



















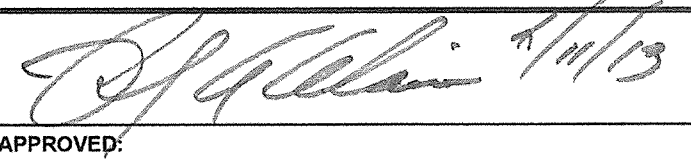
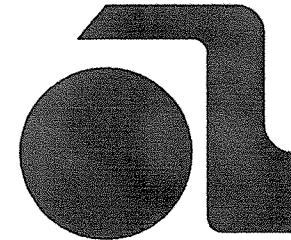


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GENERAL FIRE ALARM SYSTEM NOTES:	ABBREVIATIONS	LEGEND - PLAN SYMBOLS	DEVICE NOTES
<div>1. ALL WORK SHALL BE INSTALLED IN A NEAT WORKMANLIKE MANNER AND IN STRICT COMPLIANCE WITH THE REQUIREMENTS OF THE UNIFORM CONSTRUCTION CODE – STATE OF NEW JERSEY; THE NATIONAL ELECTRICAL CODE (LATEST EDITION – INCLUDING AMENDMENTS THERETO); THE LATEST EDITION OF APPLICABLE NATIONAL FIRE PROTECTION ASSOCIATION CODES STANDARDS/RECOMMENDED PRACTICES AND MANUALS; ALL LOCAL, STATE AND FEDERAL ENVIRONMENTAL PROTECTION REQUIREMENTS/ORDINANCES/LAWS; ALL LOCAL, STATE, FEDERAL (OSHA) SAFETY REGULATIONS/ORDINANCES/LAWS.</div> <div>2. CONTRACTOR SHALL COORDINATE HIS WORK WITH THAT OF OTHER CONTRACTORS EMPLOYED ON THE PROJECT, AND EMPLOYEES OF THE OWNER.</div> <div>3. CONTRACTOR SHALL VERIFY THE EXACT LOCATION OF CONDUITS, TRAYS, BOXES, CIRCUITS AND DEVICE WITH REFERENCE TO THE DRAWINGS OF OTHER TRADES IN ORDER TO AVOID INTERFERENCE. CONTRACTOR SHALL INSURE THAT ALL CONDUIT, TRAYS AND ACCESSORY ELECTRICAL EQUIPMENT NOT OTHERWISE DIMENSIONED ON DRAWINGS SHALL BE LOCATED SUCH THAT THERE WILL BE NO CONFLICT OR INTERFERENCE WITH ACCESS TO, OPERATION OF, OR REMOVAL OF ANY OTHER EQUIPMENT. THIS RESTRICTION ON LOCATION OF CONDUIT, TRAYS AND ACCESSORY ELECTRICAL EQUIPMENT SHALL APPLY REGARDLESS OF WHETHER EQUIPMENT OF OTHER TRADES IS DIMENSIONED OR NOT.</div> <div>4. THE CONTRACTOR SHALL COORDINATE ALL MOUNTING HEIGHTS, LOCATIONS AND OTHER REQUIREMENTS WITH THE GENERAL ARRANGEMENT DRAWINGS AND RELATED SPECIFICATIONS. MOUNTING HEIGHTS SHALL CONFORM TO REQUIREMENTS OF NFPA 72 AND ADA REQUIREMENTS.</div> <div>5. ALL EQUIPMENT & WIRING TO BE UL LISTED FOR FIRE ALARM USE.</div> <div>6. ALL EQUIPMENT TO BE 100% COMPATIBLE WITH THE UNION COUNTY NETWORK COMMAND CENTER AND COMMUNICATIONS NETWORK. CONTRACTOR TO FURNISH ALL ACCESSORY EQUIPMENT REQUIRED TO CONNECT TO THIS NETWORK. ALL PROGRAMMING NECESSARY TO INTEGRATE THIS FACILITY WITH COUNTY'S FIRE SYSTEM SHALL BE DONE BY THE COUNTY'S DESIGNATED FIRE SERVICE PROVIDER.</div> <div>7. ALL INSTALLATION TO BE PERFORMED BY A NJ LICENSED FIRE ALARM INSTALLER.</div> <div>8. ALL FIRE ALARM WIRING TO BE INSTALLED IN EMT OR AS INDICATED. FIRE ALARM CIRCUITS TO BE KEPT SEPARATE FROM ALL OTHER ELECTRICAL, COMMUNICATIONS, SIGNALING OR CONTROL WIRING. ALL FIRE ALARM CIRCUITS TO BE IDENTIFIED AND LABELED AS PER NFPA 72.</div> <div>9. DEVICES AND COMPONENTS SHOWN ARE THE MINIMUM REQUIRED. ADDITIONAL DEVICES AND COMPONENTS MAY BE REQUIRED DUE TO FIELD CONDITIONS OR TO COMPLY WITH APPLICABLE CODES. CONTRACTOR TO FURNISH AND INSTALL ALL COMPONENTS REQUIRED FOR A COMPLETE AND WORKING SYSTEM.</div> <div>10. REFER TO MANUFACTURER'S INSTALLATION INSTRUCTIONS FOR DETECTOR/DEVICE WIRING REQUIREMENTS.</div> <div>11. EXISTING FIRE ALARM SYSTEM TO REMAIN FULLY OPERATIONAL AT ALL TIMES DURING CONSTRUCTION AND UNTIL FINAL TESTING AND ACCEPTANCE.</div> <div>12. UPON FINAL ACCEPTANCE OF NEW SYSTEM, ALL OTHER EQUIPMENT AND WIRING SHALL BE REMOVED. OWNER TO PROVIDE A LIST OF EXISTING EQUIPMENT TO BE PRESERVED AND TURNED OVER TO THE OWNER. ALL OTHER EQUIPMENT TO BE PROPERLY DISPOSED OF BY THE CONTRACTOR.</div> <div>13. THIS SYSTEM DESIGN AND PERFORMANCE IS BASED ON A SIEMENS XLS ADDRESSABLE NON-VOICE FIRE ALARM CONTROL PANEL (FACP) WITH DOOR-MOUNTED DISPLAY/ CONTROLS AND INTERNAL BATTERY BACKUP. OTHER EQUIPMENT MANUFACTURERS WILL BE ACCEPTED, BUT MUST BE APPROVED IN WRITING PRIOR TO BIDDING.</div> <div>14. ACTUATION OF ANY ALARM DEVICES IN THE BUILDING SHALL SEND AN ALARM SIGNAL TO THE FIRE ALARM ANNUNCIATOR PANEL.</div> <div>15. ALL WIRE AND CABLE SHALL HAVE A WIRE MARKER ON EACH END, OR EQUAL. ALL MARKERS SHALL BE PRINTED. SHIELDS ON ALL SHIELDED CABLE SHALL BE CONTINUOUS, GROUNDED AT THE FIRE ALARM CONTROL PANEL ONLY, AND ISOLATED FROM GROUND ELSEWHERE.</div> <div>16. ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CUTTING PATCHING AND PAINTING REQUIRED FOR COMPLETE FIRE ALARM SYSTEM INSTALLATION.</div> <div>17. MOUNTING FOR ALL DEVICES SHALL COMPLY WITH IBC 2006, NFPA 90A, NFPA 72, NEC, AND ADAAG.</div> <div>18. FOR CONDUIT APPLICATIONS, USE ELECTRICAL METALLIC TUBING (EMT) AT ALL LOCATIONS INDOORS AND RIGID METAL CONDUIT OUTDOORS. ALL CONDUIT SIZE SHALL BE 3/4" MINIMUM.</div> <div>19. CONTRACTOR SHALL REPAIR/PATCH AND/OR REPAINT TO MATCH ADJACENT AREAS, ANY AREAS DAMAGED (OR WHERE ITEMS WERE REMOVED/DEMOLISHED) BY WORK OF THIS CONTRACT. ALL WALL, FLOOR AND CEILING PENETRATIONS SHALL BE SEALED TO MAINTAIN ORIGINAL FIRE RATING. SEE ARCHITECTURAL DRAWINGS FOR FIRE RATING SCHEDULE.</div> <div>20. THE FIRE ALARM VENDOR MUST CALCULATE THE NOTIFICATION APPLIANCES CANDELA RATINGS AND DESIGNATE THEM ON THE SHOP DRAWINGS. ALL STROBE SETTING MUST COMPLY WITH NFPA 72 REQUIREMENTS.</div> <div>21. DUCT SMOKE DETECTORS SHALL BE INSTALLED BY THE ELECTRICAL CONTRACTOR AND WIRED FOR FAN SHUTDOWN BY THE ELECTRICAL CONTRACTOR. EACH DUCT SMOKE DETECTOR SHALL HAVE A REMOTE ALARM INDICATOR WITH KEY TEST SWITCH, INSTALLED AND WIRED. EACH AIR HANDLING SYSTEM 200 CFM OR GREATER SHALL BE EQUIPPED WITH A SUPPLY DUCT DETECTOR. EACH AIR HANDLING SYSTEM GREATER THAN 15,000 CFM SHALL BE EQUIPPED WITH A SUPPLY AND RETURN DUCT DETECTOR WHEN THE AIR HANDLER SUPPLIES MORE THAN ONE STORY. RETURN DUCT DETECTORS ARE NOT REQUIRED WHERE THE ENTIRE SPACE SERVED BY THE AIR HANDLER IS PROTECTED BY SYSTEM SMOKE DETECTORS. DUCT DETECTORS ARE NOT REQUIRED ON EXHAUST FANS."</div> <div>22. ALL WORK AND SHUTDOWNS ASSOCIATED WITH FIRE ALARM SYSTEM INTERFACES SHALL BE COORDINATED THROUGH THE RESPECTIVE CONTRACTOR:<div>22.1. SPECIAL HAZARD SUPPRESSION SYSTEM</div><div>22.2. AUTOMATIC SPRINKLER SYSTEM</div><div>22.3. HVAC SYSTEM</div><div>22.4. ELEVATOR SYSTEM</div><div>22.5. OTHERS, AS APPLICABLE</div></div> <div>23. SYSTEM MANUFACTURER SHALL COORDINATE FINAL QUANTITIES AND LOCATIONS OF ALL SYSTEM MONITOR AND CONTROL MODULES WITH THE INTERFACE CONTRACTORS. FINAL LOCATIONS TO BE SHOWN ON SHOP DRAWINGS.</div> <div>24. ACCEPTANCE TESTING MUST BE PERFORMED IN ACCORDANCE WITH NFPA 72.</div> <div>25. EVENT, IF CONTRACTOR PULLS THE EXISTING SERVICE SOFTWARE, CONTRACTOR SHALL BARE ALL THE EXPENSES AND FEES ASSOCIATED WITH THE SCOPE OF WORK.</div> <div>26. UPON COMPLETION OF FINAL TESTING, THE INSTALLING CONTRACTOR SHALL SUBMIT RECORD DRAWINGS DETAILING AS-BUILT CIRCUITING AND INCORPORATING ALL FIELD AND DESIGN DIRECTIVES GIVEN THROUGH OUT THE PROJECT.</div>	<div>A AMPERE</div> <div>AF AMPERE FRAME</div> <div>A.F.F. ABOVE FINISH FLOOR</div> <div>A.F.G. ABOVE FINISH GRADE</div> <div>AIC AMPS INTERRUPTING CURRENT</div> <div>AS AMMETER SWITCH</div> <div>AT AMPERE TRIP</div> <div>ATS AUTOMATIC TRANSFER SWITCH</div> <div>AWG AMERICAN WIRE GAUGE</div> <div>BKR, CB CIRCUIT BREAKER</div> <div>C CONDUIT</div> <div>CKT CIRCUIT</div> <div>CPD CONNECTIV POWER DELIVERY CO.</div> <div>CU COPPER</div> <div>DBC DIRECT BURIED CABLE</div> <div>DISC DISCONNECT SWITCH</div> <div>DT DOUBLE THROW</div> <div>DWG DRAWING</div> <div>ECB ENCLOSED CIRCUIT BREAKER</div> <div>EFF EFFLUENT</div> <div>ELECT ELECTRIC, ELECTRICAL</div> <div>EMERG EMERGENCY</div> <div>EMT ELECTRICAL METALLIC TUBING</div> <div>ENCL ENCLOSURE</div> <div>EQUIP EQUIPMENT</div> <div>EXIST EXISTING</div> <div>FDR FEEDER</div> <div>FSS FUSED SAFETY SWITCH</div> <div>FUSE FUSE</div> <div>G, GND GROUND</div> <div>GEN GENERATOR</div> <div>GFCI GROUND-FAULT CIRCUIT INTERRUPTER</div> <div>HD HEAVY DUTY</div> <div>HID HIGH-INTENSITY DISCHARGE (LIGHTING)</div> <div>HOA HAND-OFF-AUTOMATIC</div> <div>HP HORSEPOWER</div> <div>HZ HERTZ</div> <div>INF INFLUENT</div> <div>JCP&L JERSEY CENTRAL POWER & LIGHT CO.</div> <div>kCMIL 1000 CIRCULAR MILS</div> <div>kVA KILO-VOLT AMPERE</div> <div>kW KILOWATT</div> <div>LTG LIGHTING</div> <div>MAX MAXIMUM</div> <div>MCC MOTOR CONTROL CENTER</div> <div>MCP MAIN CONTROL PANEL</div> <div>MFG MANUFACTURER</div> <div>MH MOUNTING HEIGHT</div> <div>MLO MAIN LUGS ONLY</div> <div>MOV MOTOR OPERATED VALVE</div> <div>MTD MOUNTED</div> <div>N NEUTRAL</div> <div>NEMA NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION</div> <div>NTS NOT TO SCALE</div> <div>P POLE(S)</div> <div>PF POWER FACTOR</div> <div>PLC PROGRAMMABLE LOGIC CONTROLLER</div> <div>PNL PANEL</div> <div>PRESS PRESSURE</div> <div>PRI PRIMARY</div> <div>PRSC PVC COATED RIGID STEEL CONDUIT</div> <div>PSE&G PUBLIC SERVICE ELECTRIC & GAS CO</div> <div>PVC POLYVINYL CHLORINE</div> <div>PWR POWER</div> <div>RCPT RECEPTACLE</div> <div>RSC RIGID STEEL CONDUIT</div> <div>SCHD SCHEDULE</div> <div>SEC SECONDARY</div> <div>SEL SELECTOR</div> <div>SS SELECTOR SWITCH</div> <div>STP SHIELDED TWISTED PAIR</div> <div>SW SWITCH</div> <div>TBD TO BE DETERMINED</div> <div>TDR TIME DELAY RELAY</div> <div>TEL TELEPHONE</div> <div>TERM TERMINAL</div> <div>TP TWISTED PAIR</div> <div>TS TEST SWITCH</div> <div>TYP TYPICAL</div> <div>V VOLT</div> <div>VA VOLT-AMPERE</div> <div>VS VOLTMETER SWITCH</div> <div>W WATT</div> <div>WP WEATHERPROOF</div> <div>WTP WATER TREATMENT PLANT</div> <div>WWTP WASTE WATER TREATMENT PLANT</div> <div>XFMR TRANSFORMER</div> <div>XMTR TRANSMITTER</div> <div>XP EXPLOSIONPROOF</div> <div>ø DIAMETER OR PHASE</div>	<div> NOTIFICATION APPLIANCE HORN STROBE</div> <div> NOTIFICATION APPLIANCE HORN STROBE WEATHERPROOF</div> <div> NOTIFICATION APPLIANCE STROBE</div> <div> NOTIFICATION APPLIANCE STROBE WEATHERPROOF</div> <div> INITIATING DEVICE MANUAL CALL BOX</div> <div> INITIATING DEVICE ADDRESSABLE HEAT DETECTOR</div> <div> INITIATING DEVICE ADDRESSABLE HEAT DETECTOR (*INDICATES ABOVE CEILING)</div> <div> INITIATING DEVICE CONVENTIONAL HEAT DETECTOR (ACTIVATION AT 200 DEGREES)</div> <div> INITIATING DEVICE ADDRESSABLE SMOKE DETECTOR</div> <div> INITIATING DEVICE DUCT SMOKE DETECTOR</div> <div> DETECTOR TEST STATION MTD IN VISIBLE LOCATION</div> <div> ADDRESSABLE CONTROL RELAY</div> <div> ADDRESSABLE MONITOR MODULE FOR SUPERVISED SWITCH</div> <div> SUPERVISED SWITCH T=TAMPER P=PRESS F=FLOW</div> <div> FIRE ALARM CONTROL PANEL</div> <div> REMOTE ANNUNCIATOR</div> <div> DATA LINE ISOLATOR</div> <div> END OF LINE RESISTOR</div> <div> ROOM/SPACE NUMBER</div> <div> DOOR DESIGNATION</div>	<div>1. ALL INITIATING DEVICES ARE TO BE FULLY ADDRESSABLE UNLESS OTHERWISE NOTED.</div> <div>2. SMOKE DETECTORS ARE MULTIPLE CRITERIA, "INTELLIGENT" DEVICES UNLESS OTHERWISE NOTED.</div> <div>3. HEAT DETECTORS SHALL INCORPORATE RATE OF RISE AND FIXED TEMPERATURE RESPONSE UNLESS OTHERWISE NOTED.</div> <div>4. MANUAL CALL BOXES SHALL BE SINGLE ACTION TYPE UNLESS OTHERWISE NOTED AND SHALL HAVE TAMPER RESISTANT HOUSING IN ALL PUBLIC SPACES.</div> <div>5. CONTRACTOR TO SUPPLY ALL REQUIRED SWITCHES AND RELAYS TO INTERFACE WITH EXISTING EQUIPMENT.</div> <div>6. ALL AUDIBLE DEVICES TO HAVE ADJUSTABLE SOUND PRESSURE LEVEL OUTPUT.</div> <div>7. ALL VISUAL NOTIFICATION DEVICES TO HAVE ADJUSTABLE CANDELA OUTPUT. WHERE MULTIPLE VISUAL DEVICES ARE WITHIN SIGHT OF EACH OTHER THEY SHALL BE SYNCHRONIZED AS PER NFPA REQUIREMENTS.</div>


APPROVED:

Richard A. Alaimo
PROFESSIONAL ENGINEER
NEW JERSEY LICENSE NO. 13195

REVISIONS	DATE	BY



ALAIMO GROUP
Consulting Engineers
NJDC# 24GA27988400
200 HIGH STREET MOUNT HOLLY, N.J.
2 MARKET STREET PATERSON, N.J.

FIRE PROTECTION IMPROVEMENTS VARIOUS PARK MAINTENANCE BUILDINGS
FIRE ALARM SYSTEMS LEGENDS, SYMBOLS & NOTES
SCALE: NONE

CLIENT: COUNTY OF UNION		DATE: APR. 2013	SHEET FA-100
PROJECT LOCATION: RAHWAY, SCOTCH PLAINS, PLAINFIELD UNION COUNTY NEW JERSEY		DESIGNED BY: SDR/PFM CHECKED BY: SDR PROJECT NO.: 2010-026 DEPT. HEAD: 	
RAA PROJECT NO.: A-0530-0017-003		FILE NO.:	