

- KEYED NOTES**
- 1 "E"-INDICATES EXISTING LIGHT FIXTURE TO REMAIN CONTRACTOR SHALL PROTECT IN PLACE.
 - 2 "EX"-INDICATES EXISTING LIGHT FIXTURE TO BE REMOVED.
 - 3 "ER"-INDICATES EXISTING LIGHT FIXTURE TO BE REPLACED WITH NEW TYPE "SH" FIXTURE.
 - 4 FOUR EXISTING UPLIGHTS (NOT SHOWN) UPLIGHTING EXISTING TREES TO BE RELOCATED SHALL BE REMOVED.
 - 5 EXISTING THREE FLAG POLE UPLIGHTS AND LANDSCAPE CONTROLLER (NOT SHOWN) TO BE REMOVED.
 - 6 EXISTING TWO PARKING LOT LIGHT POLES (NOT SHOWN) TO BE REMOVED.
 - 7 EXISTING FENCE LIGHTING SYSTEM TO REMAIN, FOR EXISTING PORTION OF FENCE TO BE REMOVED, CONTRACTOR SHALL DISCONNECT AND REMOVE AS REQUIRED.
 - 8 EXISTING PANELBOARD ON EXISTING BACKSTOP TO BE REMOVED.
 - 9 PROVIDE AN INGRADE PULL BOX AND ROUTE (1) 1 1/2" EMPTY CONDUIT TO EXISTING MAIN SWITCHBOARD IN MAINTENANCE BUILDING.
 - 10 CONCRETE PEDESTAL WITH RECEPTACLES FOR TEMPORARY EVENT POWER, REFER TO DETAIL 5 ON SHEET LE-3.
 - 11 LIGHT POLE SHALL BE ORDERED WITH AN INTEGRAL SINGLE GANG BOX WITH SEPARATE INTERNAL CONDUIT DOWN POLE FOR LIGHTING CONTROL. PROVIDE LEAD #CHWP-SDY-PST SINGLE BUTTON LOW VOLTAGE CONTROL ROUTE (1) 3/4" CONDUIT WITH A SHIELDED CATSE CABLE TO THE MASTER LIGHTING CONTROL PANEL.
 - 12 PROVIDE AN INGRADE PULLBOX TO TRANSITION CONDUCTOR SIZES DOWN FROM #6'S TO #10'S FOR REMAINDER OF BRANCH CIRCUIT.
 - 13 PROVIDE AN INGRADE PULLBOX AND ROUTE (1) 1 1/2" EMPTY CONDUIT TO ELECTRICAL CLOSET IN AMPHITHEATER.
 - 14 CIRCUIT THROUGH THE LIGHTING CONTROL PANEL IN BUILDING. REFER TO DETAIL 7 ON SHEET LE-3.
 - 15 CIRCUIT THROUGH CONTACTORS IN BUILDING. REFER TO DETAIL 8 ON SHEET LE-3.
 - 16 TO AMPHITHEATER LIGHTING CONTROL PANEL REFER TO THE AMPHITHEATER ELECTRICAL DRAWINGS FOR CIRCUITING REQUIREMENTS.
 - 17 KOOL FOG PUMP: 208V, 16, 2.0 H.P.

MIRC ENGINEERING, INC.
 Professional Engineer & Lighting Consultants
 No. 113453
 Exp. 09/30/14
 PALM DESERT | SANTA ANA | SAN DIEGO

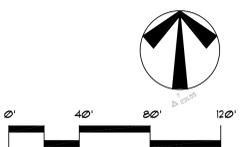


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Rancho Mirage Community Park Expansion & Amphitheater Project
 CP 12-284
 71-560 San Jacinto Dr
 Rancho Mirage, CA 92270
 for
The City of Rancho Mirage
 69-825 Highway 111
 Rancho Mirage, CA 92270
 760.324.4511

SHEET TITLE:
ELECTRICAL SITE PLAN
 SHEET:
LE-1



A

B

C

D

E



MIRC
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Project Number:
1304600



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**Rancho Mirage
Community Park
Expansion &
Amphitheater
Project**

CP 12-284
71-560 San Jacinto Dr
Rancho Mirage, CA
92270
for
**The City of
Rancho Mirage**
69-825 Highway 111
Rancho Mirage, CA 92270
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SHEET TITLE:
SITE PHOTOMETRIC PLAN

SHEET:
LE-2

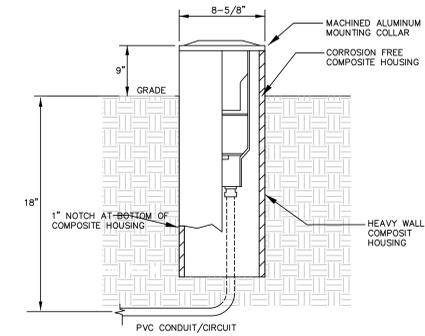
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PANEL: P (EXIST.)		PANEL VOLTAGE: 120/240 1P, 3W		CIRCUIT CODE: N : NON-CONTINUOUS				
LOCATION: MAINT. BLDG		BUS: 200A		L : LONG-CONTINUOUS				
MOUNTING SURFACE		MAIN: L.O.		R: DEMANDABLE RECEPTACLES				
		AIC RATING: 10,000		K: KITCHEN				
Q	VA LOAD	LOAD DESCRIPTION	TYPE	C.B.	C.B.	TYPE	VA LOAD	Q
A	B		M	R	L	TR	A	B
1	1920	EXIST. CIRCUIT	N		30	2	1920	2
3	1920	EXIST. CIRCUIT	N		30	2	1920	4
5	500	EXIST. CIRCUIT	N		20	2	900	6
7	900	EXIST. CIRCUIT	N		30	2	900	8
9	1920	EXIST. CIRCUIT	N		30	2	1920	10
11	1920	EXIST. CIRCUIT	N		30	2	1920	12
13	2250	EXIST. CIRCUIT	N		40	2	500	14
15	2250	EXIST. CIRCUIT	N		30	2	2200	16
17		SPARE	N		20	1		18
19		SPARE	N		20	1		20
21		SPARE	N		20	1		22
23		SPACE	N					24
25		SPACE	N					26
27		SPACE	N					28
29		SPACE	N					30
PHASE TOTALS							7890	7390
Total Phase A:							14480	23160
Total Phase B:							13980	5300
CONNECTED VA (CODE N):								
CONNECTED VA (CODE L):								
CONNECTED VA (CODE R):								
CONNECTED VA (CODE K):								
TOTAL CONNECTED KVA:							28.5	
DEMAND KVA:								
TOTAL ADJUSTED KVA:							28.5	
TOTAL PANEL AMPS:							118.7	
AMPS W/LCL:							124.3	

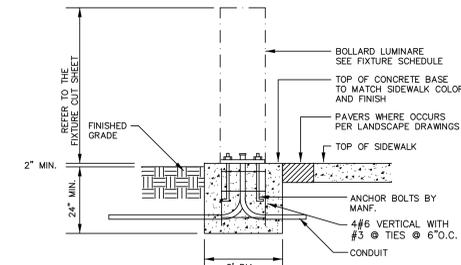
PANEL SCHEDULE 'P' SCALE: NONE 10

PANEL: L (NEW)		PANEL VOLTAGE: 120/208 3P, 4W		CIRCUIT CODE: N : NON-CONTINUOUS				
LOCATION: ELEC. CLOSET		BUS: 200A		L : LONG-CONTINUOUS				
MOUNTING SURFACE		MAIN: L.O.		R: DEMANDABLE RECEPTACLES				
		AIC RATING: 10,000		K: KITCHEN				
Q	VA LOAD	LOAD DESCRIPTION	TYPE	C.B.	C.B.	TYPE	VA LOAD	Q
A	B		M	R	L	TR	A	B
1	735	360 LIGHTING - PROMENADE	L		20	1	4080	2
3	360	250 LIGHTING - PROMENADE	L		20	1	4080	4
5	250	360 LIGHTING - LANDSCAPE	L		20	1	600	6
7	300	360 LIGHTING - FLAG POLE	L		20	1	4080	8
9	300	360 LIGHTING - RANCHO	L		20	1	4080	10
11	360	RECEPTS - PROMENADE	N		20	1	4080	12
13	360	RECEPTS - PROMENADE	N		20	1	600	14
15	360	RECEPTS - PROMENADE	N		20	1	4080	16
17	360	RECEPTS - PROMENADE	N		20	1	4080	18
19	360	RECEPTS - PROMENADE	N		20	1	4080	20
21	360	RECEPTS - PROMENADE	N		20	1	600	22
23	360	RECEPTS - PROMENADE	N		20	1	4080	24
25	360	RECEPTS - PROMENADE	N		20	1	4080	26
27	200	LIGHTING CONTROLS	N		20	1	4080	28
29	525	LIGHTING - PARKING LOT	L		20	1	600	30
31	525	LIGHTING - PARKING LOT	L		20	1	600	32
33	540	RECEPTS - PROMENADE	N		20	1	1584	34
35	360	RECEPTS - PROMENADE	N		20	1	1584	36
37		SPACE	N				1584	38
39	1584	KOOL FOG PUMP	N		25	2	1584	40
41	1584	KOOL FOG PUMP	N		25	2	1584	42
PHASE TOTALS							15624	13128
Total Phase A:							18054	44588
Total Phase B:							18728	9121
Total Phase C:							18927	
CONNECTED VA (CODE N):								
CONNECTED VA (CODE L):								
CONNECTED VA (CODE R):								
CONNECTED VA (CODE K):								
TOTAL CONNECTED KVA:							53.8	
DEMAND KVA:								
TOTAL ADJUSTED KVA:							53.8	
TOTAL PANEL AMPS:							148.6	
AMPS W/LCL:							157.9	

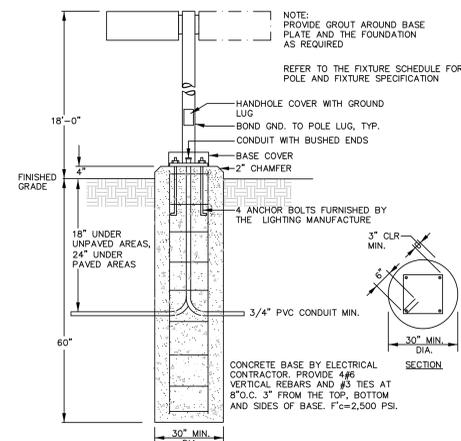
PANEL SCHEDULE 'L' SCALE: NONE 9



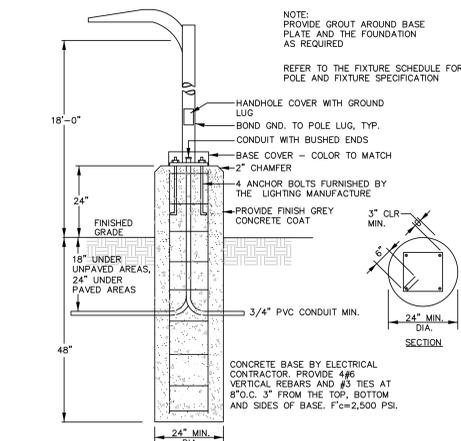
FIXTURE TYPE 'SF' BASE DETAIL SCALE: NONE 4



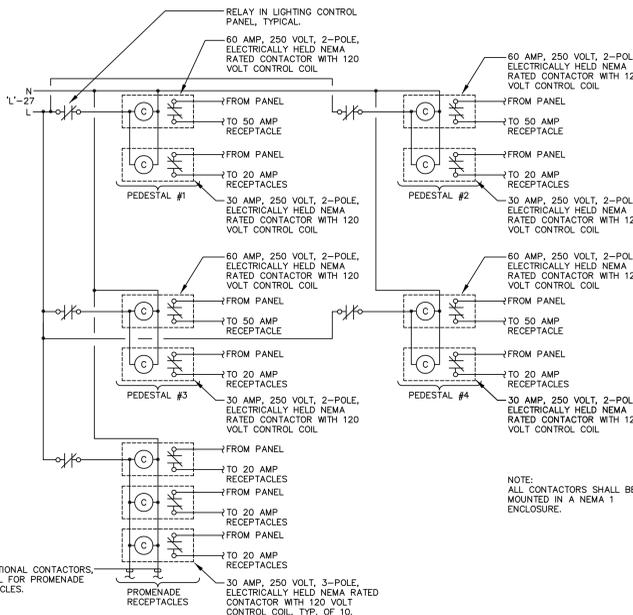
FIXTURE TYPE 'SE' BASE DETAIL SCALE: NONE 3



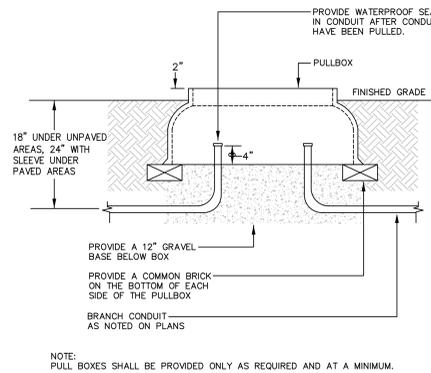
FIXTURE TYPE 'SD' BASE DETAIL SCALE: NONE 2



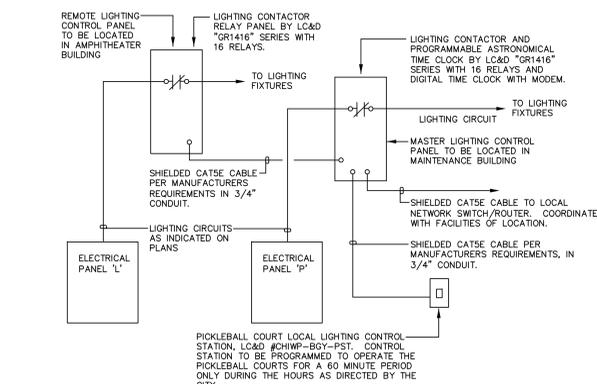
FIXTURE TYPE 'SA', 'SB' AND 'SC' BASE DETAIL SCALE: NONE 1



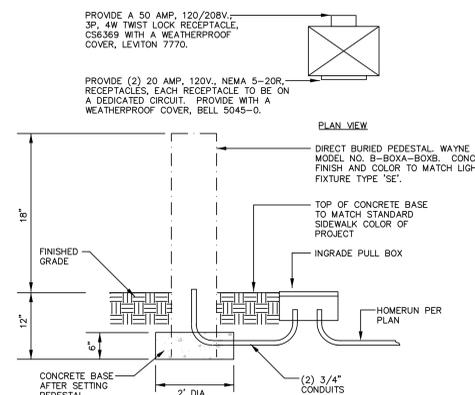
EVENT POWER PEDESTAL CONTROL DIAGRAM SCALE: NONE 8



TYPICAL INGRADE PULLBOX SCALE: NONE 6



EXTERIOR LIGHTING CONTROL SYSTEM SCALE: NONE 7



EVENTS POWER PEDESTAL BASE DETAIL SCALE: NONE 5



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CP 12-284
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Rancho Mirage, CA 92270
for
The City of Rancho Mirage
69-825 Highway 111
Rancho Mirage, CA 92270
760.324.4511

SHEET TITLE: ELECTRICAL DETAILS
SHEET: LE-3
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GENERAL

- THE FOLLOWING NOTES REFLECT THE REQUIREMENTS OF THE ELECTRICAL CONTRACTOR TO PROVIDE AND INSTALL A COMPLETE AND OPERABLE ELECTRICAL SYSTEM.
- IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO PROVIDE ALL MATERIALS, CONDUIT, WIRING, CONTROL DEVICES AND EQUIPMENT REQUIRED TO INSURE ALL SYSTEMS ARE COMPLETE AND OPERABLE.
- THE DIAGRAMS AND SYMBOLS ILLUSTRATED ON THESE DRAWINGS REFLECT THE INTENT OF THE ELECTRICAL SYSTEMS AND ARE SHOWN DIAGRAMMATICALLY.
- THE CONTRACTOR SHALL REVIEW THE COMPLETE SET OF CONSTRUCTION DOCUMENTS AND VISIT THE PROJECT EXISTING CONDITIONS PRIOR TO SUBMITTING BIDS.
- THE CONTRACTOR SHALL MAINTAIN A COMPLETE SET OF CONSTRUCTION DOCUMENTS, SPECIFICATIONS, SHOP DRAWINGS, ADDENDUM'S AND CHANGE ORDERS ON THE JOB SITE.
- THE ELECTRICAL CONTRACTOR SHALL NOTIFY THE PROJECT MANAGER AND ARCHITECT SHOULD A CONFLICT EXIST BETWEEN THESE DRAWINGS AND THE ACTUAL FIELD CONDITIONS.
- COORDINATE THE INSTALLATION OF THE ELECTRICAL SYSTEMS WITH ALL PROJECT TRADES AND NOTIFY THE PROJECT MANAGER IF A CONFLICT EXISTS.
- THE ELECTRICAL CONTRACTOR SHALL PROVIDE A WARRANTEE FOR THE ELECTRICAL WORK INCLUDING MATERIALS, EQUIPMENT AND WORKMANSHIP FOR A PERIOD OF ONE (1) YEAR AFTER ACCEPTANCE OF THE PROJECT BY THE OWNER. NO ADDITIONAL COST FOR LABOR OR REPLACEMENT OF PARTS, MATERIALS AND EQUIPMENT SHALL BE INCURRED BY THE OWNER.
- RETURN OPERATING MANUALS, COPIES OF SHOP DRAWINGS, BROCHURES AND EQUIPMENT WARRANTIES TO THE OWNER AT THE COMPLETION OF THE PROJECT.
- MAINTAIN AND UPDATE DAILY A COMPLETE SET OF AS-BUILT ELECTRICAL DOCUMENTS AND RETURN TO THE PROJECT MANAGER AT THE END OF THE PROJECT.
- ELECTRICAL EQUIPMENT SHALL BE BRACED OR ANCHORED TO RESIST A HORIZONTAL FORCE ACTING IN ANY DIRECTION USING THE FOLLOWING CRITERIA:
 - FIXED EQUIPMENT ON GRADE: 33 PERCENT OF OPERATING WEIGHT.
 - FIXED EQUIPMENT ON STRUCTURE: 40 PERCENT OF OPERATING WEIGHT.
 - FOR FLEXIBLY MOUNTED EQUIPMENT, USE 4 TIMES ABOVE VALUES. SIMULTANEOUS VERTICAL FORCE, USE ONE-THIRD TIMES HORIZONTAL FORCE.
- THESE NOTES DO NOT REPLACE BOOK SPECIFICATIONS. IF A CONFLICT IS FOUND THE CONTRACTOR SHALL NOTIFY THE ENGINEER BEFORE PROCEEDING WITH WORK.

REGULATIONS, CODES AND PERMITS

- THE COMPLETE ELECTRICAL SYSTEM SHALL BE INSTALLED IN ACCORDANCE WITH THE 2010 CALIFORNIA ELECTRICAL CODE (CEC). REFER TO THE ARCHITECTURAL DRAWINGS FOR A LIST OF CODES THAT PERTAIN TO THIS PROJECT.
- NOTHING ON THE DRAWINGS, GENERAL NOTES OR SPECIFICATIONS IS TO BE INTERPRETED AS PERMITTING WORK NOT CONFORMING WITH ANY CODE, REGULATION OR CITY ORDINANCES.

MATERIALS

- ELECTRICAL MATERIALS AND PARTS SHALL BE PROVIDED BY THE SAME MANUFACTURE FOR SAME MANUFACTURE OR GROUP OF MATERIALS.
- ALL MATERIALS, PARTS AND EQUIPMENT SHALL BE NEW UNLESS OTHERWISE NOTED.

SERVICES

- THE CONTRACTOR SHALL COORDINATE ALL SERVICE REQUIREMENTS WITH EACH UTILITY COMPANY PRIOR TO BIDDING THE PROJECT. IF FINAL UTILITY PLANS ARE NOT AVAILABLE THE CONTRACTOR SHALL PROVIDE A SEPARATE ALLOWANCE IN THE BID FOR CONDUITS AND STRUCTURES AS A SEPARATE LINE ITEM FOR EACH UTILITY SYSTEM.
- THE CONTRACTOR SHALL VERIFY ALL UTILITY COMPANY SERVICE REQUIREMENTS (POWER, TELEPHONE AND CABLE), POINT OF CONNECTIONS, QUANTITY OF CONDUITS AND SIZES, CONDUIT INSTALLATION, CONDUIT ENCASMENT, PULL BOX, VAULTS, EQUIPMENT PADS, JOINT TRENCHES AND EQUIPMENT GROUNDING REQUIREMENTS PRIOR TO STARTING CONSTRUCTION.
- VERIFY THE AVAILABLE FAULT CURRENT WITH THE UTILITY COMPANY PRIOR TO SUBMITTING ELECTRICAL DISTRIBUTION EQUIPMENT SHOP DRAWINGS.
- COORDINATE ALL UTILITY COMPANY INSPECTIONS DURING THE INSTALLATION OF CONDUITS AND STRUCTURES.

SHOP DRAWINGS AND SUBSTITUTIONS

- THE CONTRACTOR SHALL NOT RELEASE ELECTRICAL EQUIPMENT OR LIGHTING FIXTURES UNTIL SHOP DRAWINGS HAVE BEEN SUBMITTED AND REVIEWED.
- PRODUCT SUBSTITUTIONS WILL ONLY BE ALLOWED AFTER THE PROJECT PLANS AND SPECIFICATIONS ARE BID AS SPECIFIED.
- SUBSTITUTIONS WILL ONLY BE CONSIDERED DURING THE SHOP DRAWING PROCESS AND ONLY IF THE SUBMITAL INCLUDES UNIT PRICES FOR EACH SPECIFIED AND ALTERNATE PRODUCTS AND A TOTAL PROJECT SAVINGS.
- SUBSTITUTION PRODUCTS SHALL BE EQUAL TO THE PERFORMANCE, QUALITY AND WORKMANSHIP OF THE SPECIFIED PRODUCT. WORKING SAMPLES MAY BE REQUIRED.

ELECTRICAL GENERAL NOTES

- SHOP DRAWINGS SHALL BE PROVIDED FOR THE FOLLOWING ITEMS: ELECTRICAL MATERIALS, CONDUIT AND WIRE, SWITCHGEAR, PANELS, TRANSFORMERS, LIGHTING FIXTURES, LAMPS, CONTROL EQUIPMENT, FIRE ALARM SYSTEMS, AND SPECIAL SYSTEMS NOTED ON DRAWINGS OR SPECIFICATIONS.
- ELECTRICAL EQUIPMENT, PARTS AND MATERIALS SHALL BE RELEASED TO INSURE THE CONSTRUCTION SCHEDULE IS NOT JEOPARDIZED DUE TO LATE DELIVERIES.
- MAIN SWITCHBOARD SHOP DRAWINGS SHALL BE SUBMITTED TO THE SERVING UTILITY COMPANY FOR REVIEW PRIOR TO RELEASING PERMITS FOR FABRICATION, METERING FACILITIES AND UNDERGROUND PULL SECTIONS SHALL MEET THE LOCAL UTILITY COMPANY REQUIREMENTS.

GROUNDING

- THE COMPLETE ELECTRICAL SYSTEM SHALL BE GROUNDED IN ACCORDANCE WITH ARTICLE 250 - GROUNDING, OF THE CALIFORNIA ELECTRICAL CODE (CEC).
- VERIFY SYSTEM GROUNDING REQUIREMENTS AND PROVIDE GROUND RODS AS REQUIRED TO INSURE THAT THE RESISTANCE TO GROUND IS 25 OHMS OR LESS.
- THE COMPLETE ELECTRICAL SYSTEM SHALL BE TESTED TO INSURE COMPLIANCE GROUNDING REQUIREMENTS.
- THE METHOD OF OBTAINING GROUND RESISTANCE SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE JAMES C. BIDDEE MANUAL PUBLISHED ON THE SUBJECT.

SERVICE AND DISTRIBUTION EQUIPMENT

- PANELBOARDS WITH MOLDED CASE CIRCUIT BREAKERS SHALL BE FURNISHED WITH HINGED LOCKABLE DOORS THAT ARE KEYS ALIKE, INDEX CARD HOLDERS AND PERMANENT DEVICE NUMBERS. PANELS SHALL BE AS MANUFACTURED BY SIEMENS, EATON OR EQUAL.
- WHEN ALLOWED, LOAD CENTERS SHALL BE FURNISHED WITH PLUG-IN CIRCUIT BREAKERS. LOAD CENTERS SHALL BE AS MANUFACTURED BY SIEMENS, EATON OR EQUAL.
- SEPARATE COMPARTMENTS ABOVE PANEL BOARDS SHALL BE PROVIDED FOR TIME CLOCKS, RELAYS ETC. AS REQUIRED.
- REFER TO PANEL SCHEDULES FOR PANEL MOUNTING REQUIREMENTS, VOLTAGE AND INDIVIDUAL DEVICE REQUIREMENTS.
- CIRCUIT BREAKERS SHALL BE BOLT-ON TYPE UNLESS OTHERWISE NOTED, WITH A MINIMUM GROUND FAULT RATING OF 10,000 AIC FOR 120/208 AND 120/240 VOLT SYSTEMS.
- PROVIDE WIRE GUTTERS BELOW AND ABOVE PANEL BOARDS TO FACILITATE MULTIPLE BRANCH CIRCUIT CONDUITS.
- NO PIPES, DUCTS OR EQUIPMENT FOREIGN TO THE ELECTRICAL SYSTEM SHALL BE PERMITTED TO BE LOCATED WITHIN THE DEDICATED SPACE ABOVE THE MAIN SWITCHBOARD, DISTRIBUTION OR ELECTRICAL PANELS.
- THE MAIN SWITCHBOARD SHALL BE PROVIDED WITH UNDERGROUND PULL SECTIONS AND METERING FACILITIES THAT MEETS THE SERVING UTILITY COMPANY REQUIREMENTS.
- THE COMPLETE SYSTEM SHALL BE "SERIES RATED" FOR THE AVAILABLE FAULT CURRENT; THE SERIES CONNECTED DEVICES SHALL HAVE BEEN INVESTIGATED BY UL IN COMBINATION WITH THE END USE EQUIPMENT, EQUIPMENT IN WHICH THESE DEVICES ARE USED SHALL BE LABELED WITH THE SERIES CONNECTED RATING. ALL EQUIPMENT SHALL BE LABELED IN ACCORDANCE WITH CEC 110.22.
- FEEDER CONNECTIONS AT ALL ELECTRICAL DISTRIBUTION EQUIPMENT SHALL BE TIGHTENED BEFORE GROUND TESTS ARE TAKEN.
- ELECTRICAL EQUIPMENT INSTALLED OUTDOORS SHALL BE PROVIDED WITH WEATHERPROOF ENCLOSURE MANUFACTURED BY THE SAME MANUFACTURE.
- PROVIDE ENGRAVED NAMEPLATES ON THE SWITCHBOARD AND DEVICES, DISTRIBUTION PANELS AND DEVICES, PANEL BOARDS AND TRANSFORMERS. NAMEPLATES SHALL BE 3 PLY WITH BLACK FACE AND WHITE CORE PERMANENTLY ATTACHED WITH STAINLESS STEEL LOCKING SCREWS.
- THE CONTRACTOR SHALL CONFIRM THAT EQUIPMENT WORKING SPACE AND GUARDING IN FRONT OF ALL SWITCHBOARDS, PANELS, DISCONNECT SWITCHES AND ALL OTHER EQUIPMENT REQUIRED SERVINGS OR ADJUSTMENT AS OUTLINE IN SECTION 110.28 OF THE C.E.C.
- APPLICABLE EQUIPMENT MANUFACTURER'S SHALL BE RSE SIERRA, SIEMENS, SQUARE D OR EATON.

DEVICES

- SWITCHES SHALL HAVE A RATING OF 20 AMPERE AND BE TOTALLY ENCLOSED TOGGLE TYPE WITH 277V A.C. RATING FOR FULL CAPACITY. MANUFACTURED BY PASS & SEYMOUR, HUBBELL OR LEVITON.
- DEVICE AND COVER PLATE COLORS SHALL BE COORDINATED WITH THE PROJECT MANAGER AND ARCHITECT PRIOR TO INSTALLATION.
- RECEPTACLES SHALL BE GROUNDED TYPE 120 VOLT RATED AT 20 AMPERE TOTALLY ENCLOSED, MANUFACTURED BY PASS & SEYMOUR, HUBBELL OR LEVITON.
- GFCI RECEPTACLES SHALL BE PROVIDED AT LOCATIONS INDICATED AND IN ACCORDANCE WITH THE CALIFORNIA ELECTRICAL CODE ARTICLE 210.8.
- SPECIFICATION GRADE SWITCHES AND RECEPTACLES SHALL BE PROVIDED, MANUFACTURED BY PASS & SEYMOUR, HUBBELL OR LEVITON.

BRANCH CIRCUITING

- BRANCH CONDUIT AND WIRE HASH MARKS MAY NOT BE DEPICTED ON THE DRAWINGS. THE CONTRACTOR SHALL PROVIDE BRANCH CONDUITS AND WIRING TO ALL CIRCUITS INDICATED AND AS REQUIRED FOR A COMPLETE AND OPERABLE BRANCH CIRCUIT DISTRIBUTION SYSTEM IN ACCORDANCE WITH THE LATEST ADOPTED VERSION OF THE CALIFORNIA OR NATIONAL ELECTRICAL CODE.
- MINIMUM CONDUCTOR SIZE SHALL BE #12 COPPER WITH A MINIMUM CONDUIT SIZE OF 3/4".
- PROVIDE A GREEN GROUND CONDUCTOR IN ALL BRANCH CIRCUIT AND FEEDER CABLES OR CONDUITS.
- AT THE END OF THE PROJECT, THE CONTRACTOR SHALL PROVIDE A DETAILED AS-BUILT DRAWING TO THE OWNER AND ENGINEER.

CONDUCTORS & WIRING

- ALL CONDUCTORS SHALL BE COPPER WITH AMPACITY RATINGS IN ACCORDANCE WITH ARTICLE 310.15 AND TABLE 310.16.
- ALUMINUM CONDUCTORS ARE NOT APPROVED FOR THIS PROJECT.
- CONDUCTORS SHALL BE CODE GRADE THHN/THWN (DRY/WET) 600 VOLT 75 DEGREE C. COPPER WITH MARKINGS (24" O.C.) INDICATING MANUFACTURE, WIRE TYPE, AMPERAGE AND SIZE.
- THE MINIMUM WIRE SIZE SHALL BE #12 AWG SOLID. WIRE SIZE #8 AND LARGER SHALL BE COPPER STRANDED.
- SOLDERLESS CONNECTORS AND TERMINALS SHALL BE USED FOR TERMINATING STRANDED CONDUCTORS #8 AND LARGER. APPROVED MANUFACTURES ARE BURNDY OR T&L.
- BRANCH CIRCUIT AND FIXTURE WIRING, SPLICES AND TAPS FOR CONDUCTORS #10 AND SMALLER SHALL BE MADE WITH UL LISTED 600 VOLT CONNECTORS AS MANUFACTURED BY IDEAL OR SCOTCHLOCK.
- CONDUCTORS IN PANELS, TERMINAL CABINETS, PULL BOXES AND WIRING GUTTERS SHALL BE NEATLY GROUPED AND TAPES MANUFACTURED BY #33 PLASTIC ELECTRICAL TAPE OR T&B #TY-RAP CABLE STRAPS.
- REMOVE ALL DEBRIS AND MOISTURE FROM CONDUITS, BOXES AND CABINETS BEFORE THE INSTALLATION OF CONDUCTORS.
- WHEN REQUIRED MINERALCAL OR LINSEED SOAP ARE APPROVED WIRE PULLING COMPOUNDS, OIL, GREASE OR SIMILAR SUBSTANCES ARE NOT APPROVED AS PULLING COMPOUNDS.
- ALL CONDUCTORS SHALL BE PERMANENTLY TAGGED TO INDICATE SYSTEM OR CIRCUIT NUMBER.
- LOW VOLTAGE CONDUCTORS FOR HVAC AND OTHER SYSTEMS REQUIRING LOW VOLTAGE CONTROL SIGNALS SHALL SIZED IN ACCORDANCE TO SPECIFIC SYSTEM REQUIREMENTS.
- CONDUCTOR FOR SPECIAL SYSTEMS (DATA, TELEPHONE, SIGNAL, FIRE ALARM ETC.) SHALL MEET THE SYSTEM SPECIFICATION AND CODE REQUIREMENTS GOVERNING SYSTEM INSTALLATION REQUIREMENTS.
- CONNECTIONS OR SPLICES LOCATED IN PULL BOXES OR OTHER SPACE BELOW GRADE SHALL BE WEATHERPROOF. #8 CONDUCTORS AND SMALLER SHALL USE SCOTCHLOCK CONNECTORS IMBEDDED WITHIN A "UNIPAK" 3M SCOTCHCAST EPOXY TYPE RESIN. #8 AND LARGER SHALL USE "HI-PRESS" HYDRAULICALLY COMPRESSED HEAVY WALL CONNECTOR AS MANUFACTURED BY THOMAS & BETTS #HS-LR OR RAYCHEM #WTVM OR #WCSM SERIES PRE-APPLIED SEALANT. POLYESTER HEAT SHRINKABLE TUBE INSULATORS FOR EACH CONDUCTOR OR COLD SHRINK TUBE INSULATORS RAYCHEM #RVS.
- BOLT TYPE SODERLESS CONNECTORS SHALL BE TIGHTEN TWICE AT 24 AND 48 HOURS AFTER THE ORIGINAL INSTALLATION AND BEFORE TAPING.
- RESIDENTIAL SERVICE ENTRANCE CABLES TYPE "SER" 600-VOLT CLASS COPPER CONDUCTORS WITH GROUND CONDUCTOR MAY BE USED FOR PANEL FEEDERS IN MULTIPLE UNIT RESIDENTIAL BUILDING.
- TYPE "MC" CABLE 600-VOLT CLASS COPPER CONDUCTORS WITH GROUND CONDUCTOR AND STEEL INTERLOCKING ARMOR MAY BE USED FOR ALL WIRING OUTSIDE OF A DWELLING UNIT IN MULTIPLE UNIT RESIDENTIAL BUILDINGS AND ON SECONDARY RUNS BETWEEN DEVICES. HOME RUNS ON NON-RESIDENTIAL BUILDING SHALL BE MADE WITH ELECTRICAL METALLIC TUBING CONDUITS.
- RESIDENTIAL ROMEX TYPE "NM-B" CABLE 600-VOLT CLASS COPPER CONDUCTORS WITH GROUND CONDUCTOR AND COLOR CODED JACKET IS APPROVED FOR SINGLE FAMILY AND MULTI-FAMILY RESIDENTIAL PROJECT.

CONDUIT

- ELECTRICAL METALLIC TUBING UP TO 4" SHALL BE USED AS PERMITTED BY THE ELECTRICAL CODE.
- PVC SCHEDULE 40 CONDUITS SHALL BE USED FOR UNDERGROUND INSTALLATIONS WHEN CONDUIT IS IN CONTACT WITH EARTH.
- CONDUIT RISERS SHALL BE GALVANIZED WITH HALF LAPPED IMC TAPE COVERING.
- RIGGED GALVANIZED CONDUIT SHALL BE USED IN WET OR DAMP AREAS, ON ROOFS, EMBEDDED IN CONCRETE OR MASONRY WALLS AND EXPOSED IN ALL AREAS WHERE CONDUIT IS EXPOSED TO PHYSICAL DAMAGE.
- LIQUID TIGHT FLEXIBLE CONDUITS SHALL BE USED FOR ALL FINAL CONNECTIONS TO MOTORS AND CONTROL DEVICES MOUNTED ON VIBRATING OR ROTATING EQUIPMENT.
- THE MINIMUM CONDUIT SIZE PERMITTED SHALL BE 3/4".

- PROVIDE GALVANIZED SEAMLESS COUPLINGS AND CONNECTORS (SET SCREW OR COMPRESSION TYPE) WITH FACTORY APPLIED INSULATED THROAT. DEVICES SHALL BE USED IN ACCORDANCE WITH THE ARTICLE 358 - ELECTRICAL METALLIC TUBING.
- CONDUITS INSTALLED UNDER GROUND SHALL BE INSTALLED A MINIMUM OF 18" BELOW FINISHED GRADE. CONDUITS INSTALLED UNDER STREETS AND PARKING AREAS SHALL BE INSTALLED 24" BELOW FINISHED GRADE.
- CONDUIT RUNS FOR UNDERGROUND FEEDERS RUN OUTSIDE OF THE BUILDING SHALL BE INSTALLED 24" BELOW GRADE.
- UNDERGROUND PVC CONDUIT SYSTEMS, ELECTRICAL METALLIC RACEWAY SYSTEMS SHALL BE GROUNDED TO THE SAME GROUND SYSTEM.
- EXPOSED CONDUIT SHALL BE INSTALLED PARALLEL TO AND AT RIGHT ANGLES WITH THE BUILDING FLOOR. EXPOSED CONDUITS SHALL BE GALVANIZED WHEN INSTALLED BELOW 9 FEET. EXPOSED CONDUITS ARE NOT APPROVED IN PUBLIC AREAS.
- EXPOSED CONDUITS THAT PENETRATE WALLS OR CEILINGS SHALL BE MADE WITH 90 DEGREE "L" CONDUIT BODIES FOR EMT OR RIGID CONDUITS AT PENETRATION POINTS. CONDUIT SNEEP PENETRATIONS ARE NOT ACCEPTABLE.
- CONDUIT INSTALLED WITHOUT CONDUCTORS SHALL BE INSTALLED WITH PULL ROPES, CONDUIT CAPS AND PERMANENTLY LABELED TO ITS DESTINATION AND SYSTEM.
- PENETRATIONS THROUGH FIRE RATED WALLS, CEILINGS AND FLOORS SHALL BE MADE MADE WITH APPROVED FIRE RATED MATERIALS. THE FIRE RATING SHALL BE MAINTAINED AFTER PENETRATIONS ARE MADE. FIRE RATING MATERIALS SHALL BE AS MANUFACTURED BY HILTI OR 3M.
- CONDUITS SHALL BE SUPPORTED AND BRACED TO THE STRUCTURE PER OSHPP ANCHORAGE PRE-APPROVAL #OPA-0003, #OPA-0114 AND #OPA-0120 OR OTHER OSHPP PRE-APPROVAL SYSTEM.

OUTLET, JUNCTION AND PULL BOXES

- BOXES OR SPLICE BOX ENCLOSURES SHALL SIZED AND INSTALLED IN ACCORDANCE WITH THE ELECTRICAL CODE ARTICLE 314. BOXES LOCATED OUTDOORS, WET OR DAMP LOCATIONS SHALL BE WEATHERPROOF.
- OUTLET BOXES FOR GFCI RECEPTACLE DEVICES LOCATED OUTDOORS ON COMMERCIAL APPLICATIONS SHALL BE WEATHERPROOF TYPE WITH HINGED LOCKABLE DOOR AS MANUFACTURED BY PASS & SEYMOUR #4650/4650-26/4609-KEY.
- OUTLET BOXES INSTALLED IN RATED WALL LOCATIONS SHALL BE RATED BOXES OR INSTALLED WITH FIRESTOP PUTTY PADS AS MANUFACTURED BY HILTI OR EQUAL.
- PROVIDE OUTLET BOX SUPPORTS AND BRACING AT ALL LOCATIONS INTENDED FOR PENDENT LIGHT FIXTURES, FANS, ETC.
- VERIFY THE MOUNTING HEIGHT OF ALL OUTLET BOXES PRIOR TO INSTALLATION. COORDINATE WITH OTHER TRADES AND CONSTRUCTION DOCUMENTS.
- OUTLETS BOXES (POWER, DATA, ETC.) INSTALLED AT COUNTER LOCATIONS SHALL BE INSTALLED HORIZONTALLY 6" ABOVE THE COUNTER SPLASH. COORDINATE ALL COUNTER LOCATIONS WITH THE ARCHITECTURAL DRAWINGS AND PROJECT MANAGER.
- OUTLET BOXES INTENDED FOR WALL SCONCE LIGHTING, RECEPTACLES AND SWITCH DEVICES SHALL BE INSTALLED TO MEET ADA REQUIREMENTS.
- OUTLET BOXES SHALL BE INSTALLED TO WITHIN 1/4" OF THE FINISHED NON-COMBUSTIBLE WALL OR CEILING AND FLUSH WITH COMBUSTIBLE MATERIALS IN ACCORDANCE WITH ARTICLE 314.20. REFER TO ARCHITECTURAL FINISH SCHEDULE FOR WALL AND CEILING FINISHES.
- JUNCTION, OUTLET AND PULL BOXES SHALL BE PERMANENTLY MARKED INDICATING THE ELECTRICAL AND CIRCUITS INSTALLED.

LIGHTING

- THE LIGHTING FIXTURES ARE SPECIFIED WITH A GENERIC MOUNTING FORMAT. THE CONTRACTOR IS RESPONSIBLE TO VERIFY AND PROVIDING ALL HANGARS, CLIPS AND NECESSARY HARDWARE TO INSTALL LIGHTING FIXTURE AT THE LOCATION INDICATED ON THE ARCHITECTURAL AND ELECTRICAL DRAWINGS.
- THE CONTRACTOR SHALL VERIFY THE LIGHTING FIXTURE VOLTAGE PRIOR TO SUBMITTING SHOP DRAWINGS.
- VERIFY THE COLOR TEMPERATURE OF ALL LED AND FLUORESCENT LAMPS PRIOR TO ORDERING AND INSTALLATION OF FIXTURE.
- PROVIDE A TYPED WRITTEN LIST OF A LAMP TYPES, WATTAGE'S AND 'BEAM SPREADS' FOR EACH FIXTURE LOCATION TO THE PROJECT MANAGER AT THE COMPLETION OF THE PROJECT.
- THE CONTRACTOR SHALL AIM EXTERIOR ADJUSTABLE LIGHT FIXTURES DURING THE EVENING HOURS WITH THE ARCHITECT AND/OR ENGINEER PRESENT.

CONTROL DEVICES

- ELECTRONIC TIME CLOCK SHALL BE A MULTI-FUNCTIONAL DEVICE WITH ASTRONOMICAL AND MULTIPLE FUNCTIONS AS MANUFACTURED BY INTERMATIC #I7000 SERIES PRODUCT. PROVIDE CIRCUIT RELAYS AS INDICATED ON THE PANEL SCHEDULES AND CONNECT THROUGH THE INTERMATIC TIME CLOCK.

TYPE	SYMBOL	FIXTURE MANUFACTURE / MODEL NUMBER	WATTAGE	VOLTAGE	QTY.	LAMP TYPE	DESCRIPTION AND NOTES	FINISH	MOUNTING		
									TO	TYPE	HEIGHT
SA	□	VISIONAIRE LIGHTING VLX-I-1-T3-6ALC-3-AK-UNV-AM-BZ-	71	120	N/A	LED - INCLUDED WITH FIXTURE	PARKING AREA LIGHT WITH A TYPE III DISTRIBUTION, 16'-0" POLE MOUNT	BRONZE	POLE - SQUARE	SURFACE	18'-0" A.F.G.
SB	□	VISIONAIRE LIGHTING VLX-I-1-T5-6ALC-3-AK-UNV-AM-BZ	71	120	N/A	LED - INCLUDED WITH FIXTURE	PARKING AREA LIGHT WITH A TYPE V DISTRIBUTION, 16'-0" POLE MOUNT	BRONZE	POLE - SQUARE	SURFACE	18'-0" A.F.G.
SC	□	VISIONAIRE LIGHTING VLX-I-1-T2-6ALC-3-AK-UNV-AM-BZ	71	120	N/A	LED - INCLUDED WITH FIXTURE	PARKING AREA LIGHT WITH A TYPE II DISTRIBUTION, 16'-0" POLE MOUNT	BRONZE	POLE - SQUARE	SURFACE	18'-0" A.F.G.
SD	□	VISIONAIRE LIGHTING CCS-I-1-T4-T1-1000-M-240-SFA-BZ-	1100	240	1	1000W MH	SPORTS COURT LIGHT FIXTURE WITH A TYPE IV DISTRIBUTION, 18'-0" POLE MOUNT	BRONZE	POLE - SQUARE	SURFACE	18'-0" A.F.G.
SE	⊙	WAYNE TYLER 1105-LED32-120	32	120	N/A	LED - INCLUDED WITH FIXTURE	42" BOLLARD. PROVIDE SINGLE GANG OPTION FOR BOLLARDS INDICATED WITH A RECEPTACLE.	CONCRETE - VERIFY COLOR AND TEXTURE	BASE	SURFACE	3'-6" A.F.G.
SF	⊙	BK LIGHTING HP2-LED-TR-X22-WFL-BZP-D15-120	15	120	N/A	LED - INCLUDED WITH FIXTURE	INGRADE UPLIGHT WITH WIDE FLOOD OPTICS	BRONZE	GRADE	SURFACE	9" A.F.G.
SF1	⊙	BK LIGHTING HP2-LED-TR-X22-WFL-BZP-D15NC-120	15	120	N/A	LED - INCLUDED WITH FIXTURE	INGRADE UPLIGHT WITH WIDE FLOOD OPTICS AND DIMMABLE	BRONZE	GRADE	SURFACE	9" A.F.G.
SG	⊙	KIM LIGHTING EL21853/8L3KUV-DB-FH215 SM180B	10	120	N/A	LED - INCLUDED WITH FIXTURE	STANCHION MOUNT FLOOD LIGHT	BRONZE	STANCHION	SURFACE	9" A.F.G.
SH	▽	BK LIGHTING HP2-LED-TR-X22-SP-BZP-D15-120	15	120	N/A	LED - INCLUDED WITH FIXTURE	INGRADE UPLIGHT WITH WIDE FLOOD OPTICS	BRONZE	GRADE	SURFACE	9" A.F.G.

LIGHTING FIXTURE SCHEDULE

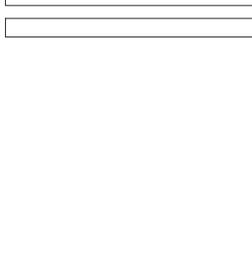
- SCALE: NONE 3
- 5 LIGHT FIXTURE CALL OUT - NUMBER INDICATES THE QUANTITY OF LIGHTS. REFER TO THE FIXTURE SCHEDULE
 - A-2,4,6 DUPLICATION SYMBOL - WALL MOUNTED +18" AFF OR AS NOTED
 - QUADPLEX RECEPTACLE - WALL MOUNTED +18" AFF OR AS NOTED
 - ⊙ GFCI DUPLEX RECEPTACLE - WALL MOUNTED MOUNTED ABOVE COUNTER OR AS REQUIRED. CONTRACTOR SHALL VERIFY MOUNTING HEIGHT WITH ARCHITECT PRIOR TO ROUGH-IN.
 - ⊙ GFCI WEATHERPROOF RECEPTACLE - WALL MOUNTED +18" OR AS NOTED
 - ⊙ SPECIALLY RATED RECEPTACLE, SIZE AND NEMA CONFIGURATION AS REQUIRED OR AS NOTED
 - ⊙ DUPLEX RECEPTACLE - WIRE FOR HALF HOT AND HALF SWITCHED +18" AFF OR AS NOTED
 - ⊙ SINGLE POLE SWITCH - WALL MOUNTED +42" OR AS NOTED, SUBSCRIPT SYMBOLS INDICATE THE FOLLOWING:
3 - THREE WAY SWITCH
M - MOTOR RATED SWITCH
d,c etc. - INDICATES THE NUMBER OF SWITCHES AND ITEMS CONTROLLED
 - ⊙ DIMMER CONTROL DEVICE - WALL MOUNTED +42" OR AS NOTED
 - ⊙ OCCUPANCY OR VACANCY SENSOR - WALL MOUNTED +42" OR AS NOTED
 - ⊙ JUNCTION BOX - ACCESSIBLE FOR THE APPLICATION SHOWN ON THE DRAWINGS
 - ⊙ JUNCTION BOX - WALL MOUNTED +18" AFF OR AS NOTED
 - ⊙ FLUSH MOUNTED PANELBOARD OR LOAD CENTER - REFER TO PANEL SCHEDULE AND GENERAL NOTES
 - ⊙ SURFACE MOUNTED PANELBOARD OR LOAD CENTER - REFER TO PANEL SCHEDULE AND GENERAL NOTES
 - ⊙ FLUSH MOUNTED TERMINAL CABINET OR SPECIAL SYSTEM TERMINAL CABINET
 - ⊙ SYSTEM GROUND IN ACCORDANCE WITH ELECTRICAL CODE ARTICLE #250
 - ⊙ DISCONNECT SWITCH - FUSED AND HP RATED ACCORDING TO THE DEVICE BEING SERVED
- CIRCUIT HOME RUN TO PANEL "A" CIRCUITS 2,4,6 - HASH MARKS INDICATE NUMBER OF CONDUCTORS. NO HASH MARKS INDICATE ONE PHASE CONDUCTOR AND ONE NEUTRAL CONDUCTOR. PROVIDE CODE SIZED COPPER BOND CONDUCTOR AS REQUIRED AND REFER TO THE GENERAL NOTES FOR ADDITIONAL REQUIREMENTS.
- CONDUIT CONCEALED WITHIN BUILDING WALLS OR CEILING SPACE. HASH MARKS INDICATE QUANTITY OF CONDUCTORS. NO HASH MARKS INDICATE ONE PHASE CONDUCTOR AND ONE NEUTRAL CONDUCTOR. PROVIDE CODE SIZED COPPER BOND CONDUCTOR AS REQUIRED AND REFER TO THE GENERAL NOTES FOR ADDITIONAL REQUIREMENTS.
- CONDUIT CONCEALED BELOW GRADE OR IN CONCRETE SLAB. HASH MARKS INDICATE QUANTITY OF CONDUCTORS. NO HASH MARKS INDICATE ONE PHASE CONDUCTOR AND ONE NEUTRAL CONDUCTOR. PROVIDE CODE SIZED COPPER BOND CONDUCTOR AS REQUIRED AND REFER TO THE GENERAL NOTES FOR ADDITIONAL REQUIREMENTS.
- EXHAUST FAN - REFER TO HVAC DRAWINGS AND SPECIFICATIONS
- MOTOR - REFER TO MOTOR SPECIFICATIONS
- MECHANICAL EQUIPMENT CALL OUT - LETTER IDENTIFIES UNIT TYPE, NUMBER IDENTIFIES UNIT REFER TO HVAC DRAWINGS AND SPECIFICATIONS FOR SPECIFIC REQUIREMENTS
- TELEPHONE OUTLET - WALL MOUNTED +18" OR AS NOTED. PROVIDE A CAT-5E CABLE TO THE COMMUNICATION BACKBOARD UNLESS OTHERWISE NOTED.
- COMBINATION DATA / TELEPHONE OUTLET - PROVIDE 2 CAT-5E CABLES TO THE COMMUNICATION BACKBOARD AND TERMINATE TO THEIR RESPECTIVE TERMINATION POINTS UNLESS OTHERWISE NOTED.
- TELEVISION OUTLET BOX - WALL MOUNTED +18" OR AS NOTED. PROVIDE A COAXIAL CABLE TO THE COMMUNICATION BACKBOARD UNLESS OTHERWISE NOTED.
- COMBINATION SMOKE AND CARBON MONOXIDE DETECTOR, SELF-CONTAINED, AC 120V, 120W, WITH BATTERY BACK-UP.
- COMMUNICATION BACKBOARD - SIZE AND TYPE AS NOTED ON DRAWINGS.
- MAIN SWITCHBOARD AND METERING ASSEMBLY - REFER TO THE SINGLE LINE DIAGRAM.

ELECTRICAL LEGEND

- SCALE: NONE 2
- | | | | | |
|--------------------------------------|---|--|----------------------------------|---------------------------------|
| ADA - AMERICAN WITH DISABILITIES ACT | EC - ELECTRICAL CONTRACTOR | INTERRUPTER | MLO - MAIN LUGS ONLY | PNL - PANEL |
| AFF - ABOVE FINISH FLOOR OR GRADE | EMT - ELECTRICAL METALLIC TUBING | GRN - GROUND | MFGR - MANUFACTURER | REC, RECEPT - RECEPTACLE |
| AMP, A - AMPERES | ENT - ELECTRICAL NON-METALLIC TUBING | HVAC - HEATING, VENTILATING AND AIR CONDITIONING | MTD, MTG - MOUNTED, MOUNTING | SHT - SHEET |
| AIC - INTERRUPTING CAPACITY | EF - EXHAUST FAN | HP - HORSEPOWER | NC - NORMALLY CLOSED | SO - SQUARE |
| (SYMMETRICAL) | E - EQUIPMENT GROUND (GREEN) | INC - INCANDESCENT | NO - NORMALLY OPENED | SW - SWITCH |
| AFCI - ARC FAULT CIRCUIT INTERRUPTER | E - EXISTING | JB - JUNCTION BOX | NTS - NOT TO SCALE | TV - TELEVISION |
| CIRC, CKT - CIRCUIT | F - FEEDING | K - KELVIN | NIC - NOT IN CONTRACT | TPP - TYPICAL |
| CB - CIRCUIT BREAKER | FT - FEET | KVA - KILOVOLT AMPERES | P - POLE | UNO - UNLESS NOTED OTHERWISE |
| CC - CONDUIT CONDUIT ONLY | FA - FIRE ALARM | LWL - KILOWATT | PB - PULL BOX | UGPS - UNDERGROUND PULL SECTION |
| CEC - CALIFORNIA ELECTRICAL CODE | FLA - FULL LOAD AMPS | LCL - LONG CONTINUOUS LOAD | PC - PHOTOCCELL | V - VOLTS |
| CU - COPPER | FACP - FIRE ALARM CONTROL PANEL | LTO - LIGHT, LIGHTS, LIGHTING | PH - PHASE | VA - VOLT AMPERES |
| DIA - DIAMETER | FF - FINISHED FLOOR | MCB - MAIN CIRCUIT BREAKER | PVC - POLYVINYL CHLORIDE CONDUIT | WP - WEATHERPROOF |
| DWG - DRAWING | GFCI - GROUND FAULT CIRCUIT INTERRUPTER | MIN - MINIMUM | PWR - POWER | W - WIRE |
| | | | PIV - POST INDICATOR VALVE | XFMR - TRANSFORMER |

ELECTRICAL ABBREVIATIONS

- SCALE: NONE 1



INSTRUMENTS OF SERVICE

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DRAWING DATE:	09-02-2014
REVISIONS:	
ISSUE DATES:	
PLANNING/INITIAL SET	DRAWN BY:
DESIGN DEVELOPMENT SET	GL
PLANS/REK SET	CHECKED BY:
PERMIT SET	VL
BID SET	MRC PROJECT NO:
CONSTRUCTION SET	13046.00

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Rancho Mirage Community Park Expansion & Amphitheater Project

CP 12-284
71-560 San Jacinto Dr
Rancho Mirage, CA 92270

The City of Rancho Mirage

69-825 Highway 111
Rancho Mirage, CA 92270

760.324.4511

SHEET TITLE:
ELECTRICAL GENERAL NOTES AND LEGEND

SHEET:

LE-4

LIGHTING MANDATORY MEASURES: NONRESIDENTIAL LTG-MM

Project Name: *Whitewater Park Expansion* Date: *1/27/2014*

Indoor Lighting Measures:

§131(c): **Shut-off Controls**
 For every floor, all interior lighting systems shall be equipped with a separate automatic control to shut off the lighting system for each area with floor-to-ceiling walls.

1. This automatic control shall meet the requirements of Section 119 and may be an occupancy sensor, automatic time switch, or other device capable of automatically shutting off the lighting.

2. Override for Building Lighting Shut-off: The automatic building shut-off system is provided with a manual, accessible override switch in sight of the lights. The area of override is not to exceed 5,000 square feet.

§119(d): **Automatic Control Devices Certified:** All automatic control devices specified are certified, all alternate equipment shall be certified and installed as directed by the manufacturer.

§111: **Fluorescent Ballast and Luminaires Certified:** All fluorescent fixtures specified for the project are certified and listed in the Directory. All installed fixtures shall be certified.

§131(a): **Individual Room/Area Controls:** Each room and area in this building is equipped with a separate switch or occupancy sensor device for each area with floor-to-ceiling walls.

Uniform Reduction for Individual Rooms: All rooms and areas greater than 100 square feet and more than 0.8 watts per square foot of lighting load shall be controlled with bi-level switching for uniform reduction of lighting within the room.

§131(b): **Daylight Area Control:** All rooms with windows and skylights that are greater than 250 square feet and that allow for the effective use of daylight in the area shall have 50% of the lamps in each daylight area controlled by a separate switch, or the effective use of daylight cannot be accomplished because the windows are continuously shaded by a building on the adjacent lot. Diagram of shading during different times of the year is included on plans.

§131(c): **Display Lighting:** Display lighting shall be separately switched on circuits that are 20 amps or less.

Outdoor Lighting Measures:

§130(c)1: Mandatory lighting power determination for medium base sockets without permanently installed ballasts

§132(a): All permanently installed luminaires with lamps rated over 100 Watts either have a lamp efficacy of at least 80 lumens per Watt or are controlled by a motion sensor.

§132(b): All luminaires with lamps rated greater than 175 Watts in hardcape area, including parking lots, building entrances, canopies, and all outdoor sales areas meet the Control Requirements.

§132(c)1: All permanently installed outdoor lighting meets the control requirements listed.

§132(c): Building facades, parking lots, garages, canopies, and outdoor sales areas meet the Multi-Level Lighting Requirements listed.

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CERTIFICATE OF COMPLIANCE (Part 1 of 4) OLTG-1C

Project Name: *Whitewater Park Expansion* Date: *1/27/2014*

Project Address: *71560 San Jacinto Drive Rancho Mirage, CA 92270* Total Illuminated Area: *118,691*

GENERAL INFORMATION

Phase of Construction: New Construction Addition Alteration

Documentation Author's Declaration Statement

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

Name: *Victor Leon* Signature: *[Signature]* Date: *1/27/2014*

Company: *MRC Engineering, Inc.* Phone: *760-340-9005*

Address: *72-880 Fred Waring Drive Suite C-11* CEA # CEPE #

City/State/Zip: *Palm Desert, CA 92260* Phone: *760-340-9005*

Principal Lighting Designer's Declaration Statement

I am eligible under Division 3 of the California Business and Professional Code to accept responsibility for the lighting design.

This Certificate of Compliance identifies the lighting features and performance specifications required for compliance with Title 24, Pages 1 and 6 of the California Code of Regulations.

The design features represented on this Certificate of Compliance are consistent with the information provided to document this design on the other applicable compliance forms, worksheets, calculations, plans and specifications submitted to the enforcement agency for approval with this building permit application.

Name: *Randal V. Metz* Signature: *[Signature]* Phone: *760-340-9005*

Company: *MRC Engineering, Inc.* License # *E13453*

Address: *72-880 Fred Waring Drive, Suite C-11* Date: *1/27/2014*

City/State/Zip: *Palm Desert, CA 92260*

Principal Lighting Designer's Declaration

I certify that this Certificate of Compliance documentation is accurate and complete, and accounts for all outdoor lighting power, including building mounted, pole mounted, as well as all other lighting designed for the site, and that Additional Lighting Power Allowances for Specific Applications or Additional Lighting Power Allowances for Ordinance Requirements have not been counted more than one time for the same area, in accordance with Section 147 of the Standards.

Outdoor Lighting Mandatory Measures
 Indicate location on building plans of Mandatory Measures Note Block: *LE-5*

LIGHTING COMPLIANCE FORMS & WORKSHEETS (check box if worksheets is included)

For detailed instructions on the use of this and all Energy Efficiency Standards compliance forms, please refer to the Nonresidential Manual published by the California Energy Commission.

OLTG-1C Certificate of Compliance. All 4 pages required on plans for all submissions.

OLTG-2C (Pages 1 of 3) Lighting Wattage Allowance for General Hardcape, Sales Frontage, or Ornamental Lighting. Optional on plans.

OLTG-2C (Pages 2 of 3) Lighting Wattage Allowance for Per Application or Per Area. Optional on plans.

OLTG-2C (Pages 3 of 3) Additional Lighting Power Allowance for Ordinance Requirements. Optional on plans.

EnergyPro 5.1 by EnergySoft User Number: 7748 RunCode: 2014-01-27T08:27:21 ID: 13046.00 Page 4 of 4

CERTIFICATE OF COMPLIANCE (Part 2 of 4) OLTG-1C

Project Name: *Whitewater Park Expansion* Date: *1/27/2014*

COMPLIANCE FIXTURE / LIGHTING CONTROL SCHEDULE and FIELD INSPECTION CHECKLIST

INSTALLATION CERTIFICATE, OLTG-1C-INST (When a copy and verify form is completed and signed) **Field Inspection**

CERTIFICATE OF ACCEPTANCE, OLTG-2A (When a copy and verify form is completed and signed) **Field Inspection**

A	B	C	D	E	F	G	H	I	
								Pass	Fail
Name or Item Tag	Luminaire Description ¹ See footnote below	Lighting Designation	Watts per Luminaire	Special Features	How wattage was determined	Number of Luminaires	Installed Watts (D X G)		
SA	71w LED (i.e., 1 lamp pole-top shoe-box 400 watt metal halide)		71.0			2	142.0		
SB	71w LED		71.0			19	1,349.0		
SC	71w LED		71.0			3	213.0		
SE	32w LED		32.0			21	672.0		
Enter total into OLTG-1C, Page 4 of 4, Row H: Total Installed Watts:							2,376		

1. Type of luminaire (i.e., post top, wall pack, surface, shoe box), for non-incandescent luminaires, indicate nominal lamp wattage and lamp type (i.e., fluorescent, incandescent, HID), ballast type (i.e., electronic or magnetic), number of lamps and number of ballasts per luminaire. For incandescent luminaires, the luminaire wattage listed in column D shall be the maximum wattage on a permanent factory-installed label on the luminaire. NOT the wattage of the lamp (bulb) used, in accordance with Section 130(d) or (e).

2. If fail then describe on Page 2 of the Inspection Checklist Form and take appropriate action to correct. Verify building plans if necessary.

EXEMPT LUMINAIRES **Field Inspection**

Name or Symbol: _____ Description of exempt luminaires in accordance with §147: _____

MANDATORY CONTROLS **Field Inspection**

#	Description	Location	#	Description	Location

SPECIAL FEATURES INSPECTION CHECKLIST (See Page 2 of 4 of OLTG-1C)

The local enforcement agency should pay special attention to the items specified in this checklist. These items require special written justification and documentation, and special verification. The local enforcement agency determines the adequacy of the justification, and may reject a building or design that otherwise complies based on the adequacy of the special justification and documentation submitted.

Filed Inspector Notes or Discrepancies:

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CERTIFICATE OF COMPLIANCE (Part 3 of 4) OLTG-1C

Project Name: *Whitewater Park Expansion* Date: *1/27/2014*

A. OUTDOOR LIGHTING ZONE

OUTDOOR LIGHTING ZONE: OLZ 1 OLZ 2 OLZ 3 OLZ 4

Is the Outdoor Lighting Zone: Default in accordance with §10-114, or Amended by JHA

Complete the information below if the default Outdoor Lighting Zone has been amended by the local jurisdiction having authority (JHA):

The site is a government designated park, recreational area, wildlife preserve, or portion thereof, and has been designated as LZ2 or LZ3, in accordance with Table 10-114-A, because the site is contained within such a zone.

The local jurisdiction having authority has officially adopted a change to the State Default Lighting Zone and has notified the Energy Commission by providing the materials required in §10-114(f) to the Executive Director.

The adopted change is posted on the Energy Commission website.

B. ADDITIONAL LIGHTING POWER ALLOWANCE FOR ORDINANCE REQUIREMENTS

Are additional lighting power allowances for ordinance in Table 147-C used? Yes No

Complete the information below if additional lighting power allowances for ordinance requirements are used:

The local jurisdiction having authority has officially adopted specific outdoor light levels, which are expressed as average or minimum footcandle levels, by following a public process that allowed for formal public notification, review, and comment about the proposed change.

The local jurisdiction having authority which adopted specific outdoor light levels and has notified the Commission by providing the following materials required §10-114(f) to the Executive Director:

C. ACCEPTANCE FORMS

Required Acceptance Tests

Designer:

This form is to be used by the designer and attached to the plans. Listed below is the acceptance test for the Lighting system, OLTG-2A. The designer is required to check the acceptance tests and list all control devices serving the building or space shall be certified as meeting the Acceptance Requirements for Code Compliance. If all the lighting system or control of a certain type requires a test, list the different lighting and the number of systems. The NA7 Section in the Appendix of the Nonresidential Reference Appendices Manual describes the test. Since this form will be part of the plans, completion of this section will allow the responsible party to budget for the scope of work appropriately. Forms can be grouped by type of luminaire controlled.

Enforcement Agency:

Systems Acceptance: Before Occupancy Permit is granted for a newly constructed building or space or when ever new lighting system with controls is installed in the building or space shall be certified as meeting the Acceptance Requirements. The OLTG-2A form is not considered a complete form and is not to be accepted by the enforcement agency unless the boxes are checked and filled and signed. In addition, a Certificate of Acceptance forms shall be submitted to the enforcement agency that certifies plans, specifications, installation certificates, and operating and maintenance information meet the requirements of §10-103(b) of Title 24 Part 6. The field inspector must receive the properly filled out and signed forms before the building can receive final occupancy. A copy of the OLTG-2A for each different lighting luminaire control(s) must be provided to the owner of the building for their records.

Equipment Requiring Testing	Description	Luminaires Controlled		Location	Certificate of Acceptance OLTG-2A ¹ Outdoor Lighting Acceptance Tests
		Qty. of Like Controls	Location		

1. Insert: OMS for Outdoor Motion Sensor; OLS for Outdoor Lighting Shut-off Controls; OP for Outdoor Photocontrol; ATS for Astronomical Time Switch; and STS for Standard (non-astronomical) Time Switch acceptance.

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CERTIFICATE OF COMPLIANCE (Part 4 of 4) OLTG-1C

Project Name: *Whitewater Park Expansion* Date: *1/27/2014*

ALLOWED AND INSTALLED OUTDOOR LIGHTING POWER

	Lighting Power Allowance (from OLTG-2C Page 1 of 3)	Lighting Wattage Power Allowance
A	Lighting power allowance for general hardcape (from OLTG-2C Page 1 of 3)	11,690
B	Specific application lighting wattage allowance per unit length (from OLTG-2C Page 1 of 3)	0
C	Specific application lighting wattage allowance for ornamental lighting (from OLTG-2C Page 1 of 3)	0
D	Specific application lighting wattage allowance per application (from OLTG-2C Page 2 of 3)	0
E	Specific application lighting wattage allowance per area (from OLTG-2C Page 2 of 3)	0
F	Specific application lighting wattage allowance for ordinance requirements (from OLTG-2C Page 3 of 3)	0
G	Total Allowed Wattage = Sum of rows A through F:	11,690
H	Total installed watts (from Compliance Fixture Schedule, (from OLTG-2C Page 1 of 3))	2,376

Complies if wattage in row H is less than or equal to the wattages in row G Yes No

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OUTDOOR LIGHTING WORKSHEET (Part 1 of 3) OLTG-2C

Project Name: *Whitewater Park Expansion* Date: *1/27/2014*

A. LIGHTING POWER ALLOWANCE FOR GENERAL HARDCAPE

AREA WATTAGE ALLOWANCE (AWA)			LINEAR WATTAGE ALLOWANCE (LWA)			INITIAL WATTAGE ALLOWANCE	TOTAL GENERAL HARDCAPE LIGHTING ALLOWANCE
A	B	C	D	E	F	G	H
Illuminated Hardcape Area	AWA Per Square Foot	AWA (A X B)	Perimeter Length of General Hardcape	LWA Per Linear Foot	LWA (D X E)	IWA (Watts)	C + F + G
92,294	0.092	8,491	0	0.920	0	770	9,261
26,397	0.092	2,429	0	0.920	0	0	2,429

Enter total into OLTG-1C, Page 4 of 4, Row A: Lighting Power Allowance for General Hardcape: 11,690

Yes AWA, LWA, and IWA from Table 147-A was used as appropriate for the Outdoor Lighting Zone

B. SPECIFIC APPLICATION LIGHTING WATTAGE ALLOWANCE PER UNIT LENGTH (Available only for sales frontage)

DETERMINE WATTAGE ALLOWANCE		LUMINAIRE TYPE		DESIGN WATTS					
A	B	C	D	E	F	G	H	I	J
Specific Lighting Application	Linear Foot of Frontage	Sales Frontage Allowance for CLZ (Watts per LF)	Wattage Allowance (B X C)	Name or Symbol	Luminaire Type	Lumin Qty	Watts Per Luminaire	Design Watts (G X H)	Allowed Watts Minimum of D or I

Enter total into OLTG-1C, Page 4 of 4, Row B: Specific Application Lighting Wattage Allowance Per Unit Length: 0

C. SPECIFIC APPLICATION WATTAGE ALLOWANCE FOR ORNAMENTAL LIGHTING

DETERMINE WATTAGE ALLOWANCE		LUMINAIRE TYPE		DESIGN WATTS					
A	B	C	D	E	F	G	H	I	J
Specific Lighting Application	Square Feet of Hardcape	Ornamental Lighting Allowance for CLZ (Watts per ft ²)	Wattage Allowance (B X C)	Name or Symbol	Luminaire Type	Lumin Qty	Watts Per Luminaire	Design Watts (G X H)	Allowed Watts Minimum of D or I

Enter total into OLTG-1C, Page 4 of 4, Row C: Specific Application Wattage for Ornamental Lighting: 0

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INSTRUMENTS OF SERVICE

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DRAWING DATE: **09-02-2014**

REVISIONS:

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△	
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△	

ISSUE DATES:

PLANNING/INITIAL SET	DRAWN BY:
DESIGN DEVELOPMENT SET	GL
PLANS CHECK SET	CHECKED BY:
PERMIT SET	VL
RED SET	MRC PROJECT NO:
CONSTRUCTION SET	13046.00

Rancho Mirage Community Park Expansion & Amphitheater Project

CP 12-284
 71-560 San Jacinto Dr
 Rancho Mirage, CA 92270

for
The City of Rancho Mirage

69-825 Highway 111
 Rancho Mirage, CA 92270

760.324.4511

SHEET TITLE:
TITLE 24

SHEET:
LE-5

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