

ADDENDUM No. 1

To the Project Bidding Documents for:

Nutrition Services
Fire Alarm and Security Protection Systems
Replacement and Upgrade
San Bernardino City Unified School District

FBA Engineering
150 Paularino Avenue, Suite A120
Costa Mesa, California 92626
(949) 852-9995

Reference: Bid # F13-02

To: Prospective Bidders

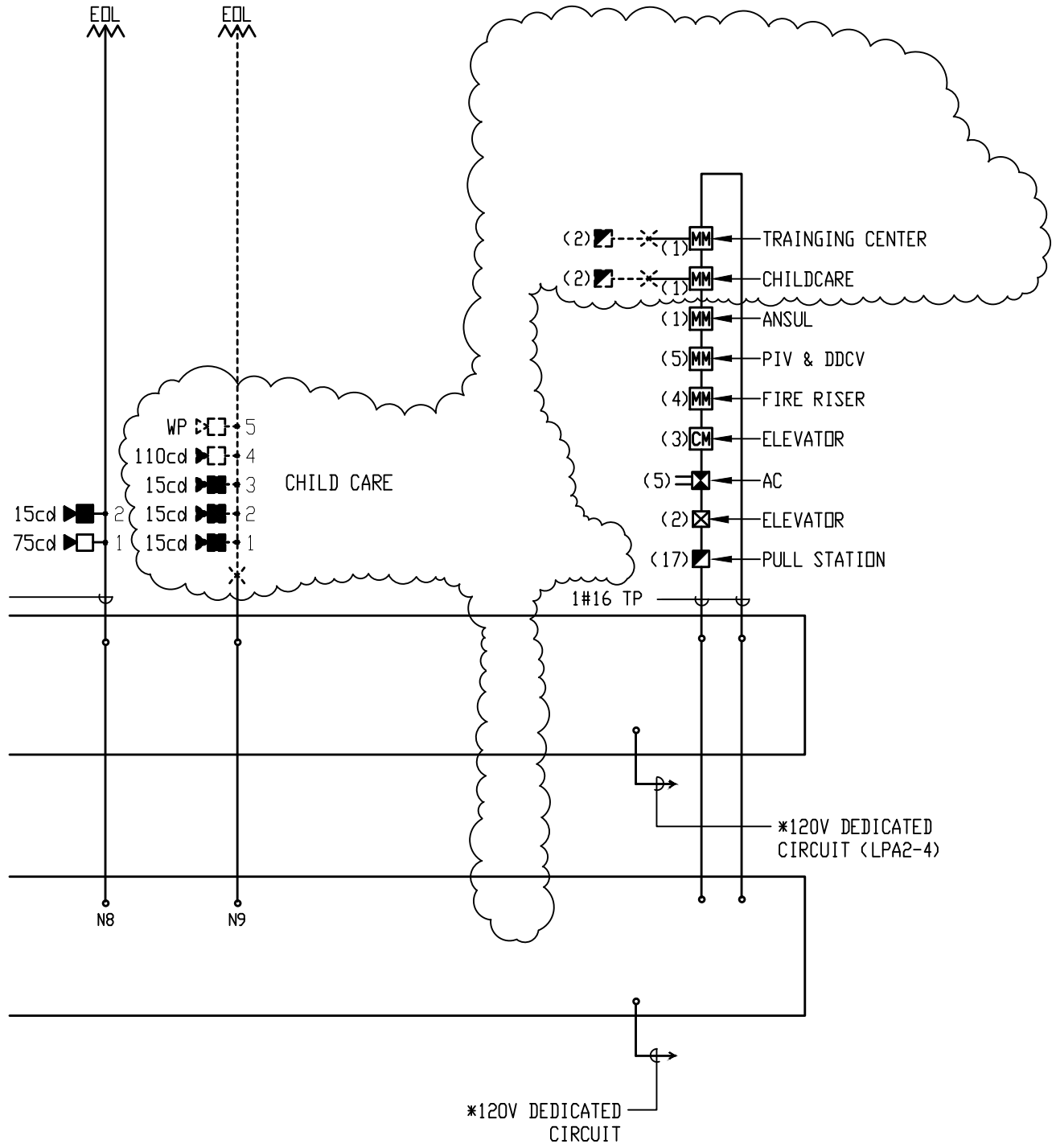
This addendum forms part of the Contract Documents and modifies the original bidding documents dated December 18, 2013. Acknowledge receipt of this Addendum in the space provided on the bid forms. Failure to acknowledge this Addendum may subject bidder to disqualification.

Add to Contract Documents

- A. Bid time is 10:30 am, Tuesday, January 21st same location as in Bid Instructions.
- B. Drawings
 - 1. Drawings E0.2, Fire Alarm Riser Diagram Battery and Voltage Drop Calculations.
 - a. Revise Riser Diagram, Battery Calculations, and Voltage Drop Calculations per attachments ESK-1, 2, and 3.
 - 2. Drawing E1.0 Site Fire Alarm/Security Plan.
 - a. Plan Notes 1 and 2. In lieu of replacement of existing flow and tamper switch devices connected to PIV's and DDCV's, reconnect the existing flow/tamper switches to the new fire alarm systems.
 - b. Remove the installation of the conduit and all associated work between the Nutrition Center and the Training Center from the Scope of Work. Intercept the existing cables at the existing FACP, and reconnect to the new fire alarm control panel to restore service to the Training Center. Provide all equipment necessary to meet this requirement.
 - 3. Drawings E1.1, First Floor Fire Alarm/Security Plan – Segment 1.
 - a. Remove candela rating shown next to horn only device symbols.
 - 4. Drawing E1.2, First Floor Fire Alarm/Security Plan – Segment B.
 - a. Remove candela rating shown next to horn only device symbols.

Attachments

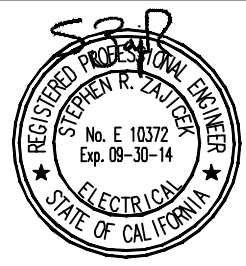
---End of Addendum---



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Sheet Name:
FIRE ALARM RISER DIAGRAM

Project Name: **NUTRITION SERVICES DEPT.**

Drawn: **FBA** FBA Project Number: **1046.001**

Date: **01/14/2014** Scale: **N.T.S.**

Reference Sheet: **E0.2** Sketch Number: **ESK-1**

VOLTAGE DROP CALCULATION

BLDG.	CIRCUIT NO.	SERVICE TO	DISTANCE FEET	CONDUCTOR SIZE	DEVICE TYPE	DEVICES NO	LOAD AMP	TOTAL AMP.	VOLT. DROP PERCENT.
NUTRITION CENTER	N1	VISUAL AND AUDIBLE DEVICES	150	12	HORN	0	0.030	0.499	1.03
					15cd	0	0.103		
					30cd	1	0.255		
					110cd	0	0.311		
					15cd/HORN	2	0.122		
					75cd/HORN	0	0.274		
110cd/HORN	0	0.330							
NUTRITION CENTER	N2	VISUAL AND AUDIBLE DEVICES	500	12	HORN	9	0.030	1.436	9.90
					15cd	6	0.103		
					75cd	0	0.255		
					110cd	0	0.311		
					15cd/HORN	0	0.122		
					75cd/HORN	2	0.274		
110cd/HORN	0	0.330							
NUTRITION CENTER	N3	VISUAL AND AUDIBLE DEVICES	250	12	HORN	3	0.030	0.872	3.00
					15cd	0	0.103		
					75cd	0	0.255		
					110cd	0	0.311		
					15cd/HORN	1	0.122		
					75cd/HORN	0	0.274		
110cd/HORN	2	0.330							
NUTRITION CENTER	N4	VISUAL AND AUDIBLE DEVICES	600	12	HORN	8	0.030	0.812	6.71
					15cd	1	0.103		
					75cd	1	0.255		
					110cd	0	0.311		
					15cd/HORN	0	0.122		
					75cd/HORN	1	0.274		
110cd/HORN	0	0.330							
NUTRITION CENTER	N5	VISUAL AND AUDIBLE DEVICES	450	12	HORN	4	0.030	0.120	0.74
					15cd	0	0.103		
					75cd	0	0.255		
					110cd	0	0.311		
					15cd/HORN	0	0.122		
					75cd/HORN	0	0.274		
110cd/HORN	0	0.330							
NUTRITION CENTER	N6	VISUAL AND AUDIBLE DEVICES	150	12	HORN	1	0.030	0.030	0.06
					15cd	0	0.103		
					75cd	0	0.255		
					110cd	0	0.311		
					15cd/HORN	0	0.122		
					75cd/HORN	0	0.274		
110cd/HORN	0	0.330							
NUTRITION CENTER	N7	VISUAL AND AUDIBLE DEVICES	350	12	HORN	1	0.030	0.832	3.05
					15cd	2	0.103		
					75cd	0	0.255		
					110cd	0	0.311		
					15cd/HORN	1	0.122		
					75cd/HORN	1	0.274		
110cd/HORN	0	0.330							
NUTRITION CENTER	N8	VISUAL AND AUDIBLE DEVICES	450	12	HORN	0	0.030	0.377	2.34
					15cd	1	0.103		
					75cd	0	0.255		
					110cd	0	0.311		
					15cd/HORN	0	0.122		
					75cd/HORN	1	0.274		
110cd/HORN	0	0.330							
CHILD CARE	N9	VISUAL AND AUDIBLE DEVICES	600	12	HORN	1	0.030	0.669	5.53
					15cd	3	0.103		
					75cd	0	0.255		
					110cd	0	0.311		
					15cd/HORN	0	0.122		
					75cd/HORN	0	0.274		
110cd/HORN	1	0.330							

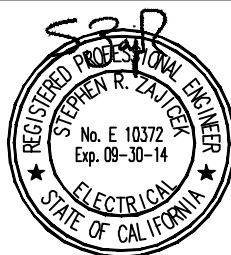
FORMULA $\frac{\text{LENGTH} \times \text{AMPS} \times 21.6 \times 100}{\text{VOLTAGE} \times \text{CIRCULAR MILS}} = \%$

CIRCUIT # N2 $\frac{500' \times 1.436 \times 21.6 \times 100}{24 \times 6530} = 9.9\%$

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Sheet Name:

**FIRE ALARM VOLTAGE
DROP CALCULATIONS**

Project Name: NUTRITION SERVICES DEPT.

Drawn: FBA

FBA Project Number: 1046.001

Date: 01/14/2014

Scale: N.T.S.

Reference Sheet:

E0.2

Sketch Number:

ESK-2

FIRE ALARM BATTERY CALCULATIONS

CONTROL PANEL "FACP"

QTY	DEVICE	STAND BY CURRENT	ALARM CURRENT
1	CONTROLS	0.290	0.530
1	ANNUNCIATOR	0.025	0.050
7	SMOKE DETECTOR	0.002	0.046
0	HEAT DETECTOR	0.000	0.000
18	PULL STATION	0.005	0.005
0	BEAM DETECTOR	0.000	0.000
7	MONITOR MODULE	0.003	0.005
3	CONTROL MODULE	0.001	0.020
13	15cd	0.000	0.780
1	75cd	0.000	0.165
0	110cd/115cd	0.000	0.000
4	15cd HORN STROBE	0.000	0.120
21	75cd HORN STROBE	0.000	0.630
11	110cd HORN STROBE	0.000	0.330
22	HORN	0.000	0.660
1	SPRINKLER BELL 10"	0.000	0.410
1	W.P. HORN	0.000	0.115
TOTAL CURRENTS		0.326	3.865

TOTAL STAND-BY CURRENT X 60 HOURS	=	0.326 X 60	=	19.575 A-HR
TOTAL ALARM CURRENT X 10 MINUTES	=	3.86 X 0.167	=	0.645 A-HR
TOTAL MINIMUM AMP HOURS OF BATTERIES		= 20.220 A-HR		

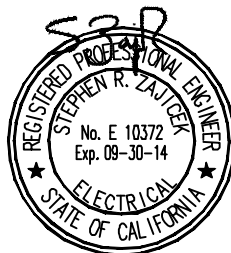
NOTES:

1. BATTERY CALCULATION SHALL BE BASED ON 60 HOURS OF STAND BY AND 10 MINUTES OF ALARM CURRENT
2. PROVIDE MINIMUM OF 26 A-HOURS ADDITIONAL STANDBY BATTERY POWER.
3. PROVIDE ADDITIONAL FIRE ALARM BATTERY TERMINAL CABINET.

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ESK-3