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ELECTRICAL LEGEND

ELECTRICAL GENERAL NOTES

- FOR EXACT LOCATIONS AND SURFACE FINISH CONDITIONS OF CEILINGS, WALLS, OR FLOORS, REFER TO ARCHITECTURAL DRAWINGS.
- FOR EXACT LOCATION OF FACILITY EXPANSION JOINTS, FIRE RATED WALLS, AND SMOKE WALLS, REFER TO ARCHITECTURAL DRAWINGS.
- VERIFY EXACT LOCATION OF CONNECTION POINTS PRIOR TO ROUGH-IN.
- COORDINATE LOCATIONS OF ALL RECEPTACLES AND LUMINAIRES IN MECHANICAL SPACES WITH HVAC CONTRACTOR PRIOR TO ROUGH-IN TO AVOID CONFLICTS WITH EQUIPMENT AND DUCTWORK.
- MOUNTING HEIGHTS ARE TO CENTER OF DEVICE OR EQUIPMENT UNLESS NOTED OTHERWISE. EXCEPT FOR PENDANT LIGHTING WHICH ARE TO THE BOTTOM OF THE LUMINAIRE. FOR AREAS WITH DIFFERENT FLOOR LEVELS, HEIGHT IS BASED UPON CLOSEST FLOOR OR LANDING TO DEVICE, EQUIPMENT, OR LUMINAIRE. ELEVATIONS GIVEN ON LEGEND SHEET ARE UNLESS NOTED OTHERWISE ON DRAWINGS.
- PROVIDE RACEWAY, WIRE AND CABLE, ASSOCIATED FITTINGS AND CONNECTORS, AND COMPLETE CONNECTIONS REQUIRED FOR DESIGNATED BRANCH CIRCUITS FROM DEVICE(S) TO FINAL OVERCURRENT DEVICE AND TO LOCAL CONTROL DEVICE(S) PER SPECIFICATIONS.
- MINIMUM BRANCH CIRCUIT WIRE SIZE SHALL BE #12 AWG. SIZE BRANCH CIRCUIT CONDUCTORS AS PER NEC AND AS SCHEDULED ON THIS DRAWING BASED ON ACTUAL CIRCUIT DISTANCE. INCLUDE GROUND CONDUCTOR DERATINGS.
- PULL A SEPARATE NEUTRAL CONDUCTOR FOR ALL BRANCH CIRCUITS REQUIRING A NEUTRAL CONNECTION. DERATE CONDUCTORS PER NEC ACCORDINGLY. MULTIWIRE BRANCH CIRCUITS ARE NOT ACCEPTABLE.
- PROVIDE GROUNDING PER NEC & TIA 607B. PROVIDE GREEN GROUND CONDUCTOR IN ALL BRANCH AND FEEDER CIRCUITS.
- DO NOT INSTALL ANY NEW WORK DIRECTLY ABOVE ANY ELECTRICAL PANELS, SWITCHBOARDS, SWITCHGEAR, OR TRANSFORMERS.
- CONFIRM ALL LABELS AND ROOM NUMBERS WITH OWNER PRIOR TO FINALIZING LABELING AND PROGRAMMING.
- COORDINATE FINAL OUTLET LOCATION WITH ALL TRADES AND FURNITURE/MILLWORK PLACEMENT PRIOR TO ROUGH-IN. GENERAL CONTRACTOR SHALL PROVIDE ALL DRILLING AND GROMMETING IN FURNITURE/CASEWORK FOR CORD ACCESS IF REQUIRED.
- SWITCHES SHOWN SIDE BY SIDE OR GANGED SHALL BE INSTALLED UNDER A COMMON COVERPLATE, UNLESS NOTED OTHERWISE.
- PROVIDE FIRESTOPPING AT ALL PENETRATIONS THROUGH FIRE RATED WALLS, FLOORS, CEILINGS, & ROOFS AS CALLED OUT ON ARCHITECTURAL PLANS. PROVIDE ACOUSTICAL SEALANT AT PENETRATIONS THROUGH ALL NON-FIRE RATED WALLS, FLOORS, & CEILINGS.
- PROVIDE CONDUIT EXPANSION JOINTS AT ALL EXPANSION JOINTS AS CALLED OUT ON ARCHITECTURAL PLANS.
- SITE PLAN CONDUIT ROUTING SHOWN FOR INTENT. REFERENCE CIVIL DRAWINGS FOR UNDERGROUND COORDINATION AND DISTANCE OF RUNS. COORDINATE WITH ALL TRADES.
- WORK INDICATED ON THIS SHEET SHALL BE PERFORMED BY THE ELECTRICAL CONTRACTOR (EC) UNLESS OTHERWISE NOTED.
- COORDINATE ALL WORK WITH THE WORK OF ALL OTHER CONTRACTORS.
- ELECTRICAL CONTRACTOR (EC) SHALL PROVIDE CIRCUIT BREAKER, RACEWAY AND CONDUCTORS TO FEED EWH-1, ALONG WITH SAFETY DISCONNECT SWITCH FOR SAME.
- ELECTRICAL CONTRACTOR (EC) SHALL PROVIDE CIRCUIT BREAKER, RACEWAY AND CONDUCTORS TO FEED EWH-2, ALONG WITH SAFETY DISCONNECT SWITCH FOR SAME.
- EC SHALL PROVIDE DISCONNECTS, OCCUPANCY SENSORS AND ALL CONDUCTORS, RACEWAY AND BOXES TO EXHAUST FANS. EC SHALL CONNECT MC'S VARIABLE SPEED CONTROLLER TO DISCONNECT (BY EC), WALL OCCUPANCY SENSOR (BY EC) AND POWER FEED (BY EC) AND PROVIDE REQUIRED RACEWAY AND CONDUCTORS.
- THE CONDUIT AND WIRING FROM THE ELECTRIC PANEL UP TO BUT NOT INCLUDING THE SPEED CONTROLLER SHALL BE BY THE ELECTRICAL CONTRACTOR. THE SPEED CONTROLLER AND ALL CONDUIT AND WIRING BETWEEN THE CONTROLLER COMPONENTS AND THE UNIT SHALL BE BY THE MECHANICAL CONTRACTOR AND SHALL CONFORM TO THE ELECTRICAL SPECIFICATIONS AND CONTRACT DRAWINGS.
- COORDINATION NOTE: EXHAUST FAN PROVIDED BY MECHANICAL CONTRACTOR. POWER CONNECTION AND OCCUPANCY CONTROLS, CONDUCTORS, RACEWAY BY ELECTRICAL CONTRACTOR.

ABBREVIATIONS

°	DEGREES	kAIC	KILOAMPERE INTERRUPTING CURRENT
Δ	DELTA	kAIR	KILOAMPERE INTERRUPTING RATING
Ω	OHMS	KO	KNOCK OUT
Ø	PHASE	kV	KILOVOLT
Y	WYE	kVA	KILOVOLT AMPERE
		kW	KILOWATT
		kWh	KILOWATT HOUR
A	AMPERE		
AFCI	ARC-FAULT CIRCUIT INTERRUPTING	LED	LIGHT EMITTING DIODE
AF	AMPERE FUSE	LTG	LIGHTING
AFF	ABOVE FINISHED FLOOR	LV	LOW VOLTAGE
AFS	AMPERE FRAME SIZE		
AFG	ABOVE FINISHED GRADE	MC	MECHANICAL CONTRACTOR
AHJ	AUTHORITY HAVING JURISDICTION	MCA	MINIMUM CIRCUIT AMPERES
AHU	AIR HANDLING UNIT	MCB	MAIN CIRCUIT BREAKER
AIC	AMPERE INTERRUPTING CAPACITY	MECH	MECHANICAL
ALUM	ALUMINUM	MFR	MANUFACTURER
AM	AMMETER	MH	MANHOLE
ANN	ANNUNCIATOR	MIN	MINIMUM
ANSI	AMERICAN NATIONAL STANDARDS INSTITUTE	MLO	MAIN LUGS ONLY
ATS	AUTOMATIC TRANSFER SWITCH		
AV	AUDIO VISUAL	NEC	NATIONAL ELECTRICAL CODE
AVG	AVERAGE	NEMA	NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION
AWG	AMERICAN WIRE GAUGE	NFPA	NATIONAL FIRE PROTECTION ASSOCIATION
		NIC	NOT IN CONTRACT
BFC	BELOW FINISHED CEILING	NL	NIGHT LIGHT
BFG	BELOW FINISHED GRADE	NTS	NOT TO SCALE
BLDG	BUILDING		
		OC	ON CENTER
CND	CONDUIT	OH	OVERHEAD
CB	CIRCUIT BREAKER		
CKT	CIRCUIT	P	POLE
CLG	CEILING	PA	PUBLIC ADDRESS
CM	CONSTRUCTION MANAGER	PB	PULLBOX
CO	COMPANY	PC	PERSONAL COMPUTER
CU	COPPER	PH	PHASE
		PNL	PANEL
DC	DIRECT CURRENT	PLC	PROGRAMMABLE LOGIC CONTROLLER
D/A	DIAMETER	POE	POWER OVER ETHERNET
DISC	DISCONNECT	PRI	PRIMARY
DN	DOWN	PT	POTENTIAL TRANSFORMER
DWG	DRAWING	PTZ	PAN/TILT/ZOOM
		PVC	POLYVINYL CHLORIDE
		PWR	POWER
EA	EACH	RCP	REFLECTED CEILING PLANS
EC	ELECTRICAL CONTRACTOR	RECP	RECEPTACLE
ECB	ENCLOSED CIRCUIT BREAKER	RMC	RIGID METAL CONDUIT
EF	EXHAUST FAN		
EGC	EQUIPMENT GROUNDING CONDUCTOR	SCHED	SCHEDULE
ELEC	ELECTRIC	SEC	SECONDARY
EMT	ELECTRICAL METALLIC TUBING	SPT	SINGLE POLE DOUBLE THROW
EQUIP	EQUIPMENT	SPST	SINGLE POLE SINGLE THROW
EXH	EXHAUST		
		TYP	TYPICAL
FLR	FLOOR		
FU SW	FUSED SWITCH	UGND	UNDERGROUND
FTL	FEED THRU LUGS	UNO	UNLESS NOTED OTHERWISE
		V	VOLT
GC	GENERAL CONTRACTOR	VA	VOLT-AMPERE
GEC	GROUND ELECTRODE CONDUCTOR		
GEN	GENERATOR	W	WATT
GFCI	GROUND FAULT CIRCUIT INTERRUPTING	WAN	WIRELESS ACCESS POINT
GF	GROUND FAULT INTERRUPTING	WAP	WEATHERPROOF COVER
G	GROUND	WR	WEATHER RESISTANT
		WR	WIRE SIZING AMPS
HP	HORSEPOWER	XFMR	TRANSFORMER
HTR	HEATER		
ID	INSIDE DIAMETER		
IMC	INTERMEDIATE METAL CONDUIT		
J-BOX	JUNCTION BOX		

DEVICE SUBSCRIPTS

II	ROMAN NUMERAL INDICATES QUANTITY OF GANGED DEVICES UNDER COMMON FACEPLATE
+XX	HEIGHT OF DEVICE ABOVE FINISHED FLOOR (IN INCHES)
L	LOWER CASE LETTER(S) INDICATES SWITCH CONTROL ARRANGEMENT
S	NUMERAL INDICATES BRANCH CIRCUIT NUMBER (POWER & LIGHTING)/CANDELA RATING (FIRE ALARM DEVICES)
A	WITH AUXILIARY CONTACTS
AC	INSTALL ABOVE COUNTER, AT 40" AFF. COORDINATE WITH GC
B	REMOVE DEVICE AND INSTALL BLANK COVERPLATE
BF	BLANKFACE GFCI
CD	CORD DROP RECEPTACLE
CH	CLOCK HANGER RECEPTACLE
CL	INSTALL FLUSH IN CEILING
CLS	INSTALL ON SURFACE OF CEILING
C*	CONTROL POINT IDENTIFIER (*) INDICATES CONTROL NUMBER)
COP	RECEPTACLE FOR COFFEE, INSTALL 18" AFF
COP	RECEPTACLE FOR COFFEE, INSTALL 44" AFF
D	DIMMER SWITCH (LIGHTING CONTROL)
E	EXISTING BACKBOX TO REMAIN AND BE REUSED
EN	EXISTING BACKBOX WITH NEW DEVICE
EQ	EQUIPMENT SUPPLIED BY OWNER
ER	EXISTING TO BE REMOVED
ERL	EXISTING TO BE RELOCATED
ETR	EXISTING TO REMAIN
EWG	RECEPTACLE FOR WATER COOLER. COORDINATE EXACT LOCATION WITH GC & PC PRIOR TO ROUGH-IN
EXP	EXPLOSION PROOF
FL	INSTALL FLUSH IN FLOOR
FB	INSTALL IN FLOORBOX/POKE THRU
FRA	FIRE RATED ASSEMBLY
GFCI	GROUND FAULT CIRCUIT INTERRUPTING RECEPTACLE
GR	GROUND FAULT CIRCUIT INTERRUPTING BREAKER PROTECTED
GFP	FEED THROUGH GROUND FAULT CIRCUIT INTERRUPTING PROTECTED
H	INSTALL HORIZONTALLY
HA	HIGH ABUSE COVERPLATE WITH CENTER PIT REJECT SCREWS
IG	ISOLATED GROUND RECEPTACLE
K	KEY OPERATED
L	LOCATOR STYLE TOGGLE SWITCH (PILOT LIGHT 'ON' WHILE DEVICE IS OFF OR UNPOWERED)
LV	LOW VOLTAGE
M	INSTALL IN MULLION
M*	MONITORING POINT IDENTIFIER (*) INDICATES MONITORING POINT NUMBER)
MCW	RECEPTACLE FOR MICROWAVE, INSTALL IN UPPER CABINET, COORDINATE EXACT LOCATION WITH GC PRIOR TO ROUGH-IN
N	INDICATES NEW DEVICE
NC	NOT IN CONTRACT/PROVIDE BY OTHERS
NL	NIGHT LIGHT LUMINAIRE (UNSWITCHED) / INTEGRAL NIGHT LIGHT STYLE RECEPTACLE
NLG	INTEGRAL NIGHT LIGHT STYLE GFCI RECEPTACLE
O	OCCUPANCY SENSOR (AUTOMATIC 'ON' LIGHTING SENSOR SWITCH)
P	PILOT STYLE TOGGLE SWITCH (PILOT LIGHT 'ON' WHILE DEVICE IS ON OR POWERED)
PH	FOR PHONE, INSTALL 54" AFF
PI	POWER INDICATING RECEPTACLE
PJ	RECEPTACLE FOR PROJECTOR, INSTALL FLUSH IN CEILING
PP	BACKBOX FOR AUTODOOR PUSH PLATE
RP	RELAY DESIGNATION (*) INDICATES RELAY NUMBER)
R*	RECEPTACLE FOR REFRIGERATOR, INSTALL 44" AFF
S	INSTALL ON SURFACE
SP	SURGE PROTECTOR STYLE RECEPTACLE
SR	INSTALL IN SURFACE RACEWAY
SW	SPLIT WIRED RECEPTACLE FOR REMOTE SWITCHING
T	DIGITAL ELECTRONIC INTERVAL TIMER (LIGHTING SWITCH)
TR	TAMPER RESISTANT
TS	DIGITAL ELECTRONIC PROGRAMMABLE TIME SWITCH (LIGHTING SWITCH)
TV	FOR TELEVISION MONITOR, INSTALL 72" AFF
UC	INSTALL UNDER COUNTER. COORDINATE EXACT LOCATION WITH GC PRIOR TO ROUGH-IN
USB	RECEPTACLE WITH USB CHARGING PORTS
VEND	RECEPTACLE FOR VENDING MACHINE, INSTALL 44" AFF
V	VACANCY SENSOR (MANUAL 'ON' LIGHTING SENSOR SWITCH)
W	INSTALL 44" AFF
WG	WIRE GUARD
WP	WEATHERPROOF DEVICE / WEATHERPROOF WHILE-IN-USE EXTRA DUTY COVER & WEATHER RESISTANT RECEPTACLE
WPS	WEATHERPROOF SPRING LOADED COVER (WEATHERPROOF WHEN CLOSED), WEATHER RESISTANT RECEPTACLE
WR	WEATHER RESISTANT DEVICE/WEATHER RESISTANT RECEPTACLE
Z*	DEVICE ZONE IDENTIFIER (*) INDICATES ZONE NUMBER)

GENERAL LINEWORK DESCRIPTIONS & DRAWINGS NOTES

—	NEW WORK
---	EXISTING WORK / FUTURE PROVISIONS / NOT IN CONTRACT WORK
—	WIRE AND / OR CONDUIT RUN CONTINUED ON REFERENCED DETAIL
#	DRAWING KEYED NOTES

BRANCH CIRCUIT CONDUCTOR SIZING

CIRCUIT NOTATION:

11.13	CIRCUIT NUMBER(S)
11.NLT	SOURCE PANELBOARD (IF OTHER THAN NOTED ON SHEET/CIRCUIT BOUNDARY)

PROVIDE MINIMUM WIRE SIZE AS FOLLOWED UNLESS NOTED OTHERWISE:

20A CB - #12 AWG
30A CB - #10 AWG
40A CB - #8 AWG
50A CB - #6 AWG

INCREASE SIZE OF CONDUCTOR FOR DISTANCE AS SHOWN BELOW IN 20A BRANCH CIRCUIT CONDUCTOR SIZING SCHEDULE.

20A BRANCH CIRCUIT CONDUCTOR SIZING SCHEDULE:

CONDUCTOR SIZE (AWG)	#12	#10	#8	#6	#4
MAXIMUM BRANCH CIRCUIT LENGTH AT 120V (FEET)	90	140	225	355	565
MAXIMUM BRANCH CIRCUIT LENGTH AT 277V (FEET)	205	325	520	825	1310

NOTES:

- INCREASE ALL BRANCH CIRCUIT CONDUCTORS AS INDICATED BASED ON LENGTH OF CIRCUIT, INCLUDING EQUIPMENT GROUNDING CONDUCTOR.
- TRANSITION FROM LARGER CONDUCTOR SIZE TO #12 AWG FOR FINAL TERMINATION TO OUTLET DEVICE. PROVIDE JUNCTION BOX WITHIN 10' OF OUTLET AND EXTEND #12 AWG CONDUCTORS TO OUTLET.
- LENGTHS ARE FROM OVERCURRENT PROTECTIVE DEVICE, ALONG CIRCUIT ROUTING, TO CENTER OF EQUIPMENT LOAD.
- SCHEDULE ASSUMES 12A LOAD, FOR LOADS HIGHER THAN 12A, INCREASE CONDUCTOR SIZE.

EQUIPMENT CONNECTIONS

○	SINGLE PHASE MOTOR/PUMP CONNECTION, REFER TO EQUIPMENT CONNECTION SCHEDULE
⊗	THREE PHASE MOTOR/PUMP CONNECTION, REFER TO EQUIPMENT CONNECTION SCHEDULE
⊕	SINGLE POINT EQUIPMENT CONNECTION, REFER TO EQUIPMENT CONNECTION SCHEDULE

PANELBOARDS

PANELBOARD - FLOOR PLAN NOTATION:

DOOR STYLE (DESIGNATES VOLTAGE):

208/120V OR 240V SYSTEM

SIZE (DESIGNATES PANELBOARD TYPE):

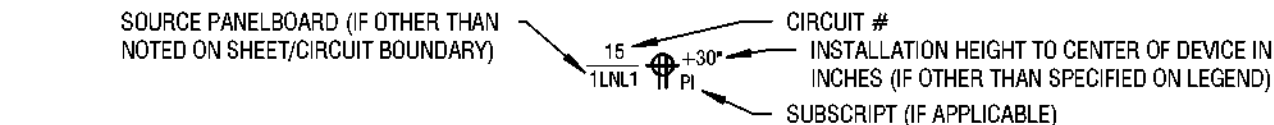
PANELBOARD

FILL (DESIGNATES BRANCH TYPE):

NORMAL BRANCH PANELBOARD

ELECTRICAL DEVICES

GENERAL ELECTRICAL DEVICE NOTATION:



NEMA 5-20R DUPLEX RECEPTACLE, 18" AFF

NEMA 5-20R GFCI DUPLEX RECEPTACLE, 18" AFF
WP = WEATHERPROOF COVER

LIGHTING CONTROL DEVICES

NOTE: LIGHTING CONTROL DEVICES SHOW FUNCTIONAL REQUIREMENTS, NOT ALL DEVICES NEEDED FOR A FULLY FUNCTIONING SYSTEM. DEPENDING ON CONFIGURATION AND MANUFACTURER, DEVICES SUCH AS POWER PACKS, RELAYS, SINGLE/DOUBLE/TRIPLE OUTPUT ROOM CONTROLLERS MAY BE NECESSARY. REFER TO DETAILS & SPECIFICATIONS.

SINGLE POLE TOGGLE SWITCH, 44" AFF

SINGLE POLE KEYED SWITCH, 44" AFF

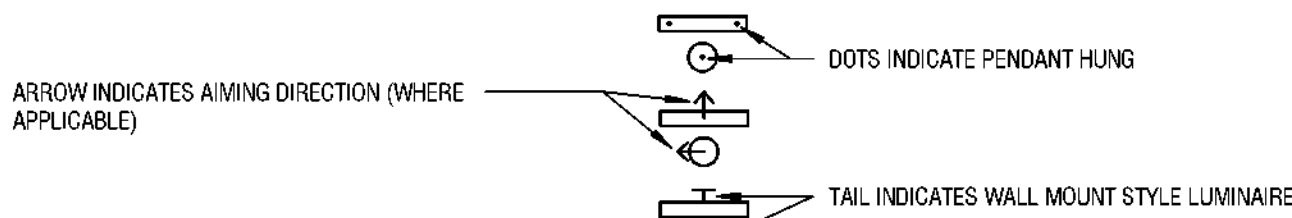
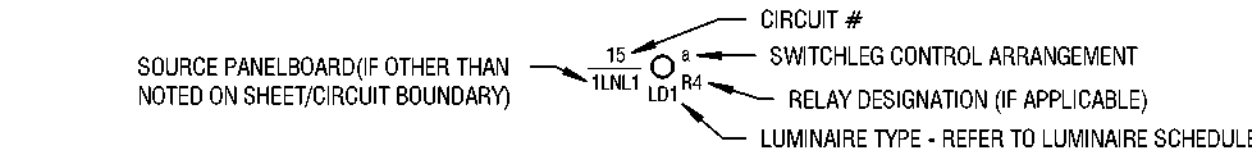
OCCUPANCY SENSOR SWITCH, DUAL TECHNOLOGY SINGLE POLE, WALL-BOX STYLE, 44" AFF

OCCUPANCY SENSOR, LOW VOLTAGE, DUAL TECHNOLOGY, WIDE VIEW, CEILING MOUNTED

PHOTOCELL DEVICE, LINE VOLTAGE, 12" ABOVE ROOF, AIMED NORTH

LIGHTING

GENERAL LUMINAIRE NOTATION:



GEOMETRIC SHAPE LUMINAIRE, RECESSED OR SURFACE MOUNTED PER LUMINAIRE SCHEDULE

ILLUMINATED EXIT SIGN - SINGLE/DOUBLE FACE AS SHOWN - DIRECTION OF ARROWS AS INDICATED - CEILING, SURFACE WALL, OR PERPENDICULAR WALL AS SHOWN

SELF-CONTAINED BATTERY LIGHTING UNIT



Governor Kathy Hochul

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Parks, Recreation and
Historic Preservation

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Project Title:

CAMP JUNIOR ON LAKE TIORATI -
PHASE 3

Project Location:

HARRIMAN STATE PARK

Key Plan

REVISIONS

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ELECTRICAL
NOTES, SYMBOL
LEGEND, &
ABBREVIATIONS

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