

ELECTRICAL SPECIFICATION

- SCOPE: PROVIDE A COMPLETE ELECTRICAL SYSTEM AS SHOWN AND MEET THE REQUIREMENTS OF APPLICABLE STATE AND LOCAL CODES. OBTAIN AND PAY FOR ALL PERMITS, INSPECTIONS AND CONNECTIONS NECESSARY FOR THIS WORK.
- SITE INSPECTION: VISIT AND THOROUGHLY INSPECT SITE BEFORE SUBMITTING BID. ASSUME RESPONSIBILITY FOR MEETING ALL EXISTING SITE CONDITIONS AFFECTING THE WORK
- GUARANTEE: PROVIDE ALL NEW MATERIALS AND EQUIPMENT, AND GUARANTEE SAME FOR ONE YEAR FROM DATE OF ACCEPTANCE.
- SUBMITTALS: SUBMIT SHOP DRAWINGS, CATALOG SHEETS, OR OTHER DESCRIPTIVE DATA WITH SUFFICIENT INFORMATION TO ESTABLISH DESIGN, QUALITY AND PERFORMANCE. MANUFACTURER CATALOG SHEETS SUBMITTED WITHOUT SPECIFIC MODEL NUMBERS INDICATED WILL BE REJECTED. DATA SHALL DESCRIBE APPARATUS, EQUIPMENT, PANELS, FIXTURES, AND OTHER ITEMS REQUIRING DESCRIPTIVE LITERATURE. SUBMITTALS SHALL INCLUDE THE FOLLOWING:
 - LIGHT FIXTURES
 - FIRING DEVICES
 - FIRE ALARM SYSTEM
- CIRCUIT BREAKERS SHALL BE MOLDED CASE, WITH QUICK-MAKE AND QUICK-BREAK ACTION FOR BOTH MANUAL AND AUTOMATIC OPERATION, WITH THERMAL MAGNETIC TRIP ELEMENTS. SAFETY SWITCHES SHALL BE QUICK-MAKE, QUICK-BREAK TYPE, IN GENERAL PURPOSE OR WEATHER PROOF ENCLOSURE. PROVIDE PROPERLY SIZED FUSES WHERE INDICATED ON THE DRAWINGS.
- WIRING DEVICES: WALL SWITCHES SHALL BE QUIET AC TYPE, 120/277V, 20A, COLOR AS DIRECTED BY ARCHITECT. RECEPTACLES SHALL BE DUPLEX, 120V, 20A, 3 WIRE GROUNDING TYPE, COLOR AS DIRECTED BY ARCHITECT. WALL PLATES FOR SWITCHES, RECEPTACLES, AND TELEPHONE/DATA OUTLETS SHALL BE PLASTIC, COLOR AS DIRECTED BY ARCHITECT. DUPLEX RECEPTACLE TO BE INSTALLED WITH THE GROUND ON BOTTOM. SPECIAL RECEPTACLES SHALL BE AS SHOWN.
- LIGHT FIXTURES: LIGHT FIXTURES SHALL BE FURNISHED AS SCHEDULED AND SHALL BE FACTORY WIRED, ASSEMBLED AND COMPLETE WITH NEW LAMPS. ALL FLUORESCENT FIXTURES SHALL BE EQUIPPED WITH CBM CERTIFIED BALLASTS TYPE P.
- ELECTRICAL CONDUIT: INSTALL ALL WIRING IN MINIMUM SIZE 1/2" CONDUIT. EMT SHALL BE USED GENERALLY FOR INTERIOR WIRING. M/C CABLE MAY BE USED ONLY WHERE TOTALLY CONCEALED AND PERMITTED BY CODE. FLEXIBLE STEEL CONDUIT SHALL BE USED FOR FINAL CONNECTION TO ALL MOTORIZED EQUIPMENT. UNDERGROUND CONDUIT SHALL BE PVC.
- OUTLET BOXES: OUTLET BOXES FOR SWITCHES, RECEPTACLES AND TELEPHONE/DATA OUTLETS IN FINISHED WALLS SHALL BE STANDARD GANG TYPE (1-1/2" DEEP) WITH COVERS SIZED FOR BOX. WALL SWITCH OUTLETS SHALL BE FLUSH MOUNTED 48 INCHES ABOVE FLOOR TO TOP. RECEPTACLE AND TELEPHONE/DATA OUTLET BOXES SHALL BE FLUSH MOUNTED 15 INCHES ABOVE FLOOR TO BOTTOM, UNLESS OTHERWISE NOTED.
- WIRE AND CABLE: ALL WIRING SHALL BE COPPER WITH THHN OR XHHW INSULATION. WIRING SUBJECTED TO ELEVATED TEMPERATURES SHALL BE DERATED AS REQUIRED BY THE NEC. WIRE SIZES NO. 6 AND LARGER SHALL BE STRANDED.
- BRANCH CIRCUITS: INSTALL ALL WIRING IN CONDUIT AS SHOWN. NO SMALLER THAN NO. 12 SHALL BE USED FOR ANY BRANCH CIRCUIT. WIRING FOR MOTORS, HEATING AND OTHER MISCELLANEOUS EQUIPMENT SHALL BE INSTALLED IN ACCORDANCE WITH THE DRAWINGS. ALTHOUGH NOT SHOWN AND NOT REQUIRED BY CODE, ALL BRANCH CIRCUITS SHALL BE PROVIDED WITH A PROPERLY SIZED EQUIPMENT GROUNDING CONDUCTOR.
- TESTING AND MARKING: COMPLETELY TEST AND MARK ALL WIRING AND EQUIPMENT INSTALLED AND LEAVE THE INSTALLATION IN PERFECT WORKING ORDER.
- ELECTRICAL/MECHANICAL COORDINATION: UNLESS SPECIFICALLY REQUIRED OTHERWISE, PROVIDE ALL DISCONNECT DEVICES FOR A/C EQUIPMENT AND PROVIDE ALL POWER WIRING. MECHANICAL CONTRACTOR SHALL FURNISH AND INSTALL ALL A/C CONTROL DEVICES AND WIRING.
- THE FIRE ALARM SYSTEM IS EXISTING. ALL NEW DEVICES SHALL MATCH EXITING MANUFACTURER'S TYPES AND FINISHES. THE ENTIRE SYSTEM ARRANGEMENT, WIRING, AND COMPONENTS SHALL BE RE-CERTIFIED AND CONFORM TO CURRENT NFPA 70, 72, 90A, 101, AND ALL LOCAL CODES.

ELECTRICAL LEGEND

- EXIT SIGN COMBO EGRESS SIGN
- CEILING MTD DECORATIVE PENDANT
- STRIP LIGHT
- CEILING FLUORESCENT OR LED DOWNLIGHT WALL MOUNTED FIXTURE
- EXISTING CEILING FLUORESCENT OR LED DOWNLIGHT
- EXISTING WALL MOUNTED FIXTURE
- CIRCUIT/CONDUIT UNDERFLOOR/GRADE
- CIRCUIT/ CONDUIT
- BRANCH CIRCUIT HOMERUN
- EXISTING CIRCUIT/ CONDUIT
- SWITCH SINGLE POLE
- EXISTING SWITCH SINGLE POLE
- 3 WAY SWITCH
- EXISTING DUPLEX RECEPTACLE
- DUPLEX RECEPTACLE
- DUPLEX GFI TYPE RECEPTACLE
- EXISTING PANELBOARD (PNL)
- JUNCTION BOX
- FA- HORN/STROBE WALL MTD

ABBREVIATIONS

- AFF ABOVE FINISHED FLOOR/GRADE
- ANN ANNUNCIATOR
- FA FIRE ALARM
- FACP FIRE ALARM CONTROL PANEL
- GFI GROUND FAULT INTERRUPT
- GND GROUND
- MW MILLWORK
- SPD SURGE PROTECTION DEVICE
- WH WATER HEATER
- WP WEATHERPROOF
- XFMR TRANSFORMER

LIGHTING FIXTURE SCHEDULE

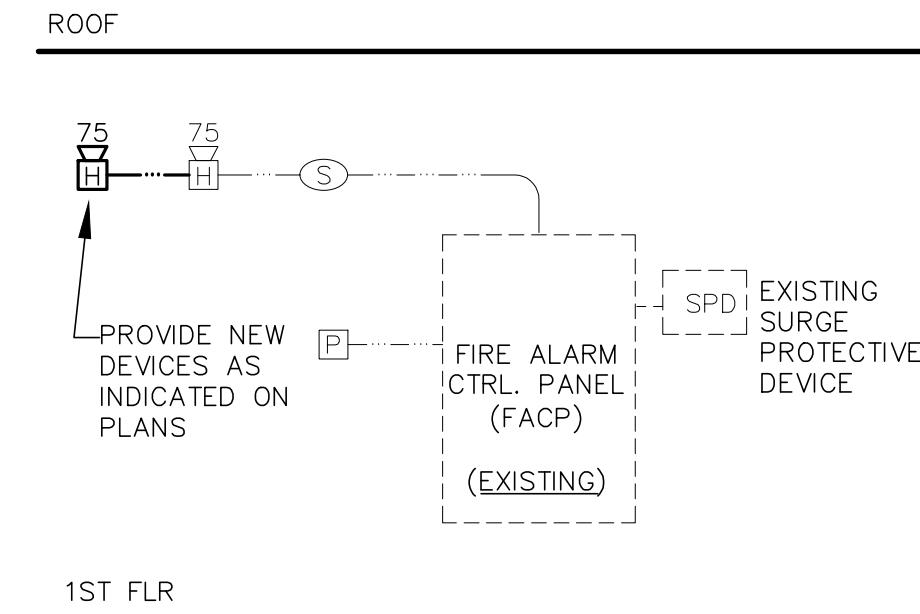
MARK	DESCRIPTION	MANUFACTURER (OR APPROVED EQUAL)	VOLT	LAMPS		INPUT WATTS	MTG/INSTALLATION (UNLESS INDICATED OTHERWISE)	NOTES
				QTY	TYPE			
A	24" LINER LED UTILITY LIGHT	H.E. WILLIAMS# 75R 2 L20 DRV UNV	120	1	LED	20	WALL	
B	CEILING MOUNTED UTILITY WITH CAGE	LURALINE# AVB23R1 SB MBL9.8A TAL		1	LED	9.8	CEILING	
C	48" LINER LED UTILITY LIGHT	H.E. WILLIAMS# 75R 4 L50 DRV UNV		1	LED	44	WALL	
E	COMBO EXIT/EGRESS LIGT W/90MIN BATTERY	BEGGELLI # BR LR U W AT		1	LED	0.5	CEILING	

NOTES:

- ALL FLUORESCENT FIXTURES SHALL BE PROVIDED WITH INTEGRAL DISCONNECTING MEANS WHICH REMOVES POWER TO FIXTURE BALLAST.
- ALL LAMPS WITH MERCURY SHALL BE LOW-MERCURY TYPE. "LOW MERCURY" IS DEFINED AS LESS THAN 80 PICOGRAMS OF MERCURY PER LUMEN HOUR, FLUORESCENT LAMP BASIS OF DESIGN: PHILLIPS ALTO OR EQUAL.
- THE FIXTURE CATALOG NUMBERS GIVEN MAY NOT CONTAIN ALL PARTS & PIECES REQUIRED. CONTRACTOR TO INCLUDE ALL PARTS REQUIRED FOR A FULLY FUNCTIONING FIXTURE INCLUDING (BUT NOT LIMITED TO) HOUSINGS, TRIMS, REFLECTORS, BALLAST, TRANSFORMER(S), DRIVERS, LAMPS etc... IN-ADDITION DIMMER SWITCHES SHALL BE COMPATIBLE WITH FIXTURE PROVIDED.

GENERAL NOTES:

- ANY NEW CIRCUIT BREAKERS REQUIRED SHALL MATCH EXISTING MANUFACTURER. PRIOR TO BIDDING PROJECT FIELD VERIFY EXISTING CONDITIONS AND REPORT TO ENGINEER IF ANY ELECTRICAL PANELS WILL REQUIRE THE ADDITION OF BREAKERS (AND/OR) HAVE NO AVAILABLE SPACE.
- SPACE RENOVATIONS ARE LIMITED TO MODIFICATIONS OF INTERIOR WALLS/ PARTITIONS AND DOES NOT CHANGE OCCUPANCY LOADS OR SPACE FUNCTION, **TOTAL CONNECTED ELECTRICAL POWER LOAD IS UNCHANGED**.
- SCOPE OF WORK INDICATED REPLACES LOW EFFICIENCY LIGHTING FIXTURES WITH NEW LED AND FLUORESCENT LIGHTING FIXTURES. AS A RESULT **TOTAL CONNECTED LIGHTING LOAD IS EFFECTIVELY REDUCED**. EXISTING LIGHTING BRANCH CIRCUIT AMPACITY IS THEREFORE REDUCED.



(EXISTING) FIRE ALARM SYSTEM RISER

FIRE ALARM RISER NOTES:

- FIRE ALARM RISER IS DIAGRAMMATICAL ONLY. FA DEVICES SHOWN ON DRAWINGS ARE A MINIMUM REQUIREMENT. FIRE MARSHALL HAVING JURISDICTION SHALL DICTATE FINAL QUANTITIES AND LOCATIONS OF ALL FA DEVICES. MAKE A PROVISION FOR ADDITIONAL DEVICES.
- ALL NEW HORNS SHALL HAVE DISTINCTIVE TEMPORAL (FA 3 BEEP) TONE. ALL NEW STROBE LIGHTS SHALL BE SYNCHRONIZED. ANY EXISTING STROBES THAT ARE IN SIGHT OF A NEW STROBE SHALL BE ABLE TO BE SYNCHRONIZED WITH NEW STROBE OR SHALL BE REPLACED.
- INSTALL NEW OR REPLACE EXISTING DEVICES TO MEET CURRENT FIRE CODES. SPECIFY EXISTING MANUFACTURER FOR NEW DEVICES TO INSURE COMPATIBILITY WITH EXISTING FA SYSTEM.
- DUCT SMOKE DETECTORS SHALL BE FURNISHED BY ELECTRICAL CONTRACTOR FOR INSTALLATION IN DUCTWORK BY HVAC CONTRACTOR.
- ALL WRING SHALL BE IN CONDUIT.

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LIGHTING SCHEDULE, SPECIFICATIONS AND LEGEND

DATE	03-01-2018
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F-3