

AUTOMATIC SPRINKLER SYSTEM NOTES:

1.

THE SPRINKLER SYSTEM MUST COMPLY WITH SPECIFICATION 13930 AND NFPA 13 (2016). PIPING AND SPRINKLER LOCATIONS SHOWN ARE CONCEPTUAL. THE CONTRACTOR SHALL VERIFY THE LOCATION OF ALL SPRINKLER SYSTEM COMPONENTS AND COORDINATE WITH THE VARIOUS TRADES.
2.

ALL DEVICES AND EQUIPMENT MUST BE UL LISTED OR FM APPROVED.
3.

DESIGN WATER SUPPLY AS PROVIDED BY DKI AIRPORT:

LOCATION: DANIEL K. INOUE INTERNATIONAL AIRPORT
STATIC PRESSURE: 65 PSI
RESIDUAL PRESSURE: 20 PSI
FLOW AT RESIDUAL PRESSURE: 2820 GPM

SPRINKLER DESIGN MUST PROVIDE A 10% SAFETY FACTOR APPLIED TO THE WATER SUPPLY DATA LISTED ABOVE.
4.

THE SPRINKLER SYSTEM DESIGN CRITERIA MUST BE AS FOLLOWS:

OFFICE SPACES, WAITING AREA, CONFERENCE ROOM, COMPUTER LAB
OCCUPANCY HAZARD: LIGHT HAZARD
DESIGN DENSITY: 0.1 GPM/SF
DESIGN AREA: 1500 SF
HOSE STREAM: 100 GPM

ELEC ROOM, SUPPLY ROOM
OCCUPANCY HAZARD: ORDINARY HAZARD GROUP 1
DESIGN DENSITY: 0.15 GPM/SF
DESIGN AREA: 1500 SF
HOSE STREAM: 250 GPM
5.

THE SPRINKLER SYSTEM MUST BE MONITORED BY A UL LISTED CENTRAL STATION.
6.

PIPING MUST BE PROVIDED WITH EARTHQUAKE PROTECTION IN ACCORDANCE WITH NFPA 13 AND SPECIFICATION SECTION 13930. PROVIDE BRANCH LINE RESTRAINTS. BEAM CLAMPS SHALL HAVE RESTRAINING STRAPS.
7.

ALL EXPOSED AND SURFACE MOUNTED SPRINKLER COMPONENTS MUST MAINTAIN A MINIMUM CLEARANCE OF 7'-0" ABOVE THE FINISHED FLOOR.
8.

SPRINKLER PIPING SHALL COMPLY WITH NFPA 13, EXCEPT THAT COPPER AND PLASTIC PIPE SHALL NOT BE PERMITTED. ALL PIPING IN AREAS WITH A DROP CEILING SHALL BE CONCEALED.
9.

THE PIPE ROUTING AND SPRINKLER LOCATIONS ARE CONCEPTUAL.
10.

ALL FIRE SPRINKLER CONTROL VALVES AND WATER FLOW SWITCHES MUST BE ELECTRONICALLY MONITORED.
11.

PIPING MUST NOT BE ROUTED THROUGH ANY ELECTRICAL OR TELECOM ROOM. PIPING SHALL BE LOCATED IN ACCORDANCE WITH NEC. SPRINKLERS IN THE ELECTRICAL ROOMS SHALL NOT BE DIRECTLY LOCATED OVER ANY PANELS OR EQUIPMENT.
12.

SPRINKLERS UNDER SKYLIGHTS EXPOSED TO DIRECT SUNLIGHT MUST BE OF THE INTERMEDIATE TEMPERATURE CLASSIFICATION IN ACCORDANCE WITH NFPA 13, 8.3.2.5 (4)

CLEAN AGENT FIRE EXTINGUISHING SYSTEM NOTES:

1.

DESIGN AND INSTALLATION OF THE CLEAN AGENT, FK-5-1-12 FIRE EXTINGUISHING SYSTEM MUST BE IN ACCORDANCE WITH NFPA 2001 (2015).
2.

ALL DEVICES AND EQUIPMENT MUST BE UL LISTED OR FM APPROVED.
3.

CLEAN AGENT EXTINGUISHING SYSTEM MUST PROVIDE COVERAGE IN THE DESIGNATED ROOM.
4.

DEVICE LOCATIONS, PIPE AND CONDUIT ROUTINGS ARE CONCEPTUAL, FINAL QUANTITY AND LAYOUT MUST BE IN ACCORDANCE WITH APPLICABLE CODES, MANUFACTURER'S RECOMMENDATIONS AND EQUIPMENT LISTINGS. COORDINATE WITH MECHANICAL AND ELECTRICAL EQUIPMENT AND RACEWAYS.
5.

MINIMUM DESIGN CONCENTRATION MUST BE 4.2% AND THE MAXIMUM DESIGN CONCENTRATION MUST BE 6%. THE DESIGN TEMPERATURE RANGE MUST BE 60 TO 90 DEGREES F. THE CONCENTRATION MUST BE MAINTAINED OVER THE TEMPERATURE RANGE ABOVE FOR A MINIMUM OF 10 MINUTES. THE DESIGN ALTITUDE IS 13 FT.
6.

PIPING AND FITTINGS MUST COMPLY WITH NFPA 2001. PIPING MUST BE PROVIDED WITH EARTHQUAKE PROTECTION. ALL SYSTEM PIPING IN FINISHED AREAS MUST BE CONCEALED FROM VIEW.
7.

FIRE PROTECTION CONTRACTOR MUST COORDINATE WITH THE GENERAL CONTRACTOR TO SEAL ALL PENETRATIONS INTO THE PROTECTED SPACE.
8.

PROVIDE INSPECTION AND TESTS IN ACCORDANCE WITH NFPA 2001 INCLUDING A ROOM INTEGRITY TEST.
9.

A ROOM INTEGRITY TEST MUST BE COMPLETED FOR THE PRELIMINARY AND FINAL ACCEPTABLE TESTING.
10.

CLEAN AGENT DETECTION SYSTEM MUST BE VERY EARLY WARNING AIR SAMPLING DETECTION SYSTEM. AIRE SAMPLING PANEL MUST PROVIDE A MINIMUM OF TWO SAMPLING PIPES THAT ARE ANNUNCIATED SEPARATELY. BOTH ZONES MUST ACTIVATE TO RELEASE CLENA AGENT SYSTEM.

FIRE ALARM NOTES:

1.

THE FIRE ALARM SYSTEM MUST BE DESIGNED AND INSTALLED IN ACCORDANCE WITH NFPA 72 (2016) AND SPECIFICATION SECTION 13851.
2.

ALL DEVICES AND EQUIPMENT MUST BE UL LISTED OR FM APPROVED. SYTEM IS AN EXTENSION OF THE EXISTING JOHNSON CONTROLS FIRE ALARM SYSTEM. ALL COMPNENTS MUST BE LISTED WITH THE JCI IFC2-3030.
3.

DEVICE LOCATIONS AND CONDUIT ROUTING ARE CONCEPTUAL. FINAL QUANTITY AND LAYOUT MUST BE IN ACCORDANCE WITH APPLICABLE CODES, MANUFACTURER'S RECOMMENDATIONS, AND EQUIPMENT LISTINGS. COORDINATE LOCATIONS WITH CEILING ELECTRICAL INSTALLATION.
4.

ALL FIRE ALARM CONDUIT MUST BE 3/4-INCH MINIMUM. ALL CONDUIT IN FINISHED AREAS SHALL BE CONCEALED.
5.

SYNCHRONIZE ALL VISUAL NOTIFICATION APPLIANCES. SYNCHRONIZE ALL AUDIBLE NOTIFICATION APPLIANCES.
6.

VISUAL NOTIFICATION APPLIANCES MUST BE SPACED IN ACCORDANCE WITH NFPA 72.
7.

SIGNALING LINE CIRCUITS MUST BE CLASS B, INITIATING DEVICE CIRCUITS SHALL BE CLASS B, NOTIFICATION APPLIANCE CIRCUITS SHALL BE CLASS B.
8.










































SMOKE DETECTORS MUST BE LOCATED A MINIMUM OF 3 FEET FROM SUPPLY AND RETURN AIR DIFFUSERS.
9.

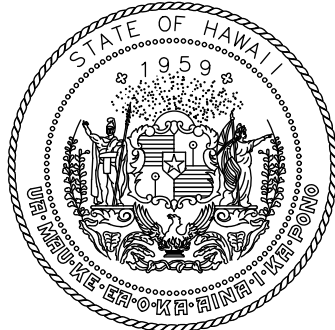
ALL CIRCUITS MUST BE PULLED FROM DEVICE TO DEVICE. NO SPLICES OR T-TAPPING IS ALLOWED. ALL DEVICES MUST HAVE SCREW TERMINALS. WHERE DEVICES ARE ONLY PROVIDED WITH PIGTAILS FROM THE MANUFACTURER, PIGTAILS MUST BE LANDED ON TERMINAL STRIPS MOUNTED WITHIN THE JUNCTION BOX.
10.

PAINT ALL FIRE ALARM JUNCTION BOXES AND COVERS RED IN UNFINISHED AREAS (I.E. ABOVE CEILINGS, MECHANICAL ROOMS, ETC). IN FINISHED AREAS, CONDUIT AND JUNCTION BOXES CAN BE PAINTED TO MATCH THE ROOM FINISH. THE INSIDE COVER OF THE JUNCTION BOX MUST BE IDENTIFIED AS "FIRE ALARM" AND THE CONDUIT MUST HAVE PAINTED RED BANDS 3/4-INCH WIDE AT 20 FEET CENTERS AND AT EACH SIDE OF A FLOOR, WALL OR CEILING PENETRATION.
11.

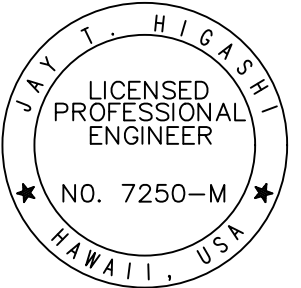
THE CONTRACTOR MUST BE RESPONSIBLE FOR COORDINATING THE WORK AMONGST THE VARIOUS TRADES AS NECESSARY TO AVOID CONFLICTS AND TO ENSURE THE INSTALLATION OF ALL WORK WILL FIT WITHIN THE AVAILABLE SPACE.
12.

CONTRACTOR MUST PROVIDE A FIRE ALARM DOCUMENT CABINET PER NFPA 72.

FIRE PROTECTION SYMBOLS AND ABBREVIATIONS		
EXISTING	NEW	DESCRIPTION
	 F	FIRE SPRINKLER PIPING
	 FDC	FIRE DEPARTMENT CONNECTION PIPING
		PENDENT SPRINKLER
		UPRIGHT SPRINKLER
		FIRE SPRINKLER RISER
		FIRE DEPARTMENT CONNECTION
		FIRE HOSE CABINET
		REMOTE TEST SWITCH
		COMBINED CLEAR AUDIO/VISUAL DEVICE, CANDELA RATING INDICATED ON DRAWINGS. WALL MOUNTED.
		COMBINED CLEAR AUDIO/VISUAL DEVICE, CANDELA RATING INDICATED ON DRAWINGS. CEILING MOUNTED.
		WATERFLOW SWITCH
		TAMPER SWITCH
		FIRE ALARM CONTROL PANEL
		POWER EXTENDER PANEL
		FIRE ALARM ANNUNCIATOR
		SUPPRESSION SYSTEM CONTROL PANEL
		AIR SAMPLING TYPE SMOKE DETECTION CONTROL PANEL, MOUNT BOTTOM OF PANEL 48-INCHES ABOVE FINISH FLOOR
		PHOTOELECTRIC SMOKE DETECTOR, CEILING MOUNTED
		HEAT DETECTOR, CEILING MOUNTED
		SMOKE DETECTOR, WALL MOUNTED
		DUCT DETECTOR
		DOUBLE ACTION MANUAL PULL STATION
		NOVEC 1230 PRE-DISCHARGE A/V DEVICE, MOUNTED 80" A.F.F. TO BOTTOM
		NOVEC 1230 POST-DISCHARGE A/V DEVICE, MOUNTED 80" A.F.F. TO BOTTOM
		NOVEC 1230 MANUAL ABORT STATION, MOUNTED 48" AFF TO TOP
		NOVEC 1230 MANUAL ACTIVATION STATION, MOUNTED 48" AFF TO TOP
		NOVEC 1230 STORAGE CYLINDER
		MAIN RESERVE SWITCH
		LOW PRESSURE SENSOR READER
		ALARM PRESSURE SWITCH READER
		SOLENOID VALVE FOR NOVEC 1230 CLEAN AGENT SYSTEM
		ADDRESSABLE INPUT MODULE
		ADDRESSABLE OUTPUT MODULE
		24 VOLT RELAY
		4A:60B:C PORTABLE FIRE EXTINGUISHER LOCATION, SEMI-RECESSED CABINET
		4A:60B:C (UNLESS OTHERWISE INDICATED ON DRAWINGS) PORTABLE FIRE EXTINGUISHER LOCATION
		PORTABLE FIRE EXTINGUISHER LOCATION, CLEAN AGENT, 2A:10B:C RATING MOUNTED IN SEMI RECESSED CABINET
	TYP	TYPICAL
	AFF	ABOVE FINISHED FLOOR



Airports Division
DEPARTMENT OF TRANSPORTATION
STATE OF HAWAII



J. T. Higley
04/30/24
/ Licensed Expiration Date

This work was prepared by me or under my supervision.

DSGN.	DRWN.	CHKD.	APPD.
JTH	AM	JTH	JTH

NO.	DATE	REVISIONS
-----	------	-----------

DATE

PROJECT TITLE :

NEW PASS AND ID OFFICE

AT
DANIEL K. INOUE INTERNATIONAL AIRPORT
HONOLULU, HAWAII

PROJECT NO.:

CO1322-63

SHEET TITLE:

FIRE PROTECTION
NOTES, SYMBOLS, AND
ABBREVIATIONS

DATE :	DWG. NO.
12/21/22	F-001
SHEET :	
78 OF 100 SHEETS	