

**Market Street Center**  
**Lee's Summit, Missouri 64082**

GENERAL NOTES:

- DO NOT SCALE DRAWINGS. USE WRITTEN DIMENSIONS ONLY. SUBMIT ANY DISCREPANCIES TO THE ARCHITECT FOR CLARIFICATION.
2. ALL WORK SHALL BE IN COMPLIANCE WITH THE STANDARD BUILDING RECOGNIZED INDUSTRY STANDARDS, CRAFTSMANSHIP STANDARDS IN THE AREA, ALL MANUFACTURER RECOMMENDATIONS, AND ALL OTHER APPLICABLE CODES
3. PROVIDE ACCESSIBILITY FOR THE PHYSICALLY HANDICAPPED CONFORMING TO THE AMERICANS WITH DISABILITIES ACT OF 2010. TO THE BEST OF OUR KNOWLEDGE, THIS BUILDING HAS BEEN DESIGNED IN ACCORDANCE WITH THE 2010 IBC AND THE RULES AND REGULATIONS OF NEW CONSTRUCTION PER ADA
4. THE CONTRACTOR(S) SHALL BE RESPONSIBLE FOR BUILDING THIS PROJECT IN ACCORDANCE WITH THE DRAWINGS AND SPECIFICATIONS UNLESS A WRITTEN NOTIFICATION FROM THE OWNER OR ARCHITECT TO THE CONTRARY IS RECEIVED
5. THE ARCHITECT DOES NOT GUARANTEE THE PERFORMANCE OF THE PROJECT IN ANY RESPECT OTHER THAN THAT OUR ARCHITECTURAL WORK AND JUDGEMENT RENDERED MEETS THE STANDARDS OF CARE OF OUR PROFESSION
6. THE LOCATION OF THE EXISTING UTILITIES AND STRUCTURES SHOWN HEREON ARE APPROXIMATE. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THE EXISTENCE AND ACTUAL LOCATION OF SUCH, WHETHER SHOWN HEREON OR NOT, PRIOR TO ANY EXCAVATION. ANY DAMAGES SHALL BE REPAIRED AT THE EXPENSE OF THE CONTRACTOR
7. THE CONTRACTOR SHALL PROVIDE ADEQUATE BRACING AND SHORING FOR ALL WORK DURING THE CONSTRUCTION PERIOD
8. PROVIDE ILLUMINATED EXIT SIGNS WITH BATTERY BACKUP DESIGNATING EXITS AND MAYES OF TRAVEL THERETO
9. FIRE BARRIER SHALL BE CONTINUOUS FROM OUTSIDE WALL TO OUTSIDE WALL, FROM A FIRE BARRIER TO ANOTHER FIRE BARRIER, OR A COMBINATION THEREOF, INCLUDING CONTINUITY THROUGH ALL CONCEALED SPACES SUCH AS THOSE FOUND ABOVE A CEILING, INCLUDING INTERSTITIAL SPACES
10. PASSAGES OF PIPES, CONDUITS, BUS DUCTS, CABLES, WIRES, AIRDUCTS, PNEUMATIC DUCTS, AND SIMILAR BUILDING SERVICE EQUIPMENT THROUGH FIRE BARRIERS SHALL BE PROTECTED AS FOLLOWS
  - 10.1. THE SPACE BETWEEN PENETRATING ITEM AND FIRE BARRIER SHALL BE FILLED WITH A MATERIAL CAPABLE OF MAINTAINING THE FIRE RESISTANCE RATING OF THE FIRE BARRIER PRODUCT. PRODUCT USED MUST MEET TEST METHODS ASTM E814 OR UL 1419 FOR FIRE RATING (PER 714.3.12.4 714.4.11.2 IBC 2018)
  - 10.2. FIRE BARRIERS SHALL BE EFFECTIVELY AND PERMANENTLY IDENTIFIED WITH 2" STENCILING (AT 12" O.C.) ABOVE ANY DECORATIVE CEILING AND CONCEALED SPACES WITH THE FOLLOWING:
    - 10.2.1. FIRE/SMOKE BARRIER
    - 10.2.2. PROTECT ALL OPENINGS
11. PROVIDE AT LEAST 1 CLASS ABC 5 POUND FIRE EXTINGUISHER TO BE MOUNTED WHERE READILY VISIBLE AND ACCESSIBLE. ADDITIONAL UNITS MAY BE REQUIRED TO MEET A 75 FT. TRAVEL DISTANCE LIMITATION. INSTALL IN ACCORDANCE WITH NFPA 10 OR PER LOCAL AUTHORITY.
12. WHEN A BEAM OR COLUMN BECOMES PART OF A FIRE RATED WALL OR CEILING IT MUST BE PROTECTED AND BE FIRE RATED AS IS THE WALL OR CEILING.
13. SHELL MECHANICAL ROOM SHALL BE SEPARATED FROM THE REST OF THE BUILDING BY ONE HOUR RATED FIRE-RESISTIVE CONSTRUCTION WITH ALL OPENINGS PROTECTED BY 45 MINUTE LABELED FIRE DOOR ASSEMBLY.. ALL RATED WALLS, WINDOWS, AND DOORS SHALL BE CLEARLY IDENTIFIED ON ARCHITECTURAL DRAWINGS.
14. THE FLOOR ON BOTH SIDES OF A DOOR SHALL BE LEVEL, AND SHALL HAVE THE SAME ELEVATION ON BOTH SIDES OF THE DOOR, FOR A DISTANCE ON EACH SIDE EQUAL TO THE WIDTH OF THE NIDEST SINGLE DOOR.
15. DOORS IN EXITS SHALL NOT BE SUBJECT TO THE USE OF A KEY FOR OPERATION FROM THE INSIDE OF THE BUILDING.
16. EVERY INTERIOR AND EXTERIOR DOOR IN THE BUILDING SHALL BE PROVIDED WITH HANDICAP HARDWARE (LEVERS, PANIC HARDWARE, OR U-SHAPE DESIGNED DEVICES, ETC)
17. PROVIDE J-MOLDS AND CORNER BEADS AT THE EDGES OF ALL EIFS SYSTEMS AND GYPSUM BOARD.

18. PROVIDE CONTINUOUS BLOCKING IN ALL STUD WALLS THAT ARE TO RECEIVE GRAB BARS, TOILET PARTITIONS, ETC.
19. ALL METAL STUD GAUGE DESIGN SHALL BE AS REQUIRED BY PERFORMANCE AND AS INDICATED IN THE DRAWINGS.
20. PROVIDE SEPARATION BETWEEN ALL DISSIMILAR METALS INCLUDING SCREWS, NAILS AND OTHER FASTENING DEVICES
21. WHERE MATERIAL FASTENERS ARE NOT INDICATED, PROVIDE AS SPECIFIED BY THE MATERIAL MANUFACTURER'S RECOMMENDATIONS AND PROCEDURES
22. USE ONLY LEAD-FREE PIPE AND SOLDER FOR DOMESTIC WATER SYSTEM (SAFE DRINKING WATER ACT OF 1986)
23. GENERAL CONTRACTOR SHALL TREAT THE SOIL BENEATH THE SUITE SPACES WITH TERMITICIDE POISON PER MANUFACTURER'S RECOMMENDATIONS
24. ALL WALLS TO BE ANCHORED BY POWER ACTUATED FASTENERS
25. ALL WOOD THAT IS IN DIRECT CONTACT WITH CEMENT, MASONRY OR EARTH SHALL BE PRESURE TREATED.
26. BUILDING SIGNAGE IS TO BE PERMITTED UNDER SEPARATE COVER
27. GYPSUM BOARD WALLS AND CEILINGS SHALL BE INSTALLED PER THE GYPSUM CONSTRUCTION HANDBOOK, 6TH EDITION. LEVELS OF FINISH PER THE FOLLOWING:

LEVEL 1:	IN CONCEALED SPACES, PLENUMS ABOVE CEILINGS, SERVICE CORRIDORS AND SPACES NOT OPEN TO PUBLIC VIEW
LEVEL 2:	IN WAREHOUSE AND STORAGE SPACES
LEVEL 3:	IN AREAS TO RECEIVE HEAVY TEXTURED WALL FINISHES, COMMERCIAL GRADE (HEAVY-DUTY) WALL COVERING
LEVEL 4:	IN AREAS TO RECEIVE FLAT PAINTS, LIGHT TEXTURES, RESIDENTIAL (LIGHT-DUTY) WALL COVERING
LEVEL 5:	IN AREAS TO RECEIVE GLOSS, SEMI-GLOSS, OR ENAMEL PAINTS, UNTEXTURED FINISHES AND IN CRITICAL LIGHTING AREAS

## INSULATION NOTES

1. PROVIDE FOIL-FACED BATT TYPE INSULATION IN EXTERIOR STUD WALLS TO MEET MINIMUM R-14
2. FLAMESPREAD AND SMOKE DEVELOPMENT RATINGS FOR BATT INSULATION VAPOR RETARDER SHALL BE AS FOLLOWS:
  - 2.1. FLAMESPREAD: 25
  - 2.2. SMOKE DEVELOPMENT: 450

## JOINTS AND SEALANT NOTES

1. PROVIDE CONTINUOUS WATERPROOFING SILICONE BASED SEALANT AND BACKER ROD AT ALL STOREFRONT AND MASONRY JUNCTIONS AND TERMINATIONS. SEALANT SHALL MATCH STOREFRONT
2. PROVIDE CONTINUOUS SEALANT AND BACKER ROD AT ALL JUNCTIONS BETWEEN DISSIMILAR MATERIALS, I.E. BRICK TO EIFS ETC. DOWNCORNING #190
3. THE METAL EDGE SECUREMENT, EXCEPT GUTTER, SHALL BE INSTALLED AS TESTED IN ACCORDANCE WITH MOST CURRENT VERSION OF THE ANSI/SPRI EX-1, AMERICAN NATIONAL STANDARD FOR EDGE SYSTEMS USED WITH LOW-SLOPE ROOFING SYSTEMS
4. PROVIDE STANDING SEAM JOINTS AT ALL COPING SLICES FOR THERMAL EXPANSION. ALL SEAMS SHALL BE SEALED WITH DOWNCORNING #195 TYP.
5. PROVIDE CLOSURE END CAPS AND 90 DEGREE TRANSITIONS AT ALL EXPANSION JOINTS AND END WALL CAPS AT GRAVELSTOPS, TYP.
6. ALL METAL VENTS AND FLUES SHALL BE FLASHED WITH 'PORTALS PLUS' FLASHING BOOT, TYP. SEAL ALL METAL TO METAL CONNECTIONS WITH DOWNCORNING #195 (NOTE: NO CLEAR SILICONE SEALANT SHALL BE ALLOWED)
7. ANCHOR ALL PRESSURE TREATED WOOD BLOCKING AT TOP OF MASONRY WALLS UNDER COPING WITH 3/8" DIA. HOT DIPPED GALVANIZED ANCHORS AT 36" O.C.
8. ALL EXTERIOR JOINTS IN THE BUILDING ENVELOPE THAT ARE SOURCES OF AIR LEAKS SHALL BE CAULKED, GASKETED, WEATHER STRIPPED, OR OTHERWISE SEALED IN ACCORDANCE WITH SPECIFICATIONS
9. PROVIDE CONTROL JOINTS IN GYPSUM BOARD PER ASTM C-840 AND GA-216-10.

SYNOPSIS:

THE SCOPE OF WORK CONSISTS OF A FIRST GENERATION TENANT BUILD-OUT WITHIN AN EXISTING SHELL BUILDING, LOCATED IN LEE'S SUMMIT, MO. THE STRUCTURE INCLUDES, BUT IS NOT LIMITED TO, A 4" THICK CONCRETE SLAB, WOOD STUD FRAMING WITH EIFS/BRICK EXTERIOR VENEER WITH STEEL COLUMNS, WOOD JOISTS AND TPO ROOF SYSTEM ON PLYWOOD ROOF DECKING. INTERIOR CONSTRUCTION WILL COMPRISE OF METAL STUD FRAMING. ALL NEW CONSTRUCTION WILL MATCH THAT ALLOWED IN TYPE II-B CONSTRUCTION.

### BUILDING CONSTRUCTION:

CONSTRUCTION TYPE: TYPE V-B  
SPRINKLERED: NO  
FIRE ALARM: NO

TENANT AREA:

4,200 SQ. FT. (GROSS SQUARE FOOTAGE)  
4,066 SQ. FT. (NET SQUARE FOOTAGE)

OCCUPANT LOAD & EGRESS WIDTHS:

4,066 SQ. FT. / 150 SF/PERSON = 27.11 PERSONS  
28 PERSONS \* 0.2 IN/PERSON = 5.6 INCHES REQUIRED, 68 INCHES  
PROVIDED

## PLUMBING CALCULATIONS

PLUMBING CALCULATIONS							
OCCUPANCY: B (BUSINESS)	WATER CLOSETS		LAVATORIES		BATHTUBS/ SHOWERS	DRINKING FOUNTAINS	OTHER
	MALE	FEMALE	MALE	FEMALE			
	1 PER 25 FOR THE FIRST 50 AND 1 PER 50 FOR THE REMAINDER EXCEEDING 50		1 PER 40 FOR THE FIRST 80 AND 1 PER 80 FOR THE REMAINDER EXCEEDING 80				
# REQUIRED					-----		1 SERVICE SINK
# PROVIDED					-----		1 SERVICE SINK, 1 UNISEX RESTROOM

## DESIGN CODES

TENANT

HEARTLAND DENTAL  
1200 NETWORK CENTRE DRIVE  
EFFINGHAM, IL 62401  
DESIGN/PERMIT CONTACT:  
ANDREA HUGHES/NICOLE DESENDER  
PHONE: (636) 459-0430/(513) 910-7716  
CONSTRUCTION CONTACT: MICHAEL VELASCO  
PHONE: (972) 872-0887

## ARCHITECT

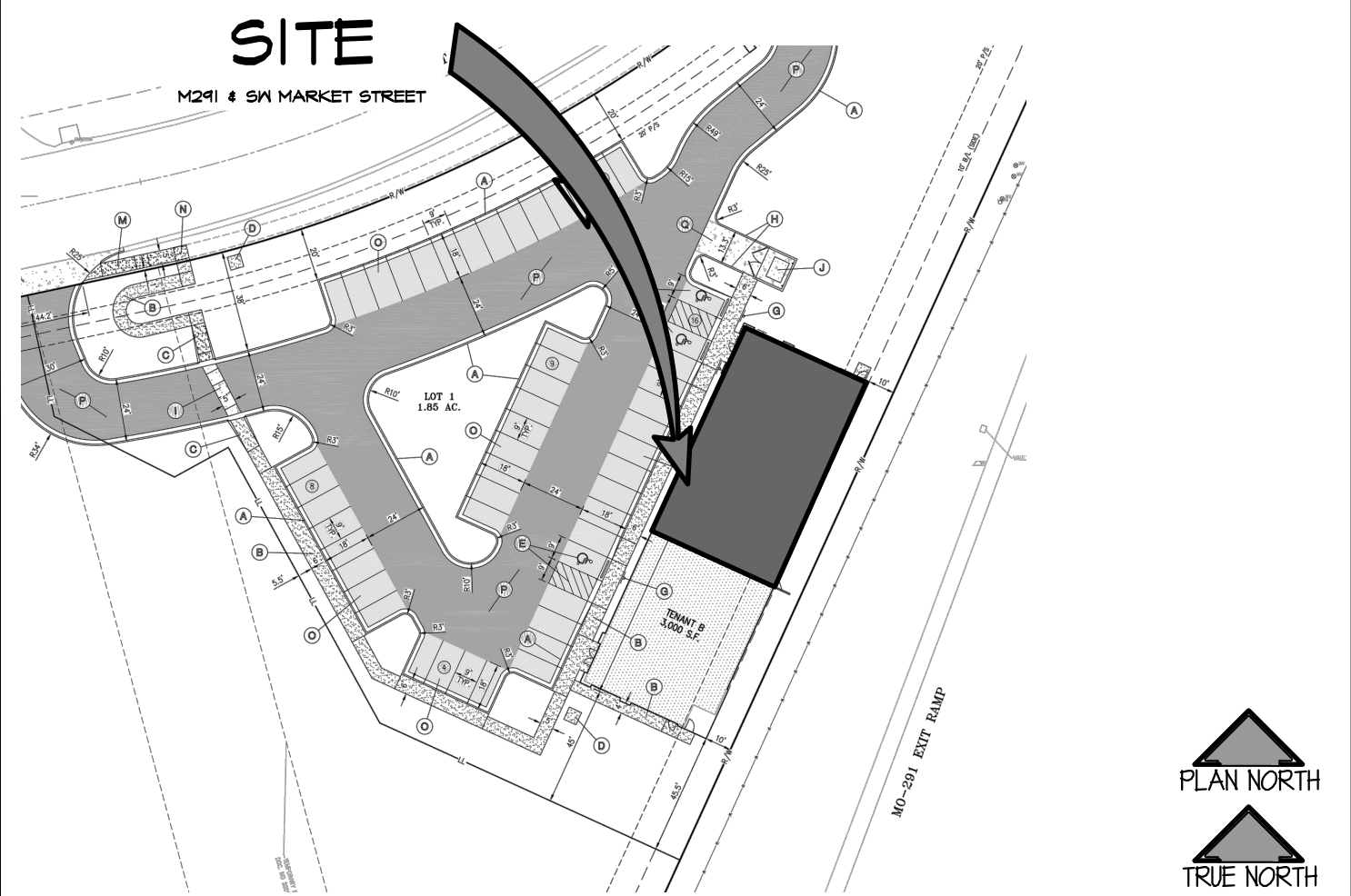
HILL FOLEY ROSSI & ASSOCIATES, LLC  
3680 PLEASANT HILL ROAD  
SUITE 200  
DULUTH, GA 30096  
CONTACT: BRAD MCCULLOUGH, R.A.  
PHONE: (770) 622-9858

## MEP ENGINEERING

SHEPHERD, HARVEY & ASSOCIATES, INC.  
4855 RIVER GREEN PARKWAY  
SUITE 400  
DULUTH, GA 30096  
CONTACT: BRAD SHEPHERD, P.E.  
PHONE: (770) 495-4007

SHEET	DRAWING NAME	FOR CONSTRUCTION 07-22-2022	REVISION #1 10-25-2022						
ARCHITECTURAL									
A001	COVER SHEET	●							
A002	SPECIFICATIONS	●							
A003	SPECIFICATIONS	●							
A004	SPECIFICATIONS	●							
A005	SPECIFICATIONS	●							
A006	U.L. DETAILS	●							
A007	GENERAL NOTES, DOOR & WINDOW SCHEDULES	●							
A008	LIFE SAFETY PLAN, DETAILS & NOTES	●							
A009	ACCESSIBILITY STANDARDS	●							
A101	FLOOR PLAN	●							
A102	TREATMENT ROOM DETAILS	●							
A103	TREATMENT SUITE AND HYGIENE DETAILS	●							
A201	EXTERIOR ELEVATIONS	●							
A501	RESTROOM PLAN, DETAILS & ELEVATIONS	●							
A502	INTERIOR ELEVATIONS	●							
A503	INTERIOR ELEVATIONS	●	●						
A504	INTERIOR ELEVATIONS	●							
A505	INTERIOR ELEVATIONS	●							
A601	REFLECTED CEILING PLAN	●							
A602	REFLECTED CEILING PLAN DETAILS	●							
A801	ROOM FINISH PLAN, DETAILS & SCHEDULES	●							
A802	ROOM FINISH DETAILS	●							
F101	EQUIPMENT PLAN	●							
F102	DECOR AND FURNISHING PLAN	●							
F103	EQUIPMENT SCHEDULES	●							
F104	BLOCKING DETAILS	●							
F105	BLOCKING DETAILS	●							
MECHANICAL / ELECTRICAL / PLUMBING									
MEP1	UTILITIES SUMMARY & ZONE PLAN	●							
MECHANICAL									
M001	MECHANICAL NOTES & LEGENDS	●							
M002	MECHANICAL SCHEDULES	●							
M003	MECHANICAL DETAILS	●							
M101	MECHANICAL FLOOR PLAN	●							
ELECTRICAL									
E001	ELECTRICAL SPECIFICATIONS & SYMBOLS	●							
E101	ELECTRICAL FLOOR PLAN - LIGHTING	●							
E102	ELECTRICAL FLOOR PLAN - POWER	●							
E500	ELECTRICAL SCHEDULES	●							
E511	ELECTRICAL DETAILS	●							
PLUMBING									
P001	PLUMBING NOTES & SPECIFICATIONS	●							
P002	PLUMBING SCHEDULES	●							
P003	PLUMBING DETAILS	●							
P004	PLUMBING DETAILS	●							
P005	PLUMBING DETAILS	●							
P006	PLUMBING RISER DIAGRAM	●							
P101	PLUMBING FLOOR PLAN - WASTE & VENT	●							
P102	PLUMBING FLOOR PLAN - WATER	●							
P103	PLUMBING FLOOR PLAN - MEDICAL GAS	●							
P104	PLUMBING FLOOR PLAN - NATURAL GAS	●							

## KEY PLAN





## SECTION 01000 - SUMMARY

### 1.1 PROJECT INFORMATION

- Project Identification: A New Tenant Finish for Heartland Dental, Inc.
  - Project Location: Market Street Center, Lee's Summit, Missouri 64082
- Tenant: Heartland Dental - 1200 Network Centre Drive Effingham, IL 62401
- Architect: Hill Foley Rossi & Associates, LLC, 3680 Pleasant Hill Road, Suite 200; Duluth, Georgia 30096
- The Work consists of: A tenant finish of approximately 4,200 S.F. for a new dental office within the existing shell building.
  - Owner Under Separate Contracts:
    - Dental Equipment: To be supplied and installed by Dental Supplier; Patterson Dental, Inc. General Contractor to coordinate with supplier and Owner.
    - Owner-Furnished Products: The following products will be furnished by Owner and shall be installed by Contractor as part of the Work:
      - Owner Provided Light Fixtures, where Occurs.
  - WORK RESTRICTIONS
    - Contractor's Use of Premises: During construction, Contractor will have full use of site, building area, or space indicated. Contractor's use of premises is limited only by Owner's right to perform or employ other contractors on portion of Project.
    - Non Smoking Building: Smoking is not permitted within the building or within 25 feet of entrances, operable windows, or outdoor air intakes.

## SECTION 01200 - SUBSTITUTION PROCEDURES

### 1.1 SUBSTITUTION PROCEDURES

- Substitutions include changes in products, materials, equipment, and methods of construction from those required by the Contract Documents and proposed by the Contractor.
- Substitution Requests: Submit three (3) copies of each request for consideration. Identify product or fabrication or installation method to be replaced. Include Specification Section number and title and Drawing numbers listed.
  - Identify product to be replaced and show compliance with requirements for substitution. Include a detailed comparison of significant qualities of proposed substitutions with those of the Work specified, a list of changes needed for other parts of the Work required to accommodate proposed substitutions, and any proposed changes in the Contract Sum or the Contract Time.
  - Architect will review proposed substitutions and notify Contractor of their acceptance or rejection. If necessary, Architect will request additional information or documentation for evaluation.
    - Architect will notify Contractor of acceptance or rejection of proposed substitution within five (5) business days of receipt of request, or five (5) business days of receipt of additional information or documentation, whichever is later.
    - Do not submit unapproved substitutions (Shop Drawings or other submittals.

## SECTION 012600 - CONTRACT MODIFICATION PROCEDURES

### 1.1 CONTRACT MODIFICATION PROCEDURES

- Architect will issue supplemental instructions authorizing minor changes in the Work, not involving adjustments to the Contract Sum or the Contract Time, on AIA Document (G710), "Architect's Supplemental Instructions".
- Owner-Initiated Proposal Request: Architect will issue a detailed description of proposed changes in the Work.
  - Proposal Request are not instruction either to stop work in progress or to execute the proposed change.
  - Within time specified in Proposal Request or five (5) business days, when not otherwise specified, after receipt of Proposal Request, submit a quotation estimating cost adjustments to the Contract Sum or the Contract Time.
- Contractor-Initiated Proposals: If latent or changed conditions require modifications to the Contract, Contractor may initiate a claim by submitting a request for a change to Architect.
  - On Owner's approval of a Proposal Request, Architect will issue a Change Order for signatures of Owner and Contractor on AIA Document (G70), for all changes to the Contract Sum or the Contract Time.
  - E-Request may issue a Construction Change Directive on AIA Document (G714), Construction Change Directive instructs Contractor to proceed with a change in the Work, for subsequent inclusion in a Change Order.
- Construction Change Directive contains a complete description of change in the Work. It also designates method to be followed to determine change on the Contract Sum or the Contract Time.
  - F. Documentation: Maintain detailed records on a time and material basis of work required by the Construction Change Directive. After completion of change, submit an itemized account and supporting data necessary to substantiate cost and time adjustments to the Contract.

## SECTION 013000 - ADMINISTRATIVE REQUIREMENTS

### 1.1 PROJECT MANAGEMENT AND COORDINATION

- Subcontract List: Submit a written summary identifying individuals of firms proposed for each portion of the Work.
- Key Personnel Names: Within fifteen (15) business days of starting Construction Operations, submit a list of key personnel assignments, including superintendent and other personnel in attendance at Project site. List email addresses and telephone numbers.
- Coordinate construction operations included in different Sections of the Specifications to ensure efficient and orderly installations for each part of the Work.
- Requests for Information (RFIs): On discovery of the need for additional information or interpretation of the Contract Documents, Contractor shall prepare and submit RFI. Use forms acceptable to Architect and Owner.
- Provide a weekly or biweekly report by electronic communication (e-mail) to the Owner's Representative and Architect on progress against project schedule. General Contractor is to schedule a rough-in review notifying Owner and Architect of said review 2 weeks prior to schedule meeting date. Require attendance of each subcontractor or other entity concerned with current progress or involved in planning, coordination, or performance of future activities.

### 1.2 SUBMITTAL ADMINISTRATIVE REQUIREMENTS

- Architect's Digital Data Files: Electronic digital data files of the Contract Drawings will be provided by Architect for Contractor's use in preparing submittals.
  - Architect will furnish Contractor one set of digital data drawing files (plans only) of the Contract Drawings for use in preparing Shop Drawings.
  - Architect makes no representations as to the accuracy or completeness of digital data drawing files as they relate to the Contract Drawings.
- Coordinate each submittal with fabrication, purchasing, testing, delivery, other submittals, and related activities that require sequential activity.
  - No extension of the Contract Time will be authorized because of failure to transmit submittals enough in advance of the Work to permit processing including resubmittals.
- Submit three copies of each electronic submittal. Architect will return two copies.
- Submit two copies of each informational submittal. Architect will not return copies.
- Architect will discard submittals received from sources other than Contractor.
- Electronic Submittals: Identify and incorporate information in each electronic submittal file as follows:
  - Assemble complete submittal including all necessary information, including temporary facilities, and requirements of a single Specification Section and transmit to architect with links enabling navigation to each item.
  - Name file with unique identifier, including project identifier, Specification Section number, and revision identifier.
  - Provide means for insertion to permanently record Contractor's review and approval markings and action taken by Architect.
  - If Paper Submittals are used: Place a permanent label or title block on each submittal for identification. Provide a space approximately 6 by 8 inches on label or beside title block to record Contractor's review and approval markings and action taken by Architect. Include the following information on the label:
    - Project name.
    - Date.
    - Name and address of Contractor.
    - Name and address of subcontractor or supplier.
    - Product name and title of appropriate Specification Section.
    - Identify options requiring selection by Architect
    - Identify deviations from the Contract Documents on submittals.
- Contractor's Construction Schedule Submittal Procedure:
  - Submit required submittals in the following format:
    - PDF electronic file.
- SUBMITTAL PROCEDURES
  - General Submittal Procedure Requirements: Prepare and submit submittals required by individual Specification Sections.
    - Submit electronic submittals via email as PDF electronic files.
    - Architect will return annotated file. Annotate and retain one (1) copy of file as an electronic Project record document file.
  - ACTION SUBMITTALS
    - If Paper Copies are used: Submit four (4) paper copies of each submittal unless other indicated. Architect will return two (2) copies.
    - Product Data: Mark each copy to show applicable products and options. Include the following:
      - Manufacturer's written recommendations, product specifications, and installation instructions.
      - Wiring diagrams showing factory-installed wiring.
      - Performance curves and operational range diagrams.
      - Testing by recognized testing agency.
      - Compliance with specified standards and requirements.
    - Shop Drawings: Prepare Project-specific information, drawing accurately to scale. Do not base Shop Drawings on reproductions of the Contract Documents or standard printed data. Submit on sheets at least 8-1/2 by 11 inches but no larger than 24 by 36 inches. Include the following:
      - Dimensions and identification of products
      - Fabrication and installation drawings and roughing-in and setting diagrams.
      - Wiring diagrams showing field-installed wiring.
      - Notation of coordination requirements
      - Notation of dimensions establishes by field measurement.
    - Shop Samples: Submit Samples for review of kind, color, pattern, and texture and for a comparison of these characteristics between submittal and actual component as delivered and installed. Include name of manufacturer and product name and label.

- General Submittal Procedure Requirements: Prepare and submit submittals required by individual Specification Sections.
  - Submit electronic submittals via email as PDF electronic files.
  - Architect will return annotated file. Annotate and retain one (1) copy of file as an electronic Project record document file.
- ACTION SUBMITTALS
  - If Paper Copies are used: Submit four (4) paper copies of each submittal unless other indicated. Architect will return two (2) copies.
  - Product Data: Mark each copy to show applicable products and options. Include the following:
    - Manufacturer's written recommendations, product specifications, and installation instructions.
    - Wiring diagrams showing factory-installed wiring.
    - Performance curves and operational range diagrams.
    - Testing by recognized testing agency.
    - Compliance with specified standards and requirements.
  - Shop Drawings: Prepare Project-specific information, drawing accurately to scale. Do not base Shop Drawings on reproductions of the Contract Documents or standard printed data. Submit on sheets at least 8-1/2 by 11 inches but no larger than 24 by 36 inches. Include the following:
    - Dimensions and identification of products
    - Fabrication and installation drawings and roughing-in and setting diagrams.
    - Wiring diagrams showing field-installed wiring.
    - Notation of coordination requirements
    - Notation of dimensions establishes by field measurement.
  - Shop Samples: Submit Samples for review of kind, color, pattern, and texture and for a comparison of these characteristics between submittal and actual component as delivered and installed. Include name of manufacturer and product name and label.

## SECTION 014000 - REFERENCES

### 1.1 GENERAL REQUIREMENTS

- Publication Dates: Comply with standards in effect as of the date of the Contract Documents unless otherwise indicated.
- Abbreviations and Acronyms: Where abbreviations and acronyms are used in Specifications or other Contract Documents, they shall mean the recognized name of the entities in the following list. Names are subject to change and are believed to be accurate and current as of the date of the Contract Documents.

AWI	Architectural Woodwork Institute
AWPA	American Wood Protection Association (Formerly: American Wood Preservers' Association)
AWS	American Welding Society
BHMA	Builders Hardware Manufacturers Association
CIMA	Cellulose Insulation Manufacturers Association

- |              |  |
|--------------|--|
| CISCA        | Ceilings & Interior Systems Construction Association   |
| CSI          | Carpet and Rug Institute (The)   |
| CSI          | Construction Specification Institute (The)   |
| DHI          | Door and Hardware Institute  |
| EIMA         | EIFS Industry Members Association  |
| EJMA         | Exposed Joint Manufacturers Association, Inc.  |
| FM Approvals | FM Approvals LLC   |
| GA           | Gypsum Association   |
| GANA         | Glass Association of North America   |
| HIMMA        | Hollow Metal Manufacturers Association   |
| HPVA         | Hardwood Plywood & Veneer Association  |
| ICBO         | International Conference of Building Officials   |
| ISSFA        | International Solid Surface Fabricators Association  |
| KCMA         | Kitchen Cabinet Manufacturers Association  |
| LGSEA        | Light Gauge Steel Engineers Association  |
| MCA          | Metal Construction Association   |
| MPMA         | Maple Flooring Manufacturers Association, Inc.   |
| MPMA         | Metal Framing Manufacturers Association, Inc.  |
| MHIA         | Material Handling Industry of America  |
| MIA          | Marble Institute of America  |
| MPI          | Master Painters Institute  |
| NAMA         | North American Insulation Manufacturers Association  |
| NBQQA        | National Building Granite Quarries Association, Inc.   |
| NCCA         | National Concrete Masonry Association  |
| NECA         | National Electrical Contractors Association  |
| NELMA        | Northeast Lumber Manufacturers' Association  |
| NEMMA        | National Electrical Manufacturers Association  |
| NGA          | National Glass Association   |
| NOMMA        | National Ornamental & Miscellaneous Metals Association   |
| NSGSA        | National Stone, Sand & Gravel Association  |
| NSTMA        | National Terrazzo & Mosaic Association, Inc. (The)   |
| RFCI         | Resilient Floor Covering Institute   |
| SDI          | Steel Door Institute   |
| SJI          | Steel Joist Institute  |
| SMACNA       | Sheet Metal and Air Conditioning Contractors' National Association   |
| SPFA         | Spray Polyurethane Foam Alliance (SPI/SPFD - The Society of the Plastics Industry, Inc.; Spray Polyurethane Foam Division) |
| TCNA         | The Council of North America, Inc.   |
| TIA/EIA      | Telecommunications Industry Association/Electronic Industries Alliance   |
| TMS          | The Masonry Society  |
| UL           | Underwriters Laboratories Inc.   |
| USGBC        | U.S. Green Building Council  |
| WCMA         | Window Covering Manufacturers Association  |
| WDMA         | Window & Door Manufacturers Association (Formerly : NWMDA - National Wood Window and Door Association)                     |
| WI           | Woodwork Institute (Formerly : WIC - Woodwork Institute of California)   |
| WITC         | Woodwork Institute of California (Now WIT)   |
| WMPMA        | Wood Moulding & Millwork Producers Association   |

- C. Code Agencies: Where abbreviations and acronyms are used in Specification or other Contract Documents, they shall mean the recognized name of the entities in the following list. Names are subject to change and are believed to be accurate and current as of the date of the Contract Documents.

### 1.2 SUBSTITUTION PROCEDURES

- Substitutions include changes in products, materials, equipment, and methods of construction from those required by the Contract Documents and proposed by the Contractor.
- Substitution Requests: Submit three (3) copies of each request for consideration. Identify product or fabrication or installation method to be replaced. Include Specification Section number and title and Drawing numbers listed.
  - Identify product to be replaced and show compliance with requirements for substitution. Include a detailed comparison of significant qualities of proposed substitutions with those of the Work specified, a list of changes needed for other parts of the Work required to accommodate proposed substitutions, and any proposed changes in the Contract Sum or the Contract Time.
  - Architect will review proposed substitutions and notify Contractor of their acceptance or rejection. If necessary, Architect will request additional information or documentation for evaluation.
    - Architect will notify Contractor of acceptance or rejection of proposed substitution within five (5) business days of receipt of request, or five (5) business days of receipt of additional information or documentation, whichever is later.
    - Do not submit unapproved substitutions (Shop Drawings or other submittals.

## SECTION 015000 - TEMPORARY FACILITIES AND CONTROLS

### 1.1 SITE SECURITY

- Use Charges: Installation and removal of and use charges for temporary facilities shall be included in the Contract Sum unless otherwise indicated.
- Electric Service: Comply with NECA, NFMA, and UL standards and regulations for temporary electric service. Install service to comply with NFPA 70.
- Accessible Temporary Egress: Comply with applicable provisions in ICC A117.1.

### 1.2 TEMPORARY FACILITIES

- Provide field offices, storage and fabrication sheds, and other support facilities as necessary for construction operations. Store combustible materials apart from building.

### 1.3 EQUIPMENT

- Fire Extinguishers: Portable, UL-rated; with class and extinguishing agent as required by locations and classes of fire exposures.
- HVAC Equipment: Unless Owner authorizes use of permanent HVAC system, provide vented, self-contained, liquid-propane-gas or fuel-oil heaters with thermostat space thermostat control.
  - Use of gasoline-burning space heaters, open-flame heaters, or salamander-type heating units is prohibited.
  - Heating Units: Listed and labeled for type of fuel being consumed, by a testing agency acceptable to authorities having jurisdiction, and marked for intended use.

- Permanent HVAC Units: If Owner authorizes use of permanent HVAC system for temporary use during construction, provide filter with MERV of 8 at each return-air grille in system and remove at end of performance of future activities.

### 1.4 TEMPORARY UTILITY INSTALLATION

- General: Install temporary service or connect to existing service.
  - Arrange with utility company, Owner, and existing users for time when service can be interrupted, if necessary, to make connections.
- Sanitary Facilities: Provide temporary toilets, wash facilities, and drinking-water fixtures. Comply with regulations and health codes for type, number, location, operation, and maintenance of fixtures and facilities.
- Heating and Cooling: Provide temporary heating and cooling required for curing or drying of completed installations or for protecting installed construction from adverse effects of low temperatures or high humidity. Select equipment that will not have a harmful effect on completed installations or elements being installed.
- Provide temporary lighting with local switching that provides adequate illumination for construction operations, observations, inspections, and traffic conditions.

### 1.5 SECURITY AND PROTECTION FACILITIES INSTALLATION

- Provide protection, operate temporary facilities, and conduct construction as required to comply with availability of temporary facilities to ensure and protect safety of personnel and property.
  - Remove each temporary facility when need for its service has ended, when it has been placed by authorized use of a permanent facility, or no later than Substantial Completion.
  - At Substantial Completion, repair, renovate, and clean permanent facilities used during construction period.

## SECTION 016000 - PRODUCT REQUIREMENTS

### 1.1 SECTION REQUIREMENTS

- The term "product" includes the terms "material," "equipment," "system," and terms of similar intent.
- Comparable Product Request: Submit request for consideration of each comparable product. Identify product or fabrication or installation method to be replaced.
  - Show compliance with requirements for comparable product requests.
  - Architects will review the proposed product and notify Contractor of its acceptance or rejection.
- Compatibility of Options: If Contractor is given option of selecting between two or more products, select product compatible with products previously selected.

- Deliver, store, and handle products using means and methods that will prevent damage, deterioration and loss, including theft. Comply with manufacturer's written instructions.
- Schedule delivery to minimize long-term storage at Project site and to prevent overcrowding of construction spaces.
- Deliver products to Project site in manufacturer's original sealed container or packaging, complete with labels and instructions for handling, storing, unpacking, protecting, and installing.
- Inspect products on delivery to ensure compliance with the Contract Documents and to ensure that products are undamaged and properly protected.
- Store materials in a manner that will not endanger Project structure.
- Store products that are subject to damage by the elements, under cover in a weatheright enclosure above grade, with ventilation adequate to prevent condensation.
- Warranties specified in other Sections shall be in addition to, and run concurrent with, other warranties required by the Contract Documents. Manufacturer's disclaimers and limitations on product warranties do not relieve Contractor of obligations under requirements of the Contract Documents.

- Provide products that comply with the Contract Documents, are undamaged, and, unless otherwise indicated, are new at the time of installation.
  - Provide products complete with accessories, trim, finish, and other devices and components needed for a complete installation and the intended use and effect.
  - Where products are accompanied by the term "as selected," Architect will make selection.
  - Descriptive, performance, and reference standard requirements in the Specifications establish salient characteristic of products.
  - Where the following headings are used to list products or manufacturers, the Contractor's options for product selection are as follows:
    - Products:
      - Where requirements include "one of the following," provide one of the products listed that complies with requirements.
      - Where requirements do not include "one of the following," provide one of the products listed that complies with requirements or a comparable product.
    - Manufacturers:
      - Where requirements "one of the following," provide a product that complies with requirements by one of the listed manufacturers.

- Where requirements do not include "one of the following," provide a product that complies with requirements by one of the listed manufacturers or another manufacturer.
  - Where Specifics include the term "match Architect's sample," provide a product that complies with requirements and matches Architect's sample. Architect's decision will be final on whether a proposed product matches.
  - Where Specifications include the phrase "as selected by Architect from manufacturer's full range" or similar phrase, select a product from that complete range that meets the requirements for color, pattern, density, or texture from manufacturer's product line that includes both standard and premium items.
- 1.3. COMPARABLE PRODUCTS
- Architect will consider Contractor's request for comparable product when the following conditions are satisfied:
    - Evidence that the proposed product does not require revisions to the Contract Documents, that it is consistent with the Contract Documents and will produce the indicated results, and that it is compatible with other portions of the Work.
    - Where dust would impair proper execution of the Work, Broom-clean or vacuum the entire work area, as appropriate.
    - List of similar installations for completed projects, if requested.
    - Samples, if requested.

## SECTION 017000 - EXECUTION AND CLOSEOUT REQUIREMENTS

### 1.1 EXECUTION REQUIREMENTS

- Cutting and Patching:
  - Structural Elements: When cutting and patching structural elements, notify Architect of locations and details of cutting and await directions from Architect before proceeding. Shore, brace, and support structural elements during cutting and patching.
  - Operational Elements: Do not cut and patch operation elements and related components in a manner that resulted in reducing their capacity to perform as intended or that results in increased maintenance or decreased operational life or safety.
  - Visual Elements: Do not cut and patch construction in a manner that results in visual evidence of cutting and patching. Do not cut and patch exposed construction in a manner that would, in Architect's opinion, reduce the building's aesthetic qualities.
- Manufacturer's Installation Instructions: Obtain and maintain on-site manufacturer's written recommendations and instructions for installation of products and equipment.

- Contractor's List of Incomplete Items: Initial submittal at Substantial Completion.
- Certified List of Incomplete Items: Final Submittal at Final Completion.
- Operation and Maintenance Data: Submit one (1) copy of manual
- PDF Electronic File: Assemble manual into a composite electronically indexed file. Submit on digital media.
- Record Drawings: Submit one (1) set of annotated record prints.
- Record Digital Data Files: Submit data file and one (1) set of plots.

- Substantial Completion Procedures
  - Prepare a list of items to be completed and corrected ("punch list"), the value of items on the list, and reasons why the Work is not complete.
  - Submittals Prior to Substantial Completion: Before requesting Substantial Completion inspection, complete the following:
    - Obtain and submit releases from authorities having jurisdiction permitting Owner unrestricted use of the Work and access to services and utilities. Include occupancy permits, operating certificates, and similar releases.
    - Submit closeout submittals specified in other sections, including project record documents, operations and maintenance manuals, property surveys, similar final record information, warranties, workmanship bonds, maintenance service agreements, final certifications, and similar documents.
    - Submit maintenance material submittals specified in other sections, including tools, spare parts, extra materials, and similar items, and delivered to location designated by Architect.
    - Submit test/adjust/balance records.
    - Submit changeover information related to Owner's occupancy, use, operation, and maintenance.
  - Procedures Prior to Substantial Completion: Before requesting Substantial Completion inspection, complete the following:
    - Advise Owner of pending insurance changeover requirements.
    - Make final changeover of permanent locks and deliver keys to Owner.
    - Complete startup and testing of systems and equipment.
    - Perform preventive maintenance on equipment used prior to Substantial Completion.
    - Advise Owner of changes in heat and other utilities.
    - Participate with Owner in conducting inspection and walk-through with local emergency responders.
    - Remove temporary facilities and controls.
    - Complete final cleaning requirements, including touchup painting.
    - Touch up and repair and restore marred exposed finishes to eliminate visual defects.
  - Inspection: Submit a written request for inspection for substantial completion. On receipt of request, Architect will proceed with inspection or advise Contractor of unfulfilled requirements. Architect will prepare the Certificate of Substantial Completion after inspection or will advise Contractor of items that must be completed or corrected before certificate will be issued.

- FINAL COMPLETION PROCEDURES
  - Submittals Prior to Final Completion: Before requesting inspection for determining final completion, complete the following:
    - In-place Materials: Use materials for patching identical to in-place materials. For exposed surfaces, use materials that visually match in-place adjacent surfaces to the fullest extent possible.
    - Cleaning Agents: Use cleaning materials and agents recommended by manufacturer or fabricator of the surface to be cleaned. Do not use cleaning agents that are potentially hazardous to health or property or that damage materials and service schedule.
  - Operation and Maintenance Documentation
    - Directory: Prepare a single, comprehensive directory of emergency, operation, and maintenance data and materials, listing items and their location to facilitate ready access to desired information.
    - Organization: Unless otherwise indicated, organize data into separate sections for each system and subsystems, and separate sections for each piece of equipment not part of a system.
    - Organize data into three-ring binders with identification on front and spine of each binder, and envelopes for folded drawings. Include the following:
      - Manufacturer's operation and maintenance documentation
      - Maintenance and service schedule
      - Maintenance service contracts. Include name and telephone number of service agents
      - Emergency instructions.
      - Spare parts list and local sources of maintenance materials.
    - Wiring Diagram.
    - Copies of warranties. Include procedures to follow and required notifications for warranty claims.

- RECORD DRAWINGS
  - Record Prints: Maintain a set of prints of the Contract Drawings and Shop Drawings, incorporating new and revised drawings as modifications are issued. Mark to show initial and revision varies from that shown originally. Accurately record information in an acceptable drawing technique.
    - Identify and date each record Drawing; include the designation "PROJECT RECORD DRAWING" in a prominent location.
- EXAMINATION AND PREPARATION
  - Existing Condition: The existence and location of underground and other utilities and construction indicated as existing are not guaranteed. Before beginning shoring, investigate and verify the existence and location of underground utilities, mechanical and electrical systems, and other construction affecting the Work.
  - Before proceeding with each component of the Work, examine substrates, area, and conditions, with Installer or Applicator present where indicated, for compliance with requirements for installation tolerances and other conditions affecting performance.
  - Verify compatibility of carbon-steel with existing materials.
  - Examine roughing-in for mechanical and electrical systems.
  - Examine walls, floors, and roofs for suitable conditions.
  - Proceed with installation only after unsatisfactory conditions have been corrected.
  - Take field measurements to ensure proper fit of the Work products.
  - Number of Side Rods for Multi-Wythe Concrete Masonry: One side rod for each face shell of hollow masonry units more than 4 inches in width, plus 1 side rod for each wythe of masonry 4 inches or less in width.
  - For multi-wythe masonry, provide type as follows: Truss design with continuous diagonal cross rods spaced not more than 16 inches o.c.
  - For multi-wythe masonry, provide type as follows: Truss design with continuous diagonal cross rods spaced not more than 16 inches o.c.
  - Number of Side Rods for Multi-Wythe Concrete Masonry: One side rod for each face shell of hollow masonry units more than 4 inches in width, plus 1 side rod for each wythe of masonry 4 inches or less in width.
  - Provide integral grade on cross rods at cavity walls.

- JOINT REINFORCEMENT
  - General: Provide tie assemblies as described below, allowing vertical or horizontal differential movement between wall and frame parallel to plane of wall but resisting tension and compression forces perpendicular to it.
  - For anchorage to steel framing, provide manufacturer's standard anchors with crimped 1/4-inch-diameter wire anchor section for welding to steel and triangular-shaped wire tie section sized to extend within 1 inch of masonry face. FR exposed conditions affecting performance.
  - Use Diameter: 0.1875 inch.
- ADJUSTABLE MASONRY-VENEER ANCHORS
  - General: Provide 2-piece assemblies allowing vertical or horizontal differential movement between wall and wall framing parallel to plane of wall but resisting tension and compression forces perpendicular to it for attachment over sheathing to metal studs, and with the following structural performance characteristics:
    - Structural Performance Characteristics: Capable of withstanding a 100-lbf (445-N) load in either tension or compression without deforming over, or developing play in excess of, 0.05 inch (1.3 mm).
  - Wire Diameter: 0.1875 inch.
  - Wire Shape: Triangular.

- Cut holes and slots neatly to minimum size required, and with minimum disturbance of adjacent carpenter. Temporarily cover openings when not in use.
- Where Specifics include the phrase "as selected by Architect from manufacturer's full range" or similar phrase, select a product from that complete range that meets the requirements for color, pattern, density, or texture from manufacturer's product line that includes both standard and premium items.
- Where dust would impair proper execution of the Work, Broom-clean or vacuum the entire work area, as appropriate.
- Remove debris from concealed spaces before enclosing the space.
- Complete the following cleaning operations before requesting inspection for certification of Substantial Completion:
  - Clean Project site, yard, and grounds, in areas disturbed by construction activities. Sweep paved areas; remove stains, spills, and foreign deposits. Rake grounds that are neither planted nor paved to a smooth, even-textured surface.
  - Sweep paved areas broom clean. Remove spills, stains, and other foreign deposits.
  - Remove labels that are not permanent.
  - Clean transparent materials, including mirrors. Remove excess glazing compounds.
  - Clean exposed finishes to a dust-free condition, free of stains, films, and foreign substances. Sweep concrete floors broom clean.
  - Remove carpeted surfaces and wash resilient flooring.
  - Wipe surfaces of mechanical and electrical equipment. Remove excess lubrication and foreign substances. Clean plumbing fixtures. Clean light fixtures, lamps, globes, and reflectors.
  - Replace disposable air filters and clean permanent air filters. Clean exposed surfaces of diffusers, registers, and grilles.

- OPERATION AND MAINTENANCE MANUAL PREPARATION
  - Operation and Maintenance Manuals: Assemble a complete set of operation and maintenance data indicating operation and maintenance of each system, subsystem, and piece of equipment not part of a system.
  - Manufacturer's Data: Where manuals contain manufacturers' standard printed data, include only sheets pertinent to product or component installed. Mark each sheet to identify each product or component incorporated into the Work. If data include more than one item in a tabular format, identify each item using appropriate reference numbers from the Contract Documents. Identify data applicable to the Work and delete references to information not applicable.
    - Prepare supplementary text if manufacturers' standard printed data are unavailable where the information is necessary for proper operation and maintenance of equipment or systems.
  - Drawings: Prepare drawings supplementing manufacturers' printed data to illustrate the relationship of component parts of equipment and systems and to illustrate control sequence and flow diagrams.
- DEMONSTRATION AND TRAINING
  - Engage qualified instructors to instruct Owner's personnel to adjust, operate, and maintain systems, subsystems, and equipment not part of a system. Include a detailed review of the following:
    - Include instruction for basis of system design and operational requirements, review of documentation, emergency procedures, operations, adjustments, troubleshooting, maintenance, and repairs.

- GENERAL
  - This section includes concrete masonry unit and brick masonry unit.
  - QUALITY ASSURANCE
    - Single-source Responsibility for Masonry Units: Obtain exposed masonry units of a uniform texture and color and a uniform blend with the same manufacturer for these characteristics, from one source and by a single manufacturer for each different product required.
    - Single-source Responsibility for Mortar Materials: Obtain mortar ingredients of a uniform quality, including color for exposed masonry, from one manufacturer for each cementitious component and from one source or producer for each aggregate.
  - DELIVERY, STORAGE, AND HANDLING
    - Store masonry units and materials on elevated platforms, under cover, and in a dry location to prevent deterioration or damage. If units become wet, do not install until they are in an air-dried condition.

- PROJECT CONDITIONS
  - Protection of Masonry: During erection, cover tops of walls, projections, and sills with waterproof sheeting at end of each day's work. Cover partially completed masonry when construction is not in progress.
  - Do not apply uniform floor or roof loads for at least 12 hours and concentrated loads for at least 3 days after building masonry wall or columns.
  - Cold-Weather Requirements: Adhere to ACT 5.30 and ACT 530.1.
  - Hot-Weather Requirements: Protect unit masonry work when temperature and humidity conditions produce excessive evaporation of water from mortar and grout. Provide artificial shade and wind breaks and use cooled materials as required. Do not apply mortar to substrates with temperatures of 100 degrees F and above.

- PRODUCTS
  - MANUFACTURERS
    - Masonry Units: Subject to compliance with requirements. See Masonry Schedule in Contract Documents for manufacturer and type.
  - Joint Reinforcement, Ties, and Anchors:
    - Dur-O-Wall, Inc.
    - Hesman Building Products, Inc.
    - Masonry Reinforcing Corp. of America
  - CONCRETE MASONRY UNITS
    - General:
      - Provide shapes indicated and as follows for each form of concrete masonry unit required.
      - Provide special shapes for lintels, corners, jamps, sash, control joints, headers, bonding, and other special conditions.
      - Provide bullnose units for outside corners, unless otherwise indicated.
    - Provide square-edged units for outside corners, except where indicated as bullnose.
  - Concrete Masonry Units: ASTM C 90 and as follows:
    - Unit Compressive Strength: Provide units with minimum average net-area compressive strength indicated below:
      - Weight Classification: Lightweight.
    - Integral Water Repellent: Provide units produced with liquid polymeric, integral water-repellent admixture that does not reduce flexural bond strength. Units made with integral water repellent, when used as a permanent water repellent, shall be applied to exterior masonry surfaces in accordance with the manufacturer's instructions and separate sections for each piece of equipment not part of a system.
    - Organize data into three-ring binders with identification on front and spine of each binder, and envelopes for folded drawings. Include the following:
      - Manufacturer's operation and maintenance documentation
      - Maintenance and service schedule
      - Maintenance service contracts. Include name and telephone number of service agents
      - Emergency instructions.
      - Spare parts list and local sources of maintenance materials.
    - Wiring Diagram.
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- EXAMINATION AND PREPARATION
  - Existing Condition: The existence and location of underground and other utilities and construction indicated as existing are not guaranteed. Before beginning shoring, investigate and verify the existence and location of underground utilities, mechanical and electrical systems, and other construction affecting the Work.
  - Before proceeding with each component of the Work, examine substrates, area, and conditions, with Installer or Applicator present where indicated, for compliance with requirements for installation tolerances and other conditions affecting performance.
  - Verify compatibility of carbon-steel with existing materials.
  - Examine roughing-in for mechanical and electrical systems.
  - Examine walls, floors, and roofs for suitable conditions.
  - Proceed with installation only after unsatisfactory conditions have been corrected.
  - Take field measurements to ensure proper fit of the Work products.
  - Number of Side Rods for Multi-Wythe Concrete Masonry: One side rod for each face shell of hollow masonry units more than 4 inches in width, plus 1 side rod for each wythe of masonry 4 inches or less in width.
  - For multi-wythe masonry, provide type as follows: Truss design with continuous diagonal cross rods spaced not more than 16 inches o.c.
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  - Provide integral grade on cross rods at cavity walls.

- JOINT REINFORCEMENT
  - General: Provide tie assemblies as described below, allowing vertical or horizontal differential movement between wall and frame parallel to plane of wall but resisting tension and compression forces perpendicular to it for attachment over sheathing to metal studs, and with the following structural performance characteristics:
    - Structural Performance Characteristics: Capable of withstanding a 100-lbf (445-N) load in either tension or compression without deforming over, or developing play in excess of, 0.05 inch (1.3 mm).
  - Wire Diameter: 0.1875 inch.
  - Wire Shape: Triangular.

- GENERAL
  - This section includes concrete masonry unit and brick masonry unit.
  - QUALITY ASSURANCE
    - Single-source Responsibility for Masonry Units: Obtain exposed masonry units of a uniform texture and color and a uniform blend with the same manufacturer for these characteristics, from one source and by a single manufacturer for each different product required.
    - Single-source Responsibility for Mortar Materials: Obtain mortar ingredients of a uniform quality, including color for exposed masonry, from one manufacturer for each cementitious component and from one source or producer for each aggregate.
  - DELIVERY, STORAGE, AND HANDLING
    - Store masonry units and materials on elevated platforms, under cover, and in a dry location to prevent deterioration or damage. If units become wet, do not install until they are in an air-dried condition.

- PROJECT CONDITIONS
  - Protection of Masonry: During erection, cover tops of walls, projections, and sills with waterproof sheeting at end of each day's work. Cover partially completed masonry when construction is not in progress.
  - Do not apply uniform floor or roof loads for at least 12 hours and concentrated loads for at least 3 days after building masonry wall or columns.
  - Cold-Weather Requirements: Adhere to ACT 5.30 and ACT 530.1.
  - Hot-Weather Requirements: Protect unit masonry work when temperature and humidity conditions produce













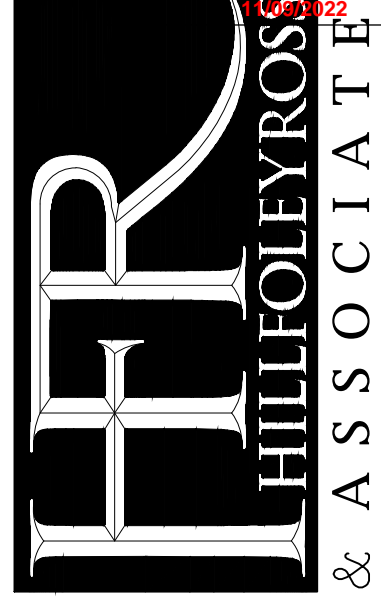












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Heartland Dental - Lee's Summit  
Market Street Center  
Lee's Summit, Missouri 64082  
For: Heartland Dental  
1200 Network Centre Drive  
Effingham, IL 62401

07/22/22 For  
mk date Construction  
issue

Life Safety  
Plan and  
Details

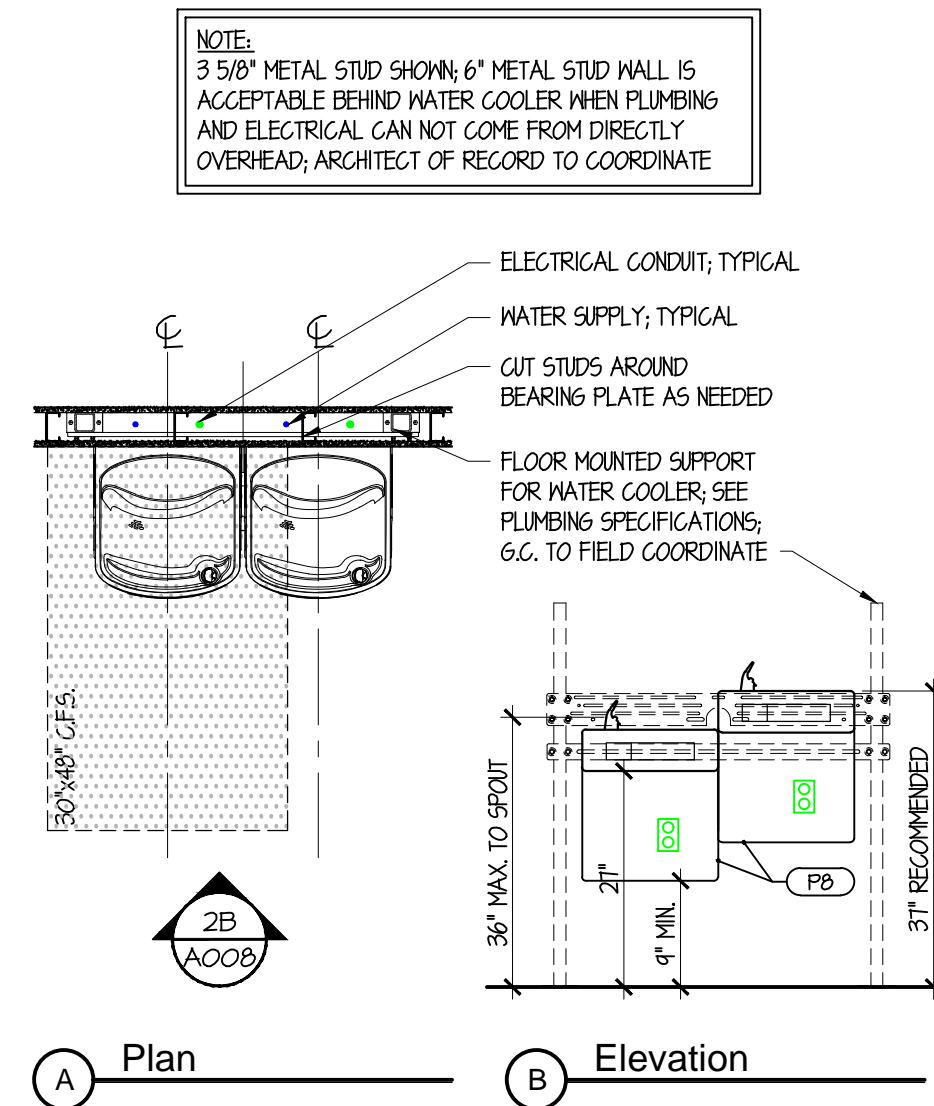
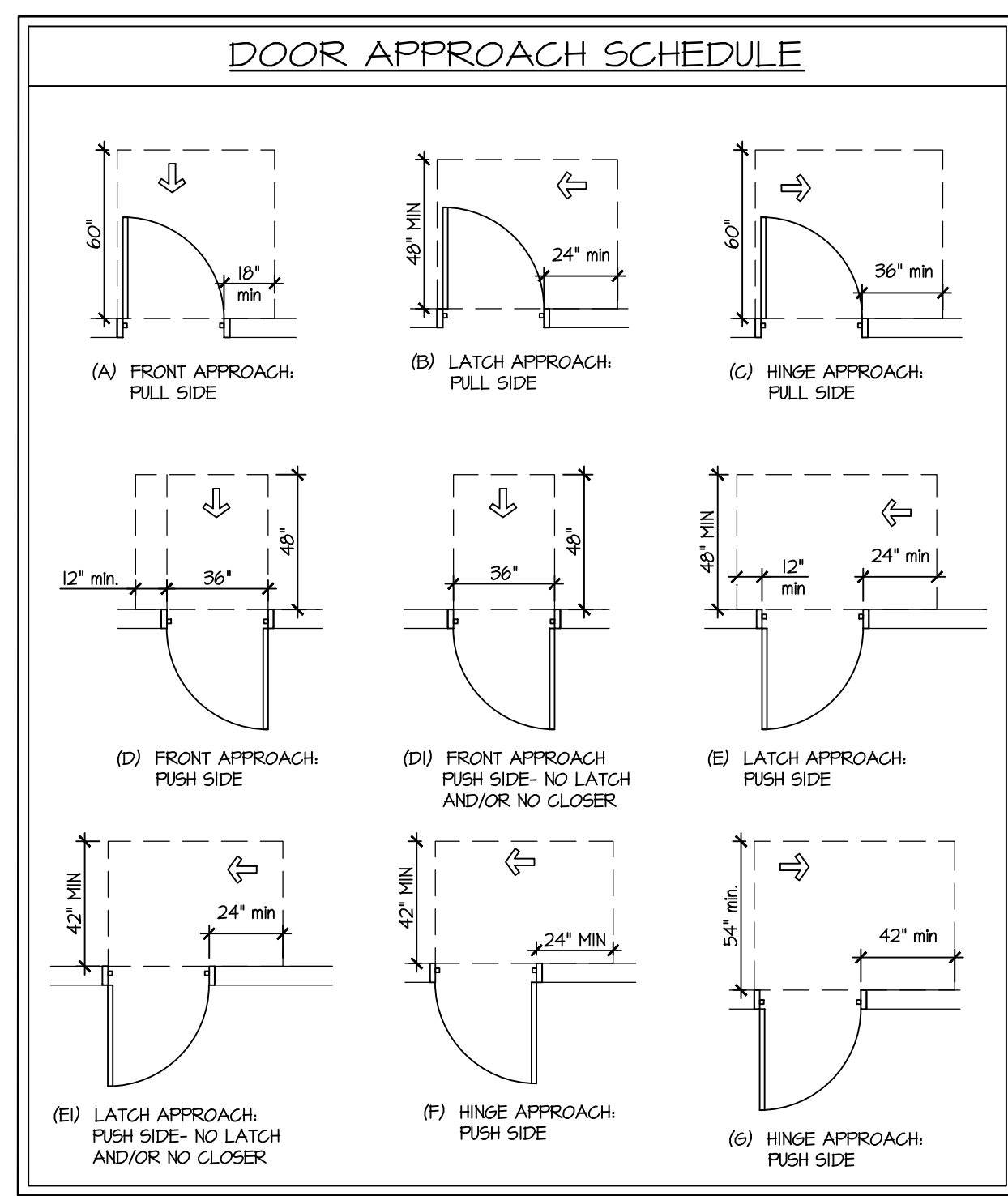
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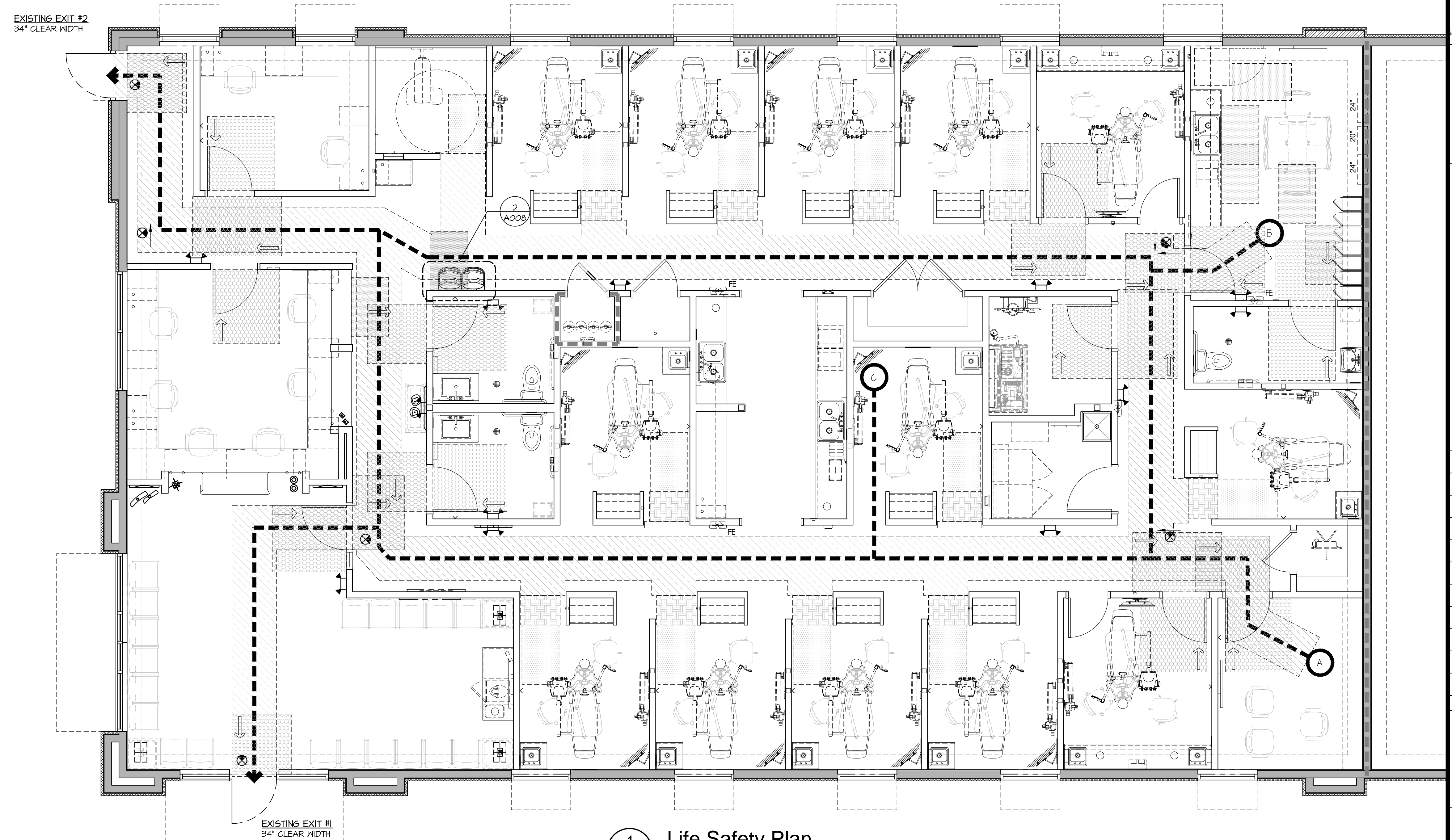
LIFE SAFETY LEGEND	
	FIRE EXTINGUISHER
	EMERGENCY LIGHT REFER TO ELECTRICAL FOR SPECIFICATIONS
	EXIT LIGHT REFER TO ELECTRICAL FOR SPECIFICATIONS
	PATH OF EGRESS
LIFE SAFETY NOTES	
1. TRAVEL DISTANCE SHALL NOT EXCEED 200 FT IN BUSINESS OCCUPANCIES WITHOUT AN AUTOMATIC SPRINKLER SYSTEM; (30.2.6.2 NFPA 101 LIFE SAFETY CODE 2012)	
2. COMMON PATH OF TRAVEL SHALL NOT EXCEED 75 FT; (30.2.5.3.3 NFPA 101 LIFE SAFETY CODE 2012)	
3. BUILDING IS PROTECTED THROUGHOUT WITH AN APPROVED NFPA 15 FIRE PROTECTION SYSTEM	
4. REFER TO THE DIMENSION PLAN ON SHEET A101 FOR WALL PARTITION TYPES AND DETAILS WHICH CROSS REFERENCE U.L. WALL CONSTRUCTION DETAILS ON SHEET A006	
5. FIRE EXTINGUISHER LOCATIONS ARE SHOWN ON THIS PLAN FOR GENERAL LOCATIONS ONLY; PROVIDED BY EFFINGHAM BUILDERS SUPPLY AND INSTALLED BY G.C.	
TRAVEL DISTANCES	
FROM POINT A TO EXIT #1	94'-7"
FROM POINT A TO EXIT #2	117'-10"
FROM POINT B TO EXIT #1	106'-4"
FROM POINT B TO EXIT #2	89'-10"
FROM POINT C TO EXIT #1	71'-8"
FROM POINT C TO EXIT #2	94'-11"
ALL COMMON PATHS OF TRAVEL ARE LESS THAN 75'	

F.R. WOOD NOTE  
ALL STRUCTURAL WOOD PRODUCTS, INCLUDING BUT NOT LIMITED TO PLYWOOD AND BLOCKING TO BE FIRE RETARDANT TREATED

ACCESSIBILITY LEGEND	
	MANEUVERING CLEARANCE AT DOORS
	36" MINIMUM CLEAR WIDTH "ACCESSIBLE" ROUTE
	32" MINIMUM CLEAR ACCESSIBLE ROUTE; ALLOWED FOR 24" MAX.
	30X48 CLEAR FLOOR SPACE FOR WHEELCHAIR AT FIXTURES
	5'-0" TURNING CIRCLE
	TURNING "T"
	DOOR APPROACH; MAINTAIN ALL MINIMUM CLEARANCES AS INDICATED ON DOOR APPROACH SCHEDULE
1. ALL CROSS SLOPES THAT ARE A PORTION OF THE ACCESSIBLE ROUTE SHALL BE A MAXIMUM OF 2% SLOPE	
2. ALL PANIC HARDWARE SHALL BE MOUNTED NO HIGHER THAN 48" A.F.F.	
3. ALL THRESHOLDS AT FLOOR LEVEL CHANGES AND TRANSITIONS SHALL NOT EXCEED 1/2" IN HEIGHT AND SHALL BE BEVELED WITH A SLOPE NO GREATER THAN 1:2	
4. ALL LIGHT SWITCHES, VOLUME CONTROLS AND THERMOSTATS IN PUBLIC AREAS SHALL BE MOUNTED NO HIGHER THAN 48" A.F.F. TO THE OPERABLE PART UNO.	
5. ALL ACCESSIBLE ELEMENTS ARE TO BE INSTALLED ACCORDING TO THE STANDARDS AND REQUIREMENTS SET FORTH BY THE ACCESSIBILITY CODE REFERENCED ON THE COVER SHEET	
6. ICC/ANSI A117.1-2009 403.5 ALLOWING REDUCTION IN ACCESSIBLE PATHS LESS THAN 24" LONG	



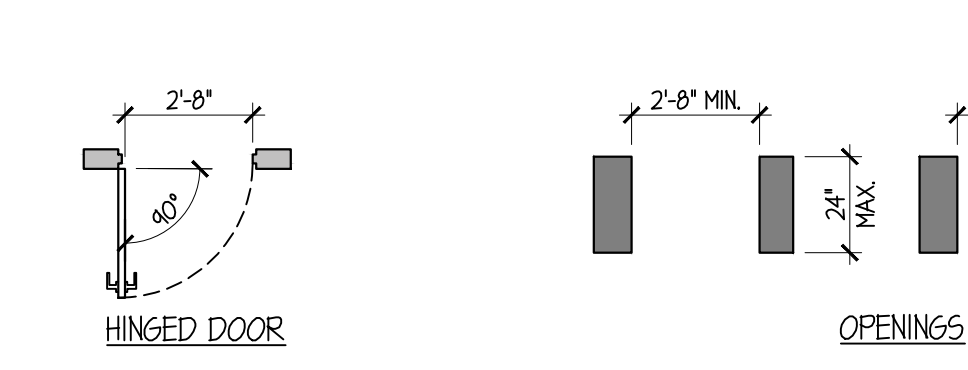
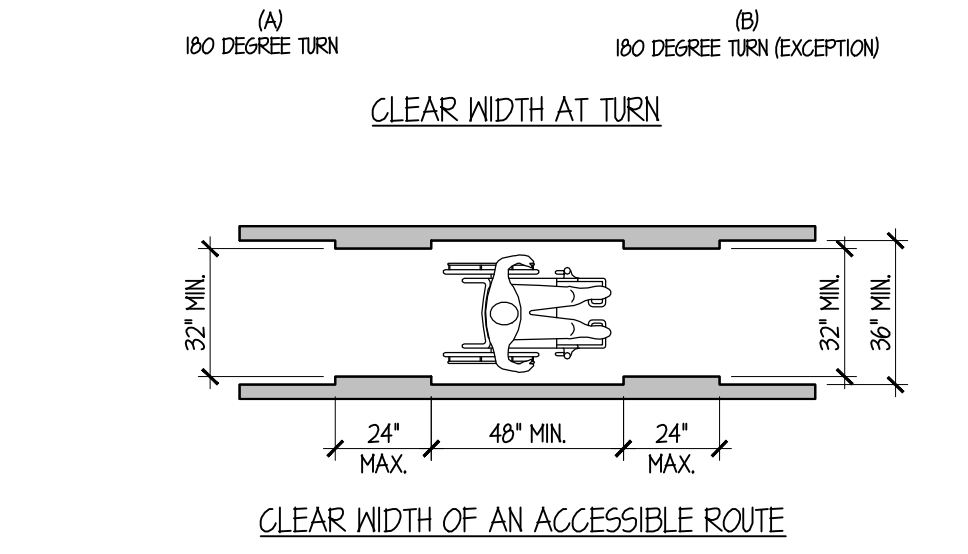
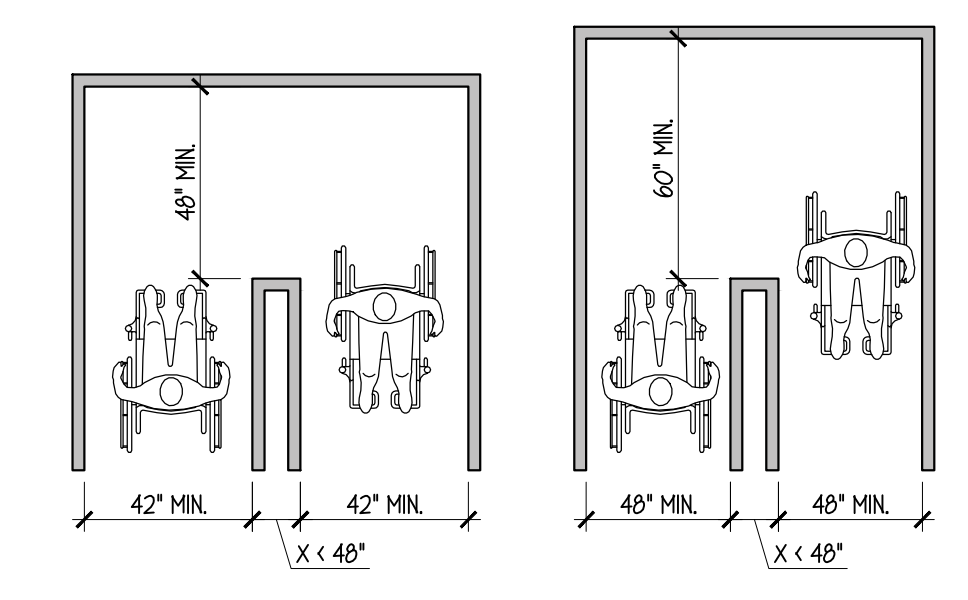
2 Water Cooler - Bi-level





### GENERAL ACCESSIBILITY NOTES

1. ACCESSIBLE ACCESS TO THESE FACILITIES SHALL BE PROVIDED AT PRIMARY ENTRANCES.
2. THE SLOPE AND CROSS SLOPES OF PUBLIC WALKS AND CLEAR FLOOR SPACES SHALL NOT EXCEED MAX. CROSS SLOPE 2 %.
3. WALKING SURFACES SLOPING GREATER THAN 2 % SHALL BE SLIP RESISTANT.
4. ALL THRESHOLDS FLOOR LEVEL CHANGES AND TRANSITIONS SHALL NOT EXCEED 1/2" IN HEIGHT AND SHALL BE BEVELED WITH A SLOPE NO GREATER THAN 1:2; SEE T/A004.
5. PROVIDE A 60" x 60" MIN. LANDING ON STRIKE SIDE OF DOOR WITH 44" MINIMUM WIDTH IN DIRECTION OF TRAVEL.
6. WALKS SHALL EXTEND 24" TO THE SIDE OF THE STRIKE EDGE OF DOOR OR GATE THAT SWINGS TOWARD THE WALK.
7. EVERY REQUIRED EXIT DOORWAY SHALL BE SIZED FOR A DOOR NOT LESS THAN 3'-0" WIDE BY 6'-8" HIGH CAPABLE OF OPENING 40 DEGREES AND MOUNTED SO THAT THE CLEAR WIDTH OF THE EXIT SHALL BE A MINIMUM OF 32".
8. THRESHOLDS TO BE A MAXIMUM OF 1/2" ABOVE THE ADJACENT FINISHED FLOOR.
9. MAXIMUM EFFORT TO OPERATE DOORS SHALL NOT EXCEED 5 LBS FOR INTERIOR DOORS AND 15 LBS FOR EXTERIOR DOORS.
10. THE BOTTOM 10" OF ALL DOORS EXCEPT AUTOMATIC SLIDERS SHALL HAVE A SMOOTH UNINTERRUPTED SURFACE.
11. THE BUILDING SHALL COMPLY WITH THE 2010 ADA STANDARDS FOR ACCESSIBLE DESIGN AND ANSI A117.1-2009, INCLUDING BUT NOT LIMITED TO IBC CHAPTER 11.
12. CONTROLS AND OPERATING MECHANISMS SHALL BE ACCESSIBLE AND HAVE MOUNTING HEIGHTS COMPLYING WITH ICC/ANSI A117.1-2009, SECTION 4.21.
13. ALL LIGHT SWITCHES, VOLUME CONTROLS, AND THERMOSTATS IN PUBLIC AREAS SHALL BE MOUNTED NO HIGHER THAN 48" AFF UNO.
14. ALL PANIC HARDWARE SHALL BE MOUNTED NO HIGHER THAN 46" AFF.
15. ALL ROOM, DIRECTIONAL, AND INFORMATION SIGNS SHALL BE ACCESSIBLE DESIGN COMPLYING WITH ICC/ANSI A117.1-2009, SECTION 4.13 AND 4.30; SEE DETAILS 9110/A004.
16. ICC/ANSI A117.1-2009, SECTION 403.5, ALLOWS REDUCTION IN ACCESSIBLE PATHS LESS THAN 24" LONG; SEE DETAIL 8/A004.
17. FUTURE TENANTS ARE RESPONSIBLE FOR MAINTAINING EXISTING ACCESSIBLE ELEMENTS AND SHALL COMPLY TO ALL CODE REQUIREMENTS AS PART OF THEIR TENANT IMPROVEMENTS.

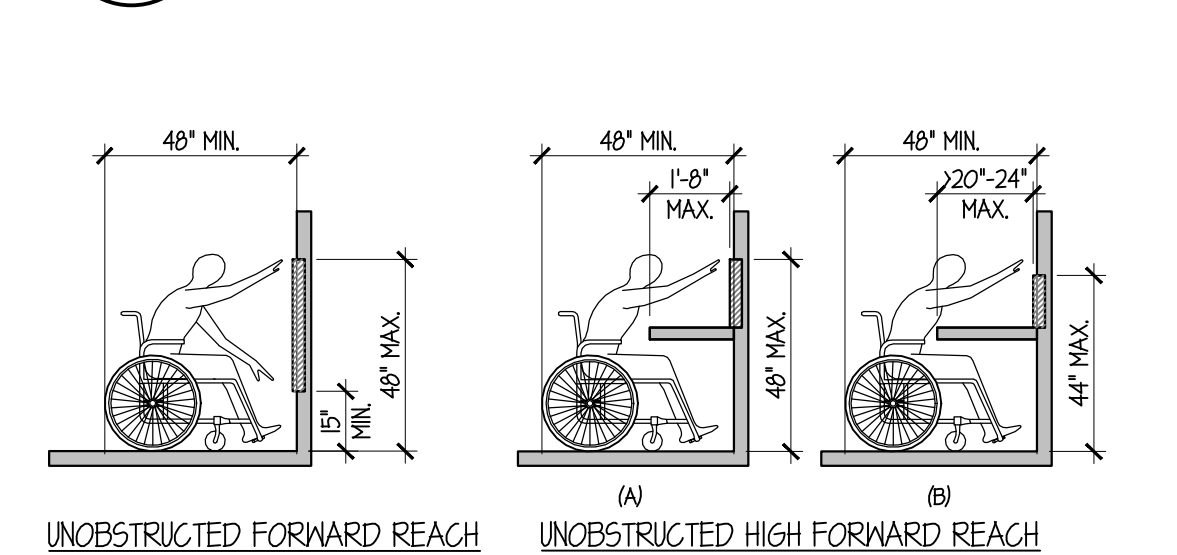


### 8 Clear Width at Doors & Routes

SCALE: 1/4" = 1'-0"

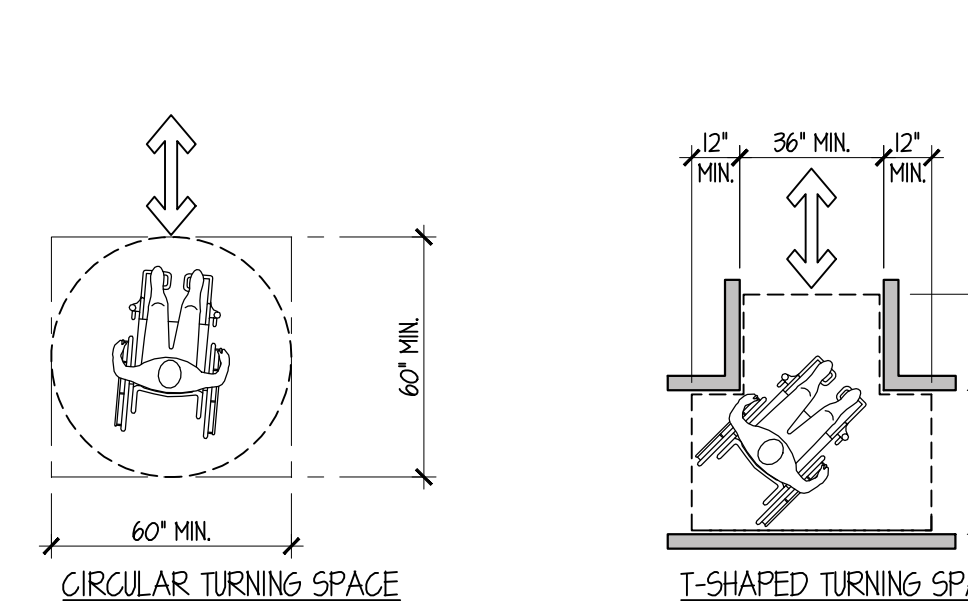
### 4 Lavatory and Knee Clearance

SCALE: 1/4" = 1'-0"



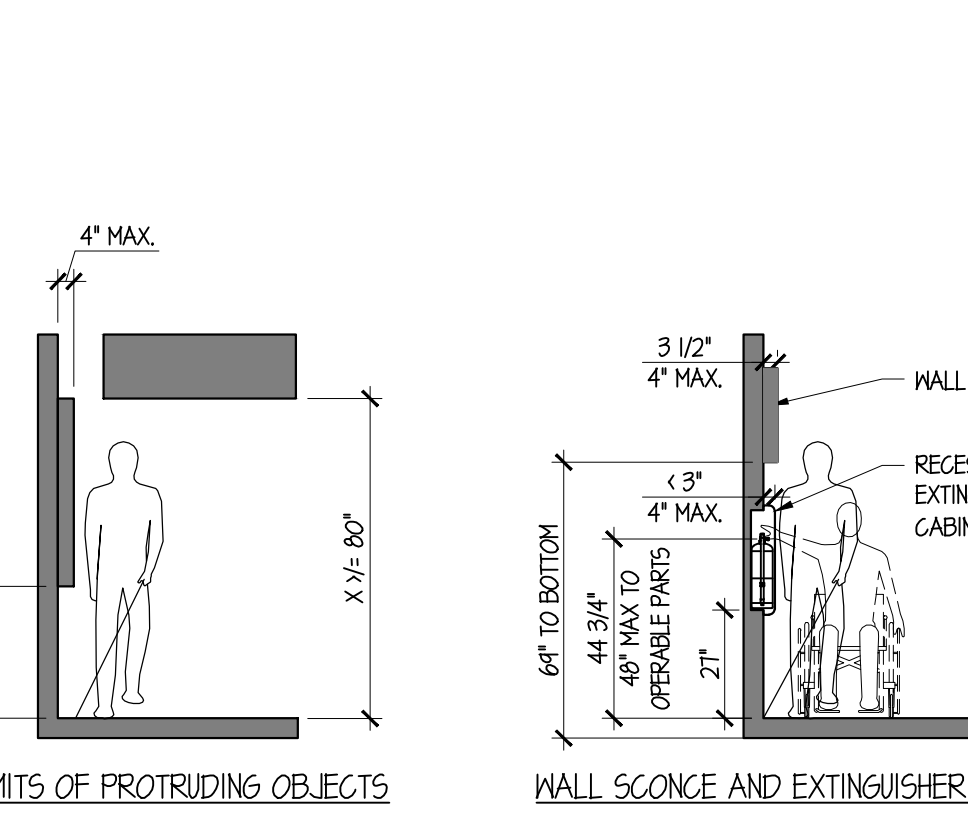
### 7 Changes in Level

SCALE: 1/4" = 1'-0"



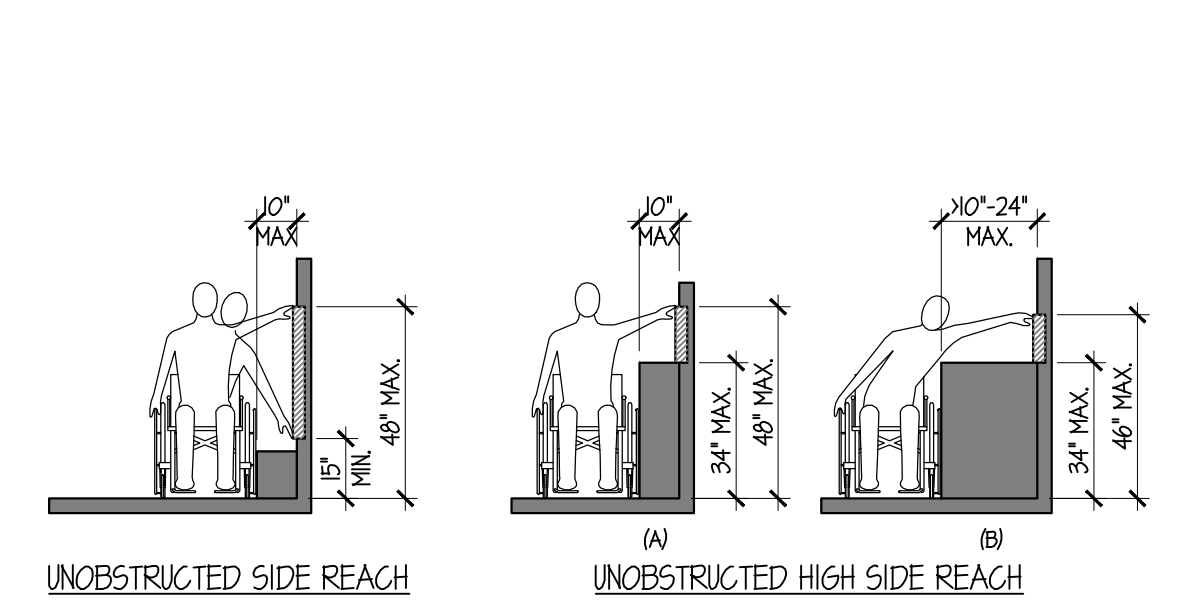
### 6 Wheelchair Turning

SCALE: 1/4" = 1'-0"



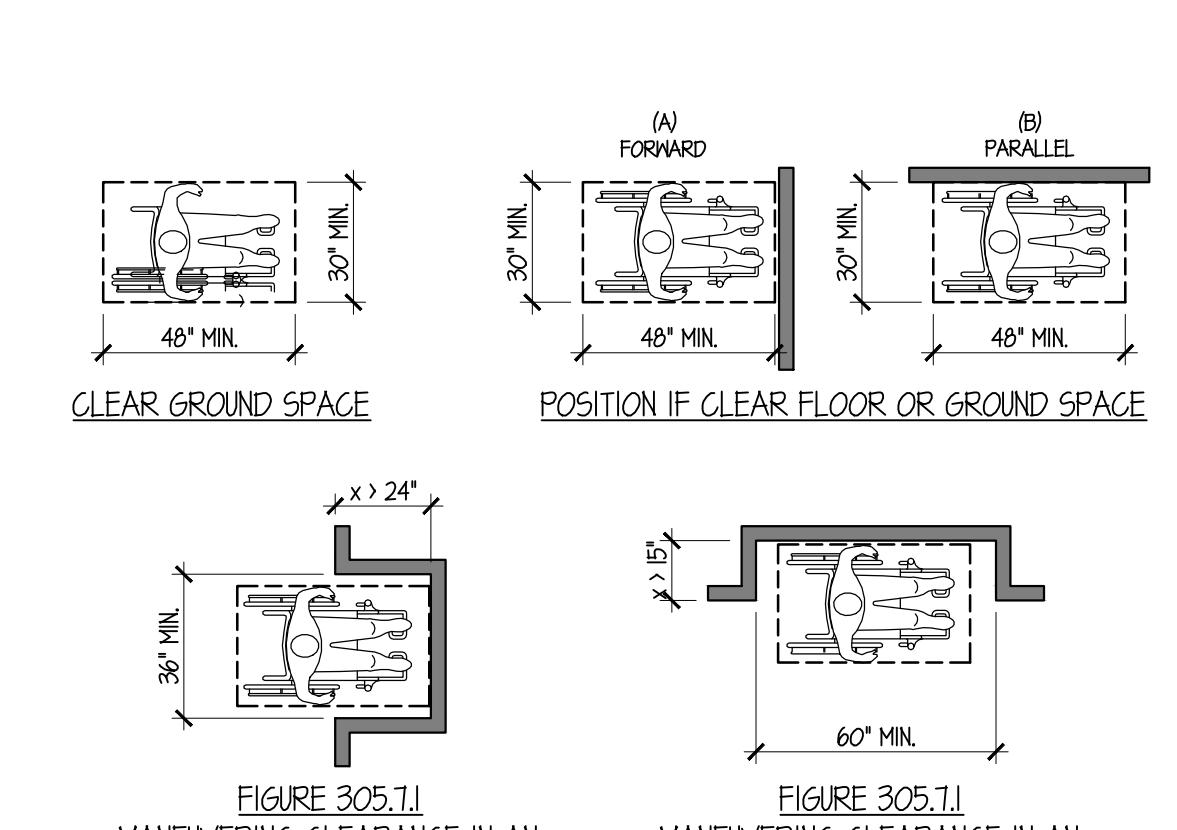
### 3 Forward Reach

SCALE: 1/4" = 1'-0"



### 2 Side Reach

SCALE: 1/4" = 1'-0"



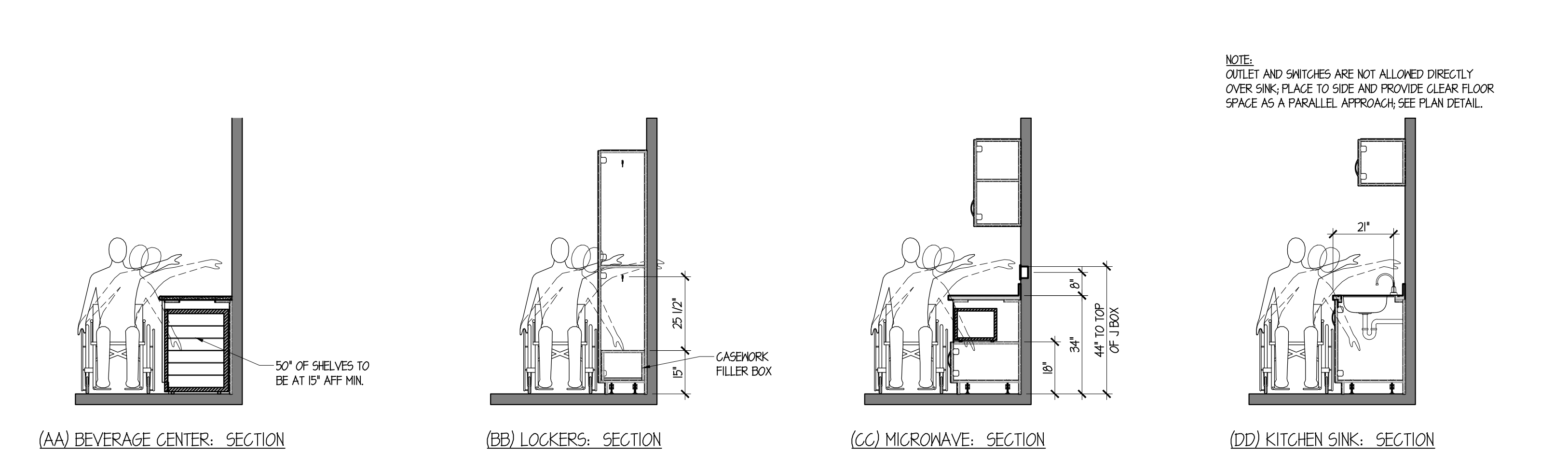
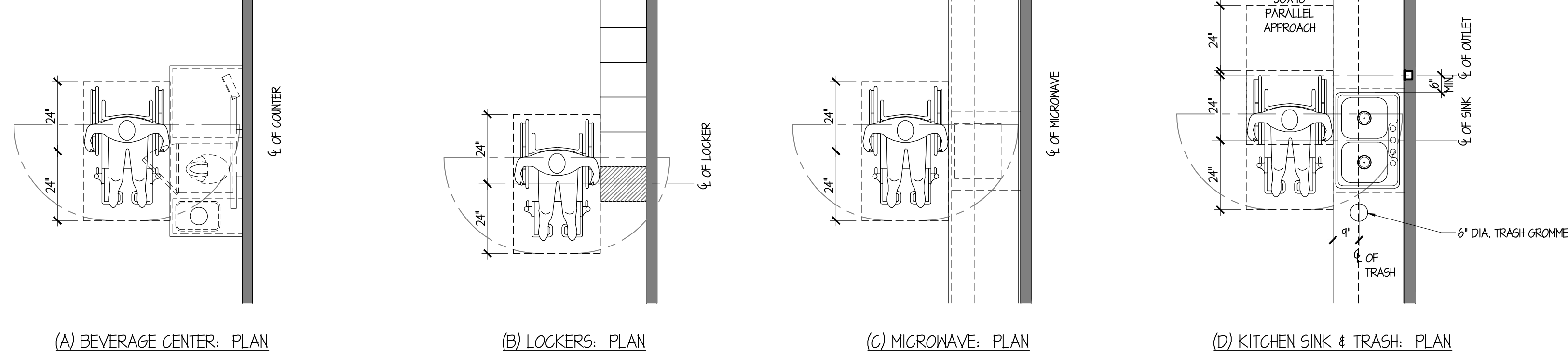
### 5 Protruding Objects

SCALE: 1/4" = 1'-0"



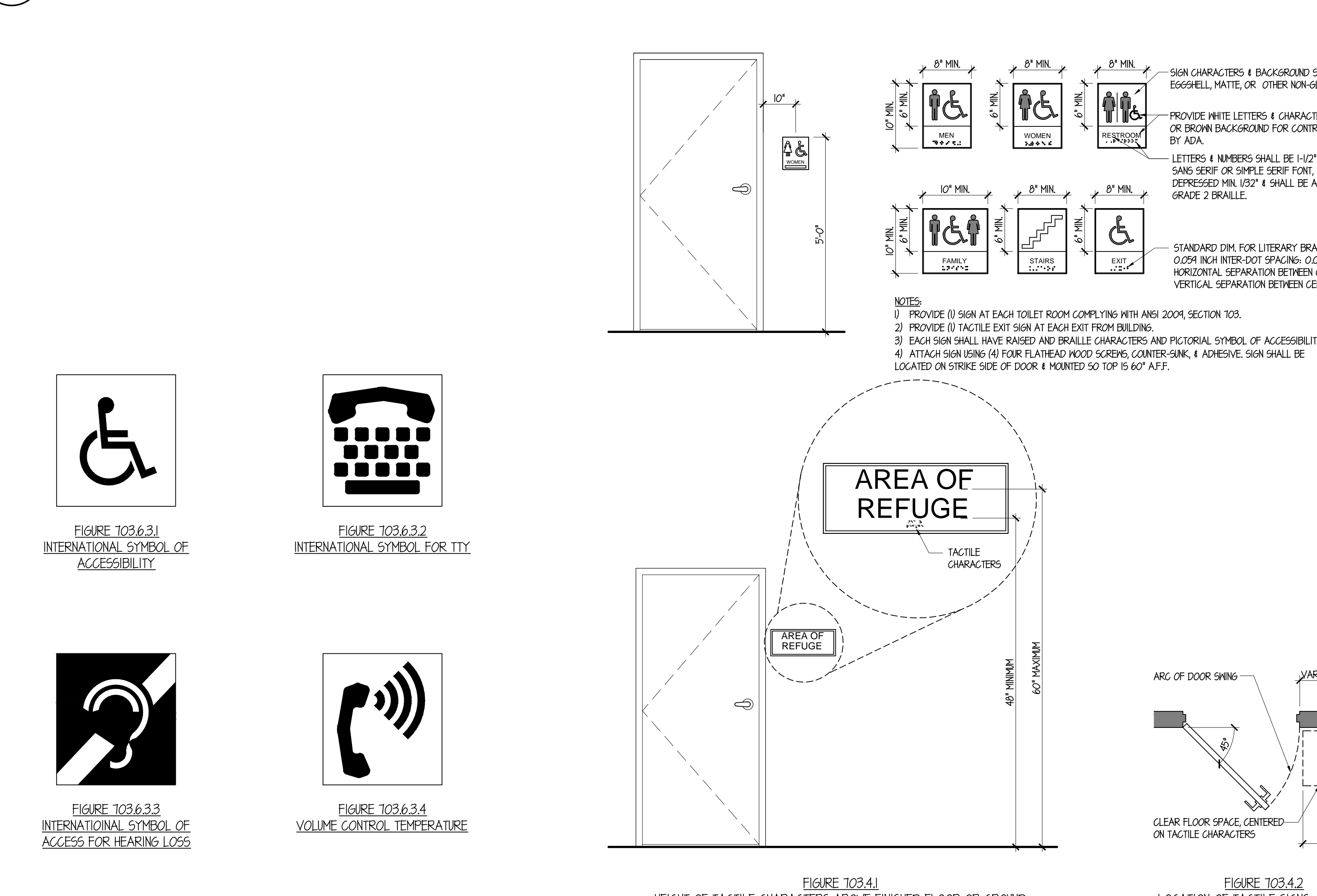
### 1 Lavatory and Knee Clearance

SCALE: 1/4" = 1'-0"



### 11 ADA Approach and Reach Details: Heartland Casework

SCALE: 3/8" = 1'-0"



### 10 Variable Message Signage

SCALE: N.T.S.



### 9 Communication Elements and Features

SCALE: N.T.S.





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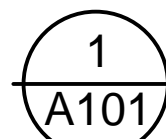
sealed: 07-22-22



	07/22/22	For Construction
mk	date	issue

A101

HFR 22.911



SCALE: 1/4" = 1'-0"





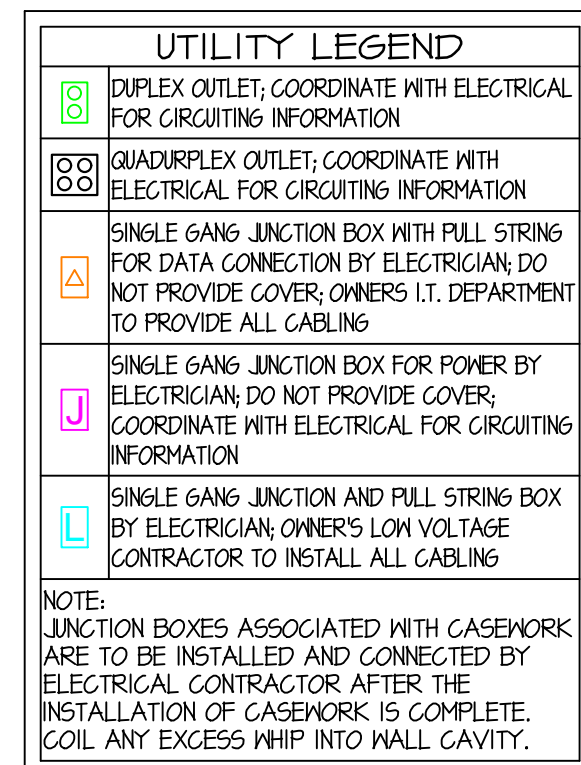
Lee's Summit, Missouri 64082

For:

### Treatment Room Details

A102

HFR 22.911



## 5A Wall Framing

5B Wall Finishes

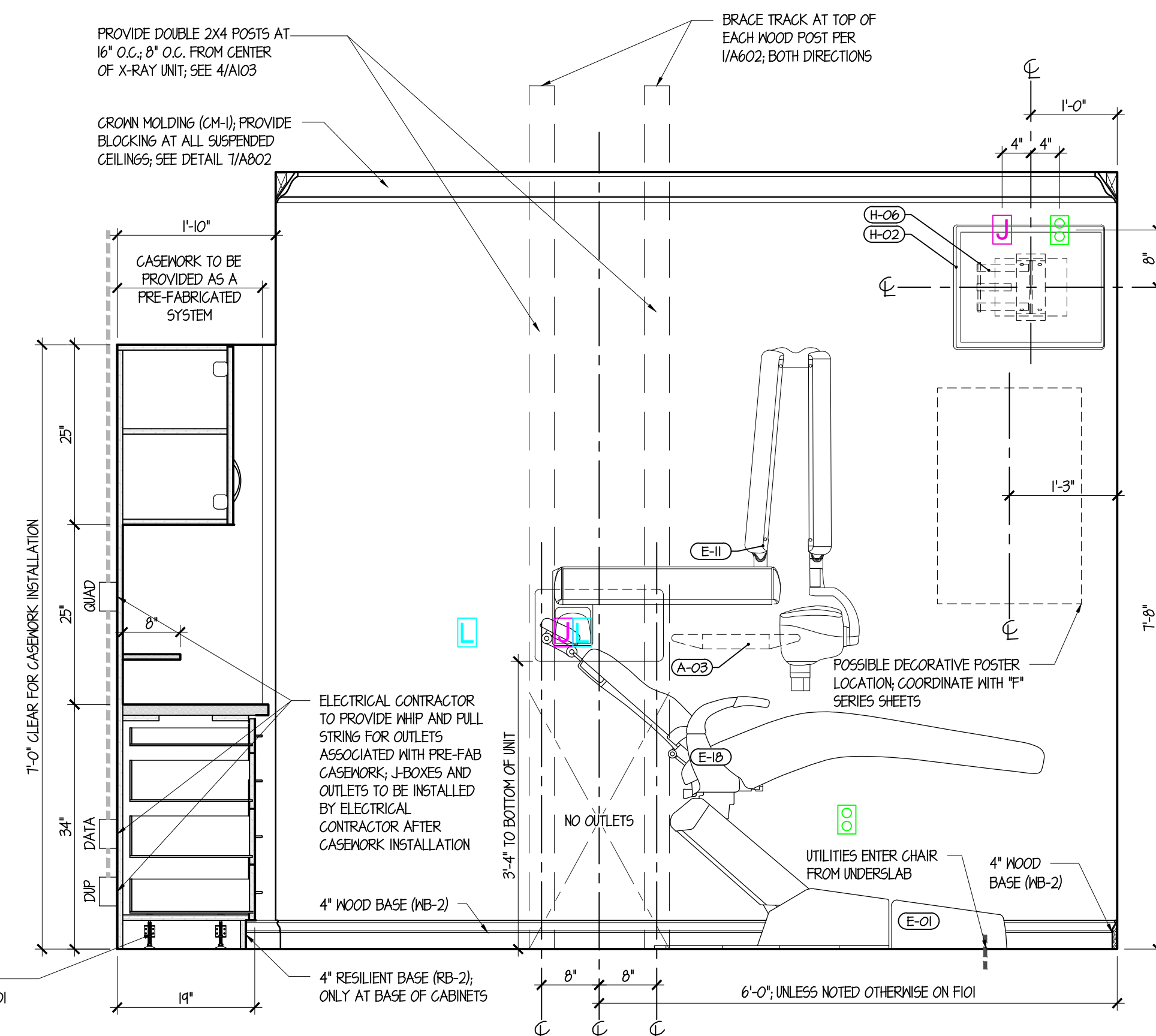
5 Detail: Treatment Room 12 O'clock Wall

SCALE: 3/4" = 1'-0"



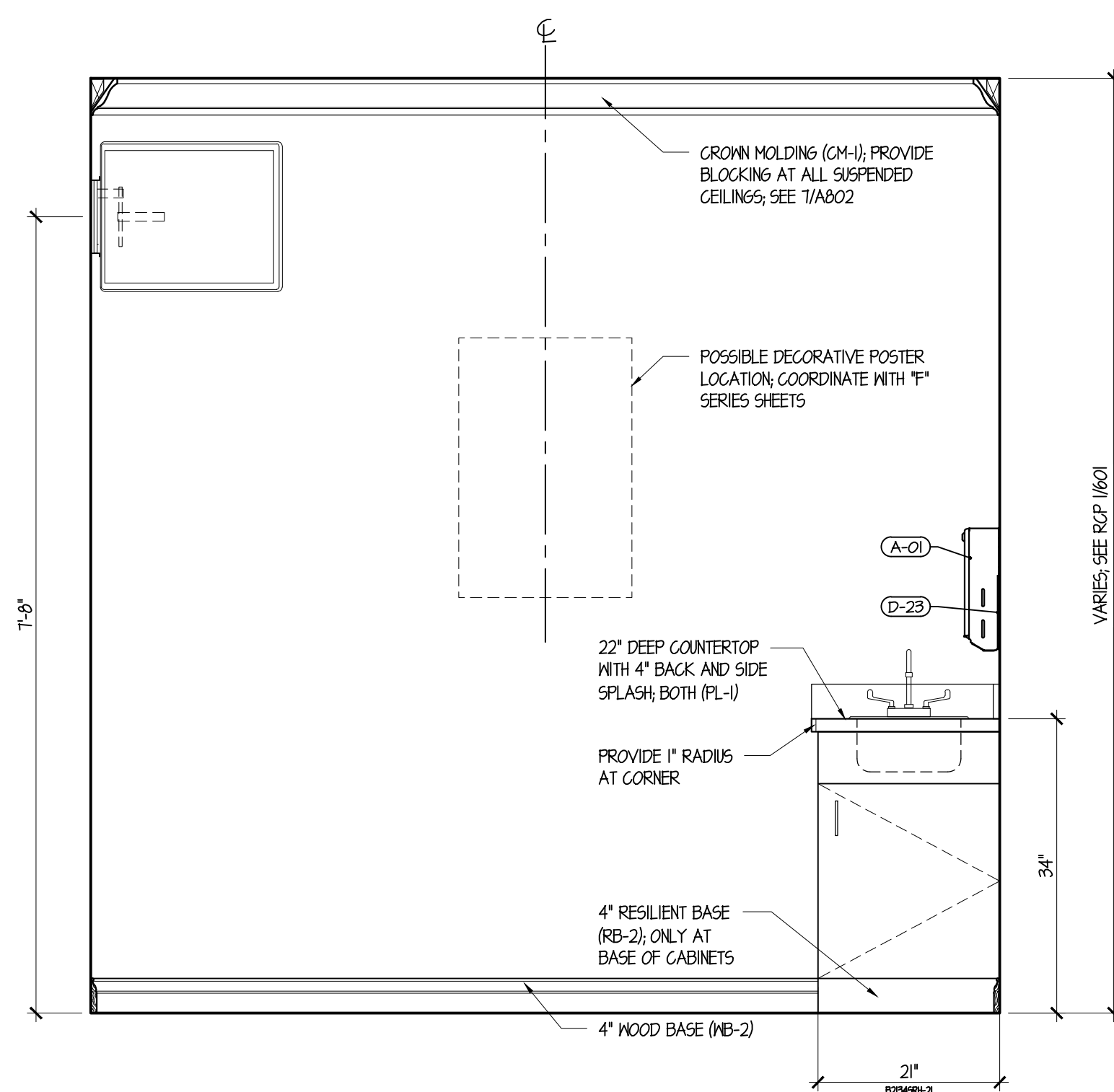
4 Elevation: Treatment Room 12 O'clock Wall

SCALE: 3/4" = 1'-0"



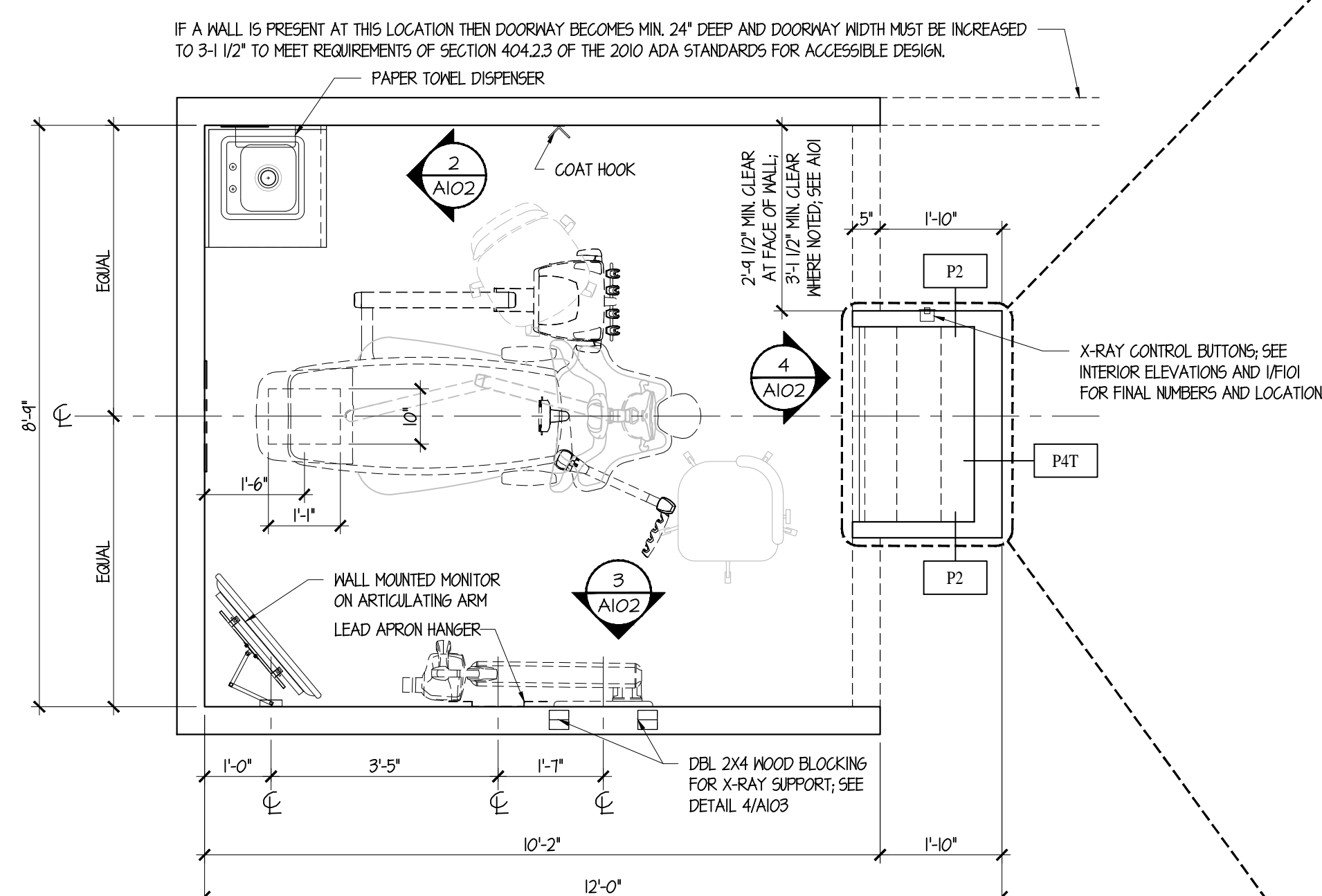
3 Elevation: Treatment X-Ray Wall

SCALE: 3/4" = 1'-0"



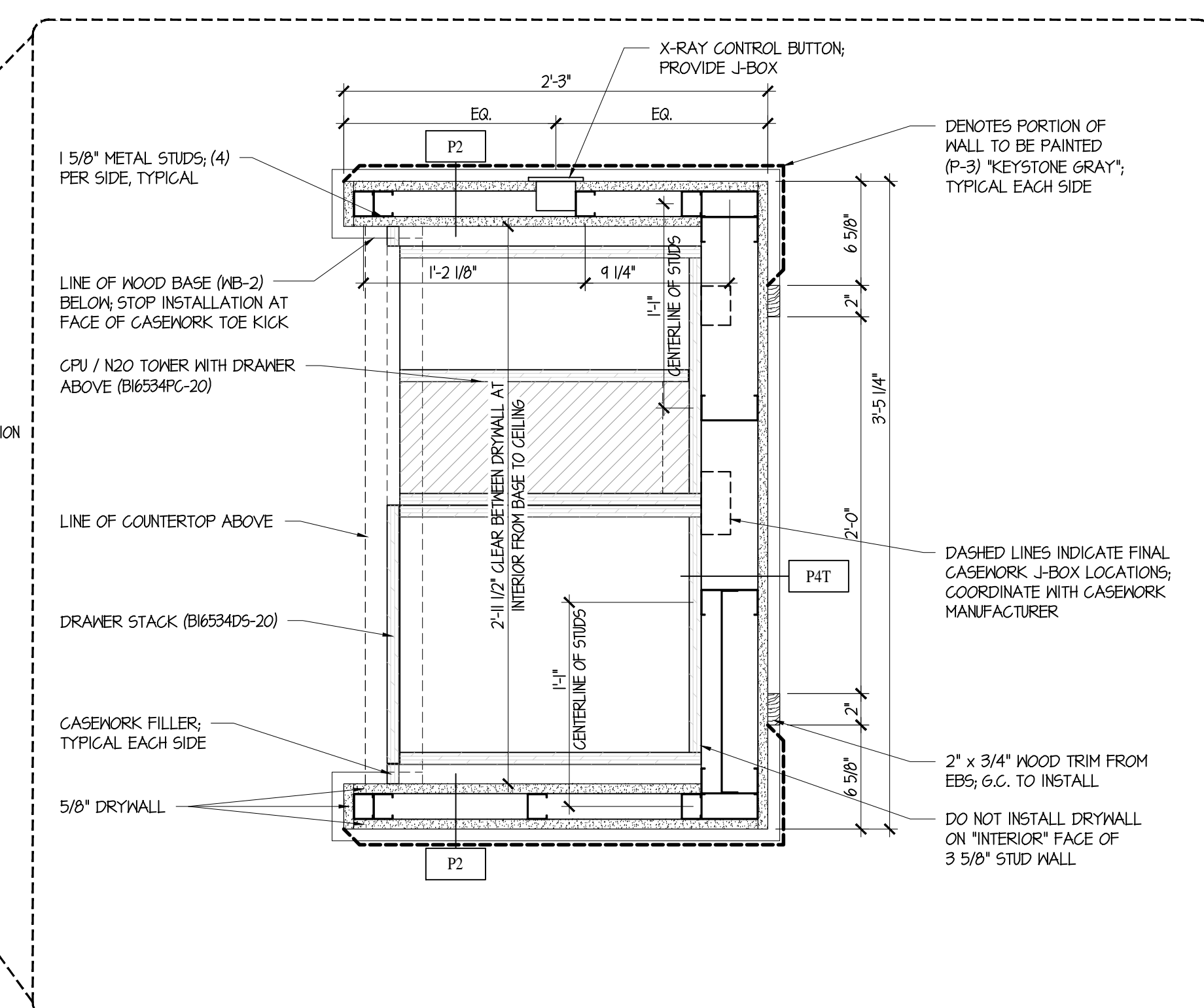
2 Elevation: 6 O'clock Wall

SCALE: 3/4" = 1'-0"

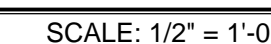
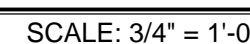
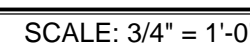
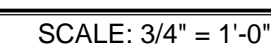


1 Detail Plan: Typical Treatment Room

SCALE: 1/2" = 1'-0"











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sealed: 07-22-22



Heartland Dental - Lee's Summit  
Market Street Center  
Lee's Summit, Missouri 64082

For:  
Heartland Dental  
1200 Network Centre Drive  
Effingham, IL 62401

07/22/22	For
mk	Construction
date	issue

Exterior  
Elevations

A201

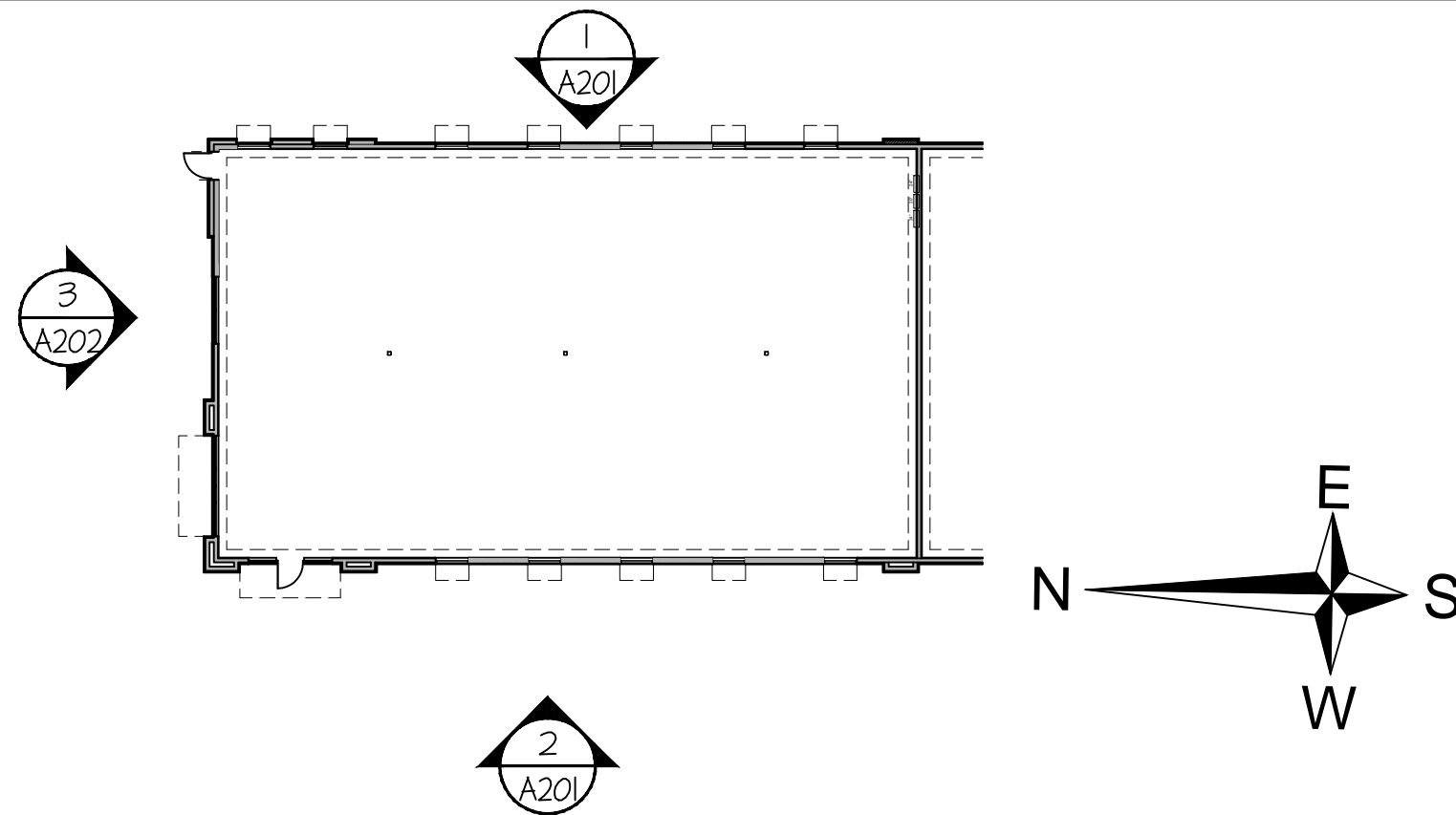
HFR 22.911

NOTE: EXTERIOR ELEMENTS ARE SHOWN FOR SIGNAGE REFERENCE ONLY. SHELL BUILDING IS  
PART OF SEPARATE SUBMISSION PACKAGE TO JURISDICTION.

EXTERIOR ELEVATION SIGNAGE NOTES

1. EXTERIOR CONSTRUCTION, STOREFRONT, CANOPY, FINISHES AND LIGHTING BY  
LANDLORD UNDER SHELL PERMIT.
2. EXTERIOR SIGNAGE LOCATION AND DESIGN FOR REFERENCE ONLY, PERMITTED UNDER  
SEPARATE PERMIT.
3. SIGN MUST BE APPROVED BY LANDLORD PRIOR TO PERMITTING.
4. ALLOWABLE WALL SIGNAGE: NO MAXIMUM OR MINIMUM SPECIFIED.
5. ENGINEERING REQUIRED IF SIGN EXCEEDS 40 SQUARE FEET.
6. TENANT ONLY ALLOWED A TOTAL OF 3 SIGNS, ONE (1) FRONT, ONE (1) SIDE AND ONE (1)  
REAR.
7. TENANT IS RESPONSIBLE FOR OBTAINING NECESSARY PERMITS AND APPROVALS FOR  
ANY SIGNAGE.

KEY PLAN



3 Exterior Elevation North

A202

SCALE: 1/4" = 1'-0"

2 Exterior Elevation West (Entrance)

A202

SCALE: 1/4" = 1'-0"

1 Exterior Elevation East (Rear)

A202

SCALE: 1/4" = 1'-0"

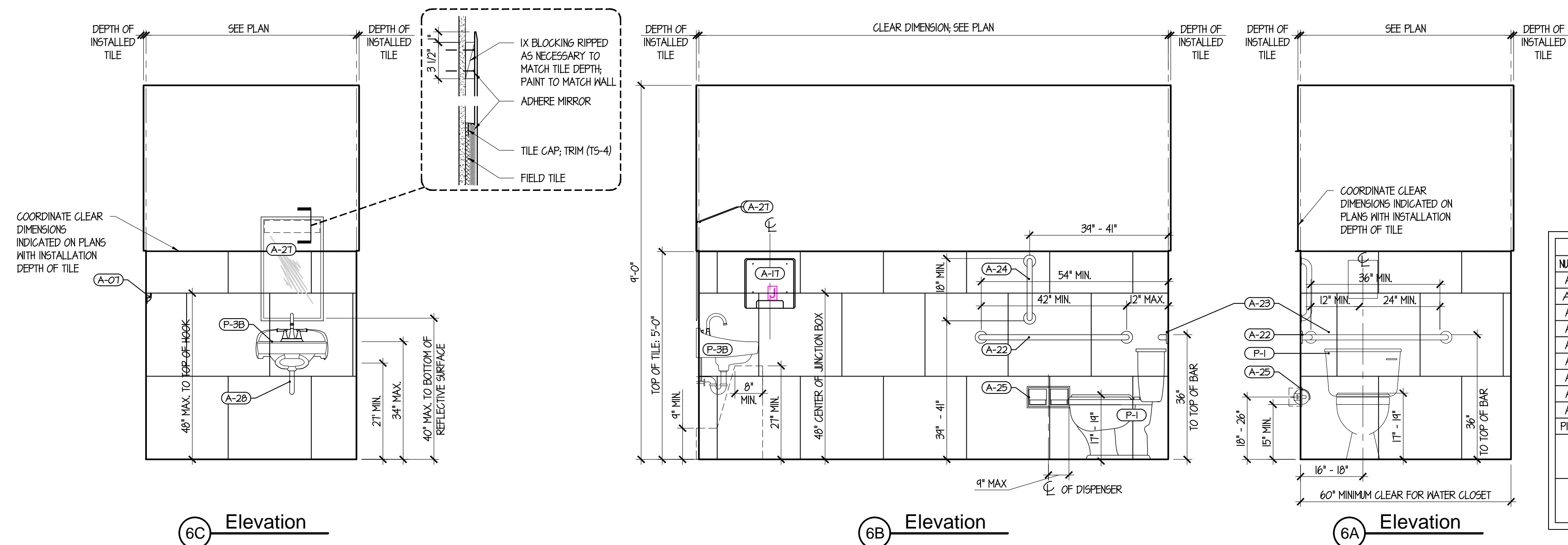


UTILITY LEGEND	
	SWITCH / SWITCHBANK; COORDINATE WITH ELECTRICAL FOR CIRCUITING INFORMATION AND NUMBER.
	SINGLE GANG JUNCTION BOX FOR POWER BY ELECTRICIAN; DO NOT PROVIDE COVER. COORDINATE WITH ELECTRICAL FOR CIRCUITING INFORMATION.

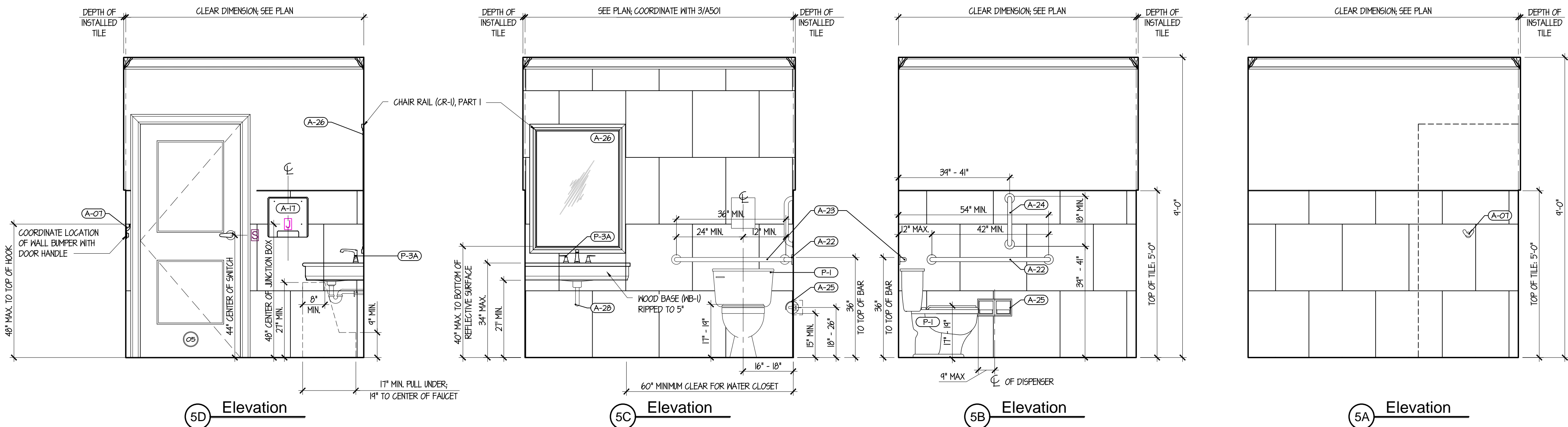
- RESTROOM FINISH NOTES**
- ALL CLEAR DIMENSIONS SHOWN ARE FROM FINISHED FACE OF TILE TO FINISHED FACE OF TILE.
  - WHEN DOOR SWINGS INTO TURNING CIRCLE, ADDITIONAL 30"x48" CLEAR FLOOR SPACE PROVIDED BEYOND ARC OF DOOR SWING PER 603.2.2 (EXCEPTION #2) AND 305.3 OF THE 2010 ADA STANDARDS.
  - FIXTURES TO BE BOBRICK OR AMERICAN STANDARD.
  - ALL INSTALLATIONS AND FIXTURES ARE TO BE IN COMPLIANCE WITH LOCAL, STATE AND FEDERAL ACCESSIBILITY REGULATIONS.
  - PROVIDE BLOCKING IN WALLS AS REQUIRED TO ANCHOR FIXTURES; SEE F103 AND F104.
  - INSULATE EXPOSED HOT WATER AND DRAIN PIPES.
  - MAINTAIN INTEGRITY OF ALL FIRE RATED WALLS DENOTED ON PLANS.
  - NOTED PLUMBING ACCESSORIES TO BE PROVIDED BY EFFINGHAM BUILDERS SUPPLY. CONTRACTOR TO PLACE ORDER AND DATE OF DELIVERY WITH EFFINGHAM BUILDERS SUPPLY. G.G. TO CONTACT BILL METTE FOR QUANTITIES NEEDED; SEE CONTACT LIST ON F103.

NOTED PLUMBING ACCESSORIES TO BE PROVIDED BY EFFINGHAM BUILDERS SUPPLY. CONTRACTOR TO PLACE ORDER AND DATE OF DELIVERY WITH EFFINGHAM BUILDERS SUPPLY. G.G. TO CONTACT BILL METTE FOR QUANTITIES NEEDED; SEE CONTACT LIST ON F103.

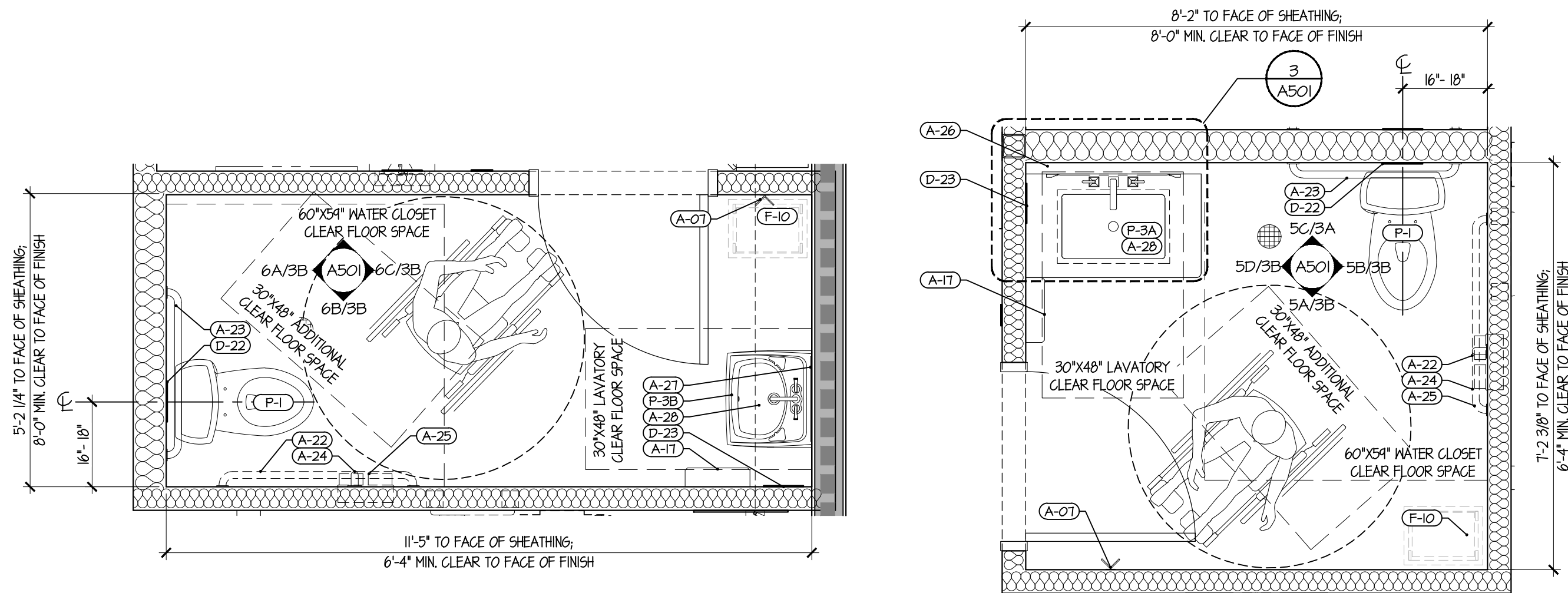
RESTROOM EQUIPMENT SCHEDULE			
NUMBER	DESCRIPTION	MOUNTING HEIGHT	REMARKS
A-01	COAT HOOK	44" TO TOP OF HOOK	
A-17	HAND DRYER	48" TO BOTTOM MOUNTING SCREW	
A-22	42" LONG GRAB BAR	36" TO TOP OF GRAB BAR	
A-23	36" LONG GRAB BAR	36" TO TOP OF GRAB BAR	
A-24	18" VERTICAL GRAB BAR	34"-41" TO BOTTOM EDGE	
A-25	RECESSED TISSUE PAPER DISPENSER	14"-24" TO CENTERLINE, 1"-4" FROM FACE OF WATER CLOSET	
A-26	MIRROR (24" X 42")	40" TO BOTTOM OF REFLECTIVE SURFACE	G.G. TO TRIM MIRROR IN CHAIR RAIL ((CR-I), PART I)
A-27	MIRROR (18" X 30")	40" TO BOTTOM OF REFLECTIVE SURFACE	
A-28	INSULATION FOR PLUMBING	9" MINIMUM ABOVE FLOOR	PROVIDED BY G.G.
P1/P2	WATER CLOSET - TANK TYPE	17"-14" TO SEAT	PROVIDED BY FERGISON
P2	UNDER MOUNTED LAVATORY	34" TO TOP OF COUNTER (MAX); 27" MIN. TO BOTTOM OF SKIRT	VANITY PROVIDED BY CASEWORK MANUFACTURER; SINK PROVIDED BY FERGISON; G.G. TO PROVIDE TRIM PER DETAILS; PLUMBING SUB-CONTRACTOR TO INSTALL AND CONNECT.
P3	WALL MOUNTED LAVATORY	34" TO TOP OF RIM (MAX); 27" MIN. TO BOTTOM	SINK PROVIDED BY FERGISON; G.G. TO PROVIDE TRIM PER DETAILS; PLUMBING SUB-CONTRACTOR TO INSTALL AND CONNECT.



**6 Elevations: Staff Restroom**  
A501  
SCALE: 1/2" = 1'-0"

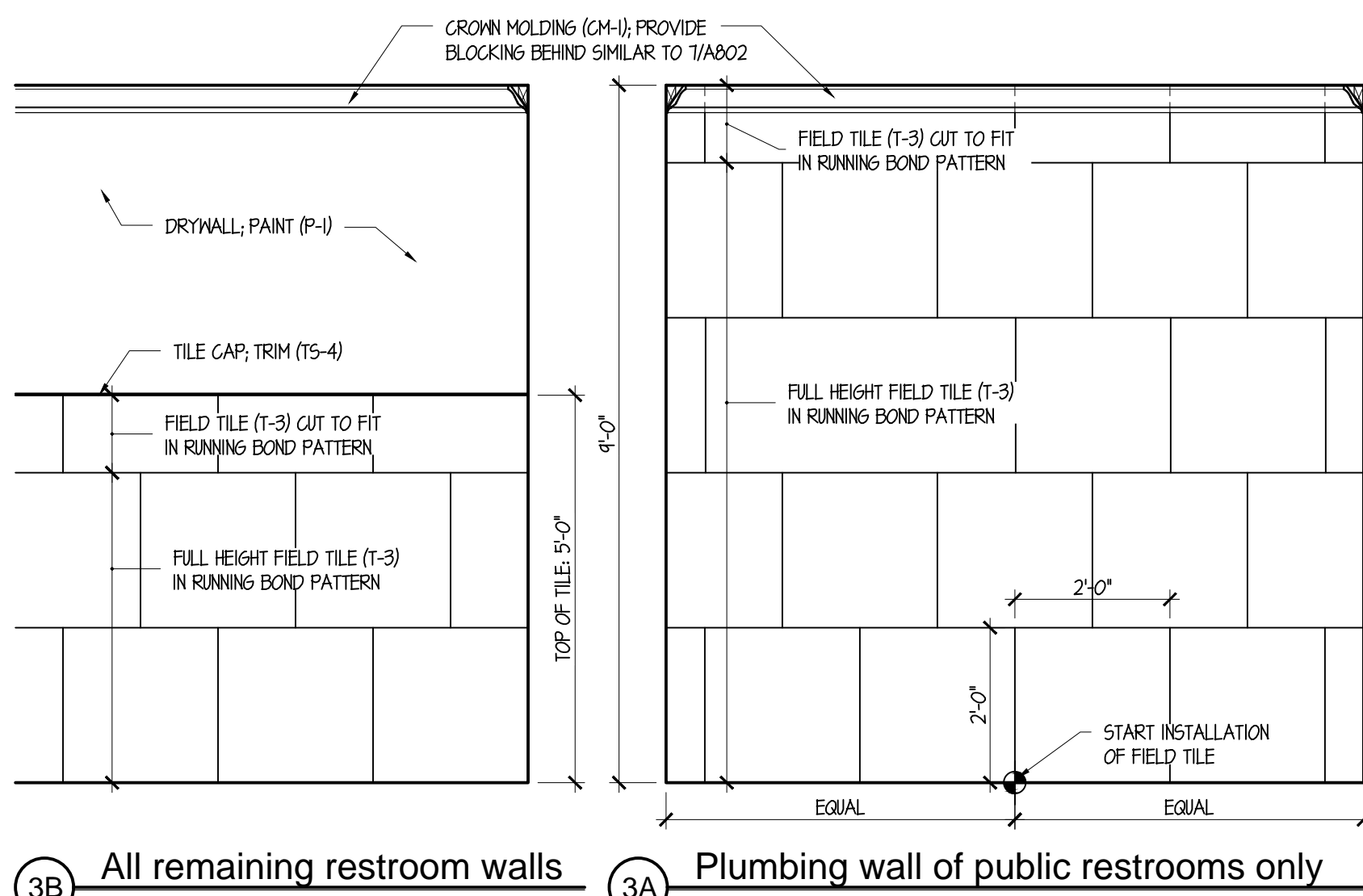


**5 Elevations: Public Restroom**  
A501  
SCALE: 1/2" = 1'-0"

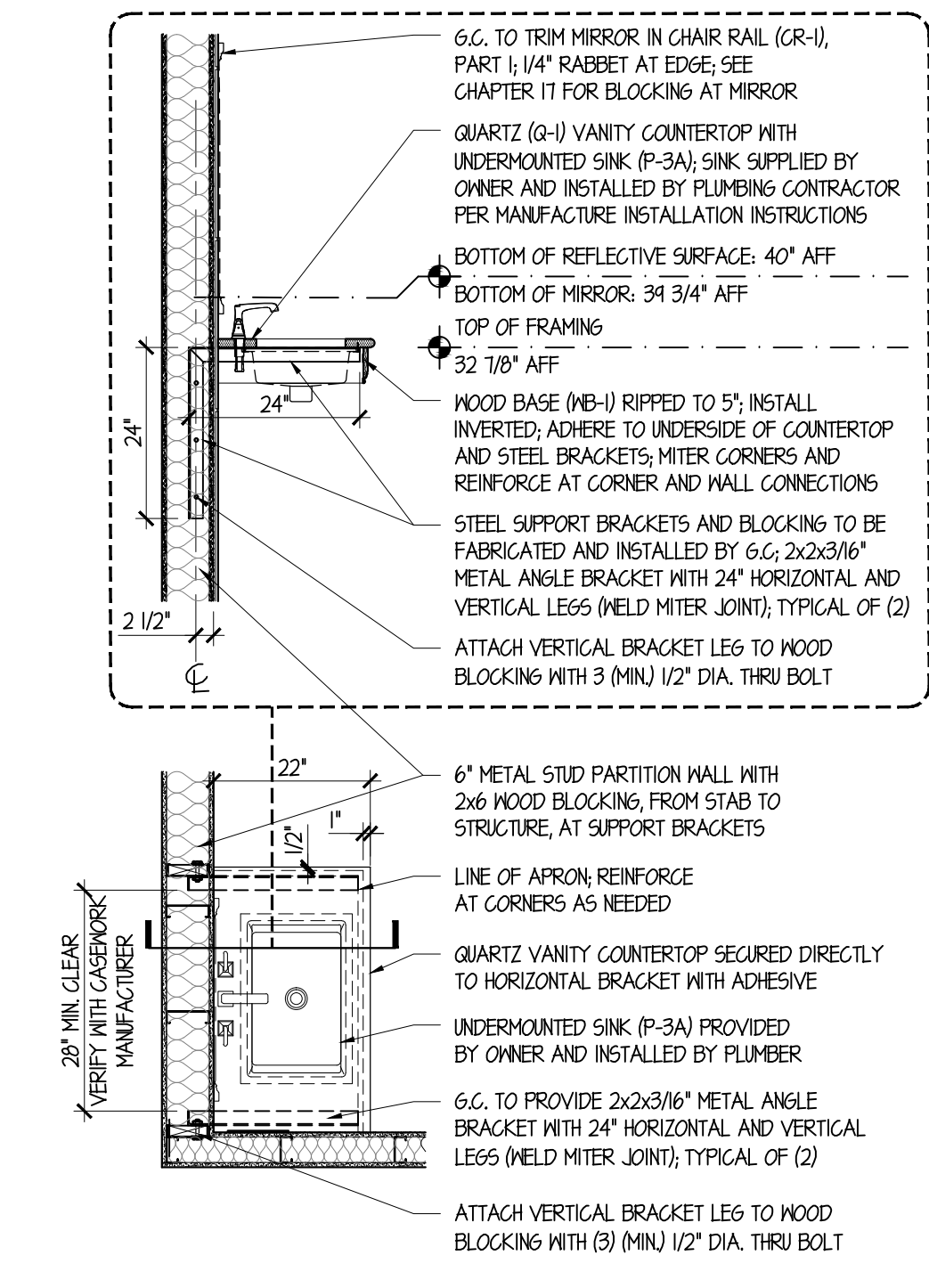


**1 Detail Plan: Public Restroom**  
A501  
SCALE: 1/2" = 1'-0"

**2 Detail Plan: Staff Restrooms**  
A501  
SCALE: 1/2" = 1'-0"

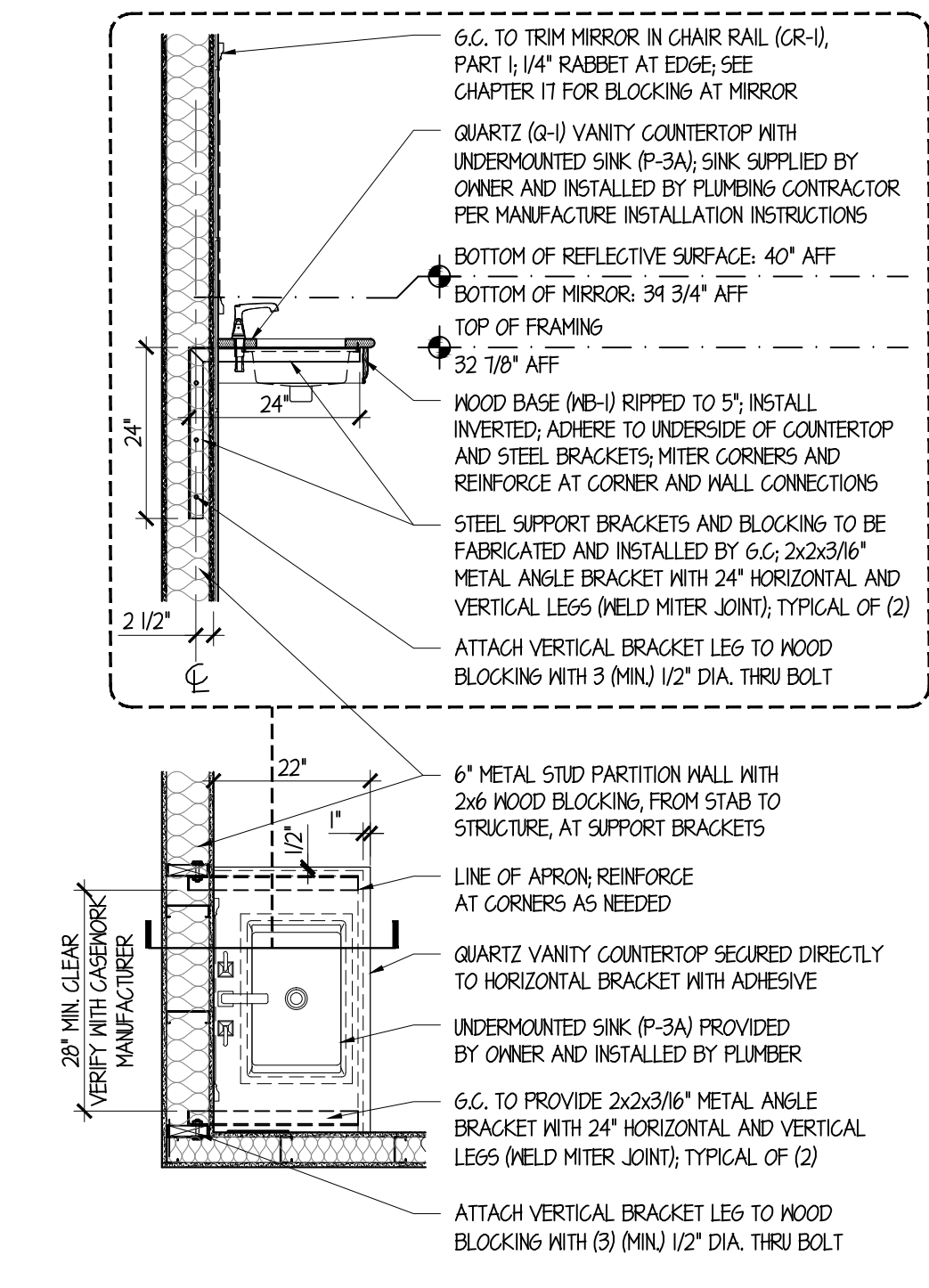


**3 Detail Plan: Public Restrooms**  
A501  
SCALE: 1/2" = 1'-0"



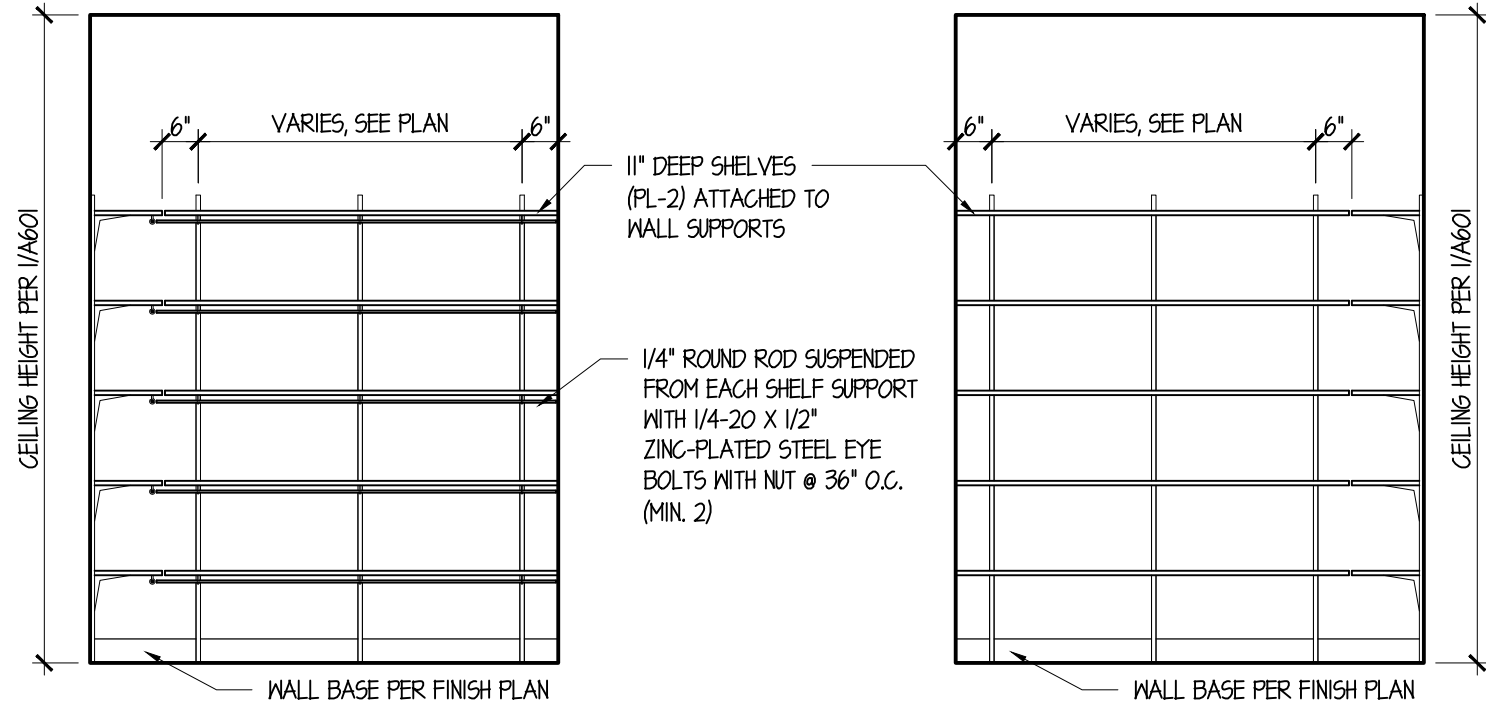
**4 Detail: Support at Vanity**  
A501  
SCALE: 1/2" = 1'-0"

NOTE:  
STEEL SUPPORT BRACKETS AND BLOCKING TO BE FABRICATED AND INSTALLED BY G.G.

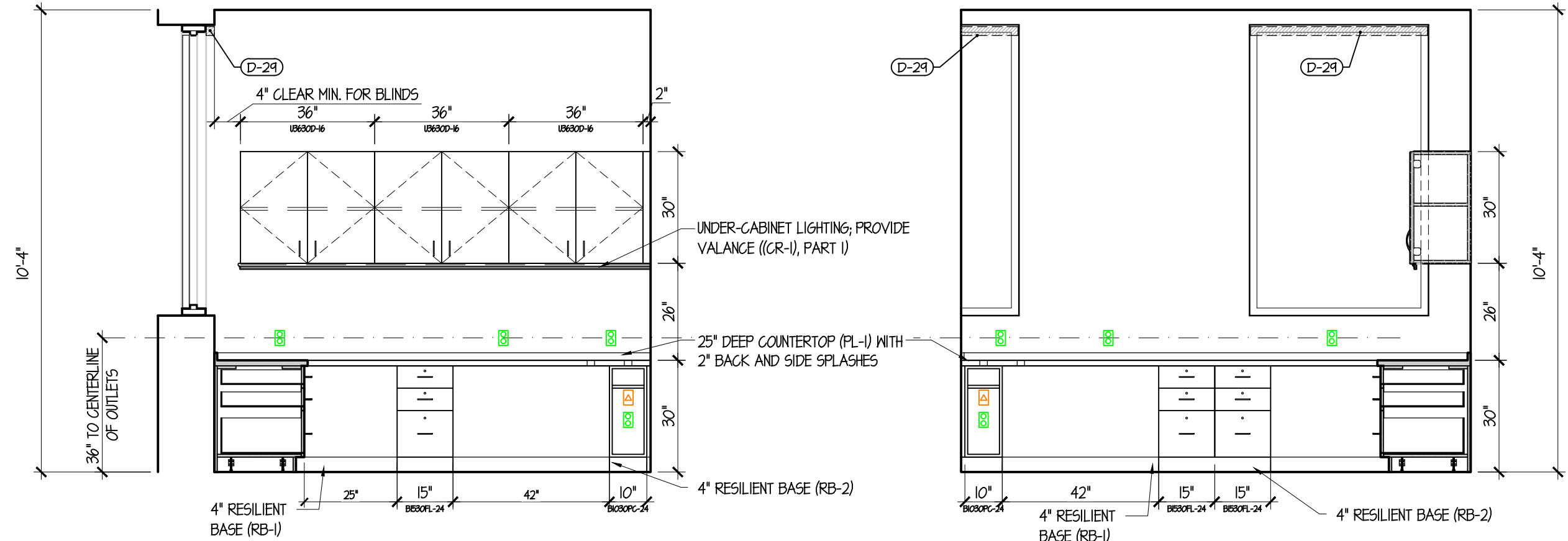




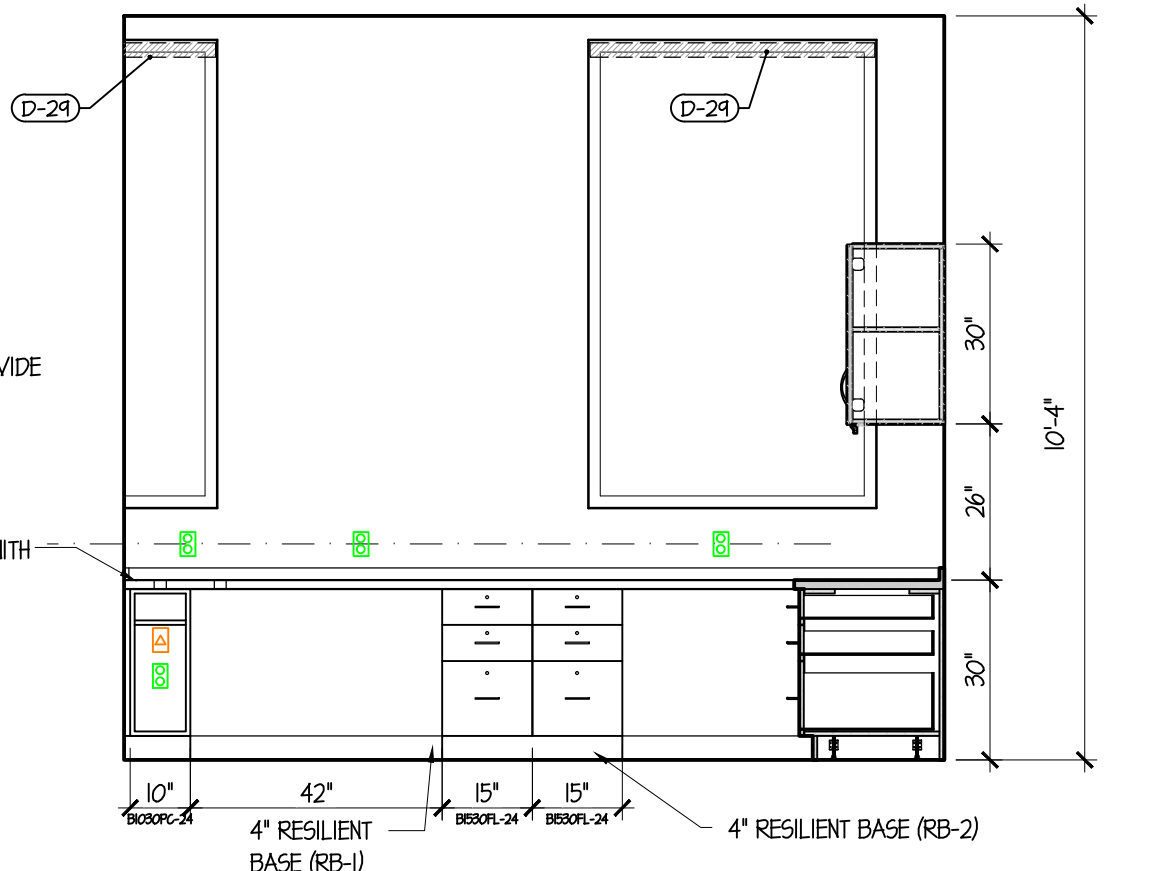
UTILITY LEGEND	
	AIR LINE (E-02); SEE PLUMBING SHEETS FOR MEDICAL GAS PLAN
	DEDICATED DUPLEX OUTLET; COORDINATE WITH ELECTRICAL FOR CIRCUITING INFORMATION
	DUPLEX OUTLET; COORDINATE WITH ELECTRICAL FOR CIRCUITING INFORMATION
	QUADPLEX OUTLET; COORDINATE WITH ELECTRICAL FOR CIRCUITING INFORMATION
	SINGLE GANG JUNCTION BOX WITH PULL STRING FOR DATA CONNECTION BY ELECTRICIAN; DO NOT PROVIDE COVER; OWNERS I.T. DEPARTMENT TO PROVIDE ALL CABLING
	SWITCH / SWITCHBANK; COORDINATE WITH ELECTRICAL FOR CIRCUITING INFORMATION AND NUMBER
	SINGLE GANG JUNCTION BOX FOR POWER BY ELECTRICIAN; DO NOT PROVIDE COVER; COORDINATE WITH ELECTRICAL FOR CIRCUITING INFORMATION
	SINGLE GANG JUNCTION AND PULL STRING BOX BY ELECTRICIAN; OWNERS LOW VOLTAGE CONTRACTOR TO INSTALL ALL CABLING
	WASHING MACHINE BOX (P-8); SEE PLUMBING SPECIFICATIONS
	ADDITIONAL DUPLEX OUTLET NOT SHOWN IN ELEVATIONS TO BE REFERENCE IN E102; GC TO COORDINATE LOCATION WITH ELECTRICAL PLANS



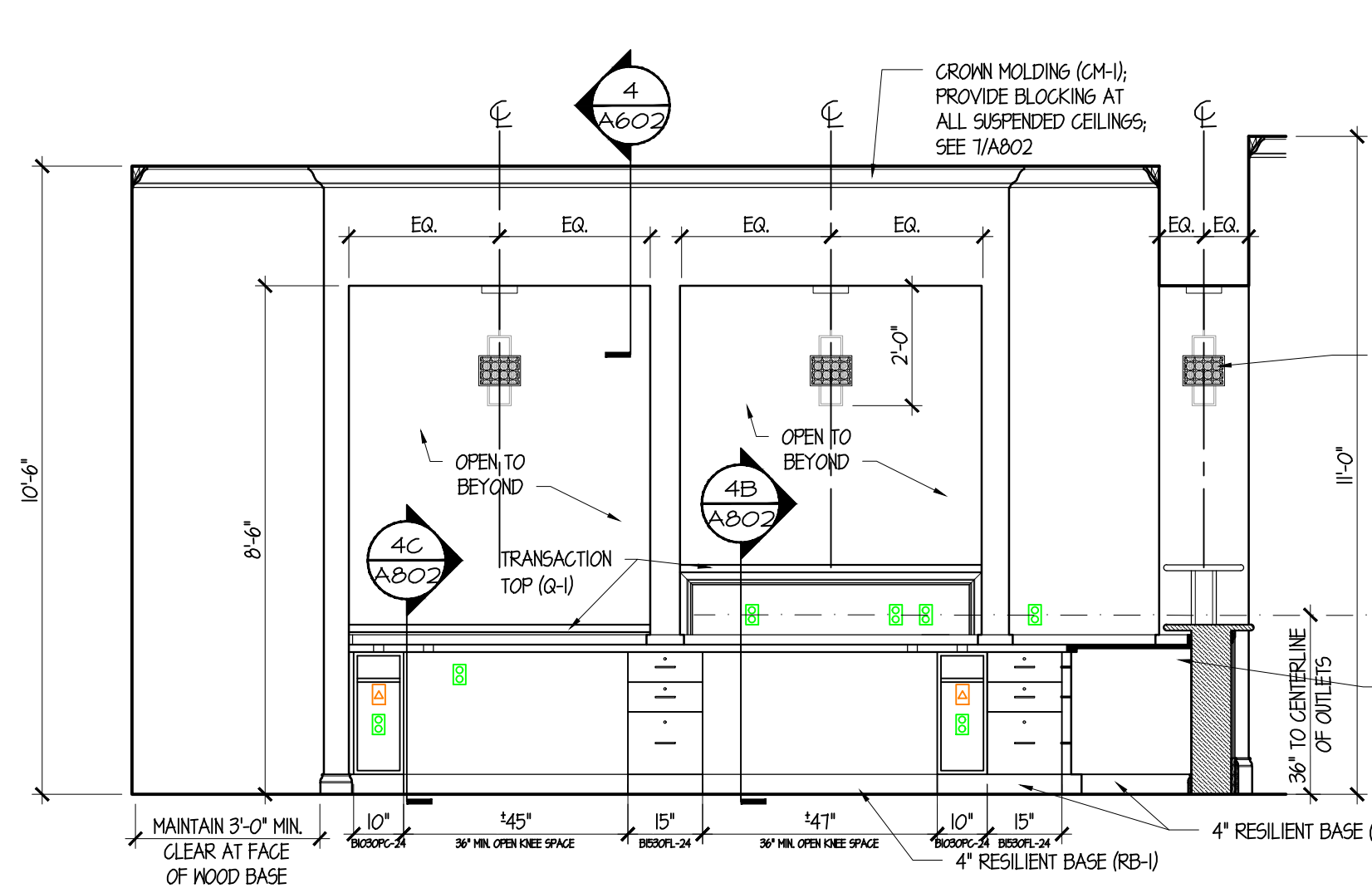
8 Elevation: Typ. Supplies  
A502 SCALE: 3/8" = 1'-0"



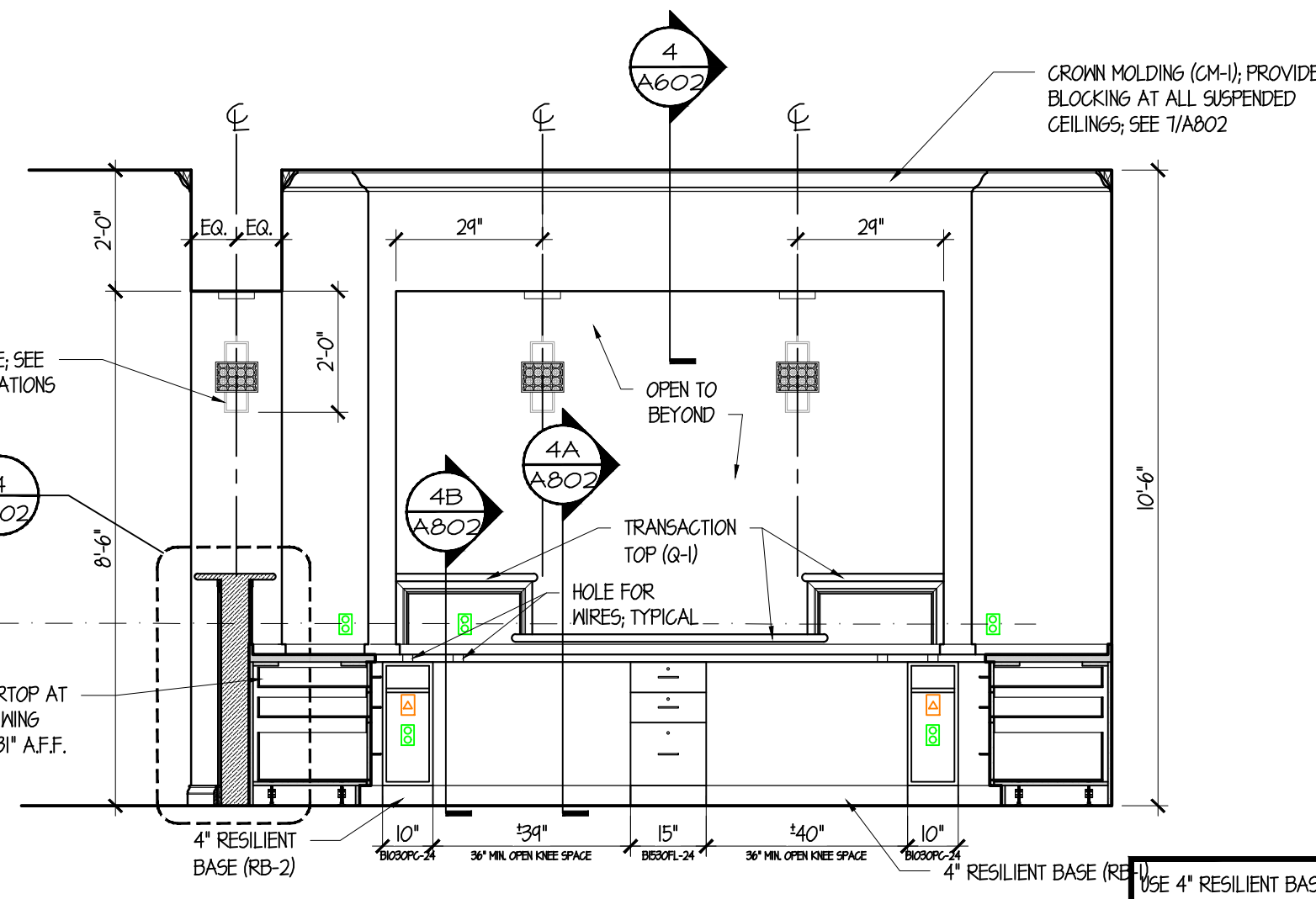
7 Elevation: Office #128  
A502 SCALE: 3/8" = 1'-0"



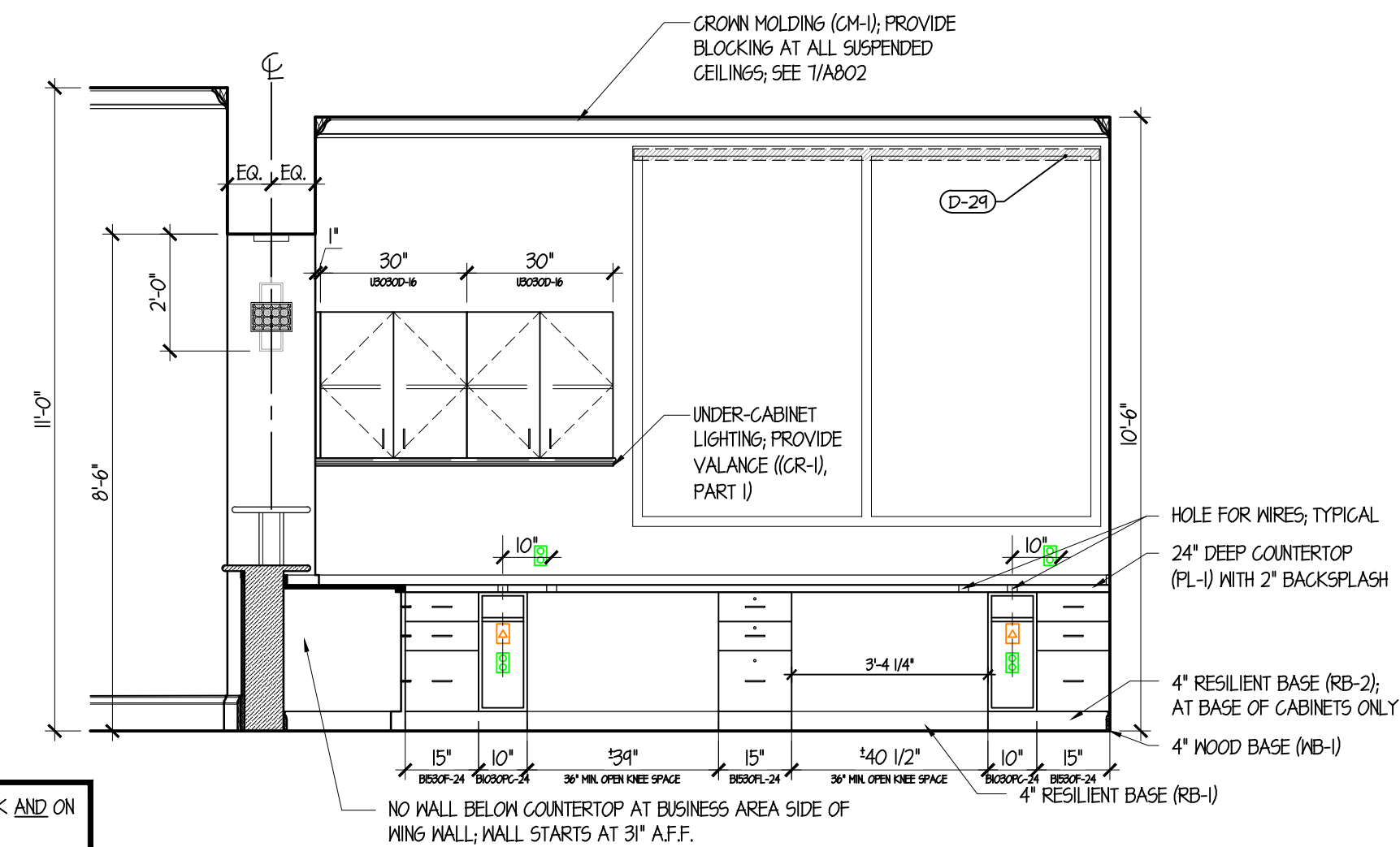
6 Elevation: Office #128  
A502 SCALE: 3/8" = 1'-0"



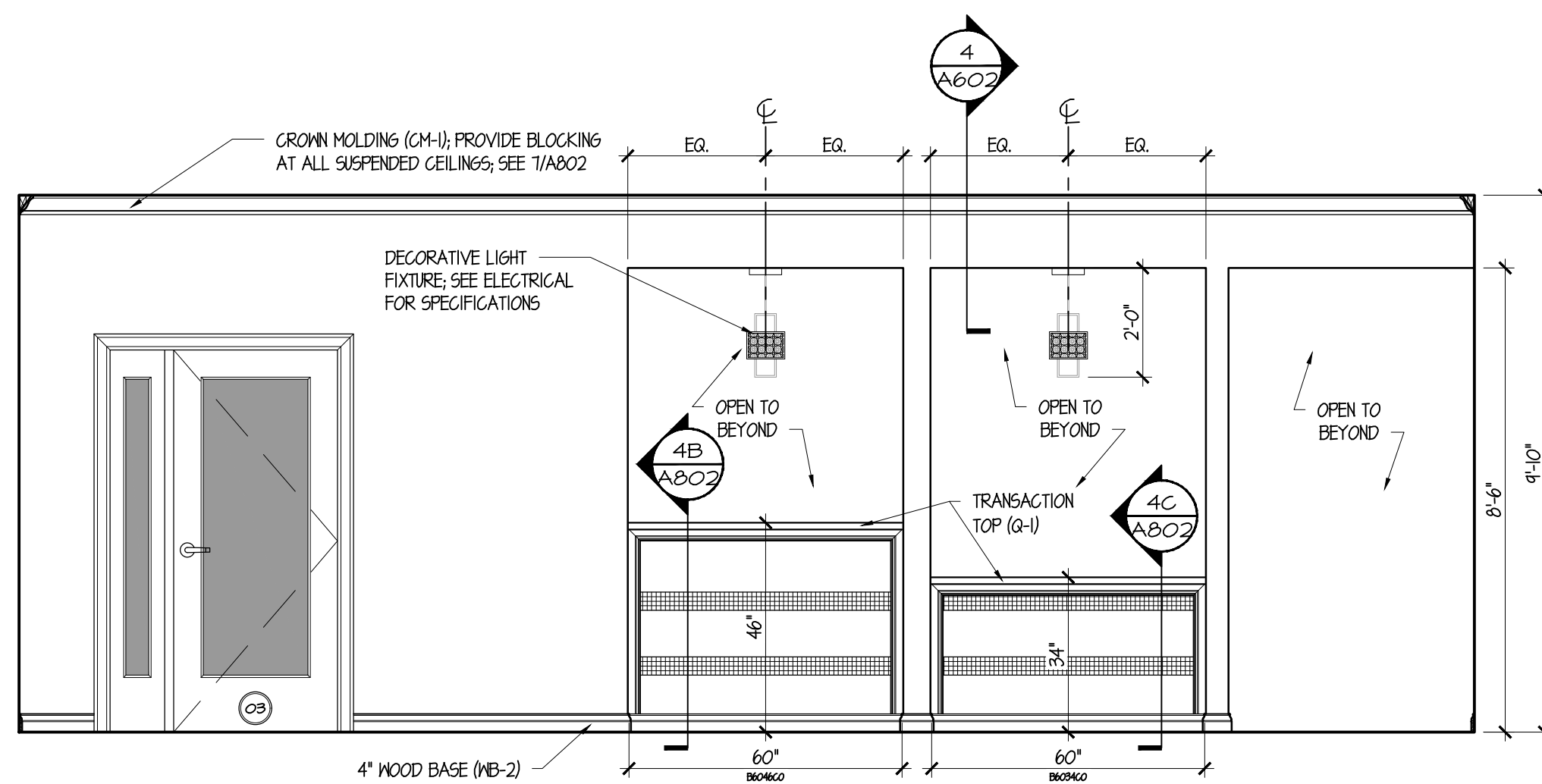
5 Elevation: Business Area  
A502 SCALE: 3/8" = 1'-0"



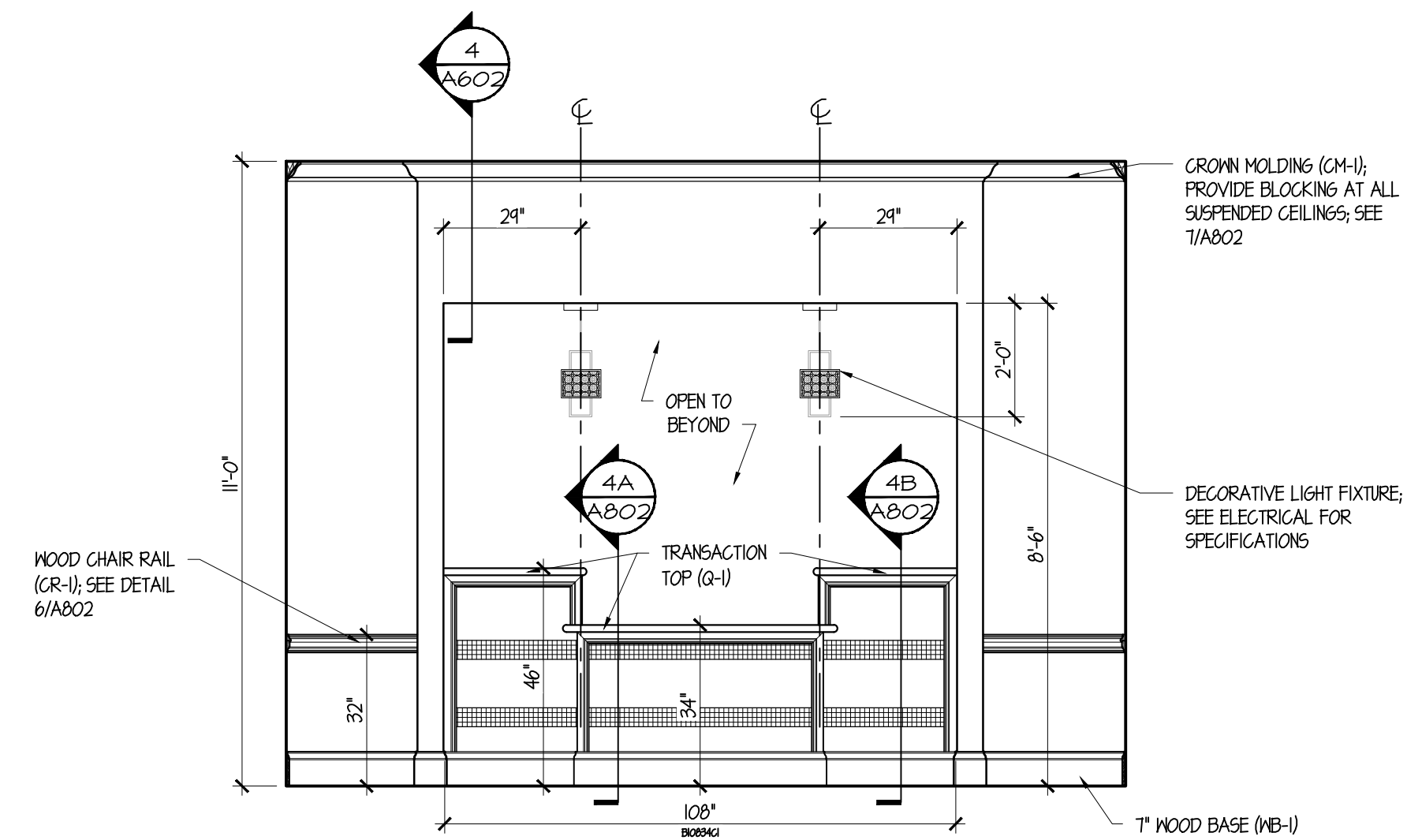
4 Elevation: Business Area  
A502 SCALE: 3/8" = 1'-0"



3 Elevation: Business Area  
A502 SCALE: 3/8" = 1'-0"



2 Elevation: Check-out Counter  
A502 SCALE: 3/8" = 1'-0"



1 Elevation: Waiting Room  
A502 SCALE: 3/8" = 1'-0"



Heartland Dental - Lee's Summit  
Market Street Center  
Lee's Summit, Missouri 64082

For: Heartland Dental  
1200 Network Centre Drive  
Effingham, IL 62401

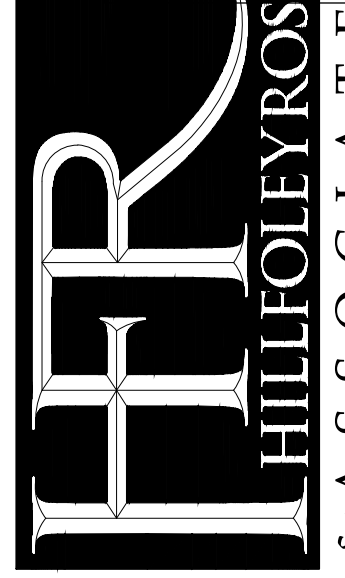
07/22/22 For Construction  
mk date issue

Interior  
Elevations

A502

HRF 22.911





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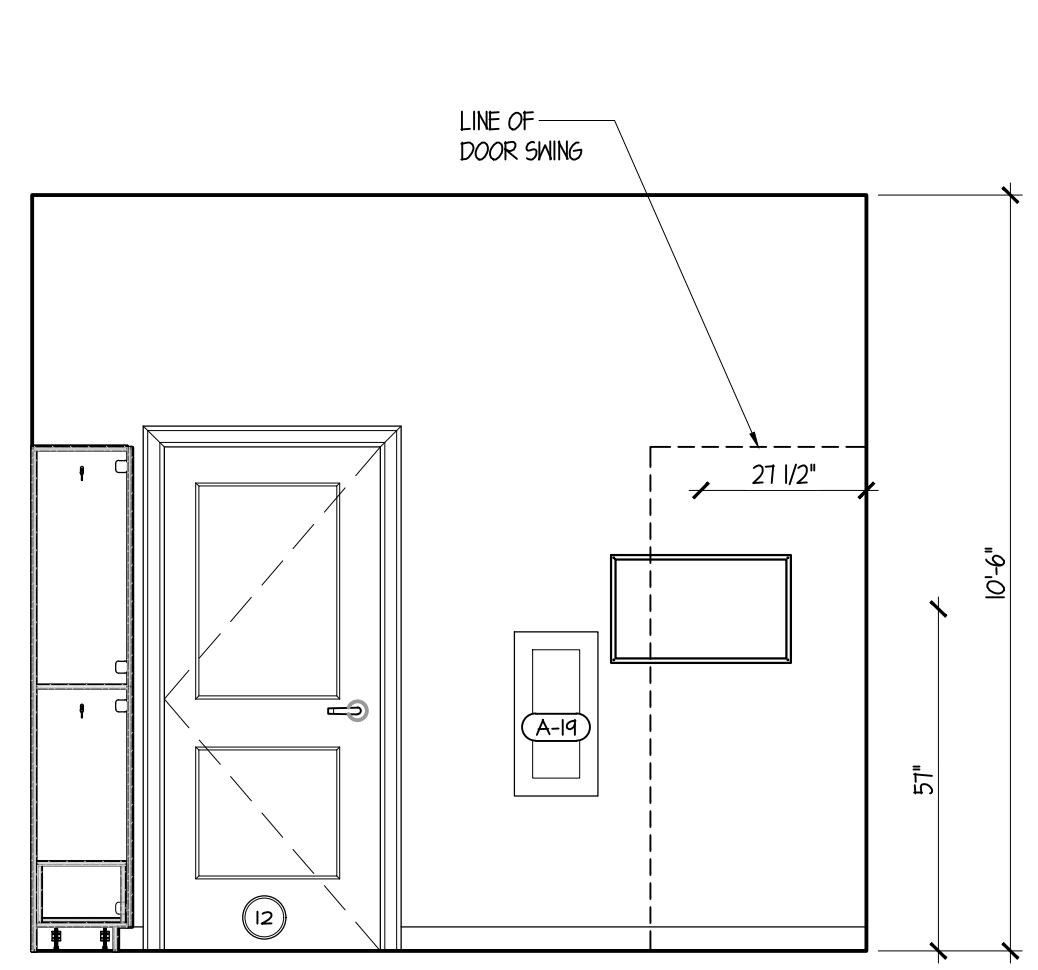
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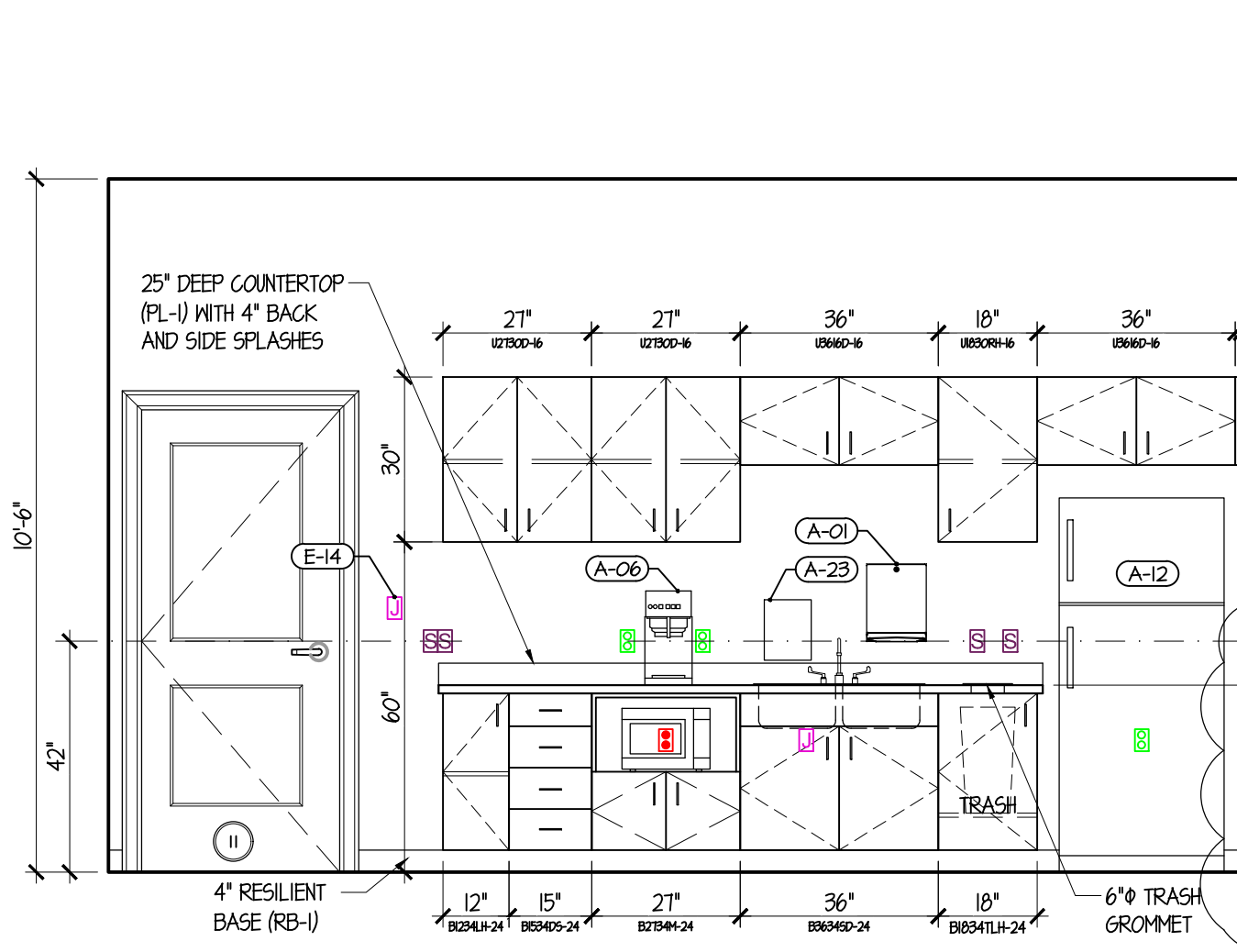


Heartland Dental - Lee's Summit  
Market Street Center  
Lee's Summit, Missouri 64082  
For: Heartland Dental  
1200 Network Centre Drive  
Effingham, IL 62401

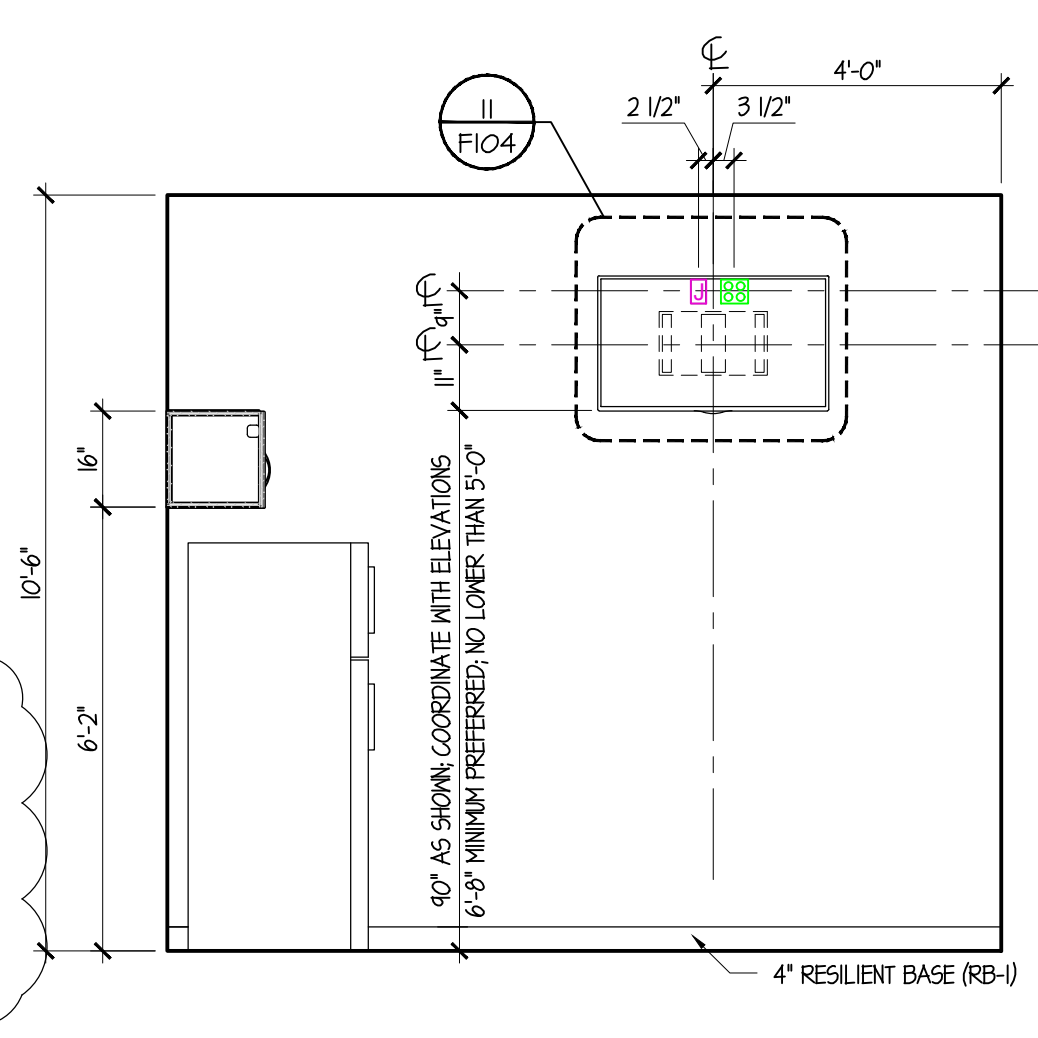
UTILITY LEGEND	
	AIR LINE (E-02); SEE PLUMBING SHEETS FOR MEDICAL GAS PLAN
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	DUPLEX OUTLET; COORDINATE WITH ELECTRICAL FOR CIRCUITING INFORMATION
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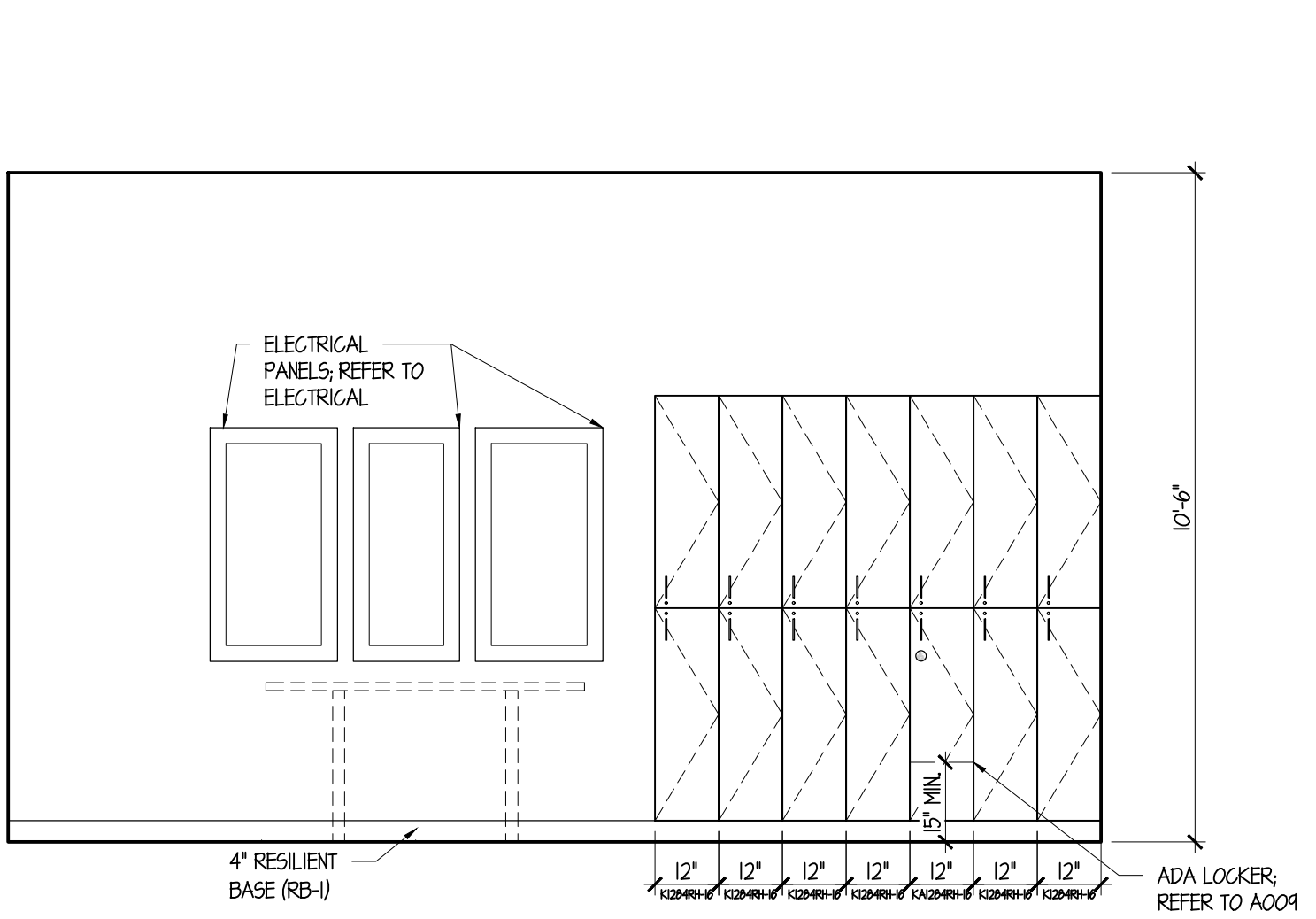
7 Elevation: Break Room  
A503 SCALE: 3/8" = 1'-0"



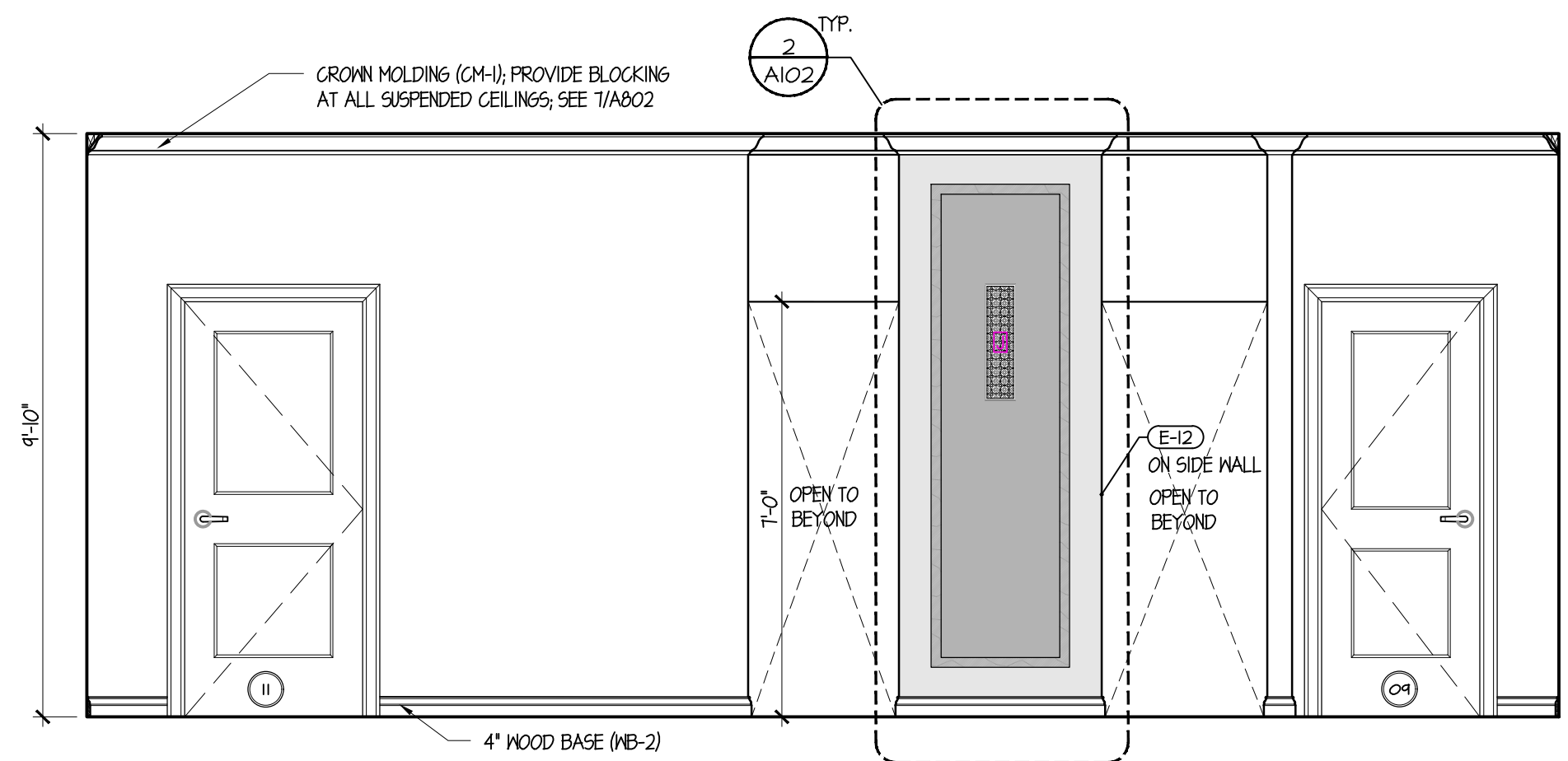
6 Elevation: Break Room  
A503 SCALE: 3/8" = 1'-0"



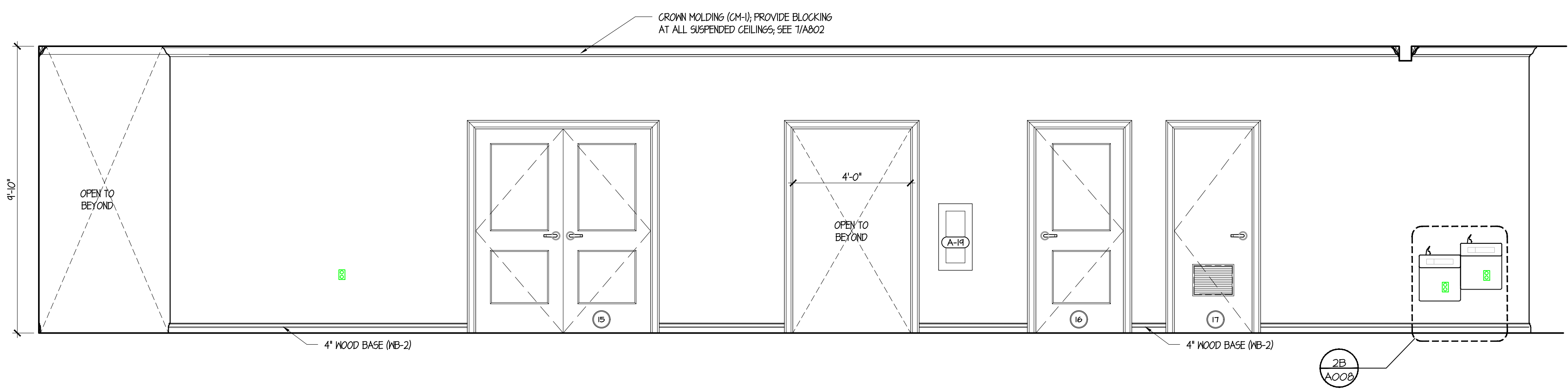
5 Elevation: Break Room  
A503 SCALE: 3/8" = 1'-0"



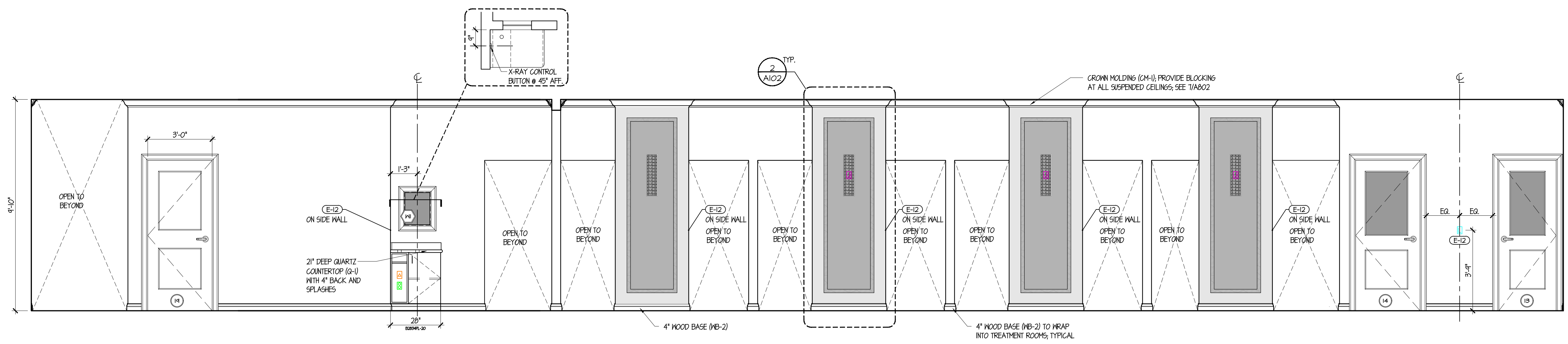
4 Elevation: Break Room  
A503 SCALE: 3/8" = 1'-0"



3 Elevation: Hallway  
A503 SCALE: 3/8" = 1'-0"



2 Elevation: Hallway  
A503 SCALE: 3/8" = 1'-0"



1 Elevation: Hallway  
A503 SCALE: 3/8" = 1'-0"

10/25/22	Permit Comments
07/22/22	For Construction
mk	date issue











Interior  
Elevations

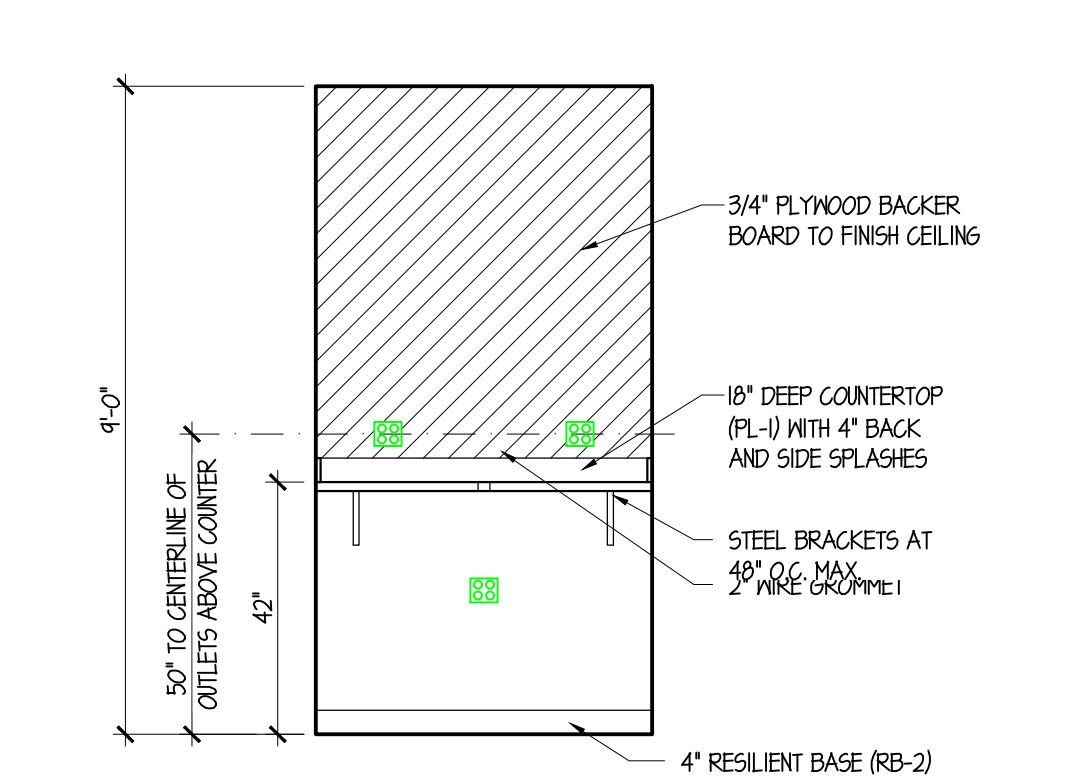
A503

HFR 22.911

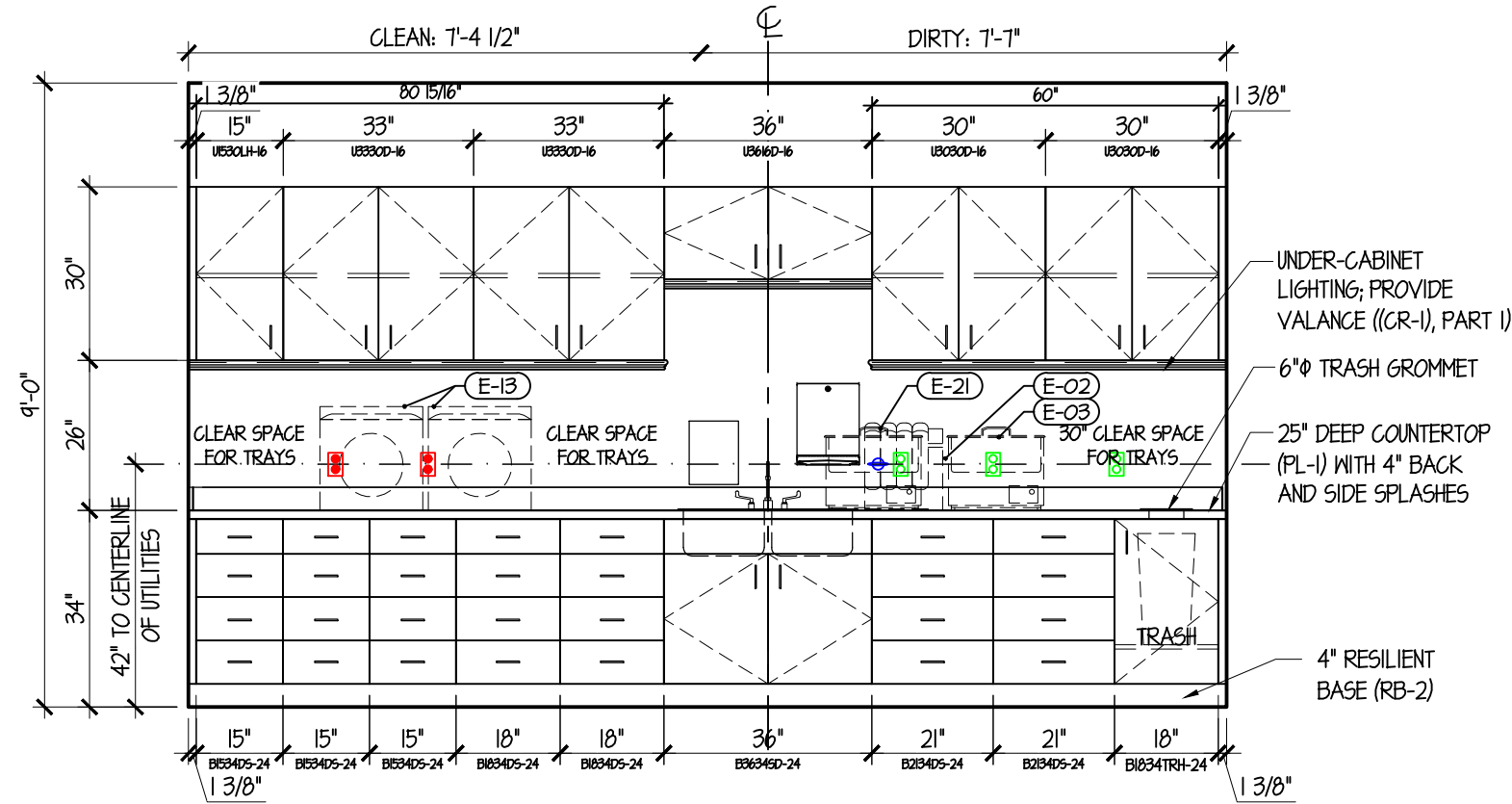


I:\Cadd\Architectural\25\_22XXX Heartland\25.911 HD Lee's Summit MO (TD)10 Drawings\25.911 A504 Interior Elevations.dwg, 7/6/2022 3:33:13 PM, JHOUSTON

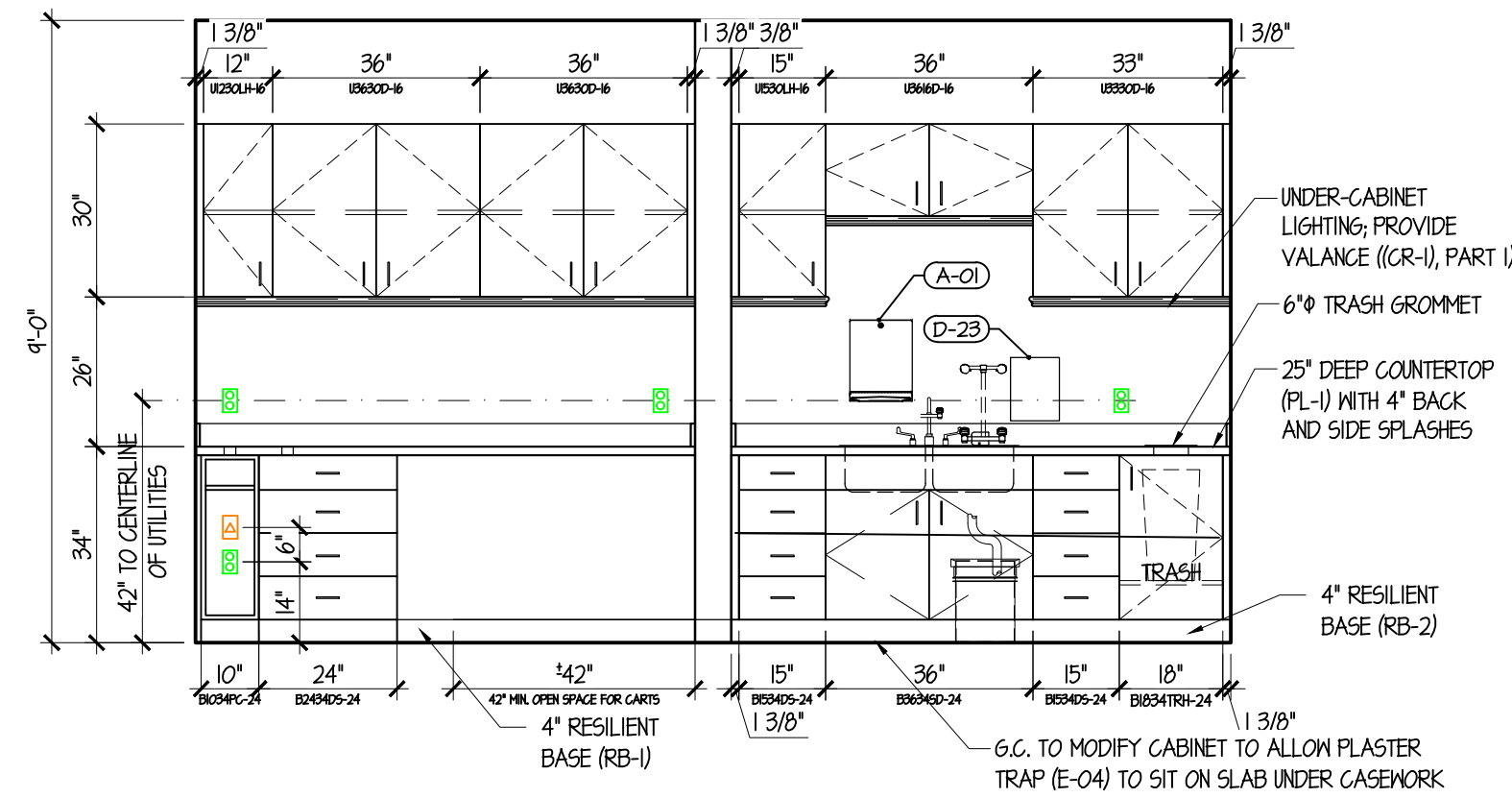
UTILITY LEGEND	
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	SWITCH / SWITCHBANK; COORDINATE WITH ELECTRICAL FOR CIRCUITING INFORMATION AND NUMBER
	SINGLE GANG JUNCTION BOX FOR POWER BY ELECTRICIAN; DO NOT PROVIDE COVER; COORDINATE WITH ELECTRICAL FOR CIRCUITING INFORMATION
	SINGLE GANG JUNCTION AND PULL STRING BOX BY ELECTRICIAN; OWNERS LOW VOLTAGE CONTRACTOR TO INSTALL ALL CABLING
	WASHING MACHINE BOX (P-0); SEE PLUMBING SPECIFICATIONS
	ADDITIONAL DUPLEX OUTLET NOT SHOWN IN ELEVATIONS TO BE REFERRED IN E-02; GC TO COORDINATE LOCATION WITH ELECTRICAL PLANS



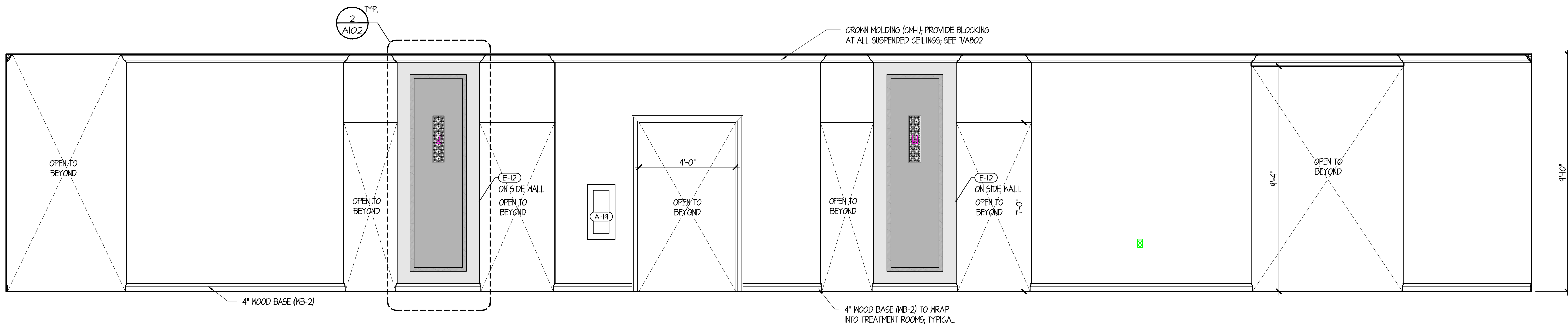
5 Elevation: I.T. Room  
A504 SCALE: 3/8" = 1'-0"



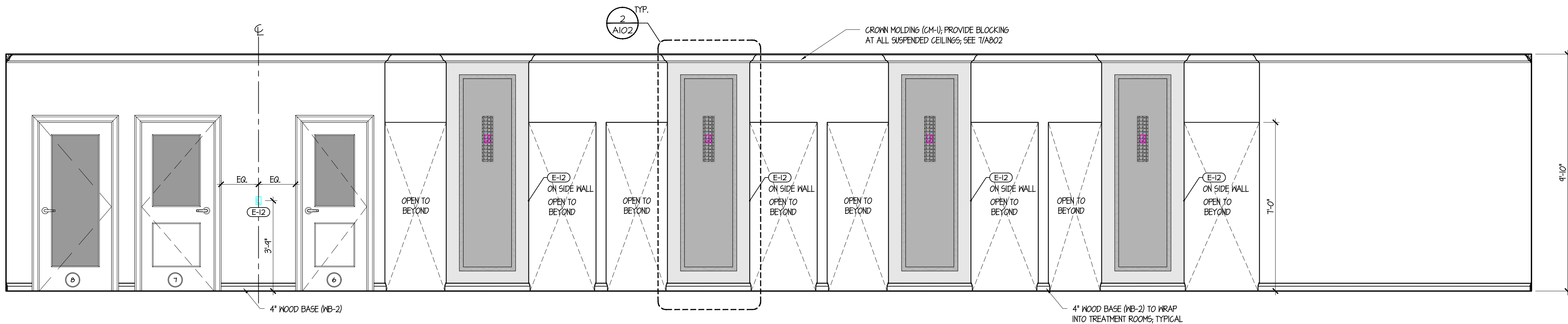
4 Elevation: Work Area  
A504 SCALE: 3/8" = 1'-0"



3 Elevation: Work Area  
A504 SCALE: 3/8" = 1'-0"



2 Elevation: Hallway  
A504 SCALE: 3/8" = 1'-0"



1 Elevation: Hallway  
A504 SCALE: 3/8" = 1'-0"



Heartland Dental - Lee's Summit  
Market Street Center  
Lee's Summit, Missouri 64082

For:  
Heartland Dental  
1200 Network Centre Drive  
Effingham, IL 62401

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mk date Construction  
issue











Interior  
Elevations

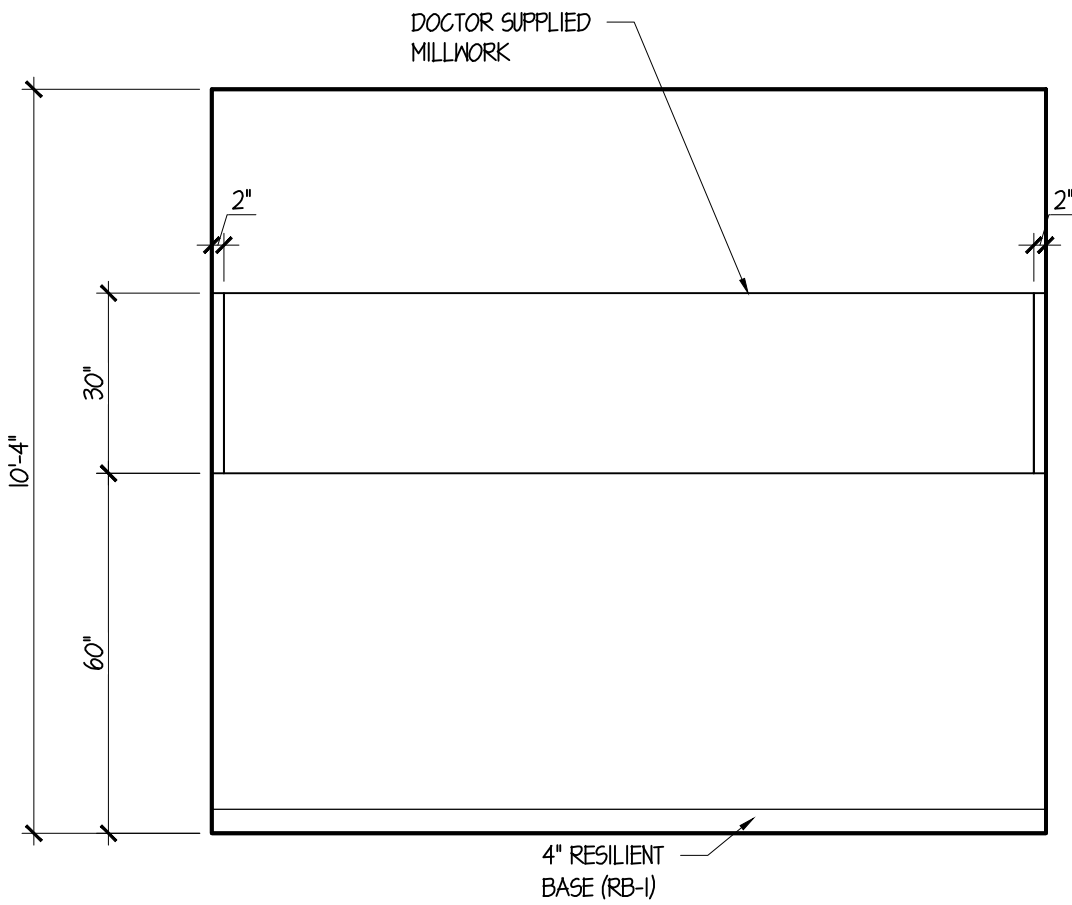
A504

HFRA 22.911

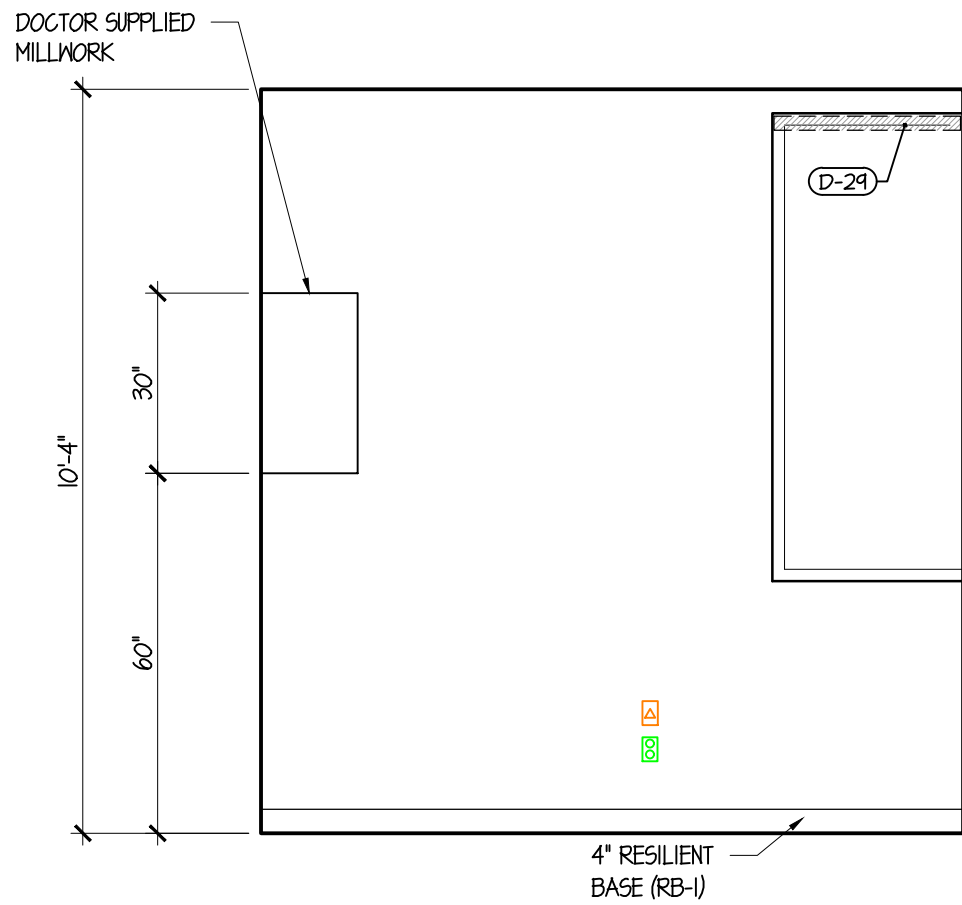


U:\Cadd\Architectural\22\_XX\Heartland\22-911 HB Lee's Summit MO (TD) 10 Drawings\22-911 A505 Interior Elevations.dwg, 7/6/2022 3:33:23 PM, JHOUSTON

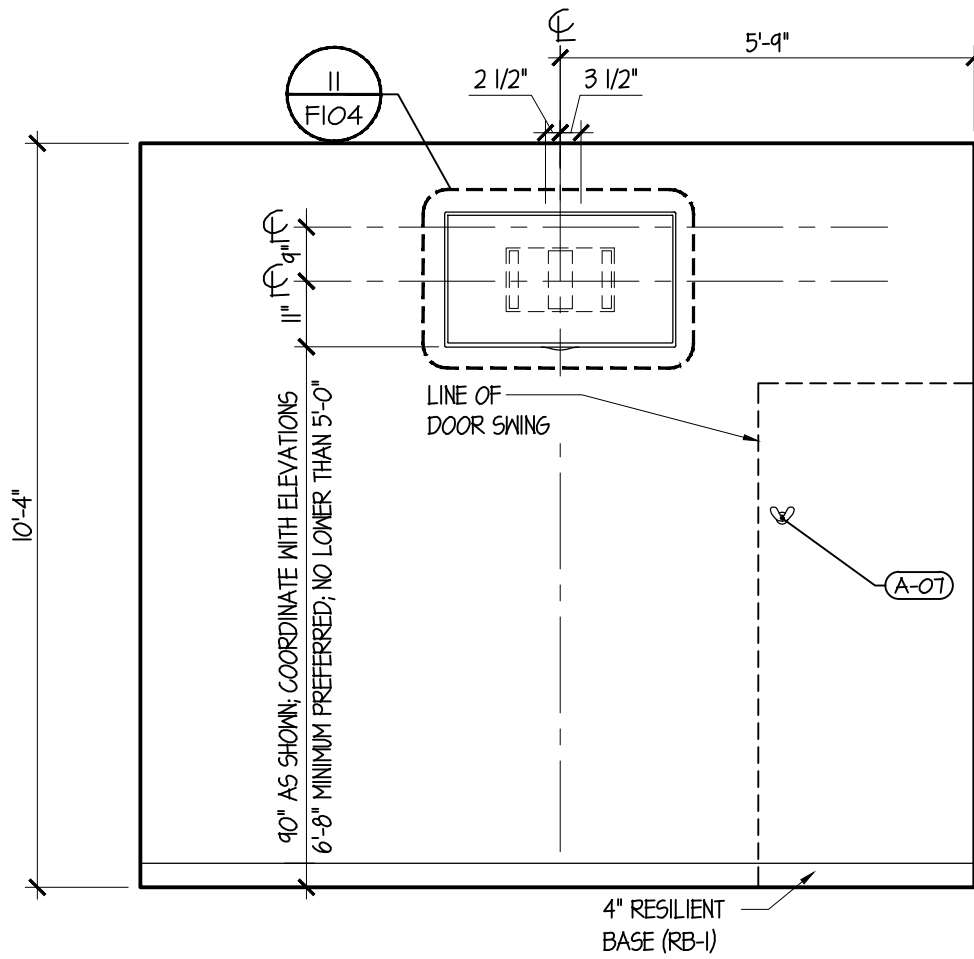
UTILITY LEGEND	
	AIR LINE (E-02); SEE PLUMBING SHEETS FOR MEDICAL GAS PLAN
	DEDICATED DUPLEX OUTLET; COORDINATE WITH ELECTRICAL FOR CIRCUITING INFORMATION
	DUPLEX OUTLET; COORDINATE WITH ELECTRICAL FOR CIRCUITING INFORMATION
	QUAD DUPLEX OUTLET; COORDINATE WITH ELECTRICAL FOR CIRCUITING INFORMATION
	SINGLE GANG JUNCTION BOX WITH PULL STRING FOR DATA CONNECTION BY ELECTRICIAN; DO NOT PROVIDE COVER; OWNERS IT DEPARTMENT TO PROVIDE ALL CABLING
	SWITCH / SWITCHBANK; COORDINATE WITH ELECTRICAL FOR CIRCUITING INFORMATION AND NUMBER
	SINGLE GANG JUNCTION BOX FOR POWER BY ELECTRICIAN; DO NOT PROVIDE COVER; COORDINATE WITH ELECTRICAL FOR CIRCUITING INFORMATION
	SINGLE GANG JUNCTION AND PULL STRINGS BOX BY ELECTRICIAN; OWNERS LOW VOLTAGE CONTRACTOR TO INSTALL ALL CABLING
	WASHING MACHINE BOX (P-8); SEE PLUMBING SPECIFICATIONS
	ADDITIONAL DUPLEX OUTLET NOT SHOWN IN ELEVATIONS TO BE REFERENCE IN E02, & C TO COORDINATE LOCATION WITH ELECTRICAL PLANS



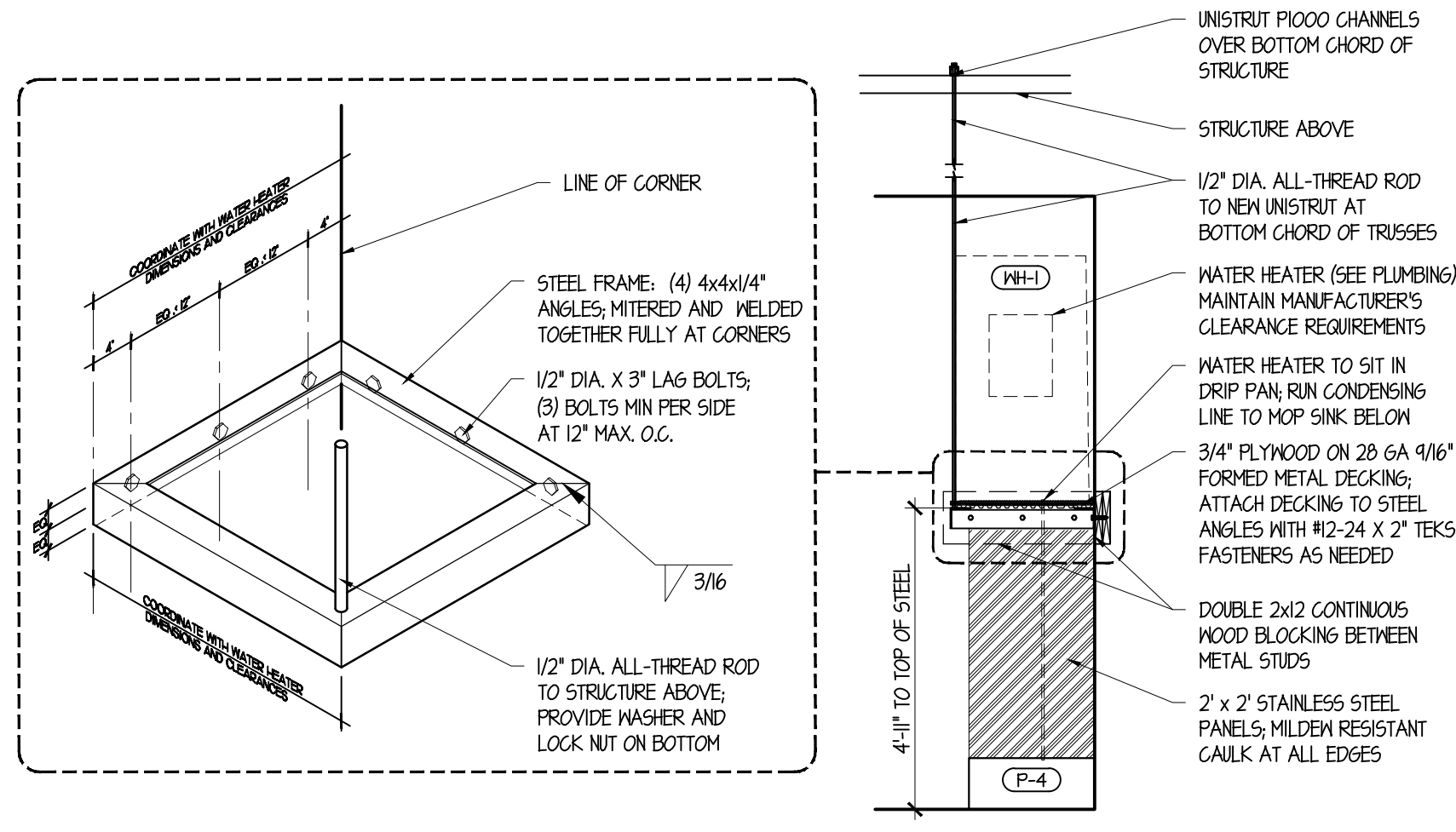
7 Elevation: Doctor's Office #112  
A505 SCALE: 3/8" = 1'-0"



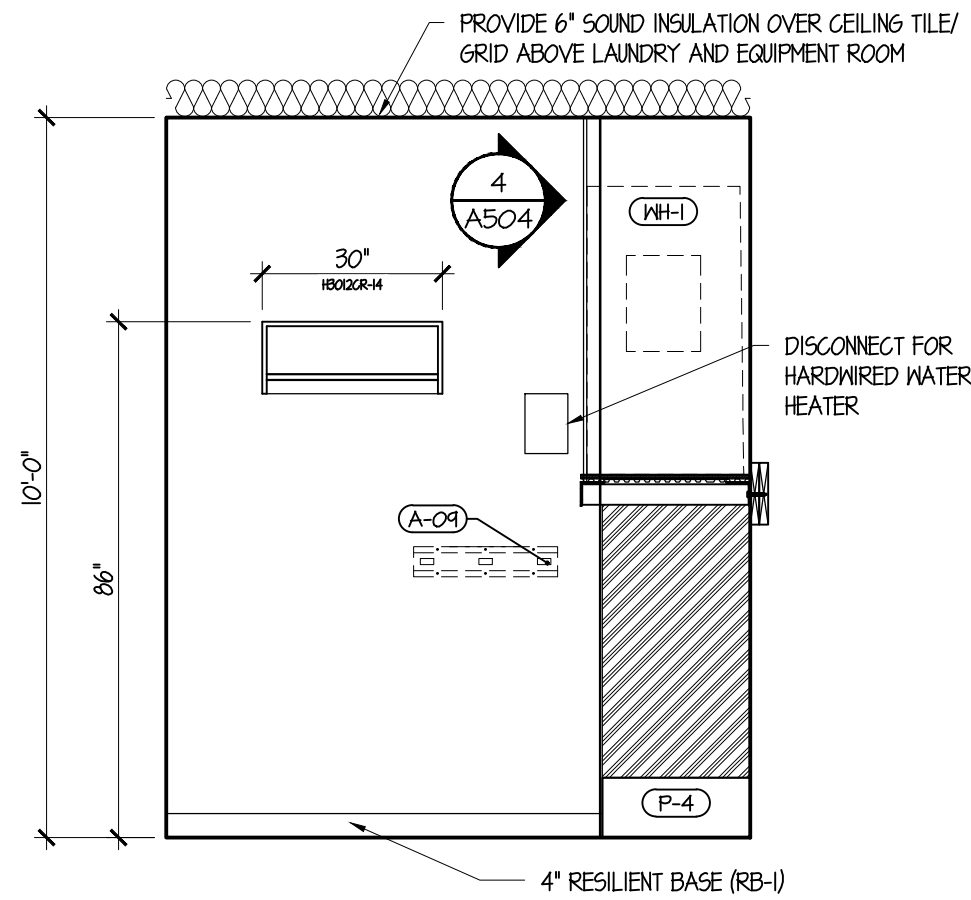
6 Elevation: Doctor's Office #112  
A505 SCALE: 3/8" = 1'-0"



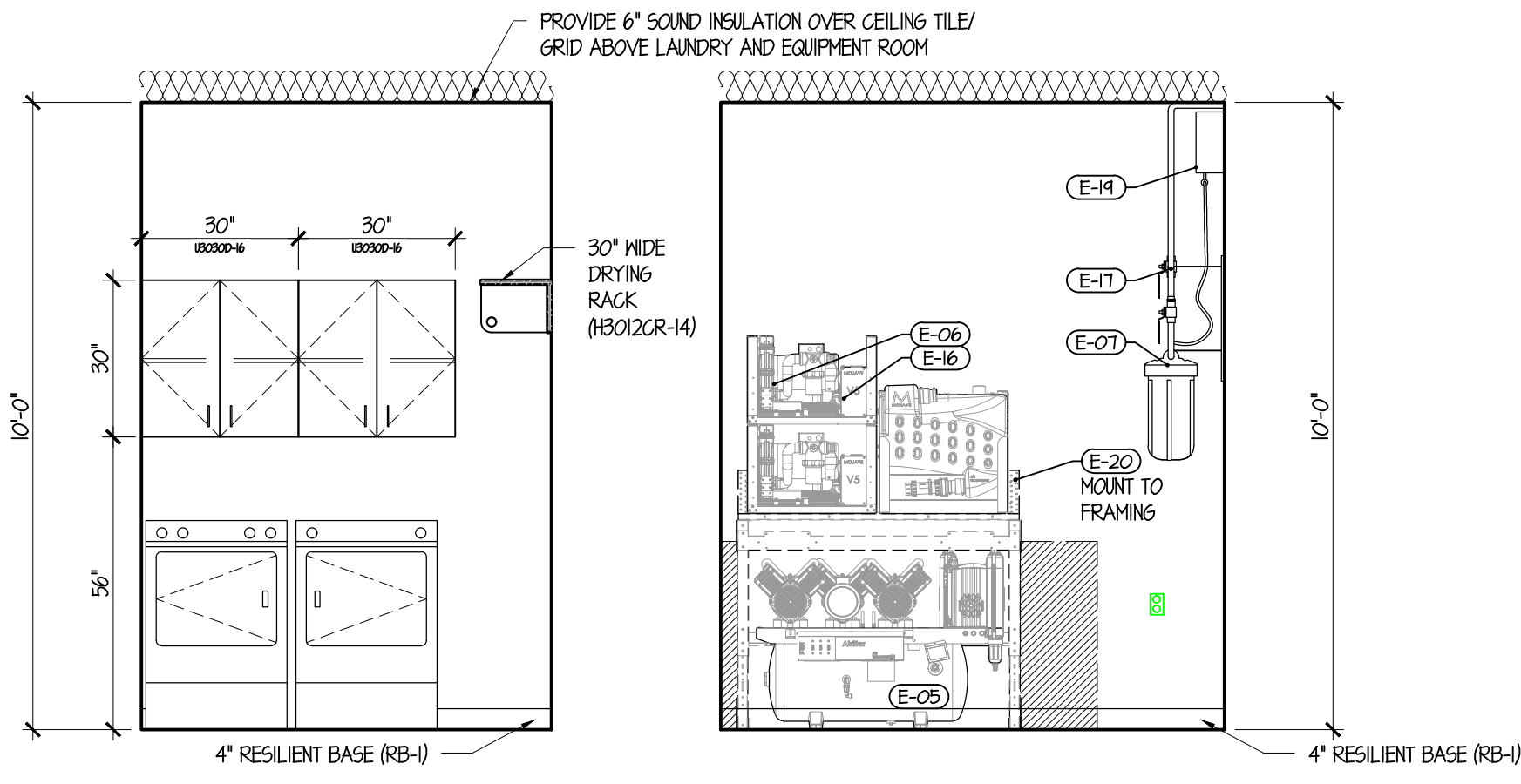
5 Elevation: Doctor's Office #112  
A505 SCALE: 3/8" = 1'-0"



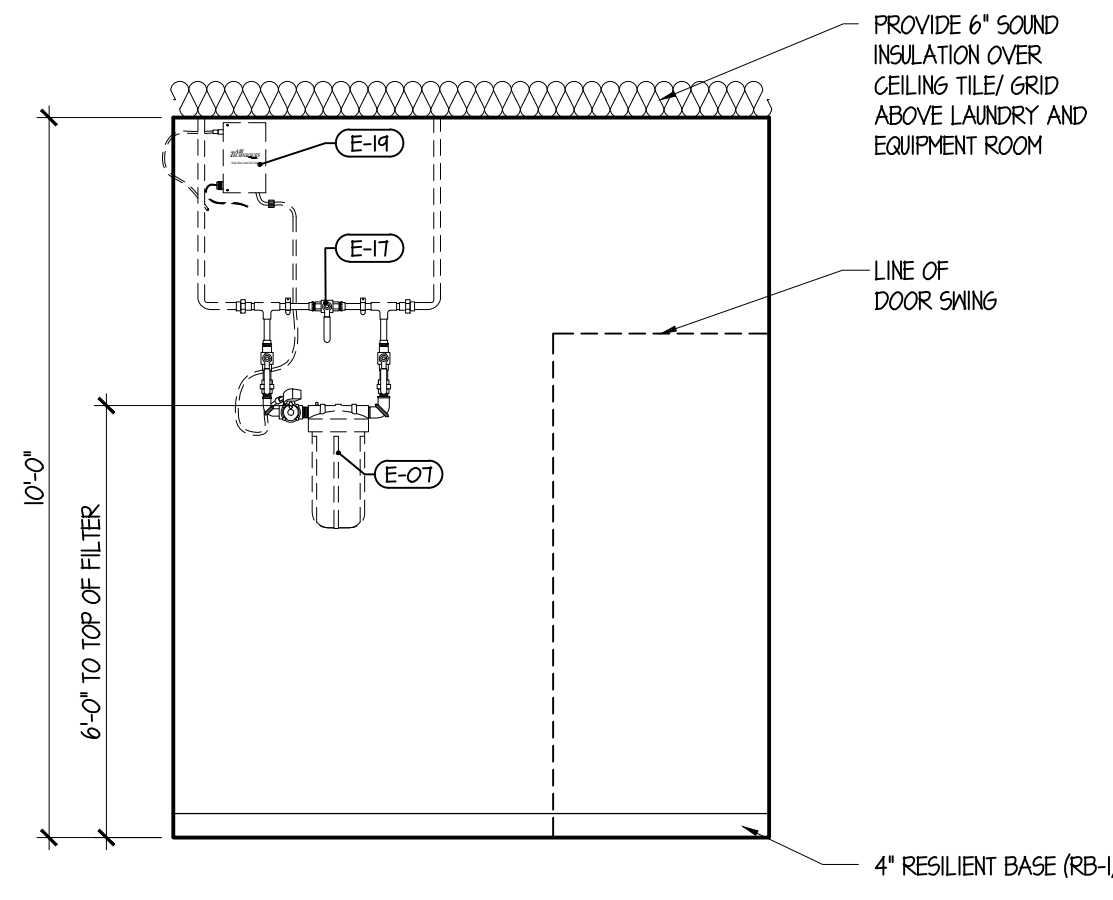
4 Elevation: Mop Sink  
A505 SCALE: 3/8" = 1'-0"



3 Elevation: Equipment Room  
A505 SCALE: 3/8" = 1'-0"



2 Elevation: Equipment Room  
A505 SCALE: 3/8" = 1'-0"



1 Elevation: Equipment Room  
A505 SCALE: 3/8" = 1'-0"

RELEASED FOR  
CONSTRUCTION  
As Noted on Plans Review

Development Engineer: JHOUSTON  
Lee's Summit, MO 64082  
762.222.9111

**HFRA505**  
HILLFOLEYROSS & ASSOCIATES

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Lee's Summit, Missouri 64082

For:  
Heartland Dental  
1200 Network Centre Drive  
Effingham, IL 62401

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mk	Construction
date	issue

Interior  
Elevations

A505

HFRA505





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Market Street Center  
Lee's Summit, Missouri 64082

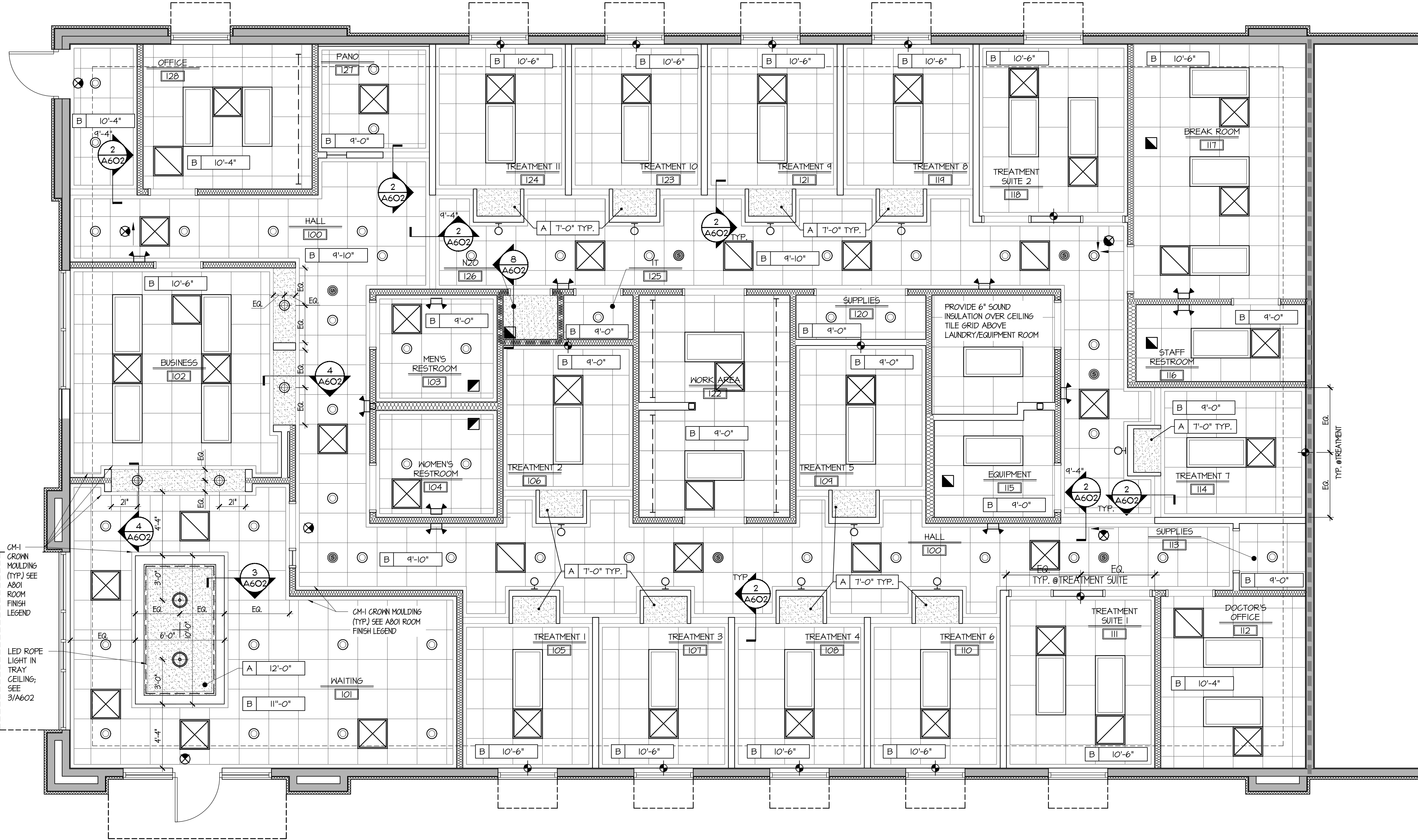
For:  
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1200 Network Centre Drive  
Evingham, IL 62401

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issue

Reflected  
Ceiling Plan

A601

HFR 22.911



1  
A601  
Reflected Ceiling Plan

SCALE: 1/4" = 1'-0"





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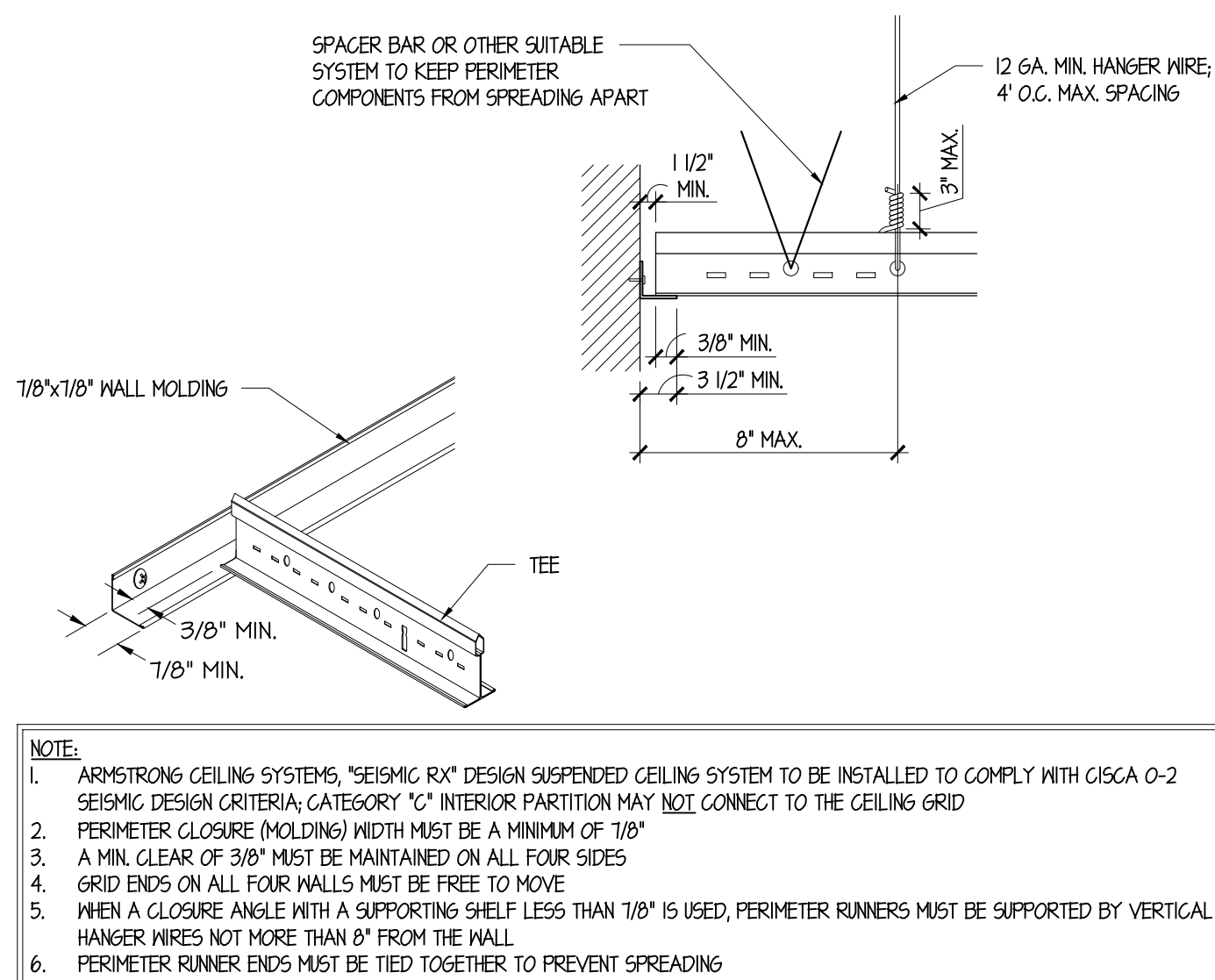
For: Heartland Dental  
1200 Network Centre Drive  
Effingham, IL 62401

[illegible]

## Reflected Ceiling Plan Details

# A602

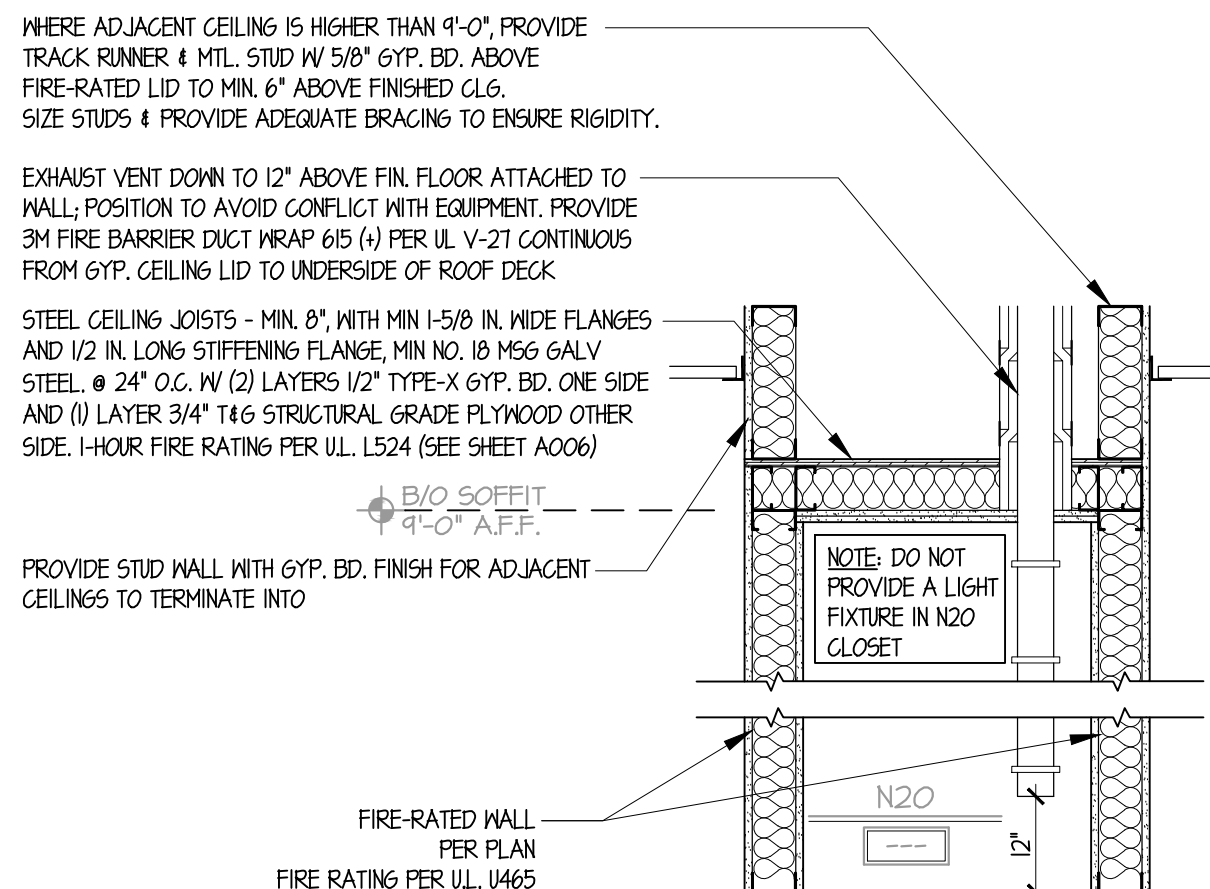
HFR 22.911



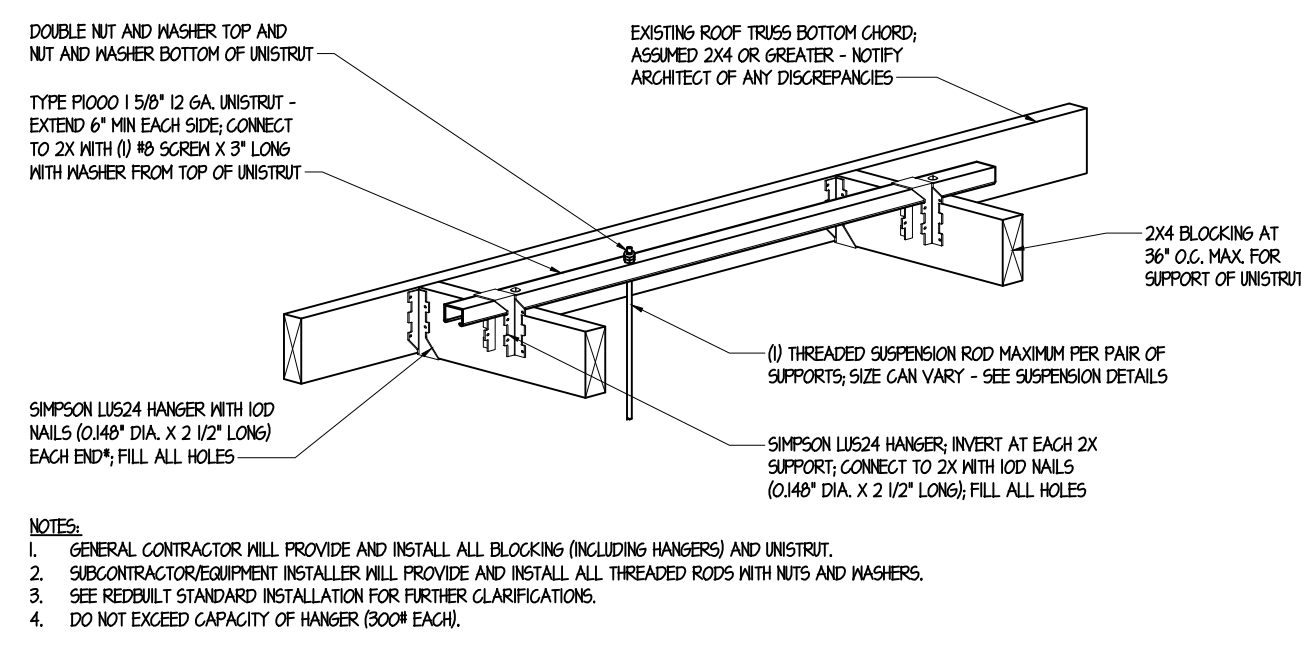
7  
A602

Cisca 0-2 Criteria

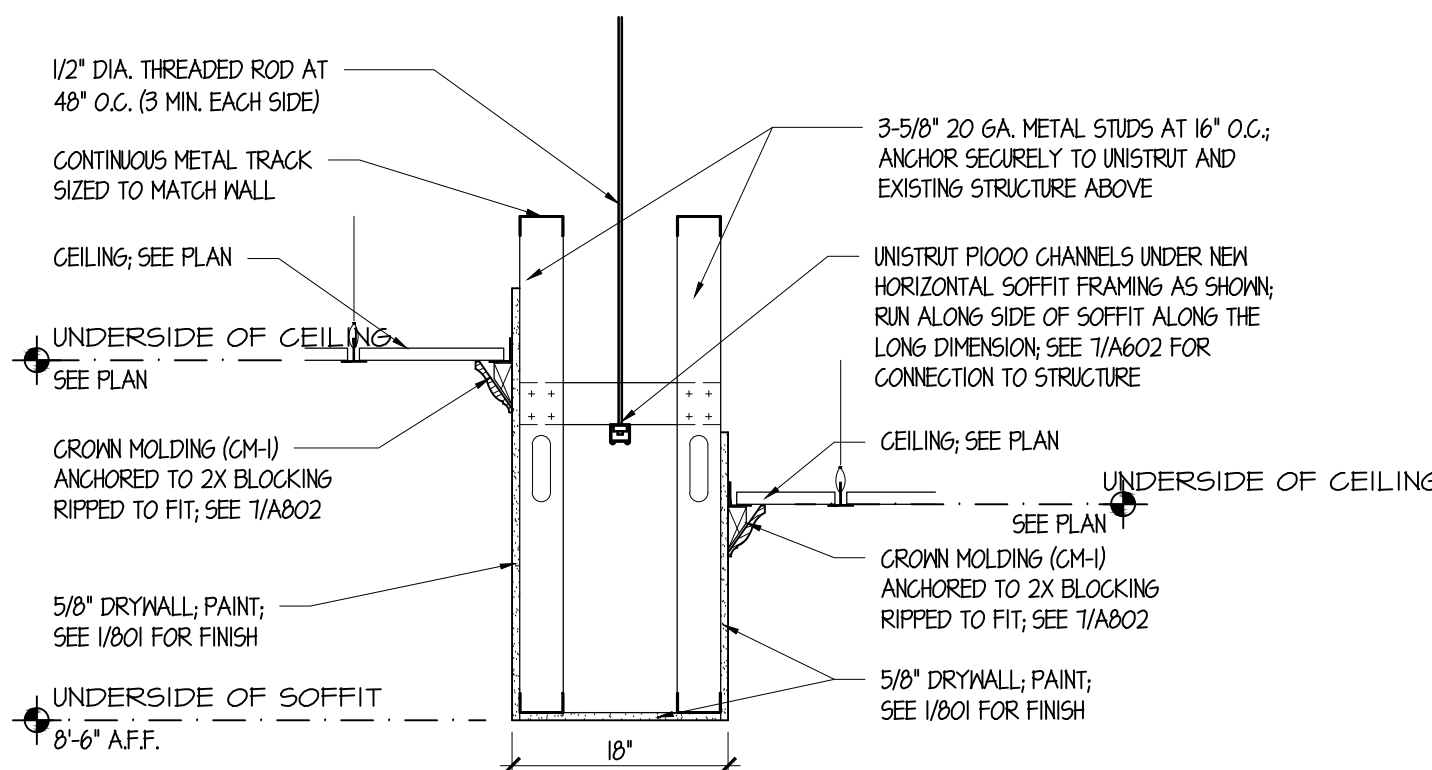
SCALE: 3" = 1'-0"



6 N20 Room Section (Interior Wall)  
A602 SCALE: 3/4" = 1'-0"



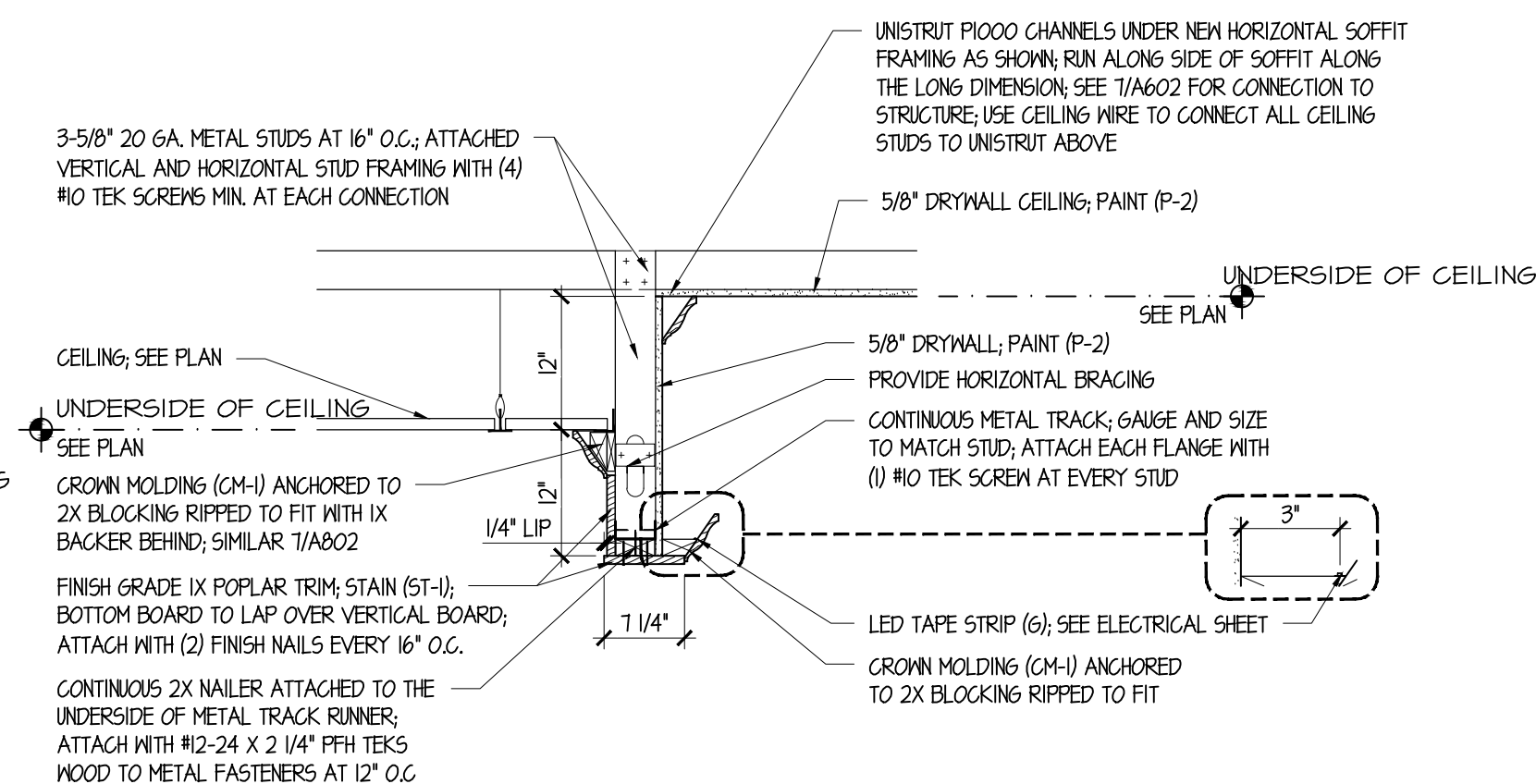
5 Suspension from Structure (Unistrut)  
A602 SCALE: 3/4" = 1'-0"



4 Soffit Section

A602

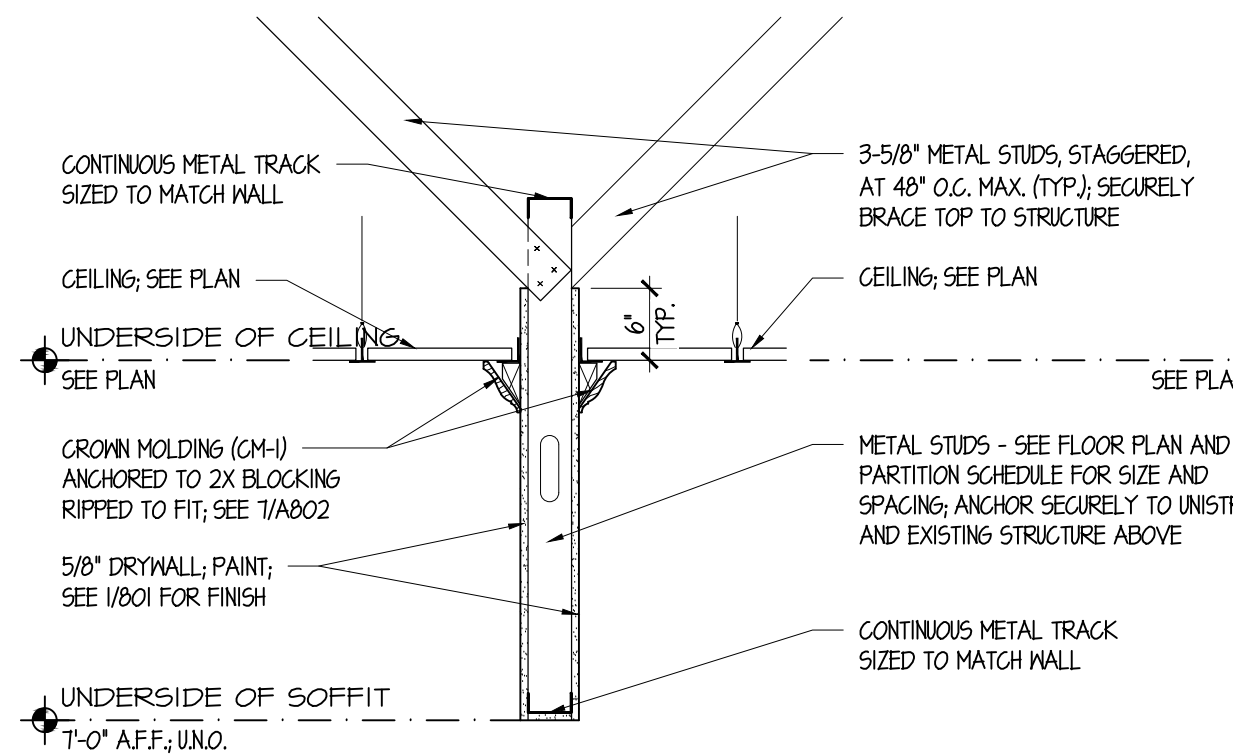
SCALE: 3/4" = 1'-0"



3 Decorative Soffit Section

A602

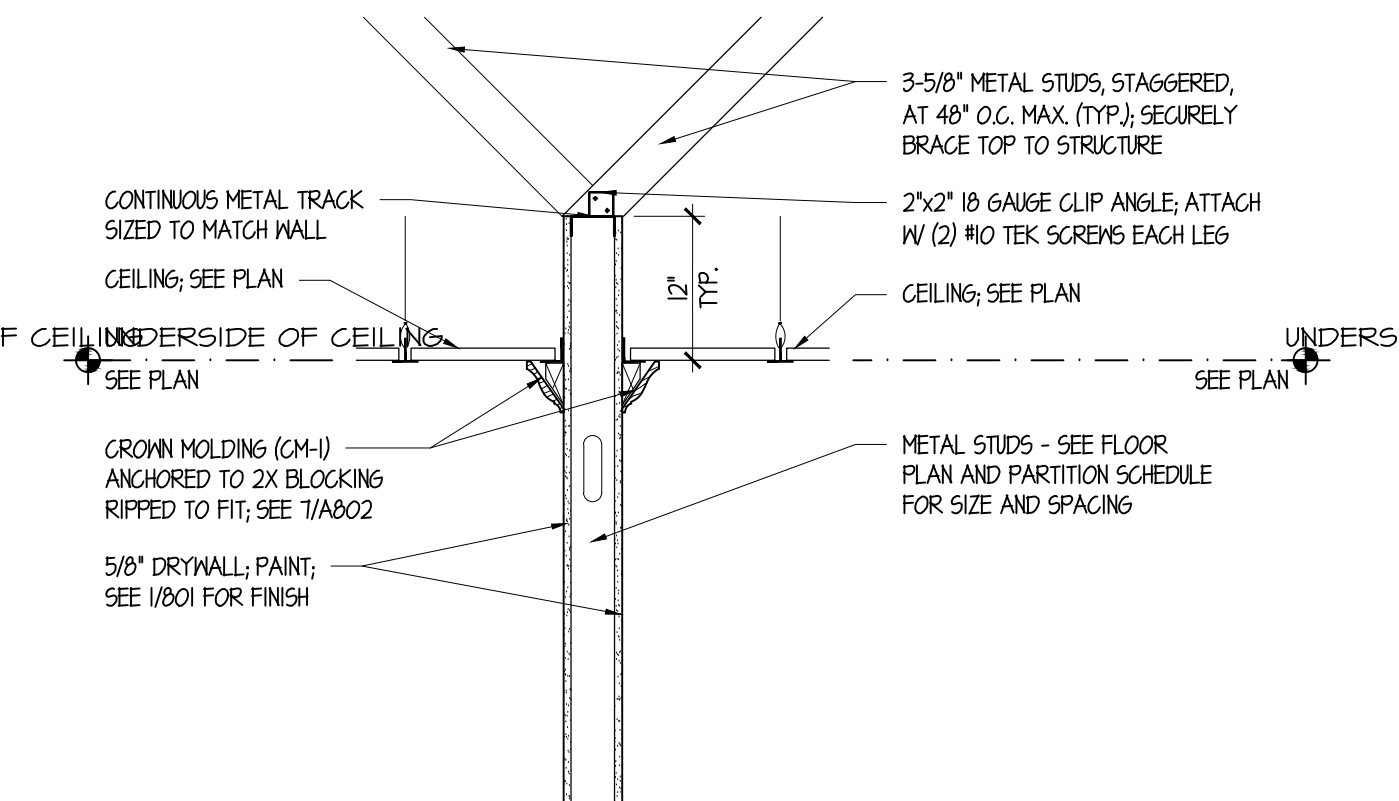
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2 Soffit Section

A602

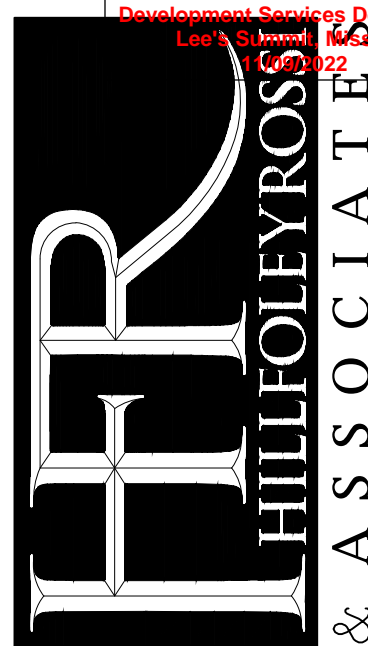
SCALE: 3/4" = 1'-0"



1 Typical Wall Bracing Detail

A602 SCALE: 3/4" = 1'-0"





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Lee's Summit, Missouri 64082

For:  
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1200 Network Centre Drive  
Effingham, IL 62401

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Room Finish  
Plan &  
Schedules

A801

HFR 22.911

### ROOM FINISH LEGEND

TYPE	MARK	MATERIAL	PRODUCT DESCRIPTION / SPECIFICATION
FLOORING	CPT-1	CARPET TILE	PATGRAFT, 12344 FLUTTER MODULAR, COLOR: 00730 CHARCOAL GLIDER, 24"x24" LAID IN 1/4 TURN PATTERN, CARPET AND ADHESIVE SUPPLIED BY OWNER, G.G. TO INSTALL.
	LVT-1	LUXURY VINYL TILE	PATGRAFT, STRATIFIED+ B22V, COLOR: 00710 DUSKY, 12"x24" LAID IN BRICK PATTERN, SUPPLIED BY OWNER, G.G. TO INSTALL.
	LVT-2	LUXURY VINYL TILE	PATGRAFT, LETTERPRESS B11V, COLOR: 00500 SERIF, 24"x24" LAID IN MONOLITHIC PATTERN, SUPPLIED BY OWNER, G.G. TO INSTALL.
	T-1	PORCELAIN TILE	ATLAS CONCORDE, MARVEL GEMS TERRAZZO CREAM, 12"x24" (UNPOLISHED) LAID IN BRICK PATTERN, GROUT: TEC IN-COLOR - FRAINE 928, SUPPLIED BY OWNER, G.G. TO INSTALL.
TRANSITION STRIPS	TS-1	TRANSITION STRIP	SCHLUTER VINIRO-5 1/8" (244) VPS 30 AT68 BRUSHED NICKEL, FOR TRANSITION OF (CPT-1) TO (LVT-1), SUPPLIED BY OWNER, G.G. TO INSTALL; SEE DETAILS ON A802. TRANSITION STRIPS ARE (15-1) UNLESS NOTED OTHERWISE.
	TS-2	TRANSITION STRIP	SCHLUTER DEGO, E-304L STAINLESS STEEL TYPE 304, FOR TRANSITION OF (CPT-1) TO (T-1/T-2), SUPPLIED BY OWNER, G.G. TO INSTALL; SEE DETAILS ON A802.
	TS-3	TRANSITION STRIP	REESE, S205A - FINISH: ALUMINUM MILL FINISH, FOR TRANSITION OF EXTERIOR TO INTERIOR; SEE DETAILS ON A802.
WALL BASE	RB-1	4" RESILIENT BASE	JOHNSONITE TRADITIONAL VINYL BASE, (40) BLACK, STANDARD, 080 GAUGE.
	RB-2	4" RESILIENT BASE	JOHNSONITE TRADITIONAL VINYL BASE, (40) BLACK, TOELESS, 080 GAUGE, USE AT CABINETS TOE KICK.
	WB-1	1" WOOD BASE	PROFILE 22232-CB, 1x POPLAR, STAINED (ST-I) MATTE FINISH.
	WB-2	4" WOOD BASE	PROFILE 22336-CB, 1x POPLAR, STAINED (ST-I) MATTE FINISH.
WALLS	P-1	PAINT	SHERWIN WILLIAMS, (SW1014) "COTTON WHITE", EGGSHELL LATEX.
	P-2	PAINT	SHERWIN WILLIAMS, (SW1065) "AR605", EGGSHELL LATEX.
	P-3	PAINT	SHERWIN WILLIAMS, (SW1068) "GRIZZLE GRAY", EGGSHELL LATEX.
	T-3	PORCELAIN TILE	DATILE RHETORIC ARISTOTLE WHITE ODYSSEY CERAMIC TILE, (MATTE), 8"x24". SUPPLIED BY OWNER, G.G. TO INSTALL.
	TR-1	CHAIR RAIL	PROFILE 2480-CRB AND 3248-ITC-BG, 3" WOOD CHAIR RAIL 32" A.F.F., POPLAR, STAINED (ST-I) MATTE FINISH.
	CR-1	WOOD TRIM	KOETTER WOODWORKING - 1IN PART NUMBER 2480-CRB - 3/4" X 2-1/2"; INSTALLED AT CHECK-IN AND CHECK-OUT COUNTERS AND PUBLIC RESTROOMS; SEE INTERIOR ELEVATIONS.
CEILING	ACT-1	ACOUSTICAL TILE	ARMSTRONG, CORTEGA (T04), ANGLED TEGULAR, 24x24x5/8", WHITE IV PRELUDE XL 15/16" EXPOSED TEE GRID.
	CM-1	CROWN MOLDING	PROFILE 20160-B-CR, POPLAR, STAIN (ST-I) MATTE FINISH.
STAIN	GYP, BD	DRYWALL	TYPE X GYPSUM WALLBOARD FOR FIRE RATED CEILING LID, REFER TO 4/A602.
	ST-1	STAIN	FACTORY-APPLIED, TO MATCH PL-2, MATTE FINISH.
CASEWORK	C-1	CASEWORK	KOETTER, POPLAR, STAIN (ST-I) MATTE FINISH.
	PL-1	PLASTIC LAMINATE	MILSONARTHO, SILVER TRAVERTINE, 1850K-55.
	PL-2	PLASTIC LAMINATE	STEVENS INDUSTRIES, LESNO COLLECTION WALNUT TREPOLO, L16 PARSIMNE.
	Q-1	QUARTZ	L6 HAUSY'S VATERA QUARTZ 30MM "ARIA".
CASEWORK	SB-1	SPEEDRACE	"SPEEDRACE" SUPPORTS, STANDARD BLACK FACTORY FINISH.

### ROOM FINISH SCHEDULE

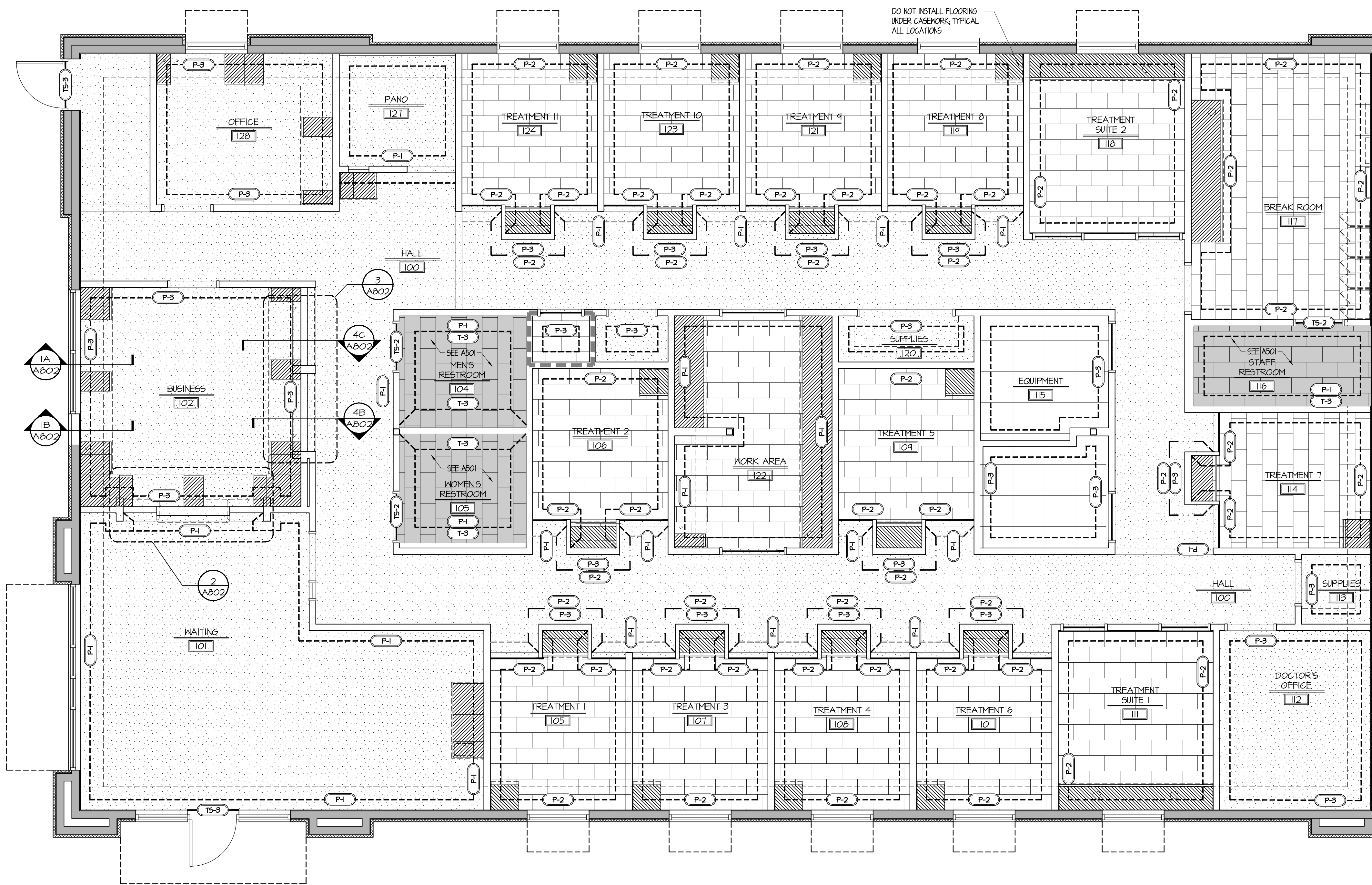
ROOM #	ROOM NAME	FLOOR		CEILING			WALLS		MILLWORK		COMMENTS
		MATERIAL	WALL BASE	MATERIAL	FINISH	CROWN MOLD	FINISH	CABINET	TOP		
100	HALLWAY	CPT-1	WB-2	ACT-1	-----	CM-1	P-1	-----	-----	REFER TO A503-A505; SEE "ALL 12 O'CLOCK WALLS"	
101	WAITING	CPT-1, T-2	WB-2	ACT-1	-----	CM-1	P-1, T-4	PL-2	Q-1	REFER TO A02 & A503-A505	
102	BUSINESS	CPT-1	WB-2 / RB-2	ACT-1	-----	CM-1	P-3	PL-2	PL-1, Q-1	REFER TO A503-A505	
103	MEN'S RESTROOM	T-1	T-3	ACT-1	-----	CM-1	T-3, T-4, P-1	PL-2	Q-1	REFER TO A501	
104	WOMEN'S RESTROOM	T-1	T-3	ACT-1	-----	CM-1	T-3, T-4, P-1	PL-2	Q-1	REFER TO A501	
112	DOCTOR'S OFFICE	CPT-1	RB-2	ACT-1	-----	-----	P-3	PL-2	PL-1	REFER TO A503-A505	
113	SUPPLY CLOSET	CPT-1	RB-1	ACT-1	-----	-----	P-3	PL-2	PL-1, Q-1		
115	LAUNDRY & EQUIPMENT	LVT-2	RB-1	ACT-1	-----	-----	P-3	-----	-----	REFER TO A501	
116	STAFF RESTROOM	T-1	T-3	ACT-1	-----	-----	T-3, P-1	-----	-----		
117	BREAK	LVT-1	RB-1	ACT-1	-----	-----	P-2	PL-2	PL-1	REFER TO A503-A505	
120	SUPPLY CLOSET	CPT-1	RB-1	ACT-1	-----	-----	P-3	PL-2	PL-1, Q-1		
122	WORK AREA	LVT-1	RB-1	ACT-1	-----	-----	P-1	PL-2	PL-1	REFER TO A503-A505	
125	IT CLOSET	CPT-1	RB-2	ACT-1	-----	-----	P-3	PL-2	PL-1, Q-1		
126	NO CLOSET	LVT-1	RB-1	DRYWALL	P-3	-----	P-3	-----	-----	REFER TO A503-A505	
127	PANO	CPT-1	WB-2	ACT-1	-----	CM-1	P-1	-----	-----		
128	OFFICE	CPT-1	RB-2	ACT-1	-----	-----	P-3	PL-2	PL-1		
---	TREATMENT	LVT-1	WB-2	ACT-1	-----	CM-1	P-2	PL-2	PL-1	RB-2 AT 12.00 STATION BASE CABINETS; SEE PLAN FOR ALTERNATE PAINT AT SELECT WALLS	
---	TREATMENT SUITE	LVT-1	WB-2	ACT-1	-----	CM-1	P-2	PL-2	PL-1	RB-2 AT BASE CABINETS	
---	12 O'CLOCK WALLS	-----	WB-2	-----	-----	CM-1	P-2, P-3, ST-1	-----	-----	HALLWAY SIDE ONLY; SEE 2/A504	

### FLOOR FINISH PLAN LEGEND

PATTERN	KEYNOTE	DESCRIPTION
	CPT-1	CARPET TILE
	LVT-1	DATILE, LANGSTON LVT, CREEKSIDE LT241, T34, 15 X 52
	LVT-2	LUXURY VINYL TILE IN STACKED BOND PATTERN
	T-1	DATILE, UNITY, AVORIO P400, PORCELAIN TILE, 12 X 24
	-----	INDICATES WALL FINISH; SEE FINISH TAG ON PLAN.
	-----	INDICATES 12 O'CLOCK WALL FINISH; SEE FINISH TAG ON PLAN; SEE ELEVATIONS AND DETAIL 5B/A02.
	-----	INDICATES FINISH FOR SOFFIT ABOVE AND WALL ALIGNED WITH SOFFIT.

### ROOM FINISH NOTES

- REFER TO INTERIOR ELEVATIONS FOR ADDITIONAL FINISH MATERIALS.
- VERIFY COLORS, LOCATIONS AND MATERIALS IN OWNER PRIOR TO ORDERING MATERIALS.
- ALL OUTLETS AND COVER PLATES TO BE COLOR: "WHITE" UNLESS LOCATED ON (PL-2 / ST-I) WHICH WILL BE COLOR: "DARK BROWN" OR "BRONZE" (OR AS DIRECTED BY OWNER).
- ALL CASEWORK IS TO BE PROVIDED BY THE MILLWORK MANUFACTURER SELECTED BY HEARTLAND DENTAL, G.G. TO COORD. IN HEARTLAND CONSTRUCTION PROJECT MANAGER FOR COMPANY & CONTACT INFORMATION.
- ALL WOOD TRIM, DOORS, AND HARDWARE TO BE PROVIDED BY OWNER. CONTRACTOR TO PLACE ORDER AND DATE OF DELIVERY WITH EFFINGHAM BUILDERS SUPPLY, G.G. TO CONTACT BILL METTE FOR QUANTITIES NEEDED; TELEPHONE: (217) 341-0561; (EMAIL) BILL@502255.COM.
- CARPET TILE (CPT), LUXURY VINYL TILE (LVT) AND ADHESIVE PROVIDED OWNER, INSTALLED BY G.G. CONTACT MELANIE JOHNSON AT MELANIE.JOHNSON@SHAWING.COM AND COPY (EMAIL) 10002@HILLMANPATGRAFT.COM TO ORDER MATERIALS; TELEPHONE: (800) 244-4014.
- CERAMIC AND DECORATIVE TILE PROVIDED BY OWNER, INSTALLED BY G.G. CONTACT KEVIN PARDO AT (EMAIL) KEVINPARDO@BISMAILE.COM TO ORDER TILE AND GROUT; TELEPHONE: (636) 734-5092.
- G.G. TO PROVIDE THE OWNER WITH THREE (3) CARTONS OF CARPET TILES AND ONE (1) CARTON OF CEILING TILES AT END OF PROJECT.



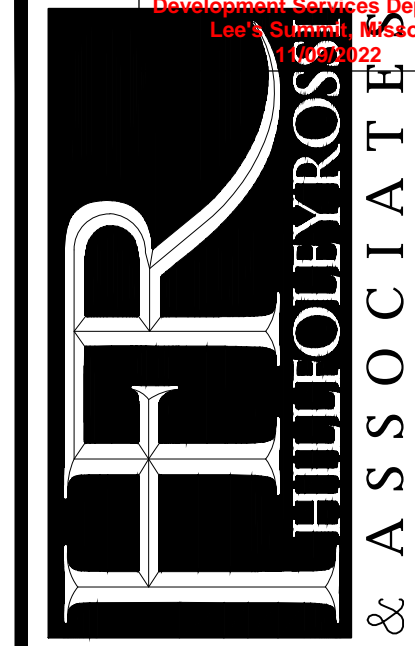
1 Floor Finish Plan

SCALE: 1/4" = 1'-0"









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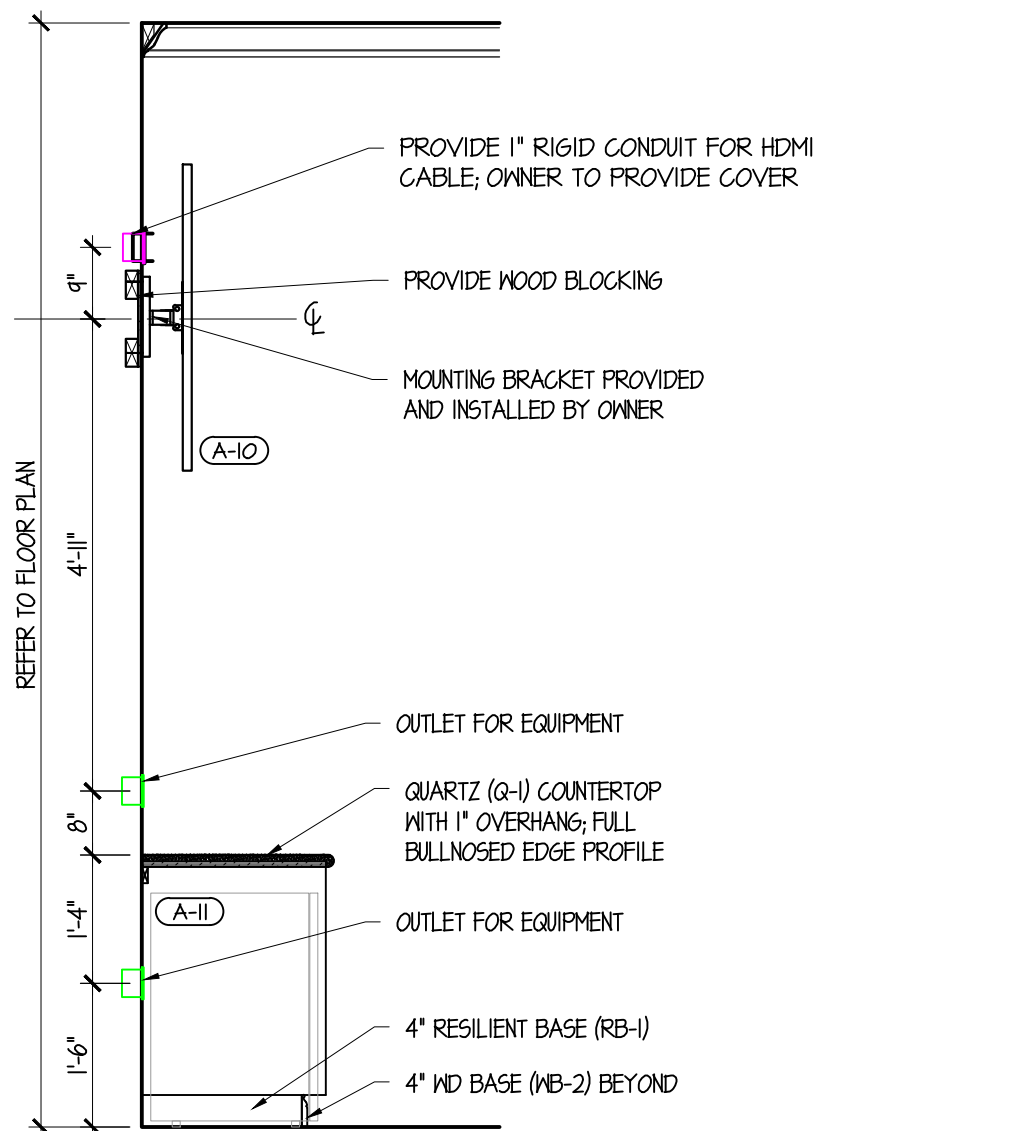
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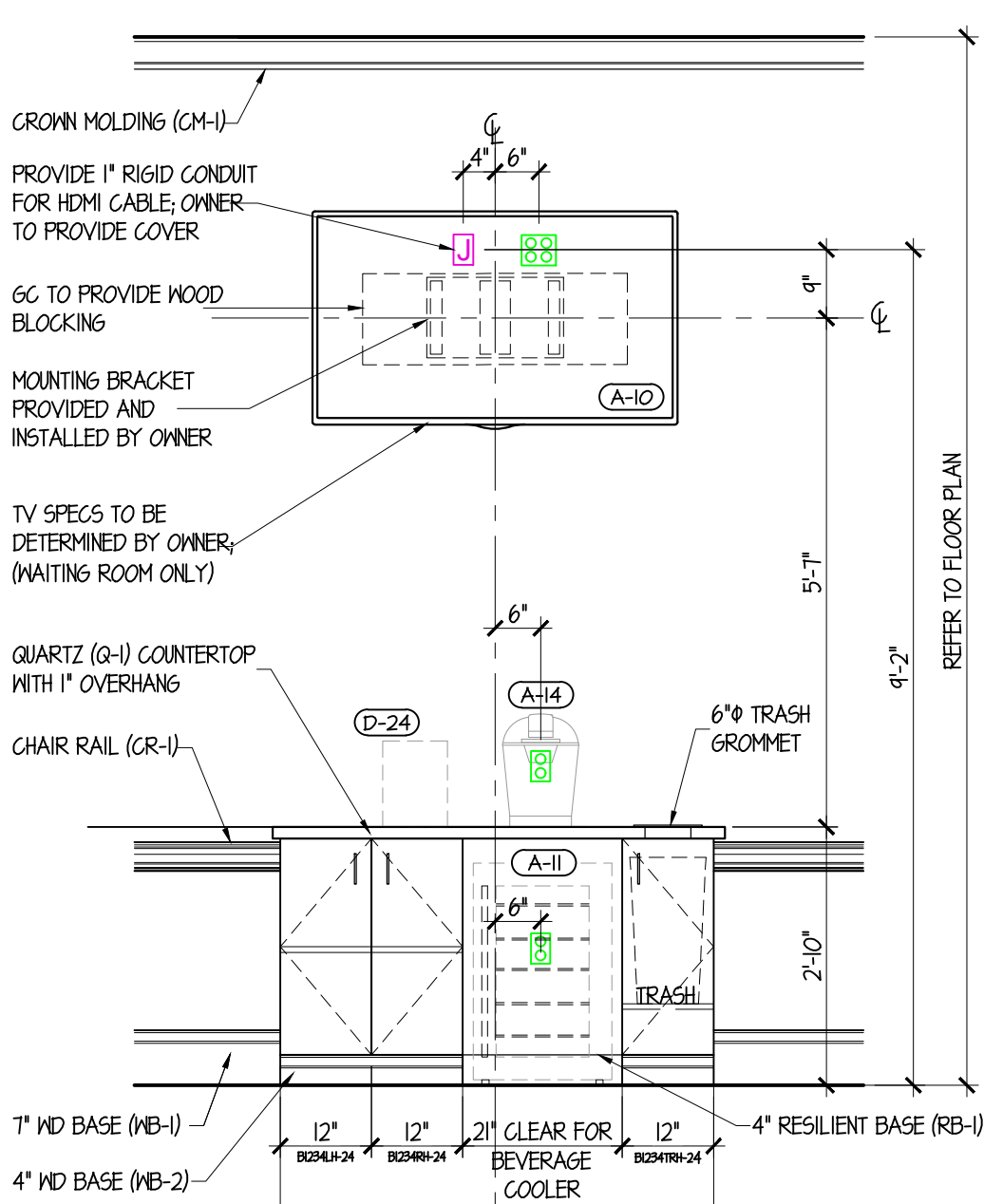
Equipment  
Plan

F101

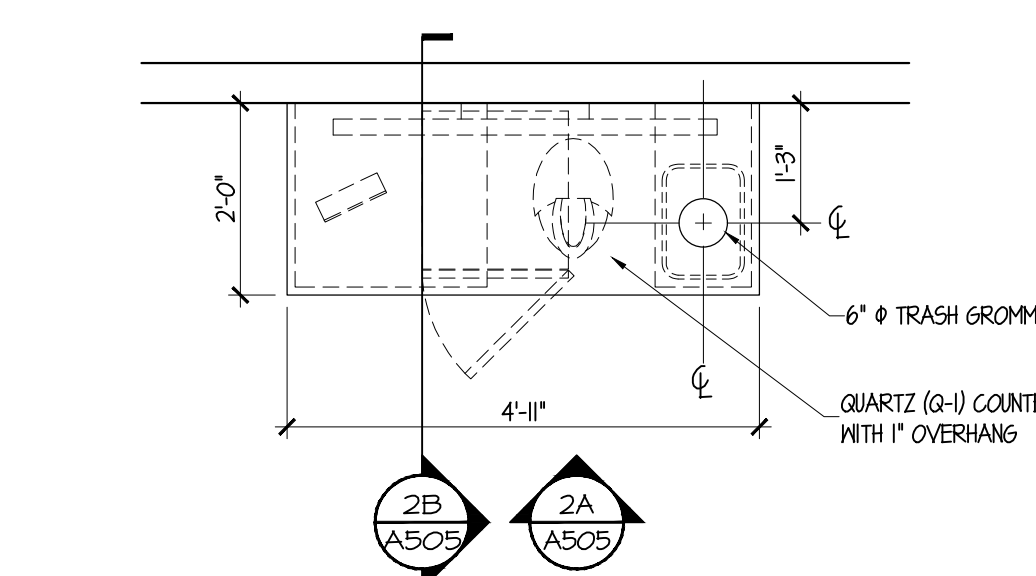
HFR 22.911



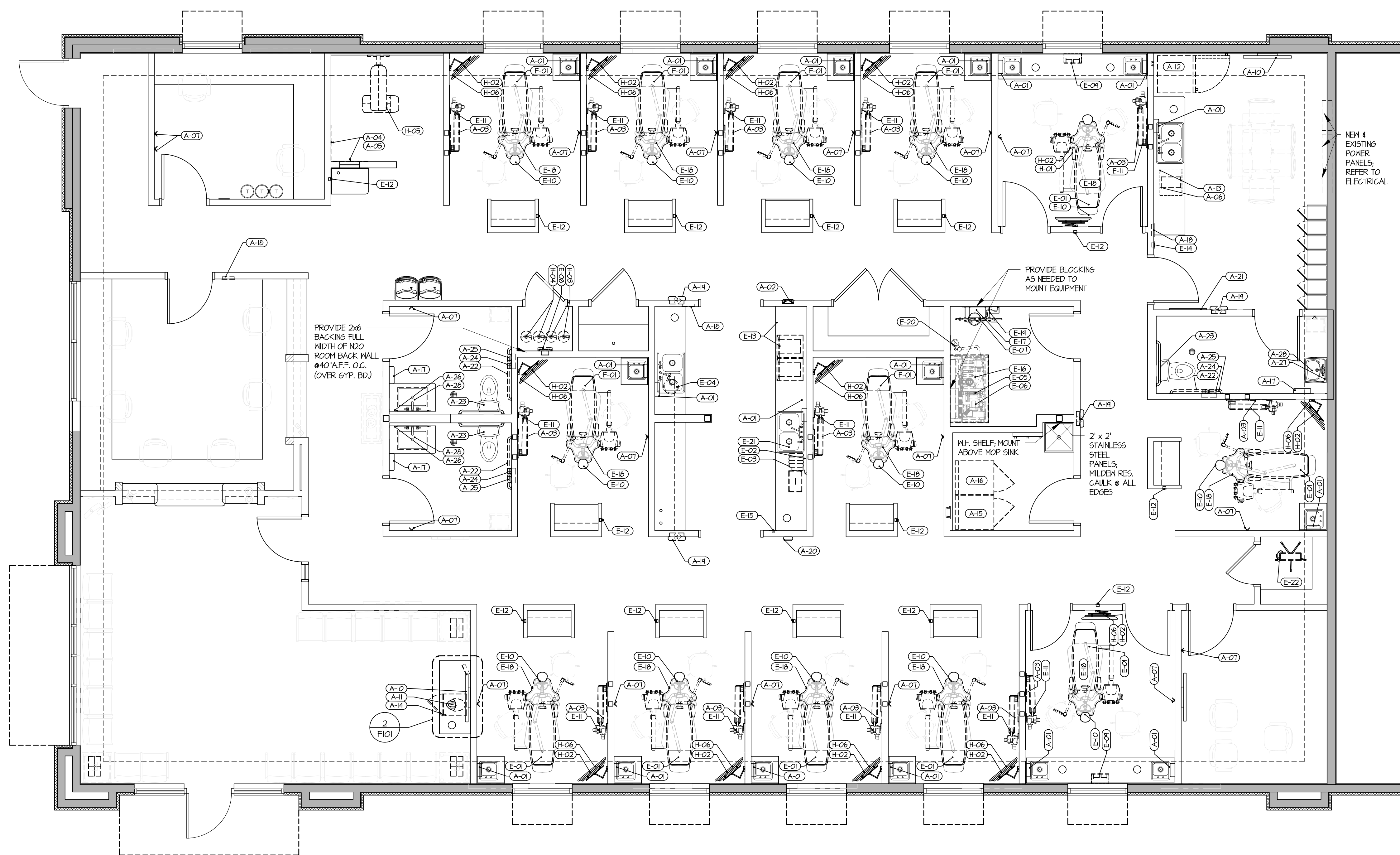
4 Detail: Beverage Counter  
F101 SCALE: 1/2" = 1'-0"



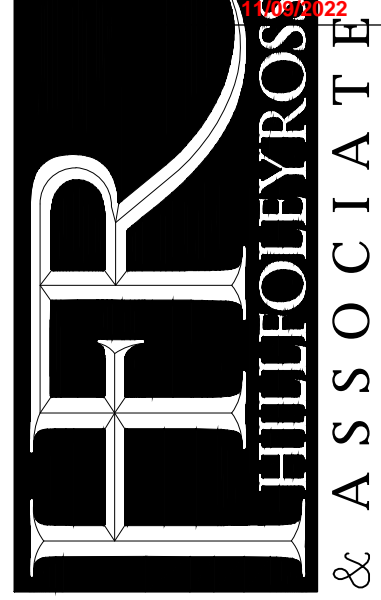
3 Detail: Beverage Counter  
F101 SCALE: 1/2" = 1'-0"



2 Detail: Beverage Counter  
F101 SCALE: 1/2" = 1'-0"









EQUIPMENT SCHEDULE (ORDER FROM HEARTLAND DENTAL)								
Item #	Count	Description	Manufacturer	Model #	Supplied By	Installed By	Connected By	Comments
A-10	3	LED Television 42"			Owner	G.C.	G.C.	
A-18	3	Speaker Control Box			Owner	G.C.	G.C.	Low Voltage contractor to provide and install controls; to provide empty junction box
A-20	1	AED Defibrillator	HeartSine	350P	Owner	G.C.	G.C.	
D-01	1	Baiano	Uttermost	8089	Owner	G.C.	NA	
D-02	1	Seymour	Uttermost	14465	Owner	G.C.	G.C.	NA
D-03	1	Anabella Bottles (2 per set)	Uttermost	20076	Owner	G.C.	G.C.	NA
D-04	3	Caffaro Lamp	Uttermost	27143-1	Owner	G.C.	NA	
D-05	1	Carla Vases (2 per set)	Uttermost	20084	Owner	G.C.	NA	
D-06	1	Sara Vases (2 per set)	Uttermost	20156	Owner	G.C.	G.C.	NA
D-07	1	Cierra Vases (2 per set)	Uttermost	20187	Owner	G.C.	G.C.	NA
D-08	1	Tamra Light	Uttermost	18712	Owner	G.C.	G.C.	NA
D-09	1	Sybil Square (2 per set)	Uttermost	4106	Owner	G.C.	G.C.	NA
D-10	1	Windblown Oil Reproduction	Uttermost	41390	Owner	G.C.	G.C.	NA
D-11	1	Smile Photo (40"x50")		Custom	Owner	G.C.	G.C.	N.A.
D-12	1	Smile Photo (20"x24")		Custom	Owner	G.C.	G.C.	N.A.
D-13	1	Financing Poster (20" x30")		OC166_14_3	Owner	G.C.	G.C.	N.A.
D-14	1	Comfort Amenities Poster (20" x30")		OC166_15_3	Owner	G.C.	G.C.	N.A.
D-15	7	Crowns Poster (20" x30")		OC163_1_3	Owner	G.C.	G.C.	N.A.
D-16	4	Fluoride Poster (20" x30")		OC166_3_1	Owner	G.C.	G.C.	N.A.
D-17	1	Periodontal Disease Poster (20" x30")		OC162_4	Owner	G.C.	G.C.	N.A.
D-18	1	Oral Cancer Poster (20" x30")		OC157_2	Owner	G.C.	G.C.	N.A.
D-22	3	Restroom Signage (Girly)	NONE	N.A.	Owner	G.C.	G.C.	N.A.
H-02	13	32" LCD Monitor	Samsung		Heartland	Heartland	G.C.	Mounted to wall mount

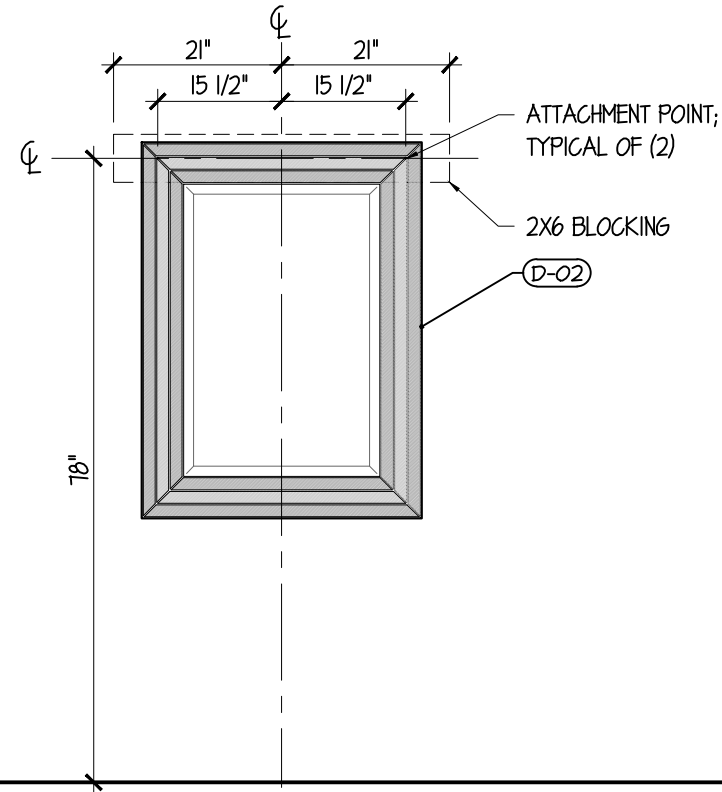
EQUIPMENT SCHEDULE (ORDER FROM PATTERSON DENTAL THROUGH HEARTLAND DENTAL NATIONAL ACCOUNT)								
Item #	Count	Description	Manufacturer	Model #	Supplied By	Installed By	Connected By	Comments
A-02	1	Med Gas Alarm Panel	Porter Sentinel System Mainfold	Sentinel Zone Valve: 9000-1	Owner	G.C.	G.C.	Mounting height 42" to centerline of knobs
A-03	13	Lead Apron Hanger			Owner	G.C.	G.C.	
A-04	2	Pano Apron Hanger			Owner	G.C.	G.C.	Owner to verify mounting locations
E-01	13	Utility Center	DCI	Edge Series 5	Patterson	Patterson	G.C.	
E-03	1	Ultrasonic Cleaner	Henry Schein	Maxisweep S3100	Patterson	Patterson	G.C.	Compressed air connection
E-04	1	Plaster Trap	NA	NA	Patterson	G.C.	G.C.	
E-05	1	Air Compressor	Air Techniques	Airstar 70	Patterson	Patterson	G.C.	
E-06	1	Vacuum Pump, Dry	Air Techniques	Mojave 2V5	Patterson	Patterson	G.C.	
E-07	1	Water Solenoid			Patterson	G.C.	G.C.	Attached to (E-19) remote water control valve transformer
E-08	1	Sentinel Manifold System	Parker Porter	3222 CX (Wall)	Patterson	Patterson	G.C.	
E-09	2	Nitrous Oxide Flowmeter	Parker Porter	NA	Patterson	Patterson	G.C.	
E-10	13	Dental Light	DCI	Edge Series 5 Light	Patterson	Patterson	Patterson	
E-11	13	Intraoral X-Ray System	Instrumentarium	Focus	Patterson	Patterson	G.C.	Requires (2) 2x4 wood posts. See 5/F101
E-12	14	X-Ray Remote Button			Patterson	Patterson	G.C.	
E-13	2	Autoclave / Sterilizer	Midmark	M11 Ultraclave	Patterson	Patterson	G.C.	110V dedicated outlet
E-14	1	Control Panel (3 Switch)	Air Techniques	P/N 53133	Patterson	G.C.	G.C.	
E-15	1	N2O-O2 System Alarm	Parker Porter	Sentinel	Patterson	Patterson	G.C.	110 Power Overhead
E-16	1	Storage Tank	Air Techniques	MT10	Patterson	Patterson	G.C.	
E-17	1	Master Controller	Air Techniques		Patterson	Patterson	G.C.	Connected to E07 & E19
E-18	13	Patient Chair	DCI	Edge Series 5	Patterson	Patterson	G.C.	
E-19	1	Remote Water Control Valve Transformer	Air Techniques	Custom	Patterson	Patterson	G.C.	
E-20	1	Amalgam Separator	Soletex	HG5-001	Patterson	Patterson	G.C.	See Plumbing
E-21	1	Quattrocare	KaVo		Patterson	Patterson	G.C.	1/4" air line with 58 to 87 psi air pressure, 45 psi max.
E-22	1	Intraoral Scanner	Itero	Element	Patterson	Patterson	G.C.	28" min. clear floor space required
E-23	1	Faucet Mounted Eyewash	Itero	G1100	Patterson	Plumber	---	Plumbing Contrator to install on Faucet (P9)
F-07	13	Assistant Stool	Brewer	3145L	Owner	G.C.	NA	
F-08	13	Doctor's Chair	Brewer	3125B	Owner	G.C.	NA	
H-05	1	Digital Panoramic System	Kavo	OP	Patterson	Patterson	G.C.	Coordinate final selection with HD DPM; If CEPH arm is installed, install at 7 degrees from wall; coordinate base plate location with manufacturer
H-06	13	Wall Arm Mount	ICW	UL500-W3-A2-QG	Owner	Owner	G.C.	Provide blocking per details on F104 & F105

<u>BLOCKING NOTE</u>
SEE PAGES F104 & F105 FOR BLOCKING DETAILS.

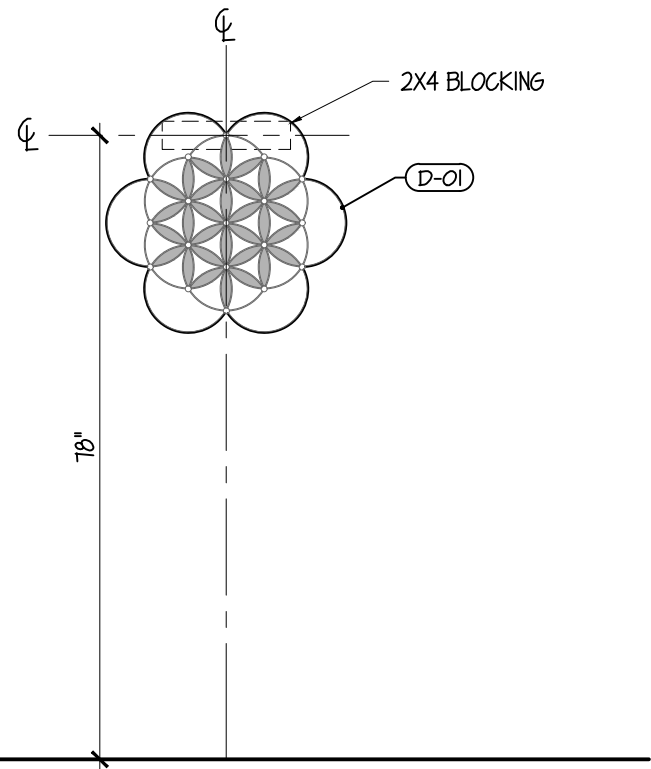


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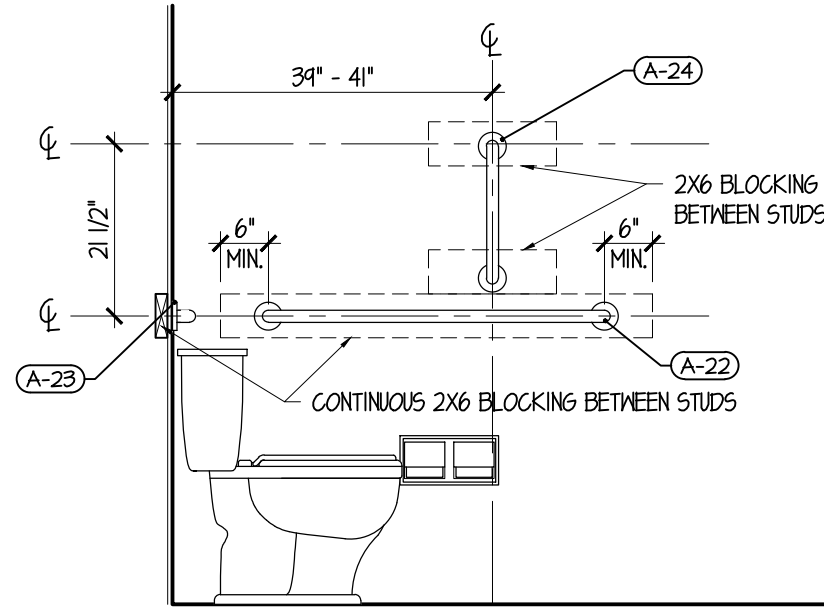
- BLOCKING INSTALLATION NOTES:
1. ALL BLOCKING BY GENERAL CONTRACTOR UNLESS NOTED OTHERWISE; COORDINATE FINAL LOCATION OF BLOCKING WITH DENTAL EQUIPMENT AND PLUMBING FIXTURES.
  2. ALL BLOCKING TO BE 2X WOOD UNLESS NOTED OTHERWISE.
  3. ALL BLOCKING TO BE BETWEEN STUDS; COORDINATE EXACT LOCATION WITH PLANS AND ELEVATIONS.
  4. LAMINATED SIGNS TO BE SECURED TO SURFACE WITH HEAVY DUTY DOUBLE SIDED TAPE.



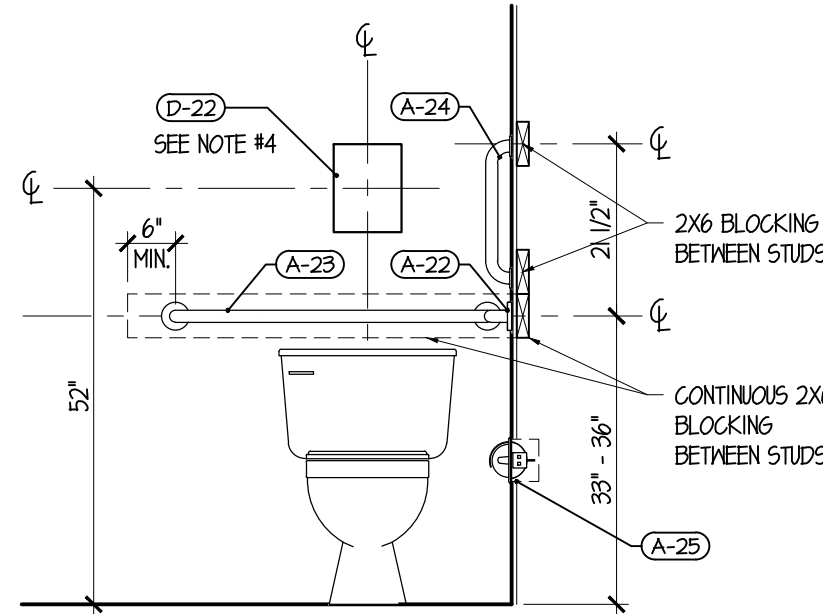
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F104  
Decorative Artwork  
SCALE: 1/2" = 1'-0"



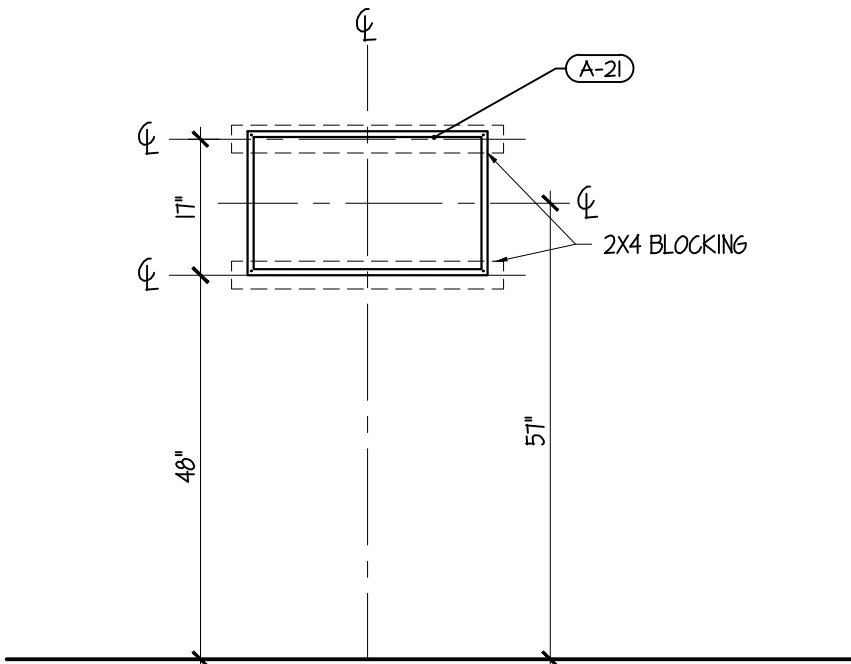
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F104  
Decorative Artwork  
SCALE: 1/2" = 1'-0"



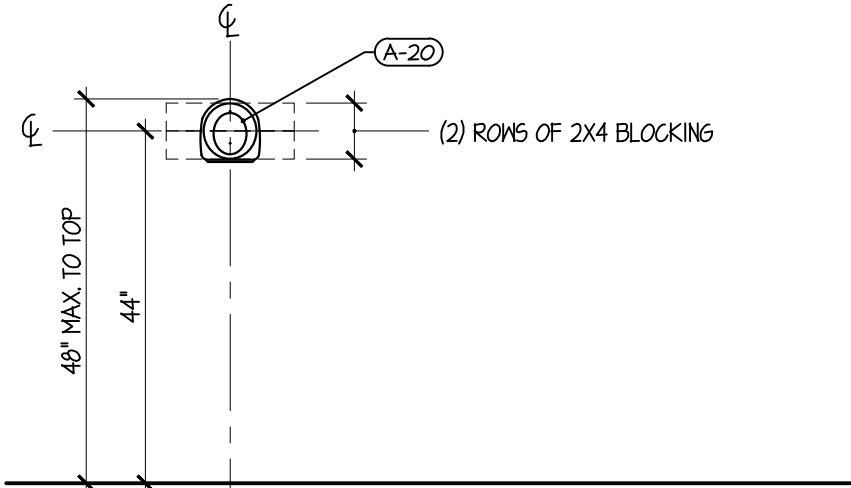
16  
F104  
Water Closet Accessories  
SCALE: 1/2" = 1'-0"



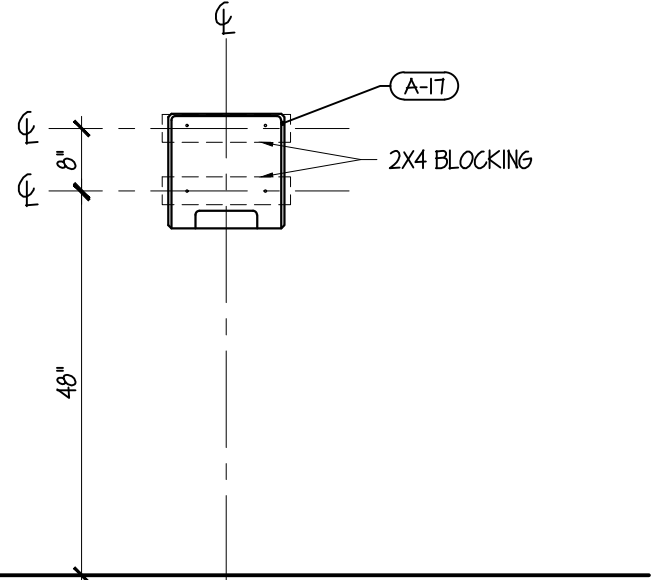
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F104  
Water Closet Accessories  
SCALE: 1/2" = 1'-0"



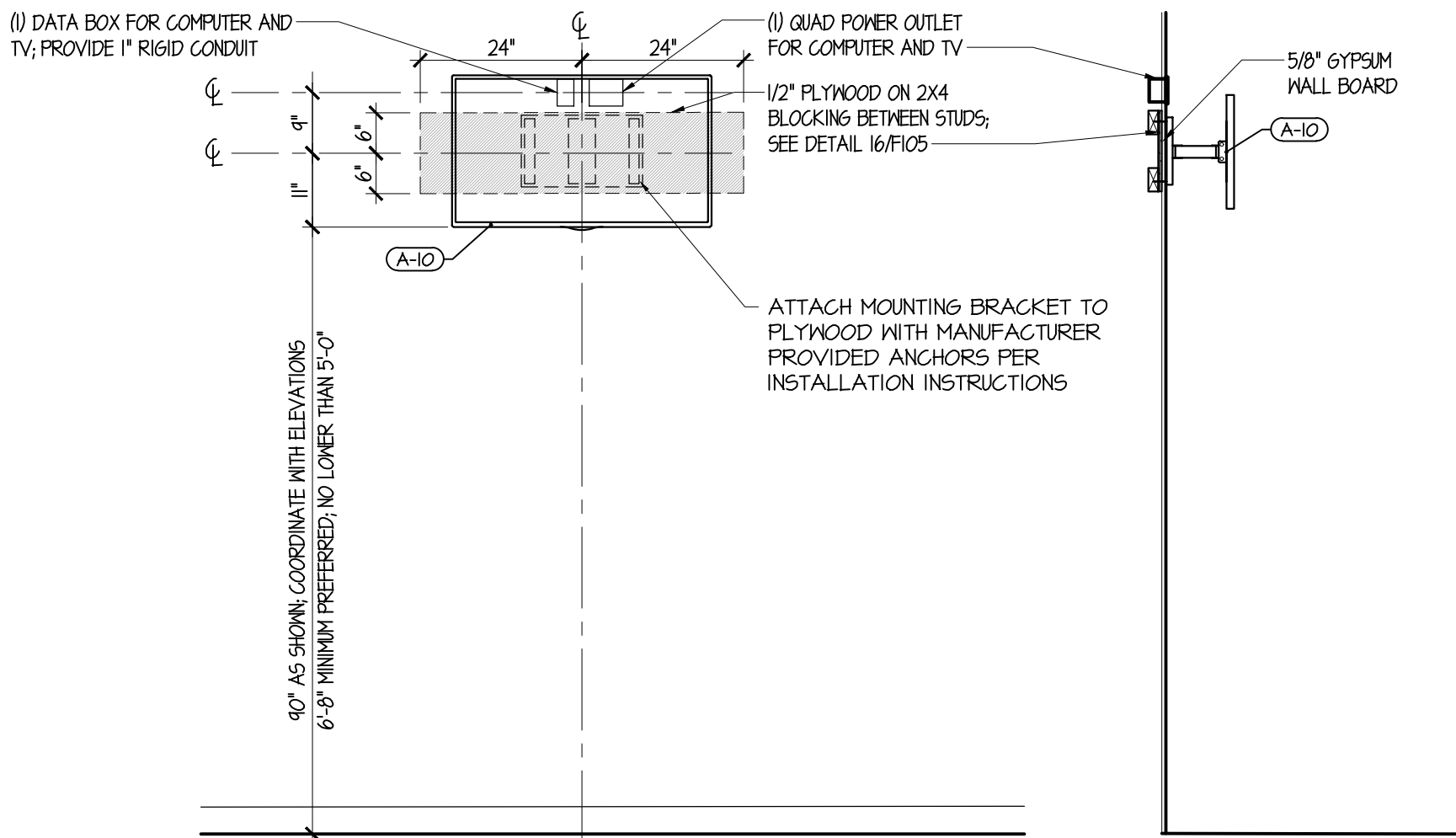
14  
F104  
Dry Erase Board  
SCALE: 1/2" = 1'-0"



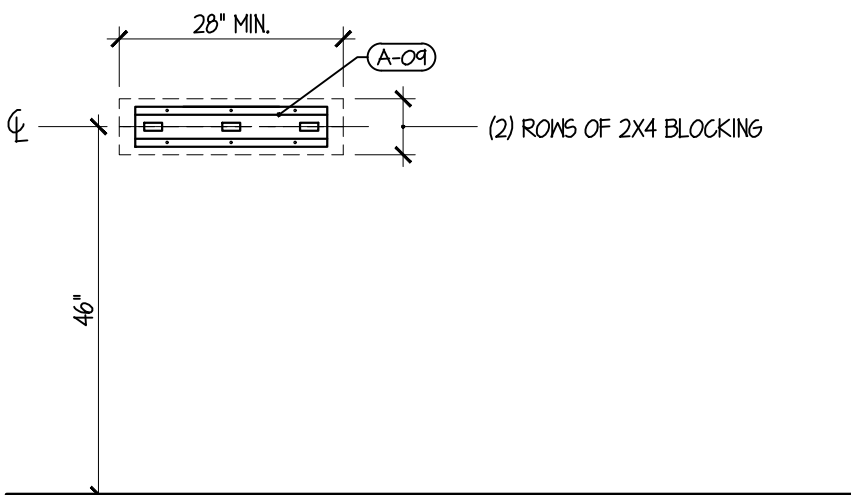
13  
F104  
AED Defibrillator  
SCALE: 1/2" = 1'-0"



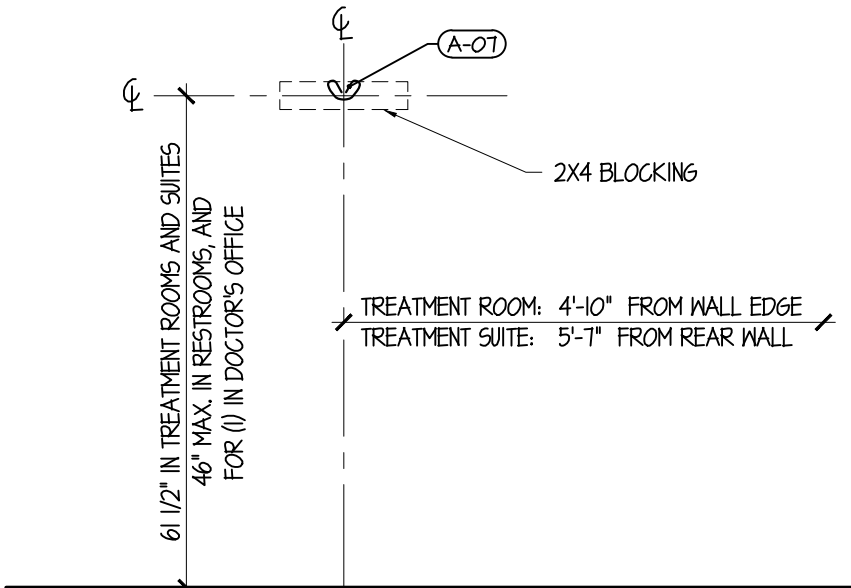
12  
F104  
Hand Dryer  
SCALE: 1/2" = 1'-0"



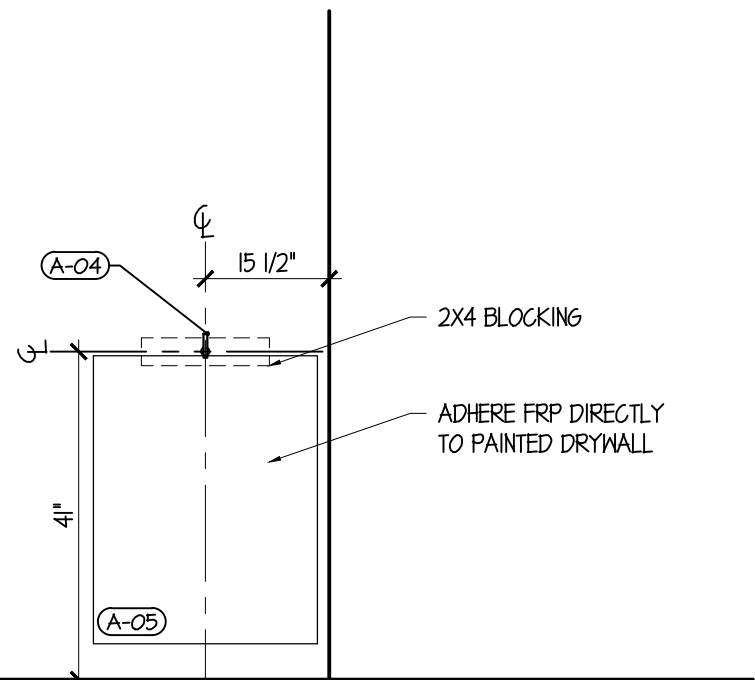
11  
F104  
Television (42")  
SCALE: 1/2" = 1'-0"



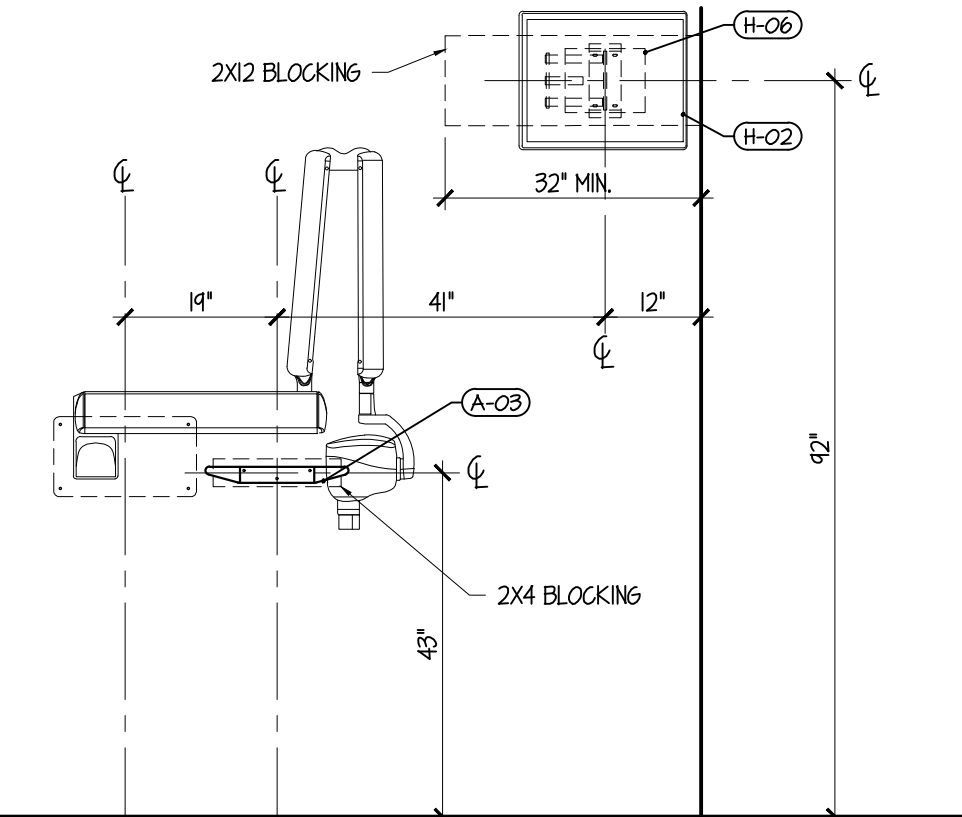
10  
F104  
Mop / Broom Holder  
SCALE: 1/2" = 1'-0"



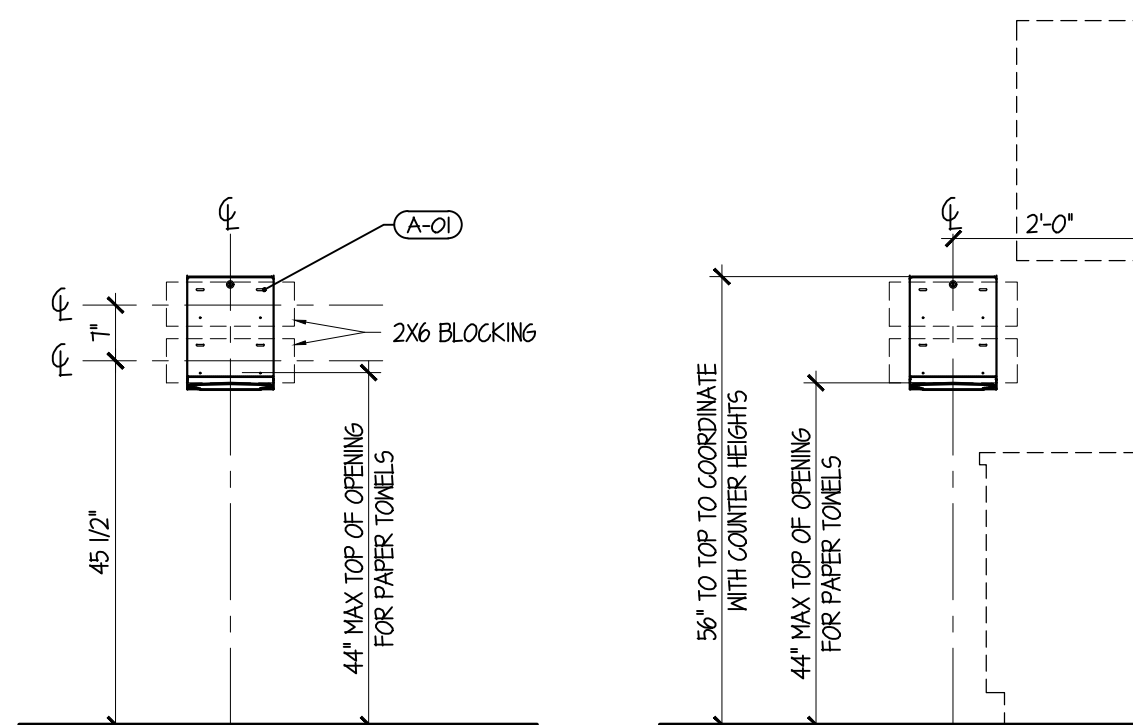
9  
F104  
Coat Hook  
SCALE: 1/2" = 1'-0"



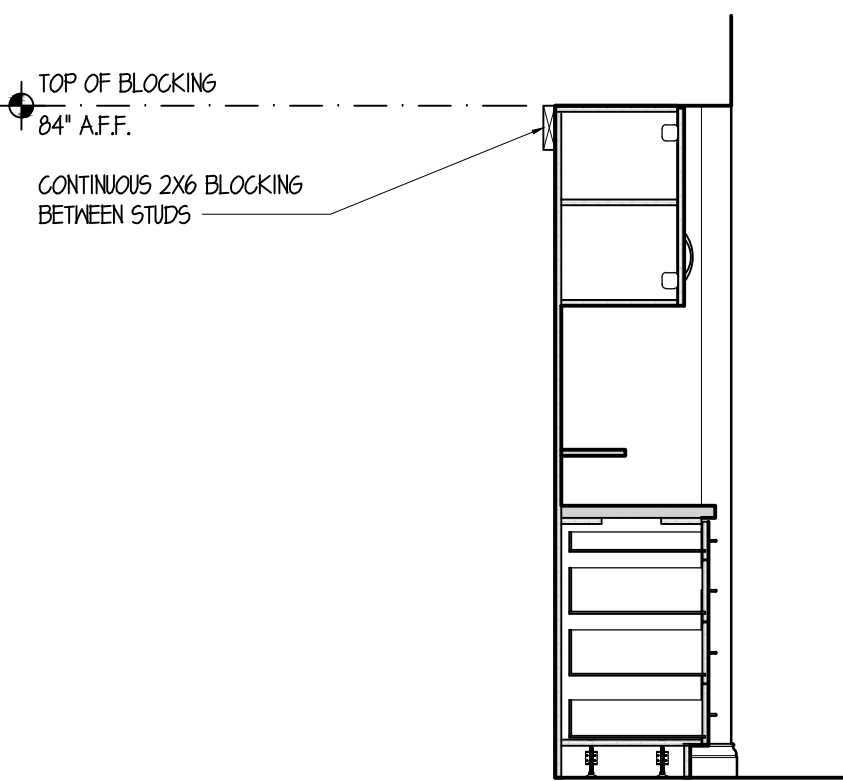
8  
F104  
Pano Apron Hook  
SCALE: 1/2" = 1'-0"



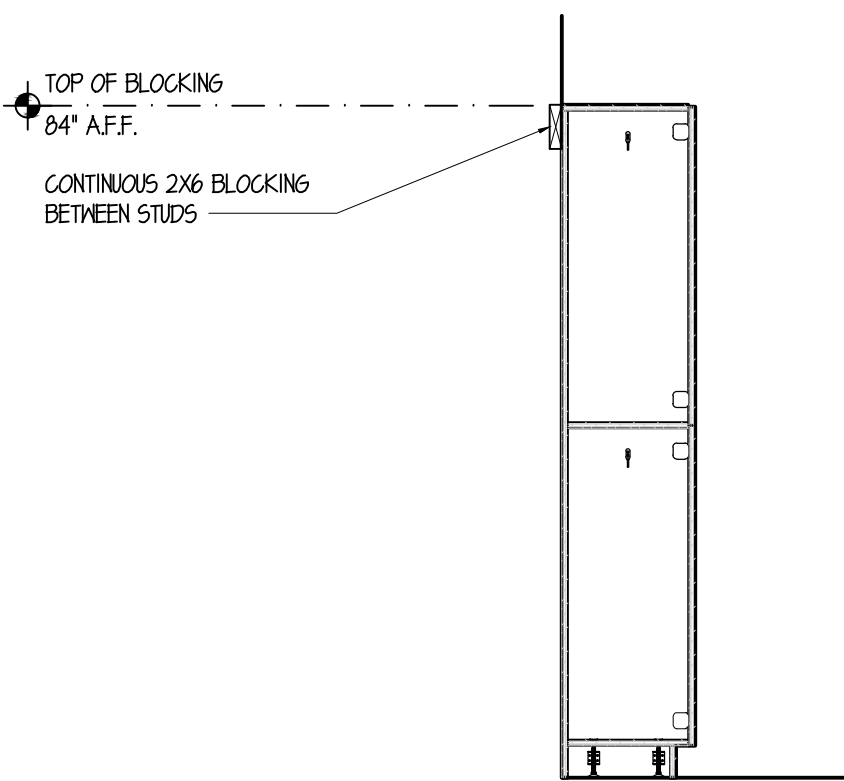
7  
F104  
X-Ray Accessories  
SCALE: 1/2" = 1'-0"



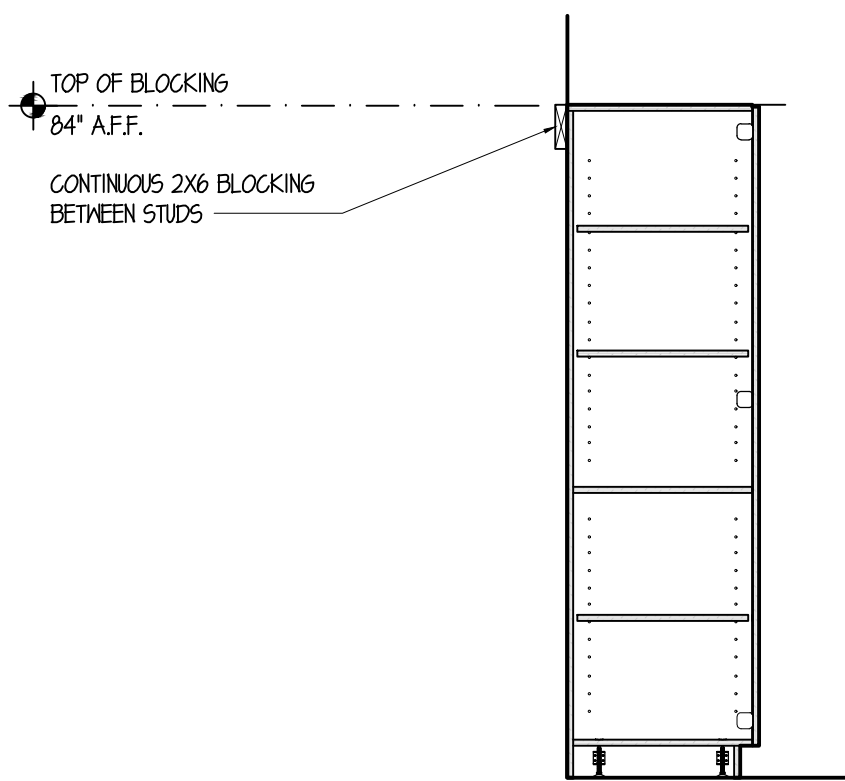
6  
F104  
Paper Towel Holder  
SCALE: 1/2" = 1'-0"



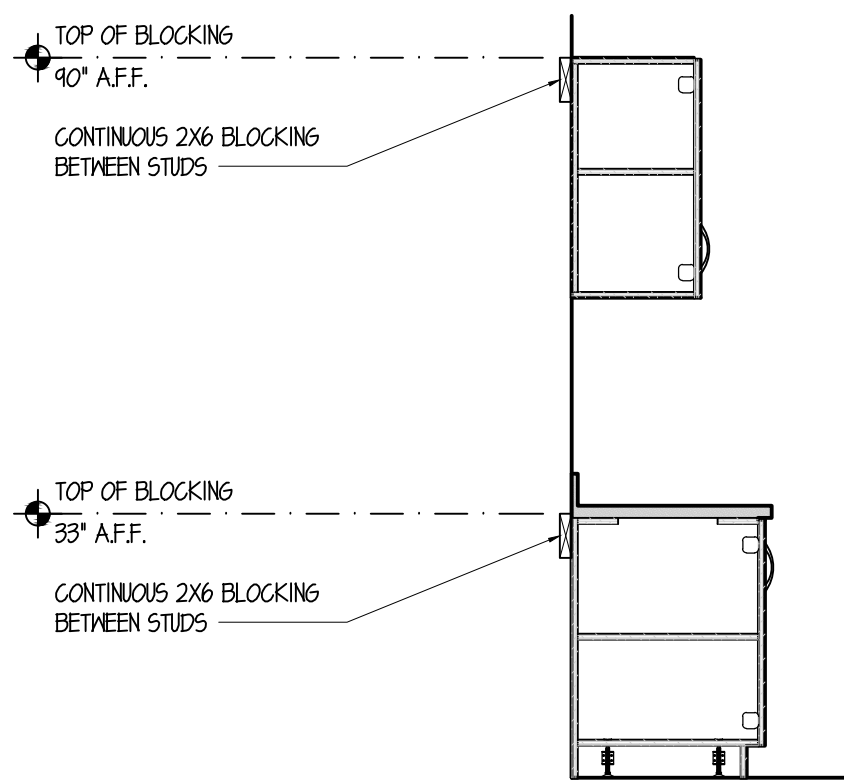
5  
F104  
Casework: Full Height Cabinet  
SCALE: 1/2" = 1'-0"



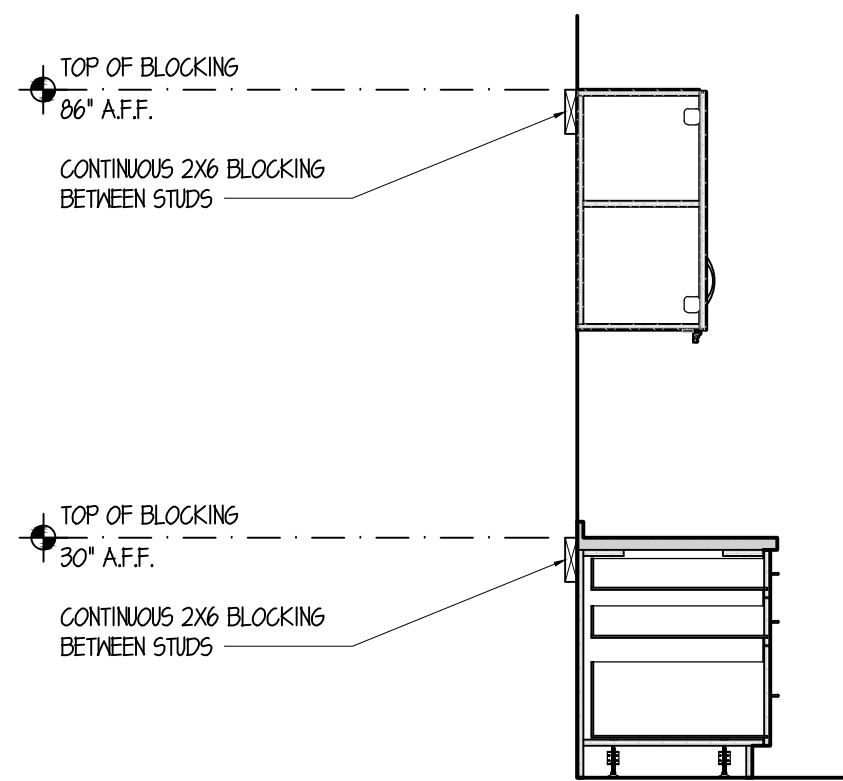
4  
F104  
Casework: Locker  
SCALE: 1/2" = 1'-0"



3  
F104  
Casework: Full Height Cabinet  
SCALE: 1/2" = 1'-0"



2  
F104  
Casework: Counter Height  
SCALE: 1/2" = 1'-0"



1  
F104  
Casework: Desk Height  
SCALE: 1/2" = 1'-0"

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CONSTRUCTION  
As Noted on Plans Review  
Lee's Summit, MO  
7/6/2022

FR  
HILFOLLEYROSS  
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STATE OF MISSOURI  
ARCHITECT  
NUMBER 2000000338  
EXPIRATION 12/31/2024

07/22/22  
mk  
date

For  
Construction  
issue

Heartland Dental - Lee's Summit  
Market Street Center  
Lee's Summit, Missouri 64082

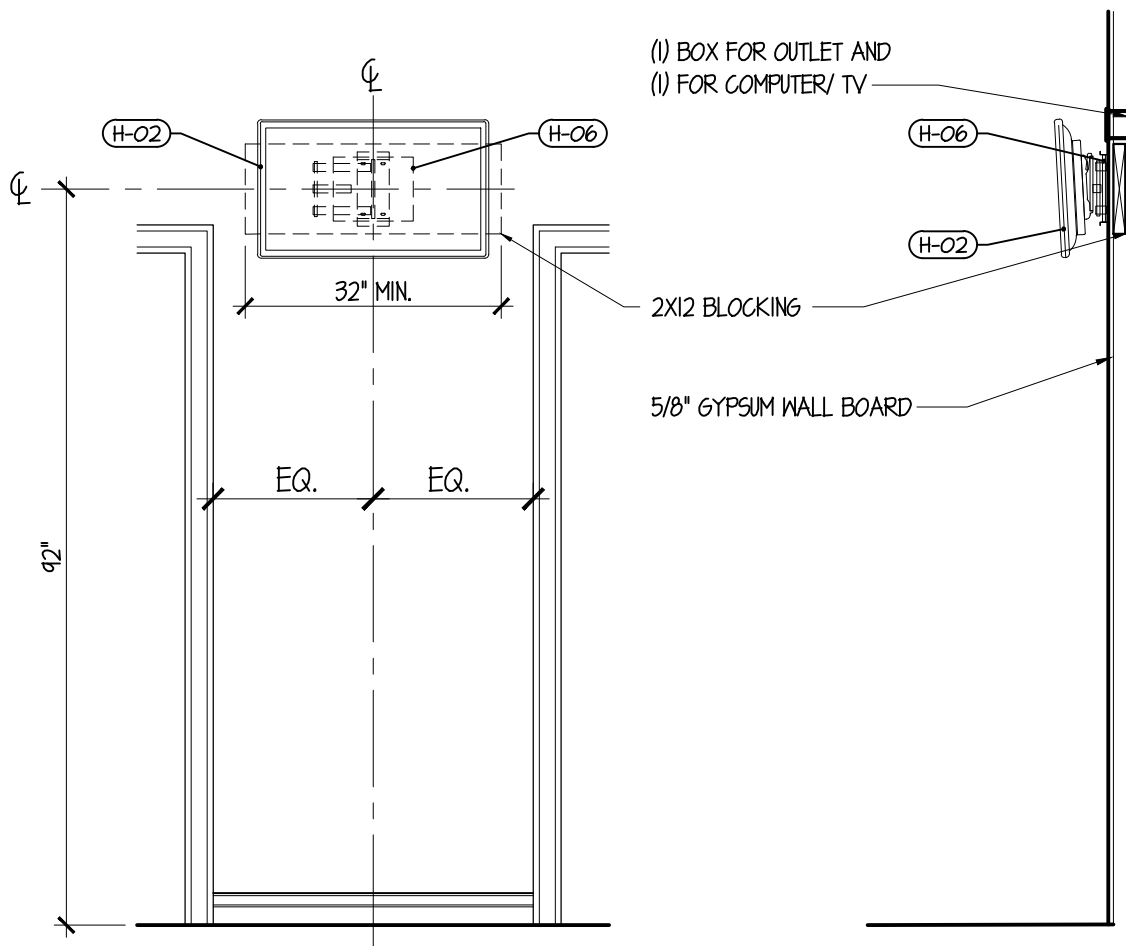
For:  
Heartland Dental  
1200 Network Centre Drive  
Evingham, IL 62401

F104

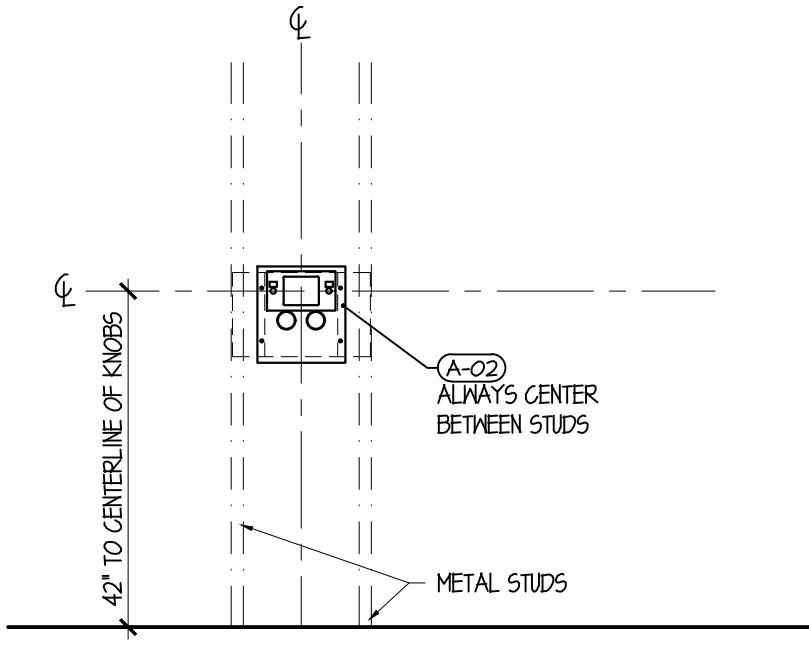
HFR 22.911



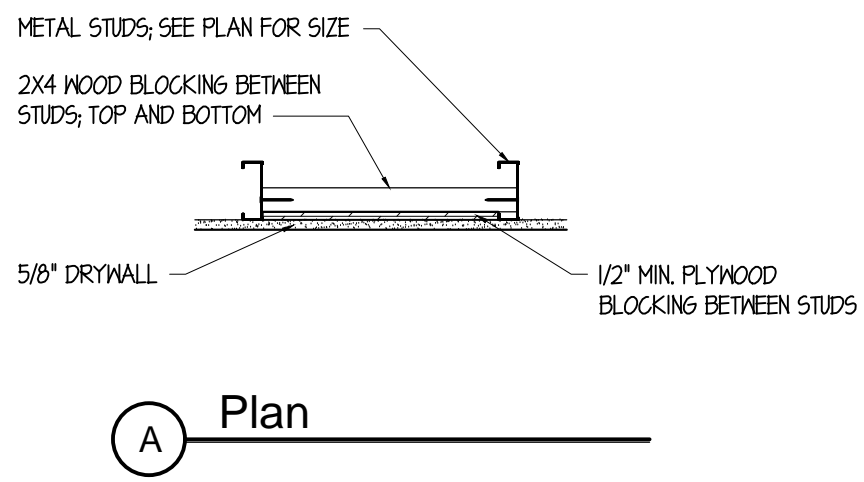
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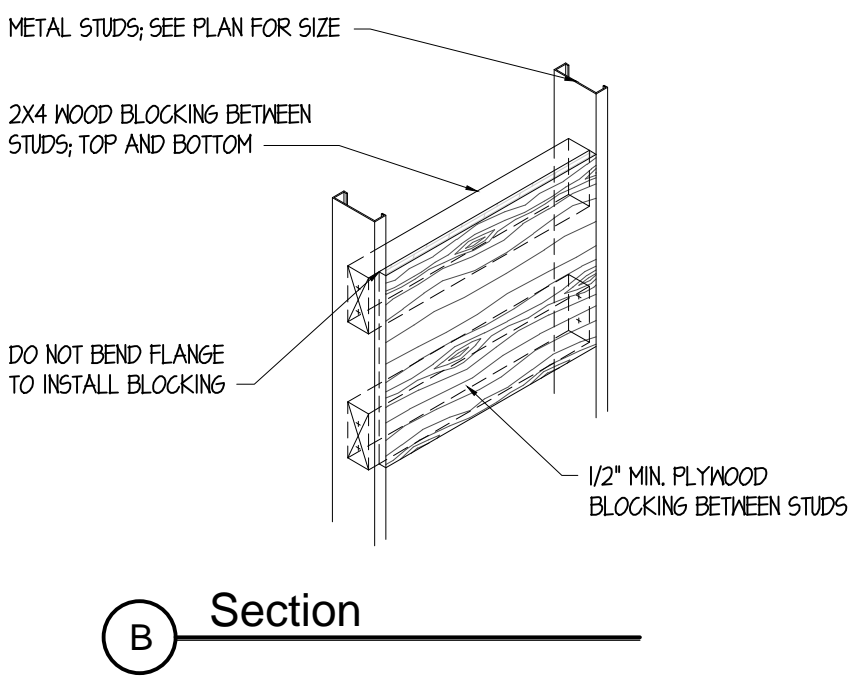
18 TV Mount - Treatment Suite  
F105 SCALE: 1/2" = 1'-0"



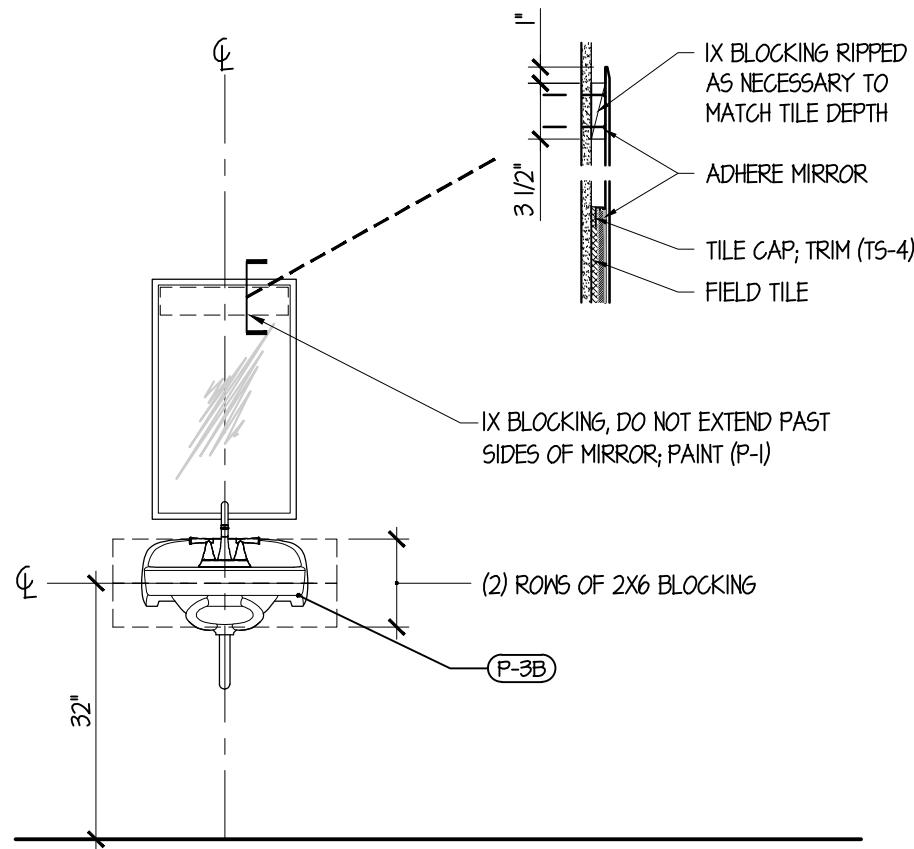
17 Medical Gas Alarm Panel  
F105 SCALE: 1/2" = 1'-0"



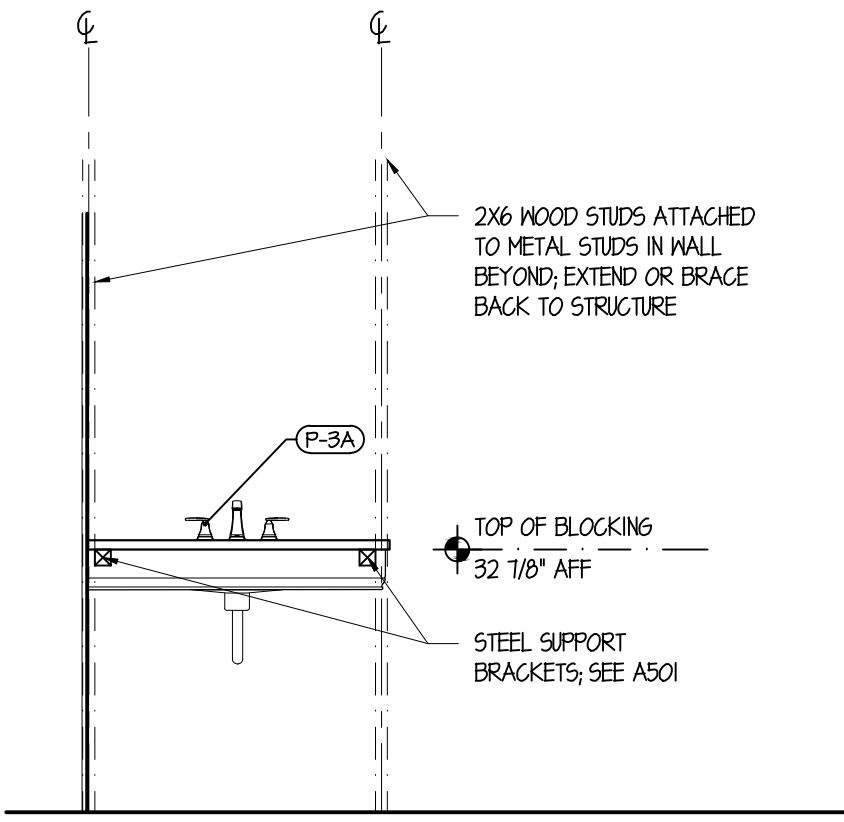
16 Plywood Blocking  
F105 SCALE: 1" = 1'-0"



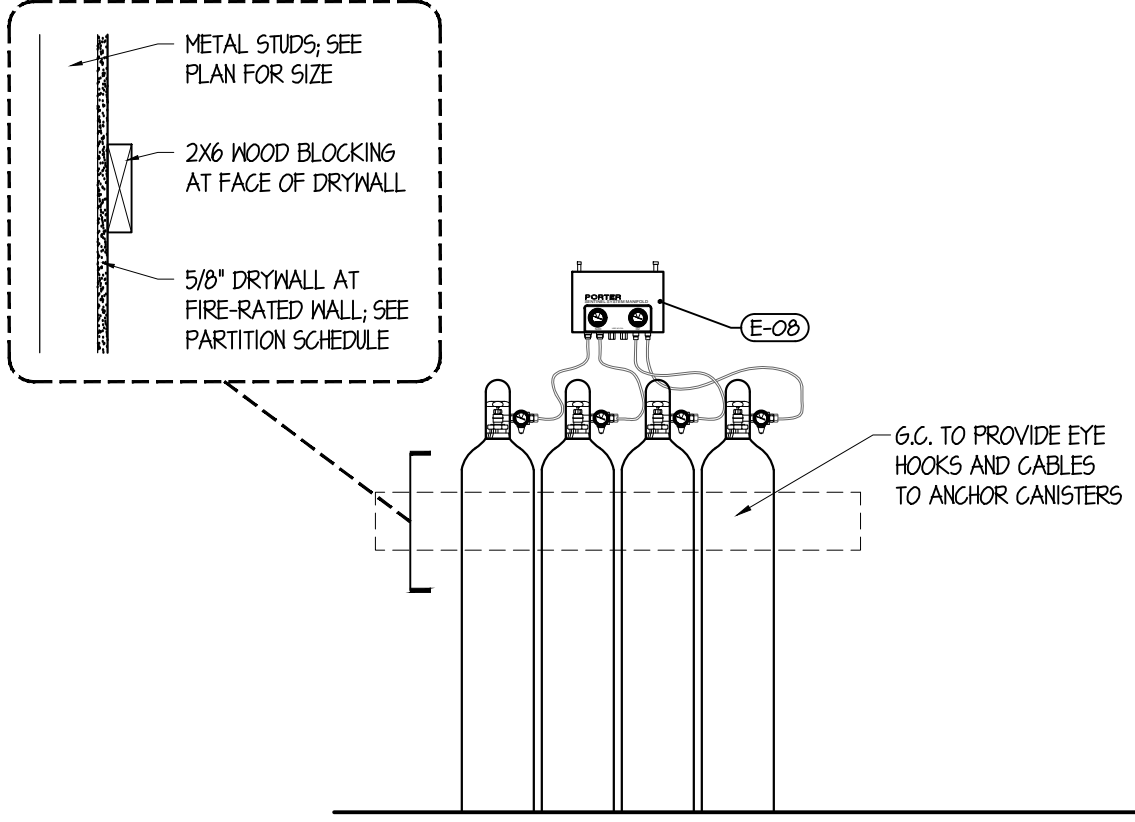
B Section



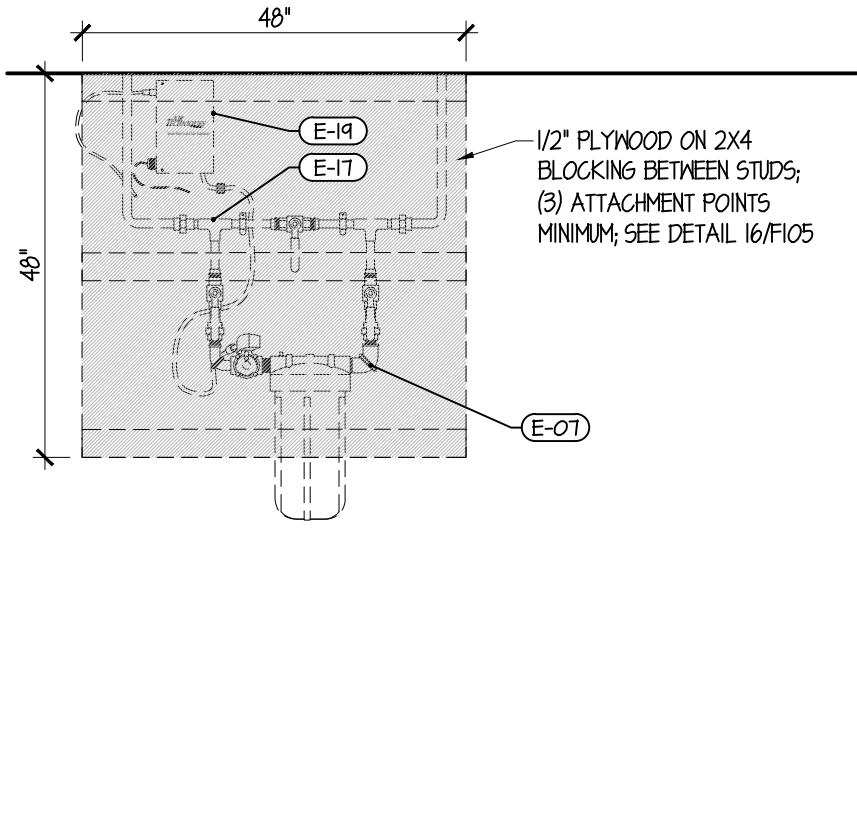
15 Wall Mounted Sink  
F105 SCALE: 1/2" = 1'-0"



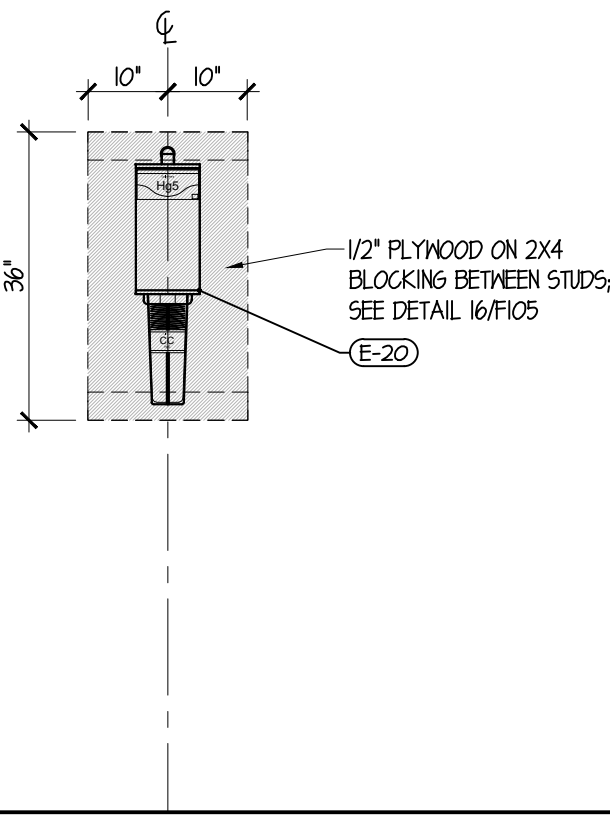
14 Vanity  
F105 SCALE: 1/2" = 1'-0"



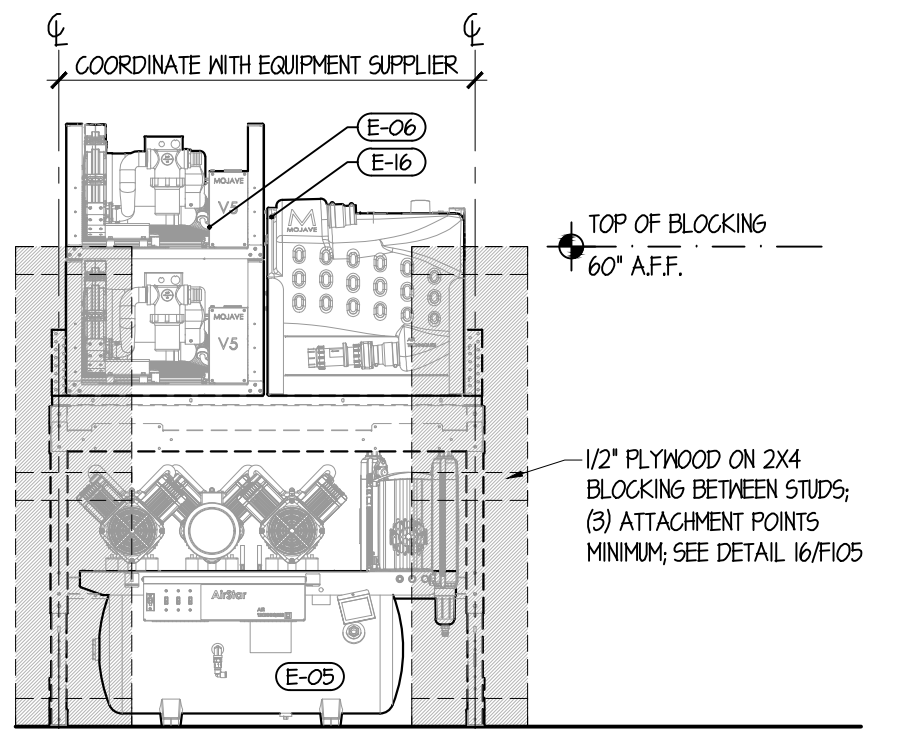
13 Medical Gas Aching  
F105 SCALE: 1/2" = 1'-0"



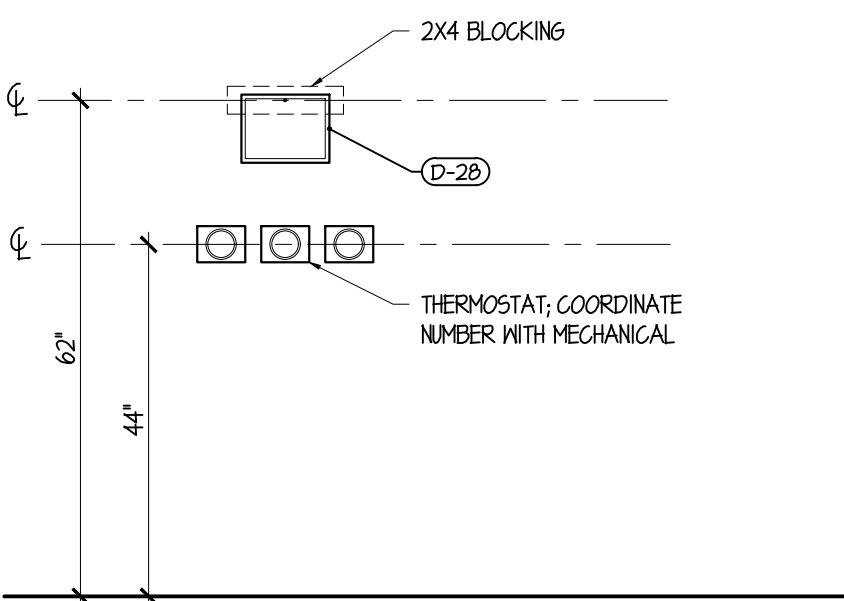
12 Water Filtration System  
F105 SCALE: 1/2" = 1'-0"



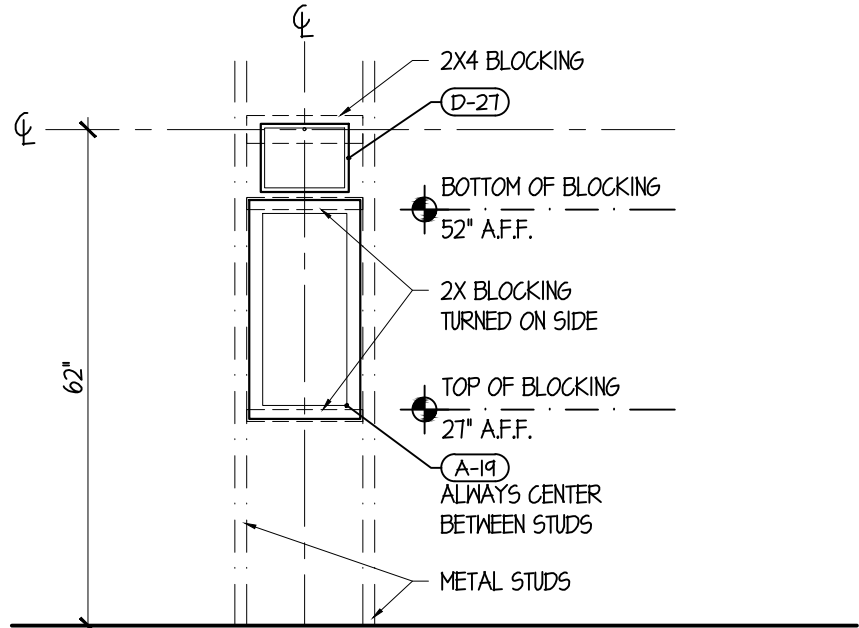
11 Amalgam Separator  
F105 SCALE: 1/2" = 1'-0"



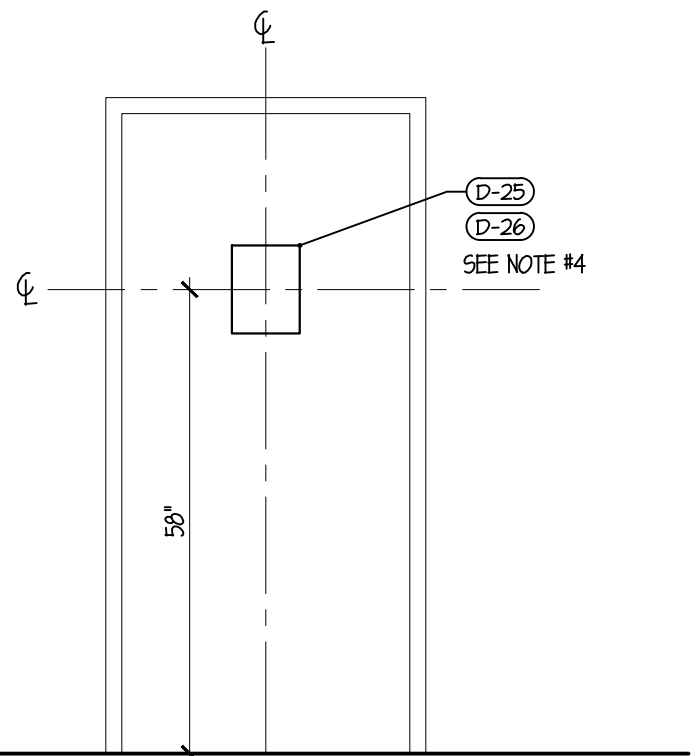
10 Equipment Stack  
F105 SCALE: 1/2" = 1'-0"



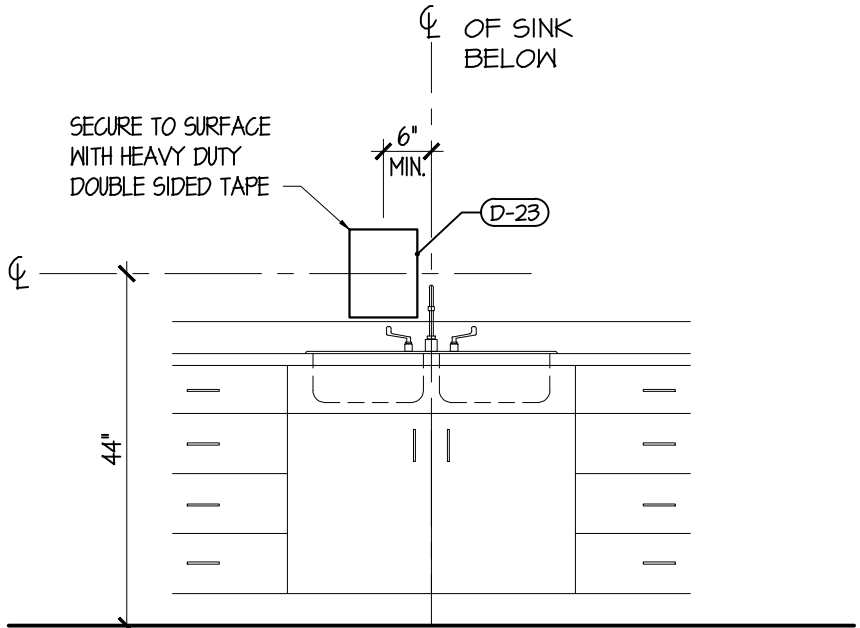
9 Thermostats and HVAC Zoning  
F105 SCALE: 1/2" = 1'-0"



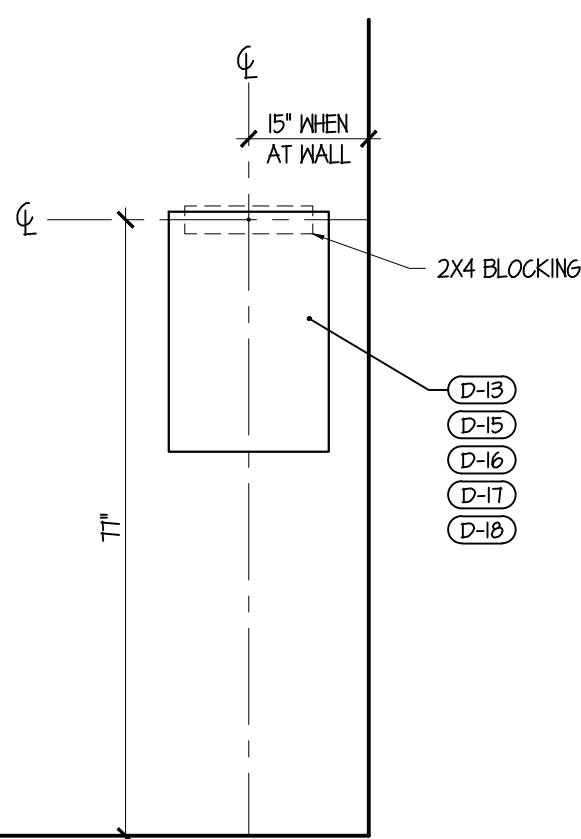
8 Extinguisher and Exit Plan  
F105 SCALE: 1/2" = 1'-0"



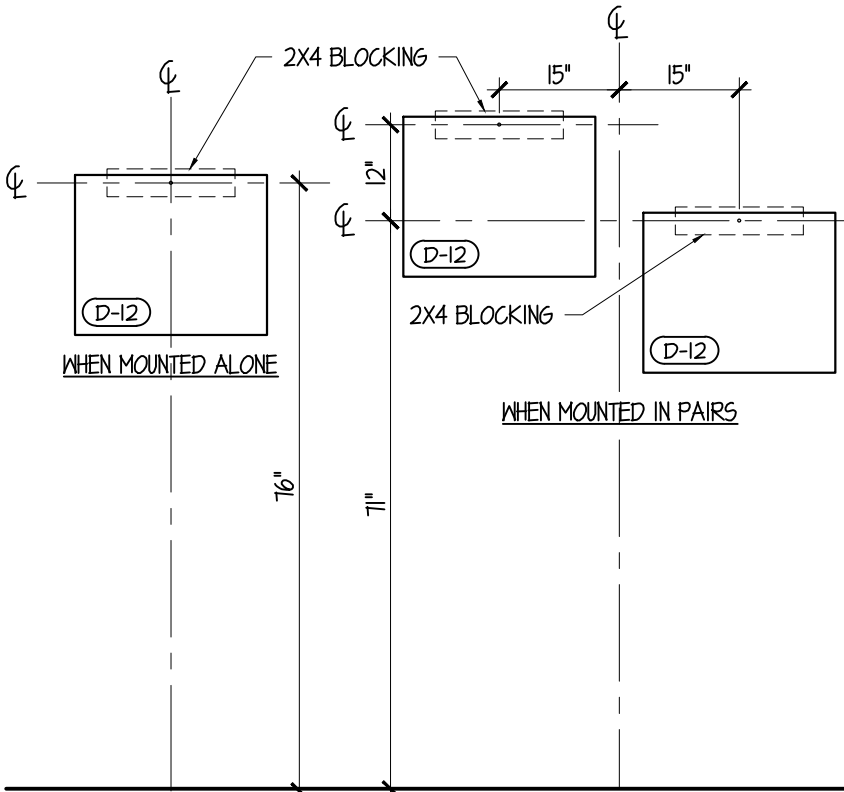
7 Instructional Poster  
F105 SCALE: 1/2" = 1'-0"



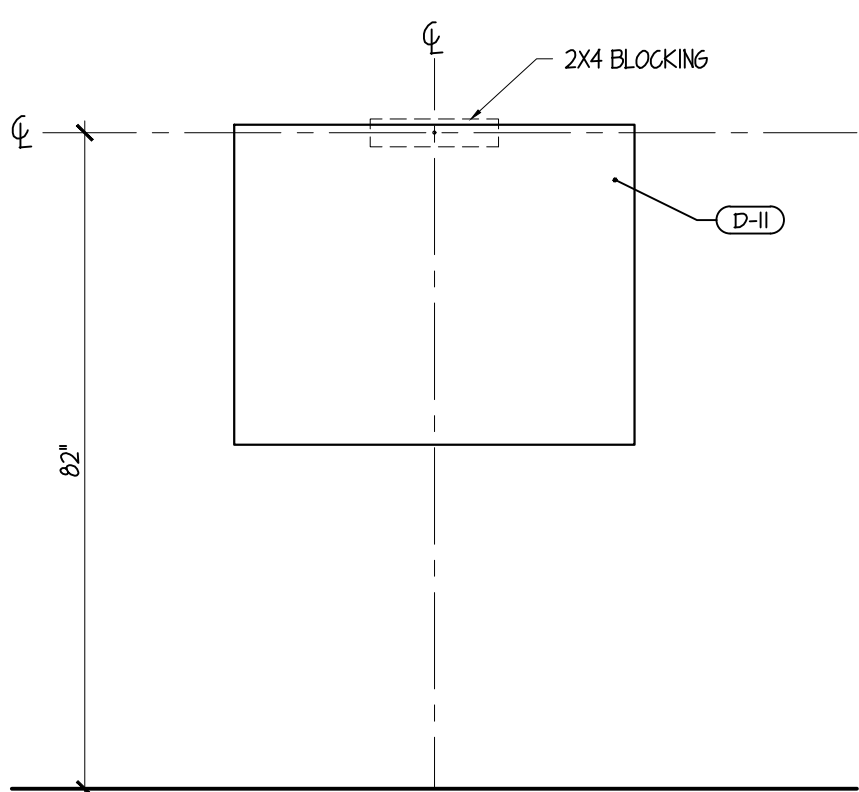
6 Instructional Poster  
F105 SCALE: 1/2" = 1'-0"



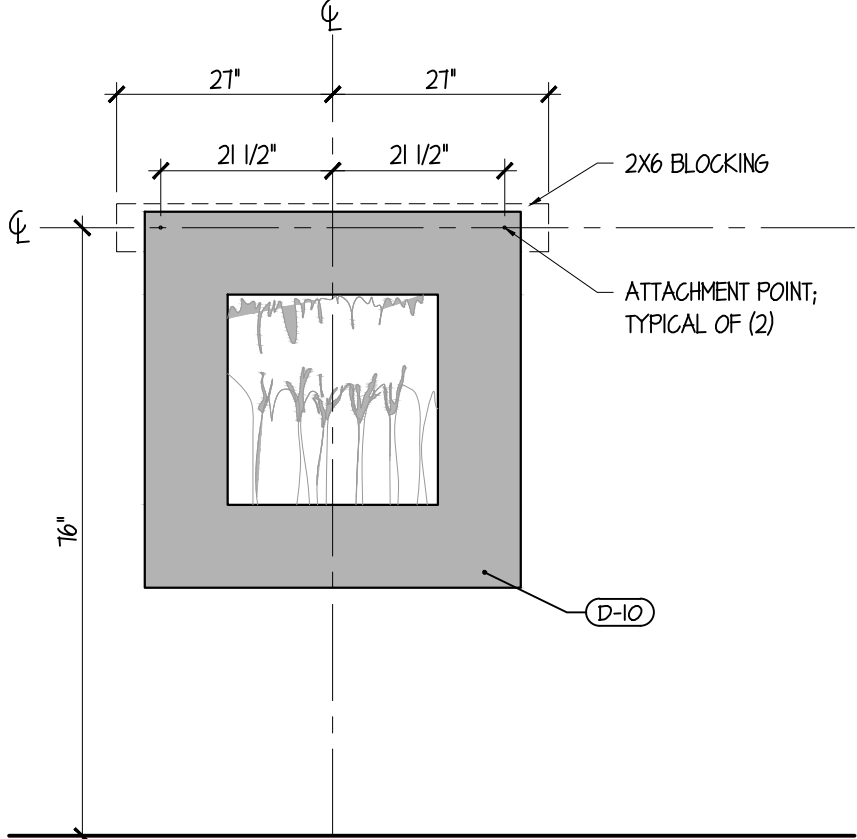
5 Decorative Poster  
F105 SCALE: 1/2" = 1'-0"



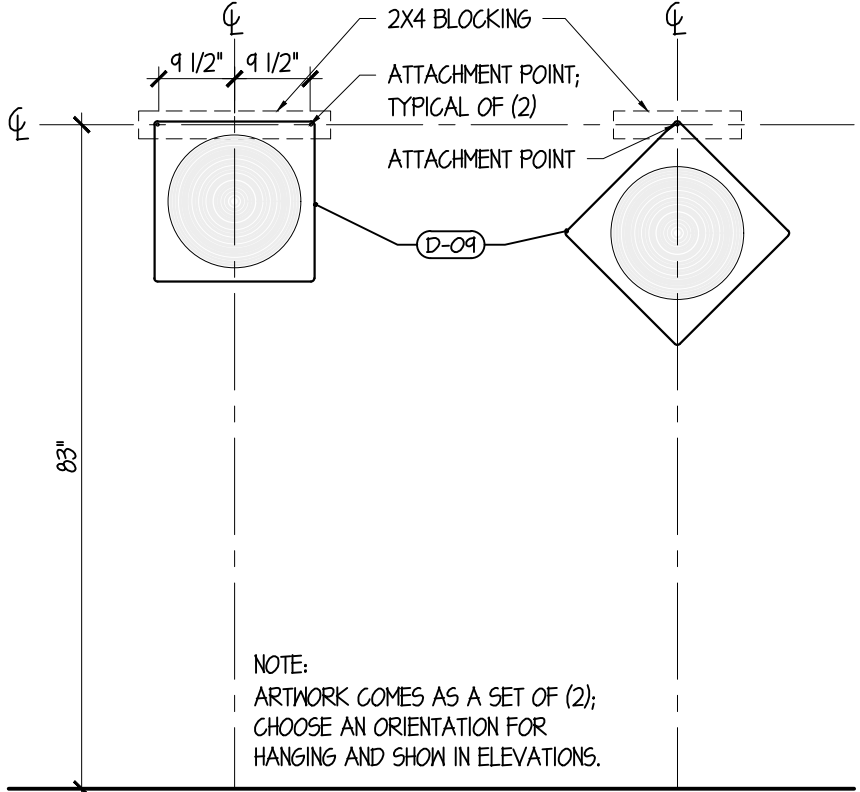
4 Decorative Artwork  
F105 SCALE: 1/2" = 1'-0"



3 Decorative Artwork  
F105 SCALE: 1/2" = 1'-0"



2 Decorative Artwork  
F105 SCALE: 1/2" = 1'-0"



1 Decorative Artwork  
F105 SCALE: 1/2" = 1'-0"

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As Noted on Plans Review  
Development Engineer: D:\Cadd\Architecture\22\_XX\Heartland\22.911 HD Lee's Summit MD (TD)10 Drawings\22.911 F105 Equipment and Decor.dwg, 7/6/2022 3:54:58 PM, JHOUSTON

FFR  
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STATE OF MISSOURI  
SEAL  
NUMBER  
2000000338  
ARCHITECT

Heartland Dental - Lee's Summit  
Market Street Center  
Lee's Summit, Missouri 64082

For:  
Heartland Dental  
1200 Network Centre Drive  
Effingham, IL 62401

07/22/22  
mk date

For Construction  
issue

Blocking  
Details

F105

HFR 22.911

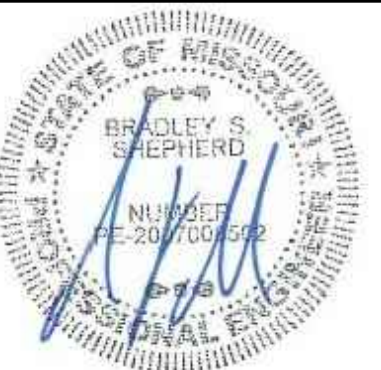




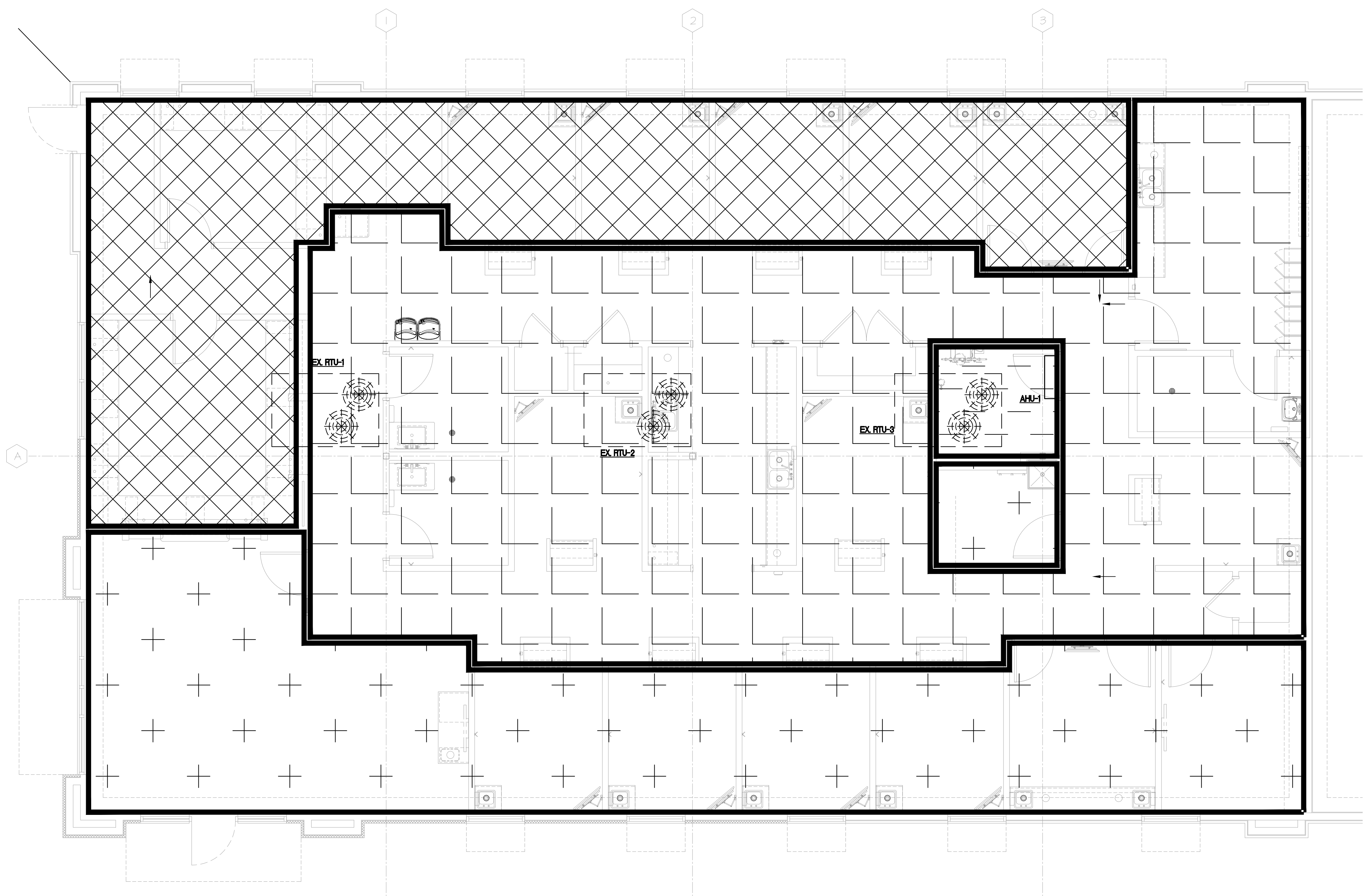
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Heartland Dental - Lee's Summit  
Market Street Center  
Lee's Summit, Missouri 64082  
For:  
Heartland Dental  
1200 Network Centre Drive  
Effingham, IL 62401



1 FLOOR PLAN - MECHANICAL  
MEP1 SCALE: 1/4" = 1'-0"

UTILITIES SUMMARY		
UTILITY /SERVICE	EXISTING WITHIN THE SHELL SCOPE (MAIN SERVICE ONLY; ALL INTERIOR UTILITY WORK IS NEW UNLESS NOTED OTHERWISE)	UPGRADES OR MODIFICATIONS WITHIN THE PROJECT'S SCOPE OF WORK
HVAC	3x ROOF TOP UNITS PROVIDED IN SHELL PACKAGE.	CONNECT DUCTWORK TO EXISTING ROOF TOP UNITS FROM SHELL PACKAGE. PROVIDE A NEW MINI-SPLIT AIR HANDLER AND ASSOCIATED HEAT PUMP SERVING THE EQUIPMENT ROOM.
POWER (MAIN)	EXISTING UTILITY TRANSFORMER, METER, 600A FUSED DISCONNECT AND 600A, 208Y/120V, 3 PH, 4 WIRE MAIN PANEL TO REMAIN. EXISTING TWO 2" CONDUITS FOR TELEPHONE, DATA FROM HOUSE EQUIPMENT ROOM.	PROVIDE AND INSTALL ONE 150A/3P AND ONE 100A/3P CIRCUIT BREAKERS IN EXISTING 600A PANEL. PROVIDE AND INSTALL ONE 150A AND ONE 100A, 208Y/120V, 3 PH, 4 WIRE PANELBOARDS AND BRANCH CIRCUITS AS SHOWN ON SHEETS E101, E102 AND E500. PROVIDE TWO 4" CONDUITS FROM IT BACKBOARD TO MAIN HOUSE EQUIPMENT ROOM.
FIRE ALARMS	N/A	NOT IN CONTRACT. PROVIDED BY OTHERS.
SPRINKLERS	N/A	N/A
POTABLE WATER	EXISTING 1-1/2" CW SERVICE	CONNECT NEW 1-1/2" CW TO EXISTING 1-1/2" SERVICE. PROVIDE SUB-METER AND RPZ BACKFLOW PREVENTION DEVICE. .
SANITARY	EXISTING 4" SANITARY SEWER WITHIN SPACE	CONNECT NEW 4" SANITARY TO EXISTING SANITARY AS SHOWN.
NATURAL GAS	EXISTING NATURAL GAS SERVICE	EXISTING NATURAL GAS PIPING TO REMAIN.

ZONING LEGEND	
	EX RTU-3
	EX RTU-4
	EX RTU-5
	AHU-1

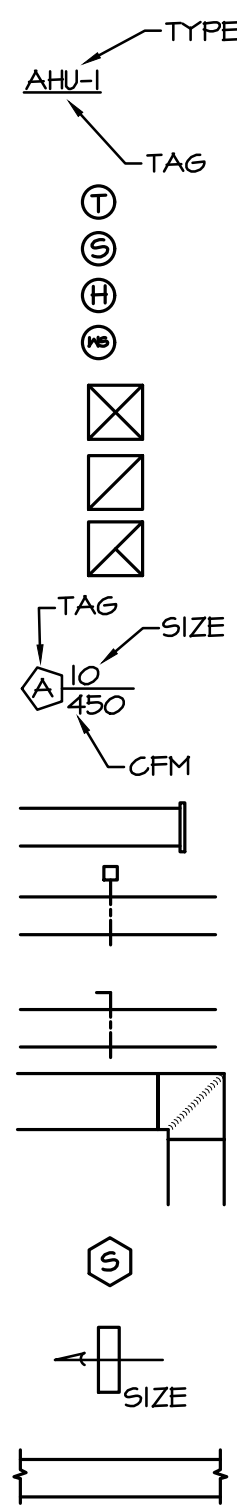
mk	07/22/22	For Construction
date		issue

Utilities  
Summary &  
Zone Plan



[illegible]

## HVAC LEGEND



AFV	ABOVE FINISHED FLOOR
DB	DRY BULB
CFM	CUBIC FEET PER MINUTE
DDC	DIRECT DIGITAL CONTROL
EF	EXHAUST FAN
EAT	ENTERING AIR TEMPERATURE
ENT	ENTERING WATER TEMPERATURE
ESP	EXTERNAL STATIC PRESSURE
FCU	FAN COIL UNIT
IN. W.G.	INCHES WATER GAUGE
LAT	LEAVING AIR TEMPERATURE
LWT	LEAVING WATER TEMPERATURE
OA	OUTSIDE AIR
RA	RETURN AIR
WL	WALL LOUVER
WB	WET BULB
VAV	VARIABLE AIR VOLUME TERMINAL
VFD	VARIABLE FREQUENCY DRIVE

## TEST & BALANCE / SYSTEM COMMISSIONING:

SYSTEM COMMISSIONING:

AFTER CONSTRUCTION, THE ENTIRE HVAC SYSTEM SHALL BE VERIFIED, TESTED, ADJUSTED, AND BALANCED BY AN INDEPENDENT NEBB OR AABC TEST AND BALANCE AGENCY TO DELIVER THE AIR AND/OR WATER QUANTITIES SHOWN ON THE DRAWINGS. THE REPORT IS TO INCLUDE:

- I. HVAC UNITS (RTUs, FURNACES, AHU'S, ENERGY RECOVERY UNITS, ETC.):
  - A. BALANCED AIR QUANTITIES TO WITHIN 10% +/- OF THE SUPPLY INDICATED ON THE DESIGN DOCUMENTS (DO NOT BALANCE RETURN AIR UNLESS SPECIFICALLY NOTED ON THE DOCUMENTS).
  - B. PROVIDE TRAVERSE READINGS FOR POSITIONING OF VENTILATION (OUTSIDE AIR) AT RTU INTAKE HOOD AND/OR DUCTWORK FOR AHU'S, FURNACES, ETC.  
PROPORTIONAL ADJUSTMENT OF VENTILATION BASED ON SUPPLY AIR QUANTITY MINUS RETURN AIR QUANTITY IS NOT ACCEPTABLE.
  - C. DATE OF BALANCING
  - D. OUTDOOR AMBIENT CONDITIONS INCLUDING; TEMPERATURE AND HUMIDITY LEVEL.
  - E. RETURN AIR TEMPERATURE (WB\*DB)
  - F. MIXED AIR TEMPERATURE (WB1\*DB1)
  - G. DISCHARGE AIR TEMPERATURE (WB4\*DB) AT THE COIL
  - H. DISCHARGE AIR TEMPERATURE (WB4\*DB) AT THE AIR DISTRIBUTION TERMINAL
  - I. REFRIGERANT CHARGE (SPLIT SYSTEMS ONLY)
  - J. MOTOR ROTATION
  - K. AMPERAGE READINGS FOR MOTORS AND COMPRESSORS

- L.1. VERIFY PROGRAMMING OF THERMOSTATS/EMS
    - G.1.1. UNITS ARE TO BE SET TO THE FOLLOWING:
      - C.1.1. MINIMUM 7 DAY PROGRAMMING CYCLE
    - G.1.2. UNITS EVAPORATOR FAN TO OPERATE CONTINUOUSLY DURING OCCUPIED MODE AS DETERMINED BY OWNER'S PERSONNEL. THERMOSTATS INSTALLED SHOULD HAVE THE ABILITY TO SEPARATELY SCHEDULE EVAPORATOR FAN RUN TIME, IF NOT REPORT THIS TO GENERAL CONTRACTOR FOR IMMEDIATE CORRECTION.
    - G.1.3. UNIT EVAPORATOR FANS ARE TO CYCLE DURING UNOCCUPIED/SETBACK MODES.
  - L.2. EXHAUST SYSTEMS:
    - A. BALANCED AIR QUANTITIES TO WITHIN 10% +/- OF THE SUPPLY INDICATED ON THE DESIGN DOCUMENTS
    - B. MOTOR ROTATION
  - L.3. VERIFY PROGRAMMING OF TIME CLOCKS/EMS
    - G.1.1. UNITS ARE TO BE SET TO THE FOLLOWING:
      - C.1.1. MINIMUM 7 DAY PROGRAMMING CYCLE
      - C.1.2. FANS ARE TO BE SET ON THE EXACT SAME OPERATING SCHEDULE AS THE HVAC UNITS EXCEPT AS NOTED ON THE "EXHAUST FAN SCHEDULE" ON THE DESIGN DRAWINGS.
      - C.1.3. VERIFY AND REPORT CONTROL DEVICE FOR ALL FANS (SWITCH, TIME CLOCK, EMS, NAK-TIMER, ETC.
- REPORT SHALL INCLUDE DRAINING OR SCHEMATIC INDICATING THE LOCATION OF EACH OUTLET WITH REFERENCE TO MEASURED AIR FLOW QUANTITY.
- PROVIDE FOUR (4) COPIES OF REPORT TO ARCHITECT.

## UTILITIES SUMMARY

UTILITY /SERVICE	EXISTING WITHIN THE SHELL SCOPE (MAIN SERVICE ONLY; ALL INTERIOR UTILITY WORK IS NEW UNLESS NOTED OTHERWISE)	UPGRADES OR MODIFICATIONS WITHIN THE PROJECT'S SCOPE OF WORK
HVAC	3x ROOF TOP UNITS PROVIDED IN SHELL PACKAGE.	CONNECT DUCTWORK TO EXISTING ROOF TOP UNITS FROM SHELL PACKAGE. PROVIDE A NEW MINI-SPLIT AIR HANDLER AND ASSOCIATED HEAT PUMP SERVING THE EQUIPMENT ROOM.
POWER (MAIN)	EXISTING UTILITY TRANSFORMER, METER, 600A FUSED DISCONNECT AND 600A, 208Y/120V, 3 PH, 4 WIRE MAIN PANEL TO REMAIN. EXISTING TWO 2" CONDUITS FOR TELEPHONE, DATA FROM HOUSE EQUIPMENT ROOM.	PROVIDE AND INSTALL ONE 150A/3P AND ONE 100A/3P CIRCUIT BREAKERS IN EXISTING 600A PANEL. PROVIDE AND INSTALL ONE 150A AND ONE 100A, 208Y/120V, 3 PH, 4 WIRE PANELBOARDS AND BRANCH CIRCUITS AS SHOWN ON SHEETS E101, E102 AND E500. PROVIDE TWO 4" CONDUITS FROM IT BACKBOARD TO MAIN HOUSE EQUIPMENT ROOM.
FIRE ALARMS	N/A	NOT IN CONTRACT. PROVIDED BY OTHERS.
SPRINKLERS	N/A	N/A
POTABLE WATER	EXISTING 1-1/2" CW SERVICE	CONNECT NEW 1-1/2" CW TO EXISTING 1-1/2" SERVICE. PROVIDE SUB-METER AND RPZ BACKFLOW PREVENTION DEVICE. .
SANITARY	EXISTING 4" SANITARY SEWER WITHIN SPACE	CONNECT NEW 4" SANITARY TO EXISTING SANITARY AS SHOWN.
NATURAL GAS	EXISTING NATURAL GAS SERVICE	EXISTING NATURAL GAS PIPING TO REMAIN.

## MECHANICAL SPECIFICATIONS AND NOTES

3. ALL MECHANICAL WORK SHALL COMPLY WITH THE REQUIREMENTS OF THE 2018 INTERNATIONAL MECHANICAL CODES WITH ALL STATE AND LOCAL AMENDMENTS, THE STATE ENERGY CODE, NFPA 90A, NFPA 101 AND ANY LOCAL ORDINANCES.
2. ALL MECHANICAL EQUIPMENT REQUIRING ELECTRICAL POWER SHALL BE INSTALLED WITH DISCONNECT SWITCHES AT EACH PIECE OF EQUIPMENT. COORDINATE SWITCH REQUIREMENTS WITH THE ELECTRICAL CONTRACTOR. IT IS THE CONTRACTOR'S RESPONSIBILITY TO COORDINATE ALL ELECTRICAL REQUIREMENTS.
3. THE SMOKE DETECTOR INDICATED ON THE DRAWINGS SHALL BE WIRED TO STOP THE FAN UPON DETECTION OF SMOKE, AND SIGNAL THE BUILDING FIRE ALARM SYSTEM (IF APPLICABLE). IF THE BUILDING HAS NO FIRE ALARM SYSTEM, THE DETECTOR SHALL CAUSE AN AUDIBLE AND VISUAL ALARM IN A NORMALLY OCCUPIED AREA.
4. SUPPLY, RETURN, AND EXHAUST DUCTWORK SHALL BE CONSTRUCTED OF GALVANIZED SHEET METAL AS RECOMMENDED IN SMACNA DUCT CONSTRUCTION STANDARDS, LATEST EDITION. DUCTWORK SHALL BE CONSTRUCTED TO WITHSTAND THE PRESSURES INDICATED ON THE DRAWINGS. ALL JOINTS AND SEAMS IN ALL SHEET METAL DUCTWORK SHALL BE SEALED WITH DUCT SEALER. DUCT SUPPORTS AND ATTACHMENT TO STRUCTURE SHALL BE AS PER SMACNA STANDARDS. NEW DUCTWORK SHALL BE INSTALLED AS HIGH AS POSSIBLE. EXPOSED ROUND DUCTWORK SHALL BE SPIRAL LOCKSEAM TYPE.
5. FLEXIBLE DUCTWORK SHALL BE FLEXMASTER TYPE 3 OR EQUAL, SAME SIZE AS DIFFUSER NECKS, MAXIMUM 6'-0" LONG. FLEXIBLE DUCTWORK SHALL BE INSTALLED AS STRAIGHT AS POSSIBLE, AND SHALL BE ROUTED AND SUPPORTED WITHOUT FORMING CRIMPS OR OTHER AIR FLOW RESTRICTIONS.
6. CONDENSATE FROM ALL AIR CONDITIONING EQUIPMENT SHALL BE TRAPPED AND ROUTED TO THE NEAREST DRAIN. CONDENSATE PIPING SHALL BE SCHEDULE 40 PVAL. PROVIDE CONDENSATE PUMP IF REQUIRED COORDINATE POWER REQUIREMENTS. PUMPS SHALL BE MOUNTED WITH OVERFLOW PANS. CONDENSATE PIPING SHALL BE INSULATED WITH ONE INCH NOMINAL THICKNESS FIBERGLASS PIPE INSULATION WITH VAPOR BARRIER JACKET, OWENS CORNING AS/J95LLI OR APPROVED EQUAL.
7. AFTER CONSTRUCTION, THE ENTIRE HVAC SYSTEM SHALL BE TESTED, ADJUSTED, AND BALANCED BY AN INDEPENDENT NEBB OR AABC TEST AND BALANCE AGENCY TO DELIVER THE AIR AND WATER QUANTITIES SHOWN ON THE DRAWINGS. PROVIDE FOUR (4) COPIES OF REPORT TO ARCHITECT.
8. MOUNT THERMOSTATS AND WALL SENSORS 48" AFF UNLESS NOTED OTHERWISE.
9. SHOP DRAWINGS SHALL BE SUBMITTED TO AND APPROVED BY THE ARCHITECT PRIOR TO ORDERING ANY EQUIPMENT OR INSTALLING ANY DUCTWORK OR PIPING.
10. ALL MECHANICAL EQUIPMENT SHALL BE INSTALLED ACCORDING TO MANUFACTURER'S RECOMMENDATIONS.
11. ALL MECHANICAL EQUIPMENT AND SYSTEMS SHALL BE GUARANTEED FOR A PERIOD OF FIVE YEARS AFTER ACCEPTANCE BY OWNER. NO INTERNAL LINER TO BE USED.
12. SHEET METAL SUPPLY, RETURN, & OUTSIDE AIR DUCTWORK SHALL BE INSULATED WITH 2" THICK EXTERIOR FIBERGLASS DUCT INSULATION WITH FOIL VAPOR BARRIER, UL LISTED, MINIMUM R-6.
13. DUCTWORK DIMENSIONS SHOWN ON THE DRAWINGS ARE INSIDE CLEAR.
14. PRIOR TO PURCHASING ANY MATERIALS OR STARTING ANY WORK, CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS, DUCTWORK AND PIPING SIZES AND LOCATIONS, EQUIPMENT, ETC. SHOWN ON THE DRAWINGS OR AFFECTING THE WORK AND SHALL REPORT ANY DEVIATIONS TO THE ARCHITECT.
15. ANY EXISTING WALL, FLOOR, OR CEILING SURFACE THAT IS DISTURBED DURING THE COURSE OF THE WORK SHALL BE REPAIRED.
16. LOCATIONS OF DUCTWORK, GRILLES, REGISTERS, AND DIFFUSERS SHOWN ON THE DRAWINGS ARE APPROXIMATE. COORDINATE EXACT LOCATIONS WITH ARCHITECT AND OWNER.
17. AS-BUILT DRAWINGS SHALL BE MAINTAINED BY THE CONTRACTOR DURING CONSTRUCTION INDICATING ALL FIELD CHANGES AND REVISIONS TO EQUIPMENT, DUCTWORK, PIPING AND CONTROLS. THESE DRAWINGS SHALL BE SUBMITTED TO THE ARCHITECT UPON COMPLETION OF THE PROJECT.
18. THE CONTRACTOR SHALL PREPARE TWO COPIES OF OPERATION AND MAINTENANCE MANUALS FOR THE PROJECT. FOR THE OWNER'S USE, THE CONTRACTOR SHALL ALSO INSTRUCT THE OWNER'S REPRESENTATIVE IN THE OPERATION OF ALL SYSTEMS AND THE MAINTENANCE REQUIRED.
19. ALL REQUIRED CONTROL WIRING NOT SHOWN ON THE ELECTRICAL DRAWINGS SHALL BE INCLUDED AS PART OF THE MECHANICAL WORK. WIRING IN HVAC PLENUM SPACES SHALL BE INSTALLED ACCORDING TO CODE REQUIREMENTS. EQUIPMENT SHALL BE CONTROLLED AS INDICATED ON THE DRAWINGS.
20. EQUIPMENT SHALL BE CONTROLLED BY RESPECTIVE INDIVIDUAL PROGRAMMABLE THERMOSTATS, OR AS OTHERWISE SPECIFIED.
21. ROOFTOP HVAC UNITS SHALL BE INSTALLED SUCH THAT ROOF DECK IS COMPLETE AND CONTINUOUS UNDER BOTTOMS OF HVAC UNITS, AND SHALL BE CUT ONLY FOR UNIT SUPPLY AND RETURN OPENINGS. THESE OPENINGS SHALL BE SEALED AIRTIGHT. SPACE BETWEEN ROOF DECK AND BOTTOM OF ROOFTOP HVAC UNITS (INSIDE OF ROOF CURBS) SHALL BE FILLED WITH HIGH DENSITY ACOUSTICAL INSULATION AS DETAILED.
22. ALL ROOFTOP MOUNTED EQUIPMENT SHALL BE INSTALLED LEVEL AND ANCHORED TO MINIMUM 12" HIGH INSULATED ROOF CURBS. CONTRACTOR SHALL COORDINATE ROOF SLOPE AND ACTUAL CURB HEIGHTS WITH ARCHITECTURAL DRAWINGS. ALL REFERENCES TO ROOF HEIGHTS REFER TO HEIGHTS ABOVE FINISHED ROOF SURFACE.
23. ALL PIPE PENETRATIONS OF FIRE AND/OR SMOKE-RATED ASSEMBLIES SHALL BE FIRE-STOPPED AS REQUIRED TO RESTORE ASSEMBLY TO ORIGINAL INTEGRITY. FIRE BARRIER PRODUCTS SHALL BE AS MANUFACTURED BY 3M CO., CP25 CALK, CS145 COMPOSITE PANEL, FS145 WRAP/STRIP, OR P99 7400 SERIES SYSTEMS AS RECOMMENDED BY MANUFACTURER FOR PARTICULAR APPLICATION, OR EQUIVALENT SYSTEM AS APPROVED BY LOCAL CODE OFFICIALS.
24. ALL PIPING SHALL BE SUPPORTED BY THE BUILDING STRUCTURE AND SHALL NOT REST ON CEILING TILES OR CEILING STRUCTURE. PIPING HUNG FROM JOISTS SHALL BE HUNG FROM THE TOP CHORDS OF THE JOISTS.
25. REFRIGERANT PIPING SHALL BE TYPE L COPPER TUBING WITH BRAZED JOINTS. SUCTION PIPING SHALL BE INSULATED WITH 3/4" CLOSED CELL INSULATION. ALL JOINTS AND SEAMS SHALL BE SEALED WITH ADHESIVE. REFRIGERANT PIPING PASSING THROUGH FLOORS SHALL BE ENCLOSED IN A CONTINUOUS FIRE RESISTIVE PIPE SHAFT HAVING NO OPENINGS INTO FLOORS NOT SERVED BY THE REFRIGERATING SYSTEM, AS REQUIRED BY LOCAL CODE AUTHORITIES. THE PIPE SHAFT SHALL BE VENTED TO THE OUTDOORS.
26. DRYER VENTS SHALL BE STUBBED OUT 2" FROM WALL AND 30" ABOVE LAUNDRY ROOM FLOOR. DRYER VENT DUCTWORK SHALL BE ROUND 24 GAUGE GALVANIZED STEEL, ROUTED TO EXTERIOR ROOF CAP AS DIRECT AS POSSIBLE. (FLEXIBLE DUCTWORK WILL NOT BE ACCEPTABLE). WALL CAP SHALL BE FURNISHED WITH BUILT-IN BACK-DRAFT DAMPER. DO NOT SECURE DUCTWORK WITH SHEET METAL SCREWS.





Heartland Dental - Lee's Summit  
Market Street Center  
Lee's Summit, Missouri 64082

**Lee's Summit, Missouri 64082**

For: Heartland Dental  
1200 Network Centre Drive  
Effingham, IL 62401

[illegible]

	07/22/22	For Construction
mk	date	issue

## Schedules - Mechanical

M002

HFR 22.911

### OUTSIDE AIR CALCULATION (INT'L MECH. CODE - TABLE 403.3)

EX. RTU-I	OCCUPANCY	O.A. CFM/PERSON REQ'D.	# OCCUPANTS	O.A. CFM/S.F. REQ'D.	ACTUAL S.F.	O.A. CFM REQ'D	
	WAITING	5	11	0.06	410	119.6	
	TREATMENT 1	15	2	-	-	30.0	
	TREATMENT 3	15	2	-	-	30.0	
	TREATMENT 4	15	2	-	-	30.0	
	TREATMENT 6	15	2	-	-	30.0	
	TREATMENT SUITE 1	15	3	-	-	45.0	
	OFFICE	5	2	0.06	115	16.1	
	*RE-BALANCE EXISTING UNIT OUTSIDE AIR FLOW TO VALUE SHOWN.					TOTAL CFM REQ'D.	301/5
						TOTAL O.A. CFM FURNISHED	305*

EX. RTU-2	OCCUPANCY	O.A. CFM/PERSON REQ'D.	# OCCUPANTS	O.A. CFM/S.F. REQ'D.	ACTUAL S.F.	O.A. CFM REQ'D	
	HALL	-	-	0.06	830	44.8	
	TREATMENT 2	15	2	-	-	30.0	
	TREATMENT 5	15	2	-	-	30.0	
	TREATMENT 1	15	2	-	-	30.0	
	BREAK	5	6	0.06	200	42.0	
	WORK AREA	5	2	0.06	130	14.0	
	*RE-BALANCE EXISTING UNIT OUTSIDE AIR FLOW TO VALUE SHOWN.					TOTAL CFM REQ'D.	200.8
						TOTAL O.A. CFM FURNISHED	205*

EX. RTU-3	OCCUPANCY	O.A. CFM/PERSON REQ'D.	# OCCUPANTS	O.A. CFM/S.F. REQ'D.	ACTUAL S.F.	O.A. CFM REQ'D
	HALL	-	-	0.06	115	6.9
	BUSINESS	5	6	0.06	190	41.4
	TREATMENT SUITE 2	15	3	-	-	45.0
	TREATMENT 8	15	2	-	-	30.0
	TREATMENT 1	15	2	-	-	30.0
	TREATMENT 10	15	2	-	-	30.0
	TREATMENT 11	15	2	-	-	30.0
	PANO	-	-	0.06	55	3.3
	OFFICE	5	2	0.06	110	16.6
*RE-BALANCE EXISTING UNIT OUTSIDE AIR FLOW TO VALUE SHOWN.					TOTAL CFM REQ'D. 239.2	
					TOTAL O.A. CFM FURNISHED 235*	

## AIR DISTRIBUTION DEVICES

MARK	MANUFACTURER	MODEL	TYPE	DUTY	COLOR	MATERIAL	VOLUME DAMPER	REMARKS
A	TITUS	TMS-1B	LOWER FACE	SA	WHITE	STEEL	NO	24x24 PANEL SIZE W/ INSULATION BLANKET
B	TITUS	50F	ALUMINUM EGGCRATE	EXH	WHITE	ALUMINUM	YES	SIZE AS INDICATED
C	TITUS	50F	ALUMINUM EGGCRATE	RA	WHITE	ALUMINUM	NO	24x24 PANEL SIZE, 22x22 EGGCRATE FACE W/TRANSITION TO NECK/RUNOUT LISTED.

# ROOF TOP UNIT SCHEDULE

MARK	NEW OR EXIST.	MANUFACTURER	MODEL	CFM	E.S.P. IN W.G.	MIN. O.A. CFM	HP	GROSS COOLING CAPACITY					GAS HEATING		UNIT WT. (LBS)	HEATING SOURCE	REMARKS
								TOTAL (MBH)	SENS (MBH)	E.A.T. (DB/°F)	O.A.T. (DB)	EER/SEER	MBH GAS INPUT	MBH GAS OUTPUT			
EX. RTU-1	EXIST.	EXISTING TO REMAIN	2400	_____					EXISTING TO REMAIN _____						NATURAL GAS	①	
EX. RTU-2	EXIST.	EXISTING TO REMAIN	1800	_____					EXISTING TO REMAIN _____						NATURAL GAS	①	
EX. RTU-3	EXIST.	EXISTING TO REMAIN	2400	_____					EXISTING TO REMAIN _____						NATURAL GAS	①	

① PROGRAMMABLE ELECTRONIC THERMOSTAT WITH REMOTE TEMPERATURE SENSORS. SEE I/MIOI FOR MOUNTING LOCATIONS OF THERMOSTATS, REMOTE SENSORS, AND HUMIDISTATS.

## SPLIT SYSTEM COOLING UNIT SCHEDULE

MARK	MANUFACTURER	MODEL	CFM	GROSS COOLING CAPACITY					VOLTAGE	REMARKS
				TOTAL (MBH)	SENS (MBH)	E.A.T. DB/MB	O.A.T. DB*(F)	SEER		
HP-1/ AHU-1	CARRIER	38MPAQ24/ 40MPHAQ24	600	24.0	18.0	80/67	95	17.0	SEE ELEC. DWGS.	①②③④⑤

① ADVANCED MICROPROCESSOR CONTROL.      ③ LOW AMBIENT CONTROLS.      ⑤ PROGRAMMABLE THERMOSTAT

② CONDENSATE DRAIN PUMP.      ④ SINGLE POINT CONNECTION.

## EXHAUST FANS SCHEDULE

MARK	TYPE	MANUFACTURER	MODEL	CFM	E.S.P.	MAX. MOTOR HP OR WATTS	MAX SONES	DRIVE	WEIGHT	VOLTAGE	CONTROLLED BY	REMARKS
EF-1	CEILING	GREENHECK	SP-B150	110	0.250	125 W	3.0	DIRECT	-	COORD. WELEC.	(5)	(1)(3)(4)(6)(8)(11)
EF-2, EF-6, EF-7	CEILING	GREENHECK	SP-B110	85	0.250	80 W	2.0	DIRECT	-	COORD. WELEC.	(15)	(1)(3)(4)(6)(8)(11)
EF-3	CEILING	GREENHECK	SP-B150	110	0.250	20 W	1.5	DIRECT	-	COORD. WELEC.	(10)	(1)(3)(4)(6)(8)(11)
EF-4	CENTRIFUGAL	GREENHECK	G-060	50	0.250	1/10 HP	3.7	DIRECT	15 LBS	COORD. WELEC.	(2)	(1)(3)(6)(7)(11)
EF-5	CEILING	GREENHECK	SP-B40	50	0.250	20 W	1.5	DIRECT	-	COORD. WELEC.	(12)	(1)(3)(4)(6)(8)(11)

① DISCONNECT SWITCH.	⑤ WALL SWITCH.	⑧ ROOF CAP OR WALL CAP AS INDICATED.	⑪ APPROVED MANUFACTURERS: GREENHECK, PENNBARRY, AND TWIN CITY, COOK.
② RUNS CONTINUOUSLY.	⑥ BACKDRAFT DAMPER.	⑨ CEILING RADIATION DAMPER.	⑫ THERMOSTAT.
③ SPEED CONTROL.	⑦ ROOF CURB.	⑩ SEVEN-DAY PROGRAMMER PROVIDED BY ELECTRICAL CONTRACTOR.	⑬ SWITCHED WITH LIGHTS.
④ CEILING GRILLE.			









For: Heartland Dental  
1200 Network Centre Drive  
Effingham IL 62401

## Floor Plan - Mechanical

HFR 22.911



- ① 6" EXHAUST DUCT UP TO ROOF CAP. MINIMUM 10' FROM ALL FRESH AIR INTAKES.
- ② 6" EXHAUST DUCT UP TO ROOF CAP. MINIMUM 10' FROM ALL FRESH AIR INTAKES.
- ③ TRANSITION SUPPLY AND RETURN DUCT TO CURB IN RISE.
- ④ ROUTE 1" CONDENSATE TO MOP SINK. CONDENSATE PUMP REQUIRED.
- ⑤ 4" DRYER EXHAUST TO ROOF VENT.
- ⑥ PROVIDE SUITABLE EQUIPMENT RAILS.
- ⑦ NON-SENSING THERMOSTAT WITH REMOTE SENSORS.
- ⑧ WRAP EXHAUST DUCT WITH 3M 1-HR FIRE RATED DUCT WRAP OR EQUAL CONTINUOUSLY FROM GRILLE TO EXTERIOR.

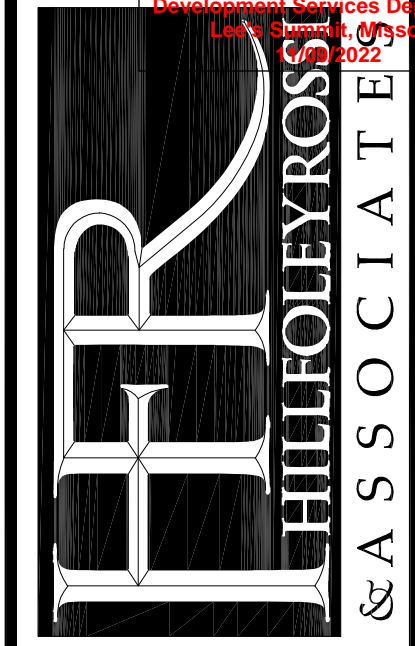
1 FLOOR PLAN - MECHANICAL

SCALE: 1/4" = 1'-0"





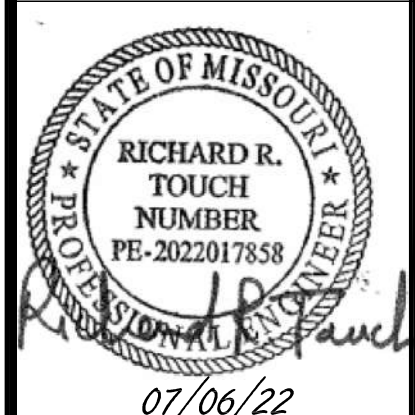




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sealed: 07-22-22



Heartland Dental - Lee's Summit  
Market Street Center  
Lee's Summit, Missouri 64082  
For: Heartland Dental  
1200 Network Centre Drive  
Effingham, IL 62401

07/22/22 For  
mk date Construction  
issue

Floor Plan -  
Lighting

E101  
HFR 22.911

GENERAL NOTES: (APPLY TO SHEET E-101 ONLY)

1. ALL ELECTRICAL WORKS SHALL BE COMPLY TO NEC 517 (HEALTH CARE FACILITIES).
2. CONNECT BATTERY IN EMERGENCY LIGHTING FIXTURE OR EXIT SIGN TO UNSWITCHED BRANCH CIRCUIT.
3. ALL WIRING SHALL BE #12 AWG, COPPER, U.O.N.
4. WIRING IN PATIENT CARE AREAS (TREATMENT AND HYGIENE ROOMS) SHALL COMPLY WITH NEC 517.13A & B. SEE ELECTRICAL SPECIFICATIONS FOR WIRING TYPE. PROVIDE CIRCUIT LABELS AT RECEPTACLES AS REQUIRED. NO SHARED NEUTRALS, U.O.N.
5. ALL WIRING DEVICES AND COVERPLATES SHALL BE WHITE IN COLOR, EXCEPT FOR QUADRUPEX RECEPTACLES AT OPERATION. PROVIDE BROWN DEVICES AND COVERPLATES WHERE REQUIRED.
6. ALL LIGHTING FIXTURE IN WORKING AREA SHALL BE TYPE 'C', U.O.N.

KEYED NOTES:

- ① PROVIDE SWITCH BANK. LOWERCASE LETTERS INDICATE SWITCHED FIXTURES. SEE DETAIL IN THIS SHEET FOR SWITCH BANK LAYOUT. INSTALL SWITCH BANK BOXES AT 48" AFF. COORDINATE WITH ARCHITECTURAL DRAWINGS FOR EXACT LOCATION, PRIOR TO ROUGH-IN.
- ② LIGHTING IN THIS AREA TO BE CONTROLLED BY SWITCH BANK AS INDICATED. LOWERCASE LETTERS INDICATED SWITCH GROUPINGS.
- ③ EXISTING EXTERIOR EGRESS FIXTURES TO REMAIN.

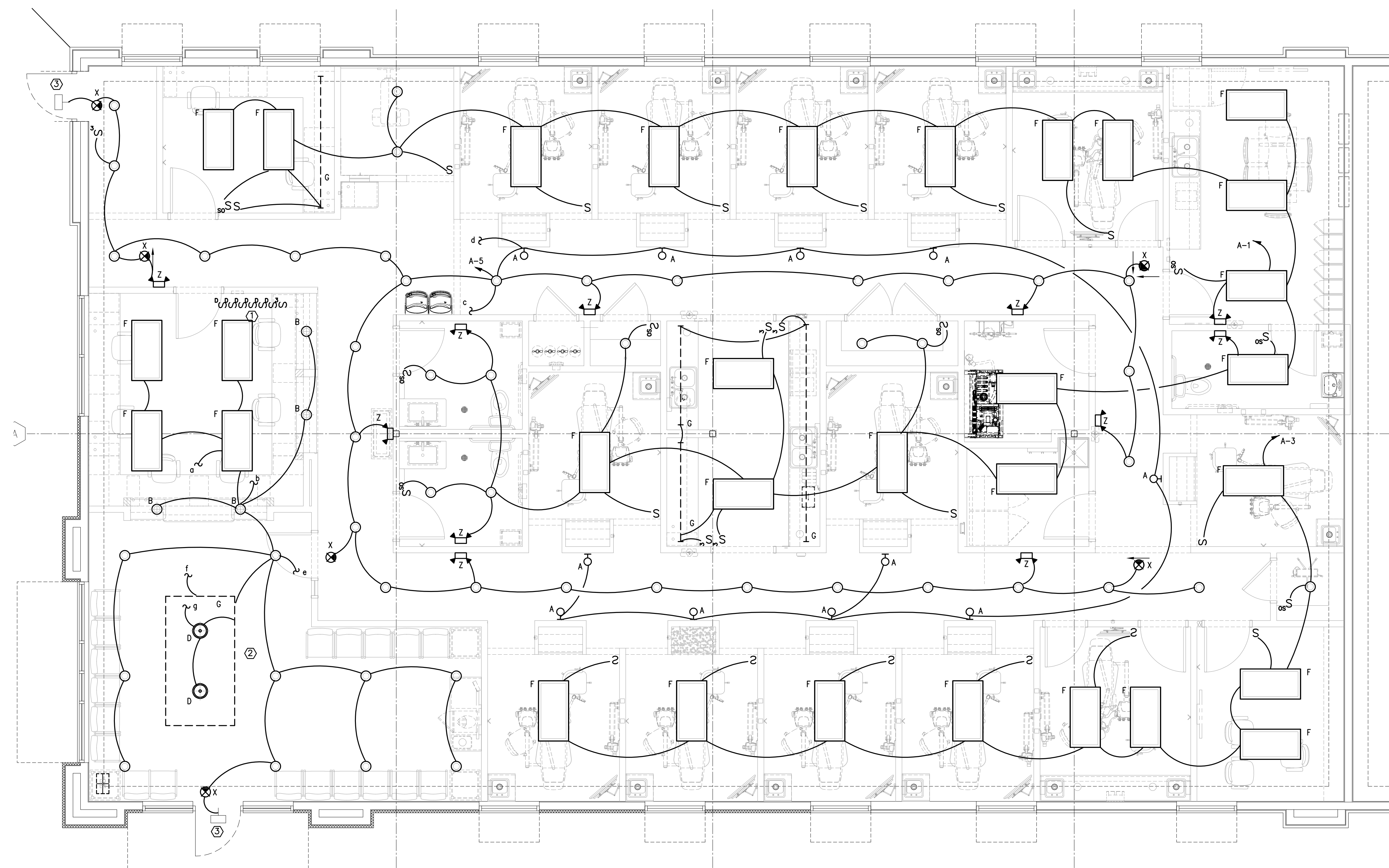
REFLECTED CEILING PLAN LEGEND	
OH	WALL SCONCE
○	6" DIA. RECESSED CAN LIGHT
○	PENDANT LIGHT FIXTURE
⊙	CHANDELIER
□	2' X 4' LIGHT FIXTURE
—	LED TAPE STRIP
⊗	EMERGENCY EXIT SIGN
⌞	EMERGENCY LIGHT FIXTURE

 BUSINESS AREA	 HALLWAY	 WAITING ROOM
FLOOR		

S - SINGLE-POLE, SINGLE-THROW LIGHTING SWITCH

NOTE: VERIFY SWITCH MOUNTING HEIGHT AND LOCATION WITH OWNER/ARCHITECT PRIOR TO CONSTRUCTION BOXES TO BE GANGED AND ARRANGED AS WALL SPACE ALLOWS. COVER PLATES TO BE ENGRAVED AS SHOWN OR PROVIDED WITH LAMINATED PLASTIC LABELS ENGRAVED AS SHOWN.

(a - BUSINESS AREA TYPE "F")  
(b - BUSINESS AREA PENDANTS/DOWNLIGHTS)  
(c - 3-WAY CORRIDOR, LEFT TYPE 'C' DOWNLIGHTS)  
(d - CORRIDOR, RIGHT TYPE 'A' WALL SCONCES)  
(e - WAITING ROOM TYPE 'C' DOWNLIGHTS)  
(f - WAITING ROOM TYPE 'G' TAPE STRIP)  
(g - WAITING ROOM TYPE TYPE 'D' CHANDELIER)



1 FLOOR PLAN — LIGHTING  
E101 SCALE: 1/4" = 1'- 0"

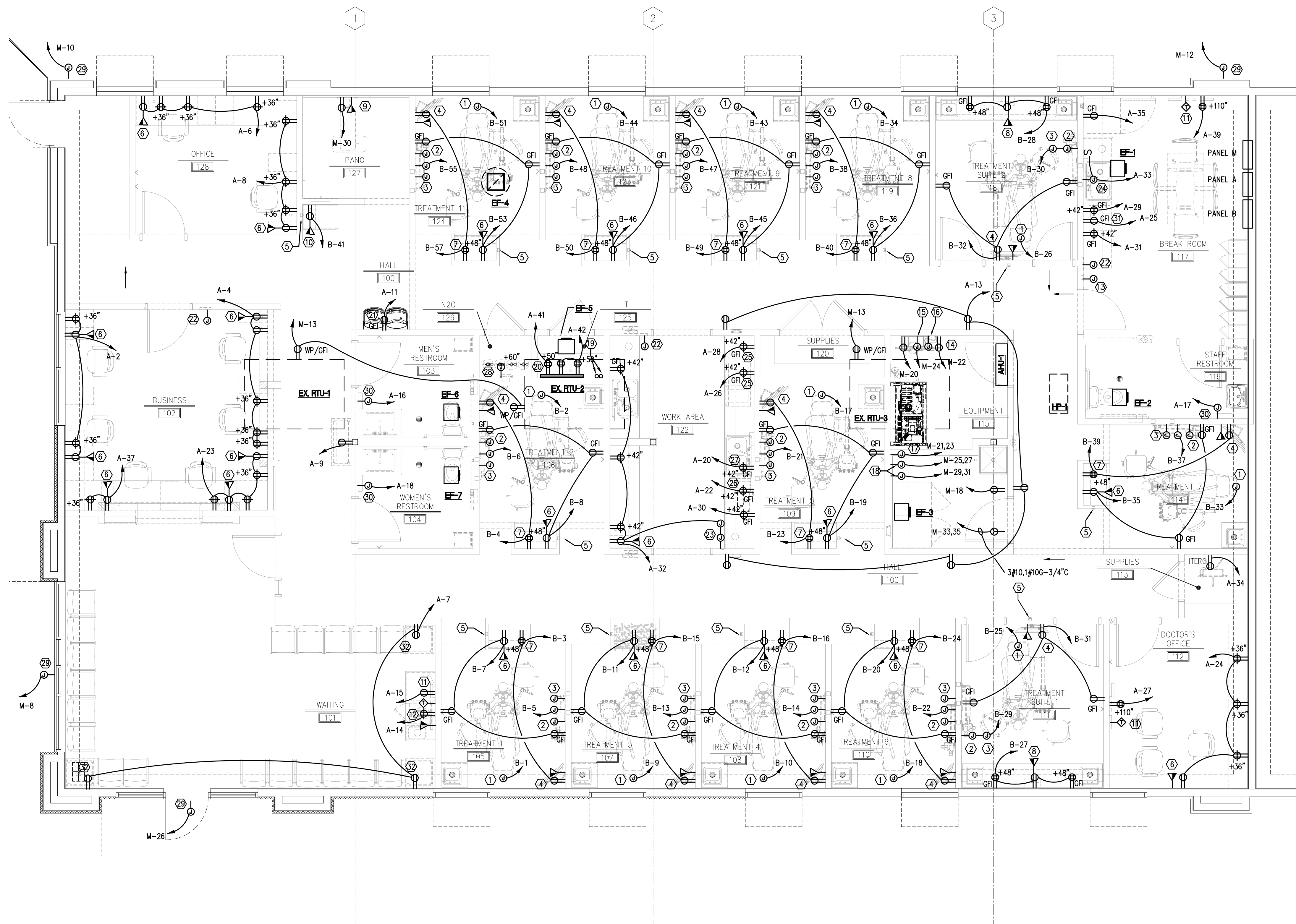


## GENERAL NOTES: (APPLY TO SHEET E-102 ONLY)

- ALL ELECTRICAL WORKS SHALL BE COMPLY TO NEC 517 (HEALTH CARE FACILITIES).
- ALL WIRING SHALL BE #12 AWG, COPPER, U.O.N.
- WIRING IN PATIENT CARE AREAS (TREATMENT AND HYGIENE ROOMS) SHALL COMPLY WITH NEC 517.13A & B. SEE ELECTRICAL SPECIFICATIONS FOR WIRING TYPE. PROVIDE CIRCUIT LABELS AT RECEPTACLES AS REQUIRED. NO SHARED NEUTRALS, U.O.N.
- ALL RECEPTACLES IN TREATMENT AND HYGIENE AREAS SHALL BE HOSPITAL GRADE (5-20R TYPE) WITH CIRCUIT DESIGNATION TYPED LABEL. COORDINATE RECEPTACLE EXACT LOCATIONS AND CONNECTION REQUIREMENT OF ALL EQUIPMENT WITH THE OWNER AND VENDORS PRIOR TO INSTALL. REFER TO ARCHITECTURAL ELEVATIONS FOR EXACT MOUNTING HEIGHT OF RECEPTACLES, OUTLETS AND SWITCHES IN TREATMENT, HYGIENE, OFFICES AND BREAKROOM AREAS FOR ROUGH-INS. IF THERE ARE CONFLICTS BETWEEN ELECTRICAL DRAWINGS AND ARCHITECTURAL DRAWINGS REGARDING LOCATIONS OF DEVICES, CONTRACTOR MUST NOTIFY ARCHITECT FOR RESOLUTION.
- ALL RECEPTACLES LOCATED ON FIRE-RATED WALL SHALL HAVE FIRE-RATED PUTTY PADS.
- ALL RECEPTACLES SHALL BE GROUNDED AS REQUIRED BY NEC 250-146.
- WHERE DEVICES, INCLUDING ALL PATIENT CARE AREA RECEPTACLES OF 15-20 AMP 120V, ARE IDENTIFIED WITH "ING," THE DEVICES SHALL BE PROVIDED WITH HOSPITAL GRADE MC CABLE WITH SECOND GROUNDING PATH AND HOSPITAL GRADE DEVICES WITH INSULATED GROUND CONNECTIONS.
- NO 15A, 120V RECEPTACLES ARE ACCEPTABLE.
- FOR ALL LOW-VOLTAGE OUTLETS, PROVIDE SINGLE-GANG DEVICE RING, OUTLET BOX AND A 3/4" EMPTY CONDUIT STUBBED UP ABOVE CEILING SPACE WITH PULL-STRING AND INSULATING BUSHING, U.O.N.
- ALL WIRING DEVICES AND COVERPLATES SHALL BE WHITE IN COLOR, EXCEPT FOR QUADRUPEX RECEPTACLES AT OPERATION "120CLOK". PROVIDE BROWN DEVICES AND COVERPLATES WHERE REQUIRED.
- PROVIDE POWER CONNECTION FOR MECHANICAL EQUIPMENT PER MECHANICAL EQUIPMENT SCHEDULE ON SHEET E-500. REFER TO MECHANICAL DRAWINGS FOR EXACT LOCATIONS. PROVIDE DISCONNECT MEANS AND EQUIPMENT NAMEPLATE AS CODE REQUIREMENT.
- PROVIDE WP/GR/GFI RECEPTACLE(S) AS CODE REQUIRED ON ROOF FOR ROOF MOUNTED EQUIPMENT WITHIN 25-FT FROM MECHANICAL EQUIPMENT.

## KEYED NOTES:

- DENTAL CHAIR BASEPLATE. PROVIDE HOSPITAL GRADE QUAD RECEPTACLE. COORDINATE EXACT LOCATION AND CONNECTION REQUIREMENTS WITH VENDOR PRIOR TO ROUGH-IN.
- RECEPTACLE FOR MICROWAVE OVEN MOUNTED BELOW COUNTER. COORDINATE EXACT LOCATION WITH MILLWORK.
- PROVIDE TAMPER-PROOF RECEPTACLE WHERE INDICATED.
- MONITOR. PROVIDE WALL MOUNTED DUPLEX RECEPTACLE AND AV/DATA BOX RECESSED AT 18" BELOW CEILING WITH 1" C TO ABOVE CEILING. COORDINATE EXACT LOCATION, HEIGHT AND CONNECTION REQUIREMENTS WITH OWNER PRIOR TO ROUGH-IN.
- X-RAY REMOTE CONTROL UNIT. PROVIDE AND TERMINATE 1" C AT 45" AFF WITH REQUIRED LOW VOLTAGE CABLING FOR REMOTE ACTIVATION. IF CONDUIT BENDS ABOVE CEILING, VERIFY THE BEND IS TOWARDS THE XRAY.
- COMPUTER CPU. PROVIDE ONE (1) DATA AT 18" AFF TO TOP OF DEVICE AND ONE (1) RECEPTACLE AT 10" AFF TO TOP OF DEVICE IN BASE CABINET. COORDINATE EXACT LOCATION AND CONNECTION REQUIREMENTS WITH ARCHITECT PRIOR TO ROUGH-IN. SEE APPLICABLE DETAIL ON E511. DATA WHIP SHALL HAVE A 1" CONDUIT STUBBED UP ABOVE CEILING AND TERMINATED WITH AN INSULATING BUSHING UNLESS NOTED OTHERWISE. INSTALL PULL STRING. RECEPTACLE TO BE FED THROUGH WHIP THAT TERMINATED IN A J-BOX ABOVE ACCESSIBLE CEILING AND INCLUDES 48" OF EXCESS LENGTH FROM FACE OF STUD ADJACENT TO ASSOCIATED PREFABRICATED CASEWORK. RECEPTACLE AND DATA TO BE INSTALLED BY ELECTRICAL SUBCONTRACTOR AFTER THE INSTALLATION OF PREFABRICATED CASEWORK.
- PROVIDE QUADRUPEX RECEPTACLE 48" AFF AT CENTER OF PREFABRICATED CASEWORK AND WALL. RECEPTACLE TO BE FED THROUGH WHIP THAT TERMINATED IN A J-BOX ABOVE ACCESSIBLE CEILING AND INCLUDES 48" OF EXCESS LENGTH FROM FACE OF STUD ADJACENT TO ASSOCIATED PREFABRICATED CASEWORK. RECEPTACLE AND DATA TO BE INSTALLED BY ELECTRICAL CONTRACTOR AFTER THE INSTALLATION OF PREFABRICATED CASEWORK. COVER-PLATE COLOR BROWN.
- VERIFY LOCATION OF STACKED POWER AND DATA RECEPTACLES WITH ELEVATION DETAILS ON E511 PRIOR TO ROUGH-IN.
- PANOREX SYSTEM. ELECTRICAL CONTRACTOR TO COORDINATE VOLTAGE AND PLUG REQUIREMENTS FOR PANOREX SYSTEM WITH PATTERSON DENTAL.
- X-RAY UNIT AND CPU. PROVIDE ONE (1) DUPLEX RECEPTACLE & ONE (1) DATA OUTLET IN BASE CABINET, ONE (1) JUNCTION BOX ON SIDE WALL ABOVE COUNTER AT 45" AFF, AND (1) 1" EMPTY CONDUIT WITH PULL-STRINGS STUBBED 6" ABOVE CEILING.
- TV/MONITOR. PROVIDE DUPLEX RECEPTACLE AND TV OUTLET MOUNTED AT 110" AFF WHERE RECEPTACLES SHALL BE HIDDEN BEHIND TV. COORDINATE EXACT LOCATION PRIOR TO ROUGH-IN.
- BEVERAGE COOLER AND COFFEE BREWER. PROVIDE ONE (1) RECEPTACLE MOUNTED AT 18" AFF AND ONE (1) RECEPTACLE MOUNTED ABOVE THE COUNTER. COORDINATE EXACT LOCATION AND CONNECTION REQUIREMENTS WITH OWNER PRIOR TO ROUGH-IN.
- WATER/VACUUM 3-SWITCH REMOTE CONTROL UNIT. PROVIDE 2-GANG JUNCTION BOX AND 1" C WITH REQUIRED LOW VOLTAGE CABLE BACK TO EQUIPMENT ROOM FOR CONNECTION TO MASTER VACUUM SYSTEM CONTROLLER. CONTRACTOR SHALL PROVIDE #18/4 24V CABLE WITH 5' WHIP AND PULL STRING COILED AT EACH END FOR FINAL CONNECTION TO BE MADE BY OTHERS. COORDINATE LOW VOLTAGE CABLE REQUIREMENTS WITH SYSTEM PROVIDER. MOUNT AT 48" AFF.
- WATER SOLENOID. PROVIDE DEDICATED 120V RECEPTACLE. COORDINATE EXACT CONNECTION REQUIREMENTS PRIOR TO ROUGH-IN. PROVIDE CONNECTION WITH CONTROL SWITCH, SEE KEYNOTE 13.
- MASTER VACUUM EQUIPMENT CONTROLLER. PROVIDE CONNECTION WITH REMOTE CONTROL SWITCH, KEYNOTE 13. CABLE SHALL BE #18/4 24V CABLE IN 1" C WITH 24" WHIP AND PULL STRING AT EACH END.
- MASTER CONTROLLER. PROVIDE 120V DUPLEX RECEPTACLE. COORDINATE EXACT LOCATION AND CONNECTION REQUIREMENTS WITH OWNER PRIOR TO ROUGH-IN.
- AIR COMPRESSOR. PROVIDE 208V, 1PH 60A-2P DISCONNECT, 2#8 AWG CU + #10G IN 3/4" C. COORDINATE EXACT LOCATION AND CONNECTION REQUIREMENTS WITH THE MANUFACTURER AND WITH OTHER EQUIPMENT IN THE ROOM PRIOR TO ROUGH-IN.
- VACUUM AIR PUMP. PROVIDE TWO (2) 240V, 1PH 30A-2P DISCONNECT, 2#10 AWG CU + #10G IN 3/4" C. INSTALL BUCK/BOOST TRANSFORMERS PROVIDED BY PATTERSON. VERIFY SUPPLY VOLTAGE RANGE IS WITHIN 205-240V. COORDINATE EXACT LOCATION AND CONNECTION REQUIREMENTS WITH MANUFACTURER AND OTHER EQUIPMENT IN THE ROOM PRIOR TO ROUGH-IN.
- TELEPHONE SERVICE. PROVIDE TWO (2) 4" PVC TO BUILDING DEMARC. COORDINATE DEMARC WITH SHELL BUILDING CONTRACTOR. WHERE THERE IS NO SLAB AT START OF CONSTRUCTION, CONDUITS SHOULD BE RUN UNDER SLAB FROM POINT OF ENTRY; WHEN PROVIDING UNDER SLAB CONDUITS IS NOT FEASIBLE DUE TO SITE CONDITIONS, RUNNING CONDUIT ABOVE CEILING IS ACCEPTABLE.
- TELEPHONE BACKBOARD. PROVIDE 4' X 8' X 1/2" FIRE-RATED PLYWOOD TELEPHONE BACKBOARD AROUND PERIMETER OF ROOM, PAINT WATERPROOF MARINE BLACK AND EXTEND #6 GROUND TO MAIN SERVICE GROUND. COORDINATE EXACT LOCATION AND CONNECTION REQUIREMENTS WITH OWNER/IT PRIOR TO ROUGH-IN.
- WATER COOLER. PROVIDE DEDICATED, ACCESSIBLE GFI DUPLEX RECEPTACLE.
- SPEAKER CONTROL. PROVIDE JUNCTION BOX AT 48" AFF, 1" C WITH PULLSTRING STUBBED 6" ABOVE ACCESSIBLE CEILING. COORDINATE EXACT LOCATION AND CONNECTION REQUIREMENTS WITH OWNER PRIOR TO ROUGH-IN.
- N20-02 ALARM. PROVIDE 3/4" C WITH #18/4 24V CABLE IN WALL TO JUNCTION BOX AT 48" AFF. ALARM MOUNTING AND FINAL CONNECTION MADE BY OTHERS. LEAVE 24" WHIP AND PULL STRING AT EACH END. SEE KEYNOTE 28. PROVIDE CEILING MOUNTED JUNCTION BOX FOR POWER. COORDINATE EXACT LOCATION AND CONNECTION REQUIREMENTS WITH OWNER PRIOR TO ROUGH-IN.
- JUNCTION BOX FOR DISPOSAL. COORDINATE EXACT ELECTRICAL REQUIREMENTS WITH MANUFACTURER PRIOR TO ROUGH-IN.
- AUTOClave/STEAM STERILIZER. PROVIDE ABOVE COUNTER GFI DUPLEX RECEPTACLE. COORDINATE EXACT LOCATION AND CONNECTION REQUIREMENTS WITH OWNER PRIOR TO ROUGH-IN.
- ULTRASONIC CLEANER. PROVIDE ABOVE COUNTER GFI DUPLEX RECEPTACLE. COORDINATE EXACT LOCATION AND CONNECTION REQUIREMENTS WITH OWNER PRIOR TO ROUGH-IN.
- KAYO QUATTROCORE UNIT. PROVIDE SINGLE GANG JUNCTION BOX WITH DEDICATED CIRCUIT. COORDINATE EXACT LOCATION AND CONNECTION REQUIREMENTS WITH ARCHITECT PRIOR TO ROUGH-IN.
- SENTINEL ALARM SYSTEM AT ROOM N20. PROVIDE CEILING MOUNTED JUNCTION BOX FOR LOW VOLTAGE CONNECTION. TERMINATE 1" C ABOVE ACCESSIBLE CEILING COORDINATE EXACT LOCATION AND CONNECTION REQUIREMENTS WITH OWNER PRIOR TO ROUGH-IN. PULL #18/4, 24V CABLE TO ITEM 23, LEAVE 24" OF WHIP AND PULL STRING AT EACH END. JACKS TO BE PROVIDED BY OTHERS.
- JUNCTION BOX FOR TENANT SIGNAGE COORDINATE EXACT LOCATION WITH OWNER. INTERLOCK WITH PHOTOSENSOR. COORDINATE ON/OFF SCHEDULE WITH OWNER.
- HAND DRYER. PROVIDE SINGLE GANG JUNCTION BOX WITH DEDICATED CIRCUIT. COORDINATE J-BOX EXACT LOCATION WITH ARCHITECTS.

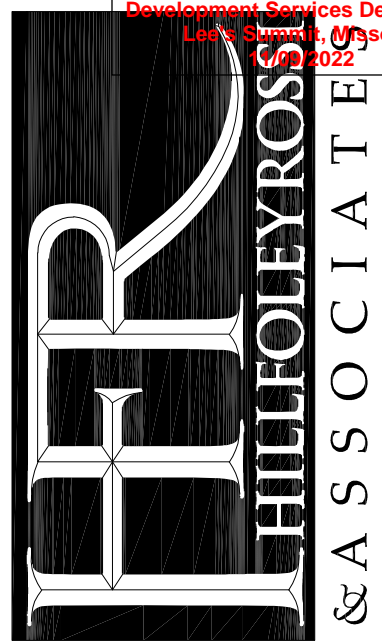


1 FLOOR PLAN - POWER  
E102 SCALE: 1/4" = 1' - 0"





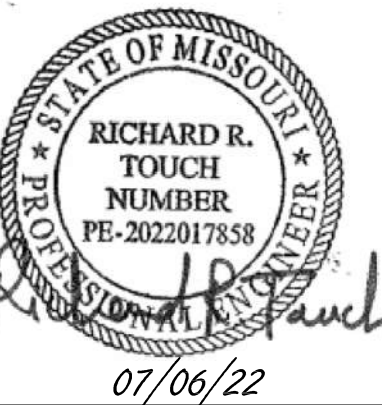




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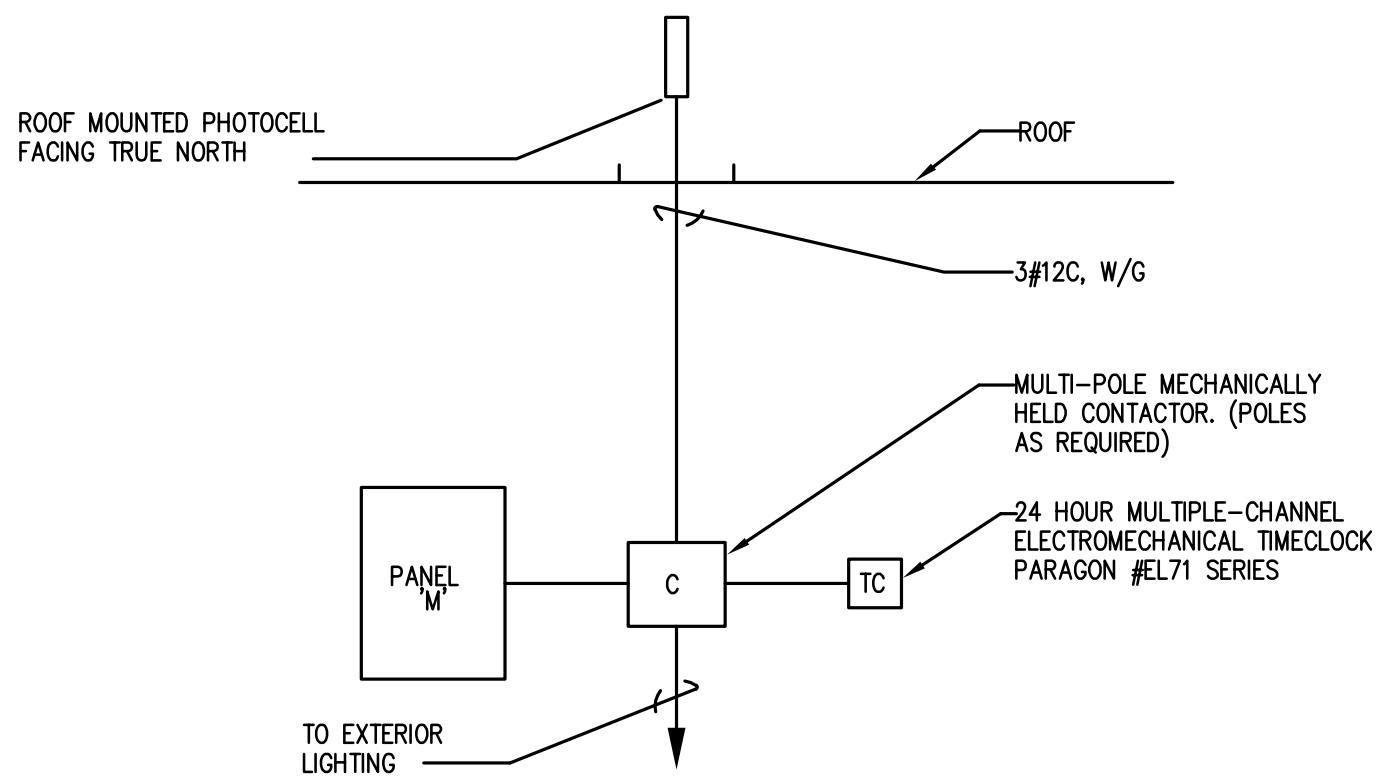
Market Street Center  
Lee's Summit, Missouri 64082

For: Heartland Dental  
1200 Network Centre Drive  
Effingham, IL 62401

07/22/22 For  
mk date Construction  
issue

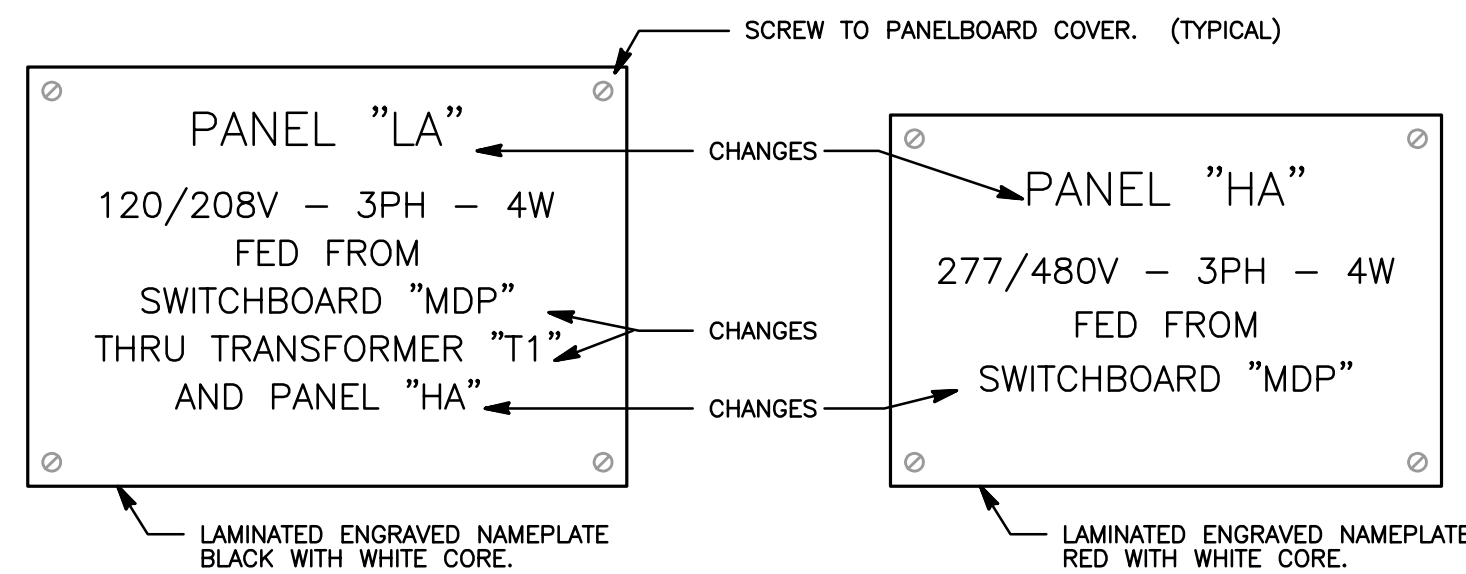
DETAILS

E511  
HFR 22.911

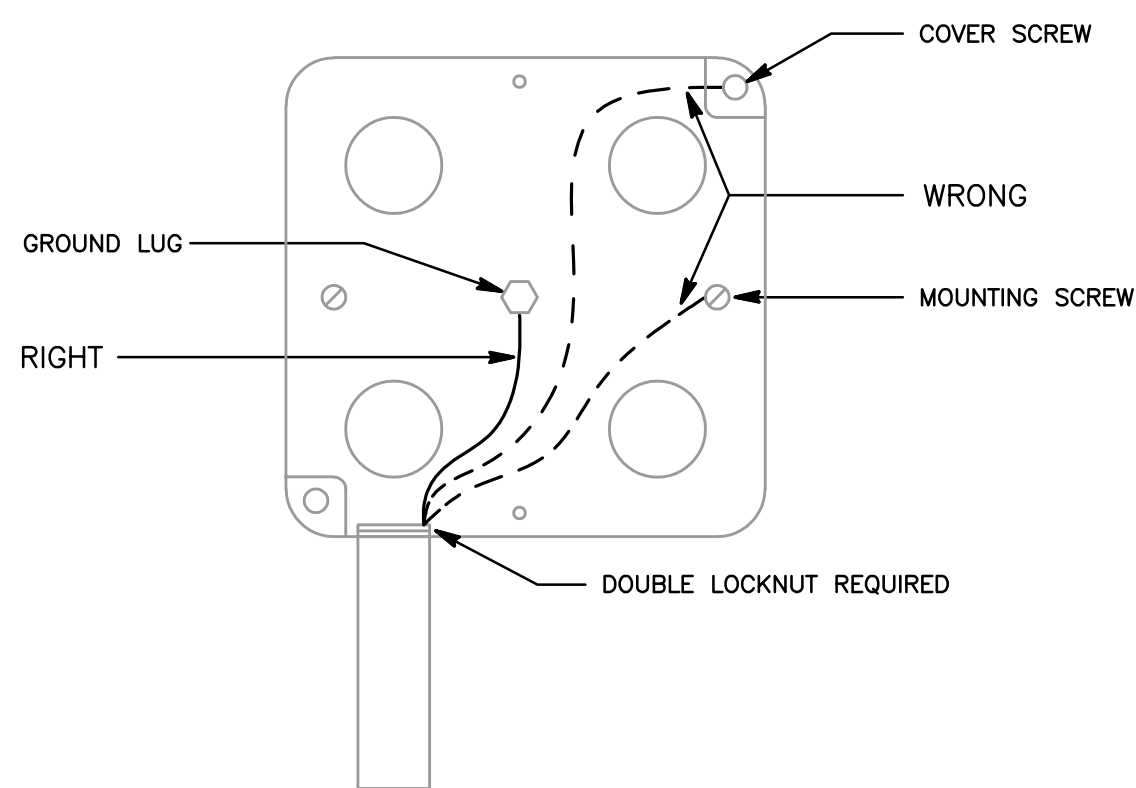


1 EXTERIOR LIGHTING CONTROL DETAIL  
E511 SCALE: NTS

- NOTES
- 1 REFER TO SINGLE LINE DIAGRAM FOR PROPER LABELING OF PANEL, SWITCHBOARD AND TRANSFORMER.
  - 2 FOR 277/480V PANELS PROVIDE RED LABELS WITH WHITE CORE.
  - 3 FOR 120/208V PANELS PROVIDE BLACK LABELS WITH WHITE CORE.
  - 4 SUBMIT CUT SHEETS OF LABELS TO ELECTRICAL ENGINEER FOR APPROVAL.
  - 5 LETTERS SHALL BE A MINIMUM OF 3/8" HIGH.



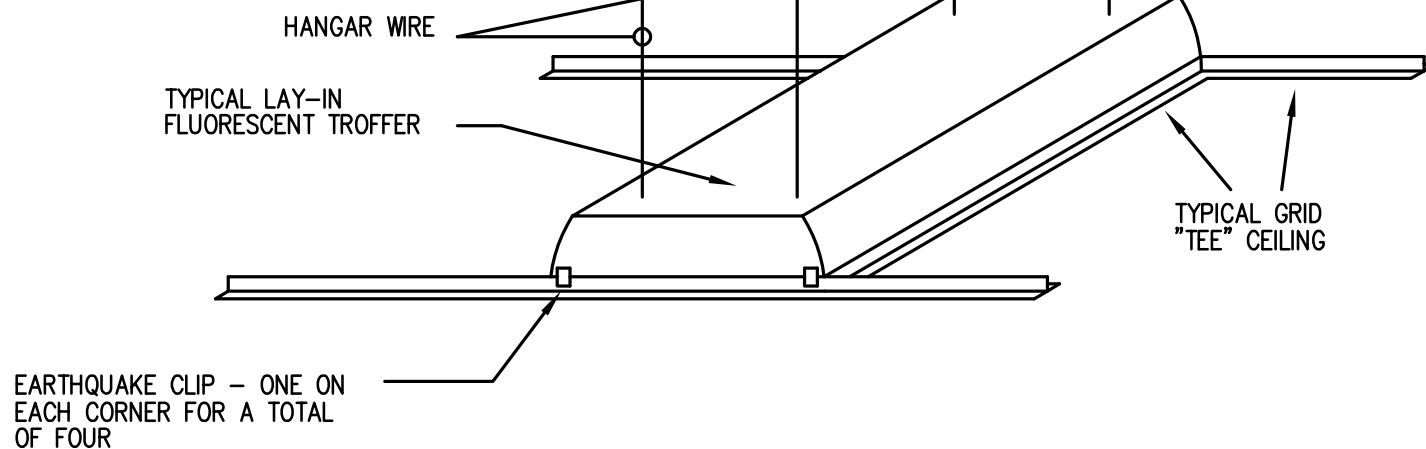
4 SAMPLE DETAIL FOR PANELBOARD LABELS  
E511 SCALE: NTS



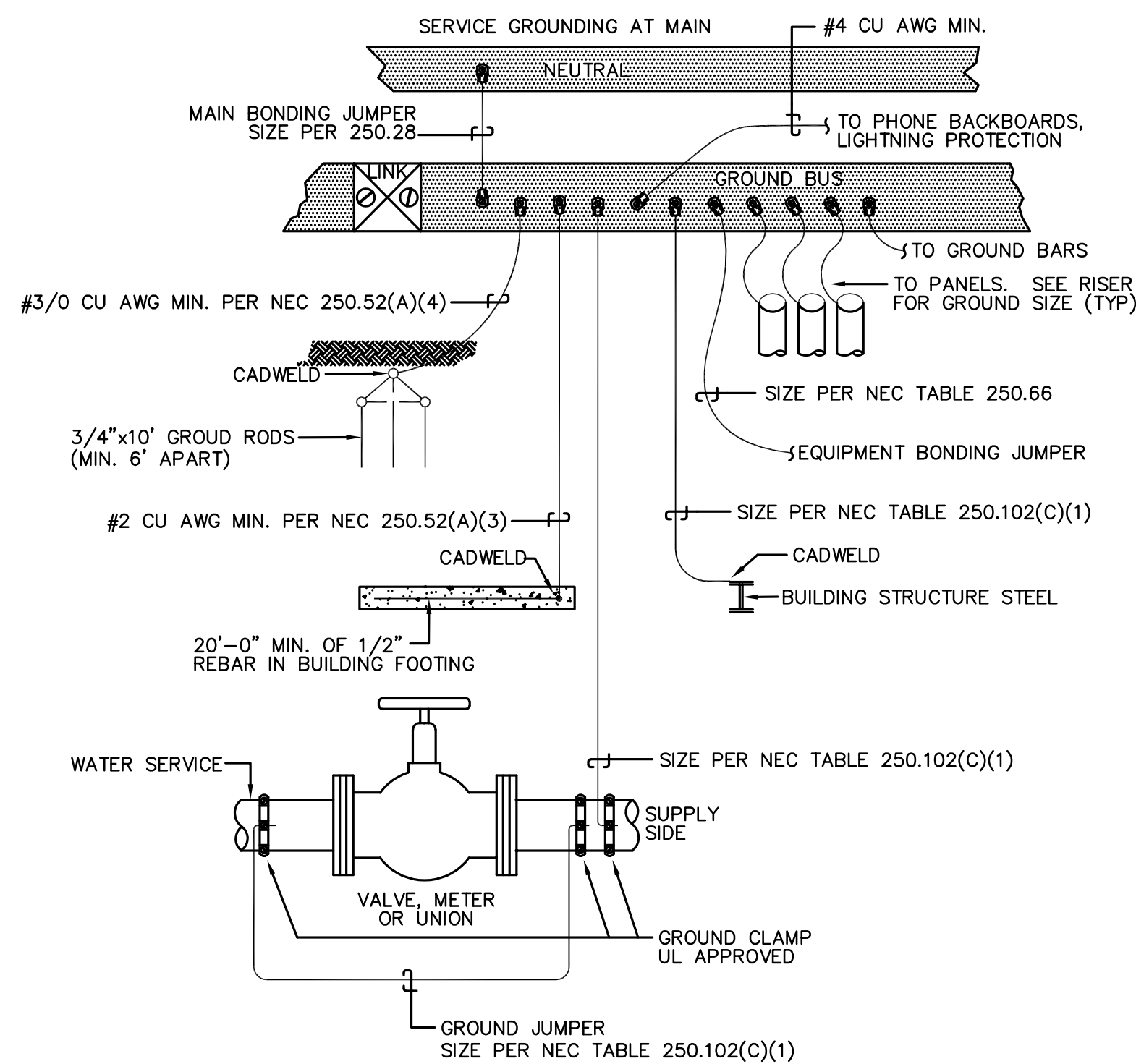
2 OUTLET BOX-GROUNDING CONNECTION  
E511 SCALE: NTS

NOTE:

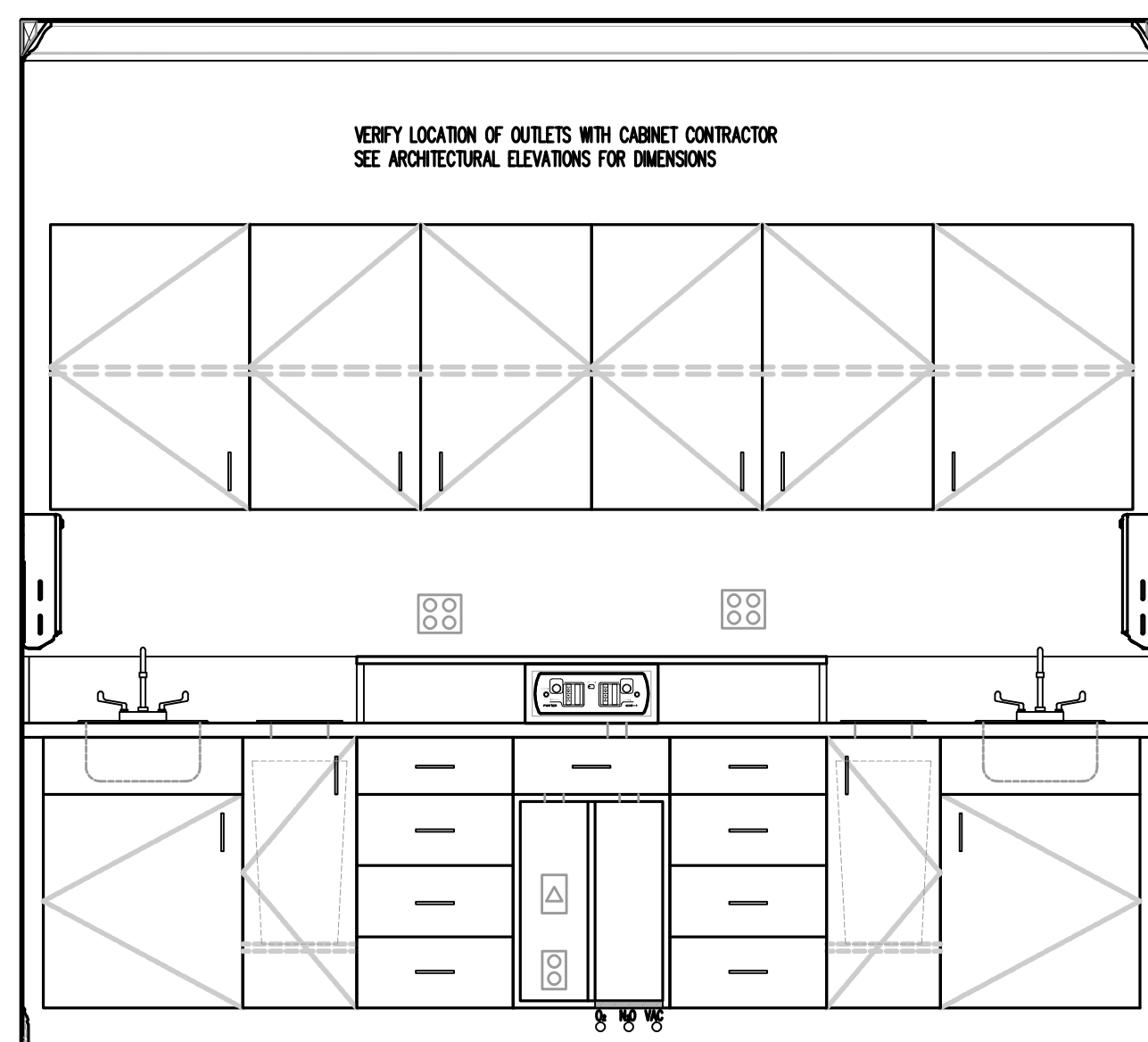
FOR FIXTURES WEIGHING 56 LBS. OR MORE,  
INSTALL #12 GAUGE HANGER WIRE ATTACHED  
TO STRUCTURE ABOVE - ONE AT EACH CORNER  
OF FIXTURE FOR A TOTAL OF FOUR. HANGER  
WIRES MUST BE INSTALLED VERTICAL BUT NOT  
MORE THAN 1 IN 6 OUT OF PLUMB. FOR  
FIXTURES WEIGHING LESS THAN 56 LBS.,  
WIRES MAY BE INSTALLED SLACK AT TWO  
CORNERS.



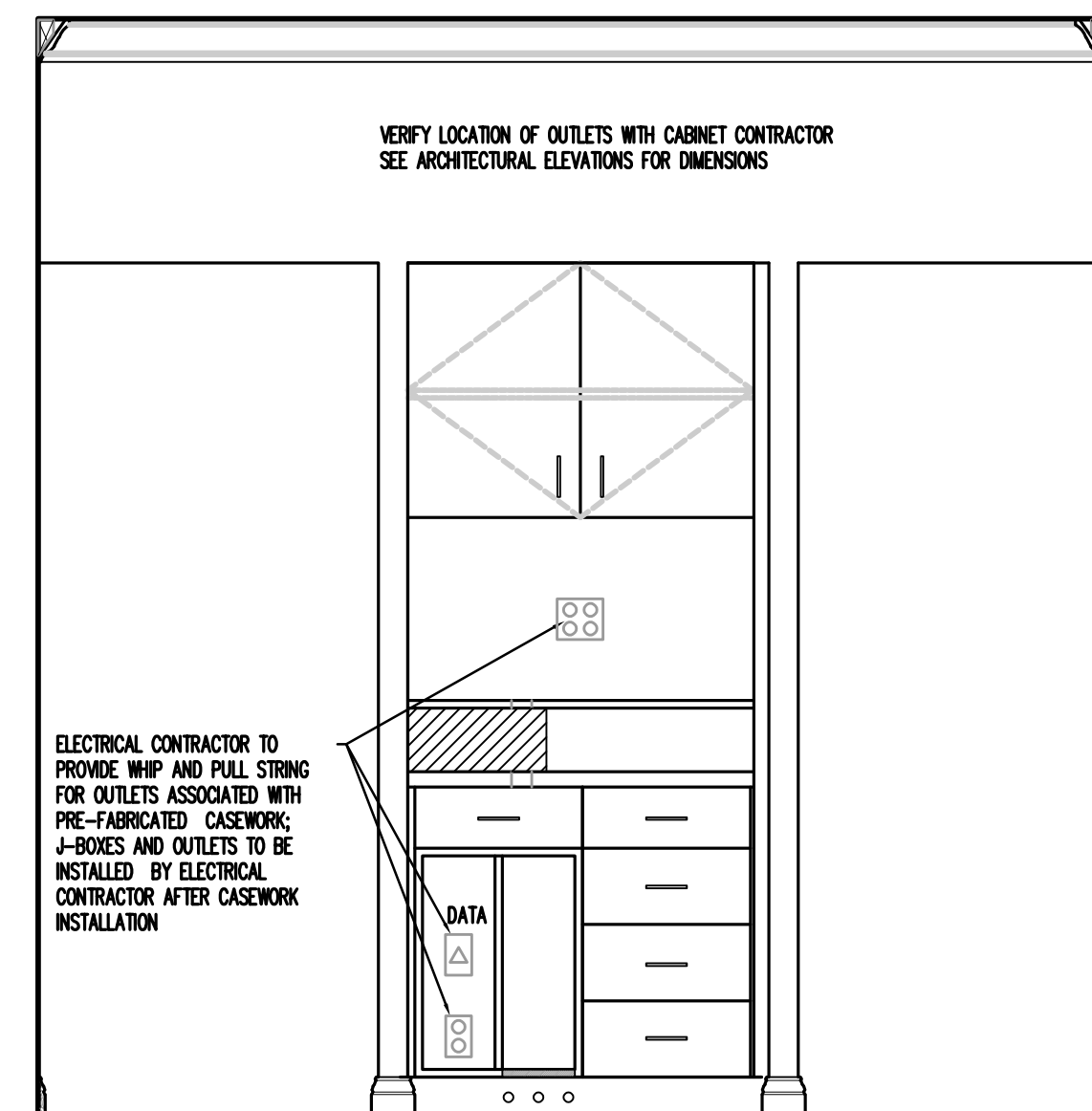
3 LIGHTING INSTALLATION DETAIL  
E511 SCALE: NTS



5 GROUNDING DETAIL  
E-511 SCALE: NTS



8 TREATMENT SUITE  
E511 SCALE: NTS

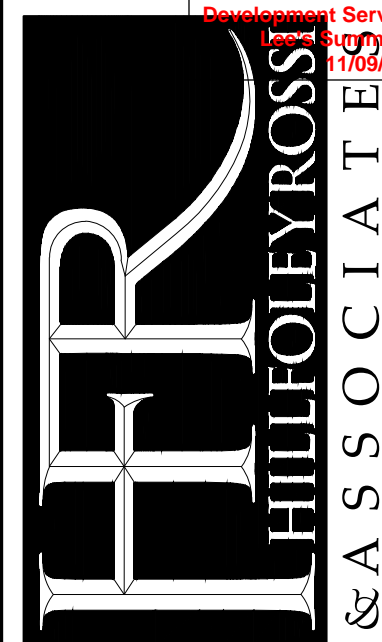


9 TREATMENT ELEVATION  
E511 SCALE: NTS









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sealed: 07-22-22



Heartland Dental - Lee's Summit  
Market Street Center  
Lee's Summit, Missouri 64082

For: Heartland Dental  
1200 Network Centre Drive  
Effingham, IL 62401

07/22/22 For  
mk date Construction  
issue

Plumbing  
Schedules

P002

HFR 22.911

## PLUMBING FIXTURE SCHEDULE (ORDER FROM FERGUSON THROUGH HEARTLAND DENTAL NATIONAL ACCOUNT)

ALL FIXTURES ON THIS SCHEDULE ARE TO BE ORDERED THROUGH HEARTLAND DENTAL NATIONAL ACCOUNT WITH FERGUSON AND INSTALLED BY THE PLUMBING CONTRACTOR; ORDERS SHOULD BE PLACED ON LINE THOUGH [HTTPS://WWW.FERGUSONONLINE.COM/FERGUSONONLINE](https://www.fergusononline.com/fergusononline); LOGIN TO HEARTLAND ACCOUNT USING [PLUMBING@HEARTLAND.COM](mailto:PLUMBING@HEARTLAND.COM) WITH THE PASSWORD HEARTLAND001; UNDER "ACCOUNT" AT THE TOP OF THE PAGE, ACCESS "MY LISTS", AND CHOOSE THE "NEW CONSTRUCTION STANDARD" LIST TO START ORDER FROM; IF THERE ARE ANY QUESTIONS PLEASE CONTACT HD ACCOUNT MANAGER AT [EP.COMMERCIAL@FERGUSON.COM](mailto:EP.COMMERCIAL@FERGUSON.COM) OR (636)300-5300

MARK	QTY.	DESCRIPTION	REMARKS	FIXTURE CONNECTIONS			
				CW	HW	VENT	WASTE
PIL	1	WATER CLOSET - TANK TYPE (ADA, LEFT HAND LEVER)	AMERICAN STANDARD, CHAMPION PRO, TWO PIECE FLOOR MOUNTED WATER CLOSET (1.28 GPF) TANK #A4225A104020 WITH BOWL #A3195A101020, ADA HEIGHT. COLOR: WHITE. PROFLO®	1/2"	---	2"	4"
PIR	2	WATER CLOSET - TANK TYPE (ADA, RIGHT HAND LEVER)	AMERICAN STANDARD, CHAMPION PRO, TWO PIECE FLOOR MOUNTED WATER CLOSET (1.28 GPF) TANK #A4225A104020 WITH BOWL #A3195A101020, ADA HEIGHT. COLOR: WHITE. PROFLO®	1/2"	---	2"	4"
P2	2	UNDERMOUNT LAVATORY (ADA, PUBLIC RESTROOM)	KOHLER, KATHRYN, UNDERMOUNT SINK #K229T-0, COLOR: WHITE, SIZE: 21"x13". DELTA, ASHLYN COLLECTION, WIDE SPREAD FAUCET (1.5 GPM) WITH LEVER HANDLES #D356496MFDUST, COLOR: STAINLESS, SIZE: 5 1/4" HIGH. PLUMBING CONTRACTOR SHALL FURNISH AND INSTALL AN ASSE 1070 COMPLIANT THERMOSTATIC MIXING VALVE (TMV) SET AT 105 DEGREES. INSTALL PIPE INSULATION (A-28) AS PROVIDED BY GENERAL CONTRACTOR.	1/2"	---	2"	1 1/4"
P3	1	WALL HUNG LAVATORY (ADA, STAFF RESTROOM)	AMERICAN STANDARD, LUCERNE, WALL HUNG LAVATORY WITH CONCEALED ARM CARRIER MOUNTING #0355012020. PROFLO, MILLETT, FAUCET WITH LEVER HANDLES #PFV6C2840CF, COLOR: CHROME. PLUMBING CONTRACTOR SHALL FURNISH AND INSTALL ACCESSORY PACKAGE (P3A) AND AN ASSE 1070 COMPLIANT THERMOSTATIC MIXING VALVE (TMV) SET AT 105 DEGREES. INSTALL PIPE INSULATION (A-28) AS PROVIDED BY GENERAL CONTRACTOR.	1/2"	---	2"	1 1/4"
P4	15	TREATMENT ROOM SINK	PROFLO, BEALETON, 23 GAUGE STAINLESS STEEL, 2 HOLE DROP-IN SINK #FF5R151562, SIZE: 15"x15". PROFLO, COUNTRY KITCHEN, FAUCET WITH LEVER HANDLES #FFN513140CF, COLOR: CHROME, SIZE: 4" CENTERSET, 5"x18". PROFLO, STAINLESS STEEL BASKET STRAINER #FFI43155. PLUMBING CONTRACTOR SHALL FURNISH AND INSTALL AN ASSE 1070 COMPLIANT THERMOSTATIC MIXING VALVE (TMV) SET AT 105 DEGREES.	1/2"	1/2"	2"	1-1/2"
P5	1	BREAK ROOM SINK (DOUBLE BOWL)	PROFLO, BEALETON, 20 GAUGE STAINLESS STEEL, 4 HOLE DOUBLE COMPARTMENT DROP-IN SINK #FF5R332284A, SIZE: 33"x22"x8 1/8", SELF RIMMING WITH 1 3/4" CORNERS AND FULLY COATED UNDERSIDE. ELKAY, 8" GOOSE NECK, DECK MOUNTED FAUCET WITH LEVER HANDLES AND SPRAYER #ELK801GN08L2, COLOR: POLISHED CHROME, SIZE: 8" CENTER, AERATOR, AND QUARTER OPERATING CARTRIDGE. PROFLO, STAINLESS STEEL BASKET STRAINER #FFI43155. INSINKERATOR, GALVANIZED STEEL GARBAGE DISPOSAL WITH 360 DEGREE SHIVEL LUGS AND QUICK LOCK INSTALLATION, 1/3 HP. IBADGERI.	1/2"	1/2"	2"	1-1/2"
P6	1	WORK AREA SINK (DOUBLE BOWL)	PROFLO, BEALETON, 20 GAUGE STAINLESS STEEL, 4 HOLE DOUBLE COMPARTMENT DROP-IN SINK #FF5R332284A, SIZE: 33"x22"x8 1/8", SELF RIMMING WITH 1 3/4" CORNERS AND FULLY COATED UNDERSIDE. ELKAY, 8" GOOSE NECK, DECK MOUNTED FAUCET WITH LEVER HANDLES AND SPRAYER #ELK801GN08L2, COLOR: POLISHED CHROME, SIZE: 8" CENTER, AERATOR, AND QUARTER OPERATING CARTRIDGE. PROFLO, STAINLESS STEEL BASKET STRAINER #FFI43155.	1/2"	1/2"	2"	1-1/2"
P7	1	MOP SINK	PROFLO, PFM-B SERIES, COMPOSITE MOP SINK #PFH2424, SIZE: 24"x24". DELTA, WALL MOUNTED, RIGID FAUCET #D28T94C, COLOR: CHROME, SIZE: 10" REACH. ACCESSORIES PROVIDE THROUGH NATIONAL ACCOUNT. STAINLESS STEEL WALL PANELS #PFV6245 AND MOP / BROOM HOLDER (A-04).	1/2"	1/2"	2"	3"
P8	1	BI-LEVEL WATER COOLER (ADA)	ELKAY, FLEXI-GUARD, 8.8 GPH BI-LEVEL WATER COOLER #EEZ5TL8LC WITH ACCESSORY APRON #LKAPREZL. 50 DEGREE WATER AT 80 DEGREE ROOM TEMPERATURE. INSTALL ON WALL CARRIER (P8-Z) AT HEIGHTS INDICATED ON A008.	1/2"	---	2"	1-1/4"
P9	1	WORK AREA SINK WITH FAUCET MOUNTED EYEWASH (DOUBLE BOWL)	PROFLO, BEALETON, 20 GAUGE STAINLESS STEEL, 4 HOLE DOUBLE COMPARTMENT DROP-IN SINK #FF5R332284A, SIZE: 33"x22"x8 1/8", SELF RIMMING WITH 1 3/4" CORNERS AND FULLY COATED UNDERSIDE. ELKAY, 8" GOOSE NECK, DECK MOUNTED FAUCET WITH LEVER HANDLES AND SPRAYER #ELK801GN08L2, COLOR: POLISHED CHROME, SIZE: 8" CENTER, AERATOR, AND QUARTER OPERATING CARTRIDGE. PROFLO, STAINLESS STEEL BASKET STRAINER #FFI43155. PLUMBING CONTRACTOR TO INSTALL FAUCET MOUNTED EYEWASH (E-23) AS PROVIDED BY PATTERSON. PLUMBING CONTRACTOR SHALL FURNISH AND INSTALL AN ASSE 1071 COMPLIANT THERMOSTATIC MIXING VALVE (TMV-E) SET AT 75 DEGREES.	1/2"	1/2"	2"	1-1/2"

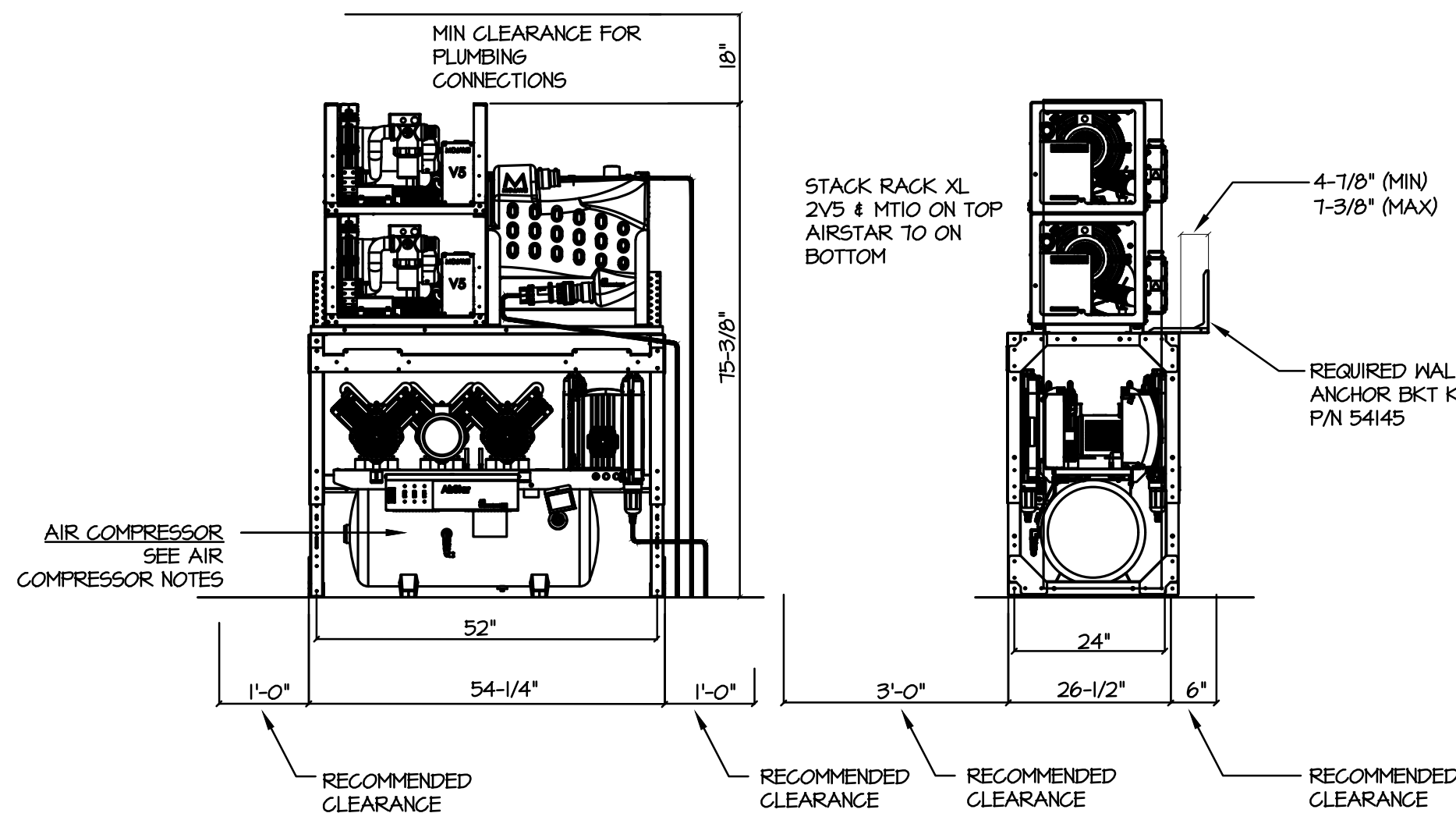
## PLUMBING FIXTURE SCHEDULE (PLUMBING CONTRACTOR TO SUPPLY AND INSTALL)

ALL FIXTURES ON THIS SCHEDULE ARE TO BE ORDERED AND INSTALLED BY THE PLUMBING CONTRACTOR THROUGH CONTRACTOR'S LOCAL DISTRIBUTOR. COORDINATE ACCESSORY KITS WITH CORRESPONDING PLUMBING FIXTURE AS PROVIDED BY FERGUSON.

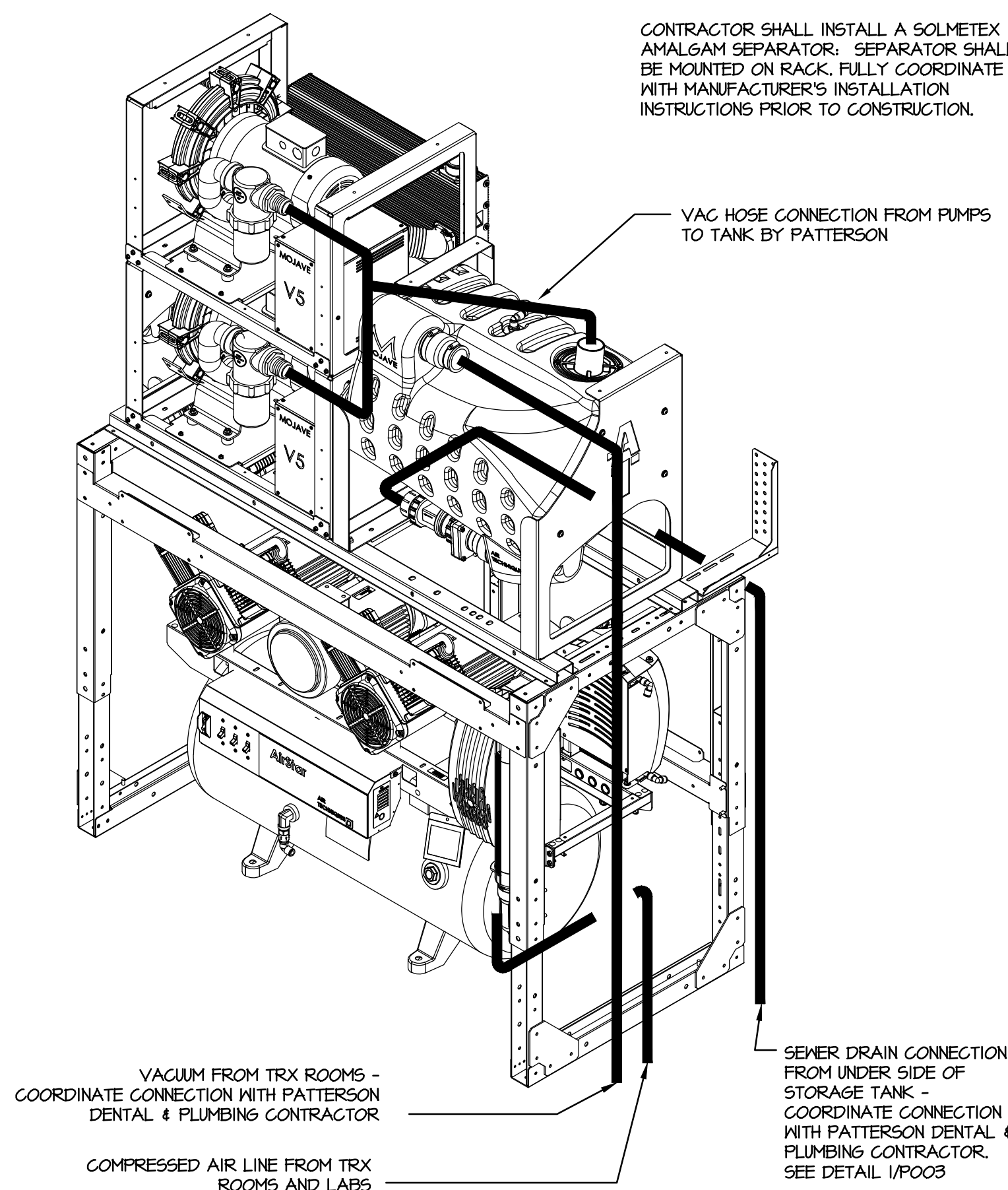
MARK	DESCRIPTION	REMARKS	FIXTURE CONNECTIONS			
			CW	HW	WASTE	VENT
P3-A	ACCESSORY KIT FOR WALL HUNG LAVATORY (P3)	ZURN, HANDICAP DRAIN OFFSET WITH GRID DRAIN #ZBT46-PC AND ZURN P-TRAP # ZBT01-PC, COLOR: CHROME PLATED. MCGUIRE, CHROME PLATED BRASS ANGLE SUPPLY STOPS WITH 12" LONG X 3/8" FLEX SUPPLIES # H165, G.C. OR PLUMBING CONTRACTOR TO PROVIDE INSULATION FOR P-TRAP AND SUPPLY LINES (A-28).	---	---	---	---
P8-Z	WALL CARRIER FOR WATER COOLER	ZURN #I225-BL. INSTALL PER DETAILS ON A008.	---	---	---	---
BFPI	BACKFLOW PREVENTER (REDUCED PRESSURE ZONE)	WATTS, LEAD FREE, REDUCED PRESSURE ZONE BACKFLOW PREVENTER WITH TWO INDEPENDENT CHECK MODULES, INTERMEDIATE RELIEF VALVE, AND TEST COCKS #LF009-QT. ASSEMBLY SHALL INCLUDE TWO ISOLATION VALVES AND STRAINERS. ASSEMBLY SHALL CONFORM TO ASSE STANDARD 1013.	---	---	---	---
IMB	ICE MAKER / REFRIGERATOR BOX	OATEY, LOW LEAD, ICE MAKER CONNECTION BOX #341 SERIES, SIZE: 6"x6". PROVIDE 1/4 TURN BRASS VALVE WITH INTEGRAL FACTORY INSTALLED WATER HAMMER ARRESTOR. PROVIDE BACKFLOW PREVENTER IN SUPPLY LINE (WATTS SERIES T' ASSE 1022).	1/2"	---	---	---
WMB	WASHING MACHINE BOX	OATEY, WASHING MACHINE CONNECTION BOX #38T4X SERIES. 1/4 TURN BRASS VALVES WITH INTEGRAL FACTORY INSTALLED WATER HAMMER ARRESTORS. FILTROL 160 POINT-OF-USE LINT INTERCEPTOR.	1/2"	1/2"	3"	2"
TP-L	TRAP PRIMER - LAVATORY TYPE	J.R. SMITH, LAVATORY TRAP PRIMER SYSTEM WITH P-TRAP AND 1/2" PRIME TUBE #PRIME-EZE. INSTALL PER MANUFACTURER'S RECOMMENDATIONS.	---	---	---	---
TP-A	TRAP PRIMER - AUTOMATIC	PRECISION PLUMBING PRODUCTS, AUTOMATIC TRAP PRIMER #P2-500. FOR TWO LINES PROVIDE UNITE #DU-4/DU-U. FOR THREE OR FOUR LINES PROVIDE MODEL #PI-500 AND UNITE #DU-4/DU-U. ASSEMBLY SHALL CONFORM TO ASSE STANDARD 1018.	1/2"	---	---	---
PT	PLASTER TRAP	PLUMBING CONTRACTOR TO INSTALL PLASTER TRAP (E-04) AS PROVIDED BY EQUIPMENT SUPPLIER.	---	---	---	---
ET-I	POTABLE WATER EXPANSION TANK	WATTS, LEAD FREE, 4.5 GALLON PORTABLE WATER EXPANSION TANK #PLT-12. 1.8 GALLONS MAXIMUM ACCEPTANCE VOLUME.	3/4"	---	---	---
FD	FLOOR DRAIN - GENERAL PURPOSE	ZURN, GENERAL PURPOSE FLOOR DRAIN WITH ADJUSTABLE COLLAR AND LIGHT DUTY NICKEL BRONZE STAINER #ZN-415B. WHERE SHOWN ON PLAN, PROVIDE TRAP PRIMER AND TRAP GUARD AT FLOOR DRAIN.	---	---	2"	2"
FCO	CLEANOUT - FLOOR	ZURN, LEVEL-TROL, ADJUSTABLE FLOOR CLEANOUT WITH NICKEL BRONZE TOP #ZN-1400, SIZE: MATCH LINE SIZE. PROVIDE ANY NECESSARY MODIFICATIONS OR ACCESSORIES SUCH AS CARPET MARKER, TILE OR SQUARE TOP AS REQUIRED TO BE FLUSH WITH, AND MATCH, ADJACENT FLOOR FINISH.	---	---	4"	---
WCO	CLEANOUT - WALL	ZURN Z1441, ABS TAPERED THREAD PLUG, AND ROUND, SMOOTH STAINLESS STEEL ACCESS COVER W/ SECURING SCREW. COORDINATE MOUNTING HEIGHT W/ ARCHITECT PRIOR TO CONSTRUCTION.	1/2"	---	2" & 3" SEE PLAN	---
TMV	THERMOSTATIC MIXING VALVE (NON-EMERGENCY FIXTURES)	LAWLER, LEAD FREE, UNDER THE COUNTER THERMOSTATIC MIXING VALVE ASSE 1070 COMPLIANT. LOCATE AS HIGH AS POSSIBLE UNDER FIXTURE INDICATED.	3/8"	3/8"	---	---
TMV-E	THERMOSTATIC MIXING VALVE (EMERGENCY FIXTURES)	LAWLER, LEAD FREE, UNDER THE COUNTER THERMOSTATIC MIXING VALVE ASSE 1071 COMPLIANT. LOCATE AS HIGH AS POSSIBLE UNDER FIXTURE INDICATED.	3/8"	3/8"	---	---
PRV	PRESSURE REDUCING VALVE (IF REQ'D)	WATTS # LF25AUB-Z3. INSTALL WITH ALL PIPING CONFIGURATIONS AND APPURTENANCES AS SHOWN ON DESIGN DOCUMENTS.	---	---	---	---
GPI	HOT WATER CIRCULATION PUMP	GRUNDFOS "UP" SERIES, 3 GPM, 4 FT/HD WITH THREADED CONNECTIONS. PROVIDE AQUASTAT AND TIME CLOCK	---	---	---	---
WHI	WATER HEATER	A.O. SMITH DEL-40, 40 GALLON STORAGE, 6.0KW (COORDINATE VOLTAGE W/ ELECTRICAL DESIGN DOCUMENTS) OUTLET TEMP = 120 DEGREES F.	---	---	---	---

FRONT VIEW

LEFT VIEW



ISOMETRIC VIEW



1 VACUUM / COMPRESSOR CONNECTIONS  
P002 SCALE: NONE



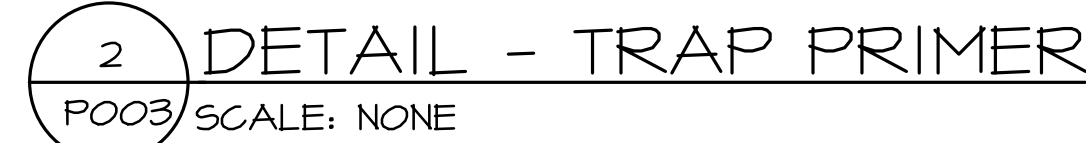
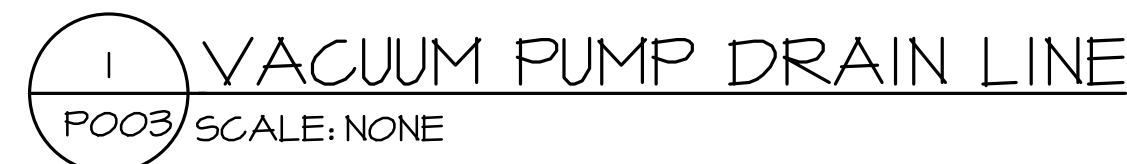


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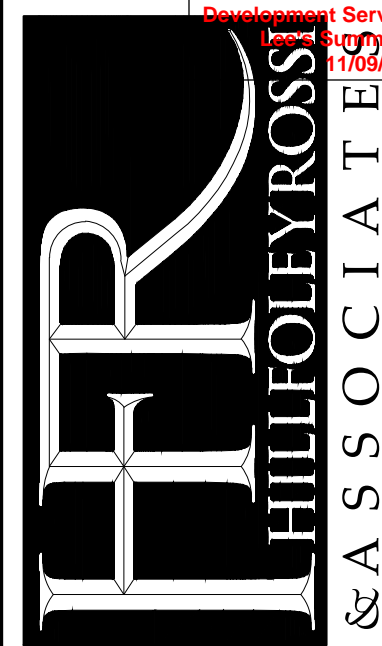
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# P003

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HFR 22.911





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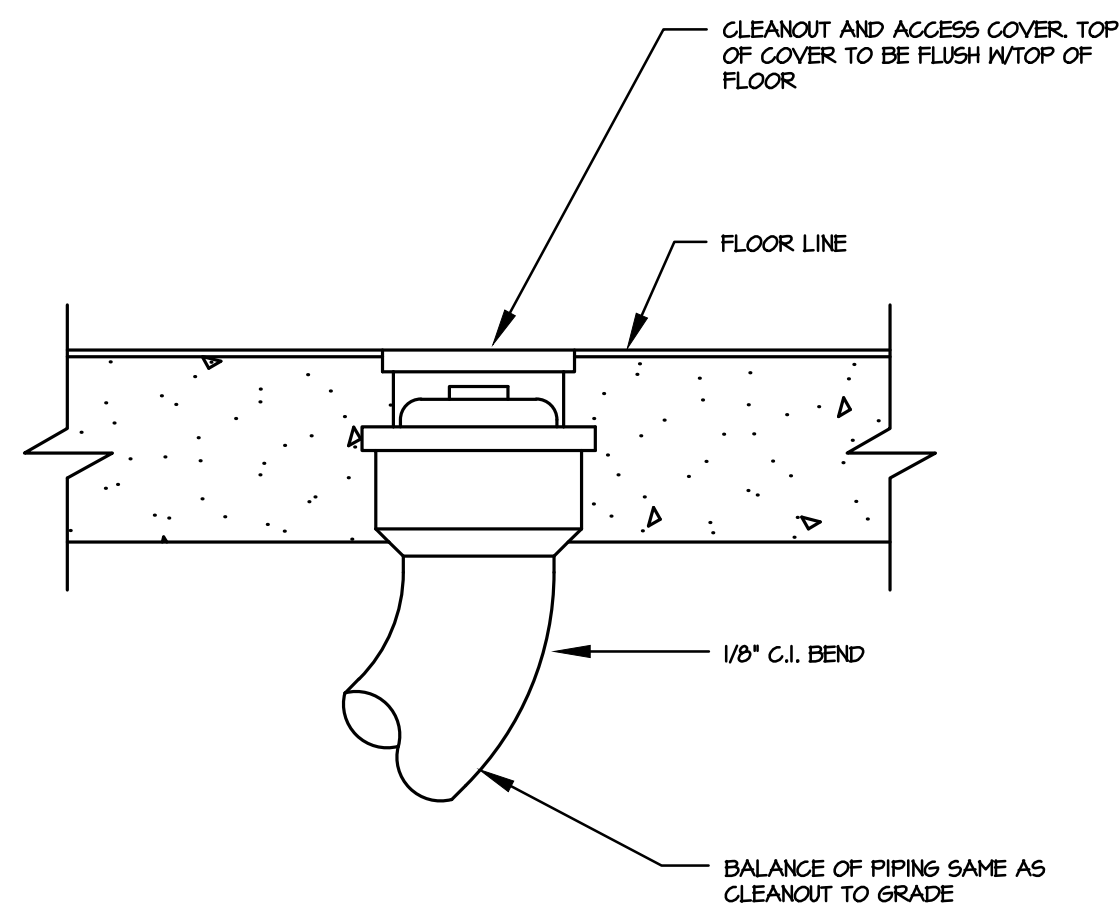
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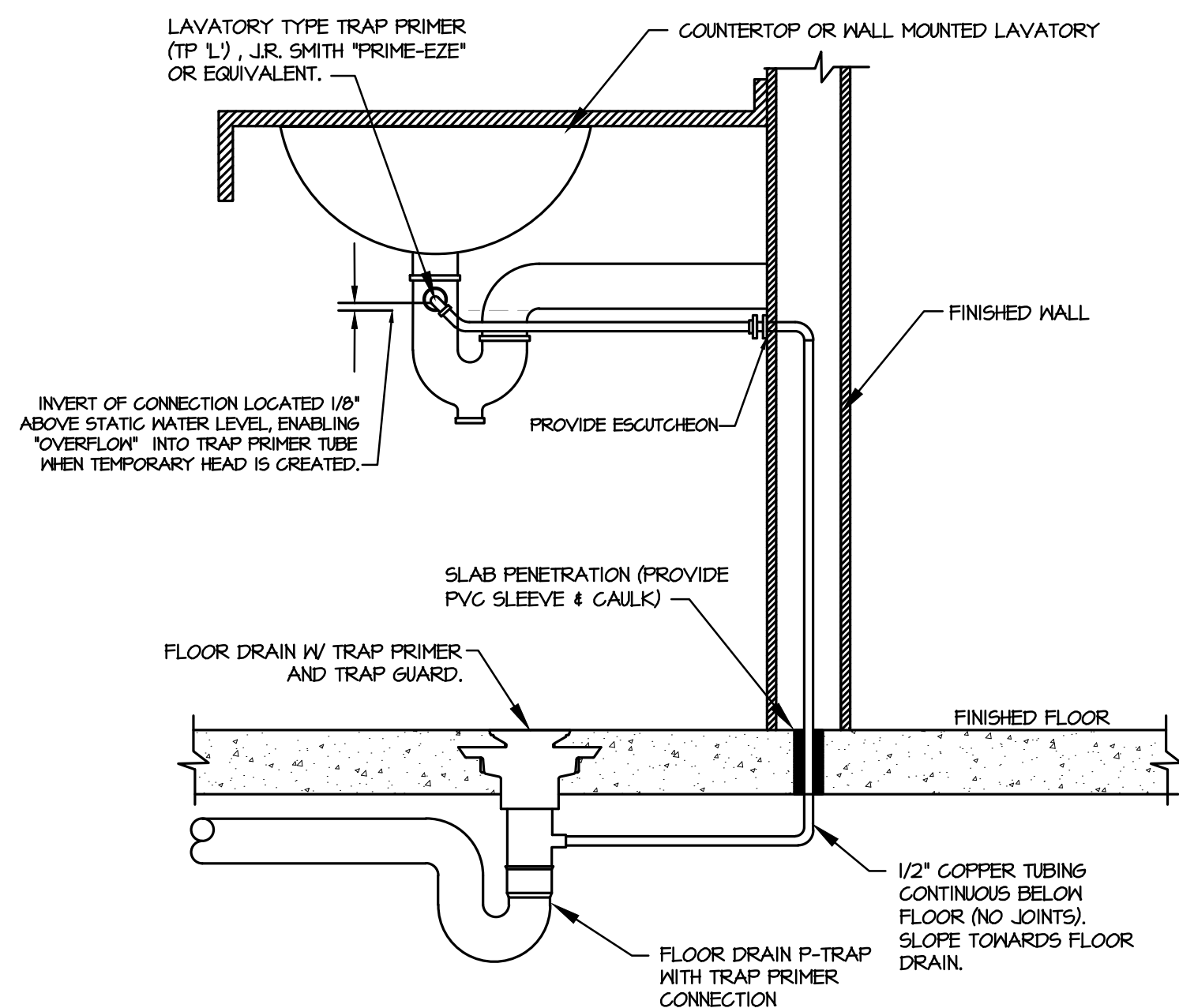
Plumbing  
Details

P004

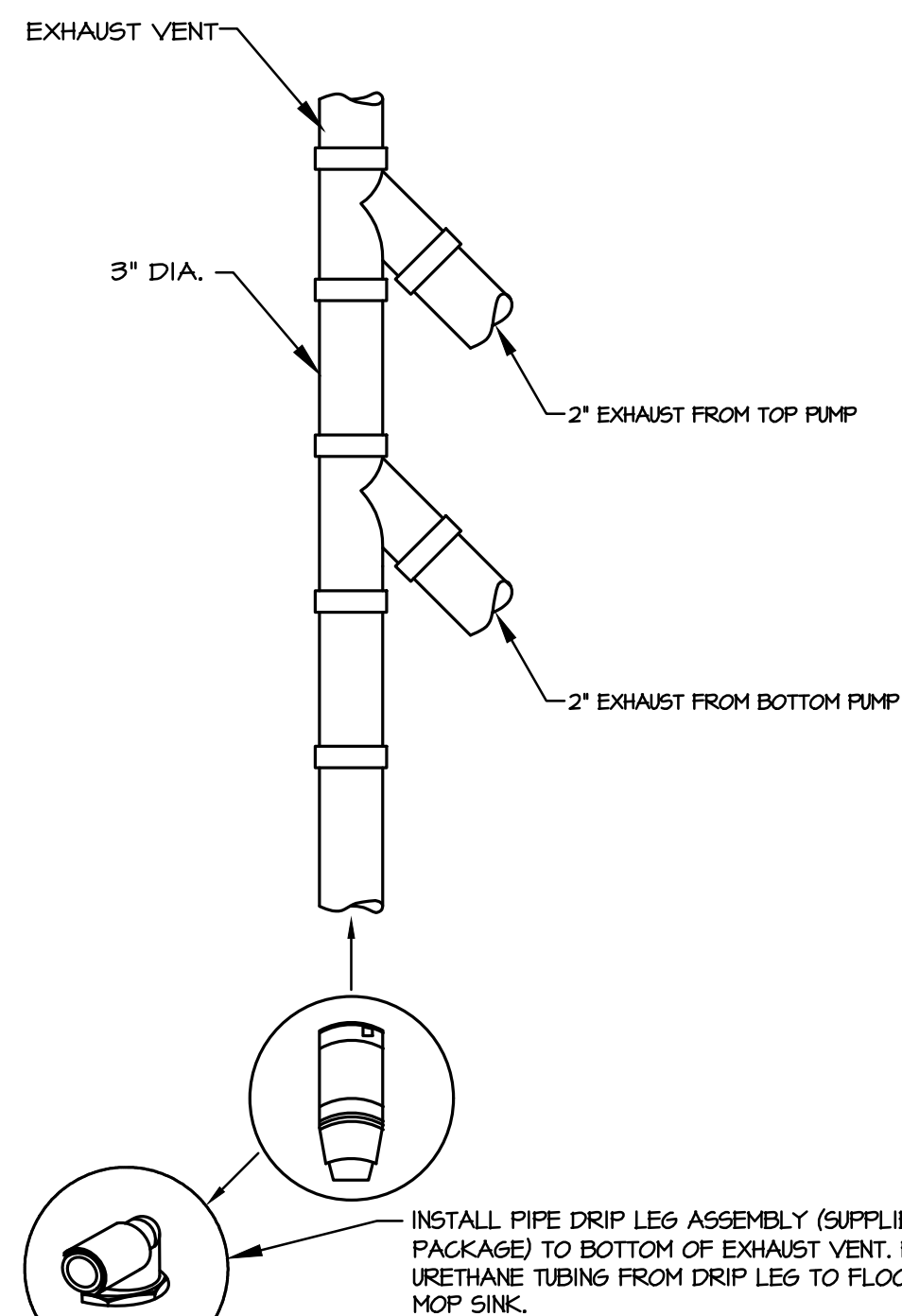
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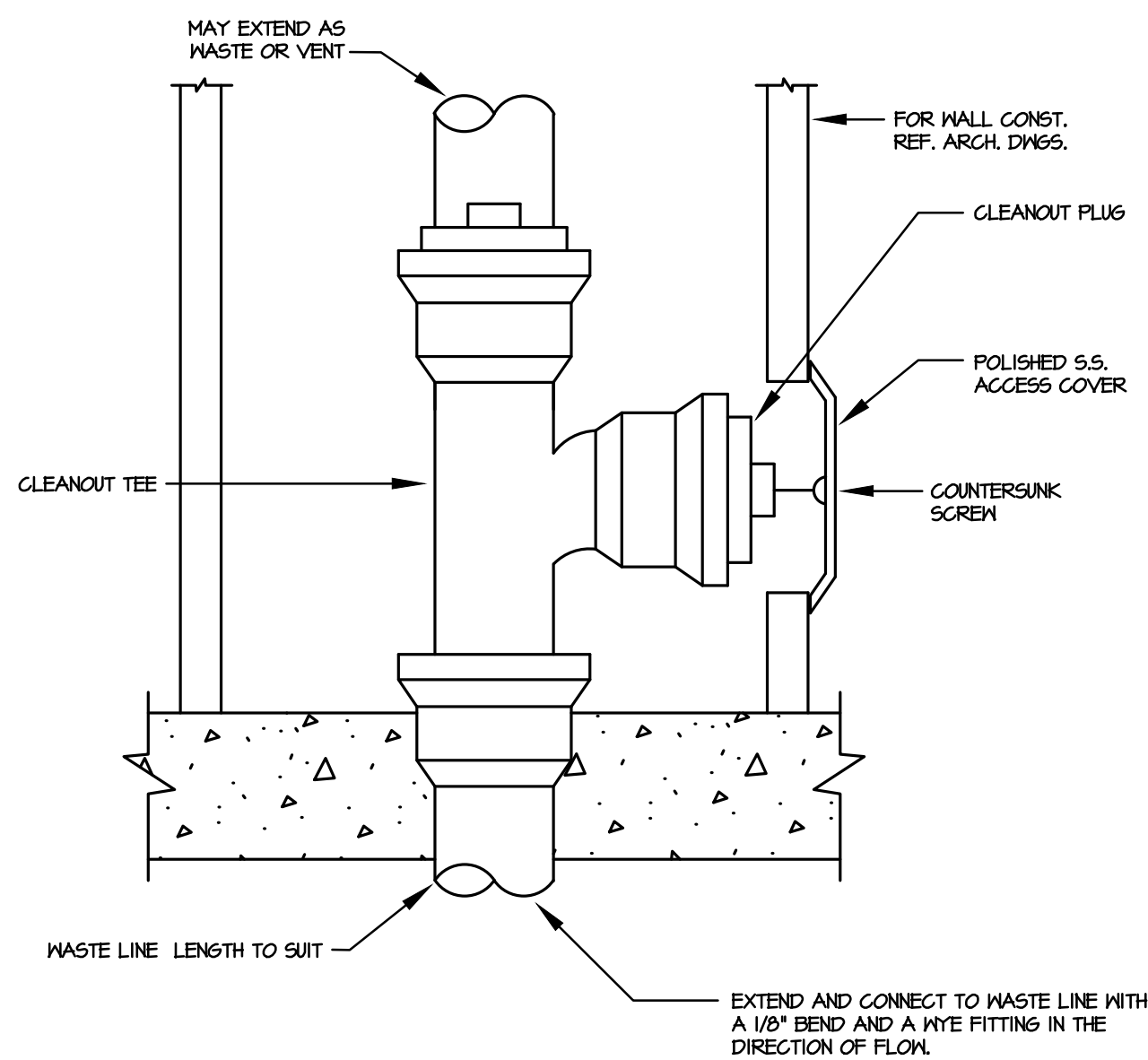
5 FLOOR CLEANOUT DETAIL  
P004 SCALE: NONE



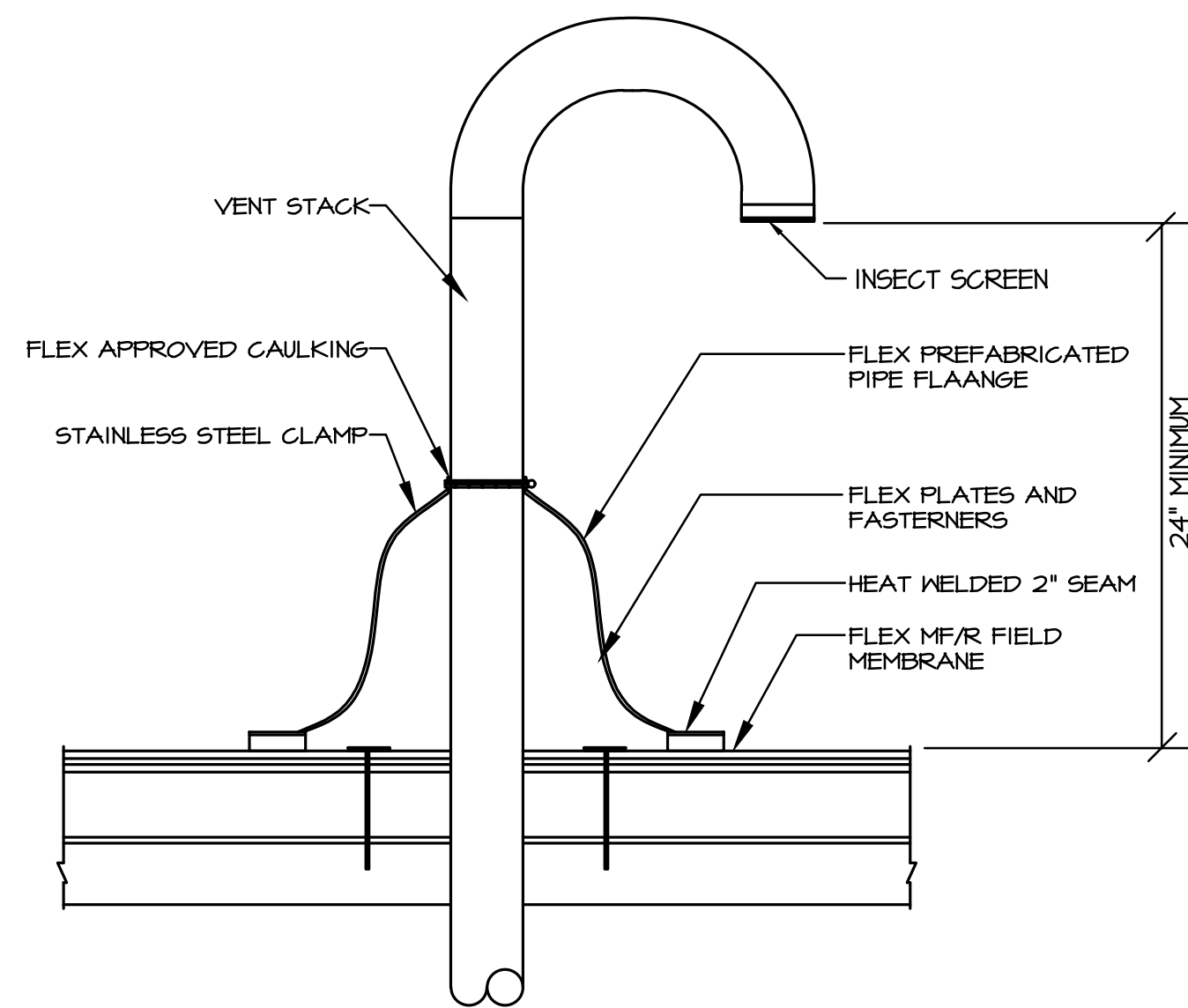
3 LAVATORY TRAP PRIMER  
P004 SCALE: NONE



1 VACUUM PUMP VENT PIPING  
P004 SCALE: NONE



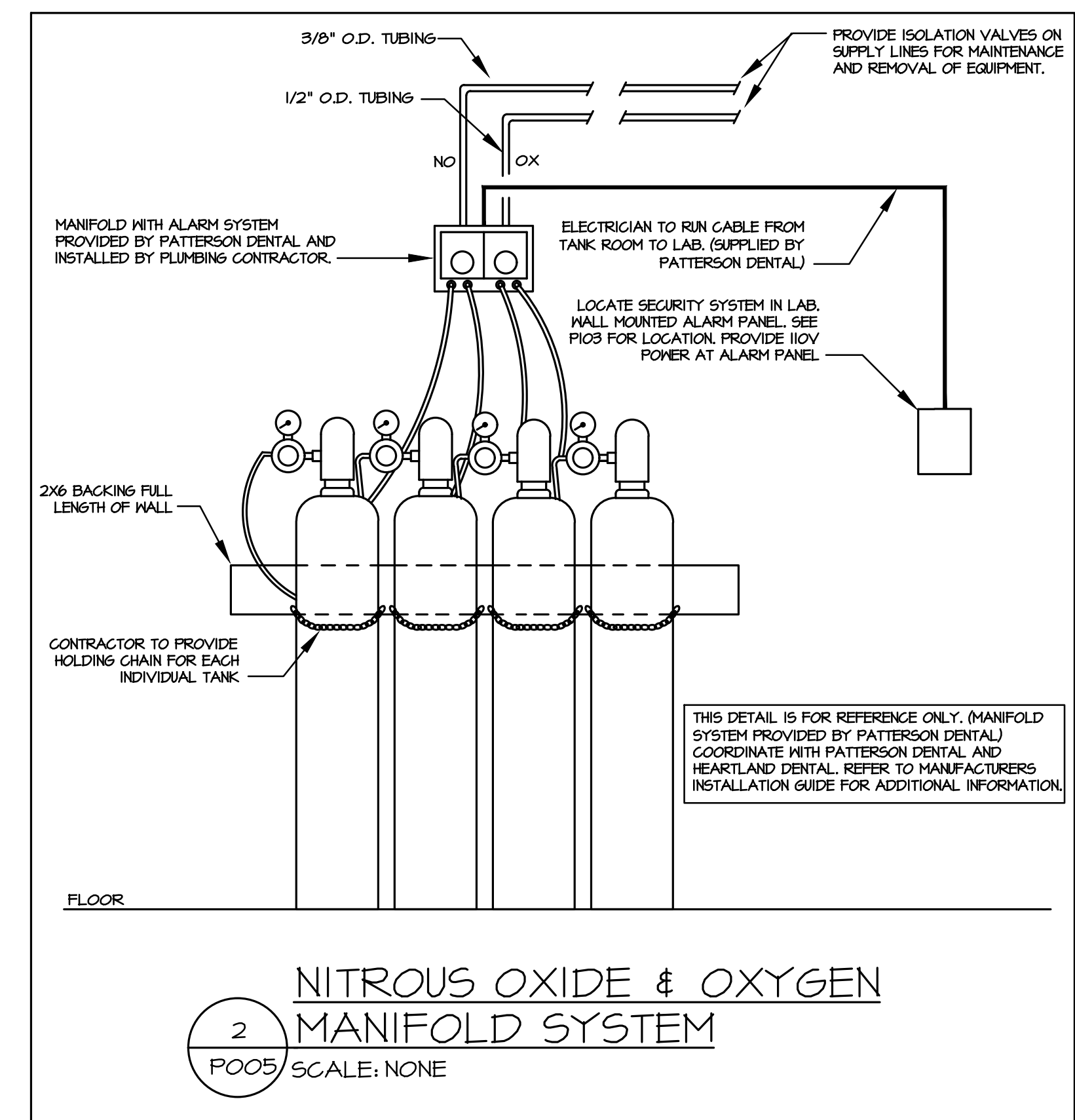
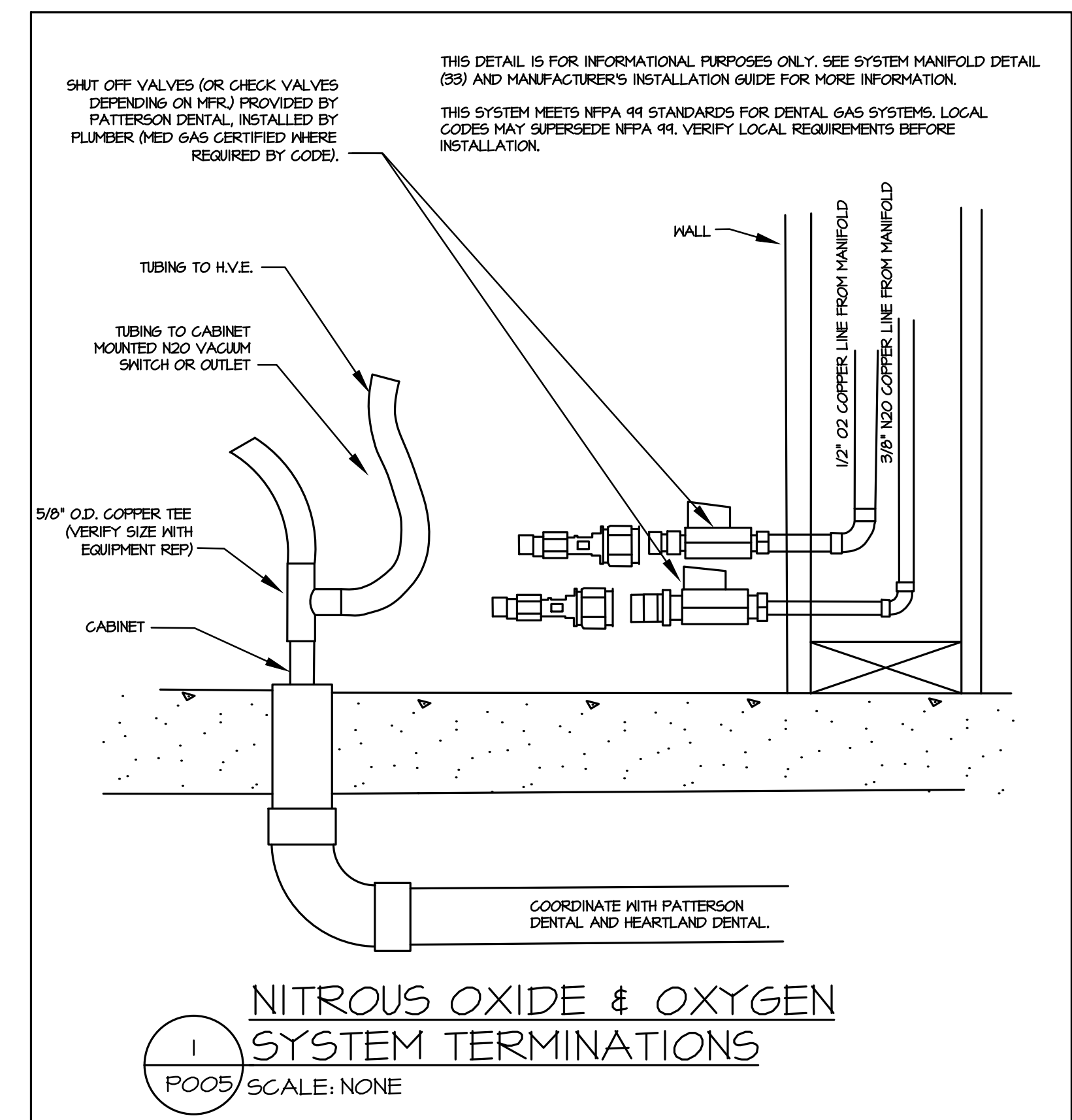
4 WALL CLEANOUT DETAIL  
P004 SCALE: NONE



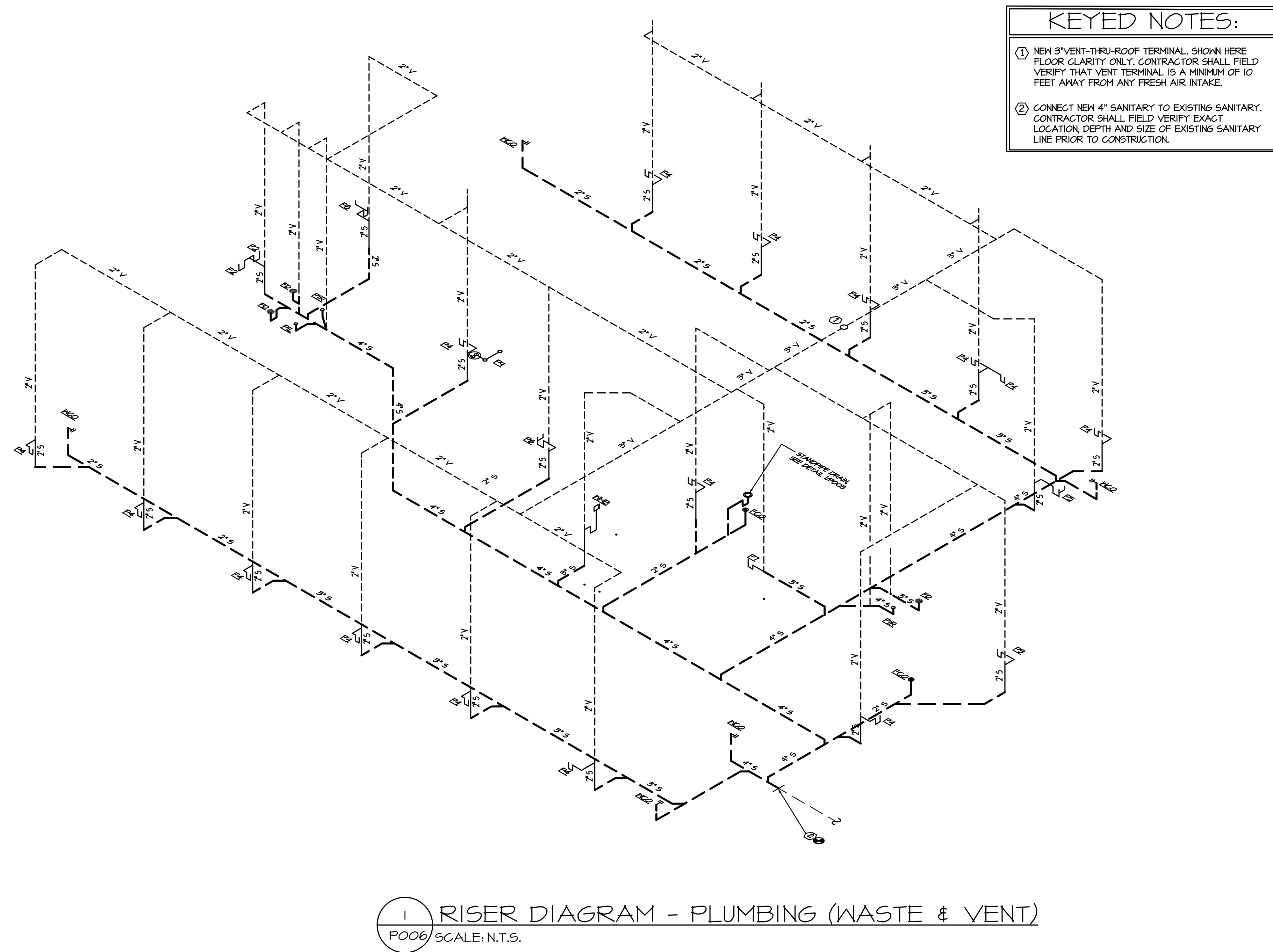
GENERAL NOTE:  
ANY AND ALL ROOF PENETRATIONS SHALL BE MADE BY LANDLORD'S SHELL ROOFING CONTRACTOR. NO PENETRATIONS SHALL BE MADE BY TENANT'S CONTRACTOR OR SUBCONTRACTORS.

2 COMPRESSOR INTAKE AND  
P004 VACUUM EXHAUST VENT  
SCALE: NONE









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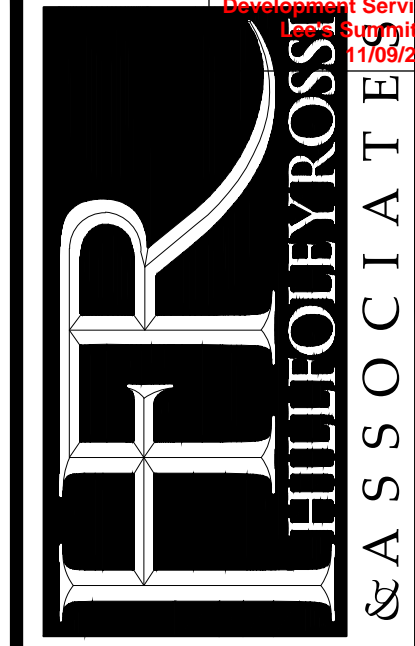
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## Plumbing Riser Diagram

P006

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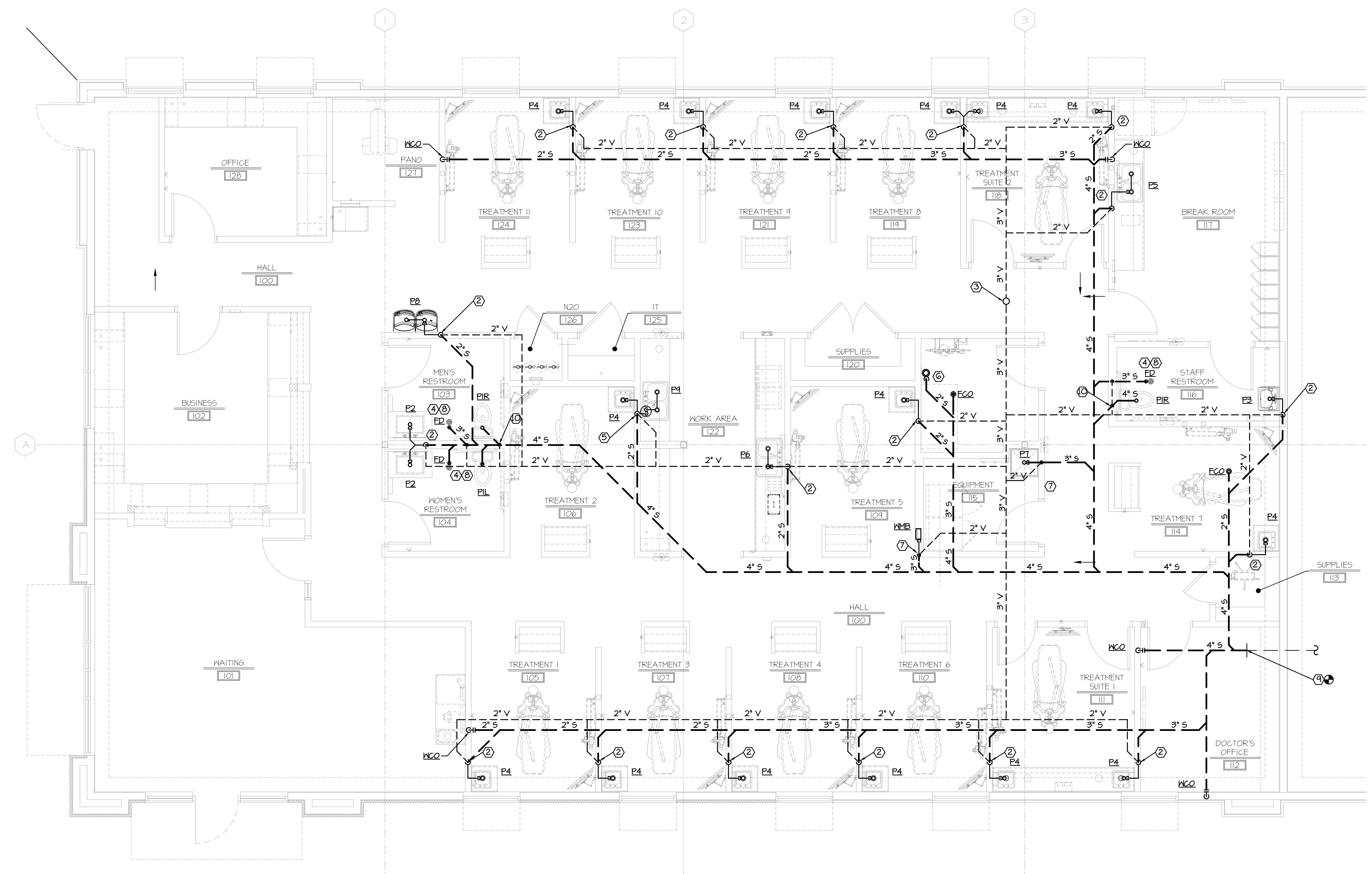
Plumbing  
Floor Plan -  
Waste &  
Vent

P101

HFR 22.911

- GENERAL NOTES:
1. CONTRACTOR SHALL FIELD VERIFY THAT THE INVERT OF EXISTING SANITARY LINE WILL NOT ALTER THE DESIGN INTENT AND NOTIFY THE ARCHITECT IF FOUND OTHERWISE PRIOR TO CONSTRUCTION.
  2. CONTRACTOR SHALL COORDINATE ALL PIPE RUNS WITH STRUCTURAL FOOTINGS PRIOR TO CONSTRUCTION.

- KEYED NOTES:
- ① 2" WASTE & VENT STACK, PROVIDE TRAP PRIMER TE-1 WITH 1/2" TP LINE DN & B/F TO FLOOR DRAIN(S). SEE DETAIL 3/P004.
  - ② 2" WASTE & VENT STACK
  - ③ NEW 3" VENT-THRU-ROOF TERMINAL SHOWN HERE FLOOR CLARITY ONLY. CONTRACTOR SHALL FIELD VERIFY THAT VENT TERMINAL IS A MINIMUM OF 10 FEET AWAY FROM ANY FRESH AIR INTAKE.
  - ④ 2" FLOOR DRAIN (FD) W/ TRAP PRIMER & TRAP GUARD (TYPICAL FOR ALL FLOOR DRAINS)
  - ⑤ 1-1/2" SAN DN INTO PLASTER TRAP MOUNTED BELOW SINK (PROVIDED BY PATTERSON DENTAL, INSTALLED BY PLUMBING CONTRACTOR). 1 1/2" SAN FROM TRAP A/F TO 2" WASTE & VENT STACK. SEE DETAIL 5/P003.
  - ⑥ DISCHARGE 1-1/2" VALVED DRAIN FROM VACUUM PUMP INTO STANDPIPE DRAIN (SEE DETAIL 1/P003).
  - ⑦ 3" WASTE & 2" VENT
  - ⑧ THERE WILL BE NO HAZARDOUS CHEMICALS DISPOSED OF IN THIS FLOOR DRAIN.
  - ⑨ CONNECT NEW 4" SANITARY TO EXISTING SANITARY. CONTRACTOR SHALL FIELD VERIFY EXACT LOCATION, DEPTH AND SIZE OF EXISTING SANITARY LINE PRIOR TO CONSTRUCTION.
  - ⑩ 4" SAN & 2" VENT



1 FLOOR PLAN - PLUMBING (WASTE & VENT)  
P101 SCALE: 3/16" = 1'- 0"



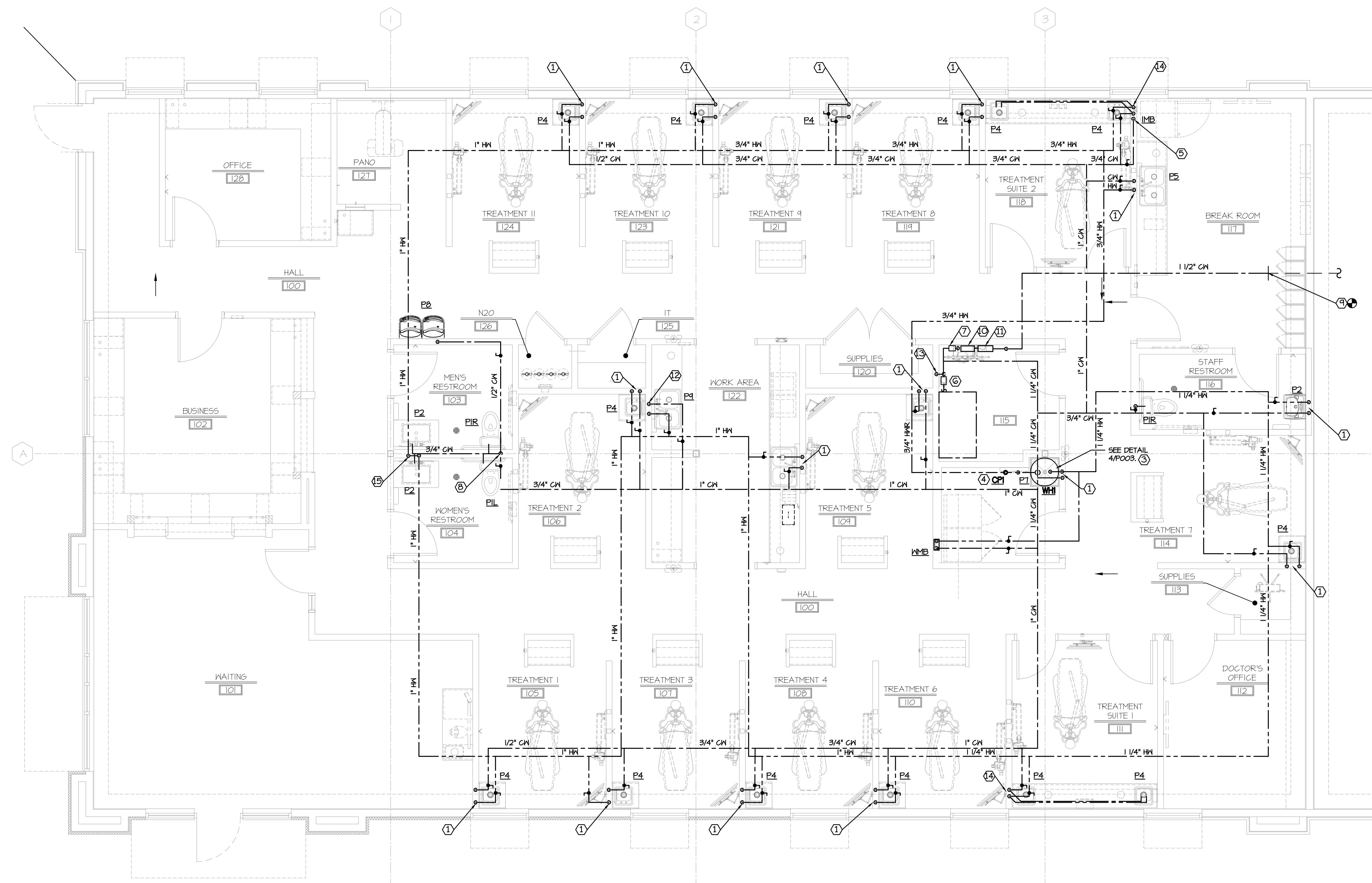


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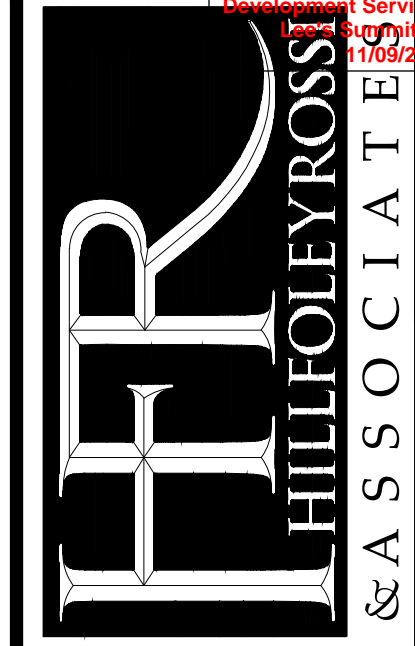
1. THESE DRAWINGS ARE DIAGRAMMATIC AND DO NOT REFLECT ALL POSSIBLE PHYSICAL CONDITIONS.
2. ANY EXISTING EXTERIOR HOSE BIBBS SHALL REMAIN AND CONTRACTOR SHALL RECONNECT TO THE NEW WATER SYSTEM UPSTREAM OF THE NEW WATER FILTER.

- ① 1/2" CM & 1/2" HM DN TO FIXTURE(S).
- ② 1/2" CM TO FIXTURE.
- ③ 1-1/4" H & CM DN TO SHELF MOUNTED WATER HEATER NH (SEE DETAIL 4/POOB).
- ④ 3/4" HWR TO CIRCULATION PUMP CEL (SEE DETAIL 3/POOB).
- ⑤ 1/2" CM TO INB.
- ⑥ 1/2" VALVED CM SUPPLY FOR VACUUM PUMP, COORDINATE FINAL CONNECTION WITH VACUUM PUMP EQUIPMENT. PROVIDE BACKFLOW PREVENTER REF AT FIXTURE CONNECTION.
- ⑦ 1-1/2" CM TO WATER SOLENOID VALVE. VALVE TO BE OPENED/CLOSED BY SWITCH AT 3-SWITCH CONTROL PANEL TO SHUTOFF ALL WATER TO SUITE. COORDINATE EXACT LOCATION WITH ELECTRICAL DEVICES.
- ⑧ 3/4" CM DN, EXTEND & CONNECT 1/2" CM TO LAVATORY AND 1/2" CM TO WATER CLOSET.
- ⑨ CONNECT NEW 1-1/2" CM TO EXISTING 1-1/2" CM A/C
- ⑩ WATER FILTER (SUPPLIED BY PATTERSON DENTAL, INSTALLED BY PLUMBING CONTRACTOR). COORDINATE EXACT LOCATION WITH ELECTRICAL DEVICES.
- ⑪ PRESSURE REDUCING VALVE ASSEMBLY MOUNT HIGH ON MALL. (IF REQUIRED) SEE DETAIL 6/POOB.
- ⑫ 1/2" H & CM DN TO PI (SEE SPECIFICATION).
- ⑬ 1/2" CM TO TRAP PRIMER TPA 1/2" TP LINE DN & B/F TO DRAINS (SEE P101).
- ⑭ 3/4" HM & CM DN, EXTEND & CONNECT 1/2" CM & 1/2" HM TO EACH FIXTURE.
- ⑮ HM MAIN ROUTED DOWN DN TO WITHIN 2' OF LAVATORY CLOSURE. 2" BRANCH TO EACH LAVATORY TO BE A MAXIMUM OF 2' IN LENGTH.



1 FLOOR PLAN - PLUMBING (WATER)  
PI02 SCALE: 1/4" = 1'-0"





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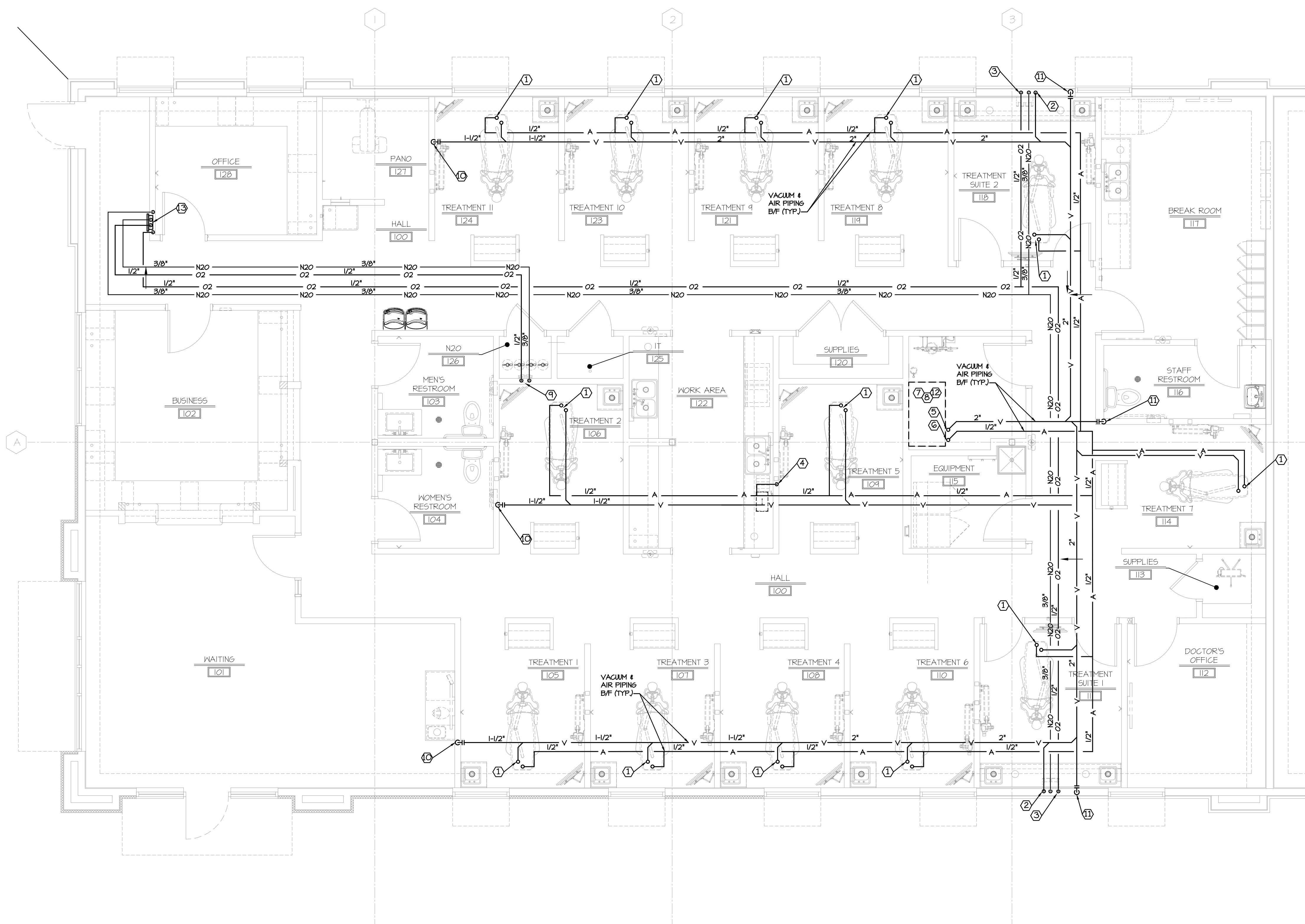
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Plumbing  
Floor Plan -  
Medical  
Gas

P103

HFR 22.911

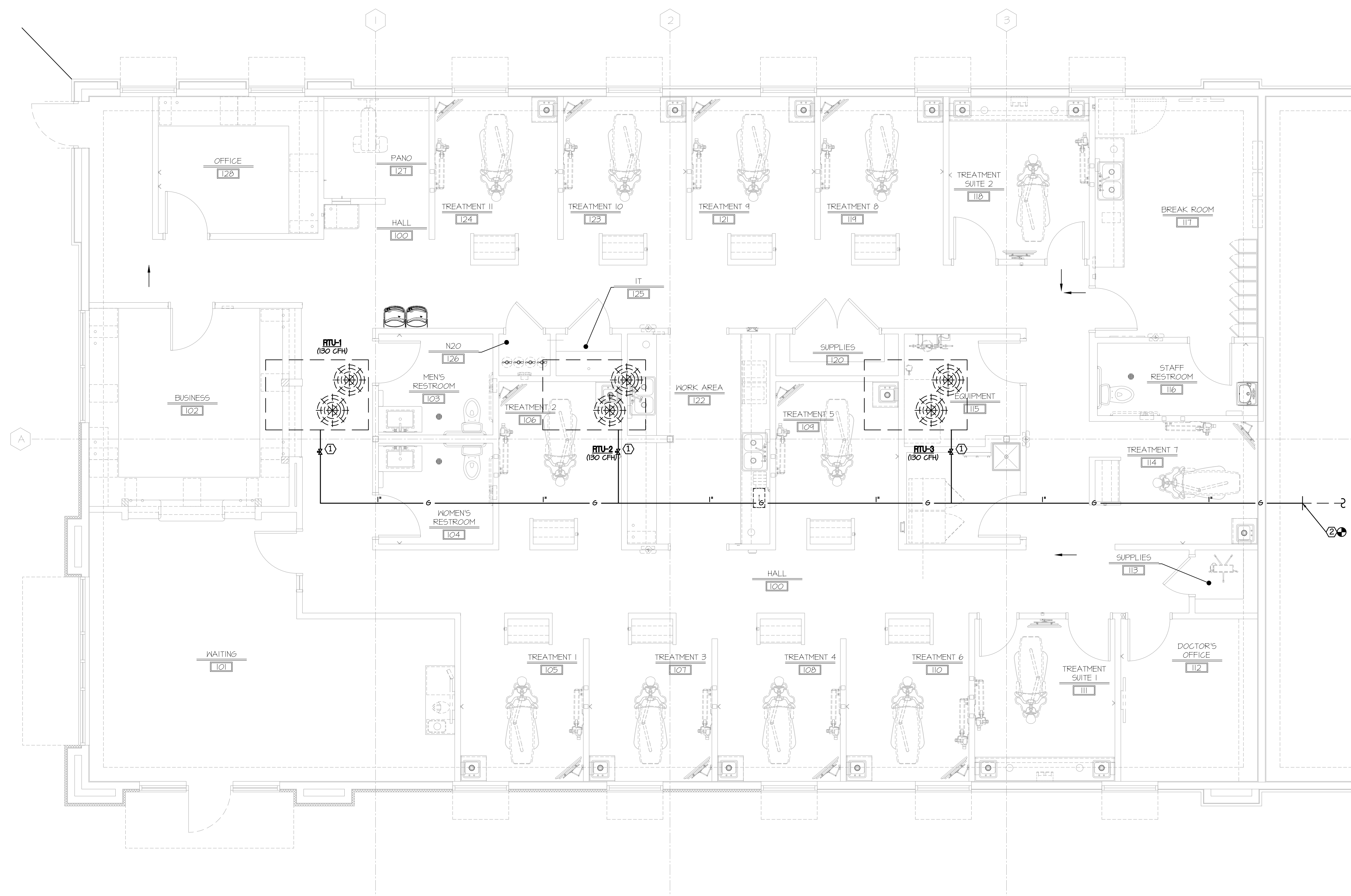


1 FLOOR PLAN - PLUMBING (MEDICAL GAS)  
P103 SCALE: 1/4" = 1'- 0"

- GENERAL NOTES:
1. CONTRACTOR SHALL FULLY COORDINATE WITH ALL MEDICAL GAS EQUIPMENT PROVIDED ON THIS PROJECT. REFER TO MEDICAL EQUIPMENT PLAN SHEET AND EQUIPMENT SCHEDULE TO DETERMINE WHAT DEVICES ARE PROVIDED AND/OR INSTALLED BY OWNER AND WHAT DEVICES SHALL BE PROVIDED AND/OR INSTALLED BY PLUMBING CONTRACTOR. COORDINATE WITH OWNER.
  2. PROVIDE REQUIRED MEDICAL GAS PIPING SYSTEM INSTALLATION SPECIAL INSPECTION REPORTS TO AHJ PRIOR TO C.O.F.O PER 2018 IBC 107, 2018 IPC SECTION 421, AND 2018 IBC CHAPTER 17.
  3. CONTRACTOR SHALL REFER TO ALL PLANS AND ELEVATIONS ON ARCHITECTURAL DRAWINGS, AS WELL AS MEDICAL EQUIPMENT DRAWINGS FOR EXACT LOCATIONS OF MEDICAL GAS, NON-MEDICAL COMPRESSED AIR AND VACUUM CONNECTION LOCATIONS.
  4. ALL NOTATIONS OF 'AIR' SHALL BE NON-MEDICAL, NON-RESPIRATORY COMPRESSED AIR.
  5. ALL GAS SYSTEMS INDICATED ON THIS DRAWING ARE CLASSIFIED AS NFPA 99 "CATEGORY 2".

- KEYED NOTES:
- ① 1/2" AIR & 1/2" VACUUM B/F & UP FOR CONNECTION TO DENTAL CHAIR EQUIPMENT UTILITY BOX. FIELD COORDINATE EXACT LOCATION AND PROVIDE ALL NECESSARY FITTINGS FOR CONNECTION PER MANUFACTURER'S REQUIREMENTS.
  - ② 1/2" VACUUM B/F & UP. TEE TO 1/2" N2O SCAVENGING VACUUM (NSV) IN WALL ABOVE FLOOR. 1/2" VACUUM & 1/2" N2O SCAVENGING VACUUM STUB OUT OF FINAL CONNECTION. PROVIDE OR ACQUIRE FROM PATTERSON DENTAL. ALL NECESSARY FITTINGS FOR CONNECTION PER MANUFACTURER'S REQUIREMENTS.
  - ③ 1/2" O2 & 3/8" N2O A/C & DOWN IN WALL. STUB OUT OF WALL & TURN 90 DEGREES INTO THE TOE KICK SPACE. FIELD COORDINATE FINAL CONNECTION. PROVIDE OR ACQUIRE FROM PATTERSON DENTAL. ALL NECESSARY FITTINGS FOR CONNECTION PER MANUFACTURER'S REQUIREMENTS.
  - ④ 1/2" AIR UP FROM B/F & RUN A/F IN WALL. STUB ABOVE COUNTER WITH STOP. NEXT TO ULTRASONIC CLEANER(S). FIELD COORDINATE EXACT LOCATION AND PROVIDE ALL NECESSARY FITTINGS FOR CONNECTION PER MANUFACTURER'S REQUIREMENTS.
  - ⑤ 2" VACUUM B/F & UP. CONNECT TO VACUUM PUMP EQUIPMENT (FIELD COORDINATE EXACT LOCATION AND COORDINATE WITH BELOW SLAB SANITARY PIPING IN SAME AREA).
  - ⑥ 1/2" AIR B/F & UP. CONNECT TO AIR COMPRESSOR EQUIPMENT (FIELD COORDINATE EXACT LOCATION AND COORDINATE WITH BELOW SLAB SANITARY PIPING IN SAME AREA).
  - ⑦ ROUTE 3" PVC UP TO VTR FROM VACUUM HEADS. SEE DETAILS 1 & 2/P004.
  - ⑧ ROUTE 2" PVC UP TO INTAKE ON ROOF FOR COMPRESSED AIR. SEE DETAIL 2/P004.
  - ⑨ 1/2" O2 & 3/8" N2O A/C & DOWN TO SYSTEM MANIFOLD (SUPPLIED BY PATTERSON DENTAL, INSTALLED BY PLUMBING CONTRACTOR).
  - ⑩ 1-1/2" UP TO VACUUM SYSTEM CLEANOUT. INSTALL CHROME PLATED COVER PLATE THREADED TO END OF PIPE. COORDINATE EXACT LOCATION TO ALLOW CABINET ACCESS AND NOT CONFLICT WITH WALL MOUNTED DEVICES.
  - ⑪ 2" UP TO VACUUM SYSTEM CLEANOUT. INSTALL CHROME PLATED COVER PLATE THREADED TO END OF PIPE. COORDINATE EXACT LOCATION TO NOT CONFLICT WITH CABINETS OR WALL MOUNTED DEVICES.
  - ⑫ REFER TO VACUUM/AIR COMPRESSOR INSTALLATION DETAIL ON P003.
  - ⑬ MED GAS ZONE VALVE; REFER TO F103.
  - ⑭ N2O-O2 SYSTEM ALARM; REFER TO F103.





## GAS LOAD SUMMARY

SCHEDULE 40 BLACK STEEL PIPE  
INLET PRESSURE LESS THAN 2 PSIG  
PRESSURE DROP IS 0.50 INCHES WATER COLUMN  
SPECIFIC GRAVITY IS 0.60

SPACE HEATING EQUIPMENT:  
 ROOF TOP UNIT (RTU-1) = X BTUH  
 ROOF TOP UNIT (RTU-2) = X BTUH  
 ROOF TOP UNIT (RTU-3) = X BTUH

TOTAL = X BTUH

TOTAL DEVELOPED LENGTH OF PIPE = X FEET

GENERAL NOTES:

1. NEW GAS METER AND ALL PIPING UP STREAM OF METER SHALL BE FURNISHED AND INSTALLED BY LOCAL GAS COMPANY.
2. CONTRACTOR SHALL FULLY COORDINATE THE EXACT LOCATION OF GAS METER AND DELIVERY PRESSURE WITH LOCAL GAS COMPANY AND ARCHITECT/OWNER PRIOR TO CONSTRUCTION.
3. ALL GAS DISTRIBUTION PIPING SHOWN IS LOCATED ON ROOF UNLESS NOTED OTHERWISE.
4. REFER TO MECHANICAL DRAWINGS FOR EXACT LOCATION OF ROOF TOP MECHANICAL EQUIPMENT.

KEYED NOTES:

- ① GAS TO MECHANICAL UNIT. SEE DETAIL 4/PO05.
- ② CONNECT NEW GAS LINE TO EXISTING GAS LINE.

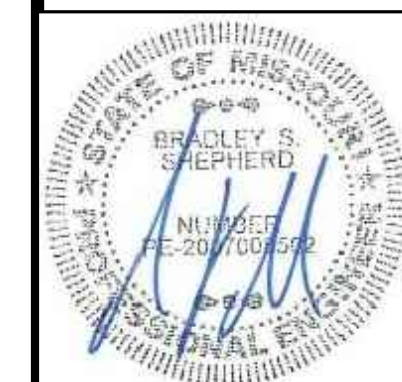
1 FLOOR PLAN - PLUMBING (NATURAL GAS)  
PI04 SCALE: 1/4" = 1' - 0"

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		Floor Plan -
		Natural Gas

P104

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