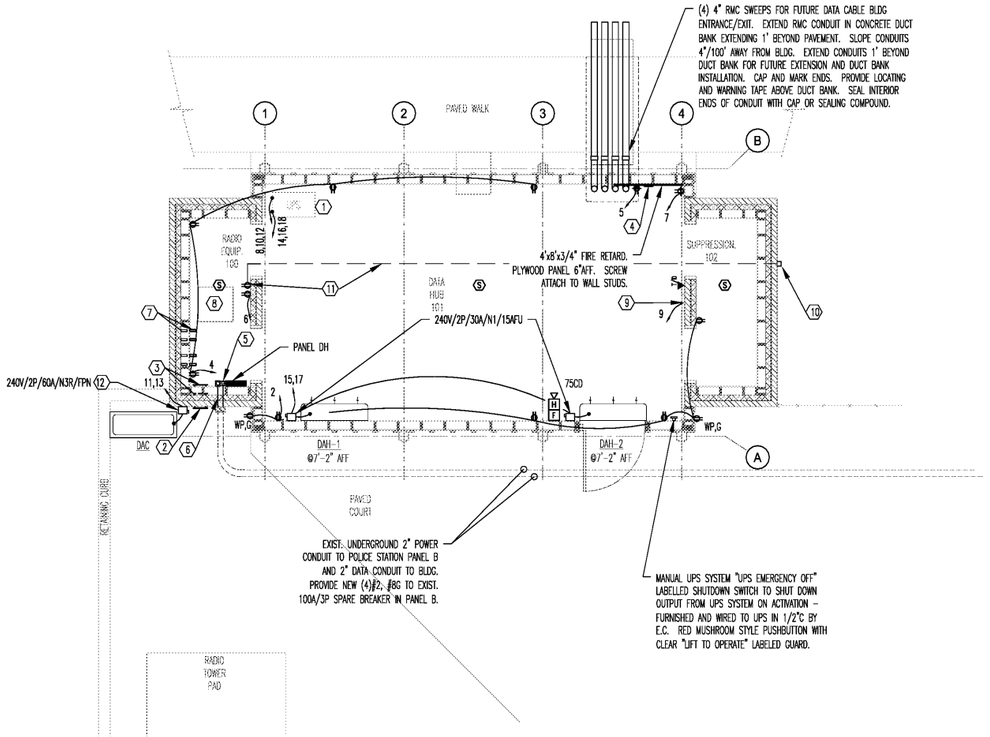
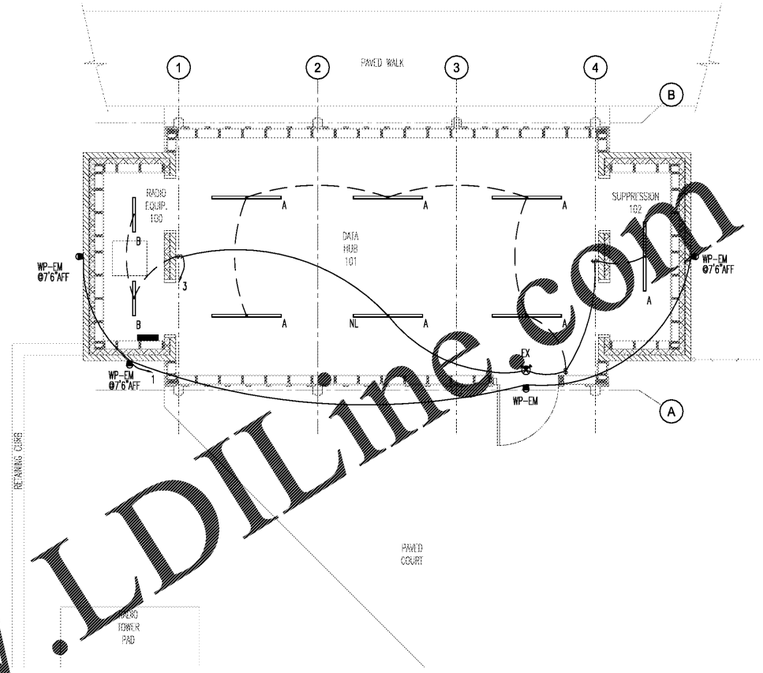




2 E1.1 ELECTRICAL LIGHTING PLAN
SCALE: 1/4"=1'-0"

GENERAL POWER PLAN NOTES:

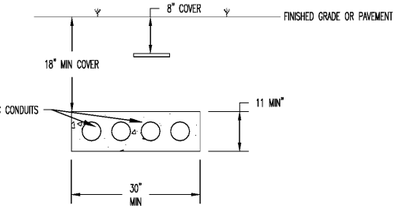
1. THIS BUILDING IS INTENDED TO BE A BACKUP FIBER DATA DISTRIBUTION HUB FOR THE CAMPUS. IT IS INTENDED TO HOUSE COMMUNICATIONS EQUIPMENT FOR THE TRANSMISSION OF AUDIO, VIDEO, AND DATA IN ADDITION TO RADIO VOICE COMMUNICATIONS. IT IS NOT INTENDED TO BE CLASSIFIED AS AN INFORMATION TECHNOLOGY EQUIPMENT ROOM. IT IS NOT INTENDED TO HOUSE SERVERS OR EQUIPMENT USED FOR THE CREATION OR MANIPULATION OF DATA, VOICE, VIDEO OR SIMILAR SIGNALS. THERE IS NO ACCESS FLOORING SYSTEM. CABLES FOR POWER AND DATA ARE INTENDED TO BE FED OVERHEAD.
2. THE ELECTRICAL SERVICE FOR THE CAREERS BUILDING IS BACKED UP BY A WHOLE BUILDING CAPACITY/GENERATOR - WHICH WILL PROVIDE BACKUP FOR BOTH THE CAREERS BUILDING AND THIS FIBER HUB BUILDING. SEE RISER DIAGRAM ON E6.1.
3. MAINTAIN POWER FROM THE EXISTING BRANCH CIRCUIT FROM THE CAREERS BUILDING TO PROVIDE POWER TO THE EXISTING RADIO EQUIPMENT UNTIL NEW CIRCUIT IS READY TO POWER EQUIPMENT.
4. DEMOLISH EXISTING LIGHTING AND RECEPTACLES AND ASSOCIATED CIRCUITS AFTER RUNNING A TEMPORARY CIRCUIT TO THE RADIO EQUIPMENT.
5. NEW DEVICES ARE TO BE SURFACE MOUNTED ON EXISTING AND NEW WALLS WITH SURFACE CONDUIT.
6. CIRCUIT WIRING AND FEEDERS ARE TO BE SURFACE MOUNTED UNLESS NOTED OTHERWISE.
7. FIRE ALARM SYSTEM WIRING SHALL BE WIRED IN CONDUIT AND ROUTED THROUGH THE DATA PATHWAY THAT COMMUNICATES WITH THE SERVICE CAREERS BUILDING. THE EXISTING PANEL IS A SIMPLEX 4100U.
8. PULL STATION AND HORN STROBE AND ASSOCIATED WIRING AND SYSTEM PROGRAMMING SHALL BE INCLUDED IN THE BASE BID.
9. UNDER THE BASE BID, SMOKE DETECTORS AND ASSOCIATED WIRING AND PROGRAMMING SHALL BE INCLUDED. SHALL BE 4-WIRE PHOTOELECTRIC DETECTORS. UNDER ALTERNATE #E1 DETECTORS WILL BE FURNISHED WITH SUPPRESSION PANEL AND WIRED TO SUPPRESSION PANEL BY THE SYSTEM INSTALLER.
10. ALTERNATE #E1 SHALL INCLUDE THE CIRCUIT WIRING FOR THE SUPPRESSION PANEL, WIRING FOR AREA SMOKE DETECTORS, ADDRESSABLE MODULES FOR ACTIVATION INDICATION AND TROUBLE INDICATION. CONDUIT FOR SMOKE DETECTORS SHALL BE INSTALLED TO THE SUPPRESSION PANEL. IF ALTERNATE #E1 IS ACCEPTED, SMOKE DETECTORS WILL BE FURNISHED WITH THE SUPPRESSION PANEL.
11. COORDINATE WITH G.C. TO PROVIDE BLOCKING FOR INSTALLATION OF GROUND BAR AND PANEL.

KEYED POWER PLAN NOTES:

1. UPS UNIT FURNISHED BY OWNER - WIRED BY CONTRACTOR. UPS IS 30 kVA AT 208/120 VOLT WITH SEPARATE BYPASS CIRCUIT. MAKE CONNECTIONS TO BOTH CIRCUITS PER INSTRUCTION MANUAL. WIRE EPO OPTION TO SHUTDOWN SWITCH AT EXIT DOOR.
2. EXISTING EXTERIOR GROUND BAR FOR RADIO TOWER. PROVIDE NEW TEMPORARY #6 BOND TO INTERIOR EXISTING INTERIOR GROUND BAR TO ALLOW FOR RELOCATION OF INTERIOR BAR.
3. EXISTING INTERIOR GROUND BAR BONDED TO EXTERIOR GROUND BAR. CONNECT TEMPORARY #6 BOND CONDUCTOR TO BAR, DISCONNECT CONNECTION TO GROUNDED ROD THAT BONDS TO EXTERIOR BAR. REPLACE THREADED ROD WITH FROM LONGER ROD TO EXTEND 2" THROUGH NEW STUD WALL AND INSTALL GROUND BAR ON THE GROUNDED WALL AND CONNECT THREADED ROD BOND TO EXTERIOR GROUND BAR. ATTACHMENTS TO EXTERIOR BAR ARE TO BE EXOTHERMIC WELDS. MAINTAIN EXISTING COAX CABLE GROUNDING BLOCKS AND PROVIDE TEMPORARY SUPPORT OF GROUND BAR DURING RELOCATION PROCESS. COORDINATE WITH G.C. TO PROVIDE WOOD BLOCKING IN NEW STUD WALL AT NEW LOCATION.
4. NEW 2"x10"x1/4" COPPER GROUND BAR WITH INSULATORS, STAND-OFF BRACKETS, AND PRE-DRILLED HOLES FOR 2-HOLE LUG ATTACHMENTS. MOUNT 7'6" AFF. BOND TO EXISTING GROUND BAR WITH #6 GREEN INSULATED STRANDED COPPER BONDING CONDUCTOR.
5. EXTEND EXISTING 2" POWER CONDUIT THROUGH NEW WALL. PROVIDE LB FITTINGS TO MAKE TURNS UP AND INTO NEW PANEL.
6. COORDINATE WITH OWNER TO MINIMIZE AND SCHEDULE INTERRUPTION TO COMMUNICATIONS WITH THE RADIO TOWER. STAGE WORK TO MINIMIZE DOWNTIME. MARK EACH CABLE AND CONNECTION IN ADVANCE OF WORK. DISCONNECT EXISTING DATA CABLES THAT ENTER THE BUILDING THROUGH THE DATA CONDUIT. PULL CABLES BACK THROUGH EXTERIOR LB FITTING AS REQUIRED TO PLACE CONDUIT EXTENSION AND NEW INTERIOR LB FITTING. ATTACH NEW CONDUIT THROUGH NEW WALL LOCATION WITH LB FITTING TURNING UP. PULL CABLES THROUGH NEW CONDUIT AND FITTING AND RECONNECT TO ORIGINAL CONNECTIONS AS SOON AS POSSIBLE.
7. EXISTING J-HOOKS (4) WITH COMM CABLES. PROVIDE TEMPORARY SUPPORT FOR CABLES FROM ROOF STRUCTURE, REMOVE J-HOOKS FROM EXIST. WALL, REINSTALL J-HOOKS ON NEW WALL. MOVE CABLES BACK TO J-HOOKS. REMOVE SUPPORTS FROM ROOF FOR NEW ROOF INSULATION WORK.
8. EXISTING RADIO EQUIPMENT RACK TO REMAIN IN OPERATION DURING CONSTRUCTION. MAINTAIN POWER AND PROTECT FROM DAMAGE, DIRT, AND CONSTRUCTION MATERIALS.
9. ALTERNATE #E1 FIRE SUPPRESSION SYSTEM MONITOR AND CONTROL PANEL.
10. EXISTING CIRCUIT FED FROM ADJACENT CAREERS BUILDING. MAINTAIN DURING CONSTRUCTION. REMOVE CONDUCTORS ONCE PERMANENT POWER IS INSTALLED FOR THE HUB BUILDING.
11. PROVIDE A NEW TEMPORARY CIRCUIT AND RECEPTACLE FOR THE EXISTING RADIO EQUIPMENT TO ALLOW DEMOLITION OF THE EXISTING DEVICES AND CIRCUITS IN THE BUILDING.
12. DISCONNECT SWITCH FOR DAC UNIT WITH FUSES PER NAMEPLATE.

FIRE ALARM LEGEND	
H	WALL MOUNTED HORN/STROBE 30cd. #cd INDICATES STROBE CANDELA
F	DOUBLE ACTION ADDRESSABLE PULL STATION
S	CEILING ADDRESSABLE PHOTOELECTRIC SMOKE DETECTOR

1 E1.1 ELECTRICAL POWER PLAN
SCALE: 1/4"=1'-0"



NOTES:
1. LOCATE AND AVOID EXISTING UNDERGROUND STRUCTURES AND UTILITIES.
2. PROVIDE PLASTIC CARRIERS 8' ON CENTER TO MAINTAIN 3" MINIMUM WALL THICKNESS OF CONCRETE AND 2" MINIMUM SPACING BETWEEN CONDUITS.
3. MAKE ALL CONDUIT JOINTS CONCRETE TIGHT PRIOR TO POURING CONCRETE.
4. STRAP CONDUITS TO CARRIERS.
5. CONCRETE TO BE 3000 PSI AIR ENTRAINED.
6. MARKING TAPE SHALL BE MAGNETIC INDICATING AND RED COLOR. PLACE DIRECTLY ABOVE DUCT BANK AT 8" DEPTH TO ALLOW VISUAL AND UNDERGROUND LOCATOR INDICATION.
7. EXTEND CONDUITS 6" BEYOND DUCTBANK FOR FUTURE EXTENSION. CAP AND MARK CONDUIT ENDS. COORDINATE LOCATION WITH SITE CONDITIONS AND CONDUIT RUNS.
8. TERMINATE DUCT BANK AT FOUNDATION WALL.

3 E1.1 DETAIL CONCRETE DUCT BANK
SCALE: NONE

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