

JOHN KNOX VILLAGE - SALON

1001 NW CHIPMAN RD SUITE 123
LEE'S SUMMIT, MO 64081

PERMIT SET - CITY COMMENTS

03 MAY 2023

COLLINS WEBB #: 22118

307B SW Market St., Lee's Summit, Missouri 64063 | 816.249.2270 | www.collinsandwebb.com



VICINITY PLAN

GENERAL		
SHEET NUMBER	SHEET NAME	REVISION
CS	COVER SHEET	
G002	ACCESSIBILITY GUIDELINES	
G003	LIFE SAFETY PLANS AND PROJECT INFO.	05.26.2023
G001	GENERAL INFORMATION	
G500	GENERAL PROJECT SPECIFICATIONS	
G501	GENERAL PROJECT SPECIFICATIONS	
STRUCTURAL		
SHEET NUMBER	SHEET NAME	REVISION
S101	STRUCTURAL FLOOR PLAN	
ARCHITECTURAL		
SHEET NO.	SHEET NAME	REVISION
A101	FLOOR PLAN AND REFLECTED CEILING PLAN	05.26.2023
A201	ELEVATIONS, SECTIONS, SCHEDULES & DETAILS	05.26.2023
A501	FINISH FLOOR PLAN, LEGEND, AND SCHEDULE	
MEP		
SHEET NUMBER	SHEET NAME	REVISION
M101	MECHANICAL NOTES, SYMBOLS & ABBREVS.	
M201	MECHANICAL FLOOR PLAN	
M301	MECHANICAL SPECIFICATIONS	
E101	ELECTRICAL NOTES, SYMBOLS & ABBREVS.	
E201	ELECTRICAL POWER PLAN	
E301	FIRST FLOOR LIGHTING PLAN	
E401	ELECTRICAL ONE-LINE DIAGRAM, DETAILS & SCHEDULES	
E501	ELECTRICAL SPECIFICATIONS	
P101	PLUMBING NOTES, SYMBOLS & ABBREVS.	
P102	PLUMBING SCHEDULES AND DETAILS	
P201	WASTE AND VENT PLAN	
P202	WATER PLAN	
P301	PLUMBING SPECIFICATIONS	



OWNER

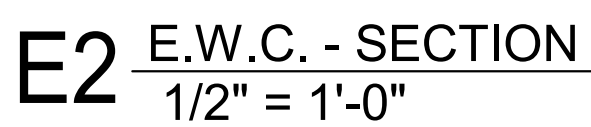
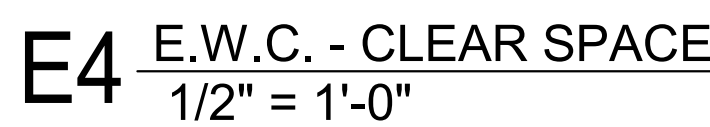
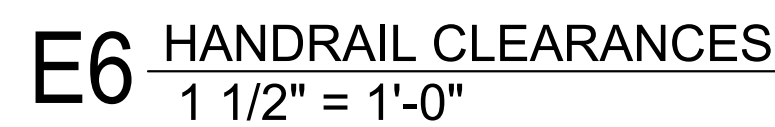
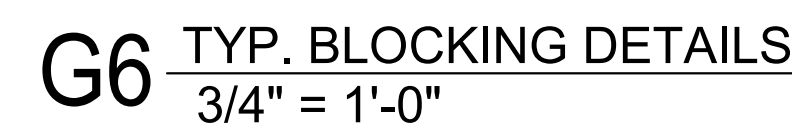
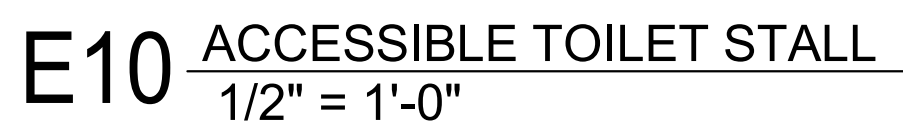
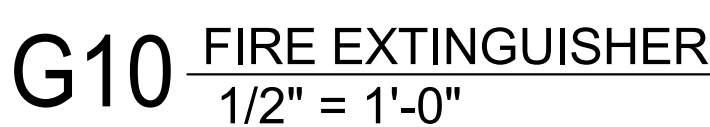
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NOTE: SOME OBJECTS INDICATED HERE ARE NOT INCLUDED IN THIS PROJECT													
FINISH													
ACCESSORY TYPE	PAPER TOWEL DISPENSER	POWER HAND DRYER	PAPER TOWEL DISPENSER & TRASH RECEPTACLE	TOILET TISSUE DISPENSER	SANITARY NAPKIN DISPOSAL	SANITARY NAPKIN DISPENSER	VANITY SOAP DISPENSER	FRAMED VANITY MIRROR	DIAPER CHANGING STATION	SOAP DISPENSER	FOLDING SHOWER SEAT	TOILET PARTITION	URINAL SCREEN
COMMENTS	SURFACE MOUNTED	SURFACE MOUNTED	SEMI RECESSED	SURFACE MOUNTED	SURFACE MOUNTED	RECESSED & SURFACE	SURFACE MOUNTED	SURFACE MOUNTED	SURFACE MOUNTED	COUNTERTOP MOUNTED	SURFACE MOUNTED	WALL MOUNTED	WALL MOUNTED

NOTE: SOME OBJECTS INDICATED HERE ARE NOT INCLUDED IN THIS PROJECT										
FINISH FLOOR										
ACCESSORY TYPE	SHOWER MIXING VALVE	SHOWER HEAD	HAND HELD SHOWER	LAVATORY	LAVATORY	CHILDRENS DRINKING FOUNTAIN	SINGLE DRINKING FOUNTAIN	DOUBLE DRINKING FOUNTAIN	TOILET	URNAL
COMMENTS	WALL MOUNTED	WALL MOUNTED	WALL MOUNTED	WALL MOUNTED	COUNTER MOUNTED	WALL MOUNTED	WALL MOUNTED	WALL MOUNTED	WALL/FLOOR MOUNTED	WALL MOUNTED

NOTE: SOME OBJECTS INDICATED HERE ARE NOT INCLUDED IN THIS PROJECT					
FINISH FLOOR					
ACCESSORY TYPE	ADA TOILET GRAB BAR	SHOWER STALL GRAB BAR	ROLL-IN SHOWER STALL GRAB BAR	TYPICAL ACCESSORIES AT ACCESSIBLE TOILET	TYPICAL ADA SINK ENCLOSURE PANEL CLEARANCE
COMMENTS	SURFACE MOUNTED	SURFACE MOUNTED	SURFACE MOUNTED	NOTE: SANITARY NAPKIN DISPOSAL AT WOMEN'S & UNISEX ONLY	

A11 TYP. MOUNTING HEIGHTS
1/4" = 1'-0"

WALL PRIORITY LEGEND

NOTE: THIS LEGEND IS FOR GRAPHIC REPRESENTATION ONLY.

FOUR HOUR FIRE WALL (4FW)
THREE HOUR FIRE WALL (3FW)
TWO HOUR FIRE WALL (2FW)
FOUR HOUR FIRE BARRIER (4FB)
THREE HOUR FIRE BARRIER (3FB)

TWO HOUR FIRE BARRIER (2FB) (INCLUDES THE FOLLOWING)

- TWO HOUR SHAFT ENCLOSURE (2SE)

ONE HOUR FIRE BARRIER (1FB) (INCLUDES THE FOLLOWING)

- ONE HOUR SHAFT ENCLOSURE (1SE)

SMOKE TIGHT PARTITION (X) (INCLUDES THE FOLLOWING)

- SMOKE TIGHT PARTITION TO SMOKE TIGHT CEILING (XC)
- SMOKE TIGHT PARTITION WITH FLENUM ABOVE CEILING (XP)
- SMOKE TIGHT PARTITION SEPARATION OF INTERSTITIAL SPACES (XI)

DETAIL ABUTMENT OF DISSIMILAR WALL

LOWER PRIORITY WALL

HIGHER PRIORITY WALLS SHALL PASS THROUGH A LOWER PRIORITY WALL

INTERSECTION OF RATED WALLS

TAPE & JOINT COMPOUND (TYP)

LOWER PRIORITY WALL

TAPE & SEAL HIGHER PRIORITY WALL BEHIND INTERSECTING LOWER PRIORITY WALL (TYP)

HIGHER PRIORITY WALL

TAPE & JOINT COMPOUND (TYP)

HIGHER PRIORITY WALL

C

LOWER PRIORITY WALL

HIGHER PRIORITY WALL

TAPE & JOINT COMPOUND (TYP)

CONTINUOUS TAPE & SEAL OF HIGHER PRIORITY WALL (TYP)

E

LOWER PRIORITY WALL

HIGHER PRIORITY WALL

TAPE & JOINT COMPOUND (TYP)

NOTES:

1. REFER TO WALL TYPES ON SHEET G121-T1 FOR WALL COMPONENTS, NUMBER OF GYPSUM BOARD LAYERS, TYPE OF GYPSUM BOARD, AND OTHER SIMILAR INFO.

2. THE HIGHER PRIORITY WALL SHALL PASS THROUGH THE LOWER PRIORITY WALL.

3. TYPING AND SEALING OF HIGHER PRIORITY WALLS SHALL BE CONTINUOUS.

4. ALTERNATE LAYERS OF GYPSUM BOARD SHALL OVERLAP AT CORNER INTERSECTIONS OF MULTI-LAYERED RATED GYPSUM BOARD PARTITIONS.

FIRE & SMOKE RESISTIVE LEGEND DEFINITIONS

FIRE WALLS (FW)

DEFINITION
A FIRE RATED WALL THAT IS CONTINUOUS VERTICALLY FROM FOUNDATION TO ROOF TO SEPARATE CONSTRUCTION INTO SEPARATE BUILDINGS.

USE
FIRE WALLS SERVE TO CREATE SEPARATE BUILDINGS FOR THE FOLLOWING REASONS:

- CONSTRUCTION TYPE VARIES FROM ONE BUILDING TO ANOTHER.
- COMPLIANCE WITH MAXIMUM ALLOWABLE AREA REQUIREMENTS.
- TO SEPARATE BUILDINGS WITH DIFFERENT LEVELS OF FIRE PROTECTION.
- TO ADDRESS A PROPERTY LINE DEFINING DIFFERENT OWNERSHIP.

SPECIAL CONSIDERATIONS

- THE FIRE WALL REQUIRES SUFFICIENT STRUCTURAL STABILITY UNDER FIRE CONDITIONS TO ALLOW THE COLLAPSE OF CONSTRUCTION ON EITHER SIDE WITHOUT COLLAPSE OF THE WALL.
- OPENINGS ARE REQUIRED TO BE PROTECTED.
- OPENINGS ARE LIMITED BASED ON A PERCENTAGE OF WALL LENGTH.
- EXTENDING THE FIRE WALL THROUGH THE ROOF WITH A PARAPET IS REQUIRED FOR SOME CONSTRUCTION CLASSIFICATIONS.
- THE REQUIRED FIRE RATING OF A FIRE WALL IS BASED ON OCCUPANCY GROUPS AND CLASS OF CONSTRUCTION.
- HARDWARE FOR SWING DOORS SHALL INCLUDE A LATCH AND CLOSER.

FIRE PARTITIONS (FP)

DEFINITION
A FIRE RATED PARTITION THAT IS USED FOR THE APPLICATIONS LISTED BELOW. IT SHALL BE CONTINUOUS FROM TOP OF FLOOR TO UNDERSIDE OF A FIRE-RATED FLOOR/CEILING OR ROOF/CEILING ASSEMBLY, WHERE ALLOWED BY CODE. EXCEPTION: A FIRE PARTITION SHALL BE ALLOWED TO TERMINATE AT THE UPPER MEMBRANE OF A FIRE RATED CEILING.

USE
FIRE PARTITIONS ARE USED IN CERTAIN OCCUPANCIES TO DO THE FOLLOWING:

- SEPARATE DWELLING UNITS
- SEPARATE SLEEPING SPACES
- SEPARATE CORRIDORS FROM ADJACENT SPACES
- SEPARATE ELEVATOR LOBBIES
- SEPARATE TENANT SPACES IN COVERED MAIL BUILDINGS

SPECIAL CONSIDERATIONS

- OPENINGS ARE REQUIRED TO BE PROTECTED.
- HARDWARE FOR SWING DOORS SHALL INCLUDE A LATCH AND CLOSER.

BEARING WALLS (BW)

DEFINITION
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.

USE
A VERTICAL LOAD BEARING STRUCTURAL ELEMENT.

SPECIAL CONSIDERATIONS

- DOORS AND WINDOWS ARE NOT REQUIRED TO BE RATED.
- HVAC DUCT PENETRATIONS ARE NOT REQUIRED TO BE FIRE-DAMPENED.
- PUMPING, 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.

FIRE BARRIERS (FB)

DEFINITION
A FIRE RATED WALL CONSTRUCTED TO RESTRICT THE SPREAD OF FIRE. CONTINUITY SHALL BE MAINTAINED FROM TOP OF FLOOR TO UNDERSIDE OF THE FLOOR OR ROOF DECK ABOVE.

USE
FIRE BARRIERS HAVE THE FOLLOWING APPLICATIONS:

- TO CREATE HORIZONTAL EXITS.
- TO SEPARATE EXIT PASSAGEWAYS.
- OCCUPANCY SEPARATIONS.
- TO SEPARATE INCIDENTAL USE AREAS.
- ISOLATION OF HAZARDS.
- TO SEPARATE ROOMS WITH DIFFERENT LEVELS OF FIRE PROTECTION.
- SMOKE BARRIERS AND SHAFT ENCLOSURES ARE FIRE BARRIERS. SEE ADDITIONAL REQUIREMENTS.

SPECIAL CONSIDERATIONS

- WITHIN SOME CONSTRUCTION CLASSIFICATIONS, CONSTRUCTION THAT PROVIDES STRUCTURAL SUPPORT OF A FIRE BARRIER IS REQUIRED TO BE OF THE SAME HOURLY FIRE RATING AS THE FIRE BARRIER, OR BETTER.
- OPENINGS ARE REQUIRED TO BE PROTECTED.
- HARDWARE FOR SWING DOORS SHALL INCLUDE A LATCH AND CLOSER.

SHAFT ENCLOSURES (SE)

DEFINITION
A SHAFT ENCLOSURE IS A FIRE BARRIER FORMING THE BOUNDARY OF A VERTICAL SHAFT.

USE
PROTECT OPENINGS IN FIRE RATED FLOOR/CEILING ASSEMBLIES.

SPECIAL CONSIDERATIONS

- PENETRATIONS IN SHAFT ENCLOSURES ARE PROHIBITED UNLESS NECESSARY FOR THE FUNCTION OF THE SHAFT. WHERE ALLOWED, OPENINGS ARE REQUIRED TO BE PROTECTED.
- DUCT PENETRATIONS REQUIRE COMBINATION SMOKE AND FIRE DAMPERS EXCEPT FOR EXISTING CONDITIONS THAT ARE GRANDFATHERED.
- HARDWARE FOR SWING DOORS SHALL INCLUDE A LATCH, CLOSER, AND PERIMETER SMOKE SEALS.

ACTIVE FIRE PROTECTION SYSTEMS:

- AUTOMATIC SPRINKLER SYSTEM - PROVIDED THROUGHOUT (803.2.1)
- STANDPIPE SYSTEM - PROVIDED IN STAIRS THROUGHOUT (905)
- ADDITIONAL CONNECTIONS PROVIDED AS SHOWN (905)
- ESCALATOR OPENING PROTECTED IN ACCORDANCE WITH IBC 712.1.3.1, DRAFT CURTAIN AND CLOSELY SPACED SPRINKLERS.

GENERAL NOTES

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

GENERAL DESCRIPTION

PROJECT NAME: JOHN KNOX VILLAGE - SALON
PROJECT LOCATION: 1001 NW CHIPMAN RD SUITE 123, LEE'S SUMMIT, MO 64081
COUNTY: JACKSON

COLLINS WEBB ARCHITECTURE
3078 SW MARKET STREET
LEES SUMMIT, MISSOURI 64063

APPLICABLE CODES:
INTERNATIONAL BUILDING CODE - 2018 ED.
INTERNATIONAL PLUMBING CODE - 2018 ED.
INTERNATIONAL MECHANICAL CODE - 2018 ED.
INTERNATIONAL FUEL GAS CODE - 2018 ED.
INTERNATIONAL FIRE CODE - 2018 ED.
NATIONAL ELECTRICAL CODE - 2017 ED.
ADA STANDARDS FOR ACCESSIBLE DESIGN - 2010 ED.
ICC/ANZI A117.1: ACCESSIBILITY AND USABILITY CODE - 2009 ED.

CODE INFORMATION

BUILDING/PROJECT USE: CONSTRUCTION TYPE OCCUPANCY CLASSIFICATION BUILDING FRAME	MESSAGE SPA AND SALON TYPE VB (EXISTING), FULLY SPRINKLERED GROUP "B" BUSINESS SOLID WOOD	IBC SECTION 304 IBC TABLE 601 IBC SECTION 304
ACTUAL TENANT AREA (GROSS)	1,075 SQ. FT.	
ALLOWABLE STORIES ACTUAL NUMBER OF STORIES	3 2 STORIES (EXISTING)	IBC TABLE 504.4
ALLOWABLE HEIGHT ACTUAL HEIGHT IN FEET	6'-0" EXISTING	IBC TABLE 504.3

FIRE RESISTIVE REQUIREMENTS

PRIMARY FRAME	0 HRS	IBC TABLE 601
NON-BEARING WALLS	0 HRS <td>IBC TABLE 601</td>	IBC TABLE 601
BEARING WALLS INT./EXT.	0 INT. / EXT. HRS <td>IBC TABLE 601</td>	IBC TABLE 601
FLOOR CONSTRUCTION	0 HRS <td>IBC TABLE 601</td>	IBC TABLE 601
CEILING/ROOF	0 HRS <td>IBC TABLE 601</td>	IBC TABLE 601
CORRIDORS	0 HRS <td>IBC TABLE 1020.1</td>	IBC TABLE 1020.1

FIRE EXTINGUISHERS

- PROVIDE PORTABLE FIRE EXTINGUISHERS IN OCCUPANCIES AND LOCATIONS AS REQUIRED BY THE LOCAL GOVERNING FIRE PREVENTION CODE. SEE PLANS FOR SUGGESTED LOCATIONS. NOTIFY ARCHITECT OF ANY PROPOSED RELOCATION OR IF A CONFLICT IS ENCOUNTERED.
- PORTABLE FIRE EXTINGUISHERS SHALL BE INSTALLED, INSPECTED, AND MAINTAINED IN ACCORDANCE WITH NFPA 10, STANDARD FOR PORTABLE FIRE EXTINGUISHERS.

CEILING HEIGHT NOTES: (IBC 1003 & 1207)

- 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 6'-6" A.F.F.
- OCCUPIED SPACES, HABITABLE SPACES AND CORRIDORS SHALL HAVE A CEILING HEIGHT OF NOT LESS THAN 7'-6" A.F.F.
- BATHROOMS, TOILET ROOMS, KITCHENS, STORAGE ROOMS AND LAUNDRY ROOMS SHALL HAVE A CEILING HEIGHT OF NOT LESS THAN 7'-0" A.F.F.

INTERIOR FINISHES

GROUP B	MAX. FLAME SPREAD	
EXIT ENCLOSURES	CLASS B	IBC TABLE 803.13
LOBBIES & CORRIDORS	CLASS C	IBC TABLE 803.13
ALL OTHER SPACES	CLASS C	IBC TABLE 803.13
TEXTILES	CLASS C (78-200)	IBC 803.1.1, 803.5.1, 803.5.2
SMOKE DEVELOPED	0-450	IBC 803.1.1

NOTE:
Decorative Materials and Trim (including plastics) must comply with IBC SECTION 906

GENERAL EXITING REQUIREMENTS

EXIT TRAVEL DISTANCE 300 FEET
DEAD END CORRIDOR 60 FEET
COMMON PATH OF TRAVEL 30 FEET, OR 75' IF OCC. < 60
MIN. CORRIDOR WIDTH 44", OR 36" IF OCC. < 60

IBC SECTION 1017.2
IBC SECTION 1020.4
IBC SECTION 1029.8
IBC SECTION 1020.2

POSTING OF OCCUPANT LOAD

EVERY ROOM OR SPACE THAT IS AN ASSEMBLY OCCUPANCY SHALL HAVE THE OCCUPANT LOAD OF THE ROOM OR SPACE POSTED IN A CONSPICUOUS PLACE, NEAR THE MAIN EXIT OR EXIT ACCESS DOORWAY FROM THE ROOM OR SPACE. POSTED SIGNS SHALL BE OF AN APPROVED LEGIBLE PERMANENT DESIGN AND SHALL BE MAINTAINED BY THE OWNER OR AUTHORIZED AGENT.

EXIT REQUIREMENTS

A. REQUIRED CAPACITY	IBC SECTION 1005.3.1 IBC SECTION 1005.3.2
1. STAIRS - 0.3" / PERSON 2. OTHER COMPONENTS - 0.2" / PERSON	
B. MINIMUM NUMBER	
1. OCCUPANT LOAD OF 1-500 PERSONS - 2 EXITS PER STORY 2. OCCUPANT LOAD OF 501-1000 PERSONS - 3 EXITS PER STORY 3. OCCUPANT LOAD OF MORE THAN 1000 PERSONS - 4 EXITS PER STORY	IBC TABLE 1006.3.2

SIGNAGE

- STAIR TACTILE AND BRAILLE SIGNAGE ON EACH FLOOR FOR EXIT STAIRWELL, FLOOR DISCHARGE, AND ROOF TOP ACCESS IN ACCORDANCE WITH ICC A117.1.
- PROVIDE SIGNAGE "IN FIRE EMERGENCY DO NOT USE ELEVATOR, USE EXIT STAIRS" IN ACCORDANCE WITH IBC (2002.3)
- EVACUATION DIAGRAM PROVIDED IN ACCORDANCE WITH IBC 1023.9

OCCUPANT LOAD

OCCUPANT LOAD	8 OCC	BEAUTY SHOP: 150 SF/OCC	IBC TABLE 1004.5
EXITS REQUIRED	2 EXITS		IBC TABLE 1006.3.2
EXITS PROVIDED	2 EXITS		

TOTAL OCCUPANT LOAD

TOTAL OCCUPANT LOAD IN TENANT SPACE: 9 OCC

PLUMBING FIXTURE REQUIREMENTS

IBC TABLE 2902.1

8 OCC WATER CLOSETS	= 1/25 FIRST 50, 1/50 REMAINDER
8 OCC LAVATORIES	= 1/40 FIRST 80, 1/80 REMAINDER
8 OCC DRINKING FOUNTAIN	= 1/100
8 OCC SERVICE SINK	= 1

PLUMBING FIXTURES REQUIRED

WATER CLOSETS: 9/25 = 1 REQUIRED
LAVATORIES: 9/25 = 1 REQUIRED
DRINKING FOUNTAINS: 9/100 = 1 PROVIDED
SERVICE SINKS: 9/100 = 1 REQUIRED

PLUMBING FIXTURES PROVIDED

WATER CLOSETS: = 1 PROVIDED
LAVATORIES: = 1 PROVIDED
DRINKING FOUNTAINS: = 0 PROVIDED (BOTTLED WATER PROVIDED)
SERVICE SINKS: = 0 PROVIDED (PROVIDED ELSEWHERE IN FACILITY)

LIFE SAFETY LEGEND

NUMBER OF OCCUPANTS EXITING

200

40" x 32"

68"

MIN. WIDTH OF MEANS OF EGRESS COMPONENT (IN.)

EXIT WIDTH PROVIDED (IN.)

X"

FROM ROOM OR LEVEL

X = CLEAR WIDTH OF OPENING IN INCHES

F.A.C.P.

FIRE ALARM CONTROL PANEL

FIRE DEPARTMENT CONNECTION

EGRESS PATH

FE-1

INDICATES FIRE EXTINGUISHER CABINET(FE) LOCATION WITH 75'-0" RADIUS COVERAGE AREA. SEE SPECIFICATIONS FOR FE TYPE.

WALL TYPE NOTES:

- DRYWALL PARTITIONS SHOULD BE CONSTRUCTED IN ACCORDANCE WITH ASTM E487 - 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 SHOULD MUST NOT RIGIDLY CONNECT TO BOTH METAL STUD WALLS.
- RE: LIFE SAFETY PLAN(S) FOR RATED WALL LOCATIONS.
- RE: WALL TYPE DETAIL SHEET FOR TYPICAL WALL DETAILS AND ADDITIONAL WALL TYPE INFORMATION.
- FOR TYPICAL TOP OF WALL CONDITIONS AT JOISTS AND BEAMS, REFER TO THE CLOSURE DETAILS ON THE WALL TYPE DETAILS SHEET.
- 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.
- 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.
- EXTEND FIRE-RATED WALL CONSTRUCTION BEHIND RECESSED OR BUILT-IN EQUIPMENT, SUCH AS FIRE EXTINGUISHER CABINETS (FE), ELECTRICAL, WATER COOLERS (EWC), ELECTRICAL PANELS, ETC., UNLESS NOTED OTHERWISE.
- 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.
- 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.
- THERE SHALL BE NO BACK-TO-BACK ELECTRICAL, TELEPHONE, OR OTHER OUTLETS, EXCEPT WHERE SPECIFICALLY SHOWN.
- WALL BASE IS NOT SHOWN ON ALL WALL TYPES FOR CLARITY. REFER TO FINISH SCHEDULE.
- PROVIDE GLASS/MAT: WATER RESISTANT BACKING BOARD AT ALL WET LOCATIONS.
- EXCEPT AT FIRE-RATED PARTITIONS, ALL WALL AND COLLUM GYPSUM BOARD FACING SHALL BE HELD AT 58 INCH BELOW STRUCTURE, UNLESS NOTED OR SHOWN OTHERWISE.
- PROVIDE AND INSTALL BLOCKING REQUIRED FOR ALL A.V. EQUIPMENT. G.C. TO COORDINATE WITH TI CONSULTANT FOR FINAL LOCATIONS AND SIZE REQUIREMENTS.
- 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.

WALL TYPE AA

INSTALL FIRESAFING INSULATION TO SEAL TOP OF WALL (RATED WALLS ONLY)

BOTTOM OF DECK RE: STRUCTURAL

2X WOOD TOP PLATE

CEILING HEIGHT RE: RCP (WHERE REQ'D)

5/8" GYP. BD. EACH SIDE

3 1/2" SOUND BATT INSULATION (WHERE REQ'D)

2X WOOD SILL PLATE

FLOOR

TYPE	WALL DESCRIPTION
AA	2X4 WOOD STUD @ 16" O.C. TO DECK ABOVE 5/8" TYPE "X" GYP. BD. EACH SIDE TO DECK ABOVE - NO SOUND BATT INSUL. - NON RATED

WALL TYPE BB

INSTALL FIRESAFING INSULATION TO SEAL TOP OF WALL (RATED WALLS ONLY)

BOTTOM OF DECK RE: STRUCTURAL

2X TOP PLATE

CEILING HEIGHT RE: RCP (WHERE REQ'D)

5/8" GYP. BD. EACH SIDE

6" SOUND BATT INSULATION (WHERE REQ'D)

2X SILL PLATE

FLOOR

TYPE	WALL DESCRIPTION
BB	2X6 WOOD STUD @ 16" O.C. TO DECK ABOVE 5/8" TYPE "X" GYP. BD. EACH SIDE TO DECK ABOVE - BATT INSUL. - NON RATED

WALL TYPE EE

AS REQUIRED PER WALL TYPE

EXISTING WALL

CEILING HEIGHT RE: RCP (WHERE REQ'D)

5/8" GYP. BD. (OR TILE BACKER & TILE) ON ROOM SIDE, RE: FINISH PLANS FOR TILE LOCATIONS.

METAL STUD / HAT CHANNEL @ 16" O.C.

SOUND BATT INSULATION (WHERE REQ'D)

METAL RUNNERS TOP AND BOTTOM

ROOM SIDE

FLOOR

TYPE	WALL DESCRIPTION
EE	7/8" HAT CHANNEL @ 16" O.C. TO DECK ABOVE 5/8" TYPE "X" GYP. BD. ONE SIDE TO DECK ABOVE - NO SOUND BATT INSUL. - NON RATED
EE1	2X4 WOOD STUD @ 16" O.C. TO DECK ABOVE 5/8" TYPE "X" GYP. BD. ONE SIDE TO DECK ABOVE - NO SOUND BATT INSUL. - NON RATED

6B KEY PLAN
1/64" = 1'-0"

TENANT
IMPROVEMENT AREA
AREA
1,075 S.F.

3B 1ST FLOOR - LIFE SAFETY
1/8" = 1'-0"

www.collinsandwebb.com

3078 SW Market Street, Lees Summit, Missouri 64063 | 816.249.2270

PERMIT SET - CITY COMMENTS

JOHN KNOX VILLAGE - SALON

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REVISION DATES:

1 City Comments 05/26/2023

PROFESSIONAL SEAL

G003

ISSUE DATE: 03 MAY 2023
COLLINS WEBB #: 22118

LIFE SAFETY PLANS AND
PROJECT INFO.

SPECIFICATIONS - PRODUCT & INSTALLATION GENERAL REQUIREMENTS

- 08 3100 - ACCESS DOORS AND PANELS
- A. SUBMITTALS: PRODUCT DATA.
- B. PRODUCTS: PRIME-PAINTED FLUSH, UNINSULATED ACCESS DOORS FOR WALLS AND CEILINGS WITH TRAILLESS FRAME AND SCREWDRIVER OPERATED LOCK FLUSH WITH FINISHED SURFACE. FIRE-RATED, SELF-LATCHING, AUTOMATIC CLOSING AT FIRE-RATED WALLS OR CEILINGS.
- C. INSTALLATION: INSTALL FLUSH TO FINISHED DRYWALL SURFACE WITH FRAME TAPED AND SANDED FLUSH WITH WALL OR CEILING SURFACE AND FINISH TO MATCH ADJACENT SURFACE.

08 4311 - ALUMINUM FRAMED STOREFRONTS

- A. SUBMITTALS: PRODUCT DATA: PROVIDE COMPONENT DIMENSIONS, DESCRIBE COMPONENTS WITH ASSEMBLY, ANCHORAGE AND FASTENERS, GLASS AND INFILL, DOOR HARDWARE, INTERNAL DRAINAGE DETAILS.
1. HARDWARE SCHEDULE: COMPLETE ITEMIZATION OF EACH ITEM OF HARDWARE TO BE PROVIDED FOR EACH DOOR, CROSS-REFERENCED TO DOOR IDENTIFICATION NUMBERS IN CONTRACT DOCUMENTS.
2. SHOP DRAWINGS: INDICATE SYSTEM DIMENSIONS, FRAMED OPENING REQUIREMENTS AND TOLERANCES, AFFECTED RELATED WORK, EXPANSION AND CONTRACTION JOINT LOCATION AND DETAILS, AND FIELD WELDING REQUIRED.
- B. WARRANTY: WARRANTY: SUBMIT MANUFACTURER WARRANTY AND ENSURE FORMS HAVE BEEN COMPLETED IN OWNER'S NAME AND REGISTERED WITH MANUFACTURER.
1. CORRECT DEFECTIVE WORK WITHIN A FIVE YEAR PERIOD AFTER DATE OF SUBSTANTIAL COMPLETION.
2. PROVIDE FIVE YEAR MANUFACTURER WARRANTY AGAINST FAILURE OF GLASS SEAL ON INSULATING GLASS UNITS, INCLUDING INTERPANE DUSTING OR MISTING, INCLUDING PROVISION FOR REPLACEMENT OF FAULED UNITS.
3. PROVIDE FIVE YEAR MANUFACTURER WARRANTY AGAINST EXCESSIVE DEGRADATION OF EXTERIOR FINISH, INCLUDING PROVISION FOR REPLACEMENT OF UNITS WITH EXCESSIVE FADING, CHALKING, OR FLAKING.
- C. BASIS OF DESIGN: KAWNEER, ENCORE-MEDIUM STYLE, ANODIZED VERIFIED AS 'BASIS OF DESIGN' OR AN EQUIVALENT PRODUCT.
- D. MATERIALS:
1. ALUMINUM-FRAMED STOREFRONT: FACTORY FABRICATED, FACTORY FINISHED ALUMINUM FRAMING MEMBERS WITH INFILL AND RELATED FLASHINGS, ANCHORAGE AND ATTACHMENT DETAILS.
2. ALUMINUM FRAMING MEMBERS: TUBULAR ALUMINUM SECTIONS<=, DRAINAGE HOLES AND INTERNAL WEEP DRAINAGE SYSTEM.
3. EXTRUDED ALUMINUM: ASTM B221 (ASTM B221M).
4. STRUCTURAL STEEL SECTIONS: ASTM A36/A36M; SHOP PRIMED.
5. FASTENERS: STAINLESS STEEL.
6. CONCEALED FLASHINGS: STAINLESS STEEL, 26 GAUGE, 0.0187 INCH MINIMUM THICKNESS.
7. SEALANT FOR SETTING THRESHOLDS: NON CURING BUTYL TYPE.
8. GLAZING GASKETS: TYPE TO SUIT APPLICATION TO ACHIEVE WEATHER, MOISTURE, AND AIR INFILTRATION REQUIREMENTS.
- E. FINISHES:
1. CLASS COAT ANODIZED FINISH: AAIA 611A-M1222444 ELECTROLYTICALLY DEPOSITED COLORED ANODIC COATING NOT LESS THAN 0.7 MILS THICK, COLOR AS SELECTED BY OWNER & ARCHITECT.
- F. HARDWARE:
1. FOR EACH DOOR, INCLUDE WEATHERSTRIPPING, SELF SWEEP STRIP, AND THRESHOLD.
2. OTHER DOOR HARDWARE: STOREFRONT MANUFACTURER'S STANDARD TYPE TO SUIT APPLICATION.
- A. FINISH ON HAND-CONTACTED ITEMS: POLISHED CHROME.
- B. FOR EACH DOOR, INCLUDE BUTT HINGES, PUSH, PULL HANDLE, PULL HANDLE, EXIT DEVICE, NARROW STYLE HANDLE LATCH, AND CLOSER, COORDINATE ADA PUSH BUTTON LOCATION.
- G. INSTALLATION:
1. VERIFY DIMENSIONS, TOLERANCES, AND METHOD OF ATTACHMENT WITH OTHER WORK.
2. VERIFY THAT WALL OPENINGS AND ADJOINING AIR AND VAPOR SEAL MATERIALS ARE READY TO RECEIVE WORK OF THIS SECTION.
3. INSTALL WALL SYSTEM IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.
4. ATTACH TO STRUCTURE TO PERMIT SUFFICIENT ADJUSTMENT TO ACCOMMODATE CONSTRUCTION TOLERANCES, AND OTHER IRREGULARITIES.
5. ALUM ASSEMBLY PLUMB AND LEVEL, FREE OF WARP OR TWIST, MAINTAIN ASSEMBLY DIMENSIONAL TOLERANCES, ALIGNING WITH ADJACENT WORK.
6. PROVIDE THERMAL ISOLATION WHERE COMPONENTS PENETRATE OR DISRUPT BUILDING INSULATION.
7. INSTALL SILL FLASHINGS, TURN UP ENDS AND EDGES; SEAL TO ADJACENT WORK TO FORM WATER TIGHT DAM.
8. WHERE FASTENERS PENETRATE SILL FLASHINGS, MAKE WATER TIGHT BY SEALING AND SEALING FASTENER HEADS TO SILL FLASHING.
9. PACK FIBROUS INSULATION IN SHIM SPACES AT PERIMETER OF ASSEMBLY TO MAINTAIN CONTINUITY OF THERMAL BARRIER.
10. SET THRESHOLDS IN BED OF SEALANT AND SECURE.
11. INSTALL HARDWARE USING TEMPLATES PROVIDED; ADJUST OPERATING HARDWARE AND GASH FOR SMOOTH OPERATION.
12. WASH DOWN SURFACES WITH A SOLUTION OF MILD DETERGENT IN WARM WATER, APPLIED WITH SOFT, CLEAN WIPING CLOTHS, AND TAKE CARE TO REMOVE DIRT ON CORNERS AND TO WIPE SURFACES CLEAN.
13. PROTECT INSTALLED PRODUCTS FROM DAMAGE UNTIL DATE OF SUBSTANTIAL COMPLETION.

08 9611 - DOOR HARDWARE

- A. SUBMITTALS: PRODUCT DATA AND HARDWARE SCHEDULE INDICATING HARDWARE ITEM, FINISH, AND QUANTITY LOCATED ON EACH DOOR WITH DOOR AND HARDWARE SET NUMBERING CORRESPONDING TO THOSE USED IN CONSTRUCTION DOCUMENTS; REFER TO ARCHITECTURAL PLANS AND HARDWARE SCHEDULES PROVIDED.
1. HARDWARE SUPPLIER SHALL SUBMIT FOUR COPIES OF FINAL HARDWARE SCHEDULE AT EARLIEST POSSIBLE DATE, PARTICULARLY WHERE ACCEPTANCE OF HARDWARE SCHEDULE MUST PRECEDE FABRICATION OF OTHER WORK WHICH IS CRITICAL IN THE PROJECT CONSTRUCTION SCHEDULE. INCLUDE WITH SCHEDULE SHOP DRAWINGS OF OTHER WORK AFFECTED BY BUILDERS HARDWARE, AND OTHER INFORMATION ESSENTIAL TO THE COORDINATE REVIEW OF HARDWARE SCHEDULE.
2. KEYING SCHEDULE: SUBMIT SEPARATE DETAILED SCHEDULE INDICATING CLEARLY HOW THE OWNER'S FINAL INSTRUCTIONS ON KEYING OF LOCKS HAVE BEEN FULFILLED, ALL KEYING SHALL BE COORDINATED WITH THE OWNER.
- B. PRODUCTS: CONTRACTOR TO COORDINATE HARDWARE SELECTION WITH OWNER, REFER TO ARCHITECTURAL DRAWINGS.
1. STRIKES: PROVIDE MANUFACTURER'S STANDARD WROUGHT BOX STRIKE FOR EACH LATCH OR LOCK BOLT, WITH CURVED UP EXTENDED TO PROTECT FRAME. FINISH TO MATCH HARDWARE SET. PROVIDE STANDARD OPEN) STRIKE PLATES FOR INTERIOR DOORS WHERE WOOD DOOR FRAMES ARE USED.
2. IN GENERAL, HARDWARE FINISH SHALL BE U515 (SATIN NICKEL) UNLESS SPECIFIED DIFFERENTLY ON HARDWARE SCHEDULE.
3. SUPPLY CAL ROYAL, 100% FLEXIBLE DOOR HINGES IN THE APARTMENT DWELLING UNITS. USE 2 INP-23 HINGE STOPS WHERE FLEXIBLE STOPS CANNOT BE USED.
4. SUPPLY OUT SWINGING EXTERIOR DOORS WITH NON REMOVABLE PINS.
- C. INSTALLATION:
1. MOUNT HARDWARE UNITS AT HEIGHTS INDICATED IN 'RECOMMENDED LOCATIONS FOR BUILDERS HARDWARE' FOR STANDARD STEEL DOORS AND FRAMES BY THE DOOR AND HARDWARE INSTITUTE, EXCEPT AS SPECIFICALLY INDICATED OR REQUIRED TO COMPLY WITH GOVERNING REGULATIONS, AND EXCEPT AS MAY BE OTHERWISE DIRECTED BY ARCHITECT. MOUNT HARDWARE IN UNITS DESIGNATED FOR USE BY THE HANDICAPPED AT HEIGHTS RECOMMENDED FOR USE BY THE HANDICAPPED.
2. INSTALL EACH HARDWARE ITEM IN COMPLIANCE WITH THE MANUFACTURER'S INSTRUCTIONS AND RECOMMENDATIONS. WHEREVER CUTTING AND FITTING IS REQUIRED TO INSTALL HARDWARE ONTO OR INTO SURFACES WHICH ARE LATER TO BE PAINTED OR FINISHED IN ANOTHER WAY, COORDINATE REMOVAL, STORAGE AND REINSTALLATION OR APPLICATION OF SURFACE PROTECTIONS WITH FINISHING WORK SPECIFIED IN THE DIVISION 9 SECTIONS. DO NOT INSTALL SURFACE MOUNTED UNITS UNTIL FINISHES HAVE BEEN COMPLETED ON THE SUBSTRATE.
3. SET UNITS LEVEL, PLUMB AND TRUE TO LINE AND LOCATION. ADJUST AND REINFORCE THE ATTACHMENT SUBSTRATE AS NECESSARY FOR PROPER LOCATION AND OPERATION.
4. DRILL AND INTERLOCK UNITS IN OWNERS NAME AND REGISTERED WITH MANUFACTURER.
5. FASTENERS AND ANCHORS IN ACCORDANCE WITH INDUSTRY STANDARDS.
6. META THRESHOLDS SHALL BE SET IN A SOLID BED OF NON STAINING THOROL, BASE CALLING.
6. ADJUST AND CHECK EACH OPERATING ITEM OF HARDWARE AND EACH DOOR, TO ENSURE PROPER OPERATION OR FUNCTION OF EVERY UNIT. REPLACE UNITS WHICH CANNOT BE ADJUSTED TO OPERATE FREELY AND SMOOTHLY AS INTENDED FOR THE APPLICATION MADE.
7. FINAL ADJUSTMENT: WHEREVER HARDWARE INSTALLATION IS MADE MORE THAN ONE MONTH PRIOR TO ACCEPTANCE OR OCCUPANCY OF A SPACE OR AREA, RETURN TO THE WORK DURING THE WEEK PRIOR TO ACCEPTANCE OR OCCUPANCY, AND MAKE FINAL CHECK AND ADJUSTMENT OF ALL HARDWARE ITEMS IN SUCH SPACE OR AREA. CLEAN OPERATING ITEMS AS NECESSARY TO RESTORE PROPER FUNCTION AND TO PROTECT HARDWARE AND DOORS. ADJUST DOOR CONTROL DEVICES TO COMPENSATE FOR FINAL OPERATION OF HEATING AND VENTILATING EQUIPMENT.

08 8000 - GLAZING

- A. SUBMITTALS: PRODUCT DATA ON INSULATING GLASS UNIT, GLAZING UNIT, AND (SPANDREL) GLAZING TYPES, PROVIDE STRUCTURAL, PHYSICAL AND ENVIRONMENTAL CHARACTERISTICS, SIZE LIMITATIONS, SPECIAL HANDLING AND INSTALLATION REQUIREMENTS.
1. PRODUCT DATA ON GLAZING COMPOUNDS AND ACCESSORIES: PROVIDE MECHANICAL, FUNCTIONAL, AND ENVIRONMENTAL CHARACTERISTICS, LIMITATIONS, SPECIAL APPLICATION REQUIREMENTS, AND IDENTIFY AVAILABLE COLORS.
2. SAMPLES: SUBMIT TWO SAMPLES [1/2] BY 1/2 INCH IN SIZE OF GLASS UNITS.
- B. WARRANTY: WARRANTY DOCUMENTATION: SUBMIT MANUFACTURER WARRANTY AND ENSURE THAT FORMS HAVE BEEN COMPLETED IN OWNERS NAME AND REGISTERED WITH MANUFACTURER.
1. INSULATING GLASS UNITS: PROVIDE A FIVE (5) YEAR MANUFACTURER WARRANTY TO INCLUDE COVERAGE FOR SEAL FAILURE, INTERPANE DUSTING OR MISTING, INCLUDING PROVIDING PRODUCTS TO REPLACE FAILED UNITS.
- C. STOREFRONT GLAZING BASIS OF DESIGN: GARDON-SUNGUARD , SKN 6227 , COATED GLASS, CLEAR, WITH 24 U-VALUE ARGON FILLED.
- D. SAFETY STANDARDS:
1. QUALITY GLASS: CATEGORY II MATERIALS COMPLYING WITH TESTING REQUIREMENTS IN 16 CFR 1201 AND 1202.1.
2. GLAZING PUBLICATIONS: WHERE APPLICABLE, COMPLY WITH THE PUBLISHED RECOMMENDATIONS OF THE FOLLOWING:
- A. CANA PUBLICATIONS: "GLAZING MANUAL" AND "LAMINATED GLASS DESIGN GUIDE".
- B. SIGMA PUBLICATIONS: SIGMA TM-3000, "VERTICAL GLAZING GUIDELINES".
- E. GLASS:
1. FLOAT GLASS: ASTM C 1036, TYPE I, QUALITY A3.
2. HEAT-TREATED FLOAT GLASS: ASTM C 1048, TYPE I, QUALITY A3, HEAT STRENGTHENED OR FULLY TEMPERED WHERE INDICATED AND WHERE REQUIRED BY CODE OR INSTALLATION CONDITIONS.
3. MIRROR GLASS: ASTM C 1036, TYPE I, CLASS 1, QUALITY A1, SILVER COATED PER FS D6M41HC, 1/8 INCH THICK, WITH EDGES FLAT POLISHED.
- F. FABRICATED GLASS PRODUCTS:
1. SEALED INSULATING-GLASS UNITS: PREASSEMBLED UNITS COMPLYING WITH ASTM E 774 FOR GLASS CBA UNITS WITH TWO SHEETS OF GLASS SEPARATED BY A 1/2-INCH DEHYDRATED SPACE FILLED WITH AIR. EXTERIOR GLASS COAT TO MATCH EXISTING. INTERIOR GLASS SHALL BE CLEAR.
- G. INSTALLATION:
1. COMPLY WITH COMBINED RECOMMENDATIONS OF MANUFACTURERS OF GLASS, SEALANTS, GASKETS, AND OTHER GLAZING MATERIALS, UNLESS MORE STRINGENT REQUIREMENTS ARE CONTAINED IN GANAS' GLAZING MANUAL.
2. SET GLASS UNITS IN EACH SERIES WITH UNIFORM PATTERN, DRAIN, BOW, AND SIMILAR CHARACTERISTICS.
3. AFTER GLASS INSTALLATION IS COMPLETE, REMOVE GLAZING MATERIALS AND LABELS FROM FINISHED SURFACES, AND THOROUGHLY CLEAN GLASS AND ADJACENT FRAMING AND SURFACES. REPEAT AS NECESSARY PRIOR TO FINAL WALL-THROUGH.

08 8100 - MIRRORS

- A. SUBMITTALS: FOR EACH TYPE OF PRODUCT INDICATED THE CONTRACTOR SHALL PREPARE, AND SUBMIT TO THE ARCHITECT FOR APPROVAL, COMPLETE SHOP DRAWINGS, INCLUDING MIRROR ELEVATIONS, EDGE DETAILS, MIRROR HARDWARE, AND ATTACHMENT TO OTHER WORK, WARRANTY, SAMPLES OF SPECIAL WARRANTY.
- B. QUALITY ASSURANCE: VINYL CASSEMENT WINDOWS: BASIS OF DESIGN: N 3500 VINYL SINGLE - HUNG WINDOWS. 1. GLAZING PUBLICATIONS: COMPLY WITH GANAS' GLAZING MANUAL; AND 'MIRRORS: HANDLE WITH EXTREME CARE.' TIPS FOR THE PROFESSIONAL ON THE CARE AND HANDLING OF MIRRORS. 2. SAFETY GLAZING PRODUCTS: FOR MIRRORS, PROVIDE PRODUCTS COMPLYING WITH TESTING REQUIREMENTS IN 16 CFR 1201 FOR CATEGORY II MATERIALS. 3. PRECONSTRUCTION MIRROR MASTIC COMPATIBILITY TEST: SUBMIT MIRROR MASTIC PRODUCTS TO MIRROR MANUFACTURER FOR TESTING TO DETERMINE COMPATIBILITY OF MASTIC WITH MIRROR BACKING AND SUBSTRATES ON WHICH MIRRORS ARE INSTALLED.
- C. WARRANTY: SPECIAL WARRANTY: MANUFACTURER'S STANDARD FORM IN WHICH MIRROR MANUFACTURER AGREES TO REPLACE MIRRORS THAT DETERIORATE WITHIN SPECIFIED WARRANTY PERIOD. DETERIORATION OF MIRRORS IS DEFINED AS DEFECTS DEVELOPED FROM NORMAL USE THAT ARE NOT ATTRIBUTED TO MIRROR BREAKAGE OR TO MAINTENANCE OR CLEANING. MIRROR SUBSTITUTIONS TO BE SELECTED BY ARCHITECT AND OWNER. 1. TYPICAL INTERIOR INSTALLATIONS: STANDARD CEMENT GROUT WITH INTEGRAL STAIN INHIBITORS (TEC ACCUJOLUR XT, OR EQUAL) 3. SETTING BED ACCESSORIES: ANSI A 108.14.
- D. BASIS OF DESIGN: SILVERED FLAT GLASS MIRRORS
1. GLASS MIRRORS, GENERAL: ASTM C 1503; MANUFACTURING USING COPPER FREE, LOW LEAD MIRROR COATING PROCESS.
2. CLEAR GLASS: MIRROR GLAZING QUALITY, ULTRACLEAR (LOW IRON) FLOAT GLASS WITH A MINIMUM 91 PERCENT VISIBLE LIGHT TRANSMISSION, NOMINAL THICKNESS: 1/4 INCH.
3. TEMPERED CLEAR GLASS: MIRROR GLAZING QUALITY, FOR BLEMISH RESISTANCE; AND COMPLY WITH ASTM C 1048 FOR FOT, CONDITION A, TEMPERED FLOAT GLASS BEFORE SILVER COATING IS APPLIED; NOMINAL THICKNESS: 1/4 INCH.
- E. MIRROR HARDWARE: TOP AND BOTTOM ALUMINUM J CHANNELS: ALUMINUM EXTRUSIONS WITH A RETURN DEEP ENOUGH TO PRODUCE A GLAZING CHANNEL TO ACCOMMODATE MIRRORS OF THICKNESS INDICATED AND IN LENGTHS REQUIRED TO COVER BOTTOM AND TOP EDGES OF EACH MIRROR IN A SINGLE PIECE. FINISH: CLEAR BRIGHT ANODIZED.
- F. INSTALLATION: GENERAL: GENERAL: OVER WHICH MIRRORS ARE TO BE MOUNTED, WITH INSTALLER PRESENT, FOR COMPLIANCE WITH INSTALLATION INSTRUCTIONS, SUBSTRATE PREPARATION, AND OTHER CONDITIONS AFFECTING PERFORMANCE. INSTALLATION SHALL BE IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS TO VERIFY COMPATIBILITY WITH AND SUITABILITY OF SUBSTRATES, INCLUDING COMPATIBILITY OF MIRROR MASTIC WITH EXISTING FINISHES OR PRIMERS.
2. PROCEED WITH INSTALLATION ONLY AFTER UNSATISFACTORY CONDITIONS HAVE BEEN CORRECTED AND SURFACES ARE DRY.
3. INSTALL MIRRORS TO COMPLY WITH MIRROR MANUFACTURER'S WRITTEN INSTRUCTIONS AND WITH REFERENCED GANAS PUBLICATIONS. MOUNT MIRRORS ACCURATELY IN PLACE IN A MANNER THAT AVOIDS DISTORTING REFLECTED IMAGES.
4. INSTALL WALL MOUNTED ANNEALED GLASS MIRRORS IN THE APARTMENT UNITS WITH MIRROR CLIPS. ATTACH MIRROR HARDWARE SECURELY TO MOUNTING SURFACES WITH MECHANICAL FASTENERS INSTALLED WITH 5. ANCHORS OR INSERTS AS APPLICABLE. INSTALL FASTENERS SO HEADS DO NOT IMPOSE POINT LOADS ON BACKS OF MIRRORS.
6. PROTECT MIRRORS FROM BREAKAGE AND CONTAMINATING SUBSTANCES RESULTING FROM CONSTRUCTION OPERATIONS.
7. MAINTAIN ENVIRONMENTAL CONDITIONS THAT WILL PREVENT MIRRORS FROM BEING EXPOSED TO MOISTURE FROM CONDENSATION OR OTHER SOURCES OF MOISTURE. PROVIDE PROTECTION FOR MIRRORS DURING CONSTRUCTION.
8. WASH EXPOSED SURFACE OF MIRRORS NOT MORE THAN FOUR DAYS BEFORE DATE SCHEDULED FOR INSPECTIONS THAT ESTABLISH DATE OF SUBSTANTIAL COMPLETION. WASH MIRRORS AS RECOMMENDED IN WRITING BY MIRROR MANUFACTURER.

DIVISION 09 - FINISHES

09 2116 - GYPSUM BOARD ASSEMBLIES

- A. STEEL FRAMING MEMBERS: COMPLY WITH ASTM C754 IN DEPTHS AND GAGES AS INDICATED IN THE CONSTRUCTION DRAWINGS AND AS FOLLOWS:
1. STEEL SHEET COMPONENTS: COMPLY WITH ASTM C845 WITH MANUFACTURER'S STANDARD CORROSION-RESISTANT ZINC COATING.
2. TIE WIRE: ASTM A 618/A 618M, CLASS 1, ZINC COATING, SOFT TEMPER, .0625" DIAMETER OR DOUBLE STRAND OF .0475 DIAMETER WIRE.
3. WIRE HANGERS: ASTM A 618/A 618M, CLASS 1, ZINC COATING, SOFT TEMPER, .0162" DIAMETER.
- B. PANEL PRODUCTS: PROVIDE IN THICKNESS AND END FINISH INDICATED IN THE CONSTRUCTION DRAWINGS IN MAXIMUM LENGTHS AVAILABLE TO MINIMIZE END-TO-END BUTT JOINTS AND AS FOLLOWS:
1. GYPSUM WALLBOARD: ASTM C 36, TYPE X WITH TAPERED EDGES, 5/8-INCH, 14-REGISTANT TYPE FOR CEILING SURFACES.
2. WATER-RESISTANT GYPSUM BACKING BOARD: ASTM C 635, TYPE X ON ALL TOILET ROOM AND SHOWER ROOM WALLS, BEHIND ALL PLUMBING FIXTURES, AND AS INDICATED.
- C. ACCESSORIES:
1. TRIM: ASTM F140, FORMED FROM GALVANIZED OR ALUMINUM COATED STEEL SHEET, ROLLED ZINC, OR PLASTIC.
2. FASTENERS: PROVIDE CORNER BEND UNLESS NOTED OTHERWISE.
3. EXPOSED PANEL EDGES: PROVIDE BEAD SEALANT BEHIND BEAD UNLESS NOTED OTHERWISE. USE TEAR-AWAY BEAD WHERE GYP. BO. MEETS WINDOW FRAMES OR CEILING GRID.
4. CONTROL JOINTS: PROVIDE WHERE INDICATED OR APPROXIMATELY 30'-0" MAX. CONTACT ARCHITECT FOR LOCATION AND COORDINATION.
5. SOUND-ATTENUATION BARRIETS: ASTM C 695, TYPE I (UNPAINTED).
6. ACoustICAL SEALANT: COMPLY WITH ASTM C 834, NONSAP, PAINTABLE, NONSTAINING LATEX.
- D. INSTALLATION:
1. FRAMING: COMPLY WITH ASTM C 754 AND ASTM C 840 AND WITH U.S. GYPSUM'S "GYPSUM CONSTRUCTION HANDBOOK" ISOLATE FIRE PROTECTION DETAILS, TYPES AND LOCATION OF FASTENERS, TRANSFER OF LOADING IMPOSED BY STRUCTURAL, MOVEMENT AND PROVIDE BRACING AS NECESSARY FOR PROPER SUPPORT WHETHER INDICATED OR NOT.
2. GYPSUM BOARD: PROVIDE IN THICKNESS AND END FINISH INDICATED IN THE CONSTRUCTION DRAWINGS AND AS FOLLOWS:
- A. LEVEL 1 (EMBED TAPE AT JOINTS): AT CONCEALED AREAS UNLESS A HIGHER LEVEL IS INDICATED OR REQUIRED BY OTHER CONDITIONS.
- B. LEVEL 2 (EMBED TAPE AND APPLY SEPARATE FIRST COAT OF JOINT COMPOUND TO TAPE, FASTENERS, AND TRIM FLANGES AND SAND SMOOTH AFTER EACH COAT) AT JOINT COMPOUND OVER ENTIRE SURFACE AND SAND SMOOTH AFTER EACH COAT) AT ALL WALLS RECEIVING SEMI-GLOSS OR GLOSS SHEEN PAINT, AND ALL GYPSUM BOARD (CEILINGS).
3. SET UNITS LEVEL, PLUMB AND TRUE TO LINE AND LOCATION. ADJUST AND REINFORCE THE ATTACHMENT SUBSTRATE AS NECESSARY FOR PROPER LOCATION AND OPERATION.
4. DRILL AND INTERLOCK UNITS IN OWNERS NAME AND REGISTERED WITH MANUFACTURER.
5. FASTENERS AND ANCHORS IN ACCORDANCE WITH INDUSTRY STANDARDS.
6. META THRESHOLDS SHALL BE SET IN A SOLID BED OF NON STAINING THOROL, BASE CALLING.
6. ADJUST AND CHECK EACH OPERATING ITEM OF HARDWARE AND EACH DOOR, TO ENSURE PROPER OPERATION OR FUNCTION OF EVERY UNIT. REPLACE UNITS WHICH CANNOT BE ADJUSTED TO OPERATE FREELY AND SMOOTHLY AS INTENDED FOR THE APPLICATION MADE.
7. FINAL ADJUSTMENT: WHEREVER HARDWARE INSTALLATION IS MADE MORE THAN ONE MONTH PRIOR TO ACCEPTANCE OR OCCUPANCY OF A SPACE OR AREA, RETURN TO THE WORK DURING THE WEEK PRIOR TO ACCEPTANCE OR OCCUPANCY, AND MAKE FINAL CHECK AND ADJUSTMENT OF ALL HARDWARE ITEMS IN SUCH SPACE OR AREA. CLEAN OPERATING ITEMS AS NECESSARY TO RESTORE PROPER FUNCTION AND TO PROTECT HARDWARE AND DOORS. ADJUST DOOR CONTROL DEVICES TO COMPENSATE FOR FINAL OPERATION OF HEATING AND VENTILATING EQUIPMENT.

09 2216 - NON-STRUCTURAL METAL FRAMING

- A. SUBMITTALS: SHOP DRAWINGS: INDICATE PREFABRICATED WORK, COMPONENT DETAILS, STUDY LOAD, FRAMED DRILL, AND INTERLOCK UNITS IN OWNERS NAME AND REGISTERED WITH MANUFACTURER.
1. ACCESSORIES: PROVIDE CORNER BEND UNLESS NOTED OTHERWISE.
2. EXPOSED PANEL EDGES: PROVIDE BEAD SEALANT BEHIND BEAD UNLESS NOTED OTHERWISE. USE TEAR-AWAY BEAD WHERE GYP. BO. MEETS WINDOW FRAMES OR CEILING GRID.
3. CONTROL JOINTS: PROVIDE WHERE INDICATED OR APPROXIMATELY 30'-0" MAX. CONTACT ARCHITECT FOR LOCATION AND COORDINATION.
4. SOUND-ATTENUATION BARRIETS: ASTM C 695, TYPE I (UNPAINTED).
5. ACoustICAL SEALANT: COMPLY WITH ASTM C 834, NONSAP, PAINTABLE, NONSTAINING LATEX.
- D. INSTALLATION:
1. FRAMING: COMPLY WITH ASTM C 754 AND ASTM C 840 AND WITH U.S. GYPSUM'S "GYPSUM CONSTRUCTION HANDBOOK" ISOLATE FIRE PROTECTION DETAILS, TYPES AND LOCATION OF FASTENERS, TRANSFER OF LOADING IMPOSED BY STRUCTURAL, MOVEMENT AND PROVIDE BRACING AS NECESSARY FOR PROPER SUPPORT WHETHER INDICATED OR NOT.
2. GYPSUM BOARD: PROVIDE IN THICKNESS AND END FINISH INDICATED IN THE CONSTRUCTION DRAWINGS AND AS FOLLOWS:
- A. LEVEL 1 (EMBED TAPE AT JOINTS): AT CONCEALED AREAS UNLESS A HIGHER LEVEL IS INDICATED OR REQUIRED BY OTHER CONDITIONS.
- B. LEVEL 2 (EMBED TAPE AND APPLY SEPARATE FIRST COAT OF JOINT COMPOUND TO TAPE, FASTENERS, AND TRIM FLANGES AND SAND SMOOTH AFTER EACH COAT) AT JOINT COMPOUND OVER ENTIRE SURFACE AND SAND SMOOTH AFTER EACH COAT) AT ALL WALLS RECEIVING SEMI-GLOSS OR GLOSS SHEEN PAINT, AND ALL GYPSUM BOARD (CEILINGS).
3. SET UNITS LEVEL, PLUMB AND TRUE TO LINE AND LOCATION. ADJUST AND REINFORCE THE ATTACHMENT SUBSTRATE AS NECESSARY FOR PROPER LOCATION AND OPERATION.
4. DRILL AND INTERLOCK UNITS IN OWNERS NAME AND REGISTERED WITH MANUFACTURER.
5. FASTENERS AND ANCHORS IN ACCORDANCE WITH INDUSTRY STANDARDS.
6. META THRESHOLDS SHALL BE SET IN A SOLID BED OF NON STAINING THOROL, BASE CALLING.
6. ADJUST AND CHECK EACH OPERATING ITEM OF HARDWARE AND EACH DOOR, TO ENSURE PROPER OPERATION OR FUNCTION OF EVERY UNIT. REPLACE UNITS WHICH CANNOT BE ADJUSTED TO OPERATE FREELY AND SMOOTHLY AS INTENDED FOR THE APPLICATION MADE.
7. FINAL ADJUSTMENT: WHEREVER HARDWARE INSTALLATION IS MADE MORE THAN ONE MONTH PRIOR TO ACCEPTANCE OR OCCUPANCY OF A SPACE OR AREA, RETURN TO THE WORK DURING THE WEEK PRIOR TO ACCEPTANCE OR OCCUPANCY, AND MAKE FINAL CHECK AND ADJUSTMENT OF ALL HARDWARE ITEMS IN SUCH SPACE OR AREA. CLEAN OPERATING ITEMS AS NECESSARY TO RESTORE PROPER FUNCTION AND TO PROTECT HARDWARE AND DOORS. ADJUST DOOR CONTROL DEVICES TO COMPENSATE FOR FINAL OPERATION OF HEATING AND VENTILATING EQUIPMENT.

09 3000 - TILING

- A. SUBMITTALS: PRODUCT DATA FOR SETTING AND GROUTING MATERIALS AND THREE (3) SAMPLES OF EACH TILE SPECIFIED FOR VERIFICATION PURPOSES.
- B. ATTIC STOCK: FURNISH 2% OF EACH TYPE OF CERAMIC TILE PACKAGED WITH PROTECTIVE COVERING AND LABELED FOR STORAGE.
- C. BASIS OF DESIGN: SEE DRAWING SCHEDULES.
- D. TILE: COMPLY WITH STANDARD GAGE REQUIREMENTS IN ANSI A137.1 "SPECIFICATIONS FOR CERAMIC TILE" FOR PRODUCTS AND SIZES INDICATED IN THE CONSTRUCTION DOCUMENTS.
- E. INSTALLATION MATERIALS:
1. THIN SET MORTAR:
- A. TYPICAL INTERIOR INSTALLATIONS: LATEX/POLYMER MODIFIED PORTLAND CEMENT COMPLY WITH ANSI A108 AND ANSI 118.4.
2. GROUT UNANSOED FOR JOINTS 1/8" WIDE OR LESS, SANDED GROUT FOR JOINTS GREATER THAN 1/8" IN COLOR AND/OR TO BE CLEANED. MORTAR TO BE SELECTED BY ARCHITECT AND OWNER.
- A. TYPICAL INTERIOR INSTALLATIONS: STANDARD CEMENT GROUT WITH INTEGRAL STAIN INHIBITORS (TEC ACCUJOLUR XT, OR EQUAL) 3. SETTING BED ACCESSORIES: ANSI A 108.14.
- F. INSTALLATION METHODS: COMPLY WITH THE INSTALLATION STANDARDS IN ANSIS' "SPECIFICATIONS FOR THE INSTALLATIONS OF CERAMIC TILE" AND "CASA" HANDBOOK FOR CERAMIC TILE INSTALLATION" THAT APPLY TO THE MATERIALS AND METHODS INDICATED BELOW.
- G. TERMINATIONS:
1. WHERE CUT TILE IS SPECIFIED AS THE TOP COURSE ON WALL WAINSCOTING OR WALL BASE WITH AN EXPOSED TOP EDGE, THE FACTORY EDGE SHALL BE USED AS THE EXPOSED EDGE.
- H. CONFLICTS: IF NOT ADDRESSED ON DRAWINGS, WHERE ELECTRICAL DEVICES OR TOILET ACCESSORIES STRADDLE THE TRANSITION FROM THE TOP EDGE OF WAINSCOT WALL TO GYPSUM BOARD SUBSTRATE, CONTACT ARCHITECT FOR RESOLUTION.
- I. GROUT JOINTS:
1. JOINT SIZE: SET TILE WITH THE SMALLEST GROUT JOINT ACHIEVABLE AND AS RECOMMENDED BY THE MFR. BASED ON THE TILE PRODUCT AND SUBSTRATE CONDITIONS, UNLESS NOTED OTHERWISE.
2. TILE PATTERN: LAY TILE IN PATTERNS AS INDICATED IN THE CONSTRUCTION DOCUMENTS. ALIGN JOINTS WHERE ADJOINING TILES ON FLOOR, BASE, WALLS, AND TRIM ARE THE SAME SIZE, UNLESS INDICATED OTHERWISE.
3. INSTRUMENT GROUT: GROUT PER MANUFACTURER'S INSTRUCTIONS, EXERCISING CARE TO AVOID REMOVAL OF GROUT COLOR BY USE OF EXCESS WATER DURING INSTALLATION, FADED OR CHALKY GROUT SHALL BE CAUSE FOR REJECTION.
4. SEALER: AFTER FULLY CURED, GROUT SHALL BE SEALED WITH TWO (2) COATS OF COMMERCIAL QUALITY PENETRATING SILICONE SEALER.

09 8100 - ACOUSTICAL CEILINGS

- A. SUBMITTALS: PRODUCT DATA ONLY.
- B. ATTIC STOCK: FURNISH 2% OF EACH TYPE OF CEILING TILE PACKAGED WITH PROTECTIVE COVERING AND LABELED FOR STORAGE.
- C. ACOUSTICAL TILE PRODUCTS: PROVIDE CEILING TILE IN TYPE AND SIZES INDICATED IN THE CONSTRUCTION DOCUMENTS COMPLYING WITH ASTM E 1204, CLASS A MATERIALS, TESTED PER ASTM E 84.
- D. SUSPENSION SYSTEM: PROVIDE HEAVY DUTY, DIRECT-HUNG, SUSPENSION SYSTEMS AS INDICATED IN THE CONSTRUCTION DOCUMENTS COMPLYING WITH ASTM C 635. FURNISH ALUMINUM C-CHAINS, ATTACHMENT DEVICES, SIZE FOR FIVE (5) TIMES THE DESIGN LOAD INDICATED IN ASTM C 635, TABLE 1, DIRECT HUNG UNLESS OTHERWISE INDICATED.
2. WIRE HANGERS, BRACES, AND TIES: ZINC-COATED CARBON-STEEL WIRE, ASTM A 641 (A 641 M), CLASS 1, ZINC COATING, SOFT TEMPER WITH A YIELD STRENGTH AT LEAST THREE (3) TIMES THE HANGER DESIGN LOAD (ASTM C 635, TABLE 1, DIRECT HUNG), BUT NOT LESS THAN 1/3" DIAMETER WIRE.
3. SEMIC STRUTS: MANUFACTURER'S STANDARD PRODUCT DESIGNED TO ACCOMMODATE SEISMIC FORCES.
4. HOLD-DOWN CLIPS: PROVIDE HOLD-DOWN CLIPS ON CEILING TILE AT ENTRANCE VESTIBULES, COMPUTER ROOMS EMPLOYING DRY-CHEMICAL FIRE SUPPRESSION SYSTEMS, AND OTHER AREAS AS INDICATED.
- F. INSTALLATION: COMPLY WITH ASTM C 836 AND CISCAS' "CEILING SYSTEMS HANDBOOK"
1. SEQUENCE WORK TO ENSURE ACOUSTICAL CEILINGS ARE NOT INSTALLED UNTIL BUILDING IS ENCLOSED, SUFFICIENT HEAT IS PROVIDED, DUST GENERATION ACTIVITIES HAVE TERMINATED, AND OVERHEAD WORK IS COMPLETED, TESTED, AND APPROVED.
2. INSTALL CEILING GRID AS INDICATED TO BE SYMMETRICAL ABOUT BOTH AXES OF EACH ROOM UNLESS NOT LESS THAN HALF-SIZE TILE UNLESS INDICATED OTHERWISE ON THE REFLECTED CEILING PLAN.
3. SUPPORT SUSPENSION SYSTEM INDEPENDENTLY OF DUCTS, PIPES, AND CONDUITS.
4. SUPPORT FUTURE LOADS USING SUPPLEMENTARY HANGERS LOCATED WITHIN A FOOT OF EACH DUCT OR SUPPORT FUTURES INDEPENDENTLY.
5. PROVIDE MATCHING PERIMETER MOLDING INSTALLED IN BEAD OF ACQUADOL SEALANT AT ALL LOCATIONS WHERE CEILING INTERSECTS VERTICAL SURFACES. USE MATCHING PRE-FORMED CLOSURES AT ROUND OR CURVED OBSTRUCTIONS.
6. FIELD CUT EDGES SHALL MATCH PATTERN OF FACTORY EDGES.

09 8500 - RESILIENT FLOORING AND WALL BASE

- A. SUBMITTALS: PRODUCT DATA AND (1) SAMPLES OF EACH TILE AND BASE SPECIFIED FOR VERIFICATION PURPOSES.
- B. BASIS OF DESIGN: METEOROL/KONECTO PLAN, PROJECT 54012 OR APPROVED EQUAL.
- C. ATTIC STOCK: FURNISH ONE (1) BOX FOR EACH 30 BOXES OR FLOORING THEREOF OF EACH TYPE OF FLOOR TILE AND 20' OF EACH COLOR AND TYPE OF WALL BASE PACKAGED WITH PROTECTIVE COVERING AND LABELED FOR STORAGE.
- D. RESILIENT TILE PRODUCTS: PROVIDE FLOOR TILE IN TYPE AND SIZES INDICATED IN THE CONSTRUCTION DOCUMENTS COMPLYING WITH THE FOLLOWING:
- E. RESILIENT WALL BASE: ASTM TYPE TS RUBBER, VULCANIZED THERMOSET 1/8" THICK, FURNISHED IN COLS IN STYLES AND SIZES INDICATED IN THE CONSTRUCTION DOCUMENTS WITH JOB-FORMED INSIDE AND OUTSIDE CORNERS.
- F. INSTALLATION ACCESSORIES:
1. LEVELING AND PATCHING COMPOUNDS: LATEX-MODIFIED, PORTLAND CEMENT, OR BLENDED HYDRAULIC CEMENT, MATCHING FORMULATION PROVIDED OR APPROVED BY FLOORING MANUFACTURER TO SUIT RESILIENT PRODUCTS AND SUBSTRATE CONDITIONS.
2. ADHESIVES: WATER-RESISTANT TYPE RECOMMENDED BY MANUFACTURER TO SUIT RESILIENT PRODUCTS AND SUBSTRATE CONDITIONS. SPREAD ONLY ENOUGH ADHESIVE TO PERMIT INSTALLATION OF MATERIALS BEFORE INITIAL SET.
3. MOLDINGS, TRANSITION AND EDGE STRIPS: SAME MATERIAL AS FLOORING.
- G. INSTALLATION:
1. PREPARE CONCRETE SUBSTRATES PER ASTM F 710. VERIFY THAT SUBSTRATES ARE DRY AND FREE OF CURING COMPOUNDS, SEALERS AND HARDENERS.
2. LAY OUT TILES SO WIDTHS AT OPPOSITE EDGES OF ROOM ARE EQUAL AND NOT LESS THAN 1/8" UNLESS OTHERWISE INDICATED.
3. LAY TILES IN PATTERNS INDICATED WITH GRAN DIRECTION ALTERNATING IN ADJACENT TILES, UNLESS NOTED OTHERWISE.
4. PRIME, SEAL, AND WAX RESILIENT FLOORING IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.
- H. WALL BASE AND ACCESSORY INSTALLATION:
1. CONFIRM THAT SOLD BACKING IS PROVIDED BEHIND ALL WALL BASE. AREAS WHERE GYPSUM BOARD IS HELD MORE THAN 1/2" ABOVE SLAB SHALL BE FILLED IN PRIOR TO BASE INSTALLATION.
2. INSTALL WALL BASE TO MATCHED PRODUCERS RECOMMENDED ADHESIVE IN MAXIMUM LENGTHS POSSIBLE. APPLY TO WALLS, COLUMNS, PLASTER, CASEWORK, AND OTHER PERMANENT FIXTURES.
3. INSTALL TRANSITION STRIPS WHERE FLOORING MATERIALS MEET OR WHERE EDGE OF TILE IS EXPOSED AS INDICATED IN THE FINISH SCHEDULE.

09 8813 - TILE CARPETING

- A. SUBMITTALS: PRODUCT DATA AND SAMPLES OF EACH CARPET PRODUCT INDICATED; SUBMIT ACTUAL TILE SAMPLES OF EACH CARPET REQUIRED.
- B. WARRANTY: PROVIDE SPECIAL PRODUCT WARRANTY, SIGNED BY CONTRACTOR, INSTALLER AND MANUFACTURER. CARPET MUST BE REPLACED OR REPLACE DEFECTIVE MATERIALS AND WORKMANSHIP OF CARPETING WORK DURING 1-YEAR WARRANTY PERIOD FOLLOWING SUBSTANTIAL COMPLETION. ATTACH COPIES OF PRODUCT WARRANTIES.
- C. ATTIC STOCK: FURNISH FULL-WIDTH CARPET EQUAL TO 5% OF EACH TYPE AND COLOR CARPET INSTALLED, PACKAGED WITH PROTECTIVE COVERING AND LABELED FOR STORAGE.
- D. PRODUCTS: PROVIDE CARPET IN PATTERNS AND COLORS AND WITH BACKINGS AS INDICATED IN THE CONSTRUCTION DOCUMENTS INCLUDING THE CATEGORICAL RADIAN FLAME CLASSIFICATION CLASS, NOT LESS THAN 0.45 WISQ, CM PER ASTM E 648. ORDER ALL MATERIALS FROM THE SAME FACTORY DYE LOT.
- E. INSTALLATION ACCESSORIES:
1. TROWELABLE LEVELING AND PATCHING COMPOUNDS: LATEX-MODIFIED, HYDRAULIC-CEMENT-BASED FORMULATION PROVIDED OR RECOMMENDED BY CARPET MANUFACTURER.
2. ADHESIVES: WATER-RESISTANT, MILDEW-RESISTANT, NONSTAINING TYPE TO SUIT PRODUCTS AND SUBFLOOR CONDITIONS INDICATED. TEST COMPLES WITH FLAMMABILITY REQUIREMENTS FOR INSTALLED CARPET AND IS RECOMMENDED OR PROVIDED BY CARPET MANUFACTURER.
- F. INSTALLATION: FOR CARPET TILE COMPLY CR 104, SECTION 13 "CARPET MODULES (TILES)";
1. GENERAL: COMPLY WITH CRIS "CR1 CARPET INSTALLATION STANDARD" AND WITH CARPET MANUFACTURER'S WRITTEN INSTALLATION INSTRUCTIONS FOR PREPARING SUBSTRATES.
2. USE TROWELABLE LEVELING AND PATCHING COMPOUNDS, ACCORDING TO MANUFACTURER'S WRITTEN INSTRUCTIONS, TO FILL CRACKS, HOLES, DEPRESSIONS, AND PROTRUSIONS IN SUBSTRATES: FILL OR LEVEL CRACKS, HOLES AND DEPRESSIONS 1/8 INCH WIDE OR WIDER, AND PROTRUSIONS MORE THAN 1/32 INCH UNLESS A MORE STRINGENT REQUIREMENTS ARE REQUIRED BY MANUFACTURER'S WRITTEN INSTRUCTIONS.
3. BROOM AND VACUUM CLEAN SUBSTRATES TO BE COVERED IMMEDIATELY BEFORE INSTALLING CARPET.
4. LAY CARPET TILE IN PATTERN AS INDICATED ON CONSTRUCTION DOCUMENTS AND SO WIDTHS AT OPPOSITE EDGES OF ROOM ARE EQUAL AND NOT LESS THAN HALF-WIDTH.
5. TRIM CARPET NEATLY AND TIGHT TO WALLS AND AROUND INTERRUPTERS.
6. INSTALL PATTERN PARALLEL TO WALLS AND BORDERS UNLESS OTHERWISE INDICATED.
7. DO NOT BRIDGE BUILDING EXPANSION JOINTS WITH CARPET.
8. CUT AND FIT CARPET TO BUTT TIGHTLY TO VERTICAL SURFACES, PERMANENT FIXTURES, AND BUILT-IN FURNITURE INCLUDING CABINETS, PIPES, OUTLETS, EDGES, THRESHOLDS, AND NOSINGS. BEND OR SEAL CUT EDGES AS RECOMMENDED BY CARPET MANUFACTURER.
9. EXTEND CARPET INTO THE SPACES DOOR REVEALS, CLOSERS, OPEN-BOTTOMED OBSTRUCTIONS, REMOVABLE FLANGES, ALCOVES, AND SIMILAR OPENINGS.
10. MAINTAIN REFERENCE MARKERS, HOLES, AND OPENINGS THAT ARE IN PLACE OR MARKED FOR FUTURE CUTTING BY REPEATING ON CARPET AS MARKED ON SUBFLOOR, USE NONPERMANENT, NONSTAINING MARKING DEVICE.
11. PROTECT CARPET AGAINST DAMAGE FROM CONSTRUCTION OPERATIONS AND PLACEMENT OF EQUIPMENT AND FIXTURES DURING THE REMAINDER OF CONSTRUCTION PERIOD. USE PROTECTION METHODS RECOMMENDED IN WRITING BY CARPET MANUFACTURER.

09 9000 - PAINTING AND COATING

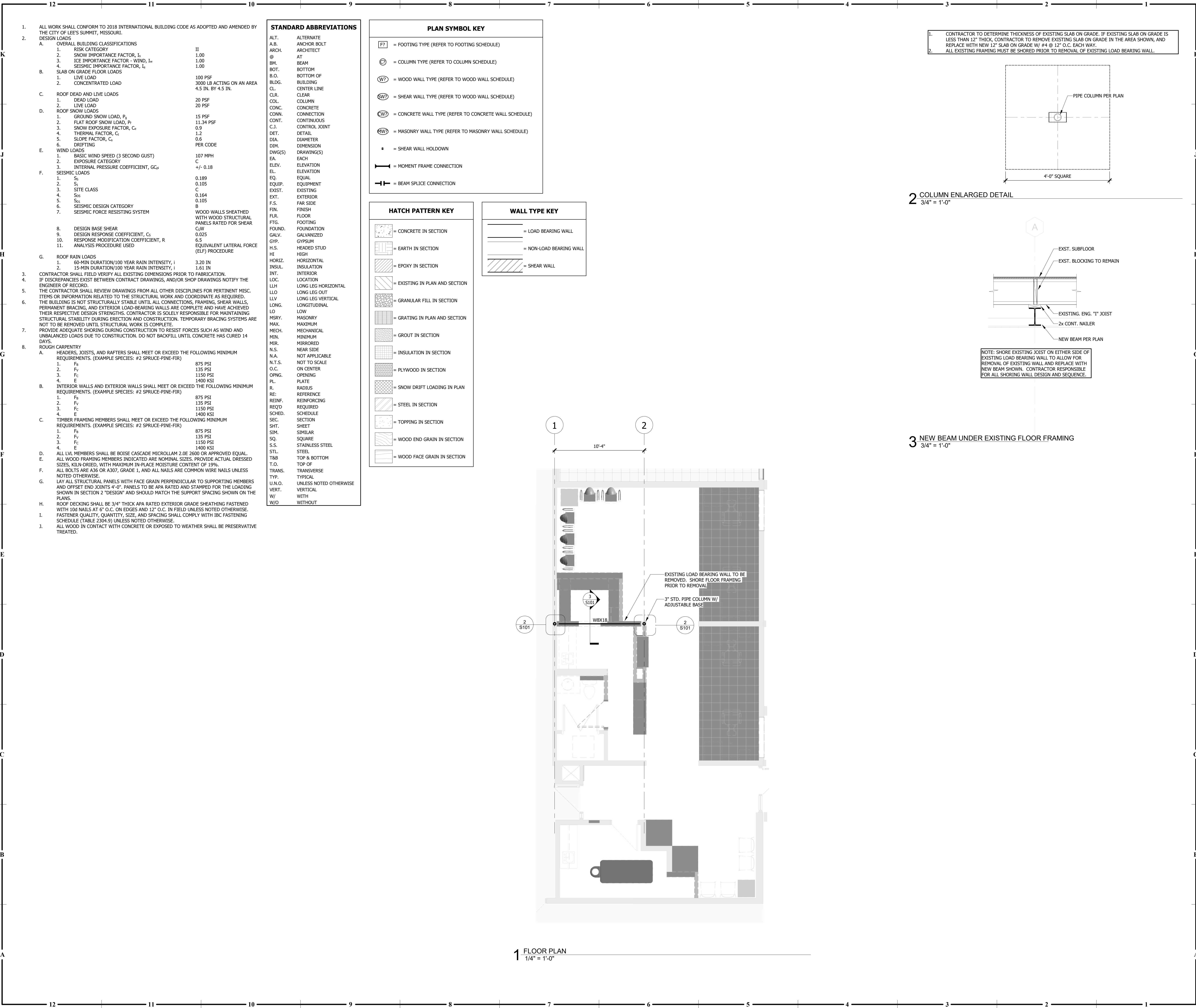
- A. SUBMITTALS: PRODUCT DATA AND THREE (3) DRAW-DOWN SAMPLES OF EACH COLOR AND SHEEN SPECIFIED.
- B. ATTIC STOCK: FURNISH ONE (1) GALLON OF EACH PAINT COLOR AND SHEEN, IN CONTAINERS, PROPERLY LABELED AND SEALED.
- C. PRODUCTS: PROVIDE MANUFACTURER'S BEST QUALITY PAINTS OF COLOR AND SHEEN AS INDICATED IN THE CONSTRUCTION DOCUMENTS THAT ARE FORMULATED AND BLENDED TO MATCH THE COLOR AND FINISHES THAT MANUFACTURER FOR APPLICATION INCLUDING: PROVIDE MATERIALS THAT ARE IDENTICAL TO ONE ANOTHER AND WITH SUBSTRATES.
- D. PAINT SYSTEMS:
1. ALL PAINT STAIN, AND VARNISH SHALL BE PRODUCTS OF DEVCO, KVAL, SHERWIN WILLIAMS, PPG INDUSTRIES, PRATT & LAMBERT OR APPROVED EQUAL.
2. ALL MATERIAL SHALL BE OF THE STANDARD COMMERCIAL GRADE OF THE TYPES DESIGNATED.
3. ALL MATERIAL SHALL BE DELIVERED TO THE JOB SITE IN THE ORIGINAL, UNOPENED, LABELED CONTAINERS. COLORS NOT SPECIFICALLY CALLED FOR IN THE PAINT SCHEDULE WILL BE SELECTED BY THE ARCHITECT.
- E. APPLICATION/INSTALLATION:
1. EQUIPMENT: APPLY COATINGS BY BRUSH, ROLLER, SPRAY, OR OTHER APPLICATORS ACCORDING TO COATING MANUFACTURER'S WRITTEN INSTRUCTIONS. WHEN SPRAYED, EXTERIOR COATINGS SHALL BE BACK-ROLLED FOLLOWING SPRAY APPLICATION. USE ROLLERS FOR FINISH COAT ON INTERIOR WALLS AND CEILINGS.
2. PIGMENT (OPAQUE) FINISHES: COMPLETELY COVER SURFACES TO PROVIDE A SMOOTH, OPAQUE SURFACE OF UNIFORM APPEARANCE. PROVIDE A FINISH FREE OF CLOUDINESS, SPOTTING, HOLIDAYS, LAPS, BRUSH MARKS, RUNS, SAGS, ROPIQUES, OR OTHER SURFACE IMPERFECTIONS.
3. APPLY PRODUCTS PER MANUFACTURER RECOMMENDED GUIDELINES: PRODUCT COVERAGE MINIMUM ONE COAT OF PRIMER AND ONE COAT OF FINAL COATS ON MATERIALS APPLY PRODUCTS TO MATERIALS APPROVED BY MANUFACTURER PRODUCT DATA SHEETS.
- A. EXTERIOR WORK:
1. ALL EXTERIOR GALVANIZED METAL FLASHINGS, CONNECTORS, ETC. TWO COATS EXTERIOR METAL PRIMER. TWO COATS EXTERIOR SEMI-GLOSS METAL PAINT.
2. ALL EXPOSED STEEL FRAMES, ANGLES, ETC. TWO COATS SEMI-GLOSS METAL PAINT. (PRIME COAT CHANNELS, POSTS, RAILINGS, BEAMS, ETC. SURFACES THAT ARE NOT PRIMED.)
3. ALL EXPOSED MISC. FERROUS METAL ITEMS INCLUDING RAILS, PLATES, ANCHORS, BOLTS, GRATES, CONDUITS, POSTS, PIPES, ETC. TWO COATS SEMI-GLOSS METAL PAINT. (PRIME COAT SURFACES THAT ARE NOT PRIMED.)
4. ALL UNPRIMED EXTERIOR MILLWORK, TRIM, SMOOTH WOOD MATERIALS, ETC. SEMI-GLOSS PAINT. PRIME AND GAT LATEX PRIMER. TWO COATS EXTERIOR SATIN OR PRIME.
5. PRIMED MILLWORK AND TRIM. TOUCH-UP PRIME. TWO COATS OF EXTERIOR 100% SATIN OR SEMI-GLOSS ACRYLIC LATEX PAINT.
6. ROUGH SAWN TRIM, BEAMS, COLUMNS, ETC. ONE COAT PRIMER. TWO COATS EXTERIOR HEAVY BODY STAIN.
7. PRIMED METAL ENTRY DOORS, FRENCH DOORS AND METAL FRAMES, GARAGE DOORS. PATCH DENIS, TOUCH UP PRIMER. TWO COATS OF OL BASE SEMI-GLOSS PAINT INSIDE AND OUTSIDE.
8. ANY OTHER PAINTING REQUIRED BY THE DRAWINGS. TWO COATS TO MATCH ADJACENT SURFACES.
9. INTERIOR WORK:
1. GYPSUM BOARD WALLS EXCEPT IN KITCHENS, BATHROOMS, LAUNDRIES AND COMMON AREAS: ONE COAT OF PRIME LATEX PAINT AND ONE FINISH COAT OF LATEX EGGSHELL WALL PAINT. (TWO COATS IF REQUIRED TO ACHIEVE FULL COVERAGE.)
2. GYPSUM BOARD WALLS IN KITCHENS, BATHROOMS AND LAUNDRIES UNLESS SCHEDULED FOR WALLCOVERING OR TILE. ONE COAT OF EPOXY COMPAQUE PRIMER PAINT AND ONE FINISH COAT OF EPOXY EGGSHELL WALL PAINT. (TWO COATS IF REQUIRED TO ACHIEVE FULL COVERAGE.)
3. GYPSUM BOARD WALLS IN COMMON AREA CORRIDORS. ONE COAT OF PRIME LATEX PAINT AND ONE FINISH COAT OF SCRUBABLE LATEX FLAT WALL PAINT. (TWO COATS IF REQUIRED TO ACHIEVE FULL COVERAGE.)
4. GYPSUM BOARD CEILINGS. TWO COATS OF LATEX FLAT PAINT. TWO COATS OF CLASS II VAPOR RETARDER PAINT AT CEILINGS ADJACENT TO ATTICS.
5. DOOR CASINGS, BASE, WOOD, MILLWORK, ETC. (PRE-PRIMED.) ONE COAT OF LATEX PAINT AND ONE FINISH COAT OF LATEX SEMI-GLOSS PAINT.
6. PRIMED HARDWOOD DOORS. ONE COAT OF LATEX PAINT AND ONE FINISH COAT OF LATEX SEMI-GLOSS PAINT.
7. ALL MISCELLANEOUS FERROUS METAL INCLUDING GRILLERES, REGISTERS, ETC. TWO COATS METAL PAINT TO MATCH ADJACENT SURFACES UNLESS FACTORY PREFINISHED WHITE.
8. ANY OTHER PAINTING WORK REQUIRED BY THE DRAWINGS. FINISH TO MATCH SIMILAR CONDITIONS.

DIVISION 10 - SPECIALTIES

10 2800 - WALL AND DOOR PROTECTION

- A. REFERENCE CONSTRUCTION DRAWINGS FOR TYPE, SIZE AND LOCATIONS.
- B. SUBMITTALS:
1. PRODUCT DATA: FOR EACH TYPE OF PRODUCT, INCLUDING
2. CONSTRUCTION DETAILS, MATERIAL DESCRIPTIONS, DIMENSIONS OF INDIVIDUAL COMPONENTS AND PROFILES, AND FINISHES.
3. STORAGE AND HANDLING REQUIREMENTS AND RECOMMENDATIONS.
4. INSTALLATION METHODS.
- C. BASIS OF DESIGN: TARKETT - 1 1/2" X 1 1

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PLAN NOTES

1. CONTRACTOR TO SHORE EXISTING CEILING FRAMING PRIOR TO REMOVING EXISTING LOAD BEARING WALLS ALONG GRIDLINES A AND B.

2. NEW COLUMNS AND BEAMS MUST BE IN PLACE PRIOR TO REMOVAL OF SHORING BELOW EXISTING CEILING FRAMING.

3. REFER TO ARCHITECTURAL DRAWINGS FOR ADDITIONAL DEMOLITION INFORMATION.

4. REFER TO ARCHITECTURAL FOR ALL DIMENSIONS NOT SHOWN ON THESE DRAWINGS.

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Project Status

JOHN KNOW VILLAGE - SALON

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REVISION DATES:

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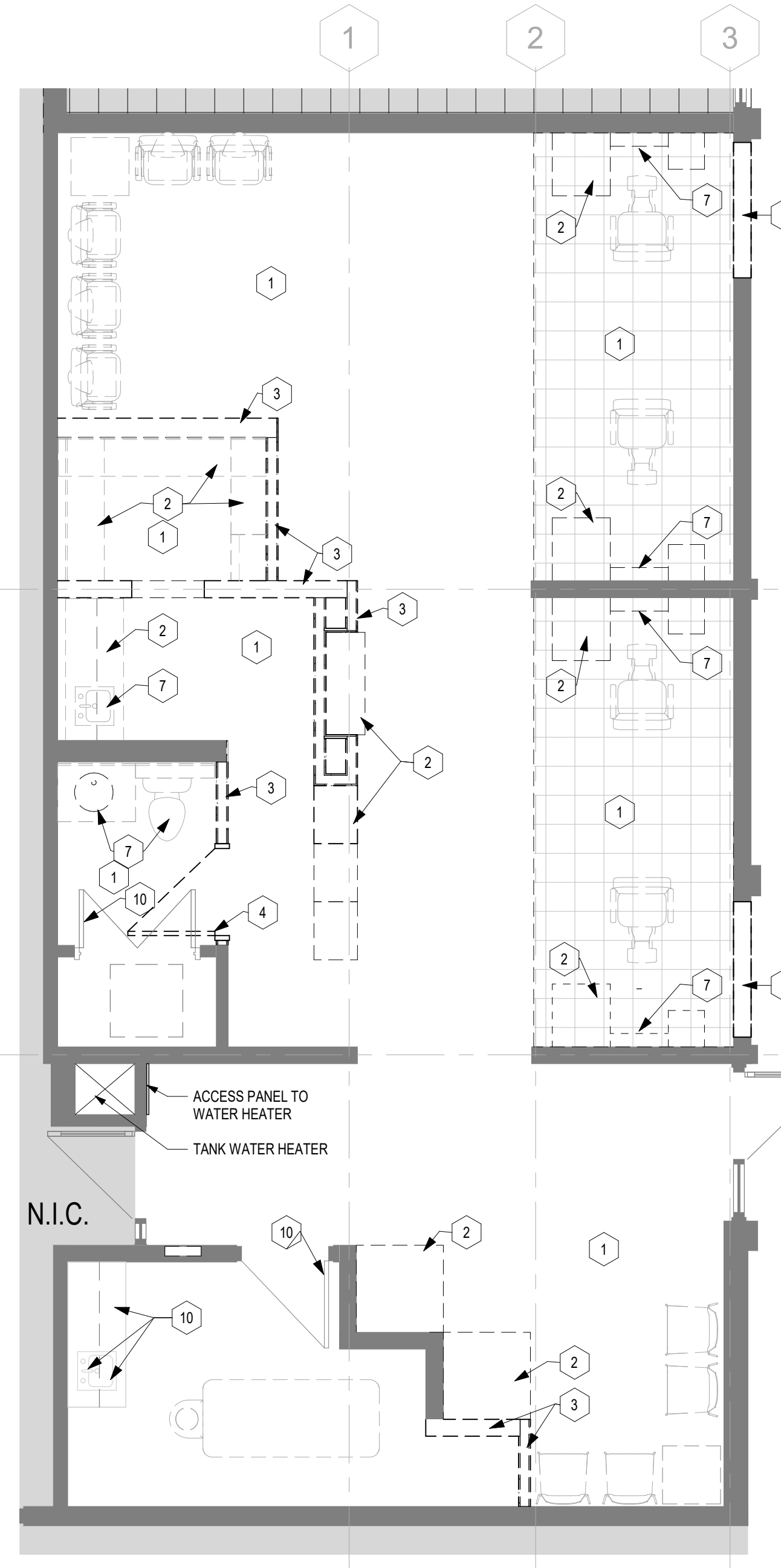
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ISSUE DATE: 1 MAY 2023
COLLINS WEBB #: 22009

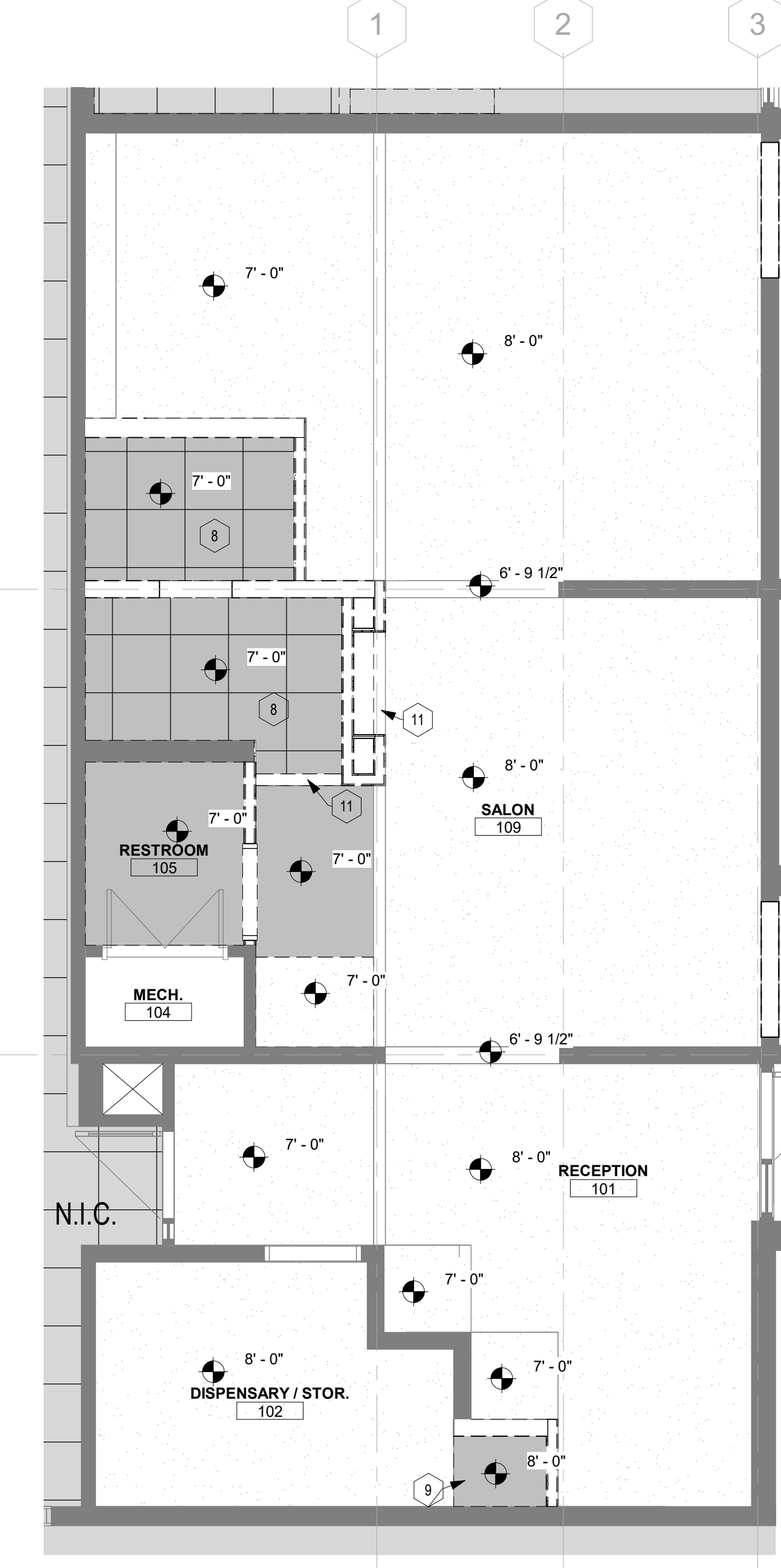
STRUCTURAL FLOOR PLAN

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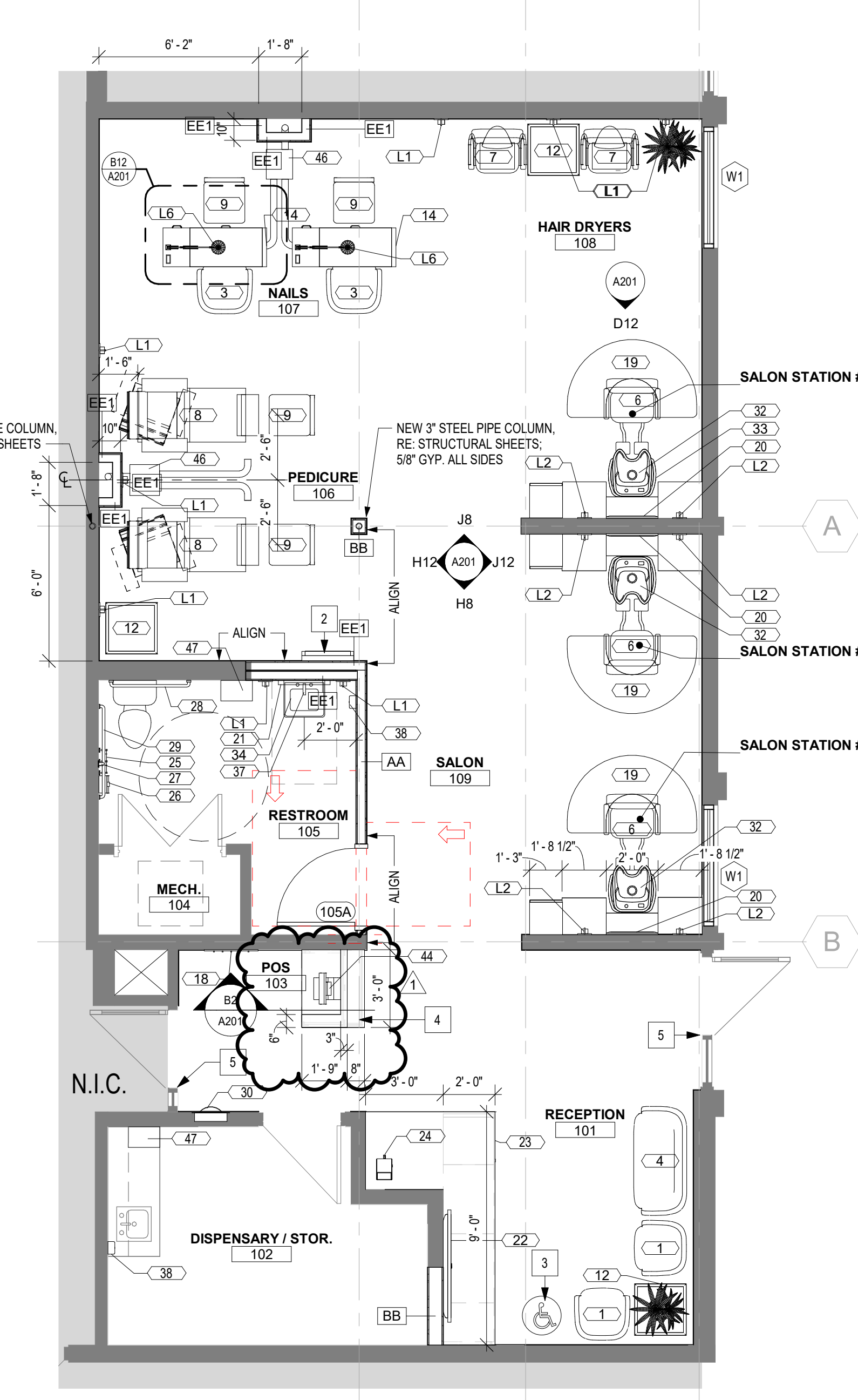
A12 DEMO PLAN
1/4" = 1'-0"



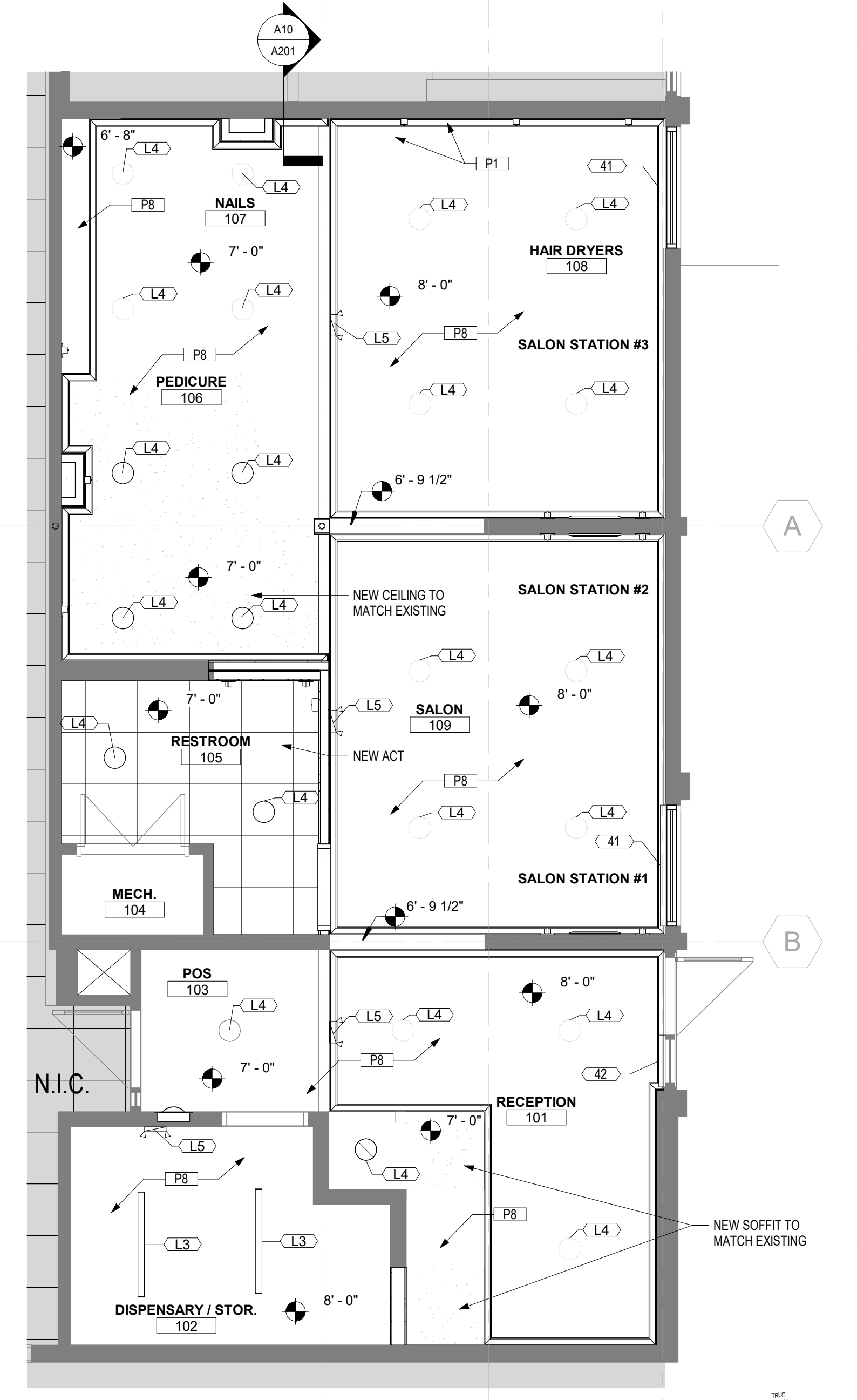
A9 DEMO REFLECTED CEILING PLAN
1/4" = 1'-0"



A6 1ST FLOOR PLAN
1/4" = 1'-0"



A3 1ST FLOOR RCP
1/4" = 1'-0"



GENERAL NOTES - DEMOLITION PLANS:	
1. RE: SHEET G001 FOR ADDITIONAL GENERAL NOTES THAT ARE APPLICABLE.	
2. CONTRACTOR TO VISIT PROJECT SITE AND BUILDING PRIOR TO BID.	
3. BUILDING AND SITE TO REMAIN SECURE DURING DEMOLITION AND CONSTRUCTION.	
4. PROTECT ALL ITEMS TO REMAIN (WALLS, PLUMBING FIXTURES, PIPING, HVAC UNITS, COLUMNS, ETC).	
5. CONTRACTOR TO PROTECT EXISTING FINISHES ADJACENT TO DEMOLITION WORK.	
6. CONTRACTOR TO PATCH AND REPAIR ALL WORK, ESPECIALLY WORK ADJACENT TO EXISTING AREAS, AS REQUIRED.	
7. CONTRACTOR TO REPAIR ANY AREAS DAMAGED DURING DEMOLITION.	
8. CONTRACTOR TO REPAIR ANY PUNCTURES OR TEARS TO THE VAPOR BARRIER AT THE EXTERIOR WALLS.	
9. CONTRACTOR TO COORDINATE DEMOLITION OPENINGS WITH NEW PLANS AND ELEVATIONS.	
10. REMOVE EXISTING GYP BOARD OR PLASTER AS NECESSARY, TO PROVIDE NEW BLOCKING IN EXISTING WALLS FOR NEW CASEWORK AND EQUIPMENT.	
11. SPRINKLER HEADS TO REMAIN. PROTECT DURING DEMOLITION.	
12. PROTECT ALL ITEMS TO REMAIN (WALLS, PLUMBING FIXTURES, PIPING, HVAC UNITS, COLUMNS, ETC).	
13. REMOVE ALL CEILING ELEMENTS IN CONSTRUCTION AREA INDICATED. FIXTURES/CONTROLS ARE SHOWN FOR GENERAL SCOPE ONLY AND DO NOT RELIEVE THE CONTRACTOR OF ANY OBLIGATION TO REMOVE ALL ELEMENTS IN THE CEILING GRID. REFERENCE MEP DRAWINGS FOR EXTENTS ABOVE CEILING GRID. ALL CEILING FIXTURES, DIFFUSERS, SPEAKERS, SMOKE ALARMS, EXIT SIGNS, STORES, CEILING TILES, CEILING GRID BULKHEADS, AND SOFFIT ELEMENTS TO BE REMOVED.	
14. SPRINKLER HEADS TO REMAIN-PROTECT DURING DEMOLITION.	
15. BUILDING TO REMAIN SECURE DURING DEMOLITION AND CONSTRUCTION.	
16. PROTECT EXISTING CONDITIONS AND MAINTAIN WEATHER TIGHTNESS FOR ALL OCCUPIED/OCCUPANCY SPACES. BOTH VERTICALLY AND HORIZONTALLY FOR THE ENTIRE DURATION THAT THE BUILDING IS EXPOSED TO THE ELEMENTS. PATCH/REPAIR/REPLACE AS REQUIRED.	
KEYED NOTES: DEMO FLOOR PLAN	
1	PREPARE EXISTING SLAB FOR NEW FLOOR FINISHES AS REQUIRED PER MANUFACTURER'S RECOMMENDATIONS. SEE FINISH PLANS FOR ROOMS WITH NEW FLOOR FINISHES.
2	REMOVE EXISTING CASEWORK AND SHELVING
3	REMOVE EXISTING WALL
4	REMOVE EXISTING DOOR AND FRAME
5	REMOVE EXISTING GLASS BLOCK WINDOW; PREPARE OPENING FOR NEW INFILL WINDOW; G.C. TO VERIFY R.O.
6	NOT USED
7	REMOVE EXISTING PLUMBING FIXTURES AND CAP EXISTING PLUMBING DRAIN AT FLOORWALL
8	REMOVE ALL EXISTING ACOUSTIC CEILING TILE AND GRID.
9	REMOVE EXISTING GYPSUM CEILING
10	EXISTING TO REMAIN
11	REMOVE EXISTING GYPSUM HEADER

FF&E SCHEDULE				
NO.	DESCRIPTION	MODEL	QTY.	REMARKS
1	OFS - KASURA SINGLE DINING CHAIR	92031	2	TX3, 4 LEG WOOD BASE, MOLDED BACK & SEAT FOAM
3	OFS - KASURA SINGLE DINING CHAIR	92031	2	TX4, 4 LEG WOOD BASE, MOLDED BACK & SEAT FOAM
4	OFS - KASURA DOUBLE DINING CHAIR	92032	1	TX2, 4 LEG WOOD BASE, MOLDED BACK & SEAT FOAM
6	COLLINS - 7710 ALL PURPOSE SALON CHAIR	COLLINS 7710	3	TX6, RECLINING, WITH SWING-AWAY FOOTRESTS (#350-7700D)
7	BELVEDERE MALETTI - S4U (STYLE FOR YOU) - LOOK DRYER CHAIR	LK13, B900C-H	2	TX6, LOOK DRYER CHAIR, MEGA DRYER
8	LEMI ITALIAN WELLNESS EQUIPMENT - CAPRI PEDI SPA (OR SIMILAR)	SKU183434	2	PIVOTING PEDICURE CHAIR, BEIGE
9	LIVING EARTH CRAFTS - DUET MANI/PEDI COMBO STOOL, ROUND EDGE, CASTORS	L100140	4	TX1
12	NATIONAL OFFICE FURNITURE - ARROWOOD END TABLE, TURNED LEGS	31N2424ENPLW	4	HPL2, WD1
14	MANICURE TABLE	-	2	P6, GLASS TOP, HDW1, [RE: CASEWORK DETAIL SHEETS]
18	WEST ELM - MID-CENTURY WALL RACK - ACORN, 25"W	7416159	1	ACORN FINISH, ANTIQUE BRASS, 25"W x 4.4"D x 4"H
19	BUY-RITE-BEAUTY EQUIPMENT - 3' X 5' SUPER SOFT CIRCULAR MAT 5/8"	SHP-SS3050C5/8	3	3' x 5' x 5/8"
20	LAMP PLUS - KICHLER WALL MIRROR	Style # P0955	3	24"W x 30"H x 1 1/2"D, OLDE BRONZE
21	BLACK TRIM MIRROR	B-290 1830.MBLK	1	18"W x 30"H (46 x 76cm)
22	60" TV (APPROX. 52.3"W x 29.4"H), BY OWNER	-	1	
23	SUMMIT - ADA UNDERCOUNTER REFRIGERATOR	SPR4890SADA	1	32.5"H x 19"W x 17"D
24	COFFEE MAKER	-	1	FREESTANDING COUNTERTOP STYLE, BY OWNER
25	BOBRICK WASHROOM EQUIPMENT, INC. - DOUBLE-ROLL TOILET TISSUE DISPENSER	B-686	1	
26	BOBRICK WASHROOM EQUIPMENT, INC. - SANITARY NAPKIN DISPOSAL	B-35139	1	TRIM LINE SERIES, SURFACE-MOUNTED
27	BOBRICK WASHROOM EQUIPMENT, INC. - GRAB BAR, 1-1/2" DIA., SS, 18	B-5806-18	1	
28	BOBRICK WASHROOM EQUIPMENT, INC. - GRAB BAR, 1-1/2" DIA., SS, 36"	B-5806-36	1	3Hx30Wx3D
29	BOBRICK WASHROOM EQUIPMENT, INC. - GRAB BAR, 1-1/2" DIA., SS, 42"	B-5806-42	1	3Hx30Wx3D
30	FIRE EXTINGUISHER	-	1	BY OWNER
31	ARTWORK	-	TBD	BY OWNER
32	BELVEDERE - SHAMPOO BOWL	8600/522	3	BLACK PORCELAIN ENAMEL, PIVOTING BACKWASH, WALL-MOUNT, WITH FAUCET
33	ADJUST-A-SINK - HYDRAULIC SHAMPOO UNIT	ADJ-K100, MP3000 - BLACK (306)	1	CONTRACTOR OPTION ADD. ALTERNATE; BLACK PORCELAIN ENAMEL, PIVOTING BACKWASH, HYDRAULIC HEIGHT ADJUSTABLE
34	AMERICAN-STANDARD ADA LAVATORY, WALL MOUNT, 20" x 28"	355.012 LUCERNE	1	WHITE
37	OLYMPIA - SINGLE HANDLE LAVATORY FAUCET	L-6030-BN	1	FINISH: PVD BRUSHED NICKEL
38	WALL MOUNTED MANUAL SOAP DISPENSER	-	2	BY OWNER
41	MECHO SYSTEMS - MANUAL ROLLER SHADE	1922 HOWARD (MOCHA) 5% OPEN	2	4'-8"W x 6'-8"H, SINGLE ROLLER, REGULAR ROLL, WALL MOUNTED, QUAKER BRONZE FASCIA
42	MECHO SYSTEMS - MANUAL ROLLER SHADE	1922 HOWARD (MOCHA) 5% OPEN	1	2'-0"W x 7'-0"H, SINGLE ROLLER, REGULAR ROLL, WALL MOUNTED, QUAKER BRONZE FASCIA
44	POS STATION	MICROS WORKSTATION 625/655	1	WITH ADJUSTABLE STAND, BY OWNER
45	PLANTER	-	2	FREESTANDING, BY OWNER
46	PORTABLE SOURCE- CAPTURE EXHAUST UNIT	46 - PORTABLE SOURCE-CAPTURE EXHAUST SYSTEM	2	RE: MECHANICAL SHEETS
47	GEORGIA-PACIFIC PAPER TOWEL DISPENSER	59462A	2	BY OWNER

LIGHTING LEGEND				
NO.	DESCRIPTION	MODEL NUMBER	QTY.	FINISHES
L1	WESPORT LIGHTING - ASPEN 102S WALL SCENCE	ASPEN-102S	8	WHITE ACRYLIC, 3500K, BRONZE
L2	WESPORT LIGHTING - ASPEN 102 WALL SCENCE	ASPEN-102	6	WHITE ACRYLIC, 3500K, BRONZE
L3	LINEAR STRIP LED LIGHT	RE: MEP SHEETS	2	WHITE
L4	RECESSED LED CAN LIGHT		22	WHITE
L5	EMERGENCY LIGHT	RE: MEP SHEETS	4	WHITE
L6	LUMENS - Z-BAR GEN 3 DESK LAMP	R307422	2	METALLIC BLACK, THROUGH-TABLE MOUNT, LED, WARM LIGHT (4500K)

GENERAL NOTES: ACCESSORIES

GENERAL NOTES:
A. ALL TOILET ACCESSORY LOCATIONS BASED ON FLOOR PLAN LAYOUT.
B. REFER TO INTERIOR ELEVATIONS FOR ANY ACCESSORIES THAT MAY NOT SHOW UP ON THE PLANS.
C. REFER TO G002 AND MANUFACTURER'S SPECIFICATIONS FOR MOUNTING HEIGHTS.
D. COORDINATE ALL MOUNTING HEIGHTS W/ PLUMBING FIXTURES TO ALLOW PROPER OPERATION & INFORM ARCHITECT IN WRITING OF ANY CONFLICTS.
E. G.C. TO VERIFY DIRECTLY W/ OWNER TO DETERMINE MOUNTING HEIGHTS. U.N.O.
F. REFER TO PLANS AND ELEVATIONS FOR ITEMS NOTED AS FF&E.
REMARKS:
1. FF&E ITEM - OWNER PROVIDED, CONTRACTOR INSTALLED. REFER TO PLANS FOR FURTHER CLARIFICATION.
2. MIRRORS TO BE CENTERED AT SINKS, TYP.
3. REFER TO SHEET G002 FOR MOUNTING HEIGHTS.
4. BATHROOM ACCESSORIES PER CONTRACTOR BUDGET, COORD. WITH OWNER.
5. TOWEL BARS LOCATED IN FLOAT ROOM. COORD. WITH OWNER.

GENERAL NOTES: 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 STUD. FACE OF MASONRY (FOM), FACE OF CONCRETE WALLS (FCO), 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. ALL ALCOVES WITHOUT A SPACE IDENTIFICATION NUMBER SHALL HAVE THE SAME FINISHES AS THE ADJOINING SPACES.
7. PROVIDE FINISH LEVELS AS DESCRIBED:
LEVEL 2:
- AREAS WHERE SETTING TYPE COMPOUND FOR WATER RESISTANT GYPSUM BACKER OR FIBER REINFORCED WALL PANELS ARE USED.
- ALL OPEN TO PLENUM SPACES ABOVE CEILINGS OPEN TO STRUCTURE SPACES WHERE PAINTED BLACK.
- AREAS IN MECHANICAL, ELECTRICAL AND STORAGE ROOMS.
LEVEL 3:
- OPEN TO STRUCTURE SPACES WHERE PAINTED OTHER THAN BLACK.
LEVEL 4:
- AREAS FOR BACK OF HOUSE EMPLOYEE OPERATIONS WHERE ROOM SIDE WALLS AND/OR CEILINGS HAVE PAINTED SURFACES.
- CIRCULATION CORRIDORS WHERE ROOM SIDE WALLS AND/OR CEILINGS HAVE PAINTED SURFACES.
8. RE: FINISH LEGEND, FINISH SCHEDULE AND SPECIFICATIONS FOR DOOR AND DOOR FRAME FINISHES.
9. STAIR ENCLOSURES, SHAFT WALLS, EXIT PASSAGE WAYS AND EXTERIOR WALLS TO BE COORDINATED FOR PHASE OF WORK PER MATRIX AND PROJECT SCOPING.
10. MAINTAIN AND PROTECT EXISTING EXPANSION JOINTS DURING CONSTRUCTION. PATCH/REPAIR/REPLACE TO MATCH EXISTING FINISHES AS REQUIRED ON THE SHELL PORTION OF PROJECT.
11. ALL WOOD PRODUCTS TO BE FIRE-RETARDANT, INCLUDING BLOCKING AND PLYWOOD.
12. CONTRACTOR TO COORDINATE INSTALLATION OF SPECIALTY EQUIPMENT WITH CONSTRUCTION.

GENERAL NOTES: REFLECTED CEILING PLANS

1. RE: SHEET G001 FOR ADDITIONAL GENERAL NOTES THAT ARE APPLICABLE.
2. RE: DETAILS FOR ADDITIONAL CONDITIONS AND CEILING HEIGHT INFORMATION.
3. RE: ELECTRICAL SHEETS AND SPECIFICATIONS FOR DETAILED INFORMATION ON LIGHT FIXTURE SCHEDULE.
4. RE: MECHANICAL SHEETS AND SPECIFICATIONS FOR DETAILED INFORMATION ON DIFFUSERS.
5. RE: MECHANICAL SHEETS FOR LOCATIONS OF SOUND ISOLATION BELOW AND OR AROUND MECH. EQUIPMENT.
6. DIMENSIONS SHOWN ON THE REFLECTED CEILING PLANS ARE TO THE FACE OF GYP. BOARD (FGS), AND COLUMN GRID LINES, UNLESS NOTED OR SHOWN OTHERWISE.
7. ALL CEILINGS TO BE OPEN TO STRUCTURE, UNLESS NOTED OTHERWISE.
8. ALL CEILING HEIGHTS AS SHOWN ON PLANS AND DETAILS ARE FROM SLAB OR TILE FLOOR (FINISHED FLOOR) TO FINISH CEILING.
9. RECESSED LIGHTING, SPEAKERS, SMOKE DETECTORS, ETC. AND PENDANT LIGHT FIXTURES - SHALL BE CENTERED IN GYP. BD. CEILING, UNLESS NOTED OTHERWISE.
10. COORDINATE ALL PENDANT MOUNTED LIGHT FIXTURES IN EQUIPMENT AREAS WITH EXPOSED STRUCTURE.
11. COORDINATE ALL CEILING MOUNTED EQUIPMENT WITH CASEWORK BELOW.
12. IF THERE IS A CONFLICT BETWEEN ANY ABOVE-CEILING MECHANICAL / ELECTRICAL / PLUMBING WORK & THE SCHEDULED OR SHOWN CEILING HEIGHT, CONTACT THE ARCHITECT IMMEDIATELY FOR CLARIFICATION.
13. PROVIDE OVERALL CEILING COORDINATION DRAWING SHOWING ALL DEVICES DURING SHOP SUBMITTAL PROCESS.
14. ALL LIGHTING BY G.C. COORD. WITH MILLWORK CONTRACTOR FOR LOCATION.
15. ALL EXPOSED CONDUIT, DUCTWORK, ETC. TO BE PAINTED BLACK, TYP.

KEYED NOTES: FLOOR PLAN

1 NOT USED
2 NAIL POLISH DISPLAY SHELVING
3 OPEN WHEELCHAIR AREA
4 BUILT-IN POS STATION
5 EXISTING DOOR TO REMAIN; ADD AUTO DOOR OPERATOR

REFLECTED CEILING PLAN SYMBOLS:

9'-0" CEILING HEIGHT
EXHAUST GRILLE
RETURN / TRANSFER GRILLE
SUPPLY DIFFUSER
LINEAR SLOT DIFFUSER
10" DOWNLIGHT
5" DOWNLIGHT
LINEAR DOWNLIGHT
WALL SCONCE
EMERGENCY LIGHT
UNDERCABINET LIGHTING
FIRE EXIT SIGN
58" GYP. BD. CEILING, BULKHEAD OR SOFFIT. SEE APPLICABLE DETAILS AND SECTIONS.
2X2' SUSPENDED ACT CEILING SYSTEM
OPEN TO STRUCTURE

DOOR LEGEND IN NEW FLOOR PLAN

EXISTING DOOR TO BE REUSED AND RELOCATED. COORDINATE FINISH WITH OWNER. RE: A501
NEW DOOR. COORDINATE FINISH WITH OWNER. RE: A501

GENERAL NOTES: REFLECTED CEILING PLANS

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10. COORDINATE ALL PENDANT MOUNTED LIGHT FIXTURES IN EQUIPMENT AREAS WITH EXPOSED STRUCTURE.
11. COORDINATE ALL CEILING MOUNTED EQUIPMENT WITH CASEWORK BELOW.
12. IF THERE IS A CONFLICT BETWEEN ANY ABOVE-CEILING MECHANICAL / ELECTRICAL / PLUMBING WORK & THE SCHEDULED OR SHOWN CEILING HEIGHT, CONTACT THE ARCHITECT IMMEDIATELY FOR CLARIFICATION.
13. PROVIDE OVERALL CEILING COORDINATION DRAWING SHOWING ALL DEVICES DURING SHOP SUBMITTAL PROCESS.
14. ALL LIGHTING BY G.C. COORD. WITH MILLWORK CONTRACTOR FOR LOCATION.
15. ALL EXPOSED CONDUIT, DUCTWORK, ETC. TO BE PAINTED BLACK, TYP.

KEYED NOTES: FLOOR PLAN

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FLOOR PLAN AND REFLECTED CEILING PLAN

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ARCHITECTURE

collins webb

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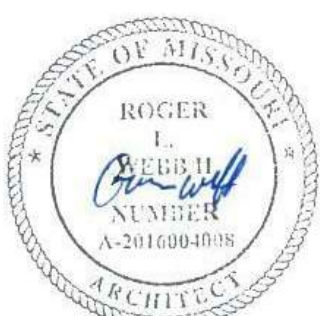
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REVISION DATES:
1 City Comments 05/26/2023

PROFESSIONAL SEAL

A101

ISSUE DATE: 03 MAY 2023
COLLINS WEBB #: 22118

PERMIT SET - CITY COMMENTS



GENERAL NOTES:
INTERIOR FINISHES

1. RE: SHEET G001 FOR ADDITIONAL GENERAL NOTES THAT ARE APPLICABLE.
2. RE: G002 FOR ACCESSIBILITY GUIDELINES.
3. ALL FLOORS TO BE SEALED CONCRETE.
4. COORD. FINAL WALL FINISH SELECTIONS WITH OWNER. CONTINUE WALL FINISH AS SCHEDULED BEHIND EQUIPMENT.
5. CONTRACTOR SHALL VERIFY ALL DIMENSIONS PRIOR TO CASEWORK FABRICATION AND INSTALLATION. COORDINATE CASEWORK FINISH SELECTIONS WITH OWNER.
6. ALL PLASTIC LAMINATE DOOR AND DRAWERS TO RECEIVE 1MM PVC EDGEBAND AND ALL COUNTERTOPS TO RECEIVE 3MM PVC EDGEBANDING.
7. ALL BACKSPLASH MATERIAL SHALL MATCH COUNTERTOP MATERIAL, U.N.O. COORDINATE FINISH SELECTION WITH OWNER.
8. INSTALL METAL TRANSITION STRIP WHERE WALL TILE MEETS PAINTED GYP. BD. WALL IN ALL VERTICAL AND/OR HORIZONTAL CONDITIONS, U.N.O.
9. WALL BASE ALONG ALL GYP. WALLS - COORD. FINISH WITH OWNER.
10. NO WALL BASE ALONG EXISTING BRICK WALL.
11. ALL GYP. CEILINGS AND CEILINGS O.T.S. TO BE PAINTED - COORDINATE FINAL PAINT SELECTION WITH OWNER.
12. ALL EXPOSED STRUCTURE AND PLUMBING TO BE PAINTED - COORDINATE FINAL PAINT SELECTION WITH OWNER.
13. COORDINATE FINAL TILE SELECTIONS WITH OWNER. ALL HEIGHT OF TILE FINISH ON WALLS TO BE COORDINATED WITH OWNER.
14. PROVIDE LEVEL 4 FINISH FOR ALL WALLS TYP.
15. COORDINATE ALL FINAL FINISH SELECTIONS WITH OWNER.

GENERAL NOTES:
FLOOR FINISH PLANS

1. RE: G-SHEETS - FOR ADDITIONAL GENERAL NOTES THAT ARE APPLICABLE.
2. RE: FINISH LEGEND, FINISH SCHEDULE, AND FLOOR FINISH PLANS FOR SPECIFIC FLOOR FINISH INFORMATION AND LOCATIONS.
3. RE: FINISH DETAILS SHEET FOR ADDITIONAL FINISH AND FLOOR TRANSITION CONDITIONS.
4. FLOOR FINISHES SHOWN ARE FOR ACCENT CLARIFICATION ONLY. RE: FINISH SCHEDULE FOR ADDITIONAL INFORMATION.
5. INSTALL TRANSITION STRIPS AT ALL FLOOR FINISH MATERIAL CHANGES, UNLESS NOTED OTHERWISE.
6. FLOOR FINISH PATTERN SHALL BE CENTERED IN ROOM, UNLESS NOTED OTHERWISE.
7. ALIGN ALL WALL TILE JOINTS WITH FLOOR TILE JOINTS, UNLESS NOTED OR SHOWN OTHERWISE.
8. ALL CLOSETS & ALCOVES W/OUT A SPACE IDENTIFICATION NUMBER SHALL HAVE THE SAME FLOOR FINISHES AS ADJOINING SPACES.
9. FLOOR FINISH MATERIAL AND/OR PATTERN SHALL BE INSTALLED UNDER TOE KICKS OF CASEWORK/MILLWORK, UNDER OPEN COUNTERTOPS, AND UNDER EQUIPMENT.
10. FLOOR MATERIAL/COLOR TRANSITIONS TO ALIGN WITH ROOM SIDE OF DOOR STOP, UNLESS NOTED OR SHOWN OTHERWISE.
11. INSTALL TRANSITION STRIPS AT ALL FLOOR FINISH MATERIAL CHANGES, UNLESS NOTED OTHERWISE.

WALL FINISH / WALL
PROTECTION PLANS:

1. RE: G-SHEETS - FOR ADDITIONAL GENERAL NOTES THAT ARE APPLICABLE.
2. RE: FINISH LEGEND & FINISH SCHEDULE FOR SPECIFIC FINISH INFORMATION & LOCATIONS.
3. ALL AUDITORIUM WALLS TO BE PRIMED PRIOR TO THE INSTALLATION OF WALL CARPET AND ACOUSTICAL PANELS.
4. CONTRACTOR SHALL PROVIDE ALL NECESSARY BLOCKING FOR WALL PROTECTION ATTACHMENT. THIS INCLUDES, BUT IS NOT LIMITED TO: HANDRAILS/POSTER CASES, TV MONITORS, BATHROOM ACCESSORIES, FIRE EXTINGUISHERS AND EQUIPMENT. RE: ROUGH CARPENTRY SPECIFICATION SECTION FOR CLARIFICATION.
5. CONTRACTOR SHALL PROVIDE MANUFACTURER'S STANDARD ACCESSORY MOLDING OR TRIM FOR WALL PROTECTION ITEMS, UNLESS NOTED OTHERWISE.
6. IF WALL IS LESS THAN 18" WIDE DO NOT PROVIDE HANDRAIL. HANDRAILS SHOULD STOP APPROXIMATELY 3" FROM THE OPEN SWING OF A DOOR. HANDRAILS SHOULD STOP APPROXIMATELY 3" FROM A CORNER GUARD.

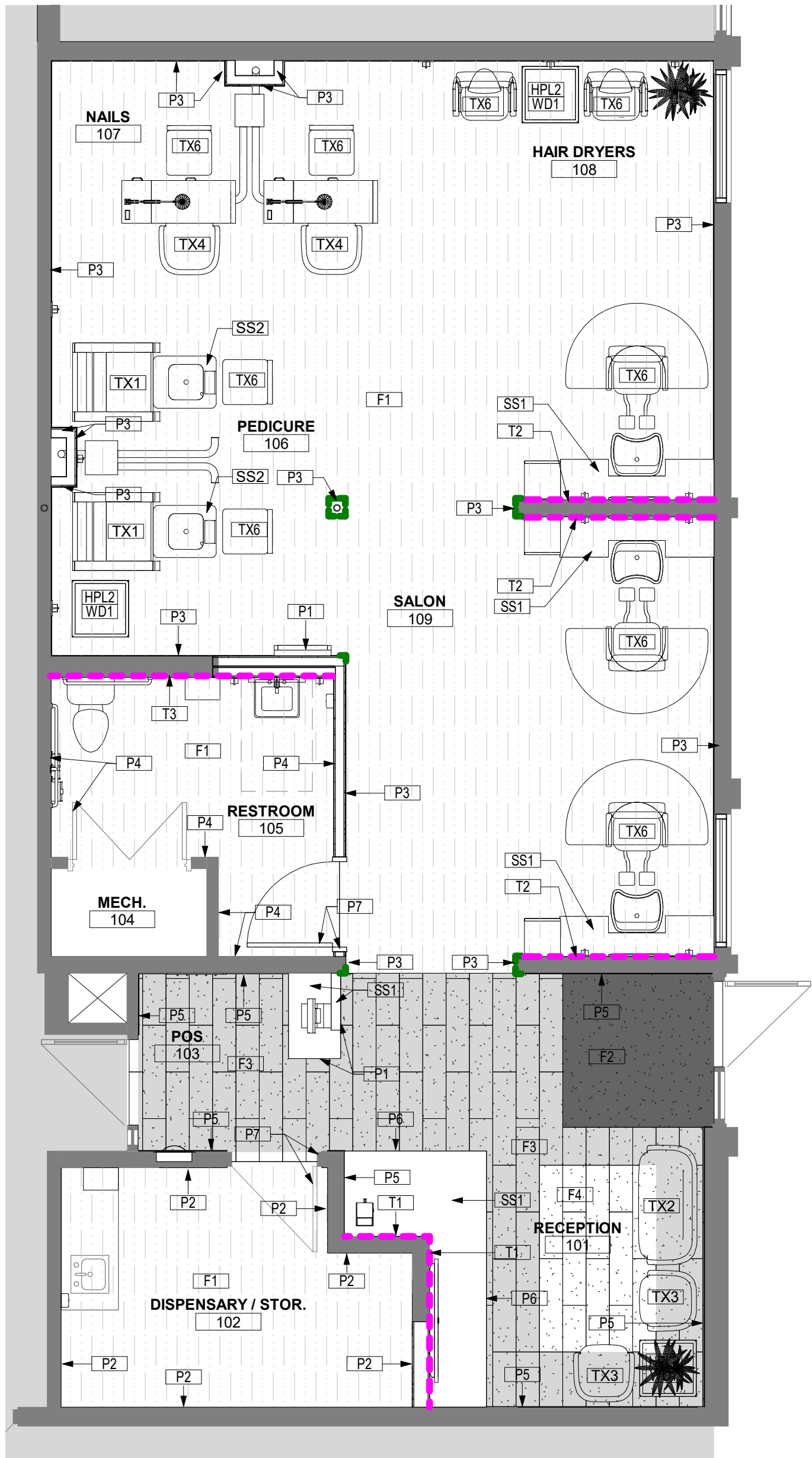
GENERAL NOTES - FURNITURE & EQUIPMENT PLANS:

1. RE: SHEET G001 - FOR ADDITIONAL GENERAL NOTES THAT ARE APPLICABLE.
2. RE: SHEET G002 - FOR TYPICAL MOUNTING HEIGHTS.
3. RE: SHEET A201 - FOR ENLARGED TOILET ROOM PLANS.
4. REFER TO ARTWORK PACKAGE FOR ARTWORK PLACEMENT PLANS AND SPEC SHEETS.
5. REFER TO I.O. BINDER FOR PRICING AND LOG CATEGORY DESIGNATIONS.

WALL FINISH LEGEND	
	WALL PROTECTION CORNER GUARD (CG)
	WALL TILE (T)

REFER TO FINISH SCHEDULE AND INTERIOR ELEVATIONS FOR SPECIFIC LOCATIONS AND MATERIALS.

FLOOR FINISH LEGEND	
	F1 LVT
	F2 CARPET TILE
	F3 CARPET TILE
	F4 CARPET TILE



F4 1ST FLOOR FINISH PLAN
1/4" = 1'-0"

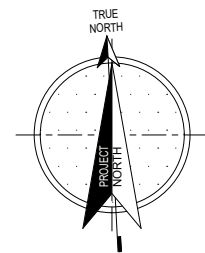
MATERIAL SCHEDULE

CODE	DESCRIPTION	MANUFACTURER	PRODUCT #	COLOR	FINISH	SIZE	CONTACT	REMARKS
FLOOR FINISH								
F1	LUXURY VINYL TILE (LVT)	INTERFACE	EVEN PATH	A05011 NATURAL		25CM X 1M	KATIE ALLEN 816-673-5771	ASHLAR INSTALLATION
F2	CARPET - WALK-OFF	TBD	TBD	TBD				COORDINATE WITH OWNER TO MATCH EXISTING PRODUCT USED IN FACILITY
F3	CARPET TILE	INTERFACE	HAPTIC	PEPPER		25CM X 1M	KATIE ALLEN 816-673-5771	ASHLAR INSTALLATION
F4	CARPET TILE	INTERFACE	HAPTIC	NATURAL		25CM X 1M	KATIE ALLEN 816-673-5771	ASHLAR INSTALLATION
WALL BASE								
B1	RUBBER WALL BASE	TARKETT - JOHNSONITE	MILLWORK - MONUMENT 4" - MW-XX-S4	TG1 SNOWBOUND W		4" H	ABBEY HELLAND 816-678-8605	COMMON AREAS
B2	RUBBER WALL BASE	TARKETT - JOHNSONITE	QUARTER ROUND - QTR-XXX-A	TG1 SNOWBOUND W		4" H	ABBEY HELLAND 816-678-8605	COMMON AREAS
B3	RUBBER WALL BASE	TARKETT - JOHNSONITE	MILLWORK - MONUMENT 4" - MW-XX-S4	32 PEBBLE WG		4" H	ABBEY HELLAND 816-678-8605	BACK OF HOUSE COMMON AREAS, CASEWORK TOE/KICKS IN COMMON AREAS
WALL ACCESSORIES								
CG1	CORNER GUARD	TARKETT	CORNER GUARD 1-1/2"	TG1 SNOWBOUND W		1-1/2" X 1-1/2"	ABBEY HELLAND 816-678-8605	RE: FINISH FLOOR PLAN
WALL FINISH								
P1	PAINT	SHERWIN WILLIAMS	LATEX LOW VOC	SW 7551 GREEK VILLA	EGG SHELL		PETER KREMM 303-902-7239	TRIM MOLDING, NAIL POLISH DISPLAY
P2	PAINT	SHERWIN WILLIAMS	LATEX LOW VOC	SW 6246 NORTH STAR	EGG SHELL		PETER KREMM 303-902-7239	WALL PAINT - DISPENSARY
P3	PAINT	SHERWIN WILLIAMS	LATEX LOW VOC	SW 6249 STORM CLOUD	EGG SHELL		PETER KREMM 303-902-7239	WALL PAINT - SALON
P4	PAINT	SHERWIN WILLIAMS	EPOXY BASED PAINT	SW 7022 ALPACA	EGG SHELL		PETER KREMM 303-902-7239	WALL PAINT - RESTROOM
P5	PAINT	SHERWIN WILLIAMS	LATEX LOW VOC	SW 6247 KRYPTON	EGG SHELL		PETER KREMM 303-902-7239	WALL PAINT - RECEPTION, POS
P6	PAINT	SHERWIN WILLIAMS	LATEX LOW VOC	SW 7024 FUNCTIONAL GRAY	SEMI-GLOSS		PETER KREMM 303-902-7239	CASEWORK, MANICURE TABLE
P7	PAINT	SHERWIN WILLIAMS	LATEX LOW VOC	SW 7551 GREEK VILLA	SEMI-GLOSS		PETER KREMM 303-902-7239	DOORS, DOOR FRAMES
P8	PAINT	SHERWIN WILLIAMS	LATEX LOW VOC	SW 7006 EXTRA WHITE	FLAT		PETER KREMM 303-902-7239	CEILINGS AND SOFFITS
TILE								
T1	WALL TILE - CERAMIC	MARAZZI	ARTEZEN	CLASSIC BLUE		2" X 8" PICKET MOSAIC	NIKKI VAN DYNE 913-620-6088	LOBBY
T2	WALL TILE - GLASS	ANATOLIA TILE	BLISS - ELEMENT	CLOUD		PETAL GLASS MOSAIC	NIKKI VAN DYNE 913-620-6088	SALON
T3	WALL TILE - GLASS	MARAZZI	COASTAL EFFECTS	SAPPHIRE		5/8" X 2" SMALL PICKET MOSAIC	NIKKI VAN DYNE 913-620-6088	RESTROOM - ACCENT COLOR
SOLID SURFACE								
SS1	QUARTZ SOLID SURFACE	WILSONART		Q4051 TRAVANO			MANDY BRIDGES 913-484-2691	COUNTERTOPS - SALON, RECEPTION, POS
SS2	SOLID SURFACE	AVONITE		SILVER PEARL 8345			BROOKE COLE 859-538-4897	SALON PEDICURE STATION
PLASTIC LAMINATE								
HPL1	HIGH PRESSURE LAMINATE	WILSONART		LOFT OAK 7968K-60	MATTE		MANDY BRIDGES 913-484-2691	PEDICURE CHAIRS
HPL2	HIGH PRESSURE LAMINATE	WILSONART	KIMBALL INTERNATIONAL	TF TRUFFLE			CANDIE THURMAN 816-719-1520	ARROWOOD OCCASIONAL TABLES
HPL4	HIGH PRESSURE LAMINATE	WILSONART		CRYSTAL D388-60	MATTE		MANDY BRIDGES 913-484-2691	MANICURE TABLES
MEL	MELAMINE			WHITE				INTERIOR CASEWORK
HARDWOOD								
WD1	CHERRY HARDWOOD		KIMBALL INTERNATIONAL	TRUFFLE			CANDIE THURMAN 816-719-1520	ARROWOOD OCCASIONAL TABLES
TEXTILES / UPHOLSTERY								
TX1	UPHOLSTERY	ULTRAFABRICS	ULTRALEATHER	291-2508 RAIN DANCE			KIMBERLY DE JESUS 914-460-1726	PEDICURE STATION CHAIR
TX2	UPHOLSTERY	DESIGNTEX	OCEANSIDE	DAFFLE			KATHY ANDERSON 212-886-8100	RECEPTION CHAIR - DOUBLE
TX3	UPHOLSTERY	DESIGNTEX	BILLIARD CLOTH	SUNFLOWER			KATHY ANDERSON 212-886-8100	RECEPTION CHAIRS - SINGLE
TX4	UPHOLSTERY	DESIGNTEX	DAFFLE	COVE			KATHY ANDERSON 212-886-8100	MANICURE GUEST CHAIRS
TX6	UPHOLSTERY	SPIRIT MILLENIUM	GENUINE NAUGHYDE	US 421 OAK			KELLY POREMBA 331-225-0946	SALON STYLING CHAIRS, DRYER CHAIRS
CEILING FINISH								
ACT	ACOUSTIC CEILING TILE			WHITE				
HARDWARE								
HWD1	DRAWER / DOOR PULL	COSMAS	703-1280RB	OIL RUBBED BRONZE				
MTL1	METAL FINISH			OIL RUBBED BRONZE				

ROOM FINISH SCHEDULE													
RM. NO.	ROOM NAME	FLOORS		WALL FINISH				CEILING FINISH	CASEWORK				REMARKS
		FLOOR	WALL BASE	NORTH WALL	EAST WALL	SOUTH WALL	WEST WALL		COUNTERTOP	BASE CABINET	UPPER CABINET	FULL HEIGHT	
101	RECEPTION	F1, F2, F3, F4	B1, B2, B3	P5	P5	P5	P5, T1	P8	SS1	P6	-	-	MEL
102	DISPENSARY / STOR.	F1	B1, B2	P2	P2	P2	P2	ACT	-	-	-	-	EXISTING CASEWORK TO REMAIN
103	POS	F3	B1, B2	P5	-	P5	P5	P8	SS1	P6	-	-	MEL
104	MECH.	-	-	-	-	-	-	-	-	-	-	-	EXISTING TO REMAIN
105	RESTROOM	F1	B1, B2	T3	P4	P4	P4	ACT	-	-	-	-	
106	PEDICURE	F1	B1, B2	-	-	P3	P3	P8	-	-	-	-	
107	NAILS	F1	B1, B2	P3	-	-	P3	P8	-	-	-	-	
108	HAIR DRYERS	F1	B1, B2	P3	P3	-	-	P8	-	-	-	-	
109	SALON	F1	B1, B2, B3	P3, T2	P3	P3, T2	P3	P8	SS1	P6	-	P6	MEL

GENERAL NOTE:

FINISH MATERIALS TO BE PROCURED FROM MANUFACTURERS AS LISTED IN FINISH LEGEND. ALTERNATIVES OR SUBSTITUTIONS WILL NOT BE ACCEPTED UNLESS APPROVED BY OWNER AND MEETS OR EXCEEDS ESTABLISHED PRODUCT REQUIREMENTS.



1001 NW CHIPMAN RD SUITE 123
LEE'S SUMMIT, MO 64081

STATE OF MISSOURI
 RYAN
 BREWER
 NUMBER
 PE-2020010759
 PROFESSIONAL ENGINEER

M101

MECHANICAL NOTES, SYMBOLS & ABBREVS.

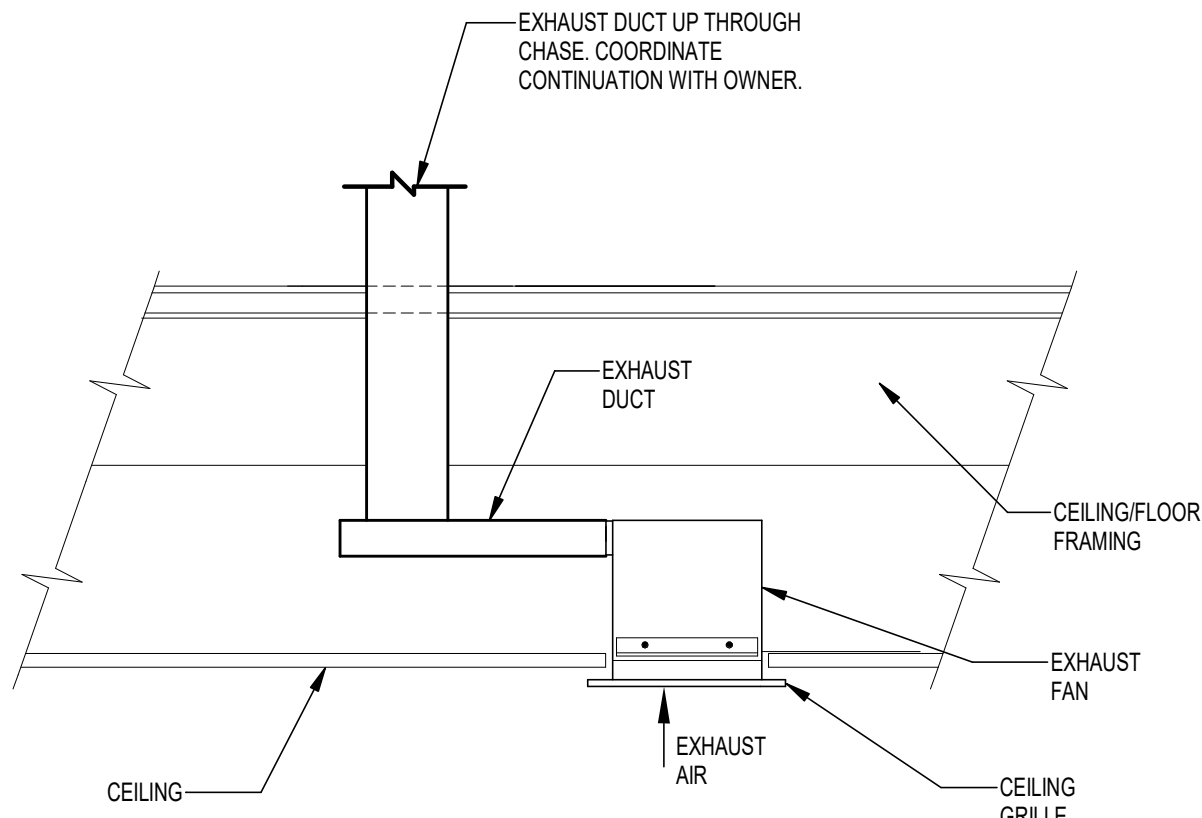
MECHANICAL LEGEND		
SYMBOLS	DESCRIPTION	ABBREVIATIONS
	EXHAUST GRILLE	AFF ABOVE FINISHED FLOOR BTU BRITISH THERMAL UNIT CFM CUBIC FEET PER MINUTE DB DRY BULB DX DIRECT EXPANSION GRD GRILLE REGISTER AND DIFFUSER EA EXHAUST AIR EAT ENTERING AIR TEMPERATURE ESP EXTERNAL STATIC PRESSURE ETC AND SO FORTH EX EXHAUST °F DEGREES FAHRENHEIT FLA FULL LOAD AMPS FPM FEET PER MINUTE FT FEET GPM GALLONS PER MINUTE HP HORSEPOWER HZ HERTZ IN INCHES KW KILOWATT MBH THOUSANDS OF BTU PER HOUR MIN MINIMUM NTS NOT TO SCALE OA OUTSIDE AIR OBD OPPOSED BLADE DAMPER PH PHASE PSI POUNDS PER SQUARE INCH PSIG POUNDS PER SQUARE INCH GAUGE RA RETURN AIR RH RELATIVE HUMIDITY SA SUPPLY AIR SH SENSIBLE HEAT SP STATIC PRESSURE TEMP TEMPERATURE TYP TYPICAL UC UNDERCUT W/ WITH W/O WITHOUT WB WET BULB WC WATER COLUMN
	RETURN / TRANSFER GRILLE	
	SUPPLY DIFFUSER	
	LINEAR SLOT DIFFUSER	
	RECTANGULAR SUPPLY ELBOW - UP / DOWN	
	RECTANGULAR RETURN ELBOW - UP / DOWN	
	RECTANGULAR EXHAUST ELBOW - UP / DOWN	
	ROUND SUPPLY ELBOW - UP / DOWN	
	ROUND RETURN ELBOW - UP / DOWN	
	ROUND EXHAUST ELBOW - UP / DOWN	
	MITERED ELBOW W/ TURNING VANES	
	RADIUS ELBOW	
	45° HIGH EFFICIENCY TAKEOFF FITTING	
	GORED ELBOW	
	MANUAL VOLUME DAMPER	
	FIRE DAMPER	
	FIRE / SMOKE DAMPER	
	MOTORIZED DAMPER	
	THERMOSTAT	
	REMOTE SENSOR	
	HUMIDISTAT	

1. PRIOR TO SUBMITTING BID, VISIT THE SITE AND BECOME FULLY ACCQUAINTED WITH THE EXISTING CONDITIONS OF THE PROJECT. THE BIDDER SHALL BE RESPONSIBLE FOR OBTAINING ALL OTHER DRAWINGS FOR ADDITIONAL REQUIREMENTS WHICH MAY NOT BE SPECIFICALLY CALLED OUT IN THIS PROJECT. THERE SHALL BE NO CONFLICTS BETWEEN THE ARCHITECT, ENGINEER AND/OR OWNER OF ANY CONFLICTS OR DISCREPANCIES PRIOR TO SUBMISSION OF BID.
2. COORDINATE THE INSTALLATION OF MECHANICAL SYSTEMS WITH OTHER TRADES TO ENSURE A NEAT AND ORDERLY INSTALLATION. NEW GENERAL NOTES AND SPECIFICATIONS TO AVOID CONFLICTS WITH ELECTRICAL PANELS, LIGHTING FIXTURES, ETC.
3. TAKE NECESSARY PRECAUTIONS TO AVOID DAMAGING EXISTING SURFACES. PROVIDE PROTECTION FOR NEW INSTALLATION DURING WORK. REPAIR ANY DAMAGE CAUSED DURING CONSTRUCTION AT NO COST TO THE OWNER.
4. ALL MECHANICAL EQUIPMENT SHOWN ON THE MECHANICAL PLANS SHALL BE PROVIDED BY THE MECHANICAL CONTRACTOR UNLESS OTHERWISE NOTED.
5. NEW MECHANICAL EQUIPMENT, DUCTWORK AND PIPING IS SHOWN. PROVIDE THE LOCATION OF THE REPAIR FOR FINAL DUCTWORK AND PIPING LOCATIONS PRIOR TO FABRICATION AND SHALL MAKE ADJUSTMENTS AS REQUIRED TO FIT THE EXISTING CONDITIONS. PROVIDE THE LOCATION OF THE FIELD VERIFY FINAL LOCATIONS TO INSTALL EQUIPMENT IN ACCORDANCE WITH THE MANUFACTURERS REQUIREMENTS. PROVIDE THE LOCATION OF THE CLEARANCE AND PROPER AIRFLOW CLEARANCE AROUND EQUIPMENT.
6. PROVIDE COMPLETE AND OPERATIONAL H.V.A.C. SYSTEM AS IT RELATES TO DRAWINGS AND SPECIFICATIONS.
7. PROVIDE MINIMUM 10 FEET SEPARATION BETWEEN OUTSIDE AIR INTAKES AND EXHAUST VENTS, PLUMBING VENTS, ETC.
8. OPERATION AND MAINTENANCE MANUALS FOR ALL MECHANICAL EQUIPMENT SHALL BE COMPILED INTO A THREE RING BINDER AND TURNED OVER TO BUILDING OWNER UPON PROJECT COMPLETION.
9. REFER TO ARCHITECTURAL DRAWINGS FOR ALL RELATED CONSTRUCTION DETAILS AS APPLICABLE TO THE HVAC SYSTEM. CHASE AND PENETRATIONS INTENDED FOR DUCTWORK AND PIPING SHALL BE VERIFIED WITH ARCHITECTURAL DRAWINGS PRIOR TO INSTALLATION.
10. COORDINATE LOCATION OF ROOF PENETRATIONS WITH THE EXISTING CONDITIONS AND ARCHITECTURAL DRAWINGS.
11. SEAL ALL PENETRATIONS THROUGH THE BUILDING COMPONENTS IN ACCORDANCE WITH THE CONSTRUCTION SPECIFICATIONS. FIREPROOF ALL PENETRATIONS THROUGH FIRE RATED WALLS AND PARTITIONS IN ACCORDANCE WITH REQUIREMENTS.
12. COORDINATE THE EXACT MOUNTING SIZE AND FRAME TYPE OF DIFFUSERS, REGISTERS AND GRILLES WITH THE SUPPLIER. PROVIDE CEILING, WALL, AND DUCT INSTALLATION REQUIREMENTS.
13. LOCATION OF CEILING DIFFUSERS, REGISTERS, AND GRILLES SHALL BE ADJUSTED AS REQUIRED TO ACCOMMODATE FINAL CEILING AND LIGHTING LOCATIONS.
14. DUCTWORK CROSSING FIRE RATED WALL OR OTHER FIRE RATED ASSEMBLY SHALL BE MINIMUM 26 GAUGE SHEET METAL.
15. PROVIDE FIRE AND/OR FIRE/SMOKE DAMPERS IN DUCTWORK AT ALL INTERSECTIONS WITH WALLS OR CEILING. PROVIDE THE AUTHORITY HAVING JURISDICTION. FIRE AND FIRE/SMOKE DAMPERS SHALL CONFORM TO NFPA AS APPLICABLE.
16. PROVIDE WALL AND/OR DUCT ACCESS PANELS OR DOORS FOR ACCESS TO ALL FIRE AND/OR FIRE/SMOKE DAMPERS. PROVIDE ACCESS TO ALL FIRE AND/OR FIRE/SMOKE DAMPERS AND SHALL BE INSTALLED WITH 12" OF DAMPER. PROVIDE A REMOVABLE DUCT SECTION WHERE DUCT SIZE IS TOO SMALL TO REMOVE DAMPER.
17. THERMOSTATS AND HUMIDISTATS SHALL BE LOCATED AND SET BY MECHANICAL CONTRACTOR AND WIRED IN CONDUIT BY ELECTRICAL CONTRACTOR. VERIFY EXACT LOCATIONS WITH THE ARCHITECT PRIOR TO INSTALLATION. MOUNTING HEIGHTS SHALL BE 48" AFF TO MEET ADA REQUIREMENTS UNLESS OTHERWISE NOTED ON PLANS.
18. COORDINATE THE LOCATION AND ELEVATION OF WALL MOUNTED DEVICES WITH ANY WALL MOUNTED ITEMS SHOWN ON THE ARCHITECTURAL PLANS. THE MECHANICAL CONTRACTOR WILL NOT BE REIMBURSED FOR RELOCATION OF ANY WALL-MOUNTED DEVICES CAUSED BY A LACK OF COORDINATION.
19. ALL BRANCH DUCT CONNECTIONS AND TAKE-OFFS TO INDIVIDUAL UNITS SHALL BE MINIMUM 12" DUCT SIZE. SHALL HAVE A PREFABRICATED 45 DEGREE, HIGH EFFICIENCY RECTANGULAR/ROUND BRANCH DUCT TAKE-OFF FITTINGS WITH MATCHING BALANCING DAMPERS.
20. BRANCH TAKE-OFFS TO AIR OUTLETS SHALL BE SAME SIZE AS OUTLET NECK WORK SIZE UNLESS OTHERWISE NOTED.
21. RIGID DUCTWORK INSULATION: PROVIDE R-6 MINIMUM INSULATION WRAP ON ALL CONCEALED DUCTWORK. PROVIDE R-6 MINIMUM INSULATION DUCT LINED ON ALL EXPOSED DUCTWORK. DUCT SIZES ON ALL EXPOSED PLANS INDICATE THE INSIDE DIMENSION. PROVIDE 1/2" METAL JACKET. INCREASE ACCORDINGLY. PROVIDE R-12 MINIMUM INSULATION ON ALL EXPOSED DUCTWORK. PROVIDE ALL UNCONDITIONED SPACES. REFER TO SPECIFICATIONS FOR MORE INFORMATION.
22. FLEXIBLE DUCT WORK SHALL BE TERMAFLEX TYPE MKE, FLEXMASTER TYPE 8M, OR APPROVED EQUAL. SHALL BE LISTED IN UL 181. SHALL BE 1/2" MINIMUM INSULATION. PROVIDE WITH INTEGRAL R-6 MINIMUM FIBERGLASS INSULATION. FLEXIBLE DUCTWORK SHALL NOT EXCEED 5'-0" LENGTH. SHALL BE SUPPORTED AND SHALL BE SUPPORTED TO SHARP BENDS AND SAGGING.

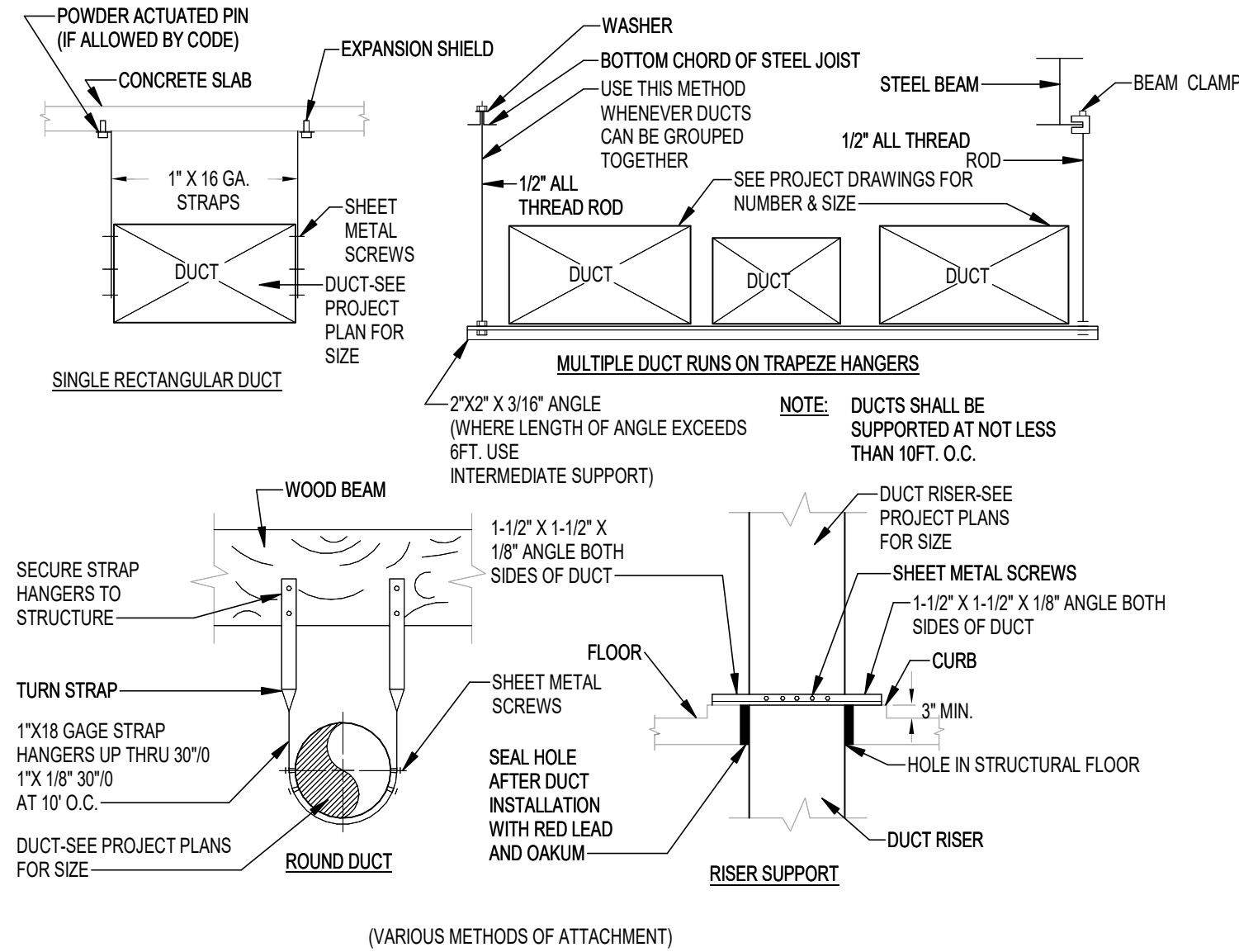
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EXHAUST CALCULATIONS (2018 IMC)				
SPACE	AREA (SQ.FT)	EA RATE (CFM/SQ.FT)	EA REQUIRED (CFM)	
SALON	619	0.6	371	
		TOTAL:	371	

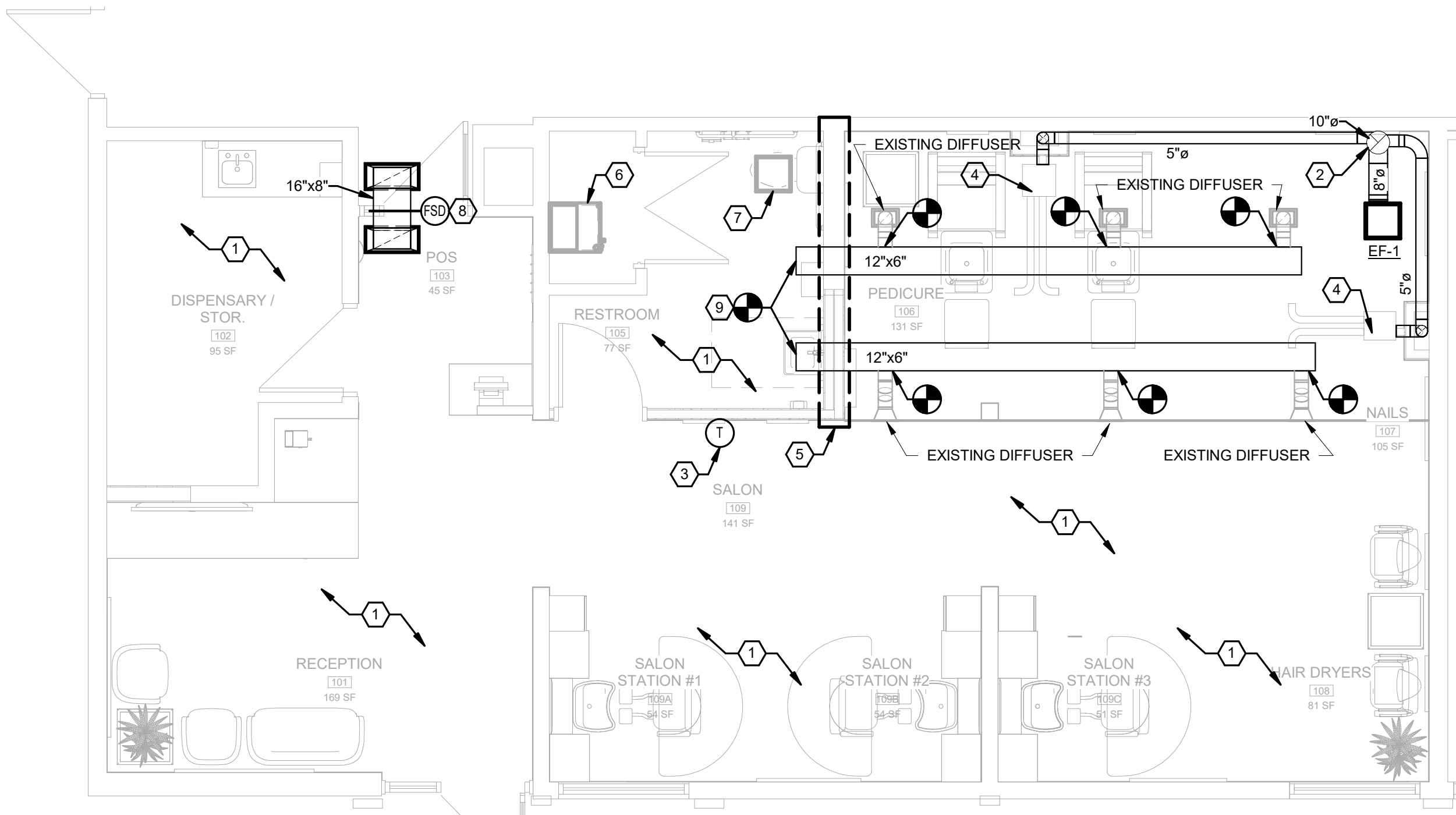
EXHAUST FAN SCHEDULE											
MARK	MANUFACTURER	MODEL	MOUNTING	VOLUME (CFM)	ESP (IN)	FAN RPM	DRIVE (BELT/DIRECT)	MOTOR WATTS	ELECTRICAL VOLTS/PH	WEIGHT (LBS)	NOTE
EF-1	GREENHECK	SP-A510-VG	CEILING	375	0.5	1197	DIRECT	84	120/1	40	1.2
NOTES: 1 PROVIDE WITH BACK DRAFT DAMPER AND SPEED CONTROLLER FOR BALANCING. COORDINATE GRILLE FINISH WITH OWNER. 2 FAN TO OPERATE CONTINUOUSLY DURING OCCUPIED HOURS. PROVIDE WITH PLUG TYPE DISCONNECT.											



2 CEILING EXHAUST FAN DETAIL
SCALE: 12" = 1'-0"



3 LOW PRESSURE DUCT HANGER AND SUPPORT DETAIL
SCALE: 12" = 1'-0"



1 MECHANICAL FLOOR PLAN
SCALE: 1/4" = 1'-0"

GENERAL NOTES

(NOT ALL NOTES APPLY)

- REFERENCE SHEET M101 FOR GENERAL NOTES, SYMBOLS, AND ABBREVIATIONS.
- PROVIDE TURNING VANES FOR ALL SUPPLY DUCT ELBOWS.
- CONTRACTOR SHALL VERIFY EXACT CONDITIONS OF EXISTING SPACE AND COORDINATE EXACT DUCT ROUTING WITH EXISTING CONDITIONS AND CONSTRAINTS.
- FIRE DAMPERS SHALL BE PROVIDED AT ANY DUCTWORK PENETRATION OF A FIRE RATED ASSEMBLY.

KEYED NOTES:

- EXISTING SUPPLY DIFFUSERS AND RETURN GRILLES IN THIS AREA TO REMAIN. FIELD VERIFY EXACT LOCATIONS.
- PROVIDE CHASE FOR 10" ROUND EXHAUST DUCT UP TO SECOND FLOOR. COORDINATE WITH OWNER AND ABOVE TENANTS FOR EXACT ROUTING AND TERMINATION LOCATION.
- RELOCATE EXISTING THERMOSTAT TO LOCATION SHOWN.
- PROVIDE HEALTHY AIR MODEL HA-SCE-G2 EXHAUST SOURCE CAPTURE FAN/FILTER UNIT. ROUTE 200 EXHAUST DUCT AND CONNECT TO EXHAUST DUCTWORK ABOVE CEILING. WHEN IN USE, INLET HOSES SHALL BE LOCATED NOT LESS THAN 12" HORIZONTALLY AND VERTICALLY FROM THE POINT OF CHEMICAL APPLICATION AT NAIL STATION. BALANCE EXHAUST RATE OF EACH HOSE TO MINIMUM 50 CFM.
- INTENT IS TO PROVIDE NEW SUPPLY DUCTWORK ROUTED OVER NEW STRUCTURAL BEAM. CONNECT EXISTING BRANCH DUCTWORK FROM EXISTING DIFFUSERS TO NEW SUPPLY DUCT AS INDICATED. FIELD VERIFY EXACT LOCATION.
- EXISTING FAN COIL UNIT AND ASSOCIATED DUCTWORK SERVING SPACE TO REMAIN. BALANCE OUTDOOR AIRFLOW TO 425 CFM. IF EXISTING UNIT CANNOT ACHIEVE OUTDOOR AIRFLOW INDICATED, CONTACT ENGINEER IMMEDIATELY.
- EXISTING RESTROOM EXHAUST FAN TO REMAIN.
- PROVIDE 24"X12" CEILING TRANSFER GRILLES ON BOTH SIDES OF WALL. TITUS MODEL 359FL OR APPROVED EQUAL. PROVIDE COMBINATION FIRE/SMOKE DAMPER AT PENETRATION OF RATED WALL.
- CONNECT NEW SUPPLY DUCTWORK TO SUPPLY MAIN. FIELD VERIFY EXACT LOCATION.

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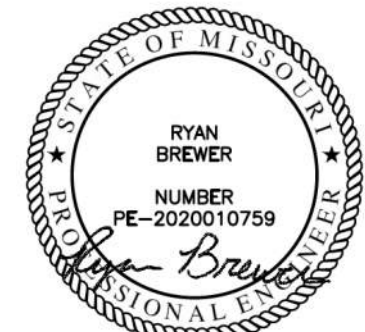
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MECHANICAL FLOOR PLAN

15000 - BASIC MECHANICAL REQUIREMENTS

DRAWINGS AND GENERAL PROVISIONS OF CONTRACT, INCLUDING GENERAL AND SUPPLEMENTARY CONDITIONS AND ALL OTHER SPECIFICATION SECTIONS, APPLY TO THIS AND THE OTHER SECTIONS OF DIVISION 15.

READ THE SPECIFICATIONS AND REVIEW DRAWINGS FOR ALL DIVISIONS OF WORK AND COORDINATE AND THE WORK OF SUBCONTRACTORS WITH ALL DIVISIONS OF WORK. PROVIDE SUBCONTRACTORS WITH A COMPLETE SET OF BID DOCUMENTS.

SCHEDULE THE COMPLETION AND INSPECTION OF WORK AND THE WORK OF SUBCONTRACTORS WORK TO COMPLY WITH THE SPECIFICATIONS AND THE PROJECT COMPLETION DATE.

VISIT THE SITE PRIOR TO SUBMITTAL OF BID TO DETERMINE CONDITIONS AFFECTING THE WORK. ANY ITEMS WHICH ARE NOT COVERED IN THE BID DOCUMENTS OR ANY PROPOSED SUBSTITUTIONS SHALL BE LISTED SEPARATELY AND QUALIFIED IN THE BID. SUBMITTAL OF BID SHALL SERVE AS EVIDENCE OF KNOWLEDGE OF EXISTING CONDITIONS AND ANY MODIFICATIONS WHICH ARE REQUIRED TO MEET THE INTENT OF THE DRAWINGS AND SPECIFICATIONS. FAILURE TO VISIT THE SITE DOES NOT RELIEVE RESPONSIBILITY IN PERFORMANCE OF WORK.

READ ALL RELEVANT DOCUMENTS, BECOME FAMILIAR WITH THE JOB. SCOPE OF WORK, TYPE OF GENERAL CONSTRUCTION, AND THE ARCHITECTURAL, STRUCTURAL, MECHANICAL AND ELECTRICAL DRAWINGS AND SPECIFICATIONS. ALSO UNDERSTAND THE PURPOSE FOR WHICH THESE DOCUMENTS HAVE BEEN PREPARED AND BECOME CONSAZANT OF ALL THE DETAILS INVOLVED. COORDINATE WORK WITH THAT OF OTHERS.

DEFINITIONS:

FURNISH - PURCHASE AND DELIVER TO PROJECT SITE COMPLETE WITH EVERY NECESSARY APPURTENANCE AND SUPPORT.

INSTALL - UNLOAD AT THE DELIVERY POINT AT THE SITE AND PERFORM EVERY OPERATION NECESSARY TO ESTABLISH SECURE MOUNTING AND CORRECT OPERATION AT THE PROPER LOCATION IN THE PROJECT.

PROVIDE - FURNISH AND INSTALL.

GENERAL REQUIREMENTS

PROVIDE ALL LABOR, MATERIALS, EQUIPMENT, SERVICES, TOOLS, TRANSPORTATION, INCIDENTALS AND DETAILS NECESSARY TO PROVIDE A COMPLETE MECHANICAL SYSTEM AS SHOWN ON THE DRAWINGS, CALLED FOR IN THE SPECIFICATIONS, AND AS REQUIRED BY JOB CONDITIONS. ALL WORK NOT SPECIFICALLY NOTED AS BEING BY THE OTHERS SHALL BE PROVIDED. CLOSELY COORDINATE THE ENTIRE INSTALLATION WITH THE ARCHITECT-ENGINEER, AS REQUIRED.

THE DRAWINGS AND SPECIFICATIONS ARE INTENDED TO SUPPLEMENT EACH OTHER AND ANY MATERIAL OR LABOR CALLED FOR IN ONE SHALL BE FURNISHED AND INSTALLED EVEN THOUGH NOT SPECIFICALLY MENTIONED IN BOTH. ANY MATERIAL OR LABOR WHICH IS NEITHER SHOWN ON THE DRAWINGS NOR CALLED FOR IN THE SPECIFICATIONS, BUT WHICH IS OBVIOUSLY NECESSARY TO COMPLETE THE WORK, AND WHICH IS USUALLY INCLUDED IN WORK OF SIMILAR CHARACTER, SHALL BE FURNISHED AND INSTALLED AS PART OF CONTRACT.

WHERE THE DRAWINGS OR SPECIFICATIONS CALL FOR ITEMS WHICH EXCEED CODES OR THE OWNERS CRITERIA, PROVIDE THE SYSTEM WITH THE MORE STRINGENT REQUIREMENTS AS DESIGNED AND DESCRIBED ON THESE DRAWINGS, UNLESS SPECIFICALLY NOTED OTHERWISE.

ALL MECHANICAL WORK SHALL BE INSTALLED SO AS TO BE READILY ACCESSIBLE FOR OPERATING, SERVICING, MAINTAINING, AND REPAIRING. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING SUFFICIENT SERVICE ACCESS TO ALL EQUIPMENT.

ALL WORK SHALL BE PERFORMED IN A NEAT PROFESSIONAL MANNER USING GOOD ENGINEERING PRACTICES.

UNLESS SPECIFICALLY NOTED OTHERWISE, MATERIALS, PRODUCTS, AND EQUIPMENT, INCLUDING ALL COMPONENTS THEREOF, SHALL BE NEW, UNDERWRITERS LABORATORIES TESTED AND LABELED AND SIZED IN CONFORMITY WITH REQUIREMENTS OF STATE AND LOCAL CODES, WHICHEVER IS MORE STRINGENT.

CODES

ALL WORK SHALL CONFORM TO THE OWNERS CRITERIA, THE STATES, COUNTYS, CITYS AND LOCAL CODES AND ORDINANCES, SAFETY AND HEALTH CODES, NFPA CODES, ENERGY CODES AND ALL OTHER APPLICABLE CODES AND REQUIREMENTS. INQUIRE INTO AND COMPLY WITH ALL APPLICABLE CODES, ORDINANCES, AND REGULATIONS. INCLUDE ANY CHANGES REQUIRED BY CODES IN THE BID AND IF THESE CHANGES ARE NOT INCLUDED IN THE BID, THEY MUST BE QUALIFIED AS A SEPARATE LINE ITEM IN THE BID. AFTER CONTRACT IS SIGNED, NO ADDITIONAL COST DUE TO CODE ISSUES SHALL BE REIMBURSED BY THE OWNER.

LICENSES, PERMITS, COMMISSIONING, INSPECTIONS & FEES

OBTAIN AND PAY FOR ALL LICENSES, PERMITS, COMMISSIONING, INSPECTIONS, AND FEES REQUIRED OR RELATED TO THIS WORK.

PROVIDE TO THE OWNER/ARCHITECT A COMMISSIONING PLAN, PRELIMINARY COMMISSIONING REPORT, FINAL COMMISSIONING REPORT, AND CERTIFICATES OF INSPECTION AND FINAL INSPECTION APPROVAL AT COMPLETION OF PROJECT.

TRADE NAMES, MANUFACTURERS AND SHOP DRAWINGS

WHERE TRADE NAMES AND MANUFACTURERS ARE USED ON THE DRAWINGS OR IN THE SPECIFICATIONS, THE EXACT EQUIPMENT SHALL BE USED AS A MINIMUM FOR THE BASE BID. MANUFACTURERS CONSIDERED AS AN EQUAL OR BETTER IN ALL ASPECTS TO THAT SPECIFIED WILL BE SUBJECT TO APPROVAL IN WRITING BY ARCHITECT-ENGINEER PRIOR TO BID THROUGH SHOP DRAWING SUBMITTAL PROCESS. FOR ACCEPTANCE PRIOR TO INSTALLATION, ANY CHANGES TO ELECTRICAL SERVICE, STRUCTURAL FRAMING, ETC., OR ANY OTHER MODIFICATION THAT IS REQUIRED BY THE USE OF ALTERNATE EQUIPMENT SHALL BE COORDINATED WITH OTHER TRADES AND SHALL INCLUDE ALL COSTS IN BID FOR THE REQUIRED CHANGES. THE USE OF THE USE OF ANY UNAUTHORIZED EQUIPMENT SHALL BE SUBJECT TO REMOVAL AND REPLACEMENT AT NO EXPENSE TO THE OWNER.

GUARANTEE ALL MATERIALS AND WORK PROVIDED UNDER THIS CONTRACT AND MAKE GOOD, REPAIR OR REPLACE AT NO EXPENSE TO THE OWNER, ANY DEFECTIVE WORK, MATERIAL, OR EQUIPMENT WHICH MAY BE DISCOVERED WITHIN A PERIOD OF TWELVE (12) MONTHS FROM THE DATE OF ACCEPTANCE (IN WRITING) OF THE INSTALLATION. EXTENDED WARRANTIES ARE AS SPECIFIED WITH INDIVIDUAL EQUIPMENT.

QUALITY ASSURANCE

INDUSTRY STANDARDS AND CODES: UNLESS MODIFIED BY THESE SPECIFICATIONS, THE DESIGN, MANUFACTURE, TESTING AND INSPECTION OF ALL MATERIALS, APPARATUS AND EQUIPMENT SHALL CONFORM TO THE FOLLOWING:

1. ARI CODE FOR REFRIGERATION APPARATUS
2. ANSI B31.1 SAFETY CODE FOR MECHANICAL REFRIGERATION
3. STANDARDS OF NATIONAL FIRE PROTECTION ASSOCIATION
4. SMACNA
5. ASHRAE

RECORD DRAWINGS

MAINTAIN ONE COPY OF DRAWINGS ON THE JOB SITE TO RECORD DEVIATIONS FROM CONTRACT DRAWINGS, SUCH AS LOCATION OF CONCEALED PIPING, VALVES AND DUCTS, REVISIONS, ADDENDUMS, AND CHANGE ORDERS, AND SIGNIFICANT DEVIATIONS MADE NECESSARY BY FIELD CONDITIONS, APPROVED EQUIPMENT SUBSTITUTIONS, AND CONTRACTORS COORDINATION WITH OTHER TRADES.

AT COMPLETION OF THE PROJECT AND BEFORE FINAL APPROVAL, MAKE ANY FINAL CORRECTIONS TO DRAWINGS AND CERTIFY THE ACCURACY OF EACH PRINT BY SIGNATURE THEREON. A SET OF REPRODUCED DRAWINGS ALONG WITH ONE SET OF BLUEPRINTS OF THE MOST RECENT SET OF DRAWINGS WITH TEMPERATURE CONTROL DRAWINGS INCLUDED SHALL BE DELIVERED TO THE ARCHITECT UPON COMPLETION OF THE WORK AND PRIOR TO FINAL ACCEPTANCE OF THE PROJECT.

DISCREPANCIES IN DOCUMENTS

DRAWINGS (PLANS, SPECIFICATIONS, AND DETAILS) ARE DIAGRAMMATIC AND INDICATE THE GENERAL LOCATION AND INTENT OF THE MECHANICAL SYSTEMS. WHERE DRAWINGS, EXISTING SITE CONDITIONS, SPECIFICATIONS OR OTHER TRADES CONFLICT OR ARE INCONCLUSIVE, THE CONTRACTOR SHALL BE RESPONSIBLE FOR RESOLVING VARIATIONS TO CONTRACT DOCUMENTS PRIOR TO SUBMISSION OF BID. OTHERWISE, ARCHITECT-ENGINEERS INTERPRETATION OF CONTRACT DOCUMENTS OR CONDITIONS SHALL BE FINAL WITH NO ADDITIONAL COMPENSATION PERMITTED.

PHASING REQUIREMENTS

INCLUDE IN BID ALL NECESSARY SERVICE REQUIRED TO KEEP THE OPERATING PHASES OF THE PROJECT PROGRESSING WITHOUT SPRINKLER SYSTEM IN OPERATION. IF APPLICABLE, SCHEDULE IN WRITING WITH ARCHITECT ONE WEEK PRIOR TO ANY SHUT DOWN OF THE HVAC, PLUMBING OR FIRE PROTECTION SYSTEMS.

DEMOLITION

COORDINATE THE DEMOLITION OF EXISTING WORK AND THE DEMOLITION PROVIDED BY OTHER. COORDINATE ANY EXISTING EQUIPMENT REQUIRED TO BE LEFT IN PLACE.

VERIFY SCOPE OF AND THE REMOVAL OF ALL EXISTING FIRE PROTECTION, PLUMBING FIXTURES, PIPING, HVAC UNIT, REFRIGERANT RECAPTURE, EXHAUST FANS, ETC. AND ASSOCIATED ROOF CURBS NOT TO BE REUSED ON THIS PROJECT. UNLESS SPECIFICALLY NOTED OTHERWISE, VERIFY ALL PRESUMED ABANDONED EQUIPMENT, PIPES, DUCTWORK, AND EQUIPMENT PRIOR TO REMOVAL. ROOF CURBS SHALL BE REMOVED AND THE ROOF PATCHED. ALL EXTRANEOUS ITEMS IN THE SPACE OR ON THE ROOF NOT APPLICABLE TO THE NEW WORK MUST BE REMOVED AND ROOFAWLFLOOR PATCHED/PREPARED TO MATCH EXISTING STRUCTURE. EXISTING ABANDONED PIPES, DUCTS, OR EQUIPMENT IN THE FLOOR, EMBEDDED IN CONCRETE, OR OTHERWISE INACCESSIBLE ARE TO BE CUT OFF AND SEALED BELOW OR WITHIN FLOOR OR WALL LEVEL. WHEN THEY ARE NOT TO BE REUSED IN THIS PROJECT, ALTERED OR REPAIRED AS REQUIRED TO BRING PERFORMANCE UP TO SPECIFIED REQUIREMENTS. WORK DAMAGED OR MARKED BY SUCH REPAIRS/ALTERATIONS, OR REPAIRS SHALL BE RESTORED TO PRIOR CONDITIONS. AT NO ADDITIONAL COSTS TO THE OWNER, WHERE MULTIPLE ITEMS OF EQUIPMENT OR MATERIALS ARE REQUIRED, THEY SHALL BE REPLACED BY A SINGLE MANUFACTURER. BEFORE ORDERING EQUIPMENT, THE PHYSICAL DIMENSIONS SHALL BE CHECKED TO VERIFY FIT IN SPACES ALLOTTED ON THE DRAWINGS. INSERTS, PIPE SLEEVES, AND SUPPORTS OF CONDITIONING EQUIPMENT SHALL BE PROVIDED AS SPECIFIED. WHERE SUCH ITEMS ARE TO BE SET OR EMBEDDED IN CONCRETE, MASONRY OR SIMILAR WORK, THE ITEMS SHALL BE FURNISHED AT THE PROPER TIME FOR SETTING OR EMBEDMENT SO AS TO CAUSE NO DELAY. DUCTWORK AND EQUIPMENT ASSEMBLIES SHOWN ON THE DRAWINGS ARE DIAGRAMMATIC. ADDITIONAL DUCTWORK AND APPURTENANCES REQUIRED FOR PROPER OPERATION OF EQUIPMENT SHALL BE PROVIDED BY THE CONTRACTOR AT NO ADDITIONAL COST.

CUTTING AND PATCHING

PERFORM ALL CUTTING AND PATCHING AS REQUIRED FOR THE INSTALLATION OF THE WORK UNDER THIS SPECIFICATION. NO CUTTING OF THE STRUCTURE SHALL BE PERMITTED WITHOUT WRITTEN APPROVAL OF THE STRUCTURAL ENGINEER OR ARCHITECT.

PATCHING SHALL BE OF THE SAME WORKMANSHIP, MATERIAL AND FINISH AND MATCH ACCURATELY ALL SURROUNDING CONSTRUCTION IN A MANNER SATISFACTORY TO THE ARCHITECT.

EXISTING UTILITIES, ETC. THAT ARE DAMAGED DURING THE CONSTRUCTION PERIOD, WHETHER OR NOT DUE TO NEGLIGENCE, SHALL BE REPAIRED OR REPLACED AND LEFT IN A CONDITION SUITABLE TO THE ARCHITECT.

SLEEVES

PROVIDE SLEEVES TO PROTECT EQUIPMENT OR FACILITIES IN THE INSTALLATION. EACH SLEEVE SHALL EXTEND THROUGH ITS RESPECTIVE FLOOR, WALL OR PARTITION AND SHALL BE CUT FLUSH WITH EACH SURFACE EXCEPT SLEEVES THAT PENETRATE THE FLOOR, WHICH SHALL EXTEND 2" ABOVE THE FLOOR. COORDINATE THROUGH THE ARCHITECT ANY CORE DRILLING OR CUTTING OF OPENINGS IN MASONRY FLOORS OR WALLS.

ALL SLEEVES AND OPENINGS THROUGH FIRE RATED WALLS AND/OR FLOORS SHALL BE FIRE SEALED WITH CALCIUM SILICATE, SILICONE PUTTY FLOW, 3/4" FIRE RATED SEALANTS OR EQUAL, SO AS TO RETAIN THEIR FIRE RATING.

SLEEVES IN BEARING AND MASONRY WALLS, FLOORS, AND PARTITIONS SHALL BE STANDARD WEIGHT STEEL, PIPE FINISHED WITH SMOOTH EDGES. FOR OTHER THAN MASONRY PARTITIONS, THROUGH SUSPENDED CEILINGS, OR FOR CONCEALED VERTICAL PIPING, SLEEVES SHALL BE NO. 22 U.S.G. GALVANIZED STEEL MINIMUM.

HANGERS SHALL INCLUDE ALL MISCELLANEOUS STEEL SUCH AS ANGLE, IRON, BANDS, C-CLAMPS WITH RETAINING CLIPS, CHANNELS, HANGER RODS, ETC., NECESSARY FOR THE INSTALLATION OF WORK.

HANGERS SHALL BE FASTENED TO BUILDING STEEL, CONCRETE, OR MASONRY, BUT NOT TO PIPING. HANGING FROM METAL DECK IS NOT PERMITTED. HANGERS SHALL BE ATTACHED TO UPPER CHORD OF BAR JOIST. WHERE INTERFERENCES OCCUR, AND IN ORDER TO SUPPORT DUCTWORK OR PIPING, INSTALL TRAPEZOID TYPE HANGERS OR SUPPORTS WHICH SHALL BE LOCATED WHERE THEY DO NOT INTERFERE WITH ACCESS TO FIRE DAMPERS, VALVES, AND OTHER EQUIPMENT. HANGER TYPES AND INSTALLATION METHODS ARE ALSO SUBJECT TO LANDLORD CRITERIA.

HANGERS FOR ALL INSULATED PIPING SHALL BE SIZED AND INSTALLED FOR THE OUTER DIAMETER OF INSULATION. INSTALL 6" LONG SPOT CIRCLE GALVANIZED SADDLE BETWEEN THE HANGER AND THE PIPE INSULATION.

HANGERS AND PIPING OF DISSIMILAR METALS SHALL BE DI-ELECTRICALLY SEPARATED.

PROVIDE SWAY AND SEISMIC BRACING WHERE REQUIRED BY CODE.

JOB CONDITIONS

PROTECT MATERIALS, APPARATUS AND EQUIPMENT FROM DAMAGE, MOISTURE, DIRT, DEBRIS AND WORK OF OTHER TRADES.

OPERATION MANUALS AND INSTRUCTIONS

PROVIDE OPERATION AND MAINTENANCE INSTRUCTIONS TO OWNER AT THE COMPLETION OF THE PROJECT. SUBMIT COPIES TO ARCHITECT.

SCHEDULE A MEETING WITH THE OWNERS REPRESENTATIVE AT THE SITE TO PROVIDE DETAILED INFORMATION ON THE OPERATING AND MAINTENANCE OF EQUIPMENT.

SUBMITTALS

SUBMIT WITHIN THIRTY (30) DAYS AFTER THE DATE OF NOTICE TO PROCEED AND BEFORE PURCHASING ANY MATERIALS OR EQUIPMENT. SUBMIT TO THE ARCHITECT FOR REVIEW. A COMPLETE LIST OF ALL MATERIALS INCORPORATED IN THE WORK. THIS LISTING SHALL BE ARRANGED BY THE ORDER OF OCCURRENCE IN THE ARCHITECT-ENGINEER WITHOUT CAUSING DELAYS OR CONFLICTS IN THE PROJECTS PROGRESS.

AFTER THE LIST HAS BEEN PROCESSED BY THE ARCHITECT, SUBMIT COMPLETE SHOP DRAWINGS AND PRODUCT DATA OF ALL EQUIPMENT. THESE SUBMITTALS SHALL BE SUBMITTED WITHIN THIRTY (30) DAYS AFTER THE PROCESSING DATE OF THE ORIGINAL SUBMITTAL LIST. SUBMISSIONS SHALL BE MADE EARLY ENOUGH IN PROJECT TO ALLOW FOR (1) WORKING DAYS FOR REVIEW BY ARCHITECT-ENGINEER WITHOUT CAUSING DELAYS OR CONFLICTS IN THE PROJECTS PROGRESS.

ALL SUBMITTALS SHALL BE COMPLETE, NO CONSIDERATION WILL BE GIVEN TO PARTIAL SUBMITTALS, UNLESS NOTED OTHERWISE BY ARCHITECT. EACH ITEM SHALL HAVE A COVER PAGE STATING CONTRACT DOCUMENTS AND PARAGRAPH REFERENCE NUMBER, OR DRAWING REFERENCE NUMBER, AND SCHEDULED EQUIPMENT IDENTIFICATION NUMBER, IF APPLICABLE.

THE REVIEW OF SUBMITTALS DOES NOT RELIEVE RESPONSIBILITY OF SHOP DRAWING ERRORS IN DETAILS, SIZES, QUANTITIES, WIRING ADJUSTMENT, INCIDENTALS AND DETAILS NECESSARY TO MEET THE SPECIFICATIONS, CONTRACT DRAWINGS AND/OR JOB CONDITIONS AS THEY EXIST.

IF APPARATUS OR MATERIALS ARE SUBSTITUTED FOR THOSE SPECIFIED UNDER THIS SECTION, AND SUCH SUBSTITUTIONS NECESSITATE CHANGES IN ADDITIONAL CONNECTIONS, PIPING SUPPORTS OR CONSTRUCTIONS, SAME SHALL BE PROVIDED AT NO ADDITIONAL COST TO THE OWNER. ASSUME COST AND ENTIRE RESPONSIBILITY THEREOF. ARCHITECTS PERMISSION TO MAKE SUCH SUBSTITUTION SHALL NOT RELIEVE FULL RESPONSIBILITY FOR WORK.

TEST AND BALANCE REPORT. SUBMIT AT FINAL INSPECTION OPERATION AND MAINTENANCE MANUALS. SUBMIT COPIES IN COMPLIANCE WITH SECTION, OPERATION AND MAINTENANCE MANUALS.

15400 - HEATING VENTILATION AND & AIR CONDITIONING

PRODUCTS

ALL MATERIALS AND EQUIPMENT SHALL BE NEW. SYSTEMS SHALL FUNCTION CORRECTLY AS A WHOLE, AND IN ALL ITS PARTS, UP TO THE SPECIFIED CAPACITY. SYSTEMS OR DEVICES FAILS TO MEET PERFORMANCE REQUIREMENTS, SHALL BE REPLACED, ALTERED OR REPAIRED AS REQUIRED TO BRING PERFORMANCE UP TO SPECIFIED REQUIREMENTS. WORK DAMAGED OR MARKED BY SUCH REPAIRS/ALTERATIONS, OR REPAIRS SHALL BE RESTORED TO PRIOR CONDITIONS. AT NO ADDITIONAL COSTS TO THE OWNER, WHERE MULTIPLE ITEMS OF EQUIPMENT OR MATERIALS ARE REQUIRED, THEY SHALL BE REPLACED BY A SINGLE MANUFACTURER. BEFORE ORDERING EQUIPMENT, THE PHYSICAL DIMENSIONS SHALL BE CHECKED TO VERIFY FIT IN SPACES ALLOTTED ON THE DRAWINGS. INSERTS, PIPE SLEEVES, AND SUPPORTS OF CONDITIONING EQUIPMENT SHALL BE PROVIDED AS SPECIFIED. WHERE SUCH ITEMS ARE TO BE SET OR EMBEDDED IN CONCRETE, MASONRY OR SIMILAR WORK, THE ITEMS SHALL BE FURNISHED AT THE PROPER TIME FOR SETTING OR EMBEDMENT SO AS TO CAUSE NO DELAY. DUCTWORK AND EQUIPMENT ASSEMBLIES SHOWN ON THE DRAWINGS ARE DIAGRAMMATIC. ADDITIONAL DUCTWORK AND APPURTENANCES REQUIRED FOR PROPER OPERATION OF EQUIPMENT SHALL BE PROVIDED BY THE CONTRACTOR AT NO ADDITIONAL COST.

MANUFACTURERS NAMES AND CATALOG NUMBERS. SPECIFIC REFERENCES HAVE BEEN MADE TO ONE OR MORE MANUFACTURERS NAMES AND MODEL OR CATALOG NUMBERS. THIS DOES NOT INDICATE THAT THE MATERIAL AND EQUIPMENT SPECIFIED IS NECESSARILY AN "OFF THE SHELF" ITEM. REQUIREMENTS FOR SPECIFIC FINISHES, MATERIALS OR OTHER MODIFICATIONS MAY INTRODUCE VARIANCES FROM MANUFACTURERS STANDARDS. ACCEPTANCE THAT SUCH MODIFICATIONS ARE FULLY CONSIDERED.

DACRAMS, NAMEPLATES AND LABELS. EACH MAJOR COMPONENT OF EQUIPMENT SHALL HAVE THE MANUFACTURERS NAME, ADDRESS AND CATALOG NUMBER ON A PLATE SECURELY AFFIXED IN A CONSPICUOUS PLACE. THE NAMEPLATE OF A DISTRIBUTING AGENT WILL NOT BE ACCEPTED. ALL PIECES OF EQUIPMENT, VALVES, STARTERS, DISCONNECTS, AND ALL PNEUMATIC AND ELECTRIC CONTROL INSTRUMENTS AND APPARATUS SHALL BE IDENTIFIED WITH 1/4" THICK BLACK LAMINATED PLASTIC NAMEPLATES, WITH 3/16" HIGH WHITE LAMINATED LETTERS. SIMILAR AND LIKE EQUIPMENT SHALL BE DESIGNATED WITH NUMERICAL SUFFIX (EXAMPLE: THERMOSTAT, T-1). THE NAMEPLATE IDENTIFICATIONS SHALL COINCIDE WITH ITEMS APPEARING ON DIAGRAMS. PROVIDE A LABEL FOR THE MECHANICAL SYSTEM(S) STATING NAME, ADDRESS AND PHONE NUMBER OF CONTRACTOR. LETTERS SHALL BE 1/4" HIGH AND LOCATED IN A CONSPICUOUS PLACE NEAR THE HVAC EQUIPMENT.

EXHAUSTION AND WORKMANSHIP THE WORK SHALL BE PERFORMED BY QUALIFIED MECHANICALS. ALL MATERIALS, APPARATUS AND EQUIPMENT SHALL BE INSTALLED IN NEAT, WORKMANLIKE MANNER. MATERIALS, DEVICES OR EQUIPMENT WHICH, IN THE OPINION OF THE ARCHITECT-ENGINEER, IS IMPROPERLY INSTALLED SHALL BE REMOVED AND REINSTALLED IN AN APPROVED MANNER AT NO ADDITIONAL COST TO THE OWNER. THE WORK SHALL BE COORDINATED WITH THE WORK OF OTHER TRADES WHERE THE WORK IS DEPENDENT UPON WORK OF OTHER TRADES OR WORK ALREADY IN PLACE. SUCH OTHER WORK AND WORK IN PLACE SHALL BE EXAMINED AND SHALL BE IN PROPER CONDITION AND STATE OF COMPLETION BEFORE CONTINUING THE INSTALLATION. THE INSTALLATION OF WORK SHALL, IN GENERAL, BE AS HIGH AS POSSIBLE AND LOCATED IN ACCORDANCE WITH THE DRAWINGS. DUCTWORK INDICATED SHALL BE FOLLOWED AS ACCURATELY AS POSSIBLE, ANY NECESSARY DEVIATIONS SHALL BE CALLED TO THE ATTENTION OF THE ARCHITECT-ENGINEER. PROVIDE DRAWINGS SHOWING PROPOSED CHANGES. APPROVAL IS REQUIRED BEFORE CHANGES SHALL TAKE EFFECT.

CUTTING AND PATCHING. ANY CUT OR PATCHING REQUIRED BY OTHER TRADES AS REQUIRED. CUTTING OF STEEL, CONCRETE OR ANY OTHER STRUCTURAL PART MUST BE APPROVED IN WRITING BY ARCHITECT-ENGINEER PRIOR TO CUTTING.

WATERPROOFING. DO NOT CUT OR PENETRATE WATERPROOFED SURFACES, OR WATERPROOFING MEMBRANES, WITHOUT FIRST MAKING ARRANGEMENTS FOR REPAIR BY A METHOD APPROVED BY ARCHITECT-ENGINEER.

PROVIDE ALL NECESSARY FLASHING AND COUNTERFLASHING TO MAINTAIN THE WATERPROOFING INTEGRITY OF THIS BUILDING AS REQUIRED BY THE INSTALLATION OR REMOVAL OF PIPES, DUCTS, LOUVERS, CONDUNIT, AND EQUIPMENT. PROVIDE EQUIPMENT CURBS AND DUNNAGE STEEL AS REQUIRED.

ELECTRICAL WORK. POWER WIRING FROM PANELS TO MOTOR CONTROLLERS AND FROM CONTROLLERS TO MOTORS IS SPECIFIED IN DIVISION 16. MOTOR STARTERS NOT SPECIFIED TO BE FURNISHED WITH THE MOTORS FROM THE FACTORY ARE SPECIFIED IN DIVISION 16. SUBMIT WIRING DIAGRAMS FOR APPROVAL, AND FURNISH APPROVED DRAWING TO THE ELECTRICAL CONTRACTOR FOR COORDINATION. ELECTRICAL CONTROL WIRING FOR COMPLETE INTERNAL TEMPERATURE CONTROLS, PUSH BUTTONS, INTERLOCKS IN MOTOR CONTROLLERS, AND LIKE ITEMS IS SPECIFIED IN THE CONTROL SECTION(S) IN THIS DIVISION. FURNISH ALL EQUIPMENT WITH COMPLETE INTERNAL CONTROL WIRING. ELECTRICAL WORK SPECIFIED IN THIS DIVISION SHALL CONFORM TO APPLICABLE PROVISIONS OF DIVISION 16. ALL CONTROL WIRING SHALL BE IN CONDUIT. PROVIDE MOTORS CONFORMING TO CHARACTERISTICS SHOWN ON ELECTRICAL DRAWINGS.

ACCESS DOORS (ACCESS PANELS)

PROVIDE ACCESS REQUIRED FOR MAINTENANCE, ADJUSTMENT, REMOVAL AND REPAIR OF VALVES, CONTROLS, DAMPERS, EQUIPMENT AND LIKE ITEMS. PROVIDE ACCESS DOORS (ACCESS PANELS) CONFORMING TO REQUIREMENTS OF DIVISION 5. ACCESS PANELS SHALL BE LOCATED TO MAKE ALL ITEMS EASILY ACCESSIBLE.

CLEAN UP

REFER TO GENERAL CONDITIONS FOR CLEANUP. CLEAN ALL MATERIALS AND EQUIPMENT OF DIRT, DUST, PAINT, SPOTS AND STAINS. SOL MARKS AND OTHER FOREIGN MATTER.

FINAL INSPECTION

GIVE NOTICE TO THE ARCHITECT-ENGINEER THAT THE WORK IS READY FOR FINAL INSPECTION.

1. SUBMIT TEST AND BALANCE REPORT AND COMPLETE REQUIREMENTS AS NOTED.
2. SUBMIT LETTER FROM CONTROL MANUFACTURER CERTIFYING THAT CONTROLS HAVE BEEN CHECKED FOR OPERATION AND CALIBRATION, AND THAT THE SYSTEM IS OPERATING AS INTENDED.

FURNISH NECESSARY MECHANICS TO OPERATE SYSTEM, MAKE NECESSARY ADJUSTMENTS AND ASSIST WITH FINAL INSPECTION.

INSTRUCTION OF OWNERS OPERATING PERSONNEL. INSTRUCT THE OWNERS OPERATING PERSONNEL IN THE OPERATION, ADJUSTMENT, CARE AND MAINTENANCE OF ALL HVAC EQUIPMENT AND SYSTEMS. INSTRUCTION SHALL BE PERFORMED AT A TIME APPROVED BY THE OWNER AND AFTER ALL HVAC EQUIPMENT AND SYSTEMS ARE INSTALLED AND COMPLETE. ADVISE THE OWNER OF THE LOCATION OF REQUIREMENTS. NOTIFY THE ARCHITECT-ENGINEER WHEN INSTRUCTIONS WILL BE GIVEN. QUALIFICATIONS OF INSTRUCTORS SHALL BE SUBJECT TO APPROVAL OF THE OWNER AND EQUIPMENT MANUFACTURER. ADDITIONAL REQUIREMENTS CONCERNING OPERATION AND MAINTENANCE OF MECHANICAL EQUIPMENT AND SYSTEMS MAY BE SPECIFIED IN OTHER SECTIONS. TWO COPIES OF INSTRUCTIONS MUST BE SUBMITTED TO THE OWNER AND AFTER ALL HVAC EQUIPMENT AND SYSTEMS ARE INSTALLED AND COMPLETE. ADVISE THE OWNER OF THE LOCATION OF REQUIREMENTS. NOTIFY THE ARCHITECT-ENGINEER WHEN INSTRUCTIONS WILL BE GIVEN. QUALIFICATIONS OF INSTRUCTORS SHALL BE SUBJECT TO APPROVAL OF THE OWNER AND EQUIPMENT MANUFACTURER. 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ADDITIONAL REQUIREMENTS CONCERNING OPERATION AND MAINTENANCE OF MECHANICAL

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GENERAL ELECTRICAL NOTES

1. COMPLETE INSTALLATION SHALL BE IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE, REQUIREMENTS OF THE ANJ AND ALL LOCAL & STATE CODES.

2. DO NOT SCALE FROM THESE DRAWINGS.

3. REFER TO ARCHITECTURAL DRAWINGS AND REFLECTED CEILING PLANS FOR EXACT LOCATIONS OF ALL LIGHTING FIXTURES AND ELECTRICAL DEVICES.

4. ALL EMPTY CONDUITS SHALL BE PROVIDED WITH PULL STRINGS AND BUSHINGS.

5. ALL JUNCTION BOXES SHALL HAVE A COVER.

6. COORDINATE EACH LIGHT FIXTURE INSTALLATION(S) W/ ACTUAL CEILING TO BE FURNISHED.

7. ALL BRANCH CIRCUITS WITHOUT A CONDUCTOR & CONDUIT INDICATED SHALL BE ROUTED TO A 20A-1P BREAKER W/ 241/2 #12EG 34°C, UNLESS NOTED OTHERWISE. REFER TO PANEL SCHEDULES FOR ADDITIONAL INFORMATION.

8. ALL BRANCH CIRCUIT CONDUCTORS SHALL NOT BE SMALLER THAN #12 AWG AND ALL CONDUIT SHALL NOT BE SMALLER THAN 3/4". UNLESS SPECIFICALLY NOTED OTHERWISE.

9. ALL CIRCUITS (LIGHTING AND POWER) SHALL BE PROVIDED WITH DEDICATED NEUTRALS UNLESS NOTED OTHERWISE. WHERE NEUTRALS ARE INDICATED TO BE SHARED, MULTIWIRE BRANCH CIRCUITS SHALL BE PROVIDED WITH 2P OR 3P BREAKERS AS REQUIRED PER NEC210.4.

10. ALL CIRCUITS (LIGHTING AND POWER) SHALL BE PROVIDED WITH AN INSULATED EQUIPMENT GROUND CONDUCTOR SIZED IN ACCORDANCE WITH THE NEC. THE RACEWAY SHALL NOT BE USED AN EQUIPMENT GROUND.

11. ALL FIXTURES SHALL BE SUPPORTED FROM EACH CORNER (INDEPENDENT OF THE SUSPENDED CEILING) WITH 12 GAUGE WIRE CONNECTED TO STRUCTURAL SYSTEM OF BUILDING. THE INSTALLATION SHALL MEET OR EXCEED THE SEISMIC REQUIREMENTS OF LOCAL AND NATIONAL CODES.

12. ELECTRICAL DEVICE MOUNTING HEIGHTS (UNO):
PANELBOARDS 78" AFF TO TOP OF PANEL
SWITCHES 48" AFF TO CENTER OF SWITCH
RECEPTACLES 18" AFF TO CENTER OF RECEPTACLE
TELEDATA OUTLETS 18" AFF TO CENTER OF RECEPTACLE

13. ELECTRICAL EQUIPMENT (PANELBOARDS, TRANSFORMERS, DISTRIBUTION EQUIPMENT, ETC.) IS SHOWN TO SCALE ON THE FLOOR PLANS.

14. THE ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR PROVIDING EQUIPMENT THAT WILL FIT WITHIN THE SPACES SHOWN ON THE PLANS AND COMPLYING WITH ALL CODE REQUIRED CLEARANCES.

15. ELECTRICAL CONTRACTOR TO LABEL ALL DEVICES (RECEPTACLES, SWITCHES, PANELBOARDS, DISCONNECTS, ETC.) WITH CIRCUIT NUMBER AND PANELBOARD DESIGNATION, RECEPTACLES, SWITCHES, AND SIMILAR DEVICES TO HAVE PRE-PRINTED, SELF-ADHESIVE LABEL.

16. PANELBOARDS, DISCONNECT SWITCHES, AND SIMILAR DEVICES TO HAVE ENGRAVED, SELF-ADHESIVE, LAMINATED ACRYLIC LABEL (BLACK W/ WHITE LETTERING).

17. PROVIDE TYPE-WRITTEN PANELBOARD SCHEDULES FOR ALL ELECTRICAL PANELBOARDS.

ELECTRICAL SYMBOLS

SYMBOL		DESCRIPTION	
○ A	DOWNLIGHT (LETTER INDICATES FIXTURE TYPE - SEE SCHEDULE)	▼	TELEPHONE OUTLET
○ A	DOWNLIGHT WITH EMERGENCY BACKUP (LETTER INDICATES FIXTURE TYPE - SEE SCHEDULE)	▼	TELEPHONE/DATA OUTLET
○ A	2X4 LIGHT FIXTURE (LETTER INDICATES FIXTURE TYPE - SEE SCHEDULE)	▼	DATA OUTLET
▨ A	2X4 LIGHT FIXTURE WITH EMERGENCY BACKUP (LETTER INDICATES FIXTURE TYPE - SEE SCHEDULE)	Ⓜ	AUDIO/VISUAL OUTLET
ⓧ	EMERGENCY EXIT SIGN (ARROW(S) AS INDICATED, SHADE INDICATES FACE, LETTER INDICATES FIXTURE TYPE - SEE SCHEDULE)	ⓑ	BELL
Ⓜ	WALL SWITCH - DESIGNATIONS AS FOLLOWS: 2-2 POLE 4-4-WAY 3-3-WAY K-KEY OPERATED M-MOTOR RATED SWITCH TS-TIME SWITCH A-3-INDICATES SWITCHING SCHEME TO RELATED FIXTURES	ⓑ	PUSH BUTTON
Ⓜ	OCCUPANCY SENSOR SWITCH (LETTER INDICATES SENSOR TYPE - SEE LIGHTING CONTROLS SCHEDULE)	ⓑ	SPEAKER
Ⓜ	LOW-VOLTAGE CONTROL STATION (LETTER INDICATES SENSOR TYPE - SEE LIGHTING CONTROLS SCHEDULE)	ⓑ	TELEVISION OUTLET
Ⓜ	SWITCHING POWER PACK (LETTER INDICATES SENSOR TYPE - SEE LIGHTING CONTROLS SCHEDULE)	ⓑ	VOLUME CONTROL
Ⓜ	DIMMING POWER PACK (LETTER INDICATES SENSOR TYPE - SEE LIGHTING CONTROLS SCHEDULE)	ⓑ	CAMERA
Ⓜ	CEILING MOUNTED OCCUPANCY SENSOR (LETTER INDICATES SENSOR TYPE - SEE LIGHTING CONTROLS SCHEDULE)	ⓑ	WIRELESS ACCESS POINT
Ⓜ	SIMPLEX RECEPTACLE - NEMA 5-20R	ⓑ	CARD READER
Ⓜ	DUPLEX RECEPTACLE - NEMA 5-20R		
Ⓜ	DUPLEX RECEPTACLE - NEMA 5-20R MOUNTED 6" ABOVE FINISHED COUNTER (VERIFY EXACT HEIGHT PRIOR TO ROUGH-IN)		
Ⓜ	SPLIT RECEPTACLE - NEMA 5-20R TOP OUTLET WIRED HOT, BOTTOM OUTLET SWITCHED.		
Ⓜ	QUAD RECEPTACLE - NEMA 5-20R		
Ⓜ	QUAD RECEPTACLE - NEMA 5-20R MOUNTED 6" ABOVE FINISHED COUNTER (VERIFY EXACT HEIGHT PRIOR TO ROUGH-IN)		
Ⓜ	CEILING MOUNTED DUPLEX RECEPTACLE - NEMA 5-20R		
Ⓜ	SPECIAL PURPOSE RECEPTACLE - REFER TO PLANS FOR MORE INFORMATION		
Ⓜ	JUNCTION BOX		
Ⓜ	WIREMOLD RFB4 SERIES FLOOR BOX, OR EQUAL, W/ (2) DUPLEX RECEPTACLES, COORDINATE DATA/TELECOM REQUIREMENTS WITH OWNER PRIOR TO ORDERING.		
Ⓜ	WIREMOLD RFA4 SERIES 4" POKE-THRU, OR EQUAL, W/ COMTS ADAPTER, (2) DUPLEX RECEPTACLES & (4) RJ45 PORTS, COORDINATE DATA/TELECOM REQUIREMENTS WITH OWNER PRIOR TO ORDERING.		
▼	DATA, TELEPHONE, OR COMBINATION TELEDATA OUTLET PROVIDE PULLSTRING IN CONDUIT TO ACCESSIBLE CEILING		
Ⓜ	ELECTRICAL PANELBOARD		
Ⓜ	ELECTRICAL SWITCHBOARD/DISTRIBUTION PANEL		
Ⓜ	DISCONNECT SWITCH 600 = 60 AMP SWITCH, 3 POLE 60/346 = 60 AMP SWITCH, 3 POLE, 40 AMP FUSE		
	CIRCUIT DESIGNATIONS ARE AS FOLLOWS: • LA-1 SINGLE PHASE CIRCUIT TO PANEL 'LA', CIRCUIT #1 WITH (1) HOT/SWITCH-LEG, (1) NEUTRAL AND (1) GROUND. • LA-3/5 SINGLE PHASE CIRCUIT TO PANEL 'LA', CIRCUITS #3,5 WITH (2) HOT CONDUCTORS AND (1) GROUND. PROVIDE NEUTRAL AS REQUIRED. • LA-7/9/11 THREE PHASE CIRCUIT TO PANEL 'LA', CIRCUITS #7,9,11 WITH (3) HOT CONDUCTORS AND (1) GROUND. PROVIDE NEUTRAL AS REQUIRED. REFER TO PANELBOARD SCHEDULES FOR ALL WIRE SIZES. ALL CONDUITS SHALL HAVE AN EGC.		

ELECTRICAL ABBREVIATIONS

A	AMPERE	K	KELVIN
AFC	AVAILABLE FAULT CURRENT	KOMIL	ONE THOUSAND CIRCULAR MILS
AFB	ABOVE FINISHED FLOOR	KVA	KILOVOLT-AMPERES
AFG	ABOVE FINISHED GRADE	KW	KILOWATT
AHJ	AUTHORITY HAVING JURISDICTION	LED	LIGHT-EMITTING DIODE
AIC	AMPERE INTERRUPTING CURRENT	MCB	MAIN CIRCUIT BREAKER
AL	ALUMINUM	MLO	MAIN LUGS ONLY
ATS	AUTOMATIC TRANSFER SWITCH	NEMA	NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION
AWG	AMERICAN WIRE GAGE	NL	NIGHTLIGHT
BRKR	BREAKER	P	POLE
C	CONDUIT	PART	PARTIAL CIRCUIT
CATV	COMMUNITY ANTENNA TELEVISION	PC	PHOTOCELL
CU	COPPER	PANLBD	PANELBOARD
EC	ELECTRICAL CONTRACTOR	RPT	RECEPTACLE
EGC	EQUIPMENT GROUNDING CONDUCTOR	RR	RESTROOM
EM	EMERGENCY	RTU	ROOF TOP UNIT
EMT	ELECTRICAL METALLIC TUBING	SPD	SURGE PROTECTION DEVICE
ENT	ELECTRICAL NONMETALLIC TUBING	SWD	SWITCHING DUTY
EX	EXISTING	TR	TAMPER-RESISTANT
G	GROUND	TS	TIME SWITCH
GI	GROUND-FAULT CIRCUIT INTERRUPTER	TYP	TYPICAL
GFPE	GROUND-FAULT PROTECTION OF EQUIPMENT	UL	UNDERWRITERS LABORATORIES
HACR	HEATING, AIR CONDITIONING, AND REFRIGERATION	UNO	UNLESS NOTED OTHERWISE
HP	HORSEPOWER	UPS	UNINTERRUPTIBLE POWER SUPPLY
HVAC	HEATING, VENTILATION, AND AIR CONDITIONING	USB	UNIVERSAL SERIAL BUS
HZ	HERTZ (CYCLE PER SECOND)	V	VOLT
IG	ISOLATED GROUND	VA	VOLT-AMPERE
IMC	INTERMEDIATE METAL CONDUIT	WP	WEATHERPROOF
		XPMR	TRANSFORMER

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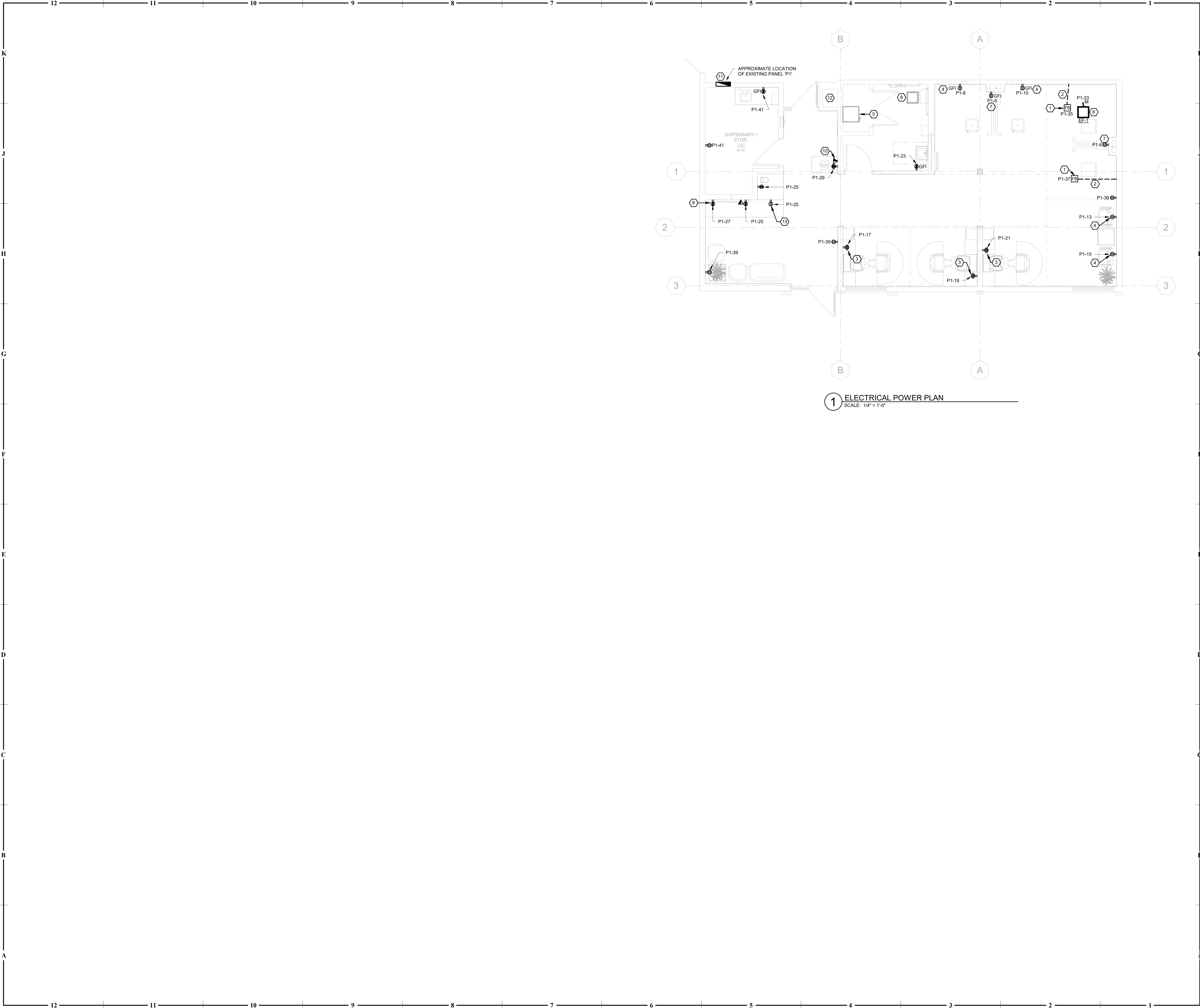
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ELECTRICAL NOTES, SYMBOLS & ABBREVS.

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GENERAL NOTES

(NOT ALL NOTES APPLY)

1. REFERENCE SHEET E01 FOR GENERAL NOTES, SYMBOLS, AND ABBREVIATIONS.

2. PROVIDE AND INSTALL 3/4" CONDUIT AND PULL STRINGS FROM TELEPHONE DATA OUTLETS TO ABOVE ACCESSIBLE CEILING. VERIFY EXACT REQUIREMENTS WITH TELEPHONE EQUIPMENT SUPPLIER AND/OR TENANT.

3. CONTRACTOR TO FIELD VERIFY EXISTING CONDITIONS. REMOVE EXCESS WIRING RESULTING FROM DEMOLITION. ELECTRICAL CONTRACTOR TO RE-CIRCUIT OUTLETS LEFT ON INCOMPLETE CIRCUITS.

4. WHERE POSSIBLE, RE-USE SPARE CIRCUITS RESULTING FROM DEMOLITION PRIOR TO PULLING NEW CIRCUITS FROM PANELBOARD.

5. ALL DEVICES LABELED 'EX' ARE EXISTING TO REMAIN. ALL DEVICES LABELED 'NEW' ARE EXISTING TO BE RELOCATED.

KEYED NOTES:

1. PROVIDE RECESSED FLOOR BOX SIMILAR TO HUBBELL #RFB030R WITH (2) DUPLEX RECEPTACLES FOR WALL STATION POWER. FIELD COORDINATE EXACT LOCATION WITH OWNER AND MILLWORK PRIOR TO ROUGH-IN.

2. ROUTE (1) 3/4" CONDUIT FOR POWER FROM FLOOR BOX TO NEAREST WALL AND UP INTO ACCESSIBLE CEILING. PATCH AND REPAIR CONCRETE AS REQUIRED.

3. POWER FOR CUTTING STATION TOOLS. FIELD COORDINATE EXACT LOCATION AND CONNECTION REQUIREMENTS WITH ARCHITECT AND MILLWORK PROVIDER PRIOR TO ROUGH-IN.

4. RECEPTACLE FOR REDUCURE CHAIR POWER. FIELD VERIFY EXACT ELECTRICAL REQUIREMENTS WITH EQUIPMENT PRIOR TO ROUGH-IN.

5. APPROXIMATE LOCATION OF EXISTING FAN COIL UNIT TO REMAIN.

6. CONTROL INTENT FOR EXHAUST FAN IS FOR FAN TO OPERATE CONTINUOUSLY DURING BUSINESS HOURS. PROVIDE #PP18 POWERPACK AND PROGRAM THROUGH DIGITAL TIMECLOCK. COORDINATE TIME-OF-DAY SCHEDULE WITH OWNER.

7. RECEPTACLE FOR SOURCE CAPTURE EXHAUST UNIT. COORDINATE EXACT LOCATION OF RECEPTACLE WITH WALL FLUR OUT AND DUCT WORK AS REQUIRED.

8. EXISTING RESTROOM EXHAUST FAN AND CONTROLS TO REMAIN. DESIGN INTENT IS FOR FAN TO OPERATE ON SAME CONTROL SCHEME. IF FAN IS CURRENTLY SWITCHED 'ON/OFF' WITH THE LIGHTS IN THE SPACE, CONNECT FAN TO LIGHTING SWITCHES AS REQUIRED.

9. RECEPTACLE FOR OWNER PROVIDED COFFEE MACHINE. FIELD VERIFY EXACT CONNECTION REQUIREMENTS WITH EQUIPMENT PRIOR TO ROUGH-IN.

10. POWER AND DATA FOR CHECK-IN STAND. FIELD VERIFY EXACT LOCATION PRIOR TO ROUGH-IN.

11. AFTER DEMOLITION, VERIFY THE QUANTITY OF AVAILABLE CIRCUITS IN EXISTING PANELS 'P1' AND 'P2' LOCATED IN THE COMMON CORRIDOR. IF THE QUANTITY OF AVAILABLE CIRCUITS IS NOT ENOUGH TO COMPLETE THE NEW SCOPE OF WORK, NOTIFY ENGINEER. WHERE NECESSARY, PROVIDE NEW BREAKERS AS REQUIRED.

12. APPROXIMATE LOCATION OF EXISTING WATER HEATER TO REMAIN.

13. POWER FOR UNDERCOUNTER REFRIGERATOR. FIELD VERIFY EXACT LOCATION PRIOR TO ROUGH-IN.

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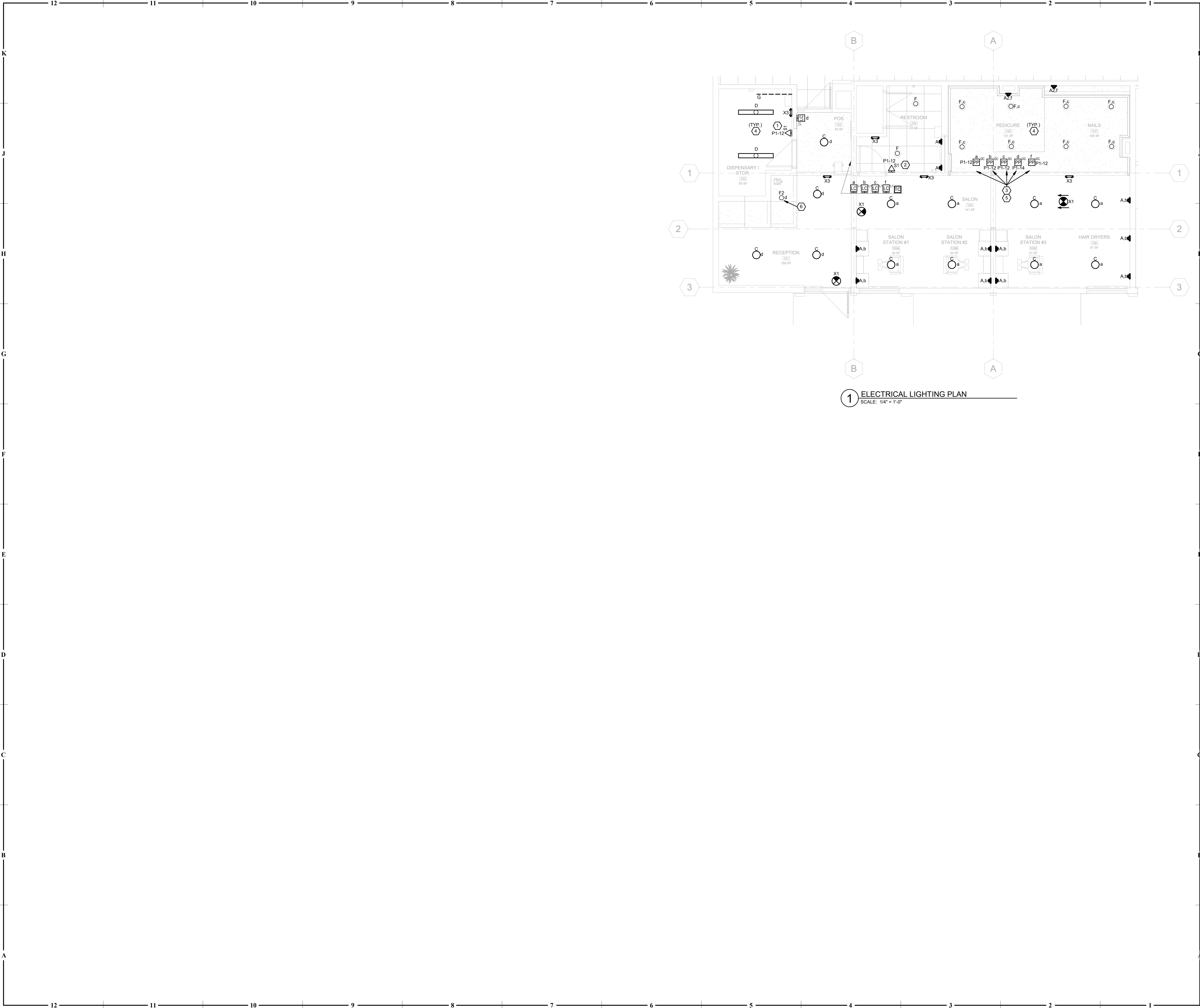
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ELECTRICAL POWER PLAN

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- GENERAL NOTES**
(NOT ALL NOTES APPLY)
1. REFERENCE SHEET E01 FOR GENERAL NOTES, SYMBOLS, AND ABBREVIATIONS.
 2. COORDINATE MOUNTING HEIGHTS AND LOCATIONS FOR ALL DEVICES WITH ARCHITECT AND/OR INTERIOR ELEVATIONS PRIOR TO ROUGH-IN.
 3. CIRCUIT ALL EXIT SIGNS TO NEAREST EMERGENCY LIGHTING CIRCUIT (OR NEAREST LIGHTING CIRCUIT IF NO GENERATOR).
 4. VERIFY ALL EXISTING BRANCH CIRCUITING. CONTRACTOR SHALL WIRE FIXTURES IN ACCORDANCE WITH SWITCHING INDICATED. CONNECTED LOAD ON 277V/20A CIRCUITS SHALL NOT EXCEED 4000W. 120V/20A CIRCUITS SHALL NOT EXCEED 1800W.
 5. CIRCUIT NUMBERS ARE SHOWN FOR REFERENCE ONLY. CONTRACTOR TO FIELD VERIFY EXISTING CONDITIONS.
 6. EXISTING, RELOCATED, AND EXISTING TO REMAIN FIXTURES SHALL BE REFURBISHED AND CLEANED. REPLACE BAD BALLAST/SOURCES AS WELL AS DIM. OR BURNED OUT LAMPS. LAMP COLOR AND WATTAGE TO MATCH EXISTING.
 7. FIXTURES LABELED 'EX' ARE EXISTING FIXTURES TO REMAIN. FIXTURES LABELED 'EXR' ARE EXISTING FIXTURES TO BE RE-USED/RELOCATED.

- KEYED NOTES:**
1. LIGHTING CONTROL INTENT FOR THIS AREA IS FOR FIXTURES TO BE MANUAL 'ON', AUTOMATIC 'OFF' VIA OCCUPANCY SENSOR WITH MANUAL OVERRIDE VIA SWITCH.
 2. LIGHTING CONTROL INTENT FOR THIS AREA IS FOR FIXTURES TO BE AUTOMATIC 'ON', AUTOMATIC 'OFF' VIA OCCUPANCY SENSOR WITH MANUAL OVERRIDE VIA SWITCH.
 3. LIGHTING CONTROL INTENT FOR ZONES 'a,b,c,d,f' IS FOR FIXTURES TO BE ON TIME-OF-DAY SCHEDULE WITH MANUAL OVERRIDE VIA LOW-VOLTAGE CONTROL STATION. COORDINATE TIME-OF-DAY SCHEDULE WITH OWNER. AFTER BUSINESS HOURS LOW-VOLTAGE CONTROL STATION TO ENERGIZE FIXTURES 'ON' FOR NOT MORE THAN 2 HOURS (MAXIMUM).
 4. FIELD COORDINATE EXACT LOCATION OF FIXTURES TO ENSURE FIXTURES DO NOT CONFLICT WITH UTILITIES AND EQUIPMENT ABOVE THE CEILING.
 5. LOCATE POWER PACKS ABOVE ACCESSIBLE CEILING IN RESTROOM AS REQUIRED.
 6. REPLACE EXISTING DOWNLIGHT IN SOFFIT OVER COUNTER WITH NEW LED DOWNLIGHT AS INDICATED.

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1000 - ELECTRICAL

GENERAL

DESCRIPTION
DIVISION 16 OF THE SPECIFICATIONS COVERS ALL ELECTRICAL WORK FOR THE PROJECT. WORK SHALL INCLUDE LABOR, MATERIAL AND ACCESSORIES NECESSARY TO ACCOMPLISH THE WORK AS SPECIFIED AND SHOWN ON THE DRAWINGS. INCLUDING CONNECTION AND CHECKOUTS OF EQUIPMENT FURNISHED BY OTHERS HEREIN. THE OWNER AND OTHER CONTRACTORS, AND TO ALL EQUIPMENT ITEMS AND AS NOTICED ON DRAWINGS OR AS REQUIRED.

THE ARCHITECTURAL SPECIFICATIONS AND DRAWINGS INCLUDING THE GENERAL CONDITIONS, INCLUDING ALL SUPPLEMENTS ISSUED HERETO, INSTRUCTIONS TO BIDDERS, AND OTHERS PERTINENT DOCUMENTS ISSUED BY THE ARCHITECT ARE A PART OF THESE SPECIFICATIONS AND ELECTRICAL DRAWINGS. THIS TRADE SHALL CONSULT THEM FOR INSTRUCTIONS WHICH APPLY. DRAWINGS INDICATE THE GENERAL ARRANGEMENT OF THE ELECTRICAL UTILITY AND WORK INCLUDED. ELECTRICAL SHALL FOLLOW DRAWINGS IN LAYOUT THE ELECTRICAL WORK AND CONSULT THE DRAWINGS AND LAYOUTS OF OTHER TRADES TO VERIFY LOCATION AND SPACES IN WHICH WORK WILL BE INSTALLED.

CODES, PERMITS, INSPECTION AND COMMISSIONING
INSTALLATION SHALL COMPLY WITH ALL LAWS APPLYING TO ELECTRICAL WORK IN EFFECT, INCLUDING THE NATIONAL ELECTRICAL CODE, THE NATIONAL ELECTRICAL CODE (N.E.C.), THE NATIONAL ELECTRICAL SAFETY CODE, ALL LOCAL GOVERNING CODES AND ORDINANCES, WITH THE REGULATIONS OF THE SERVING ELECTRICAL UTILITY COMPANY. PROVIDE ALL REQUIRED PERMITS AND INCLUDE THE COST OF SAME IN THE COST OF THE PROJECT. OBTAIN AND PAY FOR WITHOUT ADDITIONAL CHARGE TO THE OWNER, ALL REQUIRED INSPECTIONS AND REVIEWS. PROVIDE FOR AND PAY ALL EXPENSES WITHOUT ADDITIONAL CHARGE TO THE OWNER, ASSOCIATED WITH LIGHTING AND LIGHTING CONTROLS COMMISSIONING. ALL COMMISSIONING DOCUMENTATION SHALL BE CERTIFIED AND GIVEN TO OWNER AND DESIGN PROFESSIONAL.

QUALITY ASSURANCE
THE FOLLOWING INDUSTRY STANDARDS ARE APPLICABLE TO ELECTRICAL WORK SHALL APPLY TO THE WORK OF THIS DIVISION EXCEPT THAT, WHERE THE REQUIREMENTS OF THESE SPECIFICATIONS ARE MORE THAN THE LISTED STANDARD, THESE SPECIFICATIONS SHALL TAKE PRECEDENCE.

UL - UNDERWRITERS LABORATORIES
NEMA - NATIONAL ELECTRICAL MANUFACTURERS' ASSOCIATION
NECA - NATIONAL ELECTRICAL CONTRACTORS ASSOCIATION
ANSI - AMERICAN NATIONAL STANDARDS INSTITUTE
ASTM - AMERICAN SOCIETY OF TESTING MATERIALS

ALL MATERIALS SHALL BE NEW, UL LISTED AND LABELED WHERE LABELED. MATERIALS ARE AVAILABLE, UNDAUNTED AND FREE OF DEFECTS AT THE TIME OF INSTALLATION. MATERIALS OR EQUIPMENT DAMAGED IN SHIPMENT OR OTHERWISE DAMAGED PRIOR TO OR DURING INSTALLATION SHALL NOT BE REPAIRED AT THE SITE, BUT SHALL BE REPLACED WITH NEW MATERIALS. WHEN THE MANUFACTURER'S NAME APPEARS IN THESE SPECIFICATIONS AND DRAWINGS, IT SHALL BE CONSTRUED THAT THE MANUFACTURER HAS TO MEET THE FULL REQUIREMENTS OF THE SPECIFICATIONS AND DRAWINGS.

SUBMITTALS
SUBMIT SHOP DRAWINGS AND PRODUCT DATA FOR EQUIPMENT TO THE ARCHITECT FOR ENGINEER'S REVIEW ELECTRONICALLY OR HARD COPIES. INCLUDE SUFFICIENT INFORMATION TO INDICATE COMPLETE COMPLIANCE WITH SPECIFICATIONS. PROVIDE SUBMITTALS AS EARLY AS REQUIRED TO SUPPORT THE PROJECT. PROVIDE SUBMITTALS IN ACCORDANCE WITH THE PROJECT MANUAL. SCHEDULE. ALLOW ONE WEEK FOR ENGINEER REVIEW TIME. THE ENGINEER'S SUBMITTAL REVIEWS WILL NOT REFUSE THE CONTRACTOR FROM RESPONSIBILITY FOR DETAILS, DIMENSIONS, DETAILS, SIZE OF MEMBERS, OR QUANTITIES, OR FOR OMITTING COMPONENTS OR FITTINGS, OR FOR NOT COORDINATING ITEMS WITH ACTUAL BUILDING CONDITIONS AND/OR OTHER TRADES.

OWNER RECORDS
ACCUMULATE DURING THE PROGRESS OF THE JOB. THE FOLLOWING DATA IN DUPLICATE, AND PREPARE IN A NEAT BINDER OR PACKET FOLDER TO BE TURNED OVER TO THE OWNER AT SUBSTANTIAL COMPLETION. RECORD DRAWINGS PER ABOVE.

ALL WARRANTIES, GUARANTEES, AND MANUFACTURER'S DIRECTION ON EQUIPMENT & MATERIAL FURNISHED.

COMPLETE PLAN ENGLISH STEP-BY-STEP OPERATING INSTRUCTIONS FOR THE ELECTRICAL SYSTEM. ONE COPY OF THESE INSTRUCTIONS SHALL BE FRAMED AND POSTED AS DIRECTED ON THE PREMISES.

CERTIFIED LIGHTING AND LIGHTING CONTROLS COMMISSIONING AS REQUIRED BY CURRENTLY ADOPTED ENERGY CODE REQUIREMENTS.

MANUFACTURERS NAMES AND CATALOG NUMBERS
IN SOME INSTANCES, SPECIFIC REFERENCES HAVE BEEN MADE TO ONE OR MORE MANUFACTURERS NAME AND MODEL, OR CATALOG NUMBERS. USE OF NAMES AND CATALOG NUMBERS DOES NOT INDICATE THAT THE EQUIPMENT SPECIFIED IS NECESSARILY AN "OFF THE SHELF" ITEM. VARIANCES MAY BE USED TO REQUIREMENT OF DESIRED FINISH, MATERIAL OR OTHER MODIFICATION.

IN THE CASE OF PANELBOARDS, SAFETY SWITCHES AND OTHER EQUIPMENT REQUIRING WIRE AND CABLE TERMINATIONS, ASCERTAIN THAT LUG SIZES AND WIRING TYPES OR WIRING SPACE ALLOWED IS PROPER FOR THE WIRES AND CABLES CONTAINED THEREIN.

WHEN WORK IS GIVEN FOR THE USE OF EQUIPMENT DIFFERING FROM THAT SHOWN ON DRAWINGS IN REGARD TO FOUNDATIONS, SPACE FOR PIPING, DUCTWORK, WIRING, INSULATION, ETC. CHANGES REQUIRED TO ACCOMPLISH SUCH DIFFERENCES SHALL BE ACCOMPLISHED AT NO COST TO THE OWNER.

PROTECTION OF EQUIPMENT
ELECTRICAL EQUIPMENT SHALL BE PROTECTED FROM THE WEATHER, IN PARTICULAR, DRIPPING OR SPLASHING WATER, AT ALL TIMES DURING SHIPMENT, STORAGE AND CONSTRUCTION. MANUFACTURER'S RECOMMENDATIONS WITH REGARD TO STORAGE, PROTECTION, AND HANDLING SHALL BE FOLLOWED.

SHOULD ANY APPARATUS BE SUBJECTED TO POSSIBLE INJURY DUE TO WATER, IT SHALL BE THOROUGHLY DRIED AND PUT THROUGH A DIELECTRIC TEST, AT THE EXPENSE OF THE CONTRACTOR, TO ASCERTAIN THE SUITABILITY OF THE APPARATUS OR IT SHALL BE REPLACED WITHOUT ADDITIONAL COST TO THE OWNER.

DAMAGED OR DEFECTIVE EQUIPMENT - INSPECT ALL ELECTRICAL EQUIPMENT AND MATERIALS PRIOR TO INSTALLATION. INSTALLATION OR PLACEMENT INTO SERVICE OF DAMAGED MATERIALS WITHOUT THE PRIOR WRITTEN CONSENT OF THE OWNER IS PROHIBITED. REPLACE OR REPAIR TO NEW CONDITION, AS CERTIFIED BY THE MANUFACTURER, AND TEST DAMAGED EQUIPMENT IN COMPLIANCE WITH INDUSTRY STANDARDS AT NO ADDITIONAL COST TO THE OWNER. EQUIPMENT REQUIRED FOR THE TESTING SHALL BE PROVIDED BY THE CONTRACTOR.

WORKING CLEARANCE
THE SIZE OF ELECTRICAL EQUIPMENT SHOWN ON THE DRAWINGS IS BASED ON DIMENSIONS OF A PARTICULAR MANUFACTURER, (GENERALLY THE FIRST NAMED). WHILE OTHER MANUFACTURERS MAY BE ACCEPTABLE, IT IS THE RESPONSIBILITY OF THE TRADE TO DETERMINE IF THE EQUIPMENT PROPOSED WILL FIT IN THE ALLOCATED SPACE.

INSTALL ALL EQUIPMENT IN A MANNER TO PERMIT ACCESS TO ALL SURFACES, MANIPULATE PROPER CLEARANCE TO MEET ALL SAFETY AND OPERATING CODES. PARTICULARLY N.E.C. INCLUDE ALL REQUIREMENTS DICTATED BY OPERATION, CONTROL, ADJUSTMENT, MAINTENANCE AND POSSIBLE REPLACEMENT OF EQUIPMENT IN DETERMINING CLEARANCE.

SHOULD THERE BE APPARENT VIOLATIONS OF N.E.C. CLEARANCE, NOTIFY THE ARCHITECT-ENGINEER BEFORE PROCEEDING WITH CONNECTION OR PLACEMENT OF EQUIPMENT.

COORDINATION
INSTALLATION STUDIES ARE REQUIRED TO COORDINATE THE ELECTRICAL WORK WITH THE WORK OF OTHER TRADES. PREPARE COORDINATION DRAWINGS AT ACCURATE SCALE WHERE SEVERAL ELEMENTS OF ELECTRICAL OR COMBINED MECHANICAL/STRUCTURAL ELECTRICAL WORK MUST BE SEQUENCED AND POSITIONED WITH PRECISION IN ORDER TO FIT INTO THE AVAILABLE SPACE.

SHOW THE ACTUAL PHYSICAL DIMENSIONS REQUIRED FOR PROPER INTEGRATION OF EQUIPMENT WITH BUILDING SYSTEMS.

PROVIDE APPROVED SHOP DRAWINGS TO ALL REQUIRED DISCIPLINES AND VERIFY FINAL ELECTRICAL CHARACTERISTICS BEFORE REQUIRED POWER FEEDS TO ANY EQUIPMENT. WHEN ELECTRICAL DATA ON APPROVED SHOP DRAWINGS DIFFERS FROM CONTEMPLATED DESIGN, MAKE NECESSARY ADJUSTMENTS TO THE WIRING, DISCONNECTS, AND BRANCH-CIRCUIT PROTECTION FOR THE EQUIPMENT ACTUALLY INSTALLED AT NO ADDITIONAL COST TO THE OWNER.

DAMAGE FROM INTERFERENCE CAUSED BY INADEQUATE COORDINATION SHALL BE RECTIFIED AT NO ADDITIONAL COST TO THE OWNER.

WORKMANSHIP
ALL WORK SHALL BE EXECUTED IN A WORKMANLIKE MANNER AND SHALL PRESENT A NEAT MECHANICAL APPEARANCE WHEN COMPLETED.

ANY MATERIAL ITEMS OR WORK NOT SHOWN ON THE DRAWINGS, BUT MENTIONED IN THESE SPECIFICATIONS OR VIA OTHERWISE, OR ANY ACCESSORIES NECESSARY TO MAKE THE WORK COMPLETE IN ALL RESPECTS AND READY FOR OPERATION SHALL BE PROVIDED WITHOUT ADDITIONAL COST TO THE OWNER.

THIS TRADE SHALL DO OR HAVE DONE BY COMPETENT TRADESMEN ALL CUTTING AND PATCHING NECESSARY FOR THE INSTALLATION OF THIS WORK, NO CUTTING IN CONSTRUCTIVE PARTS OF THE BUILDING LEVEL TO IMPAIR ITS STRENGTH SHALL BE DONE WITHOUT THE ARCHITECT-ENGINEER'S WRITTEN APPROVAL.

EXCAVATION AND BACKFILL
EXCAVATION, TRENCHING AND BACKFILLING ARE SPECIFIED IN SECTION EXCAVATION TRENCHING AND BACKFILLING FOR UTILITIES. CONDUIT IS TO BE INSTALLED AS SPECIFIED FOR PIPELINES. CONDUIT INSTALLED NEARLY 12" ABOVE GRADE SHALL BE A MINIMUM OF 6" BELOW SLAB. BACKFILL OVER CONDUIT SHALL BE COMPACTED AS FOR SLAB BEDDING MATERIAL. REFER TO STRUCTURAL DRAWINGS FOR DETAILS OF CONDUIT PIPE PENETRATION OF EXTERIOR FOOTINGS. COMPLETE INSTALLATION SHALL CONFORM TO N.E.C.

PENETRATIONS
COORDINATE SLEEVE SELECTION AND APPLICATION WITH SELECTION AND APPLICATION OF FIRE STOPPING SPECIFIED IN ARCHITECTURAL SPECIFICATIONS.

ROOFS - COORDINATE ALL ROOF PENETRATIONS WITH ENGINEER, OWNER, AND AS APPLICABLE, THE ROOFING CONTRACTOR PROVIDING A ROOF WARRANTY. KEEP ALL RACEWAY PENETRATIONS WITH MECHANICAL EQUIPMENT CURBS WHEREVER POSSIBLE. COORDINATE WITH DIVISION 15, FLASH AND COUNTERFLASH ALL OPENINGS THROUGH ROOF, AND/OR PROVIDE PRE-FABRICATED MOLDED SEALS COMPATIBLE WITH THE ROOF CONSTRUCTION INSTALLED, OR AS REQUIRED BY THE ENGINEER, OWNER, OR ROOFING CONTRACTOR. ALL ROOF PENETRATIONS SHALL BE LEAKTIGHT AT THE TERMINATION OF THE WORK AND SHALL NOT VOID ANY NEW OR EXISTING ROOF WARRANTIES.

WALLS AND FLOORS - SLEEVES FOR RACEWAYS AND CABLES.

STANDARD ROOF PENETRATIONS: ASTM A 53A, SAE, TYPE E, GRADE E, SCHEDULE 40, GALVANIZED STEEL, PLAN ENDS AND DRIP RINGS.

CAST RDN PIPE SLEEVES: CAST OR FABRICATED "WALL PIPE" EQUIVALENT TO DUCTILE-IRON PRESSURE PIPE, WITH PLAN ENDS AND INTEGRAL WATERSTOP, UNLESS OTHERWISE INDICATED.

FIRESTOPPING: FIRE RESISTANT THROUGH PENETRATION SEALANTS - TWO PART, FOAMED-IN-PLACE, SILICONE SEALANT FORMULATED FOR USE IN THROUGH- PENETRATION FIRE STOPPING AROUND CABLES, RACEWAYS, AND CABLE TRAY PENETRATIONS THROUGH FIRE-RATED WALLS AND FLOORS. SEALANTS AND ACCESSORIES SHALL HAVE FIRE-RESISTANCE RATINGS IDENTIFIED AS ESTABLISHED BY TESTING IDENTICAL ASSEMBLIES IN ACCORDANCE WITH ASTM E 814 BY UNDERWRITERS LABORATORIES, INC. OR OTHER MTL ACCEPTABLE TO AHI.

ACCEPTABLE MANUFACTURERS - HLTI, INC., 3M CORP, RETORSEAL, SPECIFY TECHNOLOGY INC., UNITED STATES GYPSUM COMPANY.

ELECTRICAL SERVICE SHALL BE AS SHOWN ON DRAWINGS.

PROVIDE SECONDARY SERVICE INTO THE BUILDING WITH CONDUIT AND WIRING AS SHOWN ON THE PLANS, INCLUDING, BUT NOT LIMITED TO, UNDERGROUND RACEWAYS AND CABLES AND SECONDARY CONDUITS AND CABLES TO UTILITY TRANSFORMERS AS REQUIRED BY SERVING ELECTRICAL UTILITY COMPANY. COORDINATE ALL REQUIREMENTS WITH UTILITY COMPANY PRIOR TO BID.

PROVIDE ALL REQUIRED GROUNDING FOR A COMPLETE SERVICE ENTRANCE GROUNDING SYSTEM. PERMANENTLY AND EFFECTIVELY GROUND AND BOND THE ELECTRICAL SYSTEM TO THE BUILDING FRAMEWORK AND EARTH. PROVIDE IN CONFORMANCE (AT A MINIMUM) WITH N.E.C. OR THESE DOCUMENTS, WHERE THEY EXCEED CODE REQUIREMENTS. USE BARE OR INSULATED CONDUCTORS, AS SPECIFIED HEREIN, AND OTHER MATERIALS INCLUDED ON THE DRAWINGS.

PROVIDE ALL NECESSARY ENCLOSURES REQUIRED BY THE OWNER FOR THE UTILITY COMPANY METERING. REFER TO DRAWINGS FOR MINIMUM REQUIREMENTS. COORDINATE WITH UTILITY COMPANY PRIOR TO BID FOR ALL REQUIREMENTS. VERIFY WITH THE TELEPHONE CO. THE TELEPHONE TERMINAL BOARD SHALL BE PROVIDED WITH A DOUBLE DUPLY RECEPTACLE LOCATED WHERE INDICATED ON THE DRAWINGS. THE TERMINAL BOARD SHALL BE CONSTRUCTED OF 4" X 3" X 3/4" PLYWOOD WITH TWO (2) COATS OF FLAME RETARDANT PAINT UNLESS NOTED OTHERWISE ON DRAWINGS.

PRODUCTS
GENERAL
ALL EQUIPMENT OF A PARTICULAR KIND, SUCH AS WIRING DEVICES AND PANELBOARDS AND ALL LIGHTING FIXTURES OF THE SAME TYPE, SHALL BE THE PRODUCT OF THE SAME MANUFACTURER.

PROVIDE ACCESS PANELS FOR ALL EQUIPMENT AND DEVICES REQUIRING SUCH PANELS. SIZE AS REQUIRED FOR PROPER ACCESS AND MAINTENANCE. MINIMUM ALLOWED IS 12 IN BY 12 IN CLEAR OPENING WHERE HAND ACCESS ONLY IS REQUIRED.

PROVIDE LABELS FOR EACH MOTOR CONTROLLER, SAFETY SWITCH, RELAY, PANELBOARD, CONTACTOR, TIMER, CONTACTOR, DEVE, METER AND CIRCUIT BREAKER. LABELS SHALL BE LAMINATED, PHENOLIC STRIPS 1/16" THICK, AND ENGRAVED TO SHOW BLACK LETTERS ON A WHITE BACKGROUND NOT LESS THAN 1/4" HIGH. SIZE STRIPS TO PROPERLY FIT MANUFACTURER'S BRACKETS AND BE LEGIBLE. WHERE MANUFACTURER'S BRACKETS ARE NOT PROVIDED, MOUNT LABELS WITH PROPER SCREWS, OR AN APPROVED ADHESIVE.

RACEWAYS
CONDUIT, RIGID STEEL, GALVANIZED OR SHERADIZED AND MANUFACTURED IN ACCORDANCE WITH ANSI STANDARD C83.1. FITTINGS SHALL BE PIPE THREADED WITH INSULATED THROAT.

CONDUIT, PVC POLYVINYLCHLORIDE SCHEDULE 40 PIPE SPECIFICALLY MANUFACTURED AND LABELED (UL STANDARD 651) FOR USE AS ELECTRICAL CONDUIT. FITTINGS SHALL BE EITHER SOCKET WELDED TYPE OR PIPE THREADED WITH INSULATED THROAT.

CONDUIT, FLEXIBLE METALLIC, GALVANIZED, INTERLOCKED SPIRAL WOUND STEEL STRIP WITH GALVANIZED OR SHERADIZED FINISHES. LISTED PER UL, FITTINGS SHALL BE OF THE SQUEEZE TYPE WITH INSULATED THROATS.

CONDUIT, LIQUIDTIGHT FLEXIBLE METALLIC, GALVANIZED, INTERLOCKED SPIRAL WOUND STEEL STRIP WITH OVERALL JACKET OF LIQUID TIGHT PVC, UL LISTED. FITTINGS SHALL BE STEEL OR MALLEABLE IRON INSULATED THROAT, WATER TIGHT.

ELECTRIC METALLIC TUBING: GALVANIZED OR SHERADIZED AND MANUFACTURED IN ACCORDANCE WITH ANSI STANDARD C83.1. FITTINGS 12 IN O.D. THROUGH 2 INCH O.D. SHALL BE OF THE COMPRESSION TYPE. MANUFACTURED FROM MALLEABLE IRON OR STEEL, AND RAIN AND/OR CONCRETE-TIGHT AS REQUIRED BY INSTALLATION. POT METAL, OR DIE CAST TYPE FITTINGS ARE PROHIBITED. CONNECTORS SHALL BE INSULATED SLEEVES.

CONDUCTORS AND CABLES
GENERAL: SERVICE LATERALS AND PANELBOARD FEEDERS SHALL BE OF ANNEALED (SOFT) COPPER COMPLYING WITH ICEA S-65-668 NEMA WC70; SOLID CONDUCTOR FOR NO. 10 AWG AND SMALLER; CONCENTRIC, COMPRESSED STRANDED FOR NO. 8 AWG AND LARGER. ALL FEEDER CONDUCTORS NO. 8 AWG AND LARGER, STRANDED TYPE THW-2 OR XHHW-2 INSULATION.

CABINETS AND ENCLOSURES
FURNISH AND INSTALL FLUSH CABINETS AND ENCLOSURES AS SHOWN ON THE PLANS AND AS HEREIN SPECIFIED. UNIT SHALL BE PROVIDED WITH DEAD FRONT SUB PANEL, RECESSED AS REQUIRED, TO HOUSE CONTROLS. DOOR SHALL BE PROVIDED WITH CONCEALED HINGES AND FLUSH KEY OPERATED LOCK. DOOR AND TRIM SHALL BE PRIME PAINTED FOR FIELD PAINTING TO MATCH WALL FINISHES. PROVIDE KNOCK-OUTS, LOUVERS AND IDENTIFICATION ENGRAVING AS REQUIRED TO MEET FIELD CONDITIONS. EXACT BACKBOX SIZE TO BE COORDINATED WITH EQUIPMENT SUPPLIER.

CIRCUIT DISCONNECTS
SAFETY SWITCHES: SAFETY SWITCHES SHALL CONSIST OF A BOX, FRONT COVER, CIRCUIT PROTECTOR DEVICE ALL MANUFACTURED AND ASSEMBLED IN ACCORDANCE WITH NEMA STANDARDS.

THE BOX SHALL BE FABRICATED FROM COAT GAUGE GALVANIZED STEEL SHEET IN ACCORDANCE WITH UL LISTING AND LABEL. THE CIRCUIT PROTECTOR DEVICE SHALL BE HEAVY DUTY, QUICK-BREAK, FUSED OR UNFUSED SWITCH RATED FOR MOTOR CIRCUITS AND/OR SERVICE ENTRANCE, IF REQUIRED.

UNITS SHALL BE FURNISHED FOR SURFACE OR FLUSH MOUNTING WITH EITHER GENERAL PURPOSE OR RAIN/KNIGHT ENCLOSURES, AS REQUIRED. FUSED UNITS SHALL BE FURNISHED COMPLETE WITH PROPER FUSES.

PANELBOARDS
SHALL CONSIST OF BOX, INTERIOR, FRONT, AND CIRCUIT PROTECTIVE DEVICES. THE ASSEMBLY SHALL BE UL LABELED AND BE LISTED FOR SERVICE. THE ASSEMBLY SHALL BE DESIGNED AND MANUFACTURED IN ACCORDANCE WITH NEMA STANDARD PB-1. THE LATEST UL STANDARD (UL 89) AND SHALL HAVE A TURNED EDGE AROUND THE FRONT FOR RIGIDITY AND FOR CLAMPING ON FRONT. PROVIDE STANDARD KNOCKOUTS ON REMOVABLE BOX ENDS. FABRICATE FROM SHEET STEEL AND FINISH WITH ENAMEL OR GRAY ENAMEL OVER RUBBER. EACH FRONT SHALL HAVE A DOOR MOUNTED ON SEMI-CONCEALED HINGES WITH A CYLINDER LOCK, KNOX CARD CIRCUIT DIRECTORY MOUNTED BEHIND CLEAR PLASTIC AND HELD IN A METAL FRAME. CONCEALED TRIM CLAMPS FOR MOUNTING TO THE BOX. ALL LOCKS SHALL BE MASTER KEYS AND ALL PANEL DIRECTORIES SHALL BE TYPEWRITTEN.

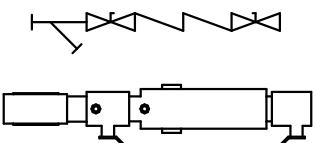
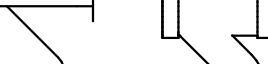
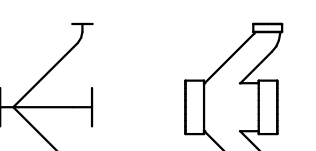
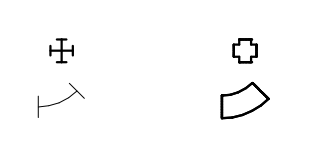
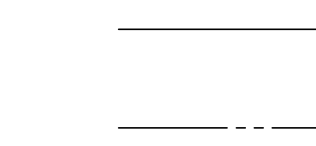
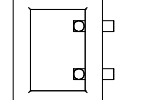
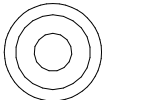
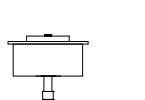
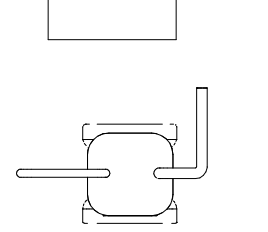
ALL INTERIORS SHALL BE COMPLETELY FACTORY ASSEMBLED. THE DESIGN OF THE INTERIOR SHALL PERMIT REPLACEMENT OF INDIVIDUAL BRANCH BREAKERS WITHOUT DISTURBING ADJACENT UNITS AND WITHOUT MECHANICAL DRILLING OR TAPPING. BUS AND CURRENT CHARACTERISTICS, WHERE LOW VOLTAGE OPERATION IS INDICATED, PROVIDE PROPER STEPDOWN TRANSFORMERS AND RECTIFIERS. APPROVED MANUFACTURERS: ASCO, OR MANUFACTURER OF APPROVED PANELBOARDS FURNISHED.

TRANSFORMERS
GENERAL PURPOSE, UL LISTED LABELED 150 DEGREES C TEMPERATURE RISE ABOVE 44 DEGREES C AMBIENT. INSULATING MATERIALS: EXCEED NEMA ST-620 STANDARDS, RATED FOR 220 DEGREES C. UL COMPONENT RECOGNIZED INSULATION SYSTEM. PHASES, VOLTAGES, AND SIZES AS INDICATED ON THE DRAWINGS. SOUND LEVEL NOT EXCEEDING NEMA STANDARDS FOR THE SIZES INDICATED. FULL-CAPACITY PRIMARY TAPS, BELOW 25 KVA - MINIMUM OF 2% (2) 25 KVA TO 300 KVA - MINIMUM OF 5% (2) 300 KVA TO 600 KVA - MINIMUM OF 7.5% (2) 600 KVA TO 1000 KVA - MINIMUM OF 10% (2) 1000 KVA TO 1500 KVA - MINIMUM OF 12.5% (2) 1500 KVA TO 2000 KVA - MINIMUM OF 15% (2) 2000 KVA TO 3000 KVA - MINIMUM OF 17.5% (2) 3000 KVA TO 4000 KVA - MINIMUM OF 20% (2) 4000 KVA TO 5000 KVA - MINIMUM OF 22.5% (2) 5000 KVA TO 6000 KVA - MINIMUM OF 25% (2) 6000 KVA TO 7000 KVA - MINIMUM OF 27.5% (2) 7000 KVA TO 8000 KVA - MINIMUM OF 30% (2) 8000 KVA TO 9000 KVA - MINIMUM OF 32.5% (2) 9000 KVA TO 10000 KVA - MINIMUM OF 35% (2) 10000 KVA TO 12000 KVA - MINIMUM OF 37.5% (2) 12000 KVA TO 15000 KVA - MINIMUM OF 40% (2) 15000 KVA TO 20000 KVA - MINIMUM OF 42.5% (2) 20000 KVA TO 25000 KVA - MINIMUM OF 45% (2) 25000 KVA TO 30000 KVA - MINIMUM OF 47.5% (2) 30000 KVA TO 40000 KVA - MINIMUM OF 50% (2) 40000 KVA TO 50000 KVA - MINIMUM OF 52.5% (2) 50000 KVA TO 60000 KVA - MINIMUM OF 55% (2) 60000 KVA TO 70000 KVA - MINIMUM OF 57.5% (2) 70000 KVA TO 80000 KVA - MINIMUM OF 60% (2) 80000 KVA TO 90000 KVA - MINIMUM OF 62.5% (2) 90000 KVA TO 100000 KVA - MINIMUM OF 65% (2) 100000 KVA TO 120000 KVA - MINIMUM OF 67.5% (2) 120000 KVA TO 150000 KVA - MINIMUM OF 70% (2) 150000 KVA TO 200000 KVA - MINIMUM OF 72.5% (2) 200000 KVA TO 250000 KVA - MINIMUM OF 75% (2) 250000 KVA TO 300000 KVA - MINIMUM OF 77.5% (2) 300000 KVA TO 400000 KVA - MINIMUM OF 80% (2) 400000 KVA TO 500000 KVA - MINIMUM OF 82.5% (2) 500000 KVA TO 600000 KVA - MINIMUM OF 85% (2) 600000 KVA TO 700000 KVA - MINIMUM OF 87.5% (2) 700000 KVA TO 800000 KVA - MINIMUM OF 90% (2) 800000 KVA TO 900000 KVA - MINIMUM OF 92.5% (2) 900000 KVA TO 1000000 KVA - MINIMUM OF 95% (2) 1000000 KVA TO 1200000 KVA - MINIMUM OF 97.5% (2) 1200000 KVA TO 1500000 KVA - MINIMUM OF 100% (2) 1500000 KVA TO 2000000 KVA - MINIMUM OF 102.5% (2) 2000000 KVA TO 2500000 KVA - MINIMUM OF 105% (2) 2500000 KVA TO 3000000 KVA - MINIMUM OF 107.5% (2) 3000000 KVA TO 4000000 KVA - MINIMUM OF 110% (2) 4000000 KVA TO 5000000 KVA - MINIMUM OF 112.5% (2) 5000000 KVA TO 6000000 KVA - MINIMUM OF 115% (2) 6000000 KVA TO 7000000 KVA - MINIMUM OF 117.5% (2) 7000000 KVA TO 8000000 KVA - MINIMUM OF 120% (2) 8000000 KVA TO 9000000 KVA - MINIMUM OF 122.5% (2) 9000000 KVA TO 10000000 KVA - MINIMUM OF 125% (2) 10000000 KVA TO 12000000 KVA - MINIMUM OF 127.5% (2) 12000000 KVA TO 15000000 KVA - MINIMUM OF 130% (2) 15000000 KVA TO 20000000 KVA - MINIMUM OF 132.5% (2) 20000000 KVA TO 25000000 KVA - MINIMUM OF 135% (2) 25000000 KVA TO 30000000 KVA - MINIMUM OF 137.5% (2) 30000000 KVA TO 40000000 KVA - MINIMUM OF 140% (2) 40000000 KVA TO 50000000 KVA - MINIMUM OF 142.5% (2) 50000000 KVA TO 60000000 KVA - MINIMUM OF 145% (2) 60000000 KVA TO 70000000 KVA - MINIMUM OF 147.5% (2) 70000000 KVA TO 80000000 KVA - MINIMUM OF 150% (2) 80000000 KVA TO 90000000 KVA - MINIMUM OF 152.5% (2) 90000000 KVA TO 100000000 KVA - MINIMUM OF 155% (2) 100000000 KVA TO 120000000 KVA - MINIMUM OF 157.5% (2) 120000000 KVA TO 150000000 KVA - MINIMUM OF 160% (2) 150000000 KVA TO 200000000 KVA - 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1001 NW CHIPMAN RD SUITE 123
LEE'S SUMMIT, MO 64081

P101

PLUMBING NOTES, SYMBOLS & ABBREVS.

PLUMBING LEGEND			
SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
COARSE FINE                     	BALL VALVE CHECK VALVE EMERGENCY MIXING VALVE PLUG VALVE RPZ BACKFLOW PREVENTER SOLENOID VALVE PVC ELBOW PVC CAP PVC CLOSET FLANGE PVC REDUCER PVC DOUBLE SANITARY TEE PVC VENT TEE PVC P-TRAP PVC COMBINATION WYE WITH 8TH BEND PVC DOUBLE COMBINATION WYE WITH 8TH BEND CROSS COPPER ELBOW COPPER TEE TRANSITION/REDUCER WALL CLEANOUT PIPE TURN DOWN/UP	       	FLOOR CLEANOUT DOWNSPOUT NOZZLE WASHING MACHINE BOX ROOF DRAIN WALL HYDRANT FLOOR DRAIN FLOOR SINK GAS METER
ABBREVIATIONS			
AD AREA DRAIN ACCESS DOOR AFC ABOVE FINISH CEILING AFG ABOVE FINISH GRADE AHU AIR HANDLING UNIT BFP BACKFLOW PREVENTER BOP BOTTOM OF PIPE BOS BOTTOM OF STRUCTURE BP BOOSTER PUMP CD CONDENSATE CO CLEANOUT CW DOMESTIC COLD WATER DD DECK DRAIN DN DOWN ETR EXISTING TO REMAIN EWC ELECTRIC WATER COOLER EWS EMERGENCY EYE WASH FCO FLOOR CLEANOUT FFA FROM FLOOR ABOVE FP FIRE PROTECTION FS FLOOR SINK G GAS (NATURAL) GCO GRADE CLEANOUT GPM GALLONS PER MINUTE HB HOSE BIBB HW DOMESTIC HOT WATER HWC HOT WATER CIRCULATION HWS HOT WATER SUPPLY IE INVERT ELEVATION LP LIQUEFIED PETROLEUM LT LAMBS TONGUED/DOWNSPOUT NOZZLE MBH 100 BTU PER HOUR N/A NOT APPLICABLE ORD OVERFLOW ROOF DRAIN OST STORM OVERFLOW PD PUMP DISCHARGE PI/ POST INDICATOR VALVE PRI/ PRESSURE REDUCING VALVE REV REVISION RPM REVOLUTIONS PER MINUTE RTU ROOF TOP UNIT SAN SANITARY ST STORM TFA TO FLOOR ABOVE TFB TO FLOOR BELOW TW TEMPERED WATER TYP TYPICAL UH UNIT HEATER V VENT PIPE VTR VENT THROUGH ROOF WCO WALL CLEANOUT WH WALL HYDRANT			
SYSTEM DESIGNATIONS			
CD CONDENSATE CW DOMESTIC COLD WATER HW HOT WATER RECIRCULATION HW DOMESTIC HOT WATER S SANITARY V VENT ST STORM DRAIN OST OVERFLOW STORM DRAIN			

1. FURNISH THE TERM "FURNISH" IS USED TO MEAN "SUPPLY AND DELIVER TO THE PROJECT SITE, READY FOR UNLOADING, UNPACKING, ASSEMBLY, INSTALLATION AND SIMILAR OPERATIONS."
2. INSTALL THE TERM "INSTALL" IS USED TO DESCRIBE OPERATIONS AT THE PROJECT SITE INCLUDING THE FOLLOWING: UNLOADING, UNPACKING, ASSEMBLY, ERECTION, PLACING, ANCHORING, APPLYING, WORKING TO DIMENSION, FINISHING, CURING, PROTECTING, CLEANING, AND SIMILAR OPERATIONS."
3. PROVIDE THE TERM "PROVIDE" MEANS "TO FURNISH AND INSTALL COMPLETE AND READY FOR THE INTENDED USE."
2. EXCEPT AS OTHERWISE NOTED, ALL SCHEDULED PLUMBING SHALL BE INSTALLED BY THE PLUMBING CONTRACTOR. THE PLUMBING CONTRACTOR SHALL MAKE ALL ROUGH-IN AND FINAL CONNECTIONS TO ALL PLUMBING EQUIPMENT.
3. EACH SINK, WATER CLOSET, ETC. SHALL HAVE SHUT-OFF VALVES LOCATED AT THE FIXTURE.
4. FIRE SEAL ALL PENETRATIONS THROUGH ROOFED WALLS. SLEEVE ENTIRELY WITH APPROPRIATE SLEEVE MATERIAL.
5. PROVIDE PROPERLY SIZED WATER HAMMER ARRESTORS ON ALL WATER LINES.
6. ALL WORK SHALL COMPLY WITH CURRENT FEDERAL, STATE, AND LOCAL CODES AND ORDINANCES AS WELL AS THE CONSTRUCTION DOCUMENTS. REPORT ANY CONFLICTS TO THE ENGINEER AS SOON AS THEY ARE DISCOVERED.
7. REVIEW THE DRAWINGS AND SPECIFICATIONS PRIOR TO BIDDING JOB AND DURING CONSTRUCTION. EXCEPT AS OTHERWISE NOTED, PROVIDE ALL EQUIPMENT, MATERIALS, AND LABOR FOR A COMPLETE PROJECT AS SHOWN IN THE DRAWINGS AND SPECIFICATIONS. DRAWINGS AND SPECIFICATIONS OVERSIGHT OR OMISSION OF ANY ITEMS LISTED IN EITHER SHALL BE PROVIDED AS IF LISTED IN BOTH. ALSO REVIEW DETAILS AND RISER DIAGRAMS FOR ADDITIONAL INFORMATION. QUESTIONS WHETHER SPECIFICALLY REFERRED TO ON PLANS OR NOT.
8. DRAWINGS ARE DIAGRAMMATIC IN NATURE AND SHOW THE GENERAL INSTALLATION OF EQUIPMENT & MATERIALS IN RELATIONSHIP TO STRUCTURE & OTHER TRADES. THEY MAY NOT COVER EVERY REQUIRED OFFSET, FITTING, ETC. FIELD VERIFY ACTUAL JOB CONDITIONS AND COORDINATE WORK WITH OTHER TRADES PRIOR TO BIDDING JOB AND PRIOR TO STARTING WORK. EQUIPMENT, MATERIALS, ETC. OTHER THAN THOSE SCHEDULED & SPECIFIED (PENDING PRE-APPROVAL) ARE FURNISHED.
9. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO COORDINATE ALL ITEMS THAT AFFECT OTHER DISCIPLINES WITH THE CORRESPONDING CONTRACTOR AND THE GENERAL CONTRACTOR. IF EQUIPMENT, MATERIALS, ETC. OTHER THAN THOSE SCHEDULED & SPECIFIED (PENDING PRE-APPROVAL) ARE FURNISHED.
10. MAINTAIN ALL REQUIRED SERVICE, FRESH AIR, & ROOF EDGE CLEARANCES FOR ALL NEW AND EXISTING EQUIPMENT, AND PLUMBING VENTS.
11. THE RESPONSIBILITY OF EACH CONTRACTOR IS NOT LIMITED TO THE SPECIFIC PLAN'S DRAWING SHEETS. REFER TO OTHER DISCIPLINES' DRAWING SHEETS AS REQUIRED FOR ADDITIONAL INFORMATION/INSTRUCTIONS.
12. SANITARY WASTE AND VENT PIPING BOTH ABOVE AND BELOW GRADE SHALL BE SOLID WALL, SCHEDULE 40 PVC-DWV PLASTIC PIPE AND FITTING COVER, AND ROUND STAINLESS STEEL WATER AND PIPING COMPONENTS SHALL BE LISTED AS CONFORMING WITH ANSISF2. 14. AND ASTM D-2865.
13. WATER PIPING MAINS SHALL BE CPVC AND INSTALLED IN ACCORDANCE WITH 2012 INTERNATIONAL PLUMBING CODE. TYPICALLY IT IS PERMISSIBLE ONLY ON WATER LINES 2" AND SMALLER.
14. PROVIDE REMOVABLE PVC COVERS ON ALL EXPOSED SUPPLY AND WASTE FITTINGS TO COMPLY WITH ANSI D2. A117.1 REQUIREMENTS.
15. WALL CLEANOUTS IN INTERIOR FINISHED WALL AREAS (WC0) - LINE TYPE WITH LAQUERED CAST IRON BODY AND ROUND STAINLESS STEEL ACCESS COVER, AND ROUND STAINLESS STEEL ACCESS COVER SECURED WITH MACHINE SCREW.
16. HOT WATER PIPE ABOVE GRADE SHALL BE INSULATED WITH 1-1/2" FIBERGLASS OR ARMAFLEX, LOW PRESSURE INSULATION WITH WHITE URTHANE JACKET.
17. ALL BALL/CONTR/BALANCING VALVES WHICH ARE NOT READILY ACCESSIBLE VIA LAY-IN CEILING OR OPEN TO SPACE SHALL BE PROVIDED WITH A FULL SIZE ACCESS PANEL. EQUAL TO MIFAB TYPE CAD-P. ACCESS PANEL SHALL BE PAINTED TO MATCH CEILING OR WALL FINISH.
18. REFERENCE SPECIFICATIONS FOR FIRE PERFORMANCE SPECIFICATIONS. FINAL DESIGN TO BE DONE BY PROFESSIONAL ENGINEER. PROVIDE ALL NECESSARY COORDINATING, QUALIFIED, CALCULATIONS, AND EQUIPMENT SPECIFICATIONS REQUIRED FOR A FULL COMPLIANT DESIGN PER ALL AUTHORITIES HAVING JURISDICTION.
19. WALL CLEANOUTS TO BE INSTALLED ON BASE OF ALL STACKS

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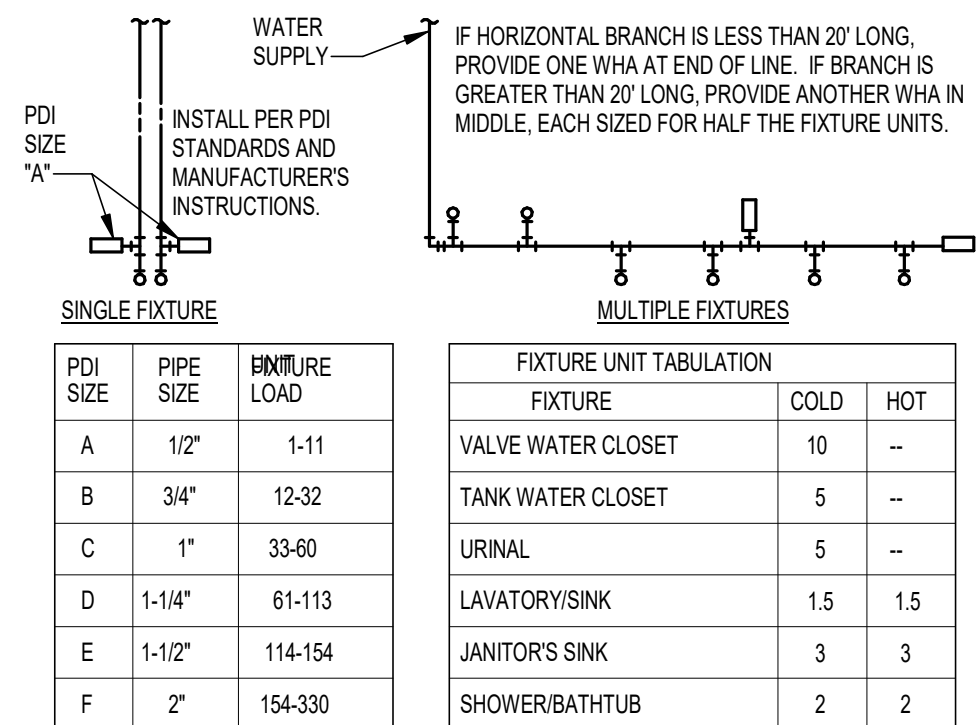
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 RYAN BREWER
 NUMBER
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 PROFESSIONAL ENGINEER

P102

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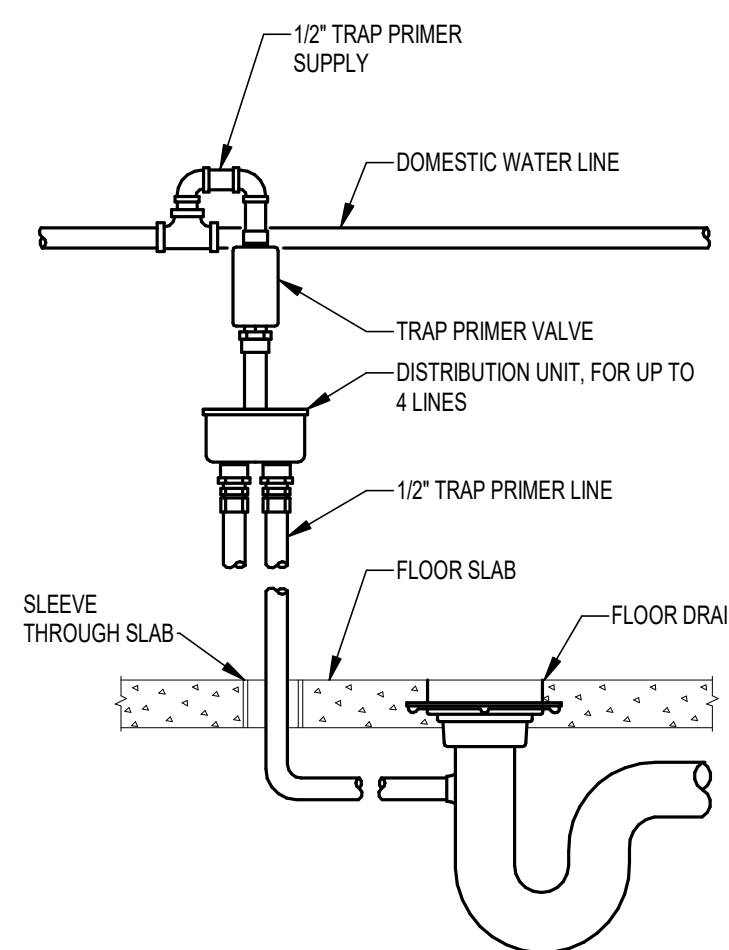
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SCHEDULES AND DETAILS

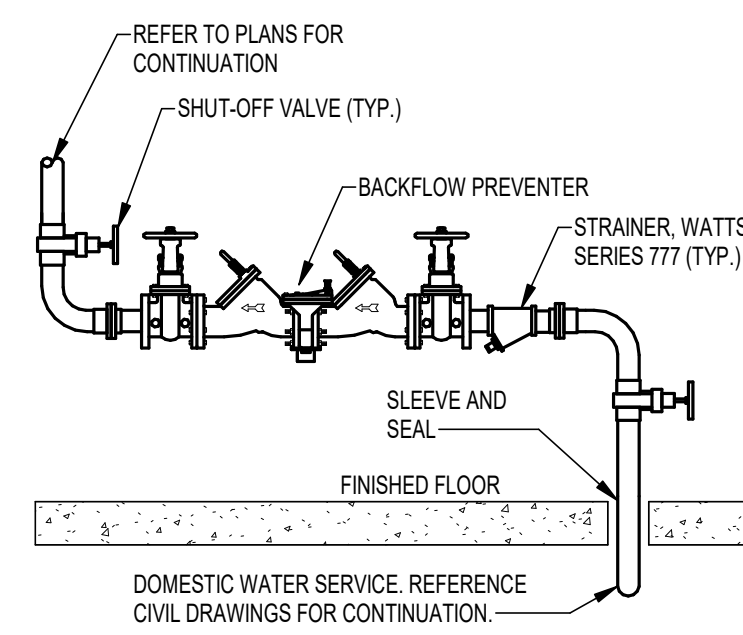
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PROVIDE WATER HAMMER ARRESTERS ON ALL QUICK CLOSING VALVES. INSTALLED AS CLOSE TO THE FIXTURES AS POSSIBLE TO CONTROL THE EFFECTS OF WATER HAMMER INSTALLATION SHALL COMPLY WITH CPC 609.10. DO NOT PROVIDE AIR CHAMBERS. PROVIDE WATER HAMMER ARRESTERS BY SIOUX CHIEF, PRECISION PLUMBING PRODUCTS, WATTS OR APPROVED EQUIVALENT WITH PISTON AND O-RING CONSTRUCTION, HAVING PID #WHY-201, ASSE # 1010 AND ANSI # A112.26.1M CERTIFICATION. INSTALL IN HORIZONTAL OR VERTICAL POSITION, BUT NEVER UPSIDE DOWN. INSTALL IN LINE WITH WATER FLOW DIRECTION IF POSSIBLE. SIZE THE UNITS PER THE TABLES SHOWN ABOVE.

8 WATER HAMMER ARRESTERS



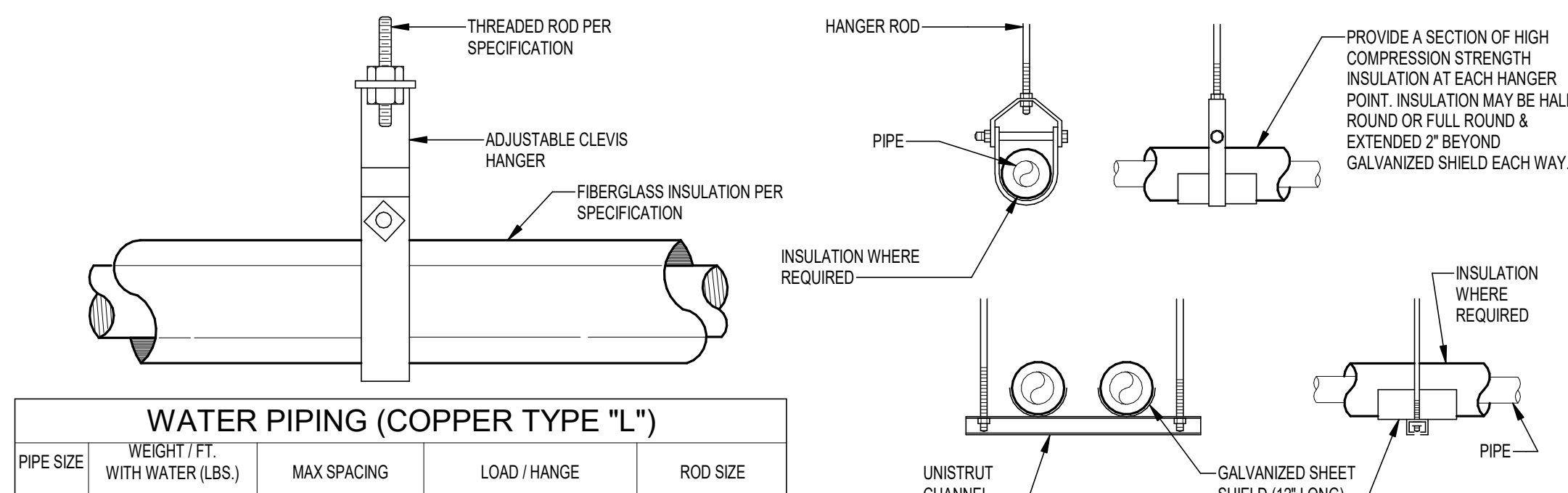
7 TRAP SEAL PRIMER DETAIL
SCALE: 6" = 1'-0"



NOTE:

- SECURE PIPING TO WALL WITH UNISTRUT AND PIPE CLAMPS 30" ON CENTER MINIMUM.
- COORDINATE AND FIELD ORIENT ALL PIPING SO AS NOT TO INTERFERE WITH SPRINKLER PIPING AND/OR ASSOCIATED DEVICES.

6 DOMESTIC WATER ENTRY

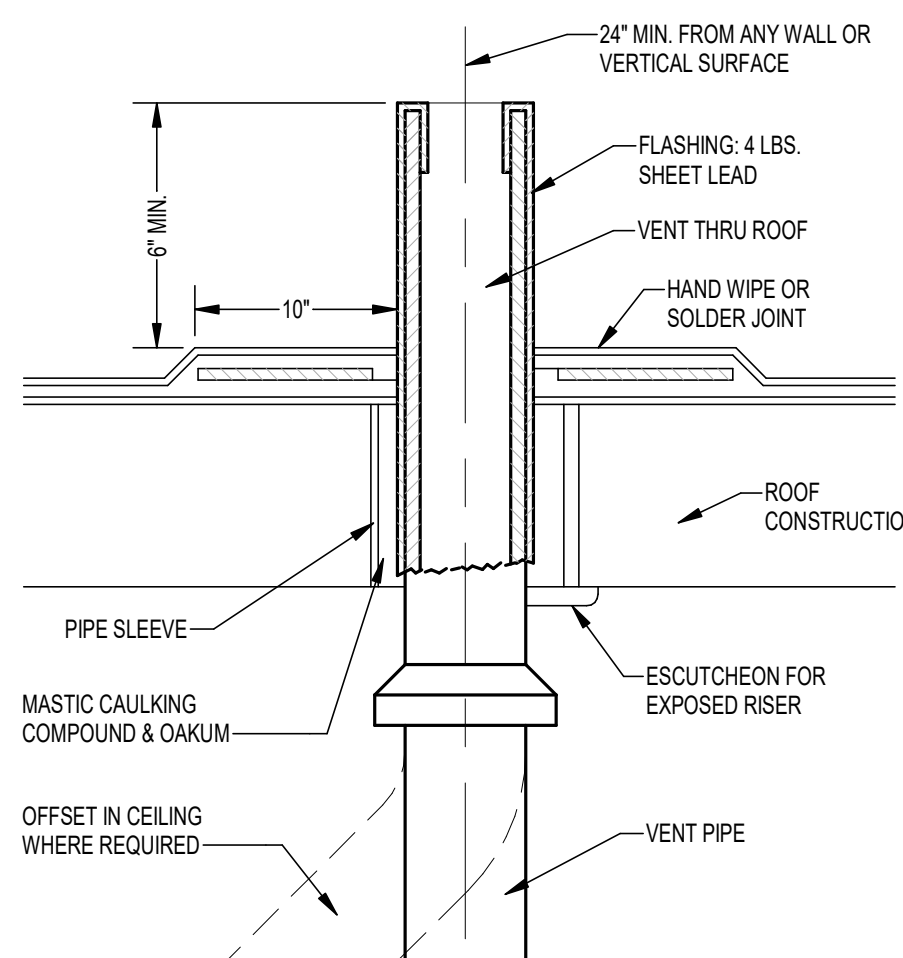


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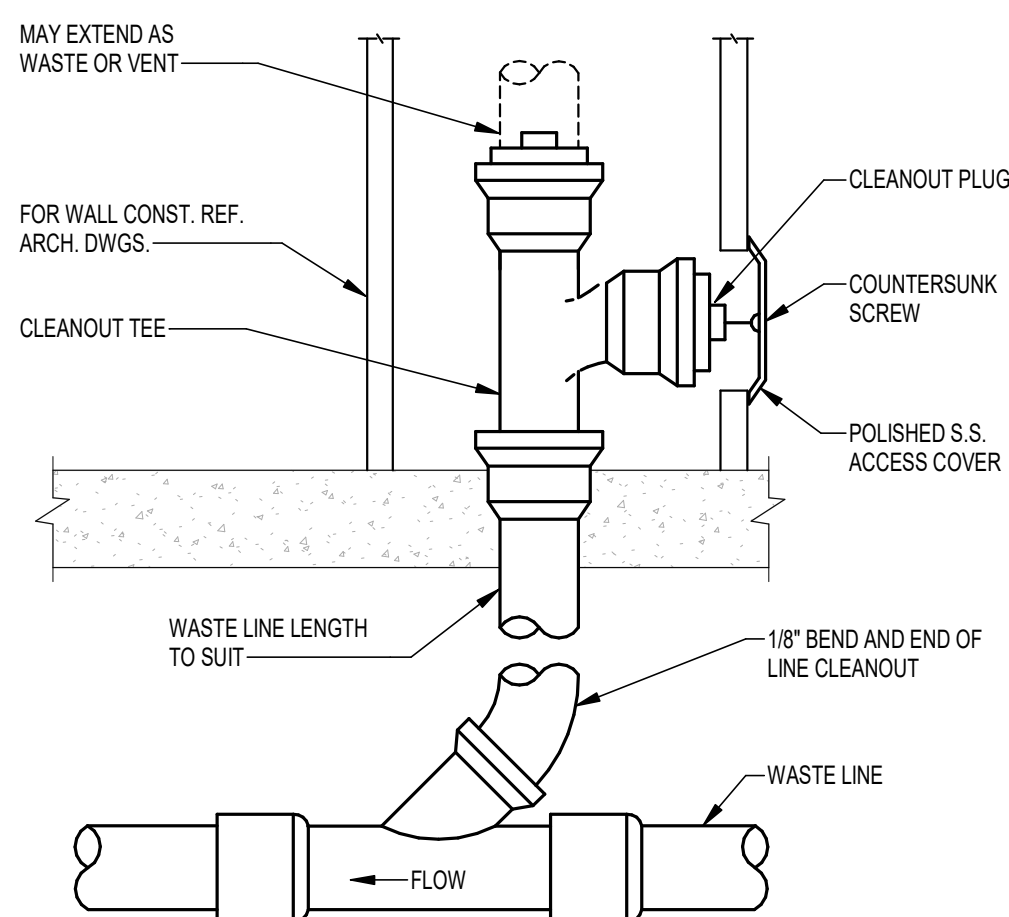
1. ATTACH SUPPORTS FOR ALL PIPING SUSPENDED FROM THE STEEL STRUCTURE TO THE TOP CORD OF JOISTS OR BEAMS.
2. PROVIDE COPPER OR PLASTIC COATED HANGERS FOR NON-INSULATED COPPER PIPE

5 PIPE HANGING DETAIL

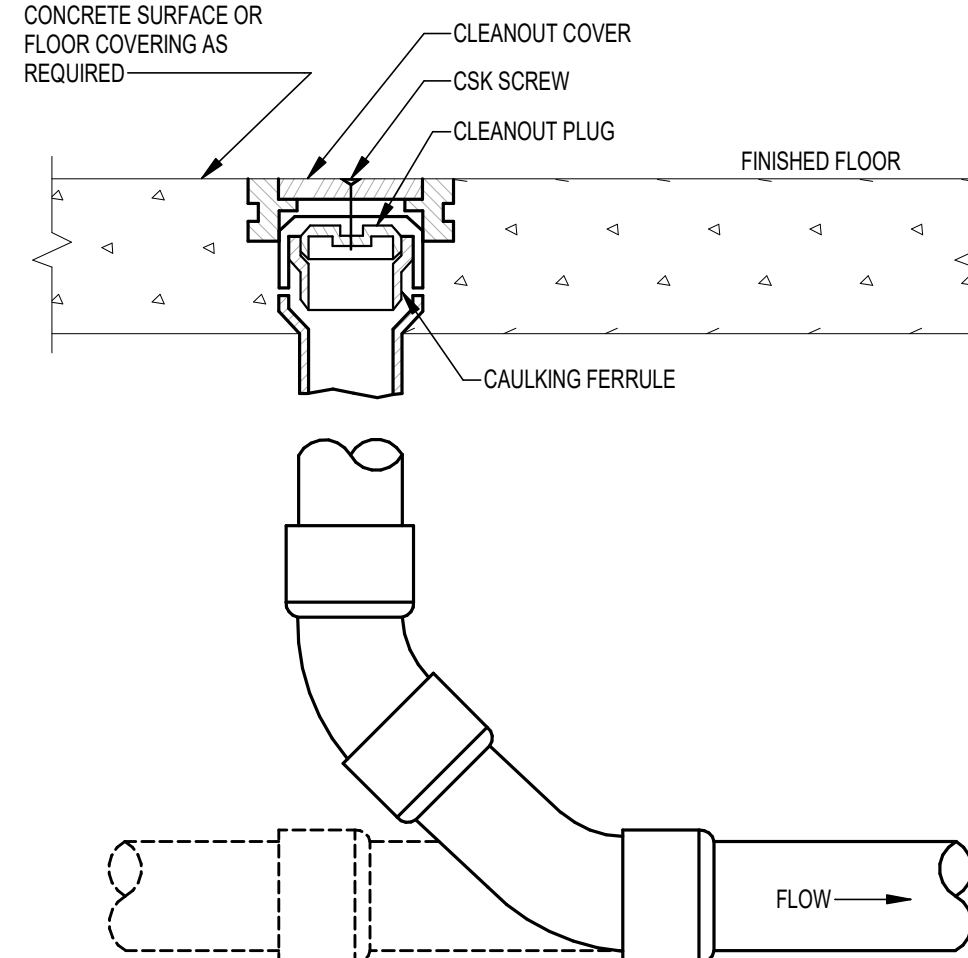
WATER PIPING (COPPER TYPE "L")				
PIPE SIZE	WEIGHT / FT. WITH WATER (LBS.)	MAX SPACING	LOAD / HANGE	ROD SIZE
1/2"	.38	6'	2.28	3/8"
3/4"	.66	6'	3.95	3/8"
1"	1.04	6'	6.24	3/8"
1-1/4"	1.43	6'	8.58	3/8"
1-1/2"	1.92	6'	19.2	3/8"
2"	3.09	10'	30.8	3/8"
2-1/2"	4.52	10'	45.2	3/8"



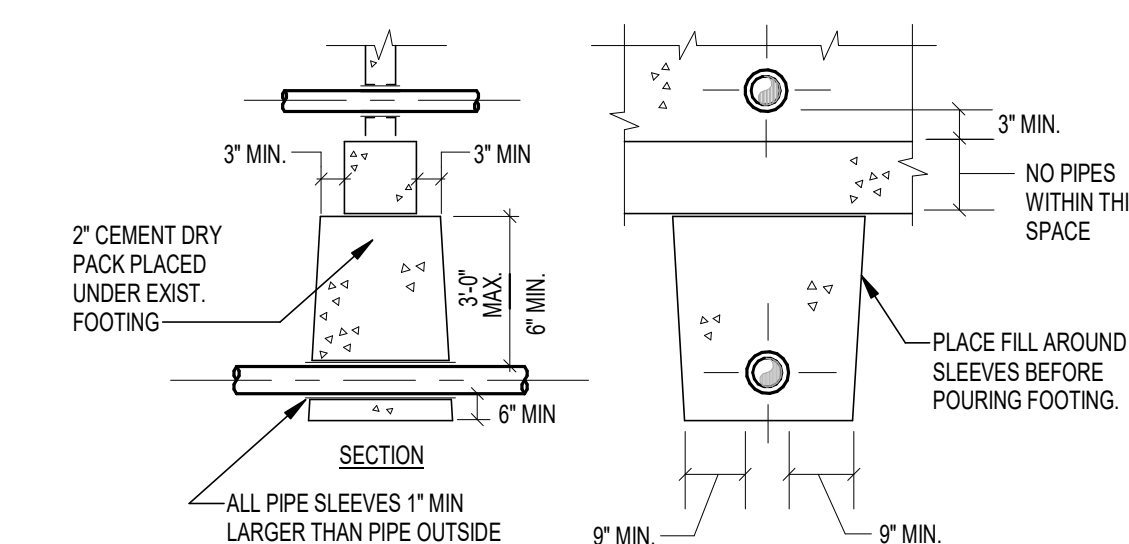
4 VENT THROUGH ROOF
SCALE: 12" = 1'-0"



3 WALL CLEANOUT - FINISHED ROOMS



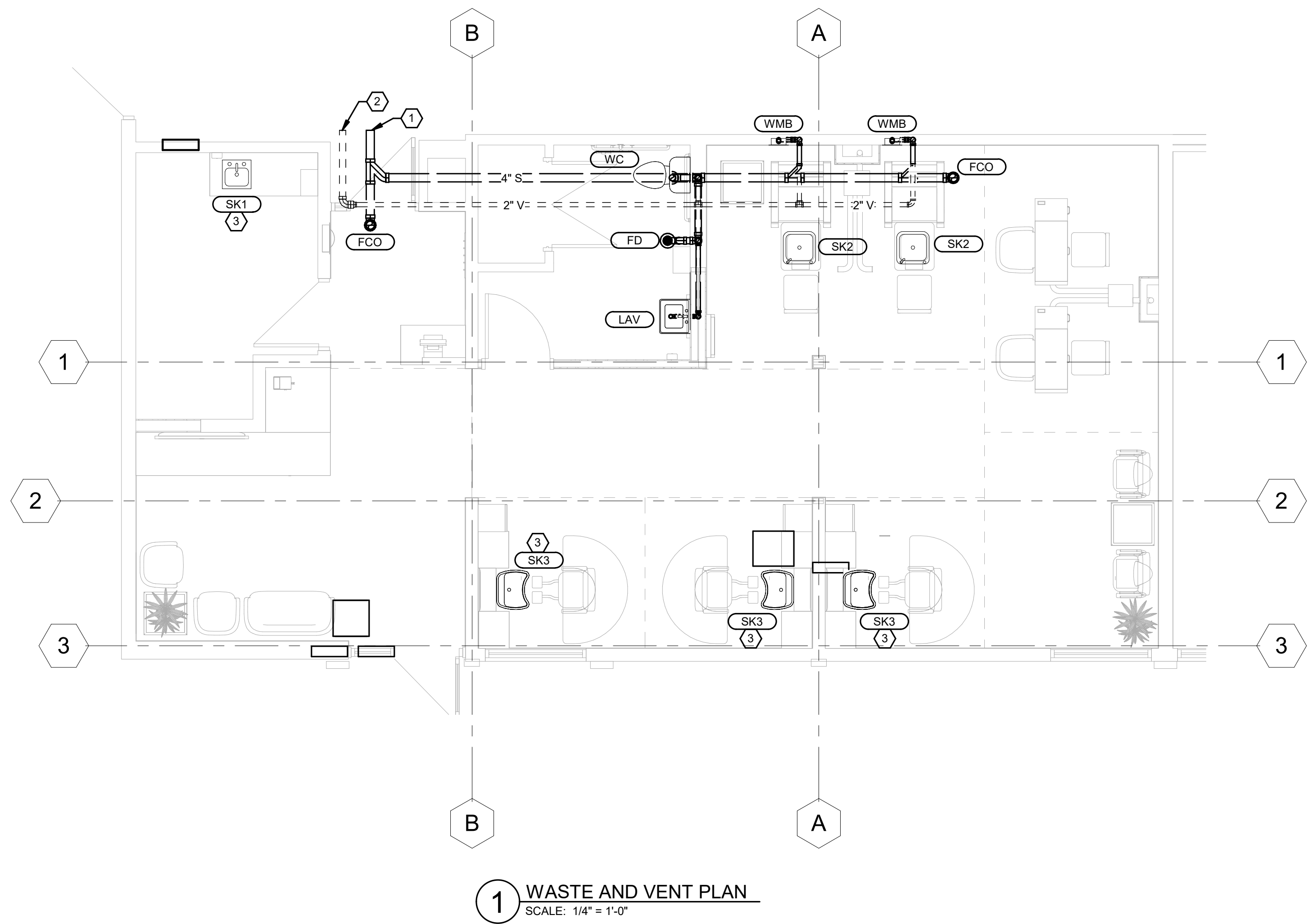
2 FLOOR CLEANOUT
SCALE: 12" = 1'-0"



1 PIPE AT CONCRETE FOOTING

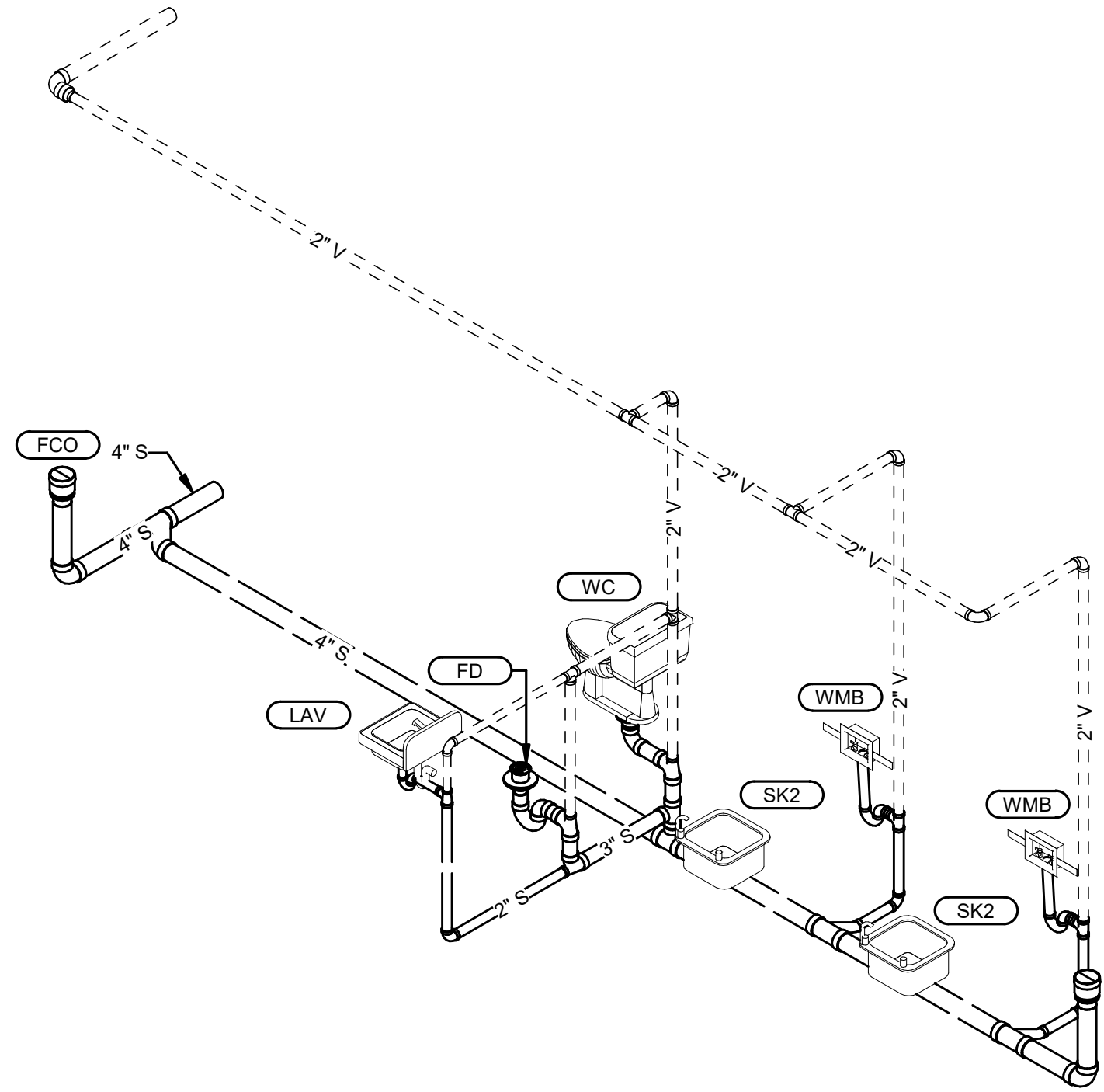
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CONTRACTOR TO FULLY INVESTIGATE SITE AND REUSE AS MUCH PIPING AS POSSIBLE. INSURE EXISTING PIPING IS IN GOOD WORKING ORDER AND ADEQUATELY SIZED.



1 WASTE AND VENT PLAN
SCALE: 1/4" = 1'-0"

2 WASTE AND VENT RISER
NOT TO SCALE



GENERAL NOTES

(NOT ALL NOTES APPLY)

1. REFERENCE SHEET P101 FOR NOTES, SYMBOLS & ABBREVIATIONS.

KEYED NOTES:

1. CONNECT NEW SANITARY PIPING INTO EXISTING SANITARY PIPING IN THIS AREA. FIELD VERIFY EXACT CONNECTION POINT, LINE SIZE, MATERIAL AND INVERT.
2. CONNECT NEW VENT PIPING INTO EXISTING VENT PIPING IN THIS AREA. FIELD VERIFY EXACT CONNECTION POINT, LINE SIZE, AND MATERIAL.
3. NEW PLUMBING FIXTURE IN EXISTING LOCATION. RECONNECT EXISTING UTILITIES OFFSETTING AS REQUIRED FOR A COMPLETE INSTALLATION.

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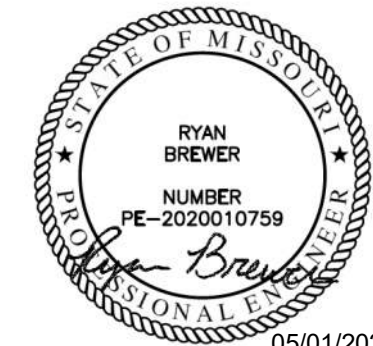


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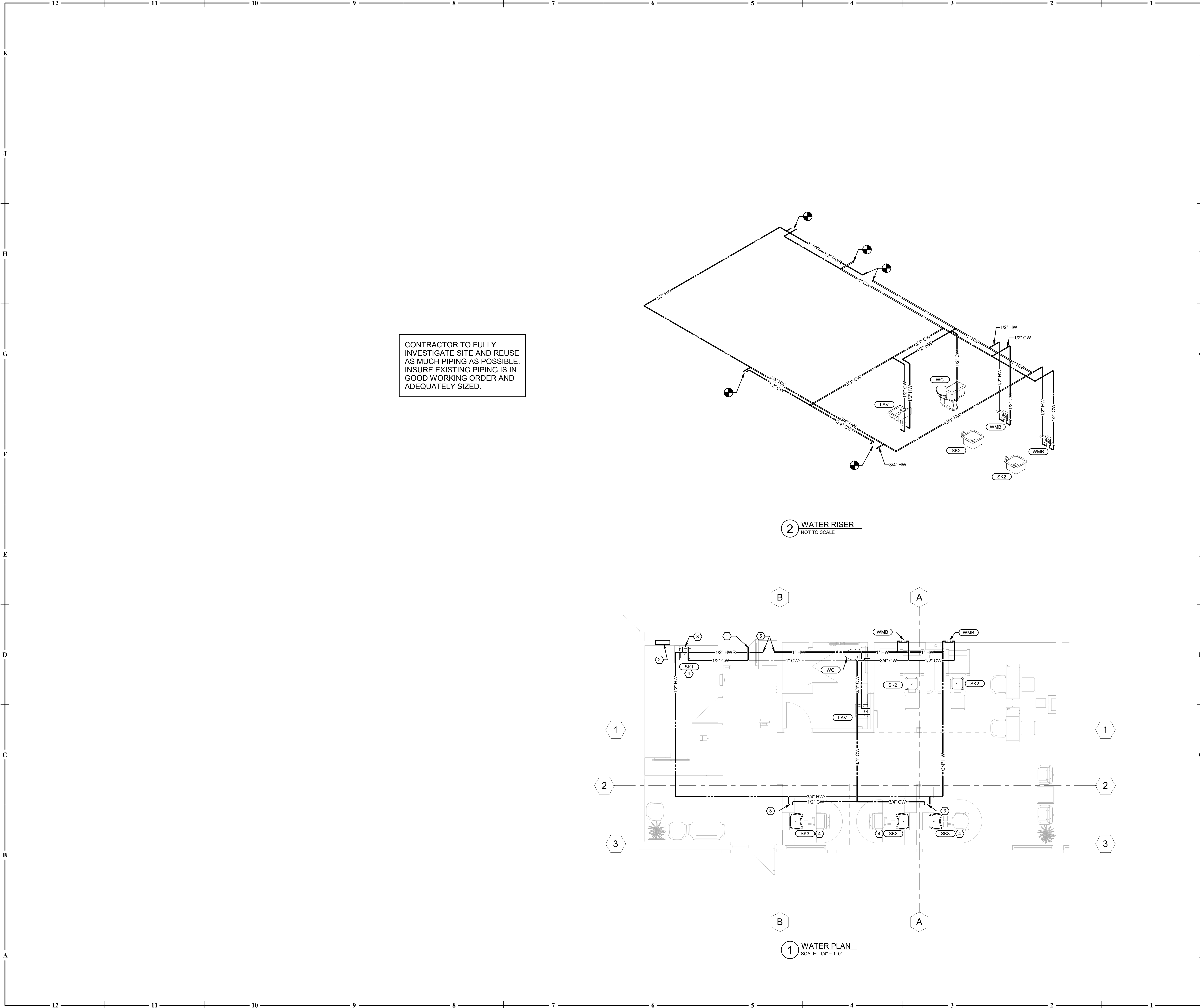
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WASTE AND VENT PLAN

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GENERAL NOTES

(NOT ALL NOTES APPLY)

1. REFERENCE SHEET P101 FOR NOTES, SYMBOLS & ABBREVIATIONS.

KEYED NOTES:

1. CONNECT NEW 1" COLD WATER PIPING INTO EXISTING DOMESTIC WATER TAP IN SPACE. FIELD VERIFY EXACT CONNECTION POINT, LINE SIZE, AND MATERIAL.

2. DO NOT ROUTE ANY PLUMBING PIPING OVER ELECTRICAL PANELS.

3. CONNECT NEW HOT AND COLD WATER PIPING INTO EXISTING PIPING IN THIS AREA. FIELD VERIFY EXACT CONNECTION POINTS, LINE SIZES, AND MATERIALS.

4. NEW PLUMBING FIXTURE IN EXISTING LOCATION. RECONNECT EXISTING UTILITIES OFFSETTING AS REQUIRED FOR A COMPLETE INSTALLATION.

5. CONNECT NEW HOT, COLD, AND HOT WATER RECIRCULATION PIPING INTO EXISTING TO REMAIN WATER HEATER. FIELD VERIFY CONDITION OF EXISTING WATER HEATER. ENSURE EXISTING WATER HEATER IS IN GOOD WORKING ORDER.

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WATER PLAN

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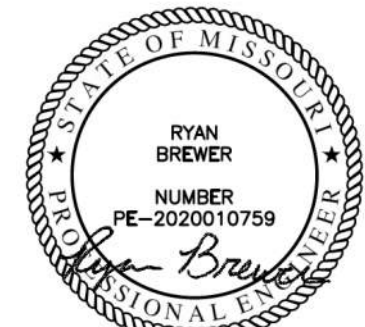
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PLUMBING SPECIFICATIONS

15400 - PLUMBING WORK

DESCRIPTION
ALL PLUMBING AND ASSOCIATED WORK IN DIVISION 15 IS GOVERNED BY THIS SECTION. PROVIDE LABOR AND MATERIALS NECESSARY TO PROVIDE THE WORK AS SHOWN ON THE DRAWINGS AND SPECIFIED HEREIN. REFER TO OTHER DIVISIONS FOR CONTINUATION OF EXTERIOR AND ALLED WORK.

QUALITY ASSURANCE
OBTAIN AND PAY FOR ALL PERMITS, INSPECTIONS AND CONNECTION FEES REQUIRED BY GOVERNING BODIES IN CONNECTION WITH THE WORK. DELIVER CERTIFICATES OF INSPECTION TO THE OWNER'S REPRESENTATIVE. ALL WORK SHALL COMPLY WITH GOVERNING CODES, ORDINANCES, AND REGULATIONS OF CITY, COUNTY AND STATE.

SUBMITTALS
SHOP DRAWINGS: SUBMIT MATERIALS, PRODUCTS, EQUIPMENT AND SYSTEMS AS SPECIFIED UNDER EACH PLUMBING SECTION IN THIS DIVISION IN ACCORDANCE WITH THE GENERAL CONDITIONS. SHOW PIPE SIZES, LOCATION, SLOPES OF HORIZONTAL RUNS, FITTINGS, VALVES, METERS, GAGES AND CONNECTIONS.

PRODUCT DATA: SUBMIT ON MATERIALS, FIXTURES, AND EQUIPMENT UNLESS OTHERWISE SPECIFIED OR ACKNOWLEDGED IN WRITING.

SAMPLES: SUBMIT WHEN SPECIFIED OR REQUESTED.

RECORD DOCUMENTS
REFER TO GENERAL CONDITIONS FOR REQUIREMENTS CONCERNING RECORD DOCUMENTS. ADDITIONAL REQUIREMENTS MAY BE SPECIFIED IN DIVISION 1. UNLESS SEKIPS OF THE DRAWINGS ARE TO BE FURNISHED BY THE ARCHITECT-ENGINEER FOR PREPARATION OF RECORD DRAWINGS, FURNISH OWNER'S REPRESENTATIVE WITH TWO SETS OF ACCURATELY MARKED COPIES OF THE DRAWINGS. INSTEAD OF ONE SET AS REQUIRED BY THE GENERAL CONDITIONS, INDICATING ALL CHANGES FROM ORIGINAL DRAWINGS AS INSTALLED.

PIPE, FITTURES AND ACCESSORIES SHALL BE PROTECTED FROM DAMAGE IN SHIPMENT, HANDLING, STORAGE AND INSTALLATION FROM MOISTURE, DIRT AND DEBRIS. PIPE, CLEANOUT AND FLOOR DRAIN OPENINGS SHALL BE TEMPORARILY PLUGGED WITH TEST PLUGS UNTIL FINAL CONNECTIONS ARE MADE.

GUARANTEE AND SERVICE
REFER TO GENERAL CONDITIONS FOR GUARANTEE. WHERE EXTENDED GUARANTEES ARE CALLED FOR, FURNISH THREE COPIES TO BE INSERTED INTO OPERATION AND MAINTENANCE MANUALS.

GENERAL
PLUMBING SYSTEMS SHALL BE PROVIDED COMPLETE. SHOULD A SYSTEM, OR ANY PART THEREOF FAIL TO MEET PERFORMANCE REQUIREMENTS, NECESSARY REPLACEMENTS, ALTERATIONS OR REPAIRS, AS REQUIRED BY THE OWNER'S REPRESENTATIVE, SHALL BE MADE TO BRING PERFORMANCE UP TO SPECIFIED REQUIREMENTS AND ALL BUILDING CONSTRUCTION AND FINISHES DAMAGED OR MARRED BY SUCH REPLACEMENTS, ALTERATIONS OR REPAIRS SHALL BE RESTORED TO PRIOR CONDITION, AT NO ADDITIONAL COST TO THE OWNER.

WHERE MULTIPLE ITEMS OF EQUIPMENT OR MATERIALS ARE REQUIRED THEY SHALL BE THE PRODUCT OF A SINGLE MANUFACTURER.

INSERTS: PIPE SLEEVES, HANGERS, SUPPORTS, FIXTURES, TRIM DRAINS AND ANCHORAGE OF PLUMBING SHALL BE PROVIDED AS SPECIFIED HEREIN, WHERE SUCH ITEMS ARE TO BE SET OR EMBEDDED IN CONCRETE, MASONRY OR SIMILAR WORK, THE ITEMS SHALL BE FURNISHED AND LAYOUT MADE AT THE PROPER TIME FOR THE SETTING OR EMBEDMENT THEREOF SO AS TO CAUSE NO DELAY IN THE WORK.

MANUFACTURERS NAMES AND CATALOG NUMBERS
SPECIFIED REFERENCES HAVE BEEN MADE TO ONE OR MORE MANUFACTURERS NAMES AND MODEL OR CATALOG NUMBERS. THIS DOES NOT NECESSARILY INDICATE THAT THE MATERIAL AND EQUIPMENT SPECIFIED IS AN "OFF THE SHELF" ITEM. REQUIREMENTS FOR SPECIFIC FINISHES, MATERIAL OR OTHER MODIFICATIONS MAY INTRODUCE VARIANCES FROM MANUFACTURERS' STANDARDS. MODIFICATIONS SHALL BE FULLY CONSIDERED.

CHARTS AND TAGS
IN AREAS HAVING VALVES, PROVIDE SINGLE LINE DIAGRAMS FRAMED UNDER GLASS AND MOUNTED ON EQUIPMENT ROOM WALL. THE DIAGRAMS SHALL GIVE NAME, NUMBER DESIGNATION AND LOCATION OF VALVE.

VALVES SHALL BE IDENTIFIED WITH 1/16 INCH THICK WHITE LAMINATED PLASTIC NAMEPLATES WITH 3/16 INCH HIGH BLACK LAMINATED LETTERS. THE NAMEPLATE IDENTIFICATION SHALL CONCLUDE WITH ITEMS APPEARING ON DIAGRAMS. ATTACH NAMEPLATES TO VALVES WITH NON-CORROSIVE CHAIN OR WIRE.

ACCESS DOORS
PROVIDE ACCESS DOORS AS INDICATED AND SPECIFIED IN DRAWINGS

INSTALLATION AND WORKMANSHIP
THE WORK SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURERS' RECOMMENDATIONS. ANY MATERIAL, APPARATUS OR EQUIPMENT WHICH, IN THE OPINION OF THE OWNER'S REPRESENTATIVE, IS IMPROPERLY INSTALLED SHALL BE REMOVED AND REINSTALLED IN AN APPROVED MANNER AT NO ADDITIONAL COST TO THE OWNER.

THE LOCATION OF PLUMBING PIPING SHALL BE COORDINATED TO ENSURE THAT IT CLEARS OPENINGS AND STRUCTURAL MEMBERS; THAT PIPING INDICATED AS CONCEALED CAN BE PROPERLY CONCEALED IN WALLS OR PARTITIONS AND THAT IT DOES NOT INTERFERE WITH LIGHTS, DUCTWORK OR EQUIPMENT HAVING FIXED LOCATIONS. MAKE NECESSARY HORIZONTAL OR VERTICAL OFFSETS WITH PIPE FITTINGS TO INSTALL THE SYSTEM IN THE AVAILABLE SPACE. CONCEAL OR INSTALL TIGHT TO STRUCTURE (IF EXPOSED) UNLESS OTHERWISE NOTED.

PPING SHALL BE EXPOSED IN FINISHED AREAS ONLY WHERE INDICATED OR WITH THE APPROVAL OF THE OWNER'S REPRESENTATIVE.

WHERE DRAIN OR WATER CONNECTIONS NECESSARY TO THE OPERATION OF FIXTURES OR EQUIPMENT ARE NOT SPECIFICALLY SHOWN ON DIAGRAMS, EXTEND NECESSARY BRANCHES TO THE CLOSEST INDICATED BRANCH OR MAIN, AT NO ADDITIONAL COST TO THE OWNER.

EACH FIXTURE, EQUIPMENT DRAIN OR FLOOR DRAIN SHALL BE SEPARATELY TRAPPED UNLESS OTHERWISE INDICATED OR SPECIFIED.

PLUMBING PIPING AND EQUIPMENT SHALL NOT BE FIELD PAINTED, OR PRIMED BEYOND THE DEGREE OF APPLICATION FROM THE FACTORY SOURCE, OR EXCEPT AS REQUIRED BY APPLICABLE CODES AND AUTHORITIES HAVING JURISDICTION.

WATERPROOFING
DO NOT CUT OR PENETRATE WATERPROOFED SURFACES OR WATERPROOFING MEMBRANES WITHOUT FIRST MAKING ARRANGEMENTS FOR REPAIR BY A METHOD APPROVED BY THE OWNER'S REPRESENTATIVE.

ACCESS DOORS
INSTALL AS REQUIRED FOR MAINTENANCE, ADJUSTMENT, REMOVAL AND REPAIR OF VALVES, EQUIPMENT AND LINE ITEMS. DOORS SHALL BE CONVENIENTLY LOCATED AND OF SUFFICIENT SIZE.

PIPING PROVISIONS FOR FIXTURES AND EQUIPMENT SPECIFIED IN OTHER SECTIONS OR FURNISHED BY THE OWNER
ROUGH IN LOCATIONS SHALL BE DETERMINED FOR SERVICES. PROVIDE ALL NECESSARY PLUMBING SERVICES, ACCESSIBLE VALVES ON PLUMBING BRANCHES AND MAKE ALL FINAL CONNECTIONS.

PLUMBING OPERATION AND MAINTENANCE MANUALS

DESCRIPTION
FURNISH TWO COPIES OF COMPLETE OPERATION AND MAINTENANCE MANUALS TO THE OWNER'S REPRESENTATIVE, FOR APPROVAL AND FOR THE OWNER, ON PLUMBING EQUIPMENT AND SPECIALTIES. THE MANUAL SHALL BE BOUND IN HARD-BACK, THREE-RING LOOSE-LEAF BINDERS.

TITLE SHEET WITH JOB NAME, AND THE NAMES, ADDRESSES AND PHONE NUMBERS OF THE CONTRACTOR, SUBCONTRACTOR, CONTROL, SUBCONTRACTOR, RELATED CONTRACTOR AND MATERIAL AND EQUIPMENT SUPPLIERS.

INDEX OF CONTENTS
TYPEWRITTEN OPERATING INSTRUCTIONS FOR THE OWNER'S PERSONNEL DESCRIBING HOW TO OPERATE EACH PIECE OF EQUIPMENT, AND CAUTION AND WARNING NOTES.

APPROVED SHOP DRAWINGS, PRODUCT DATA AND PARTS AND MAINTENANCE BOOKLET FOR EACH ITEM OF PLUMBING, EQUIPMENT SPECIFIED IN DIVISION 15.

COPIES OF CERTIFICATES OF INSPECTION, WHERE INSPECTION IS REQUIRED, GUARANTEES, INCLUDING EXTENDED GUARANTEES.

DELIVERY
DELIVER THE MANUALS TO THE OWNER'S REPRESENTATIVE PRIOR TO SUBMITTING APPLICATION FOR FINAL PAYMENT.

PLUMBING PIPING

DESCRIPTION
FURNISH AND INSTALL PLUMBING PIPING WHERE SHOWN ON DRAWINGS AND AS SPECIFIED.

PIPING MATERIALS

- OPTIONS
- CAST IRON HUBLESS SANITARY PIPE AND FITTINGS: CSPI STD. 301.
 - CAST IRON SOIL PIPE AND FITTINGS: SERVICE WEIGHT, ASTM A 14.
 - CAST IRON SOIL PIPE AND FITTINGS, EXTRA HEAVY WEIGHT, ASTM A 14.
 - STEEL PIPE: ASTM A 53.
 - MALLEABLE IRON FITTINGS: 150 LB.: ASTM A 197.
 - PIPE THREADS: ANSI B2.1.
 - NIPPLES, PIPE (THREADED): FED. SPEC. W1W-351.
 - COPPER WATER TUBE: ASTM B 88.
 - WROUGHT COPPER AND BRASS: SOLDER-JOINT PRESSURE FITTINGS: ANSI B16.29.
 - WROUGHT COPPER AND WROUGHT COPPER ALLOY SOLDER-JOINT DRAINAGE FITTINGS: ANSI B16.29.
 - CAULKING LEAD: FED. SPEC. QQ-C-40 (2).
 - SHEET LEAD: FED. SPEC. QQ-L-201.
 - SWEET COPPER: ASTM B 153.
 - NO-HUB STAINLESS STEEL COUPLING AND GASKETS: CSPI STD. S-301.

- JOINTS AND CONNECTIONS
- OPTIONS
- CAST IRON, HUB AND SPOUT: PACKED WITH OAKUM AND FINISHED WITH LEAD NOT LESS THAN 1 INCH DEEP. WELL CAULKED.
 - CAST IRON, NO-HUB: NEOPRENE GASKET AND CORRUGATED 304 STAINLESS STEEL SHIELD IN CONJUNCTION WITH 4 STAINLESS STEEL CLAMPS FOR 4" AND SMALLER, 6 CLAMPS FOR 5" AND LARGER.
 - BETWEEN LEAD AND BRASS: FERRULES OR SOLDERING NIPPLES WITH WIPED JOINTS 3/8" THICK AND 3/4" EACH SIDE OF JOINTS.
 - SCREWED JOINTS: AMERICAN NATIONAL STANDARD WITH PIPE FREE FROM CUTTING AND BURRS. THREE THREADS EXPOSED MAXIMUM.
 - SOLDERED JOINTS: 95-5 TIN-ANTIMONY SOLDER. SLP JOINTS: USE FOR PLUMBING TRAP SEALS ON INLET SIDE ONLY.
 - BETWEEN COPPER AND FERROUS MATERIALS: INSULATING DIELECTRIC UNION.
 - FLANGED JOINTS: FURNISH WITH COMPANION FLANGE AND CLOTH INSERTED RUBBER GASKET.
 - FLANGED BOLTS: ASTM A 354, MINIMUM GRADE B8, ALLOY STEEL, WITH HEX NUTS IN COMPLIANCE WITH ANSI B16.22 AND STANDARD ROLLED STEEL WASHERS.
 - ASSEMBLY FOR HUBLESS PIPING: AS RECOMMENDED BY THE MANUFACTURER.
 - CHANGES IN PIPE SIZE SHALL BE MADE WITH REDUCERS, INCREASERS OR REDUCING FITTINGS. BUSHINGS WILL NOT BE PERMITTED.

INSTALLATION
BEFORE INSTALLING PIPE IN ANY PART OF THE SYSTEM, THE PIPE SHALL BE CLEANED INSIDE AND MADE FREE OF OIL, DIRT, AND FOREIGN MATTER. PROPERLY ALIGN AND INSTALL IN NEAT ARRANGEMENT, TRUE TO THE LINES OF THE BUILDING. PITCH LINE AT A CONSTANT SLOPE FOR PROPER DRAINAGE.

EXCEPT AS NOTED OTHERWISE ON DRAWINGS, PIPING SHALL BE HELD AS HIGH AS POSSIBLE, BETWEEN STRUCTURES AND THROUGH JOIST WEBBING, WITH DUE REGARD TO CONFLICTS WITH OTHER SYSTEMS AND THEIR REQUIREMENTS FOR SPACE.

PIPING, INCLUDING NO-HUB PIPING, SHALL BE INSTALLED STRAIGHT AND TRUE TO VERTICAL AND HORIZONTAL LINES. DEFLECTION SHALL NOT EXCEED ONE DEGREE. WHEN NECESSARY TO ACHIEVE THIS ALIGNMENT PROVIDE ADDITIONAL HANGERS OR BRACING.

APPLY LUBRICANT TO SCREW JOINT MALE THREADS.

METAL TO BE SOLDERED SHALL BE CLEANED AND FLUXED AS SUITABLE FOR THE SOLDER USED.

NOTHING OF COPPER TUBING OR PLASTIC PIPING FOR CONNECTIONS WILL NOT BE PERMITTED.

PLUMBING SPECIALTIES

PIPE SLEEVES
SCHEDULE 40 BLACK STEEL, GALVANIZED 26 GAGE STEEL, PROVIDE FOR ALL PIPES THROUGH WALLS AND FLOORS.

ESCUOTCHEONS
PROVIDE FOR ALL PIPING THROUGH WALLS, FLOORS AND CEILING WHERE PIPING IS EXPOSED TO VIEW IN FINISHED AREA. ESCUOTCHEONS SHALL BE CHROMIUM PLATED, TWO PIECE, HINGED WITH SET SCREW.

UNIONS
PROVIDE GROUND JOINT BRASS UNIONS OR FLANGES ON EACH PIPING CONNECTION TO EQUIPMENT.

PROVIDE DIELECTRIC UNIONS BETWEEN COPPER AND STEEL PIPING CONNECTION TO EQUIPMENT.

VACUUM BREAKERS
SHALL CONFORM TO THE REQUIREMENTS OF THE REFERENCED PLUMBING CODE AND SHALL BE PROVIDED FOR HOSE BIBBS, FLUSHMOMERS AND ANY FIXTURE OR EQUIPMENT WATER SUPPLY HAVING A THREADED OUTLET.

FLASHING
VENT FLASHING SHALL COMPLY WITH ROOFING MANUFACTURERS WRITTEN SPECIFICATIONS.

CLEANOUTS
CLEANOUTS ON NO-HUB PIPE SHALL BE STANDARD NO-HUB FITTINGS.
CLEANOUTS ON CAST IRON HUB AND SPOUT PIPING, SHALL BE CADMIUM PLATED, APPROVED MANUFACTURERS. ZURN, JOSAM OR JONESPEC.

TRAP PRIMERS
PROVIDE WHERE INDICATED ON DRAWINGS. PRECISION PRODUCTS WITH DISTRIBUTION UNIT OR APPROVED EQUAL.

- PIPE SLEEVES
- EXTEND SLEEVE 1/4 INCH BEYOND FINISHED SURFACE.
 - SET SLEEVE BEFORE POURING CONCRETE.
 - PROVIDE CLEARANCE BETWEEN SLEEVE AND PIPE OR BETWEEN SLEEVE AND INSULATION TO ALLOW FOR PIPE MOVEMENT DUE TO EXPANSION AND CONTRACTION.
 - INSULATION SHALL PASS CONTINUOUS THROUGH THE SLEEVE.
 - CAULK BETWEEN SLEEVE AND PIPE OR SLEEVE AND INSULATION. PREFABRICATED, PRE-INSULATED, "PIPE SHIELDS" WILL BE ACCEPTABLE FOR PIPES PASSING THROUGH FLOORS, EXTERIOR WALLS, FIRE WALLS AND FIRE RESISTIVE WALLS AND PARTITIONS.
 - ESCUOTCHEONS: FIT AROUND INSULATION WHERE PRESENT. PROVIDE DEEP ESCUOTCHEON PLATES WHERE PIPE SLEEVES EXTEND ABOVE FLOORS.
 - WATER HAMMER ARRESTERS: INSTALL WHERE SHOWN ON DRAWINGS.
 - CLEANOUTS: INSTALL WHERE SHOWN ON DRAWINGS AND AT BASE OF ALL RISERS. PROVIDE ADDITIONAL CLEANOUTS WHERE REQUIRED BY LOCAL CODES AND FOR CONVENIENCE OF TESTING AND ERECTION AT CONTRACTORS OPTION.
 - FRAMES AND COVERS SHALL BE FLUSH WITH ADJOINING ARCHITECTURAL FINISH.

PLUMBING VALVES

DESCRIPTION
INSTALL IN ACCESSIBLE LOCATION.
VALVES SHALL NOT BE INSTALLED WITH THE STEMS BELOW THE HORIZONTAL POSITION.

- VALVES, GATE, 125# UNION BONNET, RISING STEM
- 3 INCH AND SMALLER.
 - SCREWED: ITT GRINNELL #3080 SJ OR APPROVED EQUAL.
 - SOLDER JOINT: ITT GRINNELL #3080 SJ OR APPROVED EQUAL.

- VALVES, BALL, MAY BE USED IN LIEU OF GATE VALVES UP TO 2", 2" AND SMALLER NIBCO #T580, TWO PIECE BRONZE BODY, WITH SCREWED ENDS, CHROME PLATED BRONZE BALL WITH CONVENTIONAL PORT, 400 PSI, BLOW OUT PROOF STEM.
- VALVES, GLOBE 150# TEFLOON DISC, UNION BONNET
 - 3 INCH OR SMALLER.
 - SCREWED: ITT GRINNELL #2040 OR APPROVED EQUAL.
 - SOLDER JOINT: ITT GRINNELL #2040 SJ OR APPROVED EQUAL.

- VALVES, CHECK 125# REMOVABLE REGRINDABLE DISC A, 3 INCH AND SMALLER HORIZONTAL
- SCREWED: ITT GRINNELL #3000 OR APPROVED EQUAL.
 - SOLDER JOINT: ITT GRINNELL #3000 SJ OR APPROVED EQUAL.

- 3 INCH AND SMALLER, VERTICAL
- FOR SCREWED AND SOLDER JOINT INSTALLATION, SAME AS SECTION A OR APPROVED EQUAL. PROVIDE ADAPTERS FOR SOLDER JOINT CONNECTION, 2.05 HOSE BIBBS A. SEE FIXTURE SCHEDULE ON DRAWINGS. B. PLUG COCKS, 125# BRONZE COCKS. TWO (2) INCH AND SMALLER SHALL BE CRANE NO. 250 OR APPROVED EQUAL.

INSTALLATION
INSTALL VALVES WHERE SHOWN ON DRAWINGS.

PLUMBING HANGERS AND SUPPORTS

DESCRIPTION
PROVIDE HANGERS FOR ALL PIPING NOT INDICATED BELOW GRADE. USE HANGERS CAPABLE OF ADJUSTMENT.

HANGERS AND SUPPORTS
HANGERS FOR BLACK OR GALVANIZED STEEL PIPE SHALL BE GRINNELL, MODEL NO. 85 OR APPROVED EQUAL.

HANGERS FOR CAST IRON PIPE SHALL BE GRINNELL, MODEL NO. 280 OR APPROVED EQUAL.

HANGERS FOR COPPER TUBING SHALL BE GRINNELL, MODEL NO. 97 C OR APPROVED EQUAL.

TRAPEZE HANGERS OF A TYPE APPROVED BY THE OWNER'S REPRESENTATIVE MAY BE USED WHERE PIPES ARE DESIGNED TO RUN PARALLEL AT THE SAME ELEVATION.

PROVIDE ISOLATION HANGER WITH PROTECTIVE SHIELD, GRINNELL, MODEL NO. 300 103 OR APPROVED EQUAL, FOR ALL INSULATED PIPING. AT HANGER POINTS, PROVIDE 6 INCH LONG SECTION OF 1/2 INCH THICK CALCIUM SILICATE SECTIONAL PIPE INSULATION WITH FACTORY LONGITUDINAL LAP. SEAL BUTT JOINTS WITH INSULATING CEMENT.

STRAP HANGERS: NOT PERMITTED.

RISER CLAMPS: PROVIDE RISER CLAMPS FOR VERTICAL PIPING AT EACH LEVEL, GRINNELL MODEL NO. 281.

INSERTS IN CONCRETE, GRINNELL MODEL NO. 285 OR APPROVED EQUAL, HAVING ADJUSTMENT FROM 3/4 INCH THROUGH 1-1/4 INCH. IN METAL DECKS READHEAD SD1 OR APPROVED EQUAL. POWDER PROPELLED PERMITTED IN NEW CONSTRUCTION WHERE TYPE AND LOCATION ARE APPROVED PRIOR TO INSTALLATION. IN EXISTING CONSTRUCTION, START SLOGUN NO. 8800 SERIES OR APPROVED EQUAL.

SIDE BEAM CLAMPS: PROVIDE WHEN SUPPORTING FROM STRUCTURAL STEEL MEMBERS, GRINNELL, MODEL 225 OR APPROVED EQUAL.

OTHER SUPPORTS: OBTAIN OWNER'S REPRESENTATIVE APPROVAL FOR OTHER METHODS OF SUPPORT.

SPACING OF HANGERS
PROVIDE HANGER AT EACH CHANGE OF DIRECTION.

SPACE HANGERS AND SUPPORTS TO PREVENT SAGGING AND REDUCE STRAIN ON VALVES AND SPECIALTIES WITH SPACING NO GREATER AND ROD NO SMALLER THAN SHOWN ON THE FOLLOWING TABLE. HANGERS SHALL ALLOW FOR EXPANSION AND CONTRACTION.

FERROUS PIPING AND COPPER TUBING:		
DIAMETER OF PIPE	MAXIMUM SPACING	ROD SIZE
1/2" THROUGH 1-1/2"	8 FT.	3/8"
2" THROUGH 3"	10 FT.	1/2"
4" THROUGH 5"	12 FT.	5/8"
6" AND LARGER	16 FT.	3/4" D.
CAST IRON PIPING:		
DIAMETER OF PIPE	MAXIMUM SPACING	ROD SIZE
2" AND 3"	EACH JOINT	3/8"
4" AND 5"	EACH JOINT	1/2"
6" AND 8"	EACH JOINT	3/4"
10" THROUGH 15"	EACH JOINT	3/4" (TWO HANGERS)

RISER CLAMPS
INSTALL AT EACH LEVEL BELOW THE FLOOR. SUSPEND FROM TWO HANGER RODS AND INSERTS WHERE THE INSTALLATION OF ESCUOTCHEON PLATES IS REQUIRED.

TESTING OF PLUMBING PIPING

DESCRIPTION
CONDUCT ALL TESTS AFTER PIPING IS INSTALLED AND BEFORE PIPING IS CONCEALED OR COVERED.

PROVIDE ALL NECESSARY TEMPORARY PIPING CLOSURES.

PROVIDE ALL TESTING EQUIPMENT, MATERIALS AND SUPPLIES.

SYSTEMS SHALL REMAIN UNDER TEST FOR SUFFICIENT LENGTH OF TIME TO PROVE TIGHTNESS THEREOF AND FOR ADEQUATE OBSERVATION BY THE ARCHITECT-ENGINEER.

MATERIALS OTHER THAN THOSE SPECIFIED FOR JOINING WILL NOT BE PERMITTED IN THE PIPING SYSTEMS FOR THE PURPOSE OF STOPPING LEAKS.

ALL LEAKS DISCLOSED BY THE TESTING PROCEDURES SHALL BE REPAIRED AND TESTING REPEATED UNTIL THE SYSTEM IS PROVEN TIGHT.

TESTING REQUIREMENTS ARE MINIMUM AND ARE NOT INTENDED TO BE LIMITING WHERE ADDITIONAL TESTING METHODS ARE REQUIRED BY THE AUTHORITY HAVING JURISDICTION.

SUBMITTALS
STERILIZATION: PROVIDE A DATED LETTER TO THE ARCHITECT-ENGINEER'S REPRESENTATIVE STATING THAT PIPING SYSTEM HAS BEEN STERILIZED AND FLUSHED AS SPECIFIED.

PIPING TEST
DOMESTIC HOT AND COLD WATER PIPING SHALL BE FILLED, THEN TESTED TO A HYDROSTATIC PRESSURE OF 150 PSIG. MAINTAIN TEST PRESSURE FOR A MINIMUM OF ONE HOUR.

SANITARY PIPING, PREVIOUS TO CONNECTION OF FIXTURES, SHALL BE FILLED WITH WATER TO THE TOP OF THE SYSTEM AND PROVEN TIGHT. WHEN TESTING THE SYSTEM BY SECTIONS THE MINIMUM HEIGHT OF THE WATER COLUMN SHALL BE 10 FEET. EXAMINE ALL JOINTS FOR LEAKS.

NEW FIRE STANDPIPE SYSTEM SHALL BE TESTED TO A HYDROSTATIC PRESSURE OF 200 PSIG. MAINTAIN TEST PRESSURE FOR A MINIMUM OF TWO HOURS.

GAS PIPING SHALL BE TESTED WITH NITROGEN TO 50 PSIG. PRESSURE SHALL BE MEASURED WITH A MANOMETER. MAINTAIN TEST PRESSURE FOR A MINIMUM OF 30 MINUTES.

STERILIZATION
AFTER TESTS ARE COMPLETED ALL WATER SUPPLY SYSTEMS SHALL BE FILLED WITH A SOLUTION CONTAINING 100 PPM OF AVAILABLE CHLORINE AND ALLOWED TO STAND FOR A PERIOD TO TWO HOURS BEFORE BEING FLUSHED WITH CLEAN WATER.

PLUMBING, FIXTURES, TRIM AND DRAINS

MANUFACTURER
MANUFACTURER SHALL BE AS SCHEDULED OR BY APPROVED EQUAL.

PIPING
PIPING TO SERVE FIXTURES AND EQUIPMENT AND EXPOSED TO VIEW IN FINISHED AREAS SHALL BE BRASS, CHROMIUM PLATED.

SUPPORTS
PROVIDE ALL BRACKETS, PLATES, ANCHORS AND FASTENING DEVICES REQUIRED FOR ANCHORING THE FIXTURES RIDIDLY IN PLACE. RISERS TO SHOWER HEADS SHALL BE ANCHORED TO THE WALL CONSTRUCTION TO PREVENT MOVEMENT.

FIXTURES
PROVIDE PLUMBING FIXTURES AS SCHEDULED ON DRAWINGS, AMERICAN STANDARD, KOHLER, ELIER OR APPROVED EQUAL.

PLUMBING DRAINS
FURNISH WITH SEEPAGE FLANGE WHERE INSTALLED WITH PANS OR FLASHING, FURNISH CLAMPING RING.

ALL DRAINS SHALL BE OF THE SAME MANUFACTURER.

FURNISH FLOOR DRAINS WITH PRIMER CONNECTIONS WHERE INDICATED ON THE DRAWINGS. IN LIEU OF CAST-IR PRIMER CONNECTIONS ON THE DRAIN BODY, A TEE BETWEEN THE DRAIN BODY AND THE TRAP, TO RECEIVE THE PRIMER DISCHARGE WILL BE ACCEPTABLE.

PROVIDE FLOOR DRAINS WITH 4 INCH DEEP SEAL TRAPS.

PROVIDE ALL DRAINS AS SCHEDULED ON DRAWINGS OR APPROVED EQUAL.

INSTALLATION
DRAIN SHALL BE INSTALLED WHERE SHOWN ON THE DRAWINGS. ACCESSIBLE AND LOCATED TO SUIT EQUIPMENT APPROVED FOR INSTALLATION. WHERE FLUSH VALVES ARE SPECIFIED WITH FIXTURES, THE SUPPLY TO THE VALVE IN EACH ROOM SHALL BE AT THE SAME HEIGHT FOR THE TYPE OF FIXTURE AND THE VALVE SHALL BE SET IN PLACE SO THAT THE CENTER LINE OF THE VALVE DISCHARGE IS DIRECTLY ABOVE THE CENTER LINE OF FIXTURE STUD. BENDING OF NIPPLE BETWEEN THE VALVE AND THE STUD TO ACHIEVE CONNECTION WILL NOT BE PERMITTED.

CHROME PLATED PIPING REQUIRING THE USE OF WRENCH SHALL BE PROTECTED FROM DAMAGE.

BOLT WATER CLOSET CARRIER TO FLOOR.

GAS PIPING

PIPING
SHALL COMPLY WITH THE REQUIREMENTS OF NFPA NO. 54 AND THE LOCAL GAS COMPANY.

PIPE SHALL BE SCHEDULE 40 BLACK STEEL PIPE WITH MALLEABLE FITTINGS

INSTALLATION
PIPING SHALL COMPLY WITH THE REQUIREMENTS OF NFPA NO. 54 AND THE LOCAL GAS COMPANY.

INSTALL GAS SHUT-OFF AND GAS MANIFOLDS AS INDICATED OR REQUIRED.

DOMESTIC HOT AND COLD WATER

DESCRIPTION
THE WORK INCLUDES DRAINING AND INSTALLING HOT AND COLD WATER PIPING AS SHOWN ON THE DRAWINGS AND SPECIFIED HEREIN.

PIPING
HOT AND COLD WATER PIPING SHALL BE COPPER WATER TUBE HARD TEMPER, TYPE "L" WITH WROUGHT SOLDER FITTINGS ABOVE FLOOR AND SOFT TEMPER TYPE "K" WITH WROUGHT SOLDER FITTINGS BELOW GRADE.

GATE VALVES
SPECIFIED IN SECTION, PLUMBING VALVES.

INSTALLATION
NOTHING OF PIPE FOR CONNECTION NOT PERMITTED.

WHERE POSSIBILITY OF BACKFLOW FROM THE DRAIN TO THE SUPPLY FITTING EXISTS, INSTALL VACUUM BREAKERS.
NOT MORE THAN ONE LAVATORY, SINK, OR SIMILAR FIXTURE SHALL BE SUPPLIED BY A 1/2 INCH BRANCH. LINEAR DIMENSIONS NOT TO EXCEED 5 FEET.

MAKE CONNECTION TO EQUIPMENT AND FIXTURES INDICATED ON THE DRAWINGS OR SPECIFIED HEREIN.
HOT WATER BRANCH CONNECTIONS TO DISTRIBUTION MAINS SHALL BE TOP TAKE-OFF, SWING JOINT TYPE.

ALL PIPING INSTALLED BELOW GROUND SHALL RECEIVE TWO COATS OF KOPPERS NO. 30 OR APPROVED EQUAL.

PLUMBING INSULATION

DESCRIPTION
INSULATION SHALL NOT BE INSTALLED UNTIL TESTING PROCEDURES HAVE BEEN COMPLETED AND ALL SURFACES HAVE BEEN CLEANED AND FREE OF DIRT, GREASE AND COMPLETELY DRIED.

MATERIALS SHALL COMPLY WITH UL 723, FLAME SPREAD RATING, HOT SURFACE TEST PERFORMANCE, AND SMOKE DEVELOPED RATING.

SUBMITTALS
SAMPLES AND MANUFACTURER'S PRODUCT DATA. SUBMIT SAMPLES OF INSULATION AND ADHESIVE AND PRODUCT DATA LISTING RECOMMENDATIONS FOR USE AND COMPLIANCE WITH NFPA 90.

INSULATION
INSULATION FOR HOT AND COLD WATER PIPING, SHALL BE SECTIONAL GLASS FIBER AS MANUFACTURED BY OWENS CORNING FIBERGLASS TYPE AJSUSLI OR APPROVED EQUAL, WITH FACTORY APPLIED, ALL PURPOSE, FIRE RETARDANT JACKET.

INSULATION FOR EXPOSED HOT AND COLD WATER PIPING SHALL BE SECTIONAL GLASS FIBER AS MANUFACTURED BY OWENS CORNING FIBERGLASS TYPE AJSUSLI OR APPROVED EQUAL, WITH FACTORY APPLIED, .016 EMBOSSED ALUMINUM JACKET.

ADHESIVE SHALL BE BENJAMIN FOSTER 30-36, OR APPROVED EQUAL, WHITE INSULATION LAGGING ADHESIVE.

VAPOR BARRIER MASTIC SHALL BE BENJAMIN FOSTER NO. 82-07, WHITE, OR APPROVED EQUAL.

INSTALLATION
HOT AND COLD WATER PIPING SHALL BE INSULATED WITH 1/2 INCH THICK GLASS FIBER INSULATION HAVING A FACTORY APPLIED, ALL PURPOSE, FIRE RETARDANT JACKET WITH A MINIMUM R-4.0 PER INCH. CONCEALED AND EXPOSED PIPING SHALL HAVE THE INSULATION APPLIED WITH SIDE AND END JOINTS BUTTED TIGHTLY. SEAL JACKET LEGS AND BUTT JOINT STRIPS WITH ADHESIVE.