

GENERAL NOTES	
A.	THE ADDRESSABLE FIRE CONTROL PANEL/DACT IS INHERENTLY POWER LIMITED; SIGNALING AND INITIATING CIRCUITS DO NOT REQUIRE OVERCURRENT PROTECTION.
B.	THE ADDRESSABLE FIRE CONTROL PANEL/DACT WILL BE PROGRAMMED TO INITIATE AND COMPLETE A TEST SIGNAL TRANSMISSION EVERY 24 HOURS.
C.	CONSULT WITH OWNER AND/OR GENERAL CONTRACTOR FOR EXACT LOCATION OF THE FIRE CONTROL PANEL/TRANSPONDER PRIOR TO INSTALLATION.
D.	INSTALLER SHALL COORDINATE ALL WORK WITH THE OWNER AND GENERAL CONTRACTOR AND ALL OTHER TRADES.
E.	THE EQUIPMENT AND MATERIAL USED ARE STATE FIRE MARSHAL LISTED AND APPROVED FOR TRANSMISSION OF SIGNALS AS SET FORTH BY NFPA 72 STANDARDS FOR SEIZURE CAPABILITIES.
F.	FIRE ALARM RECORD OF COMPLETION TO BE PROVIDED TO FIRE DEPARTMENT AT FINAL.
G.	AN ORIGINAL APPROVED PLAN SET SHALL BE ON SITE DURING ANY FIRE DEPARTMENT INSPECTION.
H.	AS-BUILT DRAWINGS SHALL BE PROVIDED AT THE COMPLETION OF THE WORK BEING PERFORMED.
I.	ALL MANUFACTURER DATA SHEETS WILL BE SUPPLIED WITH SUBMITTAL PLANS.
J.	HORN STROBES SHALL NOT BE SILENCED ON A WATER FLOW ZONE.
K.	A COMPLETE COPY OF THE APPROVED PLAN SET SHALL BE ON SITE DURING ANY FIRE DEPT INSPECTION.
L.	CENTRAL STATION SHALL PROVIDED A VERBAL DESCRIPTION OF THE ACTUATED DEVICE, ACTUATED DEVICE LOCATION AND NOT JUST ZONE INFORMATION.
M.	AS REQUIRED BY THE MECHANICAL CODE CMC 2010, ALL HVAC UNITS OVER 2000CFM MUST HAVE A DUCT DETECTOR MONITORED BY THE FIRE ALARM PANEL AS A SUPERVISORY POINT AND PROGRAMMED FOR AUTOMATIC SHUTDOWN UPON DUCT DETECTOR ACTIVATION.

INSTALLATION NOTES	
1.	ALARMS TO BE INSTALLED PER 2013 EDITION OF NFPA 72, AND 2013 C.B.C. WITH US OF CLASS "B" STYLE CITCUITS. THIS CONFORMS TO THE 2013 EDITION OF NFPA AND 2013 EDITION OF THE C.B.C. WITH CALIFORNIA AMENDMENTS AND MANUFACTURES SPECIFICATIONS.
2.	AT COMPLETION OF THE PROJECT, A COPY OF "AS BUILDS" DRAWINGS SHALL BE PROVIDED TO THE OWNER/ OCCUPANT ALONG WITH WRITTEN OPERATING INSTRUCTIONS, AND MAINTENANCE/ TESTING INFORMATION FOR THE FIRE ALARM SYSTEM, A 24 HOUR EMERGENCY RESPONSE PHONE NUMBER FOR AN ALARM COMPANY REPRESENTATIVE SHALL BE PERMANENTLY INSTALLED ADJACENT TO THE CONTROL PANEL. [T24, PART 9, SEC. 1007.3.4.3]
3.	AFTER INSTALLATION AND TESTING HAS BEEN COMPLETED AND WITNESSED BY A FIRE INSPECTOR FROM C.M.F.D., A COMPLETED NFPA CERTIFICATE OF COMPLIANCE SHALL BE ISSUED FROM THE INSTALLING COMPANY AND PROVIDED TO THE FIRE DEPARTMENT AND BUSINESS OWNER. [T24, PART 9, SEC. 1007.3.4]
4.	ALL EQUIPMENT, E.G. AUTOMATIC DETECTION DEVICES, MANUAL PULL STATIONS, DUCT DETECTOR, ETC., SHALL BE LOCATED IN ACCORDANCE WITH THEIR LISTING(S), AND APPLICABLE PROVISIONS OF THE T-24, PARTS 2, 3, 4, AND 9. (ALL EXTERIOR DEVICES SHALL BE LISTED FOR OUTDOOR USE) [TITLE 19, CHAPTER 1.5, ARTICLE 1, SEC. 200]
5.	MANUAL PULL OR BREAK GLASS STATIONS SHALL BE MOUNTED AT A HEIGHT OF 48" ON CENTER FROM THE FINISHED FLOOR. MANUAL PULL OR BREAK GLASS SHALL BE LOCATED IN THE NORMAL PATH OF ALL EXITING AT EVERY EXIT FROM EVERY LEVEL AND SPACE AT A DISTANCE NOT TO EXCEED 200'. [T24, PART 2, SEC. 35, NFPA 72 SEC. 5-9.1.2]
6.	SPRINKLER SYSTEM WATERFLOW ALARM AND SUPERVISORY INITIATING DEVICES AND THEIR CIRCUITS LOCATED OUTSIDE OF BUILDINGS SHALL BE SO DESIGNED AND INSTALLED THAT THEY CANNOT BE READILY TAMPERED WITH, OPENED, OR REMOVED WITHOUT INITIATING A SIGNAL. IN ADDITION, ALL CABLE USED IN WET/ DAMP LOCATIONS SHALL BE LISTED FOR THIS USE. [NFPA 72, SEC 3.8.11.1]
7.	PRIOR TO FINAL INSPECTION N.M.C. [NFPA 72, SECTION 4-3], CENTRAL STATION MONITORING FACILITY (CSMF) SHALL BE IDENTIFIED ON THE AS-BUILT DRAWINGS INCLUDING NAME, ADDRESS, PHONE NUMBER, AND COPY OF U.L. OR F.M. LISTING NUMBER [CFC 14.103(o); NFPA 4-3.1]
8.	THROUGH-PENETRATION FIRE STOPPING FOR ALL FIRE RATED WALLS, FLOOR/ CEILINGS AND ASSEMBLIES SHALL HAVE AN "F" OR "T" RATING PER THE CALIFORNIA BUILDING CODE AND STANDARDS. ALL FIRE STOPPING SHALL COMPLY WITH AN APPROVED "F" OR "T" METHOD. THIS WILL BE VERIFIED.
9.	PROVIDE A WRITTEN SEQUENCE OF OPERATION, IN MATRIX FORM, INCLUDING THE SYSTEM OPERATING SEQUENCE FOLLOWING ACTUATION OF ANY FIRE AND LIFE SAFETY DEVICE. [T24, PART 9, SEC. 1001.3]
10.	IDENTIFY ZONE ASSIGNMENTS INCLUDING "ADDRESSES" FOR ADDRESSABLE SYSTEM, FOR ALL SYSTEMS, WATERFLOW, SUPERVISORY SWITCHES, MANUAL PULL STATIONS, HEAT DETECTION, SMOKE DETECTION, DUCT DETECTION AND SYSTEM TROUBLE, ETC. REQUIRES SEPERATE ANNUNCIATION. [T24, PART 9, SEC. 1001.3 AND 1007.3.3.7(a)]
11.	PROVIDE A COPY OF THE INSTALLING CONTRACTORS IDENTIFICATION CARD OR PROVIDE THE CONTRACTOR(S) REGISTRATION NUMBER, LICENSE CLASS AND EXPIRATION DATE IN THE BLUE-LINE DRAWINGS. [T24, PART 9, SEC. 1001.3]
12.	SPECIFY IF ANY OTHER SUPPRESSION SYSTEMS ARE INSTALLED OR ARE TO BE INSTALLED IN THE FUTURE, E.G., ANCILLARY EXTINGUISHING SYSTEMS, FIRE SPRINKLER SYSTEMS, ETC WHEN A FACILITY IS EQUIPPED WITH AN ALARM SYSTEM, ALL ANCILLARY SYSTEMS SHALL BE ON A SEPERATE ZONE AND SUPERVISED AT THE MAIN FIRE CONTROL PANEL (THE MAIN FACP SHALL ENUNCIATE A GENERAL ALARM WHEN THE ANCILLARY PANEL INITIATES A GENERAL ALARM CONDITION. [T24, PART 9, SEC. 1001.3, 1007.3.3.7, 1007.3.37(a), 1007.3.3.7.1]
13.	IF DUCT DETECTORS ARE REQUIRED BY THE CALIFORNIA BUILDING CODE OR BY THE CALIFORNIA MECHANICAL CODE (HVAC SYSTEMS OVER 2,000 CFM), VELOCITY CALCULATIONS SHALL BE PROVIDED DEMONSTRATING THE DEVICES ARE INSTALLED ACCORDING TO THEIR LISTING. [CALIFORNIA MECHANICAL CODE, SEC. 608]
14.	PROVIDE VOLTAGE DROP CALCULATIONS OF THE PLANS (FOR NOTIFICATION CIRCUITS OR OTHER CIRCUITS AS REQUIRED BY THE MANUFACTURER. VOLTAGE DROP CALCULATIONS MUST BE PROVIDED FOR THE MOST DEMANDING CIRCUIT(S). THIS MAY BE THE LONGEST CIRCUIT WITH THE MOST DEVICES OR A COMBINATION OF BOTH. VOLTAGE DROP SHALL NOT EXCEED A MAXIMUM OF 10% (BY LOCAL ORDINANCE) USING EITHER THE ENGINEER "POINT TO POINT" OR OHM'S LAW FORMULAS. [T24, PART 9, SEC. 1001.3]
15.	FIRE ALARM SYSTEM SHALL BE CONNECTED TO A DEDICATED BRANCH CIRCUIT AND IDENTIFIED WITH RED MARKING AS "FIRE ALARM CONTROL". THE LOCATION OF THE CIRCUIT DISCONNECTING MEANS SHALL BE PERMANENTLY IDENTIFIED AT THE FIRE ALARM CONTROL UNIT.
16.	A MEANS FOR TURNING OFF THE ALARM NOTIFICATION APPLIANCES SHALL BE PERMITTED ONLY WHERE IT IS KEY OPERATED LOCATED WITHIN A LOCKED CABINET, OR ARRANGED TO PROVIDE EQUIVALENT PROTECTION AGAINST UNAUTHORIZED USE.
17.	A FIRE ALARM SYSTEM CLASSIFIED AS CENTRAL STATION SERVICE SHALL HAVE A UL CERTIFICATE OR FACTORY MUTUAL PLACECARD UPON COMPLETION OF THE SYSTEM INSTALLATION. A COPY OF THE MAINTENANCE AND MONITORING AGREEMENT BETWEEN THE OWNER AND THE CONTRACTOR SHALL BE PROVIDED TO THE FIRE DEPARTMENT PRIOR TO FINAL APPROVAL OF THE FIRE ALARM SYSTEM.
18.	ALL WIRING INSTALLED BELOW 7' OR IN A HAZARDOUS LOCATION SHALL BE INSTALLED IN A METALLIC CONDUIT PER THE 2014 EDITION OF NEC.
19.	STROBES IN THE SAME ROOM AND ALL STROBE VISIBLE FROM THE SAME LOCATION SHALL BE SYNCHRONIZED TO FLASH SIMULTANEOUSLY.
THE UL LISTED CENTRAL STATION MONITORING COMPANY IS:	
DIAMOND COMMUNICATION INC. 124 S. C ST. STE C MADERA, CA 93639 (559)673-5925	

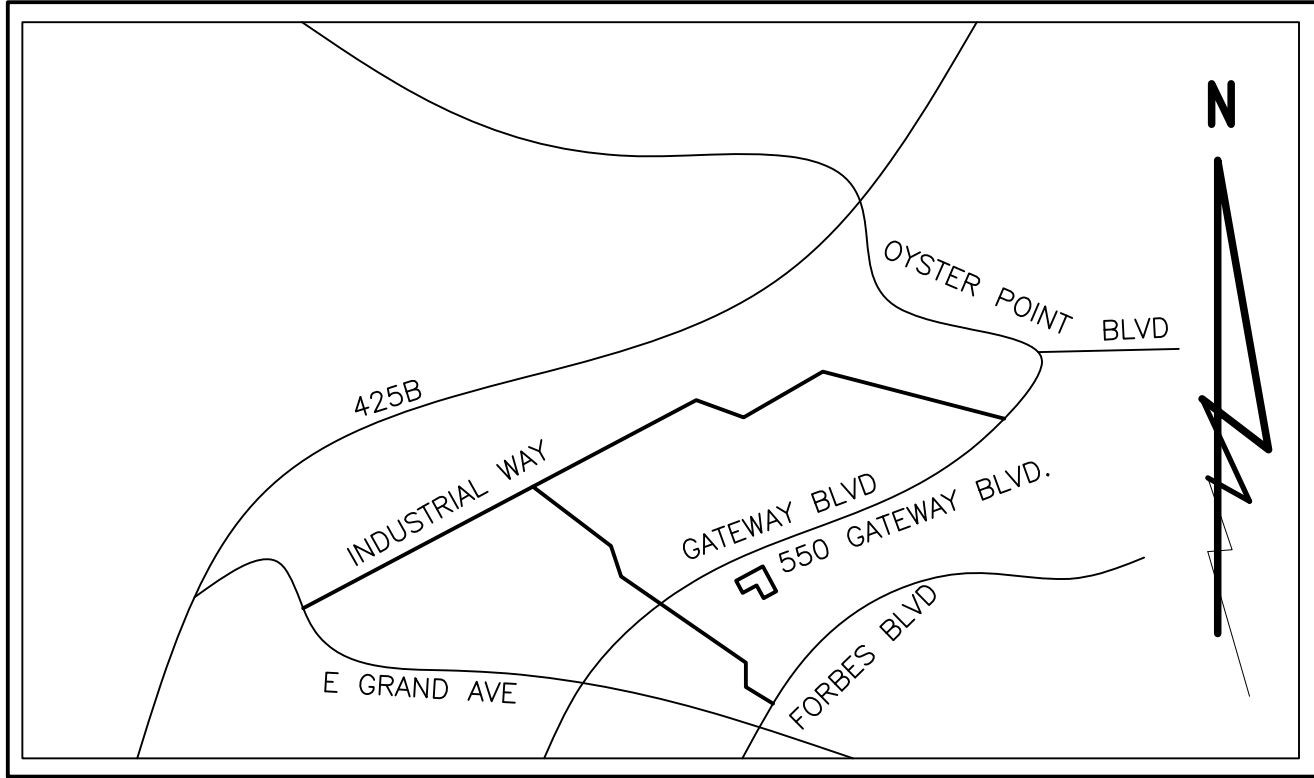
FIRE ALARM SYSTEM PLAN FOR GATEWAY HOTEL 550 GATEWAY BLVD SOUTH SAN FRANCISCO, CA

APPLICABLE CODES	
ALL ENGINEERING AND INSTALLATIONS SHALL COMPLY WITH THE FOLLOWING: 2013 CALIFORNIA BUILDING CODE (CBC), PART 2, TITLE 24 C.C.R. 2013 CALIFORNIA ELECTRICAL CODE (CEC), PART 3, TITLE 24 C.C.R. 2013 CALIFORNIA MECHANICAL CODE (CMC), PART 4, TITLE 24 C.C.R. 2013 CALIFORNIA PLUMBING CODE (CPC), PART 5, TITLE 24 C.C.R. 2016 CALIFORNIA FIRE CODE (CFC), PART 9, TITLE 24 C.C.R. 2013 CALIFORNIA REFERENCED STANDARDS CODE, PART 12, TITLE 24 C.C.R. 2013 CALIFORNIA ENERGY CODE, PART 6, TITLE 24 C.C.R. 2013 CALIFORNIA ELEVATOR SAFETY CONSTRUCTION CODE, PART 7, TITLE 24 C.C.R. 2016 EDITION NATION FIRE ALARM CODE (NFPA 72)	

SITE INFORMATION	
OCCUPANCY:	R-1
SPRINKLERED:	YES

SCOPE OF WORK	
NEW ADDRESSABLE FIRE ALARM SYSTEMS INSTALLED TO INCLUDE: 1. INSTALL SMOKE & HEAT DETECTORS, SMOKE DETECTOR W SOUNDER BASE & PULL STATIONS AS INDICATED ON PLANS. 2. INSTALL POWER SUPPLY, NOTIFICATION DEVICES AS INDICATED ON PLANS. 3. NOT USED. 4. INSTALL ANNUNCIATOR & INSTALL MONITORING MODULES, FOR MONITORING OF WATER FLOW SWITCHS & SUP. TAMPER VALVES FAN CONTROL AND HVAC UNIT AS INDICATED ON PLANS. 5. INSTALL RADIO TRANSMITTER AS INDICATED ON PLANS. TO MEET NFPA 72-2013 SECTION 26.6.3.2.1.4 ONE PHONE LINE AND ONE RADIO TRANSMITTER.	

SEQUENCE OF OPERATION	
R = ALARM RECEIPTCAPABILITY DURING ABNORMAL CONDITIONS IS REQUIRED.	
VISUAL NOTIFICATION APPLIANCES IN HEARING IMPAIRED ROOMS WILL BE ACTIVATED BY HOUSE FA SYSTEM AND/OR ROOM SMOKE DETECTOR.	
MANUAL PULL STATION	X
HEAT DETECTORS	X
SMOKE DETECTOR	X
DUCT SMOKE DETECTOR	X
SMOKE DETECTOR	X
SMOKE DETECTOR IN ELEV. EQUIPMENT ROOM	X
HEAT DETECTOR IN ELEV. EQUIPMENT ROOM	X
SMOKE DETECTOR IN ELEV. SHAFT	X
HEAT DETECTOR IN ELEV. SHAFT	X
SMOKE DETECTOR @ 1ST FLOOR ELEVATOR(PRIMARY FLOOR)	X
SMOKE DETECTOR @ 2ND FLOOR ELEVATOR(SECONDARY FLOOR)	X
SMOKE DETECTOR @ 3RD FLOOR ELEVATOR	X
SMOKE DETECTOR @ 4TH FLOOR ELEVATOR	X
SMOKE DETECTOR @ 5TH FLOOR ELEVATOR	X
DUCT SMOKE DETECTOR	X
SPRINKLER SYSTEM: WATER FLOW	X
SPRINKLER SYSTEM: TAMPER VALVES/PIV	X
RADIO TRANSMITTER POWER LOSS	X
RADIO TRANSMITTER COMMON FAIL	X
RADIO TRANSMITTER FAIL	X
SIGNALING LINE CIRCUIT (CLASS B)	
OPEN WIRE	X
GROUNDWED WIRE	XR
SHORTED WIRES	X
INITIATING ALARM CIRCUIT (CLASS B)	
OPEN WIRE	X
GROUNDWED WIRE	XR
SHORTED WIRES	X
NOTIFICATION CIRCUIT (CLASS B)	
OPEN WIRE	X
GROUNDWED WIRE	XR
SHORTED WIRES	X



VICINITY MAP

N.T.S.

SCHEDULE OF PRINTS	
SHEET	DESCRIPTION
FA1	SEQUENCE OF OPERATION, EQUIP. LEGEND, GENERAL NOTES
FA2	FIRST FLOOR
FA3	SECOND FLOOR
FA4	THIRD FLOOR
FA5	FOURTH FLOOR
FA6	FIFTH FLOOR
FA7	ROOF LAYOUT
FA8	SINGLE LINE DIAGRAM
FA9	CALCULATIONS AND DETAILS

EQUIPMENT LEGEND				
QTY.	SYMBOL	DESCRIPTION	MANUFACTURE/PART#	CSFM#
1	FACP	FIRE ALARM CONTROL PANEL (2) 12V / 7.0 AMP BATTERIES	VIGILANT VS1	7165-1657:0244
1	FAA	REMOTE ANNUNCIATOR PANEL	VIGILANT RLCD	7120-1657:0257
4	NAC	NAC POWER SUPPLY (2) 12V / 18AMP BATTERIES	VIGILANT MIRBPS6A	7300-1483:0174
1	RT	CELLULAR COMMUNICATOR (SINGLE TRANSMISSION)	HONEYWELL IPGSM-4G	7300-1645:0199
32	AM	ADDRESSABLE MINI MONITOR MODULE	VIGILANT GSA CC1	7300-1483:0115
36	COM	ADDRESSABLE CONTROL RELAY MODULE	VIGILANT GSA CR	7300-1483:0115
82	SD	SMOKE DETECTOR	VIGILANT VPS VIGILANT B4U	7257-1657:0246 7300-1567:0247
1	F	PULL STATION	VIGILANT GSA M270	7150-1657:0111
4	LD	HEAT DETECTOR	VIGILANT VHFD VIGILANT B4U	7270-1567:0248 7300-1567:0247
23	SD-B	SMOKE DETECTOR W SOUNDER BASE	VIGILANT VPS BASE- SB4U-LF	7300-1657:0222 7300-1657:0322
(23)15CD	STROBE		VIGILANT EG1F-HDVM	7125-1501:0121
(8)30CD	STROBE		VIGILANT EG1F-HDVM	7125-1501:0121
(2)75CD	STROBE		VIGILANT EG1F-HDVM	7125-1501:0121
(1)15CD	HORN/STROBE		VIGILANT EG1F-VM	7125-1501:0121
(25)30CD	HORN/STROBE		VIGILANT EG1F-VM	7125-1501:0121
(3)75CD	HORN/STROBE		VIGILANT EG1F-VM	7125-1501:0121
23	177CD	STROBE 177 CANDELA	VIGILANT EGO-VMH	7125-1501:0150
146	H	HORN	KIDDE G4LFRNH	7135-1657:0320
1	H WP	WEATHERPROOF HORN	VIGILANT WG4RF-H	7135-1657:0310
1	PIV	POST INDICATOR VALVE	BY OTHERS	
5	TV	TAMPER SUPERVISORY VALVE	BY OTHERS	
10	WM	WATER FLOW MODULE	GSA-WTM	7300-1483:0115
5	WFS	WATER FLOW SWITCH	BY OTHERS	
5	WRB	WATERFLOW RISER BELL	BY OTHERS	
1	DD	DUCT DETECTORS	BY OTHERS	
1	FAN	FAN CONTROLLER	BY OTHERS	
xxCD	CANDELA RATING			
SLC	SLC LOOP	18-4 FPL	GENESIS CABLES	7161-1487:0100
B	SIGNAL CIRCUIT	12-4 FPL	GENESIS CABLES	7161-1487:0100
C	FAA BUS	18-4 FPL	GENESIS CABLES	7161-1487:0100

124 S. "C" STREET STE. C
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Phone: (559)673-5925
Contractors Lic. # 607745 Classifications C-10

DIAMOND
Communications Inc.

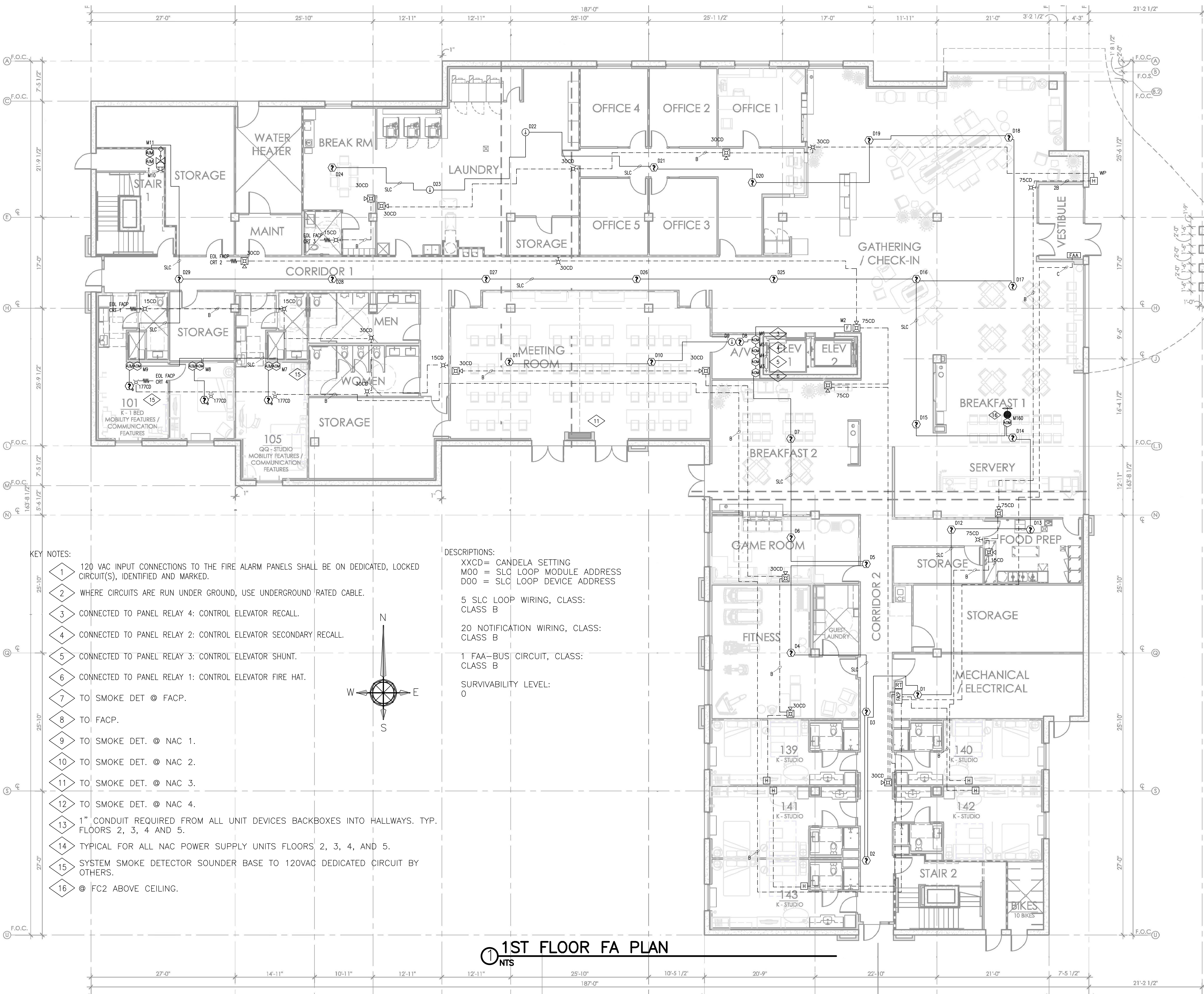
REV		BY	DATE	DESCRIPTION

FIRE ALARM SYSTEM PLAN FOR GATEWAY HOTEL 550 GATEWAY BLVD SOUTH SAN FRANCISCO, CA

LICENSED ELECTRICAL CONTRACTOR
STATE OF CALIFORNIA
Classification
C-10
License No.
607745

DRAWN BY
DIAMOND COMMUNICATIONS
CHECKED
STEVE COCKRUM
DATE
6-4-17
SCALE
AS NOTED
JOB NO.
-

SHEET
SEQUENCE OF OPERATION,
EQUIP. LEGEND,
GENERAL NOTES
FA-1



KEY NOTES:

- 120 VAC INPUT CONNECTIONS TO THE FIRE ALARM PANELS SHALL BE ON DEDICATED, LOCKED CIRCUIT(S), IDENTIFIED AND MARKED.
- WHERE CIRCUITS ARE RUN UNDER GROUND, USE UNDERGROUND RATED CABLE.
- CONNECTED TO PANEL RELAY 4: CONTROL ELEVATOR RECALL.
- CONNECTED TO PANEL RELAY 2: CONTROL ELEVATOR SECONDARY RECALL.
- CONNECTED TO PANEL RELAY 3: CONTROL ELEVATOR SHUNT.
- CONNECTED TO PANEL RELAY 1: CONTROL ELEVATOR FIRE HAT.
- TO SMOKE DET @ FACP.
- TO FACP.
- TO SMOKE DET. @ NAC 1.
- TO SMOKE DET. @ NAC 2.
- TO SMOKE DET. @ NAC 3.
- TO SMOKE DET. @ NAC 4.
- 1" CONDUIT REQUIRED FROM ALL UNIT DEVICES BACKBOXES INTO HALLWAYS. TYP. FLOORS 2, 3, 4 AND 5.
- TYPICAL FOR ALL NAC POWER SUPPLY UNITS FLOORS 2, 3, 4, AND 5.
- SYSTEM SMOKE DETECTOR SOUNDER BASE TO 120VAC DEDICATED CIRCUIT BY OTHERS.
- @ FC2 ABOVE CEILING.

DESCRIPTIONS:

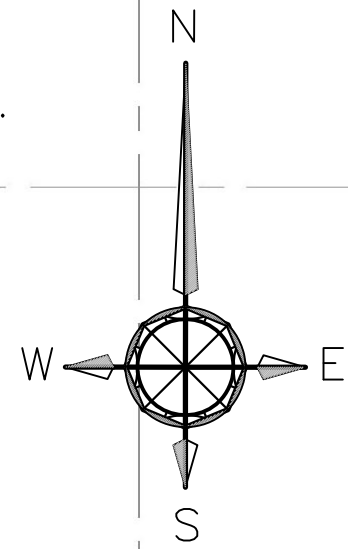
XXCD= CANDELA SETTING
M00 = SLC LOOP MODULE ADDRESS
D00 = SLC LOOP DEVICE ADDRESS

5 SLC LOOP WIRING, CLASS:
CLASS B

20 NOTIFICATION WIRING, CLASS:
CLASS B

1 FAA-BUS CIRCUIT, CLASS:
CLASS B

SURVIVABILITY LEVEL:
0



1 1ST FLOOR FA PLAN
NTS

SYMBOL LEGEND

SYMBOL	DESCRIPTION
FACP	FIRE ALARM CONTROL PANEL (2) 12V / 7.0 AMP BATTERIES
FAA	REMOTE ANNUNCIATOR PANEL
NAC	NAC POWER SUPPLY (2) 12V / 18AMP BATTERIES
RT	CELLULAR COMMUNICATOR (SINGLE TRANSMISSION)
MM	ADDRESSABLE MINI MONITOR MODULE
COM	ADDRESSABLE CONTROL RELAY MODULE
SD	SMOKE DETECTOR
F	PULL STATION
H	HEAT DETECTOR
SD-B	SMOKE DETECTOR W SOUNDER BASE
STROBE	STROBE
STROBE	STROBE
STROBE	STROBE
HORN/STROBE	HORN/STROBE
HORN/STROBE	HORN/STROBE
HORN/STROBE	HORN/STROBE
177CD	STROBE 177 CANDELA
H	HORN
WP	WEATHERPROOF HORN
PIV	POST INDICATOR VALVE
T	TAMPER SUPERVISORY VALVE
WM	WATER FLOW MODULE
WFS	WATER FLOW SWITCH
WRB	WATERFLOW RISER BELL
DD	DUCT DETECTORS
FC	FAN CONTROLLER
XXCD	CANDELA RATING
SLC	SLC LOOP
B	SIGNAL CIRCUIT
C	FAA BUS

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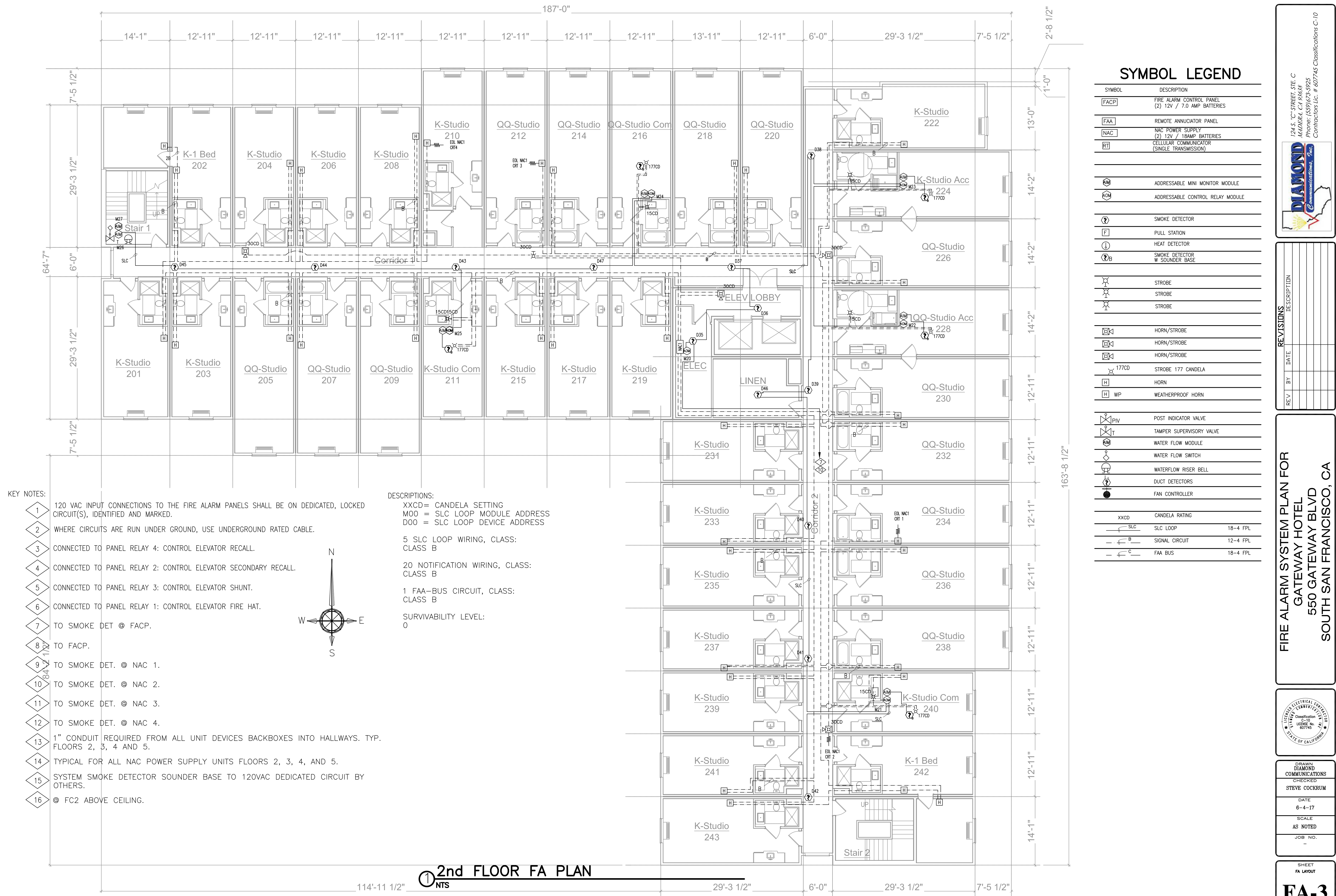


REV	BY	DATE	DESCRIPTION

FIRE ALARM SYSTEM PLAN FOR
GATEWAY HOTEL
550 GATEWAY BLVD
SOUTH SAN FRANCISCO, CA



DRAWN DIAMOND COMMUNICATIONS
CHECKED STEVE COCKRUM
DATE 6-4-17
SCALE AS NOTED
JOB NO. -

[illegible]

FIRE ALARM SYSTEM PLAN FOR
GATEWAY HOTEL
550 GATEWAY BLVD
SOUTH SAN FRANCISCO, CA



DRAWN
DIAMOND
COMMUNICATIONS

CHECKED
STEVE COCKRUM

DATE
6-4-17
SCALE
AS NOTED
JOB NO.
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SHEET
FA LAYOUT

FA-3

KEY NOTES:

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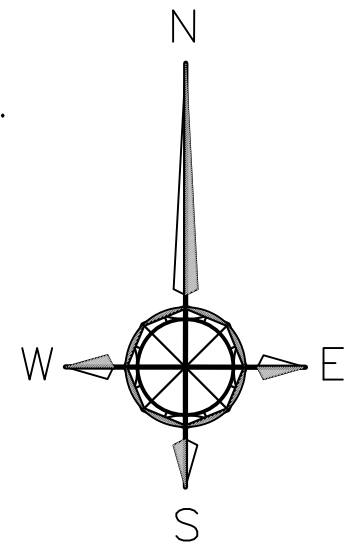
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SURVIVABILITY LEVEL:
0



3rd FLOOR FA PLAN

1 NTS

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KM	ADDRESSABLE MINI MONITOR MODULE
COM	ADDRESSABLE CONTROL RELAY MODULE

?	SMOKE DETECTOR
F	PULL STATION
H	HEAT DETECTOR
2B	SMOKE DETECTOR W SOUNDER BASE

X	STROBE
X	STROBE
X	STROBE

X	HORN/STROBE
X	HORN/STROBE
X	HORN/STROBE
X 177CD	STROBE 177 CANDELA
H	HORN
H WP	WEATHERPROOF HORN

PIV	POST INDICATOR VALVE
T	TAMPER SUPERVISORY VALVE
KM	WATER FLOW MODULE
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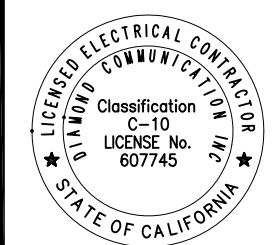
124 S. "C" STREET, STE. C
MADERA, CA 93648
Phone: (559) 673-5925
Contractors Lic. # 607745 Classifications C-10



REVISIONS

REV	BY	DATE	DESCRIPTION

FIRE ALARM SYSTEM PLAN FOR
GATEWAY HOTEL
550 GATEWAY BLVD
SOUTH SAN FRANCISCO, CA



DRAWN
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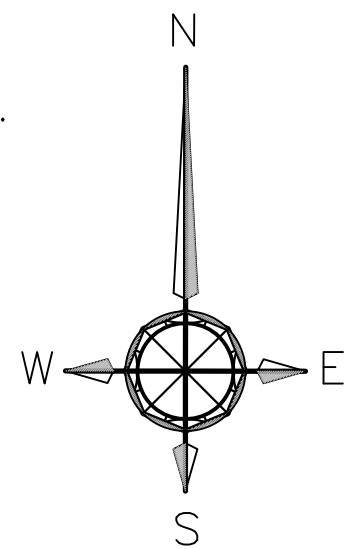
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SHEET
FA LAYOUT

FA-4

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SURVIVABILITY LEVEL:
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① 4th FLOOR FA PLAN
NTS

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?	SMOKE DETECTOR
F	PULL STATION
L	HEAT DETECTOR
?	SMOKE DETECTOR W SOUNDER BASE

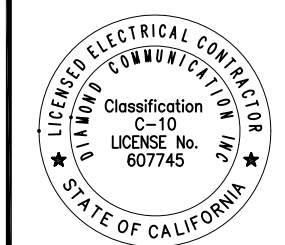
STROBE	STROBE
STROBE	STROBE
STROBE	STROBE

HORN/STROBE	HORN/STROBE
HORN/STROBE	HORN/STROBE
HORN/STROBE	HORN/STROBE
177CD	STROBE 177 CANDELA
H	HORN
WP	WEATHERPROOF HORN

PIV	POST INDICATOR VALVE
T	TAMPER SUPERVISORY VALVE
WM	WATER FLOW MODULE
WFS	WATER FLOW SWITCH
WRB	WATERFLOW RISER BELL
DD	DUCT DETECTORS
FC	FAN CONTROLLER

XXCD	CANDELA RATING
SLC	SLC LOOP 18-4 FPL
B	SIGNAL CIRCUIT 12-4 FPL
C	FAA BUS 18-4 FPL

FIRE ALARM SYSTEM PLAN FOR
GATEWAY HOTEL
550 GATEWAY BLVD
SOUTH SAN FRANCISCO, CA



DRAWN DIAMOND COMMUNICATIONS
CHECKED STEVE COCKRUM
DATE 6-4-17
SCALE AS NOTED
JOB NO. -

REV	BY	DATE	DESCRIPTION

REVISIONS

124 S. "C" STREET, STE. C
MILPITAS, CA 95038
Phone: (559) 673-5925
Contractors Lic. # 607745 Classifications C-10



KEY NOTES:

- 120 VAC INPUT CONNECTIONS TO THE FIRE ALARM PANELS SHALL BE ON DEDICATED, LOCKED CIRCUIT(S), IDENTIFIED AND MARKED.
- WHERE CIRCUITS ARE RUN UNDER GROUND, USE UNDERGROUND RATED CABLE.
- CONNECTED TO PANEL RELAY 4: CONTROL ELEVATOR RECALL.
- CONNECTED TO PANEL RELAY 2: CONTROL ELEVATOR SECONDARY RECALL.
- CONNECTED TO PANEL RELAY 3: CONTROL ELEVATOR SHUNT.
- CONNECTED TO PANEL RELAY 1: CONTROL ELEVATOR FIRE HAT.
- TO SMOKE DET @ FACP.
- TO FACP.
- TO SMOKE DET. @ NAC 1.
- TO SMOKE DET. @ NAC 2.
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- TO SMOKE DET. @ NAC 4.
- 1" CONDUIT REQUIRED FROM ALL UNIT DEVICES BACKBOXES INTO HALLWAYS. TYP. FLOORS 2, 3, 4 AND 5.
- TYPICAL FOR ALL NAC POWER SUPPLY UNITS FLOORS 2, 3, 4, AND 5.
- SYSTEM SMOKE DETECTOR SOUNDER BASE TO 120VAC DEDICATED CIRCUIT BY OTHERS.
- @ FC2 ABOVE CEILING.

DESCRIPTIONS:

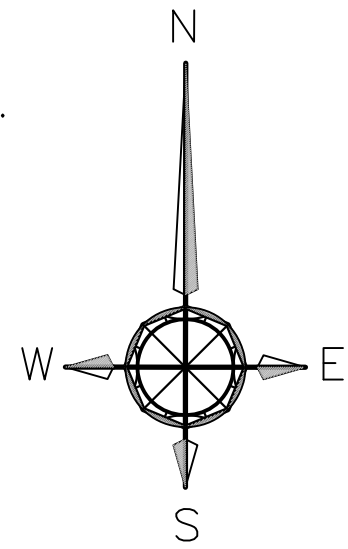
XXCD= CANDELA SETTING
M00 = SLC LOOP MODULE ADDRESS
D00 = SLC LOOP DEVICE ADDRESS

5 SLC LOOP WIRING, CLASS:
CLASS B

20 NOTIFICATION WIRING, CLASS:
CLASS B

1 FAA-BUS CIRCUIT, CLASS:
CLASS B

SURVIVABILITY LEVEL:
0



5th FLOOR FA PLAN

1 NTS

SYMBOL LEGEND

SYMBOL	DESCRIPTION
FACP	FIRE ALARM CONTROL PANEL (2) 12V / 7.0 AMP BATTERIES
FAA	REMOTE ANNUNCIATOR PANEL
NAC	NAC POWER SUPPLY (2) 12V / 18AMP BATTERIES
RT	CELLULAR COMMUNICATOR (SINGLE TRANSMISSION)
MM	ADDRESSABLE MINI MONITOR MODULE
COM	ADDRESSABLE CONTROL RELAY MODULE
SD	SMOKE DETECTOR
F	PULL STATION
H	HEAT DETECTOR
SD/B	SMOKE DETECTOR W SOUNDER BASE
CD	STROBE
D	STROBE
D	STROBE
CD	HORN/STROBE
CD	HORN/STROBE
CD	HORN/STROBE
177CD	STROBE 177 CANDELA
H	HORN
H WP	WEATHERPROOF HORN
PIV	POST INDICATOR VALVE
T	TAMPER SUPERVISORY VALVE
MM	WATER FLOW MODULE
WFS	WATER FLOW SWITCH
WRB	WATERFLOW RISER BELL
DD	DUCT DETECTORS
FC	FAN CONTROLLER
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SLC	SLC LOOP
B	SIGNAL CIRCUIT
C	FAA BUS

FIRE ALARM SYSTEM PLAN FOR
GATEWAY HOTEL
550 GATEWAY BLVD
SOUTH SAN FRANCISCO, CA

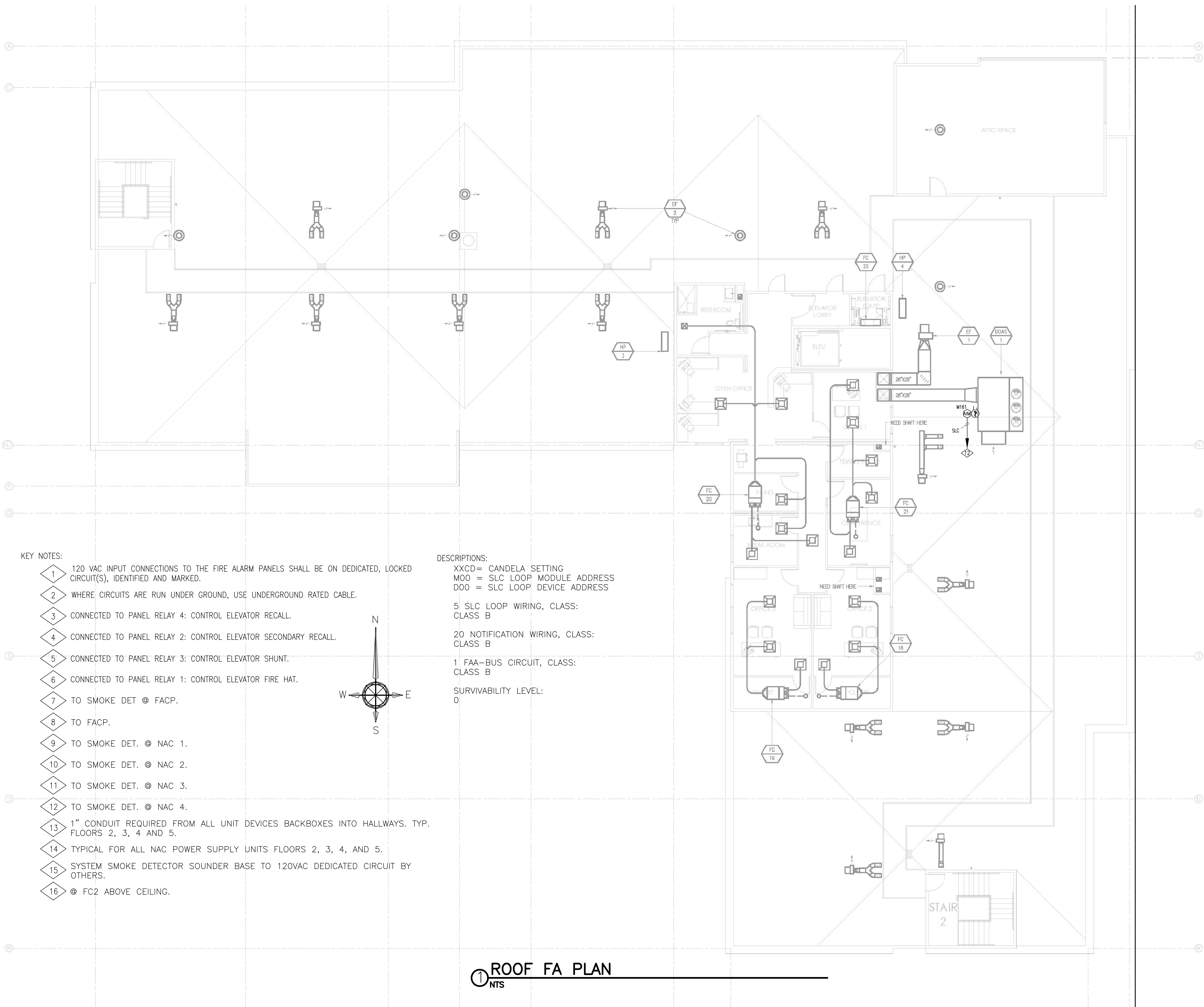


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SCALE
AS NOTED
JOB NO.
-

SHEET
FA LAYOUT
FA-6

124 S. "C" STREET, STE. C
MILPITAS, CA 95038
Phone: (559) 673-5925
Contractors Lic. # 607745 Classifications C-10
DIAMOND COMMUNICATIONS Inc.

REV	BY	DATE	DESCRIPTION



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DESCRIPTIONS:

XXCD= CANDELA SETTING
M00 = SLC LOOP MODULE ADDRESS
D00 = SLC LOOP DEVICE ADDRESS

5 SLC LOOP WIRING, CLASS:
CLASS B

20 NOTIFICATION WIRING, CLASS:
CLASS B

1 FAA-BUS CIRCUIT, CLASS:
CLASS B

SURVIVABILITY LEVEL:
0

SYMBOL LEGEND

SYMBOL	DESCRIPTION	
	FIRE ALARM CONTROL PANEL (2) 12V / 7.0 AMP BATTERIES	
	REMOTE ANNUNCIATOR PANEL	
	NAC POWER SUPPLY (2) 12V / 18AMP BATTERIES	
	CELLULAR COMMUNICATOR (SINGLE TRANSMISSION)	
	ADDRESSABLE MINI MONITOR MODULE	
	ADDRESSABLE CONTROL RELAY MODULE	
	SMOKE DETECTOR	
	PULL STATION	
	HEAT DETECTOR	
	SMOKE DETECTOR W SOUNDER BASE	
	STROBE	
	STROBE	
	STROBE	
	HORN/STROBE	
	HORN/STROBE	
	HORN/STROBE	
	STROBE 177 CANDELA	
	HORN	
	WEATHERPROOF HORN	
	POST INDICATOR VALVE	
	TAMPER SUPERVISORY VALVE	
	WATER FLOW MODULE	
	WATER FLOW SWITCH	
	WATERFLOW RISER BELL	
	DUCT DETECTORS	
	FAN CONTROLLER	
xxcd	CANDELA RATING	
	SLC LOOP	18-4 FPL
	SIGNAL CIRCUIT	12-4 FPL
	FAA BUS	18-4 FPL

FIRE ALARM SYSTEM PLAN FOR
GATEWAY HOTEL
550 GATEWAY BLVD
SOUTH SAN FRANCISCO, CA

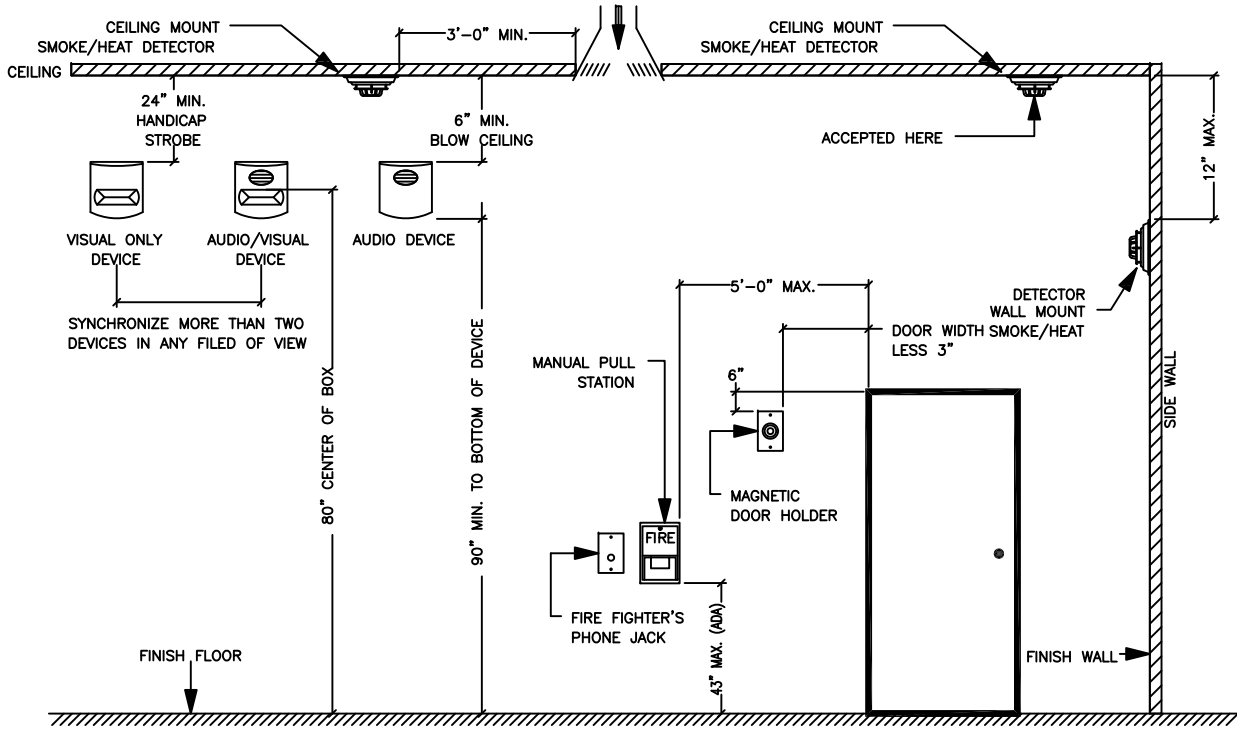


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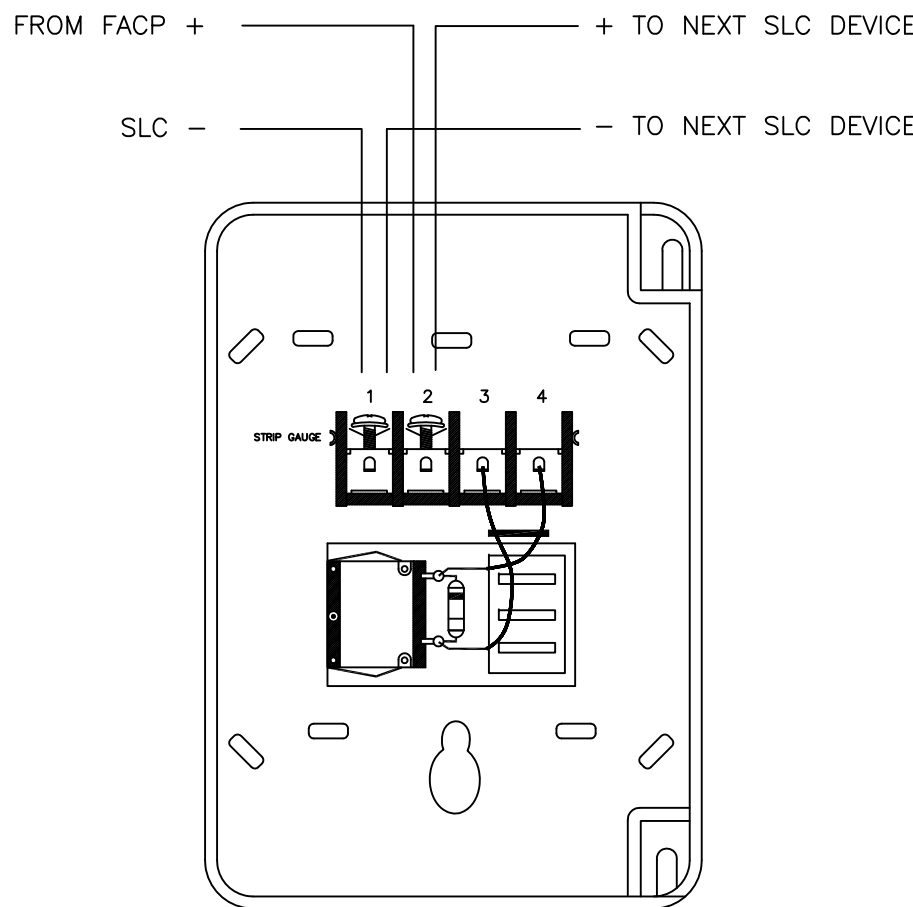
REV	BY	DATE	DESCRIPTION



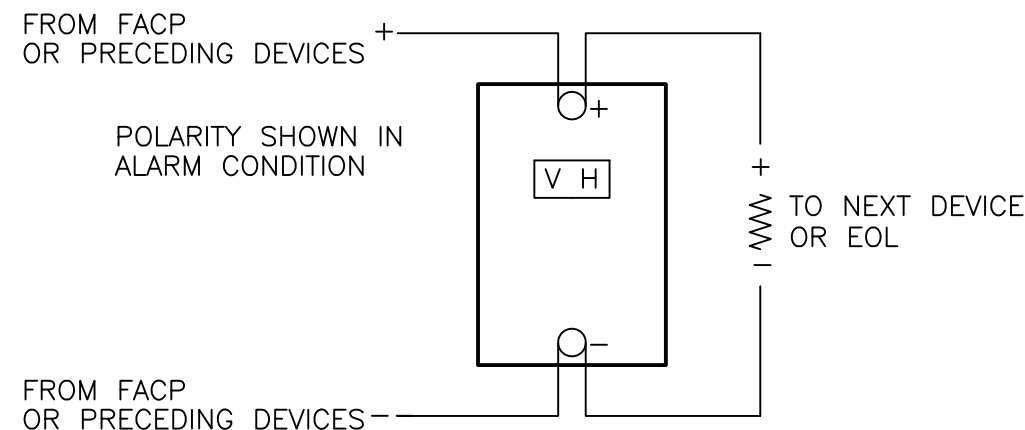
124 S. "C" STREET, STE. C
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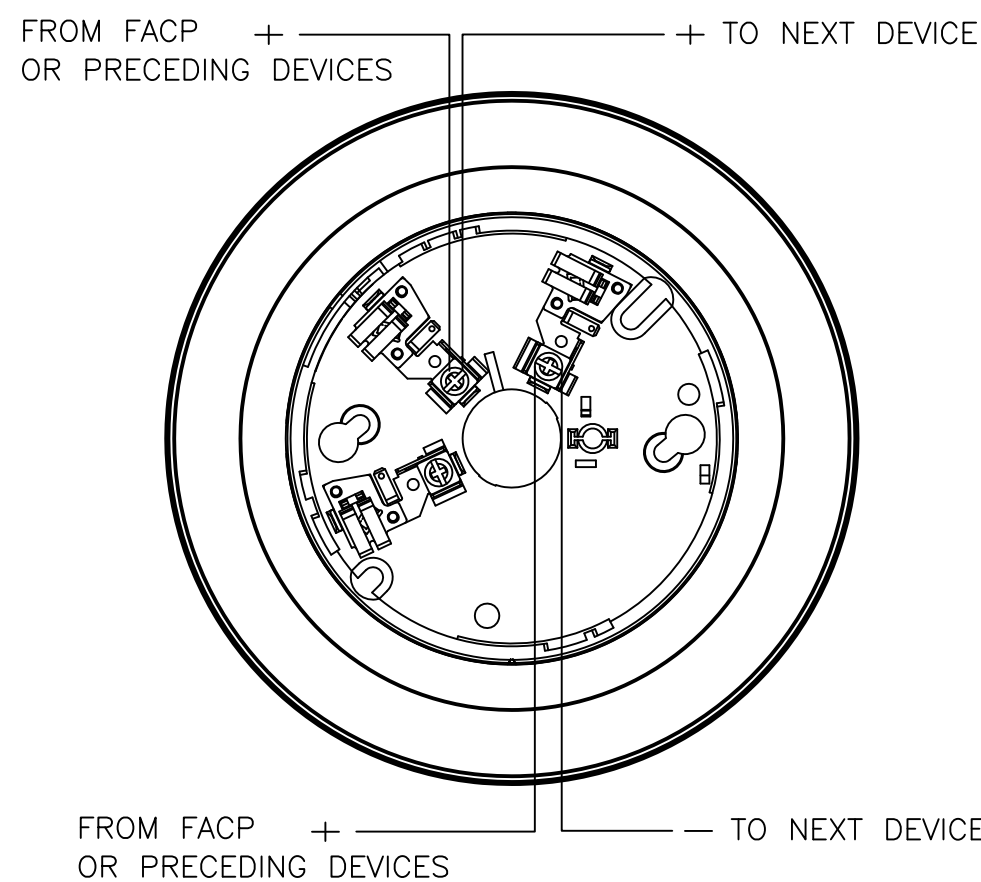
1 TYPICAL DEVICE ELEVATION



2 TYPICAL HOOKUP PULL STATION



3 TYPICAL HOOKUP HORN/STROBE



4 TYPICAL HOOKUP SMOKE DETECTOR

FACP BATTERY CALC

SECONDARY NON-FIRE ALARM						PRIMARY FIRE ALARM					
DEVICE TYPE	QUT	CURRENT (AMPS)		TOTAL	QUT	CURRENT (AMPS)		TOTAL			
		RENT	DR/			CURRENT	DRAW				
FACP	1	0.381		0.381	1	0.481		0.481			
RLCD	1	0.03600		0.036	0	0.146		0.400			
GSA TWM	10	0.00022		0.00222	1	0.001		0.400			
GSA CR	28	0.00075		0.021	1	0.001		0.400			
GSA CC1	32	0.00022		0.007136	1	0.000		0.400			
GSA M270	1	0.00035		0.00035	1	0.001		0.400			
B4U	86	0.00004		0.00344	1			0.000			
SB4U-LF	23	0.00040		0.00092	1			0.000			
		0.000000		0							
		0.000000		0							
		0.000000		0							
		0.000000		0							
		0.000000		0							
		0.000000		0							
		0.000000		0							
		0.000000		0							
Nac 1					1	0.817		0.817			
Nac 2					1	0.529		0.529			
Nac 3					1	0.991		0.991			
Nac 4					1	1.260		1.260			
SECONDARY NON-ALARM				0.452066	PRIMARY ALARM				6.078		
SECONDARY STANDBY LOAD				0.452066	REQUIRED STAND BY TIME						
					4				1.808264 AMP HOURS		
PRIMARY ALARM LOAD				6.078	REQUIRED ALARM TIME						
					0.084				0.510589 AMP HOURS		
SUM OF STANDBY AND ALARM AMP HOUR						2.318853		AMP HOURS			
MULTIPLY BY THE DERATING FACTOR						1.2					
BATTERY SIZE, TOTAL AMP HOURS REQUIRED						2.782624		AMP HOURS			
(E) BATTERIES SUPPLIED						(2) 12V 12AH					
(2)12V / 12.0 AMP HOUR BATTERIES REQUIRED											

14 NAC1 BATTERY CALCULATION

QTY.	ITEM	STANDBY	EXT.	ALARM	EXT.
1	NAC 1	0.00000	0.000	1.30500	1.305
1	NAC 2	0.00000	0.000	0.98000	0.980
1	NAC 3	0.00000	0.000	1.77000	1.770
1	NAC 4	0.00000	0.000	1.48000	1.480
1	PANEL	0.00700	0.007	0.20000	0.200
TOTAL		0.007		5.735	
AH= AMP HOURS NEEDED: K= Detection Factor (20%) = 1.2 [Time in Standby(24 hours)*(Load in Standby)]+ [Time in Alarm(5 mins = 0.083)*(Load in Alarm)]*K AH= (24 * 0.007) + (0.083 * 5.735)*1.2=AH AH=(0.17)+(0.48)*1.2 AH=(0.64)*1.2 AH= 0.77					
0.77 AMP HOURS REQUIRED					
(2) 12V / 7.0 AMP HOUR BATTERIES REQUIRED					

KEY NOTES:

14

TYPICAL FOR ALL NAC POWER SUPPLY UNITS FLOORS 2, 3, 4, AND 5.

FACP VOLTAGE DROP CALC- CRT 1				14 NAC1 VOLTAGE DROP CALC- CRT 1			
QTY.	DESCRIPTION	AMPS	TOTAL	QTY.	DESCRIPTION	AMPS	TOTAL
2	STROBE 15CD	0.059	0.118	1	STROBE 15CD	0.059	0.059
2	STROBE 30CD	0.082	0.164	0	STROBE 30CD	0.116	0.000
0	STROBE 75CD	0.153	0.000	0	STROBE 75CD	0.153	0.000
0	HORN/STROBE 15CD	0.059	0.000	0	HORN/STROBE 15CD	0.069	0.000
4	HORN/STROBE 30CD	0.082	0.328	0	HORN/STROBE 30CD	0.107	0.000
0	HORN/STROBE 75CD	0.175	0.000	0	HORN/STROBE 75CD	0.175	0.000
0	HORN/STROBE 110CD	0.218	0.000	1	STROBE 177CD	0.342	0.342
3	HORN	0.069	0.207	13	HORN	0.069	0.897
	TOTAL		0.817		TOTAL		1.298
	WIRE LENGTH		210		WIRE LENGTH		230
VOLTAGE DROP: (A x L x I) / Cm = VD (0.817 X 210 X 21.6) / 4110 = VD VOLTAGE DROP = 0.902				VOLTAGE DROP: (A x L x I) / Cm = VD (1.298 X 230 X 21.6) / 4110 = VD VOLTAGE DROP = 1.569			
% DROP: CIRCUIT VOLTAGE = 20.4 VDC (VOLTAGE DROP / 20.4) * 100 = VD% (0.902 / 20.4) * 100 = 4.42 %				% DROP: CIRCUIT VOLTAGE = 20.4 VDC (VOLTAGE DROP / 20.4) * 100 = VD% (1.569 / 20.4) * 100 = 7.69 %			
19.498	24.000	20.4	4.42	18.831	24.000	20.4	7.69
VOLTS @ LAST UNIT	SOURCE VOLTAGE	BATTERY @ 85%	% VOLTS DROP	VOLTS @ LAST UNIT	SOURCE VOLTAGE	BATTERY @ 85%	% VOLTS DROP
FACP VOLTAGE DROP CALC- CRT 2				14 NAC1 VOLTAGE DROP CALC- CRT 2			
QTY.	DESCRIPTION	AMPS	TOTAL	QTY.	DESCRIPTION	AMPS	TOTAL
1	STROBE 15CD	0.059	0.059	0	STROBE 15CD	0.066	0.000
0	STROBE 30CD	0.116	0.000	0	STROBE 30CD	0.116	0.000
0	STROBE 75CD	0.153	0.000	0	STROBE 75CD	0.153	0.000
0	HORN/STROBE 15CD	0.069	0.000	0	HORN/STROBE 15CD	0.069	0.000
2	HORN/STROBE 30CD	0.082	0.164	4	HORN/STROBE 30CD	0.082	0.328
2	HORN/STROBE 75CD	0.153	0.306	0	HORN/STROBE 75CD	0.175	0.000
0	HORN/STROBE 110CD	0.218	0.000	0	HORN/STROBE 110CD	0.218	0.000
0	HORN	0.069	0.000	8	HORN	0.069	0.552
	TOTAL		0.529		TOTAL		0.880
	WIRE LENGTH		200		WIRE LENGTH		230
VOLTAGE DROP: (A x L x I) / Cm = VD (0.529 X 200 X 21.6) / 4110 = VD VOLTAGE DROP = 0.556				VOLTAGE DROP: (A x L x I) / Cm = VD (0.880 X 230 X 21.6) / 4110 = VD VOLTAGE DROP = 1.064			
% DROP: CIRCUIT VOLTAGE = 20.4 VDC (VOLTAGE DROP / 20.4) * 100 = VD% (0.556 / 20.4) * 100 = 2.73 %				% DROP: CIRCUIT VOLTAGE = 20.4 VDC (VOLTAGE DROP / 20.4) * 100 = VD% (1.064 / 20.4) * 100 = 5.21 %			
19.844	24.000	20.4	2.73	19.336	24.000	20.4	5.21
VOLTS @ LAST UNIT	SOURCE VOLTAGE	BATTERY @ 85%	% VOLTS DROP	VOLTS @ LAST UNIT	SOURCE VOLTAGE	BATTERY @ 85%	% VOLTS DROP
FACP VOLTAGE DROP CALC- CRT 3				14 NAC1 VOLTAGE DROP CALC- CRT 3			
QTY.	DESCRIPTION	AMPS	TOTAL	QTY.	DESCRIPTION	AMPS	TOTAL
1	STROBE 15CD	0.059	0.059	3	STROBE 15CD	0.059	0.177
2	STROBE 30CD	0.082	0.164	0	STROBE 30CD	0.116	0.000
2	STROBE 75CD	0.153	0.306	0	STROBE 75CD	0.153	0.000
1	HORN/STROBE 15CD	0.059	0.059	0	HORN/STROBE 15CD	0.069	0.000
0	HORN/STROBE 30CD	0.107	0.000	0	HORN/STROBE 30CD	0.107	0.000
1	HORN/STROBE 75CD	0.153	0.153	0	HORN/STROBE 75CD	0.175	0.000
1	EXTERIOR HORN	0.112	0.112	3	HORN/STROBE 177CD	0.342	1.026
2	HORN	0.069	0.138	8	HORN	0.069	0.552
	TOTAL		0.991		TOTAL		1.755
	WIRE LENGTH		210		WIRE LENGTH		210
VOLTAGE DROP: (A x L x I) / Cm = VD (0.991 X 210 X 21.6) / 4110 = VD VOLTAGE DROP = 1.094				VOLTAGE DROP: (A x L x I) / Cm = VD (1.755 X 210 X 21.6) / 4110 = VD VOLTAGE DROP = 1.937			
% DROP: CIRCUIT VOLTAGE = 20.4 VDC (VOLTAGE DROP / 20.4) * 100 = VD% (1.094 / 20.4) * 100 = 5.36 %				% DROP: CIRCUIT VOLTAGE = 20.4 VDC (VOLTAGE DROP / 20.4) * 100 = VD% (1.937 / 20.4) * 100 = 9.49 %			
19.306	24.000	20.4	5.36	18.463	24.000	20.4	9.49
VOLTS @ LAST UNIT	SOURCE VOLTAGE	BATTERY @ 85%	% VOLTS DROP	VOLTS @ LAST UNIT	SOURCE VOLTAGE	BATTERY @ 85%	% VOLTS DROP
FACP VOLTAGE DROP CALC- CRT 4				14 NAC1 VOLTAGE DROP CALC- CRT 4			
QTY.	DESCRIPTION	AMPS	TOTAL	QTY.	DESCRIPTION	AMPS	TOTAL
0	STROBE 15CD	0.066	0.000	1	STROBE 15CD	0.059	0.059
0	STROBE 30CD	0.116	0.000	0	STROBE 30CD	0.116	0.000
0	STROBE 75CD	0.153	0.000	0	STROBE 75CD	0.153	0.000
0	HORN/STROBE 15CD	0.069	0.000	0	HORN/STROBE 15CD	0.069	0.000
0	HORN/STROBE 30CD	0.107	0.000	1	HORN/STROBE 30CD	0.082	0.082
0	HORN/STROBE 75CD	0.175	0.000	0	HORN/STROBE 75CD	0.176	0.000
0	HORN/STROBE 115CD	0.245	0.000	1	HORN/STROBE 177CD	0.342	0.342
3	HORN/STROBE 177CD	0.342	1.026	14	HORN	0.069	0.966
	TOTAL		1.026		TOTAL		1.449
	WIRE LENGTH		200		WIRE LENGTH		260
VOLTAGE DROP: (A x L x I) / Cm = VD (1.026 X 200 X 21.6) / 4110 = VD VOLTAGE DROP = 1.078				VOLTAGE DROP: (A x L x I) / Cm = VD (1.449 X 260 X 21.6) / 4110 = VD VOLTAGE DROP = 1.980			
% DROP: CIRCUIT VOLTAGE = 20.4 VDC (VOLTAGE DROP / 20.4) * 100 = VD% (1.078 / 20.4) * 100 = 5.29 %				% DROP: CIRCUIT VOLTAGE = 20.4 VDC (VOLTAGE DROP / 20.4) * 100 = VD% (1.980 / 20.4) * 100 = 9.71 %			
19.322	24.000	20.4	5.29	18.420	24.000	20.4	9.71
VOLTS @ LAST UNIT	SOURCE VOLTAGE	BATTERY @ 85%	% VOLTS DROP	VOLTS @ LAST UNIT	SOURCE VOLTAGE	BATTERY @ 85%	% VOLTS DROP

6 CALCULATIONS