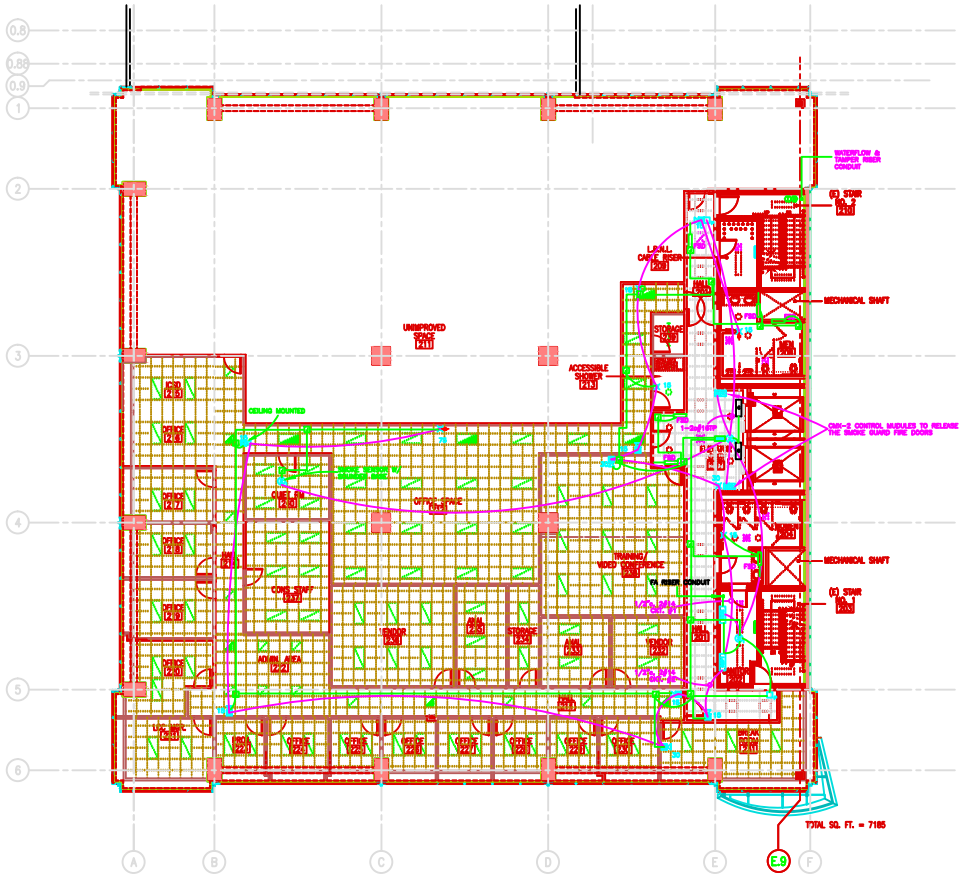

1 SECOND FLOOR PLAN
SCALE 1/8" = 1'-0"

NOTE:

1. ALL DEVICES ARE NEW.

2. THE AREA SMOKE DETECTORS SHALL NOT BE LOCATED WITHIN 3 FEET OF HVAC SUPPLY AIR DIFFUSERS.

LEGEND:

- FIRE ALARM CONTROL PANEL
- DIGITAL TRANSMITTER
- REMOTE SIGNAL CONTROL PANEL
- IONIZATION SMOKE SENSOR,
- THERMAL DETECTOR
- DUCT DETECTOR
- LIQUID CRYSTAL DISPLAY ANNUNCIATOR
- ADDRESSABLE CONTROL MODULE
- ADDRESSABLE MONITOR MODULE
- MANUAL PULL STATION
- ALARM STROBE, # = CANDELA RATING
- ALARM HORN/STROBE, # = CANDELA RATING
- ELECTROMAGNETIC DOOR HOLDER, 120 VAC
- TAMPER SWITCH (BY OTHERS)
- WATERFLOW SWITCH (BY OTHERS)
- SPRINKLER RISER (EXISTING)
- JUNCTION BOX (BY OTHERS)
- CMX W/RELAY (BY CALPROTECTION)
- ELEVATOR FIRE CURTAIN CONTROLLERS (BY OTHERS)
- FSD FIRE/SMOKE DAMPER DUCT DETECTOR

VOLTAGE DROP CALCULATIONS - (WORST CASE)

RSP1 PANEL CIRCUIT #1

1 BRANCH - 0.038 AMPS DRAW PER DSM SYNC MODULE
4 BRANCHES - 0.060 AMPS DRAW PER 15 CANDELA STROBE
1 BRANCH - 0.021 AMPS DRAW PER 30 CANDELA STROBE
1 BRANCH - 0.133 AMPS DRAW PER 75 CANDELA STROBE
6 BRANCHES - 0.037 AMPS DRAW PER 15 CANDELA HORN/STROBES
2 BRANCHES - 0.120 AMPS DRAW PER 30 CANDELA HORN/STROBES

VOLTAGE DROP = CURRENT X RESISTANCE
#14 SOLID WIRE = 0.326 OHMS PER 100 FEET OF WIRE

5 FEET OF WIRE TO BRANCH 1
.013 AMPS x .0163 OHMS = .010 VDC DROP

40 FEET OF WIRE FROM BRANCH 1 TO 2
.070 AMPS x .1304 OHMS = .070 VDC DROP

20 FEET OF WIRE FROM BRANCH 2 TO 3
.026 AMPS x .0652 OHMS = .034 VDC DROP

40 FEET OF WIRE FROM BRANCH 3 TO 4
.044 AMPS x .1304 OHMS = .058 VDC DROP

10 FEET OF WIRE FROM BRANCH 4 TO 5
.354 AMPS x .0326 OHMS = .011 VDC DROP

20 FEET OF WIRE FROM BRANCH 5 TO 6
.157 AMPS x .1304 OHMS = .024 VDC DROP

40 FEET OF WIRE FROM BRANCH 6 TO 7
.157 AMPS x .1304 OHMS = .018 VDC DROP

40 FEET OF WIRE FROM BRANCH 7 TO 8
.080 AMPS x .163 OHMS = .026 VDC DROP

.281 VDC (TOTAL)

$\frac{.281 \text{ VDC}}{24 \text{ V}} \times 100 = 1.08\%$ VOLTAGE DROP

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2600 MIRA MAR AVENUE
LONG BEACH, CA. 90815
T 562 494 3987
F 562 495 6494

TYPE OF WORK
FIRE ALARM SYSTEM

OWNER
SIEMEN ELECTRIC
1400 MEADOWS DRIVE
SANTA CLARA, CALIFORNIA 95050-2942

NO.	DATE	DESCRIPTION	BY
1	4-24-2003	FOR REVIEW	BDA
2	4-25-2003	FOR SUBMITTAL	BDA
3	6-2-2003	REV. PER PLAN CHECK CORRECTIONS	BDA
4	6-23-2003	CHANGE CMX#1 (5)	BDA
5	6-23-2003	CHANGE CMX#2 (5)	BDA
6	6-23-2003	REPLACE BOX PER PLAN CHECK (5)	BDA
7	10-10-03	AS BUILT	HB

AS BUILT BY
ELECTRICAL: BRIAN DIAZ BY
MECHANICAL: BRIAN DIAZ BY
CHECK-OUT TECHNICIAN: BRIAN DIAZ BY

PROJECT NAME
LAWRENCE BERKELEY NATIONAL LABORATORY COMPUTING CENTER
415 20th STREET
OAKLAND, CALIFORNIA 94612

SHEET DESCRIPTION
SECOND FLOOR PLAN

PROFESSIONAL STAMP
EXP. 04/30/2004

PROJECT NUMBER AL-03204
FILE NAME AL-03204SLB3D
DRAWN BY BW
CHECKED BY HB
SHEET BY BDA
SCALE 1/8" = 1'-0"

DRAWING NUMBER
6111

SHEET NUMBER
FP 5.0

FILE: 00012425
4N943E043

PROJ. NO. FH0113