ADDENDUM NO. 1
to the

CONTRACT DOCUMENTS
for

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

YAGGI ENGINEERING, INC.
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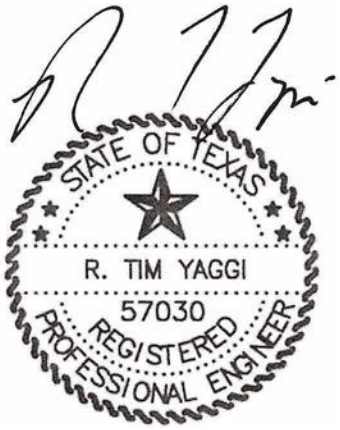
817-483-2373
www.yaggiengineering.com
Texas Registration No. F-9622

JANUARY 15, 2025
YE PROJECT NO. 2421.00



01-15-2025

This addendum is being issued as a modification to the Contract Documents and shall become part of the Contract Documents. Where provisions of the data hereinafter noted differ from those of the original Contract Documents, this addendum shall govern and take precedence.

Bidders are advised to acknowledge receipt of this addendum in the space provided on the Proposal Form. Failure to do so may subject Bidder to disqualification.

GENERAL

ITEM 1: Contractor shall provide detailed schedules based on the following completion dates by area. Include any required costs for expediting gear as needed to meet the schedule.

A. OFFICES: 04/25/25

B. DRY LABS: 05/30/25

C. WET LABS: 06/27/25

ITEM 2: Farnsworth will be contracted separately by UNT to provide commissioning and testing-and-balancing (TAB) services.

ITEM 3: SECTION 281013 ACCESS CONTROL AND SECURITY MANAGEMENT SYSTEM has been included for clarification.

ARCHITECTURAL

ITEM 4: SHEET A2.00B, FLOOR PLAN – LABS, revised dated 01/15/2025, is attached and included as a part of this addendum.

ITEM 5: SHEET A2.03A, WALL FINISH PLAN – LABS, revised dated 01/15/2025, is attached and included as a part of this addendum.

ITEM 6: SHEET A2.04, FLOOR PLAN – LABS, revised dated 01/15/2025, is attached and included as a part of this addendum.

ITEM 7: SHEET A3.00, DOOR & WINDOW INFORMATION, revised dated 01/15/2025, is attached and included as a part of this addendum.

ITEM 8: SHEET A4.02B, INTERIOR ELEVATIONS, revised dated 01/15/2025, is attached and included as a part of this addendum.

MECHANICAL

ITEM 9: SHEET M-3, MECHANICAL SCHEDULES, revised dated 01/15/2025, is attached and included as a part of this addendum.

ELECTRICAL

ITEM 10: SHEET E202, FLOOR PLAN – LABS - POWER, revised dated 01/15/2025, is attached and included as a part of this addendum.

ITEM 11: SHEET E401, ELECTRICAL ONE-LINE DIAGRAM, revised dated 01/15/2025, is attached and included as a part of this addendum.

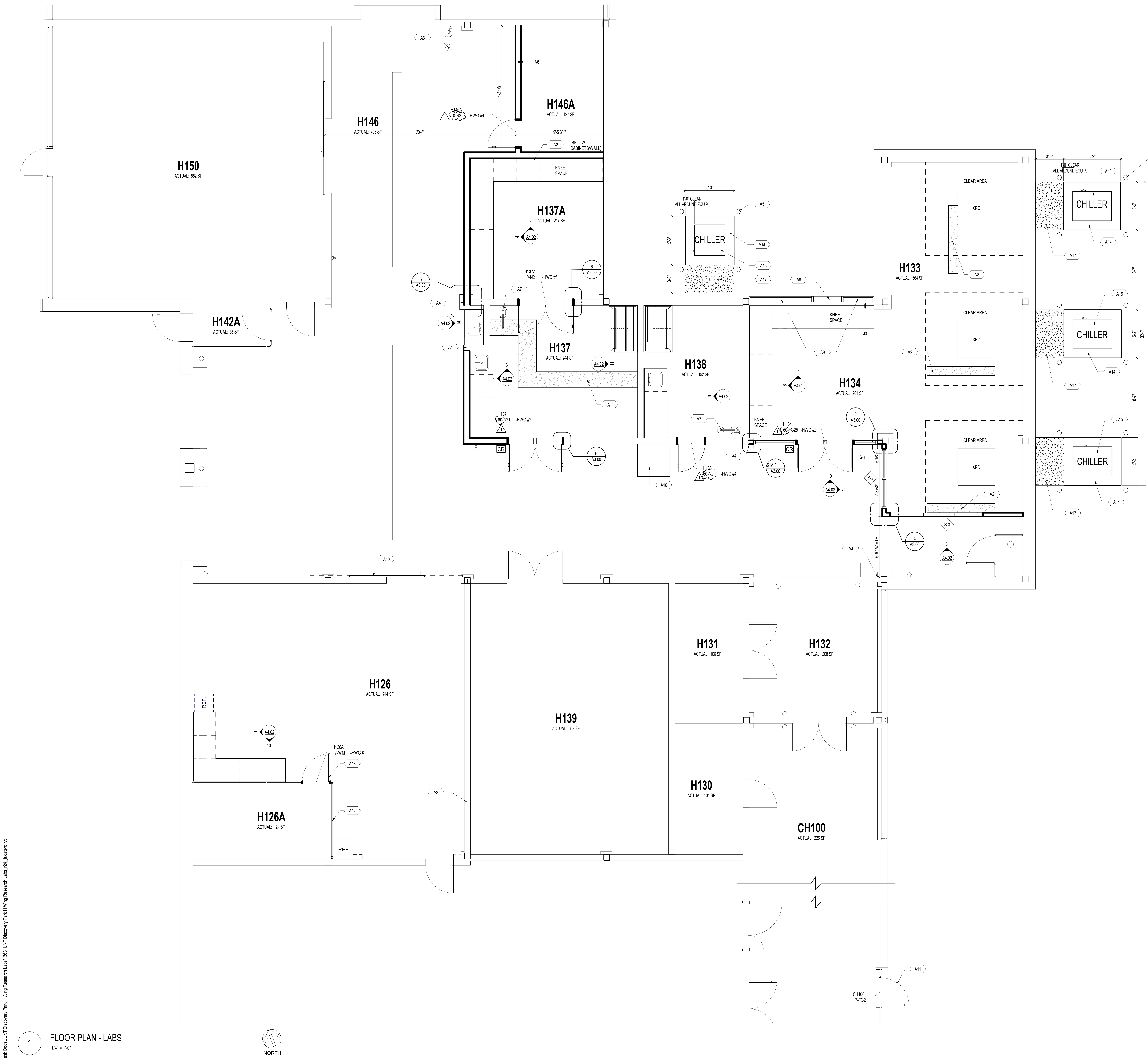
END OF ADDENDUM NO. 1

SECTION 28 10 13

ACCESS CONTROL AND SECURITY MANAGEMENT SYSTEM

PART 1 GENERAL

System to be installed is to be turn-key proprietary system "EcoStruxure Access Expert™" by Schneider Electric and integrated into existing facility and campus systems. Schneider Electric will provide requirements and specifications.



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

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 (A#)

A1 IN-FILL TRENCHING IN SLAB FOR NEW PLUMBING WITH CONCRETE FINISHED FLUSH WITH EXISTING SLAB, SEE STRUCTURAL AND PLUMBING SHEETS.

A2 IN-FILL EXISITNG CATCH BASINS WITH STONSET TG6 BY STONTEC, FINISH FLUSH WITH EXISITNG FLOOR.

A3 PATCH, TEXTURE, AND PAINT WALLS AFFECTED BY WORK TO MATCH EXISITNG 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/A2.00B.

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 RAIL 2" FURTHER OFF WALL THAN ORIGINAL INSTALLATION. INSTALL NEW PULL HANDLES FOR SLIDING DOOR.

A11 RE-OPEN EXISITNG 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.

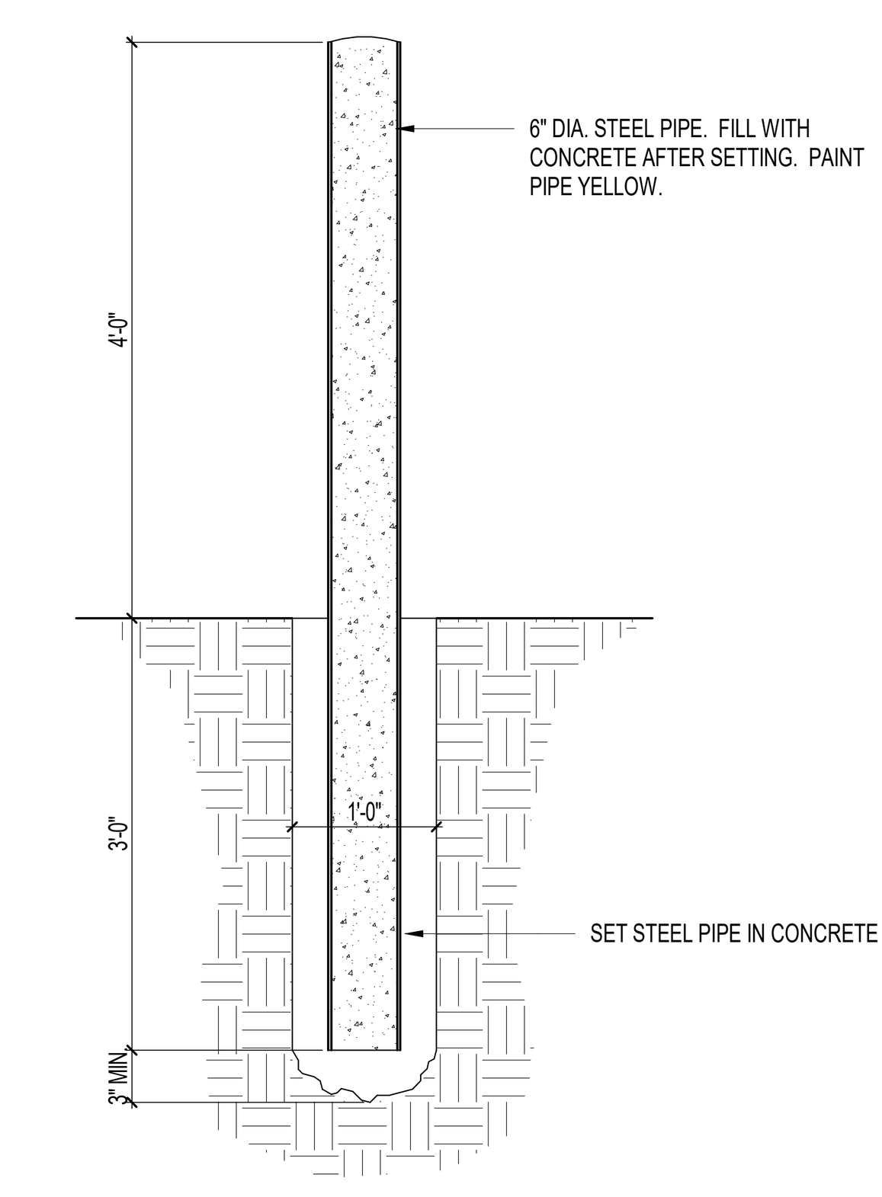
A14 CONCRETE EQUIPMENT PAD. CENTER CHILLER IN PAD. CONTRACTOR TO VERIFY DIMENSIONS OF CHILLER WITH MANF. AND ENSURE THAT THE CONSTRUCTED DIMENSIONS OF THE CONCRETE PAD ALLOW FOR 12" OF CLEAR SPACE ALL AROUND THE CHILLER TO THE EDGE OF PAD. SEE DETAIL 4/A2.00B.

A15 NEW CHILLERS. SEE MECHANICAL AND PLUMBING SHEETS.

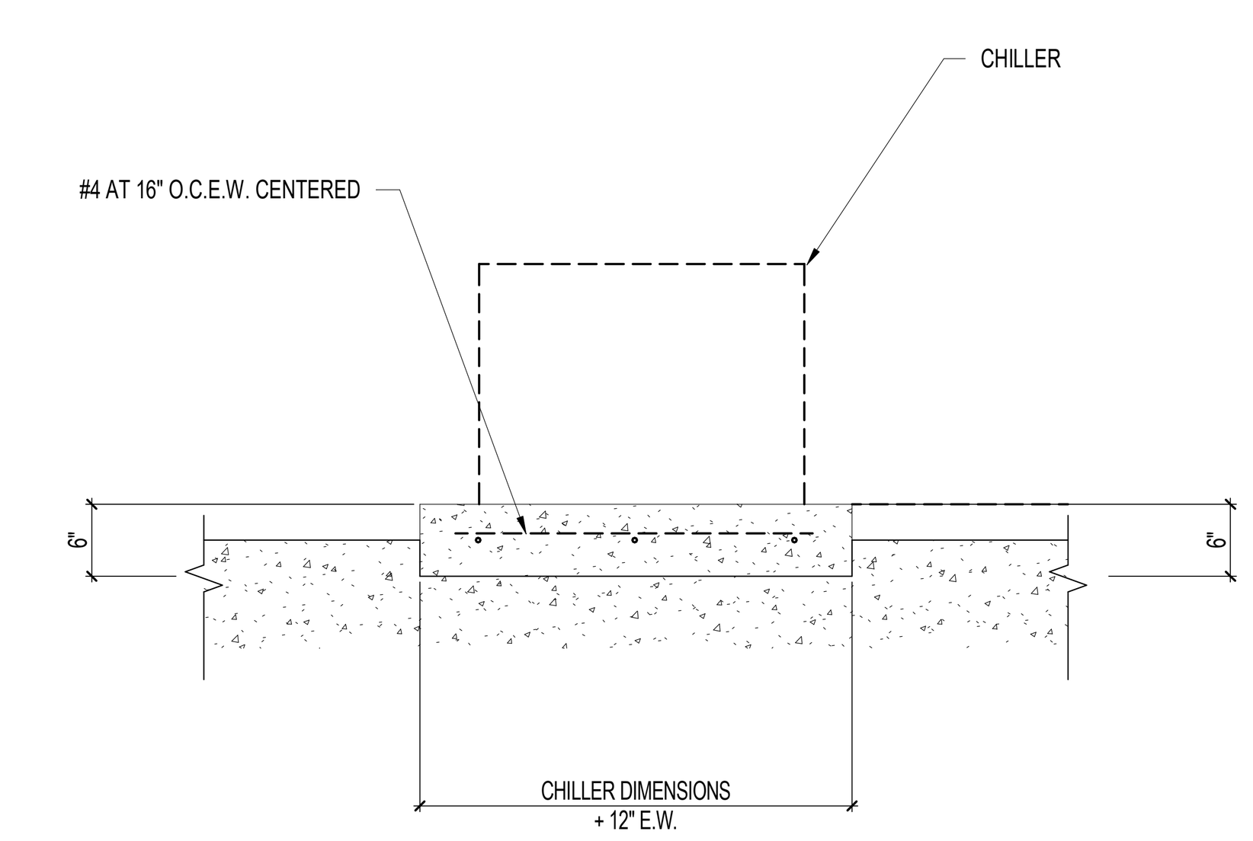
A16 CONCRETE HOUSEKEEPING PAD, VERIFY SIZE BASED ON TRANSFORMER, EXPECTED TO BE 42"X42". SEE DETAIL 5/A2.00B. SEE ELECTRICAL SHEETS FOR TRANSFORMER.

A17 INSTALL DECOMPOSED GRANTIE BETWEEN CONCRETE SLABS AND BUILDING.

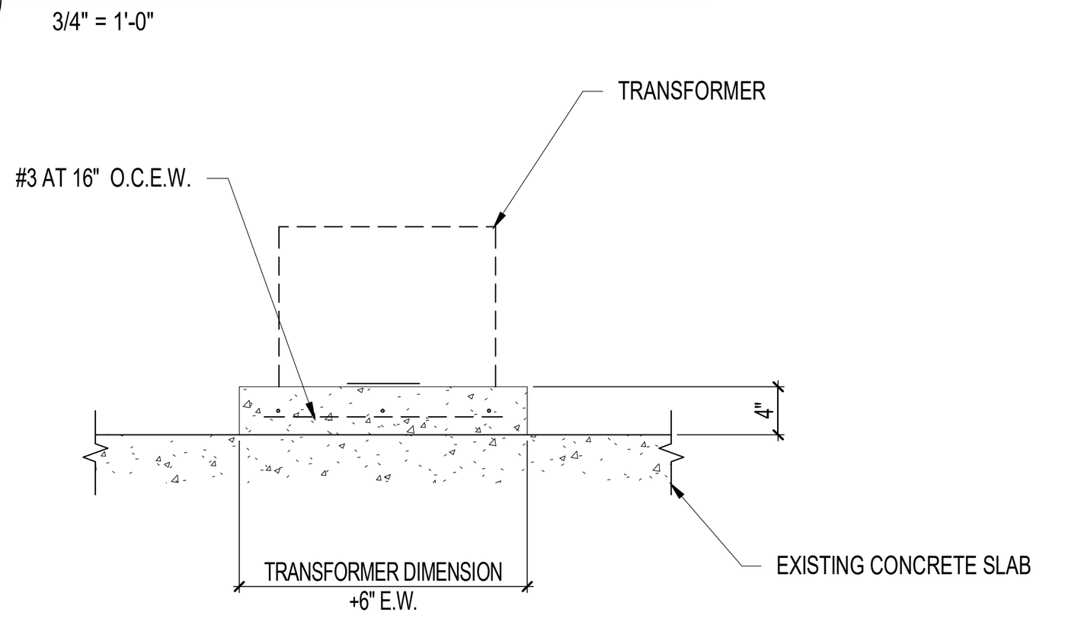
REFER TO SHEET A2.04 FOR EQUIPMENT AND FURNITURE PLAN



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"

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REVISIONS:
1 01/15/25 Addendum #01

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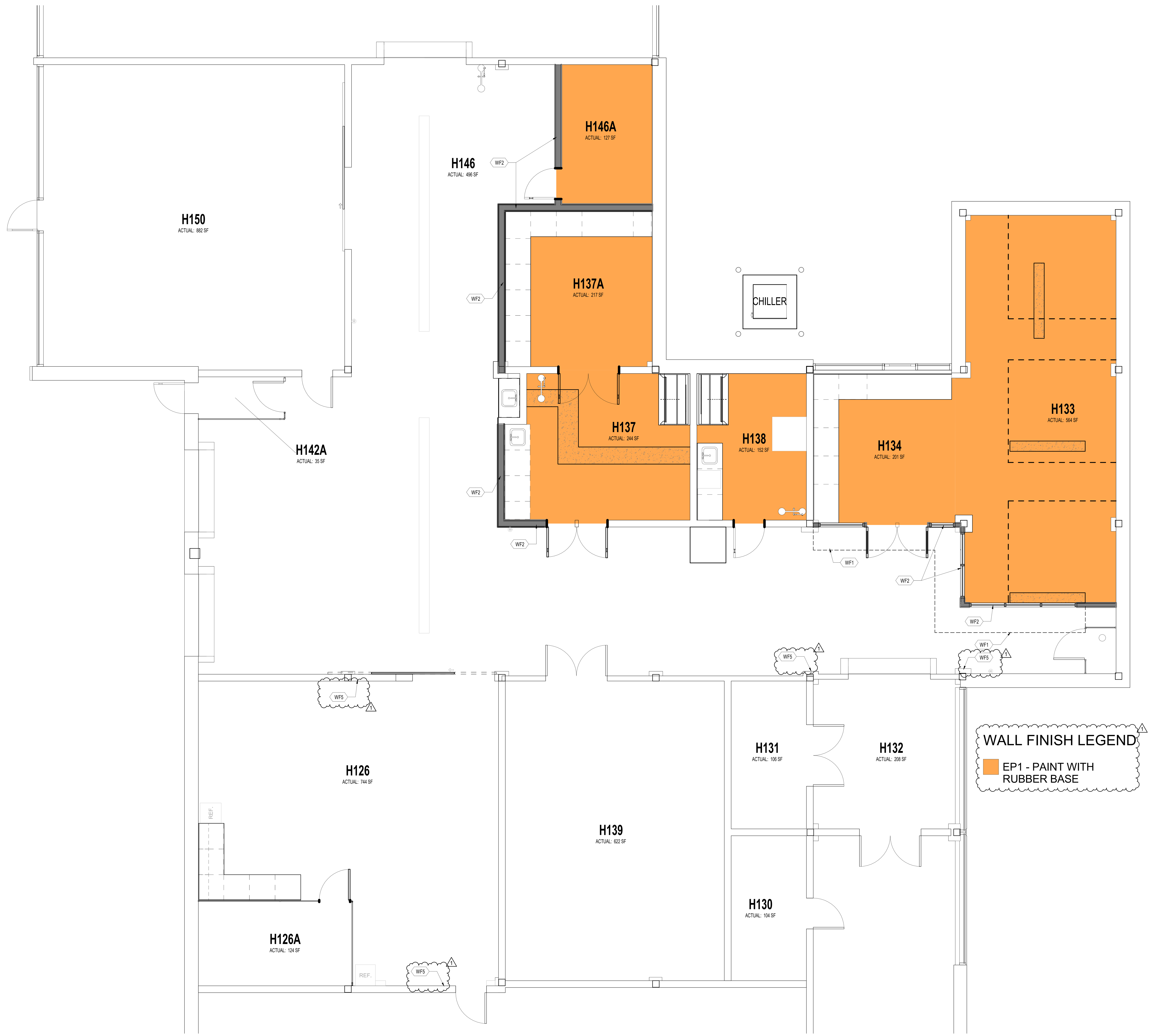
UNIVERSITY OF NORTH TEXAS DISCOVERY PARK, 3940 N ELM ST, DENTON, TX 76207

FLOOR PLAN - LABS
A2.00B



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

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 EXISITING					
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 COUNTEROP	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

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

GENERAL PAINTING NOTES

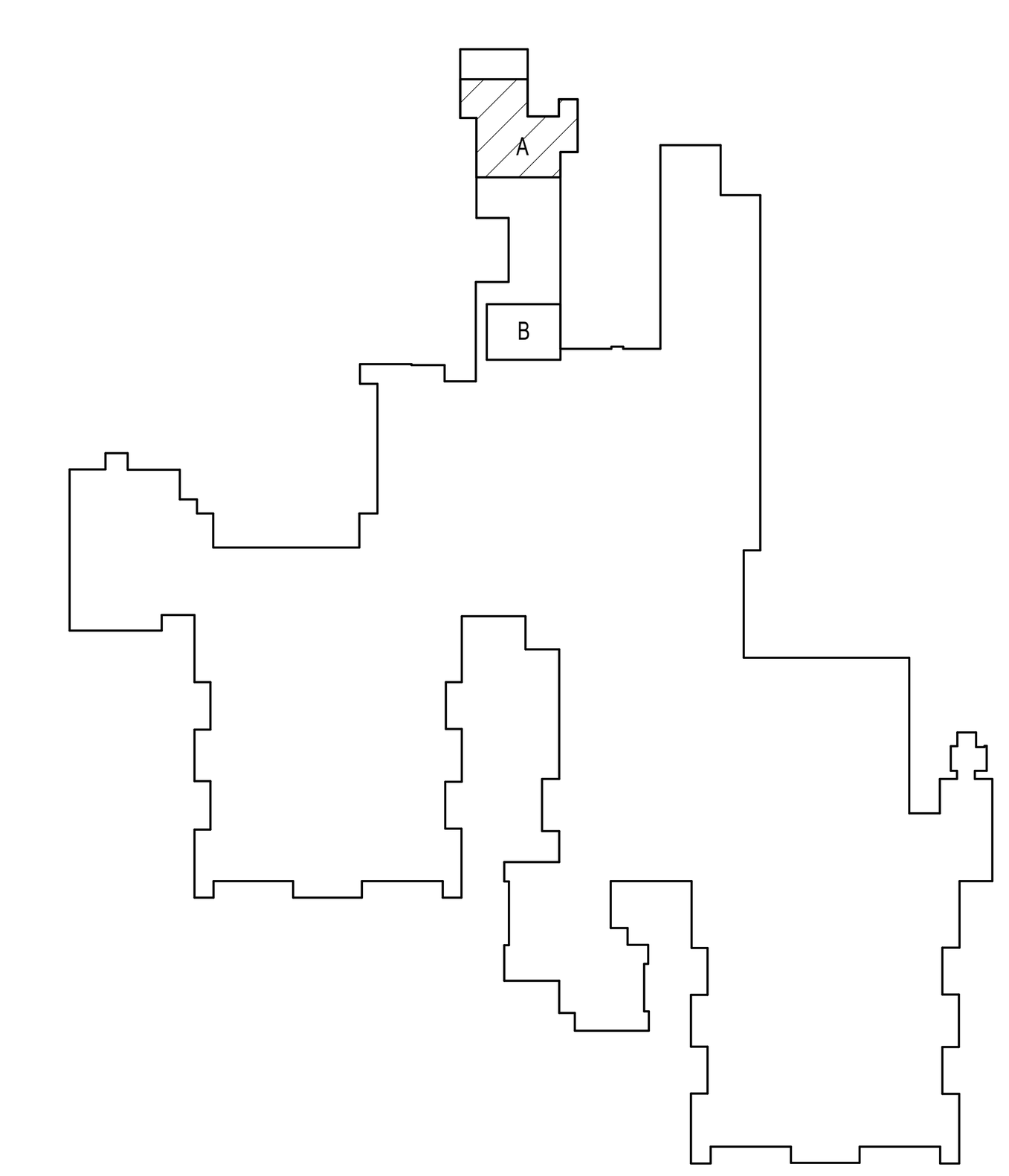
1. PAINT ALL INTERIOR PRIMED STRUCTURAL ITEMS EXPOSED TO VIEW.
2. PAINT ALL EXTERIOR STRUCTURAL STEEL ELEMENTS, INCLUDING IN CRAWL SPACES AND VENTED SPACES.
3. PAINT ALL UNFINISHED SURFACES EXPOSED TO VIEW NOT SCHEDULED TO RECEIVE ANY OTHER FINISH UNLESS NOTED OTHERWISE.
4. IN ROOMS WITHOUT FINISHED CEILINGS, PAINT ALL EXPOSED ELEMENTS SUCH AS STRUCTURE, CONDUITS, PIPING, HVAC DUCTWORK, ETC.
5. PAINT ALL SIDES OF FURR-DOWNS AND SOFFITS. PAINT ALL SOFFIT FACES SAME AS SOFFIT BOTTOM.
6. PAINT ALL SIDES OF HOLLOW METAL DOORS & FRAMES.
7. 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.
8. 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.
9. WHERE PAINT IS APPLIED OR TOUCHED UP, PAINT ENTIRE WALL OR SURFACE FROM CORNER TO CORNER. SPOT FINISHING IS NOT ACCEPTED.
10. INTERIOR PAINT SHEEN
    - A. PAINTED WALLS AND CEILINGS ARE TO BE PAINTED IN EGGSHELL SHEEN 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.
11. 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. WHERE THERE IS NO DOOR, CHANGE OCCURS AT THE MID-POINT OF THE JAMB, U.N.O.
- D. FINISHES SCHEDULED ARE DEFAULT FOR ROOMS, UNLESS NOTED OTHERWISE.
- E. ALL OUTSIDE CORNERS OF GYPSUM BOARD WALLS TO RECEIVE CORNER GUARDS INCLUDING 45 DEGRESS CORNERS.

WALL FINISH PLAN NOTES BY NUMBER 'WF'

- WF1 TEXTURE AND PAINT FURRDOWN ABOVE TO MATCH EXISITING ADJACENT WALL.
- WF2 TEXTURE AND PAINT WALL TO MATCH EXISITING ADJACENT WALL.
- WF5 PATCH, TEXTURE, AND PAINT WALLS AFFECTED BY WORK TO MATCH EXISITNG ADJACENT.



THIS DRAWING HAS INFORMATION THAT IS DISTINGUISHED BY COLOR, AND IS INTENDED TO BE VIEWED AS A FULL COLOR DOCUMENT ONLY. ANY GRAYSCALE OR BLACK AND WHITE COPY SHALL NOT BE USED.

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REVISIONS:
1 01/15/25 Addendum #01

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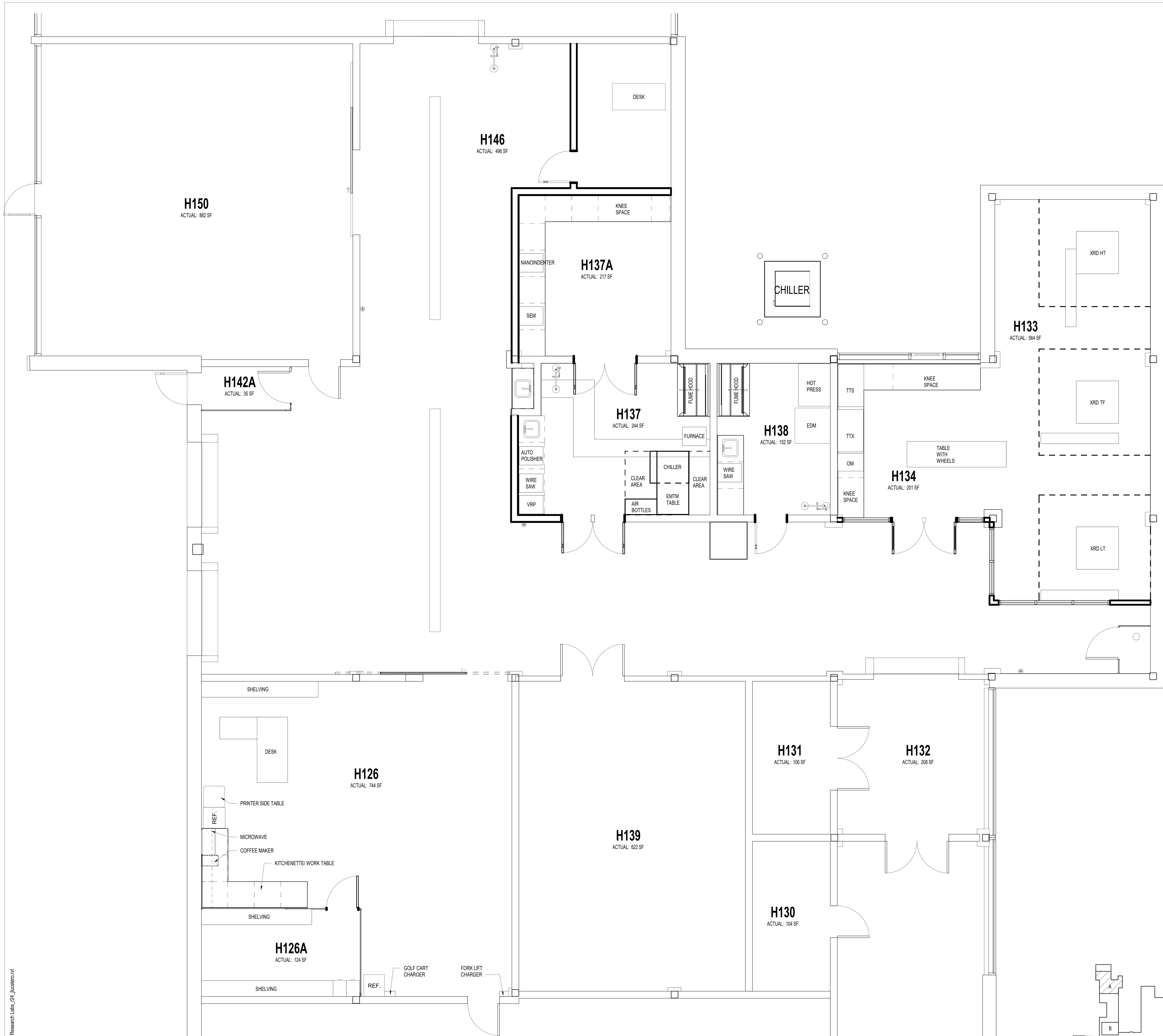
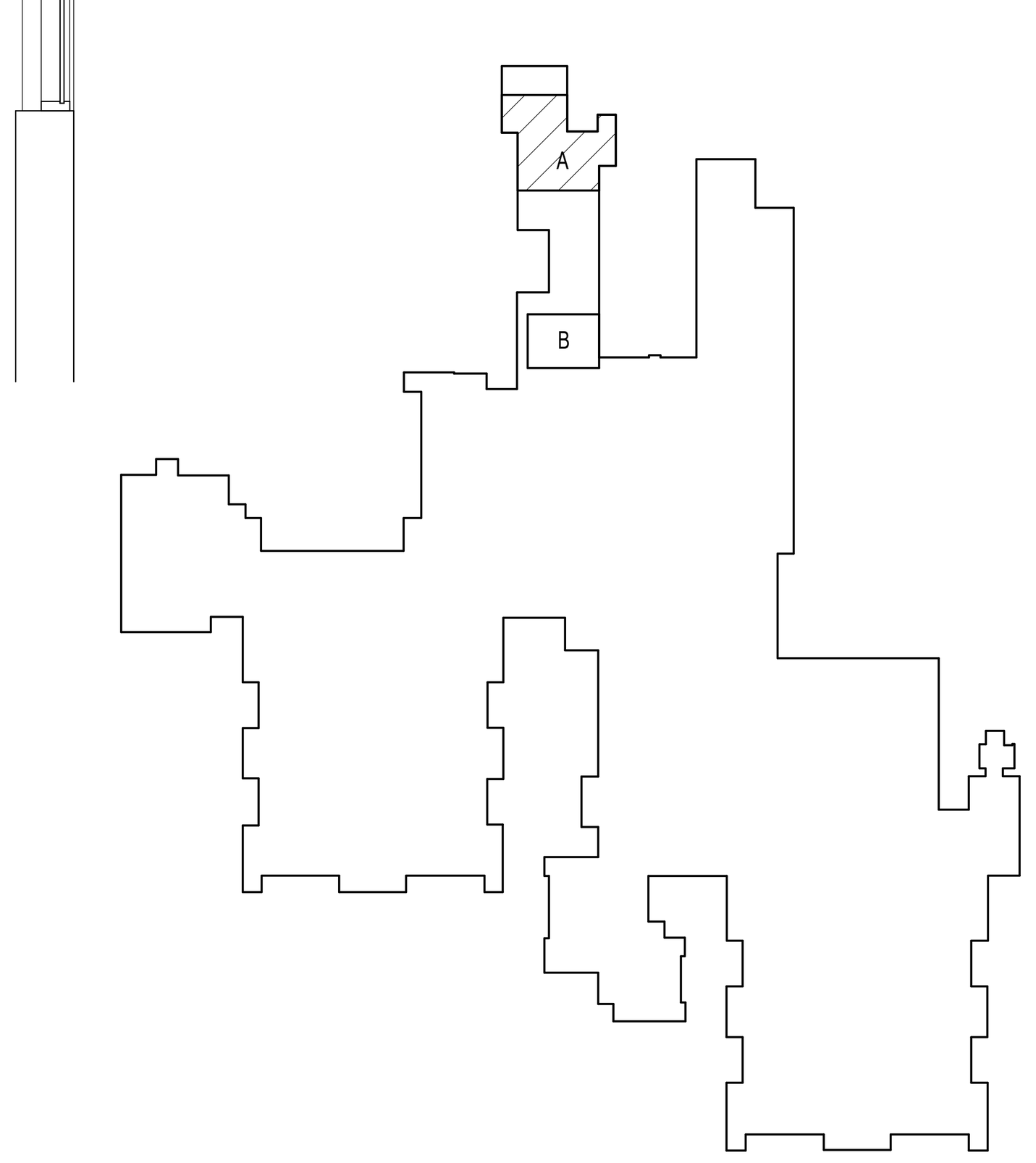
WALL FINISH PLAN - LABS
A2.03A



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



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	VRP	--	--	--	X		
E20	FUME HOOD	--	--	--			X
E21	REF (2)	--	--	--	X		
E20	MICROWAVE	--	--	--	X		
E21	COFFEE MAKER	--	--	--	X		

1

GENERAL FF&E NOTES:

A. U.N.O., LOCATE FIRE EXTINGUISHER CABINETS 1'-8" FROM ABUTTING WALL, DOOR FRAME, OR EDGE OF DOOR IN OPEN POSITION.
B. SECURELY ATTACH ALL SHELVING & STORAGE UNITS 60" TALL & HIGHER TO WALL, INCLUDING OWNER FURNISHED ITEMS. COORDINATE FINAL LOCATION(S) OF OWNERS FURNISHED ITEMS W/ ARCHITECTS IN FIELD.
C. PRIOR TO ORDERING, VERIFY SIZE & COMPATIBILITY OF FLAT PANEL DISPLAY WALL MOUNT(S) & PROJECTOR MOUNTS W/ OWNER.
D. ALL CABINETRY UNITS TO BE MAPLE FINISH OR AS OTHERWISE SELECTED BY ARCHITECT.
E. FOR PRODUCTS LISTED ON THIS SHEET BUT NOT IN THE SPECIFICATIONS, OTHER MANUFACTURER'S MAY BE SUBMITTED FOR APPROVAL, SUBJECT TO THE REQUIREMENTS OF THE SPECIFICATIONS.

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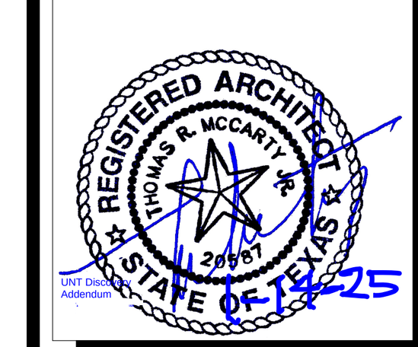

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EQUIPMENT PLAN - LABS

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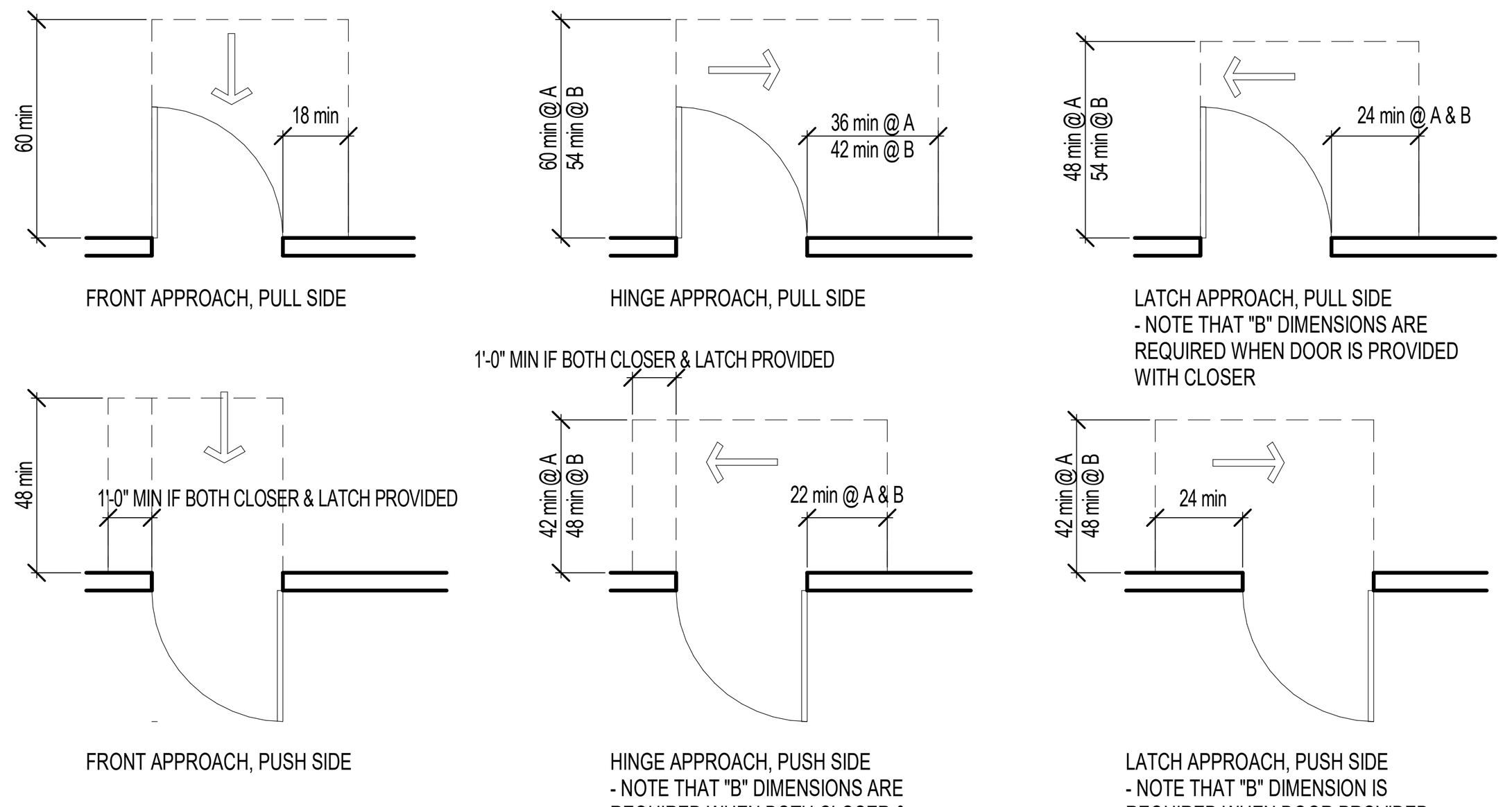
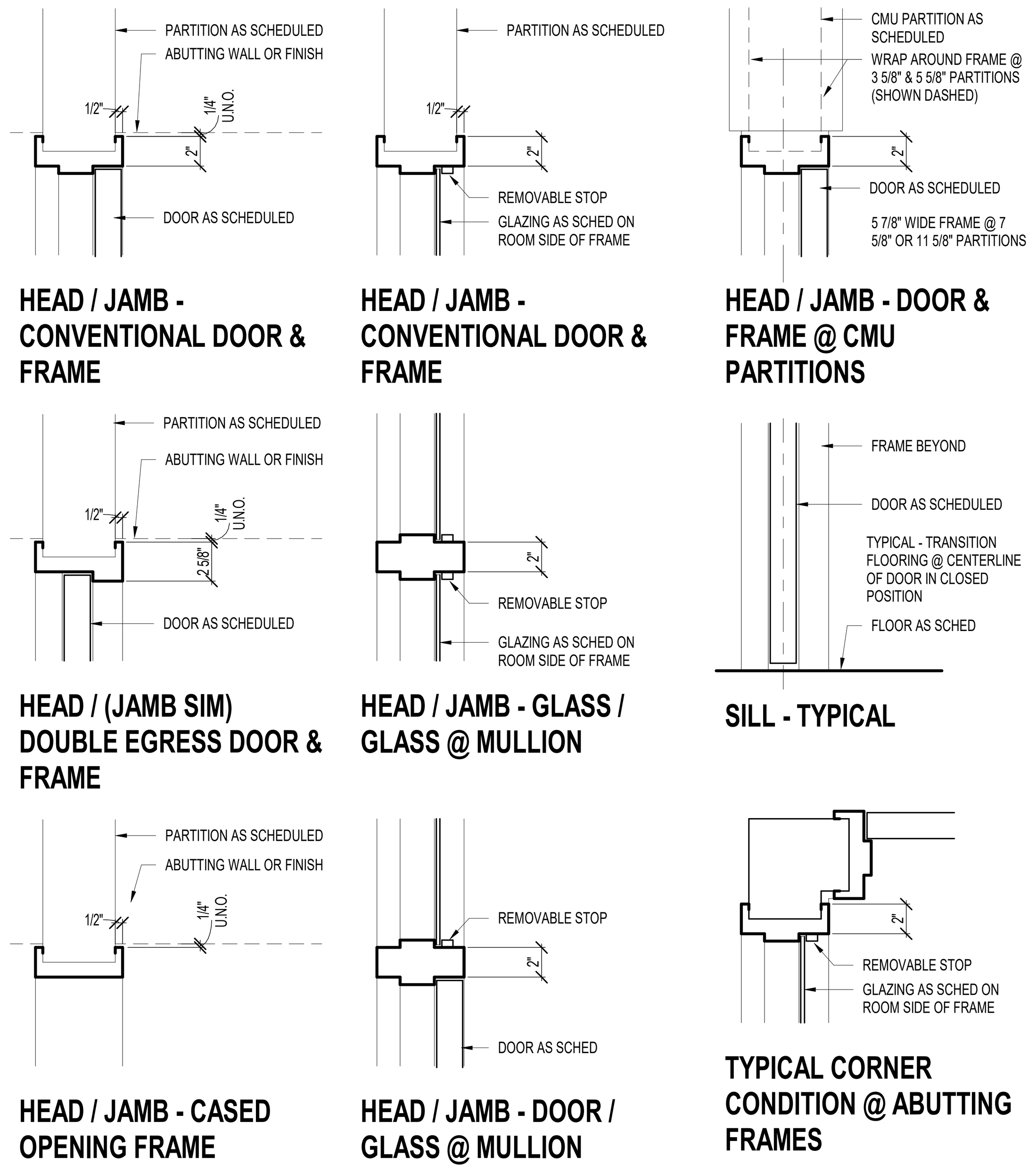
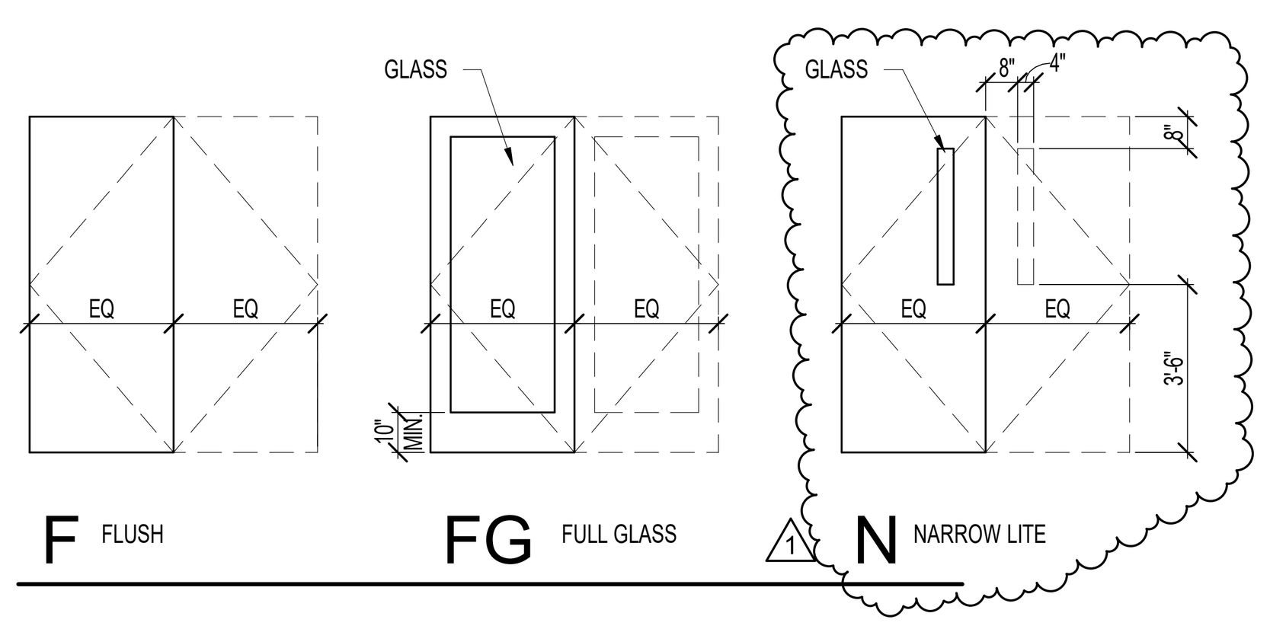


MINIMUM MANEUVERING CLEARANCES AT MANUAL SWINGING DOORS & GATES

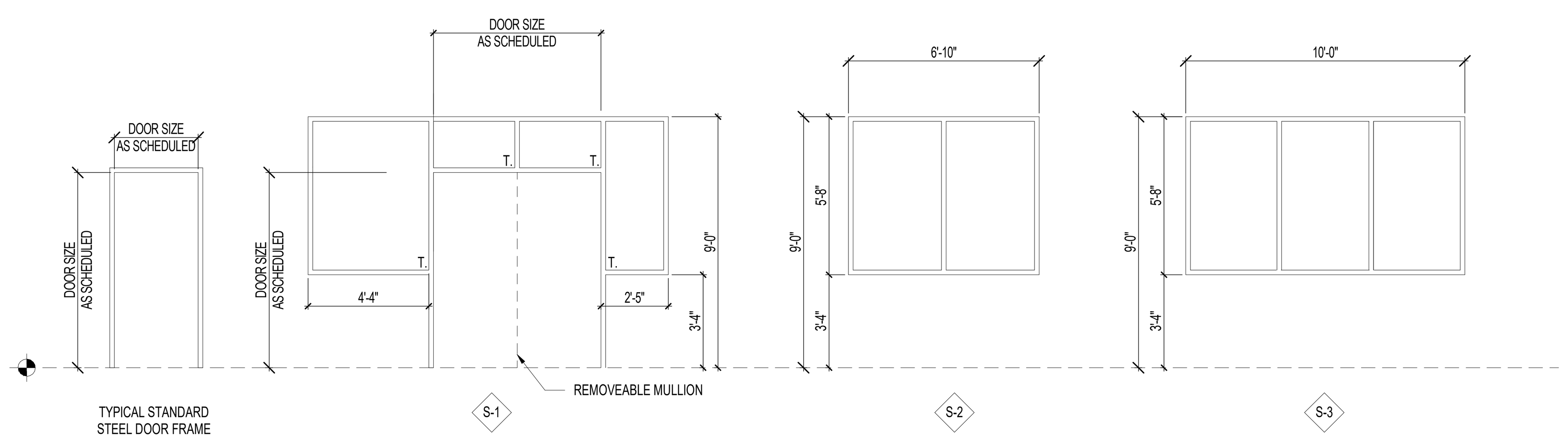


TYPICAL INTERIOR STEEL HEAD / JAMB / SILL DETAILS



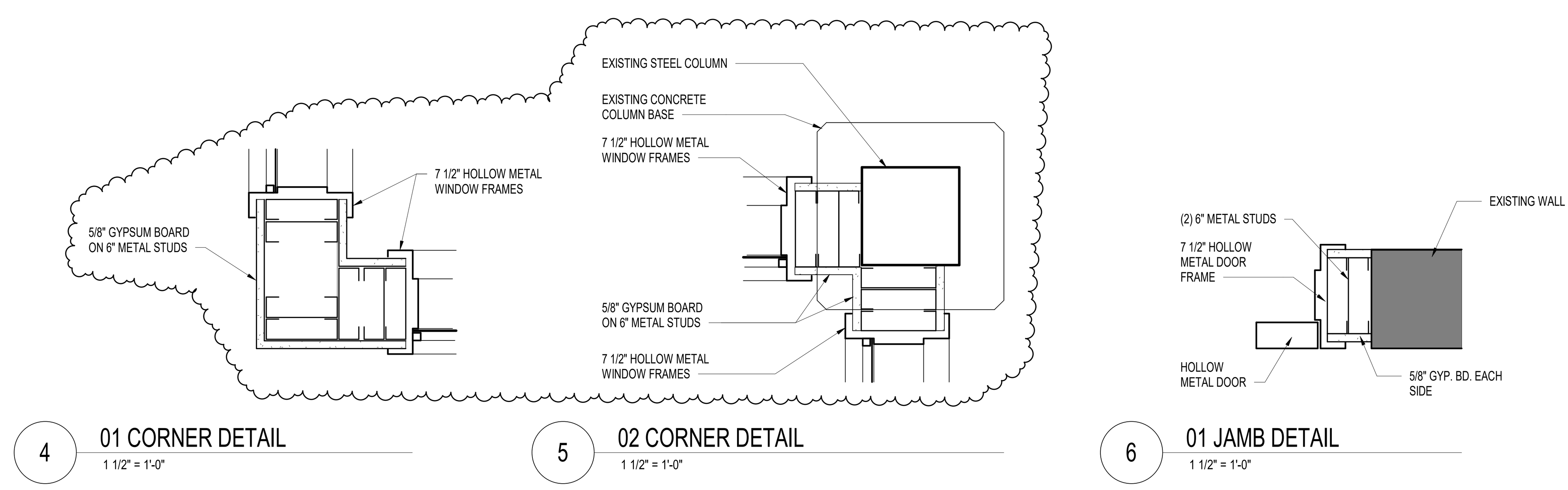
DOOR TYPES ELEVATIONS

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.



HOLLOW METAL DETAILS

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

FIRE RATING

0 - NO RATING
20 - 20 MINUTES
45 - 45 MINUTES
60 - 60 MINUTES
90 - 90 MINUTES
180 - 3 HOURS

1233
90-F10-C-1.0
C

ADDITIONAL HARDWARE CONSIDERATIONS

C - CLOSER
PN - PANIC DEVICE
HO - HOLD OPEN

DOOR NO.

DOOR TYPE
SEE DOOR TYPE SCHEDULE

HARDWARE SET NUMBER
(SEE SPECIFICATIONS)

HARDWARE LOCK FUNCTION

E - ENTRANCE
S - STORAGE
C - CLASSROOM
O - OFFICE
P - PASSAGE
V - PRIVACY

GLASS SCHEDULE

1. ALL EXTERIOR GLAZING SHALL BE INSULATED GLAZING UNITS INCLUDING DOORS, UNLESS NOTED OTHERWISE. SEE COLOR SCHEDULE FOR TYPE AND PERFORMANCE CHARACTERISTICS.
2. ALL INTERIOR GLASS SHALL BE 1/4" THICK POLISHED PLATE UNLESS NOTED OTHERWISE.
3. 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.
4. PROVIDE VISION PANEL FRAMING AND GLAZING IN DOORS AS REQUIRED FOR SCHEDULED FIRE RATING.
5. REFER TO THE FLOOR PLANS, EXTERIOR ELEVATIONS, AND WALL SECTIONS FOR LOCATONS AND QUANTITY OF EXTERIOR WINDOWS.
6. AT ROOMS SCHEDULED TO BE SOUND ATTENUATED, USE 1" INSULATED GLAZING UNITS AT ALL WINDOWS AND DOOR VISION GLAZING, EVEN AT INTERIOR WINDOWS.
7. PROVIDE 1-HOUR RATED FIRE GLASS AT ALL 1-HOUR RATED WALLS THAT CONTAIN WINDOWS, AT ALL LITES IN FIRE RATED DOORS, AND ANT LOCATION WITH CLASS LABELED AS "FRGL".

DOOR TYPES SCHEDULE

HOST ROOM	DOOR TYPE	CARD READER	DOORS				FRAME		
			WIDTH	HEIGHT	MATERIAL	GLASS	ELEVATION	MATERIAL	GLASS
ROOM H134	FG25	YES	6' - 0"	7' - 0"	STEEL	FULL		STEEL	FULL
ROOM H138	N2		3' - 0"	7' - 0"	STEEL	NARROW LITE		EXISTING	
ROOM H146A	N2		3' - 0"	7' - 0"	STEEL	NARROW LITE		STEEL	
ROOM H137	N21	YES	6' - 0"	7' - 0"	STEEL	NARROW LITE		STEEL	
ROOM H137A	N21		6' - 0"	7' - 0"	STEEL	NARROW LITE		STEEL	

EXISTING DOOR TYPES SCHEDULE

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

DOOR TYPES SCHEDULE NOTES AND LEGEND

1) WITH THIS DOOR SCHEDULING SYSTEM, EACH AND EVERY DOOR IS NOT SCHEDULED INDIVIDUALLY.

2) ALL DOORS WITH THE SAME CHARACTERISTICS ARE ASSIGNED THE SAME DOOR TYPE. THAT IS THEY ARE THE SAME SIZE, SAME MATERIAL, AND FRAME MATERIAL.

3) 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 PLAN(S).

S-1 HOLLOW METAL DOOR/WINDOW FRAME TYPE

OTHER

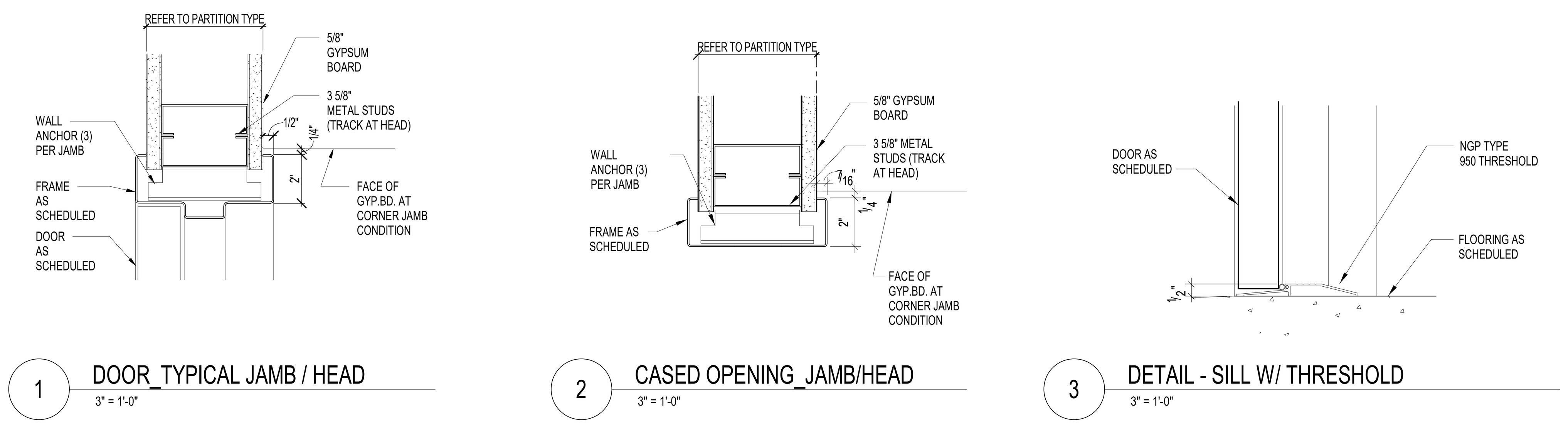
DOOR FRAME MATERIAL / TYPE (ABBREVIATIONS IN PARENTHESES)
HOLLOW METAL
WOOD
ALUMINUM
FIBERGLASS - (FBG)

DOOR MATERIAL / TYPE (ABBREVIATIONS IN PARENTHESES)
HOLLOW METAL
WOOD
ALUMINUM & GLASS - (AL/GL)
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

COMM. NO.	1368
DATE	09/05/2024
DRAWN	DE
CHECKED	TM

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

ONE INCH

REVISIONS:
1 01/15/25 Addendum #01

LBL ARCHITECTS
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TBAE FIRM # BR 1350

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

DOOR & WINDOW INFORMATION

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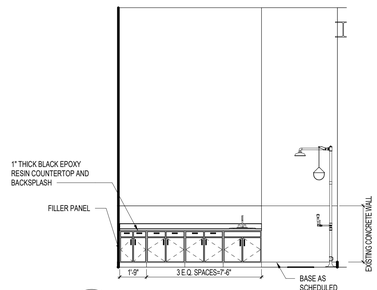
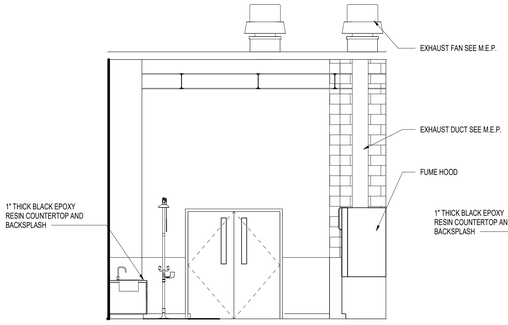
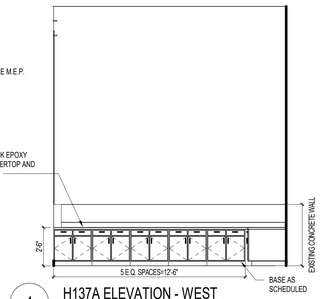


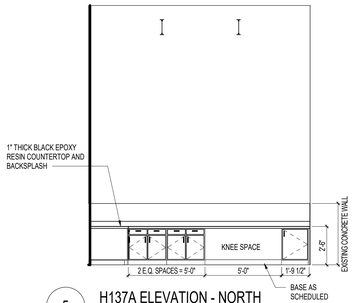
2 H137 ELEVATION - WEST
1/4" = 1'-0"



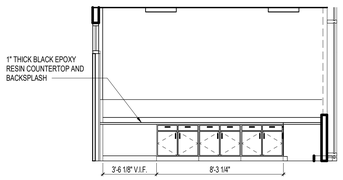
3 H137 ELEVATION - NORTH
1/4" = 1'-0"



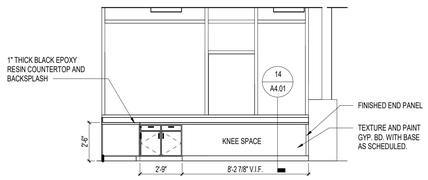
4 H137A ELEVATION - WEST
1/4" = 1'-0"



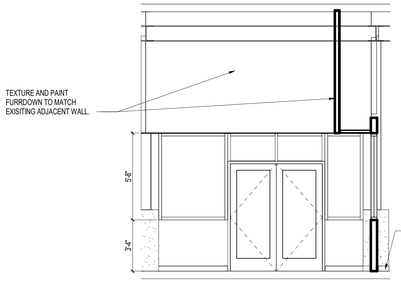
5 H137A ELEVATION - NORTH
1/4" = 1'-0"



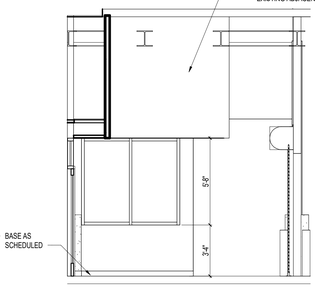
6 H134 ELEVATION - WEST
1/4" = 1'-0"



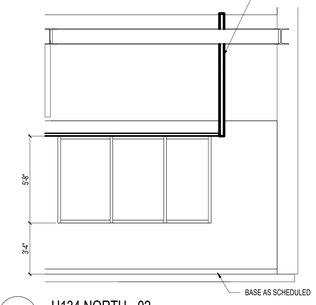
7 H134 ELEVATION - NORTH
1/4" = 1'-0"



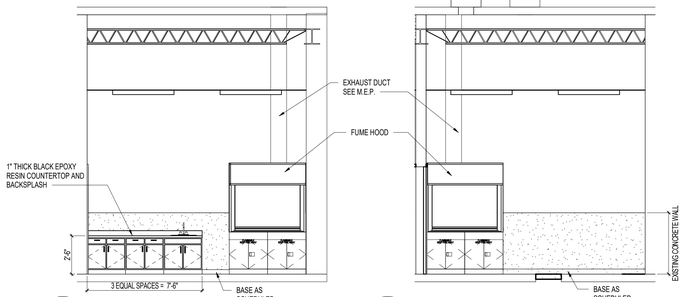
10 H134 NORTH
1/4" = 1'-0"



12 H134 EAST
1/4" = 1'-0"

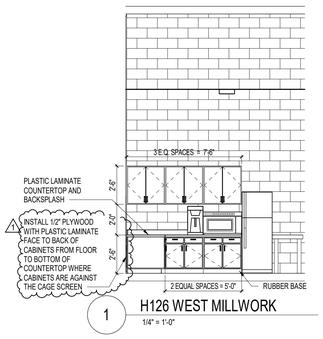


8 H134 NORTH - 02
1/4" = 1'-0"

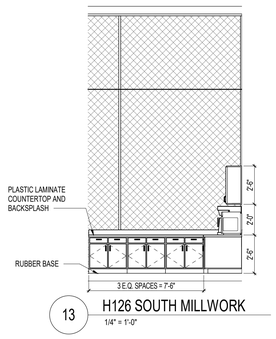


9 H138 WEST
1/4" = 1'-0"

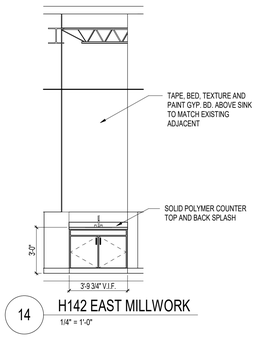
11 H137 EAST
1/4" = 1'-0"



1 H126 WEST MILLWORK
1/4" = 1'-0"



13 H126 SOUTH MILLWORK
1/4" = 1'-0"



14 H142 EAST MILLWORK
1/4" = 1'-0"

COMM. NO.	1368
DATE	09/05/2024
DRAWN	DE
CHECKED	TM

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

ONE INCH

REVISIONS:
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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

INTERIOR ELEVATIONS

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FAN SCHEDULE

TAG	SERVICE	LOCATION	CFM MIN	CFM MAX	T.S.P.	MAX. SONES	FAN TYPE	WHEEL TYPE	WHEEL DIA.	DRIVE	MOTOR RPM	MOTOR HP	MOTOR VOLTS	MOTOR PHASE	CONTROL	MANUFACTURER	MODEL NO.
EF-1	EXHAUST	H138	250	1,050	0.15	10.6	CENTRIFUGAL UPBLAST	BI	10.9	DIRECT	1725	1/6	115	1	VARIGREEN	GREENHECK	CUE-095-VG
EF-2	EXHAUST	H138/H137	1,340	1,340	1.00	19.3	CENTRIFUGAL W/ HIGH PLUME NOZZLE	BI	12.4	DIRECT	3350	2	460	3	BCS	GREENHECK	VEKTOR-H-13-9
EF-3	EXHAUST	H137	250	945	0.15	10.6	CENTRIFUGAL UPBLAST	BI	10.9	DIRECT	1725	1/6	115	1	VARI-GREEN	GREENHECK	CUE-095-VG

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)

TAG	NOMINAL TONS	SUPPLY CFM	OUTSIDE AIR MIN CFM	OUTSIDE AIR MAX CFM	EXT. S.P. (IN. OF WTR.)	MOTOR HP	COOLING TOTAL CAPACITY (MBH)	COOLING SENSIBLE CAPACITY (MBH)	E.A.T. Db (°F)	E.A.T. Wb (°F)	AMBIENT TEMP. (°F)	ELECTRIC HEATING INPUT (kW)	ELECTRIC HEATING OUTPUT (MBH)	MCA	MOCP	VOLTS	PHASE	EER	MANUFACTURER	MODEL NO.
RTU-1	30	6,740	1,340	2,000	1.50	7.5	282.0	204.0	80	65	105	20.0	68.2	67	80	460	3	8.8	AAON	RNC-V-AC-ECON-GAS

NOTES:

1. EXTERNAL STATIC PRESSURE INCLUDES ALL AIR DEVICES, TERMINAL UNITS, DUCTWORK, FITTINGS, AND DAMPERS WHICH ARE EXTERNAL TO THE AIR HANDLING UNIT. EXT. S.P. DOES NOT INCLUDE FILTERS, COILS, OR FACTORY FABRICATED RETURN AIR PLENUMS.
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. ROOF CURB SHALL BE FABRICATED TO MATCH ROOF SLOPE. HEIGHT OF ROOF CURB SHALL BE SUFFICIENT TO PROVIDE REQUIRED CLEARANCES.
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. SMOKE DETECTORS ARE TO SHUT-OFF UNITS UPON DETECTION OF SMOKE.
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 WP/GFI CONVENIENCE RECEPTACLE (AND ASSOCIATED TRANSFER) WIRED AHEAD OF UNIT DISCONNECT.

AIR DEVICE SCHEDULE

TAG	DESCRIPTION	OPPOSED BLADE DAMPER	FINISH	MANUFACTURER	MODEL NO.
S1	24"x24" SQ. LOUVERED FACE CEILING DIFFUSER 8"ø NECK	NO	WHITE ENAMEL	METALAIRE	5800
S2	24"x24" SQ. LOUVERED FACE CEILING DIFFUSER 10"ø NECK	NO	WHITE ENAMEL	METALAIRE	5800
S3	24"x24" SQ. LOUVERED FACE CEILING DIFFUSER 12"ø NECK	NO	WHITE ENAMEL	METALAIRE	5800
S4	16"x8" SIDEWALL GRILLE, DOUBLE DEFLECTION, STEEL WITHOUT DAMPER, 16"x8" NECK	NO	WHITE ENAMEL	METALAIRE	H4004
S5	24"x24" SQ. LOUVERED FACE CEILING DIFFUSER 14"ø NECK	NO	WHITE ENAMEL	METALAIRE	5800
R1	24"x24" PERFORATED FACE CEILING GRILLE 18"x18" NECK	NO	WHITE ENAMEL	METALAIRE	7550R
R2	16"x16" PERFORATED FACE CEILING GRILLE 10"x10" NECK	NO	WHITE ENAMEL	METALAIRE	7550R
R3	16"x8" SIDEWALL GRILLE SINGLE DEFLECTION, STEEL WITH 16"x8" NECK	YES	WHITE ENAMEL	METALAIRE	H4002RS
E1	24"x24" PERFORATED FACE CEILING GRILLE 14"ø NECK	NO	WHITE ENAMEL	METALAIRE	7500R

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)

TAG	LOCATION	NECK SIZE	MIN. INLET S.P. (IN. OF WTR.)	COOLING MAX. CFM	COOLING MIN. CFM	ELECTRIC RE-HEAT CFM	KW	VOLTS	PHASE	SOUND MAX. RAD. NC	SOUND MAX. DIS. NC	MANUFACTURER	MODEL NUMBER
VAV-1	H133	12"	0.12	1,440	435	435	5.5	277	1	18	15	ETI	SDR-12-EH
VAV-2	H133	12"	0.12	1,440	435	435	5.5	277	1	18	15	ETI	SDR-12-EH
VAV-3	H133	12"	0.12	1,440	435	435	5.5	277	1	18	15	ETI	SDR-12-EH
VAV-4	H137A	8"	0.12	560	175	175	2.5	277	1	18	15	ETI	SDR-8-EH

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 SCRV-DAT 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 0.06"/100-FT DOWNSTREAM OF THE VAV BOXES.

SUPPLY CONTROL VALVE SCHEDULE (SINGLE DUCT - ELECTRIC REHEAT)

TAG	LOCATION	NECK SIZE	MIN. INLET S.P. (IN. OF WTR.)	AIRFLOW MAX. CFM	AIRFLOW MIN. CFM	ELECTRIC RE-HEAT CFM	KW	VOLTS	PHASE	MANUFACTURER	MODEL NUMBER
CV-1	H137	12"	0.30	945	670	670	7.0	277	1	Phoenix Controls	CELERIS MAVA
CV-2	H138	12"	0.30	1,050	670	670	7.0	277	1	Phoenix Controls	CELERIS MAVA

NOTES:

1. ALL SUPPLY DUCT MAINS ARE SIZED AT 1,800 FPM UPSTREAM OF THE CONTROL VALVE AND 0.06"/100-FT DOWNSTREAM OF THE CONTROL VALVE.
2. ELECTRIC HEATERS SHALL HAVE SCRV-DAT 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

TAG	LOCATION	NECK SIZE	MIN. INLET S.P. (IN. OF WTR.)	AIRFLOW MAX. CFM	AIRFLOW MIN. CFM	MANUFACTURER	MODEL NUMBER
CV-3	H138	12"	0.30	675	370	Phoenix Controls	CELERIS EXVB
CV-4	H137	12"	0.30	675	370	Phoenix Controls	CELERIS EXVB

1

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

TAG	Equipment Location	SERVING	ENCLOSURE	HP	VOLTS	PHASE	MANUFACTURER	MODEL NO.
VFD-1	ROOF	EF-2	NEMA 3R	2	460 V	3	ABB, INC.	ACH580

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 EMI/RFI 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 LABLED FOR 100KAIC 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. VFDs SHALL HAVE FLUX OPTIMIZATION.

ASHRAE Standard 62.1-2004-2010

By BHB

System Ventilation Requirements

AHU Location	Description		∑ Vpz cfm	Ps People	∑ Pz People	D Ps / ∑ Pz	Vou cfm	Vps cfm	Xs	Ev	Vot cfm	%OA Vot / Vps
Alternative 4												
System	RTU-1	Cooling	6,753	35	35	1.00	592	6,736	0.088	0.527	1,123	16.7
		Heating	2,820	35	35	1.00	592	2,820	0.210	0.509	1,163	41.2

* Apply Single Zone Ventilation Calculation

Ventilation Parameters

System Zone Room	Occupancy Category	Rp cfm / p	Pz People	Ra cfm/ft²	Az ft²	Vbz cfm	Std 170 Min OA ach	Cooling Ez	Cooling Voz cfm	Heating Ez	Heating Voz cfm
Alternative 4											
02 - RIght Lab (Room H133)	Science laboratories	10.00	19.00	0.18	771	329		1.00	329	0.80	411
H133		10.00	19.00	0.18	771	329			329		411
06 - Left Lab (H137)	Science laboratories	10.00	6.00	0.18	213	98		1.00	98	0.80	123
H137		10.00	6.00	0.18	213	98			98		123
04 - Wet Lab (H138)	Science laboratories	10.00	4.00	0.18	147	66		1.00	66	0.80	83
H138		10.00	4.00	0.18	147	66			66		83
09 - Left Lab Office (H137A)	Science laboratories	10.00	6.00	0.18	212	98		1.00	98	0.80	123
H137A		10.00	6.00	0.18	212	98			98		123
RTU-1		10.00	35.00	0.18	1,342	592			592		739

ASHRAE Standard 62.1-2004-2010

By BHB

Ventilation Calculations for Cooling Design

System Zone Room	Box Type	Vpz cfm	Vfan cfm	Vdz cfm	Vpz-min cfm	Voz-clg cfm	Zd	Ep	Er	Fa	Fb	Fc	Evz
Alternative 4													
02 - RIght Lab (Room H133)	VAV Reheat	4,321	4,321	4,321	1,305	329	0.252	1.00	0.00	1.00	1.00	1.00	0.836
H133		4,321	4,321	4,321	1,305	329							0.836
06 - Left Lab (H137)	VAV Reheat	945	945	945	670	98	0.147	1.00	0.00	1.00	1.00	1.00	0.941
H137		945	945	945	670	98							0.941
04 - Wet Lab (H138)	VAV Reheat	1,049	1,049	1,049	670	66	0.099	1.00	0.00	1.00	1.00	1.00	0.989
H138		1,049	1,049	1,049	670	66							0.989
09 - Left Lab Office (H137A)	VAV Reheat	438	438	438	175	98	0.561	1.00	0.00	1.00	1.00	1.00	0.527 *
H137A		438	438	438	175	98							0.527
RTU-1		6,753	6,736	6,753	2,820	592							0.527

Ventilation Calculations for Heating Design

System Zone Room	Box Type	Vpz cfm	Vfan cfm	Vdz cfm	Vpz-min cfm	Voz-htg cfm	Zd	Ep	Er	Fa	Fb	Fc	Evz
Alternative 4													
02 - RIght Lab (Room H133)	VAV Reheat	1,305	1,305	1,305	1,305	411	0.315	1.00	0.00	1.00	1.00	1.00	0.895
H133		1,305	1,305	1,305	1,305	411							0.895
06 - Left Lab (H137)	VAV Reheat	670	670	670	670	123	0.183	1.00	0.00	1.00	1.00	1.00	1.000
H137		670	670	670	670	123							1.000
04 - Wet Lab (H138)	VAV Reheat	670	670	670	670	83	0.124	1.00	0.00	1.00	1.00	1.00	1.000
H138		670	670	670	670	83							1.000
09 - Left Lab Office (H137A)	VAV Reheat	175	175	175	175	123	0.701	1.00	0.00	1.00	1.00	1.00	0.509 *
H137A		175	175	175	175	123							0.509
RTU-1		2,820	2,820	2,820	2,820	739							0.509

COM*check* Software Version COMcheckWeb

Mechanical Compliance Certificate

Project Information

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

Construction Site: Owner/Agent: Designer/Contractor:

Mechanical Systems List

Quantity System Type & Description

1 HVAC System (Multiple-Zone):
Heating: 1 each - Central Furnace, Electric, Capacity = 68 kBtu/h
No minimum efficiency requirement applies
Cooling: 1 each - Single Package DX Unit, Capacity = 295 kBtu/h, Air-Cooled Condenser, Air Economizer
Proposed Efficiency = 10.58 EER, Required Efficiency = 10.00 EER
Proposed Part Load Efficiency = 13.20 IEER, Required Part Load Efficiency = 13.20 IEER
Fan System: FAN SYSTEM 1 -- Compliance (Brake HP and fan efficiency method) : Passes

Fans:
FAN 1 Supply, Single-Zone VAV, 6740 CFM, 7.5 motor nameplate hp, 4.7 design brake hp (4.7 max. BHP), 1.17 fan energy index

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 COM*check* Version COMcheckWeb and to comply with any applicable mandatory requirements listed in the Inspection Checklist.

Braden Santer - EIT — Name - Title
[Signature] — Signature
10-01-24 — Date

BAIRD, HAMPTON & BROWN
building partners
6300 Ridglea Pl., Ste. 700 Fort Worth, TX 76116
mail@bhbinc.com • (817)338-1277 • bhbinc.com
TBPELS Firm #44, #10011300, #10011302, #10194146
BHB PROJECT # 2024.029.007

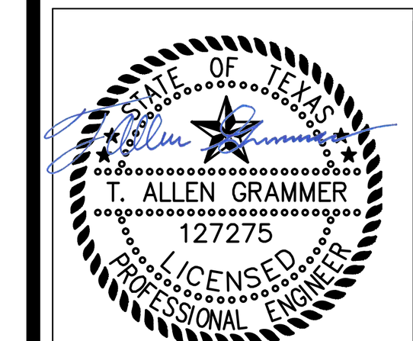
COMM. NO. 1368
DATE 11/14/24
DRAWN BCS
CHECKED TAG

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

ONE INCH

REVISIONS:
1 1/15/25 ADDENDUM 1

PROJECT STATUS:100% CD



01/14/2025

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

Mechanical Schedules

M-3

120V CONTROL POWER NOTES

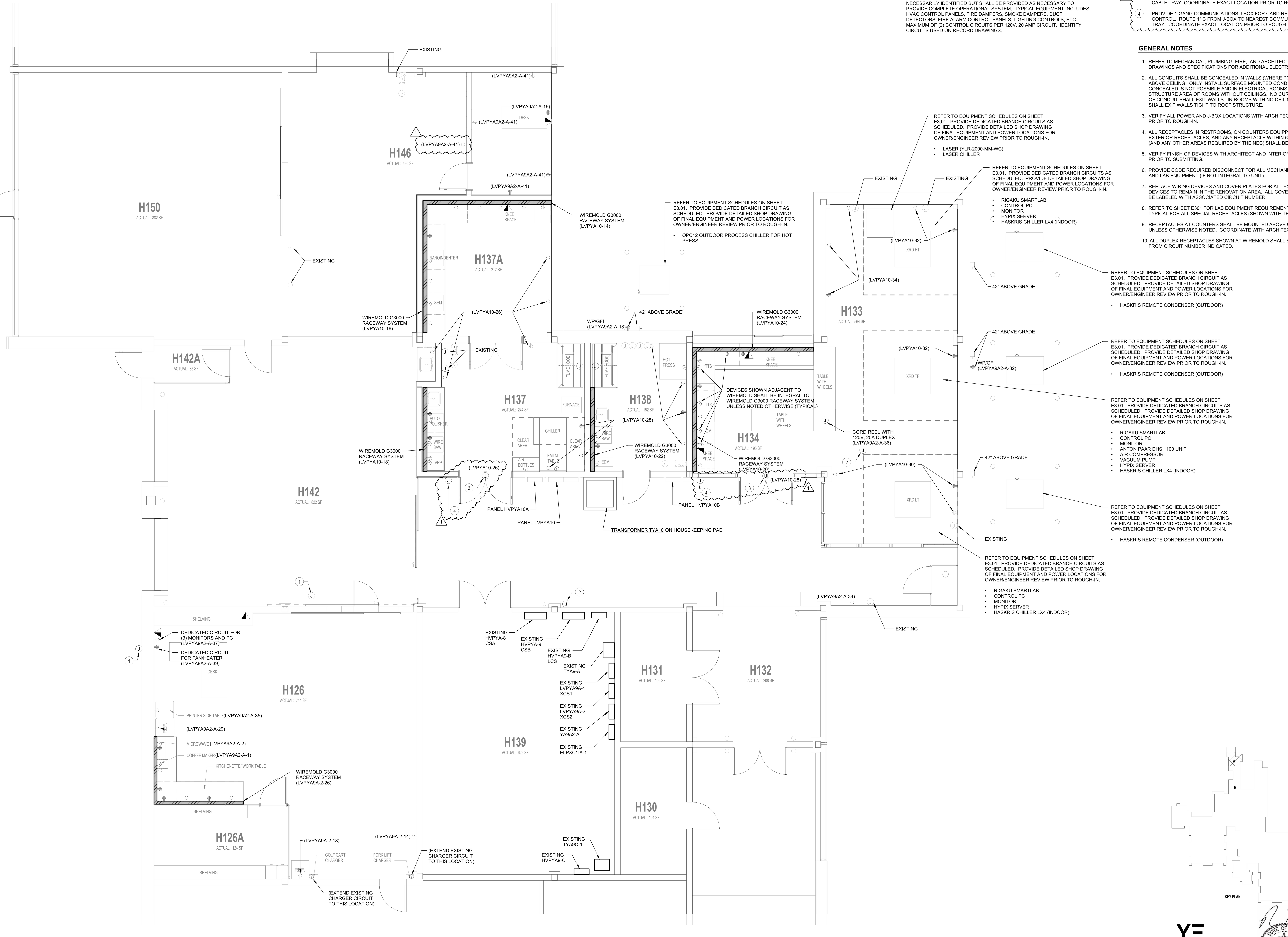
PROVIDE 120V POWER CIRCUIT TO EACH ITEM OF EQUIPMENT AS REQUIRED. REFER TO MECHANICAL SCHEDULES, ETC. THESE CIRCUITS ARE NOT NECESSARILY IDENTIFIED BUT SHALL BE PROVIDED AS NECESSARY TO PROVIDE COMPLETE OPERATIONAL SYSTEM. TYPICAL EQUIPMENT INCLUDES HVAC CONTROL PANELS, FIRE DAMPERS, SMOKE DAMPERS, DUCT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

NOTES BY SYMBOL

1. CAMERA J-BOX AND 1" C TO NEAREST COMMUNICATIONS CABLE TRAY.
2. WIRELESS ACCESS POINT J-BOX AND 1" C TO NEAREST COMMUNICATIONS CABLE TRAY.
3. PROVIDE 120V CIRCUIT AND 1-GANG COMMUNICATIONS J-BOX ABOVE CEILING FOR DOOR LOCKS/CARD READER/ACCESS CONTROL AND FUTURE CONTROL WIRING. ROUTE 1" C FROM J-BOX TO NEAREST COMMUNICATIONS CABLE TRAY. COORDINATE EXACT LOCATION PRIOR TO ROUGH-IN.
4. PROVIDE 1-GANG COMMUNICATIONS J-BOX FOR CARD READER/ACCESS CONTROL. ROUTE 1" C FROM J-BOX TO NEAREST COMMUNICATIONS CABLE TRAY. COORDINATE EXACT LOCATION PRIOR TO ROUGH-IN.

GENERAL NOTES

1. REFER TO MECHANICAL, PLUMBING, FIRE, AND ARCHITECTURAL SERIES DRAWINGS AND SPECIFICATIONS FOR ADDITIONAL ELECTRICAL WORK.
2. 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.
3. VERIFY ALL POWER AND J-BOX LOCATIONS WITH ARCHITECT AND OWNER PRIOR TO ROUGH-IN.
4. 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.
5. VERIFY FINISH OF DEVICES WITH ARCHITECT AND INTERIOR DESIGNER PRIOR TO SUBMITTING.
6. PROVIDE CODE REQUIRED DISCONNECT FOR ALL MECHANICAL, PLUMBING, AND LAB EQUIPMENT (IF NOT INTEGRAL TO UNIT).
7. 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.
8. REFER TO SHEET E301 FOR LAB EQUIPMENT REQUIREMENTS. THIS IS TYPICAL FOR ALL SPECIAL RECEPTACLES (SHOWN WITH THIS SYMBOL " ").
9. RECEPTACLES AT COUNTERS SHALL BE MOUNTED ABOVE COUNTERS UNLESS OTHERWISE NOTED. COORDINATE WITH ARCHITECTURAL.
10. ALL DUPLEX RECEPTACLES SHOWN AT WIREMOLD SHALL BE SERVED FROM CIRCUIT NUMBER INDICATED.



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

NORTH

KEY PLAN

YAGGI ENGINEERING, INC.
5840 INTERSTATE 20 WEST, SUITE 270
ARLINGTON, TEXAS 76017
817-483-2373 FAX: 817-483-4233
TEXAS REGISTRATION NO. F-9622
YE PROJECT NO. 2421.00

STATE OF TEXAS — R. TIM YAGGI — 57030 — REGISTERED PROFESSIONAL ENGINEER
01-15-2025

COMM. NO.	TBD
DATE	11/14/2024
DRAWN	SCR
CHECKED	RTY

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

ONE INCH

REVISIONS:
1 01/15/25 Addendum 1

PROJECT STATUS:CONSTRUCTION DOCUMENTS

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

FLOOR PLAN - LABS - POWER

E202

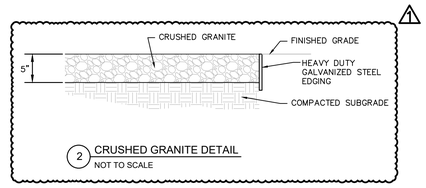
1/15/2025 10:00:20 AM

ELECTRICAL SYMBOLS

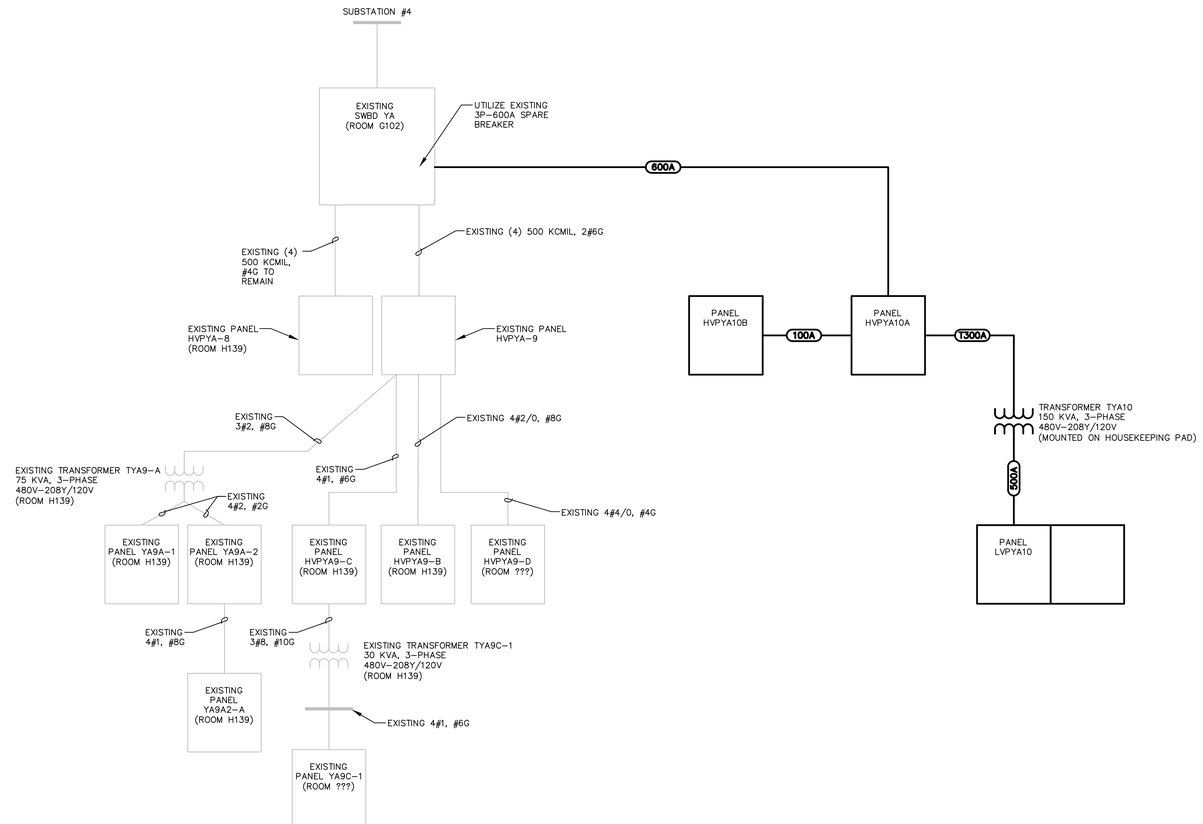
□C	LED LIGHT FIXTURE – LETTER DENOTES TYPE	⊗	SPECIAL PURPOSE OUTLET
■ ②	JUNCTION BOX	□F	DISCONNECT SWITCH OR BREAKER
——	CONDUIT CONCEALED IN CEILING OR WALL	⊙	MOTOR
——	CONDUIT CONCEALED IN, OR BELOW FLOOR – SEE SPECS	$M	MOTOR CIRCUIT SWITCH
⌒	CONDUIT HOMERUN	WP	WEATHERPROOF
$	SINGLE POLE SWITCH	A.F.F.	ABOVE FINISHED FLOOR
⊖	DUPLEX RECEPTACLE	G.F.I.	GROUND FAULT INTERRUPTER
⊕	QUADRAPLEX RECEPTACLE	⊡	LOW VOLTAGE LIGHTING CONTROL STATION
		▼	1–GANG J–BOX AND 1"C TO NEAREST COMMUNICATIONS CABLE TRAY FOR DATA/TELEPHONE OUTLET. COORDINATE HEIGHT WITH ARCHITECT. PREFERENCE IS ABOVE COUNTER.

ALL SYMBOLS SHOWN IN SYMBOL LIST ARE NOT NECESSARILY USED.

1



2 CRUSHED GRANITE DETAIL
NOT TO SCALE



1 ELECTRICAL ONE–LINE DIAGRAM
NOT TO SCALE

FEEDER SCHEDULE

AMPS	SIZE DESCRIPTION
100A	(4) #1, 1#8G IN 1-1/2"C
T300A	(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.

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TBAE FIRM # BR 1350

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

ELECTRICAL ONE-LINE DIAGRAM

E401