

WORKSPACES - DC

641 S St. NW Washington, DC

ISSUE FOR BID

PROJECT TEAM

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GENERAL CONTRACTOR
TBD
ADDRESS
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ABBREVIATIONS

ABV above	KD knock down
ACOUS acoustical	LAV lavatory
ACT acoustical ceiling tile	LB(S) pounds
AD area drain	LDG landing
ADJ adjustable	LT light
AFT above finished floor	
ALUM aluminum	MAX maximum
ALT alternate	MECH mechanical
APPROX approximate	MEMB membrane
ARCH architect	MFR manufacturer
	MIN minimum
BALC balcony	MISC miscellaneous
BD board	MTD mounted
BET between	MTL metal
BUDC building	
BLKG blocking	N north
BLW below	NIC not in contract
BM beam	NO number
BO bottom of	NOM nominal
BOT bottom	NTS not to scale
BRT bracket	
BULKHD bulkhead	OA overall
	OC on center
CAB cabinet	OD outside diameter
CAK caking	OFF office
CEN cement	OH opposite hand
CER ceramic	OPG opening
CJ construction joint	OPP opposite
CL center line	
CLG ceiling	PG paint grade
CLOS closet	PL properly line
CLS clasp	PLAM plastic laminate
CO cased opening	PLAS plaster
COL column	PLYND plywood
CONC concrete	PNT paint
CONT continuous	PR pair
CPT carpet	PSL panel support leg
CT cosmic tile	PTD painted
CTR center	PTN partition
DBL double	R riser
DET detail	RAD radius
DA diameter	RD roof drain
DIM dimension	REF refrigerator, refer
DISP disposer	REIN reinforced
DN down	RECD required
DR door	RESIL resilient
DS down spout	REV revision
DW dishwasher	RM room
DWG drawing	RO rough opening
E east	S south
EA each	SAFB sound attenuation fiber blanket
ELEC electrical	SCHED schedule
ELEV elevation	SC WD solid core wood door
EMER emergency	SEAL sealant
ENCL enclosure	SECT section
EQ equal	SF square foot
EQUIP equipment	SHT sheet
ETR existing to remain	SIM similar
EXIST existing	SP standpipe
EW/eletrical water cooler	SPEC specification
	SQ square
FA fire alarm	SS stainless steel
FD floor drain	STD standard
FE fire extinguisher	STL steel
FEC fire extinguisher cabinet	STOR storage
FH fire hydrant	STRUCT structural
FHC fire hose cabinet	SUSP suspended
FIN finish	SYM symmetrical
FLR floor	
FLUOR fluorescent	T tread
FT foot or feet	TEL telephone
FUR furring	TLR terrace
FO face of	T&G tongue & groove
FOF face of finish	THK thickness
GAL gallon	THR threshold
GALV galvanized	TO top of
GB grab bar	TYP typical
GFI ground fault interrupt	
GL glass	UC undercut
GND ground	UNFIN unfinished
GYP gypsum	UNLESS unless noted
GWB gypsum wall board	UNLESS noted otherwise
	UTIL utility
HIC handicapped	VCT vinyl composition tile
HDWD hardwood	VE value engineering
HDWR hardware	VERT vertical
HT height	VIF verify in field
HM hollow metal	VWV vinyl wall covering
HORIZ horizontal	
HR floor	W west
	W/ with
ID inner diameter	WC wall covering
INCAN incandescent	WD wood
INSUL insulation	W/ within
INT interior	W/O without
	WLD welded
JAN janitor	WP waterproof
JST joint	WSCC watercraft
JT joint	WS wetback
	WT weight

VICINITY MAP



BUILDING LOCATION

SYMBOLS LEGEND

	DETAIL NO.	DETAIL REFERENCE MARK
	SHEET NO.	SECTION REFERENCE MARK
	DRAWING NO.	SINGLE ELEVATION MARK
	DRAWING NO.	MULTIPLE VIEW ELEVATION MARK
	DOOR NO.	DOOR TAG
	HARDWARE SET	
	DOOR TYPE	
	ROOM NAME	ROOM TAG
		PLAN NOTE
		PARTITION TYPE
		WINDOW TYPE
		REVISION
	85'-10"	ELEVATION HEIGHT
	ALIGN	ALIGN SYMBOL
		CENTERLINE

CODE ANALYSIS

TENANT BUILDOUT CONFORMS TO ALL APPLICABLE BUILDING AND ZONING CODES IN THE DISTRICT OF COLUMBIA.

2005 NATIONAL ELECTRIC CODE
2006 INTERNATIONAL BUILDING CODE
2006 INTERNATIONAL ENERGY CONSERVATION CODE
2006 INTERNATIONAL FIRE PREVENTION CODE
2006 INTERNATIONAL FUEL GAS CODE
2006 INTERNATIONAL MECHANICAL CODE
2006 INTERNATIONAL PLUMBING CODE
2003 ANSI A117.1
DC LAW 8-36 DISTRICT OF COLUMBIA EPA OF 1989
DCMR 12 BUILDING CODE REGULATIONS (2008)
DCMR TITLE 11 - ZONING REGULATIONS
GREEN BUILDING ACT OF 2006

OCCUPANT LOAD:
19483 SF/100 SF PER PERSON
TOTAL OCCUPANTS 194

STAIR WIDTH CAPACITY:
REQUIRED (TOTAL OCCUPANTS X 0.2)
MINIMUM 39"
PROVIDED (2 STAIRS @ 44" EACH) 44"

DOOR WIDTH:
REQUIRED (TOTAL OCCUPANTS X 0.15)
MINIMUM 29"
PROVIDED (2 DOORS @ 33" EACH) 32"

MEANS OF EGRESS:
MAX. LENGTH OF EXIT ACCESS TRAVEL 300'
MAX COMMON PATH OF TRAVEL 100'
DEAD END CORRIDOR 50'

PROJECT DESCRIPTION

PROJECT SCOPE: INTERIOR BUILD-OUT OF ENTIRE FLOOR IN RENNOVATED BUILDING SHELL. EXISTING SHELL SPACE IS CURRENTLY UNDER CONSTRUCTION. NEW WORK WILL INCLUDE, BUT IS NOT LIMITED TO, NEW PARTITIONS, DOORS, MECHANICAL, ELECTRICAL, PLUMBING AND ASSOCIATED FINISH MATERIALS, AS INDICATED ON PLANS.

BUILDING DATA

USE GROUP:
BUILDING: B (BUSINESS)
TENANT: B (BUSINESS)
TYPE OF CONSTRUCTION: IIIB
FULLY SPRINKLERED: YES
PROPOSED TENANT FLOOR AREA: 19,483 GROSS SF
HIGH RISE BUILDING: NO
NUMBER OF STORIES: 4 ABOVE GRADE/ 1 BELOW GRADE

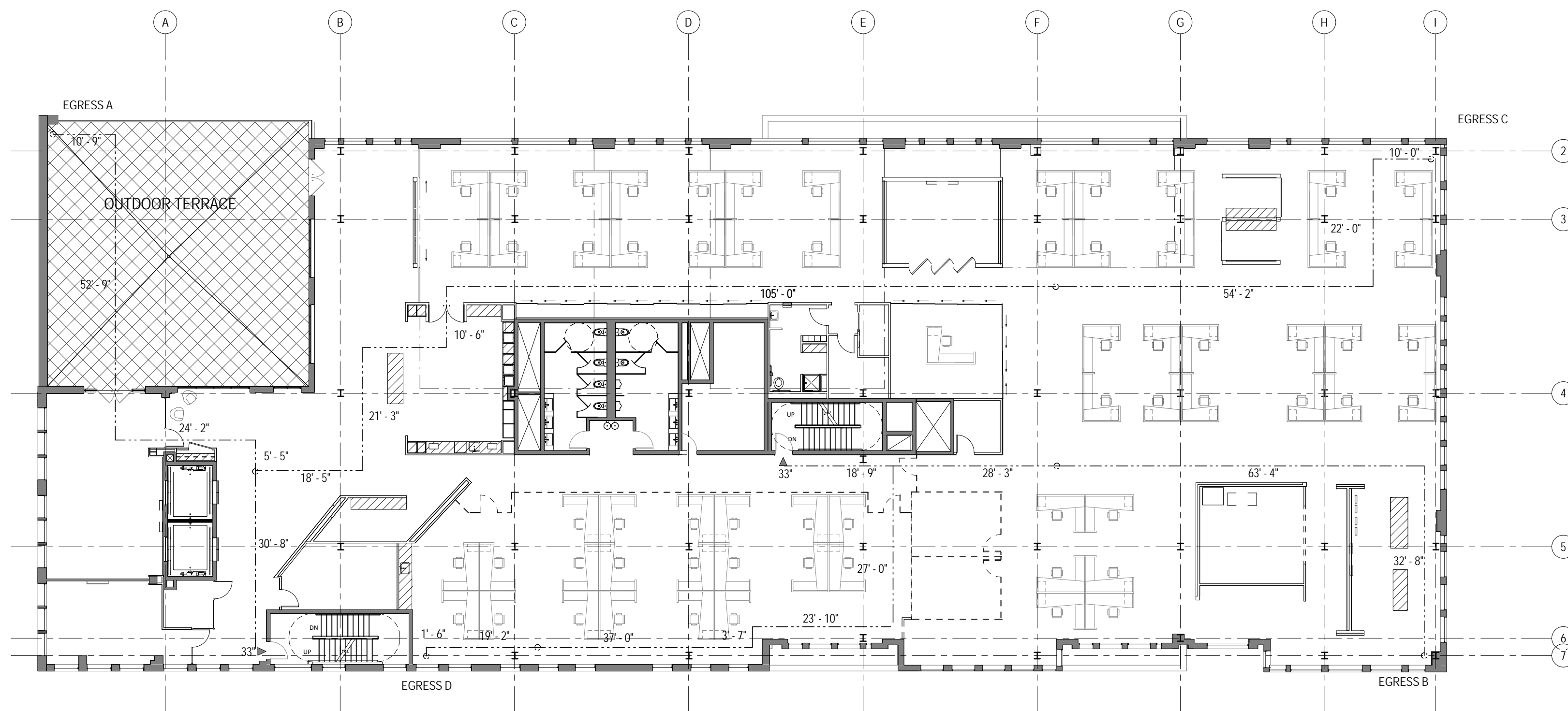
FIRE RATED ASSEMBLY:
STRUCTURAL FRAMING: (PER 2006 IBC TABLE 601 & 602)
0 HOUR REQUIRED, 0 HOUR PROVIDED

FLOOR/CEILING:
0 HOUR REQUIRED, 0 HOUR PROVIDED

ROOF/CEILING:
0 HOUR REQUIRED, 0 HOUR PROVIDED

EGRESS - TOTAL TRAVEL DISTANCE	
PATH ID	TRAVEL DISTANCE
EGRESS PATH A	123' - 7 23/32"
EGRESS PATH B	142' - 11 15/16"
EGRESS PATH C	285' - 9 11/16"
EGRESS PATH D	130' - 9 11/16"

EGRESS - COMMON PATH OF TRAVEL	
PATH ID	TRAVEL DISTANCE
EGRESS PATH A	93' - 0"
EGRESS PATH B	95' - 11 15/16"
EGRESS PATH C	86' - 2 1/8"
EGRESS PATH D	20' - 7 7/8"



DRAWING INDEX

SHEET INDEX - ARCHITECTURAL	
SHEET NUMBER	SHEET NAME
G-000	COVER SHEET
G-002	PARTITION TYPES AND DETAILS
G-003	DOOR SCHEDULE, ELEVATIONS, AND HARDWARE SCHEDULE

I-101	PARTITION PLAN
I-201	REFLECTED CEILING PLAN
I-301	TELEPHONE/ELECTRICAL PLAN
I-401	FINISH PLAN
I-501	FURNITURE PLAN
I-700	ENLARGED PLANS & ELEVATIONS - PANTRY & RESTROOM
I-701	ELEVATIONS - ENTRY & CONFERENCE
I-702	ELEVATIONS - CORE
I-703	ELEVATIONS - CORE & LIBRARY
I-704	ELEVATIONS - SOCIAL MEDIA & TEAMING
I-801	MILLWORK SECTIONS - PANTRY
I-802	MILLWORK SECTIONS - SCREEN & LIBRARY
I-803	MILLWORK SECTIONS - SOCIAL MEDIA
I-804	MILLWORK SECTIONS - TEAMING
I-805	MILLWORK SECTIONS - FEATURE WALL & RECEPTION
I-810	DETAILS - FLOOR AND CEILING TRANSITIONS

SHEET INDEX - MECHANICAL	
M001	SPECIFICATIONS, ABBREVIATIONS, LEGENDS, AND NOTES
M200	THIRD FLOOR PLAN - NEW WORK
M300	SCHEDULES AND DETAILS

SHEET INDEX - ELECTRICAL	
E001	COVERSHEET
E002	LIGHTING, OCCUPANCY SENSOR SCHEDULES, AND DETAILS
E100	THIRD FLOOR PLAN - LIGHTING
E200	THIRD FLOOR PLAN - TELEDATA/ELEC
E300	THIRD FLOOR PLAN - MECHANICAL POWER
E400	THIRD FLOOR PLAN - FIRE ALARM
E500	PANEL SCHEDULES AND PART RISER

SHEET INDEX - PLUMBING	
P100	SPECIFICATIONS, NOTES, DETAIL LEGEND & ABBREVIATIONS
P200	THIRD FLOOR & PARTIAL FIRST FLOOR PLAN - NEW WORK AND RISER DIAGRAMS

SHEET INDEX - STRUCTURAL	
SHEET NUMBER	SHEET NAME
S-100	THIRD FLOOR FRAMING PLAN
S-200	SECTIONS AND DETAILS
S-201	SECTIONS AND DETAILS

DATE	DESCRIPTION
11/08/2012	ISSUE FOR PERMIT/OWNER REVIEW
12/11/2012	ISSUE FOR BID

INSTRUCTIONS TO BIDDERS

1. Bid Format: Pricing shall be provided in standard eS format with breakdown by trades including quantities and unit prices where applicable. Material cost should be supported from labor and overhead/pror for each trade.

2. Provide at Tenant's request, full back-up for bids from subcontractors including actual bid documents provided to the General Contractor. It is the responsibility of the General Contractor to distribute complete bid packages to all trades.

3. Substitutions and Qualifications: Pricing shall be based on the contract documents without substitution or alteration. However, the General Contractor may offer product or construction method substitutions where substantial savings may be available to the Tenant/Landlord as long as the substitutions do not compromise the project intent. It is the responsibility of the General Contractor to not out and clearly identify proposed substitutions as an add or deduct alternate to the base bid. It is the Contractor's responsibility to verify that the proposed substitutions comply with the specifications. The Architect and Tenant shall review proposed substitutions following receipt of bids and shall accept or reject at Tenant/Architect's sole discretion.

4. Proposed substitutions shall be reviewed by the Architect who shall have the final authority to accept or reject substitutions on a "yes/no" to the specified item or assembly. If the General Contractor does not identify and receive decisions on substitutions, the Architect retains the right to demand that the product or construction method originally specified be installed without additional cost to the Tenant.

5. Prior to submitting bid, the General Contractor and the appropriate and approved subcontractors shall thoroughly examine the site and the specifications to ensure their knowledge of relevant field conditions and requirements affecting the Work. Any items which may conflict with the proposed Work shall be brought to the Architects attention prior to the submission of the bid. The General Contractor shall be familiar with Landlord Rules and Regulations. No claim for extra compensation will be allowed for the General Contractor's or subcontractors' failure to comply with this requirement.

6. Submit a complete list of proposed subcontractors to the Architect, Mechanical/Architect/Plumbing (MEP) Engineer, Tenant, and Landlord Subcontractor shall at the discretion of the Architect, MEP Engineer, Tenant, or Landlord, submit qualifications for the type of work specified.

7. Provide a proposed construction schedule showing the phasing of the work and the time required for each element of each phase with the bid. Also provide a schedule for required shop drawings and submittals. **A LEED documentation schedule shall also be provided with the bid.** Notify the Architect of any long lead items that will affect the date of substantial completion and provide alternate sources prior to beginning the Work.

8. Construction meetings shall be held weekly unless otherwise agreed upon. Provide meeting minutes, agenda including LEED items, complete project schedule, detailed project schedule, RFIs log, shop drawing log, and finish submittal log at each meeting.

9. Prior to start of construction, submit resumes for project managers and site supervisors interdependent for the project. The Architect, Tenant, Landlord or MEP Engineer may request an alternate selection at that time. The General Contractor cannot substitute project manager or site supervisor after project's commencement without prior approval of Architect.

10. The Project is seeking to obtain a minimum LEED Silver certification based on LEED-CI Version 3.0. Other LEED prerequisites and credits needed to obtain LEED certification depend on material selections and may not be specifically identified as LEED requirements. Compliance with requirements needed to obtain LEED prerequisites and credits may be used as one criterion to evaluate substitution requests and comparable product requests. A LEED scorecard will be provided for reference.

11. Bidders to provide separate pricing of identified spaces as noted on I-01. Line items must be included for all trades associated to each space. See RFP description for further details on spaces that require stand alone pricing.

GENERAL NOTES

1. The Contract Documents are to include AIA Document A201 "General Conditions of the Contract for Construction," WorkSpaces LLC, shall be designated as the "Tenant," Hickok Cole Architects, LLC shall be designated as the "Architect," Douglas Development shall be designated as the "Landlord." The Contract Documents consist of the Agreement between the Owner and Contractor, Performance and Payment Bonds, Conditions of the Contract (General, Supplementary and other Conditions), Specifications, Drawings, Addenda, Contract Modifications, Building Rules & Regulations and any other documents required by the Owner.

Drawings and Specifications are complementary. What is required by one shall be as binding as if required by all. Should the General Contractor at any time discover an error in a drawing or specification, or any discrepancy or variation between dimensions on the drawings and measurements at site, or lack of dimensions or other information, the Contractor shall not proceed with the work affected until clarification has been made by the Architect. In case of an inconsistency between Drawings and Specifications or within either document, not clarified by Addenda or Contract Modification, the more specific provision will take precedence over less specific; more stringent will take precedence over less stringent; more expensive item will take precedence over less expensive. Detail drawings take precedence over drawings of smaller scale. Better quality or greater quantity of Work shall be provided in accordance with Architect's interpretation. On Drawings, figures take precedence over scaled dimensions. Scaling of dimensions, if done, is done at the Contractor's own risk.

2. The General Contractor (GC) shall be both licensed and bonded in Washington, DC and shall provide documents upon the Architect's request.

3. The Work shall be done in accordance with rules and regulations of applicable safety and building codes. The General Contractor is responsible for securing and paying for permits required for the Work and for the scheduling of required inspections during the course of the Work.

4. Review the existing conditions, Landlord Rules and Regulations, and base building construction documents, and comply with base building requirements and design criteria. Document and notify Architect of any existing conditions or damages prior to start of construction. Notify the Architect of discrepancies, errors, inconsistencies or ambiguities discovered. Ensure adequate blocking for wall mounted stops. Submit to Architect for approval. Doors to resistance to receive electric strikes, which also require a request to exit device, shall be let into the alarm system and shall be fail-safe. U.O.N.

5. Provide protection and be responsible for any existing finishes to remain, including restrooms, lobbies and corridors, and shall repair or replace any damaged areas as a result of the Work. Existing finishes to remain shall be cleaned at the completion of construction.

6. Materials and systems shall be installed as per manufacturer's specifications and construction shall be of industry standard or better. The Architect shall be the ultimate judge of quality.

7. Only new items of recent manufacture, of standard quality free from defects, will be permitted in the Work. U.O.N. Rejected items shall be removed immediately from the Work and replaced with items of quality specified. Failure to remove rejected materials and equipment shall not relieve the General Contractor from the responsibility for quality of items used nor of any other obligation imposed on them by the Contract.

8. Do not scale drawings. Stated & written dimensions govern. Verbal dimensions in the field and confirm their accuracy. No extra charge or compensation shall be allowed because of difference between actual dimensions and those indicated on the drawings, unless they contribute to a change in the scope of the Work. Any difference may be found to be submitted to the Architect for decision prior to ordering, manufacturing, or proceeding with the Work. Horizontal dimensions indicated are to form face of GWB, unless otherwise noted. Vertical dimensions are to be from face of finished floor (AFF). U.O.N. Dimensions are not adjustable without approval of Architect unless noted +/-.

9. In the event of conflict between data shown on drawings and data shown on the specification, the specification shall govern. Detail drawings take precedence over drawings of smaller scale. Should the General Contractor at any time discover an error in a drawing or specification, or any discrepancy, or variation between dimensions on the drawings and measurements at site, or lack of dimensions or other information, the Contractor shall not proceed with the work affected until clarification has been made by the Architect. In case of an inconsistency between Drawings and Specifications or within either document, not clarified by addenda, the more specific provision will take precedence over less specific; more stringent will take precedence over less stringent; more expensive item will take precedence over less expensive. Better quality or greater quantity of Work shall be provided in accordance with Architect's interpretation. On Drawings, figures take precedence over scaled dimensions. Scaling of dimensions, if done, is done at the Contractor's own risk.

10. Verify that no conflicts exist at locations of mechanical, electrical, plumbing and security equipment. Do include piping, duct work, sprinklers, structural members and installation and notify Architect of any existing conditions or damages prior to start of construction. Elements of conflict shall be determined and reviewed with the Architect prior to work proceeding. Coordinate the Work with existing conditions.

11. Provide shop drawings for the Architect's review and approval for the following: Shop fabricated millwork, carpet layout and seaming diagrams, flooring, light fixtures, doors, rick, steel, metal fabrication, glasswork, sprinkler layouts, and hardware. Shop drawings shall be submitted in the form of 3 sets of prints. Shop drawings shall not be reproductions of contract documents. Refer to individual specification divisions for additional submittal requirements.

12. Provide the manufacturer's cut sheets and specifications including product codes for products and equipment provided but not limited to: adhesives and sealants, paints, carpet, composite wood, light fixtures, plumbing equipment, electrical equipment, fans, supplementary heating and cooling elements, hardware, security equipment, and appliances.

13. The General Contractor shall not proceed with work which he/she expects additional compensation beyond the contract amount. If completed in strict compliance with the construction documents, will result in additional Work beyond the scope of the Contract without written authorization from the Architect and Tenant. Failure to obtain such authorization shall invalidate a claim for extra compensation. Any field conditions that significantly vary from the contract documents and which result in additional Work shall be brought to the attention of the Architect prior to proceeding with the Work.

14. Include x-ray and core drill costs. Core drilling of the slab shall be approved by the Structural Engineer prior to proceeding with the Work. Contractor shall submit proposed locations to Architect and Structural Engineer for review prior to proceeding with the Work.

15. Patch, repair and install floorings as required by code. Finproof any new penetrations required by the Work.

16. Coordinate and review size and location of slab penetrations. Required penetrations shall be made in accordance with the Tenant and Landlord's standard approval procedures and methods. Penetrations shall be properly sealed according to the Architect, Tenant, Landlord requirements and applicable codes.

17. Continuously check architectural and structural drawings for accessibility of equipment and mechanical and electrical systems. No allowances of any kind will be made for the General Contractor's negligence to foresee means of installing equipment into position.

18. The finished Work shall be firm, well-anchored, in line, properly aligned, plumb, and level; with smooth, clean, uniform, appearance without waves, distortions, holes, marks, cracks, stains, or discoloration. Joining shall be close fitting, neat and well sealed. The finished Work shall have no exposed unsightly anchors or hardware and shall not compromise the appearance, function, or performance of the Work. The Work shall be free from expansion, contraction and shrinkage as necessary to prevent cracks, buckling, and warping due to temperature and humidity conditions.

19. Attachments, connections or fasteners of any nature are to be properly and permanently secured in accordance with best practice and the General Contractor is responsible for inspecting them accordingly. The drawings highlight special conditions only and by no means illustrate every connection. Start of installation shall imply acceptance of substrate.

20. The General Contractor shall waive "Common Practice" and "Common Usage" as construction criteria wherever details and contract documents of governing codes, ordinances, etc. require quality or better quality than common practice or common usage would require.

21. Submit shop drawings and submittals and on/deliverable delivery of materials in ample time to avoid delays in construction. If an item is found to be unavailable or to have a long lead time, notify the Architect immediately with a proposed alternative.

22. Notify the Tenant, Landlord, and Architect in writing of any deficiencies in base building conditions prior to the commencement of the Work. Any unreported deficiencies will become the responsibility of the General Contractor to correct. Submit shop drawing and submittal schedule with the bid package.

23. Exercise extreme care and precaution during the construction of the Work and schedule the Work to minimize disturbances to adjacent spaces and for structures and their occupants, property, public thoroughfares, etc. Take precautions and be responsible for the safety of building occupants from construction procedures. The General Contractor shall be responsible for any onetime costs incurred thereby.

24. Debris shall be removed from the site on a daily basis when possible. Upon completion of the Work, remove debris from the building created by the Work provided under this Contract and leave the site clean.

25. Abandoned miscellaneous nails, hangars, staples, wires and conduits shall be removed from the walls and areas of exposed ceilings. Remove abandoned pipe sleeves in floor slabs. Patch existing slab as required to maintain UL fire rating of floor slab where pipes and conduits have been removed.

26. Slab penetrations less than 7" around new and existing piping, conduit, ductwork, etc. shall be filled with acoustic foam and/or sealant with a VOC content of 250 g/L or less to ensure acoustical seal. Slab penetrations greater than 7" around new and existing piping, conduit, ductwork, etc. shall be filled with concrete. Piping, conduit, ductwork, etc. shall be wrapped with expansion material prior to filling with concrete. Expansion material shall be approved by the MEP Engineer.

27. Notify Architect of any access panels which may be required before proceeding with the Work. No access panels shall be included in GWB ceilings unless Architect's approval. Contractor shall be responsible for coordinating trailers. Required access panels shall be fabricated at the General Contractor's scope. Verify with MEP Engineer the location(s) of required access panels. Access panel frames to be fabricated with galvanized casing band welded to perimeter for assemblies installed in gypsum board surfaces. Non-rated flush doors to be fabricated of not less than 14 gauge steel materials. Equip with concealed spring hinges or concealed continuous hinge design designed to open 175 degrees minimum. Fire-rated flush doors to be fabricated of not less than 20 gauge sheet materials of sandwich type construction with manufacturer's standard core. Equip with continuous piano hinge, self-closing mechanism and interior latch release mechanism. Locking devices to be full, screwdriver-operated cam locks of number required to hold door in flush, smooth plane when closed. Finish to be manufacturer's standard primer coat. Field paint final finish coat. Paint to match adjacent surfaces.

28. The General Contractor shall be solely responsible for, and have control over, construction means, methods, techniques, sequences, and procedures including LEED compliance (if required) for coordinating and constructing all portions of the Work.

29. Nonsmoking Building. Smoking is not permitted within the building or within 25 feet of entrances, operable windows, or outdoor air intakes. Develop and implement an Indoor Air Quality Management Plan for construction and pre-occupancy to meet SMACNA IAQ Guidelines for Occupied Buildings under Construction. Submit plan to Architect for review prior to commencement of the Work.

31. Develop and implement a waste management plan, quantifying material diversion goals. Submit waste management plan to Architect for review prior to commencement of the Work. Recycle and/or salvage at least 75% of construction, demolition and packaging debris. Track waste through construction. Calculation may be done by weight or volume, but must be consistent throughout.

32. Track recycled content materials installed per LEED Materials & Resources Credit 4.

33. Track chain of custody certificates certifying that wood products specified to be made from certified wood comply with forest certification requirements. Include evidence that wood manufacturer is certified for chain of custody by an FSC-accredited certification body. Include statement indicating costs for each certified wood product.

34. Track VOC (volatile organic compound) in adhesives/sealants/paints/coatings, carpet systems, composite woods/ laminate adhesives and furniture per LEED Indoor Environmental Quality credit 4. Monitor subcontractors to ensure that the subcontractors use the correct product. Submittals must state the VOC level of each product. Product VOC requirement are as follows:
a. Adhesives must meet or exceed the limits of the South Coast Air Quality Management District Rule 1168 and all sealants used as a filler must meet or exceed Day 1 on Quantitative Volatile Organic Compound (Day 1, Rule 51)
b. Paints and coatings must meet or exceed the VOC and chemical component limits of Green Seal requirements
c. Carpet systems must meet or exceed the Carpet and Rug Institute Green Label Indoor Air Quality Test Program
d. Composite wood and agglomer products must contain no added urea formaldehyde resins

DEMOLITION NOTES

1. Visually inspect existing conditions and coordinate any outstanding dome issues with the Architect prior to beginning the Work.

2. Consult engineering notes for extent of existing building systems to be removed or to be relocated. Removal work is intended to include associated wall tie items such as electrical outlets, switches, conduits, controls, piping, mounting blocks, etc. Refer to MEP drawings for procedures concerning these trades in demolition areas.

3. The General Contractor is responsible for the replacement of any base building finishes that are damaged as a result of demolition. Include in the pricing a contingency for base building repairs which may occur. Coordinate base building finishes with the Landlord. Protect interior walls, ceilings, and floors to remain from damage during demolition and construction. Base building frames, window sills, and core partitions are required to be free from moisture or other building residue and ready to receive new finish.

4. Remove existing conduit and associated wiring not used to new work. Excess data wiring shall be removed. U.O.N. Data wiring shall be supported in accordance with current code. Mechanical devices to be evaluated and a report shall be submitted prior to the start of demolition noting condition of equipment.

5. Remove any incomplete or partially constructed or demolished walls and ceilings back to primary building structure. Remove existing walls and doors within the areas of construction in compliance with the drawings. Remove any remaining finishes within the areas of construction as described by the drawings.

6. Save demolished doors and code-compliant hardware in good condition for reuse as specified in drawings or per U.O.N. Existing doors and hardware shall be carefully removed and stored prior to installation. Reremitted doors shall be cleaned, filled, smoothed and reinforced as needed to match finish of new doors and frames. U.O.N.

7. Provide dumpster(s) for waste removal. Coordinate location with Landlord. Remove demolition materials and vacuum and/or broom sweep the Work before leaving each day.

8. Protect existing equipment, furniture and fixtures scheduled to remain. Provide hard-walled, temporary construction barriers where required to eliminate dust and sound transmission into occupied space. Construction barriers shall maintain clear paths of egress.

9. There is no presence of asbestos and lead based paint in the existing building to the best of the Landlord and Architect's knowledge. If a material is found which may be suspected of containing hazardous material, work shall stop and the General Contractor shall notify the Architect and Landlord immediately. If it is determined that the materials are hazardous, the material shall be fully abated according to applicable laws.

DOORS, FRAMES, AND HARDWARE NOTES

1. Refer to Door, Frame and Hardware Schedule for extent, type and additional notes. Acceptable wood door manufacturers to be Marshall, Eggers, Mohawk or Architect approved agency. Provide a hardware schedule and callout log including VOC content, FSC certified wood, recycled content, and Modification. The more specific provision will take precedence over less specific; more stringent will take precedence over less stringent; more expensive item will take precedence over less expensive. Detail drawings take precedence over drawings of smaller scale. Better quality or greater quantity of Work shall be provided in accordance with Architect's interpretation. On Drawings, figures take precedence over scaled dimensions. Scaling of dimensions, if done, is done at the Contractor's own risk.

2. Doors shall be set at 49" of egress perpendicular wall. U.O.N. Levers, pulls and locks are to be provided by a single manufacturer. Hinges and other miscellaneous exposed hardware shall be in similar and compatible finishes indicated on the Hardware Schedule.

3. Coordinate keying system with Tenant, Landlord, and Architect. Coordinate security system with system vendor.

4. Provide hardware, door pulls, hinges, electromagnetic devices, etc. required to provide a full and complete installation. Provide sensors at metal frames. Provide wood pile seal at aluminum frames. Provide floor mounted door stops unless existing conditions require wall mounted. Ensure adequate blocking for wall mounted stops. Submit to Architect for approval. Doors to resistance to receive electric strikes, which also require a request to exit device, shall be let into the alarm system and shall be fail-safe. U.O.N.

5. Provide 4 1/2 x 4 1/2, full mortise, letmole, 5 knuckle, heavy duty ball, bottom pin hinges with non-rising loose pins and anti-friction, ball-bearing type. Doors equipped with locksets shall be furnished with non-flammable pin hinges. Provide 1 1/2 pin hinges for doors up to 90" in height. Add 1 hinge for every additional 30" in height.

6. Heavy duty cylindrical locksets and locksets shall conform to ANSI A156.2 Series 4000, Grade 1. Functions as listed in schedule. Heavy duty mortise locksets, levers and levers shall conform to ANSI A156.13 Series 1000, Grade 1. Overhead Closers shall be in surface mounted or concealed overhead as noted in the hardware schedule and shall be heavy duty, fully hydraulic, rack and pinion action and sized to be in compliance with requirements for replacement for handicapped and recommendations of manufacturer. Furnish complete with necessary hardware. Furnish 2 keys per lock for each door. Minimum of 8 keys per keyhole are set. Before final completion, adjust hardware so that doors operate in perfect order. Test and adjust hardware for quiet, smooth operation and adjust closers for proper operation. At final completion, shop dry and identify keys and deliver to Tenant.

7. Undercut doors to clear top of floor finish by 1/4" maximum. U.O.N.

INTERIOR DRYWALL AND FRAMING NOTES

1. Installation of interior GWB and metal framing systems shall conform to ASTM C574. Fire rated partitions shall conform to UL design number indicated. Refer to U. Fire Resistance Directory - Volume I (latest edition) for additional information. See rated partitions shall conform to ASTM E487, Standard Practice for Installing Sound-Attenuating Lightweight Partitions.

2. Metal stud ganging for partitions shall be 25 gauge minimum. U.O.N. Metal studs at fire rated or fire rated door frames shall be 20 gauge minimum. Metal runners shall correspond in size and gauge to metal studs. Metal runners shall be continuous and attachment shall be at 16" or 24" o.c., minimum or as specified on drawings. Metal furring spacing shall be 16" or 24" o.c., minimum or as specified on drawings. Metal framing shall contain average recycled content (post consumer plus one-half preconsumer) of not less than 25%.

3. For gypsum panel product, provide 100% post consumer recycled content paper face and maximum gypsum recycled content available or minimum 95% synthetic gypsum, or a combination of both recycled gypsum and synthetic gypsum. Gypsum panel product shall be provided by a manufacturer within a 500 mile radius of construction site per LEED Materials & Resources Credit 5.1. Laminating adhesives or joint compounds that have a VOC content of 50 g/L or less. Sound attenuation balloons, where specified, to comply with ASTM C465, Type 1.

4. Wood blocking shall be fire resistant treated (FRT) and FSC certified. Install 34" FRT wood blocking in partitions at wall hung shelving, cabinets, millwork, guardrails, handrails and equipment required blocking as indicated on the drawings and as necessary for proper support. Verify blocking requirements with millwork subcontractor and review with Architect for acceptance prior to installation. Metal attachment plates for handrails, grab bars, etc. shall be 16 gauge min. and shall span a minimum of two studs.

5. Metal framing for GWB ceilings shall consist of 1 1/2" cold rolled steel channels or approved 4" o.c. supported by 8 gauge ganging installation who hangs 6" x 4" o.c. with 7/8" gauge metal furring channels running parallel to 2" o.c. attached to channels with approved clips, or use GWB ceiling hangers as an alternative. Metal framing shall be attached to the ductwork.

6. GWB work shall be performed by a qualified installer with experience in commercial applications similar in scope to this job. GWB installation shall conform to ASTM C840, the International Gypsum Association, the specific recommendations of the mfg., and the requirements of the U. Fire Resistance Directory (at fire rated partitions). Apply tape and joint compound over joints, interior angles, fastener heads, metal trims, and accessories as outlined in the Gypsum Association Publication 214.

7. Mechanical, electrical, and plumbing penetrations in fire rated partitions shall be sealed at their perimeter with approved fire-rated sealant. Mechanical, electrical, and plumbing penetrations in sound rated partitions shall be sealed at their perimeter with approved acoustical sealant. Sealants to have VOC content of 250 g/L or less.

8. Partitions and horizontal dimensions are dimensioned to face of GWB, unless otherwise noted. Dimensions indicated as H.O.D. shall be maintained. Dimensions indicated as CLEAR and CLR shall be maintained. Any discrepancies or variations in these dimensions shall be reviewed with the Architect before beginning construction. Align gage of partitions with face of adjacent column, unless otherwise noted.

9. Clearly lay out partitions and notify Architect of date of partition layout. Layout shall be complete and shall be reviewed by Architect before beginning construction. Alignments are to be verified in the field.

10. GWB shall be finished within 1/4" of floor slab at all partitions. Partitions, edge, corner beads, perforated reveals and joints to existing drywall surfaces shall be taped, bedded in joint compound and sanded smooth with no visible joints ("J" mark) shall not be used. Provide proper taping for reveals as recommended by the manufacturer.

11. Outside corners of GWB shall have metal corner beads (screwed) only, unless otherwise noted. Metal edge trim shall comply with Gypsum Association "J" Series in sizes corresponding to gypsum wallboard thickness.

12. Control joints shall be installed in unbroken partitions and ceilings exceeding 30 feet. Control joints in fire rated partitions shall conform to those listed in accordance with ASTM E-119. Locations of control joints to be approved by Architect prior to installation.

13. Alignment of door heads and other critical horizontal elements shall be maintained at a constant level relative to the ceiling planes, and shall not follow variations in the floor plane. Partition joints above doors and windows shall be same as the adjacent partitions, unless otherwise noted.

14. Gypsum wall board finish levels to be as indicated below and according to ASTM C 840:

Level 1: Ceiling plenum areas, concealed areas and where indicated
Level 2: Panels that are substrate for tiles
Level 3: At panel surfaces receiving medium or heavy textured finishes before painting or heavy wall coverings where lighting conditions are critical
Level 4: At painted surfaces receiving light textured finish, wall covering, and flat paint
Level 5: At surfaces receiving glossy and semigloss paints, ceiling and other surfaces subject to severe lighting and where indicated

REFLECTED CEILING PLAN

1. Refer to Reflected Ceiling Plan and Schedule for extent and type of ceiling finishes. Submit 3 samples of each type of ceiling tile and grid selected for use including recycled content. Upon completion of project, supply Tenant with an amount of ceiling tile equal to 5% of each type. Extra stock shall be provided below and clearly marked for Tenant's future use.

2. Borders at lay-in and regular acoustical ceiling panels shall be cut to match factory edge profile. Edge shall be painted to match factory finish. Ceiling tile with smaller than 4" is not acceptable. No exposed fasteners shall be permitted including pop rivets and tappers.

3. Height of ceilings shall be measured from face of finished floor to finish face of GWB or face of ceiling grid as indicated on the Architectural Reflected Ceiling Plan, U.O.N.

4. Light fixtures are to be installed according to the Reflected Ceiling Plan. Architect to review ceiling layout including bulkheads and grid prior to installation. Joint between edge of ceiling grid and partition shall be consistent with gage. Lamp temperature shall be consistent throughout Tenant space. U.O.N.

5. Light fixture types, quantities and locations only are noted on Reflected Ceiling Plan. Specifications, switching, exit lights, emergency lighting, life safety equipment, and cabling are not on Engineering documents. Architectural drawings supersede MEP drawings. The General Contractor is responsible for bringing any discrepancies to the Architect's attention.

6. Dimensioned light fixtures are from finished face of partitions to centerline of future and from centerline of future to centerline of future. Group fixtures are to be aligned. Fixtures shall be installed in center of ceiling tile unless noted otherwise. Any discrepancies with light fixtures, switches, transformers, or diffusers as to location between architectural and engineering drawings or between the drawings and existing field conditions shall be clarified with the Architect before proceeding with installation.

7. Provide 5 extra lamps of each type which are not building standard for Tenant stock. Provide lamp product reader list to Tenant at completion of project.

8. Sprinkler shop drawings showing exact location of sprinkler heads shall be submitted for review prior to proceeding with ceiling construction. Locate base building items (speakers, strobes, etc.) for review by Architect prior to installation.

9. Install control joints where an expansion joint occurs in structure and/or exterior wall. Distance between control joints in ceilings shall not exceed 30' or 24'. Partition height door frames may be considered a control joint. Distance between control joints in ceilings shall not exceed 30' or 24'. Control joints shall be installed at a maximum area between joints and greater than 2.50 square feet. A control joint shall be installed where ceiling framing or laming changes occur.

FLOOR FINISH NOTES

1. Refer to Floor Finish Plan and Finish Schedule for extent and type of floor finishes. Submit manufacturer's literature describing carpet and underlayment and product building documentation indicating compliance with Green Label Plus prior to ordering. Submit scaled shop drawings of each area to be carpeted that clearly indicate locations and sizes, direction of carpet, type of adhesive, and installation procedures. Adhesive to have VOC content of 50 g/L or less. Shop drawings shall include name of manufacturer, color of carpet for each area, quantities for each area including roll length, relations to area where product changes occur and location and type of resilient moldings. Adjacent dye lot changes are not allowed. Submit 3 samples of each carpet selected for use, sufficiently sized to clearly indicate construction, but not less than 12" x 12". Upon completion of project, supply Tenant with an amount of extra carpet from same dye lot equal to 5% of each type and color. Extra stock shall be provided nearby rolled and/or boxed and clearly marked for Tenant's future use.

2. Floor surfaces scheduled to receive carpet shall be properly prepared to accept a direct glue down installation in accordance with manufacturer's specifications. Joints shall be tightly butted to form minimal seams without gaps. Seams at doorways shall be in the centerline of the door. Flush patch shall be applied carpet with adjacent floor finish.

3. Resilient base shall be as specified on the Finish Schedule. Use rolled goods only. Unroll rolled goods 48 hours prior to installation. Outside corners to be pre-formed. Inside corners to be field fabricated. Provide resilient transition strip at joint between carpet and resilient flooring or concrete. Carpet edge strip to be Johnsonite - Reg or as equal and carpet reduce strip to be Johnsonite - CR-X or equal. Color to be determined by Architect. Install resilient trim where carpet terminates at other floor coverings or do not abut a vertical surface. Use full length pieces only. Allow adhesive to acclimate for 48 hours before application. Use cover base to equal and flooring and straight base at carpet. U.O.N.

4. Concrete floor subbases shall be tested for moisture. Test shall be calcium chloride test as manufactured by Roofing Products. Remove sub-floor ridges and bumps. Carpet shall be unrolled, released, and allowed to ventilate.

5. Flashpatch floor to provide a level surface that shall not exceed 1/4" over 10' flat cumulative. All floor finish transitions flash patch to smooth transition of finished material to maintain level finished floor surface. Fill low spots, cracks, joints, holes, and other defects, using subfloor filler compatible with carpet and adhesives. Do not use gypsum-based leveling and patching materials.

6. Carpet installation shall be laid tight and flat, well fastened and present a uniform pleasing appearance. Ensure a monolithic color, pattern and texture throughout and in compliance with the manufacturer's recommendations. Seams shall be kept to a minimum, not overlapped or peaked and free of gaps. Carpet shall be secured to floor with adhesive as recommended by manufacturer. Protect installation from rolling traffic by using sheets of hardwood, plywood, or rolled paper in affected areas. Do not use gypsum-based carpet protection on new carpet.

7. Carpet cushion underlayment to be styrene-butadiene rubber, polyolcular urethane, chemically bonded to a woven polypropylene substrate or high density open cell urethane in 5/32" (1625) thickness minimum, or as directed by carpet manufacturer and shall comply with Green Label Plus. Cushion underlayment locksets shall be furnished with non-flammable pin hinges. Provide 1 1/2 pin hinges for doors up to 90" in height. Add 1 hinge for every additional 30" in height.

8. Contractor to provide a minimum 4" x 6" pad of selected sand and stone finishes applied to existing W-1 Wood flooring for Architect and Tenant approval prior to area of work completion. Architect to review condition of wood sub floor with the Contractor to note if any nail filling or patching is required prior to prep and staining of the floor.

PAINT AND WALL FINISH NOTES

1. Refer to Wall Finish Plan and Finish Schedule for extent and type of all wall finishes. Wall surfaces, metal frames, and trim shall be painted. U.O.N. Surfaces to be painted shall be prepared for priming in accordance with the manufacturer's specifications. Paints to contain no or low VOC content. Paints to comply with Green Seal and South Coast Air Quality Management District (SQAQMD) Rule 1113, Architectural Coatings.

2. Painted surfaces shall receive 1 prime and 2 finish coats as follows:
GWB walls: Interior spaces with ceiling and lack of dimensions 72 hours prior from the Tenant and Landlord.
Hollow Metal Wall - Odorless interior semi-gloss latex enamel
GWB ceilings - Interior flat latex paint

3. Paint is to be applied by a roller or brush on all surfaces. Only the prime coat may be spray applied. Provide 3 1/2"x12" samples for each color for Architect's approval prior to the start of the Work.

4. Paint reveals and filler strips to match adjacent partition type. U.O.N.

5. Provide one unopened gallon container to Tenant of each type of opaque top coat paint in each color and sheen used in the Work.

FABRIC WALL NOTES

1. Fabric panels shall be installed by a qualified installer with experience in commercial applications. Submit manufacturer's literature describing products including VOC content, recycled content and rapidly renewable material content. Submit scaled shop drawings showing arrangement of panel joints, thickness, locations of seams, methods of joining seams, direction of fabric and other similar detailed information necessary to fully describe the installation. Submit 3 samples of each type of wall covering. Sample size to be 12" x 12" or as appropriate to material.

2. It is the responsibility of the General Contractor to obtain accurate field measurements and verify dimensions. Any dimensions or field conditions which vary from the design intent of the drawings shall be brought to the attention of the Architect for review. Provide necessary blocking.

3. Submit test reports for stretched fabric panel system prepared by an independent testing laboratory indicating full compliance with both accessibility and the resistance performance requirements. Fire ratings shall be for a complete assembly including core material and fabric covering.

4. Protect materials from excessive moisture in shipment, storage and handling. Fabric panels shall be inspected upon arrival for flaws or defects. Fabric that is flawed shall be rejected. Do not store wall fabric in bolls in an upright position, or beneath other materials. Maintain ambient temperature and humidity within spaces to receive stretched fabric panel system at levels required by manufacturer. Provide manufacturer's standard three year warranty. Levels shall be maintained continuously prior to installation and until space is turned over to the Tenant. Provide attic stock of 5% of fabric or equivalent of 3 days of same dye lot to the Tenant upon completion.

WALL COVERING NOTES

1. Wall covering shall be installed by a qualified installer with experience in commercial applications. Submit manufacturer's literature describing products including material type, VOC content, recycled content and rapidly renewable material content. Submit scaled shop drawings showing locations of seams, direction of wall covering, and other similar detailed information necessary to fully describe the installation. Submit 3 samples of each type of wall covering. Sample size to be 12" x 12" or as appropriate to material.

2. It is the responsibility of the General Contractor to obtain accurate field measurements and verify dimensions. Any dimensions or field conditions which vary from the design intent of the drawings shall be brought to the attention of the Architect for review.

3. Submit test reports prepared by an independent testing laboratory indicating full compliance with the resistance performance requirements.

4. Protect materials from excessive moisture in shipment, storage and handling. Wall covering facings shall be inspected upon arrival for flaws or defects. Wall covering that is flawed shall be rejected. Do not store wall covering in bolls in an upright position, or beneath other materials. Maintain ambient temperature and humidity within spaces to receive wall covering levels required by manufacturer. Provide mfg. standard three year warranty. Levels shall be maintained continuously prior to installation and until space is turned over to the Tenant. Provide attic stock of 5% or equivalent of 3 days of fabric of same dye lot to the Tenant upon completion.

5. Install wall covering in strict compliance with shop drawings and manufacturer's instructions. Surfaces shall be fully covered and free from wrinkles, sags, blisters and foreign matter. Install wall covering with seep and well threads plumb, level and true. Patterns, textures, and grain of wallcovering shall be aligned and matched at joints. Throughout entire room, join wall panels without distortion to gully or wall covering from pattern. Install seams not less than 6" from corners and horizontal seams are not allowed. Remove waste patches and all surface mounted fixtures to permit wall covering installation and re-install upon completion.

6. Use mildew-resistant, nonstaining adhesive and use with specific wall coverings and substrate application, as recommended in writing by the wall covering manufacturer and with a VOC content of 50 g/L or less.

MECHANICAL NOTES

See mechanical drawings by Engineers for further notes, details and specifications. Coordinate requirements with architectural drawings.

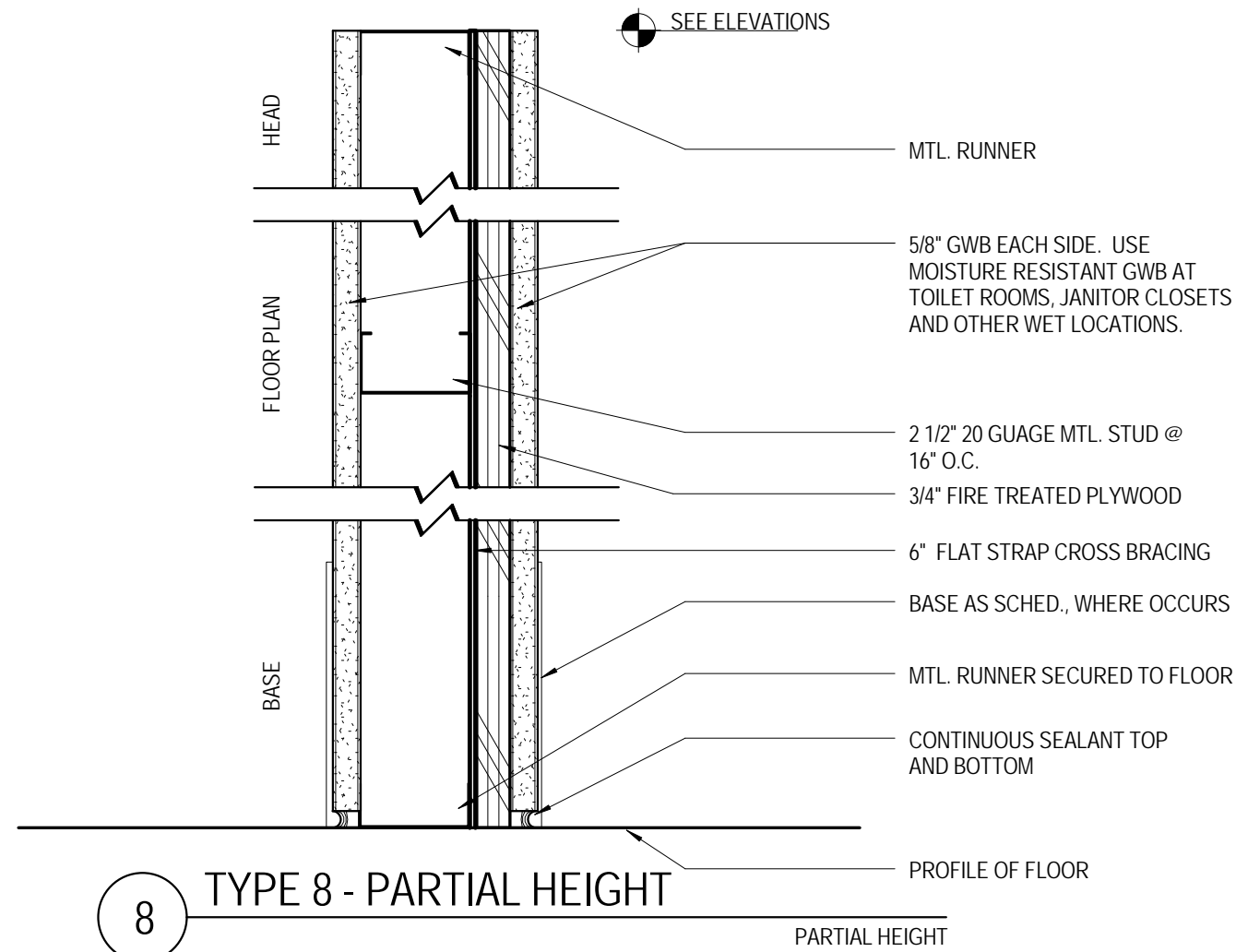
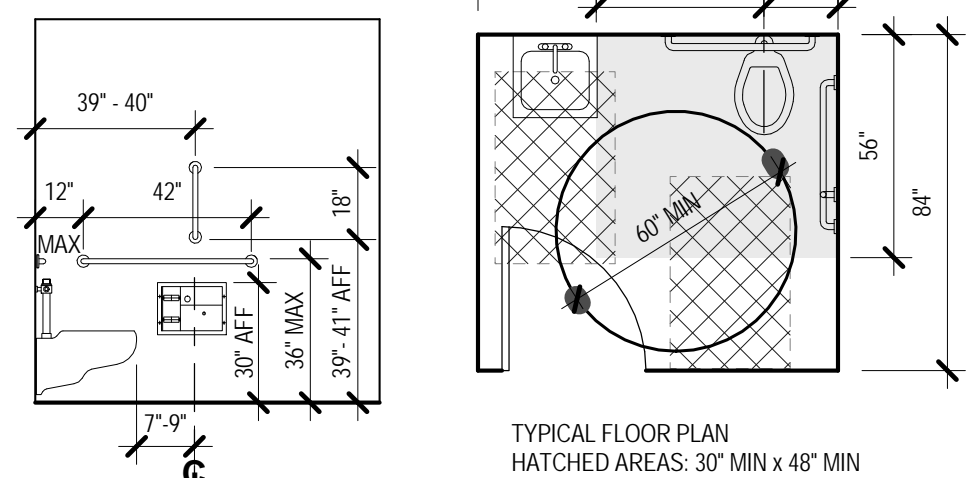
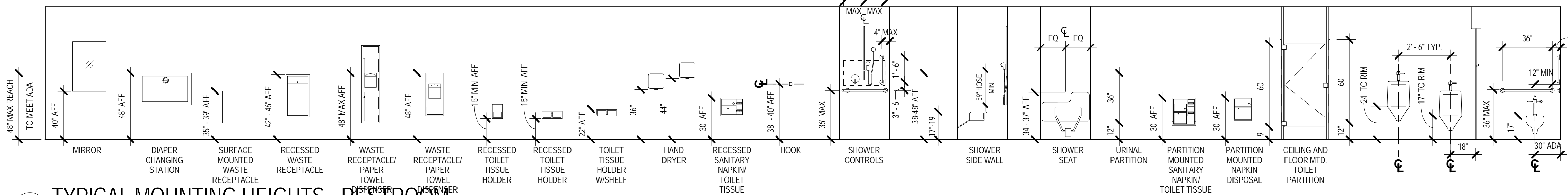
1. Mechanical work to be carried out as per the mechanical drawings and specifications. Construction shall be carried out in accordance with applicable codes and in keeping with good engineering practices.

2. Provide and install necessary equipment, sheet metal ductwork, hangers, flexible ductwork, thermostat controls, fire dampers, piping, access panels, etc., required to meet applicable mechanical codes, and to provide the Tenant with a fully operational and balanced mechanical system.

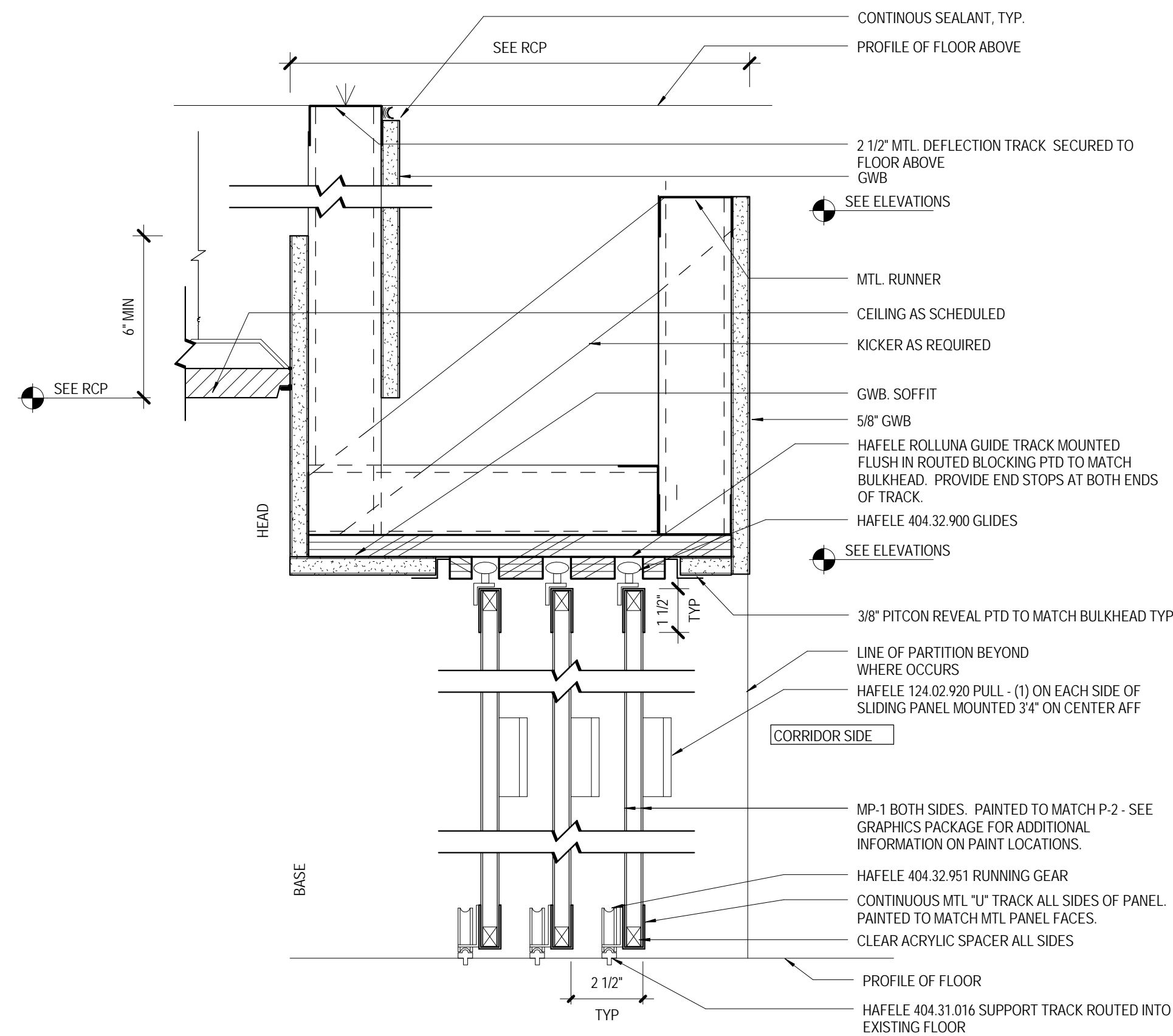
NOTE: NEW WORK TO CONFORM TO ADA AND APPLICABLE BUILDING CODES.
CONFIRM ANY CONFLICTS W/ ARCHITECT PRIOR TO CONSTRUCTION.

D2 TYPICAL MOUNTING HEIGHTS - RESTROOM

1/4" = 1'-0"

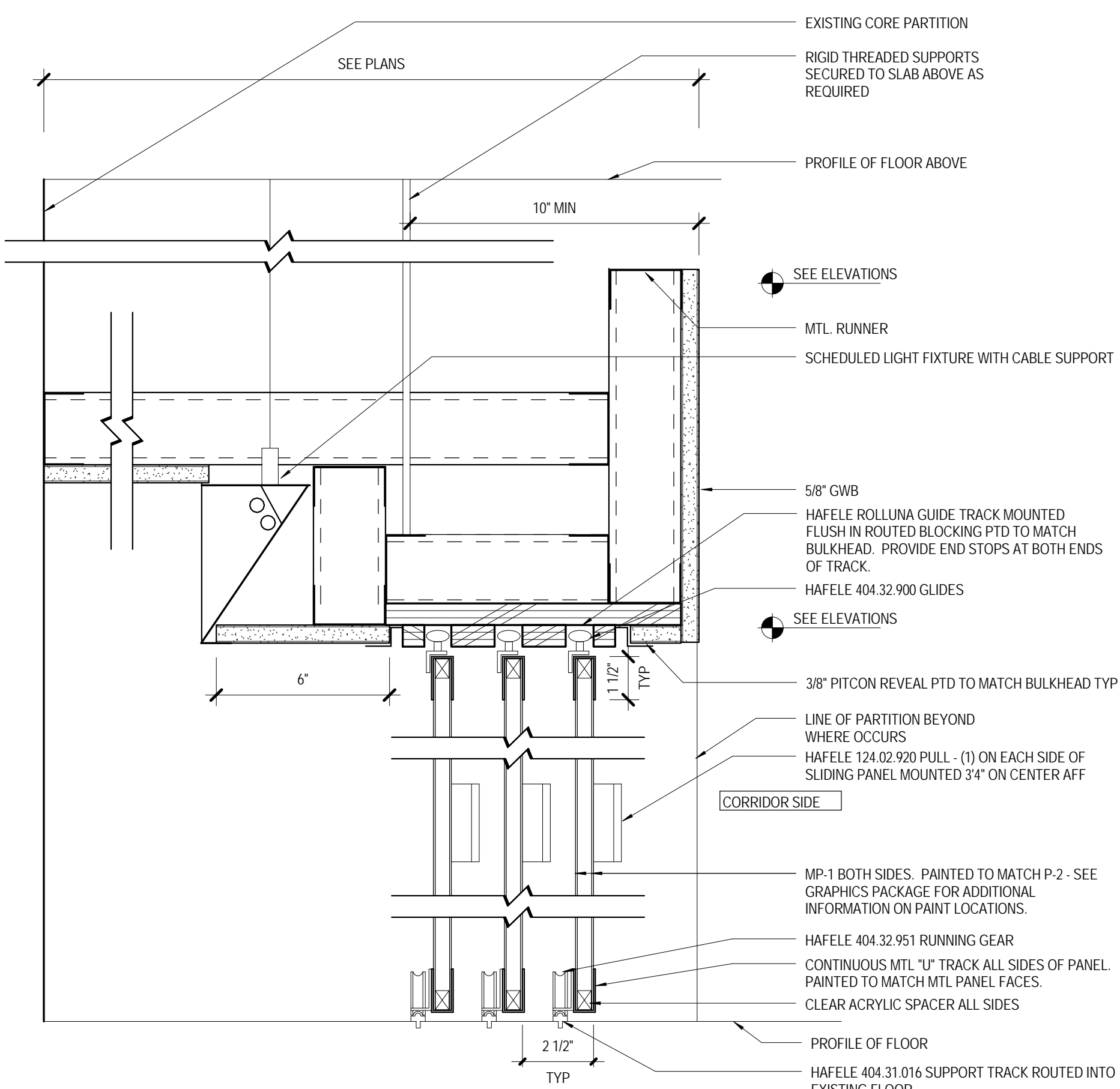


8 TYPE 8 - PARTIAL HEIGHT



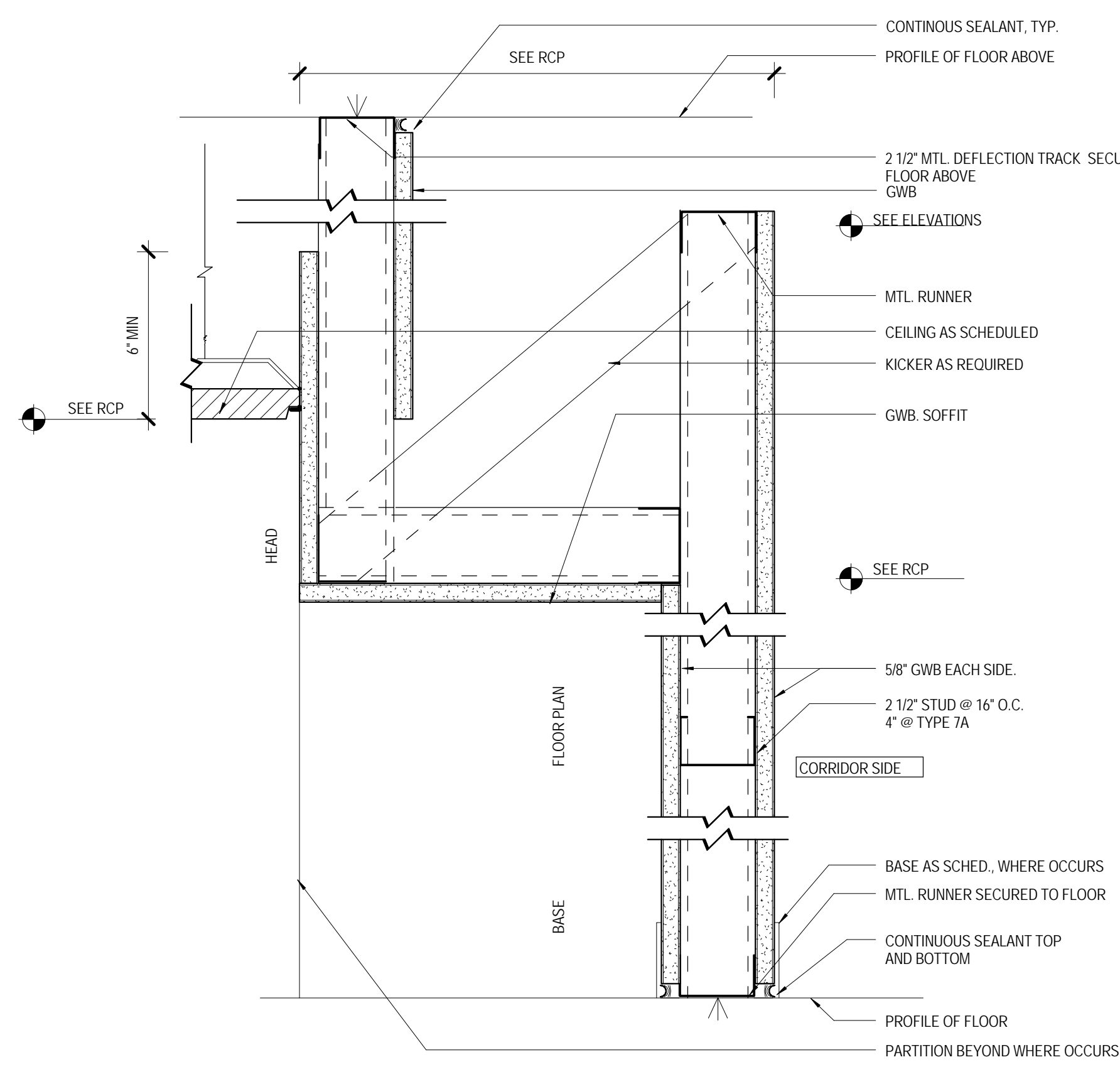
7B TYPE 7B - OFFSET BULKHEAD PARTITION

NOTE: NUMBER OF SLIDING PANELS VARIES. SEE PLANS/ELEVATIONS FOR ADDITIONAL INFORMATION.



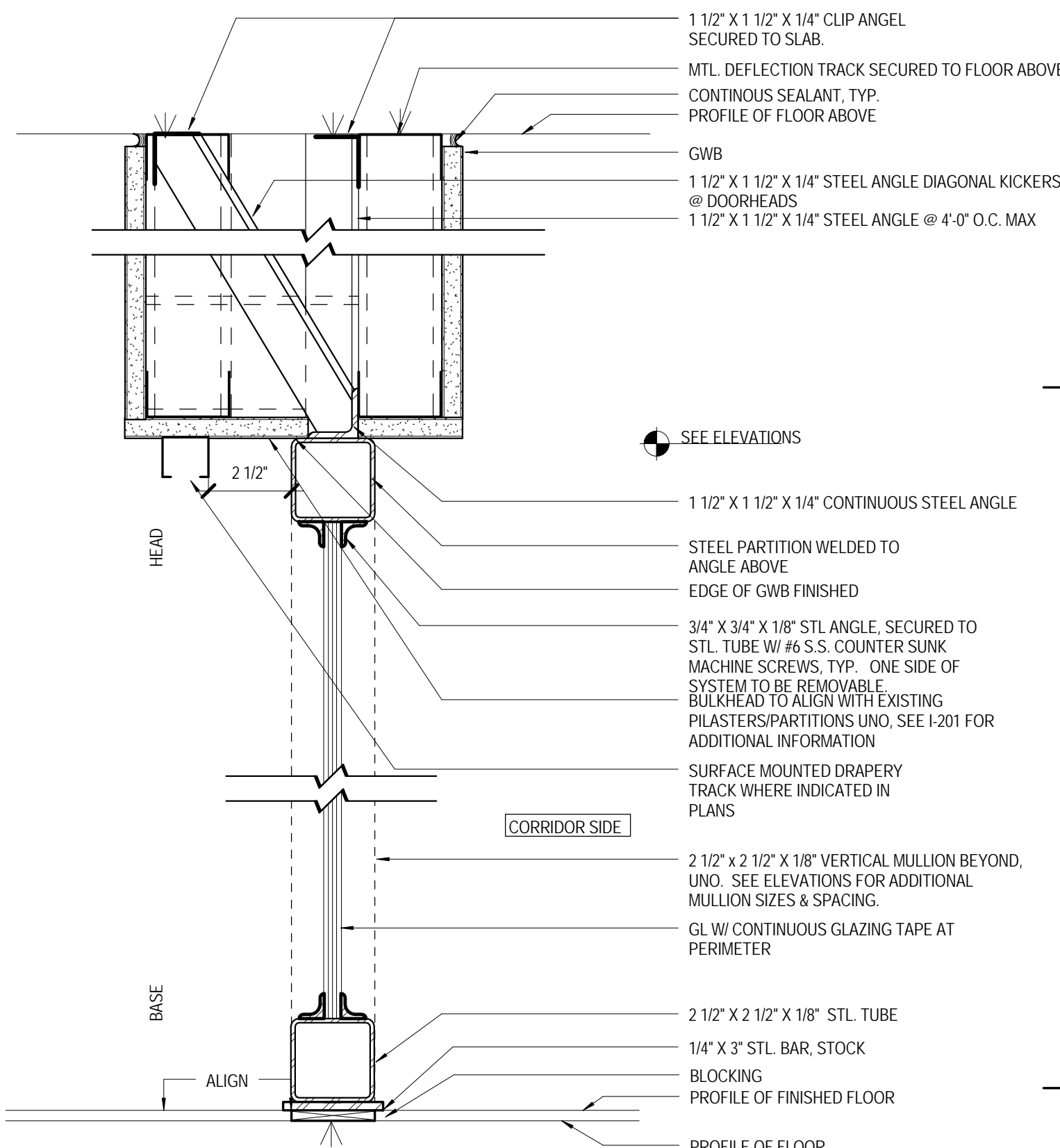
7C TYPE 7C - OFFSET BULKHEAD PARTITION

NOTE: NUMBER OF SLIDING PANELS VARIES. SEE PLANS/ELEVATIONS FOR ADDITIONAL INFORMATION.



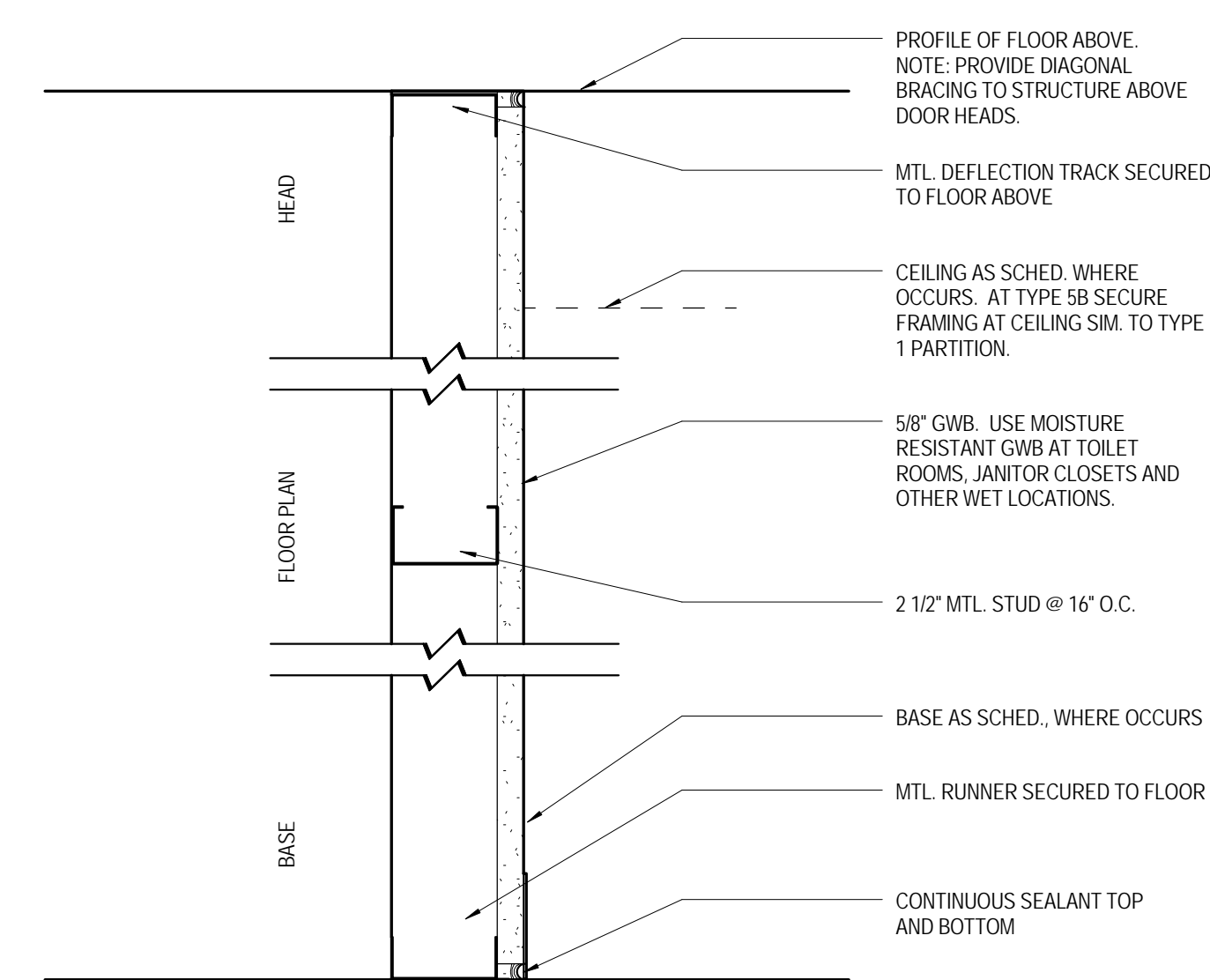
7A TYPE 7A - OFFSET BULKHEAD PARTITION

7 TYPE 7 - OFFSET BULKHEAD PARTITION



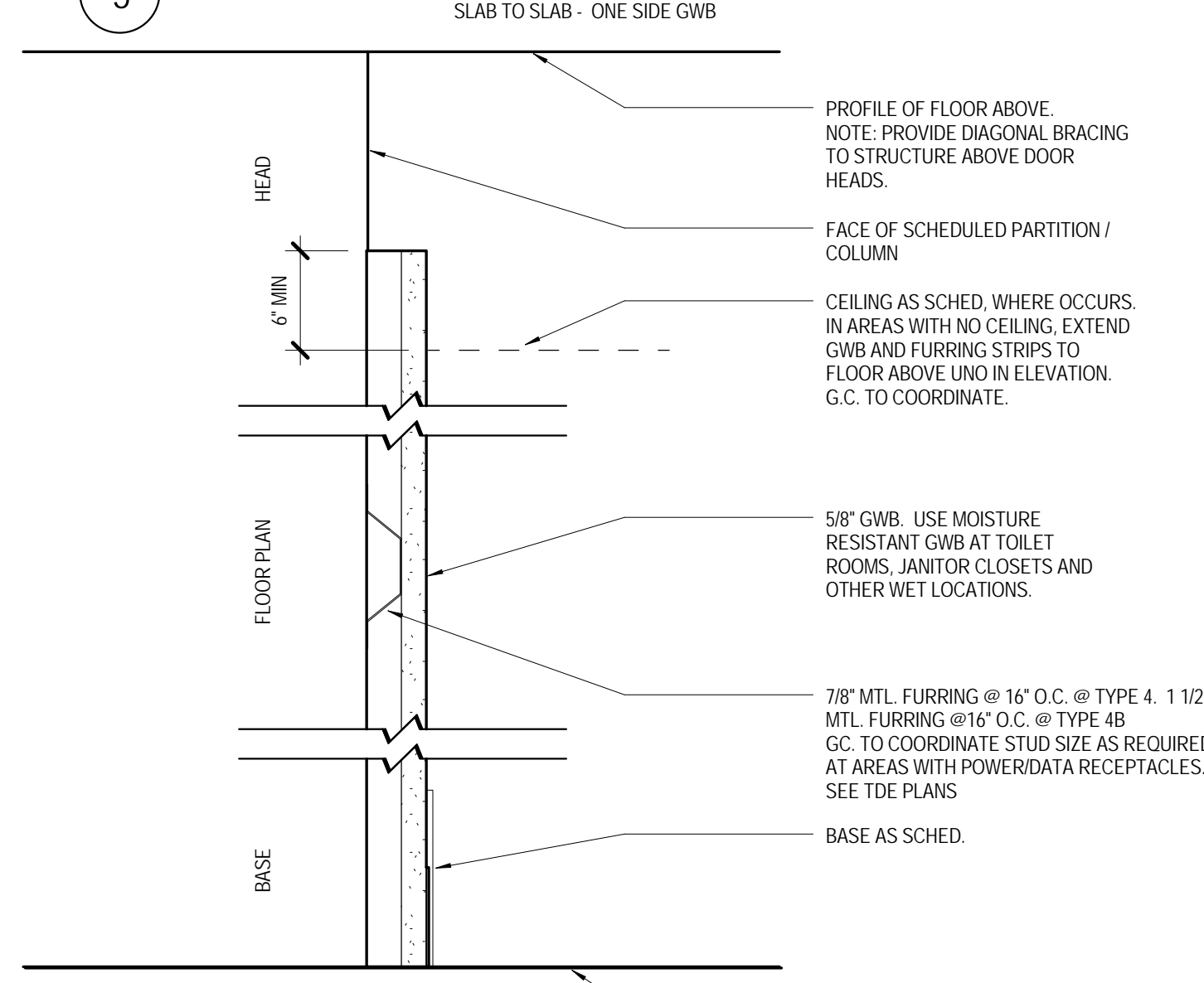
6 TYPE 6 - STEEL & GLASS PARTITION

NOTE: SEE SPECIFICATIONS & FINISH SCHEDULE FOR STEEL FINISHING



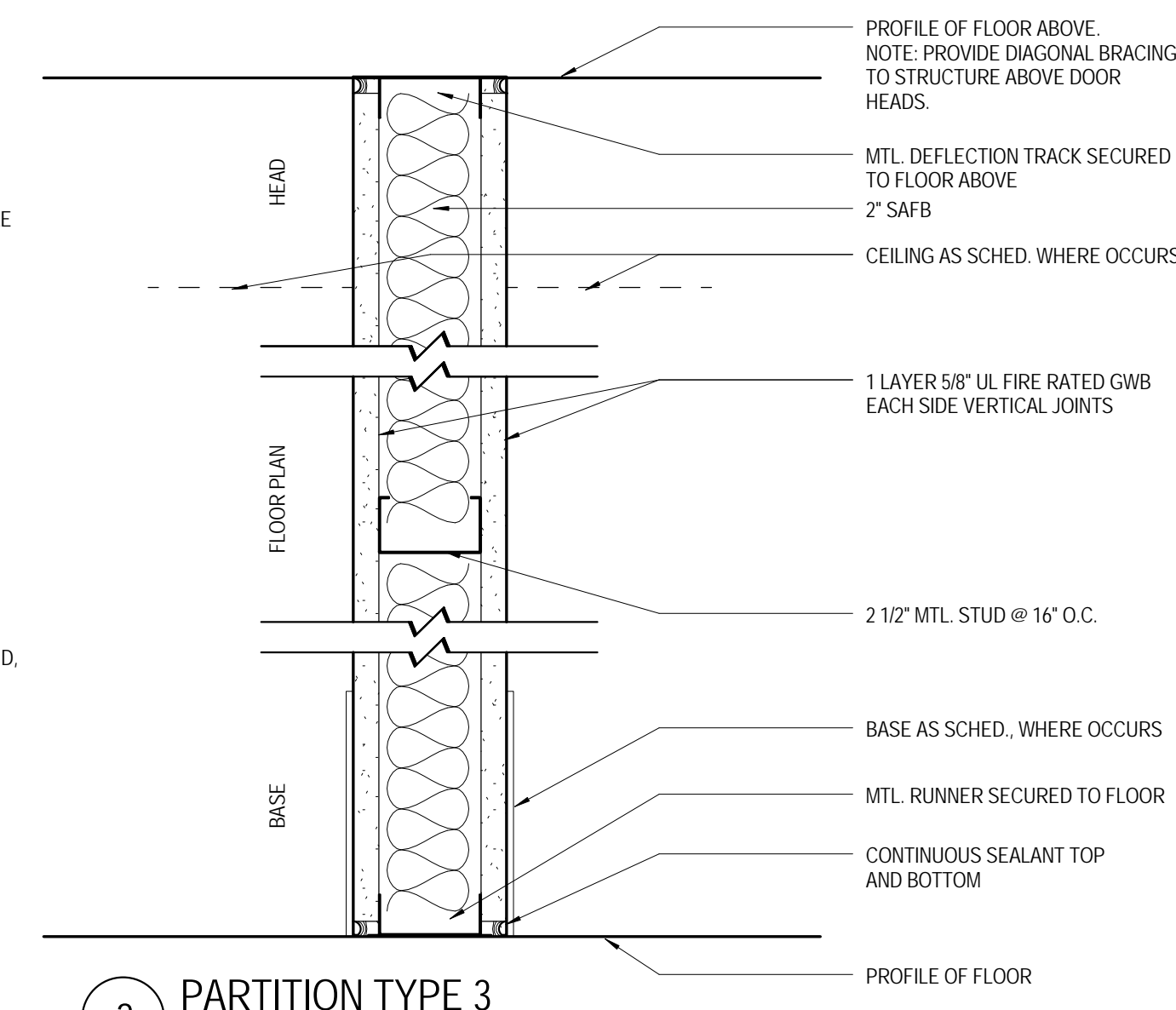
5B PARTITION TYPE 5B

5 PARTITION TYPE 5

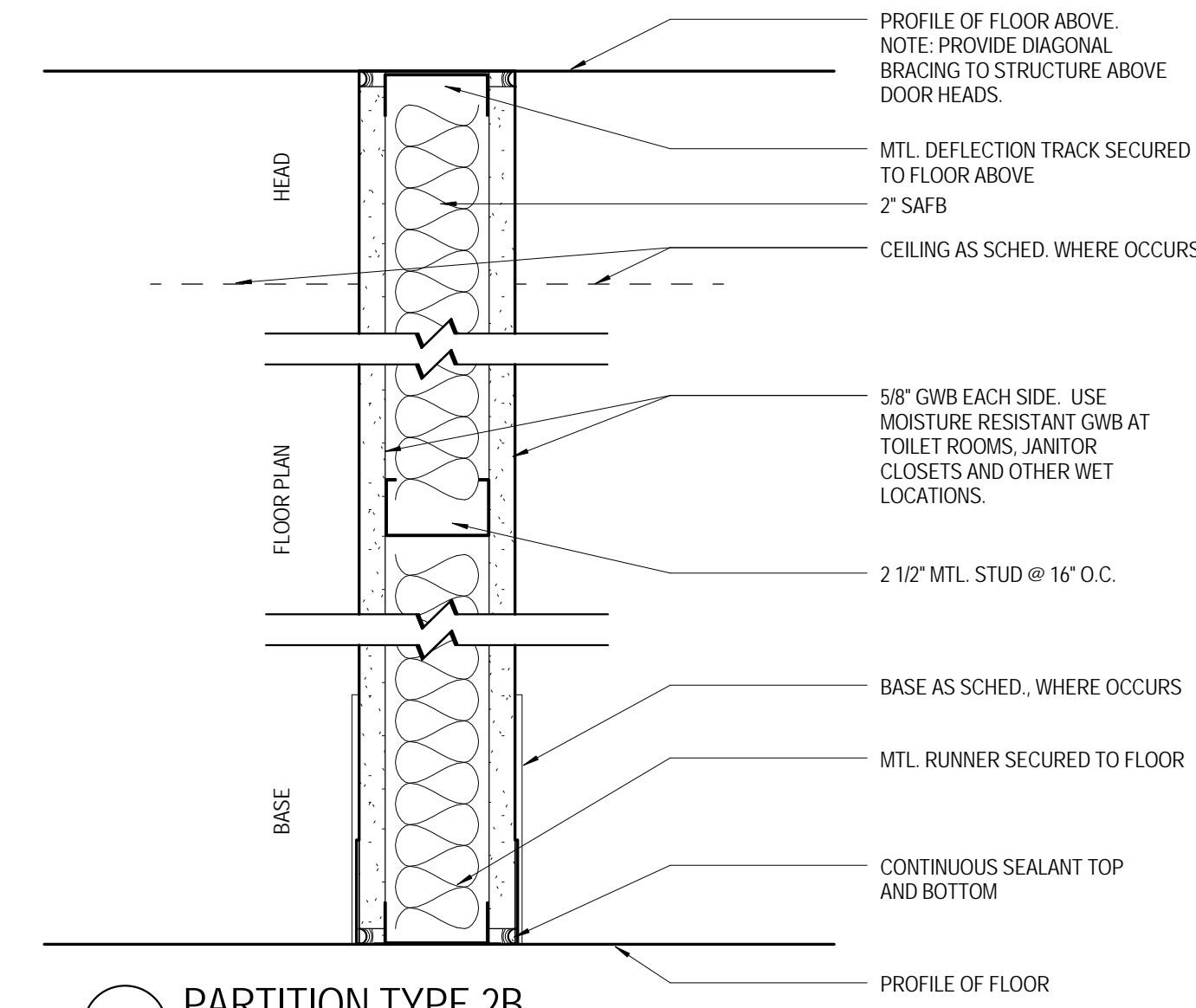


4B PARTITION TYPE 4

4 PARTITION TYPE 4

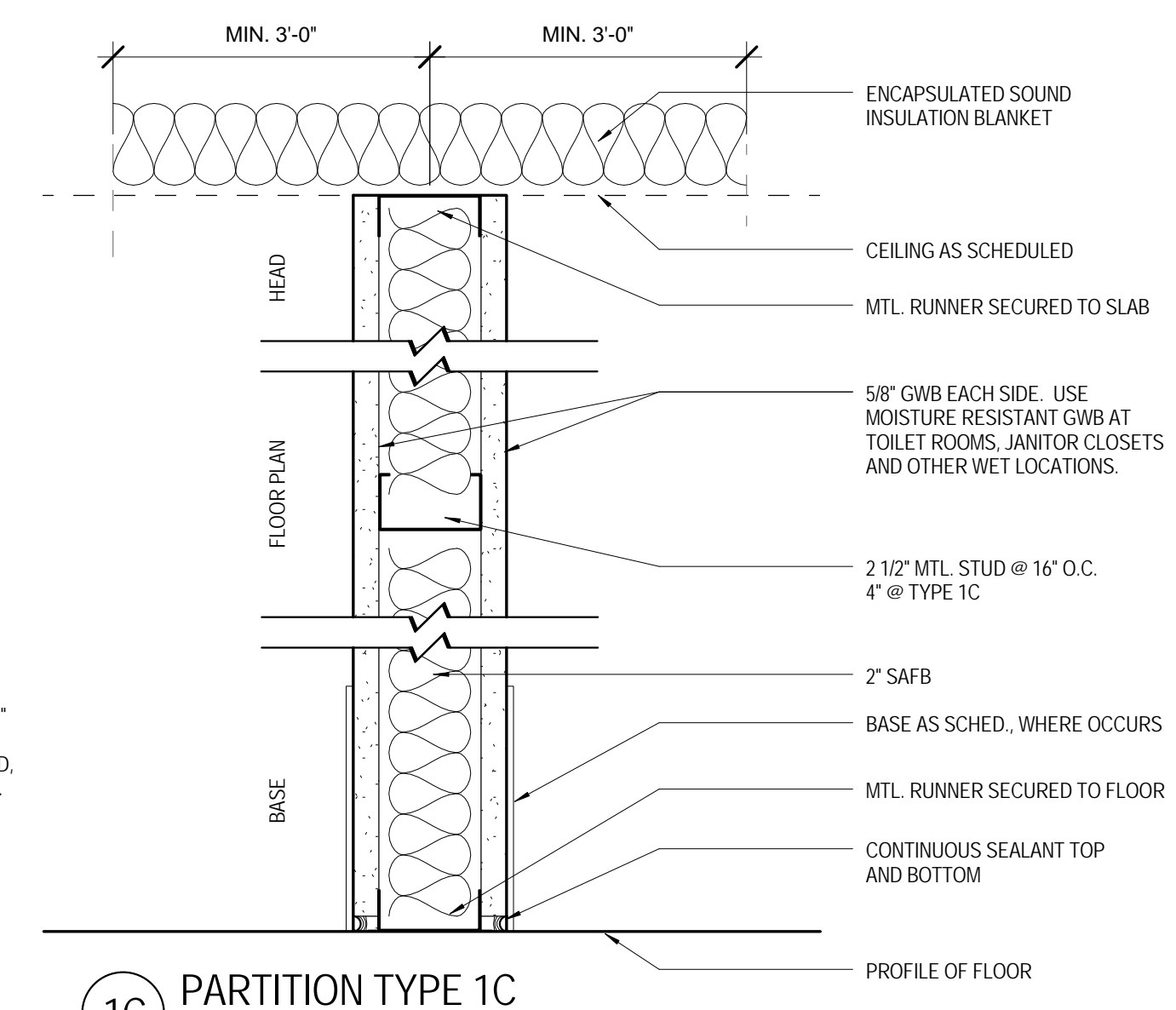


3 PARTITION TYPE 3



2B PARTITION TYPE 2B

2 PARTITION TYPE 2



1C PARTITION TYPE 1C

1B PARTITION TYPE 1B

1 PARTITION TYPE 1

DATE	DESCRIPTION
11/08/2012	ISSUE FOR PERMIT/OWNER REVIEW
12/11/2013	ISSUE FOR BID

DOOR SCHEDULE - GENERAL NOTES

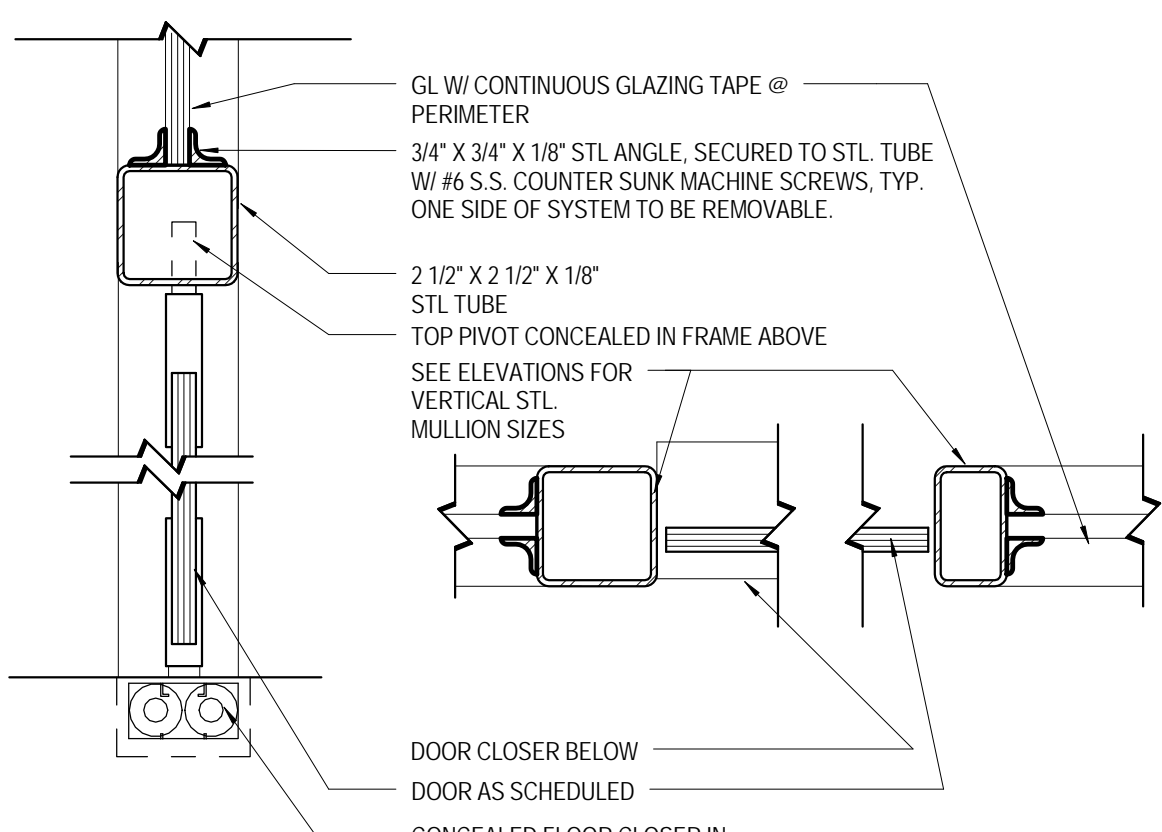
ABBREVIATIONS

ALUM	ALUMINUM
SC	SOLID CORE DOOR
HM	HOLLOW METAL
PTD	PAINT (PT-X)
WD	STAIN (ST-X)
GL	GLASS
STL	STEEL

1. SC VOOD MATERIAL TO BE PLAIN SUC DMPLE VENER.
2. NEW DOORS ARE TO MATCH EX. DOOR HEIGHTS, FIELD VERIFY AND COORDINATE WITH ARCHITECT.
3. HARDWARE MOUNTING AND FUNCTION TO MEET ADA REQUIREMENTS.
4. COORDINATE WITH LANDSCAPE/PAINT FOR DOOR PROGRAMS TO BE PREPARED WITH SECURITY HARDWARE AND FUNCTIONS.
5. FOR FRAME CONDITIONS AND SIZE, USE PARTITION TYPES & REFER TO DETAILS. COORDINATE THROAT DIMENSIONS W/ PARTITION TYPES.
6. SEE INTERIOR ELEVATIONS AND DETAILS FOR FURTHER INFORMATION.
7. SEE FRESH SCHEDULE FOR ADDITIONAL INFORMATION.
8. ELECTRONIC LOCKING DEVICES TO ALLOW ACCESS IN DIRECTION OF INGRESS VIA CARD READER AND UNIMPEDED ACCESS IN DIRECTION OF EGRESS IN COMPLIANCE WITH CODE.
9. COORDINATE FALL SAFE LOCKS W/ RECS OF FIRE MARSHAL AND FIRE ALARM SYSTEM.
10. PROVIDE RING-AND-STRONG FOR LOW VOLTAGE W/ SECURITY REQUIREMENTS.
11. DIMENSION, MATERIALS, AND INSTALLATION AS PER MANUFACTURERS SPECIFICATION AND RECOMMENDATION.

ITEM	DOOR HARDWARE SCHEDULE			NOTES
	MANUFACTURER	FINISH	FUNCTION	
HARDWARE SET 1 - STORAGE (SINGLE DOOR)				
BUTT HINGES				
CYLINDRICAL LOCKSET	SCHLAGE ND-SERIES	626	STOREROOM	
SURFACE MOUNTED CLOSER	LCN 400 SERIES			
FLOOR STOP				
HARDWARE SET 2 - CLOSET (SINGLE DOOR)				
LEVER	SCHLAGE ND-SERIES		DUMMY PULL	
FLOOR STOP				
ROLLER LATCH / ANGLE STOP				
HARDWARE SET 3 - CONFERENCE (SINGLE DOOR)				
OFFSET PIVOT W/ INTEGRAL FLOOR CLOSER	RIXON			
PUSH / PULL BARS	ELMES G630-01-001		HANDLE SET	BRUSHED STAINLESS STEEL FINISH
FLOOR STOP				
ROLLER LATCH / ANGLE STOP				
HARDWARE SET 4 - GLASS DOOR (SINGLE W/ NO SECURITY)				
CENTER PIVOTS W/ INTEGRAL FLOOR CLOSER	RIXON			
PUSH / PULL BARS	ELMES		DUMMY	SELECTIVE HOLD OPEN
ROLLER LATCH / ANGLE STOP				
FLOOR STOP				
HARDWARE SET 5 - GLASS DOOR (SINGLE W/ CARD READER)				
OVERHEAD CNCLD CLOSER	DORMA			
PUSH / PULL BARS	ELMES G630-01-001		DUMMY	BRUSHED STAINLESS STEEL FINISH
SURFACE MOUNTED OVERHEAD ELECTROMAGNETIC LOCK				
CARD READER				
MOTION SENSOR				
REQUEST TO EXIT BUTTON				
FLOOR STOP				
HARDWARE SET 6 - SINGLE USER TOILET ROOM				
BUTT HINGES				
CYLINDRICAL LOCKSET	SCHLAGE ND-SERIES	626	PRIVACY	
SURFACE MOUNTED CLOSER	LCN 400 SERIES			
CARD READER				
FLOOR STOP				
HARDWARE SET 7 - GLASS DOOR (PAIR W/ CARD READER)				
OVERHEAD CNCLD CLOSER	DORMA		DUMMY	
SURFACE MOUNTED OVERHEAD ELECTROMAGNETIC LOCK				
CARD READER				
PUSH / PULL BARS	ELMES H2160-26-047 L2000			ANODIZED BLACK FINISH
MOTION SENSOR				
REQUEST TO EXIT BUTTON				
FLOOR STOP				
HARDWARE SET 8 - POCKET DOOR				
DOOR TRACK				
FIXED PULL BOTH SIDES	ELMES G630-01-001			BRUSHED STAINLESS STEEL FINISH
HARDWARE SET 9 - PIVOT DOOR				
CENTER PIVOT W/OVERHEAD DOOR CLOSER AND HOLD OPEN	DORMA			

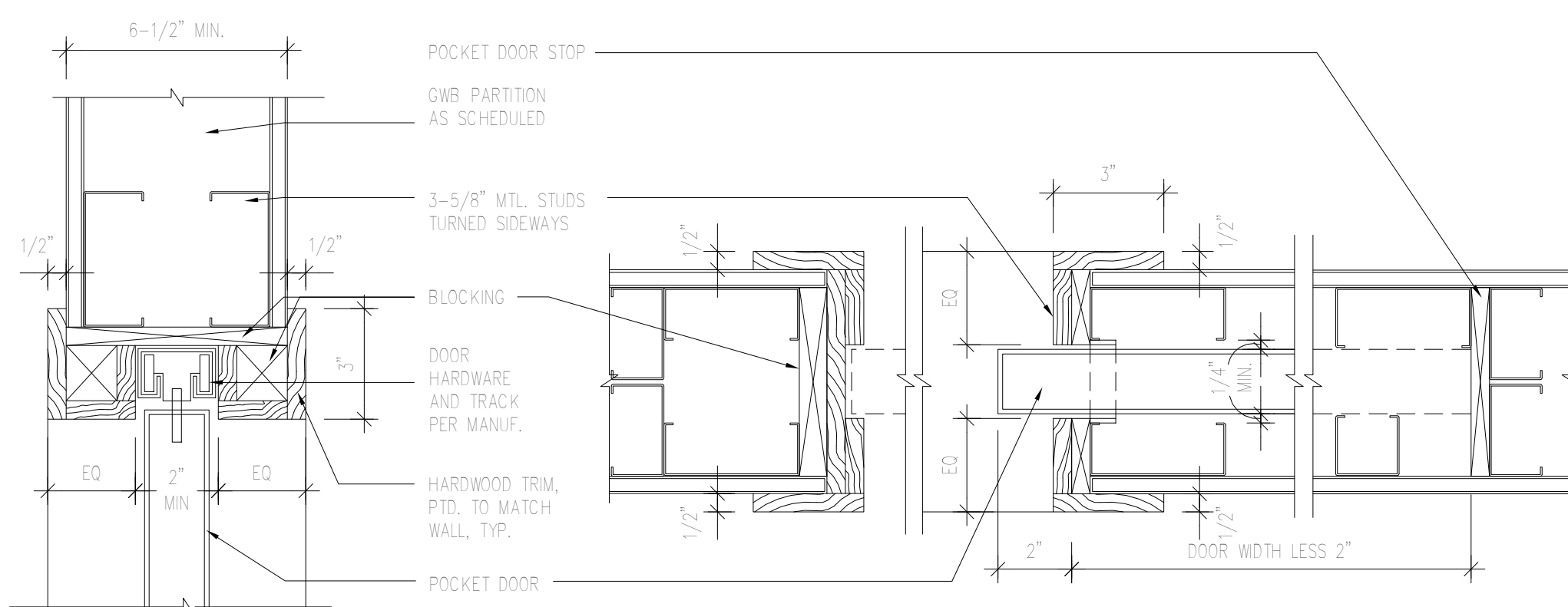
DOOR TYPE	DOOR PANEL DIMENSIONS				FRAME		DETAIL		DOOR PANEL		UL RATING	COMMENTS
	WIDTH	HEIGHT	THICKNESS	MATERIAL	FINISH	HEAD	JAMB	MATERIAL	FINISH			
A	3'-0"	8'-0"	1 3/4"	ALUM		G-003A1	G-003A1	SC				
B	3'-0"	8'-0"	1/2"	STL		G-003C1	G-003C1	GL				
C	4'-0"	8'-0"	1 3/4"	WD	PTD	G-003B1	G-003B1		PTD		DOOR & FRAME PAINTED TO MATCH PARTITION	
D	3'-10"	6'-10 1/2"	1 3/4"	NA							SEE SHEET 1802 FOR ADDITIONAL INFORMATION AND DETAILS	
E	3'-0"	8'-0"	1 3/4"	WD	PTD	G-003C	G-003C		PTD		DOOR & FRAME PAINTED TO MATCH PARTITION. GO TO COORDINATE FRAME DETAILS WITH POCKET DOOR HARDWARE MANUFACTURER	
EX	6'-0"	7'-0"	1/2"	NA								
H	6'-0"	7'-0"	1/2"	NA		G-003B2	G-003B2 SIM	GL				



HEAD DETAIL

JAMB DETAIL

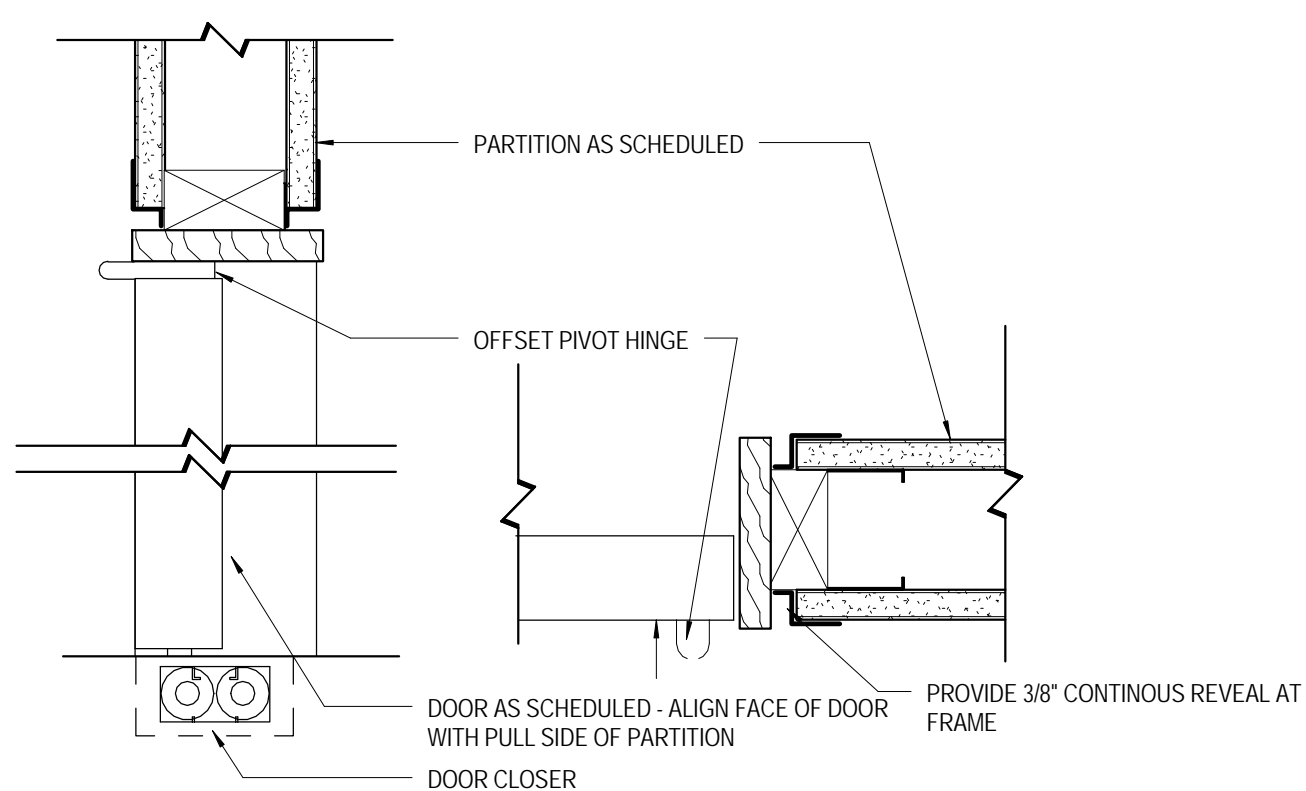
NOTE: SEE SPECIFICATIONS & FINISH SCHEDULE FOR STEEL FINISHING



HEAD DETAIL

POCKET JAMB DETAIL

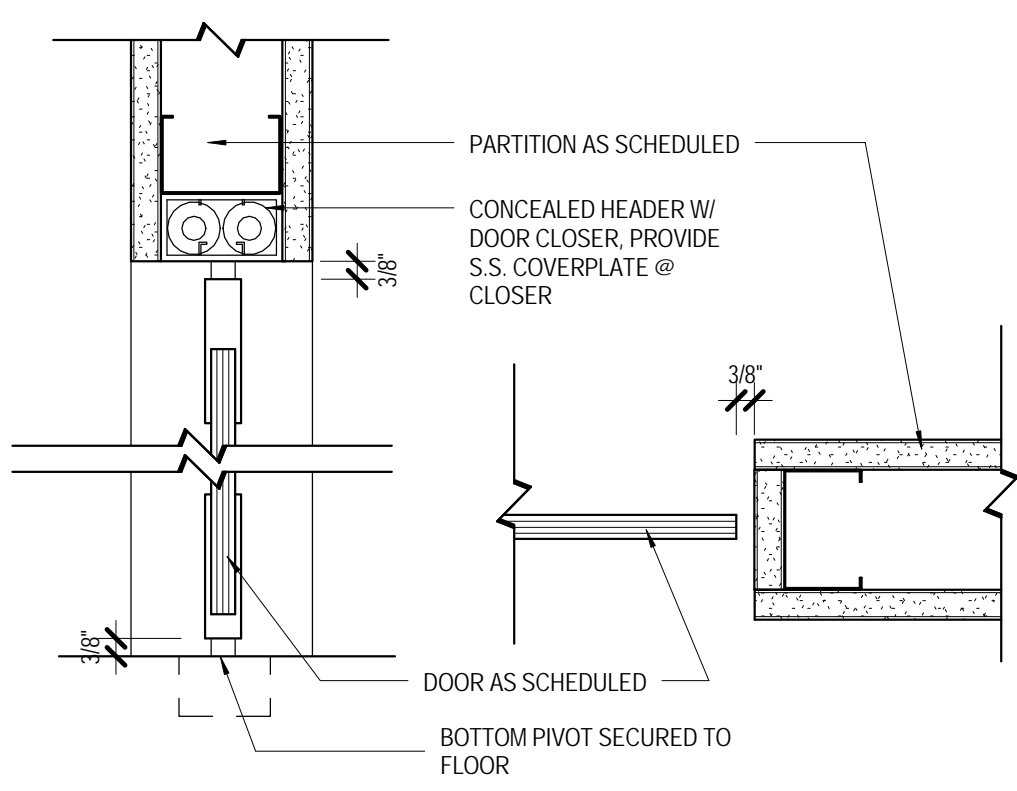
C1 DOOR DTL - GLASS @ STEEL FRAME

$$3^{\circ} = 1^{\circ} 0'$$


HEAD DETAIL

JAMB/SIDELIGHT DETAIL

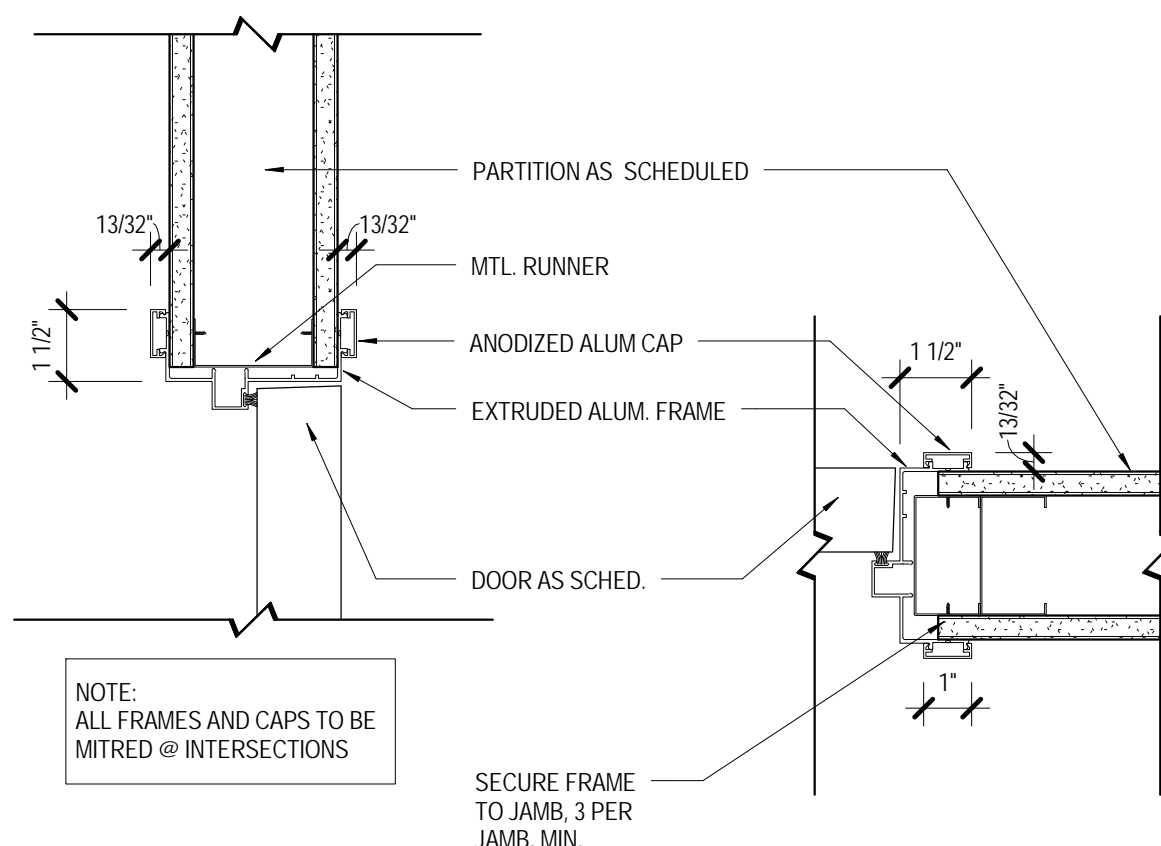
DOOR DTL - FRAMELESS WOOD

$$3^\circ = 1^\circ - 0^\circ$$


HEAD DETAIL

JAMB DETAIL

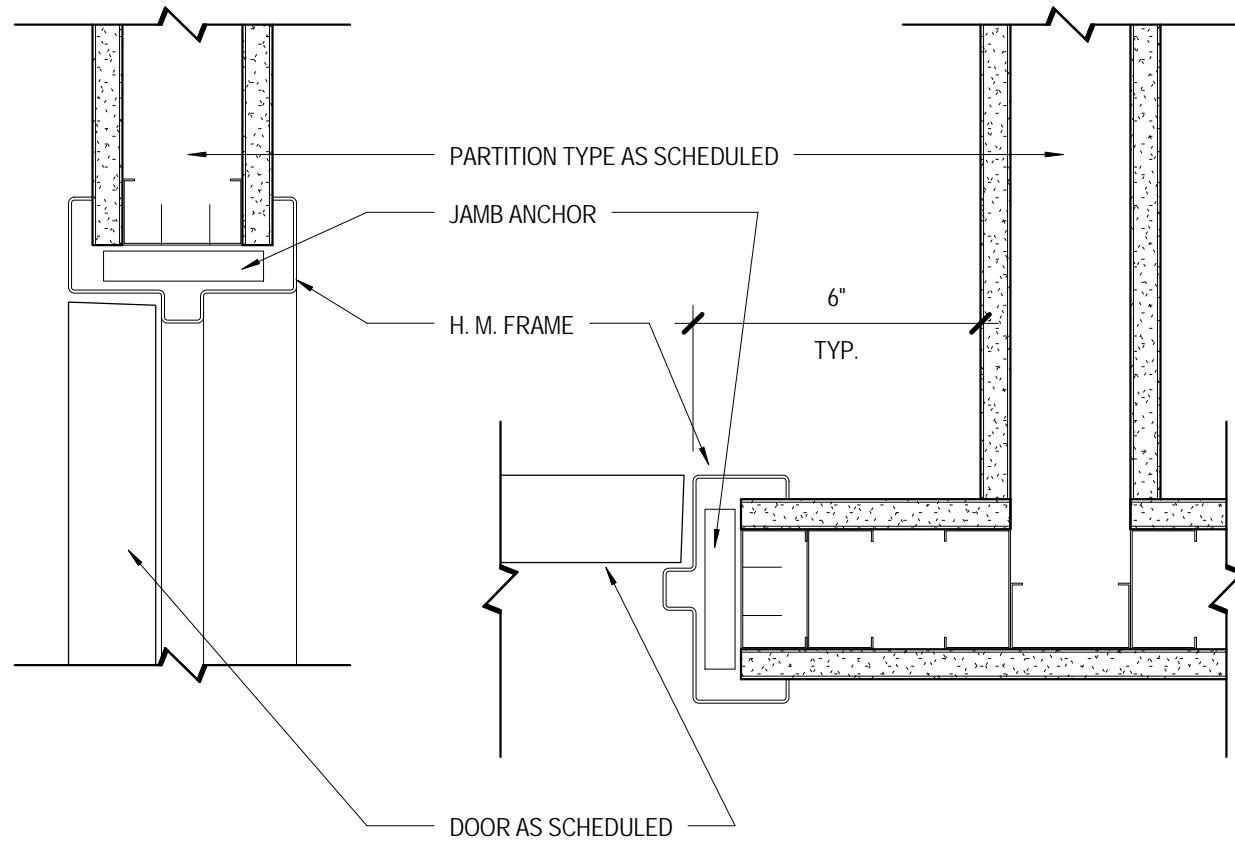
DOOR DTL - GLASS DOOR

$$3^{\circ} = 1^{\circ} - 0^{\circ}$$


HEAD DETAIL

JAMB DETAIL

DOOR DTL - ALUM. FRAME

 $3^{\circ} = 1^{\circ} 0'$ 

HEAD DETAIL

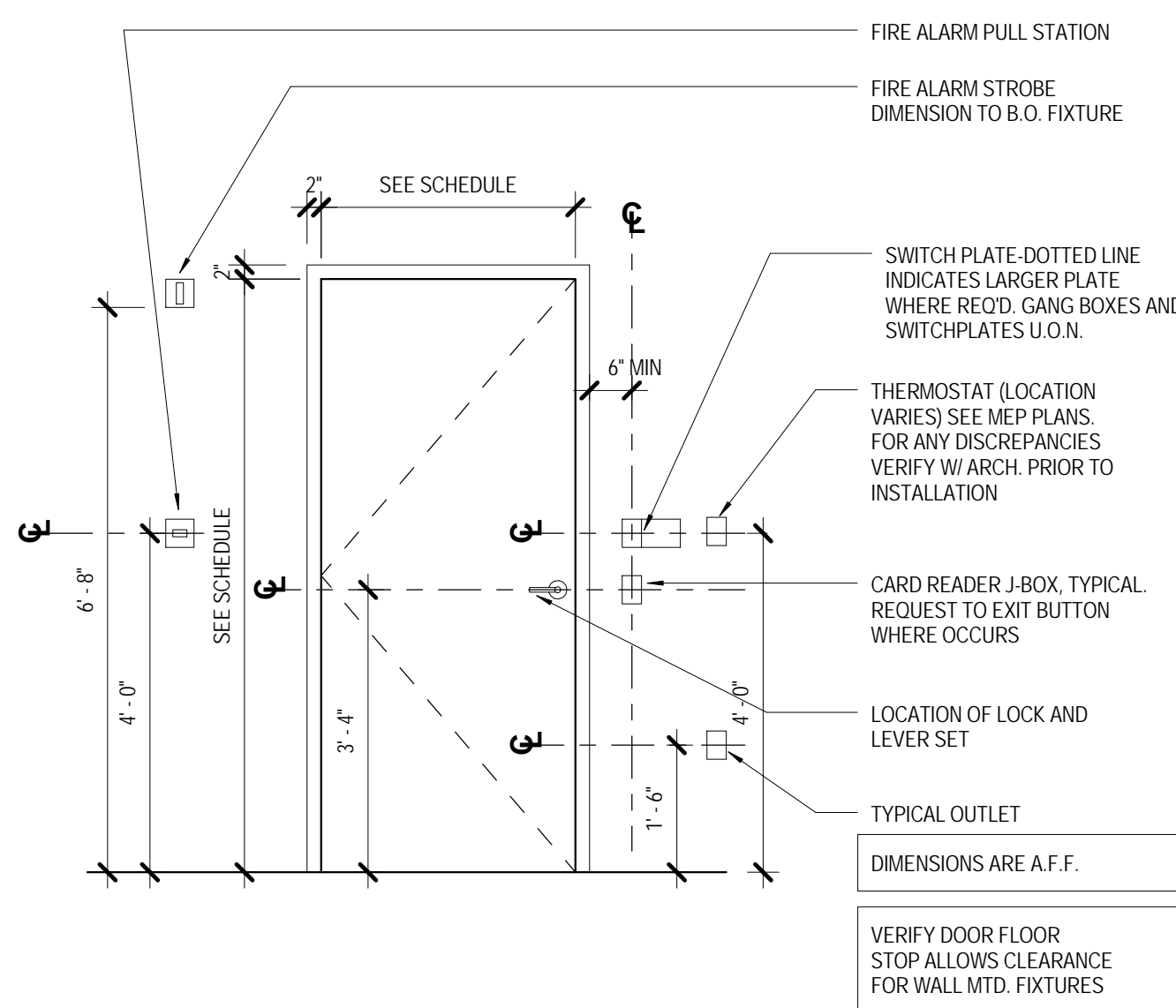
JAMB DETAIL

42 DOOR DTL - HM FRAME

$$3^{\circ} = 1^{\circ} - 0^{\circ}$$

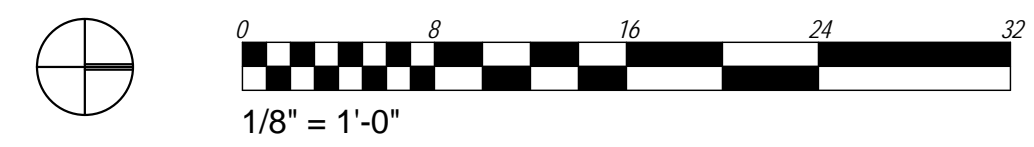
DOOR TYPE ELEVATIONS

3/8" = 1'-0"



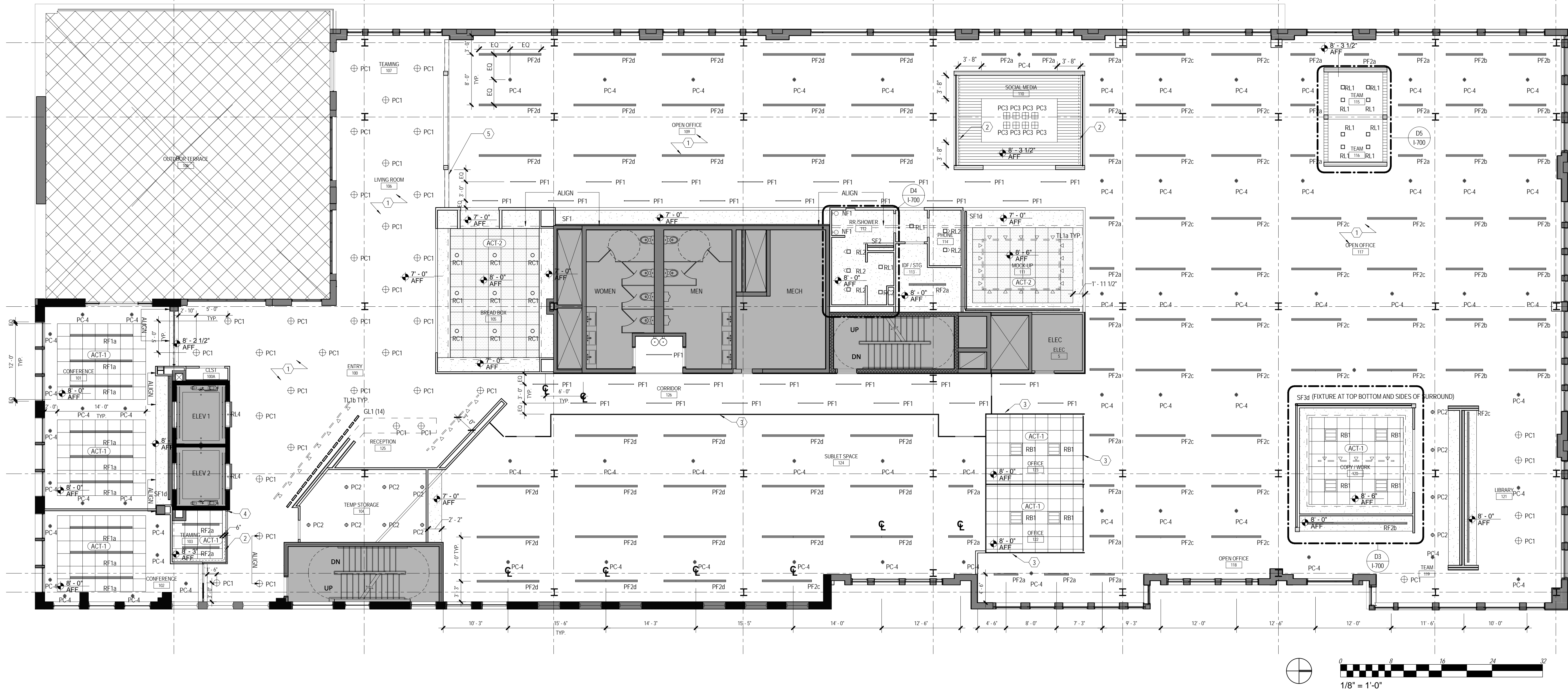
DOOR - TYPICAL MOUNTING HEIGHTS

1/2" = 1'-0"



1. PARTITIONS TO BE TYPE 1, U.O.N. REFERENCE PARTITION TYPES AND DETAILS.
2. TANTUM BUILT OUT TO CONFORM TO ALL APPLICABLE CODES IN WASHINGTON DC, INCLUDING ADA.
3. LIVING, DINING, INCLUDING COUNTERS, WASH SINK, CASE, CUPBODIES AND ANY OTHER ITEMS TO COMPLY FULLY WITH ADA.
4. PARTITIONS TO BE PARALLEL OR PERPENDICULAR TO EXTERIOR PERIMETER OF WALL, U.O.N. ITEMS.
5. PARTITIONS SHALL BE CONTIGUOUS TO EXISTING PARTITIONS ARE TO ALIGN WITH EXISTING PARTITIONS, U.O.N. DOORS AND FRAMES ARE TO BE 6" FROM ADJACENT PARTITION, U.O.N.
6. DOORS AND WINDOWS SHOULD MEET THE SIGHT RATING OF THE WALLS IN WHICH THEY ARE LOCATED.
7. COLUMNS ARE TO BE FURRED OUT AS PER TYPE.
8. REQUIRED CEMENTATION IS INCLUDED TO MAKE THIS PLAN EXECUTABLE.
9. THE SIGNAGE AND VESSEL ARE TO BE SEPARATE FROM THE PARTITIONS AND SMOKE BARRIERS SHALL BE DESIGNATED ABOVE CEILING AND ON THE INSIDE OF ALL CEILING ACCESS DOORS WHICH PROVIDE ACCESS TO SUCH FIRE RATED ASSEMBLIES BY SIGNAGE HAVING LETTERS NO SMALLER THAN 1 INCH AND SHALL INDICATE RATING AND TYPE OF ASSEMBLY AND BE PROVIDED AT HORIZONTAL INTERVALS OF NO MORE THAN 5 FEET, EXAMPLE: "ONE HOUR FIRE PARTITION"
10. AREAS NOT UNDER CONSTRUCTION, BUT AFFECTED BY CONSTRUCTION INCLUDING LOBBIES AND CORRIDORS, ARE TO BE COVERED BY FLOORS ADJACENT TO CONSTRUCTION WITH PROTECTIVE MATERIAL. DUST BARRIERS SHALL BE ERRECTED WHERE NECESSARY FOR ADDED PROTECTION.
11. PROVIDE FIRE RETARDANT BLOCKING IN ALL PARTITIONS REQUIRING MILLWORK.
12. THE CORE, CORE, PARTITIONED PARTITIONS, AND EXISTING PARTITIONS TO REMAIN ARE TO BE PATCHED, REPAIRED, AND SKINNED AS NECESSARY TO BE "PAINT READY".

DATE	DESCRIPTION
11.08.2012	ISSUE FOR PERMIT/OWNER REVIEW
12.12.2012	ISSUE FOR BID



REFLECTED CEILING PLAN - LEGEND				
TYPE	MFR.	MFR. #	DESCRIPTION	NOTES
ACT-1	---	---	24" X 24" ACOUSTIC CEILING TILE	SEE FINISH SCHEDULE
ACT-2	---	---	24" X 24" METAL CEILING TILE	SEE FINISH SCHEDULE
GWB	---	---	PAINTED GYPSUM BOARD CEILING	
GL1	---	---	RECESSED FLOOR @ FEATURE WALL	
NF1	---	---	RECESSED WALL @ MIRROR	
PC1	---	---	PENDANT CEILING @ ENTRY AND LIBRARY	
PC1b	---	---	PENDANT CEILING @ ENTRY AND LIBRARY	
PC2	---	---	PENDANT @ STORAGE	
PC3	---	---	PENDANT @ SOCIAL MEDIA	
PC4	---	---	PENDANT CEILING @ OPEN OFFICE & TENANT	
PF1	---	---	LINEAR PENDANT @ CORRIDORS	
PF2a	---	---	LINEAR PENDANT @ OPEN OFFICE	
PF2b	---	---	LINEAR PENDANT @ OPEN OFFICE	
PF2c	---	---	LINEAR PENDANT @ OPEN OFFICE	
PF2d	---	---	LINEAR PENDANT @ OPEN OFFICE	

REFLECTED CEILING PLAN - LEGEND (CONT.)				
TYPE	MFR.	MFR. #	DESCRIPTION	NOTES
RB1	---	---	2X2 RECESSED	
RC1	---	---	RECESSED DOWNLIGHT @ PANTRY	
RC2	---	---	RECESSED DOWNLIGHT @ SHOWER	
RF1a	---	---	LINEAR RECESSED	
RF2a	---	---	LINEAR RECESSED	
RF2b	---	---	LINEAR RECESSED	
RF2c	---	---	LINEAR RECESSED	
RL1	---	---	RECESSED LED DOWNLIGHT	
RL2	---	---	RECESSED LED WALL WASHER	
RL3	---	---	RECESSED LED ADJUSTABLE	
RL4	---	---	RECESSED LED WALL DOWNLIGHT	
SF1	---	---	COVE LIGHT	
SF1d	---	---	COVE LIGHT	
SF2	---	---	UPLIGHT @ LOCKERS	
SF3d	---	---	COVE LIGHT @ LIBRARY	
TL1a	---	---	TRACK LIGHT	TO BE USED WITH T1/T12 TRACK PER CEILING CONDITION
TL1b	---	---	TRACK LIGHT	TO BE USED WITH T1/T12 TRACK PER CEILING CONDITION

NOTE: REFER TO LIGHTING FIXTURE SCHEDULE SPECIFICATIONS AND ENGINEER'S DRAWINGS FOR ADDITIONAL INFORMATION.

REFLECTED CEILING PLAN - SHEET NOTES

- ALL LIGHT FIXTURES TO BE COORDINATED WITH EXISTING CEILING JOIST LOCATIONS. WHERE CONFLICTS OCCUR GC TO REVIEW IN FIELD WITH ARCHITECT PRIOR TO INSTALLATION.
- PROVIDE CURTAIN TRACKS #88001 S-R001 DRAPERY TRACK AT NOTED LOCATIONS. REFER PARTITION TYPES FOR DETAILS.
- COORDINATE BULKHEAD LOCATIONS FOR DEMOUNTABLE FURNITURE SYSTEMS WITH ARCHITECT.
- BULKHEAD OF TEAMING PARTITION TO BE SET BACK 6" FROM FACE OF ELEVATOR WALL.
- STEEL BEAM SEE STRUCTURAL DETAILS FOR ADDITIONAL INFORMATION. FINISHED TO MATCH MTL-1.

REFLECTED CEILING PLAN - GENERAL NOTES

- LIGHTS, FIXTURES, EXIT SIGNS AND OTHER CEILING ACCESSORIES ARE SHOWN FOR FIXTURE TYPE AND LOCATION ONLY. REFER TO ENGINEERING DRAWINGS FOR INFORMATION ON POWER REQUIREMENTS, CIRCUITING SWITCHING, FIXTURE SPECIFICATIONS AND EMERGENCY LIGHTING.
- REFER TO ENGINEER'S DRAWINGS FOR LOCATIONS OF EXHAUST FANS, STROBES, EXIT LIGHTS, GRILLS, EMERGENCY LIGHTS, SMOKE DETECTORS, ETC.
- IF ANY DISCREPANCY EXISTS BETWEEN DRAWINGS AND FIELD OR ARCHITECTURAL AND ENGINEERING DRAWINGS, NOTIFY ARCHITECT IMMEDIATELY.
- ALL CEILING HEIGHTS TO BE AT 8'-0" AFF. U.N.O.
- VERIFY ALL START, STOP AND ORIG. POINTS OF ACT CEILING GRID.
- GANG MULTIPLE SWITCHES WITH SINGLE COVER PLATE MOUNT. ALL COVER PLATES TO BE -WHITE-. DIMMABLE SWITCH DEVICES TO BE ROCKER TYPE (LUTRON DECOR OR EQUAL). DIMMER SWITCHES TO BE SLIM PROFILE SLIDE TYPE.
- SPRINKLER HEADS AND SPRINKLER LINES ARE TO BE LOCATED SO THAT THEY WILL NOT COME IN CONFLICT WITH THE LIGHTS AS SHOWN ON THE PLAN.
- SPRINKLER HEADS INSTALLED IN ACT CEILING SHALL BE SEMI-RECESSED. SEMI-RECESSED HEADS SHALL BE -WHITE-. SPRINKLER HEADS INSTALLED IN GWB CEILINGS SHALL BE FULLY RECESSED. COVER PLATES SHALL BE -WHITE-.
- ANY CUT ACT TILE OR EXPOSED EDGES SHALL BE TREATED WITH AN ARMSTRONG OR EQUAL CEILING PANEL TOUCH-UP PAINT.
- EXIT DEVICES TO BE CENTERED ON HALLWAY OR OPENING AND IN CENTER OF ACT IF APPLICABLE. U.N.O.
- PAINT EXPOSED DUCTS, CABLES, J-BOXES, SPRINKLER PIPES, AND OTHER EQUIPMENT TO MATCH CEILING.
- ACOUSTICAL CEILING TILE (EXCEPT AT ANGLED FACES) TO BE FULL 2X2 TILE, WHERE POSSIBLE.
- LIGHT FIXTURES TO BE UL RATED.
- ACCESS PANELS ARE NOT PERMITTED TO BE LOCATED WITHIN GWB CEILINGS. WHERE REQUIRED REVIEW WITH ARCHITECT.
- COORDINATE ALL LOCATIONS AND HEIGHTS OF T-STATS WITH SWITCH LOCATIONS. REVIEW ALL LOCATIONS OF WITH ARCHITECT AT TIME OF ROUGH-IN.

EQUIPMENT SCHEDULE						
TAG	DESCRIPTION	MANUFACTURER	MODEL	COMMENTS	PROCURED BY	
OFFICE EQUIPMENT						
BP	BREAD PAN	MAGNA INDUSTRIES	SINGLE BREAD PAN FOLDED END-MA-13730	ABLE KITCHEN.COM - 16"X4"X 4"D ALUMINIZED STEEL- PROVIDE (2) S.S. "S" HOOKS FOR EACH PAN	G.C.	
BR	BAKERS RACK	WINCO	ALRK-10 TIER ED ALUMINUM RACK	39H 20.25"W 26"D- PROVIDE 10 SHEET PANS WITH EACH RACK	G.C.	
CO	COPPER/PRINTER COLOR	TBD			TENANT	
PL	LARGE FORMAT PRINTER	TBD			TENANT	
TL	LARGE WALL MTD FLAT SCREEN TV	TBD			TENANT VENDOR	
TM	MEDIUM WALL MTD FLAT SCREEN TV	TBD			TENANT VENDOR	
PANTRY						
CM	COFFEE MAKER	TBD			TENANT	
DW	DISHWASHER	FISHER & PAYKEL	D024D7- REQUIRES CUSTOM PANELS	CUSTOM MILLWORK FRONT TO MATCH ADJACENT MILLWORK	G.C.	
FR	FREEZER	MEILE	F 1411 V- ACCEPTS CUSTOM PANEL	CUSTOM MILLWORK FRONT TO MATCH ADJACENT MILLWORK	G.C.	
IM	ICE MACHINE	U LINE ORIGINS SERIES	BR8	NO DRAIN REQUIRED		
MW	MICROWAVE	PANASONIC	NW-SN661S	STAINLESS STEEL		
R	REFRIGERATOR	MEILE	K 1901 V- ACCEPTS CUSTOM PANEL	CUSTOM MILLWORK FRONT TO MATCH ADJACENT MILLWORK	G.C.	
SF	SODA FOUNTAIN	TBD			TENANT	
T	TOASTER OVEN	TBD			TENANT	
WC	WATER COOLER	PURE WATER TECHNOLOGIES	WATERMATIC	BLACK	G.C.	
WI	WINE REFRIGERATOR	AVANTI	WC400SS 40 BOTTLE	CLEAR GLASS FRONT- SS TRIM	G.C.	
PLUMBING						
L	LOCKER	HOLLMAN	Z LOCKER-LAMINATE SERIES	DIGI LOCK	G.C.	
P1	UNDERMOUNTED SINK W/ FAUCET & GARBAGE DISPOSAL			SEE PLUMBING FIXTURE SCHEDULE FOR DETAILS		
P2	UNDERMOUNTED STAINLESS STEEL SINK W/ FAUCET & GARBAGE DISPOSAL			SEE PLUMBING FIXTURE SCHEDULE FOR DETAILS		
P4	TOILET SEAT & FLUSH VALVE- ADA			SEE PLUMBING FIXTURE SCHEDULE FOR DETAILS		
P5	SHOWER SURROUND INCLUDING ADA COMPLIANT GRAB BARS, CONTROLS & FOLDING SEAT			SEE PLUMBING FIXTURE SCHEDULE FOR DETAILS		
R1	42" GRAB BAR	BOBRICK				
R2	36" GRAB BAR	BOBRICK				
R3	18" GRAB BAR	BOBRICK				
R4	RECESSED PAPER TOWEL DISPENSER/WASTE RECEPTACLE	BOBRICK				
R5	RECESSED TOILET PAPER DISPENSER	BOBRICK				

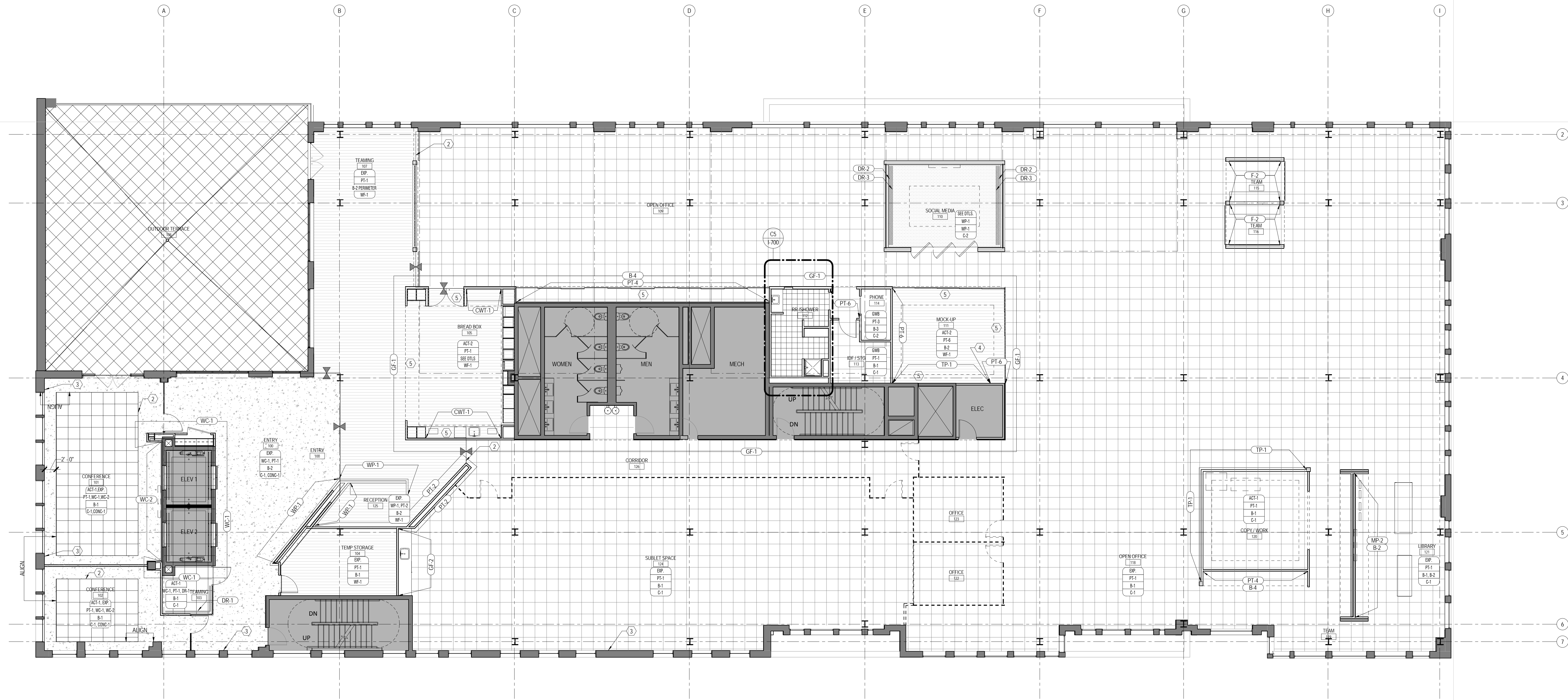
DATE	DESCRIPTION
12/14/2012	ISSUE FOR BID

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FINISH PLAN
STAMP

PROJECT NO.
12021.00
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Author
SCALE:
1/8" = 1'-0"
DATE:
11.27.2012
DWG. NO.

I-401



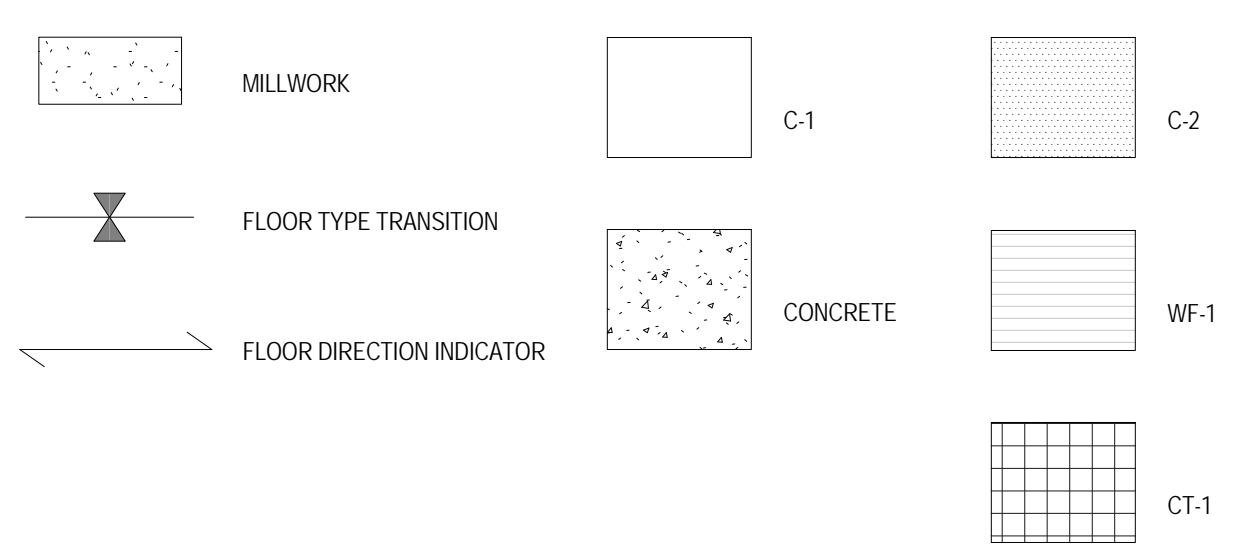
DESIGNATION	DESCRIPTION	MANUFACTURER	PRODUCT	FINISH SCHEDULE COLOR	FINISH	SIZE	COMMENT
CEILING							
ACT-1	ACOUSTIC CEILING TILE	ARMSTRONG	2'X2' X1" OPTIMA 3251	WHITE-FINE TEXTURE	SQUARE REGULAR 9/16" GRID		
ACT-2	ACOUSTIC CEILING TILE	TBD	PERFORATED ACOUSTIC TILE	PTD TO MATCH ADJACENT GWB BULKHEAD			
FLOORING							
C-1	CARPET	BOLYU	RUSH	RSHE7 COAL SPARK		24"X34"	PROVIDE CUSHION BACKING- MONOLITHIC INSTALLATION
C-2	CARPET	TRETFORD	CARPET TILE	580 LETTUCE LEAF		19 11/16" X 19 11/16"	SOCIAL MEDIA/TELEPHONE ROOM
C-3	CARPET						
CFT-1	CERAMIC FLOOR TILE	CEASAR CERAMICHE	PORCELAIN TILE	D SIGN-SKYLINE		12"X12"	FLOOR, WALL TILE AND CUT BASE @ RESTROOM
CONC-1	SEALED CONCRETE	N/A	SEE SPECIFICATIONS				EXISTING CONCRETE FLOORING TO BE SEALED. REFER TO SPECIFICATIONS
WF-1	WOOD FLOOR	EXISTING WOOD SUB FLOOR	TBD	STAIN AND SEALER TO BE SELECTED			EXISTING WOOD FLOOR- REFER TO SPECIFICATIONS
GLASS							
GL-1	3/8" TEMPERED	N/A				VARIES	CONFERENCE ROOM-SOCIAL MEDIA-TEAMING DOORS
MILLWORK							
MP-1	METAL PANEL	MCNICHOLS	PERFORATED METAL	STEEL	16 GA	3/16" RD 5/16 STG	PERF METAL PANEL
MP-2	METAL PANEL	MCNICHOLS	PERFORATED METAL HANGING PANEL	STEEL	20 GA	PS/CR V4RD	PERF METAL LIBRARY WALL- PAINTED PT-1 SHOP APPLIED FINISH
PL-1	PLASTIC LAMINATE	FORMICA	COLOR CORE	7223-MC	NEW WHITE MICRODOT FINISH		PANTRY MILLWORK
SS-1	SOLID SURFACE	RICHLITE	NORTHWEST	BLACK DIAMOND		VARIES	PROVIDE RICHLITE COLOR ENHANCER FINISH- REFER TO MANUFACTURER'S INSTRUCTIONS
WD-1	LAQUERED MDF	MILLWORKER	3/4" MDF	PT-3	HIGH GLOSS		
WALL							
B-1	VINYL WALL BASE	JOHNSONITE	VINYL BASE	29 MOON ROCK		2 1/2"	TYPICAL BASE
B-2	MDF WALL BASE	MILLWORKER	5/8" MDF	TO MATCH PARTITION COLOR WHERE APPLIED	SEMI GLOSS	2 1/2"	ENTRY/RECEPTION
B-3	VINYL WALL BASE	JOHNSONITE	VINYL BASE	103 SPROUT		2 1/2"	TEL ROOM
B-4	VINYL WALL BASE	JOHNSONITE	VINYL BASE	83 MIDNIGHT		2 1/2"	ACCENT WALLS
CWT-1	SUBWAY TILE	DALTILE	RITTENHOUSE SQUARE	DAL TILE	MATTE	3"X6"	PANTRY- PROVIDE GROUT COLOR CHART FOR SELECTION
CWT-2	MOSAIC TILE	DALTILE	1"X1" PENNY ROUND	D617 ARCTIC WHITE	GLOSSY	1"X1"	RESTROOM- PROVIDE GROUT COLOR CHART FOR SELECTION
DR-1	Drapery	KNOLL	D1469/2	FIZZ		59" INCHES	TEAMING SHEER
DR-2	Drapery	KNOLL	D1469/3	NEXT WAVE		59" INCHES	SOCIAL MEDIA SHEER
DR-3	Drapery	KNOLL	K1325/4	SHALE		55" INCHES	SOCIAL MEDIA PRIVACY DRAPERY
F-1	FELT	FILZ FELT	DESIGN FELT	170 GRAY	3MM	70 3/4" WIDTH	SINGLE LAYER OF 3MM GREY FELT- BY THE YARD
F-2	FELT	FILZ FELT	PERFORATED PANEL	170 GRAY	ROUND PERFORATED	68"X96" SHEETS	DOUBLE LAYER OF FELT. 5MM PERFORATED GREY FELT ON EXTERIOR W/SINGLE LAYER OF F-3 FELT BEHIND.
F-3	FELT	FILZ FELT	DESIGN FELT	272 BLUE	3MM	70 3/4" WIDTH	SINGLE LAYER OF 3MM GREY FELT- BY THE YARD
GF-1	GRAPHIC- APPLIED VINYL	RJF INTERNATIONAL CORP.	KOROGRAPHICS	CHAMOIS MATTE WHITE	MATTE	54" WIDE	CORE GRAPHICS REFER TO SPECIFICATIONS AND GRAPHICS PACKAGE FOR ARTWORK. ALL PARTITIONS SCHEDULED FOR GRAPHIC TO MEET MANUF. GUIDELINES FOR SURFACE PREP.
GF-2	GRAPHIC- APPLIED VINYL	RJF INTERNATIONAL CORP.	KOROGRAPHICS	CHAMOIS MATTE WHITE	MATTE	54" WIDE	SUBLET PANTRY- REFER TO SPECIFICATIONS- ARTWORK TBD
MTL-1	METAL FINISH	EXPOSED STEEL	PER SPEC	PER SPEC	PER SPEC	PER SPEC	AT PARTITION TYPE 6
PT-1	PAINT	BEN MOORE	2124-70	DISTANT GRAY	PER SPEC		TYPICAL PAINT COLOR
PT-2	PAINT	BEN MOORE	AC-26	OZARK SHADOWS	PER SPEC		EXPOSED CEILING, DUCT WORK - ACCENT WALL
PT-3	PAINT	BEN MOORE	2018-20	ORANGE	PER SPEC		ACCENT- PANTRY MILLWORK
PT-4	PAINT	BEN MOORE	2064-10	BOLD BLUE	PER SPEC		ACCENT WALL
PT-5	PAINT	BEN MOORE	2027-20	SPRING MOSS	PER SPEC		ACCENT WALL
PT-6	PAINT	BEN MOORE	HC-166	KENDALL CHARCOAL	PER SPEC		ACCENT WALL
TP-1	TACK PANEL	WALLTALKER	C250-82	QUARRY		48" WIDTH	LIBRARY TAC WALL
WB-1	WHITE BOARD	HIGHTOWER	CHAT BOARD SERIES- CB600	P03 METAL TAUPE		35.4" HX47.2"W	MAGNETIC GLASS BOARD
WC-1	WALLCOVERING	MDC	W2TD01/4708	TA DOT	SUGAR RUSH		ELEVATOR CORE
WC-2	WALLCOVERING	MDC	W2TD01/4708	TA DOT	THE MINIMALIST		CONFERENCE ROOM ACCENT
WC-3	WALLCOVERING	TBD					RESTROOM WALLCOVERING
WP-1	WOOD PANELING-CUSTOM BLOCK PANELS	PIONEER MILLWORK	ANTIQUE HEART PINE & STANDARD PINE			VARIES	FEATURE WALL, RECEPTION DESK, SOCIAL MEDIA, TEAMING & LIBRARY

FINISH - GENERAL NOTES & LEGEND

- FINISHES TO BE OF THE SAME PRODUCTION RUN.
- REFER TO SPECIFICATIONS FOR ADDITIONAL FINISH INFORMATION.
- PROVIDE TRANSITION STRIPS AND THRESHOLDS AS REQUIRED. ARCHITECT TO APPROVE.
- FINISH LOCATIONS AND START/STOP POINTS TO BE REVIEWED WITH ARCHITECT IN FIELD PRIOR TO INSTALLATION.
- REFER TO ELEVATIONS FOR ADDITIONAL INFORMATION.
- ROOMS TO HAVE BELOW FINISH DESIGNATION UNLESS OTHERWISE NOTED.

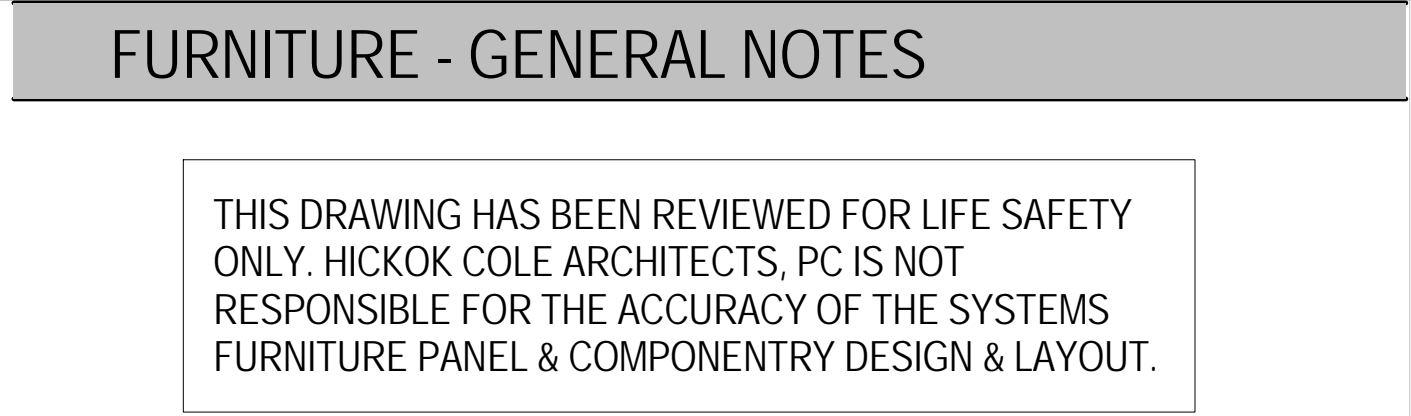
(ACT-1) CEILING
(PT-1) WALL FINISH
(B-1) BASE
(C-1) FLOOR FINISH

FINISH - LEGEND



FINISH - SHEET NOTES

- G.C. TO REVIEW CONDITION OF EXISTING CONCRETE & TONGUE AND GROOVE WOOD FLOOR TO REMAIN WITH ARCHITECT PRIOR TO WORK. PROTECTION MUST BE MAINTAINED OF THESE AREAS DURING CONSTRUCTION.
- PROVIDE CUSHION HARDWARE AND/OR ALUMINUM CARPET TRIM MODEL NUMBER FT29-9G FOR ALL CARPET TO WOOD & CONCRETE FLOORING CONDITIONS.
- NO BASE TO BE APPLIED TO EXPOSED BRICK WALL CONDITIONS.
- PROVIDE 1/2" ALUMINUM VERTICAL EDGE TRIM TO ABUTT TAC WALL AND PT-6 PAINT FINISH.
- GWB BULKHEAD TO BE PAINTED PT-6.



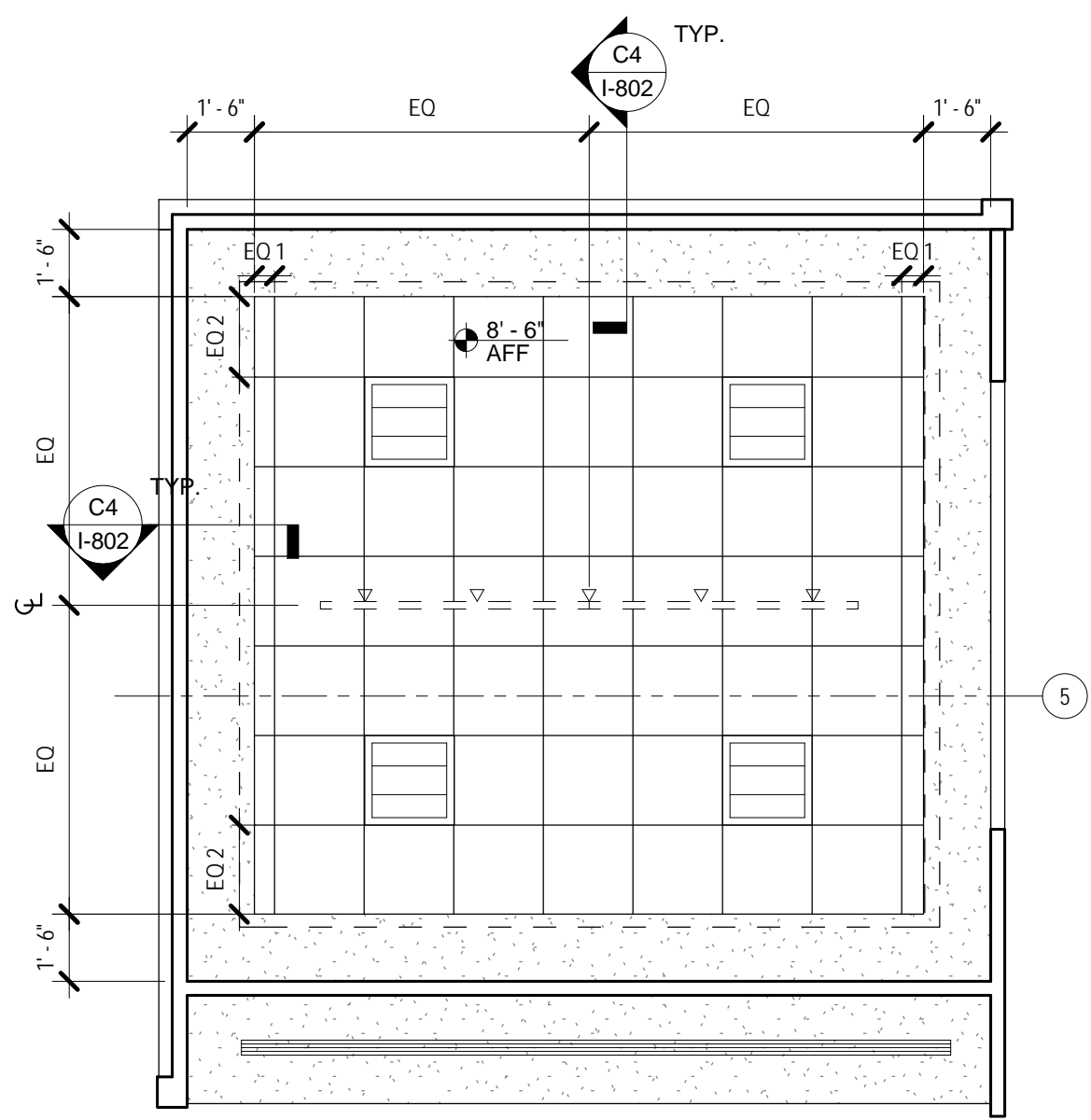
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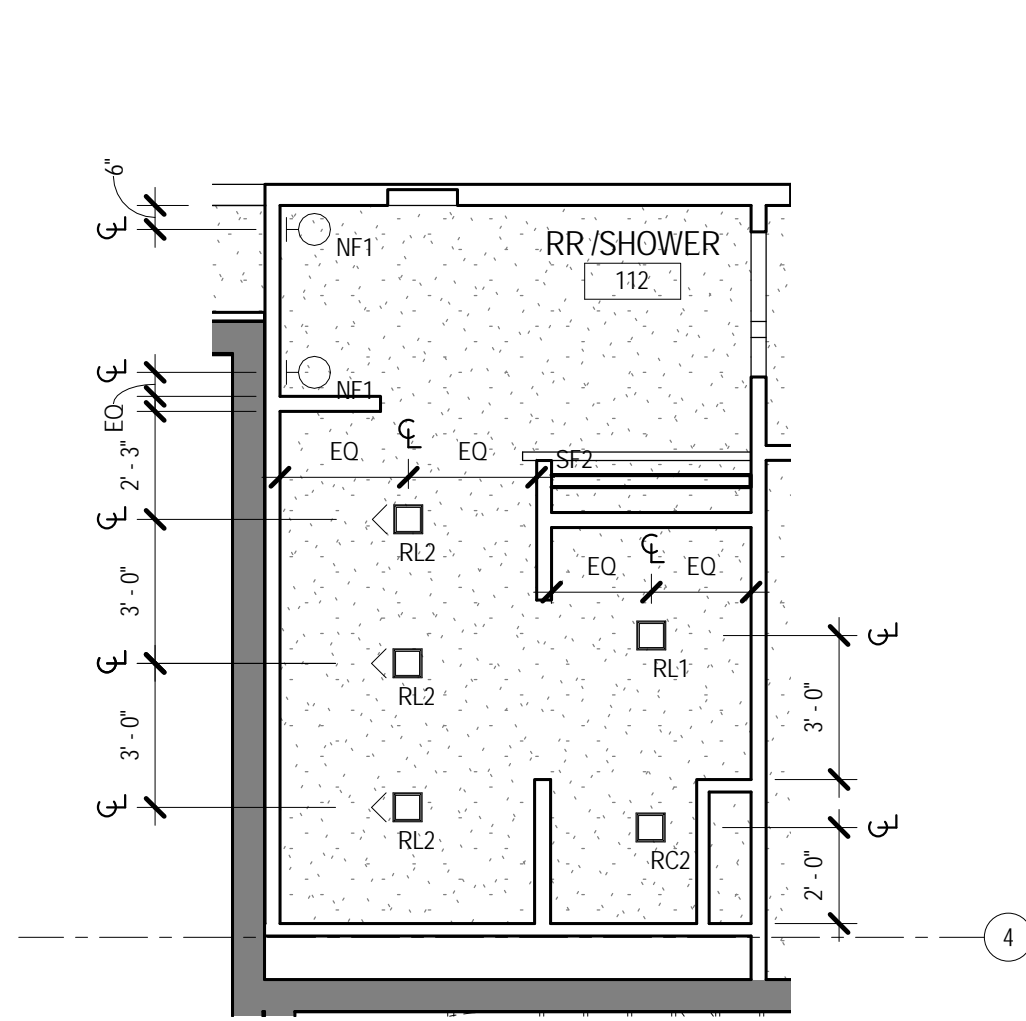
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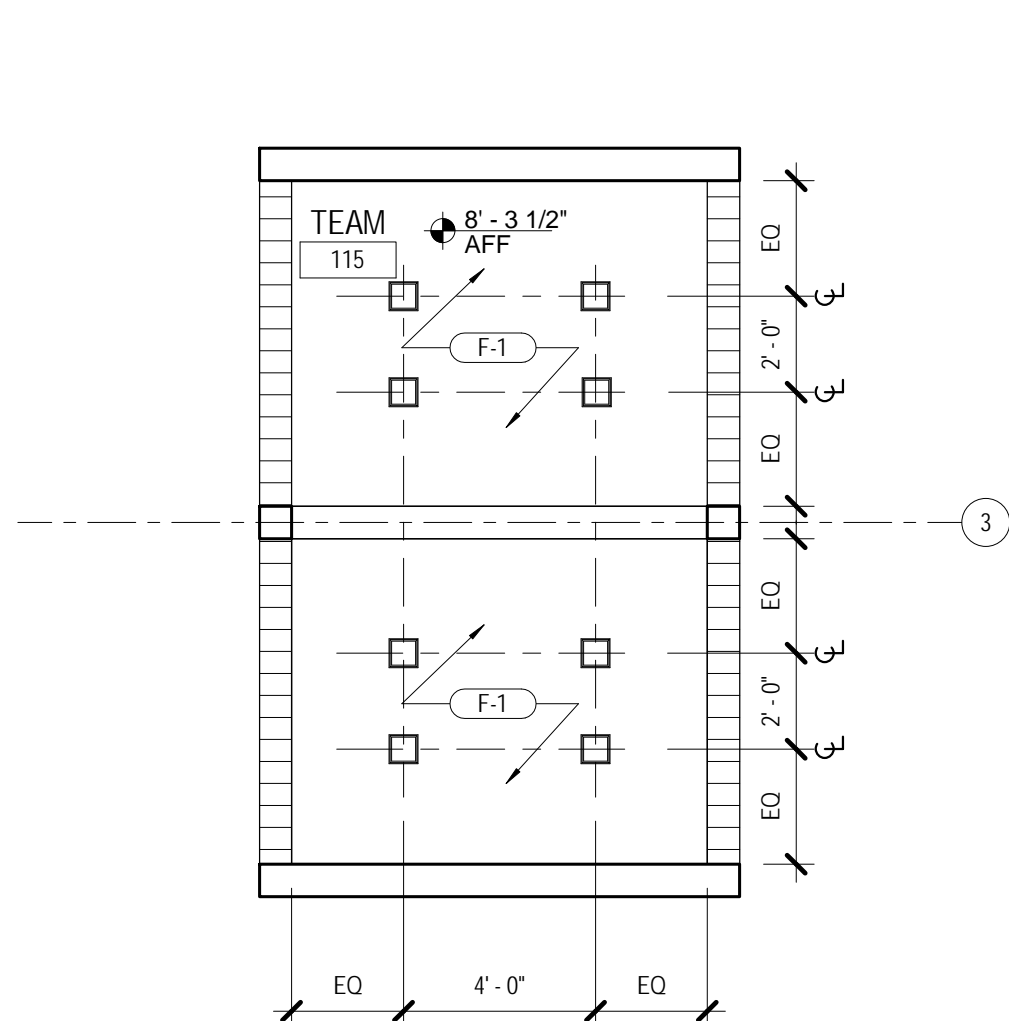
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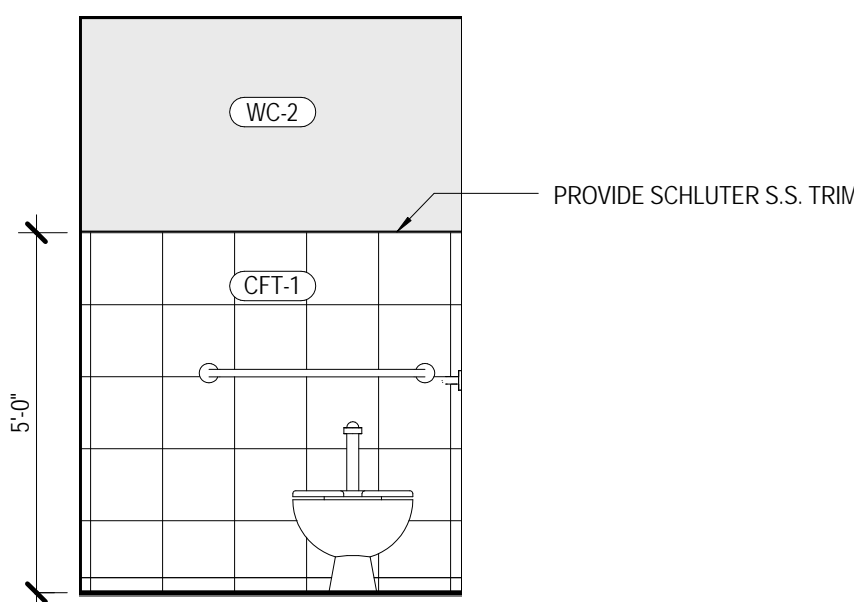
D3 ENLARGED RCP - COPY/WORK 120
1/4" = 1'-0"



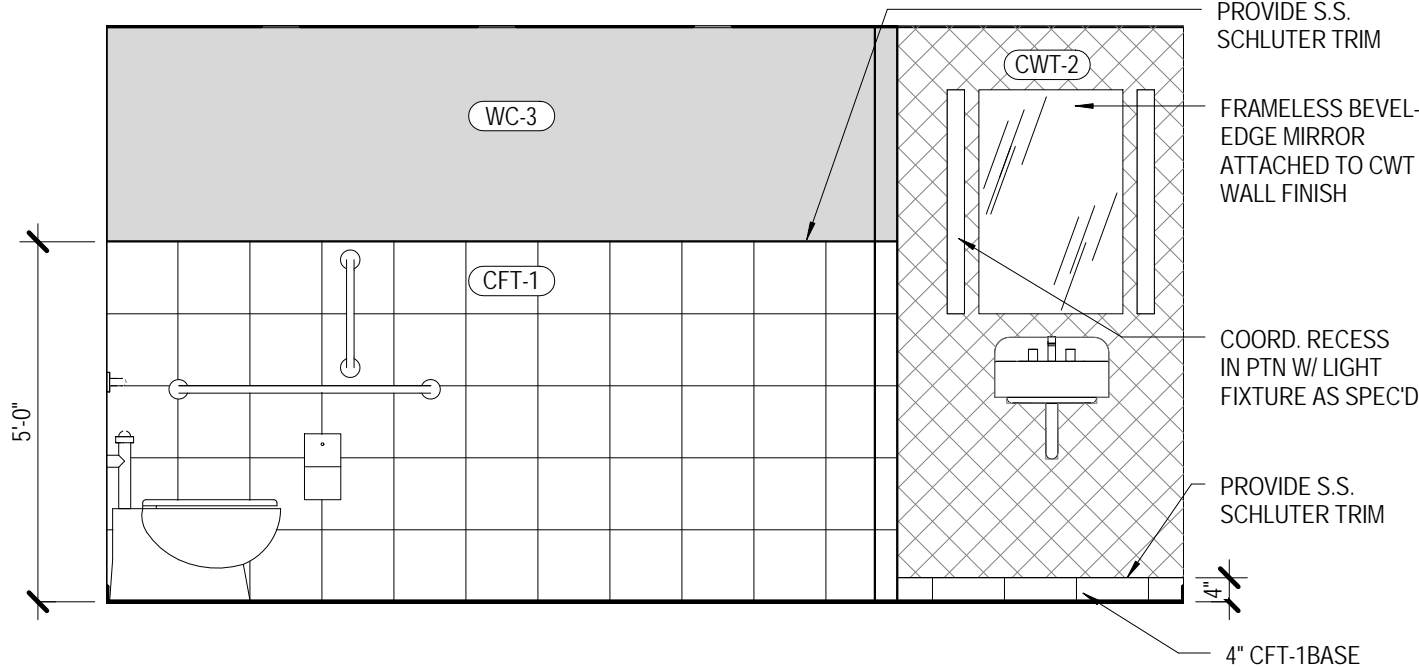
D4 ENLARGED RCP - RESTROOM 112
1/4" = 1'-0"



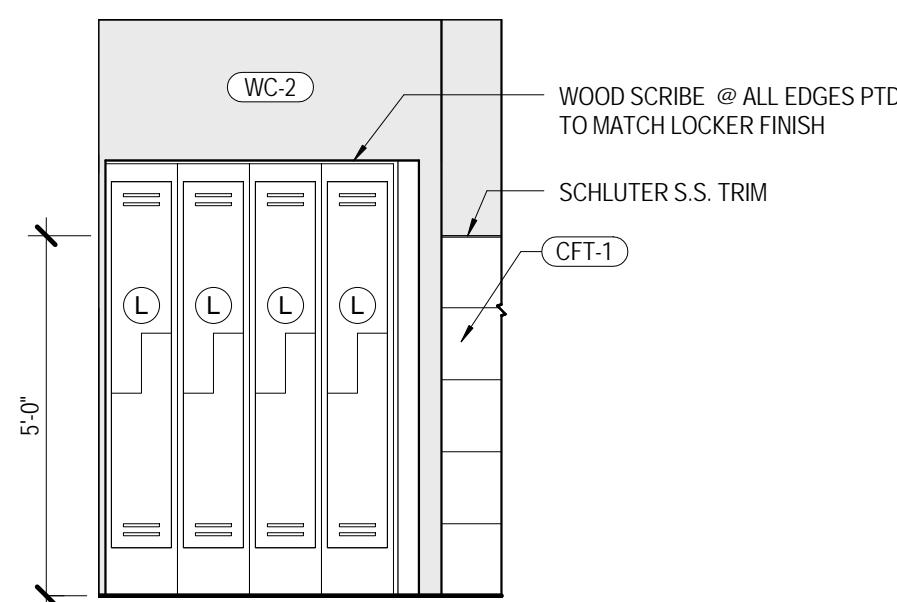
D5 ENLARGED RCP - TEAM ROOM 115
1/4" = 1'-0"



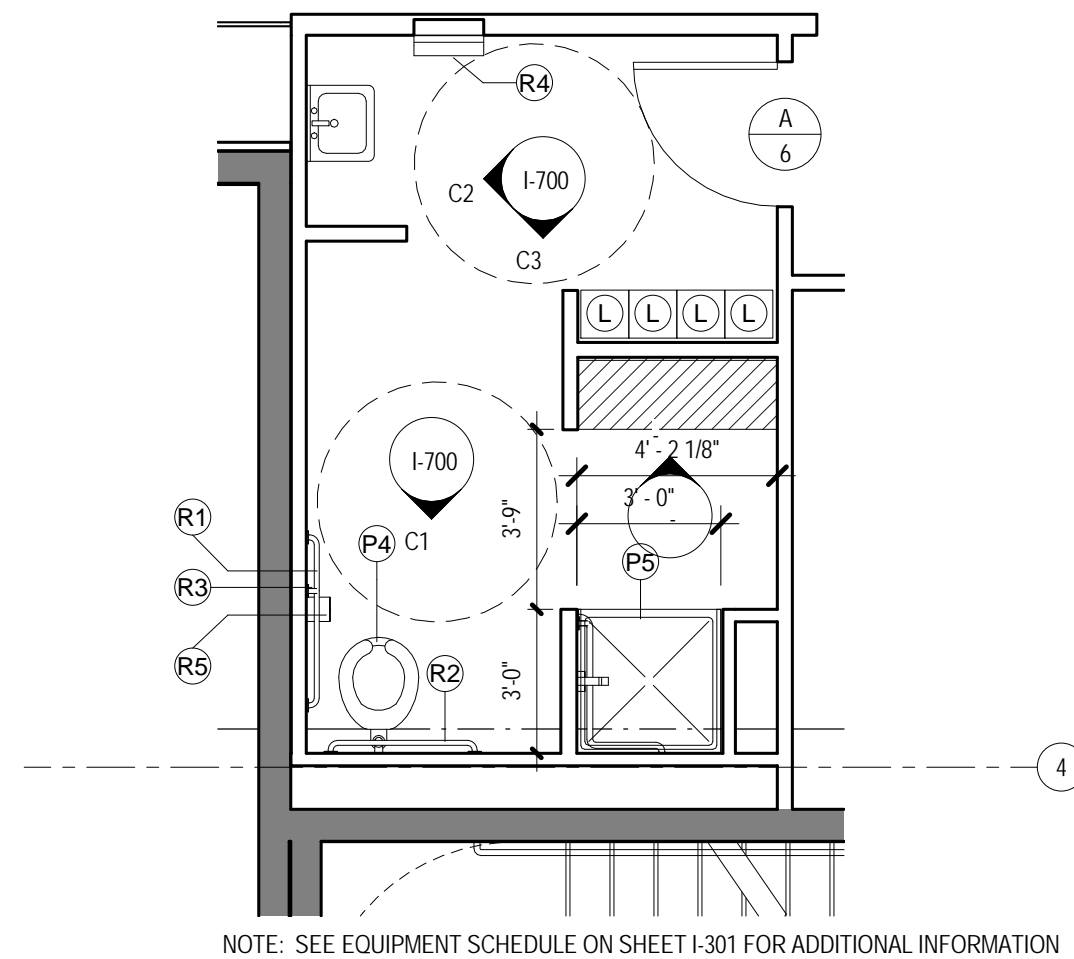
C1 ELEV - W.C.
3/8" = 1'-0"



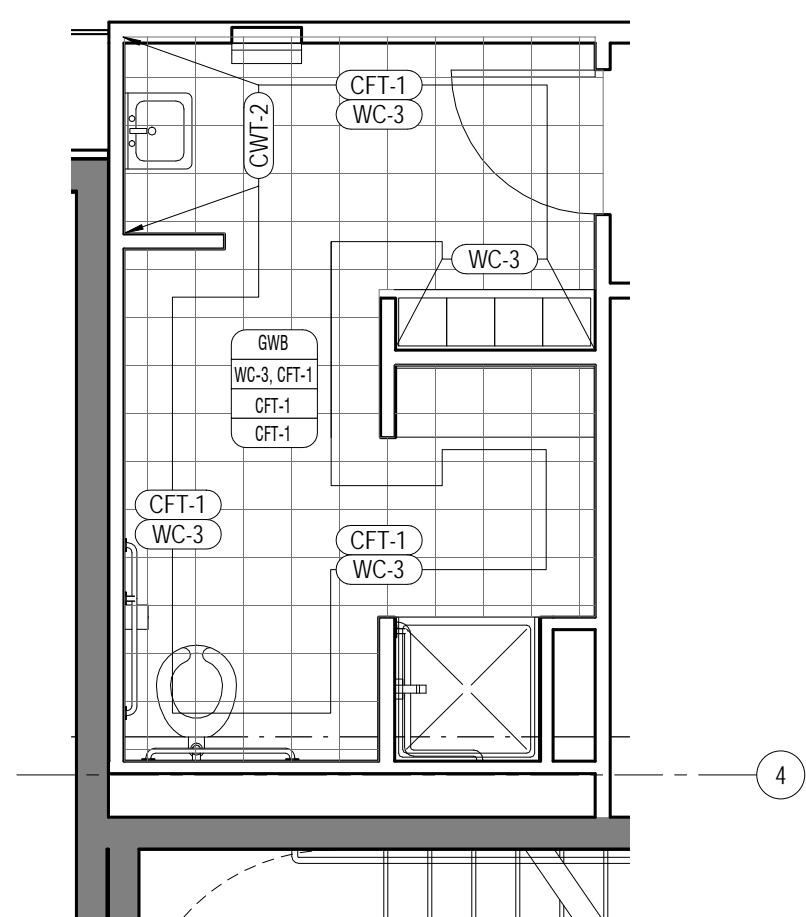
C2 ELEV - RESTROOM - SOUTH
3/8" = 1'-0"



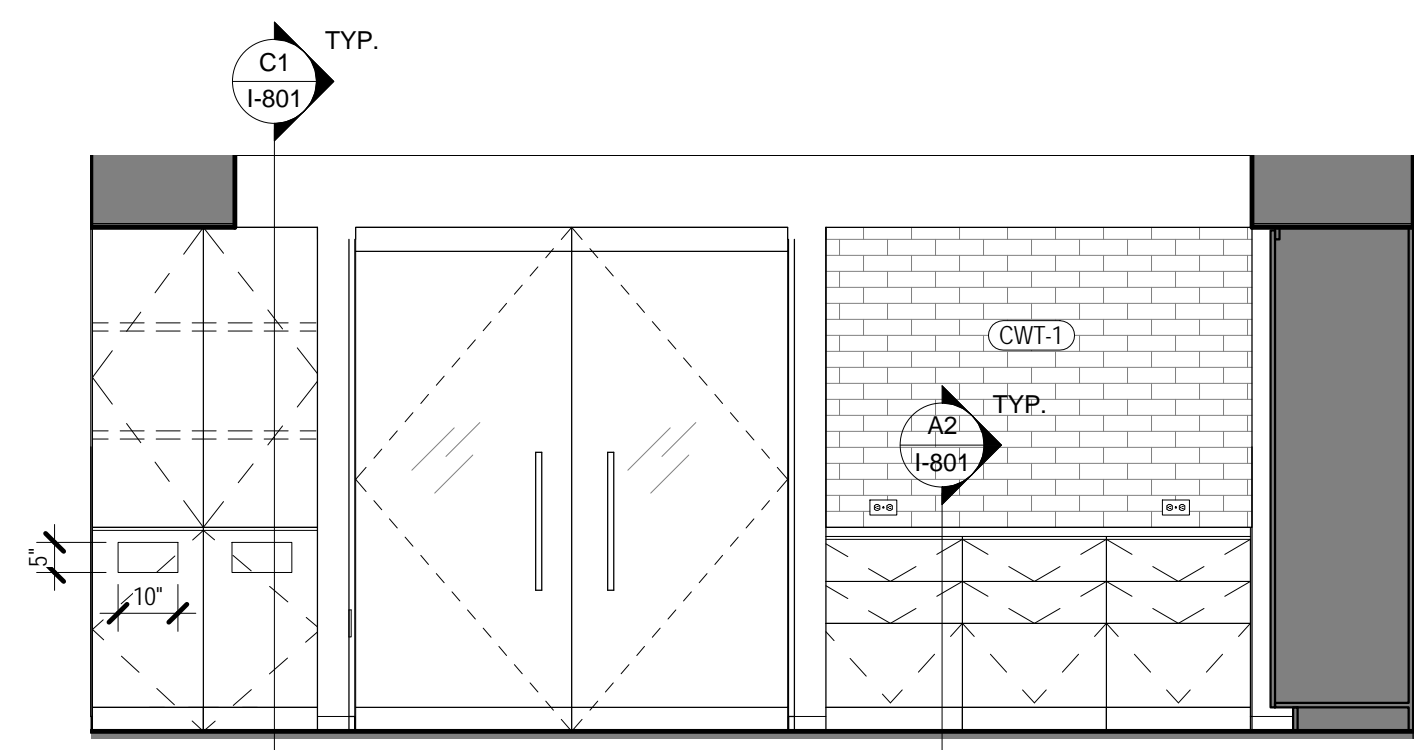
C3 ELEV - RESTROOM - EAST
3/8" = 1'-0"



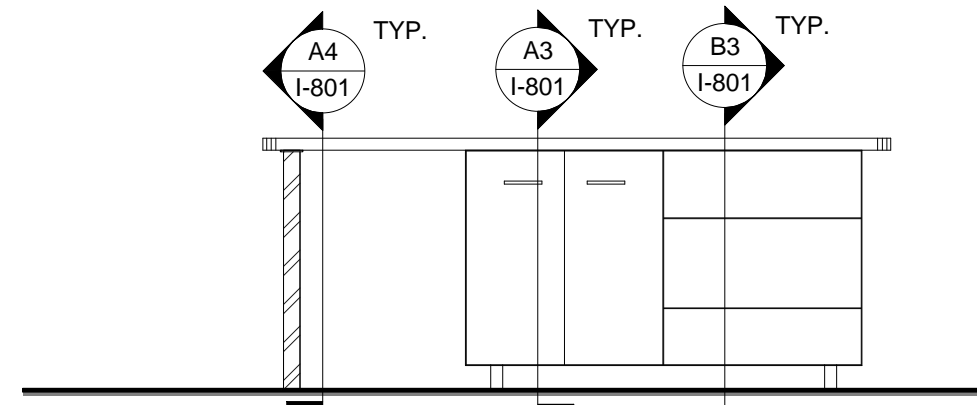
C4 ENLARGED PLAN - RESTROOM
1/4" = 1'-0"



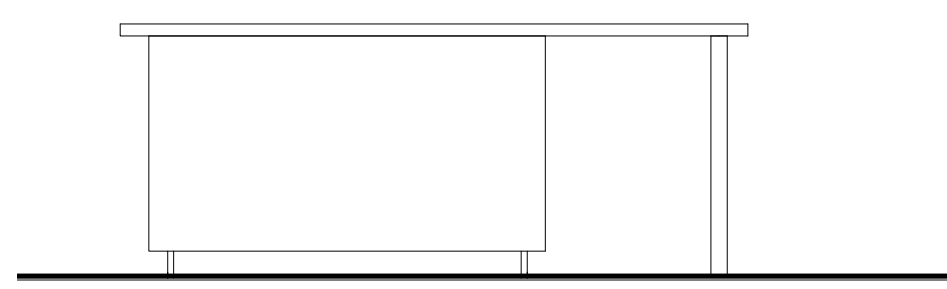
C5 ENLARGED PLAN - RESTROOM FINISHES
1/4" = 1'-0"



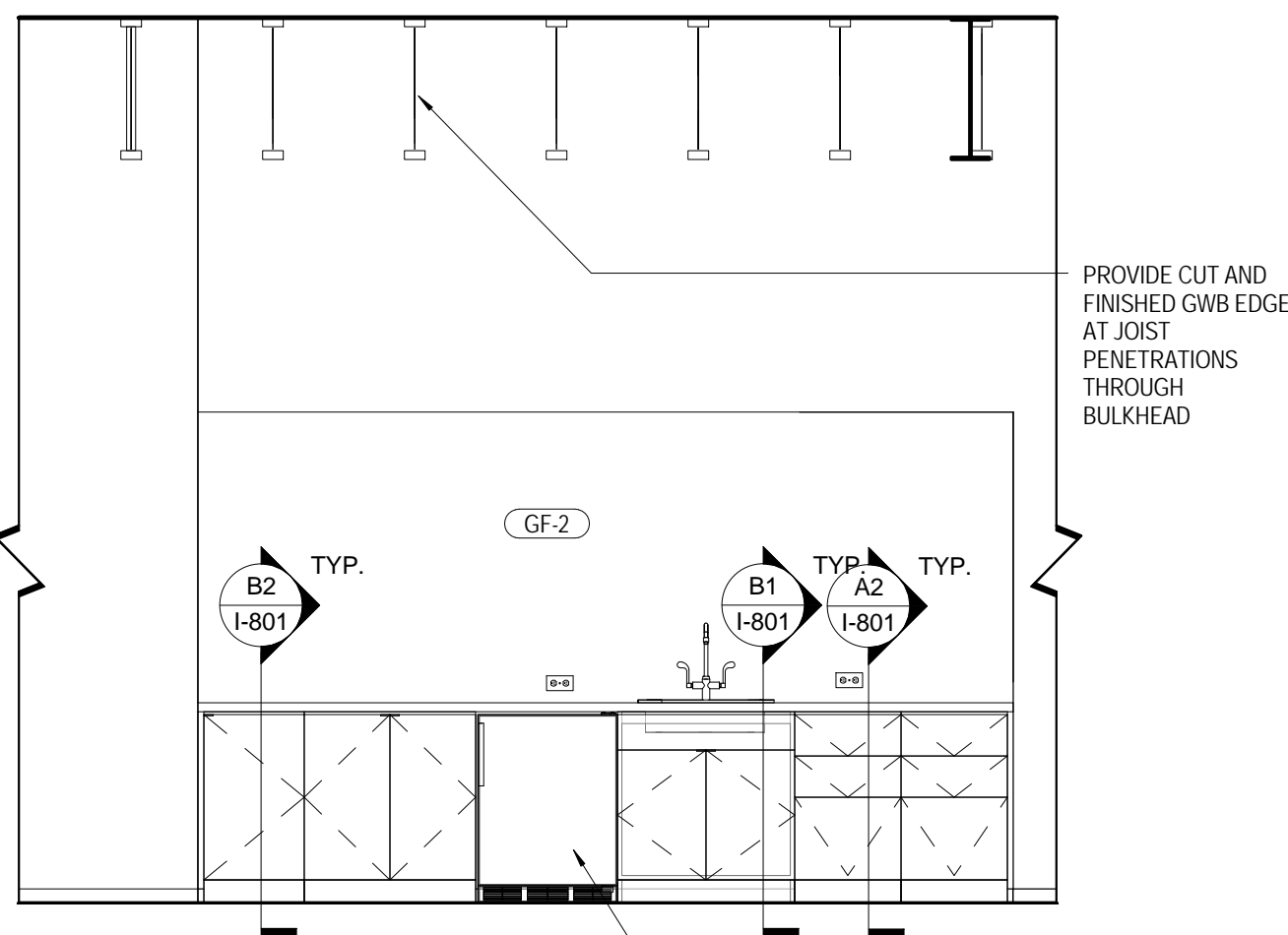
B2 ELEV - PANTRY - WEST
3/8" = 1'-0"



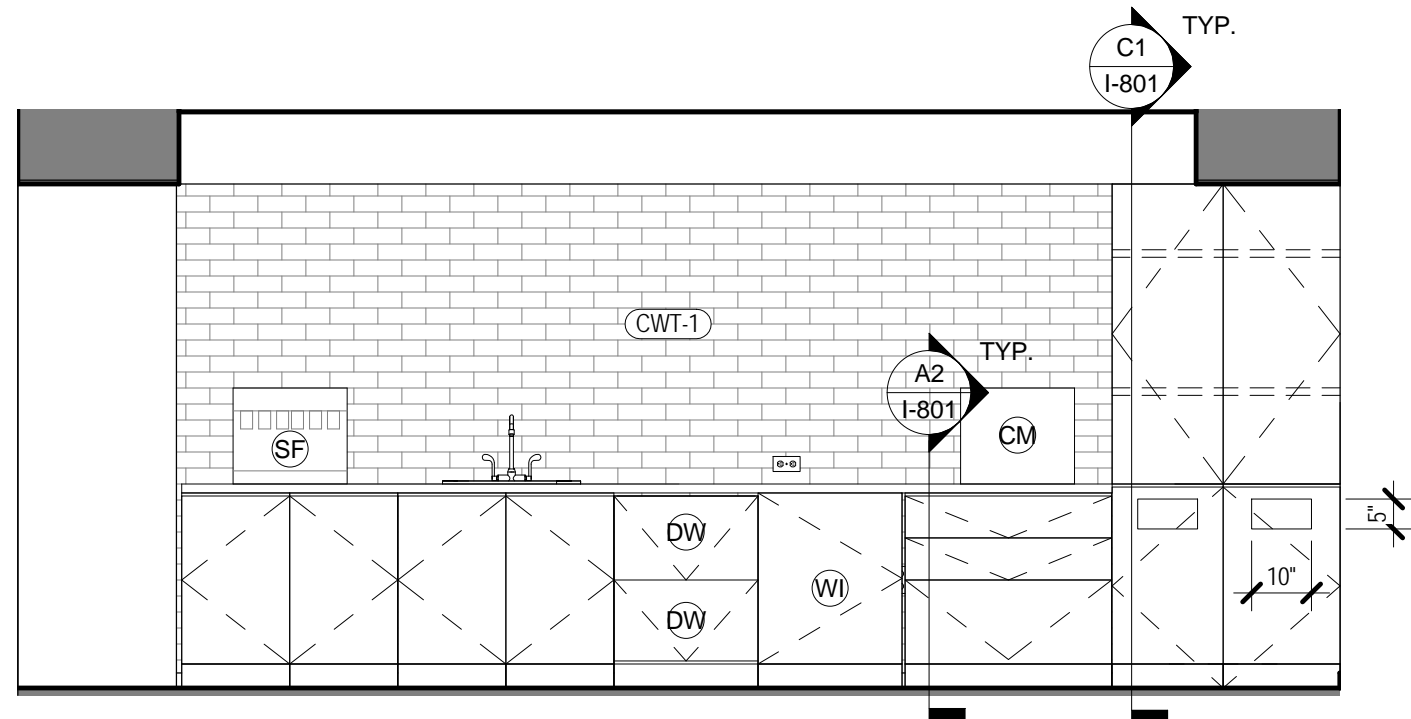
B3 ELEV - PANTRY - ISLAND
3/8" = 1'-0"



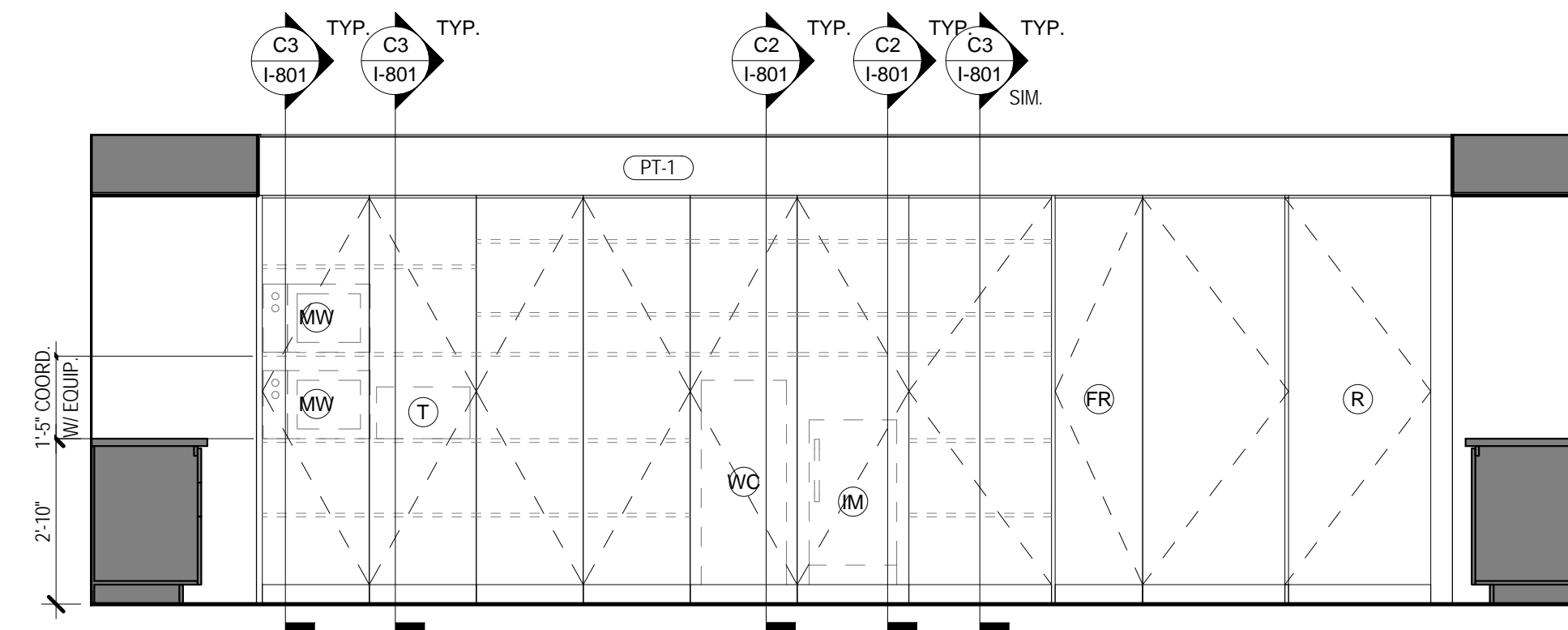
B4 ELEV - PANTRY - ISLAND FRONT
3/8" = 1'-0"



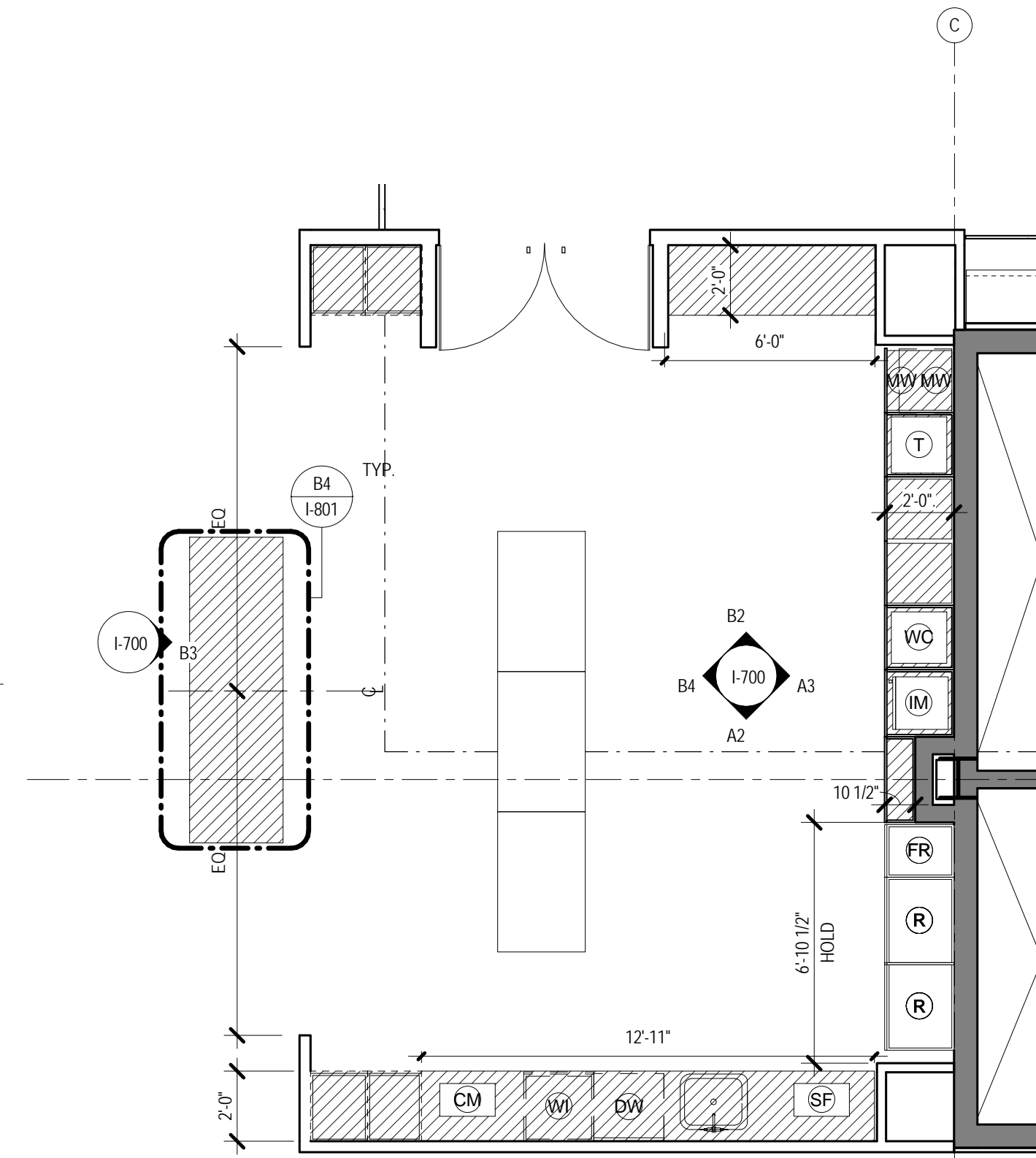
A1 ELEV - SUBLET PANTRY NORTH
3/8" = 1'-0"



A2 ELEV - PANTRY - EAST
3/8" = 1'-0"



A3 ELEV - PANTRY - NORTH
3/8" = 1'-0"



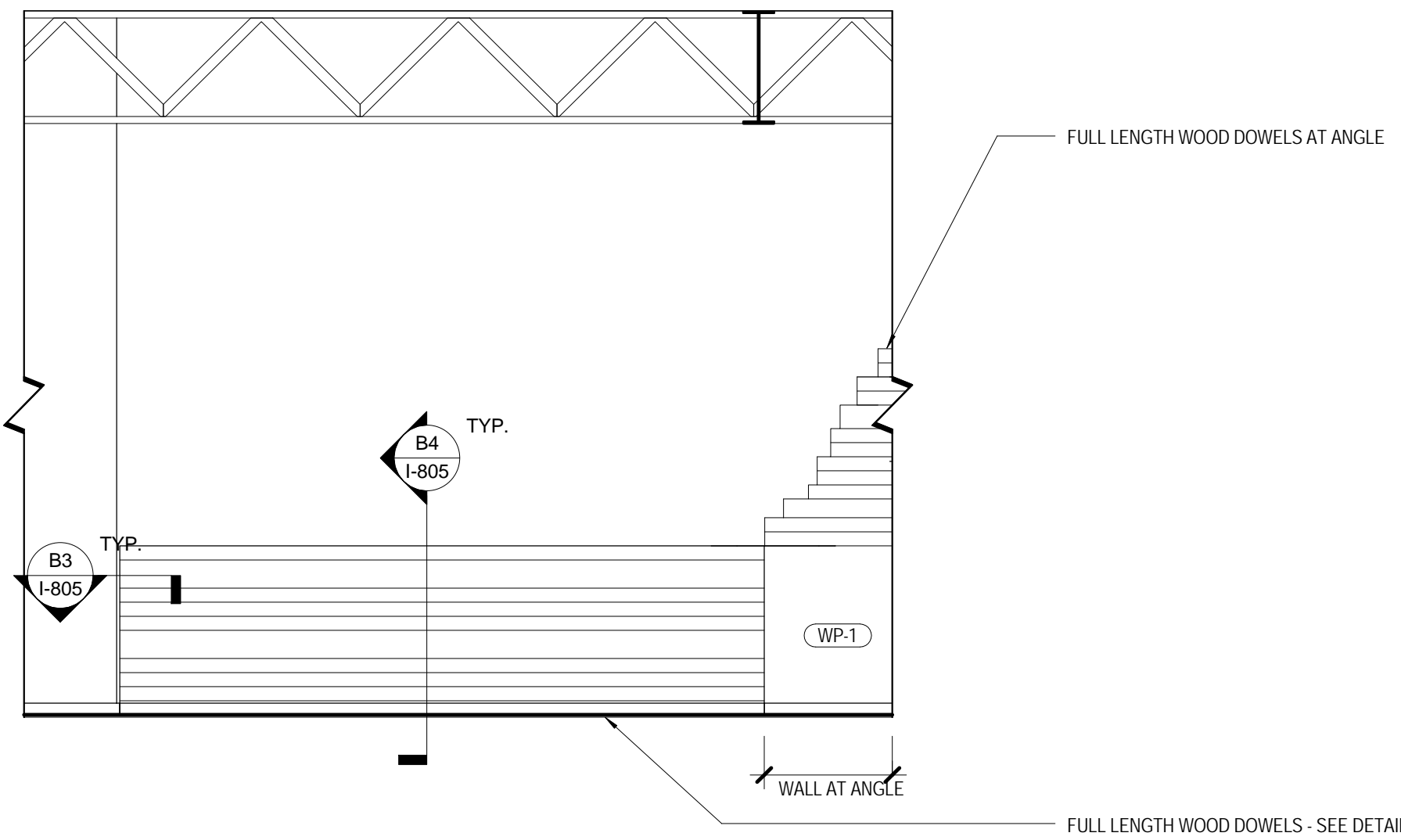
A5 ENLARGED PLAN - PANTRY
1/4" = 1'-0"

DATE	DESCRIPTION
12/16/2012	ISSUE FOR PERMIT/OWNER REVIEW
12/16/2012	ISSUE FOR BID

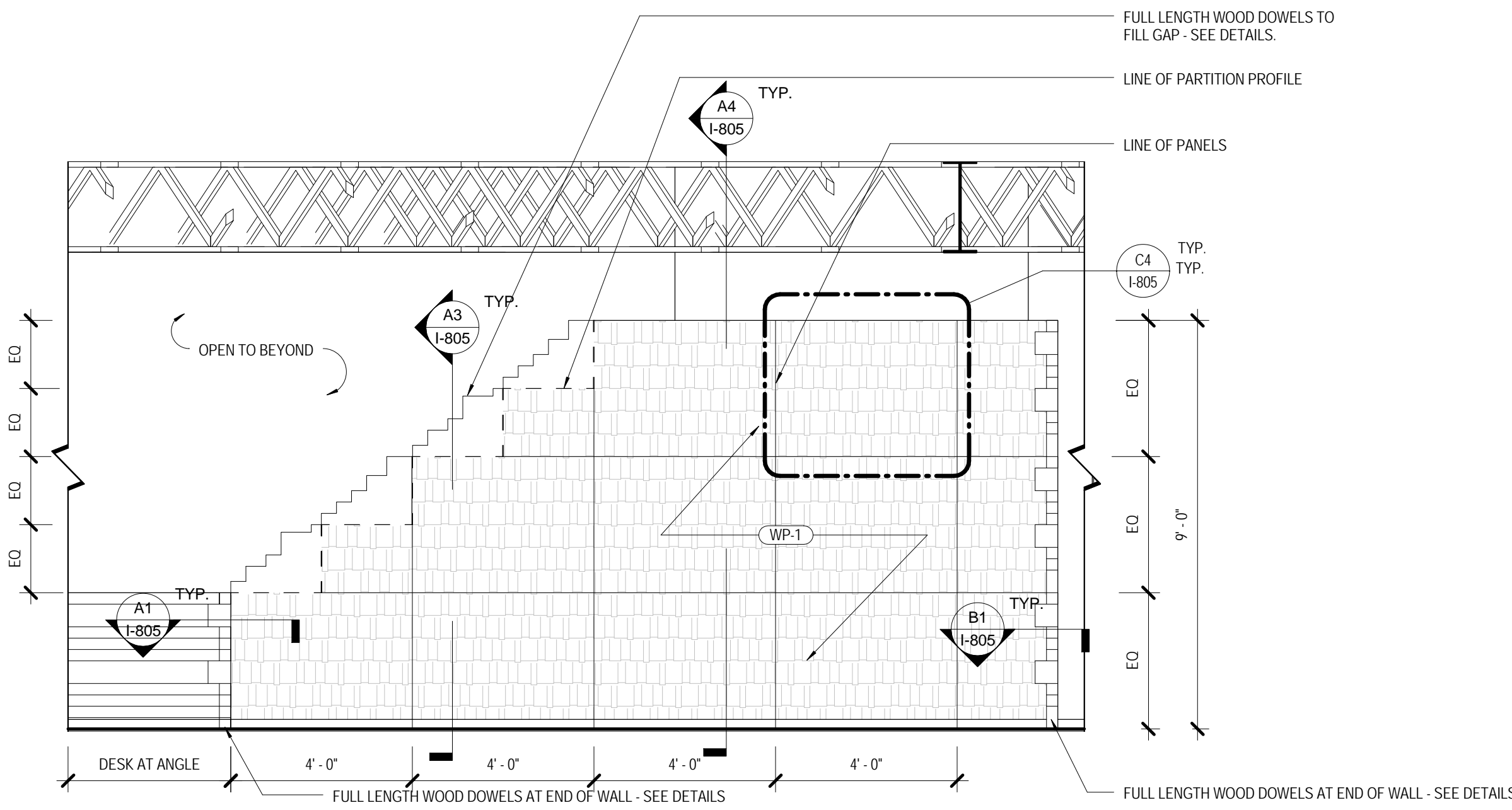
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12.14.2012	ISSUE FOR BID

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ELEVATIONS - ENTRY & CONFERENCE
STAMP

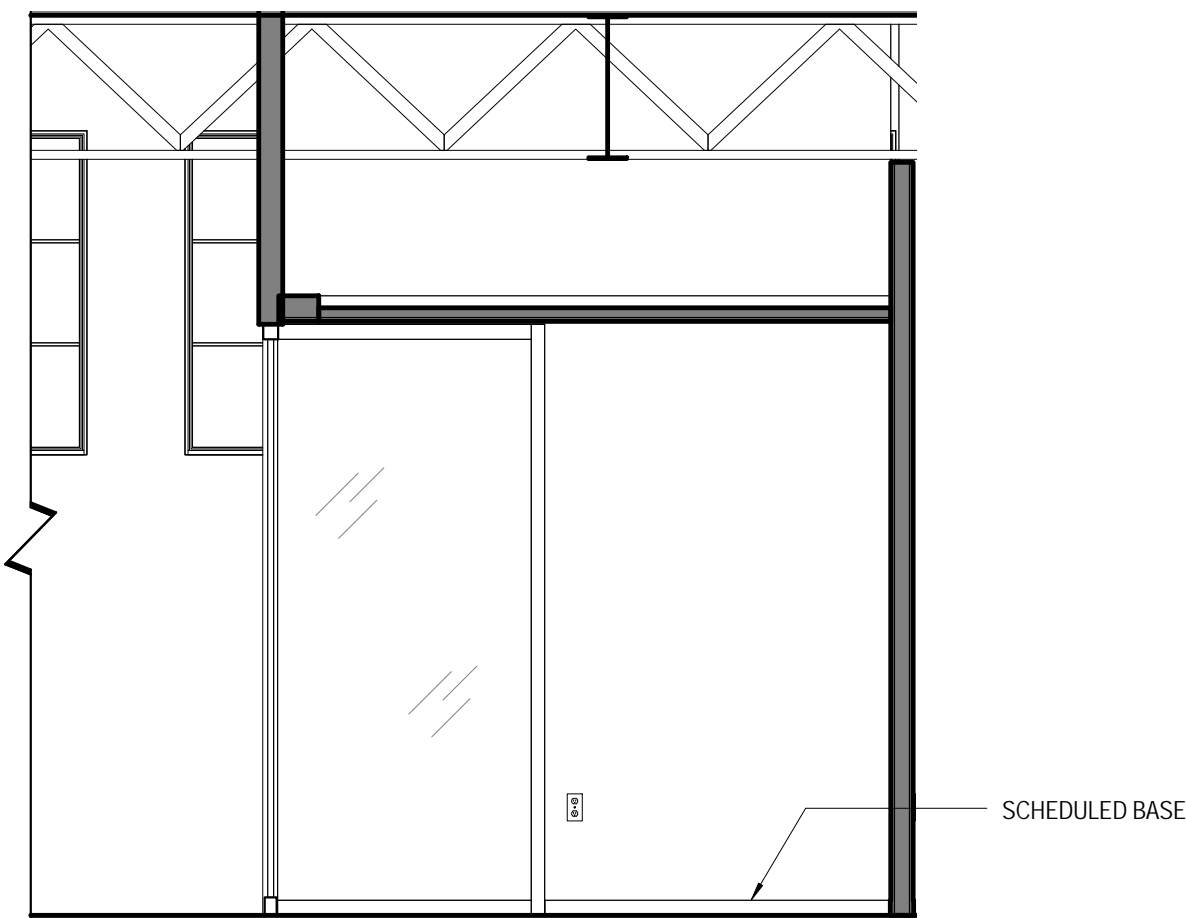
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SCALE:
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11.27.2012
DWG. NO.



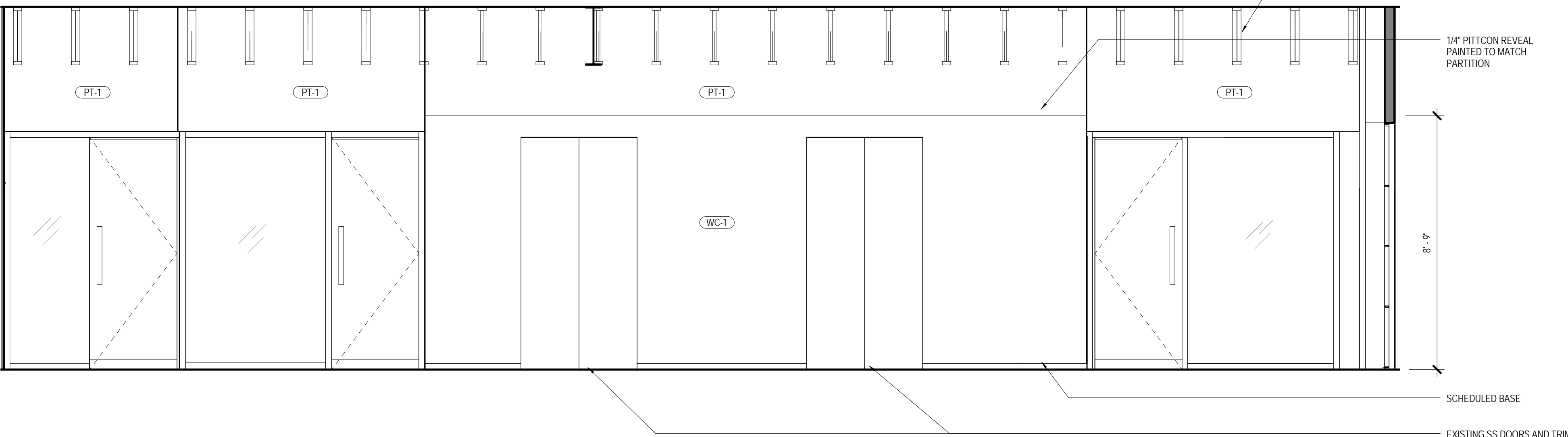
C4 ELEV - ENTRY - RECEPTION
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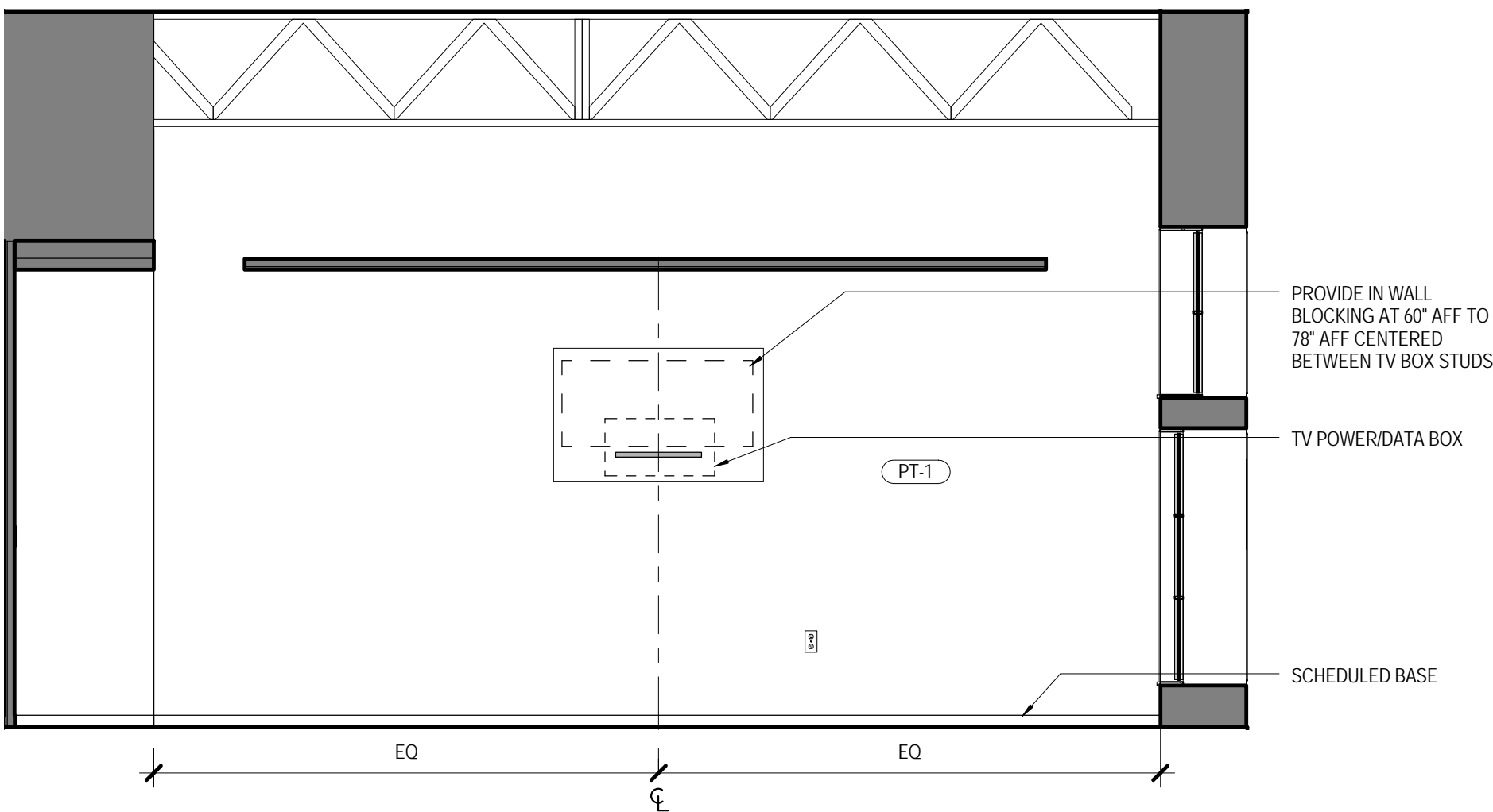
B4 ELEV - ENTRY - FEATURE WALL
3/8" = 1'-0"



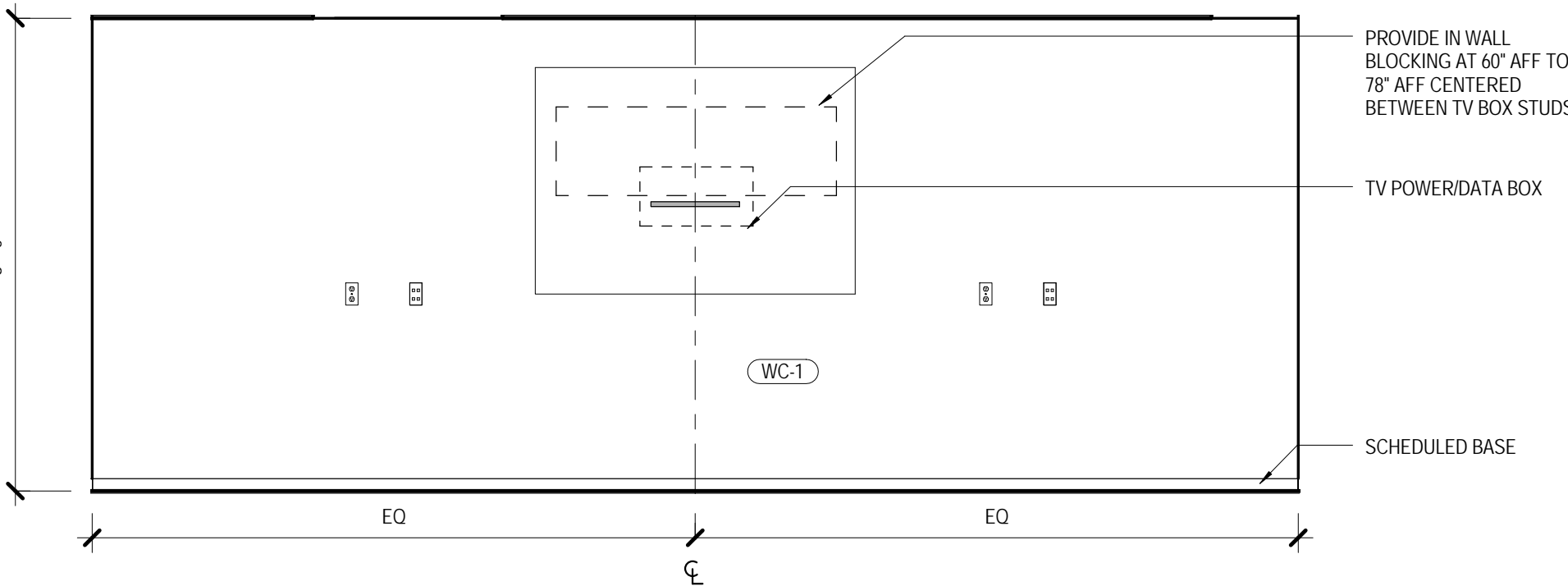
B3 ELEV - CONF - TEAMING
3/8" = 1'-0"



A3 ELEV - ENTRY - ELEVATORS
3/8" = 1'-0"

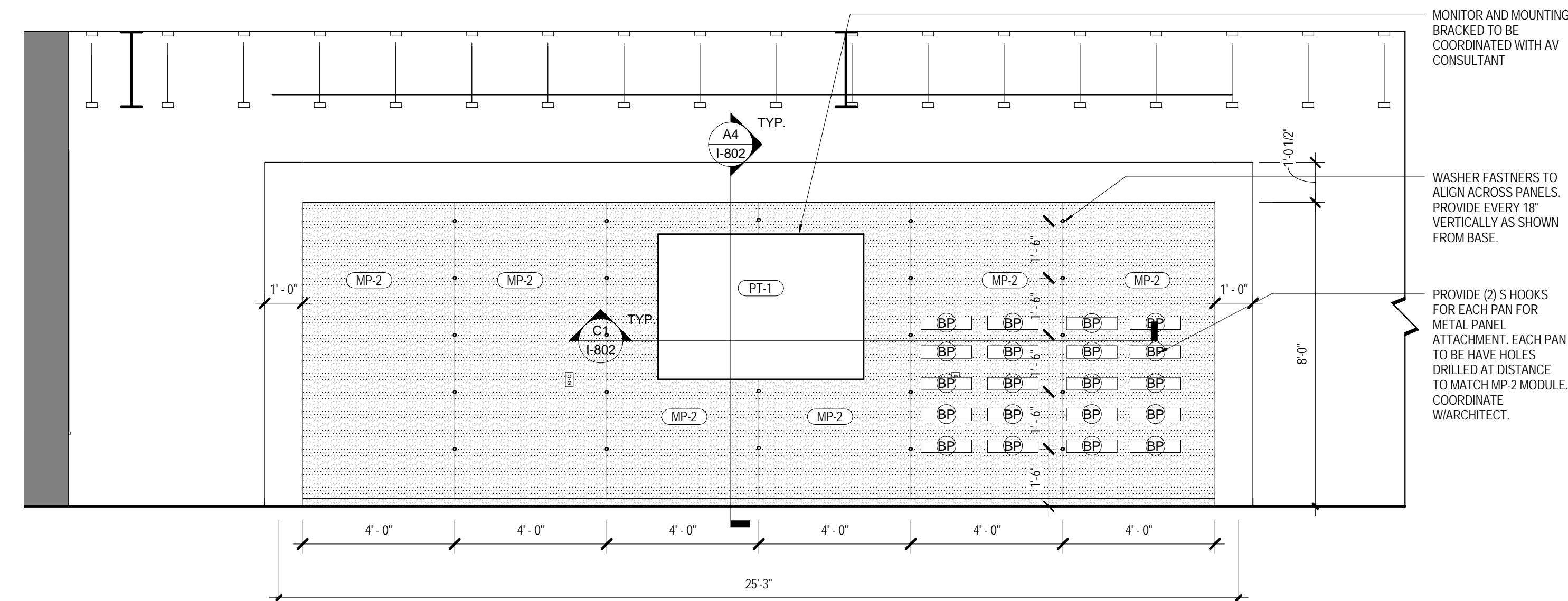


B1 ELEV - CONF - PARTITION
3/8" = 1'-0"

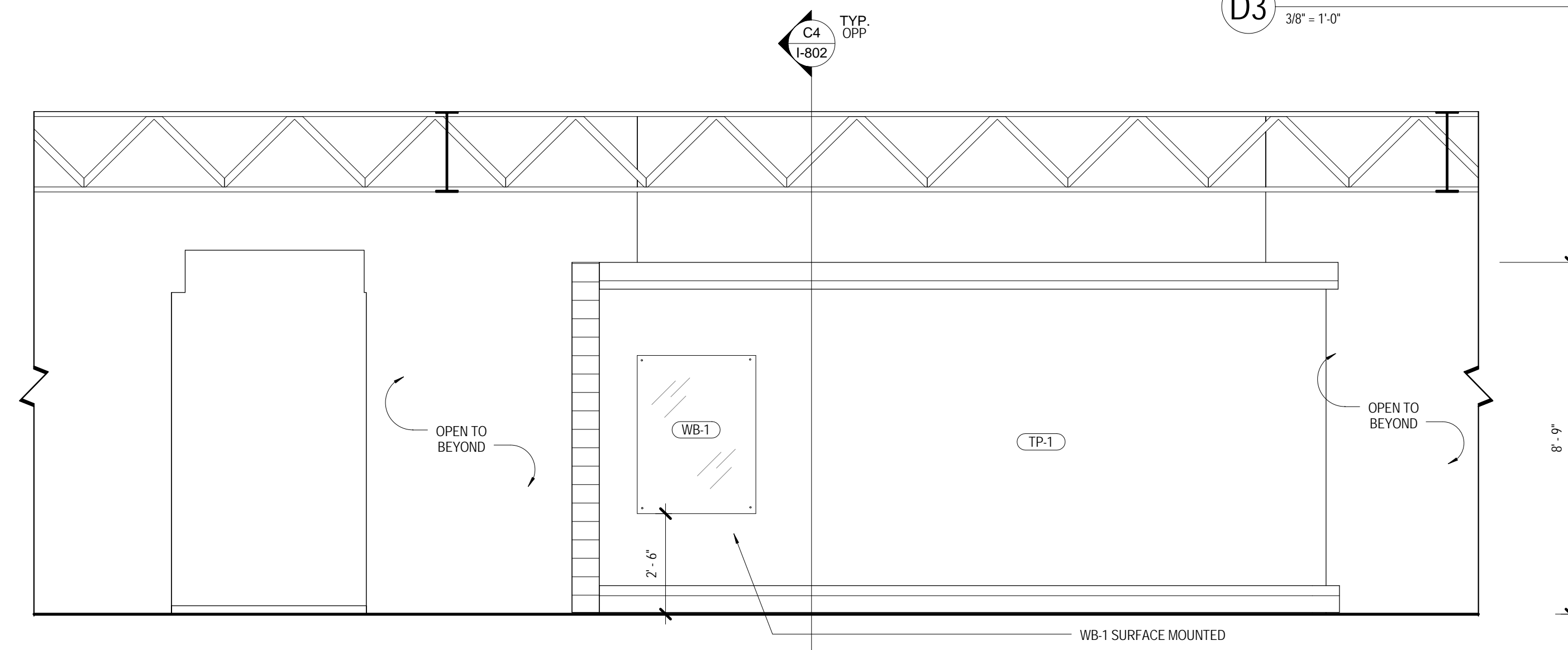


A1 ELEV - CONF - WORK WALL
3/8" = 1'-0"

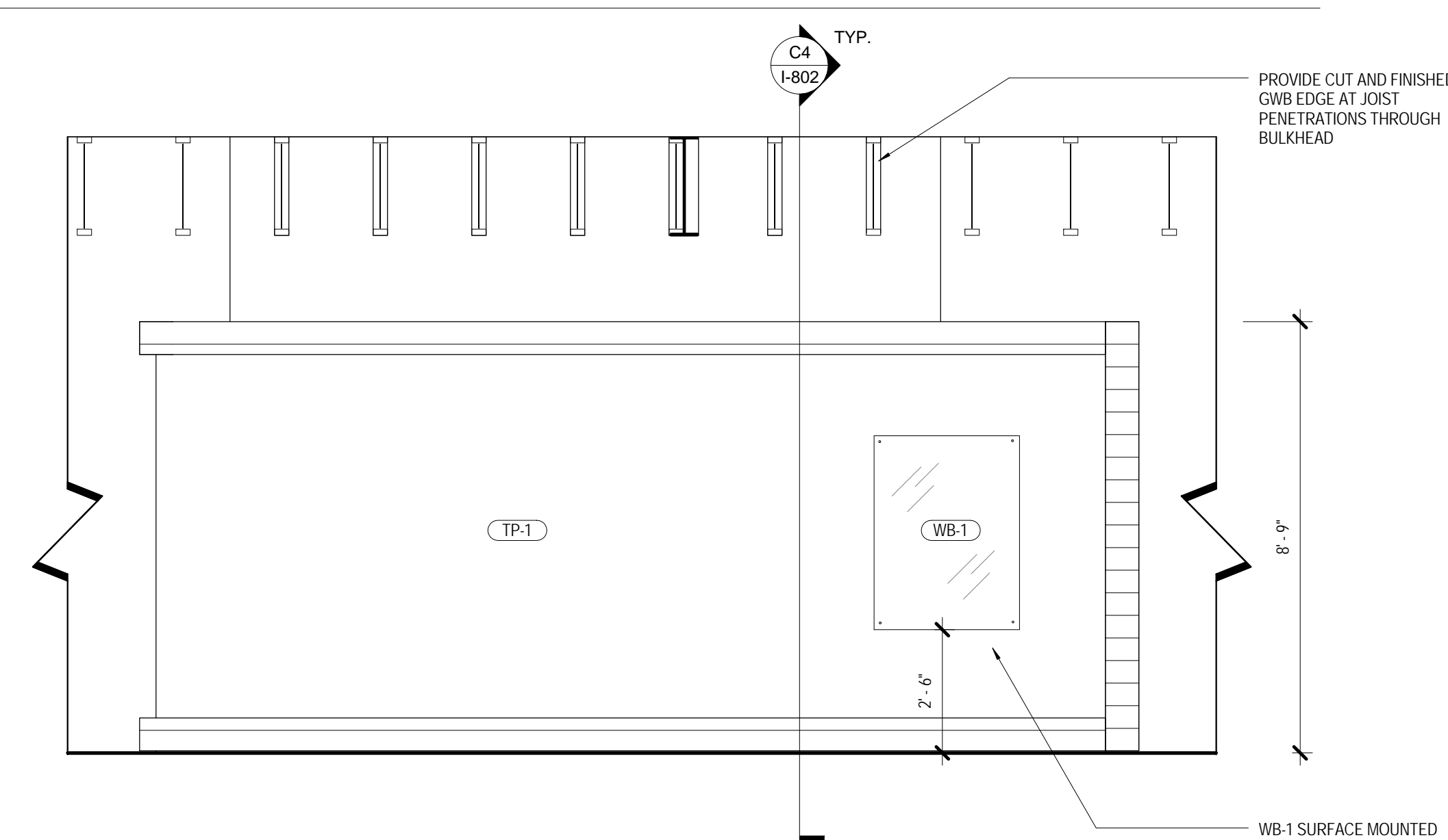
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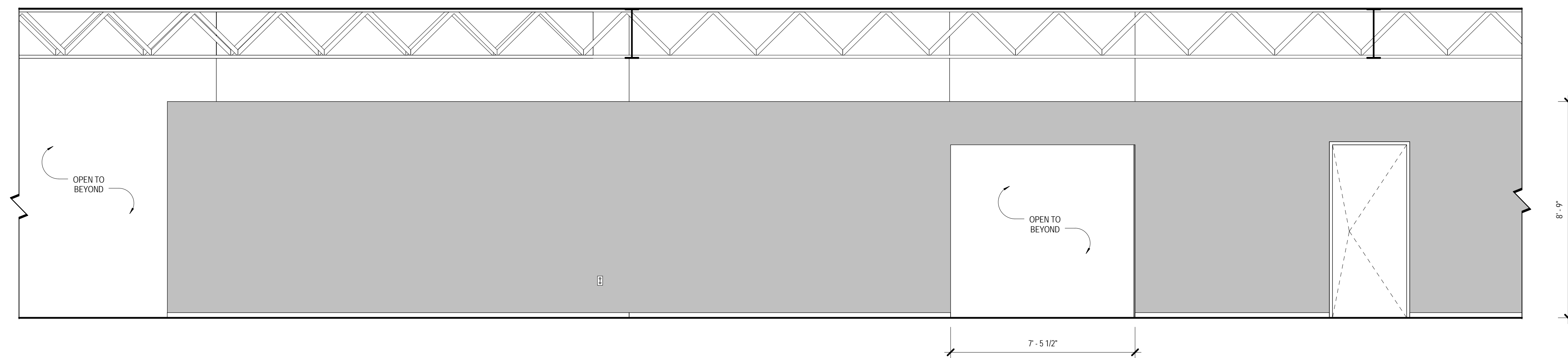
D3 ELEV - LIBRARY
3/8" = 1'-0"



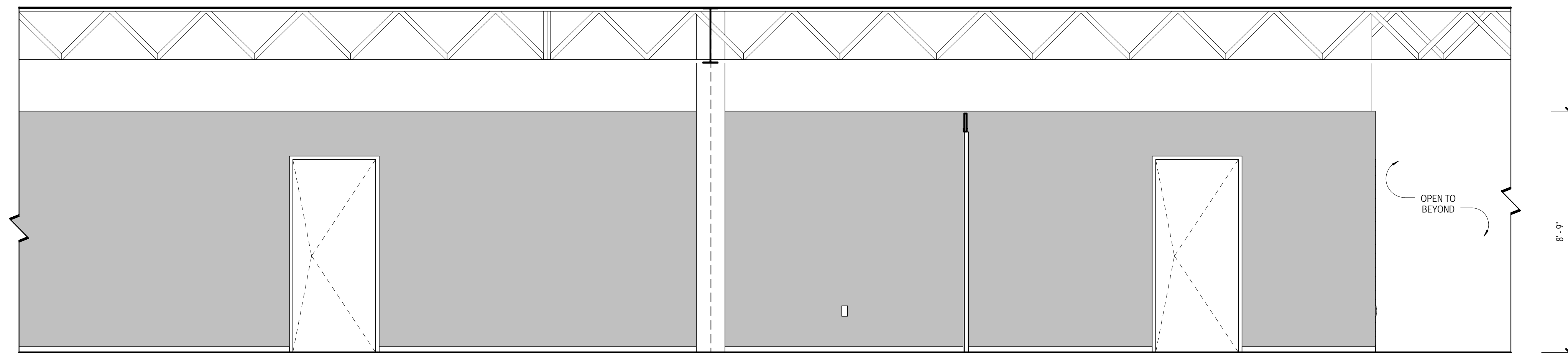
C2 ELEV - LIBRARY - EAST
3/8" = 1'-0"



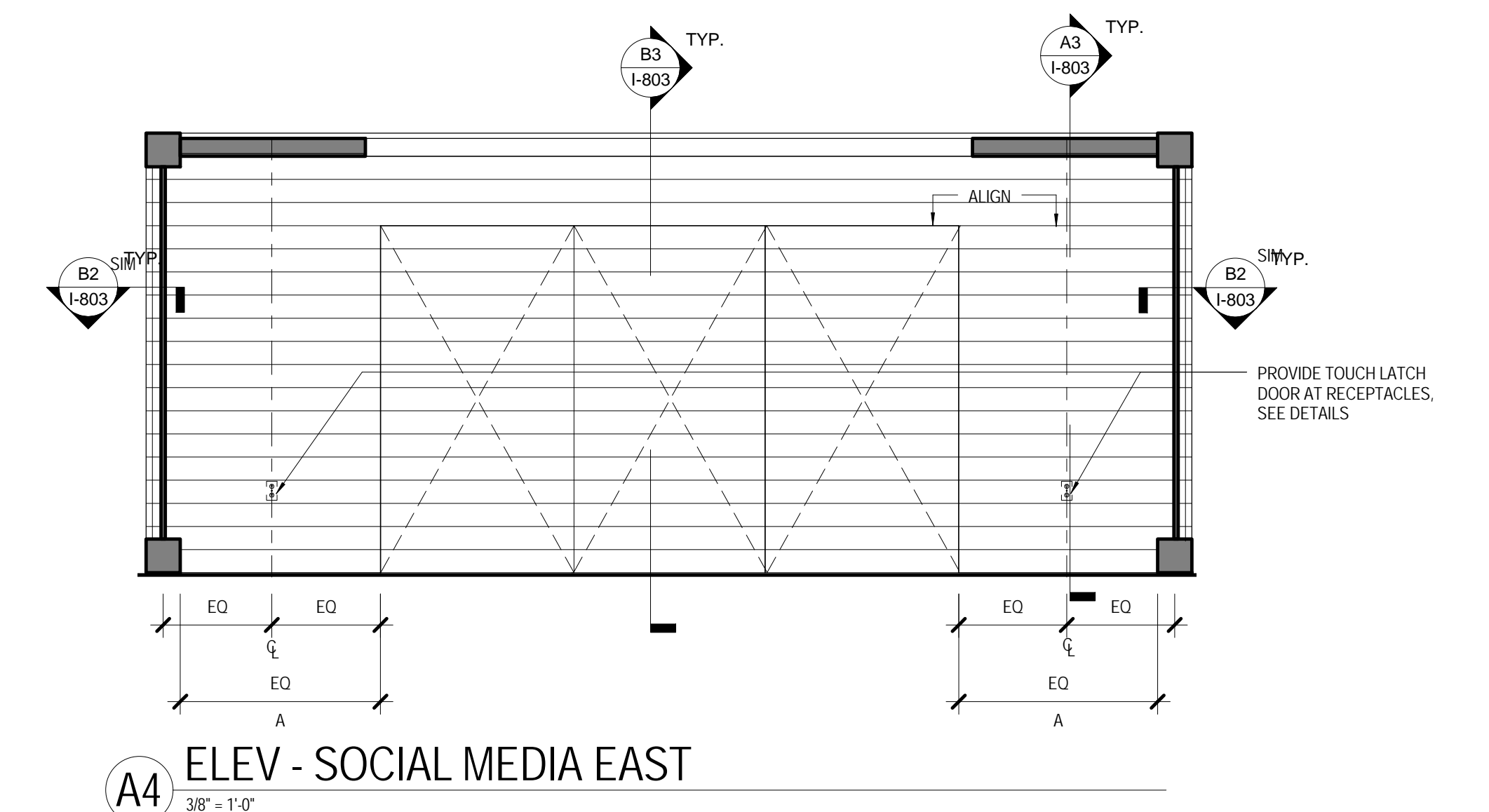
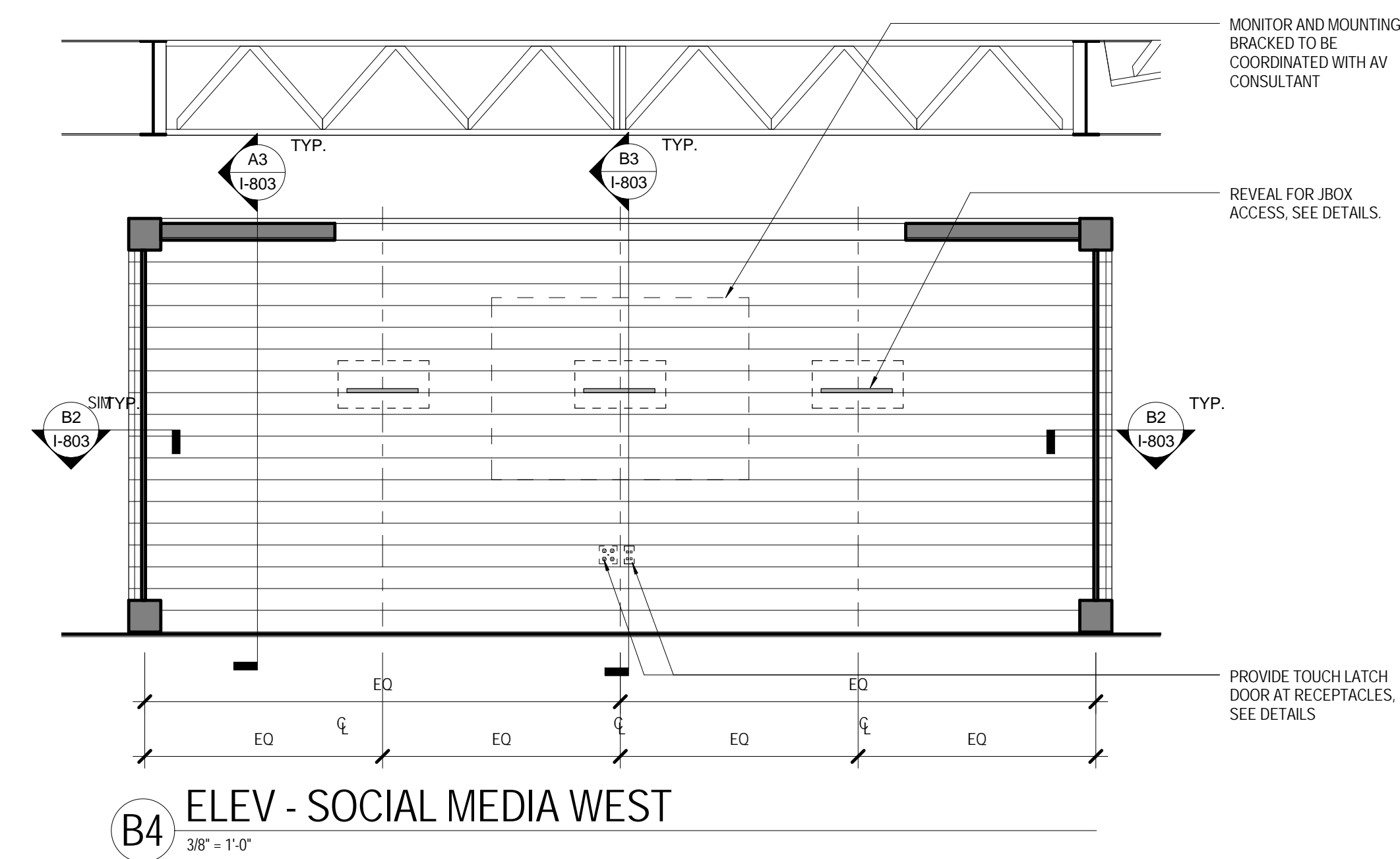
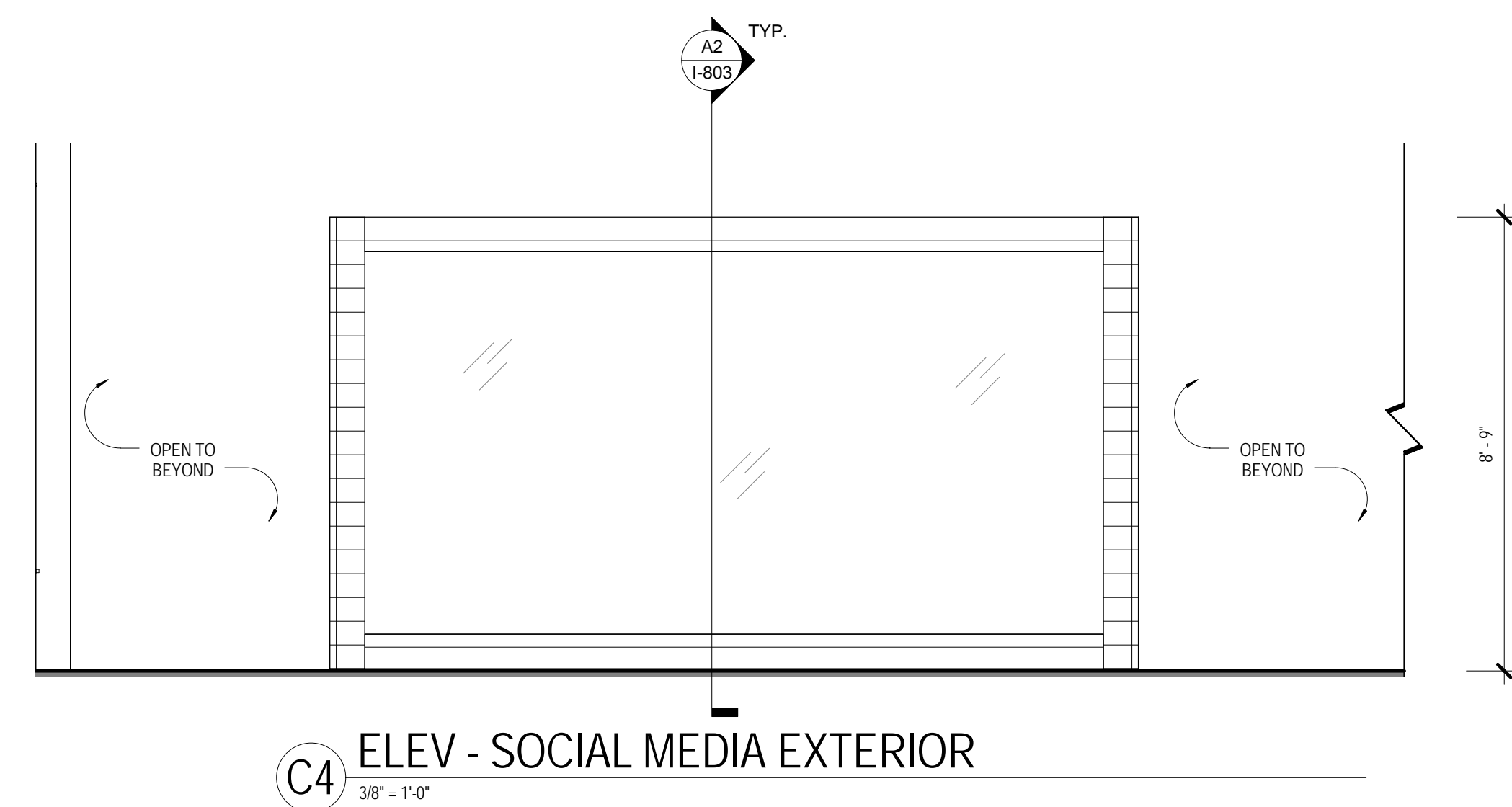
C4 ELEV - LIBRARY - NORTH
3/8" = 1'-0"

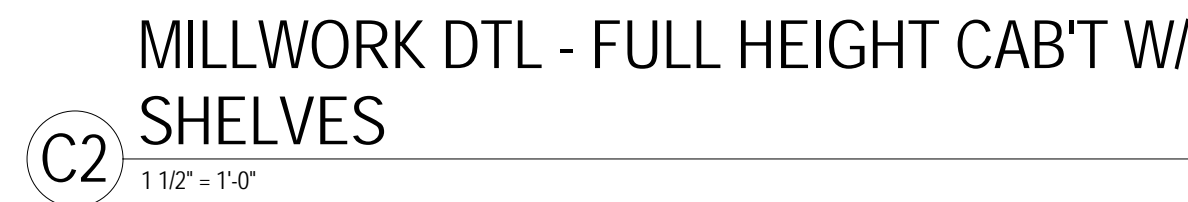


B2 ELEV - CORE - SOUTH EAST
3/8" = 1'-0"



A2 ELEV - CORE - NORTH EAST
3/8" = 1'-0"

[illegible]





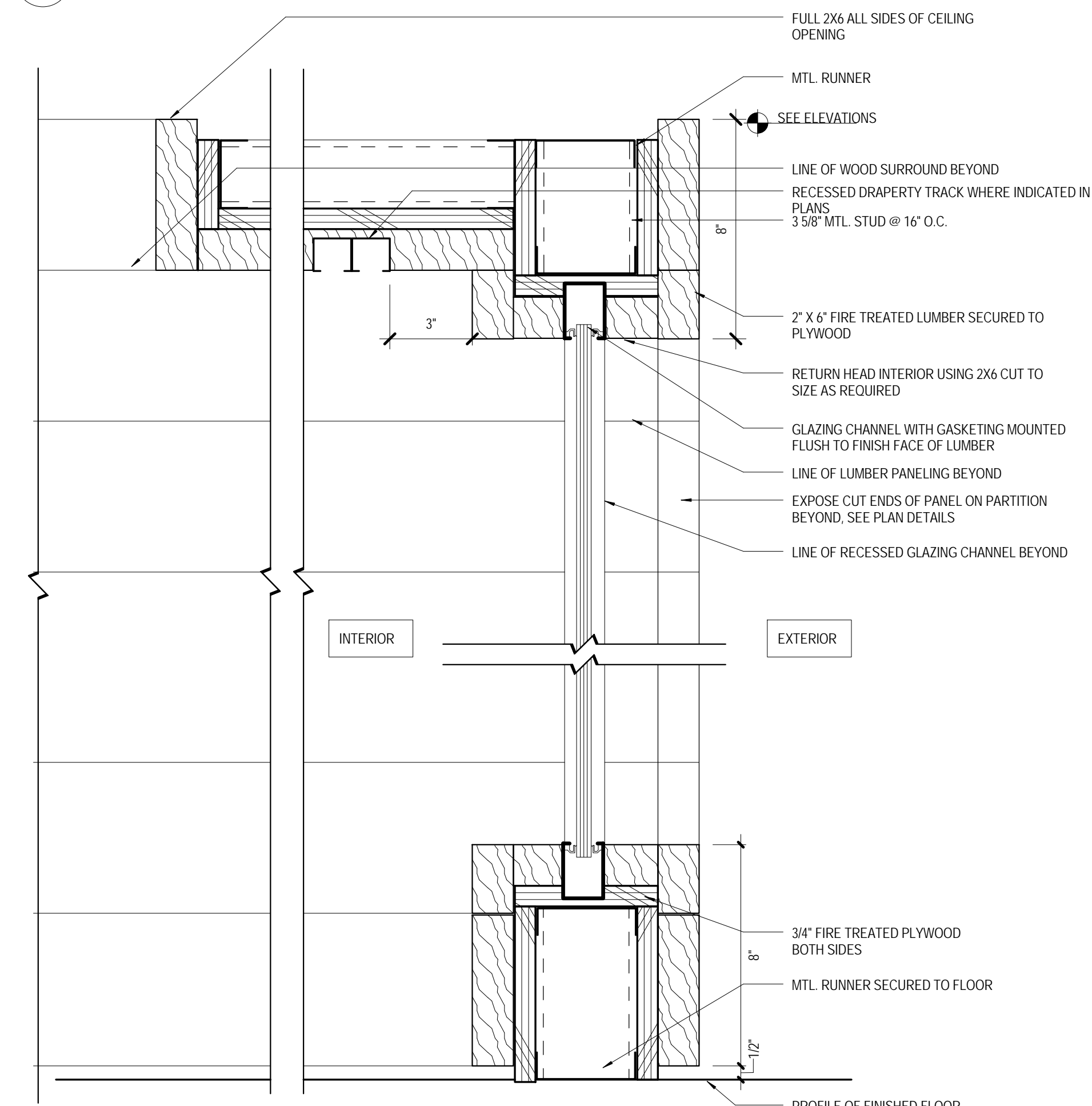
[illegible]

Architectural drawings showing cross-sections of a fire-rated door assembly. The drawings include a side elevation of the door head and jamb, a top-down view of the door head, and a side elevation of the door jamb. Labels indicate various components and materials, including fire-treated lumber, steel tube support, MTL runner, and glazing channel. Dimensions and notes are provided for installation and finish.

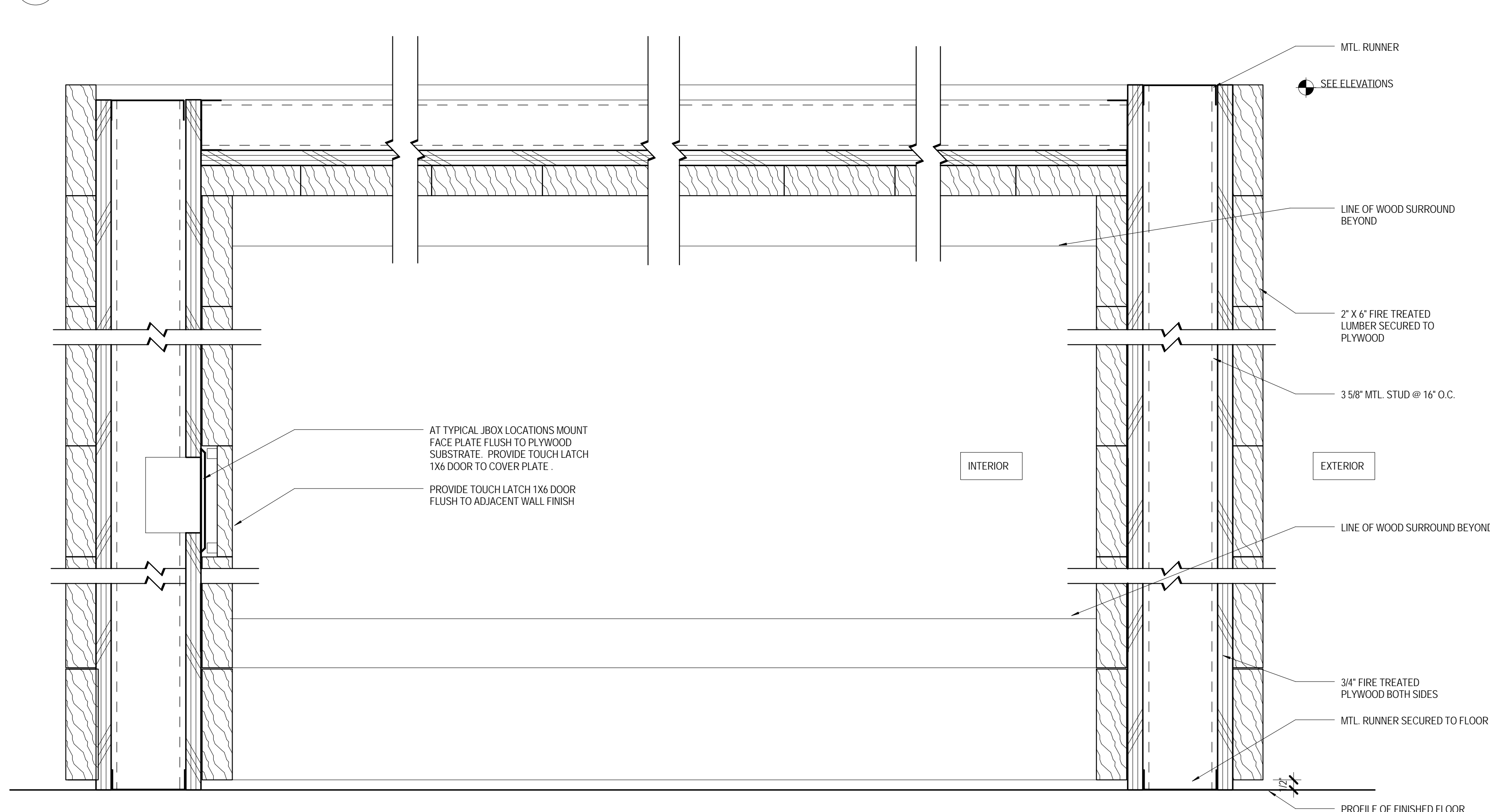
Labels and Notes:

- SCHEDULED LIGHT FIXTURE
- FULL 2X6 ALL SIDES OF CEILING OPENING
- MTL RUNNER
- SEE ELEVATIONS
- LINE OF WOOD SURROUND BEYOND
- 2" X 4" FIRE TREATED LUMBER SECURED TO PLYWOOD
- 3 5/8" MTL STUD @ 16" O.C.
- CUT 2X6 AND BLOCKING IN FIELD TO PROVIDE SLOT FOR ACCESS TO SCHEDULED JUNCTION DATA BOX AT MONITORS. SEE ELEVATIONS FOR EXACT LOCATIONS.
- 3/4" FIRE TREATED PLYWOOD BOTH SIDES
- MTL RUNNER SECURED TO FLOOR
- PROFILE OF FINISHED FLOOR
- 28" FIXTURE HEIGHT
- SECURE TOP PIVOT IN 2X6 ABOVE
- RETURN HEAD INTERIOR USING 2X6 CUT TO SIZE AS REQUIRED
- SEE ELEVATIONS
- ANGLE STOP MOUNTED TO INTERIOR SIDE OF DOOR HEAD
- 2X6 TO RETURN AT DOOR JAMBS SIM TO DOOR HEAD, SEE DOOR JAMB PLAN DETAIL
- EXPOSE CUT END OF ADJACENT PARTITION PANEL
- 2X6 CENTER PIVOT DOOR AS SCHEDULED
- SECURE BOTTOM PIVOT IN EXISTING FLOOR
- 2" X 6" FIRE TREATED LUMBER SECURED TO PLYWOOD
- EXPOSE CUT ENDS OF PANEL
- STEEL TUBE SUPPORT TIED TO BUILDING STRUCTURE. SEE STRUCTURAL DRAWINGS.
- GLAZING CHANNEL WITH GASKETING MOUNTED RECESSED INTO FINISH FACE OF LUMBER
- LINE OF LUMBER PANELING BEYOND
- LINE OF RECESSED GLAZING CHANNEL BEYOND
- INTERIOR
- EXTERIOR
- EQ

B3 SOCIAL MEDIA - E/W SECTION @ CENTER
3" = 1'-0"



A2 SOCIAL MEDIA - N/S SECTION @ CENTER
3' = 1'-0"



A3 SOCIAL MEDIA - E/W SECTION
3" = 1'-0"

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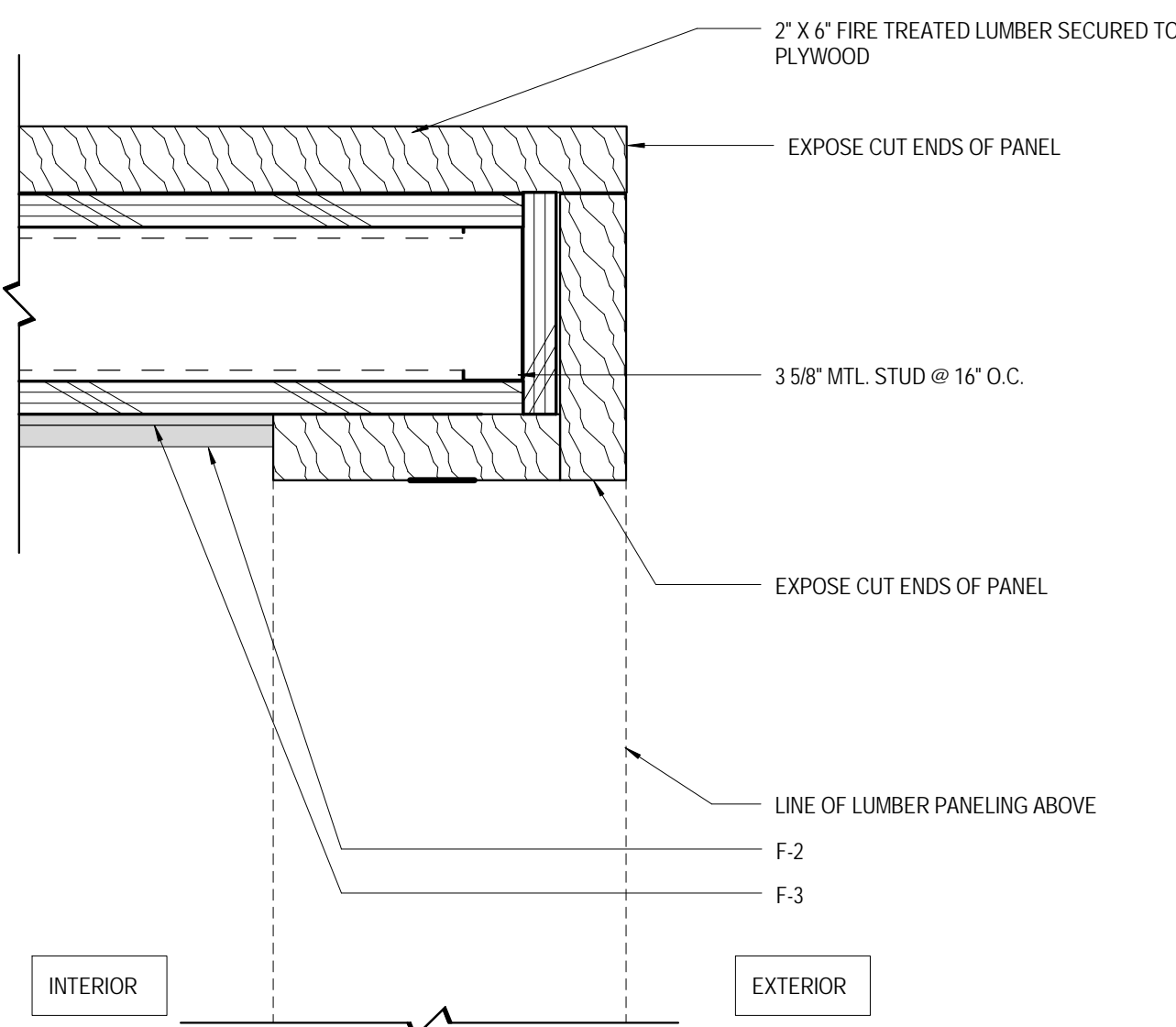
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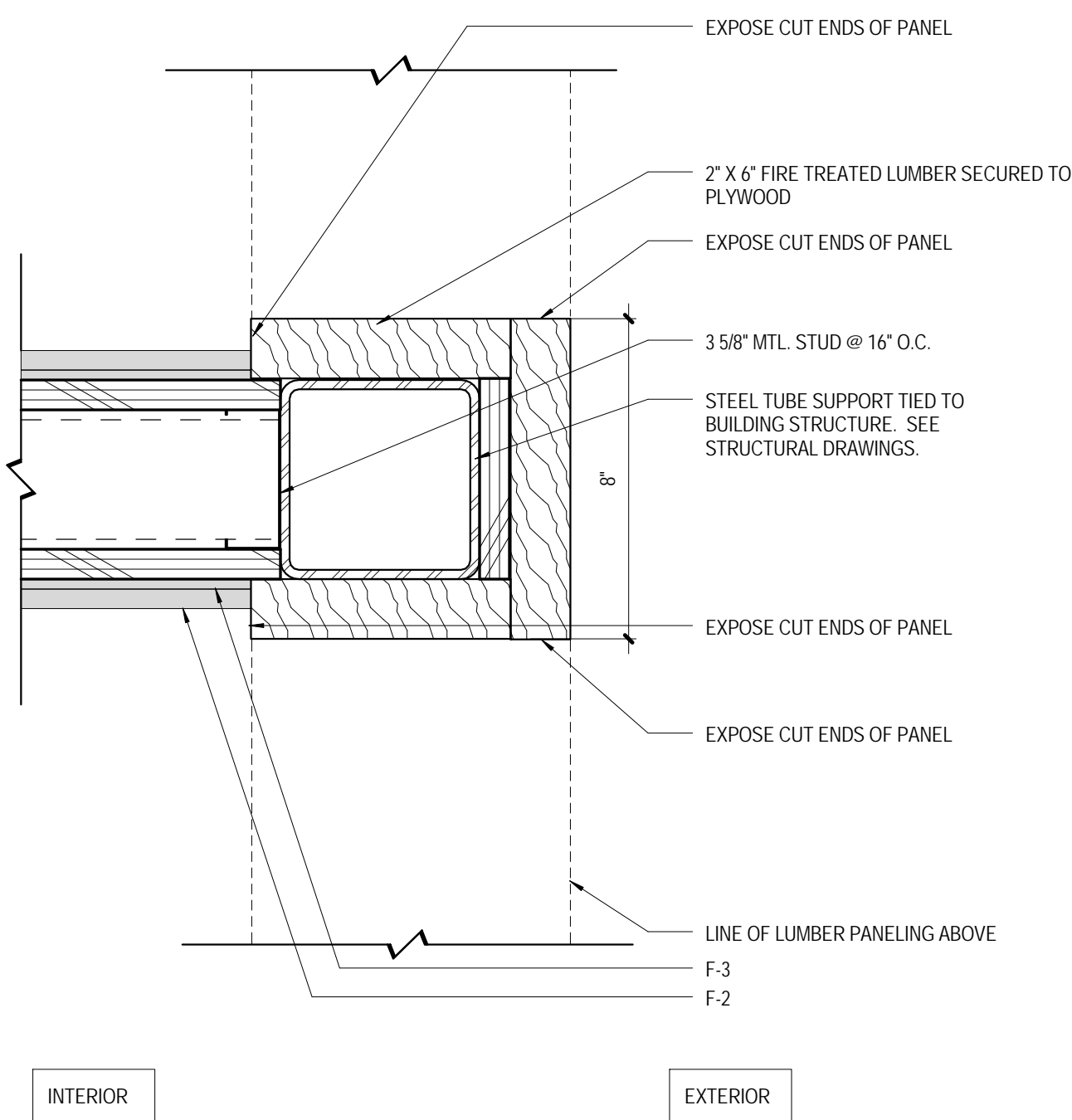
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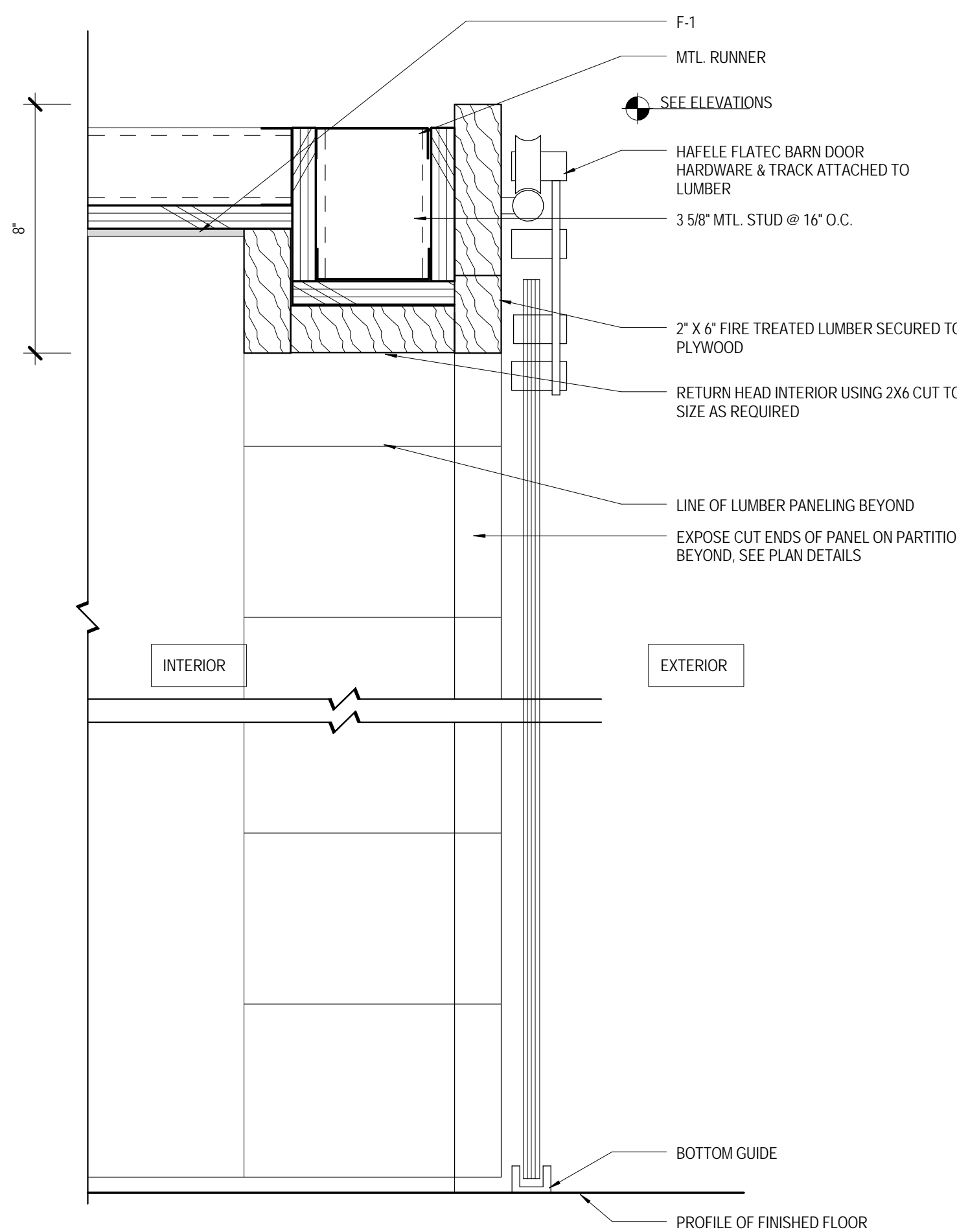
NOTE:
1. DIMENSIONED LUMBER TO BE RECLAIMED PINE BY PINONEER MILLWORK.



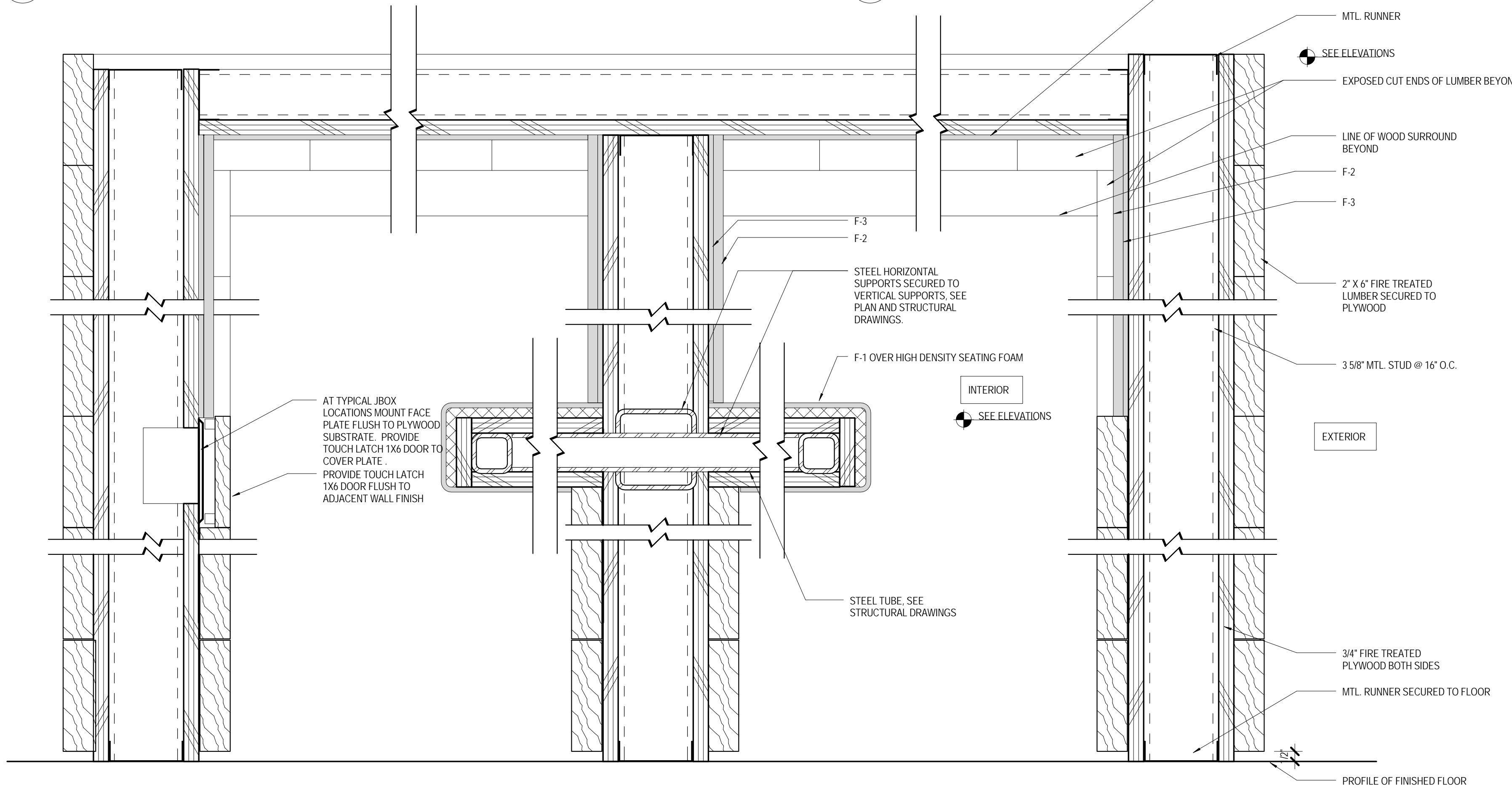
B2 TEAMING - PLAN DETAIL - OUTSIDE CORNER
3" = 1'-0"



B3 TEAMING - PLAN DETAIL - CENTER
3" = 1'-0"



B4 TEAMING - N/S SECTION
3" = 1'-0"



A3 TEAMING - E/W SECTION
3" = 1'-0"

D

1023 31st Street, NW
Washington, DC 20007
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www.hickokcole.com

CONSULTANT

C

WORKSPACES - DC
641 S St, NW Washington, DC

DESCRIPTION

ISSUE FOR BIDD

DATE

12/14/2012

B

DRAWING TITLE
MILLWORK SECTIONS - TEAMING

STAMP

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PROJECT NO.
12021.00
DRAWN BY:
Author
SCALE:
3" = 1'-0"
DATE:
11.27.2012
DWG. NO.

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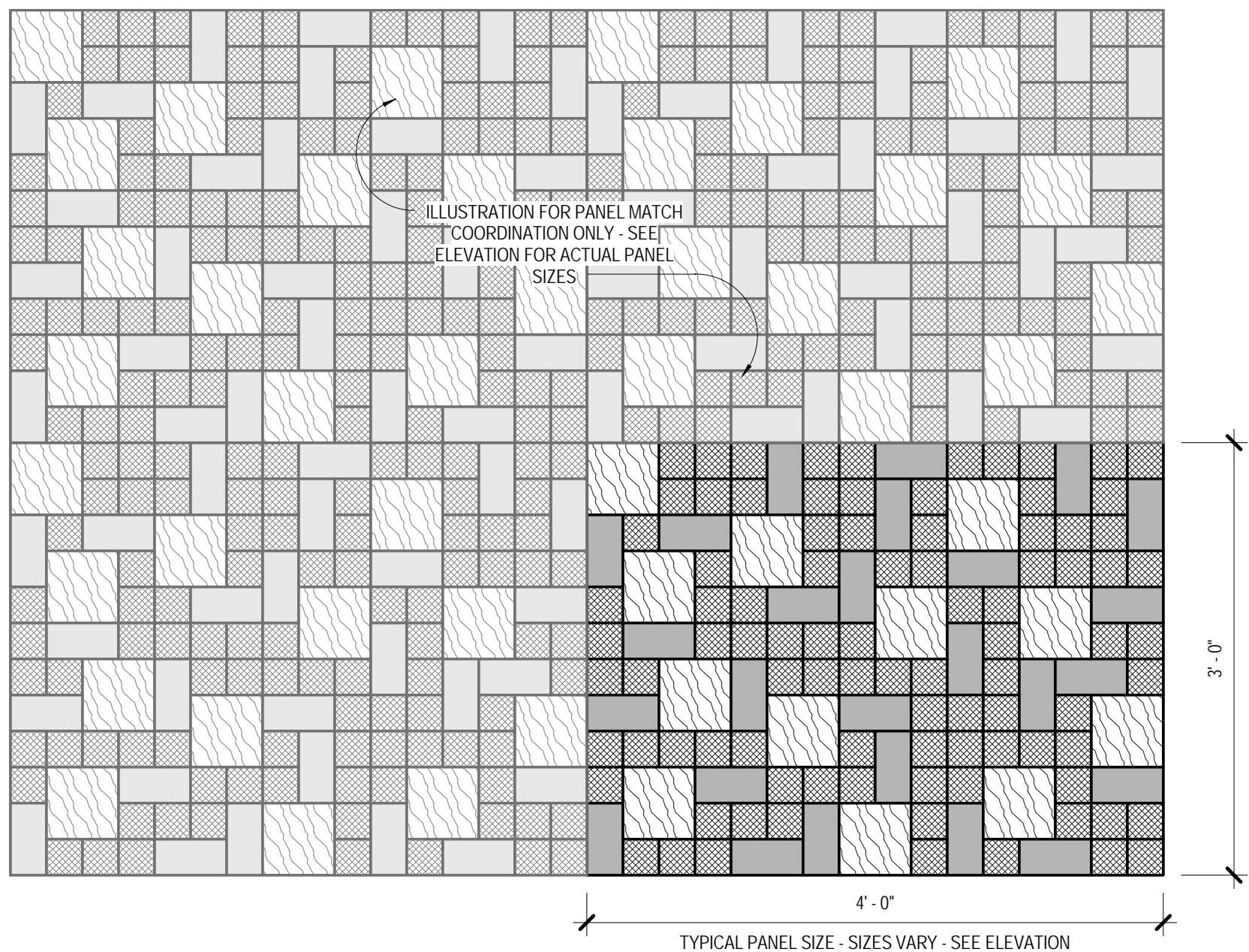
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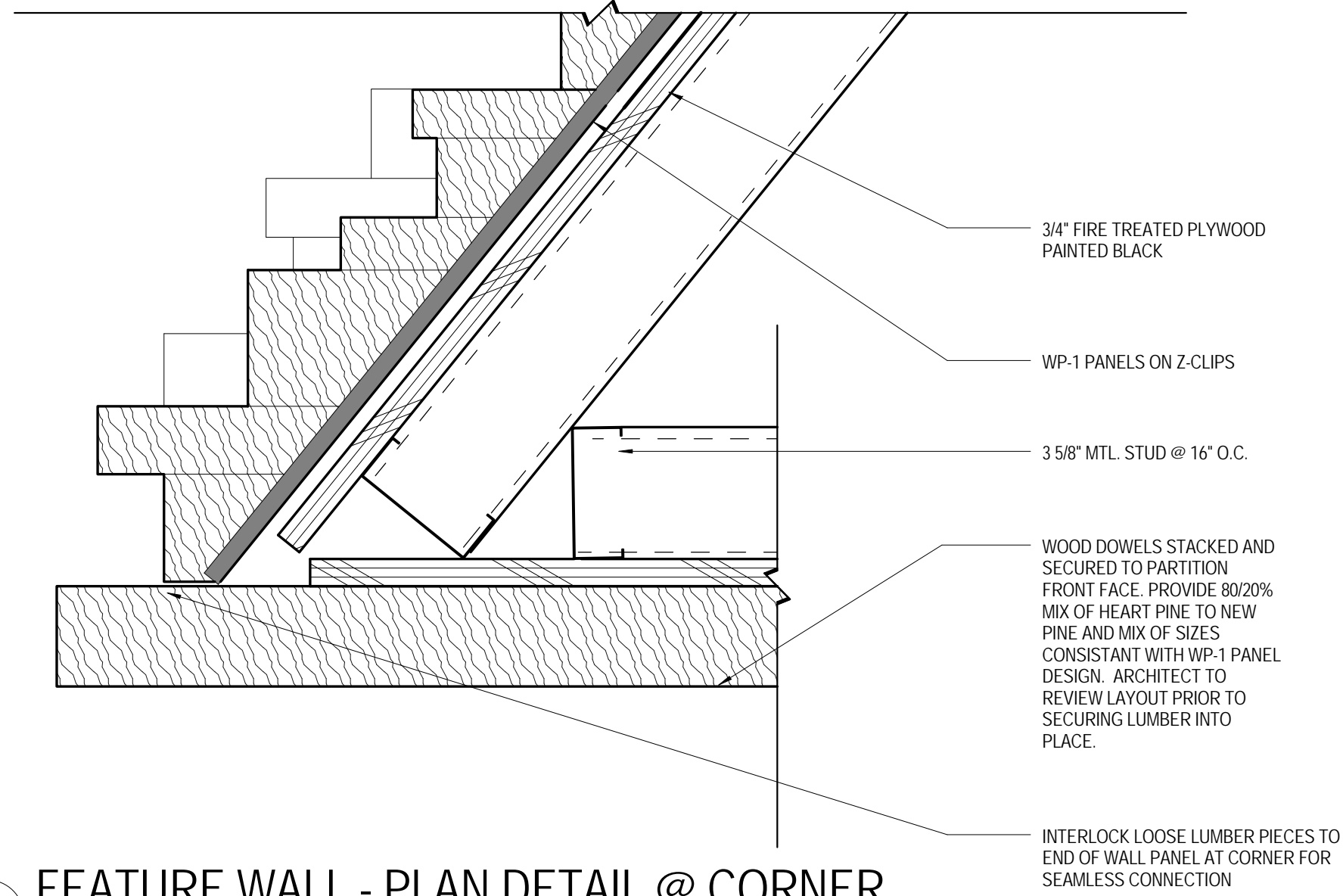
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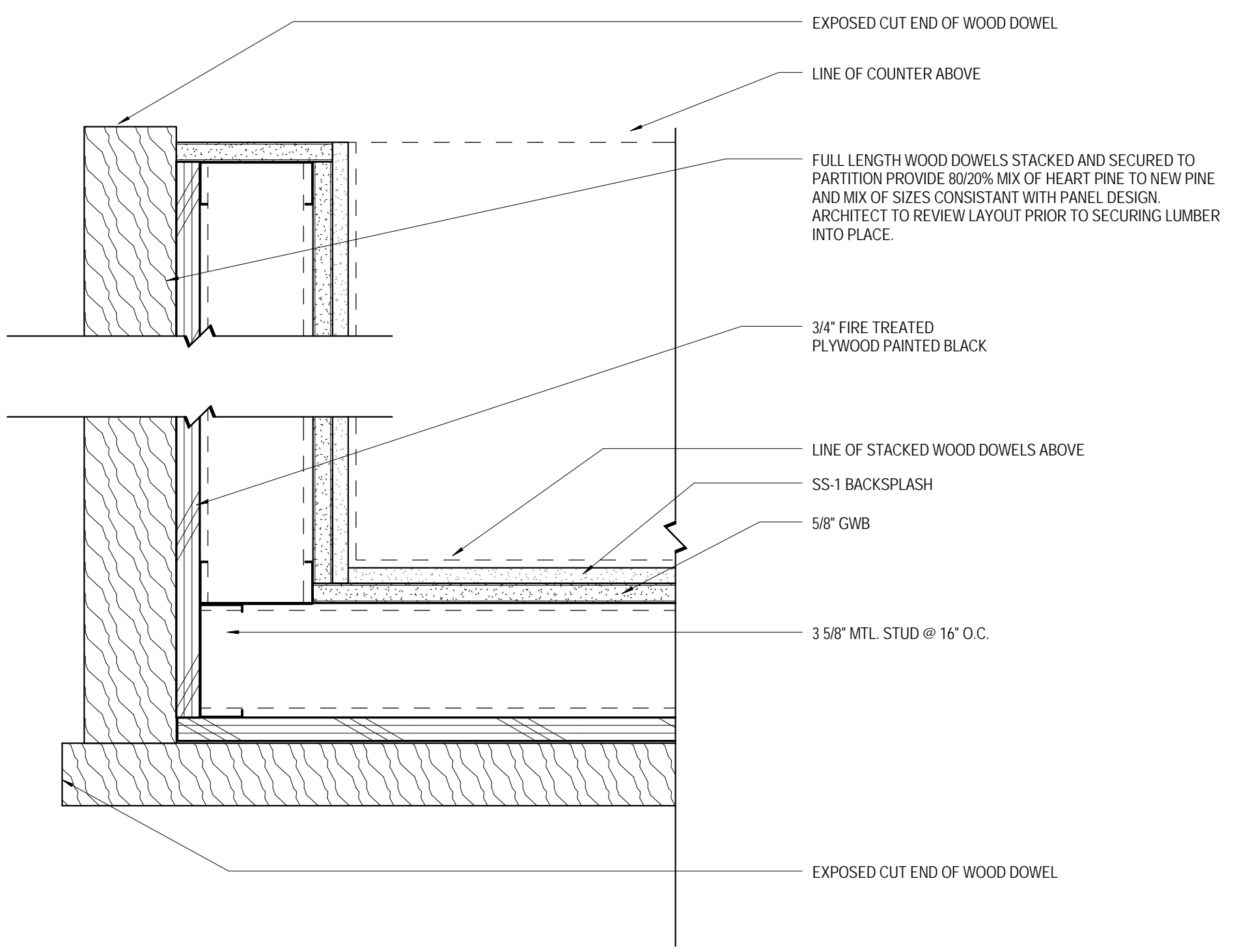
NOTE:
1. DIMENSIONED LUMBER AND WOOD DOWELS TO BE RECLAIMED PINE BY
PINONEER MILLWORK.



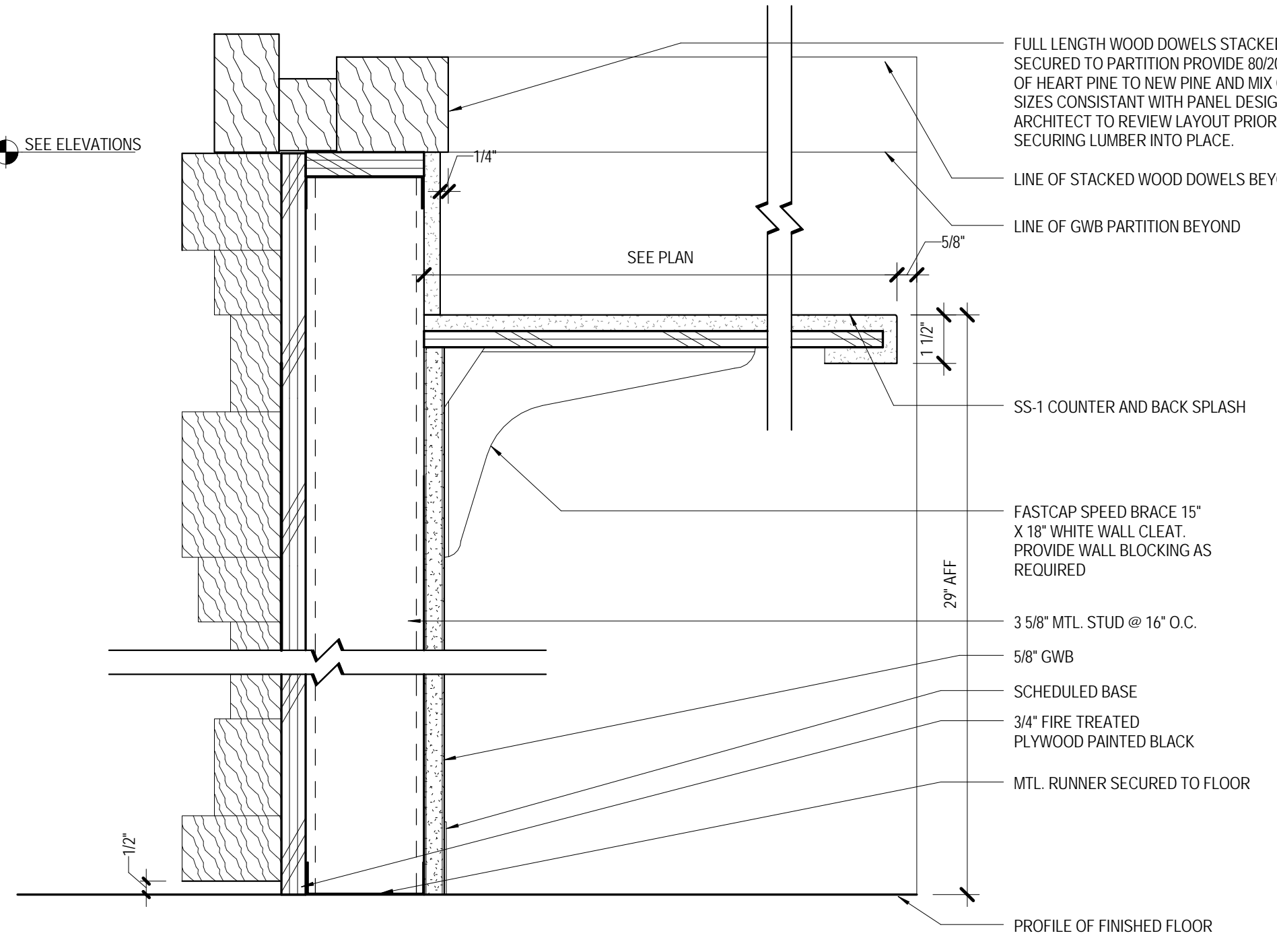
C4 DETAIL - WP-1
1" = 1'-0"



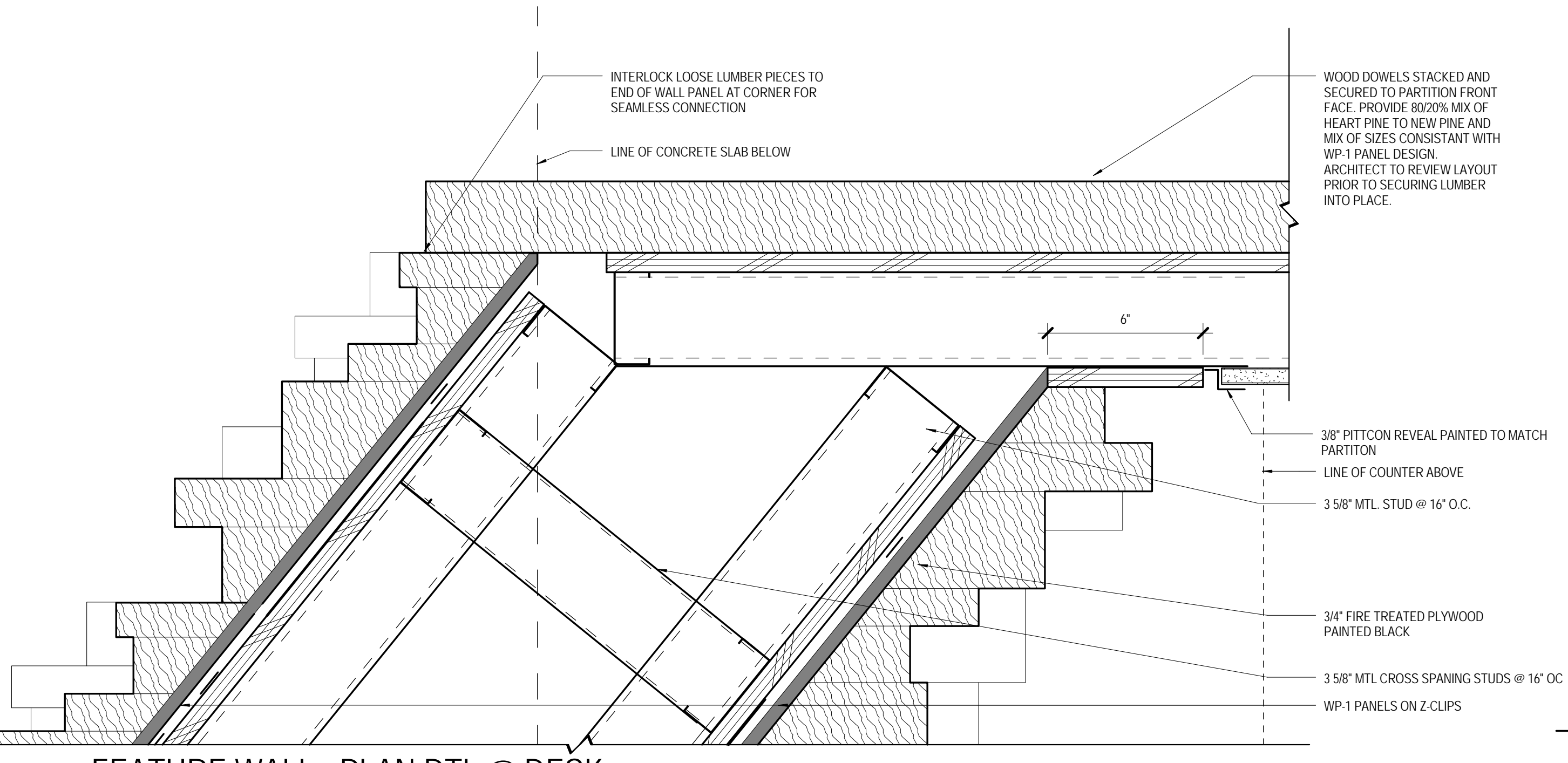
B1 FEATURE WALL - PLAN DETAIL @ CORNER
3" = 1'-0"



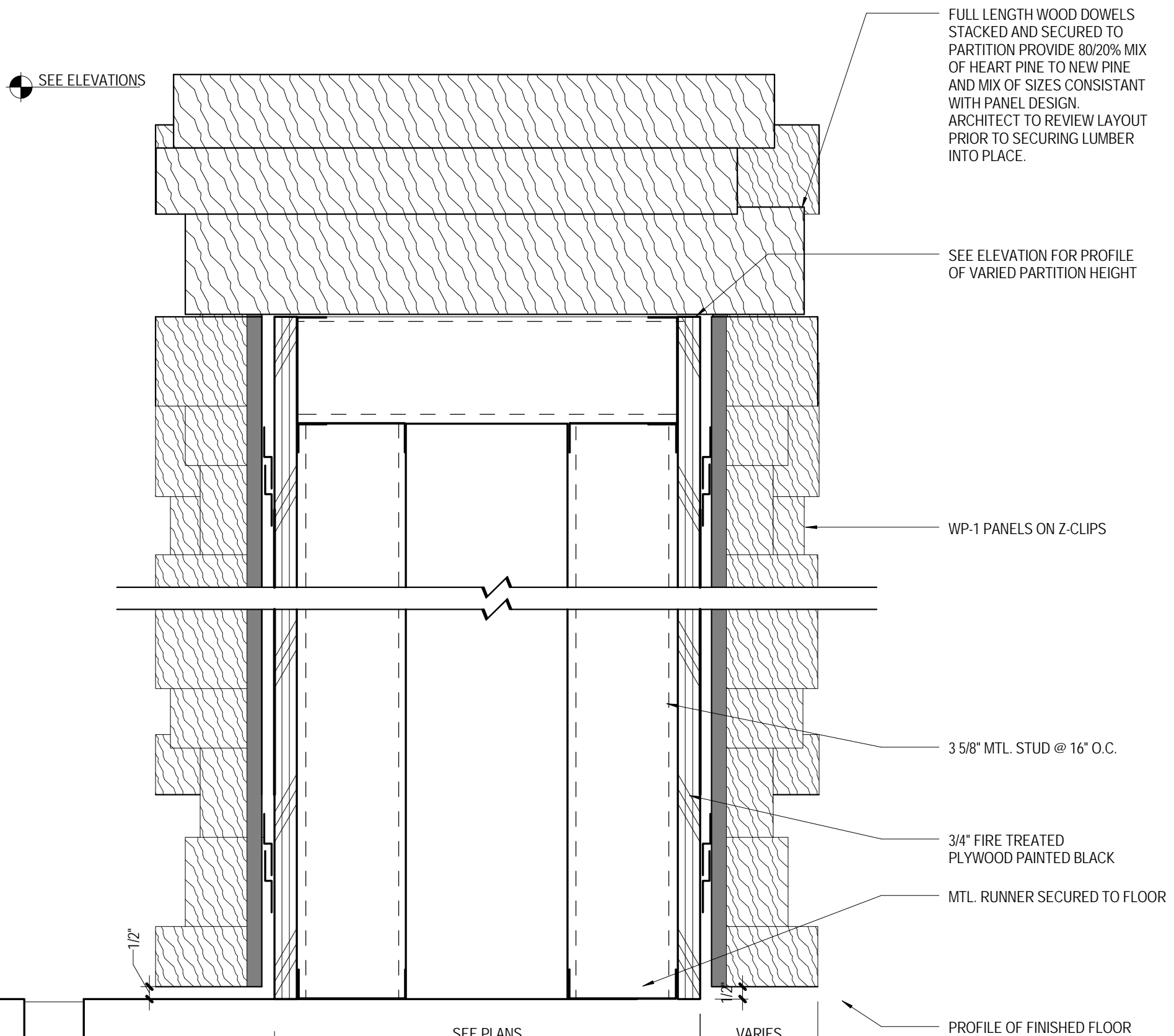
B3 RECEPTION - PLAN
3" = 1'-0"



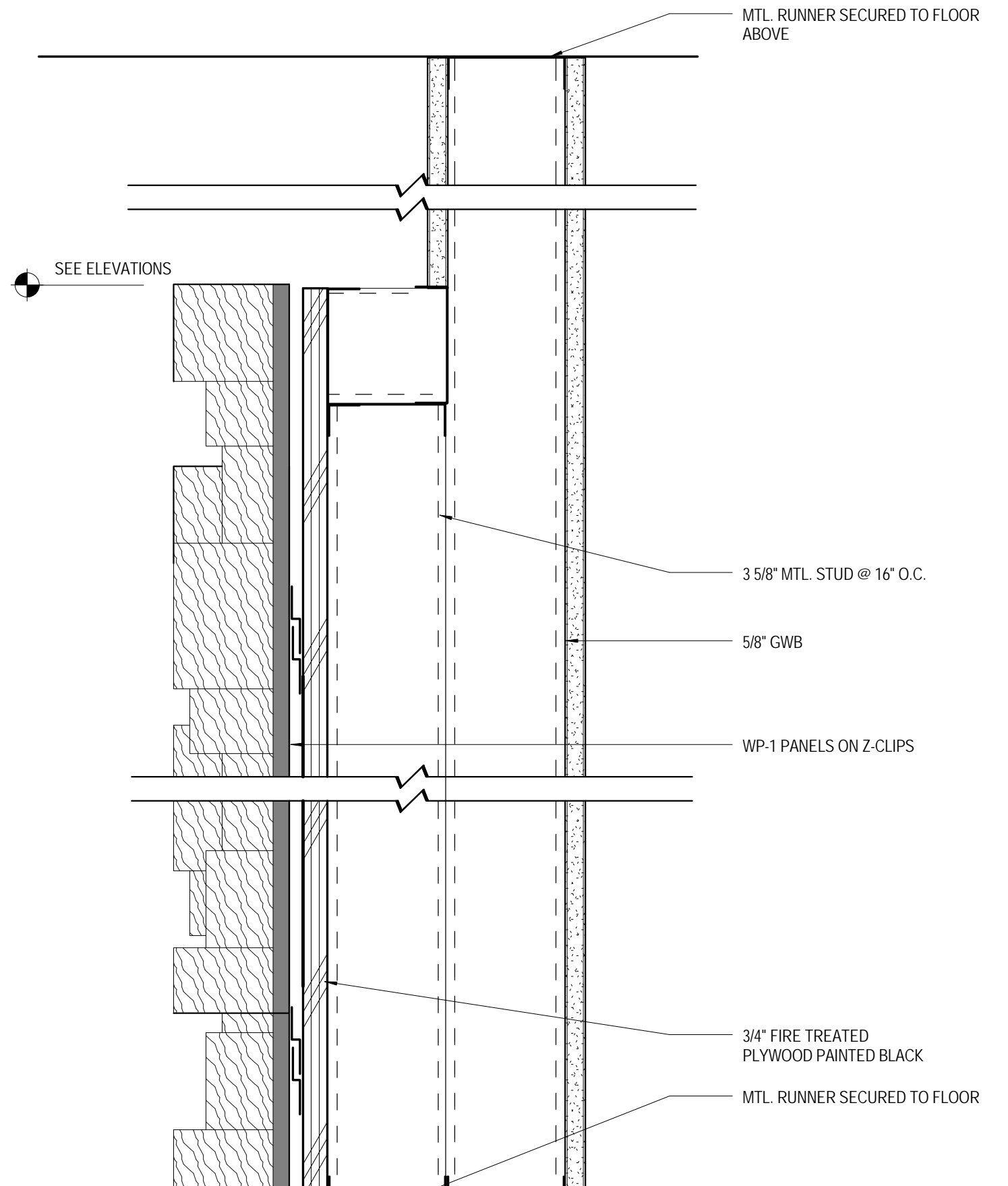
B4 RECEPTION - SECTION
3" = 1'-0"



A1 FEATURE WALL - PLAN DTL @ DESK CORNER
3" = 1'-0"



A3 FEATURE WALL - PARTIAL HGT SCTN
3" = 1'-0"



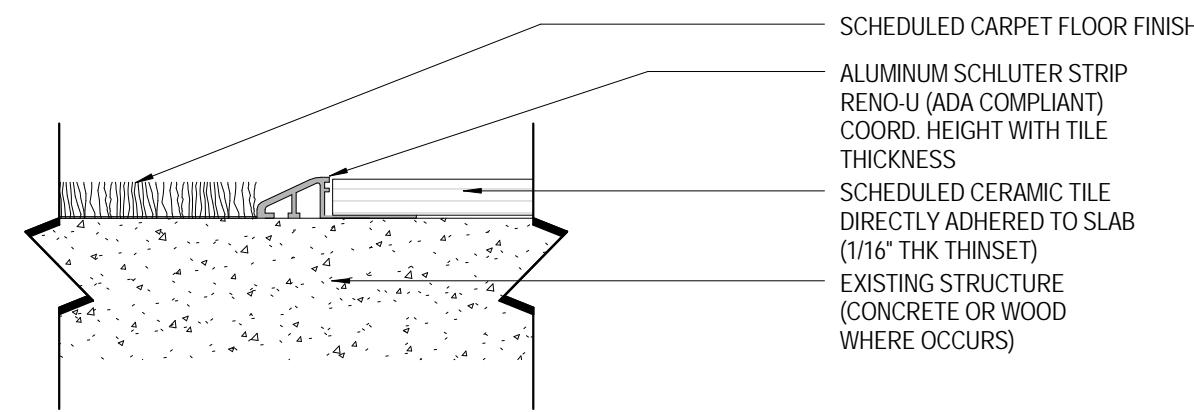
A4 FEATURE WALL - SECTION
3" = 1'-0"

DATE	DESCRIPTION
12.14.2012	ISSUE FOR BID

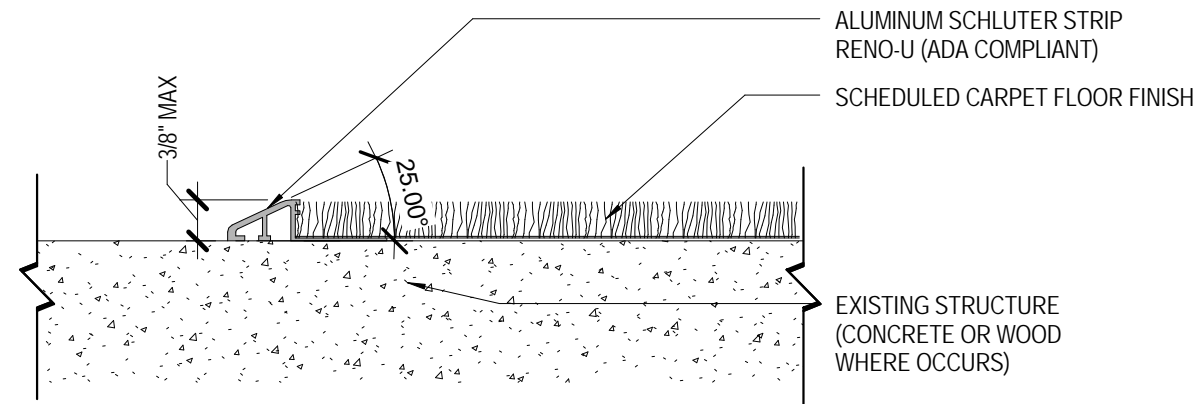
DATE	DESCRIPTION
12.14.2012	ISSUE FOR BID

DATE	DESCRIPTION
12.14.2012	ISSUE FOR BID

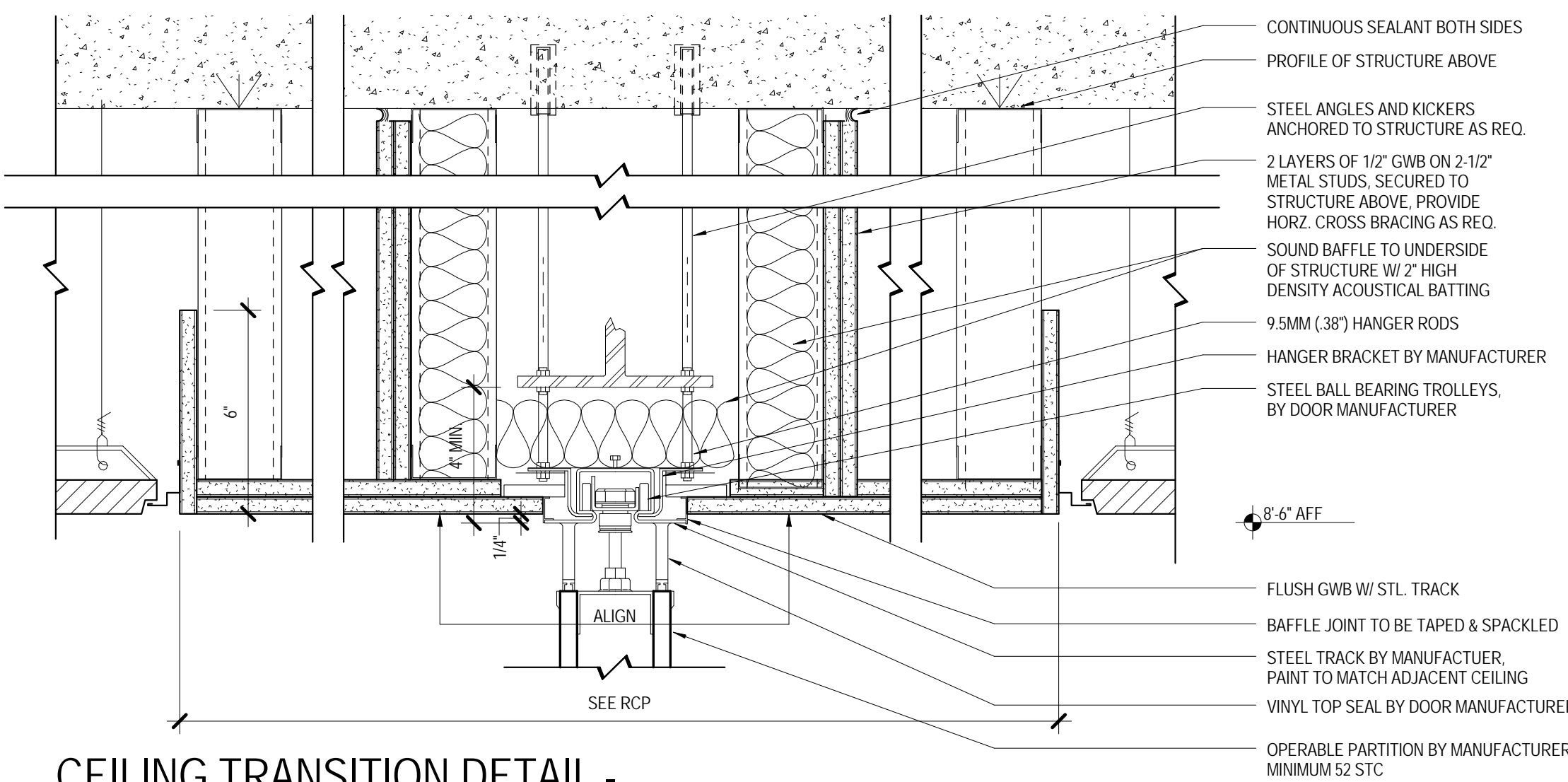
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DRAWN BY:	Author
SCALE:	As indicated
DATE:	11.27.2012
DWG. NO.	



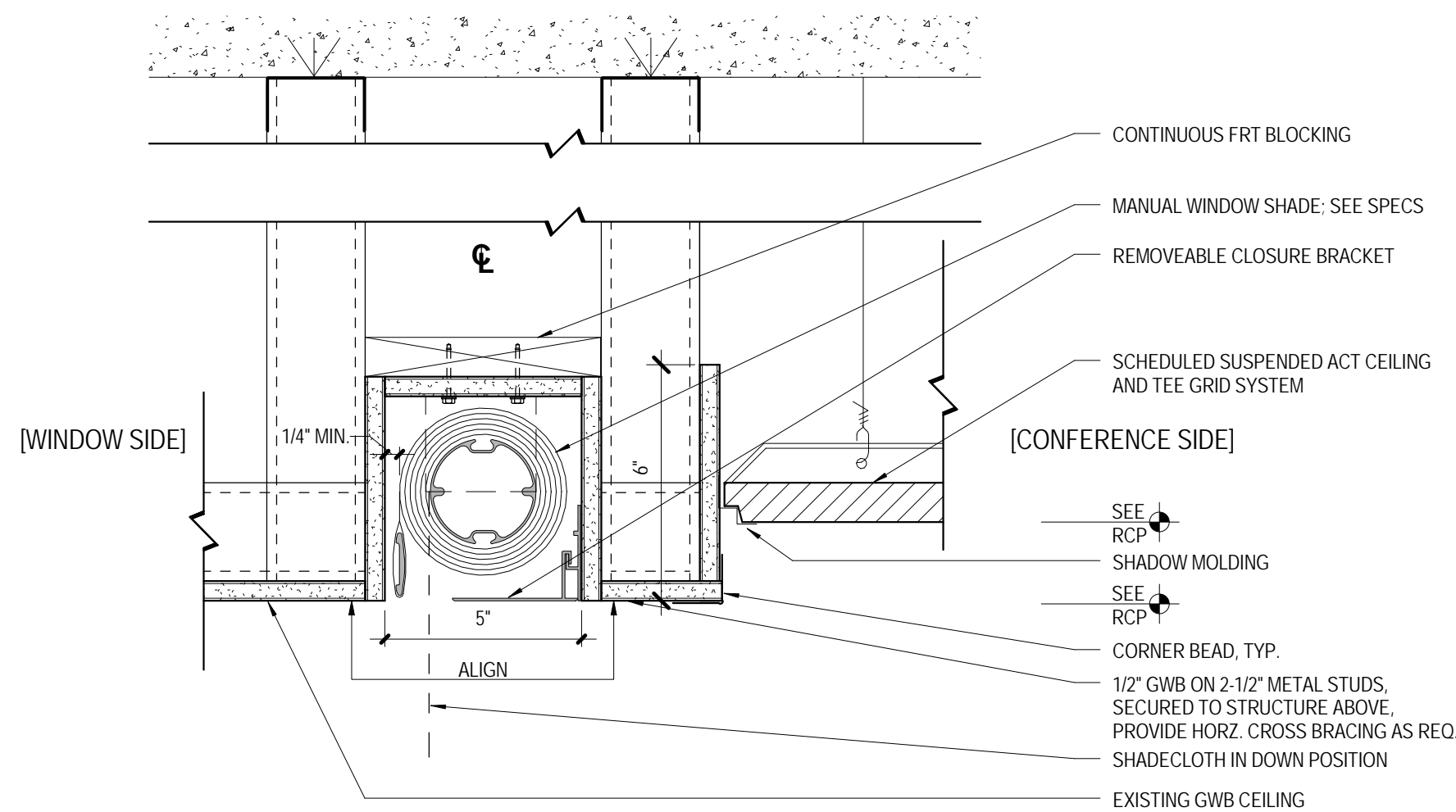
FLOOR TRANSITION DETAIL -
CARPET TO CERAMIC TILE FLOORING
D4 6' - 1'-0"



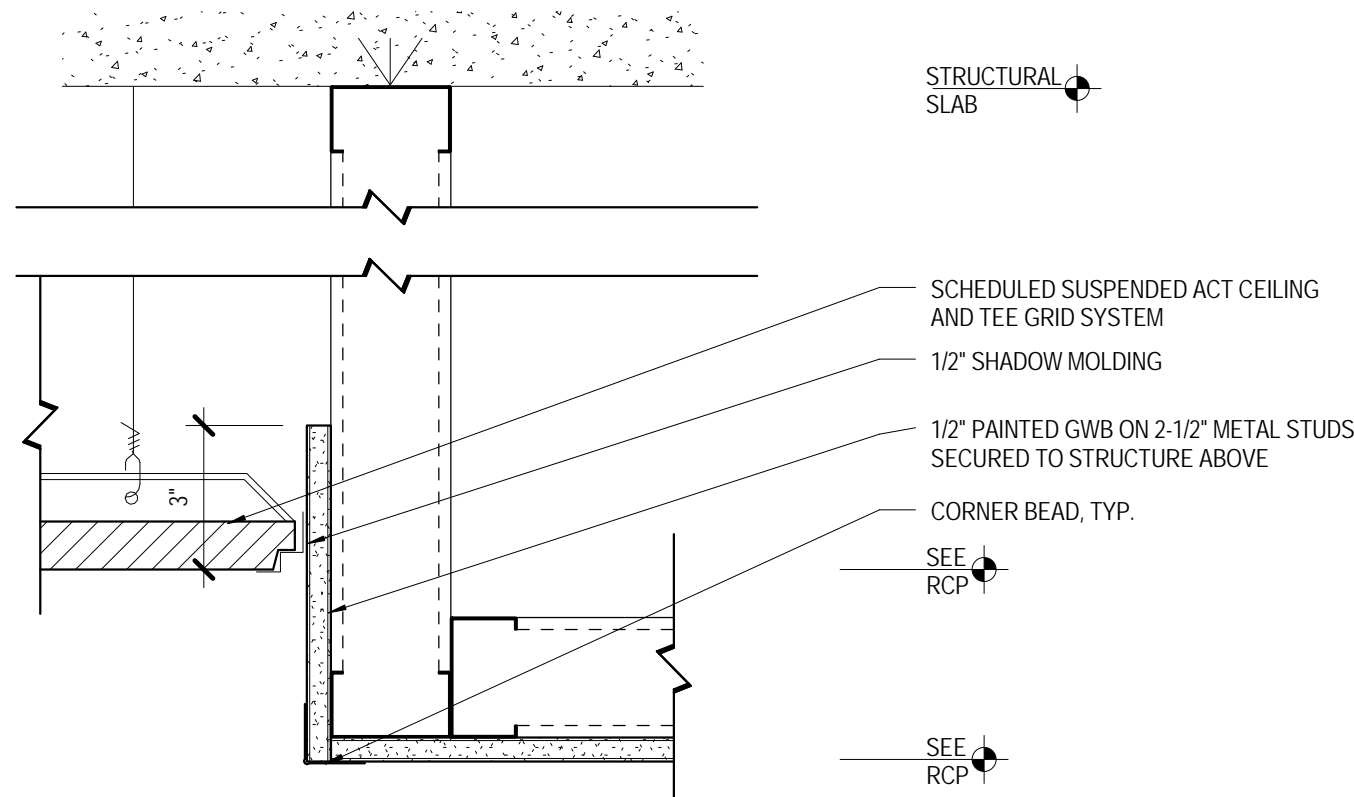
FLOOR TRANSITION DETAIL -
CARPET TO FINISHED STRUCTURAL FLOOR
D5 6' - 1'-0"



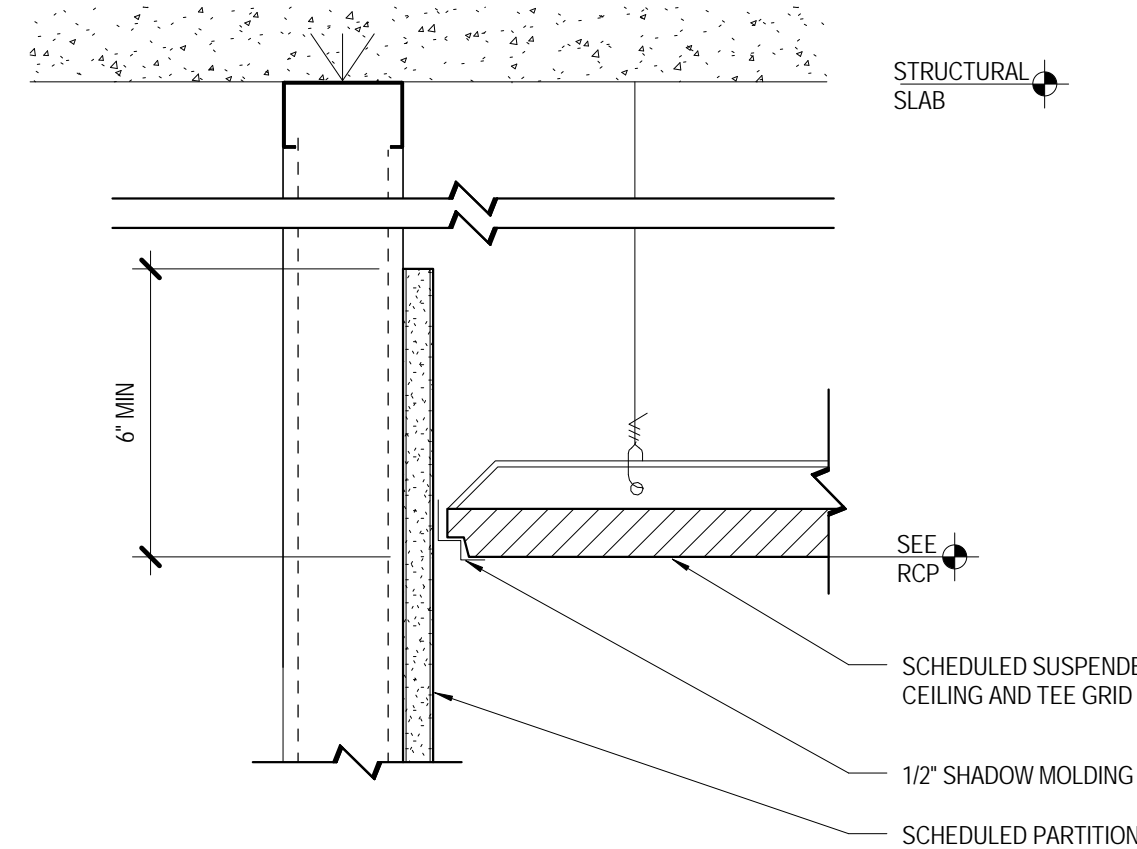
CEILING TRANSITION DETAIL -
OPERABLE PARTITION @ GWB
C3 3' - 1'-0"



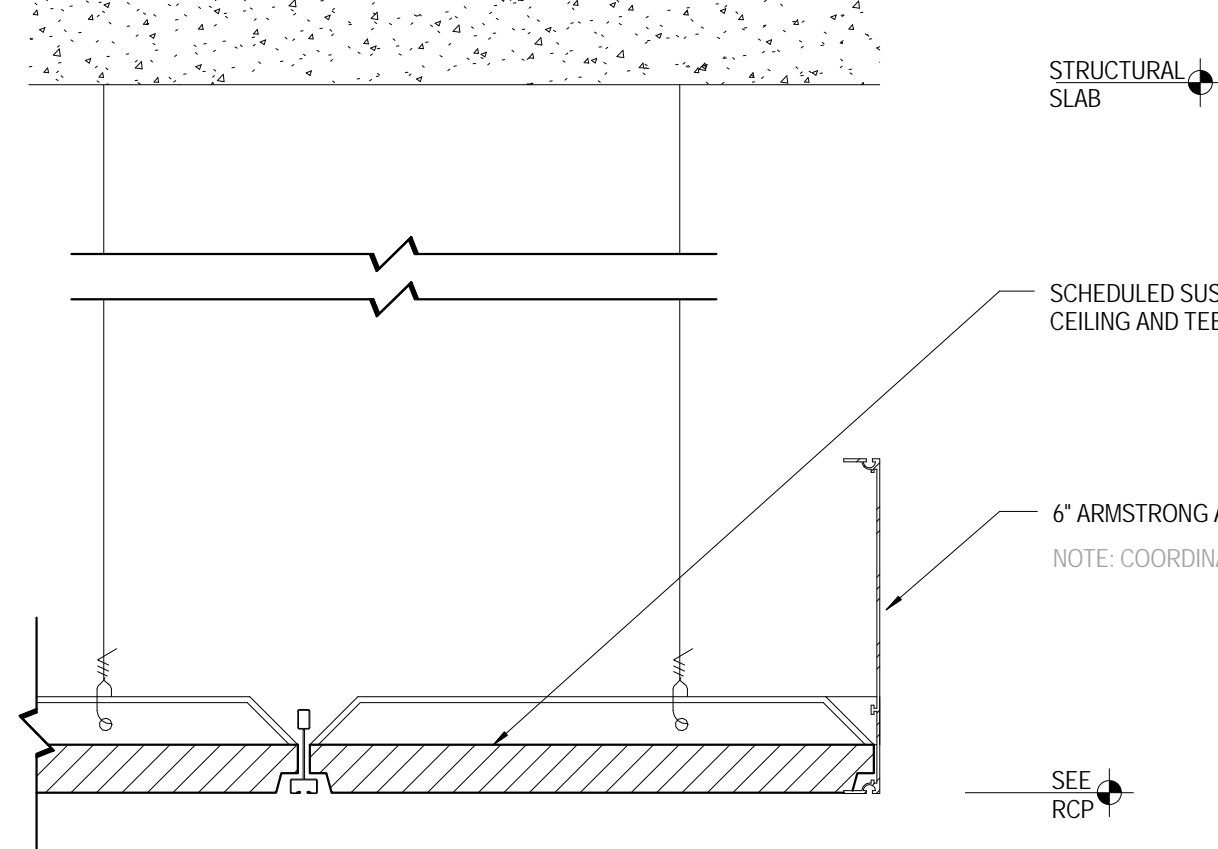
CEILING TRANSITION DETAIL -
SHADE POCKET DETAIL
C5 3' - 1'-0"



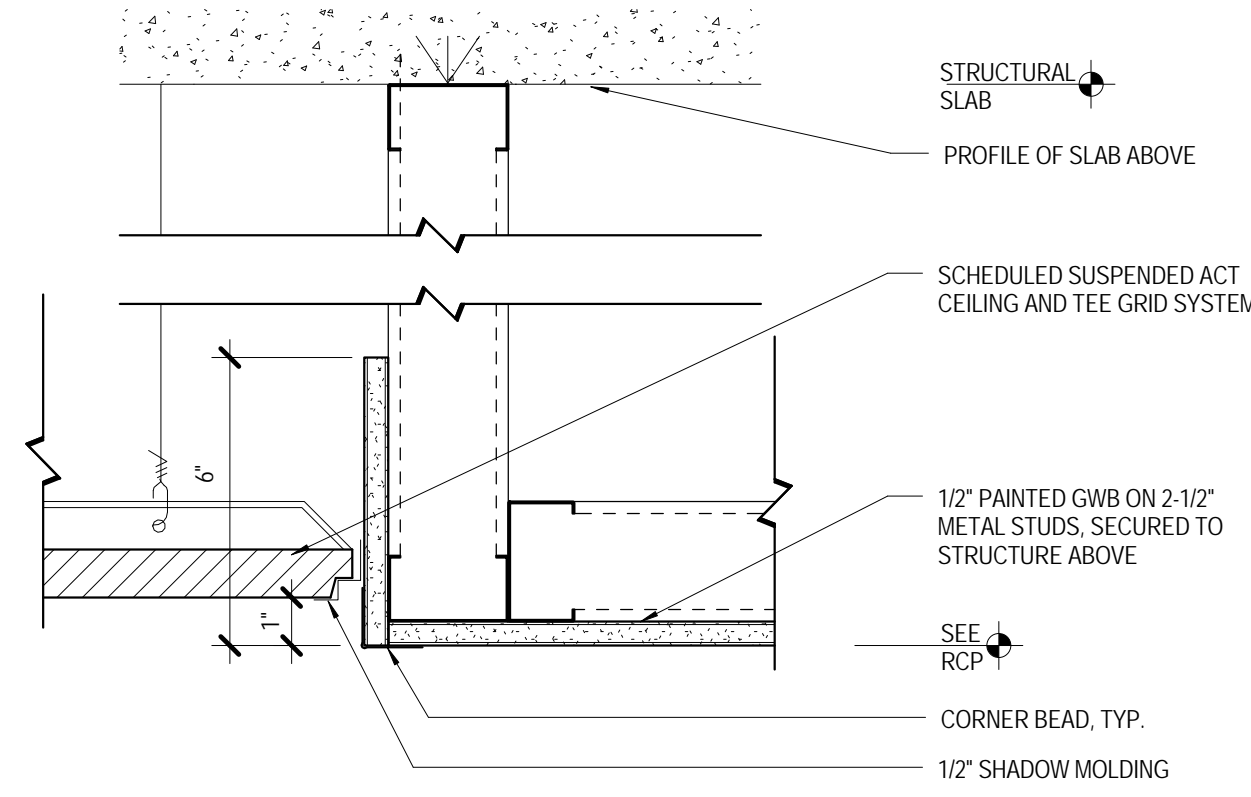
CEILING TRANSITION DETAIL -
ACT TO GWB BULKHEAD
B5 3' - 1'-0"



CEILING TRANSITION DETAIL -
ACT W/ SHADOW MOLDING
A2 3' - 1'-0"



CEILING TRANSITION DETAIL -
ACT PAD TO OPEN CEILING
A4 3' - 1'-0"



CEILING TRANSITION DETAIL -
ACT TO GWB
B3 3' - 1'-0"

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C

D

LEED COMMISSIONING REQUIREMENTS

THE FUNDAMENTAL COMMISSIONING PROCESS SHALL BE AS FOLLOWS:

1.1 PURPOSE

- AN INDEPENDENT COMMISSIONING AGENT SHALL BE THE COMMISSIONING AUTHORITY (CxA) AND SHALL DEVELOP COMMISSIONING PLAN. THE PLAN SHALL BE REVIEWED BY THE OWNER, CONTRACTOR(S) AND THE ARCHITECT AND SHALL THEN BE SUBMITTED TO THE USGBC. THE INDIVIDUAL DESIGNATED AS THE CxA SHALL HAVE COMMISSIONING EXPERIENCE IN AT LEAST 2 BUILDING PROJECTS.
- COMMISSIONING DURING THE CONSTRUCTION PHASE IS INTENDED TO ACHIEVE THE FOLLOWING SPECIFIC OBJECTIVES ACCORDING TO THE CONTRACT DOCUMENTS:

- VERIFY THAT APPLICABLE EQUIPMENT AND SYSTEMS ARE INSTALLED ACCORDING TO THE MANUFACTURERS' RECOMMENDATIONS AND TO INDUSTRY ACCEPTED MINIMUM STANDARDS AND THAT THEY RECEIVE ADEQUATE OPERATIONAL CHECKOUT BY INSTALLING CONTRACTORS.
- VERIFY AND DOCUMENT PROPER PERFORMANCE OF EQUIPMENT AND SYSTEMS.

1.2 COORDINATION

A. COMMISSIONING TEAM

THE MEMBERS OF THE COMMISSIONING TEAM CONSIST OF THE COMMISSIONING AUTHORITY (CxA), THE PROJECT MANAGER (PM), THE DESIGNATED REPRESENTATIVE OF THE OWNERS CONSTRUCTION MANAGEMENT FIRM (CM), THE GENERAL CONTRACTOR (GC), THE ARCHITECT AND DESIGN ENGINEERS (MECHANICAL ENGINEER), THE MECHANICAL CONTRACTOR (MC), THE ELECTRICAL CONTRACTOR (EC), THE TAB REPRESENTATIVE, THE CONTROLS CONTRACTOR (CC), ANY OTHER INSTALLING SUBCONTRACTORS OR SUPPLIERS OF EQUIPMENT. IF KNOWN, THE OWNERS BUILDING OR PLANT OPERATOR/ENGINEER IS ALSO A MEMBER OF THE COMMISSIONING TEAM.

B. SCHEDULING

THE CxA WILL WORK WITH THE CM AND GC ACCORDING TO ESTABLISHED PROTOCOLS TO SCHEDULE THE COMMISSIONING ACTIVITIES. THE GC IS ULTIMATELY RESPONSIBLE FOR GENERATING SCHEDULE AND MAKING SURE ALL SUB-CONTRACTORS ARE PRESENT WHEN NEEDED. THE GC WILL PROVIDE SUFFICIENT NOTICE TO THE CxA FOR SCHEDULING COMMISSIONING ACTIVITIES. THE GC WILL INTEGRATE ALL COMMISSIONING ACTIVITIES INTO THE MASTER SCHEDULE. ALL PARTIES WILL ADDRESS SCHEDULING PROBLEMS AND MAKE NECESSARY NOTIFICATIONS IN A TIMELY MANNER IN ORDER TO EXPEDITE THE COMMISSIONING PROCESS.

1.3 COMMISSIONING PLAN

- THE COMMISSIONING PLAN SHALL BE DEVELOPED BY THE CxA AND PROVIDED TO ALL PARTIES AND WILL CONSIST OF:

- CONSTRUCTION DOCUMENTS.
- GENERAL PROJECT INFORMATION, BASIS OF DESIGN, OWNERS PROJECT REQUIREMENTS, ETC.
- A NARRATIVE DESCRIBING THE SYSTEMS TO BE COMMISSIONED.
- RESPONSIBILITIES OF ALL PARTIES.
- PRE-FUNCTIONAL CHECKLISTS.
- FUNCTIONAL PERFORMANCE CHECKLISTS.
- RESOLUTION PROCESS FOR DEFICIENCIES.
- ACCEPTANCE OF BUILDING SYSTEMS.

B. DEFINITIONS:

- PRE-FUNCTIONAL CHECKLISTS (PC): PRE-FUNCTIONAL CHECKLISTS SHALL BE DEVELOPED BY THE CxA PRIOR TO START OF THE CONSTRUCTION. THE CHECKLISTS SHALL BE PROVIDED TO THE GC FOR DISTRIBUTION TO THE SUB-CONTRACTORS. THE SUB-CONTRACTORS SHALL CHECK THE INSTALLED EQUIPMENT FOR THE WORK UNDER THEIR DISCIPLINE AND SIGN-OFF ON THE CHECKLISTS. THE PRE-FUNCTIONAL CHECKLISTS SHALL BE COMPLETED PRIOR TO THE START OF ACTUAL COMMISSIONING BY CxA. THE CxA IS NOT REQUIRED TO BE PRESENT WHEN THE PRE-FUNCTIONAL CHECKLISTS ARE COMPLETED. IN THE CASE OF LARGE OR SPECIAL EQUIPMENT THE CxA SHALL BE PRESENT. IN SUCH CASES THE GC WILL BE NOTIFIED IN ADVANCE TO SCHEDULE A SITE VISIT BY THE CxA.
- FUNCTIONAL PERFORMANCE TESTS (FT): TEST OF THE DYNAMIC FUNCTION AND OPERATION OF EQUIPMENT AND SYSTEMS BY DIRECT OBSERVATION OR MONITORING METHODS. THE SYSTEMS ARE RUN THROUGH ALL THE CONTROL SYSTEMS SEQUENCES OF OPERATION AND COMPONENTS ARE VERIFIED TO BE RESPONDING AS THE SEQUENCES STATE. THE CxA DEVELOPS THE FUNCTIONAL TEST PROCEDURES IN A SEQUENTIAL WRITTEN FORM, COORDINATES, OVERSEES AND DOCUMENTS THE ACTUAL TESTING, WHICH IS USUALLY PERFORMED BY THE INSTALLING CONTRACTOR OR VENDOR. FTs ARE PERFORMED AFTER PRE-FUNCTIONAL CHECKLISTS AND STARTUP ARE COMPLETE. TAB WORK MUST BE COMPLETED PRIOR TO FUNCTIONAL PERFORMANCE TESTS OF AIR AND WATER SYSTEMS.

1.4 RESPONSIBILITIES

A. ALL PARTIES

- FOLLOW THE COMMISSIONING PLAN.
- ATTEND COMMISSIONING SCOPING MEETING AND ADDITIONAL MEETINGS, AS NECESSARY.

B. ARCHITECT

THE ARCHITECT SHALL:

- PROVIDE ALL PROJECT RELATED INFORMATION TO THE CxA TO COMPLETE THE COMMISSIONING PLAN.
- ATTEND THE COMMISSIONING SCOPING MEETING AND SELECTED COMMISSIONING TEAM MEETINGS, IF NECESSARY.
- PERFORM CONSTRUCTION OBSERVATION.

C. COMMISSIONING AUTHORITY (CxA)

THE CxA SHALL:

- DEVELOP AND COORDINATE THE EXECUTION OF A TESTING PLAN, OBSERVE AND DOCUMENT PERFORMANCE, THAT SYSTEMS ARE FUNCTIONING IN ACCORDANCE WITH THE DOCUMENTED DESIGN INTENT AND IN ACCORDANCE WITH THE CONTRACT DOCUMENTS. THE CONTRACTORS SHALL PROVIDE ALL TOOLS OR THE USE OF TOOLS TO START, CHECK-OUT AND FUNCTIONALLY TEST EQUIPMENT AND SYSTEMS.
- PERFORM CONSTRUCTION OBSERVATION AS REQUIRED.
- ATTEND COMMISSIONING SCOPING MEETINGS AND OTHER SELECTED COMMISSIONING TEAM MEETINGS, AS NECESSARY.
- COORDINATE WITH GC, EC, MC, TAB AND CONTROLS CONTRACTOR WHEN WRITING THE TESTING PROCEDURES.
- PARTICIPATE IN THE RESOLUTION OF SYSTEM DEFICIENCIES IDENTIFIED DURING COMMISSIONING, ACCORDING TO THE CONTRACT DOCUMENTS.
- WRITE THE FINAL COMMISSIONING REPORT AND SUBMIT TO THE USGBC.

D. CONSTRUCTION MANAGER, OWNERS REPRESENTATIVE (CM)

THE CM SHALL:

- FACILITATE THE COORDINATION OF THE COMMISSIONING WORK BY THE CxA, AND, WITH THE GC AND CxA, ENSURE THAT COMMISSIONING ACTIVITIES ARE BEING SCHEDULED INTO THE MASTER SCHEDULE.
- REVIEW AND APPROVE THE FINAL COMMISSIONING PLAN.
- ATTEND A COMMISSIONING SCOPING MEETING AND OTHER COMMISSIONING TEAM MEETINGS, IF NECESSARY.
- REVIEW AND APPROVE THE FUNCTIONAL PERFORMANCE TEST PROCEDURES SUBMITTED BY THE CxA, PRIOR TO TESTING.
- REVIEW COMMISSIONING PROGRESS AND DEFICIENCY REPORTS.
- COORDINATE THE RESOLUTION OF NON-COMPLIANCE AND DESIGN DEFICIENCIES IDENTIFIED IN ALL PHASES OF COMMISSIONING.
- SIGN-OFF (FINAL APPROVAL) ON INDIVIDUAL COMMISSIONING TESTS AS COMPLETED AND PASSING.

E. OWNER'S PROJECT MANAGER (PM)

THE PM SHALL:

- MANAGE THE CONTRACT FOR THE OWNER.
- ARRANGE FOR FACILITY OPERATING AND MAINTENANCE PERSONNEL TO ATTEND VARIOUS FIELD COMMISSIONING ACTIVITIES.
- PROVIDE FINAL APPROVAL FOR THE COMPLETION OF THE COMMISSIONING WORK.

F. GENERAL CONTRACTOR (GC)

THE GC SHALL:

- FACILITATE THE COORDINATION OF THE COMMISSIONING WORK BY THE CxA WITH ALL SUB-CONTRACTORS AND THE OWNER.
- INCLUDE THE COST OF COMMISSIONING IN THE TOTAL CONTRACT PRICE.
- FURNISH A COPY OF ALL CONSTRUCTION DOCUMENTS, ADDENDA, CHANGE ORDERS AND APPROVED SUBMITTALS AND SHOP DRAWINGS (IF APPLICABLE) RELATED TO COMMISSIONED EQUIPMENT TO THE CxA.
- IN EACH PURCHASE ORDER OR SUBCONTRACT WRITTEN, INCLUDE REQUIREMENTS FOR COMMISSIONING TASKS.
- PROVIDE ALL NECESSARY STAFF, TOOLS AND INSTRUMENTATION AND COORDINATION REQUIRED FOR THE COMMISSIONING WORK.
- ENSURE THAT ALL SUBS EXECUTE THEIR COMMISSIONING RESPONSIBILITIES ACCORDING TO THE CONTRACT DOCUMENTS AND SCHEDULE.
- A REPRESENTATIVE SHALL ATTEND A COMMISSIONING SCOPING MEETING AND OTHER NECESSARY MEETINGS SCHEDULED BY THE CxA TO FACILITATE THE Cx PROCESS.
- COMPLETE ALL CONSTRUCTION CHECKLISTS INCLUDING MANUFACTURERS CHECK, TEST AND START-UP DOCUMENTATION.

1.5 FINAL COMMISSIONING REPORT:

THE FINAL COMMISSIONING REPORT SHALL BE PREPARED BY CxA AND SHALL CONSIST OF THE FOLLOWING:

- EXECUTIVE SUMMARY OF THE PROCESS AND THE RESULTS OF THE COMMISSIONING PROGRAM, INCLUDING OBSERVATIONS, CONCLUSIONS, AND ANY OUTSTANDING ITEMS.
- HISTORY OF ANY SYSTEM DEFICIENCIES IDENTIFIED AND HOW THEY WERE RESOLVED, INCLUDING ANY OUTSTANDING ISSUES OR SEASONAL TESTING SCHEDULED FOR A LATER DATE.
- PRE-FUNCTIONAL AND FUNCTIONAL PERFORMANCE CHECKLISTS, SIGNED BY ALL PARTIES INVOLVED.
- CONFIRMATION FROM THE CxA INDICATING WHETHER INDIVIDUAL SYSTEMS MEET THE DESIGN REQUIREMENTS.

1.6 COMMISSIONED SYSTEMS:

COMMISSIONING PROCESS ACTIVITIES SHALL BE COMPLETED FOR THE FOLLOWING ENERGY-RELATED SYSTEMS:

- HEATING, VENTILATING, AIR CONDITIONING AND REFRIGERATION SYSTEMS AND ASSOCIATED CONTROLS.
- DOMESTIC HOT WATER SYSTEMS.

MECHANICAL SPECIFICATIONS

DUCTWORK

- ALL DUCTWORK CONSTRUCTION AND INSTALLATION SHALL BE IN ACCORDANCE WITH:

- THE HVAC DUCT CONSTRUCTION STANDARDS - 2005 EDITION PREPARED BY THE SHEET METAL AND AIR CONDITIONING CONTRACTORS NATIONAL ASSOCIATION, INC., (SMACNA), "HVAC DUCT CONSTRUCTION STANDARDS".

NFPA-90A: AIR CONDITIONING AND VENTILATING STANDARDS

- MINIMUM GAUGE 24, DUCT PRESSURE UP TO 2" W.G., SEAL CLASS B.

- DUCTWORK DIMENSIONS INDICATED ARE CLEAR INSIDE DUCT DIMENSIONS AND SHALL BE INCREASED TO COMPENSATE FOR THE THICKNESS OF DUCT LINING.

- FLEXIBLE DUCTWORK SHALL BE WIRE HELIX SUPPORTING A BLANKET OF FIBERGLASS INSULATION OVER A FIBERGLASS SCRM AND POLYETHYLENE VAPOR BARRIER. DUCTWORK SHALL BE U.L. LISTED AS A CLASS 1 AIR DUCT CONNECTOR, AND COMPLYING WITH NFPA STANDARDS 90A AND 90B. FLEXIBLE DUCTWORK SHALL BE THERMAFLEX MODEL G-KM. PROVIDE SPIN ON COLLAR WITH BUTTERFLY VOLUME DAMPER AT EACH FLEXIBLE DUCTWORK TAP. FLEXIBLE DUCT LENGTH SHALL NOT EXCEED 6'-0".

- ALL EXPOSED ROUND DUCTWORK SHALL BE RIGID TYPE.

- MANUAL BALANCING DAMPERS SHALL BE REINFORCED TO PREVENT VIBRATION AND PROVIDED WITH LOCKING QUADRANT LEVERS WHICH ARE CLEARLY MARKED FOR POSITION AND DAMPERS BOLTED, RIVETED OR OTHERWISE SECURED TO QUADRANT TO REFLECT THEIR TRUE POSITION. MANUAL BALANCING DAMPERS SHALL BE OPPOSED BLADE TYPE WITH BLADES 8 INCHES WIDE MAXIMUM AND 48 INCHES LONG MAXIMUM. CONSTRUCTION SHALL BE IN ACCORDANCE WITH SMACNA LOW VELOCITY DUCT CONSTRUCTION STANDARDS.

DUCTWORK INSULATION

- MATERIAL: DUCT INSULATION SHALL BE FIBERGLASS HAVING A K FACTOR OF .27 AT 75 DEGREES MEAN TEMPERATURE. WITH A LAMINATED ALUMINUM FOIL GLASS REINFORCED AND WHITE KRAFT PAPER VINYL COATED JACKET IN CONCEALED SPACES. THE JACKET SHALL SERVE AS A VAPOR BARRIER AND FINAL FINISH FOR INSULATION COVERING ALL BUILDING SERVICES INDICATED HEREIN.

- SUPPLY AIR DUCTWORK: 1-1/2 INCH THICK INSULATION, ONE POUND DENSITY.

- ALL INSULATION SHALL BE A PRODUCT OF ONE MANUFACTURER. THE APPLICATION OF ALL COVERING SHALL BE IN ACCORDANCE WITH THE MANUFACTURERS PUBLISHED RECOMMENDATIONS.

- ALL INSULATION AND ACCESSORIES SHALL HAVE A COMPOSITE FIRE HAZARD RATING AS TESTED BY ASTM E-84, NFPA 255, OR U.L. 723 NOT TO EXCEED Z5 FLAME SPREAD AND 50 SMOKE DEVELOPED.

- INSULATION ON COLD SURFACES MUST BE APPLIED WITH UNBROKEN VAPOR SEALS. THE INSULATION SHALL BE CONTINUOUS THROUGH WALL OPENINGS AND SLEEVES. ALL DUCT HANGERS SHALL BE INSTALLED OUTSIDE OF THE DUCT INSULATION. ALL APPURTENANCES CONNECTED TO COLD SURFACES SHALL BE INSULATED TO PREVENT CONDENSATION.

- DUCTWORK SHALL BE SOUNDUNDED WHERE INDICATED ON DRAWINGS. SOUND LINING SHALL BE CONTINUOUS GLASS FIBER FINELY BONDED INTO A RESIDENT BLANKET. LINING SHALL BE COATED ON ONE SIDE. LINING SHALL BE ONE INCH THICK, 3 POUND PER CUBIC FOOT DENSITY. FIRE HAZARD CLASSIFICATION SHALL NOT EXCEED Z5 FOR FLAME SPREAD AND 50 FOR SMOKE DEVELOPED. SOUND LINING SHALL BE CERTAINTED TOUCHGUARD-R OR APPROVED EQUAL. THE LINER SURFACE SHALL BE TREATED WITH AN EPA REGISTERED ANTI-MICROBIAL AGENT TO PREVENT THE GROWTH OF MOLD, FUNGUS AND BACTERIA.

- INSULATION ON EXPOSED DUCTWORK SHALL INTERIOR LINING AND SHALL BE RIGID.

PRELIMINARY BALANCING

- PERFORM A PRELIMINARY AIR AND WATER BALANCE OF THE SYSTEM. VERIFY THAT ALL FITTINGS, DAMPERS, CONTROL DEVICES, TEST DEVICES AND VALVES ARE PROPERLY LOCATED AND INSTALLED. EXAMINE EACH SYSTEM TO SEE THAT IS FREE FROM OBSTRUCTIONS, DETERMINE THAT ALL DAMPERS, REGISTERS AND VALVES ARE IN A SET OR FULL OPEN POSITION. THAT MOVING EQUIPMENT IS LUBRICATED. THAT ALL BUILDING COMPONENTS ARE CLEAN AND FUNCTIONING. REPAIRS THAT ARE REQUIRED BASED ON ANY DEFICIENCIES DISCOVERED DURING THIS INITIAL BALANCING RELATED BUT NOT LIMITED TO ITEMS LISTED BELOW IS CONSIDERED WORK TO BE PERFORMED BY THIS MECHANICAL CONTRACTOR.

- DUCTWORK LEAKAGE
- CONTROL COMPONENTS OF UNITS (INCLUDING DAMPERS, THERMOSTATS, ETC.)
- INADEQUATE MOTOR CAPACITY ON FANS
- MODIFICATIONS TO ADJUSTABLE SHEAVES (PROVIDE NEW SHEAVES IF REQUIRED)
- BALANCING DEVICES (DAMPERS & BALANCING VALVES)
- ANY ADDITIONAL DEVICES REQUIRED FOR THE FINAL AIR BALANCING
- OTHER MISCELLANEOUS TASKS/REPAIRS (E.G. TORN FLEX CONNECTIONS, DUCT OPENINGS, ETC.)

- IT SHALL BE THIS CONTRACTORS RESPONSIBILITY THAT HE HAS PROPERLY IDENTIFIED ANY OF THE DEFICIENCIES AND HAS PERFORMED SATISFACTORY REPAIRS PRIOR TO INSTALLATION OF CEILING AND CONCEALMENT.

BALANCING

- PROVIDE AND PERFORM A BALANCING OF THE AIR AND WATER DISTRIBUTION SYSTEM TO QUANTITIES INDICATED. ADJUST EACH REGISTER, DIFFUSER AND TERMINAL UNIT TO HANDLE AND PROPERLY DISTRIBUTE THE DESIGN AIRFLOW. ADJUST RETURN AIR DAMPERS AS REQUIRED DURING BALANCE PROCEDURES. ADJUST ALL BALANCING VALVES SO THAT EACH COIL IS FURNISHED WITH THE DESIGN FLUID FLOW. ALL BALANCING SHALL BE PERFORMED IN ACCORDANCE WITH THE PROCEDURES AS OUTLINED BY THE NATIONAL ENVIRONMENTAL BALANCING BUREAU (NEBB), OR THE ASSOCIATED AIR BALANCE COUNCIL (AABC) AND THE SMACNA "HVAC SYSTEM-TESTING, ADJUSTING AND BALANCING" MANUAL. AIR AND WATER BALANCING SHALL BE PERFORMED BY A FIRM THAT IS INDEPENDENT OF THE MECHANICAL CONTRACTOR AND SHEET METAL INSTALLERS, AND THAT IS A MEMBER OF NEBB OR AABC. MECHANICAL CONTRACTOR SHALL PROVIDE ALL NECESSARY VOLUME DAMPERS AND BALANCING VALVES TO ACHIEVE AIR AND WATER QUANTITIES INDICATED ON DRAWINGS.

- BALANCING OF NEW AND EXISTING EQUIPMENT SHALL BE PERFORMED WITH CLEAN FILTERS.

- FOR VARIABLE AIR VOLUME SYSTEMS, THE TAB CONTRACTOR SHALL NOTE AT THE TIME OF BALANCING THE FOLLOWING:
 - DUCT STATIC PRESSURE SETTING
 - ACTUAL DUCT STATIC PRESSURE USING TRAVERSE
 - VFD HERTZ

- DOCUMENT THE RESULTS ON FORMS PER THE NATIONAL ENVIRONMENTAL BALANCING BUREAU AND SUBMIT FOUR (4) COPIES TO ENGINEER FOR THE REVIEW AND APPROVAL.

- REVIEW OF THE SPACE AND FINAL BALANCING OF THE SYSTEM SHALL BE PERFORMED PRIOR TO CONCEALMENT OF HVAC COMPONENTS AND PRIOR TO TENANT OCCUPANCY AND ALL BUILDING COMPONENTS (CEILINGS, DOORS, LIGHT FIXTURES, ETC.) BEING IN PLACE.

- AFTER ALL DEFICIENCIES HAVE BEEN CORRECTED FROM THE ENGINEERS REVIEW OF THE BALANCING REPORT AND THE TENANT HAS OCCUPIED THE SPACE, THE TAB CONTRACTOR SHALL MAKE ONE ADDITIONAL SITE VISIT TO THE SPACE TO MAKE ADJUSTMENTS TO THE HVAC SYSTEM TO RECTIFY ANY OCCUPANT COMFORT COMPLAINTS. THIS SHALL BE PART OF THE CONTRACTORS SCOPE OF SERVICES.

LEED CI-REQUIREMENTS

THE FOLLOWING LEED POINTS ARE ASSIGNED UNDER THE MECHANICAL DESIGN OF THIS PROJECT:

ENERGY AND ATMOSPHERE:

PRE-REQUISITE 2: MINIMUM ENERGY PERFORMANCE

- PROVIDE EQUIPMENT TO MEET ENERGY REQUIREMENTS AS SHOWN ON DWG M300.

PRE-REQUISITE 3: FUNDAMENTAL REFRIGERANT MANAGEMENT

- PROVIDE ALL HVAC EQUIPMENT UTILIZING REFRIGERANTS WITH THE FOLLOWING REFRIGERANTS: R-407C, R-410A AND R-134A. THE USE OF CFC OR HCFC REFRIGERANTS IS PROHIBITED.
- SUBMITTALS: PROVIDE PRODUCT DATA FOR ALL REFRIGERANTS DOCUMENTING ZERO USE OF CFCs OR HCFCs.

INDOOR ENVIRONMENTAL QUALITY

PRE-REQUISITE 1: MINIMUM IAQ PERFORMANCE

CREDIT 7.1: THERMAL COMFORT, DESIGN

MECHANICAL GENERAL NOTES

- ALL WORK UNDER THIS AND OTHER SECTIONS SHALL BE SUBJECT TO THE OWNERS "GENERAL CONDITIONS BY AND BETWEEN OWNER AND CONTRACTOR" AND "GENERAL CONTRACTOR AGREEMENT BETWEEN OWNER AND CONTRACTOR."

- THE CONTRACTOR SHALL COMPLY WITH ALL THE LAWS, ORDINANCES, RULES AND REGULATIONS OF ALL LOCAL AND STATE GOVERNMENTAL AUTHORITIES, THE RULES OF THE NATIONAL FIRE PROTECTION ASSOCIATION AS INTERPRETED BY THE ENFORCING AUTHORITY HAVING JURISDICTION AND OF THE PUBLIC UTILITIES HAVING CONNECTION WITH ANY OF THE SYSTEMS HEREIN SPECIFIED.

- THE CONTRACTOR SHALL SECURE AND PAY FOR ALL PERMITS AND INSPECTIONS REQUIRED BY ANY OF THE FOREGOING AUTHORITIES, AND PAY FOR ALL OTHER COSTS IN CONNECTION WITH THE WORK. ALL CERTIFICATES SHALL BE IN DUPLICATE AND SHALL BE DELIVERED TO THE OWNER.

- THE SITE, LOCATION AND ROUTING OF SYSTEMS INDICATED TO HAVE NEW CONNECTIONS MADE TO THEM ARE SHOWN AS ACCURATELY AS FIELD CONDITIONS WOULD PERMIT. CONTRACTOR SHALL VISIT THE SITE AND THOROUGHLY EXAMINE THE CONTRACT DRAWINGS. ALL EXISTING CONDITIONS SHALL BE EXAMINED AND THEIR EXACT LOCATIONS VERIFIED. THE CONTRACTOR SHALL REPORT TO THE ENGINEER ANY CONDITIONS WHICH MIGHT MAKE INSTALLATION OF REQUIRED EQUIPMENT A PROBLEM. NO CONSIDERATION OR ALLOWANCE WILL BE GRANTED FOR FAILURE TO INVESTIGATE CONDITIONS OR MISUNDERSTANDINGS OF THE CONTRACTUAL REQUIREMENTS.

- THE CONTRACTOR SHALL SO ARRANGE AND PROSECUTE HIS WORK THAT ANY CONNECTIONS BOTH TEMPORARY OR PERMANENT TO, OR REARRANGEMENT OF, PRESENT EQUIPMENT, PIPING, ETC., SHALL BE MADE IN SUCH A MANNER AS TO ASSURE FULL RESUMPTION OF SERVICE AT THE TIME DESIGNATED BY THE OWNER.

- IF TEMPORARY CONNECTIONS ARE NECESSARY TO ASSURE THE CONTINUITY OF SERVICES, THEY SHALL BE FURNISHED BY THE CONTRACTOR WITHOUT ANY ADDITIONAL CHARGE TO THE OWNER AND SHALL BE REMOVED WHEN NO LONGER NECESSARY.

- THE CONTRACTOR SHALL INSTALL AND CONNECT ALL EQUIPMENT AND MATERIALS IN ACCORDANCE WITH THE BEST ENGINEERING PRACTICE AND, UNLESS OTHERWISE SHOWN OR SPECIFIED, FOLLOW THE MANUFACTURER'S PRINTED INSTALLATION REQUIREMENTS AND RECOMMENDATIONS AND FURNISH AND INSTALL ALL REQUIRED AUXILIARY ITEMS COMPLETE.

- THE CONTRACTOR SHALL INSTALL ALL PIPING, DUCTWORK, ETC., AS HIGH AS POSSIBLE TO MAXIMIZE HEADROOM. ALL PIPING SHALL BE RUN PARALLEL TO OR PERPENDICULAR TO BUILDING WALLS IN A NEAT AND WORKMANLIKE MANNER. EQUIPMENT AND PIPING SHALL BE SUPPORTED FROM STRUCTURE ABOVE.

- ALL EQUIPMENT AND WORKMANSHIP SHALL BE GUARANTEED IN FULL FROM DEFECT FOR ONE YEAR FROM THE DATE OF FINAL ACCEPTANCE OF THIS WORK.

- THE CONTRACTOR SHALL TEST ALL EQUIPMENT INSTALLED UNDER THIS CONTRACT AND DEMONSTRATE TO THE OWNER ITS PROPER OPERATIONS. ALL NEW EQUIPMENT SHALL BE MOUNTED VIBRATION FREE.

- ALL EQUIPMENT INSTALLED SHALL BE NEW (UNLESS INDICATED OTHERWISE) AND THE CURRENT MODEL FOR WHICH REPLACEMENT PARTS ARE AVAILABLE. SUBSTITUTIONS SHALL ONLY BE ACCOMPLISHED AT THE DISCRETION OF THE ENGINEER. SUBSTITUTIONS TO THE SPECIFIED EQUIPMENT SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW AND APPROVAL PRIOR TO EQUIPMENT PURCHASE AND INSTALLATION.

- THE CONTRACTOR SHALL REPAIR ALL WALLS, CEILING, FLOORS, ETC., THAT ARE REQUIRED TO BE PENETRATED, OR OTHERWISE DISTURBED. THE REPAIRS SHALL BE WITH MATERIALS AND FINISHES TO MATCH EXISTING. ALL FIRE WALL PENETRATIONS SHALL BE SEALED WITH SUITABLE MATERIALS TO PRESERVE FIRE WALL INTEGRITY.

DEFINITIONS

- "PROVIDE" UNDER THIS CONTRACT IS DEFINED AS FURNISH AND INSTALL.
- "CONCEALED" UNDER THIS CONTRACT IS DEFINED AS HIDDEN BY ARCHITECTURAL WALLS AND CEILINGS.
- "EXPOSED" UNDER THIS CONTRACT IS DEFINED AS VISIBLE TO VIEW.
- "INDICATED" UNDER THIS CONTRACT IS DEFINED AS SHOWN IN THE CONTRACT DOCUMENTS.

- UPON COMPLETION OF THE WORK, THE CONTRACTOR SHALL THOROUGHLY CLEAN THE CONTRACT AREA AND ALL OTHER AREAS USED FOR STORAGE, STAGING, ETC. THIS SHALL INCLUDE, BUT NOT BE LIMITED TO, WASHING GLASS, REMOVING SPOTS AND STAINS, CLEANING ALL FIXTURES AND WASHING ALL FLOORS, WALLS AND CEILINGS (IF APPROPRIATE).

- THE PLANS ARE GENERALLY DIAGRAMMATIC AND THE CONTRACTOR SHALL COORDINATE THE WORK OF THE DIFFERENT TRADES IN ORDER THAT INTERFERENCES BETWEEN WORK WILL BE AVOIDED. FURNISH ALL NECESSARY OFFSETS IN PIPING, DUCTWORK AND FITTINGS, ETC., REQUIRED TO PROPERLY INSTALL THE WORK. ALL OFFSETS REQUIRED SHALL BE FURNISHED AND INSTALLED WITHOUT ADDITIONAL EXPENSE TO THE OWNER. IN CASE INTERFERENCE DEVELOPS, THE ENGINEER WILL DECIDE WHICH EQUIPMENT SHALL BE RELOCATED REGARDLESS OF WHICH WAS FIRST INSTALLED. IF THE CONTRACTOR INSTALLS HIS WORK BEFORE COORDINATING WITH OTHER TRADES OR SO AS TO CAUSE INTERFERENCES WITH WORK OF OTHER TRADES, HE SHALL MAKE NECESSARY CHANGES IN HIS WORK TO CORRECT THE CONDITION WITHOUT EXTRA CHARGE.

- MAINTAIN THE EXISTING ESSENTIAL SERVICES IN OPERATION DURING THE ENTIRE PERIOD OF CONSTRUCTION. ANY WORK REQUIRING INTERRUPTION OF SERVICES SHALL BE DONE ONLY WITH THE APPROVAL OF THE OWNER. APPLY FOR APPROVAL AT LEAST TWO WEEKS PRIOR TO THE ANTICIPATED TIME FOR PERFORMANCE OF THE WORK. ALL INTERRUPTION TO SERVICES SHALL BE MADE ONLY AT THOSE TIMES AND OF SUCH LENGTH AS IS APPROVED BY THE OWNER.

- CONTRACTOR SHALL LOCATE ALL EQUIPMENT WHICH MUST BE SERVICED, OPERATED OR MAINTAINED IN FULL ACCESSIBLE POSITIONS. IF REQUIRED FOR BETTER ACCESSIBILITY, FURNISH ACCESS DOORS FOR THIS PURPOSE. MINOR DEVIATIONS FROM DRAWINGS MAY BE MADE TO ALLOW FOR BETTER ACCESSIBILITY, BUT CHANGES OF MAGNITUDE WHICH INVOLVE EXTRA COSTS SHALL NOT BE MADE WITHOUT APPROVAL.

- ALL DIMENSIONS FOR EXISTING DUCTWORK SHALL BE VERIFIED IN THE FIELD BY THE CONTRACTOR PRIOR TO CONSTRUCTION, WHERE NEW WORK CONNECTIONS ARE INDICATED. NEW DUCT DIMENSIONS SHOWN ARE INSIDE CLEAR DIMENSIONS.

- OPENINGS REMAINING IN EXISTING PIPING/DUCTWORK AS A RESULT OF DEMOLITION SHALL BE SEALED WITH AN AIRTIGHT/WATERTIGHT SHEET METAL CAP. WHERE EXISTING SYSTEMS ARE INSULATED, WORK SHALL INCLUDE REPAIR AND REPLACEMENT OF INSULATION EITHER DAMAGED OR REMOVED AS A RESULT OF DEMOLITION.

- REFERENCE TO CATALOGS, STANDARDS, CODES, SPECIFICATIONS, RECOMMENDATIONS AND SIMILAR PUBLICATIONS SHALL MEAN THE USE OF THE LATEST EDITION OF SUCH PUBLICATIONS IN EFFECT AT THE DATE OF THE INVITATION TO BID, UNLESS OTHERWISE INDICATED. ALL WORK IN THIS DIVISION IS SUBJECT TO THE REQUIREMENTS OF ALL PERTINENT LOCAL CODES AND THE FOLLOWING:

- SHEET METAL AND AIR CONDITIONING CONTRACTORS NATIONAL ASSOCIATION, INC., (SMACNA): HVAC DUCT CONSTRUCTION STANDARDS, 2005 EDITION

- NATIONAL FIRE PROTECTION ASSOCIATION (NFPA): NFPA-70: NATIONAL ELECTRICAL CODE NFPA-90A: AIR CONDITIONING AND VENTILATING STANDARDS

- OCCUPATIONAL SAFETY AND HEALTH ACT

- SHOP DRAWINGS AND PRODUCT DATA: SUBMIT TO OWNER 6 COPIES OF SHOP DRAWINGS AND MANUFACTURERS CERTIFIED CAPACITY DATA FOR ALL NEW EQUIPMENT. SHOP DRAWINGS SHALL BE SUBMITTED AND APPROVED BEFORE EQUIPMENT IS INSTALLED.

ABBREVIATIONS

(E)	EXISTING TO REMAIN
(ER)	EXISTING TO BE RELOCATED
(ERR)	EXISTING TO BE REMOVED AND RELOCATED
AC	AIR CONDITIONER
AF	ABOVE FINISHED FLOOR
AHU	AIR HANDLING UNIT
BAS	BUILDING AUTOMATION SYSTEM
BTUH	BRITISH THERMAL UNITS PER HOUR
CFM	CUBIC FEET PER MINUTE
CRAC	COMPUTER ROOM AIR CONDITIONING UNIT
CU	CONDENSING UNIT
DB	DRY BULB
DX	REFRIGERANT
EAT	ENTERING AIR TEMPERATURE
EF	EXHAUST FAN
ESP	EXTERNAL STATIS PRESSURE
EW	ENTERING WATER TEMPERATURE
FLA	FULL LOAD AMPS
FPB	FAN POWERED BOX
FT	FOOT, FEET
GPM	GALLONS PER MINUTE
HP	HORSEPOWER
HZ	HERTZ
IN	INCH, INCHES
KW	KILOWATTS
LAT	LEAVING AIR TEMPERATURE
LBS	POUNDS
LWT	LEAVING WATER TEMPERATURE
MBH	THOUSAND BRITISH THERMAL UNITS PER HOUR
NCA	MINIMUM CIRCUIT AMPACITY
OA	OUTSIDE AIR
PH	PHASE
RA	RETURN AIR
RLA	RATED LOAD AMPS
RTU	ROOFTOP UNIT
SA	SUPPLY AIR
TAD	TRANSFER AIR DUCT
TAO	TRANSFER AIR OPENING
TF	TRANSFER FAN
TP	TOTAL STATIC PRESSURE
TSP	TYPICAL
V	VOLT, VOLTS
VAV	VARIABLE AIR VOLUME
VFD	VARIABLE FREQUENCY DRIVE
WB	WET BULB
WG	WATER GAUGE

LEGEND

	EXISTING DUCTWORK, EQUIPMENT OR PIPING TO REMAIN
	EXISTING DUCTWORK, EQUIPMENT OR PIPING TO BE REMOVED OR RELOCATED
	NEW DUCTWORK, EQUIPMENT OR PIPING
	DUCTWORK WITH SOUNDLINING
	SUPPLY AIR DUCT TURNING UP/DOWN
	RETURN AIR DUCT TURNING UP/DOWN
	EXHAUST AIR DUCT TURNING UP/DOWN
	CHANGE IN ELEVATION OF DUCTWORK IN DIRECTION OF AIRFLOW - RISE
	CHANGE IN ELEVATION OF DUCTWORK IN DIRECTION OF AIRFLOW - DROP
	MOTORIZED DAMPER
	DUCT MOUNTED SMOKE DETECTOR
	SQUARE TO SQUARE TRANSITION
	SQUARE TO ROUND TRANSITION
	BRANCH DUCT
	ELBOW WITH TURNING VANES
	ELBOW WITHOUT TURNING VANES
	RADIUS ELBOW
	SPIN-IN COLLAR WITH INTEGRAL VOLUME DAMPER
	VOLUME DAMPER
	FIRE DAMPER
	FIRE SMOKE DAMPER
	THERMOSTAT WITH CONTROL WIRE
	HUMIDISTAT
	CARBON MONOXIDE SENSOR
	CARBON DIOXIDE SENSOR
	SQUARE CEILING DIFFUSER
	LINEAR SLOT DIFFUSER
	CFM DESIGNATION
	DIFFUSER OR GRILLE TYPE DESIGNATION
	RETURN GRILLE
	KEYED NOTE
	POINT OF REMOVAL
	POINT OF CONNECTION

DRAWING LIST

DATE	DESCRIPTION
M001	SPECIFICATIONS, ABBREVIATIONS, LEGENDS, AND NOTES
M002	THIRD FLOOR PLAN - NEW WORK
M300	SCHEDULES AND DETAILS

DEDUCTION ALTERNATE

- CONTRACTOR SHALL PROVIDE A DEDUCTION ALTERNATE TO PROVIDE EXTERNAL INSULATION PER THE SPECIFICATIONS IN LIEU OF INTERNAL LINING FOR ALL THE MEDIUM PRESSURE DUCTWORK.

SEQUENCE OF OPERATIONS -
SERIES FAN-POWERED VAV AIR
TERMINAL UNIT WITH ELEC. HEAT

PLENUM AIR
PRIMARY AIR
D-1
C-1
T
ELECTRIC REHEAT COIL
SUPPLY AIR

THE VAV BOX FAN SHALL BE ENERGIZED FROM THE EMS TO 'OCCUPIED' MODE.

A THERMOSTAT, LOCATED AS SHOWN, ACTING THROUGH A MICROPROCESSOR-BASED VAV BOX CONTROLLER, SHALL MODULATE THE SUPPLY AIR CONTROL DAMPER, MIXING THE SUPPLY AIR AND RECIRCULATING ROOM AIR TO PROVIDE A CONSTANT VOLUME OF AIR TO THE SPACE TO MAINTAIN AN ADJUSTABLE COOLING SET POINT UNTIL THE SUPPLY AIR DAMPER GOES TO MINIMUM SUPPLY AIR FLOW.

WHEN THE SPACE TEMPERATURE CALLS FOR HEAT AFTER THE PRIMARY AIR DAMPER IS CLOSED TO MINIMUM FLOW AND THE VAV BOX IS IN MAXIMUM RECIRCULATION, CONTROL SHALL THEN PASS THROUGH THE TEMPERATURE DEAD BAND. WHEN THE SPACE TEMPERATURE HAS DROPPED THROUGH THE TEMPERATURE DEAD BAND THE FAN SHALL START. IF THE HEATING SETPOINT IS STILL NOT ACHIEVED, THE ELECTRIC REHEAT COIL SHALL BE ENERGIZED TO MAINTAIN THE HEATING SETPOINT.

WHEN IN THE 'UNOCCUPIED' MODE, DAMPER 'D-1' SHALL BE AT MIN. WHEN THE SPACE TEMPERATURE CALLS FOR HEAT, THE VAV BOX FAN SHALL CYCLE THROUGH AN ADJUSTABLE DEADBAND AND THE FAN SHALL START. IF THE HEATING SETPOINT IS STILL NOT ACHIEVED, THE ELECTRIC REHEAT COIL SHALL BE ENERGIZED TO MAINTAIN THE HEATING SETPOINT.

SEQUENCE OF OPERATIONS -
VAV AIR TERMINAL UNIT WITH
ELEC. HEAT

SUPPLY AIR
D-1
C-1
T
ELECTRIC REHEAT COIL
SUPPLY AIR

THE VAV BOX SHALL BE ENERGIZED FROM THE EMS TO 'OCCUPIED' MODE. ROOM THERMOSTAT SHALL CONTROL DAMPER OPERATOR FOR VARIABLE VOLUME TERMINAL UNIT.

ON A DROP IN ROOM TEMPERATURE BELOW THE SET POINT, ROOM THERMOSTAT, THRU DDC CONTROLLER, SHALL REDUCE THE AIR FLOW TO THE ROOM TO THE UNIT MINIMUM SETTING. WHEN THE SPACE TEMPERATURE CALLS FOR HEAT AFTER THE PRIMARY AIR DAMPER IS CLOSED TO MINIMUM FLOW, CONTROL SHALL THEN PASS THROUGH THE TEMPERATURE DEAD BAND. WHEN THE SPACE TEMPERATURE HAS DROPPED THROUGH THE TEMPERATURE DEAD BAND THE ELECTRIC REHEAT COIL SHALL BE ENERGIZED TO MAINTAIN THE HEATING SETPOINT.

WHEN IN THE 'UNOCCUPIED' MODE, DAMPER 'D-1' SHALL BE AT MIN. WHEN THE SPACE TEMPERATURE CALLS FOR HEAT, THE VAV BOX SHALL CYCLE THROUGH AN ADJUSTABLE DEADBAND, AND ELECTRIC REHEAT COIL SHALL BE ENERGIZED TO MAINTAIN THE HEATING SETPOINT.

SEQUENCE OF OPERATIONS -
VAV AIR TERMINAL UNIT
(COOLING ONLY)

SUPPLY AIR
D-1
T
SUPPLY AIR

THE ROOM THERMOSTAT SHALL CONTROL DAMPER OPERATOR FOR VARIABLE VOLUME TERMINAL UNIT.

ON A DROP IN ROOM TEMPERATURE BELOW THE SET POINT, THE ROOM THERMOSTAT, THRU THE CONTROLLER, SHALL MODULATE THE DAMPER CLOSED UNTIL THE MINIMUM SETTING IS REACHED.

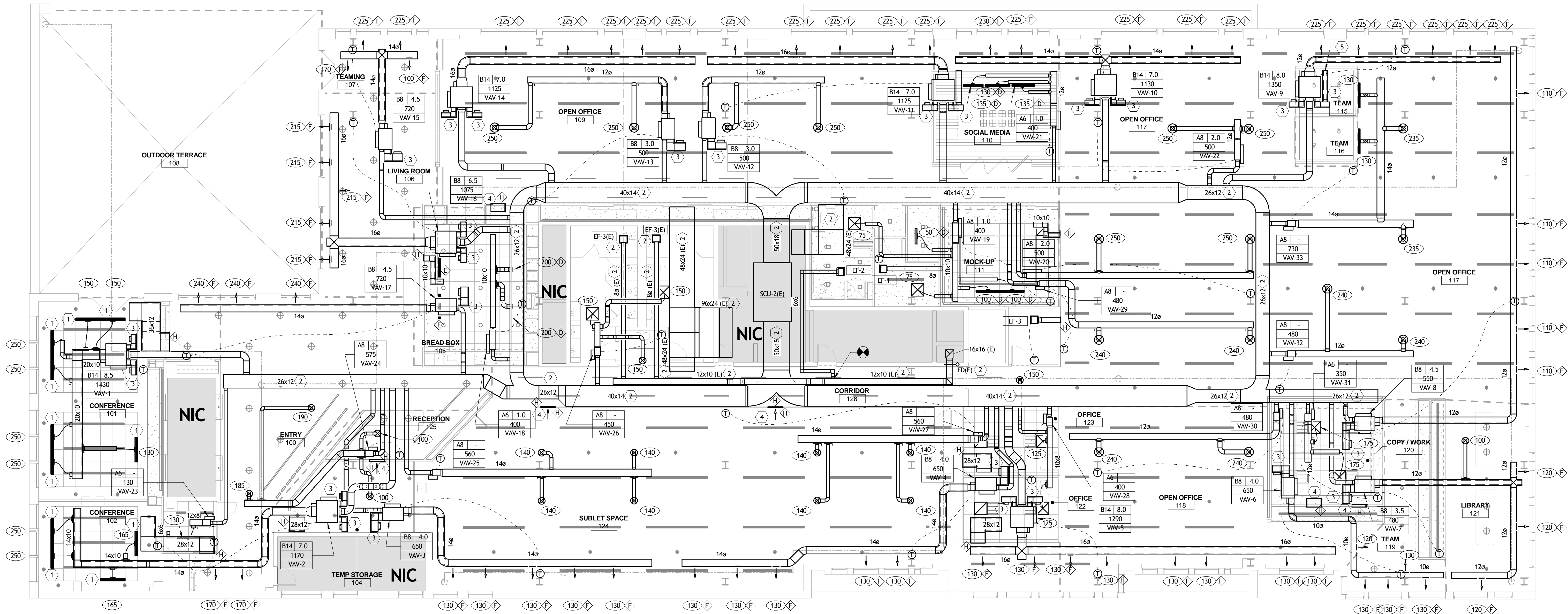
ON A RISE IN ROOM TEMPERATURE ABOVE THE SET POINT, THE ROOM THERMOSTAT, THRU THE CONTROLLER SHALL MODULATE THE DAMPER FULLY OPEN.

GENERAL NOTES

- CONTRACTOR SHALL CONFIRM THAT ALL EXISTING EQUIPMENT IS OPERATIONAL PRIOR TO PERFORMING NEW WORK. IN THE EVENT THAT ANY EXISTING EQUIPMENT IS FOUND TO BE FAULTY, REPORT DEFICIENCIES TO BUILDING ENGINEER IN WRITING IMMEDIATELY.
- AIR RETURN PATH VIA CEILING RETURN GRILLES TO CEILING PLENUM BACK TO OPEN END DUCT.
- DURING THE COURSE OF CONSTRUCTION, IF EXISTING MEDIUM PRESSURE SUPPLY AIR DUCTWORK AND/OR LOW PRESSURE SUPPLY AIR DUCTWORK IS DISCOVERED TO BE UNINSULATED OR OTHERWISE WITHOUT SOUND LINING THE CONTRACTOR SHALL IMMEDIATELY INFORM THE OWNER IN WRITING AND PREPARE AND SUBMIT A COST ESTIMATE GOVERNING ALL INSULATION WORK. NEW INSULATION SHALL BE IN ACCORDANCE WITH 2006 INTERNATIONAL ENERGY CONSERVATION CODE, AND ALL APPLICABLE CODES GOVERNING THE JURISDICTION IN WHICH THE WORK IS TO BE PERFORMED.
- LOCATE THERMOSTAT 4'-6" AFF. COORDINATE LOCATION WITH ELECTRICAL DEVICES.
- CAP AND SEAL AIRTIGHT ALL UNUSED DUCT TAPS AND DUCT OPENINGS.
- PROVIDE RIGID ROUND DUCT THROUGH ALL FULL HEIGHT WALLS.
- COORDINATE ROUTING OF DUCTWORK ABOVE CEILING WITH EXISTING CONDITIONS.
- COORDINATE VAV BOX LOCATION ABOVE CEILING WITH EXISTING CONDITIONS. PROVIDE MANUFACTURER AND CODE REQUIRED CLEARANCES FOR ACCESS AND MAINTENANCE.
- INSULATE ALL NEW DUCTWORK. SEE SPECIFICATIONS ON DRAWING M001.
- NEW VAV BOXES SHALL INTERFACE WITH EXISTING ENERGY MANAGEMENT SYSTEM (EMS). VERIFY THAT EXISTING EMS IS EXPANDABLE AND CAN ACCOMMODATE NEW VAV BOXES. PROVIDE ALL REQUIRED PROGRAMMING, MODIFICATIONS AND HARDWARE TO ENSURE EMS/VAV INTERFACE. MODIFY GRAPHICS TO INDICATE AND IDENTIFY NEW VAV BOXES, INCLUDING ALL EXISTING CONTROL POINTS. ALL VAV BOX CONTROLS WIRING SHALL BE COORDINATED WITH BUILDING ENGINEERS.
- ACCESS PANELS SHALL BE PROVIDED FOR VAV BOXES LOCATED ABOVE HARD CEILINGS. SEE ARCHITECTURAL DRAWINGS FOR MORE INFORMATION. COORDINATE FINAL LOCATION OF ACCESS PANELS WITH BUILDING ENGINEER.
- ALL 24x24 CEILING DIFFUSERS SHALL BE AIR DEVICE TYPE "A." ALL 24x24 CEILING RETURN AIR PANELS SHALL BE AIR DEVICE TYPE "B." ALL 48x4 LINEAR SLOT SUPPLY DIFFUSER SHALL BE AIR DEVICE TYPE "C." UNLESS NOTED OTHERWISE, ALL ROUND CEILING DIFFUSERS SHALL BE AIR DEVICE TYPE "G." ALL SPIRAL DUCT-MOUNTED GRILLES SHALL BE AIR DEVICE TYPE "F." REMAINING AIR DEVICES SHALL BE AS NOTED.

KEYED NOTES

- LINEAR DIFFUSER SHALL BE WHITE.
- SHALL BE PROVIDED BY THE OWNER. CONTRACTOR SHALL PROVIDE A SEPARATE COST FOR THE ASSOCIATED WORK.
- CONTRACTOR SHALL FIELD FABRICATED RETURN AIR BOOTS WITH SOUND-LINING. SEE DETAIL ON DRAWING M300 FOR MORE INFORMATION.
- 28x12 RETURN AIR TRANSFER DUCT.
- EXTEND DUCTWORK OF THE RETURN AIR BOOT TO LOCATE THE FILTER IN AN ACCESSIBLE LOCATION.



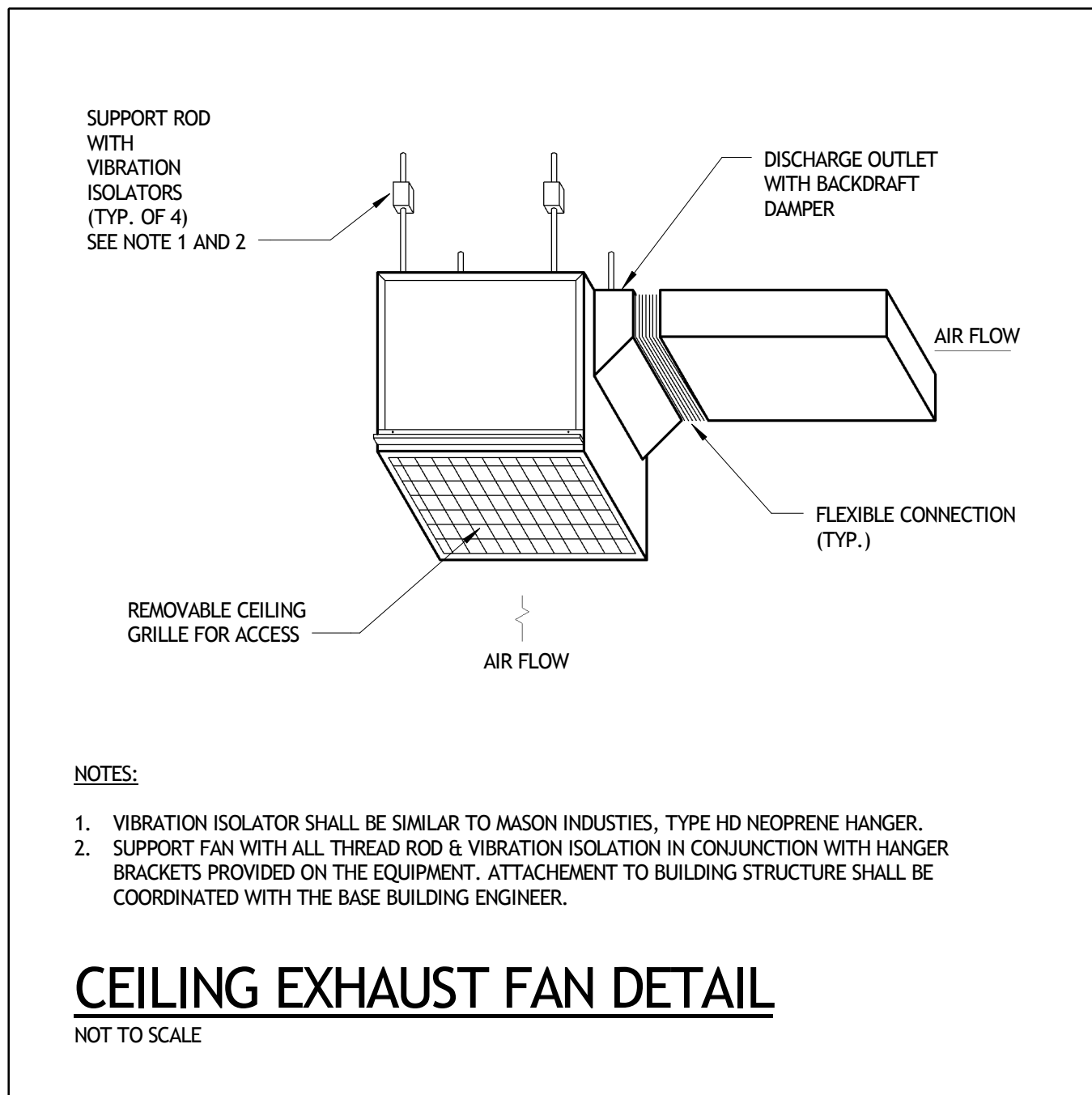
THIRD FLOOR - NEW WORK PLAN
1/8" = 1'-0"

DATE	DESCRIPTION
11/06/12	ISSUE FOR PERMIT/OWNER REVIEW
12/10/12	ISSUE FOR CONSTRUCTION DRAWINGS

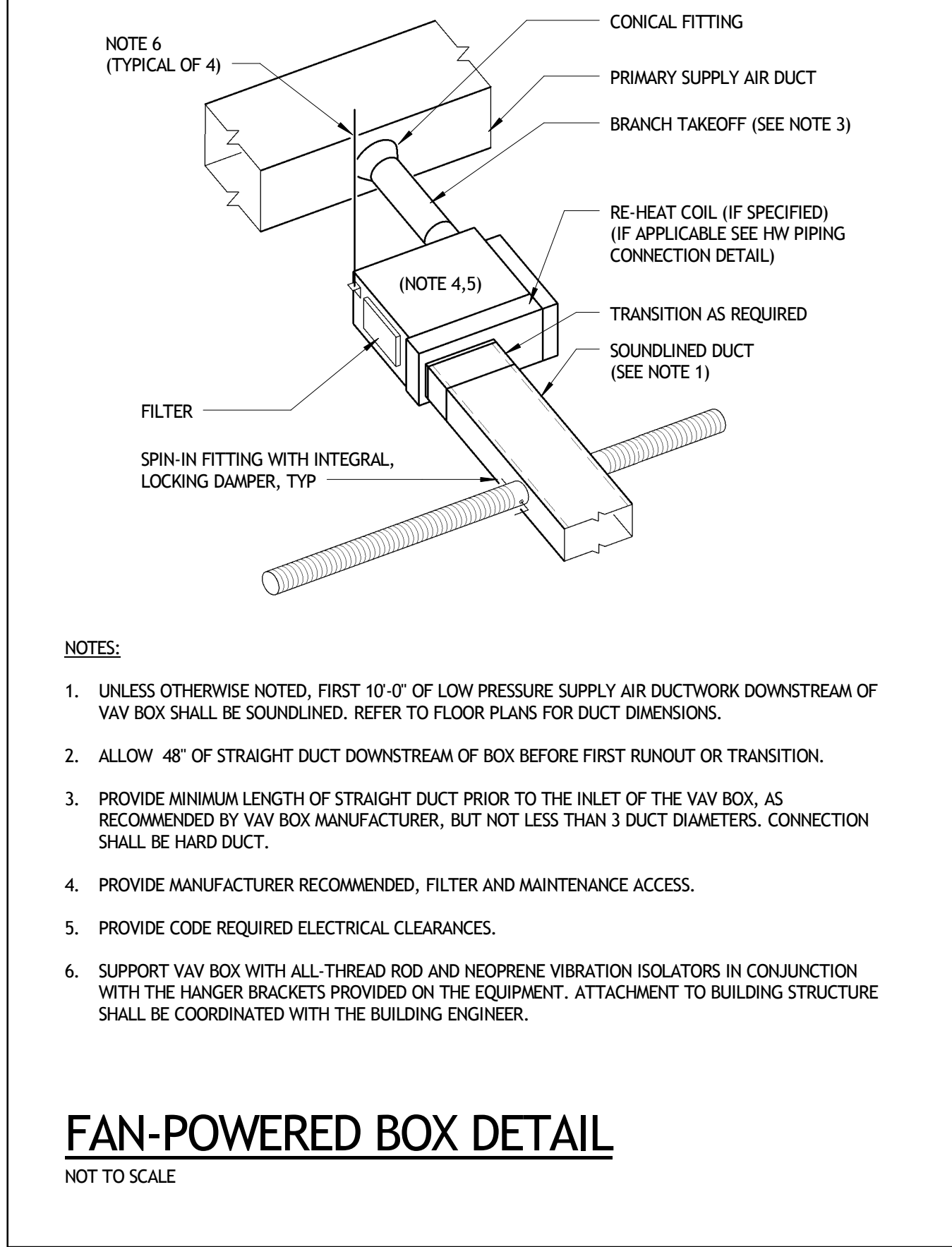
DRAWING TITLE
THIRD FLOOR PLAN - NEW WORK
STAMP

PROJECT NO.
RCK-2012184.00
DRAWN BY:
KRH
SCALE:
1/8" = 1'-0"
DATE:
10.18.2012
DWG. NO.

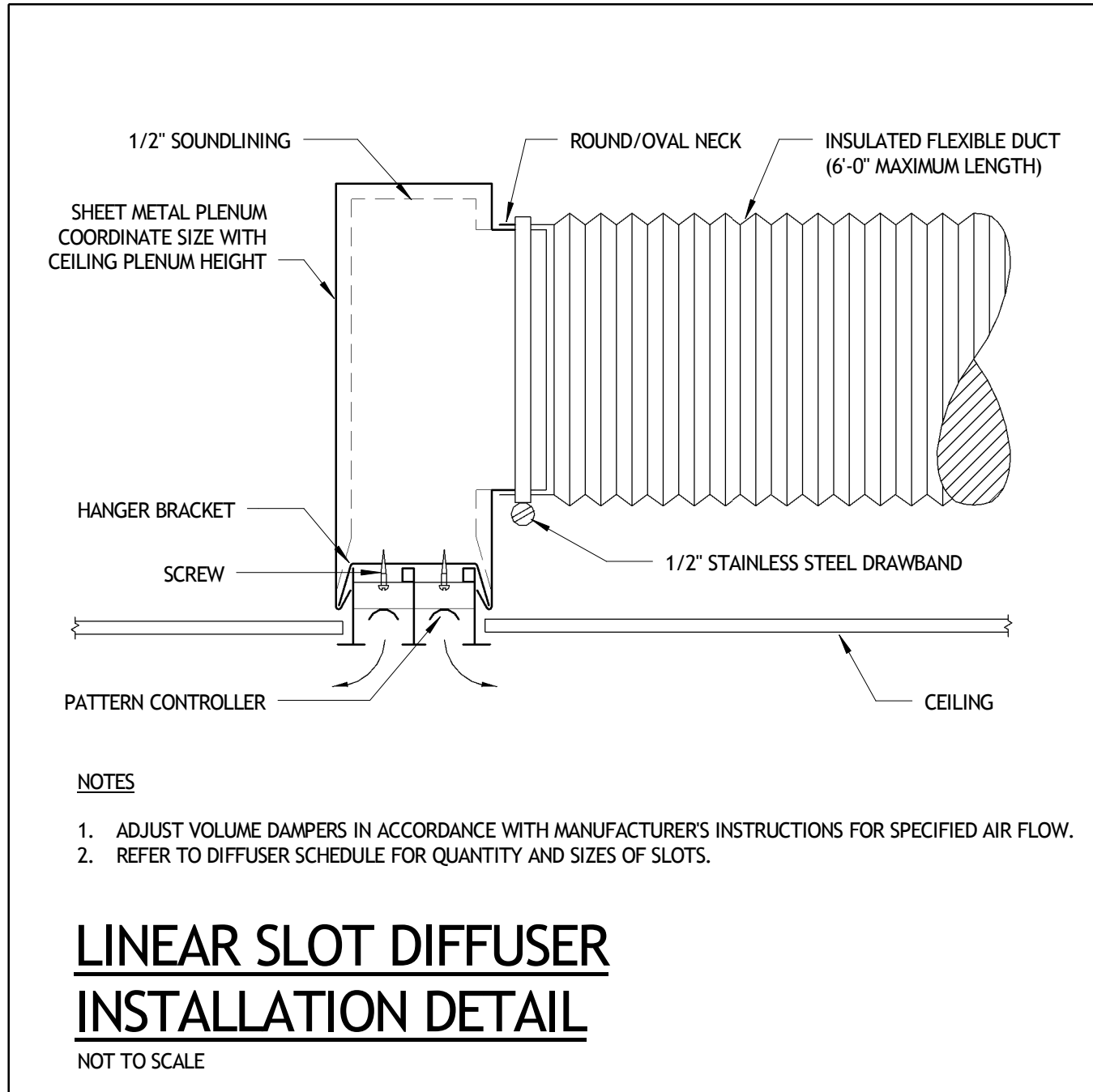
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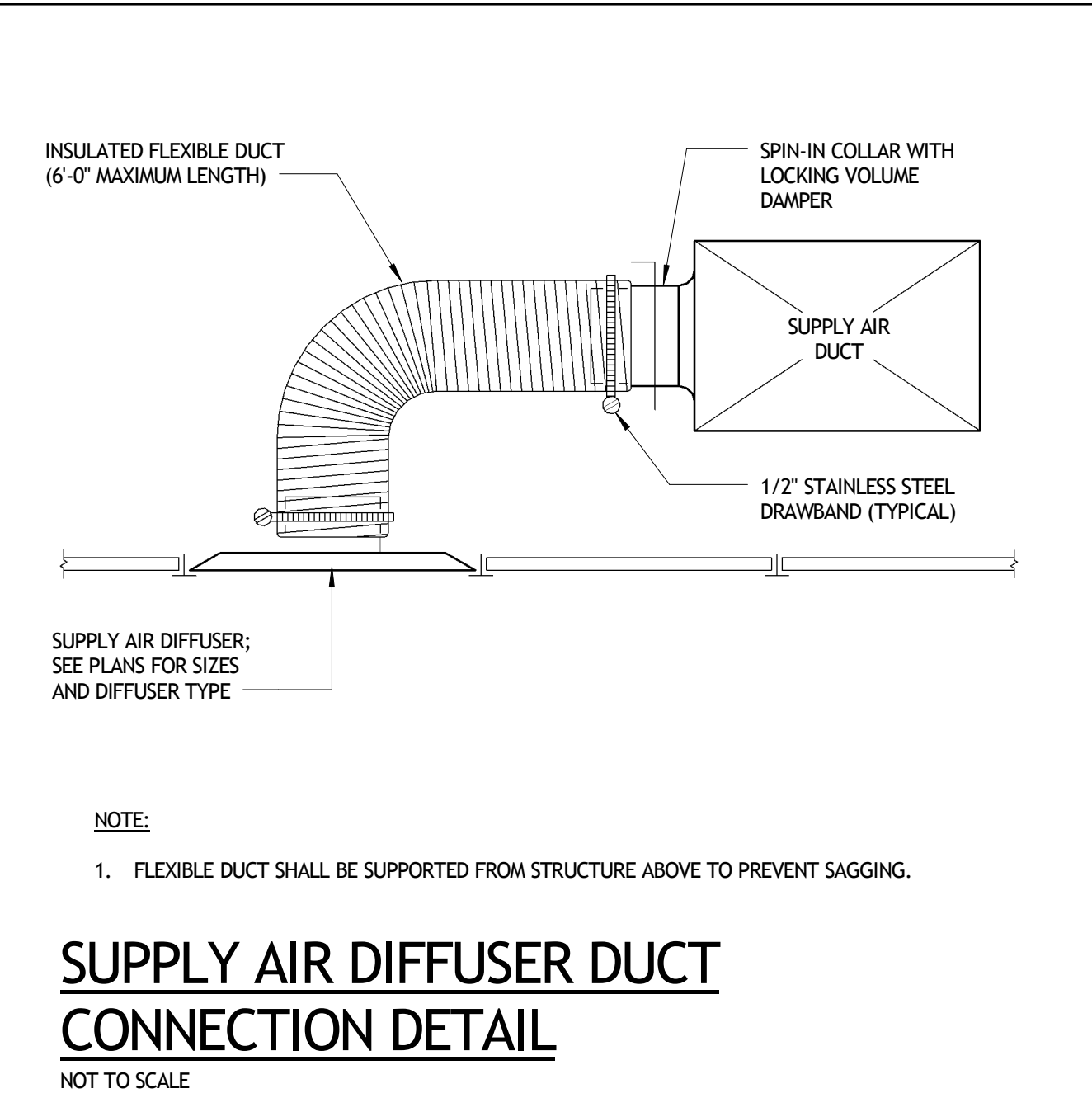
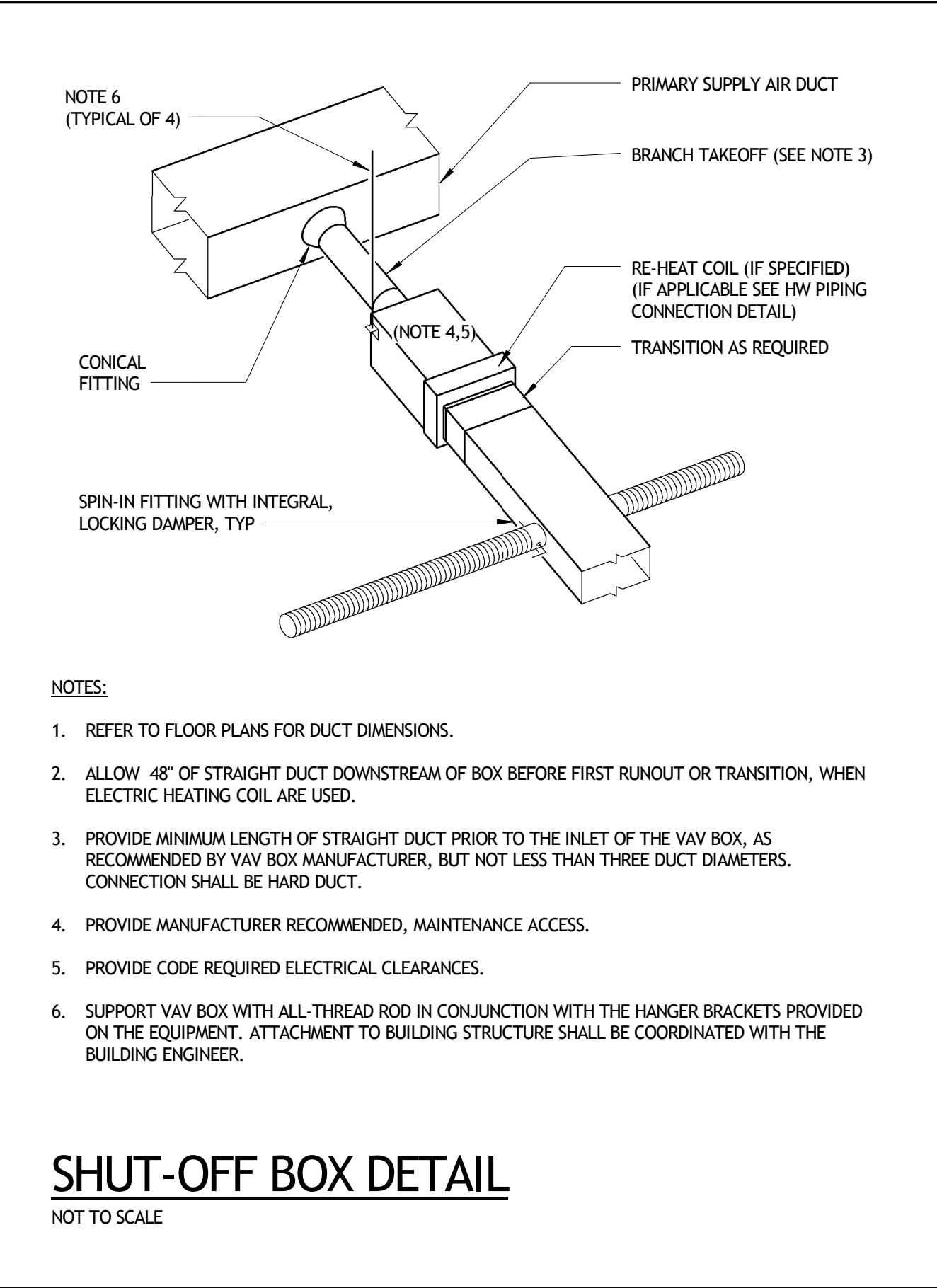
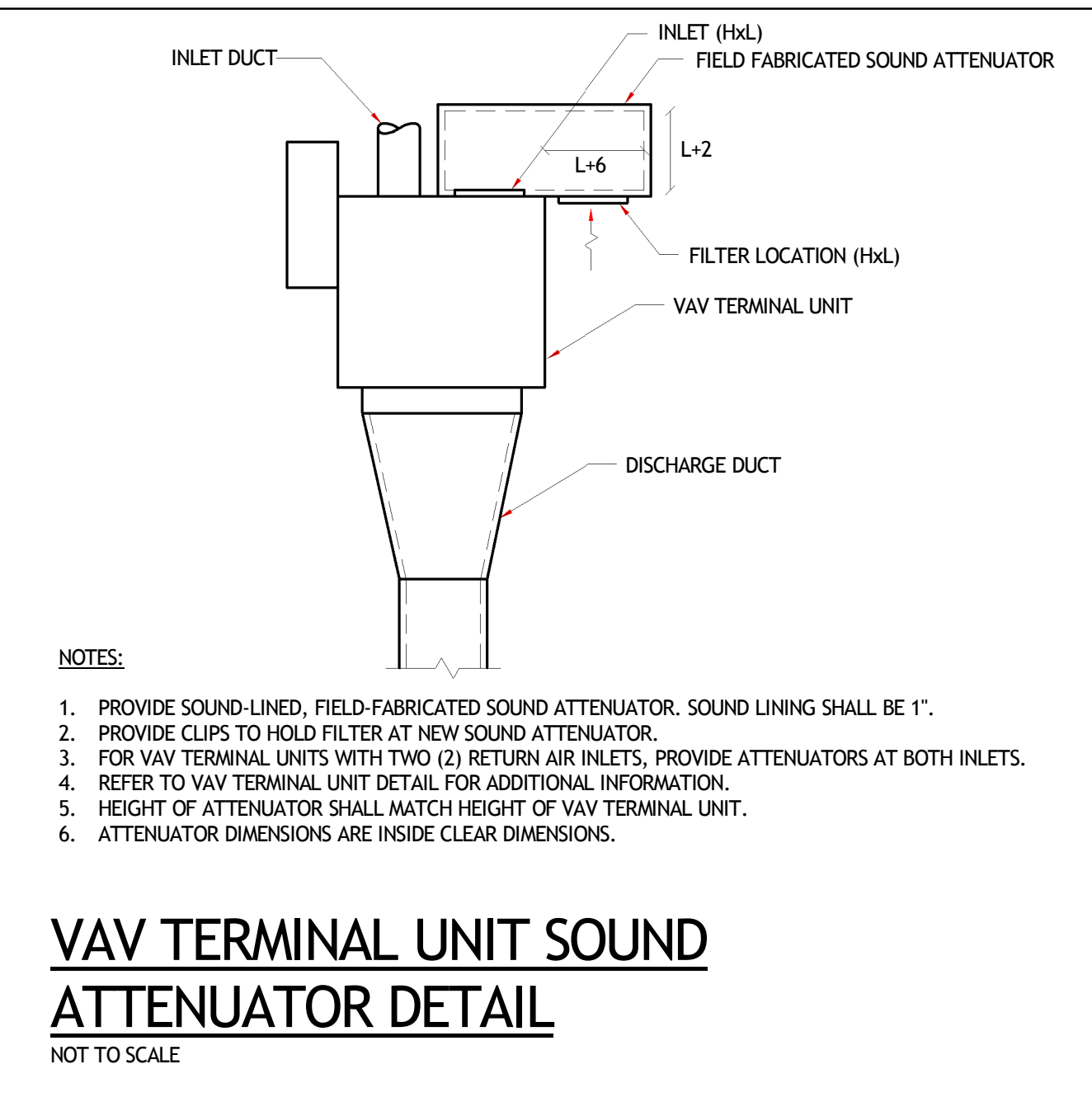
B



C



D



E

AIR TERMINAL UNIT SCHEDULE															
AP KW CFM TAG		PRIMARY AIR VALVE			MAX HEIGHT				BASIS OF DESIGN (TTTUS)		NOTES				
		(#) INLET SIZE	CFM RANGE	MAX APD											
		6" RD	0-400	0.2	10"										
		8" RD	405-750	0.2	12"										
		10" RD	755-1100	0.2	14"										
SHUT-OFF VAV BOX															
BP KW CFM TAG		PRIMARY AIR VALVE			FAN DATA			FAN MOTOR DATA			MAX HEIGHT	BASIS OF DESIGN (TTTUS)		NOTES	
		(#) INLET SIZE	CFM RANGE	MAX APD	CFM	ESP	FAN SIZE	MOTOR TYPE	HP	FLA	V/RD				
		(8) 8" RD	405-750	0.4	405-750	0.3	-	PSC(SCR)	1/4	2.4	208/1	11"			
		(14) 8"x14"	755-1600	1.6	751-1100	0.3	-	PSC(SCR)	(2) 1/6	3.4	208/1	11"			
		LOW HEIGHT SERIES FAN-POWERED VAV BOX													
NOTES:															
1. HEATER VOLTAGE AND STEPS: (IF APPLICABLE)			0-2 KW 2.1-4 KW 4.1-10 KW	(1 STEP) (2 STEPS) (3 STEPS)	208/1PH 208/1PH 208/1PH										
2. FURNISH WITH SCR CONTROLLER FOR ELECTRIC HEAT.															
3. EACH TERMINAL UNIT SHALL BE PROVIDED WITH A DAMPER ACTUATOR PROVIDED BY THE HVAC CONTROLS CONTRACTOR AND FACTORY INSTALLED BY THE TERMINAL UNIT MANUFACTURER.															
4. EACH TERMINAL UNIT SHALL BE PROVIDED WITH A UNIT CONTROLLER PROVIDED BY THE HVAC CONTROL MANUFACTURER AND FIELD INSTALLED BY HVAC CONTROLS CONTRACTOR.															
5. EACH TERMINAL UNIT SHALL BE FURNISHED WITH SINGLE POINT OF ELECTRICAL CONNECTION. A 24V (50 VA) TRANSFORMER MOUNTED IN THE CONTROL BOX WILL PROVIDE VOLTAGE FOR CONTROLS.															
6. REFER TO FLOOR PLANS FOR CONTROL BOX CONFIGURATION (LEFT HAND VS. RIGHT HAND).															
7. EACH TERMINAL UNIT SHALL BE FURNISHED WITH 1/2" FIBERGLASS WATTE FACED INSULATION.															
8. (SHUT-OFF COOLING ONLY); ADJUST MIN SET POINT OF PRIMARY AIR VALVE TO 20% OF MAX PRIMARY AIR CFM.															
9. (SHUT-OFF REHEAT); ADJUST MIN SET POINT OF PRIMARY AIR VALVE TO 20% OF MAX PRIMARY AIR CFM OR 70 CFM PER KW, WHICH EVER IS GREATER.															
10. ADJUST MIN SET POINT OF PRIMAY AIR VALVE TO 20% OF MAX PRIMARY AIR CFM. ADJUST FAN CFM TO 100% OF MAX PRIMARY AIR.															
11. FURNISH DDC CONTROLS TO ALL NEW BOXES TO MATCH BASE BUILDING STANDARD.															
11. FURNISH AIR TERMINAL UNIT WITH THERMOSTAT WHICH MATCHES BASE BUILDING STANDARD.															

FAN SCHEDULE											
UNIT NO.	LOCATION	SERVES	AIRFLOW (CFM)	STATIC PRESSURE (WG)	SPEED (RPM)	TYPE	DRIVE	WEIGHT (LB)	MOTOR		BASIS OF DESIGN (GREENHECK)
									WATTS	V/PH/Hz	
EF-1	IDF/STORAGE 113	IDF/STORAGE 113	200	0.125	900	-	DIRECT	24	48.2	115/1/60	SP-A200
EF-2	RR/SHOWER 112	RR/SHOWER 112	125	0.25	1400	-	DIRECT	17	113	115/1/60	SP-A190
EF-3	ELECTRICAL CLOSET	ELECTRICAL CLOSET	200	0.125	900	-	DIRECT	24	48.2	115/1/60	SP-A200
NOTES:											
PROVIDE FAN WITH THE FOLLOWING:											
1. VIBRATION ISOLATION KIT.											
2. WALL MOUNTED THERMOSTAT SWITCH, SET AT 80° F (ADJ).											
3. INTERLOCK WITH LIGHT SWITCH.											
4. DOOR LOUVER.											
5. FAN SHALL BEAR THE AMCA SEAL FOR APPROVED PERFORMANCE AND NOISE LEVEL.											
6. UNIT MOUNTED SPEED CONTROLLER FOR INITIAL BALANCING.											
7. FACTORY MOUNTED TERMINAL BOX.											

Project Name: WorkSpaces	Unit Total Supply Air: 23,000 cfm
Date: 10/25/2012	Unit Total Outdoor Air: 2,360 cfm
Unit Designation: SCU-2 (E)	

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
Room Number	Description	Area (ft²) (Az)	Area Outdoor Air Rate per VMC Table 403.3 (Ra)	Area Outdoor Air (RaAz)	Occupant Load Rate per VMC Table 403.3 (People/1000 ft²)	Occupancy C x F/1000 (Pz)	Occupant Outdoor Air Rate per VMC Table 403.3 (Rp)	Occupant Outdoor Air (RpPz)	Breathing Zone Outdoor Air (Vbz = RpPz + RaAz)	Zone Air Distribution Effectiveness (Ez)	Zone Outdoor Air (Voz = Vbz / Ez)	Supply Air Design (Vpz)	Secondary Recirculated Air	Outdoor Air Fraction (Zp = Voz / Vpz)
015 - Front Porch	corridor	90	0.06	5	0	0	0	0	5	0.8	7	260	0	0.027
037 - Front Porch	corridor	150	0.06	9	0	0	0	0	9	0.8	12	330	0	0.036
038 - Front Porch	corridor	115	0.06	7	0	0	0	0	7	0.8	9	460	0	0.020
051 - Corridor	corridor	540	0.06	32	0	0	0	0	32	1	32	300	0	0.107
100 - Entry East	corridor	100	0.06	6	0	0	0	0	6	0.8	8	340	0	0.024
100 - Entry Interior	corridor	610	0.06	37	0	0	0	0	37	1	37	375	0	0.099
100 - Entry West	corridor	320	0.06	19	0	0	0	0	19	0.8	24	480	0	0.050
101 - Conference	conference	650	0.06	39	50	33	5	165	204	0.8	255	1430	0	0.178
102 - Conference	conference	315	0.06	19	50	16	5	80	99	0.8	124	830	0	0.149
103 - Teaming	conference	70	0.06	4	50	4	5	20	24	1	24	130	0	0.185
104 - Temp Storge	storage rm	205	0.12	25	0	0	0	0	25	1	25	100	0	0.250
105 - Bread Box	pantry	480	0.06	29	5	3	5	15	44	0.8	55	400	0	0.138
106 - Living Room	pantry	550	0.06	33	5	3	5	15	48	0.8	60	1075	0	0.056
107 - Teaming	conference	170	0.06	10	50	9	5	45	55	0.8	69	720	0	0.096
109-Open Off. Int.	office	1320	0.06	79	5	7	5	35	114	0.8	143	1000	0	0.143
109-Open Off. Per.	office	790	0.06	47	5	7	5	35	82	0.8	103	2250	0	0.046
110 - Social Media	conference	285	0.06	17	50	15	5	75	92	0.8	115	400	0	0.288
111 - Mock-Up	office	300	0.06	18	5	2	5	10	28	0.8	35	200	0	0.175
112 - Restrm/Shwr	corridor	145	0.06	9	0	0	0	0	9	0.8	12	75	0	0.160
113 - IDF/Storage	storage rm	90	0.12	11	0	0	0	0	11	0.8	14	75	0	0.187
114 - Phone	corridor	40	0.06	2	0	0	0	0	2	0.8	3	50	0	0.060
115 - Team	conference	70	0.06	4	50	4	5	20	24	1	24	130	0	0.185
116 - Team	conference	70	0.06	4	50	4	5	20	24	1	24	130	0	0.185
117-Open Off. Int.	office	3230	0.06	194	5	17	5	85	279	1	279	2430	0	0.115
117-Open Off. N	office	520	0.06	31	5	3	5	15	46	0.8	58	550	0	0.105
117-Open Off. W	office	660	0.06	40	5	5	5	25	65	0.8	82	2020	0	0.041
118-Open Off. Int.	office	620	0.06	37	5	4	5	20	57	1	57	480	0	0.119
118-Open Off. Per.	office	430	0.06	26	5	3	5	15	41	0.8	52	960	0	0.054
119 - Team	conference	150	0.06	9	50	8	5	40	49	0.8	62	650	0	0.095
120 - Copy/Work	copy rm	440	0.06	26	5	3	5	15	41	1	41	350	0	0.117
121 - Library	office	470	0.06	28	5	3	5	15	43	0.8	54	480	0	0.113
122 - Office	office	160	0.06	10	5	1	5	5	15	1	15	125	0	0.120
123 - Office	office	160	0.06	10	5	1	5	5	15	1	15	125	0	0.120
124 - Sublet Interior	office	1480	0.06	89	5	14	5	70	159	1	159	1120	0	0.142
124 - Sublet Per.	office	850	0.06	51	5	6	5	30	81	0.8	102	1300	0	0.078
125 - Reception	office	140	0.06	8	5	1	5	5	13	1	13	100	0	0.130
Totals		16785		1024		176		880	1904		2203	22230	0	0.288

2009 OA Version 6.0 A-1 Option - FFX - REG - 3/15/10

Do not utilize Occupant Diversity without specific approval from the Authority Having Jurisdiction

System Population (Ps)

Diversity → 176

Occupant Diversity
D = Ps/Σall zones Pz

1.000

Uncorrected O.A.
Vou = D Σall zones RpPz + Σall zones RaAz

1904

Total Required Outdoor Air

2214

Percentage of Outdoor Air

10%

Method

IMC Chart

E_s
0.860

AIR DEVICE SCHEDULE											
TAG NUMBER	CFM RANGE	NECK SIZE (#/SLOTS)	FACE SIZE (IN/IN)	THROW PATTERN (NOTE 1)	THROW (FT)	MAX SPD (IN. WG.)	MAX R.C.	MATERIAL	BASIS OF DESIGN	NOTE	
A	0-125	6" RD	24x24	4-WAY	6	0.1	25	STEEL	TITUS OWN CEILING SUPPLY DIFFUSER	1,2,8,9	
	130-250	8" RD	24x24	4-WAY	10	0.1	25	STEEL			
	255-350	10" RD	24x24	4-WAY	13	0.1	25	STEEL			
B	0-1500	-	24x24	-	-	0.05	30	STEEL	TITUS PXP PERFORATED RETURN	2	
C	0-150	6" RD (2)	48x4	2-WAY ADJ.	12	0.15	30	STEEL	TITUS T8B-10 LINEAR SLOT DIFFUSER	1,2,4,6	
	155-250	8" RD (2)	48x4	2-WAY ADJ.	17	0.15	30	STEEL			
	255-380	10" RD (2)	48x4	2-WAY ADJ.	25	0.15	30	STEEL			
D	0-200	6" RD (1)	48x4	2-WAY ADJ.	20	0.18	24	STEEL	TITUS FL-10-HT LINEAR SLOT DIFFUSER	1,2,4,5, 7,8	
	205-230	8" RD (1)	48x4	2-WAY ADJ.	22	0.18	30	STEEL			
E	0-200	-	48x4	-	-	0.05	30	STEEL	TITUS FL-10-HT LINEAR RETURN DIFFUSER W/ LIGHT SHIELD	2	
F	0-200	10x4	10x4	2-WAY ADJ.	14	0.20	30	STEEL	TITUS S300F SPIRAL DUCT- MOUNTED GRILLE	1,2,3	
	205-250	12x4	12x4	2-WAY ADJ.	16	0.20	32	STEEL			
G	0-200	6" RD	14" RD	4-WAY	12	0.11	24	STEEL	TITUS MODEL R-OWN ROUND SUPPLY DIFFUSER	1,2	
	205-350	8" RD	18" RD	4-WAY	12	0.12	24	STEEL			
H	0-175	6x6	6x6	-	-	0.16	30	STEEL	TITUS S30FL RETURN GRILLE	2,10	
	180-415	10x10	10x10	-	-	0.10	30	STEEL			
	420-1400	28x12	28x12	-	-	0.10	30	STEEL			
	1405-2000	36x12	36x12	-	-	0.10	30	STEEL			
NOTES:											
1. THROW DATA IS BASED ON 50FPM TERMINAL VELOCITY AT MAXIMUM CFM.											
2. PROVIDE FRAME AND/OR ACCESSORIES AS REQUIRED TO MATCH CEILING TYPE. SEE ARCHITECTURAL DRAWINGS FOR ADDITIONAL INFORMATION.											
3. PROVIDE WITH AIR SCOOP DAMPER/EXTRACTOR.											
4. PROVIDE WITH INTEGRAL, INSULATED PREMIUM.											
5. PROVIDE WITH CONTINUOUS SLOT APPEARANCE.											
6. SLOT WIDTH SHALL BE 1", # OF SLOTS SHALL BE 2.											
7. SLOT WIDTH SHALL BE: 1", # OF SLOTS SHALL BE 1.											
8. PROVIDE DIFFUSERS WITH VOLUME DAMPERS ADJUSTABLE FROM FACE IN HARD CEILING AREA.											
9. PROVIDE ALUMINUM AIR DEVICE IN RESTROOM/SHOWER 112.											
10. CONTRACTOR SHALL PAINT THE GRILLE TO MATCH THE WALL COLOR.											

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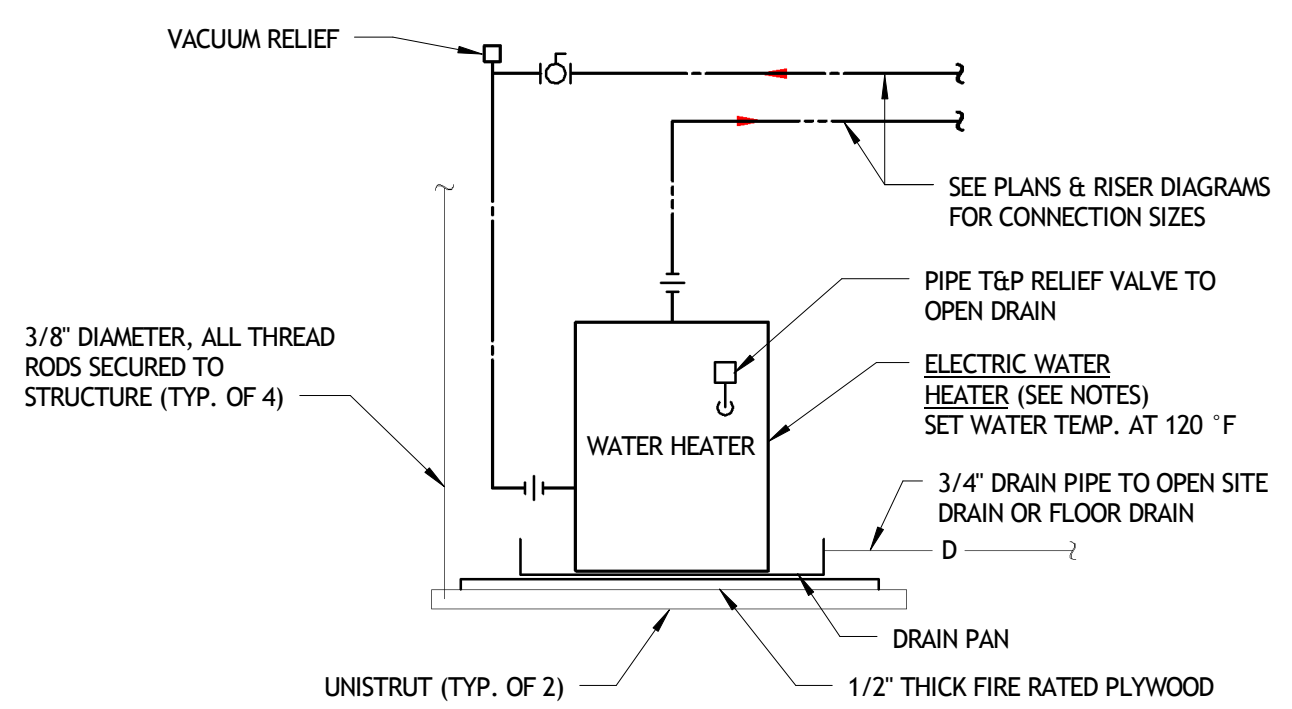
C

B

A

FIRE SUPPRESSION SPECIFICATIONS

- GENERAL:
 - THE BUILDING IS PRESENTLY FULLY SPRINKLERED WITH A WET PIPE SYSTEM. PIPING IS EXPOSED WITH UPRIGHT HEADS.
 - THE WORK SHALL BE PERFORMED BY AN ACCREDITED AUTOMATIC SPRINKLER CONTRACTOR, REGULARLY ENGAGED IN BUSINESS. THE WASHINGTON, DC METROPOLITAN, FOR AT LEAST THE PAST FIVE YEARS AND FAMILIAR WITH THIS TYPE OF WORK.
 - CONTRACTOR SHALL FAMILIARIZE HIMSELF WITH THE EXISTING SPRINKLER PIPING LAYOUT. THE CEILING SPACE IS EXTREMELY LIMITED AND MUST BE COORDINATED FOR ALL UTILITIES TO FIT WITHIN THE LIMITED SPACE PROVIDED. SPRINKLER MAINS AND BRANCH PIPING SHALL BE RELOCATED AS REQUIRED TO AVOID CONFLICTS WITH LIGHTING, DUCTWORK, DIFFUSERS, PIPING, EQUIPMENT, ETC. REQUESTS FOR CHANGE ORDERS DUE TO A LACK OF COORDINATION SHALL BE REJECTED.
 - ALL WORK SHALL BE IN ACCORDANCE WITH NFPA-13 AND THE LOCAL FIRE MARSHAL'S OFFICE. WITHIN THIRTY (30) DAYS OF CONTRACT AWARD, SUBMIT TO THE ENGINEER FOR APPROVAL ALL DEVICES TO BE USED IN THE WORK. SUBMITTALS SHALL INCLUDE PIPE, HANGERS AND SPRINKLER HEADS, INCLUDE ANY DRAWINGS OF ADDITIONAL DATA PROVIDED TO AUTHORITIES HAVING JURISDICTION.
 - BEFORE COMMENCING ANY OF THIS WORK, VERIFY ALL GOVERNING DIMENSIONS AT THE SITE AND EXAMINE ADJOINING WORK ON WHICH THIS WORK WILL BE DEPENDENT. REPORT ANY CONFLICTS OR DISCREPANCIES TO THE OWNER.
 - PROVIDE ALL PIPE, FITTINGS, ETC. REQUIRED TO CONNECT TO EXISTING SYSTEMS.
 - COORDINATE SHUTDOWN OF EXISTING SYSTEMS WITH THE OWNER. SHUTDOWN TIME SHALL BE KEPT TO A MINIMUM, AND PERFORMED WHEN CONVENIENT TO THE OWNER.
 - THE ARCHITECTURAL DRAWINGS INDICATE LIMIT OF CONSTRUCTION. PROVIDE ADDITIONAL SPRINKLER HEADS AND RELATED PIPING WHERE REQUIRED TO COMPLETE COVERAGE.
 - FURNISH THE OWNER WITH A WRITTEN GUARANTEE, STATING THAT ALL MATERIALS AND INSTALLATION ARE IN ACCORDANCE WITH THE CONTRACT DOCUMENTS, AND ARE FULLY GUARANTEED FOR ONE YEAR FROM THE DATE OF FINAL ACCEPTANCE OF THE WORK, AND THAT ALL WORK WHICH PROVES DEFECTIVE DURING THAT TIME SHALL BE REPLACED AT NO COST TO THE OWNER.
- SCOPE OF WORK:
 - THE GENERAL SCOPE OF THIS PROJECT CONSISTS OF PROVIDING NEW SPRINKLER HEADS AND PIPING TO COORDINATE WITH NEW CEILINGS AND ROOM LAYOUTS. REROUTE EXISTING PIPING AS REQUIRED TO COORDINATE WITH NEW LIGHTING, DUCTWORK, PIPING, AND EQUIPMENT. RE-USE EXISTING SPRINKLER HEADS WHERE POSSIBLE. THE SYSTEM SHALL BE HYDRAULICALLY CALCULATED AND THE ENTIRE PROJECT AREA SHALL BE FULLY SPRINKLERED. REFER TO ARCHITECTURAL DRAWINGS FOR AREA OF WORK.
 - CONTRACTOR SHALL OBTAIN AND PAY FOR ALL PERMITS.
 - CONTRACTOR SHALL OBTAIN ALL NECESSARY FLOW DATA TO HYDRAULICALLY CALCULATE NEW SPRINKLER SYSTEM.
- PRODUCTS:
 - SPRINKLER PIPING: MATCH EXISTING.
 - FITTINGS: MATCH EXISTING.
 - FIRE SPRINKLER HEADS: CONCEALED PENDANT, WHITE FINISH.
 - SUBMIT PLANS AND CALCULATIONS TO THE FIRE MARSHAL'S OFFICE FOR APPROVAL. UPON RECEIPT OF SAID APPROVALS, CONTRACTOR SHALL FURNISH THE OWNER ONE (1) SET BEARING STAMP OF APPROVAL PRIOR TO CONSTRUCTION AND TWO (2) SETS OF 'AS-BUILTS' AT COMPLETION OF PROJECT.
- EXECUTION AND TESTING:
 - ALL PIPE SHALL BE INSTALLED ABOVE CEILINGS, INSIDE WALLS OR IN CONCEALED SPACES WITHIN THE AREA.
 - PROVIDE ALL CUTTING AND PATCHING REQUIRED FOR THE FIRE SPRINKLER INSTALLATION.
 - ALL SYSTEMS SHALL BE SUBJECTED TO HYDROSTATIC TEST OF 200 PSI FOR TWO HOURS, WITHOUT LEAKS OR LOSS OF PRESSURE. TESTING SHALL BE IN ACCORDANCE WITH LOCAL REQUIREMENTS. GIVE THREE (3) DAYS NOTICE TO THE OWNER'S REPRESENTATIVE PRIOR TO TESTING. SUBMIT COMPLETED CONTRACTOR'S MATERIALS AND TEST CERTIFICATE TO THE OWNER'S REPRESENTATIVE AFTER SUCCESSFUL COMPLETION OF TESTING.



NOTES:

- WATER HEATER WH-1: A.O. SMITH #DEL-15, 15 GALLON STORAGE, WT. 180 LBS, 4.0 KW, 208V, 1 PHASE.
- WATER HEATER WH-2: A.O. SMITH #DEL-10, 10 GALLON STORAGE, WT. 140 LBS, 2.0 KW, 208V, 1 PHASE.
- EXACT HOT WATER AND COLD WATER CONNECTION MAY VARY FROM MANUFACTURER TO MANUFACTURER.

DETAIL - ELECTRIC WATER HEATER

NOT TO SCALE

PLUMBING FIXTURE SPECIFICATIONS

WC	WATER CLOSET (HANDICAP): KOHLER K-4302 "HIGHEREST", WHITE VITREOUS CHINA, FLOOR MOUNTED, ELONGATED BOWL. SLOAN SOLS 8111-1.6 GPF FLUSH VALVE, CHURCH 9500-SSC OPEN FRONT SEAT AND CHECK HINGE.
LAV	LAVATORY (HANDICAP): AMERICAN STANDARD 014.001 "LUZIA", WALL MOUNTED, WHITE VITREOUS CHINA, 0.059.020 KHEZ GUARD, AMERICAN STANDARD 6055.165. SENSOR CENTERSET FAUCET, BATTERY OPERATED, 0.5 GPM, CHROME-PLATED BRASS ANGLE STOP VALVES, SUPPLY PIPES AND ESCUTCHEONS, GRID DRAIN AND TAILPIECE, 1-1/4" x 1-1/2" CHROME-PLATED BRASS P-TRAP, WASTE PIPE COVER TUBE AND ESCUTCHEON.
SINK-1	SINK: JUST USF-ADA-1620A, ADA COMPLIANT, 18-GAUGE, 18-8 STAINLESS STEEL, SOUND DEADENING, 5-1/2" DEEP BOWL, CENTER REAR DRAIN. PROVIDE IN SINK-ERATOR "EVOLUTION COMPACT" DISPOSER; 3/4 HP, 120V. FAUCET: ALFI "LEON" AR2039, SINGLE HANDLE, CHROME-PLATED BRASS ANGLE STOP VALVES, SUPPLY PIPES AND ESCUTCHEONS, 1-1/4" x 1-1/2" CHROME-PLATED BRASS P-TRAP, WASTE PIPE COVER TUBE AND ESCUTCHEON.
SINK-2	SINK: ELKAY ELUHAD1916, ADA COMPLIANT, 18-GAUGE, 18-8 STAINLESS STEEL, SOUND DEADENING, 5-1/2" DEEP BOWL. KOHLER K-596 "SIMPLICE" FAUCET, SINGLE HANDLE, CHROME-PLATED BRASS ANGLE STOP VALVES, SUPPLY PIPES AND ESCUTCHEONS, 1-1/4" x 1-1/2" CHROME-PLATED BRASS P-TRAP, WASTE PIPE COVER TUBE AND ESCUTCHEON.
SH	SHOWER (ADA COMPLIANT): 1 PIECE, WHITE BARRIER FREE SHOWER. KOHLER FREDWILL MODEL K-12110-C. PROVIDE COMPLETE WITH GRAB BARS, FOLDING SHOWER SEAT, SOAP DISH, CURTAIN ROD AND FLOOR DRAIN. AMERICAN STANDARD 1662.211 SHOWER SYSTEM KIT.

PLUMBING FIXTURE CONNECTION SCHEDULE

MARK	DESCRIPTION	WASTE	VENT	CW	HW	REMARKS
WC	WATER CLOSET	4"	2"	1"	-	ADA COMPLIANT, FLOOR MOUNTED, FLUSH VALVE
LAV	LAVATORY	1-1/2"	1-1/2"	1/2"	1/2"	ADA COMPLIANT, WALL HUNG
SINK-1	BREAD BOX SINK	1-1/2"	1-1/2"	1/2"	1/2"	UNDER COUNTER MOUNTED, WITH DISPOSER
SINK-2	SUBLET SINK	1-1/2"	1-1/2"	1/2"	1/2"	UNDER COUNTER MOUNTED
SH	SHOWER	2"	1-1/2"	1/2"	1/2"	PRE-FAB ADA

PLUMBING GENERAL NOTES

- ALL PLUMBING WORK SHALL CONFORM WITH ALL STATE AND LOCAL CODES, RULES, AND REGULATIONS.
- PLUMBING CONTRACTOR SHALL SECURE AND PAY FOR ANY PERMITS.
- ALL PLUMBING WORK SHALL BE COORDINATED WITH OTHER TRADES TO AVOID ANY INTERFERENCE.
- THESE DRAWINGS ARE DIAGRAMMATIC, REFER TO THE ARCHITECTURAL DRAWINGS FOR EXACDIMENSIONS OF THE BUILDING AND EXACT LOCATION OF ALL FIXTURES AND EQUIPMENT.
- ALL WATER PIPING AND VENT PIPING SHALL BE RUN CONCEALED ABOVE CEILINGS, UNLESS OTHERWISE NOTED. ALL SANITARY WASTE PIPING SHALL BE RUN BELOW FLOOR SLAB, UNLESS OTHERWISE NOTED.
- ALL SANITARY WASTE PIPING SHALL BE SLOPED AT 1/4" PER FOOT UNLESS OTHERWISE NOTED.
- ALL SLOPES AND INVERT ELEVATIONS SHALL BE CHECKED BEFORE ANY PIPING IS INSTALLED, IN ORDER THAT PROPER SLOPES WILL BE MAINTAINED.
- MAKE PROPER WASTE, VENT, HOT AND COLD WATER CONNECTIONS TO ALL FIXTURES AND EQUIPMENT, EVEN THOUGH ALL BRANCH MAINS, ELBOWS AND CONNECTIONS ARE NOT SHOWN.
- FOR ALL SIZES OF WASTE, VENT, HOT AND COLD WATER PIPING TO FIXTURES AND EQUIPMENT, SEE SANITARY WASTE AND WATER RISER DIAGRAMS.
- PLUMBING CONTRACTOR SHALL DISINFECT POTABLE WATER SYSTEM PER CODE.
- PLUMBING CONTRACTOR SHALL INFORM SUBCONTRACTOR OF QUANTITY AND LOCATION OF ACCESS PANELS WHERE REQUIRED FOR ACCESS TO VALVES IN CEILINGS AND WALLS. ACCESS PANELS SHALL BE INSTALLED BY THE APPROPRIATE SUBCONTRACTOR.
- CONTRACTOR SHALL PROVIDE ADDITIONAL WATER LINE DROPS IN WALL WHEN HORIZONTAL RUN IN WALL CONFLICTS WITH VENT PIPE IN WALL.
- ALL PIPE PENETRATIONS BELOW SINKS SHALL BE SEALED.
- ALL PIPE PENETRATIONS THROUGH FLOOR SLAB SHALL BE SEALED WITH FIRE STOPPING MATERIAL.
- ALL WATER PIPING SHALL BE TYPE "L" COPPER PIPE WITH 125 PSI WROUGHT COPPER 95/5 SOLDER SWEAT FITTINGS. ALL WASTE AND VENT PIPING SHALL BE DWV COPPER WITH SOLDER SWEAT JOINTS.
- AT CONTRACTOR'S OPTION, PROVIDE NO-HUB CAST IRON PIPE WITH STAINLESS STEEL BANDS FOR WASTE AND VENT PIPING.
- ALL COLD AND HOT WATER PIPING SHALL BE INSULATED, AND ALL PIPING SHALL BE INSTALLED ON THE INSIDE OF THE BUILDING INSULATION ENVELOPE. PIPING INSULATION SHALL BE 3-1/2 LB. DENSITY, JOHNS-MANVILLE "WICOD-LOCK".
- PROVIDE INDIVIDUAL SHUTOFF VALVES AT ALL PLUMBING FIXTURES AND APPLIANCES.
- ALL VALVES SHALL BE 125 PSI BRONZE GATE OR BALL VALVES.
- CONTRACTOR SHALL FIELD VERIFY EXACT LOCATION AND DIRECTION OF FLOW FOR EXISTING SEWER LINES.
- FURNISH THE OWNER WITH WRITTEN GUARANTEE, STATING THAT ALL MATERIALS AND INSTALLATION ARE IN ACCORDANCE WITH THE CONTRACT DOCUMENTS AND ARE FULLY GUARANTEED FOR ONE YEAR FROM THE DATE OF FINAL ACCEPTANCE OF THE WORK AND THAT ALL WORK WHICH PROVES DEFECTIVE DURING THAT TIME SHALL BE REPLACED AT NO COST TO THE OWNER.

PLUMBING LEGEND

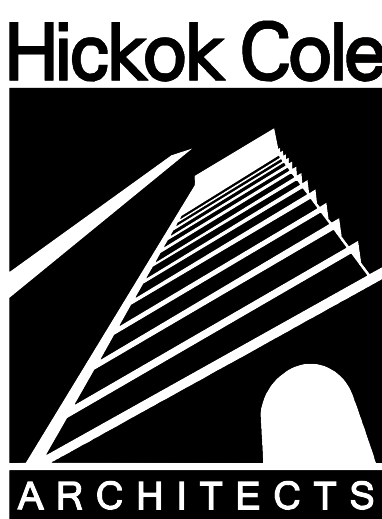
SYMBOL	ABBREVIATION	DESCRIPTION
		EXISTING PIPING OR EQUIPMENT TO REMAIN
		EXISTING PIPING OR EQUIPMENT TO BE REMOVED
	CW	DOMESTIC COLD WATER
	HW	DOMESTIC HOT WATER
	HWC	DOMESTIC HOT WATER RECIRCULATION
	WP	SANITARY SOIL AND WASTE
	VP	SANITARY VENT
	D	DRAIN LINE
	FP	FIRE PROTECTION PIPING
		PIPE TURNING UP
		PIPE TURNING DOWN
		VALVE IN VERTICAL
		PIPE BRANCH BOTTOM TAKEOFF
		PIPE BRANCH TOP TAKEOFF
		CAPPED PIPE
		BALL VALVE
		COMBINATION BALANCING AND SHUT-OFF VALVE
		UNION
		PIPE DIRECTION OF FLOW
		POINT OF REMOVAL
		POINT OF CONNECTION TO EXISTING
	(1)	KEYED NOTE
		SANITARY RISER SYMBOL WITH DESIGNATION
		WATER RISER SYMBOL WITH DESIGNATION

ABBREVIATIONS

(E)	EXISTING TO REMAIN
ADA	AMERICANS WITH DISABILITIES ACT
AFT	ABOVE FINISHED FLOOR
ARCH	ARCHITECTURAL
BFP	BACKFLOW PREVENTER
BULD	BUILDING
CLNG	CEILING
CO	CLEANOUT
DN	DOWN
DW	DISHWASHER
DWG	DRAWING
EA	EACH
ELEC	ELECTRIC, ELECTRICAL
F	FEET
GAL	GALLON, GALLONS
KW	KILOWATTS
LBS	POUNDS
MAX	MAXIMUM
MECH	MECHANICAL
MIN	MINIMUM
PH	PHASE
REF	REFRIGERATOR
RL	RAIN LEADER
TYP	TYPICAL
V	VOLTS
VS	VENT STACK
W	WITH
WH	WATER HEATER
WS	WASTE STACK

PLUMBING DRAWING LIST

P100	SPECIFICATIONS, NOTES, DETAIL, LEGEND & ABBREVIATIONS
P200	THIRD FLOOR & PARTIAL FIRST FLOOR PLAN - NEW WORK AND RISER DIAGRAMS



D

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641 S St. NW Washington, DC

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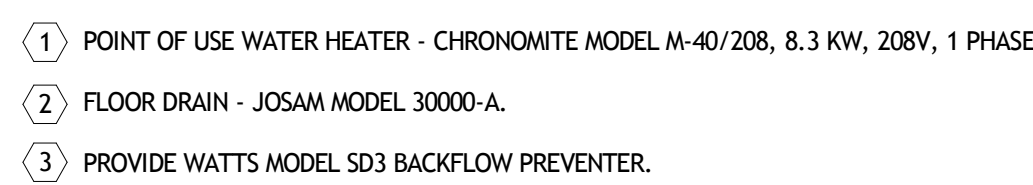
DRAWING TITLE
SPECIFICATIONS, NOTES, DETAIL, LEGEND & ABBREVIATIONS

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A

ELECTRICAL SPECIFICATIONS

GENERAL

- A. THE CONTRACTOR SHALL COMPLY WITH ALL THE LAWS, ORDINANCES, RULES AND REGULATIONS OF ALL LOCAL AND STATE GOVERNMENT AUTHORITIES, THE RULES OF THE NATIONAL FIRE PROTECTION ASSOCIATION, INTERPRETED BY THE ENFORCING AUTHORITY HAVING JURISDICTION AND OF THE PUBLIC UTILITIES HAVING CONNECTION WITH ANY OF THE SYSTEMS HEREIN SPECIFIED.
- B. THE CONTRACTOR SHALL SECURE AND PAY FOR ALL PERMITS AND INSPECTIONS REQUIRED BY ANY OF THE FOREGOING AUTHORITIES, AND PAY FOR ALL OTHER COSTS IN CONNECTION WITH THE WORK. ALL CERTIFICATES SHALL BE IN DUPLICATE AND SHALL BE DELIVERED TO THE ARCHITECT/ENGINEER/OWNER.
- C. THE SITE, LOCATION AND ROUTING OF SYSTEMS INDICATED TO HAVE NEW CONNECTIONS MADE TO THEM ARE SHOWN AS ACCURATELY AS FIELD CONDITIONS WOULD PERMIT. BIDDERS SHALL VISIT THE SITE AND THOROUGHLY EXAMINE THE CONTRACT DRAWINGS. BIDDERS WHO DO NOT VISIT THE SITE MAY BE UNILATERALLY NOT PERMITTED TO SUBMIT A BID IF THE OWNER SO DESIGNATES. ALL EXISTING CONDITIONS SHALL BE EXAMINED AND THEIR EXACT LOCATIONS VERIFIED. THE CONTRACTOR SHALL REPORT TO THE ARCHITECT/ENGINEER/OWNER BEFORE SUBMITTING A BID, ANY CONDITIONS WHICH MIGHT MAKE INSTALLATION OF REQUIRED EQUIPMENT A PROBLEM. NO CONSIDERATION OR ALLOWANCE WILL BE GRANTED FOR FAILURE TO INVESTIGATE CONDITIONS OR MISUNDERSTANDINGS OF THE CONTRACTUAL REQUIREMENTS.
- D. THE CONTRACTOR SHALL REMOVE ALL EQUIPMENT NOT INDICATED TO BE REUSED TO A DESIGNATED LOCATION AT THE PROJECT SITE. AFTER THE EQUIPMENT HAS BEEN ASSEMBLED FOR THE OWNER'S INSPECTION AND POSSIBLE RETENTION, ALL EQUIPMENT NOT TO BE RETAINED BY THE OWNER SHALL BE REMOVED FROM THE SITE BY THE CONTRACTOR. ALL BUILDING SYSTEMS SHALL REMAIN IN SERVICE UNLESS INDICATED OTHERWISE. ALL OUTAGES OR INTERRUPTIONS SHALL BE KEPT TO MINIMUM DURATION. NOTIFY THE OWNER 48 HOURS IN ADVANCE OF ANY OUTAGE OR INTERRUPTION.
- E. THE CONTRACTOR SHALL INSTALL AND CONNECT ALL EQUIPMENT AND MATERIALS IN ACCORDANCE WITH THE BEST ENGINEERING PRACTICE AND, UNLESS OTHERWISE SHOWN OR SPECIFIED, FOLLOW THE MANUFACTURER'S INSTRUCTIONS AND RECOMMENDATIONS AND FURNISH AND INSTALL ALL REQUIRED AUXILIARY ITEMS COMPLETE.
- F. DRAWINGS SHALL BE CONSIDERED DIAGRAMMATIC AND FOR BIDDING PURPOSES ONLY. WHILE THE DRAWINGS ARE GENERALLY TO SCALE AND ARE AS ACCURATE AS THE SCALE WILL PERMIT, ALL IMPORTANT DIMENSIONS SHALL BE DETERMINED IN THE FIELD.
- G. COORDINATE WITH ALL TRADES TO AVOID INTERFERENCE AMONG MECHANICAL, ELECTRICAL, ARCHITECTURAL AND STRUCTURAL ITEMS. PROVIDE ALL NECESSARY OFFSETS AND FITTINGS IN CIRCUITRY AND OTHER ITEMS REQUIRED TO INSTALL THE WORK WITHOUT INTERFERENCES.
- H. THE CONTRACTOR SHALL TEST ALL EQUIPMENT INSTALLED UNDER THIS CONTRACT AND DEMONSTRATE TO THE OWNER ITS PROPER OPERATIONS. ALL NEW EQUIPMENT SHALL BE MOUNTED VIBRATION FREE.
- I. ALL EQUIPMENT AND WORKMANSHIP SHALL BE GUARANTEED IN FULL FROM ALL DEFECTS FOR ONE (1) YEAR FROM THE DATE OF FINAL ACCEPTANCE OF THIS WORK.
- J. ALL EQUIPMENT INSTALLED SHALL BE NEW AND SHALL CONFORM IN ALL RESPECTS TO THE LATEST APPROVED STANDARDS OF IEEE, ANSI, NEMA AND UNDERWRITERS LABORATORIES, INC., (UNLESS INDICATED OTHERWISE). SUBSTITUTIONS SHALL ONLY BE ACCOMPLISHED AT THE DISCRETION OF THE ARCHITECT/ENGINEER/OWNER. SHOP DRAWINGS ARE TO BE SUBMITTED AND APPROVED BEFORE THE EQUIPMENT IS ORDERED. SUBMIT SIX (6) COPIES OF SHOP DRAWINGS TO THE ARCHITECT/ENGINEER/OWNER OF THE FOLLOWING: LIGHTING FIXTURES, OCCUPANCY SENSORS, PANELBOARDS, TRANSFORMER, DISCONNECT SWITCHES AND WIRING DEVICES.
- K. THE CONTRACTOR SHALL REPAIR ALL WALL, CEILING, FLOOR, OR ROOF OPENINGS WHICH ARE CREATED BY DEMOLITION OR PERMITS SHALL BE WITH MATERIALS AND FINISHES TO MATCH EXISTING. ALL FIRE RATED PENETRATIONS SHALL BE SEALED WITH SUITABLE MATERIALS TO PRESERVE FIRE RATED INTEGRITY.
- L. DEFINITIONS
- "PROVIDE" UNDER THIS CONTRACT IS DEFINED AS FURNISH AND INSTALL.
 - "CONCEALED" UNDER THIS CONTRACT IS DEFINED AS WITHIN ARCHITECTURAL WALLS AND ABOVE CEILINGS.
 - "EXPOSED" UNDER THIS CONTRACT IS DEFINED AS VISIBLE TO VIEW.
 - "INDICATED" UNDER THIS CONTRACT IS DEFINED AS SHOWN IN THE CONTRACT DOCUMENTS.
 - "CIRCUITRY" UNDER THIS CONTRACT IS DEFINED AS CONDUIT, FEEDER AND OR CIRCUIT.
- M. UPON COMPLETION OF THE WORK, THE CONTRACTOR SHALL THOROUGHLY CLEAN THE CONTRACT AREA AND ALL OTHER AREAS USED FOR STORAGE, STAGING, ETC.
- N. THE CONTRACTOR SHALL NOTIFY THE ARCHITECT/ENGINEER/OWNER WHEN THE PROJECT IS APPROXIMATELY 75% COMPLETED IN ORDER TO SCHEDULE A PRE-FINAL REVIEW OR CONSTRUCTION. NO WORK SHALL BE CONCEALED BY CEILINGS, WALLS, ETC. FINAL REVIEW SHALL BE SCHEDULED AT 100% COMPLETION. ALL PURCH LIST ITEMS MUST BE ACCOMPLISHED PRIOR TO FINAL ACCEPTANCE.
- O. THE CONTRACTOR SHALL PREPARE A COMPREHENSIVE METHOD OF PROCEDURE AND SUBMIT IT TO THE OWNER WITH SHOP DRAWINGS FOR REVIEW. THE SUBMITTAL SHALL ITEMIZE METHODS OF PROCEDURE FOR ALL POTENTIAL EMERGENCY SITUATIONS AND SHALL INCLUDE A LIST OF PERSONS REPRESENTING THE OWNER AND THE CONTRACTOR ALONG WITH THEIR RESIDENTIAL EMERGENCY PHONE NUMBERS INDICATING WHO SHALL BE CONTACTED IN THE EVENT OF AN EMERGENCY. THIS LIST SHALL BE DISTRIBUTED TO THE OWNER'S REPRESENTATIVE AND THE CONTRACTORS SUPERINTENDENT OR FOREMAN AT THE SITE. EMERGENCY SITUATIONS SHALL INCLUDE BUT NOT BE LIMITED TO POWER OUTAGES, CHILLED AND CONDENSER WATER SYSTEM RUPTURES, AUTOMATIC TEMPERATURE CONTROL OUTAGES AND OWNERS EQUIPMENT DAMAGE. THE COMPREHENSIVE METHOD OF PROCEDURE SHALL BE APPROVED BY THE OWNER PRIOR TO COMMENCEMENT OF ANY WORK.
- P. PROVIDE TEMPORARY SERVICE FOR LIGHTING AND POWER EQUIPMENT (DRILLS, SAW, ETC.). VERIFY TEMPORARY REQUIREMENTS WITH GENERAL CONTRACTOR. TEMPORARY LIGHTING AND POWER SHALL MEET OSHA REQUIREMENTS AND LOCAL CODE. TEMPORARY POWER SHALL BE 120 VOLTS.
- Q. PROTECT ADJACENT MATERIALS INDICATED TO REMAIN. INSTALL AND MAINTAIN DUST AND NOISE BARRIERS TO KEEP DIRT, DUST, AND NOISE FROM BEING TRANSMITTED TO ADJACENT AREAS. REMOVE PROTECTION AND BARRIERS AFTER DEMOLITION OPERATIONS ARE COMPLETE.
- R. FINAL TESTING: AT THE TIME OF FINAL INSPECTION AND TESTS, ALL CONNECTIONS AT PANELBOARDS, DEVICES AND EQUIPMENT AND ALL SPACES MUST BE COMPLETED. EACH BRANCH CIRCUIT AND ITS RESPECTIVE CONNECTED EQUIPMENT MUST TEST FREE OF SHORT CIRCUITS. UPON COMPLETION OF THE WORK, CLEAN AND POLISH ALL EXPOSED SURFACES IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.
- T. CONTRACTOR SHALL PROVIDE ACCESS PANEL FOR JUNCTION BOXES, DISCONNECT SWITCHES, OR OTHER DEVICES WHICH REQUIRE SERVICE ACCESS PER NEC.

RACEWAYS BOXES AND CONDUITS

- A. OUTDOORS WIRING METHODS: USE THE FOLLOWING WIRING METHODS:
1. EXPOSED: CONDUCTORS IN RIGID METAL CONDUIT
 2. CONCEALED: CONDUCTORS IN RIGID METAL CONDUIT.
 3. UNDERGROUND: CONDUCTORS IN RIGID NONMETALLIC CONDUIT, UNLESS OTHERWISE NOTED.
 4. CONNECTION TO VIBRATING EQUIPMENT: CONDUCTORS IN LIQUIDTIGHT FLEXIBLE METAL CONDUIT.
 5. BOXES AND ENCLOSURES: NEMA TYPE 3R.
- B. INDOORS WIRING METHODS: USE THE FOLLOWING WIRING METHODS:
1. CONNECTION TO VIBRATING EQUIPMENT: CONDUCTORS IN FLEXIBLE METAL CONDUIT, EXCEPT IN WET OR DAMP LOCATIONS USE LIQUIDTIGHT FLEXIBLE METAL CONDUIT.
 2. DAMP OR WET LOCATIONS: CONDUCTORS IN RIGID STEEL CONDUIT.
 3. EXPOSED: CONDUCTORS IN ELECTRICAL METALLIC TUBING.
 4. CONCEALED: CONDUCTORS IN ELECTRICAL METALLIC TUBING OR, AS APPROVED, METAL-CLAD (MC) CABLE.
 5. BOXES AND ENCLOSURES: NEMA TYPE 1, EXCEPT IN DAMP OR WET LOCATIONS USE NEMA TYPE 4, STAINLESS STEEL.
 6. ALL CIRCUITRY IN FINISHED AREAS SHALL BE RUN CONCEALED.
 7. MINIMUM SIZE CONDUIT SHALL BE 1/2".
 8. EMT CONNECTORS AND COUPLINGS SHALL BE OF THE ALL-STEEL, COMPRESSION TYPE WITH INSULATED THROAT.
 9. EXPOSED AND CONCEALED CIRCUITRY (WHETHER CONDUIT AND WIRE OR CABLE) SHALL BE RUN TIGHT TO CEILING SLAB (AS HIGH AS POSSIBLE TO MAXIMIZE HEADROOM) IN A NEAT, WORKMANLIKE MANNER. ALL RUNS SHALL BE PARALLEL OR PERPENDICULAR TO BUILDING WALLS.
 10. ALL CIRCUITRY RUNS INDICATED ARE DIAGRAMMATIC. THE CONTRACTOR SHALL DETERMINE IN THE FIELD THE MOST SUITABLE ROUTES.
 11. ALL EMPTY RACEWAYS SHALL CONTAIN A DRAG WIRE. EMPTY RACEWAYS 2" OR LARGER IN SIZE SHALL HAVE A MAXIMUM OF 3 - 90 DEGREE BENDS. UNLESS OTHERWISE NOTED, PROVIDE 3/4" EMT FROM EACH TELEPHONE OR COMMUNICATIONS OUTLET DEVICE TO CEILING SPACE.
 12. GROUND ACCESS-RAISED FLOOR SYSTEM WITH #4 CONDUCTOR TO BUILDING STEEL OR BUILDING GROUNDING SYSTEM PER MANUFACTURER'S REQUIREMENT. MINIMUM 1 LOCATION PER 1000 SQUARE FEET. THE ALL GROUNDS TOGETHER.
 13. UNDER COMPUTER FLOOR SEPARATE BRANCH CIRCUIT AND POWER FEEDS A MINIMUM OF 6" FROM COMMUNICATION OR COMPUTER CABLE.
 14. EXPOSED LOW VOLTAGE WIRING SHALL BE INSTALLED IN A RACEWAY, UNLESS OTHERWISE NOTED.
 15. OUTLET BOXES SHALL BE A MINIMUM OF 4" SQUARE WITH THE APPROPRIATE PLASTER RING OR TILE COVER.
 16. WHERE EXISTING WALLS ARE FURRED OUT AND DEVICES ARE NOT NOTED TO BE REMOVED, PROVIDE EXTENSION BOXES TO BRING FACE OF DEVICES FLUSH WITH NEW FINISH SURFACE AND CONTINUE IN SERVICE.

WIRE AND CABLE

- A. ALL CONDUCTORS SHALL BE COPPER, MINIMUM #12 WITH 600 VOLT TYPE "THHN-THWN" INSULATION. CONDUCTORS #8 AND LARGER SHALL BE STRANDED.
- B. WHERE APPROVED BY THE AUTHORITIES HAVING JURISDICTION, "MC" CABLE MAY BE UTILIZED FOR INTERIOR BRANCH CIRCUITS.
- C. ALL "MC" CABLE SHALL HAVE AN INTERNAL GREEN INSULATED EQUIPMENT GROUND CONDUCTOR.
- D. ALL 120 VOLT CIRCUIT HOMERUNS WHICH ARE OVER 100 LINEAR FEET SHALL BE #10 CONDUCTORS MINIMUM.
- E. RUN MULTIPLE HOMERUNS TO ALTERNATELY NUMBERED PANELBOARD CIRCUITS (I.E., 1, 3, 5)

WIRING DEVICES AND TELEPHONE/DATA OUTLETS

- A. THE LOCATION OF ALL WIRING DEVICES AND TELEPHONE/DATA OUTLETS SHALL BE VERIFIED BEFORE INSTALLATION WITH THE ARCHITECT. THE ARCHITECT MAY, AT HIS OPTION, RELOCATE ANY DEVICE 5 FEET AT NO CHARGE TO THE OWNER.
- B. WHERE TWO OR MORE DEVICES ARE SHOWN TOGETHER ON THE PLANS, A MULTI-GANG BOX AND PLATE SHALL BE USED. DEVICES OF DIFFERENT VOLTAGES SHALL BE SEPARATED BY PERMANENTLY INSTALLED BOX PARTITIONS.
- C. ALL OUTLETS SHOWN ON A WALL BACK TO BACK SHALL BE OFFSET A MINIMUM OF 6" HORIZONTALLY.
- D. WALL MOUNTED WIRING DEVICES SHALL BE A COLOR AS SELECTED BY THE ARCHITECT AND EQUAL TO THE FOLLOWING:
- | DECORA DEVICES |
|-----------------------------|
| SINGLE POLE SWITCH |
| THREE-WAY SWITCH |
| FOUR-WAY SWITCH |
| DIMMER SWITCH |
| DUPLEX RECEPTACLE |
| DUPLEX RECEPTACLE WITH GFCI |
| LEVITON 5621 |
| LEVITON 5623 |
| LEVITON 5624 |
| HUBBELL 3352 |
| HUBBELL GF3352 |
- *GFCI - GROUND FAULT CIRCUIT INTERRUPTER
- E. DEVICE PLATES SHALL BE A FINISH AND COLOR SELECTED BY THE ARCHITECT.
- F. COORDINATE LIGHT SWITCHES SHOWN ON DRAWINGS WITH DOOR SWINGS. LOCATE LIGHT SWITCH ON LOCK SIDE OF DOOR.
- G. COORDINATE WALL MOUNTED TELEPHONE/DATA OUTLET LOCATIONS WITH THE ARCHITECT. TELEPHONE/DATA CONDUCTORS WILL BE INSTALLED BY OTHERS. ALL CONDUCTORS SHALL BE PLENUM RATED.
- H. PROVIDE FOR COMPLETE INSTALLATION OF FLOOR DEVICES INCLUDING ALL ACCESSORIES.

SUPPORTING DEVICES

- A. INSTALL SUPPORTING DEVICES TO FASTEN ELECTRICAL COMPONENTS SECURELY AND PERMANENTLY IN ACCORDANCE WITH NEC REQUIREMENTS AND ANY ADDITIONAL LOCAL CODES.
- B. COORDINATE WITH THE BUILDING STRUCTURAL SYSTEM AND WITH OTHER ELECTRICAL INSTALLATIONS.

ELECTRICAL IDENTIFICATION

- A. CONDUCTOR COLOR CODING: PROVIDE COLOR CODING FOR FEEDERS AND BRANCH CIRCUIT CONDUCTORS AS FOLLOWS:
- | 208/120 VOLTS | PHASE | 480/277 VOLTS |
|---------------|---------|---------------|
| BLACK | A | BROWN |
| RED | B | ORANGE |
| BLUE | C | YELLOW |
| WHITE | NEUTRAL | GRAY |
| GREEN | GROUND | GREEN |
- B. APPLY EQUIPMENT IDENTIFICATION LABELS (MINIMUM 1" HIGH LETTERS) OF ENGRAVED PLASTIC LAMINATE ON EACH MAJOR UNIT OF ELECTRICAL EQUIPMENT. APPLY LABELS FOR EACH UNIT OF THE FOLLOWING CATEGORIES OF ELECTRICAL EQUIPMENT:
1. PANELBOARDS, ELECTRICAL CABINETS AND ENCLOSURES.
 2. ACCESS DOORS AND PANELS FOR CONCEALED ELECTRICAL ITEMS.
 3. ELECTRICAL SWITCHGEAR AND SWITCHBOARDS.
 4. MOTOR CONTROL CENTERS.
 5. MOTOR STARTERS.
 6. PUSHBUTTON STATIONS.
 7. POWER TRANSFER EQUIPMENT.
 8. CONTACTORS.
 9. REMOTE CONTROLLED SWITCHES.
 10. DIMMERS.
 11. CONTROL DEVICES.
 12. TRANSFORMERS.
 13. POWER GENERATING UNITS.
 14. FIRE ALARM MASTER STATION OR CONTROL PANEL.
- C. APPLY CIRCUIT/CONTROL/ITEM DESIGNATION LABELS OF ENGRAVED PLASTIC LAMINATE FOR POWER DISTRIBUTION AND CONTROL COMPONENTS LISTED ABOVE.

GROUNDING

- A. GROUND ELECTRICAL SYSTEMS AND EQUIPMENT IN ACCORDANCE WITH NEC EXCEPT WHERE GROUNDING IN EXCESS OF NEC REQUIREMENTS IS INDICATED.
- B. ALL CIRCUITS SHALL CONTAIN AN INSULATED GROUNDING CONDUCTORS. ALL NEW RECEPTACLE CIRCUITS SHALL CONTAIN A #12 INSULATED GROUNDING CONDUCTOR.
- C. SEPARATELY DERIVED SYSTEMS REQUIRED BY NEC TO BE GROUNDING SHALL BE GROUNDING AS APPROVED BY THE AUTHORITY HAVING JURISDICTION.
- D. TRANSFORMER
1. DRY-TYPE TRANSFORMERS SHALL COMPLY WITH NEMA STANDARD ST20 "DRY-TYPE TRANSFORMERS FOR GENERAL APPLICATIONS."
 2. GENERAL PURPOSE, DRY-TYPE TRANSFORMERS SHALL BE EQUAL TO SQUARE D CLASS 7400 GENERAL PURPOSE TRANSFORMERS.
 3. NON-LINEAR LOAD SERVICE, DRY-TYPE TRANSFORMERS SHALL BE EQUAL TO SQUARE D "NLP SERIES" WITH UL K-13 RATING.
 4. TRANSFORMER WINDINGS SHALL BE COPPER. TRANSFORMERS SHALL HAVE A TEMPERATURE RISE OF NOT MORE THAN 150C WITH CLASS H INSULATION WHEN OPERATING AT 40C AMBIENT TEMPERATURE PROVIDE 2-1/2% TAPS BELOW AND 2-1/2% TAPS ABOVE.

FUSES

- A. INSTALL FUSES IN FUSIBLE DEVICES AS INDICATED.
- B. INSTALL TYPEWRITTEN LABELS ON THE INSIDE DOOR OF EACH FUSED SWITCH TO INDICATE FUSE REPLACEMENT INFORMATION.
- C. ALL FUSES SHALL BE CLASS RK-1 TIME DELAY TYPE, UNLESS OTHERWISE INDICATED.
- D. SPARE FUSES: FURNISH QUANTITY EQUAL TO 20 PERCENT OF EACH FUSE TYPE AND SIZE INSTALLED, BUT NOT LESS THAN 1 SET OF 3 OF EACH TYPE AND SIZE.
- E. SPARE FUSE CABINET: WALL MOUNTED, 18-GAUGE MINIMUM STEEL UNIT WITH FULL-LENGTH, RECESSED PIANO-HINGED DOOR WITH KEY-CODED CAM LOCK AND PULL.
1. SIZE: ADEQUATE FOR ORDERLY STORAGE OF SPARE FUSES SPECIFIED WITH 15 PERCENT SPARE CAPACITY MINIMUM.
 2. FINISH: GRAY BAKED ENAMEL.
 3. IDENTIFICATION: STENCIL LEGEND "SPARE FUSES" IN 1-1/2" (40 mm) LETTERS ON DOOR.

PANELBOARDS

- A. IN PANELBOARDS, "EQUIPPED SPACE" OR "SPACE" IS DEFINED TO INCLUDE ALL NECESSARY BUS, DEVICE SUPPORTS AND CONNECTIONS FOR INSERTION OF A FUTURE DEVICE.
- B. ALL PANELBOARDS SHALL BE EQUIPPED WITH COMMON KEYED LOCKS. PROVIDE A MINIMUM OF TWO KEYS PER PANEL. PANELBOARDS SHALL BE COMPLETE WITH COVERS AND TRIMS AND SHALL CONTAIN A GROUND BUS.
- C. PANELBOARD CIRCUITING SHALL MATCH THE DRAWINGS. CIRCUITING CHANGES MUST BE APPROVED BY THE ARCHITECT.
- D. PANELBOARD BUS SHALL BE COPPER WITH BOLT-ON BRANCH CIRCUIT BREAKERS.
- E. BEFORE ORDERING PANELBOARDS, COORDINATE ALL MOTOR CIRCUIT BREAKER TRIPS WITH MECHANICAL MANUFACTURERS REQUIREMENTS. COORDINATE CONDUCTOR SIZE WITH ACTUAL MOTORS AND OTHER MECHANICAL AND ARCHITECTURAL EQUIPMENT FURNISHED BEFORE INSTALLING CIRCUITRY. ADJUSTABLE TRIP CIRCUIT BREAKERS SHALL BE SET BY THE CONTRACTOR IN THE FIELD.
- F. SURFACE MOUNTED PANELBOARD CABINETS SHALL BE INSTALLED ON AN APPROVED STEEL FRAMEWORK TO DISTRIBUTE THE WEIGHT EVENLY TO THE WALL AND FLOOR AND TO PROVIDE A 1-INCH AIR SPACE BETWEEN WALL AND CABINET. PAINT FRAMEWORK WITH TWO COATS OF GRAY ENAMEL AFTER FABRICATION.
- G. FOR RECESSED PANELBOARDS, RUN ONE 3/4" CONDUIT FROM TOP OF PANEL 6" INTO CEILING SPACE FOR EVERY SET OF 3 SPARE CIRCUIT BREAKERS OR SPACES.
- H. PANELBOARD SHALL BE EQUAL TO SQUARE D TYPE NEM-B, NQDD UNLESS OTHERWISE NOTED.
- I. PROVIDE HANDLE TIES ON CBS SERVING SYSTEM FURNITURE TO SIMULTANEOUSLY DISCONNECT ALL UNGROUNDED CONDUCTORS.
- J. FOR PANELBOARDS: PROVIDE FRAMED, TYPED CIRCUIT SCHEDULES WITH EXPLICIT DESCRIPTION AND IDENTIFICATION OF ITEMS CONTROLLED BY EACH INDIVIDUAL BREAKER. PROVIDE NEW PANELBOARD SCHEDULE FOR ALL EXISTING AND NEW PANELBOARDS AFFECTED BY RENOVATION. PANELBOARD SCHEDULES SHALL BE REVISED TO REFLECT ALL REVISED FIELD CONDITIONS.

DISCONNECT AND CIRCUIT BREAKERS

- A. ENCLOSED NON-FUSIBLE SWITCH SHALL BE NEMA HEAVY-DUTY TYPE WITH ENCLOSURE CONSISTENT WITH ENVIRONMENT WHERE LOCATED, HANDLE LOCKABLE WITH 2 PADLOCKS, AND INTERLOCKED WITH COVER IN "CLOSED" POSITION.
- B. ENCLOSED FUSIBLE SWITCHES SHALL BE NEMA HEAVY-DUTY TYPE WITH CLIPS TO ACCOMMODATE SPECIFIED FUSES, ENCLOSURE CONSISTENT WITH ENVIRONMENT WHERE LOCATED, HANDLE LOCKABLE WITH 2 PADLOCKS AND INTERLOCKED WITH COVER IN "CLOSED" POSITION. SWITCHES SHALL HAVE MINIMUM FAULT CURRENT RATING OF 200,000 SYMMETRICAL RMS AMPERES.
- C. LOCATE DISCONNECT SWITCH (AND MOTOR CONTROLLER) FOR MECHANICAL EQUIPMENT TO PERMIT SERVING OF EQUIPMENT. CHECK MOTORS FOR PROPER ROTATION. CONNECT CONDUCTORS AS REQUIRED BY MANUFACTURER.
- D. ENCLOSED MOLDED-CASE CIRCUIT BREAKER: FRAME SIZE, TRIP RATING, NUMBER OF POLES, AND AUXILIARY DEVICES AS INDICATED; INTERRUPTING CAPACITY RATING TO MEET AVAILABLE FAULT CURRENT, 10,000 SYMMETRICAL RMS AMPERES MINIMUM; WITH APPROPRIATE APPLICATION LISTING WHEN USED FOR SWITCHING FLUORESCENT LIGHTING LOADS OR HEATING, AIR CONDITIONING, AND REFRIGERATION EQUIPMENT.
- G. ENCLOSURE: NEMA TYPE 1, UNLESS SPECIFIED OR REQUIRED OTHERWISE TO MEET ENVIRONMENTAL CONDITIONS OF INSTALLED LOCATION.
1. OUTDOOR LOCATIONS: TYPE 12/3R.
 2. KITCHEN AREAS: TYPE 4X, STAINLESS STEEL.
 3. OTHER WET OR DAMP INDOOR LOCATIONS: TYPE 4.
 4. HAZARDOUS AREAS INDICATED ON DRAWINGS: NEMA 7C.

LIGHTING

- A. COORDINATE RECESSED LIGHTING FIXTURES WITH MECHANICAL EQUIPMENT AND ARCHITECTURAL CEILING PLAN. GRID LAYOUT ON PLANS IS APPROXIMATE. ADJUST LIGHTING FIXTURES IN FIELD PER ARCHITECT.
- B. PROVIDE FINISHING FRAMES FOR ALL RECESSED LIGHTING FIXTURES, TYPE TO BE COMPATIBLE WITH CEILING. COORDINATE ALL FIXTURE TYPES WITH CEILING SYSTEM BEFORE ORDERING FIXTURES. PROVIDE ALL MOUNTING ATTACHMENTS FOR A COMPLETE INSTALLATION.
- C. ALL NEW LIGHTING FIXTURES SHALL BE INSTALLED COMPLETE WITH LAMPS. SEE PLANS FOR SPECIFIC REQUIREMENTS. RELAMP ALL EXISTING LIGHTING FIXTURES.
- D. 2 X 2 FLUORESCENT FIXTURES IN ANY ROOM OR COMMON AREA SHALL HAVE ALL LAMPS ORIENTED IN THE SAME DIRECTION.
- E. COORDINATE LOW VOLTAGE DIMMERS WITH ELECTRONIC OR MAGNETIC LOW VOLTAGE LIGHTINGS PER MANUFACTURER OF LIGHTING FIXTURES.
- F. IN LOCATIONS WHERE NEW DUCTWORK OR CEILING IS INSTALLED UNDER THIS CONTRACT BUT LIGHTING FIXTURES HAVE NOT BEEN REVISED, REMOVE EXISTING FIXTURES AS NECESSARY TO RUN THE NEW DUCTWORK OR CEILING AND RE-HANG AFTER THE MECHANICAL OR ARCHITECTURAL WORK IS COMPLETED.
- G. COLOR LIGHTING FIXTURES SHALL BE AS SELECTED BY THE ARCHITECT.
- H. THE EXACT LOCATION OF LIGHTING FIXTURES IN MECHANICAL ROOM SHALL BE COORDINATED WITH THE MECHANICAL EQUIPMENT TO PROVIDE LIGHT OVER SERVICE AREAS.

EQUIPMENT CONNECTION

- A. EXTEND WIRING TO ALL EQUIPMENT REQUIRING ELECTRICAL CONNECTIONS AND MAKE FINAL AND COMPLETE CONNECTIONS TO ALL EQUIPMENT. BEFORE ROUGHING IN, THE LOCATION AND TYPE OF DEVICE SHALL BE VERIFIED FROM SHOP DRAWINGS OF THE EQUIPMENT. STARTERS AND DISCONNECTS AND OTHER ELECTRICAL CIRCUITRY AND DEVICES SHALL BE LOCATED TO ALLOW ACCESS TO DEVICES AND NOT INTERFERE WITH THE OPERATION OF THE MECHANICAL OR ARCHITECTURAL DEVICES OR THEIR POSSIBLE MAINTENANCE OR REMOVAL.

DEMOLITION

- A. PROVIDE DEMOLITION AS INDICATED ON DEMOLITION PLANS. CIRCUITRY NOTED FOR REMOVAL SHALL BE REMOVED BACK TO THE SOURCE BUS UNLESS NOTED OTHERWISE. BE RESPONSIBLE FOR THE COMPLETE REMOVAL FROM THE SITE FOR ALL EQUIPMENT AND MATERIAL REMOVED UNDER DEMOLITION WORK, UNLESS OTHERWISE NOTED OR DIRECTED. EXISTING CIRCUITS TO REMAIN INTERRUPTED BY DEMOLITION OPERATION AS BEFORE. OUTAGES REQUIRED TO PERFORM DEMOLITION SHALL BE COORDINATED WITH THE OWNER AND PROCESSED OUTSIDE OF NORMAL BUSINESS HOURS. REPAIR ALL WALL, CEILING, FLOOR OR ROOF OPENINGS CREATED BY DEMOLITION. REPAIRS SHALL BE PROVIDED BY WORKMAN SKILLED IN THE TRADE AND SHALL CONFORM WITH MATERIAL AND FINISHES TO MATCH EXISTING.
- B. LOCATE, IDENTIFY AND PROTECT ELECTRICAL SERVICES PASSING THROUGH DEMOLITION AREA AND SERVING OTHER AREAS OUTSIDE THE DEMOLITION LIMITS. MAINTAIN SERVICES TO AREAS OUTSIDE DEMOLITION LIMITS. WHEN SERVICES MUST BE INTERRUPTED, INSTALL TEMPORARY SERVICES FOR AFFECTED AREAS.

ABBREVIATIONS

A	AMPS
AIC	AMPERES INTERRUPTING CAPACITY
ATS	AUTOMATIC TRANSFER SWITCH
AWG	AMERICAN WIRE GAUGE
BLDG	BUILDING
CONDUIT	CONDUIT
CATV	CLOSED CIRCUIT TELEVISION
CB	CIRCUIT BREAKER
CKT	CIRCUIT
CO	CARBON MONOXIDE
COF	COFFEE
DED	DEDICATED
DISC SW	DISCONNECT SWITCH
DISP	DISPOSAL
DP	DISTRIBUTION PANEL
DW	DISH WASHER
DWG	DRAWING
EA	EACH
EC	EMPTY CONDUIT
ECC	EQUIPMENT GROUND CONDUCTOR
EM/NL	EMERGENCY/NIGHT LIGHT
EGL	ELECTRICAL METALLIC TUBING
ENGR	ENGINEER
EPO	EMERGENCY POWER OFF
EQUIP	EQUIPMENT
ELH	CABINET UNIT HEATER
EWC	ELECTRIC WATER COOLER
EX. (E)	EXISTING ITEMS
FA	FIRE ALARM
FAAP	FIRE ALARM ANNUNCIATOR PANEL
FAC	FIRE ALARM CONTROL PANEL
FLA	FLUO LOAD AMPS
FLUOR	FLUORESCENT
FPVAV	FAN POWER VAV BOX
FSS	FUSED SAFETY SWITCH
G-GND, GRD, G	GROUND CONDUCTOR
GAP	GRAPHIC ANNUNCIATOR PANEL
GC	GENERAL CONTRACTOR
GEC	GROUND ELECTRODE CONDUCTOR
GFI	GROUND FAULT INTERRUPTER
HP	HOT POWER
HWH	HOT WATER HEATER
HZ	HERTZ
ICE	ICE MAKER
IG	ISOLATED GROUND
JJB	JUNCTION BOX
KVA	KILO-VOLT AMPERE
KW	KILO-WATT
LRA	LOCKED ROTOR AMPS
LTG	LIGHT
MAX	MAXIMUM
MC	METAL CLAD CABLE
MCA	MINIMUM CIRCUIT AMPS
MCB	MAIN CIRCUIT BREAKER
MCC	MOTOR CONTROL CENTER
MDP	MAIN DISTRIBUTION PANEL
MH	MOUNTING HEIGHT
MN	MINIMUM
MLO	MAIN LUG ONLY
MOCP	MAXIMUM OVERCURRENT PROTECTION
MTS	MANUAL TRANSFER SWITCH
MW	MICROWAVE
N	NEUTRAL
NI	NEW ITEMS
NEC	NATIONAL ELECTRICAL CODE
NEMA	NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION
NFPA	NATIONAL FIRE PROTECTION ASSOCIATION
NFS	NON-FUSED SAFETY SWITCH
NO	NOT IN CONTRACT
NO.	NUMBER
NTS	NOT TO SCALE
OSPD	OVER-CURRENT PROTECTION DEVICE
OSHA	OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION
P	POLE
PB	POOL BOX
PC	PERSONAL COMPUTER
PH	PHONE
PHL	PANEL
PVC	POLYVINYL CHLORIDE
R, (R), (RE)	RELOCATED ITEMS
RCPT	RECEPTACLE
REF	REFRIGERATOR
RLA	RUN LOAD AMP
RM	ROOM
RSC	RIGID STEEL CONDUIT
SD	SMOKE DETECTOR
SW	SWITCH
SWB	SWITCHBOARD
SYS FURN	SYSTEM FURNITURE
TEL,T	TELEPHONE
TF	TRANSFER FAN WITH LOCAL TOGGLE SWITCH
TYP	TYPICAL
UL	UNDERWRITER LABORATORIES
UN	UNLESS OTHERWISE NOTED
V	VOLT
W	WIRE
W/	WITH
WATT, #W	WATT
WH	WATER HEATER
WPA	WATER PROOF
WSA	WIRE SIZE AMPS
WT	WIRING TROUGH
XPMR	TRANSFORMER

DRAWING INDEX

E001	COVERSHEET
E002	LIGHTING, OCCUPANCY SENSOR SCHEDULES, AND DETAILS
E003	LIGHTING CONTROLS WIRING DIAGRAMS
E004	LIGHTING CONTROLS WIRING DIAGRAMS
E100	THIRD FLOOR PLAN - LIGHTING
E101	THIRD FLOOR PLAN - SHOWROOM LIGHTING
E200	THIRD FLOOR PLAN - TELE/DATA/ELEC
E300	THIRD FLOOR PLAN - MECHANICAL POWER
E400	THIRD FLOOR PLAN - FIRE ALARM
E500	PANEL SCHEDULES AND PART RISER

LEED - CI REQUIREMENTS

THE FOLLOWING LEED POINTS ARE ASSIGNED UNDER THE ELECTRICAL DESIGN OF THIS PROJECT:

ENERGY AND ATMOSPHERE:
CREDIT 1.1: OPTIMIZED ENERGY PERFORMANCE - LIGHTING POWER REDUCTION
CREDIT 1.2: OPTIMIZED ENERGY PERFORMANCE - LIGHTING CONTROLS
CREDIT 3: SUB-METER TENANT SPACE

INDOOR ENVIRONMENTAL QUALITY
CREDIT 6.1: CONTROLLABILITY OF SYSTEMS - LIGHTING

ELECTRICAL SYMBOLS

DESIGNATION	DESCRIPTION	MTG HGT TO AFF (UON) CENTERLINE
	FLUORESCENT LIGHTING FIXTURE. UPPER CASE INDICATES FIXTURE TYPE. LOWER CASE INDICATES FIXTURE CONTROLLED.	-
	LED, COMPACT FLUORESCENT OR HID LIGHTING FIXTURE. UPPER CASE INDICATES FIXTURE TYPE. LOWER CASE INDICATES FIXTURE CONTROLLED.	-
	FLUORESCENT LIGHTING FIXTURE. UPPER CASE INDICATES FIXTURE TYPE. LOWER CASE INDICATES FIXTURE CONTROLLED.	-
	FLUORESCENT LIGHTING EMERGENCY FIXTURE. UPPER CASE INDICATES FIXTURE TYPE	-
	LED, COMPACT FLUORESCENT OR HID LIGHTING EMERGENCY FIXTURE	-
	CEILING MOUNTED EXIT LIGHT SINGLE FACE/DOUBLE FACE WITH ARROWS AS INDICATED	-
	FLUORESCENT LIGHTING EMERGENCY FIXTURE. UPPER CASE INDICATES FIXTURE TYPE	-
S	SINGLE POLE SWITCH	4'-0"
S _a	SINGLE POLE SWITCH - SUBLETTER INDICATES FIXTURE CONTROLLED	4'-0"
S ₃	THREE WAY SWITCH - SUBLETTER INDICATES FIXTURE CONTROLLED	-
S _a D	DIMMER SWITCH - SUBLETTER INDICATES FIXTURE CONTROLLED. PROVIDE DIMMING SWITCH COMPATIBLE WITH SPECIFIED LIGHTING FIXTURES.	4'-0"
M	MANUAL MOTOR CONTROLLER SWITCH WITH THERMAL PROTECTION	4'-0"
Sp	SWITCH FOR CEILING PROJECTOR SCREEN	4'-0"
	CEILING MOUNTED LIGHTING OCCUPANCY SENSOR. ARROWS (IF SHOWN) INDICATE DIRECTION WHICH SENSOR IS TO BE ORIENTED. "NUMBER" INDICATES SENSOR TYPE. SUBLETTER (IF SHOWN) INDICATES SWITCHED LIGHTING FIXTURE GROUP SENSOR IS TO CONTROL.	-
	"W" INDICATES WALL LINE VOLTAGE SENSOR	-
	"L" INDICATES CEILING-MOUNTED LINE-VOLTAGE SENSOR	-
	"LV" INDICATES CEILING-MOUNTED LOW-VOLTAGE SENSOR (REQUIRES POWER PACK)	-
	DUPLEX RECEPTACLE - NEMA 5-20R	18"
	DUPLEX RECEPTACLE - NEMA 5-20R WITH GROUND FAULT CIRCUIT INTERRUPTER	18"
	QUAD RECEPTACLE - NEMA 5-20R	18"
	SINGLE RECEPTACLE - NEMA 5-20	18" UON
	POKE-THROUGH SERVICE FITTING - SEE DRAWING FOR DESCRIPTION	-
	FLUSH CEILING MOUNTED RECEPTACLE/DATA OUTLET - NEMA 5-20R. PROVIDE 2-GANG BOX W/ SEPARATOR FOR POWER/ COMMUNICATIONS OUTLET.	-
	FLUSH FLOOR MOUNTED RECEPTACLE/DATA OUTLET. SEE DRAWING FOR DESCRIPTION.	-
	TV OUTLET. STUB OUT (2) 1-1/2" EC 6" INTO CEILING SPACE WITH PLASTER RING AND PULL STRING TO ACCESSIBLE CEILING SPACE FOR AV AND NETWORK. COORDINATE AV, NETWORK AND RACEWAY REQUIREMENTS WITH AV CONTRACTOR. PROVIDE FSR INC. FLAT PANEL BOX CATALOG NUMBER PWB-100. SUBSTITUTES NOT ACCEPTED.	-
	CEILING MOUNTED JUNCTION BOX	-
	WALL MOUNTED JUNCTION BOX	18"
	JUNCTION BOX FOR POWER CONNECTION TO SYSTEMS FURNITURE. "JF" INDICATES NUMBER OF STATIONS SERVED.	-
	JUNCTION BOX FOR DATA/TELEPHONE CONNECTION TO SYSTEMS FURNITURE - SEE DETAIL	-
	DATA OUTLET. STUB OUT 1" EC 6" INTO CEILING SPACE WITH PLASTER RING AND PULL STRING TO ACCESSIBLE CEILING SPACE.	18"
	TELEPHONE OUTLET. STUB OUT 1" EC 6" INTO CEILING SPACE WITH PLASTER RING AND PULL STRING TO ACCESSIBLE CEILING SPACE	18"
	COMBINATION DATA/TELEPHONE OUTLET. STUB OUT 1" EC 6" INTO CEILING SPACE WITH PLASTER RING AND PULL STRING TO ACCESSIBLE CEILING SPACE	18"
	TRANSFORMER	-
	GROUND	-
	PANELBOARD	6'-0" TO TOP
	MOTOR CONNECTION	-
	NON-FUSED SAFETY DISCONNECT SWITCH - NUMERAL DENOTES SWITCH SIZE - 3 POLE UON	5'-0" TO TOP
	FUSED SAFETY DISCONNECT SWITCH - UPPER NUMERAL DENOTES SWITCH SIZE, LOWER NUMERAL DENOTES FUSE SIZE - 3 POLE UON	5'-0" TO TOP
	FACTORY CONNECTION - PROVIDE CIRCUITRY CONNECTION AS NOTED ON PLAN	-
	HOMERUN TO PANELBOARD - NO. OF ARROWHEADS INDICATE NO. OF CIRCUITS. NUMERALS & LETTERS ADJACENT TO ARROWHEADS INDICATE ASSIGNED PANEL & CIRCUIT NO.'S	-
	TICK MARKS IN HOMERUN OR BRANCH CIRCUITRY, UNLESS OTHERWISE SCHEDULED, INDICATE THE QUANTITY (WHERE MORE THAN TWO) OF CURRENT CARRYING CONDUCTORS. NUMERAL ADJACENT TO TICKS INDICATES WIRE SIZE IF OTHER THAN #12. ALL WIRING SHALL ALSO CONTAIN AN INSULATED EQUIPMENT GROUND CONDUCTOR SIZED PER NEC. (NOT SHOWN)	-
	DENOTES PLAN SPECIFIC KEYED NOTE	-
(E)	EXISTING TO REMAIN - CONTINUE IN SERVICE	-
(R)	EXISTING TO BE REMOVED AND RELOCATED	-
(RE)	RELOCATED EQUIPMENT	-
(X)	REMOVE WITH ALL CIRCUITRY THERETO	-
	FEEDER DESIGNATION	-

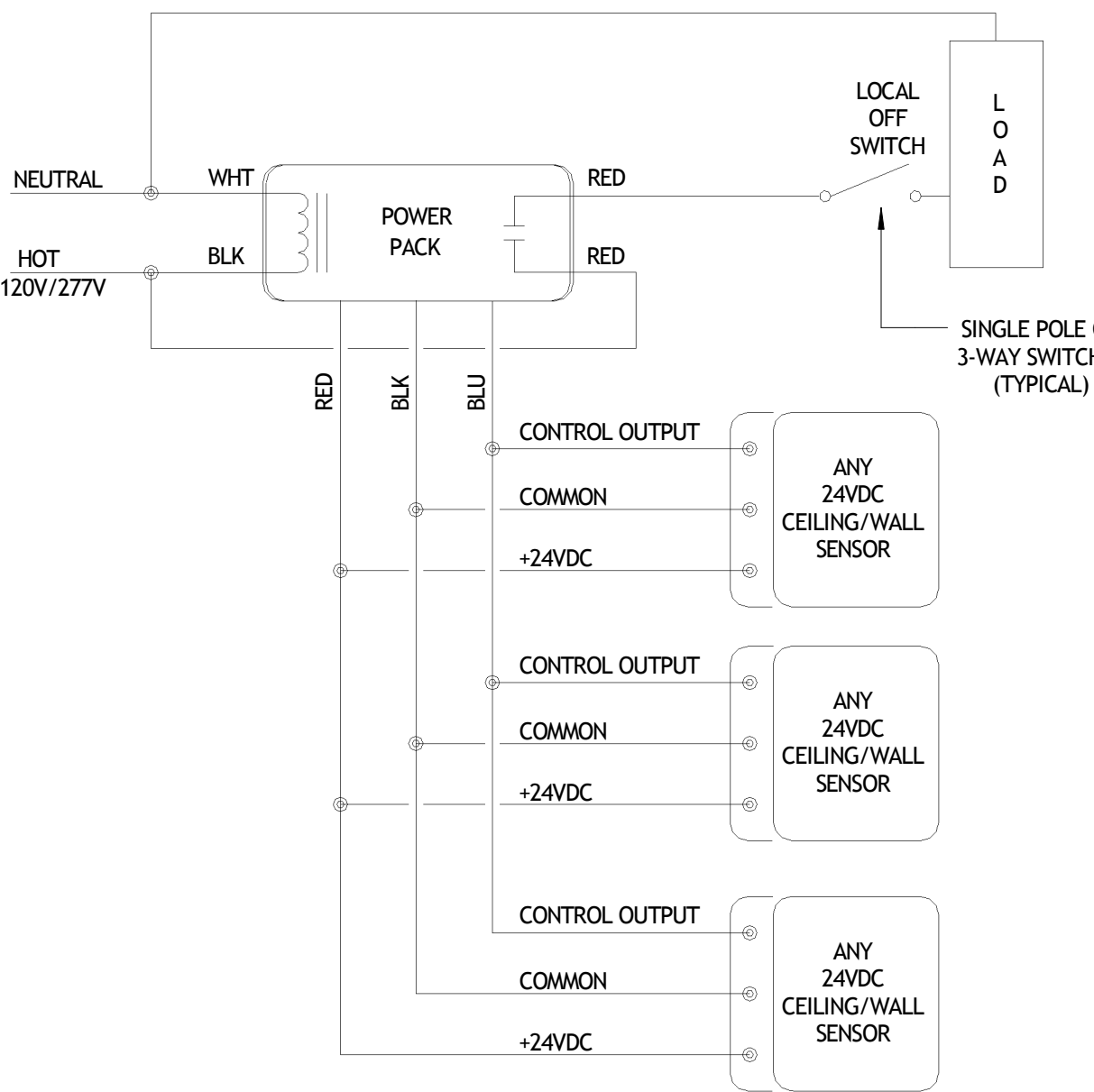
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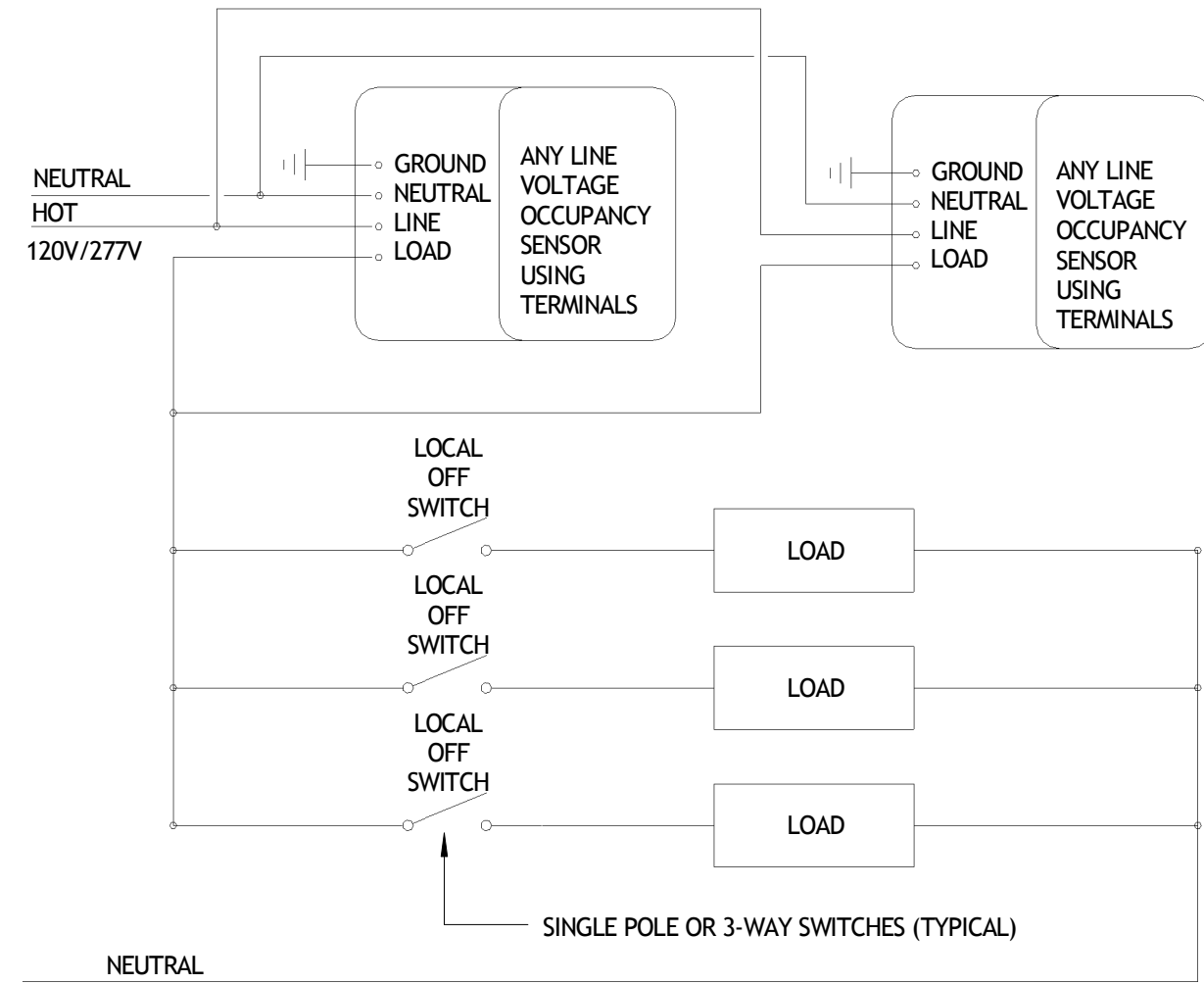
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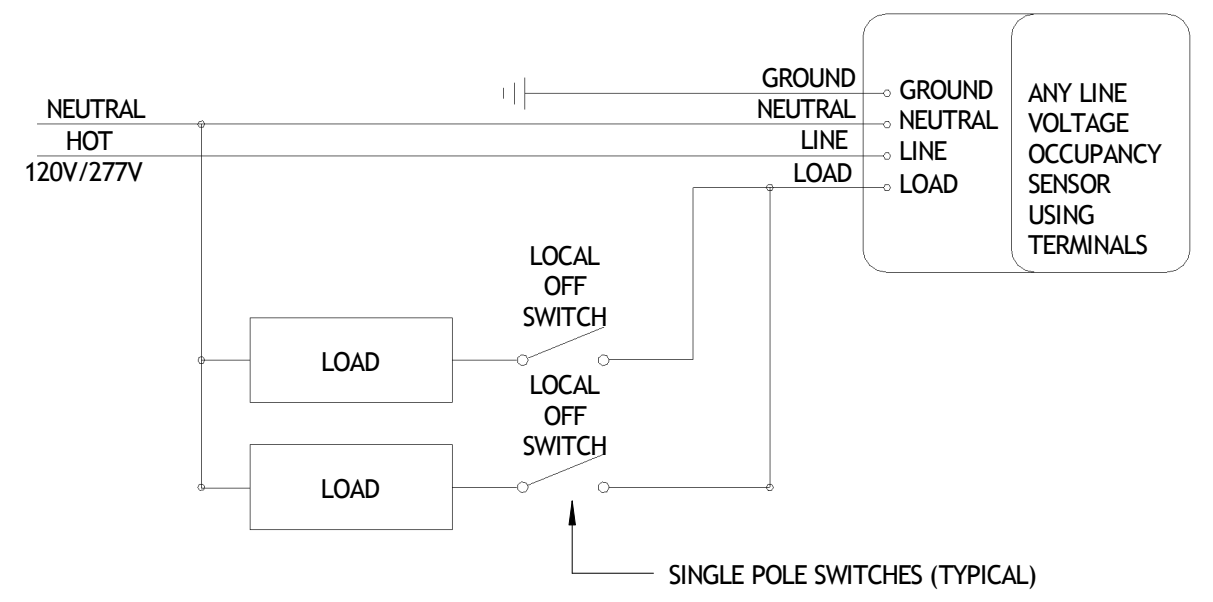
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**TYPICAL WIRING FOR
OCCUPANCY SENSOR TYPE LV6 (WT-2255)**



**TYPICAL WIRING FOR
OCCUPANCY SENSOR TYPE L1 (CI-355), L2
(DT-355), L3 (UT-355), L4 (UT-355-3)**



**TYPICAL WIRING FOR
OCCUPANCY SENSOR TYPE L1 (CI-355), L2
(DT-355), L3 (UT-355), L4 (UT-355-3)**

LIGHTING FIXTURE SCHEDULE

TYPE	DESCRIPTION	MANUFACTURER	CATALOG NO.	LAMPS		VOLTS	MOUNTING	REMARKS
				QTY	TYPE			
FC1	FLOOR LAMP - NOT PERMANENTLY INSTALLED	-	-	-	-	120	SURFACE	FIXTURE SELECTION TO BE DETERMINED
GL1	N-FLOOR LINEAR LED	ACDC	#112030/DIM/180/5ADJ/4000lmsh, #175340/DIME, #1754C/35lmsh	10	7W PER 12" WARM WHITE LED 3K CCT	120	RECESSED	PROVIDE REMOTE LED DRIVER - COORDINATE LOCATION TO BE ACCESSIBLE. NOTE-1
NF1	4" LINEAR FLUORESCENT	a LIGHT	D5-4-S-U-A-G-1lmsh-0	1	F28W/T5/830/ECCO	UNV	RECESSED	NOTE-2
PC1	COMPACT FLUORESCENT PENDANT - DIMMABLE	H-LBb	H-15612-1lmsh-STEM-U-5061-0-32CFL-0M	1	F32TBX/830/AECCO	UNV	SURFACE	NOTE-3
PC1b	COMPACT FLUORESCENT PENDANT - DIMMABLE	H-LBb	H-15612-1lmsh-STEM-U-5061-0-32CFL	1	F32TBX/830/AECCO	UNV	SURFACE	NOTE-3
PC2	COMPACT FLUORESCENT DOWNLIGHT	PATHWAY	C8P/V-TUT-E4-WQ/6VFWD/SC/PL-PK12	1	F32TBX/830/AECCO	UNV	SURFACE	NOTE-3
PC3	COMPACT FLUORESCENT PENDANT - DIMMABLE	3G LIGHTING	3G-PKU-120-1-32CFL-120-DHL-1lmsh-length	1	F32TBX/830/AECCO	120	SURFACE	NOTE-3
PC4	LED PENDANT - DIMMABLE	STONCO	MEDIUM BASE LAMP HOLDER	1	13W BR30 LED	120	SURFACE	NOTE-3 ARCHITECT TO APPROVE FINISH
PF1	4" LINEAR FLUORESCENT	ALM LIGHTING	1709PT-004-F28-1lmsh-U-CK	1	F28W/T5/830/ECCO	UNV	SURFACE	NOTE-3
PF1d	4" LINEAR FLUORESCENT - DIMMABLE	ALM LIGHTING	1709PT-004-F28-1lmsh-1-CK	1	F28W/T5/830/ECCO	120	SURFACE	NOTE-3
PF2a	4" LINEAR FLUORESCENT	a LIGHT	D3-4-S-U-S-S-1lmsh-0	1	F28W/T5/830/ECCO	UNV	SURFACE	NOTE-3
PF2b	4" LINEAR FLUORESCENT	a LIGHT	D3-6-2-U-S-S-1lmsh-0	2	(1) F28W/T5/830/ECCO (1) F21W/T5/830/ECCO	UNV	SURFACE	NOTE-3: FIXTURE LENGTH PER PLANS COORDINATE LENGTH PRIOR TO ORDERING
PF2c	4" LINEAR FLUORESCENT	a LIGHT	D3-8-2-U-S-S-1lmsh-0	3	F21W/T5/830/ECCO	UNV	SURFACE	NOTE-3: FIXTURE LENGTH PER PLANS COORDINATE LENGTH PRIOR TO ORDERING
PF2d	4" LINEAR FLUORESCENT	a LIGHT	D3-10-2-U-S-S-1lmsh-0	4	F21W/T5/830/ECCO	UNV	SURFACE	NOTE-3: FIXTURE LENGTH PER PLANS COORDINATE LENGTH PRIOR TO ORDERING
RB1	2x2 DIRECT / INDIRECT FLUORESCENT	LEDALITE	332Z-D1-S1-B025-S-1-120-E	2	F259XSP/30W/AL10	120	RECESSED	
RC1	COMPACT FLUORESCENT DOWNLIGHT - DIMMABLE	WHITEGOODS	B150RDL-CFL-32-120-DIM-ED-0	1	F32TBX/830/AECCO	120	RECESSED	
RC2	4" 5" COMPACT FLUORESCENT DOWNLIGHT - WET LOCATIONS	KURT VERSEN	WH432-SC-123-WT	1	F32TBX/830/AECCO	120	RECESSED	
RF1a	4" LINEAR FLUORESCENT - DIMMABLE	a LIGHT	D3-10-2-120-S-ceiling-1lmsh-1-CK	4	F21W/T5/830/ECCO	120	RECESSED	NOTE-3: FIXTURE LENGTH PER PLANS COORDINATE LENGTH PRIOR TO ORDERING
RF1b	4" LINEAR FLUORESCENT	a LIGHT	D3-6-2-U-S-XP-1lmsh-0	2	(1) F28W/T5/830/ECCO (1) F21W/T5/830/ECCO	UNV	RECESSED	NOTE-3: FIXTURE LENGTH PER PLANS COORDINATE LENGTH PRIOR TO ORDERING
RF1c	4" LINEAR FLUORESCENT	a LIGHT	D3-16-2-U-S-XP-1lmsh-0	5	(3) F28W/T5/830/ECCO (2) F21W/T5/830/ECCO	UNV	RECESSED	NOTE-3: FIXTURE LENGTH PER PLANS COORDINATE LENGTH PRIOR TO ORDERING
RF2c	4" LINEAR FLUORESCENT	a LIGHT	D3-24-2-U-S-XP-1lmsh-0	8	(4) F28W/T5/830/ECCO (4) F21W/T5/830/ECCO	UNV	RECESSED	NOTE-3: FIXTURE LENGTH PER PLANS COORDINATE LENGTH PRIOR TO ORDERING
RL1	SQUARE LED DOWNLIGHT	ACDC	1178/1lmsh/SAT/20446/TXPIF/JO/DOGS/P20V-181	1	15W LED WARM WHITE LED 3K CCT	120	RECESSED	
RL2	SQUARE LED WALLWASH	ACDC	1178/1lmsh/SAT/20446/TXPIF/JO/DOGS/P20V-181	1	15W LED WARM WHITE LED 3K CCT	120	RECESSED	
RL3	SQUARE LED ADJUSTABLE - DIMMABLE	ACDC	1178/1lmsh/SAT/20446/TXPIF/JO/DOGS/P20V-181	1	15W LED WARM WHITE LED 3K CCT	120	RECESSED	
RL4	LED DOWNLIGHT	ACDC	109130/30/9R/1lmsh/P20ST/D	1	8.5W LED WARM WHITE LED 3K CCT	120	RECESSED	PROVIDE REMOTE LED DRIVER - COORDINATE LOCATION TO BE ACCESSIBLE
SF1	LINEAR FLUORESCENT COVE LIGHT	WHITEGOODS	LZC-PC-length-1-15-UNV-PS-WD	1	(1) F28W/T5/830/ECCO (1) F21W/T5/830/ECCO	UNV	SURFACE	NOTE-4 & 5: FIXTURE LENGTH PER PLANS COORDINATE LENGTH PRIOR TO ORDERING
SF1d	LINEAR FLUORESCENT COVE LIGHT - DIMMABLE	WHITEGOODS	LZC-PC-length-1-15-120-DIM-HD-PS-WD	1	(1) F28W/T5/830/ECCO (1) F21W/T5/830/ECCO	120	SURFACE	NOTE-4 & 5: FIXTURE LENGTH PER PLANS COORDINATE LENGTH PRIOR TO ORDERING
SF2	LINEAR FLUORESCENT COVE LIGHT	BRCHWOOD	ASH-T5-120-EB-128-0	1	F28W/T5/830/ECCO	120	SURFACE	NOTE- 5
SF3d	LINEAR LED COVE LIGHT - DIMMABLE	LIGHTWILD	LW-PLIN-N-WWW-___FM	1	LED INCLUDED	120	SURFACE	NOTE- 5: PROVIDE REMOTE DRIVER WITHIN REQUIRED DISTANCE. VERIFY LENGTH PRIOR TO ORDERING
SL1	LINEAR LED	PROLUME	LW24-length-5-SWD-PG	1	2.9W PER 12" WARM WHITE LED 3K CCT	120	SURFACE	NOTE- 5: PROVIDE REMOTE DRIVER WITHIN MFOR REQUIRED DISTANCE
TL1a	DIRECTIONAL LED	TME SQUARE	1823-32-T1-LV6-GF10-801-DW-1lmsh-120V	1	18.8W LED WARM WHITE LED 3K CCT	120	SURFACE	VERIFY LENGTH PRIOR TO ORDERING. PROVIDE DIMMING COMPATIBLE WITH LIGHTING CONTROLS
TL1b	DIRECTIONAL LED	TME SQUARE	1823-24-T1-LV6-GF10-801-DW-1lmsh-120V	1	18.8W LED WARM WHITE LED 3K CCT	120	SURFACE	VERIFY LENGTH PRIOR TO ORDERING. PROVIDE DIMMING COMPATIBLE WITH LIGHTING CONTROLS
TT1	TRACK	TME SQUARE	TS-FTP-length-1lmsh-TEK34-T-R-1lmsh-2-2	1	TSC	120	SURFACE	NOTE- 6
TT2	TRACK	TME SQUARE						NOTE- 6
ES-1	EXIT SIGN - SINGLE FACE	LITHONIA	LRP-CMR-1		LED INCLUDED	120/277	SURFACE	PROVIDE FACES AND ARROWS PER PLANS. PROVIDE MIRROR AS REQUIRED
ES-2	EXIT SIGN - SINGLE FACE	LITHONIA	LRP-CMR-2		LED INCLUDED	120/277	SURFACE	PROVIDE FACES AND ARROWS PER PLANS. PROVIDE MIRROR AS REQUIRED

- NOTES:
- COORDINATE LOCATION WITH FLOOR TRUSSES - PROVIDE DIMMABLE FIXTURE WITH DIMMING CONTROLS
 - COORDINATE RECESSED WALL MOUNTED FIXTURE WITH ARCHITECTURAL DETAILS AND MOUNTING HEIGHTS
 - COORDINATE STEM/CABLE LENGTH WITH ARCHITECTURAL DETAILS AND MOUNTING HEIGHT
 - PROVIDE COMPLETE HARDWARE WHERE FIXTURES ARE EXPOSED TO VIEW
 - COORDINATE WITH ARCHITECTURAL MOUNTING AND COVE DETAILS
 - TRACK SHALL BE PROVIDED WITH CURRENT LIMITING DEVICE AND ALL PARTS / ACCESSORIES FOR A COMPLETE, WORKING SYSTEM. VERIFY LENGTH PRIOR TO ORDERING

OCCUPANCY SENSOR SCHEDULE

TYPE	DESCRIPTION	#/FR.	CATALOG NO.	REMARKS
OS-W1	PIR WALL SWITCH SENSOR SINGLE RELAY	WATT STOPPER	PW-100	120VAC - (0-800W BALLAST /TUNGSTEN) 277VAC - (0-1200W BALLAST)
OS-W2	PIR WALL SWITCH SENSOR DUAL RELAY	WATT STOPPER	PW-200	120VAC - (0-800W BALLAST /TUNGSTEN) 277VAC - (0-1200W BALLAST)
OS-L1	PIR CEILING SENSOR - LINE VOLTAGE	WATT STOPPER	CI-355	120VAC - (0-800W BALLAST /TUNGSTEN) 277VAC - (0-1200W BALLAST)
OS-L2	DUAL TECHNOLOGY CEILING SENSOR - LINE VOLTAGE	WATT STOPPER	DT-355	120VAC - (0-800W BALLAST /TUNGSTEN) 277VAC - (0-1200W BALLAST)
OS-LV6	ULTRASONIC CEILING SENSOR - 90 FT LINEAR COVERAGE - LOW VOLTAGE	WATT STOPPER	WT-2255	PROVIDE POWER PACKS AND MOUNTING HARDWARE AS REQUIRED

- GENERAL NOTES:
- PROVIDE 62-150 UNIVERSAL VOLTAGE POWER PACK AS NOTED ABOVE.
 - ADJUST TIME DELAYS NO LESS THAN 16 MINUTES AND SENSITIVITY SETTINGS ON THE BACK OF THE SENSOR AS NECESSARY TO PROVIDE THE DESIRED COVERAGE. MOVE OUT OF THE CONTROLLED AREA - THE LIGHTS SHALL TURN OFF.
 - INSTALL PASSIVE INFRARED WALL SWITCH SENSOR IN SPACE WHERE IT HAS A DIRECT, UNOBSTRUCTED VIEW OF THE TARGETED SPACE (FURNITURE OR OTHER OBSTACLES WILL PREVENT DETECTION).
 - CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFICATION OF REQUIRED NUMBER OF POWER PACKS:
 - 4.1 ONE POWER PACK IS REQUIRED FOR EACH CONTROLLED CIRCUIT.
 - 4.2 EACH POWER PACK CAN SUPPLY UP TO 225ma. REFER TO INSTALLATION GUIDE FOR MAXIMUM NUMBER OF SENSORS CONNECTED TO POWER PACK.
 - 4.3 IF MULTIPLE CIRCUITS ARE TO BE CONTROLLED BY A SINGLE SENSOR, AUXILIARY RELAYS MAY BE USED IN CONJUNCTION WITH A POWER PACK.
 - ALL SENSOR LOCATIONS ARE APPROXIMATE. REFER TO MANUFACTURE'S INSTALLATION INSTRUCTIONS PRIOR INSTALLATION. IF PENDANT MOUNTED FIXTURES ARE PRESENT, LOCATION AND COVERAGE OF SENSORS SHOULD BE REVIEWED.
 - REFER TO TYPICAL OCCUPANCY SENSOR WIRING DETAILS FOR ADDITIONAL REQUIREMENTS.
 - CEILING MOUNTED SENSORS SHALL BE MOUNTED AT FINISHED ELEVATION OF LIGHTING FIXTURES IN OPEN CEILING SPACES.
 - LUTRON WIRELESS OCCUPANCY SENSORS ACCEPTABLE SUBSTITUTE. CONTRACTOR TO PROVIDE SHOP DRAWING OCCUPANCY SENSOR LAYOUT WITH SUBSTITUTE SUBMITTAL. SUBSTITUTES SHALL BE EQUIVALENT TECHNOLOGY.

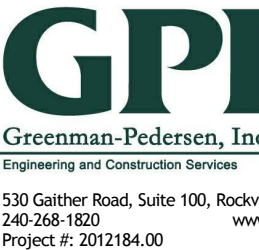


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C

DATE	DESCRIPTION
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12/16/2012	ISSUE FOR CONTRACTOR DRAWINGS

B

DRAWING TITLE
LIGHTING, OCCUPANCY SENSOR SCHEDULES,
AND DETAILS

STAMP

A

PROJECT NO.
RCK-2012184.00

DRAWN BY:
PGL

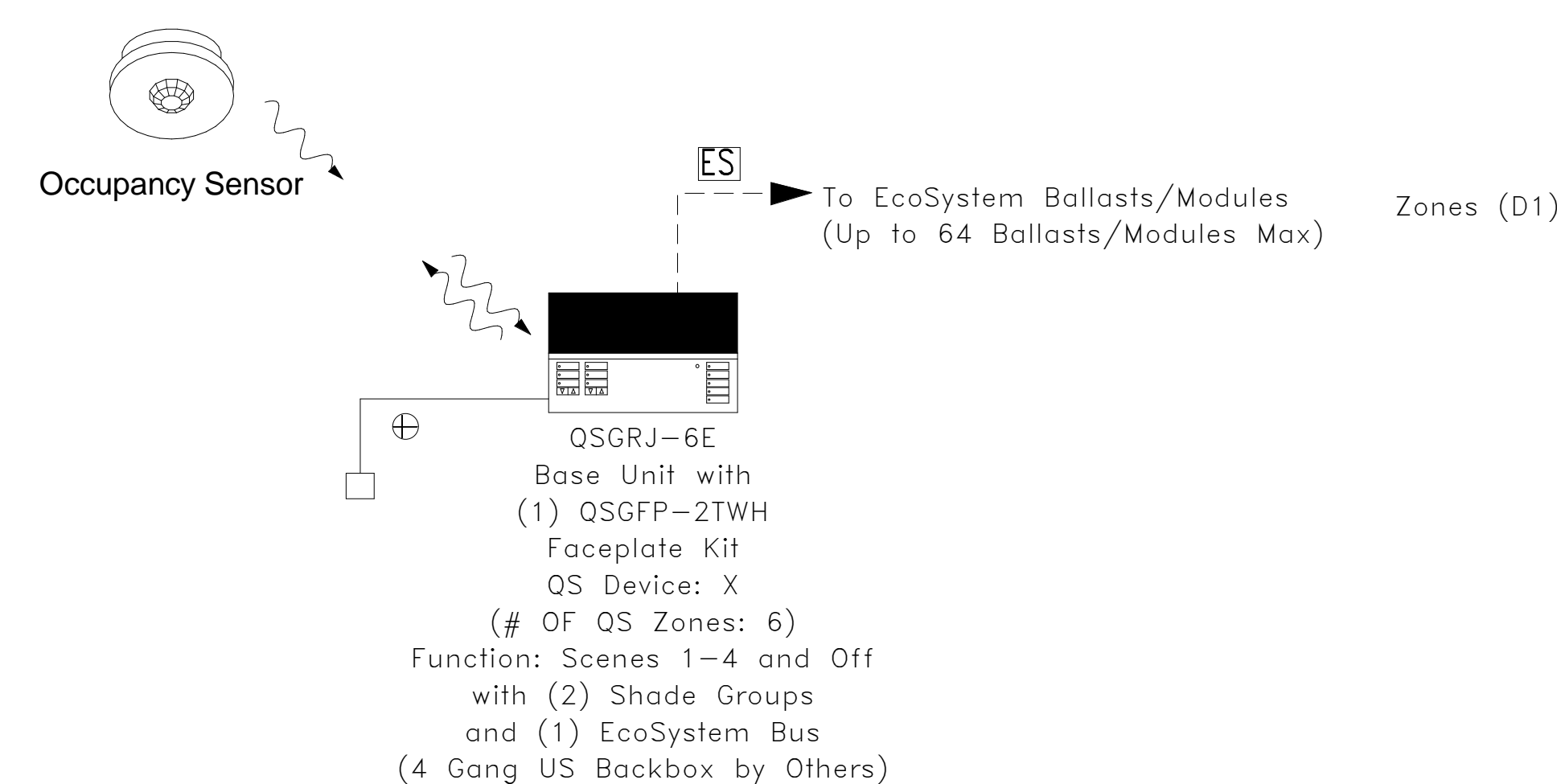
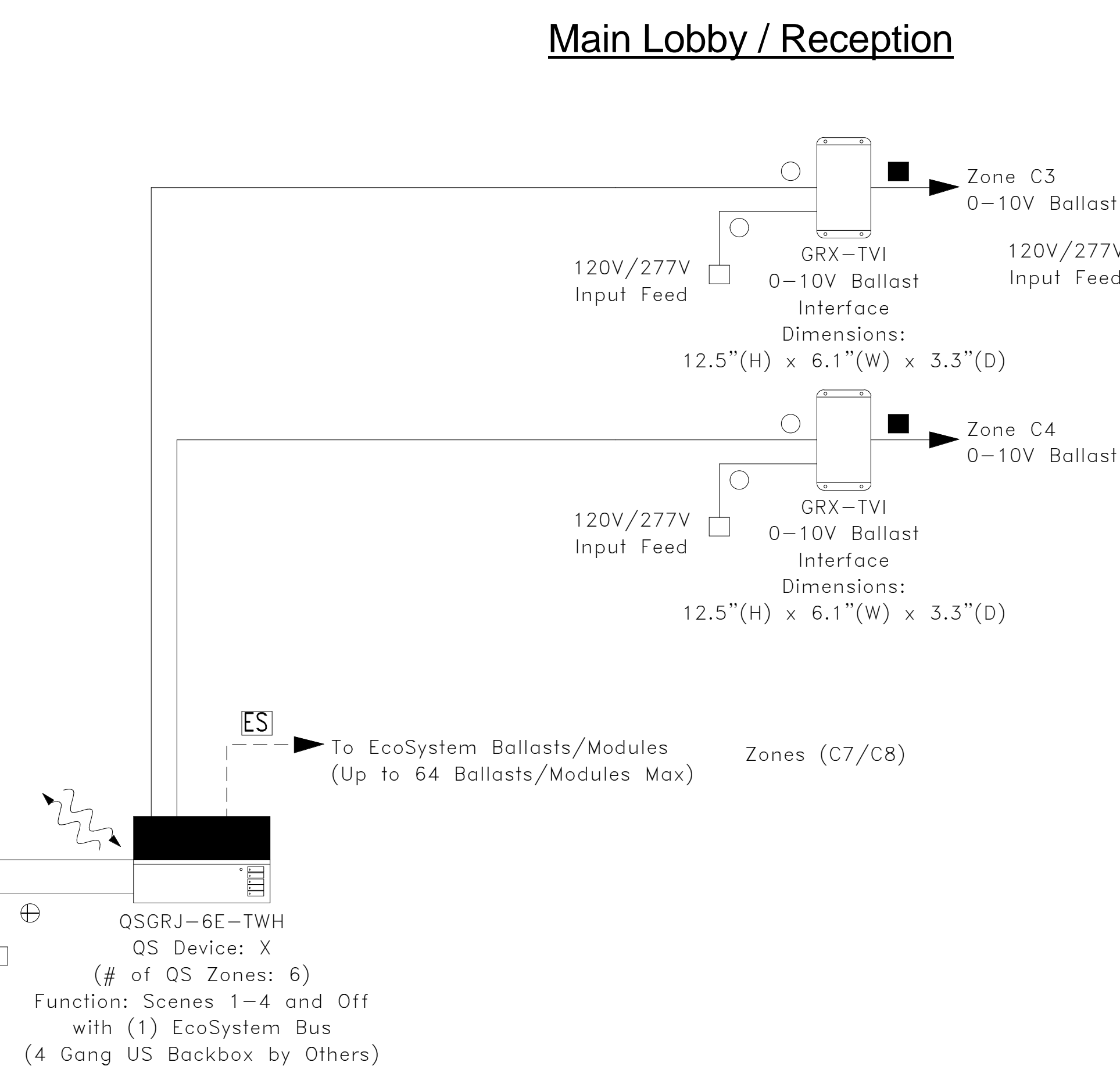
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DWG. NO.

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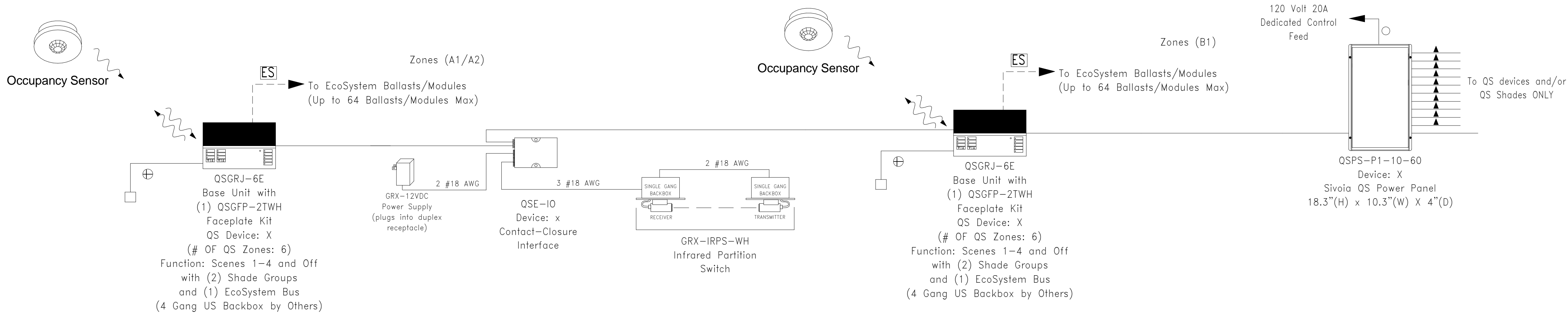
WIRING NOTES:

- 2 #12AWG (2.5 mm²)
- 3 #12AWG (2.5 mm²)
- 120V Input Power
- ▲ Luftron cable GRX-CBL-3465 (4 Conductor Non-Plenum) or GRX-CBL-3465 (4 Conductor Plenum rated). Otherwise use 2 #18AWG (1.0mm²) and 1 Belden #9461.
- ES EcoSystem link requires Luftron cable C-B-CBL-216-GR-1 (2 #16 Conductor Non-Plenum) or C-B-CBL-216-CL-1 (2 #16 Conductor Plenum rated). Otherwise use 2 #16AWG by others.

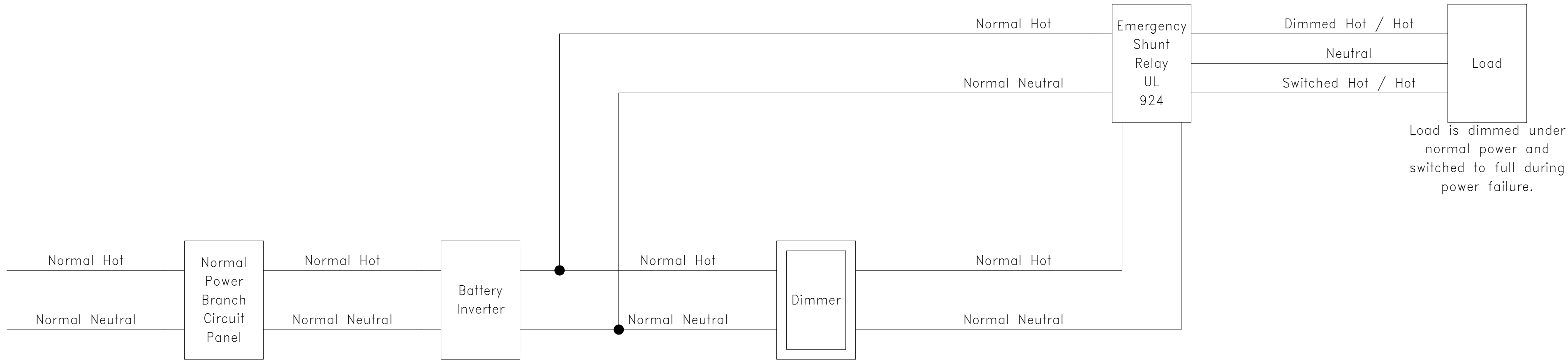
DATE	DESCRIPTION
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LARGE CONF. RM.

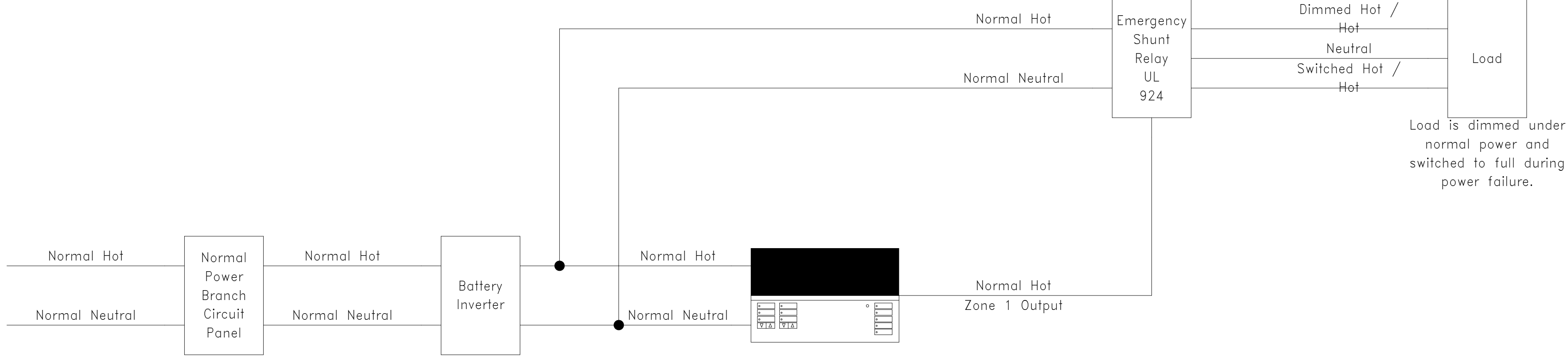
SMALL CONF. RM.



EMERGENCY WIRING DIAGRAM - WALL DIMMER



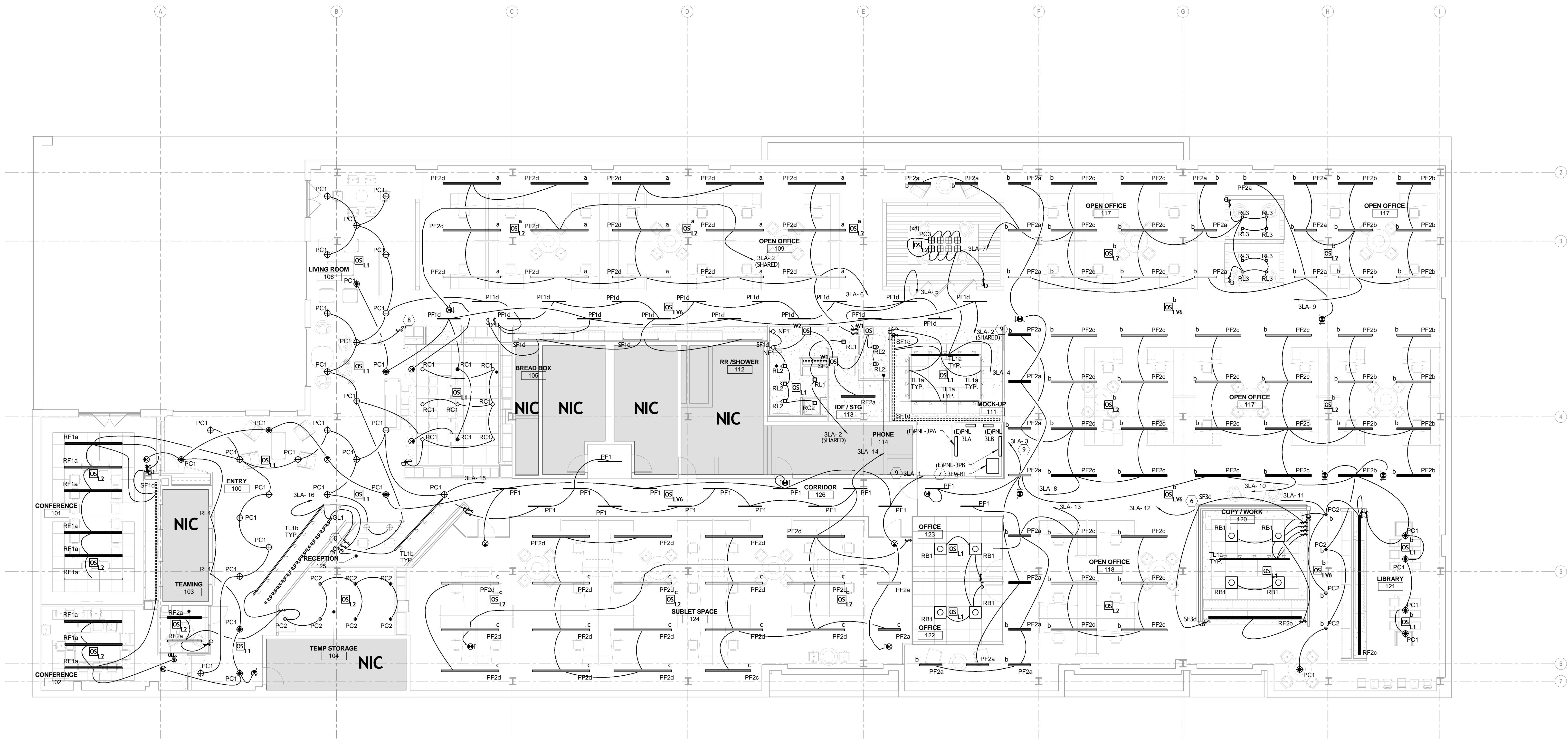
EMERGENCY WIRING DIAGRAM - GRAFIK EYE



LUTRON WIRING NOTES

- WIRING NOTES:**
- 1 #12AWG (2.5 mm²)
 - 3 #12AWG (2.5 mm²)
 - 120V Input Power
 - ▲ Lutron cable GRX-CBL-346S (4 Conductor Non-Plenum) or GRX-PCBL-346S (4 Conductor Plenum rated). Otherwise use 2 #18AWG (1.0mm²) and 1 Belden #9461.
 - [ES] EcoSystem link requires Lutron cable C-CBL-216-GR-1 (2 #16 Conductor Non-Plenum) or C-PCBL-216-CL-1 (2 #16 Conductor Plenum rated). Otherwise use 2 #16AWG by others.

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THIRD FLOOR PLAN - LIGHTING

1/8" = 1'-0"

① ② ③ ④ ⑤ ⑩

KEYED NOTES - LIGHTING

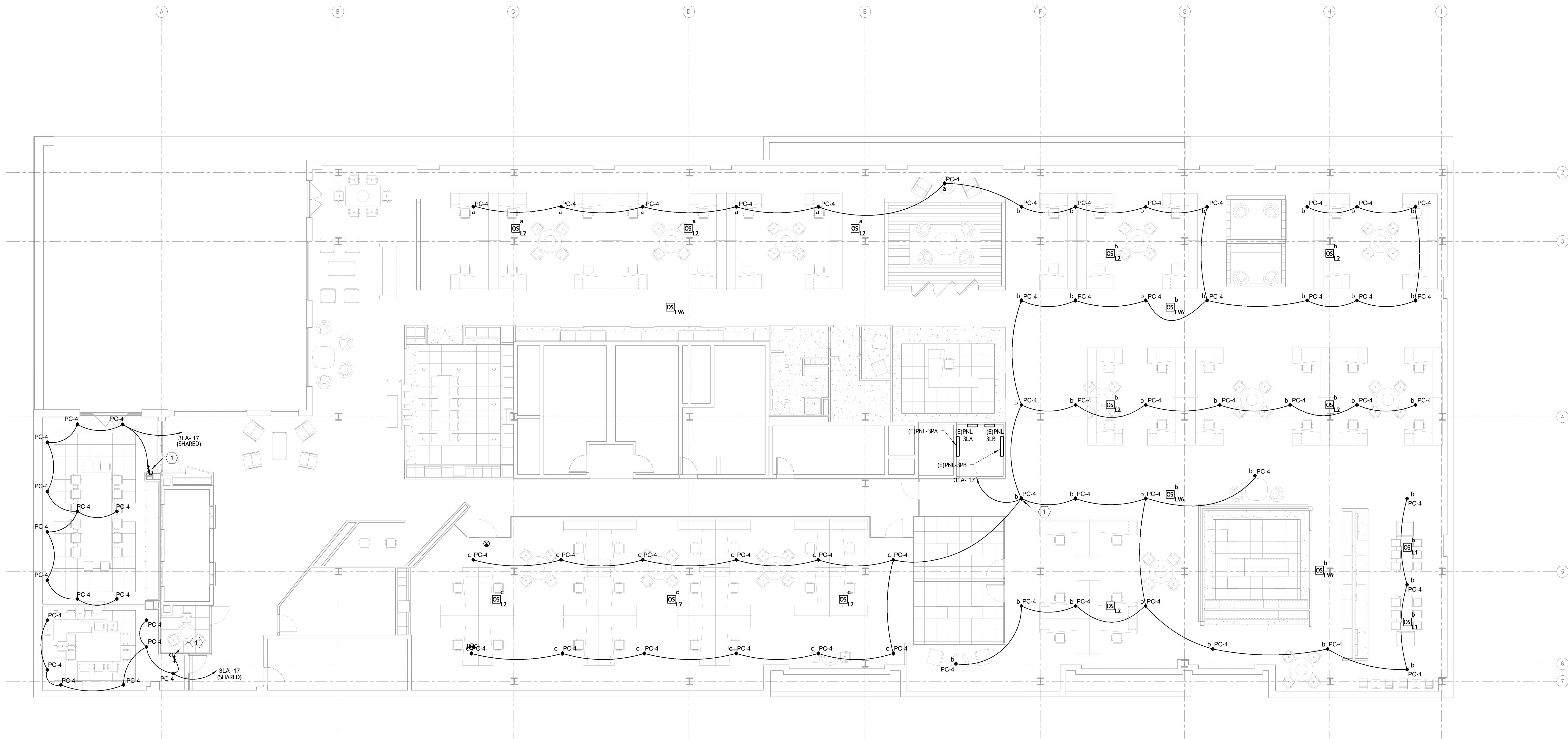
- DISCONNECT AND REMOVE ALL (NOT SHOWN) LIGHTING FIXTURES, SWITCHES, EXIT SIGNS IN AREA OF WORK UNLESS OTHERWISE NOTED. REMOVE CIRCUITRY FROM DEVICE LOCATION BACK TO SOURCE PANELBOARD AND LABEL CIRCUIT BREAKER AS SPARE. RESTORE CONNECTION TO ANY CIRCUITS OR LIGHTING FIXTURES FOR OPERATION AS BEFORE IF INTERRUPTED BY DEMOLITION.
- REFER TO ARCHITECTURAL RCP FOR MOUNTING HEIGHTS. COORDINATE OCCUPANCY SENSOR MOUNTING HEIGHT WITH OPEN CEILINGS AND SUSPENDED FIXTURES.
- ALL JUNCTION BOXES SHALL BE LABELED INDICATING PANELBOARD AND CIRCUIT NUMBER. LABEL SHALL BE WHITE ADHESIVE WITH 1" BLACK UPPER CASE LETTERS. APPLY LABEL ORIENTED TO BE LEGIBLE FROM THE FLOOR.
- THE SPACE HAS FLOATING CLOUD CEILINGS AND OPEN STRUCTURE. WORKMANSHIP AND INSTALLATION OF WIRING (DEFINED AS POWER, LIGHTING, FIRE ALARMS, CONTROLS, SECURITY, PHONE, IT, ETC) FOR A CLEAN LOOK IS CRITICAL FOR THIS PROJECT AND THE FOLLOWING IS REQUIRED.
 - CIRCUITRY RUNS IN OPEN CEILING CORRIDORS ARE LIMITED TO CORRIDOR LIGHTING. OPEN CORRIDOR CEILING SPACE SHALL BE FREE OF ALL CIRCUITRY, SYSTEMS WIRING, AND CABLING.
 - CIRCUITRY SHALL BE RUN IN WIRING BETWEEN SUSPENDED CEILING AREAS ARE CONSIDERED EXPOSED WORK. PROVIDE WIRING ACCORDINGLY.
- REFER TO GRAFIK EYE LIGHTING CONTROL DIAGRAM / E003 AND E004.
- REFER TO ARCHITECTURAL COVE DETAIL FOR QUANTITIES AND MOUNTING DETAILS. LOCATE REMOTE TRANSFORMER ABOVE ACCESSIBLE CEILING IN COPY/WORK 120.
- PROVIDE EMERGENCY LIGHTING BATTERY PLANT INVERTER. CONNECT EMERGENCY LIGHTING CIRCUITRY VIA BATTERY PLANT 120V CIRCUIT SERVING AREA OF WORK TO PANEL AS INDICATED. PROVIDE MYERS POWER PRODUCTS CATALOG NUMBER 3-E-375-5 WITH FOUR 1P, 20A CIRCUIT BREAKERS. BATTERY PLANT SHALL BE PROVIDE EMERGENCY LIGHTING UPON LOSS OF NORMAL POWER. COORDINATE FINAL LOCATION WITH BUILDING ENGINEER.
- COORDINATE LOCATION OF SCENE CONTROL DEVICES WITH ARCHITECT.
- EMERGENCY CIRCUITS SHALL BE SERVED BY THE BATTERY INVERTER AND CONTROLLED VIA EMERGENCY SHUNT RELAY. REFER TO EMERGENCY LIGHTING CONTROL DIAGRAM / E004.
- CONNECT ALL EXIT SIGNS AND EMERGENCY LIGHTING FIXTURES AHEAD OF ANY SWITCHING.

DATE	DESCRIPTION
1/18/2012	ISSUE FOR PERMIT/OWNER REVIEW
12/18/2012	ISSUE FOR CONSTRUCTION DRAWINGS

DRAWING TITLE
THIRD FLOOR PLAN - SHOWROOM LIGHTING
STAMP

PROJECT NO.
RCK-2012184.00
DRAWN BY:
PGL
SCALE:
1/8" = 1'-0"
DATE:
10.18.2012
DWG. NO.

E101

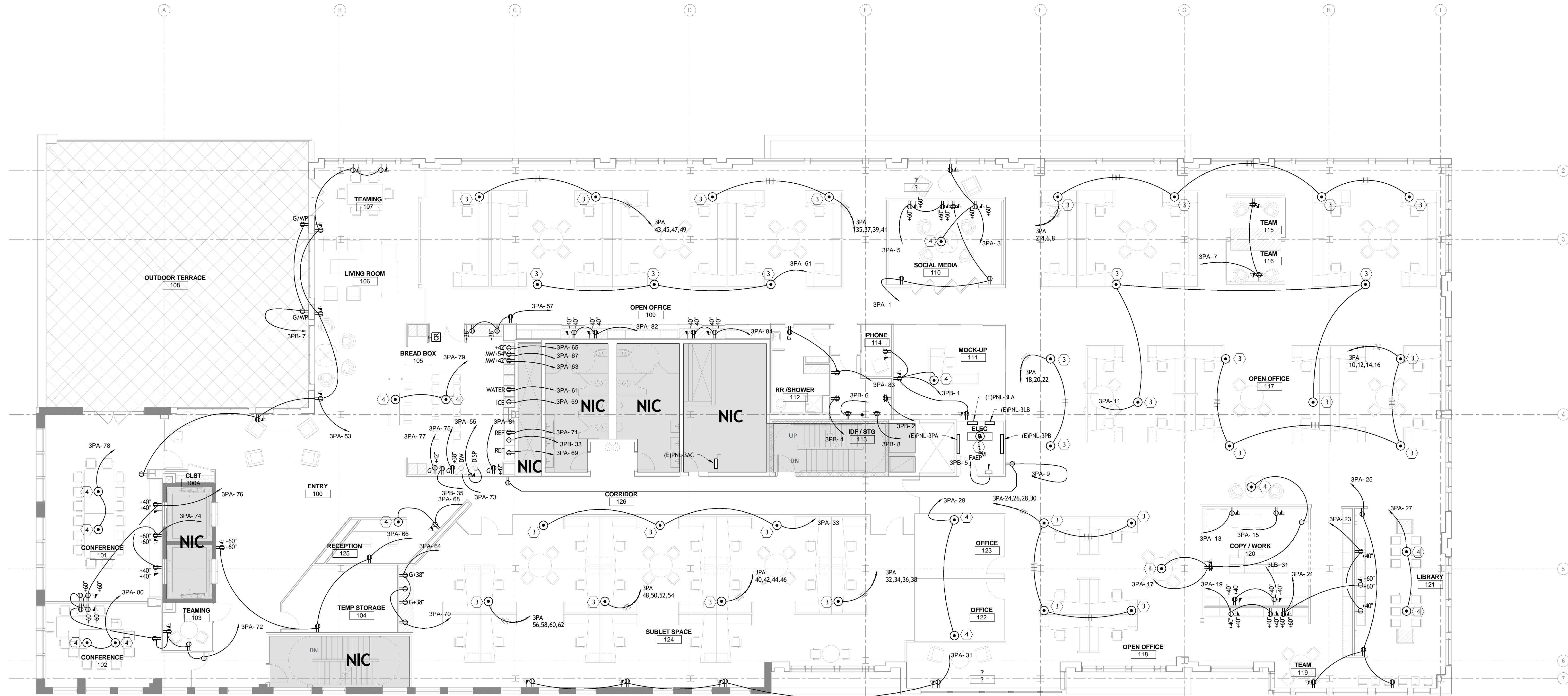


THIRD FLOOR PLAN - SHOWROOM LIGHTING ① ② ③ ④
1/8" = 1'-0"

KEYED NOTES - LIGHTING (SHOWROOM)

- ① ALL JUNCTION BOXES SHALL BE LABELED INDICATING PANELBOARD AND CIRCUIT NUMBER. LABEL SHALL BE WHITE ADHESIVE WITH 1" BLACK UPPER CASE LETTERS. APPLY LABEL ORIENTED TO BE LEGIBLE FROM THE FLOOR.
- ② THE SPACE HAS FLOATING CLOUD CEILINGS AND OPEN STRUCTURE. WORKMANSHIP AND INSTALLATION OF WIRING (DEFINED AS POWER, LIGHTING, FIRE ALARM, CONTROLS, SECURITY, PHONE, IT, ETC) FOR A CLEAN LOOK IS CRITICAL FOR THIS PROJECT AND THE FOLLOWING IS REQUIRED.
 - CIRCUITRY RUNS IN OPEN CEILING CORRIDORS ARE LIMITED TO CORRIDOR LIGHTING. OPEN CORRIDOR CEILING SPACE SHALL BE FREE OF ALL CIRCUITRY, SYSTEMS WIRING, AND CABLING.
 - CIRCUITRY SHALL BE RUN IN WIRING BETWEEN SUSPENDED CEILING AREAS ARE CONSIDERED EXPOSED WORK. PROVIDE WIRING ACCORDINGLY.
- ③ REFER TO THIRD FLOOR PLAN - LIGHTING / E100 FOR NORMAL AND EMERGENCY LIGHTING.
- ④ REFER TO GRAFIK EYE LIGHTING CONTROL DIAGRAM / E003 AND E004.
- ⑤ COORDINATE LOCATION OF SCENE CONTROL DEVICES WITH ARCHITECT.

DATE	DESCRIPTION
1/18/2012	ISSUE FOR PERMIT/OWNER REVIEW
12/18/2012	ISSUE FOR CONTRACTOR DRAWINGS

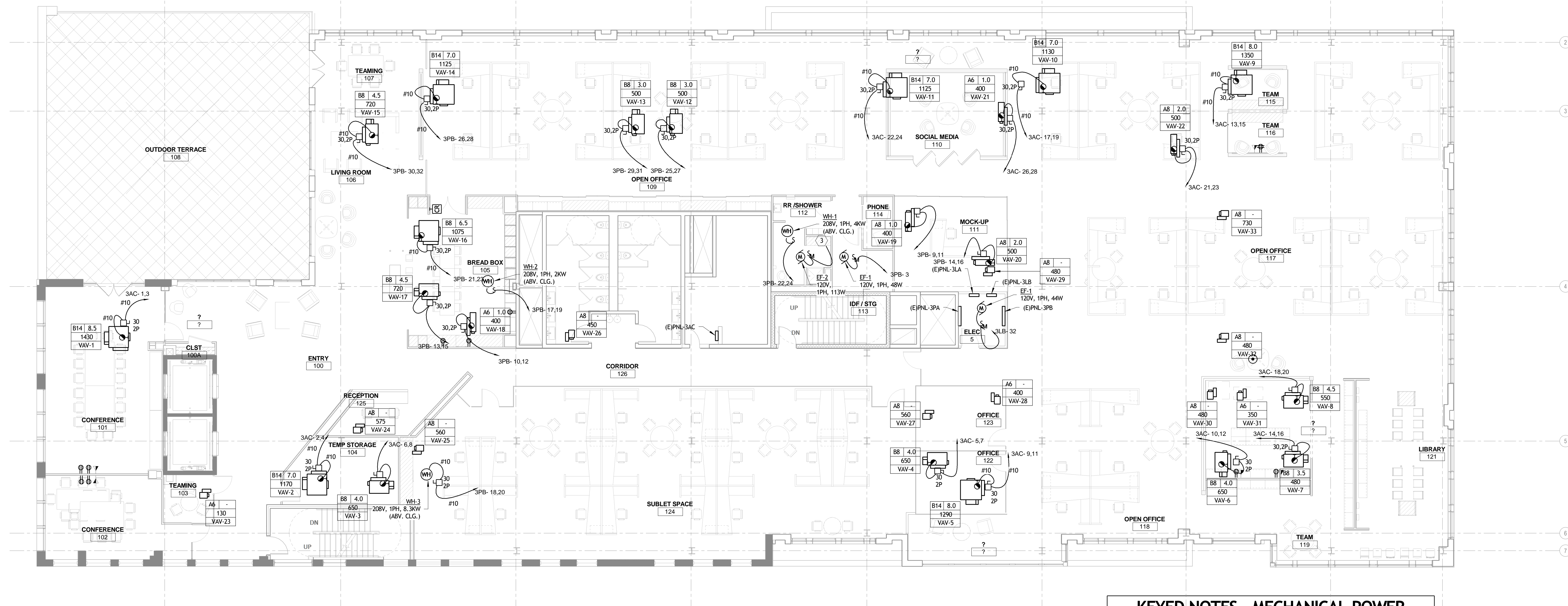


THIRD FLOOR PLAN - TELE/DATA/ELEC
1/8" = 1'-0"

KEYED NOTES - TELE/DATA/ELEC

- DISCONNECT AND REMOVE ALL (NOT SHOWN) RECEPTACLES, POKE-THRU DEVICES, TELEPHONE/DATA OUTLETS, FIRE ALARM DEVICES, SYSTEMS FURNITURE POWER/DATA FEEDS, AND CABLE TRAY SYSTEMS IN AREA OF WORK UNLESS OTHERWISE NOTED. REMOVE CIRCUITRY FROM DEVICE LOCATION BACK TO SOURCE PANELBOARD AND LABEL CIRCUIT BREAKER AS SPARE. COORDINATE REMOVAL OF TELEPHONE/DATA CABLING WITH IT VENDOR/OWNER BEFORE PROCEEDING WITH DEMOLITION.
- COORDINATE LOCATIONS OF ALL A/V RECEPTACLES AND DEVICES WITH ARCHITECTURAL AND A/V DRAWINGS. REFER TO A/V DRAWINGS FOR ADDITIONAL EMPTY RACEWAY REQUIREMENTS. A/V JUNCTION BOXES - REFER TO A/V DRAWINGS FOR JUNCTION BOX SIZES, MOUNTING HEIGHTS, AND EMPTY RACEWAY REQUIREMENTS.
- PROVIDE DUAL SERVICE FURNITURE FEED FLUSH POKE-THRU EQUIPMENT WIREWOLD 4FFATC SERIES. PROVIDE A 1-1/4" EC WITH PULLSTRING FOR TELE/ DATA SYSTEMS. PROVIDE ALL NECESSARY ACCESSORIES WITH POKE-THRU DEVICE. PROVIDE ALL NECESSARY ACCESSORIES WITH POKE-THRU DEVICE. RUN CONDUIT FROM ACCESSIBLE CEILING SPACE BELOW TO NEAREST FULL HEIGHT WALL. AT WALL TURN CONDUIT UP AT WALL AND TERMINATE STUBBED UP ABOVE ACCESSIBLE CEILING. COORDINATE POKE-THRU LOCATIONS WITH SYSTEMS BELOW SLAB, AND X-RAY SLAB PRIOR TO ROUGH-IN. COORDINATE EXACT SPECIFICATION WITH ARCHITECT/ TENANT.
- PROVIDE FLUSH POKE-THRU RECEPTACLE EQUIPMENT WIREWOLD RC4 SERIES. POKE-THRU DEVICE SHALL BE EQUIPPED WITH (1) DUPLEX RECEPTACLE AND (2) COMMUNICATIONS OUTLETS. PROVIDE A 1" EC WITH PULLSTRING FOR TELE/ DATA SYSTEMS. PROVIDE ALL NECESSARY ACCESSORIES WITH POKE-THRU DEVICE. RUN CONDUIT FROM ACCESSIBLE CEILING SPACE BELOW TO NEAREST FULL HEIGHT WALL. AT WALL TURN CONDUIT UP AT WALL AND TERMINATE STUBBED UP ABOVE ACCESSIBLE CEILING. COORDINATE LOCATIONS WITH SYSTEMS BELOW SLAB, AND X-RAY SLAB PRIOR TO ROUGH-IN. COORDINATE EXACT SPECIFICATION WITH ARCHITECT/ TENANT.
- ALL CIRCUITRY ENTERING ELECTRIC ROOM SHALL TRANSITION TO EMT.

	DATE	DESCRIPTION
1	11/8/2012	ISSUE FOR PERMIT OWNER REVIEW
2	12/14/2012	ISSUE FOR BID CONSTRUCTION DRAWINGS

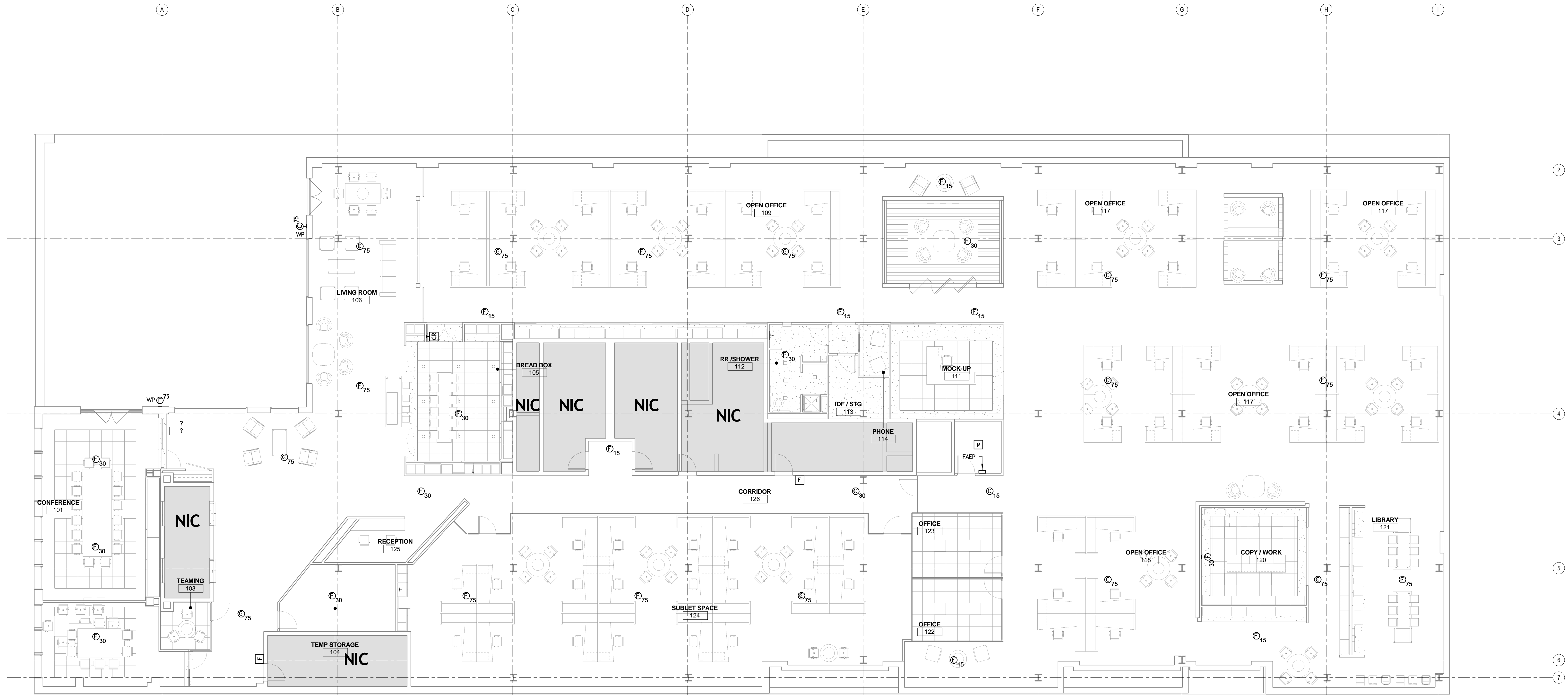


THIRD FLOOR PLAN - MECHANICAL POWER

- ## KEYED NOTES - MECHANICAL POWER

- 1 DISCONNECT ALL MECHANICAL UNITS SHOWN ON PLAN UNLESS OTHERWISE NOTED. REMOVE CIRCUITRY FROM UNIT LOCATIONS BACK TO SOURCE PANELBOARD AND LABEL CIRCUIT BREAKERS AS "SPARE" FOR ALL UNITS MARKED AS TO BE RELOCATED. RELOCATE ASSOCIATED DISCONNECT SWITCH(ES) TO NEW UNIT LOCATIONS. COORDINATE WITH MECHANICAL CONTRACTOR.
- 2 CONNECT CONTROL TRANSFORMER FURNISHED W/ SHUT OFF BOXES TO THE NEAREST POWER OUTLET CIRCUIT.
- 3 CONNECT OCCUPANCY SENSOR CONTROLLING THIS AREA. SEE LIGHTING PLAN.

DATE	DESCRIPTION
1/18/2012	ISSUE FOR PERMIT/OWNER REVIEW
12/18/2012	ISSUE FOR CONTRACTOR DRAWINGS



THIRD FLOOR PLAN - FIRE ALARM

1/8" = 1'-0"

1 2 3

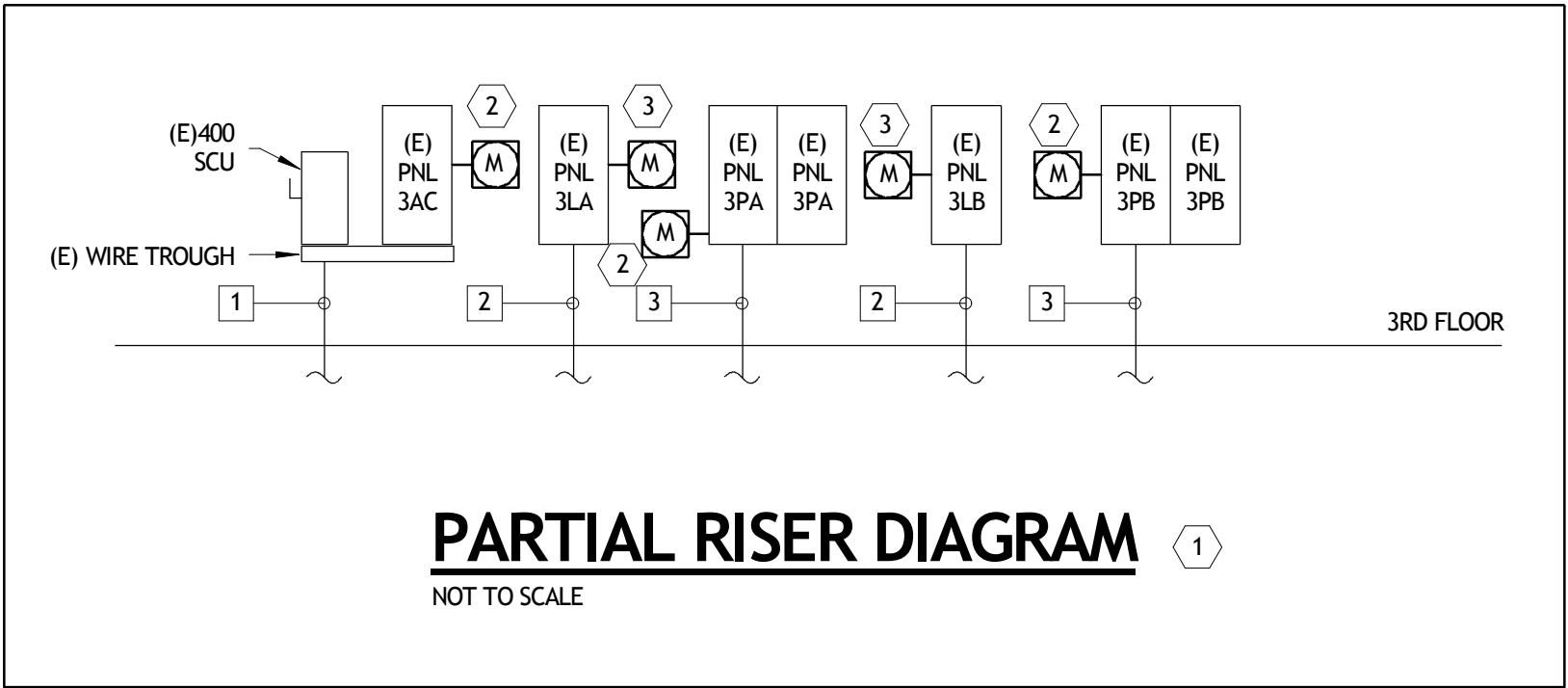
KEYED NOTES - FIRE ALARM

- THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL FIRE ALARM WORK INCLUDING BUT NOT LIMITED TO: ADDITION OF STROBES, AUDIBLE DEVICES, CIRCUITRY EXTENSION, AND SYSTEM PROGRAM MODIFICATIONS. FURNISH AND INSTALL ALL NECESSARY CONTROL EQUIPMENT INCLUDING BOOSTER PANEL, INITIATING DEVICES AND NOTIFICATION APPLIANCES REQUIRED FOR THE EXPANSION OF THE EXISTING FIRE ALARM SYSTEMS DETAILED ON THE CONTRACT DRAWINGS AND AS SPECIFIED HEREIN. THE EQUIPMENT FURNISHED SHALL BE COMPATIBLE WITH THE EXISTING EQUIPMENT. THE CONTRACTOR SHALL SURVEY THE EXISTING CONTROL PANEL TO DETERMINE ANY NECESSARY MODIFICATIONS AND/OR ADDITIONS NECESSARY TO INCORPORATE THE DEVICES ADDED UNDER THIS CONTRACT. PROVIDE SYNCHRONIZING OF STROBES FOR ALL EXISTING, NEW & RELOCATED DEVICES WITHIN THE AREA OF WORK. SYNCHRONIZATION OF STROBES SHALL BE PER NFPA72 REQUIREMENTS. SHOP DRAWINGS SHALL BE PREPARED AND SUBMITTED TO THE LOCAL AUTHORITY AND SHALL INCLUDE, BUT NOT LIMITED TO EQUIPMENT CUT SHEET, SEQUENCE OF OPERATION, BATTERY CALCULATIONS, CIRCUIT CAPACITY CALCULATIONS, WIRING DIAGRAMS, RISER DIAGRAMS AND FLOOR PLANS.
- CONNECT NEW FIRE ALARM DEVICES TO EXISTING FIRE ALARM CIRCUITRY OR NEW BOOSTER PANEL LOCATED ON THIS FLOOR.
- PROVIDE ALL VISUAL AND SPEAKER DEVICES IN WHITE COLOR W/ RED LETTERING.

FIRE ALARM SYMBOLS

DESIGNATION	DESCRIPTION	MTG HGT TO AFF CENTERLINE (UON)
[P]	CEILING MOUNTED PHOTOELECTRIC SMOKE DETECTOR - SUBSCRIPT D DENOTES DUCT DETECTOR	-
[F]	FIRE ALARM MANUAL STATION	4'-0"
15 [C]	FIRE ALARM VISUAL ALARM SIGNAL MOUNTED AT LOWER OF 80" OR 6" BELOW CEILING - NUMBER ADJACENT TO SYMBOL DENOTES MINIMUM REQUIRED LIGHT OUTPUT, CANDELA	-
15 [C]	FIRE ALARM COMBINATION SPEAKER/VISUAL ALARM SIGNAL, MOUNTED AT LOWER OF 80" OR 6" BELOW CEILING, NUMBER ADJACENT TO SYMBOL DENOTES MINIMUM REQUIRED LIGHT OUTPUT, CANDELA	-
15 [C]	CEILING FIRE ALARM VISUAL ALARM SIGNAL, NUMBER ADJACENT TO SYMBOL DENOTES MINIMUM REQUIRED LIGHT OUTPUT, CANDELA	-
15 [C]	CEILING FIRE ALARM COMBINATION AUDIO/VISUAL ALARM SIGNAL, NUMBER ADJACENT TO SYMBOL DENOTES MINIMUM REQUIRED LIGHT OUTPUT, CANDELA	-
[FACP]	FIRE ALARM CONTROL PANEL (FACP)	-
[FATC]	FIRE ALARM TERMINAL CABINET (FATC)	-
[Z]	DENOTES PLAN SPECIFIC KEYED NOTE	-
(E)	EXISTING TO REMAIN - CONTINUE IN SERVICE	-
(R)	EXISTING TO BE REMOVED AND RELOCATED	-
(RE)	RELOCATED EQUIPMENT	-

(E) 3AC														
POLES: 42				VOLTS: 120/208 Wye				MOUNTING: Surface						
MIN AIC: 10,000				PHASES: 3				LOCATION: MECHANICAL ROOM...						
FED FROM: SEE RISER DIAGRAM				WIRES: 4				MAINS RATING: 225 A						
NOTES:				NEUTRAL 100%				MCB RATING: 225 A						
								MLO RATING:						
CK...	LOAD DESCRIPTION	#	TRIP	P	A (KVA)	B (KVA)	C (KVA)	P	TRIP	#	LOAD DESCRIPTION	CK...		
1	VAV-1 - 101	1	30 A	2	4.22	3.03		2	30 A	1	VAV-2 - 104	2		
3						2.83	2.33					4		
5	VAV-4 - 122	1	20 A	2	1.33	1.33		2	20 A	1	VAV-3 - 104	6		
7						3.36	2.03					8		
9	VAV-5 - 122	1	30 A	2				2	20 A	1	VAV-6 - 120	10		
11						2.67	1.33					12		
13	VAV-9 - 115	1	30 A	2	3.36	1.86		2	20 A	1	VAV-7 - 120	14		
15						2.67	1.17					16		
17	VAV-10 - 117	1	20 A	2	2.33	1.50		3.03	2.19	2	25 A	1	VAV-8 - 120	18
19												20		
21	VAV-22 - 117	1	20 A	2		1.36	3.03	0.67	2.33	2	20 A	1	VAV-11 - 110	22
23												24		
25	(E) Spare	20 A	1		0.00	1.03				2	20 A	1	VAV-21 - 110	26
27	(E) Spare	20 A	1			0.00	0.33					28		
29	(E) Spare	20 A	1				0.00	0.00	1	20 A	(E) Spare	30		
31	(E) Spare	20 A	1		0.00	0.00		1	20 A	(E) Spare	32			
33	(E) Spare	20 A	1			0.00	0.00	1	20 A	(E) Spare	34			
35	(E) Spare	20 A	1				0.00	0.00	1	20 A	(E) Spare	36		
37	(E) Spare	20 A	1		0.00	0.00		1	20 A	(E) Spare	38			
39	(E) Spare	20 A	1			0.00	0.00	1	20 A	(E) Spare	40			
41	(E) Spare	20 A	1				0.00	0.00	1	20 A	(E) Spare	42		
TOTAL LOAD:					19.99 KVA	19.10 KVA	16.27 KVA							
TOTAL AMPS:					170 A	163 A	136 A							
LOAD CLASSIFICATION				CONNECTED KVA		DEMAND...		DEMAND KVA		PANEL TOTALS				
HVAC				55.362 KVA		100.00%		55.362 KVA						
										TOTAL CONNECTED LOAD: 55.362 KVA				
										TOTAL DEMAND LOAD: 55.362 KVA				
										TOTAL CONNECTED AMPS: 154 A				
										TOTAL DEMAND AMPS: 154 A				
Notes (#):														
1. REMOVE EXISTING SPARE 1P CIRCUIT BREAKER AND PROVIDE CIRCUIT BREAKER AS INDICATED.														



FEEDER SCHEDULE		
1	EXISTING 3-1/2" C, 4 #350 KCML, 1 #1 GRD	
2	EXISTING 2" C, 4 #1 AWG, 1 #8 GRD	
3	EXISTING 4" C, 4 #500 KCML, 1 #3 GRD	

NOTES THIS DRAWING	
1	PROVIDE LINE ITEM DEDUCT-ALTERNATE FOR SUBMETERING.
2	PROVIDE EMON-DMON METER E50-208400-R*KIT WITH SINGLE SET OF SPLIT CORE SENSORS. CONFIRM BMS PROTOCOL WITH BUILDING ENGINEER PRIOR TO ORDERING.
3	PROVIDE EMON-DMON METER E50-208100-R*KIT WITH SINGLE SET OF SPLIT CORE SENSORS. CONFIRM BMS PROTOCOL WITH BUILDING ENGINEER PRIOR TO ORDERING.

(E)3LA

POLES: 30

MIN AIC: 10,000

FED FROM: See Riser Diagram

NOTES:

VOLTS: 120/208 Wye

PHASES: 3

WIRES: 4

NEUTRAL: 100%

MOUNTING: Surface

LOCATION: Electrical Room

MAINS RATING: 100 A

MCB RATING:

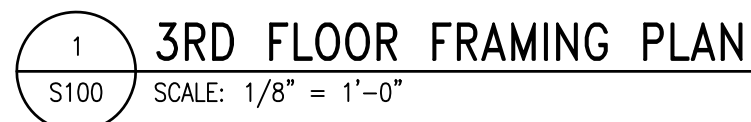
MLO RATING:

CKT #	LOAD DESCRIPTION	NOTE	TRIP	POLES	A (KVA)	B (KVA)	C (KVA)	POLES	TRIP	NOTE	LOAD DESCRIPTION	CKT #
1	Lighting - Emergency		20 A	1	0.73	0.58		1	20 A		Lighting - Emergency	2
3	Lighting - Emergency		20 A	1		1.42	0.59		1	20 A	Lighting - 111	4
5	Lighting - 106, 109 Corridor		20 A	1			1.06	1.30	1	20 A	Lighting - 109	6
7	Lighting - 117 (WEST)		20 A	1	1.22	1.00			1	20 A	Lighting - 117 (NORTH / CENTER)	8
9	Lighting - 117 (WEST)		20 A	1		0.80	1.40		1	20 A	Lighting - 117 (NORTH / CENTER)	10
11	Lighting - 120 & 121		20 A	1			0.38	0.06	1	20 A	Lighting - Feature Wall	12
13	Lighting - 118, 122, 123		20 A	1	1.25	1.08			1	20 A	Lighting - 051, 124	14
15	Lighting - 101		20 A	1		1.50	0.93		1	20 A	Lighting - Elev Lobby,	16
17	Lighting - Showroom Pendants		20 A	1			0.90	0.00	1	20 A	(E) Spare	18
19	(E) Spare		20 A	1	0.00	0.00			1	20 A	(E) Spare	20
21	(E) Spare		20 A	1		0.00	0.00		1	20 A	(E) Spare	22
23	(E) Spare		20 A	1			0.00	0.00	1	20 A	(E) Spare	24
25	(E) Spare		20 A	1	0.00	0.00			1	20 A	(E) Spare	26
27	(E) Spare		20 A	1		0.00	0.00		1	20 A	(E) Spare	28
29	(E) Spare		20 A	1			0.00	0.00	1	20 A	(E) Spare	30
TOTAL LOAD:					5.85	6.64	3.70					
TOTAL AMPS:					51 A	58 A	31 A					

LOAD CLASSIFICATION				CONNECTED KVA	DEMAND...	DEMAND KVA	PANEL TOTALS	
Lighting				16.225 KVA	100.00%	16.225 KVA		
Other				0.000 KVA	0.00%	0.000 KVA	TOTAL CONNECTED LOAD: 16.225 KVA	
							TOTAL DEMAND LOAD: 16.225 KVA	
							TOTAL CONNECTED AMPS: 45 A	
							TOTAL DEMAND AMPS: 45 A	

Notes:

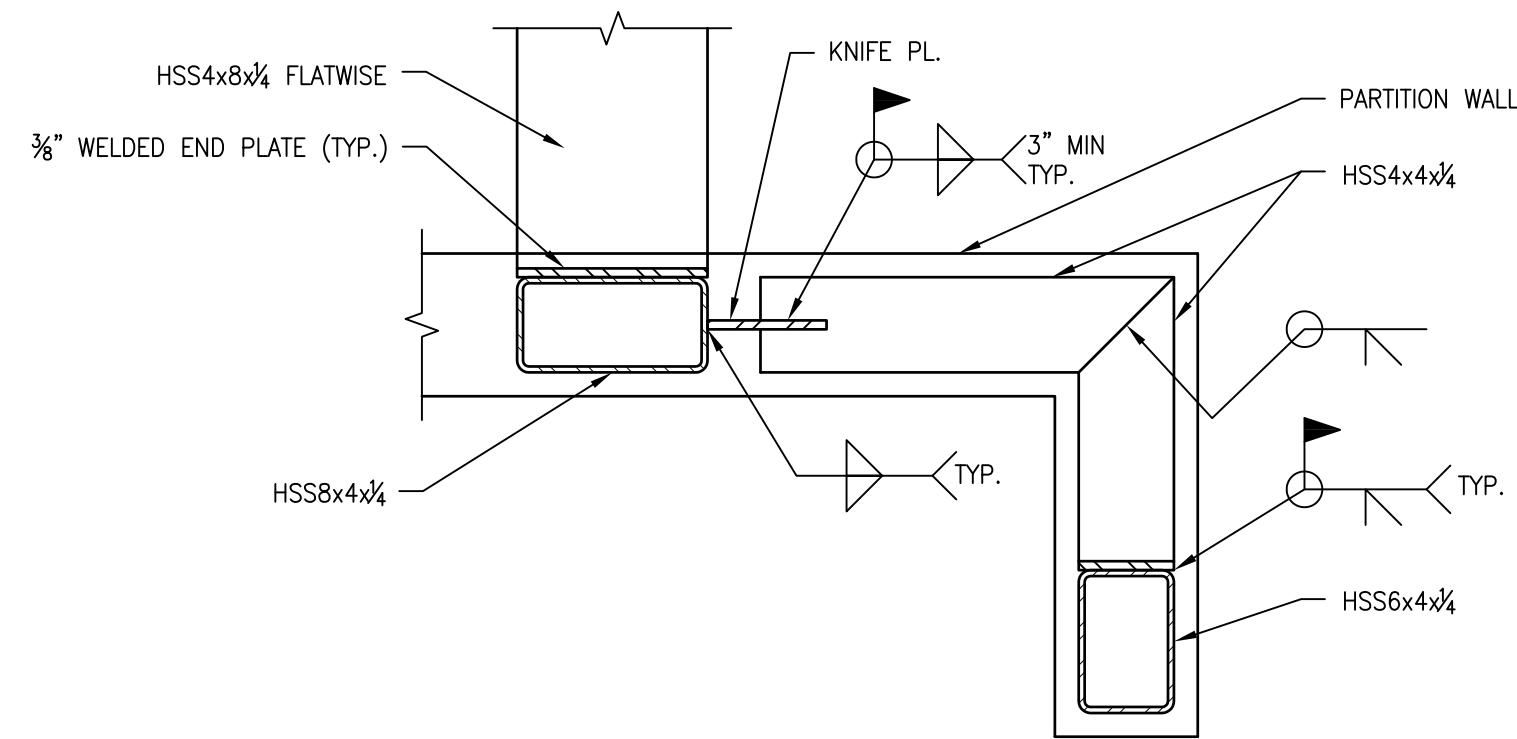
(E) 3PA															
POLES: 84				VOLTS: 120/208 Wye				MOUNTING: Surface							
MIN AIC: 10,000				PHASES: 3				LOCATION: ELECTRICAL ROOM							
FED FROM: SEE RISER DIAGRAM				WIRES: 4				MAINS RATING: 400 A							
NOTES:				NEUTRAL: 100%				MCB RATING:							
								MLO RATING:							
CK...	LOAD DESCRIPTION	#	TRIP	P	A	B	C	P	TRIP	#	LOAD DESCRIPTION	CK...			
1	Receptacle - 110	20 A	1		0.72	0.72			1	20 A	1	Systems Furn - Open Office 115	2		
3	Receptacle - 110	20 A	1			1.08	0.72		1	20 A	1	Systems Furn - Open Office 115	4		
5	Receptacle - 110	20 A	1				0.36	0.72	1	20 A	1	Systems Furn - Open Office 115	6		
7	Receptacle - 116	20 A	1		0.72	0.72			1	20 A	1	Systems Furn - Open Office 115	8		
9	Receptacle - Corridor	20 A	1			0.36	0.72		1	20 A	1	Systems Furn - Open Office 117	10		
11	Poke Thru Receptacle - Open...	20 A	1				2.88	0.72	1	20 A	1	Systems Furn - Open Office 117	12		
13	Copier - 120	20 A	1		1.00	0.72			1	20 A	1	Systems Furn - Open Office 117	14		
15	Copier - 120	20 A	1			1.00	0.72		1	20 A	1	Systems Furn - Open Office 117	16		
17	Receptacles - 120	20 A	1				1.26	0.72	1	20 A	1	Systems Furn - Open Office 117	18		
19	Receptacles - 119	20 A	1		0.36	0.72			1	20 A	1	Systems Furn - Open Office 117	20		
21	Receptacles - 119	20 A	1			0.36	0.72	1	20 A	1	Systems Furn - Open Office 117	22			
23	Receptacles -121	20 A	1				0.36	0.72	1	20 A	1	Systems Furn - Open Office 118	24		
25	Receptacles -121	20 A	1		0.72	0.72			1	20 A	1	Systems Furn - Open Office 118	26		
27	Receptacles -121	20 A	1			0.00	0.72	1	20 A	1	Systems Furn - Open Office 118	28			
29	Receptacles -123	20 A	1				1.44	0.72	1	20 A	1	Systems Furn - Open Office 118	30		
31	Receptacles - 37	20 A	1		0.72	0.72			1	20 A	1	Systems Furn - Open Office 124	32		
33	Poke Thru Receptacle - Open...	20 A	1			2.16	0.72		1	20 A	1	Systems Furn - Open Office 124	34		
35	Systems Furn - Open Office 109	1	20 A	1			0.72	0.72	1	20 A	1	Systems Furn - Open Office 124	36		
37	Systems Furn - Open Office 109	1	20 A	1		0.72	0.72		1	20 A	1	Systems Furn - Open Office 124	38		
39	Systems Furn - Open Office 109	1	20 A	1		0.72	0.72		1	20 A	1	Systems Furn - Open Office 124	40		
41	Systems Furn - Open Office 109	1	20 A	1			0.72	0.72	1	20 A	1	Systems Furn - Open Office 124	42		
43	Systems Furn - Open Office 109	1	20 A	1		0.72	0.72		1	20 A	1	Systems Furn - Open Office 124	44		
45	Systems Furn - Open Office 109	1	20 A	1		0.72	0.72		1	20 A	1	Systems Furn - Open Office 124	46		
47	Systems Furn - Open Office 109	1	20 A	1			2.88	0.72	1	20 A	1	Systems Furn - Open Office 124	48		
49	Diaposl - 105	20 A	1		0.72	0.72			1	20 A	1	Systems Furn - Open Office 124	50		
51	Poke Thru Receptacle - Open...	20 A	1			2.16	0.72		1	20 A	1	Systems Furn - Open Office 124	52		
53	Receptacle - 100, 106	20 A	1				1.26	0.72	1	20 A	1	Systems Furn - Open Office 124	54		
55	Receptacle - 105	20 A	1		2.00	0.72			1	20 A	1	Systems Furn - Open Office 124	56		
57	Receptacle - 105	20 A	1			1.18	0.72		1	20 A	1	Systems Furn - Open Office 124	58		
59	Receptacle - 105	20 A	1				1.00	0.72	1	20 A	1	Systems Furn - Open Office 124	60		
61	Receptacle - 105	20 A	1		1.00	0.72			1	20 A	1	Systems Furn - Open Office 124	62		
63	Microwave - 105	20 A	1				1.00	2.00	1	20 A	1	Receptacle - 124	64		
65	Receptacle - 105	20 A	1				1.00	0.54	1	20 A	1	Receptacle - 125	66		
67	Microwave - 105	20 A	1		1.00	0.90			1	20 A	1	Receptacle - 125	68		
69	Refrigerator - 105	20 A	1			1.00	0.18		1	20 A	1	Receptacle - 124	70		
71	Refrigerator - 105	20 A	1				1.00	1.08	1	20 A	1	Receptacle - 103	72		
73	Dishwasher - 105	20 A	1		1.00	0.18			1	20 A	1	Receptacle - 101	74		
75	Receptacle - 105	20 A	1				1.00	0.36		1	20 A	1	Receptacle - 101	76	
77	Coffee - 105	20 A	1				1.00	1.44	1	20 A	1	Receptacle - 101	78		
79	Receptacles - 105	20 A	1		1.44	1.44			1	20 A	1	Receptacle - 102	80		
81	Receptacle - 105	20 A	1			1.00	0.36		1	20 A	1	Receptation - 109	82		
83	Receptacle - 112, 113	20 A	1				1.18	0.36	1	20 A	1	Receptation - 109	84		
TOTAL LOAD:					23.48 kVA	23.84 kVA	27.68 kVA								
TOTAL AMPS:					194 A	199 A	231 A								
LOAD CLASSIFICATION												PANEL TOTALS			
Power												17,000 kVA 100.00% 17,000 kVA			
Receptacle												57.800 kVA 58.65% 33,900 kVA			
												TOTAL CONNECTED LOAD: 74,800 kVA			
												TOTAL DEMAND LOAD: 50,900 kVA			
												TOTAL DEMAND AMPS: 208 A			
												TOTAL DEMAND AMPS: 141 A			
Notes (#):															



1. FOR WALLS AND CEILINGS SHOWN ON THESE PLANS, THE CONTRACTOR SHALL SUBMIT ENGINEERED SHOP DRAWINGS FOR REVIEW

ADD'L	ADDITIONAL	LLH	LONG LEG HORIZONTAL
APPROX.	APPROXIMATE/APPROXIMATELY	LLV	LONG LEG VERTICAL
ARCH.	ARCHITECTURAL/ARCHITECT	L	LOW POINT
B.O.	BOTTOM OF	L.P.	MAXIMUM
BUDG.	BUILDING	M.P.	MINIMUM
B.M.	BENCH MARK	MISC.	MISCELLANEOUS
BRG.	BEARING	N.I.C.	NOT IN CONTRACT
CLG.	CEILING	N.T.S.	NOT TO SCALE
CLR.	CLEAR	O/C.	ON CENTER
COL.	COLUMN	P.A.F.	PERMANENTLY FASTENER
CONTR.	CONTRACTOR	PL	PLATE
DTL.	DETAIL	REIN	REINFORCE(D), REINFORCEMENT
DIA.	DIAMETER	REQ'D	REQUIRED
EA.	DEAD LOAD	SIM	SIMILAR
E.	EACH	STD	STANDARD
E.O.	EACH OF	STIFFEN	STIFFENER
E.F.	EACH FACE	STL	STEEL
EL.	ELEVATION	T.O.	TOP OF
EMBED.	EMBEDMENT	T.O. & B	TOP & BOTTOM
ENGR.	ENGINEER	TYP.	TYPICAL
E.O.R.	ENGINEER OF RECORD	U.N.O.	UNLESS NOTED OTHERWISE
EQ.	EQUIP.	W/H	WITH
EXT.	EXTERIOR	N/A	NUMBER/SIZE
E.W.	EACH WAY	¢	CENTLINE
FIN.	FINISH	ø	DIAMETER
FLR.	FLOOR	PLATE	PLATE/PROPERTY LINE

(S100) SCALE: 1 1/2" = 1'-0"



[illegible]