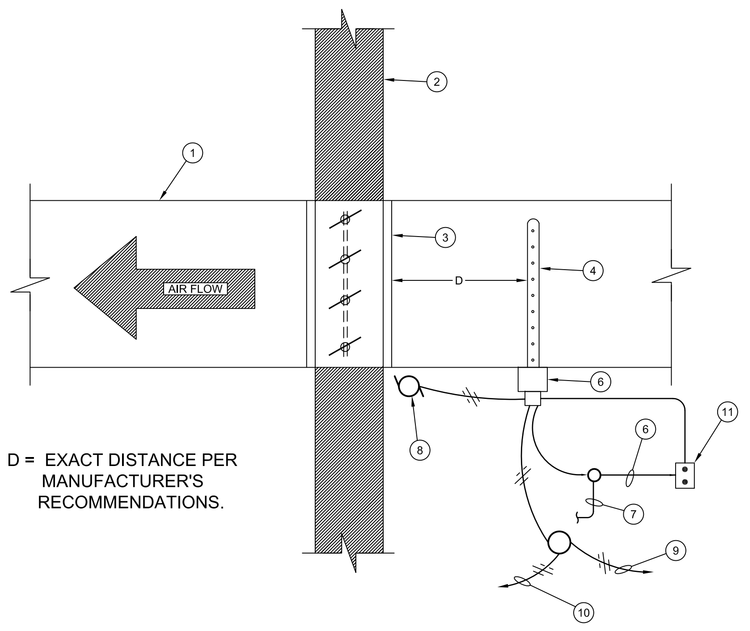


D = EXACT DISTANCE PER MANUFACTURER'S RECOMMENDATIONS.

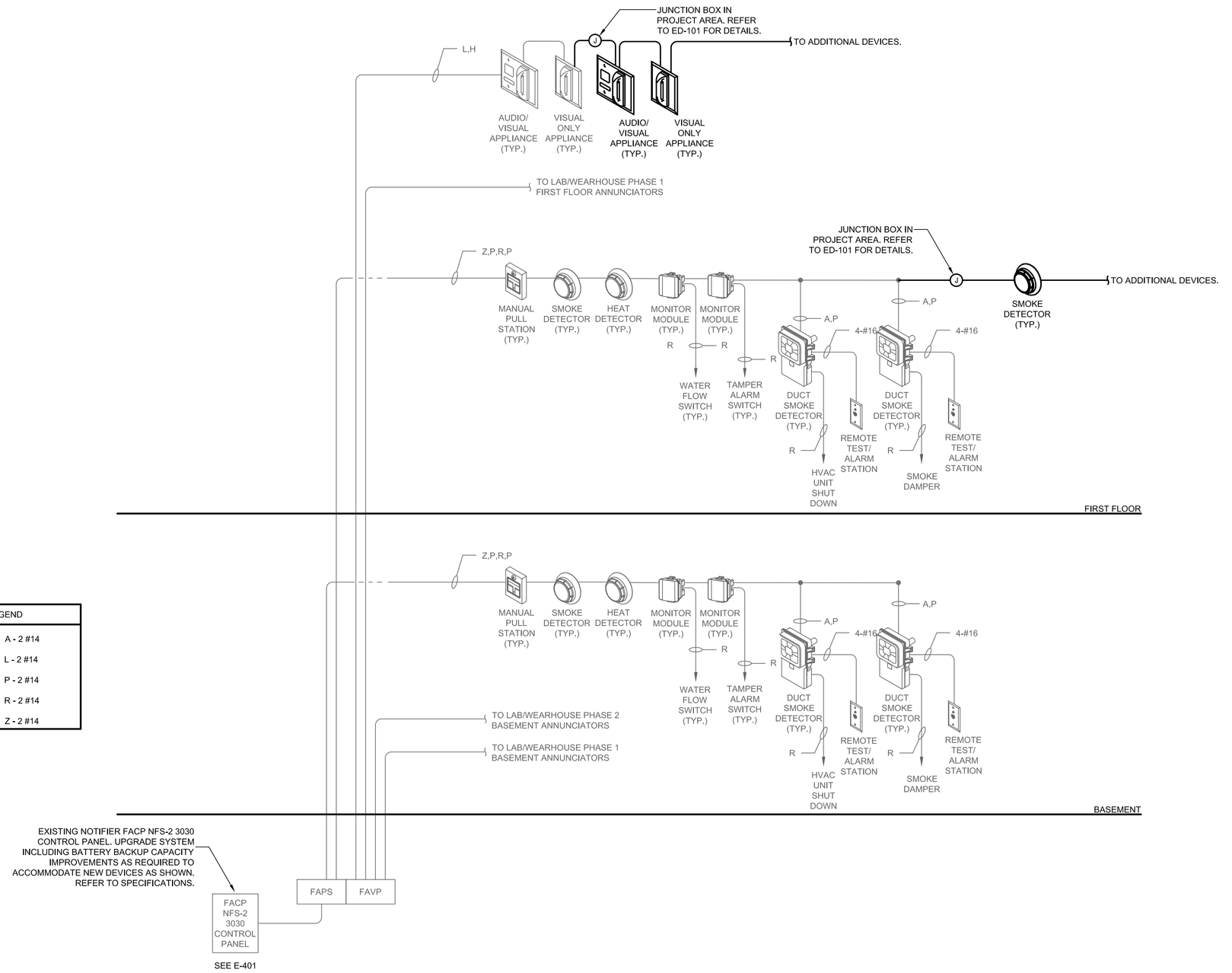
TYPICAL SMOKE/FIRE DAMPER WIRING DETAIL

SCALE: NONE

KEYNOTES:

1. DUCT ASSEMBLY WITH AIR FLOW DIRECTION AS NOTED.
2. FIRE RATED WALL OR SMOKE ZONE WALL. REFER TO ARCHITECTURAL DRAWINGS.
3. SMOKE DAMPER OR SMOKE/FIRE DAMPER BY HVAC CONTRACTOR REFER TO MECHANICAL/HVAC PLANS FOR LOCATIONS AND QUANTITIES.
4. DUCT TYPE SMOKE DETECTOR SAMPLING TUBE AND HOUSING FURNISHED BY EC FOR INSTALLATION BY HVAC CONTRACTOR, SAMPLING TUBE LENGTH TO BE DETERMINED BY DUCT WIDTH. FIELD VERIFY AND COORDINATE WITH HVAC CONTRACTOR. SAMPLING TUBE TO BE MOUNTED AT DISTANCE "D" PER MANUFACTURER'S RECOMMENDATION.
5. PHOTOELECTRIC TYPE, INTELLIGENT-ANALOG SMOKE DETECTOR WITH 20 AMP, 125VOLT RATED, NORMALLY CLOSED (NC) AUXILIARY CONTACTS. CONNECT SMOKE DETECTOR TO MAIN FACP FOR SUPERVISORY MONITORING.
6. DATA CIRCUIT TO FIRE ALARM CONTROL(FACP) OR NEXT DEVICE.
7. DATA CIRCUIT TO NEXT DUCT TYPE SMOKE DETECTOR DEVICE.
8. SMOKE DAMPER ACTUATOR MOTOR (120V, 100W). CONNECT TO 120 VOLT BRANCH CIRCUIT THROUGH N.C. AUXILIARY CONTACTS IN SMOKE DETECTOR.
9. PROVIDE A 20 AMP, 120 VOLT BRANCH CIRCUIT FOR SMOKE AND SMOKE/FIRE DAMPERS. REFER TO FLOOR PLANS AND PANEL SCHEDULE(S) FOR CIRCUITS. FURNISH WITH HANDLE "LOCK-ON" DEVICE.
10. 2#12,1#12GND, 3/4"C TO NEXT SMOKE AND/OR SMOKE/FIRE DAMPER. REFER TO FLOOR PLANS. A MAXIMUM OF TEN (10) DAMPER ACTUATOR MOTORS MAY BE CONNECTED TO A SINGLE 20 AMP BRANCH CIRCUIT.
11. REMOTE TEST STATION. MOUNT IN AN ACCESSIBLE LOCATION NEAR DUCT MOUNTED SMOKE DETECTOR OR AS DIRECTED BY ARCHITECT AND/OR OWNER.

WIRING LEGEND	
AUDIO CIRCUIT	A - 2 #14
LIGHT CIRCUIT	L - 2 #14
POWER CIRCUIT	P - 2 #14
RELAY CIRCUIT	R - 2 #14
ZONE CIRCUIT	Z - 2 #14



FIRE ALARM RISER DIAGRAM

SCALE: NONE

FIRE ALARM SYSTEM NOTES

1. FIRE ALARM DIAGRAM IS SHOWN FOR BIDDING PURPOSES ONLY. EXACT WIRING DIAGRAM FOR COTR REVIEW/APPROVAL AND ACTUAL INSTALLATION SHALL BE PREPARED BY THE FIRE ALARM SYSTEM SUPPLIER.
2. PRIOR TO COMMENCEMENT OF WORK, OBTAIN APPROVAL ON SYSTEM LAYOUT AND DESIGN FROM THE GOVERNMENT. COORDINATE WITH THE CITY FIRE DEPARTMENT, AT THE GOVERNMENT'S DIRECTION. PREPARE AND SUBMIT PROPER DOCUMENTATION, IN APPROPRIATE QUANTITIES, TO THE GOVERNMENT, FOR IT'S REVIEW AND APPROVAL. IN ADDITION TO THE QUANTITIES OF COPIES REQUIRED BY THE GOVERNMENT, FURNISH ONE COPY EACH TO THE ARCHITECT/ENGINEER AND THE MEDICAL CENTER.
3. SEE FLOOR PLANS FOR QUANTITIES AND LOCATIONS OF ALL FIRE ALARM PANELS AND DEVICES.
4. FIRE ALARM WIRING SHALL BE INSTALLED IN CONDUIT. FIRE ALARM CONDUIT SHALL BE CONCEALED UNLESS OTHERWISE NOTED.
5. FIRE ALARM CONDUCTORS SHALL COMPLY WITH THE REQUIREMENTS OF NEC ARTICLE 760. ALL WIRING SHALL BE PER THE FIRE ALARM SYSTEM MANUFACTURER'S RECOMMENDATIONS.
6. ALL JUNCTION BOXES SHALL BE FURNISHED WITH BOX LUG-TYPE TERMINAL BLOCKS WITH AT LEAST TWENTY PERCENT (20%) SPARES.
7. THE FIRE ALARM SYSTEM SUPPLIER SHALL FURNISH A COMPLETE POINT-BY-POINT WIRING DIAGRAM INDICATING ALL CONDUIT SIZES AND QUANTITIES OF CONDUCTORS.
8. THE FIRE ALARM SYSTEM SUPPLIER SHALL FURNISH COMPLETE VOLTAGE DROP CALCULATIONS FOR ALL INITIATING AND SIGNALING DEVICE CIRCUITS USING THE ACTUAL CONDUCTOR SIZES, LENGTHS, AND AMPERAGE REQUIREMENTS OF THE DEVICES BEING APPLIED.
9. THE FIRE ALARM SYSTEM SUPPLIER SHALL FURNISH COMPLETE POWER SUPPLY AND BATTERY SIZING CALCULATIONS USING THE POWER REQUIREMENTS OF THE ACTUAL DEVICES BEING APPLIED.
10. THE FIRE ALARM SYSTEM SHALL BE DESIGNED, INSTALLED, AND SHALL OPERATE IN ACCORDANCE WITH ALL REQUIREMENTS OF STATE AND LOCAL AUTHORITIES UPON COMPLETION OF WORK.
11. ALL FIRE ALARM SYSTEM COMPONENTS SHALL BE NEW, UL LISTED AND ADA COMPLIANT.
12. NOT USED.
13. ELECTRICALLY OPERATED WATER-FLOW SWITCHES ATTACHED TO SPRINKLER SYSTEMS TO PROVIDE REQUIRED SYSTEM SUPERVISION SHALL BE CONNECTED TO THE FIRE ALARM SYSTEM IN ACCORDANCE WITH THE APPROPRIATE NFPA REQUIREMENTS.
14. SPRINKLER SYSTEM WATER-FLOW AND TAMPER SWITCHES SHALL BE SUPERVISED BY THE FIRE ALARM SYSTEM IN BUILDINGS MORE THAN ONE (1) STORY HIGH IN ACCORDANCE WITH NFPA 13, SECTION 3-12.6.
15. SPRINKLER SYSTEM WATER-FLOW AND TAMPER SWITCHES ARE PROVIDED BY OTHERS. PROVIDE INTERFACE DEVICES AS REQUIRED TO PROVIDE FIRE ALARM SYSTEM SUPERVISION. FIELD VERIFY QUANTITIES AND LOCATIONS OF ALL FLOW AND TAMPER SWITCHES WITH FIRE PROTECTION CONTRACTOR PRIOR TO ROUGH-IN.
16. ALL SMOKE DAMPERS AND/OR SMOKE/FIRE DAMPERS PROVIDED BY OTHERS SHALL BE EQUIPPED WITH A DUCT MOUNTED SMOKE DETECTOR. DUCT MOUNTED SMOKE DETECTORS SHALL BE FURNISHED BY THE EC, INSTALLED BY THE HVAC CONTRACTOR, WIRING BY THE EC. CONNECT DUCT MOUNTED SMOKE DETECTOR TO THE FACP FOR SUPERVISORY MONITORING ONLY. PROVIDE 120V POWER TO THE SMOKE DAMPER ACTUATOR MOTOR THROUGH N.C. AUXILIARY CONTACT IN THE SMOKE DETECTOR HEAD.
17. DUCT MOUNTED SMOKE DETECTORS SHALL BE MOUNTED ON THE SUPPLY AND RETURN DUCTS OF HVAC UNITS SIZED TO DELIVER 2000 CFM AND GREATER. DUCT MOUNTED SMOKE DETECTORS SHALL BE FURNISHED BY THE EC, INSTALLED BY THE HVAC CONTRACTOR, WIRING BY THE EC CONNECT SMOKE DETECTOR TO HVAC UNIT'S SHUTDOWN RELAY TO CAUSE THE UNIT TO DE-ENERGIZE WHEN SMOKE IS DETECTED. COORDINATE DEVICE INSTALLATION AND WIRING REQUIREMENTS WITH HVAC EQUIPMENT SUPPLIER. WHERE REQUIRED BY CODE, CONNECT THE SMOKE DETECTOR TO THE FACP FOR SUPERVISORY MONITORING ONLY.
18. ONE SET OF APPROVED FIRE ALARM DRAWINGS SHALL BE MAINTAINED ON THE SITE AND MADE AVAILABLE TO THE COTR UPON DEMAND.
19. THE COTR SHALL WITNESS THE FINAL ACCEPTANCE TEST OF THE FIRE ALARM SYSTEM. CALL TO SCHEDULE THE TEST WITH THE COTR AT LEAST 72 HOURS PRIOR TO THE TEST TIME.
20. IMMEDIATELY AFTER THE FINAL FIRE ALARM ACCEPTANCE TEST, THE EC AND SUPPLIER SHALL PROVIDE THE FIRE INSPECTOR ONE COPY OF A "FIRE ALARM SYSTEM CERTIFICATION RECORD" COMPLETELY FILLED OUT.
21. WHEN MAKING MODIFICATIONS AND/OR ADDITIONS TO AN EXISTING FIRE ALARM SYSTEM TO REMAIN, THE EXISTING BUILDING FIRE ALARM SYSTEM SHALL REMAIN IN OPERATION AT ALL TIMES DURING THE PERIOD OF CONSTRUCTION. ALL WORK AFFECTING THE EXISTING FIRE ALARM SYSTEM SHALL BE COORDINATED WITH THE BUILDING OWNERSHIP AND THE LOCAL FIRE DEPARTMENT AND SHALL BE PERFORMED IN STRICT ACCORDANCE WITH BUILDING RULES AND FIRE DEPARTMENT REGULATIONS. AT NO TIME SHALL THE BUILDING BE LEFT WITHOUT FIRE ALARM PROTECTION IN ALL AREAS.
22. ALL NEW FIRE ALARM SYSTEM COMPONENTS AND DEVICES SHALL BE COMPATIBLE WITH THE EXISTING SYSTEM. INSTALLATION OF NEW FIRE ALARM SYSTEM COMPONENTS AND DEVICES SHALL NOT ADVERSLY AFFECT THE OPERATION OF THE EXISTING FIRE ALARM SYSTEM.
23. PRIOR TO MAKING ANY MODIFICATIONS, ADDITIONS, OR ALTERATIONS TO AN EXISTING FIRE ALARM SYSTEM, THE EC SHALL RECORD THE EXISTING FIRE ALARM SYSTEM STATUS OF TROUBLE AND ALARM CONDITIONS. ANY SYSTEM FOUND TO NOT OPERATE PROPERLY SHALL BE REPORTED, IN WRITING, TO THE OWNER AND THE ARCHITECT/ENGINEER. DO NOT PROCEED WITH ALTERATIONS, MODIFICATIONS, AND/OR ADDITIONS TO ANY SYSTEM THAT IS FOUND TO NOT FUNCTION PROPERLY UNTIL DIRECTED TO DO SO, IN WRITING, BY THE OWNER.
24. PROVIDE RELATED WIRING FROM CONTROL PANEL VIA N.C. AUXILIARY CONTACT TO EACH ELECTRONIC DOOR LOCK FOR EMERGENCY RELEASE DURING A FIRE ALARM CONDITION. COORDINATE ALL REQUIREMENTS WITH SECURITY SYSTEM SUPPLIER AND DOOR HARDWARE VENDOR.

100% CD

FULLY SPRINKLERED

Revisions:	Date

CONSULTANTS:

STATE OF OHIO RAYMOND E. HEINTEL 45763 REGISTERED PROFESSIONAL ENGINEER

ARCHITECT/ENGINEERS:

Westlake Reed Leskosky

925 Euclid Avenue, Suite 1900, Cleveland, Ohio 44115

216.522.1350

Phoenix - Washington - Cleveland
WRL Commission #09017.00

Drawing Title: **FIRE ALARM SYSTEM RISER DIAGRAM**

Approved: Project Director

Project Title: Wade Park Renovate Medical Library - CARES

Location: Cleveland, Ohio

Date: April 25, 2012 | Checked | Drawn

Project Number: 541-12-103

Building Number: 1

Drawing Number: **E-621** Dwg. of

Office of Facilities Management

Department of Veterans Affairs

VA FORM 08-6231, OCT 1978