SCOPE OF WORK

TO INSTALL A NEW FULLY ADDRESSIBLE FIRE ALARM SYSTEM IN A MIXED USE FACILITY INCLUDING ASSEMBLY, ARCHIVE, RECORD RESEARCH, FOOD PREPERATION, BANQUETTE, INSTRUCTIONAL, AND RESIDENTIAL FACILITY HAS A HIGH SECURITY PROFILE WITH MULTIPLE MANAGING AGENCIES

FACILITY WILL CONSIST OF SMOKE DETECTION THROUGHOUT, VESDA DETECTION, HEAT DETECTORS, PRE-RECORDED VOICE EMERGENCY INSTRUCTIONS FOR FIRE AND TORNADO, ZONE NOTIFICATION/ EVACUATION, PUBLIC PAGING, PREACTION SYSTEMS, DOOR HOLD OPEN DEVICES, SECURITY CONTROL INTEGRATED CAD GRAPHICS AND FIRE ALARM NOTIFICATION

ENGINEERING DESIGN SCOPE

THESE PLANS HAVE BEEN PREPARED BY AN ARIZONA REGISTERED FIRE PROTECTION ENGINEER. THE DESIGN ENGINEER HAS PROVIDED SYSTEM SPECIFICATIONS AND DRAWINGS RELATED TO LOCATION AND SPACING OF FIRE ALARM DEVICES SUCH AS SPEAKERS, STROBES, PULL STATIONS, SMOKE DETECTORS, HEAT DETECTORS, DOOR HOLD-OPENS TAMPER SWITCHES, FLOW SWITCHES, PRE-ACTION CABINETS, FIRE PUMPS, POWER SUPPLY LOCATIONS, ANNUNCIATOR LOCATIONS, AND MAIN FIRE ALARM CONTROL PANEL. VESDA CALCULATIONS AND DRAWINGS FOR ARCHIVE AREAS HAVE BEEN COMPLETED AND WILL BE MADE AVAILABLE TO CONTRACTOR. CAD FILES WILL BE MADE AVAILABLE FOR CONTRACTOR USE IF BETTER DESIGN PRACTICES ARE DETERMINED FOR THIS SYSTEM, OR CHANGES NEED TO BE MADE TO FACILITATE INSTALLATION, SUCH CHANGES SHALL BE APPROVED BY THE ENGINEER PRIOR TO MAKING ANY CHANGES

CONTRACTOR DESIGN SCOPE

CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING DETAILED SYSTEM SPECIFIC SHOP DRAWINGS INDICATING CIRCUIT CONFIGURATION POWER REQUIREMENTS, NETWORKING SYSTEM GRAPHICS, PROGRAMMING, INSTALLATION DETAILS, WIRING TYPES, WIRING SIZES AND A COMPLETE RISER DIAGRAM THE CONTRACTOR WILL BE RESPONSIBLE FOR COORDINATION WITH OTHER DISCIPLINES, ENGINEER, AND ARCHITECT FOR ITEMS SUCH AS BUT NOT LIMITED TO SECURITY SYSTEM, HVAC SHUTDOWN, BUILDING PAGING FUNCTIONS, MICROPHONE LOCATIONS, TELEPHONE/PAGING INTERFACE, PRE RECORDED VOICE MESSAGES, BUILDING COMMUNICATIONS NETWORK, AND REVISIONS TO FLOOR CONTROL VALVE LOCATIONS AS DETERMINED BY THE SPRINKLER CONTRACTOR. HVAC SHUTDOWN FOR SYSTEMS OVER 2,000 CFM STILL NEEDS TO BE IDENTIFIED AND ACCOUNTED FOR. AREA SMOKE DETECTION SHALL BE USED FOR SHUTDOWN OF RECERCULATING UNITS IN ACCORDANCE WITH LOCAL AHJ REQUIREMENTS UNIT SMOKE DETECTORS HAVE BEEN IDENTIFIED FOR THE SUPPLY SIDE OF AHU'S

PROJECT DATA

OWNER INFORMATION
ADDRESS OF PROJECT
CODES 1997 SBCCI, 1999 NFPA72, NATIONAL FIRE ALARM CODE, 1999 NFPA 13, AUTOMATIC SPRINKLERS MECHANICAL CODE 1999 NFPA 70, NATIONAL ELECTRICAL CODE, 1997 ARKANSAS FIRE PREVENTION CODE
"LEED" PROJECT - YES
CONSTRUCTION TYPE I
OCCUPANCY CLASSIFICATION - ASSEMBLY LARGE, MIXED
OF STORIES - MUSEUM = 6 WITH MECHANICAL SPACE, ARCHIVES = 4 (INCLUDES BASEMENTS IN EACH BUILDING)
APPROXIMATE SQUARE FOOTAGE - MUSEUM = , ARCHIVES =
FIRE SPRINKLERS = Y, WET AND PREACTION
FIRE PUMP = Y, ELECTRIC
FIRE ALARM = Y, SMOKE, MANUAL, VOICE, ZONED
SECURITY SYSTEM = Y
EMERGENCY LIGHTING = Y
GENERATOR = Y, DIESEL, EMERGENCY
HOURS OF OPERATION PRIMARY OPERATION IS BUSINESS HOURS, AFTER HOURS EVENTS, 24/7 SECURITY, LIMITED LIVING QUARTERS

CONSTRUCTION TEAM

FIRE ALARM CONTRACTOR/SUPPLIER
TBD
AREA MANAGER
PROJECT MANAGER -
SYSTEM PROGRAMMER -
NICET II FOR OVERSIGHT

ELECTRICAL CONTRACTOR
IK ELECTRIC
214 M L. KING DRIVE
LITTLE ROCK, AR 72203
501-376-2081
FAX 501-376-1463
PROJECT MANAGER - MIKE ALBERSON

DESIGN ENGINEER
CROMWELL ARCHITECTS ENGINEERS
101 SOUTH SPRING STREET
LITTLE ROCK, AR 72201
501 372 2900
FAX 501-372 0482
ENGINEER - SCOTT LACEY

GENERAL CONTRACTOR
CDI

PROJECT MANAGEMENT
PHELPS PROGRAM MANAGEMENT (PPM)
PROJECT ENGINEER - BRAD P NELSON
CONSTRUCTION MANAGER - TOM JONES

OFFSITE - MONITORING COMPANY
TBD

AUTHORITIES HAVING JURISDICTION
CITY OF LITTLE ROCK BUILDING SAFETY DAVID MCCLYMONT
CITY OF LITTLE ROCK FIRE DEPARTMENT - DENNIS FREE
NATIONAL ARCHIVES AND RECORDS ADMINISTRATION

F	FIRE ALARM MANUAL PULL STATION, 48" AFF
F	FIRE ALARM BELL WITH VISUAL STROBE
F	FIRE ALARM WALL SPEAKER WITH VISUAL STROBE
F	FIRE ALARM CHIME WITH VISUAL STROBE
W	FIRE ALARM CEILING SPEAKER "W" INDICATES INITIAL POWER SETTING
W cd	FIRE ALARM CEILING SPEAKER W/ VISUAL STROBE "W" INDICATES INITIAL POWER SETTINGS "CD" INICATES CANDELLA
V	FIRE ALARM VISUAL STROBE
S	FIRE ALARM SMOKE DETECTOR, PHOTOELECTRIC TYPE, CEILING MOUNTED UNLESS INDICATED OTHERWISE SUBSCRIPTS "A" - ABOVE CEILING, "U" - UNDER RAISED FLOOR
D	FIRE ALARM SMOKE DETECTOR, LOCATED IN THE SUPPLY AIR DUCT
HT	FIRE ALARM HEAT DETECTOR, RATE OF RISE TYPE, CEILING MOUNTED UNLESS INDICATED OTHERWISE SUBSCRIPT "F" DENOTES FIXED TEMPERATURE TYPE
FS	FIRE ALARM FLOW SWITCH IN SPRINKLER PIPING SYSTEM (FURNISHED UNDER THE FIRE SUPPRESSION SECTION OF THE SPECIFICATIONS)
TS	FIRE ALARM VALVE TAMPER SWITCH (FURNISHED UNDER THE FIRE SUPPRESSION SECTION OF THE SPECIFICATIONS)
P	FIRE ALARM PRESSURE SWITCH IN SPRINKLER RISER (FURNISHED UNDER THE FIRE SUPPRESSION SECTION OF THE SPECIFICATIONS)
DH	FIRE ALARM DOOR HOLD OPEN MECHANISM (FURNISHED UNDER DOOR HARDWARE SECTION OF THE SPECIFICATIONS)
UHSSD	FIRE ALARM ULTRA HIGH SENSITIVITY SMOKE DETECTION SYSTEM
H H L	FIRE ALARM ADDRESSABLE HEAT DETECTOR. L=LOW TEMPERATURE (135°F) TO INITIATE SHUNT TRIP ONLY INSTALLED IN BOTTOM OF SHAFT ON HYDRAULIC ELEVATORS L
CM	FIRE ALARM RELAY CONTROL MODULE
R	FIRE ALARM CONTROL RELAY
FACP	FIRE ALARM CONTROL PANEL
FALA	FIRE ALARM LOCAL ANNUNCIATOR.
RFAP	REMOTE FIRE ALARM BOOSTER PANEL

VICINITY MAP

NOT TO SCALE

NORTH

FIRE ALARM PLAN NOTES (FOR THE INSTALLER AND AHJ)

GENERAL

1 FIRE ALARM SYSTEM AND DEVICES SHALL BE INSTALLED TO NFPA 72, NFPA 70, NFPA 20, NFPA 13 AND LOCAL REQUIREMENTS

2. 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.

3 THE CURRENTLY PUBLISHED EDITION OF NFPA STANDARDS SHALL APPLY TO THIS DESIGN UNLESS THE LOCAL AUTHORITY HAVING JURISDICTION (AHJ) HAS ADOPTED AN EARLIER EDITION

4 RESERVED

5 ALL FIRE ALARM CABLE SHALL BE RUN IN CONDUIT

6 THE FIRE ALARM SYSTEM WILL ALSO SERVE AS A THE BUILDING PAGING SYSTEM ON A DAILY BASIS, AND MAY POSSIBLY BE USED FOR BACKGROUND MUSIC IN CERTAIN ZONES

7 FIRE/PAGING ZONES SHALL BE AS INDICATED ON PLANS

8 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

9 CONTRACTOR SHALL BE RESPONSIBLE FOR SUBMITTING FINAL SHOP DRAWINGS TO ENGINEER FOR REVIEW AND APPROVAL PRIOR TO BEGINNING INSTALLATION

10 NO FIRE ALARM DOCUMENTS/PLANS SHALL BE ON-SITE OR BE USED FOR INSTALLATION OF THIS SYSTEM UNLESS THEY CONTAIN A REVIEW AND APPROVAL STAMP FROM CROMWELL ARCHITECTS ENGINEERS CROMWELL AND/OR THE LOCAL AHJ HAS THE AUTHORITY TO STOP ANY WORK UNTIL SUCH PLANS ARE ON SITE AND IN USE

11 SEPARATE FIRE ALARM SPECIFICATIONS CONTAIN VERY DETAILED INFORMATION ABOUT THIS SYSTEM AND SHALL BE FOLLOWED ON-SITE AND AVAILABLE DURING ANY CONSTRUCTION

12 IN GENERAL, SPEAKERS IN PUBLIC AREAS SHALL BE TAPPED AT 1/2 WATT FOR PUBLIC AREAS (MUSEUM) AND 1/4 WALL FOR NON-PUBLIC AREAS UNLESS DETERMINED OTHERWISE BY THE MANUFACTURER OR ENGINEER.

LOCATION/SPACING

1 STROBES SHALL NOT BE MORE THAN 15 FEET OFF THE END OF A CORRIDOR UNLESS THE LOCAL AUTHORITY WILL ALLOW ROOM SPACING TO APPLY USING THE APPROPRIATE CANDELA.

2 SPEAKERS, STROBES OR SPEAKER/STROBES SHALL BE CEILING MOUNTED UNLESS SHOWN OTHERWISE

3 WHERE POSSIBLE, CEILING MOUNTED DEVICES SHALL BE LOCATED IN CENTER OF TILE OR PANELS HOWEVER, SPACING LIMITATIONS OF NFPA 72 PREVAIL CONFLICTS SHOULD BE BROUGHT TO THE ATTENTION OF THE ENGINEER DEVICES SHALL BE CENTERED IN THE WIDTH OF A PANEL, BUT MAY BE INCREMENTALLY LOCATED WITHIN THE LENGTH AT 12 INCH INTERVALS

4 CEILING MOUNT STROBES ARE PERMITTED UNDER SECTION 2 2 OF THE AMERICANS WITH DISABILITIES ACT ACCESSIBILITY GUIDELINES (ADAAG) WHEN INSTALLED IN ACCORDANCE WITH ANSI/NFPA 72 FOR ADDITIONAL INFORMATION RELATED TO ADA AND CEILING MOUNT STROBES SEE BULLETIN #2 FOR "VISUAL ALARMS" BY THE U S ARCHITECTURAL AND TRANSPORTATION BARRIERS COMPLIANCE BOARD

5 THE CANDELA FOR CEILING MOUNT STROBES SHALL BE ADJUSTED IN ACCORDANCE WITH NFPA 72 AND MANUFACTURERS SPECIFICATIONS FOR HEIGHTS OVER 10'

6 SMOKE DETECTORS SHALL NOT BE MORE THAN 15 FEET PERPENDICULAR TO A WALL, EXCEPT IN LONG NARROW ROOMS SUCH AS CORRIDORS WHERE THEY MAY BE UP TO 20 FEET PER NFPA 72

7 ALL SMOKE AND HEAT DETECTORS SHALL BE LOCATED WHERE THEY CAN BE READILY SERVICED

8 ALL SMOKE DETECTORS SHALL BE MOUNTED WITHIN 12" OF THE CEILING EXCEPTION WHEN LOCATED BY THE ENGINEER USING PERFORMANCE CRITERIA SUCH AS WITH WAFFLE CEILING AREAS THAT HAVE INCORPORATED REDUCED SPACING IN SUCH CASE THEY SHALL BE MOUNTED TO THE BOTTOM OF THE BEAMS

9 SMOKE DETECTORS SHALL NOT BE MORE THAN 30' APART EXCEPT IN LONG NARROW SPACES SUCH AS CORRIDORS WHERE THEY MAY BE UP TO 40' APART PER NFPA 72

10 RESERVED

11 PERFORATED PANEL CEILINGS MAY REQUIRE REDUCED SPACING AS ESTABLISHED BY THE ENGINEER

12 SMOKE AND HEAT DETECTORS SHALL NOT BE INSTALLED WITHIN 3' OF AN AIR-SUPPLY OR RETURN GRILL PER MFG CRITERIA AND APPENDIX "A" OF NFPA 72 EXCEPTION, IN SOME CASES, PERFORMANCE CRITERIA MAY HAVE BEEN USED INCLUDING REDUCED SPACING TO COMPENSATE FOR SUCH DESIGN

13 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

14 LOW RTI (SENSITIVE) FIXED TEMPERATURE HEAT DETECTORS AT 135 DEGREES FAHRENHEIT FOR ELEVATOR SHUNT TRIP SHALL BE LOCATED WITHIN 12 INCHES OF SPRINKLER HEADS AT BOTTOM OF PIT AND TOP OF SHAFT TO SHUNT POWER TO ELEVATORS PRIOR TO ACTIVATION

15 AIR HANDLER SYSTEMS OVER 2,000 CFM SHALL BE PROVIDED WITH MEANS TO SHUT DOWN UPON THE DETECTION OF SMOKE

PERFORMANCE

1 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 SEE NFPA 72 FOR INSTALLATION LIMITATION SUBJECT TO APPROVAL OF THE ENGINEER AND LOCAL AHJ THIS MAY EXCLUDE SERVICES, WHICH DO NOT CREATE AIR BORN PARTICLES AND MAY BE EXCLUDED FROM THE DEFINITION OF CONSTRUCTION SUCH AS TELEPHONE/NETWORK SERVICES, AND MODULAR FURNITURE INSTALLATION

2 DUCT DETECTORS SHALL BE MONITORED FOR INTEGRITY AND PROVIDE A SUPERVISORY SIGNAL AT THE FIRE ALARM PANEL AS ALLOWED BY NFPA 72. DUCT DETECTORS SHALL NOT INITIATE AN EVACUATION ALARM UNLESS REQUIRED BY THE LOCAL AHJ

3 ALL AUDIBLE ALERT SIGNALS SHALL BE SET TO TEMPORAL CODE PER NPFA 72

4 A MINIMUM OF 15 DBA ABOVE AMBIENT SHALL BE OBTAINED IN EVERY OCCUPIABLE SPACE (THROUGHOUT) PER NFPA 72 THIS INCLUDES STORAGE ROOMS, ELECTRICAL ROOMS, TELEPHONE ROOMS AND ANY OTHER OCCUPIABLE SPACE. THE CONTRACTOR SHALL ADVISE THE ENGINEER OF ANY INDICATIONS ON THE PLANS OR IN THE FIELD WHERE THIS CRITERIA WILL NOT BE MEET AS DESIGNED

5 UNLESS OTHERWISE NOTED THE FOLLOWING MINIMUM SURVIVABILITY CRITERIA SHALL BE MEET INITIATING CIRCUITS CLASS "A", SIGNALING LINE CIRCUITS CLASS "B" STYLE 2 OR HIGHER, AND NOTIFICATION CIRCUITS CLASS "B"

COMMISSIONING

1 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

2 EACH AND EVERY DEVICE, MESSAGE AND ZONE NOTIFICATION SHALL BE TESTED DURING COMMISSIONING AND PRIOR TO BEING TURNED OVER TO THE OWNER.

3 EACH NOTIFICATION HORN CIRCUIT SHALL BE TESTED UNDER STANDBY/BATTERY POWER. END-OF-LINE VOLTAGE READINGS SHALL BE TAKEN AT THE END-OF-LINE RESISTOR FOR CLASS "B" CIRCUITS OR AT THE BOOSTER PANEL FOR CLASS "A" CIRCUITS ANY CIRCUIT THAT MEASURES LESS THAN 20 VOLTS DC OR THE NAMEPLATE VOLTAGE, WHICHEVER IS HIGHER, SHALL BE CONSIDERED AS FAILING THE DESIGN IN THE EVENT SUCH A CONDITION EXISTS, CHANGES SHALL BE MADE AT THE EXPENSE OF THE CONTRACTOR. 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

4 EACH CIRCUIT'S END-OF LINE VOLTAGE SHALL BE DOCUMENTED FOR COMPARISON TO THE DESIGN END-OF-LINE CALCULATIONS

CERTIFICATE OF AUTHORIZATION
CROMWELL ENGINEERS
#55
ARKANSAS ENGINEERS

WILLIAM J CLINTON PRESIDENTIAL CENTER

LITTLE ROCK, ARKANSAS

Architect
POLSHEK PARTNERSHIP LLP
320 West 13th Street
New York New York 10014
212.807 7171

Coordinating Architects
POLK STANLEY YEARY ARCHITECTS Ltd
700 South Schiller Street
Little Rock Arkansas 72201
501.378.0878

WITSELL EVANS RASCO
901 West Third Street
Little Rock, Arkansas 72201
501 374 5300

WOODS CARADINE ARCHITECTS
2200 South Main Street
Little Rock, Arkansas 72206
501.374 4060

Landscape Architects
HARGREAVES ASSOCIATES
118 Magazine Street
Cambridge Massachusettes 02139
617 661 0070

LANDSCAPE ARCHITECTURE, Inc
2300 Cottondale Lane Suite 202
Little Rock Arkansas 72202
501 374.5610

Structural Engineer
LESLIE E. ROBERTSON ASSOC RLLP
30 Broad Street 47th Floor
New York New York 10004
212.750 9000

MEP Engineers
FLACK + KURTZ Inc.
475 Fifth Avenue
New York, New York 10017
212.532 9600

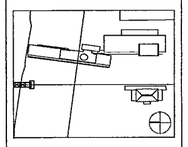
CROMWELL ARCHITECTS ENGINEERS
101 South Spring Street
Little Rock, Arkansas 72201
501 372.2900

Curtainwall Consultant
R A. HEINTGES ARCHITECTS
126 Fifth Avenue 5th Floor
New York, New York 10011
212.652 2966

Seal

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No 5857
PAUL W. WITSELL EVANS

Issue	Date
100% Construction Documents	09/27/02
90% Progress Printing	09/30/02
100% Design Development	03/01/02



Job No POLSHEK & PARTNERS ARCH. 9908
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Scale 1/8" = 1'-0"

Date SEPTEMBER 27, 2002

Title
FIRE ALARM PROJECT NOTES

Sheet No.
FA001

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