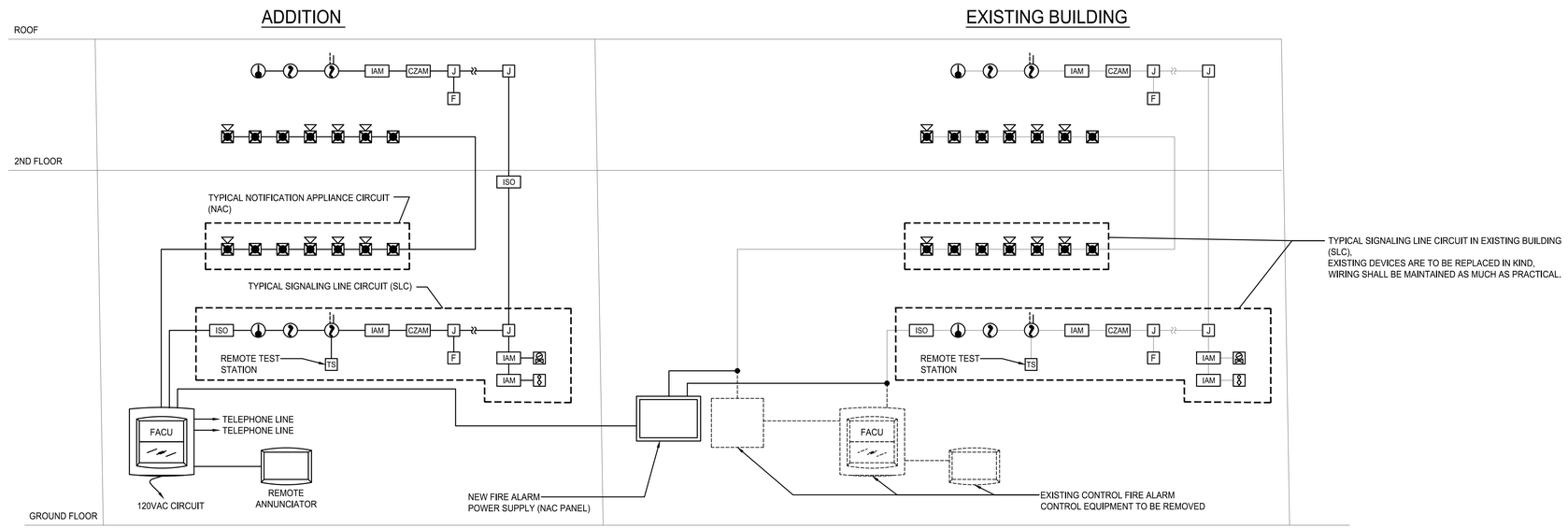

1 FIRE ALARM RISER DIAGRAM
SCALE: NONE

SCOPE:

A. PLEASE PROVIDE A COMPLETE, CODE COMPLIANT FIRE ALARM SYSTEM FOR THE NEW BUILDING ADDITION & INTEGRATE IT WITH THE EXISTING FACILITY'S FIRE ALARM INFRASTRUCTURE. THE EXISTING FIRE ALARM WIRING IN THE FACILITY SHALL REMAIN IN PLACE & BE REUSED WHERE PRACTICAL. ALL EXISTING FIRE ALARM SYSTEM INITIATING & NOTIFICATION DEVICES—INCLUDING DETECTORS, PULL STATIONS, HORN/STROBES, & ALL OTHER FIELD COMPONENTS—SHALL BE REMOVED & REPLACED WITH NEW DEVICES THAT ARE FULLY COMPATIBLE WITH THE NEW FIRE ALARM SYSTEM BEING PROVIDED. THE FIRE ALARM SYSTEM SHALL BE PROVIDED IN ACCORDANCE WITH IBC, NFPA 70, & NFPA 72.

B. THESE DOCUMENTS ARE INTENDED TO OUTLINE THE DESIGN, MATERIALS, & EQUIPMENT REQUIRED FOR A COMPLETELY FUNCTIONING & OPERATING FIRE ALARM SYSTEM, INCLUDING INTERFACING TO OTHER BUILDING SYSTEMS AS REQUIRED.

C. THE OVERALL SCOPE & CHARACTER OF THE WORK ARE ILLUSTRATED IN THE PROJECT SPECIFICATIONS & DRAWINGS. ALTHOUGH DIVIDED INTO MULTIPLE SECTIONS FOR ORGANIZATIONAL CONVENIENCE, ALL CONTRACT DOCUMENTS MUST BE REVIEWED AS A SINGLE COORDINATED PACKAGE. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING ALL TRADES, SUBCONTRACTORS, & VENDORS INVOLVED IN THE PROJECT.

D. THE DRAWINGS INDICATE THE GENERAL LOCATIONS OF FIRE ALARM SYSTEM EQUIPMENT & FIELD DEVICES. THE CONTRACTOR SHALL DETERMINE FINAL DEVICE PLACEMENT, QUANTITIES, & APPLIANCE RATINGS IN ACCORDANCE WITH ALL APPLICABLE CODES, STANDARDS, & CONTRACT REQUIREMENTS.

E. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL REQUIRED PERMITS & APPROVALS FROM THE AUTHORITY HAVING JURISDICTION (AHJ) & MUST PAY ALL ASSOCIATED FEES FOR FIRE ALARM SYSTEM WORK.

F. THE INSTALLING CONTRACTOR SHALL COORDINATE WITH MECHANICAL, ELECTRICAL, & OTHER TRADES TO ENSURE THAT INSTALLATIONS ARE CONSISTENT WITH FACILITY DESIGN, FUNCTION, & INTENT.

G. FINAL SYSTEM TESTING SHALL BE COORDINATED WITH OTHER CONTRACTORS TO ENSURE THAT THE ENTIRE SYSTEM IS OPERATIONAL AT THE TIME OF TESTING.

H. THE CONTRACTOR SHALL PROVIDE FINAL SYSTEM LAYOUT DRAWINGS, INCLUDING BATTERY & VOLTAGE DROP CALCULATIONS, & SECURE APPROVAL FROM THE FIRE MARSHAL & ALL RELEVANT AUTHORITIES HAVING JURISDICTION.

I. THE FIRE ALARM CONTRACTOR SHALL SCHEDULE & PERFORM ALL INSPECTIONS & TESTS REQUIRED BY THE AHJ & PROJECT SPECIFICATIONS.

INITIATION DEVICES:

J. INSTALL MANUAL FIRE PULL STATIONS AS SHOWN ON THE DRAWINGS. PULL STATION SHALL BE DUAL-ACTION, KEY-RESETTABLE, & MUST NOT USE BREAKABLE ELEMENTS. FINAL INSTALLATION DETAILS SHALL BE PROVIDED BY THE FIRE ALARM CONTRACTOR.

K. PROVIDE SMOKE DETECTION ABOVE EACH FIRE ALARM CONTROL PANEL & NOTIFICATION APPLIANCE CIRCUIT PANEL AS REQUIRED BY NFPA 72, SECTION 10.4.5.

L. ALL ADDRESSABLE MONITOR MODULES SHALL BE INSTALLED WITHIN 10 FEET OF THE DEVICES THEY MONITOR, UNLESS OTHERWISE INDICATED.

M. PROVIDE REMOTE TEST STATION/INDICATORS FOR ANY DEVICES THAT ARE NOT READILY ACCESSIBLE.

N. ALL ADDRESSABLE CONTROL MODULES MUST BE INSTALLED WITHIN 3 FEET OF THE DEVICES THEY CONTROL, UNLESS OTHERWISE INDICATED.

WIRING & PATHWAYS:

O. INSTALL FIRE ALARM HORN & STROBES THROUGHOUT THE FACILITY. PROVIDE ADDITIONAL NOTIFICATION APPLIANCE CIRCUIT (NAC) PANELS AS NEEDED TO SUPPORT DEVICE LOADS. NAC LOADING SHALL NOT EXCEED 75% OF THE RATED OUTPUT.

P. VISUAL NOTIFICATION DEVICES MUST BE INSTALLED IN ALL NORMALLY OCCUPIED, PUBLIC, & COMMON-USE AREAS, REFER TO DRAWINGS FOR MINIMUM NOTIFICATION SYSTEM DESIGN INTENT. ALL VISIBLE NOTIFICATION APPLIANCES SHALL BE SYNCHRONIZED.

Q. PROVIDE CLEAR STROBES LABELED "FIRE" FOR THE FIRE ALARM SYSTEM.

R. PROVIDE SUFFICIENT AUDIBLE NOTIFICATION APPLIANCES TO MEET THE AUDIBILITY & INTELLIGIBILITY REQUIREMENTS OF NFPA 72.

S. WALL-MOUNTED HORNS SHALL BE INSTALLED A MINIMUM OF 90" ABOVE THE FINISHED FLOOR, MEASURED TO THE TOP OF THE DEVICE, AS REQUIRED BY NFPA 72. COORDINATE ALL BACK BOX INSTALLATIONS WITH THE ELECTRICAL CONTRACTOR.

T. PROVIDE COMBINATION AUDIBLE/VISUAL APPLIANCES IN SPACES WITH HIGH AMBIENT NOISE LEVELS.

U. PROVIDE WEATHERPROOF DEVICES WHERE THEY MIGHT BE SUBJECT EXPOSURE TO THE WEATHER ELEMENTS.

NOTIFICATION DEVICES:

V. SLC, NAC, & IDC WIRING MUST BE INSTALLED AS CLASS B CIRCUITS.

W. WIRE TYPE BY CIRCUIT SHALL BE AS FOLLOWS:

FIRE ALARM WIRING & PATHWAY CRITERIA (NFPA 72)		
CIRCUIT TYPE	MINIMUM SIZE	PATHWAY TYPE
SLC	#16 AWG	B
NAC	#14 AWG	B
IDF	#14 AWG	B

X. CONDUCTOR TYPES SHALL BE SELECTED ACCORDING TO CIRCUIT REQUIREMENTS, SOLID OR STRANDED, CUPPER AS PERMITTED BY NFPA 70.

Y. PATHWAY SURVIVABILITY SHALL BE LEVEL 0, AS DEFINED BY NFPA 72.

Z. FIRE ALARM WIRING SHALL NOT BE INSTALLED IN CONDUITS OR JUNCTION BOXES WITH OTHER NON FIRE ALARM WIRING.

AA. PROVIDE WIRING TO CONTROL PANELS EITHER VERTICALLY OR HORIZONTALLY, MAKING ALL CHANGES IN DIRECTION AT 90-DEGREE ANGLES. CONDUCTORS SHALL BE NEATLY BUNDLED, WRAPPED, & PERMANENTLY LABELED.

AB. ALL CONDUCTORS MUST BE CONTINUOUS & PROVIDED WITHOUT SPLICES FROM DEVICE TO DEVICE. WIRE NUTS, CRIMPS, OR TWISTED SPLICES ARE NOT ALLOWED.

AC. ALL TERMINATIONS MUST BE MADE ON TERMINAL STRIPS. DEVICES SHALL BE EQUIPPED WITH SCREW TERMINALS.

AD. UNLESS OTHERWISE NOTED, ALL INTERIOR FIRE ALARM CIRCUITS MUST BE INSTALLED IN EMT RACEWAYS. RACEWAYS SHALL BE PAINTED RED. FOR EXTERIOR FIRE ALARM CIRCUITS PROVIDE WIRING IN IMC OR RMC RACEWAYS, ALSO PAINTED RED. ALL CONNECTIONS MUST BE LIQUID-TIGHT & RATED FOR WET LOCATIONS. SUPPORTS & HARDWARE MUST BE CORROSION-RESISTANT & APPROVED FOR OUTDOOR USE.

AE. CONDUIT SIZING & FILL SHALL BE DETERMINED BY THE INSTALLING CONTRACTOR IN ACCORDANCE WITH THE NEC. CONDUIT FILL CALCULATIONS MUST BE PROVIDED TO DEMONSTRATE THAT 40% FILL IS NOT EXCEEDED. ALL WIRING MUST BE INSTALLED IN CONDUITS WITH A MINIMUM SIZE OF 3/4 INCH.

FIRE ALARM SYSTEM PANELS:

AF. PROVIDE THE FIRE ALARM CONTROL UNIT IN THE CNG CONTROL BUILDING. PROVIDE SIGNAGE ON THE DOOR THAT READS "FIRE ALARM CONTROL PANEL - FACP", OR AS REQUIRED BY LOCAL FIRE MARSHAL.

AG. PROVIDE DIGITAL ALARM COMMUNICATION TRANSMITTER (DACT) WITH ABILITIES OF TRANSMITTING ALARM , SUPERVISORY, & TROUBLE SIGNAL TO THE MONITORING STATION.

AH. PROVIDE NAC PANELS AS REQUIRED TO SUPPORT NOTIFICATION APPLIANCE POWER REQUIREMENTS.

AI. UPDATE SYSTEM RECORD DOCUMENTS & OTHER NFPA 72 MANDATED RECORD DOCUMENTS IN EXISTING STORAGE CABINET ADJACENT TO THE FACU. PROVIDE A DOCUMENT CABINET ADJACENT TO THE FACP.

OTHER SYSTEM REQUIREMENTS:

AJ. ALL POWER CIRCUITS SUPPLYING FIRE ALARM EQUIPMENT MUST BE DEDICATED TO THE FIRE ALARM SYSTEM. MULTIPLE FIRE ALARM PANELS MAY SHARE A SINGLE DEDICATED CIRCUIT IF CAPACITY LIMITS ARE NOT EXCEEDED. CIRCUITS SHALL BE FED FROM DEDICATED 20AMP BREAKERS EQUIPPED WITH BREAKER LOCKS. BREAKER SHALL LABELED AS "FIRE ALARM".

AK. BATTERY CALCULATIONS SHALL INCLUDE A 20% FUTURE GROWTH FACTOR IN ACCORDANCE WITH NFPA 72.

AL. BATTERY CALCULATIONS SHALL CONSIDER DEVICES IN THE EXISTING BUILDING OUTSIDE OF THE CURRENT PROJECT SCOPE.

AM. SEALED RECHARGEABLE BATTERIES FOR SECONDARY POWER MUST PROVIDE 24 HOURS OF STANDBY CAPACITY PLUS 5 MINUTES OF ALARM OPERATION.

AN. PROVIDE SURGE PROTECTIVE DEVICES (SPDS) ON THE INPUT POWER CONNECTIONS FOR ALL PANELS, INCLUDING SUB-PANELS & POWER SUPPLY PANELS (NAC, VOICE AMPLIFIERS, ETC).

AO. DEVICE TERMINAL NUMBERS & CONFIGURATION DIFFER FROM MFGR. TO MFGR. TERMINAL DEVICE NUMBERS & DEVICE CONFIGURATIONS INDICATED ARE FOR GENERAL CONCEPT ONLY, & SHALL BE VERIFIED WITH THE ACTUAL MFGR. SELECTED FOR THE PROJECT.

AP. PROVIDE ISOLATOR MODULES ON ALL SLC CIRCUITS AT EVERY 25TH DEVICE.

Brown AND Caldwell
BROWN AND CALDWELL
900 HAMMOND DRIVE, SUITE 500
ATLANTA, GA 30328
wendel

THIS DRAWING IS NOT VALID FOR CONSTRUCTION PURPOSES UNLESS IT BEARS THE SEAL AND SIGNATURE OF A DULY REGISTERED PROFESSIONAL

GEORGIA REGISTERED No. PE046069 PROFESSIONAL ENGINEER JESSE F. WENDELL
06/30/2026

CONSTRUCTION DOCUMENTS
07/01/2026

NCWSA NEWTON COUNTY WATER & SEWERAGE AUTHORITY

NCWSA OFFICE ADDITION

REVISIONS

REV	DATE	DESCRIPTION

LINE IS 2 INCHES AT FULL SIZE

DESIGNED: RB1
DRAWN: RB1
CHECKED: JFW
CHECKED:
APPROVED:

FILENAME

BC PROJECT NUMBER
616202
CLIENT PROJECT NUMBER

ELECTRICAL

FIRE ALARM RISER DIAGRAM & NOTES

DRAWING NUMBER
E701