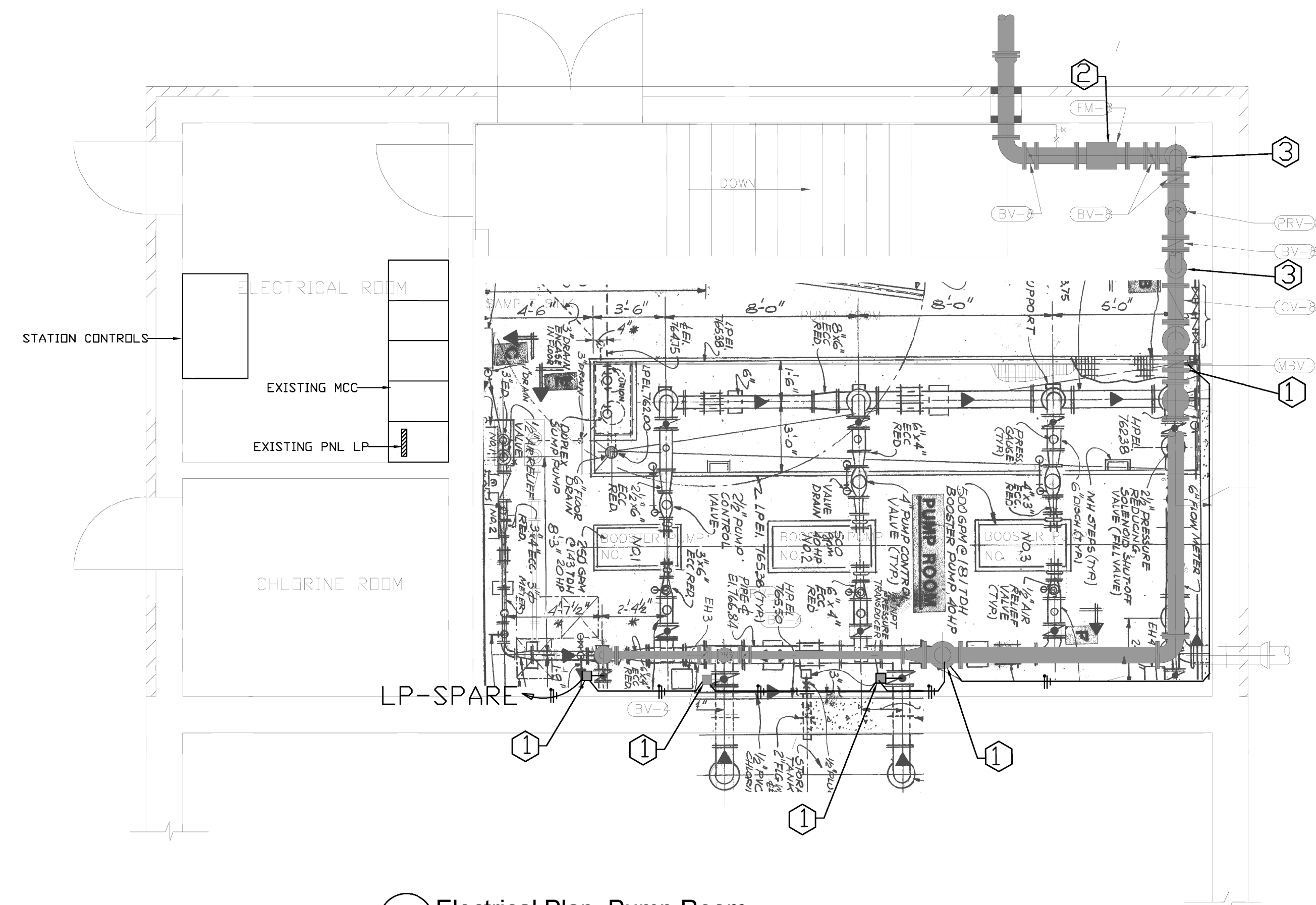


GENERAL ELECTRICAL NOTES DESIGN BASED ON 2011 NEC

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| <p>1. THE ELECTRICAL SUBCONTRACTOR SHALL PROVIDE A COMPLETE AND USABLE SYSTEM WITHIN THE INTENT AND SPIRIT OF THAT INDICATED BY THESE DRAWINGS. WORK OR MATERIALS NOT SHOWN BY THE DRAWINGS, BUT NECESSARY TO COMPLETE THE SYSTEM SHALL BE INCLUDED AT NO ADDITIONAL COST. THE ELECTRICAL SUBCONTRACTOR SHALL FURNISH AND INSTALL ALL ELECTRICAL SYSTEM REQUIREMENTS INCLUDING FIRE ALARM DEVICES, SWITCHES, RACEWAY, DEVICES, CONDUCTOR, SPECIALTIES, CUTTING AND PATCHING, ETC.</p> <p>2. THE CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS, MAKE ADJUSTMENTS TO AVOID CONFLICT. NOTIFY THE ENGINEER IN WRITING OF SIGNIFICANT CONSTRUCTABILITY ISSUES.</p> <p>3. TELEPHONE/DATA OUTLETS, UNLESS NOTED, SHALL BE CIRCUITED BY OTHERS. THE ELECTRICAL CONTRACTOR SHALL PROVIDE A CONDUIT TO AN ACCESSIBLE SPACE.</p> <p>4. THE ELECTRICAL SUBCONTRACTOR SHALL VERIFY PLACEMENT OF ALL RECEPTACLES, WIRING DEVICES, SWITCHES, AND DISCONNECTS WITH ARCHITECTURAL, MECHANICAL AND PLUMBING DRAWINGS AND TRADES BEFORE ROUGHING IN.</p> <p>5. WIRING MEANS AND METHODS SHALL BE THE RESPONSIBILITY OF THE ELECTRICAL SUBCONTRACTOR. THE ELECTRICAL SUBCONTRACTOR SHALL VERIFY CEILING TYPE WITH FIXTURE SELECTION BEFORE ORDERING.</p> <p>6. PANEL BOARDS SHALL BE SQUARE D NQOD OR EQUAL FROM CUTLER HAMMER, OR GE. BREAKERS SHALL BE BOLT-IN TYPE QOB OR EQUAL. 10kVc MINIMUM.</p> <p>7. CONDUCTOR SHALL BE THW, THWN, OR THHN. CONDUIT SHALL BE GALV. EMT, IMC OR RIGID.</p> <p>8. POWER RECEPS, WALL SWITCHES, COVER PLATES, ETC. SHALL BE COMMERCIAL GRADE 20 RATED MATCHING THE STYLE AND APPEARANCE OF THE EXISTING DEVICES.</p> <p>9. EQUIPMENT SIZES ARE AS DESIGNED. CIRCUIT BREAKERS, CONDUIT, JUNCTION BOXES, DISC. SWITCHES, CONDUCTOR SIZES, DEVICE LOCATIONS, ETC., SHALL BE ADJUSTED TO THE EQUIPMENT SUBMITTED AND APPROVED FOR INSTALLATION ON THIS PROJECT</p> <p>10. THE ELECT SUBCONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATION BETWEEN THE ELECTRICAL AND MECHANICAL TRADES TO PROVIDE CLEARANCES ABOVE CEILING BETWEEN RECESSED LIGHT FIXTURES AND THERMAL INSULATION OR COMBUSTIBLE MATERIALS IN ACCORD WITH N.E.C. PARAGRAPH 410-65 &amp; 66.</p> | <p>11. THE ELECTRICAL SUBCONTRACTOR SHALL PREPARE A SUBMITTAL PACKAGE WHICH DETAILS PROPOSED EQUIPMENT (FIVE COPIES). AT MINIMUM THE SUBMITTAL PACKAGE WILL CONTAIN DETAILED DATA ON LIGHTING FIXTURES, PANELBOARDS, AND ACCESSORIES. EQUAL EQUIPMENT TO THAT SPECIFIED WILL BE CONSIDERED IF PERFORMANCE, APPEARANCE, SERVICEABILITY AND QUALITY ARE JUDGED BY THE ENGINEER AND/OR ARCHITECT TO BE EQUAL.</p> <p>12. ALL WORK SHALL COMPLY WITH COGNIZANT CODES, REGULATIONS, LAWS AND THE DETERMINATIONS OF THE LOCAL BUILDING OFFICIAL AT NO EXTRA COST. THE CONTRACTOR SHALL INFORM THE ENGINEER IN WRITING OF ANY CONFLICT BETWEEN THE PLANS AND APPLICABLE CODES.</p> <p>13. ALL MATERIALS WILL BE NEW AND IN NEW CONDITION.</p> <p>14. ALL ELECTRICAL CONNECTIONS 120V OR HIGHER SHALL BE THE RESPONSIBILITY OF THE ELECTRICAL SUBCONTRACTOR. MECHANICAL SHALL FURNISH DUCT SMOKE DETECTORS AS REQUIRED TO ELECTRICAL FOR FIRE ALARM INSTALLATION. MECHANICAL SHALL PROVIDE HVAC CONTROL WIRING. ELECTRICAL SHALL COORDINATE EQUIPMENT CONNECTION WITH MECHANICAL AND PLUMBING.</p> <p>15. WHEN SYSTEMS ARE COMPLETE AND OPERATIONAL, A 'PUNCH LIST' INSPECTION SHALL BE REQUESTED BY THE CONTRACTOR. SUCH AN INSPECTION SHALL NOT BE CONDUCTED ON INCOMPLETE OR NON-OPERATIONAL SYSTEMS.</p> <p>16. UPON COMPLETION OF WORK, SUBMIT FOUR COPIES OF OPERATION AND MAINTENANCE MANUALS, AS BUILT DRAWINGS, GUARANTIES AND WARRANTIES. AT MINIMUM, THE CONTRACTOR WILL WARRANTY ALL WORK, EQUIPMENT AND MATERIALS FOR ONE YEAR PAST BENEFICIAL OCCUPANCY.</p> <p>17. ALL RECEPS, LOCATED IN AREAS SUBJECT TO MOISTURE, OR ON THE EXTERIOR OF THE BUILDING SHALL BE G.F.I. TYPE, IN WEATHERPROOF, TYPE-FS, BOX WITH WEATHERPROOF COVER.</p> <p>18. NO RECEP. OR DEVICE SHALL BE LOCATED WITHIN 4'-0" OF SINKS. OUTLETS NEAR SINKS, OR IN LOCATIONS SUBJECT TO MOISTURE SHALL BE G.F.I. TYPE.</p> <p>19. ALL ELECTRICAL WIRING IN OR ON THE BUILDING SHALL BE IN IMC, RMC, OR EMT, IN ACCORDANCE WITH LOCAL CODE AMENDMENT. ALL EXTERIOR WIRING SHALL BE BURIED IN CONDUIT APPROVED FOR THE ENVIRONMENT IN ACCORDANCE WITH LOCAL CODE AMENDMENT.</p> |
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1 Electrical Plan, Pump Room  
1/4" = 1'-0"

ELECTRICAL KEYED NOTES:

- 1 Five each, 120v 'Rotork' valve operators (two position). Connect in accordance with manufacturer's instructions complete and ready to use. Installation shall include fitting 120v circuit from spare 20a 1p breaker in panel LP, heavywall pvc bonded 3/4" conduit and 3/4" watertight flexible conduit with 2-#12, #12gr THWN. Also 1" heavy wall RGS threaded conduit / flexible watertight conduit from station control box to valve operator, with approved cable for signal. All complete and ready to use.
- 2 8" MAGNETIC FLOW METER INSTALLED BY MC. 8 inch magnetic flow meter, Krohne Waterflux 3000 with Krohne IFC 100 electromagnetic flow converter, connect all in accordance with the manufacturer's instructions. Installation shall include grounding of the flow meter and flow converter, and flexible watertight conduit with approved cable, from the flow meter to the flow converter junction box, and 1" inch heavy wall RGS threaded conduit and to the existing station control box located in the electrical room. All electrical connections at the flow meter detector shall be made by the electrical contractor, complete and ready to use.
- 3 PRESSURE TRANSMITTER INSTALLED BY MC. Two each Rosemount model 2088 2088 gage pressure transducers. Installation shall include transducer, mounting brackets, 1-2 conductor #16 shielded, twisted pair in 3/4 inch flexible weatherproof conduit from the transducer to the flow meter detector junction box, 2-2 conductor #16 shielded, twisted pair (1 spare) in 1 inch heavy wall RGS threaded conduit, from the flow meter detector junction box to the existing station control box located in the electrical room.

ELECTRICAL SYMBOL LEGEND	
SYMBOL	DESCRIPTION
	WALL MOUNTED ELECTRICAL SERVICE METER / TRANSOCKET. REFER TO RISER.
	MOTOR
	EXHAUST FAN. REFER TO SCHEDULE / MECHANICAL DRAWINGS.
	DISCONNECT SWITCH
	JUNCTION BOX
	TIME CLOCK
	DEVICE FOR FIRE ALARM (SMOKE, HEAT, ETC.). REFER TO SCHEDULES, ELECTRICAL PLUMBING DRAWINGS.
	TRANSFORMER AS INDICATED
	EMERGENCY FIXTURE WITH ADDITIONAL UNSWITCHED POWER TO BATTERY PACK
	UNSWITCHED (NIGHT LIGHT) FIXTURE, TYPICAL.
	EXIT LIGHT, REFER TO SCHEDULE
	WALL MOUNTED INTERIOR EMERGENCY LIGHT, REFER TO SCHEDULE
	CEILING MOUNTED/OVERHEAD SUSPENDED INTERIOR EMERGENCY LIGHT, REFER TO SCHEDULE
	SURFACE MOUNTED EXTERIOR EMERGENCY LIGHT, REFER TO SCHEDULE
	A=LIGHT FIXTURE TYPE, B=CIRCUITING PANEL, C=CIRCUIT NUMBER U.S. UNSWITCHED POWER PANEL AND CIRCUIT
	MOTOR STARTER, AS NOTED
	COMBINATION MOTOR STARTER/ DISCONNECT SWITCH, AS NOTED
	CIRCUIT SYMBOL. THIS EXAMPLE SHOWS 1 GROUND, 1 NEUTRAL, 1 HOT IN CONDUIT.
	CIRCUIT SYMBOL. THIS EXAMPLE SHOWS 1 GROUND, 1 NEUTRAL, 2 HOT IN CONDUIT.
	CIRCUIT SYMBOL. THIS EXAMPLE SHOWS 1 GROUND, 1 NEUTRAL, 3 HOT IN CONDUIT.
	CHANGE IN CONDUIT ELEVATION
	SPEAKER
	HEADPHONE JACK FOR HEARING IMPAIRED
	HOMERUN SYMBOL. THIS EXAMPLE SHOWS TWO POLES
	PANELBOARD (SEE SCHEDULE)
	PLYWOOD TELEPHONE BACKBOARD, 4"x4"x1/4" THICK WITH TWO COATS OF INSULATING VARNISH
	DUPLEX RECEPTACLE WITH A = PANEL AND B = CIRCUIT. REFER TO DETAILS FOR MOUNTING HEIGHT UNLESS OTHERWISE NOTED. INTERFERING WP IN USE=WEATHERPROOF IN USE, IS=ISA RED GROUND, E=EXISTING, OF=GROUND FAULT INTERRUPT.
	PANEL TYPE (COURTESY) RECEPTACLE REFER TO DETAILS FOR MOUNTING HEIGHT UNLESS OTHERWISE NOTED
	SPECIAL PURPOSE OUTLET WITH GROUND
	TELEPHONE/DATA OUTLET IN WALL. REFER TO DETAIL FOR MOUNTING HEIGHT UNLESS OTHERWISE NOTED. C=CONSOLE STATION PHONE
	MICROPHONE J-BOX. FLOOR MOUNTED W/ BLANK BRASS COVER, 3/4" C TO ACCESSIBLE AREA WIRING BY OTHERS.
	SINGLE POLE (UNLESS OTHERWISE NOTED) SWITCH 120/277V, 48" AFF UNLESS OTHERWISE NOTED: -W=WEATHERPROOF, -E=EXISTING, -D=DOUBLE POLE, -3=THREE-WAY, -4=4-WAY, -S=SPEED CONTROL, -H=HOMER, -M=MOVING. REFER TO SWITCH SCHEDULE
	AC ABOVE COUNTER, +48" AFF.
	ACI ABOVE CEILING
	MOTOR RATED SWITCH
	PILOT SWITCH
	MOTION OR OCCUPANCY SWITCH - REFER TO SCHEDULE
	FACP FIRE ALARM CONTROL PANEL
	FAP FIRE ALARM ANNUNCIATOR PANEL
	REP FIRE ALARM ANNUNCIATOR PANEL
	FAPL FIRE ALARM PULL STATION, 48" AFF, ADA COMPLIANT W/ WIREGUARD
	MHO MAGNETIC HOLD-OPEN
	FAPA FIRE ALARM AUDIO-VISUAL ANNUNCIATOR, WALL MOUNTED AT 80" AFF, ADA COMPLIANT, W/ WEATHER-PROOF TRUNKING. SHOWS DIRECTION OF VISUAL COMPONENT. WP = WEATHERPROOF
	FAPA FIRE ALARM AUDIO-VISUAL ANNUNCIATOR, CEILING MOUNTED / SUSPENDED OVERHEAD
	DHO DOOR HOLD OPEN DEVICES
	FASA FIRE ALARM SPEAKER ANNUNCIATOR
	STRB STROBE
	FAVA FIRE ALARM VISUAL ANNUNCIATOR, 80" AFF, ADA COMPLIANT
	HDT HEAT DETECTOR
	FWS FLOW SWITCH
	TMS TAMPER SWITCH
	SD SMOKE DETECTOR
	SD SMOKE DETECTOR, DUCT MOUNTED, FURNISHED BY MESH SUB, CONNECTED BY ELECT.
	QDC FIRE DEPARTMENT CONNECTION FOR FIRE PROTECTION LINE