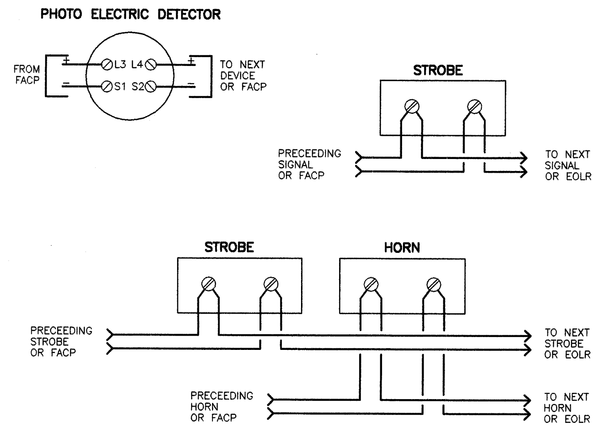
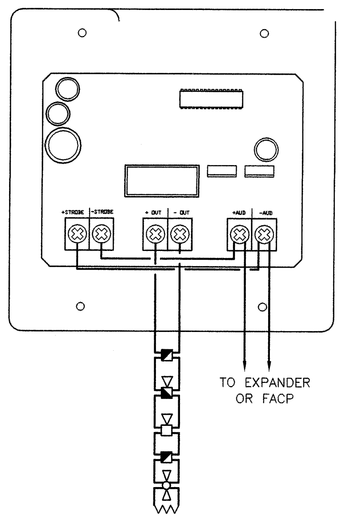


TYPICAL DEVICE WIRING DIAGRAMS

NO SCALE

6 E-1.14



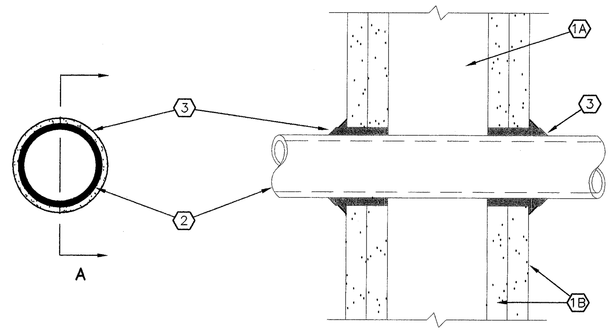
SYNC. MODULE WIRING DIAGRAM

NO SCALE

7 E-1.14

8 E-1.14

SYSTEM NO. WL1001
(FORMERLY SYSTEM NO. 147)
F RATINGS–1, 2, 3 AND 4 HR (SEE ITEMS 2 AND 3)
T RATINGS–0, 1, 2, 3, AND 4 HR (SEE ITEM 3)
L RATINGS AT AMBIENT–LESS THAN 1 CFM/sq ft
L RATING AT 400 F–LESS THAN 1 CFM/sq ft
(SEE UL DIRECTORY FOR COMPLETE COMPONENT AND INSTALLATION DETAILS.)



SECTION A–A

NOTES:

1. Wall Assembly – The 1, 2, 3 or 4 hr fire–rated gypsum wallboard/stud wall assembly shall be constructed of the materials and in the manner described in the individual U300 or U400 Series Wall or Partition Designs in the UL Fire Resistance Directory and shall include the following construction features:
   - A. Studs–Wall framing may consist of either wood studs (max 2 h fire rated assemblies) or steel channel studs. Wood studs to consist of nom 2 by 4 in. lumber spaced 16 in. OC with nom 2 by 4 in. lumber end plates and cross braces. Steel studs to be min 3–5/8 in. wide by 1–3/8 in. deep channels spaced max 24 in. OC.
   - B. Wallboard, Gypsum–Nom 1/2 or 5/8 in. thick, 4 ft wide with square or tapered edges. The gypsum wallboard type, thickness, number of layers, fastener type and sheet orientation shall be as specified in the individual U300 or U400 Series Design in the UL Fire Resistance Directory. Max diam of opening is 13–1/2 in.
2. Pipe or Conduit–Nom 12 in. diam (or smaller) Schedule 10 (or heavier) steel pipe, nom 12 in. diam (or smaller) service weight (or heavier) cast iron soil pipe, nom 12 in. diam (or smaller) Class 50 (or heavier) ductile iron pressure pipe, nom 6 in. diam (or smaller) steel conduit, nom 4 in. diam (or smaller) steel electrical metallic tubing, nom 6 in. diam (or smaller) Type L or (or heavier) copper tubing or nom 1 in. diam (or smaller) flexible steel conduit. When copper pipe is used, max F Rating of firestop system (Item 3) is 2 h. Steel pipes or conduits larger than nom 4 in. diam may only be used in walls constructed using steel channel studs. A max of one pipe or conduit is permitted in the firestop system. Pipe or conduit to be installed near center of stud cavity width and to be rigidly supported on both sides of wall assembly.
3. Fill, Void or Cavity Material–Caulk–Caulk fill material installed to completely fill annular space between pipe or conduit and gypsum wallboard and with a min 1/4 in. diam bead of caulk applied to perimeter of pipe or conduit at its egress from the wall. Caulk installed symmetrically on both sides of wall assembly. The hourly F Rating of the firestop system is dependent upon the hourly fire rating of the wall assembly in which it is installed, as shown in the following table. The hourly T Rating of the firestop system is dependent upon the type or size of the pipe or conduit and the hourly fire rating of the wall assembly in which it is installed, as tabulated below:

Max Pipe or Conduit Diam, in.	Annular Space, In.	F Rating, Hr.	T Rating, Hr.
1	0 to 3/16	1 or 2	0+, 1 or 2
1	1/4 to 1/2	3 or 4	3 or 4
4	0 to 1/4	1 or 2	0
4	0 to 1–1/2#	1 or 2	0
6	1/4 to 1/2	3 or 4	0
12	3/16 to 3/8	1 or 2	0

+When copper pipe is used, T Rating is 0 h.
#0 to 1–1/2 in. annular space applies only when Type CP–25 WB+ caulk is used and only when the min. thickness of the gypsum wallboard is 5/8 in. for 1 hr rated walls and 1–1/4 in. for 2 hr rated walls.

Minnesota Mining & Mfg. Co.–CP 25 WB+
*Bearing the UL Classification Marking

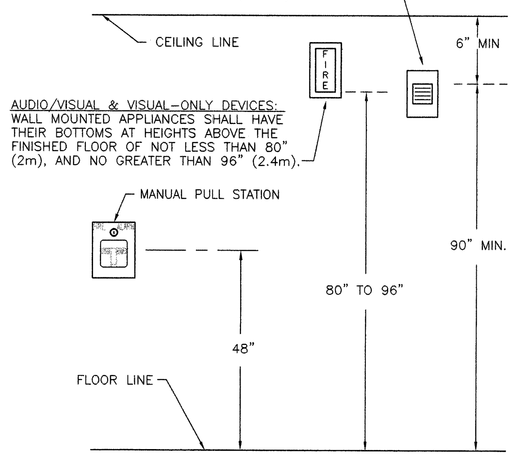
LOOKS FOR MARK ON PRODUCT

CONDUIT PENETRATION FIRESTOP DETAIL

4 E-1.14

AUDIBLE DEVICES: WHERE CEILING HEIGHTS PERMIT WALL–MOUNTED APPLIANCES SHALL HAVE THEIR TOPS AT HEIGHTS ABOVE FINISHED FLOORS OF NOT LESS THAN 90" (2.30 M) AND BELOW THE FINISHED CEILINGS OF NOT LESS THAN 6" (0.15m).

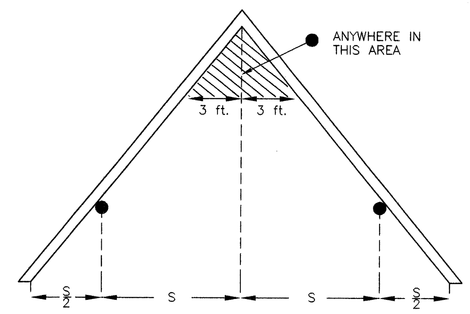
AUDIO/VISUAL & VISUAL–ONLY DEVICES: WALL MOUNTED APPLIANCES SHALL HAVE THEIR BOTTOMS AT HEIGHTS ABOVE THE FINISHED FLOOR OF NOT LESS THAN 80" (2m), AND NO GREATER THAN 96" (2.4m).



F.A. DEVICE ELEVATION

NO SCALE

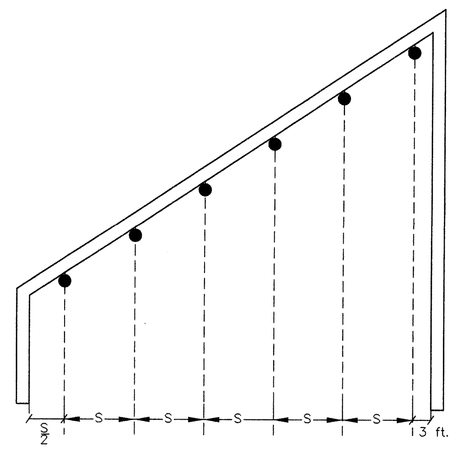
5 E-1.14



S – DETECTOR SPACING
● – SMOKE DETECTOR OR HEAT DETECTOR

PEAKED TYPE

1 E-1.14



S – DETECTOR SPACING
● – SMOKE DETECTOR OR HEAT DETECTOR

SMOKE OR HEAT DETECTOR SPACING LAYOUT, SLOPED CEILINGS (SHED TYPE).

2 E-1.14

FIRE ALARM DEVICE SEQUENCE OF OPERATION MATRIX

INITIATION → / RESPONSE ↓	AREA SMOKE OR HEAT DETECTORS	POWER FAILURE	TROUBLE	FIRE SPRINKLER FLOW SWITCH	FIRE SPRINKLER TAMPER SWITCH
ANNUNCIATE AT ADMINISTRATIVE OFFICE	•	•	•	•	•
ACTIVATE AUDIO/VISUAL THRU–OUT CAMPUS	•			•	
ANNUNCIATE AT SUPERVISING STATION	•			•	
CENTRAL STATION TRANSMITTION	•	•	•	•	•

SEQUENCE OF OPERATIONS

NO SCALE

3 E-1.14

FULLY AUTOMATIC SYSTEM

FIRE ALARM COMPLETE PLAN SUBMITTAL

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DIV. OF THE STATE ARCHITECT
APPL NO: 03–106664/
AC W FLS E/V SS R2
DATE AUG 2 6 2003

MODERNIZATION

FOR

COLONEL HOWARD NICHOLS SCHOOL
3401 RENEGADE AVE.
BAKERSFIELD, CA 93306

BAKERSFIELD CITY SCHOOL DISTRICT

FIRE ALARM DETAILS

Version Date:	
job no.	02–127
date	06/24/03
drawn by	T.A.
chk'd by	D.G.
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Version time:

E 1.14

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