



RENOVATIONS TO UNIVERSITY OF NORTH TEXAS
DISCOVERY PARK H WING RESEARCH LABS
UNIVERSITY OF NORTH TEXAS
DENTON, TEXAS
UNT PROJECT 14784

NOVEMBER 14, 2024

CONSTRUCTION DOCUMENTS

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ABBREVIATIONS

ACT.	ACTUAL
ADJ.	ADJUSTABLE
A.F.F.	ABOVE FINISH FLOOR
A.F.S.	ABOVE FINISH SLAB
AGG.	AGGREGATE
AHJ	AUTHORITY HAVING JURISDICTION
ALUM.	ALUMINUM
BLDG.	BUILDING
BK.	BRICK
BM.	BEAM
CAB.	CABINET
CPT.	CARPET
C.J.	CONTROL JOINT
CL.	CENTERLINE
CLG.	CORNER GUARD
CLG.	CEILING
COL.	COLUMN
CONC.	CONCRETE
COND.	CONDITION
CONT.	CONTINUOUS
C.T.	COUNTERTOP
DBL.	DOUBLE
DEMO.	DEMOLITION
DA.	DIAMETER
DM.	DIMENSION
DSP.	DISPENSER
DN.	DOWN
DWG.	DRAWING
E.W.C.	ELECTRIC WATER COOLER
EA.	EACH
E.J.	EXPANSION JOINT
EQ.	EQUAL
EXP.	EXPANSION
E.W.	EACH WAY
EXT.	EXTERIOR
EXIST.	EXISTING
F.E.C.	FIRE EXTINGUISHER CABINET
F.D.	FINISH DIMENSION
F.D.V.B.	FIRE DEPARTMENT VALVE BOX
F.F.	FINISH FLOOR
FN.	FINISHED
FRT.	FIRE RETARDANT TREATED
G.I.	GALVANIZED IRON
G.B./GYP.BD.	GYP/PLUM BOARD
GA.	GAUGE
GALV.	GALVANIZED
GL.	GLASS
H.M.	HOLLOW METAL
H.S.	HORIZONTAL IN SPLASH
I.C.U.	INTENSIVE CARE UNIT
INT.	INTERIOR
INSUL.	INSULATION
I.T.C.	INSTALLED THIS CONTRACT
K.S.	KNEE SPACE
LAM.	LAMINATED
LAV.	LAVATORY
L.L.V.	LONG LEG VERTICAL
L.L.H.	LONG LEG HORIZONTAL
MANUF.	MANUFACTURER
MAX.	MAXIMUM
MECH.	MECHANICAL
MM.	MINIMUM
M.O.	MASONRY OPENING
MTL./MET.	METAL
MNT.	MOUNTED
NA.	NOT APPLICABLE
NOM.	NOMINAL
N.T.S.	NOT TO SCALE
N.I.C.	NOT IN CONTRACT
O.C.	ON CENTER
O.D.	OVERFLOW DRAIN
O.HOP.H.	OPPOSITE HAND
P.D.	PLAN DIMENSION
PLAS. LAM.	PLASTIC LAMINATE
P.T.	PORCELAIN TILE
P.T.D.	PAPER TOWEL DISPENSER
RB.	RUBBER BASE
R.REV.	REVERSE/REVERSE
R.RAD.	RADIUS
RENF.	REINFORCE
REF.	REFERENCE/REFER TO
REQ'D.	REQUIRED
R.D.	ROOF DRAIN
RM.	ROOM
R.O.	ROUGH OPENING
SCHED.	SCHEDULED
SHT.	SHEET
SM.	SIMILAR
SL.	SLOPE
SP.	SPACE
S.S.	STAINLESS STEEL
S.S.V.	SOLID SURFACE VENEER
STL.	STEEL
SUSP.	SUSPENDED
SV.	SHEET VINYL
T.A.S.	TEXAS ACCESSIBILITY STANDARDS
T.B.	TACK BOARD
T.D.H.	TEXAS DEPARTMENT OF HEALTH
TEMP. OR (T.)	TEMPERED GLASS
THK.	THICK
TOIL.	TOILET
TYP.	TYPICAL
U.C.	UNDER COUNTER
UCR.	UNDER COUNTER REFRIGERATOR
U.L.	UNDERWRITERS LABORATORIES
U.N.O.	UNLESS NOTED OTHERWISE
UR.	URINAL
VCT.	VINYL COMPOSITION TILE
V.I.F.	VERIFY IN FIELD
V.T.	VINYL TILE
VERT.	VERTICAL
W.C.	NEW WATER CLOSET
W.D.W.	WOOD
WH.	WATER HEATER
WI.	WITH
W/O.	WITHOUT

MATERIALS LEGEND

	BATT. INSULATION
	CAST IN PLACE CONCRETE
	CAST STONE
	CONCRETE MASONRY (CMU)
	EARTH IN SECTION
	FACE BRICK
	GYPSUM BOARD
	MARBLE
	PARTICLE BOARD/PLYWOOD
	RIGID INSULATION
	STUCCO
	CONTINUOUS WOOD BLOCKING
	DISCONTINUOUS WOOD BLOCKING
	FINISHED WOOD

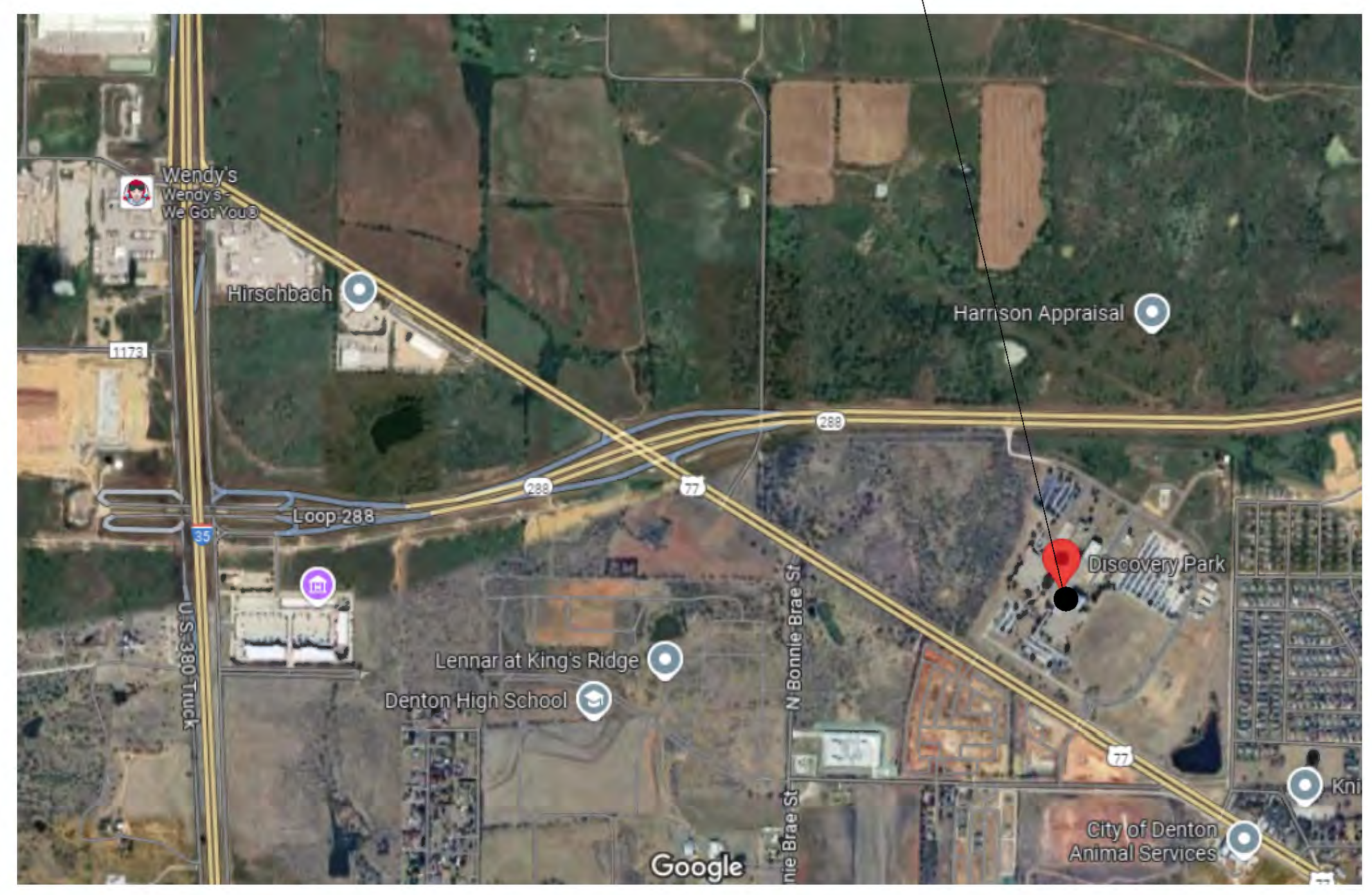
DRAWING LEGEND

	COLUMN GRID LINE
	CENTERLINE
	DIMENSION TO FACE OF WALL, FACE OF CONCRETE, COLUMN CENTERLINE, OR AS NOTED.
	ROOM TAG ROOM NAME ROOM NUMBER ROOM AREA
	DOOR TAG DOOR NUMBER AND DOOR INFORMATION, REFER TO FLOOR PLAN(S) AND DOOR AND WINDOW INFORMATION SHEET.
	EXTERIOR WALL TYPE TAG REFER TO FLOOR PLAN(S) AND EXTERIOR WALL TYPES SHEET
	INTERIOR PARTITION TYPE TAG REFER TO FLOOR PLAN(S) AND PARTITION TYPES SHEET
	DOOR AND WINDOW FRAME TYPE REFER TO DOOR AND WINDOW INFORMATION
	SIGN TYPE SEE SIGNAGE SCHEDULE
	DRAWING REVISION
	NOTES BY NUMBER
	PLUMBING FIXTURE TAG REFER TO TOILET ACCESSORIES/MOUNTING HEIGHTS SCHEDULE PLUMBING FIXTURE SHOWN ON PLAN THAT HAS TOILET ACCESSORIES.
	NORTH ARROW
	LEVEL DATUM LEVEL ELEVATION
	SECTION TAG DRAWING NUMBER SHEET NUMBER
	ENLARGED CALLOUT TAG DRAWING NUMBER SHEET NUMBER
	WALL SECTION TAG DRAWING NUMBER SHEET NUMBER
	EXTERIOR ELEVATION TAG DRAWING NUMBER SHEET NUMBER
	INTERIOR ELEVATION TAG DRAWING NUMBER SHEET NUMBER
	VIEW TITLE DRAWING NUMBER DRAWING SCALE
	GRAPHIC SCALE 0 4'-0" 8'-0" 16'-0"
	DRAWING REFERENCE SYSTEM SHEET NUMBER DRAWING NUMBER

GENERAL NOTES

- THE CONTRACT DRAWINGS AND THE PROJECT MANUAL COMPRISE THE CONTRACT DOCUMENTS. CONTRACTOR(S) SHALL BE FAMILIAR WITH ALL ASPECTS OF THE CONTRACT DOCUMENTS.
- BY SUBMITTING A BID, THE CONTRACTOR(S) AGREE THAT THEIR WORK WILL BE IN COMPLIANCE WITH ALL APPLICABLE CODES, ORDINANCES, AND REGULATIONS IN EFFECT AT THE TIME OF THE BID SUBMITTAL.
- THESE DRAWINGS SHALL NOT BE SCALED FOR CONSTRUCTION PURPOSES. IN THE EVENT OF OMISSION OF NECESSARY DIMENSIONS, CONTRACTOR SHALL NOTIFY THE ARCHITECT.
- VERIFY ALL DIMENSIONS, GRADES, AND EXISTING CONDITIONS AT JOB SITE. WHERE DIMENSIONS ARE LABELED "VERIFY" OR "V.I.F.", THE CONTRACTOR SHALL NOTIFY THE ARCHITECT IF DIMENSION VARIES FROM DIMENSION SHOWN PRIOR TO CONSTRUCTING WALLS.
- VERIFY SIZE AND LOCATIONS OF ALL OPENINGS WITH CONTRACTORS INVOLVED, INCLUDING MECHANICAL AND ELECTRICAL AND PROVIDE OPENINGS AS REQUIRED. NO OPENINGS SHALL BE MADE THROUGH STRUCTURAL COMPONENTS WITHOUT PRIOR APPROVAL FROM THE ARCHITECT.
- THE PROJECT SHALL BE CONSTRUCTED TO BE ACCESSIBLE TO PERSONS WITH DISABILITIES AS REQUIRED BY THE AUTHORITY HAVING JURISDICTION.
- ERRORS AND/OR OMISSIONS IN ROOM, DOOR, OR WINDOW SCHEDULES DO NOT RELIEVE THE CONTRACTOR FROM EXECUTING WORK SHOWN ON THE DRAWINGS OR DESCRIBED IN THE SPECIFICATIONS.
- IN ROOMS OR AREAS WITH EXPOSED STRUCTURE, ALL WIRING & CABLING TO BE IN CONDUIT.

PROJECT LOCATION



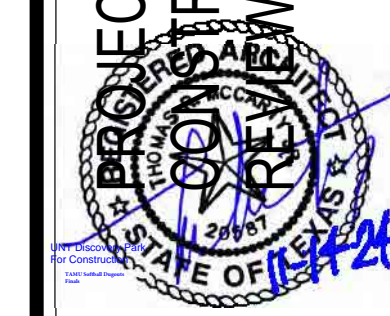
VICINITY MAP
 NOT TO SCALE

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ONE INCH

REVISIONS:

PROJECT STATUS: 100%
CONSTRUCTION DOCUMENTS - FOR



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LIFE SAFETY PLAN GENERAL NOTES

- A. HIGHER RATED FIRE WALLS TAKE PRECEDENCE OVER LOWER RATED WALLS & ARE TO CONTINUE THROUGH ALL SUCH INTERSECTIONS.
- B. ALL SMOKE BARRIER WALLS ARE TO BE EXTENDED FROM BACK SIDE OF EXTERIOR WALL SHEATHING TO BACK SIDE OF EXTERIOR WALL SHEATHING OR ANOTHER SMOKE BARRIER WALL.
- C. FIRE SEPARATION FOR INCIDENTAL STORAGE AREAS OVER 100 SQUARE FEET IS NOT REQUIRED IF AN AUTOMATIC SPRINKLER SYSTEM IS INSTALLED. SMOKE PARTITIONS ARE REQUIRED IN LIEU OF FIRE BARRIERS.
- D. ALL PENETRATIONS MADE THROUGH RATED WALLS SHALL BE CONSTRUCTED AND SEALED AS REQUIRED TO MAINTAIN THE REQUIRED WALL RATING.
- E. REFER TO PARTITION TYPES SHEET FOR ADDITIONAL REQUIREMENTS.
- F. REFER TO PARTITION TYPE SHEET FOR UL RATINGS OF FIRE RATED PARTITIONS.

LIFE SAFETY SYMBOLS

- XX---> PATH OF TRAVEL & DIRECTION OF EGRESS (FOR CUMULATIVE DISTANCES REFER TO TRAVEL DISTANCE SCHEDULE)
- FILLED IN TRIANGLE REPRESENTS SIGN FACE
REFER TO ELECTRICAL DRAWINGS FOR EXIT LIGHT FIXTURE.
ARROW SHOWS DIRECTION OF EXIT TRAVEL
- Egress WIDTH TAG, TAG INDICATES CLEAR EXIT WIDTH IN INCHES.
- SEMI-RECESSED (SR) FIRE EXTINGUISHER CABINET LARSEN - MODEL NO. 2409-6R-SS STAINLESS STEEL FINISH
FULLY-RECESSED (FR) FIRE EXTINGUISHER CABINET LARSON - MODEL NO. 2409-R2-SS STAINLESS STEEL FINISH
- HANGING FIRE EXTINGUISHERS
- SMOKE BARRIER
- SMOKE PARTITION
- ONE HOUR FIRE RATED PARTITION
- TWO HOUR FIRE RATED PARTITION
- AREA OF WALL WASHER FIRE SPRINKLERS

OCCUPANCY SCHEDULE

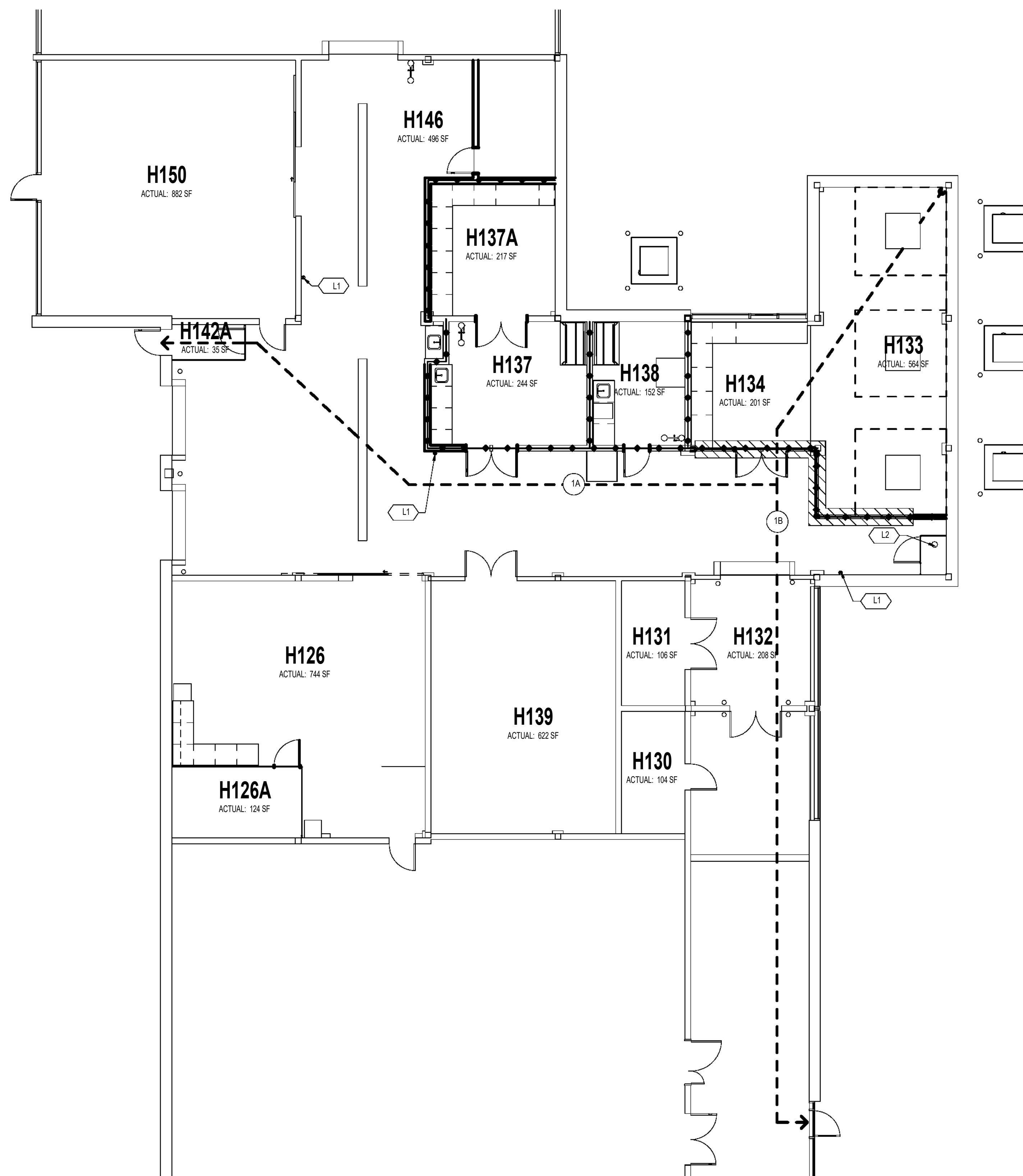
SPACE USE	AREA	SF PER OCCUPANT	OCCUPANCY LOAD	COMMENTS
LEVEL 1 Business areas	1,200 SF	150 SF	9	

TRAVEL DISTANCE SCHEDULE

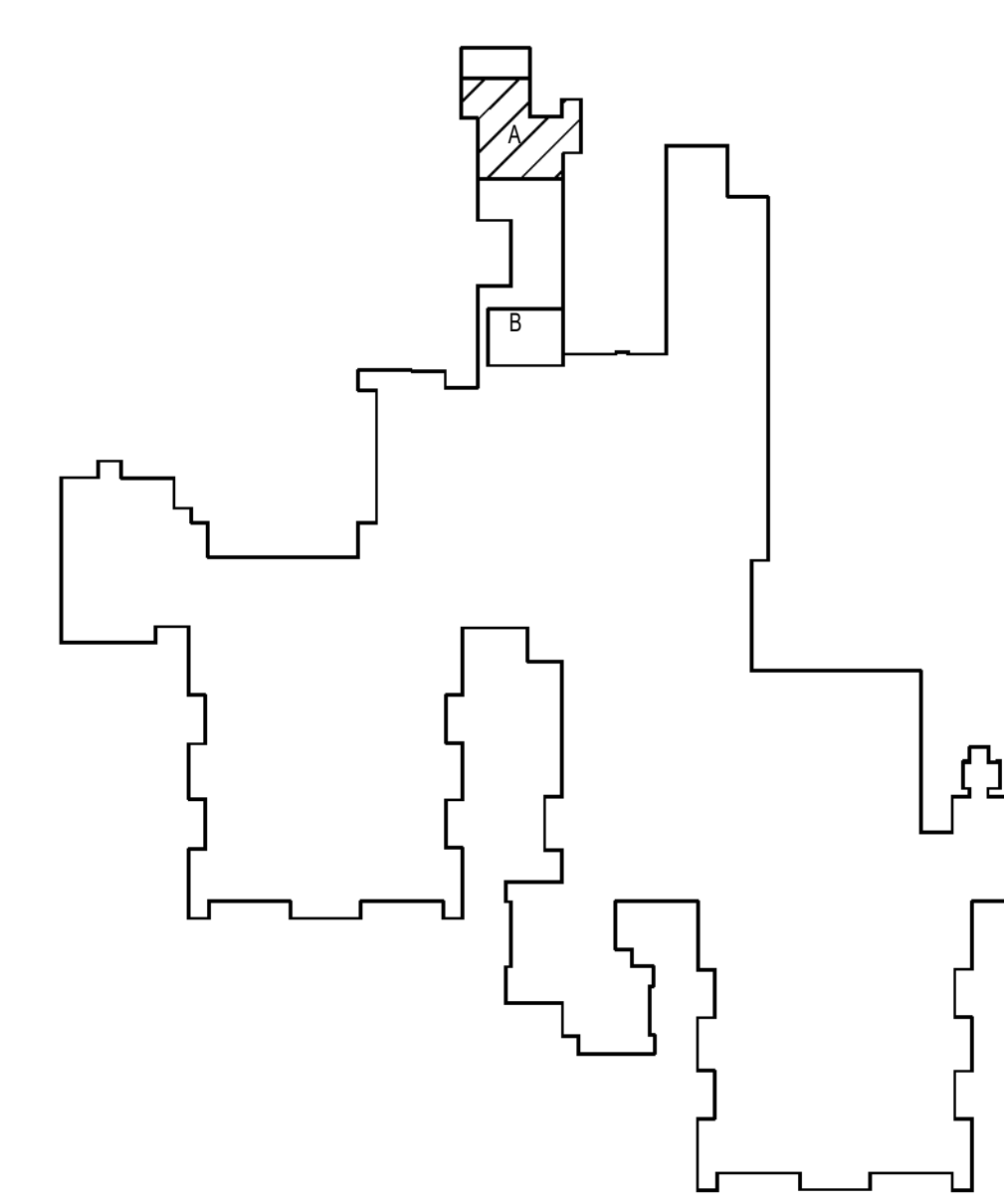
PATH NAME	DISTANCE
1A	117'
1B	77'

NOTES BY NUMBER - LIFE SAFETY

- L1 EXISTING WALL MOUNTED FIRE EXTINGUISHER
- L2 EXISTING FIRE RISER



1 LIFE SAFETY PLAN - LABS
1/8" = 1'-0" NORTH



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PROJECT STATUS: 100%
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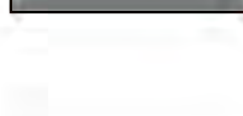



DEMOLITION FLOOR PLAN GENERAL NOTES:

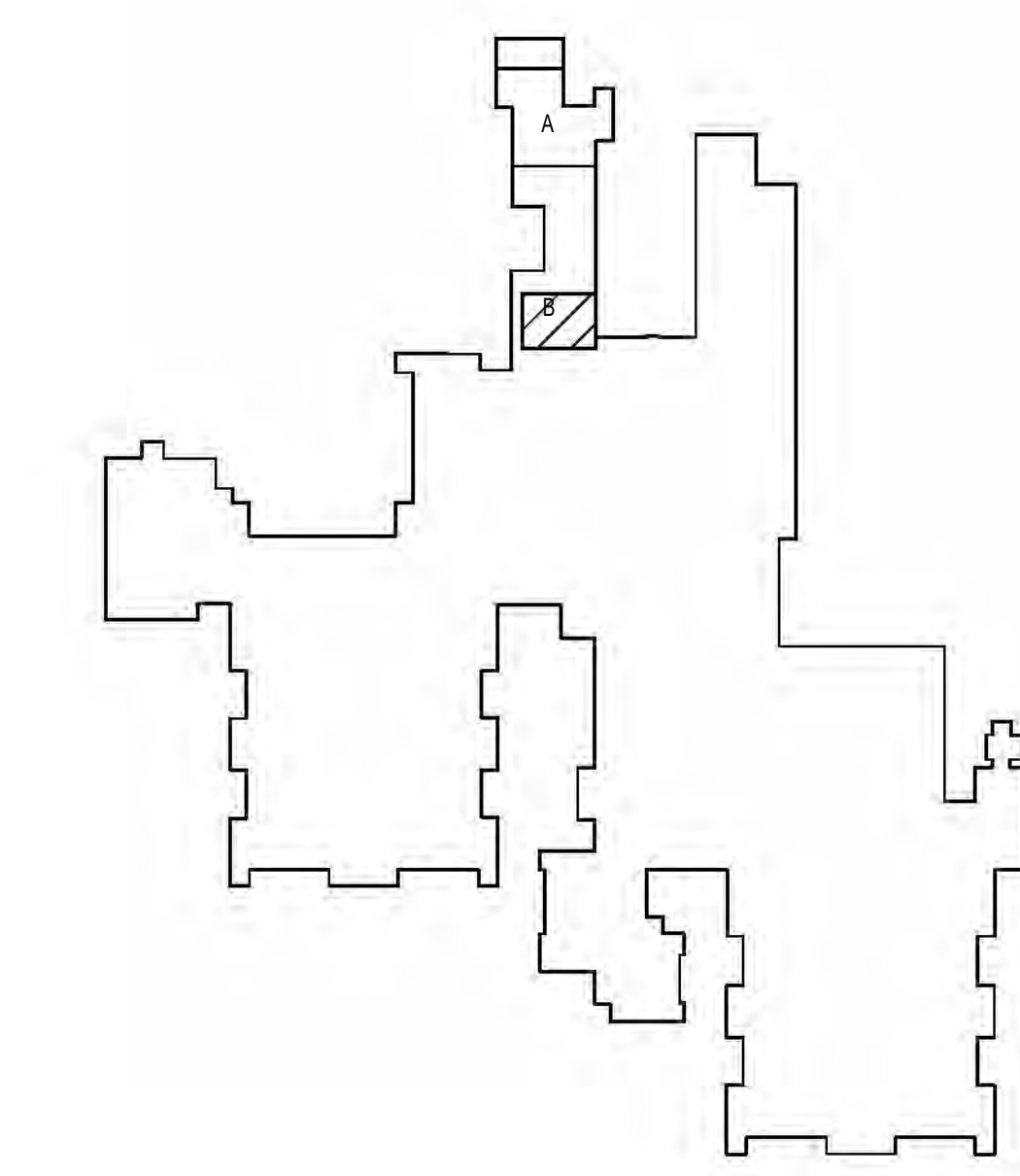
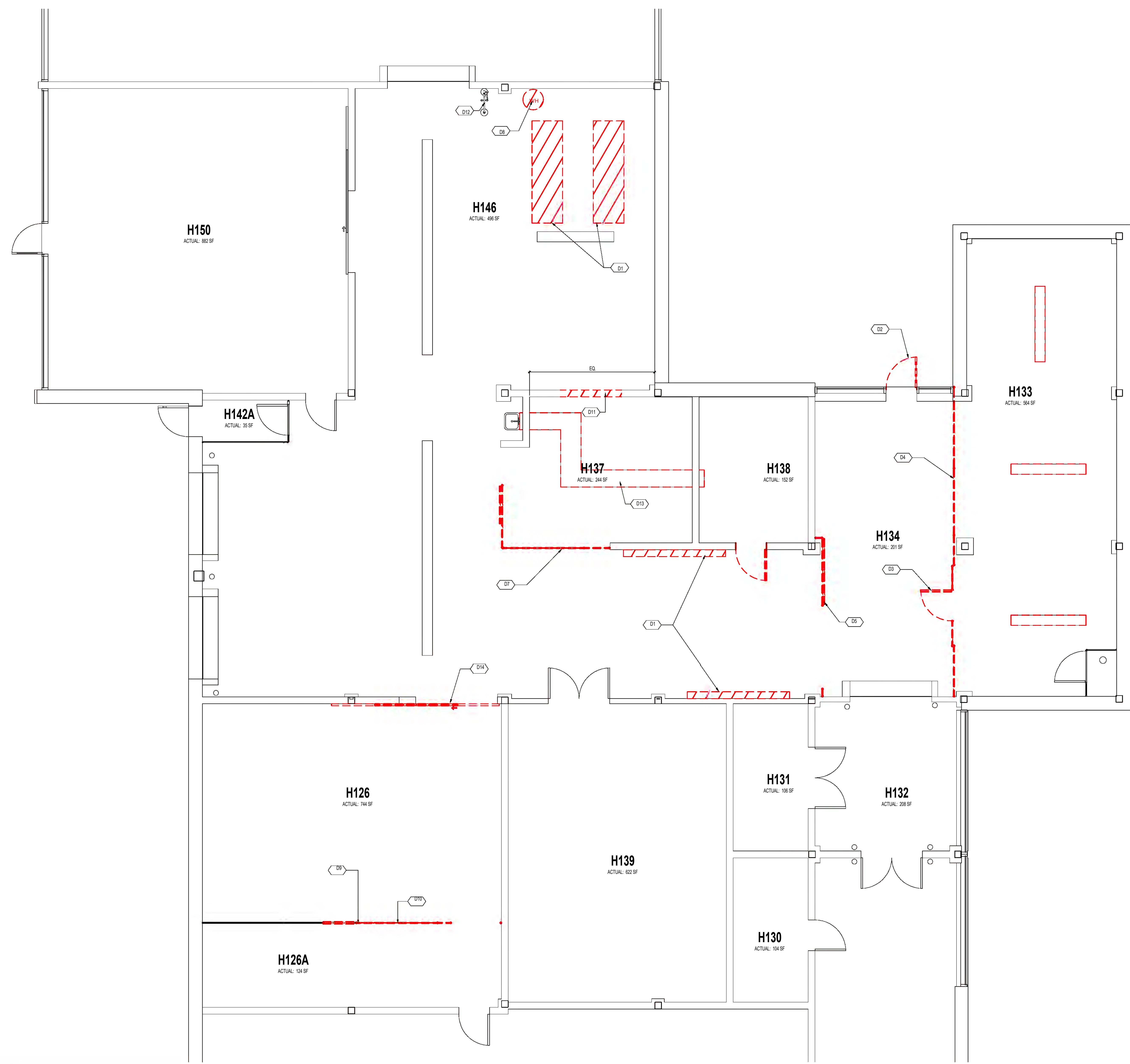
- A. THE INTENT OF THE DEMOLITION PLANS IS TO REMOVE ALL EXISTING CONSTRUCTION ITEMS THAT ARE NOT REQUIRED FOR THE FINISHED NEW CONSTRUCTION EVEN IF NOT INDIVIDUALLY ENUMERATED. MECHANICAL AND ELECTRICAL ITEMS INCLUDING BUT NOT LIMITED TO DUCTWORK, PLUMBING FIXTURES, ELECTRIC CONDUITS, BACK BOXES, PIPING, "J" BOXES, ETC. NOT REQUIRED FOR THE FINISHED BUILDING SHALL BE REMOVED.
- B. REFER TO MECHANICAL, ELECTRICAL, AND PLUMBING DRAWINGS FOR ADDITIONAL DEMOLITION WORK REQUIRED. REMOVE PORTIONS OF EXISTING SURFACES REQUIRED FOR THE DEMOLITION OF MECHANICAL, PLUMBING, AND/OR ELECTRICAL WORK. REPLACE ALL SURFACES WITH NEW MATERIALS OR PATCH EXISTING MATERIALS AS REQUIRED TO MATCH EXISTING SURFACES.
- C. COORDINATE MECHANICAL, PLUMBING, AND ELECTRICAL DEMOLITION WITH REQUIREMENTS FOR NEW MECHANICAL AND ELECTRICAL WORK. REFER TO MECHANICAL, PLUMBING, AND ELECTRICAL DRAWINGS AND SPECIFICATIONS. WHERE EXISTING PLUMBING, ELECTRICAL, OR HVAC SERVICES ARE REMOVED, REMOVE ALL PLUMBING, ELECTRICAL, OR HVAC LINES, DUCTS, DEVICES, ETC. BACK TO MARK.
- D. AT ALL LOCATIONS WHERE NEW FLOORING IS SCHEDULED OR IT IS NOTED TO REMOVE EXISTING FLOORING, THE CONTRACTOR SHALL MECHANICALLY CLEAN THE FLOOR AS REQUIRED TO PROPERLY INSTALL THE NEW SCHEDULED FLOORING. SOLVENTS MAY NOT COMPLETELY CLEAN THE EXISTING CONCRETE TO PROVIDE AN ACCEPTABLE BASE FOR NEW FLOOR FINISH ADHESIVES. THEREFORE THERE ARE A VARIETY OF MECHANICAL MEANS WHICH MAY BE USED TO CLEAN THE FLOOR THOROUGHLY.
- E. THE CONTRACTOR SHALL FILL ALL EXISTING FLOOR DEPRESSIONS AND OPENINGS EVEN IF NOT INDIVIDUALLY ENUMERATED.
- F. IT IS THE INTENT, EVEN IF NOT SPECIFICALLY NOTED ON THE DRAWINGS, THAT THE CONSTRUCTION MODEL PERIMETER TO BE SEALED IN A MANNER TO PREVENT CONSTRUCTION DEBRIS AND DUST FROM MIGRATING FROM A CONSTRUCTION AREA TO A BUILDING OPERATIONAL AREA, AS REQUIRED FOR EACH PHASE OF CONSTRUCTION.
- G. OWNER WILL REMOVE ANY ITEMS THEY WANT TO SALVAGE PRIOR TO COMMENCING DEMOLITION. HOWEVER, OWNER RETAINS FIRST RIGHT TO SALVAGED MATERIALS EVEN IF NOT INDIVIDUALLY ENUMERATED. AT THE OWNER'S REQUEST, CONTRACTOR WILL DELIVER REQUESTED SALVAGE MATERIAL TO THE OWNER.
- H. SAW-CUT AND REMOVE PORTION OF EXISTING CONCRETE SLAB OR CORE FLOOR AS REQUIRED FOR INSTALLATION OF NEW UNDER-FLOOR UTILITIES (TYPICAL).

DEMOLITION FLOOR PLAN NOTES BY NUMBER

- D1 REMOVE EXISTING GAS CYLINDER STORAGE RACKS. RETURN TO OWNER.
- D2 REMOVE, STORE AND PROTECT DOOR PULL, PANIC BAR AND CLOSER TO REINSTALLATION ON CH10 EXISTING DOOR. DOOR AND FRAME ARE TO REMAIN.
- D3 REMOVE, PROTECT AND STORE WIRE MESH CAGE MAIN DOOR FOR REINSTALLATION AT ROOM H126A. SLIDING DOOR AND RAILS TO BE REMOVED.
- D4 REMOVE EXISTING WIRE-MESH CAGE WALL.
- D5 REMOVE EXISTING WIRE-MESH CAGE WALL AND SLIDING GATE.
- D7 REMOVE EXISTING WIRE-MESH WALL AND GATE.
- D8 EXISTING WATER HEATER TO BE REMOVED AND RETURNED TO OWNER. SEE PLUMBING SHEETS.
- D9 REMOVE PORTION OF EXISTING WIRE MESH SCREEN TO CREATE NEW DOORWAY.
- D10 CAREFULLY REMOVE PORTION OF WIRE MESH SCREENING TO CENTER VERTICAL SUPPORT. STORE FOR REUSE AS NEW CAGE SIDE.
- D11 REMOVE A PORTION OF EXISTING WALL (IF HIGH CONCRETE WALL BASE TOPPED WITH 6" METAL STUDS AND GYP. BO.) AS REQUIRED FOR NEW OPENING SIZE.
- D12 EXISTING EYEWASH SHOWER TO REMAIN.
- D13 TRENCH INTO EXISTING CONCRETE FOR NEW PLUMBING DRAIN LINES. SEE STRUCTURAL AND PLUMBING SHEETS.
- D14 CAREFULLY REMOVE EXISTING SLIDING STEEL DOOR AND RAILS. PROTECT, STORE AND RELOCATE TO WALL SIDE OF WALL.

DEMOLITION PLAN LEGEND

-  WALLS TO BE DEMOLISHED
-  AREAS CONTAINING ASBESTOS. REFER TO ASBESTOS ABATEMENT REPORT FOR ADDITIONAL INFORMATION
-  EXISTING TO REMAIN
-  DOORS, MILLWORK, FIXTURES, ETC. TO BE REMOVED
-  ELEMENT TO BE DEMOLISHED



1 DEMOLITION FLOOR PLAN - LABS
 1/8" = 1'-0"
 NORTH

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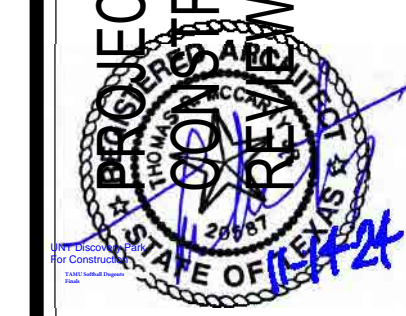
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PROJECT STATUS: 100%
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FLOOR PLAN - LABS
A2.00B

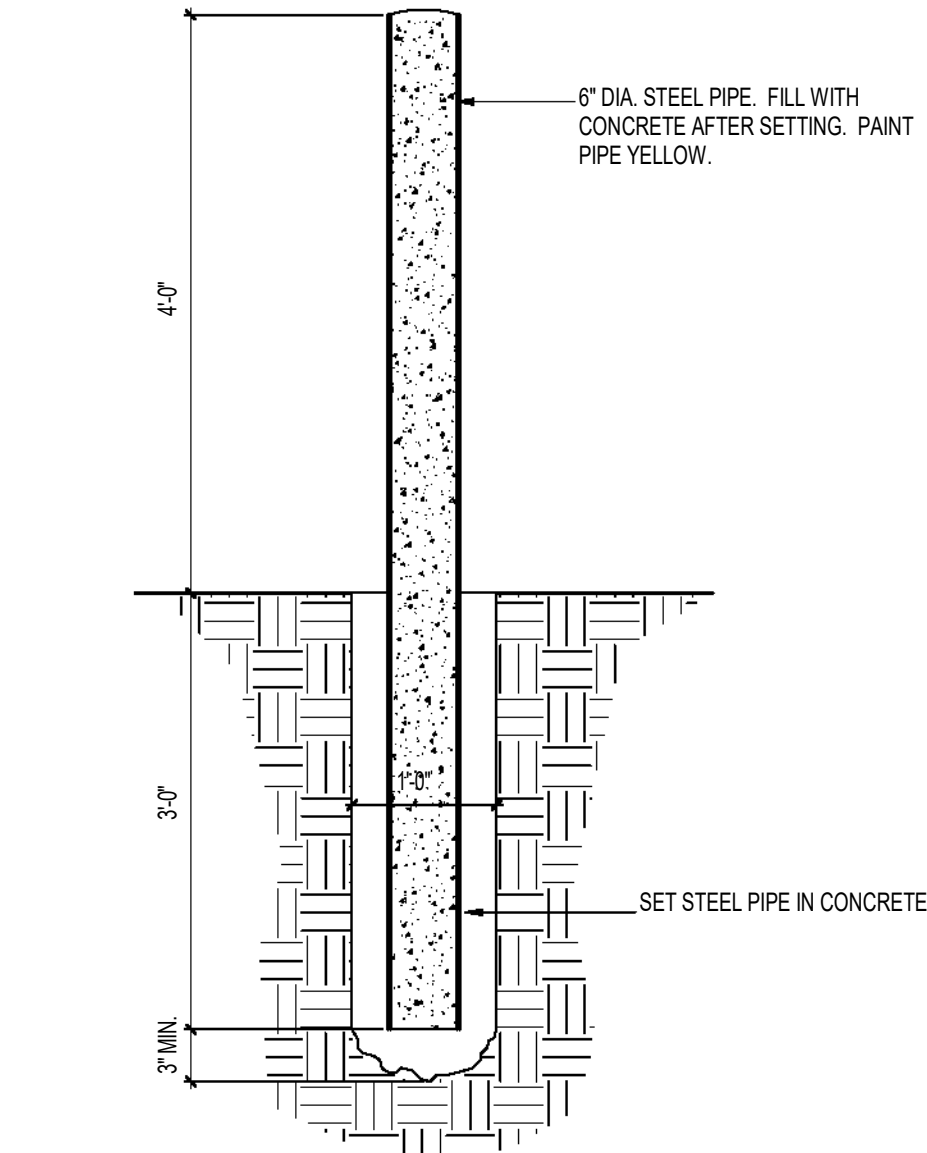
FLOOR PLAN GENERAL NOTES

- A. ALL NON-LOAD BEARING INTERIOR WALLS ARE TYPE "A6" UNLESS NOTED OTHERWISE.
- B. REFER TO DEMOLITION DRAWINGS, IF ANY, FOR WORK REQUIRED IN ADVANCE OF CONSTRUCTION AND COORDINATE ACCORDINGLY.
- C. ALL DOOR FRAMES ARE TO BE INSTALLED 1/4" AWAY OF ADJACENT PERPENDICULAR WALLS UNLESS NOTED OTHERWISE.
- D. REFER TO INTERIOR FINISH DRAWINGS FOR ADDITIONAL INTERIOR FINISH SPECIFIC INFORMATION.
- E. ALL DIMENSIONS ON PLANS ARE TO THE FACE OF FINISHED WALL, CONCRETE STRUCTURE, OR MASONRY UNLESS NOTED OTHERWISE.
- F. ADD SUFFICIENT BLOCKING IN STUD WALLS TO SUPPORT ALL ITEMS OR EQUIPMENT SHOWN OR SPECIFIED TO BE ATTACHED TO THE WALLS. PROVIDE ADDITIONAL STRUCTURAL SUPPORT (ANGLES, CHANNELS, ETC.) WITHIN WALLS WHERE WEIGHT OF ATTACHED ITEMS IS TOO GREAT TO BE SUPPORTED BY METAL STUDS.
- G. REFER TO EQUIPMENT DRAWINGS, IF ANY, FOR ADDITIONAL EQUIPMENT SPECIFIC INFORMATION.

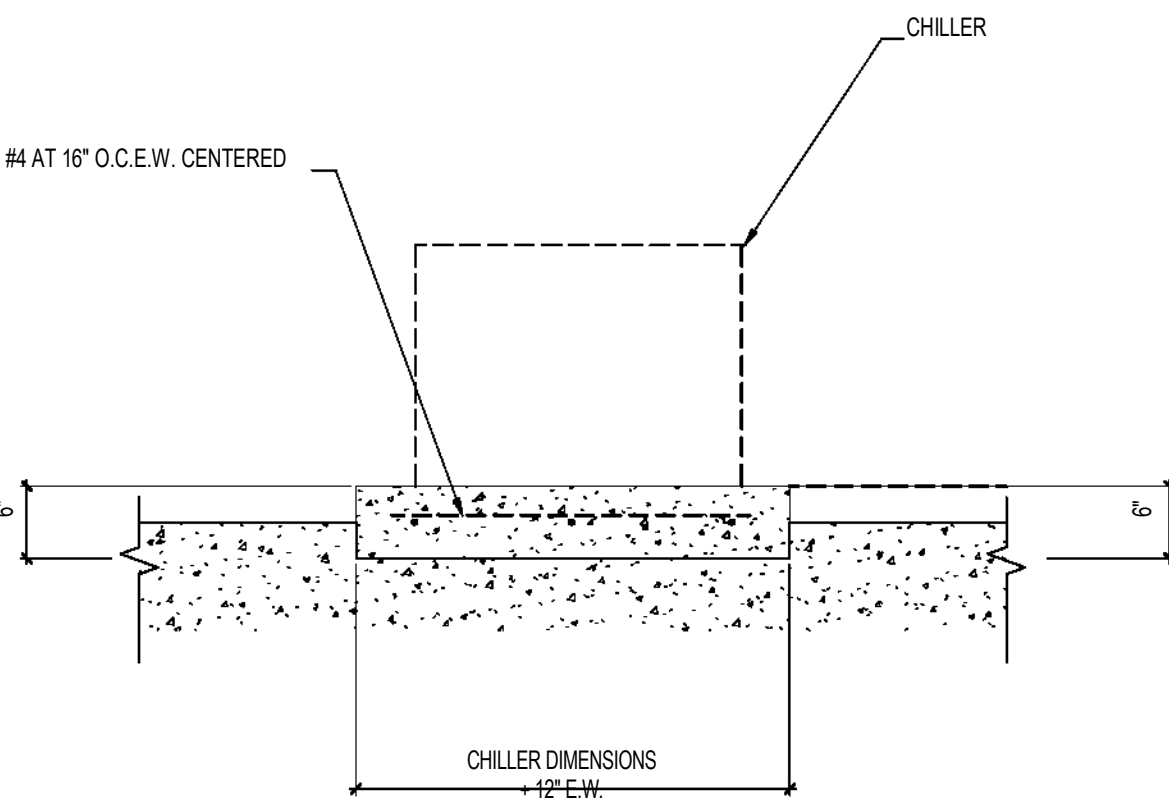
FLOOR PLAN NOTES BY NUMBER

- A1 IN-FILL TRENCHING IN SLAB FOR NEW PLUMBING WITH CONCRETE FINISH FLUSH WITH EXISTING SLAB. SEE STRUCTURAL AND PLUMBING SHEETS.
- A2 IN-FILL EXISTING CATCH BASINS WITH STONEST 108 BY STONTEC. FINISH FLUSH WITH EXISTING FLOOR.
- A3 PATCH, TEXTURE, AND PAINT WALLS AFFECTED BY WORK TO MATCH EXISTING ADJACENT.
- A4 ALIGN FACE OF NEW WALL ON HALL SIDE WITH END OF EXISTING WALL.
- A5 6" DIA. CONCRETE FILLED STEEL BOLLARD AT EACH CORNER OF CONCRETE PAD, PAINT SAFETY YELLOW. SEE DETAIL 3/2.00B.
- A6 EXISTING EYEWASH/SHOWER TO REMAIN.
- A7 NEW EYEWASH/SHOWER. SEE PLUMBING SHEETS.
- A8 INSTALL DOUBLE KEY LOCK. LOCK DOOR IN CLOSED POSITION. INSTALL PLATES OVER HARDWARE HOLES. PAINT TO MATCH FRAME. APPLY SEALANT TO INTERIOR EDGES OF DOOR AT FRAME.
- A9 PAINT INSIDE FACE OF GLASS BLACK BEHIND PONY WALL/MILLWORK AND ABOVE CEILING.
- A10 REINSTALL STEEL SLIDING DOOR ON HALL SIDE OF WALL. ADD SPACERS BETWEEN RAIL AND WALL TO STAND 1/2" FURTHER OFF WALL THAN ORIGINAL INSTALLATION. INSTALL NEW PULL HANDLES FOR SLIDING DOOR.
- A11 RE-OPEN EXISTING DOOR. INSTALL STORED DOOR PULL PANIC BAR AND CLOSER FROM PREVIOUS EXISTING EXTERIOR DOOR IN ROOM H134.
- A12 RELOCATED WIRE-MESH SCREENING INSTALLED TO BE SIDE WALL OF CAGE.
- A13 RELOCATED WIRE-MESH DOOR. RECONFIGURE EXISTING WIRE-MESH CAGE FOR INSTALLATION OF DOOR.
- A14 CONCRETE EQUIPMENT PAD. CENTER CHILLER IN PAD. CONTRACTOR TO VERIFY DIMENSIONS OF CHILLER WITH MFG. AND ENSURE THAT THE CONSTRUCTED DIMENSIONS OF THE CONCRETE PAD ALLOW FOR 12" OF CLEAR SPACE ALL AROUND THE CHILLER TO THE EDGE OF PAD. SEE DETAIL 4/2.00B.
- A15 NEW CHILLERS. SEE MECHANICAL AND PLUMBING SHEETS.
- A16 CONCRETE HOUSEKEEPING PAD. VERIFY SIZE BASED ON TRANSFORMER. EXPECTED TO BE 42"X42". SEE DETAIL 5/2.00B. SEE ELECTRICAL SHEETS FOR TRANSFORMER.
- A17 INSTALL DECOMPOSED GRANITE BETWEEN CONCRETE SLABS AND BUILDING.

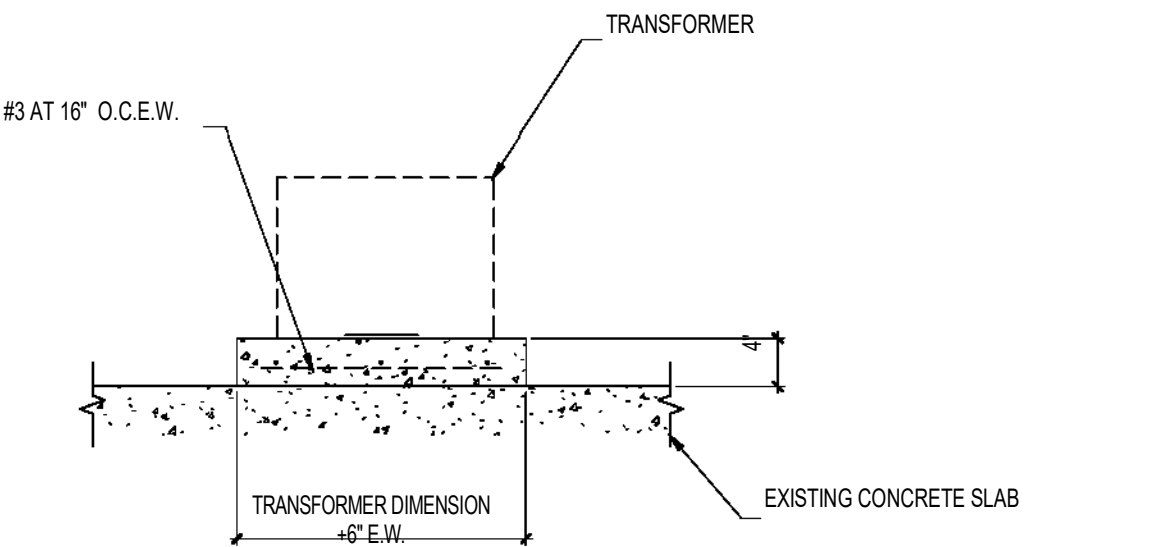
REFER TO SHEET A2.04 FOR EQUIPMENT AND FURNITURE PLAN



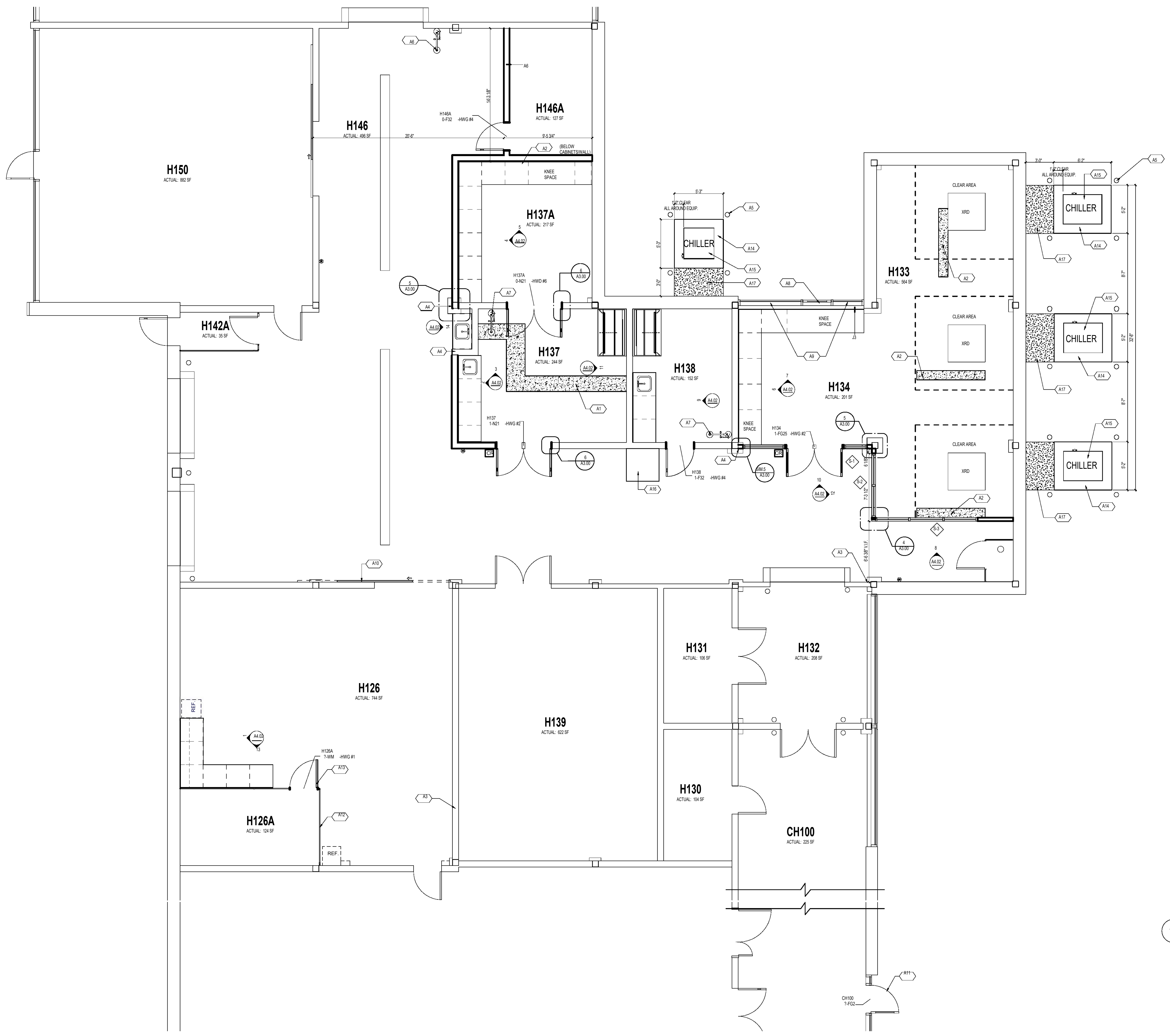
3 BOLLARD DETAIL
 3/4" = 1'-0"



4 SECTION AT CHILLER PAD
 3/4" = 1'-0"



5 SECTION AT HOUSEKEEPING PAD
 3/4" = 1'-0"



1 FLOOR PLAN - LABS
 1/4" = 1'-0"

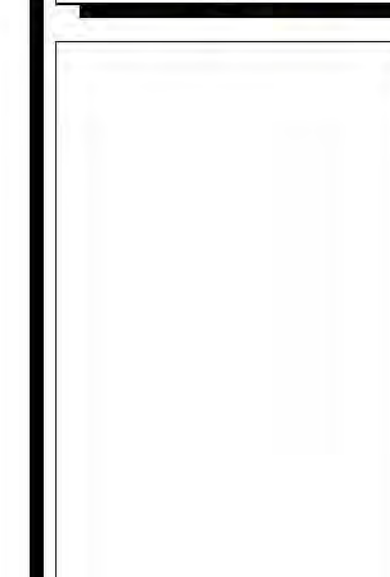


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PROJECT STATUS: 100% CONSTRUCTION DOCUMENTS - FOR



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RENOVATIONS TO UNIVERSITY OF NORTH TEXAS DISCOVERY PARK H WING RESEARCH LABS UNIVERSITY OF NORTH TEXAS DISCOVERY PARK, 3940 N. ELM ST. DENTON, TX 76207

FLOOR & BASE FINISH PLAN - LABS

A2.02A

INTERIOR COLOR SCHEDULE

MARK	TYPE	MANUFACTURER	PRODUCT NAME & NUMBER	COLOR	SIZE	COMMENTS
FLOORING						
FER1	EPOXY RESIN - WITH FLAKES	--	STONHARD STONTECH - UTF	UNT CUSTOM COLOR	1/4" FLAKE SIZE	
FER2	EPOXY RESIN	--	STONHARD STONKOTE - HT4	STEEL GREY	--	
WALL BASE						
RB1	RUBBER BASE	ROPPE	--	--	4" HIGH	
WALL FINISHES						
EP1	MARINE EPOXY PAINT	SHERWIN WILLIAMS	SW 7049	NUANCE	--	
EP2	MATCH EXISTING	--	--	--	--	
WALL PROTECTION						
CG1	CORNER GUARD	--	--	STAINLESS STEEL	1.5" - 6.0"	
CEILING						
ACT1	ACOUSTICAL CEILING	ARMSTRONG	TILE: OPTIMA SQUARE EDGE #3150	WHITE	24" X 24"	
MILLWORK						
PL2	MILLWORK	WILSONART	ASTRO STRANDZ 4940	--	--	
PL3	LABORATORY MILLWORK	WILSONART	ASTRO STRANDZ 4940	--	--	
ER1	EPOXY RESIN LAB BENCH COUNTERTOP	DURCOON	BLACK LAB BENCH EPOXY RESIN	--	--	
PL1	COUNTERTOP - PLASTIC LAMINATE	WILSONART	TO BE DETERMINED BY ARCHITECT	--	--	
SS1	SOLID POLYMER COUNTERTOP	--	TO BE DETERMINED BY ARCHITECT	--	--	

INTERIOR COLOR SCHEDULE NOTES

- REFER TO FLOOR AND BASE FINISH PLANS FOR MORE INFORMATION.
- REFER TO WALL FINISH PLANS FOR MORE INFORMATION.

GENERAL PAINTING NOTES

- PAINT ALL INTERIOR PRIMED STRUCTURAL ITEMS EXPOSED TO VIEW.
- PAINT ALL EXTERIOR STRUCTURAL STEEL ELEMENTS, INCLUDING IN CRAWL SPACES AND VENTED SPACES.
- PAINT ALL UNFINISHED SURFACES EXPOSED TO VIEW NOT SCHEDULED TO RECEIVE ANY OTHER FINISH UNLESS NOTED OTHERWISE.
- IN ROOMS WITHOUT FINISHED CEILINGS, PAINT ALL EXPOSED ELEMENTS SUCH AS STRUCTURE, CONDUITS, PIPING, HVAC DUCTWORK, ETC.
- PAINT ALL SIDES OF PIPING, RAYS AND SPOFFS. PAINT ALL SPOFF FACES SAME AS SPOFF BOTTOM.
- PAINT ALL SIDES OF HOLLOW METAL DOORS & FRAMES.
- COMPLETE COVERAGE OF ALL EXPOSED SURFACES IS INTENDED UNLESS SPECIFICALLY NOTED NOT TO BE PAINTED. DO NOT PAINT THE FOLLOWING ITEMS, UNLESS NOTED OTHERWISE:
 - FACTORY-FINISHED MATERIALS AND EQUIPMENT.
 - NON-FERROUS METALS, EXCEPT FOR ITEMS INDICATED TO BE PAINTED.
 - MOVING PARTS OF OPERATING UNITS, MECHANICAL AND ELECTRICAL PARTS, SUCH AS VALVE AND DAMPER OPERATORS, LINKAGES, SENSING DEVICES, MOTOR OR FAN SHAFTS.
 - CODE REQUIRED LABELS SUCH AS UNDERWRITERS' LABORATORIES AND FACTORY MUTUAL, OR ANY EQUIPMENT IDENTIFICATION, PERFORMANCE RATING, INSTRUCTIONS, NAME OR NOMENCLATURE PLATES.
 - DUCT SHAFTS, CONCEALED SPACES, AND CONCEALED PIPES AND DUCTS.
 - ACOUSTICAL TILE AND SUSPENSION SYSTEM, UNLESS NOTED OTHERWISE.
 - CONCRETE FLOORS.
 - STRUCTURAL STEEL WORK CONCEALED BY INTERIOR BUILDING FINISHES.
 - PLASTIC LAMINATE OR SOLID POLYMER.
 - SYNTHETIC STUCCO.
 - PRE-FINISHED ALUMINUM FRAMES.
 - GLASS.
- ALL GYPSUM BOARD WALLS AND CEILINGS ARE TO BE LEVEL 4 FINISH UNLESS NOTED OTHERWISE. ALL GYPSUM BOARD SURFACES ARE TO RECEIVE LIGHT ORANGE PEEL TEXTURE AS APPROVED BY OWNER.
- WHERE PAINT IS APPLIED OR TOUCHED UP, PAINT ENTIRE WALL OR SURFACE FROM CORNER TO CORNER. SPOT FINISHING IS NOT ACCEPTED.
- INTERIOR PAINT SHEEN:
 - PAINTED WALLS AND CEILINGS ARE TO BE PAINTED IN EGG-SHELL SHEEN UNLESS NOTED OTHERWISE.
 - PAINTED METALS, INCLUDING STRUCTURAL ELEMENTS TO BE PAINTED IN SEMI-GLOSS SHEEN UNLESS NOTED OTHERWISE.
 - PAINTED DOORS, FRAMES, AND TRIM TO BE PAINTED IN SEMI-GLOSS SHEEN UNLESS NOTED OTHERWISE.
- EXTERIOR PAINT SHEEN:
 - PAINTED NON-METALS TO BE PAINTED IN EGG-SHELL SHEEN UNLESS NOTED OTHERWISE.
 - PAINTED METALS TO BE PAINTED IN SEMI-GLOSS UNLESS NOTED OTHERWISE.

GENERAL FLOORING AND WALL BASE FINISH NOTES:

- REFER TO COLOR SCHEDULE SHEET FOR MORE INFORMATION.
- ALL FLOORS SCHEDULED TO RECEIVE NEW FLOORING SHALL BE LEVELED WITH SELF LEVELING UNDERLAYMENT.
 - FOR ALL FLOORS WITHIN PROJECT AREA, PROVIDE UNDERLAYMENT AS NECESSARY TO MAINTAIN SURFACE FLATNESS WITH MAXIMUM VARIATION OF 1/8" IN 10' AND MAXIMUM 1/4" ABOVE OR BELOW FINISH ELEVATION.
 - PROVIDE UNDERLAYMENT AS NECESSARY WHERE A FLOOR SLAB REQUIRES FLOATING UP TO TRANSITION BETWEEN DISSIMILAR FLOOR FINISH MATERIAL THICKNESSES.
 - PROVIDE UNDERLAYMENT AT OTHER LOCATIONS AS CALLED FOR ON THE DRAWINGS.
 - PROVIDE AT ALL LOCATIONS WHERE THE EDGE OF ANY ONE FLOOR SLAB SHOULD ABUT THE EDGE OF ANY OTHER SLAB, BUT THE TWO SLABS ARE NOT LEVEL WITH EACH OTHER, PROVIDE UNDERLAYMENT AS REQUIRED TO FLAT THE FLOORS LEVEL.
 - WHERE DEPRESSIONS AND CHANGES IN FLOOR ELEVATION OCCUR, OR ARE DISCOVERED DURING THE COURSE OF WORK, THAT ARE INCONSISTENT WITH THE FINAL DESIGN INTENT SHALL BE INFILLED TO CREATE A LEVEL FLOOR.
- PROVIDE FLOORING TRANSITION PROFILES TO ALL TRANSITIONS FROM ONE FLOOR MATERIAL TO ANOTHER. REFER TO FLOOR TRANSITION DETAILS ON THIS SHEET.
- ALL FLOORING CHANGES OCCUR AT THE CENTER OF DOOR LEAF (IN CLOSED POSITION), U.N.O. WHERE THERE IS NO DOOR, CHANGE OCCURS AT THE MID-POINT OF THE JAMB, U.N.O.
- EPOXY RESINOUS FLOORING:
 - AT EPOXY RESINOUS FLOORING, EXPOSED CONCRETE FLOORING.
 - AT EXPOSED CONCRETE FLOORING, BASE IS TO BE RUBBER BASE UNLESS NOTED OTHERWISE.

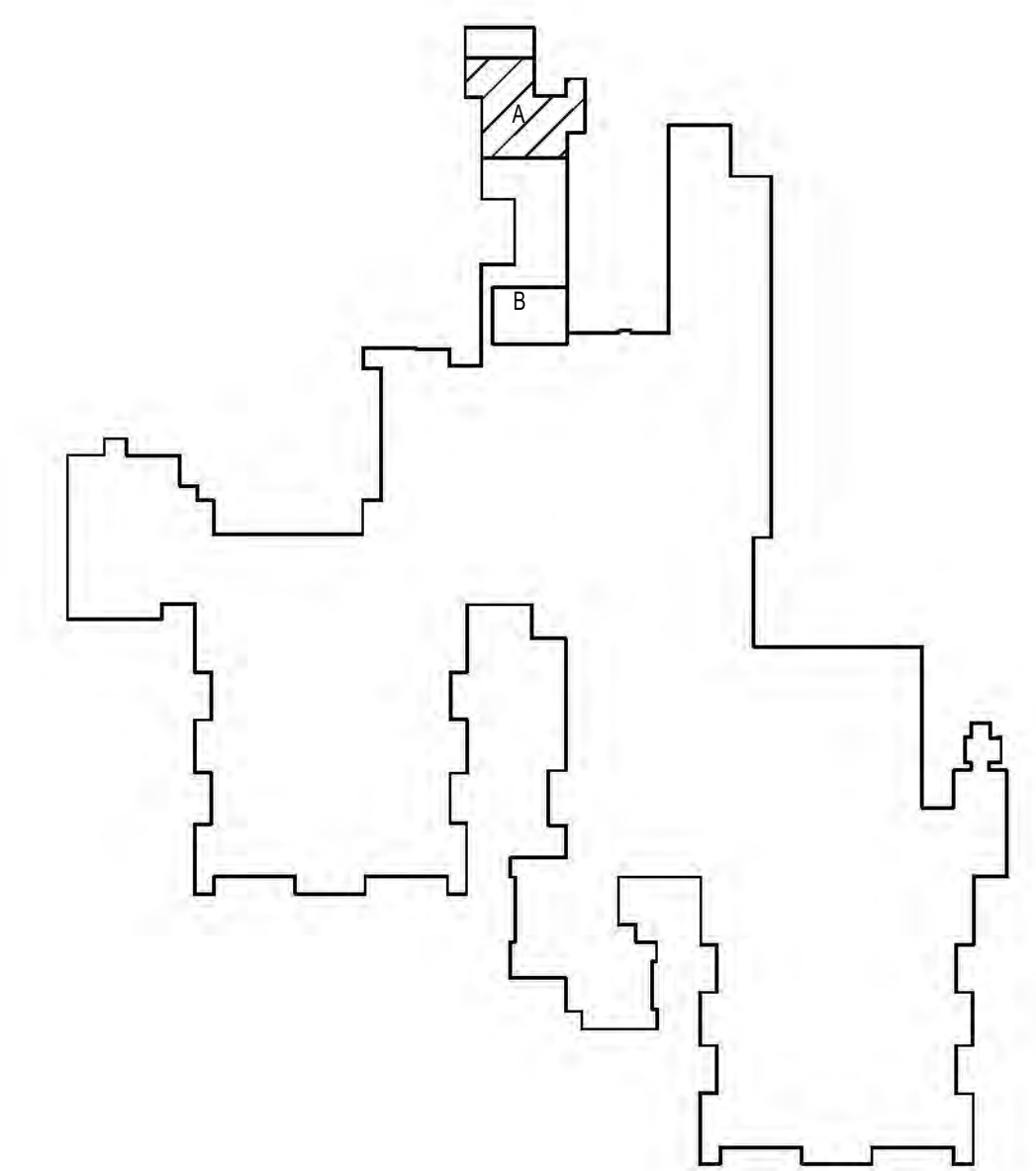
FLOOR AND BASE FINISH PLAN NOTES BY...

FBI EXISTING FLOOR FINISH TO REMAIN



FINISH FLOOR LEGEND

- EPOXY RESIN FLOORING - GREY
- EPOXY RESIN FLOORING WITH COLOR FLAKES
- MATCH EXISTING



FLOOR PLAN - LABS FINISHES



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 UNIVERSITY OF NORTH TEXAS DISCOVERY PARK, 3940 N. ELM ST. DENTON, TX 76207

INTERIOR COLOR SCHEDULE

MARK	TYPE	MANUFACTURER	PRODUCT NAME & NUMBER	COLOR	SIZE	COMMENTS
FLOORING						
FER1	EPOXY RESIN - WITH FLAKES	--	STONHARD STONTECH - UTF	UNT CUSTOM COLOR	1/4" FLAKE	
FER2	EPOXY RESIN	--	STONHARD STONKOTE - HT4	STEEL GREY	--	
WALL BASE						
RB1	RUBBER BASE	ROPPE	--	--	4" HIGH	--
WALL FINISHES						
EP1	MARINE EPOXY PAINT	SHERWIN WILLIAMS	SW 7049	NUANCE	--	--
EP2	MATCH EXISTING	--	--	--	--	--
WALL PROTECTION						
CG1	CORNER GUARD	--	--	STAINLESS STEEL	1.5" - 6" 0"	--
CEILING						
ACT1	ACOUSTICAL CEILING 1	ARMSTRONG	TILE OPTIMA SQUARE EDGE #3150	WHITE	24" X 24"	
MILLWORK						
PL2	MILLWORK	WILSONART	ASTRO STRANDZ 4940	--	--	--
PL3	LABORATORY MILLWORK	WILSONART	ASTRO STRANDZ 4940	--	--	--
ER1	EPOXY RESIN LAB BENCH COUNTERTOP	DURCON	BLACK LAB BENCH EPOXY RESIN	--	--	--
PL1	COUNTERTOP - PLASTIC LAMINATE	WILSONART	TO BE DETERMINED BY ARCHITECT	--	--	--
SS1	SOLID POLYMER COUNTERTOP	--	TO BE DETERMINED BY ARCHITECT	--	--	--

INTERIOR COLOR SCHEDULE NOTES

- REFER TO FLOOR AND BASE FINISH PLANS FOR MORE INFORMATION.
- REFER TO WALL FINISH PLANS FOR MORE INFORMATION.

GENERAL PAINTING NOTES

- PAINT ALL INTERIOR PRIMED STRUCTURAL ITEMS EXPOSED TO VIEW.
- PAINT ALL EXTERIOR STRUCTURAL STEEL ELEMENTS, INCLUDING IN DRAWN SPACES AND VENTED SPACES.
- PAINT ALL UNFINISHED SURFACES EXPOSED TO VIEW NOT SCHEDULED TO RECEIVE ANY OTHER FINISH UNLESS NOTED OTHERWISE.
- IN ROOMS WITHOUT FINISHED CEILING, PAINT ALL EXPOSED ELEMENTS SUCH AS STRUCTURE, CONDUITS, PIPING, HVAC DUCTWORK, ETC.
- PAINT ALL SIDES OF FURN-DOWNS AND SOFFITS. PAINT ALL SOFFIT FACES SAME AS SOFFIT BOTTOM.
- PAINT ALL SIDES OF HOLLOW METAL DOORS & FRAMES.
- COMPLETE COVERAGE OF ALL EXPOSED SURFACES IS INTENDED UNLESS SPECIFICALLY NOTED NOT TO BE PAINTED. DO NOT PAINT THE FOLLOWING ITEMS, UNLESS NOTED OTHERWISE:
 - A. FACTORY-FINISHED MATERIALS AND EQUIPMENT.
 - B. NON-FERROUS METALS, EXCEPT FOR ITEMS INDICATED TO BE PAINTED.
 - C. MOVING PARTS OF OPERATING UNITS, MECHANICAL AND ELECTRICAL PARTS, SUCH AS VALVE AND DAMPER OPERATORS, LINKAGES, SENSING DEVICES, MOTOR OR FAN SHAFTS.
 - D. CODE REQUIRED LABELS SUCH AS UNDERWRITERS' LABORATORIES AND FACTORY MUTUAL, OR ANY EQUIPMENT IDENTIFICATION, PERFORMANCE RATING INSTRUCTIONS, NAME OR NOMENCLATURE PLATES.
 - E. DUCT SHAFTS, CONCEALED SPACES, AND CONCEALED PIPES AND DUCTS.
 - F. ACOUSTICAL TILE AND SUSPENSION SYSTEM, UNLESS NOTED OTHERWISE.
 - G. CONCRETE FLOORS.
 - H. STRUCTURAL STEEL WORK CONCEALED BY INTERIOR BUILDING FINISHES.
 - I. PLASTIC LAMINATE OR SOLID POLYMER.
 - J. SYNTHETIC STUCCO.
 - K. PREFINISHED ALUMINUM FRAMES.
 - L. GLASS.
- ALL GYPSUM BOARD WALLS AND CEILING ARE TO BE LEVEL 4 FINISH UNLESS NOTED OTHERWISE. ALL GYPSUM BOARD SURFACES ARE TO RECEIVE LIGHT ORANGE PEEL TEXTURE AS APPROVED BY OWNER.
- WHERE PAINT IS APPLIED OR TOUCHED UP, PAINT ENTIRE WALL OR SURFACE FROM CORNER TO CORNER. SPOT FINISHING IS NOT ACCEPTED.
- INTERIOR PAINT SHEEN
 - A. PAINTED WALLS AND CEILING ARE TO BE PAINTED IN EGGSHELL UNLESS NOTED OTHERWISE.
 - B. PAINTED METALS, INCLUDING STRUCTURAL ELEMENTS TO BE PAINTED IN SEMI-GLOSS SHEEN UNLESS NOTED OTHERWISE.
 - C. PAINTED DOORS, FRAMES, AND TRIM TO BE PAINTED IN SEMI-GLOSS SHEEN UNLESS NOTED OTHERWISE.
- EXTERIOR PAINT SHEEN
 - A. PAINTED NON-METALS TO BE PAINTED IN EGGSHELL SHEEN UNLESS NOTED OTHERWISE.
 - B. PAINTED METALS TO BE PAINTED IN SEMI-GLOSS UNLESS NOTED OTHERWISE.

GENERAL WALL FINISH NOTES:

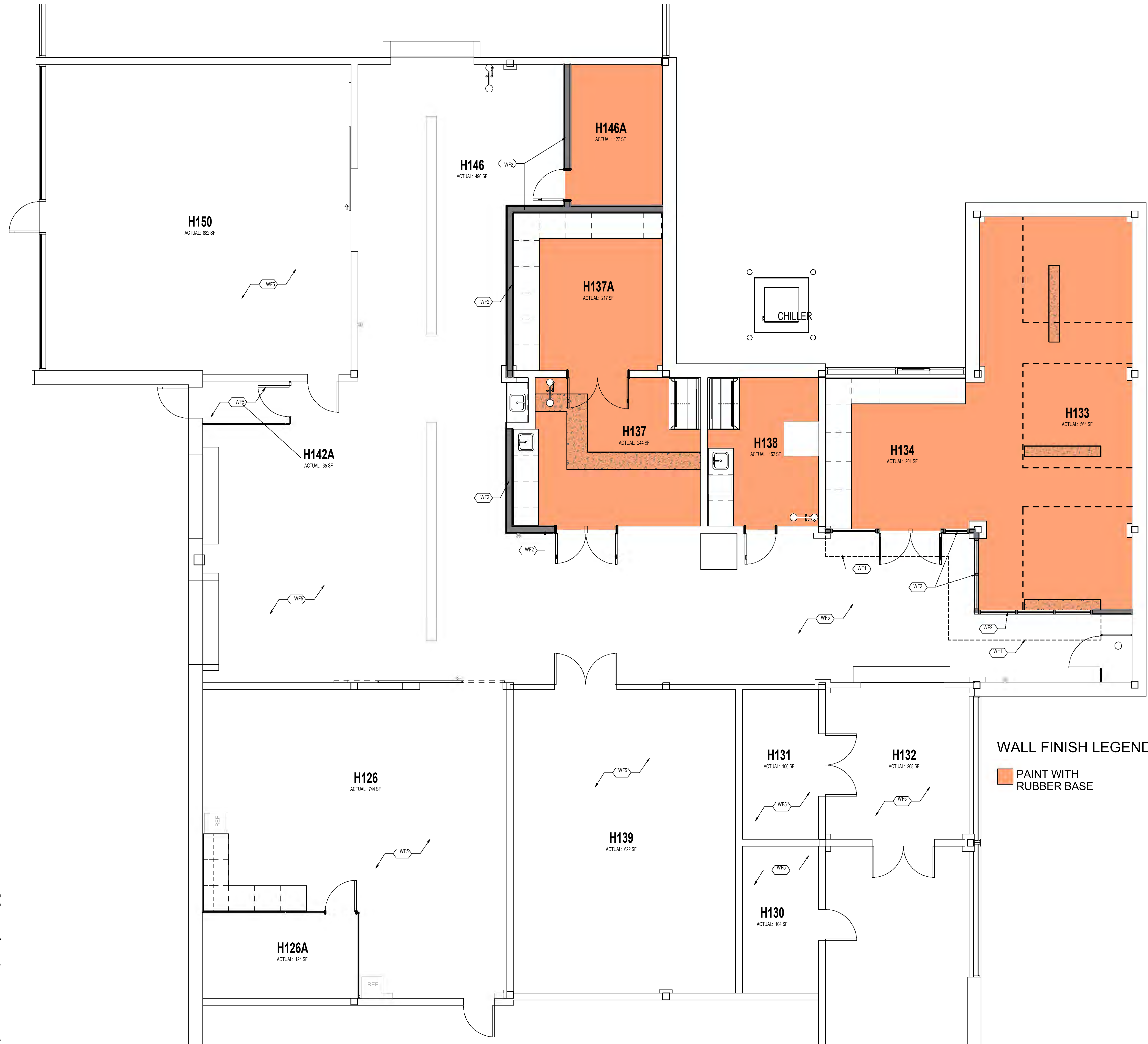
- A. REFER TO COLORS SCHEDULE FOR ADDITIONAL INFORMATION.
- B. SUPPLY & RETURN GRILLES TO BE FINISHED TO MATCH ADJACENT SURFACES.
- C. ALL FLOORING CHANGES OCCUR AT THE CENTER OF DOOR LEAF (IN CLOSED POSITION), U.N.O.
- D. WHERE THERE IS NO DOOR, CHANGE OCCURS AT THE MID-POINT OF THE JAMB, U.N.O.
- E. FINISHES SCHEDULED ARE DEFAULT FOR ROOMS, UNLESS NOTED OTHERWISE.
- F. ALL OUTSIDE CORNERS OF GYPSUM BOARD WALLS TO RECEIVE CORNER GUARDS INCLUDING 45 DEGREE CORNERS.

WALL FINISH PLAN NOTES BY NUMBER

- WF1 TEXTURE AND PAINT FURROWDOWN ABOVE TO MATCH EXISTING ADJACENT WALL.
- WF2 TEXTURE AND PAINT FURROWDOWN ABOVE TO MATCH EXISTING ADJACENT WALL.
- WF3 TEXTURE AND PAINT NEW WALL TO MATCH EXISTING ADJACENT.

WALL FINISH LEGEND

PAINT WITH RUBBER BASE



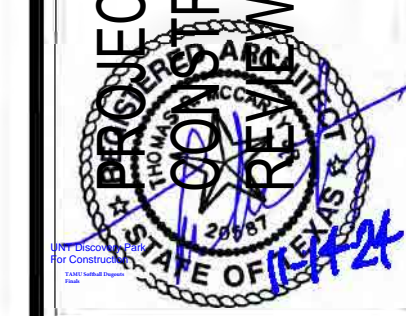
1 FLOOR PLAN - LABS WALL FINISHES
 1/4" = 1'-0"
 NORTH

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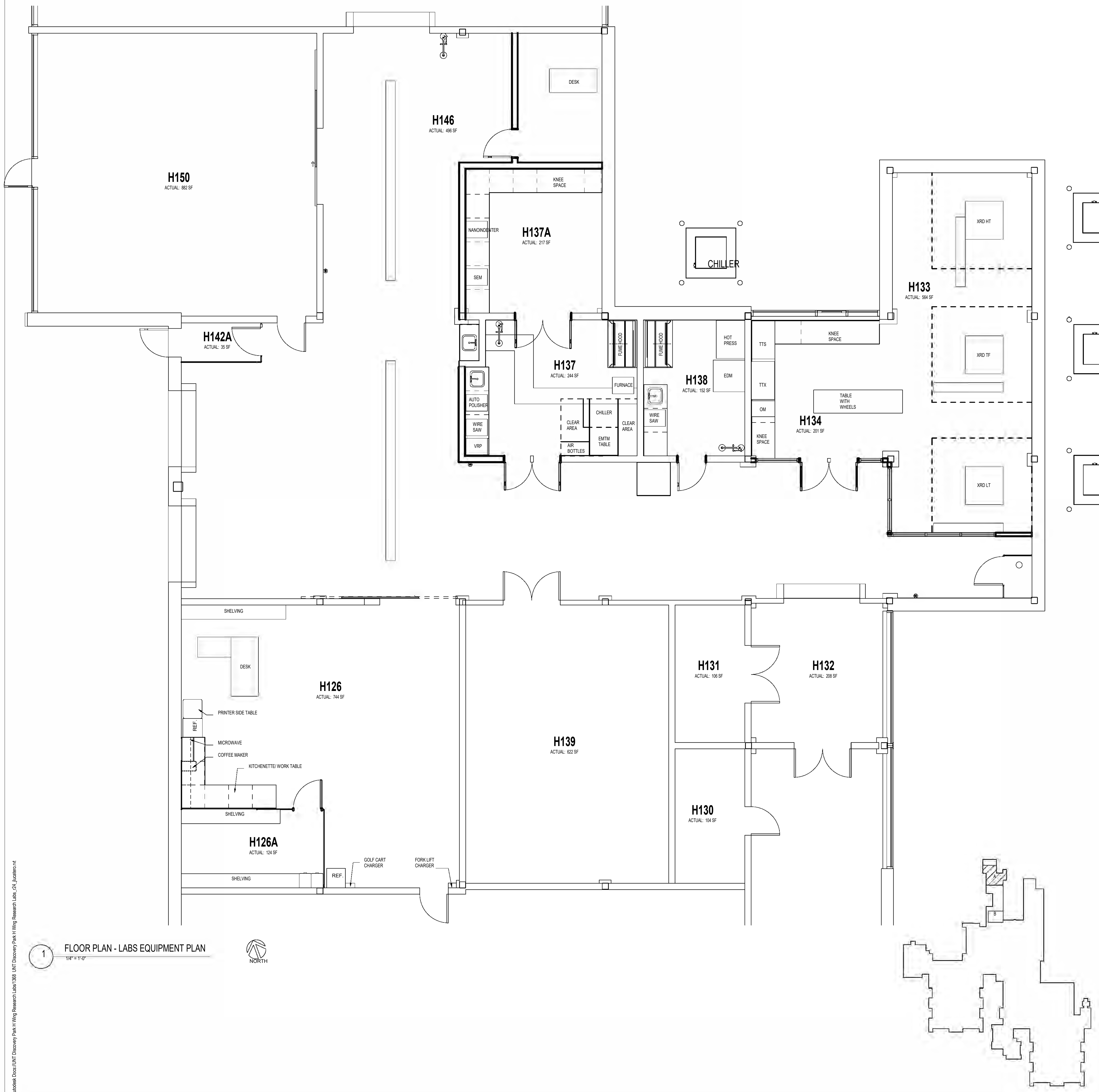
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FURNITURE, FIXTURES, & EQUIPMENT SCHEDULE

MARK	TYPE	MANUFACTURER	MODEL	COMMENTS	OWNER PROVIDED, OWNER INSTALLED	OWNER PROVIDED, CONTRACTOR INSTALLED	CONTRACTOR PROVIDED, CONTRACTOR INSTALLED
FURNITURE							
F1	L-SHAPED DESK				X		
F2	DESK				X		
F3	SHELVING				X		
F4	TABLE WITH WHEELS				X		
F5	SIDE TABLE				X		
F6	FILE CABINET (2)				X		
EQUIPMENT							
E1	XRD - HT					X	
E2	XRD - TF					X	
E3	XRD - LT					X	
E4	TTS					X	
E5	TTX					X	
E6	OM					X	
E7	HOT PRESS					X	
E8	EDM					X	
E9	WIRE SAW (2)					X	
E10	CHILLER					X	
E11	EMTM TABLE					X	
E12	AIR BOTTLE STRAP RACK					X	
E13	FURNACE					X	
E14	AUTO POLISHER					X	
E15	NANOINDENTER					X	
E16	SEM					X	
E17	WRP					X	
E20	FUME HOOD						X
E21	REF (2)				X		
E20	MICROWAVE				X		
E21	COFFEE MAKER				X		

GENERAL FF&E NOTES:

- U.N.O. LOCATE FIRE EXTINGUISHER CABINETS 1'-6" FROM ABUTTING WALL, DOOR FRAME, OR EDGE OF DOOR IN OPEN POSITION.
- SECURELY ATTACH ALL SHELVING & STORAGE UNITS 60" TALL & HIGHER TO WALL, INCLUDING OWNER FURNISHED ITEMS. COORDINATE FINAL LOCATIONS OF OWNER FURNISHED ITEMS WITH ARCHITECTS IN FIELD.
- PRIOR TO ORDERING, VERIFY SIZE & COMPATIBILITY OF FLAT PANEL DISPLAY WALL MOUNT(S) & PROJECTOR MOUNT(S) WITH OWNER.
- ALL CABINETRY UNITS TO BE MAPLE FINISH OR AS OTHERWISE SELECTED BY ARCHITECT.
- FOR PRODUCTS LISTED ON THIS SHEET BUT NOT IN THE SPECIFICATIONS, OTHER MANUFACTURERS MAY BE SUBMITTED FOR APPROVAL, SUBJECT TO THE REQUIREMENTS OF THE SPECIFICATIONS.


Autodesk Docs: U:\NT\Discovery Park H Wing Research Labs\1368_U\NT\Discovery Park H Wing Research Labs_Labs_L24_Justiero.rvt

1 FLOOR PLAN - LABS EQUIPMENT PLAN
 1/4" = 1'-0"
 NORTH

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 ONE INCH

REVISIONS:

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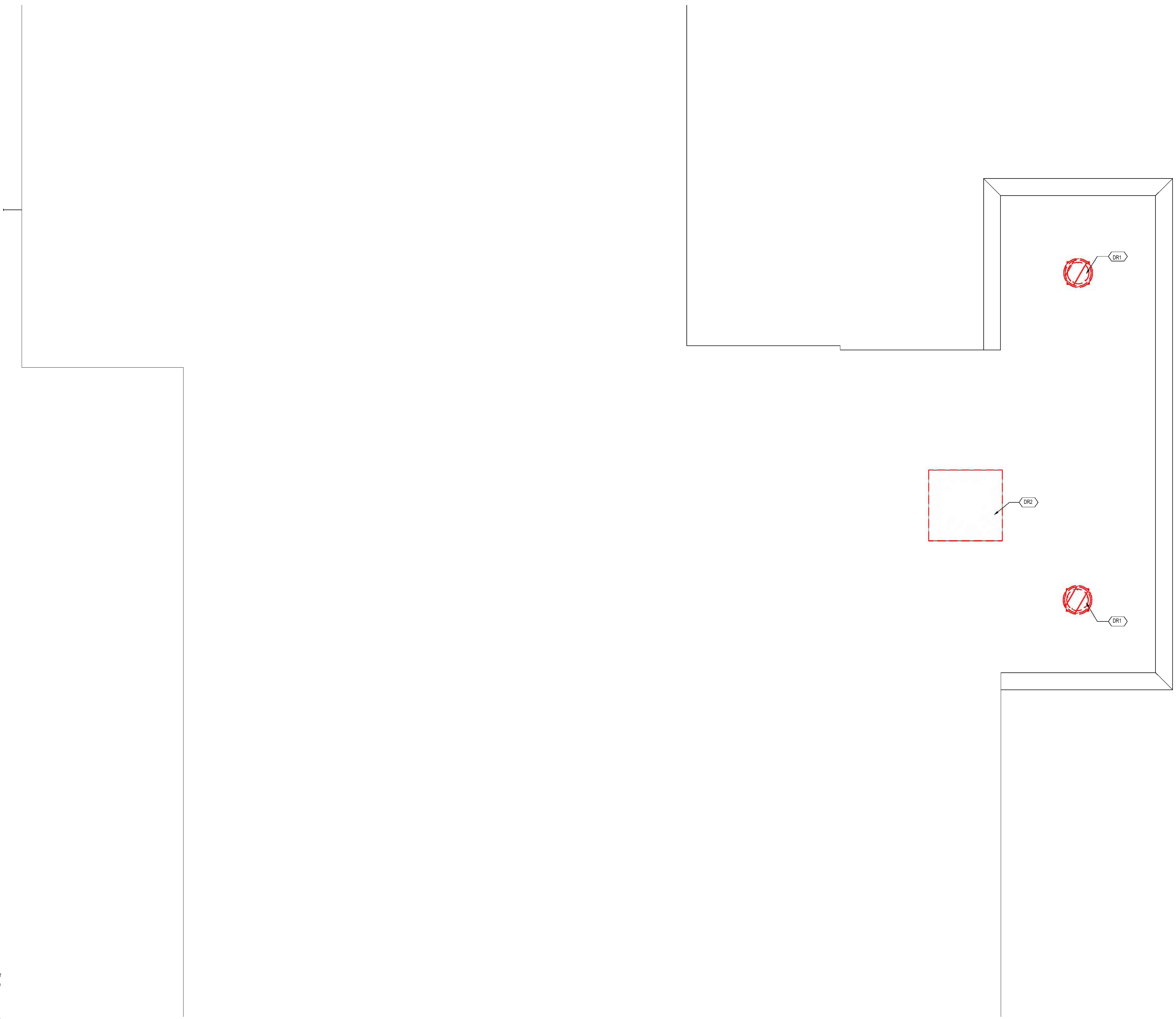
DEMOLITION ROOF PLAN
 A2.05A

DEMOLITION ROOF PLAN GENERAL NOTES:

- A. THE INTENT OF THE DEMOLITION PLANS IS TO REMOVE ALL EXISTING CONSTRUCTION ITEMS THAT ARE NOT REQUIRED FOR THE FINISHED NEW CONSTRUCTION EVEN IF NOT INDIVIDUALLY ENUMERATED. MECHANICAL AND ELECTRICAL ITEMS INCLUDING BUT NOT LIMITED TO DUCTWORK, PLUMBING FIXTURES, ELECTRICAL CONDUITS, BACK BOXES, PIPING "F" BOXES, ETC. NOT REQUIRED FOR THE FINISHED BUILDING SHALL BE REMOVED.
- B. REFER TO MECHANICAL, ELECTRICAL, AND PLUMBING DRAWINGS FOR ADDITIONAL DEMOLITION WORK REQUIRED. REMOVE PORTIONS OF EXISTING SURFACES REQUIRED FOR THE DEMOLITION OF MECHANICAL, PLUMBING, AND/OR ELECTRICAL WORK. REPLACE ALL SURFACES WITH NEW MATERIALS OR PATCH EXISTING MATERIALS AS REQUIRED TO MATCH EXISTING SURFACES.
- C. COORDINATE MECHANICAL, PLUMBING, AND ELECTRICAL DEMOLITION WITH REQUIREMENTS FOR NEW MECHANICAL AND ELECTRICAL WORK. REFER TO MECHANICAL, PLUMBING, AND ELECTRICAL DRAWINGS AND SPECIFICATIONS. WHERE EXISTING PLUMBING, ELECTRICAL, OR HVAC DEVICES ARE REMOVED, REMOVE ALL PLUMBING, ELECTRICAL, OR HVAC LINES, DUCTS, DEVICES, ETC. BACK TO MAIN.
- D. AT ALL LOCATIONS WHERE NEW FLOORING IS SCHEDULED OR IT IS NOTED TO REMOVE EXISTING FLOORING, THE CONTRACTOR SHALL MECHANICALLY CLEAN THE FLOOR AS REQUIRED TO PROPERLY INSTALL THE NEW SCHEDULED FLOORING. SOLVENTS MAY NOT COMPLETELY CLEAN THE EXISTING CONCRETE TO PROVIDE AN ACCEPTABLE BASE FOR NEW FLOOR FINISH ADHESIVES. THEREFORE, THERE ARE A VARIETY OF MECHANICAL MEANS WHICH MAY BE USED TO CLEAN THE FLOOR THOROUGHLY.
- E. THE CONTRACTOR SHALL FILL ALL EXISTING FLOOR DEPRESSIONS AND OPENINGS EVEN IF NOT INDIVIDUALLY ENUMERATED.
- F. IT IS THE INTENT, EVEN IF NOT SPECIFICALLY NOTED ON THE DRAWINGS, THAT THE CONSTRUCTION/REMODEL PERIMETER TO BE SEALED IN A MANNER TO PREVENT CONSTRUCTION DEBRIS AND DUST FROM MIGRATING FROM A CONSTRUCTION AREA TO A BUILDING OPERATIONAL AREA, AS REQUIRED FOR EACH PHASE OF CONSTRUCTION.
- G. OWNER WILL REMOVE ANY ITEMS THEY WANT TO SALVAGE PRIOR TO COMMENCING DEMOLITION. HOWEVER, OWNER RETAINS FIRST RIGHT TO SALVAGED MATERIALS EVEN IF NOT INDIVIDUALLY ENUMERATED. AT THE OWNER'S REQUEST, CONTRACTOR WILL DELIVER REQUESTED SALVAGE MATERIAL TO THE OWNER.
- H. SAW-CUT AND REMOVE PORTION OF EXISTING CONCRETE SLAB OR CORE FLOOR AS REQUIRED FOR INSTALLATION OF NEW UNDER FLOOR UTILITIES (TYPICAL).

DEMOLITION ROOF PLAN NOTES BY NUMBER

- DR1 REMOVE EXISTING EXHAUST FAN AND CAP CURB.
- DR2 REMOVE PORTION OF ROOFING WHERE REQUIRED FOR NEW EQUIPMENT CURB. REFER TO STRUCTURAL AND MECHANICAL DRAWINGS FOR REQUIRED HOLES IN DECK AND STRUCTURAL SUPPORT.



1 DEMOLITION ROOF PLAN
 1/4" = 1'-0"



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ROOF PLAN GENERAL NOTES:

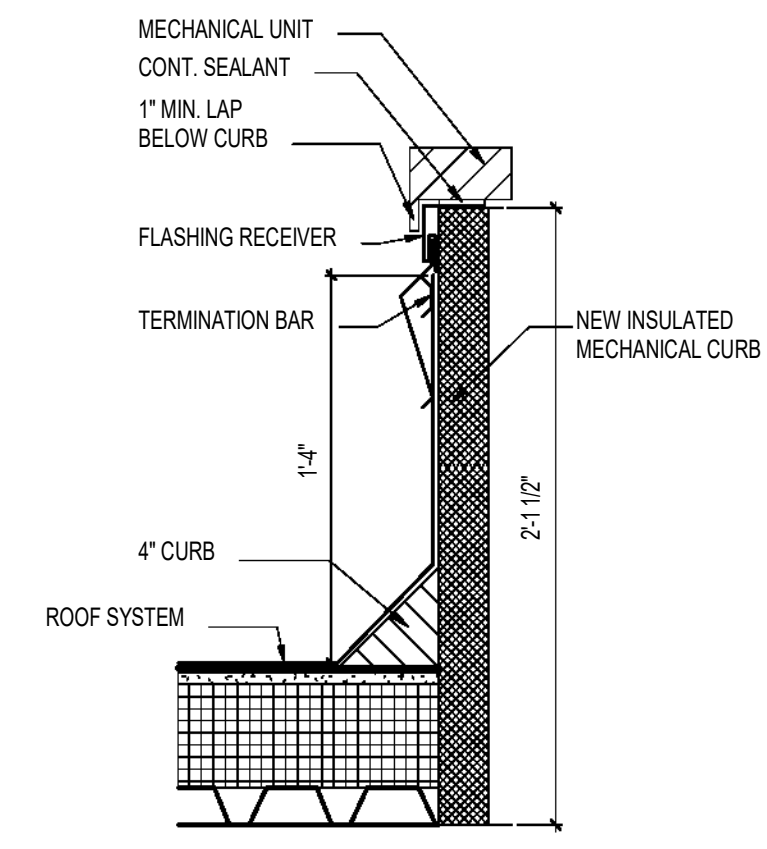
- A. AT ANY EXISTING ROOF AREA STILL UNDER WARRANTY, ALL WORK SHALL BE COMPLETED BY A CONTRACTOR ACCREDITABLE TO THAT WARRANTY.
- B. EQUIPMENT MOUNTED ON ROOF, NOT ALL ITEMS ARE NECESSARILY SHOWN ON THIS ROOF PLAN.
- C. ALL CURBS MUST BE 18" TALL MIN. ABOVE ROOF LEVEL.
- D. PROVIDE WALK TREADS AROUND ROOF MOUNTED EQUIPMENT.
- E. PROVIDE 2'-6" X 2'-6" SQUARE LEAD FLASHING OF 2 1/2" LESS MIN. PRIMED AND SET IN MASTIC AT ALL ROOF DRAINS AND OVERFLOW DRAINS PER MCA RECOMMENDATIONS.
- F. ALL PIPE, VENTS THROUGH ROOF, CONDUIT, EQUIPMENT SUPPORT, BUILDING MAINTENANCE THE BACK ANCHOR PENETRATIONS SHALL BE FLASHED PER DETAILS AND ROOFING MANUFACTURER'S WRITTEN AND DRAWN INSTRUCTIONS.

ROOF PLAN SYMBOLS LEGEND

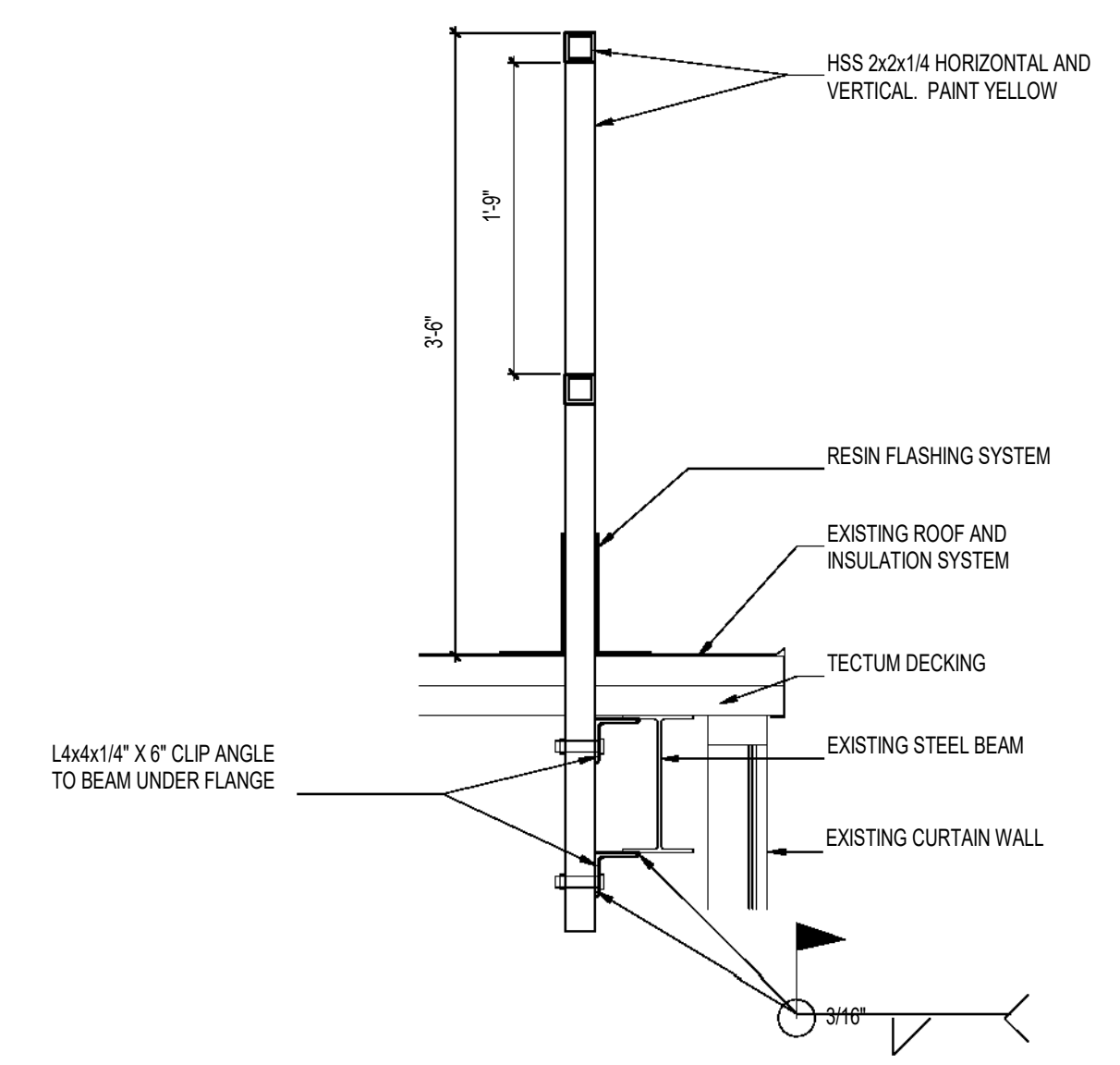
- R.D. ROOF DRAIN
- O.D. OVERFLOW DRAIN
- DIRECTION OF DOWN SLOPE. MINIMUM SLOPE 1/4" FT. TO DRAIN
- CRICKET. MINIMUM NET SLOPE 1/4" FT. TO DRAIN
- ROOF TO ROOF ALUMINUM STAIRS
- WALKWAY PADS

ROOF PLAN NOTES BY NUMBER

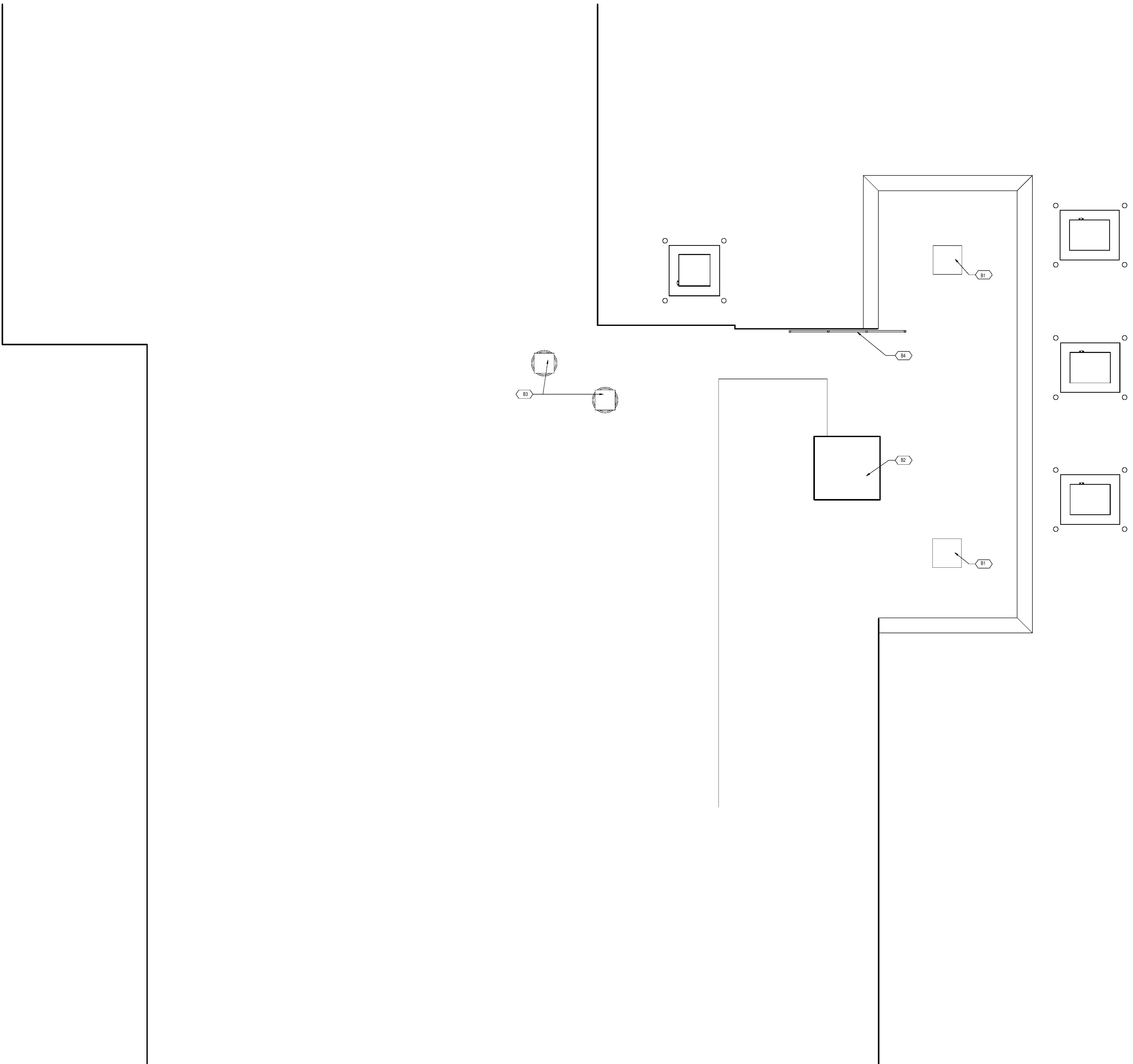
- B1 CAP EXISTING FAN CURB.
- B2 NEW EQUIPMENT CURB. SEE DETAIL 3/A2.05B. REFER TO MECHANICAL DRAWINGS FOR REQUIRED HOLES IN DECK. SEE DETAILS 3/A4.05.00 FOR STRUCTURAL SUPPORT DETAILS.
- B3 NEW EXHAUST FANS. SEE MECHANICAL SHEETS.
- B4 STEEL GUARD RAIL. 42" TOP HIGH ABOVE ROOF SURFACE. VERTICALS MEMBERS TO BE SPACED AT 4'-0" O.C. MAX. EXTEND END TO BE 30" BEYOND EDGE OF RTU. PAINT YELLOW. SEE DETAIL 3/A2.05B



2 CURB DETAIL
 1/2" = 1'-0"

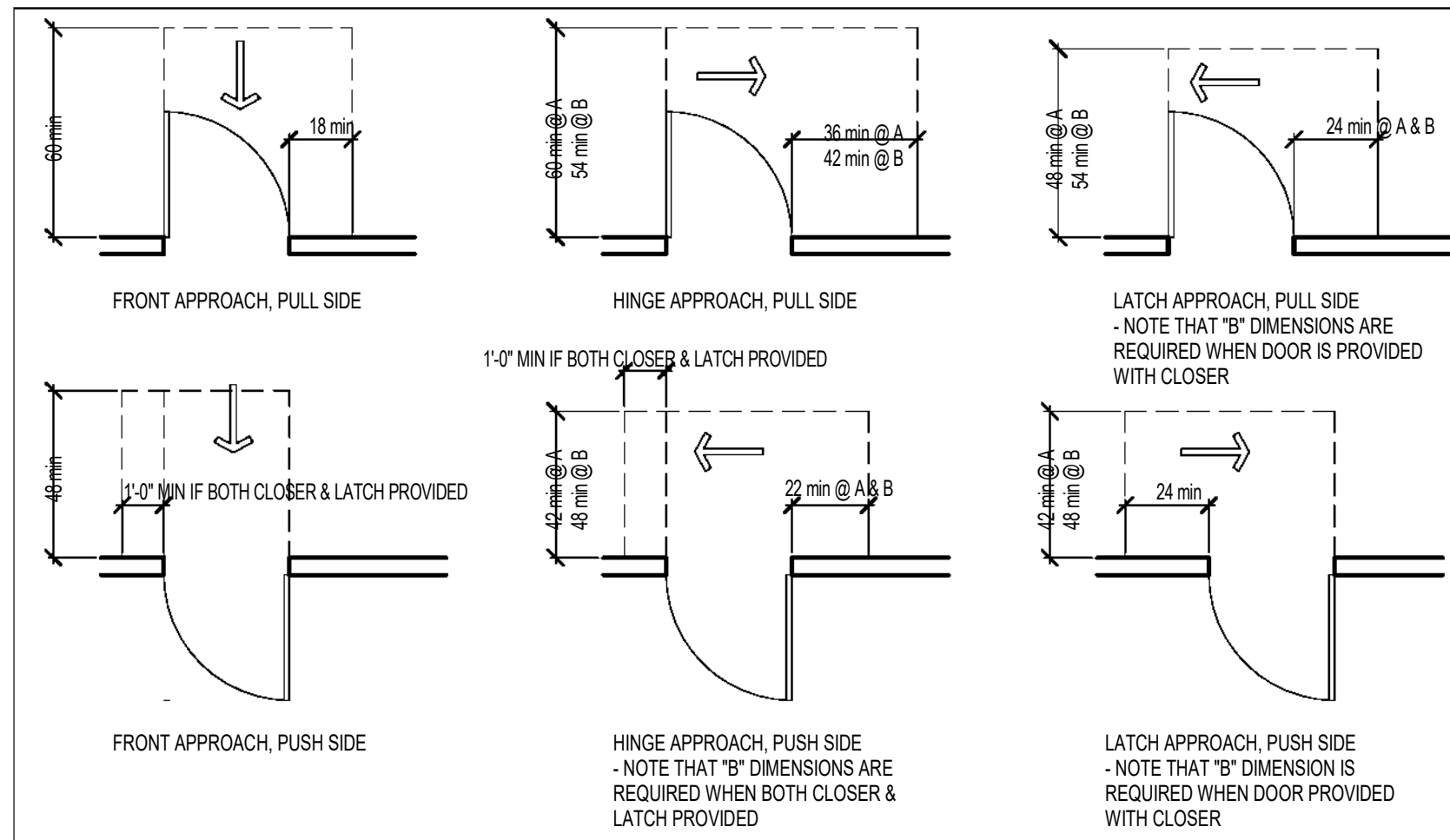


3 GUARD RAIL
 1" = 1'-0"

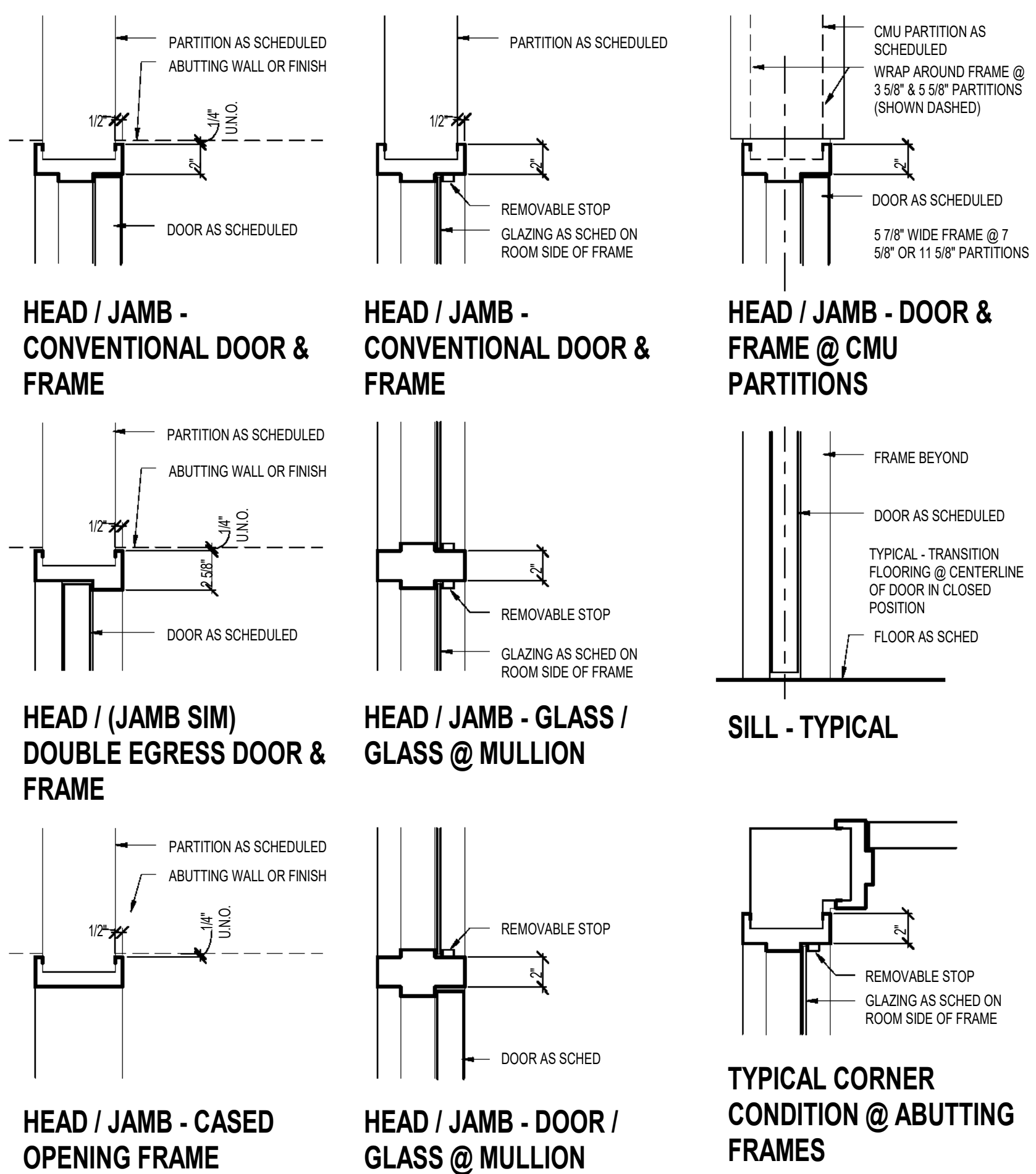


1 ROOF PLAN
 1/4" = 1'-0"

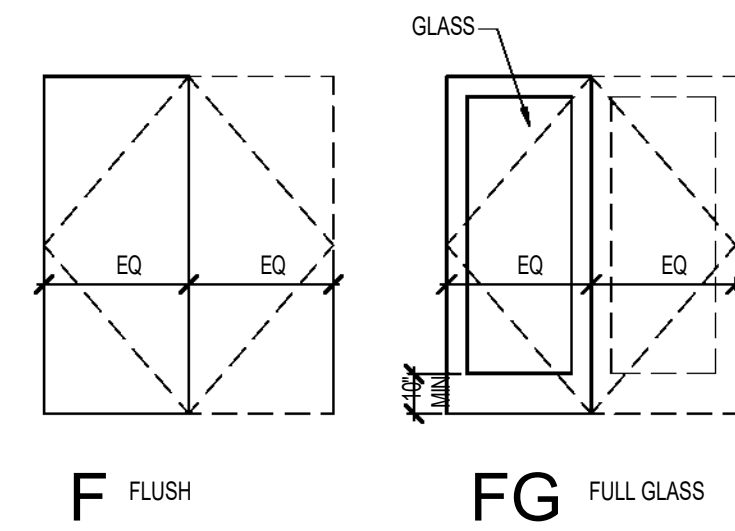




MINIMUM MANEUVERING CLEARANCES AT MANUAL SWINGING DOORS & GATES

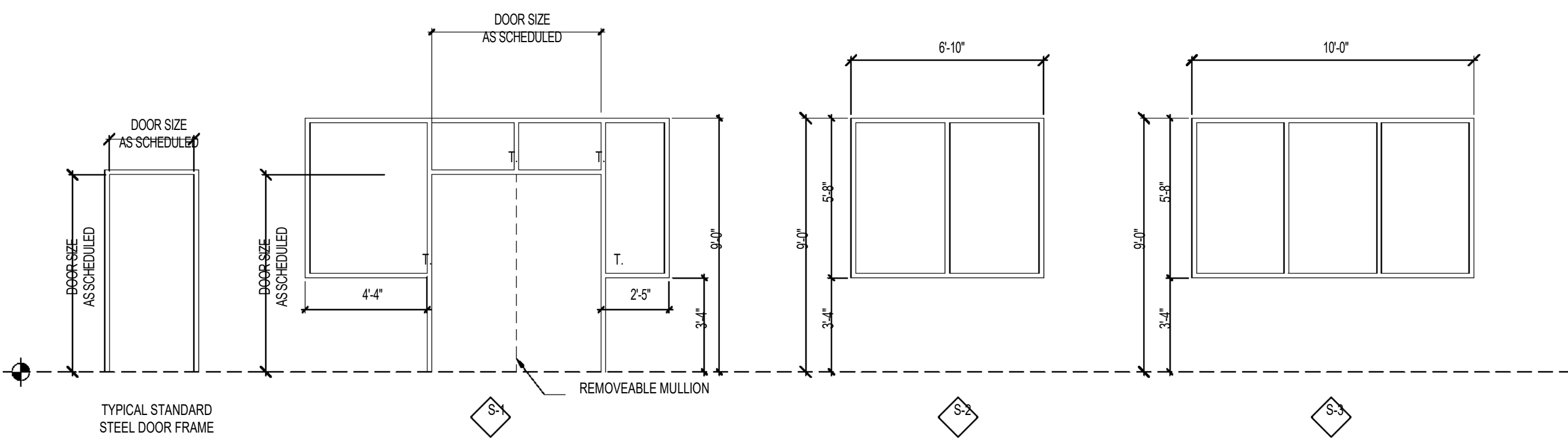


TYPICAL INTERIOR STEEL HEAD / JAMB / SILL DETAILS



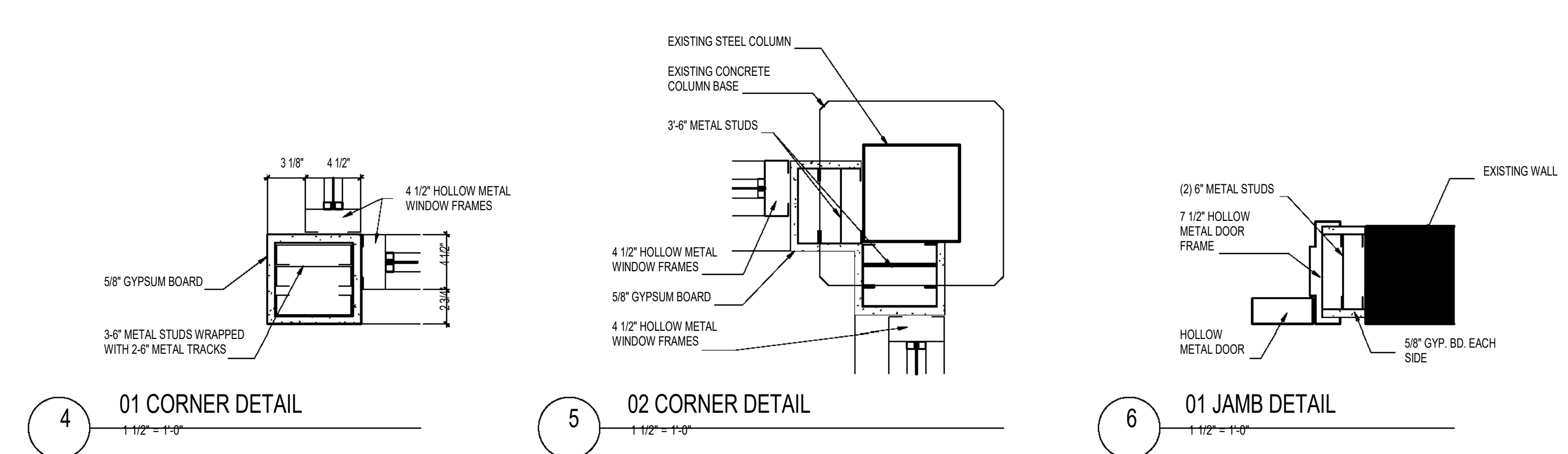
DOOR TYPES ELEVATIONS

REFER TO FLOOR PLANS TO DETERMINE IF DOORS ARE SINGLE DOORS OR DOUBLE DOORS TO OBTAIN SIZES OF DOORS. REFER TO THE FLOOR PLAN TO OBTAIN DOOR TYPE AND THEN REFER TO DOOR TYPES SCHEDULE.



HOLLOW METAL DOOR AND WINDOW FRAME TYPES

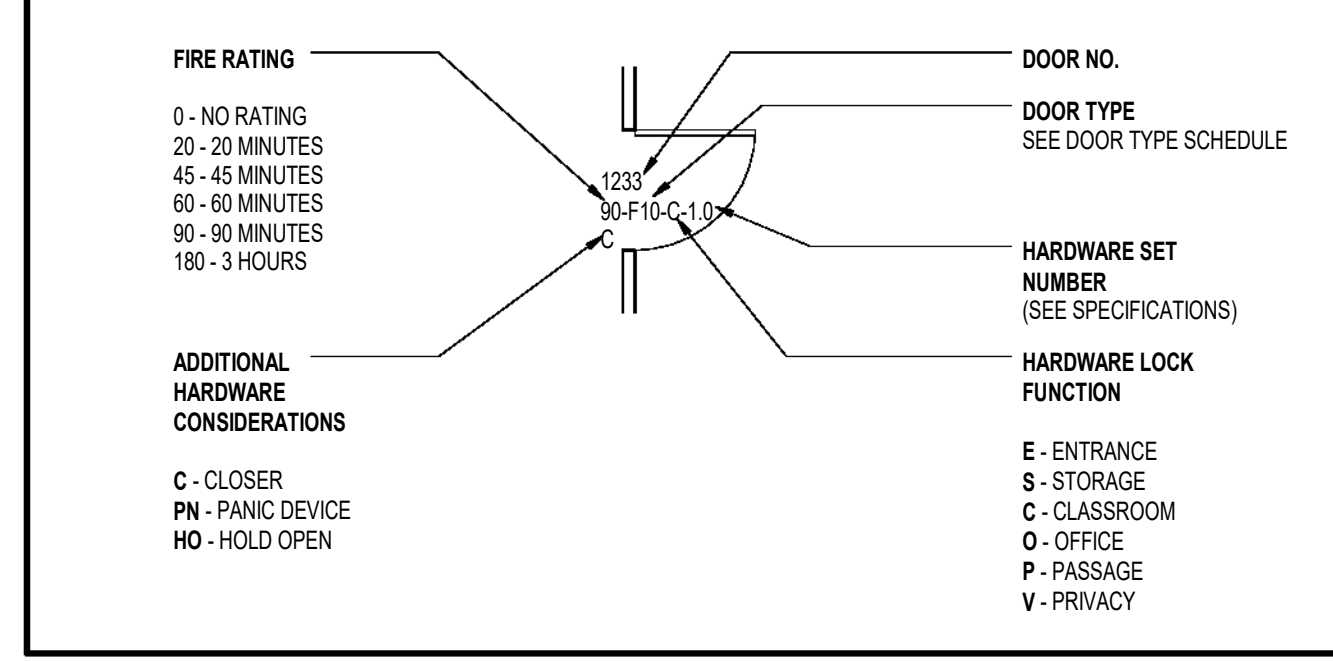
REFER TO GLASS SCHEDULE ON THIS SHEET FOR ADDITIONAL INFORMATION. THESE FRAME TYPES ARE FLAGGED ON THE FLOOR PLANS UNLESS IT IS A TYPICAL STANDARD FRAME BY ITSELF WITH NO SIDELITE.



DOOR GENERAL NOTES

- A. TYPICAL DOOR DETAILS ARE SHOWN ON THIS SHEET. SEE FLOOR PLANS FOR SPECIALIZED PLAN DETAIL REFERENCES FOR ATYPICAL CONDITIONS.
- B. DOOR FRAME THROAT DIMENSIONS: REFER TO FLOOR PLANS FOR THE APPLICABLE PARTITION TYPE.
- C. ALL WOOD DOORS TO BE TRANSPARENT FINISH UNLESS NOTED OTHERWISE.

EXAMPLE OF DOOR INFORMATION ON FLOOR PLANS



GLASS SCHEDULE

- ALL EXTERIOR GLAZING SHALL BE INSULATED GLAZING UNITS INCLUDING DOORS, UNLESS NOTED OTHERWISE. SEE COLOR SCHEDULE FOR TYPE AND PERFORMANCE CHARACTERISTICS.
- ALL INTERIOR GLASS SHALL BE 1/4" THICK POLISHED PLATE UNLESS NOTED OTHERWISE.
- PROVIDE TEMPERED GLASS AT ALL LOCATIONS REQUIRED BY THE BUILDING CODE REFERENCED FOR THE PROJECT AND ALL OTHER APPLICABLE CODES. HOWEVER, IN SOME CASES, GLASS MAY BE LABELED AS "T" FOR TEMPERED EVEN THOUGH IT MAY NOT BE REQUIRED BY THE APPLICABLE CODES.
- PROVIDE VISION PANEL FRAMING AND GLAZING IN DOORS AS REQUIRED FOR SCHEDULED FIRE RATING.
- REFER TO THE FLOOR PLANS, EXTERIOR ELEVATIONS, AND WALL SECTIONS FOR LOCATIONS AND QUANTITY OF EXTERIOR WINDOWS.
- AT ROOMS SCHEDULED TO BE SOUND ATTENUATED, USE 1" INSULATED GLAZING UNITS AT ALL WINDOWS AND DOOR VISION GLAZING, EVEN AT INTERIOR WINDOWS.
- PROVIDE 1-HOUR RATED FIRE GLASS AT ALL 1-HOUR RATED WALLS THAT CONTAIN WINDOWS. AT ALL LITES IN FIRE RATED DOORS, AND AT LOCATION WITH CLASS LABELED AS "TRGL".

DOOR TYPES SCHEDULE

HOST ROOM	DOOR TYPE	CARD READER	DOORS			FRAME		
			WIDTH	HEIGHT	MATERIAL	GLASS	ELEVATION	MATERIAL
ROOM H138	32		3'-0"	7'-0"		NARROW LITE		
ROOM H168	32		3'-0"	7'-0"		NARROW LITE		
ROOM H134	FG25	YES	3'-0"	7'-0"	STEEL	FULL	STEEL	FULL
ROOM H137	N21	YES	3'-0"	7'-0"	STEEL	NARROW LITE	STEEL	
ROOM H137A	N21		3'-0"	7'-0"	STEEL	NARROW LITE	STEEL	

EXISTING DOOR TYPES SCHEDULE

DOOR TYPE	DOORS			FRAME			COMMENTS
	WIDTH	HEIGHT	MATERIAL	GLASS	ELEVATION	MATERIAL	
FG2	3'-0"	7'-0"	STEEL			STEEL	RELOCATED HARDWARE FROM H133

DOOR TYPES SCHEDULE NOTES AND LEGEND

- WITH THIS DOOR SCHEDULING SYSTEM, EACH AND EVERY DOOR IS NOT SCHEDULED INDIVIDUALLY.
- ALL DOORS WITH THE SAME CHARACTERISTICS ARE ASSIGNED THE SAME DOOR TYPE. THAT IS THEY ARE THE SAME SIZE, SAME MATERIAL, AND FRAME MATERIAL.
- ALL DOORS TO BE INSTALLED IN A TYPICAL STANDARD DOOR FRAME OF THE MATERIAL SCHEDULED IN THE DOOR TYPES SCHEDULE. IF DOOR HAS A SIDELITE, A TRANSFORM GLASS, OR IN A WALL OF GLASS, THE FRAME TYPE WILL BE SHOWN ON THE FLOOR PLAN. THE FRAME MATERIALS MAY BE ONE OF THE FOLLOWING AS SHOWN ON THE FLOOR PLANS):

LEGEND

- ◇ HOLLOW METAL DOOR/WINDOW FRAME TYPE

OTHER

DOOR FRAME MATERIAL / TYPE (ABBREVIATIONS IN PARENTHESES)

- HOLLOW METAL
- WOOD
- ALUMINUM
- FIBERGLASS - (FBG)

DOOR MATERIAL / TYPE (ABBREVIATIONS IN PARENTHESES)

- HOLLOW METAL
- WOOD
- ALUMINUM & GLASS - (ALGL)
- FIBERGLASS - (FBG)
- ALL GLASS - (GLASS)

DOOR GLAZING SCHEDULE

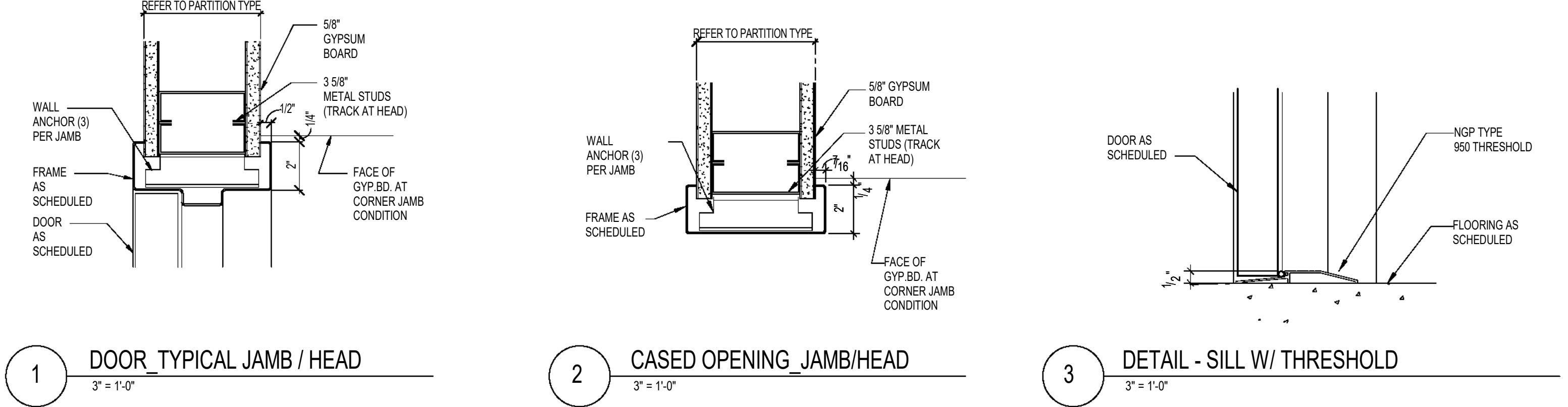
INTERIOR DOORS: 1/4" CLEAR TEMPERED GLASS

EXCEPTIONS:

- 1/4" LAMINATED CLEAR GLASS @ RATED DOORS
- 1/4" FIRE RATED CERAMIC GLASS WHERE NOTED

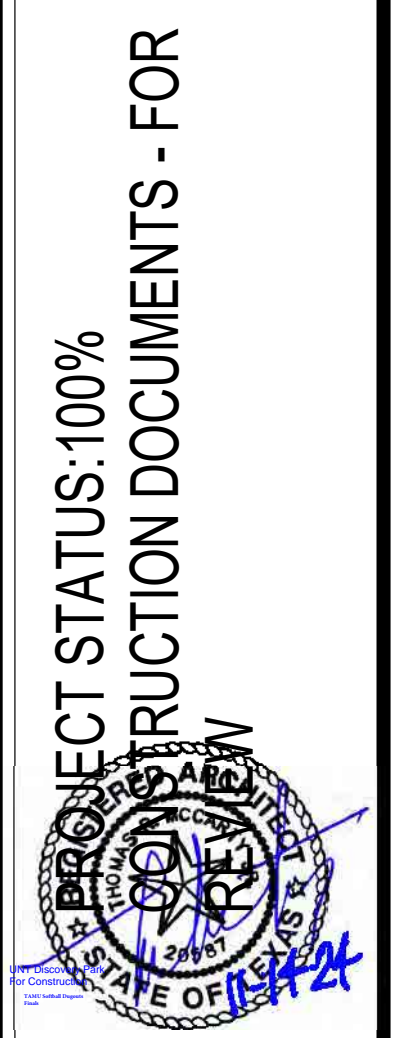
EXTERIOR DOORS: 1" INSULATED GLASS, TEMPERED WHERE REQUIRED.

REFER TO FRAME TYPE ELEVATIONS AND INTERIOR AND EXTERIOR WINDOW TYPES FOR GLAZING TYPES.



TYPICAL CONDITIONS

BAR IS ONE INCH IN LENGTH ON ORIGINAL DRAWING CHECK SCALE AND ADJUST ACCORDINGLY
ONE INCH
REVISIONS:



PROJECT STATUS: 100%
CONSTRUCTION DOCUMENTS - FOR

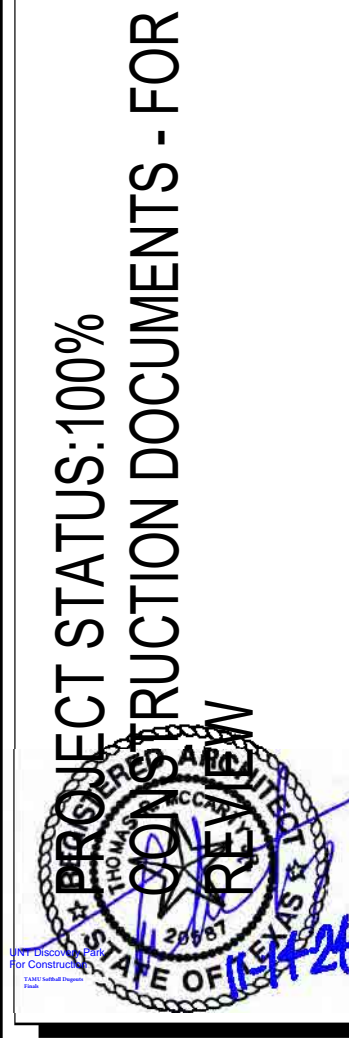
1105 W. RANDOLPH MILL ROAD
ARLINGTON, TEXAS 76012
SUITE 300
WWW.LBLARCHITECTS.COM
TEL: (817) 285-5332
FAX: (817) 285-5332
TDCS: P181811-030
Listen. Build. Lead.

RENOVATIONS TO UNIVERSITY OF NORTH TEXAS
DISCOVERY PARK H WING RESEARCH LABS
UNIVERSITY OF NORTH TEXAS DISCOVERY PARK, 3940 N. ELM ST., DENTON, TX 76207

BAR IS ONE INCH IN LENGTH ON ORIGINAL DRAWING CHECK SCALE AND ADJUST ACCORDINGLY

ONE INCH

REVISIONS:



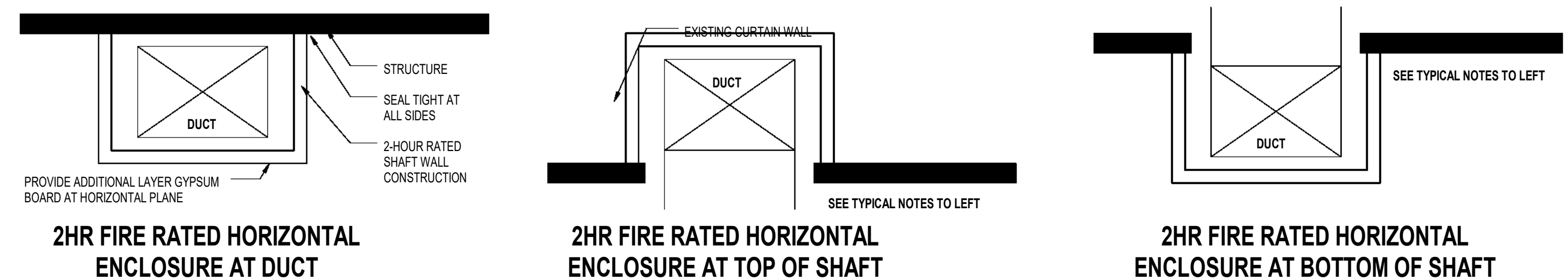
15050 SANDOZ MILL ROAD
ARLINGTON, TEXAS 76012
SUITE 300
WWW.BRADLYARCHITECTS.COM
TEL: (817) 285-5522
FAX: (817) 285-5522
TSC# PR0187-120



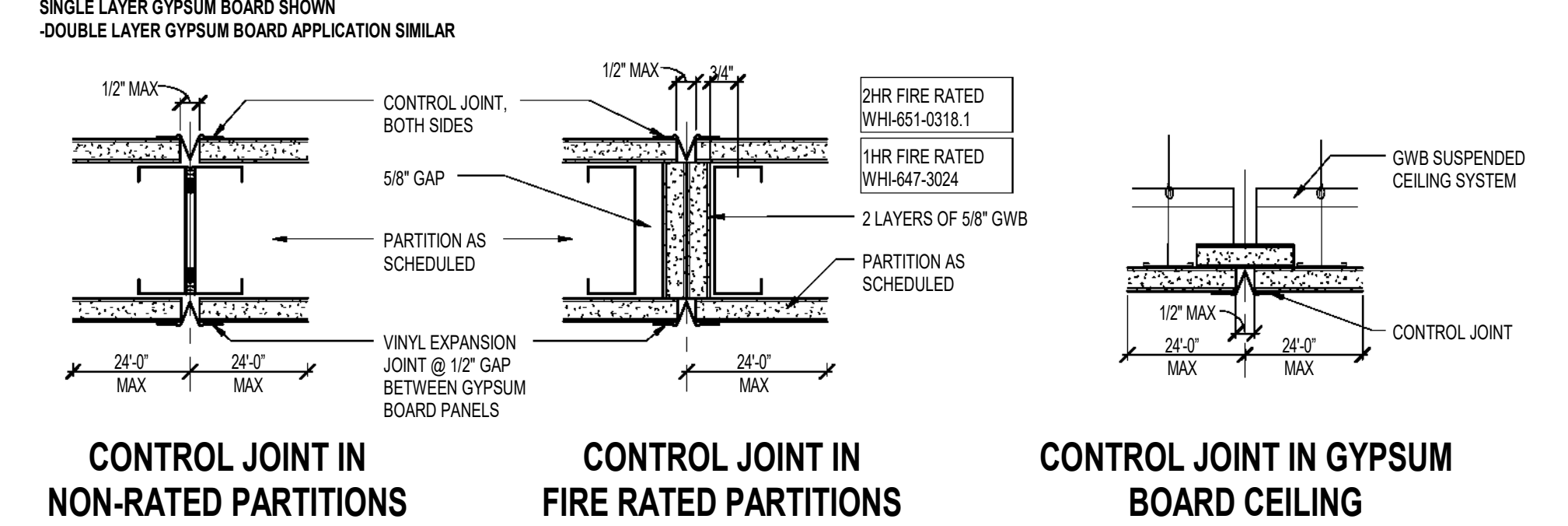
RENOVATIONS TO UNIVERSITY OF NORTH TEXAS
DISCOVERY PARK H WING RESEARCH LABS
UNIVERSITY OF NORTH TEXAS DISCOVERY PARK, 3940 N. ELM ST., DENTON, TX 76207

RATED HORIZONTAL ENCLOSURES

WHI DESIGN NO. 694-0300.1

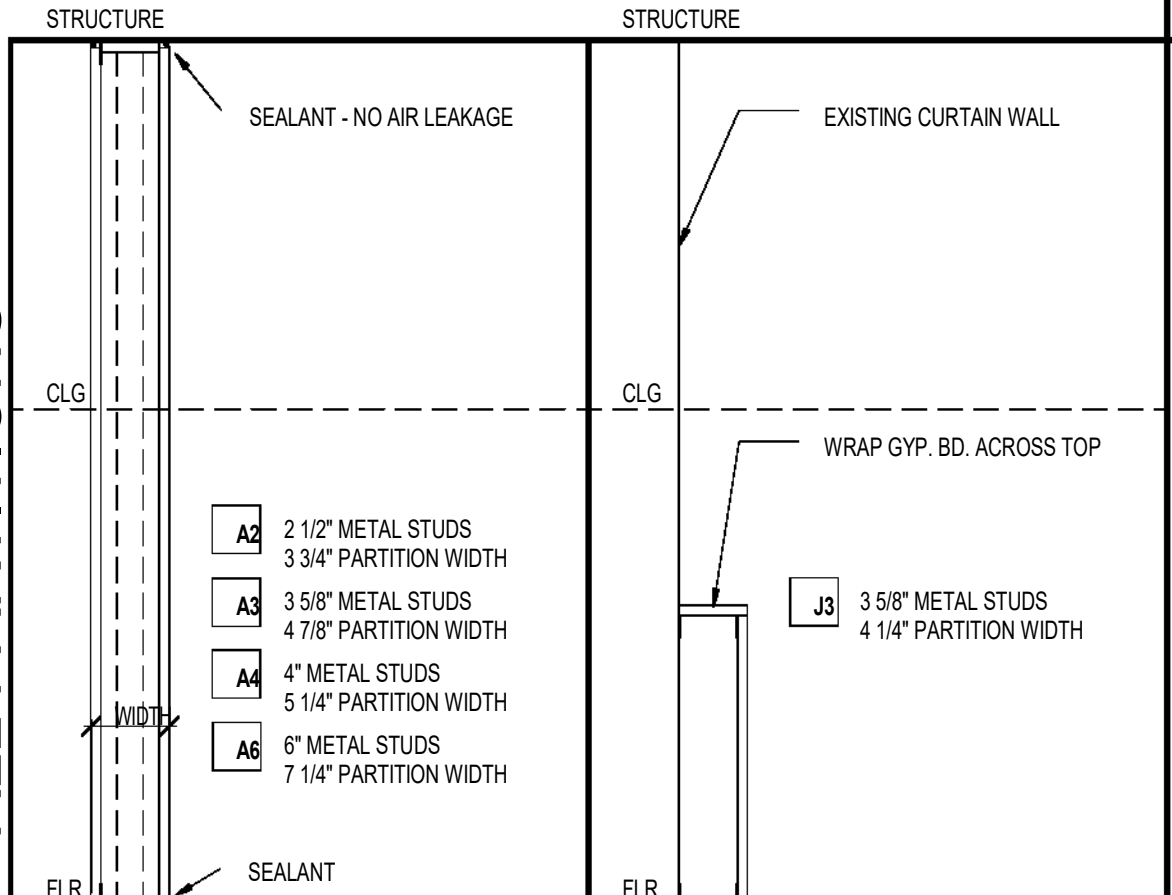


TYPICAL CONTROL JOINTS

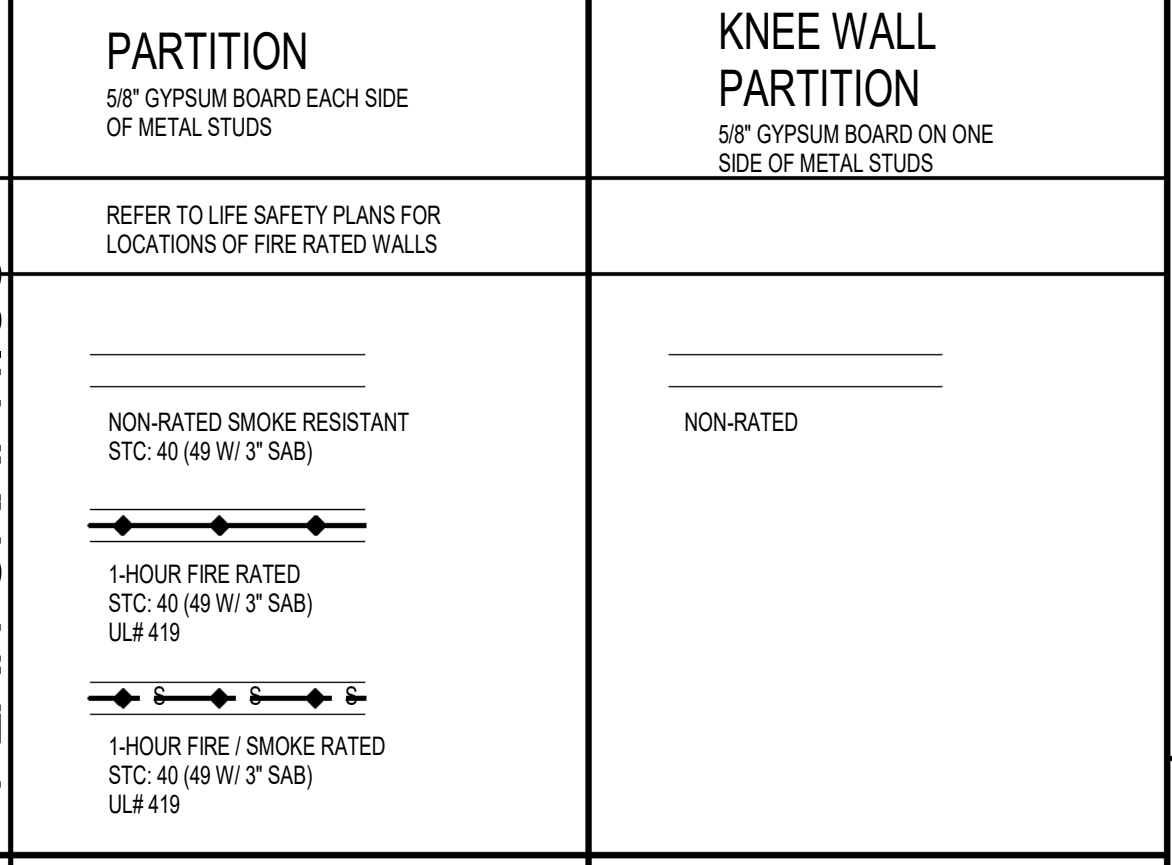


PARTITION TYPES

PARTITION NOTES



- A. ALL NON-LOAD BEARING INTERIOR PARTITIONS NOT DESIGNATED WITH A GRAPHIC TAG ARE SCHEDULED BY DEFAULT. SEE FLOOR PLAN GENERAL NOTES. IF UNCLEAR, CONTACT ARCHITECT.
- B. REFER TO LIFE SAFETY PLANS FOR LOCATIONS OF SMOKE AND / OR FIRE RATED PARTITIONS. REFER TO WALL PRIORITY LEGEND FOR CONDITIONS WHERE FIRE RATED PARTITIONS INTERSECT OTHER PARTITIONS.
 - 1. LOWER PRIORITY WALLS SHALL BE SEaled TO HIGHER PRIORITY WALLS, BUT SHALL NOT INTERRUPT CONTINUITY OF THE HIGHER PRIORITY WALL.
 - 2. ALL FIRE RESISTANT AND FIRE RESISTANT SMOKE BARRIER RATINGS ARE TO CONTINUE THROUGH ALL OPENINGS AND PENETRATIONS IN RATED PARTITIONS.
 - 3. ALL SMOKE AND FIRE RESISTANT BARRIER RATINGS SHALL EXTEND AND SEAL TO INSIDE FACE OF EXTERIOR SHEATHING, SLAB BELOW AND UNDERSIDE OF DECK ABOVE, INCLUDING EXTENSION THROUGH SOFFITS.
 - 4. FIRE RATED PARTITIONS TO HAVE FIRESTOPPING SEALANT SYSTEMS INSTALLED AT HEAD, SILL, AND JUNCTURES WITH DISSIMILAR MATERIALS, ETC. AND AROUND ALL PENETRATIONS AND OPENINGS.
 - 5. IDENTIFY ALL RATED PARTITIONS WITH LABELS 6 INCHES ABOVE THE CEILING OR 10 FEET MAX. ABOVE THE FLOOR IF NO CEILING. USE 1 1/2" HIGH LETTERS, CLEAR, LEGIBLE & READABLE AGAINST A CONTRASTING BACKGROUND.
 - 6. TERMINATE RATED PARTITIONS AT THE UNDERSIDE OF STRUCTURAL DECK IN ORDER TO MAINTAIN RATINGS. PROVIDE APPROPRIATE DRYWALL FRAMING TO OFFSET AROUND STRUCTURE OR OTHER OBSTRUCTIONS SUCH AS PIPING, STRUCTURAL MEMBERS OR DUCT WORK.
 - 7. PARTITIONS MAY TERMINATE AT STRUCTURAL MEMBERS WITH A FIRE RATING GREATER THAN OR EQUAL TO THE PARTITION, PROVIDED THAT RATING IS CONTINUOUS TO THE STRUCTURAL DECK ABOVE.
 - 8. WHERE U.C. CONSTRUCTION REFERENCE NUMBERS ARE PROVIDED AT RATED WALLS AND PENETRATIONS, CONTRACTOR SHALL BE RESPONSIBLE TO BUILD WALL TO EXACT REQUIREMENTS AS DESCRIBED BY UNDERWRITER'S LABORATORY.
- C. NON-RATED PARTITIONS
 - 1. NON-RATED PARTITIONS TO HAVE ACOUSTICAL SEALANT INSTALLED AT HEAD, SILL, AND JUNCTURES WITH DISSIMILAR MATERIALS, ETC. AND AROUND ALL PENETRATIONS AND OPENINGS.
 - 2. NON-RATED PARTITIONS THAT EXTEND TO STRUCTURE SHALL TERMINATE AT UNDERSIDE OF STRUCTURAL DECK TO MAINTAIN A CONTINUOUS PLANE OF GYPSUM BOARD AS A SMOKE, NOISE OR SIMILAR TYPE OF BARRIER.
- D. INTERIOR WALL STUDS: C-SHAPED WITH SERRATED FACES. GAUGE TO BE PER SSMA, LIMITING WALL HEIGHT TABLE - NON COMPOSITE, CONFORMING TO 2 PSP, L240 FOR APPROPRIATE LENGTHS, SIZES AS INDICATED ON THE DRAWINGS.
- E. INTERIOR WALL TRACK
 - 1. 20-GAUGE (MIN. UNCOATED THICKNESS, 0.0312")
 - 2. BOTTOM TRACK TO BE MINIMUM 1-1/4" UNLESS NOTED OTHERWISE.
 - 3. BOTTOM TRACK TO BE 4" LEGS AT CORNERS.
 - 4. SLOTTED TOP TRACK, SLIPTRACK SYSTEM, SLP-TRK, 16 GAUGE, 2 1/2" DOWN-STANDING LEGS WITH 1/4" WIDE BY 1 1/2" HIGH SLOTS SPACED AT 1" ON CENTERS.
- F. PROVIDE SOUND BATT IN ALL INTERIOR FRAMED PARTITIONS WHERE INDICATED. REFER TO REFLECTED CEILING PLAN.
- G. SEAL ALL PENETRATIONS FOR PIPES, CONDUIT, DUCTWORK, ETC. WITH NON-HARDENING, NON-SHRINK ACOUSTICAL SEALANT, UNLESS NOTED OTHERWISE. EXCEPTION: USE FIRESTOP SYSTEMS WITH FLEXIBLE FIRE RESISTIVE JOINT SEALANTS AT FIRE RATED PARTITIONS.
- H. FURR OUT ALL COLUMNS TO MINIMUM ALLOWABLE DIMENSION, NOTIFY ARCHITECT OF ANY CONFLICT BETWEEN EXISTING CONDITION AND DESIGN INTENT.
- I. SEALANTS INDICATED MAY BE FOR FIRE RATING, SMOKE RATING, AIR PRESSURE CONTAINMENT, ACOUSTIC RATING, VERMIN CONTROL, MOVEMENT CONTROL AND/OR BIOLOGICAL CONTAINMENT. SEALANT JOINTS ARE TO BE SIZED FOR EXPANDED MOVEMENT OF JOINT WITH EXPANSION/CONTRACTION CAPACITY OF SEALANT MATERIAL TO MAINTAIN THE INTEGRITY OF THE SEAL FOR THESE APPLICABLE PARAMETERS.
- J. BRACE ALL PARTITIONS NOT EXTENDING TO STRUCTURE ABOVE.
- K. PROVIDE BLOCKING INSIDE PARTITIONS FOR SECURING ALL WALL HUNG CABINETS, SHELVING, TRIM, MILLWORK, AND OTHER ELEMENTS ATTACHED TO PARTITIONS AS REQUIRED TO ENSURE FLUSH, STRAIGHT, AND WELL-SECURED CONDITIONS. PROVIDE ADDITIONAL STRUCTURAL SUPPORT (ANGLES, CHANNELS, ETC.) WITHIN WALLS WHERE WEIGHT OF ATTACHED ITEMS IS TOO GREAT TO BE SUPPORTED BY STUDS.
- L. REFER TO OTHER SCHEDULES AND DETAILS FOR INTERIOR FINISHES. PARTITION TYPES SHOWN ON THIS SHEET REFER TO BASE WALL ONLY. INTERIOR PARTITIONS ARE DIMENSIONED FROM FACE TO FACE OF PARTITION, UNLESS NOTED OTHERWISE.
- M. FOR PARTITIONS THAT EXTEND TO STRUCTURE, THE "LINE OF STRUCTURE" AS SHOWN AT THE HEAD CONDITION OF EACH PARTITION IS DIAGRAMMATIC ONLY AND DOES NOT INDICATE EXACT CONSTRUCTION CONDITIONS.



A J

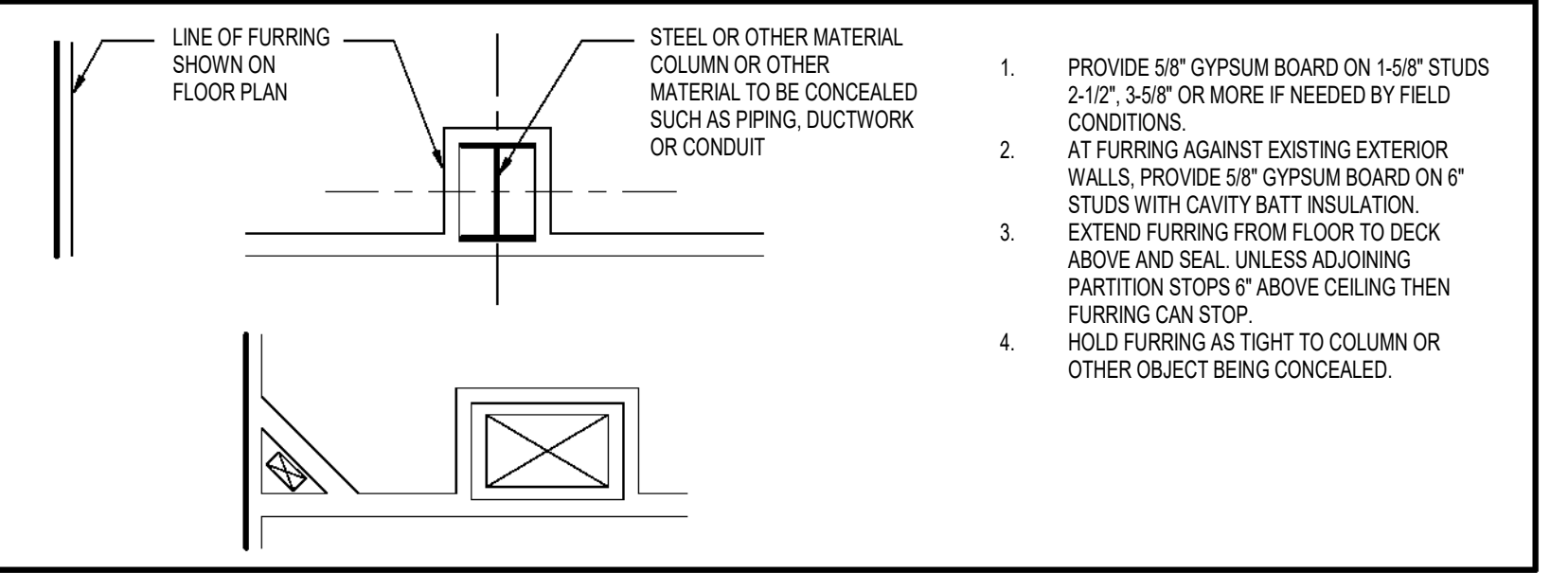
GYPSUM BOARD SCHEDULE

5/8" TYPE "X" GYPSUM BOARD	ALL PARTITIONS, UNO, OR NOTED OTHERWISE ON DRAWINGS. USE ABUSE RESISTANT WHERE INDICATED ON PLANS.
5/8" MOULD, WATER, ABUSE & FIRE RESISTANT (MWFA) GYPSUM BOARD	PRIORITY 1: PROVIDE BEHIND ALL WET WALL PARTITIONS W/ PLUMBING FIXTURES (WATER CLOSETS, URINALS, LAVATORIES, EWC'S, ETC) TO A HEIGHT OF 4' AFF AND 6" WIDE (CENTER ON FIXTURE)
5/8" FIBER CEMENT OR GP DENS SHIELD	PRIORITY 1: PARTITIONS EXPOSED DIRECTLY TO RUNNING WATER. EXAMPLES: SHOWERS, CART WASH, HYDROTHERAPY, GROOMING TUBS PRIORITY 2: USE AT ALL TOILET ROOMS, CLEANING EQUIPMENT ROOMS, HOUSEKEEPING ROOMS, JANITOR CLOSETS, OPERATING ROOMS, CATH LABS, ENDOSCOPY, TRAUMA, DECONTAM, AND SOILED UTILITY ROOMS. NOTE THAT PRIORITY 1 BOARDS TAKE PRECEDENCE.

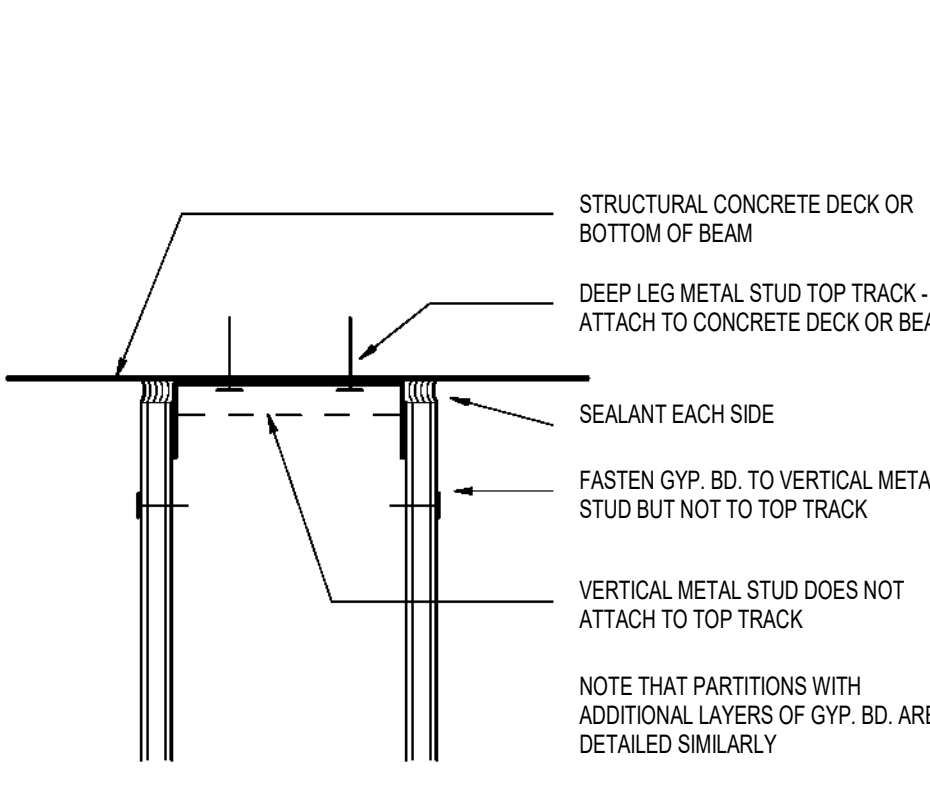
CONTROL JOINTS IN GYPSUM BOARD

- INSTALL CONTROL JOINTS NOT TO EXCEED 30'-0" O.C. CONSISTENT WITH LINES OF BUILDING SPACES AS DIRECTED BY THE ARCHITECT.
- IF THE WALLS ARE ON A SLAB ON GRADE AND THEREFORE SUBJECT TO SOME MOVEMENT, INSTALL VERTICAL CONTROL JOINTS IN WALL FROM TOP OF DOOR FRAMES AND WINDOWS TO ABOVE CEILING AND FROM BOTTOM CORNERS OF WINDOWS TO THE FLOOR.

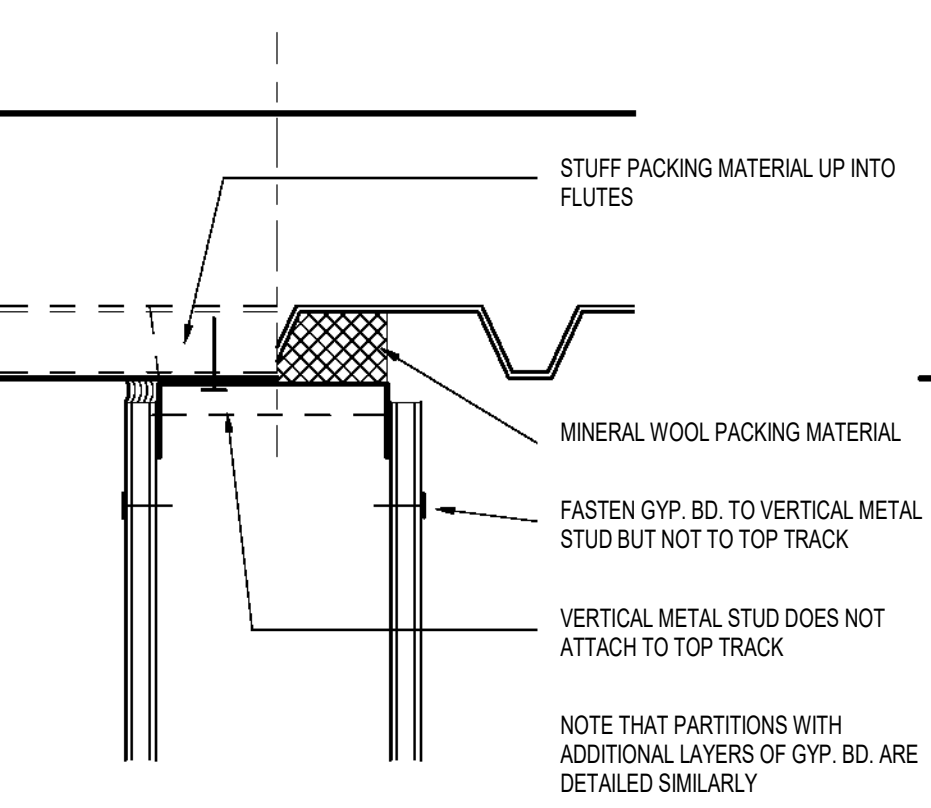
COLUMN AND WALL FURRING



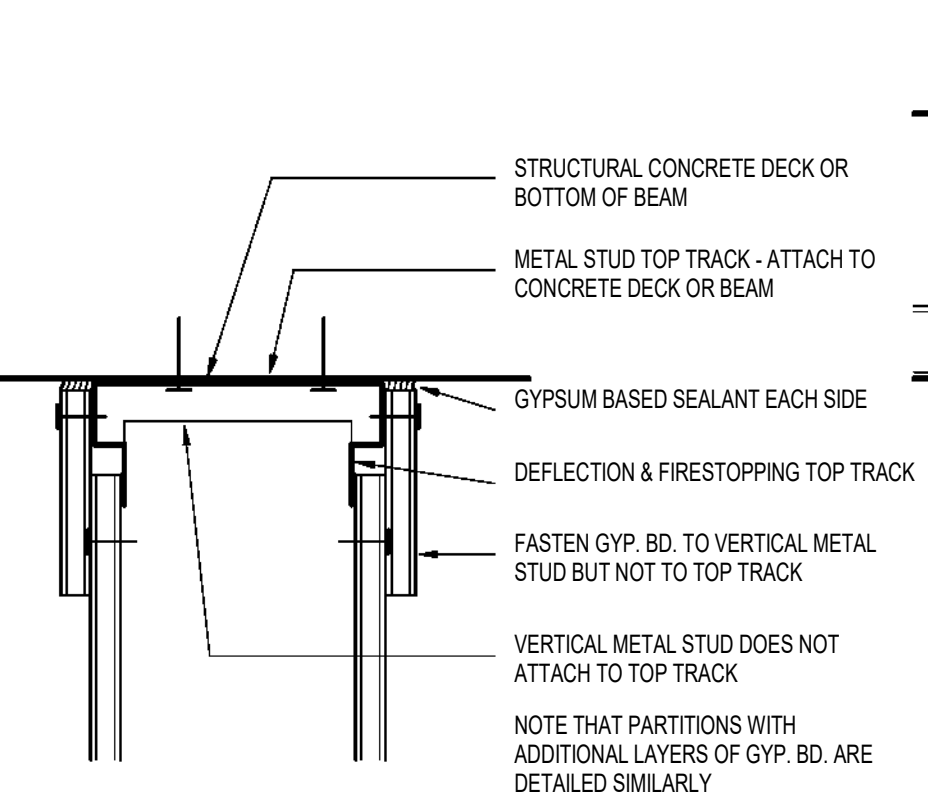
- PROVIDE 5/8" GYPSUM BOARD ON 1-5/8" STUDS 2-1/2" 3-SIP OR MORE IF NEEDED BY FIELD CONDITIONS.
- AT FURRING AGAINST EXISTING EXTERIOR WALLS PROVIDE 5/8" GYPSUM BOARD ON 6" STUDS WITH CAVITY BATT INSULATION.
- EXTEND FURRING FROM FLOOR TO DECK ABOVE AND SEAL, UNLESS ADJOINING PARTITION STOPS 6" ABOVE CEILING THEN FURRING CAN STOP.
- HOLD FURRING AS TIGHT TO COLUMN OR OTHER OBJECT BEING CONCEALED.



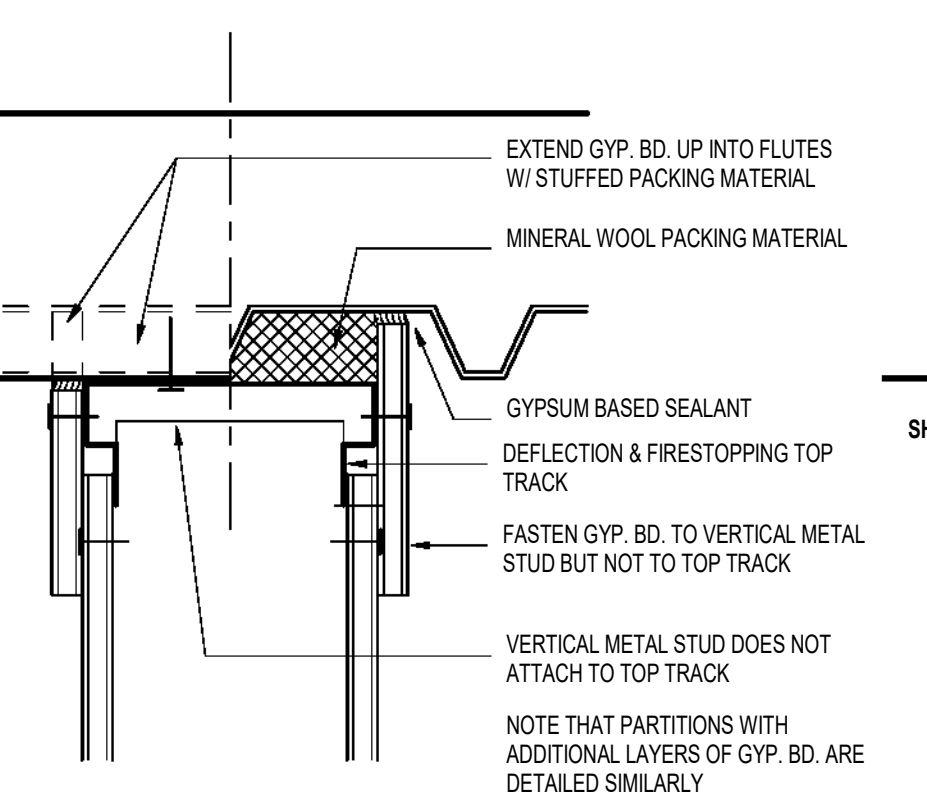
DEFLECTION TRACK
NON RATED PARTITION @ BOTTOM OF CONCRETE DECK OR BEAM



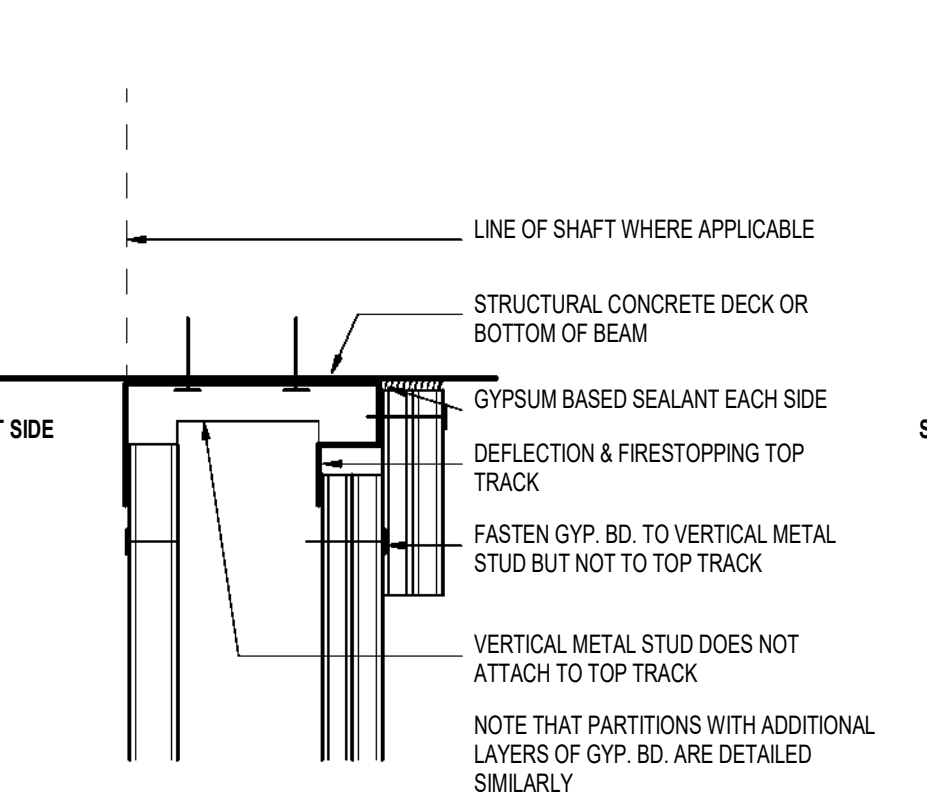
DEFLECTION TRACK
NON RATED PARTITION @ METAL DECK (BOTH PARALLEL / PERPENDICULAR TO FLUTES SHOWN)



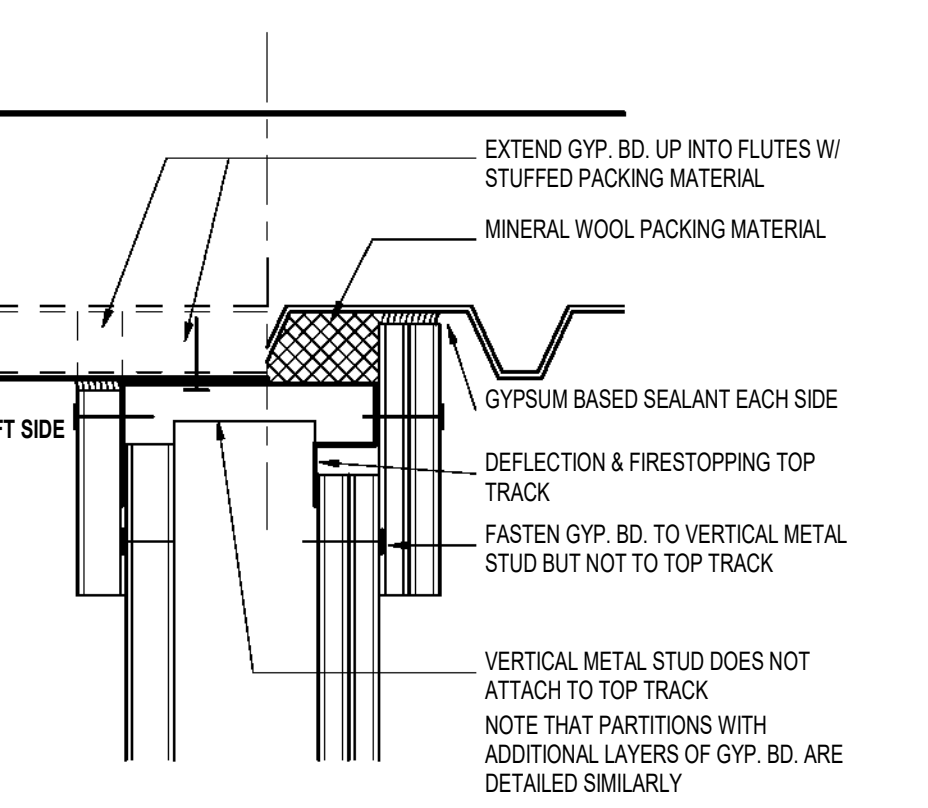
DEFLECTION TRACK
RATED PARTITION @ BOTTOM OF CONCRETE DECK OR BEAM



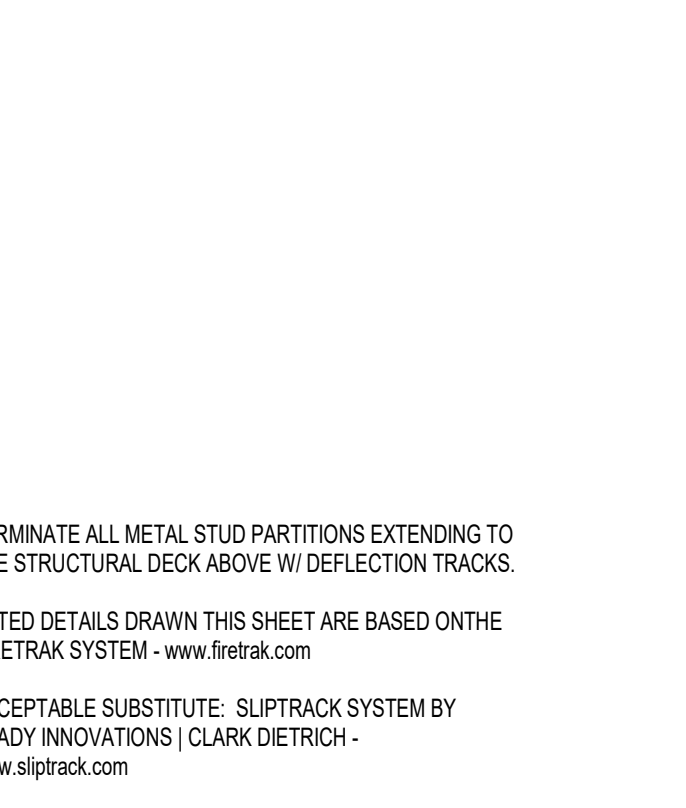
DEFLECTION TRACK
RATED PARTITION @ METAL DECK (BOTH PARALLEL / PERPENDICULAR TO FLUTES SHOWN)



DEFLECTION TRACK
SHAFTWALL PARTITION @ BOTTOM OF CONCRETE DECK OR BEAM

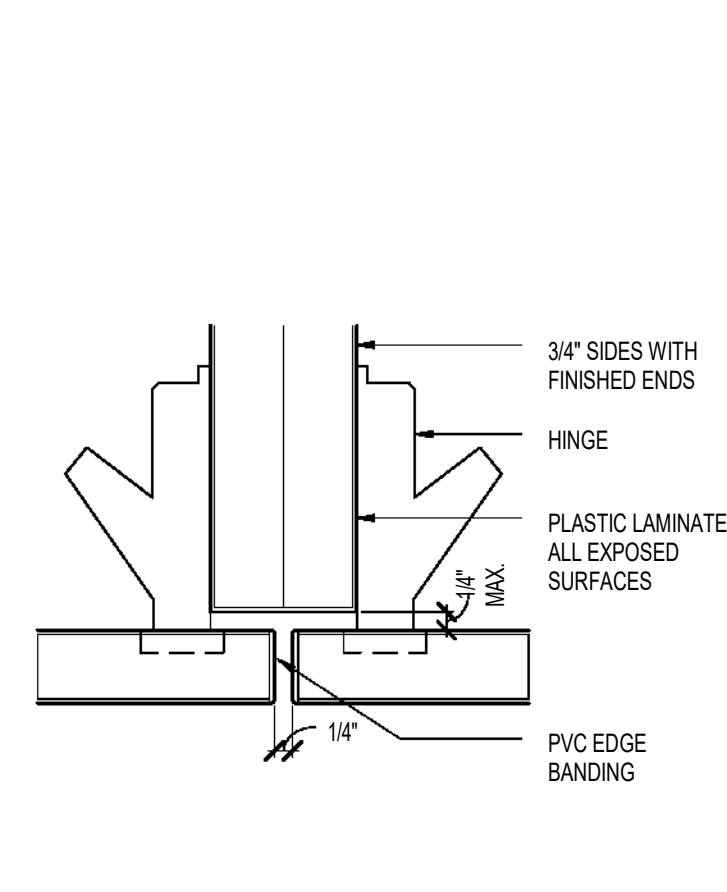


DEFLECTION TRACK
RATED SHAFTWALL PARTITION @ BOTTOM OF METAL DECK OR BEAM

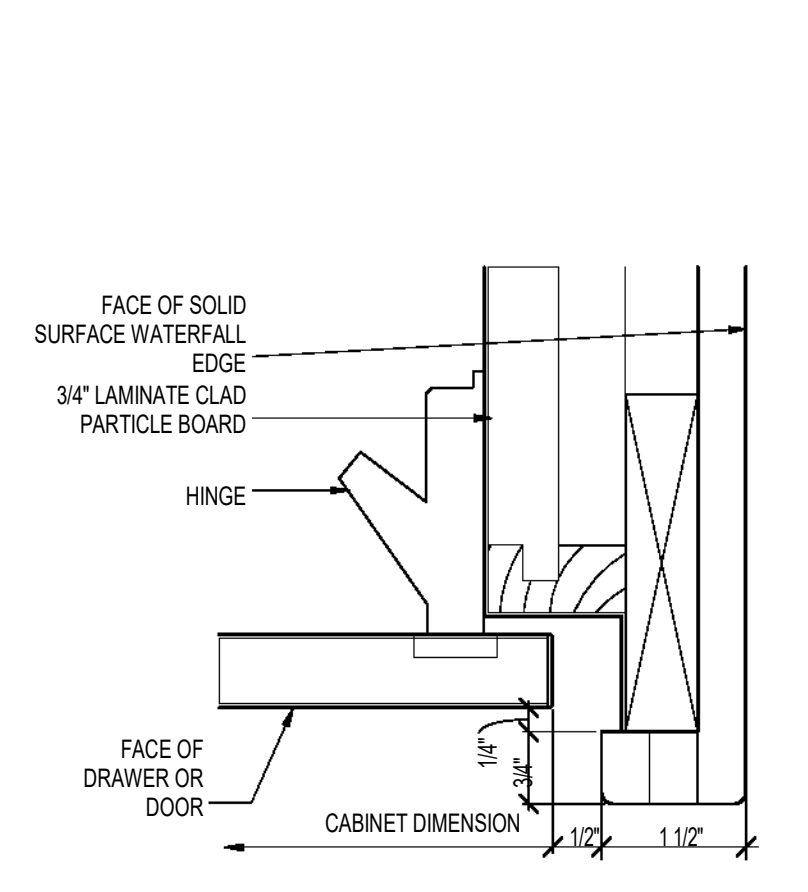


PARTITION DEFLECTION

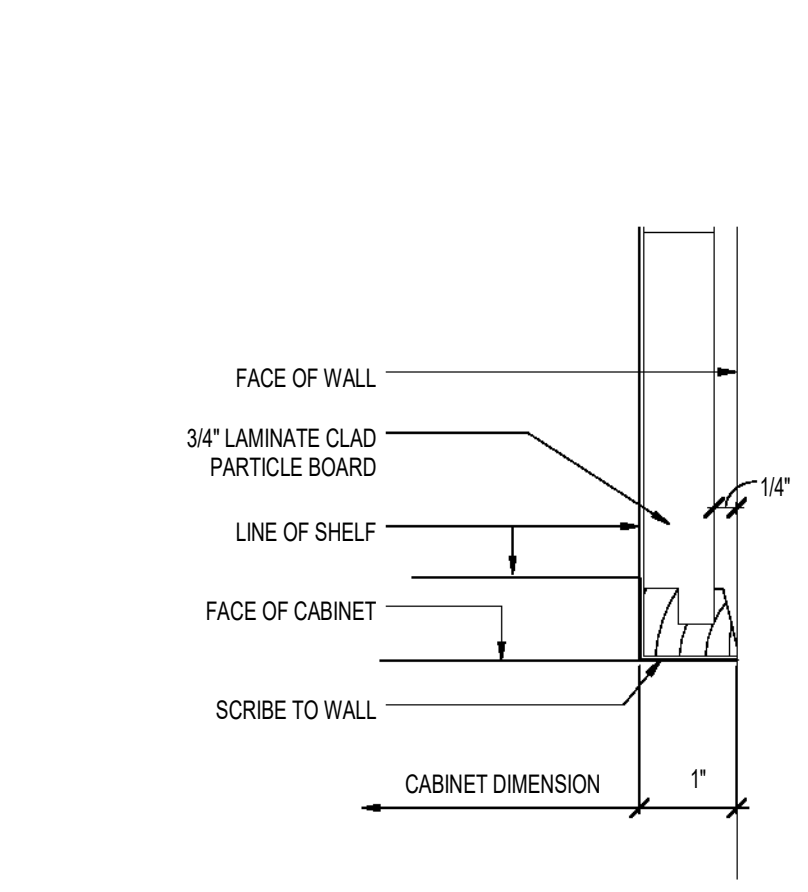
TERMINATE ALL METAL STUD PARTITIONS EXTENDING TO THE STRUCTURAL DECK ABOVE W/ DEFLECTION TRACKS.
RATED DETAILS DRAWN THIS SHEET ARE BASED ON THE FIRETRAK SYSTEM - www.firetrak.com
ACCEPTABLE SUBSTITUTE: SLIPTRACK SYSTEM BY BRADY INNOVATIONS | CLARK DIERICH - www.sliptrack.com



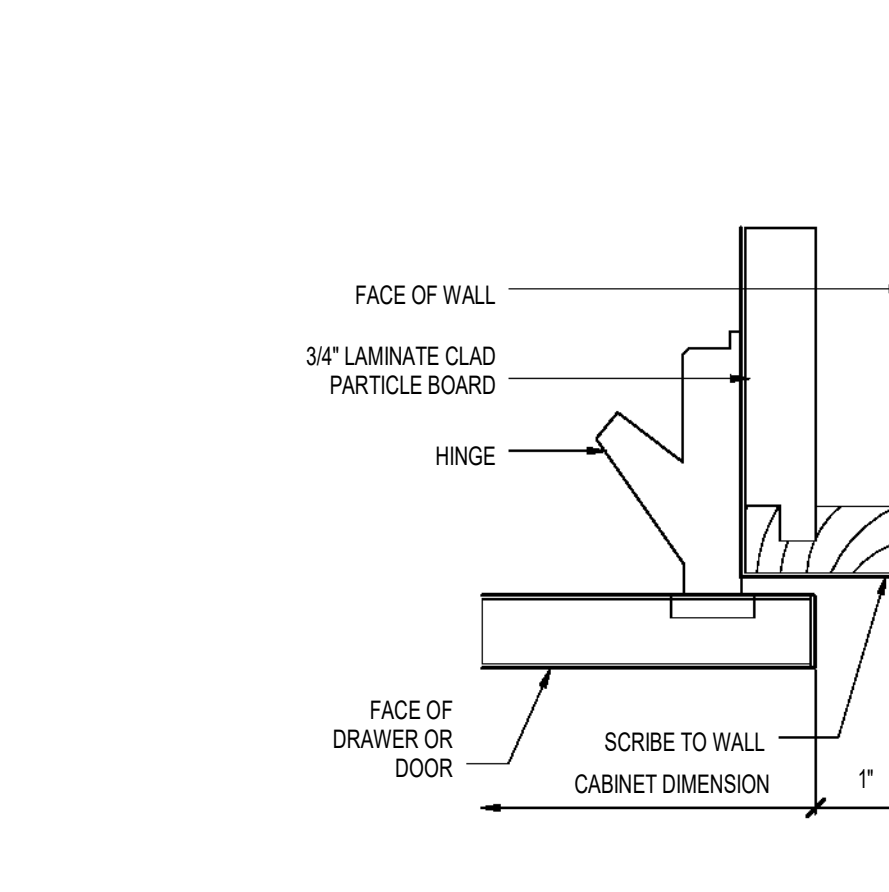
01 HINGE DETAIL - TYPICAL
 6" = 1'-0"



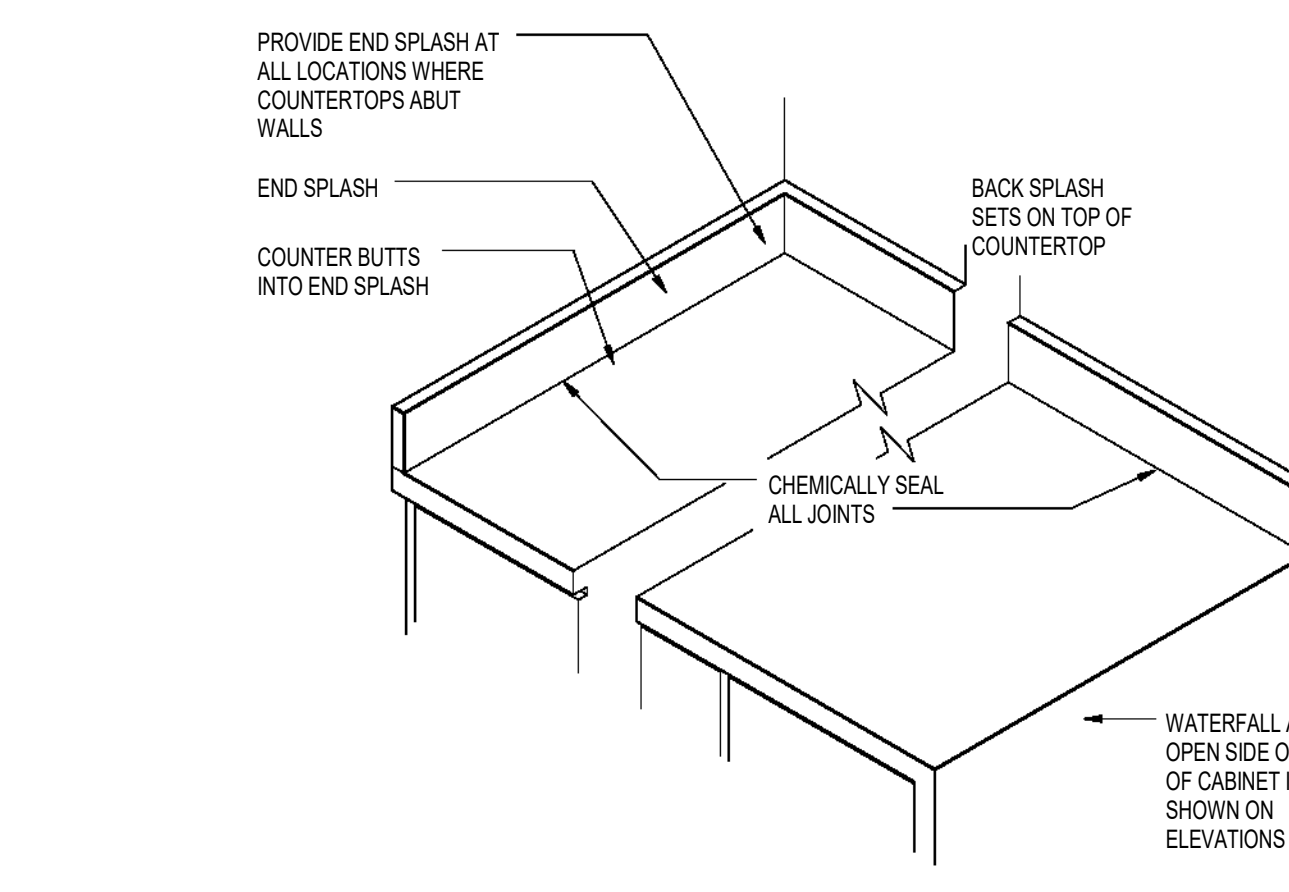
02 HINGE DETAIL - TYPICAL
 6" = 1'-0"



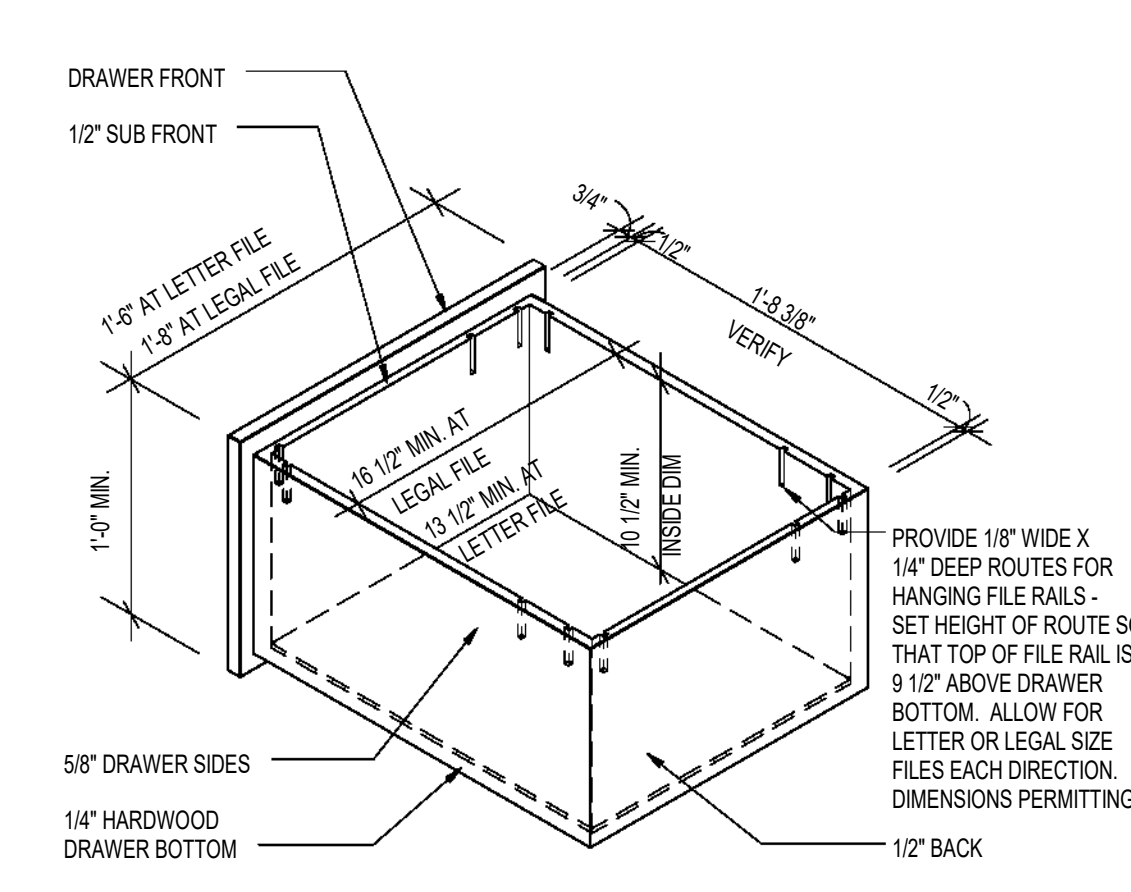
03 SHELF CABINET DETAIL - TYPICAL
 6" = 1'-0"



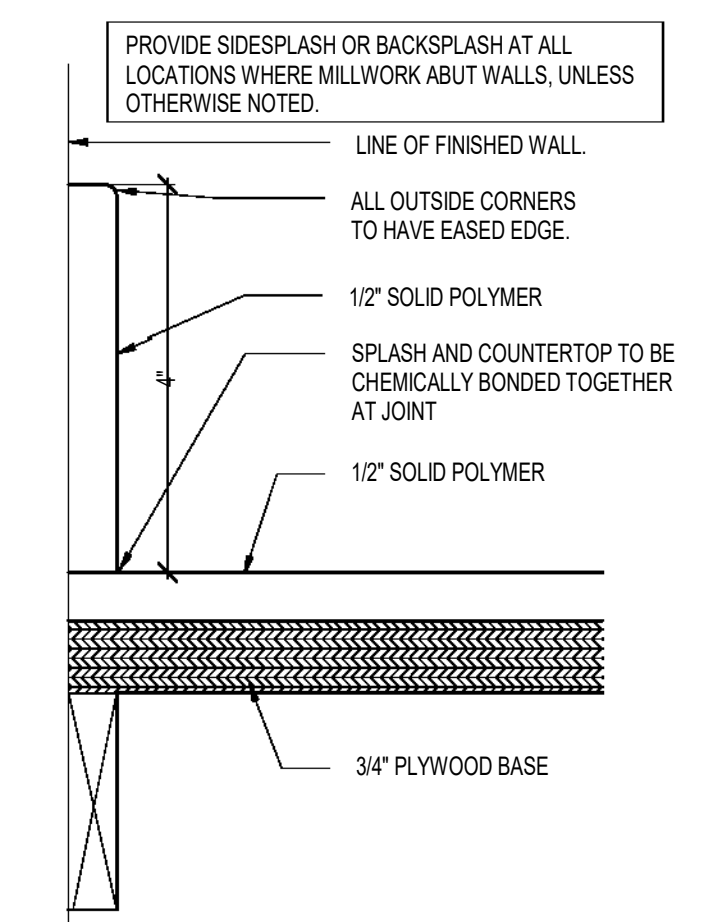
04 CABINET TO WALL DETAIL - TYPICAL
 6" = 1'-0"



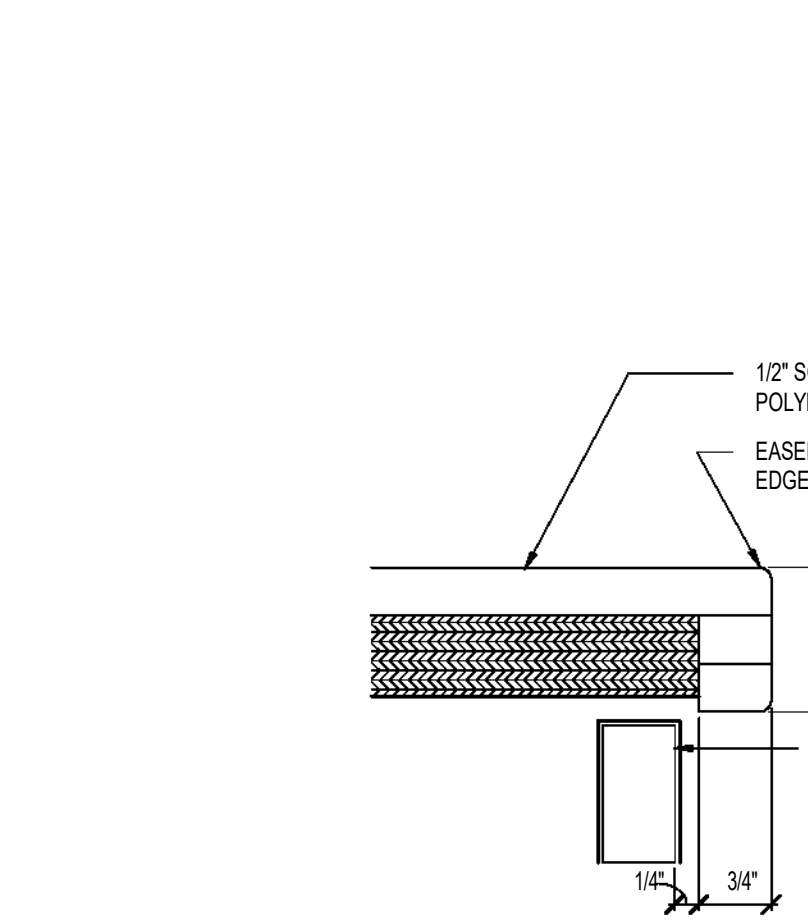
11 SOLID POLYMER COUNTERTOP
 1" = 1'-0"



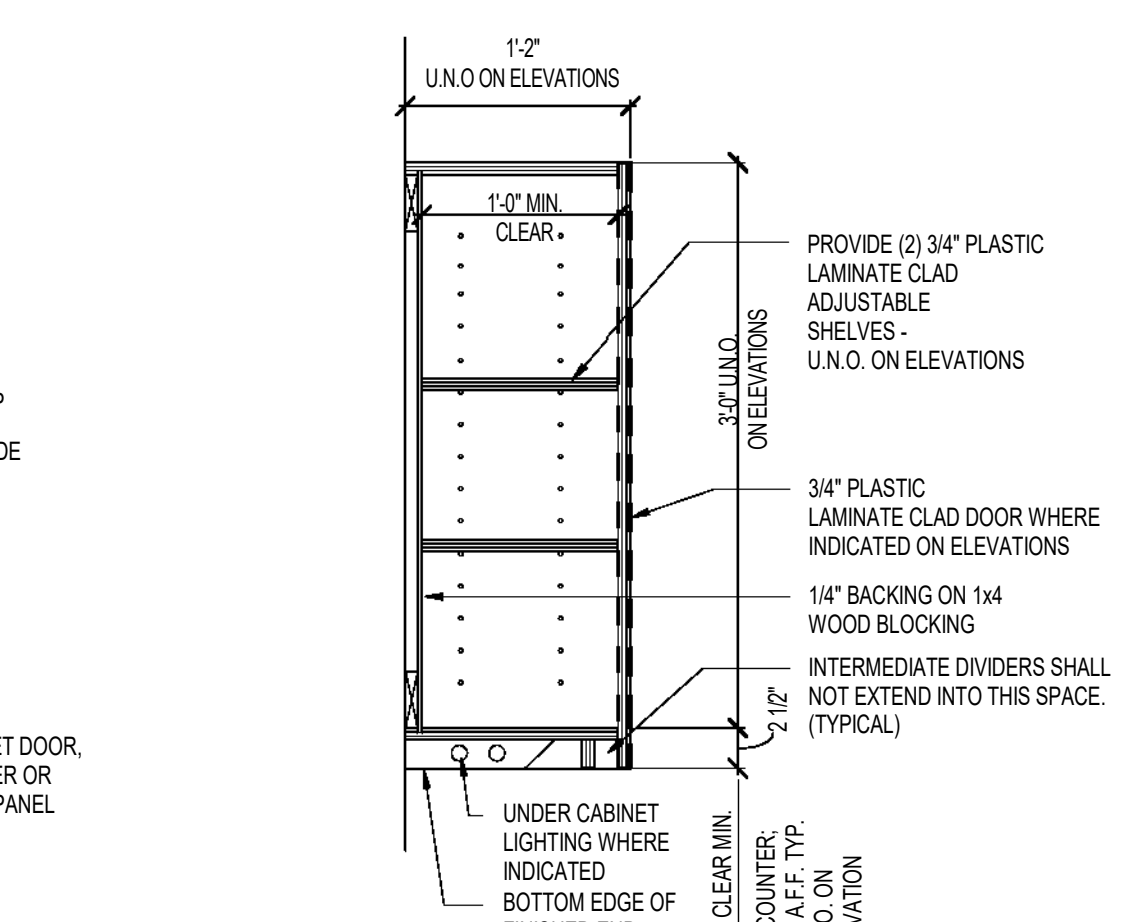
12 FILE DRAWER DETAIL
 1" = 1'-0"



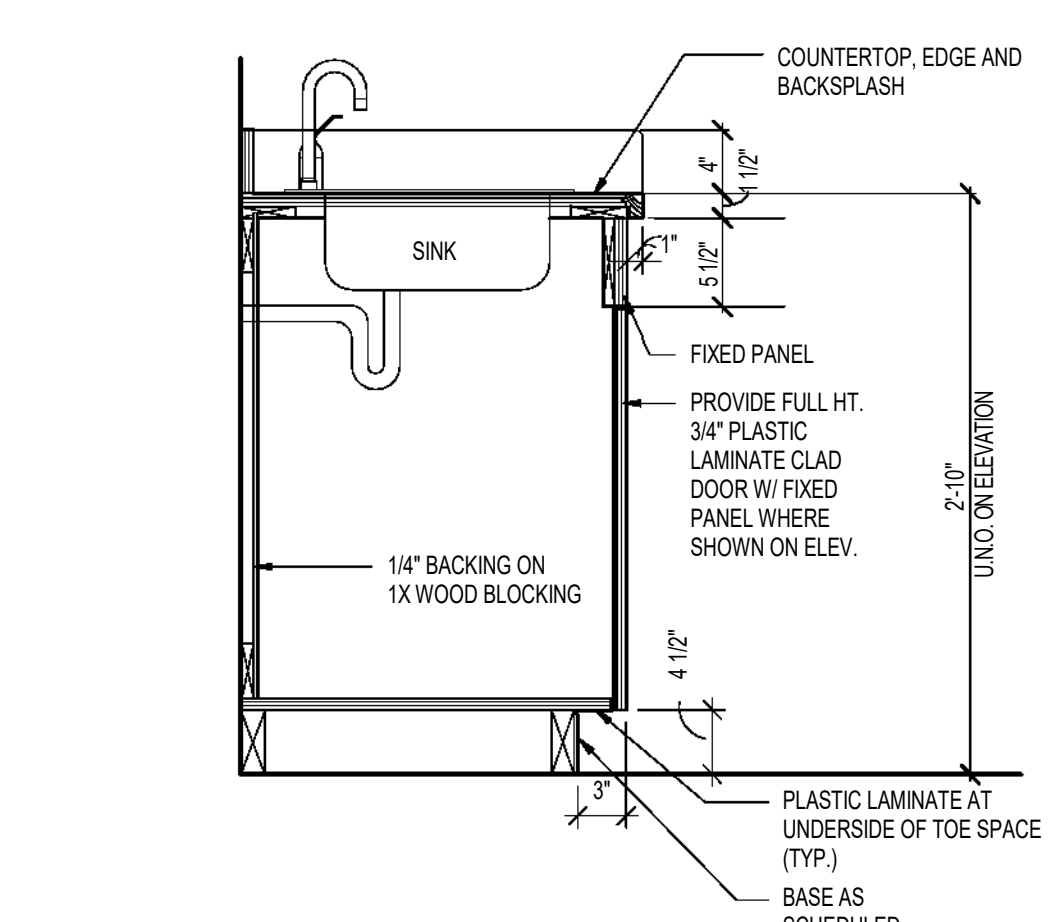
07 SOLID POLYMER BACKSPLASH - TYPICAL
 6" = 1'-0"



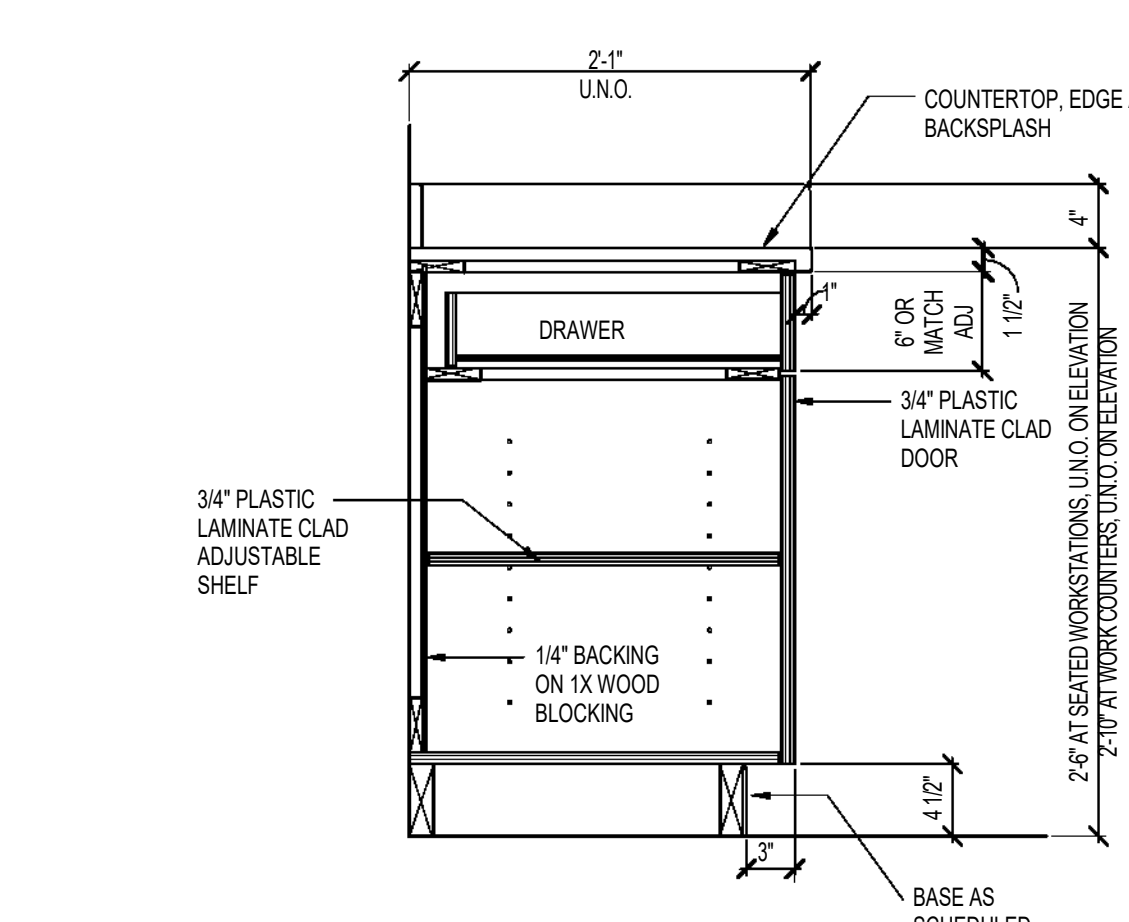
08 SOLID POLYMER NOSING - TYPICAL
 6" = 1'-0"



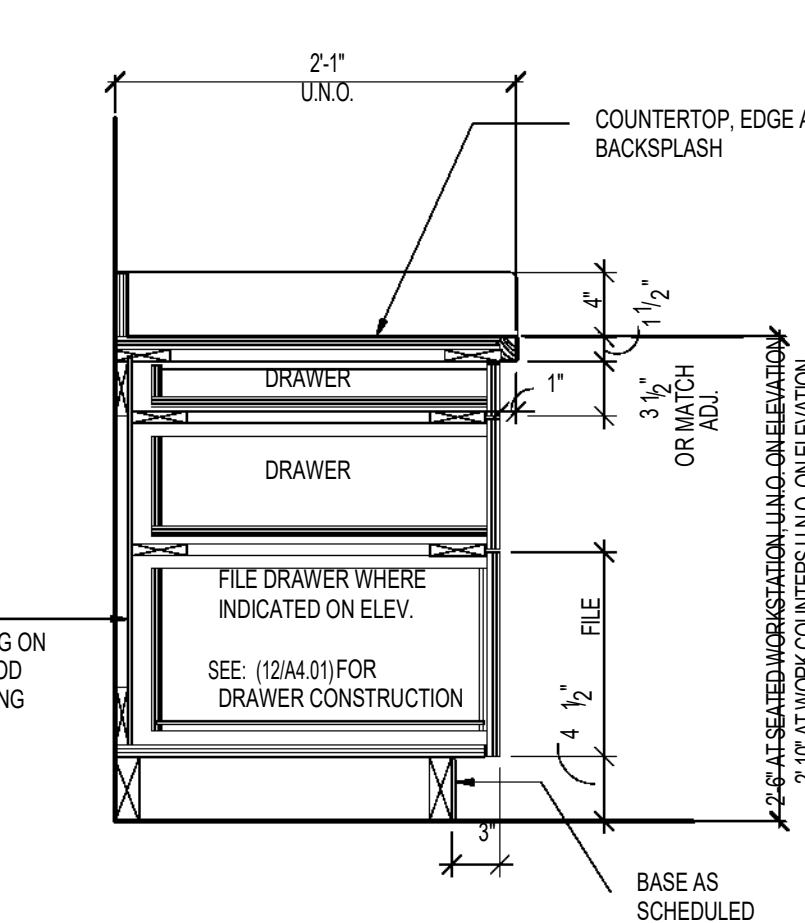
13 UPPER CABINET WITH DOOR
 1" = 1'-0"



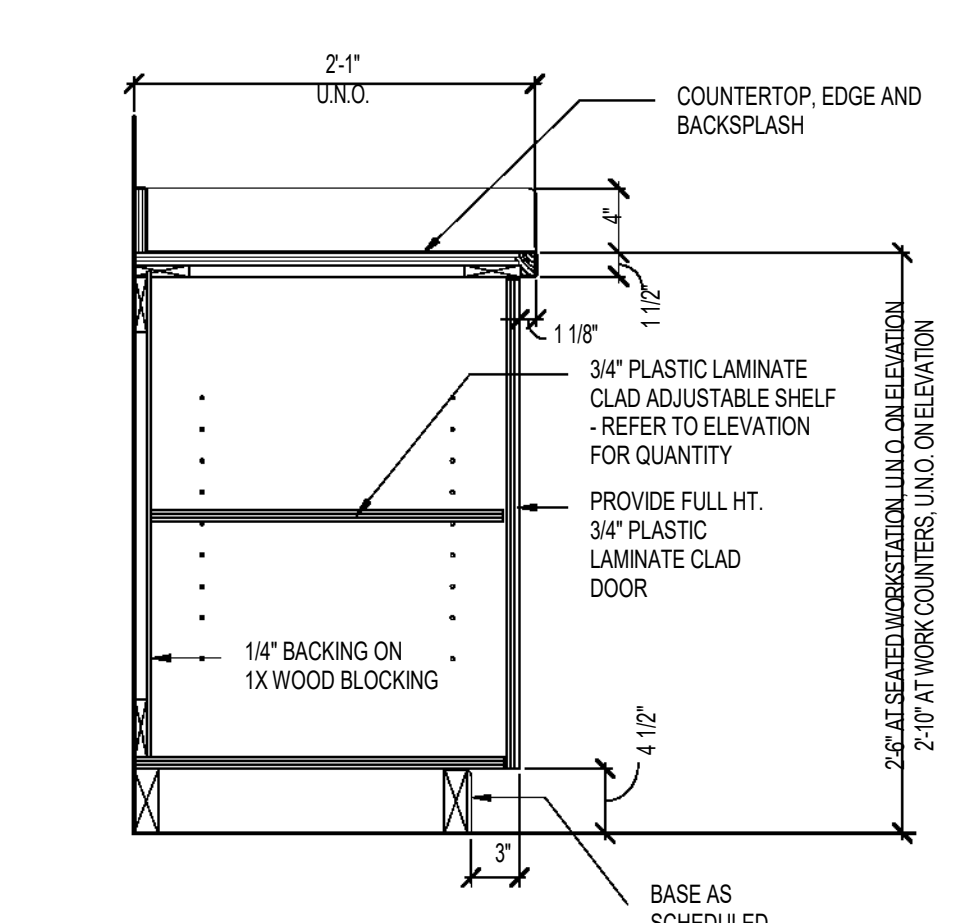
15 BASE CABINET AT SINK
 1" = 1'-0"



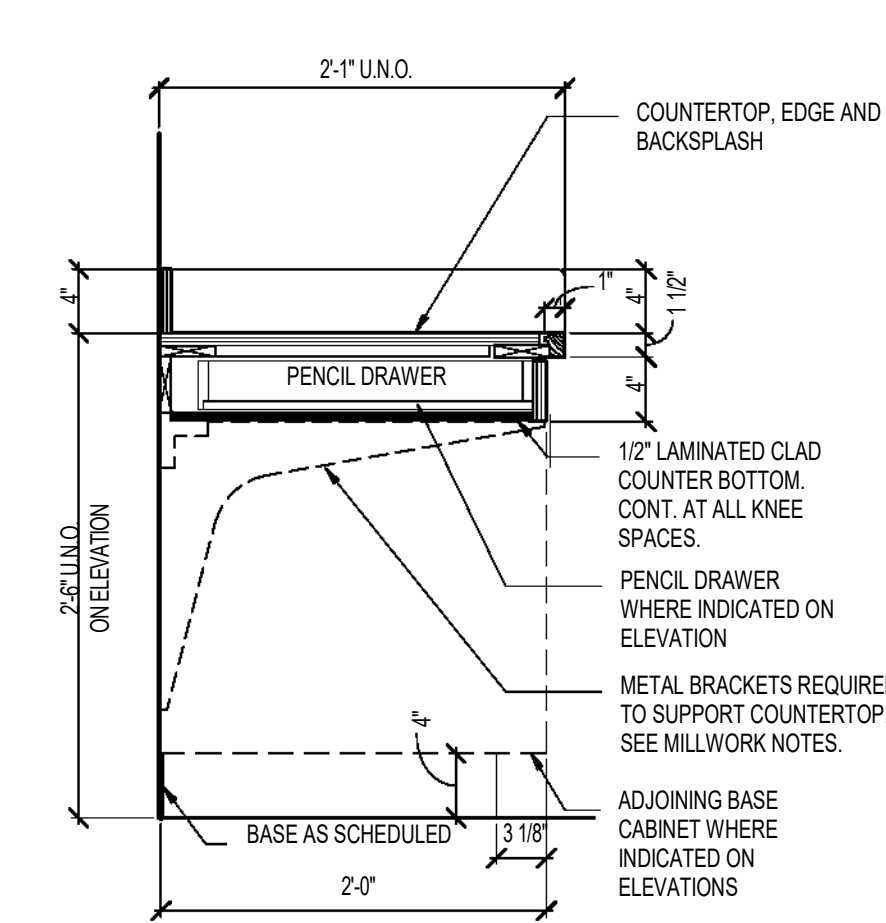
17 BASE CABINET WITH ONE BOX DRAWER
 1" = 1'-0"



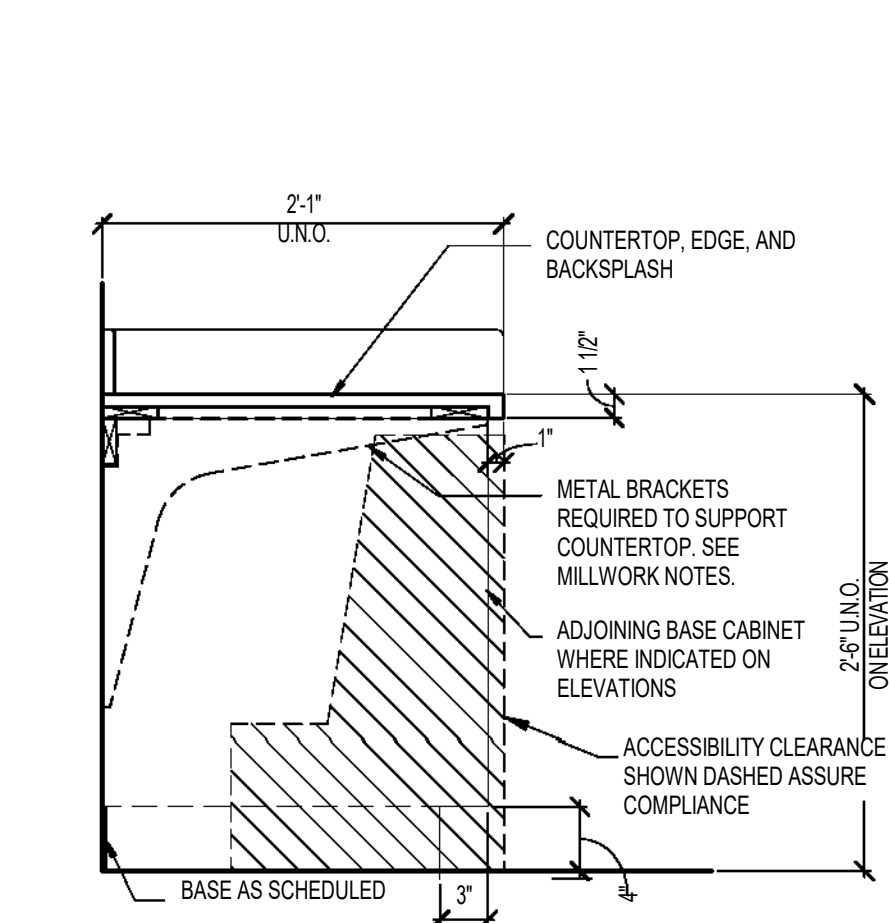
19 BASE CABINET WITH ONE FILE DRAWER
 1" = 1'-0"



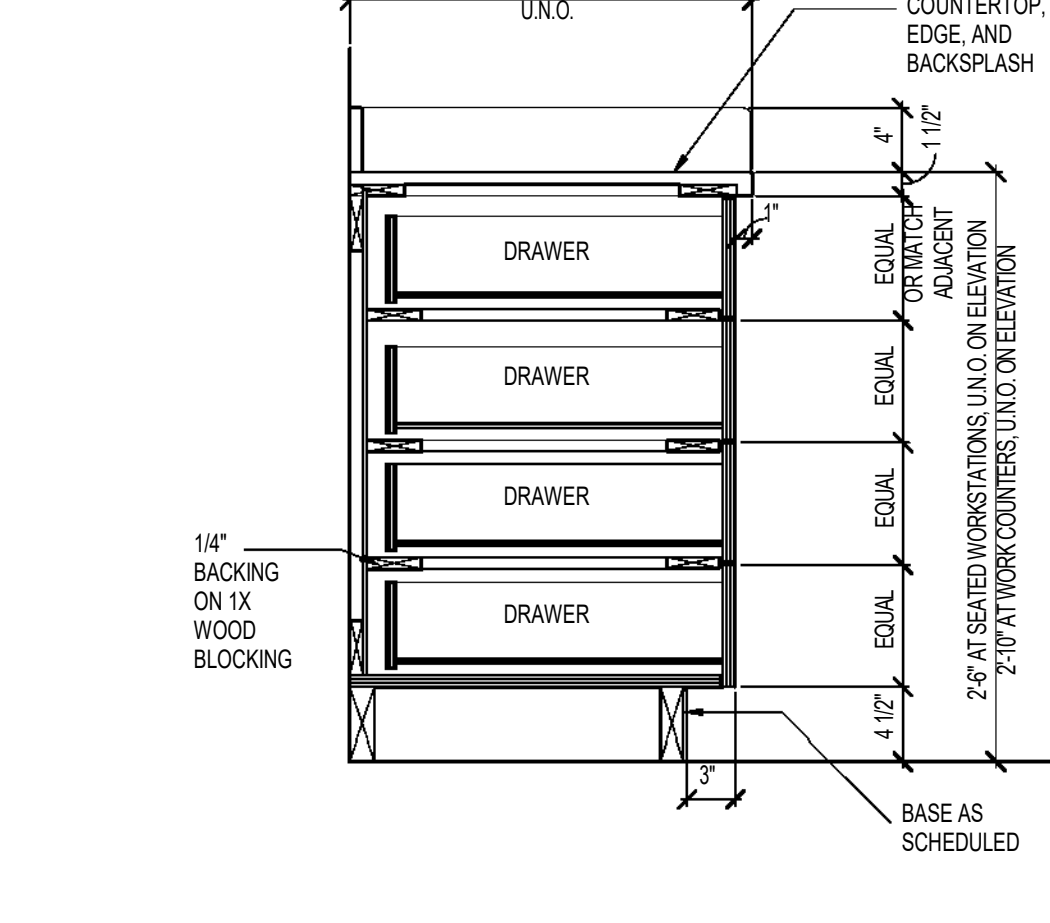
20 BASE CABINET WITH DOOR
 1" = 1'-0"



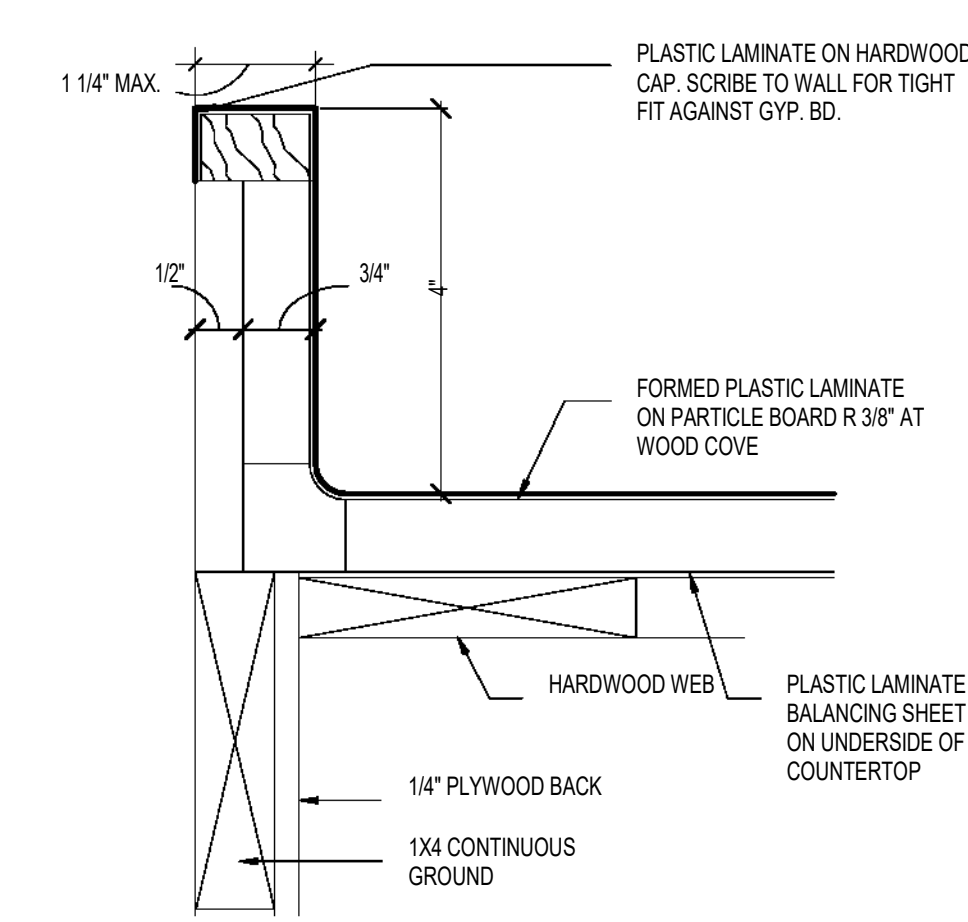
21 COUNTERTOP WITH KNEE SPACE AND PENCIL DRAWER
 1" = 1'-0"



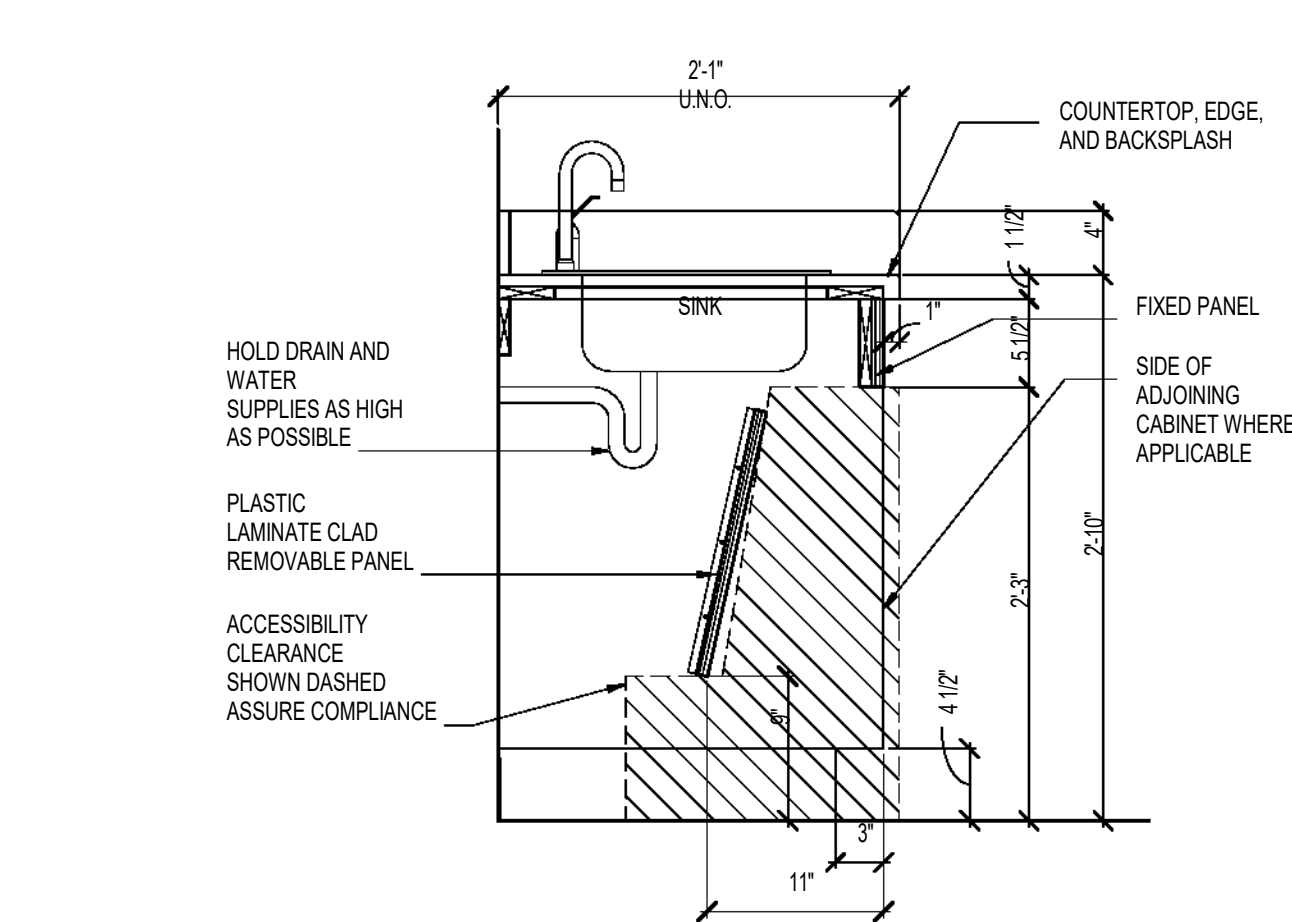
22 COUNTERTOP WITH KNEE SPACE
 1" = 1'-0"



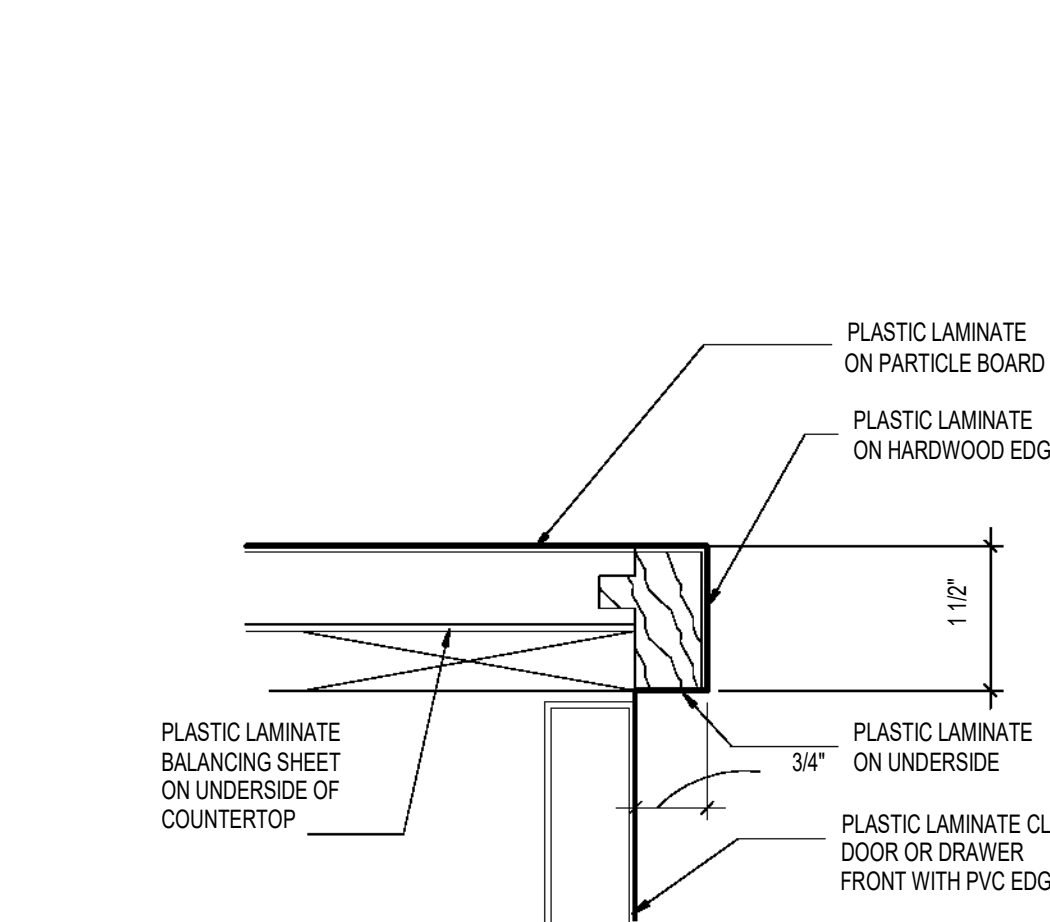
18 BASE CABINET WITH ALL DRAWERS
 1" = 1'-0"



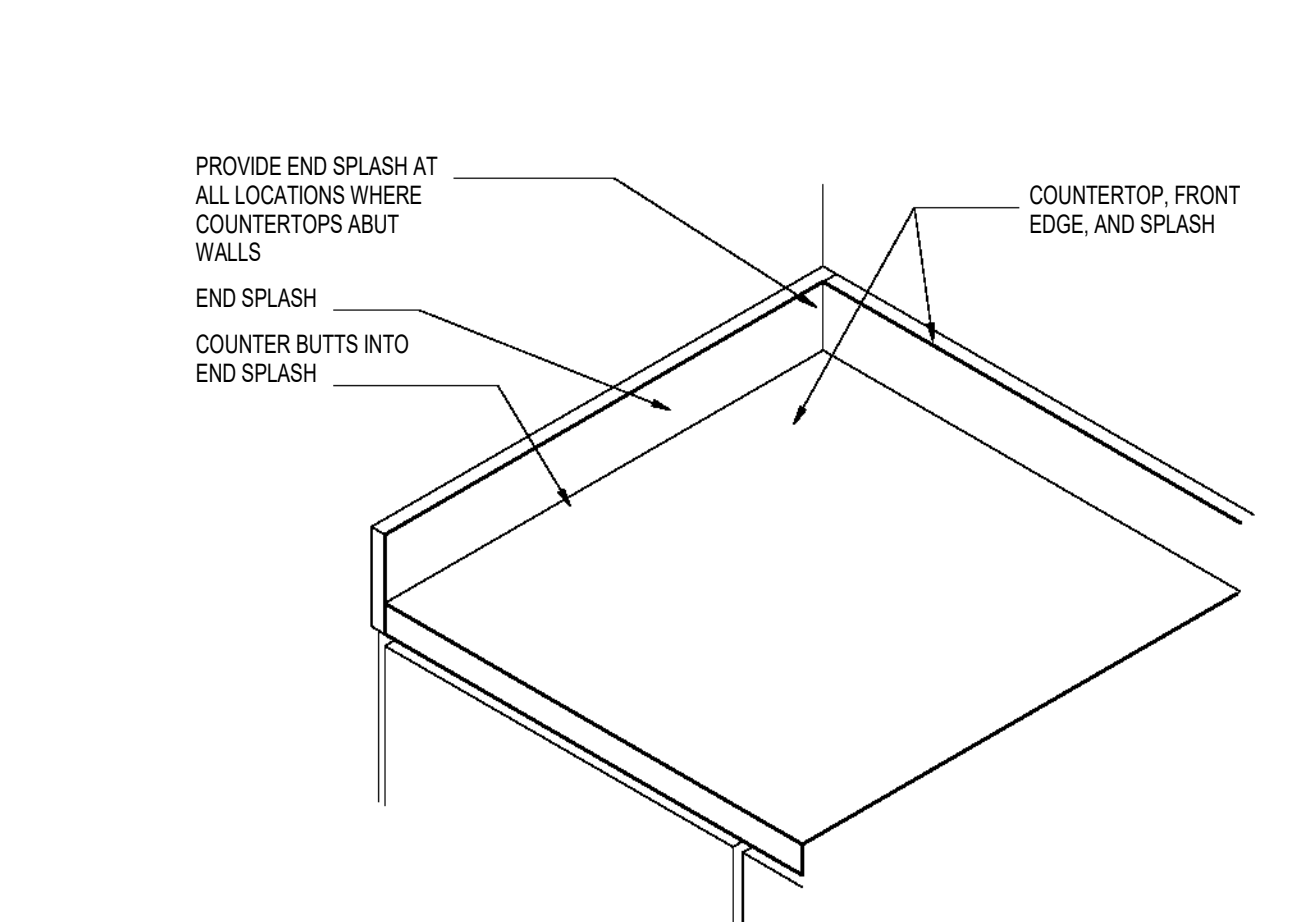
5 PLASTIC LAMINATE BACKSPLASH - TYPICAL
 6" = 1'-0"



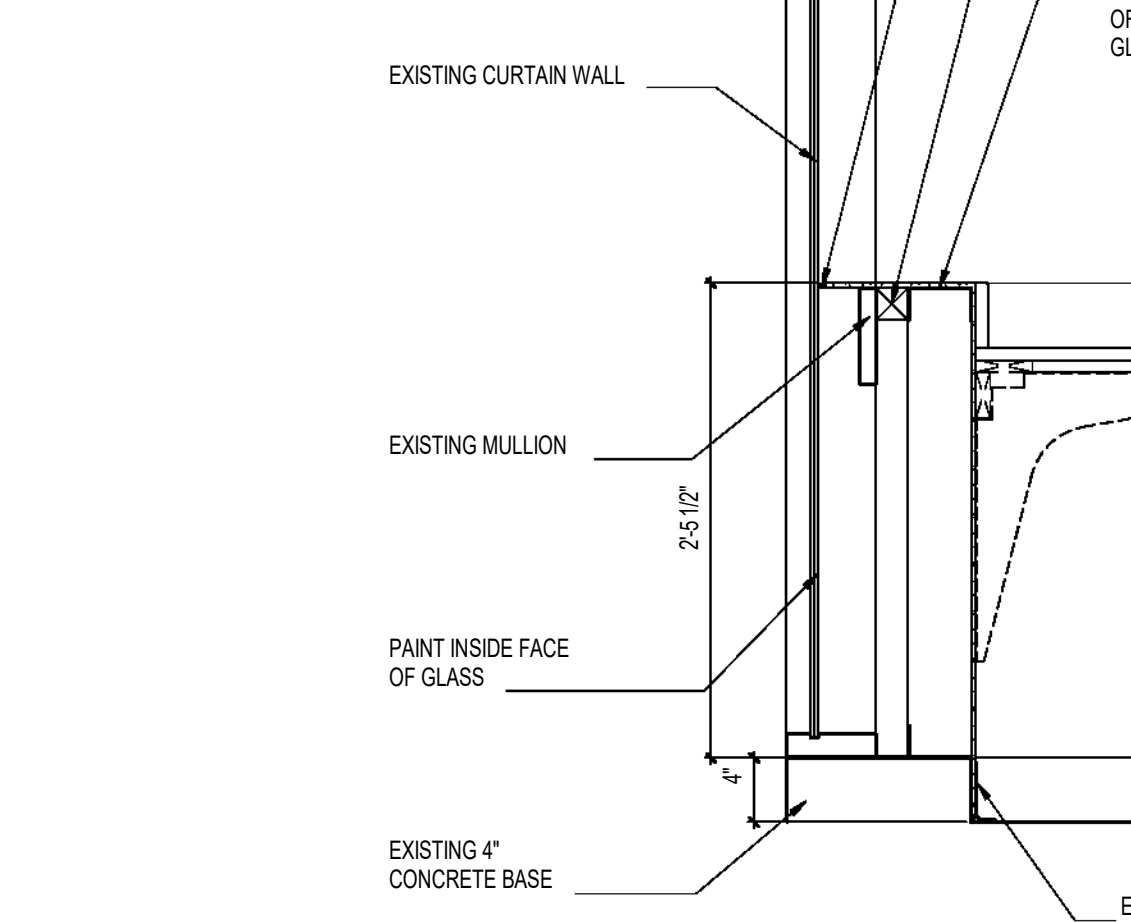
6 BASE CABINET AT ACCESSIBLE SINK WITH KNEE SPACE
 1" = 1'-0"



9 PLASTIC LAMINATE NOSING DETAIL
 6" = 1'-0"



10 PLASTIC LAMINATE COUNTERTOP DETAIL
 1" = 1'-0"



14 KNEE WALL PARTITION AT CABINET
 1" = 1'-0"

MILLWORK NOTES

- A. CABINET SECTIONS SHOWN ON THIS SHEET ILLUSTRATE TYPICAL CONSTRUCTION AND NOT EVERY DOOR AND/OR DRAWER VARIATION IS SHOWN.
- B. ALL CABINETRY IS PLASTIC LAMINATE CLAD, U.N.O. THE INTENT IS FOR ALL THE SURFACES TO BE COVERED WITH PLASTIC LAMINATE INCLUDING BUT NOT LIMITED TO THE UNDERSIDE OF TOE SPACES, UNDERSIDE OF PLASTIC LAMINATE COUNTERTOPS AS A "BALANCE SHEET", UNDERSIDE OF APRONS, UNDERSIDE OF COUNTERTOP EDGES.
- C. AT SOLID SURFACE EASE ALL EDGES TO APPROXIMATE 1/8" RADIUS, U.N.O.
- D. PROVIDE TRIM & FILLER PANELS AS REQUIRED WHERE EQUIPMENT IS LOCATED WITHIN CABINET UNITS.
- E. AT THE BOTTOM OF UPPER CABINET UNITS, ALLOW FOR CONTINUOUS RUNS OF UNDERCOUNTER LIGHTS. SEE ALSO ELECTRICAL DRAWINGS.
- F. PROVIDE END SPLASHES WHERE COUNTERTOPS ABUT WALLS AT ENDS OF COUNTERS, U.N.O.
- G. FILE DRAWERS ARE NOTED ON ELEVATIONS.
- H. PROVIDE COUNTERTOP METAL BRACKET SUPPORTS AT 30" O.C. MAX. @ KNEESPACES & LAVATORY COUNTERS, U.N.O. AT COUNTERS THAT ARE OPEN ON THE ENDS WITH NO BASE CABINET, OR END PANELS TO SUPPORT THE COUNTERTOP, THEN PROVIDE METAL BRACKET FOR SUPPORT.
- I. * 2" DEEP COUNTERTOPS - GAMBAS MODEL G-18-24 C/W BX WORKSTATION BRACKETS - WWW.GAMBASBRACKETS.COM
- J. * 2" DEEP COUNTERTOPS - GAMBAS MODEL G-15-15 C/W BX WORKSTATION BRACKETS - WWW.GAMBASBRACKETS.COM
- K. PROVIDE 2" DIAMETER BLACK GRADIENTS AT BACK OF COUNTERTOPS - 1 PER 30" OF KNEESPACE WIDTH. LOCATE IN FIELD WITH COUNTER.
- L. PAINT OR SEAL ALL WOOD, PLYWOOD, OR MDF BUCKS, CLEATS, SUPPORTS, BRACES, ETC. AT KNEESPACES, I.E. NO UNFINISHED WOOD PRODUCT SURFACES OR EDGES.
- M. WHERE MILLWORK IS TO FIT BETWEEN TWO WALLS AND A WALL TO WALL DIMENSION IS SHOWN, IT IS AT FACE OF PARTITION TO FACE OF PARTITION WITHOUT ANY APPLIED FINISH SUCH AS WALL TILE. HOWEVER, THESE CONDITIONS MUST BE FIELD MEASURED BEFORE FABRICATION OF MILLWORK.

BAR IS ONE INCH IN LENGTH ON ORIGINAL DRAWING CHECK SCALE AND ADJUST ACCORDINGLY

ONE INCH

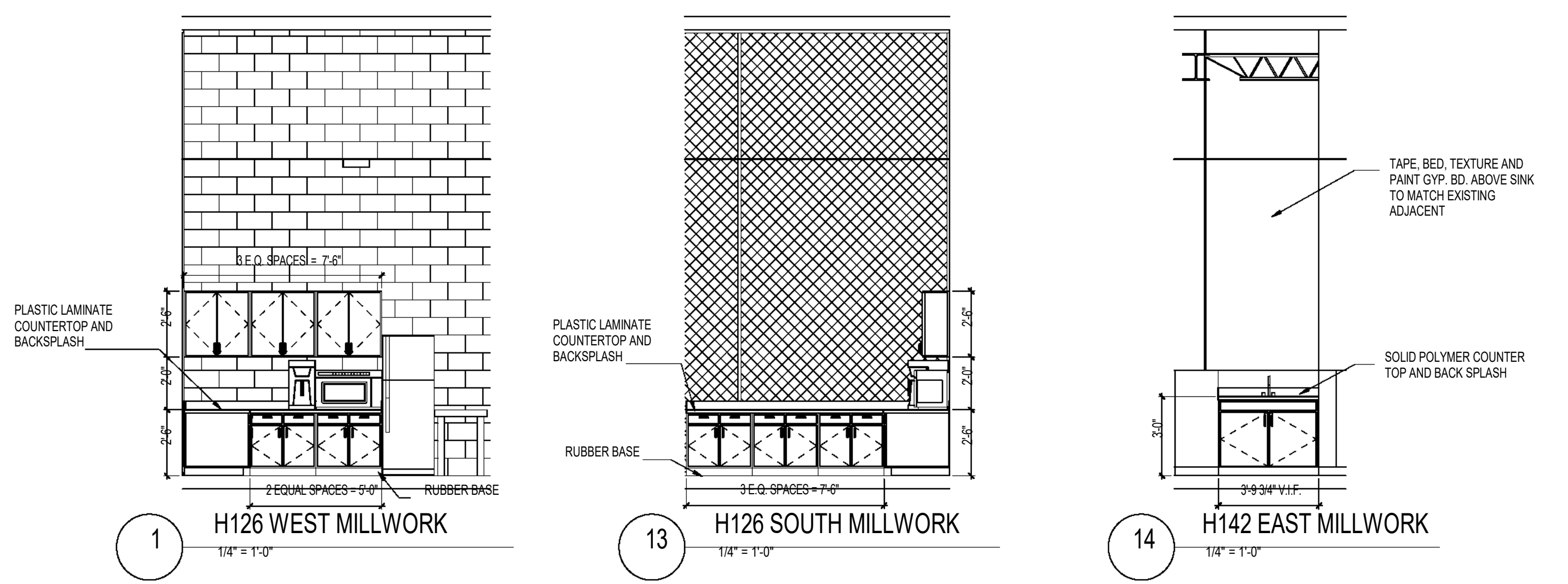
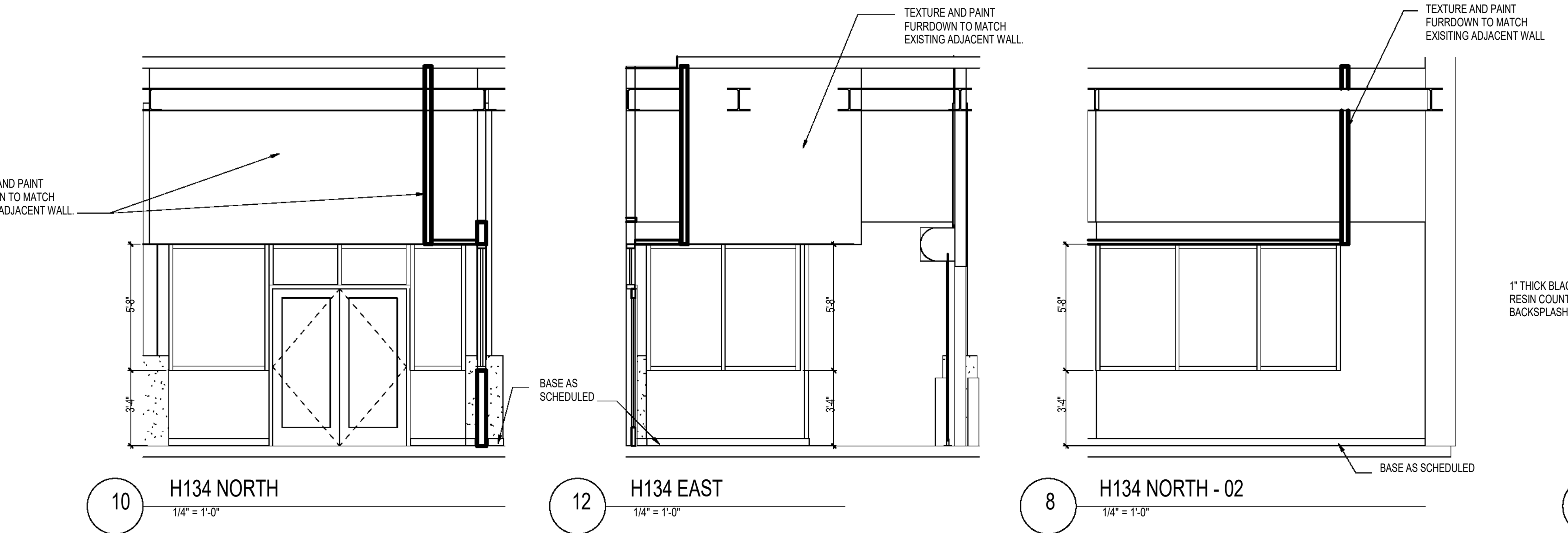
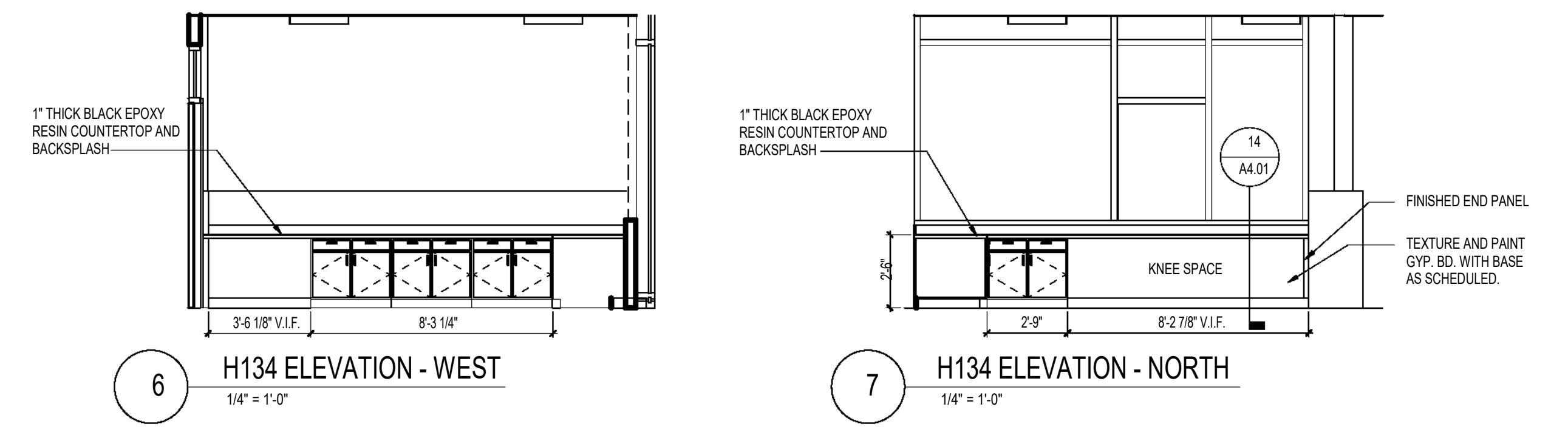
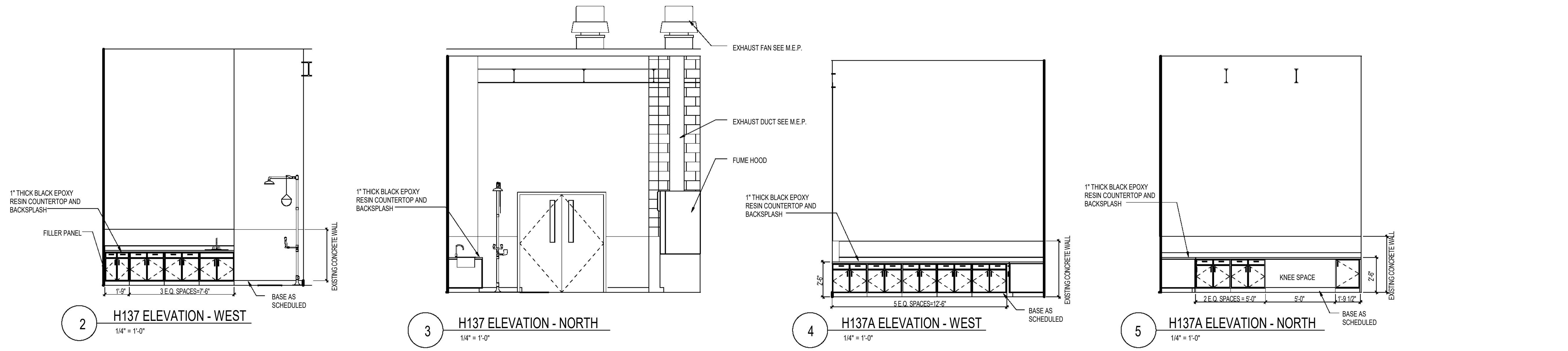
REVISIONS:

PROJECT STATUS: 100%
 CONSTRUCTION DOCUMENTS - FOR

1105 W. SANDOZ MILL ROAD
 SUITE 300
 ARLINGTON, TEXAS 76012
 TEL: (817) 285-5332
 FAX: (817) 285-5332
 WWW.LBLARCHITECTS.COM
 TSC: FRANK@LBL.COM

LBL ARCHITECTS
 Listen. Build. Lead.

RENOVATIONS TO UNIVERSITY OF NORTH TEXAS
 DISCOVERY PARK H WING RESEARCH LABS
 UNIVERSITY OF NORTH TEXAS DISCOVERY PARK, 3940 N. ELM ST. DENTON, TX 76207



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 ONE INCH
 REVISIONS:

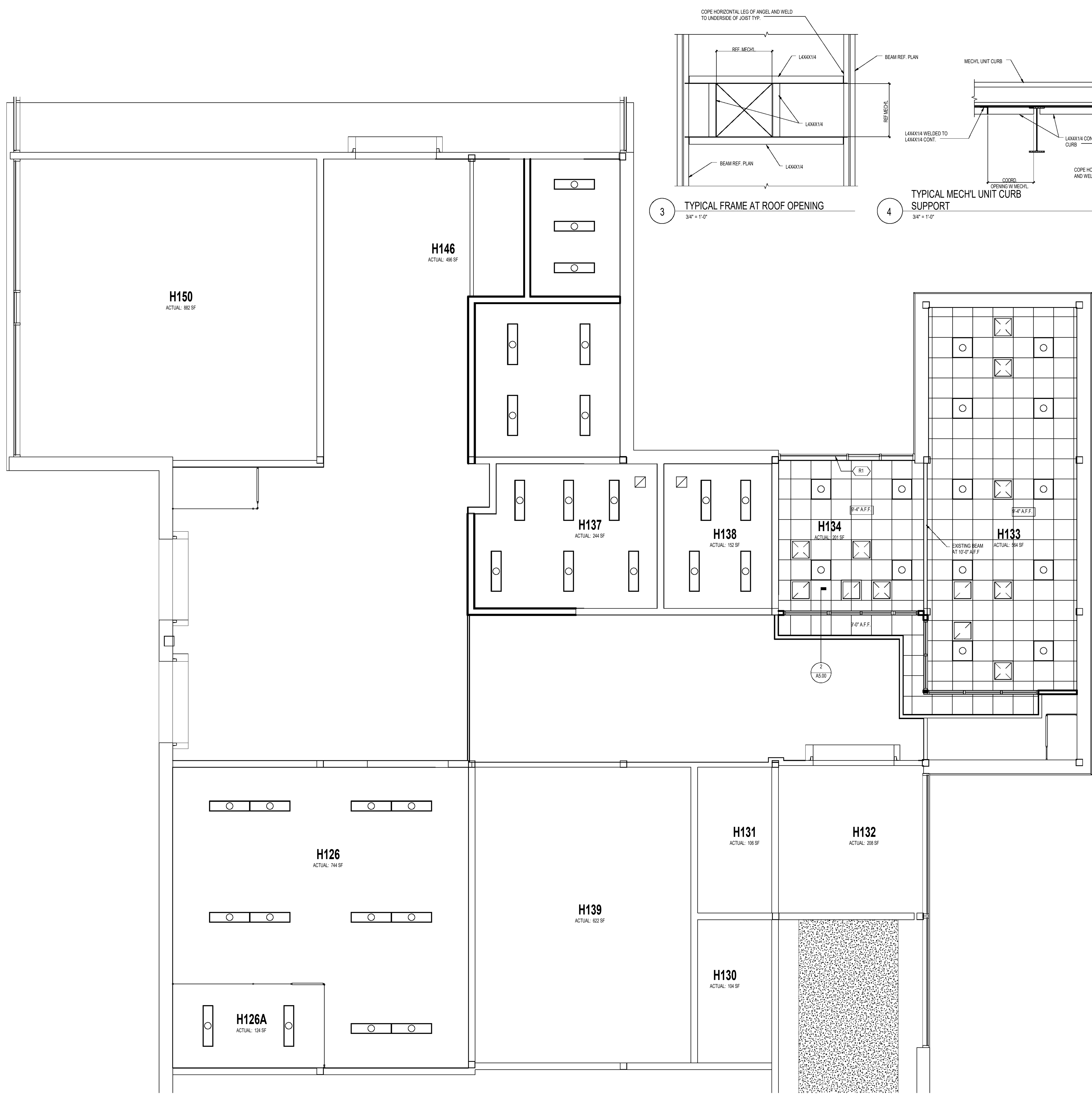
PROJECT STATUS: 100%
 CONSTRUCTION DOCUMENTS - FOR

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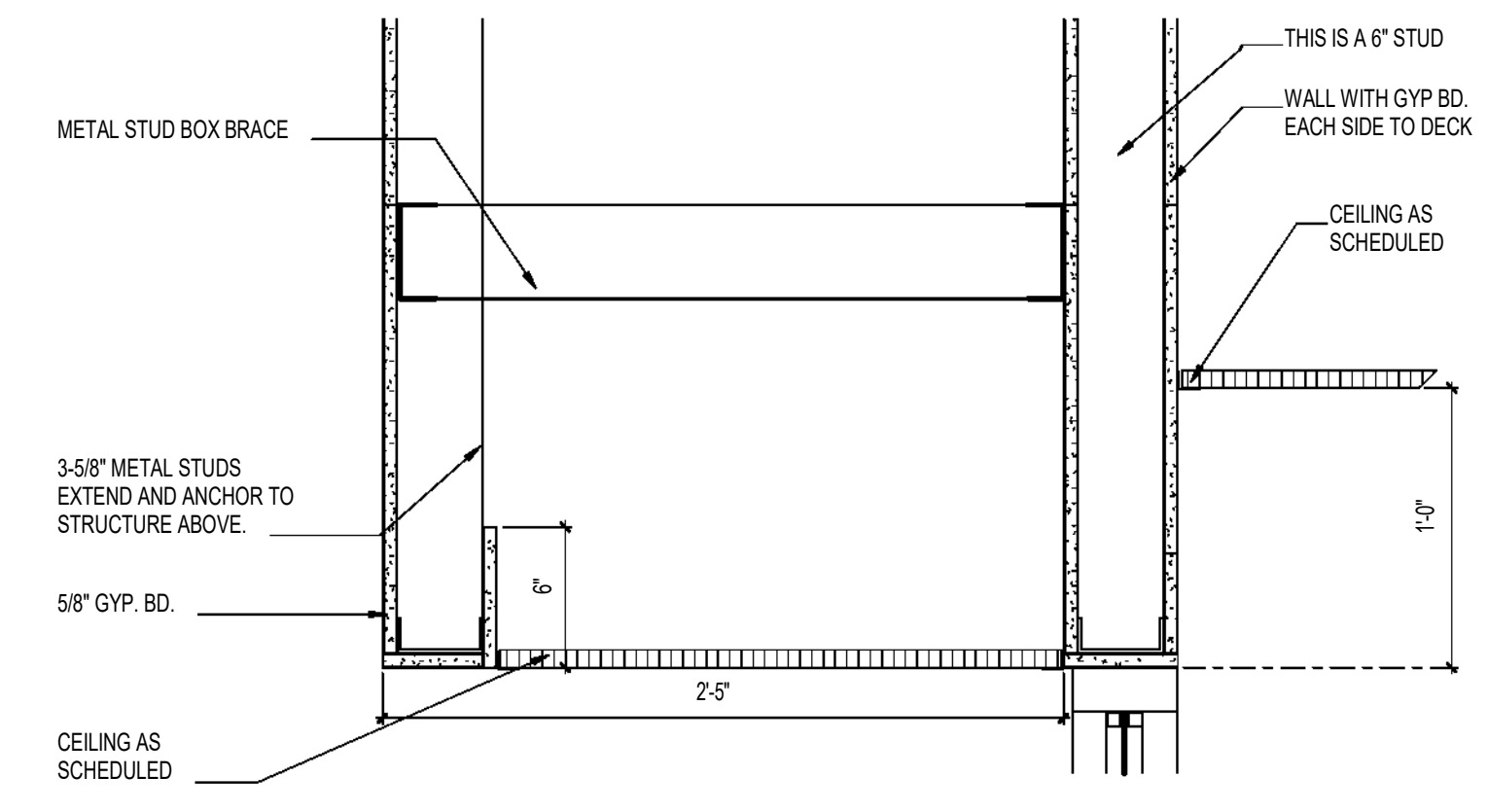
RENOVATIONS TO UNIVERSITY OF NORTH TEXAS
 DISCOVERY PARK H WING RESEARCH LABS
 UNIVERSITY OF NORTH TEXAS DISCOVERY PARK, 3940 N. ELM ST. DENTON, TX 76207

REFLECTED CEILING PLAN
A5.00



3 TYPICAL FRAME AT ROOF OPENING
 3/4" = 1'-0"

4 TYPICAL MECH'L UNIT CURB SUPPORT
 3/4" = 1'-0"



2 FURDOW DETAIL
 1 1/2" = 1'-0"

REFLECTED CEILING PLAN NOTES:

- A. LIGHT FIXTURES LOCATED IN CEILING SYSTEMS SHALL BE LOCATED ACCORDING TO THE ARCHITECTURAL REFLECTED CEILING PLAN.
- B. CEILING DIFFUSERS, RETURN AIR GRILLES, AND EXHAUST FAN INTAKES LOCATED IN CEILING SYSTEMS SHALL BE LOCATED ACCORDING TO THE ARCHITECTURAL REFLECTED CEILING PLAN.
- C. ALL GYPSUM BOARD SOFFITS AND BULKHEADS ARE TO ALIGN WITH ADJACENT SUSPENDED CEILING SYSTEMS, UNLESS NOTED OTHERWISE.
- D. SUSPENDED CEILING TILES IN EACH ROOM ARE TO BE CONFIGURED SUCH THAT NO LESS THAN ONE-HALF A BORDER TILE EXISTS ADJACENT TO ANY ROOM WALL, UNLESS NOTED OTHERWISE.
- E. CEILING IN ELECTRICAL ROOMS, TELEPHONE ROOMS, MECHANICAL ROOMS & OTHER SIMILAR SPACES ARE EXPOSED TO STRUCTURE ABOVE UNLESS NOTED OR SCHEDULED OTHERWISE.
- F. REFER TO ELECTRICAL DRAWINGS FOR ADDITIONAL LIGHT FIXTURE SPECIFIC INFORMATION.
- G. REFER TO MECHANICAL DRAWINGS FOR ADDITIONAL DIFFUSER SPECIFIC INFORMATION.
- H. FINISHED CEILING HEIGHT IS 9'-4" UNLESS NOTED OTHERWISE.

RCP PLAN NOTES BY NUMBER R#

- R1 PAINT INSIDE FACE OF GLAZING BLACK ABOVE CEILING

GENERAL ACOUSTICAL NOTES

1. INSTALL SOUND ATTENUATION BATTS BETWEEN STUDS FROM FINISH FLOOR TO FLOOR/ROOF DECK ABOVE TO PROVIDE A CONTINUOUS VERTICAL ACOUSTICAL ENVELOPE.
2. ALL INTERIOR WALLS SHALL BE EXTENDED TO ROOF DECK ABOVE AND SEALED AIR-TIGHT. ALL ELECTRICAL BOXES IN THESE WALLS SHALL ALSO BE SEALED AIR-TIGHT.

REFLECTED CEILING PLAN LEGEND

ACUSTICAL TILE CEILING 1 (24X24)	NO CEILING
ACUSTICAL TILE CEILING 2 (24X24)	GYPSUM CEILING - PAINTED

LIGHTS (REFER E-SHEETS FOR SIZES)

2x2 RECESSED LIGHT FIXTURE	SUSPENDED LIGHT FIXTURE
----------------------------	-------------------------

MECHANICAL (REFER M-SHEETS FOR SIZES)

HVAC SUPPLY DIFFUSER	HVAC EXHAUST GRILLE
HVAC RETURN DIFFUSER	ACCESS PANEL

MISCELLANEOUS

ROLLER SHADES	SMOKE DETECTOR	CEILING MOUNTED PROJECTOR, REFER SHT 5.X FOR MOUNTED DETAIL
SPEAKER	EXIT LIGHT	CUBICLE CURTAIN TRACK REFER SHEET 5.X
CAMERA		

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GENERAL CONDITIONS

1. BUILDING AND DESIGN CODES:
 - A. INTERNATIONAL BUILDING CODE 2021
 - B. AWS D1.4-2018 - STRUCTURAL WELDING CODE - STEEL REINFORCING BARS
 - C. ACI 318-19 BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE
2. DESIGN LOADS:
 - A. LIVE LOADS: UNIFORM

ROOF	20
SLAB ON GRADE	100

 ROOF LIVE LOADS ARE PERMITTED TO BE REDUCED PER SECTION 1607.14
 - B. DEAD LOADS:

ROOF DEAD LOAD	20
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3. GENERAL REQUIREMENTS:
 - A. VERIFY EXISTING CONDITIONS AND DIMENSIONS PRIOR TO BEGINNING WORK OR FABRICATING MATERIALS. NOTIFY A/E OF DISCREPANCIES BEFORE PROCEEDING WITH ANY PHASE WORK.
 - B. VERIFY THE LOCATION OF CHASES, INSERTS, OPENINGS, SLEEVES, FINISHES, DEPRESSIONS, PADS, AND WALL OPENINGS.
 - C. DO NOT SCALE DRAWINGS FOR THE PURPOSE OF ESTABLISHING DIMENSIONS.
 - D. DETAILS LABELED "TYPICAL DETAILS" ON DRAWINGS APPLY TO SITUATIONS OCCURRING ON THE PROJECT THAT ARE THE SAME OR SIMILAR TO THOSE SPECIFICALLY DETAILED. SUCH DETAILS APPLY WHETHER OR NOT DETAILS ARE REFERENCED AT EACH LOCATION. NOTIFY ENGINEER OF CONFLICTS REGARDING APPLICABILITY OF "TYPICAL DETAILS".
 - E. THE CONTRACT STRUCTURAL DOCUMENTS REPRESENT THE FINISHED STRUCTURE. THE CONTRACTOR IS RESPONSIBLE FOR THE MEANS AND METHODS OF CONSTRUCTION. PROVIDE ALL MEASURES REQUIRED TO PROTECT THE STRUCTURE, WORKMEN, AND OTHER PERSONS DURING CONSTRUCTION; INCLUDING BRACING, SHORING FOR CONSTRUCTION EQUIPMENT, SHORING FOR THE BUILDING, FORMS AND SCAFFOLDING, SHORING OF RETAINING WALLS AND OTHER TEMPORARY SUPPORTS AS REQUIRED. COMPLY WITH APPLICABLE REQUIREMENTS OF OSHA AND OTHER GOVERNING BODIES HAVING JURISDICTION AT THE SITE.

FOUNDATION

1. FOUNDATION DESIGN IS BASED UPON CHAPTER 18 OF THE IBC AND LOCAL SOILS CONDITIONS.
2. COORDINATE STRUCTURAL PLANS AND DETAILS WITH REQUIREMENTS OF GEOTECHNICAL REPORT. FOUNDATION DESIGN IS BASED ON 1,000 PSF ALLOWABLE BEARING CAPACITY.
3. PROTECT PIPES AND CONDUITS RUNNING THROUGH WALLS AND SLABS WITH 1/2 INCH EXPANSION MATERIAL. LOWER CONTINUOUS FOOTINGS AND GRADE BEAMS PERPENDICULAR TO PIPE RUNS TO ALLOW PIPES TO PASS ABOVE THE FOOTINGS OR THROUGH THE GRADE BEAMS. ALTERNATIVELY, PROVIDE A CONCRETE JACKET IF PIPES ARE LOW ENOUGH TO BE PLACED BELOW THE FOOTINGS AND GRADE BEAMS. LOWER FOOTINGS AND GRADE BEAMS PARALLEL TO PIPE RUNS TO AVOID SURCHARGE ONTO ADJACENT TRENCH EXCAVATIONS.

SUBGRADE PAD PREPARATION RECOMMENDATIONS

1. COMPACT THE SOIL BELOW THE SLAB AT TRENCHES USING A VIBRATORY COMPACTOR. PLACE LIFTS IN TRENCH WITH A MAXIMUM OF 6 INCH THICKNESS AND COMPACT IN LAYERS UNTIL BOTTOM OF SLAB ELEVATION IS REACHED.

CONCRETE

1. PROVIDE BATCH MIXING, TRANSPORTATION, PLACING AND CURING OF CONCRETE IN ACCORDANCE WITH RECOMMENDATIONS OF ACI 301 AND ACI 318. USE TYPE II PORTLAND CEMENT UNLESS NOTED OTHERWISE. PROVIDE ADMIXTURES AND SPECIAL REQUIREMENTS AS SPECIFIED.
 - A. ALL CONCRETE SHALL BE NORMAL WEIGHT (150 PCF) CONCRETE: $f_c=3,000$ PSI AT 28 DAYS
 - B. MAXIMUM WATER/CEMENT RATIO OF 0.57 BY WEIGHT.
 - C. MAXIMUM FLY ASH REPLACEMENT OF 20% OF CEMENTITIOUS MATERIALS.
 - D. AIR ENTRAINMENT SHALL BE BETWEEN 1%-5% FOR INTERIOR SLAB.
2. PROVIDE CONCRETE MIXES DESIGNED BY A QUALIFIED TESTING LABORATORY FOR REVIEW AND APPROVAL BY THE STRUCTURAL ENGINEER.
3. PROVIDE A 10 MIL VAPOR BARRIER BELOW SLAB.
4. WIRE BRUSH AND CLEAN CONSTRUCTION JOINTS PRIOR TO POURING NEW CONCRETE.
5. REFERENCE THE APPROPRIATE DISCIPLINE DRAWINGS FOR SUBSLAB PIPING, FLOOR DRAINS AND SLAB AND WALL PENETRATIONS.

REINFORCING STEEL

1. PROVIDE DETAILING, FABRICATION, AND INSTALLATION OF REINFORCING AND ACCESSORIES IN ACCORDANCE WITH ACI 315 AND ACI 318.
2. PROVIDE NEW BILLET STEEL REINFORCING BARS IN ACCORDANCE WITH ASTM A 615, GRADE 60.
3. COORDINATE PLACEMENT OF CAST-IN-PLACE EMBEDS AND ANCHOR RODS. SET ANCHOR RODS WITH A TEMPLATE. SECURELY ATTACH EMBED ITEMS TO FORMWORK OR REINFORCING.
4. PROVIDE CLASS "B" REINFORCEMENT SPLICES FOR CONTINUOUS REINFORCEMENT. PROVIDE STANDARD 90-DEGREE HOOKS IN ACCORDANCE WITH ACI 318, UNLESS NOTED OTHERWISE.
5. MAINTAIN THE FOLLOWING CONCRETE COVERAGE FOR REINFORCING STEEL UNLESS NOTED OTHERWISE:
 - A. CONCRETE CAST AGAINST EARTH: 3 INCHES
 - B. CONCRETE EXPOSED TO WEATHER:

NO. 6 AND LARGER:	2 INCHES
NO. 5 AND SMALLER:	1-1/2 INCHES
 - C. CONCRETE NOT EXPOSED TO WEATHER OR IN CONTACT WITH THE GROUND:

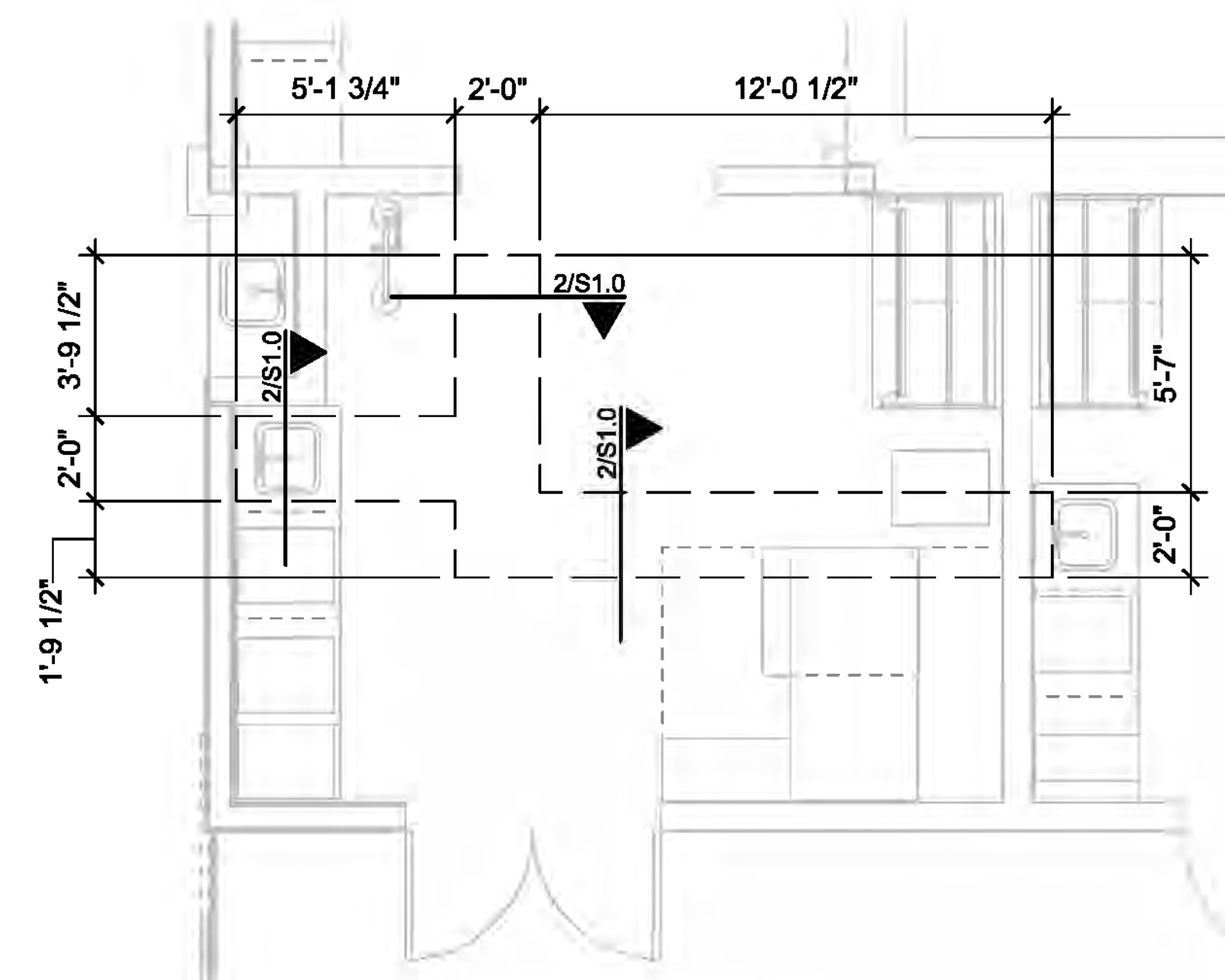
SLABS AND WALLS	NO. 14 AND NO. 18: 1-1/2 INCHES
	NO. 11 AND SMALLER: 3/4 INCHES
6. DO NOT WELD OR BEND REINFORCEMENT IN THE FIELD UNLESS SPECIFICALLY SHOWN OR APPROVED BY STRUCTURAL ENGINEER.
7. WHEN SPECIFICALLY APPROVED, PROVIDE WELDED REINFORCEMENT ACCORDANCE WITH ASTM A 706 GRADE 60. USE LOW HYDROGEN ELECTRODES FOR WELDING OF REINFORCEMENT IN CONFORMANCE WITH "RECOMMENDED PRACTICES FOR WELDING REINFORCING STEEL", AMERICAN WELDING SOCIETY, AWS D12.1. PROVIDE ASTM GRADE 40 REINFORCING BARS WHERE DETAILED BARS ARE TO BE WELDED TO A STEEL SECTION.

MASONRY

1. REINFORCED MASONRY WORK AND MATERIALS TO BE IN ACCORDANCE WITH THE BUILDING CODE REQUIREMENTS SPECIAL INSPECTION

SPECIAL INSPECTION SHALL MEET THE REQUIREMENTS OF IBC SECTION 1704. SPECIAL INSPECTOR(S) SHALL BE HIRED BY THE OWNER TO PERFORM THE REQUIRED SPECIAL INSPECTIONS. THE NAMES OF PERSONS OR FIRMS WHO ARE TO PERFORM THE SPECIAL INSPECTIONS SHALL BE FORWARDED TO THE BUILDING OFFICIAL FOR APPROVAL. THE SPECIAL INSPECTOR(S) SHALL COMPLETE AND SUBMIT ALL FORMS REQUIRED BY DENTON, TEXAS

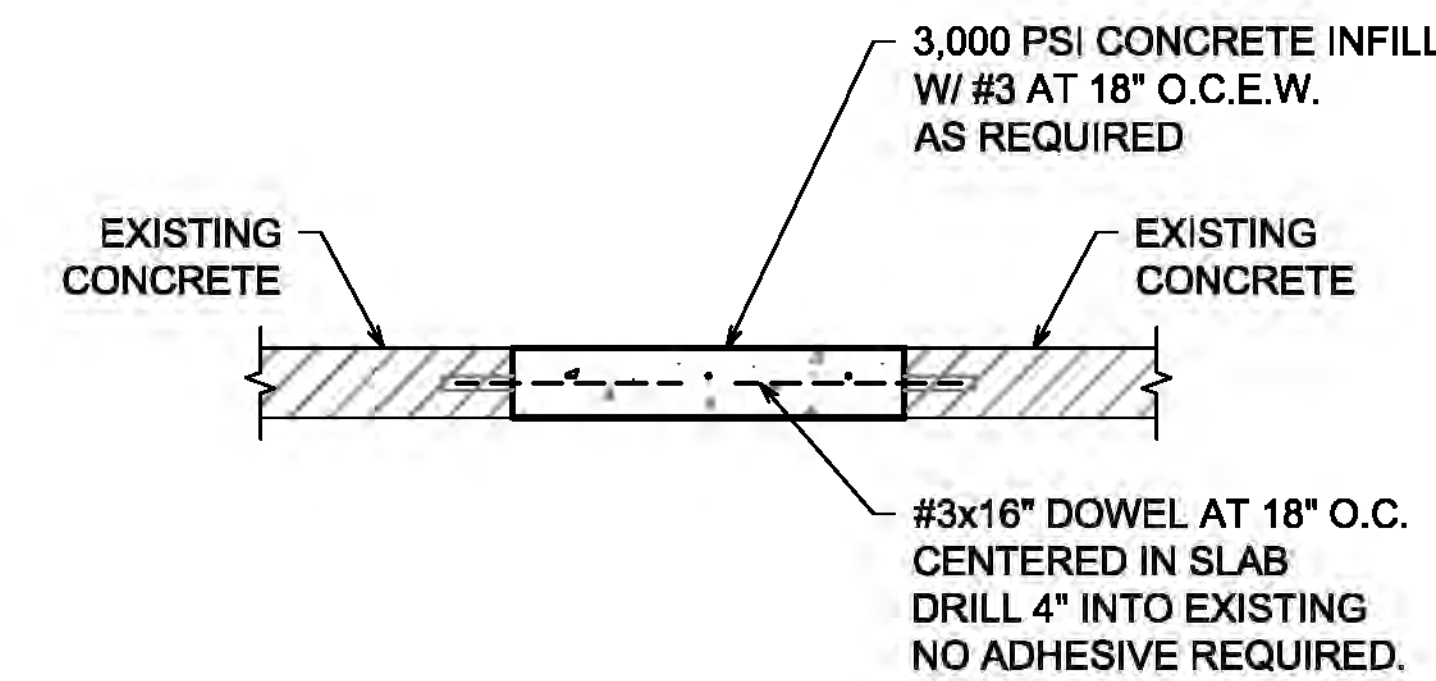
1. THE SPECIAL INSPECTOR(S) SHALL:
 - A. OBSERVE THE WORK ASSIGNED FOR CONFORMANCE TO THE APPROVED DRAWING AND SPECIFICATIONS.
 - B. FURNISH INSPECTION REPORTS TO THE ENGINEER OF RECORD AND BUILDING DEPARTMENT. DISCREPANCIES SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE CONTRACTOR FOR CORRECTION, THEN, IF NOT CORRECTED TO THE ENGINEER AND THE BUILDING DEPARTMENT.
 - C. SUBMIT TO THE ENGINEER OF RECORD AND THE BUILDING DEPARTMENT A SIGNED FINAL REPORT STATING THAT THE WORK WAS IN CONFORMANCE WITH THE APPROVED DRAWINGS AND SPECIFICATIONS AND THE APPLICABLE WORKMANSHIP PROVISIONS OF THE IBC.
2. SPECIAL INSPECTION NOTES:
 - A. CONTINUOUS SPECIAL INSPECTION IS ALWAYS REQUIRED DURING THE PERFORMANCE OF THE WORK UNLESS SPECIFICALLY NOTED BELOW.
 - B. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO PROVIDE THE SPECIAL INSPECTOR(S) WITH ADVANCE NOTICE, NO LESS THAN ONE WORKING DAY, OF THE INITIATION OF ANY WORK REQUIRED TO HAVE SPECIAL INSPECTIONS. ALL WORK PERFORMED WITHOUT REQUIRED SPECIAL INSPECTION WILL BE SUBJECT TO REMOVAL.
3. TYPES OF WORK REQUIRING SPECIAL INSPECTION ARE:
 - A. REINFORCING STEEL IN CONCRETE: DURING PLACEMENT OF REINFORCING STEEL FOR CONCRETE EXCEPT AS ALLOWED IN IBC SECTION 1705.3.



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

FOUNDATION PLAN NOTES:

1. COORDINATE ALL DIMENSIONS WITH PLUMBING PLANS AND DETAILS.
2. REFERENCE SHEET S1.0 FOR GENERAL NOTES.
3. REFER TO ARCHITECTURAL, MECHANICAL AND PLUMBING DRAWINGS FOR SLAB PENETRATION AND DRAIN LOCATIONS.
4. CENTER TRENCH ON DRAIN LINES. REFER TO PLUMBING SHEET P-1 FOR DRAIN LINE LOCATION.



2 TRENCH INFILL DETAIL
SCALE: 3/4" = 1'-0"

Digitally signed by Philippe Lalonde
Date: 2024.10.02
11:15:29 -0500



THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY PHILIPPE J. LALONDE, P.E. 08364 (C08 P7979) ON OCT. 2, 2024.

UNIVERSITY OF NORTH TEXAS
TRENCH REPAIR
 3940 N HELM STREET
 DENTON, TX 76207

REVISIONS:

DRAWN: P.B. CHECKED: P.L.
JOB NUMBER: 240207
OCTOBER 2, 2024

TRENCH REPAIR PLAN & DETAILS

SHEET NUMBER

S1.0

PRIMERA DESIGN ASSOCIATES LLC
 200 N. MESQUITE, SUITE 200A
 ARLINGTON, TX 76011
 PHONE (817) 302-5400, FAX (817)-285-1582
 www.primera.com
 TAKE FRMP1503 TYPE FRMP1503

NOTES BY SYMBOL: "O"

1. REMOVE EXISTING DUCTWORK AS SHOWN. CAP EXISTING DUCTWORK TO REMAIN AIR TIGHT. REPAIR EXISTING INSULATION AND LINER TO MATCH SURROUNDING CONDITIONS.
2. REMOVE AIR DEVICE AS SHOWN. PATCH AND REPAIR EXISTING DUCTWORK TO MATCH SURROUNDING CONDITIONS.
3. REMOVE EXISTING EXHAUST FAN AND DAMPER. INSULATE, CAP, AND SEAL EXISTING ROOF CURB WEATHERTIGHT.
4. REMOVE EXISTING EXHAUST FAN, ROOF CURB, AND ALL APPURTENANCES. PATCH AND REPAIR ROOF WEATHERTIGHT TO MATCH SURROUNDING CONDITIONS.
5. RELOCATE EXISTING AIR DEVICE PLAN SOUTH TO PORTION OF BRANCH DUCT TO REMAIN.

BAR IS ONE INCH IN LENGTH ON ORIGINAL DRAWING CHECK SCALE AND ADJUST ACCORDINGLY

ONE INCH

REVISIONS:

PROJECT STATUS: 100% CD

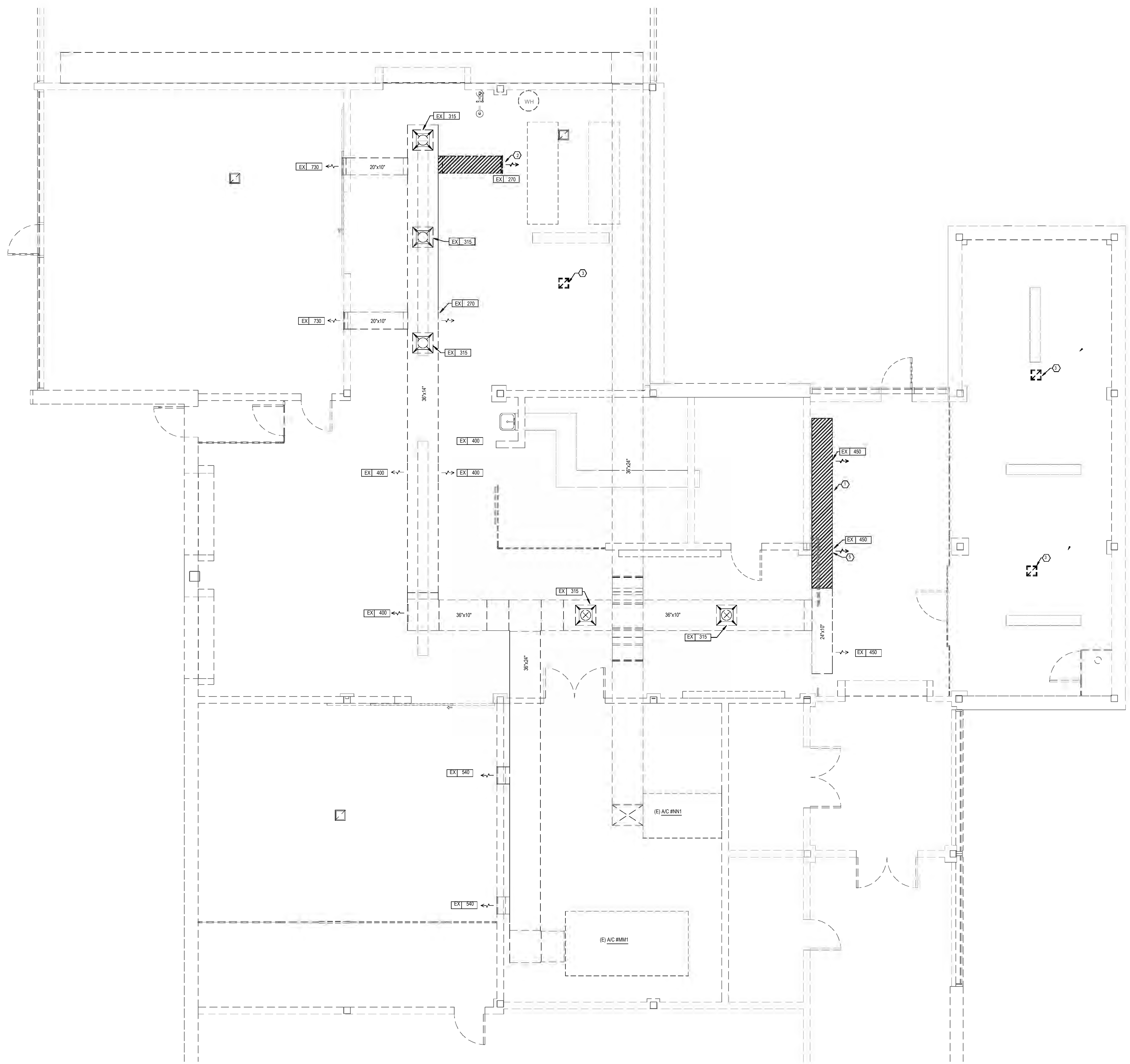
1108 W. RANDOLPH MILL ROAD
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BHB
 ARCHITECTS
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RESEARCH LABS
 UNIVERSITY OF NORTH TEXAS DISCOVERY PARK, 3940 N ELM ST. DENTON, TX 76207

Mechanical
 Demolition Floor
 Plan

MD-1



1 DEMOLITION PLAN - MECHANICAL
 Scale: 1/4" = 1'-0"



BHB
 BAIRD, HAMPTON & BROWN
 building partners

6300 Ridglea Pl., Ste. 700 Fort Worth, TX 76116
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 TBPELS Firm #44, #10011300, #10011302, #10194146
 BHB PROJECT # 2024.029.007

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PROJECT STATUS: 100% CD

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 UNIVERSITY OF NORTH TEXAS DISCOVERY PARK, 3940 N ELM ST. DENTON, TX 76207

Floor Plan - Mechanical
M-1

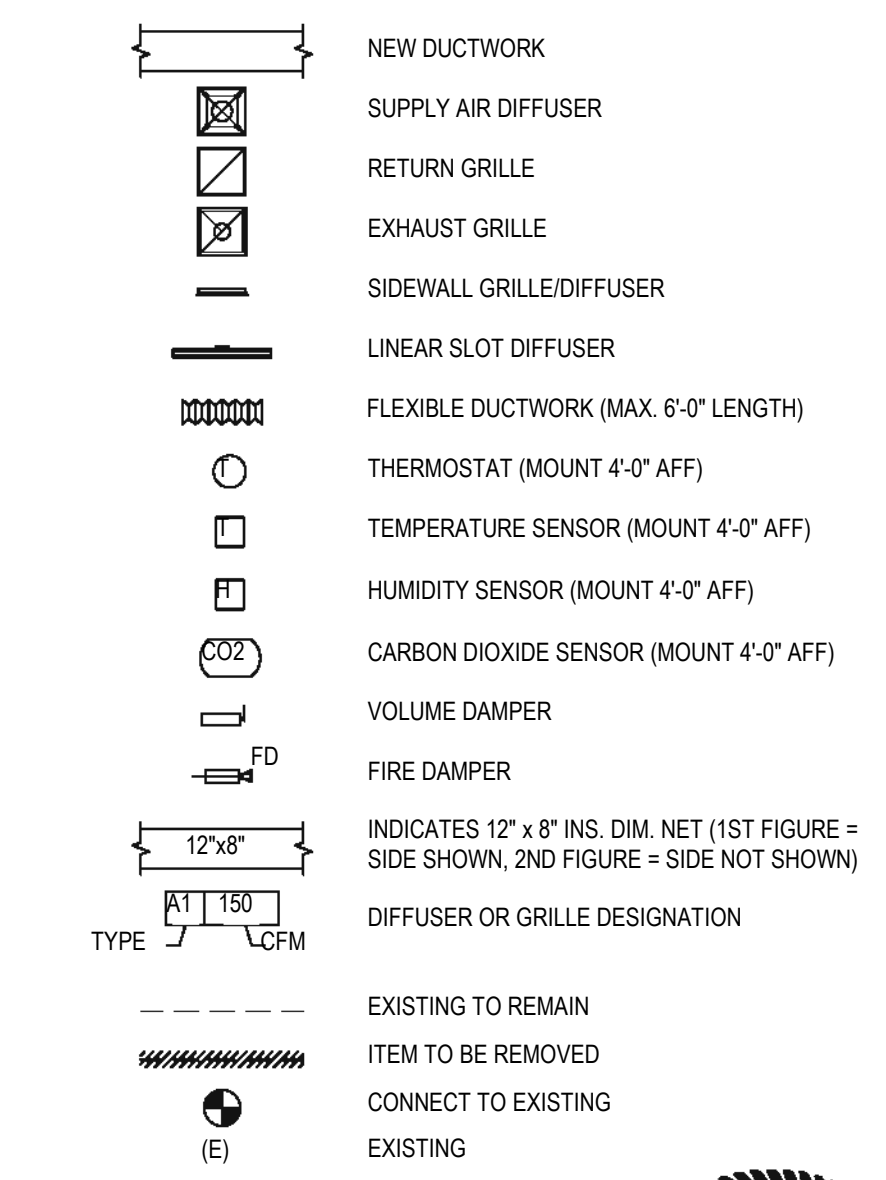
NOTES BY SYMBOL: "O"

1. PROVIDE AND INSTALL PHOENIX CONTROLS VENTURI AIR VALVE IN VERTICAL DUCTWORK BRANCH.
2. ROUTE 18" DUCT UP FROM AIR DEVICE AND CONNECT TO BOTTOM OF RETURN BRANCH MAIN. PROVIDE BALANCE DAMPER PRIOR TO FINAL CONNECTION.
3. ROUTE 10"x10" DUCT UP FROM AIR DEVICE AND CONNECT TO BOTTOM OF RETURN BRANCH MAIN. PROVIDE BALANCE DAMPER PRIOR TO FINAL CONNECTION.
4. CONNECT NEW DUCTWORK TO EXISTING DUCTWORK. PATCH AND REPAIR INSULATION TO MATCH SURROUNDING CONDITIONS.
5. PROVIDE 4" CONCRETE HOUSE KEEPING PAD FOR CONDENSING UNIT. SECURE CONDENSING UNIT TO PAD AND INSTALL WITH NEOPRENE PAD BELOW UNIT FOR VIBRATION CONTROL. MAINTAIN MANUFACTURER'S REQUIRED CLEARANCES AND ENSURE SERVICE PARTS AND PANELS ARE EASY TO ACCESS. PROVIDE METAL ALL-SERVICE JACKETING ON ALL CHILLED WATER LINES ROUTED TO BUILDING.
6. ROUTE 18" DUCT UP TO EF-2 ON ROOF.
7. ROUTE REFRIGERANT LINES BETWEEN INDOOR CHILLER SERVING XRD CABINET AND OUTDOOR REMOTE CONDENSER (APPROX. 3 TON CAPACITY). REFER TO MANUFACTURER FOR SIZING.
8. ORIENT CHILLER SUCH THAT AIR INTAKE SIDE WITH GREATER CLEARANCE REQUIREMENTS IS FACING PLAN EAST OR WEST.
9. PROVIDE 4" CONCRETE HOUSE KEEPING PAD FOR CHILLER. SECURE CHILLER TO PAD AND INSTALL WITH NEOPRENE PAD BELOW UNIT FOR VIBRATION CONTROL. MAINTAIN MANUFACTURER'S REQUIRED CLEARANCES AND ENSURE SERVICE PARTS AND PANELS ARE EASY TO ACCESS. PROVIDE METAL ALL-SERVICE JACKETING ON ALL CHILLED WATER LINES ROUTED TO BUILDING.
10. PROVIDE CHILLER SERVING XRD CABINET WITH NEOPRENE PAD BELOW UNIT FOR VIBRATION CONTROL.
11. PROVIDE ISOLATION BALL VALVE ON DIS AND DR PIPING PRIOR TO FINAL EQUIPMENT CONNECTION.
12. RELOCATE EXISTING AIR DEVICE TO LOCATION SHOWN.
13. PROVIDE CORROSION RESISTANT THERMOPLASTIC DUCTWORK BETWEEN LAB HOOD OUTLETS AND EXHAUST FAN.
14. ROUTE FULL-SIZED CHILLED WATER SUPPLY AND RETURN PIPING (1" ANTICIPATED) FROM EACH INDOOR CHILLER TO EACH XRD CABINET. REFER TO MANUFACTURER FOR SIZING. PROVIDE ISOLATION BALL VALVE PRIOR TO FINAL CONNECTION TO CHILLER.

HVAC GENERAL NOTES

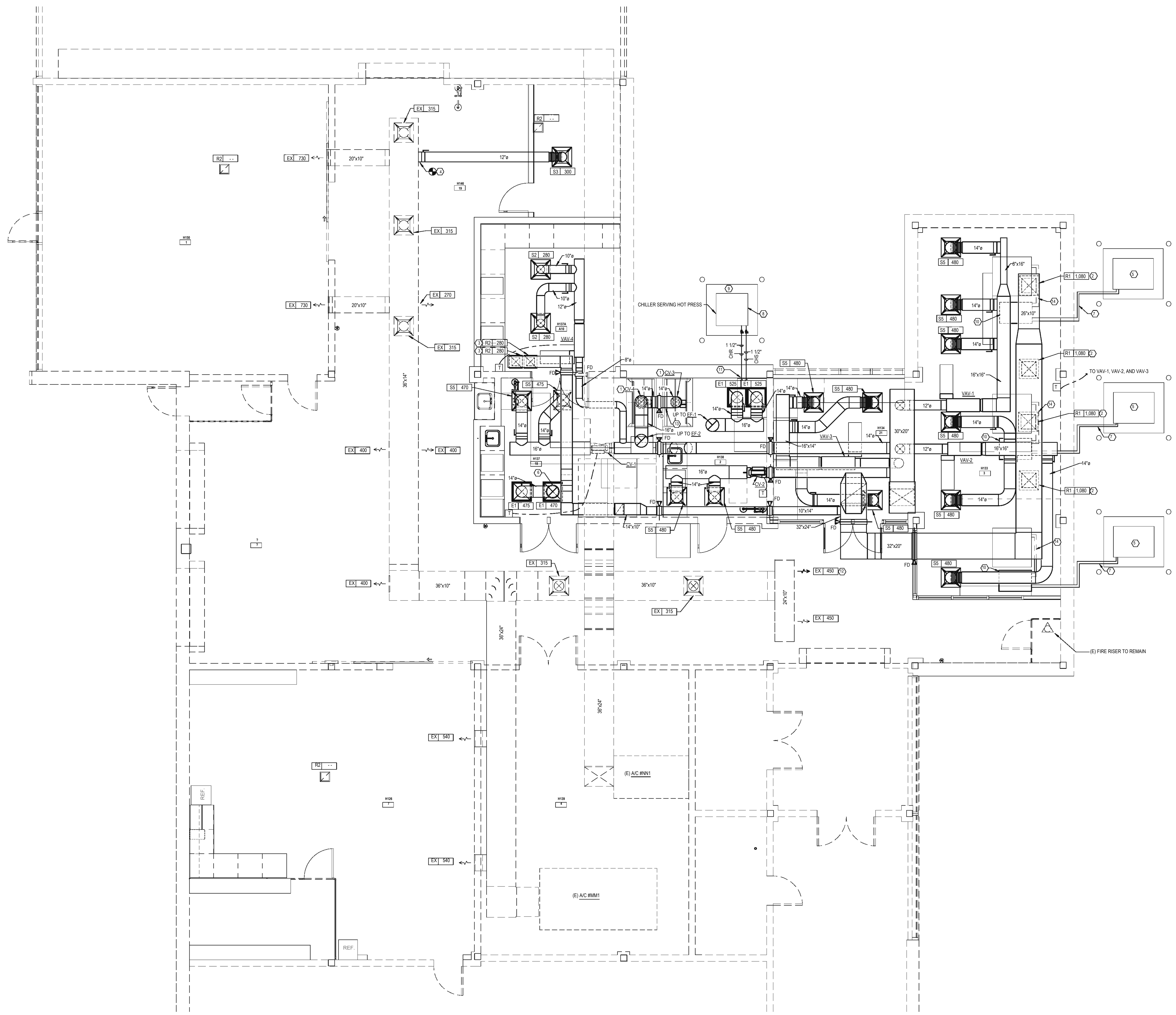
1. FURNISH AND INSTALL ALL MATERIALS AND LABOR REQUIRED TO PROVIDE COMPLETE AND OPERABLE HVAC SYSTEMS WITH ALL ITEMS AND APPURTENANCES NECESSARY EVEN THOUGH NOT SPECIFICALLY IDENTIFIED.
2. ALL WORK AND/OR MATERIALS SHALL BE INSTALLED BY A LICENSED CONTRACTOR AND SHALL CONFORM TO ALL APPLICABLE NATIONAL AND LOCAL BUILDING AND MECHANICAL CODES.
3. ALL DUCTWORK SHALL BE FABRICATED AND INSTALLED IN ACCORDANCE WITH SHAKNA STANDARDS. INSTALL TURNING VANES IN ALL DUCTWORK ELBOWS.
4. WHERE DUCTWORK IS INDICATED TO BE EXPOSED TO VIEW IN OCCUPIED SPACES, PROVIDE MATERIALS THAT ARE FREE FROM VISUAL IMPERFECTIONS INCLUDING FITTING, SEAM MARKS, ROLLER MARKS, AND STAINS AND DISCOLORATIONS, INCLUDING THOSE THAT WOULD IMPAIR PAINTING.
5. ALL INTERIOR DUCTS SHALL BE CONSTRUCTED WITH 6-GU OR BETTER GALVANIZED STEEL. RASTA #6334 650M F.O. CHEM TREAT EXTERIOR DUCTWORK OR DUCT EXPOSED TO HIGH HUMIDITY CONDITIONS (I.E. MOISTURE LADEN EXHAUSTS NOT SPECIFIED TO BE STAINLESS STEEL) SHALL BE 9-90 OR BETTER GALVANIZED STEEL LFO. CHEM TREAT.
6. COORDINATE EXACT ROUTING OF ALL WORK WITH ALL OTHER TRADES PRIOR TO INSTALLATION OF WORK.
7. MECHANICAL CONTRACTOR SHALL COORDINATE EXACT LOCATION OF AIR DEVICES AND ROUTING OF DUCTWORK WITH REFLECTED CEILING PLANS AND ELECTRICAL LIGHTING LAYOUT.
8. ALL SUPPLY AND RETURN AIR DUCTWORK SHALL BE INSULATED WITH 2" THICK 0.75 LB/CF" (MINIMUM) FSK WRAP INSULATION (MINIMUM INSTALLED R-VALUE = R-6). FOR DUCTWORK WITH INTERNAL LINER, WRAP INSULATION MAY BE OMITTED.
9. ALL SUPPLY/RETURN DUCTWORK FROM AIR HANDLING UNITS SHALL BE LINED WITH 1-1/2" THICK ACoustical LINING 2' BEYOND UNIT.
10. FLEXIBLE DUCTWORK RUNOUTS SHALL BE LIMITED TO 6'-0" EXTENDED LENGTH. FLEXIBLE DUCTWORK SHALL BE EQUAL TO ATCO #208. FLEXIBLE DUCTS, BOTH SUPPLY AND RETURN, SHALL HAVE INSULATION WITH A MINIMUM R-VALUE OF 5.0. PER IECQ, DUCT SHALL HAVE A CONTINUOUS FLEXIBLE FIBERGLASS SHEATH WITH UL APPROVED METALIZED POLYESTER BARRIER JACKET.
11. INSTALL FLEXIBLE DUCTWORK CONNECTIONS AT ALL DUCT CONNECTIONS TO ROOF TOP UNITS AND FANS.
12. ALL DUCT DIMENSIONS SHOWN ARE NET CLEAR INSIDE DIMENSIONS.
13. MOUNT ALL TEMPERATURE SENSORS 4'-0" ABOVE FLOOR (TYPICAL).
14. SUPPORT ALL ROOF MOUNTED CONDENSING UNITS WITH METAL CAPPED ROOF CURBS PER FIGURE 4-160, SHAKNA ARCHITECTURAL SHEET METAL MANUAL, 5TH EDITION.
15. FOR ALL VOLUME DAMPERS LOCATED ABOVE A HARD CEILING, PROVIDE AND INSTALL A WORM GEAR REMOTE VOLUME DAMPER REGULATOR. INSTALL KEY ACCESS IN THE CEILING DIRECTLY BELOW THE DAMPER AND PAINT CAP TO MATCH CEILING.
16. DO NOT ROUTE ANY DUCTWORK OR PIPING OVER ELECTRICAL PANELS OR I.T. SERVERS.
17. THE MECHANICAL CONTRACTOR SHALL HIRE AN INDEPENDENT TESTING AND BALANCING AGENCY CERTIFIED BY THE AABC TO TEST AND BALANCE THE HVAC SYSTEMS. SYSTEMS SHALL BE BALANCED TO PLUS/MINUS 10% OF DESIGN REQUIREMENTS. THE CONTRACTOR SHALL PLACE ALL SYSTEMS AND EQUIPMENT INTO FULL OPERATION FOR TESTING AND BALANCING. ONE COPY OF THE FINAL TEST AND BALANCE REPORT WITH THE AABC NATIONAL PERFORMANCE GUARANTEE SHALL BE SENT DIRECTLY TO THE ENGINEER OF RECORD. PROVIDE FIVE (5) ADDITIONAL COPIES TO THE CONTRACTOR.

HVAC LEGEND



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

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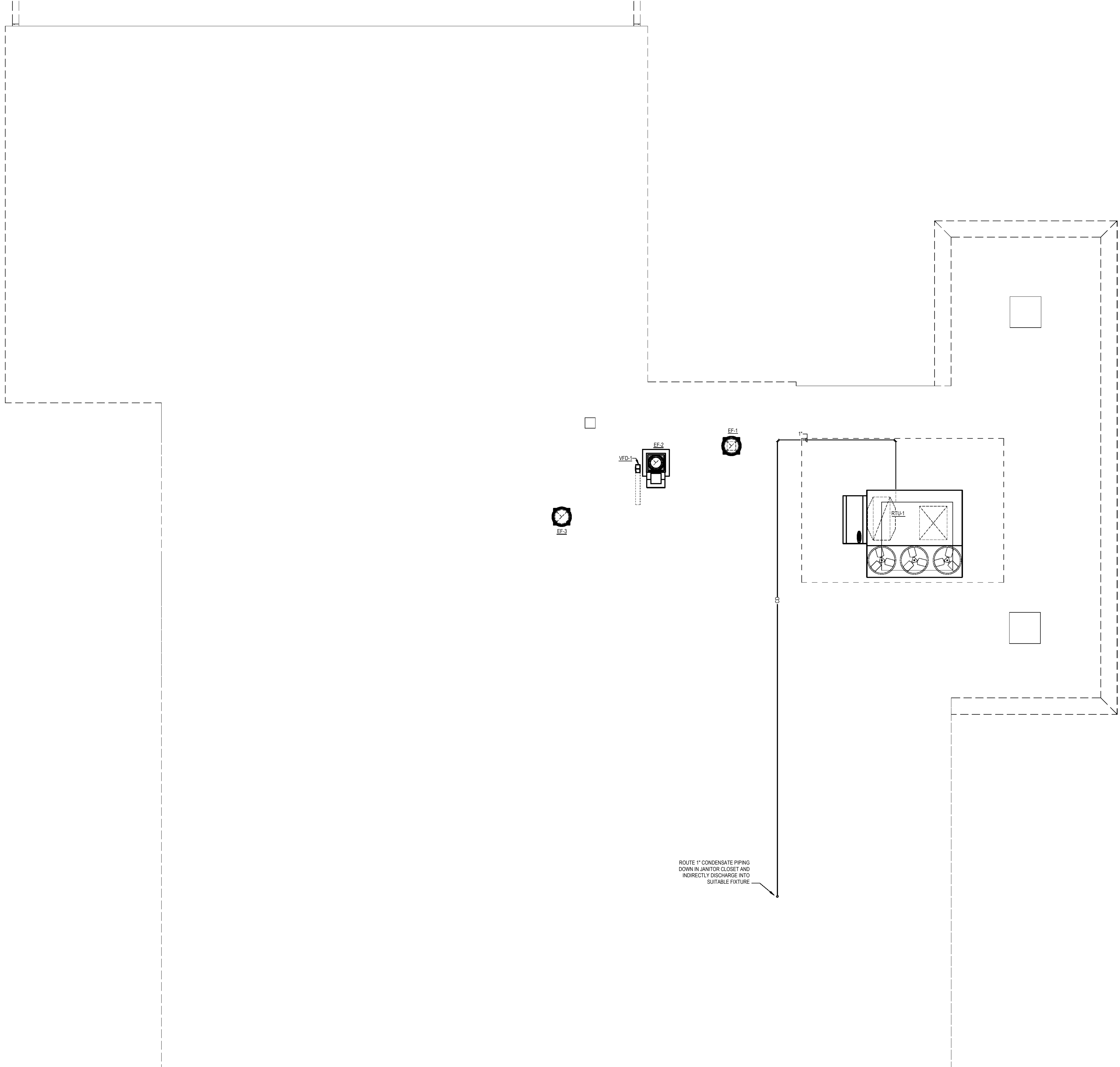
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 ONE INCH
 REVISIONS:

PROJECT STATUS: 100% CD

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RENOVATIONS TO UNIVERSITY OF NORTH TEXAS
DISCOVERY PARK H WING
RESEARCH LABS
 UNIVERSITY OF NORTH TEXAS DISCOVERY PARK, 3940 N ELM ST. DENTON, TX 76207

Roof Plan - Mechanical
M-2



ROUTE 1" CONDENSATE PIPING DOWN IN JANITOR CLOSET AND INDIRECTLY DISCHARGE INTO SUITABLE FIXTURE

1 ROOF PLAN - MECHANICAL
 Scale: 1/4" = 1'-0"



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ONE INCH

REVISIONS:

PROJECT STATUS: 100% CD

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RENOVATIONS TO UNIVERSITY OF NORTH TEXAS DISCOVERY PARK H WING RESEARCH LABS UNIVERSITY OF NORTH TEXAS DISCOVERY PARK, 3940 N ELM ST, DENTON, TX 76207

SUPPLY CONTROL VALVE SCHEDULE (SINGLE DUCT - ELECTRIC REHEAT)

Table with columns: TAG, LOCATION, NECK SIZE, MIN. INLET S.P. (IN. OF WTR.), AIRFLOW (MAX CFM, MIN CFM), ELECTRIC RE-HEAT (CFM, KW, VOLTS, PHASE), MANUFACTURER, MODEL NUMBER

NOTES: 1. ALL SUPPLY DUCT MAINS ARE SIZED AT 1,800 FPM UPSTREAM OF THE CONTROL VALVE AND 0.067/100-FT DOWNSTREAM OF THE CONTROL VALVE.

- 2. ELECTRIC HEATERS SHALL HAVE SCRVDAT SCR CONTROLLED HEATING MODULE WITH DISCHARGE AIR TEMPERATURE CONTROL.
3. ALL UNITS SHALL HAVE MAIN FUSING AND DOOR INTERLOCKING DISCONNECT SWITCH.
4. ALL UNITS SHALL BE SUITABLE FOR LOW PRESSURE OPERATION (0.3-3.0" WC).
5. ALL UNITS SHALL BE CAPABLE OF RESPONDING TO PRESSURE CHANGES TO MAINTAIN A SPECIFIC AIRFLOW WITHIN ONE SECOND.

EXHAUST CONTROL VALVE SCHEDULE

Table with columns: TAG, LOCATION, NECK SIZE, MIN. INLET S.P. (IN. OF WTR.), AIRFLOW (MAX CFM, MIN CFM), MANUFACTURER, MODEL NUMBER

NOTES: 1. ALL UNITS SHALL BE SUITABLE FOR LOW PRESSURE OPERATION (0.3-3.0" WC).

- 2. PROVIDE EACH UNIT WITH FACTORY APPLIED CHEMICAL RESISTANT PHENOLIC COATING.
3. ALL UNITS SHALL BE CAPABLE OF RESPONDING TO PRESSURE CHANGES TO MAINTAIN A SPECIFIC AIRFLOW WITHIN ONE SECOND.

VFD SCHEDULE

Table with columns: TAG, Equipment Location, SERVING, ENCLOSURE, HP, VOLTS, PHASE, MANUFACTURER, MODEL NO.

NOTES: 1. DRIVE AMPS SHALL BE RATED PER NATIONAL ELECTRICAL CODE TABLE 430.250.

- 2. VFD SHALL BE PROVIDED AND INSTALLED BY MECHANICAL CONTRACTOR.
3. PROVIDE 5% INTERNAL LINE REACTOR (VFD'S THAT USE OPTIONAL EXTERNAL REACTORS ARE NOT ACCEPTED).
4. PROVIDE INTERNAL EMIRRI FILTER. DRIVE INPUT CURRENT SHALL NOT EXCEED DRIVE OUTPUT CURRENT.
5. VFD SHALL BE BTL LISTED (COMMUNICATION "GATEWAYS" ARE NOT ACCEPTABLE).
6. VFD SHALL COMMUNICATE WITH THE CAMPUS EMCS.
7. THE VFD SHALL BE RATED AND LABELED FOR 100KAC PROVIDE WITH FACTORY BY-PASS WITH UL CLASS T FUSES.
8. VFD'S MOUNTED OUTDOORS SHALL BE IN NEMA 3R WEATHERPROOF ENCLOSURES COMPLETE WITH INLET AND OUTLET FANS, FILTERS, AND HOODS WITH HEATER.
9. ALL MOTORS CONTROLLED BY VARIABLE FREQUENCY CONTROLLERS SHALL BE EQUIPPED WITH AEGIS SHAFT GROUNDING RING KIT TO BE INSTALLED BY EQUIPMENT MANUFACTURER OR INSTALLED IN THE FIELD BY CONTRACTOR.
10. VFD'S SHALL HAVE FLUX OPTIMIZATION.



Project Information

Energy Code: 2021 IECC
Project Title: UNT H Wing Lab
Location: Denton (Denton), Texas
Climate Zone: 3a
Project Type: Alteration

Mechanical Systems List

Quantity System Type & Description

1 HVAC System (Multiple-Zone): Heating: 1 each - Central Furnace, Electric, Capacity = 68 kBtu/h. Cooling: 1 each - Single Package DX Unit, Capacity = 295 kBtu/h, Air-Cooled Condenser, Air Economizer. Proposed Part Load Efficiency = 10.50 IEER, Required Part Load Efficiency = 10.00 IEER.

Mechanical Compliance Statement

Compliance Statement: The proposed mechanical alteration project represented in this document is consistent with the building plans, specifications, and other calculations submitted with this permit application. The proposed mechanical systems have been designed to meet the 2021 IECC requirements in COMcheck Version COMcheckWeb and to comply with any applicable mandatory requirements listed in the Inspection Checklist. Braden Santer - EIT

Name - Title Braden Santer Signature Date 10-01-24

Project Title: UNT H Wing Lab

Date: 11/14/24

Report date: 10/01/24

Page 1 of 11



FAN SCHEDULE

Table with columns: TAG, SERVICE, LOCATION, CFM (MIN, MAX), T.S.P., MAX. SONES, FAN TYPE, WHEEL (TYPE, DIA), DRIVE, MOTOR (RPM, HP, VOLTS, PHASE), CONTROL, MANUFACTURER, MODEL NO.

NOTES: 1. STATIC PRESSURE INCLUDES GRILLES, DUCTWORK AND DAMPERS.

- 2. FANS SHALL HAVE BACKDRAFT DAMPERS. ROOF FANS SHALL HAVE ALUMINUM BIRD SCREENS.
3. ROOF MOUNTED FANS SHALL HAVE FACTORY BUILT, SOUND ATTENUATING ROOF CURBS COMPATIBLE WITH THE ROOFING SYSTEM.
5. PROVIDE EF-2 WITH BYPASS AIR PLENUM
6. EF-2 SHALL BE PROVIDED WITH FACTORY APPLIED CHEMICAL RESISTANT COATING

ROOFTOP UNIT SCHEDULE (ELECTRIC HEAT)

Table with columns: TAG, NOMINAL TONS, SUPPLY CFM, OUTSIDE AIR (MIN CFM, MAX CFM), EXT. S.P. (IN. OF WTR.), MOTOR HP, TOTAL CAPACITY (MBH), SENSIBLE CAPACITY (MBH), COOLING (D, E.A.T., Wb, F), AMBIENT TEMP. (F), ELECTRIC HEATING (INPUT, OUTPUT), ELECTRICAL (MCA, MOCP, VOLTS, PHASE), EER, MANUFACTURER, MODEL NO.

NOTES: 1. EXTERNAL STATIC PRESSURE INCLUDES ALL AIR DEVICES, TERMINAL UNITS, DUCTWORK, FITTINGS, AND DAMPERS WHICH ARE EXTERNAL TO THE AIR HANDLING UNIT.

- 2. UNITS SHALL BE FURNISHED COMPLETE WITH ALL NECESSARY OPERATING CONTROLS.
3. ALL UNIT COMPRESSORS SHALL BE FULLY MODULATING.
4. PROVIDE EXPANDED METAL HAIL GUARDS ON ALL UNITS.
5. UNITS SHALL BE FURNISHED COMPLETE WITH INSULATED FACTORY FABRICATED ROOF CURBS.
6. PROVIDE EACH UNIT WITH FULL ECONOMIZER CYCLE DAMPERS, RELIEF DAMPERS, AND CONTROLS PER SPECIFICATIONS.
7. INSTALL SMOKE DETECTORS IN THE SUPPLY AND RETURN DUCTS AS REQUIRED BY LOCAL CODE AND SPECIFICATIONS.
8. PROVIDE DUCT MOUNTED HUMIDISTATS IN RETURN DUCTWORK.
9. UNITS SHALL BE PROVIDED WITH BACNET COMMUNICATION INTERFACE CARD FOR INTERGRATION INTO THE CAMPUS EMCS.
10. UNITS SHALL BE PROVIDED WITH 65 KAIC SHORT CIRCUIT CURRENT RATING (SCCR).
11. UNITS SHALL BE FURNISHED WITH HOT GAS REHEAT.
12. PROVIDE INTEGRAL WPGFI CONVENIENCE RECEPTACLE (AND ASSOCIATED TRANSFER) WIRED AHEAD OF UNIT DISCONNECT.

AIR DEVICE SCHEDULE

Table with columns: TAG, DESCRIPTION, OPPOSED BLADE DAMPER, FINISH, MANUFACTURER, MODEL NO.

NOTES: 1. ALL SUPPLY DIFFUSERS LISTED AS LOUVERED FACE TYPE SHALL BE (4) CONE LOUVER TYPE.

- 2. REFER TO ARCHITECTURAL DRAWINGS FOR CEILING TYPES.
3. ALL AIR DEVICES INSTALLED IN GYP BOARD, PLASTER, OR OTHER HARD CEILING SHALL HAVE A SEPARATE MOUNTING FRAME.

TERMINAL UNIT SCHEDULE (SINGLE DUCT - ELECTRIC REHEAT)

Table with columns: TAG, LOCATION, NECK SIZE, MIN. INLET S.P. (IN. OF WTR.), COOLING (MAX CFM, MIN CFM, CFM, KW, VOLTS, PHASE), SOUND (MAX RAD. NC, MAX DIS. NC), MANUFACTURER, MODEL NUMBER

NOTES: 1. ALL UNITS SHALL HAVE A MAXIMUM UNIT CFM OF AT LEAST 130% OF DESIGN CFM.

- 2. MAX ALLOWABLE NC AT DESIGN CFM WITH 1.5" W.G. INLET STATIC. 10 Db CEILING TRANSMISSION LOSS.
3. MAX STATIC PRESSURE DROP FOR UNITS AT 130% (MIN.) OF DESIGN AIRFLOW.
4. ELECTRIC HEATERS SHALL HAVE SCRVDAT SCR CONTROLLED HEATING MODULE WITH DISCHARGE AIR TEMPERATURE CONTROL.
5. ALL UNITS SHALL HAVE MAIN FUSING AND DOOR INTERLOCKING DISCONNECT SWITCH.
6. ALL SUPPLY DUCT MAINS ARE SIZED AT 1,800 FPM UPSTREAM OF THE VAV BOXES AND 0.067/100-FT DOWNSTREAM OF THE VAV BOXES.

ASHRAE Standard 62.1-2004-2010

System Ventilation Requirements

Table for System Ventilation Requirements with columns: AHU Location, Description, Vpz, Pp, Pz, D, Vou, Vps, Xs, Ev, Vol, %OA

Ventilation Parameters

Table for Ventilation Parameters with columns: System Zone Room, Occupancy Category, Rp, Pz, Ra, Az, Vbz, Std 170 Min OA, Cooling, Heating

ASHRAE Standard 62.1-2004-2010

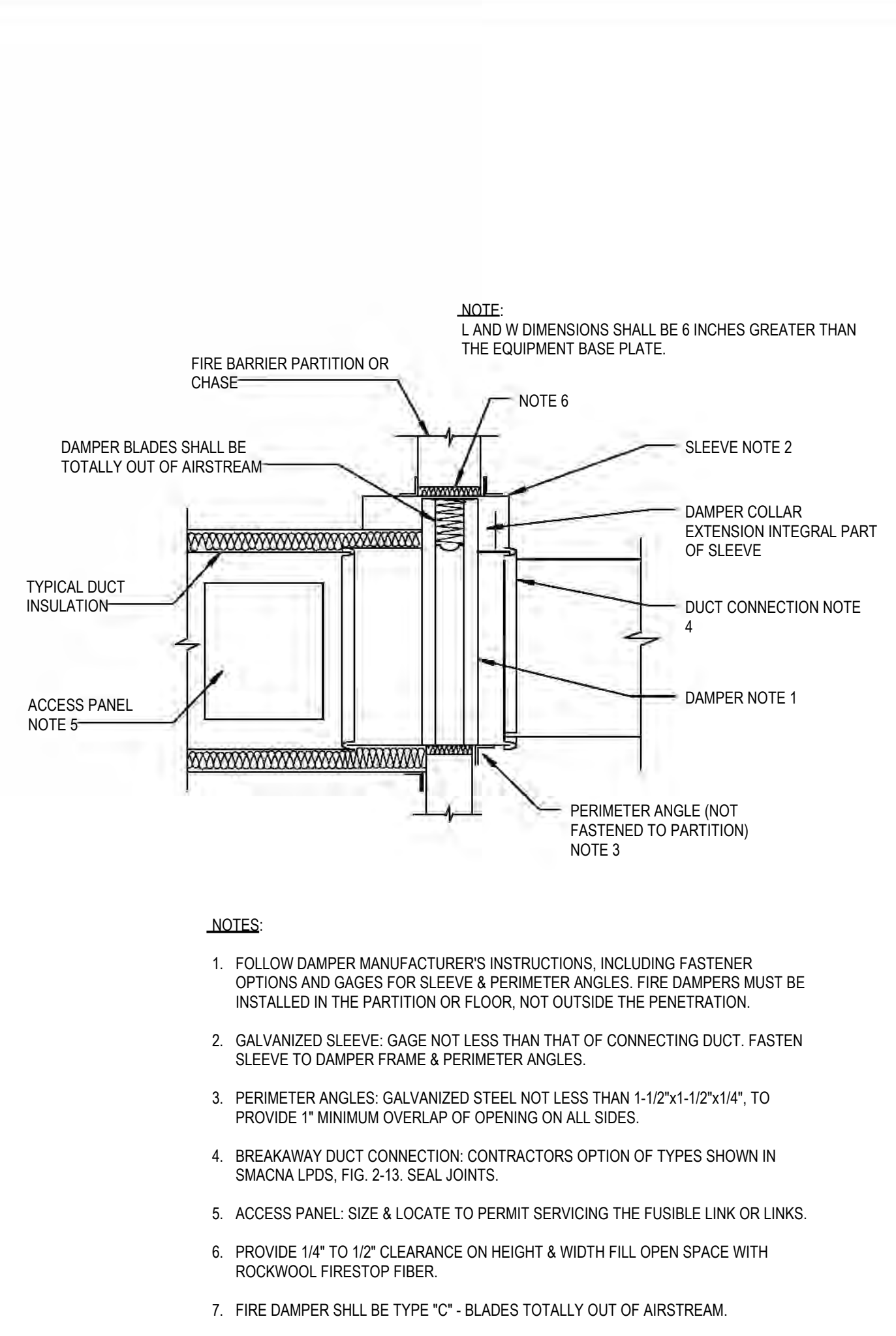
Ventilation Calculations for Cooling Design

Table for Cooling Design Calculations with columns: System Zone Room, Box Type, Vpz, Vfan, Vdz, Vpz-min, Voz-clg, Zd, Ep, Er, Fa, Fb, Fc, Evz

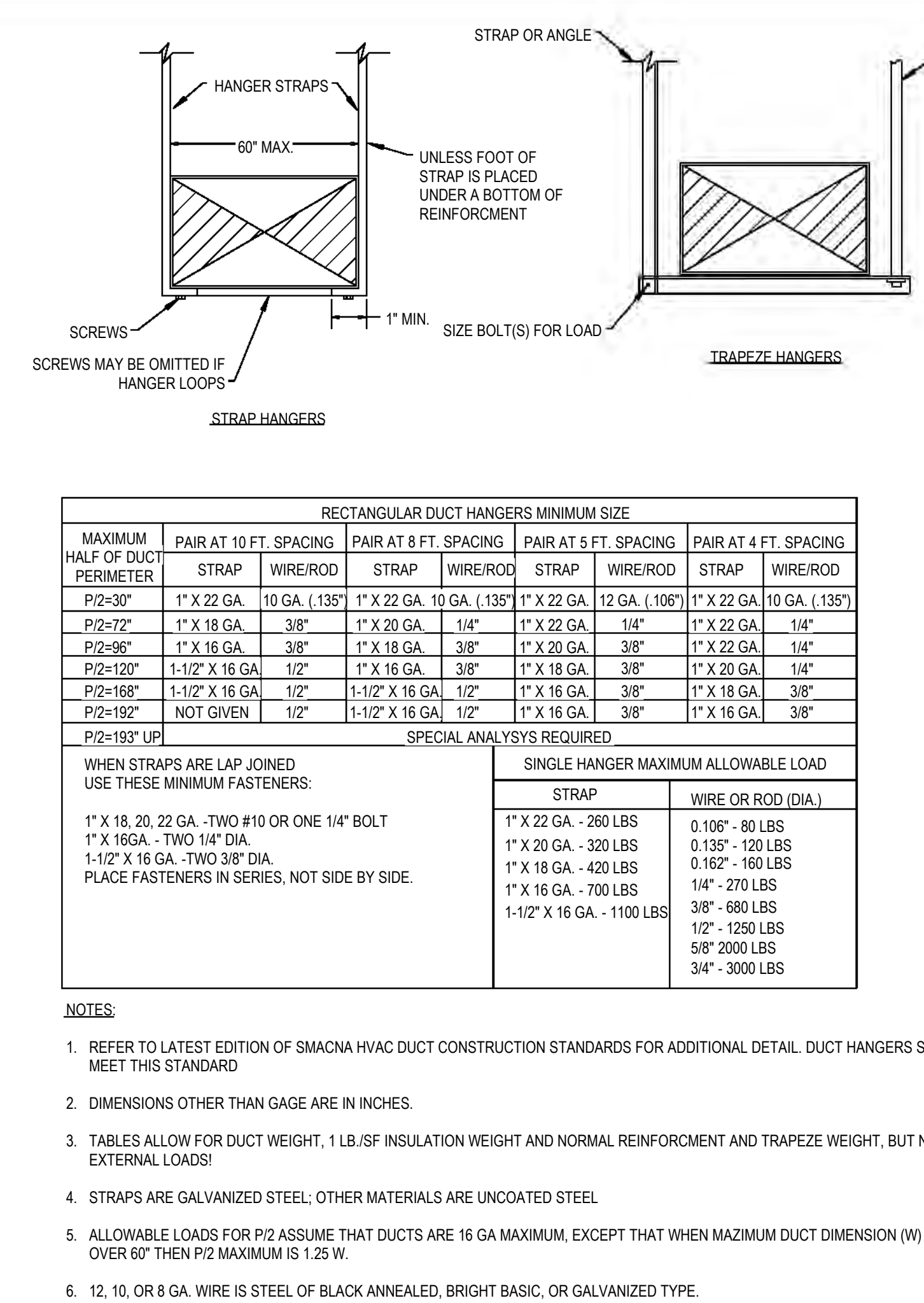
Ventilation Calculations for Heating Design

Table for Heating Design Calculations with columns: System Zone Room, Box Type, Vpz, Vfan, Vdz, Vpz-min, Voz-Htg, Zd, Ep, Er, Fa, Fb, Fc, Evz

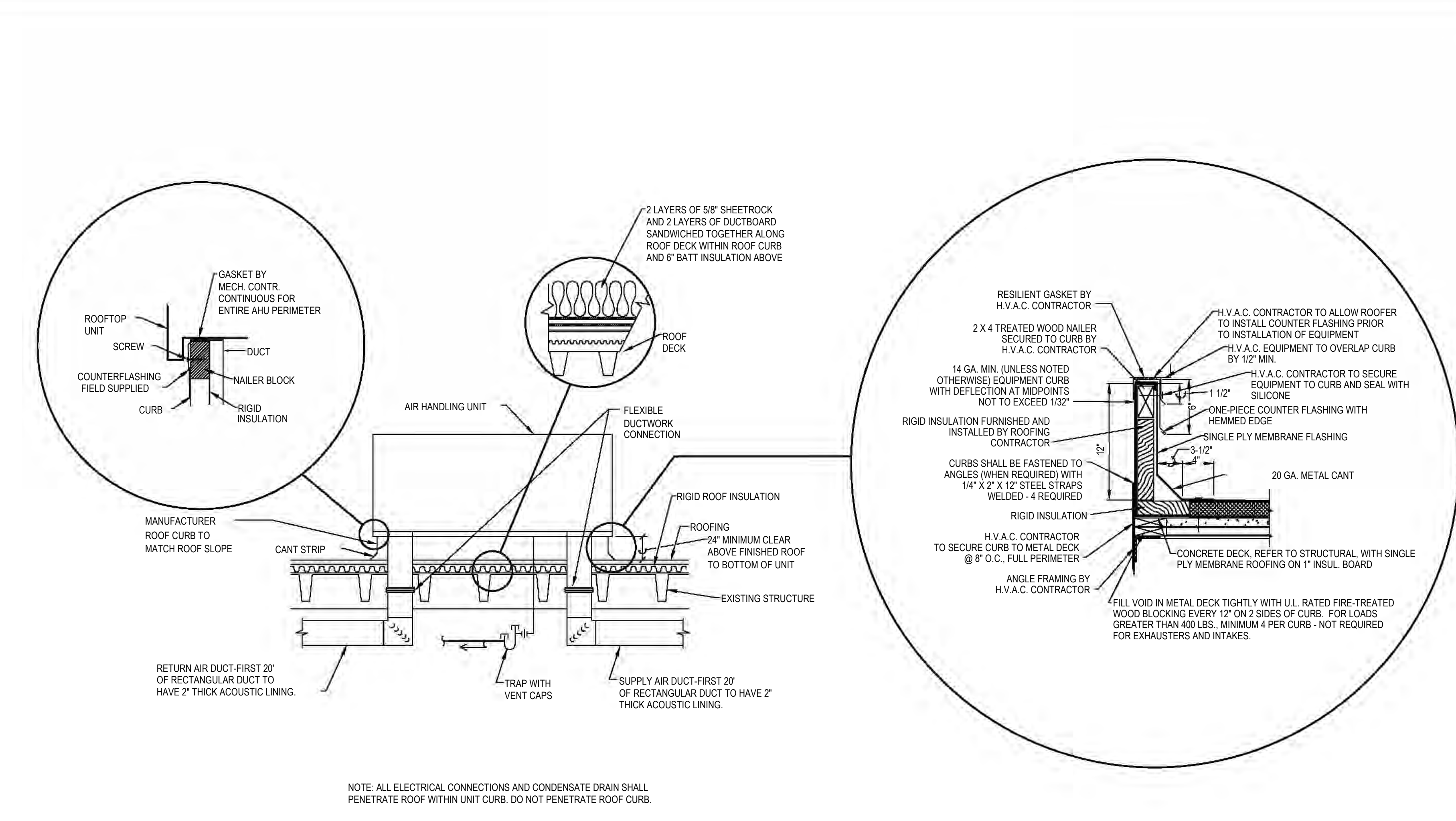
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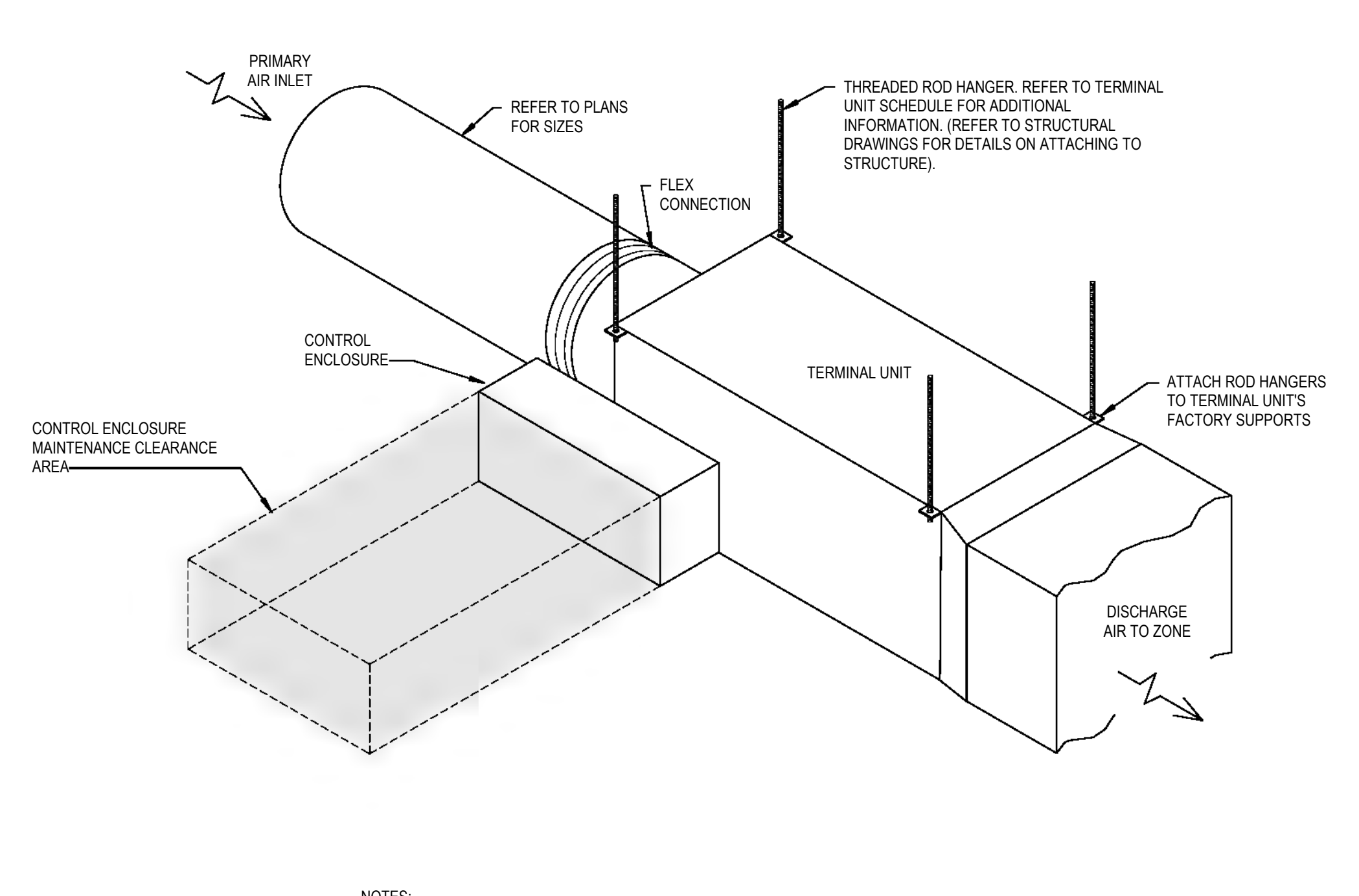
1 FIRE DAMPER INSTALLATION DETAIL
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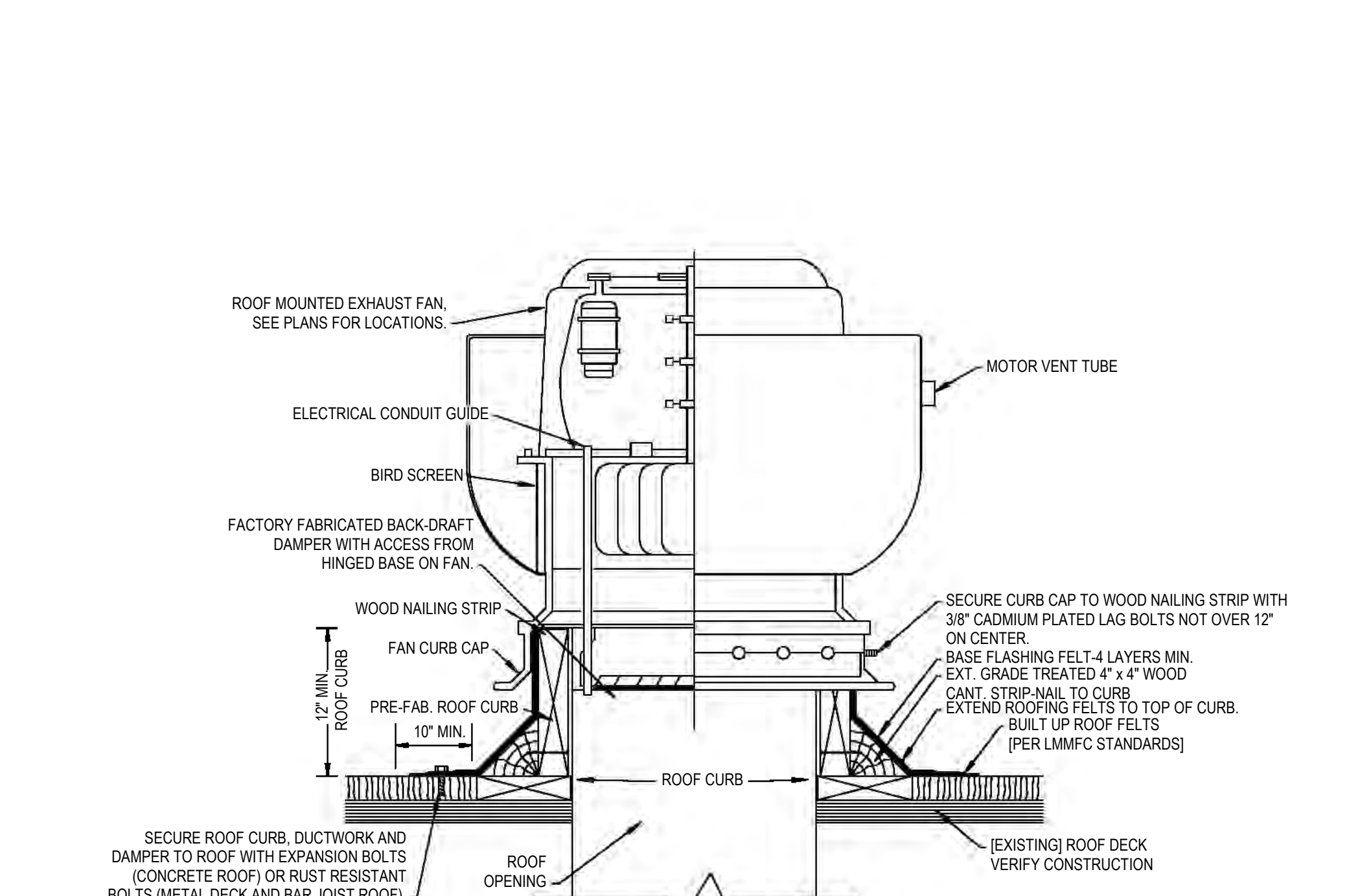
2 RECTANGULAR DUCT HANGERS
 Scale: 1/8" = 1'-0"



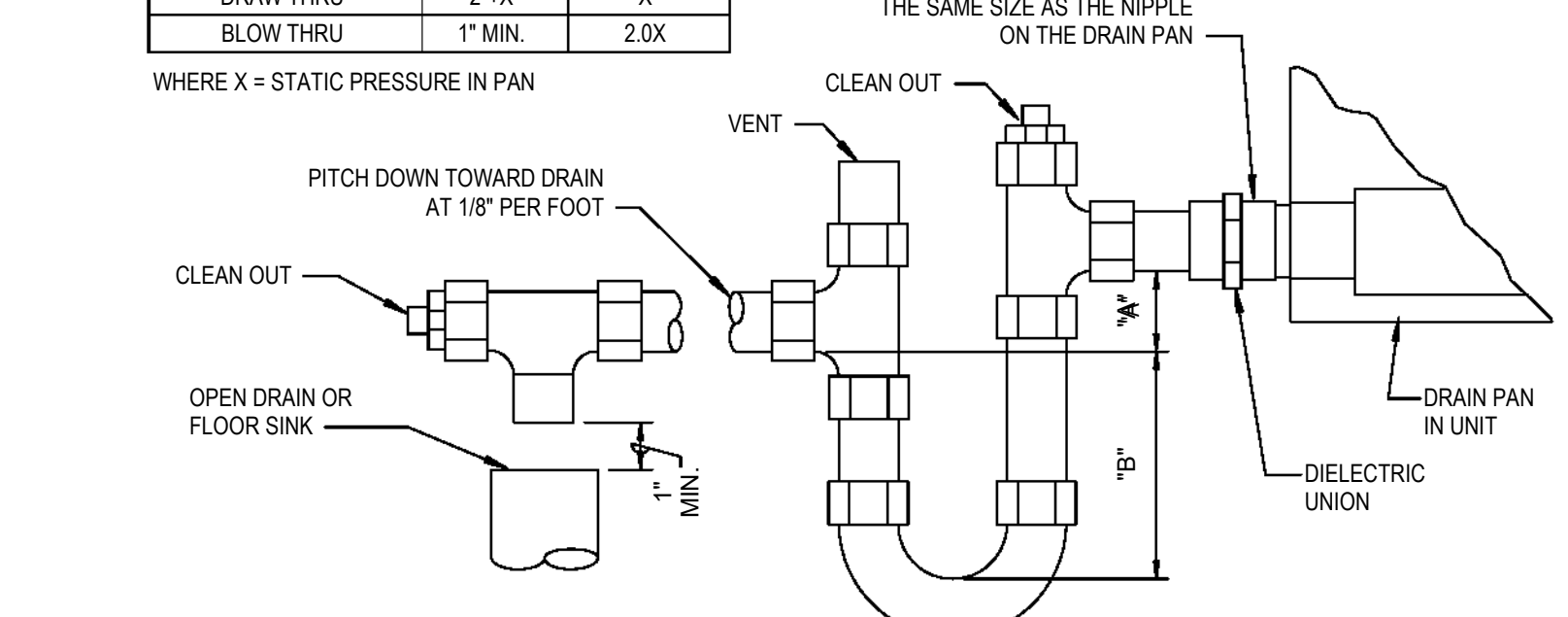
3 TYPICAL ROOFTOP UNIT DETAIL
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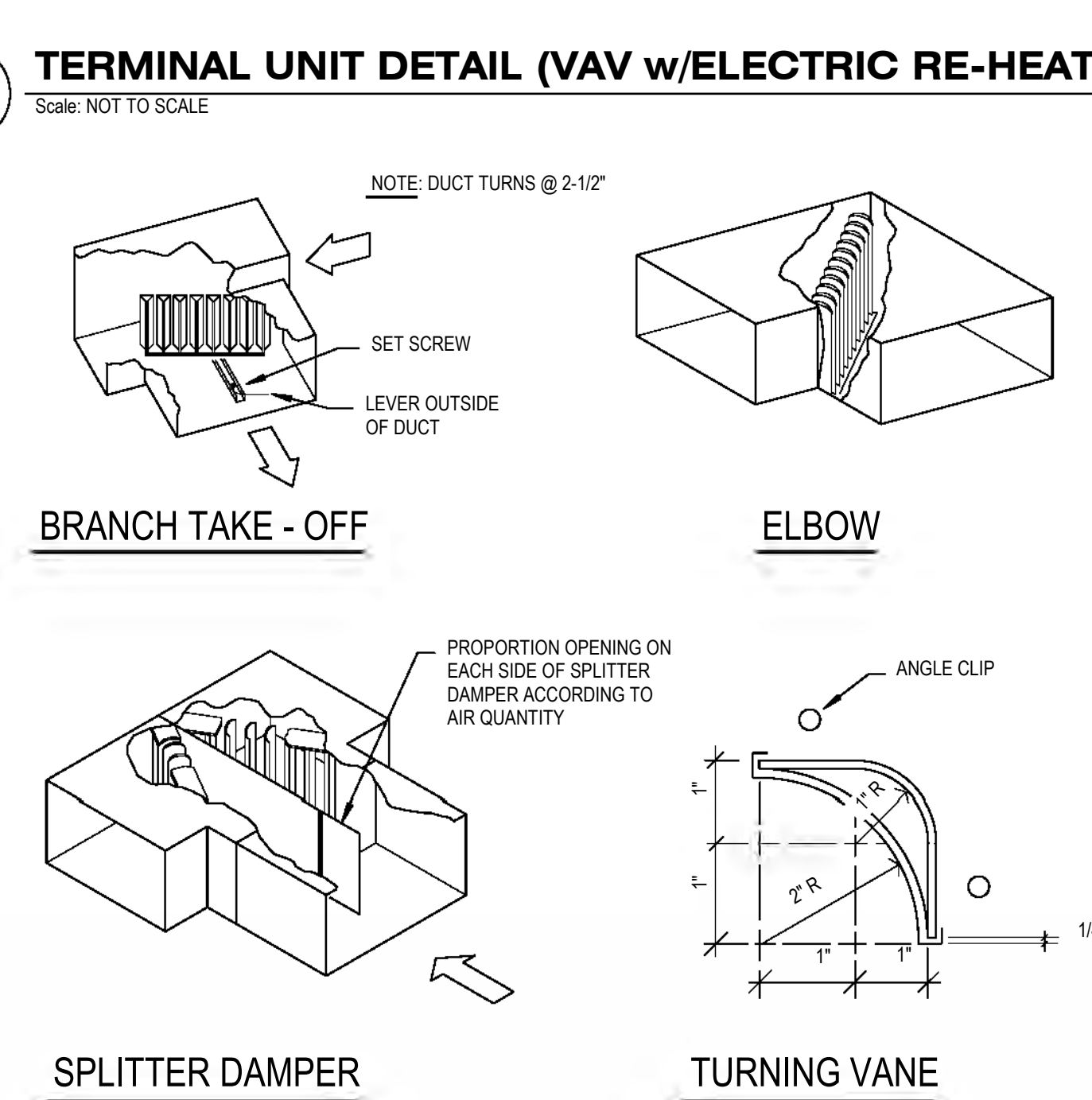
4 TERMINAL UNIT DETAIL (VAV w/ELECTRIC RE-HEAT)
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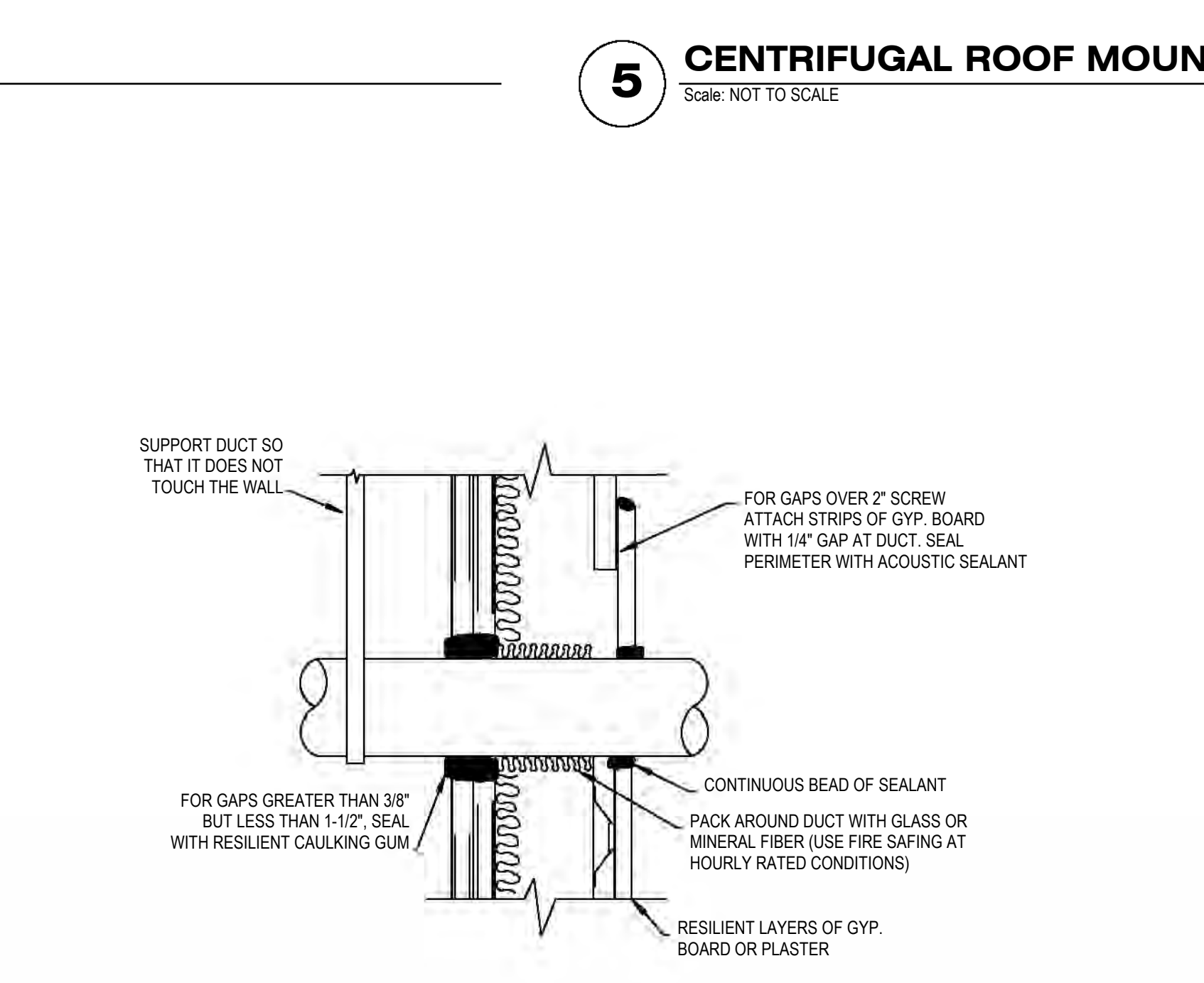
5 CENTRIFUGAL ROOF MOUNTED UPBLAST EXHAUST FAN
 Scale: NOT TO SCALE



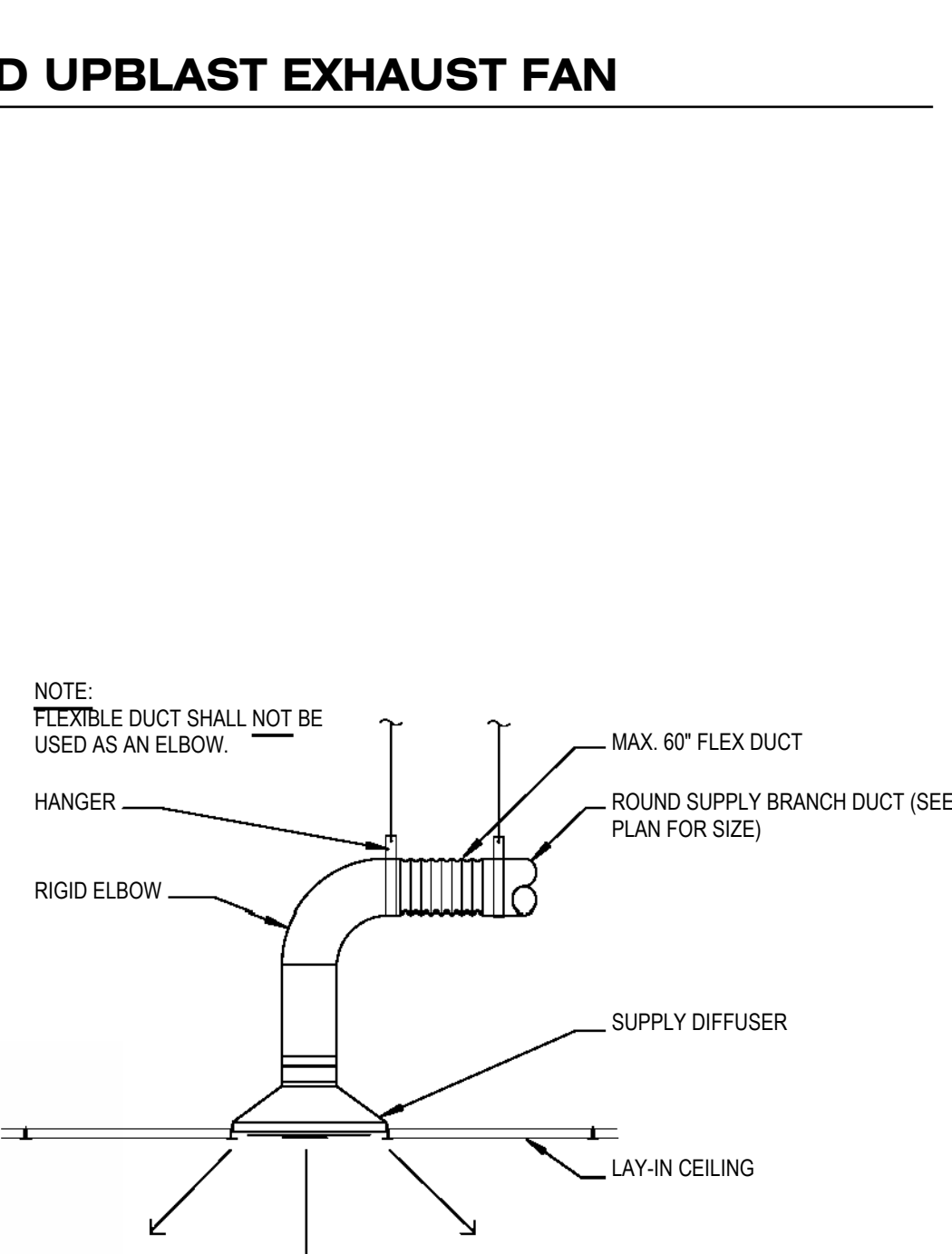
6 ROOFTOP UNIT DRAIN DETAIL
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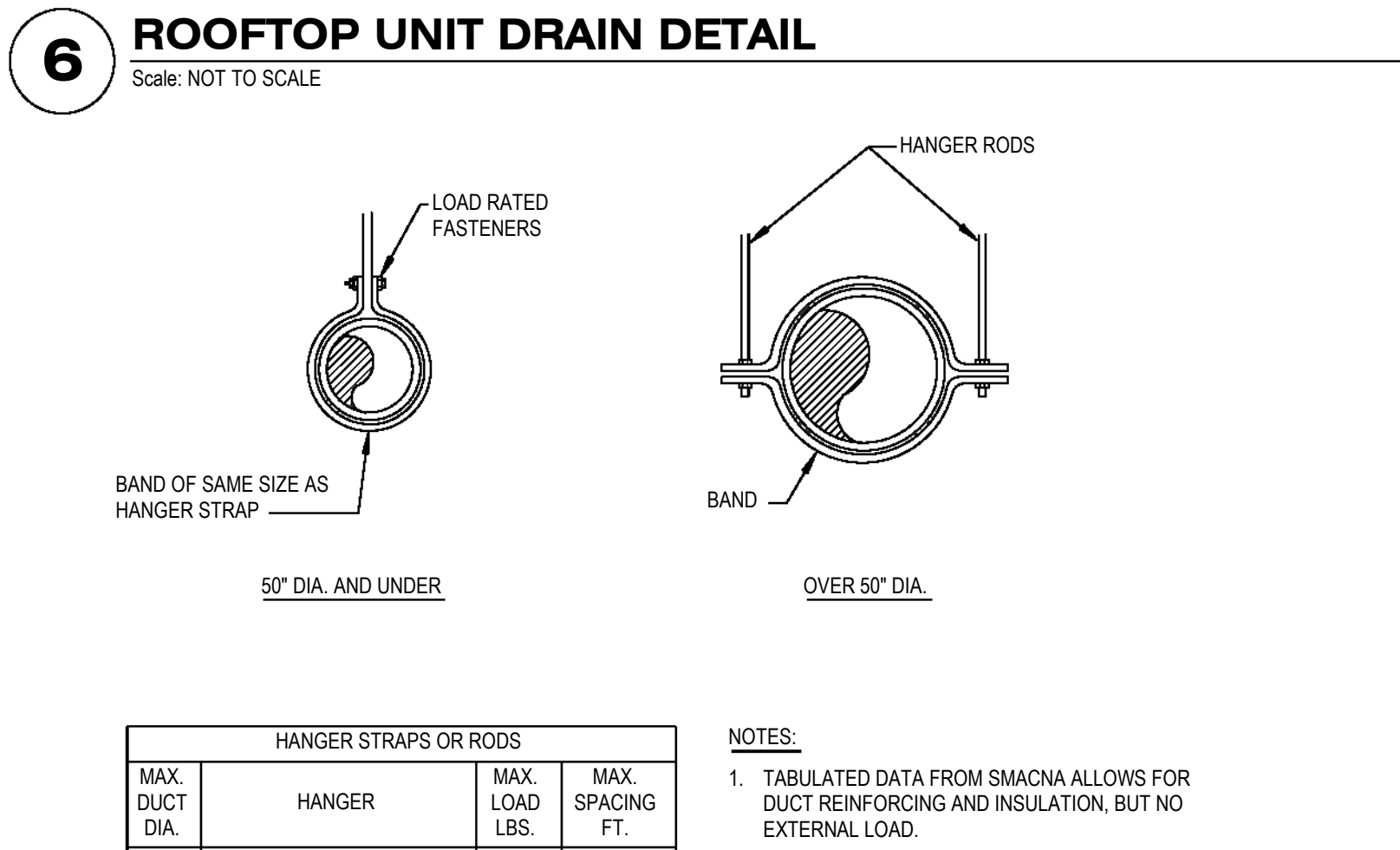
9 DUCT CONSTRUCTION DETAILS
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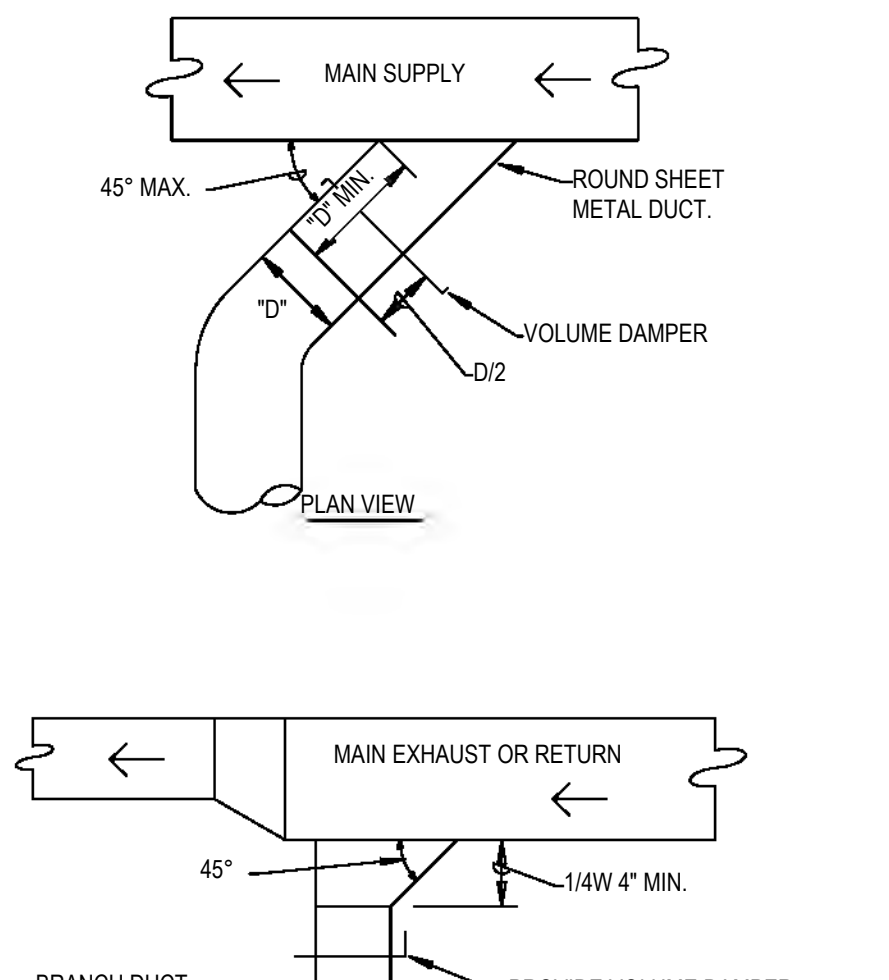
10 DUCT PENETRATION DETAIL STUD WALL
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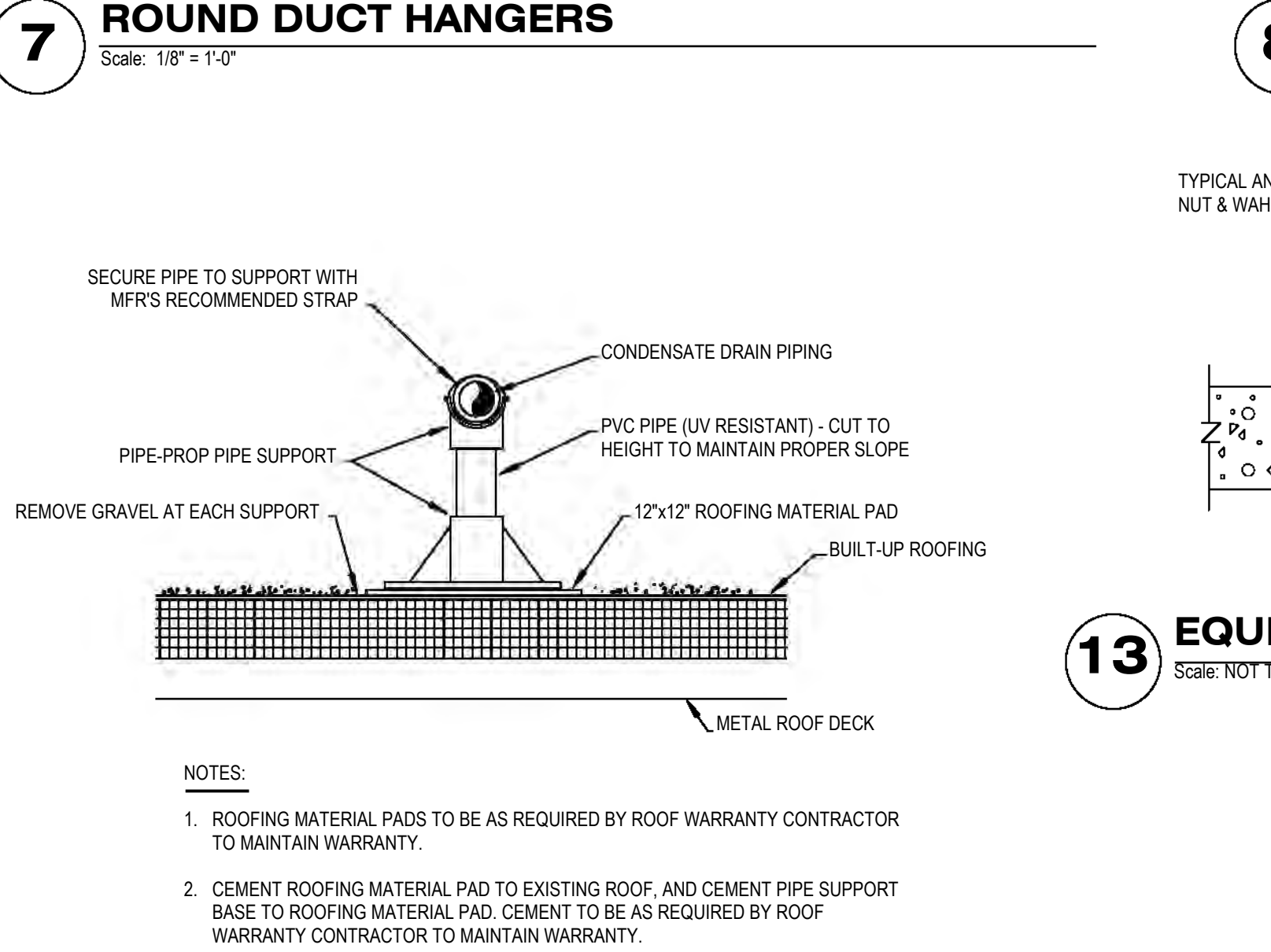
11 DIFFUSER CONNECTION DETAIL
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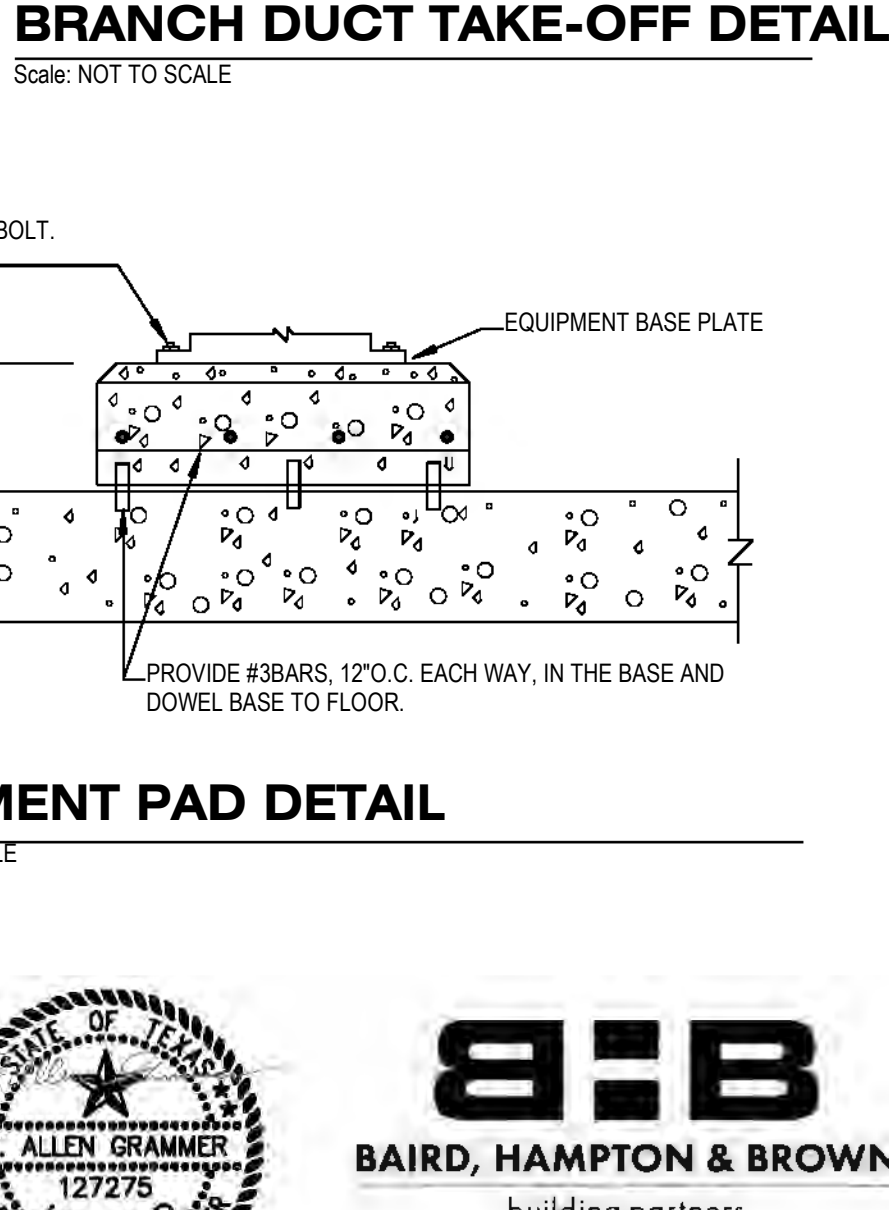
7 ROUND DUCT HANGERS
 Scale: 1/8" = 1'-0"



8 BRANCH DUCT TAKE-OFF DETAIL
 Scale: NOT TO SCALE



12 CONDENSATE DRAIN SUPPORT
 Scale: NOT TO SCALE



13 EQUIPMENT PAD DETAIL
 Scale: NOT TO SCALE



BAR IS ONE INCH IN LENGTH ON ORIGINAL DRAWING CHECK SCALE AND ADJUST ACCORDINGLY
 ONE INCH

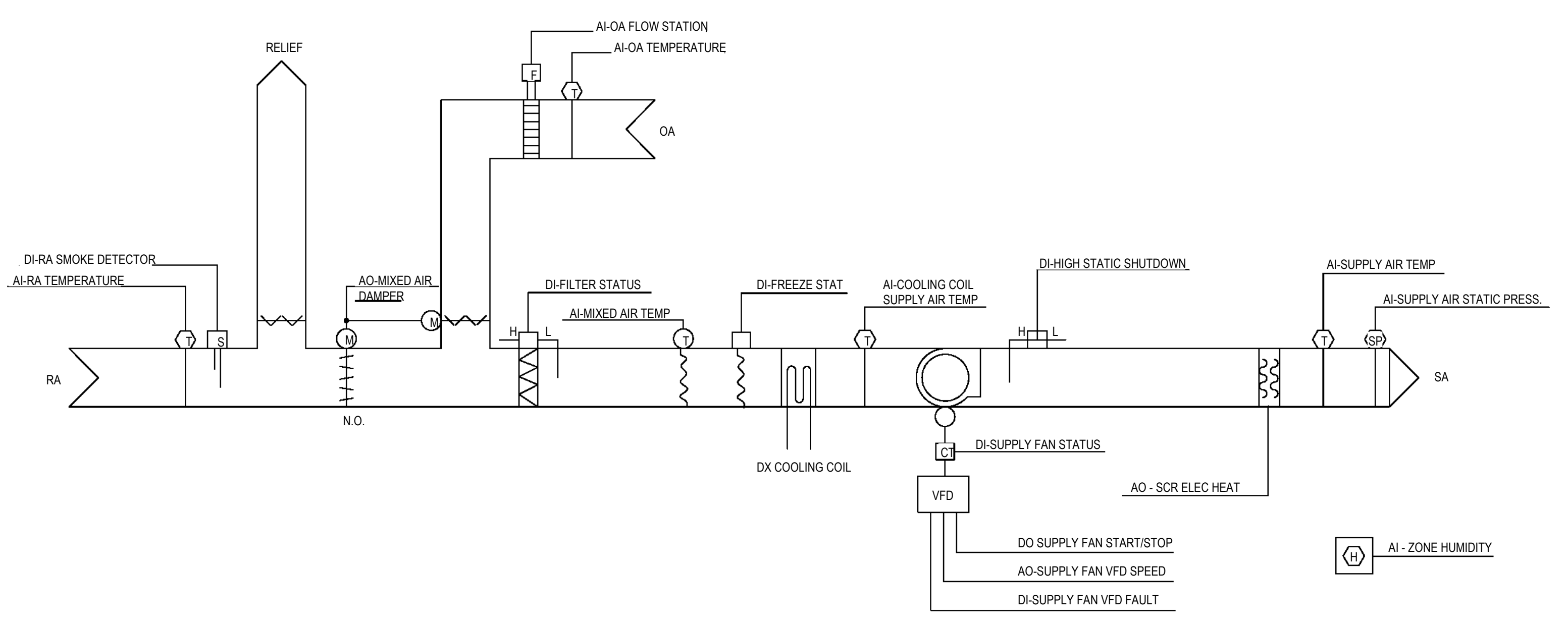
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PROJECT STATUS: 100% CD

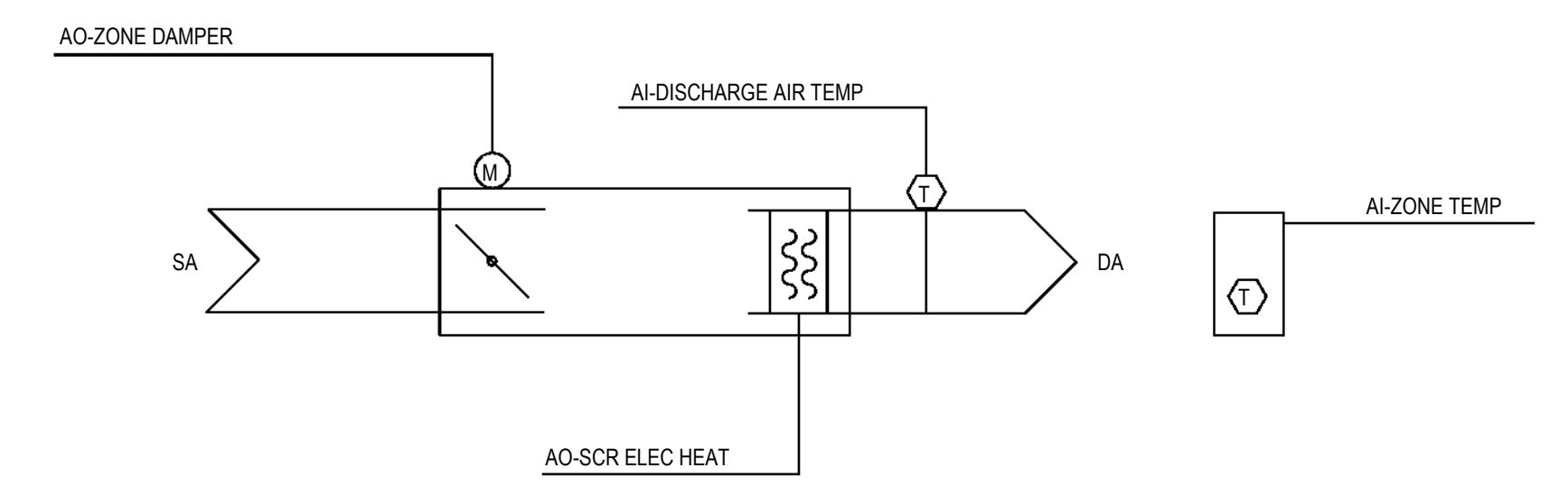
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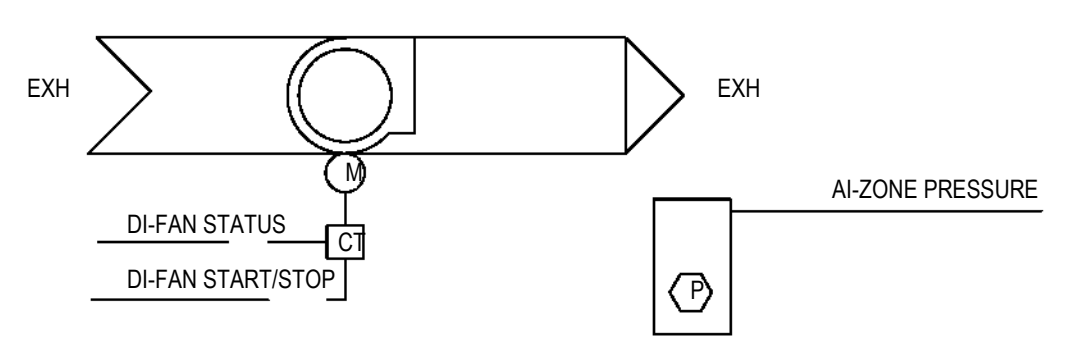
Mechanical Control Diagrams
M-5



1 ROOFTOP UNIT CONTROL DIAGRAM
 Scale: NOT TO SCALE



2 VARIABLE AIR VOLUME TERMINAL UNIT CONTROL DIAGRAM
 Scale: NOT TO SCALE



3 EXHAUST FAN CONTROL DIAGRAM
 Scale: 1/8" = 1'-0"



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PLUMBING LEGEND

	COLD WATER (CW)		CAP END OF LINE
	HOT WATER (110°F HW)		RISER DOWN
	HOT WATER RETURN		RISER UP
	HOT WATER (140°F HW)		DIRECTION OF FLOW
	HOT WATER (180°F HW)		DIRECTION OF PITCH (DOWN)
	WASTE (SANITARY SEWER)		FLOOR DRAIN
	CONDENSATE DRAIN		FLOOR SINK (FULL OR HALF GRATE AS SPECIFIED)
	FIRE PROTECTION PIPE		ROOF DRAIN
	EXISTING UTILITY		OVER FLOW DRAIN
	ITEM TO BE REMOVED		HUB DRAIN
			TRENCH DRAIN
			FIRE RISER
			CONNECT TO EXISTING
			DGCC
			WASTE
			EXISTING

NOTES BY SYMBOL:

- ROUTE 1/2" CW DOWN IN WALL AND EXTEND TO AUTO PULSER BY OTHERS. PROVIDE QUARTER-TURN BALL VALVE PRIOR TO FINAL CONNECTION.
- ROUTE 1-1/4" CW PIPING TO EMERGENCY SHOWER. ROUTE FULL-SIZED DRAIN FROM EYEWASH AND DISCHARGE 18" ABOVE FINISHED FLOOR.
- REMOVE EXISTING TRENCH DRAIN GRATE AND FILL TRENCH WITH CONCRETE. PATCH AND REPAIR FLOOR SLAB TO MATCH SURROUNDING CONDITIONS. COORDINATE DETAILS WITH ARCHITECT.
- CONNECT NEW 1-1/2" CW PIPING FROM EXISTING 2" CW MAIN AND EXTEND AS SHOWN AS HIGH AS POSSIBLE.
- INSTALL ARGON BOTTLE HOLDING BRACKET INTO WALL WITH SECURING CHAIN ATTACHED. ROUTE FULL SIZE TYPE L COPPER PIPING (1/2" ANTICIPATED) FROM ARGON REGULATORS TO ETMT (BY OTHERS) WITH ISOLATION VALVE. COORDINATE FINAL CONNECTION REQUIREMENTS WITH LAB EQUIPMENT MANUFACTURER.
- COORDINATE WASTE CONNECTION WITH EXISTING WASTE MAIN. FIELD VERIFY EXACT LOCATION, INVERT ELEVATION, AND ALL REQUIREMENTS.
- NOT USED.
- ROUTE NEW 1/2" COMPRESSED AIR PIPING FROM EXISTING COMPRESSED AIR MAIN.
- PROVIDE 1/4" COMPRESSED AIR DROP TO SERVE AUTO PULSER.
- NOT USED.
- CONNECT NEW 1-1/4" CW PIPING FROM EXISTING 1-1/4" CW MAIN TO SERVE EMERGENCY SHOWER.
- X-RAY EXISTING FLOOR SLAB AND COORDINATE ALL REQUIREMENTS WITH STRUCTURAL. SAWCUT AND ROUTE NEW WASTE BELOW GRADE. SLOPE WASTE PIPING AT 1/4" PER FOOT. PATCH AND REPAIR FLOORING TO MATCH SURROUNDING CONDITIONS.
- DEMOLISH EXISTING SINK AND REPLACE WITH NEW SINK. RECONNECT TO EXISTING CW, HW, AND WASTE CONNECTIONS. PROVIDE AND INSTALL WATER FILTER FOR SINK.
- ROUTE 1/2" CW DOWN IN WALL AND 1/2" HW FROM WELL AND CONNECT TO SINK. PROVIDE AND INSTALL GRIT TRAP IN SINK P-TRAP. ROUTE 2" WASTE DOWN BELOW SLAB. ROUTE 1-1/2" VENT UP THROUGH ROOF.
- ROUTE 1/2" CW TO WATER HEATER LOCATED UNDER CABINETS.
- ROUTE 1/2" CW DOWN IN WALL AND 1/2" HW FROM WELL AND CONNECT TO SINK. ROUTE 2" WASTE DOWN BELOW SLAB. ROUTE 1-1/2" VENT UP THROUGH ROOF.
- DEMOLISH EXISTING WATER HEATER SERVING EMERGENCY SHOWER.
- ROUTE 1-1/4" CW FROM EXISTING CW PIPING AND CONNECT TO EXISTING EMERGENCY SHOWER.

PLUMBING GENERAL NOTES

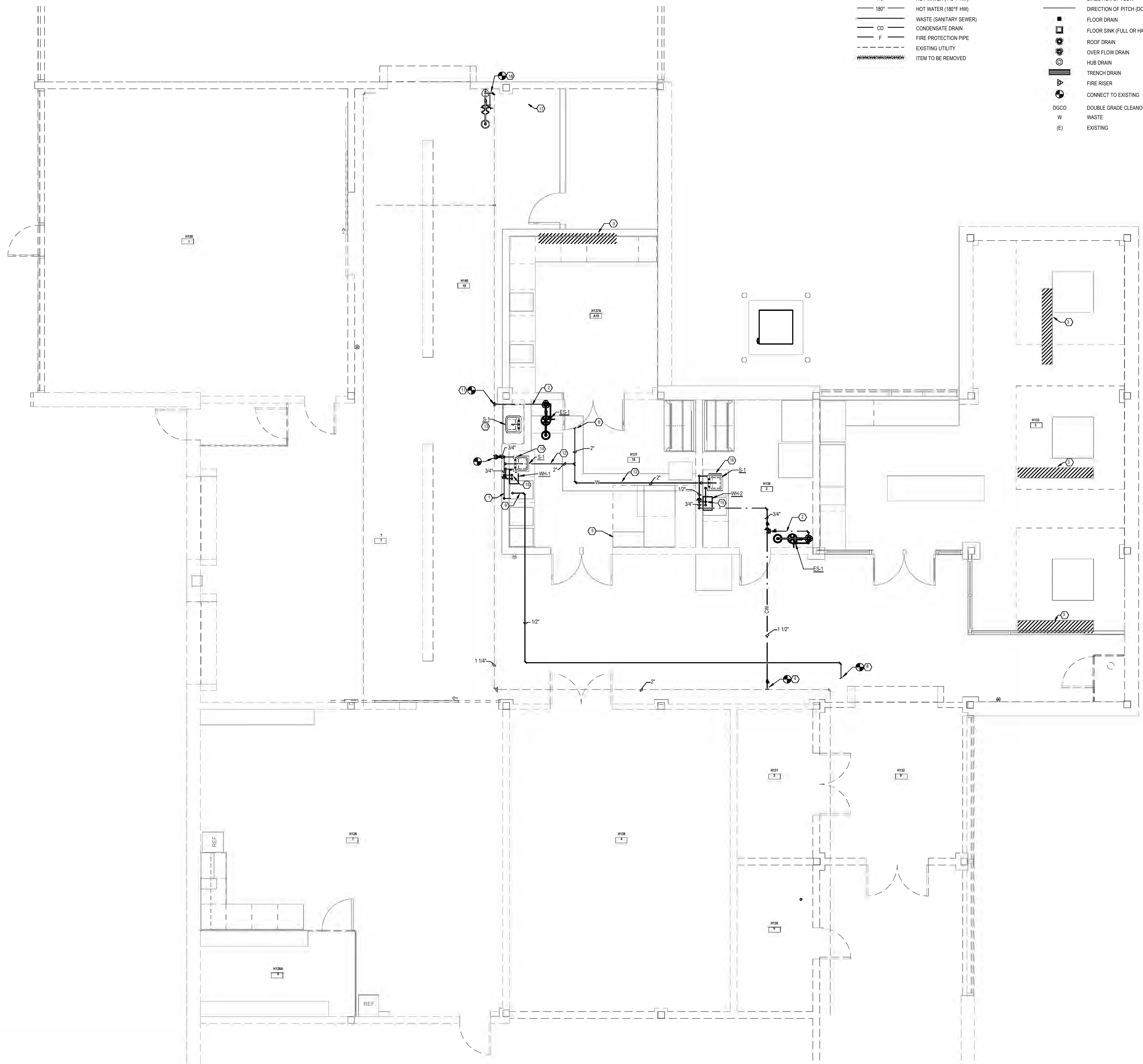
- FURNISH AND INSTALL ALL MATERIALS AND LABOR REQUIRED TO PROVIDE AND OPERABLE PLUMBING SYSTEMS WITH ALL ITEMS AND APPURTENANCES NECESSARY, EVEN THOUGH NOT SPECIFICALLY CALLED OUT.
- ALL WORK AND/OR MATERIAL SHALL BE INSTALLED BY A LICENSED CONTRACTOR.
- ALL WORK SHALL BE PERFORMED IN STRICT ACCORDANCE WITH ALL APPLICABLE STATE AND LOCAL CODES AND ORDINANCES. IN CASE OF CONFLICT BETWEEN THE DRAWING SPECIFICATIONS AND THE CODES AND ORDINANCES, THE HIGHEST STANDARD SHALL APPLY. THE PLUMBING CONTRACTOR SHALL SATISFY CODE REQUIREMENTS AS A MINIMUM STANDARD WITHOUT ANY EXTRA COST TO THE OWNER.
- CROSS-CONNECTIONS OF ANY FIXTURE, DEVICE OR CONSTRUCTION WHICH WILL PERMIT BACKFLOW CONNECTIONS BETWEEN A WATER DISTRIBUTION SYSTEM AND ANY PART OF THE DRAINAGE SYSTEM SHALL NOT BE INSTALLED.
- PLUMBING FIXTURES SHALL BE AS SCHEDULED. ALL HANDICAP FIXTURE INSTALLATIONS SHALL BE IN COMPLIANCE WITH ADA AND THE TEXAS ACCESSIBILITY STANDARDS. CONFIRM EXACT LOCATIONS OF ALL PLUMBING FIXTURES WITH ARCHITECT PRIOR TO INSTALLATION. ALL FIXTURES SHALL BE COMPLETE WITH ALL NECESSARY TRIM. ALL EXPOSED METAL PARTS SHALL BE CHROME PLATED BRASS.
- CONFIRM ROUGH-IN REQUIREMENTS FOR ALL EQUIPMENT PRIOR TO INSTALLATION.
- COORDINATE EXACT ROUTING OF ALL WORK WITH ALL OTHER TRADES PRIOR TO INSTALLATION OF WORK.
- PROVIDE TRAP PRIMERS FOR ALL FLOOR DRAIN EXCEPT FOR THOSE AREAS NOT REQUIRED BY THE CITY OF DENTON PLUMBING CODE.
- PROVIDE FACTORY MANUFACTURED WATER HAMMER ARRESTORS WHERE REQUIRED AND/OR INDICATED ON THE DRAWINGS.
- CONTRACTOR SHALL CONFIRM DEPTHS OF EXISTING SEWER LINES AND CONFIRM ADEQUACY FOR CONNECTION OF SYSTEM. THE ENGINEER SHALL BE NOTICED IF THE REQUIRED SLOPES CAN NOT BE MAINTAINED, PRIOR TO INSTALLATION OF ANY NEW PIPING.
- INSTALL PLUMBING VENTS THROUGH ROOF TO BE A MINIMUM OF 10'-0" FROM ALL RTU AND OTHER OUTSIDE AIR INTAKES. COORDINATE WITH MECHANICAL.
- ALL WATER PIPING PASSING THROUGH CONCRETE FLOOR SLABS SHALL BE COMPLETELY ISOLATED FROM THE CONCRETE BY ENCASMENT IN 1/2" THICK FLEXIBLE FOAM PLASTIC INSULATION FROM WELL BELOW THE BOTTOM OF THE CONCRETE SLAB UP TO TWO INCHES ABOVE THE BEAMS BELOW GRADE. IT SHALL BE WRAPPED WITH 2 PLYS OF 15# FELT TO ISOLATE THE PIPE FROM THE CONCRETE. WHERE WATER PIPE EXTENDS THROUGH CONCRETE GRADE BEAMS BELOW GRADE, IT SHALL BE ENCASED IN 3/8" THICK FLEXIBLE FOAM PLASTIC INSULATION. PIPING BELOW SLAB SHALL BE TYPE "M" SOFT TEMPER COPPER WITHOUT JOINTS.
- ALL EXPOSED PIPING PASSING THROUGH FLOORS, CEILING OR WALLS SHALL BE PROVIDED WITH APPROVED PLATES OF SUFFICIENT DIAMETER TO COVER THE SLEEVE OPENING AND FIT SNUGLY AROUND THE PIPE.
- WATER AND SEWER LINES SHALL BE LAID IN SEPARATE TRENCHES WITH A MINIMUM HORIZONTAL SPACING AS REQUIRED BY CODE.
- THIS CONTRACTOR SHALL FURNISH ALL PIPE SUPPORTS REQUIRED FOR HIS EQUIPMENT AND MATERIAL. ALL HORIZONTAL RUNS OF PIPING SHALL BE SUPPORTED BY PIPE HANGERS SPACED NOT MORE THAN 10 FEET APART FOR PIPES 1-1/4" AND LARGER, AND 8' FOR PIPES SMALLER THAN 1-1/4". AND AT EACH JOINT FOR SOL OR WASTE PIPE. ADDITIONAL SUPPORTS SHALL BE PROVIDED WHERE REQUIRED TO PREVENT SAGGING. HANGERS FOR COPPER PIPE SHALL HAVE NYLON INSULATED BUSHINGS OR PIPE SHALL BE WRAPPED WITH 15# FELT.
- CLEANOUTS SHALL BE PROVIDED WHERE INDICATED ON THE DRAWINGS, OR WHERE REQUIRED, TO PROVIDE ACCESS TO ALL LINES AND AT HORIZONTAL RUN AT INTERVALS NOT EXCEEDING 80 FEET IN ALL SOL, WASTE AND DRAIN LINES. CLEANOUTS SHALL BE SAME AS PIPE EXCEPT CLEANOUTS LARGER THAN 4" WILL NOT BE REQUIRED.
- DO NOT INSTALL PVC PIPING IN ANY RETURN AIR PLENUMS.
- CONDENSATE DRAINS FOR AIR CONDITIONING UNITS SHALL BE PROVIDED. IT SHALL BE THIS CONTRACTOR'S RESPONSIBILITY TO COORDINATE HIS ACTIVITIES WITH ALL OTHER TRADES SO THAT ALL SYSTEMS ARE COMPLETE.
- ALL WASTE AND VENT PIPING SHALL BE STANDARD WEIGHT CAST IRON OR SCHEDULE 40 PVC. HORIZONTAL SOL & WASTE PIPES SHALL BE GIVEN A GRADE OF 1/8" PER FOOT WHERE POSSIBLE. BUT IN NO CASE LESS THAN 1/8" PER FOOT. ALL PVC PIPING INSTALLATION SHALL CONFORM TO ASTM D 2221 LATEST EDITION "UNDERGROUND INSTALLATION OF THERMOPLASTIC PIPE FOR SEWERS AND OTHER GRAVITY FLOW APPLICATIONS" IN ALL RESPECTS. MINIMUM TRENCH WIDTH SHALL BE THE PIPE DIAMETER PLUS 1/8". ALL BEDDING MATERIAL SHALL MEET 1A OR 1B CRITERIA.
- ALL NEW DOMESTIC WATER PIPING SHALL BE TYPE "L" COPPER WITH WROUGHT COPPER FITTINGS. INSULATE ALL DOMESTIC WATER PIPING WITHIN THE BUILDING WITH 1" THICK FIBERGLASS PIPE INSULATION WITH ALL SERVICE JACKET. INSULATE ALL DOMESTIC WATER PIPING OUTSIDE THE BUILDING THERMAL INSULATION ENVELOPE WITH 1" THICK FIBERGLASS PIPE INSULATION.
- ALL CONDENSATE DRAIN PIPING SHALL BE TYPE "M" COPPER DRAINAGE TUBE AND FITTINGS WITH LEAD FREE SOLDER JOINTS. PIPING LESS THAN OR EQUAL TO 1-1/2" INSIDE BUILDING SHALL BE INSULATED WITH 1-1/2" THICK FIBERGLASS PIPE INSULATION WITH UNIVERSAL JACKET. PIPING 2" OR GREATER INSIDE BUILDING SHALL BE INSULATED WITH 2" THICK FIBERGLASS PIPE INSULATION WITH UNIVERSAL JACKET.
- ALL P-TRAPS FOR FIXTURES IN FLOORS ABOVE CONDITIONED SPACES THAT ACCEPT CONDENSATE DRAINAGE, SHALL BE INSULATED, AS WELL AS THE DRAIN PIPING 5'-0" DOWNSTREAM OF THE TRAP.

FIRE PROTECTION NOTE:

THE EXISTING FIRE SYSTEM PIPE AND SPRINKLER HEAD LOCATIONS SHALL BE MODIFIED AS REQUIRED TO SERVE THE NEW FLOOR PLAN. NEW FIRE PROTECTION PIPING AND SPRINKLER HEADS SHALL BE COORDINATED WITH NEW CEILING, DUCTWORK, CONDUITS, AND PIPING. DUCTWORK SHALL HAVE PRIORITY, AND SPRINKLER PIPING SHALL BE ROUTED AS HIGH AS POSSIBLE.



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 BHB PROJECT # 2024.029.007



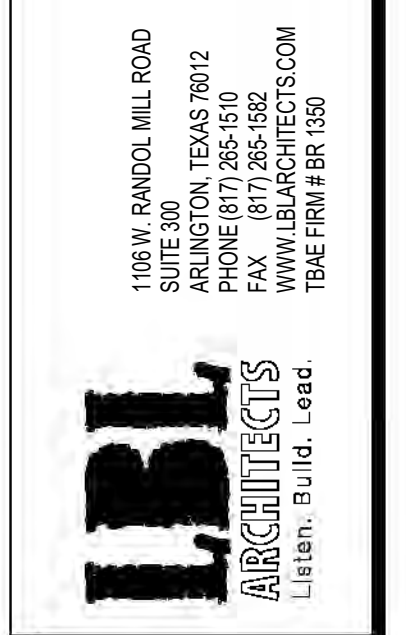
1 FLOOR PLAN - PLUMBING
 Scale: 1/4" = 1'-0"

COMM. NO.	1368
DATE	11/14/24
DRAWN	BCS
CHECKED	TAG

BAR IS ONE INCH IN LENGTH ON ORIGINAL DRAWING CHECK SCALE AND ADJUST ACCORDINGLY

ONE INCH REVISIONS:

PROJECT STATUS: 100% CD



RENOVATIONS TO UNIVERSITY OF NORTH TEXAS
DISCOVERY PARK H WING
RESEARCH LABS
 UNIVERSITY OF NORTH TEXAS DISCOVERY PARK, 3940 N ELM ST. DENTON, TX 76207

Floor Plan - Plumbing
P-1

BAR IS ONE INCH IN LENGTH ON ORIGINAL DRAWING CHECK SCALE AND ADJUST ACCORDINGLY

ONE INCH

REVISIONS:

PROJECT STATUS: 100% CD

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RESEARCH LABS
 UNIVERSITY OF NORTH TEXAS DISCOVERY PARK, 3940 N ELM ST. DENTON, TX 76207

WATER HEATER SCHEDULE (ELECTRIC)								
TAG	LOCATION	KW INPUT	VOLTS	PHASE	TANK STORAGE GALLONS	GPH @ 80°F RISE (120° F OUT)	MANUFACTURER	MODEL NO.
WH-1	H137	1.44	120	1	6	9	Eemax Inc.	EMT6
WH-2	H138	1.44	120	1	6	9	Eemax Inc.	EMT6

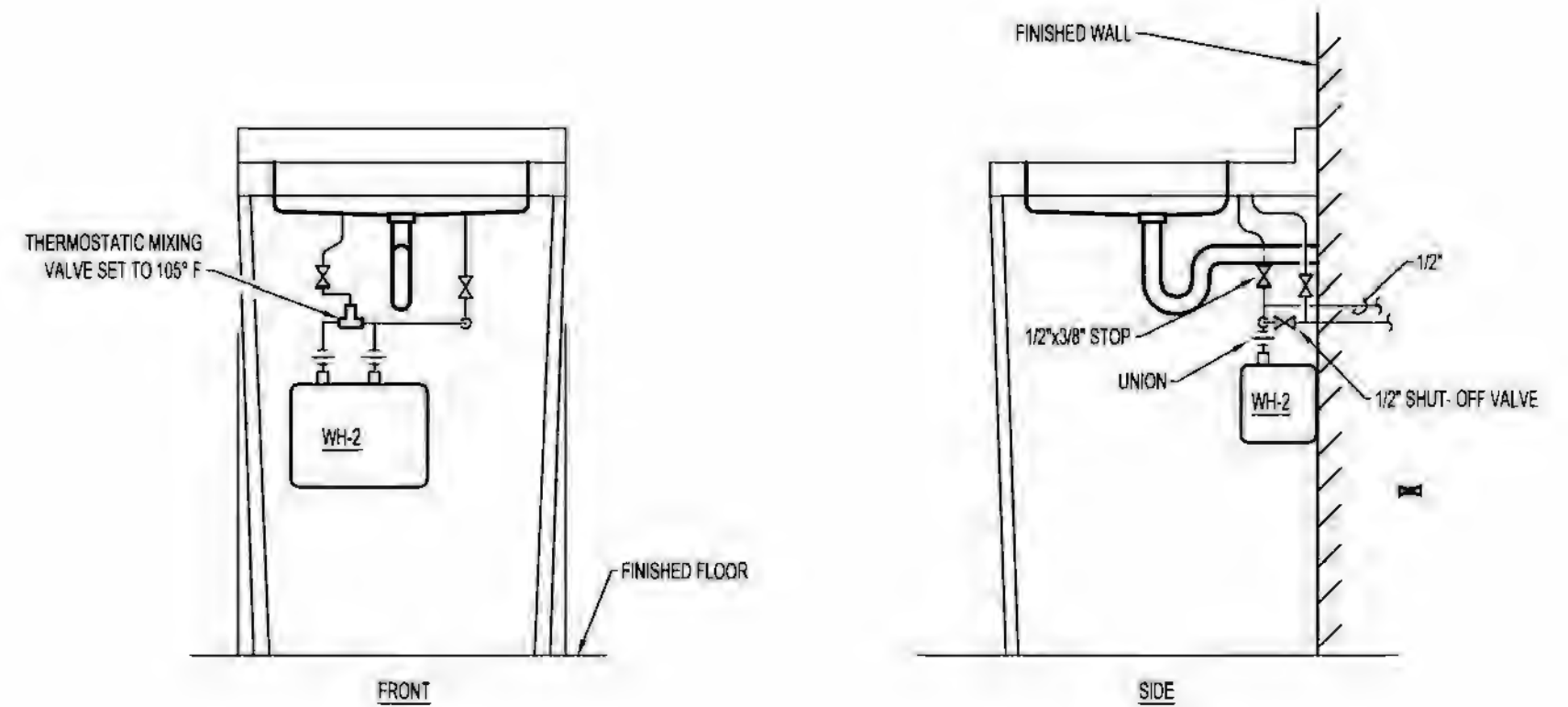
NOTES:

- PROVIDE AND INSTALL QUARTER TURN, SHUT-OFF BALL VALVES FOR HOT AND COLD WATER CONNECTIONS.
- PROVIDE WITH THERMOSTATIC MIXING VALVE.

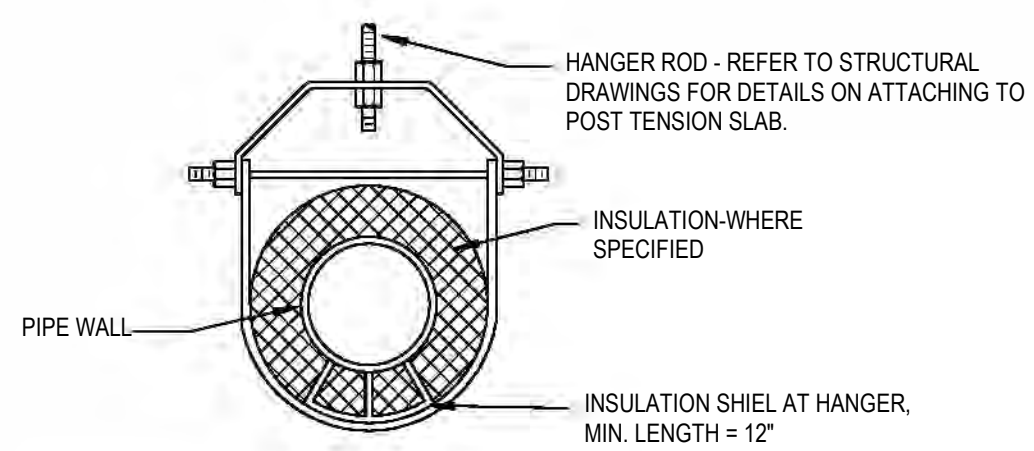
PLUMBING FIXTURE SCHEDULE								
TAG	FIXTURE	C	H	W	V	DESCRIPTION		
S-1	SINGLE COMPARTMENT HAND SINK COUNTERTOP, ACCESSIBLE	12"	12"	2'	2'	ELKAY #LRAD-19-86-65, 18 GA. STAINLESS STEEL 19" x 18" x 6-1/2" DEEP COUNTERTOP SINK WITH 2 FAUCET HOLES, DRAIN OPENING TO BE IN THE CENTER REAR LOCATION. T&S#8-8892 FAUCET WITH LEVER HANDLES, GOOSENECK SPOUT, AERATOR, STRAINER AND P-TRAP. ADA INSULATION PACKAGE.		
ES-1	EMERGENCY SHOWER, EYE WASH STATION, ADA ACCESSIBLE	1-1/4"	-	1-1/4"	-	GUARDIAN GSF-1909 BARRIER-FREE COMBINATION WIDE AREA EYEFACE WASH AND SHOWER SAFETY STATION. SHOWER HEAD AND PULL ROD ARE EXTENDED FOR IMPROVED ACCESS. BOWL IS LOWERED AND EXTENDED TO PERMIT ACCESS BY WHEELCHAIR USER. SCHEDULE 40 GALVANIZED STEEL PIPING AND FITTINGS AND STAINLESS STEEL WASH BOWL.		

NOTES:

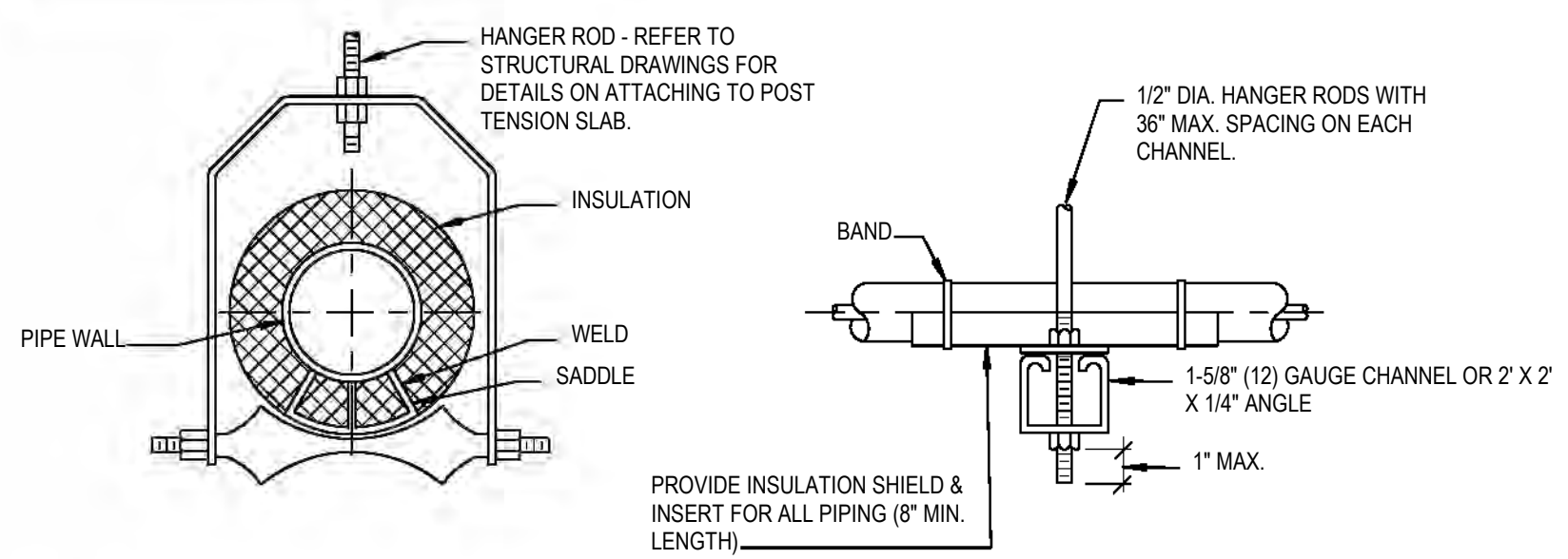
- ALL FIXTURES SHALL MEET LOW WATER CONSUMPTION REQUIREMENTS.
- PROVIDE STOPS AT ALL FIXTURES.
- ACCESSIBLE FIXTURES SHALL BE MOUNTED AND INSTALLED PER ADA & TAS.
- PROVIDE FLOOR MOUNTED CARRIERS FOR ALL WALL MOUNTED FIXTURES.



1 INSTANTANEOUS ELECTRIC WATER HEATER
 Scale: NOT TO SCALE



ADJUSTABLE CLEVIS HANGER



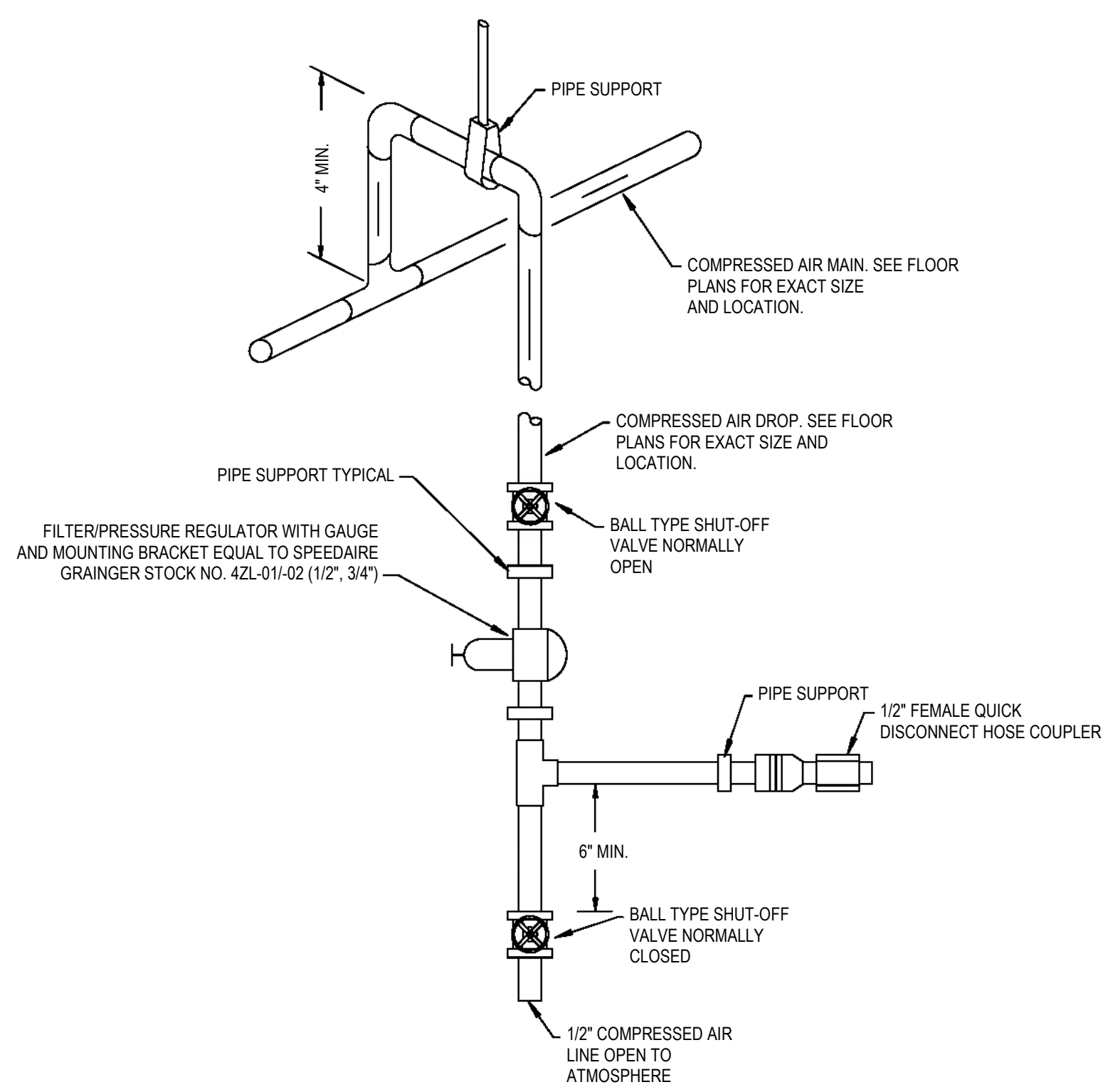
ADJUSTABLE ROLLER HANGER

SIDE VIEW
 TRAPEZE HANGER FOR UP TO 1000 LB. UNIFORM LOAD

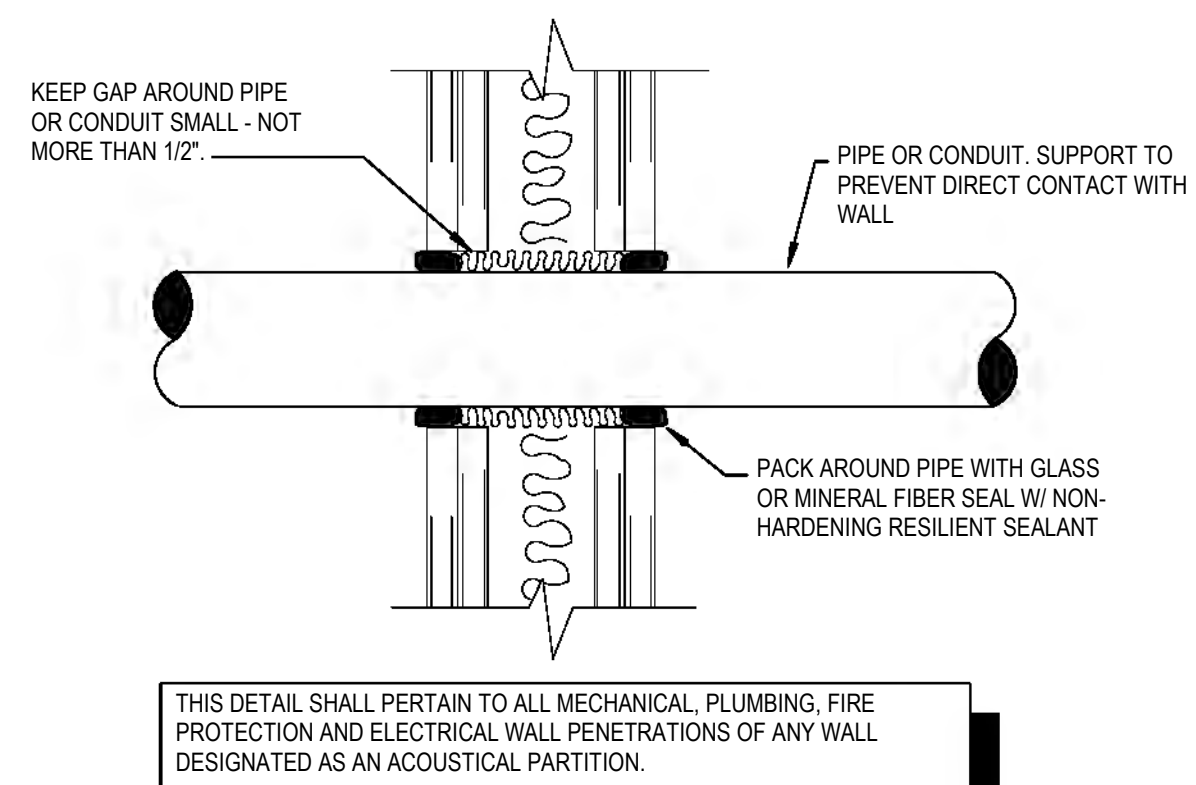
MAXIMUM PIPE SUPPORT SPACING, FEET																		
NOM. PIPE SIZE:	THRU 3/4"	1	1-1/4	1-1/2	2	2-1/2	3	4	5	6	8	10	12	14	16	18	20	24
SPACING	7 FT	7	8	9	10	11	12	14	16	17	19	22	23	25	27	28	30	32

NOTE: FOR TRAPEZE HANGER TAKE SPACING OF SMALLEST PIPE SIZE ON TRAPEZE

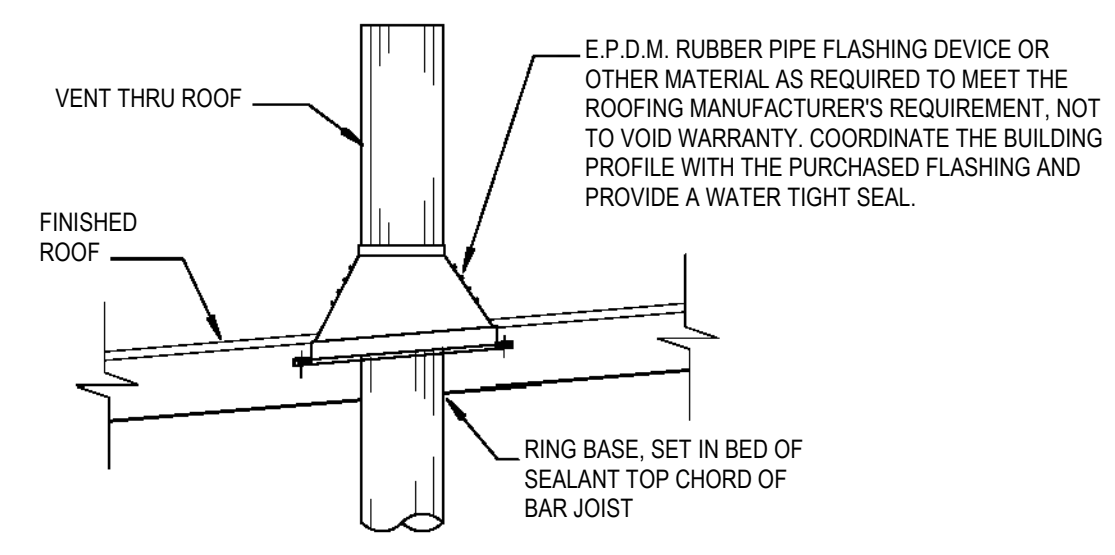
3 TYPICAL PIPING HANGER DETAIL
 Scale: NOT TO SCALE



2 AIR DROP SINGLE
 Scale: NOT TO SCALE



4 PIPE PENETRATING DRYWALL
 Scale: NOT TO SCALE



5 VENT THRU ROOF DETAIL
 Scale: NOT TO SCALE

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NOTES BY SYMBOL

(R) REMOVE ALL LIGHT FIXTURES AND LIGHTING CONTROLS THIS ROOM UNLESS NOTED OTHERWISE. REWORK LIGHTING CIRCUITS AS REQUIRED TO MAINTAIN POWER TO DOWNSTREAM LOADS.

GENERAL NOTES

- REFER TO ARCHITECTURAL FOR LIMITS OF WORK. ALL FIXTURES/CONTROLS ARE NOT NECESSARILY SHOWN, BUT SHALL BE REMOVED.
- EXISTING CONDITIONS ARE BASED ON INFORMATION PROVIDED BY SITE SURVEY AND PREVIOUS RECORD DRAWINGS. HOWEVER, IT IS NOT INTENDED TO BE AN EXACT REPRESENTATION OF ACTUAL CONDITIONS. CONTRACTOR SHALL VISIT JOB SITE PRIOR TO BIDDING TO ASCERTAIN EXISTING CONDITIONS AND SHALL NOTIFY ENGINEER/ARCHITECT OF ANY DISCREPANCIES PRIOR TO START OF WORK.
- REFER TO NEW LIGHTING PLANS FOR ADDITIONAL INFORMATION.



1 DEMOLITION FLOOR PLAN - LABS - LIGHTING
 1/4" = 1'-0"
 0 2 4 8
 NORTH

YE
 YAGGI ENGINEERING, INC.
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 ARLINGTON, TEXAS 76017
 817-483-2973 FAX: 817-483-4233
 TEXAS REGISTRATION NO. F-9022
 YE PROJECT NO. 2421.00

R. Tim Yaggi
 R. TIM YAGGI
 27030
 11/14/2024
 11/14/2024

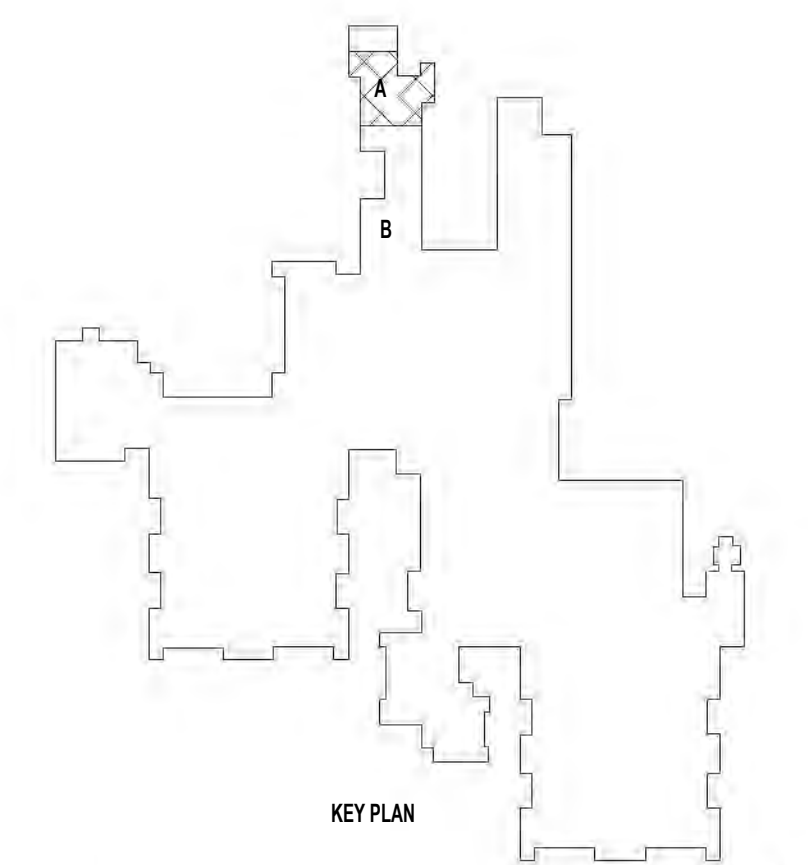
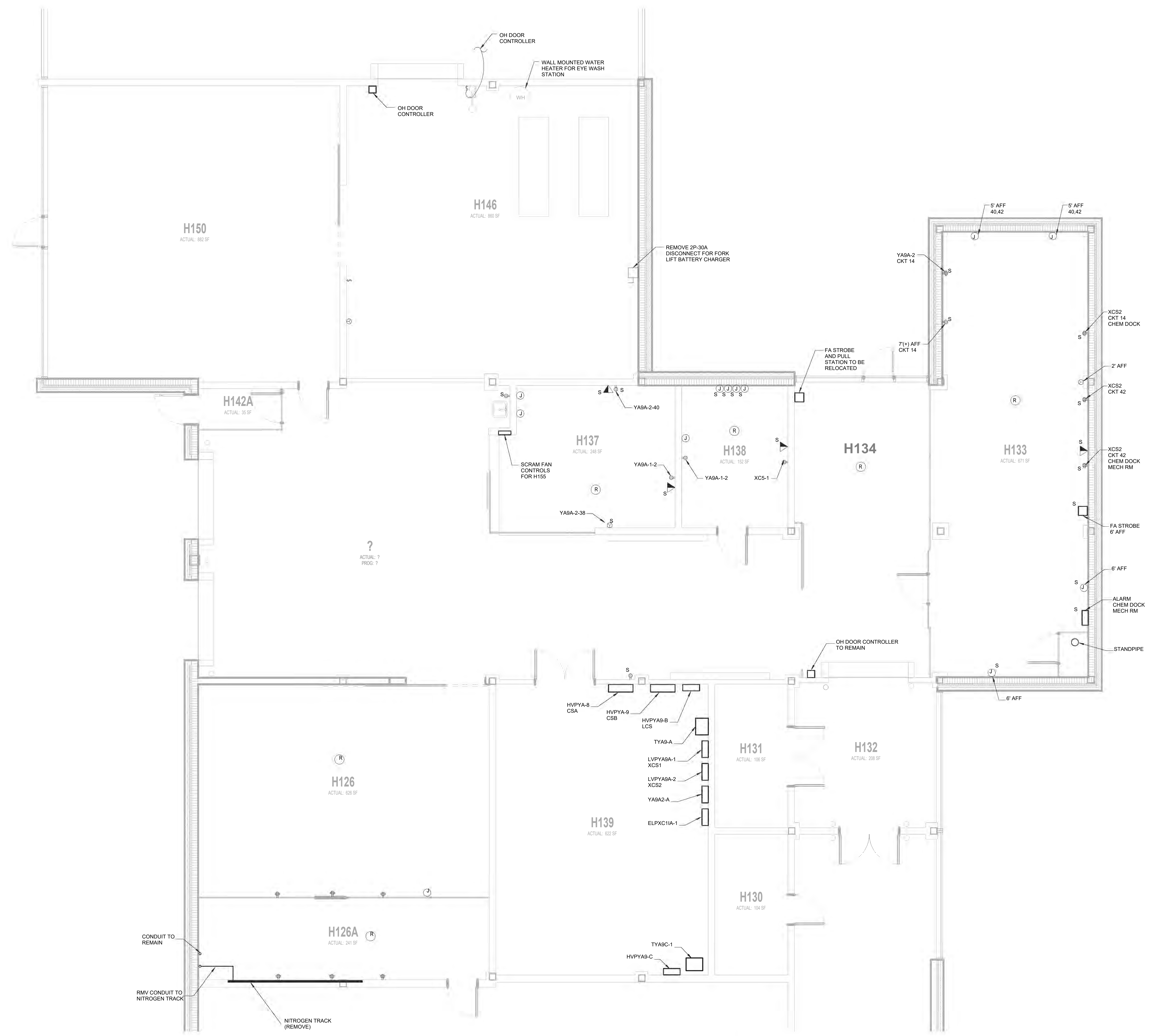
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NOTES BY SYMBOL

(R) REMOVE WIRING DEVICES, RECEPTACLES, J-BOXES, SURFACE MOUNTED CONDUIT, ETC. AND ASSOCIATED BRANCH CIRCUIT CONDUIT/WIRING THIS ROOM, UNLESS NOTED OTHERWISE. REWORK CIRCUITS AS REQUIRED TO MAINTAIN POWER TO DOWNSTREAM LOADS THAT REMAIN.

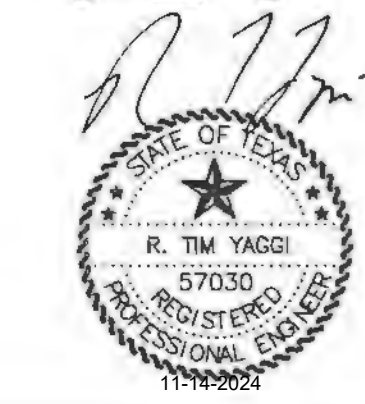
GENERAL NOTES

- REFER TO ARCHITECTURAL FOR LIMITS OF WORK. ALL DEVICES MAY NOT BE SHOWN.
- ANY WIRING DEVICE AND ASSOCIATED COVER PLATE IN WALLS THAT ARE BOTH TO REMAIN AND ARE WITHIN THE AREA OF RENOVATION, SHALL BE REPLACED WITH A NEW WIRING DEVICE AND COVER PLATE TO MATCH NEW INSTALLATIONS.
- REMOVE ALL ABANDONED OR UNUSED CONDUIT/WIRING AT OR ABOVE CEILING AREA.
- EXISTING CONDITIONS ARE BASED ON INFORMATION PROVIDED BY SITE SURVEY AND PREVIOUS RECORD DRAWINGS. HOWEVER, IT IS NOT INTENDED TO BE AN EXACT REPRESENTATION OF ACTUAL CONDITIONS. CONTRACTOR SHALL VISIT JOB SITE PRIOR TO BIDDING TO ASCERTAIN EXISTING CONDITIONS AND SHALL NOTIFY ENGINEER/ARCHITECT OF ANY DISCREPANCIES PRIOR TO START OF WORK.
- REFER TO NEW POWER SHEETS FOR ADDITIONAL INFORMATION.



DEMOLITION FLOOR PLAN - LABS - POWER
 1/4" = 1'-0"
 0 2 4 8
 NORTH

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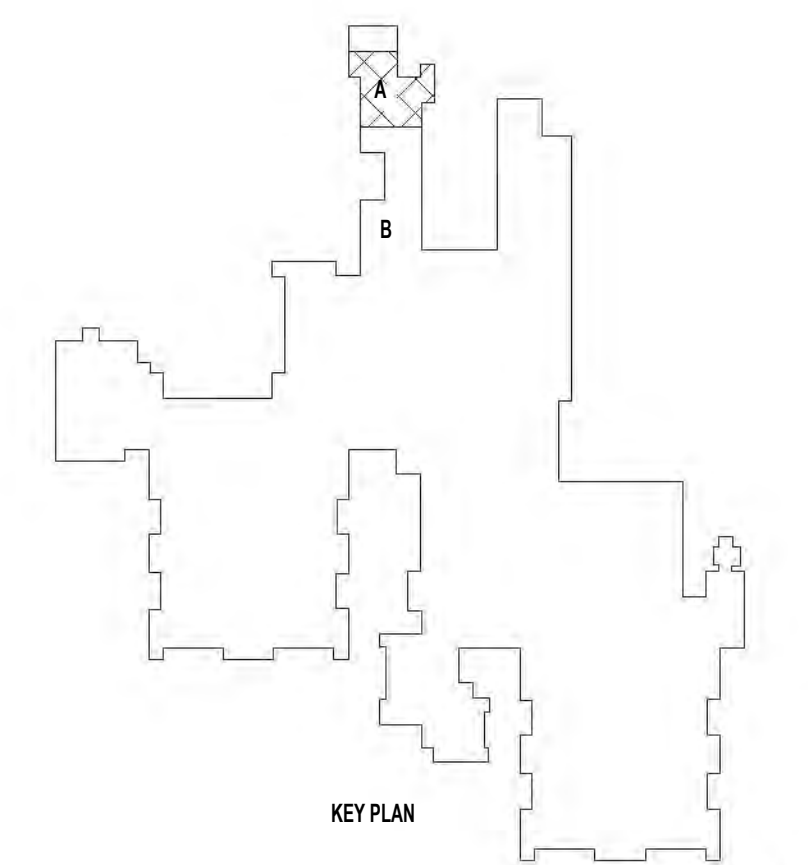
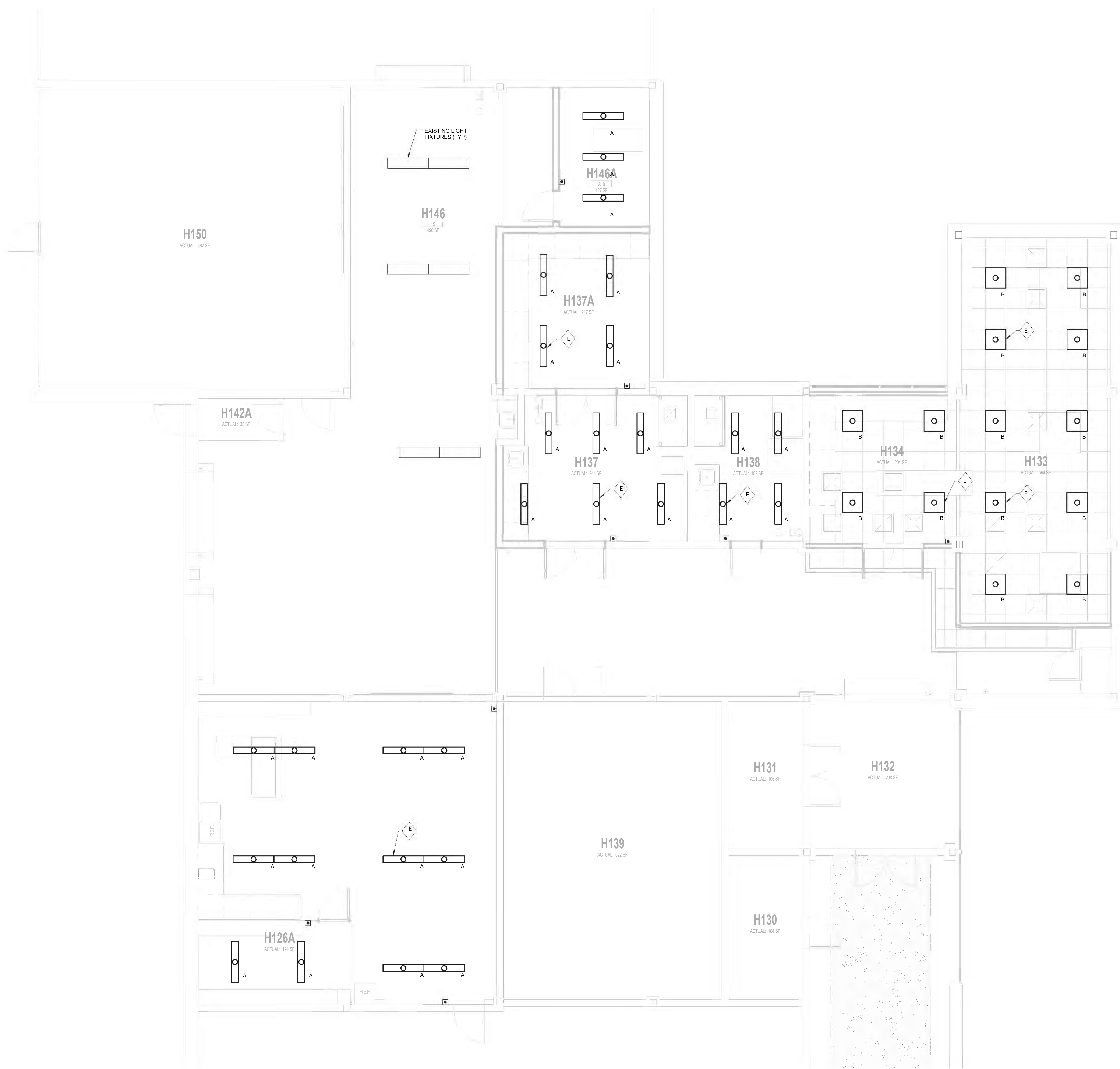
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GENERAL NOTES

- ALL CONDUITS SHALL BE CONCEALED IN WALLS OR ABOVE CEILING. DO NOT INSTALL SURFACE MOUNTED CONDUIT EXCEPT IN ELECTRICAL ROOM AND IN ROOF STRUCTURE AREA OF ROOMS WITHOUT CEILINGS (SEE NOTE 2). NO CURVED PORTION OF CONDUIT SHALL EXIT WALLS. IN ROOMS WITH NO CEILINGS, CONDUITS SHALL EXIT WALLS TIGHT TO ROOF STRUCTURE.
- VISIBLE CONDUITS IN EXPOSED CEILING AREAS SHALL BE MINIMIZED SUCH THAT THE ONLY VISIBLE CONDUITS ARE THOSE SERVING LIGHTING IN SUCH AREAS. OTHER CONDUITS/CIRCUITS SHALL NOT BE ROUTED EXPOSED THROUGH OPEN CEILING SPACES. SPECIAL CARE SHALL BE TAKEN DURING INSTALLATION OF EXPOSED CONDUITS AND CONDUIT ROUTING SHALL BE HIGH AND TIGHT, ROUTED PERPENDICULAR AND PARALLEL TO BUILDING LINES IN A VISUALLY CLEAN MANNER. WHERE CONDUITS ARE INSTALLED EXPOSED IN OPEN CEILING AREAS, THEY SHALL BE PAINTED TO MATCH DUCTWORK, STRUCTURE, DUCTWORK AND OTHER TRADES. COORDINATE ANY APPLICABLE PAINT COLOR/FINISH WITH ARCHITECT AND ARCHITECTURAL RCP PRIOR TO ROUGH-IN.
- ALL LIGHT SWITCHES AND CONTROL DEVICES SHALL BE MOUNTED PER ADA REQUIREMENTS.
- VERIFY EXACT HEIGHT AND LOCATION OF LIGHTING FIXTURES WITH ARCHITECT PRIOR TO ROUGH-IN. REFER TO ARCHITECTURAL RCP.
- REFER TO LIGHTING CONTROL SCHEDULE AND DETAILS FOR LIGHTING CONTROLS IN EACH ROOM TYPE.
- PROVIDE ADDITIONAL DIMMING MODULES, LIGHTING CONTROL STATIONS, CEILING OCCUPANCY SENSORS, DAYLIGHT SENSORS, HUBS, GATEWAYS, ETC. AS REQUIRED TO FACILITATE FIXTURE CONTROL AS NOTED IN LIGHTING CONTROL SCHEDULE.
- ELECTRICAL CONTRACTOR SHALL PROVIDE COMPLETE ASSEMBLY INCLUSIVE OF ALL PARTS AND HARDWARE FOR EACH FIXTURE SPECIFIED.
- EACH DIMMER SHALL BE COMPATIBLE WITH THE FIXTURES BEING DIMMED (0-10V, ELECTRONIC LOW VOLTAGE, ETC.).
- PROVIDE CONTINUOUS AUTOMATIC DIMMING OF FIXTURES IN DAYLIGHTING ZONES AS DEFINED AND AS REQUIRED BY ENERGY CODE (2018 IECC).
- UTILIZE EXISTING CIRCUITS SERVING LIGHTING FIXTURES BEING DEMOLISHED TO SERVE NEW LIGHTING FIXTURES. CONTRACTOR TO CONFIRM FIXTURE VOLTAGE AND CIRCUIT VOLTAGE MATCH. THIS ALSO APPLIES TO THE NOTED EMERGENCY FIXTURES (UTILIZE EXISTING EMERGENCY LIGHTING CIRCUITS).

NOTES BY SYMBOL

- E** FIXTURE SHALL BE CIRCUITED TO NEAREST EXISTING EMERGENCY LIGHTING CIRCUIT. PROVIDE NORMAL SENSING RELAY AS REQUIRED. FIXTURE SHALL BE CONTROLLED WITH ADJACENT NORMAL LIGHTING.



1 FLOOR PLAN - LABS - LIGHTING
 1/4" = 1'-0"
 0 2' 4' 8'
 NORTH

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R. Tim Yaggi
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 REGISTERED PROFESSIONAL ENGINEER
 STATE OF TEXAS
 LICENSE NO. 107030

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NOTES BY SYMBOL

- CAMERA J-BOX AND 1" C TO NEAREST COMMUNICATIONS CABLE TRAY.
- WIRELESS ACCESS POINT J-BOX AND 1" C TO NEAREST COMMUNICATIONS CABLE TRAY.

GENERAL NOTES

- REFER TO MECHANICAL, PLUMBING, FIRE, AND ARCHITECTURAL SERIES DRAWINGS AND SPECIFICATIONS FOR ADDITIONAL ELECTRICAL WORK.
- ALL CONDUITS SHALL BE CONCEALED IN WALLS (WHERE POSSIBLE) OR ABOVE CEILING. ONLY INSTALL SURFACE MOUNTED CONDUIT WHERE CONCEALED IS NOT POSSIBLE AND IN ELECTRICAL ROOMS AND IN ROOF STRUCTURE AREA OF ROOMS WITHOUT CEILINGS. NO CURVED PORTION OF CONDUIT SHALL EXIT WALLS. IN ROOMS WITH NO CEILINGS, CONDUITS SHALL EXIT WALLS TIGHT TO ROOF STRUCTURE.
- VERIFY ALL POWER AND J-BOX LOCATIONS WITH ARCHITECT AND OWNER PRIOR TO ROUGH-IN.
- ALL RECEPTACLES IN RESTROOMS, ON COUNTERS EQUIPPED WITH SINKS, EXTERIOR RECEPTACLES, AND ANY RECEPTACLE WITHIN 6'-0" OF A SINK (AND ANY OTHER AREAS REQUIRED BY THE NEC) SHALL BE GFI.
- VERIFY FINISH OF DEVICES WITH ARCHITECT AND INTERIOR DESIGNER PRIOR TO SUBMITTING.
- PROVIDE CODE REQUIRED DISCONNECT FOR ALL MECHANICAL, PLUMBING, AND LAB EQUIPMENT (IF NOT INTEGRAL TO UNIT).
- REPLACE WIRING DEVICES AND COVER PLATES FOR ALL EXISTING WIRING DEVICES TO REMAIN IN THE RENOVATION AREA. ALL COVER PLATES SHALL BE LABELED WITH ASSOCIATED CIRCUIT NUMBER.
- REFER TO SHEET E301 FOR LAB EQUIPMENT REQUIREMENTS. THIS IS TYPICAL FOR ALL SPECIAL RECEPTACLES (SHOWN WITH THIS SYMBOL).
- RECEPTACLES AT COUNTERS SHALL BE MOUNTED ABOVE COUNTERS UNLESS OTHERWISE NOTED. COORDINATE WITH ARCHITECTURAL.
- ALL DUPLEX RECEPTACLES SHOWN AT WIREMOLD SHALL BE SERVED FROM CIRCUIT NUMBER INDICATED.

120V CONTROL POWER NOTES

PROVIDE 120V POWER CIRCUIT TO EACH ITEM OF EQUIPMENT AS REQUIRED. REFER TO MECHANICAL SCHEDULES, ETC. THESE CIRCUITS ARE NOT NECESSARILY IDENTIFIED BUT SHALL BE PROVIDED AS NECESSARY TO PROVIDE COMPLETE OPERATIONAL SYSTEM. TYPICAL EQUIPMENT INCLUDES HVAC CONTROL PANELS, FIRE DAMPERS, SMOKE DAMPERS, DUCT DETECTORS, FIRE ALARM CONTROL PANELS, LIGHTING CONTROLS, ETC. MAXIMUM OF (2) CONTROL CIRCUITS PER 120V, 20 AMP CIRCUIT. IDENTIFY CIRCUITS USED ON RECORD DRAWINGS.

REFER TO EQUIPMENT SCHEDULES ON SHEET E3.01. PROVIDE DEDICATED BRANCH CIRCUITS AS SCHEDULED. PROVIDE DETAILED SHOP DRAWING OF FINAL EQUIPMENT AND POWER LOCATIONS FOR OWNER/ENGINEER REVIEW PRIOR TO ROUGH-IN.

- LASER (YLR-2000-MM-WC)
- LASER CHILLER

REFER TO EQUIPMENT SCHEDULES ON SHEET E3.01. PROVIDE DEDICATED BRANCH CIRCUITS AS SCHEDULED. PROVIDE DETAILED SHOP DRAWING OF FINAL EQUIPMENT AND POWER LOCATIONS FOR OWNER/ENGINEER REVIEW PRIOR TO ROUGH-IN.

- RIGAKU SMARTLAB
- CONTROL PC
- MONITOR
- HYPIX SERVER
- HASKRIS CHILLER LX4 (INDOOR)

REFER TO EQUIPMENT SCHEDULES ON SHEET E3.01. PROVIDE DEDICATED BRANCH CIRCUITS AS SCHEDULED. PROVIDE DETAILED SHOP DRAWING OF FINAL EQUIPMENT AND POWER LOCATIONS FOR OWNER/ENGINEER REVIEW PRIOR TO ROUGH-IN.

- HASKRIS REMOTE CONDENSER (OUTDOOR)

REFER TO EQUIPMENT SCHEDULES ON SHEET E3.01. PROVIDE DEDICATED BRANCH CIRCUITS AS SCHEDULED. PROVIDE DETAILED SHOP DRAWING OF FINAL EQUIPMENT AND POWER LOCATIONS FOR OWNER/ENGINEER REVIEW PRIOR TO ROUGH-IN.

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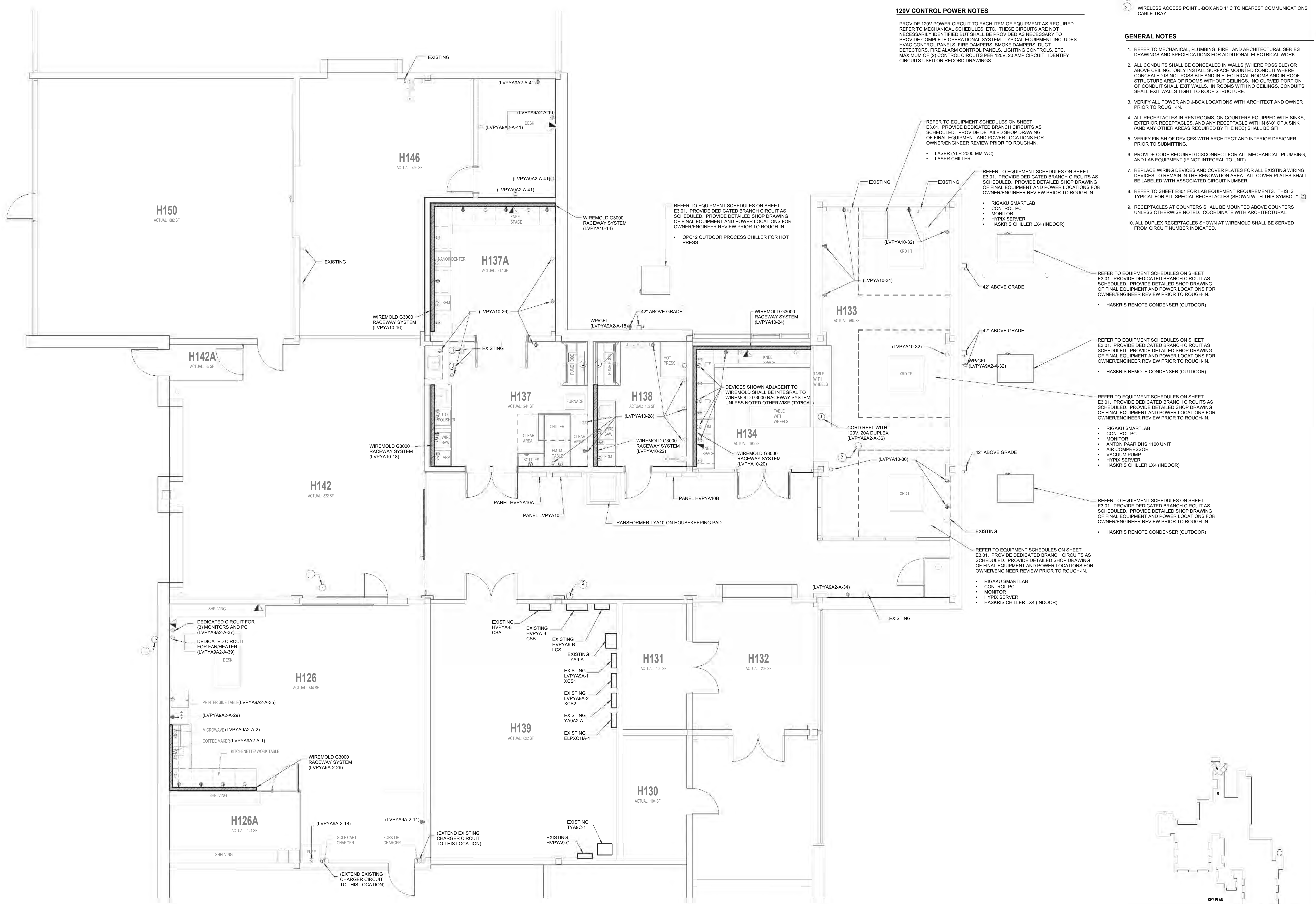
- RIGAKU SMARTLAB
- CONTROL PC
- MONITOR
- ANTON PAAR DHS 1100 UNIT
- AIR COMPRESSOR
- VACUUM PUMP
- HYPIX SERVER
- HASKRIS CHILLER LX4 (INDOOR)

REFER TO EQUIPMENT SCHEDULES ON SHEET E3.01. PROVIDE DEDICATED BRANCH CIRCUITS AS SCHEDULED. PROVIDE DETAILED SHOP DRAWING OF FINAL EQUIPMENT AND POWER LOCATIONS FOR OWNER/ENGINEER REVIEW PRIOR TO ROUGH-IN.

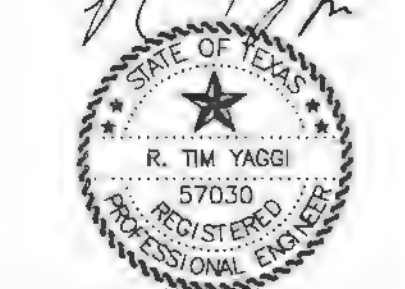
- HASKRIS REMOTE CONDENSER (OUTDOOR)

REFER TO EQUIPMENT SCHEDULES ON SHEET E3.01. PROVIDE DEDICATED BRANCH CIRCUITS AS SCHEDULED. PROVIDE DETAILED SHOP DRAWING OF FINAL EQUIPMENT AND POWER LOCATIONS FOR OWNER/ENGINEER REVIEW PRIOR TO ROUGH-IN.

- RIGAKU SMARTLAB
- CONTROL PC
- MONITOR
- HYPIX SERVER
- HASKRIS CHILLER LX4 (INDOOR)



FLOOR PLAN - LABS - POWER
 1/4" = 1'-0"
 0 2' 4' 8'



- GENERAL NOTES**
- REFER TO MECHANICAL, PLUMBING, FIRE, AND ARCHITECTURAL SERIES DRAWINGS AND SPECIFICATIONS FOR ADDITIONAL ELECTRICAL WORK.
 - ALL CONDUITS SHALL BE CONCEALED IN WALLS (WHERE POSSIBLE) OR ABOVE CEILING. ONLY INSTALL SURFACE MOUNTED CONDUIT WHERE CONCEALED IS NOT POSSIBLE AND IN ELECTRICAL ROOMS AND IN ROOF STRUCTURE AREA OF ROOMS WITHOUT CEILINGS. NO CURVED PORTION OF CONDUIT SHALL EXIT WALLS. IN ROOMS WITH NO CEILINGS, CONDUITS SHALL EXIT WALLS TIGHT TO ROOF STRUCTURE.
 - VERIFY ALL POWER AND J-BOX LOCATIONS WITH ARCHITECT AND OWNER PRIOR TO ROUGH-IN.

BAR IS ONE INCH IN LENGTH ON ORIGINAL DRAWING CHECK SCALE AND ADJUST ACCORDINGLY

ONE INCH

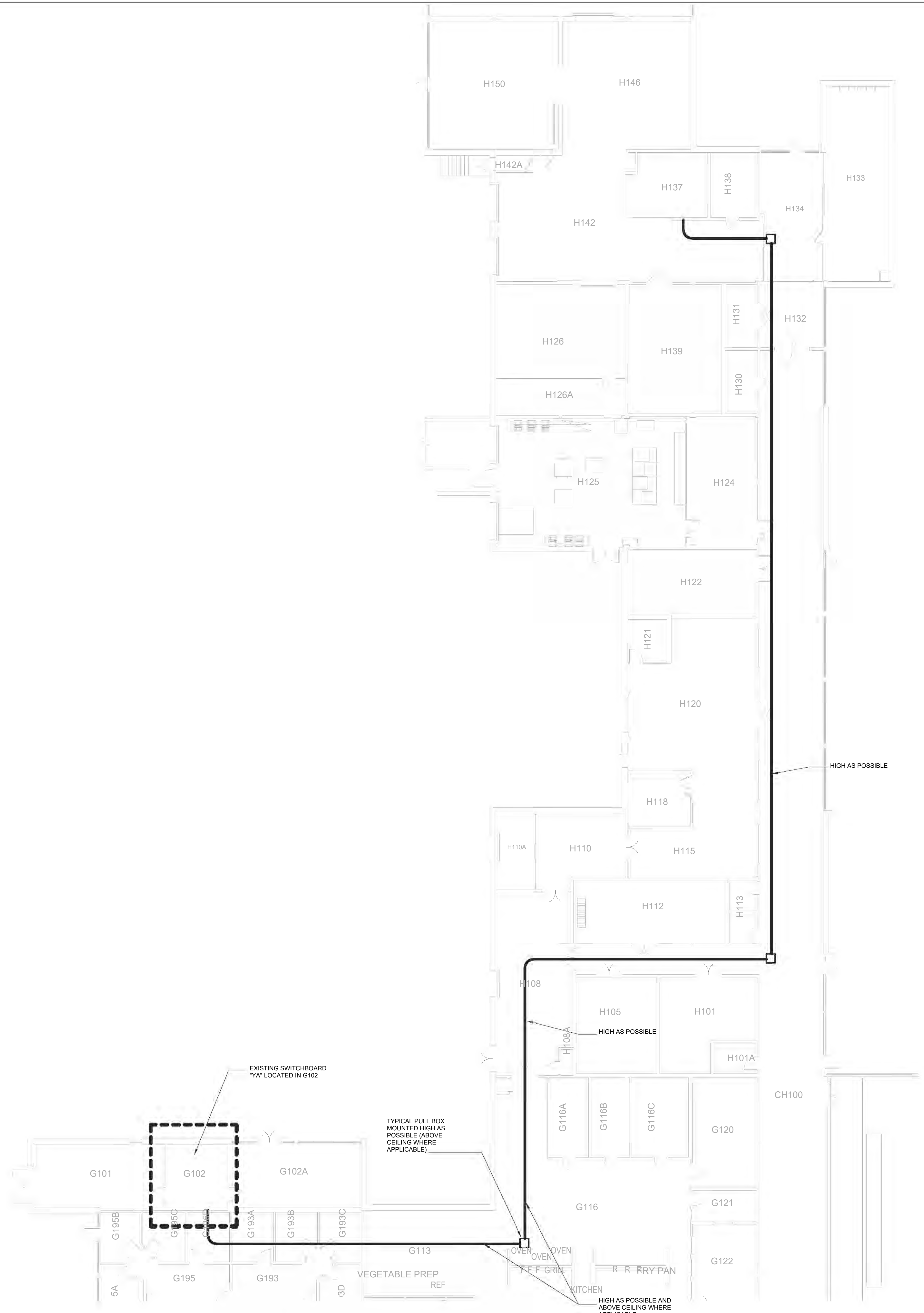
REVISIONS:

PROJECT STATUS: CONSTRUCTION DOCUMENTS

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RENOVATIONS TO UNIVERSITY OF NORTH TEXAS
 DISCOVERY PARK H WING RESEARCH LABS
 UNIVERSITY OF NORTH TEXAS DISCOVERY PARK, 3940 N ELM ST, DENTON, TX 76207

FLOOR PLAN - STORAGE - POWER
E203



EXISTING SWITCHBOARD "YA" LOCATED IN G102

TYPICAL PULL BOX MOUNTED HIGH AS POSSIBLE ABOVE CEILING WHERE APPLICABLE

EXISTING SWITCHBOARD "YA" LOCATED IN G102

VEGETABLE PREP REF

OVEN OVEN OVEN

REF F GRILL

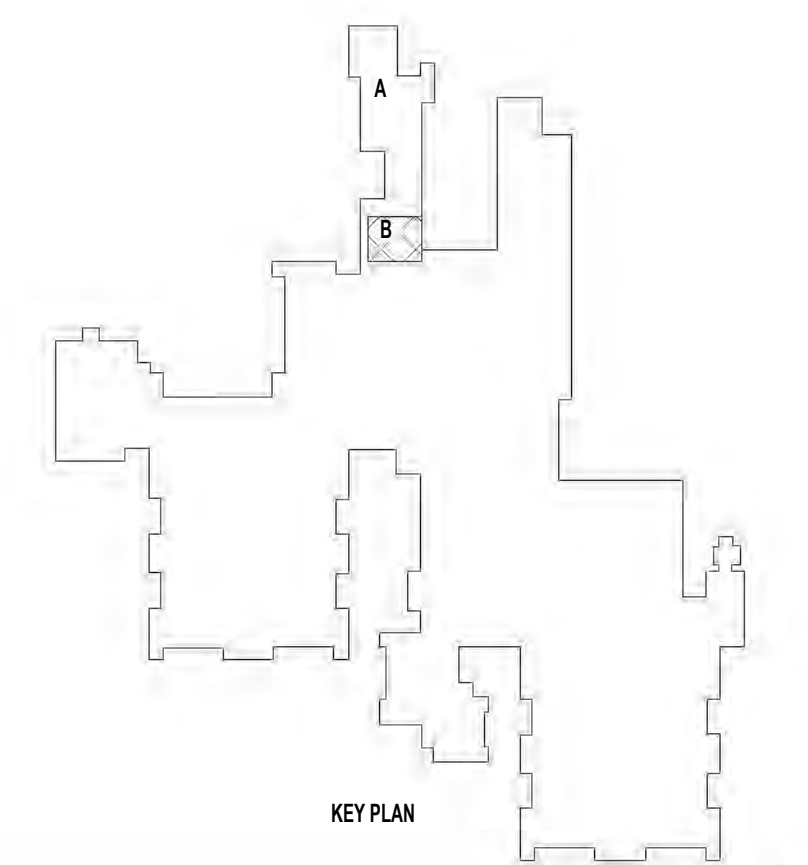
R R BRY PAN

KITCHEN

HIGH AS POSSIBLE AND ABOVE CEILING WHERE APPLICABLE

FLOOR PLAN - ROOM G102 - OVERHEAD CONDUIT ROUTING

3/32" = 1'-0"



YE
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 5840 INTERSTATE 20 WEST, SUITE 270
 ARLINGTON, TEXAS 76017
 817-483-2973 FAX: 817-483-4233
 TEXAS REGISTRATION NO. F-9022
 YE PROJECT NO. 2421.00

R. TIM YAGGI
 REGISTERED PROFESSIONAL ENGINEER
 NO. 27030
 EXPIRES 12/31/2025

Autodesk Docs \UNT Discovery Park H Wing Research Labs\UNT DP H WING Research Labs R24 - YE Electrical.rvt

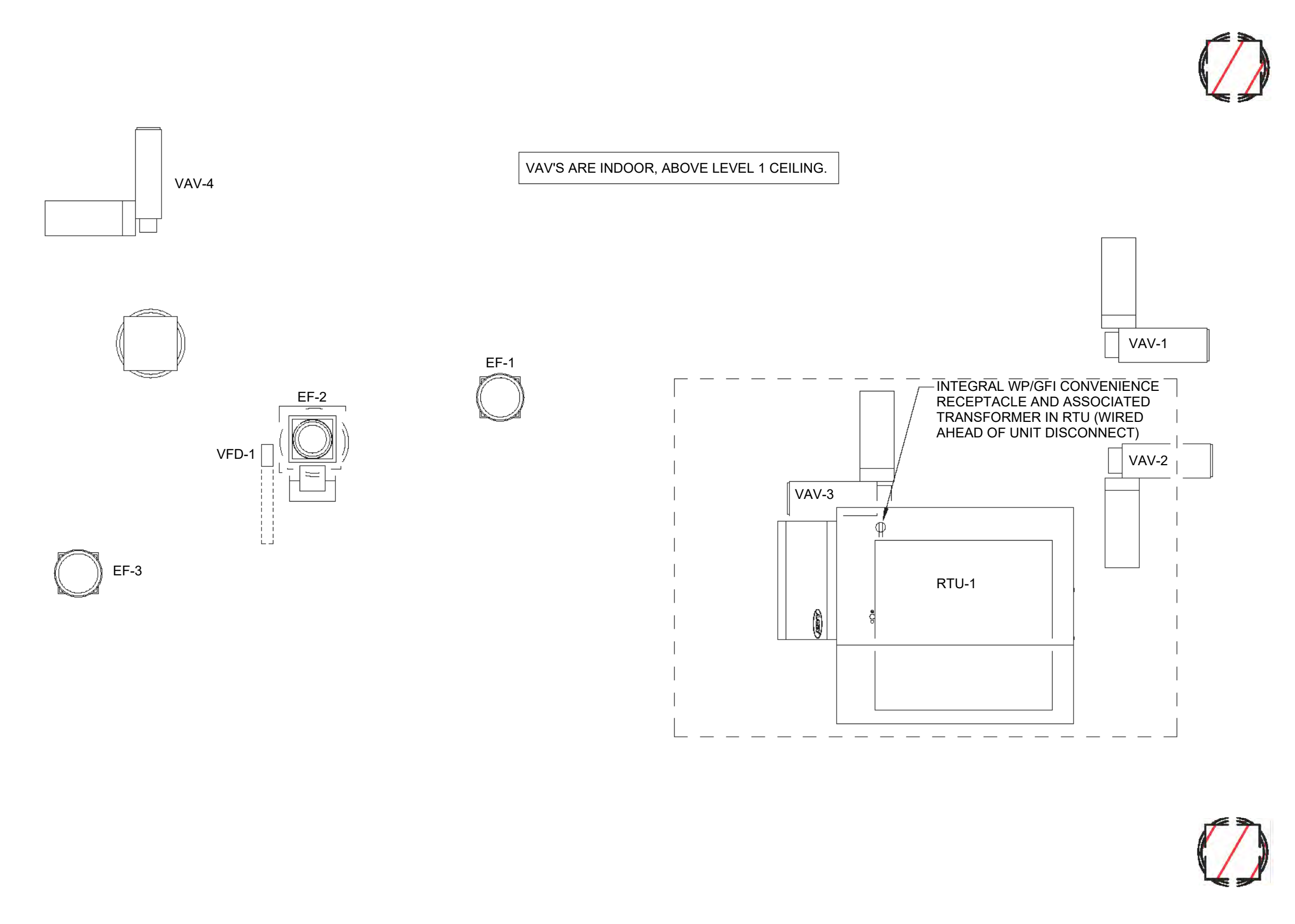
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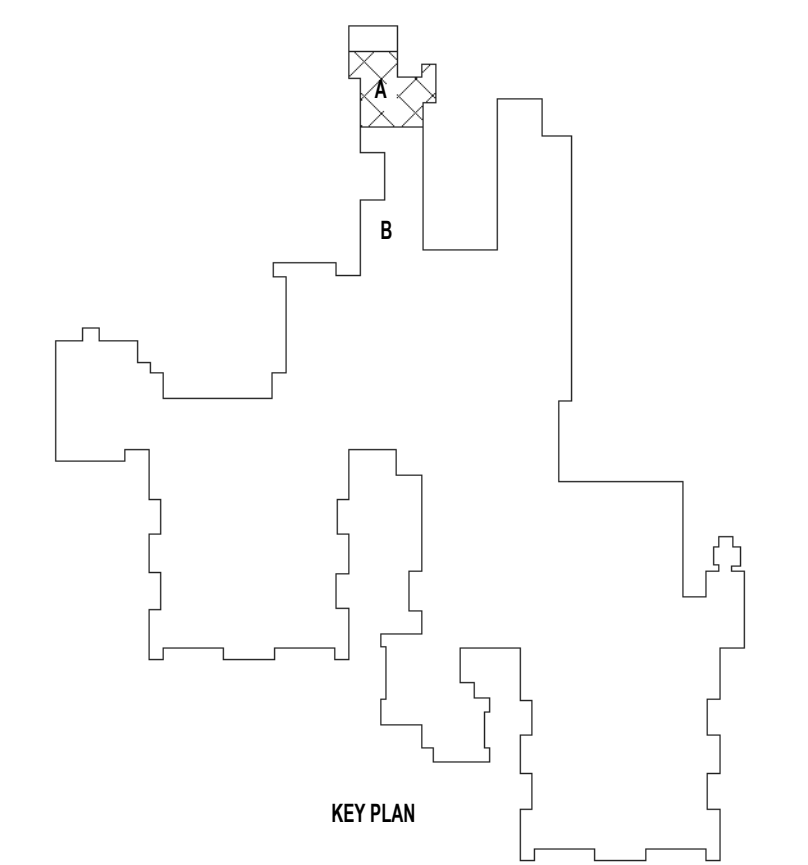
REVISIONS:
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GENERAL NOTES

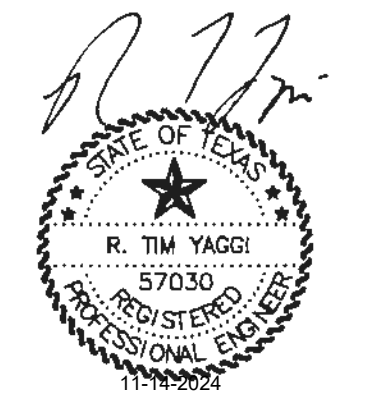
- REFER TO MECHANICAL AND PLUMBING FOR ADDITIONAL ELECTRICAL WORK.
- ALL CONDUITS SHALL BE CONCEALED IN WALLS (WHERE POSSIBLE) OR ABOVE CEILING. ONLY INSTALL SURFACE MOUNTED CONDUIT WHERE CONCEALED IS NOT POSSIBLE AND IN ELECTRICAL ROOMS AND IN ROOF STRUCTURE AREA OF ROOMS WITHOUT CEILINGS. NO CURVED PORTION OF CONDUIT SHALL EXIT WALLS. IN ROOMS WITH NO CEILINGS, CONDUITS SHALL EXIT WALLS TIGHT TO ROOF STRUCTURE.
- VERIFY ALL POWER AND J-BOX LOCATIONS WITH ARCHITECT AND OWNER PRIOR TO ROUGH-IN.
- ALL RECEPTACLES IN RESTROOMS, ON COUNTERS EQUIPPED WITH SINKS, EXTERIOR RECEPTACLES, AND ANY RECEPTACLE WITHIN 6'-0" OF A SINK (AND ANY OTHER AREAS REQUIRED BY THE NEC) SHALL BE GFI.
- PROVIDE CODE REQUIRED DISCONNECT FOR ALL MECHANICAL, PLUMBING, AND LAB EQUIPMENT (IF NOT INTEGRAL TO UNIT).
- ROOF TOP UNIT SHALL BE EQUIPPED WITH INTEGRAL ELECTRICAL DISCONNECT. CONTRACTOR SHALL COORDINATE WITH HVAC CONTRACTOR TO ENSURE INTEGRAL ELECTRICAL DISCONNECT OPTION IS FURNISHED WITH FINAL APPROVED ROOF TOP UNIT. ELECTRICAL CONTRACTOR SHALL PROVIDE ELECTRICAL DISCONNECT IF COORDINATION WITH HVAC CONTRACTOR DOES NOT RESULT IN FINAL APPROVED ROOF TOP UNIT THAT IS DELIVERED TO SITE DOES NOT HAVE INTEGRAL ELECTRICAL DISCONNECT OPTION.
- ROOF TOP UNIT SHALL BE EQUIPPED WITH INTEGRAL WEATHERPROOF, GFCI DUPLEX RECEPTACLE AND INTEGRAL TRANSFORMER TO SERVE RECEPTACLE. CONTRACTOR SHALL COORDINATE WITH HVAC CONTRACTOR TO ENSURE THESE OPTIONS ARE FURNISHED WITH FINAL APPROVED ROOF TOP UNIT. ELECTRICAL CONTRACTOR SHALL PROVIDE WEATHERPROOF, GFCI DUPLEX RECEPTACLE AND 120 VOLT CIRCUITS FOR EACH OF THE ROOF TOP UNITS IF COORDINATION WITH HVAC CONTRACTOR DOES NOT RESULT IN FINAL APPROVED ROOF TOP UNIT THAT IS DELIVERED TO SITE DOES NOT HAVE THE RECEPTACLE AND TRANSFORMER OPTIONS.



1 ROOF PLAN - ELECTRICAL
 1/4" = 1'-0"
 0 2' 4' 8'
 NORTH



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ROOF PLAN - ELECTRICAL
E204

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Room	H133/134										D										L										XRD HT										TTS	TTX	OM
Room Symbol	Rigaku SmartLab	Control PC	Monitor	Anton Paar DHS 1100 Unit	Air Compressor	Vacuum Pump	HyPix Server (Optional)	Haskris Chiller LX4 (INDOOR)	Haskris Remote Condenser (OUTDOOR)	Rigaku SmartLab	Control PC	Monitor	HyPix Server (Optional)	Haskris Chiller LX4 (INDOOR)	Haskris Remote Condenser (OUTDOOR)	DSC Controller	Humidity Generator	Bath Circulator #1	Bath Circulator #2	YLR-2000-MM-WC Laser	Laser Chiller @ 460V	Rigaku SmartLab	Control PC	Monitor	HyPix Server (Optional)	Haskris Chiller LX4 (INDOOR)	Haskris Remote Condenser (OUTDOOR)	FMP1-2X SpectroPlyometer	Miniflex 6G X-RAY Diffractometer	Optical Microscope													
Volts	200V +/- 10%	120V	120V	120	120	120	120V	460V	460V	200V +/- 10%	115V	115V	115V	460V	460V	200V +/- 10%	200V AC +/- 10%	115V AC	115V AC	400-480	460V +/- 10%	200V +/- 10%	120V	120V	115V	460V	460V	90-264 VAC	115V														
Phase	3	1	1	1	1	1	1	3	3	3	1	1	1	3	3	1	1	1	1	3	3	3	1	1	1	3	3	1	1														
Watts	9000W (17kVA)			300VA						9000W (17kVA)										5200 (Using max)	9090	9000W (17kVA)						400W	800														
Amps	50 Provide 60A Circuit	5	2		15A	6A	5	8.7A 15A MOCP	1.4A 15A MOCP	50 Provide 60A Circuit	5	2	5	8.7A 15A MOCP	1.4A 15A MOCP	3A ("Prepare a panel w/ a 20Amp rated current") NEMA 6-15	2.5	10	10			50 Provide 60A Circuit	5	2	5	8.7A 15A MOCP	1.4A 15A MOCP	400W	800	10													
Electrical Connection	DISCONNECT	RECEPTACLE	RECEPTACLE	NEMA 5-15	NEMA 5-15	NEMA 5-15	RECEPTACLE	VERIFY	VERIFY CONNECTION. 24V CONTROL TO INDOOR PORTION	DISCONNECT	RECEPTACLE	RECEPTACLE	RECEPTACLE	VERIFY	VERIFY CONNECTION. 24V CONTROL TO INDOOR PORTION	NEMA 6-15	NEMA 6-15	NEMA 5-15 Dedicated Circuit	NEMA 5-15 Dedicated Circuit	VERIFY	VERIFY	DISCONNECT	RECEPTACLE	RECEPTACLE	RECEPTACLE	VERIFY	VERIFY CONNECTION. 24V CONTROL TO INDOOR PORTION	RECEPTACLE	RECEPTACLE														
Grounding	D-class grounding 100 ohm or less									D-class grounding 100 ohm or less						Earth Ground w/ a resistance of 30 ohm or less	Earth Ground w/ a resistance of 30 ohm or less					D-class grounding 100 ohm or less																					
ELECTRICAL CIRCUIT	LVPYA10-43,45,47	LVPYA10-1	LVPYA10-3	LVPYA10-5	LVPYA10-7	LVPYA10-9	LVPYA10-11	HVPYA10B-1,3,5	HVPYA10B-2,4,6	LVPYA10-53,55,57	LVPYA10-13	LVPYA10-15	LVPYA10-17	HVPYA10B-7,9,11	HVPYA10B-8,10,12	LVPYA10-63,65	LVPYA10-67,69	LVPYA10-19	LVPYA10-21	HVPYA10A-1,3,5	HVPYA10A-7,9,11	LVPYA10-71,73,75	LVPYA10-23	LVPYA10-25	LVPYA10-27	HVPYA10B-13,15,17	HVPYA10B-14,16,18	LVPYA10-29	LVPYA10-31	LVPYA10-42													

Room	H138			
Symbol	HP	EDM	WS	
Equipment Name	FR210-10T-3X4-W-W/Mo-200-04T-HMI	OPC12 - Outdoor Process Chiller	EDM machine	Wire Saw
Volts	208V	460V	480V	110V
Phase	1	3	3	1
Watts	18720W	25107W		200W
Amps	90	30.2 MCA	25A MAX	
Electrical Connection	Main power disconnect via lockable circuit breaker on front of table	DISCONNECT & 45A MOCP		RECEPTACLE
Grounding				
ELECTRICAL CIRCUIT	LVPYA10-81,83	HVPYA10A-19,21,23	HVPYA10A-25,27,29	LVPYA10-8

Room	TBD (H133?)		
Symbol	Oxford Cryosystems PheniX		
Equipment Name	Phenix Controller	K450 Helium Compressor	Turbomolecular Vacuum Pump (Optional)
Volts	115V	208V	115V
Phase	1	1	1
Watts	200	3600	
Amps		17.3A 20A MOCP	
Electrical Connection	VERIFY	VERIFY	VERIFY
Grounding			
ELECTRICAL CIRCUIT	LVPYA10-6	LVPYA10-68,70	LVPYA10-40

FUME HOOD SCHEDULE			
NUMBER	VOLTAGE	PHASE	CIRCUIT
1	120	1	LVPYA10-36
2	120	1	LVPYA10-38

Room	H137A			
Symbol	PC	Remote TEM	SEM	Nanoindenter
Equipment Name	Computer	Remote TEM	Benchtop SEM	Benchtop Nanoindenter
Volts	110V	110V	110V	110V
Phase	1	1	1	1
Watts			348W MAX	
Amps			2.9A	
Electrical Connection	RECEPTACLE	RECEPTACLE	RECEPTACLE	RECEPTACLE
Grounding				
ELECTRICAL CIRCUIT	LVPYA10-39	LVPYA10-41	LVPYA10-2	LVPYA10-4

Room	H137						
Symbol	Auto Polisher	Wire Saw	ETMT		Furnace	VRP	
Equipment Name	Auto Polisher	Wire Saw	Electro Thermal Mechanical Tester (Frame/Controller)		Chiller	Furnace	Vibromet polisher
Volts	110V	110V	460V (60Hz) 480V acceptable per manuf.		208V	208V	110V
Phase	1	1	3		3	1	1
Watts	440W	200W	9000W			2500W	
Amps	3.67A		Supply 30A minimum		Supply 20A minimum	12A	
Electrical Connection	RECEPTACLE	RECEPTACLE	DISCONNECT		DISCONNECT	20A BREAKER, CORDED CONNECTION	RECEPTACLE
Grounding							
ELECTRICAL CIRCUIT	LVPYA10-33	LVPYA10-35	HVPYA10-13,15,17		LVPYA10-80,82,84	LVPYA10-74,76	LVPYA10-37

NOTE:
 CONTRACTOR SHALL REVIEW EQUIPMENT DATA SHEETS FOR ALL EQUIPMENT PRIOR TO SWITCH GEAR SUBMITTAL AND ROUGH-IN. PROVIDE OVERCURRENT PROTECTION AND CIRCUIT(S) AS RECOMMENDED BY EQUIPMENT MANUFACTURER. SOME EQUIPMENT MAY BE AVAILABLE ON SITE TO ALLOW FOR FURTHER REVIEW AND CONFIRMATION.

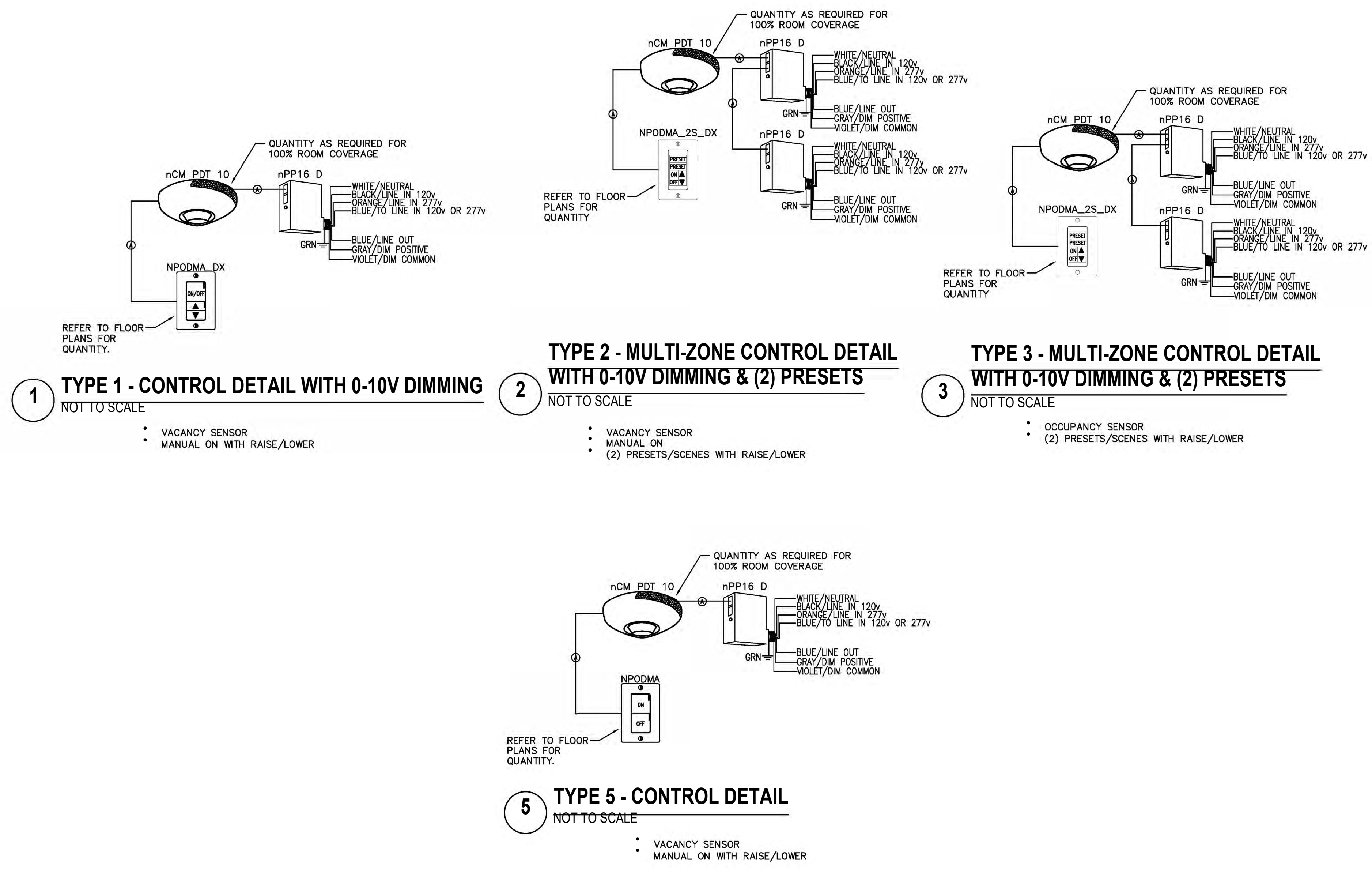
LIGHT FIXTURE SCHEDULE									
TYPE	DESCRIPTION	MANUFACTURER AND MODEL (OR APPROVED EQUAL)	MOUNTING	LUMEN OUTPUT	COLOR TEMP. (K)	LED CRI	WATTAGE	DIMMING	VOLTAGE
A	4'-0" LENGTH, HANGER MOUNT ENDCAP WHITE ACRYLIC DIFFUSE LENS, POWDER COATED WHITE FINISH, INTEGRAL DRIVER, DATA APPLICATION RATED, EXTRUDED ALUMINUM BODY, DAMP LOCATION LISTED, WIDE DISTRIBUTION. WHERE (2) TYPE A ARE SHOWN END-TO-END, SUBMIT 8'-0" FIXTURE.	LUX DYNAMICS BASE-LINE	SUSPENDED AIRCRAFT CABLE	6195L	4000K	80+	42W	0-10V	VERIFY EXISTING
B	2X2 LAY-IN TROFFER, CENTER ELEMENT, CURVED OPAL LENS, 0-10V DIMMING, GLARE REDUCING CENTER BASKET.	LITHONIA STAK	RECESSED LAY-IN	5164L	4000K	80+	42.6W	0-10V	VERIFY EXISTING
EXIT	EXIT LIGHT, AC ONLY - ON EMERGENCY CIRCUIT, GREEN ON CLEAR/MIRROR, BRUSHED ALUMINUM FINISH, # FACES AND DIRECTIONAL ARROWS AS INDICATED ON DRAWINGS FOR EACH LOCATION.		SURFACE & PENDANT	3W	N/A	N/A		N/A	VERIFY EXISTING

120V
 1. ALL LIGHTING FIXTURES SHALL BE 0-10V DIMMABLE UNLESS NOTED OTHERWISE.
 2. LIGHTING SUBCONTRACTOR TO SUBMIT PHOTOMETRIC CALCULATIONS FOR ALL INTERIOR SPACES FOR APPROVAL. INCLUDE WITH LIGHTING FIXTURE SUBMITTALS.
 3. ALL FIXTURE FINISHES AND COLORS SHALL BE AS SELECTED BY ARCHITECT.
 4. ALL FIXTURE HEIGHTS, LENGTHS, AND MOUNTING TYPES SHALL BE AS COORDINATED WITH ARCHITECT.
 5. ALL FIXTURES SHALL BE PROVIDED WITH DIMMING DRIVERS.

LIGHTING CONTROL SCHEDULE															
LIGHTING CONTROL TYPE	ROOM	VACANCY SENSORS	OCCUPANCY SENSORS	POWER PACK OR ROOM CONTROLLER	MANUAL OVERRIDE	KEYED SWITCH (MAINT.)	DIMMING	PRESET SCENE OR LEVEL MEMORY	ON FUNCTION	OFF FUNCTION	SENSOR TIMEOUT DELAY (MINUTES)	ZONE 1	ZONE 2	ZONE 3	DAYLIGHT HARVESTING (WHERE REQUIRED BY IECC)
1	OFFICE	X		X	X		X	X	MANUAL 100%	AUTO/MANUAL	15	ALL			X
2	LAB	X		X	X		X	X	MANUAL 100%	AUTO/MANUAL	15	TBD	TBD	TBD	X
3	BREAKROOM		X	X	X		X	X	AUTOMATIC 50%	AUTO/MANUAL	30	ALL			X
4	CORRIDOR		X	X	X		X	X	AUTOMATIC 100%	AUTO/MANUAL	15	ALL			X
5	STORAGE	X		X	X				MANUAL 100%	AUTO/MANUAL	15	ALL			
MANUAL	ELECT				X				MANUAL 100%	MANUAL		ALL			

LIGHTING CONTROL SCHEDULE NOTES:

- CONTROL SCHEDULES INCLUDE TYPICAL ROOMS AND DO NOT INCLUDE ALL SPACES TO BE CONTROLLED BY LOW VOLTAGE LIGHTING CONTROL SYSTEMS. ALL SPACES IN BUILDING SHALL BE CONTROLLED BY LIGHTING CONTROL SYSTEMS EXCEPT ROOMS SPECIFICALLY LISTED AS "MANUAL SWITCHES" TYPE. INCLUDE ALL BUILDING SPACES EVEN THOUGH NOT NECESSARILY INCLUDED IN SCHEDULES.
- "ALL" DENOTES THAT ALL FIXTURES IN ROOM SHALL BE CONTROLLED ON ZONE NOTED. WHERE DAYLIGHTING ZONE IS SHOWN ON PLANS, PROVIDE SEPARATE AUTO-CONTROLLED DAYLIGHTING ZONE.
- VARIOUS ROOM TYPES ARE TYPICAL. REFER TO FLOOR PLANS FOR QUANTITY OF ROOMS.
- REFER TO FLOOR PLANS FOR QUANTITY OF LOW VOLTAGE CONTROL STATIONS.
- PROVIDE QUANTITY OF OCCUPANCY AND VACANCY SENSORS AS REQUIRED TO PROVIDE 100% ROOM COVERAGE. INCLUDE QUANTITY AND LOCATIONS WITH LIGHTING CONTROL SUBMITTAL.
- FOR LIGHTING CONTROL STATIONS LOCATED IN WET/DAMP ENVIRONMENTS, PROVIDE WHILE-IN-USE COVER AT EACH LIGHTING CONTROL STATION LOCATION.
- CONFIRM "OCCUPANCY" OR "VACANCY" AND "TIMEOUT DELAY" WITH OWNER PRIOR TO PREPARING SUBMITTALS.



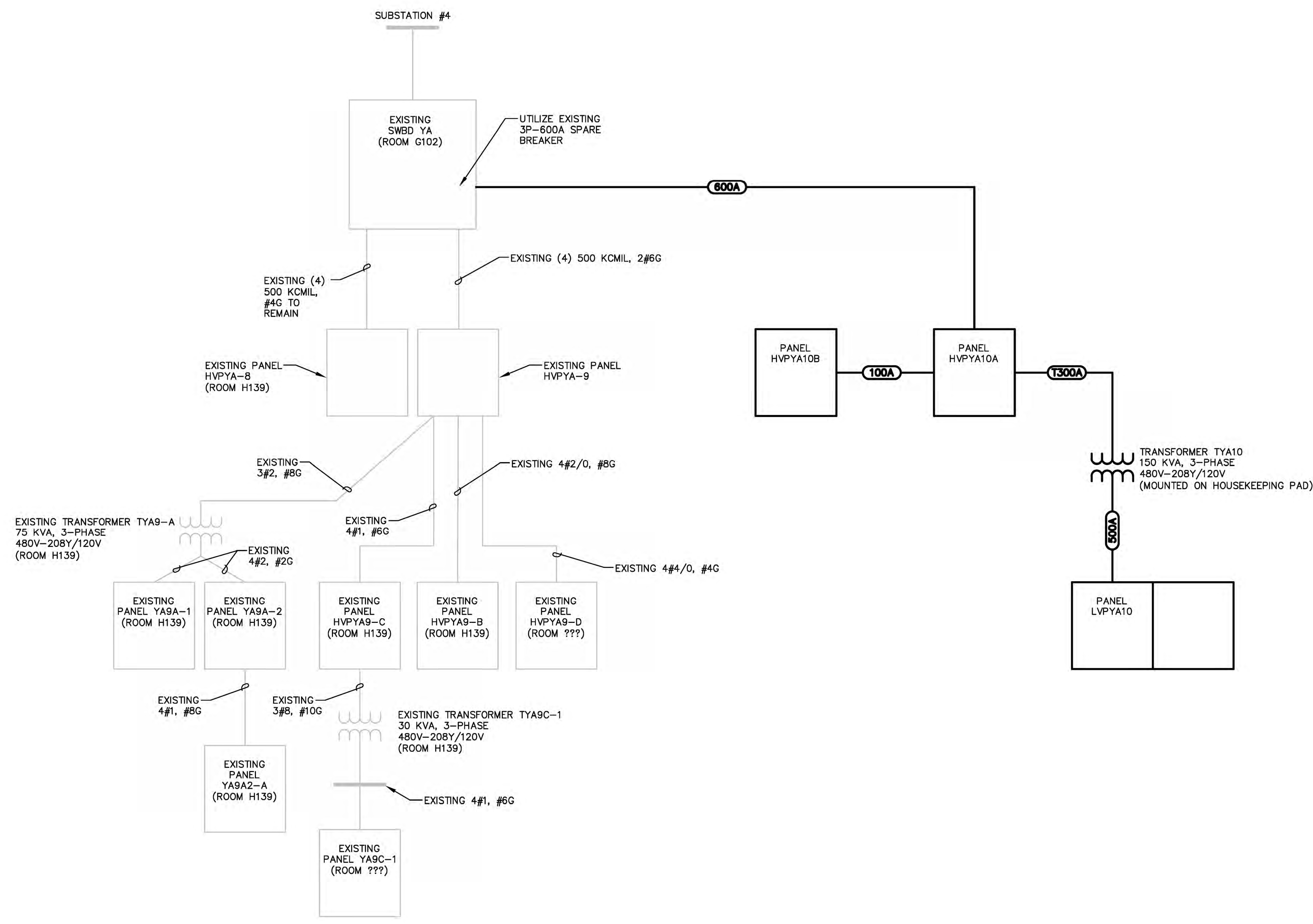
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FEEDER SCHEDULE

AMPS	SIZE DESCRIPTION
100A	(4) #1, 1#8G IN 1-1/2" C
300A	(3) 350 KCMIL, #1/0G IN 3" C
500A	(2) 3" C WITH (4) 250 KCMIL, 1#2G IN EACH
600A	(2) 4" C WITH (4) 500 KCMIL, #4/0G IN EACH

BRANCH CIRCUIT WIRE SIZE SCHEDULE

DEVICE SERVED BY	CONDUIT/CONDUCTORS
1P-20A	2#12 & 1#12 GRD IN 3/4" C
2P-15A	2#12 & 1#12 GRD IN 3/4" C
2P-20A	2#12 & 1#12 GRD IN 3/4" C
3P-20A	3#12 & 1#12 GRD IN 3/4" C
3P-25A	3#10 & 1#10 GRD IN 3/4" C
1P-30A	2#10 & 1#10 GRD IN 3/4" C
2P-30A	2#10 & 1#10 GRD IN 3/4" C
3P-30A	3#10 & 1#10 GRD IN 3/4" C
3P-35A	3#8 & 1#10 GRD IN 3/4" C
2P-40A	2#8 & 1#10 GRD IN 3/4" C
3P-40A	3#8 & 1#10 GRD IN 3/4" C
2P-50A	2#6 & 1#10 GRD IN 1" C
3P-50A	3#6 & 1#10 GRD IN 1" C
2P-60A	2#4 & 1#10 GRD IN 1-1/4" C
3P-60A	3#4 & 1#10 GRD IN 1-1/4" C
2P-70A	2#4 & 1#8 GRD IN 1-1/4" C
3P-70A	3#4 & 1#8 GRD IN 1-1/4" C
2P-80A	2#3 & 1#8 GRD IN 1-1/4" C
3P-80A	3#3 & 1#8 GRD IN 1-1/4" C
2P-90A	2#2 & 1#8 GRD IN 1-1/2" C
3P-90A	3#2 & 1#8 GRD IN 1-1/2" C
2P-100A	2#1 & 1#8 GRD IN 1-1/2" C
3P-100A	3#1 & 1#8 GRD IN 2" C
3P-110A	3#1/0 & 1#6 GRD IN 1-1/2" C
3P-150A	3#1/0 & 1#6 GRD IN 1-1/2" C
3P-200A	3#3/0 & 1#6 GRD IN 2" C

NOTE: WIRE/CONDUIT SIZE SHOWN IS MINIMUM AND SHALL BE INCREASED IF SHOWN OTHERWISE ON DRAWINGS AND AS REQUIRED BY SPECIFICATIONS. PROVIDE NEUTRAL CONDUCTOR ON 2P AND 3P CIRCUITS AS REQUIRED.

ELECTRICAL ONE-LINE DIAGRAM
 NOT TO SCALE

