

# INDEX OF DRAWINGS

DRAWING NO.	DRAWING TITLE	PROJECT ADDRESS:	2853 WEST BLVD. LOS ANGELES CA 90016
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FA-5	SIXTH FLOOR, RISER DIAGRAM & BATTERY CALCULATION	NUMBER OF STORY:	6-STORY
FA-5	DETAILS, LEG GRAPHIC ANNUNCIATOR DIAGRAM, WIRE LEGEND & SEQUENCE OF OPERATION	PATHWAY SURVIVALABILITY LEVEL:	1
		AUTOMATIC FIRE SPRINKLER SYSTEM PER NFPA 13.	
		FIRE ALARM SYSTEM PER NFPA 72 2016 EDITION,	
		AND PER LOS ANGELES CITY FIRE DEPARTMENT GUIDELINES.	
		FIRE ALARM SYSTEM SHALL BE DESIGNED AS FOLLOW :	
		A. INITIATING CIRCUIT STYLE :	STYLE " B "
		B. SIGNAL INDICATING CIRCUIT STYLE :	STYLE " B "
		C. SUPERVISORY CIRCUIT STYLE :	STYLE " B "
		D. SIGNALING LOOP LINE CIRCUIT STYLE :	STYLE " 4 "

## FIRE ALARM SYSTEM LEGEND

QUANTITY	SYMBOL	DESCRIPTION	MANUFACTURER MODEL NUMBER	CSFM #	OPERATING VOLTAGE	MOUNTING HEIGHT	BACKBOX	REMARKS
1		FIRE ALARM CONTROL PANEL	POTTER AFC-50	7165-0328:0509	120V AC	TOP OF CABINET AT 6 FT. AFF OR CENTER AT 5 FT. AFF WHICHEVER IS LOWER	INCLUDED	WALL MOUNTED
1		LED GRAPHIC ANNUNCIATOR PANEL I/O DRIVER	POTTER DRV-50	7305-0328:0200	24VDC	TOP OF CABINET AT 6 FT. AFF OR CENTER AT 5 FT. AFF WHICHEVER IS LOWER	INCLUDED	WALL MOUNTED
1		FIRE ALARM COMMUNICATOR	NAPCO SLE-LTEV-FIRE	7300-0992:0144	24VDC	TOP OF CABINET AT 6 FT. AFF OR CENTER AT 5 FT. AFF WHICHEVER IS LOWER	INCLUDED	WALL MOUNTED
1		INTELLIGET POWER SUPPLY	POTTER PSN-1000	7165-0328:0195	120V AC	TOP OF CABINET AT 6 FT. AFF OR CENTER AT 5 FT. AFF WHICHEVER IS LOWER	INCLUDED	WALL MOUNTED
-		SPRINKLER TAMPER SWITCH	BY OTHERS					
-		SPRINKLER WATER FLOW SWITCH	BY OTHERS					
8		INTELLIGENT PHOTOELECTRIC SMOKE DETECTOR	POTTER PAD200-PD	7272-0328:0531	24V DC	NOT LESS THAN 4" TO CORNERS OR BETWEEN 4" TO 12" FOR WALL MOUNTING	4" SQUARE BOX	CEILING MOUNTED
1		WEATHER PROOF HEAT DETECTOR	THERMOTECH 302-AW-194	7270-0021:0001	24V DC	NOT LESS THAN 4" TO CORNERS OR BETWEEN 4" TO 12" FOR WALL MOUNTING	4" SQUARE BOX	CEILING MOUNTED
1		SINGLE-ACTION MANUAL PULL STATION	POTTER PAD100-PSSA	7150-0328:0021	24V DC	48" AFF TO CENTER OF DEVICE	STANDARD SINGLE GANG BOX	WALL MOUNTED
1		BELL	POTTER MBA-DC	7135-0328:0119	24V DC	OUTSIDE OF BUILDING OF STREET SIDE	WEATHERPROOF BACK BOX	WALL MOUNTED
15		MONITOR MODULE	POTTER PAD100-MIN	7300-0328:0514	24V DC		STANDARD SINGLE GANG BOX	WALL MOUNTED
9		RELAY MODULE	POTTER PAD100-RM	7300-0328:0514	24V DC		STANDARD SINGLE GANG BOX	WALL MOUNTED
15		CEILING MOUNT STROBE, CLEAR LENS WITH ALERT MARKINGS XX = CANDELA RATING (SEE FAS PLAN)	SYSTEM SENSOR SCWL	7125-1653:0186	16.5-33V DC		INCLUDED	CEILING MOUNTED
1		CEILING MOUNT STROBE, CLEAR LENS WEATHER PROOF XX = CANDELA RATING (SEE FAS PLAN)	SYSTEM SENSOR SCWK	7125-1653:0188	16.5-33V DC		INCLUDED	CEILING MOUNTED
8		CEILING MOUNT HORN/STROBE, WITH "ALERT" MARKING, SET AT 1/2 WATT XX = CANDELA RATING (SEE FAS PLAN)	SYSTEM SENSOR PCZWL	7125-1653:0504	16.5-33V DC		4" X 4" X 1 1/2" BACKBOX	CEILING MOUNTED
2		CEILING MOUNT HORN/STROBE, WEATHER PROOF XX = CANDELA RATING (SEE FAS PLAN)	SYSTEM SENSOR PC2WK	7125-1653-0188	16.5-33V DC		4" X 4" X 1 1/2" WEATHER PROOF BACKBOX	CEILING MOUNTED
46		LOW FREQUENCY HORN	SYSTEM SENSOR HFL-LF	7135-1653:0516	16.5-33V DC		4" X 4" X 1 1/2" BACKBOX	CEILING MOUNTED
2		CEILING MOUNT HORN/STROBE, WEATHER PROOF XX = CANDELA RATING (SEE FAS PLAN)	SYSTEM SENSOR P2WK	7125-1653-0188	16.5-33V DC		4" X 4" X 1 1/2" WEATHER PROOF BACKBOX	WALL MOUNTED
		END-OF-LINE RESISTOR						
104		TOTAL NUMBER OF DEVICES						

## CITY OF LOS ANGELES GENERAL NOTES

- ALL WIRING, INITIATING DEVICES, AND ANNUNCIATOR PANEL SHALL BESUPERVISED TO THE PRINCIPAL POINT OF ANNUNCIATION.
- WIRING SHALL NOT BE LOOPED THROUGH DEVICES; WIRE MUST BE CUT FOR IN AND OUT.
- POINT AND COMMON ANNUNCIATION PROHIBITED. NON-ADDRESSABLE CIRCUITS T-TAPPING IS PROHIBITED.
- ALL DEVICES IN THE ALARM SYSTEM SHALL BE COMPATIBLE AND INSTALLED TO MANUFACTURERS SPECIFICATIONS.
- AUDIBILITY OF ALARM AND VOICE COMMUNICATION SHALL BE NOT LESS THAN 15 dBA ABOVE AMBIENT SOUND, BUT NOT LESS THAN 75 dBA, THROUGHOUT AREA OF ALARM
- AREA HAVING MORE THAN TWO STROBES IN THE FIELD OF VIEW SHALL BE SYNCHRONIZED.
- SMOKE DETECTORS AND HEAT DETECTOR LOCATIONS ARE BASED ON SMOOTH CEILING WITH MAXIMUM HEIGHT OF 10 FEET UNLESS OTHERWISE NOTED.
- STROBE LOCATION IS BASED ON 10 FOOT CEILING HEIGHT AND ARE INSTALLED ACCORDING TO NFPA 72 REQUIREMENTS UNLESS OTHERWISE NOTED.
- WALL-MOUNTED STROBE SHALL HAVE THEIR BOTTOMS NOT LESS THAN 80 INCHES ABOVE FINISHED FLOOR AND NO GREATER THAN 96 INCHES ABOVE FINISHED FLOOR.
- CENTER OF PULL STATION SHALL BE MOUNTED AT 48 INCHES ABOVE FLOOR LEVEL.
- ALL KEY BOXES SHALL BE HINGED. THE KEY BOX SHALL BE A SINGLE KEY ENERGY LOCK ONLY. THE LOCK SHALL BE THE LA CITY FIRE DEPT. REGISTERED UL LISTED MEDECO LOCK.
- STROBES IN SLEEPING AREAS SHALL BE LOCATED WITHIN 16 FEET OF PILLOW AND HAVE MINIMUM INTENSITY OF 110cd. FOR STROBES LOCATED LESS THAN 24 INCHES FROM CEILING, MINIMUM INTENSITY SHALL BE 177cd. (NFPA 72-2016 18.5.5.7.2)
- FIRE ALARM SIGNAL SHALL MEET ANSI S3.41, AUDIBLE EMERGENCY EVACUATION SIGNAL (TEMPORAL PATTERN). (NFPA 29.3.5)
- ALL DWELLING UNITS AND SLEEPING UNITS SHALL BE PROVIDED WITH THE CAPABILITY TO SUPPORT VISIBLE ALARM NOTIFICATION APPLIANCES IN ACCORDANCE WITH NFPA 72. (LAFD 907.5.2.3.3)
- AUDIBLE APPLIANCES PROVIDED FOR THE SLEEPING AREAS TO AWAKEN OCCUPANTS SHALL PRODUCE A LOW FREQUENCY ALARM SIGNAL THAT COMPLES WITH THE FOLLOWING (NFPA 72-2016 18.4.5.3):
  - THE ALARM SIGNAL SHALL BE SQUARE WAVE, OR PROVIDE EQUIVALENT AWAKENING ABILITY.
  - THE WAVE SHALL HAVE A FUNDAMENTAL FREQUENCY OF 520HZ +/- 10 PERCENT.
- DUCT DETECTORS SHALL BE RESET AT THE FIRE ALARM PANEL.

## SCOPE OF WORK

TO PROVIDE AND INSTALL A NEW MANUAL FIRE ALARM SYSTEM FOR 22 UNIT APARTMENT WITH ADDRESSABLE INITIATING DEVICES AND SUPERVISED AUDIBLE, AND VISUAL NOTIFICATION APPLIANCES THROUGHOUT THE BUILDING.

## FIRE ALARM SYSTEM GENERAL NOTES

- THE APPLICABLE CODES AND STANDARDS ARE 2019 CALIFORNIA BUILDING CODE ( CBC ), CALIFORNIA FIRE CODE (CBC) AND 2016 EDITION OF NFPA 72.
- ALL SIGNAL INITIATING DEVICE CIRCUITS SHALL BE CLASS B SUPERVISED. ALL SIGNALING LINE CIRCUITS SHALL BE CLASS B SUPERVISED. ALL ALARM NOTIFICATION CIRCUITS SHALL BE CLASS B SUPERVISED.
- UPON COMPLETION, A COPY OF " AS BUILT" DRAWINGS AND WRITTEN OPERATION AND MAINTENANCE INSTRUCTION SHALL BE PROVIDED TO THE OWNER/OCCUPANT.
- A 24-HOUR EMERGENCY RESPONSE PHONE NUMBER SHALL BE PERMANENTLY POSTED ADJACENT TO THE CONTROL PANEL.
- THE INSTALLING CONTRACTOR SHALL PROVIDE AN RECORD OF COMPLETION TO THE INSPECTOR AND TO THE BUSINESS OWNER FOLLOWING OF ALARM TESTING TO THE INSPECTOR AND TO THE BUSINESS OWNER FOLLOWING OF ALARM TESTING AS WITNESSED BY LOCAL AUTHORITY HAVING JURISDICTION.
- ALL FIRE ALARM COMPONENTS SHALL BE LOCATED AND INSTALLED IN ACCORDANCE WITH THEIR LISTINGS.
- ALL EXTERIOR ALARM COMPONENTS SHALL BE LISTED FOR OUTDOOR USE.
- ALL CABLE USED IN WET/DAMP LOCATIONS SHALL BE LISTED FOR THIS USE.
- MANUAL PULL STATIONS SHALL BE MOUNTED AT A HEIGHT OF 48 INCHES TO CENTER FROM THE FINISHED FLOOR.
- AUTOMATIC FIRE SPRINKLER WATER FLOW ALARMS, SUPERVISORY INITIATING DEVICES, AND THEIR CIRCUITS, SHALL BE DESIGNED AND INSTALLED SO THAT THEY CANNOT BE READILY TAMPERED WITH, OPENED, OR REMOVED WITHOUT INITIATING A SIGNAL.
- THROUGH PENETRATION FIRE STOPPING FOR ALL FIRE WALLS, FLOOR/CEILINGS, AND ASSEMBLIES SHALL HAVE AN "F" OR "T" RATING PER THE CBC AND STANDARDS. INSTALLATION OF FIRE STOPPING SHALL COMPLY WITH APPROVED METHODS.
- THE VOLTAGE DROP SHALL NOT EXCEED 10% USING EITHER THE ENGINEER " POINT TO POINT" OR OHM'S LAW FORMULAS.
- ALL ALARM NOTIFICATION SIGNALS SHALL BE CODED TEMPORAL PATTERN WITH A MINIMUM SOUND LEVEL OF 15 DECIBELS ABOVE AMBIENT NOISE LEVEL NOT TO EXCEED 110 DECIBELS. SEVENTY-FIVE DECIBELS ARE THE MINIMUM PER 2016 NFPA 72.
- WHEN MORE THAN TWO VISUAL NOTIFICATION APPLIANCES ARE LOCATED WITHIN THE SAME ROOM OR AREA, THEY SHALL BE SYNCHRONIZED.PER 2016 NFPA 72.
- SMOKE DETECTOR TESTING MUST BE BY SMOKE ENTRY INTO THE SENSING CHAMBER AND AN ALARM RESPONSE ( PER NFPA 72 ).
- ALL FIRE SPRINKLER SYSTEMS WITH 20 HEADS OR MORE SHALL BE MONITORED.
- ALL SLEEPING OR DWELLING UNITS SHALL HAVE THE CAPABILITY TO SUPPORT VISUAL ALARM NOTIFICATION APPLIANCES IN ACCORDANCE WITH NFPA 72.
- CENTRAL STATION WILL BE MONITORING INC. DBA COPS MONITORING  
U.L. LISTED # 52691-1 & CCN: UUFX  
ADDRESS : 1041 GLASSBORO Rd, SUITE F2  
WILLIAMSON, NJ 08094  
TEL : 1(800)367-2677  
ACC # 0003016617-0001-7  
FUND/CLASS CODE F425

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# 823302



2853 WEST APT  
2853 WEST BLVD.  
LOS ANGELES, CA 90016

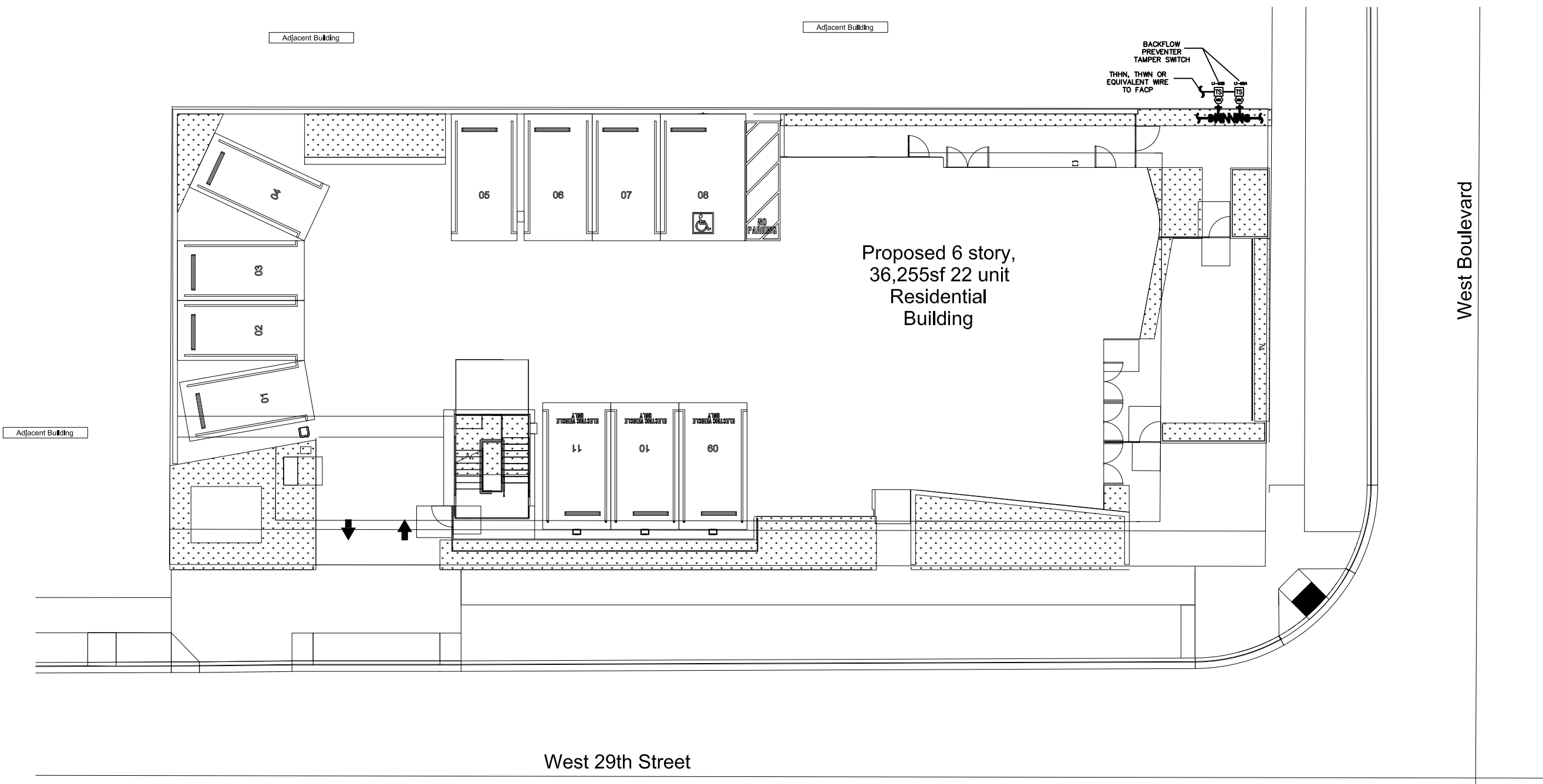
PROJECT ADDRESS

Sheet Title:  
PROTEJECT TITLE  
FIRE ALARM  
SYSTEM LEGEND,  
NOTES  
& INDEX OF  
DRAWING

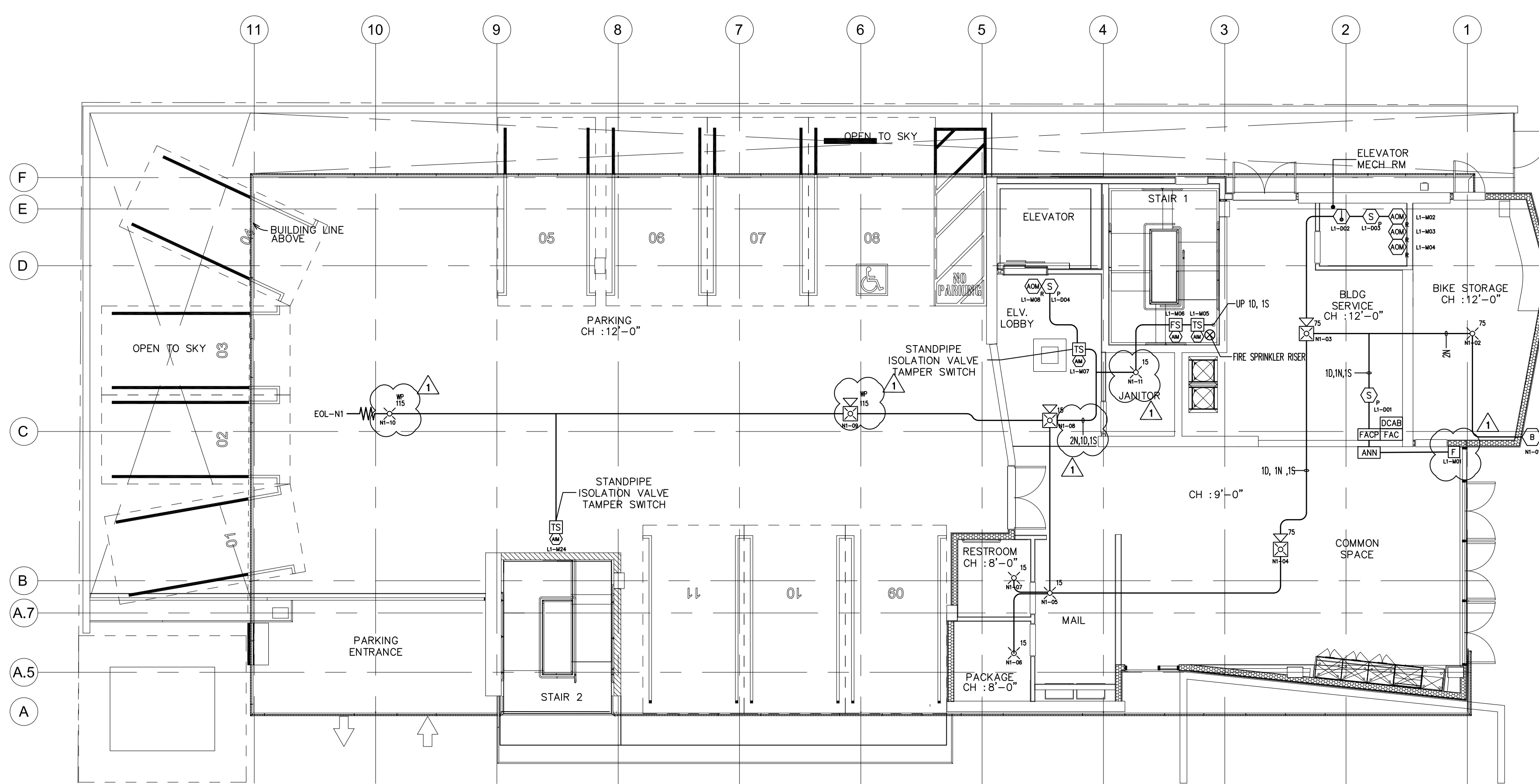
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Drawn By: BJ  
Scale: AS NOTED  
Date: 06-09-2022  
Checked By: SYL

FA-1






**SITE PLAN**  
SCALE: 1/16" = 1' - 0"



**FIRST FLOOR FIRE ALARM PLAN**  
SCALE: 1/8" = 1'-0"



**FIRE PREVENTION & PUBLIC SAFETY BUREAU**  
APPROVAL OF ALTERNATE TECHNOLOGY AS SINGLE COMMUNICATION PATH

The following technology, with the specific configuration, equipment, and requirements listed below, has been approved for use within the jurisdiction served by the LAFD. This approval letter shall be included on all plans submitted to the LAFD for alarm or monitoring systems utilizing this technology.

**System Name:** NAPCO StarLink SLE and SLE-LTE Commercial Fire Alarm Radio Communicators

**Transmission Technology:** Cellular CDMA or LTE via Verizon, or cellular GSM/GPRS via AT&T wireless service providers pursuant to manufacturer's certification; transmits RF data to StarLink Control Center, which then forwards TCP/IP data via Contact ID or Sur-Gard System II to designated central station.

**Method of signal and data integrity:** Method 2 - parity

**Communicator Make/Model and restrictions as shown:** All devices CSFM listing 7300-0992-0144

Model Number	Approved Network	Approved Technology
SLE34G-CFB(-PS)	AT&T ONLY	GSM ONLY
SLE-GSM-FIRE	AT&T ONLY	GSM ONLY
SLECDMA-CFB(-PS)	Verizon ONLY	CDMA ONLY
SLE-CDMA-FIRE	Verizon ONLY	CDMA ONLY
SLE-LTEV-CFB(-PS)	Verizon ONLY	LTE ONLY
SLE-LTEV-FIRE	Verizon ONLY	LTE ONLY

**Receiver Make/Model:** Any DACR technology capable of receiving SIA Contact ID; or DSC Sur-Gard Model System II via TCP/IP.

**Data Throttling capable?:** None indicated in manufacturer's installation instructions.

**Central Station:** Any LAFD-approved central station supervising station equipped with a compatible receiver.

**Special Requirements:**

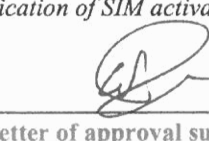
- The central station supervising station must possess and maintain a current "F425" Fire Permit through the City of Los Angeles Office of Finance. Expiration or other loss of permit voids this approval.
- Any failure of the communication path shall be annunciated at the central station within 60 minutes.<sup>1</sup>
- Incomplete, corrupted, or other signal errors will be recorded and displayed at the central station. Communicator will resend message if receipt is not acknowledged by receiver at central station.
- The record and display rate of subsequent alarms will not be less than one every 10 seconds.<sup>2</sup>
- Where a minimum of 65mA of auxiliary power is not available for the StarLink radio, model SLE-ULPS-R power supply is required, which shall be connected either to model NAPCO TRF12 external plug-in transformer or the chassis-mounted 16.5VAC / 20VA transformer affixed inside the housing.
- Authorized for use only with the existing antenna supplied by radio; the use of an extension voids this approval.

**Inspection procedure:**

<sup>1</sup>Verify maximum 60-minute check-in and fail timing. Timing is programmed by installer into the communicator.

<sup>2</sup>Record and display rate can be tested by initiating two alarm devices simultaneously and then comparing time they were received/recorded by central station.

Annunciator can display/verify: cellular signal strength (bar graph); modem operation; SIM card detection; cell tower detection; verification of SIM activation; if internet access and communication path is good.

APPROVED BY:  DATE: 11/2/18

NOTE: This letter of approval supersedes the previous letter dated 1/9/17, which is now revoked.


**FIRE PERMIT**  
CITY OF LOS ANGELES

PERMIT NO.	FUND/CLASS	DESCRIPTION	ISSUED:	STARTED
0003016617-0001-7	F425	Centrl Sta Sgng System	02/09/2022	01/01/2019

THIS FIRE PERMIT IS DUE AND PAYABLE NOVEMBER 1<sup>ST</sup> EACH YEAR AND IS DELINQUENT IF NOT PAID ON OR BEFORE DECEMBER 31<sup>ST</sup> EACH YEAR

LYDIA SECURITY MONITORING INC  
UNITED CENTRAL CONTROL (UCC)


8415 DATAPoint DRIVE SUITE #500  
SAN ANTONIO, TX 78229-3275  
1041 GLASSBORO ROAD #F-2  
WILLIAMSTOWN, NJ 08094-3547

12/31/2022  
BY:  FIRE CHIEF

THIS PERMIT IS GOOD UNTIL VOIDED OR REVOKED. IT BECOMES VOID UPON ANY CHANGE OF OWNERSHIP OR LOCATION

NOTIFY THE OFFICE OF FINANCE IN WRITING OF ANY CHANGE IN OWNERSHIP OR ADDRESS - Office of Finance, P.O. Box 53260, Los Angeles CA 90053-0260  
IMPORTANT - READ REVERSE SIDE

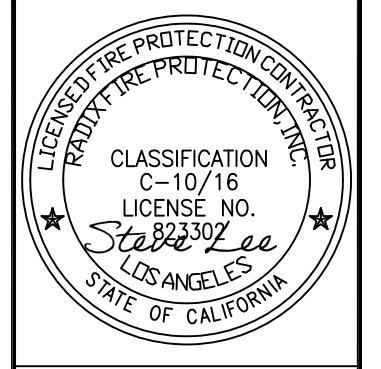
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**2853 WEST APT**  
**2853 WEST BLVD.**  
**LOS ANGELES, CA 90016**

PROJECT ADDRESS

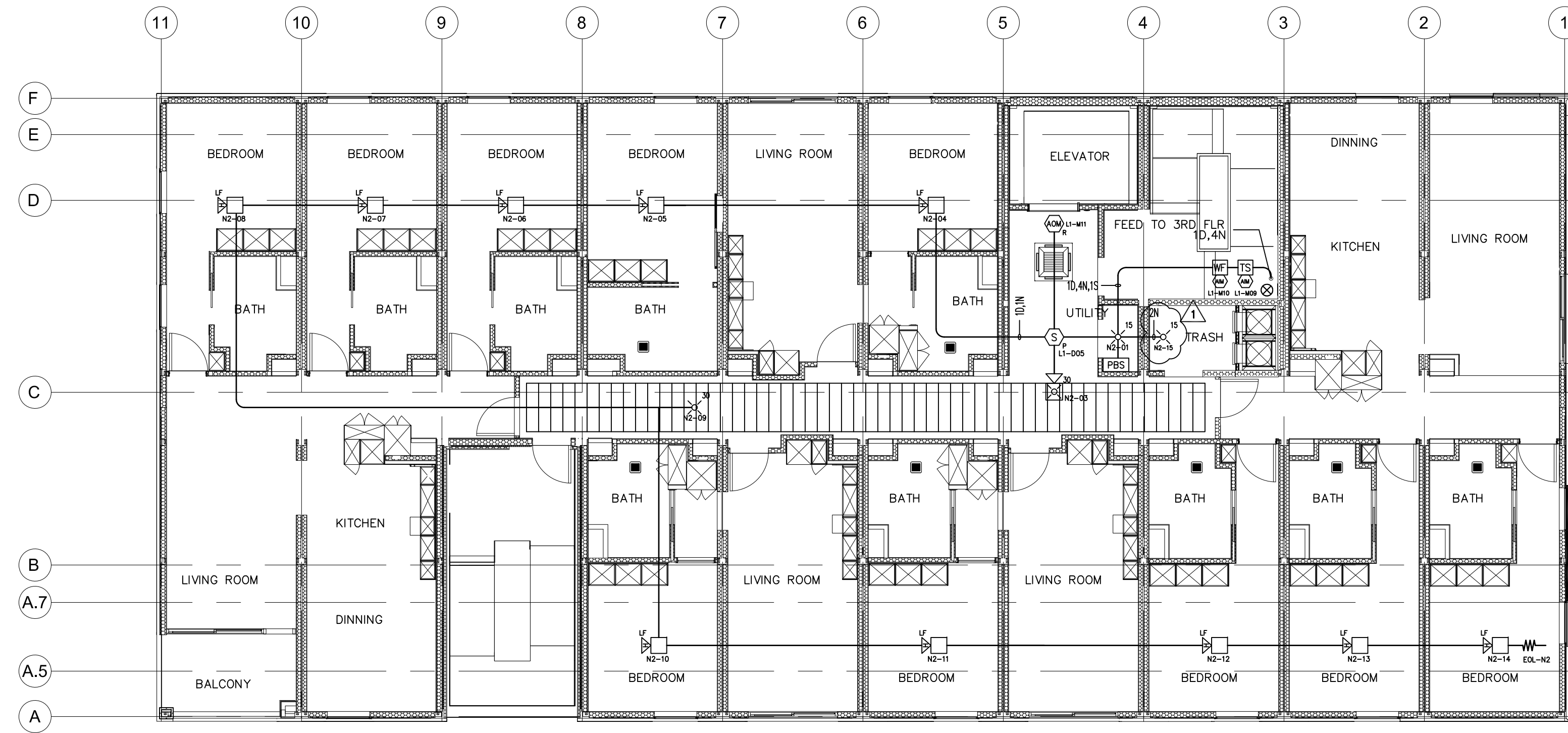
Sheet Title:  
**SITE PLAN,  
FIRST FLOOR PLAN  
& NOTE**

Project No.: A1333  
Drawn By: BJ  
Scale: AS NOTED  
Date: 06-09-2022  
Checked By: SYL

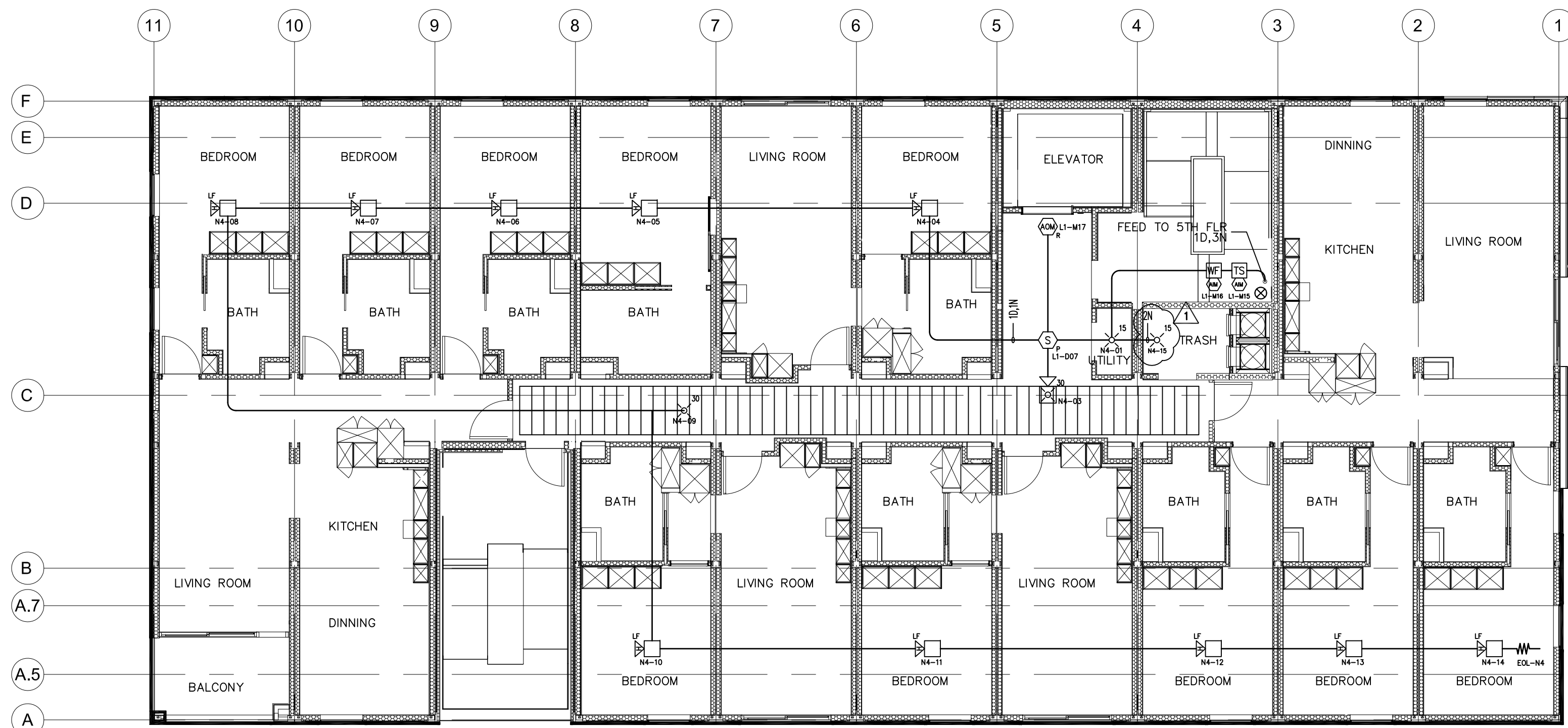
FA-2

SHEET 2 OF 6





← West 29th Street →  
**SECOND FLOOR FIRE ALARM PLAN**  
 SCALE: 1/8" = 1'-0"



← West 29th Street →  
**THIRD FLOOR FIRE ALARM PLAN**  
 SCALE: 1/8" = 1'-0"

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**2853 WEST APT**  
**2853 WEST BLVD.**  
**LOS ANGELES, CA 90016**

PROJECT ADDRESS:

Sheet Title:

**SITE PLAN,  
 FIRST FLOOR PLAN  
 & NOTE**

Project No.: A1333

Drawn By: BJ

Scale: AS NOTED

Date: 06-09-2022

Checked By: SYL

**FA-3**

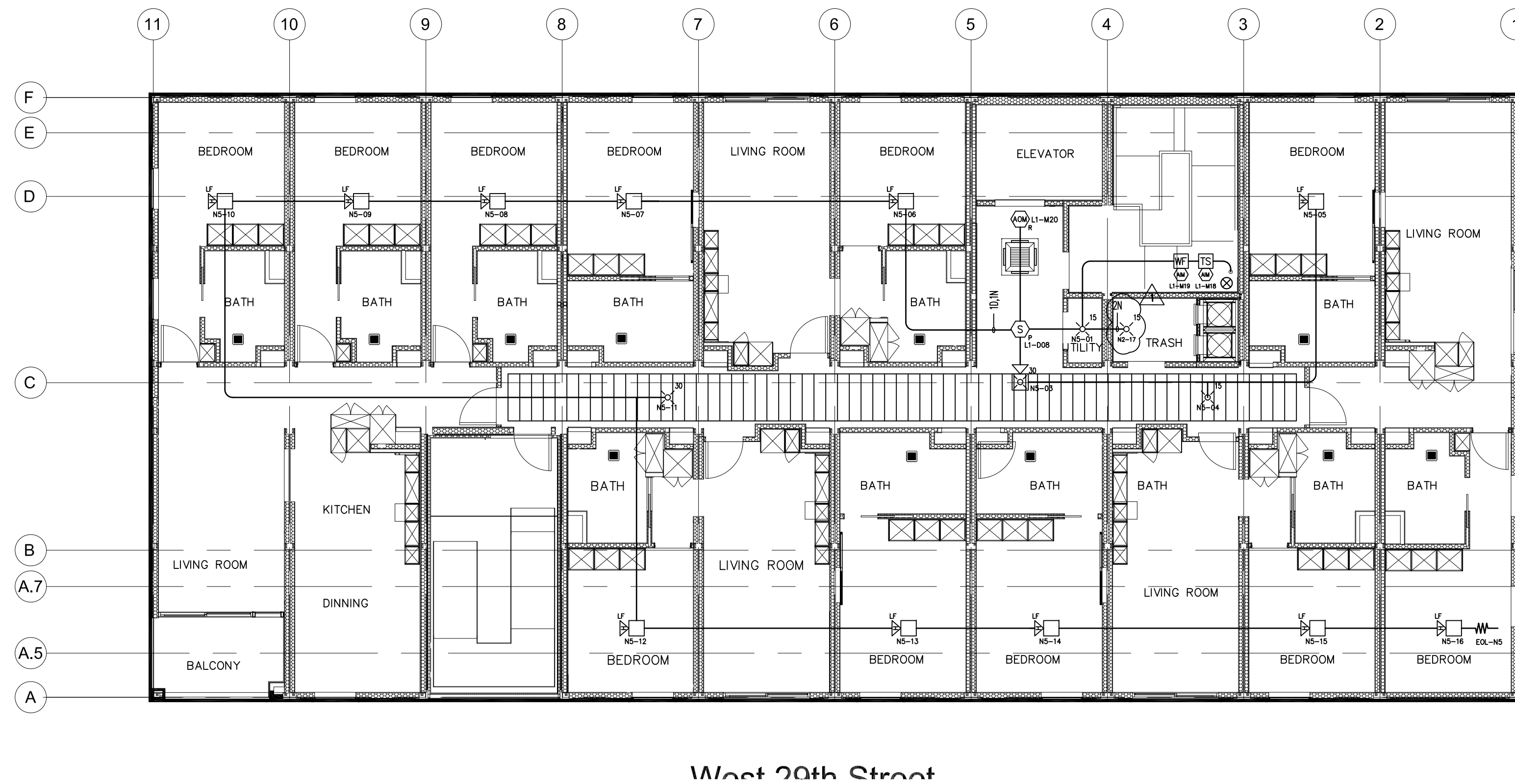
SHEET 3 OF 6





4TH FLOOR FIRE ALARM PLAN

SCALE: 1/8" = 1'-0"



5TH FLOOR FIRE ALARM PLAN

SCALE: 1/8" = 1'-0"



West Boulevard

West Boulevard

NOTIFICATION VOLTAGE DROP CALCULATIONS						FACP			
						AFS-50			
EQUIPMENT MODEL	TOTAL DEVICES	DEVICE CURRENT	TOTAL CURRENT	CIRCUIT #1	CIRCUIT #2	CIRCUIT #3	CIRCUIT #4	CIRCUIT #5	CIRCUIT #6
				QTY.	AMPS	QTY.	AMPS	QTY.	AMPS
SCWL (15CD)	4	0.041	0.164	4	0.164	0	0.000	0	0.000
SCWL (30CD)	0	0.063	0.000	0	0.000	0	0.000	0	0.000
SCWL (75CD)	1	0.111	0.111	1	0.111	0	0.000	0	0.000
SCWL (95CD)	0	0.134	0.000	0	0.000	0	0.000	0	0.000
PC2WL (15CD)	1	0.071	0.071	1	0.071	0	0.000	0	0.000
PC2WL (30CD)	0	0.090	0.000	0	0.000	0	0.000	0	0.000
PC2WL (75CD)	1	0.143	0.143	1	0.143	0	0.000	0	0.000
PC2WL (95CD)	0	0.165	0.000	0	0.000	0	0.000	0	0.000
SCWK (115CD)	1	0.218	0.218	1	0.218	0	0.000	0	0.000
PC2WK (115CD)	1	0.218	0.218	1	0.218	0	0.000	0	0.000
BELL	1	0.060	0.060	1	0.060	0	0.000	0	0.000
TOTAL CURRENT	10		0.985	0.985	0.000	0.000	0.000	0.000	0.000

VOLTAGE DROP CALCULATIONS					
DISTANCE	300				
WIRE SIZE (AWG)	14 AWG				
WIRE RESISTANCE (OHMS/1000)	3.14				
TOTAL RESISTANCE (OHMS)	1.88				
TOTAL CURRENT (MA)	0.985				
VOLTAGE DROP	1.86				
% VOLTAGE DROP	7.73				
OPERATING VOLTAGE (OPERATING VOLTAGE OF OF DEVICE IS 16-33 VDC)	18.54				
PER NFPA 72, 2016 18.3.2					
TOTAL RESISTANCE = (2 X DISTANCE X WIRE RESISTANCE) / 1000					
VOLTAGE DROP = TOTAL CURRENT X TOTAL RESISTANCE					
% VOLTAGE DROP = (VOLTS DROPPED / 20.4 * 100)					

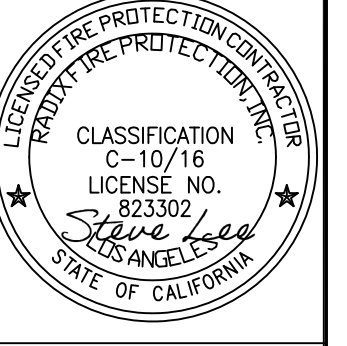
NOTIFICATION VOLTAGE DROP CALCULATIONS						POWER BOOSTER					
						PSN-1000					
EQUIPMENT MODEL	TOTAL DEVICES	DEVICE CURRENT	TOTAL CURRENT	CIRCUIT #2	CIRCUIT #3	CIRCUIT #4	CIRCUIT #5	CIRCUIT #6	CIRCUIT #7	CIRCUIT #8	
				QTY.	AMPS	QTY.	AMPS	QTY.	AMPS	QTY.	
SCWL (15CD)	10	0.041	0.410	2	0.082	2	0.082	2	0.082	2	
SCWL (30CD)	5	0.063	0.315	1	0.063	1	0.063	1	0.063	1	
SCWL (75CD)	0	0.111	0.000	0	0.000	0	0.000	0	0.000	0	
SCWL (95CD)	0	0.134	0.000	0	0.000	0	0.000	0	0.000	0	
PC2WL (15CD)	0	0.071	0.000	0	0.000	0	0.000	0	0.000	0	
PC2WL (30CD)	4	0.090	0.360	1	0.090	1	0.090	1	0.090	1	
PC2WL (75CD)	0	0.143	0.000	0	0.000	0	0.000	0	0.000	0	
PC2WL (95CD)	0	0.165	0.000	0	0.000	0	0.000	0	0.000	0	
SCWK (95CD)	0	0.181	0.000	0	0.000	0	0.000	0	0.000	0	
PC2WK (15CD)	1	0.194	0.194	0	0.000	0	0.000	0	0.000	1	
HWL-LF	45	0.108	4.860	10	1.080	10	1.080	11	1.188	4	
BELL	0	0.060	0.000	0	0.000	0	0.000	0	0.000	0	
P2WK (115CD)	2	0.218	0.436	0	0.000	0	0.000	0	0.000	2	
TOTAL CURRENT	67		6.575	1.315	1.315	1.315	1.423	1.207	0.000	0.000	

VOLTAGE DROP CALCULATIONS					
DISTANCE	310	330	350	370	260
WIRE SIZE (AWG)	14 AWG	14 AWG	14 AWG	14 AWG	14 AWG
WIRE RESISTANCE (OHMS/1000)	3.14	3.14	3.14	3.14	3.14
TOTAL RESISTANCE (OHMS)	1.95	2.07	2.20	2.32	1.63
TOTAL CURRENT (MA)	1.315	1.315	1.315	1.423	1.207
VOLTAGE DROP	2.56	2.73	2.89	3.31	1.97
% VOLTAGE DROP	10.67	13.36	14.17	16.21	9.66
OPERATING VOLTAGE (OPERATING VOLTAGE OF OF DEVICE IS 16-33 VDC)	17.84	17.67	17.51	17.09	18.43
PER NFPA 72, 2016 18.3.2					
TOTAL RESISTANCE = (2 X DISTANCE X WIRE RESISTANCE) / 1000					
VOLTAGE DROP = TOTAL CURRENT X TOTAL RESISTANCE					
% VOLTAGE DROP = (VOLTS DROPPED / 20.4 * 100)					

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1	FD CORRECTION

LICENSE NO. C-10/C-16 # 823302



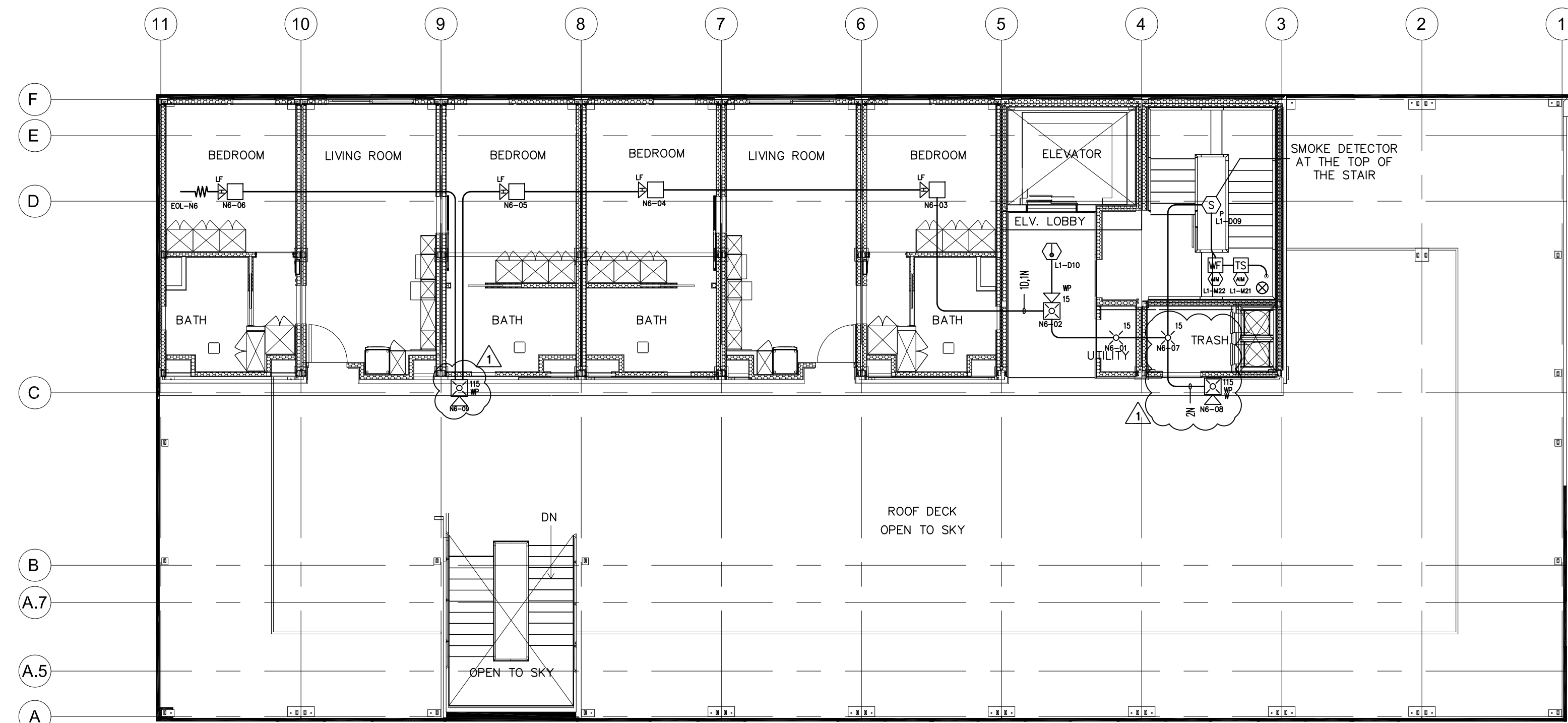
2853 WEST APT  
2853 WEST BLVD.  
LOS ANGELES, CA 90016

PROJECT ADDRESS

Sheet Title:  
FOURTH, FIFTH FLOOR PLAN, & VOLTAGE DROP CALCULATION

Project No.: A1333  
Drawn By: BJ  
Scale: AS NOTED  
Date: 06-09-2022  
Checked By: SYL

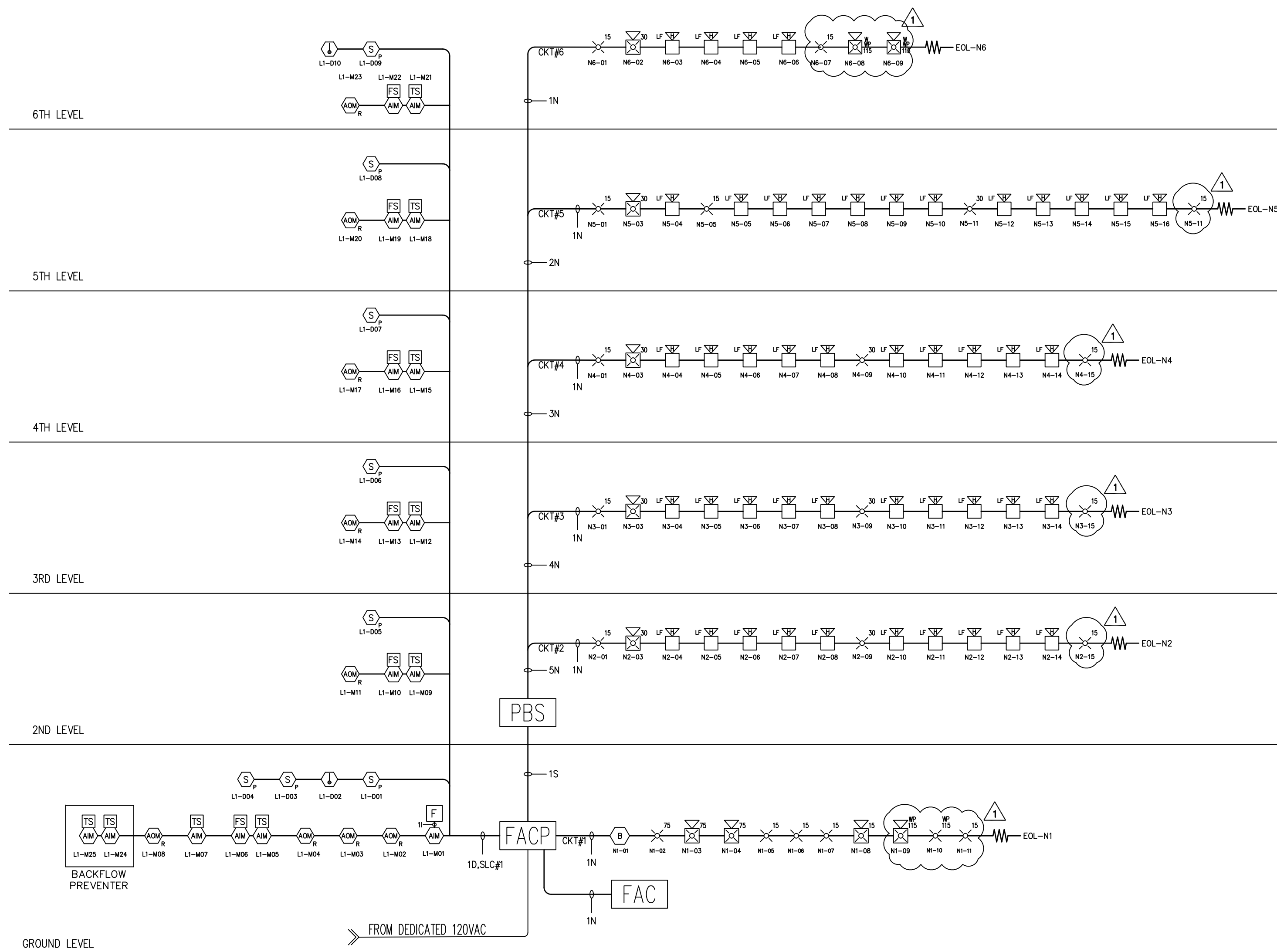




West 29th Street

SIXTH FLOOR FIRE ALARM PLAN

SCALE: 1/8" = 1'-0"



RISER DIAGRAM

SCALE: N.T.S.

West Boulevard

BATTERY CALCULATION FIRE ALARM CONTROL PANEL					
EQUIPMENT	QUANTITY	SUPERVISORY STANDBY		ALARM CURRENT (A)	
		UNIT	TOTAL	UNIT	TOTAL
Control Panel	1	0.1300	0.1300	0.2000	0.2000
Pull Station	1	0.0002	0.0002	0.0002	0.0002
Smoke Detector	8	0.0003	0.0024	0.0003	0.0024
Monitoring Module	17	0.0002	0.0034	0.0002	0.0034
Relay Module	11	0.0002	0.0022	0.0002	0.0022
LED Driver Module	1	0.0350	0.0350	0.2350	0.2350
UD-2000	1	0.0160	0.0160	0.02300	0.0230
NAPCO STARLINK	1	0.0710	0.0710	0.20000	0.2000
NOTIFICATION CIRCUIT(#1)	9				0.9850
SUB-TOTALS (IN AMPS)			0.2606		1.6516
TIME FACTOR: 24 HOUR STANDBY			X 24.0000		X 0.0830
5 MINUTES IN ALARM			6.25536		0.137086
SUB-TOTALS (IN AMPHOURS)					
STANBY AMPHOURS		6.2554			
ALARM AMPHOURS		+ 0.1371			
SYSTEM AMPHOURS		= 6.3924			
+ 20% DERATING		+ 1.2785			
TOTAL AMPHOURS REQUIRED		= 7.6709			
TOTAL AMPHOURS PROVIDED		8.00	(2) 12VDC 8AH BATTERIES		
LESS AMPHOURS REQUIRED		- 7.6709			
AVAILABLE SPARE AMPHOUR CAPACITY		= 0.33			

BATTERY CALCULATION POWER BOOSTER					
EQUIPMENT	QUANTITY	SUPERVISORY STANDBY		ALARM CURRENT (A)	
		UNIT	TOTAL	UNIT	TOTAL
POWER BOOSTER	1	0.0600	0.0600	0.2000	0.2000
NOTIFICATION CIRCUIT(#2,3,4,5,6)	67				6.5750
SUB-TOTALS (IN AMPS)			0.0600		6.7750
TIME FACTOR: 24 HOUR STANDBY			X 24.0000		X 0.0830
5 MINUTES IN ALARM			1.44		0.562325
SUB-TOTALS (IN AMPHOURS)					
STANBY AMPHOURS		1.4400			
ALARM AMPHOURS		+ 0.5623			
SYSTEM AMPHOURS		= 2.0023			
+ 20% DERATING		+ 0.4005			
TOTAL AMPHOURS REQUIRED		= 2.4028			
TOTAL AMPHOURS PROVIDED		7.00	(2) 12VDC 7AH BATTERIES		
LESS AMPHOURS REQUIRED		- 2.4028			
AVAILABLE SPARE AMPHOUR CAPACITY		= 4.60			

REVISIONS	BY
1	FD CORRECTION



\*First Call in Fire Protection\*  
 1769 E. 25th Street,  
 Los Angeles, CA 90058  
 Tel (213) 765-0884  
 Fax (213) 765-9984

LICENSE NO.  
 C-10/C-16  
 # 823302



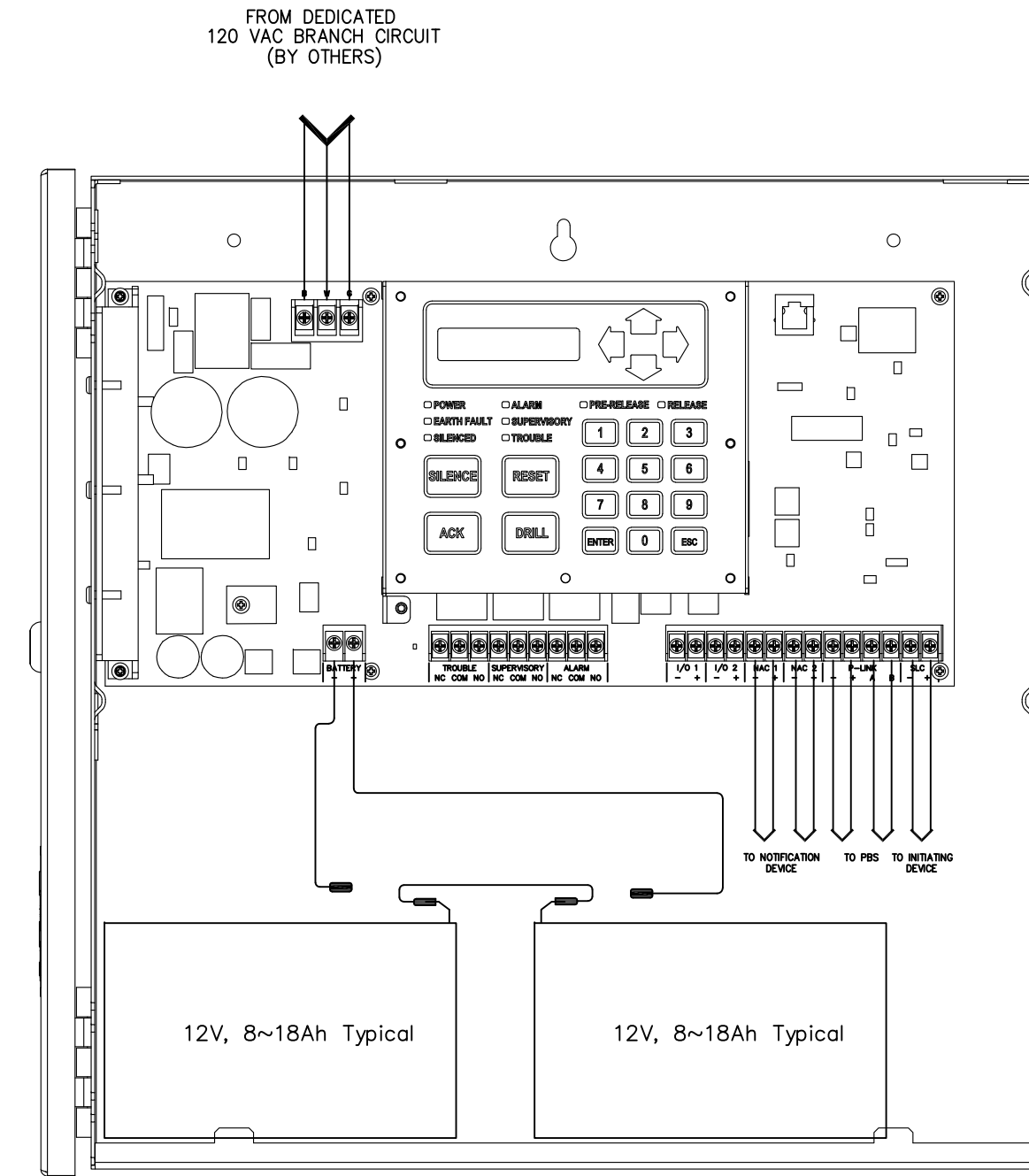
PROJECT ADDRESS:  
**2853 WEST APT**  
**2853 WEST BLVD.**  
**LOS ANGELES, CA 90016**

Sheet Title:  
 SIXTH FLOOR  
 PLAN,  
 RISER DIAGRAM  
 & BATTERY  
 CALCULATION

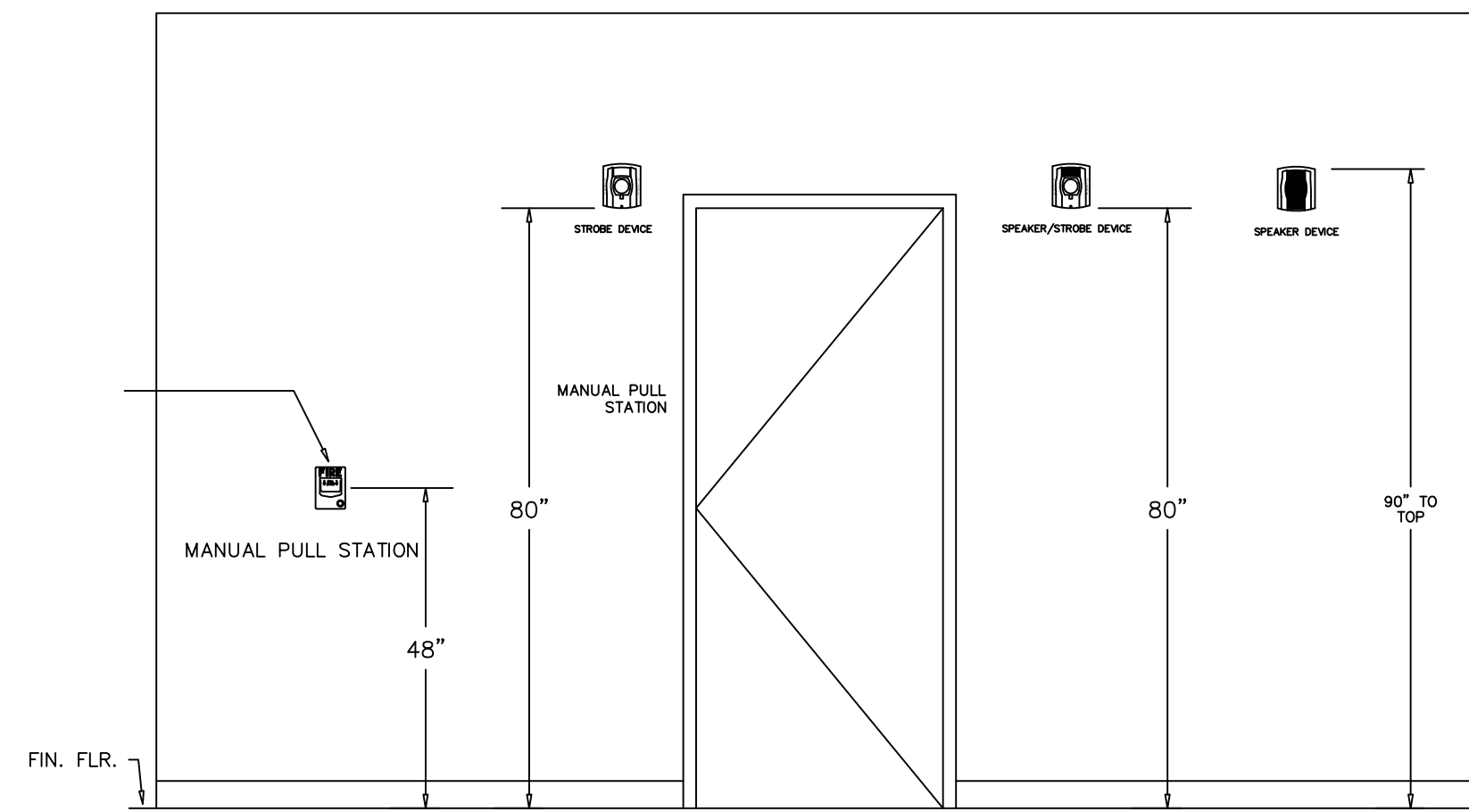
Project No.: A1333  
 Drawn By: BJ  
 Scale: AS NOTED  
 Date: 06-09-2022  
 Checked By: SYL

**FA-5**

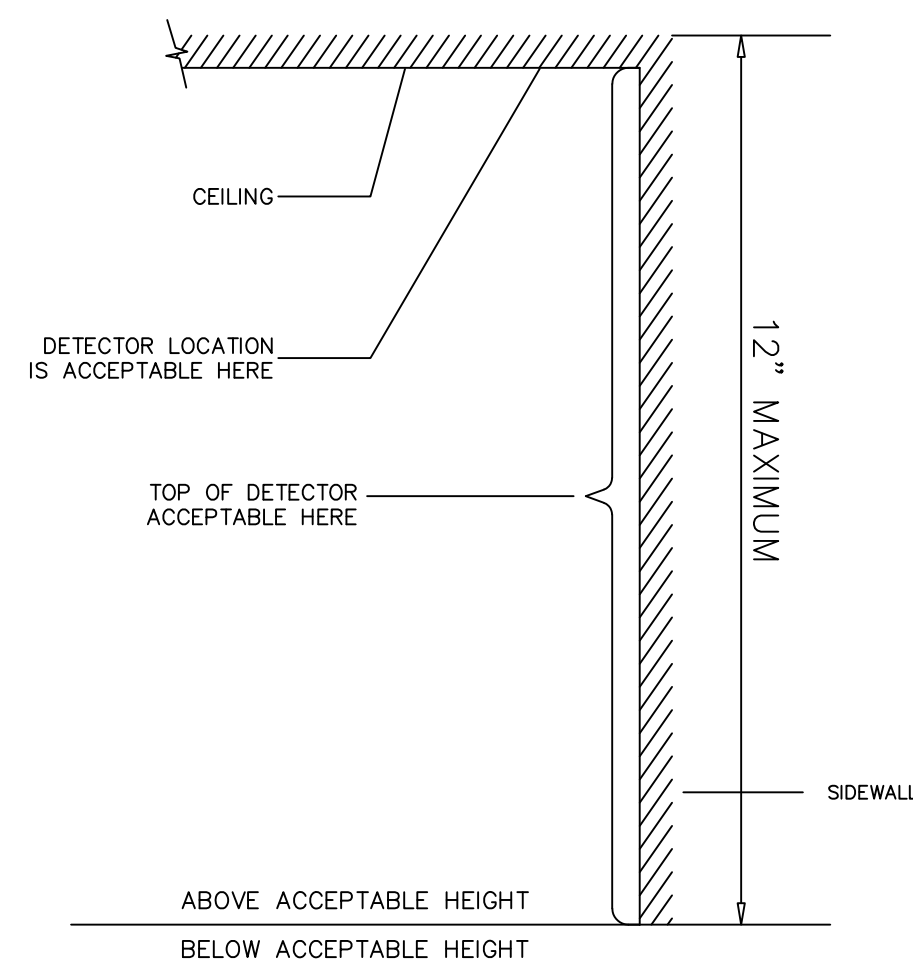




**TYPICAL FIRE ALARM PANEL I/O DIAGRAM**  
SCALE: NOT TO SCALE

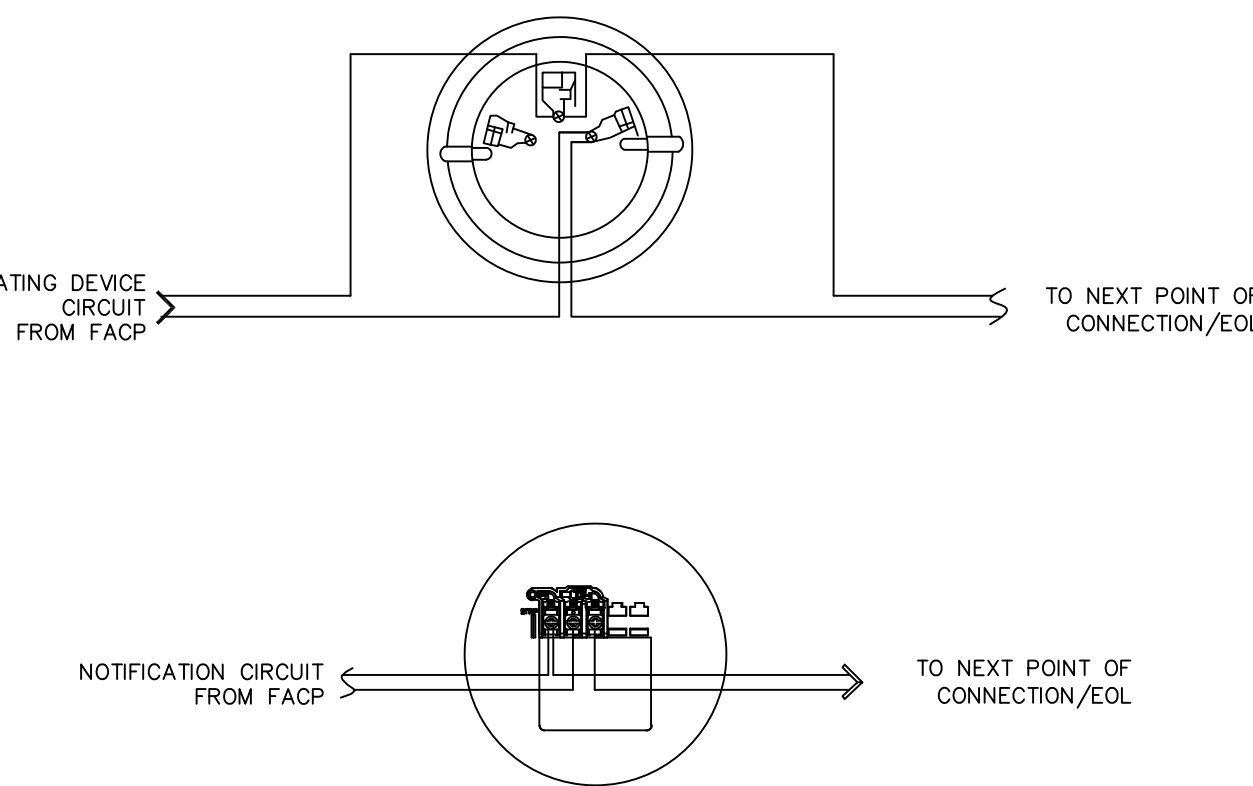


**TYPICAL MOUNTING DETAIL FOR FIRE ALARM DEVICE**  
SCALE: NOT TO SCALE



**PROPER MOUNTING DETAIL FOR SMOKE DETECTOR**  
SCALE: NOT TO SCALE

SYSTEM INPUT	SYSTEM OUTPUT					
	ANNUNCIATE ALARM ZONE AT FACP	ANNUNCIATE SUPERVISORY TO FACP	ANNUNCIATE TROUBLE ZONE AT FACP	ACTIVATE ALL NOTIFICATION DEVICES	REPORT TO CENTRAL STATION	ELEVATOR DESIGNATED LEVEL RECALL
ACTIVATION OF SMOKE/HEAT DETECTOR	X		X	X		
ACTIVATION OF MANUAL PULL STATION	X		X	X		
COMMON SYSTEM TROUBLE			X	X		
CELLULAR COMMUNICATOR TROUBLE			X	X		
OPEN CIRCUIT			X			
GROUND FAULT			X			
TAMPER SWITCH		X				
ACTIVATION OF WATER FLOW	X		X	X		
SMOKE DETECTORS OTHER THAN MAIN DISCHARGE LEVEL	X		X	X	X	X
SMOKE DETECTORS ON MAIN DISCHARGE LEVEL	X		X	X	X	X

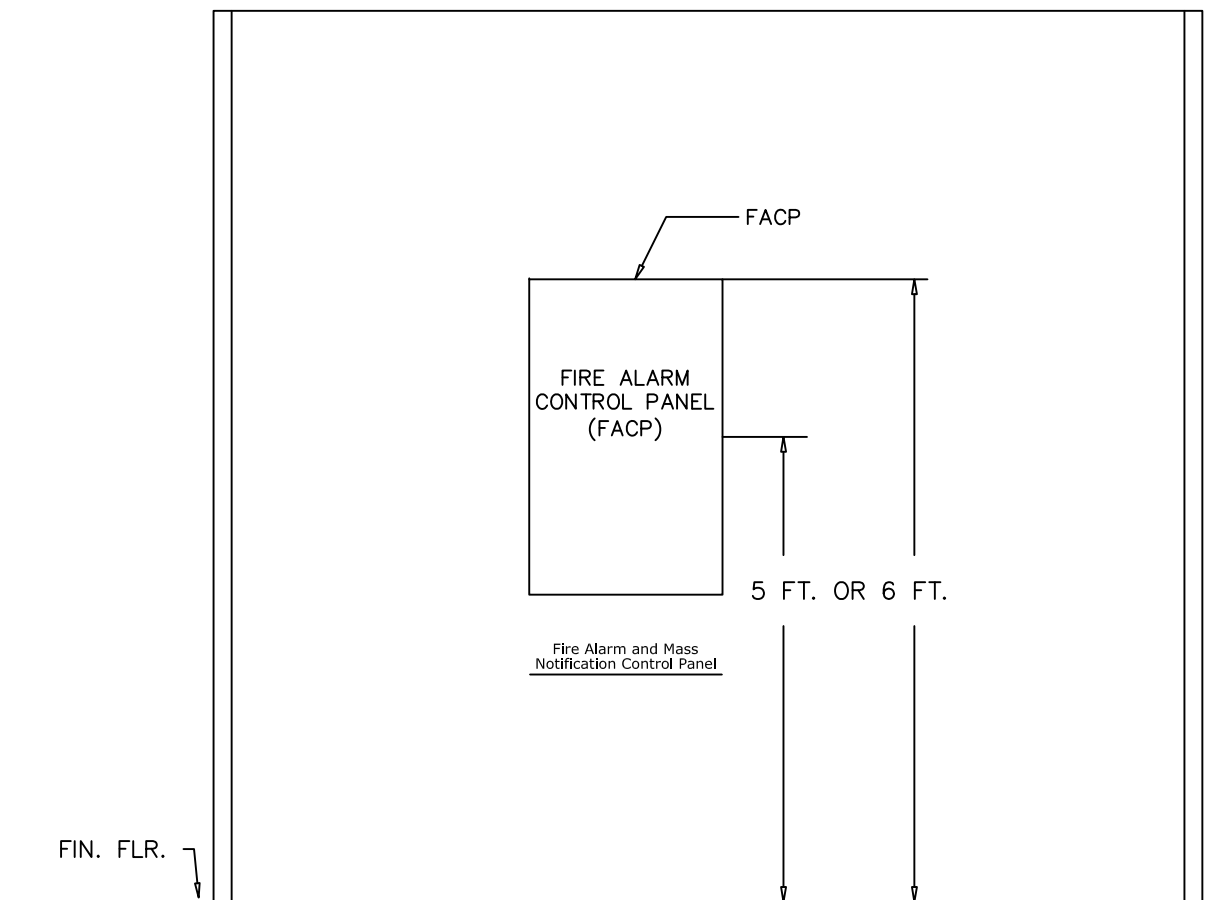


**TYPICAL FIRE ALARM SYSTEM POINT TO POINT WIRING DIAGRAM**  
SCALE: NOT TO SCALE

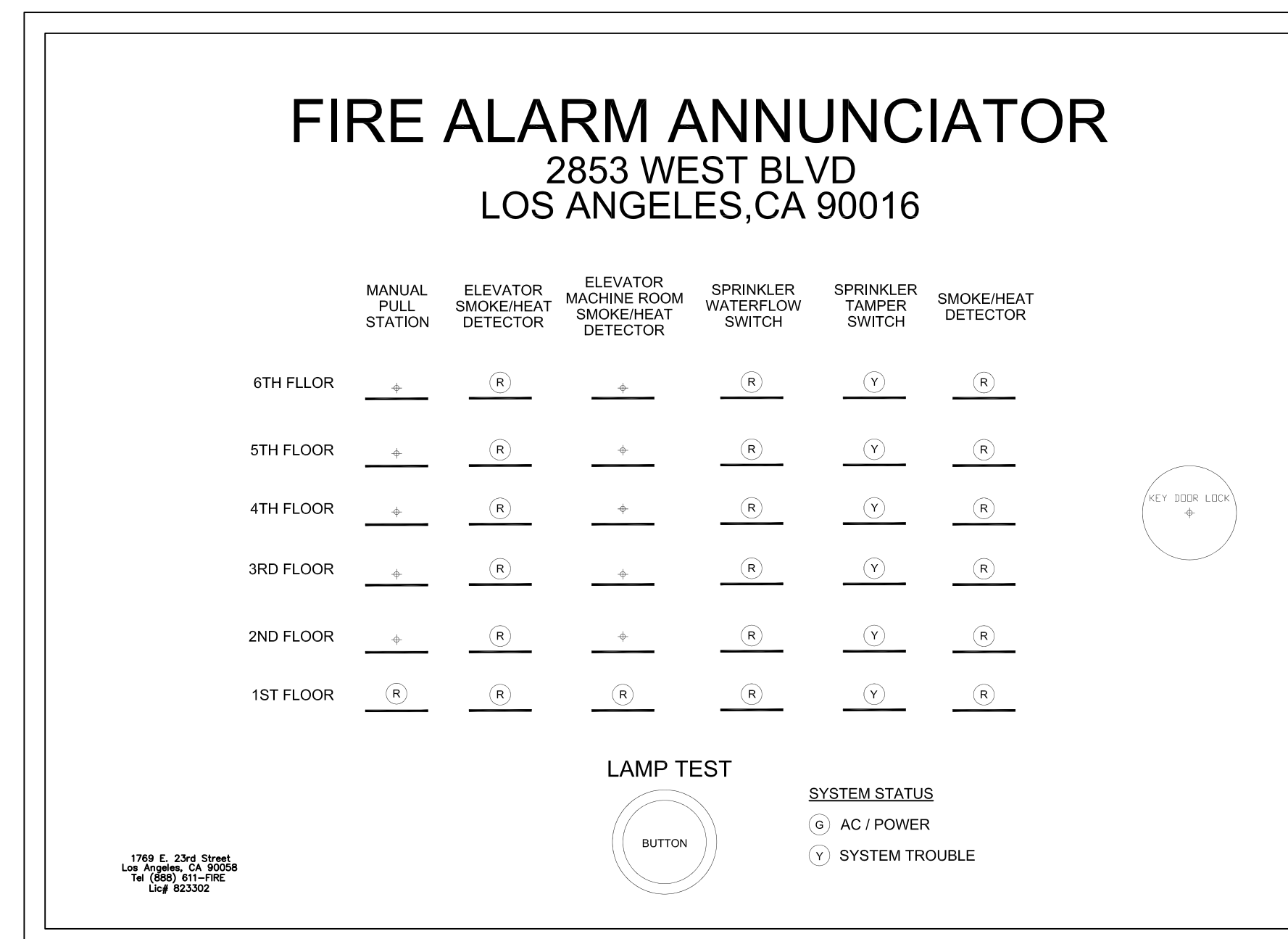
WIRING LEGEND		
SYMBOLS	WIRE TYPE	USED ON
D	2- CONDUCTOR, AWG # 18 FPLR FIRE CABLE OR EQUIVALENT	ADDRESSABLE (DATA) CIRCUIT
N	2- CONDUCTOR, AWG # 14 FPLR FIRE CABLE OR EQUIVALENT	NOTIFICATION CIRCUIT
S	2- CONDUCTOR, AWG # 18 FPLR FIRE CABLE OR EQUIVALENT	SBUS CIRCUIT
AC	AWG #12, SINGLE SOLID, PAIR	120 VAC CIRCUIT

WIRE COUNT EXAMPLE: QUANTITY OF PAIRS, AWG #14, SINGLE SOLID CONDUCTOR

NOTES:  
1. ALL CONDUIT IS TO BE 3/4" MINIMUM OTHERWISE SPECIFY (OPEN WIRE).  
2. ALL JUNCTION BOXES ARE TO BE COVERS THE FIRE ALARM SYSTEM WITH THE LETTERS "FA" IN WHITE LETTERING.



**SUGGESTED PANEL MOUNTING DETAIL**  
SCALE: NOT TO SCALE



**LED GRAPHIC ANNUNCIATOR DIAGRAM**  
SCALE: NOT TO SCALE

## LEGEND

- (G) GREEN LED
- (Y) YELLOW LED
- (R) RED LED

Note:  
MFR : LED LIGHT

THIS ANNUNCIATOR TO BE THE ONLY CONTROL OF THE FIRE ALARM SYSTEM. DIASBLE LOCAL CONTROL ON THE FIRE ALARM PANEL

FIELD FIRE INSPECTOR'S APPROVAL WILL BE OBTAINED PRIOR TO THE MANUFACTURE AND INSTALLATION.

APPROVED BY :

SIGNATURE :

REVISIONS BY

FD CORRECTION



1769 E. 25th Street,  
Los Angeles, CA 90058  
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LICENSE NO.  
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# 823302



2853 WEST APT  
2853 WEST BLVD.  
LOS ANGELES, CA 90016

PROJECT ADDRESS

Sheet Title:  
DETAILS, GRAPHIC ANNUNCIATOR DIAGRAM, WIRE LEGEND & SEQUIENC OF OPEATION MATRIX

Project No.: A1333  
Drawn By: BJ  
Scale: AS NOTED  
Date: 06-09-2022  
Checked By: SYL

**FA-6**

SHEET 6 OF 6