

PERMIT SET- ISSUED FOR CONSTRUCTION

ABBREVIATIONS

45/DP	4" SQUARE BY 2-1/8" DEEP BOX	GFCI	GROUND FAULT CIRCUIT INTERRUPTER
ADA	AMERICAN WITH DISABILITIES ACT	GE or GEC	GROUNDING ELECTRODE CONDUCTOR
A.F.F.	ABOVE FINISH FLOOR	HACR	HEATING AIR CONDITIONING REFRIGERATION
A.F.G.	ABOVE FINISH GRADE	HOA	HAND-OFF-AUTO
AWG	AMERICAN WIRE GAUGE	HVAC	HEATING, VENTILATING AND AIR CONDITIONING
AMP, A	AMPERE	H,W,D,L	HEIGHT, WIDTH, DEPTH, LENGTH
A.I.C. or AIC	AMPERES INTERRUPTING CAPACITY (SYMMETRICAL)	HID	HIGH INTENSITY DISCHARGE
A.F.C. or AFC	AVAILABLE FAULT CURRENT	HP	HORSEPOWER
AF/AT	AMP FRAME, AMP TRIP	HPS	HIGH PRESSURE SODIUM
AHJ	AUTHORITY HAVING JURISDICTION	I/G	ISOLATED GROUND
AS/AF	AMP SWITCH, AMP FUSE	IBC	INTERNATIONAL BUILDING CODE
ATS	AUTOMATIC TRANSFER SWITCH	IDF	INTERMEDIATE DISTRIBUTION FRAME
AVG	AVERAGE	JBOX	JUNCTION BOX
BJ	BONDING JUMPER	K	DEGREE KELVIN
BDF	BUILDING DISTRIBUTION FRAME	KMIL	THOUSAND CIRCULAR MILS
BR	BRANCH	KVA	KILOVOLT AMPERES
BLDG	BUILDING	KW	KILOWATT
CBC	CALIFORNIA BUILDING CODE	LCL	LONG CONTINUOUS LOAD
CEC	CALIFORNIA ELECTRICAL CODE	LFG, LTS	LIGHTING
CIRC., CKT.	CIRCUIT	LPS	CONNECTED
CB	CIRCUIT BREAKER	LPT	CONTROL POWER TRANSFORMER
CSFD	COMBINATION SMOKE FIRE DAMPER	MCB	CURRENT LIMITING CIRCUIT BREAKER
C.O.	CONDUIT ONLY, COMPLETE WITH PULLSTING	MDF	CURRENT LIMITING FUSE
CONN	CONNECT	MOCF	CURRENT TRANSFORMER
CPT	CURRENT LIMITING CIRCUIT BREAKER	MCB	EXISTING DEVICE TO BE DEMOLISHED
CLB	CURRENT LIMITING CIRCUIT BREAKER	MLO	DISTRIBUTED ANTENNA SYSTEM
CLF	CURRENT LIMITING FUSE	M.C.	MECHANICAL CONTRACTOR
CLT	CURRENT TRANSFORMER	M	METER
CO	EXISTING DEVICE TO BE DEMOLISHED	M/M	METER MAIN
DAS	DISTRIBUTED ANTENNA SYSTEM	MV	METER VAPOR
DIA	DIAMETER	MIN.	MINIMUM
DISC	DISCONNECT	MCA	MINIMUM CIRCUIT AMPS
DIST	DISTRIBUTION	MCC	MOTOR CONTROL CENTER
D.P.C.S.	DIMMING PANEL CONTROL STATION	MCM	THOUSAND CIRCULAR MILS
E.C.	ELECTRICAL CONTRACTOR	MCP	MOTOR CIRCUIT PROTECTOR
EMS	ENERGY MANAGEMENT CONTROL SYSTEM	MFR	MANUFACTURER
EMT	ELECTRICAL METALLIC TUBING	MTD	MICROWAVE
ENT	ELECTRIC NON-METALLIC TUBING	MW	NON AUTOMATIC DISCONNECT
EW	ELECTRIC WATER COOLER	NATS	NATIONAL ELECTRICAL CODE
E.P.O.	EMERGENCY POWER OFF	NEC	NATIONAL ELECTRICAL CODE
E-Q-L	END-OF-LINE CIRCUIT TERMINATOR	NEMA	MANUFACTURER'S ASSOCIATION
EF	EXHAUST FAN	NC	NORMALLY CLOSED
EG or EG or E/G	EQUIPMENT GROUND (GREEN)		
EG	EXISTING DEVICE TO REMAIN		
EP	EXPLOSION PROOF		
ET	EXISTING DEVICE TO BE RELOCATED		
FA or F.A.	FIRE ALARM		
FL	FULL LOAD AMPS		
GRD	GROUND		

FIRE ALARM SYSTEM SYMBOLS

SEE FIRE ALARM OR CENTRAL MONITORING SYSTEM DRAWINGS FOR FIRE ALARM SYMBOLS.

SIGNAL SYSTEM SYMBOLS

B	WALL MOUNTED CLOCK. FIELD VERIFY MOUNTING HEIGHT PRIOR TO INSTALLATION. "B" INDICATES BATTERY OPERATED CLOCK. "D" INDICATES DIGITAL CLOCK, "NO LETTER" INDICATES ANALOG CLOCK. REFER TO SPECIFICATIONS.
C	CONCEALED CLOCK CONDUIT RUN 1/2" CONDUIT, OR AS NOTED, WITH CONDUCTORS PER SPECIFICATIONS.
HD	TV OUTLET, WALL MOUNTED. STUB A 3/4" C.O. UP 6" ABOVE THE ACCESSIBLE CEILING AND PROVIDE BUSHING.
TV	TV OUTLET FLUSH CEILING MOUNTED.
TV	CONCEALED TELEVISION CONDUIT RUN, 3/4" CONDUIT, OR AS NOTED, WITH CONDUCTORS - REFER TO SPECIFICATIONS.
HO	MICROPHONE OUTLET, WALL MOUNTED. PROVIDE 3/4" C.O. (WITH PULL ROPE) UP TO 6" ABOVE ACCESSIBLE CEILING SPACE. PROVIDE BUSHING AT EACH END.
HO	MICROPHONE OUTLET, FLUSH CEILING MOUNTED.
M	CONCEALED MICROPHONE CONDUIT RUN, 3/4" CONDUIT, OR AS NOTED, WITH CONDUCTORS - REFER TO SPECIFICATIONS.
HV	SURFACE WALL MOUNTED SPEAKER, "V" INDICATES VOLUME CONTROL.
SV	SURFACE MOUNTED SPEAKER, "V" INDICATES VOLUME CONTROL.
HOV	FLUSH WALL MOUNTED SPEAKER, "V" INDICATES VOLUME CONTROL.
OV	CEILING FLUSH MOUNTED SPEAKER, "V" INDICATES VOLUME CONTROL.
SV	ABOVE CEILING MOUNTED SPEAKER, "V" INDICATES VOLUME CONTROL.
HOV	VOLUME CONTROL, WALL MOUNTED.
S	CONCEALED SPEAKER CONDUIT RUN 3/4" CONDUIT, OR AS NOTED, WITH CONDUCTORS - REFER TO SPECIFICATIONS.

SECURITY ALARM SYSTEM SYMBOLS

SAKP	SECURITY ALARM CONTROL PANEL - SEE SPECIFICATIONS.
SPS	SECURITY SYSTEM POWER SUPPLY - SEE SPECIFICATIONS.
PI	SECURITY ALARM PASSIVE INFRARED MOTION SENSOR - SEE SPECIFICATIONS.
PI	SECURITY ALARM DUAL TECHNOLOGY MOTION SENSOR - SEE SPECIFICATIONS.
PI	SECURITY ALARM ULTRASONIC MOTION SENSOR - SEE SPECIFICATIONS.
PI	SECURITY ALARM DOOR CONTACT - SEE SPECIFICATIONS.
PI	SECURITY ALARM PANIC BUTTON - SEE SPECIFICATIONS.
PI	SECURITY ALARM KEY PAD - SEE SPECIFICATIONS.
PI	SECURITY ALARM GLASS BREAK INDICATOR - SEE SPECIFICATIONS.
SA	SECURITY ALARM SYSTEM BRANCH CIRCUIT PER SECURITY ALARM RISER DIAGRAM AND/OR SPECIFICATIONS.

ACCESS CONTROL SYSTEM SYMBOLS

ACCP	ACCESS CONTROL PANEL - SEE SPECIFICATIONS.
APS	ACCESS CONTROL SYSTEM POWER SUPPLY - SEE SPECIFICATIONS.
LPS	ACCESS CONTROL SYSTEM LOCK POWER SUPPLY - SEE SPECIFICATIONS.
KS	ACCESS CONTROL KEY SWITCH - SEE SPECIFICATIONS.
LA	ACCESS CONTROL LOCAL ALARM SOUNDER - SEE SPECIFICATIONS.
CR	ACCESS CONTROL PROXIMITY READER - SEE SPECIFICATIONS.
CR	ACCESS CONTROL CARD READER - SEE SPECIFICATIONS.
CP	ACCESS CONTROL KEY PAD - SEE SPECIFICATIONS.
ES	ACCESS CONTROL REQUEST TO EXIT SENSOR - SEE SPECIFICATIONS.
AC	ACCESS CONTROL SYSTEM BRANCH CIRCUIT PER ACCESS CONTROL RISER DIAGRAM AND/OR SPECIFICATIONS.

PROJECT SPECIFIC SYMBOLS

REQUIRED SPECIFICATION DEVIATIONS

THE FOLLOWING ITEM(S) ARE REQUIRED DEVIATIONS FROM THE DRAWINGS AND SPECIFICATIONS AND SHALL BE INCLUDED AS PART OF THE BASE BID. THESE DEVIATIONS ARE AT THE DIRECTION OF THE OWNER:

NONE

ALLOWED SPECIFICATION DEVIATIONS

THE FOLLOWING ITEM(S) ARE ALLOWED DEVIATIONS FROM THE DRAWINGS AND SPECIFICATIONS. THESE DEVIATIONS ARE AT THE DIRECTION OF THE OWNER:

NONE

DEDUCTIVE/ADDITIVE ALTERNATE PRICING

IN ADDITION TO ANY DEDUCTIVE OR ADDITIVE LINE ITEM PRICING CALLED FOR ON THE DRAWING OR IN THE SPECIFICATIONS, CONTRACTOR SHALL PROVIDE SEPARATE LINE ITEM DEDUCTIVE/ADDITIVE ALTERNATE PRICING FOR EACH OF THE FOLLOWING ITEM(S):

NONE

GFCI	GROUND FAULT CIRCUIT INTERRUPTER	NO	NORMALLY OPENED
GE or GEC	GROUNDING ELECTRODE CONDUCTOR	NF	NON-FUSED
HACR	HEATING AIR CONDITIONING REFRIGERATION	N.T.S.	NOT TO SCALE
HOA	HAND-OFF-AUTO	NL	NIGHT LIGHT
HVAC	HEATING, VENTILATING AND AIR CONDITIONING	NO, or #	NUMBER
H,W,D,L	HEIGHT, WIDTH, DEPTH, LENGTH	OFCI	OWNER FURNISHED, CONTRACTOR INSTALLED
HID	HIGH INTENSITY DISCHARGE	PH, or ø	PERCENT IMPEDANCE
HP	HORSEPOWER	PC	PHOTOCELL
HPS	HIGH PRESSURE SODIUM	P.C.	PLUMBING CONTRACTOR
I/G	ISOLATED GROUND	POL	POLY VINYL CHLORIDE
IBC	INTERNATIONAL BUILDING CODE	PDU	POWER DISTRIBUTION UNIT
IDF	INTERMEDIATE DISTRIBUTION FRAME	PROVIDE	OVER 600 VOLTS
JBOX	JUNCTION BOX	PT	POTENTIAL TRANSFORMER
K	DEGREE KELVIN	PI	PUBLIC ADDRESS
KMIL	THOUSAND CIRCULAR MILS	PROVIDE	DEMOTES RELOCATED DEVICE LOCATION.
KVA	KILOVOLT AMPERES	REC, RECEIPT	RECEPTACLE
KW	KILOWATT	REF	REFRIGERATOR
LCL	LONG CONTINUOUS LOAD	RGS	RIGID GALVANIZED STEEL
LFG, LTS	LIGHTING	RMS	ROOT MEAN SQUARE
LPS	CONNECTED	SCC	SHORT CIRCUIT CURRENT
LPT	CONTROL POWER TRANSFORMER	SCCR	SHORT CIRCUIT CURRENT RATING
MCB	CURRENT LIMITING CIRCUIT BREAKER	SCS	STRUCTURED CABLING SYSTEM
MDF	CURRENT LIMITING FUSE	SCD	SMOKE FIRE DAMPER
MOCF	CURRENT TRANSFORMER	SE	600 VOLTS AND LESS
MCB	EXISTING DEVICE TO BE DEMOLISHED	SE	SHEET METAL AND AIR COND. CONTRACTOR'S WATL. ASSOC.
MLO	DISTRIBUTED ANTENNA SYSTEM	SQ.	SQUARE
M.C.	MECHANICAL CONTRACTOR	SSBJ	SUPPLY SIDE BONDING JUMPER
M	METER	SSB	SYSTEM BONDING JUMPER
M/M	METER MAIN	TC	TIMECLOCK
MV	METER VAPOR	TEL/DATA	TELEPHONE AND DATA
MIN.	MINIMUM	TELEVISION	TELEVISION
MCA	MINIMUM CIRCUIT AMPS	T.V.S.S.	TRANSIENT VOLTAGE SURGE SUPPRESSION
MCC	MOTOR CONTROL CENTER	TYP	TYPICAL
MCM	THOUSAND CIRCULAR MILS	U.G.P.S.	UNDERGROUND PULL SECTION
MCP	MOTOR CIRCUIT PROTECTOR	U.O.N.	UNLESS OTHERWISE NOTED
MFR	MANUFACTURER	U.P.S.	UNINTERRUPTIBLE POWER SYSTEM
MTD	MICROWAVE	VAV	VARIABLE AIR VOLUME
MW	NON AUTOMATIC DISCONNECT	V	VOLTS
NATS	NATIONAL ELECTRICAL CODE	VA	VOLT AMPERES
NEC	NATIONAL ELECTRICAL CODE	VD	VOLTAGE DROP
NEMA	MANUFACTURER'S ASSOCIATION	W	WEATHERPROOF
NC	NORMALLY CLOSED	WP	WIRE
		XFMR	TRANSFORMER

ANNOTATIONS

A	PANEL CALLOUT, "A" INDICATES PANELBOARD OR EQUIPMENT DESIGNATION.
AC	MECHANICAL EQUIPMENT CALLOUT, "AC" INDICATES UNIT TYPE AND "2" INDICATES UNIT NUMBER. REFER TO MECHANICAL DRAWINGS FOR EXACT LOCATION AND ELECTRICAL REQUIREMENTS.
3	DETAIL CALLOUT, "3" INDICATES DETAIL NUMBER "E-1" INDICATES SHEET NUMBER.
E-1	
2	PLAN NOTE REFERENCE, REFER TO NOTES ON SHEET, OR AS DIRECTED.
Δ	REVISION REFERENCE.
Y	WYE CONFIGURATION
Δ	DELTA CONFIGURATION
⏏	GROUND

CCTV SYSTEM SYMBOLS

CCVS	VIDEO MANAGEMENT SYSTEM - CCTV HEADEND - SEE SPECIFICATIONS.
CCWS	CCTV WORKSTATION AND MONITOR - SEE SPECIFICATIONS.
CCF	CCTV FIXED POSITION CAMERA - SEE SPECIFICATIONS.
CCP	CCTV PAN/TILT CAMERA - SEE SPECIFICATIONS.
CC	CCTV SYSTEM BRANCH CIRCUIT PER CCTV SYSTEM RISER DIAGRAM AND/OR SPECIFICATIONS.

TELEPHONE/DATA SYMBOLS

A-1,3,5	HOME RUN TO PANEL. LETTER DESIGNATES PANEL, NUMBERS INDICATE CIRCUITS. HASH MARKS INDICATE NUMBER OF CONDUCTORS IN CONDUIT RUN, #12 AWG MINIMUM UNLESS OTHERWISE NOTED.
A-1&3&5	HOME RUN TO PANEL. LETTER DESIGNATES PANEL, NUMBERS INDICATE CIRCUITS WITH SEPARATE NEUTRALS. "&" INDICATES SEPARATE NEUTRALS.
A-1+3+5	HOME RUN TO PANEL. LETTER DESIGNATES PANEL, NUMBERS INDICATE CIRCUITS. "+" INDICATES SEPARATE #10 NEUTRAL THROUGHOUT BRANCH CIRCUIT. HASH MARK "I" INDICATES AN ISOLATED GROUND CONDUCTOR.
CONCEALED CONDUIT OR BRANCH CIRCUIT UNLESS OTHERWISE NOTED. 1/2" CONDUIT MINIMUM, (2) #12 AWG CONDUCTORS MINIMUM.	
CONDUIT OR BRANCH CIRCUIT CONCEALED BELOW GRADE, 3/4" CONDUIT MINIMUM WITH (2) 12 AWG CONDUCTORS MINIMUM AND A CODE SIZED EQUIPMENT GROUND.	
SURFACE-MOUNTED CONDUIT OR BRANCH CIRCUIT UNLESS OTHERWISE NOTED. 1/2" CONDUIT MINIMUM, (2) #12 AWG CONDUCTORS MINIMUM.	
TANDEM WIRING CONNECTION.	
CONDUIT STUB OUT, CAP, MARK AND RECORD ON AS-BUILT DRAWINGS	
CONDUIT CONTINUATION.	
FLEXIBLE CONNECTION AS REQUIRED. NUMBER OF CONDUCTORS AS REQUIRED. VERIFY CONNECTION REQUIREMENTS WITH MANUFACTURER PRIOR TO ROUGH-IN.	
CONDUIT/ BRANCH CIRCUIT/FEEDER CONTINUATION DOWN WALL TO FLOOR BELOW	
CONDUIT/ BRANCH CIRCUIT/FEEDER CONTINUATION UP WALL TO FLOOR ABOVE	

FLOOR BOX / SPECIALTY WALL BOX / PEDESTAL BOX SYMBOLS
SINGLE SERVICE IN FLOOR BOX. PROVIDE DEVICES PER PLAN. SEE FLOOR BOX DETAILS AND SPECIFICATIONS FOR MORE INFORMATION.
TWO SERVICE IN FLOOR BOX. PROVIDE DEVICES PER PLAN. SEE FLOOR BOX DETAILS AND SPECIFICATIONS FOR MORE INFORMATION.
THREE SERVICE IN FLOOR BOX. PROVIDE DEVICES PER PLAN. SEE FLOOR BOX DETAILS AND SPECIFICATIONS FOR MORE INFORMATION.
FOUR SERVICE IN FLOOR BOX. PROVIDE DEVICES PER PLAN. SEE FLOOR BOX DETAILS AND SPECIFICATIONS FOR MORE INFORMATION.
SIX SERVICE IN FLOOR BOX. PROVIDE DEVICES PER PLAN. SEE FLOOR BOX DETAILS AND SPECIFICATIONS FOR MORE INFORMATION.
7-GANG AV FLOOR BOX. PROVIDE DEVICES PER PLAN. SEE FLOOR BOX DETAILS AND SPECIFICATIONS FOR MORE INFORMATION.

RECESSED, ADJUSTABLE DEPTH, FLAT PANEL TV/DISPLAY WALL BOX WITH FLUSH GROMMETED COVER PANEL (CHIEF #PAC525F) AND MINIMUM OF (1) 1-1/4"C.O. FROM TOP-MOUNTED L.V. CONDUIT ENTRY BOX TO ACCESSIBLE CEILING. SEE PLANS FOR ANY ADDITIONAL CONDUIT REQUIREMENTS. PROVIDE ADDITIONAL L.V. AND LINE VOLTAGE CONDUIT ENTRY BOXES AS REQUIRED TO ACCOMPLISH WALL BOX CONFIGURATIONS. DEPICTED ON PLANS: FLUSH GROMMETED COVER SHALL BE WHITE, BLACK OR CUSTOM COLOR PER ARCHITECT. WHEN FIELD CONDITIONS PROHIBIT INSTALLATION OF THIS DEVICE (SUCH AS WALL STUDY/CAVITY DEPTH OF LESS THAN 2.5" ETC), CONFIRM VIA WRITTEN RFI THE INSTALLATION OF A TRADITIONAL POWER AND DATA RECEPTACLE INSTALLATION ALONG SIDE CCTV/AV JUNCTION BOX CONSISTING OF 2-GANG DEEP JUNCTION BOX/2-GANG RING WITH 1-1/4"C.O. TO ACCESSIBLE CEILING IN ADDITION TO ANY OTHER CONDUIT REQUIREMENTS DEPICTED ON PLANS. REFER TO ARCHITECTURAL PLANS AND ELEVATIONS FOR MOUNTING HEIGHT.

SINGLE OR DUAL SERVICE RECESSED EXTERIOR WALL BOX - TYPE "WP-A", PROVIDE DEVICES PER PLAN. EACH LV OR UNUSED COMPARTMENT SHALL BE EQUIPPED WITH A 1"C.O. TO THE NEAREST ACCESSIBLE CEILING SPACE U.O.N. SEE EXTERIOR DETAILS AND SPECIFICATIONS FOR MORE INFORMATION.

SINGLE OR DUAL SERVICE EXTERIOR PEDESTAL - TYPE "WP-C", PROVIDE DEVICES PER PLAN. SEE EXTERIOR DETAILS AND SPECIFICATIONS FOR MORE INFORMATION. ARROW DENOTES DEVICE DOW LOCATION.

CONCEALED TELEPHONE/DATA CONDUIT RUN, 1-INCH CONDUIT ONLY (MIN). SEE TABLE FOR CONDUIT SIZE REQUIREMENTS.

T2 = 1-1/4" C.O. T3 = 1-1/2" C.O. T4 = 2" C.O.

FLUSH MOUNTED, LOCKABLE TERMINAL CABINET WITH TERMINAL STRIPS AS REQUIRED.

SURFACE MOUNTED, LOCKABLE TERMINAL CABINET WITH TERMINAL STRIPS AS REQUIRED.

TELEPHONE TERMINAL BACKBOARD SIZED AS NOTED, REFER TO SYSTEM GROUND DETAIL.

LIGHTING SYMBOLS

10	SITE LIGHTING FIXTURE SYMBOLS DEPICTED WITH CAPITAL LETTER(S) ADJACENT TO RESPECTIVE SYMBOL(S) INDICATE(S) LIGHT FIXTURE MOUNTING BASE DETAIL(S). SEE LIGHTING FIXTURE SCHEDULE FOR FIXTURE INFORMATION.
10	LIGHTING FIXTURE CALL OUT, NUMBER(S) AND/OR UPPER CASE LETTER(S) (i.e. "Y") INDICATES FIXTURE TYPE (REFER TO LIGHTING FIXTURE SCHEDULE). LOWER CASE LETTER (i.e. "o") ADJACENT TO FIXTURE TYPE INDICATES BALLAST OPTION (SEE GENERAL LIGHTING FIXTURE SCHEDULE NOTES).
10	INDICATES FINAL CONNECTION TO A LIGHTING FIXTURE, NUMBER OF CONDUCTORS AS REQUIRED.

LIGHTING CONTROL SYMBOLS

---	LOW VOLTAGE WIRING INTERCONNECTING DLCS COMPONENTS AS REQUIRED. SEE DLCS SPECIFICATIONS FOR MORE INFORMATION.
HO	WALL MOUNTED DIMMER. SEE SINGE POLE SWITCH SYMBOL FOR RELATED SUBSCRIPTS. QUANTITY OF ADJACENT LOWER CASE LETTERS INDICATES QUANTITY OF DIMMERS REQUIRED. PROVIDE DIMMER TYPE TO MATCH INDICATED BALLAST TYPE AND CONTROL REQUIREMENTS.
HO _y	WALL MOUNTED STAND ALONE OCCUPANCY SENSOR.
HO _H	WALL MOUNTED SYSTEM-BASED OCCUPANCY SENSOR.
HO _{H,AV,D,M,P}	1-WAY DIRECTIONAL CEILING MOUNTED, SYSTEM-BASED OCCUPANCY SENSOR.
HO _{H,AV,D,M,P}	2-WAY DIRECTIONAL CEILING MOUNTED, SYSTEM-BASED OCCUPANCY SENSOR.
HO _{K,V}	LOW VOLTAGE MOMENTARY SWITCHES, WALL MOUNTED, FOR MANUAL ON/OFF SWITCHING, DIMMING, AND OVERRIDE CONTROL OF LIGHTING.
Y ₊₊	AUTOMATIC SWITCHING/STEP-DIMMING DAYLIGHTING CONTROLLER USED TO SWITCH OFF LIGHTS WHEN SUFFICIENT NATURAL LIGHT IS PRESENT. REFER TO THE DLCS 500 FOR TARGET ILLUMINATION VALUE.
Y ₊₊	AUTOMATIC CONTINUOUS DIMMING DAYLIGHTING CONTROLLER USED TO DIM LIGHTS WHEN SUFFICIENT NATURAL LIGHT IS PRESENT. REFER TO THE DLCS 500 FOR TARGET ILLUMINATION VALUE.

LIGHTING CONTROL SYMBOL SUPERScript & SUBScript KEY:

- "Y" INDICATES THAT SWITCH LEG "Y" TO BE CONFIGURED PER THE 500, ADJACENT LOWER CASE LETTERS INDICATES QUANTITY OF SWITCHLEGS TO BE CONTROLLED. EXACT CONTROL FUNCTION IS DETERMINED BY THE BALLAST/DRIVER/FIXTURE TYPE.
- ADJACENT UPPER CASE LETTER(S) INDICATE THE FOLLOWING:
 - AV INDICATES CONNECTION TO A/V CONTROL SYSTEM.
 - DM INDICATES DUAL MODE CONTROL AT CORRIDORS, STAIRWELLS AND WAREHOUSE AISLEWAYS
 - H INDICATES CONNECTION TO HVAC SYSTEM CONTROLS VIA CONTROLLED DRY-CONTACT CLOSURE.
 - K INDICATES LOCKING SWITCH FOR THE SUBSEQUENT LOWER CASE LETTER.
 - P INDICATES CONNECTION TO MOVEABLE PARTITION INTERFACE, SENSOR AND STATUS INDICATOR.
 - V INDICATES VANDAL RESISTANT SWITCH.
- ADJACENT LOWER CASE LETTER(S) INDICATE SWITCH LEG(S) CONTROLLED EXCEPT WHERE "DM" INDICATES DUAL MODE CONTROL SWITCH.
- ADJACENT "+", ++ AND "+" INDICATES PORTION OF SWITCHLEG CONTROLLED BY SENSOR WHERE "+" INDICATES PRIMARY SIDLIT DAYLIT ZONE, "++" INDICATES SECONDARY SIDLIT DAYLIT ZONE, AND "+" INDICATES SKYLIT DAYLIT ZONE.

MISCELLANEOUS SYSTEM SYMBOLS

ICP	INVERTER CONTROL PANEL - SEE INVERTER SPECIFICATIONS.
ICAP	INVERTER ANNUNCIATOR PANEL - SEE INVERTER SPECIFICATIONS.
ICGP	GENERATOR ANNUNCIATOR PANEL - SEE GENERATOR SYSTEM SPECIFICATIONS FOR MORE INFORMATION.
IDCS	INTEGRATED DIMMING CONTROL STATION (IDCS) PANEL - WALL MOUNTED. SEE IDCS SYSTEM SPECIFICATIONS FOR MORE INFORMATION.
DPDPS	DIMMING PANEL CONTROL STATION (DPDPS) PANEL - WALL MOUNTED. SEE DPDPS SYSTEM SPECIFICATIONS FOR MORE INFORMATION.
HO	LIGHTING CONTROL SYSTEM LOCAL SWITCH - WALL MOUNTED. SEE LIGHTING CONTROL SYSTEM SPECIFICATIONS FOR MORE INFORMATION.
HO	LIGHTING CONTROL SYSTEM OVERRIDE SWITCH - WALL MOUNTED. SEE LIGHTING CONTROL SYSTEM SPECIFICATIONS FOR MORE INFORMATION.
HM	LIGHTING CONTROL SYSTEM MASTER SWITCH - WALL MOUNTED. SEE LIGHTING CONTROL SYSTEM SPECIFICATIONS FOR MORE INFORMATION.
HO	IDCS/DPDPS SYSTEM REMOTE STATION SWITCH - WALL MOUNTED. SEE IDCS SYSTEM AND/OR DPDPS SYSTEM SPECIFICATIONS FOR MORE INFORMATION.
HO	IDCS/DPDPS SYSTEM PARTITION STATION SWITCH - WALL MOUNTED. SEE IDCS SYSTEM AND/OR DPDPS SYSTEM SPECIFICATIONS FOR MORE INFORMATION.

BRANCH CIRCUIT SYMBOLS

A-1,3,5	HOME RUN TO PANEL. LETTER DESIGNATES PANEL, NUMBERS INDICATE CIRCUITS. HASH MARKS INDICATE NUMBER OF CONDUCTORS IN CONDUIT RUN, #12 AWG MINIMUM UNLESS OTHERWISE NOTED.
A-1&3&5	HOME RUN TO PANEL. LETTER DESIGNATES PANEL, NUMBERS INDICATE CIRCUITS WITH SEPARATE NEUTRALS. "&" INDICATES SEPARATE NEUTRALS.
A-1+3+5	HOME RUN TO PANEL. LETTER DESIGNATES PANEL, NUMBERS INDICATE CIRCUITS. "+" INDICATES SEPARATE #10 NEUTRAL THROUGHOUT BRANCH CIRCUIT. HASH MARK "I" INDICATES AN ISOLATED GROUND CONDUCTOR.
CONCEALED CONDUIT OR BRANCH CIRCUIT UNLESS OTHERWISE NOTED. 1/2" CONDUIT MINIMUM, (2) #12 AWG CONDUCTORS MINIMUM.	
CONDUIT OR BRANCH CIRCUIT CONCEALED BELOW GRADE, 3/4" CONDUIT MINIMUM WITH (2) 12 AWG CONDUCTORS MINIMUM AND A CODE SIZED EQUIPMENT GROUND.	
SURFACE-MOUNTED CONDUIT OR BRANCH CIRCUIT UNLESS OTHERWISE NOTED. 1/2" CONDUIT MINIMUM, (2) #12 AWG CONDUCTORS MINIMUM.	
TANDEM WIRING CONNECTION.	
CONDUIT STUB OUT, CAP, MARK AND RECORD ON AS-BUILT DRAWINGS	
CONDUIT CONTINUATION.	
FLEXIBLE CONNECTION AS REQUIRED. NUMBER OF CONDUCTORS AS REQUIRED. VERIFY CONNECTION REQUIREMENTS WITH MANUFACTURER PRIOR TO ROUGH-IN.	
CONDUIT/ BRANCH CIRCUIT/FEEDER CONTINUATION DOWN WALL TO FLOOR BELOW	
CONDUIT/ BRANCH CIRCUIT/FEEDER CONTINUATION UP WALL TO FLOOR ABOVE	

FLOOR BOX / SPECIALTY WALL BOX / PEDESTAL BOX SYMBOLS

SINGLE SERVICE IN FLOOR BOX. PROVIDE DEVICES PER PLAN. SEE FLOOR BOX DETAILS AND SPECIFICATIONS FOR MORE INFORMATION.
TWO SERVICE IN FLOOR BOX. PROVIDE DEVICES PER PLAN. SEE FLOOR BOX DETAILS AND SPECIFICATIONS FOR MORE INFORMATION.
THREE SERVICE IN FLOOR BOX. PROVIDE DEVICES PER PLAN. SEE FLOOR BOX DETAILS AND SPECIFICATIONS FOR MORE INFORMATION.
FOUR SERVICE IN FLOOR BOX. PROVIDE DEVICES PER PLAN. SEE FLOOR BOX DETAILS AND SPECIFICATIONS FOR MORE INFORMATION.
SIX SERVICE IN FLOOR BOX. PROVIDE DEVICES PER PLAN. SEE FLOOR BOX DETAILS AND SPECIFICATIONS FOR MORE INFORMATION.
7-GANG AV FLOOR BOX. PROVIDE DEVICES PER PLAN. SEE FLOOR BOX DETAILS AND SPECIFICATIONS FOR MORE INFORMATION.

RECESSED, ADJUSTABLE DEPTH, FLAT PANEL TV/DISPLAY WALL BOX WITH FLUSH GROMMETED COVER PANEL (CHIEF #PAC525F) AND MINIMUM OF (1) 1-1/4"C.O. FROM TOP-MOUNTED L.V. CONDUIT ENTRY BOX TO ACCESSIBLE CEILING. SEE PLANS FOR ANY ADDITIONAL CONDUIT REQUIREMENTS. PROVIDE ADDITIONAL L.V. AND LINE VOLTAGE CONDUIT ENTRY BOXES AS REQUIRED TO ACCOMPLISH WALL BOX CONFIGURATIONS. DEPICTED ON PLANS: FLUSH GROMMETED COVER SHALL BE WHITE, BLACK OR CUSTOM COLOR PER ARCHITECT. WHEN FIELD CONDITIONS PROHIBIT INSTALLATION OF THIS DEVICE (SUCH AS WALL STUDY/CAVITY DEPTH OF LESS THAN 2.5" ETC), CONFIRM VIA WRITTEN RFI THE INSTALLATION OF A TRADITIONAL POWER AND DATA RECEPTACLE INSTALLATION ALONG SIDE CCTV/AV JUNCTION BOX CONSISTING OF 2-GANG DEEP JUNCTION BOX/2-GANG RING WITH 1-1/4"C.O. TO ACCESSIBLE CEILING IN ADDITION TO ANY OTHER CONDUIT REQUIREMENTS DEPICTED ON PLANS. REFER TO ARCHITECTURAL PLANS AND ELEVATIONS FOR MOUNTING HEIGHT.

SINGLE OR DUAL SERVICE RECESSED EXTERIOR WALL BOX - TYPE "WP-A", PROVIDE DEVICES PER PLAN. EACH LV OR UNUSED COMPARTMENT SHALL BE EQUIPPED WITH A 1"C.O. TO THE NEAREST ACCESSIBLE CEILING SPACE U.O.N. SEE EXTERIOR DETAILS AND SPECIFICATIONS FOR MORE INFORMATION.

SINGLE OR DUAL SERVICE EXTERIOR PEDESTAL - TYPE "WP-C", PROVIDE DEVICES PER PLAN. SEE EXTERIOR DETAILS AND SPECIFICATIONS FOR MORE INFORMATION. ARROW DENOTES DEVICE DOW LOCATION.

POWER SYMBOLS

ALL RECEPTACLE OUTLETS SHOWN WITH A DIAGONAL SLASH SHALL BE CONTROLLED BY OCCUPANCY SENSOR OR LIGHTING CONTROL PANEL. SEE DISTRIBUTED LIGHTING CONTROL FOR ADDITIONAL REQUIREMENTS. WHERE DOUBLE DUPLEX RECEPTACLE OUTLETS ARE INDICATED AS CONTROLLED, ONLY A SINGLE DUPLEX RECEPTACLE OUTLET (NON-IG, NON-GFCI TYPE) SHALL BE CONTROLLED. WITHIN ANY CONTROLLED DUPLEX RECEPTACLE OUTLET, ONLY ONE RECEPTACLE SHALL BE CONTROLLED. NOTE THAT FOR FLOOR BOXES OR FLOOR-THRU DEVICES, THE ASSOCIATED CONTROL RELAY MAY NEED TO BE LOCATED WITHIN THE ELECTRICAL ROOM WHERE THE CONTROLLED CIRCUIT ORIGINATES.

HO	DUPLEX RECEPTACLE, WALL MOUNTED.
HO _y	DOUBLE DUPLEX RECEPTACLE, WALL MOUNTED.
HO _H	DUPLEX, GFCI RECEPTACLE, WALL MOUNTED. WP INDICATES WEATHERPROOF, A, B OR C INDICATES THE TYPE OF COVER, REFER TO THE GENERAL PRODUCT SPECIFICATIONS.
HO _{H,AV,D,M,P}	DOUBLE DUPLEX, WALL MOUNTED. WITH (1) GFCI RECEPTACLE AND (1) DUPLEX RECEPTACLE CONNECTED ON LOAD SIDE OF GFCI. WP INDICATES WEATHERPROOF, A, B OR C INDICATES THE TYPE OF COVER, REFER TO THE GENERAL PRODUCT SPECIFICATIONS.
HO _{H,AV,D,M,P}	DUPLEX RECEPTACLE, ONE HALF SWITCHED, WALL MOUNTED.
HO _{H,AV,D,M,P}	DUPLEX, ISOLATED GROUND RECEPTACLE, WALL MOUNTED.
HO _{H,AV,D,M,P}	COMBINATION DOUBLE DUPLEX: ONE ISOLATED GROUND DUPLEX RECEPTACLE AND ONE DUPLEX RECEPTACLE, WALL MOUNTED.
HO _{H,AV,D,M,P}	COMBINATION DOUBLE DUPLEX: TWO ISOLATED GROUND RECEPTABLES, WALL MOUNTED.
HO _{H,AV,D,M,P}	SIMPLEX RECEPTACLE, WALL MOUNTED.
HO _{H,AV,D,M,P}	SPECIAL RECEPTACLE, WALL MOUNTED. REFER TO PLAN NOTES.
HO _{H,AV,D,M,P}	DUPLEX RECEPTACLE FLUSH IN CEILING - MOUNT FLUSH IN FLOOR WHEN INDICATED IN A FLOOR BOX SYMBOL.
HO _{H,AV,D,M,P}	DOUBLE DUPLEX RECEPTACLE FLUSH IN CEILING - MOUNT FLUSH IN FLOOR WHEN INDICATED IN A FLOOR BOX SYMBOL.
HO _{H,AV,D,M,P}	DUPLEX RECEPTACLE, ONE HALF SWITCHED, FLUSH IN CEILING - MOUNT FLUSH IN FLOOR WHEN INDICATED IN A FLOOR BOX SYMBOL.
HO _{H,AV,D,M,P}	DUPLEX, ISOLATED GROUND RECEPTACLE, FLUSH IN CEILING - MOUNT FLUSH IN FLOOR WHEN INDICATED IN A FLOOR BOX SYMBOL.
HO _{H,AV,D,M,P}	COMBINATION DOUBLE DUPLEX: ONE ISOLATED GROUND DUPLEX RECEPTACLE AND ONE DUPLEX RECEPTACLE, MOUNTED FLUSH IN CEILING - MOUNT FLUSH IN FLOOR WHEN INDICATED IN FLOOR BOX SYMBOL.
HO _{H,AV,D,M,P}	COMBINATION DOUBLE DUPLEX FLUSH IN CEILING: TWO ISOLATED GROUND RECEPTABLES - MOUNT FLUSH IN FLOOR WHEN INDICATED IN FLOOR BOX SYMBOL.
HO _{H,AV,D,M,P}	SIMPLEX RECEPTACLE FLUSH IN CEILING - MOUNT FLUSH IN FLOOR WHEN INDICATED IN A FLOOR BOX SYMBOL.
HO _{H,AV,D,M,P}	SPECIAL RECEPTACLE FLUSH IN CEILING - MOUNT FLUSH IN FLOOR WHEN INDICATED IN A FLOOR BOX SYMBOL.
HO _{H,AV,D,M,P}	DUPLEX RECEPTACLE, WALL MOUNTED AT 6-INCHES ABOVE COUNTER OR SPLASH.
HO _{H,AV,D,M,P}	DUPLEX, GFCI RECEPTACLE, WALL MOUNTED AT 6-INCHES ABOVE COUNTER OR SPLASH. WP INDICATES WEATHERPROOF, A, B OR C INDICATES THE TYPE OF COVER, REFER TO THE GENERAL PRODUCT SPECIFICATIONS.
HO _{H,AV,D,M,P}	DOUBLE DUPLEX, WALL MOUNTED 6-INCHES ABOVE COUNTER OR SPLASH, WITH (1) GFCI RECEPTACLE AND (1) DUPLEX RECEPTACLE, WALL MOUNTED 6-INCHES ABOVE COUNTER OR SPLASH. WP INDICATES WEATHERPROOF, A, B OR C INDICATES THE TYPE OF COVER, REFER TO THE GENERAL PRODUCT SPECIFICATIONS.
HO _{H,AV,D,M,P}	DUPLEX RECEPTACLE, BOTTOM HALF SWITCHED, WALL MOUNTED AT 6-INCHES ABOVE COUNTER OR SPLASH.
HO _{H,AV,D,M,P}	DUPLEX, ISOLATED GROUND RECEPTACLE, WALL MOUNTED AT 6-INCHES ABOVE COUNTER OR SPLASH.
HO _{H,AV,D,M,P}	COMBINATION DOUBLE DUPLEX: ONE ISOLATED GROUND DUPLEX RECEPTACLE AND ONE DUPLEX RECEPTACLE, WALL MOUNTED AT 6-INCHES ABOVE COUNTER OR SPLASH.
HO _{H,AV,D,M,P}	COMBINATION DOUBLE DUPLEX: TWO ISOLATED GROUND DUPLEX RECEPTABLES, WALL MOUNTED AT 6-INCHES ABOVE COUNTER OR SPLASH.
HO _{H,AV,D,M,P}	SIMPLEX RECEPTACLE, WALL MOUNTED AT 6-INCHES ABOVE COUNTER OR SPLASH.
HO _{H,AV,D,M,P}	SPECIAL RECEPTACLE, WALL MOUNTED AT 6-INCHES ABOVE COUNTER OR SPLASH. REFER TO PLAN NOTES.
HO _{H,AV,D,M,P}	WET LOCATION-LISTED (RAINTITE-IN-USE) RECEPTACLE - SEE ELECTRICAL SPECIFICATION FOR ADDITIONAL INFORMATION.
HO _{H,AV,D,M,P}	DAMP LOCATION-LISTED (NOT-RAINTITE-IN-USE) RECEPTACLE - SEE ELECTRICAL SPECIFICATION FOR ADDITIONAL INFORMATION.
HO _{H,AV,D,M,P}	DUPLEX RECEPTABLES WITH TWO 5V, 3.6A USB CHARGING PORTS. PROVIDE COLOR AS REQUIRED IN 15A OR 20A CONFIGURATION AND

Mechanical/Electrical/Plumbing Engineer
tk1sc Collaborative
4755 Eastgate Mall, Suite 150
San Diego, CA 92121
858.362.6800

15231 Laguna Canyon Road, Suite 100
Irvine, California 92618
949.751.5800 www.tk1sc.com

Project Leader - Kenneth McClendon
Electrical Lead - Christina Souza
tk1sc Job #: 2019-0727



Registration Seal C-32509	Address 14 NE 1st Avenue, Suite 507 Miami, FL 33132 T +1 (305) 455 4216
------------------------------	--

Issued/Revised		
No	Date	Description
	09-17-21	Permit Set
1	01-05-22	Owner Revisions

Drawing Title

ELECTRICAL
DEMOLITION OVERALL
PLAN

Scale	As Noted
Date	09-17-2021
Drawn By	CS
Project No.	19022
Drawing No.	CS

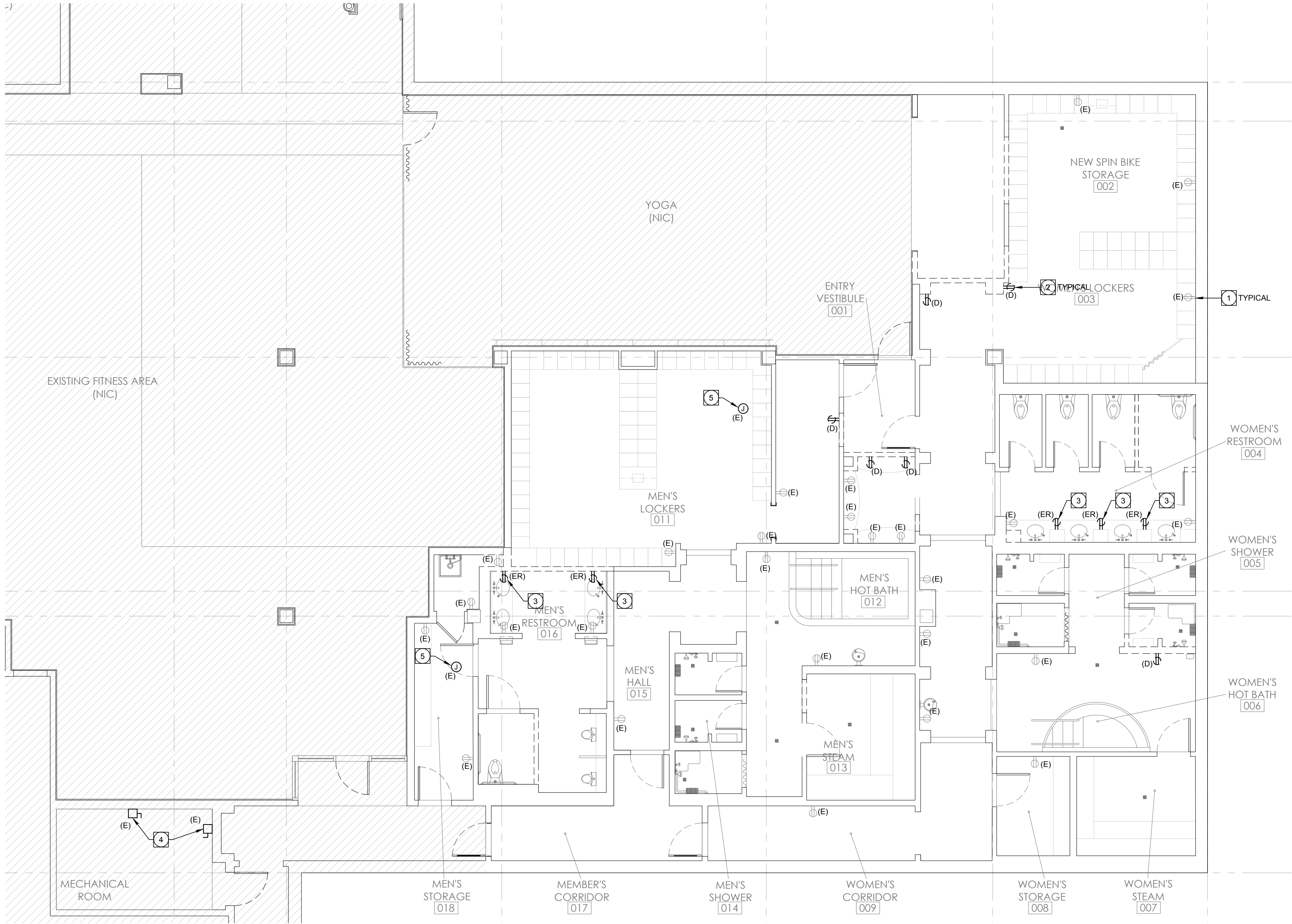
E1.00

PERMIT SET: ISSUED FOR CONSTRUCTION

1 ELECTRICAL DEMOLITION OVERALL PLAN

Scale: $3/32" = 1' - 0"$

PERMIT SET- ISSUED FOR CONSTRUCTION



DEMO PLAN NOTES:

- EXISTING RECEPTACLES AND ASSOCIATED BRANCH CIRCUITING TO REMAIN, PROTECT IN PLACE. VERIFY EXACT LOCATION IN FIELD. EXISTING DEVICE AND ASSOCIATED FACEPLATE THAT DO NOT MATCH NEW DEVICE STANDARD SHALL BE REPLACED WITH NEW DEVICES TO MATCH NEW, REFER TO ARCHITECTS' PLANS FOR FINISH REQUIREMENTS.
- EXISTING RECEPTACLES TO BE DEMOLISHED, VERIFY EXACT LOCATION IN FIELD. SAFE-OFF BRANCH CIRCUIT AT PANEL. RE-WORK EXISTING CONDUITS AND CONDUCTORS AS REQUIRED TO MAINTAIN CIRCUITRY TO EXISTING REMAINING RECEPTACLES ON CIRCUIT(S). VERIFY EXACT REQUIREMENTS IN FIELD PRIOR TO WORK.
- EXISTING RECEPTACLES TO BE RELOCATED, VERIFY EXACT LOCATION IN FIELD. SAFE-OFF BRANCH CIRCUIT AT PANEL. RE-WORK EXISTING CONDUITS AND CONDUCTORS AS REQUIRED TO MAINTAIN CIRCUITRY TO EXISTING REMAINING RECEPTACLES ON CIRCUIT(S). CONTRACTOR SHALL MAKE EXISTING BRANCH CIRCUIT(S) AVAILABLE FOR RE-USE WITH NEW RECEPTACLE LOCATIONS, SEE SHEET E2.01.
- CONTRACTOR SHALL DISCONNECT EXISTING STEAM GENERATOR FROM EXISTING BRANCH CIRCUITING AS REQUIRED. EXISTING STEAM GENERATOR DISCONNECT, ALL CONDUCTORS AND CONDUIT SHALL REMAIN, PROTECT IN PLACE. VERIFY EXACT LOCATIONS IN FIELD.
- EXISTING VAV BOX TO BE DEMOLISHED AND REPLACED, VERIFY EXACT LOCATION IN FIELD PRIOR TO WORK. EXISTING BRANCH CIRCUITING SHALL BE RE-USED, CONTRACTOR SHALL VERIFY CIRCUITING IN FIELD PRIOR TO WORK.

GENERAL DEMOLITION NOTES:

- THE ELECTRICAL DRAWINGS ARE DIAGRAMMATIC ONLY. DO NOT SCALE THE ELECTRICAL DRAWINGS TO DETERMINE THE LOCATION OF EQUIPMENT OR OUTLETS. SEE ARCHITECTURAL PLANS, WHERE PROVIDED ON PROJECT, FOR EXTENT OF DEMOLITION.
- THE EXISTING CONDITIONS SHOWN ARE FROM AVAILABLE RECORD DRAWINGS AND SHOWN FOR REFERENCE ONLY. CONTRACTOR SHALL VERIFY ACTUAL EXISTING CONDITIONS AT SITE PRIOR TO SUBMITTING BID. ALL DEMOLITION, ALTERATION, EXTENSION, RELOCATION, REHABILITATION WORK SHALL BE INCLUDED IN CONTRACT. NO ADDITIONAL ALLOWANCE OR CHANGE ORDERS WILL BE ACCEPTED.
- CONTRACTOR IS RESPONSIBLE FOR RELOCATING OR REMOVING FROM WALLS, CEILINGS, FLOOR SPACES, ETC., ANY EXISTING CONDUITS, WIRES, BOXES, FITTINGS, FIXTURES OR OTHER ELECTRICAL EQUIPMENT WHICH INTERFERES WITH PLANNED REMODEL WORK. PROVIDE CIRCUIT CONTINUATION REQUIRED FOR ALL EXISTING OUTLETS, FIXTURES, EQUIPMENT, ETC. SCHEDULED TO REMAIN.
- NOTIFY THE ENGINEER IMMEDIATELY WHEREVER EXISTING EQUIPMENT IS ENCOUNTERED WHICH MUST BE RELOCATED DUE TO THE NEW CONSTRUCTION, OR NOT INDICATED ON "AS-BUILT" DRAWINGS OR WAS BURIED UNDERGROUND OR EMBEDDED IN STRUCTURE WALLS.
- CAREFULLY PROTECT ALL WALLS, TRIM, FLOORS, EQUIPMENT, UTILITY LINES AND MATERIALS. WHEN WORKING ON FINISHED SURFACES, LIMIT DAMAGE TO THE SMALLER AREA IF POSSIBLE AND RESTORE TO THE ORIGINAL CONDITION ALL SURFACES WHICH ARE DAMAGED BECAUSE OF THE INSTALLATION OF THIS WORK.
- EQUIPMENT, MATERIALS AND SUPPLIES TEMPORARILY REMOVED FOR PROTECTION SHALL BE REPLACED IN ORIGINAL LOCATIONS. ANY MATERIALS DAMAGED SHALL BE REPLACED WITH NEW MATERIALS OF LIKE KIND AND QUALITY.
- DEMOLITION WORK SHALL BE DONE IN A MANNER WHICH WILL NOT CAUSE UNNECESSARY INCONVENIENCE OR DANGER TO USERS OF THE PREMISES AND ADJACENT SITE, AND NOT INTERFERE WITH ITS OPERATION. ANY DEMOLITION WORK TO BE PERFORMED MUST BE PLANNED IN ADVANCE.
- DO ALL DRILLING, CUTTING, ETC. REQUIRED TO DEMOLISH ELECTRICAL WORK AS INDICATED OR PROVIDE BLANK COVER PLATE ON ALL OUTLETS EXPOSED BY REMOVAL OF FIXTURE OR DEVICES.
- RESEAL ALL PENETRATIONS OR OPENING THROUGH WALLS, CEILING, FLOORS, ETC., TO MAINTAIN THE RATING OF STRUCTURE.
- ALL REMOVED MATERIALS AND EQUIPMENT WHICH ARE SALVAGED MATERIALS SHALL REMAIN THE PROPERTY OF THE OWNER. DELIVER SUCH SALVAGED MATERIALS AND EQUIPMENT ON THE PREMISES AS DIRECTED BY OWNER AND NEATLY PILE OR STORE AND PROTECT FROM DAMAGE. DISPOSE OF ALL HAZARDOUS MATERIAL PER FEDERAL, STATE AND LOCAL REGULATIONS AND OTHER AGENCIES HAVING JURISDICTION.
- CONTRACTOR SHALL FIELD VERIFY EXISTING CONDUIT/WIRING RUNS, REUSE AS REQUIRED, AND REMOVE ALL UNUSED CONDUIT/WIRING. UNUSED CONDUIT IN INACCESSIBLE LOCATIONS (WALLS TO REMAIN) MAY BE ABANDONED IN PLACE. REMOVE UNUSED WIRING INCLUDING ABANDONED TELEPHONE, DATA AND OTHER LOW VOLTAGE SYSTEMS CABLING AFTER CONFIRMING WITH THE OWNER'S PROJECT MANAGER THAT CABLING IS ABANDONED AND WILL NOT BE RE-USED.
- CONTRACTOR TO VERIFY CIRCUIT NUMBER AND LOADS FOR ALL EXISTING EQUIPMENT PRIOR TO INSTALLATION OF NEW OR RELOCATED ELECTRICAL EQUIPMENT. REASSIGN CIRCUITS AND LOADS ACCORDINGLY. PROVIDE COMPLETE "AS BUILT" DRAWINGS AND TYPEWRITTEN DIRECTORIES FOR PANELS.
- WHERE NECESSARY TO SHUT OFF UTILITY SERVICES OR CAUSE INTERRUPTION TO POWER OR SIGNAL SYSTEMS WHILE A BUILDING IS OCCUPIED OR THAT AFFECT ADJACENT BUILDINGS, SCHEDULE OUTAGES.

1 ENLARGED DEMOLITION POWER PLAN
Scale: 3/32" = 1' - 0"

HOTEL DEL CORONADO.

Fitness
Members Area
Renovation

1500 Orange Avenue
Coronado, CA 92118

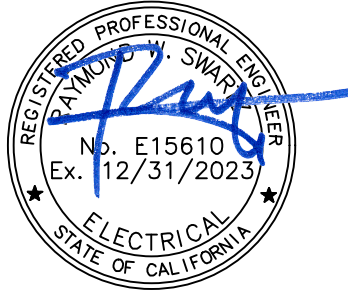


González Architects
Hospitality

Mechanical/Electrical/Plumbing Engineer
tk1sc Collaborative
4755 Eastgate Mall, Suite 150
San Diego, CA 92121
619.362.6800

tk1sc
COLLABORATIVE

15231 Laguna Canyon Road, Suite 100
Irvine, California 92618
949.751.5800 www.tk1sc.com
Project Leader - Kenneth McClendon
Electrical Lead - Christina Souza
tk1sc Job #: 2019-0727



Registration Seal
C-32509
Address
14 NE 1st Avenue, Suite 507
Miami, FL 33132
T +1 (305) 455 4216

Issued/Revised	
No.	Date Description
09-17-21	Permit Set
01-05-22	Owner Revisions

Drawing Title

ENLARGED DEMOLITION
POWER PLAN

Scale	As Noted
Date	09-17-2021
Drawn By	CS
Project No.	19022
Drawing No.	CS

E1.01

PERMIT SET- ISSUED FOR CONSTRUCTION



DEMO PLAN NOTES:

- EXISTING LIGHT FIXTURE TO BE DEMOLISHED AND REPLACED ONE FOR ONE REPLACEMENT, VERIFY EXACT LOCATION IN FIELD PRIOR TO WORK. EXISTING BRANCH CIRCUITING SHALL BE RE-USED AND IS SHOWN BASED ON LIMITED AS-BUILT INFORMATION. CONTRACTOR SHALL VERIFY CIRCUITING IN FIELD PRIOR TO WORK.
- EXISTING LIGHT FIXTURE TO BE DEMOLISHED, EXISTING LIGHTING BRANCH CIRCUITING TO BE MADE AVAILABLE FOR USE WITH NEW LIGHT FIXTURE, SEE SHEET E2.02 FOR ADDITIONAL INFORMATION. VERIFY EXACT LOCATION IN FIELD PRIOR TO WORK. EXISTING BRANCH CIRCUITING SHALL BE RE-USED AND IS SHOWN BASED ON LIMITED AS-BUILT INFORMATION. CONTRACTOR SHALL VERIFY CIRCUITING IN FIELD PRIOR TO WORK.
- EXISTING LIGHT FIXTURE TO BE DEMOLISHED, VERIFY EXACT LOCATION IN FIELD PRIOR TO WORK. RE-WORK EXISTING CONDUITS AND CONDUCTORS AS REQUIRED TO MAINTAIN CIRCUITRY TO EXISTING REMAINING LIGHTING FIXTURES ON CIRCUIT(S).
- EXISTING EXIT SIGN TO BE DEMOLISHED, VERIFY EXACT LOCATION IN FIELD PRIOR TO WORK. RE-WORK EXISTING CONDUITS AND CONDUCTORS AS REQUIRED TO MAINTAIN CIRCUITRY TO EXISTING REMAINING LIGHTING FIXTURES ON CIRCUIT(S).
- EXISTING DOWNLIGHTS TO REMAIN, PROTECT IN PLACE. VERIFY EXACT LOCATION IN FIELD.

GENERAL DEMOLITION NOTES:

- THE ELECTRICAL DRAWINGS ARE DIAGRAMMATIC ONLY. DO NOT SCALE THE ELECTRICAL DRAWINGS TO DETERMINE THE LOCATION OF EQUIPMENT OR OUTLETS. SEE ARCHITECTURAL PLANS, WHERE PROVIDED ON PROJECT, FOR EXTENT OF DEMOLITION.
- THE EXISTING CONDITIONS SHOWN ARE FROM AVAILABLE RECORD DRAWINGS AND SHOWN FOR REFERENCE ONLY. CONTRACTOR SHALL VERIFY ACTUAL EXISTING CONDITIONS AT SITE PRIOR TO SUBMITTING BID. ALL DEMOLITION, ALTERATION, EXTENSION, RELOCATION, REHABILITATION WORK SHALL BE INCLUDED IN CONTRACT. NO ADDITIONAL ALLOWANCE OR CHANGE ORDERS WILL BE ACCEPTED.
- CONTRACTOR IS RESPONSIBLE FOR RELOCATING OR REMOVING FROM WALLS, CEILINGS, FLOOR SPACES, ETC., ANY EXISTING CONDUITS, WIRES, BOXES, FITTINGS, FIXTURES OR OTHER ELECTRICAL EQUIPMENT WHICH INTERFERES WITH PLANNED REMODEL WORK. PROVIDE CIRCUIT CONTINUATION REQUIRED FOR ALL EXISTING OUTLETS, FIXTURES, EQUIPMENT, ETC. SCHEDULED TO REMAIN.
- NOTIFY THE ENGINEER IMMEDIATELY WHEREVER EXISTING EQUIPMENT IS ENCOUNTERED WHICH MUST BE RELOCATED DUE TO THE NEW CONSTRUCTION, OR NOT INDICATED ON "AS-BUILT" DRAWINGS OR WAS BURIED UNDERGROUND OR EMBEDDED IN STRUCTURE WALLS.
- CAREFULLY PROTECT ALL WALLS, TRIM, FLOORS, EQUIPMENT, UTILITY LINES AND MATERIALS. WHEN WORKING ON FINISHED SURFACES, LIMIT DAMAGE TO THE SMALLER AREA IF POSSIBLE AND RESTORE TO THE ORIGINAL CONDITION ALL SURFACES WHICH ARE DAMAGED BECAUSE OF THE INSTALLATION OF THIS WORK.
- EQUIPMENT, MATERIALS AND SUPPLIES TEMPORARILY REMOVED FOR PROTECTION SHALL BE REPLACED IN ORIGINAL LOCATIONS. ANY MATERIALS DAMAGED SHALL BE REPLACED WITH NEW MATERIALS OF LIKE KIND AND QUALITY.
- DEMOLITION WORK SHALL BE DONE IN A MANNER WHICH WILL NOT CAUSE UNNECESSARY INCONVENIENCE OR DANGER TO USERS OF THE PREMISES AND ADJACENT SITE, AND NOT INTERFERE WITH ITS OPERATION. ANY DEMOLITION WORK TO BE PERFORMED MUST BE PLANNED IN ADVANCE.
- DO ALL DRILLING, CUTTING, ETC. REQUIRED TO DEMOLISH ELECTRICAL WORK AS INDICATED OR PROVIDE BLANK COVER PLATE ON ALL OUTLETS EXPOSED BY REMOVAL OF FIXTURE OR DEVICES.
- RESEAL ALL PENETRATIONS OR OPENING THROUGH WALLS, CEILING, FLOORS, ETC., TO MAINTAIN THE RATING OF STRUCTURE.
- ALL REMOVED MATERIALS AND EQUIPMENT WHICH ARE SALVAGED MATERIALS SHALL REMAIN THE PROPERTY OF THE OWNER. DELIVER SUCH SALVAGED MATERIALS AND EQUIPMENT ON THE PREMISES AS DIRECTED BY OWNER AND NEATLY PILE OR STORE AND PROTECT FROM DAMAGE. DISPOSE OF ALL HAZARDOUS MATERIAL PER FEDERAL, STATE AND LOCAL REGULATIONS AND OTHER AGENCIES HAVING JURISDICTION.
- CONTRACTOR SHALL FIELD VERIFY EXISTING CONDUIT/WIRING RUNS, REUSE AS REQUIRED, AND REMOVE ALL UNUSED CONDUIT/WIRING. UNUSED CONDUIT IN INACCESSIBLE LOCATIONS (WALLS TO REMAIN) MAY BE ABANDONED IN PLACE. REMOVE UNUSED WIRING INCLUDING ABANDONED TELEPHONE, DATA AND OTHER LOW VOLTAGE SYSTEMS CABLING AFTER CONFIRMING WITH THE OWNER'S PROJECT MANAGER THAT CABLING IS ABANDONED AND WILL NOT BE RE-USED.
- CONTRACTOR TO VERIFY CIRCUIT NUMBER AND LOADS FOR ALL EXISTING EQUIPMENT PRIOR TO INSTALLATION OF NEW OR RELOCATED ELECTRICAL EQUIPMENT. REASSIGN CIRCUITS AND LOADS ACCORDINGLY. PROVIDE COMPLETE "AS BUILT" DRAWINGS AND TYPEWRITTEN DIRECTORIES FOR PANELS.
- WHERE NECESSARY TO SHUT OFF UTILITY SERVICES OR CAUSE INTERRUPTION TO POWER OR SIGNAL SYSTEMS WHILE A BUILDING IS OCCUPIED OR THAT AFFECT ADJACENT BUILDINGS, SCHEDULE OUTAGES.

HOTEL DEL CORONADO.

Fitness Members Area Renovation

1500 Orange Avenue
Coronado, CA 92118

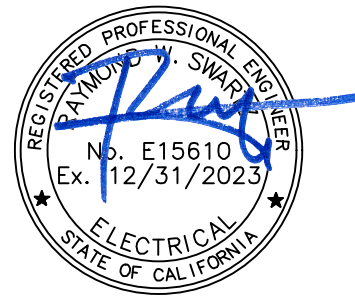


González Architects
Hospitality

Mechanical/Electrical/Plumbing Engineer
tk1sc Collaborative
4755 Eastgate Mall, Suite 150
San Diego, CA 92121
656.362.6800

tk1sc
COLLABORATIVE

15231 Laguna Canyon Road, Suite 100
Irvine, California 92618
949.751.5800 www.tk1sc.com
Project Leader - Kenneth McClendon
Electrical Lead - Christina Souza
tk1sc Job #: 2019-0727



Registration Seal
C-32509
Address
14 NE 1st Avenue, Suite 507
Miami, FL 33132
T+1 (305) 455 4216

Issued/Revised	
No.	Date Description
09-17-21	Permit Set
01-05-22	Owner Revisions

Drawing Title

ENLARGED DEMOLITION LIGHTING PLAN

Scale
Date
Drawn By
Project No.
Drawing No.

As Noted
09-17-2021
CS
19022
CS

E1.02

Mechanical/Electrical/Plumbing Engineer
tk1sc Collaborative
4755 Eastgate Mall, Suite150
San Diego, CA 92121
858.362.6800

tk1sc
COLLABORATIVE

Project Leader - Kenneth McClendon
Electrical Lead - Christina Souza
tk1sc Job #: 2019-0727



Registration Seal	Address
C-32509	14 NE 1st Avenue, Suite 507
	Miami, FL 33132
	T +1 (305) 455 4216

Issued/Revised		
No	Date	Description
	09-17-21	Permit Set
1	01-05-22	Owner Revisions

Drawing Title

ELECTRICAL OVERALL PLAN

Scale	As Noted
Date	09-17-2021
Drawn By	CS
Project No.	19022
Drawing No.	CS

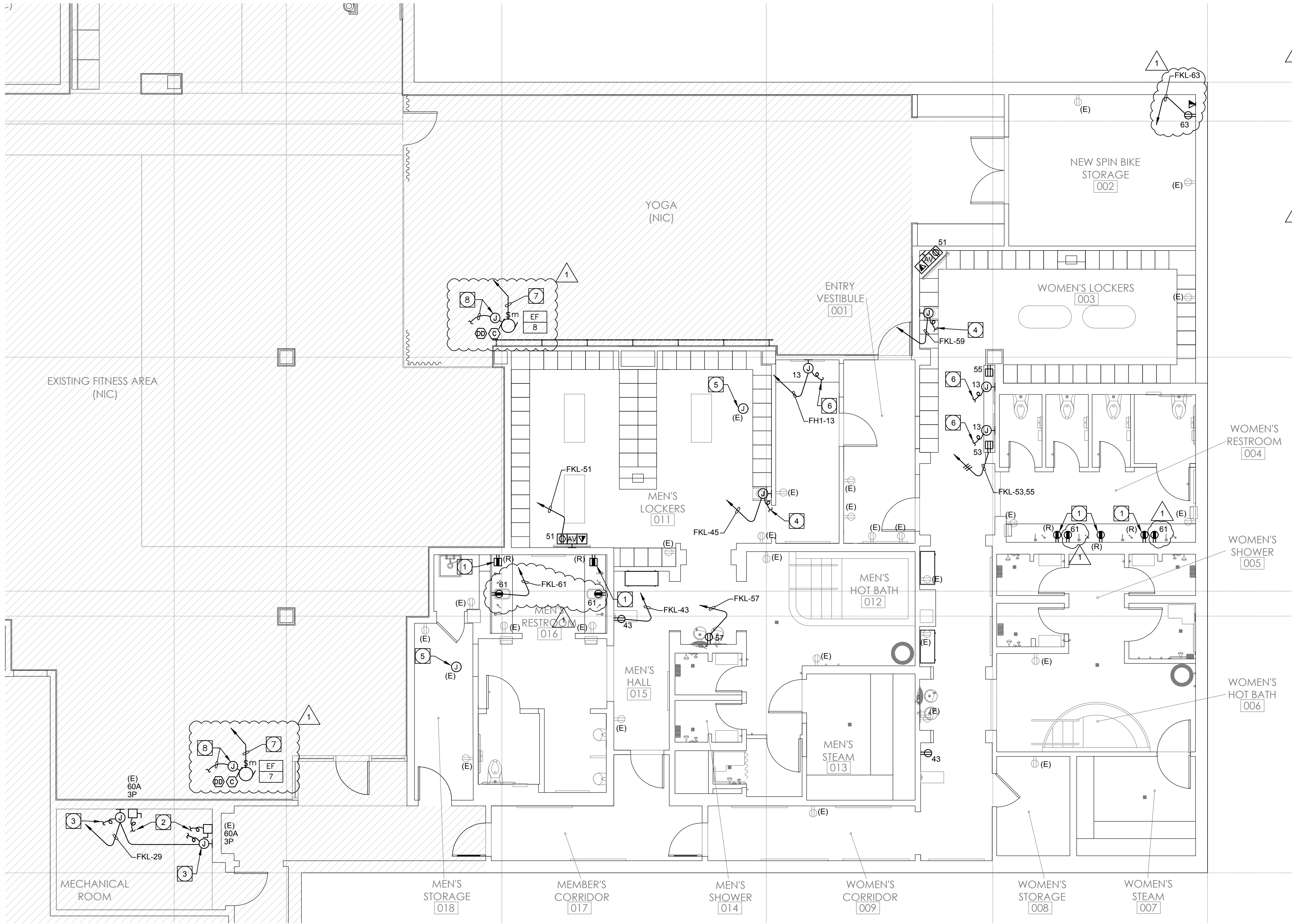
E2.00

PERMIT SET: ISSUED FOR CONSTRUCTION

1	ELECTRICAL OVERALL PLAN Scale: 3/32" = 1' - 0"
----------	--

Scale: $3/32" = 1' - 0"$

PERMIT SET- ISSUED FOR CONSTRUCTION



PLAN NOTES:

- 1 INTERCEPT AND EXTEND EXISTING RECEPTACLE BRANCH CIRCUITING MADE AVAILABLE FROM DEMOLITION WORK, SEE SHEET E1.01 FOR ADDITIONAL INFORMATION. NEW CONDUIT AND CONDUCTORS SHALL MATCH EXISTING. CONTRACTOR SHALL PROVIDE ALL CONDUIT, COUPLERS, CONDUCTORS, CONNECTORS, JUNCTION BOXES, ETC. AS REQUIRED TO PROVIDE A COMPLETE AND OPERATIONAL SYSTEM.
- 2 MAKE FINAL CONNECTION TO STEAM GENERATOR, REUSE EXISTING FEEDERS AND DISCONNECT SWITCH AS REQUIRED. COORDINATE EXACT REQUIREMENTS WITH PLUMBING CONTRACTOR.
- 3 PROVIDE 120V CONTROL CIRCUIT FOR STEAM GENERATOR. COORDINATE EXACT LOCATION WITH PLUMBING PRIOR TO ROUGH-IN.
- 4 CONNECT COMPLETE TO BATHING SUIT DRYER AS REQUIRED, VERIFY EXACT LOCATION IN FIELD PRIOR TO ROUGH-IN.
- 5 INTERCEPT AND EXTEND EXISTING VAV BRANCH CIRCUIT MADE AVAILABLE FROM DEMOLITION WORK, VERIFY EXACT LOCATION IN FIELD PRIOR TO WORK. CONNECT AS REQUIRED TO NEW VAV UNIT. SEE MECHANICAL PLANS FOR LOCATIONS AND ADDITIONAL REQUIREMENTS.
- 6 CONNECT COMPLETE TO INTERNALLY ILLUMINATED MIRROR AS REQUIRED. COORDINATE REQUIREMENTS WITH MANUFACTURER PRIOR TO ROUGH-IN. VERIFY EXACT LOCATION IN FIELD PRIOR TO ROUGH-IN.
- 7 REFER TO MOTORIZED EQUIPMENT SCHEDULE FOR MOTOR FEEDER/ BRANCH CIRCUIT INFORMATION.
- 8 PROVIDE 3/4" C.O.(S) TO RESPECTIVE CONTROL DEVICE(S) FOR CONTROL WIRING. REFER TO THE EQUIPMENT CONTROL WIRING DIAGRAMS FOR ADDITIONAL INFORMATION.

COMMUNICATIONS PATHWAYS
GENERAL NOTES:

1. CONDUITS SHALL (a) CONTAIN NO CONTINUOUS SECTIONS LONGER THAN 30M (98 FT.), AND (b) CONTAIN NO MORE THAN (2) 90° BENDS OR (1) REVERSE BEND WITHOUT INSTALLING A PULL BOX. SPLIT CONDUITS IN PLACE OF PULL BOXES ARE UNACCEPTABLE.
2. CONDUITS SHALL CONTAIN PLASTIC OR NYLON PULL TAPE RATED AT 200 LBS. WITH A MINIMUM OF 5 FEET OF EXTRA PULL TAPE COILED AT EACH END.
3. CONDUIT BEND RADIUS SHALL BE (a) A MINIMUM OF 6 TIMES THE INTERNAL CONDUIT DIAMETER FOR CONDUITS 2-INCHES IN DIAMETER OR LESS, AND (b) 10 TIMES THE INTERNAL CONDUIT DIAMETER FOR CONDUITS MORE THAN 2-INCHES IN DIAMETER.
4. TERMINATE CONDUIT STUBS AND SLEEVES THAT PROTRUDE THROUGH STRUCTURAL FLOORS 2-INCHES TO 3-INCHES ABOVE THE FLOOR SURFACE.
5. INSTALL BUSHINGS OR BELL ENDS AS REQUIRED ON ALL CONDUITS.
6. FLEX CONDUIT IS UNACCEPTABLE FOR USE AS A COMMUNICATIONS CONDUIT EXCEPT AT SEISMIC JOINTS AND/OR IF APPROVED IN WRITING BY THE ENGINEER.
7. ALL UNDER SLAB OR IN-SLAB CONDUITS SHALL BE INSTALLED IN A MANNER THAT PREVENTS WATER INFILTRATION OF THE CONDUIT. IT IS THE CONTRACTOR'S RESPONSIBILITY TO ENSURE GROUND WATER, RAIN WATER OR CONSTRUCTION WATER IS PREVENTED FROM ENTERING AND/OR REMOVED FROM THE CONDUITS PRIOR TO PLACEMENT OF COMMUNICATIONS CABLES. SEE ELECTRICAL SPECIFICATIONS, DETAILS AND PLANS FOR ADDITIONAL CONDUIT SEALING REQUIREMENTS.
8. ALL PULL BOXES SHALL BE SIZED AND INSTALLED PER ANSI-TIA-569-C. PULL BOXES FOR IN/UNDER SLAB CONDUIT RUNS ARE NOT PERMITTED UNLESS OTHERWISE NOTED. PULL BOXES FOR OVERHEAD CONDUIT RUNS SHALL BE LOCATED ABOVE ACCESSIBLE CEILINGS WITHIN THE ACCESSIBLE CEILING SPACE AND SUPPORTED INDEPENDENTLY FROM THE STRUCTURE AND CONDUIT SUPPORTS. PULL BOXES FOR ROOF MOUNTED OR EXTERIOR ABOVE GRADE APPLICATIONS SHALL BE NEMA 3R RATED. PULL BOXES SHALL BE SIZED ACCORDING TO THE FOLLOWING:

CONDUIT SIZE	WIDTH	LENGTH	DEPTH	WIDTH INCREASE PER ADDITIONAL CONDUIT
1"	4"	16"	3"	2"
2"	8"	36"	4"	5"
3"	12"	48"	5"	6"
4"	15"	60"	8"	8"

FOR OTHER CONDUIT SIZES REFER TO ANSI/TIA-569-C TABLE 12. - LATEST PUBLISHED EDITION.

9. CONDUIT(S) SHALL EXIT A PULL BOX ON THE WALL OPPOSITE THE WALL ENTERED.
10. PROVIDE LABELING OF EACH CONDUIT PER GENERAL ELECTRICAL SPECIFICATIONS.
11. PROVIDE INTERNAL/EXTERNAL GAS AND WATER TIGHT MECHANICAL SEALING/PLUGGING OF EACH BUILDING ENTRY CONDUIT AS SPECIFIED ELSEWHERE IN THE DRAWINGS AND SPECIFICATIONS.

1 ENLARGED POWER & COMMUNICATIONS PLAN

Scale: 3/32" = 1' - 0"

MOTORIZED EQUIPMENT SCHEDULE GENERAL NOTES:

1. ALL BRANCH CIRCUIT DATA IS BASED UPON METALLIC CONDUITS. IF THE CONTRACTOR ELECTS TO USE NONMETALLIC CONDUITS, AN EQUIPMENT GROUNDING CONDUCTOR SHALL BE INSTALLED PER NEC, OR CEC WHERE ADOPTED, TABLE 250.122 AND THE CONDUIT SIZE SHALL BE INCREASED ACCORDINGLY.
2. ELECTRICAL CONTRACTOR SHALL REFER TO ALL DOCUMENTS RELATED TO THE EQUIPMENT (I.E. SHOP DRAWINGS, CONSTRUCTION DOCUMENTS, ETC.) IN REGARDS TO ELECTRICAL CHARACTERISTICS OF ALL EQUIPMENT LISTED IN THE SCHEDULE. ANY MODIFICATION AND/OR ADDITIONAL WORK NECESSARY SHALL BE INCLUDED IN THE BASE BID.
3. ELECTRICAL CONTRACTOR SHALL CHECK THE ROTATION OF ALL THREE PHASE MOTORS AND CORRECT THE ROTATION IF REVERSED.
4. ELECTRICAL CONTRACTOR SHALL PROVIDE FUSES SIZED PER THE EQUIPMENT NAMEPLATE INFORMATION.
5. DISCONNECT SWITCHES SHALL BE HEAVY DUTY TYPE, EXTERNALLY OPERATED, QUICK MAKE QUICK BREAK AND SHALL BE FUSIBLE OR NON FUSIBLE AS INDICATED. A MAXIMUM VOLTAGE, CURRENT AND HORSEPOWER SHALL BE CLEARLY MARKED ON SWITCH ENCLOSURE. SWITCHES HAVING DUAL RATINGS (HIGHER RATINGS WHEN USED WITH DUAL ELEMENT FUSES) SHALL HAVE RATINGS INDICATED ON METAL PLATES RIVETED OR OTHERWISE PERMANENTLY ATTACHED TO THE ENCLOSURE. WHEN INDICATED, TOGGLE SWITCHES SHALL BE MOTOR RATED FOR THE APPLICATION.
6. STARTERS SHALL BE FULL VOLTAGE, REDUCED VOLTAGE OR COMBINATION DISCONNECT AND STARTER, WITH CONTROL VOLTAGE AS REQUIRED, AS INDICATED ON THE DOCUMENTS RELATED TO THE EQUIPMENT, SUCH AS SHOP DRAWINGS, CONSTRUCTION DOCUMENTS, ETC. STARTERS SHALL INCLUDE MOTOR OVERLOAD PROTECTION, PHASE LOSS AND PHASE UNBALANCE PROTECTION AS REQUIRED.

MOTORIZED EQUIPMENT SCHEDULE											
ITEM	DESCRIPTION	EQUIPMENT RATING							DISC. SW. SIZE	CIRCUIT DATA CONDUIT - WIRE	SPECIFIC NOTES
		VOLTS	PH.	HP	FLA	VFD	MCA	MOCP	SCCR		
EF 7	EXHAUST FAN	208	1	0.25	3.2	-	4.0	15	-	2#12 & 1#12 E/G FLK-7,79	-
EF 8	EXHAUST FAN	208	1	1	8.8	-	11	20	-	2#12 & 1#12 E/G FLK-81,83	-

7. ALL TERMINATIONS AND ENCLOSURES SHALL BE RATED FOR USE WITH 75 DEGREE C CONDUCTORS.
8. COMPLETE INSTALLATION SHALL CONFORM TO THE REQUIREMENTS OF NEC (OR CEC WHERE ADOPTED) ARTICLES 430 AND 440.
9. CONTRACTOR TO COORDINATE WITH ALL OTHER PROJECT TRADES AND WITH OWNER/ TENANT FOR TO OBTAIN RESPECTIVE EQUIPMENT SCCR AND PROVIDE APPROPRIATE PROTECTIVE DEVICES TO LIMIT AVAILABLE FAULT CURRENT TO LESS THAN THE EQUIPMENT NAMEPLATE SCCR PER NEC (OR CEC WHERE ADOPTED) 110.10. SEE POWER SYSTEM STUDY SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
10. UNLESS OTHERWISE NOTED, MOCP VALUES FOR VFD-EQUIPPED DEVICE ARE SIZED PER NEC (OR CEC WHERE ADOPTED) 430.130(A).1. CONTRACTOR SHALL COORDINATE WITH ALL OTHER PROJECT TRADES AND WITH OWNER/ TENANT (IF PROVIDING EQUIPMENT ON PROJECT) TO OBTAIN NAMEPLATE VFD-EQUIPPED DEVICE MOCP VALUE FROM MANUFACTURER INSTALLATION INSTRUCTIONS AND PROVIDE APPROPRIATE PROTECTIVE DEVICES TO COMPLY WITH NEC (OR CEC WHERE ADOPTED) 430.130(A).2.

POWER PLAN GENERAL NOTES:

1. ALL RECEPTACLES ON COMMON WALLS SHALL BE SEPARATE BOXES AND OFFSET 24-INCHES MINIMUM.
2. ALL PENETRATIONS THROUGH FIRE RATED WALLS SHALL BE PROTECTED FROM THE SPREAD OF FIRE WITH AN APPROVED FIRESTOP SYSTEM EQUAL OR GREATER THAN THE FIRE RATING OF THE WALL.
3. ALL WALL-MOUNTED DEVICE HEIGHTS SHALL BE VERIFIED WITH THE ARCHITECT PRIOR TO ROUGH-IN.
4. ALL FURNITURE FEED LOCATIONS TO BE VERIFIED WITH ARCHITECT AND FURNITURE VENDOR PRIOR TO ROUGH-IN.
5. ALL FURNITURE WHIPS SHALL BE TRIMMED TO REDUCE EXCESS WHIP LENGTH.
6. WHEN EXPOSED CEILINGS OR OPEN GRID CONDITIONS OCCUR, THE CONTRACTOR WILL NEED TO PROVIDE THE FOLLOWING ITEMS:
 - a. ALL BRANCH CIRCUITS SHALL BE EMT.
 - b. ALL BRANCH CIRCUITS SHALL BE ROUTED ORTHOGONALLY, NEATLY TRAINED, IN PARALLEL TO STRUCTURES OR DUCTWORK. THE TERM "TRAINED" MEANS ALL PARALLEL CONDUITS SHALL MAINTAIN THE SAME SPATIAL RELATIONSHIP WITH EACH OTHER FOR ENTIRE RUN TO INCLUDE RADIUS BENDS AND SWEEPS.
 - c. VISUALLY OBJECTIONABLE BRANCH CIRCUITS WILL BE REROUTED AT THE REQUEST OF THE ARCHITECT AT NO ADDITIONAL COST.
7. EXPOSED CABLE/CONDUCTORS INSTALLED IN A PLENUM SPACE SHALL CONFORM TO NEC, OR CEC WHERE ADOPTED, ARTICLE 300.22(C).
8. PROVIDE G.F.C.I. TYPE RECEPTACLE(S) OR RECEPTACLE(S) PROTECTED BY A GFCI CIRCUIT BREAKER(S) WHEN RECEPTACLES ARE 50A OR LESS, 150V TO GROUND OR LESS AND ARE LOCATED WITHIN 6- FEET OF ANY SINK OR THERAPEUTIC TUB, LAUNDRY AREA, SERVING ANY DRINKING FOUNTAIN OR VENDING MACHINE, WITHIN ANY KITCHEN SPACE, LOCKER ROOM AREA, GARAGE AND BATHROOM SPACE AND/OR LOCATED OUTDOORS. WHERE RECEPTACLES ARE NOT READILY ACCESSIBLE, PROVIDE GFCI CIRCUIT BREAKER(S) TO PROTECT THE RESPECTIVE BRANCH CIRCUIT AND PROVIDE ADDITIONAL NEUTRAL CONDUCTORS IN THE BRANCH CIRCUITING AS REQUIRED TO ENSURE PROPER GFCI FUNCTION.
9. PROVIDE OCCUPANCY SENSOR/LIGHTING CONTROL SYSTEM CONTROLLED RECEPTACLE RELAY(S) AS REQUIRED TO SWITCH CONTROLLED RECEPTACLES. CONNECT BRANCH CIRCUITRY AND CONTROL WIRING AS REQUIRED TO ALLOW OCCUPANCY SENSOR/LIGHTING CONTROL SYSTEM RELAY TO SWITCH STANDALONE AND/OR SYSTEMS FURNITURE CONTROLLED RECEPTACLES AS INDICATED ON PLANS. PROVIDE ADDITIONAL CONDUIT, WIRING AND PATHWAYS NECESSARY TO CONNECT BRANCH CIRCUITRY AND CONTROL WIRING TO REMOTE RELAYS TO EQUIPMENT (E) LOCATED ON ALTERNATE FLOORS, IN ELECTRICAL ROOMS, ETC.
10. PROVIDE ADDITIONAL J-BOX NEAR PANEL FOR MULTIPLE HOMERUN CIRCUITRY.
11. UNLESS SPECIFICALLY SHOWN AS (E), (R), (ER), (D), EXISTING OR NON-BOLD, ALL ELECTRICAL DEVICES SHOWN ARE NEW.

HOTEL DEL CORONADO.

Fitness
Members Area
Renovation

1500 Orange Avenue
Coronado, CA 92118



González Architects
Hospitality

Mechanical/Electrical/Plumbing Engineer

tk1sc Collaborative

4755 Eastgate Mall, Suite 150
San Diego, CA 92121
658.362.6800

tk1sc
COLLABORATIVE

15231 Laguna Canyon Road, Suite 100
Irvine, California 92618
949.751.5800 www.tk1sc.com

Project Leader - Kenneth McClendon
Electrical Lead - Christina Souza
tk1sc Job #: 2019-0727



Registration Seal
C-32509

Address
14 NE 1st Avenue, Suite 507
Miami, FL 33132
T+1 (305) 455 4216

Issued/Revised

No.	Date	Description
09-17-21	Permit Set	
01-05-22	Owner Revisions	

Drawing Title

ENLARGED POWER &
COMMUNICATIONS
PLAN

Scale As Noted

Date 09-17-2021

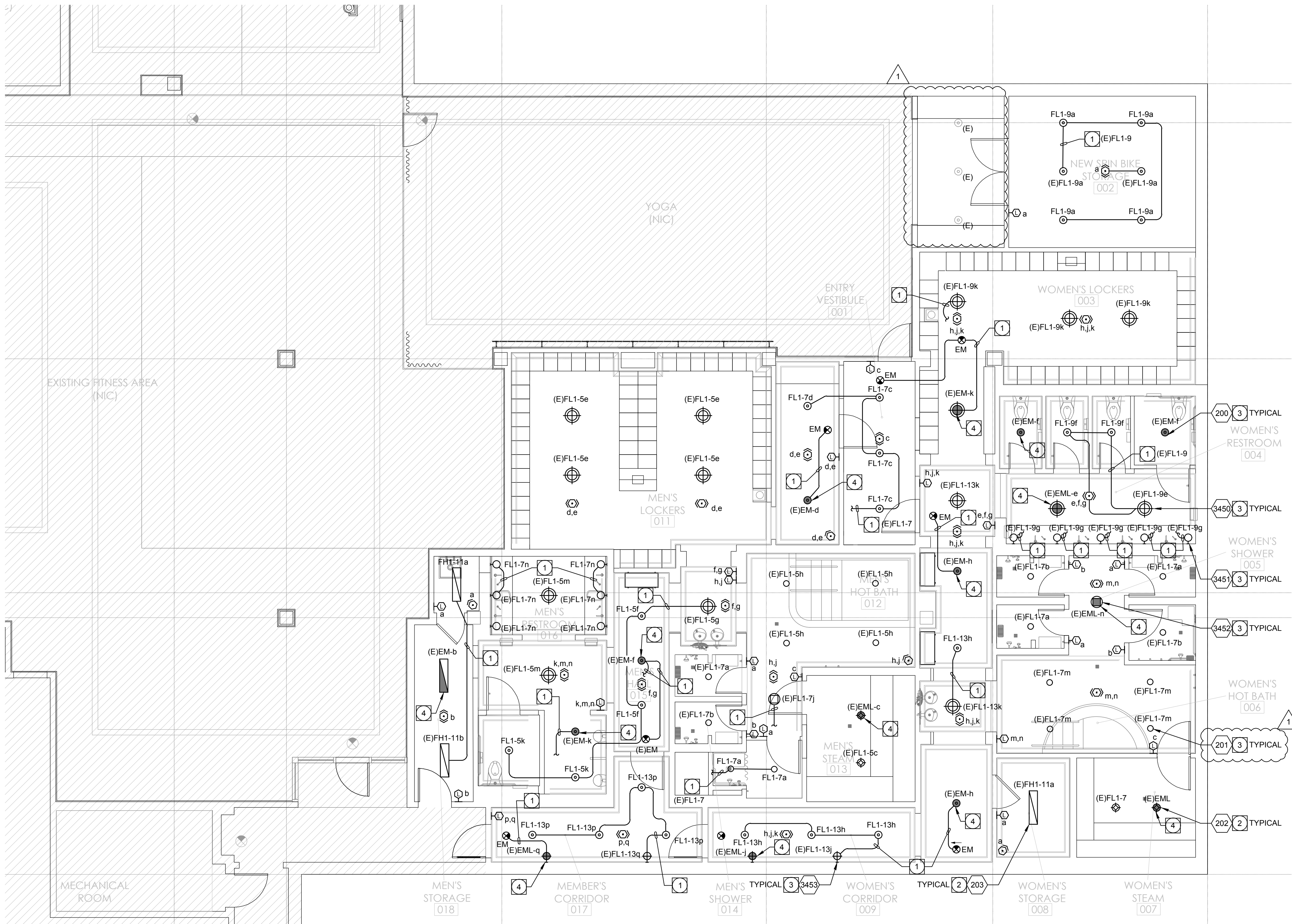
Drawn By CS

Project No. 19022

Drawing No. CS

E2.01

PERMIT SET: ISSUED FOR CONSTRUCTION



1 ENLARGED LIGHTING PLAN
Scale: 3/16" = 1' - 0"

PLAN NOTES:

- INTERCEPT AND EXTEND EXISTING LIGHTING BRANCH CIRCUIT MADE AVAILABLE FROM DEMOLITION WORK, VERIFY EXACT LOCATION IN FIELD PRIOR TO WORK. ROUTE BRANCH CIRCUITING THROUGH NEW DISTRIBUTED LIGHTING CONTROLS AS REQUIRED, REFER TO SWITCHLEGS AS SHOWN. PROVIDE ALL CONDUIT, COUPLERS, CONDUCTORS, CONNECTORS, JUNCTION BOXES, ETC. AS REQUIRED TO PROVIDE A COMPLETE AND OPERATIONAL SYSTEM AND ALL NEW COMPONENTS SHALL MATCH EXISTING.
- FIXTURE SPECIFIED WITH 0-10V LED DIMMING DRIVER(S). CONTRACTOR SHALL VERIFY EXACT 0-10V DIMMING REQUIREMENTS WITH FIXTURE MANUFACTURER.
- VERIFY EXACT DIMMING REQUIREMENTS WITH MANUFACTURER. PROVIDE ALL LIGHTING CONTROL COMPONENTS REQUIRED TO PROVIDE A COMPLETE AND OPERATIONAL DIMMING SYSTEM.
- CONTRACTOR SHALL VERIFY EMERGENCY LIGHTING BRANCH CIRCUIT IN FIELD PRIOR TO WORK. IF CIRCUIT IS 277V, CONTRACTOR SHALL MAKE A SEPARATE BID LINE ITEM TO REMOVE 277V BRANCH CIRCUIT AND ROUTE 120V CIRCUIT THROUGH EMERGENCY LIGHTING INVERTER FOR NEW LIGHT FIXTURES. CONTRACTOR SHALL FIELD VERIFY THE EMERGENCY LIGHTING BRANCH CIRCUIT IS CONNECTED TO THE EXISTING STANDBY GENERATOR. IF THERE IS NOT EMERGENCY POWER, PROVIDE BID ALTERNATE AND ROUTE CIRCUIT THROUGH EMERGENCY LIGHTING INVERTER AS REQUIRED. EMERGENCY LIGHTING INVERTER MOUNTED IN ACCESSIBLE CEILING SPACE AS REQUIRED, VERIFY EXACT MOUNTING LOCATION IN FIELD. MAKE/MODEL OR EQUAL.

LIGHTING PLAN GENERAL NOTES:

- REFER TO ARCHITECTURAL PLANS FOR EXACT LOCATION AND ELEVATION OF ALL LIGHTING FIXTURES AND ALL DEVICES. ALL WALL-MOUNTED DEVICE HEIGHTS SHALL BE VERIFIED WITH THE ARCHITECT PRIOR TO ROUGH-IN.
- VERIFY EXACT CEILING CONSTRUCTION WITH ARCHITECTURAL REFLECTED CEILING PLAN AND SPECS. PROVIDE LIGHTING FIXTURES WITH ALL NECESSARY MOUNTING HARDWARE.
- ALL RECESSED FIXTURES SHALL BE PROVIDED WITH ALL STRUCTURAL SUPPORTS AS REQUIRED BY THE IBC, OR CBC WHERE ADOPTED, IN ADDITION TO ANY LOCAL CODES.
- ALL PERIMETER AND COVE LIGHTING SHALL EXTEND THE FULL LENGTH OF THE WALLS OR COVE. CONTRACTOR TO FIELD MEASURE COVE LENGTH AND ORDER QUANTITY OF FIXTURES AS REQUIRED.
- ALL LINE VOLTAGE DIMMING BRANCH CIRCUITS SHALL BE PROVIDED WITH A DEDICATED NEUTRAL CONDUCTOR FOR EACH ZONE/CHANNEL.
- RECESSED FIXTURES LOCATED IN A FIRE-RATED CEILING OR WALL SHALL BE PROVIDED WITH A 5-SIDED, RATED ENCLOSURE SO CONSTRUCTED AS TO ALLOW CODE AND MANUFACTURER-REQUIRED CLEARANCES BETWEEN THE FIXTURE AND THE ENCLOSURE.
- REFER TO ARCHITECTURAL REFLECTED CEILING PLANS FOR EXIT SIGN CHEVRONS AND NUMBER OF FACES PER EXIT SIGN. ANY DISCREPANCIES BETWEEN EXIT SIGNS SHOWN ON THE ELECTRICAL AND ARCHITECTURAL PLANS SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT PRIOR TO ORDERING EXIT SIGNS.
- WHEN EXPOSED CEILINGS OR OPEN GRID CONDITIONS OCCUR, THE CONTRACTOR WILL NEED TO PROVIDE THE FOLLOWING ITEMS:
 - ALL BRANCH CIRCUITS SHALL BE EMT.
 - ALL BRANCH CIRCUITS SHALL BE ROUTED ORTHOGONALLY, NEATLY TRAINED, IN PARALLEL TO STRUCTURES OR DUCTWORK. THE TERM "TRAINED" MEANS ALL PARALLEL CONDUITS SHALL MAINTAIN THE SAME SPATIAL RELATIONSHIP WITH EACH OTHER FOR ENTIRE RUN TO INCLUDE RADIUS BENDS AND SWEEPS.
 - VISUALLY OBJECTIONABLE BRANCH CIRCUITS WILL BE REROUTED AT THE REQUEST OF THE ARCHITECT AT NO ADDITIONAL COST.
- ALL LED REMOTE INDICATORS FOR DUCT DETECTORS AND FIRE/SMOKE DAMPERS REQUIRED BY THE LOCAL AHJ SHALL BE LOCATED IN CEILINGS IN COORDINATION WITH ARCHITECT PRIOR TO ANY ROUGH-IN.
- PROVIDE ADDITIONAL -J-BOX NEAR PANEL FOR MULTIPLE HOMERUN CIRCUITRY.
- UNLESS SPECIFICALLY SHOWN AS (E), (R), (ER), (D), EXISTING OR NON-BOLD, ALL ELECTRICAL DEVICES SHOWN ARE NEW.
- REFER TO GENERAL POWER PLAN NOTES AND COMMUNICATIONS PATHWAYS GENERAL NOTE FOR ADDITIONAL REQUIREMENTS WHEN POWER AND/OR DATA DEVICES ARE SHOWN ON THIS PLAN.
- ALL PENETRATIONS THROUGH FIRE RATED WALLS SHALL BE PROTECTED FROM THE SPREAD OF FIRE WITH AN APPROVED FIRESTOP SYSTEM EQUAL OR GREATER THAN THE FIRE RATING OF THE WALL.

HOTEL DEL CORONADO.

Fitness Members Area Renovation

1500 Orange Avenue
Coronado, CA 92118



González Architects Hospitality

Mechanical/Electrical/Plumbing Engineer
tk1sc Collaborative
4755 Eastgate Mall, Suite 150
San Diego, CA 92121
658.362.6800

tk1sc
COLLABORATIVE

15231 Laguna Canyon Road, Suite 100
Irvine, California 92618
949.751.5800 www.tk1sc.com

Project Leader - Kenneth McClendon
Electrical Lead - Christina Souza
tk1sc Job #: 2019-0727



Registration Seal
C-32509
Address
14 NE 1st Avenue, Suite 507
Miami, FL 33132
T+1 (305) 455 4216

Issued/Revised	
No.	Date Description
09-17-21	Permit Set
01-05-22	Owner Revisions

Drawing Title

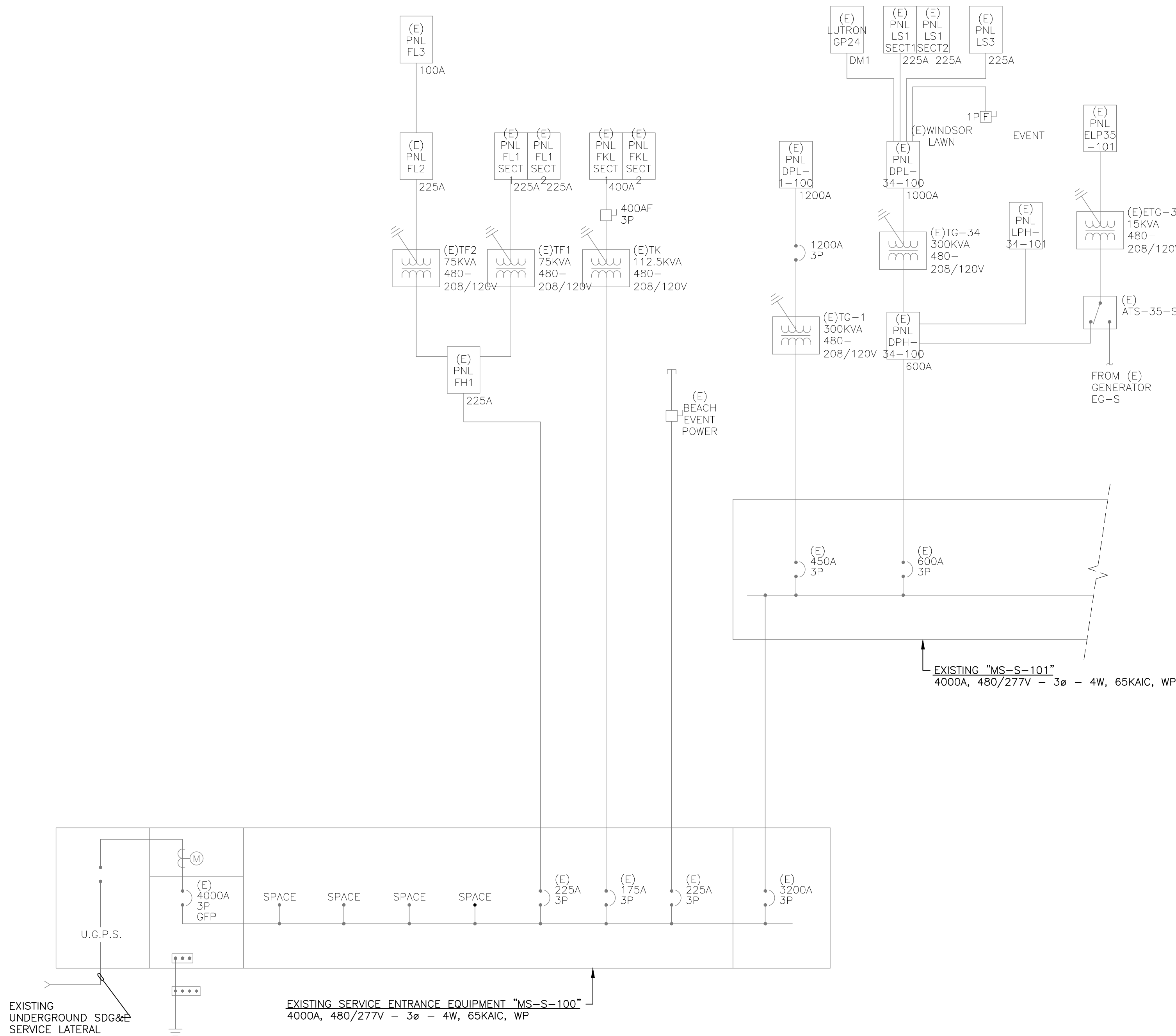
ENLARGED LIGHTING PLAN

Scale
Date
Drawn By
Project No.
Drawing No.

As Noted
09-17-2021
CS
19022
CS

E2.02

PERMIT SET- ISSUED FOR CONSTRUCTION



EXISTING SINGLE LINE DISTRIBUTION DIAGRAM (FOR REFERENCE ONLY)

SCALE: N.T.S.

1

FOR REFERENCE ONLY.
ALL EQUIPMENT IS EXISTING.

GENERAL SINGLE LINE DIAGRAM NOTES:

1. ALL SWITCHGEAR SHALL BE SQUARE D OR EQUAL BY CUTLER-HAMMER, RSE-SIERRA, G.E., SIEMENS, OR Z-POWER AND DISTRIBUTION.
2. ALL ITEMS DEPICTED ON THE SINGLE LINE DRAWINGS SHALL BE ASSUMED AS NEW U.O.N.
3. ALL OVERCURRENT DEVICES IN AN INDIVIDUAL PIECE OF EQUIPMENT SHALL HAVE AN AIC RATING EQUAL TO THE OVERALL RATING OF THE EQUIPMENT-SERIES RATING OF DEVICES WITHIN A PIECE OF EQUIPMENT IS NOT ALLOWED. SEE SPECIFICATIONS FOR MORE INFORMATION.
4. SERIES RATED DEVICES SHALL HAVE BEEN INVESTIGATED BY U.I. IN COMBINATION WITH THE END USE EQUIPMENT AND IN THE EQUIPMENT IN WHICH THESE DEVICES ARE USED AND SHALL BE MARKED WITH A SERIES RATING. ALL EQUIPMENT SHALL BE MARKED IN ACCORDANCE WITH NEC (OR CEC-WHERE ADOPTED) REQUIREMENTS. SEE SPECIFICATIONS FOR MORE INFORMATION. WHERE SERIES RATINGS ARE ALLOWED, THE EQUIPMENT SHALL BE LEGIBLY MARKED IN THE FIELD TO INDICATE A SERIES COMBINATION RATING WHICH SHALL BE READILY VISIBLE AND STATE THE FOLLOWING:
CAUTION - SERIES COMBINATION SYSTEM RATED AT ??,???, AMPERES. USE ONLY IDENTIFIED REPLACEMENT COMPONENTS IN THIS SYSTEM.
WHERE ??,??? REPRESENTS AVAILABLE FAULT CURRENT. SEE SPECIFICATIONS FOR PLACARD REQUIREMENTS.
5. ALL TERMINATIONS AND ENCLOSURES SHALL BE RATED FOR USE WITH 75 DEGREE CELSIUS CONDUCTORS.
6. ALL SERVICE ENTRANCE EQUIPMENT RATED AT 400A OR GREATER SHALL BE PROVIDED WITH A BACKFEED-RATED, SOLID STATE MAIN OVERCURRENT DEVICE AND BUSSING RATED AT 100% OPERATION (1000A/90in. FOR CU, 750A/90in. FOR AL), NO HEAT RISE RATED BUSSING ALLOWED. NON-SERVICE ENTRANCE SWITCHBOARDS AND DISTRIBUTION BOARDS LARGER THAN 600A SHALL BE PROVIDED WITH BUSSING RATED FOR 100% OPERATION - SEE SPECIFICATION FOR CIRCUIT BREAKER REQUIREMENTS. ALL NON-SERVICE ENTRANCE SWITCHBOARDS AND DISTRIBUTION BOARD MAIN OVERCURRENT DEVICES SHALL BE BACKFEED-RATED, BACKFEED RATINGS SHALL COMPLY WITH NEC, OR CEC WHERE ADOPTED, 710.15 (E) AND 705.12(B)(4). SEE SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS REGARDING CIRCUIT BREAKERS.
7. PROVIDE CIRCUIT BREAKER ARC ENERGY REDUCTION MAINTENANCE SWITCHING PER NEC, OR CEC WHERE ADOPTED, 240.87(B)(3) FOR ANY CIRCUIT BREAKER, 1200A FRAME AND LARGER. SEE SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
8. ALL SWITCHBOARDS AND DISTRIBUTION BOARDS SHALL HAVE:
 - a. TIN-PLATED ALUMINUM BUSSING WITH RECTANGULAR CROSS SECTION. HORIZONTAL AND VERTICAL BUSSING SHALL BE FULL LENGTH AND SHALL HAVE PROVISIONS FOR FUTURE EXTENSIONS. ALL BUSSING SHALL HAVE MINIMUM WITHSTAND RATING EQUAL TO THE AVAILABLE FAULT CURRENT INDICATED. ALL VERTICAL AND HORIZONTAL BUSSING SHALL BE RATED AT FULL CAPACITY IN ALL SWITCHBOARD AND DISTRIBUTION BOARD SECTIONS. PROVIDE 100% NEUTRAL BUSSING MINIMUM UNLESS OTHERWISE NOTED. PROVIDE FULL LENGTH GROUND BUS AND, WHERE INDICATED ON PLANS, ISOLATED GROUND BUSSING. PROVIDE REAR WIRE WAY IN ALL SWITCHBOARD SECTIONS.
 - b. LUGS SUITABLE FOR USE WITH COPPER OR ALUMINUM CONDUCTORS LISTED FOR USE WITH 75 DEGREE CELSIUS AMPACITY CONDUCTORS.
 - c. PERMANENT PLACARD(S) MARKED PER THE SPECIFICATIONS AND PER NEC (OR CEC-WHERE ADOPTED) SECTIONS 225.37, 230.2(C), 690.56, 692.56, 700.7, 701.7, 702.7, AND 705.10 AND IFC (OR CFC - WHERE ADOPTED) SECTION 608.2.6.1. DENOTING THE PRESENCE OF ADDITIONAL SERVICES. PHOTOVOLTAIC SYSTEMS, FUEL CELLS, EMERGENCY, STATIONARY BATTERY STORAGE SYSTEMS, OR STAND-BY POWER SOURCES AS APPLICABLE.
9. CONTRACTOR SHALL SUBMIT SWITCHBOARD SHOP DRAWINGS TO THE SERVING UTILITY FOR APPROVAL PRIOR TO FABRICATION. CONTRACTOR SHALL SECURE CONFIRMATION THAT THE PROPOSED SWITCHBOARD COMPLIES WITH ELECTRIC UTILITY COMPANY REGULATIONS.
10. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS PER THE SPECIFICATIONS FOR SWITCHBOARDS, DISTRIBUTION BOARDS, TRANSFORMERS, PANEL BOARDS, AND ALL OTHER DEVICES SHOWN ON THE SINGLE LINE, PRIOR TO FABRICATION.
11. ALLOWABLE DIMENSIONS IN MAIN ELECTRICAL ROOM ARE A CRITICAL COORDINATION ITEM. CONTRACTOR SHALL PROVIDE 1/4"= 1'-0" SCALE DRAWINGS WITH SWITCHGEAR SUBMITTALS SHOWING THAT ALL PROPOSED EQUIPMENT WILL FIT IN THE SPACE PROVIDED. SUBMITTALS WITHOUT THIS DRAWING SHALL BE REJECTED AS INCOMPLETE.
12. UNLESS SPECIFICALLY SHOWN AS (E), (R), (ER), (D), EXISTING OR NON-BOLD, ALL ELECTRICAL DEVICES SHOWN ARE NEW.
13. WHERE REQUIRED BY THE LOCAL AUTHORITY HAVING JURISDICTION OR WHERE A NEW GROUND FAULT PROTECTIVE DEVICE IS BEING INSTALLED, A GROUND FAULT SYSTEM TEST SHALL BE CONDUCTED BY AN INDEPENDENT TESTING AGENCY PER NEC (OR CEC-WHERE ADOPTED) 230.95(C). THE GROUND FAULT SYSTEM TEST SHALL BE PERFORMED IN THE PRESENCE OF THE LOCAL AUTHORITY HAVING JURISDICTION. VERIFICATION OF DEVICE SETTINGS PER THE POWER SYSTEMS STUDY SPECIFICATION SHALL BE PERFORMED BY THE SAME INDEPENDENT TESTING AGENCY. THE GROUND FAULT TEST RESULTS SHALL BE DELIVERED TO THE ENGINEER OF RECORD, DURING THE CONSTRUCTION PHASE OF THE PROJECT, ALL NEW GROUND FAULT RELAYS SHALL BE SET AT THE LOWEST AVAILABLE TIME DELAY AND PICK-UP SETTINGS.

HOTEL DEL CORONADO.

Fitness
Members Area
Renovation

1500 Orange Avenue
Coronado, CA 92118



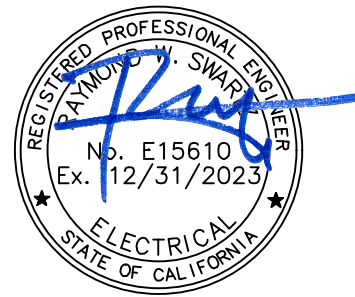
González Architects
Hospitality

Mechanical/Electrical/Plumbing Engineer
tk1sc Collaborative
4755 Eastgate Mall, Suite 150
San Diego, CA 92121
658.362.6800

tk1sc
COLLABORATIVE

15231 Laguna Canyon Road, Suite 100
Irvine, California 92618
949.751.5800 www.tk1sc.com

Project Leader - Kenneth McClendon
Electrical Lead - Christina Souza
tk1sc Job #: 2019-0727



Registration Seal Address
C-32509 14 NE 1st Avenue, Suite 507
Miami, FL 33132
T+1 (305) 455 4216

Issued/Revised	
No.	Date Description
09-17-21	Permit Set
01-05-22	Owner Revisions

Drawing Title

SINGLE LINE DIAGRAM

Scale As Noted
Date 09-17-2021
Drawn By CS
Project No. 19022
Drawing No. CS

E4.01

(E)PANEL FKL SECT. 1																			
MOUNTING	SURFACE	DOUBLE LUG	NO	VOLTS	120/208	MAIN	M.L.O.												
NEMA 3R	NO	200% NEUTRAL	NO	PHASE	3	BUS	400A												
FEED THRU	YES	I/G BUS	NO	WIRE	4	A.I.C	10,000												
N O T E S	LOCATION	A	B	C	L T G	K E I T V	M I E S C P	B K R	C I R	C I R	B K R	M I E S C P	K E I T V	L T G	A	B	C	LOCATION	N O T E S
	(E) FREEZER	1500				1	20/1	1		2	50/2	1		3020				(E) PIZZA OVEN	
	(E) FRIDGE		1370			1	20/1	3		4	-	-			3020			-	
	(E) FRIDGE			1370		1	20/1	5		6	50/2	1			3020			(E) PIZZA OVEN	
	(E) OVEN HOOD	1800				1	20/1	7		8	-	-		3020				-	
	(E) REF EQUIP STAND		960			1	20/1	9		10	30/2	1			2500			(E) CONV OVEN	
	(E) PIZZA PREP UNIT			1440		1	20/1	11		12	-	-			2500			-	
	(E) HEATER PLATE	1920				1	20/1	13		14	30/2	1		2040				(E) HEAT STRIP	
	(E) MICROWAVE		1680			1	20/1	15		16	-	-		2040				-	
	(E) UC REF			600		1	20/1	17		18	20/2	1			1240			(E) HOT FOOD WELL	
	(E) POS STATION	1440				1	20/1	19		20	-	-		1240				-	
	(E) POS STATION		1440			1	20/1	21		22	20/2	1			800			(E) GARBAGE DISP	
	(E) POS POOL BAR			1440		1	20/1	23		24	-	-			800			-	
	(E) POS POOL BAR	1440				1	20/1	25		26	70/3	1		6720				(E) DISHWASHER	
	(E) SODA GUN		1200			1	20/1	27		28	-	-		6720				-	
G	STEM GENERATOR CNTLS			1000		2	20/1	29		30	-	-			6720			-	
	SPARE					32	20/3	1		1500				1500				(E) ICE MAKER	
	(E) LOAD		1920			1	20/1	33		34	-	-			1500			-	
G	MEMBERS LIGHTING			1017	39		20/1	35		36	-	-			1500			-	
	(E) LOAD	540					20/1	37		38	175/3	1		16800				(E) HOOD	
	(E) COFFEE MAKER		3000			1	50/2	39		40	-	-		16800				-	
	-		3000			-	-	41		42	-	-			16800			-	
		A= 42980 VA			B= 44950 VA			C= 42447 VA											
		PHASE A LCL= 0 VA			PHASE B LCL= 0 VA			PHASE C LCL= 254 VA											
		PHASE A W/LCL= 42980 VA			PHASE B W/LCL= 44950 VA			PHASE C W/LCL= 42701 VA											
		TOTAL VA= 130377			TOTAL LCL= 254			TOTAL VA W/LCL= 130631											
					AMPS= 363			HIGH PHASE AMPS= 375											

(E)PANEL FKL SECT. 2																			
MOUNTING	SURFACE	DOUBLE LUG	NO	VOLTS	120/208	MAIN	M.L.O.												
NEMA 3R	NO	200% NEUTRAL	NO	PHASE	3	BUS	400A												
FEED THRU	NO	I/G BUS	NO	WIRE	4	A.I.C	10,000												
N O T E S	LOCATION	A	B	C	L T G	K E I T V	M I E S C P	B K R	C I R	C I R	B K R	M I E S C P	K E I T V	L T G	A	B	C	LOCATION	N O T E S
G	RM 015 200 S CALE RECEP	360				2	1	20/1	43		44	20/1			180			(E) KITCHEN RECEPT	
G	RM 012 BATHING SUIT DR YER		1000				1	20/1	45		46	20/1			180			(E) KITCHEN RECEPT	
	(E) L RECEPTION			60				20/1	47		48	20/1		52			1134	MEMBERS LIGHTING	G
	SPARE							20/1	49		50	20/1						SPARE	
G	RMS 003,011 TV RECS		360			2		20/1	51		52	20/1						SPARE	
G	RM 004 RESTROOM RECEPT			180		1		20/1	53		54	20/1						SPARE	
G	RM 004 RESTROOM RECEPT	180				1		20/1	55		56	20/1						SPARE	
G	RM 012 DF BOTTLE FILLER		500			1		20/1	57		58	20/1						SPARE	
G	RM 016 SOAP DISPENSERS			1000				20/1	59		60	20/1						SPARE	
G	RM 002 RECEPT	720				4		20/1	61		62	20/1						SPARE	
	SPARE							20/1	63		64	20/1						SPARE	
	SPACE							20/1	65		66	20/1						SPARE	
	SPACE								67		68							SPACE	
	SPACE								69		70							SPACE	
	SPACE								71		72							SPACE	
	SPACE								73		74							SPACE	
	SPACE								75		76							SPACE	
F	EF-7			333			1	15/2	77		78							SPACE	
F	----		333				-	----	79		80							SPACE	
F	EF-8			915				1	20/2	81		82						SPACE	
F	----			915			-	----	83		84							SPACE	
		A= 1773 VA			B= 3135 VA			C= 3622 VA											
		PHASE A LCL= 0 VA			PHASE B LCL= 0 VA			PHASE C LCL= 284 VA											
		PHASE A W/LCL= 1773 VA			PHASE B W/LCL= 3135 VA			PHASE C W/LCL= 3906 VA											
		TOTAL VA= 8530			TOTAL LCL= 284			TOTAL VA W/LCL= 8814											
					AMPS= 24			HIGH PHASE AMPS= 33											

AS-BUILT PANEL DIRECTORY NOTE:

BRANCH CIRCUIT LOCATIONS NOTED WITH "E" INDICATE EXISTING CIRCUIT(S). THE IDENTITIES OF THESE CIRCUITS ARE BASED ON EXISTING PANEL DIRECTORIES AND/OR LIMITED AS-BUILT INFORMATION. CONTRACTOR SHALL FIELD VERIFY EACH BRANCH CIRCUIT AND PROVIDE COMPLETE, TYPED AS-BUILT PANEL DIRECTORIES AS REQUIRED THAT DISTINGUISH EACH CIRCUIT PER NEC OR CEC WHERE ADOPTED, ART 408.1 AND 408.4. COMPLETED DIRECTORIES SHALL BE SUBMITTED TO THE ELECTRICAL INSPECTOR PRIOR TO FINAL ELECTRICAL INSPECTION. INCLUDE ALL COSTS IN BID.

EXISTING CIRCUIT BREAKER NOTE:

PROVIDE BREAKER INTERLOCK WITH ADJACENT BREAKER(S) FOR ANY MULTI-WIRE BRANCH CIRCUIT. BREAKER INTERLOCK GROUPING SHALL BE BY BRANCH CIRCUIT GROUP (i.e. MULTIPLE CIRCUITS SHARING A COMMON NEUTRAL (NEC, OR CEC WHERE ADOPTED, 210.4(B)), COMMON YOKE (NEC, OR CEC WHERE ADOPTED, 210.7) OR FURNITURE SYSTEM NEC OR CEC WHERE ADOPTED, 605.5 AND 605.7). WHERE AN EXISTING PANEL IS BEING ALTERED OR MODIFIED IN ANY WAY, CONTRACTOR SHALL INCLUDE ALL COSTS IN BASE BID TO ADD BREAKER INTERLOCKS TO EXISTING MULTI-WIRE BRANCH CIRCUITS BASED ON CONTRACTOR'S INVESTIGATION OF EXISTING CONDITIONS.

(E)PANEL FH1																					
MOUNTING		SURFACE		DOUBLE LUG		NO		VOLTS		277/480		MAIN		M.L.O.							
NEMA 3R		NO		200% NEUTRAL		NO		PHASE		3		BUS		225A							
FEED THRU		NO		I/G BUS		NO		WIRE		4		A.I.C		14,000							
N O T E S	LOCATION	A	B	C	L T G	K E I T V	M I E S C P	B K R	C I R	C I R	B K R	M I E S C P	K E I T V	L T G	A	B	C	LOCATION	O T E S		
	(E)AHU-1	5620							40/3	1	2	20/3	1		2100				(E)EF-1		
	-		5620						-	3	4	-	-			2100			-		
	-			5620					-	5	6	-	-				2100		-		
	(E)LTG. KITCHEN	1420							20/1	7	8	20/3	1		830				(E)EF-4		
	(E)LTG. FITNESS		1849						20/1	9	10	-	-			830			-		
	(E)LTG. CORRIDOR/LOCKER			2144					20/1	11	12	-	-				830		-		
F F F	STEAM GEN SG-1	8000			3		1	40/3	13	14	60/3	1			7480				(E)ELEVATOR		
	----		8000				-	--	15	16	-	-				7480			-		
	----			8000			-	--	17	18	-	-					7480		-		
	(E)HWVP-3	830					1	20/3	19	20	-	-							(E) SHUNT TRIP		
	-		830				-	21		22	20/1			3		126			RESTROOM MIRROR LTG	G	
	(E)HWVP-4	830					1	20/3	25	26	40/3	1			8000				SPARE		
	-		830				-	27		28	-	-				8000			SG-2	G	
	-			830			-	29		30	-	-					8000		-	G	
	(E)PRCP-1	830					1	20/3	31	32	126/3	1			2728				(E)FMR TF1		
	-		830				-	33		34	-	-				2725			-		
	-			830			-	35		36	-	-					2256		-		
	(E) SCISSOR LIFT	1000					1	15/3	37	38	126/3	1			2634				(E)FMR TF2		
	-		1000				-	39		40	-	-				2172			-		
	-			1000			-	41		42	-	-					2303		-		
		A= 42502 VA								B= 42592 VA								C= 42423 VA			
		PHASE A LCL= 2000 VA								PHASE B LCL= 32 VA								PHASE C LCL= 0 VA			
		PHASE A W/LCL= 44502 VA								PHASE B W/LCL= 42624 VA								PHASE C W/LCL= 42423 VA			
		TOTAL VA= 127517								TOTAL LCL= 2032								TOTAL VA W/LCL= 129549			
										AMPS= 156								HIGH PHASE AMPS= 161			

PERMIT SET: ISSUED FOR CONSTRUCTION

LIGHTING FIXTURE SCHEDULE NOTES:

A. GENERAL NOTES:

1. THE LIGHTING FIXTURES, LAMPS, BALLASTS, POWER SUPPLIES, DRIVERS AND TRANSFORMERS FOR THIS PROJECT HAVE BEEN SPECIFIED TO ENSURE THAT SPECIFIC AESTHETIC AND PERFORMANCE REQUIREMENTS WILL BE SATISFIED. THESE PRODUCTS HAVE BEEN CAREFULLY RESEARCHED AND EACH SPECIFIED ITEM HAS UNIQUE QUALITIES WHICH WERE DETERMINED TO BE ESSENTIAL IN SATISFYING THE OWNER'S, ARCHITECTS, ENGINEERS AND LIGHTING CONSULTANT'S DESIGN CRITERIA.
2. CONTRACTOR SHALL PROVIDE ALL MATERIALS AS DETAILED ON DRAWINGS AND/OR SCHEDULES, AND LABOR AS REQUIRED TO ACHIEVE A COMPLETE AND OPERATING LIGHTING SYSTEM.
3. CONTRACTOR SHALL NOTIFY THE ELECTRICAL ENGINEER AND/OR LIGHTING CONSULTANT OF ANY PROVISIONS OF THE SPECIFICATION THAT IS IN CONFLICT WITH LOCALLY ENFORCED CODES.
4. CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ARCHITECT OF ANY REQUIRED MODIFICATIONS THAT ARE NOT SHOWN ON THE DRAWINGS.
5. ALL ELECTRICAL MATERIAL SHALL BE IN NEW & UNDAMAGED CONDITION WHEN INSTALLED. ALL EQUIPMENT SHALL BE LISTED BY A NATIONALLY RECOGNIZED TESTING LABORATORY.
6. ALL DIMENSIONS & MEASUREMENTS FOUND ON PLANS ARE APPROXIMATE. CONTRACTOR SHALL VALIDATE ALL DIMENSIONS PRIOR TO ORDERING MATERIAL TO INCLUDE MAKING FIELD MEASUREMENTS BASED ON ACTUAL SITE CONDITIONS TO DEVELOP COMPLETE ORDERS AND INSTALL SYSTEMS PER DRAWINGS AND SPECIFICATIONS.
7. REFER TO ARCHITECTURAL PLANS FOR EXACT LOCATION AND ELEVATION OF ALL LIGHTING FIXTURES AND ASSOCIATED DEVICES AND EQUIPMENT.
8. PRIOR TO AIMING/ADJUSTING ACTIVITIES, COMMISSIONING OR PUNCHWALK COMMENCEMENT, CONTRACTOR SHALL PROPERLY TEST AND VERIFY ALL CIRCUITRY AND CONTROL WIRING AND IMPLEMENT ALL CONTROLS PROGRAMMING.

B. INSTALLATION:

1. LOCATIONS OF THE FIXTURES SHALL BE PER THE ARCHITECTURAL REFLECTED CEILING PLAN(S) AND SHALL BE COORDINATED AT TIME OF ROUGH IN. CONFLICTS BETWEEN THE ARCHITECTURAL REFLECTED CEILING PLAN(S) AND THE ELECTRICAL/LIGHTING DESIGN PLAN(S) SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT IN WRITING PRIOR TO ORDERING FIXTURES.
2. LIGHTING DRAWINGS REPRESENT THE DESIGN INTENT OF THE EQUIPMENT, DEVICES, ETC. TO BE CONNECTED AND THE CIRCUITS TO WHICH THEY ARE TO BE CONNECTED. CONTRACTOR SHALL INSTALL ALL CONDUIT, J-BOXES AND ADDITIONAL HARDWARE AND DEVICES AS REQUIRED FOR A COMPLETE AND OPERATING SYSTEM.
3. ALL LIGHTING FIXTURES SHALL BE MOUNTED AND INDIVIDUALLY SUPPORTED IN ACCORDANCE WITH APPLICABLE CODES. FIXTURES SHALL BE FURNISHED AND INSTALLED WITH ALL REQUIRED MOUNTING DEVICES, HARDWARE AND ACCESSORIES.
4. CONTRACTOR TO VERIFY LIGHTING FIXTURE MOUNTING HARDWARE IS COMPATIBLE WITH APPROVED MOUNTING CONDITIONS. MOUNTING CONDITIONS MUST ALLOW FOR AIMING AND ADJUSTING OF LIGHTING FIXTURES ON SITE.
5. CONTRACTOR TO INCLUDE AIMING/ADJUSTING LABOR AFTER DARK AS REQUIRED FOR ANY ADJUSTABLE LIGHTING FIXTURE AND FOR EACH INDIVIDUAL LIGHTING FIXTURE HEAD OR LAMP HOLDER IN A MULTI-FIXTURE/MULTI-LAMP ASSEMBLY. LIGHTING FIXTURES TO BE AIMED/ADJUSTED PER THE DIRECTION OF OWNER, ARCHITECT AND/OR LIGHTING CONSULTANT.
6. CONTRACTOR TO SUPPLY ADEQUATE SUPPORT INCLUDING LADDERS, LIFTS OR OTHER EQUIPMENT REQUIRED TO ACCESS LIGHTING FIXTURES AT THE TIME OF FOCUS, INCLUDING EVENING OR NIGHT WORK AS MAY BE REQUIRED DUE TO SCHEDULE, CONFLICT OR DAYLIGHT IMPACT. AIMING/ADJUSTING LABOR SHALL BE PREPARED FOR WORK WITH COMMON HAND TOOLS TO MAKE ADJUSTMENTS AND MINOR REPAIRS DURING AIMING.
7. ALL COVE MOUNTED LIGHTING FIXTURES SHALL EXTEND THE FULL LENGTH OF THE COVE. CONTRACTOR TO FIELD MEASURE COVE LENGTH AND ORDER QUANTITY OF LIGHTING FIXTURES AS REQUIRED. PROVIDE COMPLETE MANUFACTURER SHOP DRAWINGS OF BUILT-IN COVE OR LINEAR LIGHTING SYSTEMS.
8. CONTRACTOR TO REPLACE ALL INOPERATIVE LAMPS, LED ARRAYS OR SYSTEMS AT THE END OF THE CONSTRUCTION PHASE PRIOR TO THE FOCUS AND PROGRAMMING PHASE AND AGAIN PRIOR TO OWNER OCCUPANCY OR PROJECT OPENING.
9. ALL POLE MOUNTED FIXTURES, POST MOUNTED FIXTURES AND BOLLARDS SHALL BE PROVIDED WITH A STRUCTURAL FOOTING AS DETAILED ELSEWHERE IN THE DRAWINGS. FOOTING SIZE TO BE PROVIDED BY STRUCTURAL ENGINEER. REFERENCE FIXTURE SCHEDULE AND DETAILS FOR MORE INFORMATION.
10. ALL EXIT SIGNS SHALL BE INSTALLED IN STRICT ACCORDANCE WITH THE LOCAL FIRE PREVENTION CODE AUTHORITY. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING ALL NECESSARY HARDWARE SUCH THAT ALL EXIT SIGNS ARE INSTALLED IN AN APPROVED VISIBLE LOCATION. THE CONTRACTOR SHALL VERIFY CHEVRONS AND NUMBER OF FACES PER EXIT SIGN WITH ARCHITECTURAL REFLECTED CEILING PLAN(S). ANY DISCREPANCIES BETWEEN EXIT SIGNS DEPICTED ON ARCHITECTURAL AND ELECTRICAL PLANS SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT PRIOR TO ORDERING EXIT SIGNS.

C. SUBMITTALS AND SUBSTITUTIONS:

1. CONTRACTOR TO SUBMIT FOR APPROVAL ON THE PRODUCTS THEY INTEND TO FURNISH WITHIN TEN (10) DAYS OF AWARD OF CONTRACT. FAILURE TO SUBMIT WITHIN DEADLINE CONSTITUTES A GUARANTEE THAT ONLY THE BASE SPECIFIED PRODUCTS WILL BE SUPPLIED AND THAT NO OTHER PRODUCTS, WHETHER LISTED AS ALTERNATES OR NOT, WILL BE CONSIDERED.
2. CONTRACTOR TO PROVIDE A SUBMITTAL/SHOP DRAWING SUBMITTAL FOR EACH LIGHTING FIXTURE TYPE INCLUDING ACCESSORIES, BALLAST(S), POWER SUPPLIES, DRIVER(S) TRANSFORMER(S), AND INTEGRAL EMERGENCY BATTERIES AND TEST SWITCHES. ANY LIGHTING FIXTURE SUBMITTAL PROVIDED WITHOUT SPECIFIC LIGHTING FIXTURE'S ACCESSORIES, BALLAST, POWER SUPPLY, DRIVER, TRANSFORMER OR BATTERY INFORMATION SHALL BE REJECTED AS INCOMPLETE.
3. SUBSTITUTIONS OF THE SPECIFIED PRODUCTS ARE STRICTLY PROHIBITED -- UNLESS APPROVED AS STATED HEREIN. LIGHTING FIXTURE SUBSTITUTIONS SHALL BE FORMALLY PRESENTED TO THE ELECTRICAL ENGINEER AND/OR LIGHTING CONSULTANT BY APPOINTMENT ONLY, AT LEAST TEN (10) WORKING DAYS PRIOR TO BID TIME. THE SUBMITTAL MATERIAL SHALL INCLUDE THE FOLLOWING ITEMS.
 - a. A COMPLETE AND OPERATING SAMPLE, WIRED FOR 120V OPERATION, WITH LAMP, CORD AND PLUG.
 - b. A COMPLETE PHOTOMETRIC REPORT, FOR THE PROPOSED SUBSTITUTE PRODUCT, USING THE SPECIFIED LAMP OR LED TYPE AND WATTAGE, INCLUDING TABULATED CANDLEPOWER VALUES, COEFFICIENT OF UTILIZATION, AND AN ISO-FOOT-CANDLE DIAGRAM. PRORATED DATA WILL NOT BE ACCEPTABLE. THE PHOTOMETRIC REPORT MUST BE DONE IN ACCORDANCE WITH PUBLISHED I.E.S. TESTING PROCEDURES AND CERTIFIED BY A REGISTERED ELECTRICAL ENGINEER.
 - c. A CURRENT ORIGINAL CATALOG DATA SHEET WITH LIGHTING FIXTURE CATALOG NUMBERS, MODIFIED DATA SHEETS WILL NOT BE ACCEPTABLE.
 - d. A SIGNED COPY OF THE "SUBSTITUTION COMPLIANCE FORM", LOCATED IN THE DIVISION 1 SPECIFICATION, STATING THAT IF THE PROPOSED SUBSTITUTION IS ACCEPTED, THE PROJECT SCHEDULE WILL NOT BE NEGATIVELY AFFECTED. IF THE COMPLETION OF THE PROJECT IS DELAYED BECAUSE OF THE APPROVED SUBSTITUTION, THE CONTRACTOR WILL BE RESPONSIBLE FOR PAYMENT OF ANY ESTABLISHED LIQUIDATED DAMAGES.
 - e. FOR SPECIFIC INTERIOR FIXTURE SUBSTITUTIONS, WHEN DIRECTED BY THE ELECTRICAL ENGINEER AND/OR LIGHTING CONSULTANT, A POINT-BY-POINT SCALED COMPUTER PRINTOUT SHALL BE PROVIDED VERIFYING THE ILLUMINATION LEVELS FOR THE SPECIFIC INTERIOR AREA. IF THE SUBSTITUTED FIXTURE IS AN EMERGENCY FIXTURE, THE REPORT SHALL BE RUN IN BOTH NORMAL AND EMERGENCY MODES. THIS REPORT SHALL BE CONFIGURED WITH SPECIFIC CONSTRAINTS, AS DIRECTED BY THE ENGINEER OF RECORD. THE REPORT MUST SHOW THAT THE SUBSTITUTED FIXTURE PROVIDES PERFORMANCE EQUAL TO OR BETTER THAN THE LIGHTING LEVELS OF THE SPECIFIED PRODUCT.
 - f. FOR ALL EXTERIOR FIXTURE SUBSTITUTIONS, A POINT-BY-POINT SCALED COMPUTER PRINTOUT SHALL BE PROVIDED VERIFYING THE ILLUMINATION LEVELS FOR THE ENTIRE SITE PLAN BASED ON USING THE PROPOSED ALTERNATIVE FIXTURES. THE REPORT MUST SHOW THAT THE SUBSTITUTED FIXTURE PROVIDES PERFORMANCE EQUAL TO, OR BETTER THAN THE LIGHTING LEVELS AND UNIFORMITY RATIOS (MAX:MIN AND AVG:MIN) OF THE SPECIFIED PRODUCT. THIS REPORT SHALL BE CONFIGURED WITH THE FOLLOWING CONSTRAINTS.
 - i. THE SPACING INCREMENT OR POINTS ON THE VERIFICATION REPORT SHALL NOT EXCEED TEN (10) FEET IN EITHER DIRECTION.
 - ii. THE PHOTOMETRIC CALCULATION SHALL BE BASED ON PROVIDING MAINTAINED FOOT-CANDLE LEVELS USING MEAN LAMP LUMENS AND A LIGHT LOSS FACTOR, AS DIRECTED BY THE ENGINEER OF RECORD.
 - iii. THE PHOTOMETRIC CALCULATION SHALL SHOW ANY ADDITIONAL ENERGY AND/OR ENERGY COSTS, FOR A TEN YEAR PERIOD, AS COMPARED TO THE ORIGINALLY SPECIFIED ITEM. THE TOTAL COSTS FOR THESE EXPENSES WILL BE DEDUCTED FROM THE CONTRACT COST.
4. DURING THE BIDDING PROCESS, THE CONTRACTOR SHALL REFER TO THE LIGHTING FIXTURE SCHEDULES ON THE ARCHITECTURAL PLANS (IF PROVIDED ON PROJECT), LIGHTING DESIGN PLANS/SPECIFICATIONS (IF PROVIDED ON PROJECT), AND THE ELECTRICAL PLANS. ANY DISCREPANCIES BETWEEN THEM INCLUDING, BUT NOT LIMITED TO, PART NUMBERS AND FIXTURE DESCRIPTIONS SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT, ELECTRICAL ENGINEER, AND LIGHTING DESIGNER WITH PRE-BID RFI(S). WHERE DISCREPANCIES ARE DISCOVERED WHEN THERE IS INSUFFICIENT TIME TO ISSUE PRE-BID RFI(S), THE BASE BID SHALL INCORPORATE THE MOST COSTLY VERSION OF THE DISCREPANCY AND SHALL BE MEMORIALIZED IN AN RFI OR AS A BID CLARIFICATION. PROVIDING A VOLUNTARY DEDUCTIVE ALTERNATE BID CLARIFYING FIXTURE SCHEDULE DISCREPANCIES IS ALSO AN ACCEPTABLE FORM OF DISCREPANCY DOCUMENTATION.
5. FIXTURE FINISHES:
 - a. ALL FIXTURE FINISHES AND COLORS, UNLESS NOTED AS PREMIUM OR CUSTOM, SHALL BE SELECTED FROM THE MANUFACTURERS STANDARD COLOR OPTIONS AS LISTED ON THE FIXTURE SPECIFICATION SHEET. STANDARD FINISH SHALL BE SELECTED BY THE ARCHITECT, INTERIOR DESIGNER OR OWNER. THIS DIRECTION WILL BE PROVIDED IN THE SHOP DRAWING REVIEW PROCESS.
 - b. ALL FIXTURES INDICATED WITH A PREMIUM OR CUSTOM COLOR SHALL BE ASSIGNED A CUSTOM COLOR REFERENCE NUMBER (SUCH AS RAL) OR PROVIDE FIVE (5) PAINT CHIPS FOR MANUFACTURER TO USE TO MATCH COLOR. PREMIUM OR CUSTOM FINISH SHALL BE SELECTED BY THE ARCHITECT, INTERIOR DESIGNER OR OWNER. THIS DIRECTION WILL BE PROVIDED IN THE SHOP DRAWING REVIEW PROCESS.

6. THE LIGHTING FIXTURE MODEL NUMBER MAY INDICATE A FIXTURE OPTION THAT THE CONTRACTOR MUST IDENTIFY PRIOR TO ORDERING/PROVIDING SUBMITTALS, INCLUDING, BUT NOT LIMITED TO: VOLTAGE, MOUNTING CONDITION/HARDWARE, FINISH, DIMMING REQUIREMENTS/BALLAST INFORMATION, GENERALLY, CONTRACTOR-SELECTED OPTIONS ARE DENOTED IN THE PART NUMBER WITH BRACKETS EX: [VOLTS?]
- a. CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING AND PROVIDING ALL HANGERS, CLIPS AND NECESSARY HARDWARE TO INSTALL THE FIXTURE IN THE ENVIRONMENT AS SHOWN ON THE ARCHITECTURAL PLANS. ALL FIXTURES SHALL BE PROVIDED WITH ALL REQUIRED STRUCTURAL SUPPORTS AS REQUIRED BY THE CURRENTLY ADOPTED CODES.
- b. VOLTAGES SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO ORDERING -- SEE ELECTRICAL DRAWINGS FOR BRANCH CIRCUIT INFORMATION. IT IS POSSIBLE THAT FIXTURES WILL BE REQUIRED IN VARIOUS VOLTAGES.
7. "NO KNOWN EQUAL" LIGHTING FIXTURE PRICING/BIDDING NOTES:
 - a. EACH FIXTURE IDENTIFIED AS "NO KNOWN EQUAL" ON THIS PROJECT SHALL BE BID IN A "LINE ITEM" FORMAT. A PER UNIT MATERIAL COST SHALL BE PROVIDED FOR EACH "NO KNOWN EQUAL" FIXTURE. THIS PRICE SHALL INCLUDE LAMPS AS WELL AS ALL OTHER REQUIRED MATERIALS REQUIRED FOR INSTALLATION. THE FIXTURE PRICE QUOTED WILL BE UTILIZED, PRIOR TO SHOP DRAWING APPROVAL, FOR "ADDING" AND/OR "DELETING" ANY QUANTITY OF THE FIXTURE.
 - b. A UNIT COST SHALL BE SUBMITTED FOR EACH "NO KNOWN EQUAL" FIXTURE. SUBMIT THE PRICING AS PART OF THE BID FORM ON A SEPARATE 8 1/2" X 11" SHEET.
 - c. FAILURE TO SUBMIT A LINE ITEM FOR EACH "NO KNOWN EQUAL" FIXTURE MAY RESULT IN THE REJECTION, REFUSAL, OR NON-ACCEPTANCE OF THE CONTRACTOR'S BID.
8. FIXTURES IDENTIFIED AS "NO KNOWN EQUAL" OR "CAMPUS STANDARD" ARE TO BE PROVIDED AS SPECIFIED, WITH SUBSTITUTIONS STRICTLY PROHIBITED. SEE ADDITIONAL NOTES FOR "NO KNOW EQUAL" BIDDING REQUIREMENTS.
- D. LIGHTING FIXTURE SPECIFICATIONS:
 1. ALL EXTERIOR LIGHTING EQUIPMENT SHALL BE RATED FOR WET LOCATION AND THE IP RATING OF ALL EQUIPMENT, INCLUDING BALLAST, POWER SUPPLY AND TRANSFORMER ENCLOSURES SHALL CONFORM TO THE CONDITIONS IN WHICH THE FIXTURE IS MOUNTED.
 2. ALL BALLASTS, POWER SUPPLIES, DRIVERS AND/OR TRANSFORMERS THAT ARE REMOTELY LOCATED SHALL BE INSTALLED AS NEAR TO THE LIGHTING FIXTURE(S) AS POSSIBLE. HIDDEN FROM PUBLIC VIEW IN AN ACCESSIBLE COMPARTMENT THAT IS WELL VENTILATED. CONTRACTOR TO COORDINATE LOCATION(S) WITH ARCHITECT PRIOR TO ROUGH-IN.
 3. ALL TRANSFORMERS SHALL BE FUSED ON THE SECONDARY SIDE.
 4. COLOR FILTERS SHALL BE GLASS OR DICHOIC UNLESS OTHERWISE INDICATED ON DRAWINGS.
 5. CONTRACTOR TO PROVIDE 20% ADDITIONAL COLOR FILTERS FOR EACH COLOR AND SIZE.
 6. CONTRACTOR TO VERIFY THAT ALL LIGHTING FIXTURES SPECIFIED WITH A COLOR FILTER ARE SUPPLIED WITH ANY AND ALL ATTACHMENT DEVICES FOR THE FILTER.
 7. ALL TRACK LIGHTING FIXTURES SHALL BE PROVIDED WITH THE APPROPRIATE TRACK SYSTEM WHICH SHALL INCLUDE ALL MISCELLANEOUS COMPONENTS REQUIRED, AS WELL A ANY REQUIRED CIRCUIT LIMITERS FOR A COMPLETE INSTALLATION. TRACK LENGTH(S) SHALL BE PER DRAWINGS.
- E. DRIVERS / TRANSFORMERS:
 1. [OPTION?] IN FIXTURE MODEL NUMBER INDICATE THAT THE FIXTURE DRIVER TYPE AND QUANTITY MUST BE VERIFIED BY THE CONTRACTOR USING FIXTURE CALLOUT INFORMATION AND FIXTURE SWITCHING CONFIGURATION INFORMATION.
 2. CONTINUOUS DIMMING AND CONTROLLABLE LED:
 - a. PROVIDE CONTROLLABLE LED DIMMING DRIVERS (INTEGRAL OR REMOTE) WITH POWER FACTOR GREATER THAN 0.85 AND MAXIMUM THD OF 20% AT FULL LOAD.
 - b. PRIOR TO BID, CONTRACTOR TO VERIFY DRIVER COMPATIBILITY WITH DIMMERS, DIMMING CONTROL SYSTEM(S) AND DISTRIBUTED LIGHTING CONTROL SYSTEM(S) WITH RESPECTIVE LIGHTING MANUFACTURER(S) AND LIGHTING/DIMMING CONTROL SYSTEM MANUFACTURERS. IF COMPATIBILITY DOCUMENTATION IS UNAVAILABLE FOR A GIVEN LED FIXTURE/LIGHTING CONTROL SYSTEM COMBINATION, CONTRACTOR SHALL INCLUDE COSTS IN THE BASE BID FOR RESPECTIVE LIGHTING MANUFACTURER AND LIGHTING CONTROLS MANUFACTURER TO TEST/WARRANT COMPATIBILITY OF SAID COMBINATIONS.
 - c. CONTINUOUS LED DIMMING DRIVERS SHALL BE AT MINIMUM 4-WIRE 0-10V 10% DIMMING (HOT, NEUTRAL, DIM+, DIM-).
- F. EMERGENCY FIXTURES / BATTERY PACKS:
 1. LIGHT FIXTURES INDICATED AS EMERGENCY SHALL BE IDENTIFIED / PROVIDED AS FOLLOWS:
 - a. INTEGRAL BATTERY PACK (EB):

3a/3EB -- FIXTURE CONNECTED TO CIRCUIT "3". CONTROL SWITCH/LEG "b" -- WITH THE BATTERY CHARGING LEAD CONNECTED TO A CONSTANT HOT CIRCUIT "3".

3N/L/3EB -- FIXTURE CONNECTED TO A CONSTANT HOT CIRCUIT "#3". BATTERY CHARGING LEAD CONNECTED TO A CONSTANT HOT CIRCUIT "3".
 - b. REMOTE BACK-UP SOURCE (EM):

3a/3EM -- ROUTED THROUGH A U.L. LISTED TRANSFER RELAY (LC & D #GR-2001E/S) FOR SWITCHED CONTROLS OR A U.L. LISTED TRANSFER SWITCH (BODINE #GTD SERIES DEVICE) FOR DIMMING CONTROLS, CONNECTED TO A CONSTANT HOT EMERGENCY CIRCUIT "3". SEE DISTRIBUTED LIGHTING CONTROL SPECIFICATIONS FOR DEVICE REQUIREMENTS WHEN CONTROLLED BY OCCUPANCY SENSORS.

3N/L/3EM -- FIXTURE CONNECTED TO A CONSTANT HOT EMERGENCY CIRCUIT "3".
 - c. REMOTE BACK-UP SOURCE (EM) NOTES:

-- ALL REMOTE BACK UP SOURCE (EM) FIXTURES SHALL BE PROVIDED WITH AN IN LINE FUSE. PROVIDE ADDITIONAL LABELING TO INDICATE FIXTURE IS PROTECTED BY A FUSE.
 2. EMERGENCY BATTERY PACK NOTES:
 - a. PROVIDE INTEGRAL TEST SWITCH / CHARGE LIGHT OPTION FOR ALL EMERGENCY BATTERY PACKS INSTALLED IN LIGHT FIXTURES.
 - b. ALL RECESSED DOWNLIGHTS SUPPLIED WITH A BATTERY PACK SHALL BE PROVIDED WITH AN INTEGRAL COMBINATION TEST SWITCH / CHARGING INDICATOR LIGHT-- MOUNTED INSIDE THE REFLECTOR. REMOTE TEST SWITCH / CHARGING LIGHTS ARE NOT ALLOWED. THE TEST SWITCH / CHARGING INDICATOR LIGHT SHALL BE SECURELY ATTACHED TO THE REFLECTOR WITH 18" OF SLACK LEADS, FOR EASY REMOVAL OF THE REFLECTOR ASSEMBLY.
 - c. ALL BATTERY PACKS AND ALL COMBINATION LED BATTERY PACK/EMERGENCY DRIVERS SHALL BE UL924 LISTED.
 - d. PRIOR TO BID, CONTRACTOR SHALL VERIFY WITH FIXTURE MANUFACTURER(S) THAT EMERGENCY BATTERY PACKS ARE MANUFACTURED TO BE INTEGRAL TO FIXTURE HOUSINGS.
 - e. SHOULD THE SPECIFIED LED EMERGENCY BATTERY PACK(S) NOT FIT WITHIN A GIVEN FIXTURE(S) OR SHOULD THE FIXTURE NOT BE MANUFACTURED TO ACCOMMODATE A BATTERY PACK, CONTRACTOR SHALL INCLUDE ALL COSTS IN BASE BID TO LOCATE/CONNECT SELF-TESTING MINI INVERTER(S) (IOTA #ILS SERIES OF BODINE/ELL-S-I(WATT)) REMOTELY FROM THE FIXTURE(S) IN THE NEAREST ELECTRICAL ROOM OR TO LOCATE EMERGENCY BATTERY PACK(S) REMOTELY FROM THE FIXTURE ABOVE THE NEAREST ACCESSIBLE CEILING.
 - f. LED BATTERY PACKS SHALL PROVIDE A MINIMUM OF 90 MINUTES OF EMERGENCY ILLUMINATION, AND SHALL BE RATED AT A MINIMUM OF 10 WATTS, OR AS SPECIFIED, WHERE A FIXTURE TYPE IS UNAVAILABLE WITH A 10W BATTERY PACK OR WHERE THE WATTAGE IS NOT SPECIFIED ON THE PLANS, INCLUDE ALL COST IN BASE BID TO PROVIDE THE HIGHEST WATTAGE AVAILABLE ON THE FIXTURE CUTSHEET. ANY LISTED EQUAL FIXTURE OR ANY SUBSTITUTION OFFERED BY THE CONTRACTOR MUST ALSO HAVE BATTERY PACKS CAPABLE OF PRODUCING THE SAME OR MORE LUMENS WHEN ON BATTERY AS OUTLINED ABOVE. ACCEPTABLE MANUFACTURES: BODINE OR IOTA.
 3. TO MAINTAIN UL LISTING OF LED FIXTURE, FIXTURE MANUFACTURER(S) SHALL INSTALL LED EMERGENCY BATTERY PACKS AT THE FACTORY AND OBTAIN A U.L. LISTING FOR THE FIXTURE WITH EMERGENCY BATTERY PACK. FIELD-INSTALLATION OF LED EMERGENCY BATTERY PACK(S) IS PROHIBITED.
 - h. PROVIDE DAMP LOCATION VERSION IN ALL DAMP LABEL INSTALLATIONS.

1

LIGHTING FIXTURE SCHEDULE								NOTES	LOCATION
SYMBOL	TYPE	MANUFACTURER & MODEL NO.	WATTS	LUMEN	CCT	DIMENSION	GENERAL DESCRIPTION		
⊙	LT-200	Eico Lighting E4LF1 & ERT415CT5W	11	750	3000	—	4" Round downlight for use with 11 watt, 750 lumens LED at 3000K color temperature. Contractor shall verify exact dimming requirements prior to ordering and provide all lighting components required to make a complete and operational dimming system.	—	Members Area
○	LT-201	Eico Lighting E4LF1 & ERT415CT5W	11	750	3000	—	4" Round downlight for use with 11 watt, 750 lumens LED at 3000K color temperature. Contractor shall verify exact dimming requirements prior to ordering and provide all lighting components required to make a complete and operational dimming system.	—	Members Area
◆	LT-202	Kirlin LRR-06013-750L & REM-0700A	10	750	3000	—	Wet rated LED downlight for use with 10 watt LED at 3000K color temperature. Provide with remote 0-10V dimming driver as required. Verify all options with Architect prior to ordering.	—	Steam Rooms
▢	LT-203	Lithonia Lighting SBL4-3000LM-80CRI-30K-MIN10-GZT-MV	25.5	3236	3000	—	4" Square-basket wraparound for use with 25.5 watt LED at 3000K color temperature. Provide with 0-10V dimming.	—	Storage Room
⊕	LTG-3450	Circa Lighting Dot 16" Flush Mount	24	1850	2700	—	Decorative round flush mount for use with 24 watt dimmable LED at 2700K color temperature. Contractor shall verify exact dimming requirements prior to ordering and provide all lighting components required to make a complete and operational dimming system. Contractor shall verify finish with Architect prior to ordering.	—	Members Area
Q	LTG-3451	Mitzi Ariel -- H326101-AGB	60	—	3000	—	Decorative wall sconce for use with 60 watt equivalent dimmable LED bulb with E26 medium base. Contractor shall verify exact dimming requirements prior to ordering and provide all lighting components required to make a complete and operational dimming system. Contractor shall verify finish with Architect prior to ordering.	—	Members Area Men's and Women's Wet Area
○	LTG-3452	Troy Lighting Bennington -- C1350FBZ	120	—	3000	—	Decorative round flush mount for use with (2) 60 watt equivalent dimmable LED bulbs with E26 medium base. Contractor shall verify exact dimming requirements prior to ordering and provide all lighting components required to make a complete and operational dimming system. Contractor shall verify finish with Architect prior to ordering.	—	Members Area -- Men's and Women's Wet Area
⊕	LTG-3453	RBW Chip -- CHP-WH-30-120-TR-LINE-1P65	12	550	3000	—	Decorative wall sconce for use with 12 watt dimmable LED at 3000K color temperature. Contractor shall verify exact dimming requirements prior to ordering and provide all lighting components required to make a complete and operational dimming sy	—	Members Area -- Corridor
⊙ X		Lithonia EDGR-1/2-GMR-EL	2	—	—	—	Edge-lit exit sign for use with green LED lamps and wired for two circuits. Provide clear background for single face, mirror background for double. Refer to architectural plans for number of faces and chevrons. Verify trim finish with Architect prior to ordering.	—	—

Hotel del Coronado.

Fitness
Members Area
Renovation

1500 Orange Avenue
Coronado, CA 92118



González Architects
Hospitality

Mechanical/Electrical/Plumbing Engineer
tkisc Collaborative
4755 Eastgate Mall, Suite 150
San Diego, CA 92121
616.362.6800

tkisc
COLLABORATIVE

15231 Laguna Canyon Road, Suite 100
Irvine, California 92618
949.751.5800 www.tkisc.com
Project Leader - Kenneth McClendron
Electrical Lead - Christina Souza
tkisc Job #: 2019-0727



Registration Seal
C-32509
Address
14 NE 1st Avenue, Suite 507
Miami, FL 33132
T+1 (305) 455 4216

Issued/Revised

No.	Date	Description
1	09-17-21	Permit Set
2	01-05-22	Owner Revisions

Drawing Title

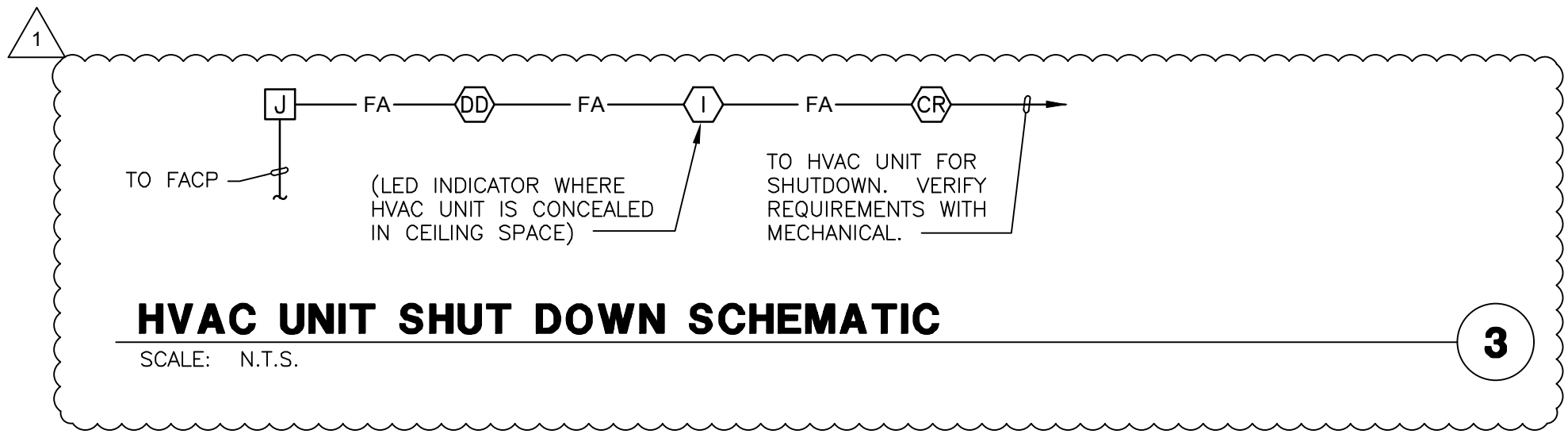
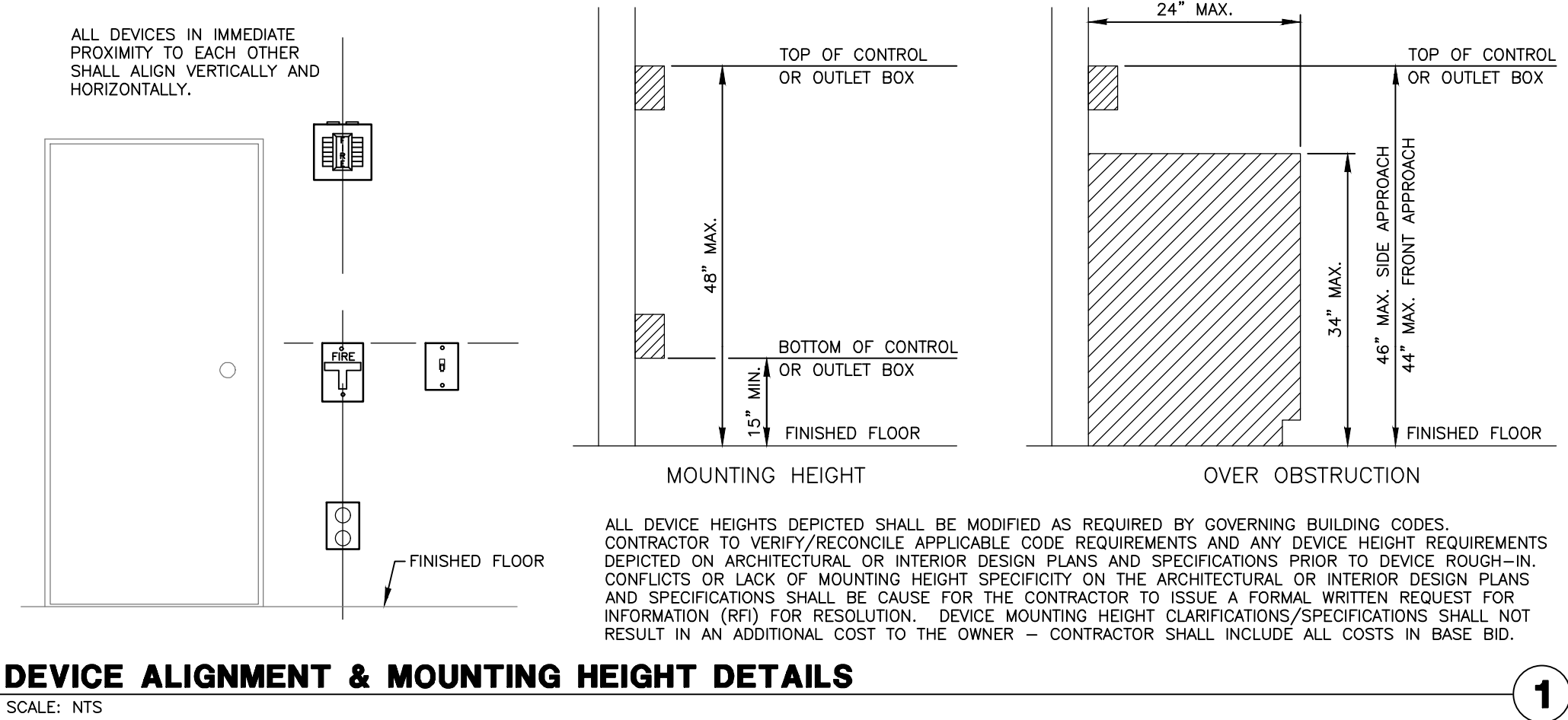
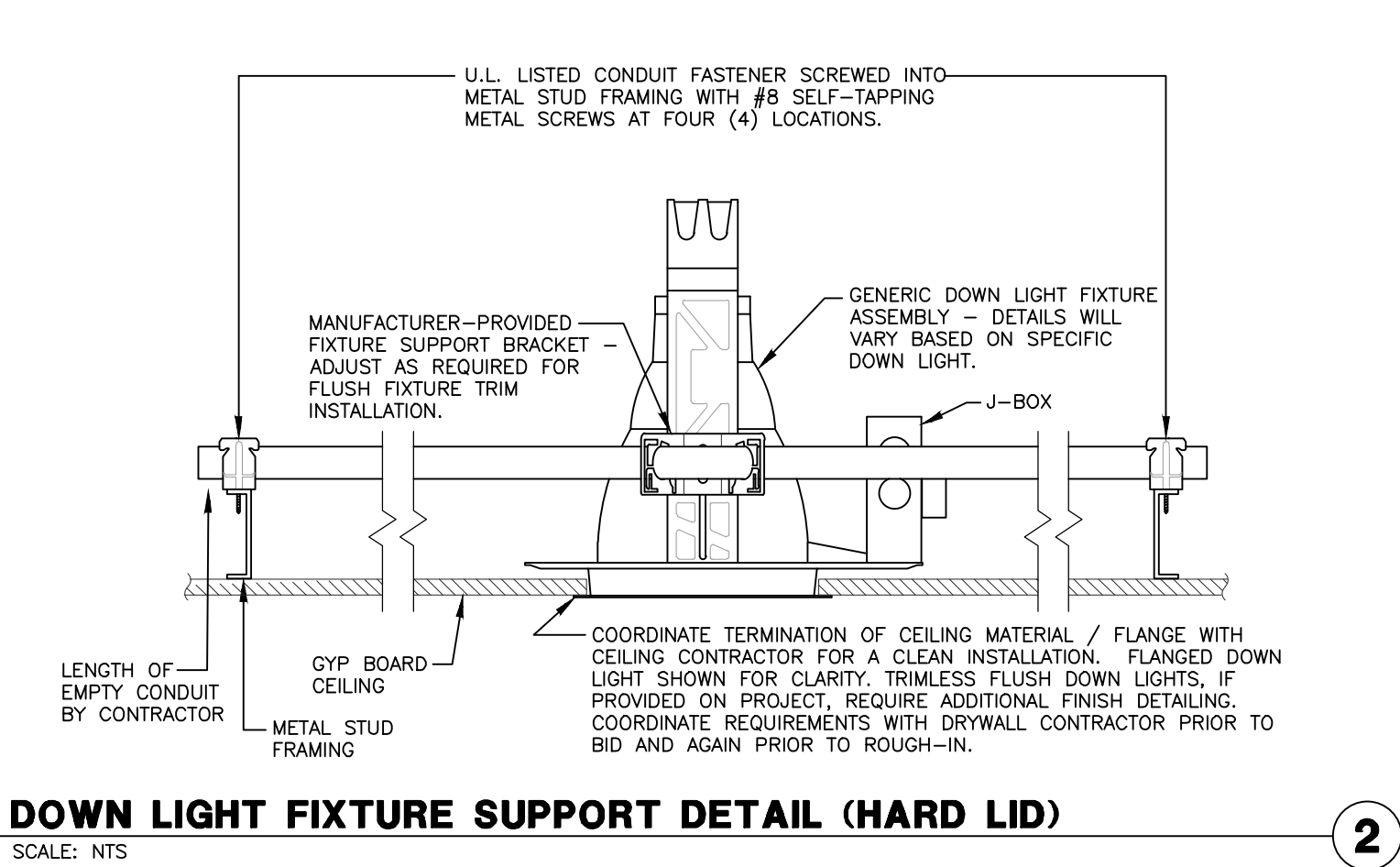
LIGHTING FIXTURE
SCHEDULES

Scale
Date
Drawn By
Project No.
Drawing No.

As Noted
09-17-2021
CS
19022
CS

E4.03

PERMIT SET- ISSUED FOR CONSTRUCTION



HOTEL DEL CORONADO.

Fitness Members Area Renovation

1500 Orange Avenue
Coronado, CA 92118



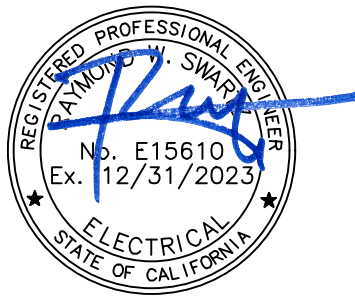
González Architects
Hospitality

Mechanical/Electrical/Plumbing Engineer
tk1sc Collaborative
4755 Eastgate Mall, Suite 150
San Diego, CA 92121
658.362.6800

tk1sc
COLLABORATIVE

15231 Laguna Canyon Road, Suite 100
Irvine, California 92618
949.751.5800 www.tk1sc.com

Project Leader - Kenneth McClendon
Electrical Lead - Christina Souza
tk1sc Job #: 2019-0727



Registration Seal
C-32509

Address
14 NE 1st Avenue, Suite 507
Miami, FL 33132
T +1 (305) 455 4216

Issued/Revised	
No.	Description
09-17-21	Permit Set
1 01-05-22	Owner Revisions

Drawing Title

**MISCELLANEOUS
DETAILS (INTERIOR)**

Scale
Date
Drawn By
Project No.
Drawing No.

As Noted
09-17-2021
CS
19022
CS

E5.01

PERMIT SET: ISSUED FOR CONSTRUCTION

DLCS SCHEDULE					
SYSTEM TOPOLOGY	COMMUNICATION TOPOLOGY	FIXTURE INTEGRATED SENSING	BAS INTEGRATION	WIRELESS DLCS COMPONENT BATTERY USAGE	REMARKS
NETWORKED	WIRELESS	NO	YES	SWITCHES & SENSORS	

DISTRIBUTED LIGHTING CONTROL SYSTEM REQUIREMENTS:

- THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE FURNISHING OF ALL MATERIAL, LABOR, EQUIPMENT, AND SERVICES, IN CONNECTION WITH THE INSTALLATION OF A COMPLETE AND FULLY FUNCTIONING AND CODE COMPLIANT INSTALLATION.
- IT IS THE INTENT OF THE CONTRACT DOCUMENTS, WHICH ARE PRESENTED IN A DIAGRAMMATIC FORMAT, TO PROVIDE CONTRACTOR INFORMATION THAT SUPPLEMENTS AND ENHANCES THE GENERALLY ACCEPTED CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES EMPLOYED IN CONNECTION WITH INSTALLATION OF THIS TYPE OF PRODUCT/SYSTEM.
- THE CONTRACTOR SHALL ALSO INCORPORATE THE REQUIREMENTS OF THE MANUFACTURER'S INSTALLATION INSTRUCTIONS/WARRANTY REQUIREMENTS AS PART OF THE REQUIREMENTS OF THE CONSTRUCTION DOCUMENTS. IN THE EVENT OF A CONFLICT BETWEEN THE CONTRACT DOCUMENT REQUIREMENTS AND THE MANUFACTURER'S INSTALLATION REQUIREMENTS, THE MORE STRINGENT REQUIREMENTS SHALL APPLY UNLESS THE MORE STRINGENT REQUIREMENT VOIDS APPLICABLE WARRANTIES OR VIOLATES THE REQUIREMENTS OF THE LOCAL AUTHORITY HAVING JURISDICTION. ANY SUCH CONFLICT SHALL IMMEDIATELY BE BROUGHT TO THE ATTENTION OF THE ENGINEER IN WRITING THROUGH THE FORMAL RFI PROCESS.
- REFER TO THE ASSOCIATED SCHEDULES, SCHEMATICS, DRAWINGS, AND SPECIFICATIONS FOR DETAILED INFORMATION/REQUIREMENTS ON THIS PRODUCT/SYSTEM.
- CONTRACTOR IS RESPONSIBLE TO VERIFY LIGHT FIXTURE DIMMING PROTOCOLS ARE COMPATIBLE WITH THE DLCS.
- SECURITY STANDARD CERTIFICATIONS, SHOP DRAWINGS AND COMPONENT SUBMITTALS SHALL BE SUBMITTED PER THE GENERAL SPECIFICATION REQUIREMENTS SHOWING ALL COMPONENTS, WIRING CONFIGURATIONS AND PROGRAMMING SCHEDULES. SCALED SHOP DRAWINGS DEPICTING/IDENTIFYING ALL SYSTEM COMPONENT LOCATIONS SHALL BE PROVIDED. SUBMITTALS SHALL BE MADE SPECIFIC TO THE PROJECT - GENERIC SUBMITTALS AND SUBMITTALS WITHOUT SCALED SHOP DRAWINGS SHALL BE REJECTED.

AREA TYPE	OCC SENSOR				INTERIOR DAYLIGHT SENSOR	EXTERIOR PHOTOCELL	ASTRONOMICAL TIME CLOCK CONTROLS			LOCAL CONTROL			SYSTEM	NOTES	REMARKS			
ALL VALUES ARE BASED ON CALIFORNIA TITLE 24 2019		MANUAL ON (WHEN SWITCH /BUTTON IS PRESSED)	REDUCED OUTPUT OR OFF	REDUCED OUTPUT OR OFF DURING NORMAL HOURS	REDUCED OUTPUT OR OFF AFTER NORMAL HOURS	AUTO DIM AT TARGET FC FIXTURES REMAIN ON AT LOWEST LEVEL AUTO OFF AT TARGET FC FIXTURES DIM TO OFF	TARGET ILLUMINATION LEVEL NOMINAL FOOTCANDLE & METER HEIGHT	EXTERIOR PHOTOCELL ON	EXTERIOR PHOTOCELL OFF	BEGIN NORMAL OPERATING HOURS (ASTRONOMICAL TIME CLOCK TURN ON)	END NORMAL OPERATING HOURS (ASTRONOMICAL TIME CLOCK TURN OFF)	AFTER NORMAL HOURS OVERRIDE CANNOT EXCEED 2 HOURS PER §130.1(d)(3)&B	ON / OFF / RAISE / LOWER DIMMING	SCENE SELECTOR	PLUG LOAD CONTROL	DEMAND RESPONSE LIGHTING REDUCTION MIN. 15% COMMERCIAL BLDG >10,000 SQ FT	PROGRAMMING NOTES PLEASE SEE BELOW	PLEASE REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION. O = INDICATES OPTIONAL COMPLIANCE. MAY NOT BE USED. PLEASE REFER TO PLANS. ● = INDICATES REQUIRED COMPLIANCE ALL LIGHTING WITHIN DAYLIGHTING ZONES SHALL BE COMMISSIONED AT NIGHT, WITH NO DAYLIGHT CONTRIBUTION, IN ORDER TO ESTABLISH BASELINE ILLUMINATION LEVELS. "NORMAL HOURS" REFERS TO OWNER-DETERMINED OPERATING HOURS. "AFTER HOURS" REFERS TO ANY TIME PERIOD BEFORE OR AFTER OWNER-DETERMINED OPERATING HOURS. WHERE EXTERIOR PHOTOCELL CONTROL IS INDICATED, PLEASE PROVIDE EXTERIOR NORTH FACING DAYLIGHT SENSOR.
CLOSET / STORAGE	ON AT 100%	ON AT 100%	OFF AFTER 5 MIN.	-	-	-	-	-	-	-	-	-	●	-	-	-	-	§130.1(b) EXCEPTION 1 - AN AREA ENCLOSED BY CEILING HEIGHT PARTITIONS THAT HAS ONLY ONE LUMINAIRE WITH NO MORE THAN TWO LAMP DOES NOT REQUIRE MULTI-LEVEL CONTROLS.
CORRIDOR RESIDENTIAL OR HOTEL	ON AT 100%	-	DIM 50% AFTER 10 MIN.	-	-	-	●	5- 10 FC +0" AFF	-	-	-	-	-	●	-	-	-	§130.1(a)1 EXCEPTION 1 - MANUAL CONTROL MAY BE LOCATED IN A SEPARATE, SECURED LOCATION. PROVIDE DUAL MODE CONTROL PER DLCS SPECIFICATIONS.
RESTROOMS / LOCKER ROOMS	ON AT 100%	-	5 MIN. TO OFF	-	-	-	-	20-30 FC	-	-	-	-	●	-	-	-	-	§130.1(b) EXCEPTION 2 - DIMMABLE LUMINAIRES NOT REQUIRED. §130.1(c)5 - [DUAL MODE] OCCUPANCY SENSORS REQUIRED. §130.1(a)1 EXCEPTION 1 - MANUAL CONTROL MAY BE LOCATED IN A SEPARATE, SECURED LOCATION.
PARKING GARAGE																		
PROGRAMMING NOTES																		
<p>NOTES: A. PROVIDE DAYLIGHTING CONTROL FOR PRIMARY AND SECONDARY DAYLIT OR SKYLIT ZONES WERE REQUIRED. DAYLIGHTING IS NOT NECESSARY WHEN AREAS DO NOT INCLUDE SKYLIGHTS OR GLAZING < 24 SQ FT OR SKYLIT+PRIMARY SIDELIT ZONE IS LESS THAN 120W. LUMINAIRES IN OR AT LEAST 50% WITHIN DAYLIGHTING ZONES MUST BE CONTROLLED.</p> <p>B. CONTROLLED BY OCCUPANCY SENSOR: AUTO AND / OR MANUAL ON UNLESS OVERRIDDEN BY DAYLIGHTING SENSORS.</p> <p>C. MANUAL CONTROL WALL STATIONS FOR THESE AREAS SHALL BE LOCATED IN THE NEAREST BACK OF HOUSE CLOSET, CONTROL BOOTH, ELECTRICAL ROOM, ETC. TO PREVENT UNAUTHORIZED USERS FROM ADJUSTING LIGHTING LEVELS.</p> <p>D. CONFIGURE LIGHTING CONTROL TO PROVIDE PROPORTIONATE RAISE / LOWER OF ALL ROOM LIGHTING TOGETHER, REGARDLESS OF LOCATION IN DAYLIGHTING AND NON-DAYLIGHTING ZONES WHERE THEY OCCUR.</p> <p>E. PROVIDE RS-232 OR ETHERNET CONNECTION TO AV SYSTEM TO ALLOW RECALL OF LIGHTING PRESETS BY AV SYSTEM WITHIN THIS ROOM, IF REQUESTED BY OWNER.</p> <p>F. PROVIDE CONTROLLED RECEPTACLES IN THIS ROOM AS REQUIRED. CONTROLLED RECEPTACLE MUST BE WITHIN 6'-0" OF UNCONTROLLED RECEPTACLE.</p> <p>G. PROVIDE MOMENTARY CONTACT CLOSURE FROM FACP TO FORCE ALL LIGHTING IN THIS AREA TO 100% DURING AN ALARM EVENT. AUTOMATICALLY RESTORE LIGHTING TO NORMAL WHEN EVENT HAS CLEARED.</p> <p>H. LIGHTING IN THIS SPACE MAY BE CONTROLLED FROM A STAGE LIGHTING SYSTEM. THE STAGE LIGHTING SYSTEM SHALL BE PROVIDED WITH A TITLE 24 COMPLIANT LIGHTING CONTROL PROCESSOR AND COMPATIBLE OCCUPANCY AND DAYLIGHT SENSORS AS REQUIRED FOR COMPLIANCE.</p> <p>I. NOT USED</p> <p>J. CONFIRM OPERATING HOURS WITH OWNER PRIOR TO FINAL PROGRAMMING.</p> <p>K. REQUIRES CONNECTION TO BUILDING AUTOMATION SYSTEM (BAS) WHEN SUCH SYSTEM IS PRESENT.</p> <p>L. FIXTURES WITHOUT OCCUPANCY SENSORS SHALL HAVE LOW END TRIM ADJUSTED TO MAINTAIN MINIMUM ILLUMINATION LEVELS.</p> <p>M. LIGHTING CONTROL SYSTEM SHALL HAVE ASTRONOMICAL TIME CLOCK AND DUAL MODE CAPABILITY FOR "AFTER HOURS" CONTROL OF LIGHTING.</p> <p>N. PERFORMANCE SPACE, NO DAYLIGHTING REQUIRED. TARGET ILLUMINATION LISTED ONLY FOR REFERENCE IN THIS COLUMN.</p>																		

CRESTRON DISTRIBUTED LIGHTING CONTROLS

(ZUM WIRED/WIRELESS):

WALL BOX SENSORS:		DUAL TECH	PIR ONLY	ULTRASONIC ONLY
STANDALONE SINGLE RELAY =		#GLA-DT-WLS-1	#GLA-IR-WLS-1	#GLA-US-WLS-1
STANDALONE DUAL RELAY =		#GLA-DT-WLS-2	#GLA-IR-WLS-2	#GLA-US-WLS-2
STANDALONE SINGLE RELAY WITH 0-10VDC =		#GLA-DT-WLS-DIM	#GLA-IR-WLS-DIM	#GLA-US-WLS-DIM
SYSTEM-BASED WALLBOX =		NOT AVAILABLE		
CEILING SENSORS:				
ONE-WAY DIRECTIONAL =		(ANALOG) #GLA-US-HALLWAY SERIES		
		#GLA-US-ONEWAY SERIES		
		(ZUM WIRED) #ZUMLINK-US-HALLWAY-DLS SERIES		
		#ZUMLINK-US-ONEWAY-DLS SERIES		
360 DEG COVERAGE =		(ANALOG) #GLA-DT-QUATTRO SERIES		
		#GLA-IR-QUATTRO SERIES		
		#GLA-IR-QUATTRO-HD SERIES		
		#GLA-US-QUATTRO SERIES		
(ZUM WIRED) #ZUMLINK-DT-QUATTRO-DLS SERIES				
		#ZUMLINK-IR-QUATTRO-DLS SERIES		
		#ZUMLINK-IR-QUATTRO-HD-DLS SERIES		
(ZUM WIRELESS, BATTERY) #ZUMLINK-US-QUATTRO-DLS SERIES				
		#ZUMMESH-PIR-OCCUPANCY-BATT		
		#ZUMMESH-PIR-VACANCY-BATT		
DAYLIGHT SENSORS:				
OPEN LOOP SENSOR =		(ANALOG) #GLA-LDL-PC-0-10		
		(ZUM WIRELESS, BATTERY) #ZUMMESH-OL-PHOTOCELL-BATT		
CLOSED LOOP SENSOR =		(ANALOG) #GLA-LDL-PC-0-10		
CONTROL UNITS: (ZUM WIRED)				
SWITCH/CONTINUOUS DIMMING (0-10V) =		#ZUMNET-JBOX-16A-LV		
		#ZUMLINK-JBOX-16A-LV		
SWITCHING ONLY =		#ZUMLINK-JBOX-20A-SW		
CONTINUOUS DIMMING (UNIVERSAL) =		#ZUMLINK-EXP-16A-DIMU		
RECEPTACLE CONTROL =		#ZUMLINK-JBOX-20A-PLUG		
DALI CONTROL =		#ZUMNET-JBOX-DALI		
HVAC CONTROL =		BACNET/IP (OPTIONAL) -RLY OPTION ON ZUM WIRED OCCUPANCY SENSOR (OPTIONAL) -COM2 OPTION ON ANALOG OCCUPANCY SENSOR		
AV SYSTEM INTERFACE =		#ZUMLINK-IO OR TCP/IP		
MOVEABLE PARTITION INTERFACE & SENSOR =		#GLS-PART-CN		
*NETWORKED SYSTEMS REQUIRE A MINIMUM OF ONE ZUMNET DEVICE PER ROOM				
CONTROL UNITS: (ZUM WIRELESS)				
SWITCH/CONTINUOUS DIMMING (0-10V) =		#ZUMMESH-JBOX-16A-LV		
		#ZUMMESH-JBOX-5A-LV		
SWITCHING ONLY =		#ZUMMESH-JBOX-20A-SW		
CONTINUOUS DIMMING (UNIVERSAL) =		#ZUMMESH-EXP-16A-DIMU		
RECEPTACLE CONTROL =		#ZUMMESH-JBOX-20A-PLUG		
DALI CONTROL =		#ZUMMESH-JBOX-DALI		
POWER SUPPLY/RANGE EXTENDER =		#ZUMMESH-JBOX-PSU		
WIRED SENSOR INTEGRATION MODULE =		#ZUMMESH-JBOX-SIM (USE WITH ANY ANALOG SENSOR)		
NETWORK ADAPTER =		#ZUMMESH-NETBRIDGE REQUIRES ZUMMESH-JBOX OF ANY KIND		
HVAC CONTROL =		BACNET/IP		
		#ZUMMESH-CCO REQUIRES ZUMMESH-JBOX OF ANY KIND (OPTIONAL) -COM2 OPTION ON ANALOG OCCUPANCY SENSOR		
AV SYSTEM INTERFACE =		#ZUMMESH-AVBRIDGE OR TCP/IP		
MOVEABLE PARTITION INTERFACE & SENSOR =		#ZUMMESH-PART REQUIRES ZUMMESH-JBOX-SIM		
*NETWORKED SYSTEMS REQUIRE ONE ZUMMESH-NETBRIDGE DEVICE PER ROOM				
WALL CONTROLS:				
WALL BOX DIMMING =		(ZUM WIRELESS) #ZUMMESH-DIM (2-WIRE FWD PHASE)		
		#ZUMMESH-DELV (2-WIRE REV PHASE)		
		#ZUMMESH-SA-LV (0-10V DIMMING)		
		#ZUMMESH-SA-SW (SWITCHING)		
WALL BOX KEYPAD =		(ZUM WIRED) #ZUMLINK-KP-R		
		(ZUM WIRELESS BATTERY) #ZUMMESH-KP10A/B/C/D-BATT		
		(ZUM WIRELESS LINE POWERED) #ZUMMESH-KP10A/B		
TOUCH SCREEN =		#TSW-570, TSW-770, TSW-1070		
KEYED SWITCH =		#GLA-KEYSW-MAINTAIN (REQUIRES ZUMMESH-JBOX-SIM OR ZUMLINK-IO)		
NETWORK COMM COMPONENTS:				
PROCESSORS =		(ANALOG/ZUM WIRED/WIRELESS): GLNET SERIES		
ZUM WIRELESS GATEWAY =		#ZUMNET-GATEWAY		
ZUM WIRED WIRELESS ACCESS POINT =		#ZUMLINK-ZAP		
EMERGENCY POWER INTERFACE:				
EMERGENCY POWER CONTROL UNITS:				
SWITCH/CONTINUOUS DIMMING (0-10V) =		(ZUM WIRED) #ZUMLINK-JBOX-16A-LV-EM		
SWITCH/CONTINUOUS DIMMING (0-10V) =		(ZUM WIRELESS) ZUMMESH-JBOX-16A-LV-EM		
POWER FAILURE OR FIRE ALARM ACTIVATION:				
SWITCH/CONTINUOUS DIMMING (0-10V) =		#GLA-EPC-FLV		
REVERSE/FORWARD PHASE DIMMING =		#GLA-EPC-D-F-ATS		
SWITCHING / STEP DIMMING =		#GLA-EPC-P SERIES		

TK1SC PM CRESTRON KEY NOTES:

- WIRED, HYBRID, AND WIRELESS AVAILABLE
- WIRELESS SYSTEMS CAN HAVE BATTERY-POWERED SWITCHES AND SENSORS OR LINE VOLTAGE OPTIONS.
- BATTERY HEALTH REPORTING FEATURE IS INCLUDED WITH NETWORK VERSION AND ALSO PHONE-BASED APP CONNECTION FOR NON-NETWORKED.

HOTEL DEL CORONADO.

Fitness Members Area Renovation

1500 Orange Avenue
Coronado, CA 92118



González Architects
Hospitality

Mechanical/Electrical/Plumbing Engineer
tk1sc Collaborative
4755 Eastgate Mall, Suite 150
San Diego, CA 92121
658.362.6800

tk1sc
COLLABORATIVE

15231 Laguna Canyon Road, Suite 100
Irvine, California 92618
949.751.5800 www.tk1sc.com

Project Leader - Kenneth McClendon
Electrical Lead - Christina Souza
tk1sc Job #: 2019-0727



Registration Seal
C-32509
Address
14 NE 1st Avenue, Suite 507
Miami, FL 33132
T+1 (305) 455 4216

Issued/Revised	
No.	Date
09-17-21	Permit Set
01-05-22	Owner Revisions

DISTRICTED LIGHTING CONTROLS SCHEDULES & PRODUCT SPECIFICATIONS

Scale	As Noted
Date	09-17-2021
Drawn By	CS
Project No.	19022
Drawing No.	CS

E5.02

DISTRIBUTED LIGHTING CONTROLS SYSTEM SPECIFICATIONS (OCCUPANCY / VACANCY SENSORS AND DAYLIGHTING CONTROLS):

1. SEE LIGHTING PLAN DRAWINGS FOR DISTRIBUTED LIGHTING CONTROL SYSTEM (DLCS) SPECIFICS, SPACE SPECIFIC CONFIGURATIONS/REQUIREMENTS, AS WELL AS FIXTURE BALLAST/DRIVER CONFIGURATIONS.

2. ALL PRODUCTS SHALL BE BACKED BY A FIVE YEAR MANUFACTURER'S WARRANTY.

3. ALL PRODUCTS LISTED IN THIS SPECIFICATION ARE BASED UPON PRODUCTS LISTED ON THIS SHEET. THE FEATURES AND CHARACTERISTICS OF THE PRODUCT LITERATURE AND SPECIFICATION SHEETS AVAILABLE ON THE VARIOUS MANUFACTURER'S WEB-SITES ARE INCLUDED IN THE REQUIREMENT OF THESE SPECIFICATIONS. ALL DLCS NETWORKED/NON-NETWORKED SYSTEM-BASED AND STANDALONE COMPONENTS SHALL BE PROVIDED BY A SINGLE MANUFACTURER.

4. DLCS COMPONENTS SHALL BE COMPLIANT WITH ALL APPLICABLE FEDERAL, STATE AND LOCAL ENERGY CODES.

4.1 ALL NETWORKED AND NON-NETWORKED SYSTEM-BASED DLCS SYSTEMS SHALL BE COMPLIANT WITH AND CERTIFIED TO THE FOLLOWING SECURITY STANDARDS SET FORTH IN THE LATEST PUBLISHED VERSION OF THE DESIGNSIGHTS CONSORTIUM'S "NETWORKED LIGHTING CONTROL SYSTEM TECHNICAL REQUIREMENTS" DOCUMENT (VERSION 4.0 OR LATEST PUBLISHED VERSION):
 - DLCS COMPONENTS: UL2900-1 UL STANDARD FOR SOFTWARE CYBER SECURITY FOR NETWORK-CONNECTABLE PRODUCTS.
 - DLCS DESIGN PROCESS: UL 2900-1 UL STANDARD FOR SOFTWARE CYBER SECURITY FOR NETWORK-CONNECTABLE PRODUCTS AND/OR ISO/IEC 27001 STANDARD FOR INFORMATION SECURITY MANAGEMENT SYSTEMS.
 - DLCS CLOUD SERVICES: ANY ASSOCIATED DLCS CLOUD SERVICES SHALL MEET THE REQUIREMENTS OF ISO/IEC 27017 (WITH 27001) STANDARD FOR CODE OF PRACTICE FOR INFORMATION SECURITY CONTROLS FOR CLOUD SERVICES.

WHERE THE MANUFACTURER CANNOT DEMONSTRATE COMPLIANCE WITH THE ABOVE REQUIREMENTS, THE DLCS MANUFACTURER SHALL PROVIDE A COMPREHENSIVE PRODUCT-SPECIFIC IT SECURITY STATEMENT FOR REVIEW BY THE OWNER. THE DLCS SHALL NOT BE CONNECTED TO AN OWNER-FURNISHED NETWORK WITHOUT PRIOR WRITTEN PERMISSION BY THE OWNER.

ADDITIONALLY, WHERE INSTALLED IN THE STATE OF CALIFORNIA, SYSTEM-BASED DLCS SYSTEMS SHALL BE COMPLIANT WITH CA STATE ASSEMBLY BILL NO. 375 CALIFORNIA PRIVACY ACT OF 2018 AND CA STATE SENATE BILL NO 327 INFORMATION PRIVACY FOR CONNECTED DEVICES.

6. WHERE THE DLCS SCHEDULE INDICATES A SPECIFIC "SYSTEM TOPOLOGY" OPTION, PROVIDE ONE OF THE FOLLOWING:
 - "NETWORKED" - PROVIDE A SYSTEM-BASED DLCS THAT COMMUNICATES USING A MANUFACTURER-SPECIFIC DLCS NETWORK ALLOWING BI-DIRECTIONAL FLOW OF INFORMATION BETWEEN DEVICES SUCH AS ROOM CONTROLLERS, SENSORS, RELAY PANELS AND NETWORK CONTROLLERS. PROVIDE A DLCS GUI AND RELATED SOFTWARE TO FACILITATE REMOTE DLCS DEVICE PARAMETERS CHANGES, REMOTE CONTROL ANY DLCS ELEMENT OR DEVICE, REMOTE SCHEDULES/SCENARIOS, AND REMOTE DLCS COMMISSIONING AND TROUBLESHOOTING. A NETWORKED SYSTEM TOPOLOGY SHALL BE CONFIGURED TO RESPOND TO LOCAL UTILITY DEMAND RESPONSE SIGNALS.
 - "NON-NETWORKED" - PROVIDE A SYSTEM-BASED DLCS THAT COULD BE MADE TO COMMUNICATE USING A MANUFACTURER-SPECIFIC DLCS NETWORK, BUT FOR THIS PROJECT IS CONFIGURED WITHOUT ANY NETWORK CONNECTIVITY OR NETWORK COMPONENTS, EXCEPT FOR ANY NETWORK COMPONENTS REQUIRED FOR DUAL MODE CONTROL FOR CORRIDORS, WAREHOUSE AISLES ETC OR WHERE REQUIRED FOR BAS INTEGRATION REQUIRED IN THE DLCS SCHEDULE OR ELSEWHERE IN THE DRAWINGS AND SPECIFICATIONS. IN A "NON-NETWORKED" DLCS, DEMAND RESPONSE CAPABILITY IS NOT REQUIRED.
 - "STAND ALONE" - PROVIDE INDIVIDUAL WALL SENSORS/CONTROLS - OPERATING AT 120V OR 277V. GENERALLY, STANDALONE COMPONENT INSTALLATIONS ARE TO BE AVOIDED AND ARE LIMITED TO USE IN SMALL ROOMS WHERE ADVANCED CONTROLS, DIMMING CAPABILITY, DEMAND RESPONSE, DUAL MODE CONTROL, AND/OR NETWORK CONNECTIVITY ARE NOT REQUIRED BY APPLICABLE ENERGY CODE AND WHERE ACCEPTABLE TO AN END-USER.

7. WHERE THE DLCS SCHEDULE INDICATES A SPECIFIC "COMMUNICATIONS TOPOLOGY" OPTION, PROVIDE ONE OF THE FOLLOWING:
 - "WIRED" - PROVIDE WIRING, AS REQUIRED, TO INTERCONNECT DLCS DEVICES. WIRING MAY BE A COMBINATION OF LOW AND LINE VOLTAGE CONDUCTORS BASED ON SPECIFIC MANUFACTURER REQUIREMENTS.
 - "WIRELESS" - PROVIDE WIRELESS CONNECTIVITY BETWEEN WALL CONTROLS, WALL, CEILING OR FIXTURE-INTEGRATED SENSORS, ROOM CONTROLLERS, WIRELESS ROUTER(S), AND WIRELESS NETWORK BRIDGES. CONTRACTOR SHALL PROVIDE WIRELESS ROUTERS, SET-UP AS REQUIRED, TO MAINTAIN ROBUST COMMUNICATIONS WITH ALL WIRELESS DEVICES. ROBUST MEANS THAT A CHANGE OF VALUE FROM OR TO ANY DLCS SYSTEM COMPONENT FROM OR TO AN APPLICABLE WIRELESS ROUTER/BRIDGE OCCURS IN LESS THAN 3 SECONDS.
 - "HYBRID" - WHERE A SOLELY WIRELESS DLCS TOPOLOGY IS DEEMED INADEQUATE BASED ON OPERATIONAL OR AESTHETIC REASONS, A WIRELESS TOPOLOGY SHALL BE AUGMENTED WITH WIRED SYSTEM TO FORM A HYBRID COMMUNICATIONS TOPOLOGY. AREAS REQUIRING WIRED CONNECTIVITY SHALL BE IDENTIFIED ON THE LIGHTING PLANS AND INDICATED. ALL RESTROOMS SHALL BE PROVIDED WITH DUAL TECHNOLOGY OCCUPANCY SENSORS WHICH REQUIRE WIRELESS CONNECTIVITY AND WIRED POWER SUPPLY. A NETWORKED, SYSTEM-BASED DLCS INSTALLED WITH A HYBRID COMMUNICATIONS TOPOLOGY SHALL APPEAR IN THE USER GUI/SOFTWARE AS A SINGLE UNIFIED SYSTEM. SEPARATE GUI SOFTWARE INTERFACES FOR THE WIRED AND WIRELESS PORTIONS ARE INDICATED WITHIN DAYLIGHTING CONTROLS.

9. WHERE THE DLCS SCHEDULE REQUIRES FIXTURE-INTEGRATED SENSORS, PROVIDE OCCUPANCY AND/OR DAYLIGHT SENSORS INTEGRATED WITHIN SPECIFIED FIXTURE TYPE THAT ALSO INTEGRATE INTO THE DLCS. SEE THE LIGHTING FIXTURE SCHEDULE FOR AFFECTED FIXTURE TYPE(S). WHERE INTEGRATED SENSORS DO NOT MEET OCCUPANCY/DAYLIGHT SENSOR COVERAGE REQUIREMENTS, CONTRACTOR SHALL PROVIDE ADDITIONAL CEILING MOUNTED SENSORS AS REQUIRED AND AS A PART OF THE BASE BID.

10. WHERE THE DLCS SCHEDULE REQUIRES THE DLCS TO INTEGRATE WITH THE PROJECT'S BUILDING AUTOMATION SYSTEM (BAS) - SEE THE DLCS START-UP, BUILDING AUTOMATION SYSTEM (BAS) INTEGRATION, COMMISSIONING, & TRAINING PORTION OF THIS SPECIFICATION FOR ADDITIONAL REQUIREMENTS.

11. WHERE THE DLCS SCHEDULE INDICATES "WIRELESS" OR "HYBRID" COMMUNICATIONS TOPOLOGIES AND ALSO ALLOWS WIRELESS DLCS COMPONENT BATTERY USAGE, PROVIDE BATTERIES WITHIN THE WIRELESS DLCS COMPONENTS INDICATED IN LIEU OF LINE OR LOW VOLTAGE POWER SOURCES.

12. DLCS COMPONENTS SHALL BE PROVIDED AS FOLLOWS:
 - a. STANDALONE: WALL MOUNTED OCCUPANCY SENSORS SHALL BE UL LISTED AND HAVE A MINIMUM LOAD CAPACITY OF 800 WATTS AT 120 VOLTS AND 1200 WATTS AT 277 VOLTS. WALL SENSORS SHALL ALSO BE DECORA STYLE, WITH A LOW-PROFILE APPEARANCE AND A HARD LENS FOR DURABILITY. SENSOR SHALL UTILIZE PASSIVE INFRARED TECHNOLOGY (PIR) AND ULTRASONIC/MICROPHONIC TECHNOLOGY. UNIT SHALL BE RATED FOR 120/277 VOLT WITH NO MINIMUM LOAD, COMPATIBLE WITH ALL THE SPECIFIED BALLASTS, PROVIDED WITH A NEUTRAL CONNECTION (NO LEAKAGE TO GROUND) AND NO LEAKAGE TO LOAD IN THE "OFF" MODE. SENSOR SHALL BE UTILIZED IN SPACES NOT EXCEEDING 150 SQ.FT. SINGLE RELAY SENSORS SHALL BE CONFIGURED WITH THE RELAY IN A "MANUAL, ON/ AUTO OFF" SETTING. DUAL RELAY SENSORS SHALL BE CONFIGURED WITH THE FIRST RELAY IN A "AUTOMATIC ON/ AUTOMATIC OFF" SETTING AND THE SECOND RELAY IN A "MANUAL ON/ AUTOMATIC OFF" SETTING. FACTORY STANDARD COLOR TO BE APPROVED BY ARCHITECT.
 - b. SYSTEM-BASED (NETWORK OR NON-NETWORK): THE OCCUPANCY SENSOR SYMBOL SHALL REPRESENT A LOW VOLTAGE, WALL MOUNTED OCCUPANCY SENSOR CONNECTED TO A CONTROL UNIT(S) AS REQUIRED. SENSOR SHALL BE DECORA STYLE WITH A LOW-PROFILE APPEARANCE, HAVE ON/OFF/RAISE/LOWER BUTTONS, AND A HARD LENS FOR DURABILITY. FACTORY STANDARD COLOR TO BE APPROVED BY ARCHITECT.
 - c. SYSTEM-BASED (NETWORK OR NON-NETWORK) OR STANDALONE CEILING MOUNTED OCCUPANCY SENSORS SHALL SHALL REPRESENT A LOW VOLTAGE, CEILING-MOUNTED OCCUPANCY SENSOR WITH A LOW-PROFILE APPEARANCE AND SHALL BE CONFIGURED IN ONE OF THE FOLLOWING WAYS AS INDICATED ON THE DRAWINGS:
 - AUTO ON: a/b
 - SWITCHED: AUTO ON a / MANUAL ON b
 - CONTINUOUS DIMMED: AUTO ON 50% a / MANUAL ON 100% a
 - d. SENSOR(S) SHALL UTILIZE DUAL TECHNOLOGY (PIR AND ULTRASONIC/MICROPHONIC TECHNOLOGY) WITH 360 DEGREE COVERAGE, IN SPACES WITH DESKTOP ACTIVITIES, THE COVERAGE SHALL BE "HAND MOTION" AND SHALL NOT EXCEED 500 SQ. FT. AT A MAXIMUM CEILING HEIGHT OF 10 FT. IN CORRIDORS, STORAGE ROOMS AND OTHER SPACES WITH NON-DESKTOP ACTIVITIES, COVERAGE SHALL BE "HALF-STEP, WALKING MOTION" AND SHALL NOT EXCEED 1200 SQ. FT. AT A MAXIMUM CEILING HEIGHT OF 10 FT. PIR-ONLY WIRELESS OCCUPANCY SENSORS SHALL NOT BE UTILIZED IN RESTROOMS OR LOCKER ROOMS.
 - d. "H" AT THE OCCUPANCY SENSOR INDICATES CONNECTION TO AUXILIARY OUTPUT CONTROL DEVICE FOR CONTROL OF A THIRD PARTY DEVICE VIA LOW-VOLTAGE CONTACT CLOSURES - 1 AMP @ 24V AC/DC. NO/NO RELAYS SHALL BE CONNECTED TO A CONTROLLER TO PERFORM THE AUXILIARY CONTROL REQUIREMENTS INDICATED BY THE DRAWINGS.
 - e. OCCUPANCY SENSORS LOCATED WITHIN CORRIDORS, HALLWAYS, STAIRWAYS/WELLS, AISLEWAYS WITHIN WAREHOUSE SPACES, AND IN OTHER AREAS PER PLANS AND/OR SDO SHALL BE CONFIGURED TO CREATE DUAL MODE CONTROL FUNCTIONALITY PER THE SDO/ZONE SCHEDULE. CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ALL DEVICES AND WIRING REQUIRED FOR DUAL MODE OPERATIONS AND ANY PROGRAMMING/CONFIGURATION OF TIME-BASED OPERATING PARAMETERS. COORDINATE WITH OWNER TO DETERMINE BUSINESS HOUR/AFTER BUSINESS HOUR MODES. IF THE PLANS IDENTIFY A NEW OR EXISTING LIGHTING CONTROL PANEL AS THE SOURCE OF DUAL MODE TIMING, E.G. SHALL INCLUDE ALL COSTS TO INSTALL ANY NECESSARY I/O TERMINALS, CARDS, ETC. TO MAKE THE SYSTEM FULLY FUNCTIONAL.

1. NETWORK SYSTEM-BASED DLCS SYSTEMS SHALL PROVIDE/RESULT IN "LADDERLESS COMMISSIONING" OF DAYLIGHT CONTROLS. AT A MINIMUM, NETWORK ACQUIRED DATA SHALL PROVIDE CT-BASED LIGHTING POWER (WATTS) MEASUREMENTS PER THE COMMISSIONING PORTION OF THESE REQUIREMENTS. PROVIDE NETWORKED CONTROL UNITS/POWER PAKS/INTERFACES AND MISCELLANEOUS EQUIPMENT AS FOLLOWS:
 - 1) NETWORK SEGMENT MANAGER OR BORDER ROUTER WITH NATIVE BACnet IP - QUANTITY AS REQUIRED BASED UPON A MAXIMUM OF 100 LOCAL ROOM NETWORKS PER SEGMENT AND A MINIMUM OF ONE SEGMENT MANAGER PER FLOOR. THIS EQUIPMENT SHALL BE LOCATED IN THE TYPICAL FLOOR ELECTRICAL ROOM.
 - 2) NETWORK BRIDGE CONNECTING THE SEGMENT MANAGER TO THE CONTROLLER SUB/LOCAL NETWORK.
 - 3) ALL CORRIDORS, WAREHOUSE AISLE WAYS, AND STAIRWELLS SHALL BE PROVIDED WITH DUAL MODE CORRIDOR/STAIRWAY CONTROLS TO INCLUDE CEC-LISTED TIME CLOCKS(S), ROUTERS, OR SYSTEM GATEWAYS, INTERPOSING RELAYS (WHEN INTERFACING WITH EXISTING CEC-LISTED RELAY PANELS), WIRING, 120V POWER, PROGRAMMING, ETC. NECESSARY FOR A COMPLETE AND FUNCTIONING CONTROL SYSTEM.
 - 4) INCLUDE ALL COSTS IN BASE BID TO PROVIDE 120V CIRCUIT(S) AND RECEPTACLE(S) NECESSARY TO POWER ALL DEMAND RESPONSE EQUIPMENT.
 - 5) PROVIDE DATA OUTLET/PATHWAY, DATA CABLEING (IF REQUIRED ELSEWHERE BY PROJECT DOCUMENTS), AND CONNECTION TO THE PROJECT'S LOCAL AREA NETWORK.
 - 6) INCLUDE ALL COSTS IN BASE BID TO PROVIDE 120V CIRCUIT(S) AND RECEPTACLE(S) NECESSARY TO POWER ALL NETWORK SEGMENT MANAGERS, SWITCHES AND ROUTERS.
 - 7) DEMONSTRATE DLCS RESPONSE TO A SIMULATED DEMAND RESPONSE REQUEST AS PART OF THE LIGHTING COMMISSIONING PROCESS. WHERE MORE THAN ONE WIRING TOPOLOGY AND/OR ZONE IS REQUIRED TO ACCOMPLISH DEMAND RESPONSE - ALL WIRING TOPOLOGIES AND ZONES SHALL BE TESTED ACCORDINGLY. SEE DLCS SDO FOR POWER REDUCTION PERCENTAGES BY ROOM TYPE THAT SHALL BE UTILIZED IN THE SIMULATED DEMAND RESPONSE TESTING.

9. WHERE INDICATED ON DRAWINGS, PROVIDE DLCS DAYLIGHTING CONTROLS AS FOLLOWS:
 - 1) AUTOMATIC SWITCHING DAYLIGHTING CONTROLS SHALL BE PROVIDED TO SWITCH SELECTED FIXTURES AND/OR LAMP(S) UPON LIGHTING LEVELS PRESENT IN THE CONTROLLED SPACE. THE DAYLIGHTING CONTROLS SHALL BE CONNECTED TO THE CONTROL UNIT. THE SENSOR SHALL UTILIZE AN INTEGRAL PHOTO DIODE TO MEASURE AMBIENT LIGHT LEVELS. CONTROLS SHALL BE FULLY ADJUSTABLE FROM 1.0-6.500 FOOTCANDELS AND SHALL BE PROVIDED WITH AN ADJUSTABLE TIME DELAY AND ADJUSTABLE DEAD BAND SETTINGS.
 - 2) AUTOMATIC DIMMING DAYLIGHTING CONTROLS SHALL BE PROVIDED TO CONTINUOUSLY DIM SELECTED FIXTURES/LAMPS UP AND DOWN BASED UPON LIGHTING LEVELS PRESENT IN THE CONTROLLED SPACE. THE SENSOR SHALL UTILIZE AN INTEGRAL PHOTO DIODE TO MEASURE AMBIENT LIGHT LEVELS. 0-10 VOLT DIMMING CONTROLS SHALL RANGE FROM 0.2 VOLTS TO 10 VOLTS, WITH AMBIENT LIGHTING SET POINTS FROM 1-65,000 FOOTCANDELS.
 - 3) AUTOMATIC DAYLIGHTING CONTROLS SHALL BE CONNECTED TO CONTROL UNITS TO PERFORM THE FIXTURE SWITCHING/DIMMING REQUIREMENTS INDICATED BY THE DRAWINGS - CONNECTIONS DIRECTLY TO A BALLAST ARE NOT ALLOWED.
 - 4) DAYLIGHT SENSOR SHALL PROVIDE CONTROLS FOR UP TO THREE DISTINCT LIGHTING ZONES TO ALLOW SEPARATE CONTROL OF PRIMARY DAYLIT, SECONDARY DAYLIT, AND SKYLIT ZONES.

h. PROVIDE CONTROL UNITS AND SYSTEM FUNCTIONALITY AS FOLLOWS:
 - 1) CONTINUOUS DIMMING CONTROLS: SYSTEM-BASED WALL OR CEILING MOUNTED OCCUPANCY SENSORS OR CONTINUOUS DIMMING CONTROLS SHALL BE PROVIDED WITHIN THE CONTROL UNIT(S) TO PERFORM THE FIXTURE DIMMING REQUIREMENTS INDICATED BY THE BALLAST AND FIXTURE TYPE. SWITCH LEG INDICATED OUTSIDE THE PARENTHESIS TO BE CONFIGURED AS "AUTO ON 50%/MANUAL ON 100%" FOR CONTINUOUS DIMMED. SWITCH LESS INDICATES A MANUAL ACTION REQUIRED TO INCREASE LIGHTING LEVELS ABOVE 50%. CONTROL UNITS WITH INTEGRAL TRANSFORMERS SHALL BE UTILIZED TO PROVIDE POWER TO OCCUPANCY SENSORS AND OTHER CONTROL DEVICES. CONTROL UNITS SHALL BE LOCATED WITHIN JUNCTION BOXES AND NOT EXPOSED IN THE CEILING SPACE. CONTROL UNIT SHALL BE 120/277 VOLT RATED WITH NO MINIMUM LOAD, COMPATIBLE WITH ALL THE SPECIFIED BALLASTS PROVIDED WITH A NEUTRAL CONNECTION (NO LEAKAGE TO GROUND) AND NO LEAKAGE TO LOAD IN THE "OFF" MODE. ADDITIONAL RELAY ZONES MAY BE REQUIRED FOR THE ADDITION OF PRIMARY DAYLIT, SECONDARY DAYLIT, AND PRIMARY SKYLIT UTILIZING THE SAME CONTROL CHANNEL. (I.E. EVEN THOUGH A SINGLE LETTER "d" IS INDICATED AT THE PRIMARY SENSOR), ADDITIONAL RELAYS WOULD BE REQUIRED FOR THE "a" (PRIMARY SIDEKIT DAYLIT ZONE), "a++" (SECONDARY SIDEKIT DAYLIT ZONE), AND "a*" (SKYLIT DAYLIT ZONE). WHERE MORE THAN ONE CIRCUIT/THREE SWITCH LEGS/THREE RELAY ZONES ARE REQUIRED, PROVIDE ADDITIONAL FULL FEATURE CONTROL UNITS AS REQUIRED.
 - 2) WHERE ADDITIONAL 120/ 277 VOLT DEVICES, RECEPTACLES, OR BRANCH CIRCUITS ARE BEING CONTROLLED BY THE ROOM CONTROLLER, AN ADDITIONAL CONTROL UNIT SHALL BE PROVIDED AS REQUIRED.
 - 3) THE OCCUPANCY SENSOR CONTROLLED RECEPTACLE BRANCH CIRCUIT RELAY, CONNECTED TO THE SPACE'S DISTRIBUTED LIGHTING CONTROL OCCUPANCY SENSOR RELAY, SHALL TURN ON WHEN THE ROOM IS OCCUPIED, REGARDLESS OF THE CONFIGURATION OF THE LIGHTING CONTROL STATE - I.E. WHETHER THE LIGHTING CONTROL STATE IS "ON", "OFF", "DIMMED", OR "AUTO". ADDITIONAL INFORMATION, EVEN THOUGH A SINGLE SYMBOL IS INDICATED, MULTIPLE RELAYS MAY BE REQUIRED TO CONTROL THE REQUIRED NUMBER OF SWITCHLEGS/CIRCUITS.
 - 4) LOW VOLTAGE WALL CONTROLS SHALL BE DECORA STYLE, LOW-VOLTAGE, MOMENTARY SWITCHES WITH COLOR TO MATCH OTHER WALL DEVICES/SWITCHES. LOWER CASE LETTERS INDICATE SWITCHING CONFIGURATION. PROVIDE SWITCHING OR DIMMING CONTROL DEVICES AS REQUIRED BY DRAWINGS.
 - DIMMING - NUMBER OF SWITCHES AS REQUIRED - 4 ZONES/YOKE MAX. EACH CONTROL ZONE TO HAVE A DEDICATED RAISE AND LOWER BUTTONS. FACTORY STANDARD COLOR BY ARCHITECT. EACH MULTI-ZONE DIMMING CONTROL STATION SHALL BE PROVIDED WITH MASTER ON AND MASTER OFF BUTTON IN ADDITION TO THE INDIVIDUAL CONTROL ZONE BUTTONS.

WHERE INDICATED, PROVIDE VANDAL RESISTANT, HIGH ABUSE SWITCH CONNECTED TO THE DLCS INPUT/OUTPUT INTERFACE DEVICE FOR ON/ OFF AND DIMMING CONTROLS. SWITCHES LOCATED IN HIGH ABUSE AREAS (EXTERIOR AREAS OR AREAS SUBJECT TO WASH-DOWN) SHALL BE INSTALLED ON PLANS AS HIGH-ABUSE SWITCHES SHALL BE VANDAL RESISTANT, STAINLESS STEEL, TOUCH SENSITIVE AND AVAILABLE WITH UP TO TWO BUTTONS IN A SINGLE GANG. EACH HIGH ABUSE SWITCH SHALL BE ABLE TO BE PROGRAMMED FOR ON, OFF, TOGGLE OR MAINTAIN OPERATION. SWITCHES MUST BE CAPABLE OF HANDLING ELECTROSTATIC DISCHARGES OF AT LEAST 30,000 VOLTS (1CMSPARK) WITHOUT ANY INTERRUPTION OR FAILURE IN OPERATION.

WHERE INDICATED, PROVIDE A LOCKING SINGLE POLE SWITCH CONNECTED TO THE ROOM CONTROLLER VIA A INPUT/OUTPUT INTERFACE DEVICE FOR ON/OFF CONTROLS. DIRECT CONNECTION OF THE KIBED SWITCH ON THE LOAD SIDE OF THE CONTROLLER IS PROHIBITED. PROVIDE AT LEAST THREE (3) KEYS TO OWNER AT CONCLUSION OF PROJECT. ADJACENT SWITCH SHALL ONLY BRING LIGHTS FULL ON. SWITCHES SHALL BE RATED FOR 120/277 VOLT WITH NO MINIMUM LOAD, COMPATIBLE WITH ALL THE SPECIFIED BALLASTS, PROVIDED WITH A NEUTRAL CONNECTION (NO LEAKAGE TO GROUND) AND NO LEAKAGE TO LOAD IN THE "OFF" MODE. SENSOR SHALL BE UTILIZED IN SPACES NOT EXCEEDING 150 SQ.FT. SINGLE RELAY SENSORS SHALL BE CONFIGURED WITH THE RELAY IN A "MANUAL, ON/ AUTO OFF" SETTING. DUAL RELAY SENSORS SHALL BE CONFIGURED WITH THE FIRST RELAY IN A "AUTOMATIC ON/ AUTOMATIC OFF" SETTING AND THE SECOND RELAY IN A "MANUAL ON/ AUTOMATIC OFF" SETTING. FACTORY STANDARD COLOR TO BE APPROVED BY ARCHITECT.

1. WHEN LIGHTING SYSTEM IS INDICATED WITH A CONNECTION TO A REMOTE EMERGENCY POWER SOURCE (I.E. AN INVERTER OR GENERATOR) PROVIDE UL924 LISTED INTERFACE EQUIPMENT TO ALLOW THE OVERRIDE OF THE LOCAL SWITCHING AND/OR DIMMING CONTROLS DURING A POWER OUTAGE.

2. WHEN LIGHTING FIXTURES/CONTROLS ARE PROVIDED WITH LUTRON 3-WIRE DIMMING BALLASTS, AN INTERFACE DEVICE SHALL BE PROVIDED TO ALLOW 0-10V CONTROL OF LUTRON 3-WIRE DIMMING BALLASTS. MOUNT INTERFACE IN A NEMA1 ENCLOSURE IN ACCESSIBLE CEILING SPACE ADJACENT TO ITS ASSOCIATED CONTROL UNIT.

3. WHEN LIGHTING FIXTURES/CONTROLS ARE LINE VOLTAGE DIMMED OR PROVIDED ELECTRONIC LOW-VOLTAGE, MAGNETIC LOW-VOLTAGE, NEON/COLD CATHODE, LUTRON "TU-WIRE" DIMMING BALLASTS, AN INTERFACE DEVICE SHALL BE PROVIDED TO ALLOW LINE VOLTAGE CONTROL. MOUNT INTERFACE IN A NEMA1 ENCLOSURE IN ACCESSIBLE CEILING SPACE ADJACENT TO ITS ASSOCIATED CONTROL UNIT.

4. WHEN AV SYSTEM INTERFACE IS INDICATED, PROVIDE TWO-WAY CAPABLE RS-232 COMMUNICATIONS INTERFACE TO ALLOW AV CONTROL SYSTEM TO CALL ADDRESSABLE LIGHTING/ROOM SCENES. COMMUNICATIONS INTERFACE SHALL PROVIDE FEEDBACK TO THE AV CONTROL SYSTEM FOR LIGHT LEVEL STATUS.

5. WHEN MOVEABLE PARTITION INTERFACE IS INDICATED, PROVIDE ALL COMPONENTS, SENSORS, WIRING, POWER SUPPLIES AND PROGRAMMING NECESSARY TO MONITOR AND REPORT MOVEABLE PARTITION(S) OPEN/CLOSED STATUS. DLCS SYSTEM SHALL AUTOMATICALLY ADOPT SINGLE ROOM OR MULTI-ROOM CONTROL PROFILES AS REQUIRED BY PARTITION STATUS.

6. WHEN NETWORKED LIGHTING CONTROL RELAY PANEL(S) ARE INDICATED, PROVIDE ALL COMPONENTS, WIRING, AND PROGRAMMING NECESSARY TO INTEGRATE RELAY PANELS WITHIN THE DLCS SYSTEM.

13. GENERAL SYSTEM REQUIREMENTS:
 - a. ALL EQUIPMENT SHALL FEATURE A PRE-SET DEFAULT OPERATION. UPON INITIAL POWER UP, THE SYSTEM SHALL AUTOMATICALLY IDENTIFY THE DEVICES ON THE LOCAL NETWORK, THEN ENTERS THE PRE-SET CONFIGURATION TO ALLOW BASIC OPERATION OF ALL DEVICES. IN MOST APPLICATIONS THE RELATIONSHIP BETWEEN QUANTITY OF LOADS, SWITCHES WITH OCCUPANCY SENSORS, AND THE REQUIRED DIMMING - ALTHOUGH AN ADJUSTMENT TO THE AUTOMATIC SETTINGS SHALL BE INCLUDED IN THE BASE BID.
 - b. ALL EQUIPMENT SHALL FEATURE A CONFIGURATION (CONFIG) BUTTON ON MOST DEVICES THAT ALLOWS EASY ACCESS TO THE INTEGRATED AUTO-CONFIGURATION TECHNOLOGY TO MODIFY SYSTEM OPERATION. FUNCTIONALITY OF THE CONFIG BUTTON SHALL BE STANDARDIZED THROUGHOUT THE PRODUCT LINE, AS IS THE OPERATION OF THE CONFIG LED INDICATORS.
 - c. NETWORK DLCS SYSTEM CONTROL/CONFIGURATION SOFTWARE SHALL BE PRE-CONFIGURED TO THE MAXIMUM EXTENT POSSIBLE OFF-SITE AT THE DLCS FACTORY OR ENGINEERING FACILITY. THE CONTRACTOR SHALL DOCUMENT EVERY NETWORK COMPONENT'S LOCATION (ROOM AND FLOOR NUMBER) AND ITS RESPECTIVE SERIAL NUMBER OR OTHER DEVICE IDENTIFIER ON A FULL SIZE FLOOR PLAN IN PDF FORMAT. HANDWRITTEN DOCUMENTATION IS UNACCEPTABLE. THE PREFERRED ACCEPTABLE METHOD OF NETWORK COMPONENT DOCUMENTATION IS COLLECTION OF FACTORY-PROVIDED, SELF-ADHESIVE, BAR-CODE IDENTIFIERS DESIGNED TO BE REMOVED FROM NETWORK COMPONENTS AS THEY ARE INSTALLED IN THE FIELD. BAR CODE IDENTIFIERS SHALL BE APPLIED TO A PAPER COPY OF A FLOOR PLAN WHICH SHALL BE PROVIDED TO THE FACTORY FOR USE IN OFF-SITE DLCS NETWORK PROGRAMMING AND CONFIGURATION. THE RESULTS OF EITHER METHOD SHALL BE SCANNED AND SUBMITTED AS A PART OF THE PROJECT CLOSOUT DOCUMENTATION.
 - d. NETWORK SYSTEMS SHALL BE INSTALLED BY VENDOR-CERTIFIED CONTRACTOR FIELD PERSONNEL TO PERFORM NETWORK INSTALLATIONS INCLUDING INCLUDING, REPEATABLE COMMUNICATIONS CABLING TERMINATIONS (BOTH LAN AND MS/TP TYPE). INCLUDE CERTIFICATES FOR EACH CERTIFIED INSTALLER TO BE UTILIZED ON THE PROJECT AS A PART OF THE PROJECT SUBMITTALS. A CERTIFIED FIELD INSTALLER SHALL BE ON-SITE SUPERVISING COMMUNICATIONS CABLING AND CABLING TERMINATIONS AT ALL TIMES WHEN THIS WORK IS OCCURRING ON THE PROJECT.
 - e. ANY BATTERY-POWERED DLCS COMPONENTS SHALL BE PROVIDED WITH A 10 YEAR EXPECTED BATTERY LIFE. EACH COMPONENT SHALL BE PROVIDED WITH BOTH A LOCAL LOW BATTERY INDICATION ON EACH DEVICE AND A SOFTWARE-BASED LOW BATTERY ALARM. WHERE A WIRELESS DLCS SYSTEM COMPONENT IS AVAILABLE EITHER AS A BATTERY POWERED DEVICE OR A LINE/LOW VOLTAGE POWERED DEVICE, PROVIDE THE LINE/LOW VOLTAGE VERSION ALONG WITH ANY LITING OR LOW VOLTAGE SENSORS. PROVIDE TWO BATTERIES TO LIMIT THE NUMBER OF BATTERIES WITHIN THE DLCS INSTALLATION TO A MINIMUM.

14. INSTALLATION OF CONTROL UNITS, OCCUPANCY/VACANCY SENSORS AND DAYLIGHTING CONTROLS:
 - a. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO LOCATE AND AIM SENSORS IN THE CORRECT LOCATION REQUIRED FOR COMPLETE AND PROPER VOLUMETRIC COVERAGE PER THE MANUFACTURER'S RECOMMENDATIONS. ROOMS SHALL HAVE NINETY (90) TO ONE HUNDRED (100) PERCENT COVERAGE AND SHALL ACCOMMODATE ALL HABITS OF SINGLE OR MULTIPLE OCCUPANTS AT ANY LOCATION WITHIN THE ROOM. THE LOCATIONS AND QUANTITIES OF SENSORS SHOWN ON THE DRAWINGS ARE DIAGRAMMATIC AND INDICATE ONLY THE ROOMS THAT ARE TO BE PROVIDED WITH SENSORS. THE CONTRACTOR SHALL PROVIDE ADDITIONAL SENSORS AS REQUIRED TO PROPERLY AND COMPLETELY COVER THE RESPECTIVE ROOM. WHERE PIR-ONLY WIRELESS CEILING OR FIXTURE-INTEGRAL OCCUPANCY SENSORS ARE UTILIZED, PROVIDE QUANTITY AS REQUIRED TO MAINTAIN THE SAME COVERAGE AND SAME MOVEMENT DETECTION SENSITIVITY AS PROVIDED BY WIRED DUAL TECHNOLOGY SENSORS. ADDITIONALLY, IT MAY BE NECESSARY FOR THE CONTRACTOR TO MAKE ADJUSTMENTS, CHANGE THE LOCATION OR TYPE OF SENSOR TO OBTAIN PROPER OPERATION IN A SPECIFIC ROOM. THE USE OF FACTORY-SUPPLIED INTERNAL MASKING (PIR) SHALL BE PROVIDED/INSTALLED AS REQUIRED TO LIMIT DETECTION TO WITHIN THE CONTROLLED SPACE ONLY. WHERE MASKING IS NOT AVAILABLE AS A FACTORY-SUPPLIED ITEM, THE CONTRACTOR SHALL PROVIDE MEANS OF COMPLIANCE OR METHODS MAY BE ACCEPTABLE. THE CONTRACTOR SHALL HAVE FINAL RESPONSIBILITY FOR PROPER OPERATION OF THE SYSTEM IN EACH ROOM AND SHOULD THEREFORE MAKE LABOR ALLOWANCES FOR CHANGES AND ADJUSTMENTS.
 - b. CEILING MOUNTED SENSORS SHOULD BE LOCATED IN THE SPACE TO BE COVERED, A MINIMUM OF 4', PREFERABLY 5', AWAY FROM THE LATCH SIDE OF THE DOOR, 2" TO 3" AWAY FROM THE WALL AND 3" TO 4" FROM AN AIR SUPPLY REGISTER. DO NOT MOUNT SENSORS OVER A DOORWAY OR BEHIND A FULL HEIGHT DOOR. SENSORS SHALL BE DIRECTED IN THE DIRECTION OF THE SPACE TO BE COVERED. DO NOT AIM SENSORS TOWARD A DOORWAY. THE USE OF FACTORY SUPPLIED INTERNAL MASKING (PIR) SHALL BE PROVIDED/INSTALLED AS REQUIRED TO LIMIT DETECTION TO WITHIN THE CONTROLLED SPACE ONLY.
 - c. ALL SENSORS SHALL BE ADJUSTED PER THE DLCS SDO/ZONE SCHEDULE, WHERE A ROOM TYPE IS NOT INDICATED ON THE DLCS SDO, ADJUST FOR FOR A TIME DELAY OF TWENTY (20) MINUTES.
 - d. EACH DAYLIGHTING CONTROL SYSTEM/ZONE SHALL BE INSTALLED/ADJUSTED AS FOLLOWS:
 - 1) AUTOMATIC SWITCHING/DIMMING CONTROL PLACEMENT: IT IS IMPORTANT TO SELECT A LOCATION IN THE DAYLIGHTING ZONE WHERE THE DAYLIGHT CONTRIBUTION IS REPRESENTATIVE OF THE DAYLIGHTING THROUGHOUT THE ZONE. A GOOD LOCATION IS OFTEN BETWEEN THE WINDOW AND/OR DAYLIGHTING SOURCE AND THE FIRST ROW OF LIGHTING FIXTURES. THE DAYLIGHTING ZONE SHOULD BE 6'-0" OF A WINDOW, MORE THAN 15'-0" FROM A WINDOW, AND LESS THAN 4'-0" TO A LIGHTING FIXTURE WITH INDIRECT DISTRIBUTION.
 - 2) AUTOMATIC STEP-DIMMED/CONTINUOUS DIMMING CONTROLS SHALL NOT BE OPERATIONAL UNTIL THE LAMPS HAVE HAD AN OPPORTUNITY TO BURN IN AT A MINIMUM OF 15 MINUTES AFTER INSTALLATION. IT IS RECOMMENDED BY THE RESPECTIVE LAMP AND BALLAST MANUFACTURERS.
 - 3) AUTOMATIC SWITCHING/STEP-DIMMED CONTROL SETTINGS: CONTRACTOR TO UTILIZE THE PHOTOSENSOR AUTOMATIC CALIBRATION AND SETPOINT FUNCTIONS TO ESTABLISH THE OPTIMAL ON/OFF SETPOINTS, TIME DELAYS AND DEADBAND SETTINGS FOR EACH CONTROL ZONE INDICATED WITH DAYLIGHTING CONTROLS.
 - 4) AUTOMATIC CONTINUOUS DIMMING CONTROL SETTINGS SHALL BE SET USING AN ILLUMINANCE METER, AT A LOCATION FURTHEST FROM THE DAYLIGHT SOURCE, AS FOLLOWS:
 - NIGHT CONDITIONS/SETTING: SET AND ADJUST THE ILLUMINANCE LEVELS TO BE PER THE "TARGET ILLUMINATION" SYMBOL VALUE - SEE DLCS SDO/ZONE SCHEDULE. THE VALUE MUST BE AT OR BELOW THE "TARGET ILLUMINATION" SYMBOL VALUE.
 - DAY CONDITIONS/SETTING: WITH WINDOW COVERS IN THE "OPEN" POSITION AND THE DAYLIGHT CONTRIBUTION (LIGHTS OFF) AT A MAXIMUM OF 75% OF THE "TARGET ILLUMINATION" SYMBOL VALUE, SET AND ADJUST THE COMBINED ARTIFICIAL ILLUMINATION AND DAYLIGHTING ILLUMINATION TO MEET THE SYMBOL VALUE AT THE SAME LOCATION/POSITION OF THE NIGHT SETTINGS.
 - RAMP UP/DOWN RATES/CUT-OFF TIME DELAY:
 - e. IT IS THE CONTRACTOR'S RESPONSIBILITY TO ARRANGE A PRE-INSTALLATION MEETING WITH THE MANUFACTURER'S FACTORY AUTHORIZED REPRESENTATIVE, AT THE PROJECT, TO VERIFY PLACEMENT OF SENSORS AND INSTALLATION CRITERIA.
 - f. PROPER JUDGMENT MUST BE EXERCISED IN EXECUTING THE INSTALLATION SO AS TO ENSURE THE BEST POSSIBLE INSTALLATION IN THE AVAILABLE SPACE AND TO OVERCOME LOCAL DIFFICULTIES DUE TO SPACE LIMITATIONS OR INTERFERENCE OF BUILDING STRUCTURAL COMPONENTS.
 - g. CONNECT ALL DEVICES AS REQUIRED. UNLESS PROHIBITED BY LOCAL CODE, CONNECTIONS SHALL BE MADE WIRELESSLY OR WITH PLENUM-RATED CABLING ROUTED NEATLY INTO AND ABOVE THE ACCESSIBLE CEILING. CABLES SHALL BE SUPPORTED WITH DEDICATED SUPPORT WIRES AND J-HOOKS. WHERE LOCAL CODE OR PROJECT SPECIFICATIONS REQUIRES LOW VOLTAGE CABLING TO BE ROUTED IN CONDUIT, INCLUDE ALL COSTS IN BASE BID TO PROVIDE APPROPRIATELY-SIZED SYSTEM OF CONDUITS AND JUNCTION BOXES TO ROUTE CONNECTION CABLING. J-BOXES/CONTROLLERS SHALL BE LOCATED ABOVE ACCESSIBLE CEILINGS AND NEVER IN HARD-UD CEILING AREAS. PRE-TERMINATED CABLING SHALL BE PROVIDED BY THE SYSTEM MANUFACTURER AND SHALL BE GREEN IN COLOR UNLESS IT IS ROUTED IN AN EXPOSED CEILING CONDITION WHERE IT SHALL BE BLACK, WHITE OR GRAY AS DIRECTED BY THE ARCHITECT.
 - h. INSTALL LINE VOLTAGE CONDUCTORS, LOW VOLTAGE CONDUCTORS AND COMMUNICATIONS CABLING BETWEEN LIGHTING FIXTURES AND DLCS COMPONENTS PER THE DLCS MANUFACTURER'S RECOMMENDATIONS REGARDING CONDUCTOR ROUTING, CONDUCTOR SEPARATION AND CONDUCTOR TERMINATIONS. CONTRACTOR SHALL UTILIZE INSTALLATION MEANS AND METHODS THAT DO NOT COMPROMISE THE DLCS SYSTEM WARRANTY.

1. WHERE CODE OR LOCAL AHJ REQUIREMENTS REQUIRE THE INSTALLATION OF ALL LOW-VOLTAGE CONDUCTORS TO BE INSTALLED IN CONDUIT - CONTRACTOR TO PROVIDE ALL REQUIRED MANUFACTURER SPECIFIC EQUIPMENT JUNCTION BOXES AND CONDUIT ADAPTERS AS REQUIRED.

2. UNLESS PROHIBITED BY LOCAL CODE, ALL CONTROL UNITS SHALL BE PLENUM-RATED. WHERE CONTROL UNITS ARE LOCATED IN EXPOSED CEILING SPACES, INCLUDE ALL COSTS IN BASE BID TO PROVIDE APPROPRIATELY-SIZED VENTILATED CONTROL UNIT ENCLOSURES FOR CONCEALMENT. COLOR OF ENCLOSURE PER ARCHITECT.
15. DLCS START-UP, BUILDING AUTOMATION SYSTEM (BAS) INTEGRATION, COMMISSIONING, & TRAINING
 - a. PRIOR TO NETWORK SYSTEM FACTORY START-UP, THE CONTRACTOR SHALL 1) TEST ALL COMMUNICATIONS CABLING FOR SHORTS, POLARITY REVERSALS AND BAD TERMINATIONS/CONNECTIONS AND MAKE NECESSARY REPAIRS AND 2) DEMONSTRATE FULL CONNECTIVITY TO ALL NETWORK AND LOCAL (IN-ROOM) DEVICES VIA BAS/TP CAPABILITY. CONTRACTOR SHALL PROVIDE TESTING PROCESS. CONTRACTOR SHALL PROVIDE A TEST REPORT OUTLINED TEST COMPLETION AND ANY REPAIRS MADE AND CERTIFY THAT NETWORK DEVICE AND LOCAL DEVICE CONNECTIVITY HAS BEEN ACHIEVED PRIOR TO SCHEDULED FACTORY START-UP. BASED ON PAST PROJECT EXPERIENCE, FAILURE TO PERFORM ANY OF THE ABOVE STEPS HAS RESULTED IN BOTH VERY INEFFICIENT FACTORY START-UP AND PROJECT DELIVERY DELAY. ANY ADDITIONAL COSTS ARISING OUT OF A FAILURE TO COMPLETE THIS TESTING SHALL BE BORNE SOLELY BY THE CONTRACTOR.
 - b. NETWORK SYSTEMS SHALL BE INSPECTED, STARTED UP, CONFIGURED AND PROGRAMMED BY FACTORY START-UP TECHNICIANS TO MEET THE INTENDED INTEGRATION AND CONTROLS SCENARIOS AND FUNCTIONALITY DESIRED BY THE SYSTEM USER. EFFORT SHALL INCLUDE REQUESTING ANY END-USER SPECIFIC NETWORK ADDRESSING OR OTHER INSTRUCTIONS FOR THE DLCS TO RESIDE ON THE END-USER LAN. FOR PROJECTS WHERE THE END-USER DOES NOT WANT THE DLCS TO COMMUNICATE WITH THE END-USER LAN, CONTRACTOR SHALL PROVIDE AND CONFIGURE ALL DLCS NETWORK COMPONENTS AS REQUIRED FOR THE SYSTEM TO FUNCTION IN ISOLATION WITHOUT PERMANENT LAN OR INTERNET ACCESS.
 - c. WHERE THE DLCS SCHEDULE INDICATES BAS INTEGRATION IS REQUIRED OR WHERE REQUIRED PER MECHANICAL & MECHANICAL CONTROLS DRAWINGS AND SPECIFICATIONS, THE CONTRACTOR'S DLCS FACTORY TECHNICIAN SHALL ASSIST THE BAS CONTRACTOR WITH DLCS POINT INTEGRATION. THE PRIMARY OBJECTIVE OF DLCS INTEGRATION WITH THE BAS IS TO ALLOW FOR OCCUPANCY-BASED HVAC SETBACK, TO ENABLE/CONTROL LIGHTING SCHEDULES AND TO INTEGRATE ZONE OR AREA OCCUPANCY LIGHTING STATUS INTO A BAS GRAPHICAL USER INTERFACE DISPLAY BASED ON ARCHITECTURAL FLOOR PLAN(S). SECONDARY OBJECTIVES INCLUDE: REMOTE TROUBLESHOOTING OF USER COMPLAINTS, INTEGRATION INTO FUTURE CONTINUOUS COMMISSIONING SYSTEMS ETC AND AS OUTLINED IN THE MECHANICAL CONTROLS DRAWINGS AND SPECIFICATIONS AND AS FOLLOWS:
 - 1) THE PRIMARY PROTOCOL FOR INTEGRATION SHALL BE BACNET PER ANSI/ASHRAE 135-2016 - OR LATEST PUBLISHED STANDARD.
 - 2) WHERE A DLCS NETWORK COMPONENT IS BTL (BACNET TESTING LAB)-LISTED, IT SHALL BE LABELED AS SUCH. WHERE A DLCS NETWORK COMPONENT IS FOUND TO CAUSE BACNET INTEGRATION ISSUES, THE DLCS MANUFACTURER SHALL BE RESPONSIBLE FOR ALL COSTS RELATED TO BOTH THE DLCS NETWORK COMPONENT AND THE TIME AND MATERIALS REQUIRED TO RESOLVE THE ISSUE. INCLUDE COSTS ASSOCIATED WITH USE OF BACNET PROTOCOL ANALYZERS TO IDENTIFY THE PROBLEM UP TO AND INCLUDING LABOR, MATERIAL, EQUIPMENT, SOFTWARE CODING, FIRMWARE REVISIONS, AND RECOMMISSIONING ASSOCIATED WITH REPAIR, REPLACEMENT AND/OR ADDITIONAL COMPONENTS NEEDED TO CORRECT THE INTEGRATION ISSUE.
 - 3) THE DLCS NETWORK SHALL BROADCAST ANY OCCUPANCY SENSOR STATUS VIA CHANGE OF VALUE TO THE BAS IN LESS THAN 5 SECONDS. POLLING BY THE DLCS AS A METHOD OF OBTAINING OCCUPANCY SENSOR VALUES IS UNACCEPTABLE DUE TO EXCESSIVE LATENCY AND RESULTANT SLOW SYSTEM RESPONSE TIME.
 - 4) WHILE THE DLCS SHALL BE CAPABLE OF PROVIDING A MUCH LARGER VARIETY OF BACNET POINTS, THE FOLLOWING ARE REQUIRED FOR BASIC INTEGRATION AT A MINIMUM. (SEE MECHANICAL DRAWINGS AND SPECIFICATIONS FOR SPECIFIC POINT INTEGRATION REQUIREMENTS)
 - INTERIOR DLCS POINTS:
 - ROOM OCCUPANCY STATE: REPORTS OCCUPIED VS UNOCCUPIED AREA(S).
 - INDIVIDUAL OCCUPANCY SENSOR STATE: REPORTS OCCUPIED VS UNOCCUPIED AREA(S).
 - LOAD/RELAY STATUS: REPORTS LIGHT FIXTURE ON/ OFF STATUS.
 - LOAD DIMMING LEVEL: REPORTS AUTOMATIC OR MANUAL DIMMING STATUS.
 - DAYLIGHTING STATUS: REPORTS DAYLIGHTING STATUS.
 - ROOM SCHEDULE STATE: REPORTS NORMAL VS AFTER HOURS SCHEDULE MODE.
 - EXTERIOR DLCS POINTS:
 - RELAY PANEL SCHEDULE STATE: REPORTS NORMAL VS AFTER HOURS SCHEDULE MODE.
 - INDIVIDUAL RELAY STATUS: REPORTS LIGHT FIXTURE ON/ OFF STATUS.
 - 5) A PROJECT-SPECIFIC BACNET OBJECT NAMING PROTOCOL SHALL BE DEVELOPED AND PROVIDED BY THE MECHANICAL CONTROLS/BAS CONTRACTOR TO BE USED BY THE DLCS CONTRACTOR IN NAMING DLCS BACNET OBJECTS INTEGRATED INTO THE BAS. CONFIRM DLCS ADDRESSING/OBJECT NAMING SHALL BE PROVIDED TO THE PROJECT CONDITIONS OF MORTGAGE LENDER. SEE MECHANICAL CONTROLS DRAWINGS AND SPECIFICATIONS FOR ADDITIONAL FORMATTING REQUIREMENTS.
 - 6) ALL OF THE ABOVE POINTS, USING THE OBJECT NAMING SCHEME PROVIDED BY THE MECHANICAL CONTROLS/BAS CONTRACTOR, SHALL BE PROVIDED TO THE BAS CONTRACTOR IN AN ELECTRONIC TABLE FORMAT TO INCLUDE BACNET OBJECT NAME, OBJECT SERIAL NUMBER, ROOM NAME AND NUMBER FOR EACH DEVICE ON THE PROJECT. FOR RELAY PANEL-BASED OBJECTS, PROVIDE ROOM NAMES OR EXTERIOR LIGHTING ZONE NAMES AS APPROPRIATE. PROVIDE BUILDING NUMBER FOR EACH SOURCE AND FIRST ROW OF LIGHTING FIXTURES. THE DAYLIGHTING ZONE SHOULD BE 6'-0" OF A WINDOW, MORE THAN 15'-0" FROM A WINDOW, AND LESS THAN 4'-0" TO A LIGHTING FIXTURE WITH INDIRECT DISTRIBUTION.
 - 7) IN ADDITION TO A POINTS LIST TABLE, PROVIDE A SHOP DRAWING DEPICTING: THE LOCATION OF EACH OCCUPANCY AND DAYLIGHT SENSOR AND EACH SENSOR OBJECT NAME. WHERE RELAY PANELS ARE PROVIDED, ALSO INDICATE EACH INTERIOR AND EXTERIOR RELAY PANEL ZONE CONTROL AREA.
 - 8) INCLUDE SUFFICIENT MEETING AND COORDINATION EFFORT WITH THE BAS AND MECHANICAL CONTRACTORS TO REVIEW THE ABOVE INFORMATION, WHERE OCCUPANCY SENSOR DEVICES DO NOT CORRESPOND TO HVAC VARIABLE AIR VOLUME (VAV) ZONES, ETC/DLCS VENDOR SHALL ASSIST THE BAS AND MECHANICAL CONTRACTORS IN RESOLVING THE CONFLICT THROUGH TROUBLESHOOTING DEVICE/OBJECT NAMING SCHEMES.
 - d. UPON COMPLETION OF THE INSTALLATION, THE SYSTEM SHALL BE COMPLETELY COMMISSIONED BY THE MANUFACTURER'S FACTORY AUTHORIZED TECHNICIAN WHO WILL VERIFY ALL ADJUSTMENTS AND SENSOR PLACEMENT TO ENSURE A TROUBLE-FREE INSTALLATION. THIS COMMISSIONING EFFORT SHALL BE PERFORMED IN A MANNER THAT MEETS ALL APPLICABLE FEDERAL, STATE, LOCAL ENERGY CODES AND/OR LEED CERTIFICATION PROGRAMS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR FILLING OUT ALL APPLICABLE PAPERWORK AND/OR FORMS. CONTRACTOR TO PROVIDE A COPY OF THE COMPLETED FORMS TO THE ENGINEER OF RECORD PRIOR TO THE PUNCH LIST SITE VISIT FOR REVIEW AND POSSIBLE RECOMMENDATION OF SETTING REVISIONS.

CONTRACTOR SHALL INCLUDE ALL COST IN THE BASE BID AND PROVIDE THE FOLLOWING WORK FOR EVERY CONTROL ZONE:
 - INITIAL SETTINGS AS INDICATED ON SDO/ZONE SCHEDULE.
 - COMMISSIONING OF EACH LIGHTING CONTROL DEVICE/ZONE PER NOTES BELOW.
 - A FOLLOW UP SETTING(S) ADJUSTMENT, AS DICTATED BY THE ELECTRICAL ENGINEER, BASED UPON A REVIEW OF THE RESULTS OF THE CONTRACTOR'S COMMISSIONING EFFORT AND FINAL PUNCH LIST.

e. REGARDLESS OF THE LESSER REQUIREMENTS OF ANY AHJ COMMISSIONING FORMS, THE FOLLOWING MINIMUM COMMISSIONING ITEMS MUST BE COMPLETED FOR EACH DEVICE/LIGHTING CONTROL ZONE:
 - MEASURED LIGHTING POWER (KW) AT THE FULLY DIMMED CONDITION.
 - MEASURED LIGHTING POWER (KW) AT FULL LIGHT OUTPUT.
 - ONLY LIGHTING FIXTURES IN THE DAYLIGHTING ZONE ARE AFFECTED BY THE DAYLIGHTING CONTROLS.
 - LIGHTING POWER IS REDUCED BY AT LEAST 50% IN WINDOW DAYLIT AREAS AND 65% IN SKYLIGHT DAYLIT AREAS.
 - DEMAND RESPONSE TESTING, RECORDING, PRE-TEST, "OCCUPIED" STEADY-STATE LIGHTING POWER (KW) & SIMULATED DEMAND RESPONSE LIGHTING POWER (KW) DEMONSTRATING AN OVERALL 10% ENERGY REDUCTION.
 - DIMMING SYSTEMS PROVIDE FLICKER FREE OPERATION.
 - ILLUMINATION LEVELS, LOCATIONS OF MEASUREMENTS, SPECIFIC DEVICE SETTINGS ARE DOCUMENTED ON AS-BUILTS.

f. AS PART OF THE "RECORD DRAWINGS", INDICATE ON THE REFLECTED CEILING PLAN THE EXACT LOCATION (CEILING TILE OR ACCESS PANEL) OF ANY ABOVE CEILING DEVICE.

g. WHEN THE PROJECT REQUIRES TWENTY-FIVE (25) OR MORE CEILING MOUNTED SENSORS, CONTRACTOR TO PROVIDE A REMOTE CONTROL, PROGRAMMING/CONTROL DEVICE, AND HAND IT TO THE OWNER AT THE END OF THE PROJECT.

h. THE CONTRACTOR TO INCLUDE ALL COSTS TO ENSURE THAT PROGRAMMING IS PERFORMED BY A FACTORY PERSON OR AUTHORIZED TECHNICIAN, FACTORY TECHNICIAN TO ALSO PROVIDE USER/OWNER TRAINING AT TURNOVER OF BUILDING WITH A SECOND TRAINING 60 TO 90 DAYS AFTER OCCUPANCY. TRAINING TO INCLUDE SYSTEM OVERVIEW, TRAINING ON SYSTEM SOFTWARE, PREVENTATIVE MAINTENANCE, SERVICE AND SUPPORT INFORMATION THAT IS DEEMED NECESSARY TO FAMILIARIZE THE OWNER'S PERSONNEL WITH THE OPERATION, USE, MAINTENANCE, ADJUSTMENT, AND PROBLEM SOLVING/DIAGNOSIS OF THE OCCUPANCY SENSING DEVICES AND LIGHTING CONTROL SYSTEMS.

SYMBOLS / REPRESENTATIVE GRAPHIC IMAGES

SECTION 16010

PART 1 – GENERAL ELECTRICAL SPECIFICATIONS

1.1 WORK INCLUDE:

- A. This specification shall apply to all phases of work hereinafter specified, shown on drawings, or as required to provide a complete installation of electrical systems for this project. Work required under this specification is not limited to just the Electrical Drawings. Refer to Architectural, Structural, Landscape, and Mechanical/Plumbing drawings as well as all other drawings applicable to this project, which designate the scope of work to be accomplished. The intent of the Drawings and Specifications is to provide a complete and operable electrical system that includes all documents that are a part of the Contract.

1. Work Include: Furnish labor, material, services and skilled supervision necessary for the construction, erection, installation, connections, testing, and adjustment of all circuits and electrical equipment specified herein, or shown or noted on Drawings, and its delivery to the Owner complete in all respects ready for use.
2. The electrical Work includes installation or connection of certain materials and equipment furnished by others. Verify installation details, installation and rough-in locations from the actual equipment or from the equipment shop drawings.
- B. Electrical Drawings: Electrical Drawings are diagrammatic, and are intended to convey the scope of work, indicating intended general arrangement of equipment, conduit and outlets. Follow Drawings in laying out Work and verify spaces for installation of materials and equipment based on actual dimensions of equipment furnished.

1.2 QUALITY ASSURANCE

- A. Design, manufacture, testing and method of installation of all apparatus and materials furnished under requirements of these specifications shall conform to latest publications or standards rules of the following:
- Institute of Electrical and Electronic Engineers – IEEE
 - National Electrical Manufacturers' Association – NEMA
 - Underwriter's Laboratories, Inc. – UL
 - National Fire Protection Association – NFPA
 - Federal Specifications – Fed. Spec.
 - American Society for Testing and Materials – ASTM
 - American National Standards Institute – ANSI
 - National Electrical Code – NEC
 - National Electrical Safety Code – NESC
 - Insulated Cable Engineers Association – ICEA
 - National Institute of Steel Construction – AISC
 - State and Municipal Codes in Force in The Specific Project Area
 - Occupational Safety and Health Administration (OSHA)
 - Electronics Industries Association/Telecommunications Industry Association (EIA/TIA)
 - California Electrical Code (where adopted)
 - Local Authority Having Jurisdiction (AHJ) Published Electrical Standards and Codes (as applicable).
- B. Perform Work in accordance with the National Electrical Code, applicable building ordinances, and other applicable codes, hereinafter referred to as the "Codes." The Contractor shall comply with the Code including local amendments and interpretations without added cost to the employer. Where Contract Documents exceed minimum requirements, the Contract Documents take precedence. Where code conflicts occur, the most stringent shall apply unless variance is approved by the General Conditions for Variations.

1. Comply with all requirements for permits, licenses, fees and codes. The Contractor, at Contractor's expense, shall obtain all permits, licenses, fees, special service costs, inspections and arrangements required for Work under this contract, unless otherwise specified.
2. Comply with requirements of the applicable utility companies serving this Project. Make all arrangements with utility companies for proper coordination of Work.

1.3 GENERAL REQUIREMENTS

- A. Guarantee: Furnish a written guarantee for a period of one-year from date of acceptance.
- B. Wherever a discrepancy in quantity or size of conduit, wire, equipment, devices, circuit breakers, etc., (all materials), arises on the Drawings and/or in the Specifications, the Contractor shall be responsible for providing and installing all material and services required by the strictest condition noted on Drawings and/or in Specifications to ensure complete and operable systems as required by the Owner and Engineer.
- C. All Core Cutting, Drilling, and Patching:
- For the installation of work under this Section, the aforementioned shall be performed under this Section of the Specifications and the Concrete section of the Specifications.
 - No holes will be allowed in any structural members without the written approval of the Project's Structural Engineer.
 - For penetrations of concrete slabs or concrete footings, the work shall be as directed in the Concrete Section of Specifications.
 - The Contractor shall be responsible for patching and repairing surfaces where he is required to penetrate for work under this contract.
 - Penetrations shall be sealed to meet the rated integrity of the surface required to be patched and repaired. The patched surface shall be painted or finished to match the existing surface.
- D. Verifying Drawings and Job Conditions:
- The Contractor shall examine all Drawings and Specifications in a manner to be fully cognizant of all work required under this Section.
 - The Contractor shall visit the site and verify existing conditions. Where existing conditions differ from Drawings, adjustment(s) shall be made and allowances included for all necessary equipment to complete all parts of the Drawings and Specifications.

1.4 WORK IN COOPERATION WITH OTHER TRADES

- A. Examine the Drawings and Specifications and determine the work to be performed by the electrical, mechanical and other trades. Provide the type and amount of electrical materials and equipment necessary to place this work in place completely wired, tested and ready for use. This shall include all conduit, wire, disconnects, relays, and other devices for the required operation sequence of all electrical, mechanical and other systems or equipment.
- B. Provide a conduit-only system for low voltage wiring required for control of mechanical and plumbing equipment described in this or other parts of the Contract Documents. Install all control housings, conduits, and boxes required for installing conduit to the controls.
- C. Install separate conduits between each heating, ventilating and air conditioning sensing device and its control panel and/or control motor. Before installing any control for heating, ventilating and air conditioning control wiring, verify the existing requirements from the control diagrams provided with the equipment manufacturer's shop drawings.

1.5 TESTING AND ADJUSTMENT

- A. Upon completion of all electrical work, the Contractor shall test all circuits, switches, light fixtures, lighting control and dimming systems including distributed systems, UPS's, generators, SPD's, lighting inverters, transfer switches, motors, circuit breakers, motor starter(s) and their auxiliary circuits and any other electrical items to ensure perfect operation of all electrical equipment.
- B. Equipment and parts in need of correction, and discovered during such testing, shall be immediately repaired or replaced with all new equipment and that part of the system shall then be retested. All such replacement or repair shall be done at no additional cost to the Owner.
- C. All circuit(s) shall be tested for continuity and circuit integrity. Adjustments shall be made for circuits not complying with testing criteria.
- D. All test reports, including copies of any required Energy Code Acceptance Forms (e.g. CA Title 24 Acceptance For Code Compliance Forms) should be submitted to the Engineer at completion of project.

1.6 IDENTIFICATION

- A. Nameplates shall be provided for unit substitutions, switchgear, switchboards, distribution boards, distribution panels, panel boards, motor control centers, transformers, transfer switches, contactors, starters, disconnect switches, enclosed circuit breakers/switches, inverters, UPS's, PDU's, RDC's, SPD's, lighting control panels, dimming panels, door releasing system panels, fire alarm/central monitoring terminal cabinets/power supplies/control panels, and all low voltage system terminal and control cabinets.
1. Nameplate inscriptions shall be identical to the equipment designations indicated in plans and specifications. Nameplates shall be engraved with the device designation/identification on the top line, source identification for the device on the 2nd line per NEC, or NEC where adopted, **Art 408.4** and load designation for the device on the bottom line. Where load designation consists of a branch circuit, omit bottom line, reserve device designation to be engraved on plans/specifications, Contractor shall submit a written clarification request to the Engineer.
- Example: Transformer 1TA
Load: Panels 1LA & 1LB
Source/Disconnect Location: Switchboard MSA located in RM 110
2. All circuit breakers/fuses in switchgear, switchboards, distribution boards, distribution panels, UPS output circuit breakers, PDU sub-feed circuit breakers and motor control centers shall have individual nameplates located immediately adjacent to the respective device. Nameplate inscription shall identify the downstream equipment or device served by the circuit breaker or fuse.

- B. Identification nameplates, unless otherwise noted (UON), shall be laminated/extruded modified acrylic that is 1/8" x 3/16" thick, UV-stabilized, rated for use in 180 deg. F ambient, with beveled edges and engraved white letters 3/8" high, minimum, on 1/16" high black background (utility/normal and optional standby power systems) for single line use only. Where two lines of text are required, provide min. 2" high nameplate. Where three lines of text are required, provide min. 2.5" high nameplate. Provide white letters on red background for all NEC, or NEC where adopted, **Article 517** essential power systems, **Article 700** Emergency Systems, **Article 701** Legally required standby systems and **Article 708** CPIS.

- C. Identification nameplates for new switchgear, switchboards, distribution boards, distribution panels, panelboards and motor control centers shall be attached with switchgear manufacturer-provided screws via switchgear manufacturer factory pre-drilled holes. A nameplate, Structural Laminated, and Mechanical/Plumbing drawings as well as all other drawings applicable to this project, which designate the scope of work to be accomplished. The intent of the Drawings and Specifications is to provide a complete and operable electrical system that includes all documents that are a part of the Contract.
- D. Identification nameplates for transformers, transfer switches, disconnect switches, enclosed circuit breakers/switches, inverters, UPS's, PDU's, RDC's, SPD's, lighting control panels, dimming panels, door releasing system panels, fire alarm/central monitoring terminal cabinets/power supplies/control panels, and all low voltage system terminal and control cabinets.
- E. Warning Plaques, as required by General Single Line Diagram Notes for multiple power sources, or instruction plaques, as required for all Kirk-Key interlock schemes, all UPS bypass procedures or as required elsewhere in the plans/specifications shall be engraved 1/2" high with white lettering on a red background using the same material specified for identification nameplates with a self-adhesive backing. Warning/Instruction plaques shall be attached to the face of the equipment directly related to the plaques. Provide a formal placard submittal for review by the Engineer prior to ordering any warning/instruction plaques. In all cases, clean surfaces before applying warning/instruction plaques parallel to equipment lines.

- F. Receptacles that are part of a UL-listed under floor computer room whip assembly, ceiling and/or cable/holder tray-mounted receptacles used in lab, manufacturing, commercial kitchen environments or that are serving telecom/data/AV racks and cabinets shall have identification nameplates located on the wiring device plate cover. Nameplates shall be self-adhesive, 3/32" thick Micarta with beveled edges, engraved 1/4" high white lettering on black background with serving power source, circuit identification and NEMA/IEC receptacle type. Use of two (2) separate nameplates per device plate cover is acceptable. Affix nameplates to be visible when plugs are occupying receptacles.
- G. See wiring device section of this specification for additional wiring device plate labeling requirements.
- H. See drawings for panel board schedule directory installation requirements.
- I. See conduit installation section of this specification for conduit labeling requirements.

1.7 FINAL INSPECTION AND ACCEPTANCE

- A. After all requirements of the Specifications and/or the Drawings have been fully completed, representatives of the Owner will inspect the work. Contractor shall provide competent personnel to demonstrate the operation of any item or system to the full satisfaction of each representative.
- B. Final acceptance of the work will be made by the Owner after receipt of approval and commendation of acceptance from each representative.

1.8 RECORD DRAWINGS

- A. Drawings of Record: The Contractor shall provide and keep up-to-date, a complete record set of drawings. These shall be corrected daily and show every change from the original Drawings. This set of prints shall be kept on the job site and shall be used only as a self-closing, gasket-equipped door that is not to be used for the Contractor to make changes in the layout without definite instruction in each case. Upon completion of the work, a set of reproducible Contract Drawings shall be obtained from the General Contractor and all changes noted on the record set of prints shall be incorporated therein to the black ink in a neat, legible, understandable and professional manner. Refer to the General Conditions for Variations for more details.
- B. Balloets: See lighting fixture schedule notes. All noisy ballolets shall be replaced at no cost to the Owner.
- C. Lamps: See lamp/fixture schedule and lamp/lighting fixture schedule notes.

1.9 APPROVALS, EQUALS, SUBSTITUTIONS, ALTERNATIVES, NO KNOWN EQUAL

- A. Approvals: Where the words (or similar terms) "approved", "approval", "acceptable", and "acceptance" are used, it shall be understood that acceptance by the Owner, Architect and Engineer are required.
- B. Equal: Where the words (or similar terms) "equal", "approved equal", "equal to", "or equal to", "or equal" and "equivalent" are used, it shall be understood that these words are followed by the expression "In the opinion of the Owner, Architect, and Engineer". For the purposes of specifying products, the above words shall indicate the same size, made of the same construction materials, materials of construction, life expectancy, finish, and some aesthetic appearance/style (includes craftsmanship, physical attributes, color and finish), and the same performance.
- C. Substitution: For the purposes of specifying products, "substitution" shall refer to the substitution of a product not explicitly approved by the construction documents/specifications.
1. Substitutions of specified equipment shall be submitted and received by the Engineer ten (10) days prior to the bid date for review and written approval. Regulatory Agency approval for all substitutions will be the sole responsibility of the Contractor. To receive consideration, requests for substitutions must be accompanied by documentary proof of its equality with the G.F.C.I. Hospital Grade Receptacle. The Contractor shall identify and identify the specified values/materials alongside proposed equal values/materials. In addition, catalog brochures and samples, if requested, must be included in the submittal.
2. ONLY PRE-BID APPROVED PRODUCTS ISSUED BY ADDENDUM TO A/B BIDDERS WILL BE ALLOWED ON THE PROJECT. REGARDLESS OF THE APPROVAL ON ANY SUBSTITUTION, BIDS SHALL BE BASED ON THE PRODUCTS EXACTLY AS SPECIFIED. PRICING FOR EACH APPROVED SUBSTITUTION SHALL BE INCLUDED IN THE BID SUBMITTAL AS A SEPARATE LINE ITEM.
3. In the event that written authorization is given for a substitution after award of contract, the Contractor shall submit to the Engineer justification for supplying/distributing the specified and proposed equal material for price comparison, as well as a verification of delivery dates that conform to the project schedule.

4. In the event of cost reduction, the Owner will be credited with 100 percent of the reduction, arranged by change order.
5. The Contractor warrants that substitutions proposed for specified items will fully perform the functions required.

- D. Alternates/Alternatives: For the purposes of specifying products, "alternatives/alternates" may be established to enable the Owner/Architect/Engineer to compare costs for alternative materials or methods might be used. An alternate price shall be submitted in addition to the original bid for consideration. If the alternate is deemed acceptable, written authorization will be issued.
- E. No Known Equal: For the purposes of specifying products, "No Known Equal" shall mean that the Owner/Architect/Engineer is not aware of an equivalent product. The Contractor will be required to submit a "Substitution" item, per the requirements listed above, if a different product is proposed to be utilized.

1.10 SHOP DRAWINGS/SUBMITTALS

- A. Shop Drawings/Submittals, unless required otherwise by general project specifications or instructions to bidders, shall be submitted in electronic format (PDF) to include a Letter of Transmittal (LOT), which shall give a list of the drawings submitted with and/or printed/electronic components contained within the submittal. Drawings and material cut sheets shall be complete in every respect and walled/inked to indicate specific items being provided. Printed/Hard copies are not acceptable.
- B. The shop drawings/submittals shall be marked with the name of the project, numbered consecutively, and bear the approval of the Contractor as evidence that the Contractor has checked the drawings. Any drawings submitted without this approval will be returned to the Contractor for resubmittal.
- C. If the shop drawings show variations from the requirements of the Contract because of standard shop practice or other reasons, the Contractor shall make specific mention of such variations in the Contractor's letter of transmittal. If the substitution is accepted, the Contractor shall be responsible for proper adjustment that may be caused by the substitution. Samples shall be submitted when requested.
- D. Only products listed as "Equal" within the contract documents, along with formally approved "Substitutions" will be reviewed. Products not conforming to these items will not be reviewed and will be returned to the Contractor for re-submittal.
- E. Review comments used in response to shop drawings/submittals are:

1. "No Exception Taken" Product approved as submitted.
2. "Furnish as Corrected" Re-submittal not required, although the Contractor shall provide the submitted product with corrections as noted.
3. "Revise and Resubmit" Re-submittal required with corrections as noted.
4. "Reject" Re-submittal required based upon the originally specified product.
- F. Shop drawings shall be submitted on the following, but not limited to:
- Lighting fixtures, lamps and ballasts.
 - Switchgear, switchboards, distribution boards, motor control centers, panelboards, and bus ducts; complete with overcurrent device information.
 - Transformers.
 - Fire Alarm System/Central Monitoring System.
 - Wiring Devices.
 - Lighting control products/dimming system products.
 - Pull boxes and underground vaults.
 - Terminal cabinets.
 - Lighting inverters, UPS's, RDC's, PDU's, generators, transfer switches, SPD systems.
 - Cable tray, flexible cable tray and cable runway.
 - Power poles and floor boxes.
 - Arc flash, short-circuit, and coordination studies.
13. All other products called out on drawings that call for shop drawings and submittals.

1.11 MAINTENANCE, SERVICING, INSTRUCTION MANUALS AND WIRING DIAGRAMS

- A. Prior to final acceptance of the job, the Electrical Contractor shall furnish to the Owner at least four (4) copies of operating and maintenance and servicing instructions, as well as four (4) complete wiring diagrams for the following items or equipment:
- Lighting control systems/dimming systems.
 - Fire Alarm System.
 - Transformers.
 - Switchgear, switchboards, distribution boards, motor control centers, panel boards, and bus ducts; complete with overcurrent device information.
 - Lighting inverters, UPS's, PDU's, generators, transfer switches, SPD systems.
- B. All wiring diagrams shall specifically cover the system supplied. Typical drawings will not be accepted. Four (4) copies shall be presented to the Owner.

1.12 INTERRUPTION OF SERVICES/SERVICE SHUTDOWN

- A. Any interruption of electrical services, electrical circuits, electrical feeders, signal systems, communication systems, fire alarm systems, etc., required to perform work shall meet the specific prior-approval requirements of the Owner. Such work shall be scheduled with the Owner to be performed at the Owner's convenience.
- B. Interruptions/outages of any of the Owner's systems and services mentioned above shall be scheduled to occur during other than the Owner's normal business hours. Any overtime costs shall be borne by the Contractor.
- C. See drawings for any additional requirements regarding outages, interruption and any temporary services required.

PART 2 – PRODUCTS

2.1 MATERIALS

- A. Materials and Equipment: All electrical materials and equipment, including custom-made equipment, shall be furnished by Underwriter's Laboratories (UL) and bear their label or be listed and certified by a Nationally Recognized Testing Lab (NRTL) that is also recognized by the local Authority-Having-Jurisdiction (AHJ).
- B. Switchgear/Switchboards/Distribution Boards/Motor Control Centers:
- See general single line diagram notes on drawings for more information.
- C. Panelboards – Branch Circuit:
- See drawings for panel board schedules and specifications.
- D. Transformers:
- See drawings for transformer schedules and specifications.
- E. Lighting Fixtures:
- See drawings for lighting fixture and lamp schedules and additional specifications. Furnish, install, and connect a lighting fixture at each outlet where a lighting fixture type symbol (designated on plans) is shown as being installed. Each fixture shall be complete with all required accessories including sockets, glassware, boxes, spacers, mounting devices, fire rating enclosure and lamps.
 - Balloets: See lighting fixture schedule notes. All noisy ballolets shall be replaced at no cost to the Owner.
 - Lamps: See lamp/fixture schedule and lamp/lighting fixture schedule notes.
- F. Wiring Devices:
- Provide wiring devices indicated per plan. Devices shall be specification grade. Acceptable manufacturers are Leviton, Pass & Seymour and Hubbell. Provide all similar devices of same manufacturer, unless indicated otherwise. All device colors shall be selected from the full range of manufacturer standard color options as selected by the Architect. This direction will be provided in the shop drawing review process.

- a. Wiring Devices (Decon)
- | | |
|---|----------------------------|
| 1) Convenience Receptacle | #16252-COLOR |
| 2) Dedicated Receptacle | #16352-COLOR |
| 3) Convenience I.G. Receptacle | #16262-IG-COLOR |
| 4) Dedicated I.G. Receptacle | #16262-IG-COLOR |
| 5) Convenience G.F.C.I. Receptacle | #F0N17-H07 |
| 6) Dedicated G.F.C.I. Receptacle | #F0N17-H07 |
| 7) Convenience Hospital Grade Receptacle | #16352-H07-COLOR |
| 8) Dedicated Hospital Grade Receptacle | #16352-H07-COLOR |
| 9) Convenience G.F.C.I. Hospital Grade Receptacle | #F0N17-H07 |
| 10) Dedicated G.F.C.I. Hospital Grade Receptacle | #F0N17-H07 |
| 11) Tamper Resistant Convenience Receptacle | #F0R10-COLOR |
| 12) Tamper Resistant Dedicated Receptacle | #F0R10-COLOR |
| 13) Tamper Resistant G.F.C.I. Receptacle | #F0R12-COLOR |
| 14) Tamper Res. Dm. G.F.C.I. Hospital Grade Receptacle | #F0R12-H07-COLOR |
| 15) Tamper Res. Ded. G.F.C.I. Hospital Grade Receptacle | #F0R12-H07-COLOR |
| 16) Weather/Tamper Resistant GFCI Receptacle | #F0W12-COLOR |
| 17) Convenience Simplex Receptacle | #16351-COLOR |
| 18) Dedicated Simplex Receptacle | #16351-COLOR |
| 19) Recessed Cover Receptacle | #3561-CH-COLOR (Non-Decon) |
| 20) Single Pole Switch | #5622-2-COLOR |
| 21) Double Pole Switch | #5622-2-COLOR |
| 22) Three Way Switch | #5623-2-COLOR |
| 23) Four Way Switch | #5624-2-COLOR |
| 24) Pilot Light Switch "On" | #5626-2-COLOR |
| 25) Pilot Light Switch "Off" | #5631-2-COLOR |
| 26) Projection Screen Switch | #5657-2-COLOR |
| 27) Low Voltage Motor/Control Switch | #5657-2-COLOR |
| 28) Keyed Switch | #1221-2L-COLOR (Non-Decon) |
| 29) Door Jam Switch | #1865-COLOR |
- b. Use of dedicated receptacles is required where plans depict a branch circuit supplying only a single simplex or duplex receptacle. Use of controlled receptacles is required where depicted on plans – See controlled receptacle specifications for additional information.

1. G. (Isolated ground) receptacle bodies shall be of a basic color specified above with an orange triangle to symbolize isolated ground.
2. H.G. (Hospital grade) receptacle bodies shall be of a basic color specified above with a green circle to symbolize hospital grade.

3. When shown circled with an I.G. conductor, all receptacles shall be of the I.G. type. As an example, a NEMA 16-30R denoted on the plans and shown circled with an I.G. conductor shall be an I.G. termination of the receptacle.
4. Wiring devices located in wood finished areas shall generally be black unless otherwise indicated by the Architect.
5. Wiring devices located in mirrors shall generally be white with stainless steel cover plates unless otherwise indicated by the architect.

7. In addition to other device requirements listed elsewhere in this specification and NEC, or NEC where adopted, **Articles 408.12 & 517.18**, all 120V & 200V, 15A and 20A, non-locking receptacles shall be Tamper-Resistant when located in the following locations:
- In dwelling units per NEC, or NEC where adopted, **Article 210.52**
 - In guest rooms and guest suites of hotels and motels
 - In child care or day care facilities
 - In preschool and elementary education facilities
 - In business offices, corridors, waiting rooms and the like in clinics, medical and dental offices and outpatient facilities.
 - In a subset of Assembly Areas outlined in NEC, or NEC where adopted, **Article 518.2** including transportation waiting areas, gymnasiums, skating rinks, and auditoriums.
 - In dormitories.
 - In pediatric care areas per NEC, or NEC where adopted, **Article 517.18 (C)**.

8. Wiring devices shall be listed "hospital grade", and so identified, in the following locations:
- Patent bed locations within general care areas per NEC, or NEC where adopted, **Article 517.18(B)**.
 - Patent bed locations within critical care areas per NEC, or NEC where adopted, **Article 517.18(B)**.
 - In "other-than-hazardous" anesthetizing locations per NEC, or NEC where adopted, **Article 517.61(C)(2)**.

9. Wiring device cover plates located on recessed boxes shall be commercial grade nylon. Plate color shall match wiring device color UON on plans. Cover plates utilized on surface mounted boxes shall be metal. Plastic cover plates are unacceptable.
10. Except as otherwise noted, all wiring device plates on the project shall be labeled with panel and circuit number(s) utilizing a Brother P-touch labeling system with 1/2" tape (yellow on black) or equal by Herman-Tellerman or Panduit. Locate label on the concealed side of the wiring device plate. Handwritten labels are unacceptable.

11. The Contractor shall provide duplex receptacle outlets in the appropriate configurations necessary to comply with applicable energy code requirements for controlled receptacles and as shown on plans. All wiring devices indicated to be controlled receptacles shall be NEMA-approved, electrical code-compliant with factory markings on the face of the receptacle(s) with the word "Controlled" or utilize further markings and symbols to indicate which receptacles on each outlet is/or controlled. Stickers, field-applied markings or other non-permanent markings are not acceptable. Where a GFCI receptacle outlet is required to be controlled, provide an adjacent controlled duplex receptacle outlet connected on the load side of the GFCI receptacle. Generally, one receptacle in a duplex receptacle outlet is required to be controlled. It may be the lower receptacle or upper receptacle based on manufacturer offering. However, the controlled receptacle location within a controlled receptacle outlet shall remain consistent throughout the project. Where an existing duplex receptacle outlet is required to be controlled, provide a new wiring device with the appropriate control configuration necessary to comply with plans. All controlled receptacles shall be connected to a branch circuit controlled by an occupancy sensor-based or relay panel lighting control system. Acceptable manufacturers are Leviton, Pass and Seymour & Hubbell.
12. The following wiring device plates shall have custom engraving:
- Key operated switches, switches with pilot lights, and switches for the control of motors, heaters and ventilators. Engraving shall be black and occur on the exposed side of the plate indicating the motor, heater, or ventilator controlled.
 - Receptacles on optional standby generator and/or UPS power shall have custom engraved plates with the words "Generator" or "UPS" in black letters. In addition, where located in telecommunications closets, ID's, server rooms, data centers, labs (wet, dry or electronic) including panel board and circuit number.

- C. For Health Care Facilities, provide custom engraved device cover plates, for all devices, including panel board and circuit number. Devices served by normal/utility power circuits shall have black lettering; devices served by essential electrical system power circuits shall have red lettering.
- D. All stainless steel and nylon device plates shall be engraved using a rotary engraving process except for black lettering on stainless steel device plates which may be accomplished via laser engraving process. All lettering shall be 3/16" high, provide a dimensioned submittal drawing detailing a typical device template with engraving.
- E. Weatherproof Outlet Covers/Assemblies: All Receptacles identified as weatherproof on the drawings shall be weather-resistant, tamper-resistant, GFCI type and equipped as follows:
- Type WP-A: Recessed wall box with a hinged, lockable, cast aluminum, self-closing, gasket-equipped door that is self-latching and rated rain/wind and/or UL listed.

1. Type WP-A: Recessed wall box with a hinged, lockable, cast aluminum, self-closing, gasket-equipped door that is self-latching and rated rain/wind and/or UL listed.- Type WP-B: Recessed wall box with a hinged, lockable, cast aluminum, self-closing, gasket-equipped door that is self-latching and rated rain/wind and/or UL listed.
- Type WP-C: Recessed wall box with a hinged, lockable, cast aluminum, self-closing, gasket-equipped door that is self-latching and rated rain/wind and/or UL listed.
- Type WP-D: Recessed wall box with a hinged, lockable, cast aluminum, self-closing, gasket-equipped door that is self-latching and rated rain/wind and/or UL listed.
- Type WP-E: Recessed wall box with a hinged, lockable, cast aluminum, self-closing, gasket-equipped door that is self-latching and rated rain/wind and/or UL listed.
- Type WP-F: Recessed wall box with a hinged, lockable, cast aluminum, self-closing, gasket-equipped door that is self-latching and rated rain/wind and/or UL listed.
- Type WP-G: Recessed wall box with a hinged, lockable, cast aluminum, self-closing, gasket-equipped door that is self-latching and rated rain/wind and/or UL listed.
- Type WP-H: Recessed wall box with a hinged, lockable, cast aluminum, self-closing, gasket-equipped door that is self-latching and rated rain/wind and/or UL listed.
- Type WP-I: Recessed wall box with a hinged, lockable, cast aluminum, self-closing, gasket-equipped door that is self-latching and rated rain/wind and/or UL listed.
- Type WP-J: Recessed wall box with a hinged, lockable, cast aluminum, self-closing, gasket-equipped door that is self-latching and rated rain/wind and/or UL listed.
- Type WP-K: Recessed wall box with a hinged, lockable, cast aluminum, self-closing, gasket-equipped door that is self-latching and rated rain/wind and/or UL listed.
- Type WP-L: Recessed wall box with a hinged, lockable, cast aluminum, self-closing, gasket-equipped door that is self-latching and rated rain/wind and/or UL listed.
- Type WP-M: Recessed wall box with a hinged, lockable, cast aluminum, self-closing, gasket-equipped door that is self-latching and rated rain/wind and/or UL listed.
- Type WP-N: Recessed wall box with a hinged, lockable, cast aluminum, self-closing, gasket-equipped door that is self-latching and rated rain/wind and/or UL listed.
- Type WP-O: Recessed wall box with a hinged, lockable, cast aluminum, self-closing, gasket-equipped door that is self-latching and rated rain/wind and/or UL listed.
- Type WP-P: Recessed wall box with a hinged, lockable, cast aluminum, self-closing, gasket-equipped door that is self-latching and rated rain/wind and/or UL listed.
- Type WP-Q: Recessed wall box with a hinged, lockable, cast aluminum, self-closing, gasket-equipped door that is self-latching and rated rain/wind and/or UL listed.
- Type WP-R: Recessed wall box with a hinged, lockable, cast aluminum, self-closing, gasket-equipped door that is self-latching and rated rain/wind and/or UL listed.
- Type WP-S: Recessed wall box with a hinged, lockable, cast aluminum, self-closing, gasket-equipped door that is self-latching and rated rain/wind and/or UL listed.
- Type WP-T: Recessed wall box with a hinged, lockable, cast aluminum, self-closing, gasket-equipped door that is self-latching and rated rain/wind and/or UL listed.
- Type WP-U: Recessed wall box with a hinged, lockable, cast aluminum, self-closing, gasket-equipped door that is self-latching and rated rain/wind and/or UL listed.
- Type WP-V: Recessed wall box with a hinged, lockable, cast aluminum, self-closing, gasket-equipped door that is self-latching and rated rain/wind and/or UL listed.
- Type WP-W: Recessed wall box with a hinged, lockable, cast aluminum, self-closing, gasket-equipped door that is self-latching and rated rain/wind and/or UL listed.
- Type WP-X: Recessed wall box with a hinged, lockable, cast aluminum, self-closing, gasket-equipped door that is self-latching and rated rain/wind and/or UL listed.
- Type WP-Y: Recessed wall box with a hinged, lockable, cast aluminum, self-closing, gasket-equipped door that is self-latching and rated rain/wind and/or UL listed.
- Type WP-Z: Recessed wall box with a hinged, lockable, cast aluminum, self-closing, gasket-equipped door that is self-latching and rated rain/wind and/or UL listed.

2. Type/Subscribe WP-B: Wet location-listed rain/light white "in use" cast copper-free aluminum, extra-duty, lockable cover with baked aluminum lacquer finish and one-gang, weather-resistant, tamper-resistant GFCI receptacle. Hubbell WP26E series. Polycarbonate covers are unacceptable. Unit shall comply with NEC, or NEC where adopted, **Article 408.6(A)** and **(B)**. Contractor shall powder coat assembly to a custom color when requested by the Architect. This direction will be provided in the shop drawing review process.
3. Type WP-C: (C.W. Cole #FL310-WCS-PED-ADA-K1-CUSTOM COLOR or #FL310-WCS-PED-K1-CUSTOM COLOR) pedestal device box with a hinged, lockable, cast aluminum, self-closing, gasket-equipped door that is self-latching and rated rain/wind and/or UL listed. Unit shall comply with NEC, or NEC where adopted, **Article 408.6(A)** and **(B)**. UON on drawings, provide a minimum of 2 separate compartments suitable for installation power receptacles, AV or communications outlets. Additionally, unless otherwise noted on drawings, provide the following:
- A 20A weather-resistant, tamper-resistant, GFCI duplex receptacle in the first compartment. Provide branch circulating per plans.
 - A blank metal plate suitable for field installation of power, AV or communications devices in the second compartment.
 - Where indicated on plans as requiring data, AV, or other low voltage service outlet, provide min. 3/4" C.O. with pull string routed from the second compartment to nearest low voltage pull box where shown mounted in a building wall, or unopened blank/unused compartment shall be equipped minimum 3/4" C.O. with pull string routed to the nearest accessible ceiling space.

4. See wiring device section of this specification for additional wiring device plate cover labeling requirements.
5. (1) key minimum per device (minimum of 2 per project) to the Owner's project manager upon completion of project.
6. Custom color powder coat finish as selected by Architect – Include all costs in base bid for same.
7. In locations with sufficient wall depth, provide 6" wide x 6" tall x 5-1/2" deep recessed wall box (C.W. Cole #FL310-WCS-K1-CUSTOM COLOR).
8. In locations utilizing shallow stud walls construction or other walls of insufficient depth, provide 10-3/4" wide x 7-3/8" tall x 3-7/8" deep recessed wall box (C.W. Cole #FL310-WCS-K1-CUSTOM COLOR).

9. See drawings for additional details.
10. Type/Subscribe WP-B: Wet location-listed rain/light white "in use" cast copper-free aluminum, extra-duty, lockable cover with baked aluminum lacquer finish and one-gang, weather-resistant, tamper-resistant GFCI receptacle. Hubbell WP26E series. Polycarbonate covers are unacceptable. Unit shall comply with NEC, or NEC where adopted, **Article 408.6(A)** and **(B)**. Contractor shall powder coat assembly to a custom color when requested by the Architect. This direction will be provided in the shop drawing review process.
11. In locations with sufficient wall depth, provide 6" wide x 6" tall x 5-1/2" deep recessed wall box (C.W. Cole #FL310-WCS-K1-CUSTOM COLOR).
12. In locations utilizing shallow stud walls construction or other walls of insufficient depth, provide 10-3/4" wide x 7-3/8" tall x 3-7/8" deep recessed wall box (C.W. Cole #FL310-WCS-K1-CUSTOM COLOR).

13. See drawings for additional details.
14. Type/Subscribe WP-D: Damp location-listed (not-rain/light-in-use) cast copper-free, pad lockable, die-cast aluminum cover with baked aluminum lacquer finish and one gang self-closing, gasket-equipped door that is self-latching and rated rain/wind and/or UL listed. Unit shall comply with NEC, or NEC where adopted, **Article 408.6(A)** and **(B)**. Custom color powder coat finish as selected by Architect. Include all costs in base bid for same.

15. See drawings for additional details.

16. See drawings for additional details.

17. See drawings for additional details.

18. See drawings for additional details.

19. See drawings for additional details.

20. See drawings for additional details.

21. See drawings for additional details.

22. See drawings for additional details.

23. See drawings for additional details.

24. See drawings for additional details.

25. See drawings for additional details.

26. See drawings for additional details.

27. See drawings for additional details.

28. See drawings for additional details.

29. See drawings for additional details.

30. See drawings for additional details.

31. See drawings for additional details.

32. See drawings for additional details.

33. See drawings for additional details.

34. See drawings for additional details.

35. See drawings for additional details.

36. See drawings for additional details.

37. See drawings for additional details.

38. See drawings for additional details.

39. See drawings for additional details.

40. See drawings for additional details.

41. See drawings for additional details.

PERMIT SET- ISSUED FOR CONSTRUCTION

STATE OF CALIFORNIA

Indoor Lighting

CERTIFICATE OF COMPLIANCE

CALIFORNIA ENERGY COMMISSION

NRCC-LTI-E

Project Name: Hotel Del Coronado Members Area Renovation

Report Page: (Page 6 of 8)

Project Address: 1500 Orange Avenue

Date Prepared: 10/25/2021

N. ADDITIONAL LIGHTING ALLOWANCE: TAILORED ORNAMENTAL/SPECIAL EFFECTS

This section does not apply to this project.

O. ADDITIONAL LIGHTING ALLOWANCE: TAILORED VERY VALUABLE MERCHANDISE

This section does not apply to this project.

P. POWER ADJUSTMENT: LIGHTING CONTROL CREDIT (POWER ADJUSTMENT FACTOR (PAF))

This section does not apply to this project.

Q. RATED POWER REDUCTION COMPLIANCE FOR ALTERATIONS

This section does not apply to this project.

R. 80% LIGHTING POWER FOR ALL ALTERATIONS - CONTROLS EXCEPTIONS

This section does not apply to this project.

S. DAYLIGHT DESIGN POWER ADJUSTMENT FACTOR (PAF)

This section does not apply to this project.

Registration Number:

Registration Date/Time:

Registration Provider: Energysoft

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance

Report Version: 2019.1.003

Schema Version: rev 20200601

Report Generated: 2021-10-25 11:46:39

STATE OF CALIFORNIA

Indoor Lighting

CERTIFICATE OF COMPLIANCE

CALIFORNIA ENERGY COMMISSION

NRCC-LTI-E

Project Name: Hotel Del Coronado Members Area Renovation

Report Page: (Page 7 of 8)

Project Address: 1500 Orange Avenue

Date Prepared: 10/25/2021

T. DECLARATION OF REQUIRED CERTIFICATES OF INSTALLATION

Selections have been made based on information provided in this document. If any selection have been changed by permit applicant, an explanation should be included in Table E. Additional Remarks. These documents must be provided to the building inspector during construction and can be found online at https://www.energy.ca.gov/title24/2019standards/2019_compliance_documents/Nonresidential_Documents/NRCC/

		Form/Title	Field Inspector	
Yes	No		Pass	Fail
<input checked="" type="radio"/>	<input type="radio"/>	NRCC-LTI-01-E - Must be submitted for all buildings	<input type="checkbox"/>	<input type="checkbox"/>
<input type="radio"/>	<input checked="" type="radio"/>	NRCC-LTI-02-E - Must be submitted for a lighting control system, or for an Energy Management Control System (EMCS), to be recognized for compliance.	<input type="checkbox"/>	<input type="checkbox"/>
<input type="radio"/>	<input checked="" type="radio"/>	NRCC-LTI-04-E - Must be submitted for two interlocked systems serving an auditorium, a convention center, a conference room, a multipurpose room or a theater to be recognized for compliance.	<input type="checkbox"/>	<input type="checkbox"/>
<input type="radio"/>	<input checked="" type="radio"/>	NRCC-LTI-05-E - Must be submitted for a Power Adjustment Factor (PAF) to be recognized for compliance.	<input type="checkbox"/>	<input type="checkbox"/>
<input type="radio"/>	<input checked="" type="radio"/>	NRCC-LTI-06-E - Must be submitted for additional wattage installed in a video conferencing studio to be recognized for compliance.	<input type="checkbox"/>	<input type="checkbox"/>

U. DECLARATION OF REQUIRED CERTIFICATES OF ACCEPTANCE

Selections have been made based on information provided in this document. If any selection have been changed by the permit applicant, an explanation should be included in Table E. Additional Remarks. These documents must be provided to the building inspector during construction and any with "A" in the form name must be completed through a Test Technician Certification Provider (TTCP). For more information visit: <http://www.energy.ca.gov/title24/ttccp/providers.html>

Yes	No	Form/Title	Field Inspector	
			Pass	Fail
<input checked="" type="radio"/>	<input type="radio"/>	NRCA-LTI-02-A - Must be submitted for occupancy sensors and automatic time switch controls.	<input type="checkbox"/>	<input type="checkbox"/>
<input type="radio"/>	<input checked="" type="radio"/>	NRCA-LTI-03-A - Must be submitted for automatic daylight controls.	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="radio"/>	<input type="radio"/>	NRCA-LTI-04-A - Must be submitted for demand responsive lighting controls.	<input type="checkbox"/>	<input type="checkbox"/>
<input type="radio"/>	<input checked="" type="radio"/>	NRCA-LTI-05-A - Must be submitted for institutional tuning power adjustment factor (PAF)	<input type="checkbox"/>	<input type="checkbox"/>

Registration Number:

Registration Date/Time:

Registration Provider: Energysoft

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance

Report Version: 2019.1.003

Schema Version: rev 20200601

Report Generated: 2021-10-25 11:46:39

STATE OF CALIFORNIA

Indoor Lighting

CERTIFICATE OF COMPLIANCE

CALIFORNIA ENERGY COMMISSION

NRCC-LTI-E

Project Name: Hotel Del Coronado Members Area Renovation

Report Page: (Page 8 of 8)

Project Address: 1500 Orange Avenue

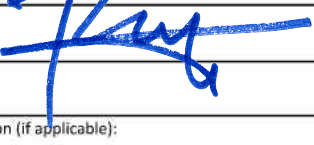
Date Prepared: 10/25/2021

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT

I certify that this Certificate of Compliance documentation is accurate and complete.

Documentation Author Name: Ray Swartz

Signature Date: 2021-10-25

Signature: 

CEA/HERS Certification Identification (if applicable): E15610

Phone: (949) 751-5800

Company: tkisc

Address: 15231 Laguna Canyon Road, Suite 100

City/State/Zip: Irvine CA 92618

RESPONSIBLE PERSON'S DECLARATION STATEMENT

I certify the following under penalty of perjury under the laws of the State of California:

- The information provided on this Certificate of Compliance is true and correct.
- I am eligible under Division 3 of the Business and Professions Code to accept responsibility for the building design or system design identified on this Certificate of Compliance (responsible designer)
- The energy features and performance specifications, materials, components, and manufactured devices for the building design or system design identified on this Certificate of Compliance conform to the requirements of Title 24, Part 1 and Part 6 of the California Code of Regulations.
- The building design features or system design features identified on this Certificate of Compliance are consistent with the information provided on other applicable compliance documents, worksheets, calculations, plans and specifications submitted to the enforcement agency for approval with this building permit application.
- I will ensure that a completed signed copy of this Certificate of Compliance shall be made available with the building permit(s) issued for the building, and made available to the enforcement agency for all applicable inspections. I understand that a completed signed copy of this Certificate of Compliance is required to be included with the documentation that is submitted to the building owner at occupancy.

Responsible Designer Name: Ray Swartz

Date Signed: 2021-10-25

Signature: 

License: E15610

Phone: (949) 751-5800

Company: tkisc

Address: 15231 Laguna Canyon Road

City/State/Zip: Irvine CA 92618

Registration Number:

Registration Date/Time:

Registration Provider: Energysoft

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance

Report Version: 2019.1.003

Schema Version: rev 20200601

Report Generated: 2021-10-25 11:46:39

STATE OF CALIFORNIA

Indoor Lighting

CERTIFICATE OF COMPLIANCE

CALIFORNIA ENERGY COMMISSION

NRCC-LTI-E

Project Name: Hotel Del Coronado Members Area Renovation

Report Page: (Page 3 of 8)

Project Address: 1500 Orange Avenue

Date Prepared: 10/25/2021

F. INDOOR LIGHTING FIXTURE SCHEDULE

LT-202	LT-202 - Wet Rated Downlight Steam LED	No	No	10	Mfr. Spec	4	No	40	<input type="checkbox"/>	<input type="checkbox"/>
LT-203	LT-203 - 4" Wraparound LED	No	No	25.5	Mfr. Spec	4	No	102	<input type="checkbox"/>	<input type="checkbox"/>
LTG-3450	LTG-3450 - 16" Flushmount LED	No	No	24	Mfr. Spec	15	No	360	<input type="checkbox"/>	<input type="checkbox"/>
LTG-3451	LTG-3451 - Decorative Wall Sconce LED	No	No	60	Mfr. Spec	11	No	660	<input type="checkbox"/>	<input type="checkbox"/>
LTG-3452	LTG-3452 - Decorative Round Flushmount LED	No	No	120	Mfr. Spec	2	No	240	<input type="checkbox"/>	<input type="checkbox"/>
LTG-3453	LTG-3453 - Decorative Wall Sconce LED	No	No	12	Mfr. Spec	4	No	48	<input type="checkbox"/>	<input type="checkbox"/>
Total Designed Watts: CONDITIONED SPACES									2,000	

¹FOOTNOTE: Design Watts for small aperture and color changing luminaires which qualify per §140.6(a)(4) is adjusted to be 75% of their rated wattage. Table F automatically makes this adjustment, the permit applicant should enter full rated wattage in column 05.

²Authority Having Jurisdiction may ask for Luminaire cut sheets to confirm wattage used for compliance per §130.0(c). Wattage used must be the maximum rated for the luminaire, not the lamp.

G. MODULAR LIGHTING SYSTEMS

This section does not apply to this project.

H. INDOOR LIGHTING CONTROLS (Not including PAFs)

This table includes lighting controls for conditioned and unconditioned spaces. When a control having a "*" is shown, the notes section of this table provides more detail on how compliance is achieved. The lighting controls section of the Compliance Summary Table on the first page will show "DOES NOT COMPLY" if the notes are left blank.

Building Level Controls					
01		02		03	
Mandatory Demand Response §110.12(c)		Shut-off controls §130.1(c)		Field Inspector	
				Pass	Fail
Required > 10,000 SF		Whole Building Auto Time Switch		<input type="checkbox"/>	<input type="checkbox"/>

Registration Number:

Registration Date/Time:

Registration Provider: Energysoft

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance

Report Version: 2019.1.003

Schema Version: rev 20200601

Report Generated: 2021-10-25 11:46:39

STATE OF CALIFORNIA

Indoor Lighting

CERTIFICATE OF COMPLIANCE

CALIFORNIA ENERGY COMMISSION

NRCC-LTI-E

Project Name: Hotel Del Coronado Members Area Renovation

Report Page: (Page 2 of 8)

Project Address: 1500 Orange Avenue

Date Prepared: 10/25/2021

H. INDOOR LIGHTING CONTROLS (Not including PAFs)

04	05	06	07	08	09	10	11	12
Area Description	Complete Building or Area Category Primary Function Area	Area Controls §130.1(a)	Multi-Level Controls §130.1(b)	Shut-Off Controls §130.1(c)	Primary/Sky lit Daylighting §140.6(d)	Interlocked Systems §140.6(e)	Field Inspector	
							Pass	Fail
NOTES: Controls with a "" require a note in the space below explaining how compliance is achieved. EX: Conference 1: Primary/Skylight Daylighting: Exempt because less than 120 watts of general lighting; EXCEPTION 1 to §130.1(d)(2)								
Plan Sheet Showing Daylit Zones:								

I. LIGHTING POWER ALLOWANCE: COMPLETE BUILDING OR AREA CATEGORY METHODS

Each area complying using the Complete Building or Area Category Methods per §140.6(b), are included in this table. Column 06 indicates if additional lighting power allowances per §140.6(c) or adjustments per §140.6(a) are being used.

01	02	03	04	05	06
Area Description	Complete Building or Area Category Primary Function Area	Allowed Density (W/ft²)	Area (ft²)	Allowed Wattage (Watts)	Additional Allowance / Adjustment Area Category PAF
Corridor	Corridor	0.6	723	433.8	No
Locker Rooms	Locker/Dressing Room	0.45	912	410.4	No
Restrooms	Restrooms	0.65	586	380.9	No
Shower/Hot Bath Areas	Restrooms	0.65	669	434.8	No
Steam Rooms	Restrooms	0.65	239	155.4	No
Storage	All Other Space Types	0.4	561	224.4	No
TOTALS:			3,690	2,039.7	See Tables J, or P for detail

Registration Number:

Registration Date/Time:

Registration Provider: Energysoft

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance

Report Version: 2019.1.003

Schema Version: rev 20200601

Report Generated: 2021-10-25 11:46:39

STATE OF CALIFORNIA

Indoor Lighting

CERTIFICATE OF COMPLIANCE

CALIFORNIA ENERGY COMMISSION

NRCC-LTI-E

Project Name: Hotel Del Coronado Members Area Renovation

Report Page: (Page 5 of 8)

Project Address: 1500 Orange Avenue

Date Prepared: 10/25/2021

J. ADDITIONAL ALLOWANCE: AREA CATEGORY METHOD QUALIFYING LIGHTING SYSTEM

All areas indicated in Table I as using an additional allowance using the Area Category Method have been included in this table to calculate the additional allowance per Table 140.6-C.

01	02	03	04	05	06	07	08	09	10
Area Description	Primary Function Area	Applicable Qualifying Lighting System from Table 140.6-C	Allowed Density (W/ft² or W/ft or W/unit)	Lgt Area, Length or ATM/Mirror (ft², ft or #)	Extra Allowance (Watts)	Luminaire Name or Item Tag	Watts per Luminaire	Number of Luminaires	Total Design Watts
Restrooms	Restrooms	Decorative Lighting	0.15	586	87.9	LTG-3451	60	5	300
						LTG-3451	60	6	360
Total Design Watts	Calculated Allowance (Watts):	Total Additional Allowance for this area:							
660	87.9								
Total Additional Allowance (Watts) CONDITIONED SPACES			87.9						

Unconditioned Spaces

This section does not apply to this project.

K. TAILORED METHOD GENERAL LIGHTING POWER ALLOWANCE

This section does not apply to this project.

L. ADDITIONAL LIGHTING ALLOWANCE: TAILORED WALL DISPLAY

This section does not apply to this project.

M. ADDITIONAL LIGHTING ALLOWANCE: TAILORED FLOOR AND TASK LIGHTING

This section does not apply to this project.

Registration Number:

Registration Date/Time:

Registration Provider: Energysoft

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance

Report Version: 2019.1.003

Schema Version: rev 20200601

Report Generated: 2021-10-25 11:46:39

STATE OF CALIFORNIA

Indoor Lighting

CERTIFICATE OF COMPLIANCE

CALIFORNIA ENERGY COMMISSION

NRCC-LTI-E

Project Name: Hotel Del Coronado Members Area Renovation

Report Page: (Page 1 of 8)

Project Address: 1500 Orange Avenue

Date Prepared: 10/25/2021

A. GENERAL INFORMATION

01 Project Location (city)	Coronado		04 Total Conditioned Floor Area (ft²)	3,690	
02 Climate Zone	7		05 Total Unconditioned Floor Area (ft²)	0	
03 Occupancy Types Within Project (select all that apply):			06 # of Stories (Habitable Above Grade)		
<input type="checkbox"/> Office	<input type="checkbox"/> Retail	<input type="checkbox"/> Warehouse	<input type="checkbox"/> Hotel/Motel	<input type="checkbox"/> School	<input checked="" type="checkbox"/> Support Areas
<input type="checkbox"/> Parking Garage	<input type="checkbox"/> High-Rise Residential	<input type="checkbox"/> Relocatable	<input type="checkbox"/> Healthcare	<input checked="" type="checkbox"/> Other (Write in) See Table I	

B. PROJECT SCOPE

This table includes any lighting systems that are within the scope of the permit application and are demonstrating compliance using the prescriptive path outlined in §140.6 or §141.0(b)(2) for alterations.

Scope of Work		Conditioned Spaces		Unconditioned Spaces	
01		02	03	04	05
My Project Consists of (check all that apply):		Calculation Method	Area (ft²)	Calculation Method	Area (ft²)
<input type="checkbox"/> New Lighting System					
<input type="checkbox"/> New Lighting System - Parking Garage					
<input checked="" type="checkbox"/> Altered Lighting System		Area Category Method	3690	Area Category Method	0
Total Area of Work (ft²)		3690		0	

Registration Number:

Registration Date/Time:

Registration Provider: Energysoft

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance

Report Version: 2019.1.003

Schema Version: rev 20200601

Report Generated: 2021-10-25 11:46:39

STATE OF CALIFORNIA

Indoor Lighting

CERTIFICATE OF COMPLIANCE

CALIFORNIA ENERGY COMMISSION

NRCC-LTI-E

Project Name: Hotel Del Coronado Members Area Renovation

Report Page: (Page 2 of 8)

Project Address: 1500 Orange Avenue

Date Prepared: 10/25/2021

C. COMPLIANCE RESULTS

If any cell on this table says "DOES NOT COMPLY" or "COMPLIES with Exceptional Conditions" refer to Table D, for guidance.

Lighting in conditioned and unconditioned spaces must not be combined for compliance per §140.6(b)(1)	Allowed Lighting Power per §140.6(b) (Watts)					Adjusted Lighting Power per §140.6(a) (Watts)		Compliance Results	
	01	02	03	04	05	06	07	08	09
	Complete Building §140.6(c)(1)	Area Category §140.6(c)(2)	Area Category Additional §140.6(c)(2G)(+)	Tailored §140.6(c)(3)(+)	Total Allowed (Watts)	Total Designed (Watts)	PAF Lighting Control Credits §140.6(a)(2)(-)	Total Adjusted (Watts) *Includes Adjustments	05 must be >= 08 §140.6
Conditioned	(See Table I)	(See Table I)	(See Table J)	(See Table K)	= 2,128	≥ 2,000	0	= 2000	COMPLIES
Unconditioned		2,039.7	88		=				COMPLIES
Controls Compliance (See Table H for Details)									
Rated Power Reduction Compliance (See Table Q for Details)									

D. EXCEPTIONAL CONDITIONS

This table is auto-filled with uneditable comments because of selections made or data entered in tables throughout the form.

E. ADDITIONAL REMARKS

This table includes remarks made by the permit applicant to the Authority Having Jurisdiction.

F. INDOOR LIGHTING FIXTURE SCHEDULE

This table includes all permanent designed lighting and all portable lighting in offices.

01	02	03	04	05	06	07	08	09	10
Name or Item Tag	Complete Luminaire Description	Modular (Track) Fixture	Small Aperture & Color Change ¹	Watts per luminaire ²	How is Wattage determined	Total Number of Luminaires	Excluded per §140.6(a)(3)	Design Watts	Field Inspector
LT-200	LT-200 - 4" Downlight LED	No	No	11	Mfr. Spec	34	No	374	Pass
LT-201	LT-201 - 4" Downlight LED	No	No	11	Mfr. Spec	16	No	176	Fail

Registration Number:

Registration Date/Time:

Registration Provider: Energysoft

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance

Report Version: 2019.1.003

Schema Version: rev 20200601

Report Generated: 2021-10-25 11:46:39

TITLE 24 GENERAL NOTE

CONTRACTOR SHALL BE RESPONSIBLE FOR ALL WORK ASSOCIATED WITH FINAL INSPECTION AND APPLICABLE ACCEPTANCE REQUIREMENT PROCEDURES. INCLUDE ALL COSTS IN THE BASE BID. THIS SHALL INCLUDE, BUT NOT BE LIMITED TO, CONSTRUCTION INSPECTION, MEASUREMENTS, MONITORING, FUNCTIONAL TESTING, CALIBRATING, ETC. CONTRACTOR SHALL ASSUME THE ROLE OF "FIELD TECHNICIAN" AND "RESPONSIBLE PERSON" AS DEFINED IN STATE OF CALIFORNIA 2019 BUILDING ENERGY EFFICIENCY STANDARDS NONRESIDENTIAL COMPLIANCE MANUAL SECTIONS 13.1.2.2 AND 13.1.2.3.

SEE STATE OF CALIFORNIA 2019 BUILDING ENERGY EFFICIENCY STANDARDS SECTIONS 10-103(a)(3A) AND 10-103(a)(3B) AND SECTION 130.4 FOR MORE INFORMATION.

SEE STATE OF CALIFORNIA 2019 BUILDING ENERGY EFFICIENCY STANDARDS NONRESIDENTIAL COMPLIANCE MANUAL CHAPTER 13 FOR MORE DETAILED REQUIREMENTS / INFORMATION.

SEE STATE OF CALIFORNIA 2019 BUILDING ENERGY EFFICIENCY STANDARDS RESIDENTIAL COMPLIANCE MANUAL CHAPTER 2 FOR MORE DETAILED REQUIREMENTS / INFORMATION.

PROVIDE COMPLETED INSTALLATION CERTIFICATE(S) AND CERTIFICATE(S) OF ACCEPTANCE AS REQUIRED TO THE SATISFACTION OF THE ENFORCEMENT AGENCY.

TITLE 24 PROCEDURES FOR TESTING AND ADJUSTING

CONTRACTOR SHALL BE RESPONSIBLE FOR ALL WORK ASSOCIATED WITH FINAL INSPECTION AND APPLICABLE ACCEPTANCE REQUIREMENT PROCEDURES. INCLUDE ALL COSTS IN THE BASE BID. THIS SHALL INCLUDE, BUT NOT BE LIMITED TO, CONSTRUCTION INSPECTION, MEASUREMENTS, MONITORING, FUNCTIONAL TESTING, CALIBRATING, ETC. CONTRACTOR SHALL ASSUME THE ROLE OF "FIELD TECHNICIAN" AND "RESPONSIBLE PERSON" AS DEFINED IN STATE OF CALIFORNIA 2019 BUILDING ENERGY EFFICIENCY STANDARDS NONRESIDENTIAL COMPLIANCE MANUAL SECTIONS 13.1.2.2 AND 13.1.2.3.

LIGHTING CONTROL ACCEPTANCE TESTING AND ADJUSTING PROCEDURES - REFER TO NRCA-LTI-02-A DOCUMENTS.

AUTOMATIC DAYLIGHT CONTROL ACCEPTANCE TESTING AND ADJUSTING PROCEDURES - REFER TO NRCA-LTI-03-A DOCUMENTS.

DEMAND RESPONSE LIGHTING CONTROL ACCEPTANCE TESTING AND ADJUSTING PROCEDURES - REFER TO NRCA-LTI-04-A DOCUMENTS.

INSTITUTIONAL TUNING PAF ACCEPTANCE TESTING AND ADJUSTING PROCEDURES - REFER TO NRCA-LTI-05-A DOCUMENTS.

OUTDOOR LIGHTING CONTROL ACCEPTANCE TESTING AND ADJUSTING PROCEDURES - REFER TO NRCA-LTI-02-A DOCUMENTS.

ALL LIGHTING CONTROLS TESTING AND ADJUSTING DOCUMENTS NOTED ABOVE ARE AVAILABLE FROM THE CALIFORNIA ENERGY COMMISSION WEB SITE AT: https://ww2.energy.ca.gov/title24/2019standards/2019_compliance_documents/Nonresidential_Documents/NRCA/

HOTEL DEL CORONADO.

Fitness
Members Area
Renovation

1500 Orange Avenue
Coronado, CA 92118



González Architects
Hospitality

Mechanical/Electrical/Plumbing Engineer
tkisc Collaborative
4755 Eastgate Mall, Suite 150
San Diego, CA 92121
658.362.6800

tkisc
COLLABORATIVE