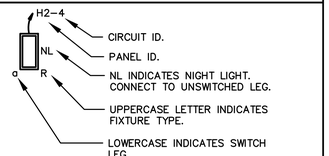
ELECTRICAL SYMBOLS

LIGHTING FIXTURE NOTATION



SYMBOL	DESCRIPTION
	POWER SYMBOLS
	PANELBOARD
	DISTRIBUTION BOARD
	SWITCHBOARD
	CONTROL PANEL.
	CIRCUIT HOMERUN TO PANELBOARD (2#12, 1#12G., 3/4"C. 20A/1P CB UNO)
REFER TO LIGHTING FIXTURE SCHEDULE FOR LIGHTING FIXTURE SYMBOL INFORMATION.	
REFER TO RECEPTACLE SCHEDULE FOR POWER RECEPTACLE TYPES, MOUNTING HEIGHTS AND OTHER INFORMATION.	
REFER TO LOW-VOLTAGE DEVICE SCHEDULE FOR DATA, IT SECURITY AND OTHER LOW VOLTAGE SYMBOL INFORMATION.	
REFER TO DISTRIBUTED LIGHTING CONTROL SYSTEM SCHEDULE FOR LIGHTING SYSTEM CONTROL DEVICE SYMBOL INFORMATION.	
REFER TO EQUIPMENT SCHEDULE FOR EQUIPMENT SYMBOL INFORMATION.	

ELECTRICAL ABBREVIATIONS

AIC	AMPERE INTERRUPTING CAPACITY	(N)	NEW
AC	ABOVE COUNTER	NC	NORMALLY CLOSED
AFF	ABOVE FINISHED FLOOR	NF	NONFUSED
BFC	BELOW FINISHED CEILING	NIC	NOT IN CONTRACT
BOF	TO BOTTOM OF FIXTURE	NL	NIGHT LIGHT
C	CONDUIT	NO	NORMALLY OPEN
CB	CIRCUIT BREAKER	(R)	RELOCATE OR TO BE RELOCATED
DZ	DAYLIGHT ZONE	RCPT	RECEPTACLES
(D)	TO BE DEMOLISHED	OS	OCCUPANCY SENSOR
EC	EMPTY CONDUIT	SPD	SURGE PROTECTION DEVICE
(E)	EXISTING	ST	SHUNT TRIP
F	FUSE	SW	SWITCH
FT	FEET	UF	UNDERFLOOR
G	GROUND (EQUIPMENT)	UG	UNDERGROUND
GEC	GROUNDING ELECTRODE CONDUCTOR	UNO	UNLESS NOTED OTHERWISE
GFI	GROUND FAULT INTERRUPTER	W/	WITH
IC	INTERRUPTING CAPACITY	W/O	WITHOUT
LCP	LIGHTING CONTROL PANEL	WAP	WIRELESS ACCESS POINT
MTD	MOUNT OR MOUNTED	WP	WEATHER-PROOF
		XFRMR	TRANSFORMER

CONDUCTOR DERATING SCHEDULE

FUSE OR BREAKER SIZE	120V			277V		
	<65 FT	65 TO 100 FT	>110 FT	<150 FT	150 TO 250 FT	>250 FT
20A	#12	#10	#8	#12	#10	#8
30A	#10	#8	#6	#10	#8	#6
40A	#8	#6	#4	#8	#6	#4

NOTES:
1. SIZE RACEWAYS ACCORDING TO THE NATIONAL ELECTRICAL CODE.
2. SIZING OF CONDUCTORS FOR VOLTAGE DROP SHALL BE PER THIS TABLE, UNLESS NOTED OTHERWISE ON THE DRAWINGS.

ELECTRICAL SHEET INDEX

GENERAL NOTES

0.0 DEFINITIONS

0.1 FURNISH: TO SUPPLY AND DELIVER TO PROJECT SITE, READY FOR UNLOADING, UNPACKING, ASSEMBLY, INSTALLATION AND SIMILAR OPERATION.

0.2 INSTALL: TO PERFORM OPERATIONS AT PROJECT SITE, INCLUDING UNLOADING, TEMPORARY STORING, PACKING, ASSEMBLING, ERECTING, PLACING, ANCHORING, WORKING TO DIMENSION, FINISHING, PROTECTING, CLEANING, AND SIMILAR OPERATION.

0.3 PROVIDE: TO FURNISH AND INSTALL, COMPLETE AND READY FOR INTENDED USE.

0.4 REMOVE: TO DISCONNECT, DISMOUNT AND REMOVE FROM SITE DEVICE AND ASSOCIATED CONDUCTORS, RACEWAYS AND APPURTENANCES ALL THE WAY TO NEAREST POINT OF CONNECTION.

0.5 MODIFY AND EXTEND: TO SELECTIVELY DEMOLISH AND CHANGE EXISTING WIRE, RACEWAY, AND BUSWAY AND TO PROVIDE NEW MATERIALS AND LABOR NECESSARY FOR A COMPLETE AND OPERABLE INSTALLATION.

1.0 GENERAL

1.1 GENERAL NOTES IN THIS DRAWING APPLY TO THE WHOLE ELECTRICAL SET. DRAWING NOTES APPLY TO THE DRAWING WHERE THEY OCCUR.

1.2 DO NOT SCALE OR DIMENSION FROM THESE DRAWINGS.

1.3 COORDINATE THE EXACT LOCATION OF ALL MECHANICAL EQUIPMENT AND REQUIREMENTS FOR CONTROL AND POWER WIRING WITH THE MECHANICAL CONTRACTOR OR THE TRADE PROVIDING EQUIPMENT.

1.4 REFER TO ELECTRICAL AND MECHANICAL PLANS, ELEVATIONS, AND DETAILS FOR LOCATIONS OF CEILING ELEMENTS (LIGHTING FIXTURES, DIFFUSERS, ETC.) AND OTHER WALL MOUNTED DEVICES. IN CASE OF CONFLICT, ARCHITECTURAL PLANS AND ELEVATIONS TAKE PRECEDENCE FOR DEVICE LOCATIONS. IF LOCATION FOR ITEMS IS NOT SHOWN, VERIFY LOCATIONS WITH ARCHITECT OR OWNER'S REPRESENTATIVE.

1.5 ELECTRICAL SYSTEMS SHOWN ON DRAWINGS ARE FOR DIAGRAMMATIC PURPOSES ONLY. ACTUAL FIELD CONDITIONS MAY REQUIRE ADDITIONAL WORK. PROVIDE ALL WORK AND MATERIALS NECESSARY FOR A COMPLETE AND SAFE WORKING SYSTEM. COORDINATE ALL WORK WITH OTHER TRADES AS NEEDED.

1.6 INDICATED CIRCUIT RUNS ARE DIAGRAMMATIC. SIZE AND LOCATE PULL BOXES PER NEC AND APPLICABLE CODES AND COORDINATE OTHER DISCIPLINES. BUILDING CONDITIONS SHALL DETERMINE ACTUAL CONDUIT RUNS. PVC SHALL NOT BE USED IN INTERIOR SPACES.

1.7 CONTRACTOR IS RESPONSIBLE FOR FOLLOWING SAFETY PROCEDURES BY OSHA, NFPA AND APPLICABLE CODES. CONTRACTOR IS RESPONSIBLE FOR METHODS AND MEANS TO ACCOMPLISH WORK DESCRIBED IN THESE CONSTRUCTION DOCUMENTS.

1.8 COORDINATE OVERCURRENT PROTECTION DEVICES, DISCONNECT SWITCHES, CONDUCTOR AND CONDUIT SIZES WITH MECHANICAL EQUIPMENT REQUIREMENTS. SIZES SHOWN ON THESE DOCUMENTS ARE BASED ON MECHANICAL EQUIPMENT SPECIFIED. VARIATIONS IN REQUIREMENTS MAY OCCUR AS A RESULT OF THE PROVISION OF OTHER MANUFACTURER'S EQUIPMENT OR IN CHANGES TO THE SPECIFIED EQUIPMENT. SUCH REVISED REQUIREMENTS ARE A PART OF THIS CONTRACT AND SHALL BE ACCOMMODATED WITHOUT ADDITIONAL CHARGE.

1.9 FOR PURPOSES OF COORDINATION, LIGHTING FIXTURES AND OTHER DEVICES MAY BE MOVED A DISTANCE OF FIVE FEET WITH NO ADDITIONAL COST TO THE OWNER, UPON INSTRUCTION BY THE ARCHITECT OR ENGINEER.

1.10 THE DESIGN OF CONNECTIONS TO EQUIPMENT PROVIDED BY OTHERS HAS BEEN DONE USING AVAILABLE INFORMATION AT TIME OF DESIGN. VERIFY THAT ACTUAL EQUIPMENT INSTALLED MATCHES DESIGN AND MAKE NECESSARY ADJUSTMENTS TO INSTALL EQUIPMENT ACCORDING TO MANUFACTURER'S RECOMMENDATIONS.

1.11 IN CASE INFORMATION IN THESE DOCUMENTS IS IN CONFLICT WITH OTHER DISCIPLINES, CONTRACTOR SHALL SEND A REQUEST FOR INFORMATION TO CLARIFY INTENT. CONTRACTOR SHALL BE RESPONSIBLE FOR ANY CHANGES TO INSTALLATION DUE TO FAILURE TO CLARIFY INTENT PRIOR TO INSTALLATION OF EQUIPMENT.

1.12 IN CASE EQUIPMENT SHOWN IN OTHER DISCIPLINES REQUIRES ELECTRICAL CONNECTIONS AND IS NOT SHOWN ON THESE DRAWINGS, CONTRACTOR SHALL INCLUDE IN THE BID COSTS TO PROVIDE REQUIRED ELECTRICAL POWER AND/OR DATA RACEWAYS TO EQUIPMENT AND ISSUE AN RFI TO CLARIFY INTENT. CONTRACTOR WILL BE RESPONSIBLE TO INSTALL SUCH EQUIPMENT WITHOUT ADDITIONAL COST TO THE OWNER.

2.0 WIRING

2.1 CONDUCTOR SIZES SHOWN ARE MINIMUM SIZES. FEEDERS AND BRANCH CIRCUIT SIZES ARE BASED ON 60 DEGREE INSULATION UP TO #1 AWG, AND 75 DEGREE INSULATION FOR LARGER SIZES. CONTRACTOR SHALL MAKE CORRECTIONS TO CONDUCTOR SIZES ACCORDING TO THE NEC IF USING LOWER TEMPERATURE CONDUCTORS.

2.2 SINGLE PHASE HOMERUNS CAN BE COMBINED INTO THREE PHASE CONDUCTORS ONE NEUTRAL AND ONE GROUND CONDUCTOR IN A SINGLE CONDUIT.

2.3 THREE PHASE HOMERUN ARE DESIGNATED FOR THREE PHASE CONDUCTORS AND ONE GROUND IN A SINGLE CONDUIT. CONTRACTOR HAS THE OPTION OF CONSOLIDATING RUNS INTO A SINGLE CONDUIT. DE-RATE CONDUCTORS AS REQUIRED PER NEC AND DO NOT COMBINE NEUTRAL CONDUCTORS

2.3 UNLESS NOTED OTHERWISE, THE MINIMUM CIRCUIT RUN SIZE SHALL BE 2#12,#12G, 3/4"C.

2.4 REFER TO MINIMUM CONDUCTOR SIZING SCHEDULE ON THIS SHEET FOR CONDUCTOR SIZE ADJUSTMENT DUE TO CONDUIT RUN DISTANCE.

2.5 INSTALL SWITCHES WITHIN 18" OF LATCHING SIDE OF DOOR UNLESS NOTED OTHERWISE.

2.6 DO NOT ROUTE CONDUITS ON ROOF. ROUTE CONDUITS UNDER ROOF STRUCTURE. ALL CONDUIT PENETRATIONS THROUGH THE ROOF TO SERVE MECHANICAL EQUIPMENT SHALL BE WITHIN THE ASSOCIATED EQUIPMENT ROOF CURB. COORDINATE LOCATIONS OF PENETRATIONS WITH THE MECHANICAL CONTRACTOR.

2.7 PROVIDE A GROUND CONDUCTOR FOR EVERY FEEDER AND BRANCH CIRCUIT PER NEC ARTICLE 250. WHERE A SINGLE CONDUIT HAS SEVERAL BRANCH CIRCUITS, PROVIDE A SINGLE GROUND CONDUCTOR U.N.O.

2.8 PROVIDE A PULL CORD WITH A MINIMUM 200 LB TENSILE STRENGTH FOR ALL EMPTY RACEWAYS AND CONDUITS.

2.9 NO SPLICES ARE ACCEPTABLE INSIDE PANELBOARDS OR DISCONNECT SWITCHES. TERMINATE ONLY ONE CONDUCTOR PER LUG.

3.0 WIRING DEVICES AND DATA OUTLETS

3.1 PROVIDE ADDITIONAL GROUNDING CONDUCTOR FOR ALL RECEPTACLES WITH ISOLATED GROUND.

4.0 LIGHTING

4.1 LIGHTING PLANS INDICATE SWITCHING AND BRANCH CIRCUIT NUMBERS FOR ALL LIGHTING FIXTURES. LOWER CASE LETTERS AT SWITCHES AND LIGHTING FIXTURES INDICATE SWITCHING WHERE CONTROL PATTERN IS NOT OBVIOUS. INSTALL BRANCH CIRCUIT WIRING IN RACEWAY TO ALL RIGIDLY ATTACHED LIGHTING FIXTURES AND TO JUNCTION BOXES FOR ALL LAY-IN FIXTURES AS REQUIRED TO PROVIDE SWITCHING AND CIRCUITING AS SHOWN ON DRAWINGS.

4.2 CONNECT ALL LAY-IN FIXTURES TO A BRANCH CIRCUIT JUNCTION BOX WITH A FLEXIBLE FIXTURE TAIL. CONNECT NO MORE THAN FOUR FIXTURES TAILS TO A SINGLE JUNCTION BOX. FIXTURE-TO-FIXTURE WIRING IS NOT ACCEPTABLE EXCEPT WHERE SPECIFICALLY STATED ON THE DRAWINGS OR SPECIFICATIONS.

OWNER PROVIDED EQUIPMENT

1. THIS PROJECT INCLUDES ELECTRICAL CONNECTIONS TO OWNER-PROVIDED EQUIPMENT. CONSTRUCTION DOCUMENTS ARE BASED ON INFORMATION AVAILABLE DURING DESIGN.
2. CONTRACTOR SHALL VERIFY ELECTRICAL REQUIREMENTS OF ACTUAL OWNER-FURNISHED EQUIPMENT PRIOR TO ROUGH-IN AND ACCOMMODATE FOR ANY DIFFERENCES DURING CONSTRUCTION.

CEILING FAN SCHEDULE

CALLOUT	SYMBOL	DESCRIPTION	MODEL	INPUT WATTS	VOLTS	NOTES
A		60 IN INDOOR CEILING FAN WITH UNIVERSAL MOUNT.	HAIKU: HAIKU LUXE SERIES INDOOR: S3150 X2 AX XX 02 C 01 FXXX	30	120V 1P 2W	VERIFY FINISHES PRIOR TO PROCUREMENT. VERIFY MOUNTING HEIGHT WITH ARCHITECT PRIOR TO INSTALLATION. PROVIDE WALL CONTROLLER AND INSTALL AS SHOWN ON PLANS
B		84 IN OUTDOOR CEILING FAN WITH UNIVERSAL MOUNT.	HAIKU: HAIKU LUXE SERIES OUTDOOR: FR213A U0G10 3H03 04XXX XXXP000	58	120V 1P 2W	VERIFY FINISHES PRIOR TO PROCUREMENT. VERIFY MOUNTING HEIGHT WITH ARCHITECT PRIOR TO INSTALLATION. PROVIDE WALL CONTROLLER AND INSTALL AS SHOWN ON PLANS
BAF		BIG ASS FAN	BIG ASS SOLUTIONS: ESSENCE 14FT DIAMETER. 110V, 1-PHASE	1200	120V 1P 2W	VERIFY FINISHES PRIOR TO PROCUREMENT. VERIFY MOUNTING HEIGHT WITH ARCHITECT PRIOR TO INSTALLATION. PROVIDE WALL CONTROLLER AND INSTALL AS SHOWN ON PLANS

PRELIMINARY
NOT FOR CONSTRUCTION

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Revision Schedule		
Rev. #	Revision Description	Revision Date

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SYMBOLS AND GENERAL NOTES

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