

GENERAL NOTES / SCOPE OF WORK

1. SYSTEM WIRING NOTED ON THE DRAWINGS IS PER MANUFACTURE AND CODE REQUIREMENTS. ANY ALTERATION TO SYSTEM WIRING, WITHOUT APPROVAL, IS AT ELECTRICAL CONTRACTOR'S OWN RISK!!

2. SYSTEM WIRING SHOWN ON DRAWINGS IS DIAGRAMMATIC AND ONLY USED FOR REFERENCE PURPOSES. ACTUAL WIRE AND DEVICE INSTALLATION MAY VARY DUE TO OBSTRUCTIONS.

3. WIRE SHOWN IN THIS DRAWING SET IS PERMITTED IN RACEWAYS LEADING TO FIRE PROTECTION EQUIPMENT. OTHER WIRE SHALL NOT BE PERMITTED IN THE SAME RACEWAY.

4. FIRE ALARM SYSTEM INSTALLATION SHALL CONFORM WITH THE LATEST U.L., N.E.C., N.F.P.A., W.A.C., AND OTHER STANDARDS AS APPLICABLE TO THE CITY STANDARDS.

5. WHEN NECESSARY, DUE TO CHANGING DESIGN REQUIREMENTS, FACTORY AVAILABILITY, ETC. FIRE SYSTEMS WEST RESERVES THE RIGHT TO SUBSTITUTE EQUIPMENT HEREIN MENTIONED OR SPECIFIED, WITH EQUIPMENT OF EQUAL OR BETTER QUALITY, FUNCTION AND DESIGN.

6. PARALLEL BRANCHING (T-TAPPING) OF WIRE TO ALL NOTIFICATION APPLIANCE CIRCUITS SHALL NOT BE PERMITTED.

7. FIRE SYSTEMS WEST WILL INSTALL A NEW FIRE ALARM POWER SUPPLY AND REMOTE ANNUNCIATOR.

8. FIRE SYSTEMS WEST WILL INSTALL NEW SMOKE DETECTORS THROUGHOUT.

9. FIRE SYSTEMS WEST WILL INSTALL A NEW RELAY MODULE FOR THE A/V SYSTEM.

10. FIRE SYSTEMS WEST WILL INSTALL NEW RELAY MODULES FOR THE HVLS FANS.

11. FIRE SYSTEMS WEST WILL INSTALL NEW NOTIFICATION DEVICES THROUGHOUT FOR THE TENANT IMPROVEMENT.

FLAG NOTES

1. INSTALL SMOKE DETECTOR ABOVE THE CEILING.
2. INSTALL RELAY FOR AV SHUTDOWN. COORDINATE WITH ELECTRICAL CONTRACTOR.
3. INSTALL RELAY FOR HVLS FAN SHUTDOWN. COORDINATE WITH MECHANICAL/ELECTRICAL CONTRACTOR.

Drawing reviewed by:

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WA ECL# FIRESWI 055LW
WA CL# FIRESWI 140B1

Symbol Legend					
SYMBOL	DESCRIPTION	MANUFACTURER	PART NUMBER	QUANTITY	UL
	E3 CLASSIC, BLACK	GAMEWELL FCI	E3 CLASSIC	1	
	LCD REMOTE ANNUNCIATOR	GAMEWELL FCI	LCD-E3	2	51689
	HPF-PS10, Power Supply, Remote Charger, 10A, 120VAC, Red Enclosure	HOMEWELL PRODUCTS	HPF-PS10	2	
	4 WIRE PHOTO DUCT DETECTOR WITH 2651 DETECTOR	SYSTEM SENSOR	DA120	8	N/A
	THERMAL HEAT DETECTOR 136F, BRIGHT WHITE	GAMEWELL FCI	ATD-L3	1	52392
	PHOTO, SMOKE, DETECTOR, BRIGHT WHITE	GAMEWELL FCI	ASD-PL3	96	51913
	OUTPUT RELAY CONTROL MODULE, ADDRESSABLE	GAMEWELL FCI	ADM-2RF	9	51688
	MONITOR MODULE, ADDRESSABLE, CLASS A OR B	GAMEWELL FCI	AMM-4F	8	51949
	PULL STATION, DOUBLE ACTION, ADDRESSABLE	GAMEWELL FCI	MS-7AF	2	52465
	HORN/STROBE, 2 WIRE, STANDARD CD, RED, OUTDOOR	SYSTEM SENSOR	P2RK	2	54011
	SCRWLED, Stroke, Outdoor, Ceiling, Red, "FIRE"	SYSTEM SENSOR	SCRWLED	4	
	PC2WLED, Horn/Strobe, Ceiling, 2 Wire, White	SYSTEM SENSOR	PC2WLED	26	N/A
	STROBE, CEILING, WHITE	SYSTEM SENSOR	SCWLED	22	N/A
	Gamewell, EOL, 4.7K Ohms	GAMEWELL FCI	EOL-4.7	8	

Battery Calculations for Panel: P4					
Part No:HPF-PS10, Power Supply, Remote Charger, 10A, 120VAC, Red Enclosure					
Part No.	Qty.	Panel Equipment	Standby	Alarm	Total Alarm
HPF-PS10, MB	1	HPF-PS10, MB, Main Board	65.0000mA	65.0000mA	145.0000mA
Peripheral Devices			65.0000mA	65.0000mA	145.0000mA
EOL-4.7	4	Gamewell, EOL, 4.7K Ohms (Notification)	0.0000mA	0.0000mA	0.0000mA
SCWLED	12	STROBE, CEILING, WHITE, (Notification) 15CD	0.0000mA	0.0000mA	0.0000mA
PC2WLED	5	PC2WLED, Horn/Strobe, Ceiling, 2 Wire, White, (Notification) 15CD 88dB	0.0000mA	0.0000mA	0.0000mA
PC2WLED	5	PC2WLED, Horn/Strobe, Ceiling, 2 Wire, White, (Notification) 30CD 88dB	0.0000mA	0.0000mA	0.0000mA
SCRWLED	4	SCRWLED, Stroke, Outdoor, Ceiling, Red, "FIRE" (Notification) 15CD	0.0000mA	0.0000mA	0.0000mA
STROBE, CEILING, WHITE, (Notification) 75CD	1	STROBE, CEILING, WHITE, (Notification) 75CD	0.0000mA	0.0000mA	0.0000mA
PC2WLED	8	PC2WLED, Horn/Strobe, Ceiling, 2 Wire, White, (Notification) 75CD 88dB	0.0000mA	0.0000mA	0.0000mA
SCWLED	5	STROBE, CEILING, WHITE, (Notification) 75CD	0.0000mA	0.0000mA	0.0000mA
Total Peripheral Alarms			0.0000mA	0.0000mA	0.0000mA
Total Standby Amps			65.0000mA	Total Alarm Amps	1781.0000mA
Standby time: 24 Hrs					1.56Ah
Alarm time: 5 Min					0.114Ah
Battery requirement:					1.707Ah
Compensation Factors - Standby: 1.2 Alarm: 1.2 Requirement with compensation:					2.045Ah

Circuit Calculations Panel: P4 Card: 13 Circuit:NAC3					
Circuit Name: NAC3					
Circuit Type: Notification					
Terminal Voltage: 20.4V/DC Amperage: 3.0000A					
Cable: 142 SOL JKT FPLR 1M RL RED #14					
Calculations based on Running Total Length					
Design Criteria: Ambient temperature: 167°F Max. operating voltage drop: 10%					
Device	Part No.	Appliance Desc	Distance	Current	Voltage Drop
HPF-PS10	Panel		20.4V		
N1	PC2WLED	PC2WLED, Horn/Strobe, Ceiling, 2 Wire, White, 30CD	124'-0"	18.0000mA	20.0187V (0.3218V)
2	SCWLED	STROBE, CEILING, WHITE, 15CD	9'-6"	18.0000mA	20.0619V (0.0168V)
3	SCWLED	STROBE, CEILING, WHITE, 15CD	9'-6"	18.0000mA	20.0619V (0.0068V)
4	SCWLED	STROBE, CEILING, WHITE, 15CD	15'-0"	18.0000mA	20.0870V (0.0147V)
N5	PC2WLED	PC2WLED, Horn/Strobe, Ceiling, 2 Wire, White, 15CD	12'-0"	35.0000mA	20.0263V (0.0105V)
6	SCWLED	STROBE, CEILING, WHITE, 15CD	14'-0"	18.0000mA	20.0717V (0.0062V)
7	SCWLED	STROBE, CEILING, WHITE, 15CD	13'-0"	18.0000mA	20.0717V (0.0071V)
8	SCWLED	STROBE, CEILING, WHITE, 15CD	19'-0"	18.0000mA	20.0344V (0.0065V)
9	SCWLED	STROBE, CEILING, WHITE, 15CD	19'-0"	18.0000mA	19.8973V (0.0062V)
N10	PC2WLED	PC2WLED, Horn/Strobe, Ceiling, 2 Wire, White, 15CD	12'-0"	35.0000mA	19.8647V (0.0028V)
N10	EOL-4.7	Gamewell, EOL, 4.7K Ohms	5'-0"	0.0000mA	19.8647V (0V)
Total Current: 234.0000mA					
Total Voltage Drop: 0.4553V					
(Total VDrop Percent:1.98%)					

Circuit Calculations Panel: P4 Card: 13 Circuit:NAC3					
Circuit Name: NAC3					
Circuit Type: Notification					
Terminal Voltage: 20.4V/DC Amperage: 3.0000A					
Cable: 142 SOL JKT FPLR 1M RL RED #14					
Calculations based on Running Total Length					
Design Criteria: Ambient temperature: 167°F Max. operating voltage drop: 10%					
Device	Part No.	Appliance Desc	Distance	Current	Voltage Drop
HPF-PS10	Panel		20.4V		
N1	SCWLED	STROBE, CEILING, WHITE, 75CD	225'-6"	70.0000mA	19.8059V (0.4642V)
N2	PC2WLED	PC2WLED, Horn/Strobe, Ceiling, 2 Wire, White, 75CD	15'-0"	87.0000mA	19.8788V (0.0261V)
N3	PC2WLED	PC2WLED, Horn/Strobe, Ceiling, 2 Wire, White, 75CD	20'-0"	87.0000mA	19.8487V (0.0201V)
N4	PC2WLED	PC2WLED, Horn/Strobe, Ceiling, 2 Wire, White, 75CD	38'-0"	87.0000mA	19.8256V (0.0241V)
N5	SCWLED	STROBE, CEILING, WHITE, 30CD	43'-0"	32.0000mA	19.8189V (0.0057V)
N5	EOL-4.7	Gamewell, EOL, 4.7K Ohms	2'-0"	0.0000mA	19.8189V (0V)
Total Current: 353.0000mA					
Total Voltage Drop: 0.5851V					
(Total VDrop Percent:2.84%)					

Battery Calculations for Panel: P1					
Part No:E3 CLASSIC - E3 CLASSIC, BLACK					
Part No.	Qty.	Panel Equipment	Standby	Alarm	Total Alarm
ELI-MB-E3	1	ELI-MB-E3, Main Board (Nicolini or CLIP Modes)	81.0000mA	81.0000mA	150.0000mA
PS10	1	POWER SUPPLY MODULE, 9-AMP	50.0000mA	50.0000mA	50.0000mA
PS10	1	PROGRAMMABLE SWITCH MODULE, 16 SW, 48 LED	11.0000mA	11.0000mA	150.0000mA
Total Panel Alarms			202.0000mA	Total Panel Alarm	505.0000mA
Peripheral Devices			0.0000mA	0.0000mA	0.0000mA
LCD-E3	3	LCD REMOTE ANNUNCIATOR, LCD-E3 (Serial)	0.0000mA	0.0000mA	0.0000mA
ADM-2RF	9	OUTPUT RELAY CONTROL MODULE, ADDRESSABLE (Signaling line)	0.3750mA	3.3750mA	6.5000mA
MS-7AF	2	PULL STATION, DOUBLE ACTION, ADDRESSABLE (Signaling line)	0.3000mA	0.6000mA	0.0000mA
ATD-L3	1	THERMAL HEAT DETECTOR 136F, BRIGHT WHITE (Signaling line)	0.2000mA	0.3000mA	2.0000mA
ASD-PL3	96	PHOTO, SMOKE, DETECTOR, BRIGHT WHITE (Signaling line)	0.2000mA	18.2000mA	2.0000mA
AMM-4F	8	MONITOR MODULE, ADDRESSABLE, CLASS A OR B (Signaling line)	0.3750mA	3.0000mA	40.0000mA
EOL-4.7	1	Gamewell, EOL, 4.7K Ohms (Notification)	0.0000mA	0.0000mA	0.0000mA
PC2WLED	1	PC2WLED, Horn/Strobe, Ceiling, 2 Wire, White, (Notification) 110CD 88dB	0.0000mA	0.0000mA	0.0000mA
HPF-PS10	1	HPF-PS10, Power Supply, Remote Charger, 10A, 120VAC, Red Enclosure, HPF-PS10, MB (Notification)	2.0000mA	2.0000mA	2.0000mA
Total Peripheral Alarms			28.3750mA	Total Periph Alarm	521.5000mA
Total Standby Amps			320.3750mA	Total Alarm Amps	1026.5000mA
Standby time: 24 Hrs					7.688Ah
Alarm time: 5 Min					0.098Ah
Battery requirement:					7.774Ah
Compensation Factors - Standby: 1.2 Alarm: 1.2 Requirement with compensation:					9.329Ah

Circuit Calculations Panel: P1 Card: 00					
Terminal Voltage: 20.4V/DC Amperage: 1.0000A					
Cable: 162 SOL JKT FPLR 1M RL RED #16					
Calculations based on Lump Sum Length					
Design Criteria: Ambient temperature: 167°F Max. operating voltage drop: 10%					
Device	Part No.	Appliance Desc	Distance	Current	Voltage Drop
ELI-MB-E3	Panel		20.4V		
ASD-PL3	96	ASD-PL3, 2.0000mA	96	2.0000mA	0.0407V
AMM-4F	8	AMM-4F, 5.0000mA	8	5.0000mA	0.0407V
ATD-L3	2	ATD-L3, 2.0000mA	2	2.0000mA	0.0407V
MS-7AF	2	MS-7AF, 3.0000mA	2	3.0000mA	0.0407V
ADM-2RF	9	ADM-2RF, 6.5000mA	9	6.5000mA	0.0407V
Total Current: 221.0000mA					
Total Voltage Drop: 0.0407V					
(Total VDrop Percent:0.20%)					

Circuit Calculations Panel: P1 Card: 00 Circuit:NAC2					
Circuit Name: NAC2					
Circuit Type: Notification					
Terminal Voltage: 20.4V/DC Amperage: 2.0000A					
Cable: 142 SOL JKT FPLR 1M RL RED #14					
Calculations based on Running Total Length					
Design Criteria: Ambient temperature: 167°F Max. operating voltage drop: 10%					
Device	Part No.	Appliance Desc	Distance	Current	Voltage Drop
HPF-PS10	Panel		20.4V		
N1	P2RK	HORN/STROBE, 2 WIRE, STANDARD CD, RED, OUTDOOR, 110CD	37'-0"	221.0000mA	20.3693V (0.0407V)
N1	EOL-4.7	Gamewell, EOL, 4.7K Ohms	4'-0"	0.0000mA	20.3693V (0V)
Total Current: 221.0000mA					
Total Voltage Drop: 0.0407V					
(Total VDrop Percent:0.20%)					

Circuit Calculations Panel: P1 Card: 00 Circuit:NAC2					
Circuit Name: NAC2					
Circuit Type: Notification					
Terminal Voltage: 20.4V/DC Amperage: 2.0000A					
Cable: 142 SOL JKT FPLR 1M RL RED #14					
Calculations based on Running Total Length					
Design Criteria: Ambient temperature: 167°F Max. operating voltage drop: 10%					
Device	Part No.	Appliance Desc	Distance	Current	Voltage Drop
HPF-PS10	Panel		20.4V		
N001	HPF-PS10	HPF-PS10, Power Supply, Remote Charger, 10A, 120VAC, Red Enclosure	2'-0"	2.0000mA	20.4V (0V)
Total Current: 2.0000mA					
Total Voltage Drop: 0.0V					
(Total VDrop Percent:0.00%)					

Battery Calculations for Panel: P2						
Part No:HPF-PS10 - HPF-PS10, Power Supply, Remote Charger, 10A, 120VAC, Red Enclosure						
Part No.	Qty.	Description	Standby	Total Standby	Alarm	Total Alarm
HPF-PS10_MB	1	Panel Equipment HPF-PS10_MB, Main Board	65.0000mA Total Panel Stry	65.0000mA 65.0000mA	145.0000mA Total Panel Alarm	145.0000mA
Peripheral Devices						
EOL-4.7	3	GAMWELL EOL, 4.7K Ohms (Notification)	0.0000mA	0.0000mA	0.0000mA	0.0000mA
PCWLED	5	PCWLED, Horn/Strobe, Ceiling, 2 Wire, White (Notification) 95CD 88dB	0.0000mA	0.0000mA	0.0000mA	0.0000mA
SCWLED	3	STROBE, CEILING, WHITE (Notification) 15CD	0.0000mA	0.0000mA	0.0000mA	0.0000mA
SCWLED	1	STROBE, CEILING, WHITE (Notification) 30CD	0.0000mA	0.0000mA	28.0000mA	28.0000mA
PCWLED	2	PCWLED, Horn/Strobe, Ceiling, 2 Wire, White (Notification) 95CD 88dB	0.0000mA	0.0000mA	19.0000mA	19.0000mA
PRK1	1	HORN/STROBE, 2 WIRE, STANDARD CD, RED, OUTDOOR (Notification) 110CD 88dB	0.0000mA	0.0000mA	221.0000mA	221.0000mA
Total Peripheral Stry			0.0000mA	0.0000mA	221.0000mA	221.0000mA
Total Standby Amps			65.0000mA	65.0000mA	Total Alarm Amps	1319.0000mA
				Standby time: 24 Hrs	1.56Ah	
				Alarm time: 5 Min	0.15Ah	
				Battery requirement	1.67Ah	
				Compensation with compensation:	2.00Ah	
Compensation Factors - Standby: 1.2 Alarm: 1.2			Requirement with compensation: 2.00Ah			