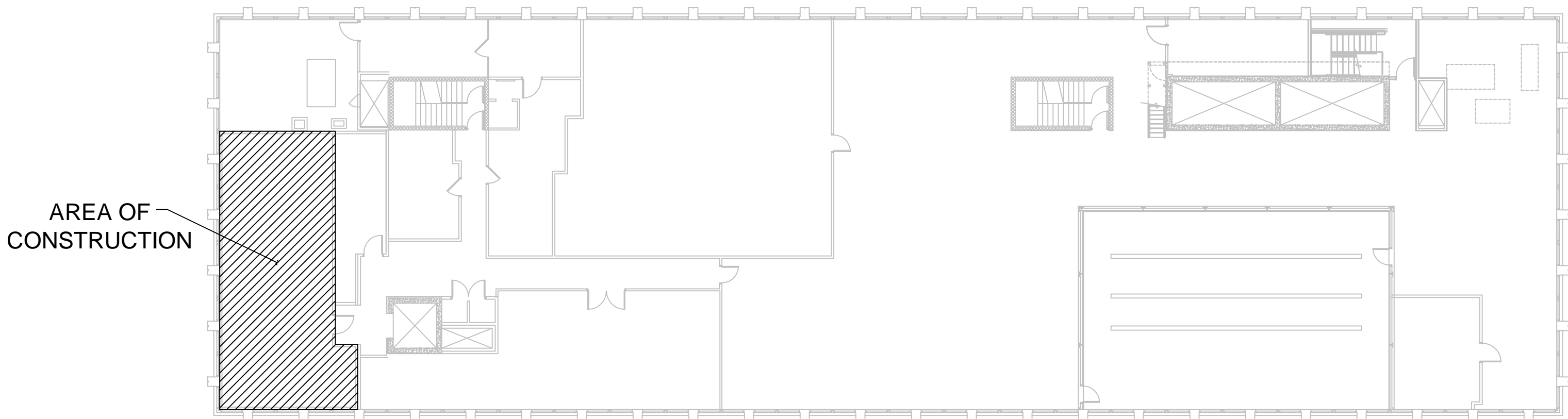


SHELBY COUNTY GOVERNMENT
160 NORTH MAIN - MEMPHIS, TN 38103
12TH FLOOR DATA CENTER
23 APR 12



KEY PLAN

SCOPE OF WORK

PROJECT CONSISTS OF MECHANICAL, PLUMBING, FIRE PROTECTION AND ELECTRICAL WORK REQUIRED FOR A COMPLETE AND OPERATIONAL DATA CENTER LOCATED ON THE 12TH FLOOR OF THE 160 N. MAIN FACILITY. THE DATA CENTER WALLS, CEILINGS AND LIGHTING ARE FURNISHED/INSTALLED BY OTHERS. SCOPE OF WORK INCLUDES BUT IS NOT LIMITED TOO THE FOLLOWING:

1. RELOCATION OF FOUR EXISTING 80KW UPS(S) BY OTHERS. DIV16 SHALL DISCONNECT POWER TO RELOCATED UPS(S), WIRING BETWEEN PDU AND UPS BY OTHERS.
2. THREE NEW PDU'S PROVIDED/INSTALLED IN DATA CENTER BY OTHERS. DIV16 SHALL PROVIDE NEW FEEDERS TO PDU'S. SEE ONE LINE DIAGRAM. WHIPS FURNISHED AND INSTALLED BY OTHERS.
3. ONE PDU RELOCATED TO DATA CENTER BY OTHERS. DIV16 SHALL COORDINATE LOCATION AND DISCONNECT POWER TO RELOCATED PDU. PROVIDE NEW FEEDER TO RELOCATED PDU AND INSTALL ELEVEN NEW 20A/3P C/B'S AND WHIPS (FURNISHED BY OTHERS) IN RELOCATED PDU.
4. DIV15 SHALL RECEIVE AND INSTALL FOUR NEW IN-ROW COOLERS AND CONDENSERS SUPPLIED BY OTHERS. DIV15 SHALL PROVIDE ALL WATER, REFRIGERANT AND DRAIN PIPING. ALL RIGGING FOR THE INSTALLATION OF EQUIPMENT IS THE RESPONSIBILITY OF DIV15. DIV16 SHALL PROVIDE POWER TO IN-ROW COOLERS AND CONDENSERS ON ROOF.
5. NEW FIREAWAY STAT-X FIRE SUPPRESSION SYSTEM INSTALLED IN DATA CENTER.
6. DIV16 SHALL MONITOR ALARM AND TROUBLE CONTACTS OF DATA CENTER FIRE SUPPRESSION SYSTEM CONTROL PANEL VIA THE SIMPLEX BUILDING FIRE ALARM SYSTEM.
7. DIV 16 SHALL PROVIDE ELECTRICAL DISTRIBUTION PANELS, FEEDERS TO PDU'S, IN-ROW COOLERS, CONDENSERS AND BRANCH CIRCUITS SHOWN.

DRAWING NOTES AND CLARIFICATIONS

GENERAL REQUIREMENTS INCLUDE MAINTAINING, PATCHING AND REPAIRING ANY OPENINGS, STRUCTURE, WALLS, FLOORS, FINISHES, INSULATION, PIPING, IDENTIFICATION, ELECTRICAL, PLUMBING AND CONTROLS THAT ARE EXPOSED/DISTURBED BY DEMOLITION OR NEW WORK.

CONTRACTOR SHALL FIELD VERIFY ALL SIZES, DIMENSIONS, AND CONDITIONS THAT AFFECT DEMOLITION AND NEW WORK UNDER THIS PROJECT PRIOR TO ANY EQUIPMENT/MATERIAL ORDERING OR FABRICATION. ALLOW FOR SHOP DRAWINGS AND ADJUSTMENTS TO IMPLEMENT THE WORK SHOWN BASED ON CONTRACTOR FIELD VERIFICATION.

NOTES ON DRAWINGS ARE NOT REPEATED OR LABELED "TYPICAL"; WHERE DIRECTION IS GIVEN IN ONE INSTANCE IT SHALL APPLY EQUALLY IN ALL SIMILAR LOCATIONS.

REMOVE: THIS DIRECTION INCLUDES THE ITEM SPECIFICALLY INDICATED AS WELL AS ALL ASSOCIATED SUPPORTS, ANCHORS, SLEEVES, RACEWAYS, CABLING, PADS, WIRING, ACCESSORIES, TUBING AND ANY APPENDAGE THAT CAN BE REMOVED WITHOUT INTERFERING WITH OPERATION/FUNCTION OF EXISTING EQUIPMENT THAT IS NOT REMOVED.

CAP: THIS DIRECTION INCLUDES PROVISION AND INSTALLATION OF A CAP FOR PIPING OR DUCT THAT MATCHES EXISTING MATERIALS AND CONSTRUCTION WHILE MAINTAINING THE EXISTING SYSTEM PRESSURE AND TEMPERATURE RATING. ADDITIONALLY THE CAP SHALL BE INSULATED EQUAL TO EXISTING AND FINISHED TO MATCH ADJACENT INSULATION JACKET. WHEN CAPPING PIPING BE ADVISED THAT VALVES MAY NOT SEAL 100%. ALLOW FOR A TEMPORARY DRAIN NIPPLE AND CAP TO PROPERLY INSTALL WELDED CAPS.

REPAIR/PATCH: SHALL RESTORE ORIGINAL OPERATION, APPEARANCE, CONDITION AND SHALL MATCH ADJACENT CONSTRUCTION.

RELOCATE: SHALL REMOVE AND RELOCATE THE ITEM TO THE NEW LOCATIONS WITH ALL SUPPORTS, ANCHORS, BLOCKING, WIRING, RACEWAY, CONNECTIONS, FITTINGS AND ACCESSORIES FOR A COMPLETE AND OPERATIONAL ASSEMBLY.

GENERAL NOTES

1. PROVIDE ALL MATERIAL, PERMITS, FEES, COORDINATION AND LABOR NEEDED FOR A COMPLETE AND OPERABLE TELEPHONE SWITCH ROOM. A ONE YEAR PARTS AND LABOR WARRANTY IS REQUIRED FROM DATE OF COMPLETION.
2. THE DRAWINGS ARE DIAGRAMMATIC AND SHOW GENERAL ARCHITECTURAL, MECHANICAL, AND ELECTRICAL LAYOUTS FOR BIDDING PURPOSES ONLY. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO PREPARE DETAILED SHOP DRAWINGS, CONFIRM SPACE ALLOCATIONS, AND ADJUST DUCT, PIPE, AND EQUIPMENT LOCATIONS TO MATCH ACTUAL FIELD CONDITIONS. DISPOSE OF REMOVED EQUIPMENT AS DIRECTED BY OWNER.
3. MAINTAIN ALL RECOMMENDED CLEARANCES FOR MAINTENANCE, REMOVAL, AND REPAIR OF BOTH NEW AND EXISTING EQUIPMENT.
4. INFORMATION OF EXISTING SERVICES WAS TAKEN FROM THE OWNER'S DRAWINGS AND WAS CONFIRMED BY INSPECTIONS. ALLOW FOR DISCREPANCIES FROM THESE DRAWINGS OR PERFORM INSPECTIONS TO CONFIRM THEIR ACCURACY PRIOR TO BID. CONTRACT AMOUNT SHALL NOT BE ADJUSTED WHERE THE WORK IS REASONABLY CLOSE TO THE CONFIGURATION SHOWN. COORDINATE ALL EQUIPMENT VOLTAGES/POWER REQUIREMENTS WITH OWNER PRIOR TO ORDERING EQUIPMENT.
5. FIELD VERIFY ALL ROUTING, PHASING, CONNECTION, AND FIRE STOPPING REQUIREMENTS PRIOR TO BID. ADJUST NEW ROUTING AND/OR RELOCATE EXISTING PIPE, DUCT, EQUIPMENT, RACEWAY, ETC. IN THE PATH OF NEW WORK. MATCH EXISTING CONSTRUCTION METHODS/CODE REQUIREMENTS IF NEW METHODS ARE NOT SPECIFICALLY ADDRESSED IN CONTRACT DOCUMENTS.
6. CORE DRILL/SAW CUT ALL FLOOR, WALL, CEILING OPENINGS FOR PIPE, DUCT, AND ELECTRICAL CONDUITS. PATCH ABANDONED OPENINGS. RESTORE BUILDING FINISHES/INSULATION/STRUCTURE TO MATCH ADJACENT AREAS. MAINTAIN/RESTORE ANY FIRE/SMOKE RATED PARTITION AFFECTED OR DISTURBED BY THIS WORK.
7. CLEAN-UP, PATCH, PRIME, TOUCH-UP PAINT ANY FINISHED SURFACES THAT ARE DISTURBED, SOILED, SCRATCHED OR VISUALLY AFFECTED BY THE WORK OF THIS CONTRACT.
8. MAINTAIN GENERAL LIABILITY AND ALL OTHER INSURANCE REQUIREMENTS IN ACCORDANCE WITH CONTRACT DOCUMENT REQUIREMENTS.
9. COMPLY WITH THE POLICY AND PROCEDURES OF THE OWNER.
10. DO NOT OBSTRUCT OR STORE MATERIALS IN CORRIDORS. ALL TOOLS AND MATERIALS MUST BE STORED IN AREA DESIGNATED BY OWNER, OR OFFSITE. THE OWNER WILL NOT BE HELD RESPONSIBLE FOR ANY TOOLS OR MATERIALS STORED ONSITE THAT ARE DAMAGED OR STOLEN. LEAVE ALL AREAS BROOM CLEAN ON A DAILY BASIS AND REMOVE ALL RUBBISH ON A WEEKLY BASIS. PROVIDE A DUMPSTER AND PAY ALL FEES ASSOCIATED WITH DISPOSAL OF DEMOLITION DEBRIS.
11. PERFORM CONSTRUCTION TO THE FULLEST EXTENT POSSIBLE PRIOR TO DISCONNECTING AND REMOVING/RELOCATING EQUIPMENT. COORDINATE AND SCHEDULE ALL EQUIPMENT AND/OR MECHANICAL, PLUMBING, OR ELECTRICAL SYSTEM SHUTDOWNS AT TIMES AND DURATION AS PERMITTED BY THE OWNER. PREFABRICATE EQUIPMENT AS MUCH AS POSSIBLE TO MINIMIZE DOWNTIME. EQUIPMENT RELOCATION AND SHUTDOWNS SHALL OCCUR AFTER HOURS AND/OR ON WEEKENDS.

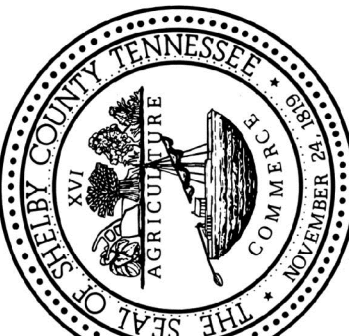
12. THERE ARE NO KNOWN HAZARDOUS MATERIALS OTHER THAN THE FLUORESCENT LAMPS WHICH MUST BE HANDLED AND DISPOSED OF IN AN OSHA APPROVED MANNER. THE CONSTRUCTION MATERIALS WHICH WILL BE HANDLED OR DISTURBED UNDER THIS PROJECT ARE FREE OF ASBESTOS AND PCBs.
13. REMOVE EQUIPMENT, LIGHTS, DUCT, PIPE, CONDUCTORS, RACEWAY, AND ASSOCIATED HANGERS, SUPPORTS, INSULATION, AND CONTROLS SHOWN AS DASHED OR NOTED FOR REMOVAL OR THAT WOULD BE LEFT FUNCTIONALLY ABANDONED AS A RESULT OF THIS PROJECT. CAP ALL SERVICES AT MAIN OR HEADER. REMOVE ABANDONED ELECTRICAL BACK TO CIRCUIT BREAKER AND LABEL AS SPARE.
14. EQUIPMENT/PIPE/DUCT ELEVATIONS ARE BOTTOM OF SUPPORT TO ABOVE FINISH FLOOR DIMENSION. EQUIPMENT/PIPE/DUCT WITHOUT ELEVATIONS DENOTED LOCATE HIGH AS POSSIBLE.
15. PROVIDE HEPA FILTER FANS AND CONSTRUCTION BARRIER PARTITIONS TO CONTROL DUST GENERATION AS WELL AS TO PREVENT MIGRATION INTO OTHER AREAS. EXTRA PRECAUTIONS MUST BE TAKEN TO PREVENT DUST FROM REACHING THE EQUIPMENT. PROVIDE DUST COVERS OVER DESKS AND COMPUTER EQUIPMENT. COVERS SHALL BE TYVEK OR SIMILAR BREATHABLE MATERIAL AND SO CONFIGURED / DRAPED TO PREVENT EQUIPMENT FROM OVERHEATING. A ZIP WALL SYSTEM OR FABRICATED TEMPORARY PARTITIONS IS REQUIRED TO PARTITION WORK AREAS FROM EQUIPMENT.
16. ALL WORK INCLUDING ROOM CONSTRUCTION, HVAC EQUIPMENT, ELECTRICAL DISTRIBUTION AND DATA/COM CABLING SHALL BE COMPLETE AND FULLY OPERATIONAL PRIOR TO RELOCATION OF UPS/PDU'S. RELOCATION OF EXISTING UPS/PDU'S SHALL BE IMPLEMENTED IN PHASES AND SCHEDULED/COORDINATED WITH THE OWNER.
17. THE SHUTDOWN/RELOCATION OF UPS/PDU'S SHALL BE IMPLEMENTED IN PHASES AS DIRECTED BY THE OWNER. ONLY ONE UPS/PDU WILL BE RELOCATED AND MADE OPERATIONAL AT A TIME. THESE SERVICE INTERRUPTIONS FOR CONSTRUCTION ACTIVITIES ARE TO BE SCHEDULED OUTSIDE OF NORMAL BUSINESS HOURS AT TIMES APPROVED BY THE OWNER AND ALL NECESSARY MEASURES REQUIRED BY THE OWNER SHALL BE TAKEN TO MINIMIZE SERVICE INTERRUPTIONS.
18. FINAL CLEANING ENTAILS A THOROUGH VACUUM CLEAN AND WIPE DOWN WITH CLEAN DAMP MOPS/CLOTH THE ACCESSIBLE PIPE, DUCT ELECTRICAL AND SUPPORT STEEL IN THE AREA OF NEW WORK TO MINIMIZE ANY DUST IN THE DATA CENTER RM. FINAL CLEANING SHALL OCCUR PRIOR TO INSTALLATION OF UPS/PDU'S OR RACKS WITHIN THE FINISHED SPACE. CLEAN UP ON A WEEKLY BASIS IS BROOM CLEAN WITH ALL MAJOR DEBRIS REMOVED ON A DAILY BASIS. CONTRACTOR TO FURNISH A DUMPSTER IN LOCATION AS DIRECTED BY OWNER OR HAUL AWAY FROM SITE IN A TRAILER.
19. THE OWNER IS RESPONSIBLE FOR REMOVING ANY ASBESTOS CONTAINING MATERIALS, ACM, TO FACILITATE YOUR WORK. YOU ARE REQUIRED TO SPOT ALL AREAS WHERE INSULATION AND FIREPROOFING NEED REMOVAL AS SOON AS POSSIBLE. ASBESTOS ABATEMENT MAY TAKE 2-4 WEEKS AND CAN RESULT IN CLOSING AN AREA TO CONSTRUCTION ACTIVITIES UNTIL ABATEMENT AND TESTING IS COMPLETE. AFTER ABATEMENT YOU ARE REQUIRED TO REPLACE THE INSULATION THAT IS REMOVED BY ABATEMENT AS WELL AS PATCH ANY DISTURBED INSULATION AND FIREPROOFING.

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PHASING

PHASING IS THE RESPONSIBILITY OF THE CONTRACTOR, SUBJECT TO PRIOR APPROVAL BY THE OWNER.



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| REVISIONS | |
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