

### DEVICES

SX	SWITCH, TYPE AS INDICATED. +48" AFF
2	DOUBLE POLE
3	3-WAY
4	4-WAY
K	KEYED
P	PILOT LIGHT
D	DIMMER
HP	HORSEPOWER RATED
TO	THERMAL OVERLOAD
LV	LOW VOLTAGE
OS	OCCUPANCY SENSOR
OR	LOW VOLTAGE, MOMENTARY OVERRIDE
VS	VACANCY SENSOR
a	SUPERSCRIPT INDICATES LIGHTS TO BE SWITCHED TOGETHER
SS	DUAL LEVEL SWITCHING, INSIDE AND OUTSIDE LAMPS OF FIXTURE TO BE SWITCHED SEPARATELY.
Ssa	DUAL LEVEL SWITCHING WITH OCCUPANCY SENSOR, INSIDE AND OUTSIDE LAMPS OF FIXTURE TO BE SWITCHED SEPARATELY.
Ssb	OCCUPANCY SENSOR WITH MANUAL DIMMING, SET FOR 50% AUTOMATIC ON, AUTOMATIC OFF, WITH MANUAL DIMMING.
SO	SINGLE CONVENIENCE OUTLET, +18" AFF UNO
FO	FLOOR MOUNT SINGLE CONVENIENCE OUTLET
DO	DUPLEX CONVENIENCE OUTLET, +18" AFF UNO
FDO	FLOOR MOUNT DUPLEX CONVENIENCE OUTLET
ED	EMERGENCY DUPLEX CONVENIENCE OUTLET, +18" AFF UNO
SD	SWITCHED DUPLEX CONVENIENCE OUTLET, +18" AFF UNO
FSD	FLOOR MOUNTED SWITCHED DUPLEX CONVENIENCE OUTLET
UD	USB DUPLEX CONVENIENCE OUTLET, +18" AFF UNO
UDF	USB FOURPLEX CONVENIENCE OUTLET, +18" AFF UNO
FD	FOURPLEX CONVENIENCE OUTLET, +18" AFF UNO
FDF	FLOOR MOUNT FOURPLEX CONVENIENCE OUTLET
CP	CONNECTION POINT TO EQUIPMENT SPECIFIED, ELECTRICAL CONTRACTOR TO SUPPLY RACEWAY AND CONDUCTORS AND MAKE FINAL CONNECTION TO EQUIPMENT UNDER THIS SECTION. UNO
FCP	FLOOR MOUNTED CONNECTION POINT, SEE NOTE ABOVE FOR REQUIREMENTS
FJ	FLOOR MOUNTED JUNCTION BOX
J	JUNCTION BOX
WB	WALL MOUNTED PUSH BUTTON, MOUNT AT SWITCH HEIGHT UNO
WBHC	WALL MOUNTED PUSH BUTTON, HANDICAPPED MOUNT AT SWITCH HEIGHT UNO
WB	WALL MOUNTED PUSH BUTTON, MOUNT AT SWITCH HEIGHT UNO
MS	MOTOR STARTER/CONTACTOR, SIZE/POLES NEMA 1 UNO AS INDICATED
MSD	COMBINATION STARTER AND DISCONNECT, SIZE/POLES, STARTER SIZE AS INDICATED, NEMA 1 UNO
FD	FUSED DISCONNECT SWITCH, SIZE/POLES, FUSE SIZES AS INDICATED, NEMA 1 UNO
FD	NON-FUSED DISCONNECT SIZE/POLES AS INDICATED, NEMA 1 UNO
TH	THERMOSTAT, +48" AFF PROVIDE CONDUIT, J-BOX, CONDUCTORS AS REQUIRED TO CONTROL ASSOCIATED UNITS. UNO COORDINATE WITH DIVISION 15.
XX	POWER POLE - DUAL CHANNEL
T	TRANSFORMER
PC	PANELBOARD, SEE SCHEDULE FOR TYPE.
EC	EQUIPMENT CABINET, SURFACE MOUNTED
ECF	EQUIPMENT CABINET FLUSH MOUNTED
SO	SURFACE MULTI-OUTLET RACEWAY
#	MECHANICAL EQUIPMENT CALL OUT
#	KITCHEN EQUIPMENT CALLOUT

### ONE LINE

DELTA WYE TRANSFORMER UNO
PANEL BOARD, SEE SCHEDULE FOR TYPE AND SIZE
CIRCUIT BREAKER, SIZE AND POLES INDICATED
FUSE, SIZE AND TYPE INDICATED, PROVIDE FUSE FOR EACH POLE
INTERRUPTER SWITCH, SIZE AND POLES INDICATED
FUSED SWITCH, SIZE/POLES AND FUSE SIZE INDICATED
DRAW OUT CIRCUIT BREAKER, SIZE AND POLES INDICATED
INDIVIDUAL BREAKER WITH SHUNT TRIP, SIZE AND POLES INDICATED. NEMA 1 UNO
INDIVIDUAL BREAKER, SIZE AND POLES INDICATED. NEMA 1 UNO
GROUND FAULT PROTECTION
TRANSIENT VOLTAGE SURGE SUPPRESSION
ADJUSTABLE BREAKER SETTINGS (PER SPECIFICATIONS): L-LONG TIME S-SHORT TIME T-INSTANTANEOUS G-GROUND FAULT R-ENERGY REDUCING MAINTENANCE SWITCH W/STATUS INDICATOR
GROUND
SHUNT TRIP COIL
MOTOR
DISCONNECT SWITCH, SIZE AND POLES INDICATED. NEMA 1 UNO
OVERHEAD SERVICE DROP
GENERATOR SET, MAIN BREAKER SIZE INDICATED
AUTOMATIC TRANSFER SWITCH (ATS)
METER AND BASE
NEUTRAL
DRY TYPE TRANSFORMER
PAD MOUNT TRANSFORMER

### ELECTRICAL ABBREVIATIONS

A	AMPERES
AC	6" ABOVE BACKSPLASH ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AF	AMP FRAME
AIC	AMPS INTERRUPTING CAPACITY
AT	AUTOMATIC TRANSFER SWITCH
AWG	AMERICAN WIRE GAUGE
BD	BOTTOM OF DECK
BS	BOTTOM OF STRUCTURE
C	CEILING MOUNTED
CB	CIRCUIT BREAKER
CF	COMPACT FLUORESCENT
CKT	CIRCUIT
CO	CONDUIT ONLY, PROVIDE PULL-LINE
CT	CURRENT TRANSFORMER
CTL	CONTROL
DC	DIRECT CURRENT
(D)	DEMOLITION
DEMO	DEMOLITION
DET	DETAIL
DTT	DOUBLE TWIN TUBE
E	EMERGENCY
(E)	EXISTING
EC	ELECTRICAL CONTRACTOR
EL	EMERGENCY LIGHT
F	FUSE
(F)	FUTURE
FACP	FIRE ALARM CONTROL PANEL
G/GND	GROUND
GFCI	GROUND FAULT CIRCUIT INTERRUPTER
GFI	GROUND FAULT INTERRUPTER
HH	HAND HOLE
HID	HIGH INTENSITY DISCHARGE
HOA	HAND-OFF-AUTO
HPS	HIGH PRESSURE SODIUM
HVAC	HEATING, VENTILATION, & AIR CONDITIONING
IG	ISOLATED GROUND
IPCO	IDAHO POWER COMPANY
J-BOX	JUNCTION BOX
KA	KILOAMP
KVA	KILO VOLT-AMP
KW	KILOWATT
KWH	KILOWATT HOUR
LCP	LIGHTING CONTROL PANEL
MB	MAIN BREAKER
MBR	MAIN CIRCUIT BREAKER
MCC	MOTOR CONTROL CENTER
MDP	MAIN DISTRIBUTION PANEL
MLO	MAIN LUGS ONLY
MMC	MODULAR METERING CENTER
MH	METAL HALIDE
MSB	MAIN SWITCH BOARD
MTG	MOUNTING
N	NEUTRAL
(N)	NEW
NC	NORMALLY CLOSED
NEC	NATIONAL ELECTRICAL CODE
NIC	NOT IN CONTRACT
NL	NIGHT LIGHT
NO	NORMALLY OPEN
NTS	NOT TO SCALE
OH	OVERHEAD
OS	OCCUPANCY SENSOR
P	POLES
PC	PHOTO-CONTROL
PVC	POLYVINYL CHLORIDE
PWR	POWER
RE	REFERENCE
REC	RECEPTACLE
(R)	RELOCATED
SF	SQUARE FEET
TBD	TO BE DETERMINED
TDR	TIME DELAY RELAY
TK	TOE KICK
TSP	TWISTED SHIELDED PAIR
TRT	TRIPLE TUBE
TBT	TELEPHONE TERMINAL BOARD
(TYP.)	TYPICAL
UC	UNDERCABINET
UG	UNDERGROUND
U.N.O.	UNLESS NOTED OTHERWISE
V	VOLT
VA	VOLT-AMPERE
W	WATT
WG	WIRE GUARD
WP	WEATHER PROOF/NEMA 3R
PROVIDED/ PROVIDE BY INSTALLED/ INSTALL	PROVIDE AND INSTALL / PROVIDED AND INSTALLED BY / PROVIDE AND INSTALL
NOTE:	THIS IS A STANDARD LIST OF COMMONLY USED ELECTRICAL ABBREVIATIONS. SOME OF THE ABBREVIATIONS SHOWN ABOVE MAY NOT BE USED IN THIS DRAWING PACKAGE.

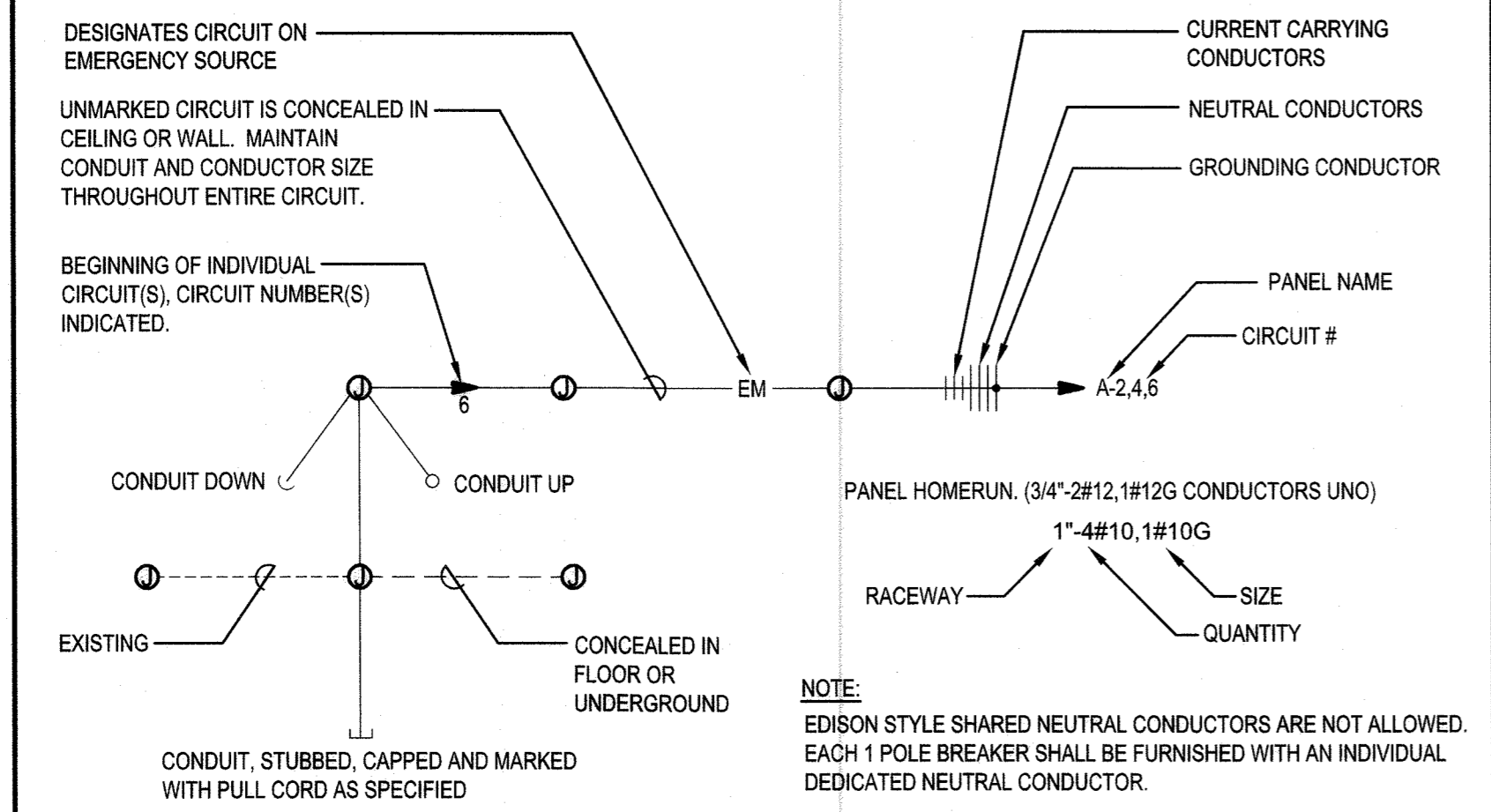
### FIRE ALARM

FF	PULL STATION, +44" AFF WITH PRE-ALARM COVER
FF	FIRE ALARM HORN, +84" AFF UNO
FF <sup>15</sup>	FIRE ALARM STROBE, +84" AFF UNO, STROBE INTENSITY INDICATED. 'C' INDICATES CEILING MOUNTED
FF <sup>15</sup>	FIRE ALARM HORN/STROBE +84" AFF, UNO, STROBE INTENSITY INDICATED. 'C' INDICATES CEILING MOUNTED
FFB	FIRE ALARM BELL, +84" AFF UNO. 'C' INDICATES CEILING MOUNTED
FFH	FIRE ALARM CHIME, +84" AFF UNO. 'C' INDICATES CEILING MOUNTED
FF <sup>15</sup>	FIRE ALARM CHIME/STROBE, +84" AFF UNO, STROBE INTENSITY INDICATED. 'C' INDICATES CEILING MOUNTED
FFS	SPEAKER STROBE, +84" AFF UNO. 'C' INDICATES CEILING MOUNTED
ELR	END OF LINE RESISTOR
FWS	FLOW SWITCH, PROVIDE MONITOR MODULE AS REQUIRED
TMS	TAMPER SWITCH, PROVIDE MONITOR MODULE AS REQUIRED
PS	PRESSURE SWITCH, PROVIDE MONITOR MODULE AS REQUIRED
FSA	FIRE SYSTEM ANNUCIATOR, FLUSH MOUNTED +54" UNO
PVI	POST INDICATOR VALVE, PROVIDE MONITOR MODULE AS REQUIRED
EDH	ELECTROMAGNETIC DOOR HOLDER
R	RELAY
CM	CONTROL MODULE
MM	MONITOR MODULE
FAK	FIRE ALARM KNOX BOX
FACP	FIRE ALARM CONTROL PANEL
NAC	NAC EXTENDER PANEL
FSD	FIRE/SMOKE DAMPER
LED	LED INDICATOR LIGHT, CEILING MOUNTED UNO
LED	LED INDICATOR LIGHT WITH TEST SWITCH, CEILING MOUNTED UNO
SD	DUCT-MOUNTED SMOKE DETECTOR
SD	SMOKE DETECTOR, CEILING MOUNTED UNO
H	HEAT
I	IONIZATION
ID	IN DUCT
P	PHOTOELECTRIC
R	RELAY
WG	PROVIDE PROTECTIVE WIRE GUARD
BS.BR	BEAM DETECTOR, SENDER & RECEIVER

### ELECTRICAL GENERAL NOTES

- ALL CONDUIT AND JUNCTION BOXES ARE TO BE CONCEALED UNLESS LOCATED WITHIN DEDICATED ELECTRICAL OR MECHANICAL ROOMS. USE OF SURFACE MOUNTED RACEWAYS IN ALL OTHER SPACES MUST BE APPROVED BY THE ARCHITECT FOR EACH LOCATION. WHERE SURFACE RACEWAYS ARE APPROVED, UTILIZE WIREMOLD, OR APPROVED EQUAL, SURFACE MOUNTED RACEWAYS PAINTED TO MATCH SURROUNDING WALLS.
  - REFER TO ARCHITECTURAL ELEVATIONS FOR OUTLET HEIGHTS WHERE THE SPECIFIC OUTLET HEIGHT IS NOT INDICATED. REFER TO THE ELECTRICAL LEGEND FOR THE DEFAULT OUTLET HEIGHT WHEN NOT INDICATED ON ELEVATIONS OR ON AT THE DEVICES.
  - PROVIDE PULL-LINE IN ALL EMPTY CONDUITS.
  - TERMINATE ALL LOW-VOLTAGE CONDUITS WITH INSULATED THROAT BUSHING.
  - MECHANICAL EQUIPMENT INDICATED IS SHOWN IN AN APPROXIMATE LOCATION. COORDINATE EXACT LOCATION WITH MECHANICAL CONTRACTOR PRIOR TO ROUGH-IN.
- DEMO:
- ALL ELECTRICAL DEVICES AND WALLS INDICATED ON THE ELECTRICAL DEMOLITION DRAWING(S) ARE TO REMAIN UNLESS OTHERWISE NOTED.

### CIRCUITING SYMBOLS



### CITY AND COUNTY OF HONOLULU REVISED ORDINANCE CHAPTER 32, HONOLULU COUNTY CODE 1990, AS AMENDED

To the best of my knowledge, this project's design substantially conforms to the Building Energy Conservation Code for:

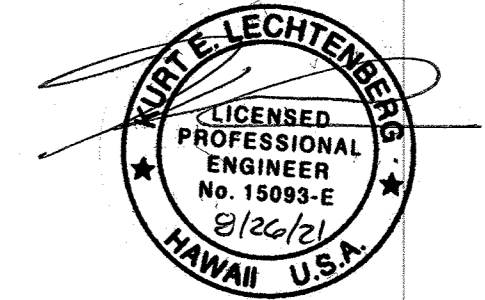
- Building Component Systems
- Electrical Component Systems
- Mechanical Component Systems

Signature: Kurt Lechtenberg Date: 8/26/21

Name: KURT LECHTENBERG

Title: ELECTRICAL ENGINEER

License No.: 15093



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PROJECT NO. 21-302

Architect / Engineer:  
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Dennis B. Patten, AIA  
P.O. Box 217  
St. George, UT 84771  
(435) 673-6579

Expiration date of license: 04/30/22  
This work was prepared by me or under my supervision. Construction of this project will be under my observation.  
I am a duly Licensed Professional Engineer in the State of Utah, License No. 15093-E, and a Licensed Professional Architect in the State of Utah, License No. 15093-A.

Project Name:  
**KALIHI RE-ROOF AND HVAC REFURBISHMENT**  
HONOLULU, HAWAII WEST STAKE  
TKM, 1-3-006-17  
1120 Kahlili St. (1723 Beckley St.) Honolulu, HI 96819

Owner:  
**THE CHURCH OF JESUS CHRIST OF LATTER-DAY SAINTS**

1	08-01-2021	REV. SET	Description

Project Number: **PCA-2013**  
Plan Series: **EXISTING**  
Property Number: **500-0031-919010101**  
Sheet Title: **COVER SHEET**  
Sheet: **E000**