THE SCHOOL DISTRICT OF PHILADELPHIA
Office of Capital Programs
440 North Broad Street, 3rd Floor – Suite 371
Philadelphia, PA 19130

TELEPHONE: (215) 400-4730

Addendum No. 01

Subject: Stephen Decatur K-8 School
SDP Contract No. B-082 18/19

Location: Stephen Decatur K-8 School
3500 Academy Road
Philadelphia, PA 19154

This Addendum, dated October 28th, 2020, shall modify and become part of the Contract Documents for the work of this project. Any items not mentioned herein, or affected by, shall be performed strictly in accordance with the original documents.

Bid RFIs:

Question #1:

Please clarify if spec section 262816 Enclosed Switches & Circuit Breakers is applicable to this project. There does not appear to be any scope regarding that spec in the drawings.

Response:

An enclosed switch is indicated on the riser diagram of FA4.0 ahead of the FACP.

Question #2:

Fire alarm general note 24 on drawing FA1.0 is not applicable because there is no scope in the project to replace the fire protection or elevator systems. Please confirm this note can be removed.

Response:

It is correct that the fire protection/sprinkler systems and elevators are not being replaced, and any present are existing to remain; contractor scope of work shall include monitoring any existing points of monitoring for these systems, and as indicated in the latest contract documents.

THE SCHOOL DISTRICT OF PHILADELPHIA

OFFICE OF CAPITAL PROGRAMS

FIRE ALARM REPLACEMENT PROJECT

FOR

STEPHEN DECATUR ELEMENTARY SCHOOL

3500 ACADEMY ROAD
PHILADELPHIA, PA 19154

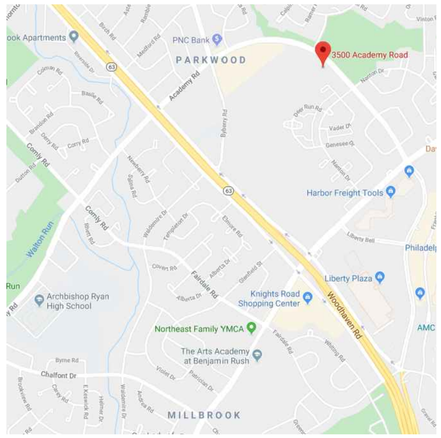
SDP#: B-082 C 18/19

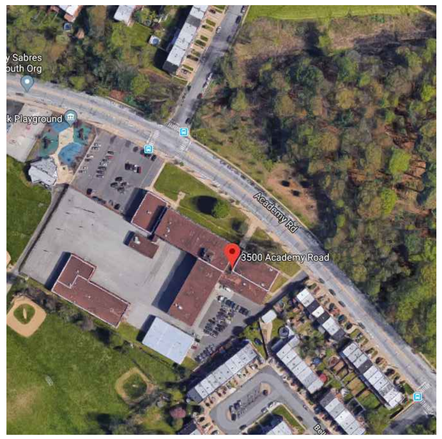
DRAWING LIST

CURRENT ISSUE:
ADDENDUM #1

		08.30.19 ISSUE FOR 60% REVIEW	11.21.19 ISSUE FOR 90% REVIEW	12.06.19 ISSUE FOR 100% REVIEW	07.31.20 ISSUE FOR BID	10.28.20 ADDENDUM #1
		A	B	C	0	1
COVER SHEET						
CS1.0	COVER SHEET	○	○	○	○	●
FIRE ALARM						
FA1.0	FIRE ALARM SYMBOLS & NOTES	○	○	○	○	●
FA1.1	FIRE ALARM DETAILS & GUIDELINES		○	○	●	
FA2.0	FIRE ALARM PLAN - GROUND FLOOR (EAST) - SLC DEVICES	○	○	○	○	●
FA2.1	FIRE ALARM PLAN - PARTIAL GROUND & FIRST FLOOR (WEST) - SLC DEVICES	○	○	○	●	
FA2.2	FIRE ALARM PLAN - PARTIAL FIRST FLOOR - SLC DEVICES	○	○	○	●	
FA2.3	FIRE ALARM PLAN -SECOND FLOOR - SLC DEVICES	○	○	○	●	
FA2.4	FIRE ALARM PLAN - THIRD FLOOR - SLC DEVICES	○	○	○	●	
FA3.0	FIRE ALARM PLAN - GROUND FLOOR - NAC DEVICES	○	○	○	●	
FA3.1	FIRE ALARM PLAN - PARTIAL FIRST FLOOR - NAC DEVICES	○	○	○	●	
FA3.2	FIRE ALARM PLAN - PARTIAL FIRST FLOOR - NAC DEVICES	○	○	○	●	
FA3.3	FIRE ALARM PLAN - SECOND FLOOR - NAC DEVICES	○	○	○	●	
FA3.4	FIRE ALARM PLAN - THIRD FLOOR - NAC DEVICES	○	○	○	●	
FA4.0	FIRE ALARM RISER DIAGRAM - SLC DEVICES	○	○	○	○	●
FA4.1	FIRE ALARM RISER DIAGRAM - NAC DEVICES	○	○	○	●	
FA4.2	FIRE ALARM BATTERY CALCULATIONS			○	○	●
FA4.3	FIRE ALARM VOLTAGE DROP CALCULATIONS			○	○	●
FA5.0	FIRE ALARM SYSTEM MANUFACTURERS DEVICE SPECIFICATION SHEETS	○	○	○	○	●
FA5.1	FIRE ALARM SYSTEM MANUFACTURERS DEVICE SPECIFICATION SHEETS	○	○	○	○	●
FA5.2	FIRE ALARM SYSTEM MANUFACTURERS DEVICE SPECIFICATION SHEETS	○	○	○	○	●
FA5.3	FIRE ALARM SYSTEM MANUFACTURERS DEVICE SPECIFICATION SHEETS	○	○	○	○	●
FA5.4	FIRE ALARM SYSTEM MANUFACTURERS DEVICE SPECIFICATION SHEETS	○	○	○	○	●
FA5.5	FIRE ALARM SYSTEM MANUFACTURERS DEVICE SPECIFICATION SHEETS			○	○	●
FIRE ALARM DEMOLITION						
FAD1.0	FIRE ALARM DEMOLITION PLAN - GROUND FLOOR			○	○	●
FAD1.1	FIRE ALARM DEMOLITION PLAN - PARTIAL FIRST FLOOR			○	○	●
FAD1.2	FIRE ALARM DEMOLITION PLAN - PARTIAL FIRST FLOOR			○	○	●
FAD1.3	FIRE ALARM DEMOLITION PLAN - SECOND FLOOR			○	○	●
FAD1.4	FIRE ALARM DEMOLITION PLAN - THIRD FLOOR			○	○	●

LOCATION MAPS





ENGINEERING CONTACT

FXB ENGINEERING
5 Christy Drive, Suite 307
Chadds Ford, PA 19317
610.558.3464 office

Christian Kremer
Senior Project Manager
christiankremer@fxbinc.com

THE SCHOOL DISTRICT OF PHILADELPHIA
OFFICE OF CAPITAL PROGRAMS
440 NORTH BROAD STREET
PHILADELPHIA, PA 19130 - 4015
(215) 400 - 4730 | (215) 400 - 4731 (fax)
www.philasd.org

SEAL:

NAME (LICENSED PROFESSIONAL): PETER J. BONNES — DATE 09/30/2021
STATE AND LICENSE NO: PA 046114E

FXB PARTNERSHIPS THROUGH ENGINEERING
5 Christy Drive, Suite 307
Chadds Ford, PA 19317
610.558.3464 office
www.fxbinc.com
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CONTRACT #'S
B-082 C 18/19

NO.	DATE	REVISION
1	10.28.20	ADDENDUM #1
0	07.31.20	ISSUE FOR BID
C	12.06.19	ISSUE FOR 100% REVIEW
B	11.21.19	ISSUE FOR 90% REVIEW
A	08.30.19	ISSUE FOR 60% REVIEW

SCHOOL & LOCATION
STEPHEN DECATUR K-8 SCHOOL
3500 ACADEMY ROAD,
PHILADELPHIA, PA 19154

PROJECT TITLE
FIRE ALARM REPLACEMENT PROJECT

DRAWING TITLE
COVER SHEET

DRAWN BY	CHECKED BY
AVW / RCK	PJB

DRAWING NO.
CS1.0

SHEET 01 OF 28

FIRE ALARM SYMBOLS
(ALL SYMBOLS MAY NOT BE USED ON THIS PROJECT. SEE PLANS AND RISERS FOR SYMBOLS USED.)

NAC DEVICES (ALL DEVICES SHALL BE AS SPECIFIED OR APPROVED EQUAL)

Symbol	Description
F	WALL–MOUNTED SPEAKER/STROBE DEVICE; SELECTABLE OUTPUT
F	WALL–MOUNTED STROBE DEVICE; SELECTABLE OUTPUT
F	WALL–MOUNTED SPEAKER DEVICE; SELECTABLE OUTPUT
CM	CEILING–MOUNTED SPEAKER/STROBE DEVICE; SELECTABLE OUTPUT
F WP	WALL–MOUNTED SPEAKER/STROBE DEVICE; WEATHERPROOF; SELECTABLE OUTPUT
F WP	WALL–MOUNTED ALARM BELL; WEATHERPROOF

NOTES: 1. SPEAKER TONE SHALL BE SET AT 15dBA OUTPUT ABOVE AREA'S AMBIENT SOUND LEVEL UNLESS OTHERWISE NOTED.
2. CANDELA SETTING SHALL BE AS SHOWN ON DRAWINGS.

CONTROL/SLC/SBUS DEVICES (ALL DEVICES SHALL BE AS SPECIFIED OR APPROVED EQUAL)

Symbol	Description
FACP	FIRE ALARM CONTROL PANEL, INTELLIGENT, ADDRESSABLE; W/ VOICE EVAC/AMPLIFIER; W/ INTEGRAL DIGITAL COMMUNICATOR; PROVIDE SLC EXPANDER FOR EACH ADDITIONAL SLC SHOWN
FAAP	FIRE ALARM ANNUNCIATOR PANEL
AMP	DIGITAL VOICE CONTROL SYSTEM WITH DIGITAL AUDIO AMPLIFIER
PB	FIRE ALARM REMOTE POWER SUPPLY
MM	ADDRESSABLE MONITOR MODULE
RM	ADDRESSABLE RELAY MODULE
CAC	CELLULAR ALARM COMMUNICATOR
RTS	REMOTE TEST SWITCH
	REMOTE MICROPHONE WITH CABINET
F	ADDRESSABLE MANUAL PULL STATION; DUAL ACTION; KEYED RESET
CO	CARBON MONOXIDE DETECTOR; PROVIDE & INSTALL ADDRESSABLE MONITOR MODULE
	ADDRESSABLE SMOKE DETECTOR; PHOTOELECTRIC W/ BASE
	ADDRESSABLE HEAT DETECTOR; 135°F FIXED TEMPERATURE
CHT	CONVENTIONAL HEAT DETECTOR; 194°F FIXED TEMPERATURE; PROVIDE & INSTALL ADDRESSABLE MONITOR MODULE
RTS	DUCT SMOKE DETECTOR HOUSING W/ RELAY MODULE & REMOTE TEST SWITCH; PROVIDE ADDRESSABLE PHOTOELECTRIC SMOKE DETECTOR; (LOCATE REMOTE TEST SWITCH IN PROXIMITY OF ASSOCIATED HVAC UNIT–SEE DEVICE MOUNTING HEIGHT DETAIL)

MONITORED POINTS (SEE SEQUENCE OF OPERATIONS MATRIX FOR ADDITIONAL INFORMATION)

Symbol	Description
ST	SHUNT TRIP CONTROL POWER SUPERVISION
AR	FIRE EXTINGUISHING SYSTEM AGENT RELEASE
CT	FIRE EXTINGUISHING SYSTEM CONTROL PANEL TROUBLE
RUN	GENERATOR RUNNING (1)
FAIL	GENERATOR FAILURE
NIA	GENERATOR CONTROLLER NOT IN AUTO

CONTROLLED DEVICES (SEE SEQUENCE OF OPERATIONS MATRIX FOR ADDITIONAL INFORMATION)

Symbol	Description
ERP	ELEVATOR RECALL; PRIMARY FLOOR
ERA	ELEVATOR RECALL; ALTERNATE FLOOR
ERM	ELEVATOR RECALL; ELEVATOR MACHINE ROOM OR HOISTWAY
EST	ELEVATOR SHUT–DOWN; SHUNT TRIP DEVICE
EFH	ELEVATOR SHUT–DOWN; FIRE HAT DEVICE

OTHER

Symbol	Description
EOLR	END OF LINE RESISTOR

TYPICAL SEQUENCE OF OPERATIONS MATRIX

	SYSTEM ALARM	TROUBLE SIGNAL	SUPERVISORY SIGNAL	ANNUNCIATE @ FACP	ANNUNCIATE @ FAAP	ALARM SIGNAL TO SUPERVISING STATION	TROUBLE SIGNAL TO SUPERVISING STATION	SUPERVISORY SIGNAL TO SUPERVISING STATION	FAN SHUTDOWN OF ASSOCIATED HVAC UNIT	RELEASE SMOKE DOOR HOLDERS	RELEASE EGRESS DOOR LOCKS	ACTIVATE SMOKE EXHAUST FANS
MANUAL PULL STATION	●			●	●	●				●	●	●
AREA DETECTOR (SMOKE OR HEAT)	●			●	●	●				●	●	●
DUCT SMOKE DETECTOR			●	●	●			●	●			
FACP/PB PRIMARY POWER FAILURE		●		●	●		●					
FACP/PB LOW BATTERY		●		●	●		●					
SLC/NAC OPEN–CIRCUIT		●		●	●		●					
SLC/NAC GROUND–FAULT		●		●	●		●					
SLC/NAC SHORT–CIRCUIT		●		●	●		●					
FIRE EXTINGUISHING ANSUL SYSTEM AGENT RELEASE	●			●	●	●				●	●	●
CO DETECTOR			●	●	●			●				
ALL OTHER MONITORED POINTS			●	●	●			●				

NOTE: CONTRACTOR SHALL PROVIDE MATRIX FOR PROPOSED INSTALL AS PART OF SHOP DRAWING SUBMITTAL.

ABBREVIATIONS

SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
A	AMPERES	SDP	THE SCHOOL DISTRICT OF PHILADELPHIA
AFF	ABOVE FINISH FLOOR	HD	HEAT DETECTOR
ARCH	ARCHITECT	HR	HOUR
AUX	AUXILIARY	mA	MILLI–AMP
BLDG	BUILDING	MC	MECHANICAL CONTRACTOR
C	CONDUIT	MPS	MANUAL PULL STATION
CKT	CIRCUIT	MISC	MISCELLANEOUS
C/L	CENTERLINE	MOD	MODULE
COL	COLUMN	N	NEW DEVICE
CU	COPPER	NAC	NOTIFICATION APPLIANCE CIRCUIT
DWG	DRAWING	N.C.	NORMALLY CLOSED
E	EXISTING DEVICE TO REMAIN	N.O.	NORMALLY OPEN
EC	ELECTRICAL CONTRACTOR	NTS	NOT TO SCALE
EMT	ELECTRICAL METALLIC TUBING	PB	POWER BOOSTER
EOL	END OF LINE	PWR	POWER
EOLR	END OF LINE RESISTOR	R	EXISTING DEVICE TO BE REMOVED
ER	EXISTING DEVICE TO BE RELOCATED	RTU	ROOF TOP UNIT
ERL	EXISTING RELOCATED DEVICE (NEW LOCATION)	SBY	STANDBY
FA	FIRE ALARM	SD	SMOKE DETECTOR
FAAP	FIRE ALARM ANNUNICATOR PANEL	SLC	SIGNALING LINE CIRCUIT
FACP	FIRE ALARM CONTROL PANEL	UON	UNLESS OTHERWISE NOTED
FAC	FIRE ALARM CONTRACTOR	V	VOLT
FBO	FURNISHED BY OTHERS	W/	WITH
FT	FEET	WG	WIRE GUARD
GRD	GROUND	WP	WEATHERPROOF

CABLE TYPE SCHEDULE

TYPE	APPLICATIONS (SEE NEC 2017; 760.154)
FPL–CI (CIRCUIT INTEGRITY)	INSTALLED WHERE 2 HR FIRE RATING OF CABLE IS REQUIRED
FPLP (PLENUM RATED)	INSTALLED IN DUCTS, PLENUMS, AND OTHER SPACES USED FOR ENVIROMENTAL AIR.
FPLR (RISER RATED)	INSTALLED IN VERTICAL RUNS AND PENETRATING MORE THAN ONE FLOOR OR INSTALLED IN VERTICAL RUNS IN A SHAFT.
FPL (GENERAL PURPOSE)	INSTALLED IN BUILDING LOCATIONS OTHER THAN THOSE LISTED ABOVE.

FIRE ALARM TESTING NOTES

1. CONTRACTOR SHALL PROVIDE SUPPORT AS NECESSARY FOR TESTING OF FIRE ALARM SYSTEMS TO ENSURE THAT ALL COMPONENTS & SUB–SYSTEMS OPERATE PROPERLY & AS REQUIRED. CONTRACTOR SHALL CONTRACT THE SERVICES OF DEVICE & PANEL MANUFACTURERS TO ENSURE PROPER TESTING & ADHERENCE TO ALL APPLICABLE STANDARDS & CODES, AS WELL AS ALL MANUFACTURER, FIRE MARSHAL, & PHILADELPHIA SCHOOL DISTRICT REQUIREMENTS.
2. CONTRACTOR SHALL PROVIDE SUPPORT TO THE FOLLOWING FUNCTIONAL TESTING OF ALL DEVICES TO ENSURE THESE DEVICES OPERATE & FUNCTION AS REQUIRED DURING AN ALARM CONDITION:
   - 2.1. VISUAL CONFIRMATION
     - 2.1.1. PROPER FUNCTIONING OF VISUAL DEVICE
     - 2.1.2. SYNCHRONIZATION OF ALL VISUAL DEVICES IN PROPER SEQUENCE
   - 2.2. AUDIBLE CONFIRMATION
     - 2.2.1. PROPER AUDIBLE FUNCTIONING OF ALL AUDIBLE DEVICES
     - 2.2.2. PROPER INTELLIGIBILITY OF SIGNAL FROM ALL AUDIBLE DEVICES
       - 2.2.2.1. PROVIDE STIPA TESTING AS REQUIRED IN ACCORDANCE WITH ANNEX D OF NFPA 72
   - 2.3. INTER–SYSTEM CONFIRMATION
     - 2.3.1. VERIFICATION OF SIGNAL BEING SENT TO SECURITY SYSTEM FOR RELEASE OF EGRESS LOCKS (AS APPLICABLE/REQUIRED)
     - 2.3.2. VERIFICATION OF SIGNAL BEING RECEIVED & AREA DAMPER(S) OPENING UPON MANUAL SMOKE PURGE ACTIVATION (AS APPLICABLE/REQUIRED)
     - 2.3.3. VERIFICATION OF SIGNAL BEING SENT/RECEIVED & PROPER SEQUENCING BETWEEN FA & SPRINKLER SYSTEMS (AS APPLICABLE/REQUIRED)
3. CONTRACTOR SHALL PROVIDE SUPPORT TO THE FOLLOWING FUNCTIONAL TESTING OF ALL DEVICES TO ENSURE THESE DEVICES OPERATE & FUNCTION AS REQUIRED DURING FIRE/SMOKE/HEAT DETECTION CONDITION:
   - 3.1. VERIFICATION THAT THE REQUIRED SIGNAL(S) ARE SENT TO, & RECEIVED BY, THE FACP FROM THE DETECTION DEVICE(S)
   - 3.2. VERIFICATION THAT THE REQUIRED SIGNALS ARE SENT TO, & RECEIVED BY, SMOKE DAMPERS FROM THE FACP (AS APPLICABLE/REQUIRED)
     - 3.2.1. THIS FUNCTIONING SHALL BE COORDINATED WITH THE MECHANICAL CONTRACTOR
   - 3.3. VERIFICATION OF SHUT–DOWN SIGNAL BEING SENT TO, & RECEIVED BY, THE ASSOCIATED HVAC UNIT FAN UPON DUCT SMOKE DETECTION WITHIN THAT UNIT
     - 3.3.1. THIS FUNCTIONING SHALL BE COORDINATED WITH THE MECHANICAL CONTRACTOR
   - 3.4. VERIFICATION THAT THE REQUIRED ALARM SIGNAL IS SENT TO, & RECEIVED BY, THE FACP UPON MANUAL PULL STATION ACTIVATION
4. CONTRACTOR SHALL COORDINATE TESTING OF THE SPRINKLER PROTECTION SYSTEM(S) (PRE–ACTION, WET, DELUGE) TO ENSURE PROPER INTER–SYSTEM COMMUNICATION (AS APPLICABLE/REQUIRED)
   - 4.1. THIS FUNCTIONING SHALL BE COORDINATED WITH THE SPRINKLER CONTRACTOR
5. CONTRACTOR OR VENDOR (OR AGENT(S) THEREOF) SHALL PROVIDE ALL EQUIPMENT NECESSARY FOR TESTING FOR PROPER FUNCTION OF THE FIRE ALARM SYSTEM, DEVICES, PANELS, EQUIPMENT, CABLING, ET CETERA.
   - 5.1. CONTRACTOR SHALL PROVIDE ANY FIRE ALARM SYSTEM TESTING EQUIPMENT NOT PROVIDED BY OTHER DISCIPLINES AS REQUIRED FOR PROPER INTER–SYSTEM TESTING.
6. CONTRACTOR SHALL SUBMIT HOURLY ALLOWANCES FOR EACH TESTING ACTIVITY AS PART OF THEIR BID PACKAGE. CONTRACTOR SHALL ALLOW FOR A MINIMUM OF TWO (2) DAYS OF TESTING.
7. CONTRACTOR SHALL INSPECT & TEST ALL FIRE ALARM CABLING & CONNECTIONS TO ENSURE THAT THE MINIMUM REQUIREMENTS OF NFPA 72 AND ALL OTHER APPLICABLE CODES HAVE BEEN MET OR EXCEEDED.
8. ALL COMMISSIONING ACTIVITIES ARE EXPECTED TO TAKE PLACE OUTSIDE OF NORMAL BUSINESS HOURS; PROVIDE DEDUCT ALTERNATE FEE FOR TESTING DURING NORMAL BUSINESS HOURS.
9. CONTRACTOR SHALL COORDINATE & VERIFY ANY FURTHER FIRE MARSHAL &/OR PHILADELPHIA SCHOOL DISTRICT TESTING REQUIREMENTS WITH AUTHORIZED AGENT(S) PRIOR TO SUBMISSION OF BID; SUBMISSION OF BID SHALL BE CONSTRUED AS UNDERSTANDING OF ALL INSTALLATION, PRE–, & POST–CONSTRUCTION CODES, REGULATIONS, & REQUIREMENTS.

FIRE ALARM GENERAL NOTES

1. THE CONTRACTOR SHALL PROVIDE ALL LABOR, MATERIALS, PERMITS, AND APPROVALS FROM GOVERNING AGENCIES, TOOLS, AND EQUIPMENT NECESSARY FOR AND INCIDENTAL TO THE INSTALLATION AND TESTING OF THE SPECIFIED FIRE ALARM SYSTEM. THE COMPLETE FIRE ALARM SYSTEM SHALL BE INSTALLED IN COMPLIANCE WITH THE FOLLOWING:
   - –INTERNATIONAL FIRE CODE (IFC)
   - –NFPA 72 (NATIONAL FIRE ALARM CODE)
   - –NFPA 70 (NATIONAL ELECTRICAL CODE)
   - –ANSI/ASME A17.1 (SAFETY CODE FOR ELEVATORS AND ESCALATORS)
   - –ICC ANSI 117.1 (ACCESSIBLE AND USABLE BUILDINGS AND FACILITIES)
   - –NFPA 20 (STANDARD FOR THE INSTALLATION OF STATIONARY FIRE PUMPS)
   - –NFPA 13 (STANDARD FOR THE INSTALLATION OF SPRINKLER SYSTEMS)
   - –LOCAL ORDINANCES
   - –FIRE MARSHAL REQUIREMENTS
2. DEVICES AND EQUIPMENT SHALL BE LISTED AS UNDERWRITER'S LABORATORIES (UL) OR FACTORY MUTUAL (FM) APPROVED. EQUIPMENT AND DEVICES SHALL BE INSTALLED IN ACCORDANCE WITH THEIR LISTING.
3. ALL FIRE ALARM ("FA") EQUIPMENT AND WIRING SHALL BE INSTALLED IN A NEAT AND WORKMANLIKE MANNER, PARALLEL & PERPENDICULAR TO BUILDING STRUCTURE. DRILLING/CORING OF STRUCTURAL MEMBERS IS NOT PERMITTED.
4. THE CONTRACTOR SHALL REVIEW ALL TRADES' CONTRACT DOCUMENTS TO DETERMINE SPECIFIC MOUNTING LOCATIONS FOR FIRE ALARM EQUIPMENT. COORDINATE WITH THE ARCHITECT, OWNER, GENERAL CONTRACTOR OR CONSTRUCTION MANAGER. THE DRAWINGS ARE INTENDED ONLY TO SHOW THE APPROXIMATE LOCATION OF DEVICES.
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR AVOIDING ALL CONFLICTS WITH LIGHTING FIXTURES, DIFFUSERS, SPRINKLER HEADS, GRILLS, DUCTS, CONDUIT, PIPING, AND OTHER OBSTRUCTIONS AND MAINTAINING ADEQUATE CLEARANCES.
6. SMOKE DETECTORS SHALL NOT BE INSTALLED CLOSER THAN 36" TO OR IN THE DIRECT AIRSTREAM OF SUPPLY AIR GRILLES.
7. DO NOT INSTALL FIRE ALARM CABLES IN RACEWAY WITH ANY OTHER BUILDING SYSTEM CONDUCTORS.
8. POLARITY SHALL BE MAINTAINED. POSITIVE SHALL BE RED AND NEGATIVE SHALL BE BLACK.
9. FIRE ALARM WIRING CONNECTIONS SHALL BE FROM DEVICE TO DEVICE. WHERE SPLICING IS REQUIRED, TERMINAL STRIPS SHALL BE PROVIDED & INSTALLED.
10. SIGNALING LINE CIRCUITS SHALL SHALL BE CLASS B. DO NOT INSTALL MORE THAN 80% OF MANUFACTURER'S MAXIMUM ALLOWED QUANTITY DEVICES PER SLC.
11. PERMANENTLY AFFIX A TYPEWRITTEN LABEL TO ALL FIRE ALARM DEVICES WITH DEVICE ADDRESS. HAND–WRITTEN LABELS ARE NOT ACCEPTABLE.
12. NOTIFICATION APPLIANCE VISUAL & AUDIO CIRCUITS SHALL BE CLASS B; DO NOT INSTALL MORE THAN 80% OF MANUFACTURER'S MAXIMUM ALLOWED CIRCUIT CAPACITIES PER NAC, POWER SUPPLY, &/OR AUDIO AMPLIFIER .
13. LOCATE MONITOR AND RELAY MODULES WITHIN 36" OF MONITORED OR CONTROLLED DEVICE.
14. PROVIDE SMOKE DETECTOR WITHIN 36" OF FIRE ALARM CONTROL PANEL AND POWER BOOSTER(S).
15. PROVIDE A FIRE ALARM ANNUNCIATOR PANEL(S) & FIRE COMMAND CENTER(S) AS REQUIRED & AT LOCATION(S) APPROVED BY THE FIRE MARSHAL.
16. PROVIDE DUCT SMOKE DETECTOR IN SUPPLY & RETURN AIR PLENUMS OF ALL HVAC UNITS OVER 2,000 CFM, OR AS INDICATED. THIS SHALL INCLUDE AN ADDRESSABLE SMOKE DETECTOR, SMOKE DETECTOR HOUSING, SAMPLING TUBES AND REMOTE TEST STATION. PROVIDE RELAY(S), AUX POWER, AND ALL WIRING AS REQUIRED FROM DETECTOR TO BOTH ASSOCIATED FAN POWERED VAV UNIT & MAIN HVAC UNIT FOR SHUT DOWN UPON ACTIVATION OF DETECTOR. PROVIDE REMOTE TEST STATION AT A READILY ACCESSIBLE LOCATION IN THE AREA SERVED BY THE UNIT. COORDINATE EXACT LOCATIONS AND QUANTITY OF DUCT SMOKE DETECTORS WITH MECHANICAL CONTRACTOR.
17. PROVIDE 120V POWER SUPPLY TO FIRE ALARM CONTROL PANEL, POWER BOOSTERS, AMPLIFIERS, ETC., FROM A DEDICATED 20A CIRCUIT. PROVIDE LOCKING DEVICE FOR CIRCUIT BREAKER AND PERMANENTLY LABEL CIRCUIT "FIRE ALARM SYSTEM POWER".
18. PROVIDE WIRING FOR TWO PHONE LINES FROM TELEPHONE DEMARCATION POINT TO FIRE ALARM CONTROL PANEL; PROVIDE CELLULAR ALARM COMMUNICATION DEVICE AS REQUIRED BY FIRE MARSHAL.
19. UPON COMPLETION OF THE INSTALLATION, A SATISFACTORY TEST OF THE ENTIRE SYSTEM SHALL BE MADE IN THE PRESENCE OF THOSE INDICATED IN THE FIRE ALARM SPECIFICATIONS.
20. FA SYSTEM INSTALLER IS RESPONSIBLE FOR & SHALL FULLY COORDINATE WITH FIRE MARSHAL & SCHOOL DISTRICT OF PHILADELPHIA ('SDP') PRIOR TO BID, PURCHASE, & CONSTRUCTION. INSTALLER SHALL RETAIN SERVICES OF AUTHORIZED MANUFACTURER'S REPRESENTATIVE OF FA SYSTEM AS REQUIRED. INSTALLER SHALL PROVIDE ALL FA DEVICES, EQUIPMENT, WIRING, RELAYS, MODULES, POWER SUPPLIES, CONTROLS, APPURTENANCES, ETC., AS NECESSARY FOR A COMPLETE & FULLY FUNCTIONAL FIRE ALARM SYSTEM IN ACCORDANCE TO OWNER & FIRE MARSHAL REQUIREMENTS, & ALL APPLICABLE CODES.
21. FA SYSTEM INSTALLER SHALL COORDINATE PRIOR TO DESIGN AND CONSTRUCTION WITH FIRE MARSHAL AND AUTHORIZED PHILADELPHIA SCHOOL DISTRICT REPRESENTATIVE FOR COMPLIANCE WITH REQUIREMENTS OF 2018 IFC 404 "FIRE SAFETY AND EVACUATION PLANS" INCLUDING THOSE OF 404.3.3 "LOCK DOWN [SHELTER–IN–PLACE] PLANS".
22. THE FA SYSTEM INSTALLER IS RESPONSIBLE TO PROVIDE A COMPLETE SET OF SHOP DRAWINGS, INCLUDING MANUFACTURER SPECIFIC VOLTAGE DROP & BATTERY CALCULATIONS, SEQUENCE OF OPERATIONS MATRIX & DEVICE SPECIFICATION SHEETS TO THIS ENGINEER FOR APPROVAL. DRAWINGS SUBMITTED FOR REVIEW & APPROVAL SHALL BEAR THE SEAL OF A PROFESSIONAL ENGINEER LICENSED IN GOOD STANDING WITH THE STATE OF PA.
23. CONTRACTOR MUST INCLUDE IN BID COST FOR TRAINING SDP PERSONNEL ON USE OF FIRE ALARM SYSTEM. CONTRACTOR SHALL RECORD TRAINING AND SUBMIT RECORDING ON BOTH A THUMB DRIVE AND A DVD FORMAT TO SDP.
24. INSTALLER SHALL COORDINATE WITH SPRINKLER VENDOR FOR LOCATION AND QUANTITY OF ANY FIRE PROTECTION SYSTEM DEVICES REQUIRED TO BE MONITORED BY THE FIRE ALARM SYSTEM. PROVIDE ONE MONITOR MODULE FOR EACH MONITORED POINT. PROVIDE & INSTALL HEAT DETECTOR WITHIN 24" OF SPRINKLER HEAD(S) IN ELEVATOR SHAFT; INTERLOCK FOR INTERRUPTION OF ELEVATOR POWER. COORDINATE ELEVATOR RECALL REQUIREMENTS WITH ELEVATOR VENDOR & FIRE MARSHAL PRIOR TO BID & CONSTRUCTION.

ELECTRICAL GENERAL NOTES

1. ALL FEEDER AND BRANCH CIRCUIT WIRING SHALL BE RUN IN CONDUIT AS INDICATED IN THE SECTION 26 SPECIFICATIONS. MC CABLE SHALL ONLY BE USED FOR LIGHTING POWER WHIPS ABOVE ACT. TYPE "AC" OR "NM" CABLE SHALL NOT BE USED. AN INSULATED EQUIPMENT GROUNDING CONDUCTOR MUST BE RUN IN ALL BRANCH CIRCUITS. SEE SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
2. ALL EQUIPMENT SHALL BE INSTALLED IN A NEAT AND WORKMANLIKE MANNER, PARALLEL & PERPENDICULAR TO BUILDING STRUCTURE.
3. MINIMUM CONDUIT SIZE SHALL BE 3/4", UNLESS NOTED OTHERWISE. MINIMUM WIRE SIZE SHALL BE #12 AWG TYPE THHN/THWN FOR POWER AND #14 THHN/THWN FOR CONTROL. ALL WIRING TO BE COPPER.
4. ALL RACEWAYS RUNNING THROUGH BUILDING EXPANSION JOINTS SHALL BE EQUIPPED WITH EXPANSION FITTINGS.
5. ALL WORK SHALL BE PERFORMED IN STRICT ACCORDANCE WITH THE 2017 NATIONAL ELECTRICAL CODE, THE PHILADELPHIA FIRE CODE, IBC 2018, IECC 2018, IFC 2018, THE LATEST STATE CODES, AND ALL LOCAL CODES.
6. ALL ELECTRICAL EQUIPMENT, INCLUDING, BUT NOT LIMITED TO CONDUIT, WIRE, BOXES, AND FITTINGS, SHALL BE NEW AND FREE OF DEFECTS, SHALL BEAR THE THE UL LABEL, AND SHALL MEET NEMA AND ANSI STANDARDS.
7. ALL WORK AND MATERIALS SHALL BE GUARANTEED FREE FROM DEFECTS FOR A MINIMUM PERIOD OF ONE YEAR UNLESS NOTED OTHERWISE. THE WARRANTY PERIOD SHALL BEGIN AT THE DATE OF BENEFICIAL OCCUPANCY OF THE SPACE UNLESS NOTED OTHERWISE IN THE PROJECT SPECIFICATIONS.
8. THE CONTRACTOR IS RESPONSIBLE FOR FILING AND PAYING ALL FEES AND OBTAINING NECESSARY PERMITS, CERTIFICATES OF INSPECTION AND SHALL DELIVER ALL CERTIFICATES OF INSPECTION TO OWNER/ CONSTRUCTION MANAGER OR GENERAL CONTRACTOR INCLUDING COPIES WITH MAINTENANCE MANUALS.
9. ALL NEW BRANCH CIRCUITS SHALL CONTAIN DEDICATED NEUTRAL CONDUCTORS. DO NOT SHARE NEUTRAL CONDUCTORS.
10. CONTRACTOR IS RESPONSIBLE FOR CREATING AND TURNING OVER COMPLETE RED LINED AS BUILT DRAWINGS TO INDICATE ANY DEVIATIONS IN DESIGN DOCUMENTS. CONTRACTOR SHALL SUBMIT BOTH HARD COPIES AND DIGITAL COPIES OF "AS–BUILT" DRAWINGS UPON ACCEPTANCE OF COMPLETION OF CONSTRUCTION.
11. CONTRACTOR IS RESPONSIBLE FOR CONFIRMING ALL EXISTING SITE CONDITIONS. COORDINATE SITE CONDITIONS WHICH DEVIATE FROM DRAWINGS WITH THIS ENGINEER.
12. ALL NEW BRANCH CIRCUITS, SHALL BE SURFACE MOUNTED, UNLESS NOTED OTHERWISE. PROVIDE FACEPLATES, BACKBOXES, MOUNTING HARDWARE, SURFACE MOUNTED CONDUIT, AND SIMILAR APPURTENANCES FOR A FULL INSTALLATION OF ALL REQUIRED WORK.
13. NEW RECEPTACLES MUST BE TAMPER PROOF PER NEC 2017.
14. PATCH, REPAIR, AND PAINT ALL HOLES AND COSMETIC BLEMISHES DUE TO REMOVAL OF DEVICES AND EQUIPMENT. INSTALL BLANK STAINLESS STEEL FACEPLATES ON UNCOVERED OUTLET AND SWITCH BOXES.
15. CAT 5/6 CABLING FOR LIGHTING CONTROLS SHALL BE PLENUM RATED. ABOVE DROP CEILING, CAT 5/6 CABLE SHALL BE SUSPENDED FROM J–HOOKS. IN WALLS OR EXPOSED, CAT 5/6 CABLING SHALL BE IN CONDUIT.

DEVICE ADDRESSING

STROBE CIRCUIT:
- NAC POWER BOOSTER
- CIRCUIT NUMBER
- DEVICE NUMBER

N1A .1 .1

SLC CIRCUIT:
- MODULE SLC NUMBER
- DEVICE NUMBER

M1 .001

SPEAKER CIRCUIT:
- NODE NUMBER
- SPEAKER CIRCUIT
- DEVICE NUMBER

1. SP 1

- DETECTOR SLC NUMBER
- DEVICE NUMBER

D1 .001

15cd ← STROBE CANDELA
1/4w ← SPEAKER WATTAGE

BIDDING INSTRUCTIONS - BASE BID

1. CONTRACTOR SHALL PROVIDE ALL MATERIAL, LABOR, EQUIPMENT, AND RELATED APPURTENANCES THAT ARE INDICATED AND IMPLIED BY THESE DRAWINGS, BOOK SPECIFICATIONS, AND EXISTING BUILDING CONDITIONS FOR COMPLETE AND FULLY OPERATIONAL SYSTEMS. THIS SHALL INCLUDE ALL COSTS REQUIRED FOR A LICENSED FIRE ALARM & ELECTRICAL CONTRACTOR TO PROVIDE A FULLY OPERATIONAL, CODE COMPLIANT, "TURN KEY" SYSTEM FOR TYPE OF WORK INDICATED.
2. CONTRACTOR SHALL VISIT THE SITE AND IDENTIFY EXISTING BUILDING AND BUILDING SYSTEMS ISSUES THAT WILL AFFECT THE BID PRICE. ANY QUESTIONS AND CLARIFICATIONS REQUIRED TO SUBMIT A COMPLETE AND ACCURATE BID PRICE SHALL BE SUBMITTED TO THIS ENGINEER AS A 'REQUEST FOR INFORMATION' (RFI) PRIOR TO SUBMITTAL OF BID.
3. CONFLICTS BETWEEN THE DRAWINGS, BOOK SPECIFICATIONS, AND THE REQUIREMENTS OF THE EXISTING BUILDING CONDITIONS SHALL BE BID USING THE MOST EXPENSIVE CONSTRUCTION METHOD.
4. THE CONTRACTOR'S FAILURE TO IDENTIFY EXISTING BUILDING CONDITION CHALLENGES, AND TO NOT ACCOUNT FOR ALL COSTS NEEDED TO COMPLETE THE WORK DESCRIBED IN THESE BIDDING INSTRUCTIONS, DRAWINGS, AND BOOK SPECIFICATIONS, SHALL NOT RESULT IN ADDITIONAL COST TO THE SCHOOL DISTRICT OF PHILADELPHIA TO COMPLETE ALL WORK DESCRIBED, INDICATED, AND IMPLIED.
5. BID PRICE SHALL INCLUDE ADDITIONAL LABOR, MATERIAL, AND EQUIPMENT REQUIRED TO COMPLETE THE INDICATED WORK DUE TO CHALLENGES RELATED TO EXISTING DUCTWORK, PIPING, STRUCTURAL COMPONENTS, AND SIMILAR EXISTING BUILDING SYSTEMS. THIS INCLUDES:
   - 5.1. RELOCATION OR TEMPORARILY REMOVAL AND REINSTALLATION OF THESE BUILDING SYSTEMS.
   - 5.2. ROUTING CONDUIT, CIRCUITS, AND MOUNTING AT/AROUND THESE BUILDING SYSTEMS.
6. BID PRICE SHALL INCLUDE TEMPORARILY RELOCATION OF FURNITURE, FURNISHINGS, AND EQUIPMENT AS REQUIRED TO COMPLETE ALL INDICATED WORK. THIS SHALL INCLUDE, BUT NOT BE LIMITED TO AUDITORIUM SEATING, CURTAINS, SPECIALTY STAGE LIGHTING, BOILER ROOM PIPE HANGERS, AND SHELVING.
7. BID PRICE SHALL INCLUDE PROVIDING (3) THREE 120V, 20A CIRCUITS. EACH CIRCUIT SHALL CONSIST OF (1) 20A/1 POLE CIRCUIT BREAKER, WITH RED LOCKING DEVICE, 125'–0" OF (2)#12 & (1)#12 GRD. IN 3/4" EMT CONDUIT. INCLUDE COST TO PROVIDE & INSTALL (3) THREE 20A, 120V NEMA 5–20R DUPLEX RECEPTACLES WITH PLATE IN SURFACE MOUNTED OUTLET BOXES [ONE (1) FOR FA SYSTEM PRINTER, ONE (1) AT NEW FACP, AND ONE (1) AS MAY BE REQUESTED BY SDP). CONFIRM THE LOCATIONS OF THESE CIRCUITS WITH SDP & THIS ENGINEER PRIOR TO COMMENCEMENT OF ROUGH–IN.
8. BID PRICE SHALL INCLUDE ALL REQUIRED MOUNTING HARDWARE & RACEWAYS FOR ALL NEW DEVICES & EQUIPMENT, AS REQUIRED AND TO COORDINATE DEVICE INSTALLATION WITH EXISTING AND PROPOSED BUILDING CONDITIONS. PROVIDE A COMPLETE NEW RACEWAY SYSTEM FOR THE NEW FIRE ALARM SYSTEM AND INSTALLED ALL FIRE ALARM WIRING IN METAL CONDUIT. PROVIDE GALVANIZED RIGID STEEL CONDUIT FOR ALL RISER CONDUITS AND, ALL CONDUITS LOCATED IN BOILER ROOM AND ALL WET AND DAMP AREAS. PAINT ALL COVERS OF JUNCTION BOXES WITH RED COLOR PAINT AND LABEL AS "FIRE ALARM".
9. REMOVE AND KEEP SAFE EXISTING CEILING TILES. CONTRACTOR IS RESPONSIBLE TO REPLACE ANY TILES DAMAGED DURING CONSTRUCTION.
10. BID PRICE SHALL INCLUDE ALL WALL AND FLOOR/CEILING PENETRATIONS FOR NEW BRANCH CIRCUITS AND FIRE ALARM CIRCUITS. FIRESTOP ALL HOLES CREATED OR THAT BECOME EXPOSED DUE TO DEMOLITION WORK IN ALL WALLS, FLOORS, SLABS AND FIRE RATED ASSEMBLIES.
11. UNLESS OTHERWISE DIRECTED BY THE PHILADELPHIA SCHOOL DISTRICT CONSTRUCTION MANAGEMENT DEPARTMENT, CONTRACTOR IS RESPONSIBLE FOR COVERING AND PROTECTING ALL SCHOOL PROPERTY FROM DUST AND DEBRIS DURING ALL PHASES OF CONSTRUCTION. CONTRACTOR SHALL COVER ALL ITEMS INCLUDING BUT NOT LIMITED TO COMPUTERS, FURNITURE, FIRE ALARM DEVICES, AND SECURITY DEVICES.
12. PATCH, REPAIR, AND PAINT ALL HOLES AND COSMETIC BLEMISHES DUE TO REMOVAL OF DEVICES AND EQUIPMENT. INSTALL BLANK STAINLESS STEEL FACEPLATES ON UNCOVERED OUTLET AND SWITCH BOXES.
13. BID PRICE SHALL INCLUDE ALL FIRE ALARM DEVICES, PROGRAMMING, TESTING, COMMISSIONING, AND OWNER TRAINING.
14. BID PRICE SHALL INCLUDE COST TO PROVIDE & INSTALL A NEW SIGN TO EACH NEW MANUAL PULL STATION. THE SIGN SHALL BE MOUNTED IMMEDIATELY ADJACENT TO THE MANUAL PULLSTATION AND SHALL READ "IN CASE OF FIRE: SOUND ALARM AND CALL THE FIRE DEPARTMENT"
15. BID PRICE SHALL INCLUDE COST TO CONNECT ALL EXISTING ELEVATOR CONTROL EQUIPMENT TO THE FIRE ALARM SYSTEM FOR ELEVATOR RECALL FUNCTION (IF PRESENT). THE ELECTRICAL CONTRACTOR SHALL HIRE AN ELEVATOR SUB CONTRACTOR TO MAKE ALL CONNECTIONS TO THE ELEVATOR.
16. REMOVE EXISTING FIRE ALARM SYSTEM COMPLETELY INCLUDING FIRE ALARM CONTROL PANEL, CODED PULL STATIONS, BELLS, DETECTORS, FIRE ALARM WIRING AND CONDUIT SYSTEM IN THEIR ENTIRETY. THE EXISTING FIRE ALARM SYSTEM SHALL BE OPERATIONAL PRIOR TO THE NEW FIRE ALARM SYSTEM IS CERTIFIED; THE DEMOLITION OF EXISTING FIRE ALARM SYSTEM SHALL NOT BEGIN UNTIL AFTER THE INSTALLATION OF NEW FIRE ALARM SYSTEM IS COMPLETED AND CERTIFIED FOR USE BY THE FIRE MARSHAL/AHJ. DEMOLITION SHALL INCLUDE REMOVAL OF ALL EXISTING FA SYSTEM DEVICES, CONDUIT, WIRING, BACKBOXES, RACEWAYS, ETC,, INCLUDING PATCHING, PAINTING AND REPAIRING WALLS WHERE PANELS AND RELATED APPURTENANCES ARE REMOVED. REMOVE ALL EXISTING SURFACE WIREMOLD WHICH CONTAINS BRANCH CIRCUITS OR WIRING FROM PANELS BEING REMOVED.

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OFFICE OF CAPITAL PROGRAMS
440 NORTH BROAD STREET
PHILADELPHIA, PA 19130 - 4015
(215) 400 - 4730 | (215) 400 - 4731 (fax)
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SEAL:

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5 Christy Drive, Suite 307
Chadds Ford, PA 19317
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SCHOOL & LOCATION
STEPHEN DECATUR K-8 SCHOOL
3500 ACADEMY ROAD, PHILADELPHIA, PA 19154

PROJECT TITLE
FIRE ALARM REPLACEMENT PROJECT

DRAWING TITLE
FIRE ALARM SYMBOLS & NOTES

DRAWN BY AVW / RCK
CHECKED BY PJB

DRAWING NO. FA1.0

FIRE ALARM GENERAL NOTES

1. ALL KEYED NOTES INDICATED MAY NOT APPLY TO DRAWING. ONLY THOSE KEYED NOTES CALLED OUT ON FLOOR PLAN SHALL APPLY.
2. PRIOR TO START OF THE FIRE ALARM SYSTEM SCOPE OF WORK, CONTRACTOR MUST REVIEW AND COMPLY WITH THE ASBESTOS INSPECTION REPORT (AIR) FOR ALL ASBESTOS CONTAINING AREAS AND BUILDING MATERIALS TO REMAIN AS IS. ALL FINAL DEVICE & EQUIPMENT LOCATIONS AND CONDUIT ROUTES SHALL BE COORDINATED WITH THE AIR DRAWINGS TO AVOID ALL ASBESTOS CONTAINING WALLS, CEILINGS, AND FLOORS. THERE SHALL BE NO COST TO THE SCHOOL DISTRICT OF PHILADELPHIA FOR DEVICES, EQUIPMENT AND CONDUIT WHICH MUST BE RELOCATED TO AVOID ALL ASBESTOS CONTAINING WALLS, CEILINGS, AND FLOORS.
3. ALL NEW FIRE ALARM DETECTION AND SUPPRESSION DEVICES SHALL BE INSTALLED, TESTED AND ACCEPTED PRIOR TO OCCUPANCY. THE LOCAL AUTHORITY HAVING JURISDICTION SHALL PERFORM ALL FINAL ACCEPTANCES.
4. ALL DEVICES CONTAINING END OF LINE RESISTORS SHALL BE LABELED "EOL".
5. PROVIDE SIGNAGE AT EACH MANUAL PULL STATION. SIGN MUST BE MOUNTED IMMEDIATELY ADJACENT TO THE MANUAL PULL STATION. THE SIGN SHALL READ "IN CASE OF FIRE: SOUND ALARM AND CALL THE FIRE DEPARTMENT".
6. CONTRACTOR SHALL USE CONDUIT SEALING FITTING WITH APPROVED SEALING COMPOUND ON ALL CONDUITS PASSING FROM INTERIOR TO EXTERIOR OF A BUILDING AND BETWEEN AREAS OF DIFFERENT TEMPERATURES. SEAL ALL CONDUIT PENETRATIONS THOUGH RATED WALLS AND FLOORS TO MAINTAIN FIRE RATING INTEGRITY.
7. ALL FIRE ALARM WIRING TO BE RUN IN EMT CONDUIT AND COMPLY WITH NEC ARTICLE 760. PROVIDE GALVANIZED RIGID STEEL CONDUIT WITH THREADED FITTINGS FOR ALL RISER CONDUITS AND ALL CONDUITS IN MECHANICAL, ELECTRICAL AND BOILER ROOMS. PAINT ALL JUNCTION BOXES WITH RED COLOR PAINT AND LABEL AS "FIRE ALARM". CONDUIT TO BE CONCEALED ABOVE DROP CEILING WHERE POSSIBLE AND SURFACE MOUNTED ELSEWHERE. DO NOT INSTALL CONDUIT IN WALLS.. MINIMUM CONDUIT SIZE TO BE 3/4"C. ALL WIRING TO BE COPPER. TYPE "MC" CABLE IS NOT ACCEPTABLE.
8. THE QUANTITY OF FIRE ALARM NAC EXTENDER POWER SUPPLY PANELS SHOWN ON THESE DRAWINGS AND THE RISER DIAGRAM ARE FOR SCHEMATIC PURPOSES ONLY. THE CONTRACTOR AND FIRE ALARM VENDOR SHALL DETERMINE THE EXACT QUANTITY OF NAC PANELS REQUIRED BASED ON THE MANUFACTURER'S NAC PANEL FUNCTION AND SPECIFICATIONS. THE CONTRACTOR SHALL PROVIDE THE QUANTITY OF NAC PANELS REQUIRED TO SUPPORT THE ENTIRE FIRE ALARM SYSTEM BASED ON THE QUANTITY OF DEVICES SHOWN ON PLAN, TOTAL POWER NEEDED TO SUPPORT THE DEVICES, VOLTAGE DROP CALCULATIONS FOR EACH CIRCUIT, BATTERY CALCULATIONS, SIZE OF BUILDING, ETC. THE CONTRACTOR SHALL PROVIDE 120V, 20AMP CIRCUITS FOR ALL NAC PANELS THAT ARE INSTALLED BASED ON THE FIRE ALARM VENDOR'S CALCULATIONS AT NO ADDITIONAL COST TO SDP.
9. CONTRACTOR SHALL COORDINATE FINAL LOCATION WITH EXISTING CEILING MOUNTED DEVICES IN FIELD PRIOR TO BID.

ROOM NAME LEGEND

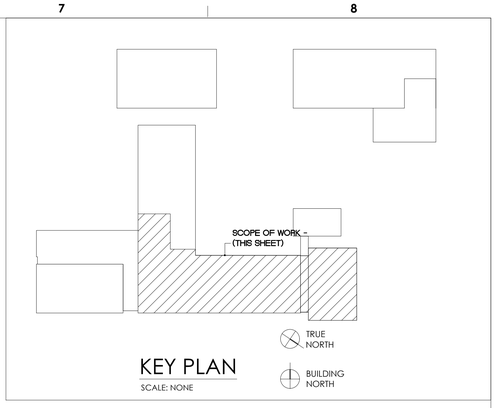
ROOM NAME ← INDICATES ROOM TYPE
* "1 - 01" ← 1"(FLOOR LEVEL) – 01"(ROOM NUMBER)
** CLG: X-XX" ← INDICATES CEILING HEIGHT (FT.)

* ROOM NUMBERS ARE DIAGRAMMATIC AND ARE SHOWN FOR REFERENCE ONLY AND DESIGN INTENT. EXISTING ROOM #'S ARE TO BE VERIFIED IN FIELD.

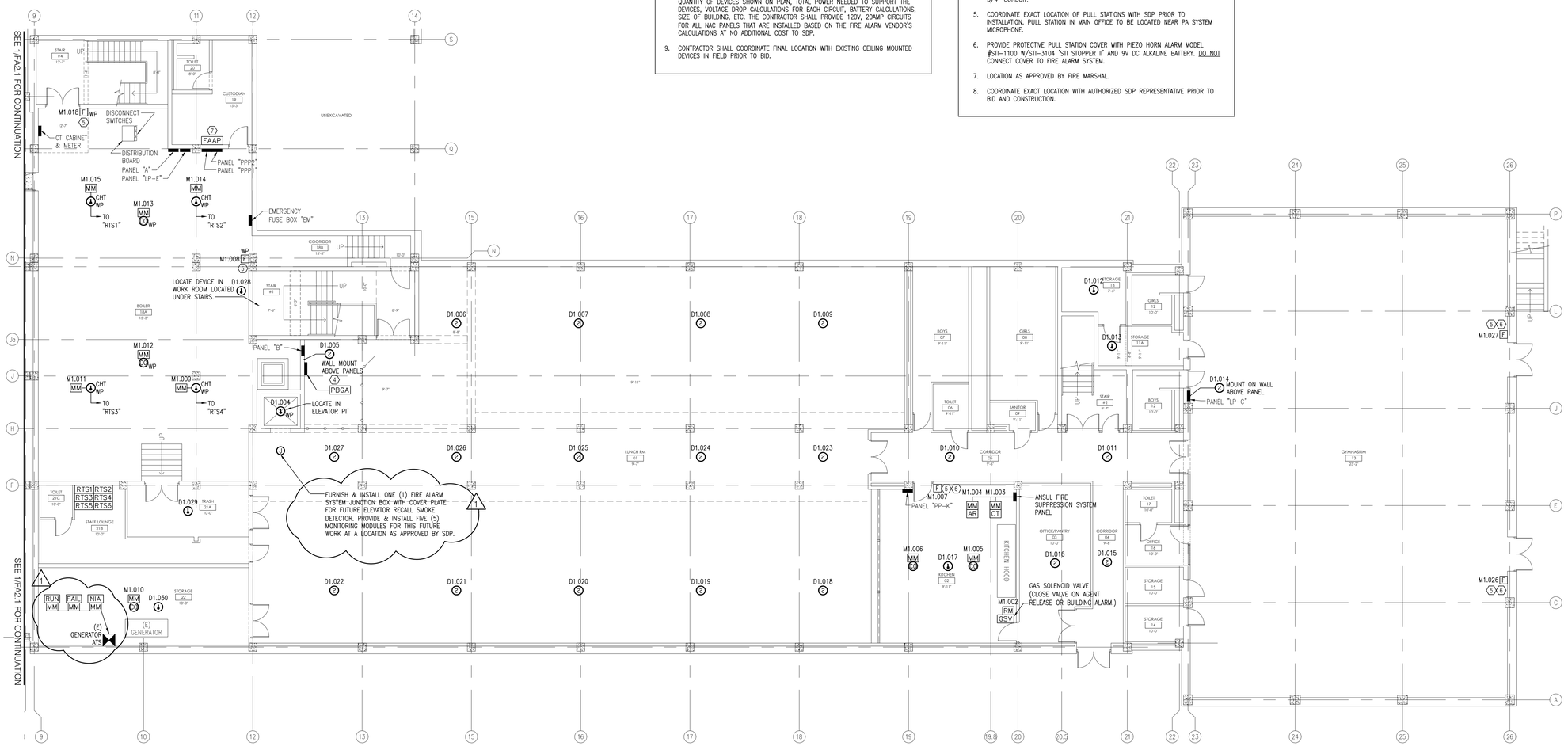
** CONTRACTOR IS RESPONSIBLE FOR CONFIRMING ALL EXISTING CEILING HEIGHTS AND EXISTING CONDITIONS WHICH MAY AFFECT FIRE ALARM INSTALLATION IN FIELD. LIGHT FIXTURE HEIGHTS ARE SHOWN FOR DESIGN INTENT AND MUST BE CONFIRMED WITH EXISTING CONDITIONS PRIOR TO INSTALLATION.

FIRE ALARM KEYED NOTES (#)

1. NEW FACP. PROVIDE 120V, 20AMP POWER CIRCUIT FROM PANELBOARD IDENTIFIED FOR FACP. PROVIDE CIRCUIT WITH (2) #12 + (1) #12 GND. IN 3/4" CONDUIT. CIRCUIT BREAKER SHALL BE RED AND LOCKABLE.
2. PROVIDE FACP WITH INTEGRAL DIGITAL ALARM COMMUNICATOR TRANSMITTER (DACT) FOR OFF-PREMISES MONITORING OF THE FACP ALARM POINTS. PROVIDE (2) CAT 6 CABLES AND (2) COPPER LAND LINES FROM THE FACP TO THE TELEPHONE DEMARCATION STATION (MAIN TELEPHONE SERVICE BOX).
3. FIELD COORDINATE EXACT LOCATIONS OF CEILING MOUNTED DETECTORS. DEVICES TO BE MOUNTED BELOW ALL DUCTWORK, PIPING, AND CONDUIT. DEVICES SHALL BE CLEAR OF ANY OBSTRUCTIONS. DEVICES SHALL BE MOUNTED TO UNISTRUT FRAMING AT AN ACCESSIBLE LOCATION SECURELY FASTENED TO CEILING.
4. NEW FIRE ALARM REMOTE BOOSTER POWER SUPPLY (NAC). PROVIDE 120V, 20AMP POWER CIRCUIT FROM PANELBOARD IDENTIFIED FOR FIRE ALARM REMOTE BOOSTER POWER SUPPLIES (NAC). PROVIDE CIRCUIT WITH (2) #12 + (1) #12 GND. IN 3/4" CONDUIT.
5. COORDINATE EXACT LOCATION OF PULL STATIONS WITH SDP PRIOR TO INSTALLATION. PULL STATION IN MAIN OFFICE TO BE LOCATED NEAR PA SYSTEM MICROPHONE.
6. PROVIDE PROTECTIVE PULL STATION COVER WITH PIEZO HORN ALARM MODEL #STI-1100 W/STI-3104 "STI STOPPER II" AND 9V DC ALKALINE BATTERY. DO NOT CONNECT COVER TO FIRE ALARM SYSTEM.
7. LOCATION AS APPROVED BY FIRE MARSHAL.
8. COORDINATE EXACT LOCATION WITH AUTHORIZED SDP REPRESENTATIVE PRIOR TO BID AND CONSTRUCTION.



KEY PLAN
SCALE: NONE



FIRE ALARM PLAN
GROUND FLOOR (EAST) - SLC DEVICES

1 / FA2.0 SCALE: 1/8" = 1'-0"

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PHILADELPHIA, PA 19154

PROJECT TITLE
FIRE ALARM REPLACEMENT PROJECT

DRAWING TITLE
FIRE ALARM PLAN - GROUND FLOOR (EAST) - SLC DEVICES

DRAWN BY	CHECKED BY
AVW / RCK	PJB

DRAWING NO.
FA2.0

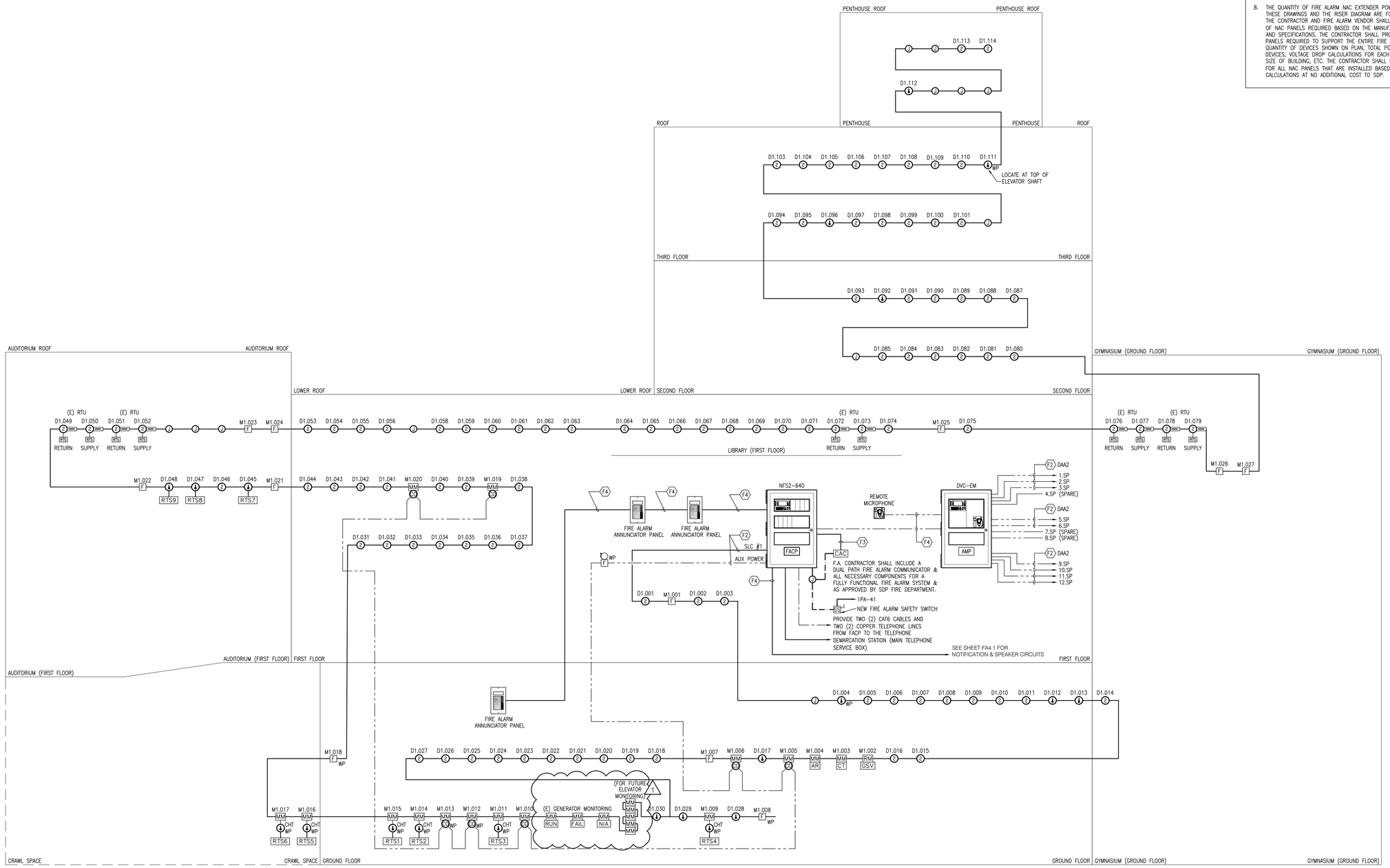
SHEET 04 OF 28

CABLE TYPE SCHEDULE

TAG	DESCRIPTION	RESISTANCE
F1	2/C; #14 CU SOLID; POWER-LIMITED FIRE ALARM CABLE; UNSHIELDED; JACKETED CABLE	2.52 OHMS/1000 FT
F2	2/C; #16 CU SOLID; POWER-LIMITED FIRE ALARM CABLE; UNSHIELDED; JACKETED CABLE	4.02 OHMS/1000 FT
F3	4/C; #14 CU SOLID; POWER-LIMITED FIRE ALARM CABLE; UNSHIELDED; JACKETED CABLE	2.52 OHMS/1000 FT
F4	4/C; #16 CU SOLID; POWER-LIMITED FIRE ALARM CABLE; UNSHIELDED; JACKETED CABLE	4.02 OHMS/1000 FT
TYPE	APPLICATIONS (SEE NEC 200B; 760.154)	
FPL-CI (CIRCUIT INTEGRITY)	INSTALLED WHERE 2 HR FIRE RATING OF CABLE IS REQUIRED	
FPLP (PLENUM RATED)	INSTALLED IN DUCTS, PLENUMS, AND OTHER SPACES USED FOR ENVIROMENTAL AIR.	
FPLR (RISER RATED)	INSTALLED IN VERTICAL RUNS AND PENETRATING MORE THAN ONE FLOOR OR INSTALLED IN VERTICAL RUNS IN A SHAFT.	
FPL (GENERAL PURPOSE)	INSTALLED IN BUILDING LOCATIONS OTHER THAN THOSE LISTED ABOVE.	

FIRE ALARM RISER DIAGRAM NOTES

1. THIS SCHEMATIC FIRE ALARM RISER IS INTENDED TO INDICATE THE MAJOR FIRE ALARM COMPONENTS AND GENERAL SEPARATION OF INDICATING, INITIATING, COMMUNICATIONS, AND ANNUNCIATION CIRCUITS AS REQUIRED BY THE PROJECT. WIRING IS TO BE PROVIDED AS REQUIRED BY THE FIRE ALARM EQUIPMENT MANUFACTURER. THE RISER DIAGRAM IS A GENERAL INDICATION OF EQUIPMENT TO BE PROVIDED AND DOES NOT NECESSARILY INDICATE ALL ITEMS OR APPURTENANCES WHICH MAY BE REQUIRED TO PROVIDE A FULLY OPERATIONAL SYSTEM. ALL SUCH ITEMS ARE TO BE PROVIDED AS INDICATED IN THE SPECIFICATIONS AND AS REQUIRED BY FIRE ALARM MANUFACTURER FOR OPERATION OF THE SYSTEM.
2. ACTIVATION OF ANY COMMON AREA SMOKE DETECTOR, OR PULL STATION SHALL INITIATE A GENERAL ALARM FOR THE ENTIRE BUILDING.
3. PROVIDE FULLY ADDRESSABLE SYSTEM CAPABLE OF ADDRESSING EACH DEVICE.
4. FACP SHALL BE SUPPLIED WITH BATTERY BACKUP TO COMPLY WITH NFPA 72. ALSO PROVIDE THE APPROPRIATE DIALER TO NOTIFY A CENTRAL MONITORING LOCATION OR CENTRAL STATION.
5. THE INSTALLING CONTRACTOR SHOULD BE ADVISED TO PREPARE THE FOLLOWING DOCUMENTATION AT THE PROJECT CLOSE-OUT:
   A. SET OF "AS-BUILT" DRAWINGS AS PER INSPECTED INSTALLATION AND AS APPROVED BY THE FIRE MARSHAL.
   B. RECORD OF COMPLETION (A DOCUMENT THAT ACKNOWLEDGES THE FEATURES OF INSTALLATION, OPERATION (PERFORMANCE), SERVICE AND EQUIPMENT).
   C. MANUAL CONTAINING A "SEQUENCE OF ALARM" AND A MANUFACTURERS SHEET FOR EACH DEVICE INSTALLED IN THE FIRE ALARM SYSTEM INCLUDING THE MAIN CONSOLE.
6. CONTRACTOR IS RESPONSIBLE TO SCHEDULE/ARRANGE, AND PAY FOR ALL PERMITS AND INSPECTIONS.
7. THE NEW FIRE ALARM SYSTEM IS TO BE ACCEPTABLE BY FIRE MARSHAL BEFORE THE REMOVAL OF THE EXISTING FIRE ALARM SYSTEM.
8. THE QUANTITY OF FIRE ALARM NAC EXTENDER POWER SUPPLY PANELS SHOWN ON THESE DRAWINGS AND THE RISER DIAGRAM ARE FOR SCHEMATIC PURPOSES ONLY. THE CONTRACTOR AND FIRE ALARM VENDOR SHALL DETERMINE THE EXACT QUANTITY OF NAC PANELS REQUIRED BASED ON THE MANUFACTURER'S NAC PANEL FUNCTION AND SPECIFICATIONS. THE CONTRACTOR SHALL PROVIDE THE QUANTITY OF NAC PANELS REQUIRED TO SUPPORT THE ENTIRE FIRE ALARM SYSTEM BASED ON THE QUANTITY OF DEVICES SHOWN ON PLAN, TOTAL POWER NEEDED TO SUPPORT THE DEVICES, VOLTAGE DROP CALCULATIONS FOR EACH CIRCUIT, BATTERY CALCULATIONS, SIZE OF BUILDING, ETC. THE CONTRACTOR SHALL PROVIDE 120V, 20AMP CIRCUITS FOR ALL NAC PANELS THAT ARE INSTALLED BASED ON THE FIRE ALARM VENDOR'S CALCULATIONS AT NO ADDITIONAL COST TO SDP.



1 FA4.0 FIRE ALARM RISER DIAGRAM - SLC DEVICES
SCALE: NONE

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SHEET 14 OF 28