

### NEW 2 STORY CLASSROOM BUILDING WORSE CASE VOLTAGE DROP CALCULATION

VISUAL CIRCUIT #1	DESCRIPTION	QUANTITY	CURRENT (A)	VOLTAGE (V)	POWER (W)
13	AUDIO/VISUAL DEVICE (75cd)	13	0.1170	110	1.2870
1	AUDIO/VISUAL DEVICE (30cd)	1	0.0910	110	0.0991
1	AUDIO/VISUAL DEVICE (15cd)	1	0.0300	110	0.0330
	<b>TOTAL</b>				<b>1.4191</b>

### FACP NSF2 #3030 BATTERY CALCULATION

DEVI	QTY.	CURRENT STANDBY (A)	CURRENT ALARM (A)	TOTAL STANDBY (A)	TOTAL ALARM (A)
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EXISTING CAMPUS CLASSROOM/AUDITORIUM BUILDINGS					
VOICE EVAC SPEAKER	28	0.0000	0.0800	0.0000	2.2400
115CD STROBE	2	0.0000	0.2170	0.0000	0.4340
75CD STROBE	2	0.0000	0.1170	0.0000	0.2340
30CD STROBE	0	0.0000	0.0910	0.0000	0.0000
15CD STROBE	0	0.0000	0.0300	0.0000	0.0000
SMOKE/HEAT MODULE	194	0.0003	0.0065	0.0582	1.2610
FACP CONTROL PANEL	1	0.3850	6.0000	0.3850	6.0000
				<b>0.7850</b>	<b>16.9350</b>

NEW 2 STORY CLASSROOM BUILDING					
VOICE EVAC SPEAKER	0	0.0000	0.0800	0.0000	0.0000
110CD STROBE	0	0.0000	0.2170	0.0000	0.0000
75CD STROBE	0	0.0000	0.1170	0.0000	0.0000
30CD STROBE	0	0.0000	0.0910	0.0000	0.0000
15CD STROBE	0	0.0000	0.0300	0.0000	0.0000
SMOKE/HEAT MODULE	71	0.0003	0.0065	0.0213	0.4615
NOT USED	0	0.0000	0.0000	0.0000	0.0000
				<b>0.0213</b>	<b>0.4615</b>
				<b>0.4645</b>	<b>15.1415</b>

### EXISTING CAFETERIUM BUILDING DAA-5052 BATTERY CALCULATION

DEVI	QTY.	CURRENT STANDBY (A)	CURRENT ALARM (A)	TOTAL STANDBY (A)	TOTAL ALARM (A)
VOICE EVAC SPEAKER	14	0.0000	0.0690	0.0000	1.0350
FACP CONTROL PANEL	1	0.0000	1.0000	0.0000	1.0000
				<b>0.0000</b>	<b>2.0350</b>

### EXISTING CAMPUS BUILDING AND NEW 2 STORY BUILDING ADDITION BATTERY CALCULATION

### NEW 2 STORY CLASSROOM BUILDING WORSE CASE VOLTAGE DROP CALCULATION

PA CIRCUIT #1	DESCRIPTION	QUANTITY	CURRENT (A)	VOLTAGE (V)	POWER (W)
18	PA SPEAKER	18	0.0690	110	7.6230
	<b>TOTAL</b>				<b>7.6230</b>

DEVI	QTY.	CURRENT STANDBY (A)	CURRENT ALARM (A)	TOTAL STANDBY (A)	TOTAL ALARM (A)
VOICE EVAC SPEAKER	0	0.0000	0.0690	0.0000	1.2420
FACP CONTROL PANEL	1	0.0000	1.0000	0.0000	1.0000
				<b>0.0000</b>	<b>2.2420</b>

### NEW 2 STORY CLASSROOM BUILDING FCPS-24 BATTERY CALCULATION

DEVI	QTY.	CURRENT STANDBY (A)	CURRENT ALARM (A)	TOTAL STANDBY (A)	TOTAL ALARM (A)
110CD STROBE	3	0.0000	0.2170	0.0000	0.6510
75CD STROBE	5	0.0000	0.1170	0.0000	0.5850
30CD STROBE	2	0.0000	0.0910	0.0000	0.1820
15CD STROBE	4	0.0000	0.0300	0.0000	0.1200
FACP CONTROL PANEL	1	0.0000	1.0000	0.0000	1.0000
				<b>0.0000</b>	<b>2.5290</b>

### EXISTING CAFETERIUM BUILDING FCPS-24 BATTERY CALCULATION

DEVI	QTY.	CURRENT STANDBY (A)	CURRENT ALARM (A)	TOTAL STANDBY (A)	TOTAL ALARM (A)
115CD STROBE	4	0.0000	0.2140	0.0000	0.8560
75CD STROBE	5	0.0000	0.1170	0.0000	0.5850
30CD STROBE	2	0.0000	0.0910	0.0000	0.1820
15CD STROBE	7	0.0000	0.0300	0.0000	0.2100
FACP CONTROL PANEL	1	0.0000	1.0000	0.0000	1.0000
				<b>0.0000</b>	<b>2.8330</b>

### 2 STORY BUILDING ADDITION FIRE ALARM SYMBOLS LEGEND

SYMBOL	DESCRIPTION
[SD]	ADDRESSABLE PHOTOELECTRIC SMOKE DETECTOR, NOTIFIER FSP-851A CSFM#7272-0028:0206 WITH BASE NOTIFIER B710LPBP CSFM#7272-0028:0206
[HD]	ADDRESSABLE HEAT DETECTOR, NOTIFIER FST-851 CSFM#7270-0028:0196 WITH BASE NOTIFIER B710LPBP CSFM#7270-0028:0196
[110cd AV]	COMBINATION AUDIO SPEAKER/110cd VISUAL DEVICE, GENTEX #6EC3 CSFM#7125-0569:0122 75 CANDELA @ 0.217A.
[75cd AV]	WALL MOUNTED COMBINATION AUDIO SPEAKER/75cd VISUAL DEVICE, GENTEX #6EC3 CSFM#7125-0569:0122 75 CANDELA @ 0.117A.
[30cd AV]	VISUAL DEVICE, GENTEX #6EC3 CSFM#7125-0569:0122 30 CANDELA @ 0.091A.
[15cd AV]	VISUAL DEVICE, GENTEX #6EC3 CSFM#7125-0569:0122 15 CANDELA @ 0.030A.
[S]	WEATHERPROOF EXTERIOR VOICE EVAC SPEAKER WITH BACKBOX, GENTEX #WSPSR CSFM#7320-0569:0141 @ 0.08A.
[H]	WEATHERPROOF EXTERIOR HORN, GENTEX #GEH CSFM#7125-0569:0122
[U]	WALL JUNCTION BOX, MOUNTING HEIGHT AS INDICATED ON PLAN, SIZE PER N.E.C. U.O.N. @ SHEET AS INDICATED ON PLAN. 120V, U.O.N. CONTRACTOR SHALL PROVIDE AND INSTALL JUNCTION BOXES SIZE TO ACCOMMODATE QUANTITIES OF WIRES PER N.E.C. SECTION 314.18 AND TABLE 314.18(A), 5" BOX 3/4" SQ. X 3/4" D. BOX.
[FOPS-24]	NOTIFIER FIRE ALARM USUAL (FLASHER POWER SUPPLY, NOTIFIER FOPS-2458 FOR STROBE FLASHER UNIT), CSFM#7315-0028:225
[NFS2-3030]	EXISTING FIRE ALARM CONTROL PANEL WITH VOICE CONTROL CENTER (VOICE EVAC), NOTIFIER NFS2#3030 WITH AUDIO OPTION DVC VOICE TRANSDUCER, CSFM#7165-0028:0224 INTELLIGENT.
[DAA-5025]	NOTIFIER #DAA-5025 INTELLIGENT AUDIO TRANSDUCER POWER SUPPLIES (FOR FREE MAIN VOICE EVAC SPEAKER), CSFM#7170-0028:223, 7170-0028:244.
[FS]	FLOW SWITCH
[TS]	TAMPER SWITCH
[FCP EXIST.]	EXISTING NOTIFIER #1010 FIRE ALARM CONTROL TO REMAIN IN PLACE AND IN SERVICE FOR SCHOOL USE TO OPERATE IN PARALLEL WITH NEW FACP AT SCHOOL CAMPUS.

### 2 STORY BUILDING ADDITION SEQUENCE OF OPERATION

ANNUNCIATE AT FIRE CONTROL PANEL (SUPERVISION & TROUBLE) ALARM	BUILDING POWER FAILURE	AREA SMOKE DETECTOR	AREA HEAT DETECTOR	PULL STATION	SPRINKLER		ELEVATOR SMOKE DETECTOR
					Water flow switch	Tamper switch	
YES	YES	YES	YES	YES	YES	YES	YES
NO	NO	NO	NO	NO	NO	NO	NO

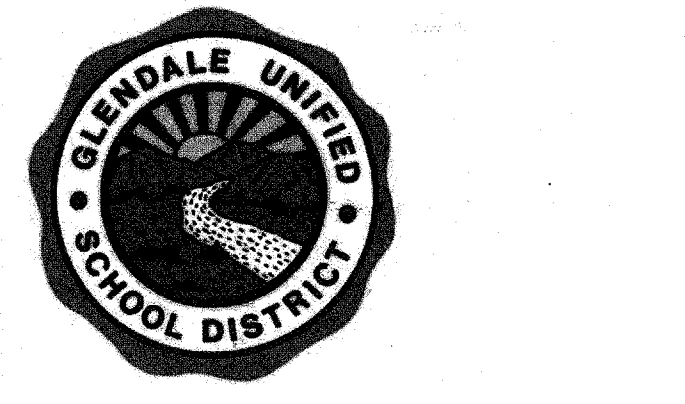
### WIRING SCHEDULE

DESIG.	CIRCUIT TYPE	DESCRIPTION	MODEL
M	MAPNET ADDRESSABLE	4 TWISTED PAIR, 18 AWG FPLR	HONEYWELL CABLE 18/8 SOL FPL #4309, CSFM #7161-1487:0100
FA	SLC INTELLIGENT LOOP NETWORK COMM	1 TWISTED PAIR, 18 AWG FPLR (FA2 = 2 SET OF CABLES)	HONEYWELL CABLE 18/2 SOL FPL #4106, CSFM #7161-1487:0100
1A	VOICE EVAC SPEAKER OUTPUT SIGNAL CIRCUIT CABLE	2#16 AWG (RED/BLACK)	HONEYWELL CABLE #4311, CSFM #7161-1487:0100
1V	STROBE SIGNAL OUTPUT CIRCUIT CABLE	2#14 AWG (RED/BLACK)	HONEYWELL CABLE #4111 CSFM #7161-1487:0100 OR #12 THIN CU.
F2	1A & 1V CABLE	MIN. 3/4" CONDUIT SYSTEM WITH BOTH VOICE EVAC SPEAKER OUTPUT SIGNAL CIRCUIT CABLE AND STROBE SIGNAL OUTPUT CIRCUIT CABLE	REFER TO 1A AND 1V ABOVE FOR CABLE TYPE
F4	(2) SET OF 1A & 1V CABLES	CONDUIT SYSTEM WITH (2) SET BOTH VOICE EVAC SPEAKER OUTPUT SIGNAL CIRCUIT CABLES AND STROBE SIGNAL OUTPUT CIRCUIT CABLES OR LOOP	REFER TO 1A AND 1V ABOVE FOR CABLE TYPE

- NOTES:
- ALL CABLE SHALL BE INSTALLED PER NEC/CEC PA VOICE CIRCUIT.
  - ALL WIRING SHALL CONFORM TO NEC 760 PART A & C FOR A POWER-LIMITED SUPPLY.
  - ALL WIRING IN WET LOCATIONS SHALL BE THIN UL LISTED FOR OUTDOOR USE OR EQUAL.
  - ALL FIRE ALARM CABLING SHALL BE RUN IN MINIMUM 3/4" CONDUIT RACEWAY UNLESS OTHERWISE NOTED.

### FIRE ALARM SPECIFICATIONS

- THE FIRE ALARM SYSTEM SHALL COMPRISE AUTOMATIC ADDRESSABLE MANUAL PULLS, SMOKE/HEAT DETECTIONS SYSTEM AND CONFORM TO ARTICLE 760 OF THE 2010 CALIFORNIA ELECTRICAL CODE.
- UPON COMPLETION OF THE INSTALLATION OF THE FIRE ALARM SYSTEM, A SATISFACTORY TEST OF THE ENTIRE SYSTEM SHALL BE MADE IN THE PRESENCE OF THE FIRE MARSHALL OR ENFORCING AGENCY.
- A STAMPED SET OF APPROVED FIRE ALARM PLANS SHALL BE ON THE JOB SITE. ANY DEVIATION FOR THE APPROVED PLANS, INCLUDING THE SUBSTITUTION OF DEVICES, SHALL BE APPROVED BY THE FIRE MARSHALL OR ENFORCING AGENCY.
- FIRE ALARM DRAWINGS ARE SCHEMATIC IN NATURE. CONTRACTOR SHALL ROUTE CONDUIT RACEWAY AS FIELD CONDITION PERMIT OR AS INDICATED ON PLANS. ANY DISCREPANCIES BETWEEN THE DRAWINGS AND CODE OR RECOGNIZED STANDARDS, SHALL BE BROUGHT TO THE ATTENTION OF THE INSPECTOR OF RECORD.
- ALL DEVICES OF THE FIRE ALARM SYSTEMS SHALL BE APPROVED AND LISTED BY THE CALIFORNIA STATE FIRE MARSHALL.
- A CERTIFICATE OF COMPLETION SHALL BE PREPARED BY THE INSTALLER AND GIVEN TO THE FIRE MARSHALL UPON COMPLETION OF THE INSTALLATION.
- CONSULT INSTALLER PRIOR TO MAKING ANY MODIFICATIONS TO THE SYSTEMS WIRING.
- UPON COMPLETION OF THE INSTALLATION, THE INSTALLER SHALL SUPPLY THE OWNER WITH WRITTEN OPERATING, TESTING AND MAINTENANCE INSTRUCTIONS, POINT-TO-POINT AS-BUILT DRAWINGS AND EQUIPMENT SPECIFICATIONS.
  - THE SYSTEM SHALL BE TESTED IN THE PRESENCE OF AND IN A MANNER ACCEPTABLE TO THE ENFORCING AGENCY AND A COMPLETE TESTING AND INSPECTION FORM SHALL BE PROVIDED FOR LOCAL FIRE AND/OR DSA INSPECTOR SIGNATURE.
- 120 VAC, 60HZ INPUT POWER FOR THE FIRE ALARM CONTROLS SHALL BE A DEDICATED CIRCUIT BREAKER PROPERLY LABELED "FIRE ALARM".
- 120 VAC IS NOT PERMITTED IN THE SAME CONDUIT WITH LOW VOLTAGE WIRING.
- THE LOCATION OF THE FIRE ALARM CONTROL PANEL AND THE ANNUNCIATOR SHALL BE APPROVED BY THE FIRE MARSHALL OR ENFORCING AGENCY.
- ALL OPENINGS IN RATED ASSEMBLIES SHALL BE REPAIRED PER UFC, NEC, UBC AND STANDARD BUILDING CODES ON EFFECT AT THE TIME OF APPROVAL. THE SYSTEM SHALL CONFORM TITLES 19 AND 24 AS APPLICABLE TO THIS PROJECT (CBC PART 2, CH. 7, TITLE 24).
- ALL BACK BOXES SHALL BE AS RECOMMENDED BY MANUFACTURER. CONTRACTOR SHALL LOCATE JUNCTION BOXES AS REQUIRED AND PER CEC CODES.
- ALL PANELS SHALL BE MOUNTED WITH CLEARANCES FOR OBSERVATION AND TESTING, AND ALL FIRE ALARM JUNCTION BOXES SHALL BE MARKED FOR IDENTIFICATION.
- ALL WIRING OF INITIATING DEVICES AND ANNUNCIATOR PANEL SHALL BE SUPERVISED TO THE PRINCIPLE POINT OF ANNUNCIATION (THE FIRE ALARM CONTROL PANEL IS TO SUPERVISE THE ANNUNCIATOR PANEL, ALL CIRCUITS AND INITIATING DEVICES).
- WIRING SHALL NOT BE LOOPED THROUGH DEVICES; WIRE MUST BE CUT FOR IN AND OUT. POINT COMMON ANNUNCIATION AND T-TAPPING ARE PROHIBITED.
  - EXCEPTION: ADDRESSABLE SYSTEMS, MAPNET CONDUCTORS WIRING CLASS "B" MAY BE T-TAPPED.
  - ALL CONDUIT SIZES SHOWN AND INDICATED ON DRAWING ARE MINIMUMS. CONTRACTOR TO ADJUST SIZES FOR FIELD CONDITIONS (I.E. NUMBER OF BENDS, ETC.) BUT SHALL NOT BE SMALLER THAN 3/4".
- ALL FIRE ALARM SYSTEM WIRING TERMINATIONS IN MAIN PULL BOXES AND TERMINAL CABINETS SHALL BE ON BOX MOUNTED TERMINAL BLOCKS.
- ALL FIRE ALARM WIRING MUST TEST FREE OF OPENS, SHORTS AND GROUNDS. SEE INSTALLATION MANUALS FOR FIELD WIRING SPECIFICATIONS FOR ADDITIONAL INSTALLATION REQUIREMENTS.
- (2) PRIMARY PHONE LINE SHALL BE DEDICATED FOR THE FIRE ALARM SYSTEM TO COMMUNICATE WITH U.L. LISTED CENTRAL STATION.
- WIRING COLOR CODE SHALL BE CONSISTENT THROUGHOUT THE SYSTEM AND SHALL ALLOW FOR EASY IDENTIFICATION OF INITIATING, INDICATING AND AUXILIARY CIRCUITS.
- CABINET TERMINALS SHALL BE NUMBERED AND CODED. FLEXIBLE CONNECTORS SHALL BE USED FOR DEVICES MOUNTED IN SUSPENDED PANELS.
- THE FIRE DEPARTMENT WILL TEST AND VERIFY ADEQUATE AUDIBILITY BEING PROVIDED THROUGHOUT, PARTICULARLY IN OPEN WORK AREAS AND IN TESTING AREAS.
  - AUDIBLE DEVICE(S) TO BE AT LEAST 15 DBA ABOVE THE AMBIENT SOUND LEVELS, BUT NOT LESS THAN THE 75 DBA AT 10' OR MORE THAN 110DBA AT THE MINIMUM HEARING DISTANCE. AUDIBLE DEVICES SHALL SOUND THE TEMPORAL FIRE ALARM SIGNAL.
- CONDUIT AND JUNCTION BACK BOXES ARE NOT TO BE USED FOR UNRELATED WIRING.
- ALL CONDUIT MOUNTING BOXES, AND PANELS SHALL BE HUNG AND FASTENED WITH FITTINGS TO ENSURE POSITIVE GROUNDING THROUGHOUT THE ENTIRE SYSTEM.
- PLACE THE BOTTOM OF THE WALL MOUNTED STROBE EXACTLY 80" ABOVE THE FLOOR TO BOTTOM OF LENS AND MAKE SURE THE TOP OF THE STROBE IS AT LEAST 6" BELOW THE CEILING. PLACE THE TOP OF THE STROBE 6" BELOW THE CEILING IF THE CEILING IS TOO LOW, AND MAKE SURE IT PROTRUDES LESS THAN 4" IF IN A WALKWAY, CORRIDOR OR AISLE. NOTE THAT THESE MOUNTING REQUIREMENTS ALSO APPLY TO COMBINATION HORN/STROBE OR SPEAKER/STROBE APPLIANCES THAT ARE WALL MOUNTED (NFPA 72, CH.6).
  - MANUAL PULL STATIONS SHALL BE MOUNTED +48" ABOVE FINISHED FLOOR TO CENTER OF BOX. STROBE SHALL BE CEILING OR WALL MOUNTED AT +80" A.F.F. AND EXTERIOR HORNS SHALL BE MOUNTED AT +90" A.F.F.
- STROBES SHALL BE VISIBLE IN ALL LOCATIONS THROUGHOUT THE BUILDING PER NFPA 72, CHAPTER 6, SECTION 6-4.
  - AUDIBLE DEVICES SHALL NOT EXCEED 2 FLASHER PER SECOND AND SHALL NOT BE SLOWER THAN 1 FLASH EVERY SECOND.
- PROVIDE 24 HOUR TELEPHONE NUMBER OF CENTRAL STATION NEAR ANNUNCIATOR AND FIRE ALARM CONTROL PANEL.
- ALL FIRE ALARM DEVICES LOCATED IN STUDENT RESTROOM FACILITIES SHALL HAVE VANDAL-RESISTANT GUARDS INSTALLED. (CONTRACTOR TO SUBMIT CUT SHEET FOR ENGINEER REVIEW AND APPROVAL.)
- ALL MANUAL PULL STATIONS IN AREAS WHERE STUDENTS HAVE ACCESS (I.E. LIBRARY, AUDITORIUM, ETC.) ARE TO HAVE PLASTIC COVERS WITH VANDAL ALARM. (CONTRACTOR TO SUBMIT CUT SHEET FOR ENGINEER REVIEW AND APPROVAL.)



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AGENCY APPROVAL

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AP 03 116996  
AC PLS MGS  
Date 3-21-16

ISSUE

NO.	DATE	DESCRIPTION
1	10-29-2015	DSA Submit/Initial

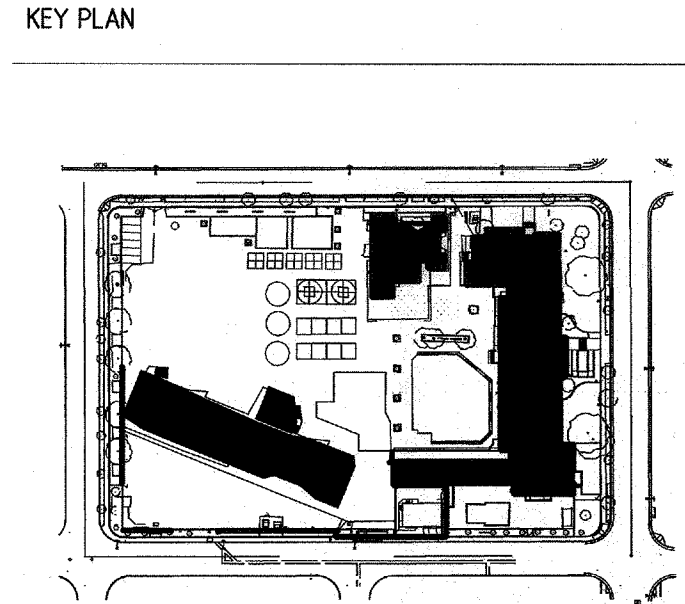
MARK DATE DESCRIPTION

DESIGNER PROJECT NO.: 273-13-001

DRAWN BY:

CHECKED BY:

SCALE: NONE



FIRE ALARM SHEET INDEX

SHEET NO.	SHEET TITLE	CURRENT ISSUE
FA-0.1	FIRE ALARM RISER, SYMBOLS, SPECIFICATIONS & NOTES	DSA SUBMITTAL
FA-0.1E	FIRE ALARM RISER, SYMBOLS, SPECIFICATIONS & NOTES	DSA SUBMITTAL
FA-1.0	FIRE ALARM SITE PLAN FOR REFERENCE ONLY (DSA FILE #19-41 APPL #03-115568)	
FA-2.1	FIRE ALARM FIRST FLOOR PLAN FOR REFERENCE ONLY (DSA FILE #19-41 APPL #03-115568)	
FA-2.2	FIRE ALARM SECOND FLOOR PLAN FOR REFERENCE ONLY (DSA FILE #19-41 APPL #03-115568)	
FA-0.2E	FIRE ALARM RISER DIAGRAM	CCD #8
FA-1.0E	FIRE ALARM SITE PLAN	CCD #8
FA-2.1E	FIRE ALARM FLOOR PLANS - SHEET ONE	CCD #8
FA-2.2E	FIRE ALARM FLOOR PLANS - SHEET TWO	CCD #8

FIRE ALARM RISER,  
SYMBOLS,  
SPECIFICATIONS &  
NOTES  
SHEET NUMBER  
**FA-01**



**WORSE CASE VOLTAGE DROP CALCULATION**

**VISUAL CIRCUIT #1**

13 AUDIO/VISUAL DEVICE (75cd) @	0.1170 A	=	1.5210 A
1 AUDIO/VISUAL DEVICE (30cd) @	0.0910 A	=	0.0910 A
1 AUDIO/VISUAL DEVICE (15cd) @	0.0300 A	=	0.0300 A
<b>TOTAL</b>			<b>1.6420 A</b>
	1.6420 A	X	650
			16,510 (#8)
		X	21.50
			1.3899 A
	1.39 A	X	100
			24 V
			5.7912 A

**WORSE CASE VOLTAGE DROP CALCULATION**

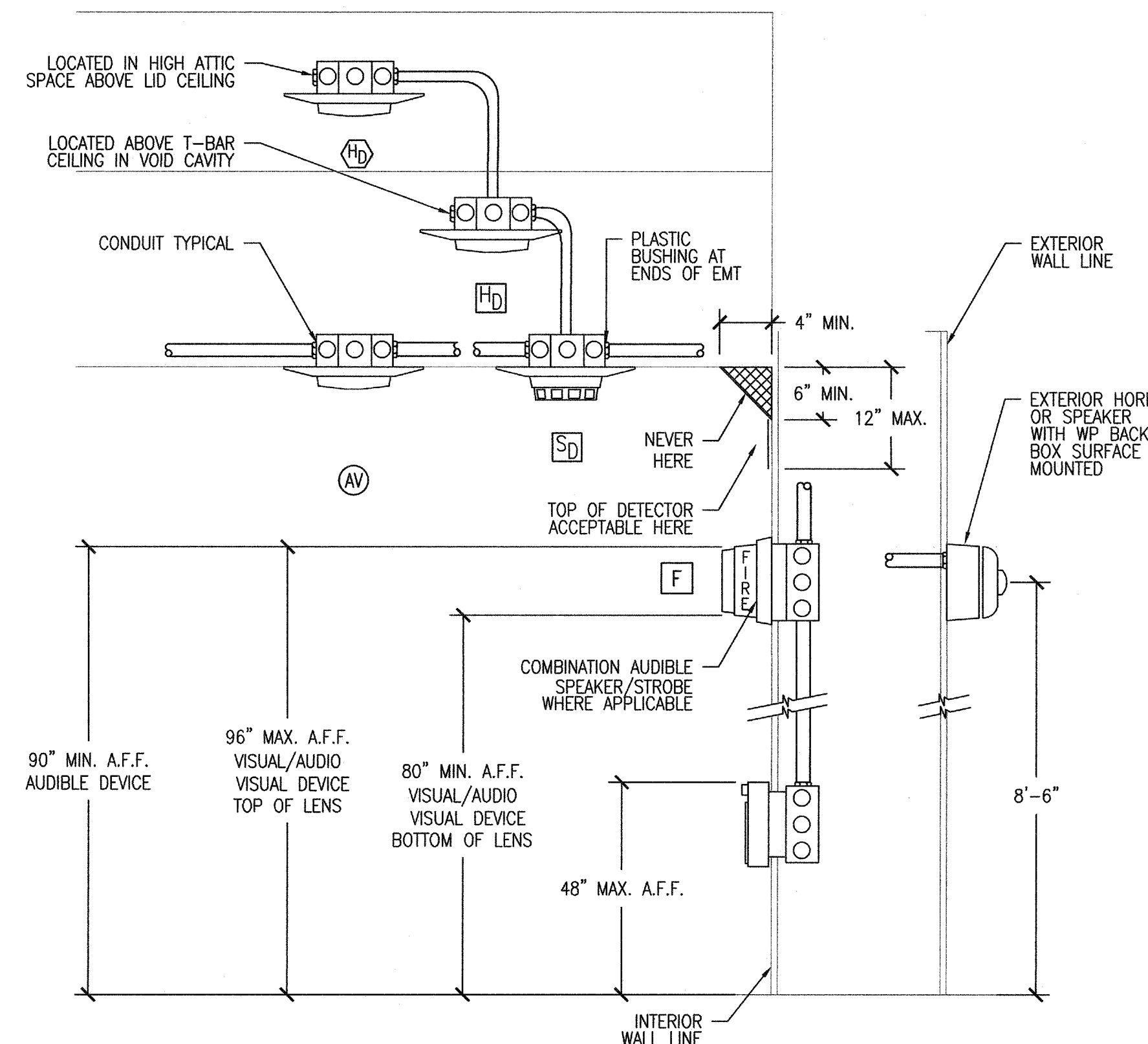
**PA CIRCUIT #1**

16 PA SPEAKER @	0.0690 A	=	1.2420 A
<b>TOTAL</b>			<b>1.2420 A</b>
	1.2420 A	X	720
			16,510 (#8)
		X	21.50
			1.1645 A
	1.16 A	X	100
			24 V
			4.8522 A

**EXISTING SCHOOL CAMPUS CLASSROOM BUILDINGS #1000 AND #3000 FIRE ALARM SYMBOLS LEGEND**

SYMBOL	DESCRIPTION
	ADDRESSABLE PHOTOELECTRIC SMOKE DETECTOR, NOTIFIER FSP-851A CSFM#7272-0028:0206 WITH BASE NOTIFIER B710LPBP CSFM#7272-0028:0206
	ADDRESSABLE HEAT DETECTOR, NOTIFIER FST-851 CSFM#7270-0028:0196 WITH BASE NOTIFIER B710LPBP CSFM#7270-0028:0196 (NOTE: LOCATED IN VOID CEILING CAVITY ABOVE T-BAR CEILING)
	ADDRESSABLE HEAT DETECTOR, NOTIFIER FST-851 CSFM#7270-0028:0196 WITH BASE NOTIFIER B710LPBP CSFM#7270-0028:0196 (NOTE: LOCATED IN HIGH ATTIC SPACE ABOVE HARD LID CEILING)
	CEILING MOUNTED COMBINATION AUDIO SPEAKER/115cd VISUAL DEVICE, 115 CANDELA @ 0.214A.
	CEILING MOUNTED COMBINATION AUDIO SPEAKER/75cd VISUAL DEVICE, 75 CANDELA @ 0.187A.
	VISUAL DEVICE, GENTEX #GEC3 CSFM#7125-0569:0122 30 CANDELA @ 0.091A.
	VISUAL DEVICE, GENTEX #GEC3 CSFM#7125-0569:0122 15 CANDELA @ 0.030A.
	WEATHERPROOF EXTERIOR VOICE EVAC SPEAKER WITH BACKBOX GENTEX #WSSPKR CSFM#7320-0569:0141 @ 0.08A.
	MANUAL PULL STATION - NOTIFIER NBG-12LX CSFM#7272-0028:0206
	ADDRESSABLE MONITOR MODULAR - NOTIFIER FMM-1 CSFM#7300-0028:202
	ADDRESSABLE CONTROL RELAY MODULAR - NOTIFIER FCM-1 CSFM#7300-0028:202
	NOTIFIER FIRE ALARM USUAL (FLASHER POWER SUPPLY, NOTIFIER FCPS-24S8 FOR STROBE FLASHER UNIT), CSFM#7315-0028:225
	EXISTING FIRE ALARM CONTROL PANEL WITH VOICE CONTROL CENTER (VOICE EVAC), NOTIFIER NFS2#3030 WITH AUDIO OPTION DVC VOICE TRANSDUCER, CSFM#7165-0028:0224 INTELLIGENT.
	EXISTING NOTIFIER #DAA-5025 INTELLIGENT AUDIO TRANSDUCER POWER SUPPLIES (FOR FIRE MAIN VOICE EVAC SPEAKER), CSFM#7170-0028:223, 7170-0028:244.
	FLOW SWITCH
	TAMPER SWITCH
FACT EXIST.	EXISTING NOTIFIER #1010 FIRE ALARM CONTROL TO REMAIN IN PLACE AND IN SERVICE FOR SCHOOL USE TO OPERATE IN PARALLEL WITH NEW FACP AT SCHOOL CAMPUS.

**EXISTING CAMPUS BUILDINGS VOLTAGE DROP CALCULATIONS**



**EXISTING SCHOOL CAMPUS CLASSROOM BUILDINGS SMOKE/HEAT DETECTOR/PULL STATION, AUDIO/VISUAL DEVICE MOUNTING DETAILS**

**EXISTING SCHOOL CAMPUS CLASSROOM BUILDINGS #1000 AND #3000 SEQUENCE OF OPERATION**

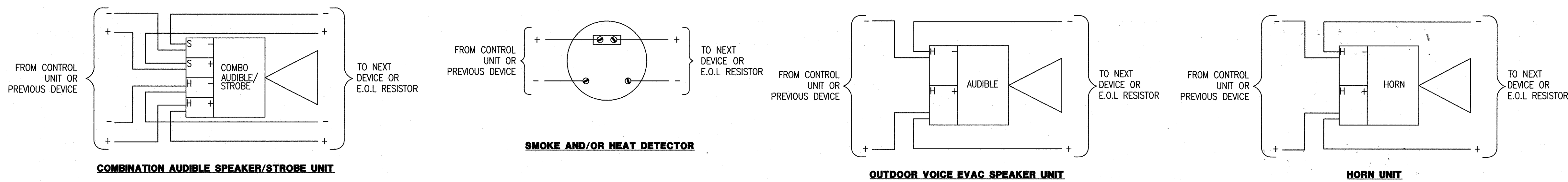
	BUILDING POWER FAILURE	AREA SMOKE DETECTOR	AREA HEAT DETECTOR	PULL STATION	SPRINKLER		ELEVATOR SMOKE DETECTOR
					FLOW SWITCH	TAMPER SWITCH	
ANNUNCIATE AT FIRE CONTROL PANEL (SUPERVISION & TROUBLE) ALARM	YES	YES	YES SUPER-NO	YES SUPER-NO	YES SUPER-NO	YES SUPER-NO	NO
SOUND CONTROL PANEL TROUBLE BUZZER	YES	ON WIRING FAULT	ON WIRING FAULT	ON WIRING FAULT	ON WIRING FAULT	YES	NA
ACTIVATE AUDIBLE ALARM SIGNALS (UNTIL SILENCE)	NO	YES	YES	YES	YES	NO	NA
ACTIVATE VISUAL ALARM SIGNALS (UNTIL RESET)	NO	YES	YES	YES	YES	NO	NA
HVAC AUTO SHUT-OFF DAMPER ACTUATION	NOT PROVIDED	YES	YES	NO	NO	NO	NA
CENTRAL STATION SIGNALS (UNTIL RESET)	YES	YES	YES	YES	YES	YES	NA
VOICE EVAC SYSTEM	YES	YES	YES	YES	YES	YES	NA

**CODES AND STANDARDS**

CODES AND PERMITS: ALL EQUIPMENT, INSTALLATION, ETC., SHALL CONFORM TO LOCAL ELECTRICAL, MECHANICAL AND OTHER APPLICABLE CODES. CONTRACTOR SHALL OBTAIN AND PAY FOR ALL PERMITS AND INSPECTIONS. COPIES OF ALL PERMITS AND INSPECTION REPORTS SHALL BE SUBMITTED TO THE ARCHITECT. CODES INCLUDE BUT NOT LIMITED TO:

- 2013 CALIFORNIA ADMINISTRATIVE CODE (CAC) (PART 1, TITLE 24, CCR)
- 2013 CALIFORNIA BUILDING CODE (CBC), VOLUMES 1&2 (PART 2, TITLE 24, CCR)
- (2012 EDITION INTERNATIONAL BUILDING CODE WITH 2013 CALIFORNIA AMENDMENTS)
- 2013 CALIFORNIA ELECTRICAL CODE (CEC) (PART 3, TITLE 24, CCR)
- (2011 EDITION NATIONAL ELECTRICAL CODE WITH 2013 CALIFORNIA AMENDMENTS)
- 2013 CALIFORNIA MECHANICAL CODE (CMC) (PART 4, TITLE 24, CCR)
- (2012 EDITION IAPMO UNIFORM MECHANICAL CODE WITH 2013 CALIFORNIA AMENDMENTS)
- 2013 CALIFORNIA PLUMBING CODE (CPC) (PART 5, TITLE 24, CCR)
- (2012 EDITION IAPMO UNIFORM PLUMBING CODE WITH 2013 CALIFORNIA AMENDMENTS)
- 2013 CALIFORNIA ENERGY CODE (PART 6, TITLE 24, CCR)
- (2013 EDITION CA ENERGY COMMISSION BUILDING ENERGY EFFICIENCY STANDARDS)
- 2013 CALIFORNIA FIRE CODE (CFC) (PART 9, TITLE 24, CCR)
- (2012 EDITION INTERNATIONAL FIRE CODE WITH 2013 CALIFORNIA AMENDMENTS)
- 2013 CALIFORNIA GREEN CODE (PART 11, TITLE 24, CCR)
- 2013 CALIFORNIA REFERENCED STANDARDS CODE (PART 12, TITLE 24, CCR)
- NFPA 13 - 2013
- NFPA 72 - 2013
- REFERENCED CODE SECTIONS FOR APPLICABLE STANDARDS
- 2013 CBC, CHAPTER 35
- 2013 CFC
- NFPA STANDARDS AND GUIDES
- NFPA 72 NATIONAL FIRE ALARM CODES (CALIFORNIA AMENDED, 2013 EDITION)

NOTE: SEE UL STANDARD 1971 FOR "VISUAL DEVICES".

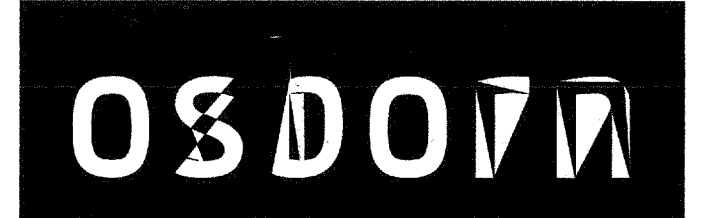


**TYPICAL DEVICE WIRING**



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DESIGNER

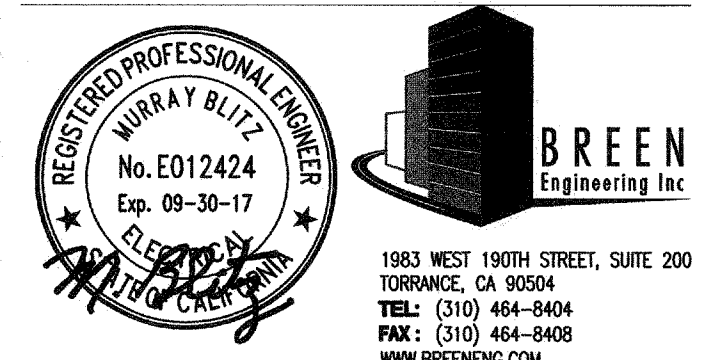


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AC - FLS M - JSS -

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DESIGNER PROJECT NO.: 273-13-001

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CHECKED BY:

SCALE: NONE

KEY PLAN

SHEET TITLE

**FIRE ALARM SYMBOLS, NOTES AND DETAIL**

SHEET NUMBER

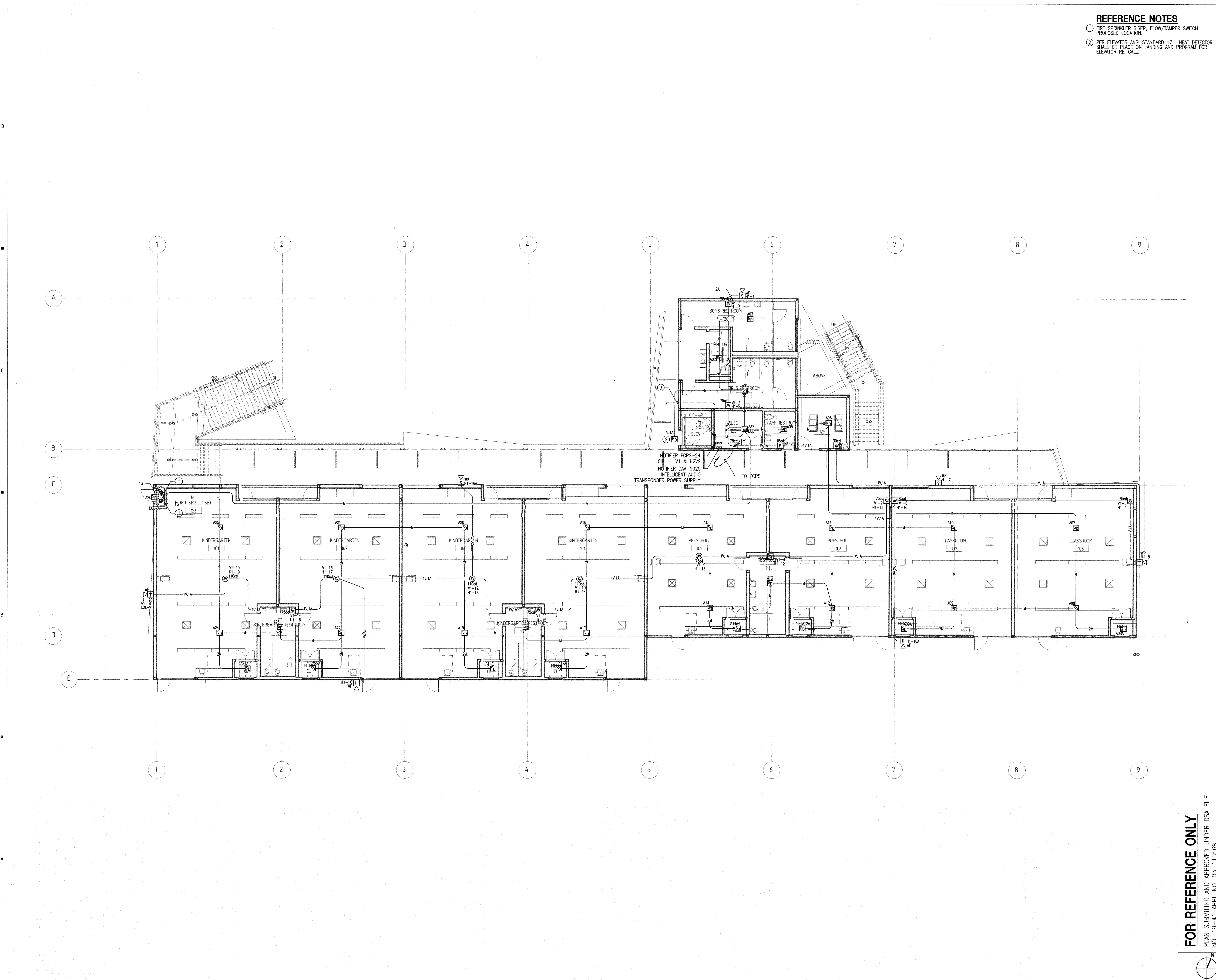
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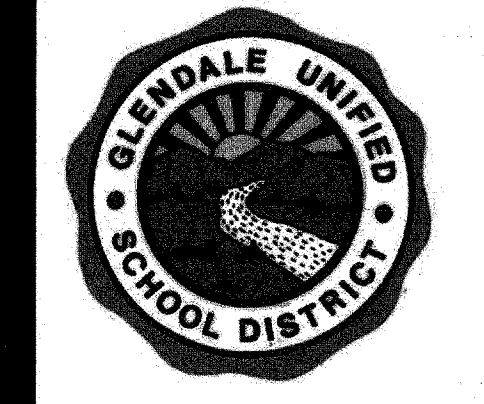


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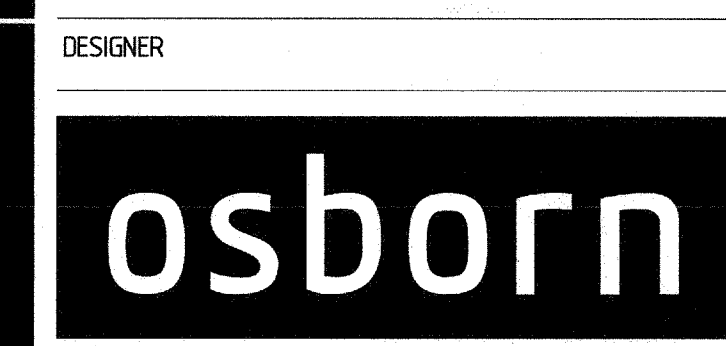


- REFERENCE NOTES**
- ① FIRE SPRINKLER RISER, FLOW/TAMPER SWITCH PROPOSED LOCATION.
  - ② PER ELEVATOR ANSI STANDARD 17.1 HEAT DETECTOR SHALL BE PLACED ON LANDING AND PROGRAM FOR ELEVATOR RE-CALL.

Glendale Unified School District

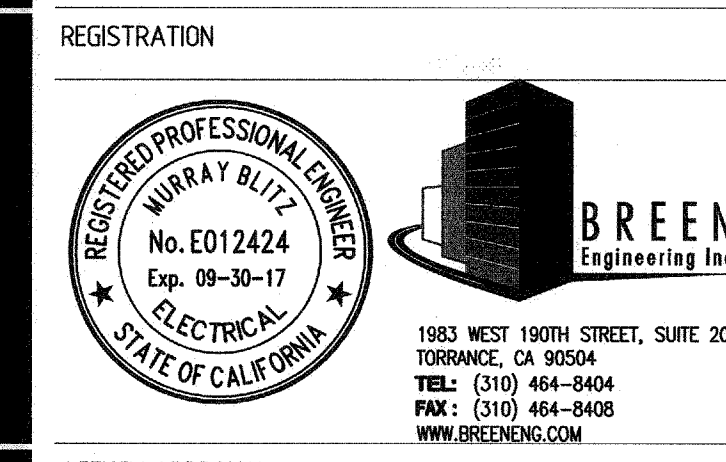


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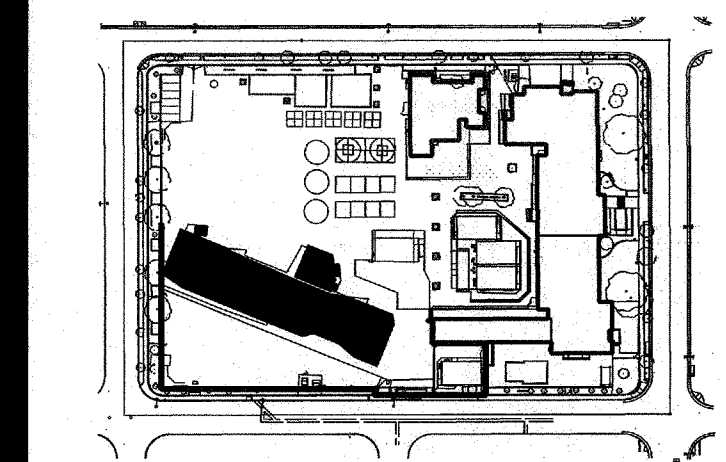
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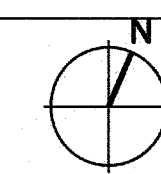
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**FIRE ALARM FIRST FLOOR PLAN**

SHEET NUMBER

**FA-21**

**FOR REFERENCE ONLY**  
 PLAN SUBMITTED AND APPROVED UNDER DSA FILE  
 NO. 19-41 APPL. NO. 03-115568

















DWG: Fire Alarm Admin Building Segment A Floor Plan - Existing Campus Fire Alarm - Franklin ES/CAD/Fire Alarm - Existing Campus Fire Alarm - SHEET ONE.dwg  
 DATE: 03/16/2016  
 PROJECT: 273 MAC Architecture/13-001 - Franklin ES/CAD/Fire Alarm - Existing Campus Fire Alarm - SHEET ONE.dwg  
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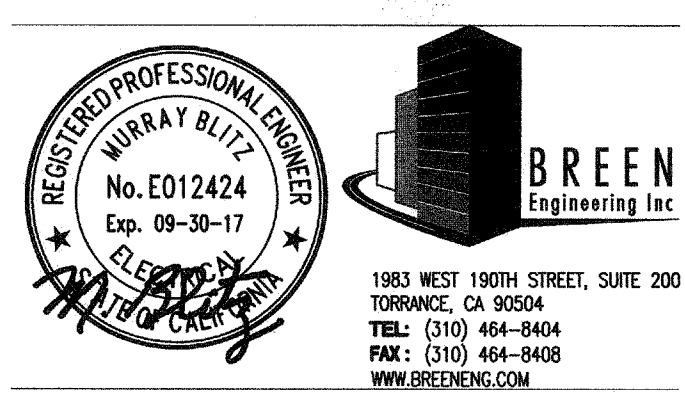


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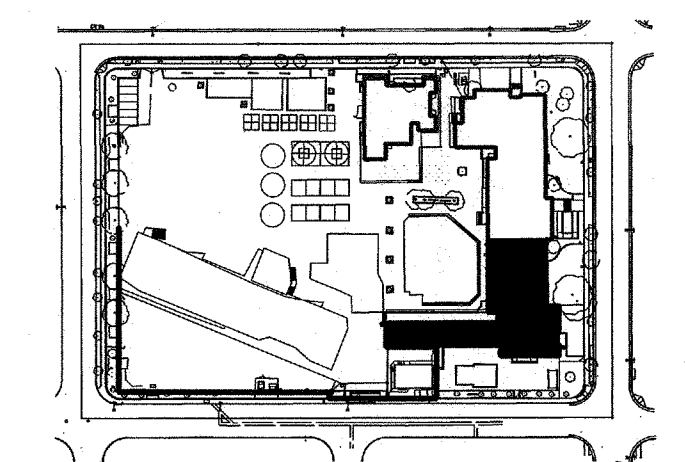
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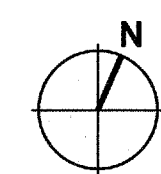


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**FIRE ALARM FLOOR PLANS - SHEET ONE**

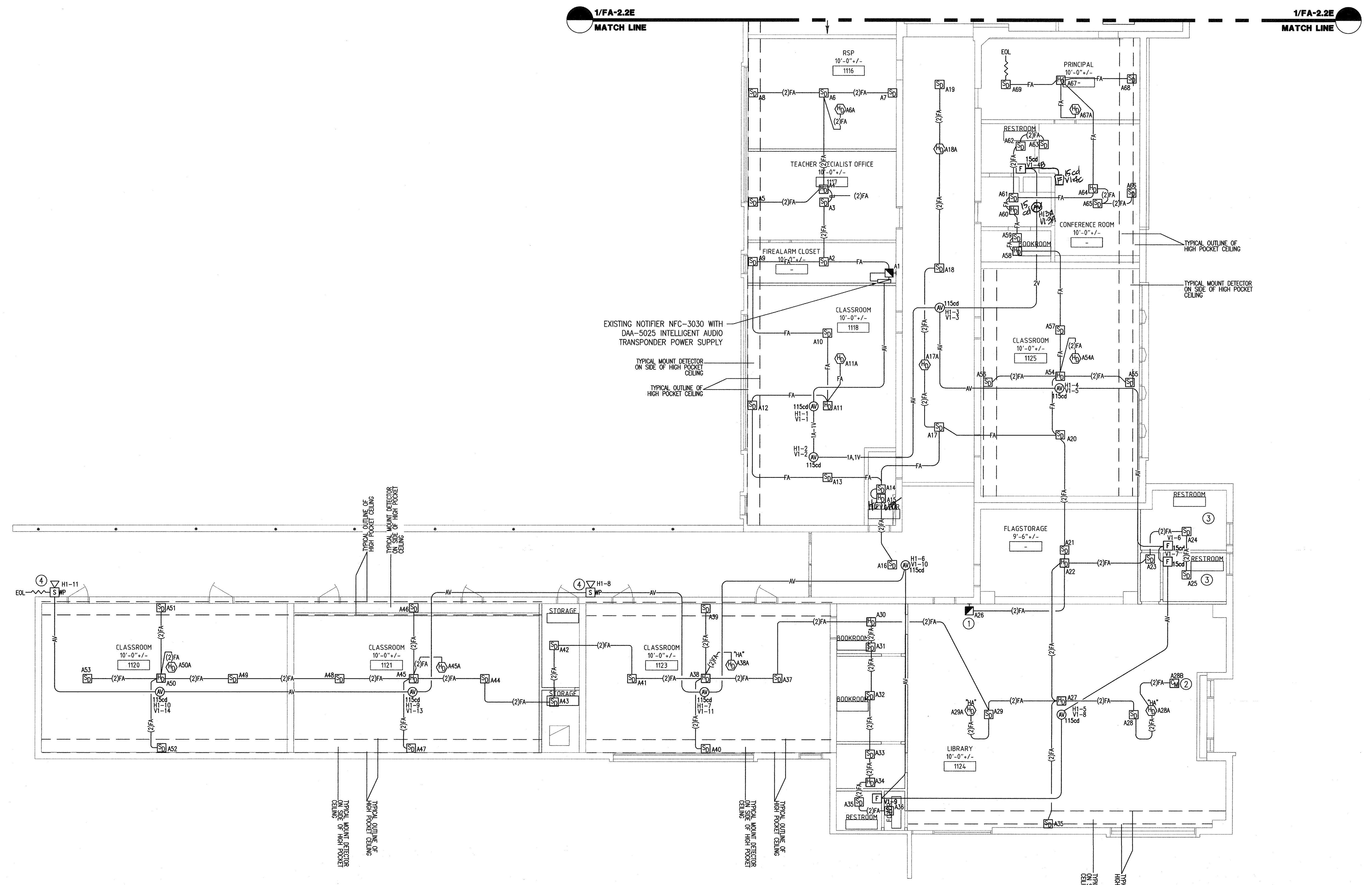
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**FA-21E**



**REFERENCE NOTES**

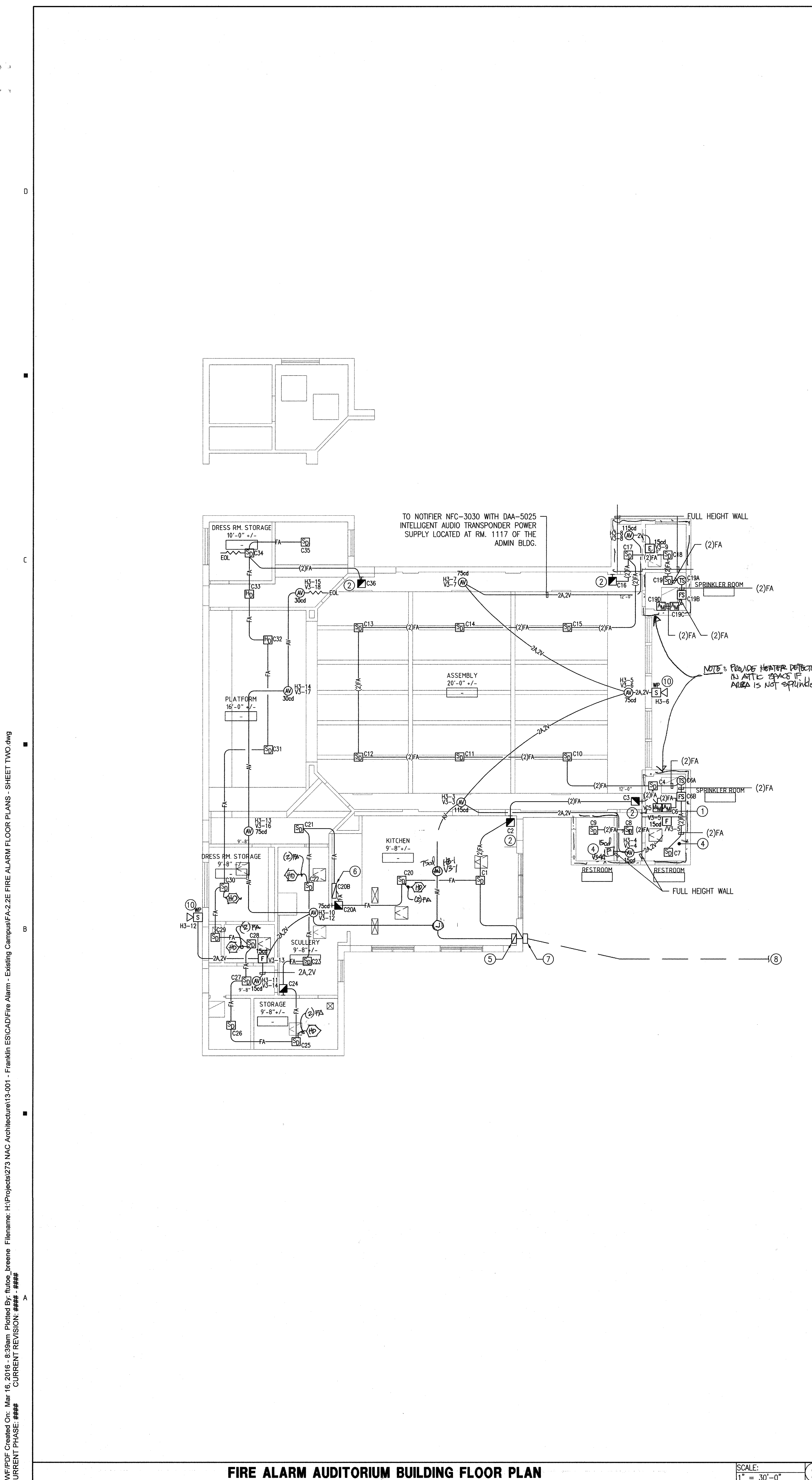
- 1 PROVIDE STUDENT GUARD ON MANUAL PULL STATION.
- 2 FOR HVAC EQUIPMENT FAN SHUT-DOWN (VIA AREA SMOKE DETECTOR), CONTRACTOR SHALL CONTROL RELAY MODULAR AT LIBRARY HVAC EQUIPMENT AC UNIT (CONTROL PANEL). CONTROL RELAY SHALL BE PROGRAM TO SHUT-DOWN UNIT DURING ALARM CONDITION AND THE AREA SMOKE DETECTORS SERVING THE LIBRARY SHALL BE PROGRAM TO ACTIVATE THE CONTROL RELAY. CONTRACTOR SHALL PROVIDE (5°C/2#14 CONTROL WIRES) AND CONNECT RELAY FROM C CONTACT TO THE SHUT-DOWN CONTROL POINTS OF THE HVAC EQUIPMENT CONTROL PANEL.
- 3 FIRE ALARM DEVICES AT RESTROOMS SHALL HAVE VANDAL RESISTANT GUARDS.
- 4 WEATHERPROOF VOICE EVAC. SPEAKER AT 10'-0" A.F.F.



**FIRE ALARM ADMIN BUILDING SEGMENT A FLOOR PLAN**

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

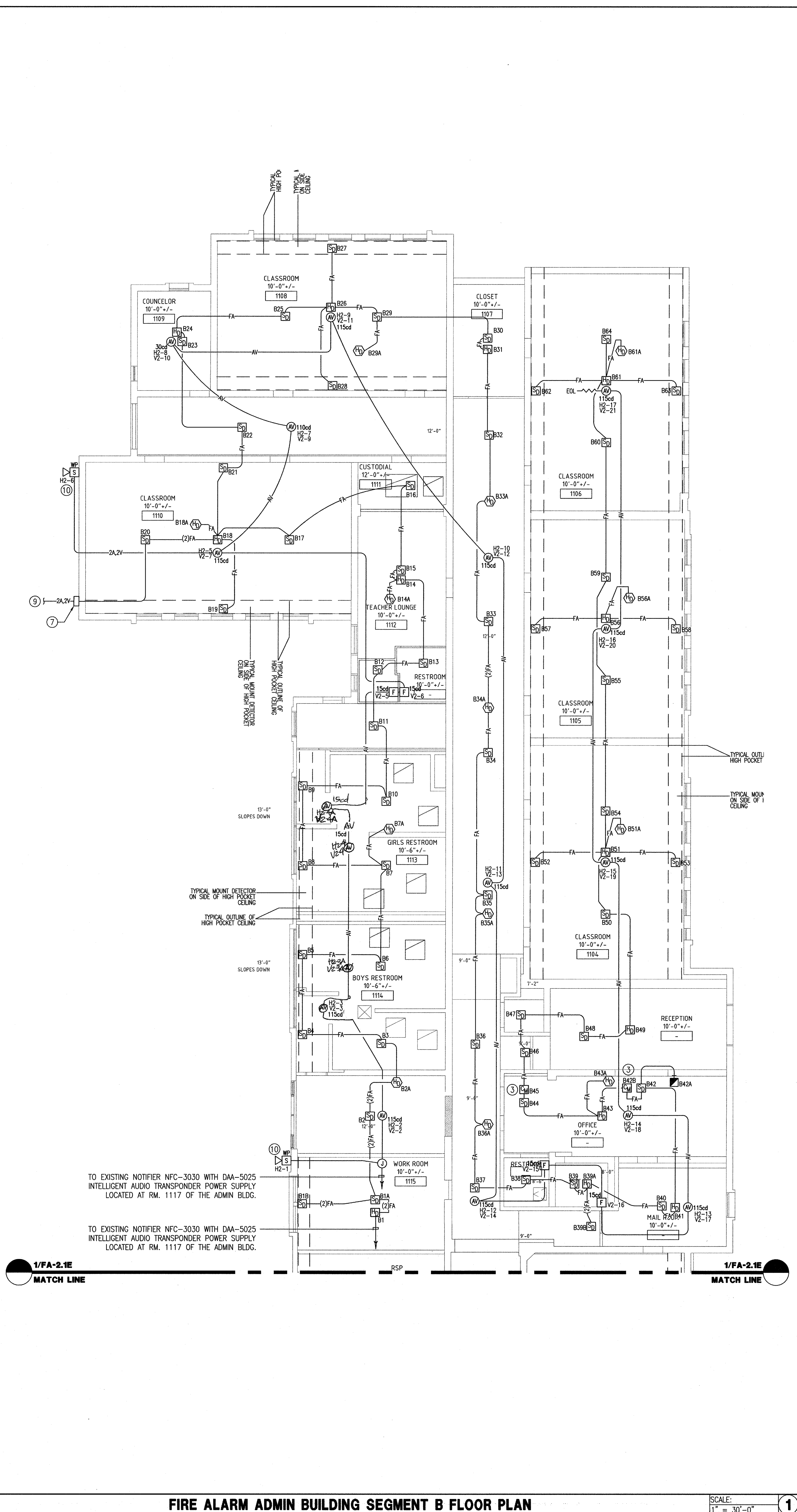




**FIRE ALARM AUDITORIUM BUILDING FLOOR PLAN**

SCALE: 1" = 30'-0"

**2**



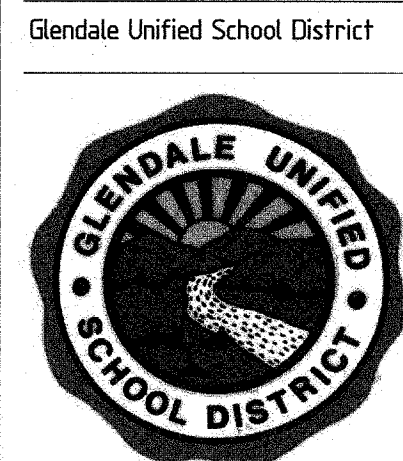
**FIRE ALARM ADMIN BUILDING SEGMENT B FLOOR PLAN**

SCALE: 1" = 30'-0"

**1**

**REFERENCE NOTES**

- EXISTING FIRE SPRINKLER RISER, CONTRACTOR SHALL PROVIDE FLOW/TAMPER SWITCH ON EXISTING RISER AND CONNECT SWITCHES TO FIRE ALARM SYSTEM. CONTRACTOR SHALL VERIFY EXISTING SPRINKLER SYSTEM RISER TO DETERMINE REQUIRED MATERIAL (I.E. FLOW SWITCH, TAMPER SWITCH TO BE INSTALLED AT RISER PIPING/VALVE ASSEMBLY). CONTRACTOR SHALL SUBMIT CUT SHEET ON MATERIAL FOR ENGINEER REVIEW AND APPROVAL.
- PROVIDE STUDENT TAMPER GUARD AT MANUAL PULL STATION.
- FOR ROLL-UP FIRE GRILL RELEASE (VIA AREA SMOKE DETECTORS), CONTRACTOR SHALL PROVIDE CONTROL RELAY MODULAR AT ROLL-UP FIRE RATED GRILL EQUIPMENT (CONTROL PANEL). CONTROL RELAY SHALL BE PROGRAM TO ROLL-UP FIRE GRILL UNIT DURING ALARM CONDITION AND THE AREA SMOKE DETECTORS SERVING THE CORRIDOR/OFFICES AREAS SHALL BE PROGRAM TO ACTIVATE THE CONTROL RELAY. CONTRACTOR SHALL PROVIDE 1/2" x 2 1/4" CONTROL WIRES AND CONNECT RELAY FORM C CONTACT TO THE ROLL-UP FIRE RATED GRILL RELEASE CONTROL POINTS OF THE ROLL-UP FIRE RATED GRILL EQUIPMENT CONTROL PANEL.
- FIRE ALARM DEVICES AT RESTROOMS SHALL HAVE VANDAL RESISTANT GUARDS.
- NEW NOTIFIER FCPS-24 AND TERMINAL CABINETS.
- ANSUL SYSTEM, VERIFY AND COORDINATE EXACT LOCATION WITH THE KITCHEN CONSULTANT.
- WEATHERPROOF PULL BOXES MOUNTED ON BUILDING EXTERIOR.
- REFER TO 1/FA-2.2 FOR CONTINUATION.
- REFER TO 2/FA-2.2 FOR CONTINUATION.
- WEATHERPROOF VOICE EVAC. SPEAKER AT 10'-0" A.F.F.



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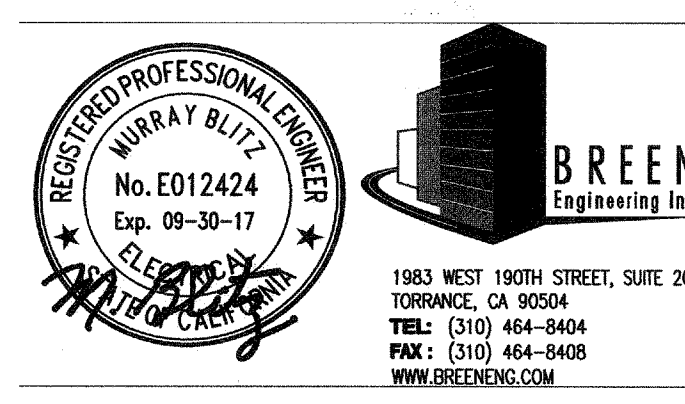


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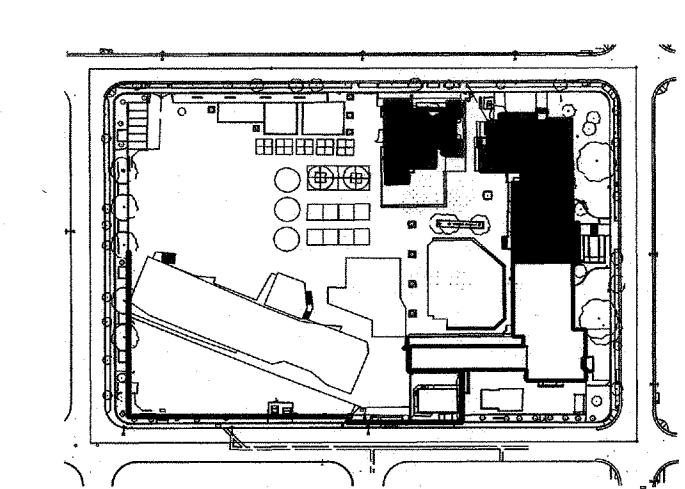
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**FIRE ALARM FLOOR PLANS - SHEET TWO**

SHEET NUMBER

**FA-2.2E**

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