

GENERAL NOTES

A. IT IS THE INTENT OF THESE PLANS AND SPECIFICATIONS THAT A COMPLETE AND WORKABLE ELECTRICAL INSTALLATION BE PROVIDED FOR ALL THE EQUIPMENT DESCRIBED OR SHOWN AS BEING IN THIS CONTRACT. TOWARD THIS END FURNISH ALL LABOR AND TOOLS NECESSARY AND FURNISH AND INSTALL ALL APPARATUS, MATERIALS, AND EQUIPMENT IN A FASHION COMPLYING WITH ALL APPLICABLE CODES, INCLUDING ITEMS REQUIRED BUT NOT NORMALLY SHOWN, SUCH AS LAMPS, COUPLINGS, HANGERS, BRACKETS, CLAMPS, BOXES, CONNECTORS AND HARDWARE.

B. REFER TO SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS FOR SUBMITTALS, TESTING, START-UP, TRAINING AND PROJECT CLOSEOUT.

C. PROCURE ALL PERMITS FROM LEGALLY CONSTITUTED AUTHORITIES, ARRANGE FOR ALL INSPECTIONS AND PAY ALL COSTS FOR FEES AND TESTS IN CONNECTION THEREWITH.

D. COMPLY WITH 2010 EDITION OF THE ELECTRICAL CODE, BASED ON 2010 CALIFORNIA ELECTRICAL CODE (BASED ON 2008 NATIONAL ELECTRICAL CODE) WITH LOCAL CITY AMENDMENTS, NOTHING IN THESE PLANS AUTHORIZES DEVIATION FROM APPLICABLE CODES.

E. ALL ELECTRICAL EQUIPMENT SHALL BE UL LISTED.

F. PROVIDE A CODE APPROVED DISCONNECT SWITCH OR BREAKER WITHIN SIGHT OF EVERY MOTOR. FOR LOCATION OF DISCONNECT SWITCH WITH DIVISION 23 CONTRACTOR TO DETERMINE THE BEST LOCATION ON SITE TO SUIT THE PURPOSE WHILE REMAINING ACCESSIBLE.

G. THE ELECTRICAL CONTRACTOR SHALL REVIEW DIVISION 23 DRAWINGS AND SPECIFICATIONS FOR THEIR SCOPE OF SUPPLY AND INSTALLATION AND SHALL COORDINATE WITH THE GENERAL CONTRACTOR IN ORDER TO PROVIDE A FINAL PRODUCT WHICH IS COMPLETE AND FUNCTIONAL. WIRING AND CONDUIT FOR CONTROL SHALL BE BY DIVISION 23 CONTRACTOR. MOTOR CONTROL, CENTER SUPPLIED AND INSTALLED BY THE ELECTRICAL CONTRACTOR SHALL PROVIDE NECESSARY CONTACTS FOR THE CONTROL FUNCTION AS INTENDED. REFER TO THE DIVISION 23 PLANS FOR WIRING DIAGRAMS.

H. MOTOR HP RATINGS AND ENCLOSURES SHOWN ARE WHAT IS EXPECTED. THIS INFORMATION IS FOR GUIDANCE ONLY AND DOES NOT LIMIT THE EQUIPMENT SIZE. VERIFY WITH THE SUPPLIERS OF EQUIPMENT FOR MOTOR SIZES, VOLTAGE AND PHASE. NOTIFY THE ENGINEER WHEN MOTOR FURNISHED SIGNIFICANTLY DIFFERS FROM THE EXPECTED RATINGS INDICATED. MAKE THE NECESSARY ADJUSTMENTS TO WIRING, CONDUIT, DISCONNECT SWITCH, MOTOR STARTER, AND OTHER AFFECTED DEVICES AND MATERIAL TO ACCOMMODATE MOTORS ACTUALLY INSTALLED.

I. COORDINATE ROUTING OF FEEDERS AND HOMERUNS IN COOPERATION WITH OTHER TRADES TO SIMPLIFY INSTALLATION.

J. DO NOT PENETRATE STRUCTURAL ITEMS WITHOUT PRIOR APPROVAL OF STRUCTURAL ENGINEER.

K. INSTALL EXPOSED CONDUITS PARALLEL AND AT RIGHT ANGLES TO NEARBY SURFACES AND STRUCTURAL MEMBERS.

L. ALL CONDUCTORS SHALL BE COPPER, TYPE THW/THHN 90 DEGREE INSULATION. ALL LUGS SHALL BE 75 DEGREE RATED, MINIMUM.

M. USE OF NONMETALLIC SHEATHED CABLE (NM OR NMC), ARMORED CABLE (AC) OR METAL CLAD CABLE (MC) IS NOT ALLOWED.

N. USE OF FLEX IS NOT ALLOWED EXCEPT FOR LENGTHS UP TO 6 FEET FOR FINAL CONNECTION TO LIGHTING FIXTURES OR VIBRATING EQUIPMENT.

O. REFER TO ELECTRICAL REFLECTED CEILING PLANS FOR LIGHT FIXTURE AND OTHER CEILING MOUNTED DEVICE LOCATIONS AND TRIM REQUIREMENTS.

P. MOUNT ALL ELECTRICAL, TELEPHONE AND DATA OUTLETS VERTICALLY 18" (AT BOTTOM OF BOX) ABOVE FINISHED FLOOR UNLESS OTHERWISE NOTED. VERIFY OUTLET HEIGHT ON EACH WALL WITH THE ARCHITECTURAL DRAWINGS.

Q. INSTALL GREEN INSULATED COPPER GROUNDING CONDUCTOR AND CONNECT TO EACH OUTLET, ENCLOSURE, DEVICE, FIXTURE, ETC. THE RACEWAYS SHALL NOT BE RELIED UPON FOR EQUIPMENT GROUNDING.

R. PROVIDE BARRIER BETWEEN NORMAL AND EMERGENCY POWER WHEN INSTALLED IN THE SAME ENCLOSURE.

S. LABEL RECEPTACLES, J-BOXES, DISCONNECT SWITCHES AND CONTROL DEVICES WITH THEIR SERVING CIRCUIT NUMBERS.

T. GANG DEVICES OCCURRING IN THE SAME LOCATION, SET DEVICES NOT GANGED IN THE SAME PLATE AT THE SAME HEIGHT WITH EQUAL SPACING BETWEEN EACH PLATE.

U. COORDINATE THE WORK OF DIVISION 26 WITH OTHER TRADES, NOT LIMITED TO AUDIO-VISUAL, SECURITY, AND INFORMATION SERVICES FOR SCOPE OF SUPPLY AND SERVICE.

V. PROVIDE FIRE STOPPING AT ALL CONDUIT PENETRATIONS OF CEILINGS AND RATED WALLS SEE DETAIL 136P6.2.

W. SUPPORT THE LIGHT FIXTURES AND CEILING MOUNTED DEVICES TO THE STRUCTURAL MEMBERS INDEPENDENT OF THE T-BAR CEILING. INSTALL TWO GUIDE WIRES TO THE OPPOSITE CORNERS FOR 2X2, 2X4, OR 1X4 FLUORESCENT FIXTURES. INSTALL ONE GUIDE WIRE TO DOWNLIGHTS, EXIT SIGNS, SPEAKERS, AND FIRE ALARM DEVICES. INSTALL TWO SUPPLEMENTARY SAFETY CHAINS FOR PENDANT MOUNTED FIXTURES. SEE 14SP6.2.

X. FIRE PROTECTION DEVICES SHALL BE APPROVED BY FIRE MARSHALL PRIOR TO INSTALLATION. CONTRACTOR SHALL OBTAIN SUCH APPROVAL FROM THE CITY FIRE MARSHALL.

Y. NO SPLICING OF FEEDERS OR BRANCH CIRCUITS SHALL BE DONE WITHOUT PRIOR APPROVAL.

Z. INSTALL WIRING AS INDICATED ON PLANS. DO NOT COMBINE HOMERUNS WITHOUT PRIOR APPROVAL.

AA. PROVIDE NEMA TP-1 RATED TRANSFORMERS FOR UNITS RATED 15 TO 1000 KVA 600 VOLTS AND BELOW.

AB. LENGTHS SHOWN ON SINGLE LINE OR FEEDER SCHEDULE ARE ESTIMATES FOR PLAN CHECK ONLY. CONTRACTOR IS RESPONSIBLE FOR DETERMINING CONDUIT AND CONDUCTOR LENGTHS BASED UPON SELECTED ROUTING.

ABBREVIATIONS

AC	ALTERNATING CURRENT	EMER	EMERGENCY EM EMERGENCY	DPST	DOUBLE-POLE SINGLE-THROW	2P	2 POLE, SIMILAR FOR OTHER QTY
AC	AIR CONDITIONER	EMT	ELECTRICAL METALLIC TUBING	N	NEUTRAL	NEUT	NEUTRAL
A	AMPERE	ENCL	ENCLOSURE	NEC	NATIONAL ELECTRIC CODE		
AMP	AMPERE	EQUIP	EQUIPMENT	NF	NONFUSED		
BLDG	BUILDING	EX	EXISTING	NTS	NOT TO SCALE		
BRKR	BREAKER	EXIST	EXISTING	PB	PULLBOX		
C	CONDUIT	F	FUSE	PNL	PANEL		
CB	CIRCUIT BREAKER	FACP	FIRE ALARM CONTROL	PVC	POLYVINYL CHLORIDE		
CCM	CHEMICAL CONTROL MONITOR	FLA	PANEL FULL LOAD AMPERES	PWR	POWER		
CIR	CIRCUIT	G	GROUND	Ø PH	PHASE		
CKT	CIRCUIT	GRD	GROUND	SQ FT	SQUARE FEET		
CO	CONDUIT ONLY WITH PULLWIRE	GND	GROUND	SW	SWITCH		
	COMMON	GFCI	GROUND FAULT CIRCUIT INTERRUPTER	SWBD	SWITCHBOARD TIME CLOCK		
CONN	CONNECT	HOA	HAND-OFF-AUTO SWITCH	TC	TEMPORARY		
CONT	CONTINUE	HP	HORSEPOWER	TXMR	TRANSFORMER		
CT	CURRENT TRANSFORMER	HZ	HERTZ	TRMR	TRANSFORMER		
CU	COPPER	J	JUNCTION BOX	TYP	TYPICAL		
DB	DIRECT BURIED	JB	JUNCTION BOX	UG	UNDERGROUND		
DEF	DUAL ELEMENT FUSE	J-BOX	JUNCTION BOX	UON	UNLESS OTHERWISE NOTED		
DISC	DISCONNECT	KVA	KILOVOLT-AMPERES	WP	WEATHERPROOF		
DN	DOWN	KW	KILOWATT	WT	WATERTIGHT		
DPDT	DOUBLE-POLE DOUBLE-THROW	KWH	KILOWATT-HOUR				
		LCL	LONG CONTINUOUS LOAD				
		LRA	LOCKED ROTOR AMP				
		LTG	LIGHTING				

SPA UNDERWATER LIGHT

SCALE: N.T.S.

NOTES:

- RUN 1" DIAMETER SCHEDULE 40 PVC CONDUIT FROM LIGHT TO "J" BOX AT DECK THEN TO BLANK FACE G.F.I. DEVICE WHEN SHOWN.
- BOND NICHE TO "J" BOX WITH #8 INSULATED COPPER WIRE PER N.E.C. SECTION 680.
- BOND NICHE TO REBAR WITH #8 CONTINUOUS SOLID COPPER WIRE PER N.E.C. SECTION 680.
- LIGHT CORD LENGTH 150'-0" (MAXIMUM).
- MAXIMUM NUMBER OF 90 DEGREE 36"R SWEEP BEND IN CONDUIT 3.
- CORD WRAP TO FACILITATE BULB CHANGE OUT ON DECK. CORD MUST BE LONG ENOUGH SO LIGHT CAN BE PLACED ON DECK 2 FEET FROM EDGE.
- U.L. APPROVED WET NICHE UNDERWATER LIGHT WITH DRAINAGE HOLES IN FACE OF RING OF LIGHT. INSTALLED IN ACCORDANCE WITH N.E.C. ART. 680.23.
- PROVIDE AN APPROVED POTTING COMPOUND IN THE FORMING SHELL.
- PROVIDE A STRAIN RELIEF AT SWIMMING POOL JUNCTION BOX FOR UNDERWATER LIGHT FIXTURE CORD.
- PROVIDE AN APPROVED POTTING COMPOUND AT SWIMMING POOL JUNCTION BOX.
- PROVIDE WIDE SWEEPS ON BENDS WITH A TOTAL OF NO MORE THAN (3) 90 DEGREE BEND OR 270 DEGREES.

SWIMMING POOL ELECTRICAL NOTES

SCALE: N.T.S.

POOL PANEL "P"

ENCLOSURE: NEMA 1										LOCATION: POOL EQUIP. ROOM																													
CKT	BRK	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29									
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208Y/120V VOL 3 PHASE 4 WIRE										LCL 0.125 0.125 0.000										MAXIMUM ENCLOSURE SIZE										100% RATED NEUTRAL									
225 AMP BISSING										LARGEST MOTOR: 0.000 0.000 0.000										HEIGHT 36" 20"										10,000 BREAKER RATING									
M.O. MAIN BREAKER										PER PHASE KVA: 11.428 10.758 11.034										TOTAL PER PHASE KVA: 11.553 10.883 11.034										TOTAL CONNECTED LOAD									
STANDARD LUGS										TOTAL AMPS PER PHASE: 96.28 90.69 91.94										33.47 THREE PHASE KVA										92.80 AMPS									
SURFACE MOUNTING PER										N/A																													

DISTRIBUTION PANEL "HR"

277Y/480V, 3ph, 4w, 400 A SQUARE "D", TYPE HCM

EQUIPMENT SHOWN ON THIS PARTIAL SINGLE LINE DIAGRAM WAS ENGINEERED AND PROVIDED UNDER SEPARATE PERMIT. IT IS SHOWN HERE FOR REFERENCE ONLY AND SHALL BE FIELD VERIFIED BY CONTRACTOR.

BONDING DETAIL

SCALE: N.T.S.

PANEL SCHEDULE

SCALE: NONE

ELECTRICAL SYMBOL SCHEDULE (LEGEND)

DIMENSIONS INDICATED ARE MEASURED TO CENTERLINE OF ENCLOSURE, UNLESS OTHERWISE NOTED. NOTE: SOME SYMBOLS SHOWN MAY NOT APPLY TO THIS PROJECT.

SYMBOL	DESCRIPTION	NOTES	SYMBOL	DESCRIPTION	NOTES
(2-A-100)	DENOTES LIGHTING FIXTURE CIRCUIT, FIXTURE TYPE AND FIXTURE WATTAGE		⊕	MOTOR, SIZE AS NOTED.	
⊕	CIRCUIT HOME RUN: DENOTES PANEL A, CKT. #3, - 3/4" C. MINIMUM, UON		⊕	FUSIBLE DISCONNECT SWITCH	
---	CONDUIT IN ATTIC/WALL: DENOTES 1/2" C - 2 #12 AWG CU THWN + 1 #12 CU GND	(9)	⊕	FUSIBLE DISCONNECT SWITCH WITH INTEGRAL MAGNETIC STARTER	
---	CONDUIT IN FLOOR/U.G.: DENOTES 1/2" C - 2 #12 AWG CU THWN + 1 #12 CU GND	(9)	⊕	DUPLEX RECEPTACLE IN WALL ⊕ +15", UON	(12)
---	CONDUIT RUN: DENOTES 1/2" C - 3 #12 AWG CU THWN + 1 #12 CU GND	(9)	⊕	DUPLEX ISOLATED GROUND RECEPTACLE IN WALL ⊕ +15", UON	(12)
---	CONDUIT RUN: DENOTES 3/4" C - 4 #12 AWG CU THWN + 1 #12 CU GND	(12)	⊕	DUPLEX GROUND FAULT INTERRUPTING RECEPTACLE IN WALL ⊕ +15", UON	(12)
---	CONDUIT RUN: DENOTES 3/4" C - 5 #12 AWG CU THWN + 1 #12 CU GND	(12)	⊕	QUADRUPEX RECEPTACLE IN WALL ⊕ +15", U.O.N	(12)
---	CONDUIT RUN: DENOTES 1" C - 6 #12 AWG CU THWN + 1 #12 CU GND	(12)	⊕	SPECIAL PURPOSE ELECTRICAL OUTLET PER PLAN IN WALL ⊕ +15", UON	(12)
---	CONDUIT RUN: DENOTES 1" C - 6 #12 AWG CU THWN + 1 #12 CU GND	(12)	⊕	SWITCHED ONE SIDE DUPLEX RECEPTACLE IN WALL ⊕ +15", UON	(12)
---	CONDUIT RUN - STUBBED, CAPPED AND LABELED		⊕	DUPLEX RECEPTACLE FLUSH IN CEILING	
---	EXISTING CONDUIT		⊕	WALL MOUNTED JUNCTION BOX ⊕ +8" MIN., UON	
---	BATTERY OPERATED EMERGENCY LIGHTING FIXTURE		⊕	TELEPHONE OUTLET IN WALL ⊕ +15", UON	(1), (6), (12)
---	ILLUMINATED EXIT SIGN MOUNTED ON WALL		⊕	COMBO TELEPHONE & COMPUTER/DATA OUTLET IN WALL ⊕ +15", UON	(1), (3), (6), (8), (12)
---	ILLUMINATED EXIT SIGN MOUNTED ON CEILING		⊕	COMPUTER/DATA OUTLET IN WALL ⊕ +15", UON	(1), (3), (6), (8), (12)
---	LOW LEVEL ILLUMINATED EXIT SIGN MOUNTED ON WALL PER PLANS		⊕	COMPUTER/DATA OUTLET IN WALL ⊕ +15", UON	(1), (3), (6), (8), (12)
---	WALL MOUNTED LIGHTING FIXTURE		⊕	SUBSCRIPT DENOTES PERFORMANCE CATEGORY OF DATA SYSTEM	(1), (3), (6), (8), (12)
---	WALL MOUNTED NIGHT LIGHTING FIXTURE		⊕	INTERCOMMUNICATIONS HANDSET ON WALL ⊕ +48", UON	(12)
---	WALL MOUNTED LIGHTING FIXTURE WITH EMERGENCY BATTERY PACK PER PLANS		⊕	TELEVISION OUTLET IN WALL ⊕ +15", UON	(1), (3), (8), (12)
---	CEILING MOUNTED LIGHTING FIXTURE		⊕	MICROPHONE OUTLET IN WALL ⊕ +15", UON	(1), (12)
---	CEILING MOUNTED NIGHT LIGHTING FIXTURE		⊕	S-VIDEO JACK IN WALL ⊕ +15", UON	
⊕	SINGLE POLE AC SNAP SWITCH ⊕ +48", UON	(11), (12)	⊕	SOUND CONSOLE REMOTE OUTLET ⊕ +15", UON	(1), (12)
⊕	SINGLE POLE AC SNAP SWITCH ⊕ +48", UON	(11), (12)	⊕	VOLUME CONTROL ON WALL ⊕ +48", UON	(12)
⊕	TWO POLE AC SNAP SWITCH ⊕ +48", UON	(11), (12)	⊕	EXTERIOR SPEAKER ⊕ +10'-0", UON	
⊕	THREE WAY AC SNAP SWITCH ⊕ +48", UON	(11), (12)	⊕	BELL ⊕ +10'-0", UON	
⊕	FOUR WAY AC SNAP SWITCH ⊕ +48", UON	(11), (12)	⊕	TERMINAL CABINET PER PLANS, FLUSH MOUNTED IN WALL	(5)
⊕	KEY OPERATED AC LOCK SWITCH ⊕ +48", UON	(11), (12)	⊕	TERMINAL CABINET PER PLANS, SURFACE MOUNTED ON WALL	(7)
⊕	HORSEPOWER RATED AC SNAP SWITCH ⊕ +48", UON	(11), (12)	⊕	SYSTEM MASTER PANEL PER PLANS, FLUSH MOUNTED IN WALL	
⊕	SYSTEM CONTROL SWITCH PER PLANS ⊕ +48", UON	(11), (12)	⊕	SYSTEM MASTER PANEL PER PLANS, SURFACE MOUNTED ON WALL	
⊕	SINGLE POLE AC SNAP SWITCH (WITH PILOT LAMP) ⊕ +48", UON	(11), (12)	⊕	ELECTRICAL PANELBOARD PER PLANS, FLUSH MOUNTED IN WALL	(4)
⊕	DIMMER SWITCH ⊕ +48", UON	(11), (12)	⊕	ELECTRICAL PANELBOARD PER PLANS, SURFACE MOUNTED ON WALL	

SINGLE LINE DIAGRAM

SCALE: N.T.S.

BONDING DETAIL

SCALE: N.T.S.

SYMBOLS

SCALE: N.T.S.

POOL CONTROL DIAGRAM

SCALE: N.T.S.

SPA CONTROL DIAGRAM

SCALE: N.T.S.

POOL ELECTRICAL SYMBOLS, NOTED AND DETAILS

710 WILSHIRE BOULEVARD
MIXED-USE HOTEL PROJECT
SANTA MONICA - CALIFORNIA 90401

COUNTY OF LOS ANGELES
DEPARTMENT OF PUBLIC HEALTH
ENVIRONMENTAL HEALTH
SWIMMING POOL PLAN CHECK

This approval does not authorize the violation of any law, ordinance or regulation.

L.A. COUNTY HEALTH OFFICER

Approved 3-24-11 By: [Signature]
(date)

See Attached Plan Correction Sheet

This approval expires one year from the date on the stamp.