

ELECTRICAL LEGEND		
SYMBOLS		DESCRIPTION
EXIST	NEW	
		FLOOD LIGHT FIXTURE WALL MOUNTED
		FLUORESCENT FIXTURE, 2'x4', CEILING MOUNTED
		FLUORESCENT FIXTURE, 2'x4', CEILING MOUNTED W/ EMERGENCY BATTERY UNIT
		FLUORESCENT FIXTURE, SURFACE MOUNTED
		EMERGENCY LIGHT W/ ADJUSTABLE HEAD, AND EMERGENCY BATTERY UNIT
		FLUORESCENT FIXTURE, WALL MOUNTED
		FLUORESCENT STRIP FIXTURE, CEILING MOUNTED
		LIGHT FIXTURE, CEILING MOUNTED
		LIGHT FIXTURE, WALL MOUNTED
		EXIT SIGN, WALL MOUNTED, SINGLE FACED
		EXIT SIGN, CEILING MOUNTED, SINGLE FACED WITH CHEVRONS AS NOTED
		EXIT SIGN, CEILING MOUNTED, DOUBLE FACED WITH CHEVRONS AS NOTED
		SWITCH, SINGLE POLE, 20A, 48" AFF, OR AS NOTED
		SWITCH, 3 WAY, 20A, 48" AFF, OR AS NOTED
		SWITCH, 4 WAY, 20A, 48" AFF, OR AS NOTED
		SWITCH BANK, 48" AFF, OR AS NOTED, 20 A EA.
		MANUAL MOTOR STARTER, HP RATED
		NON-FUSED SAFETY SWITCH, HEAVY DUTY TYPE, HP RATED
		FUSED SAFETY SWITCH, HEAVY DUTY TYPE, HP RATED, PROVIDE FUSE PER EQUIPMENT NAMEPLATE
		MOTOR STARTER, HP RATED, BY OTHERS
		MOTOR CONNECTION
		HEATER CONNECTION
		EQUIPMENT CONNECTION
		SINGLE RECEPTACLE, FLUSH WALL MTD, NEMA 5-20R, 18" AFF, OR AS NOTED
		RECEPTACLE, DUPLEX, FLUSH WALL MTD, NEMA 5-20R, 18" AFF, OR AS NOTED
		RECEPTACLE, DUPLEX, FLUSH WALL MTD, NEMA 5-20R, GFCI, 18" AFF, OR AS NOTED
		COUNTERTOP RECEPTACLE, DUPLEX, FLUSH WALL MTD, NEMA 5-20R, 6" ABOVE COUNTERTOP, OR AS NOTED
		COUNTERTOP RECEPTACLE, DUPLEX, FLUSH WALL MTD, NEMA 5-20R, GFCI, 6" ABOVE COUNTERTOP, OR AS NOTED
		RECEPTACLE, QUADRAPLEX, FLUSH WALL MTD, NEMA 5-20R, 18" AFF, OR AS NOTED
		RECEPTACLE, ISOLATED GROUND, FLUSH WALL MTD, NEMA 5-20R, 18" AFF, OR AS NOTED
		RANGE OUTLET, TO MATCH EQUIPMENT PLUG CAP
		RECEPTACLE, DUPLEX, FLUSH, FLOOR MOUNTED NEMA 5-20R
		CEILING MOUNTED RECEPTACLE, DUPLEX, NEMA 5-20R
		SPECIAL PURPOSE RECEPTACLE
		PANELBOARD
		TELEPHONE CABINET
		ELECTRICAL ENCLOSURE
		TRANSFORMER, DRY-TYPE, SIZE AS NOTED
		RACEWAY & WIRING, CONCEALED IN WALL OR CEILING
		ROMEX RACEWAY & WIRING
		HATCH MARKS INDICATE NO. OF CURRENT CARRYING CONDUCTORS PLUS GROUND WIRE
		NO HATCH MARKS INDICATE 2 CURRENT CARRYING CONDUCTORS PLUS GROUND WIRE
		EXPOSED RACEWAY & WIRING
		RACEWAY & WIRING, CONCEALED BELOW GRADE OR FLOOR SLAB
		RACEWAY & WIRING WITH ISOLATED GROUND WIRE
		FLEXIBLE METALLIC CONDUIT, LIQUIDTIGHT IN WET/DAMP LOCATIONS
		GROUND BUS
		DUCT SECTION DESIGNATION
		TELEPHONE OUTLET, 18" AFF, OR AS NOTED
		CATV OUTLET, 18" AFF, OR AS NOTED
		PA SPEAKER LOCATION, +15'-0" AFF, OR AS NOTED
		TELEPHONE/DATA OUTLET, 4-18" AFF, OR AS NOTED
		DATA OUTLET, 18" AFF, OR AS NOTED
		RCAS DATA OUTLET, 18" AFF, OR AS NOTED. TERMINATE ON A SEPARATE PATCH PANEL.
		FIRE ALARM CONTROL PANEL
		FIRE ALARM HORN
		FIRE ALARM PULL STATION, WALL MTD, +48" AFF

ELECTRICAL LEGEND (CONT.)		
SYMBOLS		DESCRIPTION
EXIST	NEW	
		FA AUDIO/VISUAL ALARM, +80" AFF
		FA VISUAL ALARM, +80" AFF
		SMOKE DETECTOR, CEILING MOUNTED
		FM-200 CONTROL PANEL
		PUSH BUTTON
		PUSH BUTTON (SHUNT TRIP)
		JUNCTION BOX, 4" SQ. CEILING MOUNTED
		JUNCTION BOX, 4" SQ. WALL MOUNTED
		FLUSH FLOOR BOX, DUPLEX RECEPTACLE, 20A, 120V, NEMA 5-20R
		FLUSH FLOOR BOX, TELEPHONE/DATA OUTLET
		PHOTOCELL, WALL MTD.
		HEAT DETECTOR, CEILING MOUNTED
		SOLENOID VALVE CONNECTION
		FLOW SWITCH CONNECTION
		TAMPER SWITCH CONNECTION
		DUCT SMOKE DETECTOR
		FIRE SMOKE DAMPER
		TIME CLOCK
		INTERROOM STATION, TOP AT +48" AFF OR AS NOTED
		ADDRESSABLE CONTROL RELAY MODULE
		INDIVIDUAL ADDRESS MODULE
		LIGHT FIXTURE DESIGNATOR
		SPEAKER, CEILING MOUNTED
		BALANCED MAGNETIC SWITCH
		KEY PAD, +48" AFF OR AS NOTED
		PUSH BUTTON (120V)
		HORN (120V)
		MOTORIZED VOLUME DAMPER
		CARD READER, WALL MTD, 48"
		EXPLOSION PROOF FITTING
		HATCHED ITEMS INDICATES EXISTING ITEM TO BE REMOVED
		DUAL TECHNOLOGY MOTION SENSOR
		SECURITY CAMERA WITH PAN, TILT, AND ZOOM
		ELECTRIC DOOR STRIKE
		POLE LIGHT
		POLE LIGHT W/TWO QUARTZ FLOODLIGHTS INDICATED
		POLE LIGHT W/THREE HPS FLOODLIGHTS AND TWO QUARTZ FLOODLIGHTS INDICATED
		DETAIL INDICATOR: TOP HALF - DETAIL NUMBER BOTTOM LEFT - SHEET NUMBER WHERE DETAIL REFERENCED BOTTOM RIGHT - SHEET NUMBER WHERE DRAWN

ELECTRICAL ABBREVIATIONS			
AIC	AMPERE-INTERRUPTING CAPACITY	MTD	MOUNT OR MOUNTED
A/C	ASPHALT CONCRETE	MTG	MOUNTING
AFF	ABOVE FINISH FLOOR	(N)	NEW
AMP, A	AMPERE	NEMA	NATIONAL ELECTRICAL MANUFACTURES ASSOCIATION
AWG	AMERICAN WIRE GAUGE	NO. #	NUMBER
A/V	AUDIO VISUAL	O.C.	ON CENTER
BKR	BREAKER	PFB	PROVISION FOR BREAKER
BLDG	BUILDING	PNL	PANEL
C	CONDUIT, CONDUCTOR	PVC	POLYVINYL CHLORIDE
CMU	CONCRETE MASONRY UNIT	RM	ROOM
CONC	CONCRETE	S/S	STAINLESS STEEL
D	DEEP	SURF	SURFACE
EHH	ELECTRICAL HANDHOLE	SWBD	SWITCHBOARD
EM	EMERGENCY	TH	THICK
EMH	ELECTRICAL MANHOLE	TYP	TYPICAL
EOL	END OF LINE	UG	UNDERGROUND
EP	EXPLOSIONPROOF	UV/IR	ULTRAVIOLET/INFRARED
(E),EXIST	EXISTING	UNO	UNLESS OTHERWISE NOTED
FA	FIRE ALARM	V	VOLTS
FACP	FIRE ALARM CONTROL PANEL	W	WIRE, WIDE, WATTS, WITH
G	GROUND	WP	WEATHERPROOF
GFCI	GROUND FAULTY CIRCUIT INTERRUPTER	XFMR	TRANSFORMER
HP	HORSEPOWER	∅	PHASE
JB	JUNCTION BOX	'	FOOT, FEET
KVA	KILO-VOLT AMPERE	"	INCH, INCHES
KW	KILOWATT	&	AND
MIN	MINIMUM		

DEVICE MOUNTING HEIGHT SCHEDULE						
DEVICE ON PLAN	MOUNTING HEIGHT	REFERENCE POINT			REMARKS	
		FLOOR	CEILING	TO	TO	TO
	48"	●				SPECIAL MTG. HTS. INDICATED ON PLAN.
	18"	●				SPECIAL MTG. HTS. INDICATED ON PLAN.
	18"	●				SPECIAL MTG. HTS. INDICATED ON PLAN.
	6"		COUNTERTOP			
	18"	●				SPECIAL MTG. HTS. INDICATED ON PLAN.
	18"	●				SPECIAL MTG. HEIGHTS INDICATED ON PLAN.
	48"	●				
	80"	●				
	15"	●				SPECIAL MTG. HTS. INDICATED IN DETAILS.
	18"	●				SPECIAL MTG. HTS. INDICATED ON PLAN.
	48"	●				
	48"	●				
	60"	●				SPECIAL MTG. HTS. INDICATED ON PLAN.
	108"	●				VERIFY HEIGHT PER MANUF. REQUIREMENTS

REVISED ORDINANCES OF HONOLULU
CHAPTER 32
BUILDING ENERGY EFFICIENCY STANDARDS

THE BUILDING ENERGY EFFICIENCY STANDARDS HAVE BEEN REVIEWED AND TO THE BEST OF MY KNOWLEDGE THIS DESIGN SUBSTANTIALLY CONFORMS TO ELECTRICAL AND LIGHTING REQUIREMENTS OF SECTIONS 53 AND 63.

Jay K. Hashimoto
SIGNATURE

JAY HASHIMOTO
NAME (PRINT)

ENGINEER
TITLE

8374-E
PE LICENSE NO.

BUILDING ENERGY EFFICIENCY STANDARDS
EXTERIOR LIGHTING POWER ALLOWANCE 80.763W INSTALLED 58.505W
INTERIOR LIGHTING POWER ALLOWANCE 206.991W INSTALLED 132.831W
METHOD USED: PRESCRIPTIVE SYSTEM PERFORMANCE X
CALCULATIONS: SEPARATE X ON DRAWINGS



AS-BUILT DRAWINGS/SPECIFICATIONS
THIS CERTIFIES THAT THE DIMENSIONS AND DETAILS SHOWN ON THIS SHEET REFLECT THE DIMENSIONS AND DETAILS AND SPECIFICATIONS AS CONSTRUCTED IN THE FIELD.
WASA ELECTRICAL SERVICES, INC. FEB 28 2008
Signature: *Jay K. Hashimoto* Date: _____

IF SHEET IS LESS THAN 24" X 36" IT IS A REDUCED PRINT-SCALE REDUCED ACCORDINGLY

The Contractor will be responsible for coordinating the work among the various trades or necessary to avoid conflicts and to insure the installation of all work within the available space.

Jay K. Hashimoto

REVISION NO.	DESCRIPTION	DATE	BY	CHK'D
DEPARTMENTS OF THE ARMY AND AIR FORCE NATIONAL GUARD OF HAWAII OFFICE OF THE ENGINEER, FORT RUGER, HAWAII				
DESIGNED:	JH	MILITARY TRAINING COMPLEX, PROJECT 150057 ADDITIONS AND ALTERATIONS TO BUILDING 117 Kalaheo (Barbers Point NAS), Hawaii		
DRAWN:	CP	PHASE I		
CHECKED:	JH	ELEC LEGEND, ABBREVIATIONS, AND MOUNTING HTS SCHEDULE		
ENGINEER:	JH			
APPROVED:	HARRING FAC. MGT. OFFICER	APPROVED:	NG8 USPFD FOR HAWAII	DATE: 20 DEC. 2002
APPROVED:		SCALE:	AS SHOWN	
		DRAWING NO.	E0.01A	
		SHEET:	OF	