

City of Aurora
Building Codes Division
15151 E Alameda Pkwy
Aurora, CO 80012
(303) 739-7420



Notice

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17 United States Code
Section 106.**



Building Permit Application

Permit Center - 15151 E Alameda Pkwy ♦ Ste 2400 ♦ Aurora, CO 80012 ♦ (303) 739-7420

Email buildingplans@aurora.gov

Project Address: 1411 S. POTOMAC ST Unit # 2ND FL Zip code: 80012
Project Name: COLORADO ORTHOPEDIC CONSULTANTS
Contractor Company Name: P.A.S Phone: 3-466-8800 Fax: 3-466-8820
Contact Person: JEREMY BIEBEL Phone: 3-466-8800
Email: _____ Fax: _____

Architect and/or Engineer Contact information for correction items:

Architect or Engineer Name: _____ Email: _____
Phone #: _____ Fax #: _____
Owner: (Required for Certificate of Occupancy) only: _____
Owner address: _____
Email: _____

Valuation / FDA\$ 1,900 Materials cost \$ 3,000

FDA = Fee Determination Assessment. (Also known as the value of project. The Fee Determination Assessment, FDA has no relationship to the construction costs for the building which can vary greatly. Rather, the Assessment is used only to determine the appropriate level of fees to fund our code compliance activities.

Describe the work you will be doing: REMOVE AND REPLACE 3 STROBES WITH HORN STROBES
PROVIDE AND INSTALL 2 HORN STROBES PROVIDE AND INSTALL 22
STROBES PROVIDE AND INSTALL NEW BOOSTER

I declare under penalty that this application has been examined by me; and that the statements made herein are made in good faith pursuant to City of Aurora tax and licensing regulations; and to the best of my knowledge and belief are true, correct and complete.

Print Name: FED CALLAHAN Signature: _____ Date: 11/22/11

BOARD OF APPEALS - Contractor's Appeals and Standards Board. Applicants have the right to have the board hear appeals of orders, decisions or determinations made by the building official relative to the application and interpretation of the building code. Any application for appeal to the board shall be based on a claim that the true intent of the code or the rules legally adopted there under have been incorrectly interpreted, the provisions of the building code do not fully apply or an equally good or better form of construction is proposed.

Sprinkler & Alarm permits are separate submittals, and the value is NOT included on main permit.

◆◆◆◆ THIS SPACE FOR OFFICE USE ONLY ◆◆◆◆

Change of occupancy/use: ☐ Yes ☒ No

FDA: 1,900-00

Reviews

- ☐ Structural
- ☐ Mechanical
- ☐ Plumbing
- ☐ Electrical
- ☒ Fire Life Safety
- ☐ Bldg Life Safety

Inspections

- ☐ Structural
- ☐ Mechanical
- ☐ Plumbing
- ☒ Electrical
- ☒ Life Safety
- ☐ Gate/Haz.

Pre-approval(s):

Zoning: ☐

Water: ☐

Initials

Exterior changes? ☐ Yes ☒ No

Homeowner Verified ☐ Yes ☒ No

Permit Type LT

Mid roof /Avg. bldg height _____

Parent Permit RSN 619637

Plans Examiner W

Sub Type CH-ALARM

RSN: 2011-571927 / 632551

Intake Date: 11-22-11 PE Initial W

Balance Due: \$ _____

Plans Picked up by _____

Company Name _____

Phone # _____

See reverse side for Fence/sign/Public Improvements application

2011571927

BUILDING CLASSIFICATIONS AND CODES

OCCUPANCY GROUP: B
USE: OFFICE
CONSTRUCTION TYPE: TYPE-II ~~B~~ - ~~SPK~~
STORIES: BASEMENT + 4 FLOORS
SPRINKLERED: FULLY
REQUIREMENTS: MODIFIED PER 2009 IFC
CODES: 2009 IFC 2007 NFPA 72
2009 IBC 2003 ANSI 17.1
2009 IMC 2009-NFPA-70-
2011 NEC

SYSTEM TYPE AND MONITORING

SYSTEM CLASSIFICATION: (NFPA 72, CHAPTER 8), REMOTE STATION
SYSTEM TYPE: INTELLIGENT/ADDRESSABLE
WIRING CLASSIFICATION: NAC - CLASS B
SLC - CLASS B, STYLE 4
COMMUNICATION RISER - CLASS A
NOTIFICATION TYPE: TEMPORAL PATTERN
MONITORING: THIS SYSTEM IS AND WILL CONTINUE TO BE
MONITORED BY A REMOTE SUPERVISING
STATION, PER NFPA 72 CHAPTER 8, SECTION 3.
MONITORING COMPANY: API
(303)427-0880
ACCOUNT: 45-00-2848

DRAWING INFORMATION

FAS WORK ORDER #: 11011409
FAS CAD FILE: COLORADO ORTHOPEDIC CONSULTANTS

SCOPE OF WORK ✓

1. REMOVE AND REPLACE THREE (3) STROBES WITH NEW HORN STROBES.
2. PROVIDE AND INSTALL TWO (2) HORN STROBES.
3. PROVIDE AND INSTALL TWENTY-TWO (22) STROBES.
4. PROVIDE AND INSTALL ONE (1) BOOSTER PANEL.

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MATRIX - SEQUENCE OF OPS
VOLTAGE DROP

AURORA MEDICAL OFFICE BUILDING

FIRE ALARM SYSTEM SHOP DRAWINGS FOR:

PROJECT:

COLORADO ORTHOPEDIC CONSULTANTS
1411 SOUTH POTOMAC STREET, 2ND FLOOR
AURORA, CO 80012

ELECTRICAL CONTRACTOR:

FIRE ALARM SERVICES, INC.
4800 W. 60TH AVENUE
ARVADA, CO 80003
PH:(303)466-8800
FAX:(303)466-8820
SHANNON SMITH

FIRE ALARM DESIGNER:

FIRE ALARM SERVICES, INC.
4800 W. 60TH AVENUE
ARVADA, CO 80003
PH:(303)466-8800
FAX:(303)466-8820



Fire Alarm Services, Inc.
4800 W. 60th Avenue
Arvada, CO 80003

(303)466-8800 (Phone)
(303)466-8820 (Fax)
contactus@fasonline.cc (E-Mail)
www.fasonline.cc

GENERAL CONTRACTOR:

CODA CONSTRUCTION GROUP, LLC
1777 SOUTH BELLAIRE STREET, SUITE 480
DENVER, CO 80222
PH:(720)250-8272
FAX:(303)757-3083
MARK STRATTON

ARCHITECT:

KEENEY DESIGN
575 LOGAN STREET
DENVER, CO 80203
PH:(303)871-1970

GENERAL NOTES

1. FIRE ALARM SYSTEMS CANNOT BE COMBINED WITH BURGLAR ALARM SYSTEMS.
2. THE INSTALLER IS REQUIRED TO COORDINATE WITH THE MECHANICAL CONTRACTOR TO DETERMINE INSTALLATION OF SMOKE DETECTORS OR SENSORS (I.E., NOT CLOSER THAN 3 FEET FROM ANY SUPPLY/RETURN DIFFUSER AND THAT ADDITIONAL DETECTION MAY BE REQUIRED DUE TO THE RELOCATION OR SPACING ADJUSTMENT OF DETECTORS, AS A RESULT).
3. FIRE ALARM DEVICES MUST BE PLACED IN PROTECTED AREAS WITH AMBIENT TEMPERATURE RANGING FROM 32 DEGREES TO 120 DEGREES F.
4. DO NOT PLACE SMOKE DETECTORS WITHIN 3 FEET OF AIR SUPPLY REGISTERS AND DIFFUSERS.
5. FIRE ALARM SYSTEM SHALL BE MONITORED BY A CLASS 1 CENTRAL STATION.
6. FIRE ALARM CONTROL PANEL WILL BE PLACED IN THE LOCATION SPECIFIED WITHIN THE PLAN SUBMITTAL UNLESS APPROVED BY THE LIFE SAFETY FIELD INSPECTOR.
7. CITY OF AURORA BUILDING CODES DIVISION DOES NOT GRANT APPROVAL FOR ANY VIOLATIONS OF ADOPTED FIRE CODE. CODE VIOLATIONS UNCOVERED DURING FIELD INSPECTIONS MUST BE CORRECTED.
8. PER THE 2009 IFC AND THE 2011 NEC THE INSTALLER MUST REQUEST A ROUGH WIRING INSPECTION ON THE FIRE ALARM SYSTEM PRIOR TO REQUESTING A FIRE ALARM FINAL INSPECTION.
9. THE CONTRACTOR SHALL CONDUCT A "PRE-TEST" OF THE PROJECT AREA PRIOR TO SCHEDULING AN ACCEPTANCE TEST WITH THE BUILDING CODES DIVISION.
10. REMOTE ALARM INDICATORS SHALL BE PROVIDED FOR ANY FIRE ALARM DETECTOR LOCATED IN A CONCEALED LOCATION WITH A NORMALLY LOCKED DOOR.
11. AT THE TIME OF FINAL FIRE ALARM INSPECTION, THE SYSTEM MUST BE SUPERVISED/MONITORED BY A CLASS 1 CENTRAL MONITORING AGENCY.
12. THE INSTALLING CONTRACTOR (OR DESIGNEE) MUST PROVIDE ALL NECESSARY TESTING EQUIPMENT AND PERFORM ALL TESTING REQUIRED BY THE LIFE SAFETY FIELD INSPECTOR.
13. IN-DUCT SMOKE DETECTORS INSTALLED IN CONCEALED LOCATIONS OR, WHERE THE DETECTORS ALARM INDICATOR IS NOT READILY VISIBLE TO RESPONDING PERSONNEL SHALL BE PROVIDED WITH A REMOTE INDICATOR, REMOTE TEST STATION AND PLACARDING.
14. ALL NEW OR EXISTING FIRE ALARM SYSTEMS MUST BE CONNECTED TO ANY EXTERIOR HORN AND STROBE DEVICE. IF THE BUILDING IS FIRE SPRINKLED, A GENERAL ALARM ACTIVATION AT THE FIRE ALARM CONTROL PANEL WILL ACTIVATE THE EXTERIOR HORN AND STROBE. SILENCING THE PANEL MUST ALLOW THE VISUAL DEVICE TO CONTINUE UNTIL THE PANEL IS RESET.
15. FIRE ALARM SYSTEMS SHALL INCLUDE BOTH AUDIBLE AND VISUAL ALARMS. VISUAL ALARMS WILL BE REQUIRED IN ALL ACCESSIBLE PUBLIC AND COMMON-USE AREAS PER THE 2009 IFC AND THE 2003 ANSI A117.1 STANDARD.
16. PROVIDE A PRIMARY AND SECONDARY POWER SUPPLY FOR THE FIRE ALARM SYSTEM PER THE 2009 IFC, SECTION 907.5 AND THE 2009 NFPA-72, 2011 NEC.

PROJECT NAME COLORADO ORTHOPEDIC CONS.
CONTRACTOR FIRE ALARM SERVICES
ADDRESS 1411 S. POTOMAC ST.
PLAN NO. 2ND FLOOR
DATE 12/5/2011

PERMIT # 2011-571927
RSN # 6232551
OCCUPANCY TYPE IBC TYPE II B - SPK
CONST. TYPE IBC B OCCUPANCY
SQUARE FOOT 5230 #
CODES REV'D 2009 IFC, 2007
NFPA 72

AURORA BUILDING DEPARTMENT
LIFE SAFETY SYSTEMS
APPROVED
SUBJECT TO CORRECTIONS AS
INDICATED AND FIELD INSPECTIONS
WITH FUNCTIONAL TESTS
MIKE DEAN 12/5/11
SIGNED DATE

David Ebaugh
Nicet Fire Alarm systems
Level IV
Certification #089814
Date: 11/22/11

David Ebaugh

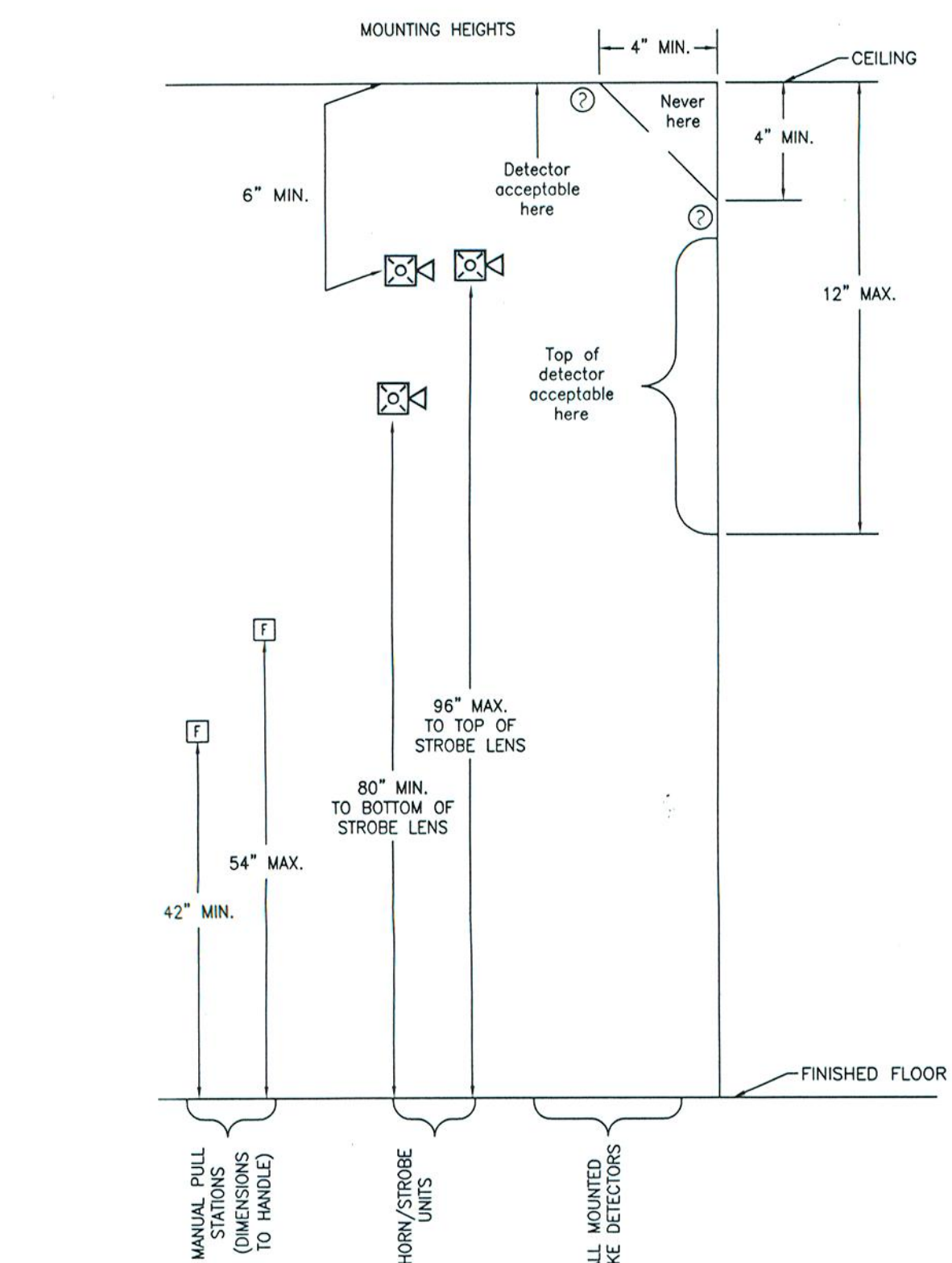

Fire Alarm
SERVICES, INC.
4800 W. 60TH AVENUE phone: 303-466-8800
ARVADA, CO 80003 fax: 303-466-8820
www.fasonline.cc email: contactus@fasonline.cc























DRAWN BY:		NO.		DATE	
L. BACON					
DATE:		11/18/2011			
APPR. BY:		SM			
DATE:		11/2/11			

PROJECT TITLE		BUILDING NAME & ADDRESS		PROJECT NUMBER
FIRE ALARM SYSTEM TENANT FINISH FOR: COLORADO ORTHOPEDIC CONSULTANTS		AURORA MEDICAL OFFICE BUILDING 1411 S. POTOMAC ST. AURORA, CO 80012		11011409

FIRE ALARM & DETECTION SYSTEM		SCALE: N/A
DRAWING TITLE: 2ND FLOOR COVER PAGE		

PROJECT
SHEET
TITLE
FA-00



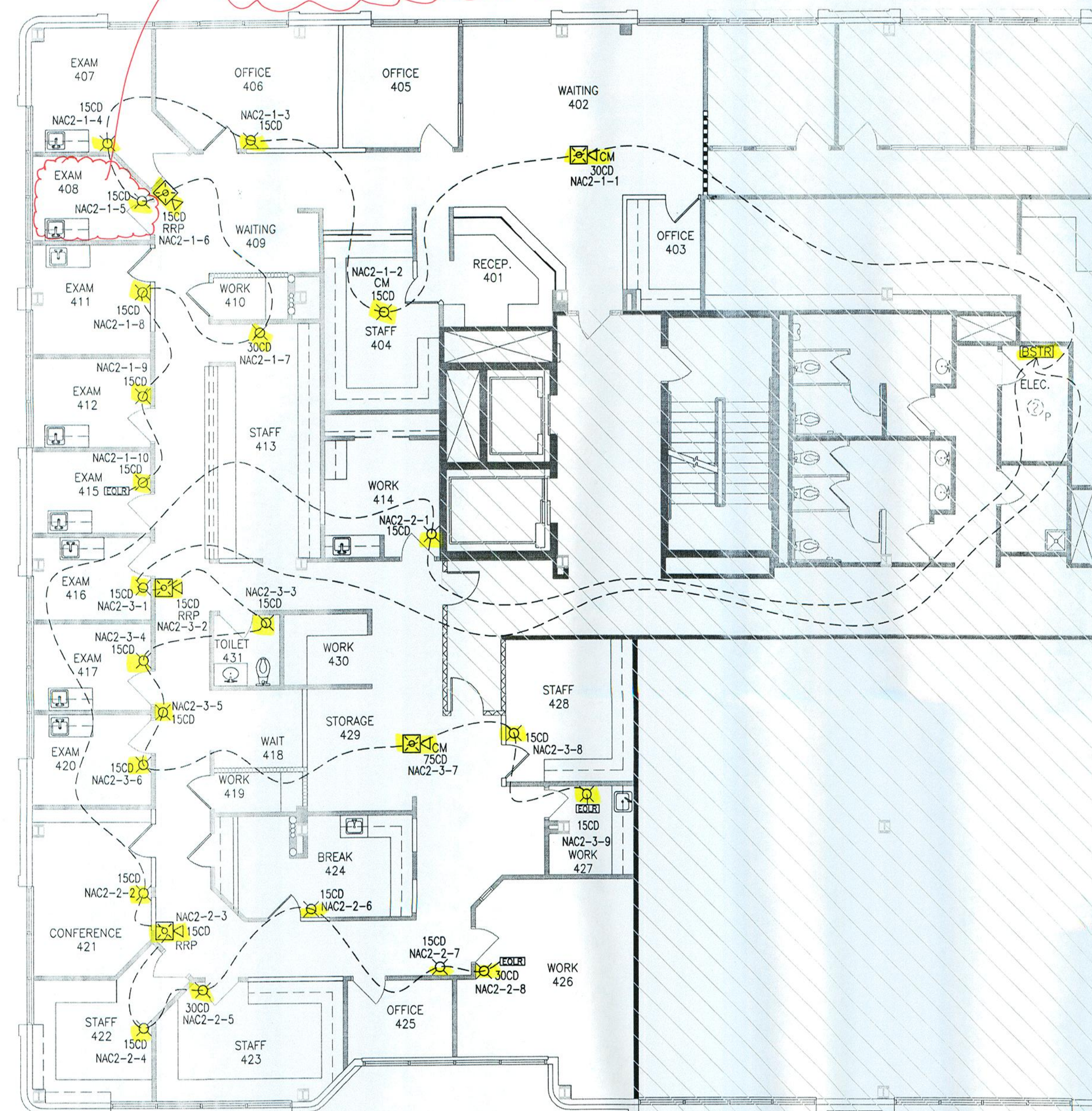
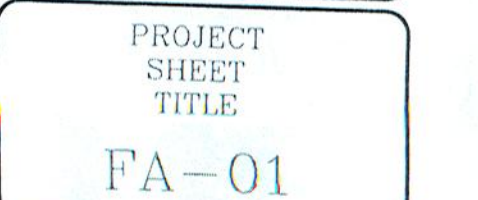
EXISTING	DESCRIPTION	PROPOSED
	STROBE – Wall Mount or CM = Ceiling Mount	
	SMOKE DETECTOR – x = photo, ion	
	HORN STROBE – Wall Mount or CM = Ceiling Mount	
	END OF LINE RESISTOR	
	PULL STATION	
	TAMPER SWITCH	
	FLOW SWITCH	
	DUCT DETECTOR – x = photo, ion	
	MONITOR–MODULE	
	HEAT DETECTOR	
	BOOSTER PANEL	

NOTIFICATION APPLIANCE CIRCUIT NUMBER ————

NOTIFICATION APPLIANCE PANEL NUMBER ————

NAC1-2-3

POWER EXPANDER NUMBERING



C.O.A. DOES NOT REQUIRE AUDIO OR VISUAL DEVICES IN EXAM ROOMS. (FYI) WHERE CORRIDOR COVERAGE PROVIDES AUDIO COVERAGE.

ITEM	QTY	PART NUMBER	DESCRIPTION	Device Supervisory Current	Device Alarm Current	Total Supervisory Current	Total Alarm Current
1	1	FCPS-24FS6	Notification Booster Panel	0.065000	0.145000	0.065000	0.145000
TOTAL:						0.065000	0.145000

ITEM	QTY	PART NUMBER	DESCRIPTION	Device Supervisory Current	Device Alarm Current	Total Supervisory Current	Total Alarm Current
1	18	SR	15cd Strobe	0.000000			
2	3	SR	30cd Strobe	0.000000	0.065000	0.000000	1.188000
3	3	P2R	15cd Horn/Strobe	0.000000	0.094000	0.000000	0.282000
4	1	P2R	75cd Horn/Strobe	0.000000	0.079000	0.000000	0.237000
5	1	SCW	15cd Ceiling Mt. Strobe	0.000000	0.176000	0.000000	0.176000
6	1	PCZW	30cd Ceiling Mt. Horn/Strobe	0.000000	0.066000	0.000000	0.066000
TOTAL:				0.000000	0.107000	0.000000	0.107000
						0.000000	2.250000

PANEL:	0.065000	AMPS
PERIPHERAL	0.000000	AMPS
SUB-TOTAL:	0.065000	AMPS
X HOURS OF SUPERVISORY:	24.0000	HOURS
SUB-TOTAL:	1.560000	AMP HOURS

PANEL:	0.145000	AMPS
PERIPHERAL:	2.067000	AMPS
SUB-TOTAL:	2.212000	AMPS
X MINUTES OF ALARM:	0.08333	HOURS
SUB-TOTAL:	0.184333	AMP HOURS

TOTAL SUPERVISORY:	1.560000	AMP HOURS
TOTAL ALARM:	0.184333	AMP HOURS
TOTAL:	1.744333	AMP HOURS
TOTAL PLUS SAFETY FACTOR(20%)	2.093200	AMP HOURS
Batteries Supplied - 1 Set of:	7.000000	AMP HOURS

Code	Description	Wire Type	Color (+)	Color (-)
AC	120VAC Power Wiring	3#12 AWG Solid	Black	White
A	Annunciator Wiring	#18 AWG Twisted (w/ Green Ground)	Black (hot)	White (neutral)
D	Door Holder Wiring	#18 AWG Twisted/Shielded Pair	Red	Black
L	SLC Wiring (Signaling Line Circuit)	#18 AWG Solid	Red	Black
P	24VDC Power Wiring	#16 AWG Solid	Red	Black
R	Remote Light/Test Wiring	#18 AWG Solid	Red	Black
S	Notification Appliance (Horns) Wiring	2 or 4#14 AWG Solid	Red	Black
S	Notification Appliance (Speaker) Wiring	#16 AWG Twisted/Shielded Pair	Red	Black
T	Telephone Circuit Wiring	2 or 4#14 AWG Twisted/Shielded Pair	Red	Black
V	Notification Appliance (Strobe) Wiring	2 or 4#14 AWG Solid	Red	Black
X	Auxiliary Circuit (Relay) Wiring	#14 AWG Solid	Red	Black
Z	IDC Wiring (Initiating Device Circuit)	#18 AWG Solid	Red	Black
WIRE TYPE			Red	Black
CLASS & STYLE	SLC - CLASS B - STYLE 4		NAC - CLASS B	

**AURORA BUILDING DEPARTMENT
LIFE SAFETY SYSTEMS
APPROVED
SUBJECT TO CORRECTIONS AS
INDICATED AND FIELD INSPECTIONS
WITH FUNCTIONAL TESTS**

MIKE DEAN 12/5/11
SIGNED DATE

INCREMENTAL VOLTAGE DROP CALCULATIONS FOR AUDIBLE/ VISUAL CIRCUITS
MINIMUM UL RATED VOLTAGE: 16 VOLTS
Current shown in calculations is RMS current at 16 volts.

Resistance	12 Gauge	1.588
	14 Gauge	2.525
	16 Gauge	4.016

Circuit Number: NAC2-1 Location: 2ND FLOOR BOOSTER PANEL							
INPUT VOLTAGE = 20.4 VOLTS							
Notification Circuit	Current (in amps)	Wire Distance (in feet)	Total Distance (in feet)	Wire Size (AWG)	Resistance (Ohms)	Voltage Drop	From Baseline Voltage
CM Horn/Strobe 30CD	0.107	56	56	14	0.2828	0.2101	20.1899
CM Strobe 15CD	0.066	41	97	14	0.4899	0.3115	19.8783
Strobe 15CD	0.066	36	133	14	0.6717	0.3828	19.4955
Strobe 15CD	0.066	23	156	14	0.7878	0.3971	19.0984
Strobe 15CD	0.066	18	174	14	0.8787	0.3849	18.7136
Horn/Strobe 15CD	0.079	12	186	14	0.9393	0.3494	18.3642
Strobe 30CD	0.094	31	217	14	1.0959	0.3211	18.0431
Strobe 15CD	0.066	22	239	14	1.2070	0.2402	17.8029
Strobe 15CD	0.066	20	259	14	1.3080	0.1740	17.6289
Strobe 15CD	0.066	17	276	14	1.3938	0.0934	17.5355
End of Line Resistor	0.001	0	276	14	1.3938	0.0014	17.5342
Totals:	0.743	276			10.4485	2.8658	17.5342
Total Devices:	10						
Circuit Number: NAC2-2 Location: 2ND FLOOR BOOSTER PANEL							
INPUT VOLTAGE = 20.4 VOLTS							
Notification Circuit	Current (in amps)	Wire Distance (in feet)	Total Distance (in feet)	Wire Size (AWG)	Resistance (Ohms)	Voltage Drop	From Baseline Voltage
Strobe 15CD	0.066	68	68	14	0.3434	0.2054	20.1946
Strobe 15CD	0.066	70	138	14	0.6969	0.3708	19.8239
Horn/Strobe 15CD	0.079	13	151	14	0.7626	0.3553	19.4685
Strobe 15CD	0.066	19	170	14	0.8585	0.3322	19.1363
Strobe 30CD	0.094	18	188	14	0.9494	0.3048	18.8316
Strobe 15CD	0.066	25	213	14	1.0757	0.2442	18.5874
Strobe 15CD	0.066	27	240	14	1.2120	0.1951	18.3922
Strobe 30CD	0.094	13	253	14	1.2777	0.1214	18.2709
End of Line Resistor	0.001	0	253	14	1.2777	0.0013	18.2696
Totals:	0.598	253			8.4537	2.1304	18.2696
Total Devices:	8						
Circuit Number: NAC2-3 Location: 2ND FLOOR BOOSTER PANEL							
INPUT VOLTAGE = 20.4 VOLTS							
Notification Circuit	Current (in amps)	Wire Distance (in feet)	Total Distance (in feet)	Wire Size (AWG)	Resistance (Ohms)	Voltage Drop	From Baseline Voltage
Strobe 15CD	0.066	94	94	14	0.4747	0.3408	20.0592
Horn/Strobe 15CD	0.079	11	105	14	0.5303	0.3457	19.7134
Strobe 15CD	0.066	24	129	14	0.6515	0.3733	19.3402
Strobe 15CD	0.066	24	153	14	0.7727	0.3917	18.9484
Strobe 15CD	0.066	14	167	14	0.8434	0.3719	18.5765
Strobe 15CD	0.066	16	183	14	0.9242	0.3466	18.2300
Horn/Strobe 75CD	0.176	36	219	14	1.1080	0.3417	17.8882
Strobe 15CD	0.066	20	239	14	1.2070	0.1605	17.7277
Strobe 15CD	0.066	23	262	14	1.3231	0.0886	17.6390
End of Line Resistor	0.001	0	262	14	1.3231	0.0013	17.6377
Totals:	0.718	262			9.1557	2.7623	17.6377
Total Devices:	9						

1411 S. POTOMAC BUILDING SEQUENCE OF OPERATIONS

		SYSTEM OPERATIONS																			
		FACP Annunciation					Notification					Fire Safety Ctrl.					Monitoring				
		A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T
1	Manual Pull Station - Basement	X	X					X	X	X	X	X	X	X	X	X	X	X	X	X	X
2	Manual Pull Station - 1st Floor	X	X					X	X	X	X	X	X	X	X	X	X	X	X	X	X
3	Manual Pull Station - 2nd Floor	X	X					X	X	X	X	X	X	X	X	X	X	X	X	X	X
4	Manual Pull Station - 3rd Floor	X	X					X	X	X	X	X	X	X	X	X	X	X	X	X	X
5	Manual Pull Station - 4th Floor	X	X					X	X	X	X	X	X	X	X	X	X	X	X	X	X
6	Smoke Sensor - Basement Elev Machine	X	X					X	X	X	X	X	X	X	X	X	X	X	X	X	X
7	Smoke Sensor - 1st Floor Elev Lobby	X	X					X	X	X	X	X	X	X	X	X	X	X	X	X	X
8	Smoke Sensor - 2nd Floor Elev Lobby	X	X					X	X	X	X	X	X	X	X	X	X	X	X	X	X
9	Smoke Sensor - 3rd Floor Elev Lobby	X	X					X	X	X	X	X	X	X	X	X	X	X	X	X	X
10	Smoke Sensor - 4rd Floor Elev Lobby	X	X					X	X	X	X	X	X	X	X	X	X	X	X	X	X
11	Smoke Sensor - All Other Locations	X	X					X	X	X	X	X	X	X	X	X	X	X	X	X	X
12	Dual Smoke Sensor - 4th Floor	X	X	X	X			X	X	X	X	X	X	X	X	X	X	X	X	X	X
13	Heat Sensors - Basement Elevator Machine	X	X					X	X	X	X	X	X	X	X	X	X	X	X	X	X
14	Heat Sensors - Basement	X	X					X	X	X	X	X	X	X	X	X	X	X	X	X	X
15	Heat Sensors - 1st Floor	X	X					X	X	X	X	X	X	X	X	X	X	X	X	X	X
16	Heat Sensors - 2nd Floor	X	X					X	X	X	X	X	X	X	X	X	X	X	X	X	X
17	Heat Sensors - 3rd Floor	X	X					X	X	X	X	X	X	X	X	X	X	X	X	X	X
18	Heat Sensors - 4th Floor	X	X					X	X	X	X	X	X	X	X	X	X	X	X	X	X
19	Sprinkler Waterflow - Basement	X	X					X	X	X	X	X	X	X	X	X	X	X	X	X	X
20	Sprinkler Waterflow - 1st Floor	X	X					X	X	X	X	X	X	X	X	X	X	X	X	X	X
21	Sprinkler Waterflow - 2nd Floor	X	X					X	X	X	X	X	X	X	X	X	X	X	X	X	X
22	Sprinkler Waterflow - 3rd Floor	X	X					X	X	X	X	X	X	X	X	X	X	X	X	X	X
23	Sprinkler Waterflow - 4th Floor	X	X					X	X	X	X	X	X	X	X	X	X	X	X	X	X
24	Sprinkler Control Valve			X	X			X	X	X	X	X	X	X	X	X	X	X	X	X	X
25	FACP AC Power Failure					X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
26	FACP Low Battery					X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
27	Open Circuit					X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
28	Ground Fault					X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
29	Notification Appliance Circuit Short					X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
30	Alarm Signal Silence																				

GENERAL ALARM W/ STRUCTURE MUST
ACTIVATE OUTSIDE HORN/SSTROBE.

AURORA BUILDING DEPARTMENT
LIFE SAFETY SYSTEMS
APPROVED
SUBJECT TO CORRECTIONS AS
INDICATED AND FIELD INSPECTIONS
WITH FUNCTIONAL TESTS

Mike Dean 2/5/11
SIGNED DATE

David Ebaugh
Nictet Fire Alarm systems
Level IV
Certification #089814

Date: 11/22/11

David Ebaugh

REVISIONS		NO.	DATE
L. BACON	DATE	11/18/2011	APPR. BY: Jm
	DATE	11/24/11	DATE

FIRE ALARM SYSTEM TENANT FINISH FOR:
COLORADO ORTHOPEDIC CONSULTANTS

AURORA MEDICAL OFFICE BUILDING

1411 S. POTOMAC ST.

AURORA, CO 80012

PROJECT
NUMBER

FIRE ALARM & DETECTION SYSTEM

DRAWING TITLE:

2ND FLOOR

MATRIX/CALCS

SCALE: N/A

PROJECT
SHEET
TITLE

FA-02

2011571927



Fire Alarm Services, Inc.
4800 W. 60th Avenue
Arvada, CO 80003

Phone (303) 466-8800
Fax (303) 466-8820

Fire Alarm System Addition at:

Tenant: Colorado Orthopedic Consultants
Aurora Medical Office Building
1411 S. Potomac Street, 2nd Floor
Aurora, CO 80012

Scope of Work:

1. Remove and replace three (3) strobes with new horn strobes.
2. Provide and install two (2) horn strobes.
3. Provide and install twenty-two (22) strobes.
4. Provide and install one (1) booster panel.

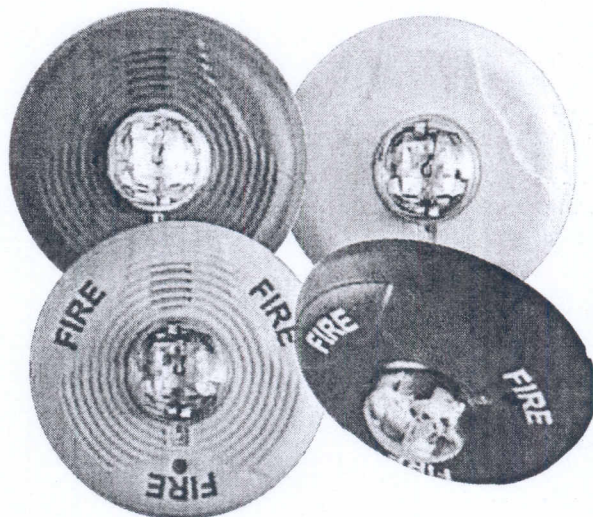
David Ebaugh Nicet Fire Alarm Systems Level IV Certification #089814
Date: 11/22/11
<i>David Ebaugh</i>

2011571927



Indoor Selectable-Output Strobes and Horn Strobes for Ceiling Applications

SpectrAlert® Advance audible visible notification products are rich with features guaranteed to cut installation times and maximize profits.



SPECTRAlert
ADVANCE
from System Sensor

Features

- Plug-in design with minimal intrusion into the back box
- Tamper-resistant construction
- Automatic selection of 12- or 24-volt operation at 15 and 15/75 candela
- Field-selectable candela settings on ceiling units: 15, 15/75, 30, 75, 95, 110, 115, 135, 150, 177, and 185
- Horn rated at 88+ dBA at 16 volts
- Rotary switch for horn tone and three volume selections
- Universal mounting plate for ceiling units
- Mounting plate shorting spring checks wiring continuity before device installation
- Electrically Compatible with legacy SpectrAlert devices
- Compatible with MDL sync module

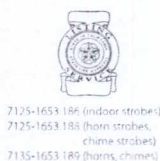
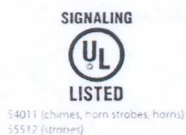
The SpectrAlert Advance series offers the most versatile and easy-to-use line of horns, strobes, and horn strobes in the industry. With white and red plastic housings, wall and ceiling mounting options, and plain and FIRE-printed devices, SpectrAlert Advance can meet virtually any application requirement.

Like the entire SpectrAlert Advance product line, ceiling-mount strobes and horn strobes include a variety of features that increase their application versatility while simplifying installation. All devices feature plug-in designs with minimal intrusion into the back box, making installations fast and foolproof while virtually eliminating costly and time-consuming ground faults.

To further simplify installation and protect devices from construction damage, SpectrAlert Advance utilizes a universal mounting plate with an onboard shorting spring, so installers can test wiring continuity before the device is installed.

Installers can also easily adapt devices to suit a wide range of application requirements using field-selectable candela settings, automatic selection of 12- or 24-volt operation, and a rotary switch for horn tones with three volume selections.

Agency Listings



201 157 1927

SpectrAlert Advance Specifications

Architect/Engineer Specifications

General

SpectrAlert Advance strobes and horn strobes shall mount to a standard 4 x 4 x 1½-inch back box, 4-inch octagon back box, or double-gang back box. Two-wire products shall also mount to a single-gang 2 x 4 x 1½-inch back box. A universal mounting plate shall be used for mounting ceiling and wall products. The notification appliance circuit wiring shall terminate at the universal mounting plate. Also, SpectrAlert Advance products, when used with the Sync-Circuit™ Module accessory, shall be powered from a non-coded notification appliance circuit output and shall operate on a nominal 12 or 24 volts. When used with the Sync-Circuit Module, 12-volt-rated notification appliance circuit outputs shall operate between 9 and 17.5 volts; 24-volt-rated notification appliance circuit outputs shall operate between 17 and 33 volts. Indoor SpectrAlert Advance products shall operate between 32 and 120 degrees Fahrenheit from a regulated DC or full-wave rectified unfiltered power supply. Strobes and horn strobes shall have field-selectable candela settings including 15, 15/75, 30, 75, 95, 110, 115, 135, 150, 177, and 185.

Strobe

The strobe shall be a System Sensor SpectrAlert Advance Model _____ listed to UL 1971 and shall be approved for fire protective service. The strobe shall be wired as a primary-signaling notification appliance and comply with the Americans with Disabilities Act requirements for visible signaling appliances, flashing at 1 Hz over the strobe's entire operating voltage range. The strobe light shall consist of a xenon flash tube and associated lens/reflector system.

Horn Strobe Combination

The horn strobe shall be a System Sensor SpectrAlert Advance Model _____ listed to UL 1971 and UL 464 and shall be approved for fire protective service. The horn strobe shall be wired as a primary-signaling notification appliance and comply with the Americans with Disabilities Act requirements for visible signaling appliances, flashing at 1 Hz over the strobe's entire operating voltage range. The strobe light shall consist of a xenon flash tube and associated lens/reflector system. The horn shall have three audibility options and an option to switch between a temporal three pattern and a non-temporal (continuous) pattern. These options are set by a multiple position switch. On four-wire products, the strobe shall be powered independently of the sounder. The horn on horn strobe models shall operate on a coded or non-coded power supply.

Synchronization Module

The module shall be a System Sensor Sync-Circuit model MDL listed to UL 464 and shall be approved for fire protective service. The module shall synchronize SpectrAlert strobes at 1 Hz and horns at temporal three. Also, while operating the strobes, the module shall silence the horns on horn strobe models over a single pair of wires. The module shall mount to a 4½½ x 4½½ x 2½½-inch back box. The module shall also control two Style Y (class B) circuits or one Style Z (class A) circuit. The module shall synchronize multiple zones. Daisy chaining two or more synchronization modules together will synchronize all the zones they control. The module shall not operate on a coded power supply.

Physical/Electrical Specifications

Standard Operating Temperature	32°F to 120°F (0°C to 49°C)
Humidity Range	10 to 93% non-condensing
Strobe Flash Rate	1 flash per second
Nominal Voltage	Regulated 12 DC/FWR or regulated 24 DC/FWR ¹
Operating Voltage Range ²	8 to 17.5 V (12 V nominal) or 16 to 33 V (24 V nominal)
Input Terminal Wire Gauge	12 to 18 AWG
Ceiling-Mount Dimensions (including lens)	6.8" diameter x 2.5" high (173 mm diameter x 64 mm high)
Ceiling-Mount Back Box Skirt Dimensions (BBSC-2, BBSCW-2)	7.1" diameter x 2.2" high (180 mm diameter x 57 mm high)
Ceiling-Mount Trim Ring Dimensions (sold as a 5 pack) (TRC-HS, TRCW-HS)	6.9" diameter x 0.35" high (175 mm diameter x 9 mm high)

Notes:

1. Full Wave Rectified (FWR) voltage is a non-regulated, time-varying power source that is used on some power supply and panel outputs.
2. P, S, PC, and SC products will operate at 12 V nominal only for 15 and 15/75 cd.

2011571927

UL Current Draw Data

UL Max. Strobe Current Draw (mA RMS)

	Candela	8-17.5 Volts		16-33 Volts	
		DC	FWR	DC	FWR
Standard Candela Range	15	123	128	66	71
	15/75	142	148	77	81
	30	NA	NA	94	96
	75	NA	NA	158	153
	95	NA	NA	181	176
	110	NA	NA	202	195
	115	NA	NA	210	205
High Candela Range	135	NA	NA	228	207
	150	NA	NA	246	220
	177	NA	NA	281	251
	185	NA	NA	286	258

UL Max. Current Draw (mA RMS), 2-Wire Horn Strobe, Standard Candela Range (15-115 cd)

	8-17.5 Volts		16-33 Volts						
	DC Input	15/75	15	15/75	30	75	95	110	115
Temporal High	137	147	79	90	107	176	194	212	218
Temporal Medium	132	144	69	80	97	157	182	201	210
Temporal Low	132	143	66	77	93	154	179	198	207
Non-Temporal High	141	152	91	100	116	176	201	221	229
Non-Temporal Medium	133	145	75	85	102	163	187	207	216
Non-Temporal Low	131	144	68	79	96	156	182	201	210
FWR Input									
Temporal High	136	155	88	97	112	168	190	210	218
Temporal Medium	129	152	78	88	103	160	184	202	206
Temporal Low	129	151	76	86	101	160	184	194	201
Non-Temporal High	142	161	103	112	126	181	203	221	229
Non-Temporal Medium	134	155	85	95	110	166	189	208	216
Non-Temporal Low	132	154	80	90	105	161	184	202	211

UL Max. Current Draw (mA RMS), 2-Wire Horn Strobe, High Candela Range (135-185 cd)

DC Input	16-33 Volts				FWR Input	16-33 Volts			
	135	150	177	185		135	150	177	185
Temporal High	245	259	290	297	Temporal High	215	231	258	265
Temporal Medium	235	253	288	297	Temporal Medium	209	224	250	258
Temporal Low	232	251	282	292	Temporal Low	207	221	248	256
Non-Temporal High	255	270	303	309	Non-Temporal High	233	248	275	281
Non-Temporal Medium	242	259	293	299	Non-Temporal Medium	219	232	262	267
Non-Temporal Low	238	254	291	295	Non-Temporal Low	214	229	256	262

Horn Strobe Tones and Sound Output Data

Horn Strobe Output (dBA)

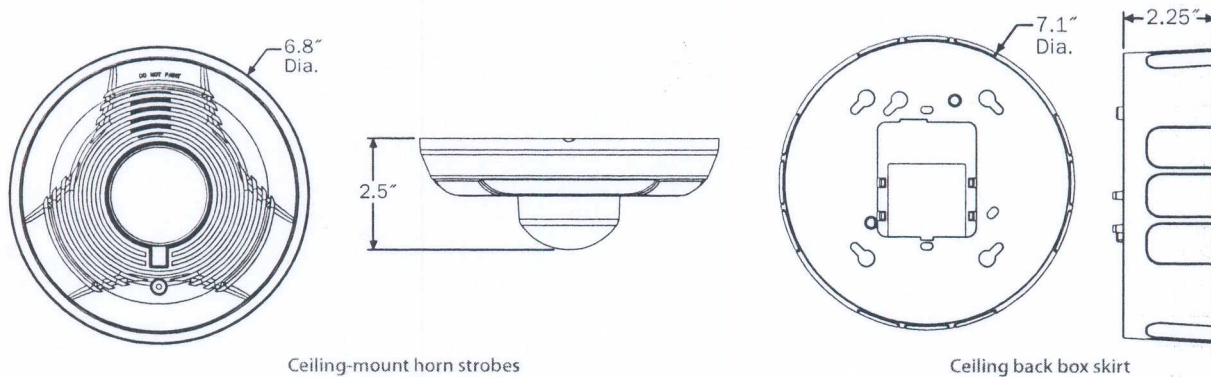
Switch Position	Sound Pattern	dB	8-17.5 Volts		16-33 Volts		24-Volt Nominal			
			DC	FWR	DC	FWR	Reverberant		Anechoic	
1	Temporal	High	78	78	84	84	88	88	99	98
2	Temporal	Medium	74	74	80	80	86	86	96	96
3	Temporal	Low	71	73	76	76	83	80	94	89
4	Non-Temporal	High	82	82	88	88	93	92	100	100
5	Non-Temporal	Medium	78	78	85	85	90	90	98	98
6	Non-Temporal	Low	75	75	81	81	88	84	96	92
7†	Coded	High	82	82	88	88	93	92	101	101
8†	Coded	Medium	78	78	85	85	90	90	97	98
9†	Coded	Low	75	75	81	81	88	85	96	92

†Settings 7, 8, and 9 are not available on 2-wire horn strobes.

AVC/SONSON

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SpectrAlert Advance Dimensions



SpectrAlert Advance Ordering Information

Model	Description
Ceiling Horn Strobes	
PC2R*	2-Wire Horn Strobe, Standard cd, Red
PC2RH	2-Wire Horn Strobe, High cd, Red
PC2W*†	2-Wire Horn Strobe, Standard cd, White
PC2WH*	2-Wire Horn Strobe, High cd, White
PC4R	4-Wire Horn Strobe, Standard cd, Red
PC4RH	4-Wire Horn Strobe, High cd, Red
PC4W	4-Wire Horn Strobe, Standard cd, White

Model	Description
Ceiling Strobes	
SCR	Strobe, Standard cd, Red
SCRH	Strobe, High cd, Red
SCW*	Strobe, Standard cd, White
SCWH	Strobe, High cd, White
Accessories	
BBSC-2	Back Box Skirt, Ceiling, Red
BBSCW-2	Back Box Skirt, Ceiling, White
TRC-HS	Trim Ring, Ceiling, Red
TRCW-HS	Trim Ring, Ceiling, White

Notes:

* Add "-P" to model number for plain housing (no "FIRE" marking on cover), e.g., P2R-P.

† Add "-SP" to model number for "FUEGO" marking on cover, e.g., P2R-SP.

‡ "Standard cd" refers to strobes that include 15, 15/75, 30, 75, 95, 110, and 115 candela settings. "High cd" refers to strobes that include 135, 150, 177, and 185 candela settings.



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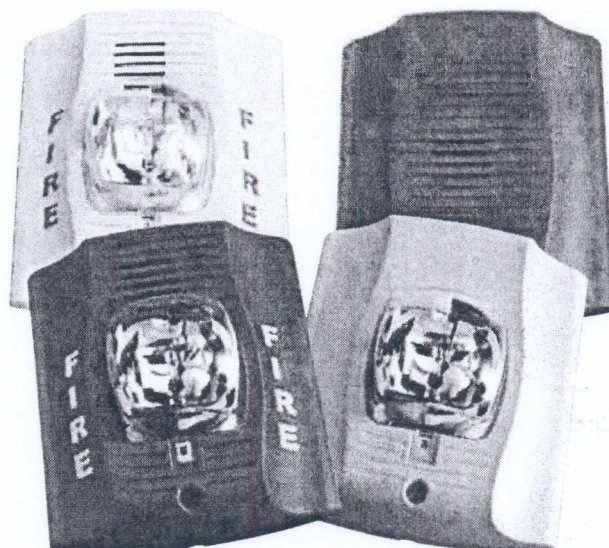


Indoor Selectable-Output Horns, Strobes, and Horn Strobes for Wall Applications

SpectrAlert® Advance audible visible notification products are rich with features guaranteed to cut installation times and maximize profits.

Features

- Plug-in design with minimal intrusion into the back box
- Tamper-resistant construction
- Automatic selection of 12- or 24-volt operation at 15 and 15/75 candela
- Field-selectable candela settings on wall units: 15, 15/75, 30, 75, 95, 110, 115, 135, 150, 177, and 185
- Horn rated at 88+ dBA at 16 volts
- Rotary switch for horn tone and three volume selections
- Universal mounting plate for wall units
- Mounting plate shorting spring checks wiring continuity before device installation
- Electrically Compatible with legacy SpectrAlert devices
- Compatible with MDL sync module



SPECTRAlert
ADVANCE
from System Sensor

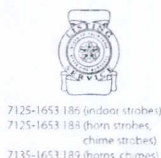
The SpectrAlert Advance series offers the most versatile and easy-to-use line of horns, strobes, and horn strobes in the industry. With white and red plastic housings, wall and ceiling mounting options, and plain and FIRE-printed devices, SpectrAlert Advance can meet virtually any application requirement.

Like the entire SpectrAlert Advance product line, wall-mount horns, strobes, and horn strobes include a variety of features that increase their application versatility while simplifying installation. All devices feature plug-in designs with minimal intrusion into the back box, making installations fast and foolproof while virtually eliminating costly and time-consuming ground faults.

To further simplify installation and protect devices from construction damage, SpectrAlert Advance utilizes a universal mounting plate with an onboard shorting spring, so installers can test wiring continuity before the device is installed.

Installers can also easily adapt devices to suit a wide range of application requirements using field-selectable candela settings, automatic selection of 12- or 24-volt operation, and a rotary switch for horn tones with three volume selections.

Agency Listings



2011571927

SpectrAlert Advance Specifications

Architect/Engineer Specifications

General

SpectrAlert Advance horns, strobes, and horn strobes shall mount to a standard 4 x 4 x 1½-inch back box, 4-inch octagon back box, or double-gang back box. Two-wire products shall also mount to a single-gang 2 x 4 x 1½-inch back box. A universal mounting plate shall be used for mounting ceiling and wall products. The notification appliance circuit wiring shall terminate at the universal mounting plate. Also, SpectrAlert Advance products, when used with the Sync-Circuit™ Module accessory, shall be powered from a non-coded notification appliance circuit output and shall operate on a nominal 12 or 24 volts. When used with the Sync-Circuit Module, 12-volt-rated notification appliance circuit outputs shall operate between 9 and 17.5 volts; 24-volt-rated notification appliance circuit outputs shall operate between 17 and 33 volts. Indoor SpectrAlert Advance products shall operate between 32 and 120 degrees Fahrenheit from a regulated DC or full-wave rectified unfiltered power supply. Strobes and horn strobes shall have field-selectable candela settings including 15, 15/75, 30, 75, 95, 110, 115, 135, 150, 177, and 185.

Strobe

The strobe shall be a System Sensor SpectrAlert Advance Model _____ listed to UL 1971 and shall be approved for fire protective service. The strobe shall be wired as a primary-signaling notification appliance and comply with the Americans with Disabilities Act requirements for visible signaling appliances, flashing at 1 Hz over the strobe's entire operating voltage range. The strobe light shall consist of a xenon flash tube and associated lens/reflector system.

Horn Strobe Combination

The horn strobe shall be a System Sensor SpectrAlert Advance Model _____ listed to UL 1971 and UL 464 and shall be approved for fire protective service. The horn strobe shall be wired as a primary-signaling notification appliance and comply with the Americans with Disabilities Act requirements for visible signaling appliances, flashing at 1 Hz over the strobe's entire operating voltage range. The strobe light shall consist of a xenon flash tube and associated lens/reflector system. The horn shall have three audibility options and an option to switch between a temporal three pattern and a non-temporal (continuous) pattern. These options are set by a multiple position switch. On four-wire products, the strobe shall be powered independently of the sounder. The horn on horn strobe models shall operate on a coded or non-coded power supply.

Synchronization Module

The module shall be a System Sensor Sync-Circuit model MDL listed to UL 464 and shall be approved for fire protective service. The module shall synchronize SpectrAlert strobes at 1 Hz and horns at temporal three. Also, while operating the strobes, the module shall silence the horns on horn strobe models over a single pair of wires. The module shall mount to a 4½½ x 4½½ x 2½-inch back box. The module shall also control two Style Y (class B) circuits or one Style Z (class A) circuit. The module shall synchronize multiple zones. Daisy chaining two or more synchronization modules together will synchronize all the zones they control. The module shall not operate on a coded power supply.

Physical/Electrical Specifications

Standard Operating Temperature	32°F to 120°F (0°C to 49°C)
Humidity Range	10 to 93% non-condensing
Strobe Flash Rate	1 flash per second
Nominal Voltage	Regulated 12 DC/FWR or regulated 24 DC/FWR ¹
Operating Voltage Range ²	8 to 17.5 V (12 V nominal) or 16 to 33 V (24 V nominal)
Input Terminal Wire Gauge	12 to 18 AWG
Wall-Mount Dimensions (including lens)	5.6" L x 4.7" W x 2.5" D (142 mm L x 119 mm W x 64 mm D)
Horn Dimensions	5.6" L x 4.7" W x 1.3" D (142 mm L x 119 mm W x 33 mm D)
Wall-Mount Back Box Skirt Dimensions (BBS-2, BBSW-2)	5.9" L x 5.0" W x 2.2" D (151 mm L x 128 mm W x 56 mm D)
Wall-Mount Trim Ring Dimensions (sold as a 5 pack) (TR-HS, TRW-HS)	5.7" L x 4.8" W x 0.35" D (145 mm L x 122 mm W x 9 mm D)

Notes:

1. Full Wave Rectified (FWR) voltage is a non-regulated, time-varying power source that is used on some power supply and panel outputs.
2. P, S, PC, and SC products will operate at 12 V nominal only for 15 and 15/75 cd.

UL Current Draw Data

UL Max. Strobe Current Draw (mA RMS)

	Candela	8-17.5 Volts		16-33 Volts	
		DC	FWR	DC	FWR
Standard	15	123	128	66	71
Candela Range	15/75	142	148	77	81
	30	NA	NA	94	96
	75	NA	NA	158	153
	95	NA	NA	181	176
	110	NA	NA	202	195
	115	NA	NA	210	205
High Candela Range	135	NA	NA	228	207
	150	NA	NA	246	220
	177	NA	NA	281	251
	185	NA	NA	286	258

UL Max. Horn Current Draw (mA RMS)

Sound Pattern	dB	8-17.5 Volts		16-33 Volts	
		DC	FWR	DC	FWR
Temporal	High	57	55	69	75
Temporal	Medium	44	49	58	69
Temporal	Low	38	44	44	48
Non-temporal	High	57	56	69	75
Non-temporal	Medium	42	50	60	69
Non-temporal	Low	41	44	50	50
Coded	High	57	55	69	75
Coded	Medium	44	51	56	69
Coded	Low	40	46	52	50

UL Max. Current Draw (mA RMS), 2-Wire Horn Strobe, Standard Candela Range (15-115 cd)

	8-17.5 Volts			16-33 Volts		
	15	15/75	30	75	95	110
DC Input						
Temporal High	137	147	79	90	107	176
Temporal Medium	132	144	69	80	97	157
Temporal Low	132	143	66	77	93	154
Non-Temporal High	141	152	91	100	116	176
Non-Temporal Medium	133	145	75	85	102	163
Non-Temporal Low	131	144	68	79	96	156
FWR Input						
Temporal High	136	155	88	97	112	168
Temporal Medium	129	152	78	88	103	160
Temporal Low	129	151	76	86	101	160
Non-Temporal High	142	161	103	112	126	181
Non-Temporal Medium	134	155	85	95	110	166
Non-Temporal Low	132	154	80	90	105	161

UL Max. Current Draw (mA RMS), 2-Wire Horn Strobe, High Candela Range (135-185 cd)

	16-33 Volts					16-33 Volts			
	135	150	177	185		135	150	177	185
DC Input					FWR Input				
Temporal High	245	259	290	297	Temporal High	215	231	258	265
Temporal Medium	235	253	288	297	Temporal Medium	209	224	250	258
Temporal Low	232	251	282	292	Temporal Low	207	221	248	256
Non-Temporal High	255	270	303	309	Non-Temporal High	233	248	275	281
Non-Temporal Medium	242	259	293	299	Non-Temporal Medium	219	232	262	267
Non-Temporal Low	238	254	291	295	Non-Temporal Low	214	229	256	262

Horn Tones and Sound Output Data

Horn and Horn Strobe Output (dBA)

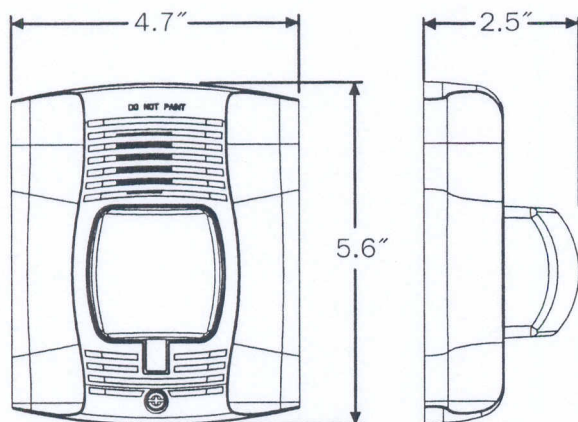
Switch Position	Sound Pattern	dB	8-17.5 Volts		16-33 Volts		24-Volt Nominal			
			DC	FWR	DC	FWR	Reverberant		Anechoic	
1	Temporal	High	78	78	84	84	88	88	99	98
2	Temporal	Medium	74	74	80	80	86	86	96	96
3	Temporal	Low	71	73	76	76	83	80	94	89
4	Non-Temporal	High	82	82	88	88	93	92	100	100
5	Non-Temporal	Medium	78	78	85	85	90	90	98	98
6	Non-Temporal	Low	75	75	81	81	88	84	96	92
7†	Coded	High	82	82	88	88	93	92	101	101
8†	Coded	Medium	78	78	85	85	90	90	97	98
9†	Coded	Low	75	75	81	81	88	85	96	92

†Settings 7, 8, and 9 are not available on 2-wire horn strobes.

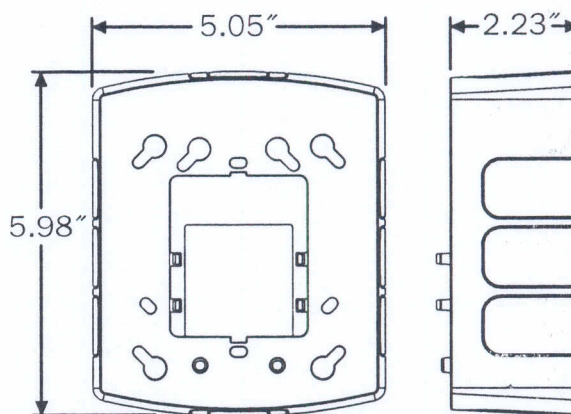
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SpectrAlert Advance Dimensions



Wall-mount horn strobes



Wall back box skirt

SpectrAlert Advance Ordering Information

Model	Description
Wall Horn Strobes	
P2R*†	2-Wire Horn Strobe, Standard cd*, Red
P2RH*†	2-Wire Horn Strobe, High cd, Red
P2W*	2-Wire Horn Strobe, Standard cd, White
P2WH*	2-Wire Horn Strobe, High cd, White
P4R*	4-Wire Horn Strobe, Standard cd, Red
P4RH	4-Wire Horn Strobe, High cd, Red
P4W	4-Wire Horn Strobe, Standard cd, White
Wall Strobes	
SR*†	Strobe, Standard cd, Red
SRH*†	Strobe, High cd, Red
SW*	Strobe, Standard cd, White
SWH*	Strobe, High cd, White

Model	Description
Horns	
HR	Horn, Red
HW	Horn, White
Accessories	
BBS-2	Back Box Skirt, Wall, Red
BBSW-2	Back Box Skirt, Wall, White
TR-HS	Trim Ring, Wall, Red
TRW-HS	Trim Ring, Wall White

Notes:

* Add "-P" to model number for plain housing (no "FIRE" marking on cover), e.g., P2R-P.

† Add "-SP" to model number for "FUEGO" marking on cover, e.g., P2R-SP.

‡ "Standard cd" refers to strobes that include 15, 15/75, 30, 75, 95, 110, and 115 candela settings. "High cd" refers to strobes that include 135, 150, 177, and 185 candela settings.



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AVD500600 - 6/11 • #2807

2011571927



www.firelite.com

July 8, 2004

DF-52301 • D-025

FCPS-24FS6 24 Volt, 6 Amp Remote Power Supply

Section: Power Supplies/Accessories

GENERAL

The **FCPS-24FS6** is a compact, cost-effective, 6-amp remote power supply with battery charger. The FCPS-24FS6 may be connected to any 12- or 24-volt Fire Alarm Control Panel (FACP) or may stand alone. Primary applications include Notification Appliance (bell) Circuit (NAC) expansion (to support ADA requirements and NAC synchronization) or auxiliary power to support 24-volt system accessories. The FCPS-24FS6 provides *regulated* and *filtered* 24 VDC power to four Notification Appliance Circuits configured as either four Class B (Style Y) or Class A (Style A, with ZNAC-4 option module). Alternately, the four outputs may be configured as all non-resettable or all resettable or two non-resettable and two resettable. The FCPS-24FS6 also contains a battery charger capable of charging up to 18 Amp Hour batteries.

FEATURES

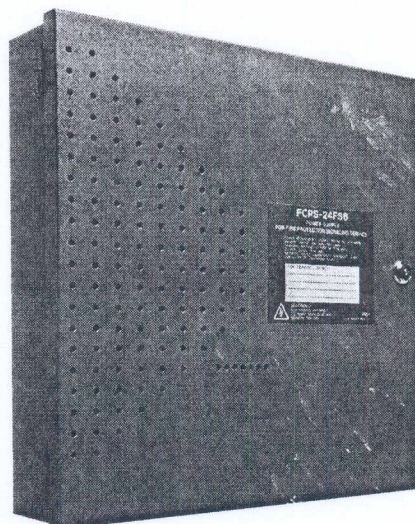
- UL Listed NAC Synchronization using System Sensor, Wheelock or Gentex (Commander Series) appliances.
- Cascadable up to 10 power supplies (four with Gentex) with strobe timing maintained.
- Operates as a sync follower or a sync generator (default).
* See note on reverse side.
- Contains two, fully-isolated input/control circuits (triggered from FACP Notification Appliance Circuit [NAC expander mode] or jumpered permanently on [stand-alone mode]).
- Optional mounting kit, P/N 90286, to internally house addressable SLC control module (CRF-300 or CMF-300) for alarm activation.
- Four Class B (Style Y) or four Class A (Style Z) (with ZNAC-4 Module) Notification Appliance Circuits.
- 6.0 A full load output (3.0 A maximum per circuit) in NAC expander mode (UL 864).
- 4.0 A continuous output in stand-alone mode (UL 1481).
- In stand-alone mode, output power circuits may be configured as resettable (reset line from FACP required) or non-resettable or a mix of two and two.
- Fully *regulated* and *filtered* power output (optimal for powering four-wire smoke detectors, annunciators and other system peripherals requiring regulated/filtered power).
- Power-limiting technology meets UL power-limiting requirements.
- Form-C normally-closed trouble relay.
- Fully supervised power supply, battery and Notification Appliance Circuits.
- Selectable earth fault detection.
- AC trouble report selectable for immediate or 8 hour delay.
- Works with virtually any UL 864 fire alarm control which utilizes an industry-standard reverse-polarity notification circuit (including unfiltered and unregulated bell power).
- Requires input trigger voltage of 9.0 - 32 VDC.
- Self-contained in compact, lockable cabinet (15" [38.1 cm] H x 14.5" [36.8 cm] W x 2.75" [7.0 cm] D).
- Includes integral battery charger capable of charging up to 18 AH batteries. Cabinet capable of housing 7.0 AH batteries.
- Battery charger may be disabled via dip switch for applications requiring larger batteries.
- Fixed, clamp-type terminal blocks accommodate up to 12 AWG (3.1 mm²) wire.



California
State Fire
Marshal
7315-0075:206

MEA

219-02-E



Fire•Lite® Alarms is a Honeywell company.

This document is not intended to be used for installation purposes. We try to keep our product information up-to-date and accurate. We cannot cover all specific applications or anticipate all requirements. All specifications are subject to change without notice.

For more information, contact Fire•Lite Alarms, One Fire-Lite Place, Northford, Connecticut 06472. Phone: (800) 627-3473, Toll-Free FAX: (877) 699-4105.

ISO 9001
CERTIFIED
ENGINEERING & MANUFACTURING
QUALITY SYSTEMS

STANDARDS and CODES

The FCPS-24FS6 complies with the following standards:

- **NFPA 72** National Fire Alarm Code.
- **UL 864** Standard for Control Units for Fire Alarm Systems (*NAC expander mode*).
- **UL 1481** Power Supplies for Fire Alarm Systems (*stand-alone mode*).

SPECIFICATIONS

Primary (AC) Power

- FCPS-24FS6: 120 VAC 60 Hz, 3.2 A maximum
- Wire size: minimum 14 AWG (2.0 mm²) with 600V insulation.

Control Input Circuit

- Trigger Input Voltage: 9.0 to 32 VDC.
- Trigger Current: 2.0 mA (16 - 32 V).
(per input) 1.0 mA (9 - 16 V).

Trouble Contact Rating

- 5.0 A at 24 VDC.

Auxiliary Power Output

- Specific Application Power - 500 mA maximum.

Output Circuits

- +24 VDC filtered, regulated.
- 3.0 A maximum for any one circuit.
- 4.0 A maximum total continuous current for all outputs (*Stand-alone mode*).
- 6.0 A maximum total short-term current for all outputs (*NAC Expander mode*).

Secondary Power (Battery) Charging Circuit

- Supports lead-acid batteries only.
- Float Charge Voltage: 27.6VDC.
- Maximum Charge Current: 1.5 A.
- Maximum Battery Capacity: 18 AH.

ORDERING INFORMATION

FCPS-24FS6 Remote charger power supply (120 VAC). Includes main printed circuit board, transformers, red enclosure, and installation instructions.

FCPS-2456RB Replacement mother board.

PN 90286 FCPS-24F Module Mounting Kit

ZNAC-4 Class A (Style Z) NAC option module

A77-716B 12/24 VDC end-of-line relay for monitoring 4-wire smoke detector power.

BAT-1270 Battery, 12 volt, 7.0 AH (*two required*).

APPLICATIONS

Example 1

Expand notification appliance power an additional 6.0 amps. Use up to 4 Class B (Style Y) outputs or 4 Class A (Style Z) outputs (using the ZNAC-4).

In this example, the FACP notification appliance circuits will activate the FCPS-24FS6 when reverse polarity activation occurs. Trouble conditions on the FCPS-24FS6 are sensed by the FACP through the Notification Appliance Circuit.

Example 2

Use the FCPS-24FS6 to expand auxiliary regulated 24 volt system power up to 4 amps. Both non-resettable and resettable power options are available.

Resettable outputs are created by connecting the resettable output from the FACP to one or both of the FCPS-24FS6 inputs.

Example 3

Use addressable control modules to activate the FCPS-24FS6 versus the FACP Notification Appliance Circuits. This typically allows for mounting the FCPS-24FS6 at greater distances* away from the FACP while expanding system architecture in various applications.

In this example, an addressable control module is used to activate the FCPS-24FS6 and an addressable monitor module is used to sense FCPS-24FS6 trouble conditions. Local auxiliary power output from the FCPS-24FS6 provides power to the addressable control module.

*Fire-Lite's MS-9200, MS-9200UD, (198-point) or MS-9600 (636-point) addressable FACP's have the capability of locating control and monitor modules up to 10,000 feet (3048 m) away.

Sync Follower/Generator Note: In some installations, it is necessary to synchronize the flash timing of all strobes in the system for ADA compliance. Strobes accomplish this by monitoring very short timing pulses on the NAC power, which are created by a Fire Alarm Control Panel such as the Fire-Lite MS-9600. When installed at the end of a MS-9600 NAC wire run, this power supply can track (i.e. "follow") the strobe synchronization timing pulses on the existing NAC wire run. This maintains the overall system flash timing of the additional strobes attached to this power supply.

When this power supply is configured (via DIP switch settings) as a "sync follower," this supply's NAC outputs track the strobe synchronization pulses present at this supply's sync input terminal. The pulses are originated from an upstream FACP or other power supply.

When this power supply is configured (via DIP switch settings) as a "sync generator," this supply's sync input terminal are not used. Rather, this power supply is the originator of the strobe synchronization pulses on the power supply's NAC outputs. In "sync generator" mode, the sync type (System Sensor, Wheelock, or Gentex) is selectable via DIP switch settings.

Number	Cen.	Yr.	Sequence	Sec.	Rev.	Type	Status
20	11	530245	000	00	TF	Tenant Finish	Final Inspection Com

Property

House	Prefix	Street	Type	Direction	Unit Type	Unit
1411	S	POTOMAC	ST			
City		Postal Code	Roll	Property Row ID		
AURORA		80012	1973-24-1-23-003	43,835		
Location						Folder Unit
Lot 003, Block 001, AURORA MEDICAL CENTER SUBDIVISION FLG NO 1						100

In Date	Apr 11, 2011	Issue/Approval	Apr 14, 2011	Expires	Apr 25, 2012
Reference File #		By	Darcy A. Dodd	Final Date	

Sub Tenant Finish-NT1

Work Proposed

Name 1411 S POTOMAC ST UNIT 100

Priority

Description DAVITA - TENANT FINISH REMODEL, EXISTING TENANT

Conditions UNIT 100 ***2006 IBC**

Group Building

Parent ID

Row ID

593218

Number	Cen.	Yr.	Sequence	Sec.	Rev.	Type	Status
20	11	558118	000	00	TF	Tenant Finish	Initial Inspection

Property

House	Prefix	Street	Type	Direction	Unit Type	Unit
1411	S	POTOMAC	ST			
City		Postal Code	Roll	Property Row ID		
AURORA		80012	1973-24-1-23-003	43,835		
Location						Folder Unit
Lot 003, Block 001, AURORA MEDICAL CENTER SUBDIVISION FLG NO 1						

Indicators

Violations	<input type="checkbox"/>
Properties	<input checked="" type="checkbox"/>
Parent	<input type="checkbox"/>
Child	<input type="checkbox"/>
Due	\$.00

In Date	Aug 25, 2011	Issue/Approval	Nov 3, 2011	Expires	May 15, 2012
Reference File #		By	John Gullickson	Final Date	

Sub Tenant Finish-NT1

Work Proposed

Name 1411 S POTOMAC ST UNIT 400

Priority

Description COLORADO ORTHOPEDIC CONSULTANTS TENANT FINISH

Conditions UNIT 400 - building occupancy change from UBC type IIN SPK to IBC type IIB SPK

Group Building

Parent ID

Row ID

619637

2011571927

