



**LEGENDS** 

VICINITY MAP

WIRE CHART

CIRCUIT DESCRIPTION

SIGNALING LINE CIRCUIT

ANNUNCIATOR DATA BUS

(POWER LIMITED)

(BLK/RD =DATA)

(WHT/GRN = PWR)

POWER | 24V NON-RESETTABLE POWER

SCALE: NTS

**Drawings Prepared By** 

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	FIRE ALARM	SYMBOLS			
QTY	SYMB	DESCRIPTION	MANUFACTURER	MODEL	BACKBOX
1	FACP	FIRE ALARM CONTROL PANEL	HONEYWELL	TYC250FBPK	OWN
1	FAC	FIRE ALARM COMMUNICATOR	HONEYWELL	LTE-CFV	OWN
2	FAA	REMOTE ANNUNCIATOR	HONEYWELL	6160CR	OWN
5	FCPS	FIRE CONTROL POWER SUPPLY	EXISTING	EXISTING	
13	S	SMOKE DETECTOR - PHOTOELECTRIC	HONEYWELL	5193SD	4" SQ X 2.5"D
4	H	HEAT DETECTOR-RATE OF RISE	SYSTEM SENSOR	5621	
17	F	FIRE ALARM PULLSTATION	FIRELITE	BG-12L	1 GANG
41	AIM	ADDRESSABLE INPUT MODULE	HONEYWELL	4193SN	4" SQ x 2.5"D
8	ss	SURGE SUPPRESSOR	DTEK	DTK-DR24F	
10	WF	FLOW DETECTOR/SWITCH	EXISTING	EXISTING	
7	VS	VALVE SUPERVISORY (TAMPER) SWITCH	EXISTING	EXISTING	



TYPE OF WIRE

FPLR FPLP

FPLR FPLP

FPLP FPLR THHN

AND TYPE OF WIRE

2-#18AWG

4-#18AWG

2-#14AWG

	0	00000
Junt	iy Rd	
	Juni	Junny Rd

APPLICABLE CODES & STANDARDS	JOHNSON CONTR	OLS CONTACTS
JURISDICTIONS WITHIN THE STATE MAY HAVE AMENDMENTS TO THE STATE ADOPTED CODE. CHECK WITH THE LOCAL JURISDICTION AUTHORITY FOR MORE DETAILS.	Sales Representative	Drawings Prepared
UNIFORM CONSTRUCTION CODE (IBC 2021 W/ TECHNICAL AMENDMENTS NJAC 5:23-3.14) NATIONAL ELECTRIC CODE (NEPA 70), 2020 EDITION W/ TECHNICAL AMENDMENTS NJAC 5:23-3.16	JOSHUA PEARSON JOSHUA.1.PEARSON@JCI.COM	PRANALI KOKATE PRANALI.KOKATE@JCI.C

NATIONAL ELECTRIC CODE (NFPA 70), 2020 EDITION W/ TECHNICAL AMENDMENTS NJAC 5:23-3.16 ELEVATOR CODE - ELEVATOR SAFETY SUBCODE - N. J. A. C. 5:23-12 (2021) NATIONAL FIRE ALARM CODE (NFPA 72), 2019 EDITION INSTALLATION OF SPRINKLER SYSTEMS (NFPA 13), 2019 EDITION

OCCUPANCY TYPE(S):

**SPRINKLER PROTECTION:** -1 FACTORY INDUSTRIAL GROUP - MODERATE-HAZARD OCCUPANCY BUILDING IS FULLY SPRINKLERED

## **SCOPE OF WORK** PROJECT DIRECTORY REPLACEMENT OF EXITING FIRE ALARM SYSTEM. THE REPLACED SYSTEM SHALL INCLUDE:

141 JUNNY RD ANGIER, NC, 27501

- FACP WILL BE UPGRADED TO VISTA250FBPT. - REPLACE OLD IDC CIRCUIT WITH NEW SLC CIRCUIT. - REPLACE ALL EXISTING FA DEVICES-PULL STATIONS, SMOKE DETECTORS, HEAT DETECTORS, MODULES. - NEW SOLE PATH COMMUNICATOR WILL BE INSTALLED TO THE EXISTING FACP. - ONE NEW 7A BATTERIES WILL BE INSTALLED TO THE SOLE PATH COMMUNICATOR. - TWO NEW 18A BATTERIES WILL BE ADDED TO THE NEW FIRE ALARM CONTROL PANEL. - RE-USE ALL EXISTING AUDIBLE/VISUAL DEVICES.

- RE-USE ALL EXISTING NAC CIRCUITS. - RE-USE ALL EXISTING FCPS. - REPLACE EXISTING KEYPAD WITH NEW KEYPAD-FRONT ENTRANCE AND CONFERENCE ROOM ENTRANCE. - CUSTOMER WILL NEED TO INSTALL NEW HIGH VOLTAGE DEDICATED CIRCUIT TO BREAKER FOR POWER OF THE NEW FACP. (ELECTRICIAN RECOMMENDED)

- JCI WILL CONNECT NEW TRANSFORMER TO NEW FACP AFTER CUSTOMER PROVIDES NEW HIGH VOLTAGE DEDICATED CIRCUIT.

MIN = MINIMUM

N/A = NOT APPLICABLE

FIRE ALARM MATRIX / SEQUENCE OF OPERATION

NAC = NOTIFICATION APPLIANCE CIRCUIT

**DEVICE TAG LEGEND ABBREVIATIONS LEGEND** 

ATIONS LEGEND		DEVICE TAG L
AC = ABOVE CEILING	NEC = NATIONAL ELECTRIC CODE	
AFF = ABOVE FINISHED FLOOR	NFPA = NATIONAL FIRE PROTECTION ASSOCIATION	
AHJ = AUTHORITY HAVING JURISDICTION	NIC = NOT IN CONTRACT	
ALM = ALARM	NPU = NETWORK PROCESSING UNIT	
ANN = ANNUNCIATOR	N.T.S. = NOT TO SCALE	
BMS = BUILDING MANAGEMENT SYSTEM	PAP = PRE-ACTION PANEL	
C = CEILING MOUNTED	RC = EXISTING TO REMOVE AND COVER	
CD = CANDELA RATING	RD = EXISTING DEVICE TO BE RELOCATED	
DET = DETECTOR DGP = DATA GATHERING PANEL	RL = RELOCATED DEVICE	
E = EXISTING TO REMAIN	SCC = STATUS COMMAND CENTER	
EOL = END OF LINE	SLC = SIGNALING LINE CIRCUIT	
EPO = EMERGENCY POWER OFF	SMK = SMOKE	
ER = ELEVATOR RECALL	SUPV = SUPERVISORY	PANEL NUMBER / NUMBER —
FAA = FIRE ALARM ANNUNCIATOR	TAC = TRUEALERT ADDRESSABLE CONTROLLER	
FACP = FIRE ALARM CONTROL PANEL FATC = FIRE ALARM TERMINAL CABINET	TOS = TOP OF SHAFT TRBL = TROUBLE	
FBO = FURNISHED BY OTHERS	TS = TAMPER SWITCH	
FCC = FIRE COMMAND CENTER	TYP = TYPICAL	
FSD = FIRE SMOKE DAMPER	UON = UNLESS OTHERWISE NOTED	
FTR = FIRE ALARM TRANSPONDER	VCC = VOICE COMMAND CENTER	VISUAL, A
H = HIGH HUMIDITY	VT = VALVE TAMPER	
HT = HEIGHT	W = WATTAGE	
HVAC = HEATING VENTILATION & AIR CONDITIONING	W/ = WITH	
IMS = INFORMATION MANAGEMENT SYSTEM	W/O = WITHOUT	
MAX = MAXIMUM	WF = WATERFLOW	
A A IA I A A IA I I A A	MO MIDE CHARD	

(V=VISUAL OR A/V, H=AUDIBLE ONLY,D=DETECTOR,M=MODULE) AUDIBLE OR A/V DEVICE

NDU = NETWORK DISPLAY UNIT STANDARD SYSTEM SEQUENCE OF OPERATIONS UNCHANGED BY THE SCOPE

WG = WIRE GUARD

WP = WEATHERPROOF XP = EXPLOSION PROOF

							S	YS	TE	M	Ol	JTI	PU	TS					
SYSTEMINPUTS	GREEN AC POWER INDICATOR IS LIT STEADILY	DISPLAY THE CUSTOM MESSAGE "ALL SYSTEMS   NORMAL" ON CONTROL UNIT LCD DISPLAY	CONTROL LINIT RETLIENS TO NORMAL	AUDIBLES & VISUALS STOP		ACTUATES ALARM CONDITION AT CONTROL UNIT	& REMOTE ANNUNCIATOR & TRANSMITS GENERAL ALARM ZONE CONDITION TO MONITORING STATION VIA DIGITAL COMMUNICATOR	ACTUATES ALARM CONDITION AT CONTROL UNIT	TRANSMITS WATEREI OW ZONE CONDITION	TO MONITORING STATION VIA DIGITAL COMMUNICATOR	ACTUATES SUPERVISORY CONDITION AT CONTROL UNIT	TRANSMITS SUPERVISORY ZONE CONDITION	TO MONITORING STATION VIA DIGITAL COMMUNICATOR	ACTUATES TROUBLE CONDITION AT CONTROL UNIT	& TRANSMITS TROUBLE CONDITION	TO MONITORING STATION VIA DIGITAL COMMUNICATOR	RECORD EVENT IN SYSTEM MEMORY		ACTUATE NOTIFICATION
CONTROL UNIT FUNCTIONS  "ALL SYSTEMS NORMAL"			1		T						1			T		Ī			
SYSTEM RESET (ONE POINT FOR RESET)		X		X												•	X		
ALARM DEVICES	1													<u> </u>				$\dashv$	
WATER FLOW SWITCHES							X		X		1			Ī			X		X
MANUAL PULL STATIONS							Χ										Χ		Х
SMOKE DETECTOR							Χ										X		Х
HEAT DETECTOR							X										X		X
SUPERVISORY DEVICES											•								
TAMPER SWITCHES												X					X		
TROUBLE FUNCTIONS								<b>-</b>						· •					
LOSS OF CELL SIGNAL														<u> </u>	X		Х		
FIRE ALARM SYSTEM AC POWER FAILURE														ļ	X		X		
FIRE ALARM SYSTEM LOW BATTERY															X		X		
ABNORMAL CIRCUIT OR DEVICE														<u> </u>	X		X		

Revisions shown with 📤 symbol	CAD CHK DESCRIPTION					
	CHK					
	CAD					
::	OATE					

RAWN BY:	PK				
IECKED BY:	AP				
SUE DATE:	10/29/25				
B #:	127816784-01				
ROJECT #:	:08864702				
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FIRE ALARM SYSTEM

**COVER SHEET** 

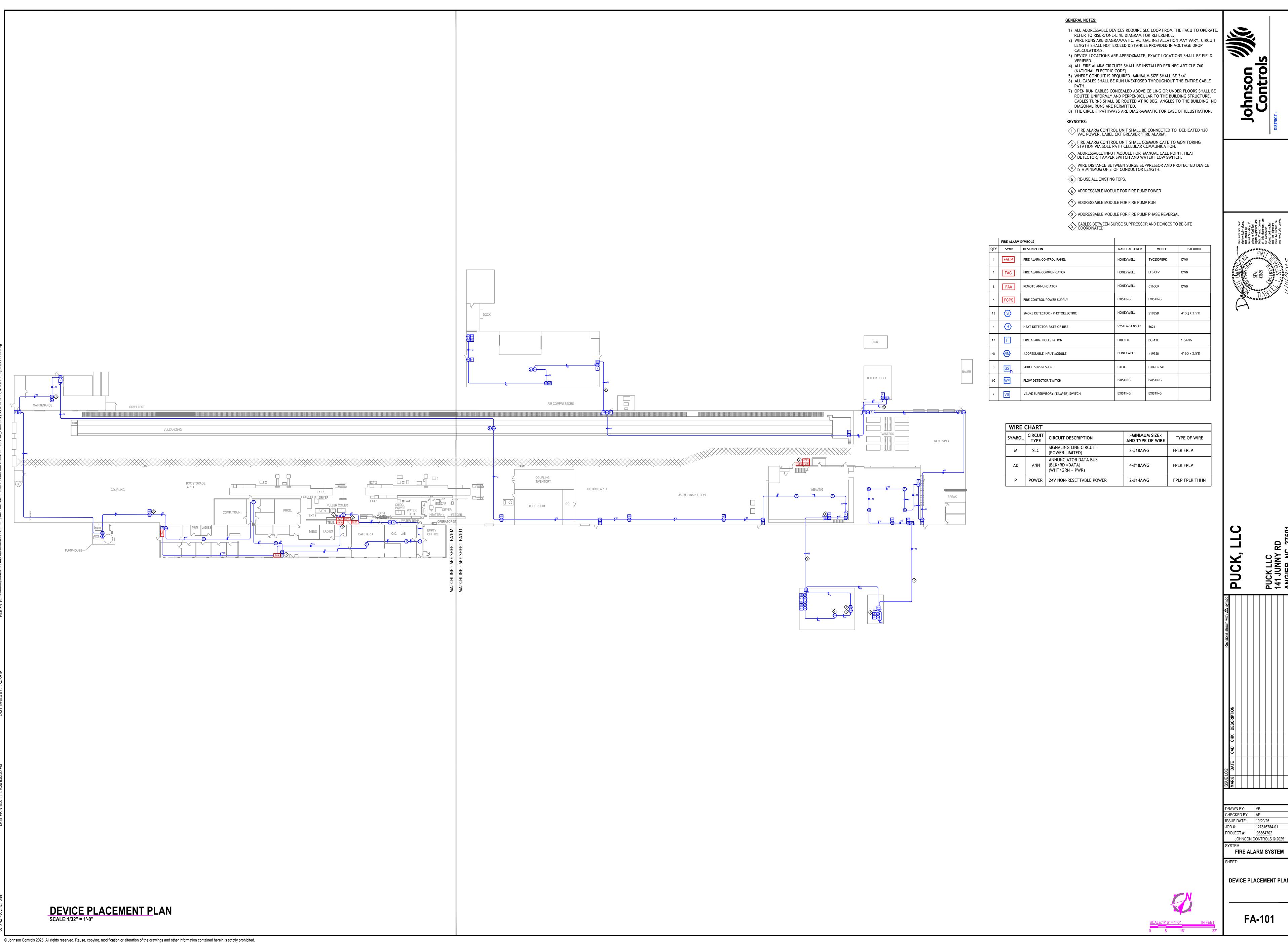
**FA-001** 

<b>GENERAL</b>	NOTES

- THESE DRAWINGS DEPICT GENERAL LOCATIONS OF LIFE SAFETY EQUIPMENT & FIELD DEVICES. EXACT ROUTING OF CONDUITS IS TO BE DETERMINED IN THE FIELD BY THE INSTALLING CONTRACTOR TO SUIT CONDITIONS. ALL CHANGES SHALL BE CLEARLY INDICATED ON SHOULD ANY CONDITIONS EXIST THAT DIFFER FROM WHAT IS INDICATED ON THESE DRAWINGS WHICH CAUSE MAJOR DEVIATIONS IN
- THE WORK SHOWN, THE CONTRACTOR SHALL CONTACT JOHNSON CONTROLS IN A TIMELY MANNER SO AS NOT TO IMPAIR THE REQUIRED TO ACCOMMODATE THE RELOCATION OF EQUIPMENT AND/OR DEVICES WHICH ARE AFFECTED BY ANY AUTHORIZED CHANGE.
- THE POWER CIRCUIT TO THE FACP AND TO THE FIRE ALARM POWER SUPPLIES SHALL BE ON A DEDICATED 120V, 20A BRANCH CIRCUIT BREAKER, AND SHALL HAVE A RED MARKING, LOCK-ON PROVISION AND SHALL BE IDENTIFIED AS "FIRE ALARM CIRCUIT CONTROL." THE
- LOCATION OF THE CIRCUIT DISCONNECT MEANS (CIRCUIT BREAKER) SHALL BE PERMANENTLY IDENTIFIED AT THE FIRE ALARM CONTROL 6. UPDATE THE AS-BUILT DRAWING SET DAILY WITH JOB PROGRESS. RETURN THE AS-BUILT DRAWING SET TO JOHNSON CONTROLS NO
- THE CONTRACTOR WILL MAINTAIN ALL AREAS OF THE BUILDING IN A NEAT AND WORKMANLIKE MANNER DO NOT APPLY POWER EXCEPT IN THE PRESENCE OF A FACTORY TRAINED JOHNSON CONTROLS TECHNICAL REPRESENTATIVE. ANY SMOKE DETECTOR HEAD INSTALLED BEFORE THE BUILDING IS CLEANED AND ACCEPTED SHALL BE COVERED TO PROTECT FROM DUST. ANY FALSE ALARMS DUE TO DIRT CONTAMINATED HEADS SHALL BE THE RESPONSIBILITY OF THE FIRE ALARM INSTALLER.
- 10. THE FIRE ALARM INSTALLER WILL MAINTAIN THE FIRE RESISTANCE INTEGRITY OF ALL WALL, CEILING, AND ROOF ASSEMBLIES ANY TIME 11. INSTALLATION OF DEVICES SHALL BE IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS. POWER LIMITED AND NON-POWER LIMITED FIELD WIRING MUST BE INSTALLED WITHIN THE FACP ENCLOSURE IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS AND APPLICABLE ELECTRICAL CODES. REFER TO 'APPLICABLE CODES & STANDARDS' FOR SPECIFIC CODE REFERENCES.
- 12. ALL WIRING SHALL BE INSTALLED ACCORDING TO APPLICABLE ELECTRICAL CODES. 13. FIRE ALARM CIRCUITS SHALL BE IDENTIFIED IN ACCORDANCE WITH APPLICABLE ELECTRICAL CODES. MARK ALL FIRE ALARM WIRES IN ACCORDANCE WITH APPLICABLE ELECTRICAL CODE SECTIONS FOR POWER LIMITED AND NON-POWER LIMITED WIRE.
- 14 FIRE ALARM CABLE INSTALLED IN DUCTS, PLENUM, AND OTHER SPACES USED FOR ENVIRONMENTAL AIR SHALL BE TYPE FPLP. 15. FIRE ALARM CABLE INSTALLED IN THE VERTICAL RUNS AND PENETRATING MORE THAN ONE FLOOR OR CABLES INSTALLED IN VERTICAL RUNS IN SHAFTS SHALL BE TYPE FPLR.
- 16. FIRE ALARM CABLE INSTALLED IN UNDERGROUND CONDUIT OR OTHER WET LOCATIONS SHALL BE UL LISTED FOR WET LOCATIONS. 17. FIRE ALARM CIRCUITS EXTENDING BEYOND ONE BUILDING AND RUN OUTDOORS SHALL BE INSTALLED IN ACCORDANCE APPLICABLE ELECTRICAL CODES, WHERE APPLICABLE.
- 18. ALL WIRING, INCLUDING SHIELDS MUST BE DRY AND FREE OF SHORTS AND GROUNDS.

from any and all claims for loss, damage or injury arising directly or indirectly from any such unauthorized use.

- 19. ALL SHIELDED WIRE MUST HAVE SHIELD CONTINUITY AT FULL LENGTH OF THE WIRE. 20. ONLY SYSTEM WIRING CAN BE RUN IN THE SAME CONDUIT.
- 21. 120VAC IS NOT PERMITTED IN THE SAME CONDUIT WITH LOW VOLTAGE WIRING. 22. MAINTAIN MAXIMUM CONDUIT FILL RATIO AS PER APPLICABLE ELECTRICAL CODES REQUIREMENTS. 23. EXISTING CONDUITS MAY BE USED BY THE INSTALLATION CONTRACTOR AS DEEMED NECESSARY; HOWEVER, ANY EXISTING CONDUIT
- WILL BE USED ONLY IF CONDUITS MEET CURRENT STANDARDS AND CODES. JOHNSON CONTROLS MAKES NO STATEMENTS WRITTEN OR VERBAL AS TO THE CONDITION OF EXISTING CONDUITS.
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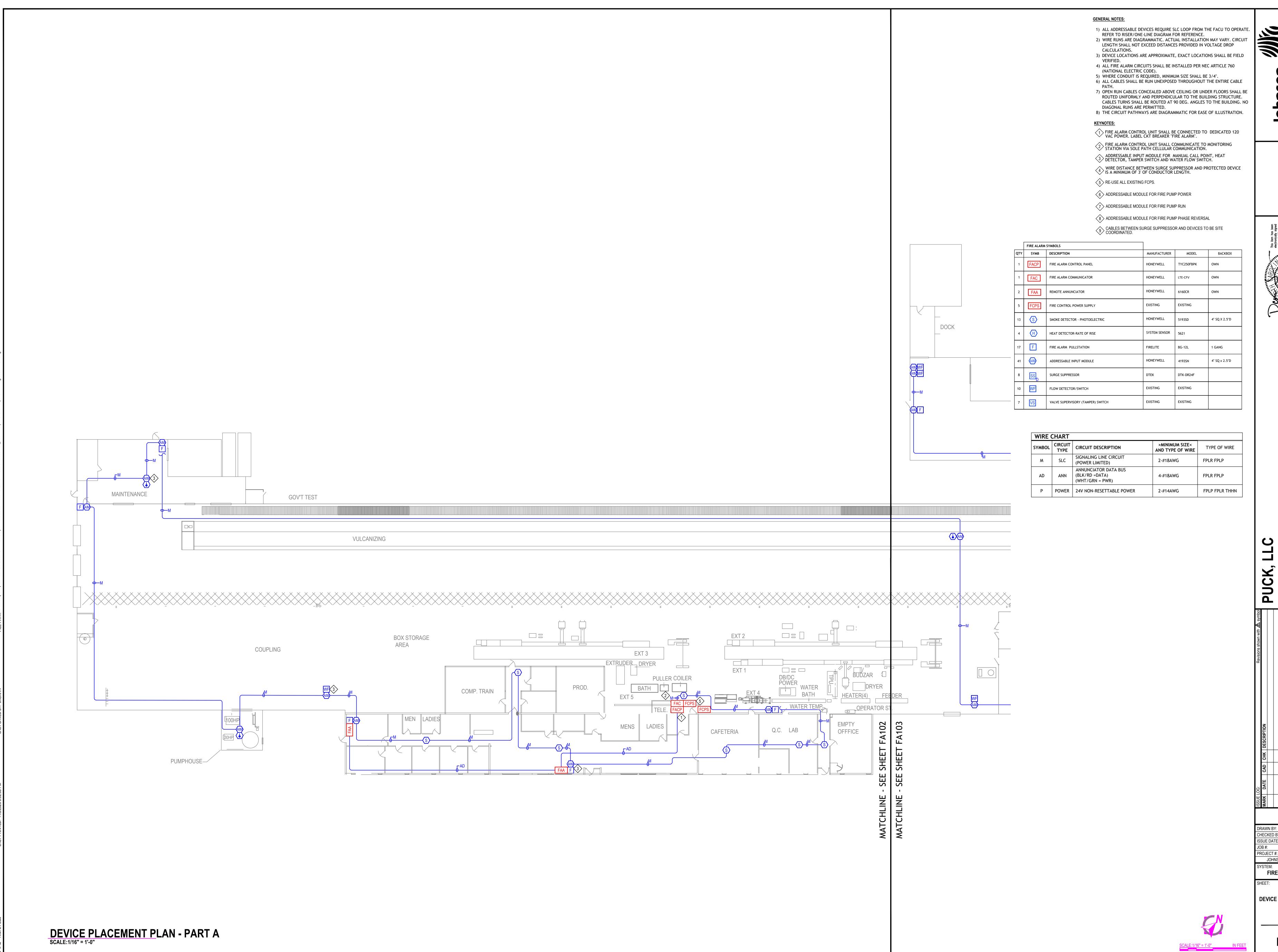




ISSUE DATE: 10/29/25

FIRE ALARM SYSTEM

DEVICE PLACEMENT PLAN



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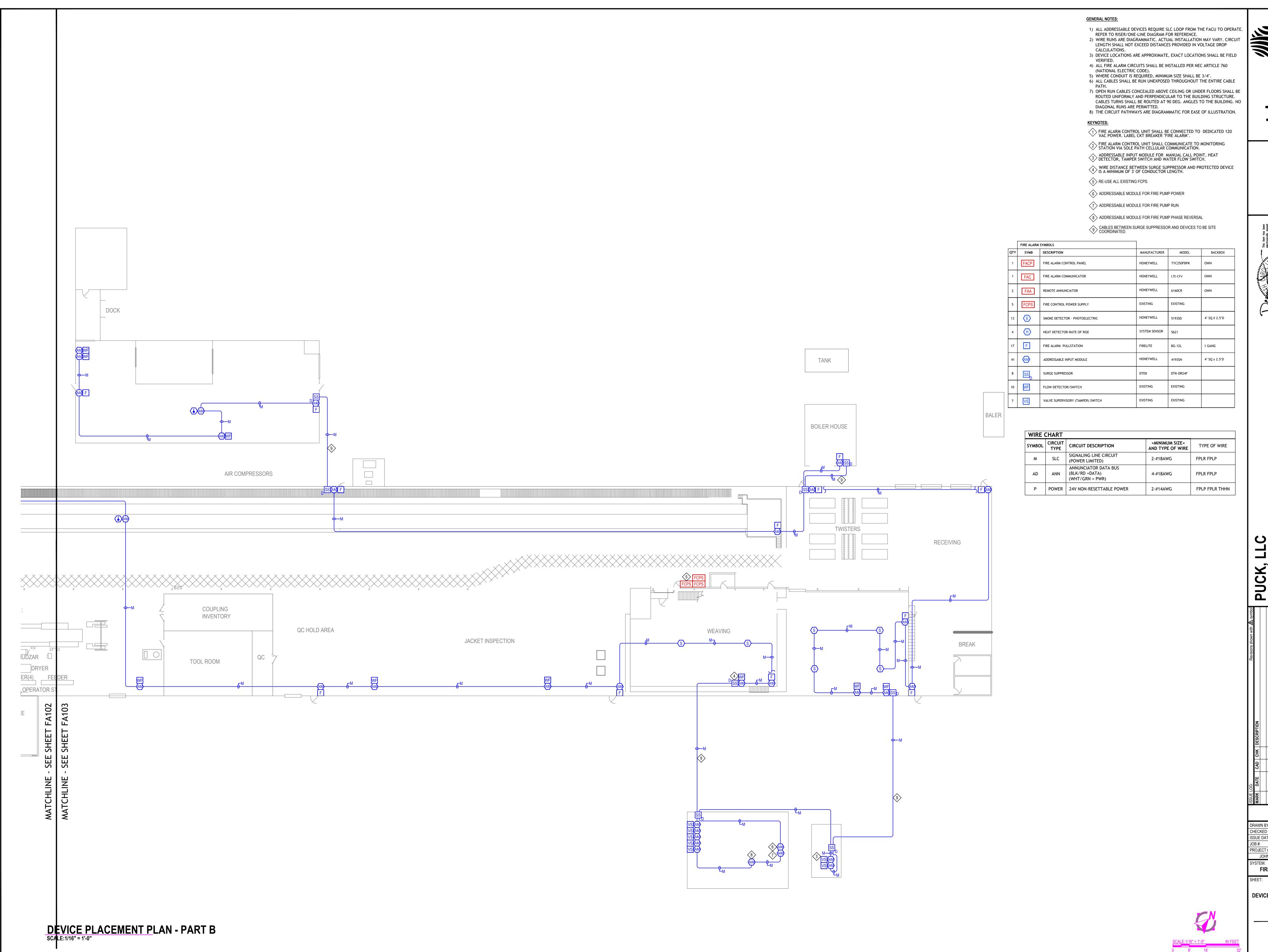
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FIRE ALARM SYSTEM

DEVICE PLACEMENT PLAN -PART A



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FIRE ALARM SYSTEM

DEVICE PLACEMENT PLAN -PART B

FAC	P BATTERY (	CALCULATIONS				
					Total	Total
Qty	Part #	Description	Standby	Alarm	Standby	Alarm
1	TYC250FBPK	Fire Alarm Panel	0.30000	0.47000	0.3000	0.4700
1	LTE-CFV	LTE universal fire alarm communicator	0.09000	0.10000	0.0900	0.1000
41	4193SN	Addressable input module	0.00150	0.00150	0.0615	0.0615
2	6860CR	Remote Annunciator	0.04500	0.16000	0.0900	0.3200
13	5193SD	Photoelectric Smoke Detector	0.00120	0.02800	0.0156	0.3640
4	5621	Fixed Temp 135 Heat detector	0.00030	0.00030	0.0012	0.0012
17	BG-12L	Manual pull station with 4193 Module	0.00150	0.00150	0.0255	0.0255
					0.5838	1.3422
		Standby Current Total Hours =	0.5838	X 24	=	14.0112
				(Hours)		
		Alarm Current Total Minutes =	1.3422	X .083	=	0.1114
				(5 Mins)		
		Total			=	14.1226
		25% Battery Safety Margin			=	3.5307
		Total AH Rated Batteries Needed			=	17.6533
					_	
		Total AH Rated Batteries Supplied				18

FACU

DEDICATED 120 VAC 20 AMP CIRCUIT(LOCKED)

	SS S S S AM AM AM SS S S S S S S S S S S
	D + D + D + D + D + D + D + D + D + D +
SLC LOOP  18 AWG / 2 COND, FPLP	S (AIN) (S) (S) (S) (S) (AIN)
FAA FA  18 AWG 4 COND FPLP  ECP DATA IN  RY  ECP DATA OUT	U.L. LISTED CENTRAL STATION  TYCO INTEGRATED SECURITY 14200 E EXPOSITION BLVD. AURORA, CO 80012 PHONE 1-800-428-7124
	DEDICATED 120 VAC 20 AMP CIRCUIT(LOCKED) (BY OTHERS)

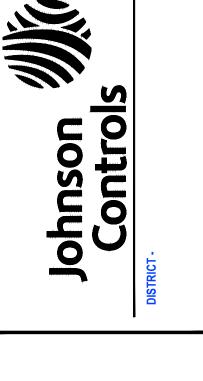
## **RISER NOTES:**

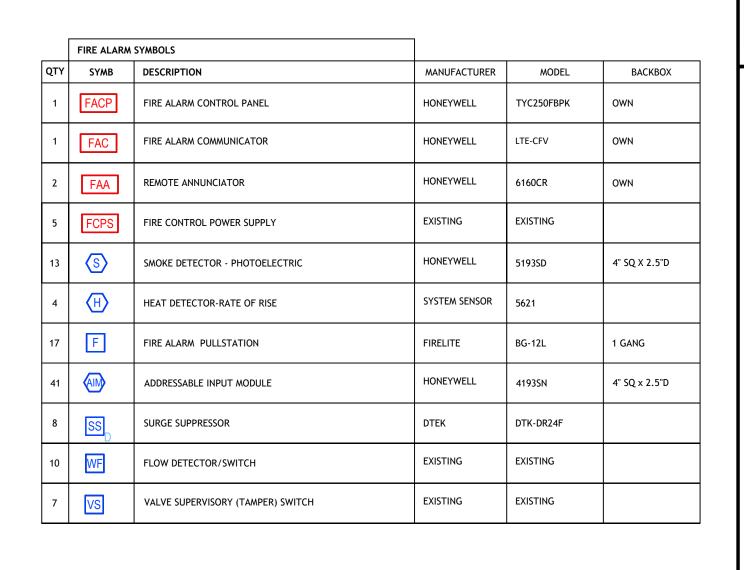
- 1. RISER IS A DIAGRAMMATICAL REPRESENTATION OF THE SYSTEM ARCHITECTURE IN BUILDING CROSS SECTION. IT IS NOT INTENDED TO REPRESENT ACTUAL WIRE RUNS, PANEL CONFIGURATIONS OR PENETRATIONS. REFER TO FLOOR PLANS AND PANEL DETAILS FOR CIRCUIT ROUTING AND
- CONFIGURATION INFORMATION. 2. ALL WIRING SHALL COMPLY WITH APPLICABLE ELECTRICAL CODES. REFER TO 'APPLICABLE CODES & STANDARDS' ON

SHEET FA-001 FOR SPECIFIC CODE REFERENCES.

## KEYED NOTES:

1> 120VAC PRIMARY POWER SOURCE SHALL BE A MECHANICALLY PROTECTED BRANCH CIRCUIT. THE CIRCUIT DISCONNECTING MEANS SHALL HAVE A RED MARKING, AND BE IDENTIFIED AS "FIRE ALARM CIRCUIT"





WIRE CHART									
SYMBOL	CIRCUIT TYPE	CIRCUIT DESCRIPTION	>MINIMUM SIZE< AND TYPE OF WIRE	TYPE OF WIRE					
М	SLC	SIGNALING LINE CIRCUIT (POWER LIMITED)	2-#18AWG	FPLR FPLP					
AD	ANN	ANNUNCIATOR DATA BUS (BLK/RD =DATA) (WHT/GRN = PWR)	4-#18AWG	FPLR FPLP					
Р	POWER	24V NON-RESETTABLE POWER	2-#14AWG	FPLP FPLR THHN					



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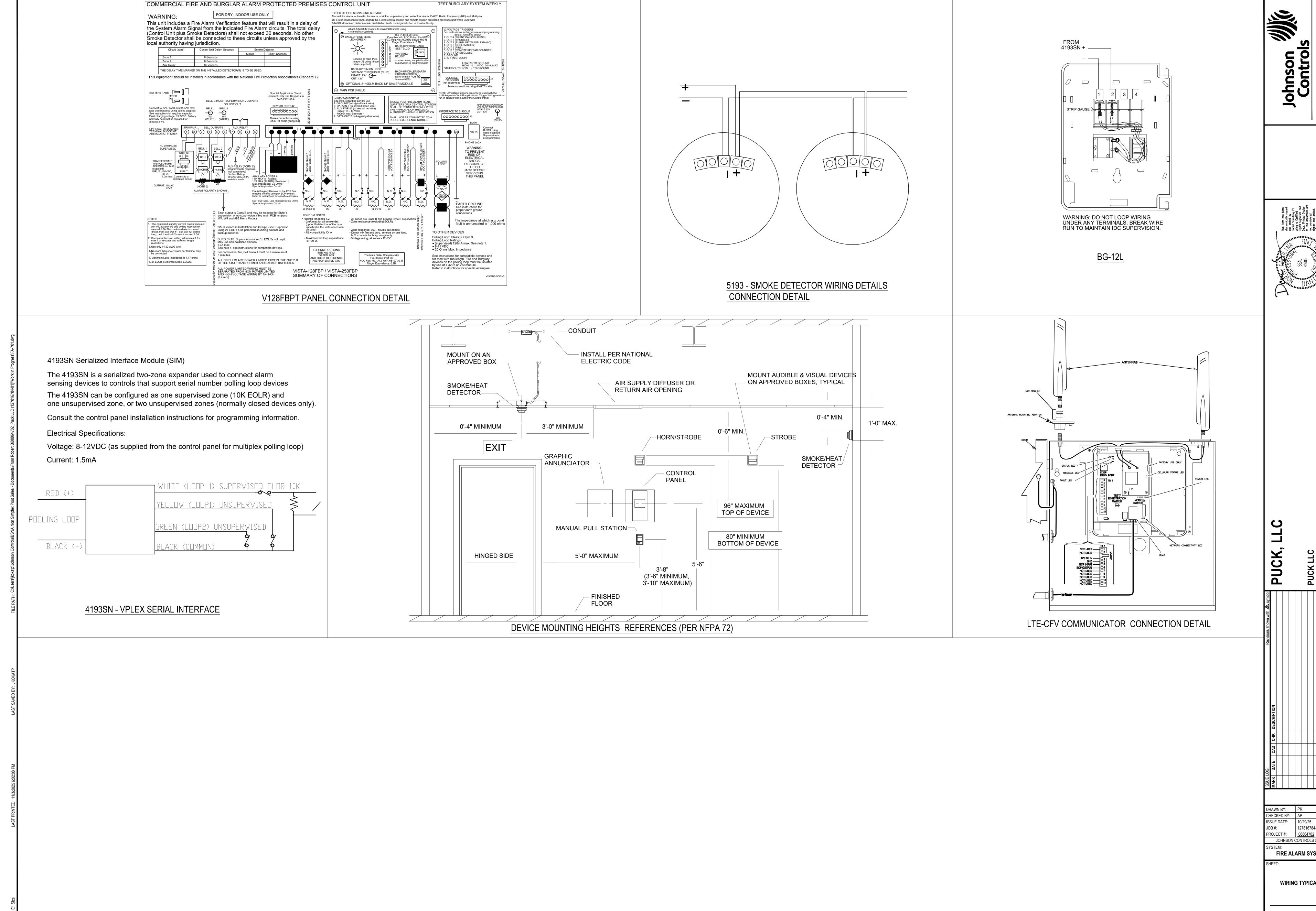
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ı	JOB #:	127816784-01				
ı	PROJECT #: <u>:08864702</u>					
ı	JOHNSON CONTROLS © 2025					
	SYSTEM:					
н						

FIRE ALARM SYSTEM

RISER DIAGRAM & **CALCULATIONS** 

**FA-201** 

RISER DIAGRAM & CALCULATIONS SCALE:N.T.S.



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**WIRING TYPICALS**