# TWIN RIVERS BLOCK A

SACRAMENTO, CA 95811

# FIRE ALARM SYSTEM

OCCUPANCY CLASS:

CONSTRUCTION TYPE:

RPDA (BACKFLOW DEVICE)

BUILDING ADDRESSES	
BUILDING E - 1200 RICHARDS BLVD	
BUILDING D1 - 1240 RICHARDS BLVD	
BUILDING D1 - 1248 RICHARDS BLVD	
BUILDING D2 - 1254 RICHARDS BLVD	
BUILDING B - 1262 RICHARDS BLVD	
BUILDING C - 1280 RICHARDS BLVD	
BUILDING A3 - 520 PIPEVINE STREET	
BUILDING A3 - 1291 RINGLET AVE	
BUILDING A3 - 1261 RINGLET AVE	
BUILDING A5 - 1243 RINGLET AVE	

PROJECT DECRIPTION NEW CONSTRUCTION OF 10 NEW MIXED-INCOME APARTMENT BUILDINGS, RANGING FROM 2 TO 4 STORIES. 104

SCOPE OF WORK
INSTALLATION OF AUTOMATIC FIRE ALARM SYSTEM PER THESE DRAWINGS. UPON COMPLETION OF
INSTALLATION A COMPLETE PRETEST SHALL BE PERFORM TO VERIFY FUNCTIONALITY OF THE SYSTEM. IF
FUNCTIONALITY IS SATISFACTORY, THEN THE PROPER DOCUMENTION SHALL SUBMITTED TO THE AHJ PRIOR TO
SCHEDULING A FINAL INSPECTION.

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ı	INSTALLATION A COMPLETE PRETEST SHALL BE PERFORM TO VERIFY FUNCTIONALITY OF THE SYSTEM. IF
ı	INSTALLATION OF AUTOMATIC FIRE ALARM SYSTEM PER THESE DRAWINGS. UPON COMPLETION OF

BUILD	INGS A3 & A5 CODE ANALYSIS TABLE
OCCUPANCY CLASS:	R2
CONSTRUCTION TYPE:	TYPE V-B
NUMBER OF LEVELS/ STORIES:	2 STORIES
OVERALL HEIGHT OF BUILDING:	19'-0"
BUILDING TOTAL SQUARE FOOTAGE:	BLDG A3 = 4,382 S.F. BLDG A5 = 7,222 S.F.
TYPE OF SYSTEM:	AUTOMATIC FIRE ALARM SYSTEM
BUILDING IS FULLY SPRINKLERED:	YES (NFPA-13)
MECHANICAL UPGRADE:	YES

MECHANICAL UPGRADE:	YES
BUII	LDINGS B & D CODE ANALYSIS TABLE
OCCUPANCY CLASS:	R2
CONSTRUCTION TYPE:	TYPE V-A
NUMBER OF LEVELS/ STORIES:	3 STORIES
OVERALL HEIGHT OF BUILDING:	29'-0"
BUILDING TOTAL SQUARE FOOTAGE:	BLDGS B & D2 = 17914 S.F. BLDG D1 = 18,588 S.F.
TYPE OF SYSTEM:	AUTOMATIC FIRE ALARM SYSTEM
BUILDING IS FULLY SPRINKLERED:	YES (NFPA-13)
MECHANICAL UPGRADE:	YES

NUMBER OF LEVELS/ STORIES:	3 STORIES
OVERALL HEIGHT OF BUILDING:	29'-0"
BUILDING TOTAL SQUARE FOOTAGE:	7,021 S.F.
TYPE OF SYSTEM:	AUTOMATIC FIRE ALARM SYSTEM
BUILDING IS FULLY SPRINKLERED:	YES (NFPA-13)
MECHANICAL UPGRADE:	YES
BU	JILDING E CODE ANALYSIS TABLE
OCCUPANCY CLASS:	R2, B, A3
CONSTRUCTION TYPE:	TYPE V-A
NUMBER OF LEVELS/ STORIES:	4 STORIES
OVERALL HEIGHT OF BUILDING:	43'-0"
BUILDING TOTAL SQUARE FOOTAGE:	53,608 S.F.
TYPE OF SYSTEM:	AUTOMATIC FIRE ALARM SYSTEM
BUILDING IS FULLY SPRINKLERED:	YES (NFPA-13)
MECHANICAL UPGRADE:	YES
EMERGENCY GENERATOR:	NO NO
OFF-SITE EMERGENCY GENERATOR:	NO
FIRE PUMP	YES

**BUILDING C CODE ANALYSIS TABLE** 

R2

TYPE V-B

			1	SEQU	ENCE OF	OPERA	TIONS MAT	RIX	I			,		T	1
SYSTEM OUTPUTS:	ACTUATE COMMON ALARM SIGNAL INDICATOR	ACTUATE AUDIBLE ALARM SIGNAL	ACTUATE COMMON SUPERVISORY SIGNAL INDICATOR	ACTUATE AUDIBLE SUPERVISORY SIGNAL	ACTUATE COMMON TROUBLE SIGNAL INDICATOR	ACTUATE COMMON TROUBLE SIGNAL	ACTUATE NOTIFICATION APPLIANCE CIRCUITS	ACTUATE ELEVATOR RECALL PRIMARY TO 1ST FLR	ACTUATE ELEVATOR RECALL ALTERNATE 2ND FLR	ACTUATE ELEVATOR SHUNT-TRIP	ACTUATE ELEVATOR SMOKE GUARD	GLOBAL SHUT-DOWN ALL FIRE SMOKE DAMPERS	TRANSMIT FIRE ALARM SIGNAL TO CENTRAL STATION	TRANSMIT SUPERVISORY SIGNAL TO CENTRAL STATION	TRANSMIT TROUBLE SIGNAL TO CENTRAL STATION
SYSTEM INPUTS:															
MANUAL PULL STATION BY PANEL	•	•					•						•		
SMOKE DETECTOR ABOVE PANEL	•	•					•						•		
1ST FLOOR ELEVATOR LOBBY SMOKE DETECTOR	•	•					•		•		•		•		
2ND THRU 4TH FLR ELEVATOR LOBBY SMOKE DETECTOR	•	•					•	•			•		•		
ELEVATOR MACHINE RM SMOKE DETECTOR	•	•					•	•					•		
ELEVATOR MACHINE RM HEAT DETECTOR	•	•					•			•			•		
ELEVATOR SHUNT TRIP 120V POWER LOSS	•						•								
FIRE SMOKE DAMPER SPOT SMOKE DETECTOR. SEE FSD METHOD OF ACTIVATION NOTE (M-3)	•						•					•	•		
WATERFLOW SWITCH ACTIVATED	•	•					•						•		
SPRINKLER ISOLATION VALVE CLOSED			•	•										•	
SITE BACKFLOW VALVE CLOSED			•	•										•	
FACU SYSTEM TROUBLE					•	•									•
FACU AC FAIL					•	•									•
FACU LOW BATTERY					•	•									•
INITIATING ZONE SHORT	•	•					•						•		
SLC LOOP EARTH GROUND					•	•									•
NOTIFICATION CIRCUIT OPEN					•	•									•
NOTIFICATION CIRCUIT SHORT					•	•									•
NOTIFICATION CIRCUIT EARTH GROUND					•	•									•
BOOSTER PANEL AC FAIL					•	•									•
BOOSTER PANEL LOW BATTERY					•	•									•
CELLULAR TROUBLE / COMM FAIL					•	•									•
2 WAY ECS TROUBLE ( COMM FAIL, COMMON TROUBLE)			•	•										•	

SHEET	SHEET DESCRIPTION	SHEET CONTENTS
FA-0.0	TITLE SHEET	SEQ OF OPS, NOTES, CODE ANALYSIS, SCOPE OF WORK, DEVICE LEGEND, WIRE LEGEND, DETAILS
FA-0.1	SITE PLAN	
FA-1.0	BUILDING E - 1ST FLOOR PLAN	1ST FLOOR, FIRE PUMP HOUSE
FA-1.1	BUILDING E - 2ND FLOOR PLAN	
FA-1.2	BUILDING E - 3RD FLOOR PLAN	
FA-1.3	BUILDING E - 4TH FLOOR PLAN	
FA-1.4	BUILDING E - ROOF PLAN	
FA-2.0	BUILDING D1 - FLOOR PLAN	
FA-3.0	BUILDING D2 - FLOOR PLAN	
FA-4.0	BUILDING B - FLOOR PLAN	
FA-5.0	BUILDING C - FLOOR PLAN	
FA-6.0	BUILDING A3 - FLOOR PLAN	
FA-7.0	BUILDING A5 - FLOOR PLAN	
FA-8.0	SYSTEM RISER DIAGRAM - BUILDING E & D1	BUILDING E INCLUDES A3,A5 & FIRE PUMP HOUSE
FA-8.1	SYSTEM RISER DIAGRAM - BUILDINGS D2, B, & C	
FA-9.0	BATTERY & VOLTAGE DROP CALCULATIONS -1	
FA-9.1	BATTERY & VOLTAGE DROP CALCULATIONS -2	
FA-9.2	FURTURE HEARING IMPAIRED UNIT BUILD OUT WORST CASE VOLTAGE DROP CALCULATIONS	
FA-10.0	POINT TO POINT WIRING DETAIL	

	QTY	DEVICE LEGEND & LIS  DESCRIPTION	MANUFACTURE	MODEL	CSFML#	BACKBOX TYPE
FACU	1	FIRE ALARM SYSTEM CONTROL PANEL	SILENT KNIGHT	6820	7165-0559:0500	INCLUDED
FAA	1	REMOTE ANNUNCIATOR	SILENT KNIGHT	5860	7165-0559:0500	INCLUDED
FAC	1	CELLULAR COMMUNICATION PANEL	SILENT KNIGHT	CELL-CAB-SK	7165-0559:0500	INCLUDED
BPS	10	BOOSTER POWER SUPPLY PANEL	SILENT KNIGHT	5495	7300-0559:0123	INCLUDED
	2	12V, 18AH RECHARGEABLE LEAD-ACID BATTERIES	POWER SONIC	PS12180		
	20	12V, 7AH RECHARGEABLE LEAD-ACID BATTERIES	POWER SONIC	PS1270		1
FAD	1	SYSTEM RECORDS CABINET	SPACE AGE	ACE-11	7300-0553:0110	12
<b>③</b>	16	INTELLIGENT PHOTOELECTRIC SMOKE DETECTOR	SILENT KNIGHT	SK-PHOTO-W	7272-0559:0512	4S BOX W/ 3.0 MUDRING
•	1	INTELLIGENT HEAT DETECTOR	SILENT KNIGHT	SK-HEAT-W	7270-0559:0511	4S BOX W/ 3.0 MUDRING
F	1	ADDRESSABLE PULL STATION	SILENT KNIGHT	SK-PULL-SA	7150-0559:0161	4S BOX
ММ	47	ADDRESSABLE SINGLE INPUT MINI MODULE	SILENT KNIGHT	SK-MINI-MON	7300-0559:0155	4S BOX
CR	8	ADDRESSABLE RELAY MODULE	SILENT KNIGHT	SK-RELAY	7300-0559:0155	4S BOX
NR	4	ADDRESSABLE NOTIFICATION MODULE	SILENT KNIGHT	SK-CONTROL	7300-0559:0155	4S BOX
R	3	120VAC, 10 AMP RELAY	AIR PRODUCTS	PAM-1	7300-1004:0101	4S BOX
НЦ	208	HORN (LOW FREQUENCY)	SYSTEM SENSOR	HWL-LF	7135-1653:0516	1-GANG
HØKI	54	MULTI-CANDELA WALL HORN-STROBE	SYSTEM SENSOR	P2WL	7135-1653:0503	1-GANG
c⊠	1	MULTI-CANDELA CEILING HORN-STROBE	SYSTEM SENSOR	PC2WL	7135-1653:0503	1-GANG
vPH図<	2	MULTI-CANDELA WALL HORN-STROBE, WEATHERPROOF	SYSTEM SENSOR	P2WK	7125-1653:0188	SA-WBB
<u> </u>	17	MULTI-CANDELA WALL STROBE	SYSTEM SENSOR	SWL	7125-1653:0504	1-GANG
ζ,	2	MULTI-CANDELA CEILING STROBE	SYSTEM SENSOR	SCWL	7125-1653:0504	1-GANG
	11	SPRINKLER FLOW SWITCH (BY OTHERS)	ми	JST BE CSFM LIST	ED	-
-&-	19	SPRINKLER CONTROL VALVE TAMPER SWITCH (BY OTHERS)	МГ	JST BE CSFM LIST	ED	-
-☆-	1	SITE BACKFLOW TAMPER SWITCH (BY OTHERS)	М	JST BE CSFM LIST	ED	141
FSD —		FIRE SMOKE DAMPERS (BY OTHERS)	MI	JST BE CSFM LIST	FD	72.7

WIRE LEGEND								
WIRE TAG	PURPOSE	TYPE						
D	ADDRESSABLE CIRCUIT	18/2 FPLR SOLID						
V	NAC CIRCUIT	14/2 FPLR SOLID						
T	BPS TRIGGER	18/2 FPLR SOLID						
С	REMOTE ANN	16/4 FPLR SOLID						
U	UNDERGROUND CIRCUIT	SOLID RATED IN CONDUIT 18/2 UNDERGROUND						

5. Penetratine Nominal 4—in Nominal 4—in Nominal 4—in Nominal 4—in APPLICATION 1. Install the	g Item(s): diameter (c) diameter (c) diameter (c) diameter (c)	or smaller), or smaller) rigio or smaller) stee or smaller) flex metrically on b	ninal 4—in. diamor smaller) conduit.  d steel conduit.  el EMT conduit.  ible steel conduit.	t. MAX 4" STEEL F OR CON	DIA. 1/4" MAXIMUM ANNULAR SPACING
Max Pipe ØA	nnular Space	F Rating Hr	T Rating Hr		
1 in. 1 in.	0-3/16 in. 1/4-1/2 in.	1 or 2 3 or 4	0 +,1 or 2 3 or 4		

1- ALL WIRING SHALL BE IN ACCORDANCE WITH CALIFORNIA ELECTRICAL CODE (CEC) AND

4- ALL DEVICES IN THE ALARM SYSTEM SHALL BE COMPATIBLE AND INSTALLED TO THE

2- WIRING SHALL NOT BE LOOPED THROUGH DEVICES UPON TERMINATION. WIRE MUST BE CUT FOR

3- ALL CONDUITS SHALL BE A MINIMUM OF 3/4". CONDUIT SIZES SHALL BE IN ACCORDANCE WITH

7- SMOKE DETECTOR AND HEAT DETECTOR LOCATIONS ARE BASED ON SMOOTH CEILING WITH

ACCORDANCE WITH NATIONAL FIRE ALARM CODE (NFPA 72) UNLESS OTHERWISE NOTED. REFERENCE

9- WALL-MOUNTED STROBE APPLIANCES SHALL BE MOUNTED SUCH THAT THE ENTIRE LENS IS NOT LESS THAN 80 INCHES AND NOT GREATER THAN 96 INCHES ABOVE FINISHED FLOOR LEVEL.

10- OPERABLE PORTION OF MANUAL PULL STATIONS SHALL BE MOUNTED AT 48" ABOVE FINISHED

12- INITIATION DEVICE CIRCUITS ARE RATED POWER LIMITED. MINIMUM RECOMMENDED WIRE SIZE

14- WHERE SHIELDED CABLE IS USED, THE SHIELD SHALL BE CONTINUOUS AND GROUNDED ONLY AT

13- CONTROL CIRCUITS ARE NON-POWER LIMITED. MINIMUM RECOMMENDED WIRE SIZE TO BE

15- REFER TO RESPECTIVE CATALOG CUT SHEETS FOR ELECTRICAL MOUNTING HARDWARE.

OF THE ENTIRE SYSTEM SHALL BE PERFORMED IN THE PRESENCE OF THE AHJ.

20- AUDIBILITY WILL BE DETERMINED BY THE FIELD FIRE MARSHAL.

OF THE PANEL OR NEXT TO THE PANEL ON THE WALL.

27- 48 HOUR ADVANCE NOTICE REQUIRED FOR ALL INSPECTIONS

INSPECTOR AT TIME OF FINAL ACCEPTANCE INSPECTION/TESTING.

29- A 24 HOUR LISTED FIRE MONITORING SERVICES SHALL RECEIVE SIGNALS.

30- ROOM IN WHICH FACP IS LOCATED SHALL BE LABEL ACCORDING TO FD POLICY.

25- FIRE BELL SHALL BE ON IT'S OWN BREAKER.

16- T-TAPPING OR PARALLEL BRANCHING OF ADDRESSABLE INITIATION DEVICE CIRCUITS IS PERMITTED ON CLASS B CIRCUITS ONLY, T-TAPPING IS PROHIBITED ON ANY OTHER CIRCUITS (I.E.

17- PHOTOELECTRIC DETECTORS SHALL NOT BE WITHIN 36" OF DIRECT AIR STREAM SUPPLY AIR

18- UPON COMPLETION OF THE INSTALLATION OF THE FIRE ALARM SYSTEM, A SATISFACTORY TEST

19- ALL DEVICES OF THE FIRE ALARM SYSTEM SHALL BE APPROVED AND LISTED BY THE CALIFORNIA

21- FIRE ALARM INSTALLER IN CHARGE OF THIS PROJECT MUST BE "STATE CERTIFIED" WITH THE DIVISION OF APPRENTICESHIP STANDARDS, AND SHALL FURNISH ID CARD UPON REQUEST LOCAL

22- INITIATION AND NOTIFICATION CIRCUITS SHALL BE CLEARLY IDENTIFIED AT ALL JUNCTION

23- THE TELEPHONE NUMBER OF THE 24 HOUR MONITORING SERVICE SHALL BE PLACE ON THE DOOR

24- CIRCUIT BREAKER FOR THE FIRE ALARM PANEL SHALL BE RED IN COLOR AND HAVE A LOCK OUT

DISTINCTIVE THREE-PULSE TEMPORAL PULSE FIRE ALARM SIGNAL IN ACCORDANCE WITH SECTION

28- ACCESS KEYS FOR FACP AND PULLSTATIONS SHALL BE PROVIDED AND LABELED FOR PLACEMENT

31- CALL FOR FINAL FIRE ALARM TEST AND INSPECTION AT LEAST 24 HOURS IN ADVANCE. APPROVED PLANS MUST BE ON SITE FOR FINAL INSPECTION. ALL AREAS THAT REQUIRE INSPECTION MUST BE ACCESSIBLE. THIS MAY MEAN HAVING A LIFT ON SITE TO INSPECT/TEST WORK, AS REQUIRED.

32- AN NFPA 72 2016 RECORD OF COMPLETION SHALL BE COMPLETED AND PROVIDED TO THE FIRE

26- ALL NOTIFICATION APPLIANCES INSTALLED WITHIN THIS PROJECT SHALL PROVIDE A

11- FIRE ALARM SIGNAL SHALL MEET ANSI V3.41, AUDIBLE EMERGENCY EVACUATION SIGNAL

FLOOR LEVEL.

(TEMPORAL PATTERN).

DETERMINED BY CIRCUIT LOAD.

THE RESPECTIVE CONTROL PANEL.

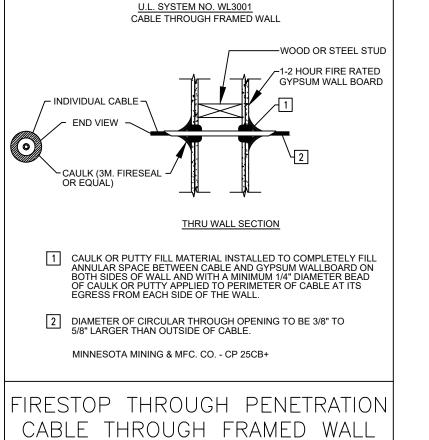
NAC, IDC, PANEL NETWORK WIRING).

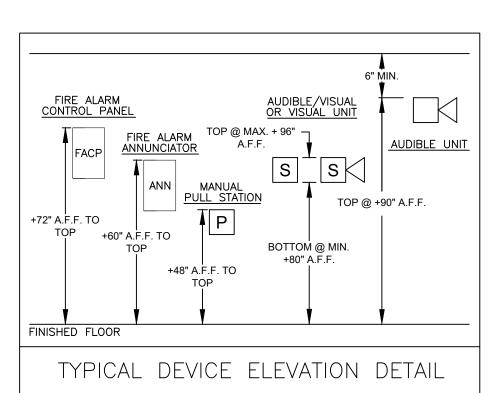
STATE FIRE MARSHAL.

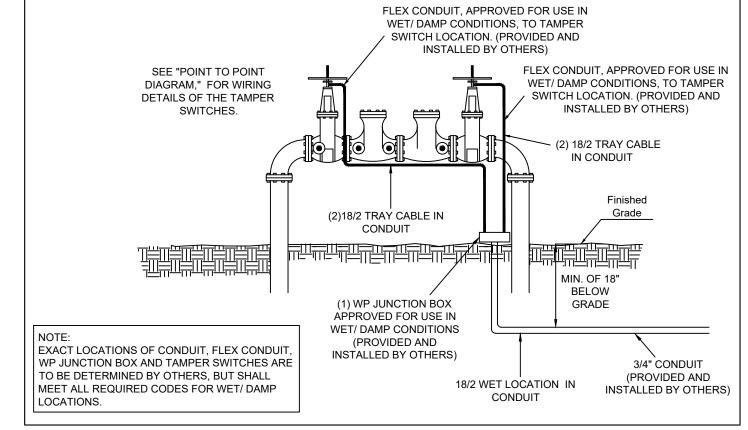
IN THE KNOX BOX.

8- STROBE LOCATIONS ARE BASED ON 10 FOOT CEILING HEIGHTS AND ARE INSTALLED IN

FIRESTOP THROUGH PENETRATION GYPSUM WALLBOARD (1 HR)



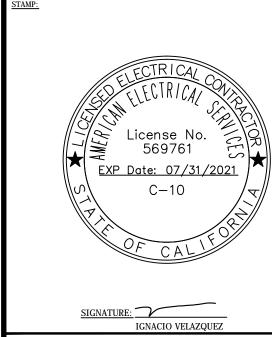








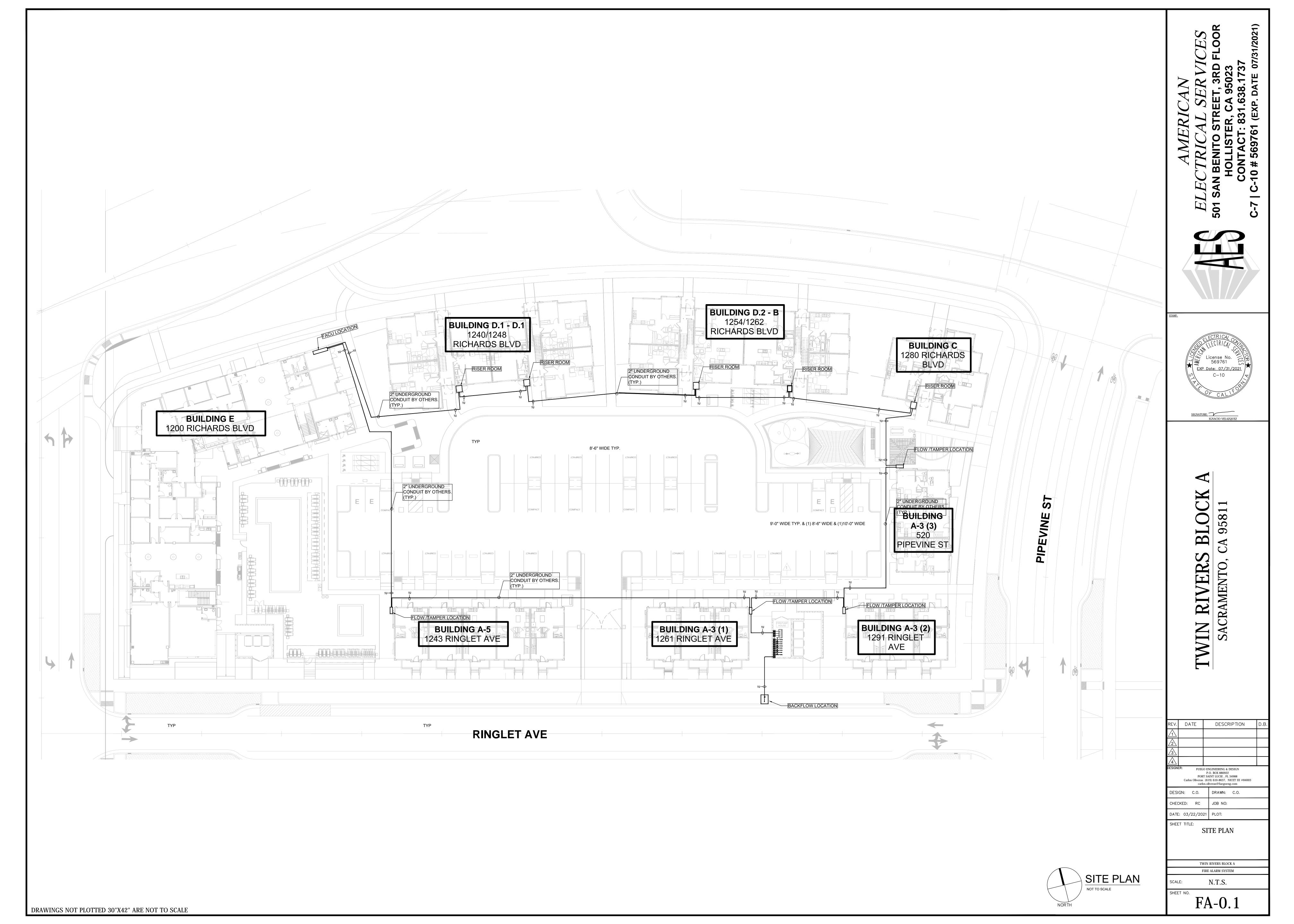


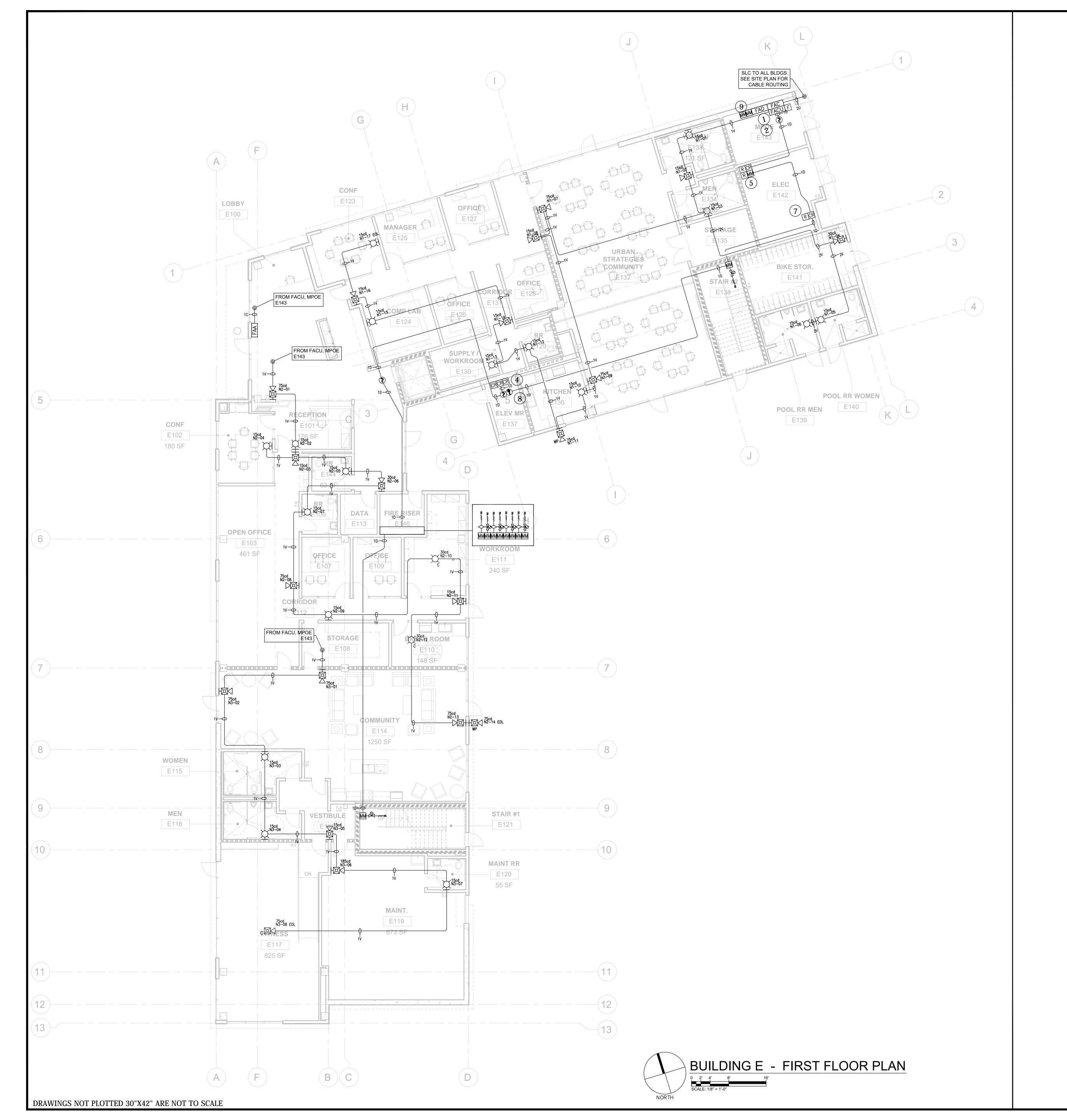


DESCRIPTION P.O. BOX 880922 PORT SAINT LUCIE, FL 34988 Carlos Oliveras (619) 610-8637, NICET III #84003 carlos.oliveras@fuegoeng.com DESIGN: C.O. DRAWN: C.O. CHECKED: RC DATE: 03/22/2021 PLOT: TITLE SHEET

TWIN RIVERS BLOCK A FIRE ALARM SYSTEM N.T.S.

FA-0.0





SMOKE DAMPER ACTUATION WHERE A SMOKE DAMPER IS INSTALLED WITHIN A DUCT, A SMOKE DETECTOR SHALL BE INSTALLED IN THE DUCT WITHIN 5' OF THE DAMPER WITH NO AIR OUTLETS OR INLETS BETWEEN THE DETECTOR AND THE DAMPER. THE DETECTOR SHALL BE LISTED FOR THE AIR VELOCITY, TEMPERATURE AND HUMIDITY ANTICIPATED AT THE POINT WHERE IT IS INSTALLED. OTHER THAN IN MECHANICAL SMOKE CONTROL SYSTEMS, DAMPERS SHALL BE CLOSED UPON FAN SHUTDOWN WHERE LOCAL SMOKE DETECTORS REQUIRE A MINIMUM VELOCITY TO OPERATE.

> WHERE A SMOKE DAMPER IS INSTALLED ABOVE SMOKE BARRIER DOORS IN A SMOKE BARRIER, A SPOT-TYPE DETECTOR LISTED FOR RELEASING SERVICE SHALL BE INSTALLED ON EITHER SIDE OF THE SMOKE BARRIER DOOR

WHERE A SMOKE DAMPER IS INSTALLED IN AN AIR TRANSFER OPENING IN A WALL, A SPOT-TYPE DETECTOR LISTED FOR RELEASING SERVICE SHALL INSTALLED WITHIN 5' HORIZONTALLY OF THE DAMPER. WHERE A SMOKE DAMPER IS INSTALLED IN A CORRIDOR WALL OR CEILING, THE DAMPER SHALL BE PERMITTED TO BE CONTROLLED BY A SMOKE DETECTION SYSTEM INSTALLED IN

REFER TO 716.3.3.2 (CBC 2019)

WHERE A TOTAL-COVERAGE SMOKE-DETECTION SYSTEM IS
PROVIDED WITHIN AREAS SERVED BY A HEATING, VENTILATION
AND AIR-CONDITIONING (HVAC) SYSTEM, SMOKE DAMPERS SHALL
BE PERMITTED TO BE CONTROLLED BY THE SMOKE DETECTION

	KEY NOTES
	120 VAC, 20 AMP DEDICATED CIRCUIT TO FACP / BOOSTER POWER SUPPLIES PROVIDED BY OTHERS. BREAKER SHALL BE RED IN COLOR AND LOCKED OUT IN THE "ON" POSITION.
	INSTALL SYSTEMS RECORD CABINET ADJACENT TO FACP.
3)	INSTALL SMOKE DETECTOR NO MORE THAN 5 FEET FROM FIRE CONTROL / BOOSTER POWER SUPPLY PANEL.
1)	ELEVATOR RECALL RELAY MODULES. FIELD VERIFY LOCATION. INSTALL NO MORE THAN 3'-0" AWAY FROM INTERFACE DEVICE.
5)	ELEVATOR SHUNT-TRIP MODULES. FIELD VERIFY LOCATION. INSTALL NO MORE THAN 3'-0" AWAY FROM

AWAY FROM AWAY FROM INTERFACE DEVICE. SMOKE GUARD INTERFACE RELAY. FIELD VERIFY LOCATION AND COORDINATE WITH ELEVATOR CONTRACTOR.

FIRE SMOKE DAMPER ACTIVATION RELAY. FIELD VERIFY LOCATION WITH ELECTRIC CONTRACTOR. INSTALL HEAT DETECTOR NO MORE THAN 24" FROM SPRINKLER HEAD.

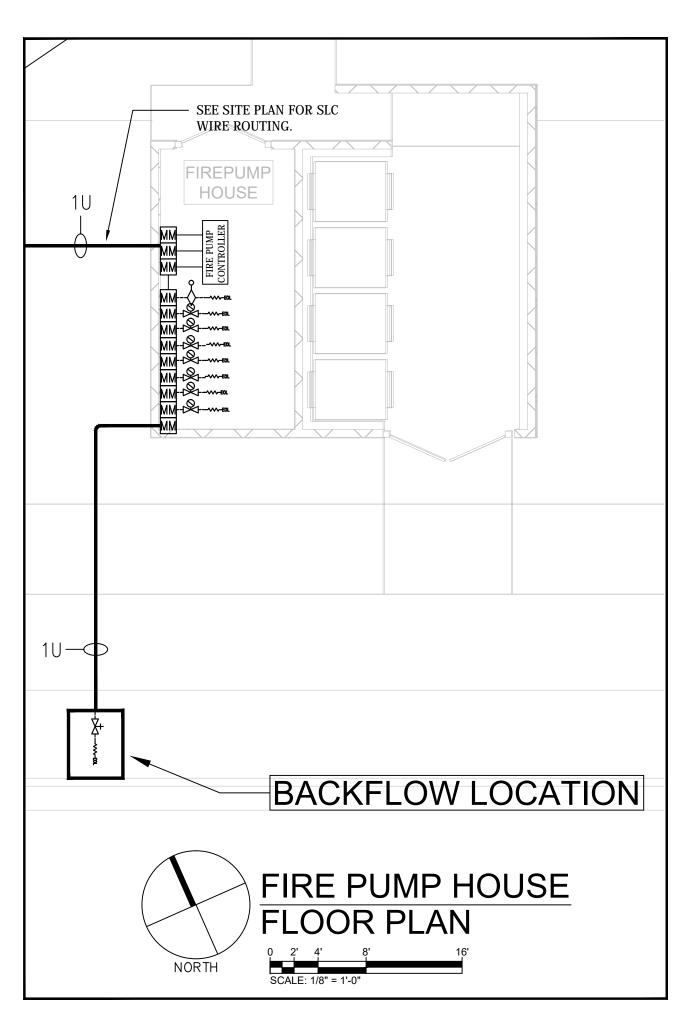
NOTIFICATION MODULE USE TO TRIGGER BPS.

2 WAY ECS MONITOR MODULES.

1. SMOKE ALARMS IN UNITS INSTALLED BY ELECTRICAL CONTRACTOR. REFERENCE ELECTRICAL PLAN FOR LOCATIONS.

DEVICE 1	LEGEND
DEVICE	
SYMBOL	DESCRIPTION
FACU	FIRE ALARM SYSTEM CONTROL PANEL
FAA	REMOTE ANNUNICATOR
FAC	CELLULAR COMMUNICATOR
FAD	FIRE ALARM DOCUMENT CABINET
BPS	BOOSTER POWER SUPPLY
<b>®</b>	SMOKE DETECTOR
•	. HEAT DETECTOR
F	ADDRESSABLE PULL STATION
ММ	ADDRESSABLE INPUT MODULE
CR	ADDRESSABLE RELAY MODULE
R	10 AMP PAM RELAY
NR	NOTIFICATION MODULE
$\Box$	HORN LOW FREQ
HØKI	HORN-STROBE WALL
WP HX	HORN-STROBE WALL, WP
	HORN-STROBE CEILING
ğ	STROBE CEILING
<u> </u>	STROBE WALL
_ <u>\</u>	SPRINKLER FLOW SWITCH
	SPRINKLER TAMPER SWITCH
- <del>-</del>	SPRINKLER BACKFLOW SWITCH
FSD —	FIRE SMOKE DAMPER

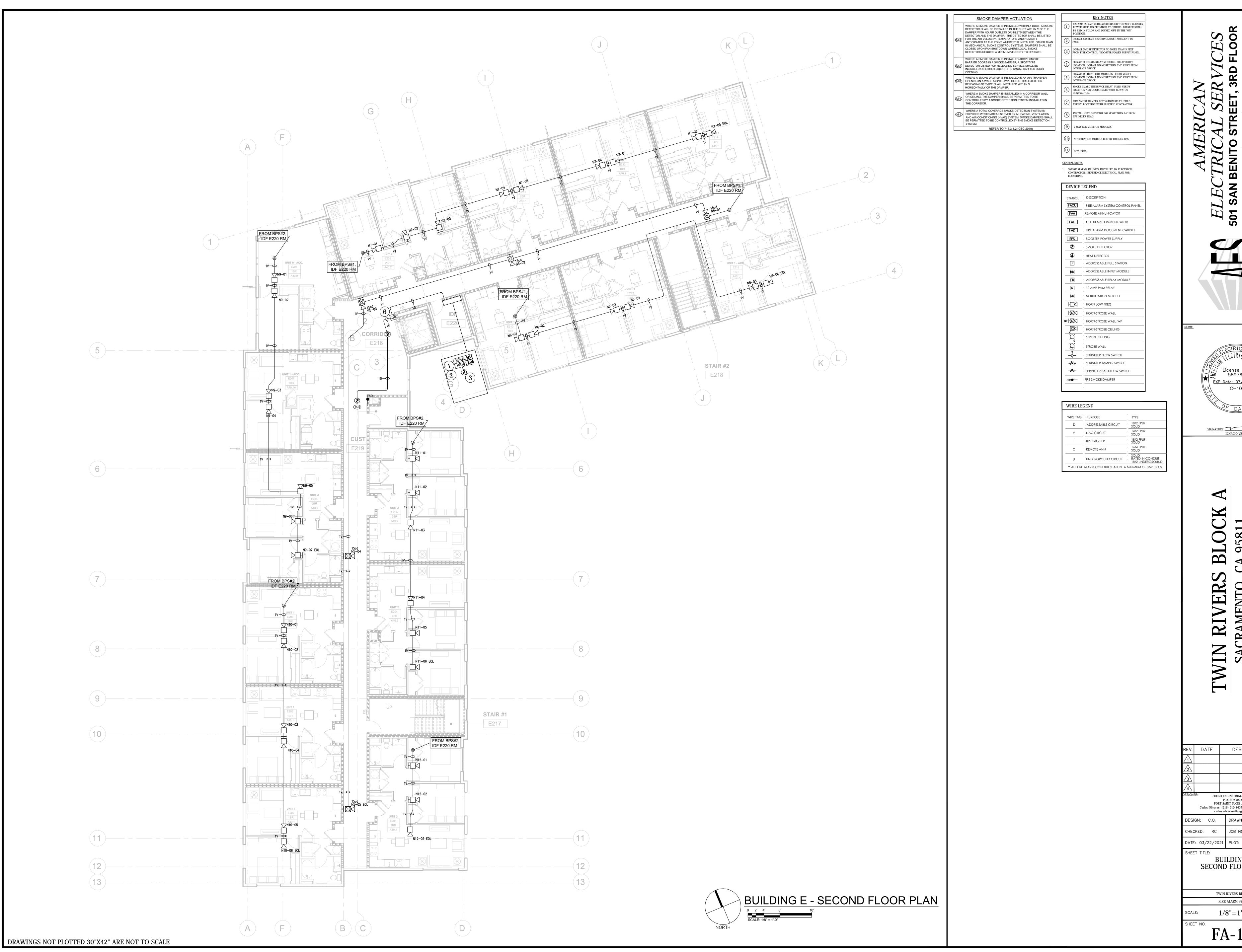
WIRE LEC	GEND	
WIRE TAG	PURPOSE	. TYPE
D ,	ADDRESSABLE CIRCUIT	18/2 FPLR SOLID
V	NAC CIRCUIT	14/2 FPLR SOLID
T .	BPS TRIGGER	18/2 FPLR SOLID
С	REMOTE ANN	16/4 FPLR SOLID
U	UNDERGROUND CIRCUIT	SOLID RATED IN CONDUIT 18/2 UNDERGROUN



DESCRIPTION V. DATE PORT SAINT LUCIE , FL 34988
Carlos Oliveras (619) 610-8637, NICET III #84003
carlos.oliveras@fuegoeng.com CHECKED: RC DATE: 03/22/2021 PLOT: SHEET TITLE: BUILDING E FIRE FLOOR PLAN TWIN RIVERS BLOCK A

FIRE ALARM SYSTEM

1/8" = 1'-0"



License No. 569761

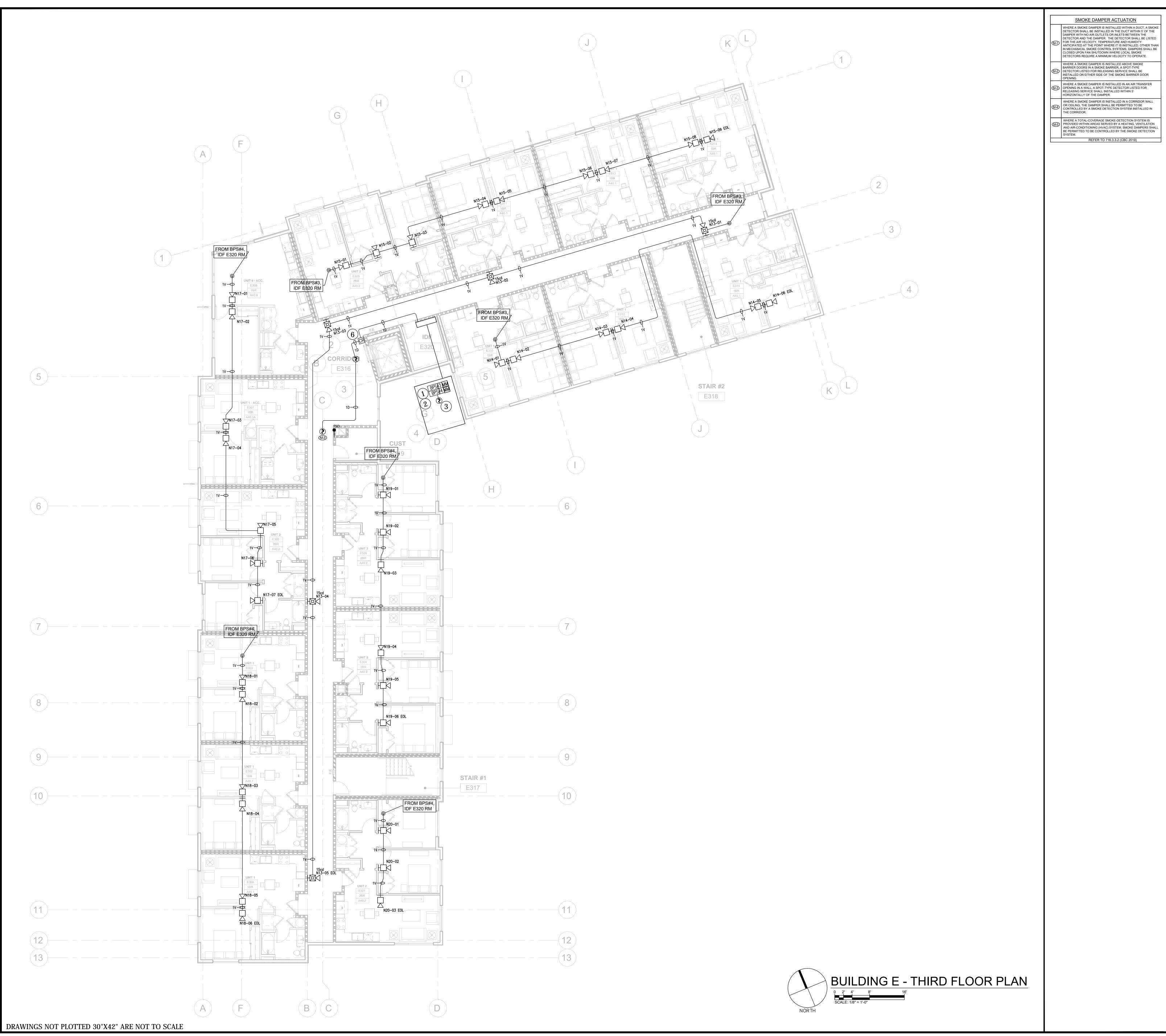
DESCRIPTION

P.O. BOX 880922 PORT SAINT LUCIE , FL 34988 carlos.oliveras@fuegoeng.com

Carlos Oliveras (619) 610-8637, NICET III #84003 DESIGN: C.O. DRAWN: C.O. CHECKED: RC JOB NO:

BUILDING E SECOND FLOOR PLAN

TWIN RIVERS BLOCK A FIRE ALARM SYSTEM 1/8"=1'-0"



- WHERE A SMOKE DAMPER IS INSTALLED IN A CORRIDOR WALL OR CEILING, THE DAMPER SHALL BE PERMITTED TO BE CONTROLLED BY A SMOKE DETECTION SYSTEM INSTALLED IN THE CORRIDOR.
  - - INSTALL HEAT DETECTOR NO MORE THAN 24" FROM SPRINKLER HEAD.
    - 10 NOTIFICATION MODULE USE TO TRIGGER BPS.

# SMOKE ALARMS IN UNITS INSTALLED BY ELECTRICAL CONTRACTOR. REFERENCE ELECTRICAL PLAN FOR LOCATIONS.

120 VAC, 20 AMP DEDICATED CIRCUIT TO FACE / BOOSTER POWER SUPPLIES PROVIDED BY OTHERS. BREAKER SHALL BE RED IN COLOR AND LOCKED OUT IN THE "ON"

INSTALL SYSTEMS RECORD CABINET ADJACENT TO

3 INSTALL SMOKE DETECTOR NO MORE THAN 5 FEET FROM FIRE CONTROL / BOOSTER POWER SUPPLY PANEL.

ELEVATOR RECALL RELAY MODULES. FIELD VERIFY LOCATION. INSTALL NO MORE THAN 3'-0" AWAY FROM INTERFACE DEVICE.

ELEVATOR SHUNT-TRIP MODULES. FIELD VERIFY
LOCATION. INSTALL NO MORE THAN 3'-0" AWAY FROM
INTERFACE DEVICE.

 SMOKE GUARD INTERFACE RELAY, FIELD VERIFY
LOCATION AND COORDINATE WITH ELEVATOR
CONTRACTOR.

7 FIRE SMOKE DAMPER ACTIVATION RELAY. FIELD VERIFY LOCATION WITH ELECTRIC CONTRACTOR.

LOCATIONS.	
DEVICE I	LEGEND
SYMBOL	DESCRIPTION
FACU	FIRE ALARM SYSTEM CONTROL PANEL
FAA	REMOTE ANNUNICATOR
FAC	CELLULAR COMMUNICATOR
FAD	FIRE ALARM DOCUMENT CABINET
BPS	. BOOSTER POWER SUPPLY
<b>®</b>	. SMOKE DETECTOR
•	· HEAT DETECTOR
F	ADDRESSABLE PULL STATION
ММ	· ADDRESSABLE INPUT MODULE
CR	· ADDRESSABLE RELAY MODULE
R	· 10 AMP PAM RELAY
NR	NOTIFICATION MODULE
$\Box$	HORN LOW FREQ
HØQ	HORN-STROBE WALL
wp HXX	HORN-STROBE WALL, WP
	HORN-STROBE CEILING
ď	STROBE CEILING
Ä	. STROBE WALL
_\$_	· SPRINKLER FLOW SWITCH
	· SPRINKLER TAMPER SWITCH
- <del> </del>	SPRINKLER BACKFLOW SWITCH
FSD⊕	FIRE SMOKE DAMPER

VIRE LEG	GEND	
WIRE TAG	PURPOSE	TYPE
D	ADDRESSABLE CIRCUIT	· 18/2 FPLR SOLID
V	NAC CIRCUIT	. 14/2 FPLR . SOLID
T	BPS TRIGGER	18/2 FPLR SOLID
С	REMOTE ANN	. 16/4 FPLR . SOLID
U	· UNDERGROUND CIRCUIT	SOLID RATED IN COND 18/2 UNDERGRO



License No. 569761

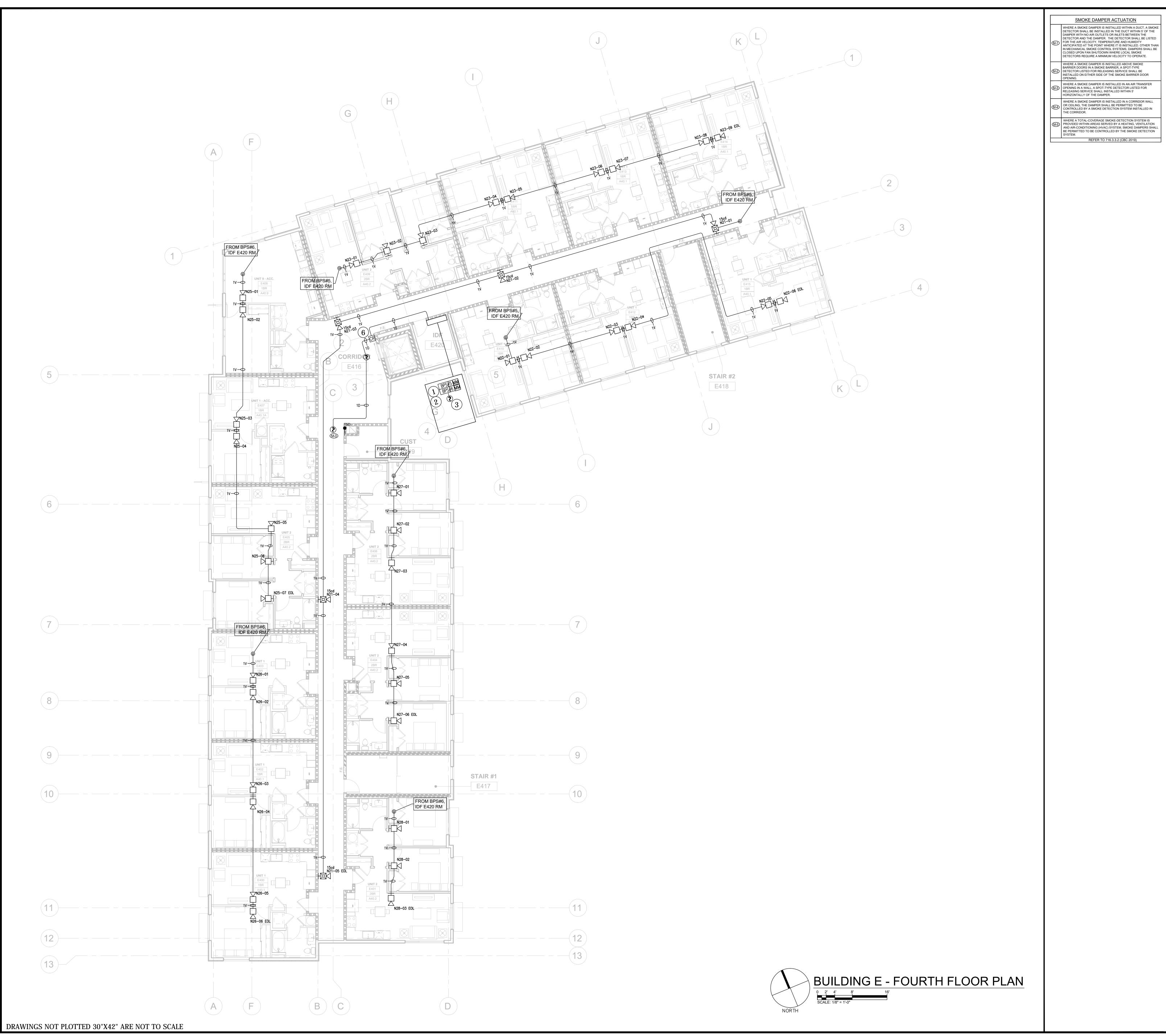
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DESIGN: C.O.	DRAWN: C.O.
CHECKED: RC	JOB NO:
DATE: 03/22/2021	PLOT:
	ILDING E FLOOR PLAN

TWIN RIVERS BLOCK A FIRE ALARM SYSTEM

FA-1.2

1/8"=1'-0"



- WHERE A SMOKE DAMPER IS INSTALLED IN A CORRIDOR WALL OR CEILING, THE DAMPER SHALL BE PERMITTED TO BE CONTROLLED BY A SMOKE DETECTION SYSTEM INSTALLED IN THE CORRIDOR.
- WHERE A TOTAL-COVERAGE SMOKE-DETECTION SYSTEM IS PROVIDED WITHIN AREAS SERVED BY A HEATING, VENTILATION AND AIR-CONDITIONING (HVAC) SYSTEM, SMOKE DAMPERS SHALL BE PERMITTED TO BE CONTROLLED BY THE SMOKE DETECTION SYSTEM.
- 120 VAC, 20 AMP DEDICATED CIRCUIT TO FACE / BOOSTER POWER SUPPLIES PROVIDED BY OTHERS. BREAKER SHALL BE RED IN COLOR AND LOCKED OUT IN THE "ON"
  - INSTALL SYSTEMS RECORD CABINET ADJACENT TO
  - 3 INSTALL SMOKE DETECTOR NO MORE THAN 5 FEET FROM FIRE CONTROL / BOOSTER POWER SUPPLY PANEL.
- ELEVATOR RECALL RELAY MODULES. FIELD VERIFY LOCATION. INSTALL NO MORE THAN 3'-0" AWAY FROM INTERFACE DEVICE.
- ELEVATOR SHUNT-TRIP MODULES. FIELD VERIFY
  LOCATION. INSTALL NO MORE THAN 3'-0" AWAY FROM
  INTERFACE DEVICE.

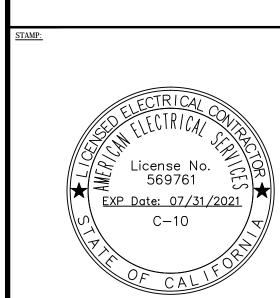
  SMOKE GUARD INTERFACE RELAY. FIELD VERIFY
  LOCATION AND COORDINATE WITH ELEVATOR
  CONTRACTOR.
- 7 FIRE SMOKE DAMPER ACTIVATION RELAY. FIELD VERIFY LOCATION WITH ELECTRIC CONTRACTOR.
  - INSTALL HEAT DETECTOR NO MORE THAN 24" FROM SPRINKLER HEAD.

  - 10 NOTIFICATION MODULE USE TO TRIGGER BPS.

## SMOKE ALARMS IN UNITS INSTALLED BY ELECTRICAL CONTRACTOR. REFERENCE ELECTRICAL PLAN FOR LOCATIONS.

DEVICE	LEGEND
SYMBOL	DESCRIPTION
FACU	FIRE ALARM SYSTEM CONTROL PANEL
FAA	REMOTE ANNUNICATOR
FAC	CELLULAR COMMUNICATOR
FAD	FIRE ALARM DOCUMENT CABINET
BPS	, BOOSTER POWER SUPPLY
<b>②</b>	. SMOKE DETECTOR
•	HEAT DETECTOR
F	ADDRESSABLE PULL STATION
ММ	· ADDRESSABLE INPUT MODULE
CR	· ADDRESSABLE RELAY MODULE
R	· 10 AMP PAM RELAY
NR	NOTIFICATION MODULE
ЮΝ	HORN LOW FREQ
- M	HORN-STROBE WALL
wp HXX	HORN-STROBE WALL, WP
	HORN-STROBE CEILING
ğ	STROBE CEILING
ğ	. STROBE WALL
<b>-</b> \$−	SPRINKLER FLOW SWITCH
-&-	SPRINKLER TAMPER SWITCH
- <del> </del>	· SPRINKLER BACKFLOW SWITCH
FSD	· FIRE SMOKE DAMPER

WIRE LEG	GEND	
WIRE TAG	PURPOSE	TYPE
D	ADDRESSABLE CIRCUIT	· 18/2 FPLR SOLID
٧	NAC CIRCUIT	. 14/2 FPLR . SOLID
T	BPS TRIGGER	18/2 FPLR SOLID
С	REMOTE ANN	. 16/4 FPLR . SOLID
U	UNDERGROUND CIRCUIT	SOLID RATED IN CONDUIT 18/2 UNDERGROUI

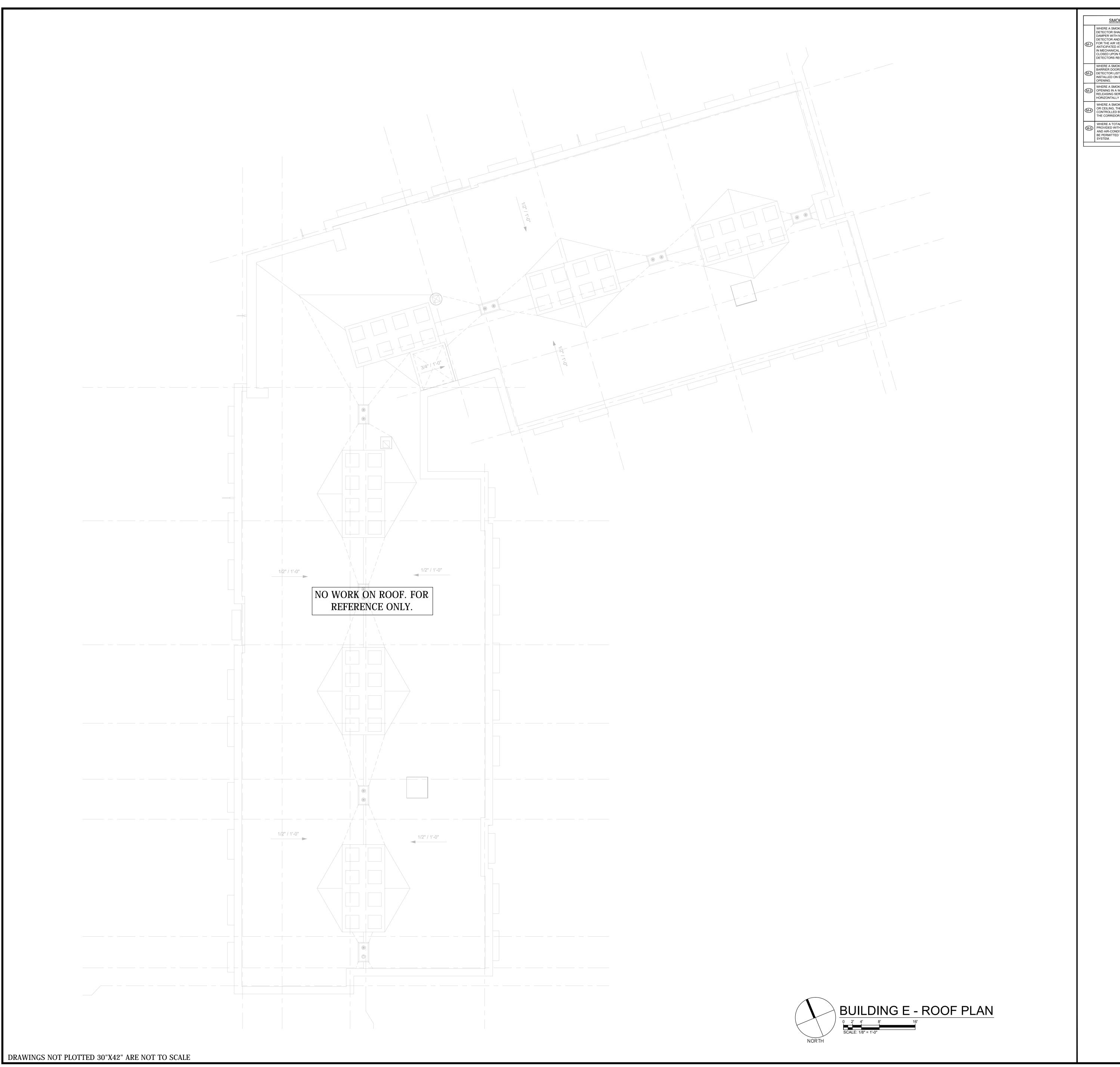


DESCRIPTION PORT SAINT LUCIE , FI 34988
Carlos Oliveras (619) 610-8637, NICET III #84003
carlos.oliveras@fuegoeng.com DESIGN: C.O. DRAWN: C.O.

DATE: 03/22/2021 PLOT: SHEET TITLE: BUILDING E FOURTH FLOOR PLAN

CHECKED: RC

TWIN RIVERS BLOCK A FIRE ALARM SYSTEM 1/8"=1'-0"



- WHERE A SMOKE DAMPER IS INSTALLED WITHIN A DUCT, A SMOKE DETECTOR SHALL BE INSTALLED IN THE DUCT WITHIN 5' OF THE DAMPER WITH NO AIR OUTLETS OR INLETS BETWEEN THE DETECTOR AND THE DAMPER. THE DETECTOR SHALL BE LISTED FOR THE AIR VELOCITY, TEMPERATURE AND HUMIDITY ANTICIPATED AT THE POINT WHERE IT IS INSTALLED. OTHER THAN IN MECHANICAL SMOKE CONTROL SYSTEMS, DAMPERS SHALL BE CLOSED UPON FAN SHUTDOWN WHERE LOCAL SMOKE DETECTORS REQUIRE A MINIMUM VELOCITY TO OPERATE.
- WHERE A SMOKE DAMPER IS INSTALLED ABOVE SMOKE BARRIER DOORS IN A SMOKE BARRIER, A SPOT-TYPE DETECTOR LISTED FOR RELEASING SERVICE SHALL BE INSTALLED ON EITHER SIDE OF THE SMOKE BARRIER DOOR OPENING.
- WHERE A SMOKE DAMPER IS INSTALLED IN AN AIR TRANSFER OPENING IN A WALL, A SPOT-TYPE DETECTOR LISTED FOR RELEASING SERVICE SHALL INSTALLED WITHIN 5' HORIZONTALLY OF THE DAMPER.
- WHERE A SMOKE DAMPER IS INSTALLED IN A CORRIDOR WALL OR CEILING, THE DAMPER SHALL BE PERMITTED TO BE CONTROLLED BY A SMOKE DETECTION SYSTEM INSTALLED IN THE CORRIDOR.
- MI-5
  WHERE A TOTAL-COVERAGE SMOKE-DETECTION SYSTEM IS
  PROVIDED WITHIN AREAS SERVED BY A HEATING, VENTILATION
  AND AIR-CONDITIONING (HVAC) SYSTEM, SMOKE DAMPERS SHALL
  BE PERMITTED TO BE CONTROLLED BY THE SMOKE DETECTION
  SYSTEM.

ON	KEY NOTES		
N A DUCT, A SMOKE WITHIN 5' OF THE WEEN THE SHALL BE LISTED	1	120 VAC, 20 AMP DEDICATED CIRCUIT TO FACP / B POWER SUPPLIES PROVIDED BY OTHERS. BREAKER BE RED IN COLOR AND LOCKED OUT IN THE "ON" POSITION.	
JMIDITY	(0)	INSTALL SYSTEMS RECORD CABINET ADJACENT TO	

INSTALL SMOKE DETECTOR NO MORE THAN 5 FEET FROM FIRE CONTROL / BOOSTER POWER SUPPLY PANEL.

4 ELEVATOR RECALL RELAY MODULES. FIELD VERIFY LOCATION. INSTALL NO MORE THAN 3'-0" AWAY FROM INTERFACE DEVICE.

ELEVATOR SHUNT-TRIP MODULES. FIELD VERIFY
LOCATION. INSTALL NO MORE THAN 3'-0" AWAY FROM INTERFACE DEVICE.

 SMOKE GUARD INTERFACE RELAY. FIELD VERIFY LOCATION AND COORDINATE WITH ELEVATOR CONTRACTOR.

7 FIRE SMOKE DAMPER ACTIVATION RELAY. FIELD VERIFY LOCATION WITH ELECTRIC CONTRACTOR.

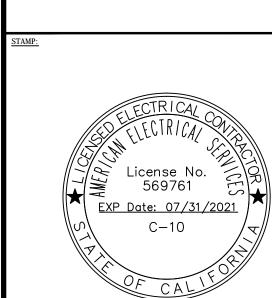
8 INSTALL HEAT DETECTOR NO MORE THAN 24" FROM SPRINKLER HEAD.

10 NOTIFICATION MODULE USE TO TRIGGER BPS.

SMOKE ALARMS IN UNITS INSTALLED BY ELECTRICAL CONTRACTOR. REFERENCE ELECTRICAL PLAN FOR LOCATIONS.

DEVICE L	EGEND
SYMBOL	DESCRIPTION
FACU	FIRE ALARM SYSTEM CONTROL PANEL
FAA	REMOTE ANNUNICATOR
FAC	CELLULAR COMMUNICATOR
FAD	FIRE ALARM DOCUMENT CABINET
BPS	BOOSTER POWER SUPPLY
<b>®</b>	SMOKE DETECTOR
	HEAT DETECTOR
F	ADDRESSABLE PULL STATION
ММ	ADDRESSABLE INPUT MODULE
CR	ADDRESSABLE RELAY MODULE
R	10 AMP PAM RELAY
NR	NOTIFICATION MODULE
ЮΝ	HORN LOW FREQ
H⊠<	HORN-STROBE WALL
WP HXX	HORN-STROBE WALL, WP
	HORN-STROBE CEILING
<u>ď</u>	STROBE CEILING
<u> </u>	STROBE WALL
-\$-	SPRINKLER FLOW SWITCH
-&-	SPRINKLER TAMPER SWITCH
- <del> </del>	SPRINKLER BACKFLOW SWITCH

WIRE TAG	PURPOSE	TYPE
D	ADDRESSABLE CIRCUIT	18/2 FPLR SOLID
٧	NAC CIRCUIT	. 14/2 FPLR . SOLID
T	BPS TRIGGER	18/2 FPLR SOLID
С	REMOTE ANN	. 16/4 FPLR . SOLID
U	UNDERGROUND CIRCUIT	SOLID RATED IN CONDU 18/2 UNDERGRO



TWIN RIVERS
SACRAMENTO, C.

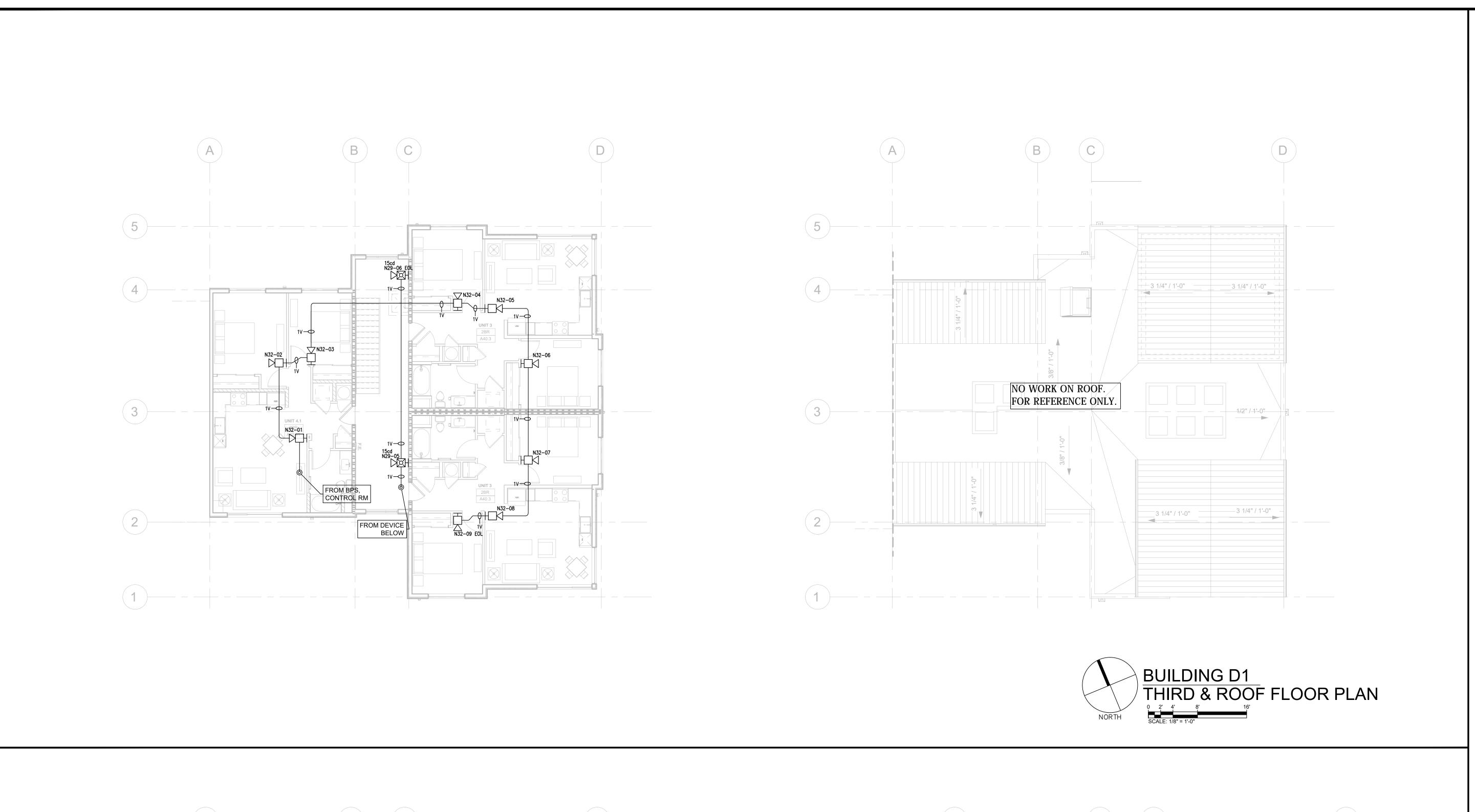
DESCRIPTION PORT SAINT LUCIE , FI 34988
Carlos Oliveras (619) 610-8637, NICET III #84003
carlos.oliveras@fuegoeng.com

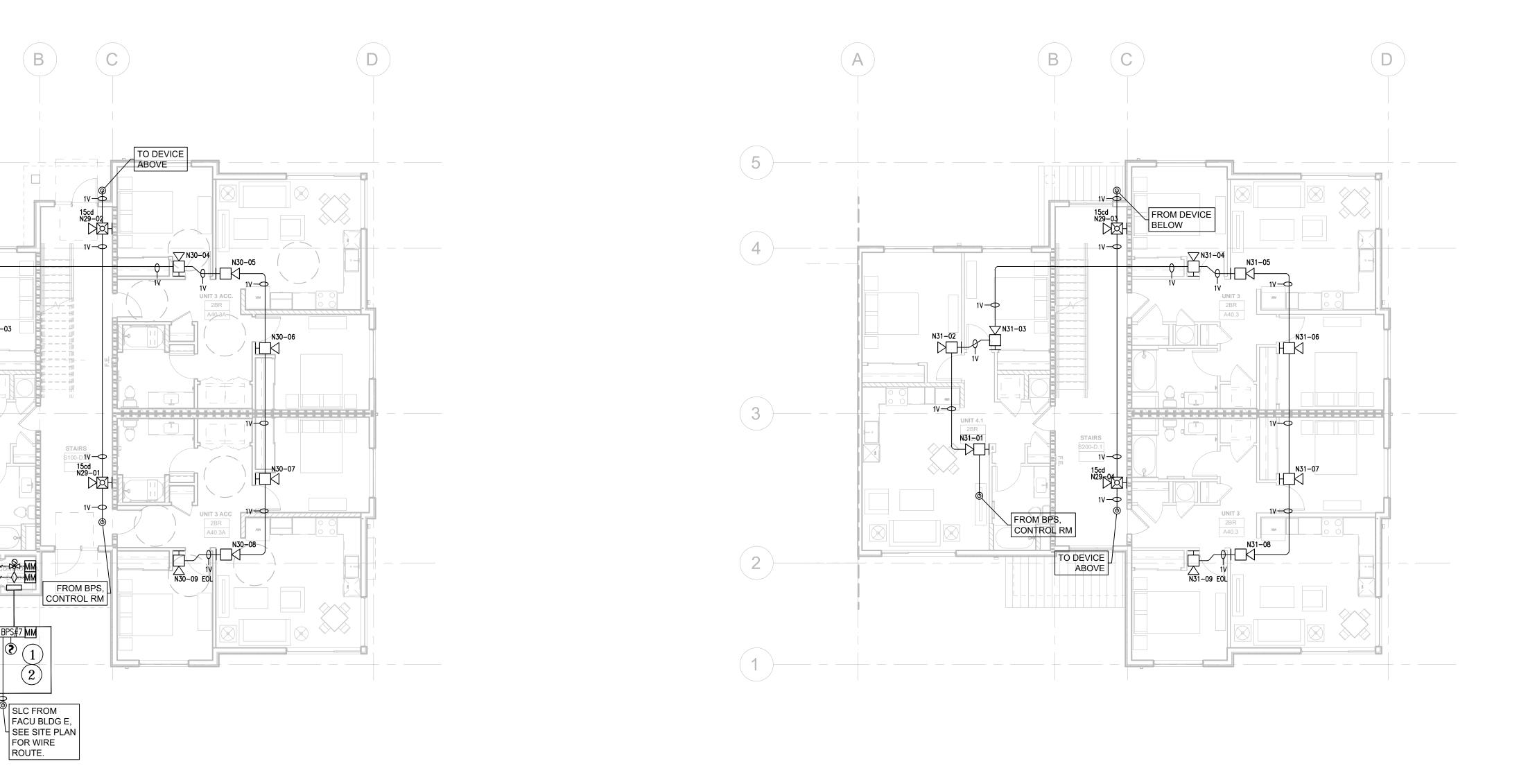
DATE: 03/22/2021 PLOT: SHEET TITLE: BUILDING E ROOF PLAN

DESIGN: C.O. DRAWN: C.O.

CHECKED: RC

TWIN RIVERS BLOCK A FIRE ALARM SYSTEM 1/8"=1'-0"





**BUILDING D1** 

FIRST & SECOND FLOOR PLAN

## SMOKE DAMPER ACTUATION

- WHERE A SMOKE DAMPER IS INSTALLED WITHIN A DUCT, A SMOKE DETECTOR SHALL BE INSTALLED IN THE DUCT WITHIN 5' OF THE DAMPER WITH NO AIR OUTLETS OR INLETS BETWEEN THE DETECTOR AND THE DAMPER. THE DETECTOR SHALL BE LISTED FOR THE AIR VELOCITY, TEMPERATURE AND HUMIDITY ANTICIPATED AT THE POINT WHERE IT IS INSTALLED. OTHER THAN IN MECHANICAL SMOKE CONTROL SYSTEMS, DAMPERS SHALL BE CLOSED UPON FAN SHUTDOWN WHERE LOCAL SMOKE DETECTORS REQUIRE A MINIMUM VELOCITY TO OPERATE.
- WHERE A SMOKE DAMPER IS INSTALLED ABOVE SMOKE BARRIER DOORS IN A SMOKE BARRIER, A SPOT-TYPE DETECTOR LISTED FOR RELEASING SERVICE SHALL BE INSTALLED ON EITHER SIDE OF THE SMOKE BARRIER DOOR OPENING.
- WHERE A SMOKE DAMPER IS INSTALLED IN AN AIR TRANSFER OPENING IN A WALL, A SPOT-TYPE DETECTOR LISTED FOR RELEASING SERVICE SHALL INSTALLED WITHIN 5' HORIZONTALLY OF THE DAMPER.
- WHERE A SMOKE DAMPER IS INSTALLED IN A CORRIDOR WALL OR CEILING, THE DAMPER SHALL BE PERMITTED TO BE CONTROLLED BY A SMOKE DETECTION SYSTEM INSTALLED IN THE CORRIDOR.
- WHERE A TOTAL-COVERAGE SMOKE-DETECTION SYSTEM IS PROVIDED WITHIN AREAS SERVED BY A HEATING, VENTILATION AND AIR-CONDITIONING (HVAC) SYSTEM, SMOKE DAMPERS SHALL BE PERMITTED TO BE CONTROLLED BY THE SMOKE DETECTION SYSTEM.

## SMOKE ALARMS IN UNITS INSTALLED BY ELECTRICAL CONTRACTOR. REFERENCE ELECTRICAL PLAN FOR LOCATIONS.

10 NOTIFICATION MODULE USE TO TRIGGER BPS.

120 VAC, 20 AMP DEDICATED CIRCUIT TO FACP / BOOSTER POWER SUPPLIES PROVIDED BY OTHERS. BREAKER SHALL BE RED IN COLOR AND LOCKED OUT IN THE "ON"

INSTALL SYSTEMS RECORD CABINET ADJACENT TO

3 INSTALL SMOKE DETECTOR NO MORE THAN 5 FEET FROM FIRE CONTROL / BOOSTER POWER SUPPLY PANEL.

4 ELEVATOR RECALL RELAY MODULES. FIELD VERIFY LOCATION. INSTALL NO MORE THAN 3'-0" AWAY FROM INTERFACE DEVICE.

ELEVATOR SHUNT-TRIP MODULES. FIELD VERIFY
LOCATION. INSTALL NO MORE THAN 3'-0" AWAY FROM INTERFACE DEVICE.

 SMOKE GUARD INTERFACE RELAY. FIELD VERIFY LOCATION AND COORDINATE WITH ELEVATOR CONTRACTOR.

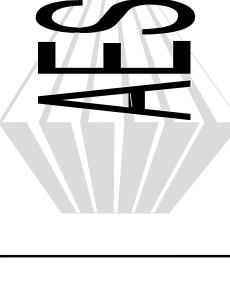
7 FIRE SMOKE DAMPER ACTIVATION RELAY. FIELD VERIFY LOCATION WITH ELECTRIC CONTRACTOR.

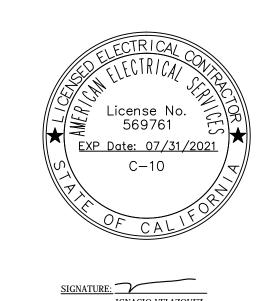
INSTALL HEAT DETECTOR NO MORE THAN 24" FROM SPRINKLER HEAD.

LOCATION	ECCATIONS.	
DEVICE	LEGEND	
SYMBOL	DESCRIPTION	
FACU	FIRE ALARM SYSTEM CONTROL PANEL	
FAA	REMOTE ANNUNICATOR	
FAC	CELLULAR COMMUNICATOR	
FAD	FIRE ALARM DOCUMENT CABINET	
BPS	. BOOSTER POWER SUPPLY	
<b>②</b>	SMOKE DETECTOR	
•	HEAT DETECTOR	
F	ADDRESSABLE PULL STATION	
MM	· ADDRESSABLE INPUT MODULE	
CR	· ADDRESSABLE RELAY MODULE	
R	· 10 AMP PAM RELAY	
NR	NOTIFICATION MODULE	
Н□И	HORN LOW FREQ	
HØ	HORN-STROBE WALL	
WP HXX	HORN-STROBE WALL, WP	
© ⊠ (	HORN-STROBE CEILING	
ď	STROBE CEILING	
Ä	STROBE WALL	
-\$-	SPRINKLER FLOW SWITCH	
-1-20-	SPRINKLER TAMPER SWITCH	
.+.	- ·	

WIRE LEG	GEND	
WIRE TAG	PURPOSE	TYPE
D	ADDRESSABLE CIRCUIT	18/2 FPLR SOLID
٧	NAC CIRCUIT	. 14/2 FPLR . SOLID
T	BPS TRIGGER	18/2 FPLR SOLID
С	REMOTE ANN	. 16/4 FPLR . SOLID
U	UNDERGROUND CIRCUIT	SOLID RATED IN CONDUIT 18/2 UNDERGROUN

- SPRINKLER BACKFLOW SWITCH





SIGNATURE: IGNACIO VELAZQUEZ

EV.	DATE		DESCF	RIPTION		D.B.
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3						
4						
ESIGN	POR Carlos Oliveras	P. T SA (61	NGINEERING & O. BOX 880922 AINT LUCIE, FL 9) 610-8637, N iveras@fuegoen	34988 NICET III #840	03	
DESI	GN: C.O.		DRAWN:	C.O.		

## DATE: 03/22/2021 PLOT: SHEET TITLE: BUILDING D1 FLOOR PLAN

CHECKED: RC JOB NO:

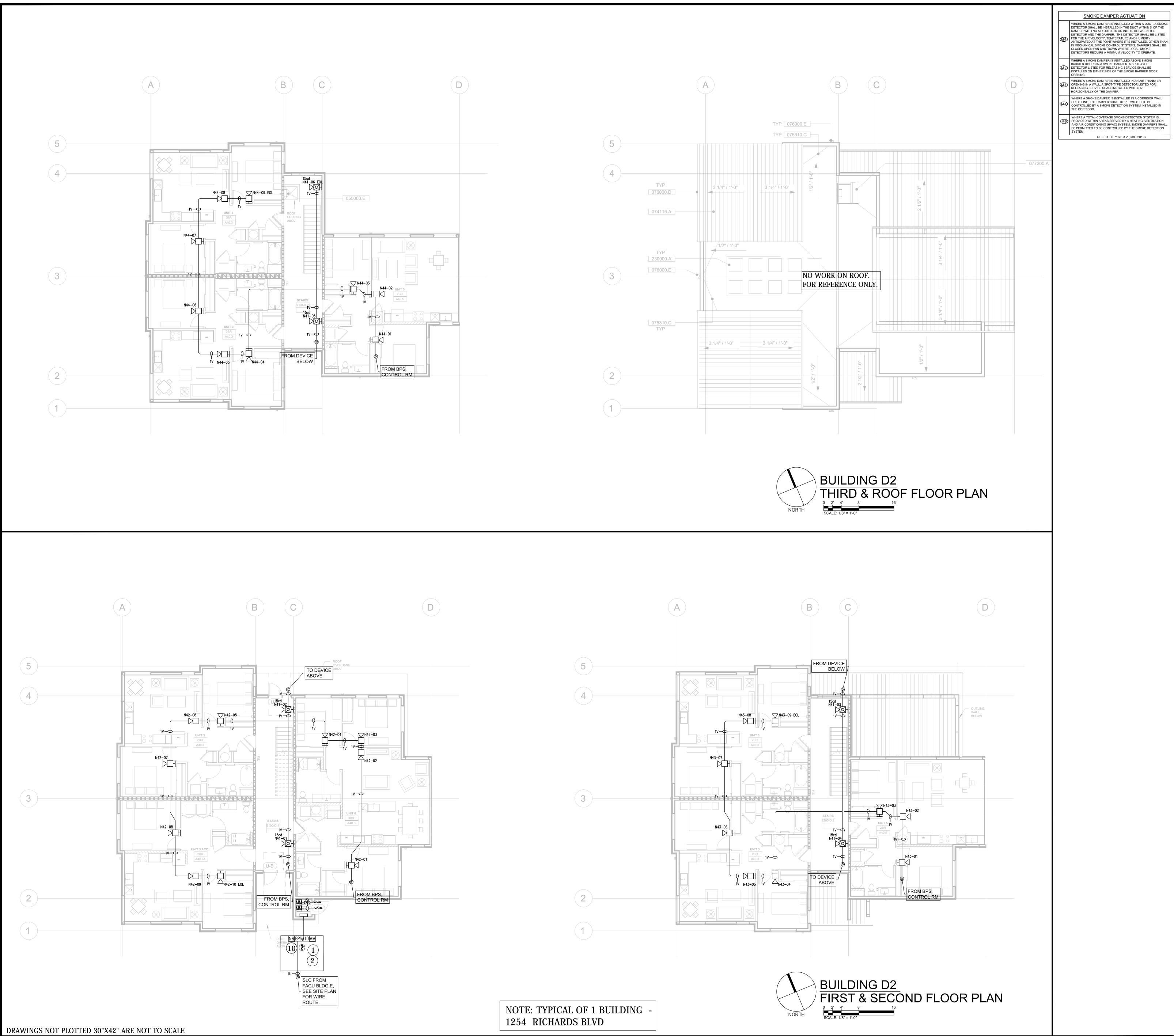
TWIN RIVERS BLOCK A FIRE ALARM SYSTEM 1/8"=1'-0"

FA-2.0

DRAWINGS NOT PLOTTED 30"X42" ARE NOT TO SCALE

FROM BPS, CONTROL RM

NOTE: TYPICAL OF 2 BUILDINGS 1240 / 1248 RICHARDS BLVD



- WHERE A SMOKE DAMPER IS INSTALLED WITHIN A DUCT, A SMOKE DETECTOR SHALL BE INSTALLED IN THE DUCT WITHIN 5' OF THE DAMPER WITH NO AIR OUTLETS OR INLETS BETWEEN THE

- M-5 WHERE A TOTAL-COVERAGE SMOKE-DETECTION SYSTEM IS PROVIDED WITHIN AREAS SERVED BY A HEATING, VENTILATION AND AIR-CONDITIONING (HVAC) SYSTEM, SMOKE DAMPERS SHALL
- REFER TO 716.3.3.2 (CBC 2019)
  - 2 WAY ECS MONITOR MODULES.
    - 10 NOTIFICATION MODULE USE TO TRIGGER BPS.

    - GENERAL NOTES SMOKE ALARMS IN UNITS INSTALLED BY ELECTRICAL CONTRACTOR. REFERENCE ELECTRICAL PLAN FOR

120 VAC, 20 AMP DEDICATED CIRCUIT TO FACP / BOOSTER POWER SUPPLIES PROVIDED BY OTHERS. BREAKER SHALL

BE RED IN COLOR AND LOCKED OUT IN THE "ON"

3 INSTALL SMOKE DETECTOR NO MORE THAN 5 FEET FROM FIRE CONTROL / BOOSTER POWER SUPPLY PANEL.

4 ELEVATOR RECALL RELAY MODULES. FIELD VERIFY LOCATION. INSTALL NO MORE THAN 3'-0" AWAY FROM INTERFACE DEVICE.

ELEVATOR SHUNT-TRIP MODULES. FIELD VERIFY
LOCATION. INSTALL NO MORE THAN 3'-0" AWAY FROM
INTERFACE DEVICE.

 SMOKE GUARD INTERFACE RELAY. FIELD VERIFY
LOCATION AND COORDINATE WITH ELEVATOR
CONTRACTOR.

7 FIRE SMOKE DAMPER ACTIVATION RELAY. FIELD VERIFY LOCATION WITH ELECTRIC CONTRACTOR.

INSTALL HEAT DETECTOR NO MORE THAN 24" FROM SPRINKLER HEAD.

INSTALL SYSTEMS RECORD CABINET ADJACENT TO

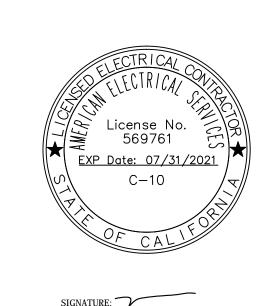
LOCATIONS.	
DEVICE I	EGEND
Symbol	DESCRIPTION
FACU	FIRE ALARM SYSTEM CONTROL PAN
FAA	REMOTE ANNUNICATOR
FAC	CELLULAR COMMUNICATOR
FAD	FIRE ALARM DOCUMENT CABINET
BPS	. BOOSTER POWER SUPPLY
<b>®</b>	SMOKE DETECTOR
•	· HEAT DETECTOR
F	ADDRESSABLE PULL STATION
ММ	· ADDRESSABLE INPUT MODULE
CR	· ADDRESSABLE RELAY MODULE
R	10 AMP PAM RELAY
NR	NOTIFICATION MODULE
ЮΝ	HORN LOW FREQ
HØQ	HORN-STROBE WALL
wp H⊠K	HORN-STROBE WALL, WP
	HORN-STROBE CEILING
ğ	STROBE CEILING
Ä	STROBE WALL
-\$-	· SPRINKLER FLOW SWITCH
-&-	· SPRINKLER TAMPER SWITCH

WIRE LEG	GEND	
WIRE TAG	PURPOSE	TYPE
D	ADDRESSABLE CIRCUIT	18/2 FPLR SOLID
V	NAC CIRCUIT	. 14/2 FPLR . SOLID
T	BPS TRIGGER	18/2 FPLR SOLID
С	REMOTE ANN	. 16/4 FPLR . SOLID
U	UNDERGROUND CIRCUIT	SOLID RATED IN COND 18/2 UNDERGRO

- SPRINKLER BACKFLOW SWITCH

FSD · FIRE SMOKE DAMPER



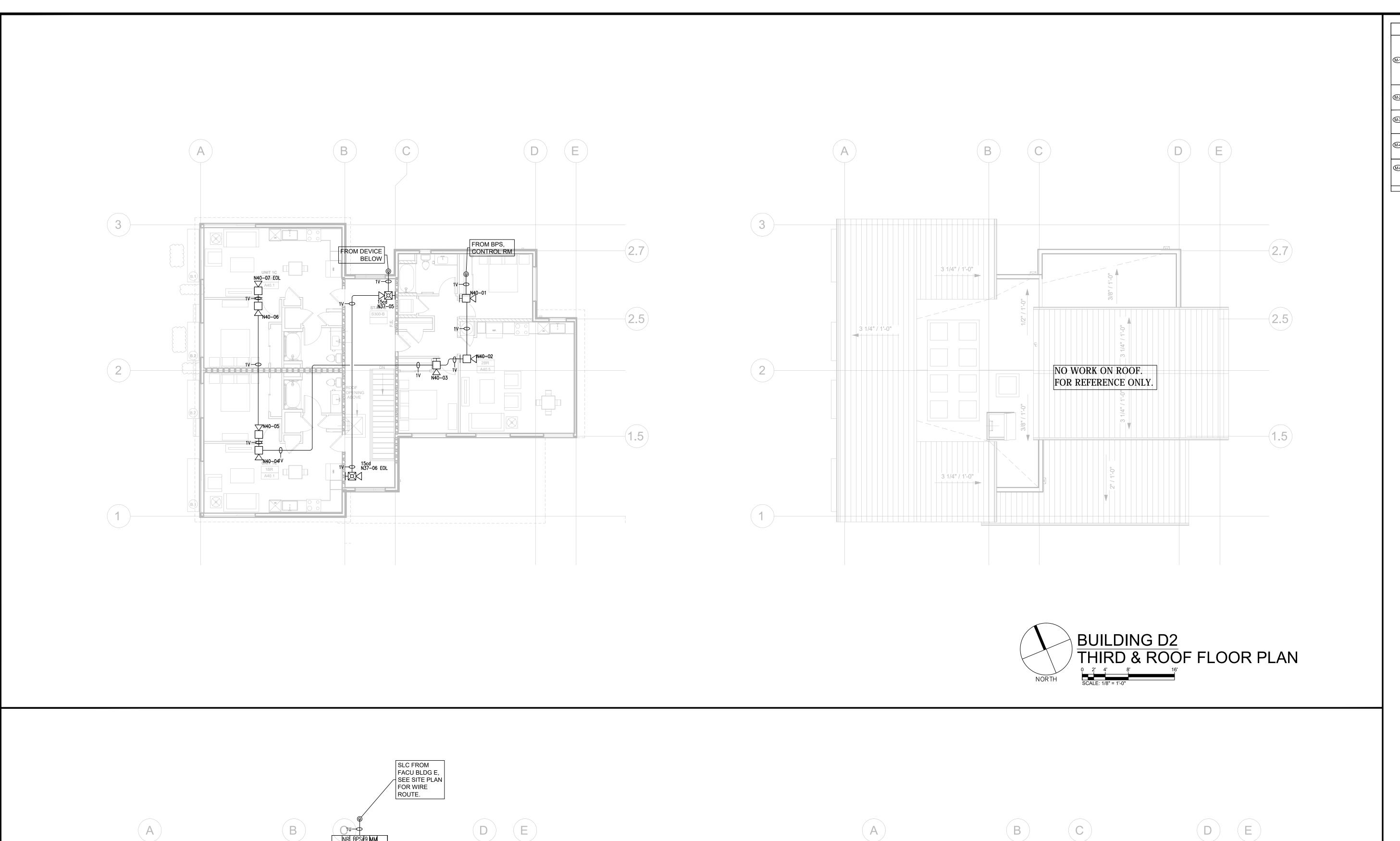


٧.	DATE	DESCRIPTION	D.B
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7			
3/			
7			
IGN	POR Carlos Oliveras	O ENGINEERING & DESIGN P.O. BOX 880922 T SAINT LUCIE , FL 34988 (619) 610-8637, NICET III #84003 os.oliveras@fuegoeng.com	
ESI	GN: C.O.	DRAWN: C.O.	

CHECKED: RC DATE: 03/22/2021 PLOT: SHEET TITLE: BUILDING D2 FLOOR PLAN

> TWIN RIVERS BLOCK A FIRE ALARM SYSTEM 1/8"=1'-0"

FA-3.0

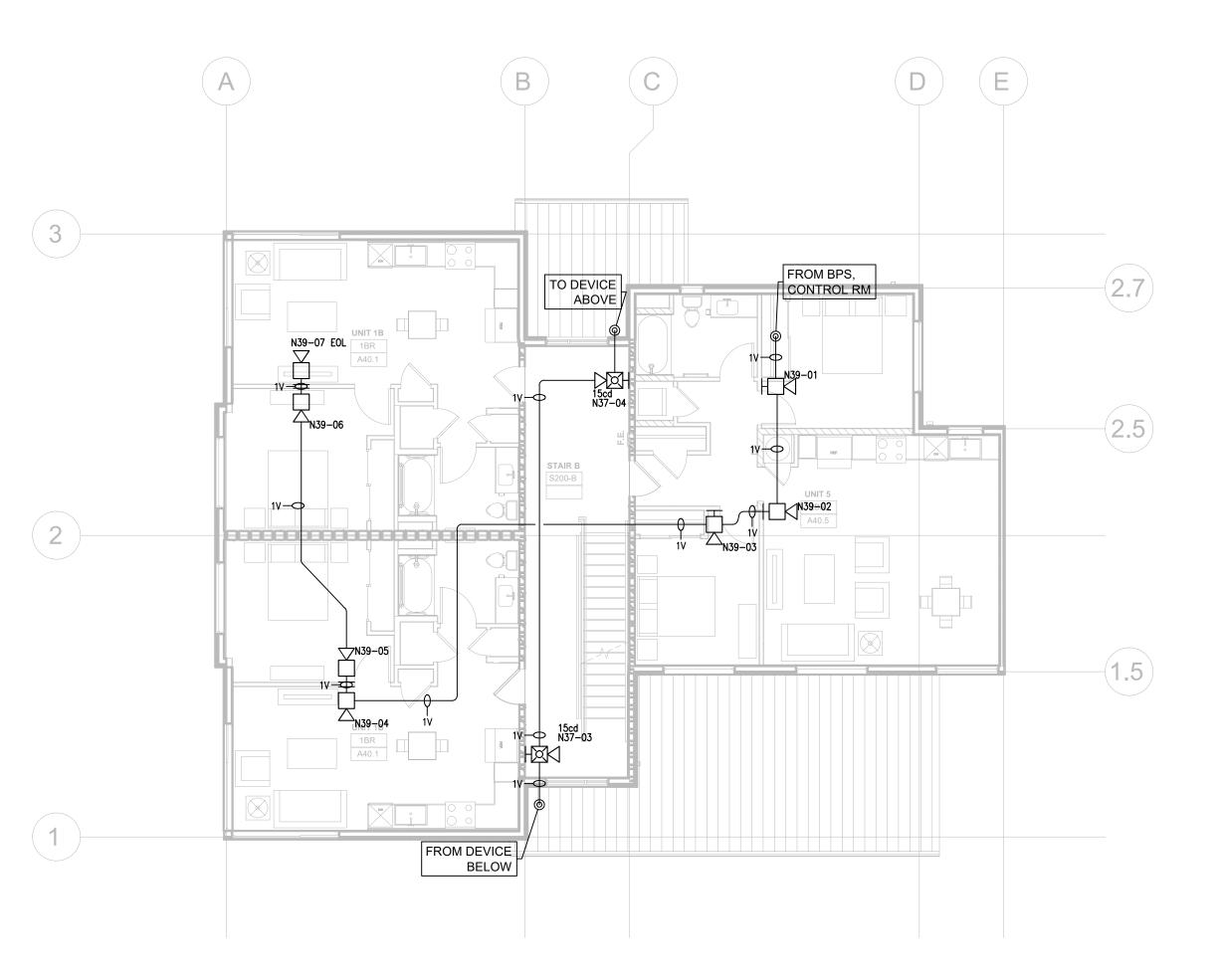


NOTE: TYPICAL OF 1 BUILDING -

1262 RICHARDS BLVD

FROM BPS, CONTROL RM

ROOF OVERHANG
 GUTTER ABOVE





SMOKE DAMPER ACTUATION

- WHERE A SMOKE DAMPER IS INSTALLED WITHIN A DUCT, A SMOKE DETECTOR SHALL BE INSTALLED IN THE DUCT WITHIN 5' OF THE DAMPER WITH NO AIR OUTLETS OR INLETS BETWEEN THE DETECTOR AND THE DAMPER. THE DETECTOR SHALL BE LISTED FOR THE AIR VELOCITY, TEMPERATURE AND HUMIDITY ANTICIPATED AT THE POINT WHERE IT IS INSTALLED. OTHER THAN IN MECHANICAL SMOKE CONTROL SYSTEMS, DAMPERS SHALL BE CLOSED UPON FAN SHUTDOWN WHERE LOCAL SMOKE DETECTORS REQUIRE A MINIMUM VELOCITY TO OPERATE.
- WHERE A SMOKE DAMPER IS INSTALLED ABOVE SMOKE BARRIER DOORS IN A SMOKE BARRIER, A SPOT-TYPE DETECTOR LISTED FOR RELEASING SERVICE SHALL BE INSTALLED ON EITHER SIDE OF THE SMOKE BARRIER DOOR OPENING.
- (M.3) WHERE A SMOKE DAMPER IS INSTALLED IN AN AIR TRANSFER OPENING IN A WALL, A SPOT-TYPE DETECTOR LISTED FOR RELEASING SERVICE SHALL INSTALLED WITHIN 5' HORIZONTALLY OF THE DAMPER. WHERE A SMOKE DAMPER IS INSTALLED IN A CORRIDOR WALL OR CEILING, THE DAMPER SHALL BE PERMITTED TO BE CONTROLLED BY A SMOKE DETECTION SYSTEM INSTALLED IN THE CORRIDOR.
- WHERE A TOTAL-COVERAGE SMOKE-DETECTION SYSTEM IS PROVIDED WITHIN AREAS SERVED BY A HEATING, VENTILATION AND AIR-CONDITIONING (HVAC) SYSTEM, SMOKE DAMPERS SHALL BE PERMITTED TO BE CONTROLLED BY THE SMOKE DETECTION SYSTEM.
- REFER TO 716.3.3.2 (CBC 2019)

GENERAL NOTES SMOKE ALARMS IN UNITS INSTALLED BY ELECTRICAL CONTRACTOR. REFERENCE ELECTRICAL PLAN FOR LOCATIONS.

120 VAC, 20 AMP DEDICATED CIRCUIT TO FACE / BOOSTER POWER SUPPLIES PROVIDED BY OTHERS. BREAKER SHALL BE RED IN COLOR AND LOCKED OUT IN THE "ON"

INSTALL SYSTEMS RECORD CABINET ADJACENT TO

3 INSTALL SMOKE DETECTOR NO MORE THAN 5 FEET FROM FIRE CONTROL / BOOSTER POWER SUPPLY PANEL.

4 ELEVATOR RECALL RELAY MODULES. FIELD VERIFY LOCATION. INSTALL NO MORE THAN 3'-0" AWAY FROM INTERFACE DEVICE.

ELEVATOR SHUNT-TRIP MODULES. FIELD VERIFY
LOCATION. INSTALL NO MORE THAN 3'-0" AWAY FROM
INTERFACE DEVICE.

 SMOKE GUARD INTERFACE RELAY, FIELD VERIFY
LOCATION AND COORDINATE WITH ELEVATOR
CONTRACTOR.

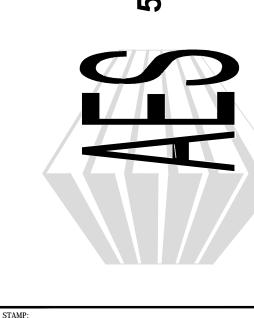
7 FIRE SMOKE DAMPER ACTIVATION RELAY. FIELD VERIFY LOCATION WITH ELECTRIC CONTRACTOR.

10 NOTIFICATION MODULE USE TO TRIGGER BPS.

INSTALL HEAT DETECTOR NO MORE THAN 24" FROM SPRINKLER HEAD.

SYMBOL	DESCRIPTION
FACU	FIRE ALARM SYSTEM CONTROL PAR
FAA	REMOTE ANNUNICATOR
FAC	CELLULAR COMMUNICATOR
FAD	FIRE ALARM DOCUMENT CABINET
BPS	BOOSTER POWER SUPPLY
<b>®</b>	SMOKE DETECTOR
<b></b>	· HEAT DETECTOR
F	ADDRESSABLE PULL STATION
ММ	ADDRESSABLE INPUT MODULE
CR	ADDRESSABLE RELAY MODULE
R	10 AMP PAM RELAY
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	HORN LOW FREQ
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WP HX	HORN-STROBE WALL, WP
_ <b>`⊠</b> \	HORN-STROBE CEILING
ğ	STROBE CEILING
- Ř	STROBE WALL
<u>_</u>	· SPRINKLER FLOW SWITCH
-&-	· SPRINKLER TAMPER SWITCH
- <b>☆</b> -	· SPRINKLER BACKFLOW SWITCH
FSD —	· FIRE SMOKE DAMPER

WIRE LEG	GEND	
WIRE TAG	PURPOSE	TYPE
D	ADDRESSABLE CIRCUIT	18/2 FPLR SOLID
V	NAC CIRCUIT	. 14/2 FPLR . SOLID
T	BPS TRIGGER	18/2 FPLR SOLID
С	REMOTE ANN	16/4 FPLR SOLID
U	· UNDERGROUND CIRCUIT	SOLID RATED IN CONDU 18/2 UNDERGROU





SIGNATURE: IGNACIO VELAZQUEZ

TWIN RIVERS
SACRAMENTO, C

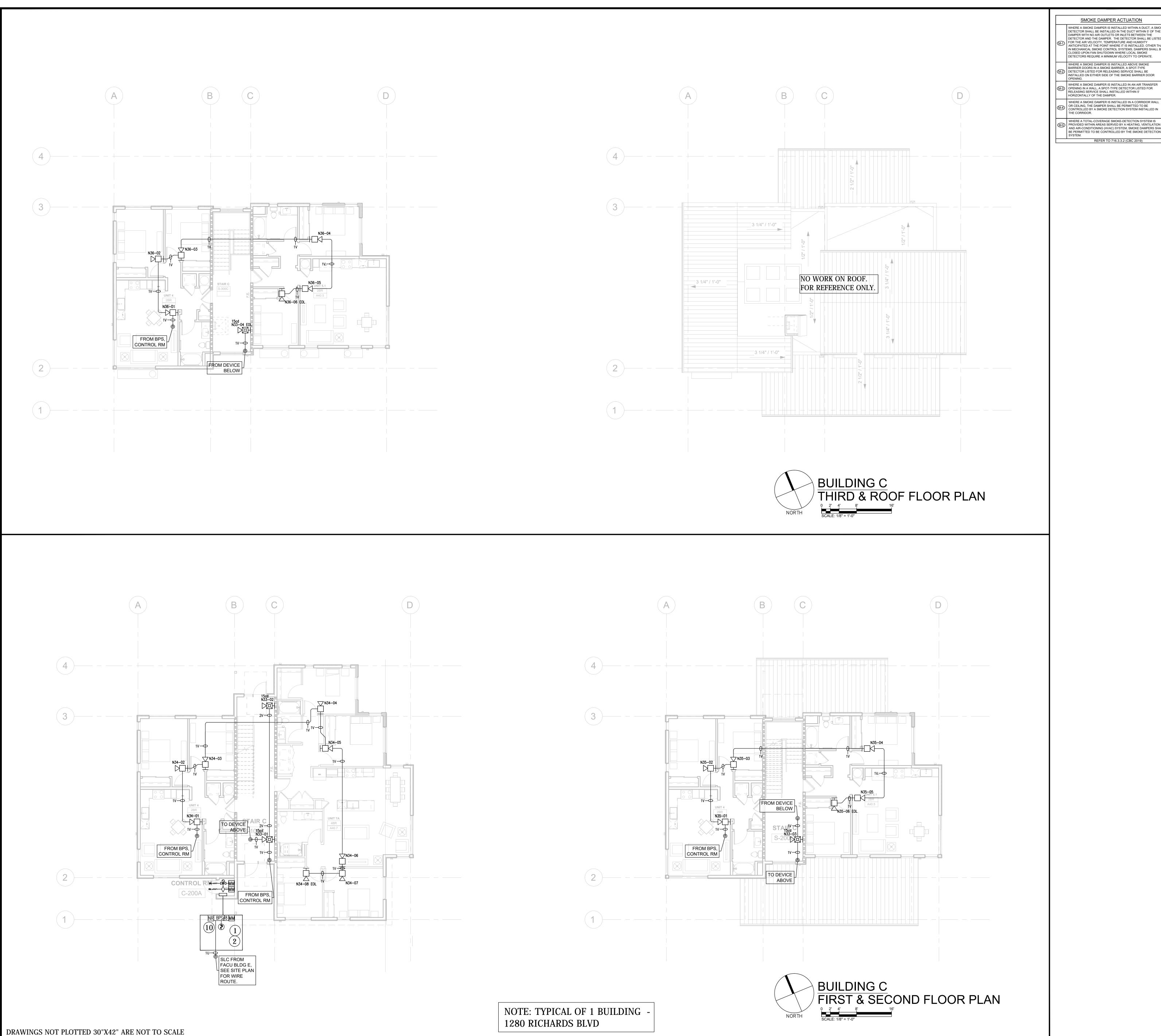
DESCRIPTION P.O. BOX 880922 PORT SAINT LUCIE , FL 34988 Carlos Oliveras (619) 610-8637, NICET III #84003 carlos.oliveras@fuegoeng.com DESIGN: C.O. DRAWN: C.O.

CHECKED: RC DATE: 03/22/2021 PLOT: SHEET TITLE: BUILDING B FLOOR PLAN

TWIN RIVERS BLOCK A FIRE ALARM SYSTEM 1/8"=1'-0"

FA-4.0

DRAWINGS NOT PLOTTED 30"X42" ARE NOT TO SCALE



- WHERE A SMOKE DAMPER IS INSTALLED WITHIN A DUCT, A SMOKE DETECTOR SHALL BE INSTALLED IN THE DUCT WITHIN 5' OF THE DAMPER WITH NO AIR OUTLETS OR INLETS BETWEEN THE DETECTOR AND THE DAMPER. THE DETECTOR SHALL BE LISTED FOR THE AIR VELOCITY, TEMPERATURE AND HUMIDITY ANTICIPATED AT THE POINT WHERE IT IS INSTALLED. OTHER THAN IN MECHANICAL SMOKE CONTROL SYSTEMS, DAMPERS SHALL BE CLOSED UPON FAN SHUTDOWN WHERE LOCAL SMOKE DETECTORS REQUIRE A MINIMUM VELOCITY TO OPERATE.

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- BE PERMITTED TO BE CONTROLLED BY THE SMOKE DETECTION SYSTEM. REFER TO 716.3.3.2 (CBC 2019)

# 10 NOTIFICATION MODULE USE TO TRIGGER BPS.

GENERAL NOTES SMOKE ALARMS IN UNITS INSTALLED BY ELECTRICAL CONTRACTOR. REFERENCE ELECTRICAL PLAN FOR

120 VAC, 20 AMP DEDICATED CIRCUIT TO FACP / BOOSTER POWER SUPPLIES PROVIDED BY OTHERS. BREAKER SHALL BE RED IN COLOR AND LOCKED OUT IN THE "ON"

INSTALL SYSTEMS RECORD CABINET ADJACENT TO

INSTALL SMOKE DETECTOR NO MORE THAN 5 FEET FROM FIRE CONTROL / BOOSTER POWER SUPPLY PANEL.

4 ELEVATOR RECALL RELAY MODULES. FIELD VERIFY LOCATION. INSTALL NO MORE THAN 3'-0" AWAY FROM INTERFACE DEVICE.

ELEVATOR SHUNT-TRIP MODULES. FIELD VERIFY
LOCATION. INSTALL NO MORE THAN 3'-0" AWAY FROM
INTERFACE DEVICE.

 SMOKE GUARD INTERFACE RELAY, FIELD VERIFY
LOCATION AND COORDINATE WITH ELEVATOR
CONTRACTOR.

7 FIRE SMOKE DAMPER ACTIVATION RELAY. FIELD VERIFY LOCATION WITH ELECTRIC CONTRACTOR.

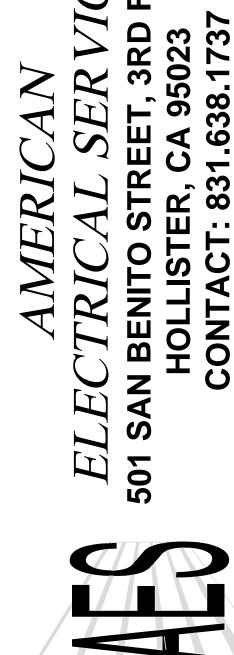
8 INSTALL HEAT DETECTOR NO MORE THAN 24" FROM SPRINKLER HEAD.

LOCATIONS	OK. REFERENCE ELECTRICAL PLAN FOR				
DEVICE I	E LEGEND				
SYMBOL	DESCRIPTION				
[FACU]	FIRE ALARM SYSTEM CONTROL PANEL				
FAA	REMOTE ANNUNICATOR				
FAC	CELLULAR COMMUNICATOR				
FAD	FIRE ALARM DOCUMENT CABINET				
BPS	. BOOSTER POWER SUPPLY				
<b>®</b>	. SMOKE DETECTOR				
<b></b>	· HEAT DETECTOR				
F	ADDRESSABLE PULL STATION				
ММ	· ADDRESSABLE INPUT MODULE				
CR	· ADDRESSABLE RELAY MODULE				
R	· 10 AMP PAM RELAY				
NR	NOTIFICATION MODULE				
_ ⊬⊒<	HORN LOW FREQ				
<u>₩</u>	HORN-STROBE WALL				
WP HOO	HORN-STROBE WALL, WP				
	HORN-STROBE CEILING				
ď	STROBE CEILING				
Ä	STROBE WALL				
\$	· SPRINKLER FLOW SWITCH				
-1-24-	SPRINKLER TAMPER SWITCH				

WIRE LEC	GEND	
WIRE TAG	PURPOSE	TYPE
D	ADDRESSABLE CIRCUIT	18/2 FPLR SOLID
٧	NAC CIRCUIT	. 14/2 FPLR . SOLID
T	BPS TRIGGER	18/2 FPLR SOLID
С	REMOTE ANN	16/4 FPLR SOLID
U	UNDERGROUND CIRCUIT	SOLID RATED IN CONDUIT 18/2 UNDERGROUN

- SPRINKLER BACKFLOW SWITCH

FSD · FIRE SMOKE DAMPER





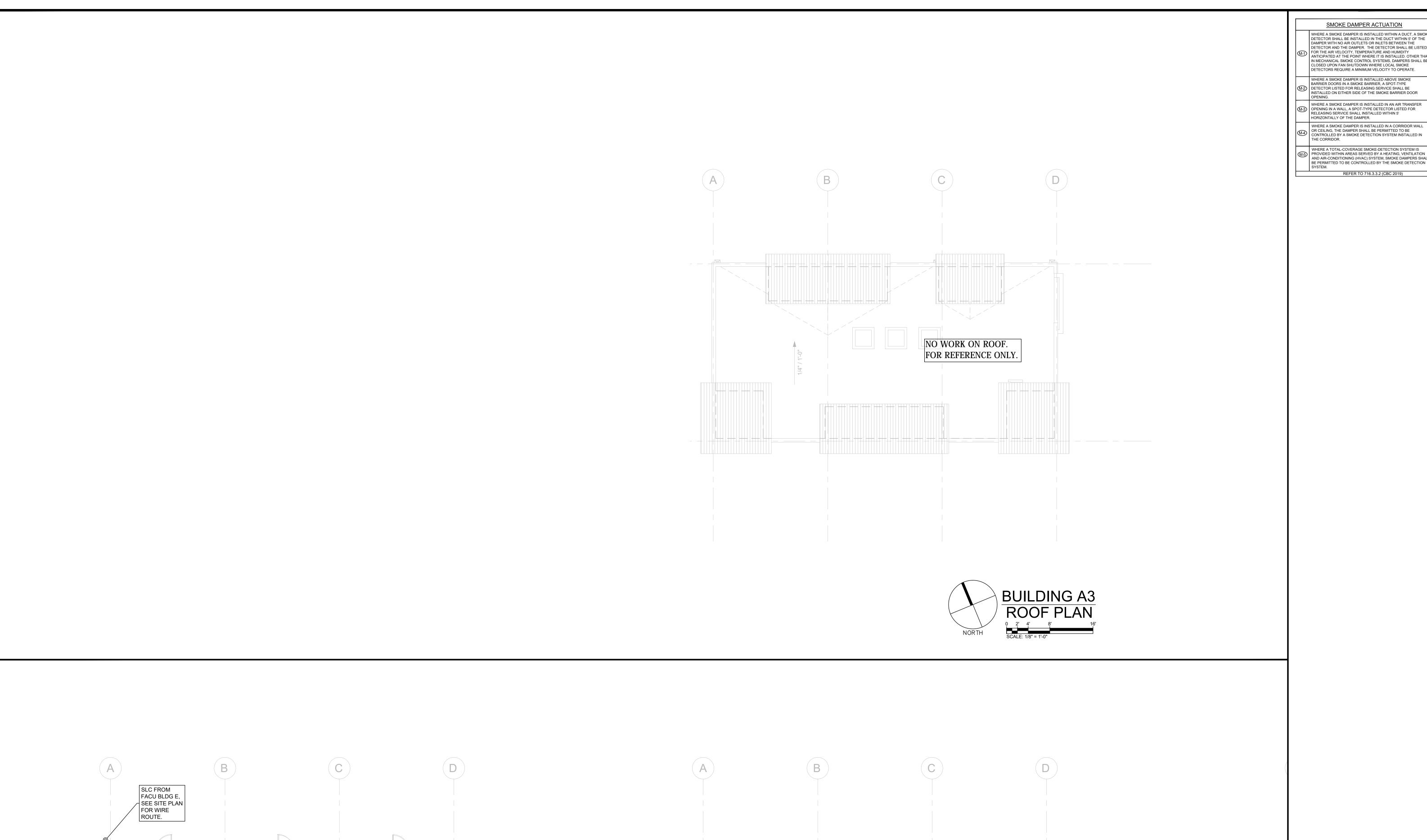
DESCRIPTION PORT SAINT LUCIE , FI 34988
Carlos Oliveras (619) 610-8637, NICET III #84003
carlos.oliveras@fuegoeng.com DESIGN: C.O. DRAWN: C.O.

DATE: 03/22/2021 PLOT: SHEET TITLE: BUILDING C FLOOR PLAN

CHECKED: RC

TWIN RIVERS BLOCK A FIRE ALARM SYSTEM 1/8"=1'-0"

FA-5.0



SMOKE DAMPER ACTUATION WHERE A SMOKE DAMPER IS INSTALLED WITHIN A DUCT, A SMOKE

- DETECTOR SHALL BE INSTALLED IN THE DUCT WITHIN 5' OF THE DAMPER WITH NO AIR OUTLETS OR INLETS BETWEEN THE DAMPER WITH NO AIR OUTLETS OR INLETS BETWEEN THE DETECTOR AND THE DAMPER. THE DETECTOR SHALL BE LISTED FOR THE AIR VELOCITY, TEMPERATURE AND HUMIDITY ANTICIPATED AT THE POINT WHERE IT IS INSTALLED. OTHER THAN IN MECHANICAL SMOKE CONTROL SYSTEMS, DAMPERS SHALL BE CLOSED UPON FAN SHUTDOWN WHERE LOCAL SMOKE DETECTORS REQUIRE A MINIMUM VELOCITY TO OPERATE.
- WHERE A SMOKE DAMPER IS INSTALLED IN AN AIR TRANSFER
- WHERE A SMOKE DAMPER IS INSTALLED IN A CORRIDOR WALL OR CEILING, THE DAMPER SHALL BE PERMITTED TO BE CONTROLLED BY A SMOKE DETECTION SYSTEM INSTALLED IN THE CORRIDOR.
- WHERE A TOTAL-COVERAGE SMOKE-DETECTION SYSTEM IS PROVIDED WITHIN AREAS SERVED BY A HEATING, VENTILATION AND AIR-CONDITIONING (HVAC) SYSTEM, SMOKE DAMPERS SHALL BE PERMITTED TO BE CONTROLLED BY THE SMOKE DETECTION SYSTEM.

REFER TO 716.3.3.2 (CBC 2019)

4 ELEVATOR RECALL RELAY MODULES. FIELD VERIFY LOCATION. INSTALL NO MORE THAN 3'-0" AWAY FROM INTERFACE DEVICE. ELEVATOR SHUNT-TRIP MODULES. FIELD VERIFY LOCATION. INSTALL NO MORE THAN 3'-0" AWAY FROM INTERFACE DEVICE.

 SMOKE GUARD INTERFACE RELAY, FIELD VERIFY LOCATION AND COORDINATE WITH ELEVATOR CONTRACTOR.

> INSTALL HEAT DETECTOR NO MORE THAN 24" FROM SPRINKLER HEAD. 2 WAY ECS MONITOR MODULES.

10 NOTIFICATION MODULE USE TO TRIGGER BPS.

GENERAL NOTES SMOKE ALARMS IN UNITS INSTALLED BY ELECTRICAL CONTRACTOR. REFERENCE ELECTRICAL PLAN FOR LOCATIONS.

120 VAC, 20 AMP DEDICATED CIRCUIT TO FACP / BOOSTER POWER SUPPLIES PROVIDED BY OTHERS. BREAKER SHALL

BE RED IN COLOR AND LOCKED OUT IN THE "ON"

3 INSTALL SMOKE DETECTOR NO MORE THAN 5 FEET FROM FIRE CONTROL / BOOSTER POWER SUPPLY PANEL.

INSTALL SYSTEMS RECORD CABINET ADJACENT TO

7 FIRE SMOKE DAMPER ACTIVATION RELAY. FIELD VERIFY LOCATION WITH ELECTRIC CONTRACTOR.

DEVICE	LEGEND
SYMBOL	DESCRIPTION
FACU	FIRE ALARM SYSTEM CONTROL PANEL
FAA	REMOTE ANNUNICATOR
FAC	CELLULAR COMMUNICATOR
FAD	FIRE ALARM DOCUMENT CABINET
BPS	, BOOSTER POWER SUPPLY
3	SMOKE DETECTOR
•	HEAT DETECTOR
F	ADDRESSABLE PULL STATION
ММ	ADDRESSABLE INPUT MODULE
CR	· ADDRESSABLE RELAY MODULE
R	· 10 AMP PAM RELAY
NR	NOTIFICATION MODULE
НЦ	HORN LOW FREQ
HØQ	HORN-STROBE WALL
WP HIZIC	HORN-STROBE WALL, WP
	HORN-STROBE CEILING
ğ	STROBE CEILING
Ħ	. STROBE WALL
<b>-</b> \$−	SPRINKLER FLOW SWITCH
-1&-	SPRINKLER TAMPER SWITCH
- <del> </del>	· SPRINKLER BACKFLOW SWITCH
FSD•	FIRE SMOKE DAMPER

WIRE LEG	GEND	
WIRE TAG	PURPOSE	TYPE
D	ADDRESSABLE CIRCUIT	18/2 FPLR SOLID
٧	NAC CIRCUIT	. 14/2 FPLR . SOLID
T	BPS TRIGGER	18/2 FPLR SOLID
С	REMOTE ANN	. 16/4 FPLR . SOLID
U	UNDERGROUND CIRCUIT	SOLID RATED IN CONDUIT 18/2 UNDERGROUN





SIGNATURE: IGNACIO VELAZQUEZ

TWIN RIVERS
SACRAMENTO, C

ΞV.	DATE		DESCR	RIPTION	D.B.
1					
1 \					
4					
SIGNI	POR Carlos Oliveras	P. T SA (61	NGINEERING & 1 O. BOX 880922 INT LUCIE , FL 9) 610-8637, N iveras@fuegoen	34988 ICET III #84003	
ESI	GN: C.O.		DRAWN:	C.O.	
HEC	CKED: RC		JOB NO:		
		_			

DATE: 03/22/2021 PLOT: **BUILDING A3** FLOOR PLAN

> TWIN RIVERS BLOCK A FIRE ALARM SYSTEM 1/8"=1'-0"

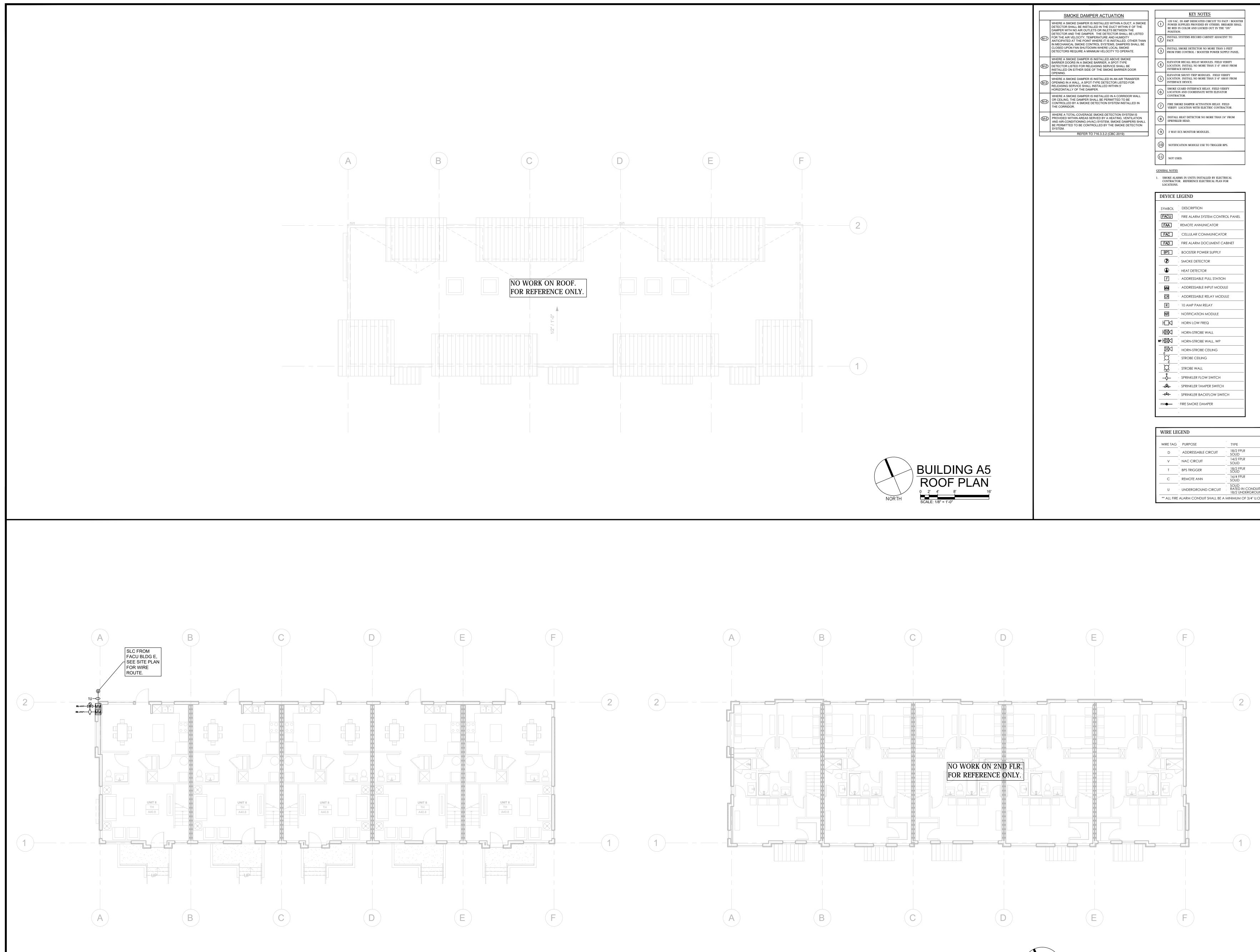
> > FA-6.0

NOTE: TYPICAL OF 3 BUILDINGS -520 PIPEVINE ST. 1261 / 1291 RINGLET AVE

DRAWINGS NOT PLOTTED 30"X42" ARE NOT TO SCALE



NO WORK ON 2ND FLR. FOR REFERENCE ONLY.



NOTE: TYPICAL OF 1 BUILDING -

1243 RINGLET AVE

DRAWINGS NOT PLOTTED 30"X42" ARE NOT TO SCALE

WIRE LEG	GEND	
WIRE TAG	PURPOSE	TYPE
D	ADDRESSABLE CIRCUIT	. 18/2 FPLR SOLID
٧	NAC CIRCUIT	. 14/2 FPLR . SOLID
T	BPS TRIGGER	18/2 FPLR SOLID
С	REMOTE ANN	. 16/4 FPLR . SOLID
U	UNDERGROUND CIRCUIT	SOLID RATED IN CONDUIT 18/2 UNDERGROUN

**BUILDING A5** 

FIRST & SECOND FLOOR PLAN

TWIN RIVERS
SACRAMENTO,

License No. 569761

SIGNATURE: IGNACIO VELAZQUEZ

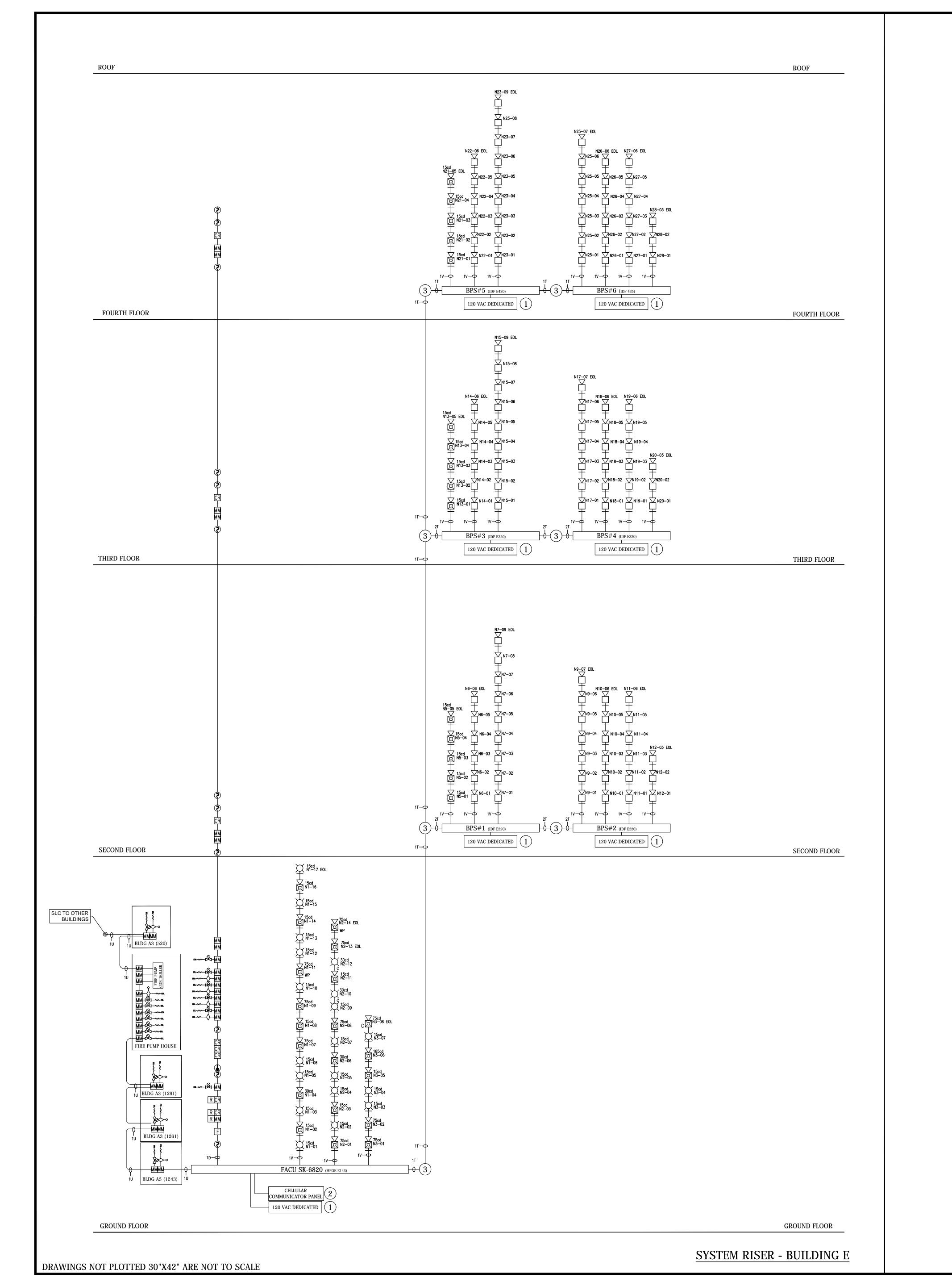
DESCRIPTION P.O. BOX 880922 PORT SAINT LUCIE, FL 34988 Carlos Oliveras (619) 610-8637, NICET III #84003 carlos.oliveras@fuegoeng.com DESIGN: C.O. DRAWN: C.O.

CHECKED: RC DATE: 03/22/2021 PLOT: SHEET TITLE: **BUILDING A5** 

FLOOR PLAN TWIN RIVERS BLOCK A FIRE ALARM SYSTEM

1/8"=1'-0"

FA-7.0





- BREAKER SHALL BE RED IN COLOR AND LOCKED OUT IN THE "ON" POSITION.
- METHOD OF COMMUNICATIONS TO CENTRAL STATION SHALL BE VIA CELLULAR COMMUNICATOR PER NFPA-72 SECTION 26.6.3.1.5 SINGLE PATH OF COMMUNICATIONS.
- FACP SHALL UTILIZE NAC 4 TO TRIGGER ALL BOOSTER 3 PANEL ON ALARM.
- UTILIZE AUX POWER FROM BPS#1 FOR DOOR HOLDER (4) CIRCUIT.

N32-09 EOL

N31-08

N31-07

N31-06

N31-05

N31-04

N30-07

N30-06

BPS#7 (CONTROL RM)

120 VAC DEDICATED 1

NOTE TYPICAL OF 2 BUILDINGS (1240 & 1248)

THIRD FLOOR

SECOND FLOOR

GROUND FLOOR

THIRD FLOOR

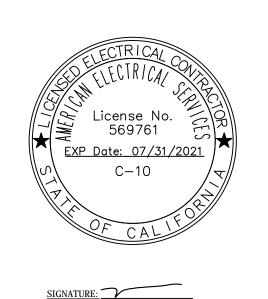
SECOND FLOOR

SLC FROM BLDG E

GROUND FLOOR

FACU, MPOE E143





SIGNATURE: IGNACIO VELAZQUEZ

BLOCK TWIN RIVERS

DESCRIPTION P.O. BOX 880922

PORT SAINT LUCIE , FL 34988

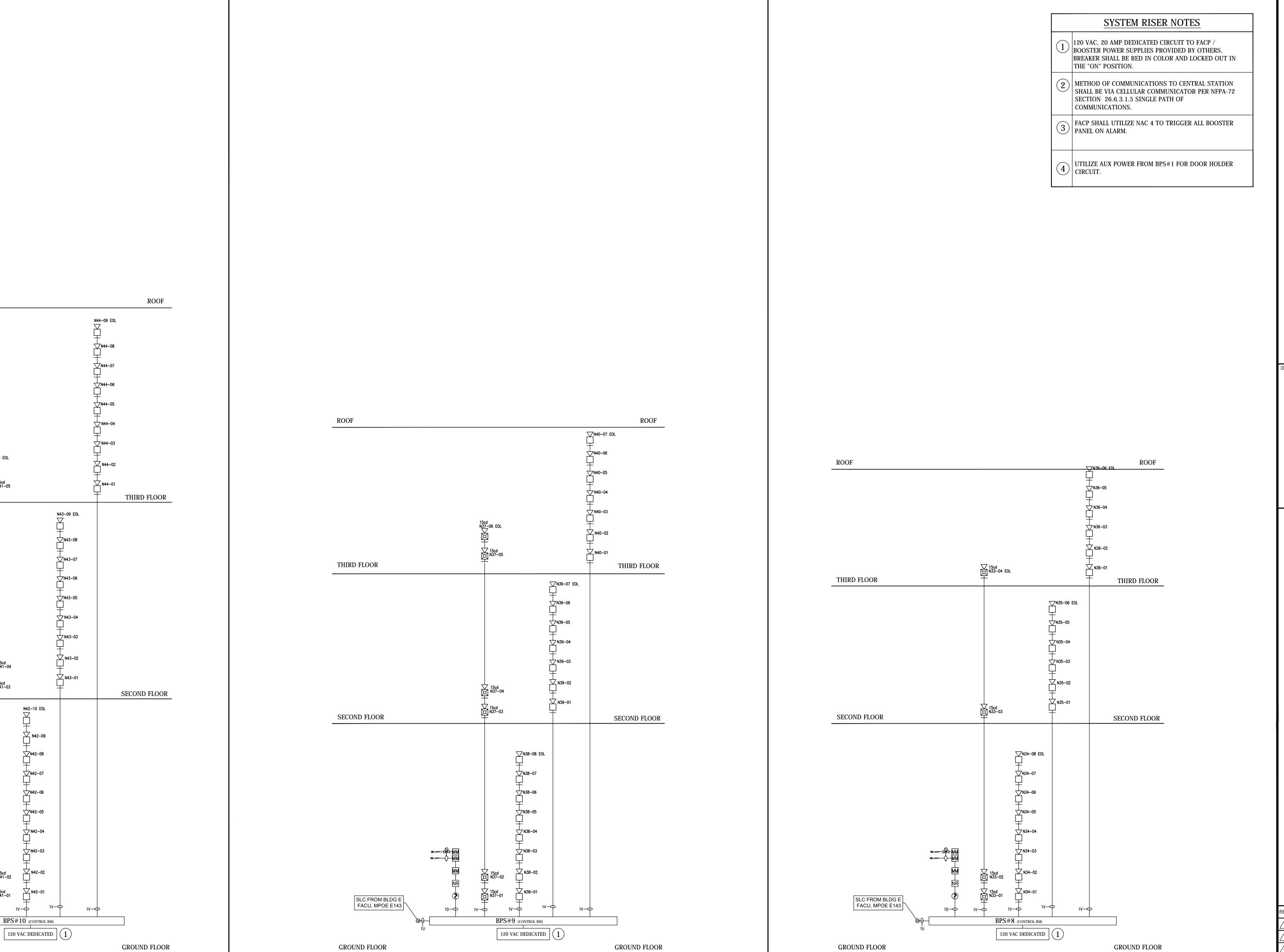
Carlos Oliveras (619) 610-8637, NICET III #84003 carlos.oliveras@fuegoeng.com DESIGN: C.O. DRAWN: C.O. CHECKED: RC DATE: 03/22/2021 PLOT: SHEET TITLE: SYSTEM RISER DIAGRAM BUILDING E & D1

TWIN RIVERS BLOCK A FIRE ALARM SYSTEM

FA-8.0

N.T.S.

SYSTEM RISER - BUILDING D1



SYSTEM RISER DIAGRAM - BUILDING D2

SYSTEM RISER DIAGRAM - BUILDING B

NOTE TYPICAL OF 1 BUILDING (1262)

SYSTEM RISER DIAGRAM - BUILDING C

NOTE TYPICAL OF 1 BUILDING (1280)

REV. DATE DESCRIPTION POST ENGINEERING & DESIGN P.O. BOX 880922 PORT SAINT LUCIE , FL 34988 Carlos Oliveras (619) 610-8637, NICET III #84003 carlos.oliveras@fuegoeng.com CHECKED: RC JOB NO: DATE: 03/22/2021 PLOT: SHEET TITLE:

RIVERS

SIGNATURE: IGNACIO VELAZQUEZ

SYSTEM RISER DIAGRAM BUILDINGS D2, B, & C

TWIN RIVERS BLOCK A FIRE ALARM SYSTEM N.T.S.

FA-8.1

DRAWINGS NOT PLOTTED 30"X42" ARE NOT TO SCALE

THIRD FLOOR

SECOND FLOOR

SLC FROM BLDG E FACU, MPOE E143

GROUND FLOOR

NOTE TYPICAL OF 1 BUILDING (1254)

6820 FACU - ( 5 MINUTUES IN ALARM, 24H	RS STANDBY)							SILENT KNIGH
A	В	С	D	E	F			
INTERNALFACP COMPONENTS	Quantity	Standby Current	Total Stanby Current (BxC)	Alarm Current	Total Alarm Current (B x E)			
6820 MAIN BOARD	1	0.19000A	0.19000A	0.25000A	0.25000A			
CELL-CAB-SK CELLULAR COMMUNICATOR	1	0.05500A	0.05500A	0.10000A	0.10000A			
SK-PULL-SA PULL STATION	1	0.00035A	0.00035A	0.00035A	0.00035A			
SK-MINI-MON MINI-MONITOR MODULE	47	0.00035A	0.01645A	0.00035A	0.01645A			
SK-PHOTO-W SMOKE DETECTOR	16	0.00020A	0.00320A	0.00450A	0.07200A			
SK-HEAT-W HEAT DETECTOR	1	0.00020A	0.00020A	0.00450A	0.00450A			
SK-RELAY RELAY MODULE	8	0.00026A	0.00204A	0.00026A	0.00204A			
	4	0.00020A			0.00204A			
SK-CONTROL NOTIFICATION MODULE  5860 REMOTE ANNUNCIATOR	1	0.02000A	0.00150A 0.02000A	0.00038A 0.02500A	0.02500A			
5000 PENOTE AMOREMON	1	0.02000rs	0.0200014	0.0230011	0.023004			
		Total Standby Current =	0.419A	Total Alm Current=	1.012A			
		Carrent	U. IZM	rocal rain carrent—	2.012.1			
			CIRCU	IT # AND QTY				
HORN-STROBE DEVICES	DEVICE CURRENT DRAW	N1	N2	N3	N4-SPARE	I/O-5-SPARE	I/O-6-SPARE	
15cd STROBE WALL	0.043A	9	5	5	0			
30cd STROBE WALL / CEILING	0.063A	0	2	2	0			
15cd HORN-STROBE, WALL	0.054A	4	2	2	0			
30cd HORN-STROBE, WALL	0.074A	1	1	1	0			
75cd HORN-STROBE, WALL OR 95cd STROBE, WALL	0.121A	2	3	3	0			
	NAC CKT CURRENT DRAW =	1.095A	1.062A	1.062A	0.000A			
							TOTAL NAC CKT CURRENT DRAW =	3.219A
TOTAL STANDBY CALCULATIONS			TOTAL STANDY CALCU					
6 Total standby current		l	0.419					
7 Multiply by 24 or 60 for standby hours needed.			24H					
8 Total standby AH (Amp Hours)	1		10.0498 AH					
ALARM CURRENT CALCULATIONS								TOTAL ALARM CURRENT CALC
9 Total alarm current								4.231
0 Multiply by 0.0833 for 5 min or 0.25 for 15 minutes of alarm	2.0							0.0833
1 Total alarm current.								0.3524 AH
BATTERY BACKUP REQUIREMENTS								
2 Sub total, add line 18+21								10.4022 AH
Multiply by 1.2 for 20% Battery Derating Factor								20%
4 Total AH (Amp Hours)								12.4826 AH
								(2) BATTERY SUPPLIED = 18 AI

																(2) BATTERY PLIED = 18 A	
Device #	Device Draw	Distance	Distance + 10%	Amps	Volt Drop	Total Amps	Total Drop	Percent Drop	Device #	Device Draw	Distance	Distance + 10%	Amps	Volt Drop	Total Amps	Total Drop	Percent Drop
N1-01	0.043A	19'	21'	1.095A	0.141v	1.095A	1.525v	7.4777%	N3-01	0.121A	200'	220'	0.813A	1.098v	0.813A	1.485v	7.2816%
N1-02	0.054A	10'	11'	1.052A	0.071v				N3-02	0.121A	23'	25'	0.692A	0.107v			
N1-03	0.043A	9'	10'	0.998A	0.061v		N.A.C #	4	N3-03	0.043A	21'	23'	0.571A	0.081v		NAC#	. 2
N1-04	0.074A	37'	41'	0.955A	0.239v				N3-04	0.043A	16'	18'	0.528A	0.057v		N.A.C #	
N1-05	0.043A	22'	24'	0.881A	0.131v	HOF	N-STROBE C	IRCUIT	N3-05	0.054A	13'	14'	0.485A	0.043v	HOH	RN-STROBE C	JRCUIT
N1-06	0.043A	3'	3'	0.838A	0.017v				N3-06	0.245A	8'	9'	0.431A	0.023v			
N1-07	0.121A	100'	110'	0.795A	0.537v				N3-07	0.043A	25'	28'	0.186A	0.031v			
N1-08	0.054A	8'	9'	0.674A	0.036v				N3-08	0.143A	46'	51'	0.143A	0.044v			
N1-09	0.121A	34'	37'	0.620A	0.142v												
N1-10	0.043A	3'	3'	0.499A	0.010v												
N1-11	0.176A	12'	13'	0.456A	0.037v												
N1-12	0.043A	19'	21'	0.280A	0.036v												
N1-13	0.043A	7'	8'	0.237A	0.011v												
N1-14	0.054A	11'	12'	0.194A	0.014v												
N1-15	0.043A	35'	39'	0.140A	0.033v												
NH 16	0.0544	71	O!	0.0074	0.0050												

549	5 BPS#1 (	5 MINUT	<b>TES IN ALARM</b>	. 24HR	S STANI	DBY)				S	ILENT KNIGH
		A			В		С	D	E	F	
	INTERNAL PO	WER SUPP	LY COMPONENTS		Quantity	St	andby Curren	Total Stanby Curren (BxC)	t Alarm Current	Total Alarm Current (B x E)	
5495	MAIN POWER S	SUPPLY BOA	ARD		1		0.075A	0.075A	0.205A	0.205A	
						1	otal Standby Current =	0.075A	Total Alm Current=	0.205A	
				D	EVICE CURP	RENT		CIRCUIT	# AND QTY		
	HORN	/ STROBE	CIRCUITS		DRAW		N5	N6	N7	NB-SPARE	
15cd 9	STROBE WALL				0.043A		0	0	0	0	
	HORN-STROBE,	WALL			0.054A	-	5	0	0	0	
	HORN-STROBE,			_	0.074A		0	0	0	0	
		TIMEL				_	0	6			
HURN	LOW FREQ			N	0.108A AC CKT CUR	RENT	U	0	8	0	
					DRAW =		0.270A	0.648A	1.090A	0.000A	
										TOTAL NAC OKT CURRENT DRAW =	2.008A
TOT	AL STAND	BY CALC	CULATIONS					TOTAL STANDY CALC	υ		
16 Total	standby current	t						0.075			
12.00	ly by 24 / 60 fo		nurs needed					24H			
			ours recocu.								
18   10031	standby AH (An	np Hours)						1.8000 AH	J		TOTAL ALARM
ALA	RM CURRE	NT CAL	CULATIONS								CURRENT CALC
19 Total	alarm current										2.213
20 Multip	ly by 0.0833 for	r 5 min									0.0830
	alarm current.			-							0.1837 AH
		KUP REC	QUIREMENTS							1	U.ZUSF AIT
	otal, add line 18										1.9837 AH
			Devotina Forder								
			Derating Factor			$\dashv$					20%
24 lotal	AH (Amp Hours	]									2.3804 AH
										(2) BATTERY	SUPPLIED = 7 AM
Davice #	Davice Draw	Dictance	Distance + 10%	Amne	Volt Drop	Total Ame	or Total Dron	Percent Dren			
N5-01 N5-02	0.054A 0.054A	71' 52'	78' 57'	0.270A 0.216A	0.129v 0.076v	0.270A	0.317v	1.5518%			
N5-03	0.054A	38'	42'	0.162A			N.A.C #				
N5-04	0.054A	64'	70'	0.108A	0.047v	ш	ORN-STROBE C				
N5-05	0.054A	63'	69'	0.054A	0.023v	110	JNV-3 TROBE C.	RCOIT			
Device #	Davice Draw	Dietanes	Distance + 10%	Amne	Volt Dron	Total A	e Total Dren	Percent Dron			
N6-01 N6-02	0.108A 0.108A	31' 3'	34' 3'	0.648A 0.540A		0.648A	0.307v	1.5053%			
N6-02	0.108A 0.108A	19'	21'	0.432A			NI A S				
N6-04	0.108A	3'	3'	0.324A			N.A.C #				
N6-05	0.108A	66'	73'	0.216A		H	ORN-STROBE C	RCUIT			
110 00		3'									

HORN-STROBE CIRCUIT

0.982A 0.040v 0.874A 0.047v 0.766A 0.098v

0.550A 0.074v

0.442A 0.009v 0.334A 0.045v

0.226A 0.005v

0.108A 0.002v

Device # Device Draw Distance Distance + 10% Amps Volt Drop Total Amps Total Drop Percent Drop

N6-06 0.108A

N7-01 0.106A N7-02 0.108A N7-03 0.108A N7-04 0.108A N7-05 0.108A N7-06 0.108A N7-07 0.108A N7-08 0.108A

N7-09 0.226A

				DEATE	CE CURKENI			CIRCUI	# AND QIT	
	HORN / S	STROBE CI	RCUITS	1	DRAW	N	9	N10	N11	N12
HOR	N LOW FREQ				0.108A		7	6	6	3
1000	LOWITHE				CKT CURREN					1 ,
				D	RAW =	0.75	56A	0.648A	0.648A	0.324A
										TOTAL NAC CKT CURRENT DRAW =
TO	TAL STAND	SY CALC	ULATIONS				1	TOTAL STANDY CAL	CU	
16 Total	standby current							0.075		
	ply by 24 / 60 for		ours needed.					24H		
	standby AH (Am							1.8000 AH		
			CULATIONS							
	alarm current	MI CAL	COLATIONS							
						_			_	+
	ply by 0.0833 for	5 min							_	+
	alarm current.	/IID DEC	UIREMENTS							
			UIKEPIEN 3			7				
	total, add line 18									
	ply by 1.2 for 209		Jerating Factor							
24 Total	AH (Amp Hours	)								
										(2) BATTERY
Device #	Device Draw		Distance + 10%	Amps	_	Total Amps	Total Drop	Percent Drop		
N9-01	0.108A	52'	57'	0.756A	- A Vitable Ni	0.756A	0.449v	2.1990%		
N9-02 N9-03	0.108A 0.108A	3' 24'		0.648A 0.540A						
N9-03	0.108A	3'		0.432A			N.A.C #	9		
N9-05	0.108A	27'		0.324A		HOR	N-STROBE C	IRCUIT		
N9-06	0.108A	6'	7'	0.216A	0.009v					
N9-07	0.108A	8'	9'	0.108A	0.006v					
Device #	Device Draw	Distance	Distance + 10%	Amps	Volt Drop	Total Amps	Total Drop	Percent Drop		
N10-01	0.108A	129'	142'	0.648A	0.565v	0.648A	0.672v	3.2932%		
N10-02	0.108A	3'	3'	0.540A	0.011v					
N10-03	0.108A	20'	22'	0.432A	0.058v		N.A.C #	10		
N10-04	0.108A	3'	3'	0.324A	0.007v					
N10-05	0.108A	20'	22'	0.216A		HUR	RN-STROBE C	JRCUIT		
N10-06	0.108A	3'	3'	0.108A	0.002v					
Device #	# Device Draw	Distance	Distance + 10%	Amps	Volt Drop	Total Amps	Total Drop	Percent Drop		
N11-01	0.108A	79'	87'	0.648A	0.346v	0.648A	0.444v	2.1776%		
N11-02	0.108A	8'	9'	0.540A	0.029v					
	0.108A	6'	7'	0.432A		1	N.A.C #	11		
N11-03				0 2244	0.037v					
N11-04	0.108A	17'	19'	0.324A		LICE	MI CTDODE C	TIDOUT		
N11-04 N11-05	0.108A	6'	7'	0.216A	0.009v	HOF	RN-STROBE C	CIRCUIT		
N11-04					0.009v	HOF	RN-STROBE C	CIRCUIT		

9' 0.216A 0.012v 7' 0.108A 0.004v

0.216A 0.012v

N.A.C #12 HORN-STROBE CIRCUIT

Quantity Standby Current

DEVICE CURRENT

Total Standby Current =

Total Stanby Current

(BxC)

5495 BPS#2 ( 5 MINUTES IN ALARM, 24HRS STANDBY)

INTERNAL POWER SUPPLY COMPONENTS

5495 BPS#3 ( 5 MINUTES IN ALARN	1, 24HRS STANDE	BY)			S	ILENT KNIGHT
A	В	С	D	E	F	
INTERNAL POWER SUPPLY COMPONENTS	Quantity	Standby Current	Total Stanby Current (B x C)	Alarm Current	Total Alarm Current (B x E)	
5495 MAIN POWER SUPPLY BOARD	1	0.075A	0.075A	0.205A	0.205A	
		Total Standby Current =	0.075A	Total Alm Current=	0.205A	
	DEVICE CURRENT		CIRCUIT #	AND QTY		
HORN / STROBE CIRCUITS	DRAW	NL3	N14	N15	N16-SPARE	
15cd HORN-STROBE, WALL	0.054A	5	0	0	0	
HORN LOW FREQ	0.108A	0	6	8	0	
	NA C CKT CURRENT DRAW =	0.270A	0.648A	1.090A	0.000A	
					TOTAL NAC CKT CURRENT DRAW =	2.008A
TOTAL STANDBY CALCULATIONS			TOTAL STANDY CALCU			
16 Total standby current			0.075			
17 Multiply by 24 / 60 for standby hours needed.			24H			
18 Total standby AH (Amp Hours)			1.8000 AH			
ALARM CURRENT CALCULATIONS						TOTAL ALARM CURRENT CALCU
19 Total alarm current						2.213
Multiply by 0.0833 for 5 min						0.0830
1 Total alarm current.						0.1837 AH
BATTERY BACKUP REQUIREMENTS		1				
22 Sub total, add line 18+21						1.9837 AH
Multiply by 1.2 for 20% Battery Derating Factor						20%
4 Total AH (Amp Hours)						2.3804 AH

N.A.C #2

HORN-STROBE CIRCUIT

Device #	Device Draw	Distance	Distance + 10%	Amps	Volt Drop	Total Amps	Total Drop	Percent Drop		
N13-01	0.054A	71'	78'	0.270A	0.129v	0.270A	0.317v	1.5518%		
N13-02	0.054A	52'	57'	0.216A	0.076v					
N13-03	0.054A	38'	42'	0.162A	0.042v		N A C #1	2		
N13-04	0.054A	64'	70'	0.108A	0.047v		N.A.C #1			
N13-05	0.054A	63'	69'	0.054A	0.023v	HOR	N-STROBE CI	RCUII		
Device #	Device Draw	Distance	Distance + 10%	Amps	Volt Drop	Total Amps	Total Drop	Percent Drop		
N14-01	0.108A	31'	34'	0.648A	0.136v	0.648A	0.307v	1.5053%		
N14-02	0.108A	3'	3'	0.540A	0.011v					
N14-03	0.108A	19'	21'	0.432A	0.055v		N.A.C #14			
N14-04	0.108A	3'	3'	0.324A	0.007v					
N14-05	0.108A	66'	73'	0.216A	0.096v	HORN-STROBE CIRCUIT				
N14-06	0.108A	3'	3'	0.108A	0.002v					
Device #	Device Draw	Distance	Distance + 10%	Amps	Volt Drop	Total Amps	Total Drop	Percent Drop		
N15-01	0.108A	33'	36'	1.090A	0.243v	1.090A	0.575v	2.8164%		
N15-02	0.108A	6'	7'	0.982A	0.040v					
N15-03	0.108A	8'	9'	0.874A	0.047v		N A C #	ır		
N15-04	0.108A	19'	21'	0.766A	0.098v	N.A.C #15 HORN-STROBE CIRCUIT				
N15-05	0.1004	3'	3'	0.658A	0.013v					
	0.108A		9							
N15-06	0.108A 0.108A	20'	22'	0.550A	0.074v					
N15-06 N15-07				0.550A 0.442A	TATE 12					
	0.108A	20'	22'		0.009v					

39' 0.140A 0.033v 8' 0.097A 0.005v

Device # Device Draw Distance Distance + 10% Amps Volt Drop Total Amps Total Drop Percent Drop

0.941A 0.095v

0.898A 0.018v

0.844A 0.046v

0.801A 0.108v

0.758A 0.041v

0.684A 0.092v 0.641A 0.074v

0.520A 0.046v 0.477A 0.106v 0.414A 0.034v 0.360A 0.044v

0.297A 0.050v

A	В	C	D	E	F	
INTERNAL POWER SUPPLY COMPONENTS	Quantity	Standby Current	Total Stanby Current (B x C)	Alarm Current	Total Alarm Current (B x E)	
5495 MAIN POWER SUPPLY BOARD	1	0.075A	0.075A	0.205A	0.205A	
		Total Standby Current =	0.075A	Total Alm Current=	0.205A	
	DEVICE CURRENT		CIRCUIT #	AND QTY		
HORN / STROBE CIRCUITS	DRAW	N17	N18	N19	N20	
HORN LOW FREQ	0.108A	7	6	6	3	
	NAC CKT CURRENT DRAW =	0.756A	0.648A	0.648A	0.324A	
					TOTAL NAC CKT CURRENT DRAW =	2.376A
TOTAL STANDBY CALCULATIONS			TOTAL STANDY CALCU			
6 Total standby current.			0.075			
7 Multiply by 24 / 60 for standby hours needed.			24H			
8 Total standby AH (Amp Hours)			1.8000 AH			
ALARM CURRENT CALCULATIONS						TOTAL ALARM CURRENT CALCU
9 Total alarm current						2.581
0 Multiply by 0.0833 for 5 min						0.0830
1 Total alarm current.						0.2142 AH
BATTERY BACKUP REQUIREMENTS						
2 Sub total, add line 18+21						2.0142 AH
3 Multiply by 1.2 for 20% Battery Derating Factor						2096
4 Total AH (Amp Hours)						2.4171 AH

Device #	Device Draw	Distance	Distance + 10%	Amps	<b>Volt Drop</b>	Total Amps	Total Drop	Percent Drop	
N17-01	0.108A	52'	57'	0.756A	0.266v	0.756A	0.449v	2.1990%	
N17-02	0.108A	3'	3'	0.648A	0.013v				
N17-03	0.108A	24'	26'	0.540A	0.088v		N.A.C #1	7	
N17-04	0.108A	3'	3'	0.432A	0.009v				
N17-05	0.108A	27'	30'	0.324A	0.059v	HOR	N-STROBE C	IRCUIT	
N17-06	0.108A	6'	7'	0.216A	0.009v				
N17-07	0.108A	8'	9'	0.108A	0.006v				
Device #	Device Draw	Distance	Distance + 10%	Amps	Volt Drop	Total Amps	Total Drop	Percent Drop	
N18-01	0.108A	129'	142'	0.648A	0.565v	0.648A	0.672v	3.2932%	
N18-02	0.108A	3'	3'	0.540A	0.011v				
N18-03	0.108A	20'	22'	0.432A	0.058v		N. A. C. //-		
N18-04	0.108A	3'	3'	0.324A	0.007v		N.A.C #1		
N18-05	0.108A	20'	22'	0.216A	0.029v	HOF	N-STROBE C	IRCUIT	
N18-06	0.108A	3'	3'	0.108A	0.002v				
Device #	Device Draw	Distance	Distance + 10%	Amps	Volt Drop	Total Amps	Total Drop	Percent Drop	
N19-01	0.108A	79'	87'	0.648A	0.346v	0.648A	0.444v	2.1776%	
N19-02	0.108A	8'	9'	0.540A	0.029v				
N19-03	0.108A	6'	7'	0.432A	0.018v		NI A C #4	0	
N19-04	0.108A	17'	19'	0.324A	0.037v		N.A.C #1		
N19-05	0.108A	6'	7'	0.216A	0.009v	HOF	N-STROBE C	IRCUIT	
N19-06	0.108A	8'	9'	0.108A	0.006v				
Device #	Device Draw	Distance	Distance + 10%	Amps	Volt Drop	Total Amps	Total Drop	Percent Drop	
N20-01	0.108A	156'	172'	0.324A		0.324A	0.357v	1.7521%	
N20-02	0.108A	8'	9'	0.216A		0.02	0.007	11,521,0	
N20-03	0.108A	6'	7'	0.108A	100 March 100 Ma		N.A.C #20		
							IN-C-1- 77/	U	

5495 BPS#5 ( 5 MINUTES IN ALARM	, 24HRS STANDE	BY)			S	ILENT KNIGHT
A	В	С	D	E	F	
			Total Stanby Current		Total Alarm Current	
INTERNAL POWER SUPPLY COMPONENTS	Quantity	Standby Current	(BxC)	Alarm Current	(BxE)	
5495 MAIN POWER SUPPLY BOARD	1	0.075A	0.075A	0.205A	0.205A	
		Total Standby Current =	0.075A	Total Alm Current=	0.205A	
	1					
	DEVICE CURRENT		CIRCUIT #	AND QTY		
HORN / STROBE CIRCUITS	DRAW	N21	N22	N23	N24-SPARE	
15cd HORN-STROBE, WALL	0.054A	5	0	0	0	
HORN LOW FREQ	0.108A	0	6	9	0	
	NAC CKT CURRENT DRAW =	0.270A	0.648A	0.972A	0.000A	
					TOTAL NAC CKT CURRENT DRAW =	1.890A
TOTAL STANDBY CALCULATIONS			TOTAL STANDY CALCU			
Total standby current			0.075			
Multiply by 24 / 60 for standby hours needed.			24H			
Total standby AH (Amp Hours)			1.8000 AH			
ALARM CURRENT CALCULATIONS						TOTAL ALARM CURRENT CALCU
Total alarm current						2.095
Multiply by 0.0833 for 5 min						0.0830
Total alarm current.						0.1739 AH
BATTERY BACKUP REQUIREMENTS		,				
Sub total, add line 18+21						1.9739 AH
Multiply by 1.2 for 20% Battery Derating Factor						20%
Total AH (Amp Hours)						2.3687 AH

N12-01 0.108A 156' N12-02 0.108A 8'

N12-03 0.108A 6'

Device #	Device Draw	Distance	Distance + 10%	Amps	Volt Drop	Total Amps	Total Drop	Percent Drop	
N21-01	0.054A	71'	78'	0.270A	0.129v	0.270A	0.317v	1.5518%	
N21-02	0.054A	52'	57'	0.216A	0.076v				
N21-03	0.054A	38'	42'	0.162A	0.042v		N A C #2	14	
N21-04	0.054A	64'	70'	0.108A	0.047v		N.A.C #2	-	
N21-05	0.054A	63'	69'	0.054A	0.023v	HOR	N-STROBE C	IRCUIT	
Device #	Device Draw	Distance	Distance + 10%	Amps	Volt Drop	Total Amps	Total Drop	Percent Drop	
N22-01	0.108A	31'	34'	0.648A	0.136v	0.648A	0.307v	1.5053%	
N22-02	0.108A	3'	3'	0.540A	0.011v				
N22-03	0.108A	19'	21'	0.432A	0.055v		NAC #	12	
N22-04	0.108A	3'	3'	0.324A	0.007v		N.A.C #2		
N22-05	0.108A	66'	73'	0.216A	0.096v	HOF	HORN-STROBE CIRCUIT		
N22-06	0.108A	3'	3'	0.108A	0.002v				
Device #	Device Draw	Distance	Distance + 10%	Amps	Volt Drop	Total Amps	Total Drop	Percent Dron	
		33'	36'		•	•		2.3671%	
N23-01 N23-02	0.108A 0.108A	6'	7'	0.972A 0.864A	0.217v 0.035v	0.972A	0.483v	2.30/1%	
N23-02	0.108A 0.108A	8'	9'	0.756A					
N23-03		19'	21'	A COLUMN TO SERVICE			N.A.C #23		
N23-04 N23-05	0.108A 0.108A	3'	3'	0.648A 0.540A	0.083v 0.011v	HOF	HORN-STROBE CIRCUIT		
N23-05	0.108A 0.108A	20'	22'	0.432A	0.011v 0.058v			and the same	
N23-06 N23-07	0.108A 0.108A	3'	3'	0.432A 0.324A	0.038V 0.007v				
N23-07	0.108A 0.108A	20'	22'	0.324A 0.216A	0.007V 0.029V				
N23-08	0.108A	3'	3'	0.210A 0.108A	0.029V 0.002V				

		- 14	DC CURRE	RAW LIS				_
	W	all		erproof	Cei	ling	W	ALL
Candela	- "	Horn/	Westin	Horn/		Horn/		LF-Horn
Rating	Strobe	Strobe	Strobe	Strobe	Strobe	Strobe	LF-Horn	Strobe
15cd	0.043	0.054	0.066	0.079	0.041	0.071		275
30cd	0.063	0.074	0.094	0.107	0.063	0.090		-
75cd	0.107	0.121	0.158	0.176	0.111	0.143		
95cd	0.121	0.142	0.181	0.194	0.134	0.165		-
110cd	0.148	0.162	0.202	0.212				-
115cd			0.210	0.218	0.158	0.187		-
135cd	0.172	0.196	0.228	0.245		-	-	-
150cd			0.246	0.259	0.189	0.217		-
177cd			0.281	0.290	0.226	0.254		
185cd	0.222	0.245	0.286	0.297				
							0.108	-
185cd								0.266

SILENT KNIGHT

2.376A

TOTAL ALARM CURRENT CALCU

> 0.0830 0.2142 AH

2.0142 AH 20%

(2) BATTERY SUPPLIED = 7 AMP

Total Alarm

Current (Bx E)

Alarm Current

Total Alm Current = 0.205A

 $A \times (L/1000) \times R \times 2$ A= CURRENT REQUIRED BY THE DEVICE L= LENGTH DISTANCE FROM DEVICE TO DEVICE R = RESISTANCE OF WIRE PER 1000 FT. 14 AWG = 3.07 OHMS PER 1000FT. VOLTAGE DROP BASE ON PANELS WORST CASE VOLTAGE OF 20.4 VDC

CHECKED: RC DATE: 03/22/2021 PLOT: BATTERY & VOLTAGE DROP CALCULATIONS - 1

DESIGN: C.O.

P.O. BOX 880922

PORT SAINT LUCIE, FL 34988 Carlos Oliveras (619) 610-8637, NICET III #84003

carlos.oliveras@fuegoeng.com

DRAWN: C.O.

REV. DATE DESCRIPTION

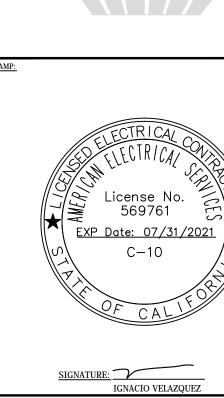
TWIN RIVERS BLOCK A

FIRE ALARM SYSTEM

N.T.S.

FA-9.0





N1-15 0.043A N1-16 0.054A

N2-02 0.043A

N2-03 0.054A N2-04 0.043A N2-05 0.043A

N2-06 0.074A

N2-07 0.043A N2-08 0.121A

N2-09 0.043A N2-10 0.063A N2-11 0.054A N2-12 0.063A

N2-13 0.121A

495 BPS#6 ( 5 MINUTES IN ALARI	M, 24HRS STANDE	3Y)			S	ILENT KNIGHT
A	В	С	D	E	F	
INTERNAL POWER SUPPLY COMPONENTS	Quantity	Standby Current	Total Stanby Current (B x C)	Alarm Current	Total Alarm Current (B x E)	
5495 MAIN POWER SUPPLY BOARD	1	0.075A	0.075A	0.205A	0.205A	
		Total Standby Current =	0.075A	Total Alm Current=	0.205A	
	DEVICE CURRENT		CIRCUIT #	AND QTY		
HORN / STROBE CIRCUITS	DRAW	N25	N26	N27	N28	
15cd STROBE WALL	0.043A	0	0	0	0	
15cd HORN-STROBE, WALL	0.054A	0	0	0	0	
HORN LOW FREQ	0.108A	7	6	6	3	
	NAC CKT CURRENT DRAW =	0.756A	0.648A	0.648A	0.324A	
					TOTAL NAC CKT CURRENT DRAW =	2.376A
TOTAL STANDBY CALCULATIONS			TOTAL STANDY CALCU			
Total standby current			0.075			
Multiply by 24 / 60 for standby hours needed.			24H			
Total standby AH (Amp Hours)			1.8000 AH			
ALARM CURRENT CALCULATIONS						CURRENT CALCU
Total alarm current						2.581
Multiply by 0.0833 for 5 min						0.0830
Total alarm current.						0.2142 AH
BATTERY BACKUP REQUIREMENTS	i					
Sub total, add line 18+21						2.0142 AH
Multiply by 1.2 for 20% Battery Derating Factor						2096
Total AH (Amp Hours)						2.4171 AH

23 Multipl	y by 1.2 for 209	% Battery D	erating Factor					
24 Total A	AH (Amp Hours)	)						
Device #	Device Draw	Distance	Distance + 10%	Amns	Volt Drop	Total Amns	Total Drop	Percent Droi
N25-01	0.108A	52'	57'	0.756A	0.266v	0.756A	0.449v	2.1990%
N25-02	0.108A	3'	3'	0.648A	0.200v	0.750A	0.1150	2.155070
N25-03	0.108A	24'	26'	0.540A	0.088v		N A C // O	_
N25-04	0.108A	3'	3'	0.432A	0.009v		N.A.C #2	5
N25-05	0.108A	27'	30'	0.324A	0.059v	HOR	N-STROBE CI	RCUIT
N25-06	0.108A	6'	7'	0.216A	0.009v			
N25-07	0.108A	8'	9'	0.108A	0.006v			
Device #	Device Draw	Distance	Distance + 10%	Amps	Volt Drop	Total Amps	Total Drop	Percent Dro
						17	111111111111111111111111111111111111111	1
N26-01	0.108A	129'	142' 3'	0.648A		0.648A	0.672v	3.2932%
N26-02	0.108A	3'	I	0.540A				
N26-03	0.108A	20'	22'	0.432A			N.A.C #2	26
N26-04	0.108A	3'	3'	0.324A		HOE	N-STROBE C	
N26-05	0.108A	20'	22'	0.216A	500 FEB. 100 St. 100	1101	TRODE C	INCOLL
N26-06	0.108A	3'	3'	0.108A	0.002v			
Device #	Device Draw	Distance	Distance + 10%	Amps	Volt Drop	Total Amps	Total Drop	Percent Dro
N27-01	0.108A	79'	87'	0.648A	0.346v	0.648A	0.444v	2.1776%
N27-02	0.108A	8'	9'	0.540A	0.029v			
N27-03	0.108A	6'	7'	0.432A	0.018v		NI A C 112	\
N27-04	0.108A	17'	19'	0.324A	0.037v		N.A.C #2	2/
N27-05	0.108A	6'	7'	0.216A	0.009v	HOF	RN-STROBE C	IRCUIT
N27-06	0.108A	8'	9'	0.108A	0.006v			
Device #	Device Draw	Distance	Distance + 10%	Amps	Volt Drop	Total Amps	Total Drop	Percent Dro
			172'	-		111111111111111111111111111111111111111		
N28-01 N28-02	0.108A 0.108A	156' 8'	9'	0.324A 0.216A		0.324A	0.357v	1.7521%
N28-02 N28-03	0.108A 0.108A	6'	7'	0.216A 0.108A	187 - 10 7 - 11 - 11 - 11			
11/20-03	U.100A	U	7.	U.100A	0.0040	HOE	N.A.C #2	

5495 BPS#7 ( 5 MINUTES IN ALARI	M, 24HRS STANDI	BY)			S	ILENT KNIGHT	5495	BPS#8 (	5 MINUTES IN ALA	RM, 24HR	SSTAND	BY)
A	В	С	D	E	F				A		В	
INTERNAL POWER SUPPLY COMPONENTS	Quantity	Standby Current	Total Stanby Current (B x C)	Alarm Current	Total Alarm Current (B x E)		IN	TERNAL POW	ER SUPPLY COMPONENT	s Q	uantity	Stand
5495 MAIN POWER SUPPLY BOARD	1	0.075A	0.075A	0.205A	0.205A		5495 1	MAIN POWER S	SUPPLY BOARD		1	- 0
		Total Standby Current =	0.075A	Total Alm Current=	0.205A							Total Cur
		<b>-</b>				1				DEVIK	E CURRENT	1
	DEVICE CURRENT DRAW		CIRCUIT #		100			HORN /	STROBE CIRCUITS		DRAW	
HORN / STROBE CIRCUITS		N29	NGO	N31	N32		15cd H	ORN-STROBE,	, WALL	3	0.054A	
15cd HORN-STROBE, WALL	0.054A	6	0	0	0		HORN I	LOW FREQ		- 1	0.108A	
HORN LOW FREQ	0.108A  NAC CKT CURRENT  DRAW =	0.324A	9 0.972A	9 0.972A	9 0.972A						KT CURRENT RAW =	0
		VIJEN	W.77.2A	V.3725	TOTAL NAC CKT CURRENT DRAW =	3.240A						
TOTAL STANDBY CALCULATIONS	1	l .	TOTAL STANDY CALCU		1	1			BY CALCULATIONS	1		
6 Total standby current	1		0.075					tandby current		_		
7 Multiply by 24 / 60 for standby hours needed.		I	24H						r standby hours needed.			
Total standby AH (Amp Hours)			1.8000 AH					tandby AH (An				
						TOTAL ALARM			NT CALCULATION	S		
ALARM CURRENT CALCULATIONS	1	I	T	I		CURRENT CALCU		larm current		_		-
9 Total alarm current	-					3,445		y by 0.0833 fo	r 5 min			
0 Multiply by 0.0833 for 5 min	1	l				0.0830		larm current.	KUP REQUIREMEN	TC		
1 Total alarm current.  BATTERY BACKUP REQUIREMENTS			I			0.2859 AH		tal. add line 18		13		
		1				2.0859 AH			96 Battery Derating Factor			
2 Sub total, add line 18+21	T					20859 AH 2096		H (Amp Hours				
Multiply by 1.2 for 20% Battery Derating Factor	1					2.5031 AH						
4 Total AH (Amp Hours)	5				/2) DATTERY	SUPPLIED = 7 AMP						
-					(Z) BATTERT	SUPPLIED = / AMP	Device #	Device Draw	Distance Distance + :	L0% Amps	Volt Drop To	otal Amp
evice # Device Draw Distance Distance + 10%	6 Amps Volt Drop To	otal Amps Total Dro	p Percent Drop				N33-01	0.054A	25' 28'	0.216A	Total Control of the	0.216A
N29-01 0.054A 26' 29'	0.324A 0.057v	0.324A 0.199v	0.9762%				N33-02 N33-03	0.054A 0.054A	30' 33' 50' 55'	0.162A	0.033v 0.036v	
NO 00 0 054A 20' 22'	0.2704 0.0554						N55-U5	U.U34A	20 22	0.108A	U.U30V	

Device #	Device Draw	Distance	Distance + 10%	Amps	Volt Drop	Total Amps	Total Drop	Percent Drop
N29-01	0.054A	26'	29'	0.324A	0.057v	0.324A	0.199v	0.9762%
N29-02	0.054A	30'	33'	0.270A	0.055v			
N29-03	0.054A	20'	22'	0.216A	0.029v		N.A.C #2	0
N29-04	0.054A	30'	33'	0.162A	0.033v			
N29-05	0.054A	20'	22'	0.108A	0.015v	HOR	N-STROBE C	IRCUIT
N29-06	0.054A	30'	33'	0.054A	0.011v			
Device #	Device Draw	Distance	Distance + 10%	Amps	Volt Drop	Total Amps	Total Drop	Percent Drop
N30-01	0.108A	25'	28'	0.972A	0.103v	0.972A	0.448v	2.1971%
N30-02	0.108A	14'	15'	0.864A				
N30-03	0.108A	4'	4'	0.756A	0.020v		NI A C #2	20
N30-04	0.108A	31'	34'	0.648A	0.136v		N.A.C #3	
N30-05	0.108A	5'	6'	0.540A	0.018v	HOR	N-STROBE C	IRCUIT
N30-06	0.108A	12'	13'	0.432A	0.035v			
N30-07	0.108A	15'	17'	0.324A	0.033v			
N30-08	0.108A	12'	13'	0.216A	0.018v			
N30-09	0.108A	5'	6'	0.108A	0.004v			
Device # N31-01	0.108A	Distance 45'	Distance + 10%	Amps 0.972A	-	Total Amps 0.972A	Total Drop 0.640v	Percent Drop 3.1394%
		14'	50°			0.9/2A	0.6400	3.1394%
N31-02 N31-03	0.108A 0.108A	4'	4'	0.864A 0.756A				
	U. IUOA	4	4	U./JUA		l		
N21_04			341	0.6484			N.A.C #3	31
N31-04	0.108A	31'	34'	0.648A	0.136v	HOR	N.A.C #3	
N31-05	0.108A 0.108A	31' 5'	6'	0.540A	0.136v 0.018v	HOR		
N31-05 N31-06	0.108A 0.108A 0.108A	31' 5' 12'	6' 13'	0.540A 0.432A	0.136v 0.018v 0.035v	HOR		
N31-05 N31-06 N31-07	0.108A 0.108A 0.108A 0.108A	31' 5' 12' 15'	6' 13' 17'	0.540A 0.432A 0.324A	0.136v 0.018v 0.035v 0.033v	HOR		
N31-05 N31-06 N31-07 N31-08	0.108A 0.108A 0.108A 0.108A 0.108A	31' 5' 12' 15' 12'	6' 13' 17' 13'	0.540A 0.432A 0.324A 0.216A	0.136v 0.018v 0.035v 0.033v 0.018v	HOR		
N31-05 N31-06 N31-07	0.108A 0.108A 0.108A 0.108A	31' 5' 12' 15'	6' 13' 17'	0.540A 0.432A 0.324A	0.136v 0.018v 0.035v 0.033v 0.018v	HOR		
N31-05 N31-06 N31-07 N31-08 N31-09	0.108A 0.108A 0.108A 0.108A 0.108A 0.108A	31' 5' 12' 15' 12' 5'	6' 13' 17' 13'	0.540A 0.432A 0.324A 0.216A 0.108A	0.136v 0.018v 0.035v 0.033v 0.018v 0.004v		N-STROBE C	IRCUIT
N31-05 N31-06 N31-07 N31-08 N31-09	0.108A 0.108A 0.108A 0.108A 0.108A 0.108A	31' 5' 12' 15' 12' 5'	6' 13' 17' 13' 6'	0.540A 0.432A 0.324A 0.216A 0.108A	0.136v 0.018v 0.035v 0.033v 0.018v 0.004v		N-STROBE C	IRCUIT
N31-05 N31-06 N31-07 N31-08 N31-09	0.108A 0.108A 0.108A 0.108A 0.108A 0.108A	31' 5' 12' 15' 12' 5'	6' 13' 17' 13' 6'  Distance + 10% 72' 15'	0.540A 0.432A 0.324A 0.216A 0.108A	0.136v 0.018v 0.035v 0.033v 0.018v 0.004v <b>Volt Drop</b> 0.427v	Total Amps	N-STROBE C	Percent Drop
N31-05 N31-06 N31-07 N31-08 N31-09 <b>Device #</b>	0.108A 0.108A 0.108A 0.108A 0.108A 0.108A Device Draw 0.108A	31' 5' 12' 15' 12' 5'	6' 13' 17' 13' 6'  Distance + 10%	0.540A 0.432A 0.324A 0.216A 0.108A Amps 0.972A 0.864A	0.136v 0.018v 0.035v 0.033v 0.018v 0.004v <b>Volt Drop</b> 0.427v	Total Amps 0.972A	Total Drop	Percent Drop 3.7830%
N31-05 N31-06 N31-07 N31-08 N31-09 <b>Device #</b> N32-01 N32-02	0.108A 0.108A 0.108A 0.108A 0.108A 0.108A Device Draw 0.108A 0.108A	31' 5' 12' 15' 12' 5'  Distance 65' 14' 4' 31'	6' 13' 17' 13' 6'  Distance + 10% 72' 15' 4' 34'	0.540A 0.432A 0.324A 0.216A 0.108A Amps 0.972A 0.864A	0.136v 0.018v 0.035v 0.033v 0.018v 0.004v Volt Drop 0.427v 0.082v 0.020v	Total Amps 0.972A	Total Drop 0.772v  N.A.C #3	Percent Drop 3.7830%
N31-05 N31-06 N31-07 N31-08 N31-09 <b>Device #</b> N32-01 N32-02 N32-03	0.108A 0.108A 0.108A 0.108A 0.108A 0.108A Device Draw 0.108A 0.108A	31' 5' 12' 15' 12' 5'  Distance 65' 14' 4'	6' 13' 17' 13' 6'  Distance + 10% 72' 15' 4'	0.540A 0.432A 0.324A 0.216A 0.108A Amps 0.972A 0.864A 0.756A	0.136v 0.018v 0.035v 0.033v 0.018v 0.004v Volt Drop 0.427v 0.082v 0.020v 0.136v	Total Amps 0.972A	Total Drop	Percent Drop 3.7830%
N31-05 N31-06 N31-07 N31-08 N31-09 <b>Device #</b> N32-01 N32-02 N32-03 N32-04	0.108A 0.108A 0.108A 0.108A 0.108A 0.108A Device Draw 0.108A 0.108A 0.108A	31' 5' 12' 15' 12' 5'  Distance 65' 14' 4' 31' 5' 12'	6' 13' 17' 13' 6'  Distance + 10% 72' 15' 4' 34'	0.540A 0.432A 0.324A 0.216A 0.108A Amps 0.972A 0.864A 0.756A 0.648A	0.136v 0.018v 0.035v 0.033v 0.018v 0.004v Volt Drop 0.427v 0.082v 0.020v 0.136v 0.018v	Total Amps 0.972A	Total Drop 0.772v  N.A.C #3	Percent Drop 3.7830%
N31-05 N31-06 N31-07 N31-08 N31-09 <b>Device #</b> N32-01 N32-02 N32-03 N32-04 N32-05	0.108A 0.108A 0.108A 0.108A 0.108A 0.108A 0.108A 0.108A 0.108A 0.108A 0.108A	31' 5' 12' 15' 12' 5'  Distance 65' 14' 4' 31' 5' 12' 15'	6' 13' 17' 13' 6'   Distance + 10%  72' 15' 4' 34' 6'	0.540A 0.432A 0.324A 0.216A 0.108A Amps 0.972A 0.864A 0.756A 0.648A 0.540A	0.136v 0.018v 0.035v 0.033v 0.018v 0.004v Volt Drop 0.427v 0.082v 0.020v 0.136v 0.018v 0.035v	Total Amps 0.972A	Total Drop 0.772v  N.A.C #3	Percent Drop 3.7830%
N31-05 N31-06 N31-07 N31-08 N31-09 <b>Device #</b> N32-01 N32-02 N32-03 N32-04 N32-05 N32-06	0.108A 0.108A 0.108A 0.108A 0.108A 0.108A 0.108A 0.108A 0.108A 0.108A 0.108A 0.108A	31' 5' 12' 15' 12' 5'  Distance 65' 14' 4' 31' 5' 12'	6' 13' 17' 13' 6'  Distance + 10%  72' 15' 4' 34' 6' 13'	0.540A 0.432A 0.324A 0.216A 0.108A Amps 0.972A 0.864A 0.756A 0.648A 0.540A 0.432A	0.136v 0.018v 0.035v 0.033v 0.018v 0.004v Volt Drop 0.427v 0.082v 0.020v 0.136v 0.018v 0.035v 0.033v 0.018v	Total Amps 0.972A	Total Drop 0.772v  N.A.C #3	Percent Drop 3.7830%

			EU alt MEMILI						T		
		A			В	-	C	D	E	F	
	OTTOWAY PARK	en cummu	сомвонилис		hant?	Chandle		Total Stanby Current	Album Comunit	Total Alarm Current	
			COMPONENTS	Q	uantity		Current	(BxC)	Alarm Current	(B x E)	
5495	MAIN POWER S	SUPPLY BOA	VRD	-	1	0.0	75A	0.075A	0.205A	0.205A	
						Total S	tandby				
						Curre	ent =	0.075A	Total Alm Current=	0.205A	
				DEVE	CE CURRENT			CIRCUIT #	AND QTY		
	HORN /	STROBE CI	ROUTS	1	DRAW	N	33	NB4	N35	N36	
15nd	HORN-STROBE,	WAII			0.054A		4	0	0	0	
	LOW FREQ	W. Talanta			0.108A		0	8	6	6	
I NOTO	LOW I PLY				OKT CURREN		-	3	0		
					RAW =		16A	0.864A	0.648A	0.648A	
										TOTAL NAC OXT	2224
										CURRENT DRAW =	2.376A
TOT	AL STAND	BY CALC	ULATIONS					TOTAL STANDY CALCU			
	standby curren							0.075			
	oly by 24 / 60 fo		nurs needed					24H			
			ours needed.								
18   10(2)	standby AH (An	np Hours)					<u> </u>	1.8000 AH	J		TOTAL ALARM
ALA	RM CURRE	NT CAL	CULATIONS								CURRENT CALCU
19 Total	alarm current										2.581
	oly by 0.0833 fo	r 5 min									0.0830
	alarm current.	J 11111									0.2142 AH
		VIID DEC	UIREMENTS								U.Z14Z AII
			OINLINENTS								
	otal, add line 18										2.0142 AH
23 Multip	oly by 1.2 for 20	96 Battery D	Derating Factor								20%
24 Total	AH (Amp Hours	i)									2.4171 AH
										(2) BATTERY	SUPPLIED = 7 AMP
Device #	Device Draw	Distance	Distance + 10%	Amps	Volt Drop	Total Amps	Total Drop	Percent Drop			
N33-01	0.054A	25'	28'	0.216A	0.036v	0.216A	0.113v	0.5542%			
N33-02	0.054A	30'	33'	0.162A	0.033v						
N33-03	0.054A	50'	55'	0.108A			N.A.C #3	33			
N33-04	0.054A	20'	22'	0.054A	0.007v		RN-STROBE C				
						1101	OTTODE C				
Device #	Device Draw	Distance	Distance + 10%	Amps	Volt Drop	Total Amps	Total Drop	Percent Drop			
N34-01	0.108A	25'	28'	0.864A		0.864A	0.468v	2.2956%			
N34-02	0.108A	14'	15'	0.756A		0.00 IA	U. 100V	2.235070			

- 60		0.006	EEI 0.400				
NI A C #22	i i	0.036v	55' 0.108		50'	0.054A	N33-03
N.A.C #33 DRN-STROBE CIRCUIT		0.007v	22' 0.054		20'	0.054A	N33-04
KN-31 ROBE CIRCUIT	TIOK						
s Total Drop Percent Dro	Total Amns	Volt Drop	ce + 10% Amr	Dieta	Distance	Device Draw	Device #
	-			Dista			100000000000000000000000000000000000000
0.468v 2.2956%	0.864A	0.146v	28' 0.864		25'	0.108A	N34-01
		0.071v	15' 0.756		14'	0.108A	N34-02
N.A.C #34		0.018v	4' 0.648		4'	0.108A	N34-03
		0.135v	41' 0.540		37'	0.108A	N34-04
DRN-STROBE CIRCUIT	HUR	0.023v	9' 0.432		8'	0.108A	N34-05
		0.066v	33' 0.324		30'	0.108A	N34-06
		0.004v	3' 0.216		3'	0.108A	N34-07
		0.005v	8' 0.108		7'	0.108A	N34-08
s Total Drop Percent Dro	Total Amps	Volt Drop	ce + 10% Amp	Dista	Distance	Device Draw	Device #
s Total Drop Percent Dro	Total Amps	Volt Drop	ce + 10% Amp	Dista	Distance	Device Draw	Device #
os Total Drop Percent Dro 0.359v 1.7592%	Total Amps 0.648A	0.197v	50' 0.648	Dista	45'	0.108A	N35-01
			50' 0.648 15' 0.540	Dista	45' 14'	0.108A 0.108A	N35-01 N35-02
0.359v 1.7592%	0.648A	0.197v 0.051v 0.012v	50' 0.648 15' 0.540 4' 0.432	Dista	45' 14' 4'	0.108A 0.108A 0.108A	N35-01 N35-02 N35-03
0.359v 1.7592% N.A.C #35	0.648A	0.197v 0.051v 0.012v 0.070v	50' 0.648 15' 0.540 4' 0.432 35' 0.324	Dista	45' 14' 4' 32'	0.108A 0.108A 0.108A 0.108A	N35-01 N35-02 N35-03 N35-04
0.359v 1.7592%	0.648A	0.197v 0.051v 0.012v 0.070v 0.026v	50' 0.648 15' 0.540 4' 0.433 35' 0.324 20' 0.216	Dista	45' 14' 4' 32' 18'	0.108A 0.108A 0.108A 0.108A 0.108A	N35-01 N35-02 N35-03 N35-04 N35-05
0.359v 1.7592% N.A.C #35	0.648A	0.197v 0.051v 0.012v 0.070v	50' 0.648 15' 0.540 4' 0.432 35' 0.324	Dista	45' 14' 4' 32'	0.108A 0.108A 0.108A 0.108A	N35-01 N35-02 N35-03 N35-04
0.359v 1.7592% N.A.C #35	0.648A HOR	0.197v 0.051v 0.012v 0.070v 0.026v 0.003v	50' 0.648 15' 0.540 4' 0.432 35' 0.324 20' 0.216 4' 0.108		45' 14' 4' 32' 18' 4'	0.108A 0.108A 0.108A 0.108A 0.108A 0.108A	N35-01 N35-02 N35-03 N35-04 N35-05 N35-06
0.359v 1.7592%  N.A.C #35  DRN-STROBE CIRCUIT	0.648A HOR	0.197v 0.051v 0.012v 0.070v 0.026v 0.003v	50' 0.648 15' 0.540 4' 0.432 35' 0.324 20' 0.216 4' 0.108		45' 14' 4' 32' 18' 4'	0.108A 0.108A 0.108A 0.108A 0.108A 0.108A	N35-01 N35-02 N35-03 N35-04 N35-05 N35-06
0.359v 1.7592%  N.A.C #35  DRN-STROBE CIRCUIT  DEST Total Drop Percent Drop	0.648A HOR	0.197v 0.051v 0.012v 0.070v 0.026v 0.003v	50' 0.648 15' 0.540 4' 0.433 35' 0.322 20' 0.216 4' 0.108		45' 14' 4' 32' 18' 4'	0.108A 0.108A 0.108A 0.108A 0.108A 0.108A	N35-01 N35-02 N35-03 N35-04 N35-05 N35-06
0.359v 1.7592%  N.A.C #35  DRN-STROBE CIRCUIT  DS Total Drop Percent Drop  0.446v 2.1883%	0.648A  HOR  Total Amps  0.648A	0.197v 0.051v 0.012v 0.070v 0.026v 0.003v Volt Drop	50' 0.648 15' 0.540 4' 0.433 35' 0.324 20' 0.216 4' 0.108 ce + 10% Amp		45' 14' 4' 32' 18' 4'  Distance	0.108A 0.108A 0.108A 0.108A 0.108A <b>Device Draw</b> 0.108A	N35-01 N35-02 N35-03 N35-04 N35-05 N35-06
0.359v 1.7592%  N.A.C #35  DRN-STROBE CIRCUIT  DEST Total Drop Percent Drop	0.648A  HOR  Total Amps  0.648A	0.197v 0.051v 0.012v 0.070v 0.026v 0.003v Volt Drop 0.284v 0.051v	50' 0.648 15' 0.540 4' 0.432 35' 0.324 20' 0.216 4' 0.108 ce + 10% Amp 72' 0.648 15' 0.540 4' 0.432		45' 14' 4' 32' 18' 4'  Distance 65' 14'	0.108A 0.108A 0.108A 0.108A 0.108A 0.108A Device Draw 0.108A 0.108A	N35-01 N35-02 N35-03 N35-04 N35-05 N35-06 <b>Device #</b> N36-01 N36-02
0.359v 1.7592%  N.A.C #35  DRN-STROBE CIRCUIT  DS Total Drop Percent Drop  0.446v 2.1883%	0.648A  HOR  Total Amps  0.648A	0.197v 0.051v 0.012v 0.070v 0.026v 0.003v Volt Drop 0.284v 0.051v 0.012v	50' 0.648 15' 0.540 4' 0.432 35' 0.324 20' 0.216 4' 0.108 ce + 10% Amp 72' 0.648 15' 0.540 4' 0.432		45' 14' 4' 32' 18' 4'  Distance 65' 14' 4'	0.108A 0.108A 0.108A 0.108A 0.108A 0.108A Device Draw 0.108A 0.108A	N35-01 N35-02 N35-03 N35-04 N35-05 N35-06 Device # N36-01 N36-02 N36-03

	A	В	C	D	E	F	
	INTERNAL POWER SUPPLY COMPONENTS	Quantity	Standby Current	Total Stanby Current (BxC)	Alarm Current	Total Alarm Current (B x E)	
	5495 MAIN POWER SUPPLY BOARD	1	0.075A	0.075A	0.205A	0.205A	
			Total Standby Current =	0.075A	Total Alm Current=	0.205A	
		DEVICE CURRENT		CIRCUIT #	AND QTY		
	HORN / STROBE CIRCUITS	DRAW	NB7	NB8	NB9	N40	
6	15cd HORN-STROBE, WALL	0.054A	6	0	0	0	
	HORN LOW FREQ	0.108A	0	8	7	7	
		NAC CKT CURRENT DRAW =	0.324A	0.864A	0.756A	0.756A	
						TOTAL NAC CKT CURRENT DRAW =	2.700A
	TOTAL STANDBY CALCULATIONS			TOTAL STANDY CALCU			
16	Total standby current			0.075			
17	Multiply by 24 / 60 for standby hours needed.			24H			
18	Total standby AH (Amp Hours)			1.8000 AH			
	ALARM CURRENT CALCULATIONS						CURRENT CALC
19	Total alarm current						2.905
20	Multiply by 0.0833 for 5 min						0.0830
_	Total alarm current.						0.2411 AH
	BATTERY BACKUP REQUIREMENTS		,			,	
22	Sub total, add line 18+21						2.0411 AH
23	Multiply by 1.2 for 20% Battery Derating Factor						20%
24	Total AH (Amp Hours)						2.4493 AH

Device #	Device Draw	Distance	Distance + 10%	Amps	Volt Drop	Total Amps	Total Drop	Percent Drop
N37-01	0.054A	18'	20'	0.324A	0.039v	0.324A	0.201v	0.9869%
N37-02	0.054A	36'	40'	0.270A	0.066v			
N37-03	0.054A	20'	22'	0.216A	0.029v		N A C #3	7
N37-04	0.054A	36'	40'	0.162A	0.039v		N.A.C #3	
N37-05	0.054A	20'	22'	0.108A	0.015v	HOR	N-STROBE C	IRCUIT
N37-06	0.054A	36'	40'	0.054A	0.013v			
Device #	Device Draw	Distance	Distance + 10%	Amps	Volt Drop	Total Amps	Total Drop	Percent Drop
N38-01	0.108A	25'	28'	0.864A	0.146v	0.864A	0.439v	2.1525%
N38-02	0.108A	25'	28'	0.756A	0.128v			
N38-03	0.108A	3'	3'	0.648A	0.013v		NI A C #3	00
N38-04	0.108A	7'	8'	0.540A	0.026v		N.A.C #3	_
N38-05	0.108A	30'	33'	0.432A	0.088v	HOF	N-STROBE C	IRCUIT
N38-06	0.108A	3'	3'	0.324A	0.007v			
N38-07	0.108A	21'	23'	0.216A	0.031v			
N38-08	0.4004	3'	3'	0.1004	0.002v			
1100 00	0.108A	3	3	0.108A	0.0027			
			Distance + 10%			Total Amps	Total Drop	Percent Drop
			<b>Distance + 10%</b> 50'		Volt Drop	Total Amps 0.756A	Total Drop	Percent Drop 2.2527%
Device #	Device Draw	<b>Distance</b> 45' 10'	Distance + 10%	Amps	Volt Drop			
<b>Device #</b> N39-01	Device Draw 0.108A	Distance	<b>Distance + 10%</b> 50'	Amps 0.756A	Volt Drop 0.230v 0.044v	0.756A	0.460v	2.2527%
<b>Device #</b> N39-01 N39-02	0.108A 0.108A	<b>Distance</b> 45' 10'	Distance + 10% 50' 11'	Amps 0.756A 0.648A	Volt Drop 0.230v 0.044v 0.018v	0.756A	0.460v N.A.C #3	2.2527%
<b>Device #</b> N39-01 N39-02 N39-03	0.108A 0.108A 0.108A	Distance 45' 10' 5'	Distance + 10% 50' 11' 6'	Amps 0.756A 0.648A 0.540A	0.230v 0.044v 0.018v 0.128v	0.756A	0.460v	2.2527%
N39-01 N39-02 N39-03 N39-04	0.108A 0.108A 0.108A 0.108A 0.108A	Distance 45' 10' 5' 44'	Distance + 10% 50' 11' 6' 48'	0.756A 0.648A 0.540A 0.432A	0.230v 0.044v 0.018v 0.128v 0.007v	0.756A	0.460v N.A.C #3	2.2527%
N39-01 N39-02 N39-03 N39-04 N39-05	0.108A 0.108A 0.108A 0.108A 0.108A 0.108A	45' 10' 5' 44' 3'	50' 11' 6' 48' 3'	0.756A 0.648A 0.540A 0.432A 0.324A	0.230v 0.044v 0.018v 0.128v 0.007v 0.031v	0.756A	0.460v N.A.C #3	2.2527%
N39-01 N39-02 N39-03 N39-04 N39-05 N39-06 N39-07	0.108A 0.108A 0.108A 0.108A 0.108A 0.108A 0.108A	Distance  45' 10' 5' 44' 3' 21' 3'	50' 11' 6' 48' 3' 23'	Amps 0.756A 0.648A 0.540A 0.432A 0.324A 0.216A 0.108A	0.230v 0.044v 0.018v 0.128v 0.007v 0.031v 0.002v	0.756A HOF	0.460v N.A.C #3 RN-STROBE C	2.2527% 39 IRCUIT
N39-01 N39-02 N39-03 N39-04 N39-05 N39-06 N39-07	0.108A 0.108A 0.108A 0.108A 0.108A 0.108A 0.108A	Distance  45' 10' 5' 44' 3' 21' 3'	Distance + 10%  50' 11' 6' 48' 3' 23' 3'	Amps 0.756A 0.648A 0.540A 0.432A 0.324A 0.216A 0.108A	0.230v 0.044v 0.018v 0.128v 0.007v 0.031v 0.002v	0.756A HOF	0.460v N.A.C #3 RN-STROBE C	2.2527% 39 IRCUIT
N39-01 N39-02 N39-03 N39-04 N39-05 N39-06 N39-07	0.108A 0.108A 0.108A 0.108A 0.108A 0.108A 0.108A 0.108A	Distance  45' 10' 5' 44' 3' 21' 3'	Distance + 10%  50' 11' 6' 48' 3' 23' 3'	Amps 0.756A 0.648A 0.540A 0.432A 0.324A 0.216A 0.108A	Volt Drop  0.230v 0.044v 0.018v 0.128v 0.007v 0.031v 0.002v  Volt Drop	0.756A HOF	0.460v  N.A.C #3  RN-STROBE C	2.2527%  39  IRCUIT  Percent Drop
N39-01 N39-02 N39-03 N39-04 N39-05 N39-06 N39-07 Device #	0.108A 0.108A 0.108A 0.108A 0.108A 0.108A 0.108A 0.108A	Distance  45' 10' 5' 44' 3' 21' 3'  Distance	Distance + 10%  50' 11' 6' 48' 3' 23' 3'  Distance + 10%  72' 11'	Amps 0.756A 0.648A 0.540A 0.432A 0.324A 0.216A 0.108A  Amps 0.756A	Volt Drop  0.230v 0.044v 0.018v 0.128v 0.007v 0.031v 0.002v  Volt Drop 0.332v	0.756A HOF Total Amps 0.756A	0.460v  N.A.C #3  N.STROBE C  Total Drop  0.559v	2.2527%  39 IRCUIT  Percent Drop 2.7389%
N39-01 N39-02 N39-03 N39-04 N39-05 N39-06 N39-07 Device # N40-01 N40-02	0.108A 0.108A 0.108A 0.108A 0.108A 0.108A 0.108A 0.108A Device Draw 0.108A 0.108A	Distance  45' 10' 5' 44' 3' 21' 3'  Distance  65' 10'	Distance + 10%  50' 11' 6' 48' 3' 23' 3'  Distance + 10%  72' 11'	Amps 0.756A 0.648A 0.540A 0.432A 0.324A 0.216A 0.108A  Amps 0.756A 0.648A	0.230v 0.044v 0.018v 0.128v 0.007v 0.031v 0.002v Volt Drop 0.332v 0.044v	0.756A  HOF  Total Amps 0.756A	0.460v  N.A.C #3  N.STROBE C  Total Drop  0.559v  N.A.C #4	2.2527%  39 IRCUIT  Percent Drop 2.7389%
N39-01 N39-02 N39-03 N39-04 N39-05 N39-06 N39-07 Device # N40-01 N40-02 N40-03	0.108A 0.108A 0.108A 0.108A 0.108A 0.108A 0.108A 0.108A Device Draw 0.108A 0.108A	Distance  45' 10' 5' 44' 3' 21' 3'  Distance  65' 10' 5'	Distance + 10%  50' 11' 6' 48' 3' 23' 3'  Distance + 10%  72' 11' 6'	Amps 0.756A 0.648A 0.540A 0.432A 0.324A 0.216A 0.108A  Amps 0.756A 0.648A 0.540A	Volt Drop  0.230v 0.044v 0.018v 0.128v 0.007v 0.031v 0.002v  Volt Drop  0.332v 0.044v 0.018v	0.756A  HOF  Total Amps 0.756A	0.460v  N.A.C #3  N.STROBE C  Total Drop  0.559v	2.2527%  39 IRCUIT  Percent Drop 2.7389%
N39-01 N39-02 N39-03 N39-04 N39-05 N39-06 N39-07 Device # N40-01 N40-02 N40-03 N40-04	0.108A 0.108A 0.108A 0.108A 0.108A 0.108A 0.108A 0.108A 0.108A 0.108A 0.108A 0.108A	Distance  45' 10' 5' 44' 3' 21' 3'  Distance 65' 10' 5' 44'	Distance + 10%  50' 11' 6' 48' 3' 23' 3'  Distance + 10%  72' 11' 6' 48'	Amps 0.756A 0.648A 0.540A 0.432A 0.216A 0.108A  Amps 0.756A 0.648A 0.540A 0.432A	Volt Drop  0.230v 0.044v 0.018v 0.128v 0.007v 0.031v 0.002v  Volt Drop  0.332v 0.044v 0.018v 0.128v	0.756A  HOF  Total Amps 0.756A	0.460v  N.A.C #3  N.STROBE C  Total Drop  0.559v  N.A.C #4	2.2527%  39 IRCUIT  Percent Drop 2.7389%

5495 BPS#10 ( 5 MINUTES IN ALA	RM, 24HRS STAND					ILENT KNIGHT
A	В	С	D	E	F	
INTERNAL POWER SUPPLY COMPONENTS	Quantity	Standby Current	Total Stanby Current (B x C)	Alarm Current	Total Alarm Current (B x E)	
5495 MAIN POWER SUPPLY BOARD	1	0.075A	0.075A	0.205A	0.205A	
		Total Standby Current =	0.075A	Total Alm Current=	0.205A	
	DEVICE CURRENT		CIRCUIT #	AND QTY		
HORN / STROBE CERCULTS	DRAW	N41	N42	N43	N44	
15cd HORN-STROBE, WALL	0.054A	6	0	0	0	
HORN LOW FREQ	0.108A	0	10	9	9	
	NAC CKT CURRENT DRAW =	0.324A	1.080A	0.972A	0.972A	
					TOTAL NAC CKT CURRENT DRAW =	3.348A
TOTAL STANDBY CALCULATIONS	-		TOTAL STANDY CALCU			
Total standby current			0.075			
Multiply by 24 / 60 for standby hours needed.			24H			
Total standby AH (Amp Hours)			1.8000 AH			
ALARM CURRENT CALCULATIONS			,			CURRENT CALC
Total alarm current						3.553
Multiply by 0.0833 for 5 min						0.0830
Total alarm current.						0.2949 AH
BATTERY BACKUP REQUIREMENTS	3	1				
Sub total, add line 18+21						2.0949 AH
Multiply by 1.2 for 20% Battery Derating Factor						20%
Total AH (Amp Hours)						2.5139 AH

Device #	Device Draw	Distance	Distance + 10%	Amps	Volt Drop	Total Amps	Total Drop	Percent Drop
N41-01	0.054A	25'	28'	0.324A	0.055v	0.324A	0.197v	0.9654%
N41-02	0.054A	30'	33'	0.270A	0.055v			
N41-03	0.054A	20'	22'	0.216A	0.029v		NI A C #4	11
N41-04	0.054A	30'	33'	0.162A	0.033v		N.A.C #4	
N41-05	0.054A	20'	22'	0.108A	0.015v	HOR	N-STROBE C	IRCUIT
N41-06	0.054A	30'	33'	0.054A	0.011v			
Device #	Device Draw	Distance	Distance + 10%	Amps	Volt Drop	Total Amps	Total Drop	Percent Drop
N42-01	0.108A	25'	28'	1.080A	0.182v	1.080A	0.656v	3.2181%
N42-02	0.108A	28'	31'	0.972A	0.184v			
N42-03	0.108A	3'	3'	0.864A	0.018v		N A C //	10
N42-04	0.108A	7'	8'	0.756A	0.036v		N.A.C #4	12
N42-05	0.108A	26'	29'	0.648A	0.114v	HOR	N-STROBE C	IRCUIT
N42-06	0.108A	5'	6'	0.540A	0.018v			
N42-07	0.108A	14'	15'	0.432A	0.041v			
N42-08	0.108A	19'	21'	0.324A	0.042v			
N42-09	0.108A	13'	14'	0.216A	0.019v			
N42-10	0.108A	5'	6'	0.108A	0.004v			
Device #	Device Draw	Distance	Distance + 10%	Amps	Volt Drop	Total Amps	Total Drop	Percent Drop
N43-01	0.108A	45'	50'	0.972A	0.295v	0.972A	0.657v	3.2217%
N43-02	0.108A	10'	11'	0.864A	0.058v			
N43-03	0.108A	5'	6'	0.756A	0.026v		N A C #4	12
N43-04	0.108A	37'	41'	0.648A	0.162v		N.A.C #4	
N43-05	0.108A	5'	6'	0.540A	0.018v	HOR	N-STROBE C	IRCUIT
N43-06	0.108A	14'	15'	0.432A	0.041v			
N43-07	0.108A	15'	17'	0.324A	0.033v			
of the second section	0.108A	14'	15'	0.216A	0.020v			
N43-08	0.100/1							

Device #	Device Draw	Distance	Distance + 10%	Amps	<b>Volt Drop</b>	<b>Total Amps</b>	Total Drop	Percent Drop
N44-01	0.108A	65'	72'	0.972A	0.427v	0.972A	0.789v	3.8653%
N44-02	0.108A	10'	11'	0.864A	0.058v			
N44-03	0.108A	5'	6'	0.756A	0.026v		N A C #/	14
N44-04	0.108A	37'	41'	0.648A	0.162v		N.A.C #4	51.5
N44-05	0.108A	5'	6'	0.540A	0.018v	HOR	RN-STROBE C	IRCUIT
N44-06	0.108A	14'	15'	0.432A	0.041v			
N44-07	0.108A	15'	17'	0.324A	0.033v			
N44-08	0.108A	14'	15'	0.216A	0.020v			
N44-09	0.108A	5'	6'	0.108A	0.004v			

	DRAW LIST							
		V	DC CURRE	NT				
	W	all	Weath	erproof	Cei	ling	WA	ALL
Candela		Horn/		Horn/		Horn/		LF-Horn /
Rating	Strobe	Strobe	Strobe	Strobe	Strobe	Strobe	LF-Hom	Strobe
15od	0.043	0.054	0.066	0.079	0.041	0.071		1000
30cd	0.063	0.074	0.094	0.107	0.063	0.090		-
75cd	0.107	0.121	0.158	0.176	0.111	0.143		
95cd	0.121	0.142	0.181	0.194	0.134	0.165	-	-
110cd	0.148	0.162	0.202	0.212				-
115cd			0.210	0.218	0.158	0.187		-
135cd	0.172	0.196	0.228	0.245				-
150cd			0.246	0.259	0.189	0.217		-
177cd			0.281	0.290	0.226	0.254		
185cd	0.222	0.245	0.286	0.297				
				2			0.108	-
185cd								0.266

A x (L/1000) x R x 2)

A= CURRENT REQUIRED BY THE DEVICE

L= LENGTH DISTANCE FROM DEVICE TO DEVICE R = RESISTANCE OF WIRE PER 1000 FT.

14 AWG = 3.07 OHMS PER 1000FT.

VOLTAGE DROP BASE ON PANELS WORST

CASE VOLTAGE OF 20.4 VDC

N RIVERS BLOCK A	ACRAMENTO, CA 95811
TWIN F	SACR/

DESCRIPTION P.O. BOX 880922
PORT SAINT LUCIE , FL 34988
Carlos Oliveras (619) 610-8637, NICET III #84003
carlos.oliveras@fuegoeng.com DESIGN: C.O. DRAWN: C.O. CHECKED: RC JOB NO: DATE: 03/22/2021 PLOT: SHEET TITLE:

BATTERY & VOLTAGE DROP CALCULATIONS - 2

TWIN RIVERS BLOCK A FIRE ALARM SYSTEM N.T.S.

FA-9.1

BATTERY & VOLTAGE DROP CALCULATIONS - 2
NOT TO SCALE

**	tal Amps Total Drop Per	100	197				
(1) 18 (1) (1) (1) (1) (1) (1) (1) (1) (1) (1)		0.334v 0.027v 0.137v	1.330A	34' 3' 21'	31' 3' 19'	0.266A 0.266A	N6-01 N6-02 N6-03
	N.A.C #6 HORN-STROBE CIRCU	0.137v 0.016v 0.237v	The second second	21' 3' 73'	19' 3' 66'	0.266A 0.266A 0.266A	N6-03 N6-04 N6-05
		0.005v	The second second	3'	3'	0.266A	N6-06
	Total Amps Total Drop 2.354A 1.158v	0.525v	2.354A	Distance +	Distance	Device Draw 0,266A	N7-01
100000000000000000000000000000000000000	7.00	0.085v 0.098v	2.088A 1.822A	7' 9'	6' 8'	0.266A 0.266A	N7-02 N7-03
	N.A.C # HORN-STROBE C	0.200v 0.026v	1.556A 1.290A	21' 3'	19' 3'	0.266A 0.266A	N7-04 N7-05
			1.024A 0.758A	22' 3'	20' 3'	0.266A 0.266A	N7-06 N7-07
		0.066v	0.492A 0.226A	22' 3'	20' 3'	0.266A 0.226A	N7-08 N7-09
Drop Percent Dror	Total Amps Total Drop	Volt Drop	10% Amps	Distance +	Distance	Device Draw	evice #
	1.862A 1.105v	0.654v	1.862A 1.596A	57' 3'	52' 3'	0.266A	N9-01
.C #9	N.A.C #9	0.032v 0.216v	1.330A	3' 26' 3'	24'	0.266A 0.266A	N9-02 N9-03
	HORN-STROBE CI	0.022v 0.146v	1.064A 0.798A	30'	3' 27'	0.266A 0.266A	N9-04 N9-05
		0.022v 0.014v	0.532A 0.266A	7' 9'	6' 8'	0.266A 0.266A	N9-06 N9-07
	Total Amps         Total Drop           1.596A         1.655v		1.596A	Distance +	Distance 129'	0.266A	N10-01
C #10	N.A.C #1	0.027v 0.144v	1.330A 1.064A	3' 22'	3' 20'	0.266A 0.266A	N10-02 N10-03
	HORN-STROBE CI	0.016v 0.072v	0.798A 0.532A	3' 22'	3' 20'	0.266A 0.266A	N10-04 N10-05
		0.005v	0.266A	3'	3'	0.266A	N10-06
Drop Percent Drop	Total Amps Total Drop	Volt Drop	10% Amps	Distance +	Distance	Device Draw	evice #
	1.596A 1.094v	0.852v	1.596A 1.330A	87' 9'	79' 8'	0.266A 0.266A	N11-01 N11-02
C #11	N.A.C #1	0.043v	1.064A 0.798A	7' 19'	6' 17'	0.266A 0.266A	N11-02 N11-03 N11-04
	HORN-STROBE CI	The state of the s	0.798A 0.532A 0.266A	7' 9'	6' 8'	0.266A 0.266A	N11-04 N11-05 N11-06
		v.U14V	U.200A	9.	O	U.200A	WTT-00
Drop Percent Drop	Total Amps Total Drop						Device #
80v 4.3153%	0.798A 0.880v		0.798A 0.532A	172' 9'	156' 8'	0.266A 0.266A	N12-01 N12-02
	N.A.C #1		0.266A	7'	6'	0.266A	N12-03
OBE CIRCUIT	HORN-STROBE C						
Drop Percent Pron	Total Amps Total Drop	Volt Drop	10% Amps	Distance ±	Distance	Device Draw	evice #
	0.270A 0.317v	0.129v	0.270A	78'	71'	0.054A	N13-01
 C #13	N.A.C #1	0.042v	0.216A 0.162A	57' 42'	52' 38'	0.054A 0.054A	N13-02 N13-03
	HORN-STROBE CI	0.047v 0.023v	0.108A 0.054A	70' 69'	64' 63'	0.054A 0.054A	N13-04 N13-05
	Total Amps         Total Drop           1.596A         0.756v	-	10% Amps 1.596A	Distance +	Distance	0.266A	<b>Device #</b> N14-01
		0.027v	1.330A 1.064A	3' 21'	3' 19'	0.266A 0.266A	N14-01 N14-02 N14-03
	N.A.C #1 HORN-STROBE C	0.137V 0.016V 0.237V	0.798A 0.532A	3' 73'	3' 66'	0.266A 0.266A	N14-03 N14-04 N14-05
		0.237V 0.005v	0.266A	3'	3'	0.266A	N14-05 N14-06
Drop Percent Drop	Total Amps Total Drop	Volt Drop	10% Amps	Distance +	Distance	Device Draw	Device #
5.6777%	2.354A 1.158v	0.525v 0.085v	2.354A 2.088A	36' 7'	33' 6'	0.266A 0.266A	N15-01 N15-02
 C #15	N.A.C #1	0.098v 0.200v	1.822A 1.556A	9' 21'	8' 19'	0.266A 0.266A	N15-03 N15-04
OBE CIRCUIT	HORN-STROBE CI	0.026v 0.138v	1.290A 1.024A	3' 22'	3' 20'	0.266A 0.266A	N15-05 N15-06
		0.015v 0.066v	0.758A 0.492A	3' 22'	3' 20'	0.266A 0.266A	N15-07 N15-08
		0.005v	0.492A 0.226A	3'	3'	0.226A	N15-09
Drop Percent Drop	Total Amps Total Drop	Volt Drop	10% Amps	Distance +	Distance	Device Drav	Device #
05v 5.4161%	1.862A 1.105v		1.862A 1.596A	57' 3'	52' 3'	0.266A 0.266A	N17-01 N17-02
C # 17	N.A.C #1	0.216v 0.022v	1.330A 1.064A	26' 3'	24' 3'	0.266A 0.266A	N17-03 N17-04
OBE CIRCUIT	HORN-STROBE C		0.798A 0.532A	30' 7'	27' 6'	0.266A 0.266A	N17-05 N17-06
		0.014v	0.266A	9'	8'	0.266A	N17-07
Dron Porcent Dror	Total Amps Total Drop	Volt Drop	100% Amas	Distance 4	Distance	Dovice Draw	Dovice #
-	1.596A 1.655v	1.391v	1.596A	142'	129'	0.266A	N18-01
C #19	N A C #1	0.027v 0.144v	1.330A 1.064A	3' 22'	3' 20'	0.266A 0.266A	N18-02 N18-03
	N.A.C #1	0.016v 0.072v	0.798A 0.532A	3' 22'	3' 20'	0.266A 0.266A	N18-04 N18-05
		0.005v	0.266A	3'	3'	0.266A	N18-06
Drop Percent Dror	Total Amps Total Drop	Volt Drop	10% Amps	Distance +	Distance	Device Drav	Device #
	1.596A 1.094v	0.852v	1.596A 1.330A	87' 9'	79' 8'	0.266A 0.266A	N19-01 N19-02
C #19	N.A.C #1	0.043v	1.330A 1.064A 0.798A	7'	6'	0.266A	N19-03
	HORN-STROBE CI	0.092v 0.022v	0.532A	19' 7'	17' 6'	0.266A 0.266A	N19-04 N19-05
		0.014v	0.266A	9'	8'	0.266A	N19-06
Drop Percent Drop	Total Amps Total Drop	Volt Drop	10% Amps	Distance +	Distance	Device Drav	Device #
80v 4.3153%	0.798A 0.880v		0.798A 0.532A	172' 9'	156' 8'	0.266A 0.266A	N20-01 N20-02
	N.A.C #2	0.011v	0.266A	7'	6'	0.266A	N20-03
UBE CIRCUIT	HORN-STROBE CI						
Drop Percent Dro	Total Amps Total Drop	Volt Dron	10% Amps	Distance +	v Distance	Device Drav	Device #
	1.596A 0.756v	0.334v	1.596A	34'	31'	0.266A	N22-01
C #22	N.A.C #2	0.137v	1.330A 1.064A	3' 21'	3' 19'	0.266A 0.266A	N22-02 N22-03
	HORN-STROBE C	0.237v	0.798A 0.532A	3' 73'	3' 66'	0.266A 0.266A	N22-04 N22-05
		0.005v	0.266A	3'	3'	0.266A	N22-06
Drop Percent Dro	Total Amps Total Drop	Volt Drop	10% Amps	Distance +	v Distance	Device Drav	Device #
	2.394A 1.189v	0.534v	2.394A 2.128A	36' 7'	33' 6'	0.266A 0.266A	N23-01 N23-02
.C #23	N.A.C #2	0.101v	1.862A	9'	8'	0.266A	N23-03
	HORN-STROBE C	0.027v	1.596A 1.330A	21' 3'	19' 3'	0.266A 0.266A	N23-04 N23-05
		0.016v	1.064A 0.798A	22' 3'	3'	0.266A 0.266A	N23-06 N23-07
			0.532A 0.266A	22' 3'	20' 3'	0.266A 0.266A	N23-08 N23-09
Drop Percent Drop	Total Amps Total Drop  1.862A 1.105v		10% Amps 1.862A	Distance +	Distance	Device Drav	<b>Device #</b> N25-01
	1 1050			57' 3'	52' 3'	0.266A 0.266A	N25-02
05v 5.4161%			1.596A			0.200	VIDE OF
05v 5.4161% C #25	N.A.C #2	0.216v 0.022v	1.330A 1.064A 0.798A	26' 3' 30'	24' 3' 27'	0.266A 0.266A 0.266A	N25-03 N25-04 N25-05

N26-01 N26-02	Device Draw	Distance	Distance + 10				Total Drop	
	0.266A 0.266A	129' 3'	142' 3'	1.596A 1.330A		1.596A	1.655v	8.1110%
N26-03	0.266A	20'	22'	1.064A	0.144v		N.A.C #2	26
N26-04 N26-05	0.266A 0.266A	3' 20'	3' 22'	0.798A 0.532A		HOF	RN-STROBE C	
N26-06	0.266A	3'	3'	0.266A	0.005v			
Device #	Device Draw	Distance	Distance + 10	00% Amns	Volt Dron	Total Amns	Total Dron	Percent Dro
N27-01	0.266A	79'	87'	1.596A		1.596A	1.094v	5.3633%
N27-02	0.266A	8'	9' 7'	1.330A				
N27-03 N27-04	0.266A 0.266A	6' 17'	19'	1.064A 0.798A	0.092v	LIOT	N.A.C #2	
N27-05 N27-06	0.266A 0.266A	6' 8'	7' 9'	0.532A 0.266A	0.022v 0.014v	HOF	RN-STROBE C	IRCUIT
Device #	Device Draw	Distance	Distance + 10	10% Amns	Volt Dron	Total Amns	Total Dron	Percent Dro
N28-01	0.266A	156'	172'	0.798A	0.841v	0.798A	0.880v	4.3153%
N28-02 N28-03	0.266A 0.266A	8' 6'	9' 7'	0.532A 0.266A	0.029v 0.011v		N A C #3	00
						HOF	N.A.C #2 RN-STROBE C	
D! #	Davis Davis	D:-1	Di-t 1 40	20/ 4	V-4 D	T-1-14	T-1-1 D	D D
N30-01	0.266A	Distance 25'	Distance + 10	2.394A	_	2.394A	1.104v	5.4113%
N30-02 N30-03	0.266A 0.266A	14' 4'	15' 4'	2.128A 1.862A				
N30-04	0.266A	31'	34'	1.596A	0.334v	ПОГ	N.A.C #3	
N30-05 N30-06	0.266A 0.266A	5' 12'	6' 13'	1.330A 1.064A		HOF	RN-STROBE C	IKCUII
N30-07	0.266A	15'	17'	0.798A	0.081v			
N30-08 N30-09	0.266A 0.266A	12' 5'	13' 6'	0.532A 0.266A	0.043v 0.009v			
Davise #	Davisa Draw	Dietanee	Distance L 10	10/s As	Volt Dran	Tatal Anna	Total Dran	Doveent Dra
N31-01	0.266A	45'	50'	2.394A		2.394A	1.577v	7.7323%
N31-02	0.266A	14'	15'	2.128A	0.201v			525 /0
N31-03 N31-04	0.266A 0.266A	4' 31'	4' 34'	1.862A 1.596A	0.050v 0.334v	W American	N.A.C #3	
N31-05 N31-06	0.266A 0.266A	5' 12'	6' 13'	1.330A 1.064A	0.045v 0.086v	HOF	RN-STROBE C	IKCUIT
N31-07	0.266A	15'	17'	0.798A	0.081v			
N31-08 N31-09	0.266A 0.266A	12' 5'	13' 6'	0.532A 0.266A				
Device #	Device Draw	Distance	Distance + 10	0% Amps	Volt Drop	Total Amps	Total Drop	Percent Dro
N32-01	0.108A	65'	72'	0.972A	0.427v	0.972A	0.772v	3.7830%
N32-02 N32-03	0.108A 0.108A	14' 4'	15' 4'	0.864A 0.756A				
N32-04	0.108A	31'	34'	0.648A	0.136v	HOE	N.A.C #3 RN-STROBE C	
N32-05 N32-06	0.108A 0.108A	5' 12'	6' 13'	0.540A 0.432A		HOF	IN-31 RODE C	INCOTT
N32-07 N32-08	0.108A 0.108A	15' 12'	17' 13'	0.324A 0.216A	0.033v			
N32-08	0.108A 0.108A	5'	6' NOTE: TYPICAL I	0.108A	0.004v	1940		
		ľ	NOTE: TYPICAL I	FOR BUILDI	NGS 1240,	1248,		
Device #	Device Draw 0.266A	Distance 25'	Distance + 10	2.128A		Total Amps	Total Drop	Percent Dro
N34-02	0.266A	14'	15'	1.862A	0.176v	Z.1Z0A	1.1330	3.0339%
N34-03 N34-04	0.266A 0.266A	4' 37'	4' 41'	1.596A 1.330A		22.200	N.A.C #3	
N34-05 N34-06	0.266A 0.266A	8' 30'	9' 33'	1.064A 0.798A	0.057v 0.162v	HOF	RN-STROBE C	IRCUIT
N34-06 N34-07 N34-08	0.266A 0.266A	30 <sup>-</sup> 3 <sup>-</sup> 7 <sup>-</sup>	3'	0.798A 0.532A 0.266A				
		Di-t	_			Tetal A	Tatal Duan	Downsel Du
N35-01	0.266A	45'	Distance + 10	1.596A		1.596A	0.884v	4.3329%
N35-02 N35-03	0.266A 0.266A	14' 4'	15' 4'	1.330A 1.064A				
N35-04		32'	35'	0.798A	0.172v	HOF	N.A.C #3	
	0.266A	401	201		0.065v	1101	N-STROBE C	IRCUIT
N35-05 N35-06	0.266A 0.266A 0.266A	18' 4'	20' 4'	0.532A 0.266A	0.007v		RN-STROBE C	IRCUIT
N35-05 N35-06	0.266A 0.266A	4'	4'	0.266A	0.0000000000000000000000000000000000000	Total Arms		
N35-05 N35-06	0.266A 0.266A	4'		0.266A	Volt Drop	Total Amps		
N35-05 N35-06 <b>Device #</b> N36-01 N36-02	0.266A 0.266A <b>Device Draw</b> 0.266A 0.266A	4'  Distance  65' 14'	4'  Distance + 10  72' 15'	0.266A  0.266A  0.266A  1.596A  1.330A	Volt Drop 0.701v 0.126v	SCHOOL SCHOOL STATE OF SCHOOL	Total Drop 1.099v	<b>Percent Dro</b> 5.3897%
N35-05 N35-06 <b>Device #</b> N36-01 N36-02 N36-03 N36-04	0.266A 0.266A Device Draw 0.266A 0.266A 0.266A 0.266A	4'  Distance  65' 14' 4' 32'	4'  Distance + 10  72'  15'  4'  35'	0.266A  0.266A  1.596A  1.330A  1.064A  0.798A	Volt Drop 0.701v 0.126v 0.029v 0.172v	1.596A	Total Drop 1.099v N.A.C #3	Percent Dro 5.3897%
N35-05 N35-06 <b>Device #</b> N36-01  N36-02  N36-03	0.266A 0.266A Device Draw 0.266A 0.266A 0.266A	4'  Distance  65' 14' 4'	4'  Distance + 10  72'  15'  4'	0.266A  0.266A  1.596A  1.330A  1.064A	Volt Drop 0.701v 0.126v 0.029v 0.172v	1.596A	Total Drop 1.099v	Percent Dro 5.3897%
N35-05 N35-06 <b>Device #</b> N36-01  N36-02  N36-03  N36-04  N36-05  N36-06	0.266A 0.266A Device Draw 0.266A 0.266A 0.266A 0.266A 0.266A	4'  Distance  65' 14' 4' 32' 18' 4'	4'  Distance + 10  72' 15' 4' 35' 20' 4'	0.266A  0.266A  1.596A  1.330A  1.064A  0.798A  0.532A  0.266A	Volt Drop 0.701v 0.126v 0.029v 0.172v 0.065v 0.007v	1.596A HOF	Total Drop 1.099v  N.A.C #3	Percent Dro 5.3897% 36 IRCUIT
N35-05 N35-06 <b>Device #</b> N36-01  N36-02  N36-03  N36-04  N36-05  N36-06	0.266A 0.266A Device Draw 0.266A 0.266A 0.266A 0.266A 0.266A	4'  Distance 65' 14' 4' 32' 18' 4'  Distance	72' 15' 4' 35' 20'	0.266A  0.266A  1.596A  1.330A  1.064A  0.798A  0.532A  0.266A  0.400  0	Volt Drop 0.701v 0.126v 0.029v 0.172v 0.065v 0.007v	1.596A HOF	Total Drop 1.099v  N.A.C #3	Percent Dro 5.3897% 36 IRCUIT
N35-05 N35-06 Device # N36-01 N36-02 N36-03 N36-04 N36-05 N36-06 Device # N38-01 N38-02	0.266A	4'  Distance  65' 14' 4' 32' 18' 4'  Distance  25' 25'	4'  Distance + 10  72' 15' 4' 35' 20' 4'  Distance + 10  28' 28'	0.266A  1.596A  1.596A  1.064A  0.798A  0.532A  0.266A  0.400  0.	Volt Drop  0.701v  0.126v  0.029v  0.172v  0.065v  0.007v  Volt Drop  0.359v  0.314v	1.596A  HOF  Total Amps 2.128A	Total Drop 1.099v  N.A.C #3 RN-STROBE C  Total Drop 1.082v	Percent Dro 5.3897%  36 IRCUIT  Percent Dro 5.3016%
N35-05 N35-06 N35-06 N36-01 N36-02 N36-03 N36-04 N36-05 N36-06 Device # N38-01 N38-02 N38-03 N38-04	0.266A	0istance 65' 14' 4' 32' 18' 4'  Distance 25' 25' 3' 7'	4'  Distance + 10  72' 15' 4' 35' 20' 4'  Distance + 10  28' 28' 3' 8'	0.266A  1.596A  1.330A  1.064A  0.798A  0.532A  0.266A  0.266A  0.4 Amps  2.128A  1.862A  1.596A  1.330A	Volt Drop  0.701v  0.126v  0.029v  0.172v  0.065v  0.007v  Volt Drop  0.359v  0.314v  0.032v  0.063v	1.596A  HOF  Total Amps 2.128A	Total Drop 1.099v  N.A.C #3 N-STROBE C  Total Drop 1.082v  N.A.C #3	Percent Dro 5.3897%  36 IRCUIT  Percent Dro 5.3016%
N35-05 N35-06 Device # N36-01 N36-02 N36-03 N36-04 N36-05 N36-06 Device # N38-01 N38-02 N38-03	0.266A	0istance 65' 14' 4' 32' 18' 4'  Distance 25' 25' 3'	4'  Distance + 10  72' 15' 4' 35' 20' 4'  Distance + 10  28' 28' 3'	0.266A  1.596A  1.596A  1.064A  0.798A  0.532A  0.266A  0.406A  0.406A  1.862A  1.862A  1.596A	Volt Drop  0.701v  0.126v  0.029v  0.172v  0.065v  0.007v  Volt Drop  0.359v  0.314v  0.032v	1.596A  HOF  Total Amps 2.128A	Total Drop 1.099v  N.A.C #3 RN-STROBE C  Total Drop 1.082v	Percent Dro 5.3897%  36 IRCUIT  Percent Dro 5.3016%
N35-05 N35-06 N35-06 N36-01 N36-02 N36-03 N36-04 N36-05 N36-06 Device # N38-01 N38-02 N38-03 N38-04 N38-05	0.266A	0istance 65' 14' 4' 32' 18' 4'  Distance 25' 25' 3' 7' 30'	4'  Distance + 10  72' 15' 4' 35' 20' 4'  Distance + 10  28' 28' 3' 8' 33'	0.266A  1.596A  1.330A  1.064A  0.798A  0.532A  0.266A  0.266A  2.128A  1.862A  1.596A  1.330A  1.064A	Volt Drop  0.701v  0.126v  0.029v  0.172v  0.065v  0.007v  Volt Drop  0.359v  0.314v  0.032v  0.063v  0.216v	1.596A  HOF  Total Amps 2.128A	Total Drop 1.099v  N.A.C #3 N-STROBE C  Total Drop 1.082v  N.A.C #3	Percent Dro 5.3897%  36 IRCUIT  Percent Dro 5.3016%
N35-05 N35-06 N35-06 N36-01 N36-02 N36-03 N36-04 N36-05 N36-06 N38-01 N38-02 N38-03 N38-04 N38-05 N38-06 N38-07 N38-08	0.266A	4'  Distance  65' 14' 4' 32' 18' 4'  Distance  25' 25' 3' 7' 30' 3' 21' 3'	4'  Distance + 10  72' 15' 4' 35' 20' 4'  Distance + 10  28' 28' 3' 8' 33' 3' 23' 3'	0.266A  0.266A  1.596A  1.330A  1.064A  0.798A  0.266A  0.266A  1.330A  1.064A  1.330A  1.064A  0.798A  0.532A  0.266A	Volt Drop  0.701v  0.126v  0.029v  0.172v  0.065v  0.007v  Volt Drop  0.359v  0.314v  0.032v  0.063v  0.216v  0.016v  0.075v  0.005v	1.596A  HOF  Total Amps 2.128A  HOR	Total Drop 1.099v  N.A.C #3 N-STROBE C  Total Drop 1.082v  N.A.C #3 N-STROBE CI	Percent Dro 5.3897%  36 IRCUIT  Percent Dro 5.3016%  8 RCUIT
N35-05 N35-06 N35-06 N36-01 N36-02 N36-03 N36-04 N36-05 N36-06 N38-01 N38-02 N38-03 N38-04 N38-05 N38-06 N38-07 N38-08	0.266A	4'  Distance  65' 14' 4' 32' 18' 4'  Distance  25' 25' 3' 7' 30' 3' 21' 3'	4'  Distance + 10  72' 15' 4' 35' 20' 4'  Distance + 10  28' 28' 3' 8' 33' 3' 23'	0.266A  1.596A  1.596A  1.064A  0.798A  0.532A  0.266A  0.4 Mmps  2.128A  1.862A  1.064A  0.798A  0.532A  0.266A  0.798A  0.266A	Volt Drop  0.701v  0.126v  0.029v  0.172v  0.065v  0.007v  Volt Drop  0.359v  0.314v  0.032v  0.063v  0.216v  0.016v  0.075v  0.005v  Volt Drop  0.566v	1.596A  HOF  Total Amps 2.128A  HOR	Total Drop 1.099v  N.A.C #3 N-STROBE C  Total Drop 1.082v  N.A.C #3 N-STROBE CI	Percent Dro 5.3897%  36 IRCUIT  Percent Dro 5.3016%  8 RCUIT
N35-05 N35-06 N35-06 N35-06 N36-01 N36-02 N36-04 N36-05 N36-06 N38-01 N38-01 N38-02 N38-03 N38-04 N38-05 N38-06 N38-07 N38-08 N38-08	0.266A	Distance 65' 14' 4' 32' 18' 4'  Distance 25' 25' 3' 7' 30' 3' 21' 3'  Distance	4'  Distance + 10  72' 15' 4' 35' 20' 4'  Distance + 10  28' 28' 3' 8' 33' 3' 3' 23' 3' Distance + 10	0.266A  1.596A  1.596A  1.330A  1.064A  0.798A  0.532A  0.266A  0.4 Amps  2.128A  1.862A  1.330A  1.064A  0.798A  0.532A  0.266A  0.798A  0.266A	Volt Drop  0.701v  0.126v  0.029v  0.172v  0.065v  0.007v  Volt Drop  0.359v  0.314v  0.032v  0.063v  0.216v  0.016v  0.075v  0.005v  Volt Drop  0.566v  0.108v	1.596A  HOF  Total Amps 2.128A  HOR	Total Drop 1.099v  N.A.C #3 N-STROBE C  Total Drop 1.082v  N.A.C #3 N-STROBE CI  Total Drop 1.132v	Percent Dro 5.3897%  36 IRCUIT  Percent Dro 5.3016%  8 RCUIT  Percent Dro 5.5482%
N35-05 N35-06 N35-06 N35-06 N36-01 N36-02 N36-03 N36-04 N36-05 N36-06 Device # N38-01 N38-02 N38-04 N38-05 N38-06 N38-07 N38-08 N38-08	0.266A	4'  Distance  65' 14' 4' 32' 18' 4'  Distance  25' 25' 3' 7' 30' 3' 21' 3'  Distance  45' 10' 5' 44'	4'  Distance + 10  72' 15' 4' 35' 20' 4'  Distance + 10  28' 28' 3' 8' 33' 3' 3'  Distance + 10  50' 11' 6' 48'	0.266A  1.596A 1.330A 1.064A 0.798A 0.532A 0.266A  0.4 Mps 2.128A 1.862A 1.596A 1.330A 1.064A 0.798A 0.532A 0.266A  1.4 Mps 1.862A 1.596A 1.330A 1.064A 1.330A 1.064A 1.330A 1.064A	Volt Drop  0.701v  0.126v  0.029v  0.172v  0.065v  0.007v  Volt Drop  0.359v  0.314v  0.032v  0.063v  0.216v  0.016v  0.075v  Volt Drop  0.566v  0.108v  0.045v  0.316v	1.596A  HOF  Total Amps 2.128A  HOR  Total Amps 1.862A	Total Drop 1.099v  N.A.C #3 RN-STROBE C  Total Drop 1.082v  N.A.C #3 N-STROBE CI  Total Drop 1.132v  N.A.C #3	Percent Dro 5.3897%  36 IRCUIT  Percent Dro 5.3016%  8 RCUIT  Percent Dro 5.5482%
N35-05 N35-06 N35-06 N35-06 N36-01 N36-02 N36-03 N36-04 N36-05 N36-06 N38-01 N38-02 N38-03 N38-04 N38-05 N38-06 N38-07 N38-08 N38-08	0.266A	4'  Distance  65' 14' 4' 32' 18' 4'  Distance  25' 25' 3' 7' 30' 3' 21' 3'  Distance  45' 10' 5'	4'  Distance + 10  72' 15' 4' 35' 20' 4'  Distance + 10  28' 28' 3' 8' 33' 3' 23' 3'  Distance + 10  50' 11' 6' 48' 3' 23'	0.266A  0% Amps  1.596A 1.330A 1.064A 0.798A 0.266A  0% Amps 2.128A 1.862A 1.330A 1.064A 0.798A 0.532A 0.266A  0% Amps 1.862A 1.596A 1.330A 1.064A 0.798A 0.532A 0.266A	Volt Drop  0.701v  0.126v  0.029v  0.172v  0.065v  0.007v  Volt Drop  0.359v  0.314v  0.032v  0.063v  0.216v  0.016v  0.075v  Volt Drop  0.566v  0.108v  0.045v  0.316v  0.016v	1.596A  HOF  Total Amps 2.128A  HOR  Total Amps 1.862A	Total Drop 1.099v  N.A.C #3 N-STROBE C  Total Drop 1.082v  N.A.C #3 N-STROBE CI  Total Drop 1.132v	Percent Dro 5.3897%  36 IRCUIT  Percent Dro 5.3016%  8 RCUIT  Percent Dro 5.5482%
N35-05 N35-06 N35-06 N35-06 N36-01 N36-02 N36-03 N36-04 N36-05 N36-06 N38-01 N38-02 N38-03 N38-04 N38-05 N38-06 N38-07 N38-08 N38-08 N39-01 N39-01 N39-02 N39-03 N39-04 N39-05	0.266A	4'  Distance  65' 14' 4' 32' 18' 4'  Distance  25' 25' 3' 7' 30' 3' 21' 3'  Distance  45' 10' 5' 44' 3'	4'  Distance + 10  72' 15' 4' 35' 20' 4'  Distance + 10  28' 28' 3' 8' 33' 3' 23' 3'  Distance + 10  50' 11' 6' 48' 3'	0.266A  1.596A 1.330A 1.064A 0.798A 0.532A 0.266A  0.4 Mps 2.128A 1.862A 1.596A 1.330A 1.064A 0.798A 0.532A 0.266A  1.4 Mps 1.862A 1.596A 1.330A 1.064A 0.798A 1.064A 0.798A 1.064A 0.798A	Volt Drop  0.701v  0.126v  0.029v  0.172v  0.065v  0.007v  Volt Drop  0.359v  0.314v  0.032v  0.063v  0.216v  0.016v  0.075v  Volt Drop  0.566v  0.108v  0.045v  0.316v  0.016v	1.596A  HOF  Total Amps 2.128A  HOR  Total Amps 1.862A	Total Drop 1.099v  N.A.C #3 RN-STROBE C  Total Drop 1.082v  N.A.C #3 N-STROBE CI  Total Drop 1.132v  N.A.C #3	Percent Dro 5.3897%  36 IRCUIT  Percent Dro 5.3016%  8 RCUIT  Percent Dro 5.5482%
N35-05 N35-06 N35-06 N35-06 N36-01 N36-02 N36-03 N36-04 N36-05 N36-06 N38-01 N38-02 N38-03 N38-04 N38-05 N38-07 N38-08 N38-07 N38-08 N38-07 N39-01 N39-02 N39-03 N39-04 N39-05 N39-06 N39-07	0.266A	4'  Distance  65' 14' 4' 32' 18' 4'  Distance  25' 25' 3' 7' 30' 3' 21' 3'  Distance  45' 10' 5' 44' 3' 21' 3'	4'  Distance + 10  72' 15' 4' 35' 20' 4'  Distance + 10  28' 28' 3' 8' 33' 3' 23' 3'  Distance + 10  50' 11' 6' 48' 3' 23'	0.266A  1.596A 1.330A 1.064A 0.798A 0.266A  2.128A 1.862A 1.330A 1.064A 0.798A 0.532A 0.266A  1.330A 1.064A 0.798A 0.532A 0.266A  1.330A 1.064A 0.798A 0.266A	Volt Drop  0.701v  0.126v  0.029v  0.172v  0.065v  0.007v  Volt Drop  0.359v  0.314v  0.032v  0.016v  0.075v  0.005v  Volt Drop  0.566v  0.108v  0.045v  0.016v  0.075v  0.016v  0.075v  0.005v	Total Amps 2.128A  HOR  Total Amps 1.862A  HOR	Total Drop 1.099v  N.A.C #3 N-STROBE CO  Total Drop 1.082v  N.A.C #3 N-STROBE CO  Total Drop 1.132v  N.A.C #3 N-STROBE CO	Percent Dro 5.3897%  36 IRCUIT  Percent Dro 5.3016%  8 RCUIT  Percent Dro 5.5482%
N35-05 N35-06 N35-06 N35-06 N35-06 N36-01 N36-02 N36-03 N36-04 N36-05 N36-06  Device # N38-01 N38-02 N38-04 N38-05 N38-06 N38-07 N38-08  Device # N39-01 N39-02 N39-03 N39-04 N39-05 N39-06 N39-07  Device # N40-01	0.266A	4'  Distance  65' 14' 4' 32' 18' 4'  Distance  25' 25' 3' 7' 30' 3' 21' 3'  Distance  45' 10' 5' 44' 3' 21' 3'  Distance  65'	4'  Distance + 10  72' 15' 4' 35' 20' 4'  Distance + 10  28' 28' 3' 8' 33' 3' 23' 3'  Distance + 10  50' 11' 6' 48' 3' 23' 3' 3'  Distance + 10  72'	0.266A  1.596A 1.330A 1.064A 0.798A 0.266A  0.4 Mmps 2.128A 1.862A 1.330A 1.064A 0.798A 0.532A 0.266A  0.6 Amps 1.862A 1.596A 1.330A 1.064A 0.798A 0.266A  0.798A 0.266A 1.330A 1.064A 0.798A 0.266A	Volt Drop  0.701v  0.126v  0.029v  0.172v  0.065v  0.007v  Volt Drop  0.359v  0.314v  0.032v  0.063v  0.216v  0.016v  0.075v  0.005v  Volt Drop  0.566v  0.108v  0.016v  0.016v  0.075v  0.016v  0.075v  Volt Drop  0.817v	Total Amps 2.128A  HOR  Total Amps 1.862A  HOR	Total Drop 1.099v  N.A.C #3 N-STROBE CO  Total Drop 1.082v  N.A.C #3 N-STROBE CO  Total Drop 1.132v  N.A.C #3 N-STROBE CO	Percent Dro 5.3897%  36 IRCUIT  Percent Dro 5.3016%  8 RCUIT  Percent Dro 5.5482%
N35-05 N35-06 N35-06 N35-06 N35-06 N36-01 N36-02 N36-03 N36-04 N36-05 N36-06 N38-01 N38-02 N38-03 N38-04 N38-05 N38-08 N38-08 Device # N39-01 N39-02 N39-03 N39-04 N39-05 N39-06 N39-07 Device # N40-01 N40-02 N40-03	0.266A	4'  Distance  65' 14' 4' 32' 18' 4'  Distance  25' 25' 3' 7' 30' 3' 21' 3'  Distance  45' 10' 5' 44' 3' 21' 3'  Distance  65' 10' 5'	Distance + 10  72' 15' 4' 35' 20' 4'  Distance + 10  28' 28' 3' 8' 33' 3' 23' 3'  Distance + 10  50' 11' 6' 48' 3' 23' 3'  Distance + 10  72' 11' 6'	0.266A  1.596A 1.330A 1.064A 0.798A 0.532A 0.266A  2.128A 1.862A 1.330A 1.064A 0.798A 0.532A 0.266A  0.64A 0.798A 0.532A 0.266A  0.798A 0.266A  1.862A 1.30A 1.064A 0.798A 0.266A  1.862A 1.330A 1.064A 0.798A 0.266A	Volt Drop  0.701v  0.126v  0.029v  0.172v  0.065v  0.007v  Volt Drop  0.359v  0.314v  0.032v  0.063v  0.216v  0.016v  0.075v  0.005v  Volt Drop  0.566v  0.108v  0.016v  0.075v  0.016v  0.075v  Volt Drop  0.566v  0.108v  0.045v  0.016v  0.075v  0.005v	Total Amps 2.128A  HOR  Total Amps 1.862A  HOR	Total Drop 1.099v  N.A.C #3 RN-STROBE CO  Total Drop 1.082v  N.A.C #3 N-STROBE CI  Total Drop 1.132v  N.A.C #3 RN-STROBE CO  Total Drop 1.1376v	Percent Dro 5.3897%  36 IRCUIT  Percent Dro 5.3016%  8 RCUIT  Percent Dro 5.5482%  39 IRCUIT  Percent Dro 6.7459%
N35-05 N35-06 N35-06 N35-06 N35-06 N36-01 N36-02 N36-03 N36-04 N36-05 N36-06  Device # N38-01 N38-02 N38-04 N38-05 N38-08  Device # N39-01 N39-02 N39-03 N39-04 N39-05 N39-06 N39-07  Device # N40-01 N40-02	0.266A	4'  Distance  65' 14' 4' 32' 18' 4'  Distance  25' 25' 3' 7' 30' 3' 21' 3'  Distance  45' 10' 5' 44' 3' 21' 3'  Distance  65' 10'	Distance + 10  72' 15' 4' 35' 20' 4'  Distance + 10  28' 28' 3' 8' 33' 3' 23' 3'  Distance + 10  50' 11' 6' 48' 3' 23' 3'  Distance + 10  72' 11'	0.266A  1.596A 1.330A 1.064A 0.798A 0.266A  0.266A  0.266A  1.862A 1.330A 1.064A 0.798A 0.532A 0.266A  0.64A 0.798A 0.532A 0.266A  0.798A 0.266A  1.862A 1.30A 1.064A 0.798A 0.266A	Volt Drop  0.701v  0.126v  0.029v  0.172v  0.065v  0.007v  Volt Drop  0.359v  0.314v  0.032v  0.063v  0.216v  0.016v  0.075v  0.005v  Volt Drop  0.566v  0.108v  0.016v  0.075v  0.016v  0.075v  0.016v  0.075v  0.016v  0.045v  0.016v  0.075v  0.016v  0.016v	Total Amps 1.862A  Total Amps 1.862A	Total Drop 1.099v  N.A.C #3 N-STROBE C  Total Drop 1.082v  N.A.C #3 N-STROBE CI  Total Drop 1.132v  N.A.C #3 N-STROBE C	Percent Dro 5.3897%  36 IRCUIT  Percent Dro 5.3016%  8 RCUIT  Percent Dro 5.5482%  39 IRCUIT  Percent Dro 6.7459%
N35-05 N35-06 N35-06 N35-06 N35-06 N36-01 N36-02 N36-03 N36-04 N36-05 N36-06  Device # N38-01 N38-03 N38-04 N38-05 N38-06 N38-07 N38-08  Device # N39-01 N39-02 N39-03 N39-04 N39-05 N39-06 N39-07  Device # N40-01 N40-02 N40-03 N40-04	0.266A	4'  Distance  65' 14' 4' 32' 18' 4'  Distance  25' 25' 3' 7' 30' 3' 21' 3'  Distance  45' 10' 5' 44' 3' 21' 3'  Distance  65' 10' 5' 44' 4'	Distance + 10	0.266A  1.596A 1.330A 1.064A 0.798A 0.266A  0.4 Mps 2.128A 1.862A 1.330A 1.064A 0.798A 0.532A 0.266A  0.6 Amps 1.862A 1.330A 1.064A 0.798A 0.532A 0.266A  0.798A 0.266A	Volt Drop  0.701v 0.126v 0.029v 0.172v 0.065v 0.007v  Volt Drop  0.359v 0.314v 0.032v 0.063v 0.216v 0.016v 0.075v 0.005v  Volt Drop  0.566v 0.108v 0.045v 0.016v 0.075v 0.005v  Volt Drop  0.817v 0.108v 0.045v 0.108v 0.016v 0.075v 0.005v	Total Amps 1.862A  Total Amps 1.862A	Total Drop 1.099v  N.A.C #3 N-STROBE CO  Total Drop 1.082v  N.A.C #3 N-STROBE CO  Total Drop 1.132v  N.A.C #3 N-STROBE CO  Total Drop 1.376v  N.A.C #4	Percent Dro 5.3897%  36 IRCUIT  Percent Dro 5.3016%  8 RCUIT  Percent Dro 5.5482%  39 IRCUIT  Percent Dro 6.7459%
N35-05 N35-06 N35-06 N35-06 N35-06 N36-01 N36-02 N36-03 N36-04 N36-05 N36-06  Device # N38-01 N38-02 N38-03 N38-04 N38-05 N38-08 Device # N39-01 N39-02 N39-03 N39-04 N39-05 N39-06 N39-07  Device # N40-01 N40-02 N40-03 N40-04 N40-05 N40-06	0.266A	4'  Distance  65' 14' 4' 32' 18' 4'  Distance  25' 25' 3' 7' 30' 3' 21' 3'  Distance  45' 10' 5' 44' 3' 21' 3'  Distance  65' 10' 5' 44' 3' 19'	Distance + 10  72' 15' 4' 35' 20' 4'  Distance + 10  28' 28' 3' 8' 33' 3' 23' 3'  Distance + 10  50' 11' 6' 48' 3' 23' 3'  Distance + 10  72' 11' 6' 48' 3' 21'	0.266A  0% Amps  1.596A 1.330A 1.064A 0.798A 0.266A  0% Amps 2.128A 1.862A 1.596A 1.330A 1.064A 0.798A 0.532A 0.266A  0% Amps 1.862A 1.596A 1.330A 1.064A 0.798A 0.532A 0.266A	Volt Drop  0.701v 0.126v 0.029v 0.172v 0.065v 0.007v  Volt Drop  0.359v 0.314v 0.032v 0.063v 0.216v 0.016v 0.075v 0.005v  Volt Drop  0.566v 0.108v 0.045v 0.016v 0.075v 0.005v  Volt Drop  0.817v 0.108v 0.045v 0.108v 0.016v 0.075v 0.005v	Total Amps 1.862A  Total Amps 1.862A	Total Drop 1.099v  N.A.C #3 N-STROBE CO  Total Drop 1.082v  N.A.C #3 N-STROBE CO  Total Drop 1.132v  N.A.C #3 N-STROBE CO  Total Drop 1.376v  N.A.C #4	Percent Dro 5.3897%  36 IRCUIT  Percent Dro 5.3016%  8 RCUIT  Percent Dro 5.5482%  39 IRCUIT  Percent Dro 6.7459%
N35-05 N35-06 N35-06 N35-06 N35-06 N36-01 N36-02 N36-03 N36-04 N36-05 N36-06  Device # N38-01 N38-03 N38-04 N38-05 N38-08  Device # N39-01 N39-02 N39-03 N39-04 N39-05 N39-06 N39-07  Device # N40-01 N40-02 N40-03 N40-04 N40-05 N40-06 N40-07	0.266A	4'  Distance  65' 14' 4' 32' 18' 4'  Distance  25' 25' 3' 7' 30' 3' 21' 3'  Distance  45' 10' 5' 44' 3' 21' 3'  Distance  65' 10' 5' 44' 3' 19' 3'	Distance + 10  72' 15' 4' 35' 20' 4'  Distance + 10  28' 28' 3' 8' 33' 3' 23' 3'  Distance + 10  50' 11' 6' 48' 3' 23' 3'  Distance + 10  72' 11' 6' 48' 3' 21' 3' Distance + 10	0.266A  0% Amps  1.596A 1.330A 1.064A 0.798A 0.266A  1.862A 1.330A 1.064A 0.798A 0.532A 0.266A  0% Amps  1.862A 1.596A 1.330A 1.064A 0.798A 0.532A 0.266A  0% Amps  1.862A 1.596A 1.330A 1.064A 0.798A 0.532A 0.266A	Volt Drop  0.701v 0.126v 0.029v 0.172v 0.065v 0.007v  Volt Drop  0.359v 0.314v 0.032v 0.063v 0.216v 0.016v 0.075v 0.005v  Volt Drop  0.566v 0.108v 0.045v 0.016v 0.075v 0.005v  Volt Drop  0.817v 0.108v 0.045v 0.016v 0.075v 0.005v  Volt Drop  Volt Drop  0.817v 0.108v 0.016v 0.005v  Volt Drop  0.817v 0.108v 0.016v 0.005v	Total Amps 1.862A  Total Amps 1.862A  HOF	Total Drop  1.099v  N.A.C #3 RN-STROBE CI  Total Drop  1.082v  N.A.C #3 N-STROBE CI  Total Drop  1.132v  N.A.C #3 RN-STROBE CI  Total Drop  1.376v  N.A.C #4 RN-STROBE CI	Percent Dro 5.3897%  36 IRCUIT  Percent Dro 5.3016%  8 RCUIT  Percent Dro 6.7459%  40 IRCUIT
N35-05 N35-06 N35-06 N35-06 N35-06 N36-01 N36-02 N36-03 N36-04 N36-05 N36-06  Device # N38-01 N38-02 N38-03 N38-04 N38-05 N38-08 Device # N39-01 N39-02 N39-03 N39-04 N39-05 N39-06 N39-07  Device # N40-01 N40-02 N40-03 N40-04 N40-05 N40-06 N40-07	0.266A	4'  Distance  65' 14' 4' 32' 18' 4'  Distance  25' 25' 3' 7' 30' 3' 21' 3'  Distance  45' 10' 5' 44' 3' 21' 3'  Distance  65' 10' 5' 44' 3' 19' 3' Distance	Distance + 10  72' 15' 4' 35' 20' 4'  Distance + 10  28' 28' 3' 8' 33' 3' 23' 3'  Distance + 10  50' 11' 6' 48' 3' 23' 3'  Distance + 10  72' 11' 6' 48' 3' 21' 3' Distance + 10  72' 11' 6' 48' 3' 21' 3' Distance + 10  72' 11' 6' 48' 3' 21' 3'	0.266A  0% Amps  1.596A 1.330A 1.064A 0.798A 0.266A  0.266A  0% Amps  1.862A 1.330A 1.064A 0.798A 0.532A 0.266A  0% Amps  1.862A 1.596A 1.330A 1.064A 0.798A 0.532A 0.266A  0% Amps  1.862A 1.596A 1.330A 1.064A 0.798A 0.798A 0.266A	Volt Drop  0.701v 0.126v 0.029v 0.172v 0.065v 0.007v  Volt Drop  0.359v 0.314v 0.032v 0.063v 0.216v 0.016v 0.075v 0.005v  Volt Drop  0.566v 0.108v 0.045v 0.016v 0.075v 0.005v  Volt Drop  0.817v 0.108v 0.045v 0.016v 0.075v 0.005v  Volt Drop  0.817v 0.108v 0.016v 0.075v 0.005v  Volt Drop  0.817v 0.108v 0.016v 0.005v  Volt Drop  0.817v 0.108v 0.016v 0.005v	Total Amps 2.128A  HOF  Total Amps 1.862A  HOF	Total Drop 1.099v  N.A.C #3 RN-STROBE C  Total Drop 1.082v  N.A.C #3 RN-STROBE CI  Total Drop 1.132v  N.A.C #3 RN-STROBE C	Percent Dro 5.3897%  36 IRCUIT  Percent Dro 5.3016%  8 RCUIT  Percent Dro 6.7459%  10 IRCUIT
N35-05 N35-06 N35-06 N35-06 N35-06 N36-01 N36-02 N36-03 N36-04 N36-05 N36-06  Device # N38-01 N38-02 N38-03 N38-04 N38-05 N38-08 Device # N39-01 N39-02 N39-03 N39-04 N39-05 N39-06 N39-07  Device # N40-01 N40-02 N40-03 N40-04 N40-05 N40-06 N40-07  Device # N42-01 N42-02 N42-03	0.266A	4'  Distance  65' 14' 4' 32' 18' 4'  Distance  25' 25' 3' 7' 30' 3' 21' 3'  Distance  45' 10' 5' 44' 3' 21' 3'  Distance  65' 10' 5' 44' 3' 19' 3' Distance  25' 28' 3'	Distance + 10  72' 15' 4' 35' 20' 4'  Distance + 10  28' 28' 3' 8' 33' 3' 23' 3'  Distance + 10  50' 11' 6' 48' 3' 23' 3'  Distance + 10  72' 11' 6' 48' 3' 21' 3' Distance + 10  72' 11' 6' 48' 3' 21' 3' Distance + 10  72' 11' 6' 48' 3' 3' 21' 3'	0.266A  0% Amps  1.596A 1.330A 1.064A 0.798A 0.266A  0.266A  0% Amps 2.128A 1.596A 1.330A 1.064A 0.798A 0.532A 0.266A  0% Amps 1.862A 1.596A 1.330A 1.064A 0.798A 0.532A 0.266A  0% Amps 1.862A 1.596A 1.330A 1.064A 0.798A 0.532A 0.266A	Volt Drop  0.701v 0.126v 0.029v 0.172v 0.065v 0.007v  Volt Drop  0.359v 0.314v 0.032v 0.063v 0.216v 0.075v 0.005v  Volt Drop  0.566v 0.108v 0.045v 0.016v 0.075v 0.005v  Volt Drop  0.817v 0.108v 0.016v 0.005v  Volt Drop  0.817v 0.108v 0.016v 0.005v	Total Amps 1.862A  Total Amps 1.862A  HOF	Total Drop  1.099v  N.A.C #3 RN-STROBE CI  Total Drop  1.082v  N.A.C #3 N-STROBE CI  Total Drop  1.132v  N.A.C #3 RN-STROBE CI  Total Drop  1.376v  N.A.C #4 RN-STROBE CI	Percent Dro 5.3897%  36 IRCUIT  Percent Dro 5.3016%  8 RCUIT  Percent Dro 6.7459%  10 IRCUIT  Percent Dro 7.9260%
N35-05 N35-06 N35-06 N35-06 N35-06 N36-01 N36-02 N36-03 N36-04 N36-05 N36-06  Device # N38-01 N38-02 N38-03 N38-04 N38-05 N38-06 N38-07 N38-08  Device # N39-01 N39-02 N39-03 N39-04 N39-05 N39-06 N39-07  Device # N40-01 N40-02 N40-03 N40-04 N40-05 N40-06 N40-07  Device # N42-01 N42-02 N42-03 N42-04 N42-05	0.266A	4'  Distance  65' 14' 4' 32' 18' 4'  Distance  25' 25' 3' 7' 30' 3' 21' 3'  Distance  45' 10' 5' 44' 3' 21' 3'  Distance  65' 10' 5' 44' 3' 21' 3'  Distance  65' 10' 5' 44' 3' 21' 3' Distance	Distance + 10  72' 15' 4' 35' 20' 4'  Distance + 10  28' 28' 3' 8' 33' 3' 23' 3'  Distance + 10  50' 11' 6' 48' 3' 23' 3'  Distance + 10  72' 11' 6' 48' 3' 21' 3'  Distance + 10  72' 11' 6' 48' 3' 21' 3' Distance + 10  28' 31' 3' 21' 3'	0.266A  0% Amps  1.596A 1.330A 1.064A 0.798A 0.266A  0% Amps 2.128A 1.596A 1.330A 1.064A 0.798A 0.532A 0.266A  0% Amps  1.862A 1.596A 1.330A 1.064A 0.798A 0.532A 0.266A  0% Amps  1.862A 1.596A 1.330A 1.064A 0.798A 0.798A 0.532A 0.266A	Volt Drop  0.701v 0.126v 0.029v 0.172v 0.065v 0.007v  Volt Drop 0.359v 0.314v 0.032v 0.063v 0.216v 0.016v 0.075v 0.005v  Volt Drop 0.566v 0.108v 0.045v 0.016v 0.075v 0.005v  Volt Drop 0.817v 0.108v 0.045v 0.016v 0.075v 0.005v  Volt Drop 0.817v 0.108v 0.045v 0.016v 0.075v 0.005v	Total Amps 1.862A  Total Amps 1.862A  HOF	Total Drop  1.099v  N.A.C #3 RN-STROBE CO  Total Drop  1.082v  N.A.C #3 RN-STROBE CO  Total Drop  1.132v  N.A.C #3 RN-STROBE CO  Total Drop  1.376v  N.A.C #4 RN-STROBE CO  Total Drop  1.376v  N.A.C #4 RN-STROBE CO  Total Drop	Percent Dro 5.3897%  36 IRCUIT  Percent Dro 5.3016%  8 RCUIT  Percent Dro 6.7459%  40 IRCUIT  Percent Dro 7.9260%
N35-05 N35-06 N35-06 N35-06 N35-06 N36-01 N36-02 N36-03 N36-04 N36-05 N36-06  Device # N38-01 N38-02 N38-03 N38-04 N38-05 N38-06 N38-07 N38-08  Device # N39-01 N39-02 N39-03 N39-04 N39-05 N39-06 N39-07  Device # N40-01 N40-02 N40-03 N40-04 N40-05 N40-06 N40-07  Device # N42-01 N42-02 N42-03 N42-04	0.266A	4'  Distance  65' 14' 4' 32' 18' 4'  Distance  25' 25' 3' 7' 30' 3' 21' 3'  Distance  45' 10' 5' 44' 3' 21' 3'  Distance  65' 10' 5' 44' 3' 19' 3' Distance  25' 28' 3' 7'	Distance + 10  72' 15' 4' 35' 20' 4'  Distance + 10  28' 28' 3' 8' 33' 3' 23' 3'  Distance + 10  50' 11' 6' 48' 3' 23' 3'  Distance + 10  72' 11' 6' 48' 3' 21' 3' Distance + 10  72' 11' 6' 48' 3' 21' 3' Distance + 10  78' 11' 6' 48' 3' 8'  Distance + 10  78' 11' 6' 48' 3' 8'  Distance + 10  78' 11' 6' 48' 3' 8'	0.266A  0% Amps  1.596A 1.330A 1.064A 0.798A 0.266A  0.266A  0% Amps 2.128A 1.596A 1.330A 1.064A 0.798A 0.532A 0.266A  0% Amps 1.862A 1.596A 1.330A 1.064A 0.798A 0.532A 0.266A  0% Amps 1.862A 1.596A 1.330A 1.064A 0.798A 0.532A 0.266A	Volt Drop  0.701v 0.126v 0.029v 0.172v 0.065v 0.007v  Volt Drop  0.359v 0.314v 0.032v 0.016v 0.075v 0.005v  Volt Drop  0.566v 0.108v 0.045v 0.016v 0.075v 0.005v  Volt Drop  0.817v 0.108v 0.045v 0.108v 0.045v 0.016v 0.075v 0.005v	Total Amps 1.862A  Total Amps 1.862A  HOF	Total Drop  1.099v  N.A.C #3 RN-STROBE CO  Total Drop  1.082v  N.A.C #3 RN-STROBE CO  Total Drop  1.132v  N.A.C #3 RN-STROBE CO  Total Drop  1.376v  N.A.C #4 RN-STROBE CO  Total Drop  1.376v  N.A.C #4 RN-STROBE CO  Total Drop  1.410v  N.A.C #4	Percent Dro 5.3897%  36 IRCUIT  Percent Dro 5.3016%  8 RCUIT  Percent Dro 6.5482%  39 IRCUIT  Percent Dro 6.7459%  40 IRCUIT  Percent Dro 7.9260%

Device # Device Draw Distance Distance + 10% Amps Volt Drop Total Amps Total Drop Percent Drop

1.064A 0.101v 0.798A 0.081v 0.532A 0.050v 0.266A 0.009v

1.064A 0.101v 0.798A 0.081v 0.532A 0.050v 0.266A 0.009v

Device # Device Draw Distance Distance + 10% Amps Volt Drop Total Amps Total Drop Percent Drop

N43-01 0.266A N43-02 0.266A N43-03 0.266A N43-04 0.266A N43-05 0.266A

N43-06 0.266A N43-07 0.266A N43-08 0.266A N43-09 0.266A

N44-01 0.266A N44-02 0.266A N44-03 0.266A N44-04 0.266A N44-05 0.266A N44-06 0.266A N44-07 0.266A N44-08 0.266A N44-09 0.266A

2.394A 0.728v 2.394A 1.619v 7.9348%
2.128A 0.144v
1.862A 0.063v
1.596A 0.399v
1.330A 0.045v
HORN-STROBE CIRCUIT

2.394A 1.051v 2.394A 1.942v 9.5200% 2.128A 0.144v 1.862A 0.063v 1.596A 0.399v 1.330A 0.045v

N.A.C #44 HORN-STROBE CIRCUIT

FUTURE ADA BUILD OUT:

ALL CIRCUITS ARE DESIGNED TO ALLOW FOR FUTURE UPGRADE TO ACCOMMODATE THE HEARING IMPAIRED WITHOUT THE REQUIREMENT OF ADDITIONAL CABLE OR CONSTRUCTION.

CALCULATIONS FOR WORST CASE SCENARIO (CIRCUIT WITH THE LONGEST CABLE RUN AND FULLY LOADED WITH LOW FREQUENCY HORNS AND 177cd STROBES) IS POSTED BELOW.

UPGRADE TO 185cd STROBES IS DONE BY REPLACING EXISTING LOW FREQUENCY HORN WITH LOW FREQUENCY HORN/STROBE. CIRCUITS ARE DESIGNED TO ACCEPT NEW DEVICES WITHOUT NEED FOR ADDITIONAL CIRCUITS. ADDITIONAL POWER SUPPLIES MAY BE NECESSARY TO BALANCE THE AMPERAGE LOAD TO MAINTAIN POWER SUPPLY LIMITS.

AT TIME OF CONVERSION 120VAC SMOKE ALARM IN UNIT TO BE REPLACED WITH 120VAC SMOKE ALARM WITH INTEGRATED STROBE.





DESCRIPTION P.O. BOX 880922

PORT SAINT LUCIE , FL 34988

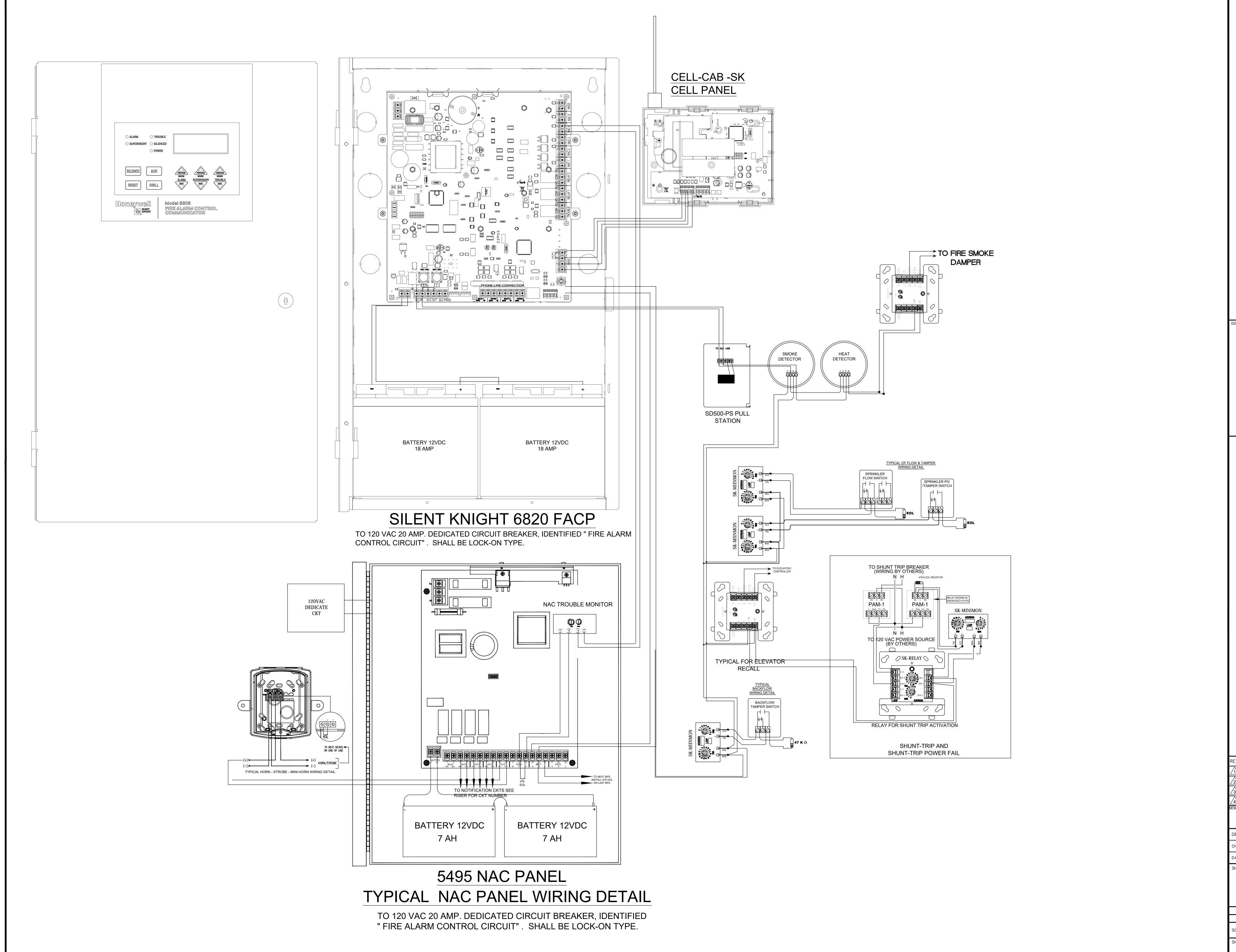
Carlos Oliveras (619) 610-8637, NICET III #84003 carlos.oliveras@fuegoeng.com DESIGN: C.O. DRAWN: C.O. CHECKED: RC JOB NO:

SHEET TITLE: FUTURE HEARING IMPAIR UNIT BUILD OUT WORST CASE VOLTAGE DROP CALCULATIONS

DATE: 03/22/2021 PLOT:

TWIN RIVERS BLOCK A FIRE ALARM SYSTEM N.T.S.

FA-9.2

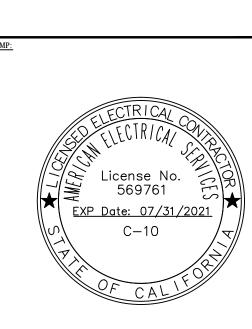


AMERICAN

ELECTRICAL SERVICES

501 SAN BENITO STREET, 3RD FLOOR
HOLLISTER, CA 95023
CONTACT: 831.638.1737





SIGNATURE: IGNACIO VELAZQUEZ

IGNACIO VELAZÇ

WIN RIVERS BLOCK A

REV. DATE DESCRIPTION D.E

The proof of the

POINT TO POINT WIRING DETAIL

TWIN RIVERS BLOCK A

FIRE ALARM SYSTEM

SCALE: N.T.S.

FA-10.0

DRAWINGS NOT PLOTTED 30"X42" ARE NOT TO SCALE