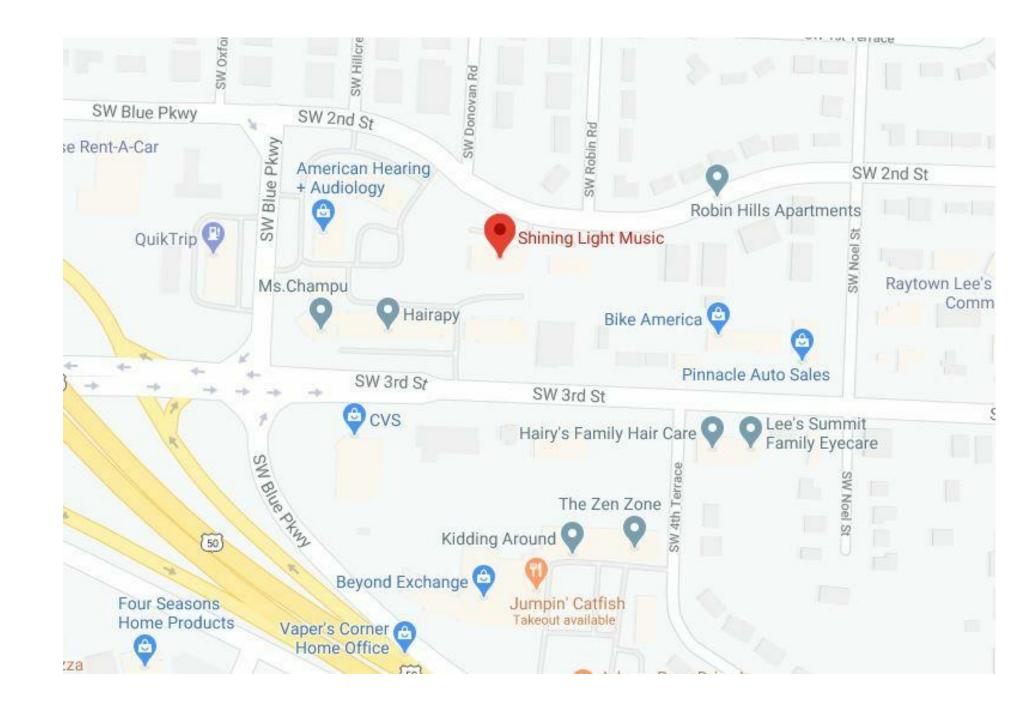
SHINING LIGHT MUSIC 616 SW 3rd St., Lee's Summit, MO 64063

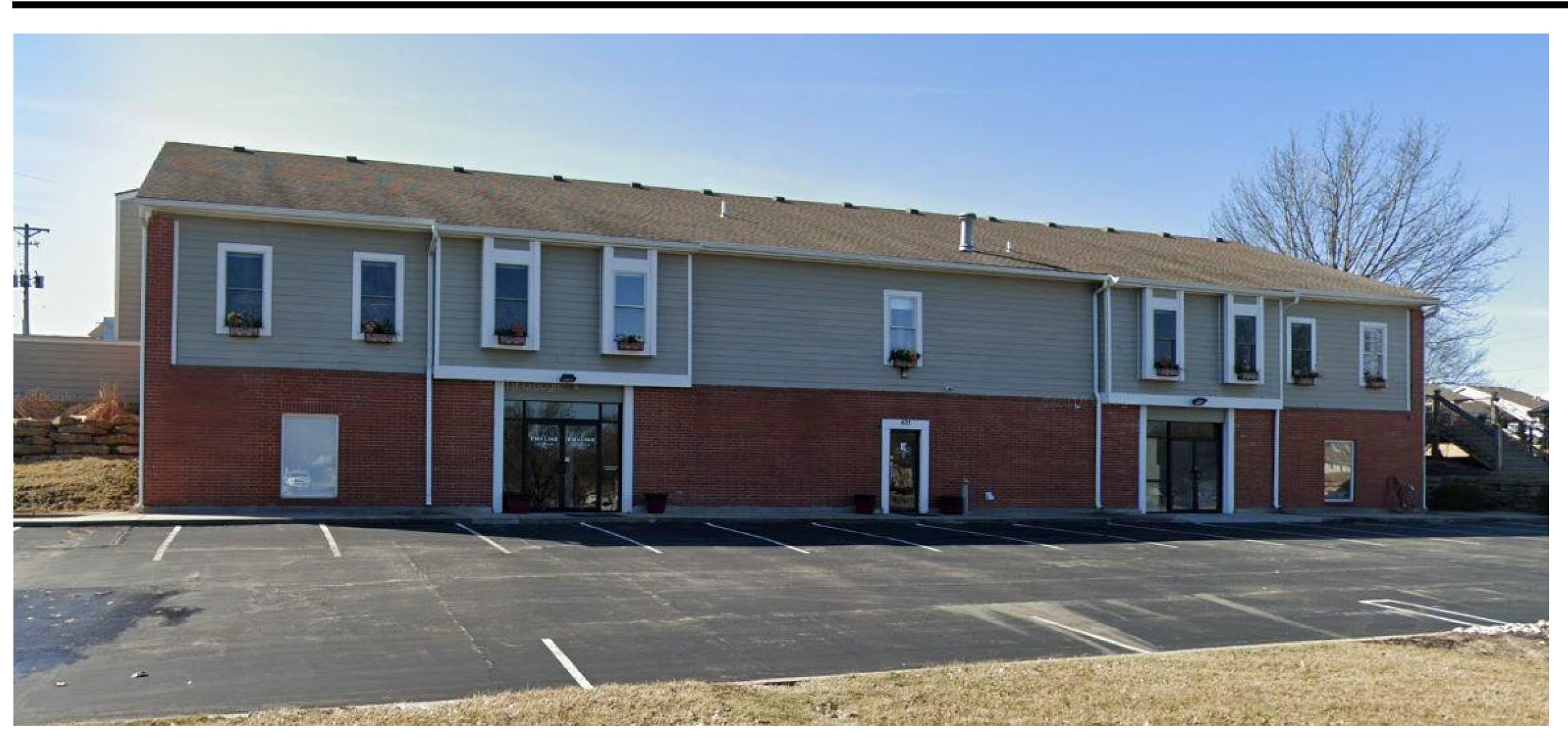
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05/06/2020

COLLINS WEBB #: 20027



VICINITY MAP



GENERA	L
SHEET NUMBER	SHEET NAME
CS	COVER SHEET
G000	GENERAL INFORMATION
G001	LIFE SAFETY PLANS AND PROJECT INFO.
G002	ACCESSIBILITY GUIDELINES
C121	WALL TYPES & SPECIFICATIONS

ARCHITE	CTURAL
	OTOTAL
SHEET NO.	SHEET NAME
A101	FLOOR PLANS, SCHEDULES & DETAILS
A CO4	DELECTED CELLING DI ANG

MEP	
SHEET NUMBER	SHEET NAME
ME001	COVER SHEET
ME002	SPECIFICATIONS
M101	MECHANICAL PLAN
E101	ELECTRICAL PLAN
E201	ELECTRICAL SCHEDULES/ DETAILS



SHINING LIGHT MUSIC 611 SW 3RD STREET LEE'S SUMMIT, MO 64063 P: 816.718.2350

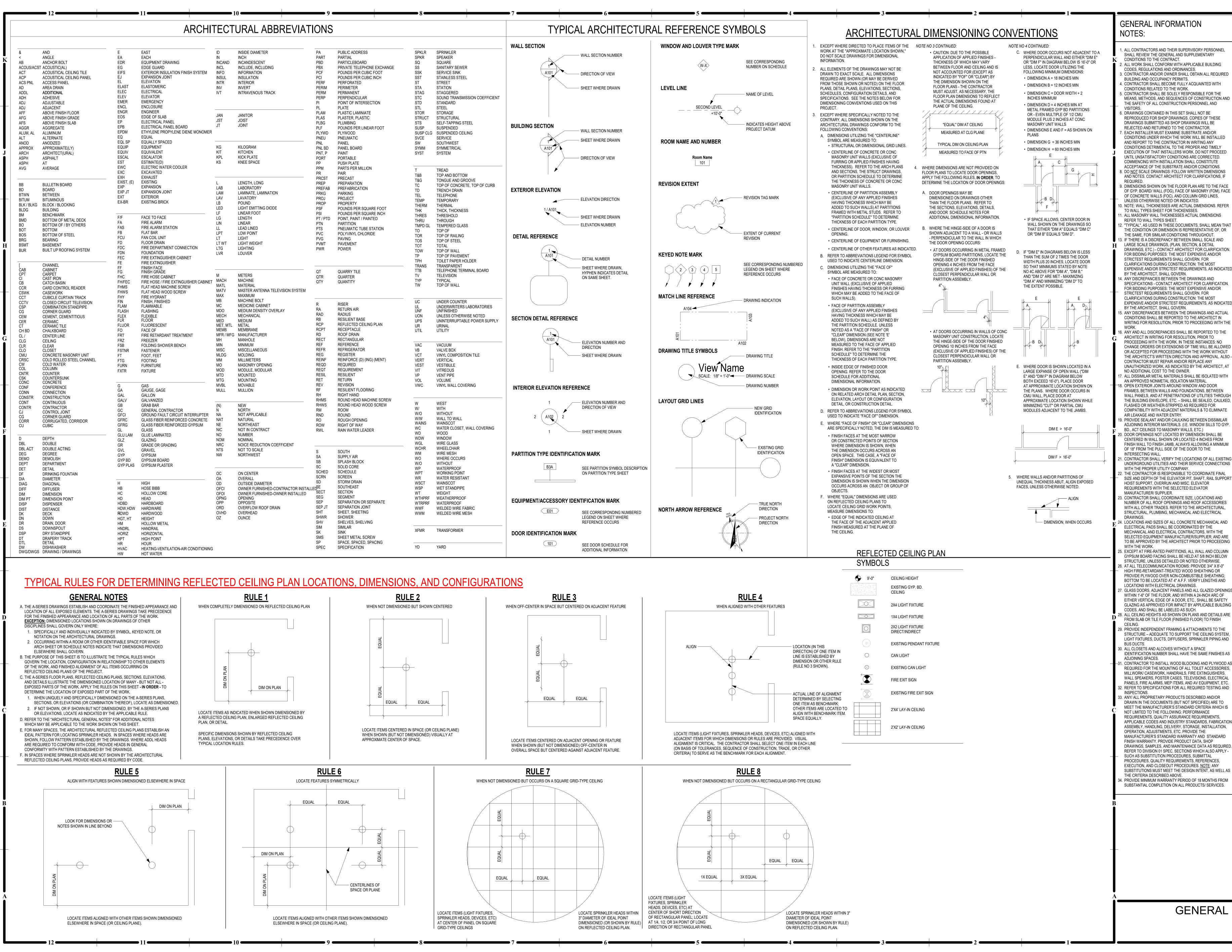
ARCHITECT

COLLINS WEBB ARCHITECTURE 13A SW 3RD STEET LEE'S SUMMIT, MISSOURI 64063 P: 816.249.2270 www.collinsandwebb.com

MEP ENGINEER

PKMR ENGINEERS, LLC 13300 W. 98TH STREET LENEXA, KS 66215 P: 913.492.2400





1. ALL CONTRACTORS AND THEIR SUPERVISORY PERSONNEL SHALL REVIEW THE GENERAL AND SUPPLEMENTARY

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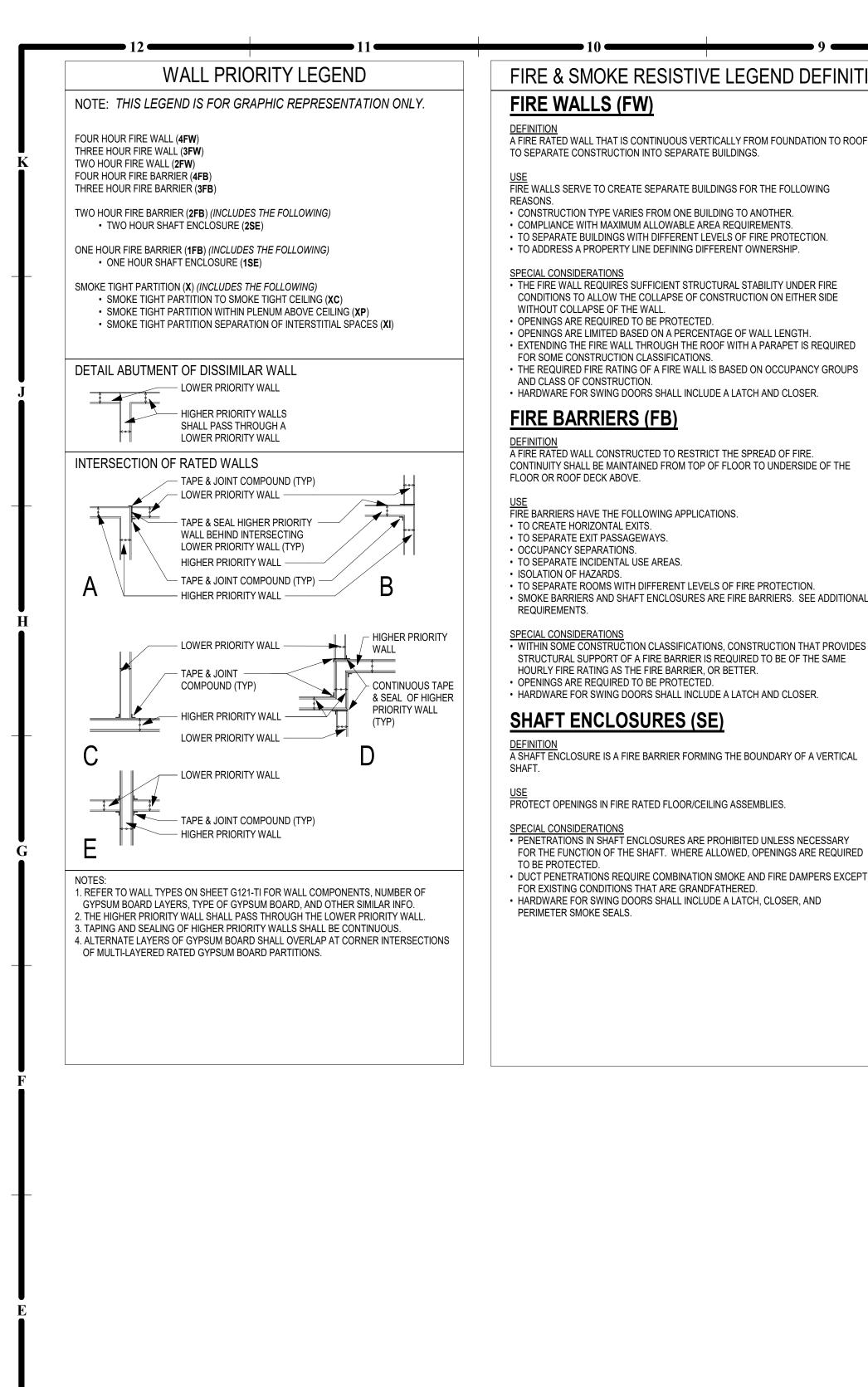
COLLINS WEBB ARCHITECTURE, LLC **REVISION DATES:**

Roger L. Webb II - Architect MO# A-2016004008 PROFESSIONAL SEAL

COLLINS WEBB #: GENERAL INFORMATION

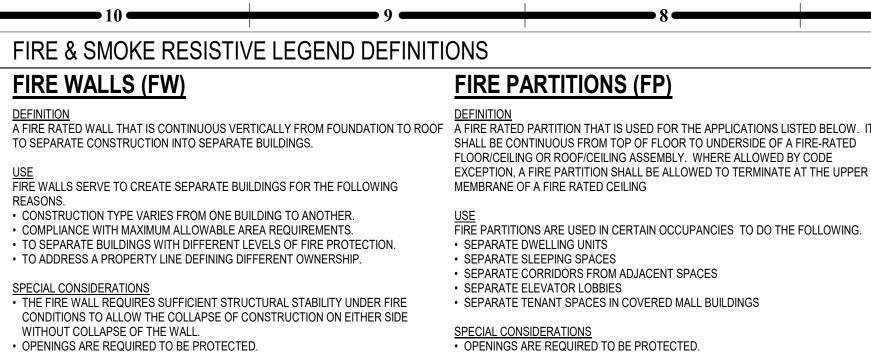


05/11/2020



THIS EXIT SERVES

STORAGE ONLY



• HARDWARE FOR SWING DOORS SHALL INCLUDE A LATCH AND CLOSER. **BEARING WALLS (BW)**

AN INTERIOR OR EXTERIOR WALL DESIGNED TO SUPPORT FLOOR OR ROOF LOADS. A BEARING WALL IS FIRE-RATED ONLY TO MAINTAIN THE INTEGRITY OF ITSELF AS A FIRE RATED STRUCTURAL ELEMENT. THE WALL DOES NOT SERVE AS A FIRE SEPARATION FROM ONE SIDE TO THE OTHER SIDE

A FIRE RATED WALL CONSTRUCTED TO RESTRICT THE SPREAD OF FIRE.

CONTINUITY SHALL BE MAINTAINED FROM TOP OF FLOOR TO UNDERSIDE OF THE

A VERTICAL, LOAD BEARING STRUCTURAL ELEMENT.

• DOORS AND WINDOWS ARE NOT REQUIRED TO BE RATED. • HVAC DUCT PENETRATIONS ARE NOT REQUIRED TO BE FIRE-DAMPERED. PLUMBING, ELECTRICAL, SPRINKLER SYSTEM, AND CABLE PENETRATIONS ARE REQUIRED TO BE FIRE-STOPPED WITH FIRE SEALANT AT BOTH SIDES, FOR WALLS CONSTRUCTED OF HOLLOW CMU OR STUD FRAMING.

• TO SEPARATE ROOMS WITH DIFFERENT LEVELS OF FIRE PROTECTION. • SMOKE BARRIERS AND SHAFT ENCLOSURES ARE FIRE BARRIERS. SEE ADDITIONAL **GENERAL NOTES**

PROVIDE PANIC

HARDWARE

PROVIDE PANIC HARDWARE

31' - 0 1/2" > 1/3rd AREA SERVED

1. THE FOLLOWING INFORMATION SERVES TO PROVIDE BUILDING OWNERS WITH SPECIAL CONSIDERATIONS

• WITHIN SOME CONSTRUCTION CLASSIFICATIONS, CONSTRUCTION THAT PROVIDES

CONCISE DEFINITIONS OF WALL TYPES RELATED TO LIFE SAFETY ISSUES. THIS INFORMATION IS NOT MEANT TO BE A SUBSTITUTE FOR APPLICABLE BUILDING CODES. 2. WHEN A WALL HAS MORE THAN ONE CLASSIFICATION, THE MOST RESTRICTIVE REQUIREMENTS FOR EACH CLASSIFICATION SHALL APPLY. 3. FOR NEW CONSTRUCTION, PERIMETER SMOKE-SEALS MAY BE REQUIRED AT FIRE RATED DOORS IN CERTAIN OCCUPANCIES.

GENERAL DESCRIPTION GENERAL EXITING REQUIREMENTS PROJECT NAME: SHINING LIGHT MUSIC EXIT TRAVEL DISTANCE **TABLE 1017.2** PROJECT LOCATION: 616 SW 3RD STREET 50 FEET - GROUP B (FULLY SPRINKLERED) SECTION 1020.4 DEAD END CORRIDOR CITY: LEE'S SUMMIT, MO 64063 **COMMON PATH OF TRAVEL SECTION 1006.2.1** COLLINS WEBB ARCHITECTURE 44", OR 36" IF OCC. <50 MIN. CORRIDOR WIDTH **SECTION 1020.2** 13A SW 3RD STREET POSTING OF OCCUPANT LOAD LEES SUMMIT, MISSOURI 64063 APPLICABLE CODES: EVERY ROOM OR SPACE THAT IS AN ASSEMBLY OCCUPANCY SHALL HAVE THE OCCUPANT LOAD 2018 INTERNATIONAL BUILDING CODE OF THE ROOM OR SPACE POSTED IN A CONSPICUOUS PLACE, NEAR THE MAIN EXIT OR EXIT 2018 INTERNATIONAL PLUMBING CODE ACCESS DOORWAY FROM THE ROOM OR SPACE. POSTED SIGNS SHALL BE OF AN APPROVED 2018 INTERNATIONAL MECHANICAL CODE LEGIBLE PERMANENT DESIGN AND SHALL BE MAINTAINED BY THE OWNER OR AUTHORIZED AGENT. 2018 INTERNATIONAL FIRE CODE 2017 NATIONAL ELECTRICAL CODE NATIONAL ELECTRICAL CODE - 2017 ED. EXIT REQUIREMENTS ICC/ANSI A117.1-2017, ACCESSIBLE AND USABLE BUILDINGS AND FACILITIES A. REQUIRED CAPACITY **CODE INFORMATION** TABLE/SECTION/REFERENCE 1. STAIRS - 0.3" / PERSON 2. OTHER COMPONENTS - 0.2" / PERSON 1005.3.2 **BUILDING/PROJECT USE:** MUSIC BUSINESS **IBC SECTION 304** CONSTRUCTION TYPE TYPE VB (FULLY-SPRINKLERED) **IBC TABLE 601** GROUP B - MUSIC BUSINESS **IBC SECTION 304 OCCUPANCY CLASSIFICATION** B. MINIMUM NUMBER **BUILDING FRAME** WOOD FRAMED TABLE 1006.3.2 1. OCCUPANT LOAD OF 1-500 PERSONS - 2 EXITS PER STORY BASE ALLOWABLE AREA B 27,000 SQ. FT. IBC TABLE 506.2 2. OCCUPANT LOAD OF 501-1000 PERSONS - 3 EXITS PER STORY TABLE 1006.3.2 3. OCCUPANT LOAD OF MORE THAN 1000 PERSONS - 4 EXITS PER STORY TABLE 1006.3.2 **ACTUAL BUILDING AREA (GROSS)** 11,322 SQ. FT. OCCUPANT LOAD FIRST FLOOR 5.661 SQ. FT. LOWER LEVEL 5,661 SQ. FT. OCCUPANT LOAD : FIRST FLOOR OCCUPANT LOAD : LOWER LEVEL ALLOWABLE STORIES 3 STORIES IBC TABLE 504.4 **TABLE 1004.5** TABLE 1004.5 **ACTUAL NUMBER OF STORIES** 2 STORIES BUSINESS 6 OCC. BUSINESS ALLOWABLE HEIGHT 60'-0" IBC TABLE 504.3 MERCANTILE STORAGE 65 OCC. **ACTUAL HEIGHT IN FEET** 23'-0" BREAK ROOM 2 OCC. CLASSROOM CLASSROOM 4 OCC. FIRE RESISTIVE REQUIREMENTS TABLE/SECTION/REFERENCE OCCUPANT LOAD THIS LEVEL OCCUPANT LOAD THIS LEVEL = 77 OCCUPANTS EXITS REQUIRED THIS LEVEL PRIMARY FRAME **IBC TABLE 601 NO CHANGE EXITS REQUIRED THIS LEVEL** 2 EXITS **EXITS PROVIDED THIS LEVEL** NON-BEARING WALLS NO CHANGE IBC TABLE 601 EXITS PROVIDED THIS LEVEL 3 EXITS **NO CHANGE IBC TABLE 601** BEARING WALLS INT./ EXT. FLOOR CONSTRUCTION **NO CHANGE IBC TABLE 601** TOTAL OCCUPANCY LOAD: CEILING/ROOF NO CHANGE **IBC TABLE 601** 128 OCCUPANTS CORRIDORS NO CHANGE **IBC TABLE 1020.1** PLUMBING FIXTURE REQUIREMENTS FIRE EXTINGUISHERS 1. PROVIDE PORTABLE FIRE EXTINGUISHERS IN OCCUPANCIES AND LOCATIONS AS REQUIRED BY THE FIRE PREVENTION CODE. SEE PLANS FOR SUGGESTED LOCATIONS. NOTIFY ARCHITECT OF ANY PROPOSED RELOCATION OR IF A CONFLICT IS ENCOUNTERED.

WOMEN LAVATORIES:

DRINKING FOUNTAINS:

SERVICE SINKS:

UNISEX TOILET:

= 3 EXISTING

= NO CHANGE

= NOT REQUIRED

= WATER COOLER PROVIDED

2. PORTABLE FIRE EXTINGUISHERS SHALL BE INSTALLED, INSPECTED, AND MAINTAINED IN ACCORDANCE WITH NFPA 10, STANDARD FOR PORTABLE FIRE EXTINGUISHERS.

803.13 IBC

803.13 IBC

803.13 IBC

IBC 803.5.2

IBC 803.1.2

1. ALL MEANS OF EGRESS TO HAVE A MINIMUM CEILING HEIGHT OF 7'-6" A.F.F., NOR SHALL HAVE ANY PROJECTION FROM THE CEILING BE LESS THAN 7'-0" A.F.F.

3. BATHROOMS, TOILET ROOMS, KITCHENS, STORAGE ROOMS AND LAUNDRY ROOMS SHALL HAVE A CEILING HEIGHT OF NOT LESS THAN 7'-0" A.F.F.

2. OCCUPIED SPACES, HABITABLE SPACES AND CORRIDORS SHALL HAVE A CEILING HEIGHT OF NOT LESS THAN 7'-6" A.F.F.

CEILING HEIGHT NOTES: (IBC 1207)

MAX. FLAME SPREAD

CLASS B

CLASS C

CLASS C (76-200)

CLASS A (0-25)

Decorative Materials and Trim (including plastics) must comply with IBC SECTION 806

INTERIOR FINISHES

GROUP B

TEXTILES

EXIT ENCLOSURES

LOBBIES & CORRIDORS

ALL OTHER SPACES

SMOKE DEVELOPED

FIRE RESISTIVE LEGEND TABLE/SECTION/REFERENCE TABLE/SECTION/REFERENCE TABLE/SECTION/REFERENCE 15 OCC. 6 OCC. 30 OCC. = 51 OCCUPANTS 2 EXITS 2 EXITS **B OCC WATER CLOSETS** = 1/25 FOR FIRST 50 AND 1 PER 50 FOR THE REMAINDER EXCEEDING 50 **B OCC LAVATORIES** = 1/40 FOR THE FIRST 80 AND 1/80 FOR THE REMAINDER EXCEEDING 80 **B OCC DRINKING FOUNTAIN** = 1/100 B OCC SERVICE SINK PLUMBING FIXTURES REQUIRED (128/2 = 64 OCC. EACH MEN AND WOMEN MEN WATER CLOSETS: 64 OCC. = 2 REQUIRED **WOMEN WATER CLOSETS:** 64 OCC. = 2 REQUIRED MEN LAVATORIES: 64 OCC. = 2 REQUIRED WOMEN LAVATORIES: 64 OCC. = 2 REQUIRED DRINKING FOUNTAINS: 128 OCC. = 2 REQUIRED SERVICE SINKS: 128 OCC. = 1 REQUIRED PLUMBING FIXTURES PROVIDED (EXISTING FIXTURE COUNT EXCEEDS REQUIRED NUMBER OF FIXTURES) MEN WATER CLOSETS: = 5 EXISTING **WOMEN WATER CLOSETS:** = 5 EXISTING = 3 EXISTING MEN LAVATORIES:

OCCUPANTS EXITING 200 NUMBER OF CALCULATED EXIT **MEANS OF EGRESS** WIDTH REQ'D (IN.) COMPONENT (IN.) EXIT WIDTH — PROVIDED (IN.) **◄ ■ ■ ■ ■** EGRESS PATH INDICATES FIRE EXTINGUISHER CABINET(FE) (FE-1) LOCATION WITH 75'-0" RADIUS COVERAGE AREA. SEE SPECIFICATIONS FOR FE TYPE. ACCESSIBLE EGRESS COMPONENT MAX. EGRESS DISTANCE MAX EXIT TRAVEL DISTANCE MAX. TRAVEL DIST. 93' - 8"

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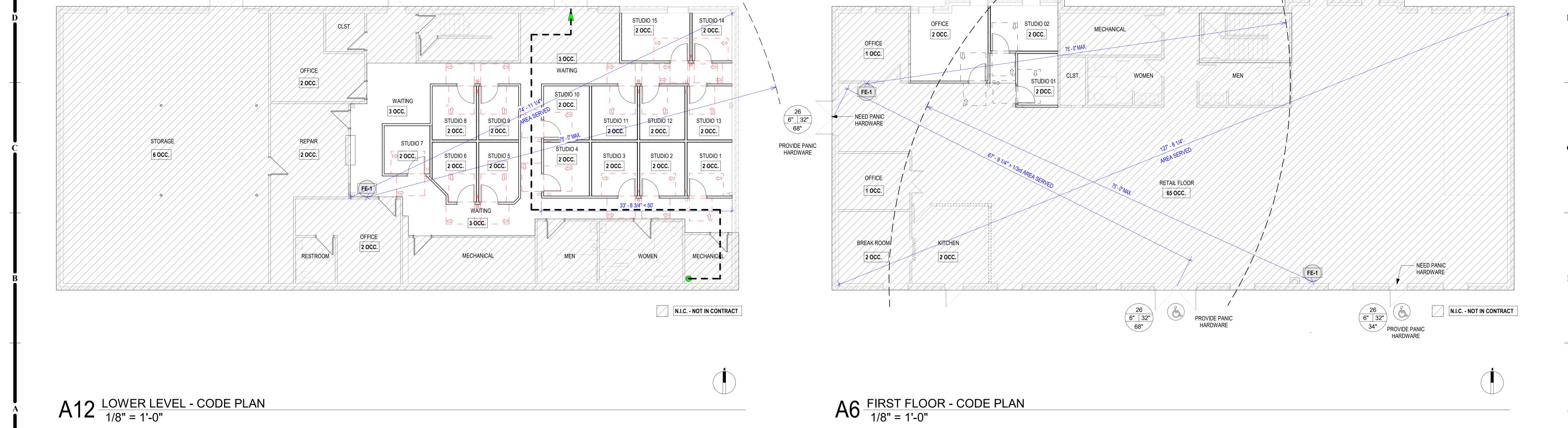
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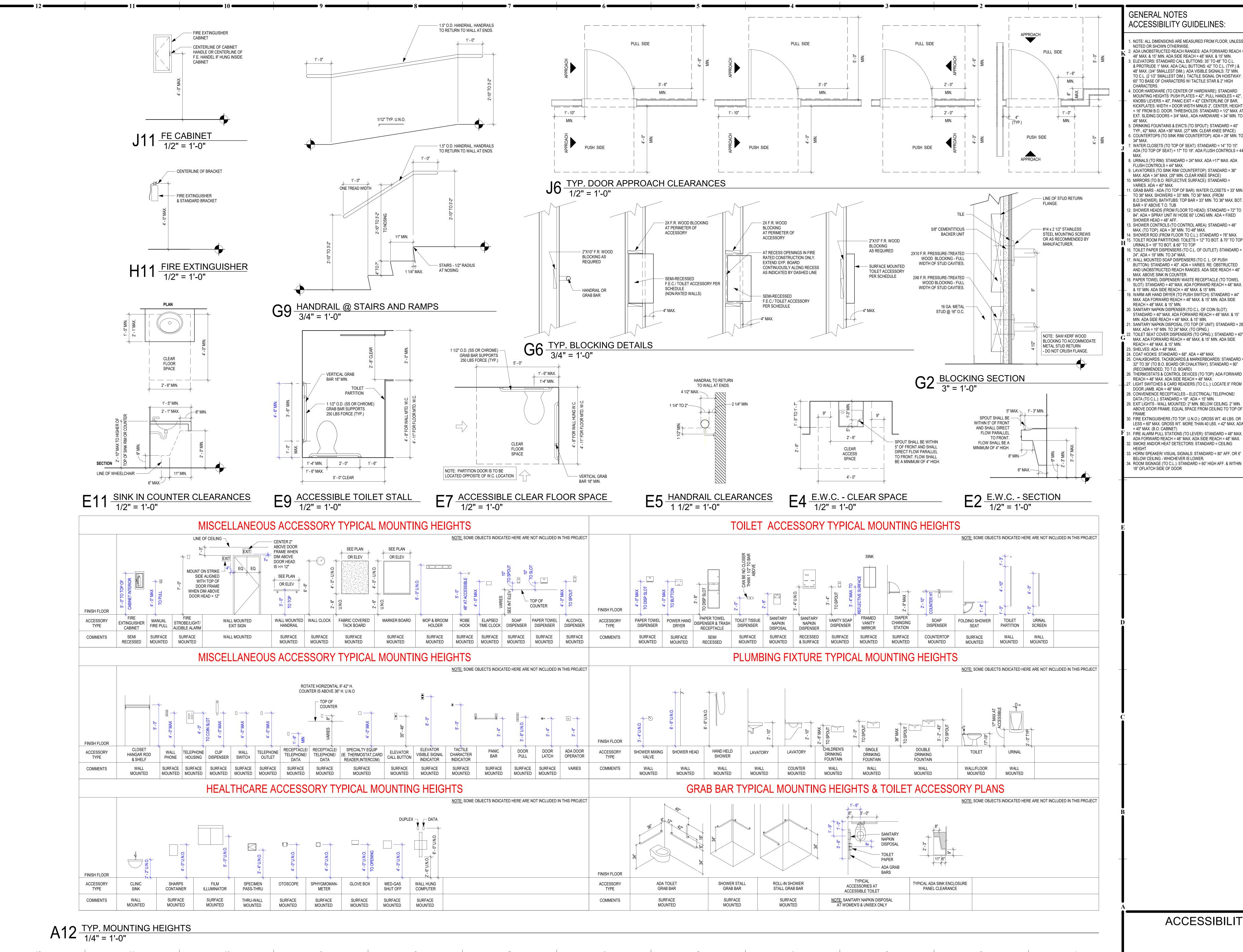
LIFE SAFETY PLANS AND PROJECTION

CONSTRUCTION

AS NOTED ON PLANS REVIEW

DEVELOPMENT SERVICES





GENERAL NOTES ACCESSIBILITY GUIDELINES:

 NOTE: ALL DIMENSIONS ARE MEASURED FROM FLOOR, UNLES NOTED OR SHOWN OTHERWISE. 2. ADA UNOBSTRUCTED REACH RANGES: ADA FORWARD REACH 48" MAX. & 15" MIN. ADA SIDE REACH = 48" MAX. & 15" MIN. 3. ELEVATORS: STANDARD CALL BUTTONS: 35" TO 48" TO C.L. & PROTRUDE 1" MAX. ADA CALL BUTTONS: 42" TO C.L. (TYP.) 8 48" MAX. (3/4" SMALLEST DIM.). ADA VISIBLE SIGNALS: 72" MÍN. TO C.L. (2 1/2" SMALLEST DIM.). TACTILE SIGNAL ON HOISTWAY:

60" TO BASE OF CHARACTERS W/ TACTILE STAR & 2" HIGH 4. DOOR HARDWARE (TO CENTER OF HARDWARE): STANDARD

MOUNTING HEIGHTS: PUSH PLATES = 42", PULL HANDLES = 42" KNOBS/ LEVERS = 40", PANIC EXIT = 42" CENTERLINE OF BAR, KICKPLATES: WIDTH = DOOR WIDTH MINUS 2", CENTER, HEIGHT = 16" FROM B.O. DOOR. THRESHOLDS: STANDARD = 1/2" MAX. AT EXT. SLIDING DOORS = 3/4" MAX., ADA HARDWARE = 34" MIN. TO 5. DRINKING FOUNTAINS & EWC'S (TO SPOUT): STANDARD = 40" TYP., 42" MAX. ADA =36" MAX. (27" MIN. CLEAR KNEE SPACE) 6. COUNTERTOPS (TO SINK RIM/ COUNTERTOP): ADA = 28" MIN. TO 7. WATER CLOSETS (TO TOP OF SEAT): STANDARD = 14" TO 15".

3. URINALS (TO RIM): STANDARD = 24" MAX. ADA =17" MAX. ADA FLUSH CONTROLS = 44" MAX. 9. LAVATORIES (TO SINK RIM/ COUNTERTOP): STANDARD = 36" MAX. ADA = 34" MAX. (29" MIN. CLEAR KNEE SPACE) 0. MIRRORS (TO B.O. REFLECTIVE SURFACE): STANDARD =

1. GRAB BARS - ADA (TO TOP OF BAR): WATER CLOSETS = 33" MIN. TO 36" MAX. SHOWERS = 33" MIN. TO 36" MAX. (FROM B.O.SHOWER). BATHTUBS: TOP BAR = 33" MIN. TO 36" MAX. BO BAR = 9" ABOVE T.O. TUB 2. SHOWER HEADS (FROM FLOOR TO HEAD): STANDARD = 72" 1 84". ADA = SPRAY UNIT W/ HOSE 60" LONG MIN. ADA = FIXED SHOWER HEAD = 48" AFF. 3. SHOWER CONTROLS (TO CONTROL AREA): STANDARD = 48" MAX. (TO TOP). ADA = 38" MIN. TO 48" MAX. 14. SHOWER ROD (FROM FLOOR TO C.L.): STANDARD = 78" MAX. 15. TOILET ROOM PARTITIONS: TOILETS = 12" TO BOT. & 70" TO TOF URINALS = 18" TO BOT. & 60" TO TOP 16. TOILET PAPER DISPENSERS (TO C.L. OF OUTLET): STANDARD =

24". ADA = 19" MIN. TO 24" MAX. 7. WALL MOUNTED SOAP DISPENSERS (TO C. L. OF PUSH BUTTON): STANDARD = 40". ADA = VARIES. RE: OBSTRUCTED AND UNOBSTRUCTED REACH RANGES. ADA SIDE REACH = 46" MAX. ABOVE SINK IN COUNTER. 8. PAPER TOWEL DISPENSER/ WASTE RECEPTACLE (TO TOWEL SLOT): STANDARD = 40" MAX. ADA FORWARD REACH = 48" MAX. & 15" MIN. ADA SIDE REACH = 48" MAX. & 15" MIN. WARM AIR HAND DRYER (TO PUSH SWITCH): STANDARD = 44' MAX. ADA FORWARD REACH = 48" MAX. & 15" MIN. ADA SIDE REACH = 48" MAX. & 15" MIN. 20. SANITARY NAPKIN DISPENSER (TO C.L. OF COIN SLOT): STANDARD = 40" MAX. ADA FORWARD REACH = 48" MAX. & 15"

MIN. ADA SIDE REACH = 48" MAX. & 15" MIN. 1. SANITARY NAPKIN DISPOSAL (TO TOP OF UNIT): STANDARD = 28 MAX. ADA = 19" MIN. TO 24" MAX. (TO OPNG.) 2. TOILET SEAT COVER DISPENSERS (TO OPNG.): STANDARD = 40 MAX. ADA FORWARD REACH = 48" MAX. & 15" MIN. ADA SIDE REACH = 48" MAX. & 15" MIN. 3. SHELVES: ADA = 48" MAX. 24. COAT HOOKS: STANDARD = 68". ADA = 48" MAX.

25. CHALKBOARDS, TACKBOARDS,& MARKERBOARDS: STANDARD 32" TO 39" (TO B.O. BOARD OR CHALKTRAY). STANDARD = 80" (RECOMMENDED, TO T.O. BOARD) 26. THERMOSTATS & CONTROL DEVICES (TO TOP): ADA FORWARD REACH = 48" MAX. ADA SIDE REACH = 48" MAX. 7. LIGHT SWITCHES & CARD READERS (TO C.L.): LOCATE 6" FROM DOOR JAMB. ADA = 48" MAX. 28. CONVENIENCE RECEPTACLES – ELECTRICAL/ TELEPHONE/ 9. EXIT LIGHTS - WALL MOUNTED: 2" MIN. BELOW CEILING. 2" MIN

2. SMOKE AND/OR HEAT DETECTORS: STANDARD = CEILING

3. HORN/ SPEAKER/ VISUAL SIGNALS: STANDARD = 80" AFF. OR 6" BELOW CEILING - WHICHEVER IS LOWER. 4. ROOM SIGNAGE (TO C.L.): STANDARD = 60" HIGH AFF. & WITHIN 18" OFLATCH SIDE OF DOOR

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Roger L. Webb II - Architect MO# A-2016004008

ROFESSIONAL SEAL

COLLINS WEBB #:

ACCESSIBILITY GUIDELINES



1.NO SUBSTITUTIONS OF MATERIALS WITHOUT COMPLETION OF A SUBSTITUTION REQUEST FORM & APPROVAL OF SUBSTITUTION BY BOTH ARCHITECT & OWNER PROJECT MANAGER. FORM CAN BE REQUESTED FROM ARCHITECT. 2. A CONDENSED SET OF SPECIFICATIONS ARE PROVIDED FOR THE PROJECT. STRICT ADHERENCE TO MANUFACTURER REQUIREMENTS AND INSTALLATION ARE REQUIRED TO BE FOLLOWED WITH SECTIONS PROVIDED WITHIN. IF REQUIRED THE ARCHITECT WILL ISSUE ADDITIONAL SECTIONS TO PROVIDE CLARITY TO

ROUGH CARPENTRY

PRODUCTS OR INSTALLATION REQUIREMENTS.

1. PROVIDE SUFFICIENT FIRE RETARDANT TREATED WOOD BLOCKING AT ALL STUDS FOR SECURING OF WALL & CEILING ITEMS, WHETHER FURNISHED BY OWNER 2. CONCEALED WOOD IS TO BE FIRE RETARDANT TREATED UNLESS NOTED OTHERWISE.

3. PRESERVATIVE TREATED LUMBER IS REQUIRED FOR ALL ITEMS TO REMAIN IN CONTACT WITH CONCRETE OR MASONRY TO CONFORM TO AWPA STANDARD 5. 4. PLYWOOD SHALL BE CD GRADE APA FIR OR YELLOW PINE. ALL PLY-WOOD TO BE FIRE RATED.

5. BLOCKING SHALL BE CLOSELY FITTED, ACCURATELY SET TO REQUIRED LINES & LEVELS, SECURELY CONNECTED & RIGIDLY FIXED IN PLACE. USING NAILS. SCREWS, &/OR BOLTS AS INDICATED OR REQUIRED BY GOOD PRACTICE AND MANUFACTURER'S RECOMMENDATIONS.

FINISH CARPENTRY

1. WOOD TRIM SHALL BE POPLAR FOR PAINTED FINISH. 2. INSTALL TRIM WORK STRAIGHT & TRUE IN ALIGNMENT & RIGIDLY FASTEN IN PLACE. FIELD VERIFY ALL DIMENSIONS. COORDINATE WHERE BLOCKING OR BACKING 3. MAKE ALL JOINTS TO CONCEAL SHRINKAGE, MITER ALL EXTERIOR CORNERS, COPE ALL INTERIOR CORNERS & SCARF ALL END-TO-END JOINTS, INSTALL PIECES AS LONG AS POSSIBLE TO MINIMIZE JOINTS. JOINTING ONLY WHERE SOLID SUPPORT IS OBTAINED.

<u>INSULATION</u>

1. PROVIDE INSULATION AS SHOWN IN WALL TYPES.

2. PROVIDE 6 INCH BATT INSULATION OVER THE TOP OF STRUCTURAL FRAMING, CONTINUOUS, AS REQUIRED TO MAINTAIN AN INSULATION BARRIER. MINERAL FIBER BATT INSULATION: FLEXIBLE OR SEMI-RIGID PREFORMED BATT OR BLANKET, COMPLYING WITH ASTM C665; FRICTION FIT; UNFACED FLAME SPREAD INDEX OF 0 (ZERO) WHEN TESTED IN ACCORDANCE WITH ASTM E84. 3. FLAME SPREAD INDEX: 25 OR LESS, WHEN TESTED IN ACCORDANCE WITH ASTM E84.

SEALANTS

1. ACCEPTABLE MANUFACTURERS ARE BOSTIK OR EQUAL & APPROVED. 2. ACRYLIC LATEX CAULK AT INTERIOR TRIM SHALL BE ASTM C834; PAINTABLE TYPE

3. PROVIDE PRIMERS, JOINT BACKING & OTHER ACCESSORIES AS REQUIRED, & RECOMMENDED BY THE MANUFACTURER.

4. PREPARE SURFACE PER SEALANT MANUFACTURER'S RECOMMENDATIONS, APPLY WITH SUFFICIENT PRESSURE TO FILL ALL VOIDS & FINISH JOINTS TO BE SLIGHTLY CONVEX & WEATHER TIGHT. 5. CAULK OR SEAL ALL JOINTS BETWEEN DISSIMILAR MATERIALS.

SEALANT APPLICATIONS BY TYPE:

1. INTERIOR JOINTS: USE NON-SAG POLYURETHANE SEALANT, UNLESS OTHERWISE INDICATED.

4. DEEP SET ALL FASTENERS, FILL, CLEAN & SAND AS REQUIRED FOR PAINT OR STAIN FINISH.

2. WALL AND CEILING JOINTS IN NON-WET AREAS: ACRYLIC EMULSION LATEX SEALANT. 3. WALL AND CEILING JOINTS IN WET AREAS: NON-SAG POLYURETHANE SEALANT FOR CONTINUOUS LIQUID IMMERSION. 4. IN SOUND-RATED ASSEMBLIES: USE ONE OF THE FOLLOWING SEALANTS. A. TREMCO® ACOUSTICAL/CURTAINWALL SEALANT

B. PECORA AIS-919

WOOD DOORS **DOORS**: REFER TO DRAWINGS FOR LOCATIONS AND ADDITIONAL REQUIREMENTS. 1. QUALITY STANDARD: CUSTOM GRADE, HEAVY DUTY PERFORMANCE, IN ACCORDANCE WITH

AWI/AWMAC/WI (AWS), AWMAC/WI (NAAWS) OR WDMA I.S. 1A. 2. WOOD VENEER FACED DOORS: 5-PLY UNLESS OTHERWISE INDICATED.

3. HIGH PRESSURE DECORATIVE LAMINATE (HPDL) FACED DOORS: 5-PLY UNLESS OTHERWISE

4. WHERE PLASTIC LAMINATE (P'LAM) IS INDICATED ON DOOR SCHEDULE, USE EITHER HIGH PRESSURE DECORATIVE LAMINATE (HPDL) FACED DOORS IN COMPLIANCE WITH AWI/AWMAC/WI (AWS).

AWMAC/WI (NAAWS) OR WDMA I.S. 1A, OR LOW PRESSURE DECORATIVE LAMINATE (LPDL) FACED DOORS IN COMPLIANCE WITH WDMA I.S. 1A.

DOOR AND PANEL CORES

1. NON-RATED SOLID CORE AND 20 MINUTE RATED DOORS: TYPE PARTICLEBOARD CORE (PC), PLIES AND FACES AS INDICATED.

2. FIRE-RATED DOORS: MINERAL CORE TYPE, WITH FIRE RESISTANT COMPOSITE CORE (FD), PLIES AND FACES AS INDICATED ABOVE; WITH CORE BLOCKING AS REQUIRED TO PROVIDE ADEQUATE ANCHORAGE OF HARDWARE

WITHOUT THROUGH-BOLTING. 3. SOUND-RATED DOORS: EQUIVALENT TO TYPE, WITH PARTICLEBOARD CORE (PC) CONSTRUCTION AS REQUIRED

TO ACHIEVE STC RATING SPECIFIED: PLIES AND FACES AS INDICATED ABOVE.

DOOR FACINGS 1. VENEER FACING FOR TRANSPARENT FINISH: MAPLE, VENEER GRADE IN ACCORDANCE WITH QUALITY STANDARD INDICATED, PLAIN SLICED (FLAT CUT), WITH BOOK MATCH BETWEEN LEAVES OF VENEER, RUNNING

MATCH OF SPLICED VENEER LEAVES ASSEMBLED ON DOOR OR PANEL FACE. 2. TRANSOMS: CONTINUOUS MATCH TO DOORS.

3. HIGH PRESSURE DECORATIVE LAMINATE (HPDL) FACING FOR FIRE DOORS: NEMA LD 3, SGF; _____ TEXTURED, LOW GLOSS FINISH.

4. HIGH PRESSURE DECORATIVE LAMINATE (HPDL) FACING FOR NON-FIRE-RATED DOORS: NEMA LD 3, HGS; COLOR(S) AS INDICATED; TEXTURED, LOW GLOSS FINISH.

DOOR CONSTRUCTION

1. FABRICATE DOORS IN ACCORDANCE WITH DOOR QUALITY STANDARD SPECIFIED.

2. CORES CONSTRUCTED WITH STILES AND RAILS: 3. FACTORY MACHINE DOORS FOR HARDWARE OTHER THAN SURFACE-MOUNTED HARDWARE, IN ACCORDANCE WITH

HARDWARE REQUIREMENTS AND DIMENSIONS. 4. FACTORY FIT DOORS FOR FRAME OPENING DIMENSIONS IDENTIFIED ON SHOP DRAWINGS, WITH EDGE

CLEARANCES IN ACCORDANCE WITH SPECIFIED QUALITY STANDARD. 5. PROVIDE EDGE CLEARANCES IN ACCORDANCE WITH THE QUALITY STANDARD SPECIFIED.

INSTALLATION

1. INSTALL DOORS IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS AND SPECIFIED QUALITY STANDARD.

2. INSTALL FIRE-RATED DOORS IN ACCORDANCE WITH NFPA 80 REQUIREMENTS. 3. INSTALL SMOKE AND DRAFT CONTROL DOORS IN ACCORDANCE WITH NFPA 105 REQUIREMENTS. 4. FACTORY-FINISHED DOORS: DO NOT FIELD CUT OR TRIM; IF FIT OR CLEARANCE IS NOT CORRECT, REPLACE DOOR.

5. USE MACHINE TOOLS TO CUT OR DRILL FOR HARDWARE. 6. COORDINATE INSTALLATION OF DOORS WITH INSTALLATION OF FRAMES AND HARDWARE.

FLOORING- COMMON WORK RESULTS

1. COMPLY WITH REQUIREMENTS AND RECOMMENDATIONS OF FLOOR COVERING MANUFACTURER.

2. FILL AND SMOOTH SURFACE CRACKS, GROOVES, DEPRESSIONS, CONTROL JOINTS AND OTHER NON-MOVING

JOINTS, AND OTHER IRREGULARITIES WITH PATCHING COMPOUND. 3. DO NOT FILL EXPANSION JOINTS, ISOLATION JOINTS, OR OTHER MOVING JOINTS.

CONCRETE SLAB PREPARATION 4. PERFORM FOLLOWING OPERATIONS IN THE ORDER INDICATED:

A. EXISTING CONCRETE SLABS (ON-GRADE AND ELEVATED) WITH EXISTING FLOOR COVERINGS: 1. VISUAL OBSERVATION OF EXISTING FLOOR COVERING, FOR ADHESION, WATER DAMAGE, ALKALINE DEPOSITS, AND OTHER DEFECTS.

2. PROVIDE PRELIMINARY CLEANING PER MFR. 3. INTERNAL RELATIVE HUMIDITY TESTS; IN SAME LOCATIONS AS MOISTURE VAPOR EMISSION TESTS, UNLESS

OTHERWISE INDICATED.

4. SPECIFIED REMEDIATION, IF REQUIRED. 5. PATCHING, SMOOTHING, AND LEVELING, AS REQUIRED BY MFR.

6. OTHER PREPARATION SPECIFIED BY MFR. 7. PROVIDE ADHESIVE BOND AND COMPATIBILITY TEST. 8. PROVIDE FLOOR PROTECTION.

CARPET BROADLOOM

1. CONTRACTOR TO PROVIDE AN ALLOWANCE PER CONTRACT DOCUMENTS

FIELD CONDITIONS / ACCESSORIES

1. STORE MATERIALS IN AREA OF INSTALLATION FOR MINIMUM PERIOD OF 24 HOURS PRIOR TO INSTALLATION. 2. SUB-FLOOR FILLER: TYPE RECOMMENDED BY FLOORING MATERIAL MANUFACTURER. 3. ADHESIVES COMPATIBLE WITH MATERIALS BEING ADHERED.

4. SEAM ADHESIVE: RECOMMENDED BY CARPET MANUFACTURER. 5. TACKLESS STRIP: CARPET GRIPPER, OF TYPE RECOMMENDED BY CARPET MANUFACTURER TO SUIT

APPLICATION, WITH ATTACHMENT DEVICES. 6. MOLDINGS AND EDGE STRIPS: EMBOSSED ALUMINUM, COLOR AS SELECTED. 7. MAINTAIN MINIMUM 70 DEGREES F AMBIENT TEMPERATURE 24 HOURS PRIOR TO, DURING AND 24 HOURS

8. VENTILATE INSTALLATION AREA DURING INSTALLATION AND FOR 72 HOURS AFTER INSTALLATION.

1. VERIFY THAT SUB-FLOOR SURFACES ARE SMOOTH AND FLAT WITHIN TOLERANCES SPECIFIED FOR THAT TYPE OF WORK AND ARE READY TO 2. CEMENTITIOUS SUB-FLOOR SURFACES: VERIFY THAT SUBSTRATES ARE DRY ENOUGH AND READY FOR FLOORING INSTALLATION BY TESTING FOR MOISTURE AND PH.

3. TEST IN ACCORDANCE WITH MANUFACTURER INSTRUCTIONS 4. OBTAIN INSTRUCTIONS IF TEST RESULTS ARE NOT WITHIN LIMITS RECOMMENDED BY FLOORING MATERIAL MANUFACTURER AND ADHESIVE MATERIALS MANUFACTURER.

PREPARATION 1.PREPARE FLOOR SUBSTRATES FOR INSTALLATION OF FLOORING IN ACCORDANCE WITH MANUFACTURER INSTRUCTIONS.

1. STARTING INSTALLATION CONSTITUTES ACCEPTANCE OF SUB-FLOOR CONDITIONS.

2. INSTALL CARPET AND CUSHION IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS AND CRI 104 3. VERIFY CARPÉT MATCH BEFORE CUTTING TO ENSURE MINIMAL VARIATION BETWEEN DYE LOTS.

4. LAY OUT CARPET AND LOCATE SEAMS IN ACCORDANCE WITH SHOP DRAWINGS. A. LOCATE SEAMS IN AREA OF LEAST TRAFFIC, OUT OF AREAS OF PIVOTING TRAFFIC, AND PARALLEL TO MAIN

B. DO NOT LOCATE SEAMS PERPENDICULAR THROUGH DOOR OPENINGS.

C. ALIGN RUN OF PILE IN SAME DIRECTION AS ANTICIPATED TRAFFIC AND IN SAME DIRECTION ON ADJACENT PIECES. D. LOCATE CHANGE OF COLOR OR PATTERN BETWEEN ROOMS UNDER DOOR CENTERLINE. E. PROVIDE MONOLITHIC COLOR, PATTERN, AND TEXTURE MATCH WITHIN ANY ONE AREA.

5. INSTALL CARPET TIGHT AND FLAT ON SUBFLOOR, WELL FASTENED AT EDGES, WITH A UNIFORM APPEARANCE.

INSTALLATION_DIRECT - GLUED CARPET

1. DOUBLE CUT CARPET SEAMS, WITH ACCURATE PATTERN MATCH. MAKE CUTS STRAIGHT, TRUE, AND UNFRAYED APPLY SEAM ADHESIVE TO CUT EDGES OF WOVEN CARPET IMMEDIATELY. 2. APPLY CONTACT ADHESIVE TO FLOOR UNIFORMLY AT RATE RECOMMENDED BY MANUFACTURER. AFTER SUFFICIENT OPEN TIME, PRESS CARPET

3. APPLY SEAM ADHESIVE TO THE BASE OF THE EDGE GLUED DOWN. LAY ADJOINING PIECE WITH SEAM STRAIGHT, NOT OVERLAPPED OR PEAKED, AND FREE OF GAPS.

4. ROLL WITH APPROPRIATE ROLLER FOR COMPLETE CONTACT OF ADHESIVE TO CARPET BACKING. 5. TRIM CARPET NEATLY AT WALLS AND AROUND INTERRUPTIONS. 6. EXTEND CARPET AS BASE FINISH UP VERTICAL SURFACES TO FORM BASE. TERMINATE TOP OF BASE WITH CAP STRIP.

7. COMPLETE INSTALLATION OF EDGE STRIPS, CONCEALING EXPOSED EDGES. BIND CUT EDGES WHERE NOT CONCEALED BY EDGE STRIPS.

1. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL PATCHING OF ALL NAIL HOLES, CRACKS ETC., PRIOR TO FINAL PAINTING. 2. WORK INCLUDES PREPARATION OF SURFACES FOR PAINTING, FINISHING & THE APPLICATION OF PAINT & FINISH PRODUCTS ON ALL SURFACES WHICH ARE NOT FACTORY FINISHED. 3. ALL SURFACES MUST BE DRY, FREE FROM GREASE, OIL, MILDEW & GROUT; SANDED SMOOTH & FREE FROM LOOSE DIRT, DUST OR GRIT.

4. GLOSS SURFACES TO BE DULLED BY LIGHT SANDING. 5. ALL COATS TO BE TINTED TOWARDS FINAL COLOR, MINIMUM 3 COATS. GYPSUM BOARD PRIMERS TO BE FACTORY FORMULATED LATEX BASED FOR INTERIOR APPLICATION, SW PREPRITE 200, B28W200 SERIES OR EQUAL. 6. WOOD PRIMERS TO BE FACTORY FORMULATED ALKYD OR ACRYLIC BASED FOR INTERIOR APPLICATION, SW PREPRITE WOOD, B49W200 OR EQUAL

FOR ACRYLIC ENAMEL & SEMIGLOSS FINISHES. 7. FERROUS METAL PRIMERS TO BE FACTORY FORMULATED QUICK DRYING RUST INHIBITIVE ALKYD BASED, SW KERN KROMIK UNIVERSAL METAL PRIMER, B50NZ6/B50WZ1 OR EQUAL. B. GYPSUM BOARD CEILINGS & SOFFITS FINISH COAT TO BE FACTORY FORMULATED FLAT ACRYLIC LATEX, SW PROMAR 200 INTERIOR, B30W200 SERIES

OR EQUAL. 9. GYPSUM BOARD WALLS FINISH COAT TO BE FACTORY FORMULATED SATIN ACRYLIC LATEX, SW B20W200 SERIES OR EQUAL. 10. WOOD & METAL SURFACES FINISH COAT TO BE FACTORY FORMULATED FULL SATIN ALKYD ENAMEL, SW PROMAR 200 INTERIOR B35W200 SERIES OR 12. PROVIDE LEFT OVER STOCK OF EACH FINISH COLOR.

GYPSUM WALL BOARD

1. PROVIDE & INSTALL METAL STUD WALL SYSTEMS IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS & THE GYPSUM CONSTRUCTION

HANDBOOK AS PUBLISHED BY UGC. 2. METAL STUDS, DIETRICH OR EQUAL, REFERENCE DRAWINGS FOR STUD TYPES. PER ASTM 525, G-90. 3. FURRING CHANNELS, REFERENCE DRAWINGS FOR CHANNEL TYPES USG OR EQUAL.

4. FASTENERS SHALL BE USG BUGLE HEAD SCREWS. 5. JOINT TREATMENT SHALL BE: - PREFILLER-USG DURABOND 90 -

6. TAPE-USG PERF-A-TAPE - FILLER-USG READY-MIXED JOINT COMPOUND

7. PAPER FACED METAL TRIM TO MEET ASTM C1047-8. CORNER BEADS-USG BEADEX INSIDE & OUTSIDE CORNERS

9. CASING BEADS-USG BEADEX L TRIMS 10. ALL EXTERIOR CORNERS SHALL RECEIVE CORNER BEADS, & EXPOSED EDGES (AT END OF NEW DRYWALL WORK)SHALL RECEIVE CASING BEADS TAPED IN WITH THE JOINT TREATMENT SYSTEM.

11. WALLS TO RECEIVE WALL COVERING SHALL BE BEDDED, TAPED & SANDED TO PROVIDE A SMOOTH, CONTINUOUS SURFACE & PRIMED AS RECOMMENDED BY WALL COVERING MANUFACTURER.

12. REVIEW ALL WORK AFTER PRIME COAT OF PAINT & CORRECT ANY VISIBLE JOINT OR FASTENER TREATMENT OR ROUGHNESS IN THE WORK. 13. FIRE TAPE INNER LAYERS OF GYPSUM BOARD AT RATED WALLS. FINISH TAPE & SAND OUTSIDE LAYER OF GYPSUM BOARD THAT WILL RECEIVE PAINT VINYL OR WALL CARPET.

14. ALL GYPSUM BOARD IS 5/8" (TYPE "X") UNLESS NOTED OTHERWISE (UNO). 16. LISTED BELOW ARE TYP INNER LAYER GUIDELINES FOR JOINT FINISHING:

- FACTORY EDGE TO FACTORY EDGE CONDITIONS DO NOT REQUIRE TO BE TAPED & FILLED IN LAYERS BELOW FINISH LAYER. - ANY CUT EDGES OR CORNERS ON INNER LAYERS WILL REQUIRE TO BE TAPED & FILLED TYP.

- ANY GAPS OR BROKEN CORNERS, MUST BE TAPED TYP. 17. REFERENCE DRAWING GENERAL NOTE FOR GYP. FINISH LEVELS.

FIRE EXTINGUISHERS

1. PROVIDE FIRE EXTINGUISHERS WITHIN TRAVEL DISTANCE OF 75 FEET DURING DEMOLITION & ALTERATIONS. IF F.E.C. IS WALL MOUNTED, RELOCATE TO NEW LOCATION & REPAIR ALL WALLS DAMAGED BY WORKS TO MATCH ADJACENT. IF F.E.C. IS RECESSED, DO NOT DISTURB & ADD NEW F.E.C. AS SHOWN. GC SHALL VERIFY LOCATION & NUMBER OF FIRE EXTINGUISHERS WITH FIRE INSPECTOR PRIOR TO INSTALLATION.

ACOUSTICAL CEILING TILE

ADMINISTRATIVE REQUIREMENTS 1. SEQUENCE WORK TO ENSURE ACOUSTICAL CEILINGS ARE NOT INSTALLED UNTIL BUILDING IS ENCLOSED, SUFFICIENT HEAT IS

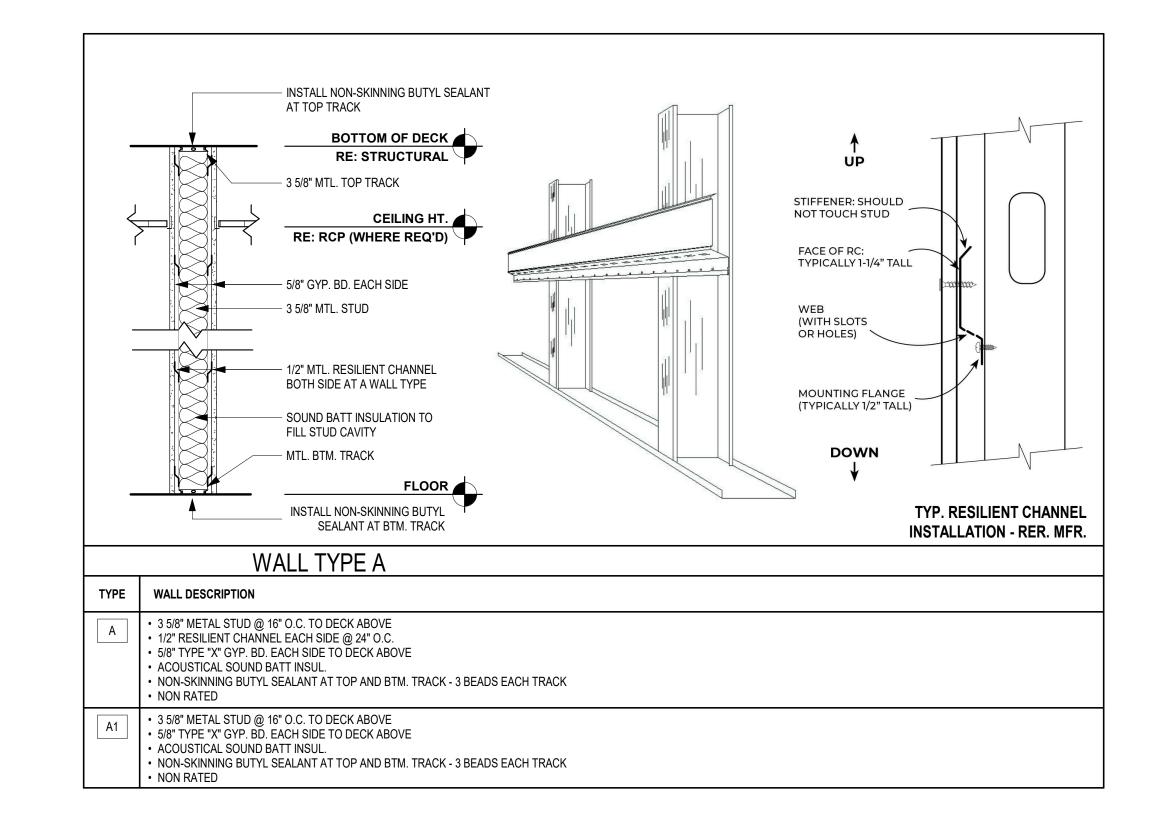
PROVIDED, DUST GENERATING ACTIVITIES HAVE TERMINATED, AND OVERHEAD WORK IS COMPLETED, TESTED, AND APPROVED. 2. DO NOT INSTALL ACOUSTICAL UNITS UNTIL AFTER INTERIOR WET WORK IS DRY.

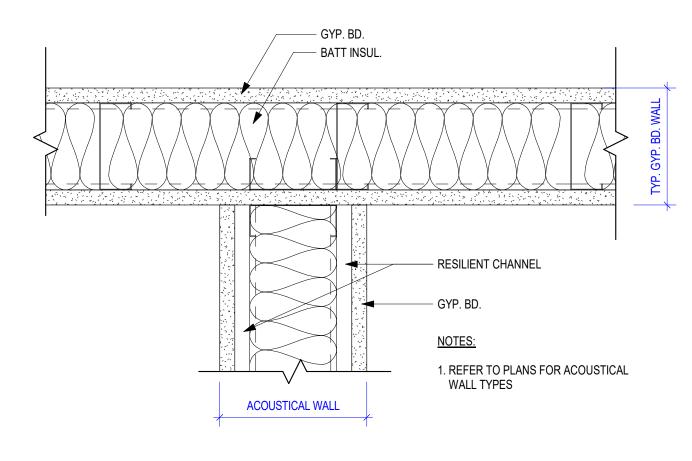
3. MAINTAIN UNIFORM TEMPERATURE OF MINIMUM 60 DEGREES F, AND MAXIMUM HUMIDITY OF 40 PERCENT PRIOR TO, DURING, AND AFTER ACOUSTICAL UNIT INSTALLATION.

QUALITY ASSURANCE 1. FIRE-RESISTIVE ASSEMBLIES: COMPLETE ASSEMBLY LISTED AND CLASSIFIED BY UL (FRD) FOR THE FIRE RESISTANCE INDICATED.

PRODUCTS 2. ACOUSTIC TILES/PANELS:

A. CERTAINTEED CORPORATION: WWW.CERTAINTEED.COM. B. REFERENCE FINISH SCHEDULE. 3. SUBSTITUTIONS: AS APPROVED BY ARCHITECT





WALL CONTINUITY LEGEND @ ACOUSTICAL E4 WALLS- PLAN VIEW 3'' = 1'-0''

WALL TYPE NOTES:

I. DRYWALL PARTITIONS SHOULD BE CONSTRUCTED IN ACCORDANCE WITH ASTM E497 - STANDARD PRACTICE FOR INSTALLING SOUND ISOLATING GYPSUM BOARD PARTITIONS, AND ASTM C919 - STANDARD PRACTICE FOR USE OF SEALANTS IN ACOUSTICAL APPLICATIONS. ALL SOUND BARRIER PARTITIONS SHOULD EXTEND FROM FLOOR TO STRUCTURE UNLESS STATED OTHERWISE. METAL STUDS SHALL BE RIGIDLY ATTACHED ONLY AT HEAD AND FOOT, STRUCTURAL CROSS BRACING MUST NOT

RIGIDLY CONNECT TO BOTH METAL STUD WALLS. 2. RE: LIFE SAFETY PLAN(S) FOR RATED WALL LOCATIONS. 3. RE: WALL TYPE DETAIL SHEET FOR TYPICAL WALL DETAILS AND ADDITIONAL WALL TYPE INFORMATION. NOT USED 5. COORDINATE METAL STUD GAUGE WITH PRE-APPROVED

EQUIPMENT ANCHORAGE. WHERE A DISCREPANCY OCCURS. THE MORE STRINGENT REQUIREMENT SHALL 6. WHERE "ACOUSTIC SEALANT" IS INDICATED ON WALL TYPES: PROVIDE ACOUSTIC (SOUND) SEALANT ABOVE TOP

TRACK, UNDER BOTTOM TRACK, AND AT ALL PENETRATIONS (BOTH SIDES), SEE SPECIFICATION FOR PRODUCT REQUIREMENTS. 7. WHERE "FIRE-RATED SEALANT" IS INDICATED ON WALL TYPES: PROVIDE FIRE-RATED SEALANT ABOVE TOP TRACK, UNDER BOTTOM TRACK, AT ALL PENETRATIONS (BOTH SIDES), AND AS REQUIRED BY FIRE RATING UL NUMBER. 8. EXTEND FIRE-RATED WALL CONSTRUCTION BEHIND RECESSED OR BUILT-IN EQUIPMENT; SUCH AS FIRE EXTINGUISHER CABINETS (FEC), ELECTRICAL WATER

COOLERS (EWC), ELECTRICAL PANELS, ETC., UNLESS NOTED OTHERWISE. 9. PROVIDE AND INSTALL ALL STIFFENERS, BRACING, BACK-UP PLATES AND SUPPORTING BRACKETS REQUIRED FOR THE INSTALLATION OF ALL CASEWORK AND OF ALL FLOOR MOUNTED OR SUSPENDED MECHANICAL, ELECTRICAL OR

LABORATORY EQUIPMENT. 0. WHERE HVAC OR OTHER MECHANICAL, ELECTRICAL AND PLUMBING ITEMS PENETRATE PARTITIONS: STUDS SHALL BE BRACED AND FRAMED TO STRUCTURE AS REQUIRED TO PROVIDE ADEQUATE SUPPORT, ALL PENETRATIONS THROUGH ACOUSTICAL AND FIRE RATED WALLS SHALL BE SEALED TO PROVIDE FIRE, SMOKE, AND/OR ACOUSTICAL ISOLATION OF SPACES WITH APPROPRIATE ACOUSTICAL/ FIRESTOP MATERIAL

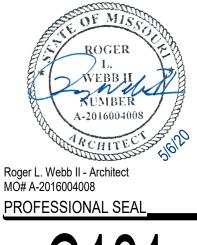
I. THERE SHALL BE NO BACK-TO-BACK ELECTRICAL. TELEPHONE, OR OTHER OUTLETS, EXCEPT WHERE SPECIFICALLY SHOWN.

2. WALL BASE IS NOT SHOWN ON ALL WALL TYPES FOR CLARITY. REFER TO FINISH SCHEDULE. 13. PROVIDE GLASS-MAT, WATER RESISTANT BACKING BOARD AT ALL WET LOCATIONS. 14. EXCEPT AT FIRE-RATED PARTITIONS, ALL WALL AND COLUMN GYPSUM BOARD FACING SHALL BE HELD AT 5/8 INCH BELOW STRUCTURE, UNLESS NOTED OR SHOWN OTHERWISE 15. PROVIDE AND INSTALL BLOCKING REQUIRED FOR ALL A.V.

EQUIPMENT. G.C. TO COORDINATE WITH TI CONSULTANT FOR FINAL LOCATIONS AND SIZE REQUIREMENTS. 16. COMPRESSIBLE FILLER - ACCEPTABLE MATERIALS WOULD BE FIBERGLASS INSULATION OR FIRESTOPPING. VOIDS TO BE COMPLETELY FILLED AND A FIRESTOP SEALANT OVER ANY ENDS. THIS IS TYPICAL FOR ALL ACOUSTICAL WALL ASSEMBLIES WHERE "COMPRESSIBLE FILLER" IS CALLED FOR. THERE CAN BE NO VOIDS IN THE INSTALLATION. 7. BACK TO BACK ACOUSTICAL WALLS MAY NOT BE BRIDGED, BRACED OR RIGIDLY TIED TOGETHER WITHOUT AN APPROVED ISOLATION SYSTEM.

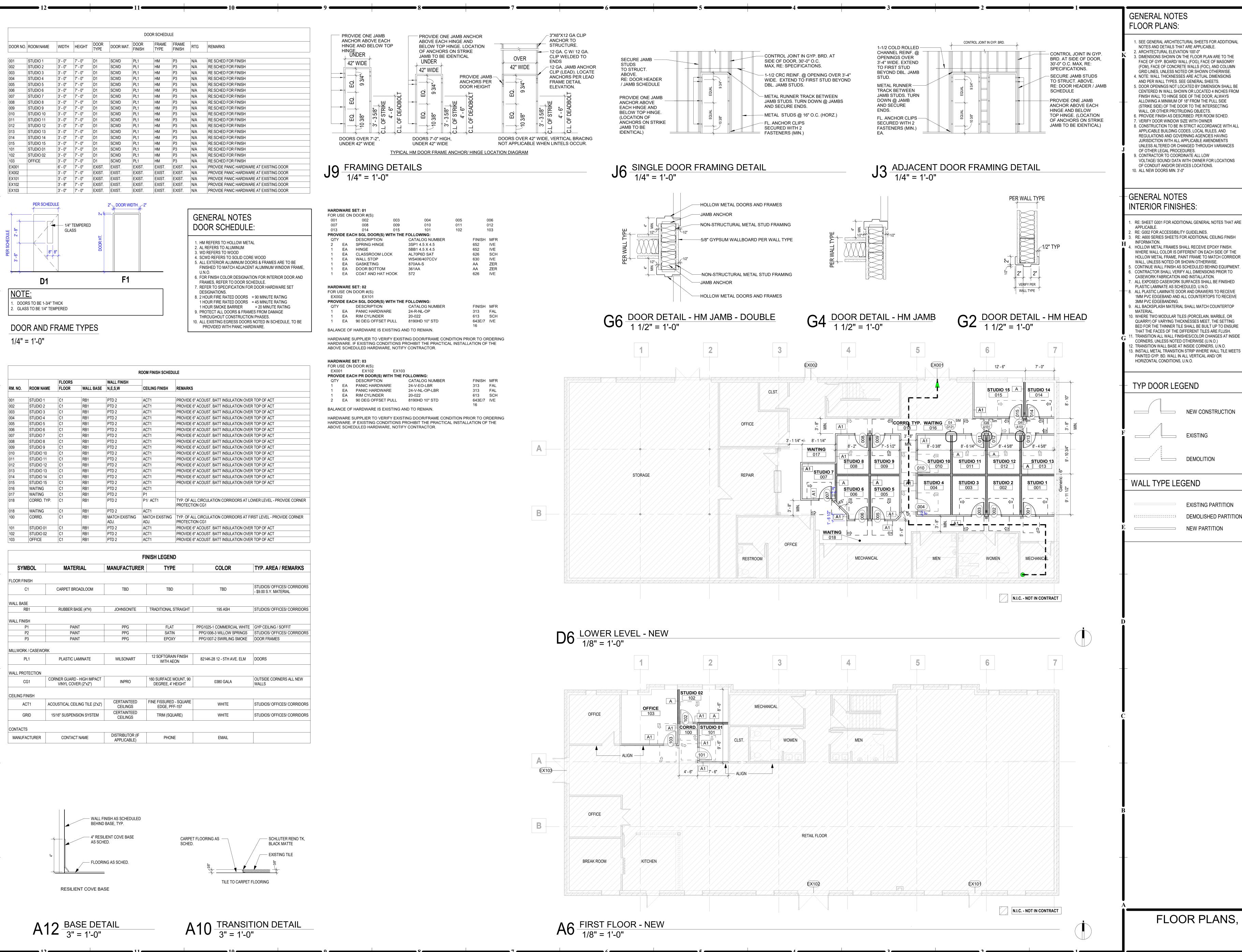
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COLLINS WEBB #: WALL TYPES & SPECIFICATIONS





FLOOR PLANS:

1. SEE GENERAL ARCHITECTURAL SHEETS FOR ADDITIONAL NOTES AND DETAILS THAT ARE APPLICABLE. 2. ARCHITECTURAL ELEVATION 100'-0"

3. DIMENSIONS SHOWN ON THE FLOOR PLAN ARE TO THE

FACE OF GYP. BOARD/ WALL (FOG), FACE OF MASONRY (FOM), FACE OF CONCRETE WALLS (FOC), AND COLUMN GRID LINES, UNLESS NOTED OR SHOWN OTHERWISE. 4. NOTE: WALL THICKNESSES ARE ACTUAL DIMENSIONS

AND PER WALL TYPES. SEE GENERAL SHEETS. 5. DOOR OPENINGS NOT LOCATED BY DIMENSION SHALL BE CENTERED IN WALL SHOWN OR LOCATED 4 INCHES FROM FINISH WALL TO HINGE SIDE OF THE DOOR, ALWAYS ALLOWING A MINIMUM OF 18" FROM THE PULL SIDE (STRIKE SIDE) OF THE DOOR TO THE INTERSECTING WALL, OR OTHER PROTRUDING OBJECTS.

6. PROVIDE FINISH AS DESCRIBED: PER ROOM SCHED. 7. VERIFY DOOR WINDOW SIZE WITH OWNER 8. CONSTRUCTION TO BE IN STRICT ACCORDANCE WITH ALL APPLICABLE BUILDING CODES, LOCAL RULES, AND REGULATIONS AND GOVERNING AGENCIES HAVING JURISDICTION WITH ALL APPLICABLE AMENDMENTS UNLESS ALTERED OR CHANGED THROUGH VARIANCES OF OTHER LEGAL PROCEDURES. 9. CONTRACTOR TO COORDINATE ALL LOW

VOLTAGE/ SOUND/ DATA WITH OWNER FOR LOCATIONS OF CONDUIT AND/OR DEVICES LOCATIONS. 10. ALL NEW DOORS MIN. 3'-0"

GENERAL NOTES INTERIOR FINISHES:

I. RE: SHEET G001 FOR ADDITIONAL GENERAL NOTES THAT ARE

2. RE: G002 FOR ACCESSIBILITY GUIDELINES. 3. RE: A600 SERIES SHEETS FOR ADDITIONAL CEILING FINISH

. HOLLOW METAL FRAMES SHALL RECEIVE EPOXY FINISH. WHERE WALL COLOR IS DIFFERENT ON EACH SIDE OF THE HOLLOW METAL FRAME, PAINT FRAME TO MATCH CORRIDOR

WALL, UNLESS NOTED OR SHOWN OTHERWISE. CONTINUE WALL FINISH AS SCHEDULED BEHIND EQUIPMENT B. CONTRACTOR SHALL VERIFY ALL DIMENSIONS PRIOR TO CASEWORK FABRICATION AND INSTALLATION. . ALL EXPOSED CASEWORK SURFACES SHALL BE FINISHED PLASTIC LAMINATE AS SCHEDULED, U.N.O. B. ALL PLASTIC LAMINATE DOOR AND DRAWERS TO RECEIVE

1MM PVC EDGEBAND AND ALL COUNTERTOPS TO RECEIVE 3MM PVC EDGEBANDING. 9. ALL BACKSPLASH MATERIAL SHALL MATCH COUNTERTOP 10. WHERE TWO MODULAR TILES (PORCELAIN, MARBLE, OR QUARRY) OF VARYING THICKNESSES MEET, THE SETTING BED FOR THE THINNER TILE SHALL BE BUILT UP TO ENSURE

CORNERS, UNLESS NOTED OTHERWISE (U.N.O.) . TRANSITION WALL BASE AT INSIDE CORNERS, U.N.O. 13. INSTALL METAL TRANSITION STRIP WHERE WALL TILE MEETS PAINTED GYP. BD. WALL IN ALL VERTICAL AND/ OR HORIZONTAL CONDITIONS, U.N.O.

TYP DOOR LEGEND

NEW CONSTRUCTION

WALL TYPE LEGEND

EXISTING PARTITION DEMOLISHED PARTITION NEW PARTITION

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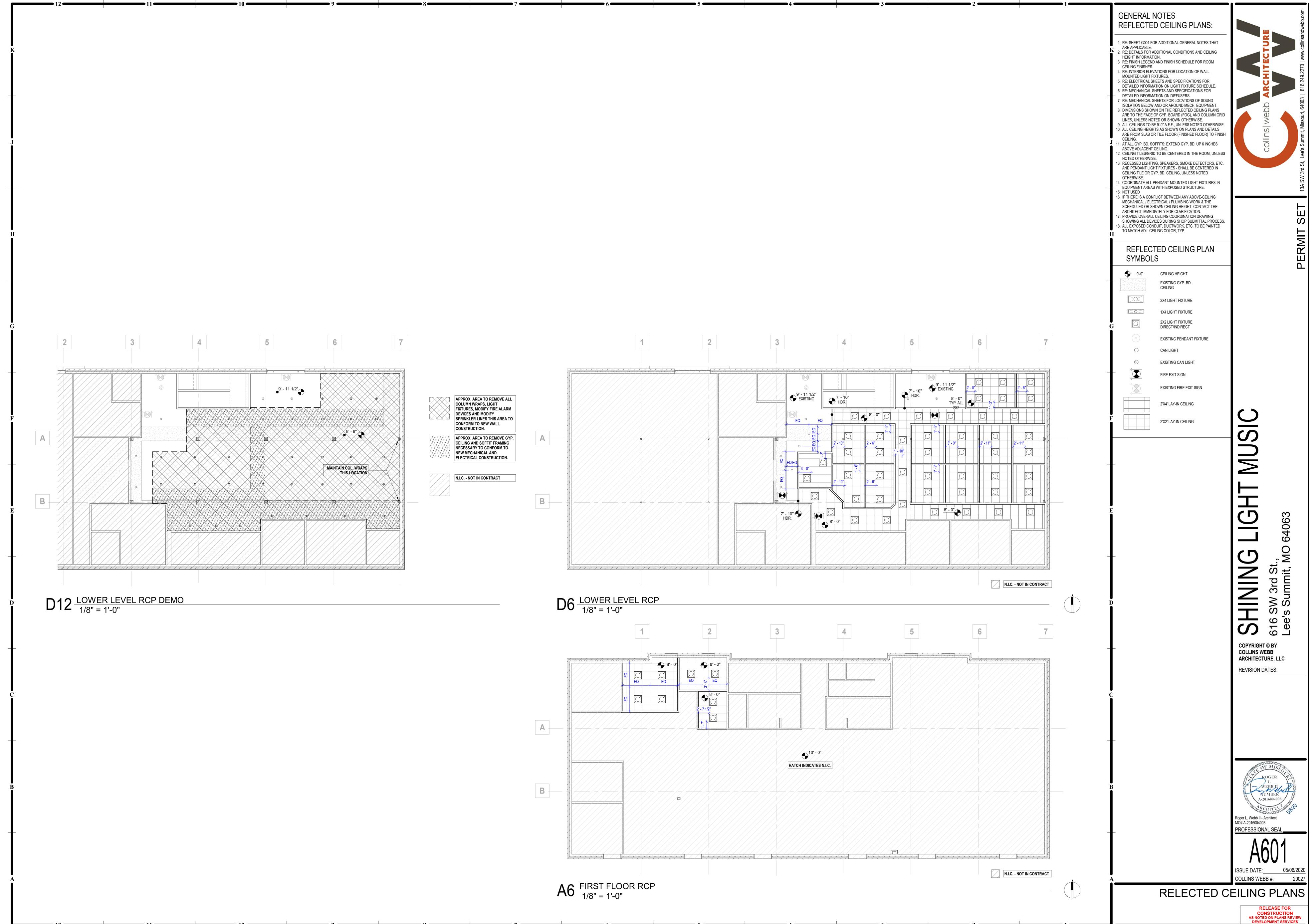
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Roger L. Webb II - Architect MO# A-2016004008 PROFESSIONAL SEAL

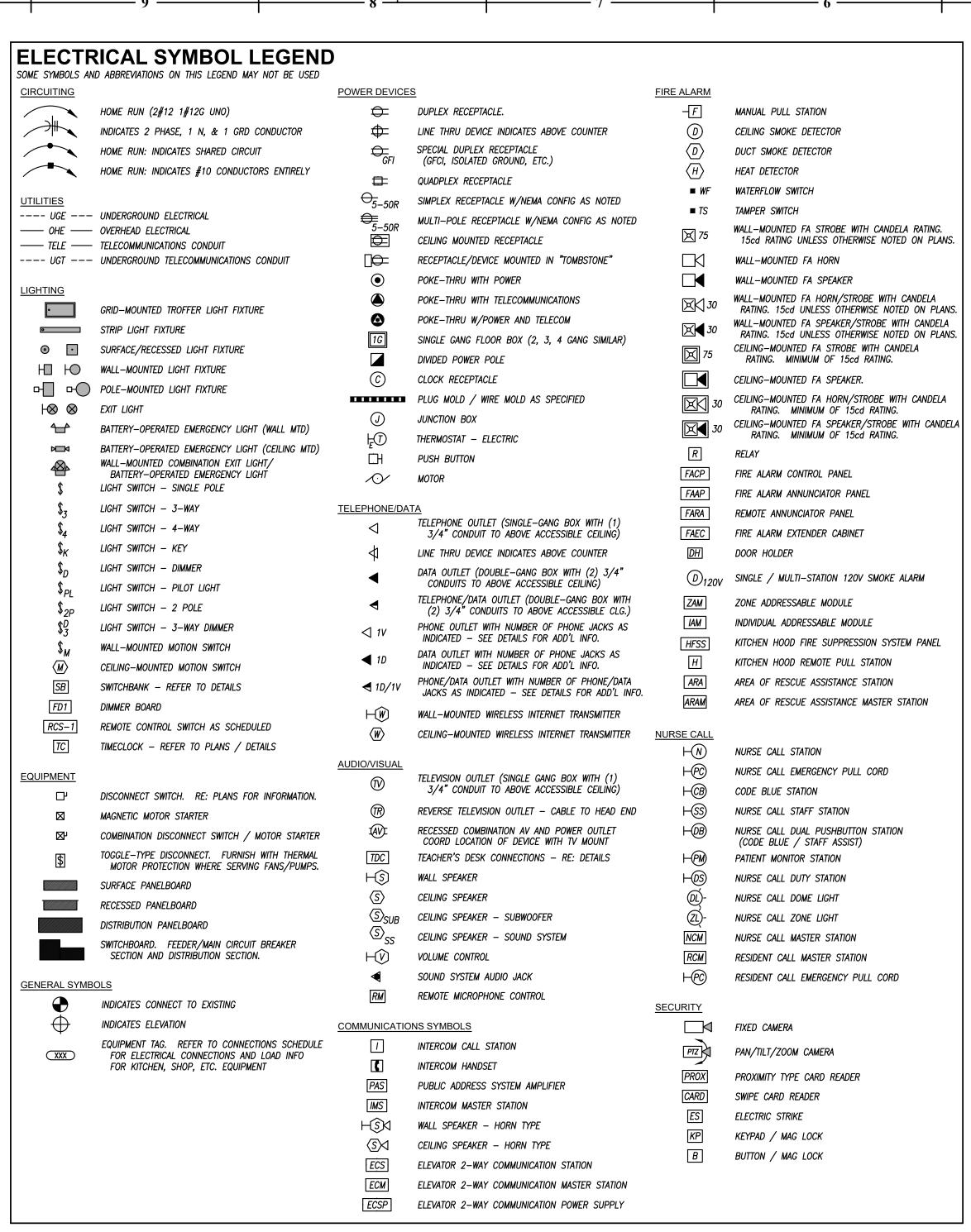
COLLINS WEBB #: FLOOR PLANS, SCHEDULES &

CONSTRUCTION
AS NOTED ON PLANS REVIEW
DEVELOPMENT SERVICES

05/11/2020







FIRE SEALING NOTES

A/E	ARCHITECT / ENGINEER	ELEV	ELEVATION	MH	MANHOLE
	ABOVE FINISHED FLOOR	ЕМ	EMERGENCY FIXTURE/DEVICE	MLO	MAIN LUGS ONLY
AFG	ABOVE FINISHED GRADE	EWT	ENTERING WATER TEMPERATURE	NFA	NET FREE AREA
AG	ABOVE GRADE	ΕX	EXISTING ITEM	NL	NIGHT LIGHT
AHJ	AUTHORITY HAVING JURISDICTION	FFA	FROM FLOOR ABOVE	OA	OUTSIDE AIR
AHU	AIR HANDLING UNIT	FFB	FROM FLOOR BELOW	ORD	OVERFLOW ROOF DRAIN
ARCH	ARCHITECT	FFC0	FINISHED FLOOR CLEAN OUT	P/C	PLUMBING CONTRACTOR
BFP	BACKFLOW PREVENTER	FGC0	FLUSH GRADE CLEAN OUT	PSI	POUNDS PER SQUARE INCH
BG	BELOW GRADE	FL	FLOW LINE	PVC	POLYVINYLCHLORIDE
BLDG	BUILDING	FLR	FLOOR	RA	RETURN AIR
BMS	BUILDING MANAGEMENT SYSTEM	FP	FIRE PROTECTION	RE/REF	REFER / REFERENCE
С	CONDUIT	FPM	FEET PER MINUTE	RF	RELIEF FAN
CD	CANDELA	<i>FWCO</i>	FLUSH WALL CLEAN OUT	RL	RELOCATED ITEM
CD	COLD DECK	G	GROUND / GANG	RPZ	REDUCED PRESSURE ZONE
CLG	COOLING	G/C	GENERAL CONTRACTOR	RR	RESTROOM
	COORDINATE MOUNTING HEIGHT	ĠFI	GROUND FAULT CIRCUIT INTERUPTER	SA	SUPPLY AIR
	CLEAN OUT	GFIP	GFI-PROTECTED DEVICE	SPD	SURGE PROTECTIVE DEVICE
	CONNECT TO EXISTING	GPM	GALLONS PER MINUTE	ST	SHUNT TRIP
	DOUBLE CHECK VALVE ASSEMBLY	HD	HOT DECK	TA	TRANSFER AIR
	DOMESTIC COLD WATER	HTG	HEATING	TFA	TO FLOOR ABOVE
DDC	DIRECT DIGITAL CONTROLS	IG	ISOLATED GROUND	TFB	TO FLOOR BELOW
	DRINKING FOUNTAIN	JB	JUNCTION BOX	TP	TAMPERPROOF
	DOMESTIC HOT WATER	LED	LIGHT EMITTING DIODE	TYP	TYPICAL
	DOMESTIC HOT WATER RETURN	LWT	LEAVING WATER TEMPERATURE	UNO	UNLESS NOTED OTHERWISE
	DIAMETER	M/C	MECHANICAL CONTRACTOR	VRF	VARIABLE REFRIGERANT FLOW
	DOWN	ΜA	MIXED AIR	VTR	VENT THROUGH ROOF
•	ELECTRICAL CONTRACTOR	MAU	MAKE UP AIR UNIT	WCO	WALL CLEANOUT
EA	EXHAUST AIR	мсв	MAIN CIRCUIT BREAKER	WG	WIRE GUARD

WP WEATHERPROOF

ABBREVIATIONS

EDF ELECTRIC DRINKING FOUNTAIN

. COORDINATE CONSTRUCTION OF OPENINGS AND PENETRATING ITEMS TO ENSURE THAT THROUGH-PENETRATION FIRESTOP SYSTEMS ARE

INSTALLED ACCORDING TO SPECIFIED AND APPLICABLE UL REQUIREMENTS. 2. COORDINATE SIZING OF SLEEVES, OPENINGS, CORE-DRILLED HOLES, OR CUT OPENINGS TO ACCOMMODATE THROUGH—PENETRATION FIRESTOP SYSTEMS. 3. DO NOT COVER UP THROUGH-PENETRATION FIRESTOP SYSTEM INSTALLATIONS UNTIL EXAMINED BY INSPECTOR, IF REQUIRED BY AUTHORITIES HAVING JURISDICTION. 4. COMPATIBILITY: PROVIDE THROUGH—PENETRATION FIRESTOP SYSTEMS THAT ARE COMPATIBLE WITH ONE ANOTHER; WITH THE SUBSTRATES FORMING OPENINGS; AND WITH THE ITEMS, IF ANY, PENETRATING

THROUGH-PENETRATION FIRESTOP SYSTEMS, UNDER CONDITIONS OF SERVICE AND APPLICATION, AS DEMONSTRATED THROUGH-PENETRATION FIRESTOP SYSTEM MANUFACTURER BASED ON TESTING AND FIELD EXPERIENCE. 5. PROVIDE COMPONENTS FOR EACH THROUGH-PENETRATION FIRESTOP SYSTEM THAT ARE NEEDED TO INSTALL FILL MATERIALS. USE ONLY COMPONENTS SPECIFIED BY THROUGH-PENETRATION FIRESTOP SYSTEM MANUFACTURER AND APPROVED BY QUALIFIED TESTING AND INSPECTING AGENCY FOR FIRESTOP SYSTEMS INDICATED.

6. PROVIDE SLEEVES THROUGH ALL FIRE-RATED WALLS AND FILL VOIDS SURROUNDING SLEEVES AND INTERIOR TO SLEEVES AROUND PIPING WITH FIRE STOP PUTTY WITH U.L. LISTED 3 HOUR RATING INSTALLED AS PER MANUFACTURERS RECOMMENDATIONS. 7. FIRE SEAL ALL PIPING, CONDUIT, CABLE, ETC PENETRATIONS ROUTED THROUGH FIRE RATED WALLS. 8. PROVIDE FIRE RATED ENCLOSURES OR WRAPS ON LIGHT FIXTURES

AND OTHER ITEMS PENETRATING FIRE RATED CEILINGS,

FLOOR/CEILING/ CEILING/ROOF ASSEMBLIES TO MAINTAIN UL LISTING

FOR CONSTRUCTION.

MECHANICAL AND PLUMBING SYMBOL LEGEND

SHEET METAL		MECHANICAL PI	<u>PING</u>	PIPING SYMBOL	<u>_S</u>
T*T= T*T=	HIGH EFFICIENCY ROUND DUCT TAKEOFF		REFRIGERANT LIQUID	$\longrightarrow\!$	SHUTOFF VALVE
	(WITH & WITHOUT MANUAL DAMPER)	RS	REFRIGERANT SUCTION	 >-	SHUTOFF VALVE IN RISER
T⁴Æ T⁴┺	SPIN—IN ROUND DUCT TAKEOFF	D	DRAIN (CONDENSATE)	→፟ ↓	BALANCING VALVE
	(WITH & WITHOUT MANUAL DAMPER)		- COMPRESSED AIR	⊸ >>	PLUG VALVE
⁻⁴ ┺		—— cws ——	CHILLED WATER SUPPLY	—	AUTO FLOW CONTROL VALVE
ЩЩ	CONICAL BELLMOUTH ROUND TAKEOFF	CWR	CHILLED WATER RETURN	—ю	PIPING ELBOW UP
T*T _F		— c/нws —	CHILLED/HOT WATER SUPPLY	 -	PIPING ELBOW DOWN
	ROUND DUCT RUNOUT WITH FLEX DUCT	•	CHILLED/HOT WATER RETURN		PIPING TEE
		—— н w s ——	HOT WATER SUPPLY	<u>-</u> -	PIPING ELBOW
	DUCTWORK ELBOW (WITH & WITHOUT TURNING VANES)	—— н w R ——	HOT WATER RETURN	ю-	PIPING TEE UP
	FD:FIRE DAMPER FS:FIRE/SMOKE DAMPER	—— ст w s ——	COOLING TOWER SUPPLY	- ICI -	PIPING TEE DOWN
	SD:SMOKE DAMPER BD:BACKDRAFT DAMPER (GRAVITY)		COOLING TOWER RETURN	—₩	INCREASER / REDUCER
\bigcirc			STEAM (ANY #'S DENOTE PRESSURE)		UNION
(MD)	AUTOMATIC MOTORIZED DAMPER		CONDENSATE RETURN (#'S DENOTE PRESSURE)		CAP
8"ø 225	SUPPLY DIFFUSER AND DIFFUSER CALLOUT		REFRIGERANT VENT		PIPE FLEX
8"øA 225	(NECK SIZE, TYPE AND CFM)			- \ - 	STRAINER
	LINEAR/SLOT DIFFUSER			— /	CHECK VALVE
	RETURN GRILLE OR EXHAUST REGISTER	PLUMBING PIPIN	NG	-1	INLINE STRAINER
	RETURN GRILLE OR EXHAUST REGISTER	•	DOMESTIC COLD WATER	T	TEST PLUG
←	SUPPLY AIR FLOW INDICATOR		DOMESTIC HOT WATER		GUIDE
/ ─►	RETURN AND EXHAUST AIR FLOW INDICATOR		RECIRCULATING DOMESTIC HOT WATER	_ _	ANCHOR
\oplus	THERMOSTAT		WASTE ABOVE GRADE OR FLOOR		
•	TEMPERATURE SENSOR		WASTE BELOW GRADE OR FLOOR	– ₫–	TRIPLE DUTY VALVE
н Ш	HUMIDISTAT		STORM ABOVE GRADE OR FLOOR	─────	AUTOMATIC 2-WAY CONTROL VALVE
/	CONTROL WIRING		STORM BELOW GRADE OR FLOOR	────	AUTOMATIC 3-WAY CONTROL VALVE
			STORM OVERFLOW ABOVE GRADE OR FLOOR	수 (5)	
MEDICAL GAS		•	STORM OVERFLOW BELOW GRADE OR FLOOR	—	SOLENOID VALVE
—— мv ——	MEDICAL VACUUM PIPING	•	PLUMBING VENT		
<u> </u>	OXYGEN PIPING		WATER SERVICE	PIPING SPECIAL	<u>LTIES</u>
<u> — N0 —</u>	NITROUS OXIDE PIPING		GAS (NATURAL)	$\mathcal{Q} \qquad \mathcal{Q}$	PRESS/ TEMP GAUGE WITH COCK
—— SA ——	MEDICAL COMPRESSED AIR PIPING		- FROM SUMP PUMP DISCHARGE	— ———————————————————————————————————	TRESSY TEMM GROSE WITH GOOK
— N —	NITROGEN PIPING		- COMPRESSED AIR	Ф	THERMOMETER.
<u> </u>	CARBON DIOXIDE PIPING	—— I.P.——		— , †	THEINMOWETEN.
— v v—	VACUUM VENT PIPING	_	SOFT DOMESTIC COLD WATER	HI LOW	PRESSURE REDUCING VALVE
WAGD	WASTE ANESTHETIC GAS DISPOSAL PIPING		SOFT DOMESTIC HOT WATER	$-\!$	TRESSORE REDOUNTO VALVE
—— GV ——	MEDICAL GAS VENT PIPING		SOFT RECIRCULATING HOT WATER	\rightarrow	RELIEF VALVE
\vdash_χ	MEDICAL GAS OUTLET W/ DESIGNATION (RE: BELOW)	—— ACID ——		Ť	NELLI VALVE
	O OXYGEN		ACID WASTE VENT	Ų	WATER HAMMER ARRESTER
	N NITROGEN		NON-POTABLE	 [±] 	WATER HAMIMER ARRESTER
	NO NITROUS OXIDE		DEIONIZED WATER		
	WAGD WASTE ANESTHETIC GAS DISPOSAL			PLUMBING FIXT	URES/EQUIPMENT
	CO CARBON DIOXIDE	NO	NEVENSE USMOSIS WATER	I HB	HOSE BIBB
	MV MEDICAL VACUUM	(W&V)	PLUMBING RISER CALLOUT (REFERS TO RISER DIAGRAM)	⊏ +WH	WALL HYDRANT
	SA SURGICAL AIR	(xx)	TEOMBING MISEN GALLOOT (NEI ENS TO MISEN BIAGINAI)	————	CLEAN OUT
	S MEDICAL SLIDE		_	RPZ	REDUCED PRESSURE BACKFLOW PREVEN
		FIRE SPRINKLER	_	DCBP	DOUBLE CHECK BACKFLOW PREVENTER
GENERAL SYMB	<u> SOLS</u>	— F—	FIRE PROTECTION PIPING	~	
•	INDICATES CONNECT TO EXISTING	——⊗——	SPRINKLER HEAD	<u>₩C−1</u> <u>S−1</u>	PLUMBING FIXTURE AND CALLOUT
Ĭ.		─	SIDEWALL SPRINKLER HEAD		FD: FLOOR DRAIN, AD: AREA DRAIN,
\bigoplus	INDICATES ELEVATION	Ŷ	FIRE PROTECTION SIAMESE CONNECTION		FS: FLOOR SINK
XXX	EQUIPMENT TAG. REFER TO CONNECTIONS SCHEDULE FOR MECHANICAL CONNECTIONS AND LOAD INFO	 ⊗ 	POST INDICATOR VALVE	(<u>)</u> <u>RD-1</u>	RD: ROOF DRAIN ORD: OVERFLOW ROOF DRAIN

EQUIPMENT WITH ALL OTHER TRADES.

IN POTENTIAL CONFLICT WITH ROUTING.

AND APPROVED.

TIME FOR INSTALLATION.

4. 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

TRANSMIT TO OTHER TRADES ALL INFORMATION REQUIRED FOR WORK

TO BE PROVIDED UNDER THEIR RESPECTIVE SECTIONS IN AMPLE

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

7. COORDINATE, PROJECT AND SCHEDULE WORK WITH OTHER TRADES IN

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

OF SURFACES. AREAS AND PROPERTY THAT MAY BE DAMAGED AS A

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

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

12. COORDINATE WITH LOCAL UTILITY PROVIDERS FOR THEIR

13. COORDINATE THE MOUNTING OF SUSPENDED LIGHT FIXTURES

REQUIREMENTS FOR SERVICE CONNECTIONS AND PROVIDE ALL

NECESSARY PAYMENTS, MATERIALS, LABOR AND TESTING TO

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

9. CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTION AND REPAIR

10. ADJUST LOCATION OF PIPING, DUCTWORK, ETC. TO PREVENT

11. WHEREVER THE WORK IS OF SUFFICIENT COMPLEXITY, PREPARE

SHALL BE MADE WITHOUT ADDITIONAL COST TO THE OWNER.

ACCORDANCE WITH THE CONSTRUCTION SEQUENCE.

RESULT OF CONSTRUCTION ACTIVITIES.

CLEARANCES AND HEADROOM.

OR ERECTION IN THE FIELD.

ACCOMPLISH THE WORK.

THESE ITEMS WHENEVER POSSIBLE.

6. WHEREVER WORK INTERCONNECTS WITH WORK OF OTHER TRADES,

GEN. MECHANICAL NOTES

FOR KITCHEN, SHOP, ETC. EQUIPMENT

COMPLETE INSTALLATION SHALL BE IN ACCORDANCE WITH THE LATEST ADOPTED VERSION OF THE INTERNATIONAL MECHANICAL CODE, LOCAL AND STATE CODES, AND REQUIREMENTS OF THE AHJ.

2. ANY POWER FOR CONTROL SYSTEMS TO BE PROVIDED BY E/C IS INDICATED ON ELECTRICAL PLANS. ANY ADDITIONAL LINE VOLTAGE OR LOW VOLTAGE POWER REQUIRED BY THE M/C OR SUBCONTRACTORS TO HAVE A FULLY FUNCTIONING SYSTEM SHALL BE PROVIDED BY THE M/C CONTRACTOR OR SUBS.

3. ALL EQUIPMENT SHALL BE ADEQUATELY AND PROPERLY SUPPORTED AND FASTENED FROM STRUCTURE. 4. ALL EQUIPMENT AND ACCESSORIES INSTALLED IN CONCEALED SPACES REQUIRING ACCESS SHALL BE PROVIDED WITH ACCESS DOORS MEETING ANY FIRE REQUIREMENTS OF THE WALL/CEILING THEY ARE

INSTALLED. 5. EACH AIR HANDLING UNIT OVER 2000CFM SHALL BE PROVIDED WITH A SMOKE DETECTOR TO SHUT DOWN THE UNIT PER IMC 606 AS REQUIRED BY AHJ. COORDINATE WITH OTHER TRADES. 6. START UP AND ADJUST ALL EQUIPMENT AND VERIFY ALL MECHANICAL SYSTEMS IN OPERATE IN ACCORDANCE WITH THEIR INTENDED PURPOSES. SUBMIT BALANCE AND START UP REPORTS TO THE A/E. REFER TO SPECIFICATIONS FOR ANY ADDITIONAL REQUIREMENTS.

GENERAL ELECTRICAL NOTES

. COMPLETE INSTALLATION SHALL BE IN ACCORDANCE WITH THE LATEST ADOPTED VERSION OF THE NATIONAL ELECTRICAL CODE, LOCAL AND STATE CODES, AND REQUIREMENTS OF THE AHJ. 2. COORDINATE LOCATIONS OF RECEPTACLES, SWITCHES, ETC. WITH ARCHITECTURAL CASEWORK AND ELEVATIONS. 3. REFER TO MOUNTING HEIGHTS DETAIL FOR MOUNTING HEIGHTS OF ALL DEVICES NOT INDICATED OTHERWISE. 4. PROVIDE ALL EMPTY CONDUITS WITH PULL STRINGS AND BUSHED 5. CONTRACTOR SHALL CONCEAL ALL CONDUIT, FITTINGS, AND DEVICES

FROM VIEW WHERE REASONABLY POSSIBLE.

COORDINATION NOTES GENERAL NOTES

COORDINATE REQUIREMENTS FOR INSTALLATION OF SYSTEMS AND . SOME ROOM NAMES MAY NOT BE SHOWN FOR PURPOSE OF CLARIFYING PLAN. REFER TO ARCHITECTURAL PLANS FOR REFERENCE TO ROOM NAMES NOT SHOWN. 2. 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 2. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO MAINTAIN AND KEEP AT THE JOB SITE, AN UP TO DATE SET OF "RECORD FOR PROVIDING NECESSARY OFFSETS. TURNS. RISES AND DROPS DRAWINGS" SHOWING ALL CHANGES FROM THE ORIGINAL FOR SYSTEMS AND COMPONENTS AS NEEDED TO INSTALL THE MEP PLANS. THE CONTRACTOR SHALL DELIVER THE "RECORD SYSTEMS TO CLEAR STRUCTURE, CEILINGS, ETC AND OTHER SYSTEMS DRAWINGS" TO THE ENGINEER AT THE CONCLUSION OF THE PROJECT ELECTRONICALLY. 3. COORDINATE WORK WITH OTHER TRADES TO INSTALL SYSTEMS ABOVE CEILING HEIGHTS INDICATED ON ARCHITECTURAL PLANS.

NEEDED FOR THIS.

3. THESE DRAWINGS ARE DIAGRAMMATIC. THE CONTRACTOR SHALL VERIFY ALL CONDITIONS (NEW AND EXISTING), DIMENSIONS, AND CLEARANCES PRIOR TO THE COMMENCEMENT OF WORK AND SHALL INCLUDE ALL COSTS, EQUIPMENT, MATERIAL, ACCESSORIES, ETC. REQUIRED FOR A FULLY COMPLETE, FUNCTIONAL AND CODE COMPLIANT INSTALLATION. 4. FINAL LOCATIONS OF ALL DEVICES, LIGHT FIXTURES, EQUIPMENT ETC SHALL BE INDICATED ON THE ARCHITECTURAL DRAWINGS.

ALL DIMENSIONAL INFORMATION SHALL BE OBTAINED FROM ARCHITECTURAL PLANS. NO DIMENSIONAL INFORMATION SHALL BE OBTAINED FROM MEP DRAWINGS. 5. THE CONTRACTOR SHALL OBTAIN ALL REQUIRED PERMITS APPROVALS, LICENSES, ETC. AS NEEDED FOR THE COMPLETE INSTALLATION AND PROJECT. THE CONTRACTOR SHALL COORDINATE WITH THE OWNER FOR ALL FEES AND DATA

GEN. RENOVATION NOTES

1. DISCONNECT AND REMOVE ANY EQUIPMENT. PIPING OR DUCTWORK THAT WAS INSTALLED AS PART OF THE BUILDING SHELL THAT IS NOT NEEDED OR CONFLICTS WITH THIS BUILD OUT. 2. EXISTING UNDERGROUND PIPING LOCATIONS ARE ESTIMATED BASED UPON ANTICIPATED ROUTINGS. FIELD VERIFY EXACT LOCATIONS DURING CONSTRUCTION AND PROVIDE ALL NECESSARY MODIFICATIONS. 3. SAWCUT GRADE FLOOR SLABS TO INSTALL NEW PIPING, MECHANICAL SYSTEMS, ELECTRICAL FLOOR BOXES AND ALL ASSOCIATED CONDUIT, ETC. PATCH FLOOR TO MAKE LIKE NEW AFTER INSTALLATION. TAKE

CARE TO LOCATE EXISTING CONDUIT, ETC AND AVOID CUTTING EXISTING CONDUITS BY NOT OVER—CUTTING SLAB DEPTH. 4. SAWCUT AND CORE DRILL OPENINGS AS REQUIRED FOR ABOVE GRADE SLAB PENETRATIONS. X-RAY SLABS TO ASCERTAIN STEEL AND EXISTING CONDUIT PENETRATIONS PRIOR TO CUTTING. VERIFY OPENINGS WITH STRUCTURAL ENGINEER PRIOR TO CUTTING.

5. HOMERUN CIRCUITS TO 20 AMP, SINGLE POLE BREAKERS IN PANELBOARDS INDICATED. UTILIZE SPARE BREAKERS MADE AVAILABLE BY DEMOLITION, IF NO SPARE BREAKER IS AVAILABLE, PROVIDE NEW BREAKER. 6. EXISTING CIRCUITING MAY BE RE-USED WHERE POSSIBLE.

7. CONCEAL NEW CIRCUITING IN WALLS WHERE POSSIBLE. FOR NEW DEVICES INSTALLED ON EXISTING SOLID WALLS, CONCEAL CIRCUITING IN WIREMOLD. COORDINATE FINISH AND GENERAL ROUTING OF WIREMOLD WITH ARCHITECT TO BE AS CONCEALED AND/OR ROUTED IN A NEAT AND ORGANIZED CONSISTENT MANNER. 8. ALL LIGHTING FIXTURES THAT ARE RELOCATED OR OTHERWISE

AFFECTED BY THE SCOPE OF WORK SHALL BE CLEANED AND

SHEET INDEX

ME001 COVER SHEET ME002 SPECIFICATIONS MECHANICAL PLAN ELECTRICAL PLAN E101 E201 ELECTRICAL SCHEDULES/DETAILS



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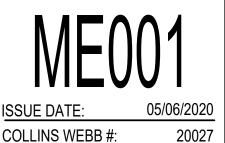
COLLINS WEBB

REVISION DATES:

ARCHITECTURE, LLC

90





COVER SHEET



2. GENERAL REQUIREMENTS A Furnish & install all labor & materials required for complete, functioning

mechanical & plumbing systems w/ all associated equipment & apparatus as shown on plans. B. Obtain & pay for all permits required for execution of this work & shall make arrangements for modifications to water, gas & sewer connections to building as

C. All materials shall be new & shall bare UL label where applicable. D. Visit site & observe conditions under which work will be done. Any discrepancies shall be called to architect's attention. No subsequent allowance will be made in contract for any error or negligence on contractor's part

E. Final acceptance of work shall be subject to condition that all systems, equipment, apparatus & appliances operate satisfactorily as designed & intended. Work shall include required adjustment of systems & control

equipment installed under these specifications. F. Warrant to owner quality of materials, equipment, workmanship & operation of equipment provided under these specifications for one year from & after completion of building & acceptance of mechanical systems by owner. G.All materials installed in plenums shall be noncombustible or have flame/smoke

index of no more than 25/50 in accordance w/ ASTM e 84.

H. Requirements under Division one & general & supplementary conditions of these specifications shall be part of this section. Contractor shall become thoroughly acquainted w/ its contents as to requirements that affect this Division of work required under this section includes material. Equipment, appliances. Transportation, Services, & labor required to complete entire system as required by drawings & specifications.

I. The specifications & drawings for project are complementary, & portions of work described in one, shall be provided as if described in both. In event of discrepancies, notify engineer & request clarification prior to proceeding w/ work

3. EXTENT OF CONTRACT WORK A. Provide MEP systems indicated on drawings, specified or reasonably implied. In addition to specific equipment called out in plans and specifications, provide

every device, component, programming, interlocking and accessory necessary for proper operation and completion of totally functional MEP systems. B. In no case will claims for "Extra Work" be allowed for work about which Contractor could have been informed before bids were taken. C.Contractor shall become familiar with equipment provided by other contractors

that require plumbing connections and controls. D. Electrical work required to install and control plumbing equipment, which is not shown on plans or specified under Division 26, shall be included in Contractor's

E. All automatic temperature control devices shall be mounted as indicated in automatic temperature control section of specifications. F. The cost of larger wiring, conduit, control and protective devices resulting from

installation of equipment which was not used for basis of design as outlined in specifications shall be paid for by the supplying Contractor at no cost to Owner G.Contractor shall be responsible for providing supervision to other trade Contractors to insure that required connections, interlocking and interconnection of MEP equipment is made to attain intended control sequences and system

H. Contractor shall obtain complete MEP data on shop drawings and shall list this data on an approved form that shall be presented on request, to other trade Contractors. Data shall be complete with wiring diagrams received to date and shall contain necessary data on electrical components of plumbing equipment such as HP, voltage, amperes, watts, locked rotor current to allow other trade Contractors to order support or other equipment coordinated as required in his

4. <u>DEFINITIONS</u> A. Whenever used in these specifications or drawings, following terms shall have

indicated meanings: B. Furnish: term "Furnish" is used to mean "supply & deliver to project site. Ready for unloading, unpacking, assembly. Installation & similar operations. C Install: term "Install" is used to describe operations at project site including actual "unloading, unpacking. Assembly. Erection. Placing. Anchoring. Applying, working to dimension. Finishing, curing, protecting, cleaning. & similar

D.Provide: term "Provide" means "to Furnish & Install. Complete & ready for intended use." furnished by owner or furnished by others: item will be furnished by owner or others. It is to be installed & connected under requirements of this Division, complete & ready for operation, including items incidental to work, including services necessary for proper installation & operation. Installation shall be included under guarantee required by this Division. E. Engineer: where referenced in this Division, "Engineer" is engineer of record & design professional for work under this Division, & is consultant to, & an

obligations to, engineer, in addition to involvement by. & obligations to, F. AHJ: local code &/or inspection agency (authority) having jurisdiction over work. G.The terms "Approved equal", "Equivalent". Or "Equal" are used synonymously & shall mean "accepted by or acceptable to engineer as equivalent to item or

authorized representative of, architect. As defined in general &/or supplementary

conditions. When used in this Division. It means increased involvement by. &

H. The term "approved" shall mean labeled, listed. Or both. By nationally recognized testing laboratory (e.g. UL. ETL. CSA). & acceptable to AHJ over this project. MATERIAL & WORKMANSHIP

A. Provide new material, equipment. & apparatus under this contract unless otherwise stated herein. Of best quality normally used for purpose in good commercial practice & free from defects. Model numbers listed in specifications or shown on drawings are not necessarily intended to designate required trim, written descriptions of trim govern model numbers

B. Pipe, fittings, specialties & valves shall be manufactured in USA. Work performed under this contract shall provide neat & "workmanlike" appearance when completed to satisfaction of architect & engineer. Workmanship shall be finest possible by experienced mechanics. Installations shall comply w/ applicable codes & laws. Complete installation shall function as designed & intended w/ respect to efficiency, capacity, noise level. etc. Abnormal noise caused by rattling equipment, piping, ducts, air devices & squeaks in rotating components will not be acceptable. In general materials & equipment shall be of commercial specification grade in quality. Light duty & residential equipment is not

C.Remove from premises waste material present from work, including cartons, crating, paper, stickers, &/or excavation material not used. D. Clean equipment installed under this contract to present neat & clean installation E. Repair or replace public & private property damaged as result of work performed

under this contract to satisfaction of authorities & regulations having jurisdiction. 6. COORDINATION A. Coordinate work w/ other trades so various components of systems will be

installed at proper time will fit available space & will allow proper service access for maintenance. Components which are installed without regard to above shall be relocated at no additional cost to owner B. Obtain equipment submittal information for all pieces of equipment to be connected to from other trades that clearly indicates all connection requirements, locations, sizes, and similar requirements. Obtain this information in ample time to coordinate other trade submittals and equipment coordination. Where requirements differ from that on plans or differs from provisions made in the work, immediately notify the architect/engineer. Do not proceed with work that is

incompatible with equipment provided. C. Unless otherwise indicated, general contractor will provide chases & openings in building construction required for installation of systems specified herein. Contractor shall furnish general contractor w/ information where chases & openings are required.

D. Keep informed as to work of other trades engaged in construction of project & execute work in manner as to not interfere w/ or delay work of other trades. Figured dimensions shall be taken in preference to scale dimensions. E. Contractor shall take his own measurements at building, as variations may occur. Contractor will be held responsible for errors that could have been avoided by proper checking & inspection.

F. Provide materials w/ trim that will properly fit types of ceiling, wall. Or floor finishes actually installed. Model numbers listed in specifications or shown on drawings are not intended to designate required trim.

G.Coordinate construction operations included in different sections of the specifications to ensure efficient and orderly installation of each part of the work Coordinate construction operations, included in different sections, that depend on each other for proper installation, connection, and operation. H. Each contractor shall coordinate its construction operations with those of other contractors and entities to ensure efficient and orderly installation of each part of the work. Each contractor shall coordinate its operations with operations,

included in different sections, that depend on each other for proper installation . Schedule construction operations in sequence required to obtain the best results where installation of one part of the work depends on installation of other components, before or after its own installation

J. Coordinate installation of different components with other contractors to ensure maximum accessibility for required maintenance, service, and repair. K. Make adequate provisions to accommodate items scheduled for later installation L. Where availability of space is limited, coordinate installation of different components to ensure maximum performance and accessibility for required

maintenance, service, and repair of all components, including mechanical and

M.Prepare coordination drawings if limited space availability necessitates maximum utilization of space for efficient installation of different components or if coordination is required for installation of products and materials fabricated by separate entities. Content: project-specific information, drawn accurately to scale. Do not base coordination drawings on reproductions of the contract documents or standard printed data. Include the following information, as

1) Indicate functional and spatial relationships of components of architectural, structural, civil, mechanical, and electrical systems.

2) Indicate required installation sequences.

3) Indicate dimensions shown on the contract drawings and make specific note of dimensions that appear to be in conflict with submitted equipment and minimum clearance requirements. Provide alternate sketches to architect for resolution of such conflicts. Minor dimension changes and difficult installations will not be considered changes to the contract.

N.Meetings: conduct project coordination meetings at regular intervals. Project coordination meetings are in addition to specific meetings held for other purposes, such as progress meetings and preinstallation conferences. 1) Attendees: each contractor, subcontractor, supplier, and other entity

concerned with current progress or involved in planning, coordination, or performance of future activities shall be represented at these meetings. All participants at the conference shall be familiar with project and authorized to conclude matters relating to the work. Notify architect of meeting. 2) Agenda: review and correct or approve minutes of the previous coordination meeting. Review other items of significance that could affect

3) Combined contractor's construction schedule: review progress since the last coordination meeting. Determine whether each contractor is on time, ahead or behind schedule, in relation to construction schedule. Discuss whether schedule revisions are required to ensure that current and subsequent activities will be completed within the contract time. Discuss impact of various contractor schedules upon other contractors and how to

4) Review present and future needs of each contractor present O.After shop drawings have been reviewed and approved by all parties, transmit a set of submittals to each other trade (eg Plumbing, Mechanical, Electrical, Controls, etc) that will interface with installation. Each other contractor shall

review the submittal for coordination and return a stamped submittal indicating they have reviewed the submittal for coordination purposes. . ARCHITECTURAL VERIFICATION AND RELATED DOCUMENTS A. Contractor shall consult all Architectural Drawings and specifications in their

entirety incorporating and certifying all millwork, furniture, and equipment rough-in including utility characteristics such as voltage, phase, amperage, pipe sizes, duct sizes, including height, location and orientation. Shop drawings incorporating these requirements should be submitted to the Architect for approval prior to installation or rough in.

ORDINANCES & CODES A. Work performed under this contract shall. At minimum, be in conformance w/ applicable national, state & local codes having jurisdiction. B. Installation work performed under this contract shall be in strict compliance w/

current applicable codes adopted by local AHJ including any amendments & standards as set forth by National Fire Protection Association (NFPA). Underwriters Laboratories (UL), Occupational Safety & Health Administration (OSHA). American Society of Mechanical Engineers (ASME), American Society of Heating, Refrigeration, & Air Conditioning Engineers (ASHRAE). American national standards institute (ANSI). American Society of Testing Materials (ASTM) & other national standards & codes where applicable.

C. Where contract documents exceed requirements of referenced codes. Standards, etc., contract documents shall take precedence. D. Procure & pay for permits & licenses required for accomplishment of work herein described. Where required, obtain. Pay for & furnish certificates of inspection to

. <u>STANDARDS</u> A. Drawings and specifications indicate minimum construction standard. Should any work indicated be sub standard to any ordinances, laws, codes, rules or regulations bearing on work, Contractor shall promptly notify Architect Engineer in writing before proceeding with work so that necessary changes can be made. However, if the Contractor proceeds with work knowing it to be contrary to any ordinances, laws, rules, and regulations, Contractor shall thereby have assumed

full responsibility for and shall bear all costs required to correct non complying

owner. Contractor will be held responsible for violations of law.

10. PROTECTION OF EQUIPMENT & MATERIALS

13. WARRANTIES

A. Store & protect from damage equipment & materials delivered to job site. Cover as required to protect from dirt & damage. Plug or cap open ends of ductwork & piping systems while stored & installed during construction when not in use to prevent entrance of debris into systems. Equipment & material that has been damaged by construction activities will be rejected, & contractor is obligated to furnish new equipment & material of like kind. Keep premises broom clean from foreign material created during work performed under this contract. Piping, equipment, etc. Shall have neat & clean appearance at completion

. SPARE PARTS A. Furnish to owner, w/ receipt one set of spare filters of each type required for each unit. In addition to spare set of filters, install new filters prior to testing, adjusting, & balancing work & before turning system over to owner.

promptly, upon written notice from engineer or owner.

commencement date & term.

14. CUTTING & PATCHING

satisfactory to architect.

roofing contractor when required.

18. MISCELLANEOUS REMODELING WORK

motors, remote controls, & safety interlocks.

6. PENETRATIONS

17. ELECTRICAL WIRING

19. BUILDING OPERATION

normal building operations.

END OF GENERAL MEP REQUIREMENTS

months. Remedy all defects, occurring within warranty period(s) stated in genera

or replacements without any additional costs to owner. Perform remedial work

A. Perform cutting of walls, floors, ceilings, etc. As required to install work under this

section. Obtain permission from architect prior to cutting. Do not cut or disturb

possible. General contractor shall patch walls, floors, etc. As required by work

structural members without prior approval from architect. Cut holes as small as

under this section. Patching shall match original material & construction. Repair

& refinish areas disturbed by work to condition of adjoining surfaces in manner

A. Coordinate rough-in w/ general construction & other trades. Conceal piping &

A. Seal mechanical floor, exterior wall & roof penetrations watertight & weathertight

Seal around mechanical penetrations w/ 3M CP-25 fire barrier caulk (thickness

as required & recommended by manufacturer) to maintain resistance rating of

Curb, Pate, Thycurb or approved equal. Provide roof curb w/ factory installed

wood nailer; welded, 18 gauge galvanized steel shell, base plate & flashing;

1-1/2" thick, 3 pound rigid insulation; fully mitered 3-inch raised cant; cover of

material w/ stainless steel pipe clamps. Make roof penetrations by authorized

weather-resistant, weather-proof material & pipe collar of weather-resistant

A.Line voltage wiring shall be provided by Division 26. Line voltage control &

interlock wiring for mechanical systems shall also be provided by Division 26

contractor. Furnish wiring diagrams to Division 26 contractor as required for

A.Remove all unused equipment, ductwork, piping & associated supports. Cap

ductwork & piping at mains & seal air & water tight. Provide items of HVAC

systems modification required because of building remodeling, as noted on

drawings or necessary for proper operation. Match existing materials &

construction techniques when modifying existing systems unless specified

otherwise. Coordinate additional requirements w/ general contractor & architect.

Seal airtight existing ductwork required to be abandoned in place or not in use at

termination of work. Cap & seal weathertight existing roof curbs & roof openings

existing ductwork, diffusers, registers, & grilles intended for reuse as required or

as indicated on drawings. Clean & refurbish existing HVAC equipment intended

for reuse as required for proper operation including replacement of filters, belts,

A. Comply w/ schedule of operations as outlined in architectural portions of this

specification. Building shall be in continuous operation. Accomplish work

requiring interruption of building operation at time when building is not in

operation, & only w/ written approval of building owner &/or tenant. Coordinate

B. The following Work shall be performed at night or weekend other than holiday

weekends as directed and coordinated with the Owner: All tie-in, cut-over and

tie-ins or modifications shall be arranged and scheduled with the Owner to be

done at a time as to maintain continuity of the service and not interfere with

modifications to the existing electrical system and other existing system requiring

interruption of building operation w/ owner &/or tenant minimum of seven days in

to be abandoned in place as result of equipment removal. Clean & rebalance

proper equipment hookup. Coordinate w/ Division 26 contractor actual wire sizing

contractor. Low voltage control wiring shall be provided by Division 22/23

amps for submitted mechanical equipment to ensure proper installation

fire-rated assemblies. Provide prefabricated roof curbs manufactured by Custom

conduit rough-in except in unfinished areas & where otherwise shown.

M.At time of substantial completion, deliver to owner all warranties in writing &

period. Each warranty instrument being addressed to owner & stating

B. Furnish one complete set of belts for each fan. 3) Hydraulic calculations 4) Product data for all fire sprinkler system components. Provide next to sprinkler riser main, a printed sheet, protected by glass or a transparent L. Warrant each system & each element thereof against all defects due to faulty plastic cover, giving brief instructions regarding control, emergency workmanship design or material for period of 12 months from date of substantial procedure & other data as required by NFPA 13. For hydraulically designed completion unless specific items are noted to carry longer warranty in systems, a placard must be permanently attached to riser indicating construction documents or manufacturer's standard warranty exceeds 12 location, & basis of design (discharge density & system demand).

conditions & Division 1. Warranties shall include labor & material. Make repairs SYSTEM MANUAL A. Upon completion of installation, & as a condition of its acceptance, contractor shall compile three 8-1/2" by 11" manuals, firmly bound in heavyweight plastic or paper cover to withstand hard use. Loose-leaf binding is not acceptable. Manuals properly executed including term limits for warranties extending beyond one year shall be delivered to architect, & shall contain following items:

manufacturer's name & catalog number.

MECHANICAL SPECIFICATIONS

A. Provide modifications to existing wet or combination wet/dry sprinkler system as

exterior electric bell & dialers as shown or required. Coordinate all wiring &

heading. System shall be installed in strict accordance w/ NFPA 13 Underwriters

Laboratories (LLL) & must be acceptable to owner's insurer, authority having

contract documents exceed requirements of referenced codes, standards, etc.,

contractor turns copies of certificates & permits over to owner. Contractor shall

be approved & state licensed for design & installation of fire protection systems.

Work done under this section shall be performed only by a contractor whose

workmen are experienced & regularly engaged in installation of fire protection

coordinate main & branch lines w/ structure, ceilings, piping, ductwork & light

A. This contractor shall verify design criteria & rating hazards with owner's insurer

prior to designing system. Waterflow & pressure test data shall be acquired

before system is calculated & be dated not more than 12 months prior to

B. Contractor shall verify with authority having jurisdiction any minimum safety

factor requirements. Regardless, demand shall not be less than 10% below

C. The contractor shall be fully responsible for hydraulic calculations, arrangements

as required for approval by owner's insurer, authority having jurisdiction & all

reduced as allowed by NFPA 13 for areas utilizing quick response sprinklers.

engineer, for his approval. Architect will forward one set to contractor after final

approval. Submitted shop drawings shall bear a stamp indicating approval by

authority having jurisdiction. Provide drawings electronically in pdf format.

B. Shop drawings shall meet requirements of NFPA 13 & shall include following:

1) Submit working plans per NFPA 13 including layout drawings of complete

overhead sprinkler system indicating relationship of sprinkler piping &

sprinklers to all other overhead items including ceiling grid & tiles, light

fixtures, diffusers, registers, grilles, ductwork, etc. Location of risers, piping,

requirements. System design capabilities & water demands shall also be

design, including a materials list describing all proposed materials by

etc., shall be as inconspicuous as possible & shall fulfill all functional

2) Submit complete details & sections as required to clearly define & clarify

A. Shop drawings & hydraulic calculations shall be furnished to architect &/or

applicable local, state & national codes & standards.

for & cost of flow tests, final system design, & layout of all components of system.

jurisdiction & all applicable local, state & national codes & standards. Where

C. Sprinkler system shall be certified. Contractor shall retain certification until

D. System shall be hydraulically designed. Design of sprinkler system shall

B. An approved automatic sprinkler contractor shall perform all work under this

required for building, or area of work shown on drawings, complete w/ alarm

1. FIRE SPRINKLER GENERAL REQUIREMENTS

conduit for a complete & functional installation

contract documents shall take precedence

fixtures. Entire building shall be sprinkled.

of fire protection system

submittal of sprinkler drawings

supply at demand point.

for by contractor.

. SHOP DRAWINGS

noted on drawings

SYSTEM DESIGN

2. SYSTEM DESCRIPTION

sprinkler system manual". 2) Neatly typed index at front with all emergency information clearly identified. 3) Complete list of all system components with manufacturer's names, catalog numbers, & all data for ordering parts 4) One copy of record drawings, as described above.

1) Identification clearly visible on or through cover, name of project & "fire

5) All information required to secure emergency repairs or service. 6) Contractor's "material & test certificate(s) for sprinkler system", as described in NFPA 13. SPRINKLER HEADS

A. Sprinkler heads - as required by NFPA 13 manufactured by Viking, Reliable, Tyco and Victaulic. Semi recessed chrome plated brass where exposed. Sidewall where required. Rough brass where concealed & exposed in mechanical rooms. Concealed heads where located in sheet rock ceilings. Provided w/ necessary hardware for mounting into hard or acoustical ceilings. Reference architectural drawings for ceiling types & locations. Where no ceilings occur, provide standard brass upright or pendant as required by construction. B. Sprinkler heads shall be underwriters-approved, automatic spray type.

Temperature rating of heads shall be 165 deg f., except furnish 212 deg f. Heads C.Location of sprinkler heads is not shown on drawings but nevertheless shall be furnished & installed to meet requirements of specifications & NFPA. Center heads in 2x2 tile spacing in acoustic ceilings. Location of heads shall be as approved by architect. Provide head guards where required by NFPA. Furnish spare heads & wrenches mounted in metal cases where directed by architect &

as required by NFPA. PIPE, FITTINGS, & HANGERS A. Sprinkler piping 2-1/2" & larger shall be schedule 10 or schedule 40 black steel. Sprinkler piping 2" & smaller shall be schedule 40. Pipes shall have welded,

13 requirements. Piping shall be UL listed & FM approved. B. Acceptable alternatives to schedule 10 & schedule 40 pipe shall be manufactured to standards recognized by NFPA 13. Threaded pipe shall have a corrosion resistance rating of 1.0 or greater. Crimp-type couplings shall not be used. Threadable thinwall pipe with corrosion resistance rating less than 1.0 not

threaded, or mechanically joined fittings, based on pipe material & size per NFPA

C. Hangers shall be of type & spacing to support pipes & meet approval of UL & FM. Hangers shall be attached to structural components only. Support risers from structure below. Do not support exposed risers from clamps above floor. D. Conceal mains back or above construction in finished areas. Piping shall be designed to provide maximum head room in all areas. Piping shall not pierce

E. Pitch all dry pipe sprinkler piping to drain according to NFPA requirements, without exception & without traps. Wet pipe sprinkler systems may be pitched to drain or run level, but piping must be installed straight & true, without traps. F. Provide drain valves & inspector test valves as necessary to drain system & meet requirements of NFPA

furnish all labor & equipment required to properly test all sprinkler equipment installed under this contract & he shall assume all costs involved in making tests, & repairing &/or replacing all damage resulting therefrom. B. Upon completion of systems installation, & prior to acceptance by engineer & owner, this contractor shall make general operating tests to demonstrate that all equipment & systems are in proper working order, & are functioning in

A. Upon completion of each phase of installation, each system shall be tested in

conformance with local code requirements & as noted below. Contractor shall

conformance with intent of drawings & specifications. C. After completion of installation, test, retest, & make all corrections necessary to secure acceptance by fire marshal &/or any other authority having jurisdiction. Furnish all test equipment & personnel required.

D. After completion of all installation, tests, etc., & prior to final acceptance date,

contractor shall instruct building owner & his selected personnel in operation of

sprinkler system & procedure to conduct quarterly main drain tests as required

by NFPA 25. 9. EXECUTION

. TESTING & ACCEPTANCE

A. All modifications & additions shall be performed without hampering proper operation of remaining system. Shop drawing submittals shall indicate by calculation total system compliance B. Provide installation of water flow switches & tamper switches on bypass lines &

shut off valves. Wiring by electrical contractor. Coordinate w/ fire alarm system. C. Submit drawings & calculations to state fire marshall, owner's insurance company & local building officials for approval. D. Furnish all gauges, pumps, compressors & equipment required to perform tests. Coordinate all scheduling & work with other trades so as to prevent conflicts, & to ensure orderly progress of work, with a minimum of delays. When sprinkler

sprinkler piping shall be relocated as required at no additional cost to owner to resolve conflicts.

E. Piping in areas having ceilings, other than underside of roof deck, shall be concealed. Piping in areas without ceilings may be exposed but kept at a minimum distance from deck. All piping shall be clean & free of rust. Install system such that all piping is rigidly secured & supported. All ductwork, lights, structural members & main runs of piping shall take precedence over sprinkler piping. Cutting of structural members for passage of sprinkler pipes or hangers will not be permitted. All horizontal piping in ceiling space shall be at an elevation above top of light fixtures & air outlets to allow for access to light fixtures & air outlets without removing horizontal piping. Route all sprinkler piping & provide all offsets, bends, & elbows around all mechanical, electrical, & structural members as required.

F. Contractor shall coordinate with fire alarm contractor &/or electrical contractor connection of fire sprinkler alarm devices to fire alarm system or fire sprinkler monitoring panel as required. G.Where exposed piping passes through finish work, chrome plated (or other finish acceptable to architect) split wall plates or escutcheons shall be installed to fit

snugly around piping. H. Piping shall be routed parallel to building lines. I. Seal all fire protection floor, wall & roof penetrations watertight & weathertight. Caulk around fire protection penetrations with approved fire barrier caulk as

required to maintain fire resistance rating of fire-rated assemblies.

END OF DIVISION 210000

<u>DIVISION 210000 - FIRE SPRINKLER SYSTEM MODIFICATIONS</u> **DIVISION 230000 - MECHANICAL**

1. MECHANICAL GENERAL REQUIREMENTS

A.Refer to GENERAL MECHANICAL, ELECTRICAL & PLUMBING requirements A.Refer to GENERAL MECHANICAL, ELECTRICAL & PLUMBING requirements

SHEET METAL WORK A.HVAC ductwork shall be galv sheet metal of gauges & joint types specified in SMACNA manual. Provide turning vanes in elbows. valves, drain valves, mains, risers, branches, sprinkler heads, test pipes, gauges,

B. Coordinate routing of ductwork w/ other contractors such that piping, electrical conduit, & associated supports are not routed through ductwork. Construct supply ducts to meet SMACNA positive pressure of 3" WG. Construct return, outdoor & exhaust ductwork upstream of fans to meet SMACNA negative pressure of 1" WG, construct exhaust ductwork downstream of fans to meet SMACNA positive pressure of 1" WG.

C. Seal ductwork w/ heavy liquid sealant. Hardcast Irongrip 601. Design Polymer DP 1010, United McGill duct sealer or approved equal, applied according to sealant manufacturer's instructions.

D. Ducts shall be connected to fans, fan casings & fan plenums by means of flexible connectors. Flexible connectors shall be neoprene coated glass cloth canvas connections. Duro-Dyne. Elgen. Ventfabric or equal. Flexible connectors shall have flame spread of 25 or less & smoke developed rating not higher than 50. Make airtight joints & install w/ minimum 1-1/2" slack.

E. All ductwork must be supported properly from structure. 3. DUCTWORK SPECIALTIES

E. Work shall include, but shall not necessarily be limited to following: design & A. Flexible ducts - Thermaflex or equal sound rated type G-KM insulated. (duct w/o installation of a complete wet-pipe fire protection sprinkler system for project published acoustical attenuation ratings not acceptable). Take off fitting shall be space. Portions of systems subject to freezing or temperatures below 40' f shall hi-eff style w/ locking damper. Maximum length of flexible ductwork shall be be protected against freezing as required by NFPA 13. Contractor shall be responsible for repairs & for all costs incurred from damage caused by freezing

B. Diffusers & grilles - see schedule. Equivalent by Price, Tuttle & Bailey, Titus, Metal-Aire, Krueger. Coordinate color, mounting w/ duct, ceilings, architect. Select air devices to limit room noise level to no higher than NC-30 unless otherwise shown. Provide devices w/ soft plastic gasket to make an airtight seal against mounting surface. Coordinate final location, frame, & mounting type of air devices w/ architectural reflected ceiling plans. Submit complete shop drawings including information on noise level, pressure drop, throw, cfm for each air device, styles, borders, etc. Clearly marked w/ specified equipment number. Provide ceiling supply air diffusers & return air grilles of lay-in or surface mounted type as required to be compatible w/ ceiling construction. Provide ceiling diffusers & grilles w/ white enamel finish unless noted otherwise. Provide slot plenums by diffuser manufacturer. Plenums shall be internally insulated by

C.Provide balancing dampers, manufactured by Ruskin, Greenheck, Nailor Industries, Cesco, Louvers & Dampers, Pottorff or approved equal, where 'shown D. The contractor shall be fully responsible for coordinating system layout with other on drawings & wherever necessary for complete control of air flow. Splitter contractors. Changes to system design due to lack of coordination shall be paid dampers shall be controlled by locking quadrants; provide young regulator or ventlok end bearings for damper rod. Rectangular volume dampers shall be E. Sprinkler spacing shall conform to NFPA 13. Extended coverage sprinklers shall opposed blade interlocking type. Round volume dampers shall be butterfly type not be used in unfinished (shell) spaces. Hydraulic area of operation shall not be

consisting of circular blade mounted to shaft.

C.Line all transfer boots w/ 1/2" liner

D. Damper leakage for outside air dampers shall not exceed 6.5 cfm/square foot in full closed position at 4" wg pressure differential across damper. Reference manufacturer & model number for outside air dampers is Ruskin model CD-50.

4. <u>DUCT INSULATION WORK</u> A.Duct insulation & wraps shall meet flame/smoke rating of 25/50 per ASTM E 84. B. Line all low pressure supply & return air ductwork w/ 1/2" liner. Line all medium pressure supply w/ 1" liner.

D. Wrap all outside air HVAC ductwork w/ Certainteed 1-1/2" thick insulation w/ vapor barrier in concealed locations

A. Coordinate w/ e/c to provide all wiring between equipment, dampers, thermostats & all other required controls & devices. M/C is responsible for all control &

work shall comply w/ electrical specifications. B. All piping shall be properly supported with hangers & supports specifically intended for that purpose. Provide clevis hangers, unistrut brackets & pipe clamps & similar systems. Protect integrity of insulation & provide rigid insulation.

interlock wiring unless specifically shown on electrical drawings. All electrical

C. All exterior control wiring shall be in conduit. D. Provide any required interfaces to fire alarm or similar systems

E. Provide clean filters at time of project turnover. Provide FINAL TESTING & ADJUSTMENTS

inserts or pipe saddles as necessary.

A. Final system testing. Balancing & adjustments shall be performed by contractor certified by NEBB, AABC or other approved agency. Perform test readings on fans, units, coils, etc. & adjust equipment to deliver specified amounts of air or water. Prepare testing & balancing report log showing air supply quantities, air entering & leaving temperatures & pressures, fan & unit test readings, motor voltage & amp draws. etc., & submit PDF of final compilation of data to architect for evaluation & approval before final inspection of project. Balance air systems to within plus or minus 10 percent for terminal devices & branch lines & plus or minus 5 percent for main ducts & air handling equipment of amount of air shown on drawings. Further adjustments shall be made to obtain uniform temperature in spaces. Adjust equipment to operate as intended by specification. Align bearings & replace bearings that have dirt or foreign material in them w/ new bearings without additional cost to owner. Balance contractor shall include in report any improperly installed or missing balancing devices that would negatively impact system operation. Adjust thermostats & control devices to operate as intended. Adjust burners, pumps, fans, etc. For proper & efficient operation, Certify to architect that adjustments have been made & that system is operating satisfactorily. Further adjustments shall be made to obtain uniform temperature in spaces. Calibrate, set, & adjust automatic temperature controls. Check proper sequencing of interlock systems, & operation of safety controls. Verify clean

filters are installed END OF DIVISION 230000

ELECTRICAL SPECIFICATIONS

SECTION 26000 - ELECTRICAL

1. GENERAL ELECTRICAL REQUIREMENTS A.Refer to GENERAL MECHANICAL, ELECTRICAL & PLUMBING requirements.

B. Wiring of Thermostats. Time, & Temperature Controls 1) Provide all raceways, power wiring, & line-voltage control and interlock wiring not provided under division 23, for all thermostats, temperature control devices, & controls, including, but not limited to, night-stats, water heater interlocks, time switches & override timers. See mechanical drawings for locations & temperature control diagrams. Low-voltage conductors for thermostats & temperature control system may be run exposed above finished accessible ceilings, if approved & listed for this purpose, but shall be installed in conduit within walls & where exposed in

CONDUIT & CONDUCTORS

2) Kitchen circuits.

recommended tools

A.Follow circuiting shown on plans. Use no conduit smaller than 3/4" & no conductors smaller than #12 ga. Unless noted otherwise.

1) All circuits & feeders greater than 30A.

B. Conductors #10 and smaller shall be solid. C. If no conductor size is indicated on drawings for branch circuit, provide conductors & conduit sized per NFPA 70 & based on indicated branch circuit overcurrent protective device (OCPD) rating & number of poles. D. Wire shall be in non-flexible metallic conduit (EMT, IMC or RMC) for:

Home runs. E. MC cable acceptable for branch convenience circuits & lighting circuits. 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

F. Lighting & receptacle circuit conductors shall be copper THHN-THWN-2 600 volt, 75 deg c, color coded as described under applicable codes. No romex, plastic flex tubing etc permitted. Light fixture wire insulation shall have temp rating not

less than individual fixture manufacturers recommended rating. G.Circuits w/ no. 8 or larger conductors, motor circuits, power & feeder circuits & building service feeders shall be copper THHN-THWN-2 600 volt, 75 deg c. H. All materials used to terminate, splice or tap conductors: designed for, properly sized for, & UL listed for specific application & conductors involved, & installed in strict accordance w/ manufacturer's recommendations, using the manufacturer's

I. Where wiring is indicated as installed, but connection is indicated "future" or "by other division, trades, or contracts", leave minimum 3-foot "pigtail" at box, tape ends of conductors, & cover box J. Number of conductors in specific raceway "home run" is indicated w/ cross lines

(tick marks) on each "circuit run" on drawings. In general, direction of branch circuit "home run" routing is indicated on drawings, complete w/ circuit numbers & panelboard designation. Continue all such "home run" wiring to designated panelboard, as though "circuit runs" were indicated in their entirety. K. Wiring shall have insulation of proper color to match NEC color code. In larger

sizes, where properly colored insulation is not available, use vinyl plastic electrical tape of appropriate color around each conductor at all termination points, junction & pull boxes. <u>GROUNDING</u> A. Supplement grounded neutral of secondary distribution system w/ equipment

grounding system, installed so that metallic structures, enclosures, raceways, junction boxes, outlet boxes, cabinets, machine frames, portable equipment & other conductive items operate continuously at ground potential & provide low impedance path for ground fault currents. B. System shall comply w/ national electrical code, drawings & as specified.

C.Provide equipment ground bus in base of low voltage, switchgear brazed or otherwise adequately connected by an approved method to ground rods. D. Provide in conduit green insulated copper ground conductor to main metallic water service entrance & connect by means of adequate ground clamps. E. Equipment grounding conductors for branch circuit home runs shown on

drawings shall indicate an individual & separate ground conductor for that branch

circuit which shall be terminated at branch circuit panelboard, switchboard, or other distribution equipment. F. Provide low voltage distribution system w/ separate green insulated equipment grounding conductor for each single or three-phase feeder. Single phase 120 volt branch circuits for lighting & power shall consist of phase & neutral conductors & green ground conductor installed in common conduit which shall

serve as grounding conductor G.Grounding conductors shall be as shown on plans or if not specifically shown shall be no smaller than that required by NEC. RACEWAY INSTALLATION

A.Install all conductors & cable in raceways continuous without taps or splices. Splice or tap only in approved boxes & enclosures w/ approved solderless connectors, or crimp connectors & terminal blocks for control wiring, & keep to minimum required. Insulate all splices, taps, & joints as required by codes. B. 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 & supports shall be furnished & set & contractor shall be responsible for proper & permanent locations. 2) Support all conductors & cables in vertical installations, as required by NFPA 70, by installing cable supports or plug-type conduit riser supports, or wire-mesh safety grips. C. Conduit installed below grade shall be Schd. 80 PVC heavy wall plastic conduit

meeting NEMA standards & UL listed for underground & exposed use. Provide GRS radius bends & risers as conduits rise above grade or above floor slab. D. Provide GRS for all conduits run exposed to weather or exposed to other hazardous conditions. Provide any GRS installed below grade w/ corrosion resistant bonded-plastic or approved mastic coating. This shall include 90-degree elbow below grade & entire vertical transition to above grade E. Provide interlocking spacers for multiple runs of UG conduits in same trench.

F. All other raceway may be EMT where approved by local code. Use compression type fittings for EMT, w/ all fittings UL listed for environment in which they are G.Use FMC for final connection to each motor & transformer, & to any device that

would otherwise transmit motion, vibration, or noise. Use LFMC where exposed to liquids, vapors or sunlight. 1) Provide all FMC & LFMC w/ an insulated bonding conductor.

H. Install raceways parallel & perpendicular to building lines. I. Install raceways to requirements of structure & to requirements of all other work on project. Install raceway to clear all openings, depressions, pipes, ducts, reinforcing steel, & other immovable obstacles. Install raceways set in forms for concrete structure in such manner that installation will not affect strength of

J. Install raceways continuous between connections to outlets, boxes & cabinets w/ minimum possible number of bends & not more than equivalent of four 90-degree bends between connections. Use manufactured elbows for all 45- & 90-degree bends, unless approved by engineer in advance. Make other bends smooth & even & without flattening raceway or flaking galvanizing or enamel. Radii of bends shall be as long as possible & never shorter than corresponding trade elbow. Use long radius elbows where necessary, indicated, or both. K. Securely fasten raceways in place w/ approved straps, hangers & steel supports

as required. Attach raceway supports to building structure. Hang single raceways for feeders w/ malleable split ring hangers w/ rod & turnbuckle suspension from inserts spaced not over 10 feet apart in construction above. L. 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. M.Ream raceway ends, thoroughly clean raceways before installation, & keep clean after installation. Plug or cover openings & boxes as required to keep raceways clean during construction & fish all raceways clear of obstructions before pulling conductors wires. Provide raceways of ample size for pulling of wire & not smaller than code requirements & not less than 3/4", unless indicated

otherwise on drawings. N. Protect all raceway installations against damage during construction. Repair all raceways damaged or moved out of line after roughing-in to meet engineer's approval without additional cost to owner. O.Align & install true & plumb all raceway terminations at panelboards,

switchboards, motor control equipment & junction boxes. P. Install approved expansion/deflection fittings where raceways pass through (if embedded) or across (if exposed) expansion joints. Q.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 min. 24" slack at each end. R. Make all joints & connections in manner that will ensure mechanical strength & electrical continuity. S. Effectively seal raceways, by installing conduit fitting at boundary of two spaces, & filling it w/ an approved pliable material. after conductors or cables have been

installed & tested, whenever raceways pass from non-cooled to cooled spaces or

transition from outside facility or enclosure to inside, whether buried or exposed. 5. BUSHINGS & LOCKNUTS A. Rigidly terminate conduits entering sheet metal enclosures to enclosure w/ bushing & locknut on inside & locknut or an approved hub on outside. Conduit shall enter enclosure squarely.

B. Provide bushings & locknuts made of galvanized malleable iron w/ sharp,

ean-cut threads. Where EMT enters box, provide approved EMT compre

connectors. C.Use insulated, grounding, or combination, bushings wherever connection is subject to vibration or moisture when required by NFPA 70, or both. 6. JUNCTION & OUTLET BOXES

A. All boxes including light fixture, switch, receptacle, & similar outlet boxes: National Electrical, Appleton, Steel City, Raco, or approved equal, galvanized steel knockout boxes, suitable in design to purpose they serve & 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

B. Set all outlet boxes in walls, columns, floors, or ceilings so they are flush w/ finished surface, accurately set, & rigidly secured in position. Provide plaster rings, extension rings &/or masonry rings as req'd for flush mounting. Provide approved cast outlet boxes, w/ hubs & weatherproof covers, in all areas subject to damp, wet, or harsh conditions C. Coordinate locations of outlet boxes. Outlets are only approx located on small

knockout type.

locations from architect. D. All outlets, shall be mounted w/ bottom at 18" AFF & switches w/ bottom at 44" AFF floor unless noted otherwise on plans. Refer to arch for other required elevations & cabinetry coordination.

scale drawings. Use great care in actual location by consulting various large

scale detailed drawings used by other division trades, & by securing definite

7. ELECTRICAL IDENTIFICATION

A.Manufactured labels for each Panelboard & Transformer. Typewritten panel schedules mounted in panels. Where electrical equipment is installed as service entrance equipment, contractor shall furnish & install nameplate listing the following: Equip Short-Circuit Current Rating in Amps (RMS SYM), as indicated on the drawings, Whether or not equipment is fully or series-rated, Available Fault Current in Amps. Contractor shall perform available fault current calculation to obtain available fault at Service Equipment, Date fault current

calculations were performed B. Printed tape style label for each receptacle indicating Panel & Ckt #. C. Manufactured labels for all disconnect switches indicating equipment served. D. Branch circuits - identify each circuit w/ wire markers when enclosure label & wire colors do not provide enough information to identify each circuit without tracing. Feeders & branch circuit home runs w/ wire marker w/ Panel & Ckt #.

Box covers above lay-in ceilings neatly marked w/ indelible marker. E. Fire alarm - nameplate on each fire alarm terminal cabinet. Label all wiring. 8. CIRCUIT BREAKERS IN EXISTING PANELBOARDS A. Provide new circuit breakers, for installation in existing panelboards, of same manufacturer, type & short circuit current interrupting ratings as existing

panelboard circuit breakers. 9. WIRING DEVICES A. Color of devices as directed by architect.

Seymour/Legrand

Sensor Switch.

B. Convenience outlets: 1) Spec grade 20 amp duplex w/ ground & SS wall plates. Other outlets shall be verified w/ equipment suppliers for proper NEMA configurations. Provide GFCI rated devices where indicated & as reg'd per code.

C. Switches

1) Light switches - spec grade 20 amp toggle switches w/ SS wall plates. 2) Wall motion switches - spec grade, PIR, override 3) Ceiling motion switches - spec grade, dual technology, model as req'd by room configuration, all necessary power packs & relays.

2) Equivalent devices by Cooper/Eaton, Hubbell, Leviton, Pass &

4) Wall motion switches (bathroom) - dual relay, spec grade, PIR, 2nd relay for operation of exhaust fan delay. 5) Dimmer Switches: Modular, full-wave, solid-state units with integral, quiet on-off switches with audible frequency and FMI/RFI suppression filters Continuously adjustable slider: with single-pole or three-way switching. Comply with UL 1472. 600W or 1200W as required by load. Incandescent Lamp Dimmers: 120 V; control shall follow square-law

dimming curve. On-off switch positions shall bypass dimmer module. LED Dimmers: Modular; 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%). 6) Equivalent devices by Leviton, Bryant, Hubbell, Wattstopper, Lithonia,

LUMINAIRES, LAMPS & BALLASTS A.Refer to lighting fixture schedule plans for fixture types. B. Equivalent luminaires by Hubbell, Infinity, Lithonia, Williams, Eaton [Cooper].

C.Fluorescent Fixtures: 1) Lamps shall be type recommended by fixture manuf. Lamp none above manuf recommended max wattage. Color temperature shall be coordinated throughout project, with generally 4100k interior lamps and min 85 CRI. Equivalent lamps by G.E., Venture, Phillips Or Sylvania.

2) Ballasts - Fluorescent - electronic, <20%THD, Equivalent by Advance, G.E., Motorola, Or Magnetek. D. LED Fixtures 1) Lamps & modules: Philips, General Electric, Osram/Sylvania, Cree, Nichia. 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 E. Emergency ballasts/drivers/batteries/inverters - shall be Bodine, lota. Coordinate voltages and outputs for min. 90 minute operation with fixtures scheduled and controls indicated and provided

1) Provide lighting fixtures w/ lamps & accessories req'd for hanging. Coord mounting of lighting fixtures w/ architect & G/C. Additional fixture suppo shall be provided by E/C. Supports shall comply w/ latest edition of NEC. Provide lighting fixture securing clips as required. Consult arch plans for ceiling types & provide surface & recessed lighting fixtures w/ appropriate mounting components & accessories.

2) Fixtures mounted in fire rated ceilings shall be provided & installed w/ fire rated enclosures to maintain ceiling integrity. 3) Poles & support components: comply w/ AASHTO LTS-4. Provide steel poles in color as specified or selected by architect. Provide bolt covers. Provide concrete base for pole & ground rod. ADJUSTING. ALIGNING & TESTING

A. Adjust, align, & test all electrical equipment on this project provided under this division & all electrical equipment furnished by others for installation or wiring under this division for proper operation. Test all systems & equipment according to requirements in NETA ATS (latest edition) & all additional requirements

B. In following sections. Maintain following on project premises at all times: true RMS reading voltmeter, true RMS reading ammeter, & megohmmeter insulation resistance tester. Provide test data readings as requested or as required by

2. SYSTEM START UP A. Prior to starting up electrical systems: 1) Check all components & devices.

> 2) Lubricate items accordingly. 3) Tighten screws & bolts for connectors & terminals according to manufacturer's published torque-tightening values. If manufacturer's torque values are not indicated, use those specified in UL 486a & UL 486b. 4) Check & record building's service entrance voltage, grounding conditions,

B. Replace all burned-out lamps & lamps used for temporary construction lighting in permanent light fixtures C. After all systems have been inspected & adjusted, confirm all operating features required by drawings & specifications & make final adjustments as necessary.

END OF DIVISION 26000

grounding resistance, & proper phasing.

SECTION 28000 - SAFETY & SECURITY GENERAL ELECTRICAL REQUIREMENTS A.Refer to GENERAL MECHANICAL, ELECTRICAL & PLUMBING requirements. 2. EXISTING FIRE ALARM SYSTEM MODIFICATIONS

A. Provide following new equipment, compatible w/, or of same manufacturer as, existing fire alarm control panel & system, at locations indicated on drawings, as required by building codes, landlord, or all three, & connect to existing fire alarm control panel:

1) Additional initiating devices, indicating appliances, & interconnecting 2) Additional zone modules required by new zoning. 3) New amplifiers & other equipment that may be required to incorporate new

4) A new zone map, including all existing zones & all new zones, framed, mounted under glass, & installed adjacent to fire alarm control panel. Horn/strobes shall meet all requirements of ADA. B. Install all wiring in raceway.

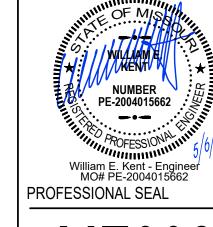
initiating devices & indicating appliances into existing system.

C. Where acceptable to AHJ, plenum rated cables may be used above suspended accessible ceilings 1) Submit shop drawings w/ wiring diagrams & battery calcs for approval to

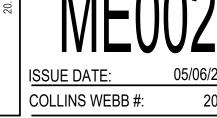
2) Coordinate to provide power & shutdown or operation of fire/smoke dampers, door hold opens, power to door locks &access control & other 3) Installed & tested per NFPA 72 & applicable sections of NFPA 70. Provide complete fire alarm system as described herein & shown to be wired. connected, & in first class condition. Include sufficient control unit(s), annunciator(s), manual stations, automatic fire detectors, smoke detectors,

audible & visible notification appliances, wiring, terminations, electrical boxes, & all necessary material for complete operating system.

END OF DIVISION 28000







SPECIFICATIONS

AS NOTED ON PLANS REVIEW DEVELOPMENT SERVICE 05/11/2020

RELEASE FOR CONSTRUCTION

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REVISION DATES:

		DUCT	INSULATION			ĺ	
PURPOSE	DUTY	LOCATION	STYLE	MATERIAL	APPLICATION	THICKNESS	NOTES
SUPPLY	LOW PRESSURE/VELOCITY	CONCEALED	RECTANGULAR	FIBERGLASS	LINED	1/2"	
		CONCEALED	ROUND	MINERAL FIBER	WRAPPED	1-1/2"	
	ALL	UNCONDITIONED ATTICS	ALL	MINERAL FIBER	WRAPPED	1-1/2"	1
RETURN		CONCEALED	RECTANGULAR	FIBERGLASS	LINED	1/2"	
	LOW PRESSURE/VELOCITY	CONCEALED	ROUND	MINERAL FIBER	WRAPPED	1-1/2"	
		RETURN/TRANSFER BOOTS	RECTANGULAR	FIBERGLASS	LINED	1/2"	
	ALL	UNCONDITIONED ATTICS	ALL	MINERAL FIBER	WRAPPED	1-1/2"	1
OUTSIDE AIR	ALL	CONCEALED OR MECH. SPACE	ROUND	MINERAL FIBER	WRAPPED	1-1/2"	

1. IN ADDITION TO OTHER SCHEDULED INSULATION.

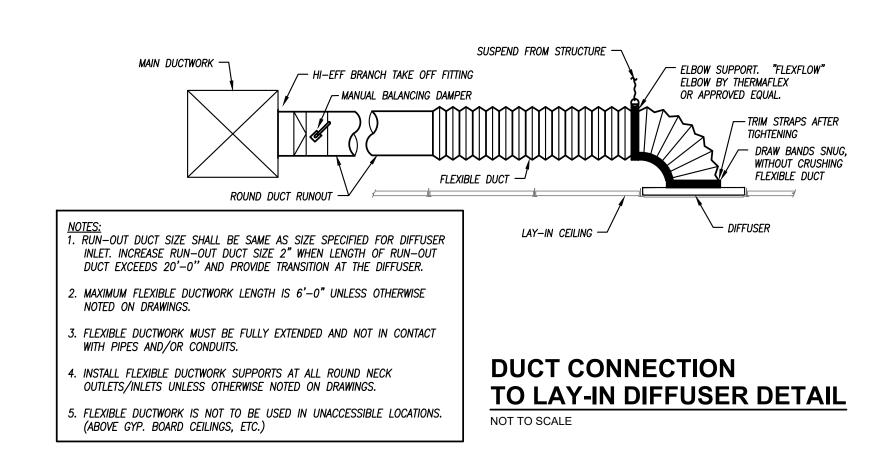
GENERAL REMARKS (APPLICABLE TO ALL TYPES):

3. VERIFY CEILING CONFIGURATION, COLOR AND SPECIFICS WITH ARCHITECTURAL CEILING PLANS.

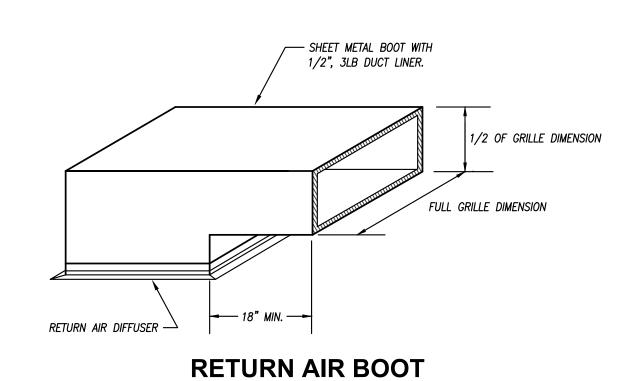
1) ALL DUCTWORK, INSULATION AND MATERIALS IN PLENUMS MUST MEET ASTM E84 FLAME/SMOKE RATING OF 25/50.
2) ALL INSULATION THICKNESSES SHALL MEET ASHRAE 90.1 – 2010 REQUIREMENTS AT A MINIMUM.

3) REFER TO SPECIFICATIONS FOR MORE DETAILED INFORMATION FOR INSULATION PRODUCTS AND SYSTEMS.

MAIN SUPPLY DUCT ── PROVIDE VOLUME DAMPER ──- AIR CUSHION AT END OF BRANCH DUCT ----RUN BEYOND LAST TAP OR BRANCH. CUSHION DEPTH "D" EQUAL TO GREATER OF BRANCH DUCT TAKE-OFF 6" OR 1/2 MAIN DUCT WIDTH OR MAIN DUCT WIDTH SEE PLAN FOR SPLIT DIMENSION — PROVIDE VOLUME DAMPER MAIN SUPPLY DUCT - SQUARE ELBOW SHOWN. PROVIDE ROUND ELBOW TURNING VANES WHEN SHOWN ON PLANS SUPPLY REGISTER PROVIDE VOLUME DAMPER OR BRANCH DUCT <u>PLAN VIEW</u> <u>AIR SPLIT TYPE DUCT TAKE-OFF</u> **DUCTWORK TAKEOFFS**



NOT TO SCALE





PROVIDE NECESSARY TAMPER FLOW SWITCH AND CONTROLS AS REQUIRED. SYSTEM SHALL BE QUICK

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. COORDINATE ATTIC LAYOUT WITH ARCHITECTURAL PLANS AND ANY DRAFTSTOPS OR FIRE

ENGINEERING DOCUMENTS SHALL BE BASED UPON THE FOLLOWING CODES AND STANDARDS

DESIGN APPROACH (STATE THE FOLLOWING: RESPONSE TYPE, DENSITY, HEAD SPACING.)

FIRE SPRINKLER DESIGN CRITERIA

ENGINEERING DOCUMENTS SHALL ALSO LIST AND/OR SHOW THE FOLLOWING:

SYSTEM RESPONSE TYPE – QUICK
DENSITIES – 0.10 GPM/SF FOR 1,500 SF

DENSITIES - 0.15 GPM/SF FOR 1,500 SF

6. THE POINT OF SERVICE FOR THE FIRE PROTECTION WATER SUPPLY

5. CHARACTERISTICS OF WATER SUPPLY TO BE USED, INCLUDING MAIN SIZE

7.1. SYSTEM SHALL BE MONITORED BY THE FIRE ALARM SYSTEM OR A SEPARATE MONITORING SYSTEM PANEL, DIALER AND ANNUNCIATION ACCESSORIES AS

7.2. ALL CONTROL VALVES SHALL BE EQUIPPED WITH TAMPER AND FLOW SWITCHES

ACCEPTANCE TESTING OF FIRE PROTECTION SYSTEM SHALL BE IN ACCORANCE WITH THE

MAXIMUM HEAD SPACING — 225 SF

MAXIMUM HEAD SPACING — 130 SF

4.3. HAZARD CLASSIFICATION — ORDINARY GROUP 1 4.3.1. SYSTEM RESPONSE TYPE — QUICK

SYSTEM VALVING AND ALARM REQUIREMENTS:

REQUIRED BY LOCAL ADOPTED CODES.

WIRED TO THE MONITORING SOURCE PANEL.

OCCUPANCY TYPE — AS LISTED ON ARCHITECTURAL CODE PLANS
CONSTRUCTION TYPE: AS LISTED ON ARCHITECTURAL CODE PLANS

RESPONSE TYPE FOR APPROPRIATE HAZARD CLASSIFICATION.

(AND LIST THEM ON THE LAYOUT DOCUMENTS):

4. INTERIOR OCCUPIED SPACES SYSTEM

4.2. HAZARD CLASSIFICATION — LIGHT

`1. NFPA 13 — CURRENT EDITION

4.1. SYSTEM TYPE - WET

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





GENERAL DEMOLITION NOTES

REFER TO GENERAL DEMOLITION NOTES ON MEP COVER SHEET FOR ADDITIONAL REQUIREMENTS OF WORK.

DEMOLITION PLAN KEYED NOTES

(1) REMOVE EXISTING DIFFUSER/GRILLE AND RELOCATE TO NEW LOCATION.

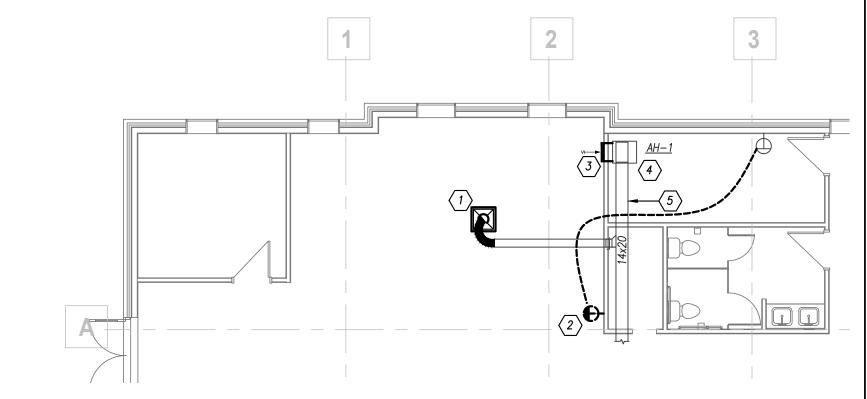
 $\overbrace{2}$ relocate temperature sensor to new wall.

3 REMOVE EXISTING RETURN GRILLE AND RETURN OPENING. PATCH WALL OPENING. REFER TO ARCHITECTURAL PLANS FOR WALL FINISH.

4 EXISTING FURNACE SHALL REMAIN.

(5) EXISTING DUCTWORK SHALL REMAIN.

 $\langle 6 \rangle$ EXISTING GRILLE SHALL REMAIN. CLEAN GRILLE OF ANY DUST OR DEBRIS.



FIRST FLOOR DEMOLITION PLAN

GENERAL HVAC NOTES

1. REFER TO GENERAL NOTES ON MEP COVER SHEET FOR ADDITIONAL REQUIREMENTS OF WORK.

ROUND BRANCH DUCT RUNOUTS AND FLEXIBLE DUCT SHALL BE THE SAME SIZE AS THE DIFFUSER NECK UNLESS NOTED OTHERWISE.
 MAXIMUM FLEXIBLE DUCT LENGTH SHALL BE 5'-0".

4. ALL AIR DISTRIBUTION DEVICES SHALL HAVE LOCKABLE VOLUME CONTROL DEVICES.

ALL 90 DEGREE TURNING ELBOWS SHALL BE SMOOTH ROUND OR SQUARE WITH TURNING VANES.
 DUCT SIZES SHOWN ON PLANS ARE INSIDE FREE AREA.

HVAC PLAN KEYED NOTES

1 EXISTING DIFFUSER RELOCATED. BALANCE TO NOTED AIRFLOW.

2 RELOCATED TEMPERATURE SENSOR TO NEW WALL. EXTEND CONTROL WIRING TO NEW LOCATION.

3 REVISE RETURN CONNECTION FOR SIDE CONNECTION.

FIRST FLOOR PLAN - HVAC

4 OFFSET DUCTWORK UP INTO ROOF TRUSSES. COORDINATE WITH EXISTING TRUSSES.

5 8" OUTDOOR AIR DUCT TO WALL CAP. BALANCE OUTDOOR AIR TO 100

6 12X8 LINED TRANSFER BOOT INSTALLED ABOVE THE CEILING.

7 RELOCATE RETURN GRILLE INTO NEW DROPPED CEILING.

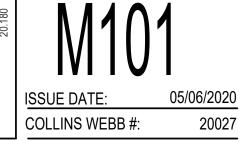
| 7 | RELOCATE RETURN GRILLE INTO NEW DROPPED CEILING.

| 8 | TURN RETURN DUCT DOWN INTO RETURN PLENUM.

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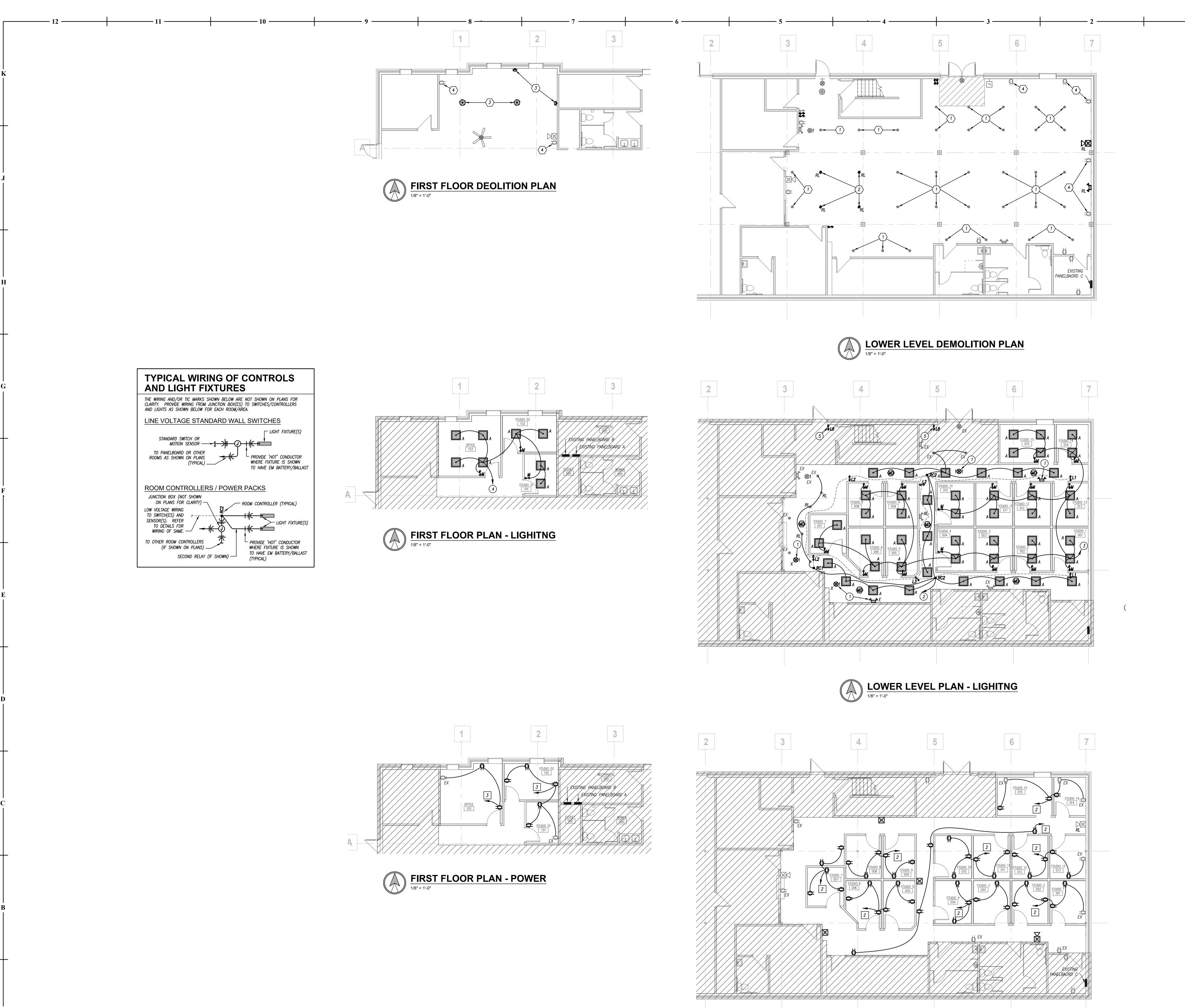












GENERAL DEMOLITION NOTES

REFER TO GENERAL DEMOLITION NOTES ON MEP COVER SHEET FOR ADDITIONAL REQUIREMENTS OF WORK.

DEMOLITION PLAN KEYED NOTES

 $\overline{3}$ SALVAGE LIGHT FIXTURES AND TURN OVER TO OWNER.

1) EXISTING FIXTURES ARE TO REMAIN IN PLACE. REMOVE FIXTURE FROM EXISTING POWER CIRCUIT.

2 REMOVE EXISTING FIXTURES AND RELOCATE TO NEW LOCATION SHOWN ON NEW WORK DRAWINGS.

4 EXISTING DEVICES ARE TO REMAIN IN PLACE. REMOVE DEVICES FROM EXISTING POWER CIRCUIT.

GENERAL LIGHTING NOTES

1. REFER TO GENERAL NOTES ON MEP COVER SHEET FOR ADDITIONAL REQUIREMENTS OF WORK.

LIGHT FIXTURES INDICATED AS EMERGENCY FIXTURES ARE TO FUNCTION AS NIGHT LIGHTS UNLESS SPECIFICALLY SHOWN SWITCHED.

3. ALL CIRCUITING SHOWN ON THIS PLAN IS DIAGRAMMATIC.

3.1. ALL CIRCUITING SHOWN ON THIS PLAN IS DIAGRAMMATIC.

3.1. ALL FIXTURES SHALL BE FED FROM JUNCTION BOXES WITH LIGHT FIXTURE WHIPS (<6'). DAISY-CHAINING OF FIXTURES IS NOT ALLOWED.

3.2. SWITCH BOX LOCATIONS SHALL BE WIRED SO THAT A NEUTRAL WIRE IS AVAILABLE AT THE SWITCH BOX LOCATION, EITHER IN THE BOX OR AVAILABLE TO BE SERABATE LOAD TYPES (FILM AND THAT A 120 (277)). 3.3. WALL SWITCHES FOR SEPARATE LOAD TYPES (EM/NORMAL, 120/277V,

ETC.) SHALL NOT BE IN A SINGLE BOX. 3.4. REFÉR TO SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.

LIGHTING PLAN KEYED NOTES

(1) CIRCUIT WITH EXISTING EXIT LIGHTING CIRCUIT.

(2) CIRCUIT AVAILABLE SPARE IN EXISTING PANELBOARD C.

(3) CIRCUIT TO AVAILABLE SPACE IN EXISTING PANELBOARD C, PROVIDE NEW

4 CIRCUIT TO AVAILABLE SPACE IN EXISTING PANELBOARD A, PROVIDE NEW 20A-1P BREAKER.

LIGHTING CONTROLS

SYMBOLS

**WALL SWITCH VACANCY SENSOR: PASSIVE INFRARED, 120/277V, WALL SWITCH DECORA STYLE SENSOR. (WATTSTOPPER PW-101, OR EQUAL)

ROOM CONTROLLER LOW VOLTAGE SWITCHES: PUSHBUTTON SWITCHES WITH LED PILOT LIGHT. SINGLE GANG IN DECORA STYLE FACEPLATE WITH UP TO EIGHT (8) CONTROLL FREFERS TO QUANTITY OF SWITCHES ON FACE.

(WATTSTÓPPER LMSW SËRIES, OR EQUAL) <u>DIGITAL CEILING—MOUNTED MOTION SENSOR:</u> DUAL TECHNOLOGY (PASSIVE INFRARED AND ULTRASONIC), DIGITAL, CEILING SENSOR.

(WATTSTOPPER LMDC-100, OR EQUAL) RC# ROOM CONTROLLER: DIGITAL ON/OFF ROOM CONTROLLER. 120/277V INPUT. # INDICATES NUMBER OF RELAYS (STD 1-2, UNITS SHALL BE

GANGED FOR MORE THAN 2 RELAYS/ZONES) (WATTSTOPPER LMRC-100 <u>DLM OR LOW VOLTAGE CABLING:</u> DIGITAL SYSTEMS SHALL UTILIZE PLENUM

RATED CAT5 WIRING OR CABLING PROVIDE BY MANUFACTURER SPECIFICALLY FOR CONTROL SYSTEM. LOW VOLTAGE SYSTEMS SHALL UTILIZE CABLING PER MANUFACTURERS REQUIREMENTS. CABLING MAY NOT BE INDICATED WHERE ROOM SYSTEM ARCHITECTURE IS SIMPLE FOR CLARITY.

TRAINING AND PROGRAMMING

OWNER TRAINING:

PROVIDE FACTORY REPRESENTATIVE TRAINING TO OWNER FOR EACH LIGHTING CONTROL SYSTEM UTILIZED, INCLUDING PROGRAMMING FOR SCHEDULING AND OPERATION OF EACH ROOM PER OWNER DIRECTION.

PROVIDE RECORD OF TIME DELAY SETTINGS ON ALL SENSOR DEVICES FOR

SENSOR ADJUSTMENTS AND SETTINGS:

SYSTEMS SHALL BE SET/PROGRAMMED TO OPERATE TYPICALLY IN MANUAL

ON/AUTO OFF MODE. 1. SET WALL MOUNTED MOTION SENSOR TO MANUAL ON MODE.

2. SET POWER PACKS AND ROOM CONTROLLERS CONTROLLED BY MOTION SENSORS TO MANUAL ON AND CONTROL WITH MOMENTARY WALL SWITCH. PROVIDE FINAL SETTINGS/ADJUSTMENTS PER OWNER'S DIRECTION.

CONTROLS SEQUENCES

WALL—MOUNTED LINE VOLTAGE SENSORS:

TURN ON LIGHTS IN ROOM/AREA UPON BUTTON ON SENSOR BEING ACTIVATED

BY OCCUPANT. TURN OFF LIGHTS AFTER NO MOTION IS DETECTED AND DELAY EXPIRES.

GENERAL POWER NOTES

1. REFER TO GENERAL NOTES ON MEP COVER SHEET FOR ADDITIONAL REQUIREMENTS OF WORK.

2. COORDINATE EXACT NEMA CONFIGURATIONS OF RECEPTACLES SERVING EQUIPMENT WITH EXACT EQUIPMENT BEING FURNISHED.

3. REFER TO THE SPECIFICATIONS FOR ADDITIONAL LOCATIONS/REQUIREMENTS FOR RECEPTACLES, INCLUDING GFCI, WEATHER-RESISTANT, HOSPITAL-GRADE, AND TAMPER-RESISTANT RECEPTACLES.

4. EXACT MECHANICAL EQUIPMENT LOCATIONS MAY NOT BE SHOWN FOR CLARITY. COORDINATE EXACT LOCATIONS OF ALL MECHANICAL EQUIPMENT, DUCT

DETECTORS, ETC. WITH MECHANICAL DRAWINGS AND CONTRACTOR. 5. COORDINATE EXACT LOCATIONS OF SMOKE DETECTORS WITH CEILING FANS,

HVAC DIFFUSERS, SPRINKLER HEADS, ETC. PER NFPA REQUIREMENTS. 6. RECEPTACLES SHALL BE PLACES BACK TO BACK IN A WALL.

POWER PLAN KEYED NOTES

1 CIRCUIT DEVICES WITH EXISTING CORRIDOR RECEPTACLES.

LOWER LEVEL PLAN - POWER

1/8" = 1'-0"

2 CIRCUIT TO AVAILABLE SPACE IN EXISTING PANELBOARD C, PROVIDE NEW 20A-1P BREAKER.

3 CIRCUIT TO AVAILABLE SPACE IN EXISTING PANELBOARD A, PROVIDE NEW 20A-1P BREAKER.





ELECTRICAL PLAN

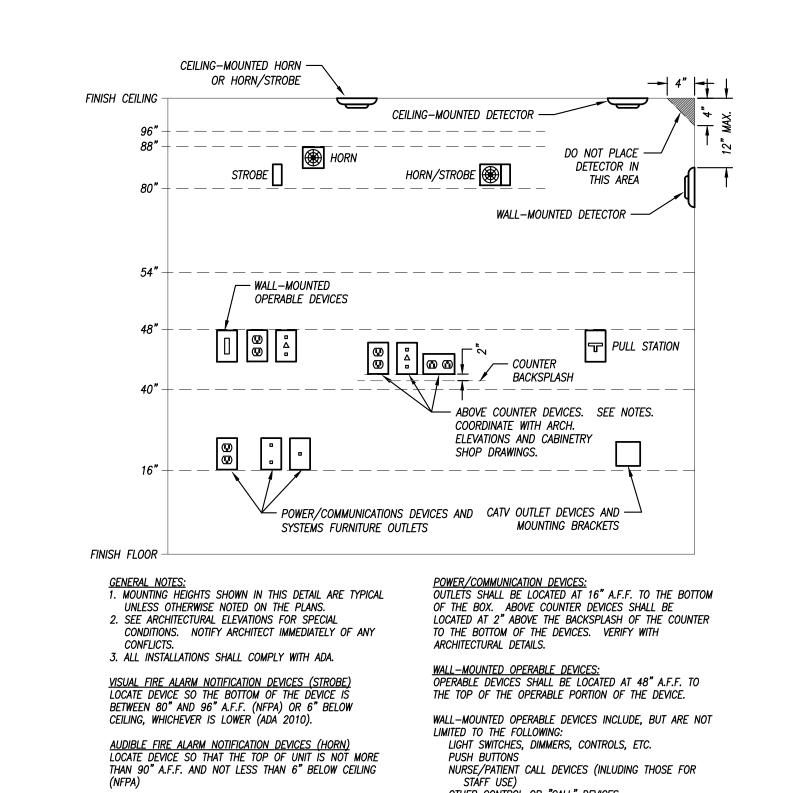


616 Lee'

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MOUNTING HEIGHTS FOR WALL-MOUNTED DEVICES

NOT TO SCALE

FIRE ALARM ACTIVATION DEVICES (PULL STATION)
LOCATE FRONT—APPROACH DEVICES SO THAT THE HIGHEST
OPERABLE PORTION OF THE DEVICE IS NOT MORE THAN
48" A.F.F (ADA 2010) AND NOT LESS THAN 42" A.F.F.

OTHER CONTROL OR "CALL" DEVICES

FIXTURE TYPE	MANUFACTURER	CATALOG NUMBER	DESCRIPTION	LAMP NUMBER / DESCRIPTION	VOLTAGE	REMARK
Α	WILLIAMS	AT1 SERIES	2'x4' RECESSED "FLOATING LENS" ARCHITECTURAL LED TROFFER. MATTE WHITE PAINT HOUSING WITH DIFFUSE MATTE ACRYLIC CENTER LENS. GRID MOUNTING. INTEGRAL 0—10V DIMMING LED DRIVER.	ONE (1) 29.5 WATT, 4000 LUMEN, L30 LED MODULE. 3500K CCT.	120	1,2
E	DUAL-LITE	EV SERIES	LOW-PROFILE EMERGENCY LIGHTING UNIT. FLAME-RATED, UV-STABLE THERMOPLASTIC HOUSING. TWO (2) SEMI-RECESSED, ADJUSTABLE "EYEBALL" HEADS WITH GLASS LENS. WHITE FINISH. MAINTENANCE-FREE BATTERY FOR 90 MINUTE OPERATION OF LAMPS. INTEGRAL TEST SWITCH AND AC-ON INDICATOR.	TWO (2) 1.1 WATT 1W LED LED.	120	1
Х	DUAL-LITE	EVE SERIES	COMPACT, LOW—PROFILE EXIT SIGN. UV STABLE THERMOPLASTIC HOUSING. WHITE FINISH WITH RED LETTERS. SIDE, TOP, OR WALL MOUNTED IN SINGLE/DOUBLE FACE CONFIGURATION WITH DIRECTIONAL ARROWS AS INDICATED ON PLANS. FURNISH WITH EMERGENCY OPTION FOR MAINTENANCE—FREE NICKEL—METAL—HYDRIDE BATTERY FOR 2 HOUR OPERATION WITH INTEGRAL TEST SWITCH AND AC—ON LIGHT.	SIX (6) HIGH-OUTPUT LEDS - TOTAL POWER CONSUMPTION = 2 WATTS.	120	1

1. FURNISH WITH AND INSTALL ALL NECESSARY HARDWARE AND MOUNTING BRACKETS.

2. REFER TO DETAIL(S) ON SHEET E-201 FOR WORK AND ADDITIONAL ACCESSORIES REQUIRED FOR MOUNTING OF FIXTURE.

GENERAL NOTES (APPLICABLE TO ALL FIXTURES):

NOT TO SCALE

1) REFER TO SPECIFICATIONS FOR APPROVED EQUAL FIXTURE MANUFACTURERS AND ADDITIONAL FIXTURE/DRIVER/BALLAST REQUIREMENTS.
2) ALL FIXTURES WITH PAINTED METAL PARTS SHALL BE PAINTED AFTER FABRICATION.

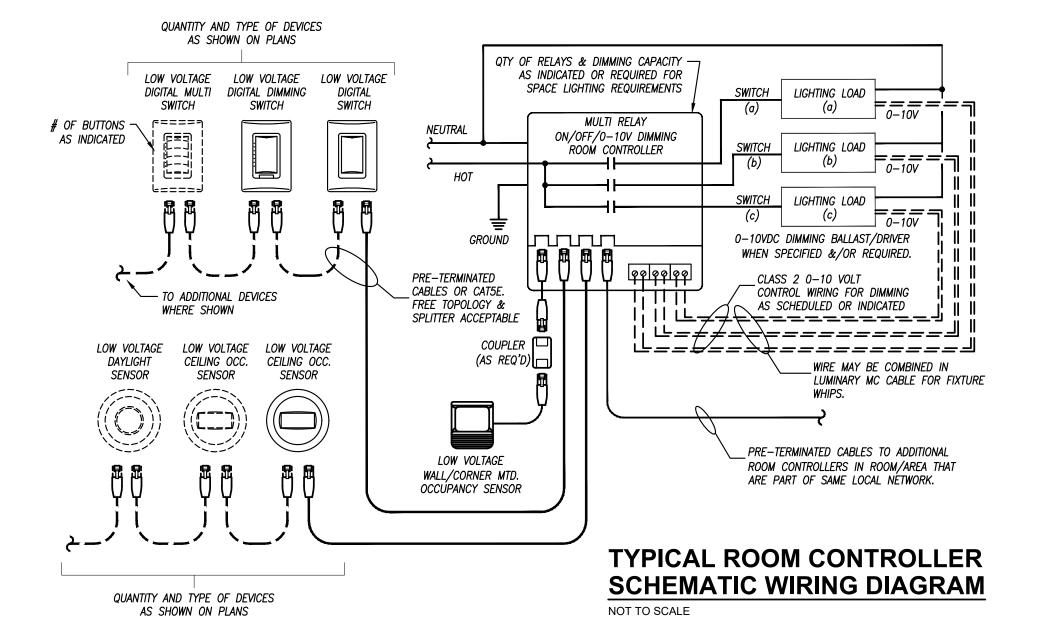
BRANCH CIRCUIT CONDUIT

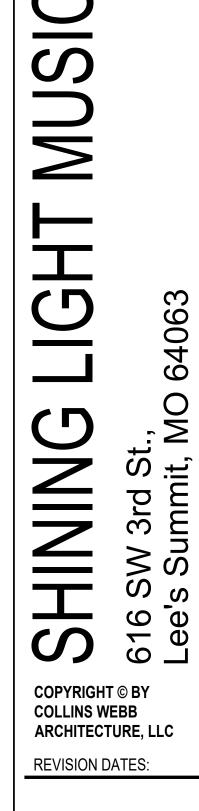
FOR EACH FIXTURE,
PROVIDE TWO DEDICATED
STEEL WIRE SUPPORTS
TO STRUCTURE AT
DIAGONALLY OPPOSITE
CORNERS OF FIXTURE.

LAY-IN CEILING AND STRUCTURE. SECURE FIXTURE

TYPICAL TROFFER SUPPORT AND WIRING

TO GRID WITH (4) APPROVED CLIPS PER FIXTURE.





NUMBER PE-2004015662





William E. Kent - Engineer MO# PE-2004015662 PROFESSIONAL SEAL

ELECTRICAL SCHEDULES/DETAILS

