

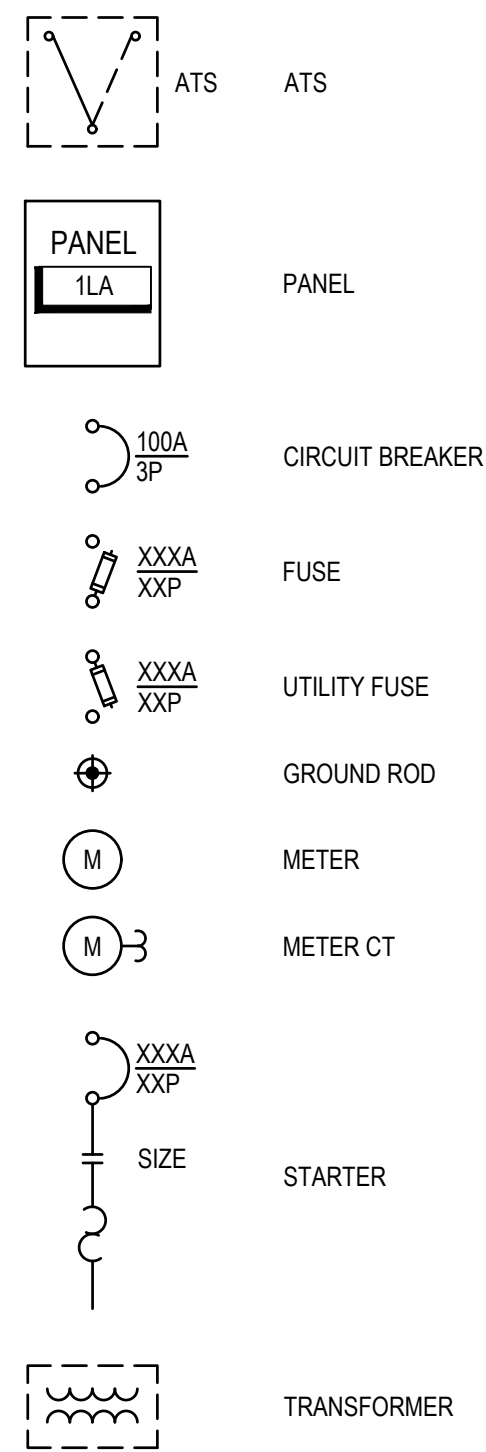
REPLACE 911 UPS AND TEMPORARY GENERATOR PROVISION

SHERIFF OFFICE
COUNTY OF MENDOCINO
589 LOW GAP ROAD
UKIAH, CA

OWNER:
DOUG ANDERSON
COUNTY OF MENDOCINO
841 LOW GAP ROAD
UKIAH, CA 95482
(707) 234-6654
anderson@co.mendocino.ca.us

PROJECT MANAGER:
MICHAEL BURKE
BROKAW DESIGN
P.O. BOX 3103
ROHNERT PARK, CA 94928
(707) 536-6635
mike.burke@brokawdesign.com

DIAGRAMS



ABBREVIATIONS

A	AMPERES
AC	ALTERNATING CURRENT
AF	AMP FRAME
AFD	ADJUSTABLE FREQUENCY DRIVE
A.F.F.	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AHJ	AUTHORITY HAVING JURISDICTION
AHU	AIR HANDLING UNIT
AIC	AMPS INTERRUPTING CAPACITY
AL	ALUMINUM
ANN	ANNUNCIATOR
APPROX	APPROXIMATE
ARF	ABOVE RAISED FLOOR
ATS	AUTOMATIC TRANSFER SWITCH
AWG	AMERICAN WIRE GAUGE
BAT	BATTERY
BFG	BELOW FINISH GRADE
CATV	CABLE TELEVISION
C	CENTERLINE
C.CND	CONDUIT
CB	CIRCUIT BREAKER
CCTV	CLOSED CIRCUIT TELEVISION
CKT	CIRCUIT
CO	CONDUIT ONLY
COMM	COMMUNICATIONS
CONST	CONSTRUCTION
CONT	CONTINUED
CP	CONTROL PANEL
CPT	CONTROL POWER TRANSFORMER
CS	CONTROLLED SWITCHED RECEPTACLE
CT	CURRENT TRANSFORMER
CU	COPPER
DC	DIRECT CURRENT
(D)	DEMOLITION
DWG	DRAWING
(E)	EXISTING
EA	EACH
EF	EXHAUST FAN
EGU	ENGINE GENERATOR UNIT
EM	EMERGENCY LIGHT W/BATTERY BACKUP
EMT	ELECTRICAL METALLIC CONDUIT
ENT	ELECTRICAL NON-METALLIC CONDUIT
EP	EXPLOSION PROOF
EQ	EQUAL
EQUIV	EQUIVALENT
EWC	ELECTRIC WATER COOLER
(F)	FUTURE
FA	FIRE ALARM
FACP	FIRE ALARM CONTROL PANEL
FC	FAN COIL
FDR	FEEDER
FLUOR	FLUORESCENT
FU	FUSE
G, GND	GROUND
GFCI	GROUND FAULT CIRCUIT INTERRUPTER
GFI	GROUND FAULT INTERRUPTER
GFR	GROUND FAULT RELAY
HID	HIGH INTENSITY DISCHARGE
HO	CONTROL SWITCH, "HAND - OFF"
HOA	CONTROL SWITCH, "HAND - OFF - AUTO"
HOR	CONTROL SWITCH, "HAND - OFF - REMOTE"
HP	HORSE POWER
HPS	HIGH PRESSURE SODIUM
HV	HIGH VOLTAGE
HVAC	HEATING, VENTILATION & AIR-COND.
IC	INTERRUPTING CAPACITY
IG	ISOLATED GROUND
IMC	INTERMEDIATE METAL CONDUIT
JB	JUNCTION BOX
KV	KILO VOLT
KVA	KILO VOLT-AMP
KW	KILO WATT
KWH	KILO WATT-HOUR
LPS	LOW PRESSURE SODIUM
LTG	LIGHTING
LV	LOW VOLTAGE
MAX	MAXIMUM
MC	METAL-CLAD
MCC	MOTOR CONTROL CENTER
MCP	MOTOR CIRCUIT PROTECTOR
MFR, MFGR	MANUFACTURER
MH	METAL HALIDE
MIN	MINIMUM
MLO	MAIN LUGS ONLY
MDP	MAIN DISTRIBUTION BOARD
MSB	MAIN SWITCHBOARD
MTD	MOUNTED
MTS	MANUAL TRANSFER SWITCH
MV	MEDIUM VOLTAGE
(N)	NEW
N, NEUT	NEUTRAL
N/A	NOT APPLICABLE
NC	NORMALLY CLOSED
NIC	NOT IN CONTRACT
NL	NIGHT LIGHT
NO	NORMALLY OPEN
NTS	NOT TO SCALE
OC	ON CENTER
PNL	PANEL
PT	POTENTIAL TRANSFORMER
PVC	POLYVINYL CHLORIDE
PB	PULL BOX, ELECTRICAL
(R)	RELOCATE
RECP	RECEPTACLE, OUTLET
REQ	REQUIRED
RSS, RSG	RIGID GALVANIZED STEEL CONDUIT
RTU	REMOTE TERMINAL UNIT
SP	SPACE, SPARE
SS	STAINLESS STEEL
STD	STANDARDS, APPLICABLE
SW	SWITCH
SWBD	SWITCHBOARD
SWGR	SWITCHGEAR
TP	TAMPER PROOF
TV	TELEVISION
TVSS	TRANSIENT VOLT. SURGE SUPPRESSOR
TYP	TYPICAL
UF	UNDER FLOOR
UG	UNDER GROUND
U.O.N.	UNLESS OTHERWISE NOTED
UPS	UNINTERRUPTABLE POWER SUPPLY
V	VOLT
VA	VOLT-AMP
VFD	VARIABLE FREQUENCY DRIVE
W	WITH
W/O	WITHOUT
WH	WATER HEATER
WHM	WATT-HOUR METER
WP	WEATHER PROOF

ELECTRICAL SHEET INDEX

E001	ELECTRICAL LEGEND AND ABBREVIATIONS
E101	ELECTRICAL PLAN
E-501	ELECTRICAL DIAGRAMS

DEVICES

	JUNCTION BOX - WALL MOUNTED +18" A.F.F. U.O.N.
	JUNCTION BOX - FLOOR MOUNTED
	JUNCTION BOX - CEILING MOUNTED
	POWER OUTLET, DUPLEX - WALL MOUNTED +18" A.F.F. U.O.N.
	POWER OUTLET, DEDICATED DUPLEX - WALL MOUNTED +18" A.F.F. U.O.N.
	POWER OUTLET, SWITCHED DUPLEX - +18" A.F.F. U.O.N.
	POWER OUTLET, FOURPLEX - WALL MOUNTED +18" A.F.F. U.O.N.
	POWER OUTLET, DEDICATED FOURPLEX - WALL MOUNTED +18" A.F.F. U.O.N.
	POWER OUTLET, SIMPLEX - WALL MOUNTED +18" A.F.F. U.O.N.
	POWER OUTLET, DEDICATED SIMPLEX - WALL MOUNTED +18" A.F.F. U.O.N.
	POWER OUTLET, DUPLEX - FLOOR MOUNTED, FLUSH LID U.O.N.
	POWER OUTLET, DEDICATED DUPLEX - FLOOR MOUNTED, FLUSH LID U.O.N.
	POWER OUTLET, FOURPLEX - FLOOR MOUNTED, FLUSH LID U.O.N.
	POWER OUTLET, DEDICATED FOURPLEX - FLOOR MOUNTED, FLUSH LID U.O.N.
	POWER OUTLET, DUPLEX - CEILING MOUNTED
	POWER OUTLET, DEDICATED DUPLEX - CEILING MOUNTED
	POWER OUTLET, FOURPLEX - CEILING MOUNTED
	POWER OUTLET, DEDICATED FOURPLEX - CEILING MOUNTED
	DATA OUTLET - WALL MOUNTED +18" A.F.F. U.O.N.
	VOICE OUTLET - WALL MOUNTED +18" A.F.F. U.O.N.
	VOICE/DATA OUTLET - WALL MOUNTED +18" A.F.F. U.O.N.
	DATA OUTLET - FLOOR MOUNTED
	VOICE OUTLET - FLOOR MOUNTED
	VOICE/DATA OUTLET - FLOOR MOUNTED
	VOICE OUTLET - CEILING MOUNTED
	VOICE/DATA OUTLET - CEILING MOUNTED
	DATA OUTLET - CEILING MOUNTED
	TV OUTLET, WALL MOUNTED
	SIGNAL - WALL MOUNTED
	SPEAKER BACK BOX - WALL MOUNTED
	SPEAKER BACK BOX - CEILING MOUNTED
	WIRE MOLD
	DOOR CONTACT
	CLOCK/ BELL/ INTERCOM DEVICE

CONTROLS

	SWITCH, SINGLE CONTROL - WALL MOUNTED +42" A.F.F. U.O.N.
	SWITCH, 3-WAY CONTROL - WALL MOUNTED +42" A.F.F. U.O.N.
	SWITCH, 4-WAY CONTROL - WALL MOUNTED +42" A.F.F. U.O.N.
	SWITCH, MOTOR RATED - NOTED MOUNTING
	SWITCH, DIMMER CONTROL - WALL MOUNTED +42" A.F.F. U.O.N.
	SWITCH, VACANCY CONTROL - SINGLE POLE - WALL MOUNTED +42" A.F.F. U.O.N.
	SWITCH, VACANCY CONTROL - DUAL POLE - WALL MOUNTED +42" A.F.F. U.O.N. (FAN CONTROL SHALL BE PROVIDED WITH TIME DELAY)
	LV SWITCH, SINGLE ON/OFF WITH DIMMER - WALL MOUNTED +42" A.F.F. U.O.N.
	LV SCENE SWITCH - WALL MOUNTED +42" A.F.F. U.O.N. (NUMBER OF SCENE BUTTONS AS INDICATED)
	LV MASTER CONTROL - WALL MOUNTED +42" A.F.F. U.O.N.
	LV VACANCY SENSOR CONTROL - CEILING MOUNTED
	LV DAYLIGHTING SENSOR CONTROL - DUAL ZONE - CEILING MOUNTED
	PLUG LOAD CONTROLLER - MOUNT IN ACCESSIBLE LOCATION
	ROOM LIGHTING CONTROLLER - MOUNT IN ACCESSIBLE LOCATION (NUMBER OF ZONES AS INDICATED)
	SWITCH, PHOTO CELL
	ASTRONOMICAL TIME CLOCK

EQUIPMENT

	DISCONNECT, NON-FUSED
	DISCONNECT, WITH FUSE
	STARTER, NON-FUSED
	STARTER, WITH FUSE
	DIVISION 15 FAN
	STARTER, WITH CIRCUIT BREAKER
	PANELBOARD FLUSH
	PANELBOARD SURFACE
	ENCLOSURE FLUSH
	ENCLOSURE SURFACE
	DISTRIBUTION BOARD
	METER SECTION
	MOTOR
	MTB
	SITE PULL BOX / VAULT
	TRANSFORMER

CIRCUITING

	ELECTRICAL CIRCUIT - CONCEALED
	ELECTRICAL CIRCUIT - EXPOSED
	ELECTRICAL CIRCUIT - UNDER FLOOR, GROUND OR SLAB
	ELECTRICAL CIRCUIT - HOME RUN
	ELECTRICAL CIRCUIT - STUB OUT
	ELECTRICAL CIRCUIT - STUB DOWN
	ELECTRICAL CIRCUIT - STUB UP
	ELECTRICAL CIRCUIT - COMPLETE CONNECTION OF EQUIPMENT OR DEVICE

MISCELLANEOUS

	DEMO KEYED NOTE TAG
	ELECTRICAL EQUIPMENT TAG
	KEYED NOTE TAG
	LIGHT FIXTURE TAG
	MECHANICAL EQUIPMENT TAG
	REVISION DELTA
	EQUIPMENT MANUFACTURER'S IDENTIFICATION NUMBER

ADA REQUIREMENTS

- ALL HEIGHTS ARE TO CENTERLINE OF DEVICE
- FOLLOW ALL ADA REQUIREMENTS FOR DEVICE MOUNTING:
 - MAX UNOBSTRUCTED FORWARD REACH 48-INCHES TO TOP OF DEVICE.
 - MIN UNOBSTRUCTED FORWARD REACH 15-INCHES TO BOTTOM OF DEVICE.
 - MAX OBSTRUCTED FORWARD REACH 44-INCHES TO TOP OF DEVICE.
 - MAX OBSTRUCTED SIDE REACH 46-INCHES TO TOP OF DEVICE.

APPLICABLE CODES AND STANDARDS

- INCORPORATED DOCUMENTS
- Requirements of the general conditions, supplementary conditions, and division 1. sections apply to all work in this section, unless modified herein.
 - Published specifications, standard tests or recommended methods of trade, industry or government organizations apply to work of this section where cited by abbreviations noted below, unless modified herein.
 - NATIONAL ELECTRICAL CODE, LATEST EDITION, (NEC).
 - NEMA STANDARDS
 - UNDERWRITERS' LABORATORIES, INC. (UL).
 - LOCAL UTILITY COMPANY REGULATIONS.
 - NATIONAL FIRE PROTECTION ASSOCIATION (NFPA)

REVISION	DESCRIPTION	INITIAL	DATE



CONSULTANT:

BrokawDesign

PO BOX 3103
ROHNERT PARK, CA 94928
WWW.BROKAWDESIGN.COM

PROJECT:
SHERIFF - OFFICE 911
UPS REPLACEMENT
AND TEMPORARY
GENERATOR
PROVISIONS

589 LOW GAP ROAD
UKIAH, CA.

ASSESSORS PARCEL NO X

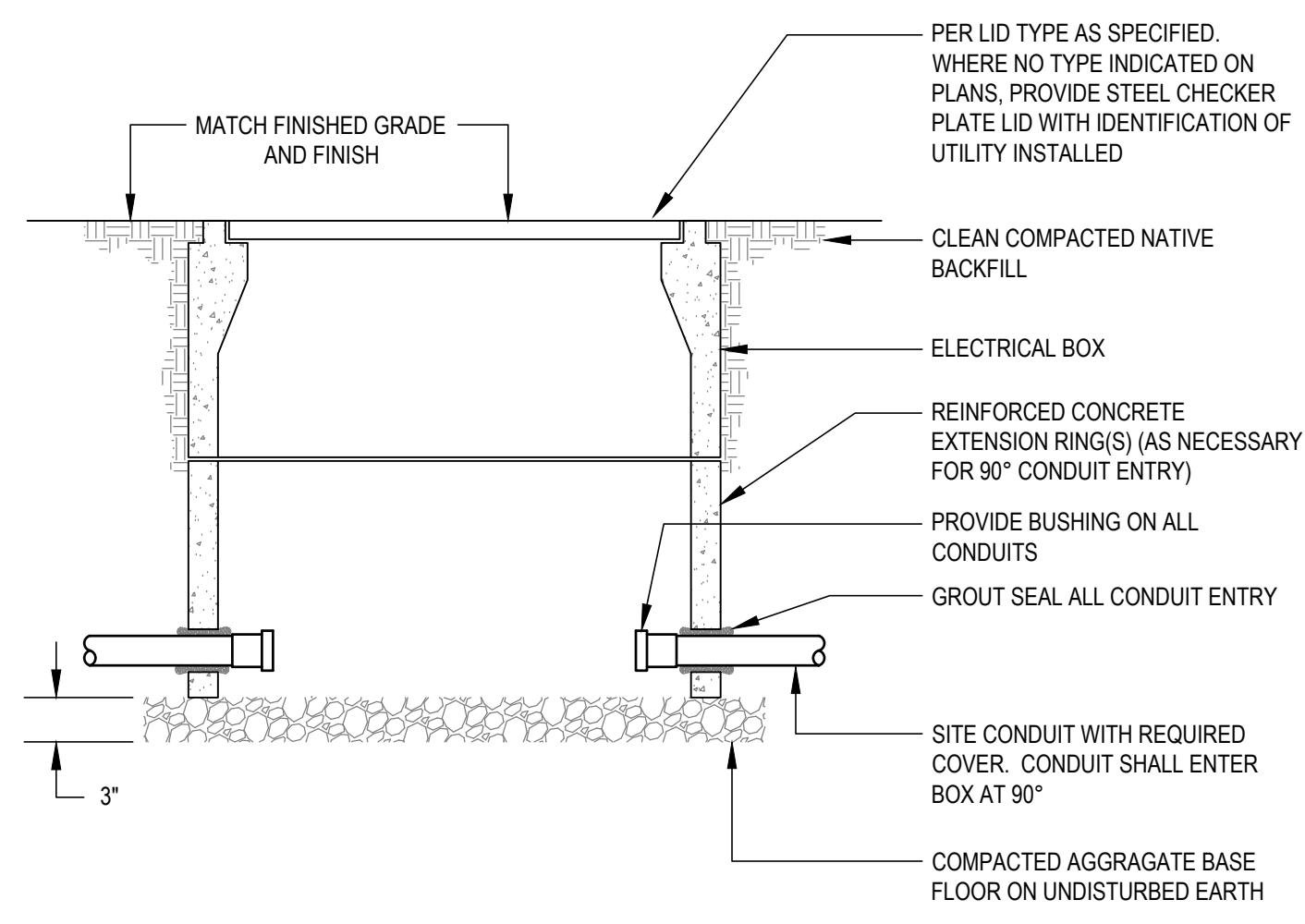
ELECTRICAL LEGEND AND ABBREVIATIONS

ISSUE DATE:	NOVEMBER 18, 2019
PREPARATION AND REVIEW	
DRAWN BY:	MB
DESIGNER:	MB
PROJ MGR:	
PEER REVIEW:	CLB

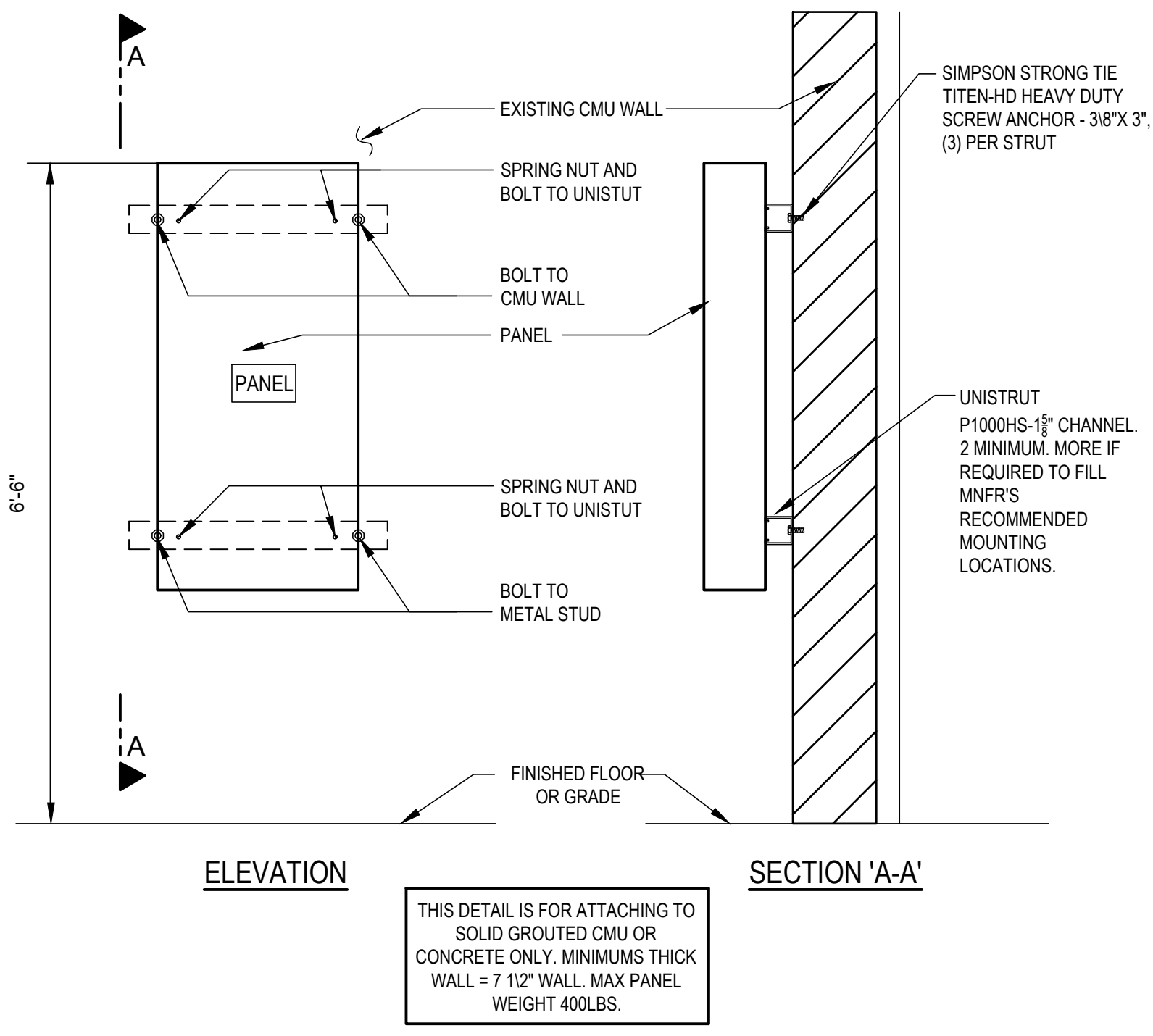
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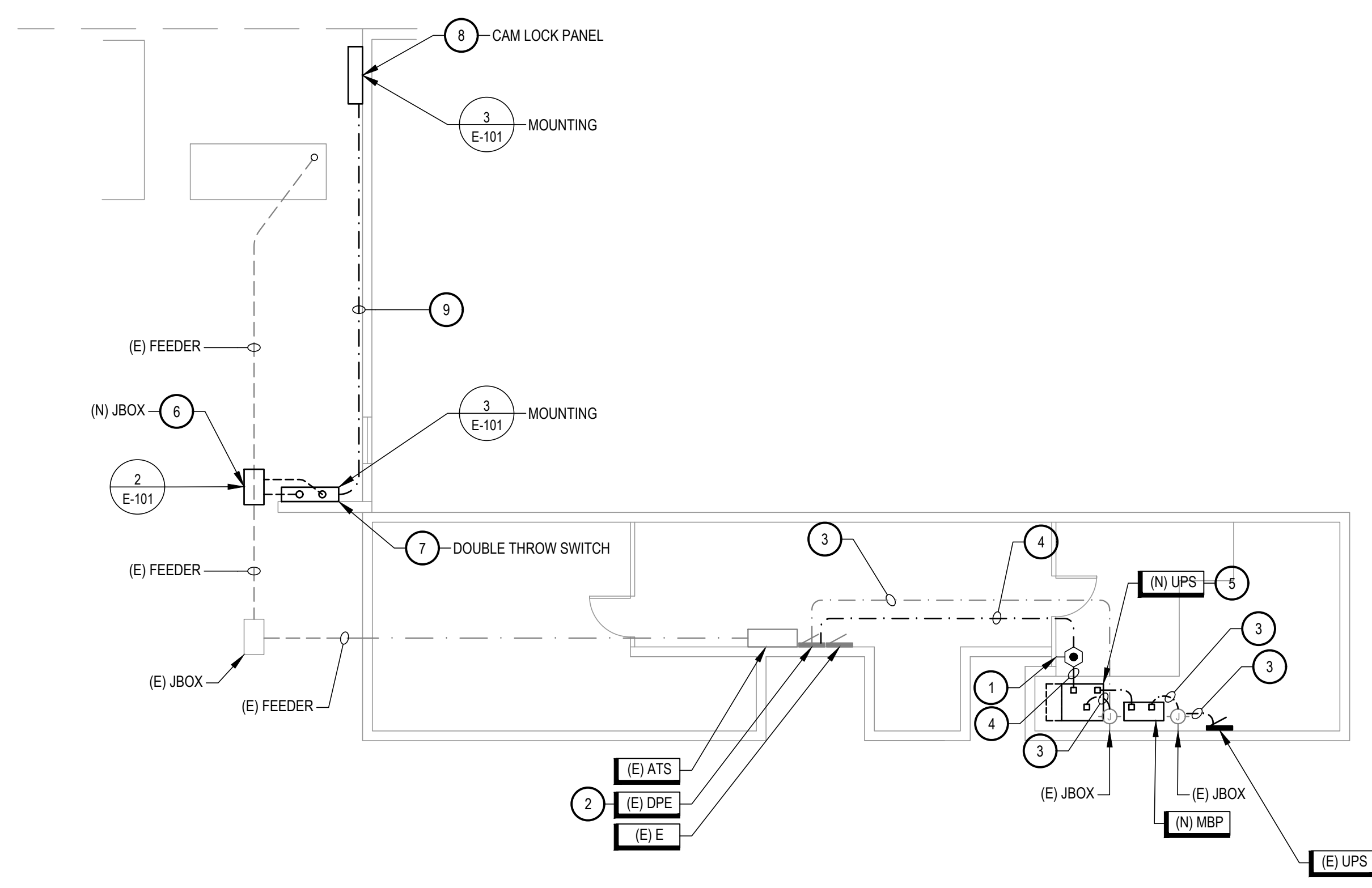
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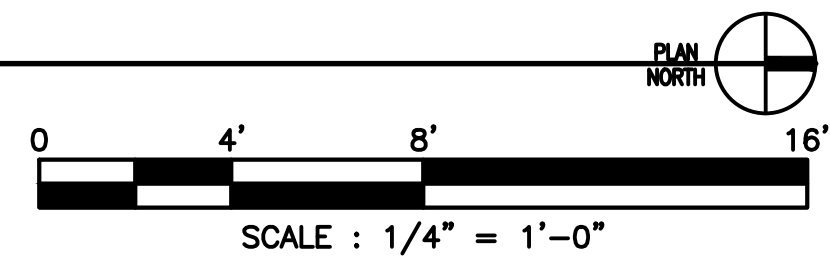
2 IN GROUND PULLBOX
NOT TO SCALE



3 PANELBOARD MOUNTING
NOT TO SCALE



1 ELECTRICAL PLAN
SCALE: 1/4" = 1'-0"



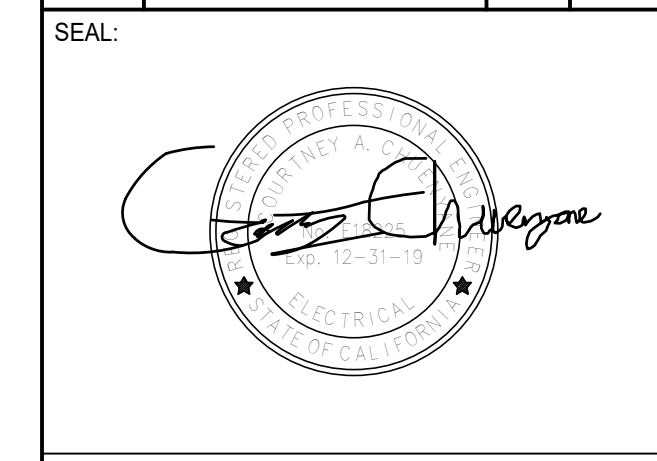
SHEET NOTES -POWER

- A. FOR ADDITIONAL INFORMATION PERTAINING TO THIS PROJECT, SEE ELECTRICAL SHEET SPECIFICATIONS.
- B. ALL EMPTY BOXES SHALL BE PROVIDED WITH BLANK COVER PLATES.
- C. VERIFY COLOR OF ALL DEVICES AND COVER PLATES WITH THE OWNER'S REPRESENTATIVE PRIOR TO ORDERING.

KEYED NOTES - POWER (X)

1. PROVIDE EPO SWITCH FOR EMERGENCY SHUT DOWN OF THE UPS SYSTEM. THE SWITCH SHALL TRIP A SHUNT TRIP CIRCUIT BREAKER IN (E) PANEL DPE AND BE CONNECTED TO THE NEW UPS. UPON ACTIVATION OF THE EOP THE SHUNT TRIP CIRCUIT BREAKER SHALL OPEN AND SIMULTANEOUSLY THE BATTERIES DISCONNECT FROM THE UPS. LOCATE EPO SWITCH ADJACENT TO THE ENTRY DOOR ACCORDING TO NEC 645.10
2. PROVIDE (1) 100AMP/3P SHUNT TRIP CIRCUIT BREAKER IN (E) DISTRIBUTION PANEL DPE. CONNECT TO THE NEW EOP SYSTEM FOR THE UPS/PANEL UPS POWER.
3. (E) 100 AMP FEEDER FOR UPS PANEL VIA UPS SHALL BE DISCONNECTED AND RECONNECTED TO THE NEW UPS. CONNECT COMPLETE.
4. PROVIDE EPO SWITCH CONTROL WIRING TO THE SHUNT TRIP CIRCUIT BREAKER AND THE UPS EPO SHUT DOWN CONTROLS. CONNECT COMPLETE.
5. INSTALL **OWNER PROVIDED** 15 kVA EATON 9355 UPS WITH EXTERNAL MAINTENANCE BYPASS WITH 2 HOUR RUN TIME AT 100% CAPACITY COMPLETE AND TESTED.
 - a. UPS - PW9355-15kVA 120/208C c/w MODEL KA1512100000010
 - b. (2) BATTERIES - EMB, 9615LV, MODEL 103004193-5501 ; PROVIDE ADDITIVE ALTERNATE FOR (1) ADDITIONAL BATTERY
 - c. MAINTENANCE BYPASS PANEL - 3BKR, 15kVA, MODEL 124100027-001
 - d. COMMUNICATIONS CARD - MODEL 103007974-5591
6. PROVIDE NEW IN GROUND PULL BOX. LOCATE (E) STANDBY GENERATOR POWER FEEDER AND INTERCEPT. EXTEND TO DOUBLE THROW SAFETY SWITCH AND TERMINATE. PROVIDE NEW FEEDER FROM SWITCH TO CIRCUIT BREAKER IN GENSET. CONNECT COMPLETE.
7. PROVIDE NEW 400 AMP/3POLE CAM LOCK CONNECTOR BOX FOR MOBILE GENERATOR CONNECTION POINT. INTERSECT, INC. MODEL ICGC-30-400. VERIFY WITH COUNTY FACILITIES
8. DOUBLE THROW SAFETY SWITCH SHALL NOT BE OPERATED WHILE GENERATOR IS UNDER LOAD. PROVIDE ENGRAVED NAMEPLATE ATTACHED WITH SCREWS TO MTS THAT READS " DO NOT TRANSFER BETWEEN POWER SOURCES WHILE UNDER LOAD. OPEN ALL CIRCUIT BREAKERS BEFORE OPERATING SWITCH "
9. PROVIDE FEEDER TO CAM LOCK UNIT. **SEE E5-501**

REVISION	DESCRIPTION	INITIAL	DATE



CONSULTANT:

BrokawDesign
PO BOX 3103
ROHNERT PARK, CA 94928
WWW.BROKAWDESIGN.COM

PROJECT:
SHERIFF - OFFICE 911 UPS REPLACEMENT AND TEMPORARY GENERATOR PROVISIONS

589 LOW GAP ROAD UKIAH, CA.
ASSESSORS PARCEL NO x

SHEET TITLE:
ELECTRICAL PLAN

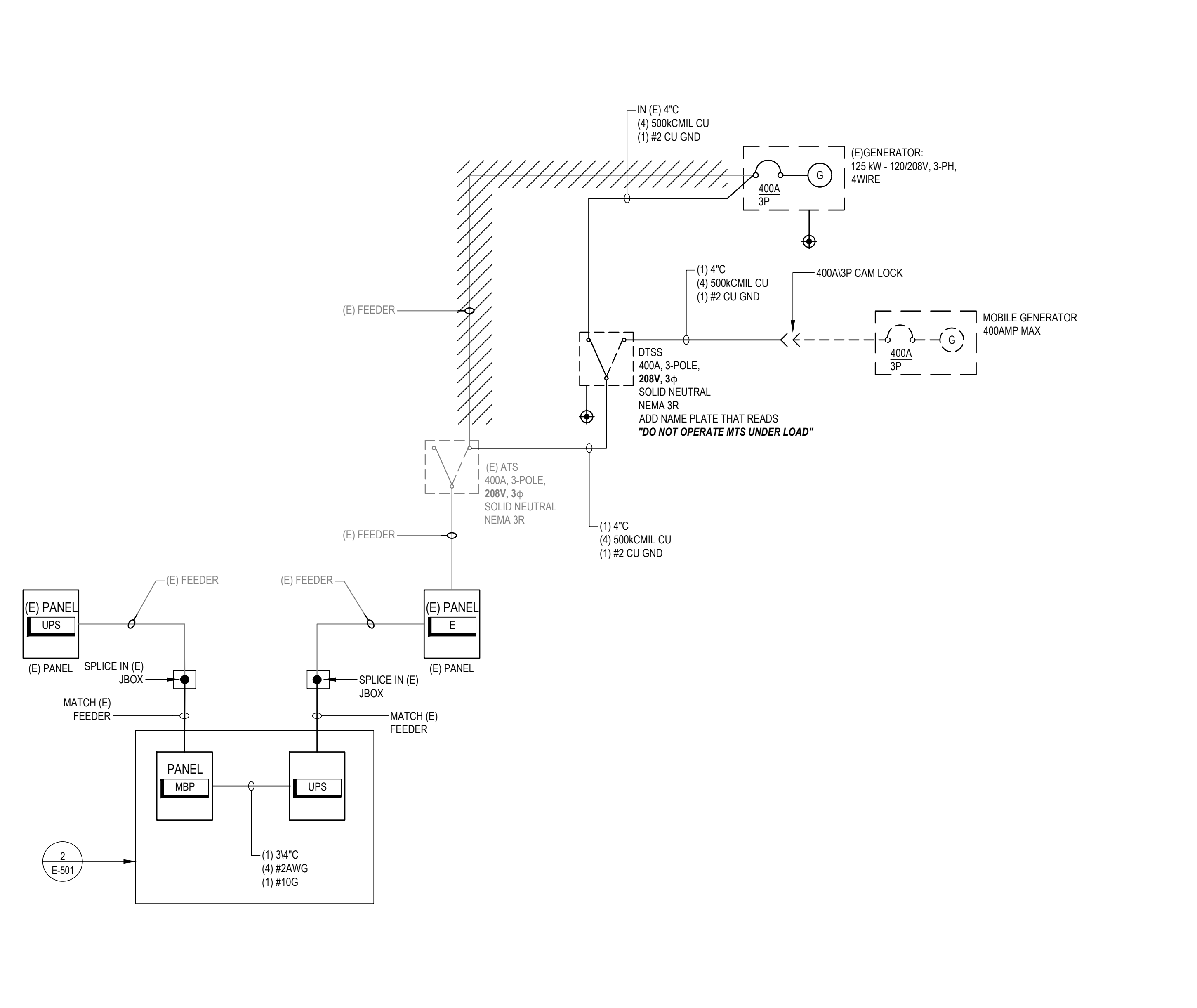
ISSUE DATE:	NOVEMBER 18, 2019
PREPARATION AND REVIEW	
DRAWN BY:	MB
DESIGNER:	MB
PROJ MGR:	
PEER REVIEW:	CLB
SHEET NUMBER:	

E-101
Progress: .

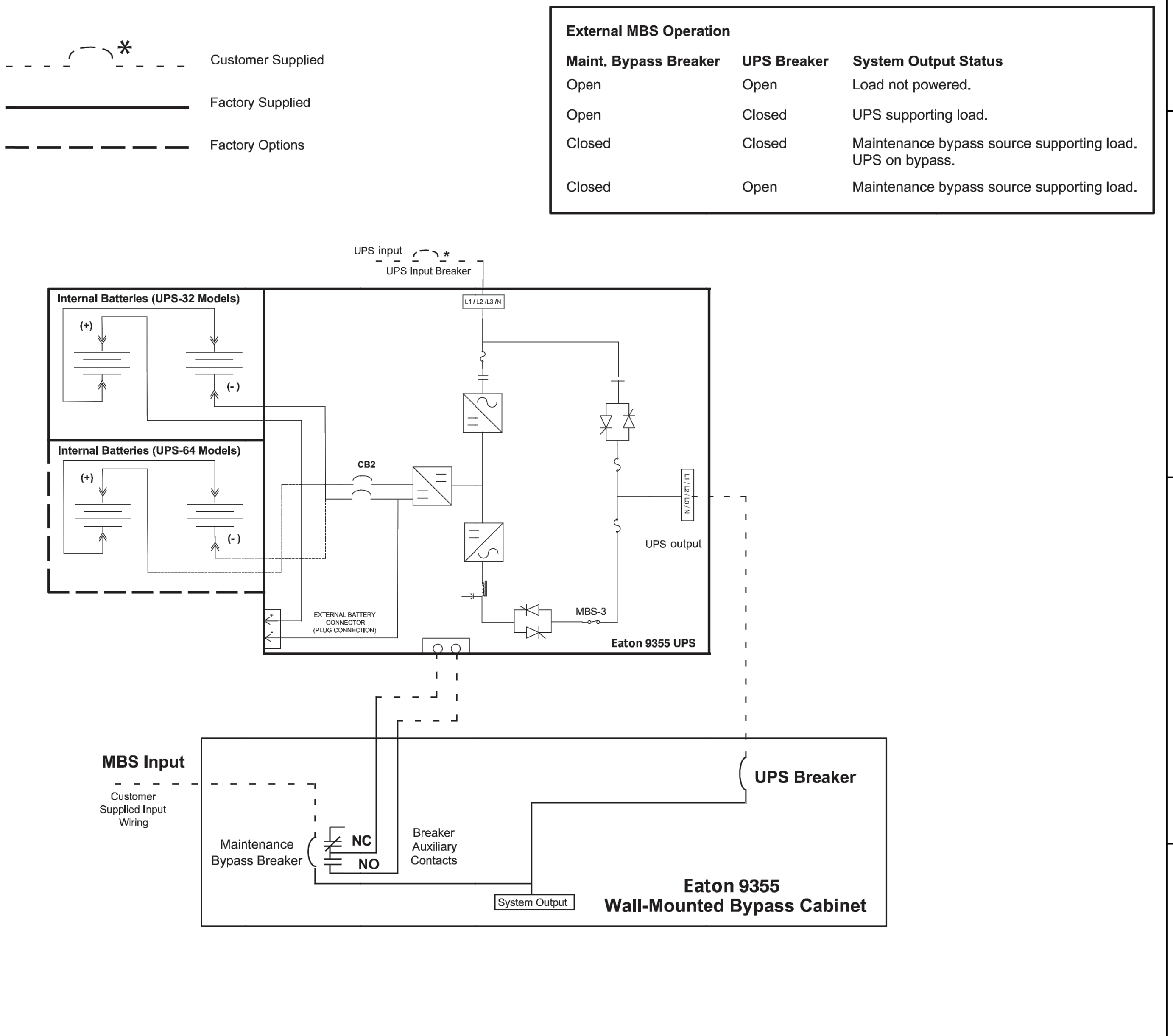
PANEL SCHEDULE																
PANEL NAME: UPS			VOLTAGE: 208			NEMA RATING: 1			NOTES: UPS POWER							
MAINS RATING: 100A			PHASE: 3			AIC RATING: 10KAIC										
CKT NO	PHASE	WIRE	NEUT WIRE	USE	DESCRIPTION	WIRE 4		BKR SIZE	PHASE	BKR KVA	BKR OPTS	DESCRIPTION	USE	NEUT WIRE	PHASE WIRE	CKT NO
						BKR SIZE	BKR OPTS									
1	#12	#12	O		SERVER ROOM	20/1	0.02	A	0.02	20/1		SERVER ROOM	O	#12	#12	2
3	#12	#12	O		SERVER ROOM	20/1	1.40	B	0.25	20/1		RADIO ROOM	O	#12	#12	4
5	#12	#12	O		SERVER ROOM	20/1	0.01	C	0.02	20/1		RADIO ROOM	O	#12	#12	6
7	#12	#12	O		SERVER ROOM	20/1	0.01	A	0.04	20/1		SERVER ROOM	O	#12	#12	8
9	#12	#12	O		RADIO ROOM	20/1	0.01	B	0.01	20/2		SERVER ROOM-230V	O	-	#12	10
11	#12	#12	O		SERVER ROOM-230V	20/2	0.30	C	0.01	20/1		?	O	-	#12	12
13	#12	#12	O		SHERIFF IT	20/1	0.30	A	0.01	20/1		RADIO ROOM	O	#12	#12	14
15	#12	#12	O		SHERIFF IT	20/1	0.08	B	0.13	20/1		RADIO ROOM	O	#12	#12	16
17	#12	#12	O		SHERIFF IT	20/1	0.20	C	0.04	20/1		RADIO ROOM	O	#12	#12	18
19	#12	#12	O		SERVER ROOM-230V	20/1	1.40	A	0.60	20/1		RADIO ROOM	O	#12	#12	20
21	#12	#12	O		DISPATCH DESK	20/1	0.25	B	0.30	20/1		SPARE	O	#12	#12	22
23	#12	#12	O		DISPATCH DESK	20/1	0.20	C	0.50	20/1		RADIO ROOM	O	#12	#12	24
25	#12	#12	O		DISPATCH DESK	20/1	0.26	A	0.70	20/1		RADIO ROOM	O	#12	#12	26
27	#12	#12	O		DISPATCH MANAGER	20/1	0.10	B	0.01	20/1		DISPATCH DESK	O	#12	#12	28
29	#12	#12	O		DISPATCH DESK	20/1	0.50	C	0.30	20/1		DISPATCH DESK	O	#12	#12	30
31	#12	#12	O		DISPATCH WALLS	20/1	0.01	A	0.30	20/1		DISPATCH DESK	O	#12	#12	32
33	#12	#12	O		DISPATCH DESK	20/1	0.01	B	0.01	20/1		DISPATCH DESK	O	#12	#12	34
35	#12	#12	O		DISPATCH DESK	20/1	0.02	C	0.40	20/1		DISPATCH DESK	O	#12	#12	36
37	#12	#12	O		RADIO ROOM	20/1	0.10	A	0.10	20/1		DISPATCH DESK	O	#12	#12	38
39	#12	#12	O		RADIO ROOM	20/1	0.60	B	0.20	20/1		RADIO ROOM	O	#12	#12	40
41	#12	#12	O		SPACE	20/1		C		20/1			O	#12	#12	42

LOADS:	PHASE A:	PHASE B:	PHASE C:	TOTAL:
	3.8 (KVA)	3.1 (KVA)	2.5 (KVA)	9.3 (CONNECTED KVA)
				25.9 (CONNECTED A)

NEC DEMAND LOAD SUMMARY	CONN KVA	DEMAND FACTOR	DEMAND KVA
TYPE "M": MOTOR LOADS (LARGEST MOTOR)		125%	
TYPE "M": MOTOR LOADS (REMAINING)		100%	
TYPE "L": LIGHTING LOADS		125%	
TYPE "R": RECEPTACLES (FIRST 10KVA)		100%	
TYPE "R": RECEPTACLES (OVER 10KVA)		50%	
TYPE "H": HVAC LOADS		100%	
TYPE "P": PANEL LOADS		100%	
TYPE "O": OTHER LOADS	9.33	100%	9.33
DEMAND KVA:	9.33		20% FUTURE = 11KVA MINIMUM
DEMAND AMPS:	25.9		



1 SINGLE LINE DIAGRAM
SCALE: NONE



2 UPS LINE DIAGRAM
SCALE: NONE

External MBS Operation		
Maint. Bypass Breaker	UPS Breaker	System Output Status
Open	Open	Load not powered.
Open	Closed	UPS supporting load.
Closed	Closed	Maintenance bypass source supporting load. UPS on bypass.
Closed	Open	Maintenance bypass source supporting load.

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E-501
Progress: .