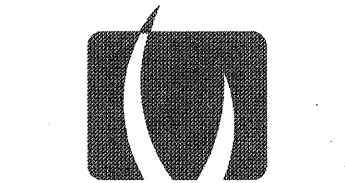


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(E) FIRE ALARM CONTROL PANEL MSL- BATTERY CALCULATION

QUANTITY	MODEL #	DEVICE	SUPV. CURRENT PER	TOTAL SUPV. CURRENT	ALARM CURRENT	TOTAL ALARM CURRENT
(E) DEVICES INSTALLED UNDER DSA #01-11618						
1	ALD-2I	(E) ANALOG LOOP DRIVER	0.01	0.01	0.00	0
1		1mA per device (2 loops per cord)	0.01	0.01	0.00	0
1	CSM-4	(E) CONTROLLABLE SIGNAL MODULE	0.01	0.01	0.00	0
1		12mA per NAC circuit (2 chs. Per cord)	0.01	0.01	0.00	0
1	MKB-2	(E) ANNUNCIATOR / KEYBOARD	0.01	0.01	0.00	0
0	NET-7	(E) NETWORK CARD	0.08	0.00	0.00	0
0	NET-4	(E) NETWORK CARD	0.01	0.00	0.00	0
0	PSR-1	(E) REMOTE POWER SUPPLY	0.01	0.00	0.00	0
1	NS-24MCM-FR	(E) HORN/STROBE TSCD	0.00	0.00	0.18	0.184
1	ASWP-2475M-FR	(E) WEATHERPROOF HORN/STROBE	0.00	0.00	0.17	0.188
(N) DEVICES INSTALLED UNDER THIS PROJECT						
1	AH-24M-FR	(N) HORN WEATHERPROOF	0.00	0.00	0.08	0.08
2	RSS-24MCM-FR	(N) STROBE ISCD	0.00	0.00	0.06	0.12
4	FP-11	(N) SMOKE DETECTOR	0.00	0.00	0.08	0.2
4	DT-200R/TRI-S	(N) ATTIC HEAT DETECTOR IV MONITOR MODULE	0.00	0.01	0.00	0.006
2	DT-200R/TRI-S	(N) HIGH HEAT DETECTOR IV MONITOR MODULE	0.00	0.00	0.00	0.003
			Max. Supv. Current	0.20744	Max. Alarm Current	0.16
			Maximum Supervisory Current:	0.20744		
			Standby Period 24 hour:	24		
			Total Supervisory Reserve:	4.91856 (A)		
			Maximum Alarm Current:	0.16		
			Alarm Period (5 minute):	0.088		
			Total Alarm Reserve:	0.06 (B)		
			Total Reserve Current: (A + B)	5.04		
			Safety Margin (20%):	1.2		
			Total Ampere Hours Required:	6.05		
(E) Battery: 2-12V 88 Ampere Hour						

2 FIRE ALARM BATTERY CALC

FA3.1 SCALE: NOT TO SCALE

NOTIFICATION CIRCUIT # AI

DEVICE #	DEVICE TYPE	DISTANCE (FT)	AMPS OF DEVICE	TOTAL AMPS @ DEVICE	VOLTAGE DROP @ DEVICE
AI-1	(E) HORN/STROBE TSCD	40	0.184	0.552	0.075
AI-2	(E) Horn/Strobe (WP)	20	0.188	0.368	0.024
AI-3	(N) Strobe IS	485	0.060	0.200	0.288
AI-4	(N) Horn (WP)	25	0.080	0.140	0.012
AI-5	(N) Strobe IS	10	0.060	0.060	0.002
				TOTAL CIRCUIT AMPS:	0.552
				TOTAL VOLTAGE DROP:	0.391
				CIRCUIT VOLTAGE:	24
				% VOLTAGE DROP	1.66%

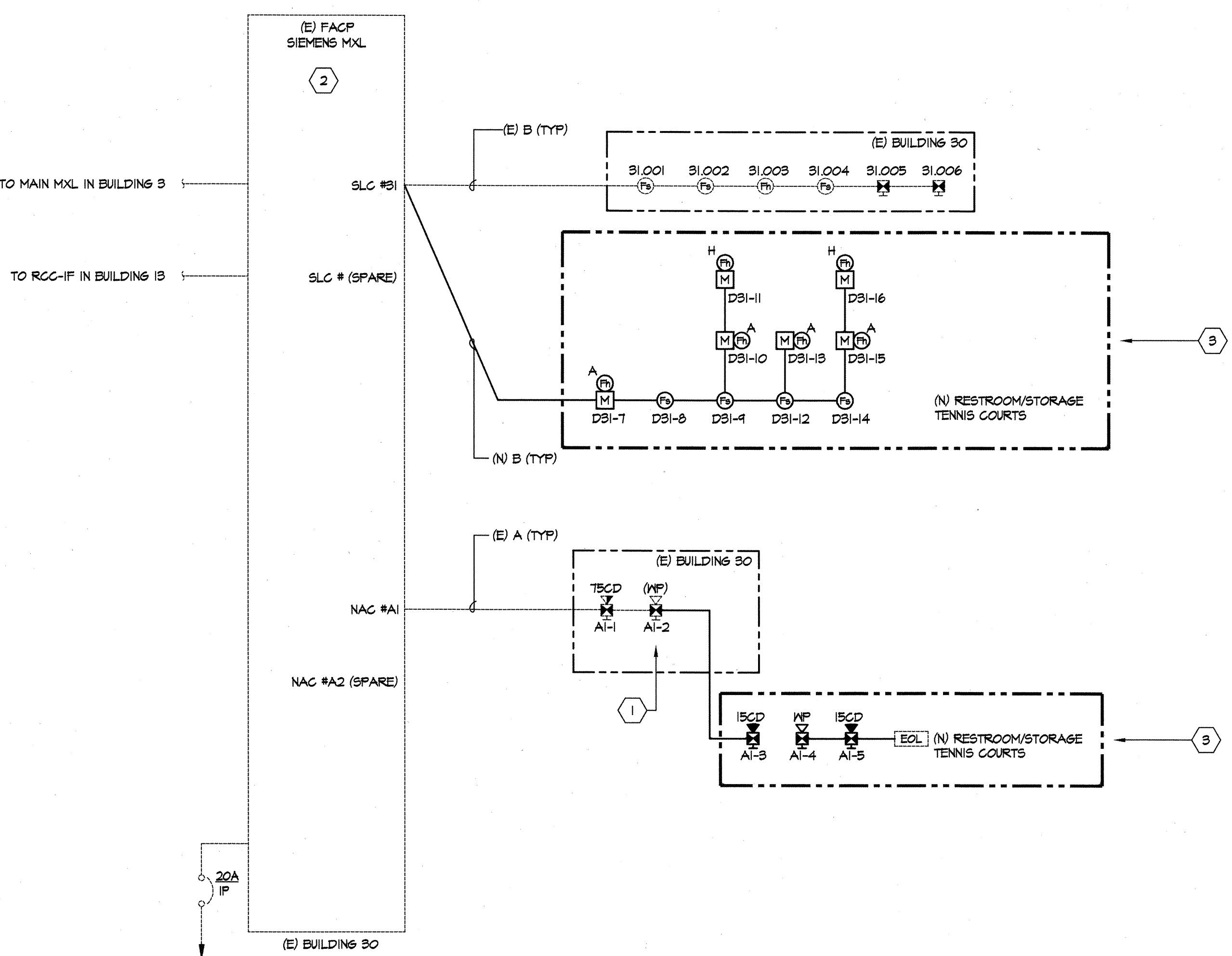
WIRE GAUGE 12

** FORMULA**
(L x FEET x 2.16) / CIRCULAR MILS

WIRE SIZE	RES PER MIL	CIRCULAR MILS
10	1.24	10580
12	1.91	6590
14	2.82	410
16	4.02	2580
18	6.94	1620
20	10.1	1020
22	16.2	640

3 FIRE ALARM VOLTAGE DROP CALC

FA3.1 SCALE: NOT TO SCALE



1 FIRE ALARM RISER DIAGRAM

FA3.1 SCALE: NOT TO SCALE

GENERAL NOTES:

- SEE SITE PLAN AND FLOOR PLANS FOR ADDITIONAL INFORMATION AND REQUIREMENTS.
- ALL CABLES AND CONDUIT SHALL BE NEW UN.
- COORDINATE NEW FA ADDRESSES WITH EXISTING FA SYSTEM ADDRESSES. CONFIRM NUMBERING STANDARD WITH DISTRICT.

FA CABLE SCHEDULE:

- A - (2) #12 FOR NOTIFICATION APPLIANCE CIRCUITS (NAC)
- B - (1) #14 SHIELDED TWISTED PAIR FOR SIGNALING LINE CIRCUITS (SLC)

SHEET NOTES:

- REMOVE AND RELOCATE EXISTING EOL FROM EXISTING NOTIFICATION DEVICE "AI-2". CONNECT EXISTING EOL AT END OF NEW NOTIFICATION DEVICE "AI-5" AS SHOWN.
- EXISTING FACP AND EXISTING DEVICES INSTALLED UNDER DSA APPLICATION #01-11618.
- NEW FA DEVICES INSTALLED UNDER THIS PROJECT.

SHEET TITLE

FIRE ALARM RISER DIAGRAM

PROJECT NAME

CANADA COLLEGE TENNIS FACILITY IMPROVEMENTS

PROJECT ADDRESS

**4200 FARM HILL BLVD
REDWOOD CITY, CA 94061**

SUBMITTAL

90% 07/30/12

BID SUBMITTAL

08/21/12

ADDENDUM ONE

08/31/12

CONFORM SET

09/24/12

NO. REVISIONS DATE

NO.	REVISIONS	DATE

DRAWN BY

MM

CHECKED BY

SF

DATE ISSUED

08/21/12

SCALE

AS NOTED

PROJ. NO.

1207300-1281

SHEET NO.

FA3.1

38 OF 39 SHEETS