

SKYLINE COLLEGE - FIRE ALARM RISER DIAGRAM

① NOT TO SCALE

FAS BATTERY CALCULATION (E) FACP-M

QTY	MODEL NUMBER	DEVICE TYPE	SUPERVISORY CURRENT (PER DEVICE)	SUPERVISORY CURRENT (TOTAL)	ALARM CURRENT (PER DEVICE)	ALARM CURRENT (TOTAL)
1	(E) SIEMENS MXL	(E) FACP	0.11700	0.11700	1.65000	1.65000
2	(E) SIEMENS ALD-21	(E) LOOP DRIVER MODULE	0.17500	0.35000	0.17500	0.35000
			SYSTEM SUPERVISORY	0.46700	SYSTEM ALARM CURRENT	2.00000

MAXIMUM SUPERVISORY CURRENT: 0.46700
 STANDBY PERIOD (24 HOURS): 24.00000
 REQUIRED SUPERVISORY RESERVE: 11.20800
 MAXIMUM ALARM CURRENT: 2.00000
 ALARM PERIOD (5 MINUTES): 0.08300
 REQUIRED ALARM RESERVE: 0.16600
 TOTAL RESERVE AMP HOURS: 11.37400
 20% SPARE CAPACITY: 2.27480
 TOTAL REQUIRED AMP HOURS: 13.64880
 * (E) BATTERY AMP HOURS: 33.0

* NOTE: REPLACE (E) BATTERY WHEN 4 YEARS OLD.

FAS VOLTAGE DROP (VD) CALCULATION 1AS2 (BLDG. 1)

DEVICE NUMBER	1	2	3	4	5	6	7	8	12	12	12	12	12	12
WIRE GAUGE	12	12	12	12	12	12	12	12	12	12	12	12	12	12
DISTANCE (FT)	57	82	47	32	27	27	22	62						
AMPS AT DEVICE	0.026	0.093	0.041	0.063	0.026	0.041	0.026	0.026						
AMPS DEVELOPED	0.372	0.348	0.253	0.212	0.119	0.093	0.062	0.026						
VOLTAGE DROP	0.075	0.100	0.042	0.024	0.011	0.009	0.004	0.005						

TOTAL CIRCUIT VOLTAGE DROP: 0.271
 CIRCUIT VOLTAGE: 24.000
 VOLTAGE AT FINAL DEVICE: 23.729
 % VOLTAGE DROP: 1.128%
 MAXIMUM ALLOWED % VOLTAGE DROP: 10%

WIRE SIZE	OHMS/1000 FT	CIRC. MILS.
12	1.77	6530
14	2.82	4110
16	4.48	2580
18	7.14	1620
20	11.34	1020
22	18.08	640
24	28.64	404

FORMULA: VOLTAGE DROP = AMPS X FT X OHMS/FT

FAS BATTERY CALCULATION (E) RNPS-1A

QTY	MODEL NUMBER	DEVICE TYPE	SUPERVISORY CURRENT (PER DEVICE)	SUPERVISORY CURRENT (TOTAL)	ALARM CURRENT (PER DEVICE)	ALARM CURRENT (TOTAL)
1	(E) SIEMENS PAD-2	(E) REMOTE POWER SUPPLY	0.11700	0.11700	1.65000	1.65000
1	WHEELLOCK DSM-24-R	DUAL SYNC MODULE	0.00000	0.00000	0.03800	0.03800
1	WHEELLOCK RSS-24MCW-FR	STROBE (15CD)	0.00000	0.00000	0.04100	0.04100
7	(E) WHEELLOCK RSS-24MCW-FR	(E) STROBE (15CD)	0.00000	0.00000	0.04100	0.28700
1	WHEELLOCK AS-24MCW-FR	HORN/STROBE (15CD)	0.00000	0.00000	0.09300	0.09300
1	(E) WHEELLOCK AS-24MCW-FR	(E) HORN/STROBE (30CD)	0.00000	0.00000	0.11400	0.11400
4	WHEELLOCK AH-24-R	HORN	0.00000	0.00000	0.02600	0.10400
			SYSTEM SUPERVISORY	0.11700	SYSTEM ALARM CURRENT	2.32700

MAXIMUM SUPERVISORY CURRENT: 0.11700
 STANDBY PERIOD (24 HOURS): 24.00000
 REQUIRED SUPERVISORY RESERVE: 2.80800
 MAXIMUM ALARM CURRENT: 2.32700
 ALARM PERIOD (5 MINUTES): 0.08300
 REQUIRED ALARM RESERVE: 0.19314
 TOTAL RESERVE AMP HOURS: 3.0114
 20% SPARE CAPACITY: 0.60023
 TOTAL REQUIRED AMP HOURS: 3.61137
 * (E) BATTERY AMP HOURS: 10.0

* NOTE: REPLACE (E) BATTERY WHEN 4 YEARS OLD.

GENERAL NOTES

- ALL CABLES CONNECTING REMOTE NOTIFICATION POWER SUPPLY WITH FIRE ALARM CONTROL PANEL SHALL BE (2) TWO #14 AWG, UNLESS OTHERWISE NOTED.
- ALL DETECTION CIRCUITS SHALL USE (2) TWO #14 AWG CABLES, UNLESS OTHERWISE NOTED. SEE VOLTAGE DROP CALCULATIONS FOR NOTIFICATION CIRCUIT CABLE SIZE.

SHEET NOTES

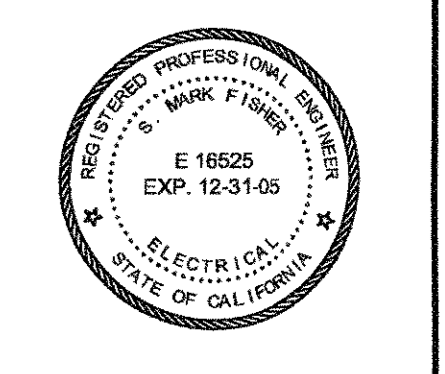
- CIRCUIT BREAKER SHALL BE MARKED AND IDENTIFIED PER NFPA 72.

FILE LOCATION: P:\2163.002\Permit Pkg 3\CAD\Archives\SKYLINE PKG#3 CONFORM SET\Elec\03064F41.dwg
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DSA SUBMITTAL - 02.13.04

SKYLINE COLLEGE - RISER DIAGRAM AND SCHEDULES
 SKYLINE COLLEGE SWING SPACE PERMIT PACKAGE #3
 SKYLINE COLLEGE
 3300 COLLEGE DRIVE
 SAN BRUNO, CA. 94066

REVISIONS

NO.	ITEM	DATE
2	CONSTRUCTION ISSUE	6/10/04

CLIENT APPROVAL:

DRAWN BY: RCS
 CHECKED BY: SMF
 JOB NO: 2163.002
 DATE: 5 FEB. 2004

F4.1
 OF SHEETS