



PUBLIC SAFETY BUILDING FIRE ALARM UPGRADE

TALOYOAK, NUNAVUT

PROJECT: 1005448, 2017

PSAV PROJECT No. 2017-01

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LIST OF DRAWINGS

ARCHITECTURAL

A000 COVER SHEET

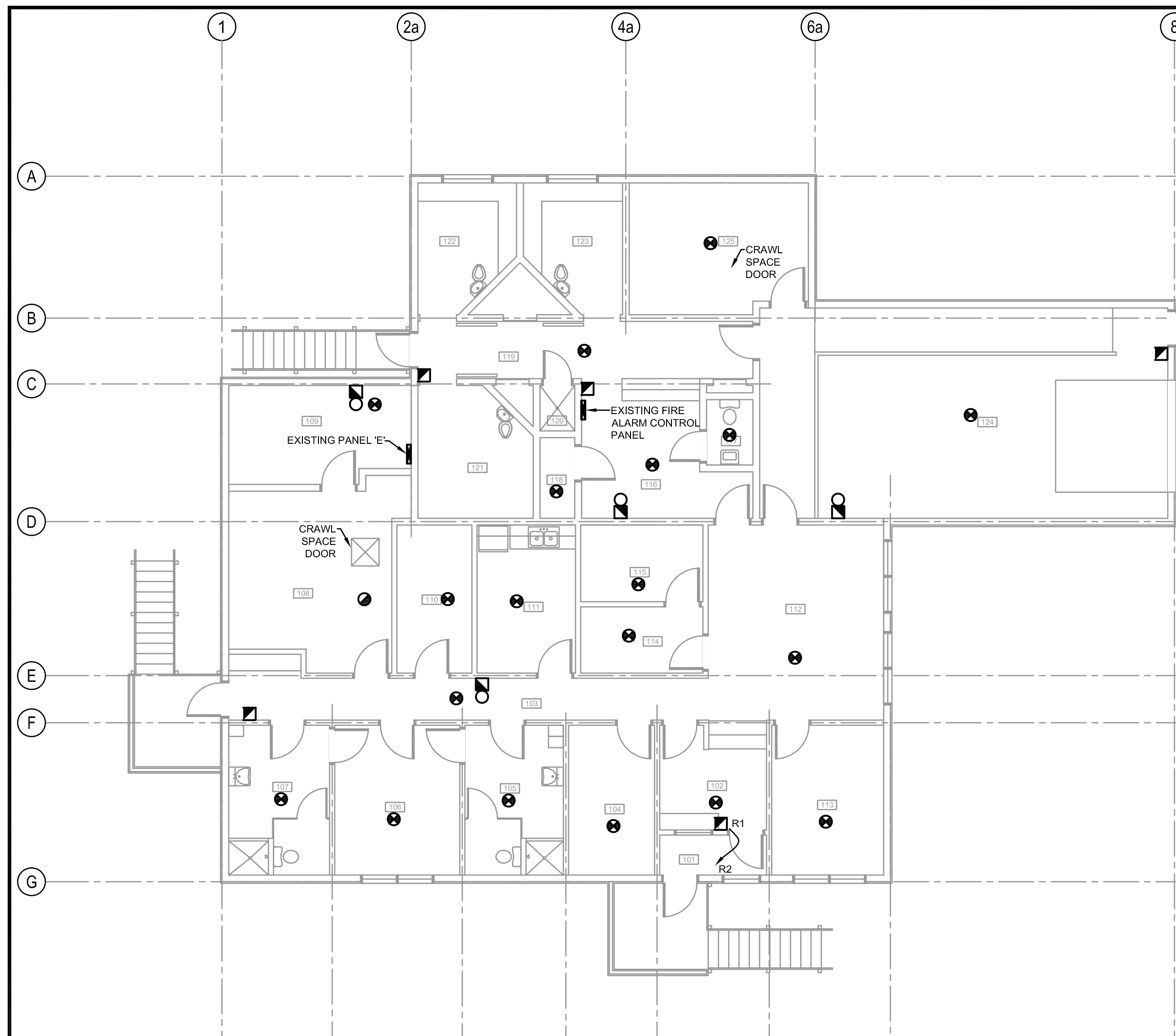
ELECTRICAL

E100 ELECTRICAL CRAWLSPACE & MAIN FLOOR FIRE ALARM SYSTEM LAYOUTS

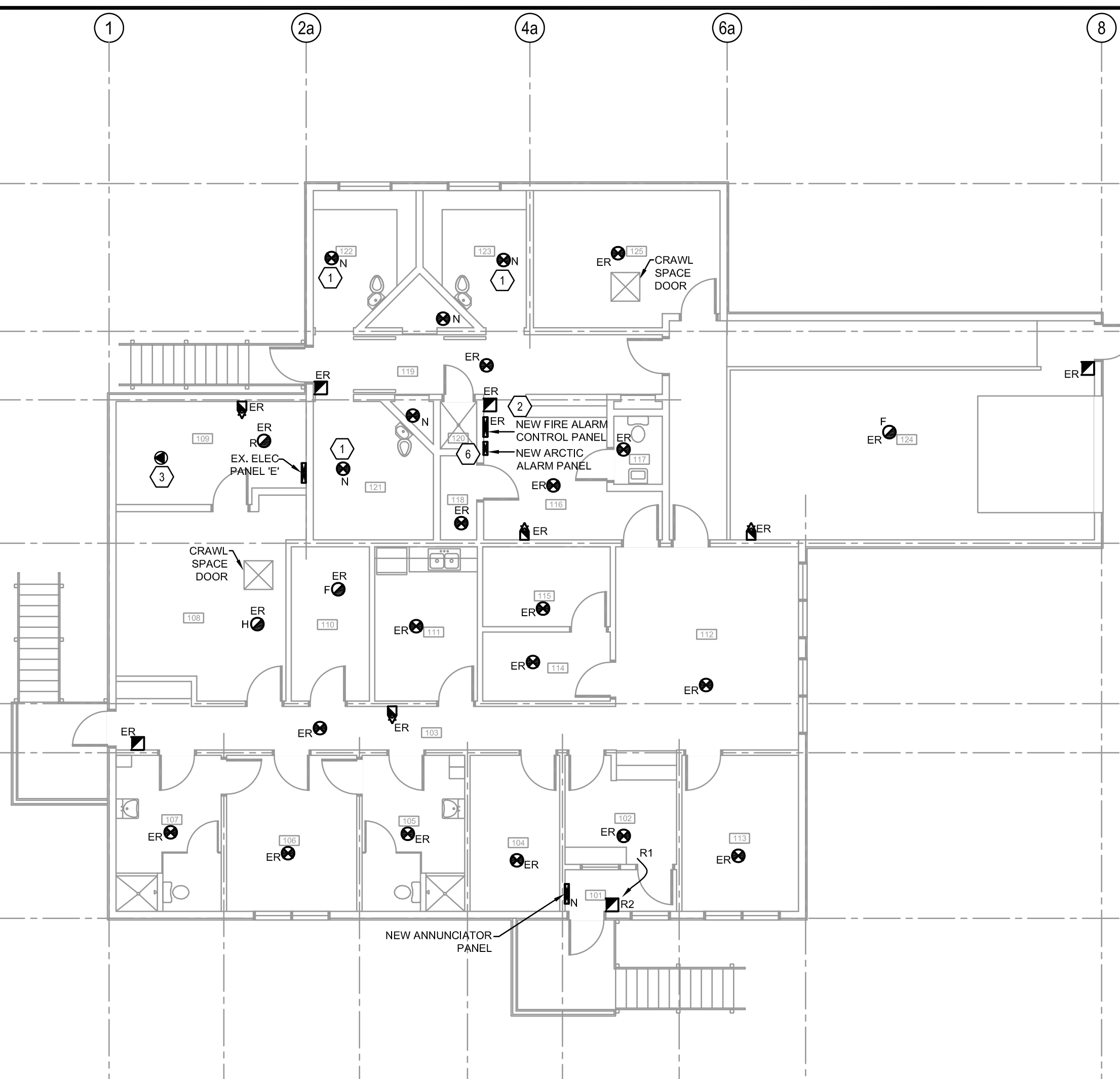
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MARCH 23, 2017

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PUBLIC SAFETY BUILDING FIRE
ALARM UPGRADE
TALOYOAK, NUNAVUT



EXISTING MAIN FLOOR FIRE ALARM SYSTEM PLAN
SCALE: 1:100



NEW MAIN FLOOR FIRE ALARM SYSTEM PLAN
SCALE: 1:100

SCOPE OF WORK

- REMOVE EXISTING FIRE ALARM DEVICES INCLUDING FIRE ALARM CONTROL PANEL, HORN/STROBE COMBINATION, PULL STATIONS, DETECTORS, DUCT DETECTORS AND ALL MECHANICAL CONTROL RELATED WITH FIRE ALARM SYSTEM ONLY, IN RENOVATION AREAS WHETHER SHOWN ON THE DRAWINGS OR NOT UNLESS OTHERWISE NOTED. REMOVE EXISTING WIRING BACK TO FIRE PANEL AND RE-WIRE WITH CLEAR LABELS FOR NEW DEVICES. REFER TO DEMOLITION NOTES.
- REPLACE WITH NEW DEVICES FOR ALL REMOVED ITEMS AS MENTIONED IN KEYED NOTE 1 AND SHOWN IN DRAWINGS.
- EXISTING FIRE ALARM SYSTEM CONDUIT, IF IN GOOD CONDITION, TO BE RE-USED AT EXISTING DEVICES LOCATION. PROVIDE NEW WIRING, CONDUIT AND WIRE DESIGNATIONS REPRESENT ALL DOWNSTREAM WIRES ALSO, OTHERWISE PROVIDE NEW.

DEMOLITION NOTES

- WHERE THE TERM "REMOVE" IS USED, THIS MEANS THAT DEVICE AND ITS ASSOCIATED WIRING SHALL BE REMOVED BACK TO PANEL. DEAD JUNCTION BOXES AND CONDUIT IN CEILING CEILING SPACE ARE TO BE REMOVED.
- CONSTRUCTION WILL BE CARRIED OUT ONLY FOR FIRE ALARM SYSTEM. ALL ELECTRICAL EQUIPMENT AND DEVICES ARE TO REMAIN OPERATIONAL, EXCEPT FOR BRIEF PERIODS OF DOWNTIME NECESSITATED BY CHANGE OF EQUIPMENT LOCATION OR POWER SOURCE. ALL DOWNTIME PERIODS ARE TO BE COORDINATED WITH THE AUTHORITIES OR SITE MAINTENANCE STAFF AND OWNER.

RENOVATION NOTES:

- ANY NEW DEVICES SHOULD BE CLEARLY LABELED.
- PROVIDE FIRE SEALING WITH FIRE SEALING PRODUCTS MATCHING RATING FOR FIRE SEPARATIONS FOR ALL PENETRATIONS OF FIRE SEPARATIONS, IF REQUIRED.

GENERAL NOTES:

- PROVIDE NEW SINGLE STAGE ADDRESSABLE CONTROL PANEL, ANNUNCIATOR, INITIATING AND SIGNALING DEVICES. NOTIFICATION APPLIANCES ARE TO BE ZONED. ENSURE FIRE ALARM CONTROL PANEL COMES WITH SURGE SUPPRESSION SYSTEMS.
- PERFORM COMPLETE V. TEST.
- ALL REMOVED ITEMS SHALL BE RETURN TO THE OWNER OR SITE MAINTENANCE STAFF.
- MINIMIZE INTERRUPTION ON OPERATION HOURS DURING CONSTRUCTION PERIOD AND COORDINATE WITH OFFICE STAFF.
- 40% MAXIMUM CONDUIT FILL.
- CONTRACTOR TO PROVIDE LABELING FOR ALL DEVICES INCLUDING END-OF-LINE DEVICES AND PROVIDE THESE LABELS ON MARKED-UP DRAWINGS.
- FIRE ALARM DEVICE BRANCH WIRE TO BE CONCEALED IN FINISHED SPACES, ALLOWED TO BE RUN IN EXPOSED CONDUIT IN SERVICE AND UNFINISHED SPACES (TO MATCH EXISTING). RUN CABLING AND CONDUIT PARALLEL WITH THE BUILDING STRUCTURE.
- DO NOT PROVIDE MORE THAN 25 DEVICES BETWEEN ISOLATOR MODULES IN SOL LOOPS. CONSULT MANUFACTURER FOR DEVICE COUNT REPRESENTATION (SOME DEVICES COUNT AS MORE THAN ONE DEVICE DUE TO INCREASED CURRENT DRAW).
- PROVIDE FIRE SEALING WITH FIRE SEALING PRODUCTS MATCHING RATING FOR FIRE SEPARATIONS FOR ALL ELECTRICAL PENETRATIONS OF FIRE SEPARATIONS.
- PROVIDE STAINLESS STEEL COVER PLATES WHERE EXISTING DEVICES ARE REMOVED, IF APPLICABLE.
- PROVIDE ISOLATOR MODULES IN LOCATIONS WHERE INITIATING DEVICE CONDUIT/WIRING PASSES THROUGH FIRE RATED WALLS INCLUDING STAIRWELLS, MECHANICAL ROOMS, ELECTRICAL ROOMS, ETC.
- CONFIRM DEVICE VOLTAGE DROP REQUIREMENTS WITH MANUFACTURER. INCREASE CONDUCTOR SIZE IF REQUIRED.
- PROVIDE TEMPORARY MANUAL TRIGGER FOR FIRE ALARM NOTIFICATION AT FIRE ALARM PANEL IN ADVANCE OF SYSTEM DOWN TIME. TRIGGER TO ACTIVATE ALL HORNS AND BELLS. SOUND TO BE TEMPORAL PATTERNS.
- PROVIDE FIRE WATCH FOR ANY EXTENDED PERIODS OF SYSTEM DOWNTIME WHEN THE BUILDING IS OCCUPIED. FINAL PROCEDURES TO BE COORDINATED WITH FIRE MARSHALL, FIRE DEPARTMENT AND OWNER. ENSURE HOURLY LOGBOOK IS MAINTAINED. IF A FIRE CONDITION IS DISCOVERED, NOTIFICATION APPLIANCES TO BE MANUALLY TRIGGERED.

ALL PERSONNEL THAT WILL REQUIRE ENTRY TO THE PREMISES MUST HAVE FA-2 CLEARANCE. CONTRACTOR TO ENSURE ACQUIRING FA-2 SECURITY CLEARANCE PRIOR TO START OF ANY ACTIVITY OF ALL WORKING PERSONNEL ACCESSING THE WORK AREA.

AT ANY POINT OF THE FIRE ALARM SYSTEM PROCESS OF REMOVING ANY DEVICES CONCERNING MECHANICAL SYSTEM, ALL WIRING MUST BE SAFELY DISCONNECTED/REMOVED AND REINSTALL AS PER MECHANICAL REQUIREMENTS.

CONTRACTOR TO COORDINATE WITH MAINTENANCE STAFF AT SITE FOR EXACT LOCATION OF DEVICES AND MAKE SURE THAT ALL ELECTRICAL INSTALLATION IS MEETING THE CEC-2012.

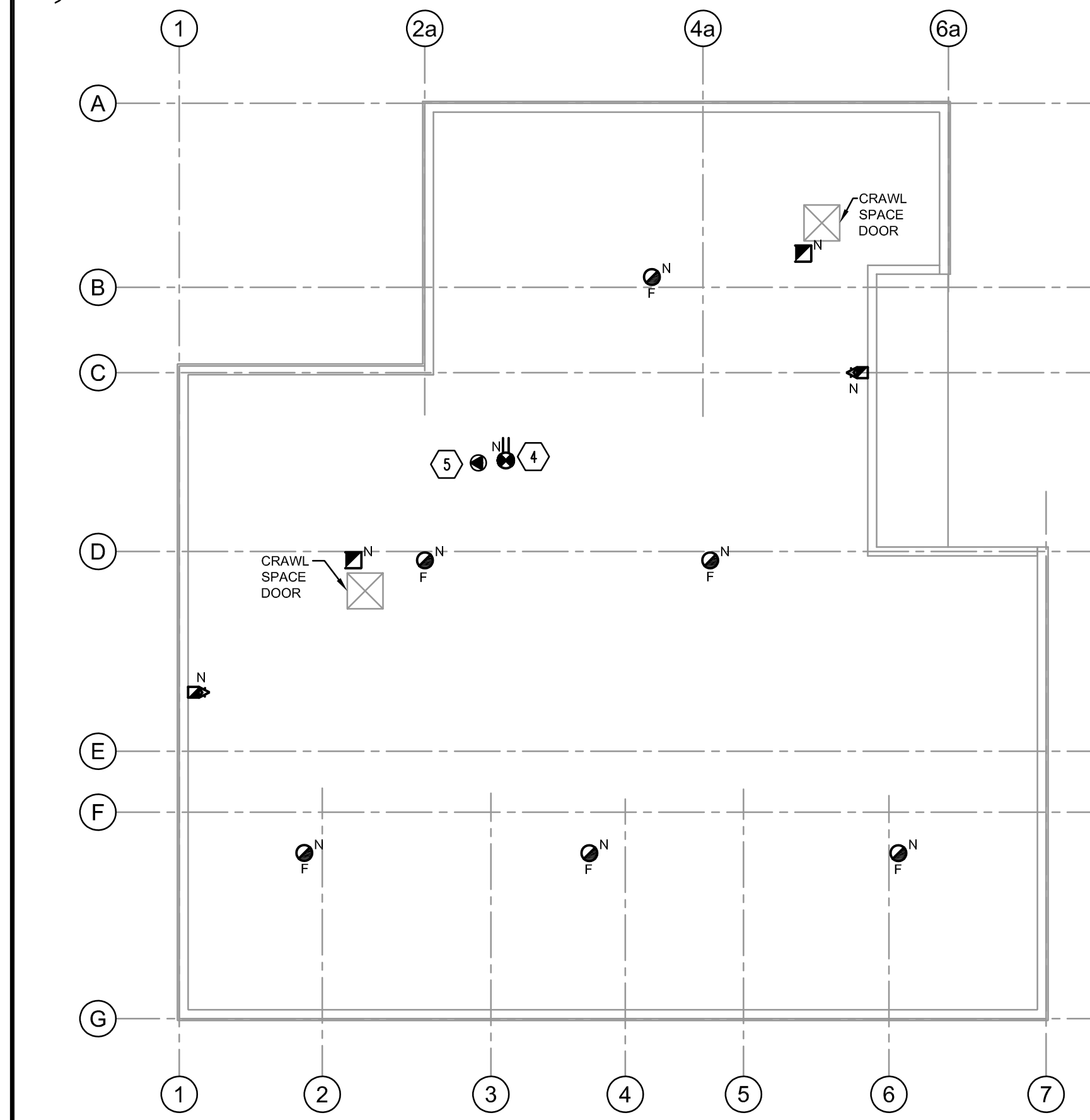
CONTRACTOR TO MAINTAIN MARK-UP (RED LINE) SET OF AS-BUILTS AT ALL TIMES FOR EACH SYSTEM.

FIRE ALARM VERIFICATION REPORT SHALL INCLUDE AUDIBILITY TESTING IN ALL ROOMS IN THE BUILDING AND PROVIDE AUDIBILITY LEVELS FOR BOTH AMBIENT AND FIRE ALARM CONDITION. THE MINIMUM AUDIBILITY LEVEL FOR THE FIRE ALARM SYSTEM SHALL BE 10 dBA ABOVE AMBIENT CONDITIONS WITH A MINIMUM OF 65 dBA AS PER NBC.

ALL PENETRATIONS OF FIRE SEPARATIONS SHALL BE COMPLETELY FIRE STOP SEALED.

ELECTRICAL SYMBOL LEGEND

FIRE ALARM SYMBOLS	
	HORN/STROBE COMBINATION
	PULL STATION, MANUAL
	DETECTOR, SMOKE
	DETECTOR, HEAT: H = HIGH TEMPERATURE R = RATE OF RISE F = FIXED TEMPERATURE
	DETECTOR, DUCT SMOKE
	FIRE BELL
	END LINE RESISTOR
	ISOLATOR
	HARD WIRE CONNECTION
DESCRIPTOR	
ER	EXISTING DEVICE TO BE REPLACED WITH NEW
N	NEW DEVICE
R1	EXISTING LOCATION
R2	NEW LOCATION

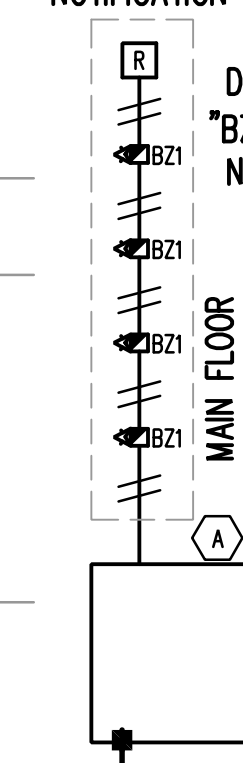


NEW CRAWLSPACE FIRE ALARM SYSTEM PLAN
SCALE: 1:100

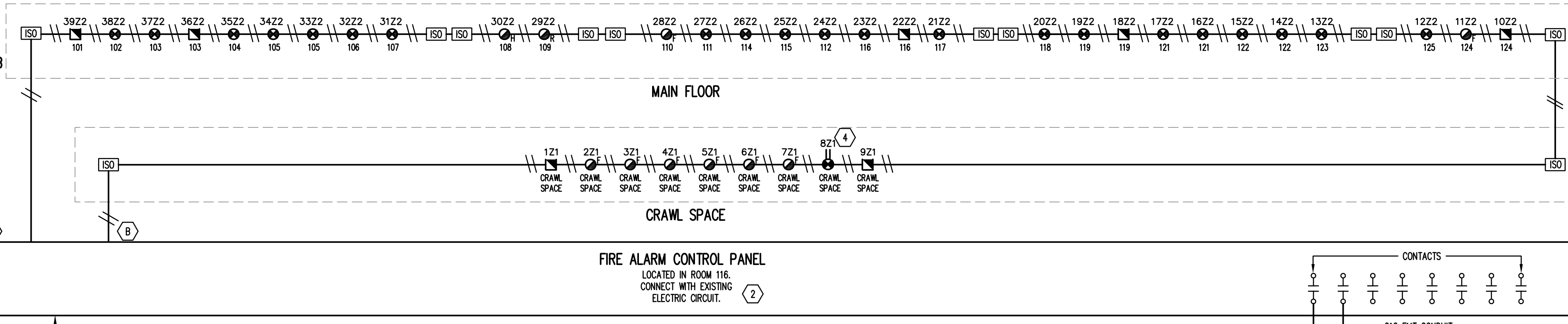
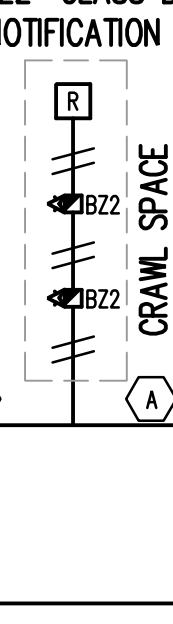
KEYNOTES:

- PROVIDE A SMOKE DETECTOR MODEL SCA-IPHS (EDWARDS) WITH TAMPER PROOF EST 6255-004 SERIES SMOKE DETECTOR GUARD AND ENSURE A SUITABLE DISTANCE (MINIMUM 12 INCH) TO AVOID DEAD ZONE AT TRANSITION POINT BETWEEN WALL AND CEILING. ALSO, MINIMUM 450 DISTANCE IS REQUIRED FROM THE LIGHT FIXTURE, COORDINATE AT SITE.
NOTE: EXPOSED CONDUITS ARE NOT ALLOW INSIDE THE CELL AREA AND ALL CONDUIT OPENINGS TO BE CAULKED CORRECTLY WITH APPROVED CAULKING PRODUCT.
- REPLACE THE EXISTING FACP WITH NEW SINGLE STAGE ADDRESSABLE FACP. FEED THE CONTROL PANEL FROM EXISTING CIRCUIT. BREAKER TO BE COLOURED RED.
- CONNECTION POINT FOR EXISTING GENSET TO NEW FIRE ALARM CONTROL PANEL.
- PROVIDE A NEW DUCT DETECTOR ON SUPPLY AIR DUCT AND CONNECT TO NEW FIRE ALARM CONTROL PANEL, EXISTING DUCT DETECTOR LOCATION TO BE COORDINATED AT SITE.
- CONNECTION FOR FAN SHUTDOWN FUNCTION TO FIRE ALARM CONTROL SYSTEM, EXACT LOCATION TO BE COORDINATED AT SITE.
- PROVIDE NEW ARCTIC ALARM AUTO-DIALLER FOR FIRE DEPARTMENT SIGNALING. COORDINATE MONITORING CONNECTION WITH ARCTIC ALARM LTD. ENSURE SYSTEM ALARM, SUPERVISORY, AND TROUBLE SIGNALS ARE CONNECTED TO DACT. ENSURE TWO (2) PHONE LINES FOR DACT USE; ONE DEDICATED; ONE LINE SEIZE.

DEVICE LOOP "BZ1" CLASS B NOTIFICATION

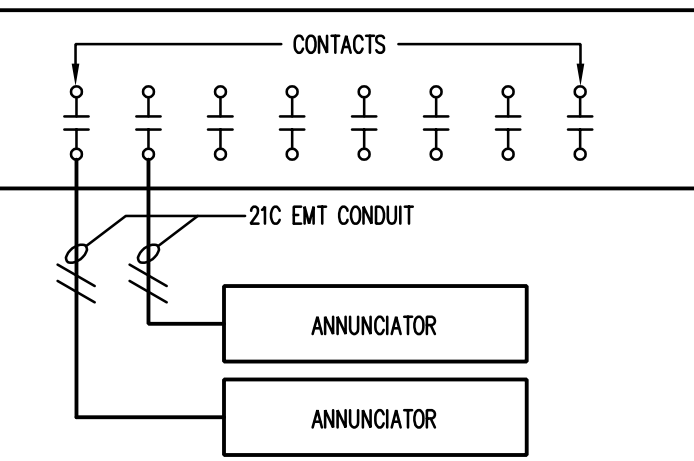


DEVICE LOOP "BZ2" CLASS B NOTIFICATION



FIRE ALARM WIRE SCHEDULE	
NOTE #	WIRE SIZE
A	2 #14 RW90
B	#6 TWISTED SHIELDED PAIR. BELDEN 9575.

FIRE ALARM RISER DIAGRAM
SCALE: NTS



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Architects Ltd.

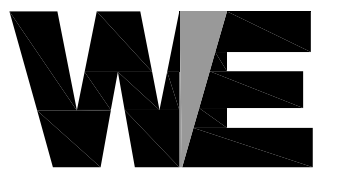
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THE CONTRACTOR SHALL CHECK AND VERIFY ALL DIMENSIONS AND REPORT ALL ERRORS AND OMISSIONS TO THE ARCHITECT PRIOR TO COMMENCING THE WORK.

NO	REVISION	DATE
1	ISSUED FOR TENDER	2017.03.23



JOB TITLE
PUBLIC SAFETY BUILDING
FIRE ALARM UPGRADE

TALYOAK, NUNAVUT

DRAWING TITLE
ELECTRICAL
CRAWLSPACE & MAIN FLR
FIRE ALARM SYSTEM
LAYOUTS

DESIGNED BY	SCALE
H.R.	AS SHOWN
DRAWN BY	DATE
E.I.	MARCH 23, 2017
CHECKED BY	JOB NUMBER
H.R.	PROJECT # 1005448.2017