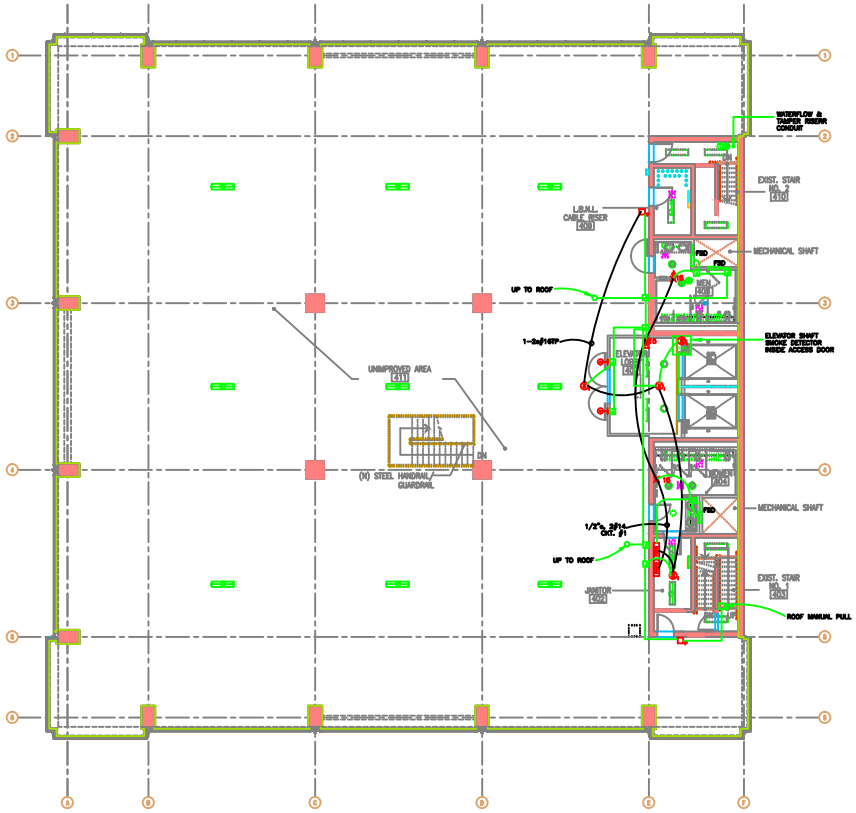

1 FOURTH FLOOR PLAN
SCALE 1/8" = 1'-0"

NORTH

NOTES:

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
- FIRE ALARM TERMINAL CABINET
- 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)
- WP WEATHERPROOF
- FSD FIRE/SMOKE DAMPER DUCT DETECTOR

VOLTAGE DROP CALCULATIONS – (WORST CASE)

4TH FLOOR – RSP3 PANEL1 CIRCUIT #1

1 BRANCH – 0.035 AMPS DRAW PER DRM SYNC MODULE
1 BRANCH – 0.097 AMPS DRAW PER 15 CANDELA HORN/STROBE
2 BRANCHES – 0.06 AMPS DRAW PER 15 CANDELA STROBES

VOLTAGE DROP = CURRENT X RESISTANCE
#14 GAUGE WIRE = 0.320 OHMS PER 100 FEET OF WIRE

5 FEET OF WIRE TO BRANCH 1
0.225 AMPS x .0163 OHMS = .004 VDC DROP

30 FEET OF WIRE FROM BRANCH 1 TO 2
0.197 AMPS x .0978 OHMS = .018 VDC DROP

50 FEET OF WIRE FROM BRANCH 2 TO 3
0.137 AMPS x .163 OHMS = .022 VDC DROP

30 FEET OF WIRE FROM BRANCH 3 TO 4
0.020 AMPS x .0978 OHMS = .002 VDC DROP

100 FEET OF WIRE FROM BRANCH 4 TO 5
.006 AMPS x .326 OHMS = .195 VDC DROP

0.049 VDC (TOTAL)

0.049 VDC / 24 V x 100 = 0.20% VOLTAGE DROP

G:\Eng\AutoCAD\Support Files\GREY.tif

2600 MIRA MAR AVENUE
LONG BEACH, CA. 90815
F 562 494 3957
T 562 495 6684

TYPE OF WORK
FIRE ALARM SYSTEM

OWNER
BOARD ELECTRIC
1400 BERKELEY DRIVE
SANTA CLARA, CALIFORNIA 95050-2042

NO.	DATE	DESCRIPTION	BY
1	4-24-2020	FOR REVIEW	BGA
2	4-28-2020	FOR SUBMITTAL	BGA
3	6-2-2020	REV. PER PLAN CHECK CORRECTIONS	BGA
4	10-10-20	AS BUILT	HG

AS BUILT BY
ELECTRICAL: BRIAN DIAZ BY
MECHANICAL: BRIAN DIAZ BY
CHIEF-DAY TECHNICIAN: BRIAN DIAZ BY

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

SHEET DESCRIPTION
FOURTH FLOOR PLAN

PROFESSIONAL STAMP
EXP. 04/30/2021

PROJECT NUMBER AL-00204
FILE NAME AL-00204FP.DWG
DRAWN BY BY
CHECKED BY HMB
SHEET BY BGA
SCALE 1/8" = 1'-0"

DRAWING NUMBER
6111

SHEET NUMBER
FP 7.0

FILE: 00012427
4N943E045

PROJ. NO. FH0113