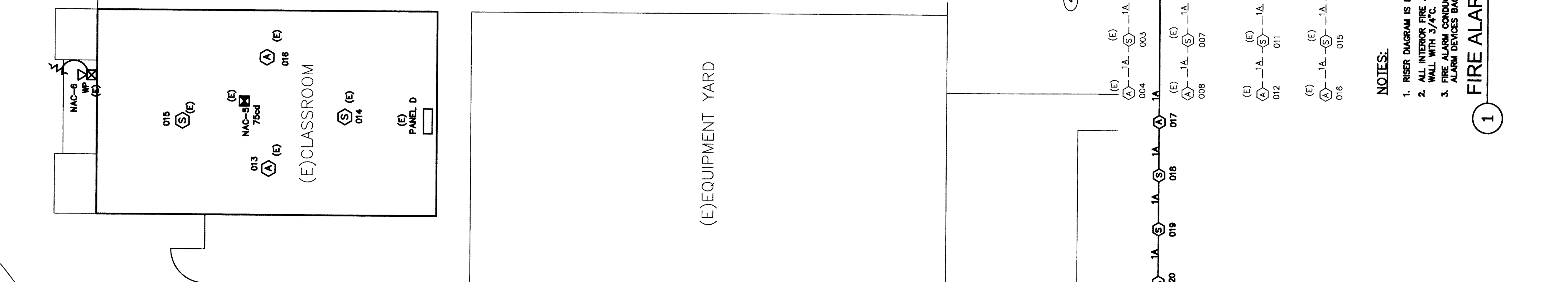


SCALE : 1/8" = 1' - 0"



- NOTES:**
- RISER DIAGRAM IS DIAGRAMMATIC. SEE FIRE ALARM FLOOR PLAN AND FIELD VERIFY EXACT ROUTING AS REQUIRED.
  - ALL INTERIOR FIRE ALARM CONDUCTORS ARE INSTALLED IN EMT CONDUIT AND CONCEAL ABOVE CEILING OR INSE W/ WALL WITH 3/4".
  - FIRE ALARM CONDUCTOR CANNOT SPLICE INSIDE PULL BOX. CONDUCTOR MUST BE CONTINUE RUN BETWEEN FIRE ALARM DEVICES BACK BOX OR TERMINAL CABINET.

**FIRE ALARM RISER DIAGRAM**

N.T.S

**FIRE ALARM SYMBOLS AND SCHEDULE**

ITEM	DESCRIPTION	MODEL NUMBER	CSFN NUMBER	MOUNT	BACK BOX
1	EXISTING FACP (FOR REFERENCE ONLY)	HOOCHIKI #FRIBNET 4127	7165-0410-0159	+60"	EQUIPMENT CABINET
2	EXISTING VOICE EVACUATION PANEL (FOR REFERENCE ONLY)	HOOCHIKI EVAL 50	6911-0785-0176	+60"	EQUIPMENT CABINET
3	EXISTING BATTERY & VOICE VAC BOOSTER PANEL (FOR REFERENCE ONLY)	WEST PENN #PSP-874	7330-0410-0184	+80"	4" SQ X 2 1/2"
4	CEILING MOUNTED ADDRESSABLE CEILING SMOKE DETECTOR WITH BASE	HOOCHIKI #ALC-V /RN-NSA-4	7272-0410-0173		CEILING
5	ATTIC HEAT DETECTOR	#DPE 1807/HSD-300L	7300-0410-0192		ATTIC
6	ATTIC HEAT DETECTOR WITH BASE AND MONITOR MODULE	WEST PENN #PSP-874	7300-0410-0190		4" SQ X 2 1/2"
7	FIRE ALARM CABLE POWER LIMITED	N/A	7161-0856-0101		LAST DEVICE
8	END OF LINE RESISTOR	N/A			4" SQ X 2 1/2"

**BATTERY POWER CALCULATIONS**

EXISTING	NO. OF DEVICES	CURRENT PER DEVICE	STANDBY CURRENT	ALARM CURRENT
24 HOUR STANDBY CURRENT	1	0.130A	0.130A	1.0A
15 MINUTE ALARM CURRENT	1	0.130A	0.130A	1.0A
<b>SUB-TOTAL</b>			<b>0.130A</b>	<b>1.0A</b>
24 HOUR STANDBY CURRENT				
24 HOUR STANDBY CURRENT	1	0.130A	0.130A	1.0A
15 MINUTE ALARM CURRENT	1	0.130A	0.130A	1.0A
<b>SUB-TOTAL</b>			<b>0.130A</b>	<b>1.0A</b>

24 HOUR STANDBY CURRENT: 3.120AH  
15 MINUTE ALARM CURRENT: 0.250AH  
TOTAL NEW AMPS-HRS REQUIRED: 3.370AH  
20K SAFETY FACTOR: 0.076A  
SUB-TOTAL: 0.254A  
REPLACE BATTERY WITH (2)12AH BATTERIES

**BATTERY POWER CALCULATIONS**

EXISTING	NO. OF DEVICES	CURRENT PER DEVICE	STANDBY CURRENT	ALARM CURRENT
24 HOUR STANDBY CURRENT	1	0.120A	0.120A	1.000A
15 MINUTE ALARM CURRENT	1	0.120A	0.120A	1.000A
<b>SUB-TOTAL</b>			<b>0.120A</b>	<b>1.000A</b>
24 HOUR STANDBY CURRENT				
24 HOUR STANDBY CURRENT	1	0.120A	0.120A	1.000A
15 MINUTE ALARM CURRENT	1	0.120A	0.120A	1.000A
<b>SUB-TOTAL</b>			<b>0.120A</b>	<b>1.000A</b>

24 HOUR STANDBY CURRENT: 2.880AH  
15 MINUTE ALARM CURRENT: 1.800AH  
TOTAL NEW AMPS-HRS REQUIRED: 4.680AH  
20K SAFETY FACTOR: 0.060A  
SUB-TOTAL: 1.860AH  
REPLACE BATTERY WITH (2)12AH BATTERIES

**BATTERY POWER CALCULATIONS**

EXISTING	NO. OF DEVICES	CURRENT PER DEVICE	STANDBY CURRENT	ALARM CURRENT
24 HOUR STANDBY CURRENT	1	0.120A	0.120A	1.000A
15 MINUTE ALARM CURRENT	1	0.120A	0.120A	1.000A
<b>SUB-TOTAL</b>			<b>0.120A</b>	<b>1.000A</b>
24 HOUR STANDBY CURRENT				
24 HOUR STANDBY CURRENT	1	0.120A	0.120A	1.000A
15 MINUTE ALARM CURRENT	1	0.120A	0.120A	1.000A
<b>SUB-TOTAL</b>			<b>0.120A</b>	<b>1.000A</b>

24 HOUR STANDBY CURRENT: 2.880AH  
15 MINUTE ALARM CURRENT: 1.800AH  
TOTAL NEW AMPS-HRS REQUIRED: 4.680AH  
20K SAFETY FACTOR: 0.060A  
SUB-TOTAL: 1.860AH  
REPLACE BATTERY WITH (2)12AH BATTERIES

**SHEET NOTES**

- EXISTING FIRE ALARM SIGNAL AND AUDIO BOOSTER PANEL AND CONDUIT TO (E) FACP FOR BEST SIGNAL EXISTING 110V POWER CONNECTION AND REDUCED CIRCUIT FROM PANEL. 1-1/2" PROVIDE FIRE ZONE W/ SIGNAL CIRCUITS, AND STANDBY CURRENT AND ALARM CURRENT. THE REPORT TO OWNER AND DRAWING FOR REVIEW, AND PLASTIC LABEL THE COPY THESE CABINET DOOR. SEE FA RISES DIAGRAM FOR DETAIL.
- LOCATE HEAT DETECTOR IN ATTIC AND STROKE MARK ON THE BOTTOM OF RAFTER. FIELD VERIFY LOCATION WITH GENERAL CONTRACTOR AND PROVIDE ATTIC HEAT DETECTOR IN EACH BAY OF STRUCTURAL.
- INTERCEPT EXISTING NAC SIGNAL CIRCUIT AND EXPAND TO NEW FA SIGNAL DEVICE PER PLANS.
- REDETERMINE EXISTING METALING CIRCUIT AND EXPAND TO NEW FA REDTERMINE DEVICE PER PLANS.
- PROVIDE 1" W/ FLEX CONDUIT RACE BETWEEN BUILDING FOR NEW FA WIRING INSTALLATION. FIELD VERIFY LOCATION.

**F.A. SYSTEM SCOPE OF WORK**

- PROVIDE AUTOMATIC FIRE ALARM SYSTEM WITH VOICE EVACUATION SPEAKERS FOR THE NEW CLASSROOM BUILDINGS PER PLANS.
- EXISTING FACP IS 24VDC ADDRESSABLE, AND CLASS B WIRING SYSTEM, AND WITH OFF SITE MONITORING SERVICE VIA AUTO DUAL LINE DIALER AND TELEPHONE.
- DURING THE FINAL TESTING, MEASURE ALL FIRE ALARM CURRENTS, VOLTAGE DROP FOR EACH SIGNAL CIRCUIT. SEND OWNER AND ENGINEER ONE COPY RECORD FOR REVIEW, AND PLASTIC LAMINATED ONE COPY INSIDE FACP CABINET DOOR.
- COMPLETE FIRE ALARM DRAWING SUBMITTAL IS PROVIDED.

**FIRE ALARM NOTES**

- THE SYSTEMS SHALL CONFORM TO CALIFORNIA ELECTRICAL CODES ARTICLE 780, CALIFORNIA FIRE ALARM CODE AND CALIFORNIA BUILDING CODE, SECTION 305.9.
- FIRE ALARM CIRCUITS SHALL BE RUN IN EMT CONDUIT PER SPECIFICATIONS.
- ALARM CONDUIT SHALL BE INSTALLED IN THE FIRE ENFORCING AGENCY.
- NO SPLICE SHALL BE PERMITTED IN PULLBORES. ALL CABINETS SHALL BE RUN CONTINUOUS BETWEEN TERMINAL CABINETS.
- ALL PENETRATIONS IN FIRE-RATED ASSEMBLIES SHALL BE SEALED IN COMPLIANCE WITH CHAPTER 7, A.B.C. PRIVATE WORK SHALL HAVE SIGNATURE OF THE FIRE ALARM CONTRACTOR IN THE PRESENCE OF THE ENFORCING AGENCY.
- AT THE MINIMUM HEARING DISTANCE FORM THE AUDIBLE APPLIANCE, AN AVERAGE SOUND LEVEL OF 15 DBA SHALL BE MAINTAINED AT ALL TIMES. VISIBLE SIGNAL APPLIANCE IF AUDIBILITY LEVEL DOES NOT MEET THE REQUIREMENT AT THE TIME OF TESTING, NEW ADDRESSES AND REVISED PLANS WILL BE REQUIRED.
- NEW ADDRESSES AND REVISED PLANS SHALL BE APPROVED BY THE CONTRACTOR OF COMPLETION OF THE FIRE ALARM CODE. THE OWNER PER NFPA 72 AND THE CALIFORNIA FIRE CODE.
- AN APPROVED FIRE ALARM SYSTEM SHALL BE MAINTAINED IN ACCORDANCE WITH THE FIRE ALARM CODE IN GROUP DIVISION 1, 2, AND 2.1 OCCUPANCIES. (303.9, 308)
- THE ALARM SYSTEM SHALL BE INSTALLED, TESTED, AND MAINTAINED IN ACCORDANCE WITH THE STATE FIRE ALARM ELECTRICAL CODE AND ARTICLE 91.
- CALIFORNIA ELECTRICAL CODE SHALL CONFORM TO INSTALLATION OF THE SYSTEM SHALL NOT BEGON UNTIL DETAILED PLANS AND SPECIFICATIONS, INCLUDING SPN AND SIGNATURE OF THE ARCHITECT, HAVE BEEN APPROVED BY DSA. UPON COMPLETION OF THE INSTALLATION, A TEST OF THE ENTIRE SYSTEM SHALL BE MADE IN THE PRESENCE OF THE INSPECTOR OF ALARM INDICATING DEVICES OF A FIRE ALARM SYSTEM INTENDED TO ALERT ALL OCCUPANTS SHALL CAUSE A LEVEL OF AUDIBILITY OF NOT LESS THAN 15 DBA ABOVE THE AVERAGE AMBIENT NOISE MEASURE 10' SURROUNDING THE SIGNALING DEVICE. TOTAL THROUGHOUT, SUPPLY NOT LESS THAN 100 DBA. SIGNALING DEVICES NORMALLY BE EXPECTED WHEN THE FACILITY BUILDING ROOM OR AREA IS FUNCTIONING UNDER NORMAL OPERATING OR WORKING CONDITIONS.
- WARNINGS SHALL HAVE A FLASH RATE NOT EXCEEDING TWO FLASHES PER SECOND (2 HZ) NOR BE LESS THAN ONE FLASH EVERY SECOND (1 HZ). STROBE SIGNALING DEVICES FOR THE HEARING IMPAIRED SHALL BE STATE FIRE MARSHAL APPROVED AND LISTED.

**F.A. MONITORING NOTES**

- THE AUTOMATIC FIRE ALARM SYSTEMS SHALL TRANSMIT THE ALARM, SUPERVISORY, AND TROUBLE SIGNALS TO THE CALIFORNIA FIRE MARSHAL OFFICE, EITHER BY NFPA 72 AND AMENDED EITHER LUIS OR LULUS BY UNDERWRITERS OF FACTORY MUTUAL RESEARCH APPROVAL STANDARD 3011. SUPERVISION OF SYSTEM SHALL BE PROVIDED BY THE CALIFORNIA FIRE MARSHAL. LEASED TELEPHONE LINES SHALL BY ARRANGED BY OWNER.

**COMPLETE AUTOMATIC FIRE ALARM PLAN SUBMITTAL**

- THE FIRE ALARM SYSTEM SHOWN ON THESE PLANS HAS BEEN SUBMITTED AND APPROVED BY DIVISION OF THE STATE ARCHITECT. ANY SUBSTITUTION OF THE FIRE ALARM SYSTEM SHALL BE APPROVED BY THE ARCHITECT FOR REVIEW AND APPROVAL. THE CONTRACTOR SHALL PAY ANY ADDITIONAL FEES THAT ARE INCURRED DUE TO THIS SUBSTITUTION.
- THE AUTOMATIC FIRE ALARM SYSTEM SHALL COVER ALL ROOMS AND AREAS AND UPON ACTIVATION OF AN INITIATING DEVICE ALERT ALL OCCUPANTS AND TRANSMIT THE ALARM, SUPERVISORY, AND TROUBLE SIGNALS TO THE CALIFORNIA FIRE MARSHAL OFFICE. (EXCEPTION: SMOKE DETECTORS ARE EXCLUDED FROM THIS REQUIREMENT. NON-ACCESSIBLE AREAS AS DEFINED IN EMERGENCY EXPRESS TERMS OF PROPOSED S.F.M. AMENDMENTS TO 2013 C.F.C. SECTION 210 (C.F.C. SECTIONS 1006.2.2.2.1.1 AND 1006.2.2.2.1.5)

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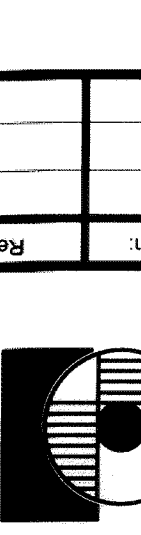
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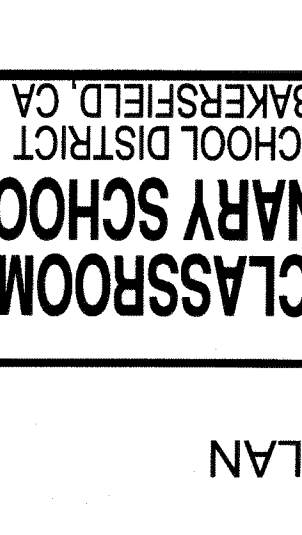
**1 RELOCATABLE CLASSROOMS**  
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BAKERSFIELD CITY SCHOOL DISTRICT  
2400 TRUXTON AVE. BAKERSFIELD, CA

**FIRE ALARM PLAN**  
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