# FITNESS STUDIO SUMMIT FAIR

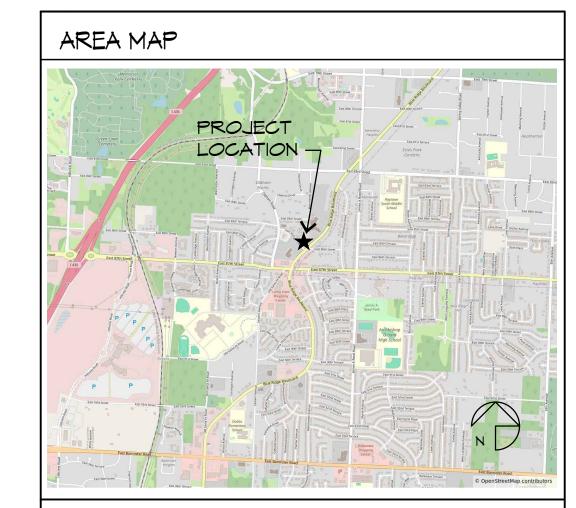
910 NW BLUE PARKWAY, LEE'S SUMMIT, MO 64086

# CODE NOTES

- A. TENANT FINISH
- B. ALL CONSTRUCTION FOR THIS PROJECT SHALL BE PERFORMED UNDER THE PROVISIONS OF FOLLOWING LIST OF CODES, AS AMENDED BY THE CITY OF LEES SUMMIT
- 2018 International Building Code
- 2018 International Plumbing Code
- 2018 International Mechanical Code 2018 International Fuel Gas Code
- 2018 International Residential Code 2018 International Fire Code
- 2017 National Electrical Code ICC/ANSI A117. 2009, Accessible and Usable Buildings and Facilities
- C. Use, Occupancy Classification, and Type of Construction:
- Tenant Use: Exercise Studio Tenant Occupancy Classification: A3 (unchanged)

Building Type of Construction: IIB

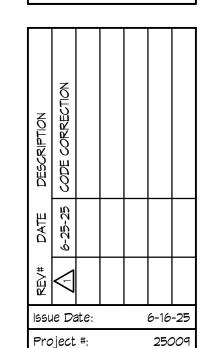
- D. Tenant Square Foot: 2,195.4 SF occupied, 2,343 SF gross
- E. Fire Protection Sustems:
- Automatic Sprinkler Systems: Provided. Fire Alarm and Detection Systems: Provided.
- Tenant Occupant Load (see plan)(35)Occupants



CONSTRUCTION



910



# GENERAL NOTES

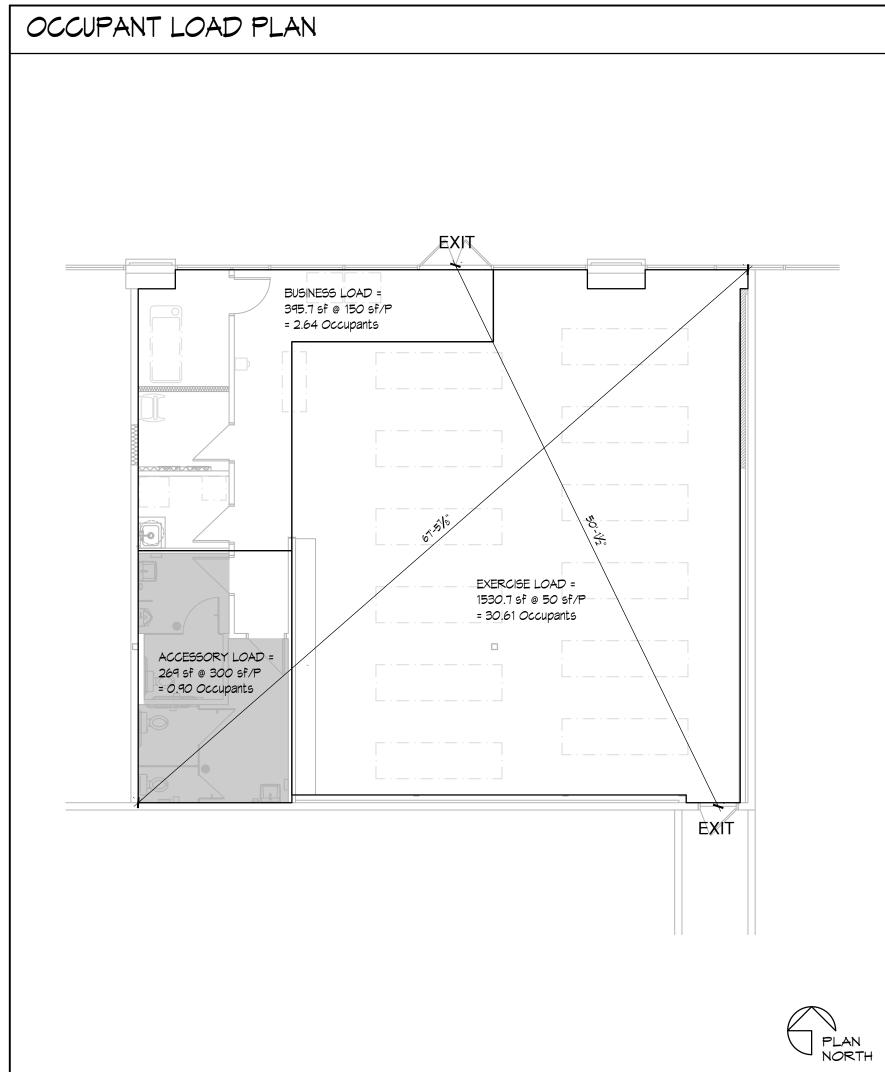
- MAINTAIN ACCESS TO EXISTING WALKWAYS, CORRIDORS, AND OTHER ADJACENT OCCUPIED OR USED FACILITIES. DO NOT CLOSE OR OBSTRUCT WALKWAYS, CORRIDORS, OR OTHER OCCUPIED OR USED FACILITIES WITHOUT PERMISSION FROM TENANT.
- REMOVE AND DISCARD: DETACH ITEMS FROM EXISTING CONSTRUCTION AND LEGALLY DISPOSE OF THEM OFF-SITE. REMOVE AND SALVAGE: DETACH ITEMS FROM EXISTING CONSTRUCTION
- RELOCATE: DETACH ITEMS FROM EXISTING CONSTRUCTION, MOVE ITEMS TACT AND UNDAMAGED, AND REINSTALL THEM WHERE INDICATED. EXISTING TO REMAIN: EXISTING ITEMS OF CONSTRUCTION THAT ARE NOT

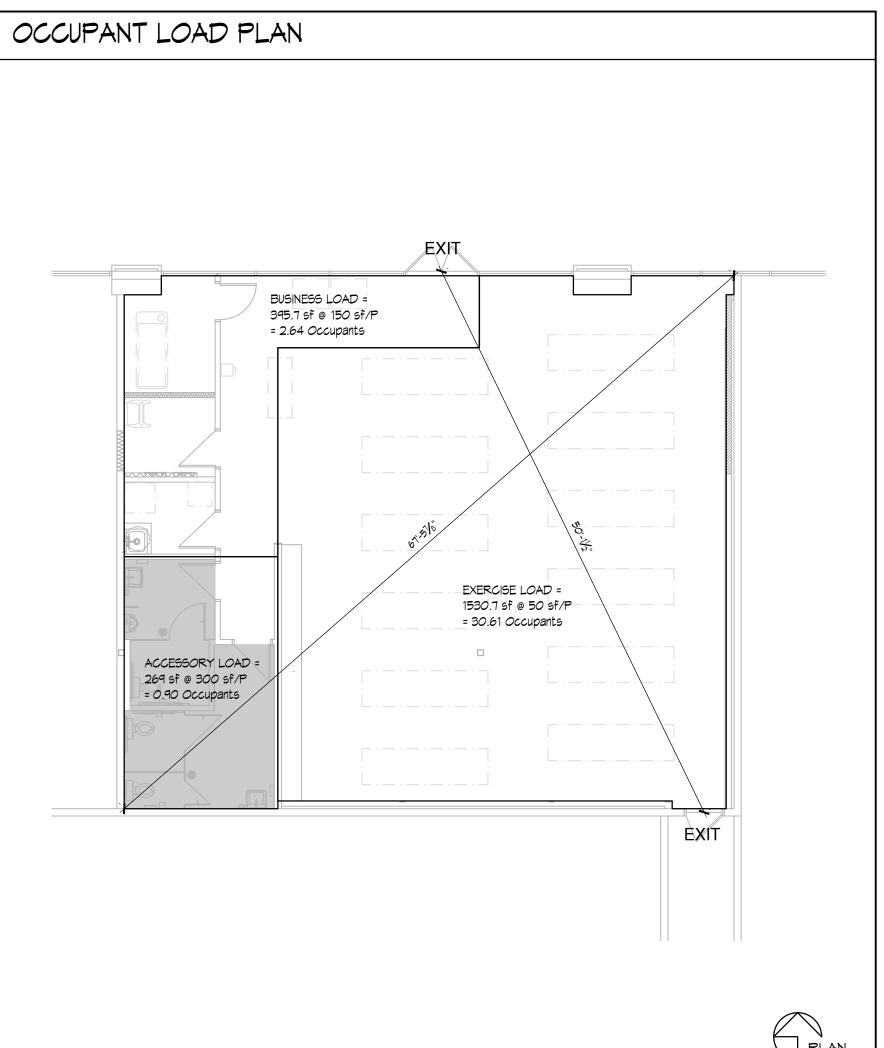
AND TURN OVER TO TENANT UNDAMAGED.

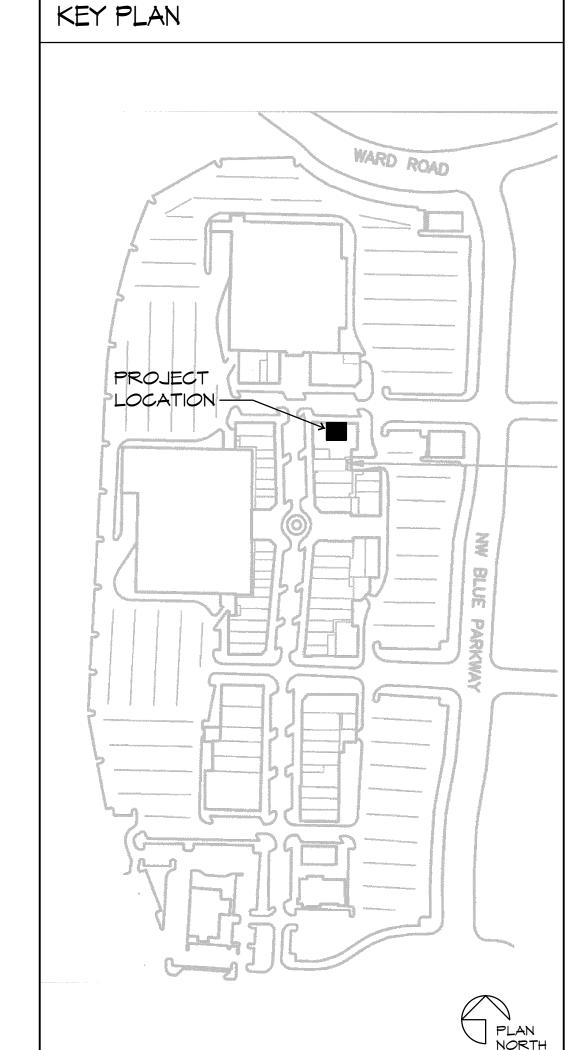
- BE REMOVED, BUT ARE TO REMAIN IN PLACE AND BE UNDAMAGED. REMOVE AND RECLAIM: DETACH ITEMS FROM EXISTING CONSTRUCTION. AT CONTRACTORS OPTION ITEM MAY BE REUSED AS PART OF NEW WORK. IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO INVENTORY ITEMS TO DETERMINE IF ITEMS WILL FUNCTION AND APPEAR LIKE THE NEW ITEMS SPECIFIED AND CALLED OUT ON THESE DOCUMENTS. IF ITEMS ARE REUSED. CONTRACTOR IS TO CLEAN, REPAIR, OR OTHERWISE BRING ITEMS TO LIKE NEW CONDITION. MODIFY REUSED ITEMS AS REQUIRED AND SUPPLEMENT WITH MATERIALS, AND INCIDENTALS NECESSARY TO EXECUTE A COMPLETE WORKMANLIKE JOB. IF CONTRACTOR CHOOSES TO NOT REUSE ITEM, LEGALLY DISPOSE OF ITEM OFF-SITE AND REPLACE MITH NEW TO MATCH EXISTING.
- PROVIDE: THE MEANING OF THE WORD "PROVIDED" INCLUDES, BUT IS NOT LIMITED TO, FURNISHED, DELIVERED, INSTALLED, FINISHED, MADE FULLY OPERABLE AND COMPLETE. UNLESS SPECIFICALLY NOTED OTHERWISE, ALL WORK DESCRIBED IN THESE DOCUMENTS IS TO BE PROVIDED BY THE CONTRACTOR.
- CONTRACTOR IS TO INCLUDE AS PART OF HIS SCOPE ALL CUTTING AND PATCHING REQUIRED THROUGH CAREFUL EVALUATION OF THE EXISTING SITE AND THE CONSTRUCTION DOCUMENTS. CONTRACTOR SHALL COORDINATE THE CUTTING AND PATCHING OF EXISTING CONSTRUCTION NECESSARY TO PERMIT INSTALLATION OR PERFORMANCE OF THE WORK INDICATED IN THESE CONSTRUCTION DOCUMENTS. SAW-CUT CONC. SLAB AS REQUIRED FOR UTILITIES, FOR EQUIPMENT AND SINKS. VERIFY ROUTE AND TRENCH DEPTH IN FIELD. PATCH BACK WITH MATCHING SLAB THICKNESS OVER SAME MATERIAL, COMPACT UNDERLYING MATERIALS TO MEET BEST PRACTICES. DOWEL NEW TO EXISTING WITH #4 REBAR AT 30" OC.
- WHERE WALLS, CASEMORK, FINISHES, EQUIPMENT OR OTHER ITEMS AND CONSTRUCTIONS HAVE BEEN REMOVED EXPOSING UNDERLYING WALL AND/OR FLOOR SURFACES, SUCH SURFACES ARE TO BE PATCHED AND REPAIRED AS REQUIRED TO ACCEPT NEW FINISHES. ALL HOLES, DAMAGES, DEFECTS, ETC. IN EXISTING SURFACES ARE TO BE PATCHED TO MATCH EXISTING CONDITIONS.
- EXISTING CONDITIONS SHOWN ON THESE DRAWINGS ARE BASED UPON BASE BUILDING OR OTHER CONSTRUCTION DOCUMENTS MADE AVAILABLE TO THE DESIGNER BY THE BUILDING MANAGEMENT. ALL AS-BUILT ARCHITECTURAL CONDITIONS HAVE NOT BEEN FIELD VERIFIED AND MAY VARY FROM THOSE
- PRIOR TO BID: FIELD VERIFY ALL EXISTING CONSTRUCTION TO REMAIN AND INCLUDE COSTS FOR REPAIR AND RECONDITION OF ALL EXISTING CONSTRUCTION TO REMAIN SO THAT IT MEETS THE AESTHETIC AND FUNCTIONAL STANDARD OF QUALITY FOR NEW CONSTRUCTION. BLEND AND MATCH EXISTING CONSTRUCTION WITH NEW CONSTRUCTION PRIOR TO BID, ADVISE TENANT OF ANY CONDITIONS WHICH CANNOT BE REPAIRED OR RECONDITIONED, BLENDED AND MATCHED. NOTE CONTRACT DOCUMENT REQUIREMENTS FOR EXISTING CONSTRUCTION AND INCLUDE COSTS FOR THIS WORK IN BID PROPOSAL.

- THE GENERAL CONTRACTOR SHALL, IN THE BIDDING PROCESS, REQUIRE THAT MECHANICAL AND ELECTRICAL SUBCONTRACTORS MAKE A THOROUGH FIELD INSPECTION OF AS-BUILT CONDITIONS OF EXISTING SYSTEMS. AFTER SUCH FIELD VERIFICATION HAS BEEN COMPLETED, THE GENERAL CONTRACTOR AND SUBCONTRACTORS SHALL PROVIDE IN THEIR BIDS, ANY MODIFICATIONS TO THE EXISTING SYSTEMS WHICH MAY BE REQUIRED TO ACCOMMODATE THE PROPOSED REQUIREMENTS FOR THIS TENANT. IF A DETERMINATION OF SUCH MODIFICATIONS CANNOT BE MADE, THE GENERAL CONTRACTOR SHALL NOTIFY THE TENANT, AND AT THE DIRECTION OF THE TENANT, PROVIDE AN AGREED UPON ALLOWANCE TO COVER SUCH WORK.
- 8. COMMENCING WORK BY A CONTRACTOR OR SUBCONTRACTOR CONSTITUTES ACCEPTANCE OF THE UNDERLYING CONDITIONS AND SURFACES. PRIOR TO PROCEEDING WITH THE WORK, PREPARE EXISTING AND NEW UNDERLYING CONDITIONS AND SUBSTRATE TO COMPLY WITH THE CONTRACT DOCUMENTS, INDUSTRY STANDARDS AND MANUFACTURER'S RECOMMENDATION.
- FIELD VERIFY ALL ROUGH OPENINGS AND WALL WIDTHS PRIOR TO ORDERING OR FABRICATION OF MATERIALS.
- 10. DIMENSIONS ARE NOMINAL AND TO THE FACE OF PARTITIONS
- 11. CLEAN-UP OF RUBBISH AND DEBRIS RESULTING FROM DEMOLITION AND NEW WORK SHALL BE COLLECTED REGULARLY FROM PROJECT SITE AND LEGALLY DISPOSED
- 12. ALL MEATHER EXPOSED SURFACES SHALL HAVE A MEATHER RESISTIVE BARRIER TO PROTECT THE INTERIOR WALL COVERING AND EXTERIOR OPENINGS SHALL BE FLASHED IN SUCH A MANNER AS TO MAKE THEM WEATHERPROOF
- 13. BUILDING ADDRESS NUMBERS SHALL BE PROVIDED AND PLACED IN A POSITION THAT IS PLAINLY LEGIBLE AND VISIBLE FROM THE STREET OR ROAD FRONTING THE PROPERTY. THESE NUMBERS SHALL CONTRAST WITH THEIR BACKGROUND. IN MULTI-TENANT COMMERCIAL BUILDING WHERE TENANTS HAVE MULTIPLE ENTRANCES LOCATED ON DIFFERENT SIDES OF THE BUILDING EACH DOOR SHALL BE ADDRESSED. ADDRESS NUMBERS SHALL BE ARABIC NUMERALS OR ALPHABET LETTERS. NUMBERS SHALL BE A MINIMUM OF 4 INCHES (102 MM) HIGH WITH A MINIMUM STROKE WIDTH OF 0.5 INCH (12.7 MM).
- 14. CONTRACTORS ARE RESPONSIBLE FOR ALL MATERIALS AND QUANTITIES SHOWN IN THESE DRAWINGS GRAPHICALLY AS WELL AS THOSE CALLED FOR
- 15. THE CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS TO COMPLETE THE PROPOSED WORK AND SHALL COMPLY WITH ALL LOCAL, STATE, AND FEDERAL REGULATIONS
- 16. THE TENANT OR THE TENANT'S DESIGNATED REPRESENTATIVE WILL PROVIDE SERVICES IN CONNECTION WITH ADMINISTRATION OF THE CONTRACT
- 17. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH ALL LOCAL LAWS, ORDINANCES, RULES AND REGULATIONS OF THE GOVERNING AGENCIES HAVING JURISDICTION
- 18. THE CONTRACTOR MUST TAKE ADEQUATE CARE TO PROTECT ALL AREAS OF THE BUILDING WHERE THE WORK OF THIS PROJECT IS LOCATED AS WELL AS THE AREAS ADJACENT TO THE AREA OF THE WORK OF THIS PROJECT SO AS TO PREVENT DAMAGE TO LIFE OR PROPERTY AS A RESULT OF THIS CONSTRUCTION PROJECT
- 19. ONLY MATERIALS THAT ARE NEW, UNUSED, FREE FROM DEFECTS, AND THE BEST OF THEIR RESPECTIVE KINDS SHALL BE USED. THE BASIS OF QUALITY SHALL BE THE LATEST STANDARDS OF ASTM, ASA OR ASHRA

- 20. THE CONTRACTOR SHALL COORDINATE HIS WORK WITH ALL OTHER TRADES INCLUDING THOSE OF THE TENANT WHO MAY BE ENGAGED UNDER A SEPARATE CONTRACT
- 21. INSTALL ALL WORK IN SUCH A MANNER AS TO BE READILY ACCESSIBLE FOR OPERATION, MAINTENANCE AND/OR REPAIRS
- 22. ALL WORK AND EQUIPMENT SHALL BE CLEANED TO THE SATISFACTION OF THE TENANT BEFORE BEING TURNED OVER FOR USE
- 23. A COPY OF THE LATEST SET OF CONSTRUCTION DOCUMENTS SHALL BE KEPT AT THE JOB SITE AT ALL TIMES
- 24. THE CONTRACTOR AND EACH SUBCONTRACTOR SHALL KEEP ACCURATE RECORDS OF ANY MODIFICATION OR DEVIATIONS FROM THE CONTRACT
- 25. PROJECT CLOSE OUT DOCUMENTS SHALL BE PROVIDED TO THE TENANT. INCLUDE AS-BUILT DRAWINGS, WARRANTY/MAINTENANCE MANUALS AND TESTING AND SUPERVISION AS REQUIRED. PRESERVE ALL PRINTED INSTRUCTIONS AND WARRANTIES THAT ARE PROVIDED WITH EQUIPMENT OR MATERIALS USED, AND DELIVER SAID PRINTED MATTER TO THE TENANT AT THE TIME OF SUBSTANTIAL COMPLETION. IF REQUESTED BY THE TENANT, INSTRUCT THE MANAGEMENT IN THE PROPER USE AND MAINTENANCE OF ALL ITEMS OF WORK PROVIDED.
- 26. PROVIDE WORK IN ACCORDANCE WITH THE MANUFACTURE'S RECOMMENDATION, EXCEPT IN THE CASE WHERE THE CONTRACT DOCUMENTS ARE MORE STRINGENT. PROVIDE ANY MISCELLANEOUS ITEMS OR MATERIALS NOT SPECIFICALLY NOTED. BUT REQUIRED FOR PROPER INSTALLATION OF THE
- 27. ALL WORK SHALL BE WARRANTED BY THE CONTRACTOR TO BE SATISFACTORY, IN MATERIALS AND WORKMANSHIP, FOR A MINIMUM PERIOD OF ON (1) YEAR, OR FOR THE PERIOD OF WARRANTY CUSTOMARY, SPECIFIED FOR, THE TRADE, CRAFT OR PRODUCT, WHICHEVER IS LONGER.
- 28. SUBMIT REQUESTS FOR SUBSTITUTIONS OF SPECIFIED ITEMS IN WRITING, ACCOMPANIED BY THE ALTERNATIVE PRODUCT INFORMATION, TO THE TENANT. SUBSTITUTIONS MAY BE CONSIDERED ONLY IF THEY DO NOT SACRIFICE QUALITY, APPEARANCE AND FUNCTION. ACCEPTANCE OF SUBSTITUTIONS IS AT THE SOLE DISCRETION OF THE TENANT.







# DIVISION 1 - GENERAL REQUIREMENTS

- 1. GENERAL REQUIREMENTS 01000
- 2. The General Conditions of the Contract for Construction of A.I.A. Document A201, latest edition, forms part of this contract as if herein bound.
- 3. Satisfy all applicable local codes and ordinances. Reference the cover sheet for list of codes.
- 4. Contractor to pay for Construction Permit Fees, Excise Tax, Tap Fees, Ect. as applicable to the local Municipalities and Utility Companies.
- 5. Contractor is to meet all Building Owner Standards and Instructions for work.

#### PRODUCTS 01600

- Where a specific manufacturer's product is named including make or model number or other designation, it has been selected to establish the significant qualities related to type, function, dimension, in-service performance, physical properties, appearance, and other characteristics of the product. Unless otherwise indicated, provided the named product or a product that is equal to or exceeds the specified product.
- 2. Deliver, store, and handle products using means and methods that will prevent damage, deterioration, and loss, including theft. Comply with manufacturer's written instructions.
- 3. Provide products complete with accessories, trim, finish, fasteners, and other items needed for a complete installation and indicated use and effect.
- 4. All products, and materials used in conjuction with, are to be installed in strict conformance with manufacturers instruction.

### SPECIAL CONDITIONS 01700

- General Contractor shall provide all water, light, and power necessary during construction until the completion of the building. All extensions, controls, and equipment beyond the points of temporary service shall be provided under the work of the respective Division requiring the same.
- 2. The General Contractor shall do all final cleaning of the building construction areas and wash

## CUTTING AND PATCHING

- Contractor is to include as part of his scope all cutting and patching required through careful evaluation of the existing site and the construction documents. All holes, damages, defects, ect. in existing surfaces are to be patched to match existing conditions. Contractor shall coordinate the cutting of existing construction necessary to permit installation or performance of other Mork.
- 2. Patching: Patch construction by filling, repairing, refinishing, closing up, and similar operations. Patch with durable seams that are as invisible as possible. Use materials identical to existing materials. If identical materials are unavailable or cannot be used use materials that when installed will match the visual and functional performance of existing materials. For exposed surfaces, use materials that visually match existing adjacent surfaces to the fullest extent possible. Before patching, verify compatibility with and suitability of substrates, including compatibility with existing and new finishes or primers.
- 3. Cutting: Cut existing construction by sawing, drilling, breaking, chipping, grinding, and similar operations, including excavation, using methods least likely to damage elements retained or adjoining construction. In general, use hand or small power tools designed for sawing and grinding, not hammering and chopping. Cut holes and slots as small as possible, neatly to size required, and with minimum disturbance of adjacent surfaces. Temporarily cover openings when not in use. Provide temporary support of Mork to be cut. Cut concrete using a cutting machine, such as an abrasive saw or a diamond-core drill.

# DIVISION 2 - SITE WORK

NO WORK THIS SECTION

# DIVISION 3 - CONCRETE

REFER TO CUTTING AND PATCHING

# DIVISION 4 - MASONRY

NO WORK THIS SECTION

# DIVISION 5 - METALS

#### METAL STUD FRAMING

- Metal Studs and Runners: shall be as manufactured by Dietrich, Inryco/Milcor, USC, or approved equal. Studs shall be sized as indicated on the drawings and of gauge recommended by the manufacturers literature. Double studs at door jambs shall be 20 gauge minimum. Standard stud spacing at no more than 16" O.C. unless otherwise noted on drawings.
- 2. At all walls indicated to extend to underside of decking provide Dietrich SLP-TRK slotted deflection track. Install and finish per manufacturer's recommendations.

# DIVISION 6 - WOODS AND PLASTIC

#### CARPENTRY

Each piece of framing lumber shall be identified by the trademark of an approved inspection agency or association. Mood framing and all rough carpentry items shall be installed in accordance with UBC and/or FHA requirements whichever is most restrictive.

# DIVISION 7 - THERMAL AND MOISTURE PROTECTION

#### INSULATION

- 1. Where insulating materials listed below will not be covered with aupsum board substitute specified insulation w/ product of same thickness and R-value and similar facing, but such shall have a flame spread rating of 25 or less and a smoke developed rating of 50 or less when tested in accordance with ASTM E84 unless more stringent requirements are listed for a specific product.
- Exterior Malls: Unfaced batts of fiberglass vapor barrier in thickness to match stud cavity
- 2.2. Gaps and voids around door and window areas and in built up wood lintels: Minimal expandina foam insulation shall be Dow Chemical Great Stuff. It is to be Tack free in 20 minutes and with full cure in 8 hours at room temperature and 50% relative humidity. It is to be paintable and
- 2.3. Interior non-loadbearing walls: Unfaced Fiberglass Batts Certainteed CertaPRO AcoustaTherm Batts in thickness to fill entire cavity.

#### SEALANTS

- Mildew-Resistant Silicone Rubber Sealant: Silicone rubber-based, one part elastomeric sealant, complying with F5 TT-S-0021543, Class A; compounded specifically for mildew resistance and recommended by manufacturer for interior joints in wet areas; passing ANSI A136.1 test for mold
- 2. Silicone Sealant: One-part nonacid-curing silicone sealant complying with ASTM C920; Type S, Grade NS, Class 25, paintable, for uses at casings, window casings and hollow metal to drywall and masonry.
- 3. Joints and spaces to be caulked shall be clean, dry and free of dust, loose mortar or other foreign materials. After joints have been filled, they shall be neatly tooled to eliminate air pockets or voids and to provide a smooth, neat appearing surface.
- 4. Non-Elastomeric Sealants and Caulking Compounds: 1-component acrylic sealant: FS-TT-S-00230. Class B, Type 11, solvent based solids 95% acrylic for uses at exterior window and door frame perimeters and flashing

# DIVISION 8 - DOORS AND WINDOWS

# DOORS

Single swing interior doors shall be solid core premium grade flush slab doors with veneer, stain, and finish to match existing. Comply with requirements of ANSI/NMMA I.S. 1 and Section 1400 of AWI "Architectural Moodwork Quality Standards" except as otherwise indicated. Coordinate stain color with interior designer.

# FINISH HARDWARE

Provide finish hardware for all doors in project. The Contractor shall verify all keying requirements with owner prior to installation. Finish to be 26d. Hardware mounting heights by the door and hardware institute "Recommended Locations for Builders Hardware". Comply with all ADA requirements for hardware.

# DIVISION 9 - FINISHES

#### GYPSUM DRYWALL

- 1. Materials shall meet the following standards:
- a. Gupsum Mallboard ASTM C36
- b. Nails ASTM C380
- c. Metal Accessories ASA A97.1
- d. Water Resistant Gypsum Backing Board ASTM C1278 (paragraph 6.1)
- 2. Use gypsum board fasteners that are recommended by gypsum board manufacturer except as otherwise indicated.
- 3. Furnish and install all trim accessories, adhesives and joint treatments per manufacturer's
- 4. All gypsum board to be finished to Level 4 unless noted otherwise.
- 5. Schedule: (basis of design)
- Interior side of exterior walls:  $\frac{5}{8}$ " Gold Bond XP Gypsum Board. Gypsum Board is to be installed from floor to underside of deck above.
- Interior partitions, ceilings and soffits general: 5/8" Gold Bond Gypsum Board.
- Interior partitions in wet areas/toilet rooms: 5/8" Gold Bond XP Gypsum Board.
- Interior partitions to receive wall tile: 5/8" Gold Bond exp Tile Backer
- Where called out to receive sound board: 5/8" Gold Bond® SoundBreak® XP® Fire-Shield® Gypsum Board. When multiple layers are indicated all joints are to be staggered.

# DIVISION 9 - FINISHES

#### FLOORING GENERAL

- 1. Patch, level and prepare all floors as recommended by flooring manufacturer for each type of flooring to be placed. Use trowelable leveling and patching compound to fill cracks, holes, and depressions in substrates. Trowelable Leveling and Patching Compounds shall be of Latex-modified, portland cement based or blended hydraulic cement based formulation provided or approved by floor covering manufacturer for applications indicated.
- 2. Transitions between floor finishes: Floor finishes are to be tightly butted together (unless edge protection is specified or is required by the manufacturer.) At all transitions where finished floor height of a flooring is higher then adjacent floor finish, raise adjacent flooring with ROPPE SUBLEVELER TS-1 so finish heights are equal.

#### PAINTING GENERAL

1. Paint shall be as manufactured by Sherwin Williams Paints or approved equal.

## SURFACE PREPARATION FOR PAINT

- 1. General: Protect adjacent and underlying surfaces. Remove or mask electrical plates, hardware, light fixture trim, escutcheons, and fittings prior to preparing surfaces of finishing. Correct defects and clean surfaces capable of affecting work of this section. Seal marks that may bleed through surface finishes with compatible sealer.
- 2. Galvanized Steel: Remove surface contamination and oils and wash with solvent.
- 3. Uncoated Ferrous Metals: Remove grease, mill scale weld splatter, dirt and rust. Where heavy coatings of scale are evident, remove by hand or power tool wire brushing or sandblasting: wash with solvent. Apply treatment of phosphoric acid solution, ensuring weld joints, bolts and nuts are similarly cleaned. Spot Prime paint after repairs.
- 4. Shop primed ferrous Metals: Sand and scrape to remove loose primer and rust. Feather edges to make patches inconspicuous. Clean with solvent. Prime bare steel surfaces.
- 5. Other existing Surfaces: Remove loose, flaking, powdery, and peeling paints. Light sand painted surfaces. Fill holes, cracks, depressions and other imperfections with compatible patching compound; sand flush with surface. Remove oil, grease, and wax by scraping; solvent wash and thoroughly rinse. Remove rust by wire brushing to expose base metal.

# PAINTING SCHEDULE

- 1. Paint all new and existing interior gypsum board walls:
- 1.1. 1 ct. PrepRite 200 Latex Primer and
- 1.2. 2 cts. Promar 200 Int. Latex Eq-Shel
- 2. Paint all new and existing interior gypsum board walls in wet areas (Toilet, Plunge, and Utility Rooms):
- 2.1. 1 ct. PrepRite 200 Latex Primer and 2.2. 2 cts. Waterbased Catalyzed Epoxy
- 3. Interior gypsum board ceilings and soffits (unless noted otherwise): 3.1. 1 ct. PrepRite 200 Latex Primer
- 3.2. 2 cts. Promar 200 Int. Latex Flat
- 4. Interior Ferrous metal (metal frames, misc. metal):
- 4.1. Touch up factory prime coat with compatible Metal Primer or 4.2. 1 ct. Sprayed All Surface Enamel oil Primer
- 4.3. 2 cts. Sprayed Promar 200 Int. Alkyd Eg-Shel Enamel

# DIVISION 10 - SPECIALTIES

#### FIRE EXTINGUISHER

Field verify existing fire extinguisher will pass inspection. If Fire extinguisher is defective or unable to be fully charged provide new fire extinguisher which shall be Cosmic 5E (2A,10B,C) by J.L. Industries or approved equal.

# DIVISION 11 - EQUIPMENT

COORDINATE EQUIPMENT INSTALLATION WITH OWNER AND OWNER'S EQUIPMENT SUPPLIER.

# DIVISION 12 - FURNISHINGS

#### CASEMORK

- The General Contractor or his Subcontractor shall provide all necessary work to provide plastic laminate casework at locations indicated on these documents. Work under the contract shall include all labor, materials, and incidentals necessary to execute a complete workmanlike job in accordance with the requirements of all applicable codes and ordinances including the Americans with Disabilities Act Guidelines. The General Contractor or his Subcontractor to review shop drawings with Owner to verify casework layout and dimensions.
- 2. Casework shell units are to be constructed with 3/4" particle board sides and 1/2" particle board backs. Provideh plastic laminate on all exterior exposed vertical faces and on bottom face of upper cabinets. Exposed edges to be .020 polyvinyl chloride impact/chip/mar-resistant edges. All interior surfaces on units with doors/drawers to be 85 gram melamine. Open units are to have plastic laminate to match the exterior. Base cabinets are to be nominal 24" deep. Upper cabinets are to 14" deep O.A. from back of cabinet at wall to face of doors. Full height cabinets are to be 26" deep unless noted otherwise. Full height cabinets are to constructed with solid center shelf with doors above and below.
- 3. Countertops: Outside corners of all countertops to have  $1\frac{1}{2}$ " radius.
- 3.1. Plastic Laminate countertops are to be  $1\frac{1}{4}$ " thick with plastic laminate faces and 3mm ( $\frac{1}{6}$ ") flexible PVC edges. Backsplashes are to be provided, and are to have matching plastic laminate on all exposed faces.
- 3.2. Solid Surface countertops shall be as indicated on Finish Legend. Surfaces of material are to be adhesively joined with inconspicuous seams. Nominal  $\frac{1}{2}$ " thick matching backsplashes are to be
- 3.3. Quartz Surfacing shall be as indicated on Finish Legend. Surfaces of material are to be epoxy joined with inconspicuous seams. Nominal  $\frac{3}{4}$  thick matching backsplashes are to be provided.
- 4. Plastic Laminate Door, Drawer, and False Front Panels to have plastic laminate faces, 85 gram melamine backs, and 3mm (1/8") high impact resistant PVC edges.
- . Shelving to be 1" particle board fully adjustable on 1-1/4" centers. Edge to be .020 polyvinyl chloride impact/chip/mar-resistant edge. Shelving inside units with doors to have 85 gram melamine on top and bottom. Shelving of open units are to have plastic laminate to match the exterior.
- 6. Hardware shall be finished per interior designer. Hinges shall be European concealed heavy duty hinges. All doors over 36" tall to have three hinges. All pulls are to be 4" bent wire pulls, unless otherwise noted. Removable panels to be secured with Hafele Keku push fit fastners.
- Drawer boxes to be Blum Meta-Box system or Grass UniDrawer (Unless noted otherwise). Slides to have 100 pound load rate. Drawer box depth is to be within 2" of drawer face panel height. Drawers indicated on drawings as FILE are to have white melamine box with KV 8505 slides and Hafele letter width file frame kit.
- 8. Provide one 2" dia standard plastic grommet with hole liner and slotted cover for every three linear feet of countertop that has knee space below. If knee space is less than three feet wide provide two grommets. Also provide one 2" dia standard plastic grommet at each location with power and/or data installed in cabinet. Color as selected by interior designer. Exact locations of grommets to be established and be confirmed by owner prior to installation.
- 9. All particle board is to be of 45-pound density particle board. All plastic laminate is to be General Purpose Type 107 HG5 laminate as manufactured by Wilsonart or approved equal.
- 10. Provide fillers to match casework at sides of all casework abutting adjecent vertical surfaces. Provide filler panels above upper cabinets where distance between upper cabinet and ceiling above is less than 8".

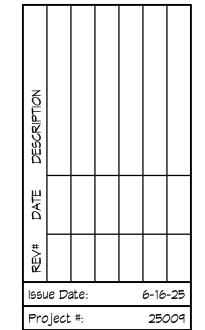


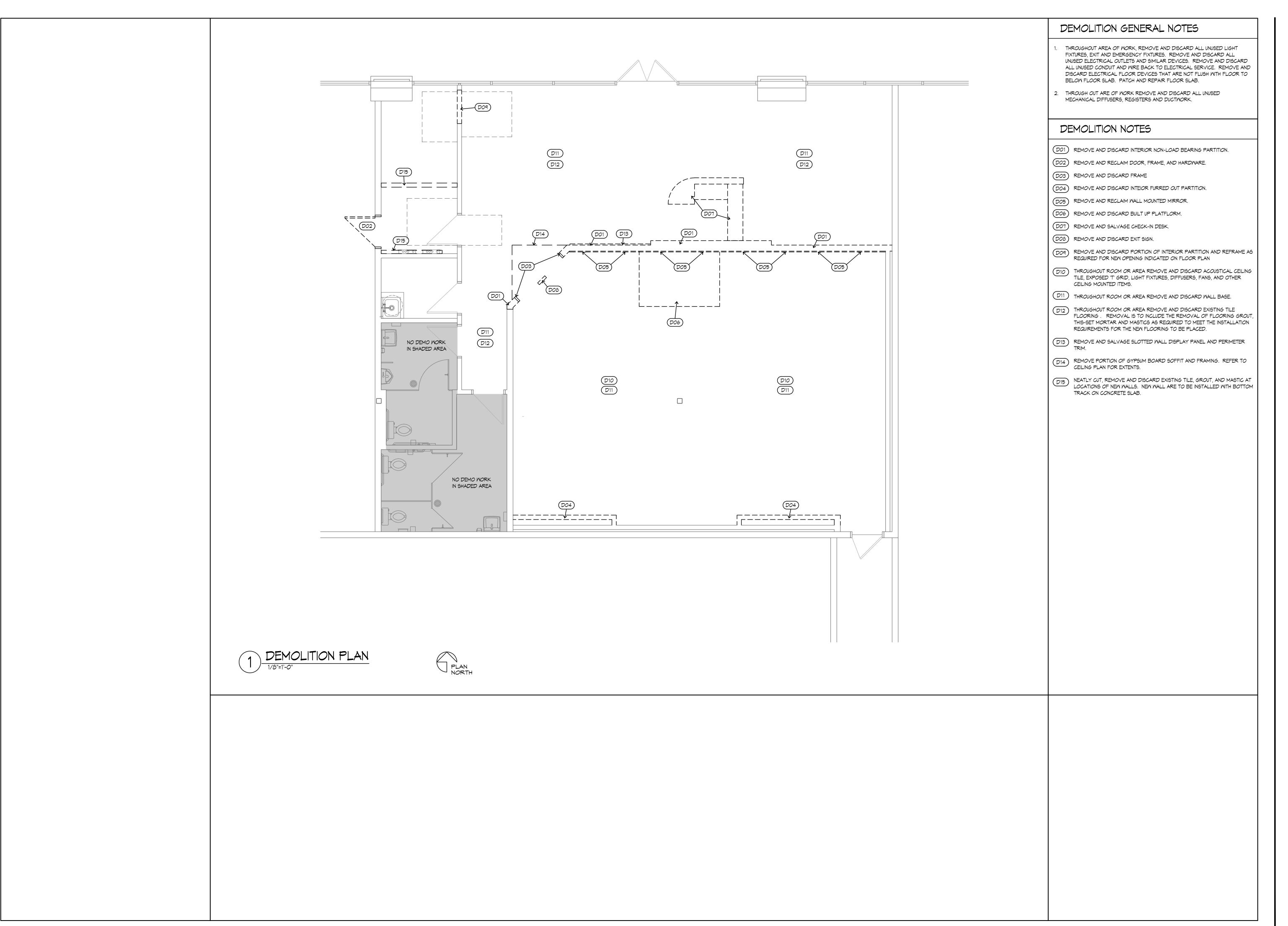
RELEASED FOR CONSTRUCTION **As Noted on Plans Review** 

GUY GRONBERG ARCHITECTS, P. ( 113 SE 3rd St. Lee's Summit, MO 64063 Phone 316.524.0878 Fax 816.524.8578









FITNESS STUDIO
SUMMITT FAIR

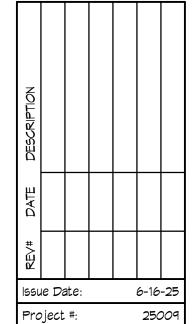
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6-16-2025

GUY GRONBERG ARCHITECTS, P.C. 13 SE 3rd St. Lee's Summit, MO 64063 Phone 316.524.0878 Fax 316.524.8578

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**A2** 

# FINISH GENERAL NOTES

- 1. FINISH MATERIALS LISTED HERE-IN ARE TO ESTABLISH THE SIGNIFICANT QUALITIES RELATED TO TYPE, FUNCTION, DIMENSION, PRICE, PHYSICAL PROPERTIES, APPEARANCE, AND OTHER CHARACTERISTICS OF THE PRODUCT. FINAL SELECTION OF ALL FINISHES ARE TO BE CONFIRMED BY OWNER OR OWNER'S INTERIOR DESIGNER.
- 2. PATCH, LEVEL AND PREPARE ALL FLOORS AS RECOMMENDED BY FLOORING MANUFACTURER FOR EACH TYPE OF FLOORING TO BE PLACED. USE TROWELABLE LEVELING AND PATCHING COMPOUND TO FILL CRACKS, HOLES, AND DEPRESSIONS IN SUBSTRATES. TROWELABLE LEVELING AND PATCHING COMPOUNDS SHALL BE OF LATEX-MODIFIED, PORTLAND CEMENT BASED OR BLENDED HYDRAULIC CEMENT BASED FORMULATION PROVIDED OR APPROVED BY FLOOR COVERING MANUFACTURER FOR APPLICATIONS INDICATED.
- 3. INTERIOR FINISHES MUST CONFORM TO THE GOVERNING CODE FOR "CLASS III" MAX. 25 FOR SMOKE DENSITY CLASSIFICATION. MAX. FLAME SPREAD OF 200
- 4. COLOR OF ALL LIGHT SWITCHES, RECEPTACLES AND PLATE COVERS TO MATCH EXISTING.
- 5. PAINTING CONTRACTOR SHALL EXAMINE ALL SURFACES AFTER COMPLETION OF WORK OF ALL TRADES AND PROVIDE NECESSARY "TOUCH UP" PAINTING AND PATCHING. HE SHALL IMMEDIATELY REMOVE ANY PAINT SPILLAGE OR SPLATTER.
- 6. ALL PAINTING WORK SHALL BE DONE BY SKILLED WORKERS USING EITHER BRUSHES OR ROLLERS. POOR WORKMANSHIP WILL NOT BE ACCEPTED. ALL MATERIALS SHALL BE EVENLY SPREAD, SMOOTHLY FLOWED ON AND FREE FROM RUNS, SAGS, CRAWLINGS OR OTHER DEFECTS. FINISHED SURFACES SHALL BE UNIFORM IN COLOR, GLOSS, SHEEN AND MATTE FINISH AND FREE FROM BRUSH MARKS, BRISTLES, LINT OR DUST PIMPLES.

# FINISH SCHEDULE

RM. #	ROOM NAME	FLOOR	BASE	MALL	_			NOTES
				NORTH	EAST	SOUTH	WEST	
100	ENTRANCE	NRF	NRB	PT1	PT1	PT1	PT1	
101	C. PLUNGE	EXT	XRB,NRB	PT2	PT2	PT2	PT2	
102	DESK	NRF	NRB	PT1	PT1	PT1	PT1	
103	RED LIGHT	EXT	XRB,NRB	PT1	PT1	PT1	PT1	
104	UTILITY	EXT	XRB	PT2	PT2	PT2	PT2	
105	HALL	NRF	NRB	PT1	PT1	PT1	PT1	
106	MEN	X2R	X2R	X2R,PT2	X2R,PT2	X2R,PT2	X2R,PT2	1.
107	MOMEN	X2R	X2R	X2R,PT2	X2R,PT2	X2R,PT2	X2R,PT2	1.
108	EXERCISE	XRF,NRF	NRB	PT1	PT1	PT6,MD	PT1	2.

# NOTES

- 1. EXISTING WALL TILE IS TO REMAIN. EXISTING PAINTED WALLS ARE TO BE REPAINTED PT2.
- 2. WALL IS TO BE PAINTED WITH ACCENT PAINT PT6 AS PART OF BASE BID.
  PROVIDE AN ADD ALTERNATE TO PROVIDE WOOD SLATS ON A DESIGN

# FINISH MATERIAL LEGEND

X2R EXISTING TO REMAIN FINISH - NO WORK

FLOORING

EXT EXISTING TO REMAIN FLOOR TILE.

XRF EXISTING TO REMAIN RUBBER FLOOR

NRF NEW RUBBER FLOOR TO MATCH EXISTING.

<u>BASE</u>

XRB EXISTING TO REMAIN RUBBER BASE.

NRB NEW RUBBER BASE JOHNSONITE 4" COVE BASE, CONTINUOUS COIL, TO MATCH EXISTING WALL BASE.

PAINT COLOR

NOTE: ALSO REFER TO PAINT SCHEDULE IN SPECIFICATIONS FOR PAINTS.

PT1 PRIMARY FIELD COLOR: (TO BE DETERMINED)

PT2 EPOXY PAINT COLOR: (TO BE DETERMINED)

PT3 CEILING/SOFFIT COLOR: (TO BE DETERMINED)

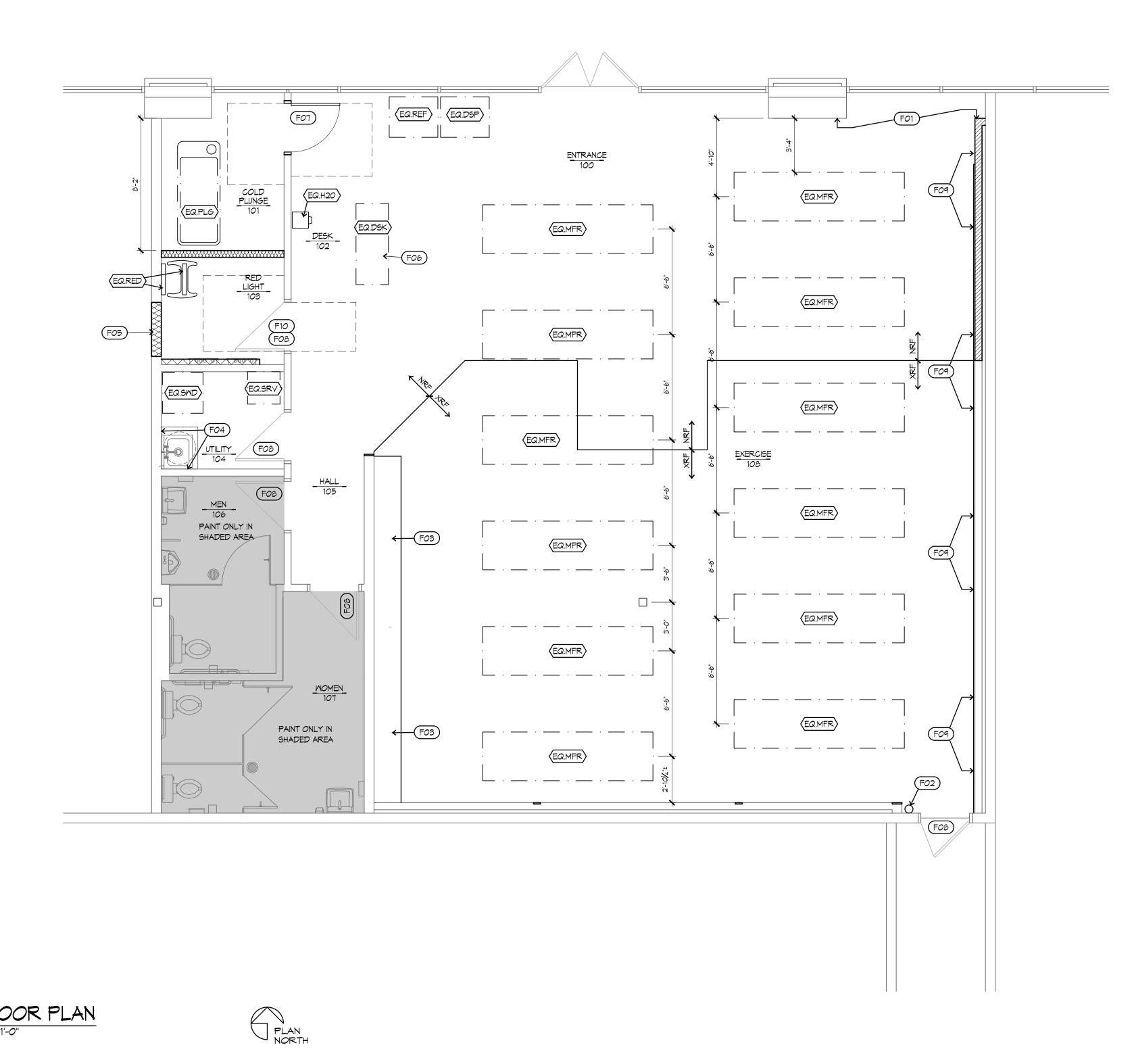
PT4 DRYFALL CEILING WHITE: (MATCH EXISTING WHITE)

PT5 METAL FRAMES: (TO BE DETERMINED)

PT6 ACCENT PAINT COLOR: (TO BE DETERMINED)

# ALTERNATE BID

MD ON A DESIGN BUILD BASIS CONTRACTOR IS TO PROVIDE WOOD SLAT ACCENT WALL AS PART OF AN ADD ALTERNATE BID. COORDINATE WITH TENANT ON WOOD TYPES, SIZES, LAYOUT, AND FINISH.



# WALL TYPES

- 1. PROVIDE FIRE TREATED SOLID BLOCKING FOR DOORS, WINDOWS, TOILET PARTITION, ACCESSORIES, HANDRAILS, LAVATORY BRACES, CASEWORK, SHELVING ETC. AS REQUIRED BY MANUFACTURER AND ALL WORK DONE BY CARPENTRY AND MILLWORK TRADES. ALL FIRE TREATED WOOD REQUIRED BY BUILDING CODES SHALL MEET ALL REQUIREMENTS TO THE CODE OF UNDERWRITERS LABORATORIES, INC. VERIFY THE DEPTH OF WALLS PRIOR TO INSTALLING RECESSED FIXTURES.
- 2. ALL EXPOSED EDGES AND / OR CORNER ON ALL GYPSUM WALL BOARD CONSTRUCTION SHALL HAVE A METAL CORNER TRIM, TAPED AND SPACKLED.
- 3. ALL EXISTING TO REMAIN AND NEW GYPSUM BOARD PARTITIONS IN AREA OF WORK TO BE PROPERLY PREPARED, PATCHED, SPACKLED AND SANDED, ETC., TO PROVIDE A SMOOTH FINISH AND AS REQUIRED TO RECEIVE NEW FINISHES.
- 4. ALL OPENINGS IN GYPSUM BOARD PARTITIONS SHALL BE DOUBLE STUDDED.
- 5. IN THE FOLLOWING ROOMS ALL NEW GYPSUM BOARD SHALL BE MOISTURE RESISTANT GYPSUM BOARD IN LIEU OF THE STANDARD GYPSUM BOARD INDICATED IN WALL TYPES BELOW; COLD PLUNGE 101

EXISTING TO REMAIN WALL FRAMING TYPICAL (NO HATCH PATTERN). PATCH AND REPAIR AS REQUIRED FOR NEW PAINT

2½" MTL. STUDS @ 16" O.C. WITH ½" GYPSUM BOARD ONE SIDE. EXTEND ALL FROM FLOOR TO UNDERSIDE OF EXPOSED 'T' GRID. EXISTING ELECTRICAL PANELS ARE TO BE FLUSH IN FACE SURFACE OF NEW WALL. BRACE WALL BACK TO EXISTING

3½" MTL. STUDS @ 16" O.C. WITH ½" GYPSUM BOARD EACH SIDE AND 3½" UNFACED BATT INSULATION. EXTEND ALL FROM FLOOR TO UNDERSIDE OF EXPOSED 'T' GRID. TOP TRACK SHALL RESIST LATERAL LOADS

EXTEND EXISTING SOUND WALL. 37/8" MTL. STUDS @ 12" O.C. WITH TWO LAYERS 7/8" GOLD BOND® SOUNDBREAK® XP® FIRE-SHIELD® GYPSUM BOARD ON ONE SIDE WITH QUIET GLUE BETWEEN EACH LAYER AND 31/2" UNFACED ACOUSTICAL BATT INSULATION. EXTEND ALL FROM FLOOR TO UNDERSIDE OF GYPSUM BOARD AT BOTTOM OF ROOF TRUSSES. PROVIDE DEEP LEG DEFLECTION TRACK. ACOUSTICALLY SEAL AT PERIMETERS AND THROUGH PENETRATIONS.

# FLOOR PLAN NOTES

- (FO1) ALIGN FACE OF WALL WITH FINISH FACE OF EXISTING
- F02) EXISTING TO REMAIN WALL MOUNTED FIRE EXTINGUISHER.
- NEW PLASTIC LAMINATE CLAD PLYWOOD BENCH WITH CUBBIES BELOW TO BE DESIGN BUILT BY CONTRACTOR.
- FO4) EXISTING TO REMAIN FIBERGLASS REINFORCED PANELS ON WALLS AT UTILITY SINK.
- FO5 INFILL EXISTING OPENING WITH \$\frac{1}{8}\$" GYPSUM BOARD AND METAL STUD FRAMING. MATCH DEPTH OF FRAMING AND NUMBER OF GYPSUM BOARD LAYERS IN EXISTING WALL. WALL IS TO BE FINISHED FLUSH ON BOTH SIDES OF WALL.
- TENANT SUPPLIED DESK IS TO PRVIDE AN ACCESSIBLE COUNTER IN ACCORDANCE WITH ICC A117.1 SECTION 904.3. A PORTION OF THE COUNTER SURFACE SHALL BE 36" MINIMUM IN LENGTH AND 36" MAXIMUM IN HEIGHT. A 30"X48" CLEAR FLOOR SPACE POSITIONED FOR A PARALLEL APPROACH
- PROVIDE NEW KNOCK DOWN METAL FRAME, SOLID CORED FLUSH WOOD DOOR AND ADA LEVER HARDWARE TO MATCH EXISTING DOORS.

  RECLAIMED DOOR AND HARDWARE MAY BE USED AT TENANT OPTION.
- FOB EXISTING TO REMAIN DOOR, FRAME, AND ADD LEVER DOOR HARDWARE.
  PAINT FRAME.

  FOP PROVIDE NEW OR RELCLAIMED MIRRORS ON FACE OF WALL. COORDINATE SIZE AND EXTENTS WITH TENANT.
- (F10) REVERSE LOCKSET TO ALLOW EGRESS FROM ROOM AT ALL TIMES.

# OWNER EQUIPMENT AND ACCESSORIES

CONTRACTOR IS TO COORDINATE ELECTRICAL AND LOW-VOLTAGE HOOK-UP REQUIREMENTS AND IS PROVIDE AND INSTALL BLOCKING FOR ALL MOUNTED ITEMS REGARDLESS OF WHO IS TO DO THE FINAL INSTALLATION. SEE DESCRIPTION FOR INSTALLATION REQUIREMENTS. MOUNTING LOCATIONS INDICATED ON THESE DRAWINGS REPRESENT APPROXIMATE LOCATIONS. PRECISE MOUNTING LOCATIONS ARE TO BE VERIFIED IN FIELD WITH TENANT PRIOR TO INSTALLATION.

ITEM DESCRIPTION

EQ.DSK CHECK-IN DESK: FURNISHED BY TENANT AND INSTALLED BY CONTRACTOR. SEE FLOOR PLAN NOTE 'F06' THIS SHEET.

EQ.DSP SHELVING DISPLAY UNIT: FURNISHED AND INSTALLED BY TENANT OR TENANT'S VENDOR.

EQ.H20 MATER DISPENSOR: FURNISHED AND INSTALLED BY TENANT OR TENANT'S VENDOR. CONNECT TO EXISTING WATER LINE AND POWER.

(EQ.MFR) MEGAFORMER: SPRING BASED WORKOUT EQUIPMENT TO BE PROVIDED AND INSTALLED BY TENANT OR TENANT'S VENDOR.

EQ.PLG COLD PLUNGE: FURNISHED BY TENANT AND INSTALLED BY CONTRACTOR.

RED LIGHT TREATMENT: FURNISHED BY TENANT AND INSTALLED BY CONTRACTOR. NOTE: ONE UNIT IS WALL MOUNTED AND OTHER IS ON WHEELS AND CAN BE EASILY MOVED TO PROVIDE CODE CLEARANCES AT PANELS AND DOOR.

EQ.REF GLASS DOOR REFIGERATOR: FURNISHED AND INSTALLED BY TENANT OR TENANT'S VENDOR.

EQ.SVR SERVER RACK: FURNISHED BY TENANT AND INSTALLED BY CONTRACTOR.

EQ.SMD STACKED WASHER AND DRYER: FURNISHED BY TENANT AND INSTALLED BY CONTRACTOR.

KEMNETH J.
KLEFFRIER
NUMBER
6-16-2025

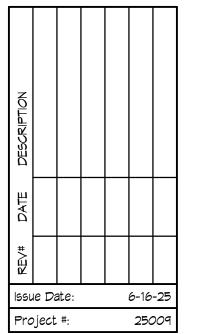
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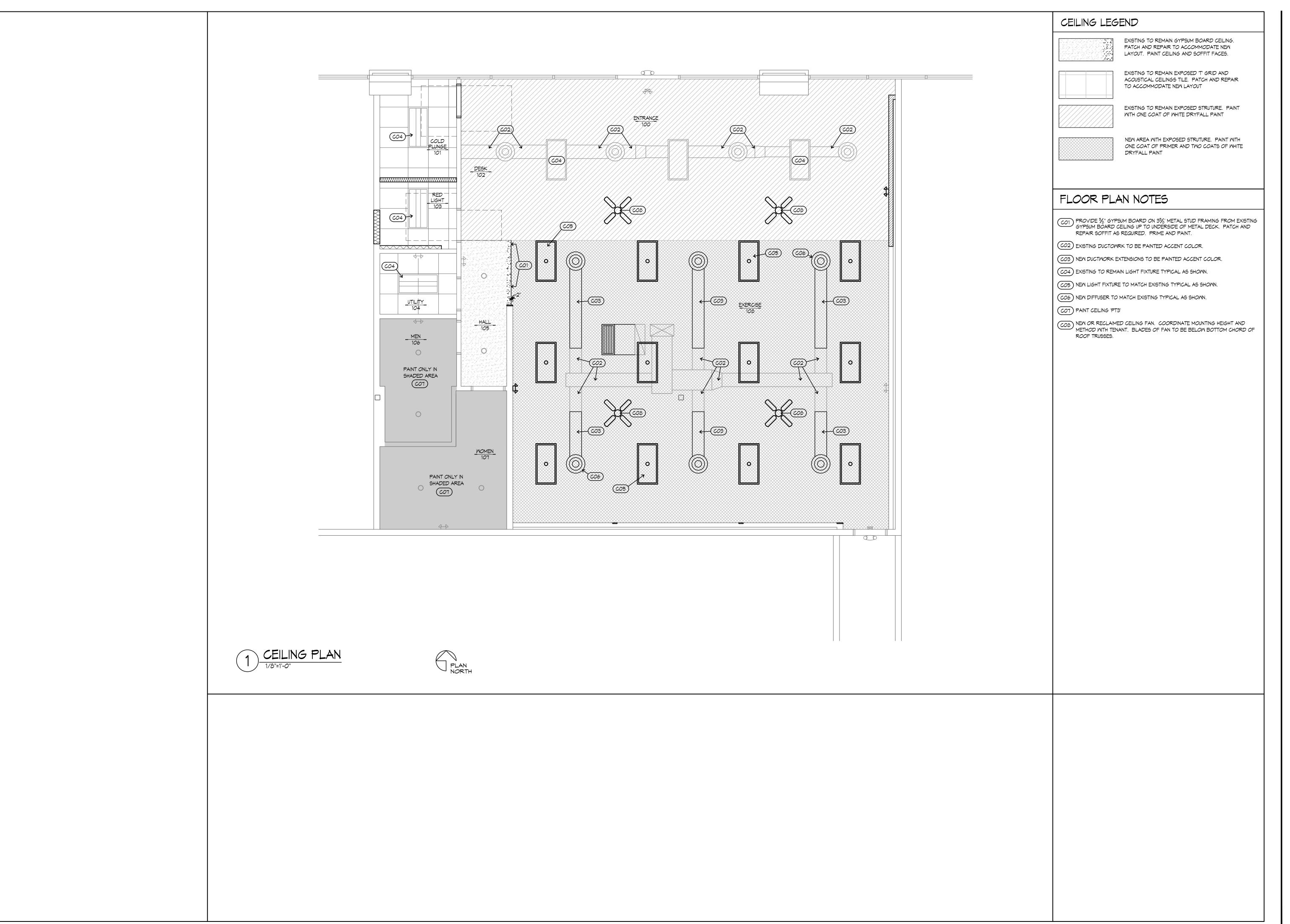


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Development Services Departure Summit, Missouri 06/25/2025

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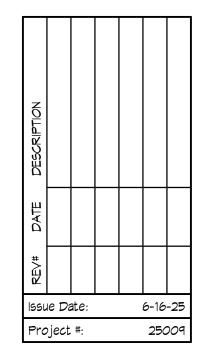
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GRONBERG ARCHITECTS, P.C.



A4

A. PROVIDE ALL LABOR, MATERIALS, EQUIPMENT, NECESSARY FOR THE COMPLETE INSTALLATION OF THE

PLUMBING AND MECHANICAL SYSTEMS OUTLINED B. OBTAIN ALL PERMITS, FEES, LICENSES, INSPECTIONS, AND CERTIFICATES OF COMPLIANCE OR APPROVAL AS REQUIRED BY THE AUTHORITIES.

C. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH ALL APPLICABLE LAWS, CODES AND REGULATIONS OF THE GOVERNMENTAL BODIES HAVING JURISDICTION OVER THE SITE.

D. ALL TESTING REQUIRED BY AUTHORITIES SHALL BE CONSIDERED PART OF THIS WORK E. DURING CONSTRUCTION, ALL FIXTURES, EQUIPMENT, PIPE, DUCT, ETC, SHALL BE COVERED, PLUGGED. OR CAPPED AS REQUIRED TO KEEP CLEAN AND UNDAMAGED. ALL DAMAGED ITEMS SHALL BE RESTORED TO ORIGINAL CONDITION OR REPLACED. ALL PROTECTIVE COVERING SHALL BE REMOVED BEFORE FINAL

ACCEPTANCE. F. PROVIDE ALL NECESSARY CUTTING AND PATCHING OF WALLS, FLOORS, CEILINGS, AND ROOFS AS NECESSARY. PATCH AROUND ALL OPENINGS SHALL MATCH ADJACENT AREA. COORDINATE ALL ROOFING WORK WITH OWNER OR RESPONSIBLE PARTY, SO THAT THE EXISTING ROOFING WARRANTY WILL BE

G. CONTRACTOR SHALL GUARANTEE ALL WORK AND MATERIALS AGAINST DEFECTS FOR A PERIOD OF ONE YEAR FROM FINAL ACCEPTANCE. 2. OPERATION AND MAINTENANCE MANUALS:

A. DURING THE COURSE OF CONSTRUCTION, COLLECT AND COMPILE OPERATING INSTRUCTIONS, WIRING DIAGRAMS, CATALOG CUTS, LUBRICATION AND PREVENTIVE MAINTENANCE INSTRUCTIONS, PARTS LISTS.

ETC. FOR ALL EQUIPMENT FURNISHED UNDER THIS CONTRACT. B. ALL LITERATURE AND INSTRUCTIONS SHIPPED WITH THE EQUIPMENT SHALL BE SAVED FOR INCLUSION

IN THE OPERATION AND MAINTENANCE MANUALS C. ALL LITERATURE LISTED ABOVE AND ALL PAPERS LISTING WARRANTIES, ETC. SHALL BE BOUND IN A 3-RING BINDER AND LABELED WITH THE PROJECT NAME, ADDRESS, ARCHITECT, ENGINEER,

3. MANUFACTURERS:

A. MANUFACTURERS, MODEL NUMBERS, ETC. INDICATED OR SCHEDULED ON THE DRAWINGS SHALL BE INTERPRETED AS HAVING ESTABLISHED A STANDARD OF QUALITY AND SHALL NOT BE CONSTRUED AS LIMITING COMPETITION. ARTICLES, FIXTURES, ETC. OF EQUAL QUALITY BY MANUFACTURERS SHALL BE ACCEPTABLE, SUBJECT TO STRUCTURAL AND ELECTRICAL CONSTRAINTS OF THE PROJECT DESIGN,

4. MOTORS:

A. PROVIDE THERMAL OVERLOAD PROTECTION FOR EACH MOTOR PROVIDED BY THIS WORK.

5. TESTING, BALANCING, AND CLEANING: A. ALL PIPING SHALL BE TESTED FOR LEAKS BEFORE BEING CONCEALED IN WALL CONSTRUCTION OR

COVERED WITH INSULATION. B. SEWER AND VENT PIPING SHALL BE HYDROSTATICALLY TESTED WITH NO LESS THAN 10 FEET OF HEAD FOR A PERIOD OF NOT LESS THAN 15 MINUTES, PER THE LOCAL PLUMBING CODE, WITH NO LEAKS.

C. DOMESTIC WATER PIPING SHALL BE HYDROSTATICALLY TESTED AT A PRESSURE OF NOT LESS THAN 1-1/2 TIMES THE OPERATING PRESSURE, BUT NOT LESS THAN 60 PSI, FOR A PERIOD OF NOT LESS THAN 2 HOURS, WITH NO LEAKS.

D. DUCTWORK AND PIPING SHALL BE BALANCED BY QUALIFIED INDEPENDENT BALANCING PERSONNEL WHO HAVE PREVIOUS EXPERIENCE WITH BALANCING PROCEDURES AND ARE CERTIFIED BY THE ASSOCIATED AIR BALANCE COUNCIL (AABC) OR NATIONAL ENVIRONMENTAL BALANCING BUREAU (NEBB). BALANCING SHALL INCLUDE THE BALANCING OF THE EQUIPMENT AND AIR DISTRIBUTION SYSTEMS
 TO PROVIDE DESIGN QUANTITIES INDICATED AND VERIFICATION OF PERFORMANCE OF ALL

2) WITH IN 30 DAYS OF THE COMPLETION OF THE TESTING AND BALANCING WORK, SUBMIT THE TEST AND BALANCING REPORT BEARING THE SIGNATURE OF THE TEST AND BALANCE ENGINEER. THE REPORTS SHALL BE CERTIFIED PROOF THAT THE SYSTEMS HAVE BEEN TESTED, ADJUSTED, AND BALANCED IN ACCORDANCE WITH THE REFERENCED STANDARDS; ARE AN ACCURATE REPRESENTATION OF HOW THE SYSTEMS HAVE BEEN INSTALLED AND ARE OPERATING. REPORTS SHALL BE BOUND IN

A VINYL BINDER AND THE BINDER LABELED OR MAY BE AN ELECTRONIC PDF SUBMITTAL. E. BEFORE DOMESTIC WATER PIPING IS PLACED IN SERVICE, ALL DOMESTIC WATER DISTRIBUTION SYSTEMS, INCLUDING THOSE FOR COLD WATER AND HOT WATER SYSTEMS, SHALL BE FLUSHED, STERILIZED AND CHLORINATED IN ACCORDANCE WITH HEALTH DEPARTMENT REGULATIONS. THE SYSTEMS SHALL BE THOROUGHLY FLUSHED OF ALL DIRT AND FOREIGN MATTER, THEN FILLED WITH WATER TREATED WITH 50 PPM OF CHLORINE. DURING THE FILLING PROCESS. VALVES AND FAUCETS SHALL BE OPENED SEVERAL TIMES TO ASSURE TREATMENT OF THE ENTIRE SYSTEM. THE TREATED WATER SHALL BE LEFT. IN THE SYSTEM FOR 24 HOURS AFTER WHICH TIME THE SYSTEM SHALL BE FLUSHED; IF THE RESIDUAL CHLORINE IS NOT LESS THAN 10 PPM, THE FLUSHING SHALL BE REPEATED. AFTER STERILIZATION, SAMPLES OF WATER IN THE SYSTEM SHALL BE APPROVED BY THE BOARD OF HEALTH.

6. PLUMBING:

A. PROVIDE AN APPROVED WATER HAMMER ARRESTOR FOR EACH PLUMBING FIXTURE SUPPLY AS REQUIRED BY FIXTURE MANUFACTURER.

B. ALL EXPOSED WASTE PIPE SHALL BE CHROME PLATED BRASS PIPE, NO FERROUS PIPE. C. PROVIDE CLEANOUTS AT EACH CHANGE OF DIRECTION AND AT 100 FOOT INTERVALS IN STRAIGHT RUNS.

D. PROVIDE ACCESS PANELS FOR ALL CONCEALED VALVES AND TRAPS. E. CLEANOUTS: 1) VINYL TILE FLOOR: JR SMITH #4140, OR EQUAL.

2) QUARRY TILE FLOOR: JR SMITH #4200, OR EQUAL. 3) CARPETED ELOOR: JR SMITH #4020-Y, OR FOLIAL 4) UNFINISHED FLOOR: JR SMITH #4020, OR EQUAL 5) WALL: JR SMITH #4472, OR EQUAL, 24" ABOVE THE FLOOR.

PROVIDE DIFFECTRIC LINIONS WITH APPROPRIATE FND CONNECTIONS TO MATCH THE PIPE SYSTEM IN WHICH INSTALLED (SCREWED, SOLDERED, OR FLANGED). PROVIDE DIELECTRIC UNIONS ON ALL PIPING CONNECTIONS TO HOT WATER HEATERS AND EXPANSION TANKS.

G. ALL SEWER PIPING LOCATED INSIDE THE BUILDING SHALL BE INSTALLED WITH THE FOLLOWING SLOPES. 1) INSTALL 2-1/2" AND SMALLER PIPE AT 1/4" PER FOOT FALL. 2) INSTALL 3" AND LARGER PIPE AT 1/8" PER FOOT FALL.

A. DOMESTIC COLD AND HOT. 1) TYPE L HARD DRAWN COPPER TUBING, ASTM B-88.

a) WROUGHT COPPER SOLDERED FITTINGS, ASTM B75 ALLOY C12200. ANSI B16.22. MSS SP-104. b) MECHANICAL PRESS COPPER FITTINGS FOR USE IN PLUMBING OR MECHANICAL APPLICATIONS. ASME B16.22, ASME B16.51, or ASME B16.18. MECHANICAL PRESS COPPER FITTINGS SHALL CONFORM TO IAPMO PS-117 OR

2) PEX. HIGH-DENSITY CROSS-LINKED POLYETHYLENE TUBING SHALL BE MANUFACTURED TO THE REQUIREMENTS OF ASTM F876 AND MEET THE STANDARD GRADE HYDROSTATIC PRESSURE RATINGS FROM PLASTIC PIPE INSTITUTE IN ACCORDANCE WITH TR-4/03

a) PEX-A AND PEX-B MEETING ANSI/NSF61 AND ANSI/NSF372 STANDARDS FOR POTABLE WATER SAFETY AND EE STANDARDS AND MUST BE MARKED WITH "PW-G", "NSF-61-G" OR OTHER NSF-APPROVED MARKING. ASTM F2023 FOR USE WITH CHLORINATED WATER.

b) PEX MECHANICAL, CRIMP/INSERT OR EXPANSION FITTINGS INSTALLED IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS. PIPE SIZES GIVEN ON THE DRAWINGS ARE NOMINAL COPPER PIPE SIZE, INCREASE PEX PIPING SIZE TO EQUAL OR EXCEED COPPER PIPE INSIDE DIAMETER FOR SUPPLY MAINS.

a) TO BE INSTALLED ON THE FIXTURE SUPPLY TO EACH PLUMBING FIXTURE. b) TO BE INSTALLED ON THE WATER SUPPLY SIDE TO EACH APPLIANCE OR MECHANICAL EQUIPMENT.

1. GATE VALVE: JOMAR T/S-301G OR EQUAL. LEAD-FREE NSF 61, ANSI B1.20.1. 2. GLOBE VALVE: JOMAR TGG OR EQUAL. 3. BALL VALVE: JOMAR JP100PxP OR EQUAL COMPACT LEAD FREE BRASS BALL VALVE. UL842, CSA 3371-12 & 3371-92, FM, CALIFORNIA CODE AB1953, NSF61 ANNEX G APPROVED. 4. BALL VALVE: JOMAR T-100NE OR EQUAL. UL842, FM, CSA, NSF 61-8, MSS SP-110

B. LEAD CONTENT OF WATER SUPPLY PIPE AND FITTINGS:

1) PIPE AND PIPE FITTINGS, INCLUDING VALVES AND FAUCETS, UTILIZED IN THE WATER SUPPLY SYSTEM SHALL NOT HAVE MORE THAN 8% LEAD CONTENT 2) PIPE, PIPE FITTINGS, JOINTS, VALVES, FAUCETS, AND FIXTURE FITINGS UTILIZED TO SUPPLY WATER FOR DRINKING OR COOKING PURPOSES SHALL COMPLY WITH NSF 372 AND SHALL HAVE A WEIGHTED AVERAGE LEAD CONTENT OF 0.25% OR LESS.

C. SANITARY SEWER AND VENTS.

(UNDERGROUND, INTERIOR TO THE BUILDING) ABS PIPE AND FITTINGS: ABS PIPE AND FITTINGS SHALL COMPLY WITH NSF 14, "PLASTICS PIPING SYSTEMS COMPONENTS AND RELATED MATERIALS," FOR PLASTIC PIPING COMPONENTS. INCLUDE MARKING WITH "NSF-DWV" FOR PLASTIC DRAIN, WASTE, AND VENT PIPING AND "NSF-SEWER" FOR PLASTIC SEWER PIPING. SOLID-WALL ABS PIPE: ASTM D 2661, SCHEDULE 40. ABS SOCKET FITTINGS: ASTM D 2661, MADE TO ASTM D 3311, DRAIN, WASTE, AND VENT PATTERNS. SOLVENT CEMENT: ASTM D

2) PVC PIPE AND FITTINGS: PVC PIPE AND FITTINGS SHALL COMPLY WITH NSF 14. "PLASTICS PIPING SYSTEMS COMPONENTS AND RELATED MATERIALS," FOR PLASTIC PIPING COMPONENTS. INCLUDE MARKING WITH "NSF-DWV" FOR PLASTIC DRAIN, WASTE, AND VENT PIPING AND "NSF-SEWER" FOR PLASTIC SEWER PIPING. SOLID-WALL PVC PIPE: ASTM D 2665, DRAIN, WASTE, AND VENT. PVC SOCKET FITTINGS: ASTM D 2665, MADE TO ASTM D 3311, DRAIN, WASTE, AND VENT PATTERNS AND TO FIT SCHEDULE 40 PIPE. ADHESIVE PRIMER: ASTM F 656. SOLVENT CEMENT: ASTM D 2564.

3) HUBLESS CAST IRON SOIL PIPE AND FITTINGS: HUBLESS CAST IRON PIPE AND FITTINGS SHALL BE MANUFACTURED FROM GRAY CAST IRON AND SHALL CONFORM TO ASTM A 888 AND CISPI STANDARD 301. HUBLESS COUPLINGS SHALL CONFORM TO CISPI STANDARD 310 AND BE CERTIFIED BY NSF® INTERNATIONAL.

4) HUB AND SPIGOT CAST IRON SOIL PIPE AND FITTINGS: HUB AND SPIGOT CAST IRON PIPE AND FITTINGS SHALL BE MANUFACTURED FROM GRAY CAST IRON AND SHALL CONFORM TO ASTM A 74.

D. SANITARY SEWER AND VENTS.

(ABOVE GROUND, INTERIOR TO THE BUILDING).
ABS PIPE AND FITTINGS: ABS PIPE AND FITTINGS SHALL COMPLY WITH NSF 14, "PLASTICS PIPING SYSTEMS COMPONENTS AND RELATED MATERIALS." FOR PLASTIC PIPING COMPONENTS, INCLUDE MARKING WITH "NSF-DWV" FOR PLASTIC DRAIN, WASTE. AND VENT PIPING AND "NSF-SEWER" FOR PLASTIC SEWER PIPING. SOLID-WALL ABS PIPE: ASTM D 2661, SCHEDULE 40. CELLULAR-CORE ABS PIPE: ASTM F 628, SCHEDULE 40.ABS SOCKET FITTINGS: ASTM D 2661, MADE TO ASTM D 3311, DRAIN,

WASTE, AND VENT PATTERNS. SOLVENT CEMENT: ASTM D 2235. PVC PIPE AND FITTINGS: PVC PIPE AND FITTINGS SHALL COMPLY WITH NSF 14, "PLASTICS PIPING SYSTEMS COMPONENTS AND RELATED MATERIALS," FOR PLASTIC PIPING COMPONENTS. INCLUDE MARKING WITH "NSF-DWV" FOR PLASTIC DRAIN, WASTE, AND VENT PIPING AND "NSF-SEWER" FOR PLASTIC SEWER PIPING. SOLID-WALL PVC PIPE: ASTM D 2665. DRAIN. CELLULAR-CORE PVC PIPE: ASTM F 891, SCHEDULE 40, WASTE, AND VENT, PVC SOCKET FITTINGS: ASTM D 2665, MADE TO ASTM D 3311, DRAIN, WASTE, AND VENT PATTERNS AND TO FIT SCHEDULE 40 PIPE, ADHESIVE PRIMER: ASTM F 656, SOLVENT

3) HUBLESS CAST IRON SOIL PIPE AND FITTINGS: HUBLESS CAST IRON PIPE AND FITTINGS SHALL BE MANUFACTURED FROM GRAY CAST IRON AND SHALL CONFORM TO ASTM A 888 AND CISPI STANDARD 301. HUBLESS COUPLINGS SHALL CONFORM TO CISPI STANDARD 310 AND BE CERTIFIED BY NSF® INTERNATIONAL.

4) HUB AND SPIGOT CAST IRON SOIL PIPE AND FITTINGS: HUB AND SPIGOT CAST IRON PIPE AND FITTINGS SHALL BE MANUFACTURED FROM GRAY CAST IRON AND SHALL CONFORM TO ASTM A 74.

## MECHANICAL/PLUMBING SPECIFICATIONS (CONTINUED)

E. ALL PIPE HANGERS AND SUPPORTS SHALL BE STANDARD PRODUCTS OF GRINNELL, FEE AND MASON, OR ELCEN. HANGER SPACING SHALL BE IN ACCORDANCE WITH MSS-SP-69.

F. SLEEVES

1) PROVIDE, SET, AND PROPERLY LOCATE PIPE SLEEVES AS REQUIRED FOR THIS WORK, ALL SLEEVES SHALL BE OF SUFFICIENT SIZE TO PERMIT PIPE MOVEMENT DUE TO EXPANSION AND CONTRACTION

AND TO ACCOMMODATE PIPE INSULATION.

2) INTERIOR PARTITIONS: 16 GAGE GALVANIZED STEEL, PACK BETWEEN PIPE AND SLEEVE WITH FIRE SAFING AND CAULK AT EACH END WITH FIRE RESISTANT SEALANT. 3) ROOF: PROSET OR EQUAL, MANUFACTURED PVC SCHEDULE 40 PIPE SLEEVE WITH WATERPROOF SEAL

COORDINATE WITH ROOFING CONTRACTOR AND FLASH AS REQUIRED TO MAINTAIN ROOF WARRANTY 4) PROTECTION AGAINST CONTACT: METALLIC PIPING, EXCEPT FOR CAST IRON, DUCTILE IRON AND GALVANIZED STEEL SHALL NOT BE PLACED IN DIRECT CONTACT WITH STEEL FRAMING MEMBERS. CONCRETE, OR CINDER WALLS AND FLOORS OR OTHER MASONRY. METALLIC PIPING SHALL NOT BE PLACED IN DIRECT CONTACT WITH CORROSIVE SOIL. SHEATHING USED TO PREVENT DIRECT CONTACT SHALL HAVE A THICKNESS OF GREATER THAN .008: AND THE SHEATHING SHALL BE MADE OF PLASTIC. ANY PIPE THAT PASSES THROUGH A FOUNDATION WALL OR FOOTING SHALL BE PROVIDED WITH A RELIEVING ARCH, OR A PIPE SLEEVE SHALL BE BUILT INTO THE FOUNDATION WALL. THE SLEEVE

5) PLUMBING VENTS: FLASH ROOF VENT INTO ROOFING SYSTEM AS REQUIRED BY THE ROOFING CONTRACTOR TO MAINTAIN EXISTING ROOF WARRANTY. ALL PLUMBING VENT TERMINALS SHALL ERMINATE A MINIMUM OF 12" ABOVE ROOF OR EQUAL TO HEIGHT OF PARAPET. WHICHEVER IS GREATER.

SHALL BE TWO SIZES GREATER THAN THE PIPE PASSING THOUGH THE WALL OR FOOTING.

8. INSULATION AND DUCT LINING:

G. PROVIDE CHROME PLATED ESCUTCHEONS ON ALL PIPE ENTERING FINISHED AREAS.

A. ALL INSULATIONS AND ACCESSORIES SHALL HAVE A FIRE HAZARD CLASSIFICATION WITH A FLAME SPREAD RATING OF NOT OVER 25, A FUEL CONTRIBUTION RATING OF NOT OVER 50, AND A SMOKE DEVELOPED RATING OF NOT OVER 50. IN ACCORDANCE WITH NFPA.

1) THE PIPING INSULATION USED SHALL HAVE A THERMAL CONDUCTIVITY OF 0.27 Btu PER in/hr\*sqft\*F° OR LESS. 2) FIBERGLASS INSULATION WITH FACTORY APPLIED VAPOR BARRIER, ASJ JACKET, FACTORY APPLIED PRESSURE SEALING LONGITUDE LAP JOINT, NO STAPLES, ZESTON PREMOLDED PVC FITTING OVERS. INSTALLATION SHALL BE IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS B) FLEXIBLE CLOSED CELL ELASTOMERIC THERMAL INSULATION, UNSLIT OR PRESLIT WITH PRESSURE

ARMAFLEX OR ARMAFLEX 2000. 4) FOR NON CIRCULATING SYSTEMS, THE FIRST 8 FEET OF INLET AND OUTLET PIPING BETWEEN THE TANK AND THE HEAT TRAP (INCLUDING THE HEAT TRAP) MUST BE INSULATED. 5) FOR CIRCULATING SYSTEMS, ALL HOT WATER PIPING IN THE CIRCULATION LOOP MUST BE INSULATED AS SPECIFIED BELOW.

SENSITIVE ADHESIVE SYSTEM FOR CLOSURE AND VAPOR SEALING, EQUAL TO ARMSTRONG AP

6) INSULATION SCHEDULE: a) DOMESTIC COLD WATER C. DUCTWORK: ACOUSTICAL INSULATION.

RECOMMENDATIONS.

1) DUCT LINING: 2 LB/CF, THICKNESS AS SCHEDULED, AIR STREAM SIDE COATED, INSTALL PER SMACNA STANDARDS.

a) DUCT LINING SCHEDULE:
(1) RECTANGULAR SUPPLY DUCT
1/2": THROUGHOUT THE FIRST 10 FEET OF DUCT. (2) RETURN AIR DUCT 1/2": THROUGHOUT THE FIRST 10 FEET OF DUCT.

D. DUCTWORK: THERMAL INSULATION. 1) DUCT COVERING: 3/4 LB/CF, FIBERGLASS BLANKET WITH FACTORY APPLIED VAPOR BARRIER AND FACING, THICKNESS AS SCHEDULED, INSTALLATION IN ACCORDANCE WITH MANUFACTURERS

a) DUCT COVERING SCHEDULE: MINIMUM R-6 (WHERE LOCATED ABOVE CEILING) (1) ROUND SUPPLY DUCT 2) EXPOSED SPIRAL DUCT - NO INSULATION REQUIRED.

9. DUCTWORK:
A. ALL DUCTWORK, UNLESS OTHERWISE INDICATED, SHALL BE FABRICATED FROM GALVANIZED SHEET STEEL COMPLYING WITH ASTM A 653, LOCKFORMING QUALITY, WITH G 90 ZINC COATING IN ACCORDANCE WITH ASTM A 924: AND MILL PHOSPHATIZED FOR EXPOSED LOCATIONS B. WHERE DUCTWORK IS INDICATED TO BE EXPOSED TO VIEW IN OCCUPIED SPACES. PROVIDE MATERIALS. WHICH ARE FREE FROM VISUAL IMPERFECTIONS INCLUDING PITTING, SEAM MARKS, ROLLER MARKS,

STAINS AND DISCOLORATIONS, AND OTHER IMPERFECTIONS, INCLUDING THOSE WHICH WOULD IMPAIR C. DUCTWORK, METAL GAUGES, REINFORCING, ETC. SHALL BE CONSTRUCTED IN ACCORDANCE WITH SMACNA "HVAC DUCT CONSTRUCTION STANDARDS," LATEST EDITION FOR A 2 INCH WATER GAUGE STATIC 1) RECTANGULAR DUC

a) ELBOWS, UNLESS INDICATED OTHERWISE SHALL BE CONSTRUCTED WITH CENTERLINE RADIUS OF NOT LESS THAN 1.5 DUCT WIDTH OR SQUARE ELBOW WITH DOUBLE WALL STREAMLINE VANES. b) RETURN AIR ACOUSTICAL ELBOWS AND SOUND BOOTS SHALL BE A SQUARE ELBOW WITH NO SLOPES FOR TRANSITIONS OR OTHER CHANGES IN DIMENSIONS SHALL BE MINIMUM 1 TO 3.

2) ROUND AND OVAL SPIRAL SEAM DUCT: a) PROVIDE RADIUS TYPE FITTINGS FABRICATED OF MULTIPLE SECTIONS WITH MAXIMUM 15 DEGREE CHANGE OF DIRECTION PER SECTION. UNLESS SPECIFICALLY DETAILED OTHERWIS USE 45 DEGREE LATERALS FOR BRANCH TAKEOFF CONNECTIONS. WHERE 90 DEGREE BRANCHES ARE INDICATED PROVIDE CONICAL TYPE TEES.

b) SLOPES FOR TRANSITIONS OR OTHER CHANGES IN DIMENSIONS SHALL BE MINIMUM 1 TO 3. c) AS AN OPTION, PROVIDE FACTORY-FABRICATED DUCT AND FITTINGS, IN LIEU OF SHOP-(1) ELBOWS: ONE PIECE CONSTRUCTION FOR 90 DEGREES AND 45 DEGREE ELBOW 14" AND SMALLER. PROVIDE MULTIPLE GORE CONSTRUCTION FOR LARGER DIAMETERS WITH

STANDING SEAM CIRCUMFERENTIAL JOINT (2) DIVIDED FLOW FITTINGS: 90 DEGREE TEES, CONSTRUCTED WITH SADDLE TAP SPOT WELDED AND BONDED TO DUCT FITTING BODY. ROUND LONGITUDINAL SEAM DUCT. USE FOR RIGID METAL DUCT ON LEAVING SIDE OF DUCT. IN CONCEALED LOCATIONS FOR EXTENSION TO FLEX FOR DIFFUSERS, UNLESS OTHERWISE

D. DUCT SIZES SHOWN ON THE DRAWINGS ARE SHEETMETAL SIZES, ALLOWANCE FOR DUCT LINER HAS BEEN MADE WHERE APPLICABLE.

F INSTALLATION OF METAL DUCTWORKS 1) GENERAL: ASSEMBLE AND INSTALL DUCTWORK IN ACCORDANCE WITH RECOGNIZED INDUSTRY PRACTICES WHICH WILL ACHIEVE AIR-TIGHT SYSTEMS (MAXIMUM 5% LEAKAGE), WITH NO OBJECTIONABLE NOISE, AND CAPABLE OF PERFORMING INDICATED SERVICE. INSTALL EACH RUN WITH MINIMUM NUMBER OF JOINTS. ALIGN DUCTWORK ACCURATELY WITH INTERNAL SURFACES. SMOOTH, SUPPORT DUCTS RIGIDLY WITH SUITABLE STRAPS, BRACES, HANGERS AND ANCHORS IN ACCORDANCE WITH SMACNA "HVAC DUCT CONSTRUCTION STANDARDS" LATEST EDITION. DUCT HANGERS SHALL BE OF THE TYPE WHICH WILL HOLD DUCTS TRUE-TO-SHAPE AND TO PREVENT

BUCKLING. SUPPORT VERTICAL DUCTS AT EVERY FLOOR.

2) AUXILIARY STEEL: PROVIDE AUXILIARY STEEL AS REQUIRED TO ADEQUATELY SUPPORT DUCTWORK. 3) ROUTING: LOCATE DUCTWORK RUNS, EXCEPT AS OTHERWISE INDICATED, VERTICALLY AND HORIZONTALLY AND AVOID DIAGONAL RUNS WHEREVER POSSIBLE. LOCATE RUNS AS INDICATED BY DIAGRAMS. DETAILS AND NOTATIONS OR. IF NOT OTHERWISE INDICATED. RUN DUCTWORK IN SHORTEST ROUTE WHICH DOES NOT OBSTRUCT USABLE SPACE OR BLOCK ACCESS FOR SERVICING BUILDING AND ITS EQUIPMENT. HOLD DUCTS CLOSE TO WALLS, OVERHEAD CONSTRUCTION, COLUMNS, AND OTHER STRUCTURAL AND PERMANENT ENCLOSURE ELEMENTS OF BUILDING. WHEREVER POSSIBLE IN FINISHED AND OCCUPIED SPACES, CONCEAL DUCTWORK FROM VIEW, BY LOCATING IN MECHANICAL SHAFTS. HOLLOW WALL CONSTRUCTION OR ABOVE SUSPENDED CEILINGS. DO NOT ENCASE HORIZONTAL RUNS IN SOLID PARTITIONS, EXCEPT AS SPECIFICALLY SHOWN. COORDINATE LAYOUT WITH SUSPENDED CEILING AND LIGHTING LAYOUTS AND SIMILAR FINISHED WORK. 4) DO NOT ROUTE DUCTWORK THROUGH ELECTRICAL EQUIPMENT SPACES AND ENCLOSURES, UNLESS INDICATED OTHERWISE.

5) PENETRATIONS: a) WHERE DUCTS PASS THROUGH INTERIOR PARTITIONS OR EXTERIOR WALLS, AND ARE EXPOSED TO VIEW, CONCEAL SPACE BETWEEN OPENING AND DUCT OR DUCT INSULATION WITH SHEET METAL FLANGES OF SAME GAGE AS DUCT. OVERLAP OPENING ON 4 SIDES BY AT LEAST 1-1/2". FASTEN TO DUCT AND WALL

b) WHERE DUCTS PASS THROUGH FIRE-RATED FLOORS, WALLS, OR PARTITIONS, PROVIDE FIRESTOPPING BETWEEN DUCT AND WALL.

6) COORDINATION: COORDINATE DUCT INSTALLATIONS WITH INSTALLATION OF ACCESSORIES, DAMPERS, COIL FRAMES, EQUIPMENT, CONTROLS, AND OTHER ASSOCIATED WORK OF THE DUCTWORK 7) INSTALLATION: INSTALL METAL DUCTWORK IN ACCORDANCE WITH SMACNA "HVAC DUCT

CONSTRUCTION STANDARDS", LATEST EDITION. F. EQUIPMENT CONNECTIONS: 1) CONNECT METAL DUCTWORK TO EQUIPMENT AS INDICATED, PROVIDE FLEXIBLE CONNECTION FOR EACH DUCTWORK CONNECTION TO EQUIPMENT MOUNTED ON VIBRATION ISOLATORS, AND/OR EQUIPMENT

CONTAINING ROTATING MACHINERY. PROVIDE ACCESS DOORS AS REQUIRED. G. SEAL ALL CONCEALED DUCTWORK JOINTS WITH NON-HARDENING, NON-MIGRATING MASTIC SEALANT, AS RECOMMENDED FOR SEALING SEAMS AND JOINTS IN DUCTWORK. OIL BASE CAULKING AND GLAZING COMPOUNDS SHALL NOT BE ACCEPTABLE. DUCTS SHALL BE SEALED TO THE CLASS LEVEL LISTED BELOW. 1) UNCONDITIONED SPACES CLASS B CLASS A CLASS C CLASS B 2) CONDITIONED SPACES CLASS C CLASS B CLASS C SUPPLY < 2" W.C. SUPPLY > 2" W.C. EXHAUST/DRYER RETURN

10. EXHAUST FANS:

A. CENTRIFUGAL CEILING EXHAUSTERS SHALL BE ELECTRICALLY POWERED CENTRIFUGAL TYPE FAN SUITABLE FOR MOUNTING IN THE CEILING WITH A PERFORATED OFF-WHITE METAL GRILLE WITH A THUMBSCREW ATTACHMENT FOR EASY ACCESS TO FAN HOUSING. UNIT SHALL CONSIST OF A GALVANIZED STEEL HOUSING LINED WITH ACOUSTICAL INSULATION AND SHALL INCLUDE AN INTEGRAL BACKDRAFT DAMPER ON FAN DISCHARGE. MOTOR SHALL BE A PERMANENT SPLIT-CAPACITOR TYPE MOTOR. PERMANENTLY LUBRICATED, WITH THERMAL OVERLOAD PROTECTION. PROVIDE DISCONNECT SWITCH OR OTHER MEANS OF DISCONNECT AT MOTOR IN FAN HOUSING.

## MECHANICAL/PLUMBING SPECIFICATIONS (CONTINUED)

A. ELECTRICAL WIRING AND WIRING CONNECTIONS REQUIRED FOR THE INSTALLATION OF THE TEMPERATURE CONTROL SYSTEM, SHALL BE PROVIDED BY THIS CONTRACTOR, UNLESS SPECIFICALLY SHOWN ON THE ELECTRICAL DRAWINGS OR SPECIFICATIONS. B. INSTALL CONTROL WIRING, WITHOUT SPLICES BETWEEN TERMINAL POINTS, COLOR CODED. INSTALL IN

NEAT WORKMANLIKE MANNER, SECURELY FASTENED. INSTALL IN ACCORDANCE WITH NATIONAL ELECTRICAL CODE AND THE ELECTRICAL SPECIFICATIONS. 1) INSTALL CIRCUITS OVER 25 VOLT WITH COLOR CODED NUMBER 12 WIRE.

2) INSTALL CIRCUITS UNDER 25 VOLT WITH COLOR CODED NUMBER 18 WIRE WITH 0.031 INCH HIGH TEMPERATURE 105 DEGREES F PLASTIC INSULATION ON EACH CONDUCTOR AND PLASTIC SHEATH OVER

3) INSTALL ELECTRONIC CIRCUITS WITH COLOR CODED NUMBER 22 WIRE WITH 0.023 INCH POLYETHYLENE INSULATION ON EACH CONDUCTOR WITH PLASTIC JACKETED COPPER SHIELD OVER 4) INSTALL LOW VOLTAGE CIRCUITS, LOCATED IN CONCRETE SLABS AND MASONRY WALLS, OR EXPOSED

IN OCCUPIED AREAS, IN ELECTRIC CONDUIT 5) ALL WIRING IN AREAS USED AS AIR PLENUMS SHALL BE IN ELECTRIC CONDUIT EXCEPT THAT LOW VOLTAGE WIRING MAY BE TEFLON COATED, ALUMINUM SHEATHED CABLE OR OTHER WIRE SPECIFICALLY APPROVED FOR INSTALLATION IN AIR PLENUMS, WHERE ACCEPTABLE BY LOCAL

6) ALL WIRING IN AREAS NOT USED FOR AIR MOVEMENT SHALL BE IN ELECTRIC METALLIC TUBING EXCEPT LOW VOLTAGE WIRING MAY BE IN APPROVED SIGNAL CABLE WHERE ACCEPTED BY LOCAL

C. THERMOSTATIC CONTROLS TO HAVE A 5°F DEADBAND AND SETPOINT OVERLAP RESTRICTIONS. 1) TEMPERATURE CONTROLS SETBACK TO BE 55°F (HEAT) AND 85° (COOL), 2-HOUR OCCUPANT OVERRIDE, 10-HOUR BACKUP

12. REMODELING WORK: A. DEMOLITION: DISCONNECT, DEMOLISH, AND REMOVE ABANDONED MECHANICAL MATERIALS AND EQUIPMENT INDICATED TO BE REMOVED AND NOT INDICATED TO BE SALVAGED OR REMAIN. B. EQUIPMENT TO BE SALVAGED:

1) DISCONNECT AND REMOVE, EXISTING MECHANICAL EQUIPMENT INDICATED TO BE REMOVED AND SALVAGED. DELIVER EQUIPMENT TO THE LOCATION DESIGNATED BY THE OWNER FOR STORAGE. 2) ALL MATERIALS AND EQUIPMENT DESIGNATED TO BE REUSED OR RELOCATED SHALL BE CAREFULLY REMOVED, AND STORED UNTIL NEEDED FOR REMODELING WORK. ALL ITEMS SHALL BE RESTORED TO "LIKE NEW" CONDITION WITH RUST OR CORROSION REMOVED, SURFACE PAINT TOUCHED UP OR REPAINTED AS REQUIRED TO MATCH NEW CONSTRUCTION, AND THOROUGHLY CLEANED AND INSPECTED. ANY ITEMS WHICH BECOME DAMAGED BEYOND REPAIR AS A RESULT OF CONSTRUCTION OR DEMOLITION

ACTIVITY SHALL BE REPLACED WITH NEW MATERIAL EQUIVALENT IN EVERY RESPECT. C. DISPOSAL AND CLEANUP: REMOVE FROM THE SITE AND LEGALLY DISPOSE OF DEMOLISHED MATERIALS AND EQUIPMENT NOT INDICATED TO BE SALVAGED. D. PROTECT ADJACENT MATERIALS INDICATED TO REMAIN. INSTALL AND MAINTAIN DUST AND NOISE BARRIERS TO KEEP DIRT, DUST, AND NOISE FROM BEING TRANSMITTED TO ADJACENT AREAS. REMOVE

PROTECTION AND BARRIERS AFTER REMODELING OPERATIONS ARE COMPLETE. E. LOCATE, IDENTIFY, AND PROTECT MECHANICAL SERVICES PASSING THROUGH REMODELING AREA AND SERVING OTHER AREAS OUTSIDE THE REMODELING LIMITS. MAINTAIN SERVICES TO AREAS OUTSIDE REMODELING LIMITS. WHERE MECHANICAL SERVICES ARE LOCATED IN A WALL, ETC. TO BE DEMOLISHED. REROUTE PIPING TO NEW OR EXISTING CONSTRUCTION TO MAINTAIN CONTINUITY OF THE SYSTEM. WHEN SERVICES MUST BE INTERRUPTED, INSTALL TEMPORARY SERVICES FOR AFFECTED AREAS. F. REMOVE ALL PIPING TO BE DEMOLISHED BACK TO PIPE MAIN OR EDGE OF PROJECT AREA, AND CAP

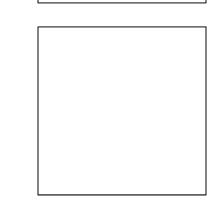
G. PIPING AND DUCTS EMBEDDED IN FLOORS, WALLS, AND CEILINGS MAY REMAIN IF SUCH MATERIALS DO NOT INTERFERE WITH NEW INSTALLATIONS. PIPING AND DUCTS TO REMAIN SHALL BE APPROVED BY THE ARCHITECT. REMOVE MATERIALS ABOVE ACCESSIBLE CEILINGS. DRAIN AND CAP PIPING AND DUCTS ALLOWED TO REMAIN ABOVE CEILING OR BELOW FLOOR, CONCEALED FROM VIEW, EXCEPT AS OTHERWISE NOTED. PATCH FLOOR TO MATCH EXISTING H. PIPE AND DUCT SHALL BE CONCEALED WITH NEW OR EXISTING CONSTRUCTION WHENEVER POSSIBLE,

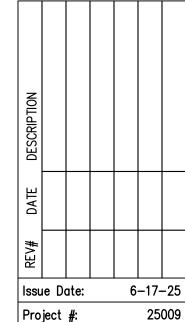
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MECHANICAL/PLUMBING SPECIFICATIONS

BC PROJECT #: 25468 FO/FS

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# MECHANICAL SYMBOLS

$\bowtie$	NEW SUPPLY DIFFUSER
	NEW RETURN AIR GRILLE
	EXHAUST GRILLE/FAN
<b>S</b>	REMOTE TEMPERATURE SENSOR
$\bigcirc$	THERMOSTAT, MOUNTED AT 48" AFF
$\oplus$	HUMIDISTAT, MOUNTED AT 48" AFF
<b>©</b>	CO2 SENSOR, MOUNTED AT 48" AFF
D	DUCT-MOUNTED SMOKE DETECTOR
+ +	NEW DUCTWORK
32"x14"	SIZE OF RECTANGULAR DUCT
6"Ø	SIZE OF ROUND DUCT
	FLEXIBLE DUCTWORK
	FLEXIBLE CONNECTION TO FAN
	FLOOR PLAN NOTE DESIGNATION
S.A.	SUPPLY AIR
R.A.	RETURN AIR
EXH.	EXHAUST AIR
	TRANSITION IN DUCT SIZE
	ELBOW WITH TURNING VANES
	MANUAL VOLUME DAMPER
	SUPPLY AIR DUCT UP/DOWN
	RETURN AIR DUCT UP/DOWN
	EXHAUST AIR DUCT UP/DOWN
<b>→</b> UP	CHANGE IN ELEVATION UP (UP) DOWN (DN) IN DIRECTION OF FLOW
RTU-1	SCHEDULED MECHANICAL EQUIPMENT
	EXIST'G DUCT TO REMAIN
	EXIST'G DUCT TO BE REMOVED
	EXISTING FLEXIBLE DUCTWORK
32"x14"E	SIZE OF EXISTING DUCT

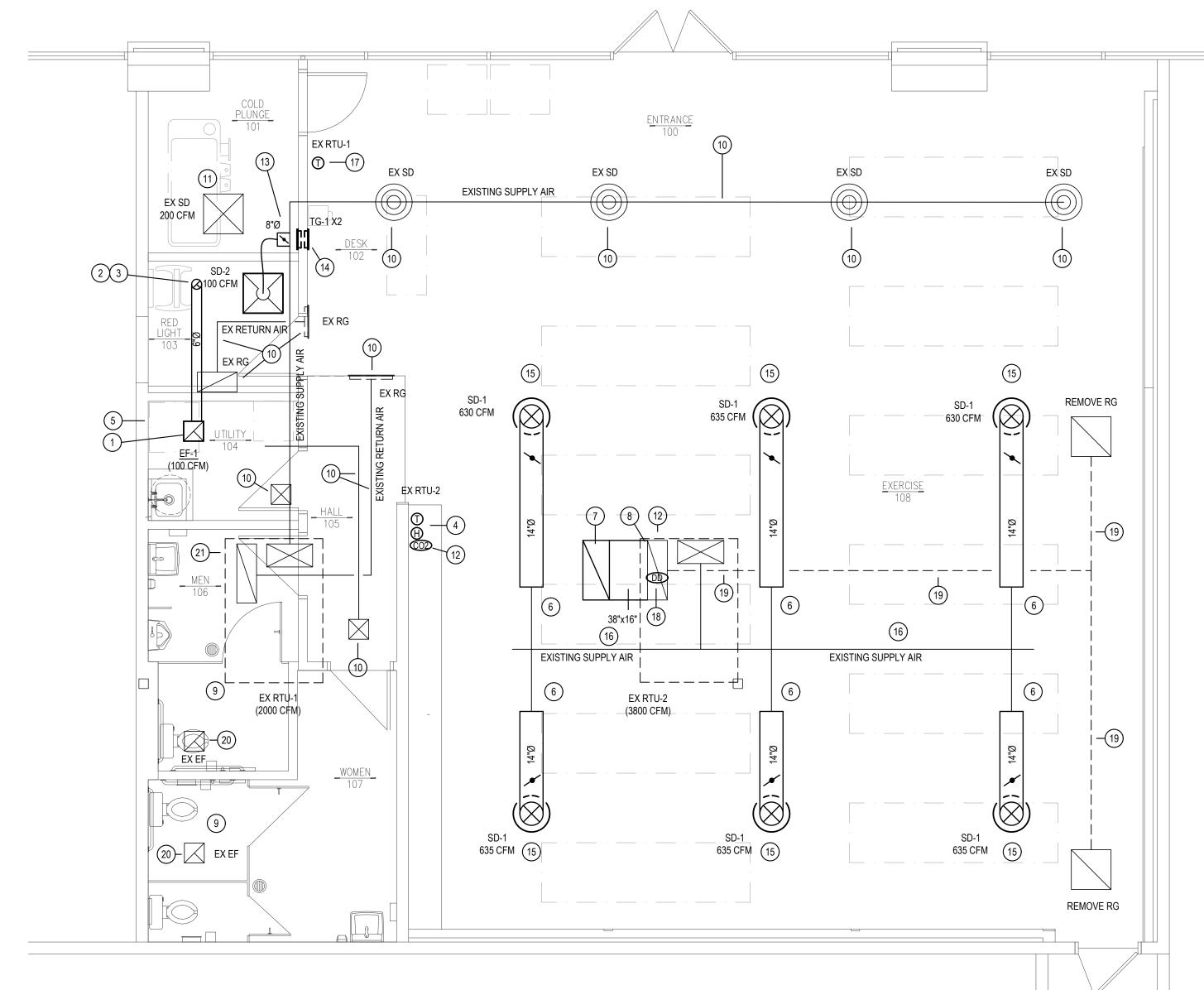
# MECHANICAL GENERAL NOTES:

- COORDINATE ALL WORK WITH OTHER TRADES AND EXISTING CONDITIONS AS REQUIRED TO PROPERLY INSTALL ALL SYSTEMS AS INTENDED, WITHIN THE CONFINES OF THE SPACES AVAILABLE, AND WITHOUT INTERFERENCES.
- 2. THIS CONTRACTOR SHALL PERFORM ALL WORK INDICATED AND/OR AS REQUIRED FOR THE PROPER INSTALLATION AND OPERATION OF THE MECHANICAL SYSTEMS.
- 3. REFER TO ARCHITECTURAL REFLECTED CEILING PLANS FOR EXACT LOCATIONS OF DIFFUSERS.
- 4. INSTALL ALL DUCT, PIPE, ETC. AS HIGH AS POSSIBLE.
- 5. DUCT SIZES SHOWN ARE ACTUAL SHEET METAL SIZES AND INCLUDE AN ALLOWANCE FOR DUCT LINER WHERE APPLICABLE.
- 6. PROVIDE FLEXIBLE CONNECTION BETWEEN DUCTWORK AND ROOFTOP UNITS, EXHAUST FANS, AND OTHER MOTORIZED EQUIPMENT.
- 7. NO DUCT SHALL BE ROUTED OVER THE TOP OF ELECTRICAL PANELS.
- 8. ALL MECHANICAL SYSTEMS SHALL BE BALANCED BY A CERTIFIED BALANCING CONTRACTOR. REFER TO SPECIFICATIONS FOR DETAILS.

	DIFFUSER SCHEDULE								
MARK	MFGR	MODEL	BORDER TYPE	NECK SIZE	FACE SIZE	FINISH	DAMPER	ACCESSORIES	NOTES
SD-1	TITUS	TMR	-	14"Ø		WHITE	-	-	-
SD-2	TITUS	TMS	3	8"Ø	24"x24"	WHITE	-	-	-
TG-1	TITUS	350RL	1	10"x6"	1	WHITE	-	-	-

				EXHAU	ST FAN	I SCHEDUI	_E			
		I I		EXTERNAL		ELECTRICAL				
MARK	MFGR	MODEL	MODEL CFM	CFM STATIC P. IN. WG.	RPM	VOLT/Ø/HZ	PWR	FAN TYPE	CONTROLS	NOTES
EF-1	COOK	GC-146	100	0.1	900	120/1/60	36 W	CEILING EXH.	THERMOSTAT	1

NOTES: 1. PROVIDE CEILING GRILLE, INTEGRAL BACK DRAFT DAMPER, VARI-SPEED CONTROLLER (NEAR FAN AND ABOVE CEILING), FACTORY MEANS OF DISCONNECT AND WEATHER HEAD.



# MECHANICAL PLAN NOTES:

- 1) SUPPORT FAN FROM STRUCTURE AS REQUIRED BY THE MANUFACTURER.
- CUT EXISTING ROOF AND FLASH INTO ROOF AS REQUIRED. ALL ROOFING WORK SHALL BE PERFORMED BY BUILDING OWNER'S ROOFING CONTRACTOR (AT THIS CONTRACTOR'S EXPENSE) TO MAINTAIN EXISTING ROOF WARRANTY. VERIFY APPROVED ROOFING CONTRACTOR WITH BUILDING OWNER PRIOR TO PERFORMING WORK.
- MAINTAIN 10' CLEARANCE FROM ALL OUTDOOR AIR INTAKES.
- RELOCATE EXISTING THERMOSTAT, HUMIDISTAT, AND CO2 SENSOR FOR EX RTU-2 TO NEW LOCATION AS SHOWN. INSTALL AT 48" AFF.
- 5 CONNECT NEW DRYER EXHAUST TO EXISTING 4" DRYER EXHAUST DUCT AS REQUIRED.
- DEMOLISH EXISTING SUPPLY DIFFUSERS FOR EX RTU-2 AND EXTEND EXISTING SUPPLY DUCTWORK AS REQUIRED. FIELD VERIFY EXACT LOCATION PRIOR TO INSTALLATION OF ANY DUCTWORK.
- OPEN END OF RETURN DUCTWORK TURNED UP TO STRUCTURE WITH MINIMUM 12" CLEARANCE TO DECK. PROVIDE AND INSTALL BIRD SCREEN ON OPEN R.A. DUCT.
- 8 CONNECT NEW RETURN DUCTWORK TO EXISTING RTU RETURN DROP WITH FLEX CONNECTORS AS REQUIRED.
- (9) EXISTING RESTROOM TO REMAIN.
- EXISTING DUCTWORK/DIFFUSERS/GRILLES TO REMAIN. CLEAN DIFFUSERS/GRILLES AS REQUIRED FOR REUSE.
- EXISTING DIFFUSER TO REMAIN. REBALANCE TO NEW CFM AS SHOWN ON PLAN. CLEAN AS REQUIRED FOR REUSE.
- VERIFY PROPER EXISTING CONTROLS FOR EX RTU-2 DEMAND CONTROL VENTILATION. OUTDOOR AIR DAMPER TO OPERATE FROM MINIMUM REQUIRED 100

CFM TO 1290 CFM BASED ON OCCUPANT LOAD. REFER TO OA CALCS ON THIS SHEET.

- (13) CONNECT NEW 8" SUPPLY AIR TO EXISTING SUPPLY DUCT AS REQUIRED.
- HIGH/LOW RETURN AIR GRILLES COLD PLUNGE SIDE GRILLE LOCATED AT 12" AFF. CENTRAL AREA SIDE LOCATED AT 8' AFF.
- (15) INSTALL NEW SD-1 TO MATCH INSTALLATION HEIGHT OF EXISTING ROUND SD
- (16) REMOVE EXISTING INSULATION FROM EXISTING RTU-2 DUCTWORK THAT IS NOW

TO BE EXPOSED IN THE EXERCISE ROOM.

- (17) RELOCATE EXISTING THERMOSTAT FOR EX RTU-1 TO NEW LOCATION AS SHOWN.
- INSTALL AT 48" AFF.
- VERIFY EXISTING SMOKE DETECTOR IN RETURN DUCTWORK OF EX RTU-2. PROVIDE AND INSTALL IF NONE FOUND TO BE EXISTING.
- DEMOLISH EXISTING RETURN DUCTWORK AND GRILLES FOR EX RTU-2 AS SHOWN
- AND AS REQUIRED.

  EXISTING 100 CFM EXHAUST FAN TO RUN CONTINUOUSLY VIA TIME CLOCK DURING
- OCCUPIED HOURS. COORDINATE WITH ELECTRICAL.
- REBALANCE OUTDOOR AIR DAMPER FOR EX RTU-1 TO MINIMUM 200 CFM AS REQUIRED. REFER TO OUTDOOR AIR CALCULATIONS ON THIS SHEET.

	MECHANICAL FLOOR PLA	N
NORTH	SCALE: 1/4" = 1'-0"	

				Г		1	1			l	1	_	
UNIT	Area (sqft)	OCCUPANCY CLASSIFICA	Occupant Dens	ity #/1000 sqft	People outdoor airflow rate in breathing zone, (Rp) cfm/person	airflow rate in	Exhaust airflow rate cfm/sqft	Breathing zone outdoor airflow (Vbz)	Zone air distributior effectivene ss (Ez)		)		
	300	Main entry area		)	5	0.06		33	0.8	41			
EX RTU-1	KRTU-1 400 Health rooms 100 Corridors		10		20	0.06		104	0.8	130			
			0		0	0.06		6	0.8	8			
										Total	179		
UNIT	Area (sqf	t) OCCUPANCY CLASSIFICATION	Occupant Density	Occupant Density #/1000 sqft breathing		r airflow rate in zone, (Rp) erson	Area outdoor airflow rate in breathing zone, (Ra) cfm/sqft	Minimum DC breathing zo outdoor airflo (Vbz)	ne breathin	g zone of airflow ef	Zone air distribution fectiveness (Ez)	Maximum DCV Zone outdoor airflow (cfm)	Minimum DCV Zone outdoor airflow (cfm)
EX RTU-2	EX RTU-2 1200 Health club/aerobics room 40			2	0	0.06	72.0	103	2	0.8	1290	100	

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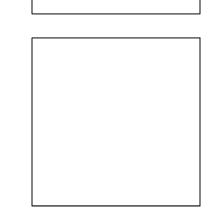
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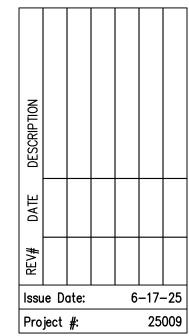
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MECHANICAL FLOOR PLAN

# PLUMBING GENERAL NOTES:

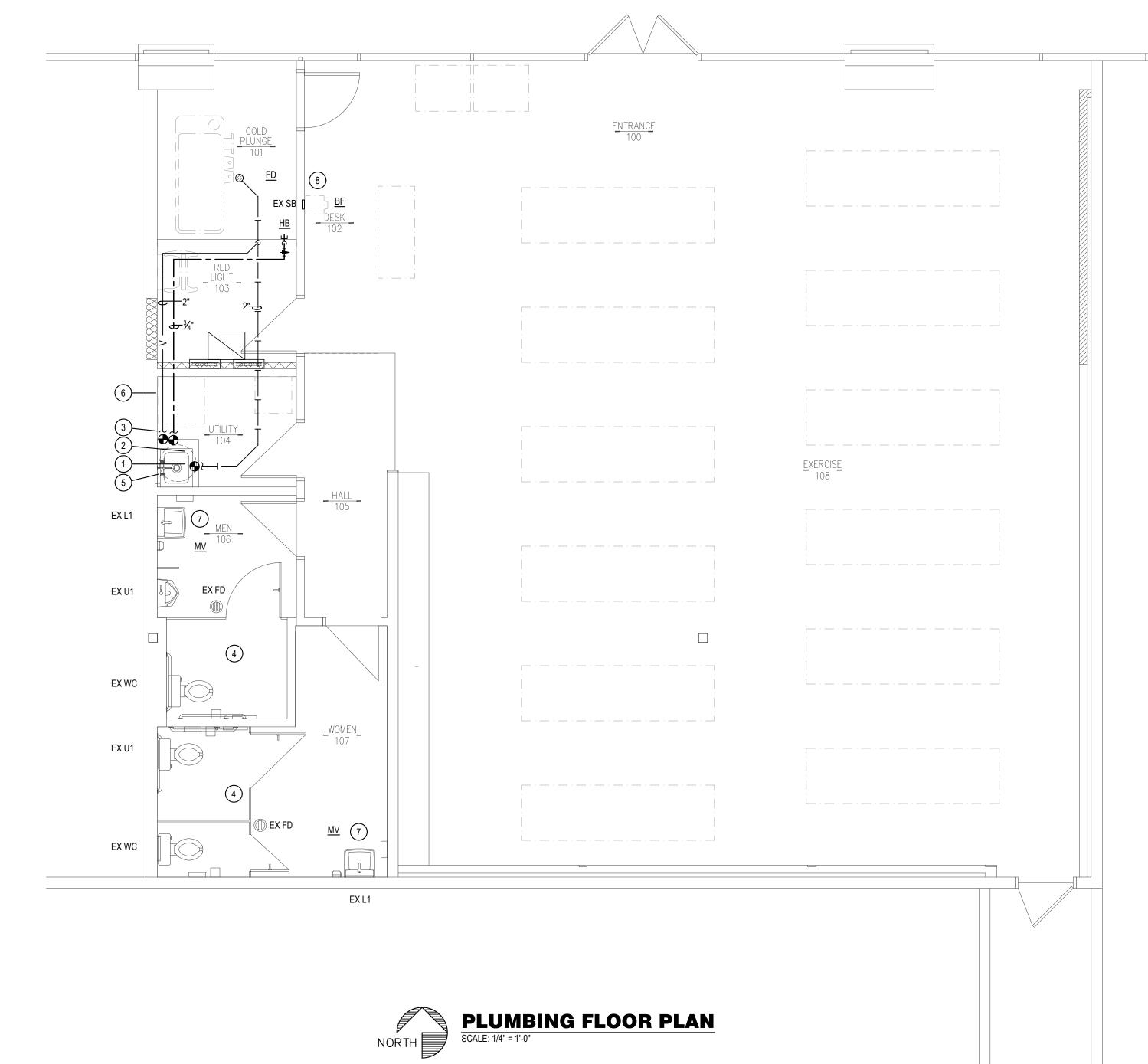
- 1. INSTALL ALL PIPE, ETC. AS HIGH AS POSSIBLE.
- 2. COORDINATE ALL WORK WITH OTHER TRADES AND EXISTING CONDITIONS AS REQUIRED TO PROPERLY INSTALL ALL SYSTEMS AS INTENDED, WITHIN THE CONFINES OF THE SPACES AVAILABLE, AND WITHOUT INTEREFRENCES
- 3. REFER TO ARCHITECTURAL DRAWINGS FOR EXACT LOCATIONS AND MOUNTING HEIGHTS OF FIXTURES.
- 4. REFER TO ARCHITECTURAL & STRUCTURAL DRAWINGS FOR REQUIREMENTS FOR SUPPORTING PIPING, EQUIPMENT, ETC. FROM THE STRUCTURE. PROVIDE ADDITIONAL STEEL AS REQUIRED TO PROPERLY SUPPORT SYSTEMS FROM THE STRUCTURE.
- 5. SAWCUT EXISTING FLOOR AS REQUIRED FOR INSTALLATION OF UNDERFLOOR PIPING. PATCH FLOOR TO MATCH EXISTING.
- 6. NO PIPING SHALL BE ROUTED OVER THE TOP OF ELECTRICAL PANELS.
- 7. CONTRACTOR TO TEST WATER PRESSURE ON SITE AND PROVIDE PRESSURE REDUCING VALVE ON WATER SERVICE IF PRESSURE IS OVER 80 PSI.

# PLUMBING SYMBOLS

———	SOIL AND WASTE PIPING BELOW FLOOR/GRADE
	SOIL AND WASTE PIPING ABOVE FLOOR/GRADE
v	SANITARY VENT PIPING ABOVE GRADE
v	SANITARY VENT PIPING BELOW GRADE
	DOMESTIC COLD WATER PIPING
	DOMESTIC HOT WATER PIPING
<del></del>	PIPING TURNING DOWN
<del></del>	PIPING TURNING UP
<del></del>	TEE TOP CONNECTION
——  <b>—</b> —	UNION
<b>−</b> ×∞∞×−	BACKFLOW PREVENTER
	BACKFLOW PREVENTER FLOOR DRAIN
. ,-,	
FD ⊘	FLOOR DRAIN
FD ⊘ FCO □	FLOOR DRAIN FLOOR CLEAN OUT
FD ⊘ FCO ○ WCO ⊩	FLOOR DRAIN FLOOR CLEAN OUT WALL CLEAN OUT
FD ⊘ FCO ○ WCO ⊩	FLOOR DRAIN FLOOR CLEAN OUT WALL CLEAN OUT GRADE CLEAN OUT
FD ⊘ FCO ○ WCO ⊩	FLOOR DRAIN FLOOR CLEAN OUT WALL CLEAN OUT GRADE CLEAN OUT VALVE
FD ⊘ FCO ○ WCO ⊩	FLOOR DRAIN FLOOR CLEAN OUT WALL CLEAN OUT GRADE CLEAN OUT VALVE BALANCING VALVE
FD ⊘ FCO ○ WCO ⊩	FLOOR DRAIN FLOOR CLEAN OUT WALL CLEAN OUT GRADE CLEAN OUT VALVE BALANCING VALVE SOLENOID VALVE

CONNECT TO EXISTING

PIPE HANG	SER SCHEDUL	_E
PIPE MATERIAL	MAXIMUM HANGER SPACING	HANGER ROD DIAMETER
ABS (All sizes)	4'	3/8"
PVC (All Sizes)	4'	3/8"
CPVC, 1 inch and smaller	3'	1/2"
CPVC, 1-1/4 inches and larger	4'	1/2"
Cast Iron (All Sizes)	5'	5/8"
Cast Iron (All Sizes) with 10 foot length of pipe	10'	5/8"
Copper Tube, 1-1/4 inches and smaller	6'	1/2"
Copper Tube, 1-1/2 inches and larger	10'	1/2"
Steel, 3 inches and smaller	12'	1/2"
Steel, 4 inches and larger	12'	5/8"
Pex, 1" and below without support channel	32"	3/8"
Pex, 1-1/4" and above without support channel	48"	3/8"
Pex ¾" and below with support channel	6'	3/8"
Pex 1" and above with support channel	8'	3/8"



# PEX PIPING REQUIREMENTS

PIPE SIZES GIVEN ON THE DRAWINGS ARE NOMINAL COPPER PIPE SIZE. IF PEX PIPING IS USED, INCREASE PEX PIPING ONE SIZE ABOVE LISTED SIZES AS REQUIRED TO EQUAL OR EXCEED COPPER PIPE INSIDE DIAMETER.

PLUMBING FIXTURE BRANCH PIPING SCHEDULE						
FIXTURE	WASTE	VENT	CW	HW		
FLOOR DRAIN	2"	2"				
HOSE BIBB	-	-	3/4"	-		

# FIRE PROTECTION NOTES:

- 1. THE EXISTING SPACE IS PROTECTED WITH AN EXISTING WET PIPE SPRINKLER SYSTEM. RELOCATE AND PROVIDE ADDITIONAL SPRINKLER HEADS AND PIPING AS REQUIRED FOR THE NEW CONSTRUCTION. SPRINKLER HEADS IN FINISHED CEILINGS SHALL BE SEMI-RECESSED PENDENT TYPE (VERIFY FINISH). SPRINKLER HEADS IN ROOMS WITHOUT CEILINGS SHALL BE UPRIGHT BRASS TYPE HEADS.
- 2. SPRINKLER WORK SHALL BE PERFORMED BY A LICENSED SPRINKLER CONTRACTOR PRE-APPROVED BY THE OWNER/LANDLORD.
- 3. REFER TO THE ARCHITECTURAL DRAWINGS FOR NEW WALL CONSTRUCTION.
- 4. SPRINKLER PIPING SHALL MATCH EXISTING AND COMPLY WITH NFPA 13.
- 5. SPRINKLER SYSTEM (SHOP DRAWINGS) SHALL BE APPROVED BY THE LOCAL FIRE AUTHORITY AND OWNERS/LANDLORD'S INSURANCE CARRIER PRIOR TO START OF WORK.

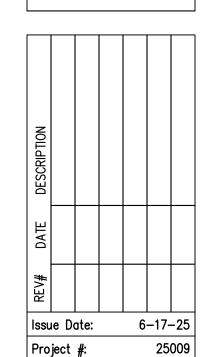
# PLUMBING PLAN NOTES:

- CONNECT WASTE TO EXISTING SANITARY SEWER AS REQUIRED. VERIFY EXACT LOCATION, DIRECTION OF FLOW AND ELEVATION PRIOR TO INSTALLATION OF ANY PIPING
- CONNECT CW TO EXISTING DOMESTIC CW AS REQUIRED. VERIFY EXACT LOCATION PRIOR TO INSTALLATION OF ANY PIPING.
- CONNECT VENT TO EXISTING VENT AS REQUIRED. VERIFY EXACT LOCATION PRIOR TO INSTALLATION OF ANY PIPING.
- 4) EXISTING RESTROOM TO REMAIN.
- EXISTING MOP BASIN/WATER HEATER TO REMAIN. VERIFY IN PROPER WORKING ORDER.
- 6 CONNECT CW, HW, AND WASTE FOR NEW TENANT-PROVIDED WASHING MACHINE TO EXISTING WASHER BOX AS REQUIRED.
- (7) VERIFY IF EXISTING MIXING VALVE IS PRESENT FOR LAVATORY. PROVIDE AND INSTALL MV IF NONE FOUND TO BE EXISTING.
- (8) CONNECT BOTTLE FILLER TO EXISTING CW SUPPLY BOX AND WASTE STUB-OUT IN WALL AS REQUIRED PER MANUFACTURER'S INSTRUCTIONS. VERIFY LOCATION PRIOR TO INSTALLATION.

## PLUMBING FIXTURE SCHEDULE:

- FD FLOOR DRAIN: SIOUX CHIEF, #842, PVC FLOOR DRAIN WITH ADJUSTABLE TOP AND CAST BRASS STRAINER. PROVIDE TRAP SEAL DEVICE.
- HB HOSE BIBB: WOODFORD, #24, 3/4" HOSE NOZZLE OUTLET, BRASS FINISH, TEE KEY OPERATED, INTEGRAL VACUUM BREAKER.
- MIXING VALVE: WATTS, #LFUSG-B, THERMOSTATIC CONTROLLED MIXING VALVE, LEAD FREE BRONZE BODY, LOCKED TEMPERATURE ADJUSTMENT CAP (VANDAL RESISTANT), COPPER ENCAPSULATED THERMOSTAT ASSEMBLY WITH BRASS SHUTTLE, STAINLESSSTEEL SPRINGS, INTEGRAL CHECK VALVES ON HOT AND COLD INLETS. (SET TO 110°F). ASSE 1070 LISTED.
- $\frac{\text{BF}}{\text{PROVIDE P-TRAP, CHROME PLATED RISER.}} \text{BOTTLE FILLER: PROVIDED BY OWNER. INSTALLED BY PLUMBING CONTRACTOR.}$

FITNESS STANDED STORM BLUE PARKWAY, LEE'S



PLUMBING FLOOR PLAN

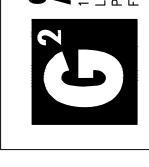
BC PROJECT #: 25468 FO/FS
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RELEASED FOR CONSTRUCTION As Noted on Plans Review

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## **ELECTRICAL SPECIFICATIONS**

- 1. GENERAL PROVISIONS:
- A. PROVIDE ALL LABOR, MATERIALS, EQUIPMENT, NECESSARY FOR THE COMPLETE INSTALLATION OF THE ELECTRICAL SYSTEMS OUTLINED.
- B. OBTAIN ALL PERMITS, FEES, LICENSES, INSPECTIONS, AND CERTIFICATES OF COMPLIANCE OR APPROVAL AS REQUIRED BY THE AUTHORITIES.
- C. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE LATEST APPROVED EDITION OF THE NATIONAL ELECTRIC CODE (NEC), AND ALL APPLICABLE LAWS, CODES AND REGULATIONS OF THE GOVERNMENTAL BODIES HAVING JURISDICTION OVER THE SITE.
- D. ALL TESTING REQUIRED BY AUTHORITIES SHALL BE CONSIDERED PART OF THIS WORK.
- E. DURING CONSTRUCTION, ALL FIXTURES, EQUIPMENT, CONDUIT, ETC. SHALL BE COVERED, PLUGGED, OR CAPPED AS REQUIRED TO KEEP CLEAN AND UNDAMAGED. ALL DAMAGED ITEMS SHALL BE RESTORED TO ORIGINAL CONDITION OR REPLACED. ALL PROTECTIVE COVERING SHALL BE REMOVED BEFORE FINAL
- F. PROVIDE ALL NECESSARY CUTTING AND PATCHING OF WALLS, FLOORS, CEILINGS, AND ROOFS AS NECESSARY. PATCH AROUND ALL OPENINGS SHALL MATCH ADJACENT AREA. COORDINATE ALL ROOFING WORK WITH OWNER OR RESPONSIBLE PARTY, SO THAT THE EXISTING ROOFING WARRANTY
- G. CONTRACTOR SHALL GUARANTEE ALL WORK AND MATERIALS AGAINST DEFECTS FOR A PERIOD OF ONE YEAR FROM FINAL ACCEPTANCE.
- H. CONTRACTOR SHALL PROVIDE ACCESS PANELS WHERE NECESSARY FOR CONCEALED ELECTRICAL
- I. CONTRACTOR SHALL PROMPTLY CALL ENGINEERS ATTENTION TO ANY APPARENT CONTRADICTIONS, AMBIGUITIES, ERRORS, DISCREPANCIES, OR OMISSIONS IN THE PLANS OR SPECIFICATIONS. 2. OPERATION AND MAINTENANCE MANUALS:
- A. DURING THE COURSE OF CONSTRUCTION, COLLECT AND COMPILE OPERATING INSTRUCTIONS, WIRING DIAGRAMS, CATALOG CUTS, LUBRICATION AND PREVENTIVE MAINTENANCE INSTRUCTIONS, PARTS LISTS, ETC. FOR ALL EQUIPMENT FURNISHED UNDER THIS CONTRACT.
- B. ALL LITERATURE AND INSTRUCTIONS SHIPPED WITH THE EQUIPMENT SHALL BE SAVED FOR INCLUSION IN THE OPERATION AND MAINTENANCE MANUALS.
- C. ALL LITERATURE LISTED ABOVE AND ALL PAPERS LISTING WARRANTIES, ETC. SHALL BE COLLATED AND LABELED WITH THE PROJECT NAME, ADDRESS, ARCHITECT, ENGINEER, CONTRACTORS, ETC. DOCUMENTS SHALL BE COMPILED AND BOUND IN DIGITAL FILE OR 3 RING BINDER.

## 3. MANUFACTURERS:

A. MANUFACTURERS, MODEL NUMBERS, ETC. INDICATED OR SCHEDULED ON THE DRAWINGS SHALL BE INTERPRETED AS HAVING ESTABLISHED A STANDARD OF QUALITY AND SHALL NOT BE CONSTRUED AS LIMITING COMPETITION. ARTICLES, FIXTURES, ETC. OF EQUAL QUALITY BY MANUFACTURERS SHALL BE ACCEPTABLE, SUBJECT TO STRUCTURAL AND ELECTRICAL CONSTRAINTS OF THE PROJECT DESIGN, UNLESS NOTED OTHERWISE

# 4. TESTING, AND BALANCING:

- A. ALL CIRCUITS SHALL BE TESTED FOR CONTINUITY, SHORTS, AND GROUNDS BEFORE CONNECTING TO THE PROPER PHASE AS DESIGNED TO BALANCE THE LOADING BETWEEN PHASES
- B. POWER AND LIGHTING PANELS SHALL BE PROPERLY PHASED TO DISTRIBUTE THE LOAD AND SHALL BE CONNECTED AND ADJUSTED TO OPERATE AS SPECIFIED.
- C. ALL MOTORS AND SIMILAR EQUIPMENT SHALL BE CHECKED FOR PROPER PHASE ROTATION AND OPERATION. 5. RACEWAYS:
- A. CONDUIT INSIDE THE BUILDING SHALL BE METALLIC TUBING (EMT), BEARING THE UL LABEL, WITH COMPRESSION TYPE FITTINGS OR SCREW SET FITTINGS.
- B. CONDUIT EXPOSED TO THE WEATHER, INSTALLED UNDERGROUND, IN CONCRETE, OR USED FOR SERVICE ENTRANCE SHALL BE STANDARD RIGID CONDUIT (GALVANIZED) WITH THREADED FITTINGS
- C. UNDERGROUND CONDUIT MAY BE POLYVINYL CHLORIDE WITH A DEFLECTION TEMPERATURE, UNDER LOAD AT 264 PSI, OF 78 DEGREES C, AND A TENSILE STRENGTH OF 5,200 PSI. JOINTS SHALL BE FLUSH SOLVENT WELDED IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS. CONDUIT SHALL BE EQUAL TO CARLON POWER AND COMMUNICATIONS DUCT TYPE DB (DIRECT BURIAL). CONDUIT AND FITTINGS SHALL BE PRODUCED BY THE SAME MANUFACTURER.
- D. FLEXIBLE METAL CONDUIT SHALL ONLY BE USED FOR CONNECTIONS TO MOTORS, TRANSFORMERS, AND LIGHT FIXTURES. MAXIMUM LENGTH SHALL BE 6'-0".

LOCATIONS), SOLID CONDUCTOR, UNLESS OTHERWISE INDICATED.

- A. WIRES SHALL BE CONTINUOUS WITHOUT SPLICES OR TAPS IN CONDUIT RUNS. ALL SPLICES SHALL BE MADE IN JUNCTION, PULL, OR OUTLET BOXES. ALL WIRE SHALL BE INSTALLED IN CONDUIT,
- WIREWAYS, OR OTHER PROTECTIVE COVER SANCTIONED BY CODES B. CONDUCTORS FOR LIGHTING AND POWER SHALL BE COPPER, MINIMUM NO. 12 A.W.G., 600 VOLT.
- C. NO. 10 GAUGE AND SMALLER CONDUCTORS SHALL BE TYPE THWN (WET LOCATIONS) OR THHN (DRY
- LOCATIONS), STRANDED, UNLESS OTHERWISE INDICATED.
- E. SERVICE ENTRANCE AND PANEL FEEDER CONDUCTORS, NO. 3 GAUGE AND LARGER SHALL BE TYPE XHHW-2 (WET LOCATIONS) OR THHN (DRY LOCATIONS), STRANDED COPPER, UNLESS OTHERWISE INDICATED F. ALUMINUM SERVICE WIRE MAY BE USED FOR SERVICE ENTRANCE CONDUCTORS AND/OR PANEL FEEDERS
- G. ALUMINUM CONDUCTORS SHALL BE TYPE 'XHHW-2', ALCAN, "STABILOY" TYPE ALLOY CONDUCTORS UTILIZING "AA-8030" ALUMINUM ALLOY, CONDUCTORS SHALL BE UL LISTED.

ONLY. ALL OTHER WIRING SHALL BE COPPER CONDUCTORS AS HEREINBEFORE SPECIFIED.

- H. ALL ALUMINUM CONDUCTORS SHALL BE TERMINATED IN CONNECTIONS OR LUGS WHICH ARE DUAL RATED (AL7CU OR AL9CU) AND ARE LISTED BY UL FOR USE WITH ALUMINUM OR COPPER CONDUCTORS AND SHALL BE SIZED TO ACCEPT ALUMINUM CONDUCTORS OF THE AMPACITY SPECIFIED.
- I. WHEN MULTIPLE VOLTAGE SYSTEMS ARE PRESENT IN A BUILDING THE FOLLOWING COLOR CODING SHALL BE FOLLOWED FOR FEEDERS AND BRANCH CIRCUITS PER NEC 210.5(C)(1) & 215.12(C)
- a) FOR 120, 208 OR 240V SYSTEMS. PHASE A - BLACK WIRE PHASE B – RED WIRE PHASE 3 – BLUE WIRE
- NEUTRAL WHITE WIR GROUND – GREEN, GREEN WITH A YELLOW STRIPE, OR BARE WIRE.
- b) FOR 277 OR 480V SYSTEMS. PHASE A – BROWN WIRE PHASE B - ORANGE WIRE PHASE 3 - YELLOW WIRE
- NEUTRAL GRAY WIRE GROUND – GREEN, GREEN WITH A YELLOW STRIPE, OR BARE WIRE.

# 7. MC CABLE:

- A. MC CABLE SHALL CONSIST OF INTERLOCK ARMORED CABLE MADE OF THREE OR FOUR TYPE THHN SOLID (#8 AWG AND LARGER MAY BE STRANDED) COPPER CONDUCTORS RATED 90°C FOR DRY LOCATIONS, WITH NYLON OR EQUIVALENT UL LISTED JACKET, PER UL STANDARD 83 THE THREE CONDUCTORS SHALL BE TWISTED TOGETHER WITH THE COPPER GROUNDING CONDUCTOR, SUITABLE FILLERS, AND WRAPPED IN BINDER TAPE. THE ASSEMBLY SHALL BE ARMORED WITH SPIRALLY WRAPPED INTERLOCKED ARMOR OF ALUMINUM OR GALVANIZED
- B. CABLES SHALL BE TESTED IN ACCORDANCE WITH UL STANDARD 1569 FOR TYPE MC CABLE AND RATED AT 600 VOLTS, 90 DEG. C FOR DRY LOCATIONS AND 75 DEG. C FOR WET LOCATIONS. 8. WIRING DEVICES:
- A. WALL SWITCHES SHALL BE SPECIFICATION GRADE, QUIET TYPE, FLUSH TOGGLE SWITCH, RATED FOR 20 AMPS, WITH THERMOPLASTIC COVER PLATES.
- 1) SINGLE POLE: HUBBELL #CS1221-X, OR EQUAL.
- 2) THREE WAY: HUBBELL #CS1223-X, OR EQUAL.
- B. RECEPTACLES SHALL BE SPECIFICATION GRADE, DUPLEX, GROUNDING, THREE-WIRE TYPE, RATED FOR 20 AMPS, WITH THERMOPLASTIC COVER PLATES. HUBBELL #CR5352-X, OR EQUAL
- C. GROUND FAULT INTERRUPTER RECEPTACLES (GFI) SHALL BE HUBBELL #GF20-XL. DEVICE COVER
- D. ISOLATED GROUND RECEPTACLES (IG) SHALL BE HUBBELL #CR5352IG, ORANGE COLOR. DEVICE COVER PLATES SHALL BE AS HEREINBEFORE SPECIFIED.
- E. RECEPTACLES OUTSIDE BUILDING AND WHERE NOTED AS WEATHERPROOF, SHALL BE LISTED 'WEATHER-RESISTANT' HUBBEL #GFTR20-X OR EQUAL AND SHALL BE INSTALLED IN A WEATHERPROOF ENCLOSURE WHICH SHALL BE INTERMATIC #WP1010MXD OR #WP1010HMXD DIECAST METAL WEATHERPROOF RECEPTACLE COVER. COVER SHALL BE WEATHER PROOF RATED WHILE IN USE.
- F. VERIFY DEVICES AND DEVICE COVERPLATES COLOR AND STYLE WITH ARCHITECT.

# 9. BOXES:

- A. HOT DIPPED GALVANIZED STEEL BOXES. PROVIDE TYPE TO SUIT CONDITIONS FOR INSTALLATION.
- B. ALL BOXES SHALL BE FLUSH MOUNTED, UNLESS INDICATED OTHERWISE

# ELECTRICAL SPECIFICATIONS (CONTINUED)

- A. PANELBOARDS ARE EXISTING AND SHALL BE REUSED. PROVIDE ADDITIONAL BREAKERS AS REQUIRED TO CONNECT CIRCUITS AS SHOWN ON THE DRAWINGS. ADDITIONAL BREAKERS SHALL BE THERMAL MAGNETIC, QUICK-BREAK BOLT ON CIRCUIT BREAKERS WITH ONE HANDLE FOR SINGLE OR MULTI-POLE RATINGS AND
- B. COMPLETE EXISTING DIRECTORY AS REQUIRED TO IDENTIFY NEW CIRCUIT, LISTING LOAD SERVED AND

#### 11. DISCONNECTS:

A. DISCONNECTS SHALL BE EXTERNALLY OPERATED, QUICK-MAKE, QUICK-BREAK, SAFETY, WITH PROVISIONS FOR PAD LOCKING. FUSED AND NON-FUSED DISCONNECT SWITCHES SHALL BE PROVIDED AS INDICATED. B. INDOOR SWITCHES SHALL BE NEMA I AND OUTDOOR SWITCHES SHALL BE NEMA 3R, UNLESS INDICATED OTHERWISE.

A. FUSES PROTECTING CIRCUIT BREAKER PANELS SHALL BE CURRENT LIMITING U.L. CLASS RK-1 FUSES WITH 200,000 AMPERES RMS SYM INTERRUPTING CAPACITY. FUSING ELEMENTS SHALL BE SILVER FOR

#### B. ALL OTHER FUSES SHALL BE U.L. CLASS RK-5, DUAL-FLEMENT WITH A MINIMUM TIME-DELAY OF 10 SECONDS AT 500% RATING. FUSES SHALL HAVE CURRENT-LIMITING SHORT-CIRCUIT LINKS AND 200,000 AMPERES RMS SYM INTERRUPTING CAPACITY. FUSING ELEMENTS SHALL BE COPPER.

- 13. LIGHT FIXTURES: A. WHERE LIGHT FIXTURES ARE MOUNTED IN A LAY-IN CEILING, PROVIDE A MINIMUM OF 2 SUPPORT WIRES ATTACHED DIRECTLY BETWEEN EACH LIGHT FIXTURE AND THE BUILDING STRUCTURE. SUPPORT WIRES SHALL BE A MINIMUM OF 12 GAUGE GALVANIZED STEEL WIRE, SOFT ANNEALED.
- B. FIXTURES ARE REQUIRED AT ALL LIGHTING OUTLETS SHOWN ON THE DRAWINGS. APPROVED LIGHTING FIXTURE WIRE IS REQUIRED IN ALL FIXTURES AND FIXTURE RACEWAYS. WEATHERPROOF WIRING IS REQUIRED FOR EXTERIOR FIXTURES. ALL PARTS OF FIXTURES AND WIRING SHALL BE IN ACCORDANCE

## C. ALL FIXTURES SHALL CARRY UL AND ETL LABELS.

- A. PROVIDE, SET, AND PROPERLY LOCATE PIPE SLEEVES AS REQUIRED FOR THIS WORK.
- B. INTERIOR PARTITIONS: 16 GAGE GALVANIZED STEEL, PACK BETWEEN CONDUIT AND SLEEVE WITH FIRE SAFING AND CAULK AT EACH END WITH FIRE RESISTANT SEALANT.
- C. ROOF: PROSET OR EQUAL, MANUFACTURED PVC SCHEDULE 40 PIPE SLEEVE WITH WEATHERPROOF SEAL. COORDINATE WITH ROOFING CONTRACTOR AND FLASH AS REQUIRED TO MAINTAIN ROOF WARRANTY.
- A. GROUND ALL ELECTRICAL APPARATUS IN ACCORDANCE WITH THE NATIONAL ELECTRIC CODE (NEC) 250, AND ANY LOCAL REQUIREMENTS. INSURE CONTINUOUS BOND WHERE FLEXIBLE CONDUIT IS USED. PROVIDE BONDING JUMPER INSIDE ALL FLEXIBLE CONDUIT.
- B. BOND METAL PIPING SYSTEMS IN COMPLIANCE WITH NEC 250.4(A)(4).

#### 16. REMODELING WORK:

- A. DEMOLITION: DISCONNECT, DEMOLISH AND REMOVE ABANDONED ELECTRICAL MATERIALS AND EQUIPMENT INDICATED TO BE REMOVED AND NOT INDICATED TO BE SALVAGED OR REMAIN.
- B. EQUIPMENT TO BE SALVAGED:
- 1) DISCONNECT AND REMOVE EXISTING ELECTRICAL EQUIPMENT INDICATED TO BE REMOVED AND SALVAGED. DELIVER EQUIPMENT TO THE LOCATION DESIGNATED BY THE OWNER FOR STORAGE.
- 2) ALL MATERIALS AND EQUIPMENT DESIGNATED TO BE REUSED OR RELOCATED SHALL BE CAREFULLY REMOVED, AND STORED UNTIL NEEDED FOR REMODELING WORK. ALL ITEMS SHALL BE RESTORED TO "LIKE NEW" CONDITION WITH RUST OR CORROSION REMOVED, SURFACE PAINT TOUCHED UP OR REPAINTED AS REQUIRED TO MATCH NEW CONSTRUCTION, AND THOROUGHLY CLEANED AND INSPECTED. ANY ITEMS WHICH BECOME DAMAGED BEYOND REPAIR AS A RESULT OF CONSTRUCTION OR DEMOLITION ACTIVITY SHALL BE REPLACED WITH NEW MATERIAL EQUIVALENT IN EVERY RESPECT.
- C. DISPOSAL AND CLEANUP: REMOVE FROM THE SITE AND LEGALLY DISPOSE OF DEMOLISHED MATERIALS AND EQUIPMENT NOT INDICATED TO BE SALVAGED.
- D. PROTECT ADJACENT MATERIALS INDICATED TO REMAIN. INSTALL AND MAINTAIN DUST AND NOISE BARRIERS TO KEEP DIRT, DUST, AND NOISE FROM BEING TRANSMITTED TO ADJACENT AREAS. REMOVE
- PROTECTION AND BARRIERS AFTER REMODELING OPERATIONS ARE COMPLETE. E. PROVIDE ALL ALTERATIONS AND REWORK INDICATED AND/OR REQUIRED FOR THE PROPER INSTALLATION AND OPERATION OF ALL EXISTING ELECTRICAL SYSTEMS. INTEGRATING THE NEW AND EXISTING AREAS. LOCATE, IDENTIFY, AND PROTECT ELECTRICAL SERVICES PASSING THROUGH REMODELING AREA AND SERVING OTHER AREAS OUTSIDE THE REMODELING LIMITS. MAINTAIN SERVICES TO AREAS OUTSIDE REMODELING LIMITS. WHEN SERVICES MUST BE INTERRUPTED, INSTALL TEMPORARY SERVICES FOR
- 1) ABANDONED CONDUIT SHALL HAVE WIRE REMOVED AND SHALL BE CAPPED. ABANDONED OUTLETS IN WALLS OR PARTITIONS SHALL HAVE DEVICES AND WIRE REMOVED, AND SHALL BE COVERED.
- 2) WHERE EXISTING CONDUITS TERMINATE AT AN EXISTING OUTLET IN A WALL, CEILING, OR FLOOR TO BE REMOVED, DISCONNECT AND REMOVE DEVICE AND WIRE FROM CONDUIT. CONDUIT SHALL BE CUT BACK AND CAPPED (BELOW THE FLOOR OR ABOVE THE CEILING) SO NOT TO CREATE AN OBSTRUCTION. PATCH FLOOR TO MATCH EXISTING.
- 3) WHERE EXISTING CIRCUITS EXTEND BEYOND THE OUTLET IN THE EXISTING WALL, CEILING, OR FLOOR TO BE REMOVED, FURNISH AND INSTALL NEW CONDUIT AND WIRE TO EITHER REROUTE THE CIRCUIT OR FEED THE REMAINING OUTLET(S) FROM ANOTHER ELECTRICAL SOURCE, BUT IN SUCH A MANNER AS NOT TO REVISE THE CIRCUIT. ALL REROUTED CONDUIT SHALL BE APPROVED BY THE
- 4) WHERE EXISTING OUTLETS IN A WALL, CEILING, OR FLOOR TO BE REMOVED ARE ESSENTIAL TO MAINTAIN OPERATION OF OTHER REMAINING OUTLETS, RELOCATE THE OUTLET TO A NEW CONVENIENT LOCATION. EXISTING WIRING DEVICES SHALL NOT BE REUSED. UNLESS OTHERWISE INDICATED.
- 5) WHERE LIGHTING FIXTURES ARE INDICATED TO BE DEMOLISHED, REMOVE ALL WIRE AND MODIFY THE EXISTING CONDUIT (IF APPLICABLE) FOR THE NEW LIGHTING. ALL UNUSED CONDUIT SHALL BE
- 6) WHERE A TELEPHONE CIRCUIT EXTENDS BEYOND AN OUTLET IN AN EXISTING WALL, CEILING, OR FLOOR TO BE REMOVED, PROVIDE NECESSARY EMPTY CONDUIT AND NOTIFY THE OWNER WHO WILL REQUEST THE OWNER TO ARRANGE WITH THE TELEPHONE COMPANY FOR NEW WIRING TO OUTLETS THAT
- 7) WHERE EXISTING CONDUIT AND WIRE RUNS ARE LOCATED IN OR ATTACHED TO AN EXISTING WALL. CEILING OR FLOOR TO BE REMOVED, THEY SHALL BE REROUTED IN EITHER NEW OR EXISTING CONSTRUCTION TO MAINTAIN CONTINUITY OF CIRCUITS UNLESS OTHERWISE INDICATED.
- 8) CONDUIT SHALL BE CONCEALED WITHIN THE EXISTING BUILDING CONSTRUCTION WHEREVER POSSIBLE, EXCEPT WHERE OTHERWISE INDICATED.
- 9) EXISTING WIRE SHALL BE DISCONNECTED AND REMOVED WHEREVER EXISTING CIRCUITS ARE

# 17. PENETRATIONS OF FIRE RATED ASSEMBLIES:

- A. OUTLET BOXES THAT DO NOT EXCEED 16 SQUARE INCHES AND INSTALLED IN FIRE RATED WALLS SHALL NOT BE INSTALLED
- B. IF BOXES MUST BE INSTALLED WITHIN 24" OF EACH OTHER THAN BOTH OUTLET BOXES SHALL BE PROTECTED WITH LISTED PUTTY PADS, 3M FIRE BARRIER MOLDABLE PUTTY + OR EQUAL.

THE ASSEMBLY TYPE(S) AND CONSTRUCTION METHOD(S) USED.

C. CONDUITS, SLEEVES AND OTHER THROUGH-PENETRATIONS OF FIRE-RATED ASSEMBLIES SHALL BE PROTECTED WITH LISTED FIRE CAULKING OR OTHER APPROVED UL-SYSTEM DESIGNED FOR

# **ELECTRICAL SYMBOLS LIST**

CIRCUITING & N	NOTES
+46"	SPECIAL MOUNTING HEIGHT FOR ASSOCIATED DEVICE (CENTERLINE OF DEVICE)
GFI	GROUND FAULT CIRCUIT INTERRUPTER DEVICE
WP	WEATHERPROOF ENCLOSURE ON DEVICE
WR	WEATHERPROOF RESISTANT DEVICE
IG	ISOLATED GROUND DEVICE
EM	EMERGENCY BATTERY BACKUP
TR	TAMPER RESISTANT OUTLET
USB	COOPER # TRUSBPDAC20-X OR EQUAL DUPLEX RECEPTACLE WITH (1) USB-A AND (1) USB-C CHARGING PORTS. PROVIDE 2-1/8" DEEP BACK BOX.
(TIE)	PARTIAL HOMERUN. REFER TO PLANS FOR ADDITIONAL DEVICES CONNECTED TO THIS CIRCUIT.
X	ELECTRICAL FLOOR PLAN NOTE WITH DESIGNATION
LP 2	CONDUIT CONCEALED WHERE POSSIBLE OR AS NOTED, ARROWS INDICATE HOME RUN TO PANEL. CIRCUIT NUMBERS INDICATED
<b>—</b>	#12 WIRE IN CONDUIT, UNLESS NOTED OTHERWISE ON DRAWINGS OR SPECIFICATION
<b>~</b>	GROUNDING CONDUCTOR, #12 WIRE UNLESS NOTED OTHERWISE ON DRAWINGS OR SPECIFICATION
/	CONDUIT ROUTED UNDER FLOOR/GRADE
LIGHTING	

LIGHTING	
4	EMERGENCY TWIN HEAD LIGHT FIXTURE
181	EXIT LIGHT WITH DIRECTIONAL ARROWS INDICATED
A	STRIP FIXTURE WITH TYPE DESIGNATION
A •	RECESSED OR SURFACE MOUNTED FIXTURE WITH TYPE DESIGNATION
A NL	NIGHT LIGHT, CONNECT TO UNSWITCHED CIRCUIT
ΑØ	CEILING OR RECESSED FIXTURE WITH TYPE DESIGNATION
ΑÖ	WALL MOUNTED FIXTURE WITH TYPE DESIGNATION
DOWED DEVICE	

# POWER DEVICES

ф	DUPLEX RECEPTACLE, BOTTOM OF BOX AT 16" AFF, UNLESS NOTED OTHERWISE
ф	FOURPLEX RECEPTACLE, BOTTOM OF BOX AT 16" AFF, UNLESS NOTED OTHERWISE
# ₩	HALF-CONTROLLED RECEPTACLE, HUBBELL #HBL5362C1-X OR EQUAL. CONTROLLED DEVICE SHALL BE PERMANENTLY MARKED "CONTROLLED" AT FACTORY.
<del>♦</del> <del>▽</del>	DEVICE MOUNTED ABOVE COUNTER AND/OR SPLASH GUARD
•	HEAVY DUTY OUTLET - NEMA CONFIGURATION SIZE PER EQUIPMENT MANUFACTURER'S RECOMMENDATION
	PANEL BOARD, TOP OF BOX 6'-0" AFF
<b>(</b> )	JUNCTION BOX
ㅁ	NON-FUSED DISCONNECT SWITCH
D'	FUSED DISCONNECT SWITCH
$\boxtimes$	MAGNETIC STARTER
<b>⊘</b>	MOTOR WITH DESIGNATION

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FLOOR BOX

CONTROLS	
S	SINGLE POLE WALL SWITCH, TOP OF BOX AT 48" AFF
S <sub>P</sub>	SINGLE POLE WALL SWITCH WITH PILOT LIGHT, TOP OF BOX AT 48" AFF
Sĸ	SINGLE POLE WALL SWITCH, KEY OPERATED, TOP OF BOX AT 48" AFF
S 2	TWO POLE WALL SWITCH, TOP OF BOX AT 48" AFF
S 3	THREE-WAY WALL SWITCH, TOP OF BOX AT 48" AFF
<b>\$</b> ,D	DIMMER SWITCH, TOP OF BOX AT 48" AFF
S m	MANUAL MOTOR STARTER WITH OVERLOADS

# DUAL TECHNOLOGY/ULTRASONIC CEILING SENSORS SHALL BE MOUNTED 6'

FROM SUPPLY/EXHAUST AIR DIFFUSERS. 2. LOW VOLTAGE CEILING SENSORS SHALL BE PROVIDED WITH 6' SLACK CONDUCTOR COILED AT SENSOR.

S <sub>0</sub>	WALL MOUNTED DUAL-TECHNOLOGY OCCUPANCY SENSOR, ACUITY SENSORSWITCH #WSX-PDT-SA OR EQUAL, TOP OF BOX AT 48" AFF. SENSORS SHALL BE PROGRAMMED FOR MANUAL-ON OPERATION.
<b>S.</b> od	WALL MOUNTED DUAL-TECHNOLOGY OCCUPANCY SENSOR WITH 0-10V DIMMING, ACUITY SENSORSWITCH #WSX-PDT-D-SA OR EQUAL, TOP OF BOX AT 48" AFF, VERIFY DIMMER COMPATIBILITY
<u>(S)</u>	DUAL TECHNOLOGY CEILING MOUNT OCCUPANCY SENSORS, ACUITY nLIGHT #NCM-PDT-10-RJB OR EQUAL
PP	OCCUPANCY SENSOR POWER PACK, ACUITY nLIGHT #NPP16 OR EQUAL, PROVIDE LOW VOLTAGE WIRING TO OCCUPANCY SENSORS AND MOMENTARY SWITCHES
S LV	MOMENTARY SWITCH, ACUITY nLIGHT #NPODMA-X OR EQUAL

- 1		
	•	DATA/TELEPHONE OUTLET WITH MINIMUM $\frac{3}{4}$ " CONDUIT STUBBED UP TO ABOVE ACCESSIBLE CEILING, BOTTOM OF BOX AT 16", UNLESS NOTED OTHERWISE. PROVIDE WITH PULL STRING
	₩	FLAT SCREEN TELEVISION - PROVIDE AND INSTALL ONE (1) HUBBELL #RR1510X RECESSED TAMPER-RESISTANT DUPLEX RECEPTACLE WITH COVERPLATE AND ONE(1) HUBBELL #HBL26I TWO GANG LARGE CAPACITY WALL BOX (UP TO 2" KNOCKOUT) W/ MUD RING AND COVERPLATE FOR DATA. PROVIDE 2"C WITH PULL STRING TO ABOVE ACCESSIBLE CEILING FOR DATA CABLES. MOUNT BOX AT 5'-6" AFF UNLESS NOTED OTHERWISE (VERIFY)

## FIRE ALARM - FIRE ALARM SYSTEM IS EXISTING TO REMAIN. PROVIDE ADDITIONAL COMPATIBLE DEVICES AND CONNECT TO EXISTING SYSTEM AS REQUIRED.

<b>X</b> I	FIRE ALARM AUDIBLE/VISUAL COMBINATION SIGNAL, CENTERLINE AT 6'-8" AFI

# MISCELLANEOUS

COMBINATION POWER AND DATA FLOORBOX

# **ELECTRICAL GENERAL NOTES:**

- 1. COORDINATE ALL WORK WITH OTHER TRADES AND EXISTING CONDITIONS AS REQUIRED TO PROPERLY INSTALL ALL SYSTEMS AS INTENDED, WITHIN THE CONFINES OF THE SPACES AVAILABLE, AND WITHOUT INTERFERENCES.
- 2. WHERE CONDUIT IS SHOWN UNDER FLOOR, VERIFY IF FLOOR IS STRUCTURAL SLAB OR SLAB ON GRADE. IF STRUCTURAL SLAB, CORE DRILL PENETRATION, AND ROUTE CONDUIT IN SPACE BELOW. IF SLAB ON GRADE, SAW CUT EXISTING FLOOR SLAB AS REQUIRED FOR INSTALLATION OF UNDER FLOOR CONDUIT. NO STRUCTURAL ELEMENTS SHALL BE CORE DRILLED OR SAW CUT. WHEN SAW CUTTING, PATCH FLOOR TO MATCH EXISTING SURFACE AS REQUIRED.
- 3. IT IS THE ELECTRICAL CONTRACTORS RESPONSIBILITY TO PROPERLY BALANCE ALL BRANCH CIRCUITS
- 5. ELECTRICAL CONTRACTOR SHALL REMOVE ALL EXISTING ELECTRICAL EQUIPMENT, FIXTURES, SYSTEMS, CONDUIT AND WIRE, ETC. NOT BEING REUSED. DO NOT JUST ABANDON.
- 8. ALL ELECTRICAL DEVICES ARE EXISTING AND TO REMAIN UNLESS NOTED OTHERWISE OR CONFLICT WITH NEW
- 9. ALL MATERIALS EXPOSED WITHIN PLENUMS SHALL BE NONCOMBUSTIBLE OR SHALL HAVE A FLAME SPREAD INDEX OF NOT MORE THAN 25 AND A SMOKE-DEVELOPED INDEX OF NOT MORE THAN 50 WHEN TESTED IN
- 11. PLANS INDICATE MINIMUM WIRE SIZES PER NEC. ALL BRANCH CIRCUITS SHALL BE SIZED TO ALLOW FOR A MAXIMUM OF 3% VOLTAGE DROP. ALL FEEDERS SHALL BE SIZED TO ALLOW FOR A MAXIMUM OF 2% VOLTAGE DROP. ELECTRICAL CONTRACTOR SHALL VERIFY WIRING INDICATED IS SUFFICIENT AND INCREASE
- 12. PROVIDE LOW VOLTAGE WIRING BETWEEN ALL 0-10V DIMMING DRIVERS CONTROLLED BY 0-10V DIMMERS PER MANUFACTURER'S INSTRUCTIONS.
- 13. WHEREVER POSSIBLE, CONDUIT SHALL BE RUN CONCEALED WITHIN WALLS, CEILINGS, SOFFITS, ETC. SURFACE MOUNTED CONDUIT IN FINISHED SPACES MUST BE APPROVED BY THE ENGINEER OR ARCHITECT PRIOR TO INSTALLATION. EXTERIOR CONDUIT SHALL NOT BE RUN EXPOSED IN PUBLICLY VISIBLE AREAS

BETWEEN THE PHASES OF THE SYSTEM REGARDLESS OF CIRCUITING INDICATED.

4. ALL EXPOSED RACEWAYS SHALL BE IN EMT CONDUIT, MC CABLE IS NOT PERMITTED IN EXPOSED AREAS.

6. ELECTRICAL CONTRACTOR TO COORDINATE MANUFACTURER ELECTRICAL REQUIREMENTS FOR HVAC EQUIPMENT BEING FURNISHED WITH MECHANICAL CONTRACTOR PRIOR TO ROUGH-IN. EQUIPMENT DISCONNECTS TO BE PROVIDED BY ELECTRICAL CONTRACTOR UNLESS NOTED OTHERWISE IN MECHANICAL

7. REFER TO ARCHITECTURAL DRAWINGS FOR EXACT LOCATION OF LIGHT FIXTURES AND DEVICES.

CONSTRUCTION. MAINTAIN PROPER OPERATION OF ALL EXISTING ELECTRICAL.

ACCORDANCE WITH ASTM E 84.

10. EACH BRANCH CIRCUIT SHALL HAVE A DEDICATED NEUTRAL PER NEC 210.4.

CONDUCTOR SIZE AS REQUIRED BASED OFF ACTUAL INSTALLED LENGTH OF CONDUCTORS.

WITHOUT APPROVAL OF THE ARCHITECT OR ENGINEER.

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ELECTRICAL

SPECIFICATIONS

6-17-25

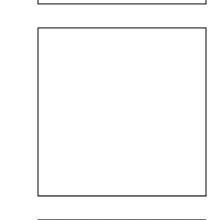


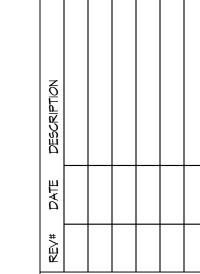
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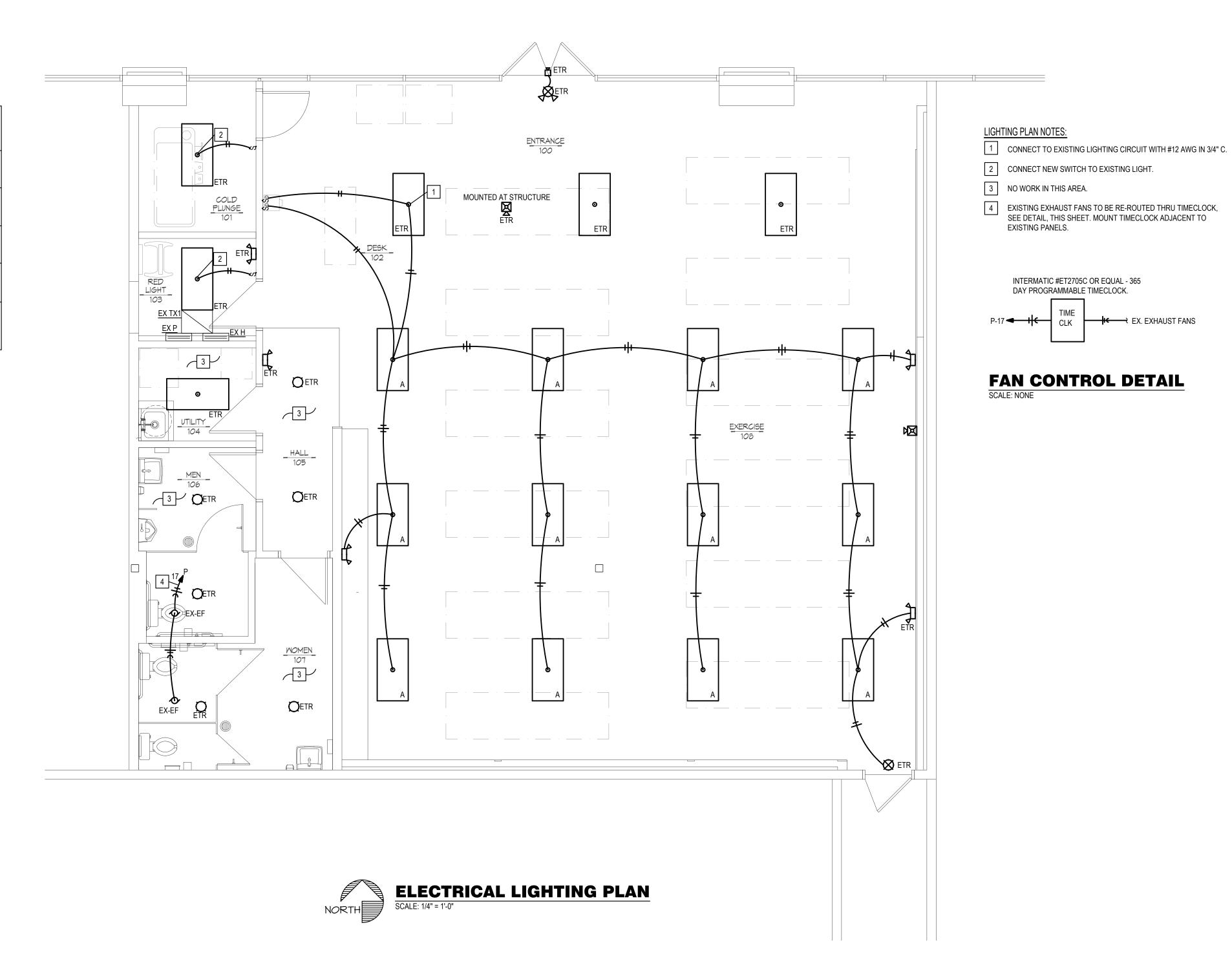




Issue Date:

Project #:

	LIG	HT F	IXTURE	SCHEDULE
MARK N0.	MANUFACTURER & CATALOG NUMBER	VOLTS WATTS	LIGHT SOURCE	DESCRIPTION
A	MATCH EXISTING SUSPENDED 2X4 LED FIXTURE	120 40	LED	SUSPENDED 2X4 LED LIGHT FIXTURE TO MATCH EXISTING IN SPACE
ETR	EXISTING LIGHT TO REMAIN	120	VARIES	EXISTING LIGHT TO REMAIN. CLEAN AND RELAMP(AS REQUIRED). VERIFY PROPER OPERATION
¢	MATCH EXISTING EMERGENCY LIGHT	120 1	INCL	WALL MOUNTED EMERGECY LIGHT TO MATCH EXISTING IN SPACE
NOTES:				



GUY GRONBERG ARCHITECTS, P.C. 113 SE 3rd St. Lee's Summit, MO 64063 Phone 816.524.0878 Fax 816.524.0878

**├** EX. EXHAUST FANS

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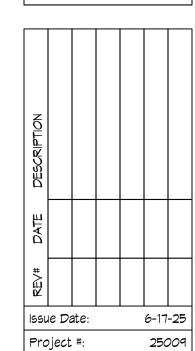
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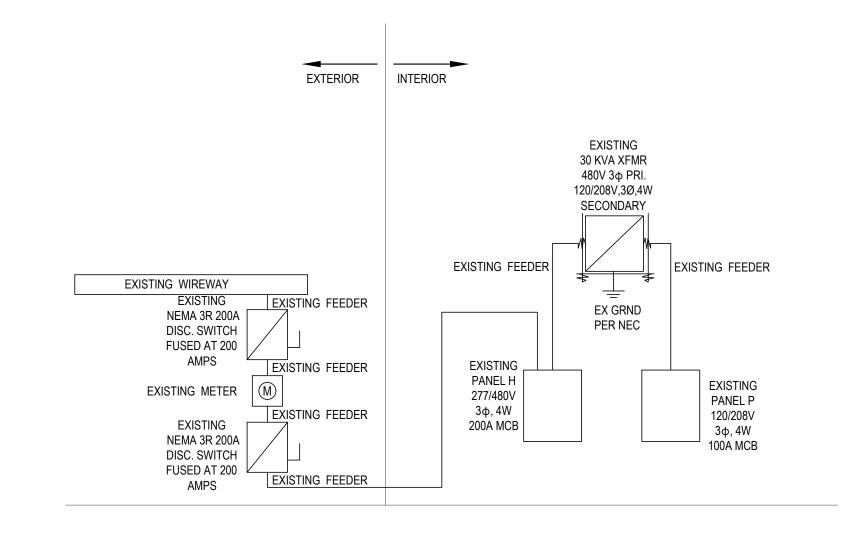
FITNESS STUSIONW BLUE PARKWAY, LEE'S SUMIN



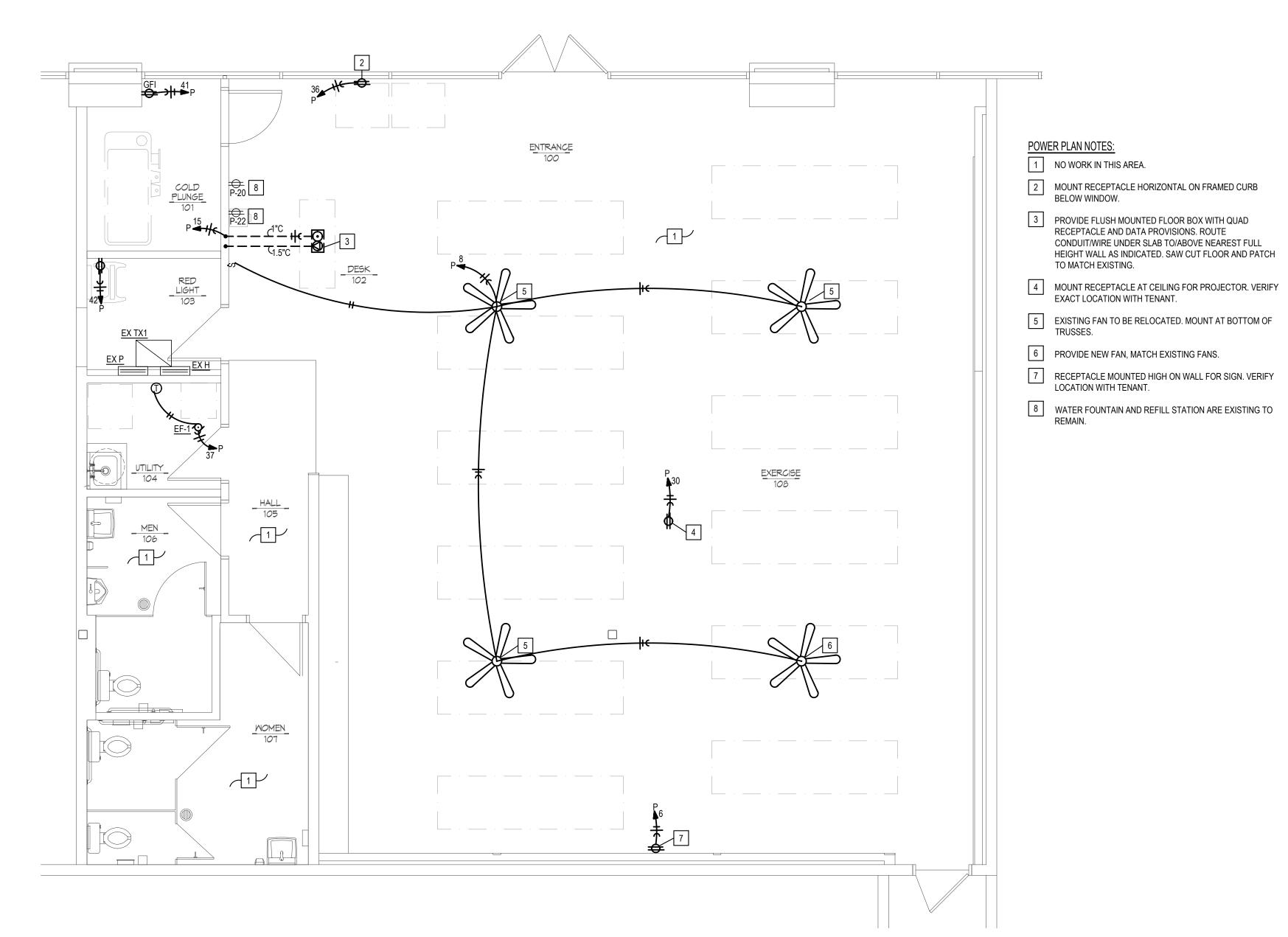
ELECTRICAL LIGHTING PLAN

EXIST PANEL: H VOLTS:  BUS: 250A MAIN:		<b>VOLTS</b> : 277/480V		PH:	3Ø	WIRE:	4W	LOCATION:		RED LIGH	HT RM		MOUNTING: SURFACE				
		MAIN:	MAIN: 200A MCB											FEEDER: SEE RISER DIAGRAM			
CKT	DESCRIPTION	AMPS	POLE	WIRE	ØA	ØB	ØC	ØA	ØB	ØC	WIRE	POLE	AMPS	DESC	RIPTION	CKT NO	
1					2,812			6,966								2	
3	EXISTING RTU-1 [EX]	15	3	12		2,812			8,017		6	3	50	EXISTING 30KVA	TRANSFORMER [EX]	4	
5							2,812			5,800				PA	NEL P	6	
7					7,133			3,000			12	2	20	EXISTING WA	TER HEATER [EX]	8	
9	EXISTING RTU -2 [EX]	30	3	10		7,133			3,000							10	
11							7,133							BUSSE	ED SPACE	12	
13	BUSSED SPACE													BUSSE	ED SPACE	14	
15	SUSSED SPACE													BUSSED SPACE			
17	BUSSED SPACE													BUSSE	ED SPACE	18	
NOTES:					9,945	9,945	9,945	9,966	11,017	5,800				•			
EX]-EXIS	TING BRKR				19,	911	20	,962	15,	745			TOTAL C	ONNECTED LOAD:	56,618	VA	
				ι					1		_		NE	EC DEMAND LOAD:	59,573	VA	
											DEMAND	AMPS @	480	VOLT / 3Ø:	71.66	<b>A</b>	

EXIST PANEL: P		<b>T PANEL</b> : P <b>VOLTS</b> : 120/208V			120/208V PH: 3Ø WIRE: 4W LOCATION:						RED LIGH	HT RM		MOUNTING: SURFACE		
	<b>BUS</b> : 125A	MAIN: 100A MCB							FEEDER: SEE RISER DIAGRAM							
СКТ	DESCRIPTION	AMPS	POLE	WIRE	ØA	ØB	ØC	ØA	ØB	ØC	WIRE	POLE	AMPS	DESCRIPTION		CKT NO
1	EX DRYER [EX] [GF]	30	2	10	2,496			360			12	1	20	EX RTU WP RCPTS [EX]		2
3						2,496			360		12	1	20	EX (2) BATH GFI RCPT [EX]		4
5	EX WASHER [EX] [GF]	20	1	12			1,000			180	12	1	20	SIGN	RCPT [EX]	6
7	EX DRYER FAN [EX]	20	1	12	100			800			12	1	20	F.	ANS [EX]	8
9	EX MODEM [EX]	20	1	12		180						1	20	SF	PARE [EX]	10
11	SPARE [EX]	20	1							180	12	1	20	EX BATH H	ALL (1) RCPT [EX]	12
13	SPARE [EX]	20	1					360			12	1	20	EX (2) PANE	L ROOM RCPT [EX]	14
15	NEW RECEPTION DESK [EX]	20	1	12		360			500		12	1	20	EX DUCT DET. CIR [EX]		16
17	EXISTING EF'S [EX]	20	1	12			100			360	12	1	20	EX PHONE 4-PLEX [EX]		18
19	SPARE [EX]	20	1					800			12	1	20	EX. FLOWATER REFILL STATION [EX]		20
21	SPARE [EX]	20	1						500		12	1	20	EX. DRINKING FOUNTAIN [EX]		22
23	SPARE [EX]	20	1									1	20	SPARE [EX]		24
25	EX EMERGENCY CIRCUIT [EX]	20	1	12	500							1	20	SPARE [EX]		26
27	LIGHTING [EX]	20	1	12		921						1	20	SF	PARE [EX]	28
29	EX TIMECLOCK FEED [EX]	20	1	12			200			180	12	1	20	PROJEC	TOR RCPT [EX]	30
31	SPARE [EX]	20	1					1,500			12	2	20	EX WATE	ER HEATER [EX]	32
33	EX SIGNAGE (1) OUTSIDE [EX]	20	1	12		1,200			1,500							34
35	SPARE [EX]	20	1							1,000	12	1	20	FRIDO	GE RCPT [EX]	36
37	EF-1 [EX]	20	1	12	50							1	20	SF	PARE [EX]	38
39	SPARE [EX]	20	1									1	20	SPARE [EX]		40
41	COLD PLUNGE [GF]	20	1	12			1,000			1,600	12	1	20	RED	LIGHT [EX]	42
NOTES:		•			3,146	5,157	2,300	3,820	2,860	3,500			•	•		
[EX]-EXISTING BRKR, [GF]-GFCI BRKR 5mA					6,966 8,017 5,800						TOTAL C	CONNECTED LOAD: 20,783 VA		3 VA		
						·		_		NE	EC DEMAND LOAD:	22,238	B VA			
											DEMAN	AMPS @	208	VOLT / 3Ø:	61.73	3 A



ELECTRICAL RISER DIAGRAM
SCALE: FOR REFERENCE ONLY





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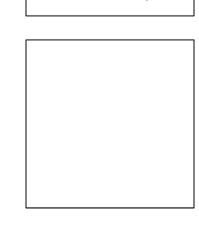


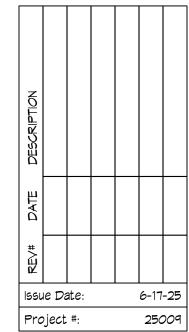
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ELECTRICAL POWER PLAN

E2