GENERAL NOTES

GENERAL CONTRACTOR AND ALL OTHER CONTRACTORS WORKING ON THIS CONSTRUCTION PROJECT SHALL MEET ALL APPLICABLE CODE REQUIREMENTS. ALL CONSTRUCTION AND MATERIALS SHALL COMPLY WITH ANY AND ALL APPLICABLE CODES, REGULATIONS, DIRECTIVES AND LAWS. CONTRACTOR SHALL BE KNOWLEDGEABLE OF ALL CITY REGULATIONS AND CODE ISSUES AND SHALL IMMEDIATELY NOTIFY THE ARCHITECT UPON DISCOVERY OF ANY DISCREPANCIES ON THE DOCUMENTS OR CONDITIONS OF THE PROJECT SITE

SUBSTANTIAL COMPLETION SHALL BE ESTABLISHED ON DELIVERY OF OCCUPANCY PERMIT FINAL COMPLETION SHALL BE DEEMED COMPLETED WHEN ALL PUNCH LIST ITEMS ARE COMPLETED AND APPROVED, ALL SUPPORT EQUIPMENT INSTALLED AND COMPLETE. OWNER WILL DETERMINE FINAL COMPLETION.

THE RESPONSIBILITIES CONCERNING THE PREPARATION AND REVIEW OF THE APPLICATION FOR PAYMENT AND PAYMENT SCHEDULE SHALL BE ADDRESSED IN THE AGREEMENTS BETWEEN THE OWNER, ARCHITECT, AND CONTRACTOR.

4. THE ARCHITECT WILL BE AVAILABLE TO THE OWNER AND CONTRACTOR DURING CONSTRUCTION. THE ARCHITECT WILL ASSIST THE OWNER AND/OR CONTRACTOR IN OBTAINING A BUILDING PERMIT.

THE CONTRACTOR IS SOLELY RESPONSIBLE FOR THE CONSTRUCTION PROCESS, MATERIAL VERIFICATION, AND WORKER SAFETY.

THE CONTRACTOR SHALL VERIFY AND BE RESPONSIBLE FOR DETAILS AND ACCURACY, FOR CONFIRMING AND CORRELATING ALL OUANTITIES AND DIMENSIONS, AND FOR TECHNIOUES OF ASSEMBLY

7. ALL CUTTING AND PATCHING SHALL BE PERFORMED IN A NEAT AND WORKMAN LIKE MANNER. ANY EXISTING FINISHES DISTURBED OR DAMAGED BY THE CONTRACTOR OR TRADES UNDER CONTRACT DURING THE COURSE OF THE WORK SHALL BE REPAIRED TO MATCH EXISTING.

NO SUBSTITUTES OF SPECIFIED CONSTRUCTION ITEMS, EQUIPMENT AND FINISHES WILL BE ALLOWED WITHOUT WRITTEN APPROVAL FROM THE OWNER AND ARCHITECT.

9. ALL BIDDING CONTRACTOR(S) SHALL VISIT THE SITE OF THE PROPOSED WORK AND FULLY ACQUAINT THEMSELVES WITH THE EXISTING CONDITIONS OF THE PROJECT SITE, AS THEY CURRENTLY EXIST, SO THEY MAY FULLY UNDERSTAND THE FACILITIES, DIFFICULTIES AND RESTRICTIONS PRIOR TO SUBMITTING ANY BIDS.

THE CONTRACTOR SHALL PROVIDE THE OWNER WITH SCHEDULING INFORMATION PRIOR TO CONSTRUCTION, WHICH WILL BE UPDATED IF THERE ARE ANY CHANGES.

ALL REQUIRED COMMUNICATION SHALL BE THROUGH THE ARCHITECT AND OWNER.

DO NOT SCALE DRAWINGS. THE CONTRACTOR SHALL VERIFY AND BE RESPONSIBLE FOR ALL DIMENSIONS AND CONDITIONS ON THE IOBSITE. INFORMATION CONTAINED IN THESE DRAWINGS IS GENERAL AND NOT BASED ON EXISTING DOCUMENTS AND FIELD MEASUREMENTS THE INFORMATION CONTAINED HEREIN MAY REQUIRE ADJUSTMENTS OR MODIFICATIONS TO CONFORM TO EXISTING CONDITIONS AND DESIGN INTENT OF DOCUMENTS. THE CONTRACTOR MUST NOTIFY ARCHITECT OF ANY CONFLICTS AND/OR VARIATIONS

13. CONTRACTOR SHALL FURNISH ALL ITEMS SHOWN ON THE DRAWINGS UNLESS SPECIFICALLY NOTED OTHERWISE.

14. CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING FLOOR FINISH MATERIALS TO ENSURE THAT TRANSITIONS BETWEEN FLOORING MATERIALS WILL BE SMOOTH AND IN ACCORDANCE WITH THE DRAWINGS

15. UNLESS OTHERWISE STATED, CHANGES IN FLOORING MATERIAL SHALL OCCUR AT THE CENTERLINE OF DOORS.

16. ALL STUDS, CEILING FURRING AND FRAMING MEMBERS SHALL BE SO PLACED AS TO AVOID INTERFERENCE WITH LOCATIONS OF CASEWORK, RECESSED LIGHTING FIXTURES, PIPING, DUCT WORK, ETC.

DEMOLITION WORK SHALL INCLUDE ALL EXISTING CONSTRUCTION AS INDICATED AND AS REQUIRED TO COMPLETE NEW WORK AS INDICATED ON THE DOCUMENTS AND TO THE DESIGN INTENT OF DRAWINGS, WHETHER OR NOT DEMOLITION WORK IS SPECIFICALLY INDICATED.

18. ALL CONTRACTORS SHALL GUARANTEE ALL WORK EXECUTED UNDER THIS CONTRACT; BOTH AS TO MATERIAL AND WORKMANSHIP, FOR A PERIOD OF TWELVE MONTHS AFTER DATE OF SUBSTANTIAL COMPLETION. IN ADDITION, ANY DAMAGE TO ADJACENT AREAS/SURFACES CAUSED BY FAULTY MATERIALS OR WORKMANSHIP SHALL ALSO BE REPAIRED TO THE OWNER'S SATISFACTION AT NO ADDITIONAL COST.

CONTRACTOR SHALL PROVIDE ALL PATCHING, CLEANING, AND REPAIR WORK TO EXISTING SURFACES AS REQUIRED TO ACHIEVE SMOOTH, CLEAN WALL SURFACES FOR FINISH MATERIALS. REMOVE ALL DECALS, MARKS, PAINT, DIRT, AND DISCOLORATION FROM EXISTING MATERIALS TO REMAIN.

CONTRACTOR TO INSTALL ALL MATERIAL PER MANUFACTURERS' REQUIREMENTS, UL RATING REQUIREMENTS, SPECIFIC TRADE GUIDELINES, INDUSTRY STANDARDS, AND BUILDING CODES. ALL NEW FINISHES TO COMPLY WITH IBC CHAPTER 8.

21. PROVIDE SIGNAGE MEETING ADA REQUIREMENTS AND LOCATIONS DICTATED BY THE CITY AND LOCAL CODES. DESIGN, CONTENT, AND LOCATIONS SHALL BE PROVIDED TO THE OWNER AND ARCHITECT PRIOR TO INSTALLATION.

22. ALL SURFACES SCHEDULED FOR PAINT IN FOOD PREPARATION AND RESTROOM AREAS SHALL BE EPOXY TYPE PAINT FOR WASHABILITY.

23. NO COMBUSTIBLE MATERIALS WILL BE ALLOWED IN RETURN AIR PLENUMS.

24. INSTALL NEW OR MODIFY THE EXISTING FIRE SPRINKLER SYSTEM (IF EXISTING) AS REQUIRED TO SATISFY APPLICABLE CODES FOR NEW WORK AND EXISTING CONDITIONS COMBINED.

25. THE CONTRACTOR MUST SUBMIT TO OWNER AN INSURANCE CERTIFICATE WITH MINIMUM COVERAGE OF \$1,000,000 IN GENERAL LIABILITY OR EQUAL. THIS CERTIFICATE MUST NAME THE OWNER AS ADDITIONAL INSURED.

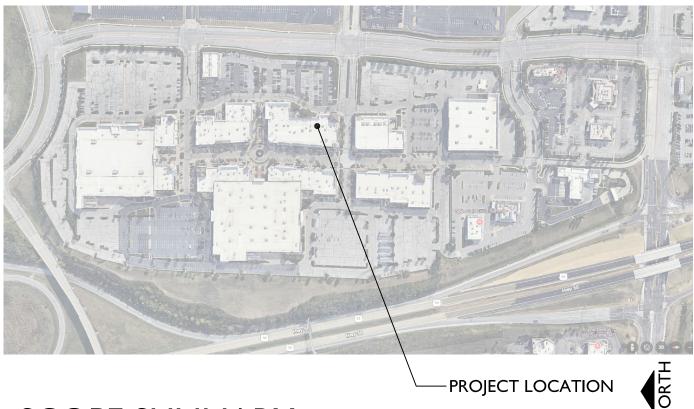
26. ALL CHANGES, DEVIATIONS, MODIFICATIONS, ADDITIONS OR DELETIONS FROM THE CONTRACT OF CONSTRUCTION OF APPROVED ARCHITECTURAL PLANS SHALL BE APPROVED BY THE OWNER AND ARCHITECT. WHEN UNAPPROVED DEVIATIONS ARE MADE, THE GC SHALL BE HELD LIABLE FOR ANY ERRORS, OMISSIONS, DELAYS AND SUPPLEMENTARY COSTS INCURRED (INCLUDING ARCHITECTURAL & ENGINEERING PROFESSIONAL SERVICE FEES) THAT MAY BE REQUIRED AS A RESULT OF THESE DEVIATIONS.

ALL DIMENSIONS ARE FROM FACE OF FINISH TO FACE OF FINISH UNLESS OTHERWISE NOTED.

CONTRACTOR SHALL BE RESPONSIBLE FOR CLEANING ALL INTERIOR SURFACES AND EXTERIOR DEBRIS SPECIFIC TO CONSTRUCTION ACTIVITIES PRIOR TO OCCUPANCY OF THE SPACES BY THE OWNER. ADDITIONAL CLEANING FOLLOWING THE RECONCILIATION OF PUNCHLIST ITEMS SHALL ALSO BE INCLUDED. FINAL CLEANUP SHALL CONSIST OF THE FOLLOWING:

- a. REMOVE ALL CONSTRUCTION DEBRIS, UNUSED MATERIALS, TOOLS, ETC.
- b. CLEAN, SANITIZE, AND STOCK ALL TOILET ROOMS
- c. CLEAN ALL COUNTERS AND TABLETOPS d. CLEAN INTERIOR AND EXTERIOR SURFACES OF STOREFRONT GLASS AND FRAMES
- e. CLEAN ALL FLOORS
- f. CLEAN ALL GLASS SURFACES
- g. REPLACE ALL FILTER MEDIA IN HVAC SYSTEMS

LOCATOR PLAN



SCOPE SUMMARY

WALL SECTION MARK Interior renovation of an existing space (T.I.) to reorient an existing back-of-house service corridor. Scope includes demolition of existing conditions and installation of new partitions, doors, and finishes. Contractor to coordinate ELEVATION MARKS IT/AV/security installation in the field with Tenant vendor.

CODE SUMMARY

THE PLANS SUBMITTED HAVE BEEN DESIGNED TO

MEET THE CODES AS LISTED BELOW: 2018 International Building Code 2018 International Existing Building Code 2018 International Plumbing Code 2018 International Energy Conservation Code 2018 International Mechanical Code 2018 International Fuel Gas Code 2018 International Fire Code 2017 National Electrical Code

CHAPTER 3 USE AND OCCUPANCY CLASSIFICATION FORMER SPACE WAS MERCANTILE USE (ASSUMED)

CHAPTER 5 GENERAL BUILDING HEIGHTS AND AREAS (TABLE 503) THIS SCOPE OF WORK DOES NOT INCREASE THE AREA OF THE EXISTING BUILDING/TENANT SPACE.

TENANT RENOVATION AREA = 450 SF

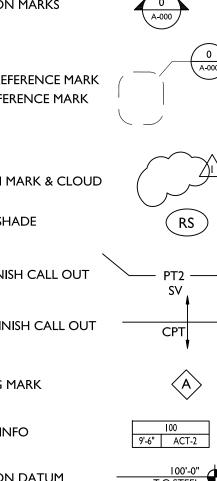
- CHAPTER 6 TYPES OF CONSTRUCTION CONSTRUCTION TYPE II-B FULLY SPRINKLERED
- CHAPTER 9 FIRE PROTECTION SYSTEMS FIRE EXTINGUISHERS PROVIDED IN ACCORDANCE WITH INTERNATIONAL FIRE CODE: (EXTINGUISHERS PROVIDED AND INSTALLED BY GENERAL CONTRACTOR) NFPA 10 SMOKE DETECTORS TO BE PROVIDED.
- CHAPTER IO MEANS OF EGRESS THE EXISTING BUILDING MEETS THE REQUIREMENTS FOR FOR A FULLY SPRINKLERED BUILDING.
- CHAPTER II ACCESSIBILITY THE EXISTING BUILDING MEETS THE REQUIREMENTS FOR THE REQUIREMENTS FOR ACCESSIBLE PARKING.
- CHAPTER 29 PLUMBING SYSTEMS PLUMBING SYSTEMS.

MEANS OF EGRESS. EGRESS PATH OF TRAVEL IS LESS THAN 250'

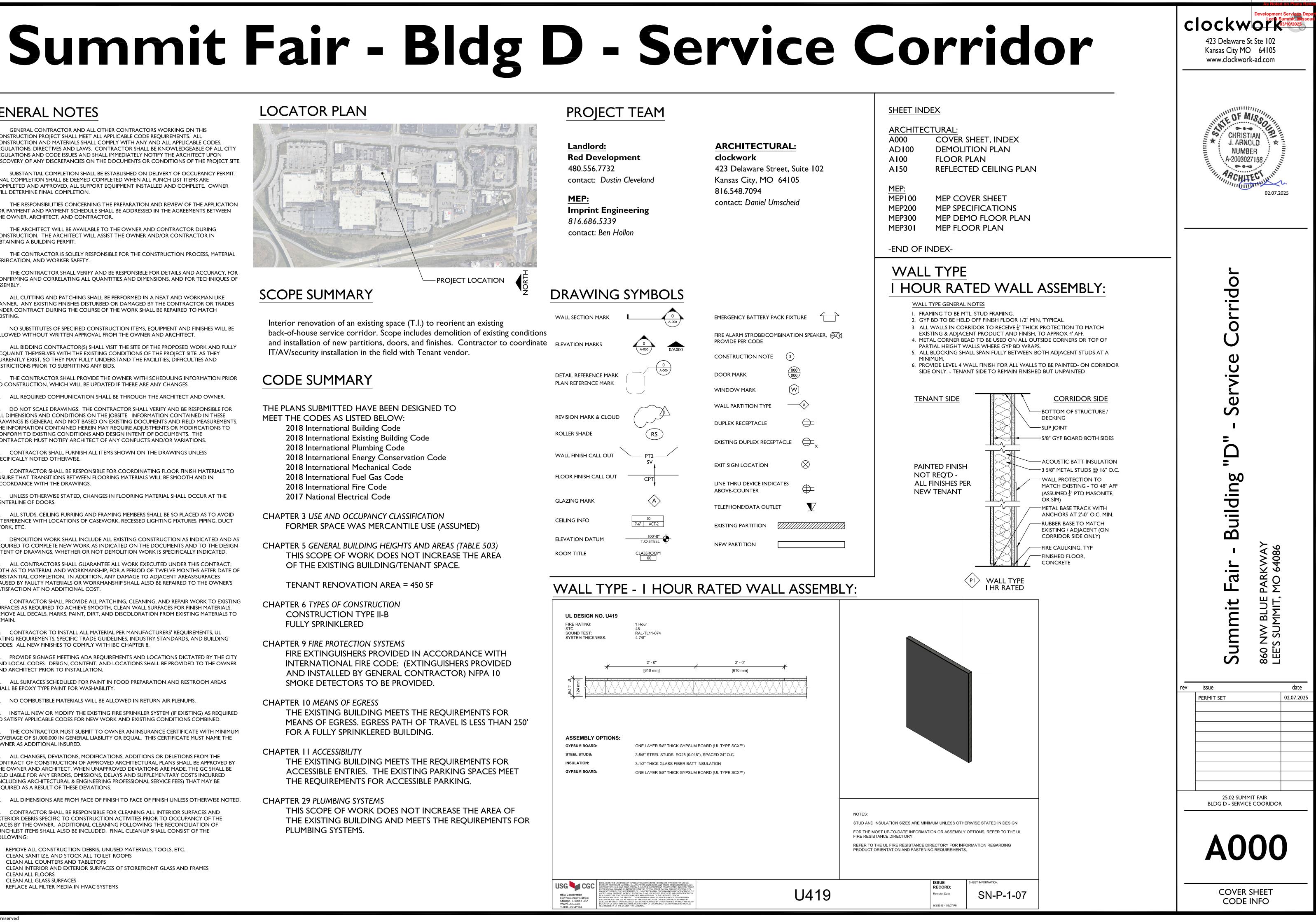
ACCESSIBLE ENTRIES. THE EXISTING PARKING SPACES MEET

THIS SCOPE OF WORK DOES NOT INCREASE THE AREA OF THE EXISTING BUILDING AND MEETS THE REQUIREMENTS FOR

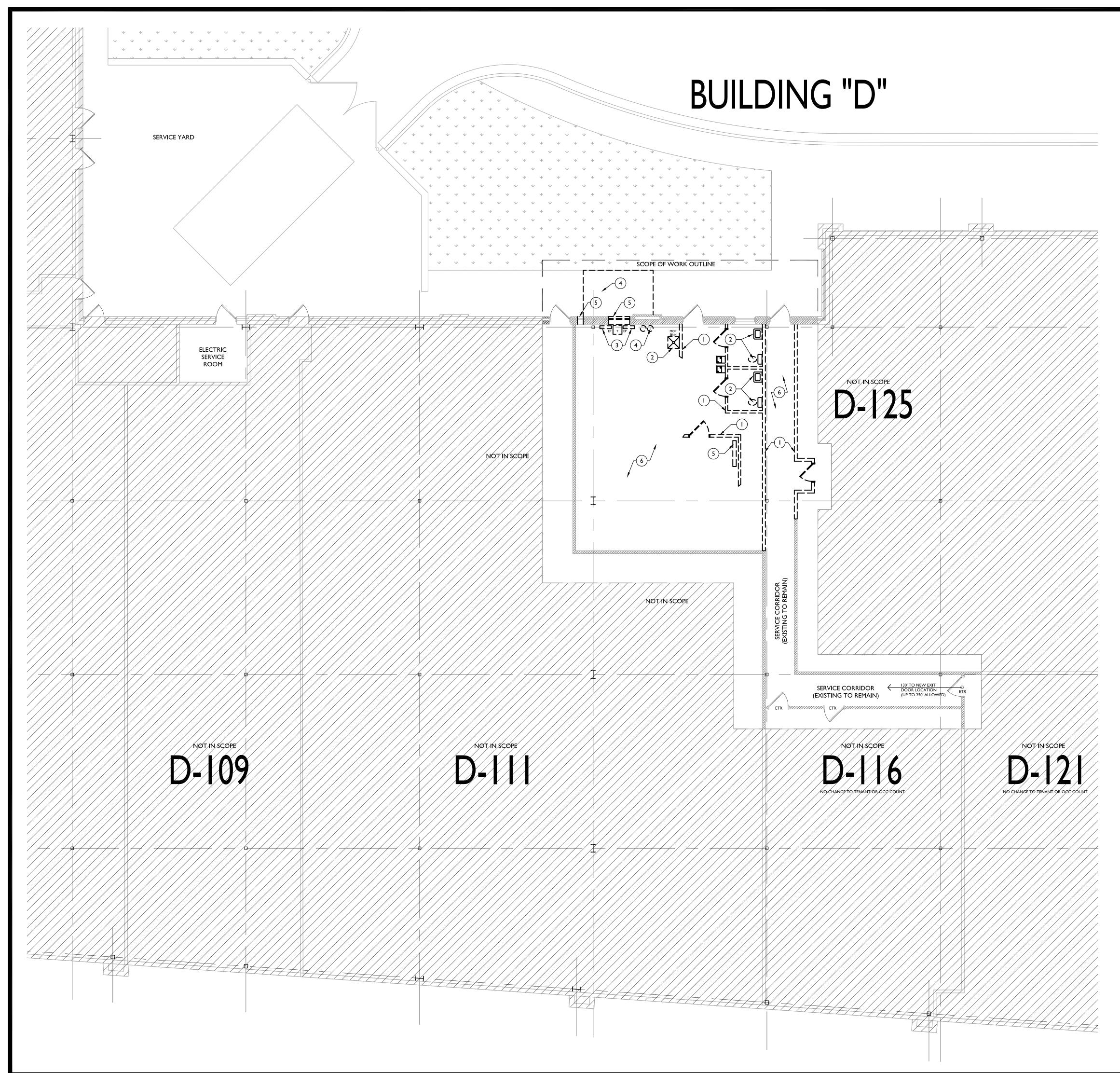
clockwork 816.548.7094 contact: Daniel Umscheid



EMERGENCY BATTERY PACK FIXTURE
FIRE ALARM STROBE/COMBINATION SPEAKER,
CONSTRUCTION NOTE (3)
DOOR MARK
WALL PARTITION TYPE
DUPLEX RECEPTACLE
EXISTING DUPLEX RECEPTACLE \bigcirc_{X}
EXIT SIGN LOCATION
LINE THRU DEVICE INDICATES ABOVE-COUNTER
TELEPHONE/DATA OUTLET
EXISTING PARTITION
NEW PARTITION



RELEASED FOF CONSTRUCTION



DEMOLITION PLAN GENERAL NOTES:

- I. ITEMS TO BE REMOVED ARE SHOWN WITH A DASHED (HIDDEN) LINE.
- 2. ALL DIMENSIONS ARE + / -3. DO NOT ALLOW MATERIALS AND DEBRIS GENERATED BY DEMOLITION ACTIVITIES TO ACCUMULATE ON THE JOB SITE. REMOVE DAILY AND DISPOSE OF IN A LEGAL MANNER. NO ON SITE SALE OR BURNING OF REMOVED ITEMS IS PERMITTED.
- 4. THIS PLAN IS TO BE USED IN CONJUNCTION WITH THE ENTIRE SET OF CONSTRUCTION DRAWINGS. DO NOT REMOVE ANY ITEMS WITHOUT VERIFYING AND COORDINATING WITH ALL GENERAL TRADES AS TO HOW THEY RELATE TO THE OVERALL PROJECT.
- COORD ALL SITE WORK W/LANDLORD AS REQ'D. 5. THE CONTRACTOR MUST MAINTAIN ADEQUATE SUPPORT, INSULATION, WATERPROOFING, EMERGENCY LIGHTING, EGRESS PATHS, SECURITY, ALARMS, ETC. FOR ALL OR PART OF ITEMS TO REMAIN.
- 6. GENERAL CONTRACTOR AND SUB-CONTRATORS SHALL BE RESPONSIBLE FOR VERIFYING AND COORDINATING ALL FIELD CONDITIONS AS CALLED FOR OR REQUIRED BY THE NEW WORK.
- 7. GENERAL CONTRACTOR SHALL PROVIDE TEMPORARY CONSTRUCTION BARRICADES AS REQUIRED FOR DEMOLITION AND NEW WORK. 8. EXISTING EXIT SIGNAGE, EGRESS LIGHTING, SECURITY CAMERAS, SWITCHES, OUTLETS, ETC.
- ARE NOT SHOWN FOR CLARITY AND ARE TO BE REMOVED UNLESS NOTED OTHERWISE. COORD. W/ MEP DEMO AND NEW WORK PLANS. 9. CONTRACTOR TO PROTECT ALL EXISTING FINISHES, CEILINGS AND OTHER SURFACES
- SCHEDULED TO REMAIN DURING ALL PHASES OF CONSTRUCTION. ANY SURFACES SCHEDULED TO REMAIN THAT GETS DAMAGED DUE TO CONTRACTOR WORK SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE. 10. CONTRACTOR TO ENSURE PROJECT SITE IS SECURE AFTER BUSINESS HOURS. CONFIRM
- HOURS WITH LANDLORD AND TENANT. 11. CONTRACTOR TO ENSURE THAT LOUD OR DISRUPTIVE (SMELLY) WORK SHALL BE
- COORDINATED WITH LANDLORD AND TENANT. 12. REMOVE ALL ABANDONED ELECTRICAL AND BLANK COVER PLATES THROUGHOUT.
- PATCH AND REPAIR WALL FOR NEW FINISH.
- 13. REMOVE AND DISPOSE OF ALL BUILT-IN FURNITURE AND CASEWORK (TABLES, CASEWORK, WALL PANELS, WAINSCOTING, ARTWORK, SHELVING ETC.)
- 14. WHERE REQUIRED FLOOR SHALL BE PATCHED & PREPPED, LEVELED AFTER REMOVAL OF FLOORING MATERIAL. PATCH AND FILL ALL HOLES AND VOIDS IN FLOOR SLAB. 15. REMOVE ALL ROOM AND OCCUPANCY SIGNAGE LEFT BY PREVIOUS TENANT. PATCH AND REPAIR WALL FOR NEW PAINT FINISH.
- 16. DEMO AND REMOVE ALL EXISTING WALL FINISHES (INCLUDING VINYL DECALS/WALLCOVERING). SKIMCOAT OR PREP WALLS TO RECEIVE NEW PAINTED WALL FINISH.

DEMOLITION PLAN KEYED NOTES:

- I REMOVE EXISTING PARTITION WALL AND CEILING (WHERE PRESENT) AS REQUIRED BY THE NEW WORK. TERMINATE AND CAP OFF ANY EXISTING IN-WALL UTILITIES NOT REUSED BY NEW WORK. REMOVE AND DISPOSE OF EXISTING DOORS, FRAME, ASSOCIATED HARDWARE.
- (2) REMOVE SINK, TOILET, PLUMBING FIXTURES AND ASSOCIATED FIXTURES & FINISHES. CAP AS REQ'D BY CODE.
- (3) REMOVE (EP) ELECTRIC PANEL, (T) TRANSFORMER REF: MEP.
- (4) REMOVE VERTICAL PORTION OF EXISTING ROOF-DRAIN PIPING TO RE-ROUTE TO NEW LOCATION. REMOVE LAMBS-TONGUE FROM EXTERIOR WALL AND RETAIN FOR RE-USE. PATCH AND REPAIR EXTERIOR WALL WITH SALVAGED EXTERIOR CLADDING MATERIAL. DEMO EXTERIOR FLATWORK AS REQ'D FOR FUTURE TIE-IN OF ROOF DRAIN TO UNDERGROUND DRAIN SYSTEM.
- (5) REMOVE PORTION OF EXTERIOR WALL FOR NEW SCOPE OF WORK. SALVAGE EXTERIOR CLADDING AND RETAIN FOR RE-USE. PATCH AND REPAIR EXTERIOR WALL WITH SALVAGED EXTERIOR CLADDING MATERIAL.
- (6) REMOVE AND RETAIN LIGHTING FIXTURES FOR REUSE AS CONDITIONS ALLOW. COORD WITH NEW SCOPE OF WORK. REF: MEP.

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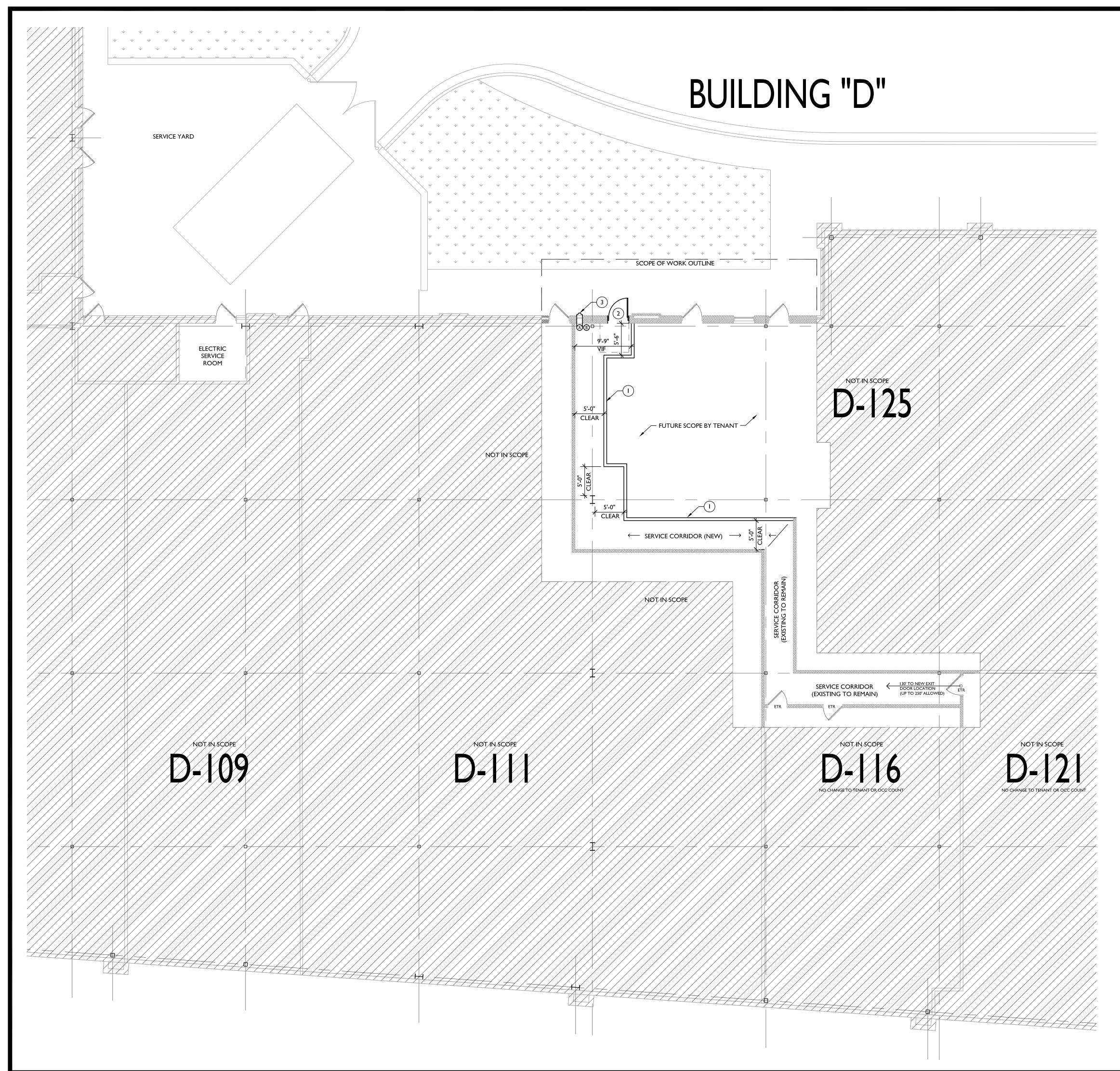
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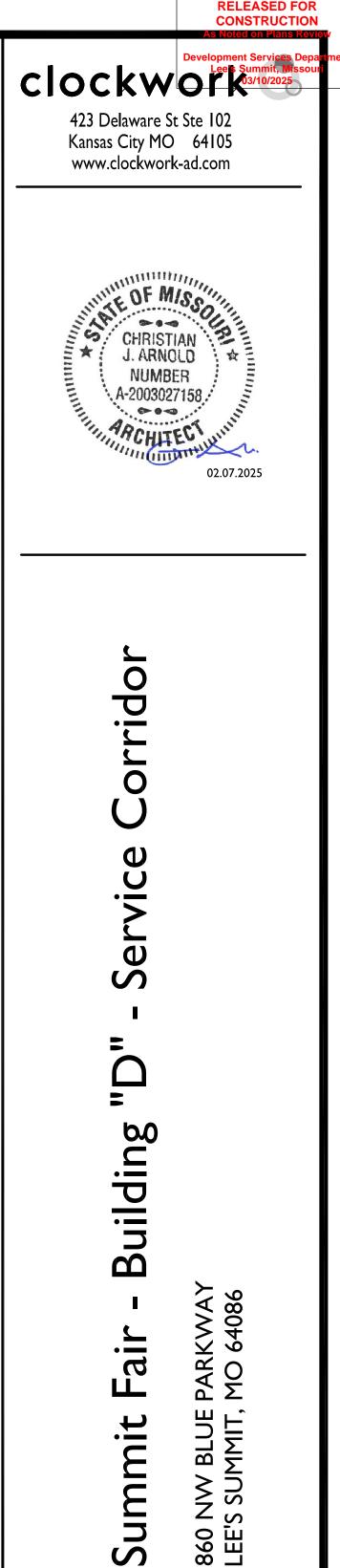
DEMO FLOOR PLAN





FLOOR PLAN GENERAL NOTES:

- I. ALL DIMENSIONS TO EXISTING ITEMS ARE + / -
- DIMENSIONS FOR INTERIOR PARTITIONS ARE TO OUTSIDE FACE OF WALL FINISH.
 ALL PARTITIONS TO BE TYPE <P UNLESS NOTED OTHERWISE.
- 4. CONTRACTOR TO COORDINATE ALL MEP REQUIREMENTS.
- 5. CONTRACTOR TO COORDINATE IT/AV/SECURITY SYSTEM WITH TENANTS VENDOR. PROVIDE CONDUIT AND PULL STRING FOR IT/AV/SECURITY WORK. COORDINATE WITH ELECTRICAL & IT/AV/SECURITY.
- CONTRACTOR IS RESPONSIBLE FOR COORDINATING AND PROVIDING ALL BLOCKING AS REQUIRED FOR CASEWORK, LIGHT FIXTURES, ACCESSORIES, ETC.
 CONTRACTOR TO COORDINATE TENANT PROVIDED LCD & MOUNT LOCATIONS.
- PROVIDE POWER, CABLE AND BLOCKING AS REQUIRED.
 8. ALL STOREFRONT AND DOOR DIMENSIONS ARE TO FRAME EXTENTS. CONTRACTOR TO
- COORDINATE AND VERIFY ROUGH OPENINGS PRIOR TO ORDERING FRAMES AND DOORS. 9. CONTRACTOR SHALL COORDINATE ALL CORE DRILL LOCATIONS WITH GAMES,
- ELECTRICAL AND I.T. LAYOUTS. PROVIDE FLUSH POKE THROUGH DEVICE. 10. ALL CARD READERS, SWITCHES, CONTROLS, ETC TO COMPLY WITH A.B.A.A.S. (ARCHITECTURAL BARRIERS ACT ACCESSIBILITY STANDARD) REQUIREMENTS FOR MOUNTING HEIGHTS.
- II. CONTRACTOR TO ENSURE THAT LOUD OR DISRUPTIVE (SMELLY) WORK SHALL BE DONE AFTER BUSINESS HOURS. COORDINATE WITH LANDLORD AND TENANT.
 I2. ALL CUSTOM ITEMS TO BE REVIEWED BY TENANT / ARCHITECT VIA SHOP DRAWINGS
- PRIOR TO FABRICATION. 13. PROVIDE POWER & DATA FOR ALL POS LOCATIONS - COORD FINAL LOCATIONS WITH
- TENANT. 14 ALL DECORATIVE WOOD ELEMENTS SHALL DE CONISTRUCTED OF MATERIALS MUTULA
- 14. ALL DECORATIVE WOOD ELEMENTS SHALL BE CONSTRUCTED OF MATERIALS WITH A CLASS C FLAME SPREAD INDEX OR BETTER.
- 15. GC & FSEQ TO COORDINATE FINAL ROUTING OF BEER & SODA LINES WITH ARCH & MEP PRIOR TO INSTALLATION.
- 16. COORD FINAL ROUTING OF BEER, SODA LINES WITH ARCH AND MEP PRIOR TO
- INSTALLATION. 17. WHERE EXPOSED IN GUEST-FACING AREAS - ALL WIRING SHALL BE RUN IN CONDUIT PAINTED TO MATCH ADJACENT SURFACE COLOR
- FLOOR PLAN KEY NOTES:
- I NEW WALL TO DECK MATCH EXISTING AND ADJACENT WALL TYPE AND FIRE RATING.
- 2 NEW INSULATED PAINTED METAL EXTERIOR DOOR AND HM FRAME. MIN SIZE 3'4" WIDE BY 7'-0" TALL TO MATCH LL STANDARD EXTERIOR DOOR, STYLE AND FINISH. INSTALL TO MATCH INSTALLATION DETAILS OF ADJACENT DOORS.
- 3 INSTALL SALVAGED LAMBS-TONGUE IN EXISTING MASONRY WALL, PATCH EXTERIOR CLADDING FOR WEATHERTIGHT PERFORMANCE. RE-ROUTE ROOF-DRAIN PIPING TO NEW LOCATION WITH MATCHING SIZE OF PIPE AND INSULATION. TIE (PIPE A) INTO LAMBS-TONGUE AND (PIPE B) INTO EXISTING STORM PIPING. REF MEP.



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FLOOR PLAN

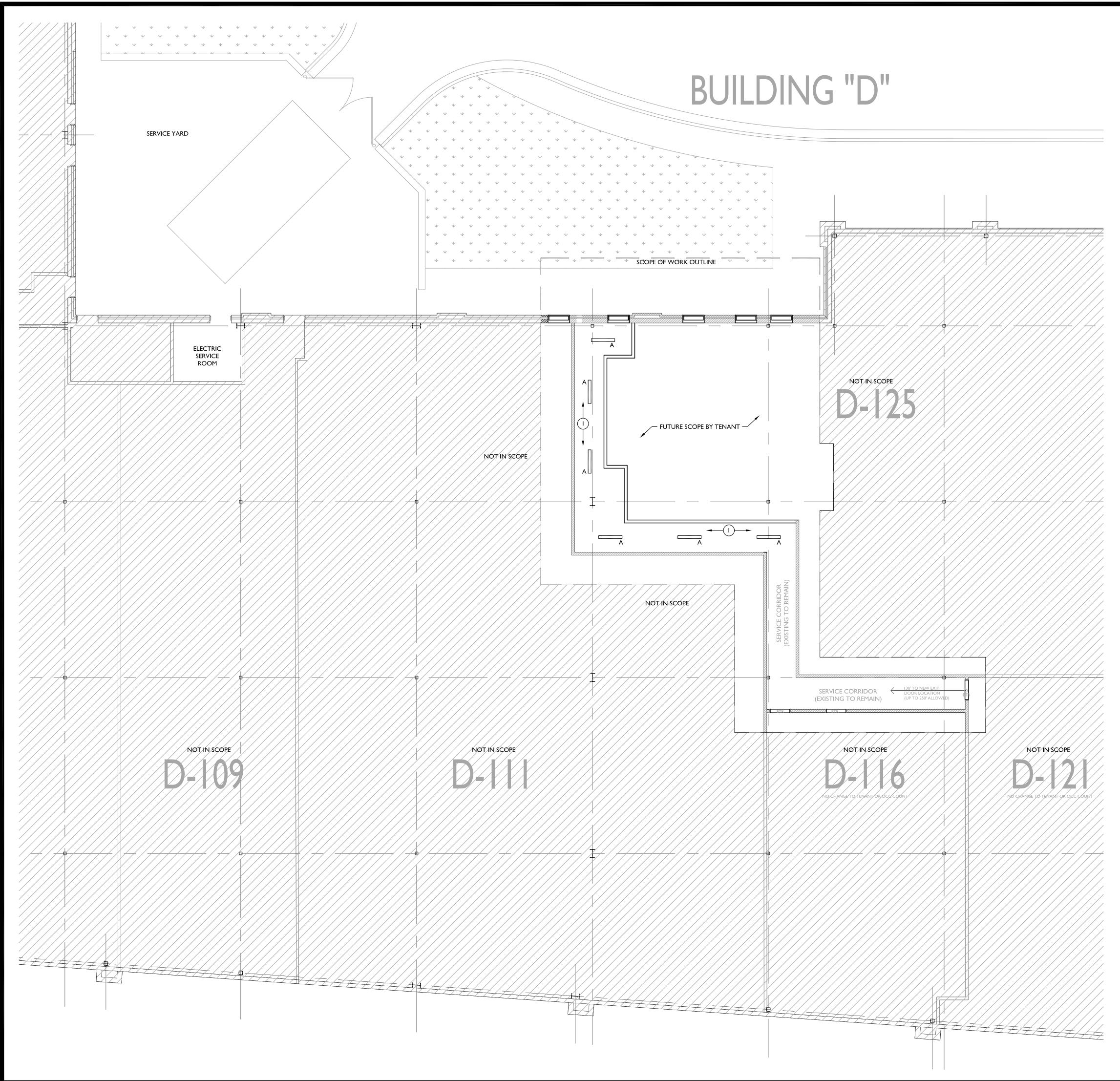
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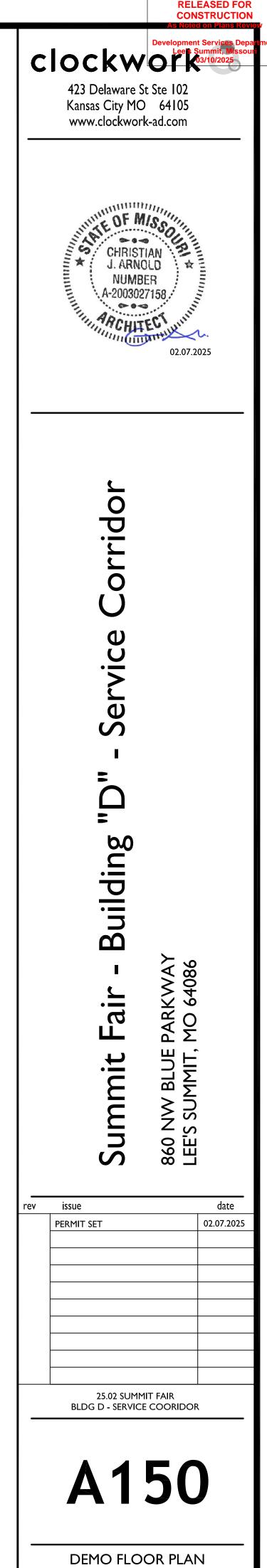


REFLECTED CEILING PLAN GENERAL NOTES:

- I. ALL DIMENSIONS TO EXISTING ITEMS ARE + / -
- CONTRACTOR TO COORDINATE ALL MEP REQUIREMENTS.
 CONTRACTOR TO COORDINATE IT/AV/SECURITY SYSTEM WITH TENANTS VENDOR. PROVIDE CONDUIT AND PULL STRING FOR IT/AV/SECURITY WORK. COORDINATE
- WITH ELECTRICAL & IT/AV/SECURITY.
 4. CONTRACTOR TO FIELD VERIFY ALL EXISTING CONDITIONS AND REPORT BACK TO ARCHITECT ANY CONFLICTS THAT MAY AFFECT DESIGN INTENTIONS SHOWN ON PROJECT DOCUMENTS.
- REFER TO MEP DRAWINGS FOR ALL EMERGENCY AND EXIT LIGHTING REQUIREMENTS.
- CONCEAL ALL CONDUIT TO LIGHT FIXTURES, EXIT DEVICES AND EMERGENCY LIGHTING IN WALL OR IN HARD PIPE CONDUIT.
 ALL CEILINGS TO BE OPEN TO STRUCTURE, UNLESS NOTED OTHERWISE. ALL
- EXPOSED STRUCTURE, CONDUIT AND DUCTWORK TO BE PAINTED.
- CENTER LIGHTS WITHIN SOFFIT AND TILES U.N.O, WHERE PRESENT.
 COORDINATE MOUNTING HEIGHTS OF ALL PENDANT LIGHTS IN FIELD WITH
- ARCHITECT U.N.O. 10. PROVIDE NEW EXIT SIGNS WHERE REQ'D - REFER TO ELECTRICAL DRAWINGS FOR LOCATION AND SPECIFICATION.
- II. CONTRACTOR TO ENSURE THAT LOUD OR DISRUPTIVE (SMELLY) WORK SHALL BE
- DONE AFTER BUSINESS HOURS. COORDINATE WITH LANDLORD AND TENANT. 12. CONTRACTOR SHALL COORDINATE BLOCKING REQUIREMENTS OF ALL ITEMS IN SCOPE TO PROVIDE BLOCKING AS NEEDED FOR INSTALLATION AND SUPPORT.
- I3. ALL SOFFIT AND WALLS IN OPEN STRUCTURE AREAS SHOULD CONTINUE TO
- STRUCTURE. MATCH EXISTING SOFFITS.
- 14. PATCH AND PAINT ALL DAMAGED CEILINGS/SOFFITS FROM FIXTURE AND HVAC REMOVAL.
 15. PAINT ALL EXPOSED/OPEN STRUCTURE, DUCTING, CONDUIT, ETC. WHERE REQ'D BY LANDLORD.

REFLECTED CEILING PLAN KEYED NOTES:

INSTALL SALVAGED LED LIGHT FIXTURE (TYPE A) - BOTTOM OF FIXTURE TO MATCH ADJACENT EXISTING FIXTURES (APPROX 12' AFF). REF: MEP



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MECHANICAL GENERAL NOTES:

- 1. THESE GENERAL NOTES APPLY TO ALL MECHANICAL DRAWINGS. REFER TO DIVISION 23 SPECIFICATIONS FOR ADDITIONAL MECHANICAL SYSTEMS SPECIFICATIONS AND REQUIREMENTS.
- THESE DRAWINGS ARE DIAGRAMMATIC AND INDICATE GENERAL ARRANGEMENT OF DUCTWORK, PIPING AND EQUIPMENT. DO NOT SCALE DRAWINGS. THE EXACT LOCATION AND ROUTING OF EQUIPMENT DUCTWORK, PIPING, ETC., UNLESS SPECIFICALLY DIMENSIONED ON THE DRAWINGS, SHALL BE DETERMINED IN THE FIELD. MAKE REASONABLE MODIFICATIONS IN THE INSTALLATION SO ALL DUCTWORK FITS PROPERLY AND EQUIPMENT CAN BE SERVICED.
- MATERIALS AND EQUIPMENT SHALL BE NEW AND INSTALLED AS INDICATED ON THE DRAWINGS AND/OR SPECIFICATIONS. THEY SHALL BE INSTALLED PLUMB, LEVEL AND TRUE-TO-LINE WITH ADJACENT WORK WHERE INSTALLATION METHODS ARE NOT SPECIFICALLY COVERED BY THE DRAWINGS AND/OR SPECIFICATION, FIRST CLASS TRADE PRACTICES AND MANUFACTURER'S INSTRUCTIONS AND RECOMMENDATIONS SHALL GOVERN.
- 4. CAREFULLY EXAMINE ALL ARCHITECTURAL, STRUCTURAL, PLUMBING, HVAC, FIRE PROTECTION, AND FLECTRICAL DRAWINGS PERTAINING TO CONSTRUCTION. COOPERATE WITH OTHER TRADES IN LOCATING DUCTWORK, PIPING, EQUIPMENT, ETC. IN ORDER TO AVOID CONFLICT WITH OTHER TRADE'S WORK. NO CLAIM FOR COSTS WILL BE ALLOWED FOR RELOCATING EQUIPMENT, PIPING, DUCTWORK, ETC. WHICH INTERFERES WITH OTHER TRADE'S WORK.
- HVAC EQUIPMENT, DUCTS AND INSTALLATION SHALL COMPLY WITH THE REQUIREMENTS OF ALL AUTHORITIES HAVING JURISDICTION. BUILDING DEPARTMENTS, APPLICABLE TO THE LATEST EDITION OF THE APPROVED BUILDING CODES, APPLICABLE OSHA AND NFPA STANDARDS, COUNTY AND CITY BUILDING REGULATIONS AND CODES.
- FABRICATION AND INSTALLATION OF DUCTWORK SHALL BE IN ACCORDANCE WITH SMACNA HVAC DUCT CONSTRUCTION STANDARDS, STATE MECHANICAL CODE AND APPLICABLE NFPA STANDARDS.
- 7. ALL DUCT SIZES SHOWN ARE INSIDE CLEAR DIMENSIONS.
- 8. PROVIDE AIR TURNING VANES IN ALL SQUARE ELBOWS. 9. REFER TO TYPICAL DETAILS FOR PIPING AND INSTALLATION OF EQUIPMENT.
- 10. PERSONNEL SHALL BE THOROUGHLY TRAINED AND EXPERIENCED IN THE PRODUCTS INVOLVED AND RECOMMENDED METHODS FOR THEIR FABRICATION AND INSTALLATION SHALL BE MADE FOR LACK OF SKILL ON THE PART OF THE WORKMAN IN THE ACCEPTANCE AND/OR REJECTION OF COMPLETED WORK
- 11. MECHANICAL CONTRACTOR SHALL FURNISH ALL LABOR, MATERIAL, TOOLS, AND EQUIPMENT TO INSTALL ALL HVAC SYSTEMS AS INDICATED ON THESE DRAWINGS.
- 12. MECHANICAL CONTRACTOR SHALL ARRANGE AND PAY FOR MECHANICAL PERMITS AND INSPECTIONS AS REQUIRED BY LOCAL ORDINANCES.
- 13. DELIVER MATERIALS TO PROJECT IN GOOD CONDITION. STORE MATERIALS OFF OF GROUND AND PROTECT FROM WEATHER AND THE ELEMENTS.
- 14. VERIFY DIMENSIONS IN THE FIELD. VERIFY STRUCTURAL DETAILS BEFORE INSTALLING DUCTWORK. NO EXTRA COMPENSATION WILL BE CONSIDERED BECAUSE OF DIFFERENCE BETWEEN ACTUAL MEASURED DIMENSIONS AND THOSE INDICATED ON THE DRAWINGS.
- 15. ALL PENETRATIONS THROUGH WALLS SHALL BE PROVIDED WITH PROPERLY SIZED SLEEVES. SEAL ALL PIPE SLEEVES WITH APPROPRIATE CAULKING. ALL PIPE PENETRATIONS THROUGH FIRE RATED WALLS AND/OR FLOORS SHALL BE INSTALLED IN ACCORDANCE WITH APPROPRIATE 3M FIRESTOP SYSTEM (OR APPROVED EQUAL). ALL PIPING SLEEVES SHALL BE SCHEDULE 40, CARBON STEEL, ASTM A53, GRADE B.
- 16. ANY CUTTING OR PATCHING OF NEW OR EXISTING SURFACES THAT IS REQUIRED SHALL BE BY THIS CONTRACTOR AND SHALL BE REPLACED WITH MATERIAL OF THE SAME QUALITY AND THICKNESS AS THE EXISTING SURFACE. ANY DAMAGES TO EXISTING MATERIALS SHALL BE REPAIRED OR REPLACED TO MATCH EXISTING.
- 17. ALL DUCTWORK SHALL BE IDENTIFIED AFTER INSULATION WITH PLASTIC DUCT SIGNAGE/MARKERS. THESE MARKERS SHALL BE THE MANUFACTURER'S STANDARD LAMINATED PLASTIC IN THE FOLLOWING COLOR CODES INDICATING BACKGROUND COLOR THEN LETTER COLOR: A. BLUE / WHITE: SUPPLY AIR B. RED / WHITE: RETURN AIR C. GREEN / WHITE: OUTSIDE AIR / INTAKE AIR D. YELLOW / BLACK: RELIEF AIR / EXHAUST AIR.
- 18. ENGAGE AN INDEPENDENT TESTING, ADJUSTING AND BALANCING (TAB) AGENT CERTIFIED BY EITHER AABC OR NEBB FOR ALL TESTING, ADJUSTING AND BALANCING. SEE THE TAB SPECIFICATION FOR MORE INFORMATION.
- 19. THERMOSTATS SHALL BE LOCATED AS PER PLANS 48 INCHES ABOVE FINISHED FLOOR.
- 20. MECHANICAL CONTRACTOR SHALL HAVE THE FINAL START-UP OR ALL HVAC EQUIPMENT SUPERVISED AND MONITORED BY A FACTORY AUTHORIZED TECHNICIAN.
- 21. PROVIDE FIRE RATED FINISHES OR FIRE-WRAP FOR ANY COMBUSTIBLE OR NON-PLENUM RATED MATERIALS IN RETURN AIR PLENUMS FOR NEW WORK OR EXISTING WORK TO REMAIN.

SCOPE OF FIRE SUPPRESSION

CONTRACTOR SHALL MODIFY EXISTING FIRE SUPPRESSION SYSTEM TO ACCOMMODATE THIS PROJECT SCOPE, REFER TO SPECIFICATIONS FOR REQUIREMENTS, PRODUCT SPECIFICS AND INSTALLATION PROCEDURES. SPRINKLER SYSTEM SHALL BE MONITORED BY THE FIRE ALARM SYSTEM. CONTRACTOR SHALL PROVIDE NECESSARY CONTROLS AS REQUIRED. SYSTEM SHALL BE QUICK RESPONSE TYPE FOR APPROPRIATE HAZARD CLASSIFICATION.

CONTRACTOR SHALL COORDINATE WITH OTHER TRADES AND ARCHITECTURAL PLANS FOR ROUTING OF PIPING AND PLACEMENT OF SPRINKLER HEADS. PROVIDE SHOP DRAWINGS FOR APPROVAL PRIOR TO INSTALLATION SHOWING COORDINATION OF SPRINKLER PIPING AND SPRINKLER HEADS WITH OTHER TRADES.

FIRE SPRINKLER DESIGN CRITERIA

ENGINEERING DOCUMENTS SHALL BE BASED UPON THE FOLLOWING CODES AND STANDARDS (AND LIST THEM ON THE LAYOUT DOCUMENTS): 1. NFPA 13 - CURRENT EDITION

- ENGINEERING DOCUMENTS SHALL ALSO LIST AND/OR SHOW THE FOLLOWING:
- OCCUPANCY TYPE AS LISTED ON ARCHITECTURAL CODE PLANS 2. CONSTRUCTION TYPE: AS LISTED ON ARCHITECTURAL CODE PLANS
- 3. DESIGN APPROACH (STATE THE FOLLOWING: RESPONSE TYPE, DENSITY, HEAD SPACING.)
- 4. INTERIOR OCCUPIED SPACES SYSTEM 4.1. SYSTEM TYPE - WET
- 4.2. HAZARD CLASSIFICATION LIGHT
- 4.2.1. SYSTEM RESPONSE TYPE QUICK
- DENSITIES 0.10 GPM/SF FOR 1,500 SF 4.2.2. 4.2.3. MAXIMUM HEAD SPACING - 225 SF
- 4.3. HAZARD CLASSIFICATION ORDINARY GROUP 1 SYSTEM RESPONSE TYPE - QUICK 4.3.1.
- 4.3.2. DENSITIES 0.15 GPM/SF FOR 1,500 SF
- 4.3.3. MAXIMUM HEAD SPACING 130 SF 5. CHARACTERISTICS OF WATER SUPPLY TO BE USED, INCLUDING MAIN SIZE AND I OCATION
- 6. THE POINT OF SERVICE FOR THE FIRE PROTECTION WATER SUPPLY 7. SYSTEM VALVING AND ALARM REQUIREMENTS:
- 7.1. SYSTEM SHALL BE MONITORED BY THE FIRE ALARM SYSTEM OR A SEPARATE MONITORING SYSTEM PANEL, DIALER AND ANNUNCIATION ACCESSORIES AS REQUIRED BY LOCAL ADOPTED CODES. 7.2. ALL CONTROL VALVES SHALL BE EQUIPPED WITH TAMPER AND FLOW SWITCHES
- WIRED TO THE MONITORING SOURCE PANEL. ACCEPTANCE TESTING OF FIRE PROTECTION SYSTEM SHALL BE IN ACCORANCE WITH THE

FOLLOWING CODES AND STANDARDS: 1. NFPA 25 - CURRENT EDITION

PLUMBING GENERAL NOTES:

- 1. THESE GENERAL NOTES APPLY TO ALL PLUMBING DRAWINGS. REFER TO D SPECIFICATIONS FOR ADDITIONAL PLUMBING SYSTEMS SPECIFICATIONS A
- 2. THESE DRAWINGS ARE DIAGRAMMATIC AND INDICATE GENERAL ARRANGEMENT OF ALL MATERIALS, PIPING AND EQUIPMENT. DO NOT SCALE DRAWINGS. THE EXACT LOCATION AND/OR ROUTING OF EQUIPMENT. PLUMBING, SANITARY PIPING, ETC., SHALL BE FOLLOWED AS CLOSELY AS BUILDING CONSTRUCTION AND ALL OTHER WORK WILL PERMIT.
- 3. MATERIALS AND EQUIPMENT SHALL BE NEW AND INSTALLED AS INDICATED ON THE DRAWINGS AND/OR SPECIFICATIONS. THEY SHALL BE INSTALLED PLUMB, LEVEL AND TRUE-TO-LINE WITH ADJACENT WORK. WHERE INSTALLATION METHODS ARE NOT SPECIFICALLY COVERED BY THE DRAWINGS AND/OR SPECIFICATIONS, FIRST CLASS TRADE PRACTICES AND MANUFACTURER'S INSTRUCTIONS AND RECOMMENDATIONS SHALL GOVERN.
- 4. ALL WORK SHALL COMPLY WITH THE REQUIREMENTS OF ALL AUTHORITIES HAVING JURISDICTION, BUILDING DEPARTMENTS, APPLICABLE TO THE LATEST EDITION OF THE APPLICABLE BUILDING CODE, PROVINCIAL FIRE CODE, APPLICABLE OSHA AND NFPA STANDARDS, COUNTY AND CITY BUILDING REGULATIONS AND CODES.
- 5. CAREFULLY EXAMINE ALL ARCHITECTURAL, STRUCTURAL, PLUMBING, HVAC, FIRE PROTECTION, AND ELECTRICAL DRAWINGS PERTAINING TO CONSTRUCTION. COOPERATE WITH OTHER TRADES IN LOCATING DUCTWORK, PIPING, EQUIPMENT, ETC., IN ORDER TO AVOID CONFLICT WITH OTHER TRADE'S WORK. NO CLAIM FOR COSTS WILL BE ALLOWED FOR RELOCATING EQUIPMENT, PIPING, DUCTWORK, ETC., WHICH INTERFERES WITH OTHER TRADES WORK.
- 6. VERIFY ALL ROUGH-IN LOCATION AND COORDINATE PIPING AND EQUIPMENT LOCATIONS WITH WORK UNDER OTHER DIVISIONS OF THE SPECIFICATIONS TO AVOID CONFLICTS. CONTRACTOR MUST COORDINATE WITH OTHER TRADES FOR ALL STRUCTURES, PIPING, CONDUIT, DUCTWORK, LIGHTING, ETC. TO PROPERLY BE INSTALLED. ANY CONFLICTS SHALL BE RESOLVED AT NO EXPENSE TO THE OWNER.
- 7. LABEL ALL PLUMBING PIPING WITH ADHESIVE PIPE LABELS INDICATING SERVICE AND DIRECTION OF FLOW. PIPE LABELS SHALL BE LOCATED NEAR ALL BRANCH CONNECTIONS, NEAR ALL FLOOR AND WALL PENETRATIONS, AND AT MAXIMUM INTERVALS OF 10 FEET ALONG EACH RUN.
- 8. PLUMBING SYSTEMS INCLUDE, BUT ARE NOT LIMITED TO: a. PLUMBING FIXTURES AND EQUIPMENT b. FIRE STOPPING c. DOMESTIC WATER SYSTEM d. SANITARY WASTE AND VENT SYSTEM 8. PROVIDE COMPLETE FIXTURES AND INCLUDE SUPPLIES, STOPS, VALVES, FAUCETS, DRAINS, TRAPS, TAILPIECES, ESCUTCHEONS, ETC. EXPOSED COPPER OR BRASS MATERIALS SHALL BE CHROME PLATED.
- 9. SEAL ALL EDGES OF PLUMBING FIXTURES IN CONTACT WITH FLOORS, WALLS OR COUNTERTOPS USING SANITARY-TYPE, ONE-PART, MILDEW RESISTANT SILICONE SEALANT. MATCH SEALANT COLOR TO FIXTURE COLOR.
- 10. FIRE STOP ALL PENETRATIONS, BY PIPING OR CONDUITS, OF FIRE RATED WALLS, FLOORS, AND PARTITIONS. PROVIDE DEVICE(S) OR SYSTEM(S) WHICH HAS BEEN TESTED AND LISTED AS COMPLYING WITH ASTM E-814 AND INSTALL IN ACCORDANCE WITH THE CONDITIONS OF THEIR LISTING. PROVIDE DEVICE(S) OR SYSTEM(S) WITH AN 'F' RATING EQUAL TO THE RATING OF THE ASSEMBLY BEING PENETRATED.
- 11. FURNISH AND INSTALL A COMPLETE SYSTEM OF DOMESTIC HOT AND COLD WATER FROM EXISTING SUPPLIES TO ALL FIXTURES AND/OR EQUIPMENT REQUIRING DOMESTIC WATER SUPPLIES. VERIFY LOCATION OF BEGINNING POINTS.
- 12. ALL PIPE INSULATION SHALL RUN CONTINUOUSLY THROUGH WALLS AND PARTITIONS.
- 13. SHUT-OFF VALVES SHALL BE NIBCO TWO-PIECE. BRONZE. FULL PORT. BALL-TYPE. PROVIDE SHUT-OFF VALVES WHERE INDICATED ON THE SCHEDULES. INSTALL VALVES IN A LOCATION THAT PERMITS ACCESS FOR SERVICE AND OPERATION WITHOUT DAMAGE TO THE BUILDING OR FINISHED MATERIALS. PROVIDE ACCESS DOORS IF REQUIRED.
- 14. PROTECT COPPER PLATING AGAINST CONTACT WITH DISSIMILAR METALS. ALL HANGARS, ANCHORS, AND CLIPS SHALL BE COPPER OR COPPER-PLATED.
- 15. FURNISH AND INSTALL COMPLETE SYSTEMS OF SANITARY WASTE AND VENT PIPING FROM ALL PLUMBING FIXTURES AND/OR EQUIPMENT REQUIRING WASTE AND VENT CONNECTIONS. ALL WASTE AND VENT PIPING SHALL BE CONCEALED IN THE BUILDING CONSTRUCTION WHERE POSSIBLE
- 16. INVERTS ELEVATIONS SHALL BE ESTABLISHED AND VERIFIED BEFORE SANITARY PIPING IS INSTALLED IN ORDER THAT PROPER SLOPES WILL BE MAINTAINED.
- 17. INSTALL CLEANOUTS IN A LOCATION THAT PERMITS ACCESS FOR SERVICE WITHOUT DAMAGE TO THE BUILDING OR FINISHED MATERIALS. CLEANOUT PLUGS SHALL BE IN ACCORDANCE WITH PLUMBING CODE REQUIREMENTS.
- 18. PROVIDE WATER HAMMER ARRESTORS CONFORMING TO PDI-WH201 OR ASSE 1010, INSTALLED PER MANUFACTURER'S SPECIFICATIONS, WHERE QUICK CLOSING VALVES ARE UTILIZED. A QUICK CLOSING VALVE IS A VALVE OR FAUCET THAT CLOSES AUTOMATICALLY WHEN RELEASED, OR THAT IS CONTROLLED BY MECHANICAL MEANS FOR FAST-ACTION CLOSING. REFER TO WATER HAMMER ARRESTOR SCHEDULE.
- 19. PROVIDE FIRE RATED FINISHES OR FIRE-WRAP FOR ANY COMBUSTIBLE OR NON-PLENUM RATED MATERIALS IN RETURN AIR PLENUMS FOR NEW WORK OR EXISTING WORK TO REMAIN.

VOLTAGE DROP

ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR UPSIZING ALL BRANCH CIRCUIT AND FEEDER CONDUCTORS AS REQUIRED TO COMPLY WITH VOLTAGE DROP REQUIREMENTS AS OUTLINED IN THE NEC.

UPSIZE WIRE ON 120V CIRCUIT HOMERUNS AS LISTED BELOW UNLESS OTHERWISE SHOWN ON PLANS:

- 1. LESS THAN 100 FEET IN CONDUCTOR LENGTH: #12 PHASE/NEUTRAL CONDUCTORS & #12 GROUND
- 2. 100 TO 150 FEET IN CONDUCTOR LENGTH:
- #10 PHASE/NEUTRAL CONDUCTORS & #10 GROUND
- 3. GREATER THAN 150 FEET IN CONDUCTOR LENGTH: #8 PHASE/NEUTRAL CONDUCTORS & #8 GROUND

DIVISION 22	
AND REQUIREMENTS.	

- **ELECTRICAL GENERAL NOTES:** 1. THESE GENERAL NOTES APPLY TO ALL ELECTRICAL AND SPECIAL SYSTEMS DRAWINGS. REFER TO DIVISION 26 SPECIFICATIONS FOR ADDITIONAL ELECTRICAL AND SPECIAL SYSTEMS SPECIFICATIONS AND REOUIREMENTS. 2. PROVIDE PULL BOXES AS REQUIRED TO PROPERLY INSTALL THE RACEWAYS AND CIRCUITS INDICATED. 3. REFER TO ARCHITECTURAL DRAWINGS FOR TYPICAL ROOM INTERIOR ELEVATIONS. COORDINATE EXACT DIMENSIONED DEVICE LOCATIONS AND MOUNTING HEIGHTS OF ALL LIGHT FIXTURES, LIGHTING DEVICES, SWITCHES, RECEPTACLES, ETC. WITH ARCHITECT PRIOR TO ROUGH-IN. 4. COMPLETE INSTALLATION SHALL BE IN ACCORDANCE WITH THE LATEST ADOPTED VERSION OF THE
- NATIONAL ELECTRICAL CODE, STATE AND LOCAL CODES, AND REQUIREMENTS OF THE AHJ. 5. ALL EMPTY CONDUITS SHALL BE PROVIDED WITH ROT-PROOF PULL-TAPE, LABELED AT EACH END.
- ALL CONDUITS SHALL BE PROVIDED WITH PLASTIC BUSHINGS WHERE TERMINATED OPEN-ENDED. 6. COORDINATE ALL WIRING DEVICE LOCATIONS SHOWN AT MILLWORK LOCATIONS WITH THE MILLWORK CONTRACTOR AND GENERAL CONTRACTOR PRIOR TO ANY ROUGH-IN OR INSTALLATION. ALL WIRING DEVICES SHALL BE INSTALLED IN ACCESSIBLE LOCATIONS AND SHALL NOT BE CONCEALED.
- 7. CONTRACTOR SHALL CONCEAL ALL CONDUIT, FITTINGS, AND DEVICES FROM VIEW WHERE POSSIBLE.
- 8. SEAL ALL PENETRATIONS THROUGH FIRE-RATED ASSEMBLIES AS NECESSARY TO RESTORE FIRE-RESISTANCE RATING OF ASSEMBLY. REFER TO ARCHITECTURAL PLANS AND SPECIFICATIONS OR RATED ASSEMBLIES, FIRE STOPPING MATERIALS, AND REQUIREMENTS. WHERE ANY DEVICE JUNCTION BOXES ARE RECESSED WITHIN OPPOSITE SIDES OF A FIRE RATED WALL AND ARE WITHIN 24" OF EACH OTHER MEASURED HORIZONTALLY, PROVIDE AN INTUMESCENT MOLDABLE FIRE STOP PUTTY PAD AROUND EACH JUNCTION BOX.
- 9. EACH CONTRACTOR AND SUB-CONTRACTOR OR TRADE IS REQUIRED TO REVIEW THE CONSTRUCTION DOCUMENTS AS A WHOLE, INCLUDING ALL OTHER TRADES' DRAWINGS AND PROVIDE ANY MISC. MATERIALS, WORK, ETC. REQUIRED TO COMPLETE THE WORK AS SHOWN ON ALL DOCUMENTS. THIS REQUIREMENT APPLIES TO ALL TRADES. STRUCTURAL, MECHANICAL. ELECTRICAL, PLUMBING, CIVIL, EQUIPMENT VENDORS, ETC. REQUIREMENTS AND RELATED WORK ARE INDICATED THROUGHOUT THE DOCUMENTS AND SHOULD BE REVIEWED WITH THE SPECIFIC MEP, STRUCTURAL, ARCHITECTURAL, EQUIPMENT DRAWINGS FOR OVERALL SCOPE OF WORK.
- 10. REFER TO THE MECHANICAL DRAWINGS FOR EXACT LOCATIONS AND QUANTITY OF ALL MECHANICAL EQUIPMENT AND FIRE/SMOKE AND/OR SMOKE DAMPERS. LOCATIONS AND QUANTITY SHOWN ON THE ELECTRICAL DRAWINGS ARE APPROXIMATE AND MAY NOT REFLECT FINAL POSITION OR QUANTITY.
- 11. ELECTRICAL CONTRACTOR SHALL PROVIDE FINAL CONNECTION TO ALL MECHANICAL & PLUMBING EQUIPMENT. WHERE EQUIPMENT IS SHOWN ON THE MECHANICAL PLANS, BUT NOT SHOWN ON THE ELECTRICAL PLANS, ELECTRICAL CONTRACTOR SHALL PROVIDE POWER TO THE EQUIPMENT BASED ON EQUIPMENT REQUIREMENTS AND INCLUDE ALL COSTS IN THE BASE BID.
- 12. LOCATION SHOWN OF ELECTRICAL CONNECTION TO MECHANICAL & PLUMBING EQUIPMENT IS SCHEMATIC AND MAY NOT REFLECT ACTUAL CONNECTION POINTS. ROUGH-IN AND CONNECTION TO EQUIPMENT SHALL BE PER THE EQUIPMENT MANUFACTURER'S REQUIREMENTS AND THE NATIONAL ELECTRICAL CODE. PROVIDE STRUCTURAL SUPPORTS AS REQUIRED FOR MOUNTING OF DISCONNECTING MEANS. VERIFY ALL ROUGH-IN REQUIREMENTS WITH THE MECHANICAL CONTRACTOR AND EQUIPMENT MANUFACTURER PRIOR TO ANY ROUGH-IN.
- 13. PROVIDE FINAL CONNECTION TO ALL EQUIPMENT, INCLUDING ANY CORD AND PLUG SETS FOR EQUIPMENT NOT PROVIDED WITH IT (WHETHER SPECIFICALLY NOTED OR NOT). COORDINATE ALL WORK WITH THE EQUIPMENT SUPPLIER AND OWNER; AND VERIFY ALL ROUGH-IN LOCATIONS AND **REQUIREMENTS PRIOR TO ANY ROUGH-IN.**
- 14. ALL HVAC CONTROL WIRING IS PROVIDED BY MECHANICAL CONTRACTOR, INSTALLED BY ELECTRICAL CONTRACTOR UNLESS OTHERWISE NOTED.
- 15. WHERE DEVICES ARE LOCATED ADJACENT TO EACH OTHER ON PLANS, DEVICES SHALL BE INSTALLED AS CLOSE TOGETHER AS POSSIBLE
- 16. REFER TO MOUNTING HEIGHTS DETAIL FOR MOUNTING HEIGHTS OF ALL DEVICES NOT INDICATED OTHERWISE.
- 17. COORDINATE THE MOUNTING OF SUSPENDED LIGHT FIXTURES UTILIZING INDIRECT LIGHT SO THAT CONDUIT, DUCTWORK, STRUCTURAL MEMBERS, ETC. ARE NOT LOCATED DIRECTLY ABOVE THE LIGHT FIXTURE. MAINTAIN A MINIMUM OF 24" CLEARANCE FROM THESE ITEMS WHENEVER POSSIBLE.
- 18. ANY ELECTRICAL AND LOW VOLTAGE DEVICES THAT ARE SHOWN AS EXISTING TO REMAIN SHALL BE REPLACED WITH NEW DEVICES AND NEW FACEPLATES OF THE SAME TYPE AND COLOR AS THE NEW DEVICES TO BE INSTALLED AND RECONNECTED TO THE SAME CIRCUIT UNLESS OTHERWISE NOTED. DEVICE AND FACEPLATE TYPE AND COLOR SHALL BE COORDINATED WITH THE ARCHITECT PRIOR TO FURNISHING.
- 19. DEVICES SHOWN TO BE DEMOLISHED SHALL HAVE THE WALL PATCHED AND REPAIRED. BLANK FACEPLATES ARE NOT ALLOWED FOR DEVICES TO BE REMOVED.

COORDINATION NOTES:

- 1. COORDINATE WITH LOCAL UTILITY PROVIDERS FOR THEIR REQUIREMENTS FOR SERVICE CONNECTIONS AND PROVIDE ALL NECESSARY PAYMENTS, MATERIALS, LABOR AND TESTING TO ACCOMPLISH THE WORK.
- 2. COORDINATE REQUIREMENTS FOR INSTALLATION OF SYSTEMS AND EQUIPMENT WITH ALL OTHER TRADES.
- 3. THE CONTRACTOR SHALL COORDINATE THE ROUTING AND PATH OF ALL SYSTEMS, CONDUITS, PIPES, DUCTS, ETC WITH THE POSITION AND LAYOUT OF THE STRUCTURE. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING NECESSARY OFFSETS, TURNS, RISES AND DROPS FOR SYSTEMS AND COMPONENTS AS NEEDED TO INSTALL THE MEP SYSTEMS TO CLEAR STRUCTURE, CEILINGS, ETC AND OTHER SYSTEMS IN POTENTIAL CONFLICT WITH ROUTING.
- 4. WHEREVER THE WORK IS OF SUFFICIENT COMPLEXITY, PREPARE ADDITIONAL COORDINATION DRAWINGS AND ORGANIZE ON-SITE MEETINGS WITH ALL RELATED SUBCONTRACTORS TO COORDINATE THE WORK BETWEEN TRADES . DRAWINGS SHALL CLEARLY SHOW THE WORK AND ITS RELATION TO THE WORK OF OTHER TRADES, AND BE SUBMITTED FOR REVIEW PRIOR TO COMMENCING SHOP FABRICATION OR ERECTION IN THE FIELD.
- 5. COORDINATE WORK WITH OTHER TRADES TO INSTALL SYSTEMS ABOVE CEILING HEIGHTS INDICATED ON ARCHITECTURAL PLANS.
- 6. CHECK SPACE REQUIREMENTS WITH OTHER TRADES AND STRUCTURE/CONSTRUCTION TO ENSURE THAT ALL MATERIALS AND EQUIPMENT CAN BE INSTALLED IN THE SPACE ALLOTTED INCLUDING FINISHED SUSPENDED CEILINGS AND OTHER SPACES, CHASES, ETC WITHIN THE BUILDING. MAKE MODIFICATIONS THERETO AS REQUIRED AND APPROVED.
- 7. ADJUST LOCATION OF PIPING, DUCTWORK, ETC. TO PREVENT INTERFERENCES, BOTH ANTICIPATED AND ENCOUNTERED. DETERMINE THE EXACT ROUTE AND LOCATION OF EACH ITEM PRIOR TO FABRICATION. MAKE OFFSETS, TRANSITIONS AND CHANGES IN DIRECTION IN SYSTEMS AS REQUIRED TO MAINTAIN ADEQUATE CLEARANCES AND HEADROOM.
- 8. DRAWINGS SHOW THE GENERAL RUNS OF CONDUITS, PIPING AND DUCTWORK AND APPROXIMATE LOCATION OF OUTLETS. ANY SIGNIFICANT CHANGES IN LOCATION OF ITEMS NECESSARY IN ORDER TO MEET FIELD CONDITIONS SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE ARCHITECT/ENGINEER AND RECEIVE HIS APPROVAL BEFORE SUCH ALTERATIONS ARE MADE. ALL SUCH MODIFICATIONS SHALL BE MADE WITHOUT ADDITIONAL COST TO THE OWNER.
- 9. COORDINATE, PROJECT AND SCHEDULE WORK WITH OTHER TRADES IN ACCORDANCE WITH THE CONSTRUCTION SEQUENCE.
- 10. WHEREVER WORK INTERCONNECTS WITH WORK OF OTHER TRADES, COORDINATE WITH THOSE TRADES TO ENSURE THAT ALL SUBCONTRACTORS HAVE THE INFORMATION NECESSARY SO THAT THEY MAY PROPERLY INSTALL ALL CONNECTIONS AND EQUIPMENT, IDENTIFY ALL ITEMS OF WORK THAT REQUIRE ACCESS SO THAT THE CEILING TRADE WILL KNOW WHERE TO INSTALL ACCESS DOORS AND PANELS.
- 11. CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTION AND REPAIR OF SURFACES, AREAS AND PROPERTY THAT MAY BE DAMAGED AS A RESULT OF CONSTRUCTION ACTIVITIES.
- 12. TRANSMIT TO OTHER TRADES ALL INFORMATION REQUIRED FOR WORK TO BE PROVIDED UNDER THEIR RESPECTIVE SECTIONS IN AMPLE TIME FOR INSTALLATION.
- 13. CONTRACTOR TO PROVIDE FIRESTOPPING AT ALL FIRE RATED ASSEMBLIES MEETING THE MANUFACTURER'S FIRESTOPPING U.L. LISTED DETAILS AND INSTRUCTIONS PER LOCAL CODES AND JURISDICTIONS. CONTRACTOR IS RESPONSIBLE FOR COORDINATING LOCATIONS WITH ARCHITECTURAL FIRE RATINGS ON PLANS OR AS REQUIRED.

				RELEASED F CONSTRUCTI As Noted on Plans F
ELECTRICAL S	 DENOTES SHARED (PARTIAL) CIRCUIT DENOTES THREE SEPARATE CIRCUITS NOTE: ALL WIRES ARE MINIMUM #12 UNLESS NOTED OTHERWISE AND/OR UPSIZED AS REQUIRED PHASE CONDUCTORS PER VOLTAGE DROP TABLE. NEUTRAL CONDUCTOR GROUND CONDUCTOR PANEL - BREAKER NUMBER (IDENTIFICATION) INDICATES X/X= 2-POLE C.B., X/X/X = 3-POLE C.B. CONDUIT CONCEALED IN CEILING OR WALL WITH THREE CONDUCTORS: 1-PHASE; 1-NEUTRAL; 1-GROUND WIRE, MINIMUM NO.12 WIRE UNLESS OTHERWISE SPECIFIED ON DRAWINGS. CONDUIT RUN UNDERGROUND OR CONCEALED IN FLOOR SLAB. EXIT LIGHT, WALL OR CEILING AS INDICATED. BATTERY-OPERATED EMERGENCY LIGHT (WALL / CEILING) COMBINATION EXIT / EMERGENCY LIGHT (WALL / CEILING) GRID-MOUNTED TROFFER LIGHT FIXTURE (DIAGONAL SHADING DENOTES EMERGENCY BATTERY) STRIP LIGHT FIXTURE (DIAGONAL SHADING DENOTES EMERGENCY BATTERY) SQUARE / ROUND DOWNLIGHT (DIAGONAL SHADING DENOTES EMERGENCY BATTERY) 		ER SHEET CIFICATIONS IOLITION FLOOR PLAN	<section-header><section-header><text><text><text><text></text></text></text></text></section-header></section-header>
	(DIAGONAL SHADING DENOTES EMERGENCY BATTERY) PANELBOARD (SURFACE OR FLUSH) TOP MOUNTED 6'-0" AFF			
	SWITCHBOARD, NUMBER OF SECTIONS AS INDICATED. DISTRIBUTION PANEL (SURFACE OR FLOOR MOUNTED). CONDUIT UP / CONDUIT DOWN CONDUIT STUBBED THRU WALL WITH BUSHINGS ON BOTH ENDS GROUND	<u>LINEWORK L</u>	EGEND: DEMOLISH / REMOVE EXISTING TO REMAIN EXISTING TO REMAIN (ROOF / ABOVE) NEW WORK	idor
• () () \$ \$ 3, 4, M, T \$ ^{1,2} , LD, Sa a,b,c,d RC1 RCD (M) (M) (M)	POWER CONNECT ION POINT DISCONNECT SWITCH, SIZE AND TYPE AS NOTED TOP MOUNTED 5-0" AFF WALL MOUNTED OR CEILING MOUNTED JUNCTION BOX SINGLE POLE SWITCH 3-WAY / 4-WAY / MOTION / TIMER SWITCH TYPE AS SCHEDULED LOW VOLTAGE SWITCH, ON/OFF, DIMMING, SCENE SELECTOR, TYPE AS SCHEDULED SWITCH ZONE DESIGNATION DIGITAL LIGHTING ROOM CONTROLLERS, TYPE AS INDICATED WALL / CEILING MOUNTED MOTION DETECTOR, TYPE AS INDICATED WALL / CEILING MOUNTED MOTION DETECTOR, TYPE AS INDICATED SIMPLEX RECEPTACLE DUPLEX RECEPTACLE DUPLEX RECEPTACLE SPECIAL DUPLEX RECEPTACLE SPECIAL DUPLEX RECEPTACLE SPECIAL DUPLEX RECEPTACLE, TYPE AS INDICATED DUBLE DUPLEX RECEPTACLE CSTRIKETHROUGH DENOTES ABOVE COUNTER) SPECIAL NEMA RECEPTACLE, TYPE AS INDICATED DUBLES DUPLEX RECEPTACLE, TYPE AS INDICATED ON PLANS. RECESSED STYLE POKE THRU DEVICE, POWER AND DATA OR AS SPECIFIED LOW VOLTAGE OUTLET, DOUBLE GANG BOX WITH SINGLE GANG PLASTER RING. INSTALL 1" CONDUIT STUBBED UP OUT OF TOP OF BOX TO ABOVE AN ACCESSIBLE CEILING. MULTI-SERVICE POWER AND MINIMUM 2 LOW VOLTAGE GANGS, MANUFACTURER MAKE/MODEL AS SPECIFIED CEILING MOUNTED PHOTO-ELECTRIC SMOKE DETECTOR DUCT MOUNTED PHOTO-ELECTRIC SMOKE DETECTOR FA VISUAL FIRE ALARM STROBE LIGHT (WALL / CEILING)	MECHANICA	L SYMBOLS DUCTWORK SUPPLY DUCT RETURN DUCT EXHAUST DUCT SUPPLY DIFFUSER RETURN GRILLE EXHAUST GRILLE EXHAUST GRILLE RISE OR DROP IN DUCT THERMOSTAT MANUAL VOLUME DAMPER SUPPLY DUCT DOWN SUPPLY DUCT DOWN RETURN DUCT DOWN RETURN DUCT DOWN RETURN DUCT DOWN EXHAUST DUCT UP EXHAUST DUCT UP EXHAUST DUCT UP WALL MOUNTED DIFFUSER/GRILLE FLEXIBLE DUCT CONNECTION EQUIPMENT TYPE AND DESIGNATION MARK NO. SUPPLY (S_), RETURN (R_), EXHAUST (E_) — CFM CONNECT TO EXISTING MECHANICAL PLAN NOTE	Fair - Building "D" - Service Corl PARKWAY MO 64086
₩ <mark>₩</mark> ⁴ F ⁶ S ⁶ S ⁶ SD FACP FAAP CR ML	FA COMBINATION HORN/STROBE (WALL / CEILING) FIRE ALARM MANUAL PULL STATION. SPRINKLER ALARM SYSTEM FLOW SWITCH SPRINKLER ALARM SYSTEM TAMPER SWITCH FIRE AND SMOKE DAMPER 120V, 1Ø FIRE ALARM CONTROL PANEL FIRE ALARM CONTROL PANEL (FLUSH) SECURITY DEVICES: SECURITY SYSTEM PROVIDED BY OTHERS, ROUGH-IN PROVIDED BY CONTRACTOR. PROVIDE TWO-GANG BOXES AT EACH DEVICE UNLESS OTHERWISE SHOWN	PLUMBING S	PIPING FLOW ARROW COLD WATER HOT WATER SANITARY VENT ABOVE GROUND/FLOOR SANITARY VENT BELOW GROUND/FLOOR SANITARY WASTE BELOW GROUND/FLOOR	rev issue date PROGRESS SET 02.07.202
REX KP	IN DOOR ROUGH-IN DETAILS. REFER TO DETAILS AND COORDINATE ALL WORK WITH SECURITY VENDOR PRIOR TO WORK.		SHUT OFF VALVE UNION	
		 ☑ OR Ø	FLANGE CONNECTION FLOOR DRAIN OR EQMT FLOOR DRAIN	
ECTRICAL NC	ELECTRICAL PLAN NOTE	 o	PIPE DROP/PIPE RISE	
<u>XX-X</u>	MECHANICAL/PLUMBING EQUIPMENT TAG		BOTTOM OUTLET TEE	
72"	HEIGHT TO CENTERLINE OF OUTLET BOX ABOVE FINISHED FLOOR		TOP OUTLET TEE	
AFF	ABOVE FINISH FLOOR		WALL CLEAN OUT	
FA	FIRE ALARM	O FFCO	FINISHED FLOOR CLEANOUT	25.02 SUMMIT FAIR

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EQUIPMENT TYPE AND DESIGNATION

PLUMBING FIXTURE DESIGNATION

CONNECT TO EXISTING

PLUMBING PLAN NOTE

E##	ELECTRICAL PLAN NOTE
<u>XX-X</u>	MECHANICAL/PLUMBING EQUIPMENT TAG
72"	HEIGHT TO CENTERLINE OF OUTLET BOX ABOVE FINISHED FL
AFF	ABOVE FINISH FLOOR
FA	FIRE ALARM
GFI	GROUND FAULT INTERRUPTER
UGE	UNDERGROUND ELECTRICAL
OHE	OVERHEAD ELECTRICAL
(R)	RELOCATED FIXTURE / DEVICE
NL	NIGHT LIGHT (24/7 OPERATION)
USB	USB TYPE DEVICE WITH BOTH A & C TYPE CHARGING PORTS

25.02 SUMMIT FAIR BLDG D - SERVICE COORIDOR

MEP COVER SHEET

GENERAL, MECHANICAL, PLUMBING & FIRE PROTECTION SPECIFICATIONS

GENERAL MEP REQUIREMENTS

1. SUMMARY OF WORK

- A. The contract documents require the furnishing and installing of complete functioning mechanical systems, and each element thereof, as specified or indicated in the contract documents or reasonably inferred, to completely construct and leave ready for operation the systems as shown on the drawings and herein described, including every article, device or accessory, whether or not specifically called for by item. Elements of the work include materials, labor, supervision, supplies, equipment, transportation, and utilities.
- B. Specifications and drawings are complementary and what is called for in one shall be as binding as is called for by both.
- C. All work performed under this section shall be done in a neat and workmanlike manner by experienced mechanics of the proper trade.
- . COORDINATION, MEASUREMENTS AND LAYOUTS
- A. The contractor shall inspect the site where this work is to be performed and fully familiarize K. When the excavation is beyond the area of general construction work, final surface and adjacent himself with all conditions related to this project
- B. The contractor shall employ a competent foreman on the job to see that work is done in accordance with the best practices and in a satisfactory and workmanlike manner. The foreman shall keep informed as to the work of other trades engaged in the construction of the project, L. When the excavation is on public property, restoration of surface conditions shall meet the and shall execute their work in such a manner as not to interfere with or delay the work of other
- C. Drawings show the general arrangement of all systems and components covered under this section. Where local conditions necessitate a rearrangement, the contractor shall prepare, and submit for approval, drawings of the proposed rearrangement. Because of the small scale of the drawings, it is not possible to indicate all offsets, fittings, and accessories that may be required. The contractor shall carefully investigate the structural and finish conditions affecting all of their work and shall arrange such work accordingly, furnishing such offsets, fittings and accessories as 13. DEMOLITION AND NEW WORK may be required to meet such conditions at no additional cost to the owner. The contractor shall verify all dimensions. Drawings shall not be scaled to determine dimension.

3. PERMITS AND <u>FEES</u>

- A. The contractor shall obtain and pay for all required permits and licenses and shall make all deposits and pay all fees required for the performance of work under this section, other than those deposits or fees which are fully refundable to the owner.
- 4. SUBMITTALS, MATERIALS AND EQUIPMENT
- A. All items of materials and equipment shall be new unless otherwise specified herein, free from defects and of the best quality normally used for the purpose in good commercial practice.
- B. As soon as possible after the award of the contract, the contractor shall submit for review digital shop drawings for all equipment to be furnished for this project. Submittals shall include manufacturer's name, model number, descriptive engineering data and all necessary information as to finish, material gauges and accessories. After such shop drawings are processed, they will be returned to the contractor. The contractor shall, upon receipt of reviewed shop drawings proceed with the procurement and installation of such equipment
- . CODES, LAWS, AND STANDARDS
- A. All work shall be installed in compliance with all governing codes, applicable local laws, regulations, ordinances or statutes of regulatory bodies having jurisdiction. The work shall be executed in accordance with said laws, regulations, ordinances, statues or codes, without increased cost to the owner. Any point in question shall be referred to the engineer for approval. 15. Work indicated on the documents that is in excess of code requirements shall not be reduced in quality and/or quantity
- B. Comply with rules and regulations of public utilities and municipal departments affected by connections of services.
- 6. RECORD DOCUMENTS
- A. Operating and Maintenance Brochure:
- 1) On completion of the project, the Contractor shall provide project manuals electronically (PDF format unless otherwise instructed) containing complete product information for all END OF GENERAL MEP REQUIREMENTS installed or provided equipment and components including cut sheets, parts lists, wiring and installation diagrams, operating, service and lubrication instructions. Provide manufacturer guarantee and warranty certificates.

B. Record Drawings:

- 1) On completion of the project, the Contractor shall provide record drawings with all field 1. SCOPE: changes clearly and neatly noted. The original routing and layout shall be clearly marked A. Fire protection shall be governed by all applicable provisions of the Contract Document. out. References to other documents, drawings, addenda, RFI's or otherwise for additional information shall not be accepted.
- 2) The Contractor shall submit record drawings electronically in PDF format (unless otherwise instructed).

. GUARANTEES AND WARRANTI

- A. The contractor shall guarantee complete system operation and that the material and equipment C. All fire protection components shall be UL and FM approved devices where applicable as conical fittings unless specifically indicated otherwise on drawings. Provide locking quadrant volume furnished and installed will be free from defects in workmanship and materials and will give satisfactory service under the specified operating conditions. The contractor agrees to replace, within one year after the system is accepted. No equipment warranty or guarantee shall start until the time of building acceptance.
- given to the owner prior to final acceptance of work performed under this section.

8. FINAL INSPECTION

A. After completion of the entire project the contractor shall request final inspection of this project in written form addressed to the architect along with a statement to the effect that all installations have been completed, checked, adjusted and balanced in accordance with G. Upon completion of the project, perform all flushing and testing of the system including pressure 7. PAINTING: requirements of this project. Upon receipt of written notification of completion and request for final inspection the engineer will perform a final inspection of this work and, if all installations are as represented by the contractor, the engineer will submit written recommendation of 2. WET SPRINKLER AND STANDPIPE SYSTEMS: acceptance

9. CLEANING

- A. Dirt and refuse resulting from the performance of the work shall be removed to keep the premises reasonable clean at all times.
- B. After completion of the work described in this specification and shown on the drawings, the contractor shall thoroughly clean all exposed surfaces and equipment, remove all dirt, debris, crating, cartons, etc., and leave all installations finished and ready for operation.

10. OPENINGS AND SLEEVES

- A. In fire-rated walls: caulking shall be a pure ceramic fiber made of alumina-silica, "Cerafiber-fs" by iohns-Manville. Sealant shall be gun grade. An acrylic 2-part gun applied, fire retardant elastic sealant, "Dymeric" by Tremco or equal by Permatite no. 1113fr.
- 1) Limit the size of the space between the wall or floor and the outside of the pipe or duct 3. PIPING, FITTING AND VALVES to 1 inch maximum. This space is sufficient to allow some movement of the pipes or duct without cracking the caulking or sealant.
- 2) For openings in walls, the caulking shall be applied to a minimum of 3 inch total depth. Sealant shall then be applied on both sides of the wall opening a minimum of 1/2 inch in depth, finished flush with the wall. D.
- B. For openings in floors, the caulking shall be applied from the upper side to a minimum of 3 inch total depth recessed 1/2 inch below the finished floor. This 1/2 inch recess shall then be filled with sealant to flush with finished floor.

CUTTING AND PATCHING

- A. The contractor shall be responsible for any cutting of walls, floors, ceilings and roofs required for
- performance of their work.
- B. No structural member shall be cut without permission from the architect. C. Patch all openings to match adjacent construction in both material and finish.
- D. All cutting of existing concrete floors/slabs on grade in the interior of the building shall be performed by "saw cutting" and shall be performed by this contractor.

12. EXCAVATION AND BACKFILI

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- A. All excavation and backfill required for the installation of the work shall be the complete responsibility of the contractor.
- removed without prior approval of the owner's representative
- C. Contractor shall provide protection for trees within 15 feet of utility excavation.
- Any dewatering of trenches/excavation shall be provided prior to installing any material.
- E. The contractor shall be required to provide all necessary barricades, fencing, bracing, sheet piling, shoring, warning signs, pumps, etc., for the protection of workers, general public, and G. Locate sprinklers at center of 2 x 2 lay-in tiles or 2 x 2 portion of 2 x 4 lay-in tiles. Align sprinklers properties. Excavation work shall comply with ASA standard a10.2 "safety code for building construction" and AGC standard "manual of accident prevention in construction" and the department of labor occupational safety and health (OSHA) standards.
- F. Locate existing underground utilities in areas of excavation work. Should uncharted, or incorrectly charted, piping or other utilities be encountered during excavation, consult utility END OF DIVISION 21000 owner immediately for directions

G. All trenches shall be uniformly graded and be free of soft spots and stone. Provide a 4 inch sand

H. Backfill shall not begin until installation has been tested and inspected. Contractor shall consult

- with the authority having jurisdiction and the architect/engineer prior to backfilling. 1) Initial backfill shall be sand to a point 6 inches above top of installed work.
- 2) Final backfill shall be installed in layers not exceeding 12 inches. Fill shall be well tamped A. The work included under this contract consists of providing all labor, materials, tools, before additional backfill material is placed. Backfill shall consist of earth or sand free of stone, bricks, or foreign matter.
- I. All excess earth and other material resulting from the excavation shall be removed from site by the contractor or may be piled at a location designated and approved by the owner. All debris rock and trash shall not be allowed to accumulate and shall be removed from the site. Streets, oadways and private property shall be kept in a clean condition.
- project closeout . When the excavation is within the area where finished site work is to be done under the general contract work, backfill to the height of rough grade. Final surfacing will be under general contract 2. sheet metal ductwork:
- disturbed areas shall be restored to match the original condition by sodding, seeding, asphalt paving, concrete, etc., as required. Work shall conform to applicable sections of these specifications.
- requirements of authorities having jurisdiction.
- M.When services are to be run side-by-side, a common trench may be used providing the required Seal class minimum requirements are: vertical and horizontal separation between the various services are maintained and providing the methods of bedding and backfill meet the approval of the engineer. Contractors involved shall make their own agreement as to the sharing of the cost of the common trenching and backfill

A. The contractor shall do all demolition, alterations and rework indicated and/or required to maintain the operation of all existing systems and to integrate the new systems in the renovated building as required. The contractor shall include all work which may be required to alterations and demolition work. This shall include all removal, relocation and reworking of piping, items of D. Crossbreak all ductwork surfaces over 18 inches in width. equipment, etc. Existing systems and new systems shall be completely integrated as intended E. Full areas shall be maintained in transitions where a change in the configuration of the duct and as indicated on the plans and in the specifications.

- B. The contractor shall remove from the premises and dispose of properly all existing material and F. Joints in ducts shall be made practically airtight and any open corner shall be neatly patched equipment which no longer serves a purpose in altered areas. The contractor shall remove and soldered tight. Duct tape will not be accepted as a joint patch. Low pressure system duct leakage unused ductwork and piping. Remove piping connected to equipment back to main and cap. shall not exceed 2%. Jnless otherwise noted, the contractor shall maintain services to all existing areas requiring such G. Concealed round ducts shall be constructed to SMACNA 2" w.g. Standards with grooved services. The contractor shall reroute as required such services where are disrupted due to longitudinal seams and sleeved type transverse joints. architectural changes in the existing structure. Any equipment which is designated to be reused and which is damaged in the process shall be replaced by the contractor with new equipment of 2. duct liner: like kind at no cost to the owner.
- The contractor shall replace any existing devices including air devices, thermostats and electrical devices to match new devices unless instructed otherwise.
- INTERRUPTION OF SERVICES
- 3. FLEXIBLE DUCT: A. The contractor shall schedule any service interruptions to the existing building with the owner's representative. Such interruptions shall be planned so as to be at times to cause the least A. Flexible ducts shall be UL-181 class Thermaflex M-KE, or approved equal, shall not be longer than inconvenience and interruption to the facility's schedule.

EXISTING CONDITIONS

A. All existing conditions shown on the drawings and described in the specifications for this project A. All horizontal ducts shall be supported with hangers spaced not more than 8'-0" apart. Hangers have been determined from available drawings and field investigations. Contractors making proposals for this work shall investigate all existing conditions and base their proposals on their observations to provide complete and functioning installations in accordance with the intent of the drawing and specifications for this project and all applicable governing codes, rules, regulations and ordinances. Failure to determine existing conditions which cause additional work DUCTWORK INSULATION will not constitute grounds for additional compensation.

DIVISION 21000 - FIRE PROTECTION

- include
- 1) Wet sprinkler system -- NFPA 13.
- 2) Systems shall be compliant with NFPA 70, 72, FM and UL as applicable.
- required by NFPA.
- without expense to the owner, any part of the apparatus which proves or becomes defective D. Upon completion of the work, system acceptance testing shall be performed by the sprinkler contractor in accordance with requirements of NFPA with a completed copy of 'Contractor's E. Duct splits, elbows and reducing fittings shall be fabricated per SMACNA standards. "Ductmate" Material and Test Certificate' provided.
- B. All warranties issued by equipment manufacturers shall be filled out in the owner's name and E. All cable ties for controls and other cable systems located in plenums utilized for air movement equal by Ruskin, American Warming & Ventilating, Air Balance, Inc., Carnes, Krueger, Nailor, United that are not installed in conduit shall be 25/50 flame and smoke rated, Hellermann Tyton Enertech.
 - T50R2C2UL or equivalent.
 - accordance with NFPA 13 and 14.
 - and flow tests and testing of all electrical, controls and safety components.

- system shall be hydraulically designed per appropriate hazard class. B. Sprinkler system shall be a delegated design, contractor shall be responsible for layout and END OF DIVISION 23000 design of the fire sprinkler system. Submit all necessary documentation (plans, calculations, cut sheet literature and flow tests) and obtain necessary permits for approval and installation of the
- system. Provide PE or NICET stamp on submittal drawings. C. As required by application, system shall include but not be limited to pipe and hangers, sprinklers, valves, inspector tests, fire department connection, audible and visible alarms, flow and tamper switches, gages, wiring, etc. Conform to the requirements of Division 16, FM and UL or IRI where required by owner.

1) System shall be an extension of and/or modifications to the existing building system.

- A. Fire protection piping and components above ground -
- i) 2" and smaller Schedule 40, black steel, malleable iron threaded, flanged or welded fittings; roll or cut groove mechanical joints with wrought or forged steel fittings or roll grooved end couplings.
- ii) Contractor to match existing building piping material standards.
- B. Sprinkler piping shall be independently supported from all other systems, no other system or component may bear on any sprinkler pipe or support. In accordance with NFPA 25 or where required by local authority, sprinkler piping shall not be subjected to external loads by materials either hung from or resting on sprinkler piping.
- C. Sprinklers may be supplied by UL 2443 listed 1" minimum 304 stainless steel (braided or unbraided corrugated) 175 PSIG rated flexible hoses with all associated UL listed fittings, threaded ends, brackets and other attachments, 6' maximum length. Victaulic Vic-Flex or acceptable equivalent.

4. <u>SPRINKLERS:</u>

- A. Provide quick response sprinklers, standard response, extended coverage or dry sprinklers as required by application
- B. Sprinklers shall be of the following styles, subject to application.
- B. No excavation and backfill shall be done within drip line of trees to remain. No tree shall be C. Recessed chrome plated brass with 2-piece adjustable escutcheon in gypsum and lay-in tile
 - D. Upright chrome plated brass in finished areas with exposed structure.
- D. Contractor shall be responsible for protecting all trench areas and maintaining a dry excavation. E. Where not otherwise indicated, sprinkler type, style, appearance and coverage to match existing. F. Any sprinklers removed shall be replaced with new sprinklers.

 - in a row when in gypsum board ceilings. All location tolerances shall be +/- 1/2".
 - H. Refer to reflected ceiling plans for coordination with lights, diffusers, exit signs, etc.

DIVISION 23000 - HEATING, VENTILATING AND AIR CONDITIONING

transportation, services, etc., necessary to complete the installation of the heating, ventilating, and air conditioning systems and other items herein listed and as described in these specifications, as illustrated in the accompanying drawings or as directed by the

B. Existing equipment including, but not limited to, rooftop units, heating only units and electric heating units shall be inspected for functionality. Any deficiencies or operational issues with the existing equipment shall be presented to the tenant, Architect, and Engineer in writing prior to

A. Sheet metal ducts and connections shall be constructed of G-90 galvanized sheets of mild steel. The ducts shall be constructed to the sheet metal and air conditioning contractors national association (SMACNA) pressure class standards. No duct shall be constructed with less than 24 guage metal. Local codes requiring heavier gauges shall govern.

1. general:

Architect/Engineer.

iurisdiction

4. DUCTWORK SUPPORTS

ecommendations

6. ACCESSORIES

concealed in frame.

1) Up thru 2" WG pressure - rectangular - Class 24, round - Class 12.

1) Up thru 2" WG pressure - class A for all duct joints.

B. Duct sections shall be joined in accordance with the recommendations of the sheet metal and air conditioning contractors national association and requirements of the building code having

C. Curved elbows shall be constructed with inside radius not less than the duct width in the same plane. Square elbows shall have turning vanes. Turning vanes shall be designed in accordance with ASHRAE recommendations. Manufactured vanes shall be by Greenheck or approved equal.

occurs. All tapering joints shall be reduced gradually.

A. All rectangular outside air intake, supply, return and transfer air ductwork shall be lined with 1/2" thick 2 lb. Density Certainteed Tough Gard duct liner or equal from Manville, Knauf insulation, or Owens Corning unless noted otherwise on the drawings. All duct liner is to comply and be installed in accordance to NAIMA fibrous glass duct liner standard and SMACNA.

5 feet and shall not have any air flow obstruction.

for ducts smaller than 31 inches shall consist of 22 guage galvanized steel straps securely fastened to the duct and the building construction. Ducts over 31 inches in width shall be hung with 1/4 inch steel angle on the bottom of the duct supported with steel rods of appropriate size securely fastened to the building structure. All supports to meet SMACNA standards.

A. All concealed round ducts shall be insulated with 1-1/2 inch thick, 1 pound per cubic foot density, certain-teed duct wrap insulation faced on one side with .002 inch aluminum foil with a 2 inch tab, or equal products by Manville, Knauf insulation, or Owens Corning unless noted otherwise on the drawings. Insulation shall be applied in strict compliance with the manufacturer's

B. All insulation shall be UL listed; flame spread/fuel contributed/smoke developed rating of 25/50/50 or less in accordance with ASTM E84, NFPA 255 and UL 723.

A. Provide single thickness turning vanes in all supply duct turns.

B. Provide a complete and operational fire protection system as required by NFPA, systems shall B. Provide duct access doors for all internal mounted equipment. Access doors shall be insulated double wall, constructed airtight in accordance with SMACNA standards for the appropriate pressure class where they are installed. They shall have butt or piano hinged with cam latches. Minimum size shall be 12"x12" or 12"x duct depth unless noted otherwise.

> Branch take-offs to air terminal units shall be high efficiency type D. All take-offs to diffusers and grilles shall be made with high efficiency take-offs, 45° take-offs or damper at take-offs in accessible ceilings, unless shown otherwise. Extractors and scoops are not

or acceptable equal flanged and gasketed joint systems are approved.

F. Provide dampers where shown and required. Dampers shall be by Greenheck or acceptable

G. Volume balancing dampers shall be Ruskin CD-35/CDR-25 or approved equal. The dampers F. Provide permanent identification of all valves, piping, electrical components and equipment in shall be constructed of 16 gauge galvanized steel, 6-inch wide opposed blades and the linkage

A. Painting, except as specified herein, shall be done by others.

B. Equipment which has damaged finish shall be repainted to match the original factory finish. A. Systems shall be in accordance with NFPA 13 and complete in every respect to provide complete C. All exposed ferrous metal furnished under this contract, such as hangers, struts, structural coverage of all areas in the building, or throughout the area of work as indicated. Sprinkler steel, etc., shall be given one coat of Tnemec gray primer.

ELECTRICAL SPECIFICATIONS

SECTION 26000 - ELECTRICAL

- 1. GENERAL ELECTRICAL REQUIREMENTS A.Refer to GENERAL MECHANICAL, ELECTRICAL and PLUMBING requirements.
- 2. IDENTIFICATION OF ELECTRICAL EQUIPMENT
- A. All cabinets, safety switches, panelboards, transformers, and other apparatus used for operation and control of circuits, appliances, and equipment shall be identified by means of manufactured engraved plastic plates, black with white letters
- B. All receptacles and switches to have clear printed tape style label with black letters indicating Panel and Circuit number.
- C. Panels to have typewritten panel schedules per as-built conditions. Where electrical equipment is installed as service entrance equipment. contractor shall furnish and install nameplate listing the following: Equip Short-Circuit Current Rating in Amps (RMS SYM), as indicated on the drawings, the rating of the equipment (fully or series-rated), and Available Fault Current in Amps. Contractor shall perform available fault current calculation to obtain available fault at Service Equipment, and label the date fault current calculations were performed.
- D. Identify each circuit branch circuit with wire markers when enclosure label and wire colors do not provide enough information to identify each circuit without tracing. Identify feeders and branch circuit home runs with wire marker with panel and circuit number. Box covers above lay-in ceilings neatly marked with indelible marker.
- 3. GROUNDING
- A. Grounding system, including all conductors, motor frames, raceways, cabinets, etc. that require grounding, shall comply with article 250 of the National Electrical Code, drawings, those of the serving utility and local authorities having jurisdiction, and as specified. Grounding conductors shall be as shown on plans or if not specifically shown shall be no smaller than that required by NEC.
- B. For service entrances, install per article 250 of the NEC and per service entrance grounding detail as described on the drawings.
- C. Provide individual separate equipment grounding conductors for branch circuit home runs shown on drawings and terminate at branch circuit panelboard, switchboard, or other distribution equipment
- D. Single phase branch circuits for lighting and power shall consist of phase and neutral conductors and green ground conductor installed in common conduit which shall serve as grounding conductor. 4. CONDUIT
- A. All electrical wiring, including low voltage wiring and fire alarm wiring, shall be installed in conduit as specified herein. All conduit shall be minimum 3/4" trade size
- B. Underground conduit shall be schedule 40 EPC-40-PVC. All conduits shall be installed with minimum 24 inch cover
- C. Conduit installed in concrete slabs or above ground shall be galvanized rigid steel or EPC-40-PVC.
- D. When PVC conduits penetrate concrete floor construction, contractor shall use rigid steel or IMC elbows and extension. PVC conduit/fittings shall not be permitted to be exposed above the floor.
- E. Thinwall tubing shall be EMT
- F. Conduit installed below grade shall be Schedule 80 PVC heavy wall plastic conduit meeting NEMA standards and UL listed for underground and exposed use. Provide GRS radius bends and risers as conduits rise above grade or above floor slab.
- G.Provide GRS for all conduits ran exposed to weather or exposed to other hazardous conditions. Provide any GRS installed below grade with corrosion resistant bonded-plastic or approved mastic coating. This shall include 90-degree elbow below grade and entire vertical transition to above grade.
- H. All other raceway may be EMT where approved by local code. Use compression type fittings for EMT, with all fittings UL listed for environment in which they are used.
- I. All fittings shall be of the compression type and watertight for underground and in slab locations. Compression or screwed fittings for indoo
- J. Use FMC whips (maximum 5ft) for final connection to each motor and transformer, and to any device that would otherwise transmit motion, vibration, or noise. Use LFMC whips (maximum 5ft) where exposed to liquids, vapors or sunlight. Provide all FMC and LFMC with an insulated bonding conductor.
- K. Conduit for interior wiring, in general, shall be thinwall tubing unless
- otherwise noted. L. Conduits shall be protected during construction; plug and keep clean and dry. Conduit ends shall be butted in centers of couplings. No cracks or
- flattened sections will be permitted at bends or elsewhere. All ends of conduit shall be reamed to remove rough edges. Running threads will not be permitted. M. Wire shall be in non-flexible metallic conduit (EMT, IMC, GRC, or
- RMC) for: 1) All circuits and feeders greater than 30A.
- 2) HVAC equipment dedicated branch circuits.
- 3) All home runs.
- N.MC cable acceptable for branch convenience circuits and lighting circuit WHIPS ONLY. Do not daisy chain light fixtures. Provide cable whips of sufficient lengths to allow for relocating each light fixture within 5-foot radius of its installed location, but not exceeding 6 feet in unsupported lengths
- 1) Do not use MC cable for following: homeruns to panelboards, where exposed to view or damage, in any finished "exposed-to-structure" space, hazardous locations, in concrete, block walls or wet locations, and when disallowed by local AHJ or landlord.
- 2) Provide health care rated MC for patient care areas (as defined by the NEC) when not in conduit. 5. WIRE AND CONDUCTORS
- A. All wiring, cabling, and conductors shall be copper unless noted
- otherwise.
- B. No. 10 AWG and smaller conductors shall be solid and no. 8 AWG and larger conductors shall be stranded
- C. Lighting and receptacle circuit conductors shall be copper THHN-THWN-2 600 volt, 75 deg c, color coded as described under applicable codes. No NM ("Romex"), plastic flex tubing etc. permitted unless expressly noted on the drawings for R-2 wood-construction applications. Light fixture wire insulation shall have temperature rating not less than individual fixture manufacturers recommended rating.
- D. Circuits with no. 8 or larger conductors, motor circuits, power and feeder circuits and building service feeders shall be copper THHN-THWN-2 600 volt, 75 deg C.
- E. Wire size indicated on home runs shall be run throughout the entire circuit.
- F. Unless local AHJ dictates otherwise, contractor shall use the following color designations and be consistent throughout the project. Color designation for switch legs and or travelers: Violet, Pink or Purple may be used. (The only exception, when NM or MC cable used, and wires must be re-identified)
- 208Y/120V, 1-phase: black, red, Neutral white.
- 208Y/120V, 3-phase: black, red, blue, Neutral white.
- 480Y/277V, 3-phase: brown, orange, yellow, Neutral gray. Green shall be used for ground wire conductor.
- 6. RACEWAY INSTALLATION
- A.Install raceways parallel and perpendicular to building lines.
- B. Raceways shall be concealed within the walls, ceilings, and floors to the maximum extent possible unless otherwise noted. Exposed conduit shall be run parallel to or at right angles with the building lines and grouped together to keep the area as open as possible to structure architecturally.
- C. Baceways in open-to-structure areas shall be run within area above bottom of structure to the maximum extent possible. Otherwise, install tight to bottom of structure.
- D.Install all conductors and cable in raceways continuously without taps or splices. Splice or tap only in approved boxes and enclosures with approved solderless connectors, or crimp connectors and terminal blocks for control wiring, and keep to minimum required. Insulate all splices, taps, and joints as required by codes.
- E. Install all circular raceways concealed above suspended ceilings or

concealed in walls or floors wherever possible except where otherwise indicated.

- 1) All conduit, junction boxes, etc. above ceilings shall be supported from structure. Pipe sleeves, hangers and supports shall be furnished and set and contractor shall be responsible for proper and
- permanent locations. 2) Support all conductors and cables in vertical installations, as required by NFPA 70, by installing cable supports or plug-type conduit riser supports, or wire-mesh safety grips.
- F. Install raceways to requirements of structure and to requirements of all other work on project. Install raceway to clear all openings, depressions, pipes, ducts, reinforcing steel, and other immovable obstacles. Install raceways set in forms for concrete structure in such manner that installation will not affect strength of structure.
- G.Install raceways continuously between connections to outlets, boxes, and cabinets with minimum possible number of bends and not more than equivalent of four 90-degree bends between connections. Use manufactured elbows for all 45- and 90-degree bends, unless approved by engineer in advance. Make other bends smooth and even and without
- flattening raceway or flaking galvanizing or enamel. Radii of bends shall be as long as possible and never shorter than corresponding trade elbow. Use long radius elbows where necessary, indicated, or both. H. Securely fasten raceways in place with approved straps, hangers and steel supports as required. Attach raceway supports to building structure.
- Hang single raceways for feeders with malleable split ring hangers with rod and turnbuckle suspension from inserts spaced not over 10 feet apart in construction above. I. Clamp groups of horizontal feeder raceways to steel channels that are
- suspended from inserts spaced not over 10 feet apart in construction above. Securely clamp vertical feeder raceways to structural steel members attached to structure. Install cable clamps for support of vertical feeders where required. Add raceway supports within 12 inches of all bends, on both sides of bends. Do not support raceways from suspended ceiling components.
- J. Align and install true and plumb all raceway terminations at panelboards, switchboards, motor control equipment and junction boxes.
 - K. Install approved expansion/deflection fittings where raceways pass through (if embedded) or across (if exposed) expansion joints.
 - L. Install pull wire in each empty raceway that is left for installation of conductors or cables under other divisions or contracts. Use polypropylene or monofilament plastic line. Leave minimum. 24" slack at each end.
 - M. Effectively seal raceways, by installing conduit fitting at boundary of two spaces, and filling it with an approved pliable material, after conductors or cables have been installed and tested, whenever raceways pass from non-cooled to cooled spaces or transition from outside facility or enclosure to inside, whether buried or exposed. **BUSHINGS and LOCKNUTS**
 - A. Rigidly terminate conduits entering sheet metal enclosures to enclosure with bushing and locknut on inside and locknut or an approved hub on outside. Conduit shall enter enclosure squarely. B. Provide bushings and locknuts made of galvanized malleable iron with sharp, clean-cut threads. Where EMT enters box, provide approved EMT
 - compression connectors. C. Use insulated, grounding, or combination, bushings wherever connection is subject to vibration or moisture when required by NFPA 70, or both.
 - JUNCTION and OUTLET BOXES A. All boxes including light fixture, switch, receptacle, and similar outlet boxes: National Electrical, Appleton, Steel City, Raco, or approved equal, galvanized steel knockout boxes, suitable in design to purpose they serve and space they occupy. Size as required for specific function or as required by NFPA 70, whichever is larger.

1) Lighting fixture boxes in ceilings shall not be less than 4" octagonal knockout type.

- B. Set all outlet boxes in walls, columns, floors, or ceilings so they are flush with finished surface, accurately set, and rigidly secured in position. Provide plaster rings, extension rings and/or masonry rings as required for flush mounting. Provide approved cast outlet boxes, with hubs and weatherproof covers, in all areas subject to damp, wet, or harsh conditions.
- C. Coordinate locations of outlet boxes. Outlets are only approximately located on small scale drawings. Use great care in actual location by consulting various large scale detailed drawings used by other division
- trades, and by securing definite locations from architect. D. All outlets shall be mounted with bottom at 18" AFF and switches with bottom at 44" AFF floor unless noted otherwise on plans. Refer to arch for other required elevations and cabinetry coordination
- MECHANICAL AND PLUMBING EQUIPMENT WIRING AND CONTROL WIRING A. Provide all raceways and power wiring for all mechanical and plumbing equipment requiring electrical connections, and all line voltage control and interlock wiring not provided under division 22/23. Connect per manufacturers' wiring diagrams. Coordinate with division 22/23 for disconnects furnished with equipment and provide all disconnect switches as required. After installing wiring, verify that each motor load
- has correct phase rotation. B. Verify actual MOCP device ratings and MCA conductor sizing for mechanical equipment from equipment nameplate. Reduction of wire sizes based on equipment provided that is smaller than what the drawings indicate shall not be allowed without engineer review. Wiring that varies due to equipment provided versus the equipment specified shall be provided without extra cost to owner. Notify engineer of all changes required in electrical installation due to equipment variances so that effects on feeders, branch circuits, panelboards, fuses and circuit breakers can be checked prior to purchasing and installation. C. Provide all raceways, power wiring, and line-voltage control and interlock
- wiring not provided under division 23, for all thermostats, temperature control devices, and controls, including, but not limited to, night-stats, water heater interlocks, time switches and override timers. See mechanical drawings for locations and temperature control diagrams. **10. CIRCUIT BREAKERS IN EXISTING PANELBOARDS**
- 1. GENERAL ELECTRICAL REQUIREMENTS A. Provide new circuit breakers, for installation in existing panelboards, of A.Refer to GENERAL MECHANICAL, ELECTRICAL and PLUMBING same manufacturer, type, and short circuit current interrupting ratings as requirements. existing panelboard circuit breakers. 2. EXISTING FIRE ALARM SYSTEM MODIFICATIONS 11. WIRING DEVICES

- A. Switches: 1) Light switches - spec grade 20 amp toggle switches with stainless steel wall plates.
- 2) Wall motion switches spec grade, PIR, override. 3) Wall motion switches (bathroom) - dual relay, spec grade, PIR, 2nd relay for operation of exhaust fan delay.
- 4) Dimmer Switches: Modular, full-wave, solid-state units with integral, quiet on-off switches, with audible frequency and EMI/RFI suppression filters. Continuously adjustable slider; with single-pole or three-way switching. Comply with UL 1472. 600W or 1200W as required by load.

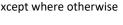
indicated and as required per code.

Lithonia, Sensor Switch.

Seymour/Legrand

B. Convenience outlets:

C. USB Outlets:



- LED Dimmers: Universal type; compatible with dimming drivers in fixture(s); if other than 0-10V dimming is provided, verify dimmer is compatible with driver for full range of dimming (100-10%). 5) Equivalent devices by Leviton, Bryant, Hubbell, Wattstopper,
- 1) Spec grade 20 amp duplex with ground and stainless-steel wall plates. Other outlets shall be verified with equipment suppliers for proper NEMA configurations. Provide GFCI rated devices where
- 2) Equivalent devices by Cooper/Eaton, Hubbell, Leviton, Pass and
- 3) Tamper Resistant devices to be provided per NEC 406.12 unless specifically otherwise not required per the AHJ. Including but not limited to, all dwelling units, guest rooms and guest suites of hotels and motels, child care facilities, preschools and elementary education facilities, business offices, corridors, waiting rooms and the like in clinics, medical and dental offices and outpatient facilities, the subset of assembly occupancies described in NEC 518.2 to include places of waiting transportation, gymnasiums, skating rinks, and auditoriums, and dormitories.

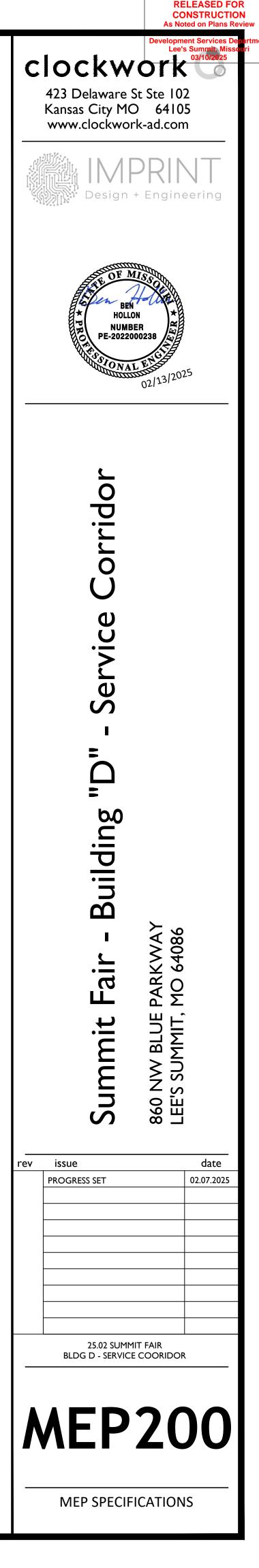
- 1) Spec grade 20 amp duplex with ground, fast charging 30-watt with type A and type C ports. WHITE wall plates. Other outlets shall be verified with equipment suppliers for proper NEMA configurations. Provide GFCI rated devices where indicated and as required per
- 2) Equivalent devices by Cooper/Eaton, Hubbell, Leviton, Pass and Sevmour/Legrand D. Half-Switched Controlled Receptacles (Energy Code):
- 1) Spec grade 20 amp duplex with ground, split wired and manufacturer-engraved symbol and labeling denoting the specific outlet (top or bottom) as controlled. Top half unswitched, bottom half switched, with stainless steel wall plates. Other outlets shall be verified with equipment suppliers for proper NEMA configurations. Provide GFCI rated devices where indicated and as required per
- 2) Equivalent devices by Cooper/Eaton, Hubbell, Leviton, Pass and Seymour/Legrand
- E. Color of devices and associated wall plates as directed by architect. 12. LUMINAIRES, LAMPS and DRIVER
- A.Refer to lighting fixture schedule plans for fixture types. B. Equivalent luminaires by Hubbell, Acuity Brands, Williams, Eaton
- [Cooper], Signify [Philips]. C. LED Fixtures:
 - 1) Lamps and modules: Philips, General Electric, Osram/Sylvania, Cree,
 - 2) LED components, lamps, drivers, and fixtures shall comply with: PCC 47 CFR Part 15; UL 8750; ANSI/NEMA Standards C78.377, NEMA SSL-1, C82.77, IESNA Standards TM-16-05, RP-16, LM-79, LM-80 and TM-21.
- 3) Drivers shall be integral to the fixture unless otherwise shown or specified. D. Emergency drivers/batteries/inverters - shall be Bodine, lota. Coordinate voltages and outputs for minimum. 90-minute operation with fixtures
- scheduled and controls indicated and provided. E. Provide lighting fixtures with lamps and accessories required for hanging. Coordinate mounting of lighting fixtures with architect and G/C. Additional fixture supports shall be provided by E/C. Supports shall comply with latest edition of NEC. Provide lighting fixture securing clips as required. Consult arch plans for ceiling types and provide surface and recessed lighting fixtures with appropriate mounting components and
- accessories. F. Fixtures mounted in fire rated ceilings shall be provided and installed with fire rated enclosures to maintain ceiling integrity.
- G.Poles and support components: comply with AASHTO LTS-4. Provide steel poles in color as specified or selected by architect. Provide bolt covers. Provide concrete base for pole and ground rod. 13. DIGITAL LIGHTING CONTROLS
- A. Provide DLM systems consisting of lighting control panels, room controllers, motion sensors, daylight sensors, and other controls as necessary to achieve lighting switching and dimming control indicated on the drawings.
- B. Provide all interconnecting wiring, controls, programming and owner training for the system(s). C. Provide systems by: Hubbell (NX), Watt Stopper (DLM), Lutron (Athena), Acuity (nLight).
- D.Execution: 1) Calibrate all sensor time delays and sensitivity for proper detection of occupants and energy savings. Adjust time delays
- 2) Provide documentation of room-by-room system configuration including: sensor parameters, time delays, sensitivities, and daylighting setpoints, sequence of operation, load parameters. 3) Post start-up tuning - 30 days after occupancy contractor shall
- adjust sensors to meet the owner's requirements. Provide a detailed report to the architect / owner of post start-up activity. 14. ADJUSTING. ALIGNING and TESTING A. Adjust, align, and test all electrical equipment on this project provided
- under this division and all electrical equipment furnished by others for installation or wiring under this division for proper operation. Test all systems and equipment according to requirements in NETA ATS (latest edition) and all additional requirements specified in this specification. END OF DIVISION 26000
- SECTION 27000 COMMUNICATIONS
- 1. GENERAL ELECTRICAL REQUIREMENTS
- A.Refer to GENERAL MECHANICAL, ELECTRICAL and PLUMBING requirements. TELECOMMUNICATIONS SYSTEMS PROVISIONS
- A. Provide incoming telephone and/or data service raceways as indicated on
- drawings or as required by serving telecommunications company. B. Provide 3/4-inch-thick plywood board, fire-retardant- treated and stamped FRT, securely anchored to wall, at location and of size as indicated on drawings.
- C. Provide flush mounted telephone and/or data outlet boxes with 3/4-inch EMT stub-up concealed to accessible ceiling space at locations as indicated on drawings.

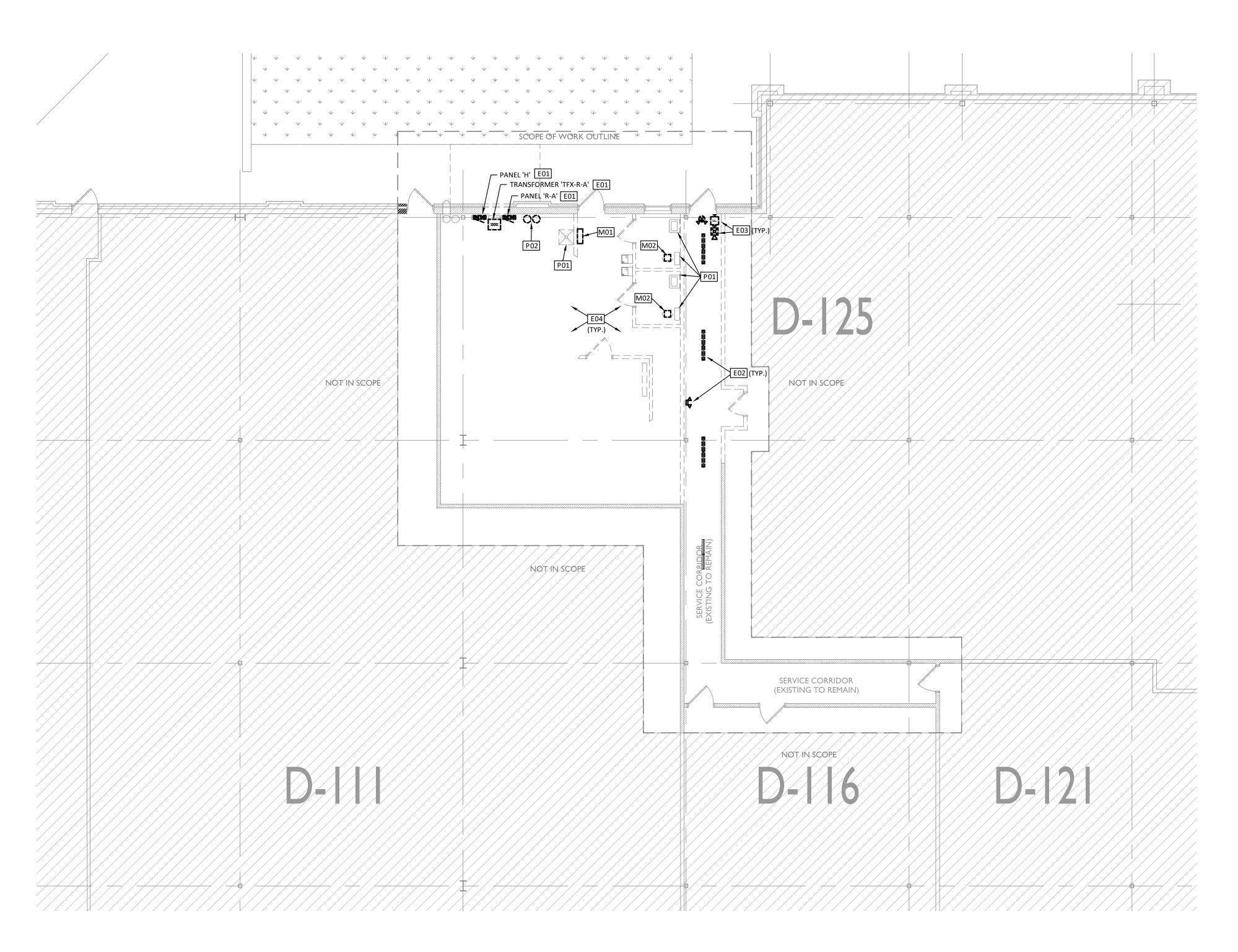
END OF DIVISION 27000

SECTION 28000 - SAFETY and SECURITY

- A. Provide following new equipment, compatible with, or of same manufacturer as, existing fire alarm control panel and system, at locations indicated on drawings, as required by building codes, landlord, or all three, and connect to existing fire alarm control panel:
- 1) Additional initiating devices, indicating appliances, and interconnecting circuits.
- Additional zone modules required by new zoning.
- 3) New amplifiers and other equipment that may be required to incorporate new initiating devices and indicating appliances into existing system.
- 4) A new zone map, including all existing zones and all new zones, framed, mounted under glass, and installed adjacent to fire alarm control panel. Horn/strobes shall meet all requirements of ADA.
- B. All fire alarm wiring to be installed in hard metallic conduit (EMT, RGC, etc. by location). Fire alarm junction boxes to have red covers with typewritten permanent labeling denoting Fire Alarm Circuiting.
- C. Where acceptable to AHJ, plenum rated cables may be used above suspended accessible ceilings.
- D.Execution:
 - 1) Submit shop drawings with wiring diagrams and battery calcs for approval to Fire Marshal and AHJ
 - 2) Coordinate to provide power and shutdown or operation of fire/smoke dampers, door hold opens, power to door locks and access control and other similar systems.
- 3) Installed and tested per NFPA 72 and applicable sections of NFPA 70. Provide complete fire alarm system as described herein and shown to be wired, connected, and in first class condition. Include sufficient control unit(s), annunciator(s), manual stations, automatic fire detectors, smoke detectors, audible and visible notification appliances, wiring, terminations, electrical boxes, and all necessary material for complete operating system.

END OF DIVISION 28000





DEMO FLOOR PLAN - MEP

PLAN NOTES

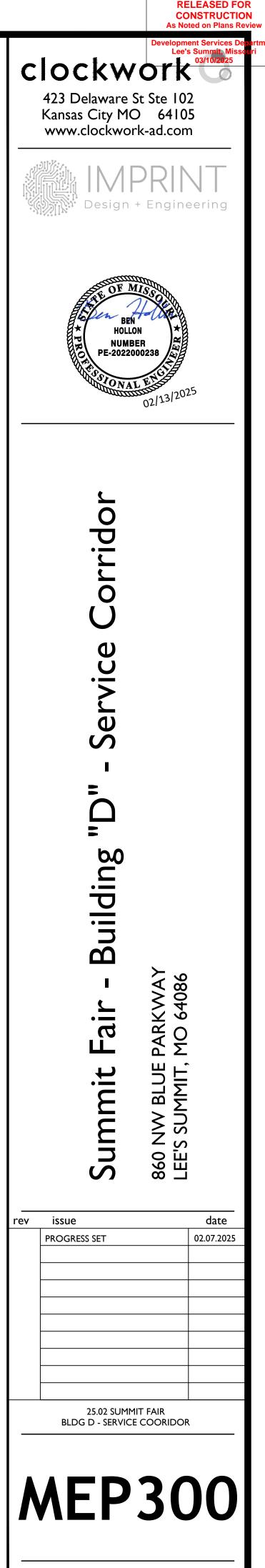
- 1. REMOVE EXISTING WALL HEATER AND RETAIN FOR REINSTALLATION, RE: NEW WORK.
- 2. REMOVE EXISTING EXHAUST FAN AND ALL ASSOCIATED DUCTWORK.

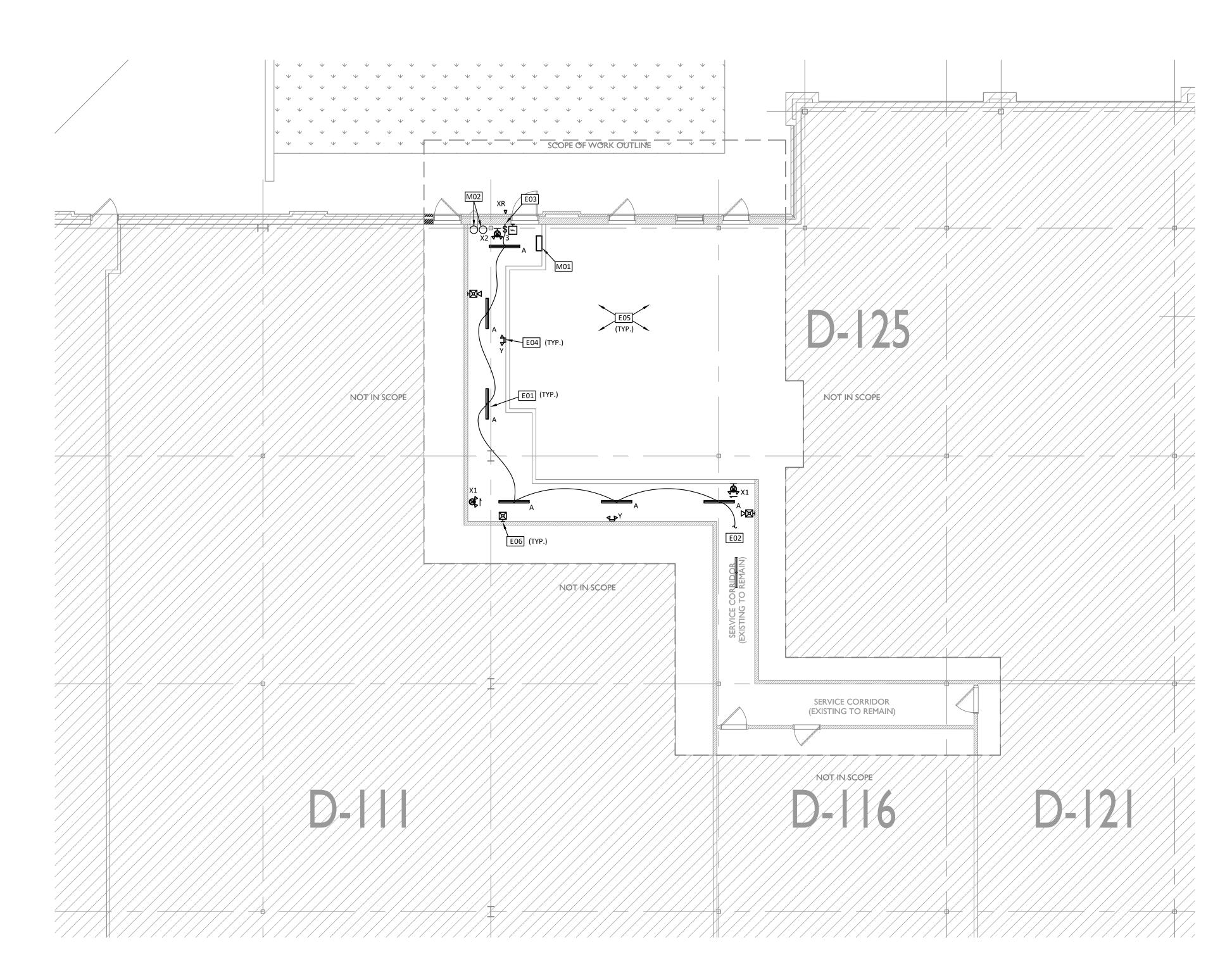
PHE PLAN NOTES

- 1. REMOVE EXISTING PLUMBING FIXTURE, REMOVE WATER, WASTE, AND VENT PIPING BACK TO MAIN AND CAP AND INSULATE TO MATCH EXISTING. COORDINATE FLOOR PUTBACK WITH GENERAL CONTRACTOR.
- 2. REMOVE EXISTING STORM PIPING AND PREPARE FOR CONNECTION TO NEW WORK. EXISTING STORM PIPING AND INSULATION MAY BE REUSED IF IN GOOD CONDITION. REMOVE EXISTING LAMBS TONGUE AND RETAIN FOR REUSE. COORDINATE EXTERIOR WALL PATCHING WITH GENERAL CONTRACTOR.

EHH PLAN NOTES

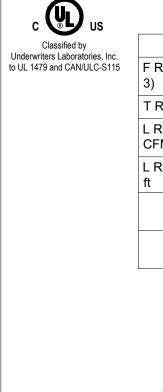
- 1. PANELS AND TRANSFORMER TO BE REMOVED. REMOVE CONDUIT AND WIRING BACK TO SOURCE.
- 2. LIGHTING TO BE REMOVED.
- 3. FIRE ALARM TO BE REMOVED / RELOCATED.
- 4. EXISTING LIGHTING AND EMERGENCY LIGHTING TO REMAIN.







FLOOR PLAN - MEP



features:

A. Studs — Wall framing may consist of either wood studs or steel channel studs. Wood studs to consist of nom 2 by 4 in. (51 by 102 mm) lumber spaced 16 in. (406 mm) OC. Steel studs to be min 2-1/2 in. (64 mm) wide and spaced max 24 in. (610 mm) OC. When steel studs are used and the diam of opening exceeds the width of stud cavity, the opening shall be framed on all sides using lengths of steel stud installed between the vertical studs and screw-attached to the steel studs at each end. The framed opening in the wall shall be 4 to 6 in. (102 to 152 mm) wider and 4 to 6 in. (102 to 152 mm) higher than the diam of the penetrating item such that, when the penetrating item is installed in the opening, a 2 to 3 in. (51 to 76 mm) clearance is present between the penetrating item and the framing on all four sides. B. Gypsum Board* — 5/8 in. (16 mm) thick, 4 ft (122 cm) wide with square or tapered edges. The gypsum board type, thickness, number of layers, fastener type and sheet orientation shall be as specified in the individual U300 or U400 Series Design in the UL Fire Resistance Directory. Max diam of opening is 32-1/4 in. (819 mm) for steel stud walls. Max diam of opening is 14-1/2 in. (368 mm) for wood stud walls. The F and FH Ratings of the firestop system are equal to the fire rating of the wall assembly.

3. Fill, Void or Cavity Material* — Sealant — Min 5/8 in. (16 mm) thickness of fill material applied within the annulus, flush with both surfaces of wall. At the point or continuous contact locations between pipe and wall, a min 1/2 in. (13 mm) diam bead of fill material shall be applied at the pipe wall

interface on both surfaces of wall.

respectively.



PLAN NOTES

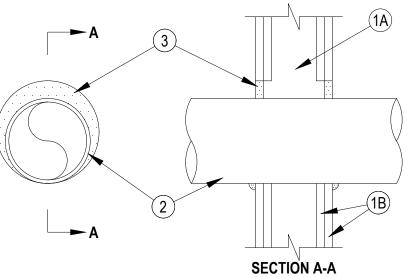
- 1. REINSTALL EXISTING ELECTRIC SURFACE MOUNTED UNIT HEATER PER MANUFACTURER'S REQUIREMENTS.
- 2. INSTALL STORM PIPING AS REQUIRED, EXISTING PIPING MAY BE REUSED, RECONNECT TO OVERHEAD PIPING AS REQUIRED. SAWCUT FLOOR AS REQUIRED AND RECONNECT BELOW GRADE TO EXISTING STORM PIPING, COORDINATE FLOOR PUTBACK WITH GENERAL CONTRACTOR. INSULATE NEW STORM PIPING TO MATCH EXISTING. INSTALL RELOCATED OVERFLOW DRAIN LAMBS TONGUE.

EHE PLAN NOTES

- 1. LED LIGHT FIXTURE SPECIFICATIONS TO MATCH EXISTING.
 - TYPE 'A' LED, MINIMUM 5000 LUMENS, 120V. CLEAR ACRYLIC LENS. • TYPE 'Y' - EM LED WALL PACK, MINIMUM 90 MINUTE BATTERY.
 - TYPE 'X1' THERMOPLASTIC COMBINATION EXIT-EM SIGN, 90 MINUTE BATTERY.
- TYPE 'X2' SAME AS TYPE 'X1' EXCEPT WITH ADDITIONAL BATTERY CAPACITY FOR REMOTE HEAD.
- TYPE 'XR' LED WEATHERPROOF REMOTE HEAD.
- 2. EXTEND AND CONNECT TO EXISTING CORRIDOR CIRCUIT. 3. PROVIDE THREE-SWITCHING AS REQUIRED PER LANDLORD DIRECTION.
- 4. PROVIDE UNSWITCHED HOT CONDUCTOR TO ALL EXIT SIGNS AND EMERGENCY FIXTURES FROM THE NORMAL LIGHTING CIRCUIT SERVING THE IMMEDIATE VICINITY.
- 5. EXISTING LIGHTING AND EMERGENCY LIGHTING TO REMAIN.
- 6. EXTEND AND CONNECT NEW FIRE ALARM DEVICES TO EXISTING SYSTEM. DEVICE MANUFACTURER TO BE COMPATIBLE WITH EXISTING SYSTEM. FIELD VERIFY PRIOR TO BID.

System No. W-L-1054

ANSI/UL1479 (ASTM E814)	CAN/ULC S115
Ratings —1 and 2 Hr (See Items 1 and	F Ratings — 1 and 2 Hr (See Items 1 and 3)
Rating — 0 Hr	FT Rating — 0 Hr
Rating at Ambient — Less Than 1 FM/sq ft	FH Ratings —1 and 2 Hr (See Items 1 and 3)
Rating at 400 F — Less Than 1 CFM/sq	FTH Rating — 0 Hr
	L Rating at Ambient — Less Than 1 CFM/sq ft
	L Rating at 400 F — Less Than 1 CFM/sq ft



1. Wall Assembly — The 1 or 2 hr fire-rated gypsum wallboard/stud wall assembly shall be constructed of the materials and in the manner specified in the individual U300 or U400 Series Wall and Partition Designs in the UL Fire Resistance Directory and shall include the following construction

2. Through-Penetrants — One metallic pipe, conduit or tubing to be installed either concentrically or eccentrically within the firestop system. The annular space shall be min 0 in. to max 2-1/4 in. (57 mm). Pipe may be installed with continuous point contact. Pipe, conduit or tubing to be rigidly supported on both sides of wall assembly. The following types and sizes of metallic pipes, conduits or tubing may be used: A. Steel Pipe — Nom 30 in. (762 mm) diam (or smaller) Schedule 10 (or heavier) steel pipe.

B. Iron Pipe — Nom 30 in. (762 mm) diam (or smaller) cast or ductile iron pipe.

C. Conduit — Nom 4 in. (102 mm) diam (or smaller) steel electrical metallic tubing or 6 in. (152 mm). diam steel conduit. D. Copper Tubing — Nom 6 in. (152 mm) diam (or smaller) Type L (or heavier) copper tubing. E. Copper Pipe — Nom 6 in. (152 mm) diam (or smaller) regular (or heavier) copper pipe.

HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC - FS-One Sealant or FS-ONE MAX Intumescent Sealant

* Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada),



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NOTE: APPROVED UL LISTED EQUALS BY 3M, SIKA, STI.

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