

FIRE ALARM SYSTEM

for

CAÑADA COLLEGE

San Mateo Community College District

Electrical Infrastructure Replacement Project

SAN MATEO COMMUNITY COLLEGE DISTRICT
CANADA COLLEGE
4200 FARM HILL BLVD.
REDWOOD CITY, CA 94061

DRAWING INDEX

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CODE COMPLIANCE

2007 CBC, TITLE 24 CCR (WITH 2007 AMENDMENTS.)

Part 1 Building Standards Administrative Code
Part 2 California Building Code
Part 3 California Electrical Code
Part 4 California Mechanical Code
Part 5 California Plumbing Code
Part 6 California Energy Code
Part 9 California Fire Code
Part 12 California Referenced Standards Code

State Fire Marshal Regulations & National Reference Standards

ADA Code of Federal Regulations including Amendments
ASD(AISC) Manual of Steel Construction, 13th Edition
ACI-318-05 Code & Commentary

2002 NFPA 13 Installation of Sprinkler Systems
2002 NFPA 14 Installation of Standpipe, Private Hydrant and Hose Systems
2002 NFPA 17A to a UL 300 for Class I Hood Fire Suppression System. (Wet Chemical Extinguishing Systems)
2002 NFPA 24 Installation of Private Fire Service Mains and Their Appurtenances
2002 NFPA 72 National Fire Alarm Code
NFPA 90A, 2002 Edition
1994 ADAG GUIDELINES

MXL-IQ FIRE ALARM SYSTEM WIRING GUIDELINES

- ALL WIRING MUST COMPLY WITH LOCAL AND CALIFORNIA ELECTRICAL CODES. ALL WIRING MUST BE DONE AS DESCRIBED IN NOTES 2 & 6 BELOW, TO OBTAIN SAFE AND PROPER SYSTEM OPERATION.
- EARTH GROUND THE MXL-IQ ENCLOSURE PROPERLY. SEE LATEST EDITION OF NATIONAL ELECTRICAL CODES FOR APPROVED METHODS. CONDUIT GROUND IS NOT ADEQUATE.
- SEPARATE ALL WIRING FOR INITIATING DEVICES (i.e., DETECTORS, MANUAL STATIONS, TRI MODULES, ETC) FROM ALL OTHER WIRING IN THE MXL-IQ ENCLOSURE.
- INSULATE ALL CABLE DRAIN WIRES FROM ANY CONDUIT OR OTHER EARTH GROUNDED ELECTRICAL BOX, INCLUDING THOSE IN THE MXL-IQ ENCLOSURE.
- CONNECT SHIELD CABLE DRAIN WIRE ONLY AT SPECIFIED LOCATION INSIDE THE MXL-IQ ENCLOSURE.
- EARTH GROUND ALL CONDUIT RUNS THROUGHOUT THE INSTALLATION.
- LINE RESISTANCE IS MEASURED AT THE ALD-21 MODULE SCREW TERMINALS. THE END OF THE LOOP MUST BE SHORTED, THE ALD-21 MODULE MUST BE REMOVED FROM THE SCREW TERMINALS, AND NO ADDRESSABLE DEVICES MAY BE INSTALLED.
- LINE CAPACITANCE IS MEASURED AT THE ALD-21 MODULE SCREW TERMINALS. THE END OF THE LOOP(S) MUST BE OPEN. THE ALD-21 MODULE MUST BE REMOVED FROM THE SCREW TERMINALS AND NO ADDRESSABLE DEVICES MAY BE INSTALLED.
- ALL 110/120 VAC CIRCUITS SHALL BE INSTALLED IN DEDICATED CONDUIT.
- ALD-21 LOOP WIRING MUST NOT BE IN THE SAME CONDUIT AS CODED AUDIBLE WIRING.
- ALL INITIATING CIRCUITS ARE RATED POWER LIMITED AND SHALL BE WIRED IN ACCORDANCE WITH APPLICABLE CODES.
- UNDERGROUND WIRING IS PERMISSIBLE IF ALL NEC WIRING REQUIREMENTS ARE MET.
- OVERHEAD OR EXTERIOR WIRING IS NOT RECOMMENDED.

GENERAL NOTES

- ALL WIRING AND INSTALLATION MUST CONFORM WITH PROJECT SPECIFICATIONS, APPLICABLE CODE SUMMARIES AND REQUIREMENTS ADOPTED BY THE CITY.
- SMOKE DETECTORS SHOULD NOT BE LOCATED IN A DIRECT AIRFLOW NOR CLOSER THAN 3 FEET (1 m) FROM AN AIR SUPPLY DIFFUSER OR RETURN AIR OPENING. PER NFPA 72 CHAPTER 10-3.5.1-1999 EDITION.
- ALL SMOKE DETECTORS AND INITIATING DEVICES SHALL BE INSTALLED MINIMUM 3 FEET AWAY FROM ELECTRONIC BALLAST (LIGHTING FIXTURES).
- WHEN INSTALLING INITIATING AND NOTIFICATION DEVICES, POLARITY MUST BE OBSERVED.
- ALL NOTIFICATION CIRCUIT WIRES MUST BE SUPERVISED. HENCE, NO PARALLEL BRANCHING OF WIRES IS PERMISSIBLE (T-TAPPING). ALL AUDIBLE SIGNALING DEVICES SHALL PRODUCE A DISTINCTIVE THREE-PULSE TEMPORAL TONE. AUDIBLE SIGNALS SHALL HAVE A SOUND LEVEL OF NOT LESS THAN 75dBA AT 10' OR AT LEAST 15dBA ABOVE THE AVERAGE AMBIENT SOUND LEVEL, WHICHEVER IS GREATER, BUT NOT MORE THAN 120dBA AT THE MINIMUM HEARING DISTANCE FROM THE AUDIBLE APPLIANCE (PER NFPA 72 CH. 4-3.2.1, 1999 ED.) WHEN MORE THAN TWO (2) VISUAL DEVICES ARE IN THE SAME VIEWING PLANE THE VISUAL DEVICES SHALL BE SYNCHRONIZED AS REQUIRED BY NFPA 72 CHAPTER 4, 2007 EDITION.
- DO NOT INSTALL ADDRESSABLE DEVICES PRIOR TO PROGRAMMING. (SEE NOTE 15)
- ALL 24 VDC WIRE TO BE INSTALLED IN DEDICATED CONDUIT SEPARATE FROM 120 VAC WIRING, IN ACCORDANCE WITH CURRENT NATIONAL AND STATE ELECTRICAL CODES.
- CONDUIT SIZING TO BE DETERMINED BY THE ELECTRICAL CONTRACTOR AND SHALL CONFORM TO CONDUIT FILL CAPACITIES AS PER REQUIREMENTS OF CURRENT EDITIONS OF NATIONAL AND STATE ELECTRICAL CODES.
- DO NOT APPLY 120 VAC POWER TO CONTROL PANEL UNTIL A SIEMENS FIRE SAFETY SERVICE TECHNICIAN HAS INSPECTED ALL SYSTEM WIRING CONNECTIONS AND HAS APPROVED THE SYSTEM TO BE TURNED ON.
- ALL PLUG-IN TYPE DETECTORS REQUIRE A 4" OCTAGONAL, 1-1/2" OR DEEPER MOUNTING BOX. REFER TO DETAIL DRAWINGS FOR DEVICE WIRING AND MOUNTING CONDITIONS.
- 120 VAC INPUT CONNECTIONS TO THE FIRE ALARM CONTROL PANEL SHALL BE ON DEDICATED BRANCH CIRCUIT(S). THE CIRCUIT(S) AND CONNECTIONS SHALL BE MECHANICALLY PROTECTED. CIRCUIT DISCONNECTION SHALL HAVE A RED MARKING. SHALL BE ACCESSIBLE ONLY TO AUTHORIZED PERSONNEL AND SHALL BE IDENTIFIED AS FIRE ALARM CIRCUIT CONTROL. THE LOCATION OF THE CIRCUIT DISCONNECTING BREAKER SHALL BE PERMANENTLY IDENTIFIED AT THE FIRE ALARM CONTROL UNIT.
- INSTALLATION MATERIALS SUCH AS CONDUITS, FITTINGS, JUNCTION BOXES, TERMINAL CABINETS, PULL BOXES, HANGERS, ETC. ARE SUPPLIED AND INSTALLED BY THE ELECTRICAL CONTRACTOR. ALL WIRING IS TO BE FROM DEVICE TERMINAL TO DEVICE TERMINAL SPLICES AND WIRE NUTS ARE NOT ACCEPTABLE.
- ANY DEVIATION FROM THE DESIGN AND LOCATION OF EQUIPMENT SHOWN MUST FIRST HAVE A WRITTEN APPROVAL FROM SIEMENS FIRE SAFETY. ANY DEVIATION FROM DESIGN MUST ALSO BE INDICATED ON SIEMENS FIRE SAFETY SHOP DRAWINGS (BLUEPRINTS) AND RETURNED TO SIEMENS FIRE SAFETY AT TIME OF JOB COMPLETION.
- THE DRAWINGS REPRESENT A SIEMENS FIRE SAFETY ENGINEERED FIRE ALARM SYSTEM PER CONTRACTUAL DESIGN DRAWINGS AND SPECIFICATIONS.
 - CONTRACTOR SHALL NOT DEVIATE BY NOT MORE THAN 5% FROM THE FINAL APPROVED SHOP DRAWINGS.
 - WIRE RUNS HAVE BEEN ENGINEERED TO COMPLY WITH SPECIFIC VOLTAGE DROP REQUIREMENTS. ANY DEVIATION FROM SHOWN WIRE RUNS WHICH RESULTS IN NON-COMPLIANCE WITH VOLTAGE DROP REQUIREMENTS SHALL BE THE SOLE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR.
 - THESE SUBMITTED SHOP DRAWINGS ARE COMPLETE. SIEMENS FIRE SAFETY SHALL NOT BEAR ANY ADDITIONAL COSTS OF RE-ENGINEERING RECORD DRAWINGS (AS-BUILTS).
- ALL SMOKE DETECTORS (NEW OR EXISTING) SHALL BE PROTECTED FROM DUST AND DEBRIS DURING CONSTRUCTION. SMOKE-SENSING DETECTORS SHALL NOT BE INSTALLED UNTIL AFTER THE CONSTRUCTION CLEANUP OF ALL TRADES IS COMPLETE AND FINAL PER NFPA 72 (CHAPTER 2-3.6.1.3) 2007 EDITION. Exception: WHERE REQUIRED BY THE AUTHORITY HAVING JURISDICTION FOR PROTECTION DURING CONSTRUCTION, DETECTORS THAT HAVE BEEN INSTALLED DURING CONSTRUCTION AND FOUND TO HAVE A SENSITIVITY OUTSIDE THE LISTED AND MARKED SENSITIVITY RANGE SHALL BE CLEANED OR REPLACED AT AN ADDITIONAL COST TO THE CONTRACTOR.
- IF REQUIRED BY THE OWNER OR CONTRACT, LABELING OF FIELD DEVICES SHALL BE SUPPLIED BY THE INSTALLING CONTRACTOR.

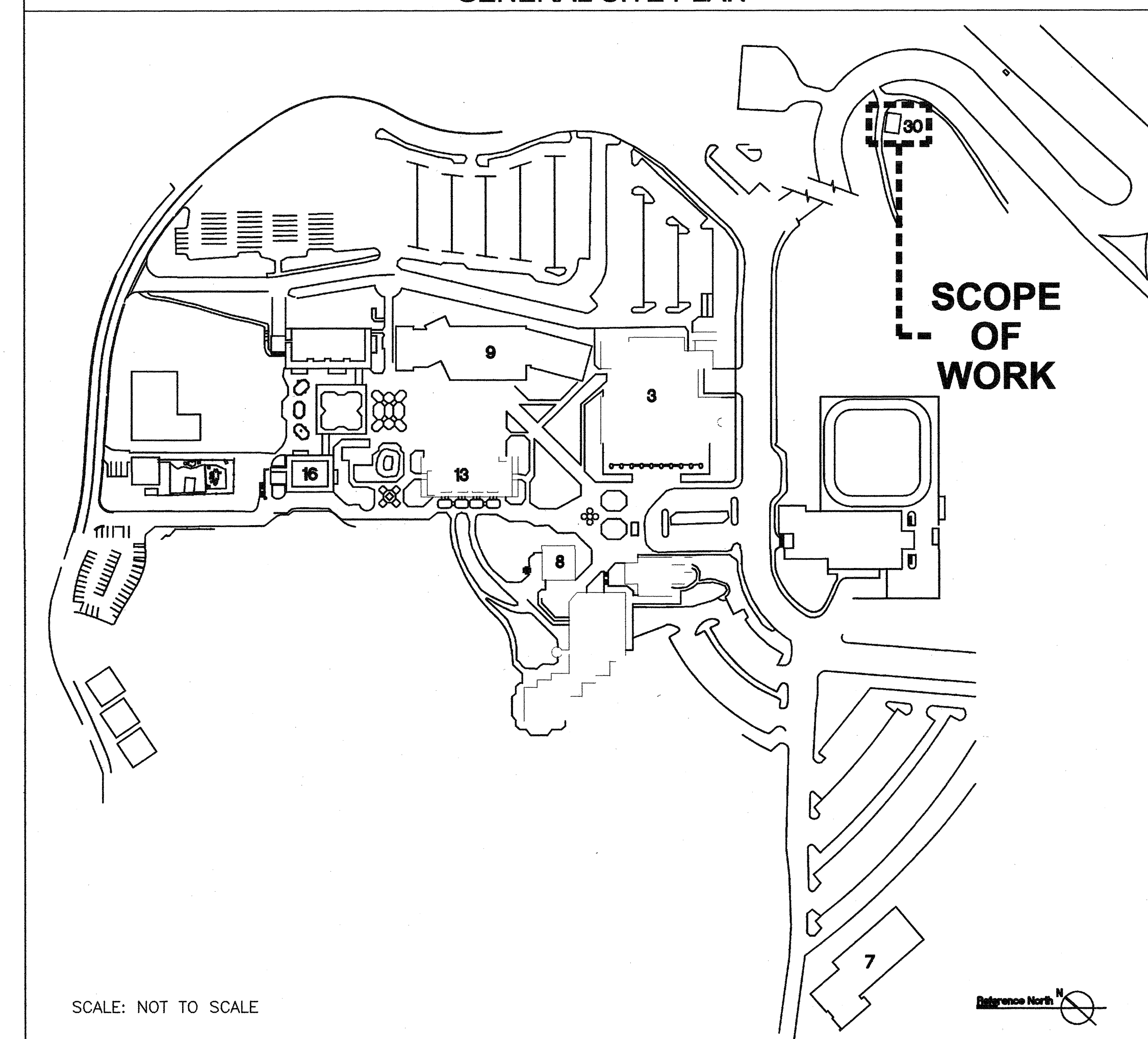
SCOPE OF WORK

PRESENTED HEREIN IS THE ADDITION OF FIRE ALARM DEVICES TO THE NEW BUILDING 30 POWERHOUSE. THESE ADDED DEVICES WILL TIE INTO THE EXISTING NETWORK AND CONSIST OF ONE PSR, THREE SMOKE DETECTORS, ONE HEAT DETECTOR, TWO MANUAL PULL STATIONS, ONE WEATHERPROOF HORN STROBE AND ONE HORN STROBE.

FIRE ALARM EQUIPMENT LIST

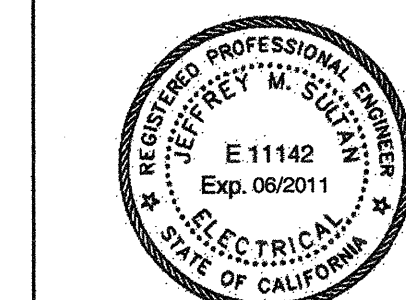
QTY	SYMBOL	MODEL NUMBER	DESCRIPTION	MANUFACTURER	DATA SHEET NUMBER	CALIFORNIA STATE FIRE MARSHAL LISTING NUMBER
1		MME-3	MXL MEDIUM SIZE DOOR/ENCLOSURE PACKAGE	SIEMENS	5056	7170-0067-0172
2		MDL-1	CLEAR LENS	SIEMENS	5056	-----
3		MOB-1	SHEET METAL BLANK PLATE	SIEMENS	5056	-----
4		MOR-MP	MXL CARD CAGE MOUNTING PLATE	SIEMENS	5056	-----
5		MOB-2	MXL DISPLAY / KEYBOARD	SIEMENS	5026	7165-0067-0144
6		PSR-1	REMOTE POWER SUPPLY	SIEMENS	5010	7170-0067-0154
7	[FACP]	MOM-4	OPTION MODULE CARD CAGE	SIEMENS	5004	7170-0067-0172
8		ALD-21	ANALOG LOOP DRIVER	SIEMENS	5036	7170-0067-0172
9		CSM-4	CONTROLLABLE SIGNAL MODULE	SIEMENS	5001	7156-0067-0144
10		NET-7	NETWORK INTERFACE CARD	SIEMENS	5004	7170-0067-0154
11		CP2341	SURGE SUPPRESSOR	SIEMENS	-----	7300-0067-0172
12		MPS-12	POWER SUPPLY w/ TRANSFORMER, 12 AMPS	SIEMENS	5035	7170-0067-0154
13		WKA12-33J	33 AMP HOUR BATTERIES	WERKER	-----	-----
14						
15						
16		FP-11	INTELLIGENT PHOTOELECTRIC SMOKE DETECTOR	SIEMENS	6175	7272-0067-0203
17		DB-11	DETECTOR BASE FOR FP-11 DETECTOR	SIEMENS	6175	7272-0067-0134
18		FPT-11	INTELLIGENT THERMAL FIRE DETECTOR	SIEMENS	6176	7272-0067-0202
19		DB-11	DETECTOR BASE FOR FPT-11 DETECTOR	SIEMENS	6176	7272-0067-0134
20	[F]	MSI-10B	INTELLIGENT MANUAL PULL STATION	SIEMENS	6187	7150-0067-0036
21		ASWP-2475W-FR	WEATHERPROOF HORN STROBE	WHEELLOCK	----	7125-0785-0131
22		WPBB	WEATHERPROOF BACK BOX	WHEELLOCK	----	-----
23			150CD CANDELA HORN STROBE	WHEELLOCK	----	7125-0785-0142
24			300CD CANDELA HORN STROBE	WHEELLOCK	----	7125-0785-0142
25			750CD CANDELA HORN STROBE	WHEELLOCK	----	7125-0785-0142
26			1100CD CANDELA HORN STROBE	WHEELLOCK	----	7125-0785-0142
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GENERAL SITE PLAN



SCALE: NOT TO SCALE

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Engineer of Record
Jeffrey M. Sullivan

IDENTIFICATION STAMP

DIVISION OF THE STATE ARCHITECT
APPLICATION NUMBER 01-111618
AC 02 11 11
DATE 2/9/11

CALIFORNIA STATE FIRE MARSHAL APPROVED

APPROVAL OF THESE PLANS DOES NOT ALTER OR AMEND ANY CONDITION OR DEVIATION FROM APPLICABLE REGULATIONS. FINAL APPROVAL IS SUBJECT TO FIELD INSPECTION. ONE SET OF APPROVED PLANS SHALL BE AVAILABLE ON THE PROJECT SITE AT ALL TIMES.
REVIEWED BY: _____ DATE: _____

CAÑADA COLLEGE

Electrical Infrastructure Replacement Project

4200 Farm Hill Blvd
Redwood City, CA 94061

BID SET

SHEET TITLE
COVER/ DRAWING INDEX/ EQUIPMENT LIST

REVISIONS
NO. DATE DESCRIPTION

DATE January 14, 2011
DRAWN RB
CHECKED KFR
SCALE N/A
JOB NO. 2921.01
SHEET NUMBER

FA-01