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ISSUED FOR: DRC 10-13-14

BIDS PERMIT 04-09-2015

CONSTRUCTION



PROJECT TITLE
CITY OF HALLANDALE BEACH FIRE RESCUE STATION 7

111 FOSTER ROAD HALLANDALE BEACH, FL 33009

NUM.	DESCRIPTION	DATE
1	BUILDING DEPT. COMMENTS	05/15/15
3	BLDG DEPT. COMM./COORDINATION	07/10/15
5	ADDENDUM	09/14/15

THIS PROJECT HAS BOOK SPECIFICATIONS THAT ARE AN INTEGRAL AND COMPLIMENTARY PART OF THE OF THE CONSTRUCTION DOCUMENTS.

THESE DRAWINGS ARE PREPARED PER ESTABLISHED INDUSTRY STANDARDS AND REPRESENT THE ARCHITECT AND ENGINEERS DESIGN CONCEPT. THEY ARE NOT INTENDED TO PROVIDE EVERY DETAIL OR CONDITION REQUIRED TO CONSTRUCT THE BUILDING. THE CONTRACTOR THROUGH SUBMITTALS AND OTHER COORDINATION EFFORTS IS FULLY RESPONSIBLE FOR PROVIDING A COMPLETE AND OPERATIONAL BUILDING WHETHER INDICATED ON THE PLANS OR NOT.

FILE NUMBER
14069 FA-0.1.DWG

DRAWING TITLE
FIRE ALARM NOTES AND LEGEND

DATE 01/14/2015 DRAWN BY MB,DJM,AD

JOB NUMBER 140403/14069

DRAWING NUMBER

FA-0.1

FIRE ALARM SYSTEM GENERAL NOTES

- SYSTEM SHALL BE U.L. LISTED AS POWER LIMITED AND OF GENERAL ALARM PER NFPA 72, AND FBC-2010; CH1, 1-4.2B; NON-CODED, ELECTRICALLY SUPERVISED, ADDRESSABLE, POWER LIMITED, BATTERY BACK-UP TELEPHONE AUTODIALER TO SEND SIGNALS TO CENTRAL STATION FACILITY, TROUBLE BELL, TROUBLE LIGHT, & SILENCING SWITCH. S.L.C. CIRCUIT SHALL BE "CLASS B-STYLE 4", STYLE 4", AND "T" TAPPING ALLOWED. NOTIFICATION CIRCUIT SHALL BE "CLASS B-STYLE Y", NO "T" TAPPING ALLOWED.
- FIRE ALARM CONTROL PANEL SHALL BE NOTIFIER 'NFS2-640', INCLUDING ALL MODULES, CARDS, COMPONENTS REQUIRED FOR A FULLY OPERATIONAL SYSTEM. PANEL SHALL BE EXPANDABLE. FIRE ALARM ANNUNCIATOR PANEL SHALL BE NOTIFIER 'ACM/AEM' (EXPANDABLE) WITH LED'S TO ANNUNCIATE BY POINT - I.D. ALL MANUAL & AUTOMATIC DEVICES. APPROVED EQUAL BRANDS EXCEPTABLE.
- SUPPLEMENTARY APPLIANCE INDICATING PANEL SHALL HAVE TWO 1.25 AMP-24VOLT (30 VA) NOTIFICATION APPLIANCE CIRCUITS, WITH SELF-CONTAINED POWER AND 7 AMP-HOUR BACK-UP BATTERY CHARGER AND BATTERIES.
- EACH FIRE ALARM PANEL SHALL HAVE MAINTENANCE FREE BATTERY BACK-UP WITH MINIMUM 24 HOURS STANDBY AND ADDITIONAL 5 MINUTES ALARM. FIRE ALARM SUPPLIER/INSTALLER SHALL SUBMIT BATTERY CALCULATIONS BASED UPON DEVICES ACTUALLY INSTALLED FOR SHELL SHELL BUILDING, AND PROVIDE FOR 100% SPARE CAPACITY FOR FUTURE DEVICES.
- MAKE ALL SPLICES/CONNECTIONS ON TERMINAL STRIPS, TAPED OR WIRE NUT SPLICES NOT ALLOWED. WIRING COLOR CODE IS REQUIRED. IT IS RECOMMENDED FOR EASE OF TERMINATIONS IF COLOR CODE IS NOT USED, LABEL WIRES WITH CORRESPONDING LETTER DESIGNATION.
- AT START OF JOB AND PRIOR TO ANY INSTALLATION, SUBMIT COMPLETE WIRING DIAGRAMS INCLUDING WIRE AND CONDUIT SIZES, EQUIPMENT LISTS AND CATALOGUE CUTS OF EACH ITEM OF EQUIPMENT TO ARCHITECT AND TO LOCAL FIRE INSPECTION AUTHORITY FOR APPROVALS.
- INSTALLER SHALL BE U.L. LISTED + STATE LICENSED FIRE ALARM SYSTEMS CONTRACTOR. AT COMPLETION OF JOB, TEST SYSTEM IN PRESENCE OF FIRE INSPECTOR. SYSTEM SHALL BE U.L. CERTIFICATED.
- ALL WIRE COUNTS ARE BASED ON EQUIPMENT NEEDS, THE TYPE OF WIRE USED (SIZE, INSULATION, # OF STRANDS, ETC.) AND HOW IT IS INSTALLED IS THE SOLE RESPONSIBILITY OF THE ELECT CONTRACTOR. IT MUST MEET ALL APPLICABLE CODES AND SPECIFICATIONS. ALL WIRE SHALL BE #14 THWN - CU.
- ALL CONDUIT SIZES SHALL BE 3/4", UNLESS NOTED OTHERWISE. THE INSTALLATION OF THE FIRE ALARM RACEWAY SYSTEM IS THE SOLE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR.
- ALL COMPONENTS SHALL REFLECT 'UL' LISTING FOR FIRE SERVICE USE. MEET NFPA 72 REQUIREMENTS, AND SHALL BE COMPATIBLE. FIRE ALARM SYSTEM TO BE INSTALLED IN ACCORDANCE WITH NFPA .
- A BREAK IN ANY FIELD WIRING OR GROUNDING OF ANY CONDUCTOR WILL RESULT IN THE ACTIVATION OF THE FIRE ALARM PANEL TROUBLE BUZZER, WHICH CAN BE SILENCED BY OPERATING THE 'TROUBLE SILENCE' BUTTON ON THE FIRE ALARM PANEL.
- PULL STATIONS TO BE MOUNTED AT 48" AFF PER THE ADA CODE.
- WALL MOUNTED HORNS AND STROBES TO BE AT 80" TO BOTTOM OR 6" FROM CEILING WHICH EVER IS LOWER.
- CEILING MOUNTED SMOKE DETECTORS SHALL BE LOCATED IN A DIRECT AIRFLOW, NOT CLOSER THAN 3 FEET FROM AN AIR SUPPLY DIFFUSER. NFPA 72 A-5-3.6.1 AND A-5-5.7.1.
- THE CONTROL RELAY MODULE FOR RTU SHUTDOWN SHALL BE LOCATED WITHIN 3 FEET OF THE DEVICE BEING CONTROLLED. NFPA 101 A-7-6.5.5. THE RELAY CONTACTS HAVE A MAXIMUM CAPABILITY OF 1.0 AMPS @ 24V AND 0.3 AMPS AT 120VAC. CONTRACTOR MUST VERIFY THAT THE SHUTDOWN CIRCUIT DOES NOT EXCEED THESE MAXIMUM CURRENT RATINGS RATINGS.
- THE DUCT SMOKE DETECTOR AND REMOTE TEST IS PROVIDE BY THE FIRE ALARM CONTRACTOR. THE MECHANICAL CONTRACTOR IS RESPONSIBLE FOR THE INSTALLATION OF THE DUCT SMOKE DETECTOR IN THE DUCT WORK. THE FIRE ALARM CONTRACTOR IS RESPONSIBLE FOR ALL WIRING.
- THE INSTALLING CONTRACTOR SHALL SET THE DEVICE ADDRESS AS IDENTIFIED ON THE INSTALLATION WIRING DIAGRAMS.
- THE 120VAC POWER FEED FOR THE FIRE PANEL AND BOOSTER POWER SUPPLIES MUST BE FROM A DEDICATED EMERGENCY PANEL BREAKER, AND THE BREAKER MUST BE LOCKABLE, RED IN COLOR, AND IDENTIFIED THAT IT IS FOR THE 'FIRE ALARM SYSTEM'.
- POWER UP AND POWER DOWN OF THE FIRE ALARM PANEL MUST BE DONE IN THE PROPER SEQUENCE:
 POWER UP: TURN ON THE BREAKER IN THE PANEL AND THEN CONNECT THE BATTERY.
 NOTE: DO NOT DISCONNECT THE 120VAC POWER FEED FROM THE TERMINAL BLOCK TO DISCONNECT POWER.
- ALL SOUNDERS SHALL BE SET TO THE "TEMPORAL MODE" AND SHALL BE SYNCHRONIZED FOR UNIFORM SIGNALLING. ALL STROBE SHALL BE SYNCHRONIZED PER ADA REQUIREMENTS. SOUNDERS SHALL BE SET TO THE "TEMPORAL MODE" AND SHALL BE SYNC'D FOR UNIFORM SIGNALLING. ALL STROBE SHALL BE SYNCHRONIZED PER ADA REQUIREMENTS.
- PLEASE REFER TO THE WIRING LEGEND FOR THIS PROJECT FOR TYPES AND GAUGES. PLEASE CONFORM TO THESE REQUIREMENTS TYPES AND GAUGES. PLEASE CONFIRM TO THESE REQUIREMENTS SINCE THEY ARE REQUIRED BY THE MANUFACTURER. PIPE FILLS AND TERMINATIONS SHALL MEET NEC CODES.

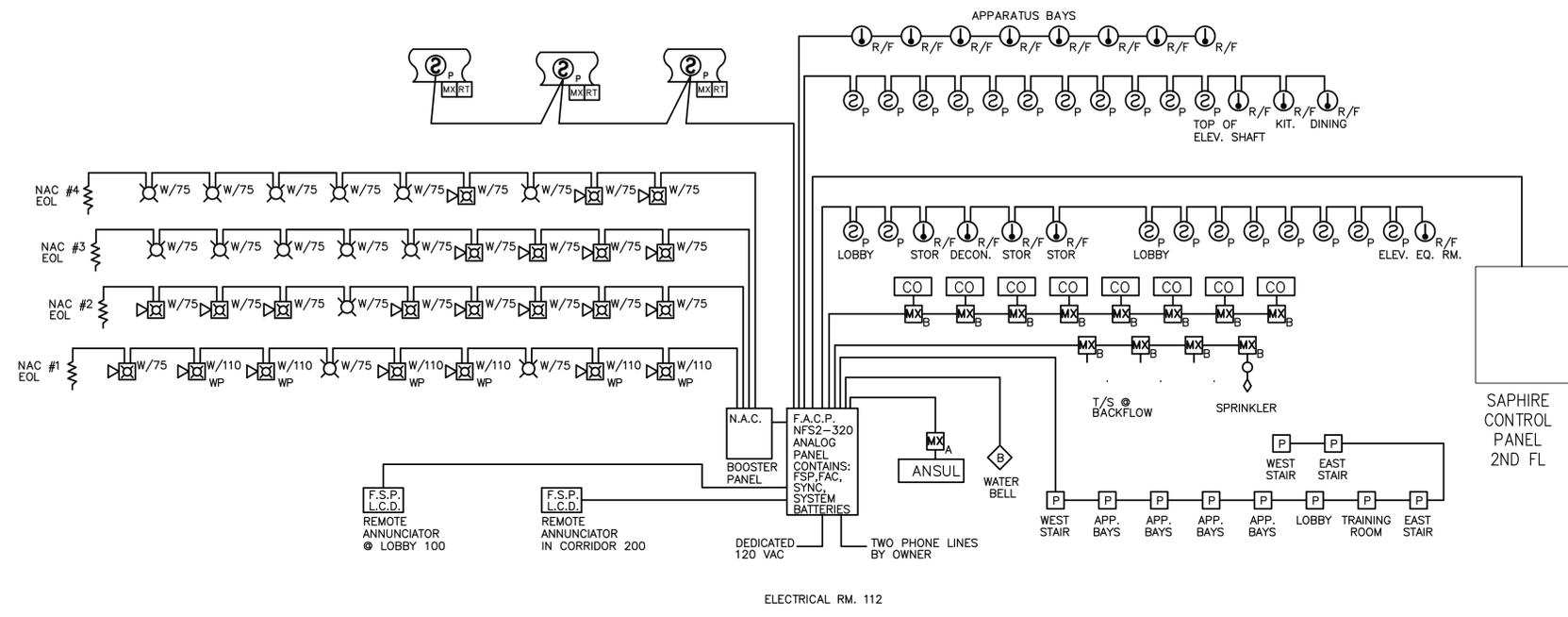
NOTE:
 THE FIRE ALARM DRAWINGS ARE DIAGRAMMATIC AND ARE INTENDED TO SHOW DESIGN INTENT. THE CONTRACTOR SHALL SUBMIT INSTALLATION DRAWINGS FOR PERMITTING BASED ON ALL APPLICABLE CODES INCLUDING BUT NOT LIMITED TO NFPA 70, NFPA 72, FBC 2010 AND SHALL SHOW ALL DEVICES, CIRCUITING, VOLTAGE DROP CALCULATIONS, BATTERY CALCULATIONS, CUT SHEETS, ETC. THAT PROVIDE A COMPLETE CODE COMPLIANT SYSTEM.

FIRE ALARM SYMBOL LIST

- FIRE ALARM SYSTEM PHOTOELECTRIC SMOKE DETECTOR NOTIFIER # FSP-851 WITH NOTIFIER #B710LP BASE
- DUCT SMOKE DETECTOR PHOTO ELECTRIC W/SAMPLING TUBE. NOTIFIER #SD-751PL FLASHSCAN ADDRESSABLE. MOUNTED IN ACCORDANCE WITH NFPA 90A .
- FIRE ALARM SYSTEM HEAT DETECTOR - RATE-OF-RISE. NOTIFIER # FST-851R WITH B710LP BASE, APPROX. 140' ANALOG ADDRESSABLE.
- FIRE ALARM SYSTEM NOTIFIER "NBG-12LX" ADDRESSABLE DOUBLE ACTION PULL STATION. MOUNT AS PER DETAILS.
- FIRE ALARM SYSTEM MULTI-CANDELA STROBE LIGHT, W = WALL MOUNTED, GENTEX # GES3-24WR, A.D.A. COMPLIANT.
- FIRE ALARM SYSTEM COMBINATION MULTI-CANDELA HORN/STROBE LIGHT, W = WALL MOUNTED. GENTEX # GEC3-24WR, A.D.A. COMPLIANT
- FIRE ALARM SYSTEM COMBINATION MULTI-CANDELA HORN/STROBE LIGHT, C = CEILING MOUNTED. GENTEX # GEC3-24CR, A.D.A. COMPLIANT
- FIRE ALARM SYSTEM WATER FLOW SWITCH, WITH NOTIFIER "FMM-101" MONITOR MODULE, SWITCH PROVIDED BY SPRINKLER CONTRACTOR.
- FIRE ALARM SYSTEM TAMPER SWITCH, WITH NOTIFIER "FMM-101" MONITOR MODULE. SWITCH PROVIDED BY SPRINKLER CONTRACTOR.
- FIRE ALARM SYSTEM CARBON MONOXIDE SENSOR, SYSTEM SENSOR #C01224 W/"FMM-101" MONITOR MODULE.
- FIRE ALARM SYSTEM REMOTE TEST STATION MATCH DUCT SMOKE DETECTOR.
- FIRE ALARM SYSTEM MONITOR MODULE, CLASS "A" INTERFACE. NOTIFIER # "FMM-1"
- FIRE ALARM SYSTEM MONITOR MODULE, CLASS "B" INTERFACE. NOTIFIER # "FMM-101"
- FIRE ALARM SYSTEM MANUAL ADDRESSABLE DUAL MONITOR MODULE. NOTIFIER # "FMM-1"
- FIRE ALARM SYSTEM WATERFLOW BELL "SSM-24-10", AS REQUIRED BY LOCAL CODE.
- FIRE ALARM SYSTEM CONTROL PANEL; NOTIFIER NFS2-320
- FIRE ALARM SYSTEM ANNUNCIATOR PANEL, L.E.D POINT "ID" REQUIRED AT FIRE ALARM CONTROL PANEL.
- FIRE ALARM SYSTEM DIGITAL COMMUNICATOR, U.L. LISTED DUAL PHONE LINES REQUIRED BY OWNER.
- NOTIFICATION APPLIANCE CIRCUIT BOOSTER PANEL TO MATCH DEVICES WITH BUILT IN SYNC MODULES.
- RECESSED KNOX BOX FURNISHED BY OWNER & INSTALLED BY GENERAL CONTRACTOR. MOUNT AT +60" TO BOTTOM OF BOX.
- BACKFLOW PREVENTER - DOUBLE CHECK TYPE.

SEQUENCE OF OPERATION

- A GENERAL ALARM SHALL BE CAUSE WHEN ANY OF THE FOLLOWING DEVICES ARE ACTIVATED.
 - MANUAL PULL STATIONS.
 - AREA SMOKE DETECTORS, IN ALL COMMON AREAS AS REQUIRED.
 - THERMAL HEAT DETECTORS, FOR SPECIFIC AREAS AS REQUIRED.
 - WATER FLOW SWITCH WHEN ACTIVATED BY WATER MOVEMENT THAT EXCEEDS THE DELAY TIME SET WITHIN THE DEVICE.
- A SUPERVISORY SIGNAL SHALL BE GENERATED WHEN ANY OF THE FOLLOWING DEVICES ARE ACTIVATED.
 - GATE VALVE TAMPER SWITCH WHEN MOVED TO AN OFF NORMAL POSITION BY THE ACTION OF THE VALVE BEING CLOSED, NO MORE THAN 2-1/2 TURNS OF THE GATE VALVE OFF NORMAL SHALL CAUSE THE SUPERVISORY SIGNAL TO SOUND.
 - P.I.V. AND BACKFLOW TAMPER SWITCHES SHALL ALSO BE REQUIRED TO MEET THE ABOVE OFF NORMAL CONDITION.
 - DUCT SMOKE DETECTORS SHALL NOT CAUSE A GENERAL ALARM AND SHALL BE CONSIDERED SUPERVISORY DEVICES.
- A TROUBLE CONDITION SHALL BE CAUSED BY ANY OPEN, SHORT AND/OR GROUND ON ANY FIELD WIRING ASSOCIATED WITH THE FIRE ALARM SYSTEM, AND SHALL COMPLY WITH NFPA 72 IN ALL ASPECTS.
- ALL CIRCUITS FOR THIS FIRE ALARM SYSTEM SHALL BE AS INDICATED IN THE GENERAL NOTES (ON THIS SHEET).
- THE SECOND FLOOR DATA ROOM SUPPRESSION SYSTEM SHALL BE MONITORED BY THE MAIN FACP. UPON ACTIVATION OF COMPUTER ROOM SUPPRESSION SYSTEM, A GENERAL ALARM SHALL BE SENT TO ALL ANNUNCIATION DEVICES, AS WELL AS THE LOCAL DEVICE IN THE DATA ROOM.



FIRE ALARM SYSTEM RISER DIAGRAM

MAIN FCP PANEL (NFS2-640) VOLTAGE DROP CALCULATION

FORMULAS: $V=2K \times I \times L / \text{cir mil}$, $V=2R \times I \times L$
 RESISTIVITY OF CONDUCTOR: K=12 FOR COPPER
 CIR MILS: #18=1620, #16=2580, #14=4110, #12=6530, #10=10380

FIRE ALARM NOTES, RISER, AND LEGEND

N.T.S.

FIRE ALARM DRAWING LIST

DRAWING NUMBER	DRAWING NAME
F-01	FIRE ALARM NOTES, RISER, AND LEGEND
F-11	FIRE ALARM FIRST FLOOR PLAN
F-12	FIRE ALARM SECOND FLOOR PLAN
F-21	FIRE ALARM CALCULATIONS AND DETAILS

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BID SET 7-24-2015