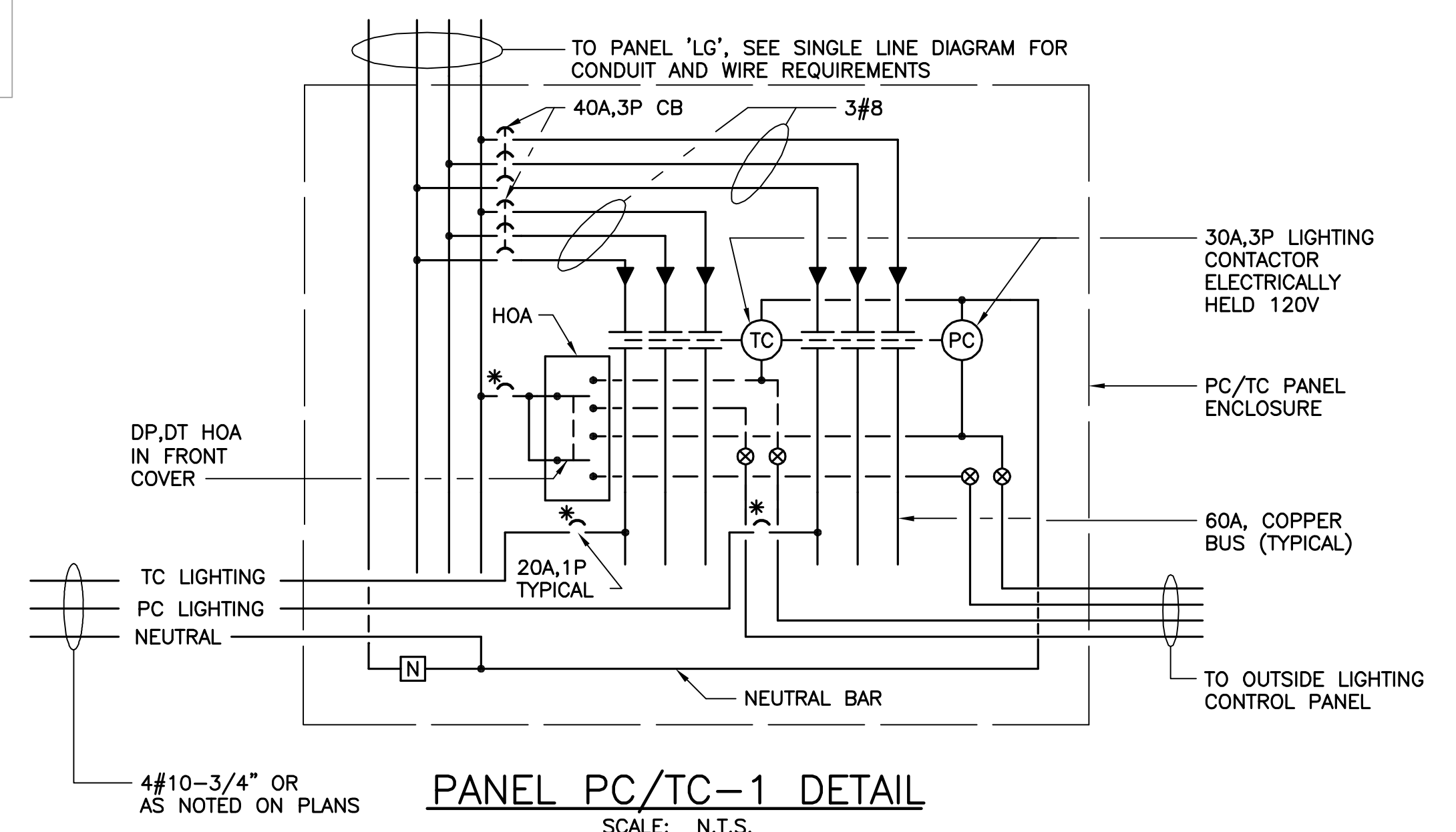
PROJECT NO.:	110016
SCALE:	NOTED
DRAWING NO.:	E01
REVISION:	0
SHEET NO.:	11 OF 16

RE
REISS ENGINEERING, INC.
1016 SPRING VILLAS PT
WINTER SPRINGS, FL 32708
(407) 679-5358

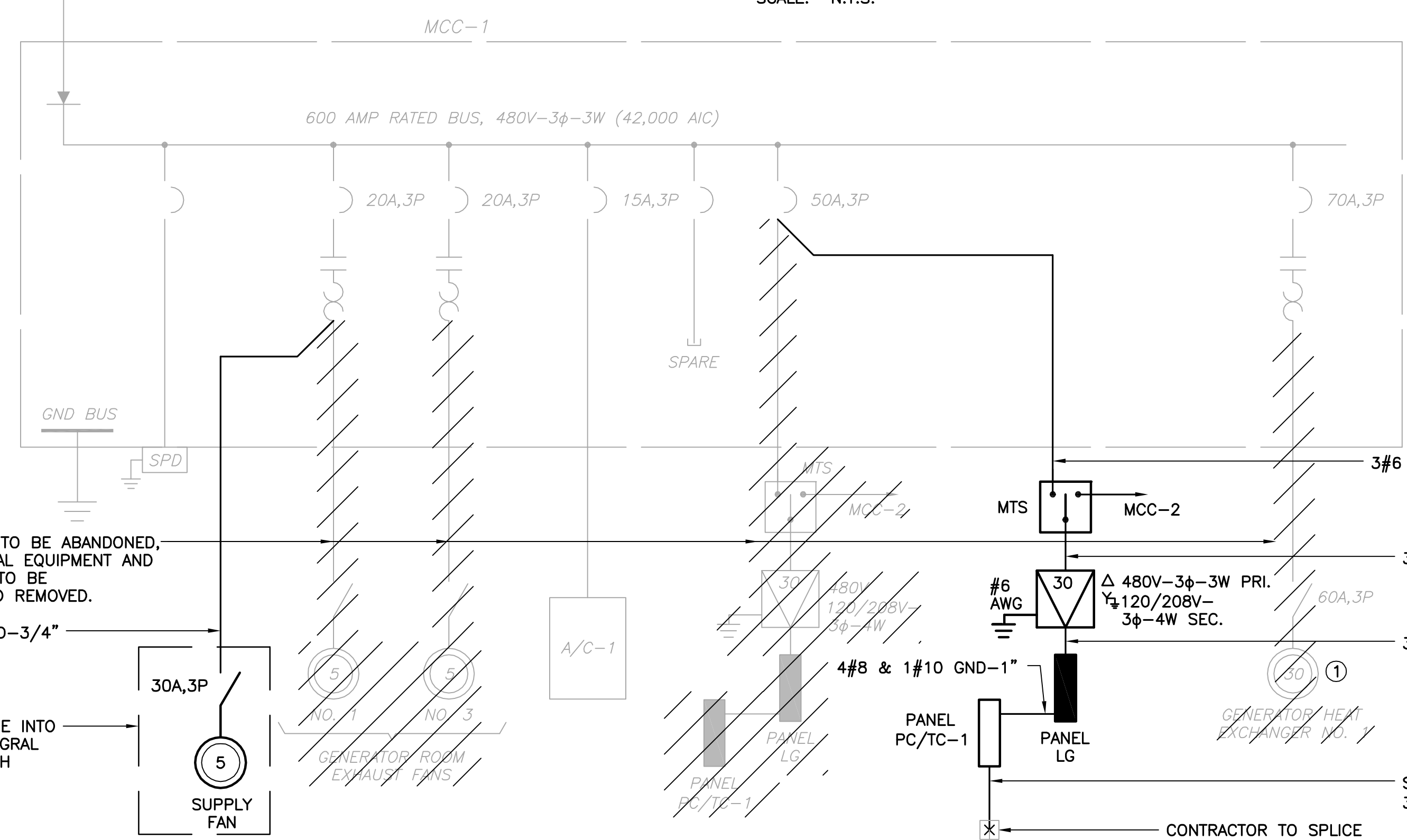
Parent Sheet Set: 110016_EWRP_GENERAL\ORANGE\COMPANY PROJECTS\110016_ORANGE COUNTY UTILITIES EWRP GEN BLDG CONVERSION DESIGN\DRAWINGS\FINAL\DESIGN\12 E02.DWG
 Individual File Path: \\REISS\ORANGE\COMPANY PROJECTS\110016_ORANGE COUNTY UTILITIES EWRP GEN BLDG CONVERSION DESIGN\DRAWINGS\FINAL\DESIGN\12 E02.DWG
 Rev on: 7/7/2014 4:56 PM
 LUPLO



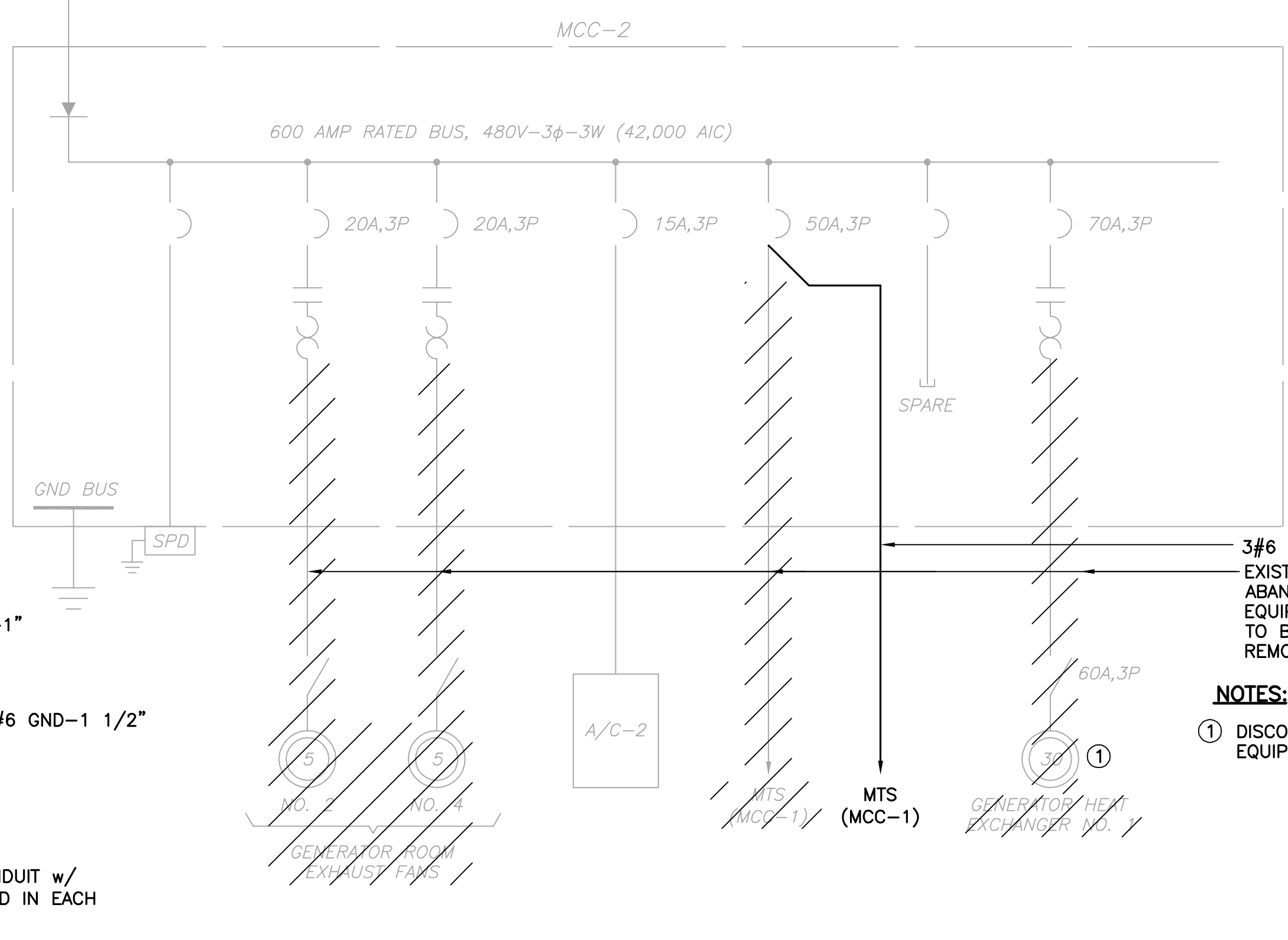
**SWGR-01 & SWGR-02
SINGLE LINE DIAGRAM**
SCALE: N.T.S.



PANEL PC/TC-1 DETAIL
SCALE: N.T.S.



MCC-1 SINGLE LINE DIAGRAM
SCALE: N.T.S.



MCC-2 SINGLE LINE DIAGRAM
SCALE: N.T.S.

NOTES:
 ① DISCONNECT AND REMOVE CONDUIT AND WIRE. EQUIPMENT PREVIOUSLY REMOVED.

EXISTING CONDUIT TO BE ABANDONED, EXISTING ELECTRICAL EQUIPMENT AND ASSOCIATED WIRE TO BE DISCONNECTED AND REMOVED.

CONTRACTOR TO TIE INTO LINE SIDE OF INTEGRAL DISCONNECT SWITCH

CONTRACTOR TO SPLICE INTO EXISTING LOADS IN EXISTING J-BOX



REV	DATE	DESCRIPTION	BY
0	10/2014	ISSUED FOR BID	LMR

Issue Certification
 Lillian M. Reyes, P.E.
 Florida P.E. No. 50780
 Electrical Design Associates
 Certificate of Authorization No. 8079
 4763 South Conway Road, Suite E
 Orlando, FL 32812

Designed DD
 Drawn RRM
 Checked LMR
 Reviewed DD
 Approved LMR
 Date 10/2014

ORANGE COUNTY UTILITIES
 EASTERN WATER RECLAMATION FACILITY

ELECTRICAL
 SINGLE LINE DIAGRAMS

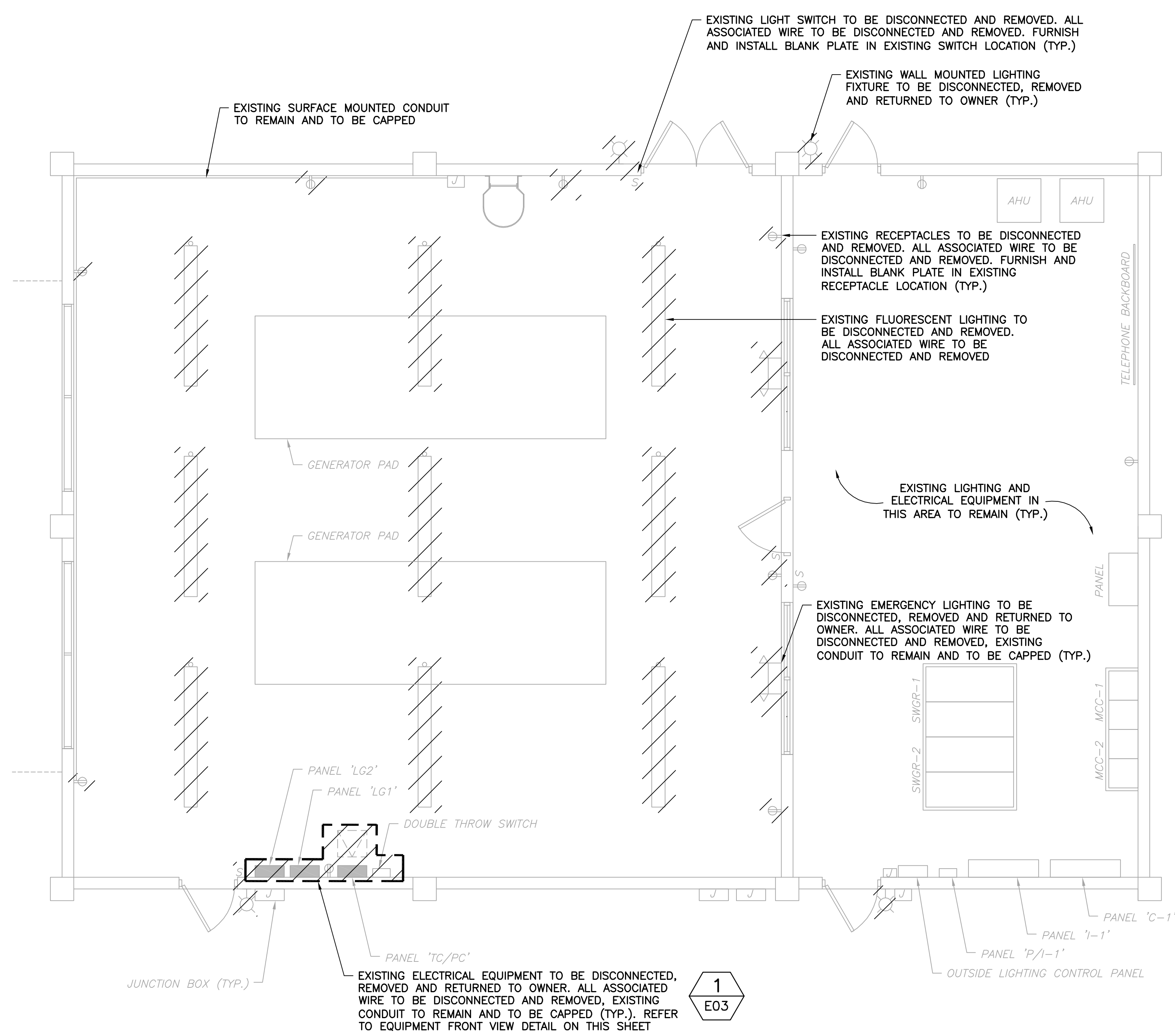
PROJECT NO.: 110016	
SCALE: NOTED	REVISION: 0
DRAWING NO. E02	SHEET NO.: 12 OF 16



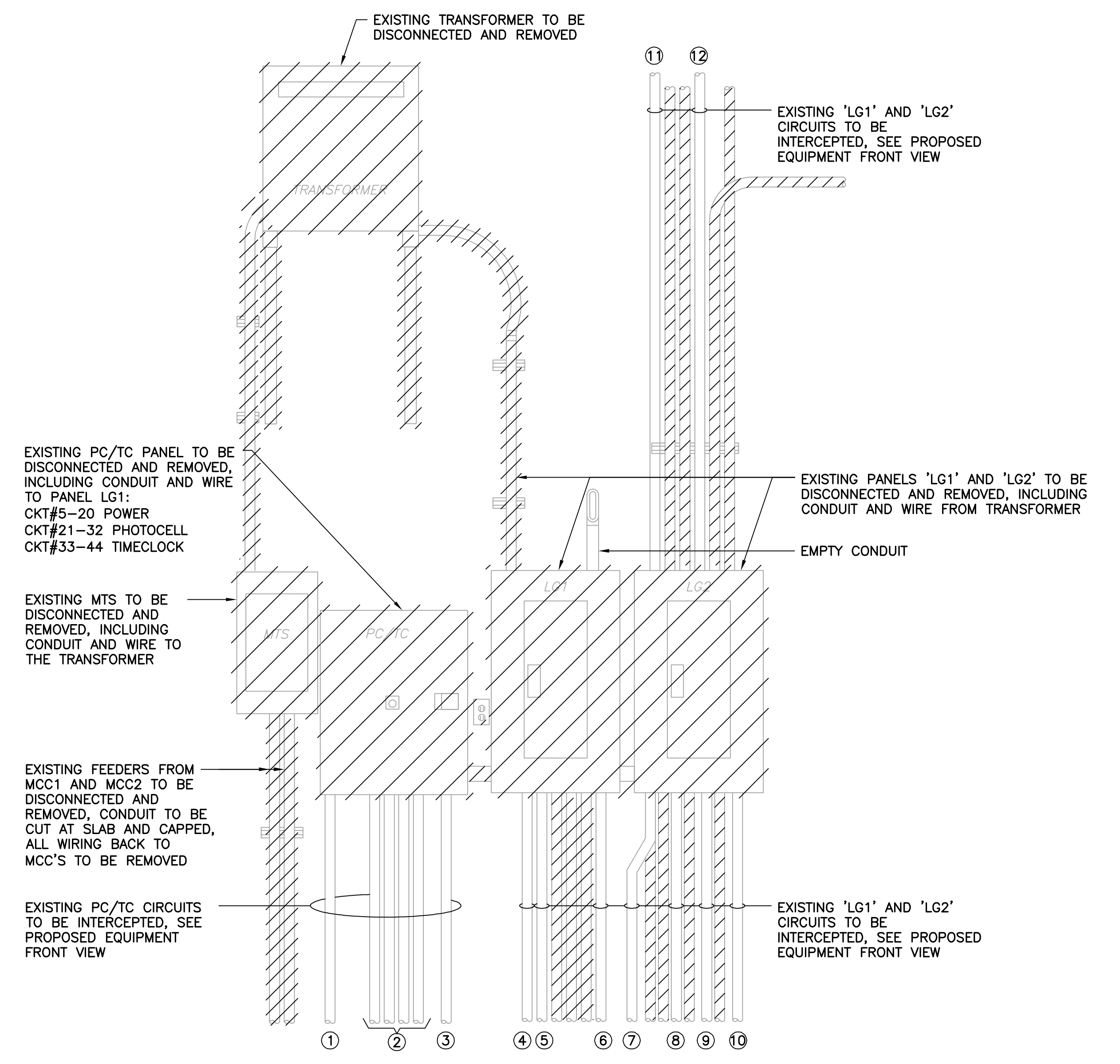
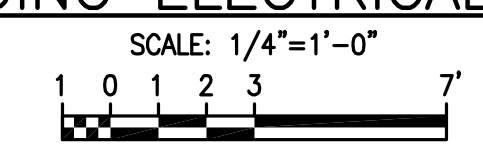
REISS ENGINEERING, INC.
 1016 SPRING VILLAS PT
 WINTER SPRINGS, FL 32708
 (407) 679-5358

EDA
 Electrical Design Associates
 4763 SOUTH CONWAY ROAD, STE. E
 ORLANDO, FLORIDA 32812
 PHONE (407) 745-5604
 FAX (407) 745-5603
 C.O.A. No. 8079
 LILLIAN M. REYES, P.E.
 Florida P.E. No. 50780

Parent Sheet Set: 110016_EWRP_GEN BLDG CONVERSION DESIGN DRAWINGS\FINALDESIGN\13 E03.DWG Individual File Path: \\REISS\SHARE\COMPANY PROJECTS\110016_ORANGE COUNTY UTILITIES EWRP_GEN BLDG CONVERSION DESIGN DRAWINGS\FINALDESIGN\13 E03.DWG Rev on: 12/16/2012 10:42:AM LUPU



GENERATOR BUILDING ELECTRICAL DEMOLITION PLAN



NOTES:

- ① EXISTING PC CKT#29.
- ② LB'S TO EXTERIOR WALL, EXISTING TC/PC CKTS#7,22-28,31
- ③ CONTROLS, EXISTING TC/PC CKT#30.
- ④ MCC ROOM RECEPTACLES, EXISTING LG1 CKTS#1,3,5.
- ⑤ MCC ROOM LIGHTING, GENERATOR ROOM EAST LIGHTING & GENERATOR ROOM EAST LIGHTING, EXISTING LG1 CKT#2,4,6.
- ⑥ LEAK SENSOR, EXISTING LG1 CKT#14,16.
- ⑦ MANHOLE RECEPTACLES & BATTERY RACK, EXISTING LG2 CKT#2,4,6.
- ⑧ CONTROLS, EXISTING LG2 CKT#3.
- ⑨ AIR HANDLER UNITS, EXISTING LG2 CKT#10,12,14,16.
- ⑩ EXISTING LG2 CKT#12
- ⑪ FPL UPS, EXISTING LG2 CKT#22.
- ⑫ A/C RELAYS, EXISTING LG2 CKT#13,15,17.

EXISTING ELECTRICAL EQUIPMENT FRONT VIEW
SCALE: N.T.S.



REV	DATE	DESCRIPTION	BY
0	10/2014	ISSUED FOR BID	LMR

Issue Certification
Lillian M. Reyes, P.E.
Florida P.E. No. 50780
Electrical Design Associates
Certificate of Authorization No. 8079
4763 South Conway Road, Suite E
Orlando, FL 32812

Designed_DD
Drawn_RRM
Checked_LMR
Reviewed_DD
Approved_LMR
Date_10/2014

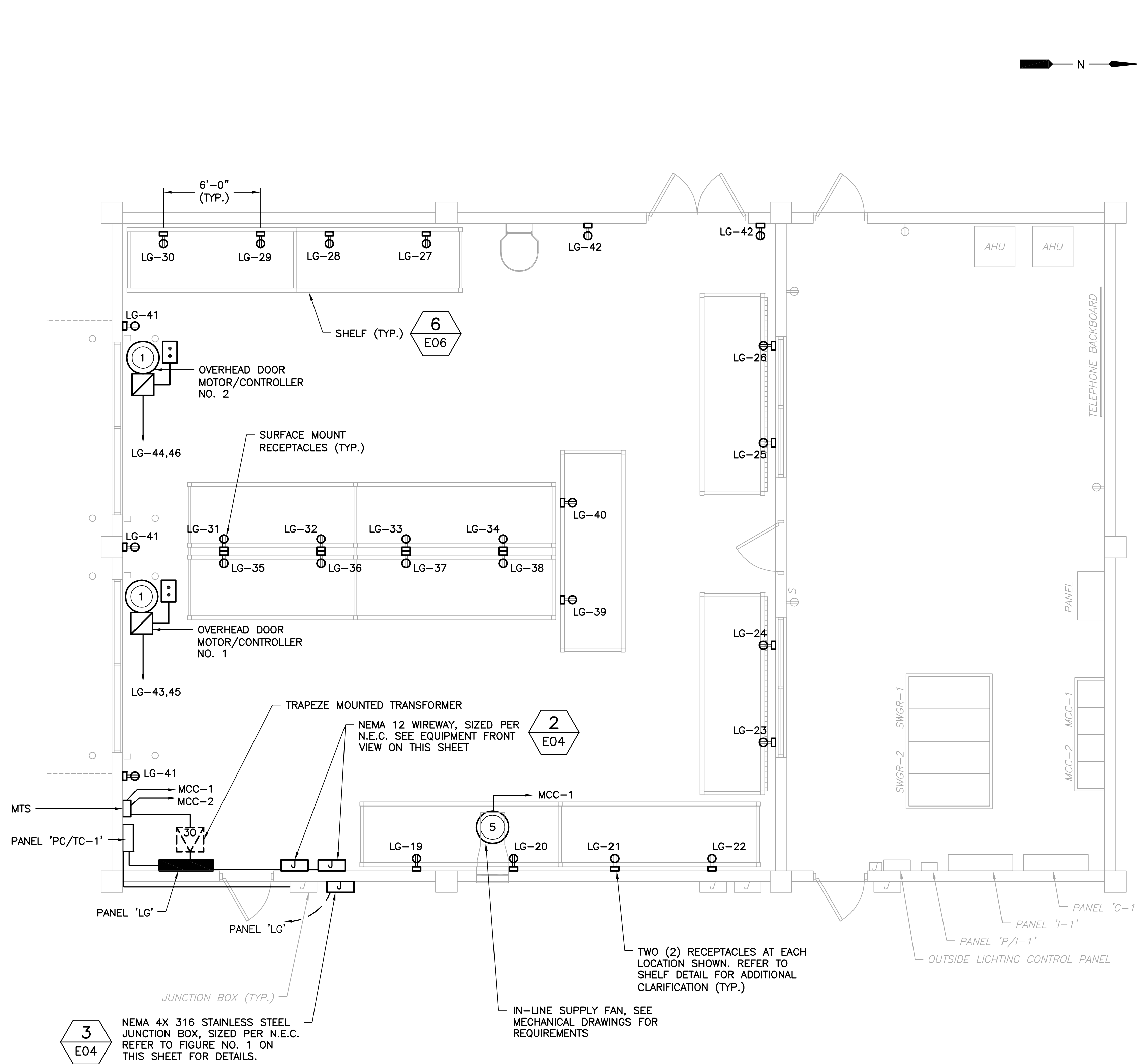
ORANGE COUNTY UTILITIES
EASTERN WATER RECLAMATION FACILITY
ELECTRICAL
GENERATOR BUILDING ELECTRICAL DEMOLITION PLAN

PROJECT NO.:	110016
SCALE:	NOTED
DRAWING NO.:	E03
REVISION:	0
SHEET NO.:	13 OF 16

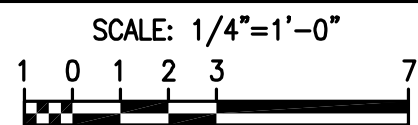
EDA
Electrical Design Associates
4763 SOUTH CONWAY ROAD, STE. E
ORLANDO, FLORIDA 32812
PHONE (407) 745-5604
FAX (407) 745-5603
C.O.A. No. 8079
LILLIAN M. REYES, P.E.
Florida P.E. No. 50780

RE
REISS ENGINEERING, INC.
1016 SPRING VILLAS PT
WINTER SPRINGS, FL 32708
(407) 679-5358

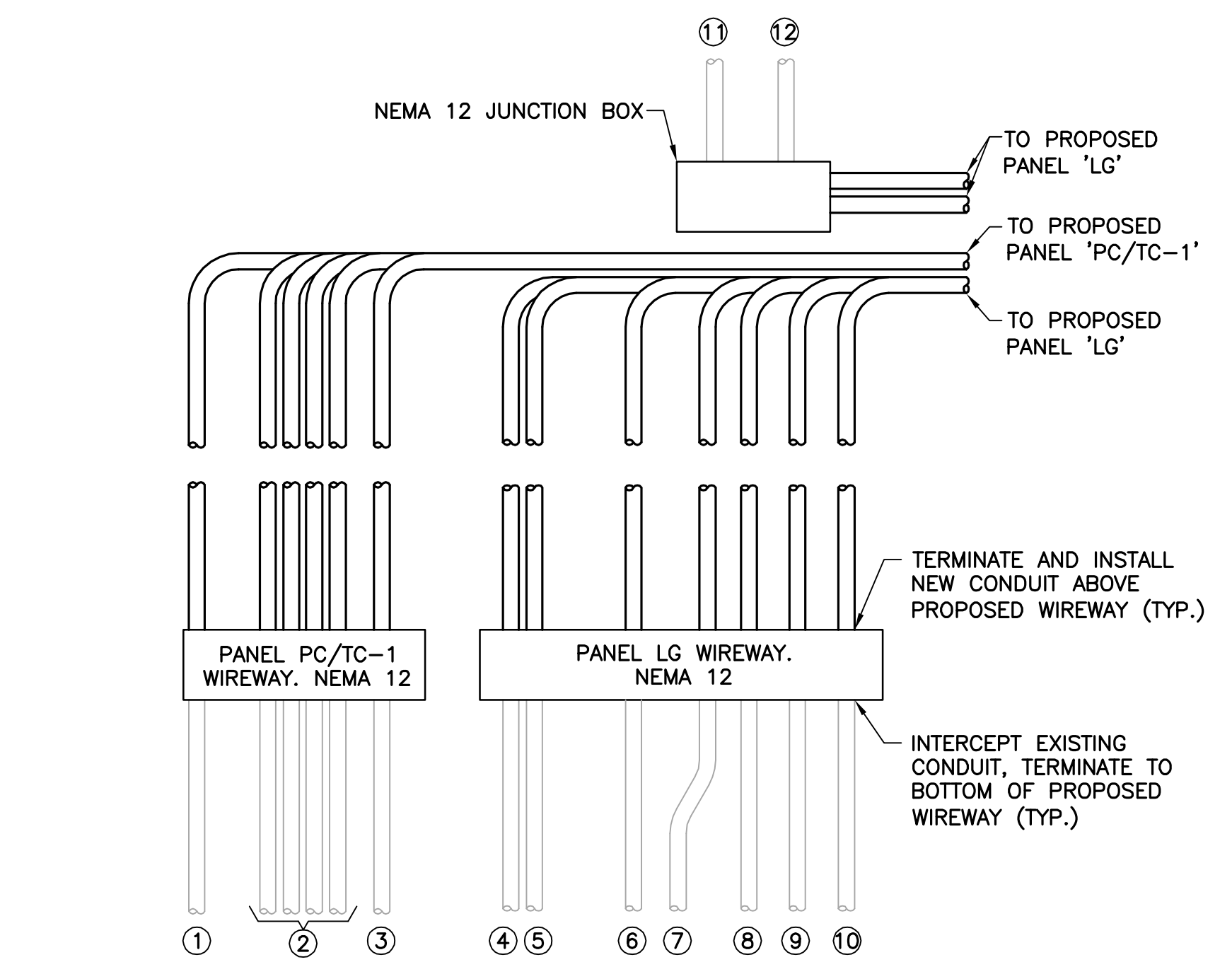
Parent Sheet Set: 110016_EWR6_EWRF_GEN_BLDG_CONVERSION_DRAWINGS_FINALDESIGN\14_E04.DWG



GENERATOR BUILDING PROPOSED ELECTRICAL PLAN

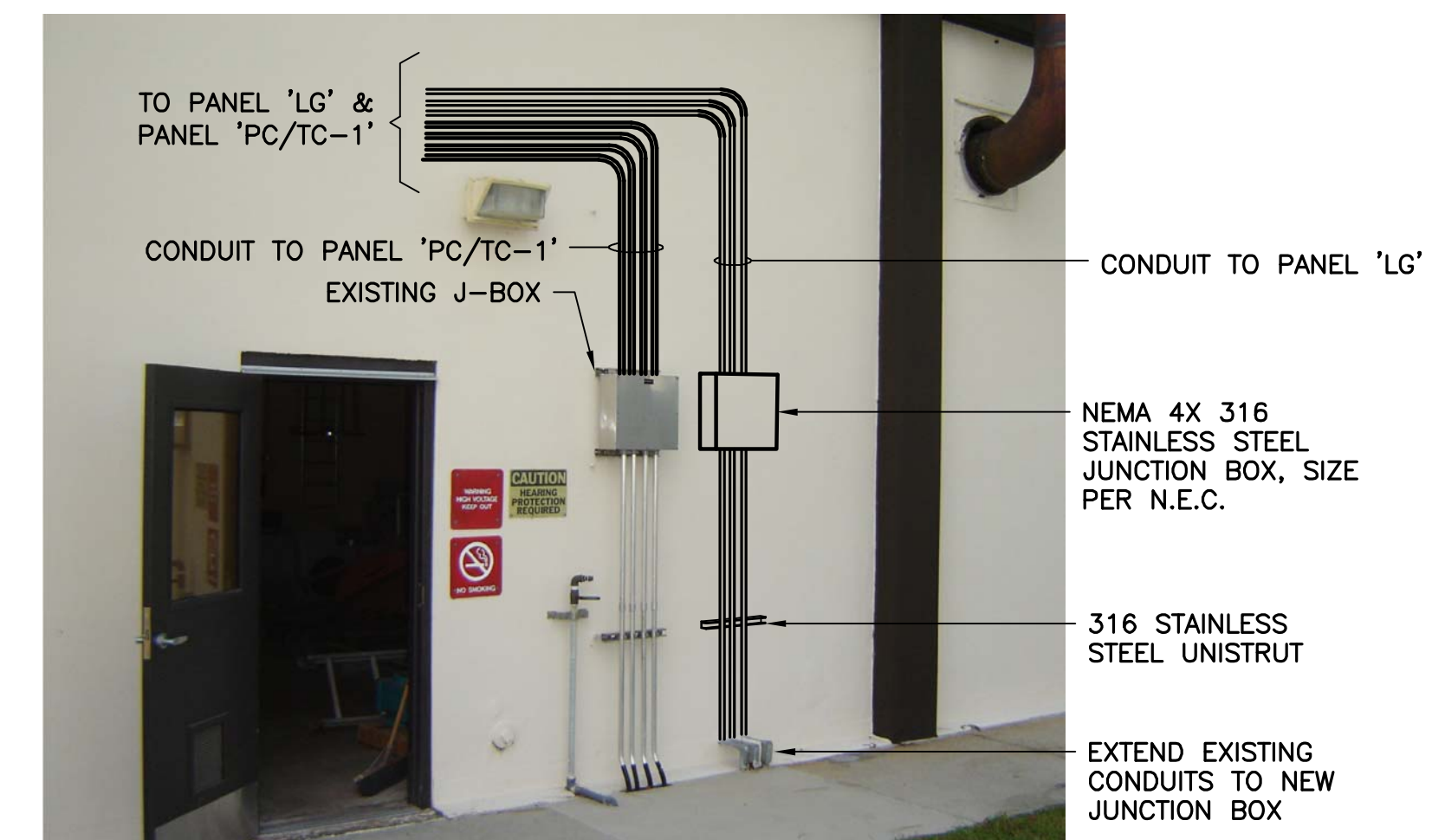


- NOTES:**
 ① REFER TO SINGLE LINE DIAGRAM AND PANEL SCHEDULE FOR CONDUIT AND WIRE REQUIREMENTS.



- NOTES:**
- ① EXISTING PC CKT#29.
 - ② LB'S TO EXTERIOR WALL, EXISTING TC/PC CKTS#7,22-28,31
 - ③ CONTROLS, EXISTING TC/PC CKT#30.
 - ④ MCC ROOM RECEPTACLES, EXISTING LG1 CKTS#1,3,5.
 - ⑤ MCC ROOM LIGHTING, GENERATOR ROOM EAST LIGHTING & GENERATOR ROOM EAST LIGHTING, EXISTING LG1 CKT#2,4,6.
 - ⑥ LEAK SENSOR, EXISTING LG1 CKT#14,16.
 - ⑦ MANHOLE RECEPTACLES & BATTERY RACK, EXISTING LG2 CKT#2,4,6.
 - ⑧ CONTROLS, EXISTING LG2 CKT#3.
 - ⑨ AIR HANDLER UNITS, EXISTING LG2 CKT#10,12,14,16.
 - ⑩ EXISTING LG2 CKT#12
 - ⑪ FPL UPS, EXISTING LG2 CKT#22.
 - ⑫ A/C RELAYS, EXISTING LG2 CKT#13,15,17.

2 PROPOSED ELECTRICAL EQUIPMENT FRONT VIEW
SCALE: N.T.S.



3 FIGURE NO. 1
SCALE: N.T.S.

EDA
 Electrical Design Associates
 4763 SOUTH CONWAY ROAD, STE. E
 ORLANDO, FLORIDA 32812
 PHONE: (407) 745-5604
 FAX: (407) 745-5603
 C.O.A. No. 8079
 LILLIAN M. REYES, P.E.
 Florida P.E. No. 50780



REV	DATE	DESCRIPTION	BY
0	10/2014	ISSUED FOR BID	LMR

Issue Certification
 Lillian M. Reyes, P.E.
 Florida P.E. No. 50780
 Electrical Design Associates
 Certificate of Authorization No. 8079
 4763 South Conway Road, Suite E
 Orlando, FL 32812

Designed_DD
 Drawn_RRM
 Checked_LMR
 Reviewed_DD
 Approved_LMR
 Date_10/2014

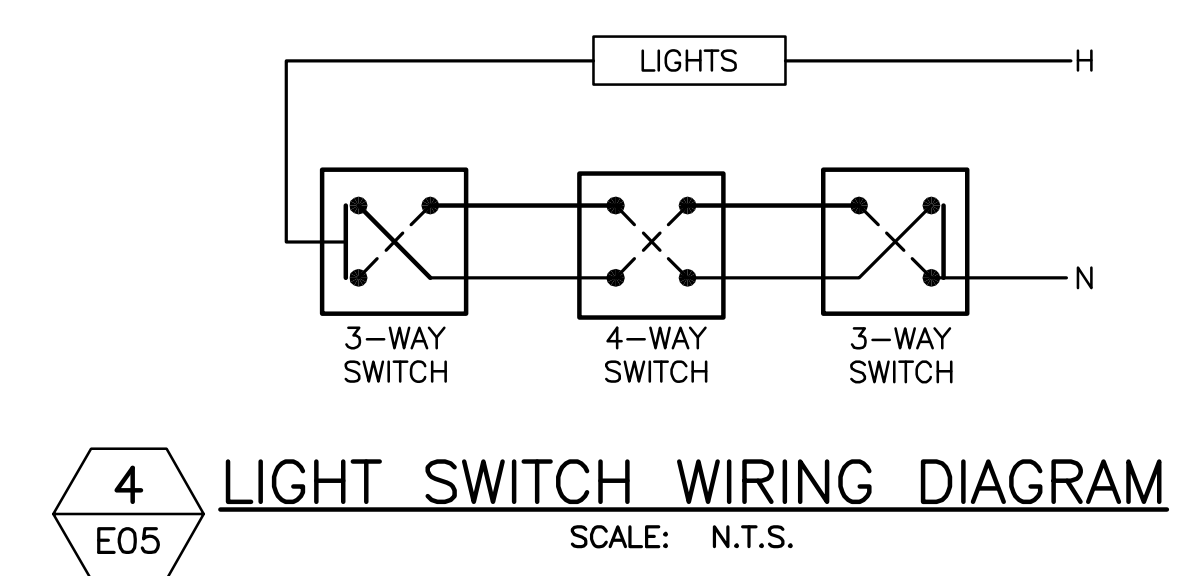
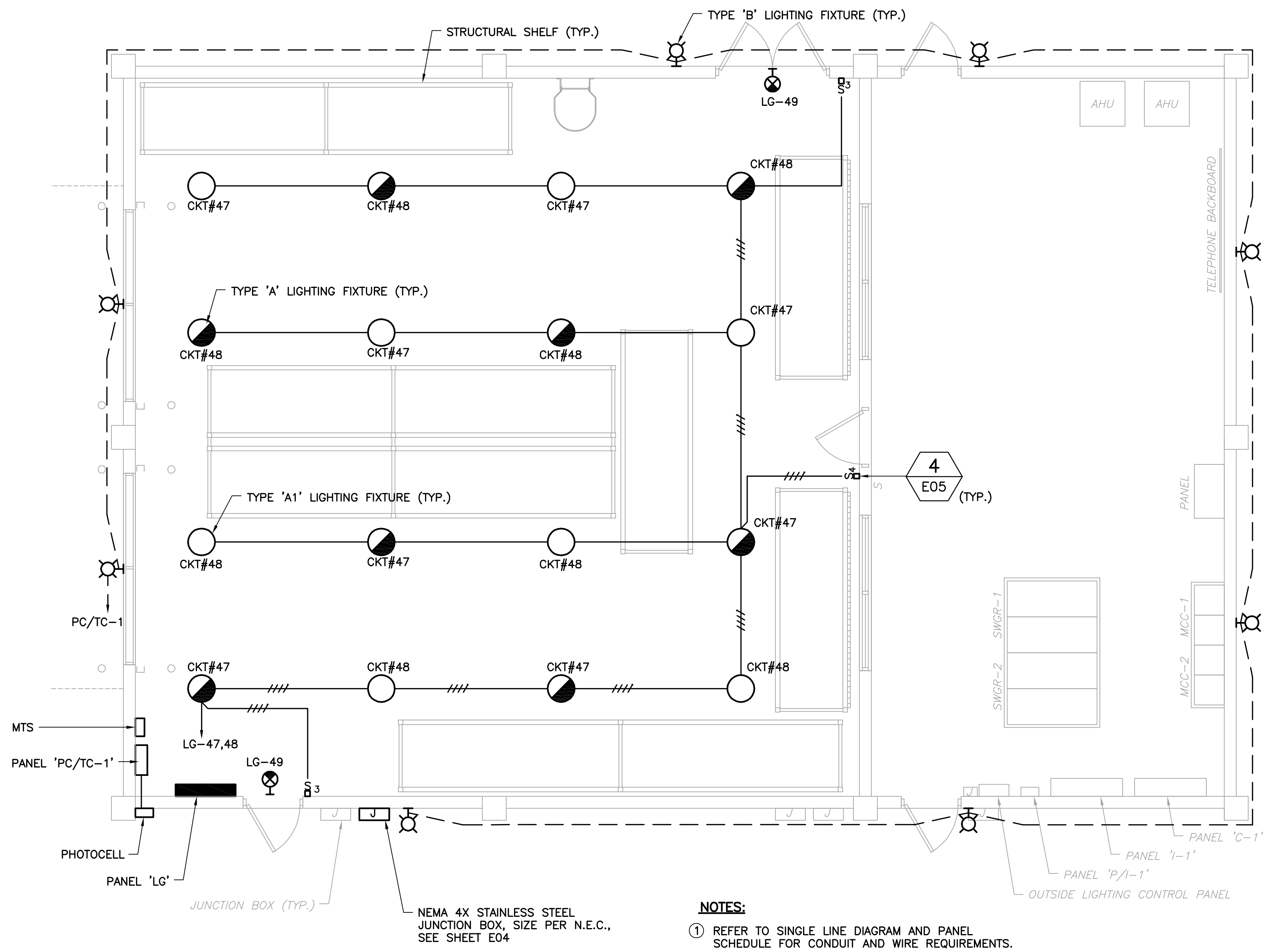
ORANGE COUNTY UTILITIES
 EASTERN WATER RECLAMATION FACILITY

GENERATOR BUILDING PROPOSED ELECTRICAL PLAN

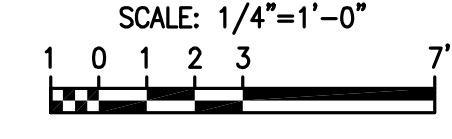
PROJECT NO.: 110016	
SCALE: NOTED	REVISION: 0
DRAWING NO. E04	SHEET NO.: 14 OF 16

RE
 REISS ENGINEERING, INC.
 1016 SPRING VILLAS PT
 WINTER SPRINGS, FL 32708
 (407) 679-5358

Parent Sheet Set: 110016_EWRP_GENERATOR BUILDING PROPOSED LIGHTING PLAN LUPLO Rev on: 12/16/2012 10:42:AM Individual File Path: \\REIFS01\SHARE\COMPANY PROJECTS\110016_ORANGE COUNTY UTILITIES EWRP GEN BLDG CONFERSION DESIGN\DRAWINGS\FINAL DESIGN\15 E05.DWG



GENERATOR BUILDING PROPOSED LIGHTING PLAN



REV	DATE	DESCRIPTION	BY
0	10/2014	ISSUED FOR BID	LMR

Issue Certification
 Lillian M. Reyes, P.E.
 Florida P.E. No. 50780
 Electrical Design Associates
 Certificate of Authorization No. 8079
 4763 South Conway Road, Suite E
 Orlando, FL 32812

Designed DD
 Drawn RRM
 Checked LMR
 Reviewed DD
 Approved LMR
 Date 10/2014

ORANGE COUNTY UTILITIES
 EASTERN WATER RECLAMATION FACILITY
 ELECTRICAL
 GENERATOR BUILDING PROPOSED LIGHTING PLAN

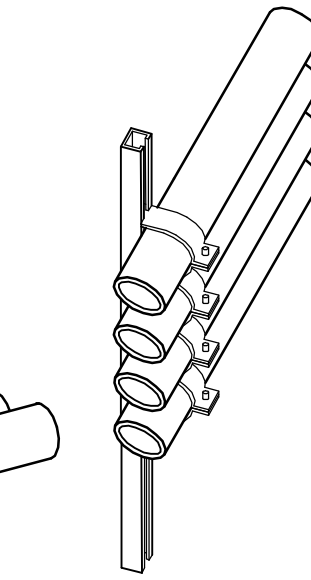
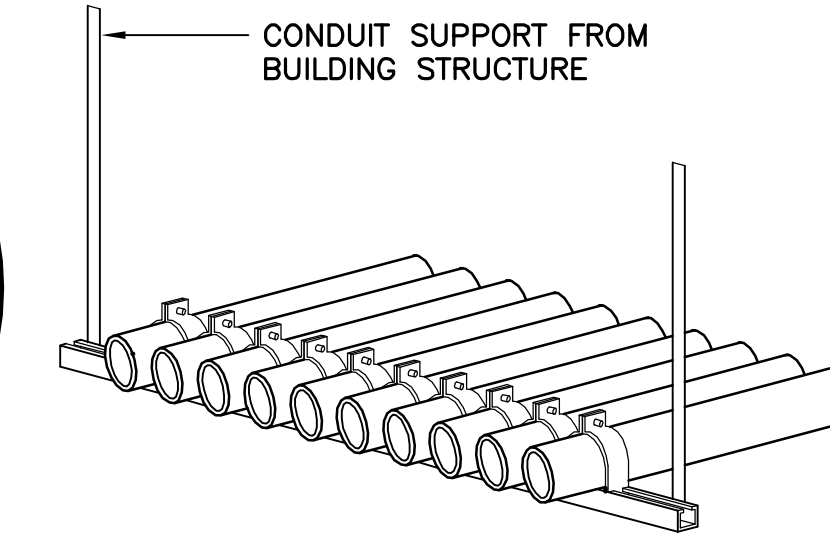
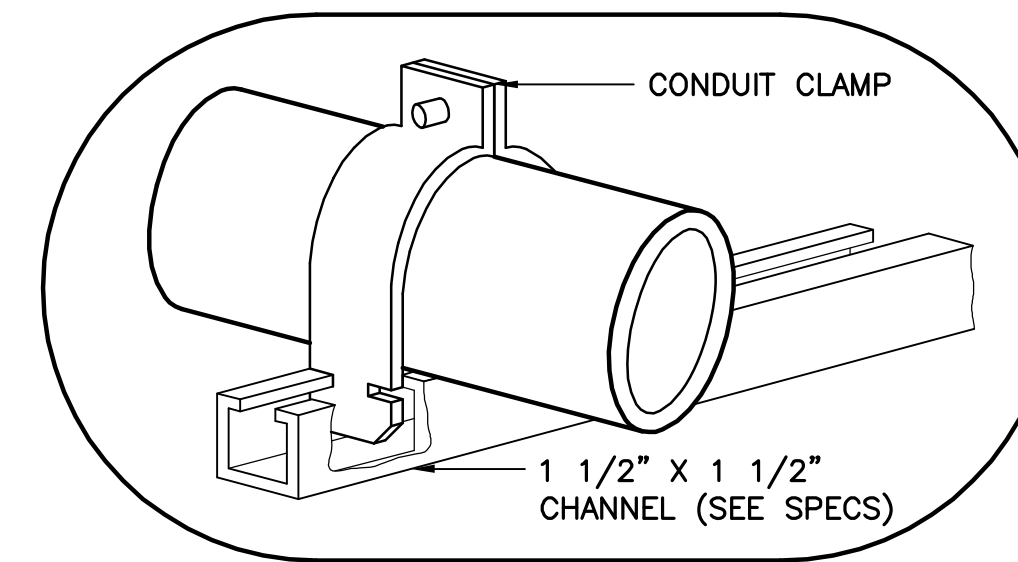
PROJECT NO.:	110016
SCALE:	NOTED
REVISION:	0
DRAWING NO.:	E05
SHEET NO.:	15 OF 16

EDA
 Electrical Design Associates
 4763 SOUTH CONWAY ROAD, STE. E
 ORLANDO, FLORIDA 32812
 PHONE: (407) 745-5604
 FAX: (407) 745-5603
 C.O.A. No. 8079
 LILLIAN M. REYES, P.E.
 Florida P.E. No. 50780



LIGHTING FIXTURE SCHEDULE

TYPE	WATT	DESCRIPTION	MANUFACTURER	SERIES TYPE
A	164	HEAVY INDUSTRIAL LED HIGH BAY FIXTURE WITH INDUSTRIAL LED OPTICS AND RUGGED THERMAL DISSIPATING HOUSING WITH WIDE WIDE DISTRIBUTION HINGE AND LATCH MOUNTING SYSTEM. CSA TESTED TO U.L. 1598 WET LOCATION. IP56. 72 LEDS, 120V, CEILING MOUNT, 3/4" HUB, 5000 KELVIN COLOR TEMPERATURE & LG25 DUAL-LITE 250VA INTEGRAL EMERGENCY LIGHTING INVERTER.	HUBBELL OR EQUAL	HBL LED HIGHBAY SERIES OR APPROVED EQUAL.
A1	164	SAME AS TYPE 'A', WITHOUT THE EMERGENCY LIGHTING INVERTER.	HUBBELL OR EQUAL	HBL LED HIGHBAY SERIES OR APPROVED EQUAL.
B	44.5	FULL CUT-OFF WALLPACK. DECORATIVE, DIE-CAST ALUMINUM HOUSING AND DOOR. WHITE BRONZE POWDER PAINT FINISHES PROVIDING A LASTING APPEARANCE IN OUTDOOR ENVIRONMENTS. 18 HIGH POWER LEDS, 2038 LUMENS. 5000K/70 CRI. 120V, TYPE III DISTRIBUTION.	HUBBELL OR EQUAL	LAREDO SERIES LMC-18-LEDs
⊗		CAST ALUMINUM RED LED EXIT SIGN. DIE-CAST ALUMINUM HOUSING. UL LISTED FOR 2 HOUR RUN TIME.	PRESCOLITE	GC SERIES



ENLARGED VIEW

TRAPEZE ASSEMBLY

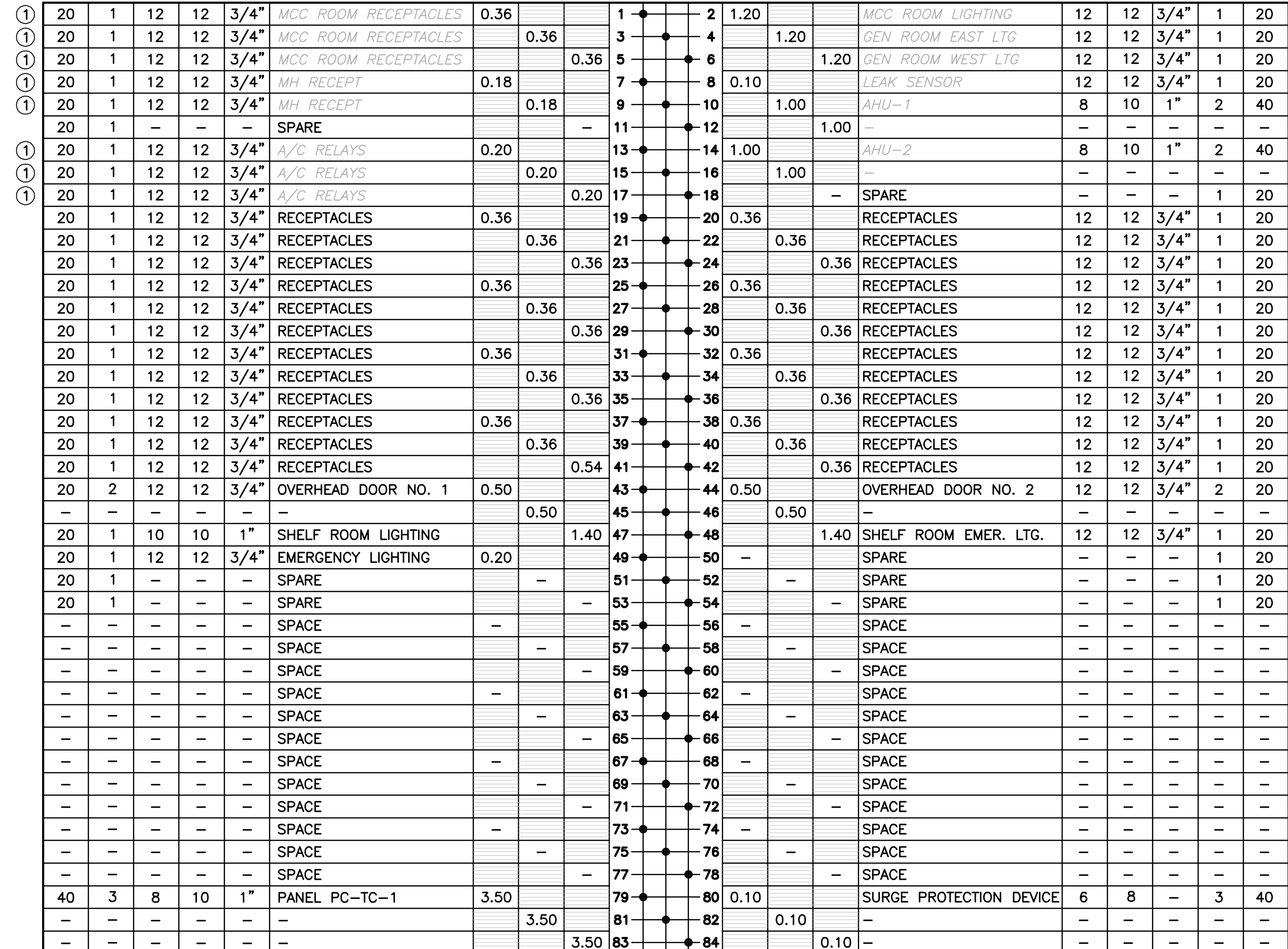
WALKWAY AND WALL MOUNTED

* ALL MOUNTING HARDWARE SHALL BE 316 STAINLESS STEEL.

5 CONDUIT PIPE STRAP MOUNTING DETAILS

SCALE: N.T.S.

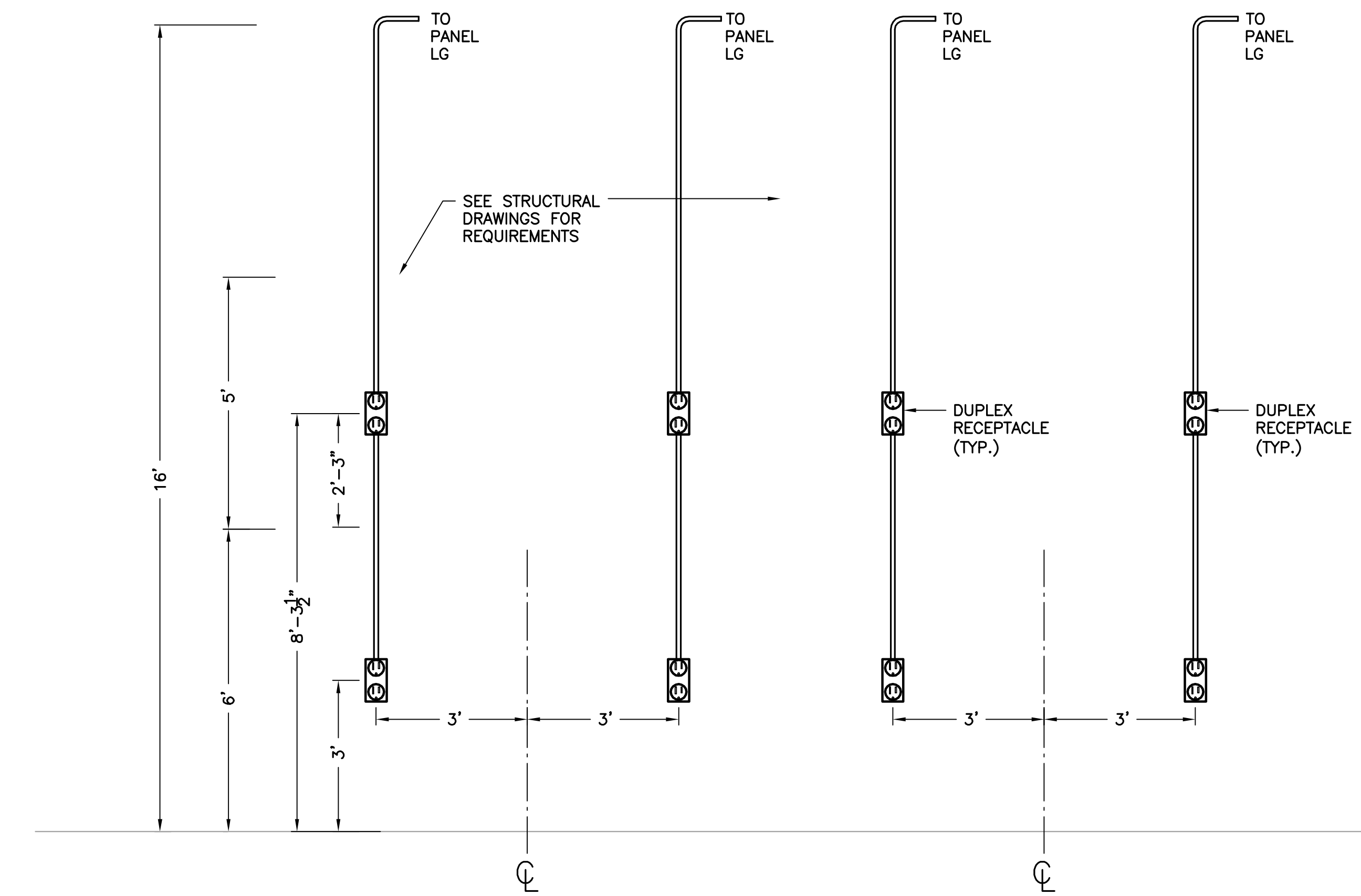
PANEL: LG (2 SECTION)										BUS: 225 AMP										VOLT: 120/208V-3-4W									
LOCATION: SHELF ROOM										MAINS: 100A,3P										REMARKS: PROVIDE SPD									
MOUNTING: SURFACE										POLES: 84										A.I.C. SYMM: 10,000									
AMPS	POLE	WIRE	GND.	COND.	LOAD SERVED	BUS KVA			BUS A B C			BUS KVA			BUS A B C			LOAD SERVED	WIRE	GND.	COND.	POLE	AMPS						
20	1	12	12	3/4"	MCC ROOM RECEPTACLES	0.36			1	2	1.20				MCC ROOM LIGHTING	12	12	3/4"	1	20									
20	1	12	12	3/4"	MCC ROOM RECEPTACLES		0.36		3	4	1.20				GEN ROOM EAST LTG	12	12	3/4"	1	20									
20	1	12	12	3/4"	MCC ROOM RECEPTACLES			0.36	5	6		1.20			GEN ROOM WEST LTG	12	12	3/4"	1	20									
20	1	12	12	3/4"	MH RECEPT	0.18			7	8	0.10				LEAK SENSOR	12	12	3/4"	1	20									
20	1	12	12	3/4"	MH RECEPT		0.18		9	10		1.00			AHU-1	8	10	1"	2	40									
20	1	-	-	-	SPARE				11	12			1.00		-														
20	1	12	12	3/4"	A/C RELAYS	0.20			13	14	1.00				AHU-2	8	10	1"	2	40									
20	1	12	12	3/4"	A/C RELAYS		0.20		15	16		1.00			-														
20	1	12	12	3/4"	A/C RELAYS			0.20	17	18					SPARE						1	20							
20	1	12	12	3/4"	RECEPTACLES	0.36			19	20	0.36				RECEPTACLES	12	12	3/4"	1	20									
20	1	12	12	3/4"	RECEPTACLES		0.36		21	22		0.36			RECEPTACLES	12	12	3/4"	1	20									
20	1	12	12	3/4"	RECEPTACLES			0.36	23	24			0.36		RECEPTACLES	12	12	3/4"	1	20									
20	1	12	12	3/4"	RECEPTACLES	0.36			25	26	0.36				RECEPTACLES	12	12	3/4"	1	20									
20	1	12	12	3/4"	RECEPTACLES		0.36		27	28		0.36			RECEPTACLES	12	12	3/4"	1	20									
20	1	12	12	3/4"	RECEPTACLES			0.36	29	30			0.36		RECEPTACLES	12	12	3/4"	1	20									
20	1	12	12	3/4"	RECEPTACLES	0.36			31	32	0.36				RECEPTACLES	12	12	3/4"	1	20									
20	1	12	12	3/4"	RECEPTACLES		0.36		33	34		0.36			RECEPTACLES	12	12	3/4"	1	20									
20	1	12	12	3/4"	RECEPTACLES			0.36	35	36			0.36		RECEPTACLES	12	12	3/4"	1	20									
20	1	12	12	3/4"	RECEPTACLES	0.36			37	38	0.36				RECEPTACLES	12	12	3/4"	1	20									
20	1	12	12	3/4"	RECEPTACLES		0.36		39	40		0.36			RECEPTACLES	12	12	3/4"	1	20									
20	1	12	12	3/4"	RECEPTACLES			0.54	41	42			0.36		RECEPTACLES	12	12	3/4"	1	20									
20	2	12	12	3/4"	OVERHEAD DOOR NO. 1	0.50			43	44	0.50				OVERHEAD DOOR NO. 2	12	12	3/4"	2	20									
-	-	-	-	-	SPARE		0.50		45	46		0.50			-														
20	1	10	10	1"	SHELF ROOM LIGHTING			1.40	47	48			1.40		SHELF ROOM EMER. LTG.	12	12	3/4"	1	20									
20	1	12	12	3/4"	EMERGENCY LIGHTING	0.20			49	50					SPARE						1	20							
20	1	-	-	-	SPARE				51	52					SPARE						1	20							
20	1	-	-	-	SPARE				53	54					SPARE						1	20							
-	-	-	-	-	SPACE				55	56					SPACE														
-	-	-	-	-	SPACE				57	58					SPACE														
-	-	-	-	-	SPACE				59	60					SPACE														
-	-	-	-	-	SPACE				61	62					SPACE														
-	-	-	-	-	SPACE				63	64					SPACE														
-	-	-	-	-	SPACE				65	66					SPACE														
-	-	-	-	-	SPACE				67	68					SPACE														
-	-	-	-	-	SPACE				69	70					SPACE														
-	-	-	-	-	SPACE				71	72					SPACE														
-	-	-	-	-	SPACE				73	74					SPACE														
-	-	-	-	-	SPACE				75	76					SPACE														
-	-	-	-	-	SPACE				77	78					SPACE														
40	3	8	10	1"	PANEL PC-TC-1	3.50			79	80	0.10				SURGE PROTECTION DEVICE	6	8		3	40									
-	-	-	-	-	SPARE		3.50		81	82		0.10			-														
-	-	-	-	-	SPARE			3.50	83	84		0.10			-														



TOTAL (PHASE):	6.38	6.18	7.08	4.34	5.24	5.14
TOTAL KVA:				34.36		
TOTAL AMPS:				95.37		
TOTAL DEMAND AMPS @ 60%:				57.22		

NOTES:
① EXISTING CIRCUITS TO BE INTERCEPTED.

REFER TO SPECIFICATION SECTION 16709 FOR REQUIREMENTS



6 SHELVING RECEPTACLE DETAIL

SCALE: 1/2"=1'-0"

EDA
Electrical Design Associates
4763 SOUTH CONWAY ROAD, STE. E
ORLANDO, FLORIDA 32812
PHONE: (407) 745-5604
FAX: (407) 745-5603
C.O.A. No. 8079
LILLIAN M. REYES, P.E.
Florida P.E. No. 50790



REV	DATE	DESCRIPTION	BY
0	10/2014	ISSUED FOR BID	LMR

Issue Certification
Lillian M. Reyes, P.E.
Florida P.E. No. 50780
Electrical Design Associates
Certificate of Authorization No. 8079
4763 South Conway Road, Suite E
Orlando, FL 32812

Designed_DD
Drawn_RRM
Checked_LMR
Reviewed_DD
Approved_LMR
Date_10/2014

ORANGE COUNTY UTILITIES
EASTERN WATER RECLAMATION FACILITY
ELECTRICAL
ELECTRICAL DETAILS

PROJECT NO.:	110016
SCALE:	NOTED
REVISION:	0
DRAWING NO.:	E06
SHEET NO.:	16 OF 16



REISS ENGINEERING, INC.
1016 SPRING VILLAS PT
WINTER SPRINGS, FL 32708
(407) 679-5358