# UCV STORAGE RACK UTILITY SUPPORT FOR



# PEPSI BEVERAGES COMPANY LAKE CITY, FL PLANT

**OWNER** 

PEPSI BEVERAGES COMPANY 619 SW ARROWHEAD TERRACE LAKE CITY, FL 32024 PHONE: (386) 752-8956 MECHANICAL ENGINEER
ELECTRICAL ENGINEER

CHA, INC. 270 PEACHTREE NW, SUITE 1500 ATLANTA, GA 30303-1283 PHONE: (678) 954-5002 FAX: (678) 954-5001 CONTRACTOR

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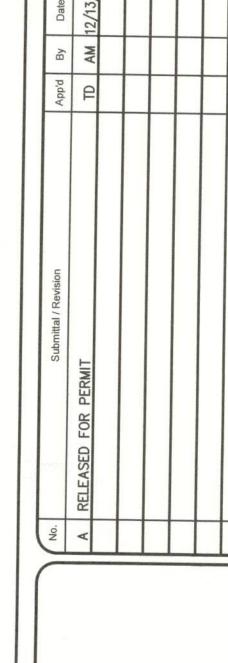
LOCATION MAP SCALE: NOT TO SCALE

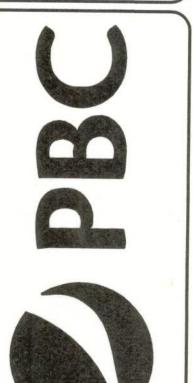
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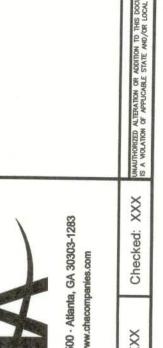


VICINITY MAP
SCALE: NOT TO SCALE









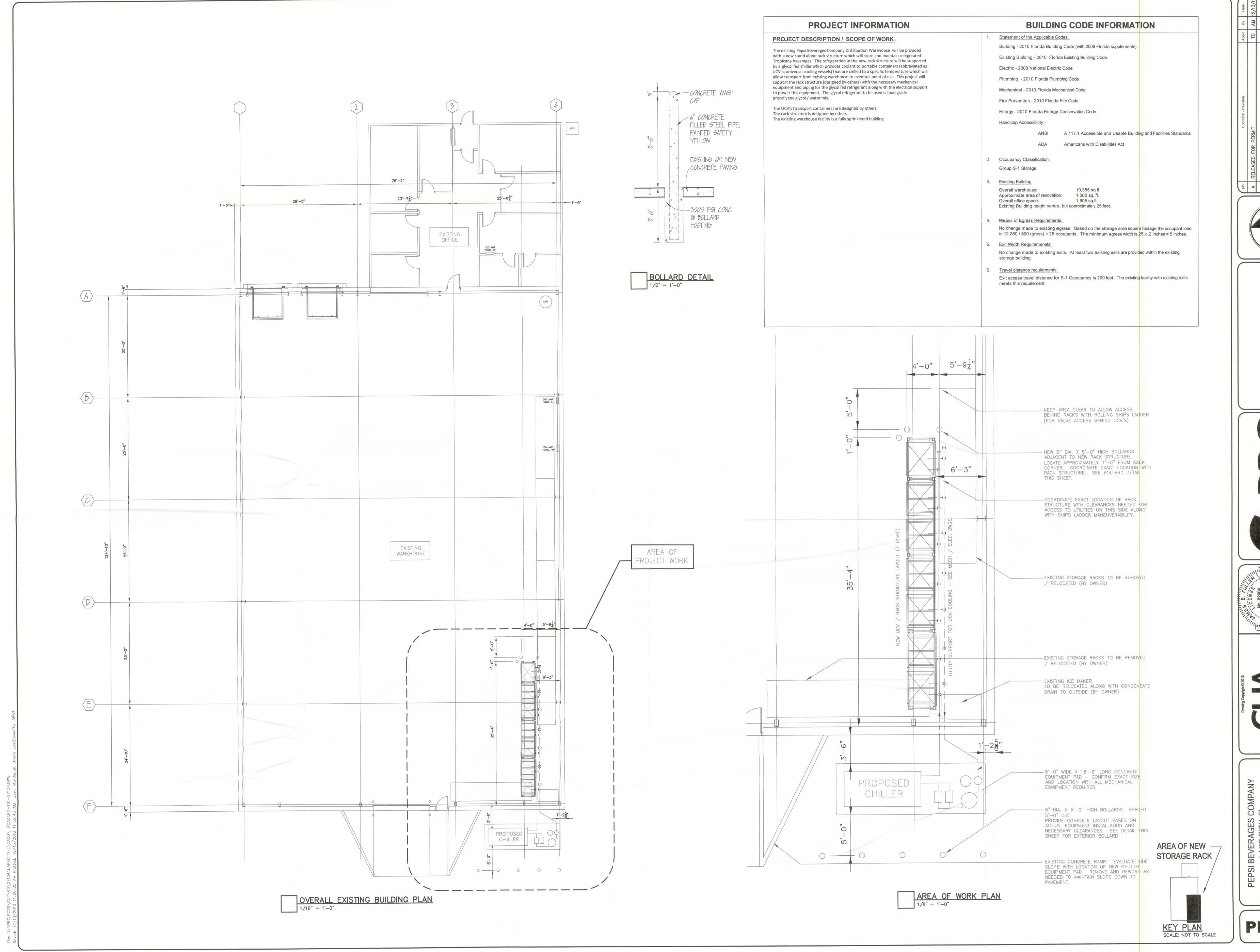
270 Peachtree St. NW, Suite 14 Main: (678) 954-5000 · v

COVER SHEET

COVER SHEET

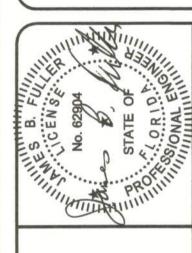
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G-001

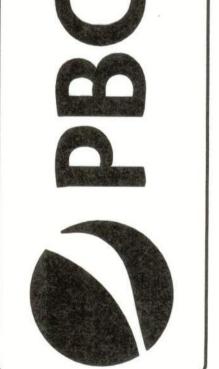


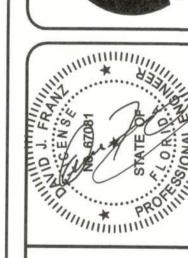


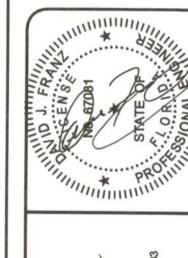




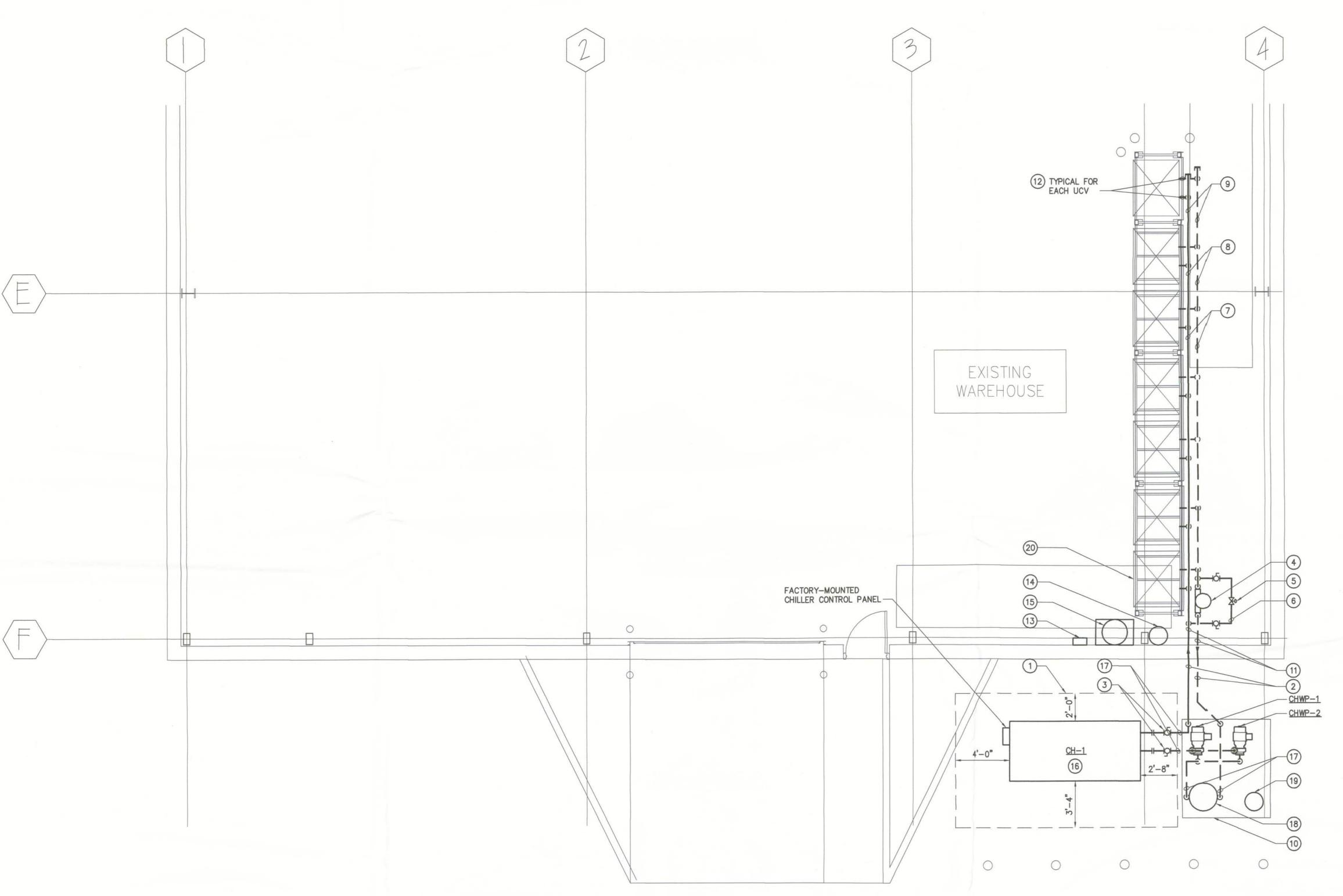
PD-101







M-001



GENERAL NOTES

- 1. FIELD VERIFY ALL EXISTING CONDITIONS PRIOR TO INITIATING ANY WORK.
- INSTALL CHILLER CH-1 PER MANUFACTURER'S INSTRUCTIONS AND RECOMMENDATIONS. PROVIDE ALL PIPING, VALVES, CONTROLS AND ACCESSORIES FOR CHILLER CH-1.
- SEE CHILLED WATER FLOW DIAGRAM FOR PIPING AND VALVE SIZES.
- 4. COORDINATE PIPING ROUTING AND MOUNTING HEIGHT WITH ELECTRICAL TRADE AS NECESSARY.

CODED NOTES

- 1) EQUIPMENT CLEARANCE.
- 2 ROUTE 2" CHWS AND CHWR UP AND INSTALL AS HIGH AS POSSIBLE.
- 3 SHUT OFF VALVE (2")
- (4) AIR SEPARATOR AS-1, INSTALL AS HIGH AS POSSIBLE.
- 5) 1-1/2" MODULATING 2-WAY CONTROL VALVE (BYPASS CONTROL VALVE).
- 6 1-1/2" BYPASS
- (7) 1-1/2" CHWS & CHWR.
- 8) 1-1/4" CHWS & CHWR.
- 9 1" CHWS & CHWR.
- 10 EQUIPMENT SKID TO MOUNT CHWP-1 & 2, ET-1, & CWST-1
- 11) 2" CHWS & CHWR.
- 3/4" CHWS & CHWR W/ BALL VALVES AND CONNECTED WITH 3/4" JACKETED INSULATED FLEXIBLE PIPES WITH 3/4" QUICK CONNECT FITTINGS AT THE PIPE ENDS TO CONNECT WITH UCV. INSULATED FLEXIBLE PIPE SHALL BE URECON PEX-FLEX, OR APPROVED EQUAL. THE 3/4" CARRIER PIPE SHALL BE INSULATED WITH 1-1/4" POLYURETHANE FOAM INSULATION WITH R-VALUE OF 6.25 PER INCH WITH JACKET. PROVIDE INSULATION BOOT WITH VAPOR BARRIER FOR EACH QUICK CONNECT FITTING. QUICK CONNECT FITTINGS (NIPPLE OR COUPLING) SHALL BE SNAP-TITE 61 SERIES, OR APPROVED EQUAL. SEE TYPICAL UCV PIPING CONNECTION DETAIL ON M-501.
- (13) REMOTE CHILLER CONTROL PANEL.
- 14) 5 GAL CHEMICAL SHOT FEEDER
- PACKAGED GLYCOL FEED SYSTEM WITH AN ON/OFF CONTROL SWITCH FOR PUMP, NEPTUNE MODEL G-50-1A (1.5 GPM @ 100 PSI PUMP, 1/2 HP, 115V/1PH/60HZ) OR APPROVED EQUAL. SYSTEM SHALL BE SUITABLE FOR OUTDOOR INSTALLATION.
- (16) CHILLER CH-1 TO BE MOUNTED ON A 6" HIGH CONCRETE PAD ON GRADE.
- (17) 2" CHWS & CHWR. PROVIDE PIPE SUPPORTS FROM GROUND.
- (18) CHILLED WATER STORAGE TANK CWST-1
- 19 EXPANSION TANK ET-1
- 20) UNIVERSAL COOLER VESSEL (UCV) TYPICAL OF SEVEN; OWNER PROVIDED EQUIPMENT.

M-201

AREA OF NEW — STORAGE RACK

MECHANICAL HYDRONIC PIPING PLAN
1/4" = 1'-0"

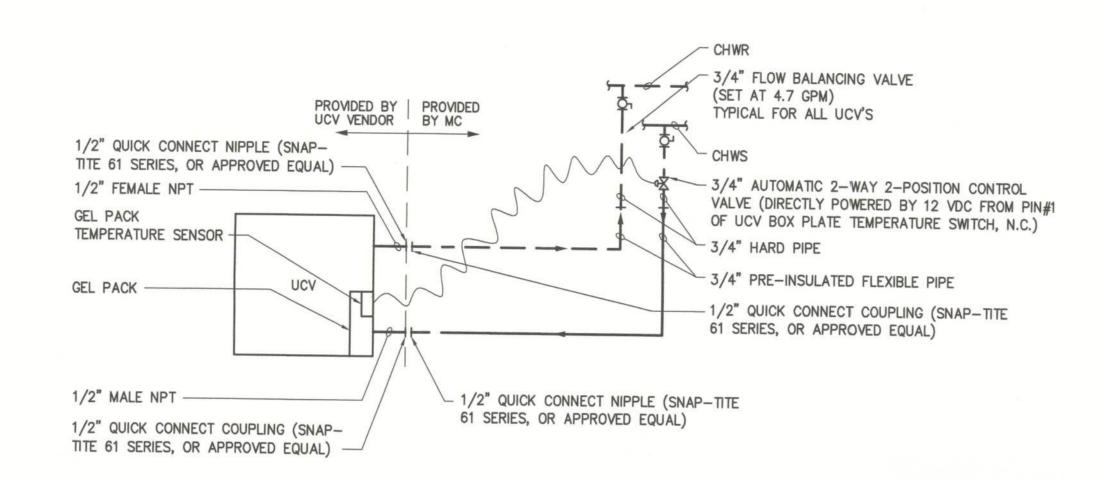
# TYPICAL EXTERIOR EQUIPMENT PAD SCALE: NOT TO SCALE

	AIR SEPARATOR SCHEDULE											
TAG	LOCATION	SERVICE	FLUID	GPM	CONNECTION SIZES	MANUFACTURER & MODEL#	REMARKS					
AS-1	SEE PLAN	CHILLED WATER	40% PG	32.9	2"	BELL & GOSSETT R-2N	PROVIDE BUILT-IN STRAINER AND SUPPORT BRACKET					

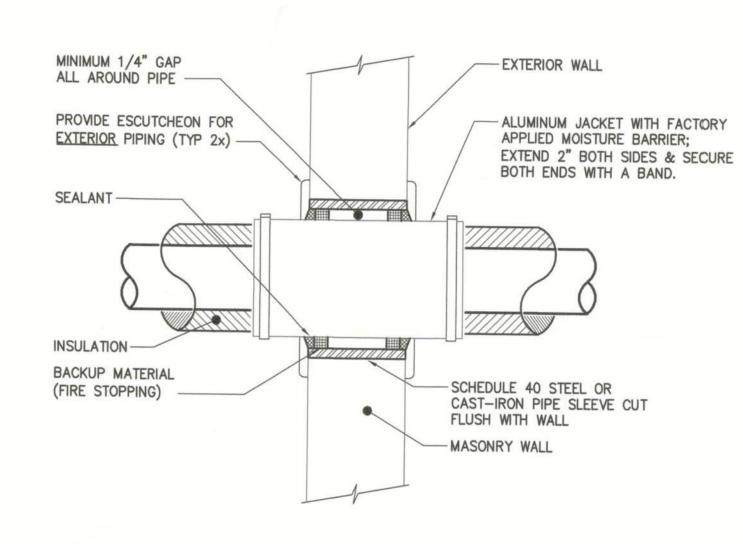
			CHILLE	WATER	STORAGE TANK S	SCHEDULE
TAG	LOCATION	SERVICE	CAPACITY (GAL)	SIZE H x DIA (IN)	MANUFACTURER & MODEL#	REMARKS
CWST-1	SEE PLAN	40% PG CHILLED WATER	120	60x24	WESSELS MODEL CBT-120 WITH 2" FLANGES	ASME CHILLER WATER STORAGE TANK W/ 2" FLANGED INLET & OUTLET. TANK SHALL BE SUITABLE FOR PROPYLENE GLYCOL CHILLED WATER STORAGE.

					EXPANS	SION TAN	K SCHEDUL	E		
TAG	LOCATION	SERVICE	TYPE	FLUID	ACCEPTANCE VOLUME (GAL)	SIZE VOLUME	FILL P'RESS (PSIG)	RELIEF VALVE SETTING (PSIG)	MANUFACTURER & MODEL#	REMARKS
ET-1	SEE PLAN	CHILLED WATER	DIAPHRAGM	40% PG	11.3	21.7	20	100	BELL & GOSSETT D-40V	

										F	PUMP S	CHEDULE			
TAG	LOCATION	SERVICE	FLUID	GPM	M FT HD EFF		ELECTRICAL		ELECTRICAL		ELECTRICAL			MANUEACTURED & MODEL #	
			, 2015	01 141	11110	L11	HP	VOLT	PH	HZ	RPM	MANUFACTURER & MODEL#	REMARKS		
CHWP-1	SEE PLAN	CHILLED WATER	40% PG	32.9	140	37.0	5	240	3	60	3500	BELL & GOSSETT SERIES 80 SIZE 1-1/2x1-1/2x7B	PUMP SHALL BE SUITABLE FOR OUTDOOF		
CHWP-2	SEE PLAN	CHILLED WATER	40% PG	40% PG 32.9 140 37.0 5 240 3 60 3500 BELL & GOSSETT SERIES		BELL & GOSSETT SERIES 80 SIZE 1-1/2x1-1/2x7B	INSTALLATION.								

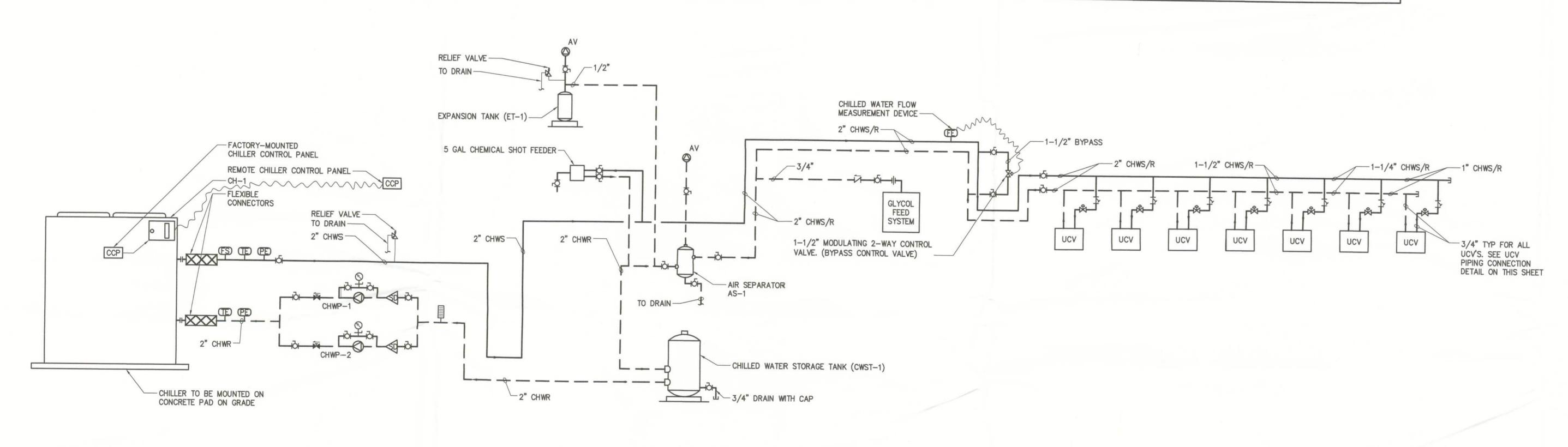


# TYPICAL UCV PIPING CONNECTION SCALE: NOT TO SCALE



WALL PIPE PENETRATION DETAIL
SCALE: NOT TO SCALE

#### AIR COOLED CHILLER SCHEDULE REFRIGERANT COMP TYPE (ARI RATED) IPLV COOLING MBH **EVAPORATOR** CONDENSER ELECTRICAL TAG LOCATION SERVICE MANUFACTURER FLUID TYPE FOULING WPD ENTER LEAVE # FAN AMBIENT CONTROL REMARKS & MODEL# FACTOR (FT) (F) (F) CONNECT TYPE | VOLT | Ø | HZ | MCA | MOCP | FANS (KW) AIR TEMP STEPS 40% PG CHILLER SHALL BE HIGH EFFICIENCY, WIDE AMBIENT (0-125°F), UL LISTED, LOW TEMPERATURE PROCESS AND SUPER QUIET TYPE. PROVIDE REFRIGERANT ISOLATION VALVES, FACTORY INSTALLED WATER STRAINER, VIBRATION ISOLATORS, UNIT-MOUNTED STARTER AND CONTROL CH-1 ROOF UCV'S R410A SCROLL 10.3 0.00010 | 10.2 | 15.5 | 10.0 | 9,413 | 2 | 1.2 | 84.0 | 32.9 | (FOOD TRANE MODEL SINGLE POINT 240 3 60 105.5 125 GRADE) CGAM020 INTERFACE FOR BAS CONTROL PANEL.



NOTE:

THIS DIAGRAM IS NOT INTENDED TO SHOW ALL PIPING CONNECTIONS OR VALVES FOR THE SYSTEM. REFER TO HVAC PLAN AND DETAILS FOR PIPE ROUTING AND VALVE SIZES AND LOCATIONS.

CHILLED WATER FLOW DIAGRAM
NOT TO SCALE

#### SEQUENCE OF OPERATIONS FOR MECHANICAL SYSTEMS

PART 1 - GENERAL

1.1 THE CONTRACTOR SHALL IMPLEMENT THE CONTROL SEQUENCES SET FORTH HEREIN AS PART OF THIS PROJECT. IMPLEMENTATION SHALL CONSIST OF DESIGNING, CONFIGURING, INSTALLING, AND PROGRAMMING THE SYSTEM AS REQUIRED. THE CONTRACTOR SHALL INSTALL ALL HARDWARE, SOFTWARE, EQUIPMENT, ACCESSORIES, AND DEVICES NECESSARY TO MEET ALL REQUIREMENTS OF THE SPECIFICATIONS AND ALL RELATED DRAWINGS. THE CONTRACTOR SHALL PERFORM A FUNCTIONAL CHECK TO CONFIRM COMPLIANCE. INSTALL STAND ALONE CONTROL HARDWARE AND SOFTWARE TO PERFORM THIS SEQUENCE OF OPERATION AND TO PROVIDE INPUTS, OUTPUTS AND ALARMS AS REQUIRED. UNLESS OTHERWISE SPECIFIED, ALL MODULATING CONTROL SHALL BE PROPORTIONAL—INTEGRAL CONTROL.

#### PART 2 - MECHANICAL SYSTEMS

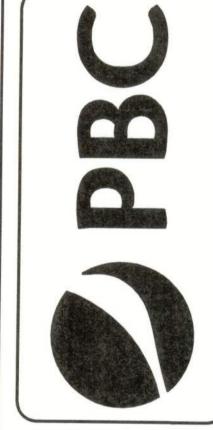
2.1 AIR-COOLED CHILLER (CH-1)

- A. THE STAND ALONE CONTROL SYSTEM SHALL MONITOR THE ENABLED STATUS OF ALL SYSTEMS SERVED BY THIS SYSTEM. CHILLER CH-1 SHALL BE ENABLED ONLY WHEN UCV'S ARE PLUGGED INTO THE GLYCOL LOOP AND SHALL STAY ON UNTIL CH-1 IS DISABLED. CHILLER CH-1 SHALL BE DISABLED AFTER ALL UCV'S ARE UNPLUGGED FROM THE GLYCOL LOOP.
- B. WHEN THIS SYSTEM IS ENABLED AND THE CHILLED WATER PUMP (CHWP-1 OR CHWP-2) IS PROOFED ON, THE CHILLER CONTROL AND CHILLED WATER TEMPERATURE CONTROL LOOPS SHALL BE ENABLED.
- C. CHILLER CONTROL: CHILLER OPERATION SHALL BE ENABLED BY SCHEDULE OR BY MANUAL FROM REMOTE CHILLER CONTROL PANEL. THE MANUFACTURER PROVIDED CONTROLS SHALL BE UTILIZED TO INITIATE CHILLER OPERATION ONCE EVAPORATOR FLOW IS CONFIRMED VIA THE FLOW SWITCH. A REMOTE CHILLER CONTROL PANEL SHALL BE PROVIDED AND INTERFACED WITH THE CHILLER MANUFACTURER'S CONTROLS AND STATUS. THE REMOTE CHILLER CONTROL PANEL SHALL BE CAPABLE OF CONTROLLING AND MONITORING THE CHILLER AND PUMPS, AND SHOWING ALL STATUS, SET POINTS, ENABLE/DISABLE COMMANDS, AND OPERATING CONDITIONS. AS AN OPTION THIS REMOTE CONTROL PANEL CAN BE FURNISHED WITH THE CHILLER AND INSTALLED BY THE MC. WHEN ENABLED, THE MANUFACTURER PROVIDED CONTROLS SHALL BE ADJUSTED TO MAINTAIN A LEAVING CHILLED WATER TEMPERATURE OF 10 DEGREES F (FULLY ADJUSTABLE). CHILLED WATER CIRCULATING PUMP CHWP-1 OR CHWP-2 IS REQUIRED TO OPERATE CONTINUOUSLY WHENEVER THE CHILLER IS ENABLED. THE CONTROL SYSTEM SHALL ASSIGN LEAD/LAG STATUS TO THE PUMPS (CHWP-1 AND CHWP-2). LEAD/LAG ASSIGNMENT OF CHWP-1 AND CHWP-2 SHALL BE ROTATED BY THE CONTROL SYSTEM ON A MONTHLY BASIS TO EQUALIZE RUN TIME. THE LAG PUMP SHALL BE ENABLED UPON A FAILURE OF THE LEAD PUMP. WHEN CHILLER IS ENABLED, THE CHILLED WATER BYPASS CONTROL VALVE SHALL BE CLOSED WHEN THE CHILLED WATER FLOW (MEASURED THROUGH THE CHILLER WATER FLOW MEASUREMENT DEVICE) IS 30 GPM (ADJUSTABLE) OR ABOVE. THE CHILLED WATER BYPASS CONTROL VALVE SHALL MODULATE TO MAINTAIN THE MINIMUM FLOW WHEN THE CHILLED WATER FLOW (MEASURED THROUGH CHILLER WATER FLOW MEASUREMENT DEVICES) IS BELOW 30 GPM (ADJUSTABLE).

#### 2.2 UCV'S

UCV CONTROL IS STAND ALONE

- A. WARM UCV BOX IS MANUALLY PLUGGED IN, +12VDC OUT OF PIN#1 FROM THE UCV BOX PLATE TEMPERATURE SWITCH, THE TWO-WAY GLYCOL CONTROL VALVE SHALL BE 100% OPENED.
- B. UCV GEL PACK REACHES 20 DEGREES F, NO VOLTAGE OUT OF PIN #1 FROM THE UCV BOX PLATE TEMPERATURE SWITCH, THE TWO-WAY GLYCOL CONTROL VALVE SHALL BE 100% CLOSED.
- C. UCV GEL PACK WARMS TO 25 DEGREES F, +12VDC OUT OF PIN #1 FROM THE UCV BOX PLATE TEMPERATURE SWITCH, THE TWO-WAY GLYCOL CONTROL VALVE SHALL BE 100% OPENED.
- D. UCV BOX IS MANUALLY UNPLUGGED, PIN#1 DISCONNECT FROM THE TWO-WAY GLYCOL CONTROL VALVE, THE CONTROL VALVE SHALL BE 100% CLOSED.





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LAKE CITY, FL
AL SCHEDULES, DETAILS

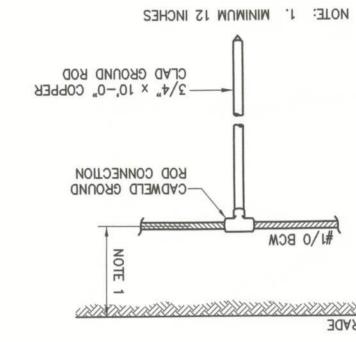
LAKE CITY, FL

MECHANICAL SCHEDULE

AND SEQUENCE

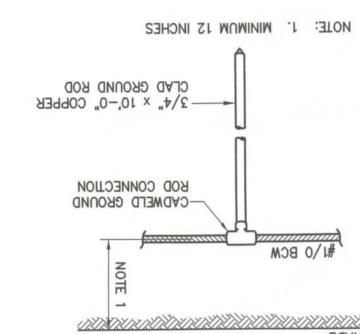
M-501

# 2 COPPER-CLAD STEEL GROUND ROD



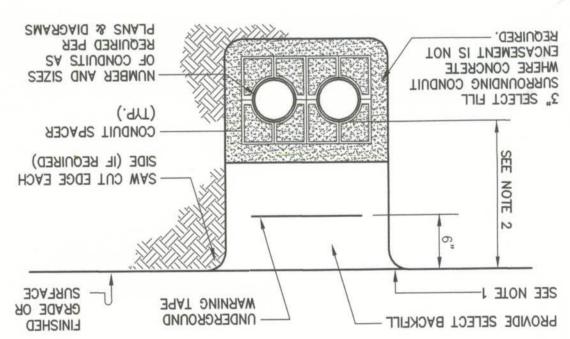
CRUSHED STONE, SELECT GRAVEL, ASPHALT, TOPSOIL INCLUDE, BUT NOT BE LIMITED TO: CONCRETE, 1. REPLACE EXISTING SURFACE CONDITIONS IN KIND TO

	JME CØ IS HIGH LEG ON DELTA SERVIC ITIFY HIGH LEG PER NEC REQUIREMENT			Sc	4MA 2.0	67 = 09	1 + 9.0	13(		NICE	LABELED AS "SUITABLE FOR USE AS SER'
	IIT BREAKER IN THE OFF POSITION.		Sc	IMA 2.0	$\Sigma l = (\Sigma$	7.1 × 04	7) / (5	001 x S	₽9	ED AND	PROVIDE PANELBOARD MDP THAT IS LIST
A:	2-POLE AND 3-POLE BRANCH FEEDE	EACH				Z. <b>≯</b> Z					. ASSUME 80% MAX DEMAND (160 AMPS)
OCK	R WITH PROVISIONS TO INDIVIDUALLY L	COVE			_	OTAL KVA					EXISTING SINGLE PHASE SERVICE.
TNC	NDE PANELBOARD MDP WITH DEAD FRO	15. PRO/			8.81	9.81	8.81		¥ ⊗B ⊗C ⊗	ЭН	KW DEMAND DATA IS NOT AVAILABLE FOR TI
			###	8.0	0.1	T .aus	8.81	8.71	8.71		OTES:
_	HIGH LEG PROVISIONED SPACE	<b>_</b>					0.0	0:0		-	21 SEE NOTE 4 & 5
E 22	3 A A Q S	1/02		0.0				0.0	0.0	0/00	3 4 7 32011 320 11
	3 A A S	1/02			0.0				0.0	5/05	19 5 HP CHILLER PUMP (STANDBY)
81 3	HIGH FEG PROVISIONED SPACE	<u> </u>				- 1		011		1/07	
91 /	NCA 12 ADC DOMER SUPPLY	1/02		9.0				0.1	011	1/07	d2///00 10 d2///00 d2 / //// 2
t1 /	NCV 15 VDC POWER SUPPLY	1/02			8.0	1 1			0.1	1/02	13 CHILLER CONTROL POWER
12	HICH LEG PROVISIONED SPACE					1 1	1.2			-	11 LI CONTRACTOR OF THE CONTRA
01 9	GFI OUTLET AT CHILLER	1/02		2.0				1.2		- /	6 SEE NOTE 4 & 5
8 8	GFI OUTLET OUTLET AT UCV's	1/02			2.0	1 1			1.2	2/02	7 5 HP CHILLER PUMP (PRIMARY)
9	HIGH LEG PROVISIONED SPACE					1 1	7.41				9 71011 7700
<b>₽</b>	SEE NOTES 1, 2 & 5							7.41		l ,	2 SEE NOIE 2
7	EXISTING 200A PANEL A	2/002				1 /			7.41	125/3	1 20 TON CHILLER (106 MCA)
СКТ	LOAD DESCRIPTION	POLE AMPS/ CB	CQ FOAD CONN	B¢ KAY CONN	KVA LOAD CONN		CQ FOAD CONN	B¢ FO¥D CONN	KVA LOAD CONN	POLE AMPS/ CB	KT LOAD DESCRIPTION



SCALE: NONE	
UNDERGROUND CONDUITS	l

2. MINIMUM 3' BELOW FINISHED GRADE.



SWITCHES AND STARTIERS AND SHALL PRONDE ALL POWER WIRING COMPLETE. THE OTHERWISE NOTED. THE ELECTRICAL CONTRACTOR SHALL INSTALL ALL LOOSE DISCONNECT 6. PROVIDE LOCAL DISCONNECT SWITCHES FOR EQUIPMENT FURNISHED BY OTHERS UNLESS BUILDING CODE INCLUDING 2009 SUPPLEMENTS.

AVOID CONFLICT WITH PIPING, DUCTWORK, ETC. CONDUIT RUNS SHALL BE DETERMINED IN THE FIELD. COORDINATE INSTALLATIONS AND 5. CIRCUITRY SHOWN IS IDIAGRAMMATIC UNLESS OTHERWISE NOTED. EXACT LOCATION OF ALL

REFER TO MECHANICAL SCHEDULES AND DRAWINGS FOR DETAILED EQUIPMENT INFORMATION. RESPECTIVE DIVISION AND WIRED COMPLETE BY DIVISION 16 UNLESS OTHERWISE NOTED. REQUIRES 240V AND OR 120V CIRCUITRY WILL BE FURNISHED AND INSTALLED BY THE 4. COORDINATE WORK WITH ALL TRADES. EQUIPMENT INDICATED ON 'M' DRAWINGS THAT

CONTROL WIRING (BELOW 120 VOLTS) SHALL BE BY THE DIVISION 15 CONTRACTOR(S). ELECTRICAL CONTRACTOR SHALL PROVIDE ALL 120 VOLT CONTROL WIRING COMPLETE.

3. REFER TO MECHANICAL DRAWINGS FOR SYMBOLS ASSOCIATED WITH WORK, EQUIPMENT, ETC.

CONTRACTOR UNLESS OTHERWISE INDICATED.

REFER TO MECHANICAL DRAWNGS FOR COORDINATION AMONG TRADES.

2. ALL WORK SHOWN ON THE ELECTRICAL DRAWINGS SHALL BE BY A LICENSED ELECTRICAL

- INDICATES DETAIL SHOWN ON SAME DRAWING

DRAWING NUMBER WHERE DETAIL IS SHOWN

ENCLOSURE, AMPERE RATING AS NOTED.

AS REQUIRED BY EQUIPMENT BEING SERVED

ENCLOSURE. AMPERE RATING AS NOTED.

NATERRUPTOR

AND OR EQUIPMENT MOUNTED

BRANCH CIRCUIT.

120 VAC TO 15 VDC POWER SUPPLY

EXISTING ELECTRICAL EQUIPMENT

250 VOLT, 3-POLE, COMBINATION MAGNETIC MOTOR STARTER IN NEMA 3R

MANUAL MOTOR STARTER - VOLTAGE, AMPERE RATING, NUMBER OF POLES

250 VOLT, 3-POLE, NON-FUSED SAFETY DISCONNECT SWITCH IN NEMA 3R

WP - INDICATES DEVICE IN WEATHERPROOF BOX WITH WEATHERPROOF

20 AMP, 120 VOLT SPECIFICATION GRADE, GFI DUPLEX RECEPTACLE - WALL

SUBJECT TO COMPLIANCE WITH ALL APPLICABLE REQUIREMENTS OF NEC.

HOMERUN. MULTIPLE HOMERUNS MAY BE COMBINED IN A SINGLE CONDUIT

NOTE: FOR CLARITY, CIRCUITRY SHOWN ON PLANS INDICATE A SEPARATE

ONE 208 OR 480 VOLT SINGLE PHASE CIRCUIT

THREE 120 OR 277 VOLT SINGLE PHASE CIRCUITS

TWO 120 OR 277 VOLT SINGLE PHASE CIRCUITS

ONE 120 OR 277 VOLT SINGLE PHASE CIRCUIT

BOTTOM LINE NUMBER IF LISTED IDENTIFIES SOURCE CIRCUIT BREAKER.

STRAIGHT LINE OR CURVE WITH ARROWHEAD INDICATES HOMERUN TO PANEL

CONDUCTOR FOR EACH AND EVERY 120 VOLT AND 277 VOLT SINGLE PHASE

DO NOT SHARE NEUTRAL CONDUCTORS, PROVIDE A DEDICATED NEUTRAL

PROVIDE EQUIPMENT GROUNDING CONDUCTOR IN EACH AND EVERY CONDUIT

MINIMUM CONDUIT SHALL BE 1/2 INCH TRADE SIZE AND MINIMUM WIRE SIZE

ABOVE GROUND CONDUITS(S) WITH WIRING OR PULL ROPE AS INDICATED

PRONDE SIZE AS NOTED TO LAST DENCE OR FIXTURE ON THE CIRCUIT. WHERE LARGER SIZE WIRES ARE CALLED FOR TO LIMIT VOLTAGE DROP,

GFI - DUPLEX RECEPTACLE WITH GROUND FAULT CIRCUIT

COVER WITH AND WITHOUT PLUG INSERTED

BRANCH CIRCUIT PANELBOARD; 240/120 V, DELTA, 3¢, 4W

#/#/# ONE 208 OR 480 VOLT THREE PHASE CIRCUIT

PROVIDE TYPES OF CIRCUITRY AS NOTED BELOW:

OR SWITCHBOARD AS NOTED. TOP LINE IDENTIFIES PANEL OR SWITCHBOARD.

SHALL BE #12 AWG BCW. TYPICAL ALL INSTALLATIONS.

INDICATES CODED NOTE FOR PROPOSED WORK

PLAN OR DETAIL NUMBER

15 VDC CORD AND PLUG

1. GENERAL NOTES ON THIS DRAWING APPLY TO ALL ELECTRICAL ('E' SERIES) DRAWINGS.

**CENERAL NOTES** 

**CENERAL** 

0

ELECTRICAL LEGEND

FLORID	THE 2010	. QNA	2008	NEC	OŁ	EMENTS	REQUIR	BLE F	PLICAE	dA .	ALL	HTM	COMPLY	.21
ZHALL	REMENTS	REGUI	THESE	OŁ.	IN	STRINGE	MORE	THE	NEC'	ЭHТ	<b>QNA</b>	STI	DOCNWE	

ELECTRICAL CODE (NEC) 2008 EDITION. IF A CONFLICT EXISTS BETWEEN THE CONSTRUCTION DRAWINGS AND SPECIFICATIONS AND WITH APPLICABLE ARTICLES IN THE NATIONAL DRAWINGS. ALL INSTALLATIONS SHALL COMPLY WITH THE REQUIREMENTS OF THE PROJECT 11. PROVIDE COMPLETE INSTALLATION FOR ALL WORK SHOWN ON THE ELECTRICAL SERIES OF

10. PROVIDE CONDUIT TYPES AS LISTED IN THE SPECIFICATIONS.

9. PROVIDE EXPANSION FITTINGS ON ALL CONDUITS THAT CROSS EXPANSION JOINTS.

8. PROVIDE SUBMITTALS PER SPECIFICATIONS TO THE ENGINEER.

MINIMUM CLEARANCES, DEDICATED SPACE AND WORKING SPACE. NOT SHOWN FOR CLARITY. INSTALL EQUIPMENT TO COMPLY WITH NEC REQUIREMENTS FOR 7. DISCONNECT SWITCHES AND STARTERS FOR EQUIPMENT FURNISHED BY DIVISION 15 ARE

**WEATHERPROOF** 

**ONLESS OTHERMISE NOTED** 

RUNNING LOAD AMPS

NORMALLY OPEN

NOT APPLICABLE

MAIN LUG ONLY

METAL HALIDE

KILO WATTS

KILO VOLT

KILO VOLT AMPS

HORSE POWER

HIGH OUTPUT

GROUND

CONDUIT

BLDG BULDING

**ABBREVIATIONS** 

FLUOR FLUORESCENT

MOCP MAXIMUM OVER-CURRENT PROTECTION MECHANICAL CONTRACTOR

MAIN CIRCUIT BREAKER

YTIDA9MA TIUDRID MUMINIM

HIGH INTENSITY DISCHARGE

GROUND FAULT PROTECTION

GROUND FAULT CIRCUIT INTERRUPTER

OTUA / FT / AUTO

ELECTRICAL CONTRACTOR

COMP COMPACT / COMPRESSOR

CIRCUIT BREAKER

BARE COPPER WIRE

A/AMP AMPERE FLOOR
AFF AMPERE

AMERICAN WIRE GAUGE

ABOVE FINISHED GRADE

YTIDA9AD DUIT9NBTNI BRAHMA

NORMALLY CLOSED

UNIVERSAL COOLING VESSEL

PLUS OR MINUS (APPROXIMATELY)

NATIONAL ELECTRICAL CODE - 2008 EDITION

PEPSI BEVERAGE CORPORATION

HTIW

(S)TTAW

VOLT(S)

TYPICAL

POLE(S)

NUMBER

NON NCA

**PBC** 

NEC

MLO

KM

KΛ

HID

OH

AOH

GFP

BCM

**PFG** 

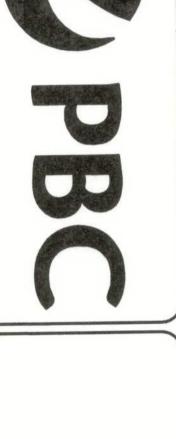
**AFF** 

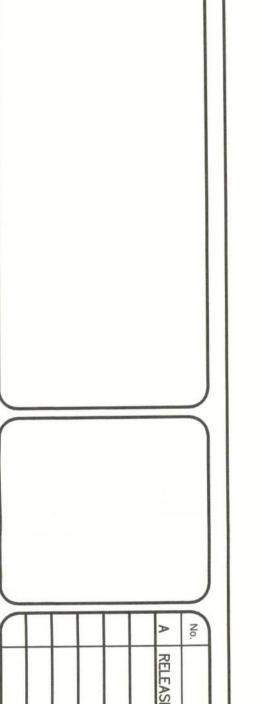
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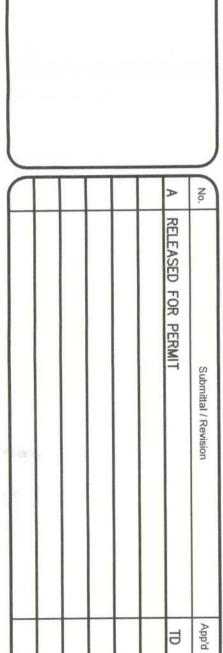
KVA

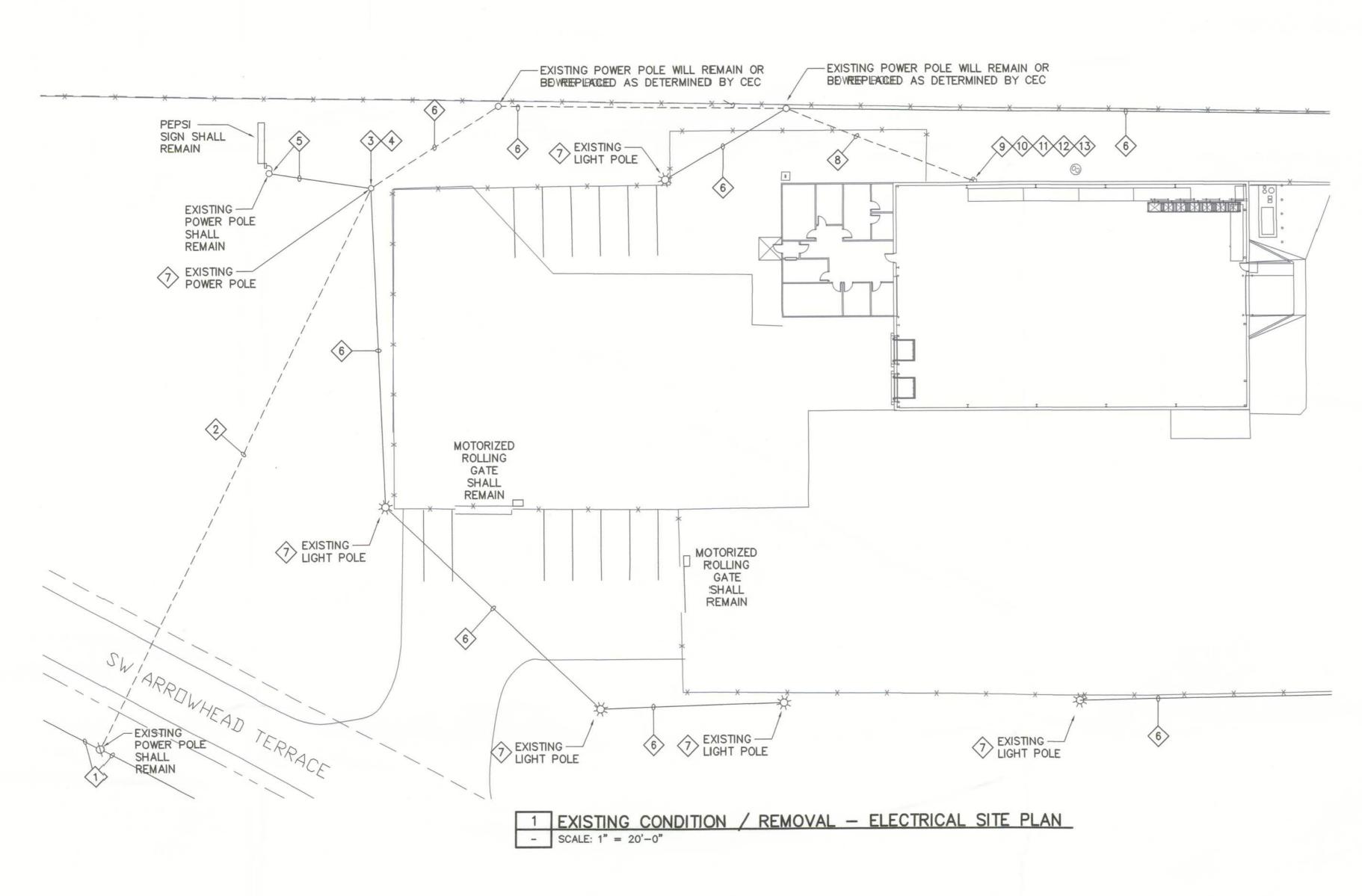
F-001

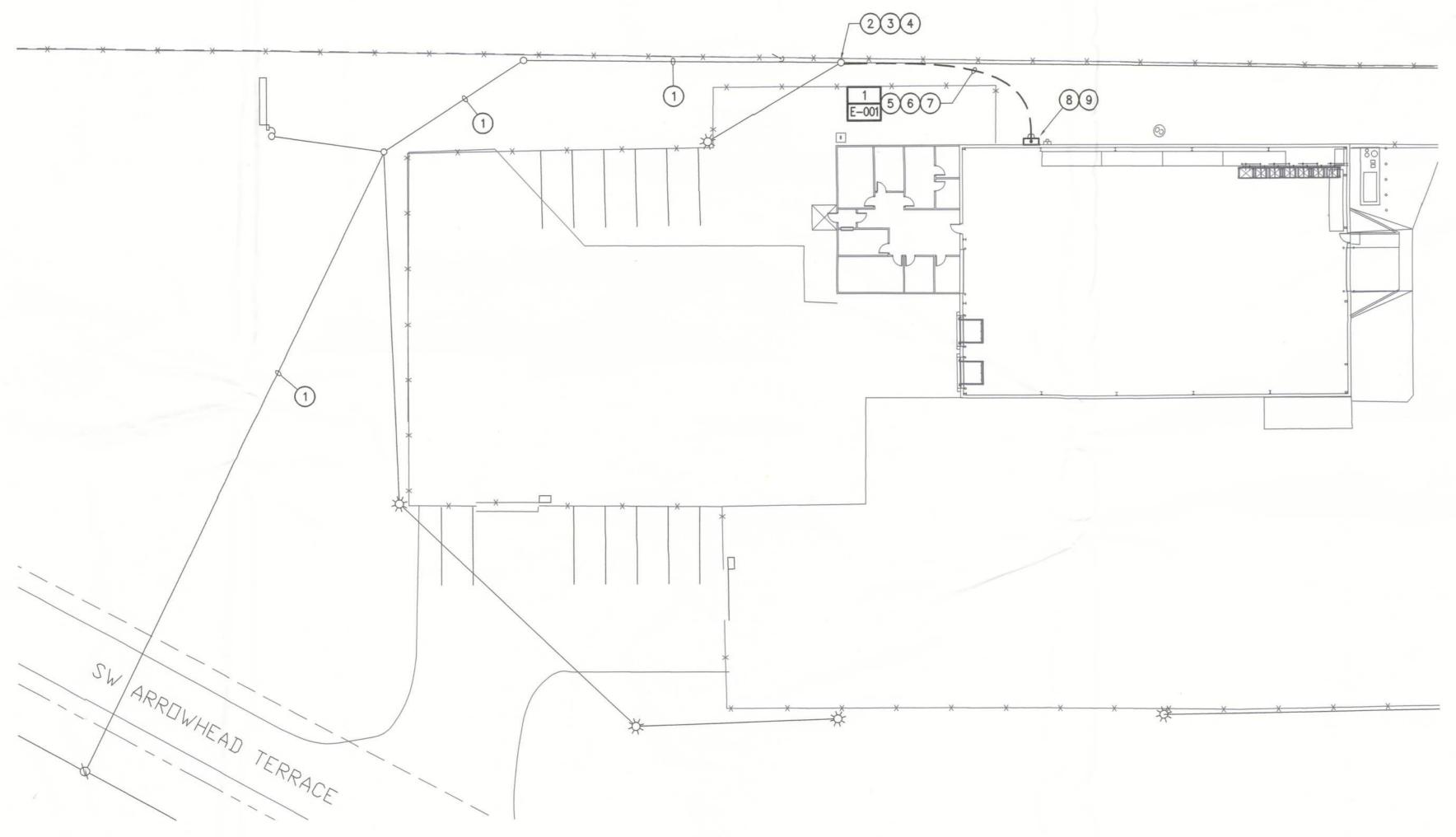












2 PROPOSED ELECTRICAL SITE PLAN
- SCALE: 1" = 20'-0"

# DRAWINGS NOTES:

- 1. ALL EXISTING ELECTRICAL EQUIPMENT IN THIS FACILITY IS NOT SHOWN FOR CLARITY, ALL EXISTING ELECTRICAL EQUIPMENT IN THIS FACILITY SHALL REMAIN IN PLACE AND OPERATIONAL UNLESS OTHERWISE DIRECTED BY THE REMOVAL NOTES.
- 2. PROVIDE ALL EQUIPMENT, FIXTURES, DEVICES, APPLIANCES, RACEWAYS, SUPPORTS, BRANCH FEEDERS, BRANCH CIRCUITRY, ACCESSORIES, ETC. SHOWN, NOTED AND/OR INDICATED ON THIS DRAWINGS.
- 3. INSTALL EQUIPMENT AS NOTED ON ALL ELECTRICAL PLANS AND AS NOTED ON THE ONE LINE DIAGRAM.
- 4. COORDINATE ELECTRICAL SERVICE INTERRUPTIONS WITH AUTHORIZED REPRESENTATIVES OF PBC AND CLAY ELECTRIC COOPERATIVE, INC.
- 5. SCHEDULE AND EXECUTE ALL WORK TO MINIMIZE THE DOWN TIME TO THE ELECTRICAL SERVICE AT THIS FACILITY.

## CODED ELECTRICAL REMOVAL NOTES:

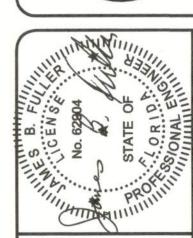
- (1) CEC's OVERHEAD, MEDIUM VOLTAGE DISTRIBUTION SHALL REMAIN.
- (2) CEC SHALL REMOVE EXISTING 10 MEDIUM VOLTAGE DISTRIBUTION.
- CEC'S TRANSFORMER POLE, GUY WIRE AND ANCHOR SHALL REMAIN OR BE REMOVED AND REPLACED BY CEC AT THEIR DISCRETION.
- CEC'S TRANSFORMER SHALL REMAIN OR BE REMOVED AND REPLACED BY CEC AT THEIR DISCRETION.
- THE SINGLE PHASE ELECTRICAL SERVICE AND METER TO THE PEPSI SIGN SHALL REMAIN.
- (6) CEC'S OVERHEAD LIGHTING FEEDERS SHALL REMAIN.
- POLE AND LIGHT FIXTURE SHALL REMAIN.
- 8 CEC SHALL DISCONNECT AND REMOVE THE OVERHEAD 240/120 VOLT SERVICE CABLES TO THE PEPSI BUILDING.
- DISCONNECT AND REMOVE THE EXISTING SERVICE MAST, WEATHERHEAD AND 9 200 AMP 10 3 WIRE SERVICE DROP CABLES.
- 10 DISCONNECT AND REMOVE THE EXISTING METER SOCKET.
- 11) DISCONNECT AND REMOVE THE EXISTING GROUNDING AT THE METER.
- (12) DISCONNECT AND REMOVE THE EXISTING GROUNDING ELECTRODE CONDUCTOR.
- SEE DRAWING E-201 FOR RELATED WORK.

# CODED ELECTRICAL NOTES - PROPOSED WORK:

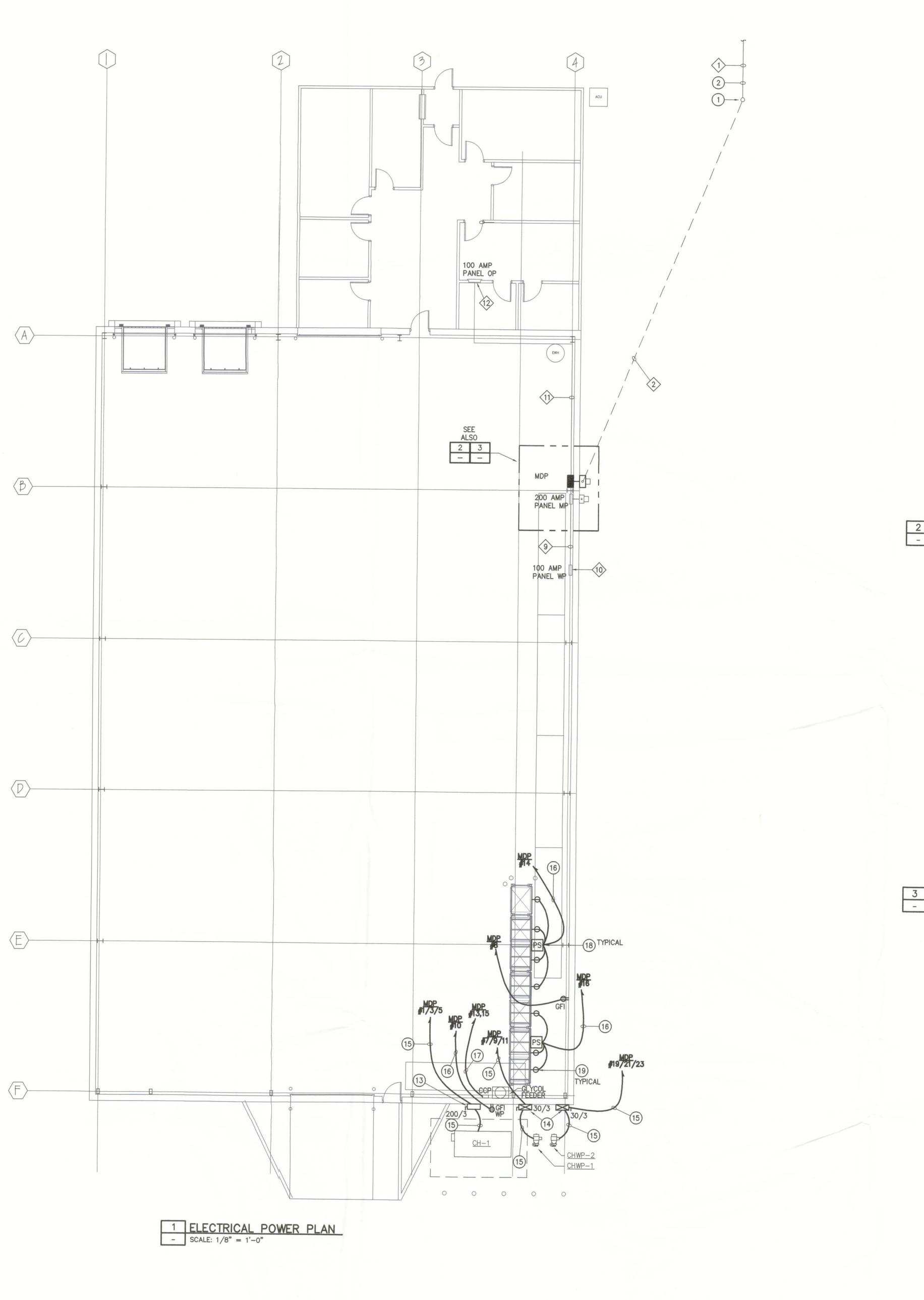
- 1) CEC SHALL PROVIDE 3 PHASE, OVERHEAD MEDIUM VOLTAGE CABLES.
- 2 CEC SHALL PROVIDE POLE. COORDINATE EXACT LOCATION WITH AN AUTHORIZED REPRESENTATIVE OF CEC.
- 3 CEC SHALL PROVIDE 3 PHASE, POLE MOUNTED TRANSFORMER BANK.
- PROVIDE RISER CONDUITS AT POLE PER THE ONE LINE DIAGRAM AND PER CEC REQUIREMENTS.
- 5 PROVIDE EXCAVATION, BACKFILL AND SITE REPAIR PER DETAIL.
- 6 PROVIDE UNDERGROUND SERVICE LATERAL CONDUITS PER THE ONE LINE DIAGRAM.
- 7) CEC SHALL PROVIDE SERVICE LATERAL CABLES.
- 8 CEC SHALL FURNISH A 240/120 VOLT, 3Ø, 4 WIRE (DELTA) METER SOCKET. THE ELECTRICAL CONTRACTOR SHALL INSTALL THE METER SOCKET PER CEC REQUIREMENTS.
- 9 PROVIDE GROUNDING, EQUIPMENT AND CONDUITS AND CABLES PER DRAWING E-201.

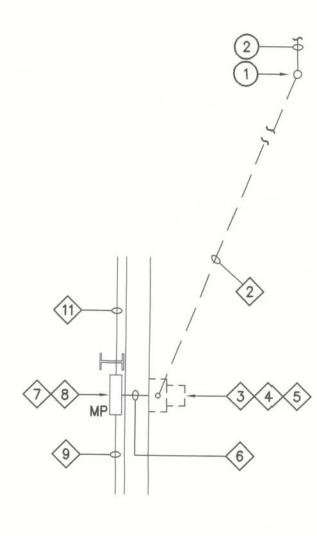




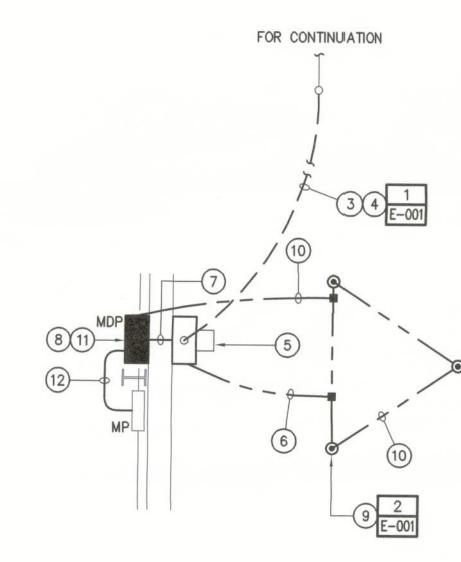








2 ENLARGED PARTIAL ELECTRICAL REMOVAL PLAN
- SCALE: 1/4" = 1'-0"



3 ENLARGED PARTIAL ELECTRICAL POWER PLAN - SCALE: 1/4" = 1'-0"

### DRAWINGS NOTES:

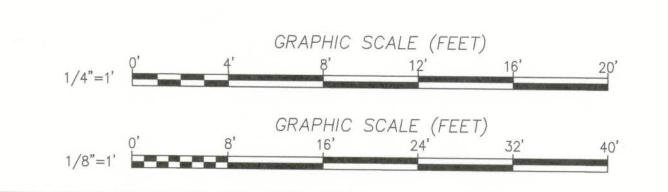
- 1. ALL EXISTING ELECTRICAL EQUIPMENT IN THIS FACILITY IS NOT SHOWN FOR CLARITY. ALL EXISTING ELECTRICAL EQUIPMENT IN THIS FACILITY SHALL REMAIN IN PLACE AND OPERATIONAL UNLESS OTHERWISE DIRECTED BY THE REMOVAL NOTES.
- 2. CIRCUITRY SHOWN IS DIAGRAMMATIC. SOME REQUIRED BRANCH CIRCUITRY MAY NOT BE SHOWN FOR CLARITY.
- 3. PROVIDE ALL EQUIPMENT, FIXTURES, DEVICES, APPLIANCES, RACEWAYS, SUPPORTS, BRANCH FEEDERS, BRANCH CIRCUITRY, ACCESSORIES, ETC. SHOWN, NOTED AND/OR INDICATED ON THIS DRAWINGS.
- 4. PULL BOXES ARE NOT SHOWN FOR CLARITY. PROVIDE PULL BOXES SIZED PER NEC REQUIREMENTS. DO NOT EXCEED MORE THAN 270° OF BENDS IN
- 5. INSTALL EQUIPMENT AS NOTED ON ALL ELECTRICAL PLANS AND AS NOTED ON THE ONE LINE DIAGRAM.
- 6. SEE DRAWING E-202 FOR INFORMATION AND REQUIREMENTS REGARDING WIRING FOR UCV'S.
- 7. COORDINATE ELECTRICAL SERVICE INTERRUPTIONS WITH AN AUTHORIZED REPRESENTATIVE OF THE CLAY ELECTRIC COOPERATIVE, INC.
- 8. SCHEDULE AND EXECUTE ALL WORK TO MINIMIZE THE DOWN TIME TO THE ELECTRICAL SERVICE AT THIS FACILITY.
- 9. SEE DRAWING E-101 FOR ADDITIONAL INFORMATION AND REQUIREMENTS.

# CODED ELECTRICAL REMOVAL NOTES:

- CLAY ELECTRIC COOPERATIVE, INC'S (CEC) EXISTING 10 OVERHEAD 240/120 VOLT FEEDER WILL BE UPGRADED TO 30 4 WIRE BY CEC.
- CEC SHALL DISCONNECT AND REMOVE 240/120V, OVERHEAD SERVICE CONDUCTORS.
- DISCONNECT AND REMOVE THE EXISTING SERVICE MAST, WEATHERHEAD AND 240/120 VOLT 10 3 WIRE SERVICE DROP CABLES.
- DISCONNECT AND REMOVE THE EXISTING METER SOCKET.
- 5 DISCONNECT AND REMOVE THE EXISTING GROUNDING AT THE METER.
- 6 DISCONNECT AND REMOVE THE CONDUITS AND CABLES FROM THE LOAD SIDE OF THE METER SOCKET TO EXISTING SERVICE PANEL MP.
- (7) EXISTING 200 AMP, 240/120 VOLT, 10 3W PANEL MP SHALL REMAIN.
- BONDING CONNECTION AT PANEL MP.
- THE CONDUIT AND THE 100 AMP, 10, 3 WIRE FEEDER CABLES FROM PANEL MP TO WAREHOUSE PANEL SHALL REMAIN.
- WAREHOUSE PANEL AND ALL BRANCH FEEDERS AND BRANCH CIRCUITRY
  THAT ORIGINATE FROM THIS PANEL SHALL REMAIN UNLESS OTHERWISE
- THE CONDUIT AND THE 100 AMP, 10, 3 WIRE FEEDER CABLES FROM PANEL MP TO OFFICE PANEL SHALL REMAIN.
- OFFICE PANEL AND ALL BRANCH FEEDERS AND BRANCH CIRCUITRY THAT ORIGINATE FROM THIS PANEL SHALL REMAIN UNLESS OTHERWISE

# CODED ELECTRICAL NOTES - NEW WORK:

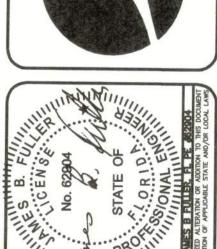
- 1 CEC SHALL PROVIDE SERVICE POLE. COORDINATE EXACT LOCATION WITH AN AUTHORIZED REPRESENTATIVE OF CEC.
- 2 CEC SHALL PROVIDE OVERHEAD, 400 AMP, 240/120 VOLT 3Ø 4 WIRE SERVICE CABLES TO RISER POLE. SEE DRAWING E-101 FOR ADDITIONAL INFORMATION AND REQUIREMENTS.
- 3 PROVIDE EXCAVATION, BACKFILL AND SITE REPAIR COMPLETE PER DETAIL.
- PROVIDE UNDERGROUND SERVICE LATERAL CONDUITS AND CABLES PER THE ONE LINE DIAGRAM AND PER CEC REQUIREMENTS.
- 5 CEC SHALL FURNISH A 240/120 VOLT, 30, 4 WIRE (DELTA) METER SOCKET WITH BY-PASS HANDLE. THE ELECTRICAL CONTRACTOR SHALL INSTALL THE METER SOCKET PER CEC REQUIREMENTS.
- 6 PROVIDE GROUNDING TO THE NEW METER SOCKET PER CEC REQUIREMENTS.
- 7 PROVIDE CONDUIT AND CABLES FROM THE NEW METER SOCKET TO NEW PANELBOARD MDP PER THE ONE LINE DIAGRAM.
- 8 PROVIDE A 240/120 VOLT, 30, 4 WIRE (DELTA) PANELBOARD MDP WITH A 400A/3P MAIN CIRCUIT BREAKER THAT IS LISTED AND LABELED AS "SUITABLE FOR USE AS SERVICE ENTRANCE EQUIPMENT". SEE THE PANELBOARD SCHEDULE AND TECHNICAL SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
- (9) PROVIDE GROUND RODS PER DETAIL AND PLAN.
- (10) PROVIDE #1/0 AWG BCW COUNTERPOISE PER PLAN.
- PROVIDE GROUNDING FOR PANELBOARD MDP AND BOND PER NEC REQUIREMENTS.
- PROVIDE CONDUIT AND CABLES PER ONE LINE DIAGRAM FROM PANELBOARD MDP TO THE EXISTING 200 AMP, 10, 3 PANEL MP.
- THE 20 TON CHILLER FURNISHED AND INSTALLED BY OTHERS. PROVIDE A 200A/3P, 250 VOLT SAFETY DISCONNECT SWITCH IN A NEMA 3R ENCLOSURE FOR THE 20 TON CHILLER.
- THE 5 HP PUMP SHALL BE FURNISHED AND INSTALLED BY THE MECHANICAL CONTRACTOR. PROVIDE A 250 VOLT, 3-POLE COMBINATION STARTER IN A NEMA 3R ENCLOSURE FOR THE 5 HP PUMP.
- (15) PROVIDE CONDUIT AND CABLE PER THE ONE LINE DIAGRAM.
- (16) PROVIDE 1/2" C. w/ (2) #10, #10 G.
- (17) PROVIDE 3/4" C. w/ (4) #10, #10 G.
- PROVIDE 15 VDC POWER SUPPLY AND WIRING COMPLETE PER DRAWING E-202.
- (19) PROVIDE 15 VDC CORD AND PLUG FOR EACH UCV INSTALLED.



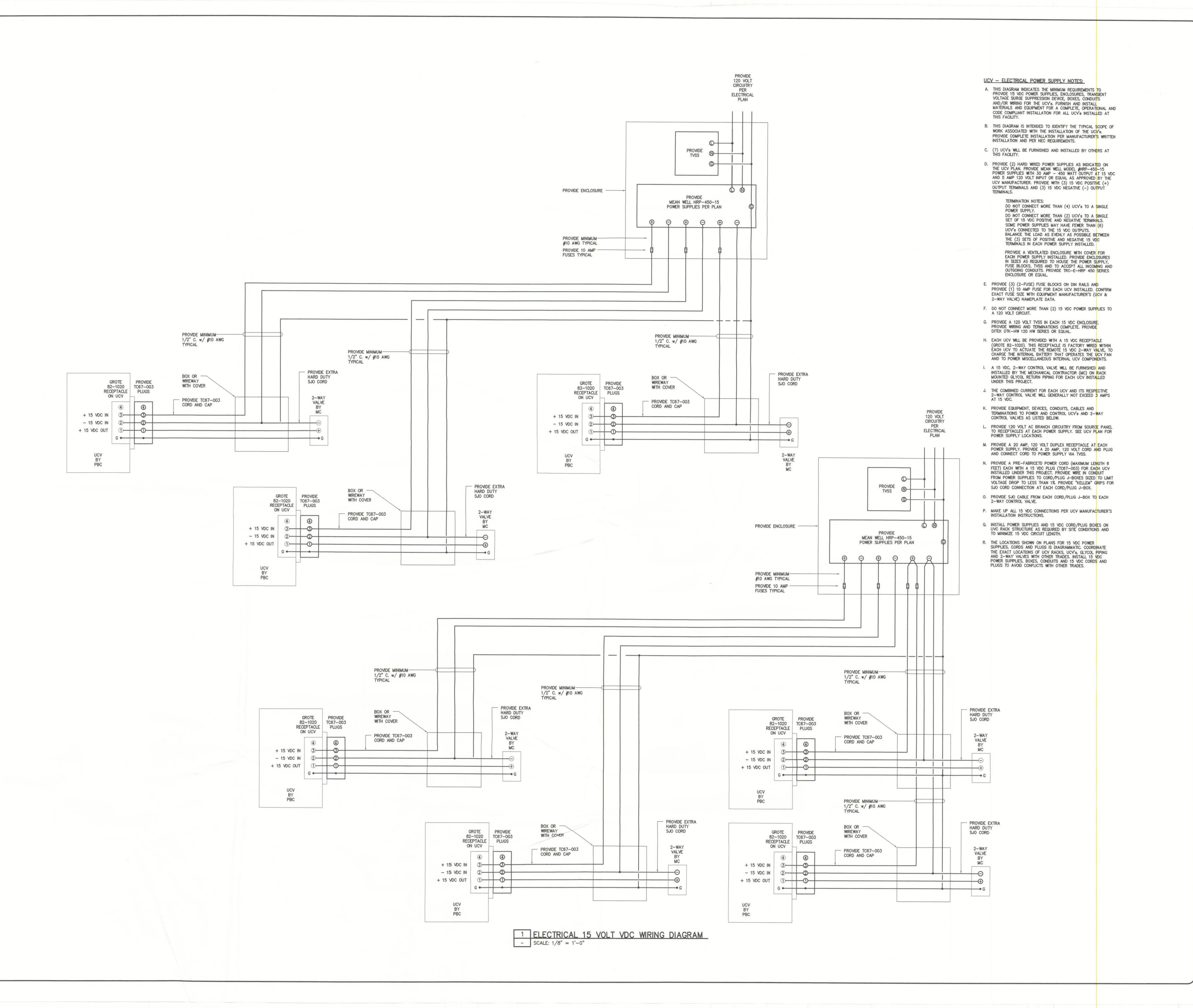




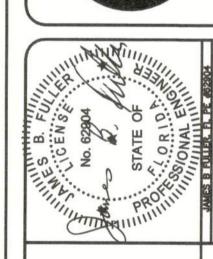




AREA OF NEW — STORAGE RACK KEY PLAN
SCALE: NOT TO SCALE







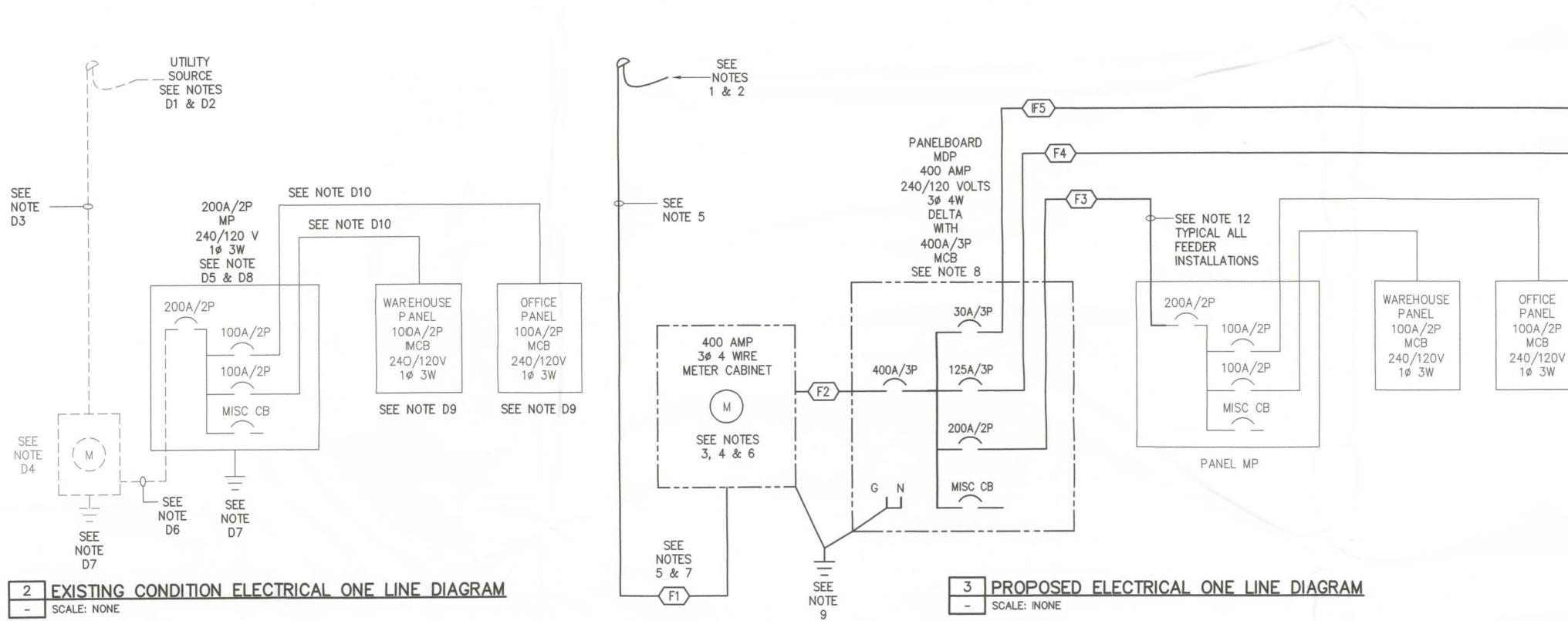
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LAKE CILY, FL
LT VDC WIRING DIAGRAM

LAKE CITY, FI 15 VOLT VDC WIRING

#### EXISTING CONDITION ONE LINE DIAGRAM NOTES:

- D1. CLAY ELECTRIC COOPERATIVE, INC. SHALL REMOVE AND REPLACE THE EXISTING SERVICE POLE AND SHALL PROVIDE A NEW SERVICE POLE AND 3-PHASE TRANSFORMER BANK.
- D2. CLAY ELECTRIC COOPERATIVE, INC. SHALL DISCONNECT AND REMOVE THE EXISTING SINGLE PHASE, OVERHEAD SERVICE CABLES.
- D3. DISCONNECT AND REMOVE THE EXISTING 200 AMP SERVICE RISER CONDUIT AND CABLES.
- D4. DISCONNECT AND REMOVE THE EXISTING 200 AMP SINGLE PHASE METER SOCKET.
- D5. THE EXISTING 200 AMP MAIN PANEL MP SHALL REMAIN.
- DISCONNECT AND REMOVE THE CABLES BETWEEN THE METER SOCKET AND THE EXISTING MAIN PANEL MP. REMOVE CONDUIT BETWEEN THE METER SOCKET AND PANEL MP AS REQUIRED BY SITE CONDITIONS.
- D7. DISCONNECT AND REMOVE THE EXISTING GROUNDING SYSTEM.
- D8. DISCONNECT AND REMOVE THE BONDING CONNECTION AT THE EXISTING PANEL MP.
- D9. THE EXISTING SUB-PANEL IN THE WAREHOUSE AREA AND THE EXISTING SUB-PANEL IN THE OFFICE AREA SHALL REMAIN. EACH PANEL HAS A 100A/2P MAIN CIRCUIT BREAKER.
- D10. EXISTING FEEDER TO SUB-PANEL SHALL REMAIN.



# ONE LINE DIAGRAM GENERAL NOTES:

- A. INSTALL NEW EQUIPMENT, CONDUITS AND CABLES TO THE GREATEST EXTEND POSSIBLE PRIOR TO REMOVAL OF EXISTING EQUIPMENT, CONDUITS AND CABLES TO MINIMIZE THE DURATION OF INTERRUPTION OF ELECTRICAL SERVICE AT THIS FACILITY.
- B. ALL EXISTING LIGHTING AND APPLIANCE PANELS SHALL REMAIN IN PLACE AND OPERATIONAL THROUGHOUT THIS PROJECT UNLESS SPECIFICALLY NOTED OTHERWISE.
- C. COORDINATE WITH AND OBTAIN WRITTEN PERMISSION FROM AN AUTHORIZED REPRESENTATIVE OF PBC PRIOR TO ANY INTERRUPTION OF POWER TO THE ELECTRICAL SERVICE AND/OR TO THE ELECTRICAL DISTRIBUTION SYSTEM.
- D. COORDINATE ALL INSTALLATION AND REMOVAL REQUIREMENTS WITH AN AUTHORIZED REPRESENTATIVE OF CLAY ELECTRIC COOPERATIVE, INC.

#### LOAD CALCULATIONS

TOTAL ADDED LOAD

MAXIMUM DEMAND DATA FROM CLAY ELECTRIC COOPERATIVE, INC. IS NOT AVAILABLE FOR THE EXISTING 200 AMP ELECTRICAL SERVICE. IT IS ASSUMED THE MAXIMUM DEMAND ON THE 200 AMP, 240/120 VOLT 1Ø 3 WIRE SERVICE DOES NOT EXCEED 80% OF THE SERVICE RATING (160 AMPS)

THE ELECTRICAL CONTRACTOR SHALL SIMULATE MAXIMUM DEMAND BY MANUALLY TURNING ON THE GREATER OF THE HEATING AND AIR CONDITIONING LOADS AS WELL AS ALL OTHER EQUIPMENT THAT WOULD CONTRIBUTE TO MAXIMUM DEMAND. THE ELECTRICAL CONTRACTOR SHALL MEASURE AND RECORD THE "MAXIMUM DEMAND" AND SEND THE INFORMATION TO THE ENGINEER.

#### LOADS ADDED UNDER THIS PROJECT:

20 TON CHILLER	106	AMP
5 HP PRIMARY CHILLER PUMP	15	AMP
5 HP STANDBY CHILLER PUMP	0	AMF
CHILLER CONTROL POWER	20	AMF
(7) UCV OUTLETS	10	AMP

160 + 151 = 311 AMPS CALCULATED MAXIMUM DEMAND UPON COMPLETION OF THIS PROJECT.

311 x 1.25 = 389 AMPS. A 400 AMP, 240/120 VOLT 3Ø 4 WIRE ELECTRICAL SERVICE WILL BE PROVIDED UNDER THIS PROJECT.

151 AMPS

PRIMARY AND STANDBY PUMPS WILL NEVER OPERATE AT THE SAME TIME

#### PROPOSED UPGRADE - ONE LINE DIAGRAM NOTES:

- COORDINATE ALL INSTALLATION REQUIREMENTS AND THE EXACT LOCATION OF THE PROPOSED SERVICE POLE FOR THE NEW 400 AMP, 3Ø 4 WIRE ELECTRICAL SERVICE WITH AN AUTHORIZED REPRESENTATIVE OF CLAY ELECTRIC COOPERATIVE, INC.
- 2. CLAY ELECTRIC COOPERATIVE, INC. SHALL PROVIDE NEW THREE PHASE, OVERHEAD MEDIUM VOLTAGE CABLES, OVERHEAD 3-PHASE ELECTRICAL SERVICE CABLES, TRANSFORMERS AND TERMINATIONS COMPLETE.
- CLAY ELECTRIC COOPERATIVE, INC. SHALL FURNISH A 400 AMP, 250 VOLT, 3Ø 4 WIRE SELF—CONTAINED METER CABINET FOR USE ON THIS PROJECT. THE ELECTRICAL CONTRACTOR SHALL INSTALL THE METER CABINET PER CLAY ELECTRIC COOPERATIVE, INC. REQUIREMENTS.
- 4. THE NEW 30 METER SHALL BE FURNISHED AND INSTALLED COMPLETE BY CLAY ELECTRIC COOPERATIVE, INC.
- 5. RISER CONDUITS, SERVICE LATERAL CONDUITS AND SERVICE LATERAL CABLES PER THE CONDUIT AND CABLE SCHEDULE AND AS NOTED ON ELECTRICAL PLANS.
- 6. TERMINATE THE SERVICE CABLES AT THE METER ENCLOSURE AND/OR AT THE NEW SERVICE ENTRANCE PANEL MDP AS DIRECTED BY CLAY ELECTRIC COOPERATIVE, INC.
- 7. PROVIDE EXCAVATION, BACKFILL AND SITE REPAIR COMPLETE.
- 8. PROVIDE NEW PANELBOARD MDP PER THIS DIAGRAM, PER THE PANELBOARD SCHEDULE AND PER THE TECHNICAL SPECIFICATIONS. PROVIDE PANELBOARD THAT IS LISTED AND LABELED AS "SUITABLE FOR SERVICE ENTRANCE EQUIPMENT".
- 9. PROVIDE GROUNDING AND BONDING PER DRAWING E-101, PER THIS DIAGRAM AND AS REQUIRED BY NEC ARTICLE 250 AND CLAY ELECTRIC COOPERATIVE, INC.
- 10. THE 20 TON CHILLER SHALL BE FURNISHED AND INSTALLED BY OTHERS. PROVIDE SAFETY DISCONNECT SWITCH IN NEMA 3R ENCLOSURE. PROVIDE CONDUIT, CABLES AND 240 VOLT CABLE TERMINATIONS COMPLETE.
- 11. THE 5 HP PUMP SHALL BE FURNISHED AND INSTALLED BY THE MECHANICAL CONTRACTOR. PROVIDE SAFETY DISCONNECT SWITCH / COMBINATION STARTER IN NEMA 3R ENCLOSURE. PROVIDE CONDUIT, CABLES AND VOLT CABLE TERMINATIONS COMPLETE.
- 12. PROVIDE BRANCH FEEDER PER CONDUIT AND CABLE SCHEDULE.

UTILITY COMPANY CONTACT INFORMATION:

20 TON

CHILLIER

240V

106 MICA

SEE NOTE

10

CHILLER

PUMP

240V

3ø

15.2 FLA

SEE NOTE

TYPICAL

FOR (2)

**PUMPS** 

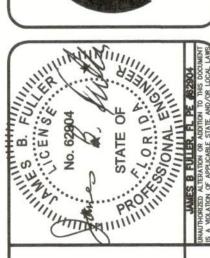
CHWP-1

CHWP-2

DEWITT LAW DISTRICT ENGINEER 386961-0103 dlaw@clayelectric.com

	ONE LINE DIAGRAM - CONDUIT & CABLE	SCHEDULE
TAG	DESCRIPTION	REMARKS
(F1)	PROVIDE (2) 4 INCH CONDUITS EACH WITH PULL ROPE PROVIDE WEATHERHEAD ON EACH CONDUIT AT SERVICE RISER POLE	SERVICE LATERAL CABLES BY CEC
F2	PROVIDE 4" C. w/ (3) #500 kcmil, #4/0 NEUTRAL & #3 G.	
(F3)	PROVIDE 2" C. w/ (3) #3/0, #6 G.	
F4	PROVIDE 1-1/2" C. w/ (3) #1, #6 G.	
(F5)	PROVIDE 3/4" C. w/ (3) #8, #8 G.	

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L ONE LINE DIAGRAM

LAKE CITY, FI

INSTALL WIREWAYS, CONDUITS AND/OR CABLE TRAY AS SHOWN IN THIS PHOTOGRAPH. CONDUITS SHALL NOT TERMINATE AT THE TOP OF SWITCHBOARDS, PANELS AND MOTOR CONTROL CENTERS. DROP STRAIGHT DOWN TO THE SIDE OF EQUIPMENT WITHOUT OFFSETS.

1 EQUIPMENT AND RACEWAY INSTALLATION SCALE: NONE



INSTALL CABLES TO SIDES OF TRAY IN A NEAT MANNER ON CABLE TRAY AND TIE DOWN IN SETS AS SHOWN IN THIS PHOTOGRAPH.



PROVIDE WIREWAYS AT DOOR CONTROLLERS, DOCK LEVELERS. ETC. AS

STEP 1 - PUNCH HOLES IN ROOF OR FLOOR DECKING



STEP 4 - ATTACH VERTICAL DROP OF





COORDINATE EXACT ROUTING OF WIREWAYS, CONDUITS AND/OR CABLE TRAY WITH OTHER TRADES AS SOON AS POSSIBLE TO AVOID CONFLICTS.

2 RACEWAY COORDINATION



DO NOT INSTALL VERTICAL CONDUITS WITH OFFSETS AS SHOWN IN THIS

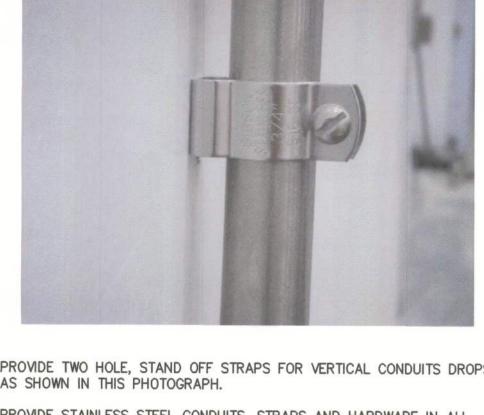
7 CONDUIT DROPS TO DEVICES
- SCALE: NONE





PROVIDE FS BOXES IN ALL AREAS. INSTALL VERTICAL CONDUITS WITHOUT OFFSETS AS SHOWN IN THIS PHOTOGRAPH. PROVIDE STAINLESS STEEL CONDUITS AND BOXES IN ALL PROCESS AREAS FOR DROPS TO DEVICES.

8 WALL DEVICES AND CONDUIT DROPS
- SCALE: NONE



WHEN USING CABLE TRAY, PROVIDE FACTORY MADE 90 DEGREE BENDS TO

TURN TO HORIZONTAL AND TERMINATE WIREWAY AT CABLE TRAY. DO NOT

INSTALL HORIZONTAL RUNS BELOW ROOF SUPPORT STRUCTURAL STEEL AND

4 WIREWAY TO CABLE TRAY TERMINATIONS

- SCALE: NONE

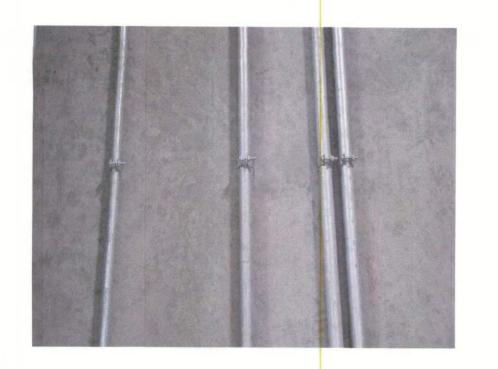
PROVIDE TWO HOLE, STAND OFF STRAPS FOR VERTICAL CONDUITS DROPS AS SHOWN IN THIS PHOTOGRAPH. PROVIDE STAINLESS STEEL CONDUITS, STRAPS AND HARDWARE IN ALL PROCESS AREAS FOR DROPS TO DEVICES.

9 WALL MOUNT CONDUIT STRAPS
- SCALE: NONE



INSTALL TRANSFORMER HIGH ON WALL AND ADJACENT TO VERTICAL WIREWAYS FOR PRIMARY AND SECONDARY CABLE CONNECTS. FLEXIBLE SEALTIGHT CONNECTIONS SHALL BE LESS THAN 3 FEET IN LENGTH.

5 WALL MOUNT TRANSFORMER INSTALLATION - SCALE: NONE



PROVIDE TWO HOLE, STAND OFF STRAPS FOR VERTICAL CONDUITS DROPS AS SHOWN IN THIS PHOTOGRAPH.

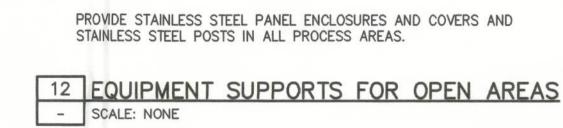
PROVIDE STAINLESS STEEL CONDUITS, STRAPS AND HARDWARE IN ALL PROCESS AREAS FOR DROPS TO DEVICES. ALIGN STRAPS AND COUPLINGS WHEN MULTIPLE CONDUIT DROPS ARE INSTALLED IN THE SAME AREA.

10 WALL MOUNT CONDUIT STRAPS
- SCALE: NONE



SHOWN IN THIS PHOTOGRAPH TO MINIMIZE CONDUIT BENDS AND THE USE OF CONDULETS.

11 OVERHEAD DOOR CONTROLLER SCALE: NONE



PROVIDE PIPE FRAME CORE DRILLED INTO FLOOR FOR PANELS AND

EQUIPMENT THAT IS INSTALLED IN OPEN AREAS AS SHOWN IN THIS



EXAMPLE OF A SATISFACTORY INSTALLATION FOR DOCK LEVELER CONTROL PANELS.

13 DOCK LEVELER PANEL - SCALE: NONE



PROVIDE TWO HOLE, STAND OFF STRAPS FOR VERTICAL COMDUITS DROPS ON COLUMNS AS SHOWN IN THIS PHOTOGRAPH. PROVIDE STAINLESS STEEL CONDUITS, STRAPS AND HARDWARE IN ALL PROCESS AREAS FOR DROPS TO DEVICES. DO NOT PAINT CONDUITS OR BOXES.

14 CONDUITS ON COLUMN'S
- SCALE: NONE



PROVIDE TWO HOLE, STAND OFF STRAPS FOR VERTICAL CONDUITS DROPS TO SECURITY DEVICES AS SHOWN IN THIS PHOTOGRAPH. PROVIDE STAINLESS STEEL CONDUITS, STRAPS AND HARDWARE IN ALL PROCESS AREAS FOR DROPS TO DEVICES. DO NOT PAINT CONDUITS OR BOXES. COORDINATE SECURITY REQUIREMENTS AND PREPARE FRAMES AND DOORS

15 SECURITY DEVICES SCALE: NONE



PROVIDE CONCRETE FILLED STEEL BOLLARDS SIMILAR TO THOSE SHOWN IN COORDINATE EXACT LAYOUT AND INSTALLATION REQUIREMENTS WITH AN AUTHORIZED REPRESENTATIVE OF THE LOCAL UTILITY COMPANY.

16 TRANSFORMER BOLLARDS SCALE: NONE

# GENERAL NOTES:

PRIOR TO DELIVERY.

1. ALL PHOTOGRAPHIC "DETAILS" INCLUDED ON THIS DRAWING MAY NOT BE APPLICABLE TO THIS PROJECT.

- 2. PHOTOGRAPHS SHOWN ON THIS DRAWING THAT ARE APPLICABLE TO THIS PROJECT REPRESENT THE MINIMUM REQUIREMENTS FOR INSTALLATIONS OF EQUIPMENT, FIXTURES, DEVICES AND RACEWAYS FOR ALL PBC FACILITIES.
- 3. THE ELECTRICAL CONTRACTOR SHALL INSTALL ALL EQUIPMENT, FIXTURES, DEVICES, RACEWAYS, ETC. TO MEET THESE STANDARDS.
- CONFORMING MATERIALS AND METHODS BY THE ELECTRICAL CONTRACTOR AT NO ADDITIONAL COST TO PBC.

4. ANY AND ALL INSTALLATIONS THAT DO NOT CONFORM TO THESE REQUIREMENTS SHALL BE REMOVED AND REPLACED WITH

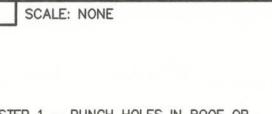
5. LITHONIA LIGHT FIXTURES ARE THE ACCEPTED STANDARD FOR PBC FACILITIES. ALL LAMPS SHALL BE SHATTER PROOF (COATED WITH ENCAPSULITE OR EQUAL).

6. RE-LOCK TYPE ELECTRICAL DISTRIBUTION SYSTEMS FOR LIGHTING ARE ACCEPTABLE IN WAREHOUSE AND PROCESS AREAS AS

- ALLOWED BY NEC AND LOCAL CODES. PROVIDE FOR EACH FIXTURE A TWISTLOCK RECEPTACLE, PLUG AND CORD OR "PLUG AND 7. STANDARD PRACTICE IS TO PROVIDE A DEDICATED MOTION SENSOR FOR EACH FIXTURE INSTALLED. COORDINATE THE INSTALLATION
- REQUIREMENTS FOR MOTION SENSORS AND/OR LIGHT SENSORS WITH PBC.
- 8. ANY AND ALL INSTALLED WORK THAT DOES NOT MEET THE REQUIREMENTS OF THE PROJECT DOCUMENTS AND/OR PBC STANDARDS SHALL BE REMOVED AND REWORKED AT NO ADDITIONAL COST TO PBC.
- 9. THE USE OF "UNISTRUT" OR "KINDORF" U-TYPE CHANNEL PRODUCTS IS NOT ALLOWED IN ANY AREAS OF A PBC FACILITY.
- 10. PROVIDE RIGID METALLIC CONDUIT (RMC) FOR ALL CONDUIT INSTALLATIONS WITHIN 10 FEET OF FINISHED FLOORS. A TRANSITION TO EMT CONDUIT IS ALLOWED ABOVE 10 FEET ABOVE FINISHED FLOORS. ALIGN TRANSITION POINTS WHERE CONDUIT DROPS ARE GROUPED IN A CLOSE AREA. PROVIDE STAINLESS STEEL CONDUIT IN ALL "PROCESS AREAS".
- 11. VERTICAL CONDUIT DROPS ARE ALLOWED FOR 1/2", 3/4" AND 1" TRADE SIZE CONDUITS ONLY WHEN SUPPLYING DEVICES AND MISCELLANEOUS EQUIPMENT.
- 12. HORIZONTAL CONDUIT INSTALLATIONS ARE NOT ALLOWED BELOW THE BOTTOM LEVEL OF ROOF STRUCTURAL STEEL.
- 13. PROVIDE WIREWAY IN LIEU OF CONDUIT FOR VERTICAL DROPS THAT REQUIRE 1-1/4" CONDUIT AND LARGER.

ROUTE CONDUCTORS THROUGH THE PULL BOX AND DOWN INTO THE SECTION THAT SUPPLIES EACH FEEDER.

- 14. PROVIDE WIREWAY FOR VERTICAL DROPS FOR FEEDERS TO PANELS, SWITCHBOARDS AND MOTOR CONTROL CENTERS. 15. PROVIDE VERTICAL WIREWAY FOR MULTIPLE BRANCH CIRCUITS AND FEEDERS FROM PANELS, SWITCHBOARDS AND MOTOR CONTROL
- CENTERS. PROVIDE MEANS TO SPACE AND SUPPORT CONDUCTORS IN WIREWAYS AS REQUIRED BY NEC. 16. CONDUCTORS SHALL NOT PASS THROUGH SECTIONS OF SWITCHBOARDS PER NEC ARTICLE 408.3 (A) (3). WHERE SWITCHBOARDS WITH MULTIPLE DISTRIBUTION SECTIONS ARE INSTALLED PROVIDE A CUSTOM PULL BOX THE SAME SIZE AS THE TOP OF THE DISTRIBUTION SECTIONS. INSTALL BOX ON TOP OF THE SWITCHBOARD. INSTALL VERTICAL WIREWAY TO THE SIDES OF THE PULL BOX.





AIRCRAFT CABLE



STEP 2 - ALIGN HANGER



"CADDY" PART NUMBERS

Part Number	Description	Std Box Qty
TDH	3/8" plain hole	50
TDHT4	1/4"-20 nut	50
TDHT6	3/8"-16 nut	50
TDHM6	6 mm nut	50
TDHM8	8 mm nut	50
TDHM10	10 mm nut	50
TDHP2	Deck Hanger Punch	1
TDHP2PR10	Replacement Punch (requires 2 per punch)	2

Check with deck manufacturer for recommended load capacity.

17 DECK HANGING SYSTEM FOR LIGHT FIXTURES



STEP 3 - SLIDE THE RETAINING BAR

THROUGH THE HOLES

LIGHT FIXTURE INSTALLATION REQUIREMENTS:

 INSTALL HANGERS WITH MATERIALS AND METHODS AS NOTED IN THE ADJACENT EXAMPLES.

PROVIDE AIRCRAFT CABLE AND SECURE

MAIN VERTICAL CABLES TO THE HANGERS AT EACH END OF THE LIGHT FIXTURES. 3. FABRICATE AN INVERTED Y CABLE FROM THE BOTTOM OF EACH MAIN CABLE AND

CONNECT EACH LEG OF THE Y TO A CORNER OF THE LIGHT FIXTURE TO KEEP

THE BOTTOM OF EACH FIXTURE PARALLEL

WITH THE FLOOR BELOW AND TO MINIMIZE

4. INSTALL ALL FIXTURES IN COMMON AREAS AT THE SAME ELEVATION. DO NOT FOLLOW THE SLOPE OF THE DECK.

SWAY OF THE SUPPORTED FIXTURES.



EXAMPLE OF A SATISFACTORY INSTALLATION FOR MOTOR CONTROL CENTER ON RAISED CONCRETE PAD. EXPOSED CONCRETE SHALL NOT BE MORE THAN AS SHOWN IN THIS PHOTO.

18 RAISED CONCRETE PADS FOR FREE STANDING EQUIPMENT - SCALE: NONE

17. AS ALLOWED, INSTALL VERTICAL CONDUIT DROPS WITH MINIMUM BENDS POSSIBLE. WHERE MULTIPLE CONDUIT DROPS ARE INSTALLED IN THE SAME AREA, ANY BENDS THAT ARE REQUIRED SHALL BE MADE IN THE SAME FASHION AND LOCATION FOR ALL CONDUIT

PEPSI ELECTRIC DETAILS

ANDARD

BEVERAGES (LAKE CITY, I

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