

ABBREVIATIONS			
& Ø /R A AB ABV ACOUS ADD ADDL AFF AG AHJ ALT ALV ALUM AP ARCH AUTO AUX BFF BFV BSMT BTWN CAP CFCV CFM CI CIS CEG COL COMB CONC CONT COORD COR CTR CUFT D/* DCA DCDA DIA DI DISCH DMPR DN DWG EA ECS EAH EX EXP EXPJT ESP F° FD FDV FHR FHV FPI FLEX FLG FT FTG FUT GAL GALV	AND ROUND ON ROOF AIR ABOVE BASE ABOVE ACOUSTICAL ADDENDUM ADDITIONAL ABOVE FINISHED FLOOR ABOVE GROUND AUTHORITY HAVING JURISDICTION ALTERNATE ALARM VALVE ALUMINUM ACCESS PANEL ARCHITECT/ARCHITECTURAL AUTOMATIC AUXILIARY DRAIN BELOW FINISHED FLOOR BUTTERFLY VALVE BASEMENT BETWEEN CAPACITY CONSTANT FLOW CNTRL. VL. CUBIC FEET PER MINUTE CAST IRON COMMON INTELLIGEBELTY SYS. CEILING COLUMN COMBINATION CONCRETE CONTINUE/CONTINUATION COORDINATE CONTRACTOR OFFICES REP. CENTER CUBIC FEET DEGREE DETECTOR CHECK ASSY. DOUBLE DETECTOR CK. ASSY. DIAMETER DUCTILE IRON DISCHARGE DAMPER DOWN DRAWING EACH EMERGENCY COMM. SYSTEM EXHAUST HOOD EXISTING EXPANSION EXPANSION JOINT EXTERNAL STATIC PRESSURE DEGREES FAHRENHEIT FIRE DAMPER FIRE DEPARTMENT VALVE FIRE HOSE STATION FIRE HOSE VALVE FINS PER INCH FLEXIBLE FLANGE FOOT/FEET FOOTING FUTURE GALLON GALVANIZED	GPM HD H.P. HTG IN INLET INSUL INWVG ITC JT LAB LB LB/HR LF LOC LP MA MAN MAX MD MFR MIN MISC MRA NIC NFA NP NTS O OPNG PD PIV PR PREL PS PRIM PRV PSI PSIG PW REC RED REQD SF SD SIM SLV SP SPS SQ SS STD T SYS TCP TD TEMP TSP TYP U/G U/S UNO VL	GALLONS PER MINUTE HEAD HIGH PRESSURE HEATING INCH INLET INSULATION INCHES WATER GAUGE INSPECTOR TEST CONNECT JOINT LABORATORY POUND POUNDS PER HOUR LINEAL FOOT LOCATION LOW PRESSURE MIXED AIR MANUAL MAXIMUM MOTORIZED DAMPER MANUFACTURER MINIMUM MISCELLANEOUS MOST HYDRAULICALLY DEMANDING AREA NOT IN CONTRACT NATIONAL FIRE PROTECTION ASSOCIATION NOT POTABLE NOT TO SCALE OXYGEN OPENING PRESSURE DROP POST INDICATOR VALVE PAIR PRELIMINARY PRESSURE PRIMARY PRESS. REDUCING VALVE LBS. PER SQ. IN. LBS. PER SQ. IN. GAUGE POTABLE WATER RECESSED REDUCER REQUIRED SQUARE FOOT SMOKE DAMPER SIMILAR SLEEVE STATIC PRESSURE STATIC PRESSURE STATION SQUARE STAINLESS STEEL STANDARD THERMOSTAT SYSTEM TEMP. CONTROL PANEL TEMPERATURE DROP TEMPERATURE TOTAL STATIC PRESSURE TYPICAL UNDER GROUND UNDER SLAB UNLESS NOTED OTHERWISE VALVE
EQUIPMENT ABBREVIATIONS			
DBP DCA DDCA FHR F.A. FPU FDC	DOMESTIC WATER BOOST PUMP DETECTOR CHECK ASSY. DOUBLE DETECTOR CHECK ASSY. FIRE HOSE STATION FIRE ALARM FIRE PUMP FIRE DEPARTMENT CONTROL	FDCP FMCP FAA LOC NRSV ITC PNL	F.A. ACCESS PANEL F.A. MASS NOTIFICATION PNL. F.A. ANNUNCIATOR PNL. LOCAL OPERATOR CONSOLE NON-RISING STEM VALVE INSPECTOR'S TEST PANEL
FIRE ALARM PHASING			
<div><div><div></div><div>FACP</div></div><div><div></div><div>(E)FACP</div></div><div><div></div><div>(D)FACP</div></div></div> <div><div>NEW CONSTRUCTION FIRE EQUIPMENT (TYPICAL TAG FOR ALL NEW CONSTRUCTION)</div><div>EXISTING FIRE ALARM EQUIPMENT FOR ALL EXISTING TAGS) (TYPICAL</div><div>FIRE ALARM EQUIPMENT FOR DEMOLITION (TYPICAL FOR ALL DEMOLITION TAGS)</div></div>			
FIRE ALARM SHEET SET NOTE			
* NOTE * ALL OF GENERAL NOTES ON THIS SHEET ARE TO BE APPLIED TO ALL OTHER DRAWINGS IN THIS SET. SYMBOLS AND ABBREVIATIONS SHOWN ON THIS SHEET MAY OR MAY NOT BE USED IN THE CONTAINED REFERENCE DRAWINGS.			

FIRE ALARM DEVICES		GENERAL SYMBOLS	
<div><div><div></div><div>###</div></div><div>FIRE ALARM CONTROL PANEL</div><div>FIRE ALARM PANEL TYPE</div></div> <div>CONTROL PANELS ABBREVIATIONS:</div> <div>APM ACU BATT FMCP DACT FAA FACP FSCP GAP LCD LOC NAC PRE PRN MIC UPS EVAC</div> <div>AMPLIFIER RACK AUTONOMOUS CONTROL UNIT BATTERY CABINET COMBI. FIRE ALARM/MASS NOTIFICATION CONTROL DIGITAL ALARM COMMUNICATOR TRANSMITTER FIRE ALARM ANNUNCIATOR FIRE ALARM CONTROL FIRE SUPPRESSION CONTROL GRAPHIC ANNUNCIATOR LCD ANNUNCIATOR LOCAL OPERATORS CONTROL NOTIFICATION CIRCUIT POWER BOOSTER PRE-ACTION SYSTEM PRINTER REMOTE VOICE UNINTERRUPTABLE POWER SUPPLY VOICE EVACUATION</div>		<div><div><div></div><div>1</div><div>FX001</div></div><div>KEYNOTE</div></div> <div><div>PIPE CONTINUATION</div><div>SPACE TAG: OFFICE 101</div><div>SPACE NAME SPACE NUMBER</div></div> <div><div></div><div>ITEM TO BE DEMOLISHED</div></div> <div><div></div><div>AREA NOT IN CONTRACT</div></div> <div>FIRE ALARM DEVICE MOUNTING NOTE WALL MOUNTED VISUAL DEVICES TO BE LOCATED SUCH THAT THE ENTIRE LENS OF THE STROBE IS BETWEEN 80" AND 96" AFF. ALL WALL MOUNTED NOTIFICATION DEVICES SHALL BE MOUNTED AT THE SAME HEIGHT AFF TO ACHIEVE A UNIFORM APPEARANCE OR AS DIRECTED BY THE A/E. WATTAGE AND CANDELA ARE GUIDELINES. CONTRACTOR RESPONSIBLE FOR FINAL SPACING AND TOTAL DEVICE POWER.</div>	
<div><div><div></div><div>F</div><div>###</div></div><div>FIRE ALARM ABORT SWITCH</div><div>FIRE ALARM ABORT SWITCH TYPE</div></div> <div>ABORT SWITCH ABBREVIATIONS:</div> <div>AS CO2 CA DL DC EPO F HL PRE WM WC</div> <div>ABORT SWITCH CARBON DIOXIDE CLEAN AGENT DELUGE SPRINKLER DRY CHEMICAL EMERGENCY POWER OFF FOAM HALON PREACTION SYSTEM WATER MIST WET CHEMICAL</div>		<div><div><div></div><div>S</div><div>P</div></div><div>SPOT-TYPE SMOKE DETECTOR (P-PHOTO, I-IONIZATION, SB-SOUNDER BASE)</div></div> <div><div><div></div><div>S</div><div>S</div></div><div>DUCT SMOKE DETECTOR (S-SUPPLY, R-RETURN)</div></div> <div><div><div></div><div>F</div><div>F</div></div><div>HEAT DETECTOR (RATE OF RISE)</div></div> <div><div><div></div><div>F</div><div>F</div></div><div>MANUAL PULL STATION (48" AFF UNLESS NOTED OTHERWISE)</div></div> <div><div><div></div><div>WF</div><div>WF</div></div><div>WATER FLOW SWITCH</div></div> <div><div><div></div><div>VS</div><div>VS</div></div><div>VALVE SUPERVISORY (TAMPER) SWITCH</div></div> <div><div><div></div><div>DH</div><div>DH</div></div><div>DOOR HOLD OPEN MODULE. PROVIDE FIRE ALARM LISTED HOLD-OPEN ASSEMBLY IF NOT CALLED OUT IN DOOR HARDWARE SCHEDULE.</div></div> <div><div><div></div><div>F</div><div>F</div></div><div>ELECTRIC BELL FOR WATER FLOW. INSTALL AT 9'+/- ABOVE FINISHED GRADE OR AS DIRECTED BY FIRE MARSHAL.</div></div> <div><div><div></div><div>AIM</div><div>AIM</div></div><div>ADDRESSABLE MODULE (AIM - INPUT, AOM - OUTPUT, AIO - INPUT/OUTPUT)</div></div> <div><div><div></div><div></div><div></div></div><div>UV FLAME DETECTOR</div></div>	
<div><div><div></div><div>F</div><div>###</div></div><div>FIRE ALARM PULL STATION</div><div>FIRE ALARM PULL STATION TYPE</div></div> <div>PULL STATION ABBREVAITIONS:</div> <div>CO2 CA DL DC F HL M P WM WC</div> <div>CARBON DIOXIDE CLEAN AGENT DELUGE SPRINKLER DRY CHEMICAL FOAM HALON MANUAL PULL STATION WATER MIST WET CHEMICAL</div>		<div><div><div></div><div>S</div><div>S</div></div><div>SYMBOL</div></div> <div><div><div></div><div>DESCRIPTION</div></div><div>CEILING MOUNT HORN AND CLEAR STROBE, 15 CANDELA AND 0.25 WATT TAP UNLESS NOTED OTHERWISE</div></div> <div><div><div></div><div>DESCRIPTION</div></div><div>WALL MOUNT HORN AND CLEAR STROBE, 15 CANDELA AND 0.25 WATT TAP UNLESS NOTED OTHERWISE</div></div> <div><div><div></div><div>DESCRIPTION</div></div><div>CEILING MOUNT CLEAR STROBE, 15 CANDELA UNLESS NOTED OTHERWISE</div></div> <div><div><div></div><div>DESCRIPTION</div></div><div>WALL MOUNT CLEAR STROBE, 15 CANDELA UNLESS NOTED OTHERWISE</div></div>	

GENERAL

- FIRE ALARM SYSTEM AND DEVICES SHALL BE INSTALLED TO THE LATEST EDITION OF NFPA 72, NFPA 70, AND LOCAL REQUIREMENTS.
- ALL FIRE ALARM INSTALLATIONS, INCLUDING PULLING OF WIRE AND MOUNTING OF DEVICES, SHALL HAVE OVERSIGHT OF A NICET LEVEL II FIRE ALARM TECHNICIAN OR HIGHER.
- STROBES SHALL BE SYNCHRONIZED PER NFPA 72.
- ALL FIRE ALARM CABLE SHALL BE RUN IN RED FACTORY COLORED CONDUIT.
- THESE DESIGN DOCUMENTS PROVIDE GENERAL SPACING, LOCATION, AND COORDINATION CRITERIA. CONTRACTOR SHALL BE RESPONSIBLE FOR CIRCUIT CONFIGURATION, SYSTEM PERFORMANCE, SOFTWARE CONFIGURATION, DEVICE PROGRAMMING, SYSTEM COMMISSIONING, AND SYSTEM WARRANTY.
- CONTRACTOR SHALL SUBMIT FIRE ALARM, DATA CUT-SHEETS, AND VOLTAGE DROP CALCULATIONS TO AHJ AND A/E FOR REVIEW AND APPROVAL PRIOR TO BEGINNING ANY WORK ON THE FA SYSTEM.
- NO FA DOCUMENTS/PLANS SHALL BE USED FOR INSTALLATION OF THIS SYSTEM UNLESS THEY CONTAIN A REVIEW AND APPROVAL STAMP FROM THE AHJ AND THE A/E. THE LOCAL AHJ HAS THE AUTHORITY TO STOP ANY WORK UNTIL SUCH PLANS ARE ON SITE AND IN USE.
- SEPARATE FIRE ALARM SPECIFICATIONS CONTAIN VERY DETAILED INFORMATION ABOUT THIS SYSTEM AND SHALL BE FOLLOWED, ON-SITE AND AVAILABLE DURING ANY CONSTRUCTION.
- SECONDARY POWER PERFORMANCE TO MEET NFPA 72. 24 HOURS OF STANDBY POWER FOLLOWED BY 15 MINUTES OF ALARM FOR ALL CONNECTED DEVICES AT MAXIMUM LOAD. SECONDARY POWER FOR THE SYSTEM SHALL ALSO BE DESIGNED TO OPERATE MAXIMUM CONNECTER ALARM LOAD FOR 60 MINUTES IMMEDIATELY FOLLOWING DISCONNECTION OF PRIMARY POWER.
- CIRCUITS TO BE 24V TYPICAL.

LOCATION / SPACING

- IN ACCORDANCE WITH 2019 NFPA 72, STROBES MAY BE MORE THAN 15 FEET FROM THE END OF A CORRIDOR WHEN ROOM SPACING CRITERIA APPLIES USING THE APPROPRIATE CANDELA.
- WALL MOUNTED SPEAKER, STROBES, OR SPEAKER/STROBES SHALL BE AT 96" OR 6" BELOW THE CEILING, WHICHEVER IS LOWER.
- ALL SMOKE DETECTORS SHALL BE LOCATED WHERE THEY CAN BE READILY SERVICED.
- ALL SMOKE DETECTORS SHALL BE CEILING MOUNTED OR WITHIN 12" OF THE CEILING.
- SMOKE DETECTORS SHALL NOT BE INSTALLED WITHIN 3' OF AN AIR-SUPPLY OR RETURN GRILLE PER MFG CRITERIA AND APPENDIX 'A' OF NFPA 72.
- EACH POWER BOOSTER PANEL OR FIRE ALARM PANEL SHALL BE PROTECTED BY A SMOKE DETECTOR. WHEN PROVIDED, AREA DETECTORS WITHIN THE SAME SPACE WILL SATISFY THIS REQUIREMENT.
- AIR HANDLER SYSTEMS OVER 2,000 CFM SHALL BE PROVIDED WITH MEANS TO SHUT DOWN UPON THE DETECTION OF SMOKE. THESE DETECTORS SHALL NOT INITIATE A GENERAL FIRE ALARM.
- DAMPER AND HVAC SMOKE DETECTORS SHALL BE PROVIDED BY THE FIRE ALARM CONTRACTOR, LISTED WITH THE FIRE ALARM SYSTEM, AND INCORPORATE ADDRESSABLE MODULES.
- WHERE APPLICABLE, SMOKE DETECTORS FOR AIR-HANDLER SHUT DOWN SHALL BE ON BOTH SUPPLY AND RETURN DUCTS.
- WALL MOUNTED VISUAL DEVICES TO BE LOCATED SUCH THAT THE ENTIRE LENS OF THE STROBE IS BETWEEN 80" AND 96" AFF. ALL WALL MOUNTED NOTIFICATION DEVICES SHALL BE MOUNTED AT THE SAME HEIGHT AFF TO ACHIEVE A UNIFORM APPEARANCE OR AS DIRECTED BY THE A/E. WATTAGE AND CANDELA ARE GUIDELINES. CONTRACTOR RESPONSIBLE FOR FINAL SPACING AND TOTAL DEVICE POWER.

PERFORMANCE

- ANY SMOKE DETECTOR THAT HAS BEEN INSTALLED PRIOR TO THE CONSTRUCTION CLEANUP OF ALL TRADES AND WITHOUT PRIOR WRITTEN APPROVAL OF THE ENGINEER AND LOCAL AHJ SHALL BE MARKED IN A MANNER THAT WILL IDENTIFY IT FROM RE-USE AND SHALL BE REPLACED PRIOR TO COMMISSIONING OF THE SYSTEM OR TURNING OVER TO THE OWNER. SUCH DETECTORS SHALL BE REPLACED AT THE SOLE EXPENSE OF THE INSTALLING CONTRACTOR.
- DUCT DETECTORS SHALL BE MONITORED FOR INTEGRITY AND PROVIDE A SUPERVISORY SIGNAL AT THE FIRE ALARM PANEL. AIR HANDLER SYSTEMS SHALL BE RAN AND BLOWN OUT PRIOR TO INSTALLATION OF SMOKE DETECTORS.
- FIRE ALARM AUDIBLE ALERT SIGNALS SHALL BE SET TO TEMPORAL CODE PER NFPA 72.
- UNLESS OTHERWISE NOTED THE FOLLOWING MINIMUM SURVIVABILITY CRITERIA SHALL BE MET: SIGNALING LINE CIRCUITS CLASS "B", AND NOTIFICATION CIRCUITS CLASS "B".
- INITIATING DEVICES SHALL BE INDIVIDUALLY ADDRESSABLE.

ACCEPTANCE TESTING

- A COMPLETED AND SIGNED RECORD (CERTIFICATE) OF COMPLETION FORM SHALL BE PROVIDED BY THE CONTRACTOR TO THE AHJ, OWNER, AND A/E PRIOR TO COMMISSION TESTING. THIS CERTIFICATE SHALL CERTIFY THAT THE CONTRACTOR HAS PRE-TESTED EVERY DEVICE AND FUNCTION OF THE SYSTEM AND REPAIRED ANY DEFICIENCIES PRIOR TO THE COMMISSIONING TEST.
- ALL SMOKE DETECTORS SHALL BE COMMISSIONED USING CANNED SMOKE OR A METHOD THAT WILL FUNCTIONALLY TEST THE SMOKE CHAMBER. THE USE OF MAGNETS FOR COMMISSION TESTING OF SMOKE DETECTORS IS STRICTLY PROHIBITED.
- EACH AND EVERY DEVICE SHALL BE TESTED DURING COMMISSIONING AND PRIOR TO BEING TURNED OVER TO THE OWNER.
- EACH NOTIFICATION CIRCUIT SHALL BE TESTED UNDER STANDBY/BATTERY POWER. ANY CIRCUIT THAT MEASURES LESS THAN 20 VOLTS DC OR THE NAMEPLATE VOLTAGE, WHICHEVER IS HIGHER, SHALL BE CONSIDERED AS FAILING THE DESIGN. NOTE: SOME SYSTEMS INCORPORATING SYNCHRONIZING MODULES CAN IMPAIR RESULTS. IF THE MODULE CANNOT BE BYPASSED FOR VOLTAGE READINGS, THE MANUFACTURER SHOULD BE CONTACTED FOR GUIDANCE. WHEN VOLTAGE CANNOT BE MEASURED, CIRCUIT WIRE RESISTANCE READINGS AND DEVICE LOAD MAY BE COMPARED TO DESIGN CALCULATIONS (MAKE SURE CIRCUIT IS REMOVED FROM POWER SUPPLY WHEN OBTAINING WIRE RESISTANCE). ONLY A QUALIFIED TECHNICIAN EMPLOYED BY THE INSTALLING CONTRACTOR SHOULD PERFORM THIS FUNCTION.
- EACH CIRCUIT'S END-OF-LINE VOLTAGE SHALL BE DOCUMENTED FOR COMPARISON TO THE DESIGN END-OF-LINE CALCULATIONS.

Project		
AEROJET BUILDING 66B CURE OVEN BUILDING EAST CAMDEN, ARKANSAS		
Design Phase		
CONSTRUCTION DOCUMENTS		
Revisions		
No.	Date	Description
Stamp		
<div><div>CERTIFICATE OF AUTHORITY</div><div>CROMWELL ARCHITECTS/ENGINEERS #5</div><div>ARKANSAS-ENGINEERS</div></div> <div><div>STATE OF ARKANSAS</div><div>REGISTERED PROFESSIONAL ENGINEER</div><div>No. 19823</div><div>W. W. ORSHAN</div></div> <div>07-31-2024</div>		
Notes		
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Project Number		
Issue Date		
Sheet Title		
FIRE ALARM LEGEND AND NOTES		
Sheet Number		

Project

AEROJET BUILDING 66B
CURE OVEN BUILDING
EAST CAMDEN,
ARKANSAS

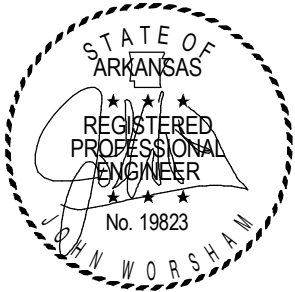
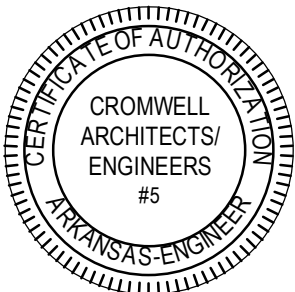
Design Phase

CONSTRUCTION
DOCUMENTS

Revisions

No.	Date	Description

Stamp



07-31-2024

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2024-045

Issue Date

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Sheet Title

FIRE ALARM CEILING
PLAN

Sheet Number

FA101

NOTE:

COOL-DOWN 101 AND MAINTENANCE ACCESS 103 ARE CLASS II DIVISION 1 LOCATIONS.
ALL ELECTRICAL FIXTURES AND DEVICES PROVIDED IN THESE AREAS SHALL BE LISTED
AND INSTALLED IN ACCORDANCE WITH 2020 NFPA 70.

