PROJECT INFORMATION

CLIENT NAME:

THE UNIVERSITY OF NORTH CAROLINA AT CHAPEL HILL

JOB NAME:

UNC VENABLE HALL LOWER LEVEL UPFIT / CONSTRUCTION SET

ISSUE DATE:

5-21-25

PROJECT LOCATION:

VENABLE HALL, GROUND FLOOR
101 South Rd
Chapel Hill, NC 27514

NORTH CAROLINA STATE CONSTRUCTION OFFICE NO. (SCO NUMBER)

24-28389-01A

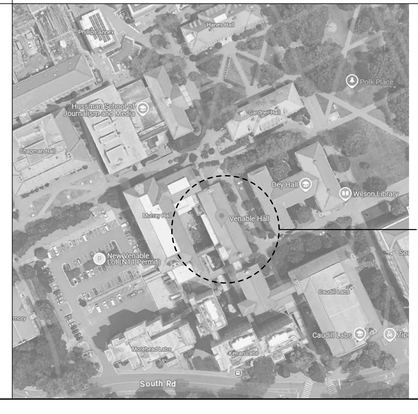
UNC PROJECT MANAGER CONTACT INFORMATION:

NAME: CHRIS BOZZELLI
PHONE: 919.962.9048
EMAIL: bozzelli@email.unc.edu

DRAWING INDEX

VICINITY MAP

LOCATION MAP



ADD ALTERNATES

ADD ALTERNATE 01: ADD A SECOND HOOD (FUME HOOD 2), INCLUDING THE DUCTWORK NEEDED TO CONNECT IT, AND ALSO ADD "EMERGENCY SHOWER & EYEWASH ADA COMPLIANT 2" PER PLANS

- SEE 1/A-501 FOR EXACT LOCATION OF SECOND HOOD AND EMERGENCY SHOWER & EYEWASH ADA COMPLIANT 2
- SEE 2/M-111, M-401, 1/E-200, P-311
- HOOD WILL BE OWNER PROVIDED, CONTRACTOR INSTALLED
- SAME MODEL AS FUME HOOD 1 (CONTINUOUS SPEED KEWAUNEE TRUVIEW SUPREME AIR, ADA COMPLIANT OPTION)

GENERAL PROJECT NOTES

DIMENSIONING

1. DIMENSIONS ON PLANS ARE TO FACE OF MASONRY, GWB OR FINISH UNLESS NOTED OTHERWISE.
2. MASONRY DIMENSIONS SHOWN ARE ACTUAL DIMENSIONS.
3. DO NOT SCALE DRAWINGS. USE DIMENSIONS ONLY.
4. DIMENSIONS RELATED TO THE EXISTING BUILDING SHALL BE VERIFIED PRIOR TO CONSTRUCTION.
5. EXTERIOR DIMENSIONS ARE GIVEN TYPICALLY TO THE OUTSIDE FACE OF GLAZING, MASONRY OR EIFS.

PARTITIONS/FINISHES/GENERAL

6. SEE LIFE SAFETY PLANS, FLOOR PLANS & WALL SCHEDULE FOR LOCATION OF FIRE RATED WALLS AND WALL TYPES
7. PROVIDE CONTINUOUS HORIZONTAL BLOCKING IN ALL PARTITIONS WHERE INDICATED AND WHERE REQUIRED FOR EQUIPMENT AND CASEWORK ATTACHMENT.
8. ALL INTERIOR AND EXTERIOR WOOD BLOCKING SHALL BE TREATED AS CALLED FOR IN SPECIFICATIONS.
9. IN GENERAL, THERE SHALL BE NO BACK-TO-BACK ELECTRICAL, TELEPHONE OR OTHER OUTLETS. OUTLET HOLES SHALL BE PACKED WITH ACOUSTICAL SEALANT.
10. WHEN OUTLETS ARE INDICATED AS OCCURRING BACK-TO-BACK THEY SHOULD BE SEPARATED BY 16 INCHES HORIZONTALLY. WHERE DIMENSIONS ARE SHOWN WHICH CONFLICT WITH THIS, OBTAIN DIRECTION FROM ARCHITECT.
11. PROVIDE A SEALANT JOINT AT ALL INTERSECTIONS OF GWB WALLS OR GWB CEILINGS WITH CMU PARTITIONS.
12. MAINTAIN INTEGRITY OF ALL RATED PARTITIONS AT INSTALLATION OF RECESSED FIRE EXTINGUISHER CABINETS, CABINETS, TOWEL DISPENSERS, RECEPTACLES, ELECTRICAL PANELS AND OTHER RECESSED ITEMS. AT GWB WALLS, OBTAIN THIS INTEGRITY BY INSTALLING AN ADDITIONAL LAYER OF GYPSUM BOARD WITHIN WALL AROUND ALL SIDES OF ITEM AND AN ADDITIONAL LAYER BEHIND ITEM.
13. WHERE HVAC OR OTHER MECHANICAL, ELECTRICAL AND PLUMBING ITEMS PENETRATE PARTITIONS, STUDS SHALL BE BRACED AND FRAMED TO STRUCTURE AS REQUIRED TO PROVIDE ADEQUATE SUPPORT. ALL PENETRATIONS THROUGH WALLS SHALL BE SEALED TO PROVIDE FIRE, SMOKE AND/OR ACOUSTIC ISOLATION SPACES.
14. BEFORE PATCHING ANY FIRE-RATED CMU PARTITION, FILL ANY EXPOSED CELLS SOLID WITH GROUT.
15. PROVIDE FINISHED WALL UNDER AND BEHIND WALL EQUIPMENT AND CASEWORK.

COORDINATION/INDICATION OF ENGINEERING WORK ON ARCHITECTURAL DRAWINGS:

16. WORK OF ENGINEERING DISCIPLINES IS SHOWN ON ARCHITECTURAL DRAWINGS FOR COORDINATION AND CONVENIENCE PURPOSES ONLY. REFER TO APPROPRIATE DISCIPLINE DRAWINGS FOR COMPLETE AND GOVERNING INFORMATION REGARDING THEIR WORK.
17. SEE ARCHITECTURAL REFLECTED CEILING PLANS FOR LOCATION OF CEILING MOUNTED MECHANICAL, ELECTRICAL AND PLUMBING FIXTURES.
18. WHERE EXPOSED STRUCTURE CEILING AREAS OCCUR IN ARCHITECTURAL REFLECTED CEILING PLANS, FULL DELINEATION OF STRUCTURAL, MECHANICAL, ELECTRICAL, PLUMBING, AND FIRE PROTECTION SYSTEMS IS NOT PROVIDED, SELECTED ELEMENTS AND DEVICES MAY BE SHOWN FOR LOCATION OR COORDINATION (E.G. LIGHT AND SPRINKLER SPACING)
19. FOR ALL ELECTRICAL INSTALLED IN CUSTOM MADE PANELS, FURNITURE, AND OTHER BUILT-INS, ACCEPTANCE BY ELECTRICAL INSPECTOR IS BY NEC 110.2 AND NEC 110.3

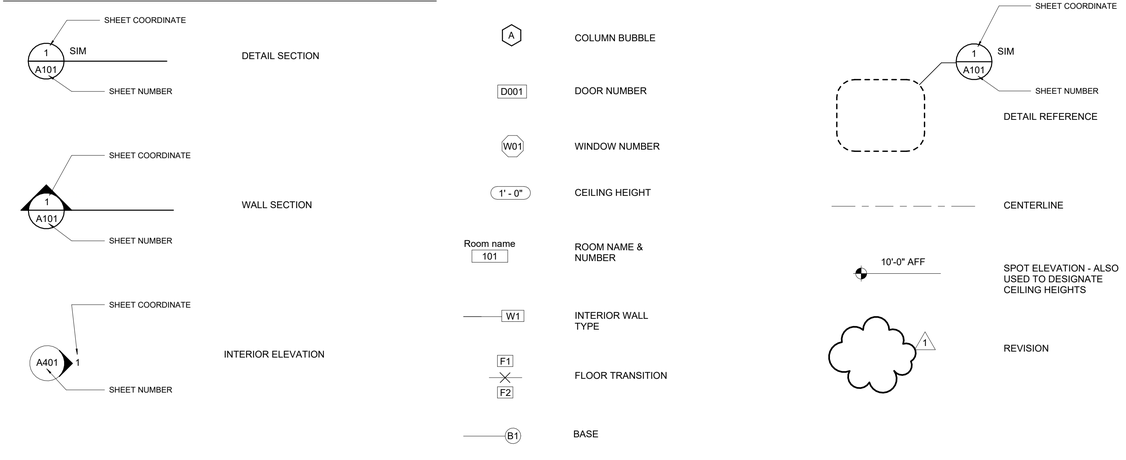
UNC STANDARD PRACTICES:

20. GC TO FOLLOW UNC *STORMWATER REQUIREMENTS* FOR SMALL CONSTRUCTION PROJECTS, ESPECIALLY WHEN STAGING OR CONDUCTING ANY ACTIVITY OUTSIDE OF THE BUILDING.

ABBREVIATIONS

A	
&	AND
@	AT
A/C	AIR CONDITIONING
AB	ANCHOR BOLT
ACOUST	ACOUSTICAL
ACT	ACOUSTIC CEILING TILE
AD	AREA DRAIN
AFF	ABOVE FINISHED FLOOR
AHU	AIR HANDLING UNIT
ALT	ALTERNATE
ALUM	ALUMINUM
APPROX	APPROXIMATE
ARCH	ARCHITECTURAL
AV	AUDIO-VISUAL
AVG	AVERAGE
B	
BD	BOARD
BEJ	BRICK EXPANSION JOINT
BLDG	BUILDING
BLKG	BLOCKING
BO	BOTTOM OF
BOT	BOTTOM
BRG	BEARING
BRK	BRICK
BSMT	BASEMENT
BUR	BUILT-UP ROOF
C	
CAB	CABINET
CB	CATCH BASIN
CF	CUBIC FEET
CFM	CUBIC FEET PER MINUTE
CFMF	COLD-FORMED METAL FRAMING
CJ	CONTROL JOINT
CL	CENTERLINE
CLG	CEILING
CLOS	CLOSET
CM	CENTIMETER
CMU	CONCRETE MASONRY UNIT
CO	CLEAR OPENING, CLEAN OUT
COL	COL
CONC	CONCRETE
CONF	CONFERENCE
CONST	CONSTRUCTION
CONT	CONTINUOUS
CORR	CORRIDOR
CPT	CARPET
CT	CERAMIC TILE
CW	CHILLED WATER
CY	CUBIC YARD
D	
D	DEEP
DBL	DOUBLE
DET	DETAIL
DF	DRINKING FOUNTAIN
DIA	DIAMETER
DIAG	DIAGONAL
DIM	DIMENSION
DN	DOWN
DR	DOOR
DS	DOWNSPOUT
DWG(S)	DRAWING(S)
E	
E	EAST
EA	EACH
EF	EACH FACE
EIFS	EXTERIOR INSULATION FINISH SYSTEM
EJ	EXPANSION JOINT
EL	ELEVATION
ELEC	ELECTRICAL
ELEV	ELEVATION
EQ	EQUAL
EQUIP	EQUIPMENT
EW	EYE WASH, EACH WAY
EWC	ELECTRIC WATER COOLER
EWH	ELECTRIC WATER HEATER
EXIST	EXISTING
EXP	EXPANSION, EXPOSED
EXT	EXTERIOR
F	
FA	FIRE ALARM
FACP	FIRE ALARM CONTROL PANEL
FB	FACE BRICK
FD	FLOOR DRAIN
FE	FIRE EXTINGUISHER IN CABINET
FEX	FIRE EXTINGUISHER ON BRACKET
FF	FINISHED FLOOR
FFE	FINISHED FLOOR ELEVATION
FH	FUME HOOD
FHC	FIRE HOSE CABINET
FIN	FINISH
FL	FLOOR, FLOORING
FO	FACE OF
FOC	FACE OF CONCRETE
FOM	FACE OF MASONRY
FOS	FACE OF STUDS
FP	FIREPROOF
FR	FIRE RATED
FRP	FIBERGLASS REINFORCED PLASTIC
FRT	FIRE RETARDED TREATED
FS	FULL-SIZED
FT	FOOT, FEET
FTG	FOOTING
FURN	FURNISH
FUT	FUTURE
FV	FIELD VERIFY
G	
G	GAS
GA	GAUGE
GALV	GALVANIZED
GB	GRAB BAR
GC	GENERAL CONTRACTOR
GCMU	GLAZED CONCRETE MASONRY UNIT
GD	GRADE
GFRC	GLASS FIBER REINFORCED CONCRETE
GFRG	GLASS FIBER REINFORCED GYPSUM
GL	GLASS
GWB	GYPSUM WALL BOARD
GYP	GYPSUM
H	
HB	HOSE BIBB
HC	HANDICAPPED, HOLLOW CORE
HD	HAND
HDR	HEADER
HDW	HARDWARE
HDWD	HARDWOOD
HK	HOOK(S)
HM	HOLLOW METAL
HORIZ	HORIZONTAL
HP	HIGH POINT, HORSE POWER
HR	HOUR
HS	HEAT STRENGTHENED
HT	HEIGHT
HVAC	HEATING VENTILATION AIR CONDITIONING
HVT	HOMOGENEOUS VINYL TILE
I	
ID	INSIDE DIAMETER
INSUL	INSULATION
INT	INTERIOR
INV	INVERT
J	
JAN	JANITOR
JC	JANITOR CLOSET
JST	JOIST
JT	JOINT
K	
KD	KNOCKDOWN
KG	KILOGRAM
KIT	KITCHEN
KO	KNOCKOUT, KNEE OPENING
KS	KNEE SPACE
L	
L	LONG, LENGTH
LAB	LABORATORY
LAV	LAVATORY
LB	LOAD BEARING
LBS	POUNDS
LEV	LEVEL
LH	LEFT HAND
LHR	LEFT HAND REVERSE
LIN	LINOLEUM
LLH	LONG LEG HORIZONTAL
LLV	LONG LEG VERTICAL
LP	LOW POINT
LT	LIGHT
LTL	LINTEL
LVR	LOUVER
LW	LIGHTWEIGHT
M	
M	METER
MAINT	MAINTENANCE
MAX	MAXIMUM
MDF	MEDIUM DENSITY FIBERBOARD
MDO	MEDIUM DENSITY OVERLAY
MECH	MECHANICAL
MET	METAL
MEZZ	MEZZANINE
MFG	MANUFACTURING
MFR	MANUFACTURER
MH	MANHOLE
MIN	MINIMUM
MIR	MIRROR
MISC	MISCELLANEOUS
MM	MILLIMETER
MNT	MOUNT
MO	MASONRY OPENING
MTG	MOUNTING
MTL	METAL
MULL	MULLION
N	
N	NORTH
NCSBC	2018 NORTH CAROLINA STATE BUILDING CODE
NE	NORTHEAST
NIC	NOT IN CONTRACT
NO	NUMBER
NOM	NOMINAL
NPS	NOMINAL PIPE SIZE
NTS	NOT TO SCALE
NW	NORTHWEST
O	
OA	OVERALL
OC	ON CENTER
OD	OUTSIDE DIAMETER
OFCI	OWNER FURNISHED CONTRACTOR INSTALLED
OFF	OFFICE
OFOI	OWNER FURNISHED OWNER INSTALLED
OH	OVERHEAD, OPPOSITE HAND
OPNG	OPENING
OPP	OPPOSITE
OTO	OUT-TO-OUT
P	
PBD	PARTICLE BOARD
PC	PRECAST
PERF	PERFORATED
PL	PLATE, PROPERTY LINE
PLAM	PLASTIC LAMINATE
PLAS	PLASTER
PLBG	PLUMBING
PLWD	PLYWOOD
PLYWD	PLYWOOD
PNL	PANEL
POL	POLISHED
PR	PAIR
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
PT	PRESSURE TREATED
PTD	PAINTED
PTN	PARTITION
PVC	POLYVINYL CHLORIDE
PVG	PAVING
PWD	PLYWOOD
Q	
QT	QUARRY TILE
R	
R	RADIUS, RISER
R/A	RETURN AIR
RB	RESILIENT BASE
RD	ROOF DRAIN
REF	REFERENCE
REINF	REINFORCED, REINFORCING
REQ'D	REQUIRED
RES	RESILIENT
REV	REVISION
RH	RIGHT HAND
RHR	RIGHT HAND REVERSE
RL	RAIN LEADER
RM	ROOM
ROW	RIGHT OF WAY
RTU	ROOFTOP UNIT
RUB	RUBBER
S	
S	SOUTH
S/A	SUPPLY AIR
S/CONC	SEALED CONCRETE
SCHED	SCHEDULE
SE	SOUTHEAST
SECT	SECTION
SF	SQUARE FOOT
SIM	SIMILAR
SPECS	SPECIFICATIONS
SQ	SQUARE
SS	SERVICE SINK
SST	STAINLESS STEEL
STD	STANDARD
STL	STEEL
STND	STAINED
STOR	STORAGE
STRUCT	STRUCTURAL
SUSP	SUSPENDED
SW	SOUTHWEST
SYM	SYMMETRICAL
SYS	SYSTEM
T	
T	TREAD
T&B	TOP AND BOTTOM
T&G	TONGUE AND GROOVE
TC	TOP OF CURB
TEL	TELEPHONE
TEMP	TEMPORARY
THK	THICK, THICKNESS
TO	TOP OF
TOC	TOP OF CONCRETE
TOS	TOP OF STEEL
TOW	TOP OF WALL
TS	TRANSPARENT
TYP	TYPICAL
U	
UC	UNDERCUT
UH	UNIT HEATER
UNFIN	UNFINISHED
UNO	UNLESS NOTED OTHERWISE
UTIL	UTILITY
V	
VB	VAPOR BARRIER
VCT	VINYL COMPOSITION TILE
VERT	VERTICAL
VIF	VERIFY IN FIELD
VTR	VENT THROUGH ROOF
VWC	VINYL WALL COVERING
W	
W	WIDTH, WEST
W/	WITH
W/O	WITHOUT
WC	WATER CLOSET, WALL COVERING
WD	WOOD
WGL	WIRE GLASS
WH	WATER HEATER
WP	WATERPROOFING
WT	WEIGHT
WWM	WELDED WIRE MESH

SYMBOLS



NOTCH

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REVISION:

SCO Review 9/15/25
2nd SCO Review 10/24/25
Construction Set 11/17/25

CONSTRUCTION SET

JOSE R NOYA
REGISTERED ARCHITECT
11/17/2025
15566
NORTH CAROLINA
CARRBORO, NC

CLIENT NAME: THE UNIVERSITY OF NORTH CAROLINA AT CHAPEL HILL
JOB NAME: UNC VENABLE HALL LOWER LEVEL UPFIT
LOCATION: VENABLE HALL LOWER LEVEL
101 South Rd
CHAPEL HILL, NC 27514

ISSUE DATE
5-21-25

JOB. NO.
N092

SCO # 24-28389-01A

A000

COVER SHEET

2018 APPENDIX B
BUILDING CODE SUMMARY FOR ALL COMMERCIAL PROJECTS
(EXCEPT 1 AND 2-FAMILY DWELLINGS AND TOWNHOUSES)
(Reproduce the following data on the building plans sheet 1 or 2)

Name of Project: UNC VENABLE HALL LOWER LEVEL UPFIT SCO # 24-28389-01A
Address: VENABLE HALL, GROUND FLOOR, 101 SOUTH ROAD, CHAPEL HILL, NC Zip Code 27514
Owner/Authorized Agent: CHRIS BOZZELLI Phone # (919) 962 - 9048 E-Mail bozzelli@email.unc.edu
Owned By: ☐ City/County ☐ Private ☒ State
Code Enforcement Jurisdiction: ☐ City_____ ☐ County_____ ☒ State

CONTACT:

DESIGNER	FIRM	NAME	LICENSE #	TELEPHONE #	E-MAIL
Architectural	Notch Design, PLLC	Jose Noya	15566	(919) 260-5709	jose@notchdesign.us
Civil				( )	
Electrical	McKim and Creed	Jesse C. Alonzo	053121	(919) 233-8091	JAlonzo@mckimcreed.com
Fire Alarm	McKim and Creed	Jesse C. Alonzo	053121	(919) 233-8091	JAlonzo@mckimcreed.com
Plumbing	McKim and Creed	Mitchell A. Brown, PE	019692	(919) 233-8091	MBrown@mckimcreed.com
Mechanical	McKim and Creed	Mitchell A. Brown, PE	019692	(919) 233-8091	MBrown@mckimcreed.com
Sprinkler-Standpipe	McKim and Creed	Mitchell A. Brown, PE	019692	(919) 233-8091	MBrown@mckimcreed.com
Structural				( )	
Retaining Walls >5' High				( )	
Other				( )	

("Other" should include firms and individuals such as truss, precast, pre-engineered, interior designers, etc.)

2018 NC BUILDING CODE: ☐ New Building ☐ Addition ☒ Renovation
☐ 1st Time Interior Completion
☐ Shell/Core - Contact the local inspection jurisdiction for possible additional procedures and requirements
☐ Phased Construction - Shell/Core- Contact the local inspection jurisdiction for possible additional procedures and requirements

2018 NC EXISTING BUILDING CODE: EXISTING: ☒ Prescriptive ☐ Repair ☐ Chapter 14
Alteration: ☐ Level I ☒ Level II ☐ Level III
☐ Historic Property ☐ Change of Use

CONSTRUCTED: (date) 2011 **CURRENT OCCUPANCY(S)** (Ch. 3): (B) - Business
RENOVATED: (date) _____ **PROPOSED OCCUPANCY(S)** (Ch. 3): (B) - Business

RISK CATEGORY (Table 1604.5): **Current:** ☐ I ☐ II ☒ III ☐ IV
Proposed: ☐ I ☐ II ☒ III ☐ IV

BASIC BUILDING DATA
Construction Type: ☐ I-A ☐ II-A ☐ III-A ☐ IV ☐ V-A
(check all that apply) ☒ I-B ☐ II-B ☐ III-B ☐ V-B
Sprinklers: ☐ No ☐ Partial ☒ Yes ☒ NFPA 13 ☐ NFPA 13R ☐ NFPA 13D
Standpipes: ☐ No ☒ Yes Class ☒ I ☐ II ☐ III ☐ Wet ☐ Dry
Fire District: ☐ No ☐ Yes **Flood Hazard Area:** ☒ No ☐ Yes
Special Inspections Required: ☐ No ☐ Yes (Contact the local inspection jurisdiction for additional procedures and requirements.)

Building Height (feet): 88.6
Number of Stories: 6
Mezzanine: No
High Rise: Yes

SEISMIC DESIGN CATEGORY= B

Gross building area: 160,458 SF
Area of work: 4,864 SF

Gross Building Area Table

FLOOR	EXISTING (SQ FT)	NEW (SQ FT)	SUB-TOTAL
Penthouse	15,9332	0	15,9332
Floor 4	25,780	0	25,780
Floor 3	27,952	0	27,952
Floor 2	27,867	0	27,867
Floor 1	29,856	0	29,856
Floor G	33,071	0	33,071
TOTAL	160,458	0	160,458

SEE A-002 FOR OCCUPANT LOAD CALCULATIONS

FIRE PROTECTION REQUIREMENTS

BUILDING ELEMENT	FIRE SEPARATION DISTANCE (FEET)	RATING REQ'D	RATING PROVIDED (W/ * REDUCTION)	DETAIL # AND SHEET #	DESIGN # FOR RATED ASSEMBLY	SHEET # FOR RATED PENETRATION	SHEET # FOR RATED JOINTS
Structural Frame, including columns, girders, trusses		2-Hr	1-Hr roof only (601 "a")	No new structural frame construction			
Bearing Walls		2-Hr		No new bearing wall construction			
Exterior		2-Hr					
North		2-Hr					
East		2-Hr					
West		2-Hr					
South		2-Hr					
Interior		2-Hr		No new bearing wall construction			
Nonbearing Walls and Partitions Exterior walls		0-Hr		No new rated wall construction			
North		0-Hr					
East		0-Hr					
West		0-Hr					
South		0-Hr					
Interior walls and partitions		0-Hr		No new rated partition construction			
Floor Construction Including supporting beams and joists		2-Hr		No new floor construction			
Floor Ceiling Assembly		2-Hr					
Columns Supporting Floors		2-Hr					
Roof Construction, including supporting beams and joists		1-Hr		No new roof construction			
Roof Ceiling Assembly		1-Hr					
Columns Supporting Roof		1-Hr					
Shaft Enclosures - Exit		2-Hr					
Shaft Enclosures - Other		2-Hr		No new shaft construction			
Corridor Separation		1-Hr	0 (1020.1 "c")	N/A	N/A	N/A	N/A
Occupancy/Fire Barrier Separation		N/A	N/A	N/A	N/A	N/A	N/A
Party/Fire Wall Separation		N/A	N/A	N/A	N/A	N/A	N/A
Smoke Barrier Separation		N/A	N/A	N/A	N/A	N/A	N/A
Smoke Partition		N/A	N/A	N/A	N/A	N/A	N/A
Tenant/Dwelling Unit/ Sleeping Unit Separation		N/A	N/A	N/A	N/A	N/A	N/A
Incidental Use Separation		N/A	N/A	N/A	N/A	N/A	N/A

* Indicate section number permitting reduction

Floor Designation	Code Equivalent Floor Level Relative to Grade per DOI, and Control Areas by Location				Percentage Maximum Allowable Storage Quantities of Hazardous Materials per Control Area in NCBC Tables 307.7(1) and (2)	Percentage Maximum Allowable Use Quantities of Hazardous Materials per Control Area in NCBC Tables 307.7(1) and (2)
	Relationship to Grade	Control Areas per floor Allowable	Control Areas per floor Provided	Fire Barrier Rating (hrs)		
Ground Floor	1st below	3	1	1 hr	400% x 75% =300%	200% x 75% =150%
1st Floor	GRADE	4	4	1 hr	400% x 100% =400%	200% x 100% =200%
2nd Floor	2nd above	3	3	1 hr	400% x 75% =300%	200% x 75% =150%
3rd Floor	3rd above	2	2	1 hr	400% x 50% =200%	200% x 50% =100%
4th Floor	4th above	2	2	2 hrs	400% x 12.5% =200%	200% x 12.5% =100%
Penthouse	5th above	2	1	2 hrs	400% x 12.5% =200%	200% x 12.5% =100%

THIS TABLE SHOWS THE CONTROL AREAS PROVIDED IN THE EXISTING BUILDING.

THIS TABLE WAS EXTRACTED FROM THE PROJECT "PHYSICAL SCIENCE BUILDING SCO ID# 00-06097-03C", PREVIOUSLY REVIEWED AND APPROVED BY SCO IN 2011

THE AGGREGATE QUANTITY OF CHEMICALS WILL NOT EXCEED THE QUANTITIES ALLOWED PER TABLES 307.1(1) AND 307.1.2(2)

UNC WILL ALSO COMPLY WITH OSHA REGULATORY SAFETY GUIDELINES AND UNC 'S LABORATORY SAFETY MANUAL.

LIFE SAFETY SYSTEM REQUIREMENTS

Emergency Lighting: ☐ No ☒ Yes
Exit Signs: ☐ No ☒ Yes
Fire Alarm: ☐ No ☒ Yes
Smoke Detection Systems: ☐ No ☒ Yes ☐ Partial _____
Carbon Monoxide Detection: ☐ No ☒ Yes

LIFE SAFETY PLAN REQUIREMENTS

Life Safety Plan Sheet #: A002

☒ Fire and/or smoke rated wall locations (Chapter 7)
☐ Assumed and real property line locations (if not on the site plan) (N/A to this interior renovation)
☐ Exterior wall opening area with respect to distance to assumed property lines (705.8) (N/A to this interior renovation)
☐ Occupancy Use for each area as it relates to occupant load calculation (Table 1004.1.2) (N/A to this interior renovation)
☒ Occupant loads for each area (see A-002)
☐ Exit sign locations (1013) (see 2/E-200)
☐ Exit access travel distances (1017) (No exit travel path changes)
☐ Common path of travel distances (Tables 1006.2.1 & 1006.3.2(1)) (No exit travel path changes)
☐ Dead end lengths (1020.4) (No exit travel path changes)
☐ Clear exit widths for each exit door (see A-002)
☐ Maximum calculated occupant load capacity each exit door can accommodate based on egress width (1005.3) (see A-002)
☐ Actual occupant load for each exit door (see A-002)
☐ A separate schematic plan indicating where fire rated floor/ceiling and/or roof structure is provided for purposes of occupancy separation (N/A)
☐ Location of doors with panic hardware (1010.1.10) (see A-002)
☐ Location of doors with delayed egress locks and the amount of delay (1010.1.9.7) (N/A)
☐ Location of doors with electromagnetic egress locks (1010.1.9.9) (N/A)
☐ Location of doors equipped with hold-open devices (N/A)
☐ Location of emergency escape windows (1030) (N/A)
☐ The square footage of each fire area (202) (N/A, no changes to building fire areas)
☐ The square footage of each smoke compartment for Occupancy Classification I-2 (407.5) (N/A)
☐ Note any code exceptions or table notes that may have been utilized regarding the items above

ACCESSIBLE DWELLING UNITS
(SECTION 1107)
(Not applicable)

ACCESSIBLE PARKING
(SECTION 1106)
(N/A)

PLUMBING FIXTURE REQUIREMENTS
(TABLE 2902.1)
(Unchanged)

SPECIAL APPROVALS
(No special approvals required at this time)

ENERGY SUMMARY
(Not applicable, no chanes to thermal envelope by this interior renovation)

2018 APPENDIX B
BUILDING CODE SUMMARY FOR ALL COMMERCIAL PROJECTS
MECHANICAL DESIGN
(PROVIDE ON THE MECHANICAL SHEETS IF APPLICABLE)

(SEE M001)

2018 APPENDIX B
BUILDING CODE SUMMARY FOR ALL COMMERCIAL PROJECTS
ELECTRICAL DESIGN
(PROVIDE ON THE ELECTRICAL SHEETS IF APPLICABLE)

(SEE E002)

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REVISION:
SCO Review 9/15/25
2nd SCO Review 10/24/25
Construction Set 11/17/25

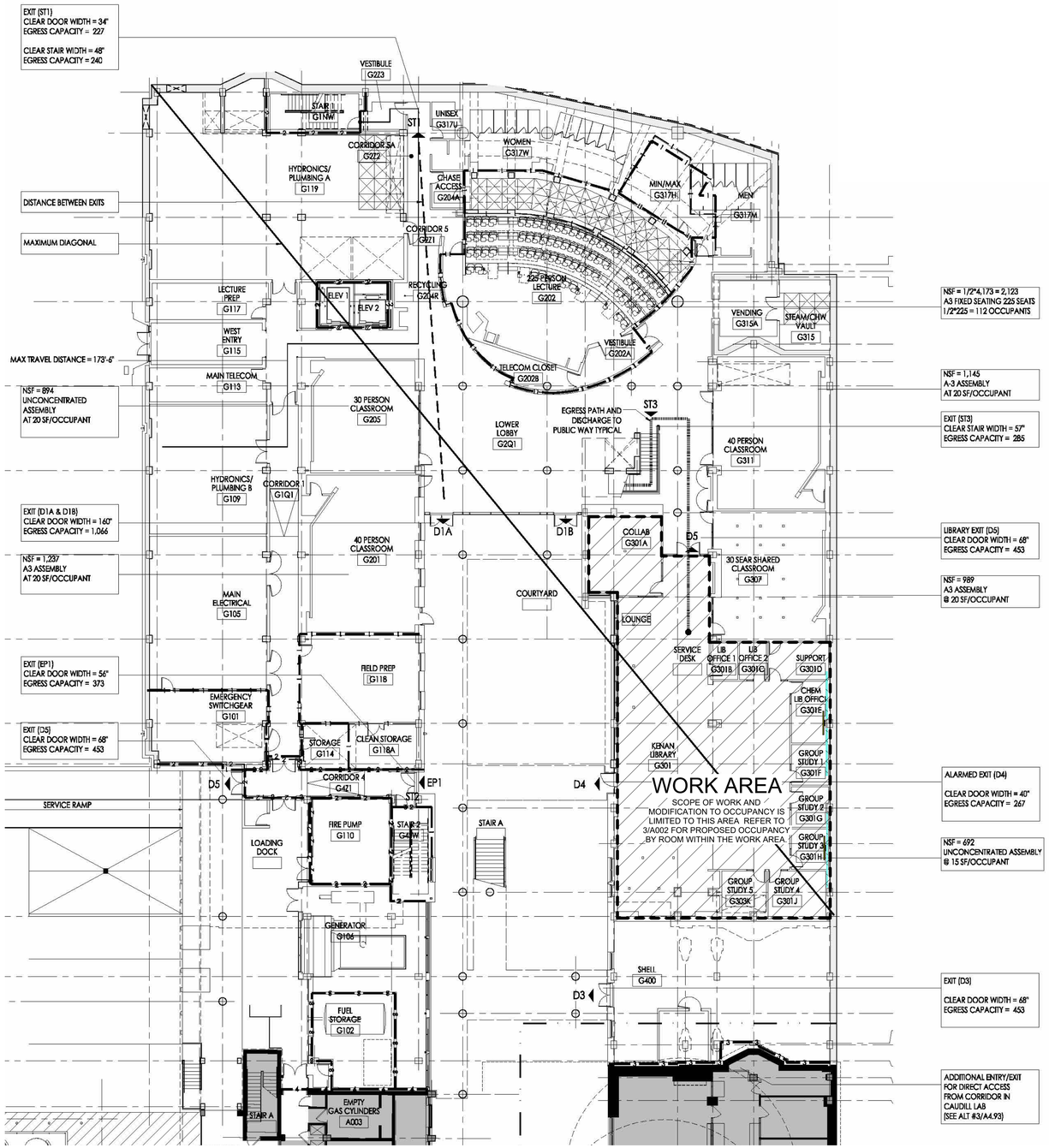
CONSTRUCTION SET

JOSE R NOYA
REGISTERED ARCHITECT
11/17/2025
15566
NORTH CAROLINA
CARRBORO, NC

CLIENT NAME: THE UNIVERSITY OF NORTH CAROLINA AT CHAPEL HILL
JOB NAME: UNC VENABLE HALL LOWER LEVEL UPFIT
LOCATION: VENABLE HALL LOWER LEVEL
101 South Rd
CHAPEL HILL, NC 27514

ISSUE DATE: 5-21-25
JOB. NO.: N092
SCO # 24-28389-01A

A001
APPENDIX B



1 EXISTING (2011) LIFE SAFETY PLAN
1/16" = 1'-0"

OCCUPANT LOAD TOTALS

2011 AS-BUILT DRAWINGS OCCUPANT LOAD CALCULATIONS IN BLACK
2025 UPDATED OCCUPANT LOAD CALCULATIONS IN RED

MAIN GSF = 29,267

A3 ASSEMBLY = 4,265 sf @ 20 SF/OCCUPANT = 213 OCCUPANTS

CONCENTRATED ASSEMBLY = 1,152 sf @ 7 SF/OCCUPANT = 165 OCCUPANTS

A3 FIXED SEATING = 2,123 sf =1/2*225 = 112 OCCUPANTS

MECHANICAL ROOMS = 8,957 @ 300 SF/OCCUPANT = 30 OCCUPANTS

BUSINESS GROUP B OCCUPANCY = [GSF - ASSEMBLY]= 9,515 @ 100 SF/OCCUPANT = 95 OCCUPANTS

MAIN OCCUPANT LOAD = 615

LIBRARY GSF = 4,864

UNCONCENTRATED ASSEMBLY = 1,079 sf @ 15 SF/OCCUPANT = 72 OCCUPANTS

READING ROOM = 656 SF @ 50 SF/OCCUPANT = 13 OCCUPANTS

BUSINESS GROUP B OCCUPANCY =(GSF - ASSEMBLY)= 3,129 @ 100 SF/OCCUPANT = 31 OCCUPANTS

LIBRARY OCCUPANT LOAD = 116

TOTAL OCCUPANT LOAD = 731
TOTAL EGRESS CAPACITY = 2413

MAXIMUM DIAGONAL = 280'-0"
DISTANCE BETWEEN EXITS = 98'-0"
98'-0"> 1/3 (280'-0")= 93'-4"

MAXIMUM TRAVEL DISTANCE ALLOWABLE = 300'

ACTUAL MAX TRAVEL DISTANCE: =173'-6"

NEW OCCUPANT LOAD AT WORK AREA:

WORK AREA GSF = 4,864 (PREVIOUSLY CALLED LIBRARY)

OFFICE/ TAs G301A = 380 NSF
@ 20 SF/OCCUPANT = 19 OCCUPANT LOAD

(2) TEACHING LABS G301B AND G301C = 1,555+1,555= 3110 SF
@ 15 SF/OCCUPANT PER PER 1004.1.2 = 208 OCCUPANT LOAD

STORAGE ROOM G301D = 63 SF
@ 100 SF/OCCUPANT = 1 OCCUPANT LOAD

G301 SOCIAL
- SEATING AREA = 449 SF

@ 15SF/ OCCUPANT= 30 OCCUPANT LOAD
- CIRCULATION ZONE= 684 SF

(0 OCCUPANT LOAD)

TOTAL WORK AREA OCCUPANT LOAD = 258

TOTAL OCCUPANT LOAD= 731-116+258= 873
TOTAL EGRESS CAPACITY= 2413

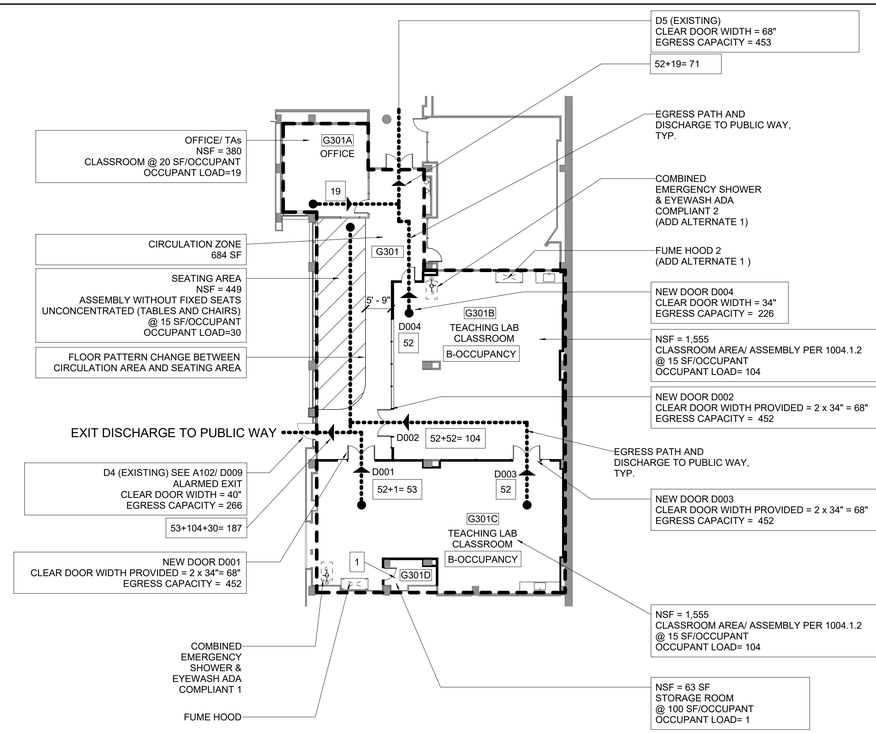
LAB GSF = 2,195

BUSINESS GROUP B OCCUPANCY = 2,195 @ 100 SF/OCCUPANT = 22 OCCUPANTS

EXIT CAPACITY (D3)= 453

MAXIMUM DIAGONAL = 71'-0"

DISTANCE BETWEEN EXITS = 40'
40'> 1/3 (71'-0")= 35'-6"



NEW DOORS D001, D002, & D004 WILL HAVE PANIC HARDWARE
DOOR D003 WILL NEVER BE LOCKED
SEE A-601 DOOR SCHEDULE AND DOOR HARDWARE

SCOPE OF WORK AREA

52 CALCULATED OCCUPANT LOAD PER EXIT

SEE A102 AND A601 FOR DOOR AND HARDWARE SCHEDULES

2 WORK AREA LIFE SAFETY PLAN
1/16" = 1'-0"

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JOSE R NOYA
REGISTERED ARCHITECT
11/17/2025
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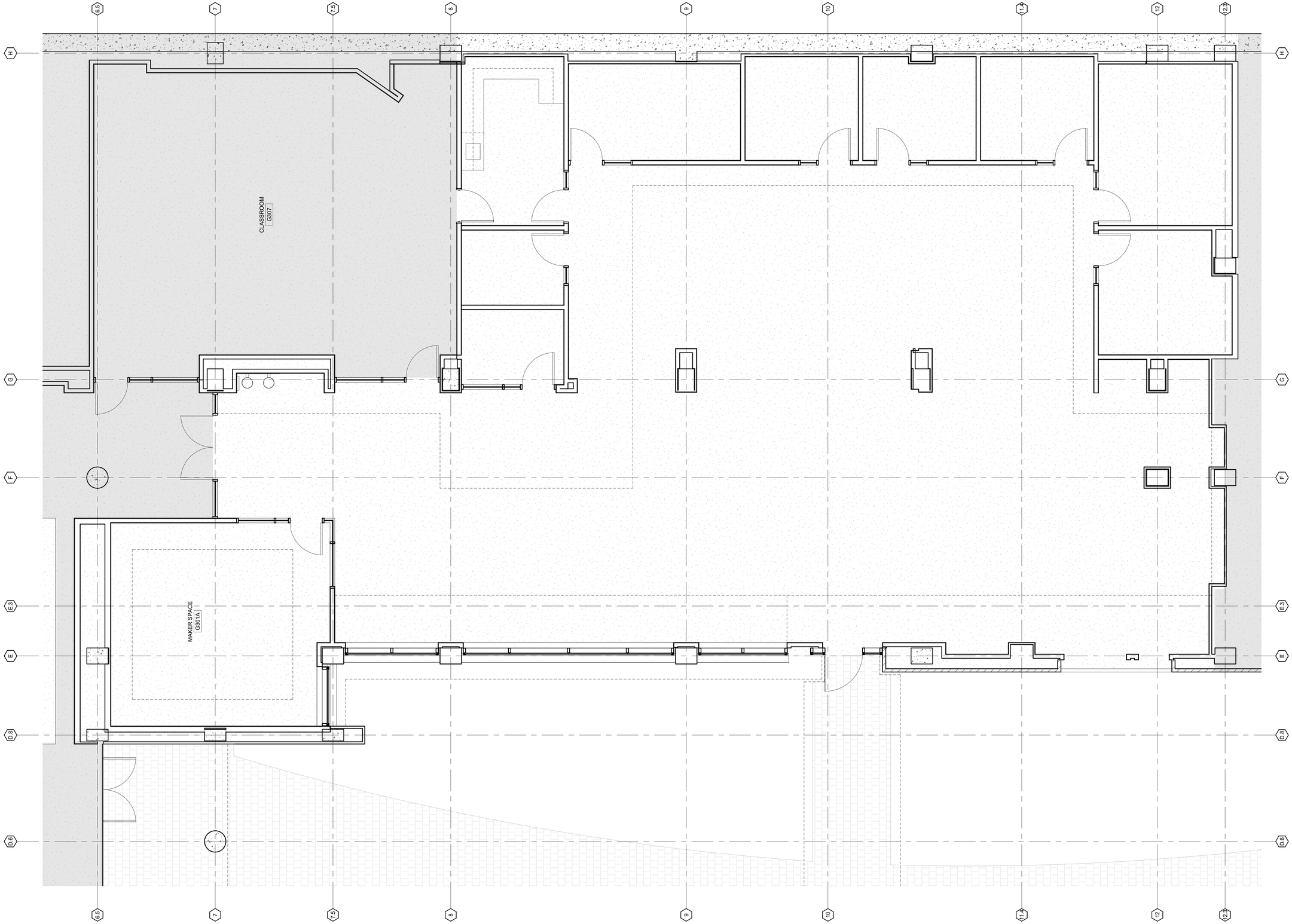
A002

LIFE SAFETY & OCCUPANT LOAD



GROUND FLOOR PLAN EXISTING
1

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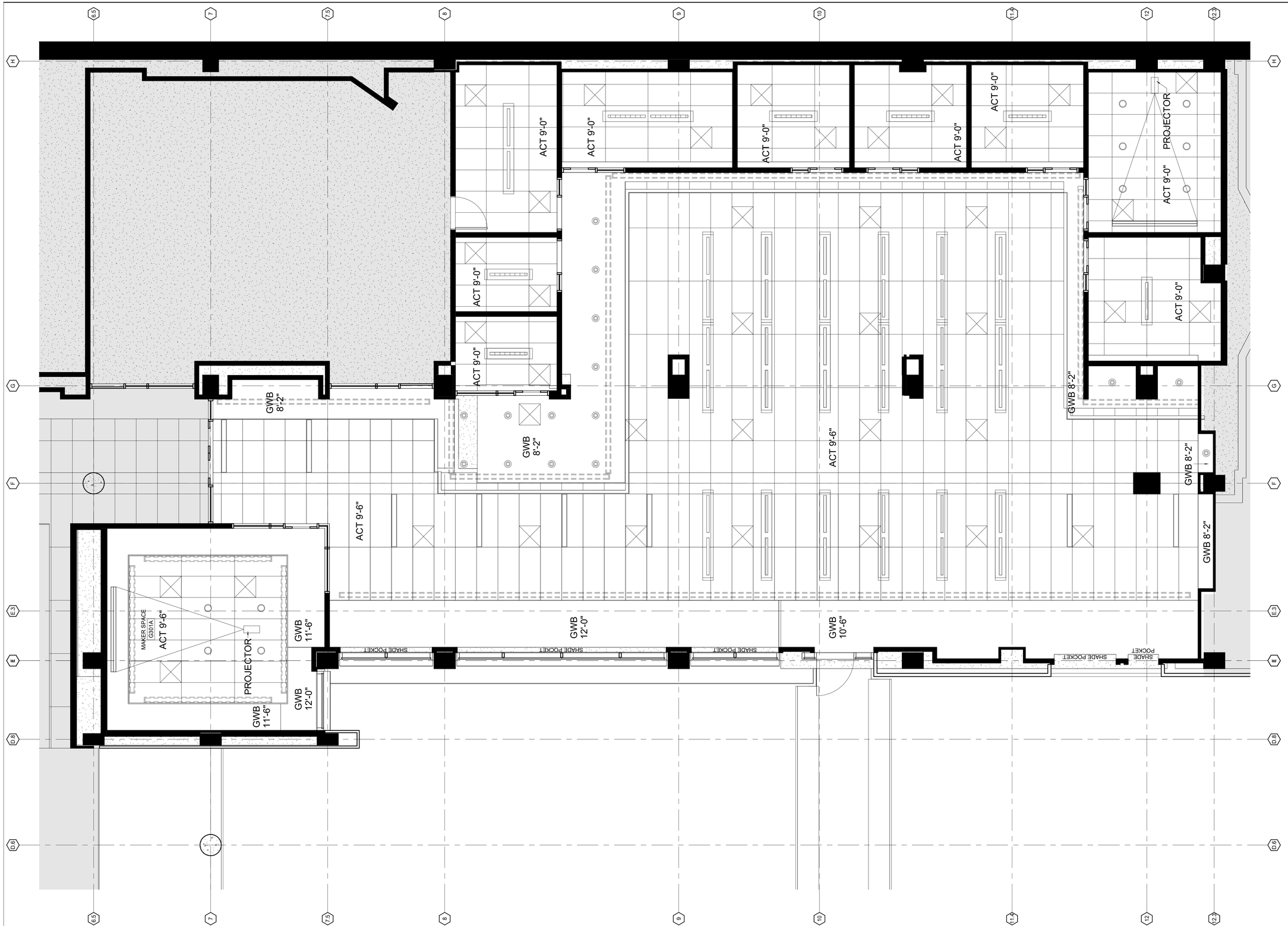
A100

GROUND FLOOR
EXISTING PLAN



1 GROUND FLOOR EXISTING RCP

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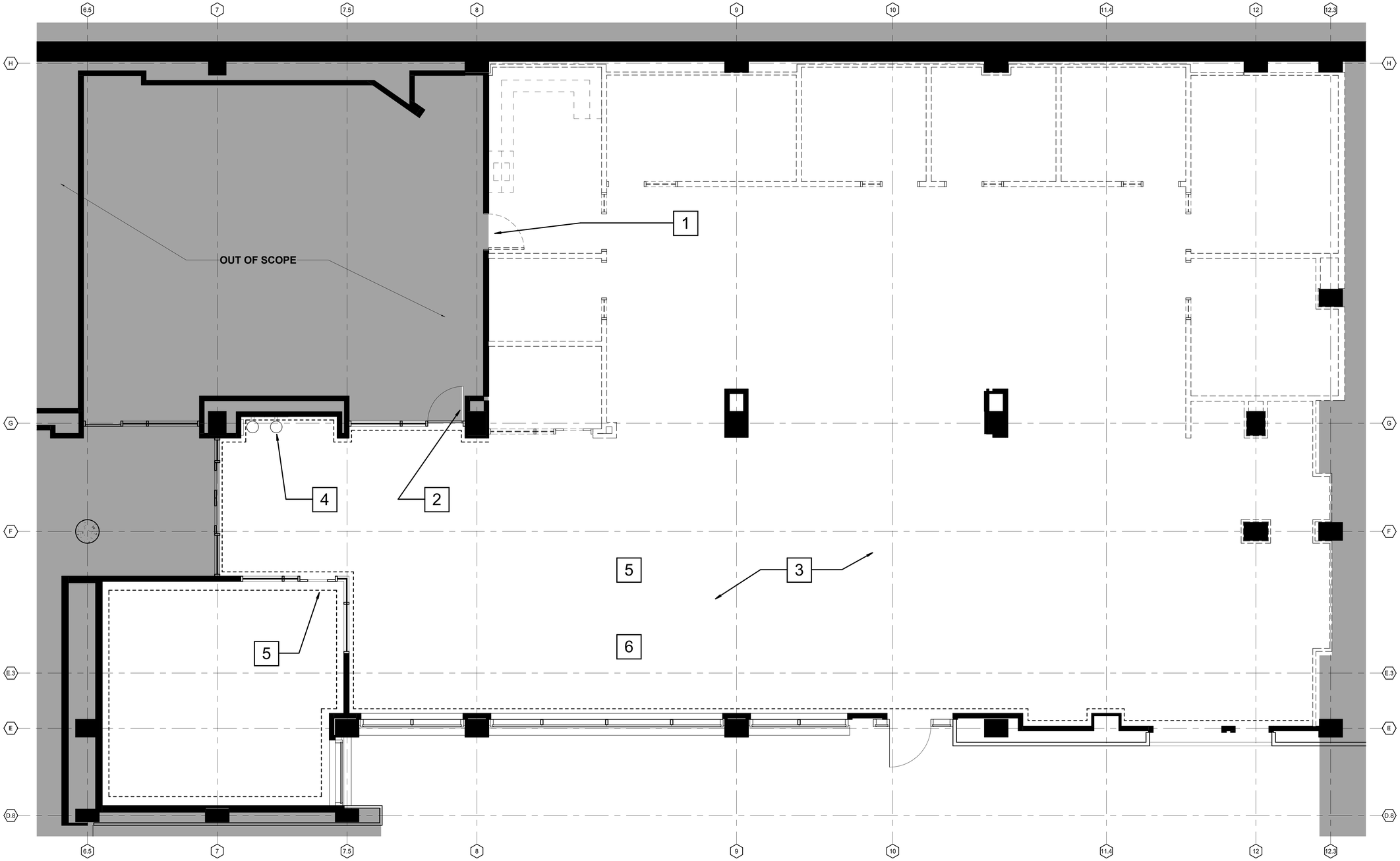
A100.1

GROUND FLOOR
EXISTING RCP



1 GROUND FLOOR DEMOLITION PLAN
1/4" = 1'-0"

DEMOLITION GENERAL NOTES

A. REFER TO MECHANICAL, ELECTRICAL AND FIRE PROTECTION DRAWINGS FOR ADDITIONAL DEMOLITION ITEMS.
B. REFER TO MECHANICAL, ELECTRICAL, AND FIRE PROTECTION SHEETS FOR ANY MECHANICAL, ELECTRICAL, OR FIRE PROTECTION DEMOLITION ITEM. DON'T FOLLOW THE ARCHITECTURAL SHEETS FOR DEMOLITION OF THOSE ITEMS. CONTACT THE ARCHITECT ABOUT ANY DISCREPANCIES.
C. CONTRACTOR SHALL OBTAIN A COPY OF THE BUILDING MANAGEMENT'S RULES AND REGULATIONS AND COMPLY WITH THEM IN ALL MATTERS RELATED TO THE SCOPE OF WORK. PROVIDE PROTECTION OF INTERIOR FINISHES DURING DEMOLITION AND CONSTRUCTION.
D. CONTRACTOR TO PROTECT EXISTING MECHANICAL UNITS TO REMAIN DURING EXTENT OF CONSTRUCTION, IN ACCORDANCE WITH CONSTRUCTION INDOOR QUALITY MANAGEMENT PLAN. COORDINATE WITH ENGINEERING DRAWINGS.
E. REFER TO DEMOLITION REFLECTED CEILING PLAN FOR EXTENTS AND DESCRIPTION OF CEILING DEMOLITION.
F. REMOVE DESIGNATED PARTITIONS WHERE INDICATED.
G. REMOVE FLOORING THROUGHOUT PROJECT AREA. REMOVE ALL ADHESIVES AND UNDERLAYMENTS, LEAVING SUBFLOOR IN CLEAN CONDITION READY FOR NEW FISHES.
H. REMOVE WALL FINISHES, DRY ERASE BOARDS, ETC. FROM EXISTING PARTITIONS, PREPARE FOR
I. WHERE INIDICATED ON PLANS, LEAVE EXISTING FURRING WALLS IN PLACE, TO BE EXTENDED TO STRUCTURE ABOVE IN OPEN-CEILING AREAS DURING NEW WORK PHASE.
J. GC TO STUDY THE CONDITION TO THE EXISTING STUDS AND DRYWALL, AND COMMUNICATE TO THE ARCHITECT IF SOME OF THE EXISTING WALLS DESIGNATED AS "DEMOLITION" IN THIS PLANS CAN POTENTIALLY BE SAVED/ NOT DEMOLISHED; OR PARTIALLY SAVED
K. SEE PLUMBING DRAWINGS FOR ANY DEMOLITION NEEDED OF THE EXSITING SLAB TO INSTALL NEW PIPES

PLAN KEYED NOTES

1. DEMOLISH DOOR. OPENING TO BE INFILLED TO MATCH EXISTING WALL STRUCTURE AND FINISHES ON BOTH SIDES.
2. CAREFULLY REMOVE DOOR WITHOUT DAMAGING IT. GC TO INVESTIGATE IF POSSIBLE TO RE-USE IT. SEE A-102
3. REMOVE ALL FLOORING MATERIAL IN THE AREA OF SCOPE OF WORK AND PREPARE FOR NEW FLOORING MATERIAL. LEVEL IF NEEDED PER FLOORING MANUF. RECOMMENDATIONS / SEE SPECS
4. KEEP WATER FOUNTAINS
5. REMOVE EXISTING BASE THROUGHOUT THE SCOPE AREA. PATCH AND REPAIR AS NEEDED AND PREP FOR NEW FLOORING WORK AND NEW BASE
6. STUDY MEP AND FP PLANS AND PREPARE EXISTING WALLS FOR NEW MEP AND FP WORK. PATCH AND REPAIR DRYWALL AS REQUIRED. ADD BLOCKING IF REQUIRED.

LEGEND, DEMOLITION PLAN

- WORK LIMIT LINE
- AREA NOT IN CONTRACT/ SCOPE
- EXISTING WALLS
- WALL TO BE DEMOLISHED

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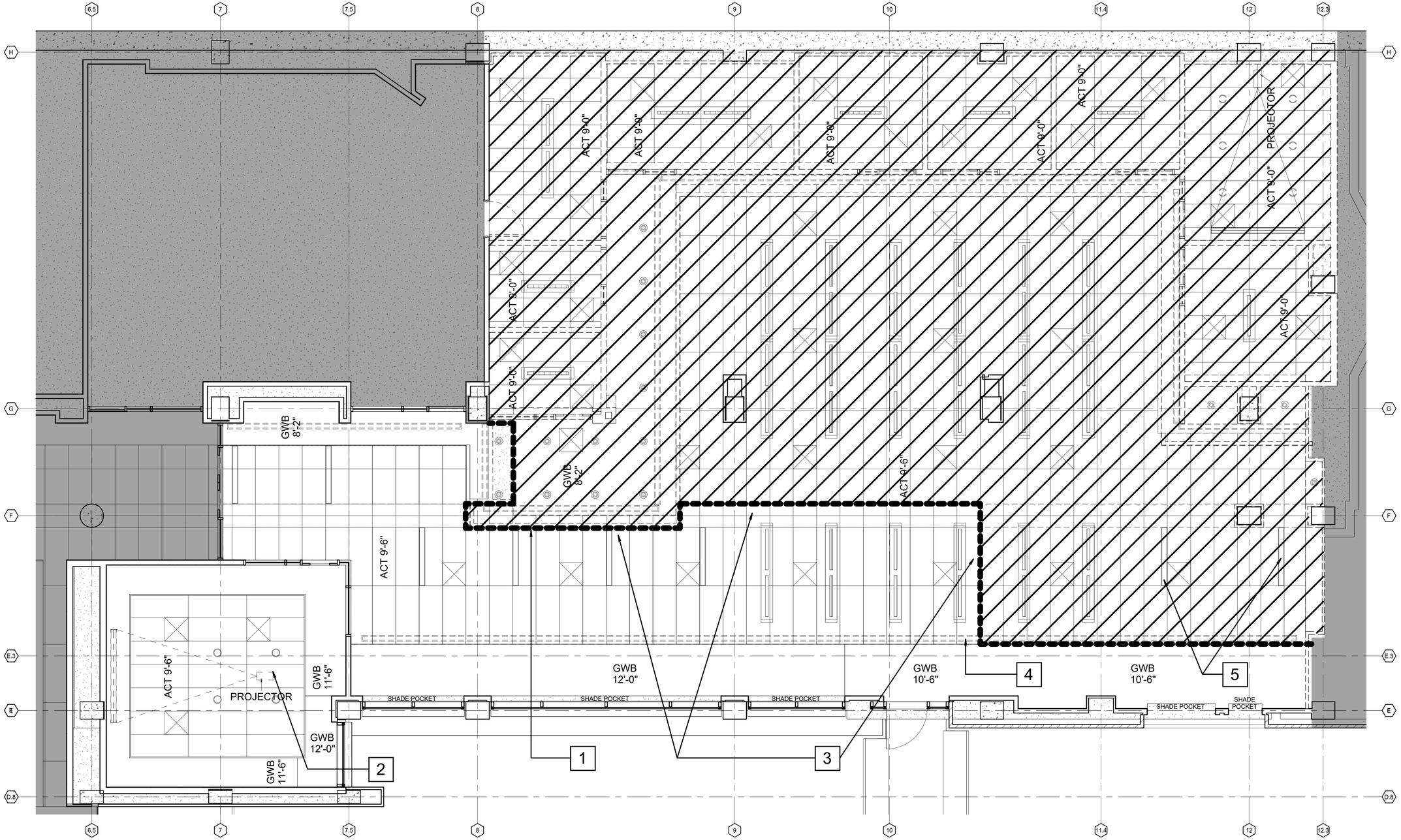
A101

DEMOLITION PLAN



1/4" = 1'-0"

1 GROUND FLOOR DEMOLITION RCP

DEMOLITION CEILING PLAN GENERAL NOTES

A. REFER TO MECHANICAL, ELECTRICAL AND FIRE PROTECTION DRAWINGS FOR ADDITIONAL DEMOLITION ITEMS.
B. REFER TO MECHANICAL, ELECTRICAL, AND FIRE PROTECTION SHEETS FOR ANY MECHANICAL, ELECTRICAL, OR FIRE PROTECTION DEMOLITION ITEM. DON'T FOLLOW THE ARCHITECTURAL SHEETS FOR DEMOLITION OF THOSE ITEMS. CONTACT THE ARCHITECT ABOUT ANY DISCREPANCIES.
C. CONTRACTOR SHALL OBTAIN A COPY OF THE BUILDING MANAGEMENT'S RULES AND REGULATIONS AND COMPLY WITH THEM IN ALL MATTERS RELATED TO THE SCOPE OF WORK. PROVIDE PROTECTION OF INTERIOR FINISHES DURING DEMOLITION AND CONSTRUCTION.
D. CONTRACTOR TO PROTECT EXISTING MECHANICAL UNITS TO REMAIN DURING EXTENT OF CONSTRUCTION, IN ACCORDANCE WITH CONSTRUCTION INDOOR QUALITY MANAGEMENT PLAN. COORDINATE WITH ENGINEERING DRAWINGS.
E. WITHIN CEILING DEMOLITION AREA:
   - REMOVE LIGHT FIXTURES
   - DEMOLISH CEILING INCLUDING GRID SUPPORT AND ANY CONNECTIONS TO STRUCTURE
   - G.C. TO ASSES IF REUSING SOME OF THE EXISTING ACT FOR THE SMALL AREA IN THE SOCIAL SPACE IS POSSIBLE. SEE KEYED PLAN NOTE NUMBER 1 ON 1/A102.1
   - G.C. TO ASSES IF REUSING SOME OF THE EXISTING LINEAR LIGHT FIXTURES IS POSSIBLE . SEE KEYED PLAN NOTE NUMBER 1 ON 1/A102.1
F. REFER TO DEMOLITION SPECIFICATIONS FOR DETAILED GENERAL REQUIREMENTS.

PLAN KEYED NOTES

1. DEMOLISH CEILING BULKHEAD AND COVE LIGHTING WHERE INDICATED, RETAIN ADJACENT BULKHEAD IN PLACE. SUPPORT ADJACENT CEILING AREA AS NECESSARY TO PRESERVE EXISTING CEILING TO BE INFILLED PER NEW WORK PLANS.
2. OFFICE: REMOVE PROJECTOR AND SCREEN. PREPARE EXISTING CEILING FINISHES TO BE REPAIRED.
3. SOME DEMOLITION OF THE EXISTING ACT CEILING MAY NEED TO EXTEND PAST THE WORK LIMIT LINE INTO THE HALLWAY IN ORDER TO PROVIDE THE ROOM NEEDED TO INSTALL THE NEW METAL STUD THAT WILL SEPARATE "G301 SOCIAL" FROM "G301B TEACHING LAB" AND "G301C TEACHING LAB CLASSROOM." THE GENERAL CONTRACTOR WILL EVALUATE THE EXTENT OF THIS POTENTIAL ADDITIONAL DEMOLITION AND COMMUNICATE THEIR ASSESSMENT TO THE ARCHITECT BEFORE FINALIZING THE CONSTRUCTION CONTRACT AND BEFORE STARTING CONSTRUCTION.
4. KEEP EXISTING COVE LIGHT IN THE HALLWAY. FIELD VERIFY IF THE LAST SECTION CLOSE TO THE NEW LAB WALL WILL NEED TO BE DEMOLISHED OR NOT
5. KEEP EXISTING (2) LIGHT FIXTURES. G.C. TO EVALUATE IF REUSING THIS FIXTURES IS POSSIBLE PER A102.1/ PLAN KEYED NOTE 2

LEGEND, DEMOLITION RCP

- WORK LIMIT LINE
- AREA NOT IN CONTRACT/ SCOPE
- WALL TO BE DEMOLISHED
- CEILING DEMOLITION AREA
- DOOR TO BE DEMOLISHED

N

0 4 8 16'

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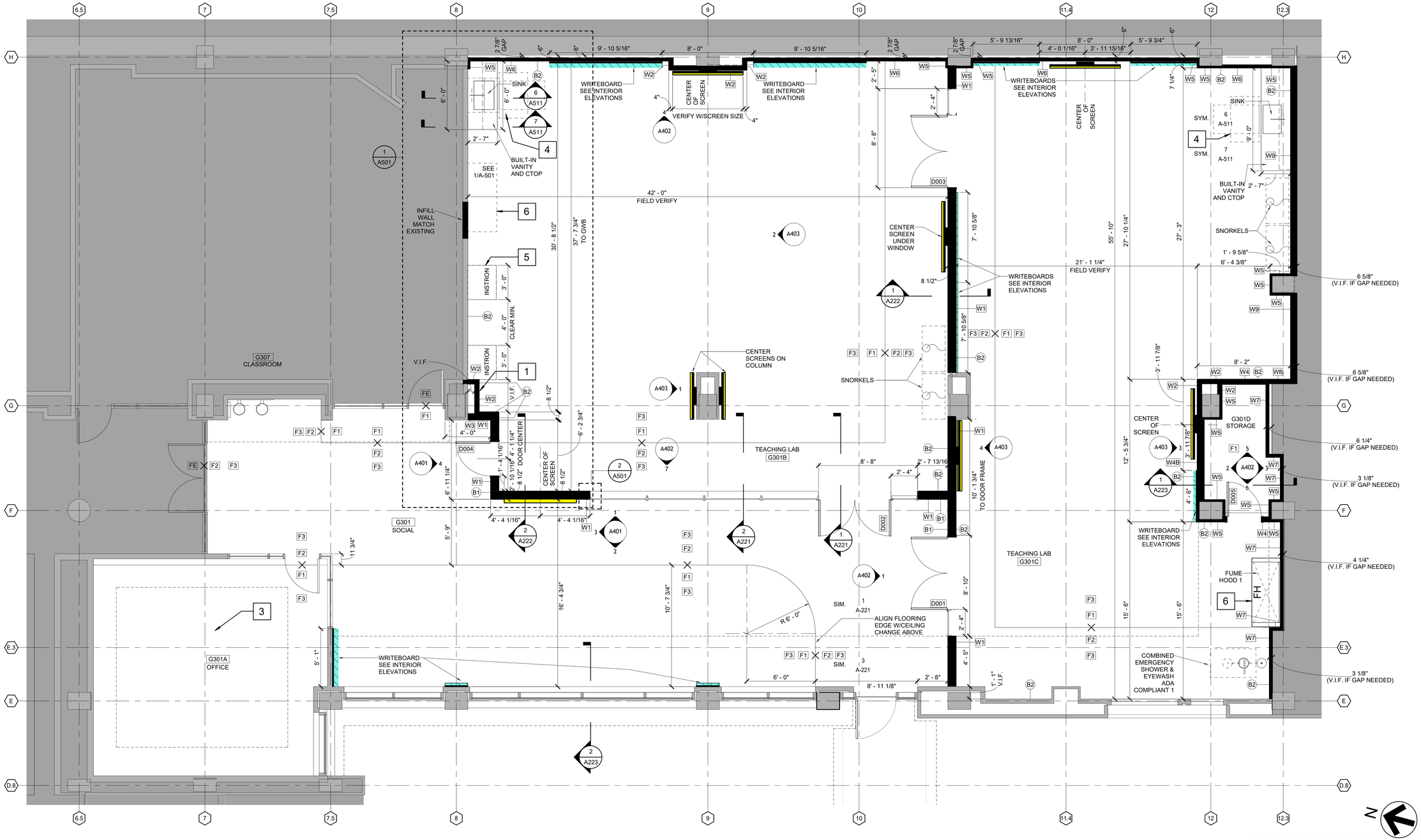
A101.1

DEMOLITION RCP



DIMENSIONS TO FINISHED FACE U.N.O.

1 NEW WORK PLAN
1/4" = 1'-0"

FLOOR PLAN GENERAL NOTES

- ALL EXISTING CONDITIONS AND DIMENSIONS TO BE FIELD VERIFIED
- SEE A-601 FOR INTERIOR WALL TYPES
- SEE A-601 FOR WINDOW SCHEDULE
- SEE A-601 FOR DOOR SCHEDULE
- SEE A-601 FOR FLOOR AND WALL FINISH SCHEDULE
- SEE A-601 FOR BASE SCHEDULE
- REFER TO 3/A-501 FOR FINAL FLOORING PATTERN
- ALL EXISTING AND NEW PARTITIONS AND FURRING WALLS WITHIN THE OPEN-CEILING AREAS TO BE EXTENDED AND FINISHED UP TO THE BOTTOM OF STRUCTURAL SLAB ABOVE.
- FURNITURE SHOWN FOR INFORMATIONAL PURPOSES ONLY, FF&E NOT IN SCOPE OF THIS PLAN
- ALL EXISTING WALLS TO RECEIVE NEW PAINT
- OWNER TO PROVIDE SPECS FOR DISPLAY SCREENS. COORDINATE MOUNTING LOCATIONS WITH ARCHITECT AND POWDER AND DATA NEEDS WITH ARCHITECT AND MEP ENGINEER. DISPLAY SCREENS OR OTHER OBJECTS SHOULD NOT ENCROACH MORE THAN 4 INCHES FOR ADA COMPLIANCE
- PROVIDE BLOCKING AS REQD. FOR DISPLAY SCREENS, WRITEBOARDS AND ANY OTHER WALL-MOUNTED ITEMS
- FUME HOOD PROVIDED BY OWNER, CONTRACTOR INSTALLED. MODEL: CONTINUOUS SPEED KEWAUNEE TRUVIEW
- SNORKELS AND INSTROMS ARE FF&E ITEMS OWNER PROVIDED. SHOWING HERE FOR REFERENCE
- INTERIOR AND EXTERIOR SIGNS IDENTIFYING PERMANENT ROOMS AND SPACES SHALL HAVE BOTH THE NAME AND NUMBER IN RAISED LETTERS AND BRAILLE THAT COMPLIES WITH THE CURRENT ACCESSIBILITY CODES.
- A MINIMUM OF ONE OF EACH TYPE OF EQUIPMENT PROVIDED IN EACH LABORATORY MUST BE ACCESSIBLE
- A MINIMUM OF ONE OF EACH TYPE OF STORAGE PROVIDED IN EACH LABORATORY MUST BE ACCESSIBLE
- PROVIDE ACCESSIBLE FURNITURE AS REQUIRED BY NCBC CHAPTER 11 AND ICC A117.1

PLAN KEYED NOTES

1. FURR AS NEEDED TO ACCOMMODATE NEW DRAIN LEADER ADJACENT TO COLUMN, REFER TO PLUMBING SANITARY GROUND PLAN (P111).
2. REVERSE SWING
3. PAINT EXISTING OFFICE'S WALLS AND BASEBOARDS TO MATCH G301 SOCIAL AND TEACHING LABS.
4. ADA COMPLIANT CLEAR FLOOR SPACE PROVIDED PER NCBC CHAPTER 11 AND ICC A117.1. SHOWN AS DASHED LINE
5. INSTRON MACHINE TO BE ADA COMPLIANT / ICC A117.1
6. HOOD MODEL: KEWAUNEE TRUVIEW SUPREME AIR, ADA COMPLIANT OPTION / ICC A117.1

FLOOR PLAN LEGEND

- EXISTING WALLS
- NEW WALLS
- DISPLAY SCREEN W/ OPTIONAL FLEXIBLE ARM, ADA COMPLIANT
- GLASS WRITABLE SURFACE
- INSTRON — INSTRON TESTING MACHINE ON TABLE, 115" TOTAL HEAD CLEARANCE NEEDED
- FH — FUME HOOD, 6' WIDTH
- SNORKEL WORK AREA 4' WIDTH
- SINK, H/C, DEI H20
- DIGITAL DISPLAY, FLUSH MOUNTED, ADA COMPLIANT
- COMBINED EYEWASH AND SHOWER ADA COMPLIANT

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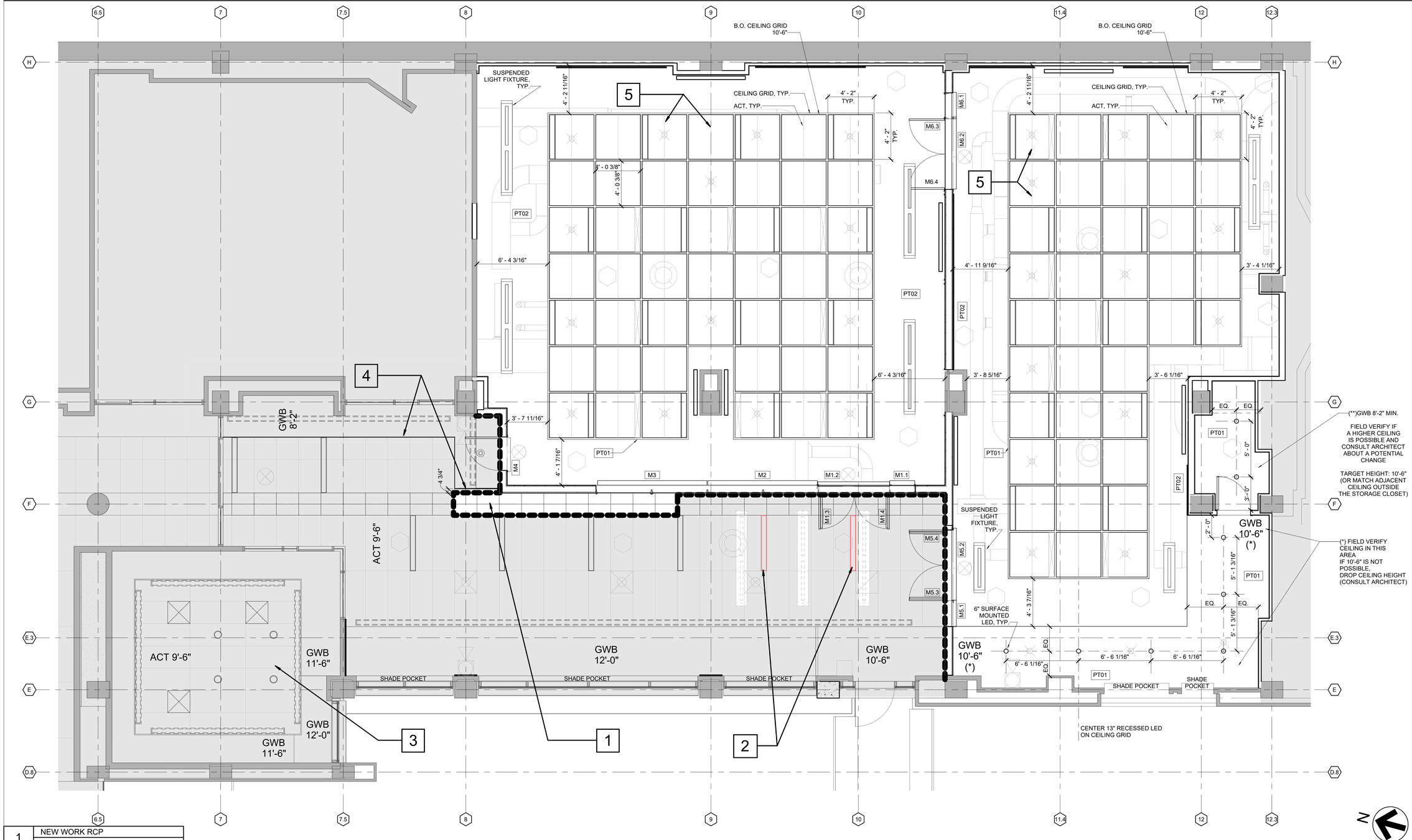
A102
NEW WORK PLAN



1 NEW WORK RCP
1/4" = 1'-0"

REFLECTED CEILING PLAN GENERAL NOTES

- ALL EXISTING CONDITIONS AND DIMENSIONS TO BE FIELD VERIFIED
- NEW PARTITIONS TO BE FINISHED WITH DRYWALL UP TO THE BOTTOM OF SLAB ABOVE WITHIN LAB 1 AND LAB 2
- GENERAL CONTRACTOR IS RESPONSIBLE TO HIRE UNISTRUT SUBCONTRACTOR TO DESIGN AND INSTALL UNISTRUT GRID SYSTEM. CONTACT MATT FRALICK WITH UNISTRUT MIDWEST 216-804-1912
- SEE A-602 FOR MOTORIZED ROLLER SHADES SCHEDULE
- SEE A-601 FOR SCHEDULES
- BOTTOM OF SUSPENDED LIGHT FIXTURES IN ROOMS G301B AND G301C TO MATCH THE BOTTOM OF THE CEILING GRID. FIELD VERIFY / COORDINATE WITH ARCHITECT
- LOCATE FIRE DETECTION DEVICES A MINIMUM OF THREE FEET FROM SUPPLY OR RETURN DIFFUSERS. SEE FIRE PROTECTION, FIRE ALARM, ELECTRICAL AND MECHANICAL DRAWINGS
- SEE FIRE PROTECTION DRAWINGS FOR FINAL LOCATIONS OF SPRINKLER HEADS. SMALL ADJUSTMENTS MAY BE NEEDED AT THE SITE TO COORDINATE HEADS WITH THE FINAL ACT CEILING LAYOUT. GC TO SUBMIT COORDINATED SHOP DRAWINGS FOR ACT CEILING AND SPRINKLER HEADS FOR ARCHITECT'S REVIEW

REFLECTED CEILING PLAN KEYED NOTES

1. INFILL AREA WITH ACT TO MATCH EXISTING ADJACENT PANELS. PROVIDE NEW TILES TO MATCH THE EXISTING OR G.C. TO ASSESS IF REUSING SOME OF THE EXISTING TILES IS POSSIBLE
2. NEW LIGHT FIXTURES TO MATCH EXISTING IN ADJACENT CEILING AREAS. REFER TO ELECTRICAL DRAWINGS AND SPECIFICATIONS. RE-USE THE EXISTING LIGHT FIXTURES IF POSSIBLE PER A101.1/ PLAN KEYED NOTE 5
3. PATCH AND REPAIR AS REQUIRED TO MATCH THE EXISTING CEILING / SEE A101.1
4. MATCH EXISTING CLOUD CEILING EDGE DETAIL. STOP 4.75" SHORT BEFORE THE NEW WALL PER DIMENSION CALLED OUT ON THE PLAN
5. LIGHT GRAY LINE INDICATES TYPICAL ACT JOINT. 2X4 NOMINAL ACT TILES. ATTACH ACT CHANNELS TO STRUCTURAL CEILING GRID. CUT TILES THAT ARE ADJACENT TO LIGHT FIXTURE AS NEEDED TO KEEP THE LINEAR PATTERN CONSISTENT.

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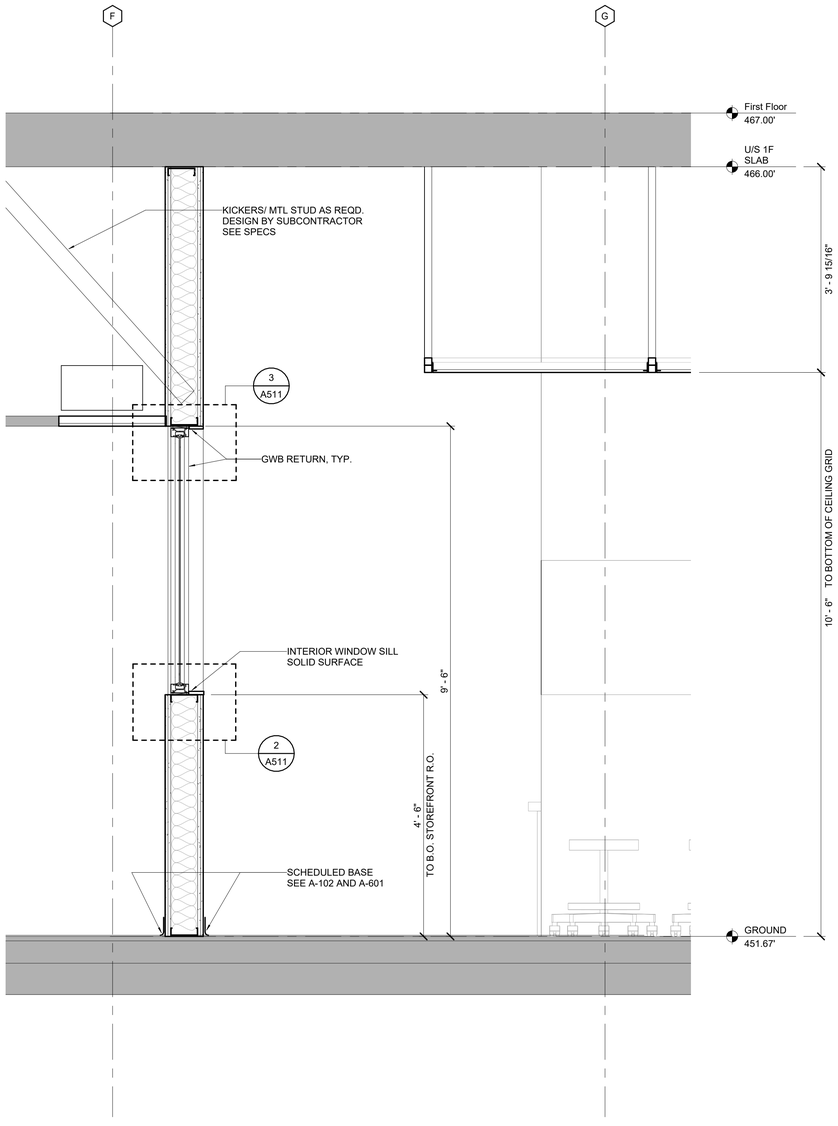
A102.1

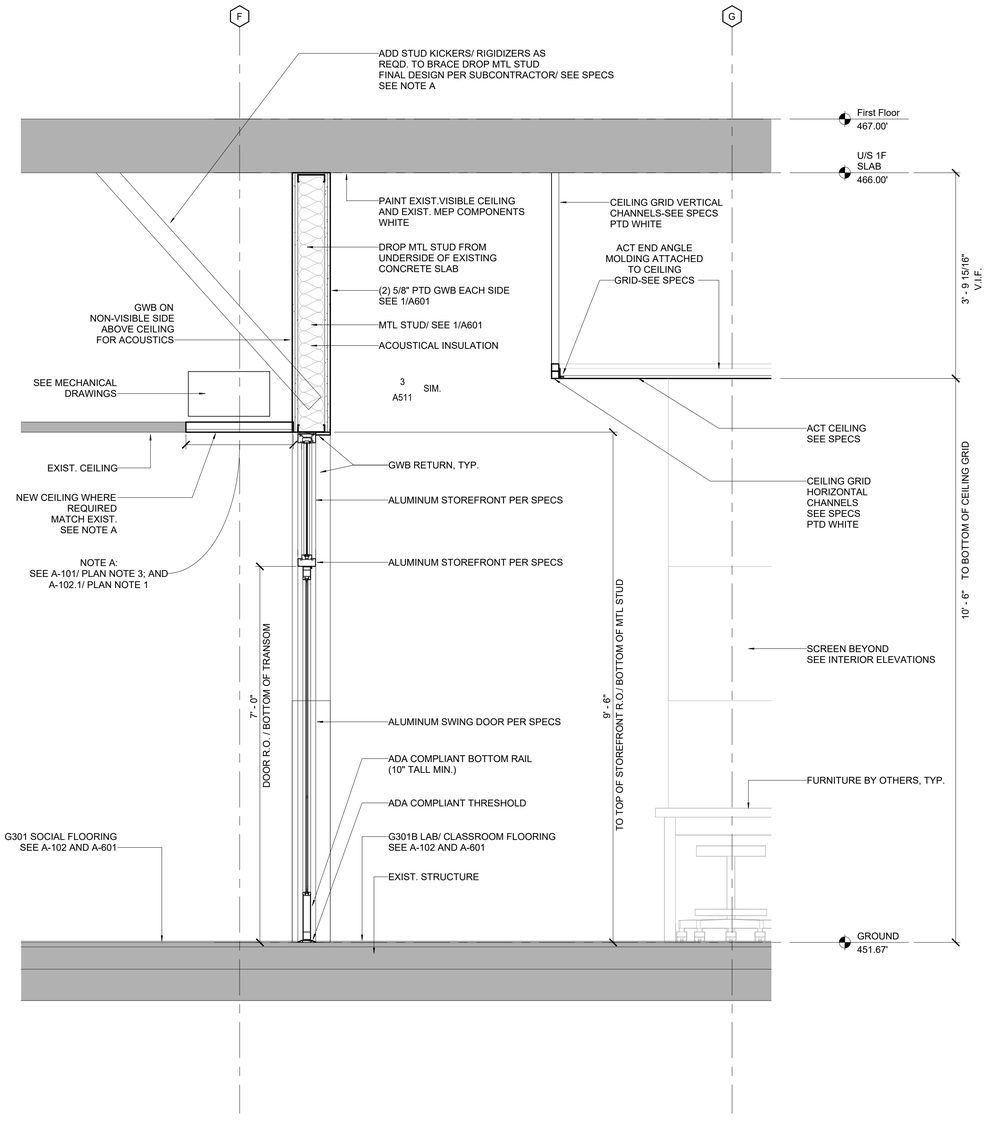
NEW WORK RCP



REFER TO 1/A221 FOR TYPICAL NOTES AND DIMENSIONS

0 2 4 FT

2 SECTION 02
3/4" = 1' - 0"



0 2 4 FT

1 SECTION 01
3/4" = 1' - 0"

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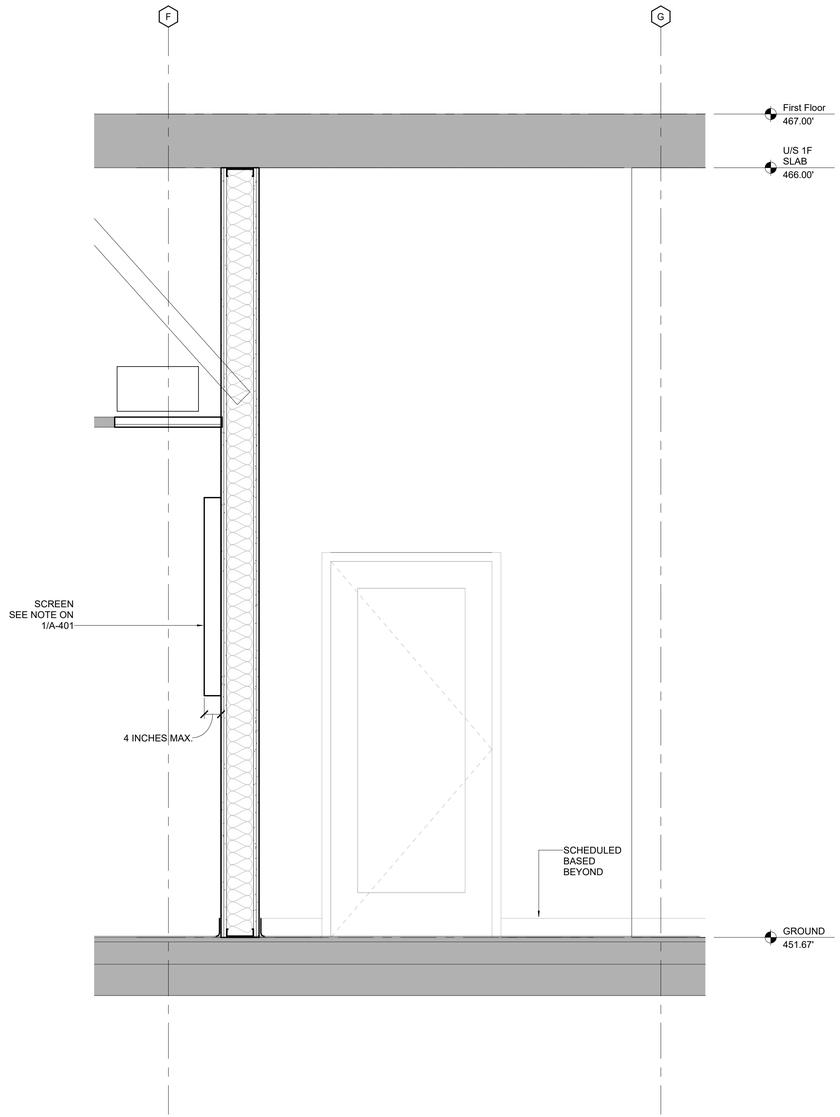
A221

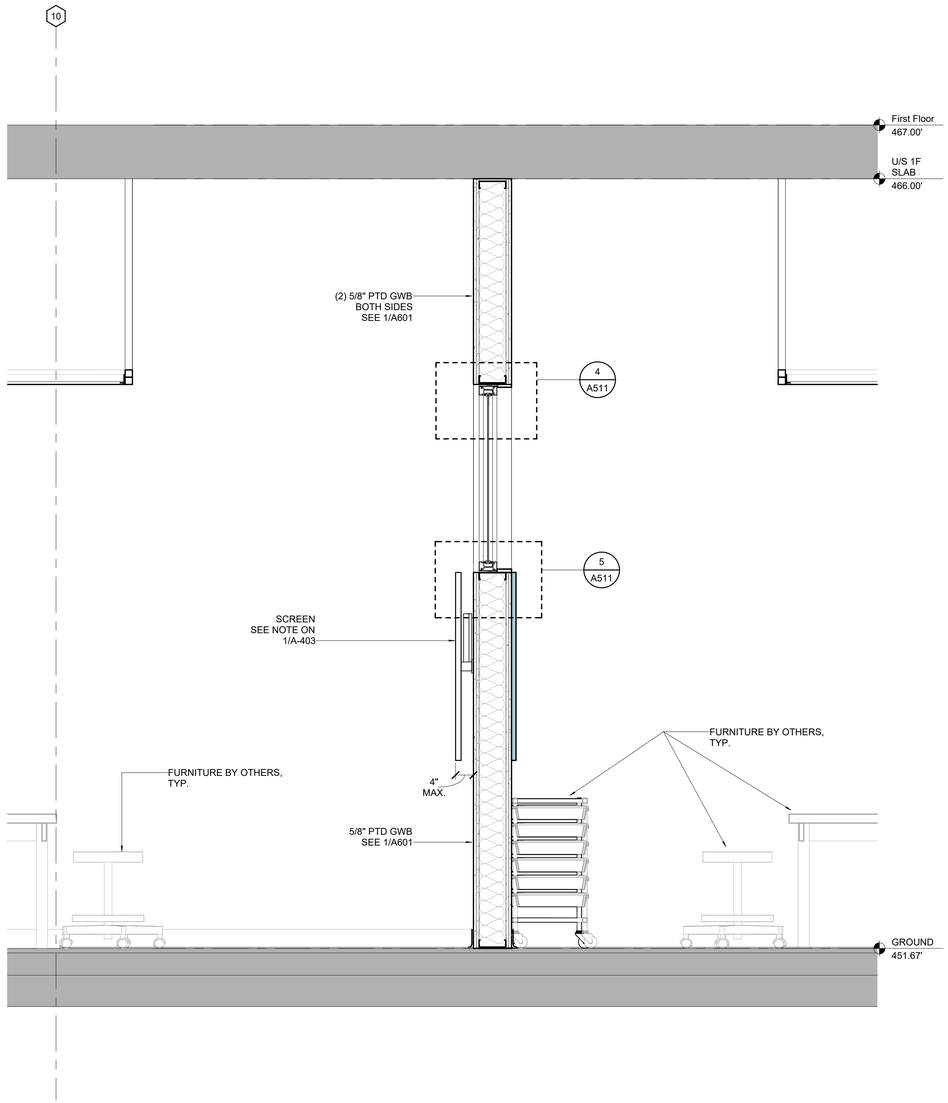
WALL SECTIONS 1



0 2 4 FT

REFER TO 1 &2 /A221 FOR TYPICAL NOTES AND DIMENSIONS

2 SECTION 03
3/4" = 1' - 0"



0 2 4 FT

REFER TO 1 &2 /A221 FOR TYPICAL NOTES AND DIMENSIONS

1 SECTION 04
3/4" = 1' - 0"

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Construction Set 11/17/25

CONSTRUCTION SET

JOSE R NOYA
REGISTERED ARCHITECT
11/17/2025
15566
NORTH CAROLINA
CARRBORO, NC

CLIENT NAME
THE UNIVERSITY OF NORTH CAROLINA AT CHAPEL HILL

JOB NAME
UNC VENABLE HALL LOWER LEVEL UPFIT

LOCATION
VENABLE HALL LOWER LEVEL
101 South Rd
CHAPEL HILL, NC 27514

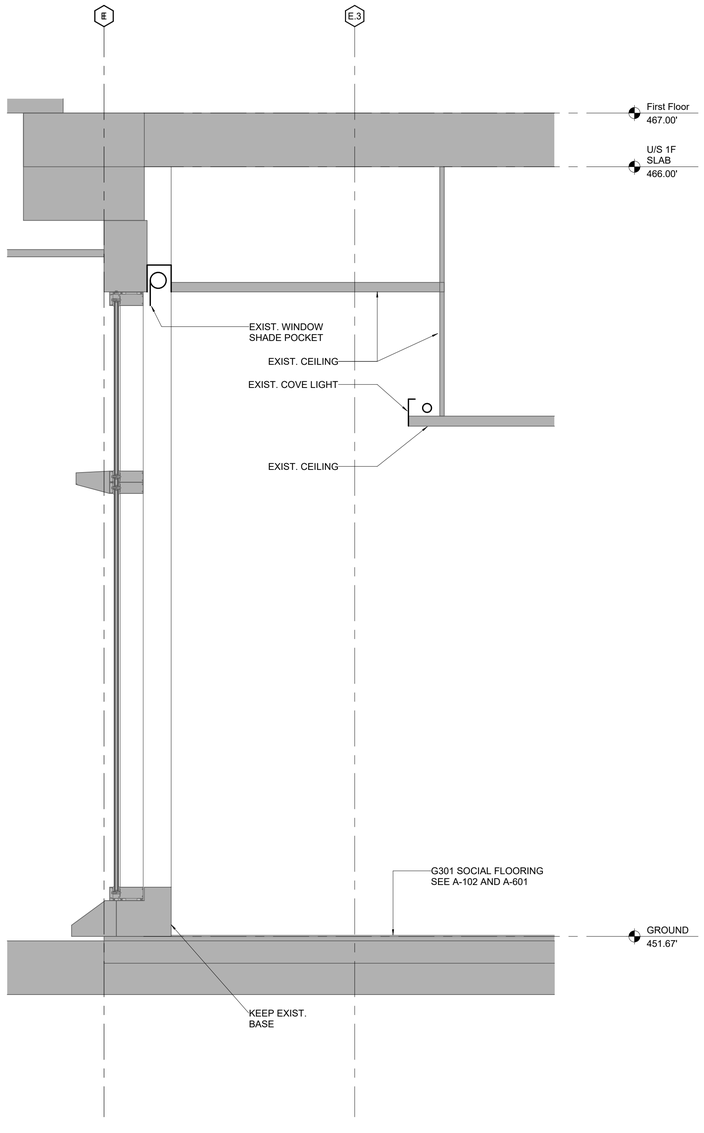
ISSUE DATE
5-21-25

JOB NO.
N092

SCO # 24-28389-01A

A222

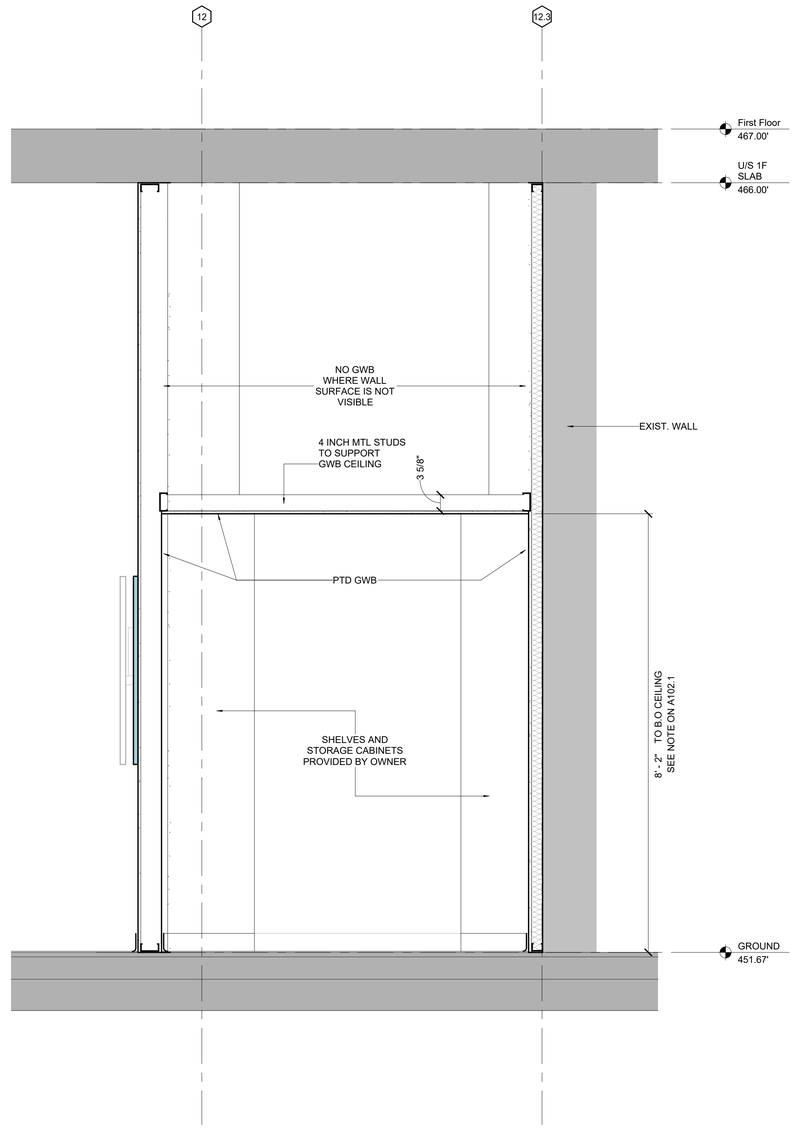
WALL SECTIONS 2



0 2 4 FT

REFER TO 1/A221 FOR TYPICAL NOTES AND DIMENSIONS

2 SECTION 06
3/4" = 1' - 0"



0 2 4 FT

REFER TO 1/A221 FOR TYPICAL NOTES AND DIMENSIONS

1 SECTION 05
3/4" = 1' - 0"

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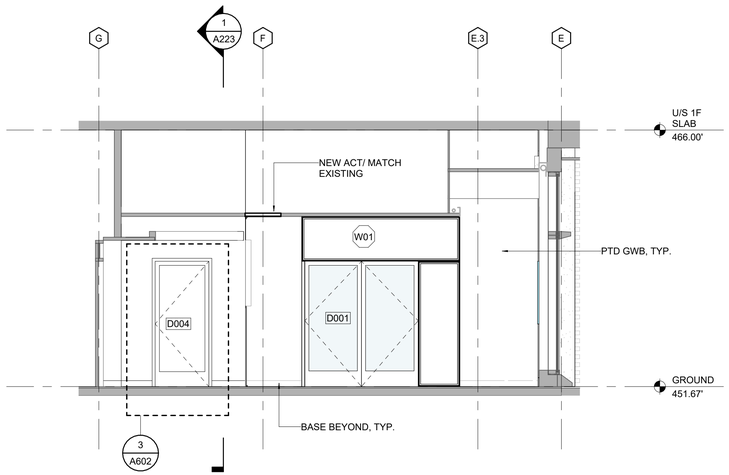
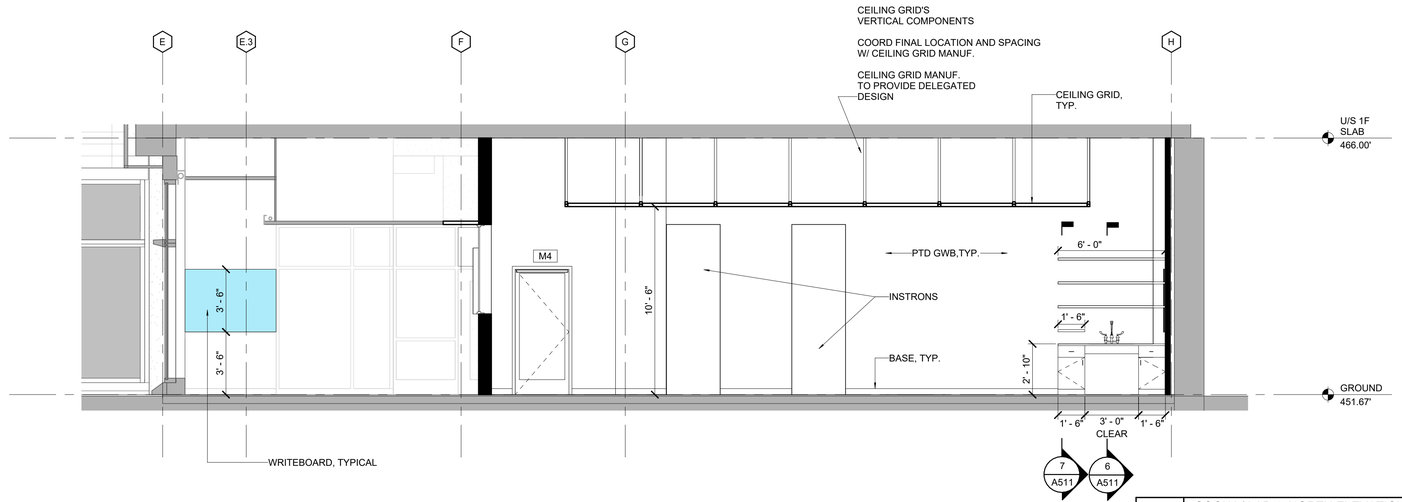
WALL SECTIONS 3



SEE 1/A401 FOR TYPICAL NOTES

4 SOCIAL SOUTH ELEVATION

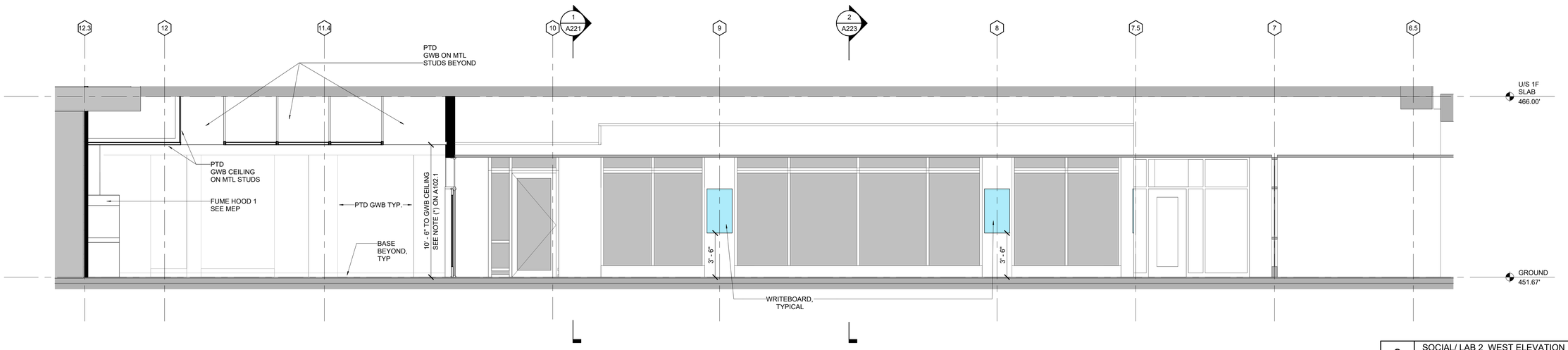
1/4" = 1'-0" 0 4 8 FT



SEE 1/A401 FOR TYPICAL NOTES

3 SOCIAL/ LAB 1 NORTH ELEVATION

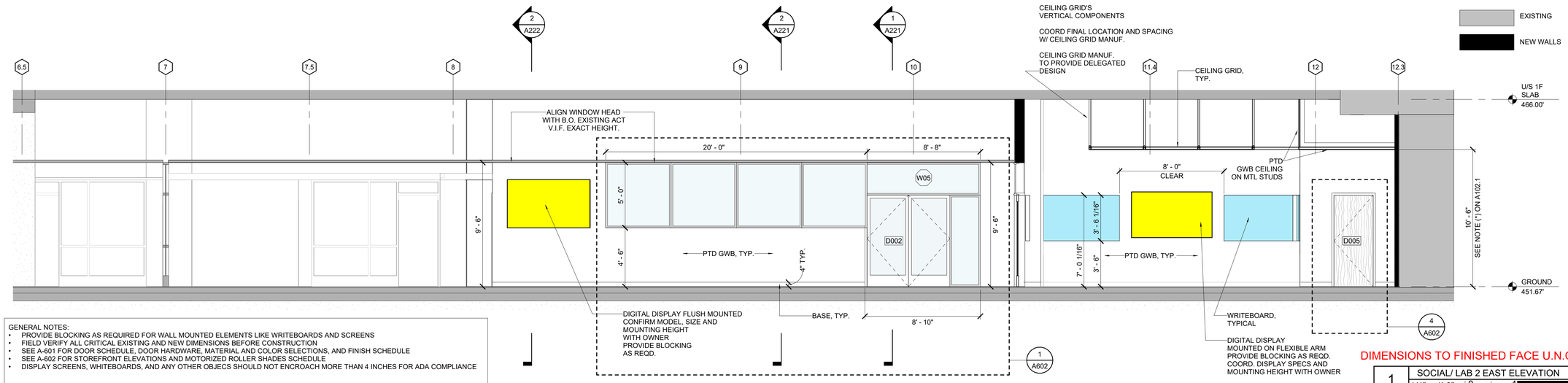
1/4" = 1'-0" 0 4 8 FT



SEE 1/A401 FOR TYPICAL NOTES

2 SOCIAL/ LAB 2 WEST ELEVATION

1/4" = 1'-0" 0 4 8 FT



GENERAL NOTES:

- PROVIDE BLOCKING AS REQUIRED FOR WALL MOUNTED ELEMENTS LIKE WRITEBOARDS AND SCREENS
- FIELD VERIFY ALL CRITICAL EXISTING AND NEW DIMENSIONS BEFORE CONSTRUCTION
- SEE A-601 FOR DOOR SCHEDULE, DOOR HARDWARE, MATERIAL AND COLOR SELECTIONS, AND FINISH SCHEDULE
- SEE A-602 FOR STOREFRONT ELEVATIONS AND MOTORIZED ROLLER SHADES SCHEDULE
- DISPLAY SCREENS, WHITEBOARDS, AND ANY OTHER OBJECTS SHOULD NOT ENCROACH MORE THAN 4 INCHES FOR ADA COMPLIANCE

DIMENSIONS TO FINISHED FACE U.N.O.

1 SOCIAL/ LAB 2 EAST ELEVATION

1/4" = 1'-0" 0 4 8 FT

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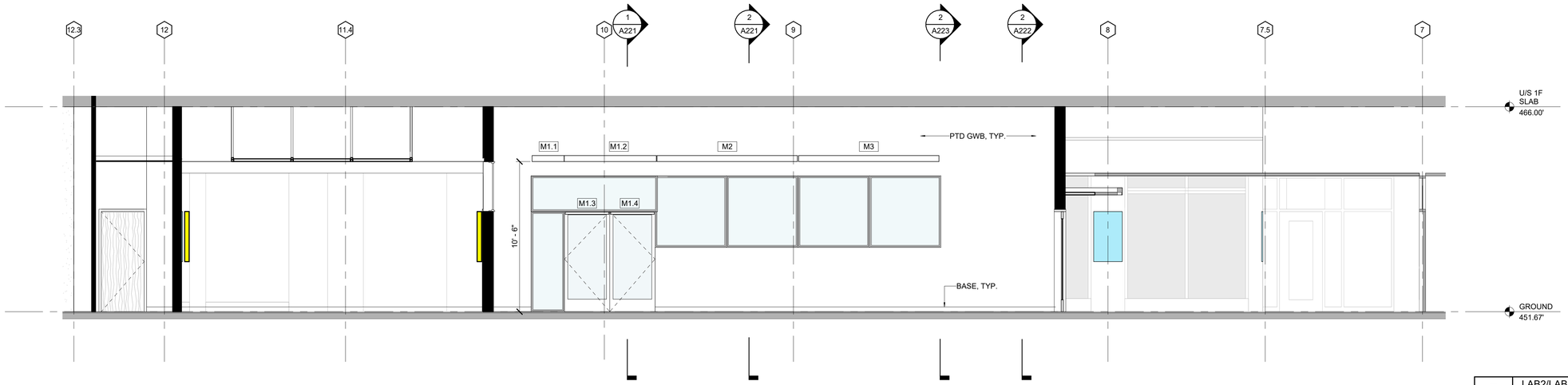
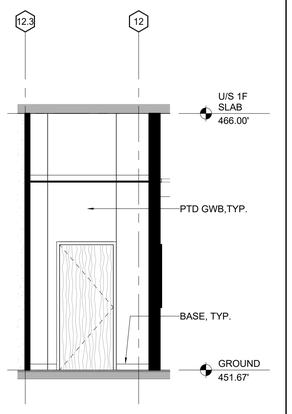
A401

INTERIOR
ELEVATIONS 1



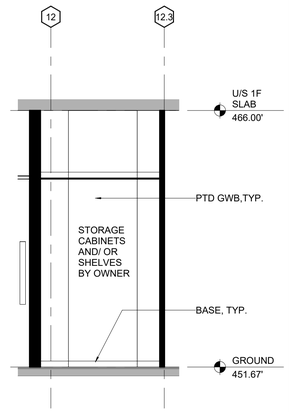
SEE 1&2/A401 AND 1&6/A402 FOR TYPICAL NOTES

7 LAB2/LAB1/SOCIAL WEST ELEV.
1/4" = 1'-0" 0 4 8 FT



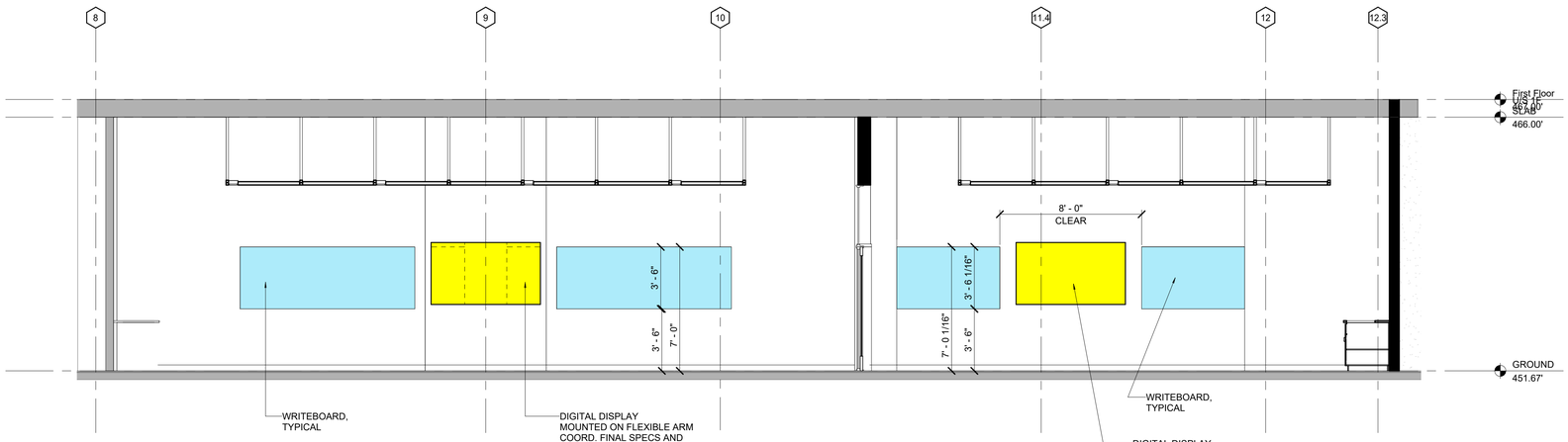
SEE 1/A401 & 2/A-402 FOR TYPICAL NOTES

6 STORAGE WEST
1/4" = 1'-0" 0 4 8 FT



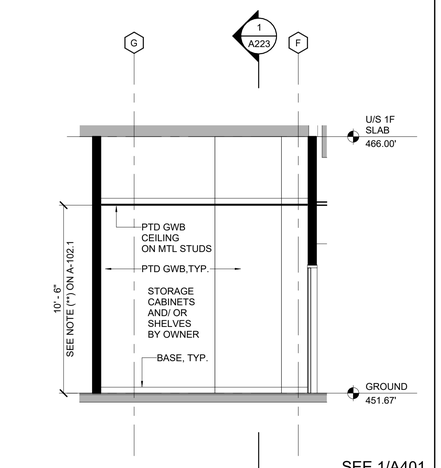
SEE 1/A401 & 2/A-402 FOR TYPICAL NOTES

5 STORAGE EAST
1/4" = 1'-0" 0 4 8 FT



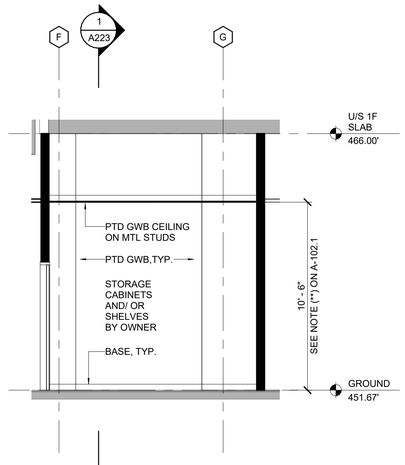
SEE 1/A401 FOR TYPICAL NOTES

4 LAB1/LAB2 EAST ELEVATION
1/4" = 1'-0" 0 4 8 FT



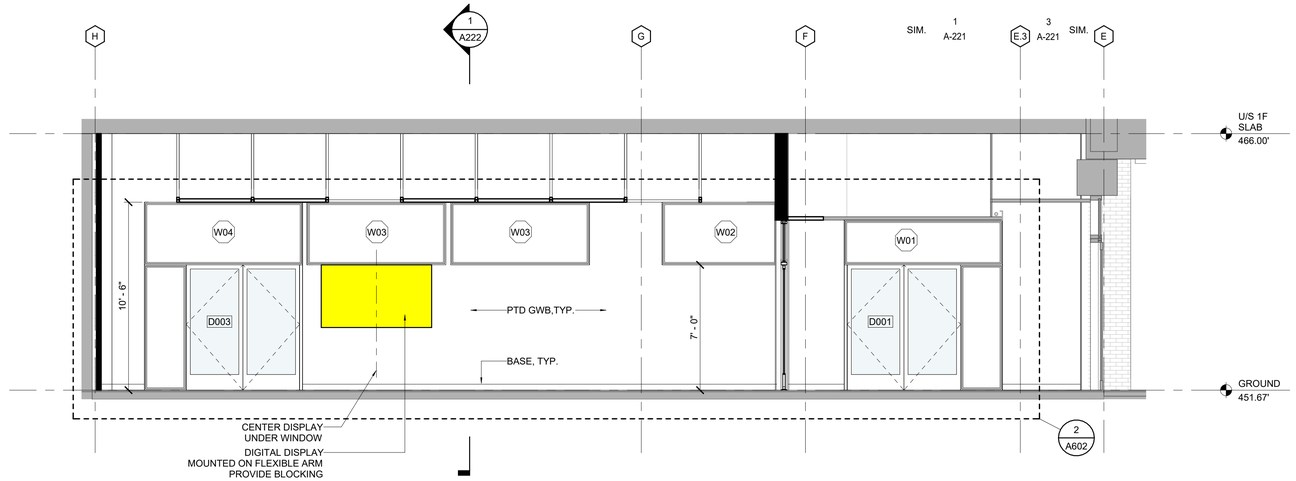
SEE 1/A401 FOR TYPICAL NOTES

3 STORAGE SOUTH
1/4" = 1'-0" 0 4 8 FT



SEE 1/A401 FOR TYPICAL NOTES

2 STORAGE NORTH
1/4" = 1'-0" 0 4 8 FT



SEE A401 FOR GENERAL NOTES
SEE 1& 4/A401 FOR TYPICAL NOTES

1 SOCIAL/ LAB 1 SOUTH ELEVATION
1/4" = 1'-0" 0 4 8 FT

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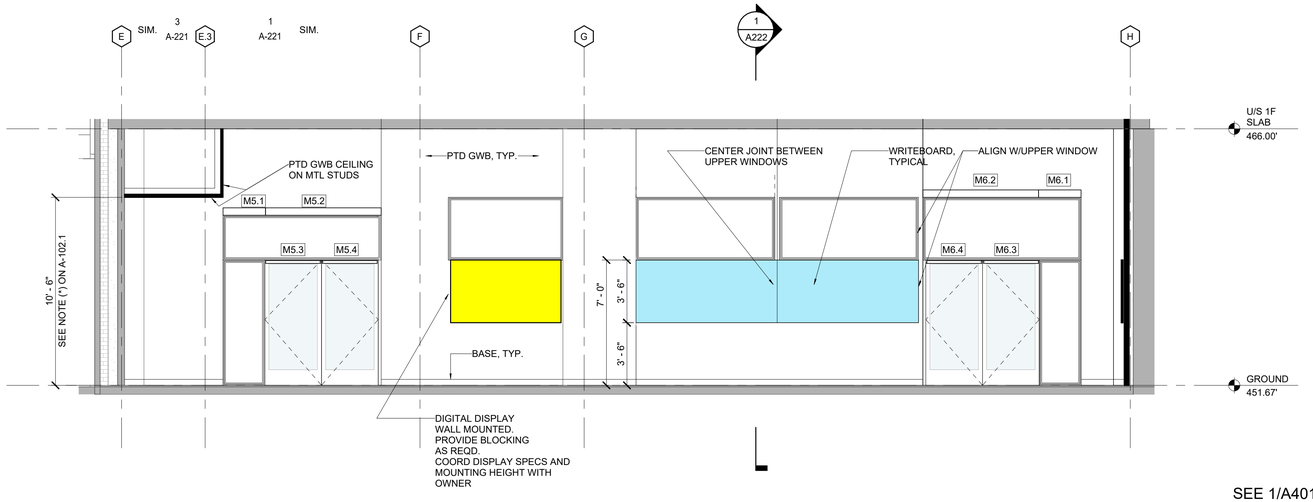
A402

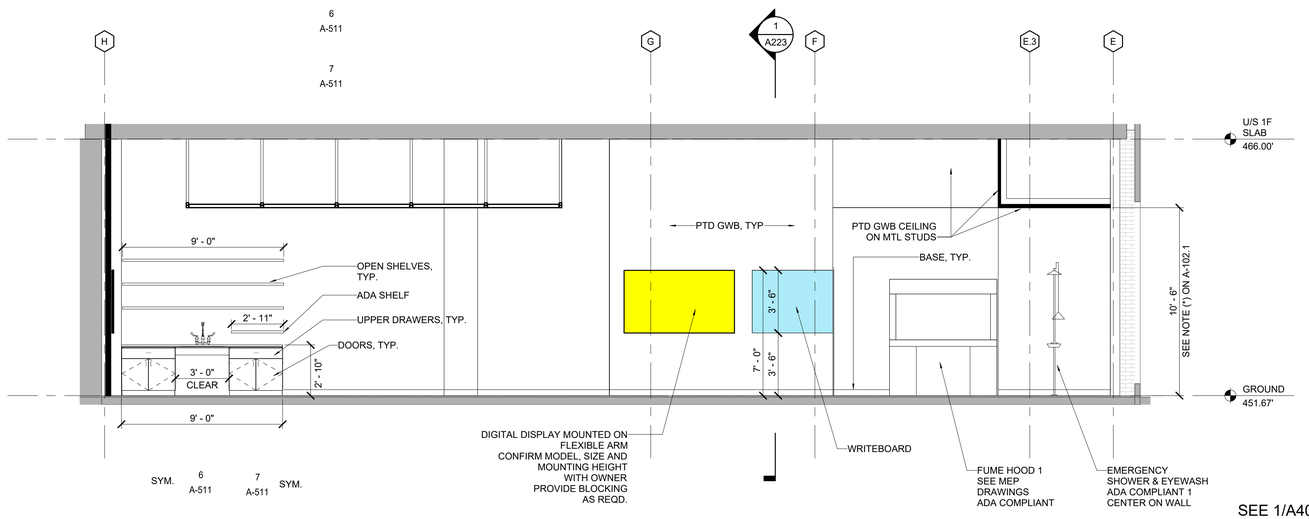
INTERIOR ELEVATIONS 2



SEE 1/A401 FOR TYPICAL NOTES

4 LAB 2 NORTH ELEVATION

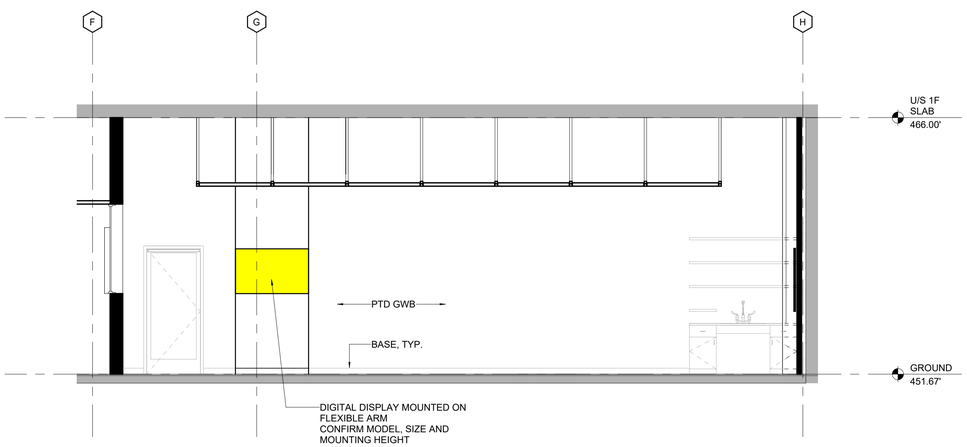
1/4" = 1'-0" 0 4 8 FT



SEE 1/A401 FOR TYPICAL NOTES

3 LAB 2 SOUTH ELEVATION

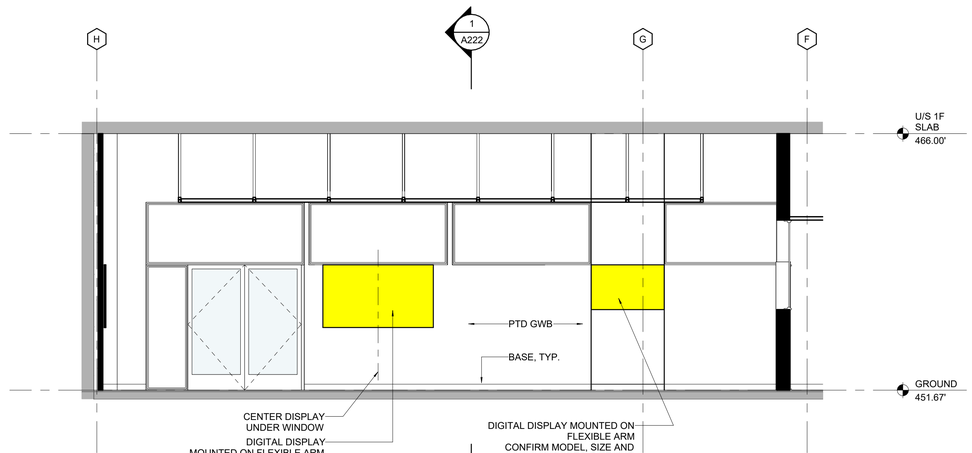
1/4" = 1'-0" 0 4 8 FT



SEE 1& 3/A401 FOR TYPICAL NOTES

2 LAB1/ INTERIOR COLUMN NORTH

1/4" = 1'-0" 0 4 8 FT



SEE A401 FOR GENERAL NOTES

SEE 1/A401 AND 1/402 FOR TYPICAL NOTES

1 LAB1/ INTERIOR COLUMN SOUTH

1/4" = 1'-0" 0 4 8 FT

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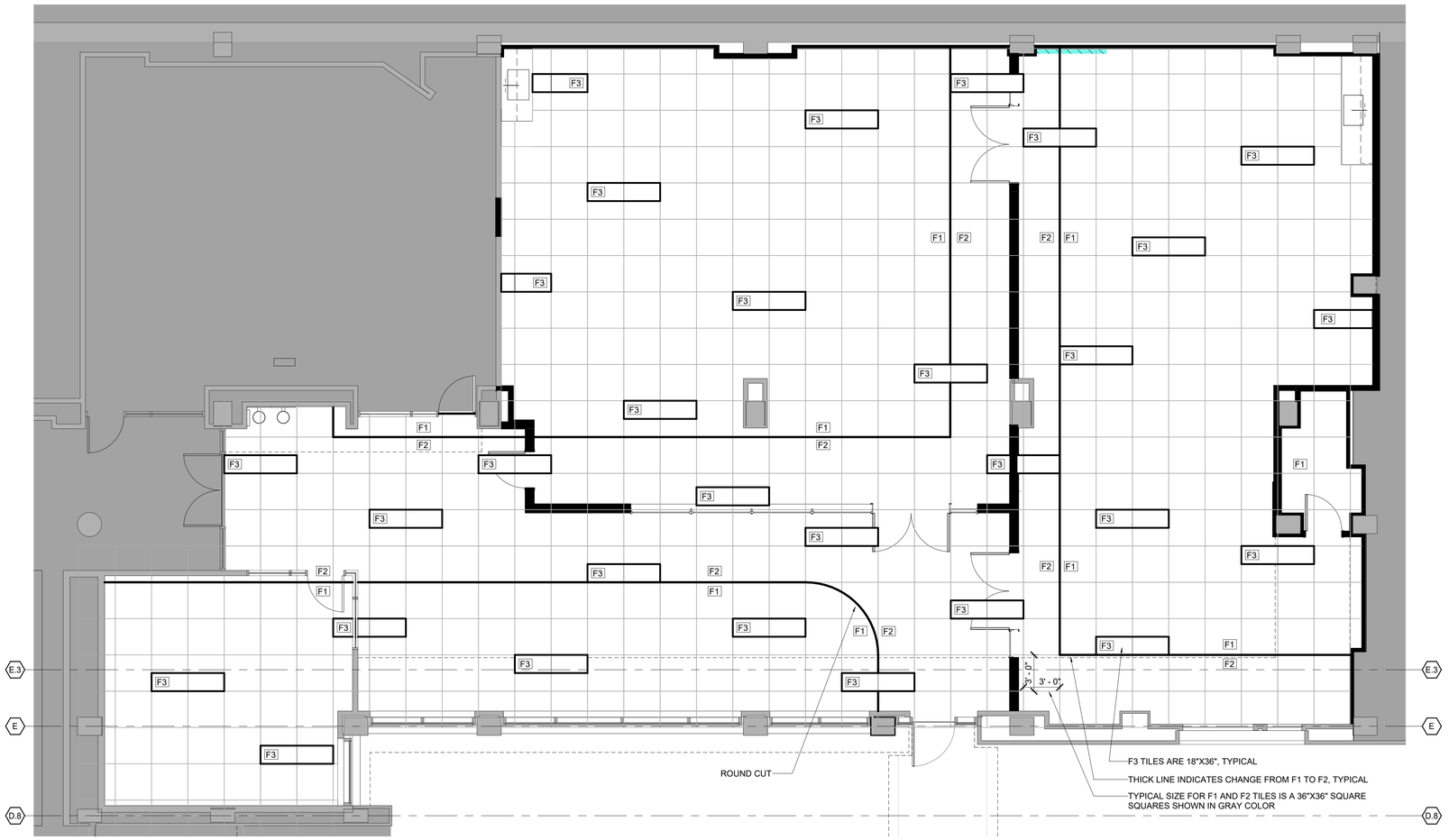
SCO # 24-28389-01A

A403

INTERIOR
ELEVATIONS 3

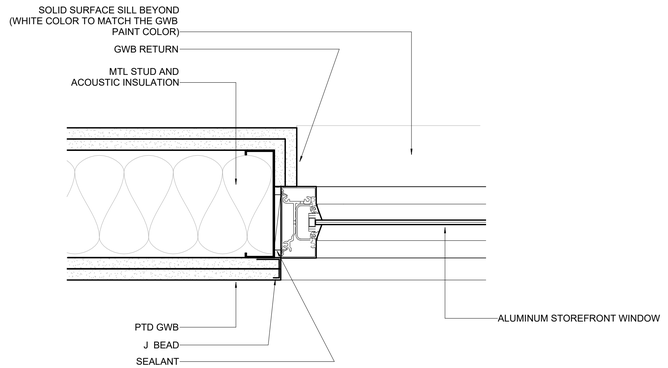


ALL JOINTS ARE WELDED AND SEAMLESS. SEE FLOORING SPECS

THIS FLOORING LAYOUT IS PRELIMINARY AND FOR BIDDING PURPOSES. MINOR ADJUSTMENTS TO THE FINAL PATTERN DESIGN MAY BE NEEDED BEFORE CONSTRUCTION. COORDINATE FINAL PATTERN WITH ARCHITECT

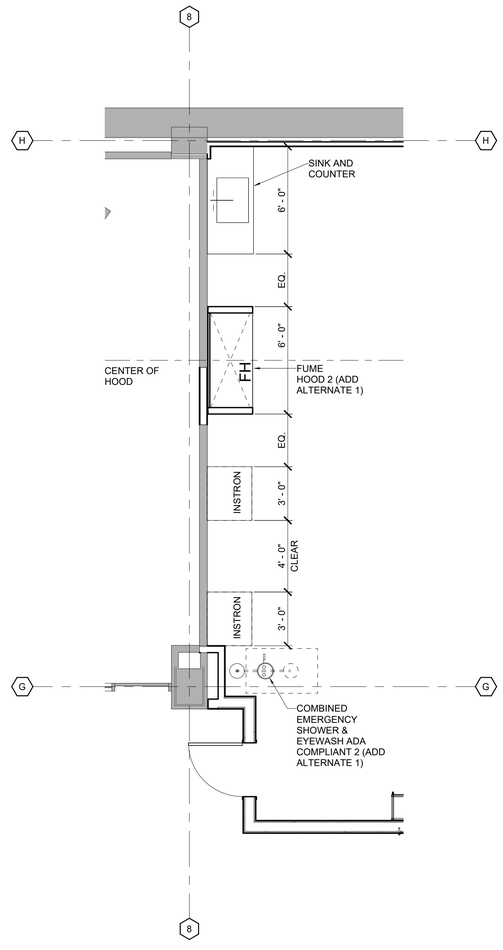
SEE A-601 AND A-102

3 FLOOR PATTERN
3/16" = 1'-0"



0 6 12 IN

2 STOREFRONT PLAN DETAIL
3" = 1' - 0"



SEE A102 FOR TYPICAL NOTES AND LEGEND

1 ADD ALTERNATE 1-SECOND HOOD
1/4" = 1'-0"

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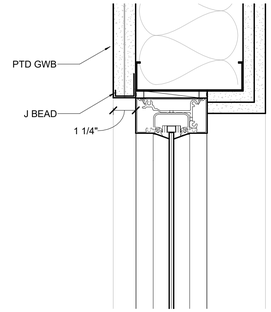
A501

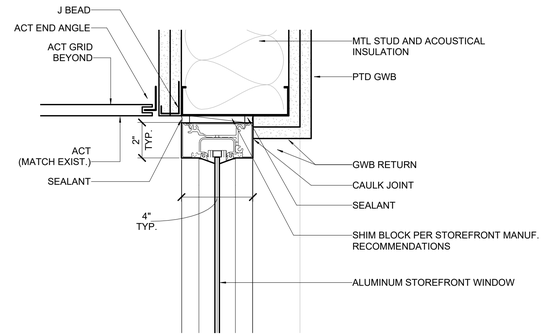
PLAN DETAILS



SEE 3/A-511 FOR GENERAL NOTES

0 6 12 IN

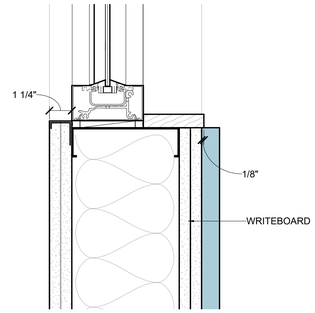
4	STOREFRONT HEAD 2
	3" = 1' - 0"



SEE 6/A-511 FOR ALTERNATIVE DETAIL WITH SHADES
CONFIRM WITH OWNER NUMBER AND LOCATION OF SHADES

0 6 12 IN

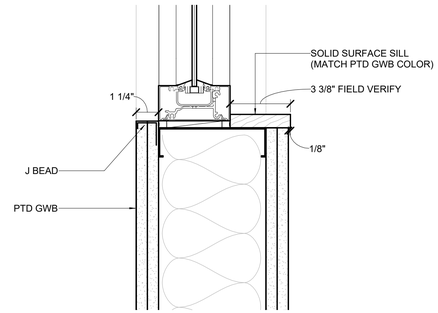
3	STOREFRONT HEAD DETAIL
	3" = 1' - 0"



SEE 2/A-511 FOR GENERAL NOTES

0 6 12 IN

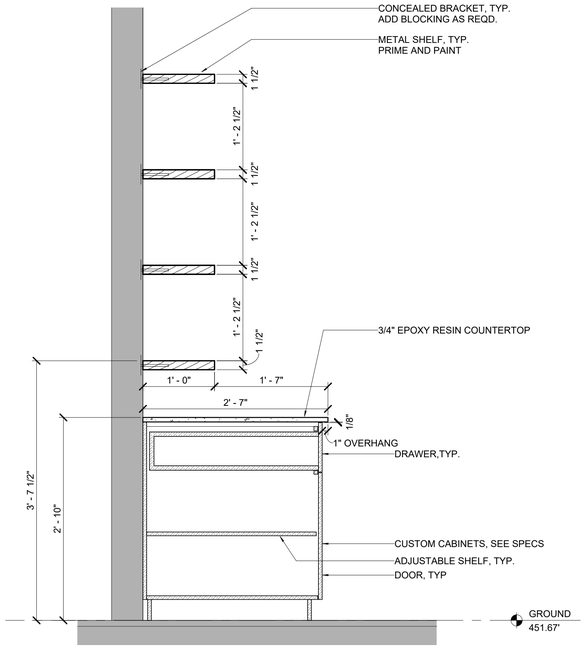
5	STOREFRONT SILL 2
	3" = 1' - 0"



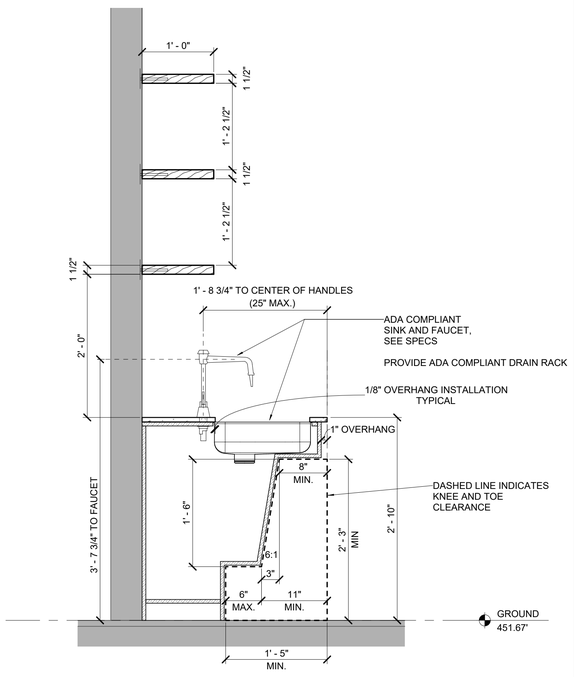
SEE 3/A-511 FOR GENERAL NOTES

0 6 12 IN

2	STOREFRONT SILL DETAIL
	3" = 1' - 0"



7	BUILT-IN CABINET SECTION 2
	1" = 1' - 0"



SEE 7/511 FOR TYPICAL NOTES

6	BUILT-IN CABINET SECTION 1
	1" = 1' - 0"

1	NOT USED

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A511

SECTION DETAILS

FINISH SCHEDULE

SPACE	FLOOR	BASE	WALLS		CEILING		REMARKS
			MATERIAL/COMPONENT	FINISH	MATERIAL/COMPONENT	FINISH	
G301 SOCIAL	F1, F2, F3 SEE 1/A102 & 3/A501	EXISTING AND B1	GWB	PT01	ACT AREA (WHERE PATCHING IS REQD.)	MATCH EXISTING ACT AS REQD.	1
					GWB CEILING AREA	PT01	
G301A OFFICE	F1, F3 SEE 1/A102 & 3/A501	EXISTING	GWB	PT01	ACT AREA (WHERE PATCHING IS REQD.)	MATCH EXISTING ACT AS REQD.	
					GWB CEILING AREA	PT01	
G301B TEACHING LAB	F1, F2, F3 SEE 1/A102 & 3/A501	B2	GWB	PT01	OPEN CEILING AND MEP/FP COMPONENTS	PT02 (WHERE VISIBLE)	2
					STRUCTURAL GRID	PT02	
					NEW ACT	REFER TO A-102.1 AND SPECS	
G301C TEACHING LAB	F1, F2, F3 SEE 1/A102 & 3/A501	B2	GWB	PT01	OPEN CEILING AND MEP/FP COMPONENTS	PT02 (WHERE VISIBLE)	2
					STRUCTURAL GRID	PT02	
					NEW ACT	REFER TO A-102.1 AND SPECS	
					GWB CEILING AREA	PT01	
G301D STORAGE	F1 SEE 1/A102 & 3/A501	B2	GWB	PT01	GWB CEILING AREA	PT01	

REMARKS

1. WALL GRAPHICS TO BE INSTALLED BY OTHERS
2. IN OPEN-CEILING AREAS, WALLS AND WALL PAINT CONTINUE TO DECK ABOVE, USE PT02 FOR OTHER ELEMENTS TO BE PAINTED IN CEILING ZONE.

MATERIAL AND COLOR SELECTIONS

WOOD AND WOOD VENEER:

WD01:
RIFT SAWN WHITE OAK, LINEAR GRAIN DIRECTION AS DESCRIBED IN THE DRAWINGS / MATCH EXISTING WOOD GRAIN
FINAL APPROVAL OF ALL WOOD ELEMENTS TO BE MADE BY OWNER AND ARCHITECT FROM PHYSICAL SAMPLES SUBMITTED BY THE GENERAL CONTRACTOR

PAINT COLORS:

PT01 SHERWIN WILLIAMS PURE WHITE SW 7005

PT02 WHITE DRYFALL PAINT, COLOR SW 7005

FLOORING:

F1 36"X36" HVT SHAW MONTAGE FUSE, 84518

F2 36"X36" HVT SHAW MONTAGE ASSEMBLE 84761

F3 36"X36" HVT SHAW MONTAGE BLEND 84447. CUT IT HALF TO CREATE 18"X36" PIECES, AND WELD THEM TOGETHER TO CREATE 18"X72" RECTANGLES

BASE:

B1 4" RESILIENT COVE BASE, DARK GRAY FINISH TO BE SELECTED BY THE ARCHITECT FROM THE MANUFACTURER'S FULL RANGE. SEE SPECS

B2 4" RESILIENT COVE BASE, DARK GRAY FINISH TO BE SELECTED BY THE ARCHITECT FROM THE MANUFACTURER'S FULL RANGE. SEE SPECS

PRODUCT MATERIAL/COLOR SELECTIONS:

STOREFRONT WINDOW SYSTEM: CLEAR ANODIZED

GLASS WRITABLE SURFACE: COLOR TO BE SELECTED BY OWNER AND ARCHITECT FROM MANUFACTURER'S FULL RANGE OF COLORS

HVT FLOORING: F1, F2, AND F3 COLORS AND PATTERNS TO BE APPROVED BY OWNER DURING INTERIOR DESIGN STAGE PRIOR TO CONSTRUCTION.

DOOR SCHEDULE

DOOR NO.	W	H	RATING	MAT		FINISH		HEAD	JAMB	DESCRIPTION	REMARKS
				DOOR	FRM	DOOR	FRM				
D001	6'-4" (PR OF 3'-2")	7'-0"	N/A	AL	AL	ANODIZED	ANODIZED	1 / A221 SIM.	PER MANUF.	ALUMINUM STOREFRONT DOOR, FULL LITE, ADA COMPLIANT	1,2,3,4,9,11,12
D002	6'-4" (PR OF 3'-2")	7'-0"	N/A	AL	AL	ANODIZED	ANODIZED	1 / A221	PER MANUF.	ALUMINUM STOREFRONT DOOR, FULL LITE, ADA COMPLIANT	1,2,3,4,8,11,12
D003	6'-4" (PR OF 3'-2")	7'-0"	N/A	AL	AL	ANODIZED	ANODIZED	1 / A221 SIM.	PER MANUF.	ALUMINUM STOREFRONT DOOR, FULL LITE, ADA COMPLIANT	1,2,3,4,5,10,11,12
D004	3'-0"	7'-0"	N/A	AL	AL	ANODIZED	ANODIZED	PER MANUF.	PER MANUF.	ALUMINUM STOREFRONT DOOR, FULL LITE, ADA COMPLIANT	1,2,3,4,7,11,12
D005	3'-0"	7'-0"	N/A	SC	HM	WD	WD	5/A-602	5/A-602	SC WD DOOR, FLUSH SLAB, VERTICAL GRAIN, MATCH EXISTING DOORS	1,2,3,4,6

DOOR REMARKS:

1. PROVIDE AUTOMATIC CLOSER
2. SIGNAGE SHOULD ADHERE TO UNC STANDARDS
3. COORDINATE CARD READER ACCESS WITH THE OWNER
4. SEE "DOOR HARDWARE" BELOW
5. THIS DOOR CANNOT BE LOCKED BECAUSE A PERCENTAGE OF THE OCCUPANTS IN ROOM G301C NEED TO BE ABLE TO EGRESS THROUGH ROOM G301B (SEE A002)
6. SEE 6/A-602 FOR DOOR FRAME PROFILE
7. DOOR AND FRAMES TO MATCH THE STOREFRONT SYSTEM'S DOORS AND FRAMES (W05-D002; W01-D001; W04-D003)
8. THIS DOOR IS ATTACHED TO STOREFRONT UNIT "W05"; SEE 1/A-602
9. THIS DOOR IS ATTACHED TO STOREFRONT UNIT "W01"; SEE 2/A-602
10. THIS DOOR IS ATTACHED TO STOREFRONT UNIT "W04"; SEE 2/A-602
11. EXIT DEVICE, PANIC HARDWARE / COORDINATE WITH ELECTRICAL-LOW VOLTAGE INSTALLATION AS REQUIRED. SEE RISER DIAGRAMS ATTACHED TO SPEC SECTION "DOOR HARDWARE" 087100
12. DOOR AND HARDWARE TO BE ADA COMPLIANT

ABBREVIATIONS

PR:	PAIR OF DOORS
UPR:	UNEVEN PAIR OF DOORS
T:	THICKNESS
MAT:	MATERIAL
WD:	WOOD
AL:	ALUMINUM
GL:	GLASS
ST:	STEEL
FIN:	FINISH
PT:	PAINTED
STN:	STAINED
HW:	HEAD WIDTH
FRM:	FRAME
HM:	HOLLOW METAL DOOR
SC:	SOLID CORE COMMERCIAL DOOR

DOOR HARDWARE

SEE PROJECT MANUAL SPEC SECTION 08 71 00 – DOOR HARDWARE

D001 - HARDWARE SET #3

D002 - HARDWARE SET #3

D003 - HARDWARE SET #3

D004 - HARDWARE SET #2

D005 - HARDWARE SET #1

.

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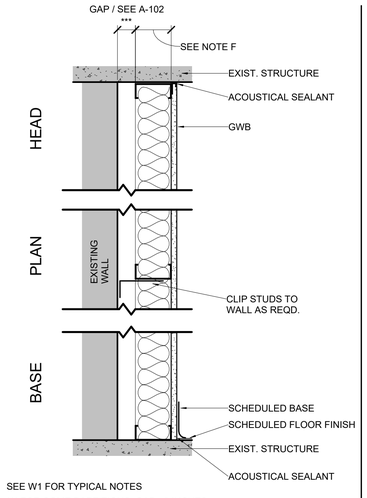


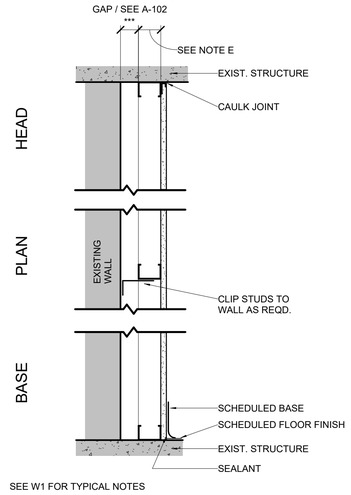
SEE W1 FOR TYPICAL NOTES

*** FOR SOME PARTITIONS, GAP= 0 INCHES
SEE A-102 FOR GAP DIMENSION

W7 NOTE F: 2 1/2" MTL STUD FURRING 16" O.C. / PER SPECS; WITH ACOUSTIC INSULATION

W8 NOTE F: 4" MTL STUD, 16" O.C./ PER SPECS; WITH ACOUSTIC INSULATION

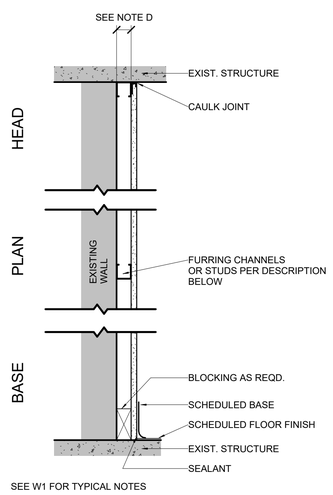
W9 NOTE F: 6" MTL STUD, 16" O.C./ PER SPECS; WITH ACOUSTIC INSULATION



SEE W1 FOR TYPICAL NOTES

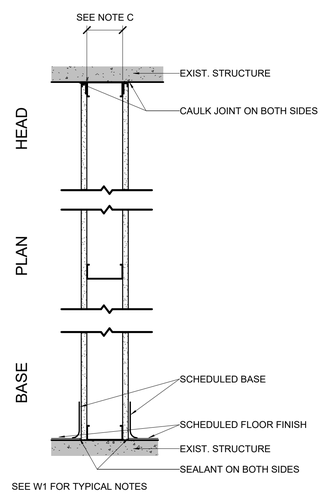
*** FOR SOME PARTITIONS, GAP= 0 INCHES
SEE A-102 FOR GAP DIMENSION

W6 **NOTE E:** 2 1/2" MTL STUD FURRING 16" O.C./ PER SPECS. NO ACOUSTICAL INSULATION



SEE W1 FOR TYPICAL NOTES

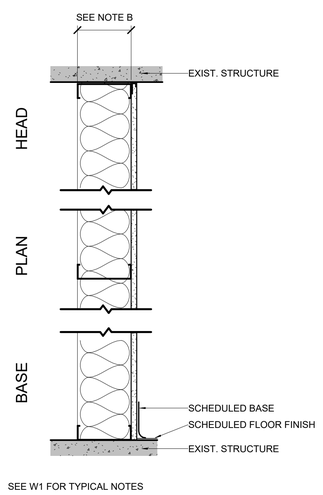
W5 **NOTE D**: 1 5/8" FURRING CHANNELS 16" O.C. / PER SPECS. NO ACOUSTICAL INSULATION



SEE W1 FOR TYPICAL NOTES

W4 **NOTE C**: 4" STUD, 16" O.C./ PER SPECS; WITH NO ACOUSTICAL INSULATION; GWB ON BOTH SIDES

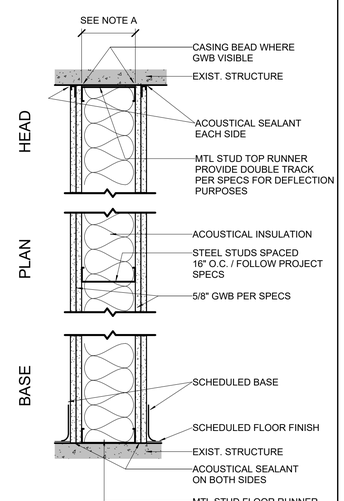
W4B **NOTE C**: 6" STUD, 16" O.C./ PER SPECS; WITH NO ACOUSTICAL INSULATION; GWB ON BOTH SIDES



SEE W1 FOR TYPICAL NOTES

W2 **NOTE B**: 4" MTL STUD, 16" O.C./ PER SPECS; ACOUSTIC INSULATION; GWB ON ONE SIDE ONLY

W3 **NOTE B**: 6" MTL STUD, 16" O.C./ PER SPECS; WITH ACOUSTIC INSULATION; GWB ON ONE SIDE ONLY



W1 **NOTE A**: 6" MTL STUD, 16" O.C./ PER SPECS; WITH ACOUSTIC INSULATION. GWB ON BOTH SIDES

- STC 50-55 (MAX. FOR PRIVACY SPACES PER UNC STANDARDS)
- 25 GAUGE

2 INTERIOR WALL SCHEDULE
1 1/2" = 1' - 0"

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JOB NAME
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LOCATION
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ISSUE DATE
5-21-25

JOB. NO.
N092

SCO # 24-28389-01A

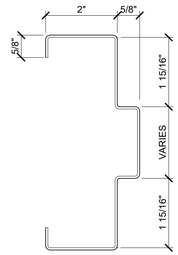
A601

SCHEDULES

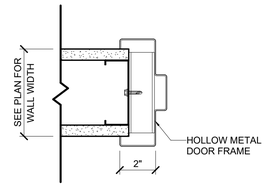
ROLLER SHADES SCHEDULE

TAG	DRAWINGS	DESCRIPTION	FINISH	DRAPERY SELECTION	NOTES
M1.1	7/A-402 & 1/A-102.1	ROLLER SHADE, SINGLE ROLLER, ALUMINUM FASCIA AND END CAPS	WHITE	BLACKOUT FABRIC, FINAL SELECTION BY ARCHITECT	MANUAL CHAIN SIMILAR TO EXISTING SHADES
M1.2	7/A-402 & 1/A-102.1	ROLLER SHADE, SINGLE ROLLER, ALUMINUM FASCIA AND END CAPS	WHITE	BLACKOUT FABRIC, FINAL SELECTION BY ARCHITECT	MANUAL CHAIN SIMILAR TO EXISTING SHADES
M1.3	7/A-402 & 1/A-102.1	ROLLER SHADE, SINGLE ROLLER, ALUMINUM FASCIA AND END CAPS	WHITE	BLACKOUT FABRIC, FINAL SELECTION BY ARCHITECT	MANUAL CHAIN SIMILAR TO EXISTING SHADES
M1.4	7/A-402 & 1/A-102.1	ROLLER SHADE, SINGLE ROLLER, ALUMINUM FASCIA AND END CAPS	WHITE	BLACKOUT FABRIC, FINAL SELECTION BY ARCHITECT	MANUAL CHAIN SIMILAR TO EXISTING SHADES
M2	7/A-402 & 1/A-102.1	ROLLER SHADE, SINGLE ROLLER, ALUMINUM FASCIA AND END CAPS	WHITE	BLACKOUT FABRIC, FINAL SELECTION BY ARCHITECT	MANUAL CHAIN SIMILAR TO EXISTING SHADES
M3	7/A-402 & 1/A-102.1	ROLLER SHADE, SINGLE ROLLER, ALUMINUM FASCIA AND END CAPS	WHITE	BLACKOUT FABRIC, FINAL SELECTION BY ARCHITECT	MANUAL CHAIN SIMILAR TO EXISTING SHADES
M4	3/A-401 & 1/A-102.1	ROLLER SHADE, SINGLE ROLLER, ALUMINUM FASCIA AND END CAPS	WHITE	BLACKOUT FABRIC, FINAL SELECTION BY ARCHITECT	MANUAL CHAIN SIMILAR TO EXISTING SHADES
M5.1	4/A-403 & 1/A-102.1	ROLLER SHADE, SINGLE ROLLER, ALUMINUM FASCIA AND END CAPS	WHITE	BLACKOUT FABRIC, FINAL SELECTION BY ARCHITECT	MANUAL CHAIN SIMILAR TO EXISTING SHADES
M5.2	4/A-403 & 1/A-102.1	ROLLER SHADE, SINGLE ROLLER, ALUMINUM FASCIA AND END CAPS	WHITE	BLACKOUT FABRIC, FINAL SELECTION BY ARCHITECT	MANUAL CHAIN SIMILAR TO EXISTING SHADES
M5.3	4/A-403 & 1/A-102.1	ROLLER SHADE, SINGLE ROLLER, ALUMINUM FASCIA AND END CAPS	WHITE	BLACKOUT FABRIC, FINAL SELECTION BY ARCHITECT	MANUAL CHAIN SIMILAR TO EXISTING SHADES
M5.4	4/A-403 & 1/A-102.1	ROLLER SHADE, SINGLE ROLLER, ALUMINUM FASCIA AND END CAPS	WHITE	BLACKOUT FABRIC, FINAL SELECTION BY ARCHITECT	MANUAL CHAIN SIMILAR TO EXISTING SHADES
M6.1	4/A-403 & 1/A-102.1	ROLLER SHADE, SINGLE ROLLER, ALUMINUM FASCIA AND END CAPS	WHITE	BLACKOUT FABRIC, FINAL SELECTION BY ARCHITECT	MANUAL CHAIN SIMILAR TO EXISTING SHADES
M6.2	4/A-403 & 1/A-102.1	ROLLER SHADE, SINGLE ROLLER, ALUMINUM FASCIA AND END CAPS	WHITE	BLACKOUT FABRIC, FINAL SELECTION BY ARCHITECT	MANUAL CHAIN SIMILAR TO EXISTING SHADES
M6.3	4/A-403 & 1/A-102.1	ROLLER SHADE, SINGLE ROLLER, ALUMINUM FASCIA AND END CAPS	WHITE	BLACKOUT FABRIC, FINAL SELECTION BY ARCHITECT	MANUAL CHAIN SIMILAR TO EXISTING SHADES
M6.4	4/A-403 & 1/A-102.1	ROLLER SHADE, SINGLE ROLLER, ALUMINUM FASCIA AND END CAPS	WHITE	BLACKOUT FABRIC, FINAL SELECTION BY ARCHITECT	MANUAL CHAIN SIMILAR TO EXISTING SHADES

GENERAL NOTES:
- SEE PROJECT MANUAL. COMPLY WITH UNC GUIDELINES
- ALL ROLLER SHADE CHAINS SHOULD BE WITHIN ADA OPERABLE REACH RANGES (15" AFF MINIMUM, 48" AFF MAXIMUM)

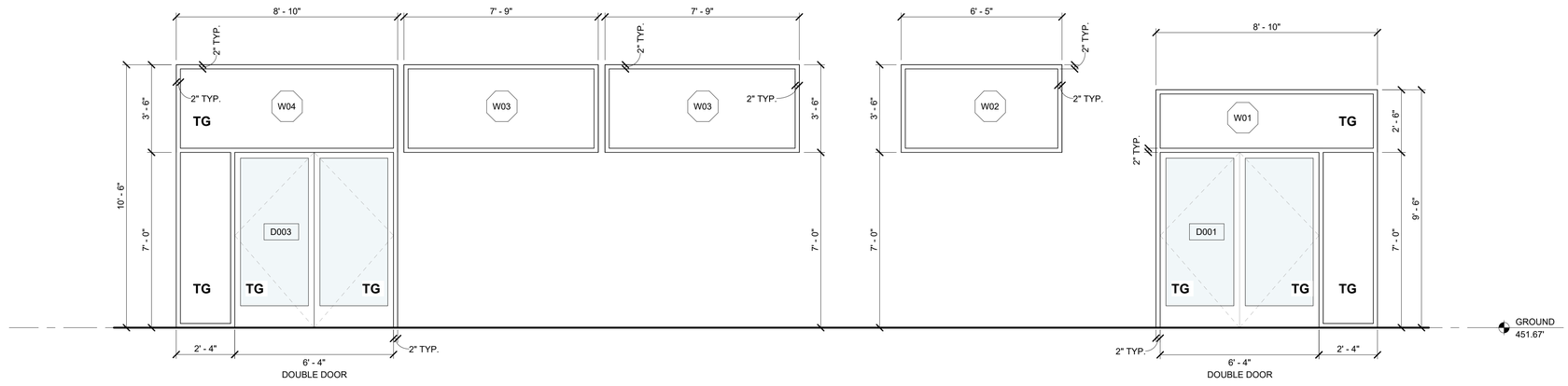


6 TYP HM DOOR FRAME PROFILE
6" = 1' - 0"



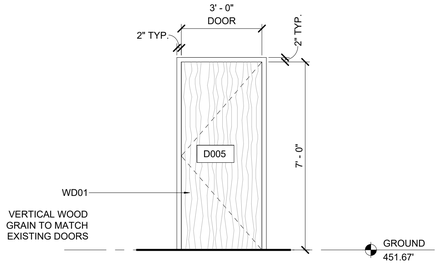
HEAD/JAMB @ GWB PARTITION

5 TYP HM DOOR HEAD/JAMB DETAILS
3" = 1' - 0"



SEE 1/A-602 FOR TYPICAL NOTES

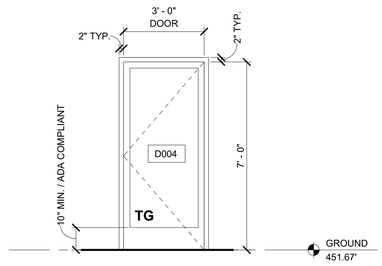
2 W01-W04, D001 & D003 ELEVATIONS
3/8" = 1' - 0"



SEE 5 & 6/ A-602 FOR DOOR FRAME, JAMB AND HEAD DETAILS

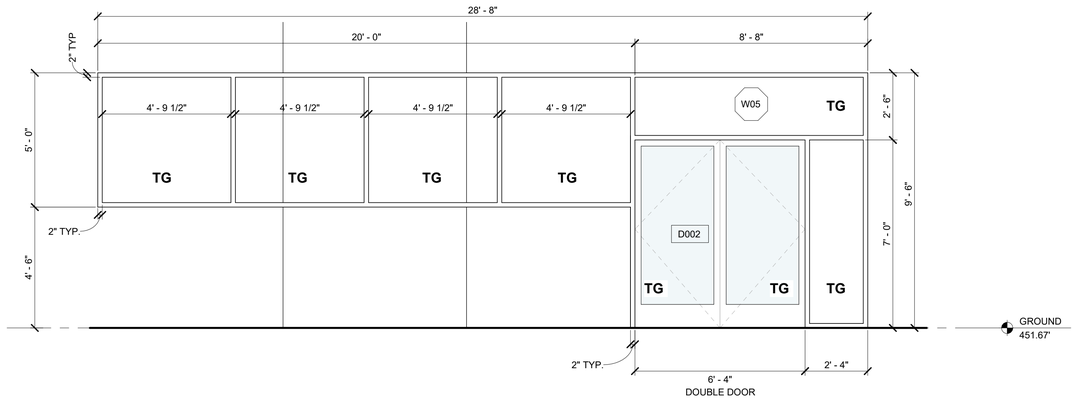
SEE 1/A-602 FOR TYPICAL NOTES

4 D005 ELEVATION
3/8" = 1' - 0"



SEE 1/A-602 FOR TYPICAL NOTES

3 D004 ELEVATION
3/8" = 1' - 0"



TG = TEMPERED GLASS

SEE A-601/ DOOR SCHEDULE AND DOOR HARDWARE

1 W05 AND D002 ELEVATION
3/8" = 1' - 0"

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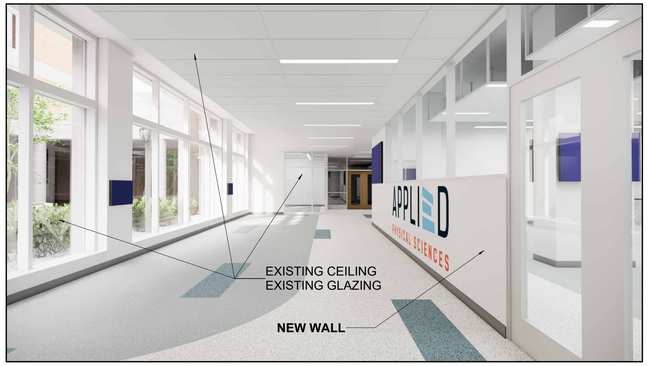
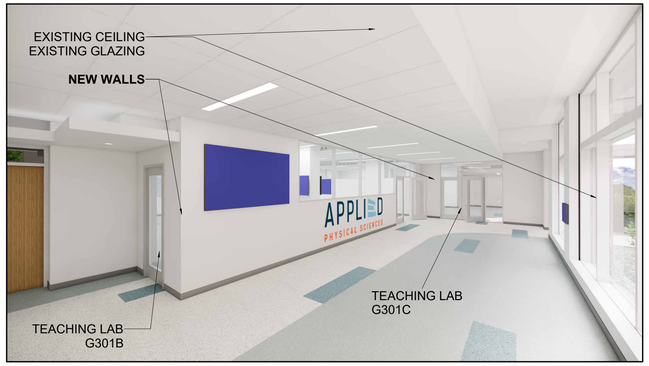
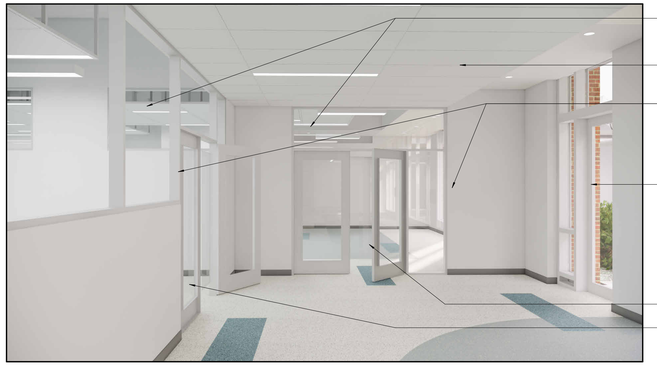
A602
INTERIOR STOREFRONT AND DOOR ELEVATIONS



1. SOCIAL SPACE G301, LOOKING NORTH



2. SOCIAL SPACE G301, LOOKING SOUTH



3. SOCIAL SPACE G301, LOOKING SOUTH AT TEACHING LAB ENTRIES

4. TEACHING LAB G301B LOOKING EAST/SOUTHEAST

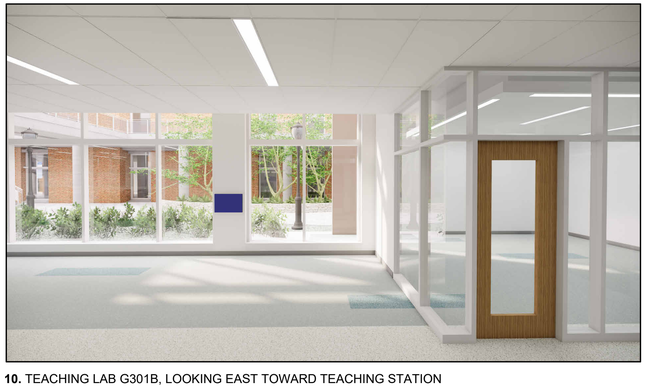
5. TEACHING LAB G301B LOOKING SOUTH

6. TEACHING LAB G301B LOOKING NORTH

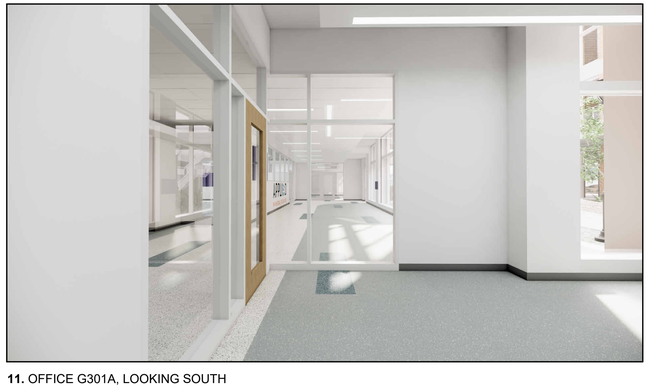
7. TEACHING LAB G301C, LOOKING NORTH/NORTHWEST

8. TEACHING LAB G301C LOOKING NORTHEAST

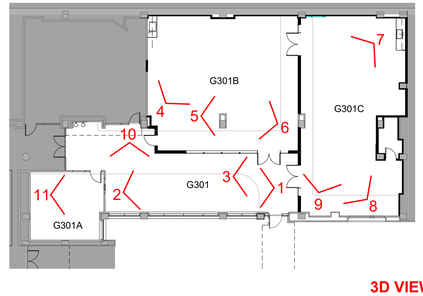
9. TEACHING LAB G301C LOOKING EAST



10. TEACHING LAB G301B, LOOKING EAST TOWARD TEACHING STATION



11. OFFICE G301A, LOOKING SOUTH



3D VIEWS KEY PLAN

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A700

3D VIEWS

2018 APPENDIX B

NC MECHANICAL SUMMARY

MECHANICAL SYSTEMS, SERVICE SYSTEMS AND EQUIPMENT

CLIMATE ZONE: 4A

THERMAL ZONE

- WINTER DRY BULB: 10 DEG F
- SUMMER DRY BULB: 92 DEG F

INTERIOR DESIGN CONDITIONS

- WINTER DRY BULB: 70 DEG F
- SUMMER DRY BULB: 75 DEG F
- RELATIVE HUMIDITY: 50%

BUILDING HEATING LOAD: N/A

BUILDING COOLING LOAD: N/A

MECHANICAL SPACE CONDITIONING SYSTEM

UNITARY

- DESCRIPTION OF UNIT: N/A
- HEATING EFFICIENCY: N/A
- COOLING EFFICIENCY: N/A
- HEAT OUTPUT OF UNIT: N/A
- COOLING OUTPUT OF UNIT: N/A

BOILER

- TOTAL BOILER OUTPUT. IF OVERSIZED, STATE REASON.: N/A

CHILLER

- TOTAL CHILLER OUTPUT. IF OVERSIZED, STATE REASON.: N/A

LIST EQUIPMENT EFFICIENCES

CODES/STANDARDS

- 2018 NORTH CAROLINA MECHANICAL CODE
  - ASHRAE STANDARDS:
  - 15-2022, "SAFETY STANDARD FOR REFRIGERATION SYSTEMS"
  - 62-2022, "VENTILATION FOR ACCEPTABLE INDOOR AIR QUALITY"
  - 90.1-2022, "ENERGY STANDARD FOR BUILDINGS EXCEPT LOW-RISE"
  - 170-2021, "VENTILATION OF HEALTHCARE FACILITIES"
  - 2018, "ADVANCED ENERGY GUIDE FOR (K-12 SCHOOL BUILDINGS, SMALL RETAIL BUILDINGS, SMALL OFFICE BUILDINGS)"
  - 55-2023, "THERMAL ENVIRONMENTAL CONDITIONS FOR HUMAN OCCUPANCY"

MECHANICAL ABBREVIATIONS

ABBREVIATION	DESCRIPTION	ABBREVIATION	DESCRIPTION
AAV	AUTOMATIC AIR VENT	HX	HEAT EXCHANGER
ADJ	ADJUSTABLE OR ADJUSTMENT	IND	INDUCTION UNIT
AI	ANALOG IN	IWC	INCHES WATER COLUMN
AO	ANALOG OUT	JB	JUNCTION BOX
AFF	ABOVE FINISHED FLOOR	LAT	LEAVING AIR TEMPERATURE
AFG	ABOVE FINISHED GRADE	LPC	LOW PRESSURE CONDENSATE
AHU	AIR HANDLING UNIT	LPS	LOW PRESSURE STEAM
APD	AIRSIDE PRESSURE DROP	LWT	LEAVING WATER TEMPERATURE
BFF	BELOW FINISHED FLOOR	MAV	MANUAL AIR VENT
BLDG	BUILDING	MC	MECHANICAL CONTRACTOR
BMP	BOILER MANAGEMENT PANEL	MPC	MEDIUM PRESSURE CONDENSATE
CFM	CUBIC FEET PER MINUTE	MPS	MEDIUM PRESSURE STEAM
CMD	COMMAND	MTD	MONTH TO DATE
COND	CONDENSATE DRAINAGE	N/A	NOT AVAILABLE / NOT APPLICABLE
CV	CONSTANT VOLUME	NC	NORMALLY CLOSED
CWMU	COLD WATER MAKEUP UNIT	NIC	NOT IN CONTRACT
CHWR	CHILLED WATER RETURN	NO	NORMALLY OPEN
CHWS	CHILLED WATER SUPPLY	NTS	NOT TO SCALE
CWS	CONDENSER WATER SUPPLY	OCC	OCCUPANT OR OCCUPANCY
CWR	CONDENSER WATER RETURN	OA	OUTSIDE AIR
DI	DIGITAL IN	PC	PLUMBING CONTRACTOR
DO	DIGITAL OUT	PSI	POUNDS PER SQUARE INCH
DN	DOWN	RA	RETURN AIR
EA	EXHAUST AIR	RAG-X	RETURN AIR GRILLE - TYPE
EAG-X	EXHAUST AIR GRILLE - TYPE	RTU	ROOF TOP UNIT
EAT	ENTERING AIR TEMPERATURE	SA	SUPPLY AIR
EC	ELECTRICAL CONTRACTOR	SAD-X	SUPPLY AIR DIFFUSER - TYPE
ESP	EXTERNAL STATIC PRESSURE	SC	SAFETY CIRCUIT
ETR	EXISTING TO REMAIN	S/S	START/STOP
EWT	ENTERING WATER TEMPERATURE	STM COND	STEAM CONDENSATE RETURN
EX	EXISTING	TAB	TEST AND BALANCE
FACP	FIRE ALARM CONTROL PANEL	TEMP	TEMPERATURE
FCU	FAN COIL UNIT	TSP	TOTAL STATIC PRESSURE
FPM	FEET PER MINUTE	UH	UNIT HEATER
GC	GENERAL CONTRACTOR	VEL	VELOCITY
GPM	GALLONS PER MINUTE	VAV	VARIABLE AIR VOLUME
HWS	HEATING HOT WATER SUPPLY	VP	VIRTUAL POINT
HWR	HEATING HOT WATER RETURN	WPD	WATERSIDE PRESSURE DROP
HP	HORSEPOWER	XFMR	TRANSFORMER
HPC	HIGH PRESSURE CONDENSATE		
HPS	HIGH PRESSURE STEAM		

HAZARDOUS MATERIALS WARNING

HAZARDOUS MATERIALS, INCLUDING ASBESTOS CONTAINING MATERIALS, ARE EITHER NOT PRESENT OR WERE REMOVED PRIOR TO CONSTRUCTION, TO THE BEST OF THIS CONSULTANT'S KNOWLEDGE. THERE IS ALWAYS THE RISK OF REMAINING, UNDISCOVERED HAZARDOUS MATERIALS PRESENT IN THE CONSTRUCTION SITE HOWEVER. DURING THE COURSE OF THE PROJECT, SHOULD SUSPECT REGULATED MATERIALS BE LOCATED AND/OR IDENTIFIED, THE CONTRACTOR SHALL CEASE ALL WORK AND NOTIFY THE OWNER/DESIGNER/ENVIRONMENTAL CONSULTANT FOR CONFIRMATION AND TESTING IF NECESSARY.

CONTROLS LEGEND

- ANALOG POINT
- DIGITAL POINT
- CO2 — CARBON DIOXIDE SENSOR
- POINT NAME — CONTROL POINT
- CR — CONTROL RELAY
- CONTROL WIRING
- CS — CURRENT SWITCH
- CT — CURRENT TRANSMITTER
- DP — DIFFERENTIAL PRESSURE TRANSMITTER
- E/P — ELECTRO-PNEUMATIC TRANSDUCER
- ESS — EMERGENCY STOP SWITCH
- ES — END SWITCH
- FT — ENTHALPY SELECTOR
- FS — FLOW SWITCH
- FT — FLOW TRANSMITTER
- FZSC — FREEZESTAT
- HT — HIGH TEMPERATURE SWITCH
- HS — HUMIDITY SWITCH
- HT — HUMIDITY TRANSMITTER
- LSSC — LEVEL SWITCH
- LM — LIGHT METER
- M — MOTOR OPERATED DAMPER
- MS — MOTOR STARTER
- OS — OCCUPANCY SENSOR
- OSOS — OVERRIDE SWITCH
- O2 — OXYGEN SENSOR
- PS — PRESSURE SWITCH
- PT — PRESSURE TRANSMITTER
- SD — SMOKE DETECTOR
- H — SPACE RELATIVE HUMIDITY TRANSMITTER
- T — SPACE TEMPERATURE TRANSMITTER
- TS — TIME SWITCH
- TT — DUCT TEMPERATURE TRANSMITTER
- VFD — VARIABLE FREQUENCY DRIVE
- VP — VELOCITY PRESSURE TRANSMITTER
- H2OSC — WATER DETECTION SWITCH

EQUIPMENT LEGEND

- VAV BOX
- FAN POWERED VAV BOX
- HYDRONIC COIL
- PRESSURE GAUGE
- THERMOMETER

DRAWING SYMBOLS

- FPV 1-1 — EQUIPMENT TAG
- # — DEMOLITION KEYED NOTE
- # — NEW WORK KEYED NOTE
- X / XXX — DETAIL NUMBER / DRAWING NUMBER
- XX / XXX — SECTION LETTER / DRAWING NUMBER

MECHANICAL LEGEND

- LIMIT OF DEMOLITION
- POINT OF CONNECTION TO EXISTING
- SUPPLY DIFFUSER
- RETURN GRILLE
- EXHAUST GRILLE
- BEACON STROBE LIGHT FOR HVAC ALARM SYSTEMS
- MANUAL VOLUME CONTROL DAMPER
- BDD — BACKDRAFT DAMPER
- MOTORIZED AIR DAMPER (PNEUMATIC Ⓟ - ELECTRIC Ⓜ)
- VERTICAL FIRE DAMPER (WITH ACCESS DOOR AND SLEEVE)
- HORIZONTAL FIRE DAMPER (WITH ACCESS DOOR AND SLEEVE)
- COMBINATION FIRE SMOKE DAMPER (PNEUMATIC ▽ - ELECTRIC ▼)
- SD — MOTORIZED SMOKE DAMPER
- SOUND ATTENUATOR TAG - MARK (X)
- AIRFLOW MEASURING STATION TAG - MARK (X)
- RADIATION DAMPER FOR RATED CEILINGS
- CONSTANT AIRFLOW REGULATOR
- SD — SMOKE DETECTOR
- 3 BOX — DIFFUSER/GRILLE TAG / SIZE / CFM
- 2 BOX — DIFFUSER/GRILLE TAG / SIZE
- AIRFLOW DIRECTION
- SUPPLY REGISTER OR GRILLE
- EXHAUST OR RETURN GRILLE
- 10x10 — RECTANGULAR DUCTWORK
- 8"Ø — ROUND DUCTWORK
- EXISTING DUCTWORK
- DUCTWORK TO BE DEMOLISHED
- FLEXIBLE DUCTWORK (INSULATED)
- DUCT ACCESS DOOR
- UP DN — SUPPLY DUCT (UP & DOWN)
- UP DN — EXHAUST DUCT (UP & DOWN)
- UP DN — RETURN DUCT (UP & DOWN)
- EXISTING PIPING TO REMAIN
- PIPING TO BE DEMOLISHED
- ISOLATION VALVE
- GATE VALVE
- GLOBE VALVE
- GATE VALVE WITH 3/4" HOSE ADAPTER
- CHECK VALVE
- BUTTERFLY VALVE
- BALL VALVE
- BALANCING VALVE
- RELIEF VALVE
- WYE STRAINER
- BOILER DRAIN VALVE
- PRESSURE REGULATING VALVE
- CONTROL VALVE (2-WAY)
- CONTROL VALVE (3-WAY)
- TEST PLUG (PRESSURE/TEMPERATURE)
- PIPING DOWN
- PIPING UP
- TEE UP
- TEE DOWN
- CAPPED PIPING
- IN LINE TRIPLE DUTY VALVE
- AUTOMATIC AIR VENT
- MANUAL AIR VENT

GENERAL NOTES

1. THE DRAWINGS SHALL NOT BE SCALED FOR CONSTRUCTION PURPOSES. THE SCALE, WHEN INDICATED IS INTENDED FOR GENERAL REFERENCE ONLY.
2. THE MECHANICAL CONTRACTOR SHALL MAKE A COMPLETE REVIEW OF THE PROJECT PLANS, SCHEDULES, AND DETAILS PRIOR TO INSTALLATION OF THE MECHANICAL SYSTEMS AND REVIEW ANY CONFLICTS WITH THE ENGINEER.
3. ALL WORK SHALL CONFORM TO ALL LOCAL, STATE, AND NATIONAL CODES. EQUIPMENT SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S WRITTEN RECOMMENDATIONS. ANY EQUIPMENT OR MATERIAL DEVIATIONS FROM THAT SPECIFIED OR DETAILED ON THIS DRAWING SHALL BE SUBJECT TO THE APPROVAL OF THE ARCHITECT/ENGINEER. ALL PROPOSED EQUIPMENT DEVIATIONS SUBMITTED SHALL BE SIMILAR BOTH IN QUALITY AND CAPACITY TO THAT EQUIPMENT SPECIFIED.
4. DESIGN IS BASED ON THE MANUFACTURER AND MODEL SCHEDULED OR THE FIRST MANUFACTURER LISTED IN THE DRAWINGS AND SPECIFICATIONS. CONTRACTOR SHALL BEAR ANY AND ALL COSTS FOR ALTERING ANY OTHER CONTRACT OR SUB-CONTRACT RESULTING FROM THE USE OF ANY MANUFACTURER OR MODEL OTHER THAN THE DESIGN BASIS INCLUDING LISTED EQUALS.
5. PRIOR TO CONSTRUCTION, FABRICATING DUCTWORK, ORDERING EQUIPMENT, ETC., THE CONTRACTOR SHALL FIELD VERIFY SPACE LIMITATIONS AT THE JOB SITE AND COORDINATE WITH OTHER TRADES.
6. ALL MATERIALS, EQUIPMENT AND PRODUCTS INCORPORATED IN THE WORK UNDER THE CONTRACT SHALL BE NEW, OF A SUITABLE GRADE FOR THE PURPOSES INTENDED, AND TO THE EXTENT POSSIBLE, STANDARD PRODUCTS OF THE VARIOUS MANUFACTURES EXCEPT WHERE SPECIAL CONSTRUCTION OR PERFORMANCE FEATURES ARE CALLED FOR. THEY SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S REQUIREMENTS.
7. ALL MATERIALS AND EQUIPMENT SHALL BE NEW UNLESS OTHERWISE NOTED AND SHALL BE FURNISHED AND INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S REQUIREMENTS.
8. THE MECHANICAL CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGE CAUSED BY THEIR ACTIONS. SUCH DAMAGE SHALL BE RETURNED TO ORIGINAL NORMAL WORKING CONDITION, SUBJECT TO ACCEPTANCE OF THE OWNER AND ENGINEER, WITHOUT EXTRA COST TO THE OWNER.
9. THE MECHANICAL CONTRACTOR SHALL KEEP THEIR WORK SITE AND ALL ACCESS POINTS OF THE BUILDING FREE OF RUBBISH AND WASTE MATERIAL. ALL ROOF OPENINGS IN THE BUILDING REQUIRED FOR THE MECHANICAL CONTRACT SHALL BE PROVIDED BY THE GENERAL CONTRACTOR. ALL FRAMING AROUND OPENINGS SHALL BE BY THE GENERAL CONTRACTOR. MECHANICAL CONTRACTOR SHALL COORDINATE SIZE OF OPENINGS AND LOCATION OF OPENINGS WITH THE GENERAL CONTRACTOR. ALL ROOF CURBS AND ROOF SUPPORT RAILS FOR MECHANICAL EQUIPMENT INSTALLED ON THE ROOF SHALL BE FURNISHED BY THE MECHANICAL CONTRACTOR AND INSTALLED BY THE GENERAL CONTRACTOR.
10. ALL OPENINGS IN WALLS AS REQUIRED BY THE MECHANICAL SYSTEM IN THE BUILDING SHALL BE PROVIDED BY THE GENERAL CONTRACTOR. IT IS THE MECHANICAL CONTRACTOR'S RESPONSIBILITY TO COORDINATE THE SIZE AND LOCATION OF ALL OPENINGS WITH THE GENERAL CONTRACTOR AT THE JOB SITE IN A TIMELY MANNER.
11. REFER TO ARCHITECTURAL DRAWINGS, AS AVAILABLE, FOR LOCATIONS OF ALL RATED WALL AND FLOOR ASSEMBLIES. PROVIDE FIRE DAMPERS AND/OR U.L. LISTED ASSEMBLIES AND/OR SEALANTS PER DRAWINGS, SPECIFICATIONS, AND APPLICABLE CODES AT ALL PENETRATIONS.
12. THE MECHANICAL CONTRACTOR SHALL FURNISH ACCESS DOORS FOR ALL GYPSUM BOARD CEILINGS AT VOLUME DAMPERS, EQUIPMENT, MOTOR OPERATED DAMPERS, FIRE DAMPERS, BALANCING DEVICES OR OTHER ITEMS REQUIRING BALANCING OR SERVICE. ACCESS DOORS SHALL BE INSTALLED BY THE GENERAL CONTRACTOR. SEE PLANS AND GENERAL CONSTRUCTION SPECIFICATIONS FOR ACCESS DOOR REQUIREMENTS.
13. MECHANICAL CONTRACTOR SHALL PROVIDE 6" HIGH HOUSEKEEPING PADS UNDER MAJOR MECHANICAL EQUIPMENT (I.E. CHILLERS) AND 4" HIGH HOUSEKEEPING PADS UNDER ALL OTHER FLOOR MOUNTED EQUIPMENT UNLESS NOTED OTHERWISE. PADS SHALL EXTEND BEYOND EQUIPMENT BY THE SAME DIMENSION AS THE HEIGHT OF THE PAD, UNLESS NOTED OTHERWISE.
14. ALL PIPING AND DUCTWORK (EXCEPT IN MECHANICAL ROOMS, BOILER ROOM, ETC.) SHALL BE CONCEALED UNLESS OTHERWISE SHOWN OR NOTED.
15. DO NOT INSTALL PIPING OR DUCTWORK OVER ANY ELECTRICAL SWITCHGEAR; SEE MECHANICAL DETAIL SHEET(S).
16. MC SHALL BLANK OFF UNUSED PORTIONS OF LOUVERS WITH DOUBLE WALL INSULATED PANELS.
17. REFER TO SPECIFICATIONS FOR EQUIPMENT STARTUP PROCEDURES AND REQUIREMENTS.

DUCTWORK

18. DUCT SIZES SHOWN ON PLANS ARE FREE AREA DIMENSIONS. CONTRACTOR SHALL INCREASE SIZES AS NECESSARY TO ACCOMMODATE LINING, IF SPECIFIED.
19. BEFORE FABRICATING OR INSTALLING DUCTWORK, COORDINATE DUCT LOCATIONS WITH THE ELECTRICAL CONTRACTOR'S PANELS, CONDUIT AND RECESSED LIGHT FIXTURES, PLUMBING PIPING, AND ALL STRUCTURAL MEMBERS. THESE DRAWINGS ARE DIAGRAMMATIC AND ARE NOT SHOP DRAWINGS. ALL OFFSETS AND TRANSITIONS REQUIRED FOR THIS PROJECT MAY NOT BE SHOWN ON THESE DRAWINGS; HOWEVER, THEY SHALL BE PROVIDED WITHOUT CHANGE TO THE BID CONTRACTS.
20. BEFORE FABRICATING OR INSTALLING DUCTWORK, COORDINATE FINAL LOCATION OF CEILING GRILLES, REGISTERS AND DIFFUSERS WITH REFLECTED CEILING PLANS AND ELECTRICAL LIGHTING PLANS.
21. ALL SURFACES SEEN THOUGH GRILLES AND DIFFUSERS SHALL BE PAINTED MATTE BLACK.
22. CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO KEEP ACCESS TO THE VOLUME DAMPERS WITHIN THE LAY-IN CEILING OR EXPOSED AREAS.
23. PROVIDE FLEXIBLE CONNECTIONS TO ALL AIR MOVING EQUIPMENT.
24. INSTALL DIFFUSERS WITH 3-WAY OR 2-WAY THROW AS REQUIRED TO AVOID BLOWING DIRECTLY ON THERMOSTATS.
25. MC SHALL CONFIRM ALL CEILING TYPES, HARD OR LAY-IN, INCLUDING NARROW TEE AND REGULAR, PRIOR TO SUBMITTAL OF SHOP DRAWINGS TO ENGINEER. ANY AIR DEVICES REQUIRING REPLACEMENT DUE TO LACK OF MC'S CONFIRMATION SHALL BE PROVIDED AT NO ADDITIONAL COST TO THE OWNER.
26. ALL FIRE DAMPERS AND U.L. FIRE STOPS SHALL BE INSTALLED IN COMPLETE ACCORDANCE WITH MANUFACTURER'S U.L. LISTING AND INSTALLATION INSTRUCTIONS. REGARDLESS OF DUCT SIZE, FIRE DAMPERS SHALL BE MINIMUM 12"x12" OR 12"Ø IN SIZE. TRANSITION BEYOND ACCESS DOOR AS REQUIRED TO MATCH ACTUAL DUCT SIZE.

PIPING

27. FLEXIBLE PIPE CONNECTIONS SHALL BE PROVIDED AT ALL HYDRONIC PIPING CONNECTIONS AT ROTATING EQUIPMENT, INCLUDING AIR HANDLING UNITS, BASE-MOUNTED PUMPS, CHILLERS, ETC.

INSULATION

28. ANY INSULATION DAMAGED DURING THE PROJECT SHALL BE REPAIRED AND ALL VAPOR BARRIERS RESTORED.

BUILDING AUTOMATION SYSTEM (CONTROLS)

29. SOME VIRTUAL POINTS ARE SHOWN ON THE CONTROL POINTS LISTS. THESE POINTS ARE INTENDED TO SHOW MAJOR VIRTUAL POINTS BUT IS NOT AN ALL-ENCOMPASSING LIST. THE CONTRACTOR IS RESPONSIBLE FOR DETERMINING FINAL POINT COUNTS AND SHALL ENSURE THAT THE CONTROLLERS PROVIDED ARE CAPABLE OF HANDLING ANY ADDITIONAL VIRTUAL POINTS THAT MAY BE NEEDED TO PROVIDE A FULLY FUNCTIONAL SYSTEM.
30. MOTOR CONNECTIONS AT MOTOR TERMINALS SHALL NOT BE MADE UNTIL ROTATION, HORSEPOWER, PHASE RATINGS, AND RATINGS OF ANY REQUIRED THERMAL HEATERS HAVE BEEN VERIFIED AND APPROVED AS CORRECT FOR THE INSTALLATION BY THE MC.
31. INSTALL THERMOSTATS AT THE SAME HEIGHT AS THE LIGHT SWITCH WHERE INSTALLED ADJACENT AND NO HIGHER THAN PERMITTED BY ADA GUIDELINES. PROVIDE INSULATED PLATES BEHIND THERMOSTATS INSTALLED ON EXTERIOR WALLS. COORDINATE LOCATION OF WALL MOUNTED THERMOSTATS, TEMPERATURE SENSORS, WALL SWITCHES, ETC. WITH OTHER CONTRACTORS TO AVOID CONFLICTS WITH DRAWING BOARDS, ELECTRICAL DEVICES, TACK BOARDS, ETC. ALL WIRING TO WALL MOUNTED DEVICES SHALL BE CONCEALED IN WALL UNLESS NOTED OTHERWISE.

COORDINATION

32. ALL SHUTDOWNS SHALL BE COORDINATED AND APPROVED THROUGH THE OWNERS' REPRESENTATIVE AND WILL REQUIRE ADVANCE NOTICE OF ONE WEEK MINIMUM. THIS TIME/LENGTH MAY BE LONGER OR SHORTER FOR SOME SHUTDOWNS AND SHALL BE AT THE OWNER'S DISCRETION.
33. ALL ROOF MOUNTED UNITS SHALL BE CAREFULLY COORDINATED WITH THE STRUCTURE. MC AND GC SHALL COORDINATE ROOF STEEL PLACEMENT AND ROOF OPENINGS WHICH SHALL MATCH UP WITH THE ACTUAL UNIT OPENING LOCATION, SIZE, WEIGHTS AND DIMENSIONS. NO WORK SHALL OCCUR UNTIL CONTRACTOR HAS APPROVED SHOP DRAWINGS.

DEMOLITION

34. THESE DRAWINGS DEFINE THE BASIC AREA OF DEMOLITION AND ARE AS ACCURATE AS WAS POSSIBLE FROM SITE INVESTIGATIONS MADE DURING THE DESIGN PROCESS. NOT ALL EXISTING MATERIALS AND EQUIPMENT ARE SHOWN. ANY MECHANICAL MATERIALS AND EQUIPMENT THAT ARE NOT BEING USED AFTER THE RENOVATION SHALL BE REMOVED WHETHER SHOWN OR NOT. NO MATERIALS OR EQUIPMENT SHALL BE ABANDONED IN PLACE UNLESS OTHERWISE NOTED.
35. ALL EQUIPMENT TO BE REUSED IS TO BE CLEANED. ANY EQUIPMENT FOUND TO BE NON-FUNCTIONING SHALL BE DOCUMENTED AND BROUGHT TO THE ATTENTION OF THE OWNER PRIOR TO COMMENCEMENT OF DEMOLITION. IF PROPER NOTIFICATION IS NOT PROVIDED THEN REPAIR OR REPLACEMENT OF THE EQUIPMENT SHALL BE MADE AT NO ADDITIONAL COST TO THE OWNER.
36. THE MECHANICAL CONTRACTOR SHALL OBTAIN AND PAY FOR ALL PERMITS, FEES, AND INSPECTIONS REQUIRED FOR HIS WORK. ALL MATERIALS REQUIRED FOR TESTING (E.G. - SMOKE GENERATORS) SHALL BE PROVIDED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE PROJECT. IF A PROJECT FAILS AN INSPECTION, THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY AND ALL COSTS ASSOCIATED WITH THE RE-INSPECTION.
37. ANY EQUIPMENT OR MATERIAL DEVIATIONS FROM THAT SPECIFIED OR DETAILED ON THIS DRAWING SHALL BE SUBJECT TO THE APPROVAL OF THE ARCHITECT/ENGINEER. ALL PROPOSED EQUIPMENT DEVIATIONS SUBMITTED SHALL BE SIMILAR BOTH IN QUALITY AND CAPACITY TO THAT EQUIPMENT SPECIFIED.
38. ALL MECHANICAL EQUIPMENT SHALL BE LISTED AND LABELED BY APPROVED THIRD PARTY LISTING AGENT.
39. THE MECHANICAL CONTRACTOR SHALL PROVIDE AND INSTALL THEIR OWN SUPPORT EQUIPMENT. SUPPORT ALL EQUIPMENT FROM STRUCTURAL MEMBERS, UNLESS NOTED OTHERWISE. LOCATIONS SHALL BE COORDINATED WITH ALL CONTRACTORS PRIOR TO INSTALLATION.
40. DUCTWORK AND PIPING LAYOUTS AND LOCATIONS ARE SCHEMATIC. DO NOT SCALE THESE DRAWINGS. EXACT ROUTING OF DUCTWORK AND PIPING MUST BE DETERMINED IN THE FIELD. ALL DIMENSIONS SHALL BE FIELD VERIFIED BY THE CONTRACTOR BY ACTUAL MEASUREMENT AND OBSERVATION BEFORE ORDERING OR FABRICATING ANY DUCTWORK, PIPING OR EQUIPMENT. ANY DISCREPANCIES BETWEEN THE REQUIREMENTS OF THE CONTRACT DOCUMENTS AND THE EXISTING CONDITIONS OR DIMENSIONS SHALL BE REPORTED TO THE ENGINEER BEFORE THE PERFORMANCE OF ANY WORK. FAILURE TO VERIFY AND REPORT SHALL CONSTITUTE THE CONTRACTOR'S ACCEPTANCE OF THE EXISTING CONDITIONS AS FIT FOR THE PROPER EXECUTION OF THEIR WORK.
41. DUCTWORK AND PIPING SHALL BE KEPT AS CLOSE AND HIGH AS POSSIBLE TO THE BUILDING WALLS, CEILING AND FLOOR AND ROOF STRUCTURE IN ORDER THAT THE MAXIMUM AMOUNT OF SPACE IS AVAILABLE. ADDITIONAL OFFSETS, FITTINGS, ETC. NOT SHOWN BUT REQUIRED TO MAINTAIN MAXIMUM CLEARANCE SHALL BE PROVIDED AT NO ADDITIONAL COST.
42. THE MECHANICAL CONTRACTOR SHALL COORDINATE RESPONSIBILITY FOR ALL PATCHING AND CLEANING ASSOCIATED WITH THIS PROJECT WITH THE GENERAL CONTRACTOR.
43. EXISTING FLOOR DRAINS SHOULD BE COVERED DURING DEMOLITION AND NEW WORK CONSTRUCTION.

MECHANICAL SHEET INDEX

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REVISION:

SCO REVIEW	9/15/25
2nd SCO REVIEW	10/24/25
Construction Set	11/17/25

CONSTRUCTION SET

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 019692 MITCHELL A. BROWN 11/17/25

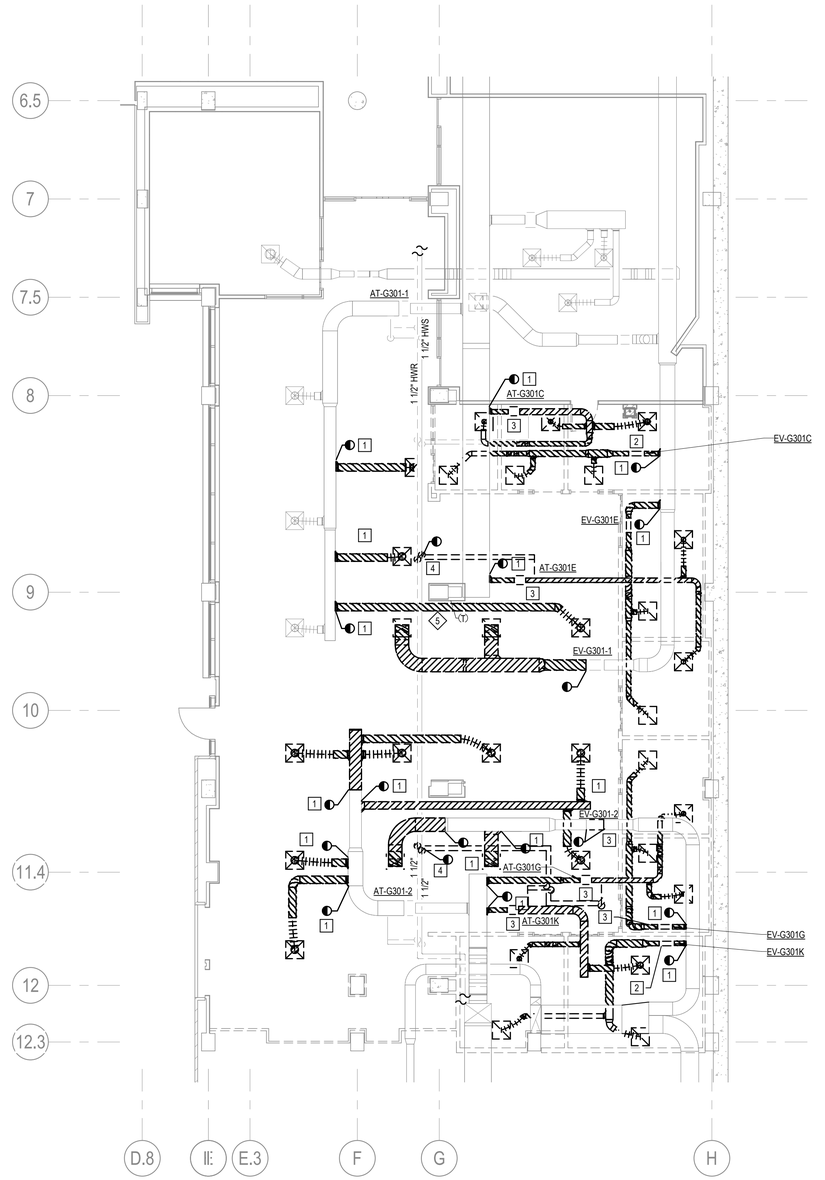
CLIENT NAME: THE UNIVERSITY OF NORTH CAROLINA AT CHAPEL HILL
JOB NAME: UNC VENABLE HALL LOWER LEVEL UPFIT
LOCATION: VENABLE HALL LOWER LEVEL
101 South RD
CHAPEL HILL, NC 27514
SCO ID: 24-28389-01A

ISSUE DATE: 11-17-25
JOB. NO.: 10021-0001
DWG. NO.:

M001

MECHANICAL
DATA SHEET

KEYED NOTES	
1	EXISTING SUPPLY/ EXHAUST DUCTWORK SHALL BE REMOVED AS SHOWN. COORDINATE EXTENTS OF DEMOLITION WITH NEW WORK PLANS.
2	EXISTING SUPPLY/EXHAUST TERMINAL UNIT TO BE RELOCATED. COORDINATE WITH NEW WORK PLANS.
3	EXISTING SUPPLY/EXHAUST TERMINAL UNIT/AIR VALVE TO BE DEMOLISHED AND RETURNED TO BASE BUILDING STOCK.
4	EXISTING SUPPLY TERMINAL UNIT ASSOCIATED PIPING TO BE DEMOLISHED BACK TO MAIN AND SEALED.
5	RELOCATE EXISTING THERMOSTAT. SEE MECHANICAL NEW WORK PLANS FOR LOCATION.



1 MECHANICAL GROUND DEMOLITION PLAN

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

1/8"=1'-0" 8' 4' 0 8' 16'

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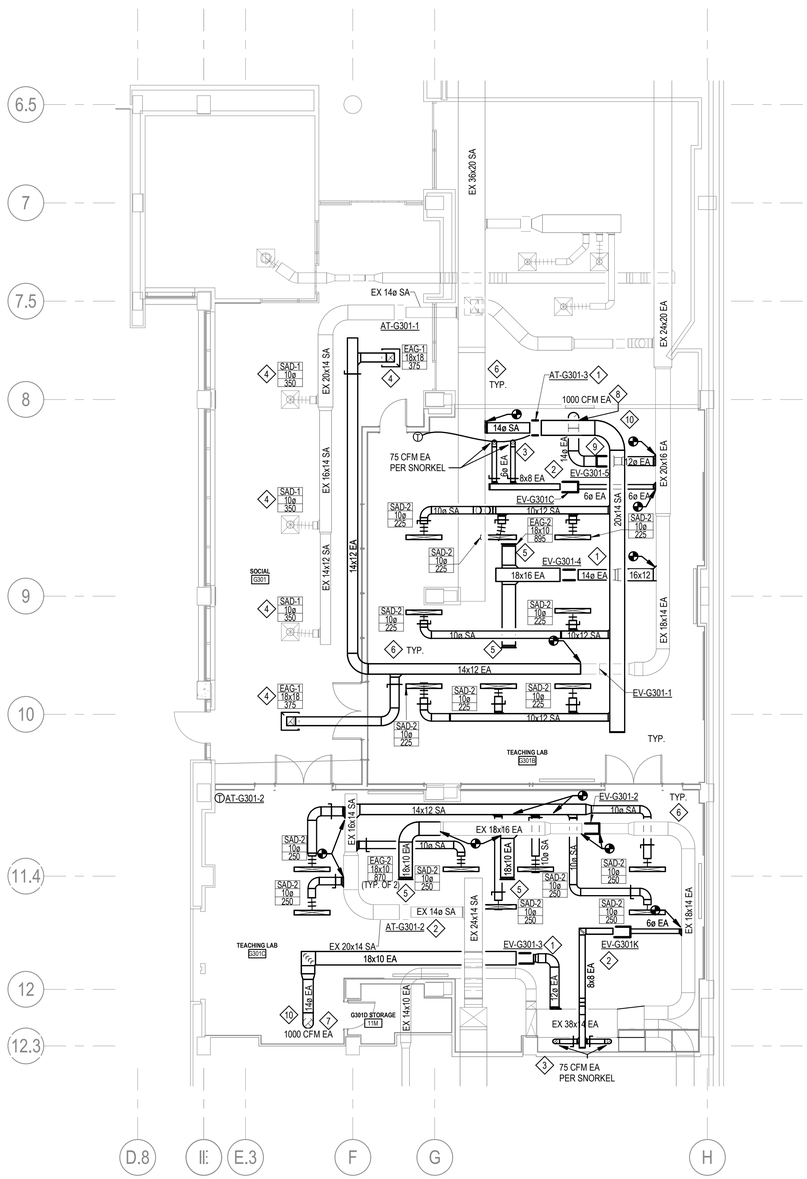
MD111

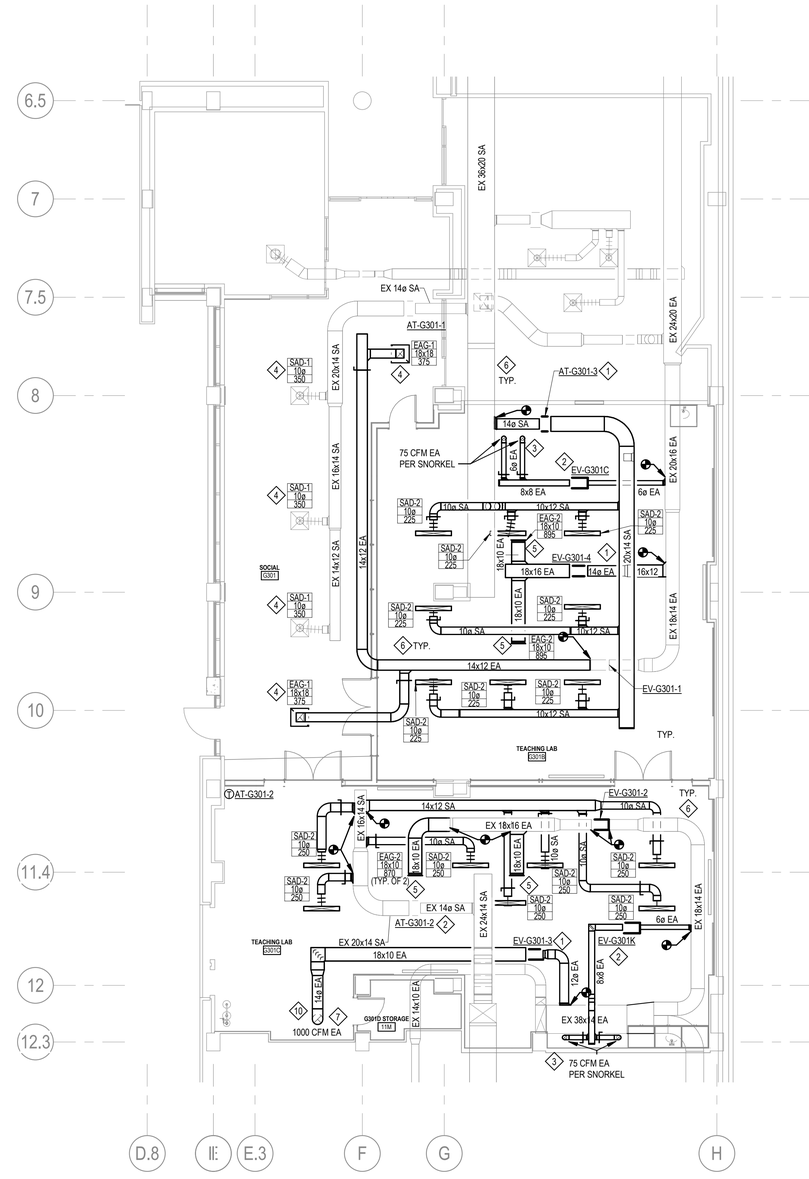
DEMO
MECHANICAL -
GROUND FLOOR
PLAN

KEYED NOTES	
1	PROVIDE AND INSTALL NEW SUPPLY/EXHAUST TERMINAL UNIT AS SCHEDULED ON M401.
2	EXISTING SUPPLY/EXHAUST TERMINAL UNIT TO BE RELOCATED AS SHOWN. COORDINATE WITH DEMO PLANS AND REBALANCE TO CONNECTED/SCHEDULED AIRFLOW.
3	6"ø EXHAUST DUCTWORK DOWN TO SNORKELS. SNORKELS PROVIDED BY OTHERS.
4	BALANCE EXISTING DIFFUSER/GRILLE TO AIRFLOW LISTED ON PLANS. UPDATE TERMINAL UNIT AIRFLOW SETPOINTS AS SHOWN ON SCHEDULE.
5	NEW EXHAUST AIR DUCT SHALL BE TERMINATED WITH EXHAUST GRILLE AT THE END OF THE DUCT. DUCT IS ABOVE THE SUSPENDED CLOUD/CEILING.
6	PROVIDE AND INSTALL PAINTABLE JACKET ON ALL NEW AND EXISTING EXPOSED DUCTWORK WITHIN PROJECT SCOPE. COORDINATE COLOR OF JACKET PAINT WITH ARCHITECT AND ALL OTHER TRADES.
7	14"ø EXHAUST DUCTWORK DOWN TO NEW EXHAUST HOOD PROVIDED BY OTHERS.
8	ADD ALTERNATE 01: PROVIDE 14"Ø EXHAUST DUCTWORK DOWN TO NEW EXHAUST HOOD PROVIDED BY OTHERS.
9	ADD ALTERNATE 01: PROVIDE NEW EXHAUST AIR VALVE FOR FUME HOOD.
10	CONTRACTOR SHALL CERTIFY THE FUME HOOD PERFORMANCE IN ACCORDANCE WITH ASHRAE 110 USING A QUALIFIED PROFESSIONAL FIRM AND PROVIDE A WRITTEN REPORT OF THE TESTING PERFORMED.



2 MECHANICAL DUCTWORK GROUND PLAN ALTERNATE 01

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



1 MECHANICAL DUCTWORK GROUND PLAN

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

1/8"=1'-0" 8' 4' 0 8' 16'

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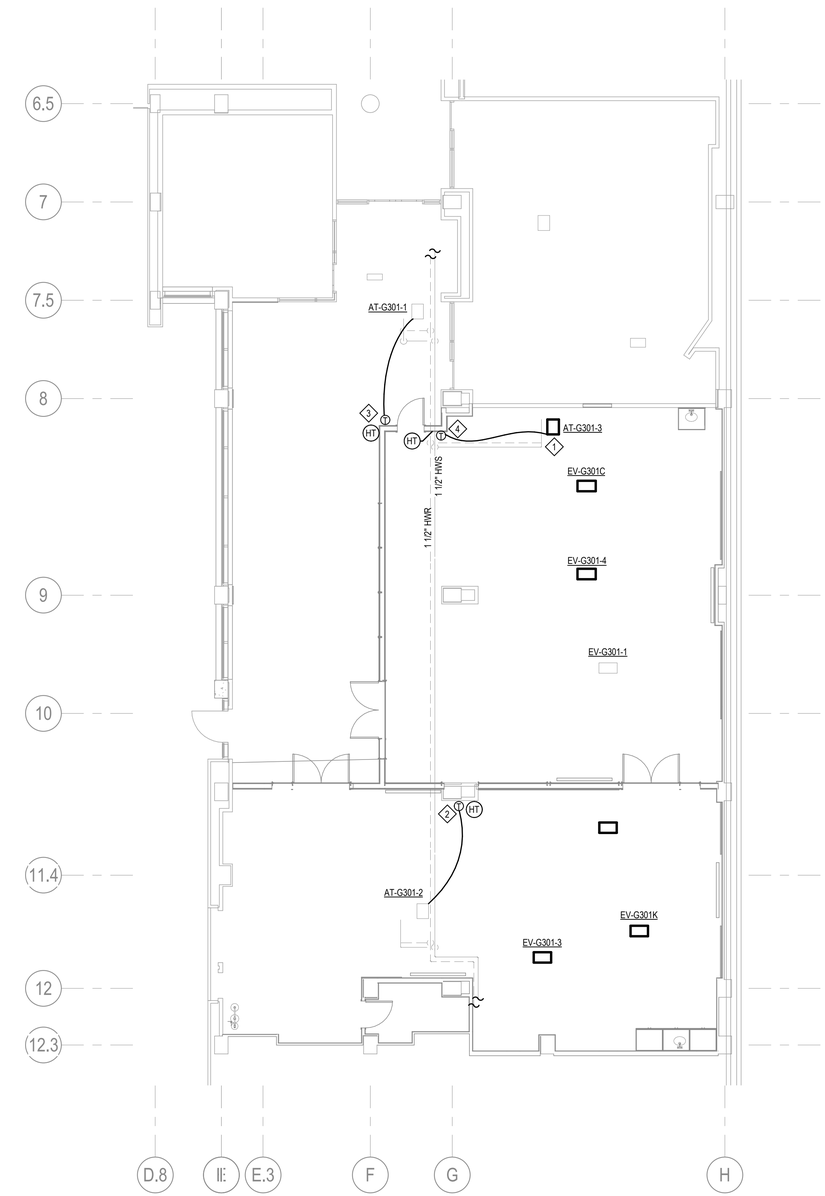
DUCTWORK - GROUND FLOOR PLAN

KEYED NOTES	
1	CONNECT HW PIPING TO NEW TERMINAL UNIT FROM EXISTING TAP OFF THE HWS/HWR MAINS.
2	LOCATION OF EXISTING THERMOSTAT AND NEW SPACE HUMIDITY SENSOR.
3	LOCATION OF RELOCATED THERMOSTAT AND NEW SPACE HUMIDITY SENSOR.
4	LOCATION OF NEW THERMOSTAT AND NEW SPACE HUMIDITY SENSOR.



1 MECHANICAL PIPING BASEMENT PLAN
SCALE: 1/8" = 1'-0"

1/8"=1'-0" 8' 4' 0 8' 16'

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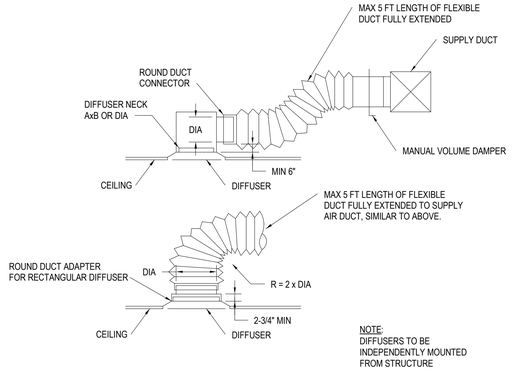
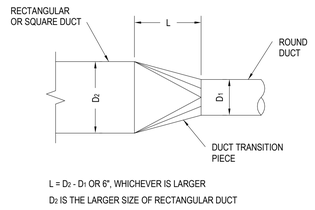
PIPING - GROUND FLOOR PLAN



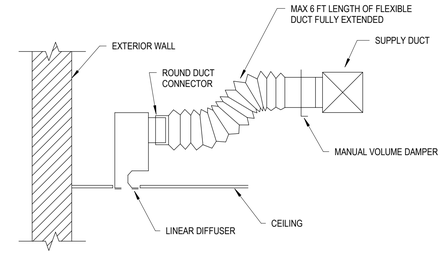
1 DIFFUSER CONNECTION
SCALE: 12" = 1'-0"



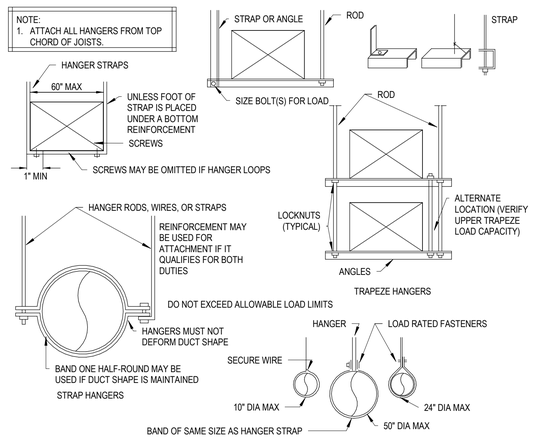
L = D2 - D1 OR 6", WHICHEVER IS LARGER

D2 IS THE LARGER SIZE OF RECTANGULAR DUCT

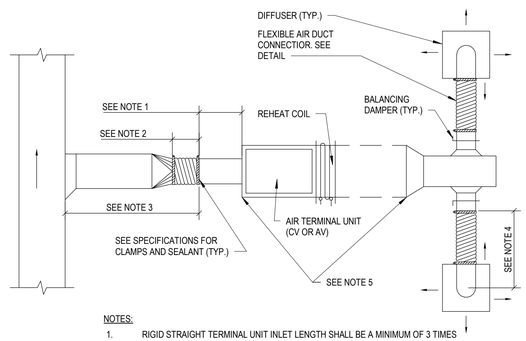
2 3-210 DUCT TRANSITION
SCALE: 12" = 1'-0"



3 LINEAR DIFFUSER CONNECTION
SCALE: NTS



4 DUCT HANGERS
SCALE: NTS



NOTES:

1. RIGID STRAIGHT TERMINAL UNIT INLET LENGTH SHALL BE A MINIMUM OF 3 TIMES THE DIAMETER OF INLET.
2. FLEXIBLE AIR DUCT CONNECTOR IS NOT MANDATORY FOR INLET TO THIS BOX, BUT ALLOWED TO ACCOMMODATE MINOR OFFSETS. MAXIMUM LENGTH 3'-0".
3. A BRANCH DUCT SERVING AN INDIVIDUAL BOX MAY BE THE SAME SIZE AS THE BOX INLET, PROVIDED THE EQUIVALENT LENGTH OF THE BRANCH DUCT, AS SHOWN, DOES NOT EXCEED 10 FEET. FOR LONGER LENGTHS, INCREASE THE DUCT SIZE AND PROVIDE A DUCT TRANSITION TO MAINTAIN THE DUCT STATIC PRESSURE DROP AT OR BELOW 0.2"/100' .
4. FLEXIBLE AIR DUCT CONNECTORS, WHEN USED FROM TERMINAL UNIT SUPPLY AIR DUCT TO DIFFUSER, SHALL NOT EXCEED 5'-0". USE RIGID ELBOWS FOR CHANGE OF DIRECTION GREATER THAN 45°.
5. COMPONENT ARRANGEMENT MAY VARY BY MANUFACTURER. PROVIDE INSULATION W/VAPOR BARRIER FOR CONNECTING DUCT SECTIONS.
6. USE OF THE FLEXIBLE AIR DUCT CONNECTORS ARE NOT PERMITTED FOR THE DEDICATED SYSTEMS SERVING A SURGICAL SUITE.
7. PROVIDE CEILING ACCESS TO EACH TERMINAL BOX IN NON-ACCESSIBLE CEILINGS. CONTROLS TO BE LOCATED FOR ADEQUATE SERVICE ACCESS.

5 AIR TERMINAL UNITS - DUCT CONNECTIONS
SCALE: NTS

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REVISION:

SCO REVIEW	9/15/25
2nd SCO REVIEW	10/24/25
Construction Set	11/17/25

CONSTRUCTION SET

NORTH CAROLINA PROFESSIONAL SEAL 019692 ENGINEER MITCHELL A. BROOM 11/17/25

CLIENT NAME: THE UNIVERSITY OF NORTH CAROLINA AT CHAPEL HILL
JOB NAME: UNC VENABLE HALL LOWER LEVEL UPFIT
LOCATION: VENABLE HALL LOWER LEVEL
101 South RD
CHAPEL HILL, NC 27514
SCO ID: 24-28389-01A

ISSUE DATE: 11-17-25
JOB. NO.: 10021-0001
DWG. NO.:

M301

MECHANICAL DETAILS

AIR TERMINAL DEVICES SCHEDULE

TAG	SYSTEM TYPE	STATUS	MAX AIRFLOW (CFM)	MIN AIRFLOW (CFM)	INLET SIZE (IN. Ø)	APD (IN WC)	REHEAT CFM	HEAT CAPACITY (MBH)	EAT (°F)	LAT (°F)	GPM	EWT (°F)	LWT (°F)	WPD (FT)	MANUF	MODEL	NOTES
EV-G301-1	EXHAUST	EXISTING	750	750	14	EX.	-	-	-	-	-	-	-	-	EXISTING	EXISTING	
EV-G301-2	EXHAUST	NEW	1740	700	14	0.17	-	-	-	-	-	-	-	-	ACCUTROL	AVT6414-03	2
EV-G301-3	EXHAUST	NEW	1000	120	10	0.27	-	-	-	-	-	-	-	-	ACCUTROL	AVC6210-03	2
EV-G301-4	EXHAUST	NEW	1790	750	14	0.18	-	-	-	-	-	-	-	-	ACCUTROL	AVT6414-03	2
EV-G301-5	EXHAUST	NEW	1000	120	10	0.27	-	-	-	-	-	-	-	-	ACCUTROL	AVC6210-03	1, 2
EV-G301C	EXHAUST	RELOCATED	150	0	6	EX.	-	-	-	-	-	-	-	-	EXISTING	EXISTING	
EV-G301K	EXHAUST	RELOCATED	150	0	6	EX.	-	-	-	-	-	-	-	-	EXISTING	EXISTING	
AT-G301-1	SUPPLY	EXISTING	1050	1050	14	EX.	1050	42	55	85	4.3	160	140	0.2	EXISTING	EXISTING	
AT-G301-2	SUPPLY	EXISTING	1750	1750	14	EX.	1750	64.7	55	85	6.6	160	140	0.2	EXISTING	EXISTING	
AT-G301-3	SUPPLY	NEW	1800	1800	14	0.38	1800	72.4	55	85	4.02	160	140	4.51	PRICE	SDV	3

NOTES:
1. ADD ALTERNATE 01: PROVIDE NEW EXHAUST AIR VALVE FOR FUME HOOD.
2. PROVIDE NEW VENTURI TYPE AIR TERMINAL UNIT.
3. PROVIDE NEW BLADE TYPE AIR TERMINAL UNIT.

AIR DISTRIBUTION SCHEDULE

TAG	SYSTEM	BASIS OF DESIGN		DESCRIPTION	MAX. N.C	NOTES
		MANUF	MODEL			
EAG-1	EXHAUST	PRICE	PDDR	PERFORATED RETURN GRILLE. 24x24" FACE WITH SQUARE INLET. PROVIDE WITH SQUARE TO ROUND INLET CONNECTION WHERE REQUIRED. SEE PLANS FOR NECK SIZE/DIMENSIONS.	25	
EAG-2	EXHAUST	PRICE	80	EGG CRATE RETURN GRILLE. 0" CORE, 1/2 IN x 1/2 IN. DEPTH	25	
SAD-1	SUPPLY	EXISTING	EXISTING	EXISTING 24x24" DIFFUSER. SEE PLANS FOR AIRFLOW.	25	
SAD-2	SUPPLY	PRICE	SDS	PRICE SDS100 WITH SDB PLENUM. 1 IN. SLOT WIDTH WITH 3 SLOTS.	25	

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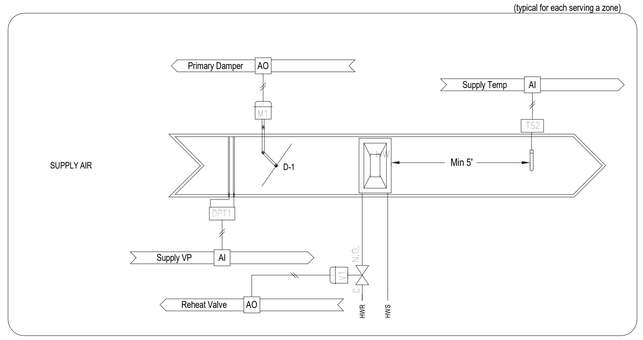
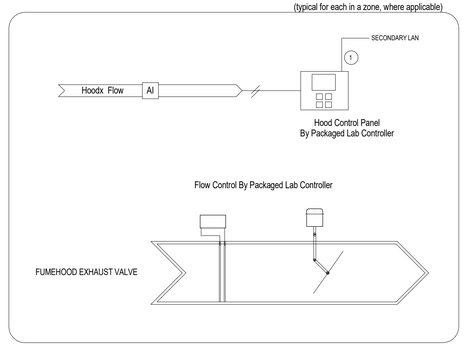
MECHANICAL
SCHEDULES

LAB VAV FLOW TRACKING – MULTI ZONE with TERMINAL SUPPLY DAT RESET

(typical for each serving a zone)



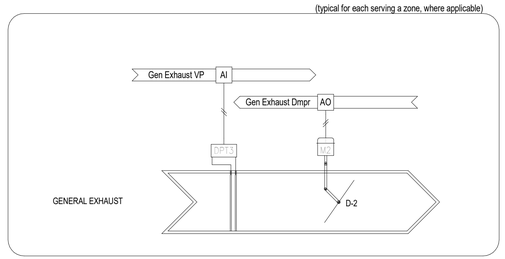
(typical for each in a zone, where applicable)



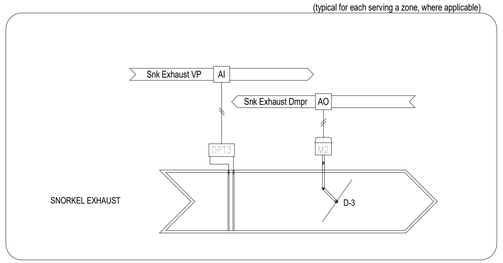
NOTES

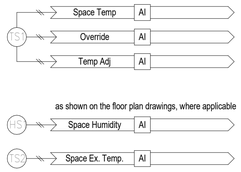
1. Provide digital interface to the control system for diagnostic point information. Required points to be mapped include: Hood cfm, Master Alarm, Volume/Velocity Reset & Sash Position. Hood Flow point to be hardwired to the BAS for flow calculation of General Exhaust and Supply Air Valves
2. NOT USED
3. Provide a single controller for each Flow Tracking Zone. Broadcasting flow setpoints between separate controllers at each Supply or Exhaust valve is not acceptable.
4. Provide a single graphic for each flow tracking zone that depicts all equipment and devices in the zone. Show all values and setpoints as indicated in the logic diagram below. Provide links to the fume hood controllers from the tracking zone graphic, as applicable.
5. Drawing applies to entire open lab. i.e. Each open lab is considered a single flow tracking zone.
6. Averae all zone sensors in a flow tracking zone. Use average zone temperature as controlling input for space temperature control. Provide software logic that will allow the system operator to exclude any individual zone temperature sensors from the averaging calculations through the head end. This should be accomplished without the need to modify or download a new program
7. Provide only 1 zone sensor in each open lab/ flow tracking zone with setpoint adjust and override. All other sensors shall have space temperature only. Locations of the zone sensors with setpoint adjust and override shall be labeled and shown on the floor plans.

(typical for each serving a zone, where applicable)



(typical for each serving a zone, where applicable)





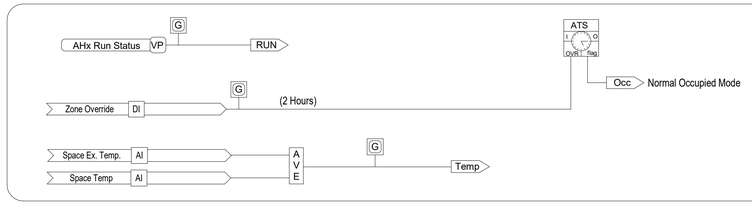
POINTS LIST

ADDRESS	POINT DESCRIPTOR	POINT TYPE DI	AI	DO	AO	VP	REMARKS
	Override	*					
	Space Temp		*				
	Temp Adj		*				
	Space Humidity		*				
	Supply VP		*				
	Primary Damper				*		
	Supply Temp		*				
	Reheat Valve				*		
	Gen Exhaust VP		*				
	Gen Exhaust Dmpr				*		
	Snk Exhaust VP		*				
	Snk Exhaust Dmpr				*		
	Hood x Flow		*				

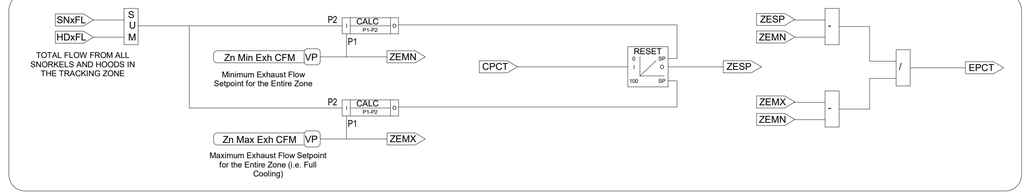
LOGIC VARIABLES

BINARY	ANALOG	DESCRIPTION
Occ		ON WHEN OCCUPIED MODE IS ACTIVE
STBK		ON WHEN AHU IN SETBACK MODE
	Temp	VARIABLE VALUE OF SPACE TEMPERATURE
	HTSP	VARIABLE CALCULATED VALUE OF EFFECTIVE HEATING SETPOINT
	CLSP	VARIABLE CALCULATED VALUE OF EFFECTIVE COOLING SETPOINT
	HDxFL	VARIABLE CALCULATED VALUE OF HOOD EXHAUST FLOW (CFM) FOR HOOD x
	GXxFL	VARIABLE CALCULATED VALUE OF GENERAL EXHAUST FLOW (CFM) FOR VALVE x
	SPxFL	VARIABLE CALCULATED VALUE OF SUPPLY FLOW (CFM) FOR SUPPLY VALVE x
	SPCT	VARIABLE CALCULATED VALUE OF SUPPLY FLOW SETPOINT % FOR EACH VALVE
	ZSSP	VARIABLE CALCULATED VALUE OF ZONE TOTAL SUPPLY FLOW SETPOINT
	ZSMN	VARIABLE CALCULATED VALUE OF ZONE TOTAL SUPPLY SCHEDULED MIN SETPT
	ZSMX	VARIABLE CALCULATED VALUE OF ZONE TOTAL SUPPLY SCHEDULED MAX SETPT
	EPCT	VARIABLE CALCULATED VALUE OF EXHASUT FLOW SETPOINT % FOR EACH VALVE
	ESMN	VARIABLE CALCULATED VALUE OF ZONE TOTAL EXHAUST MIN SETPOINT
	ESMX	VARIABLE CALCULATED VALUE OF ZONE TOTAL EXHAUST MAX SETPOINT
Run		ON WHEN SUPPLY AIR SOURCE (AHUs) IS PROVIEN ON
	SNxFL	VARIABLE CALCULATED VALUE OF SNORKEL EXHAUST FLOW (CFM) FOR SNKL x

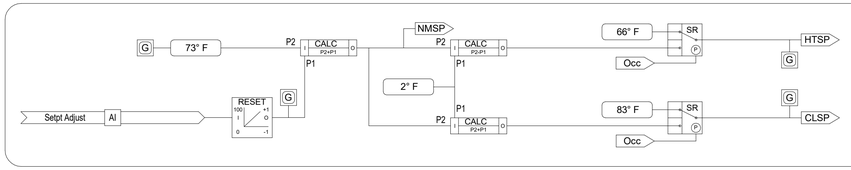
Run Conditions



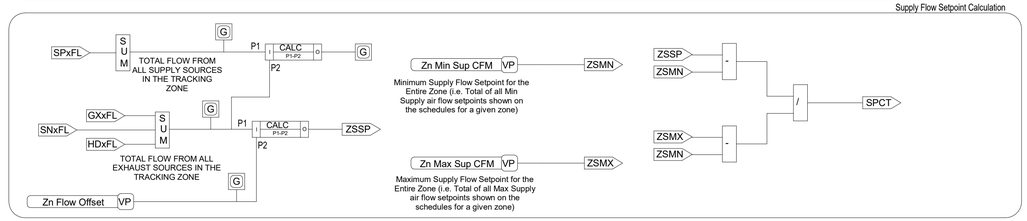
General Exhaust Flow Setpoint Calculation (where applicable)



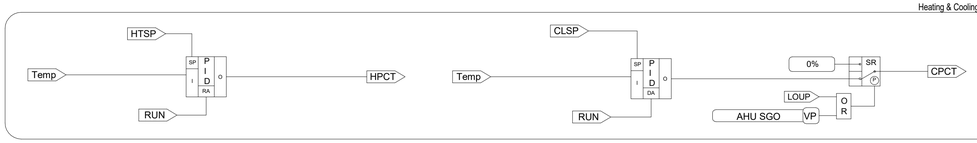
Setpoints



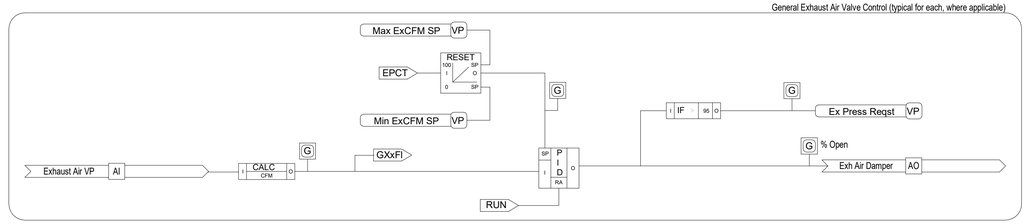
Supply Flow Setpoint Calculation



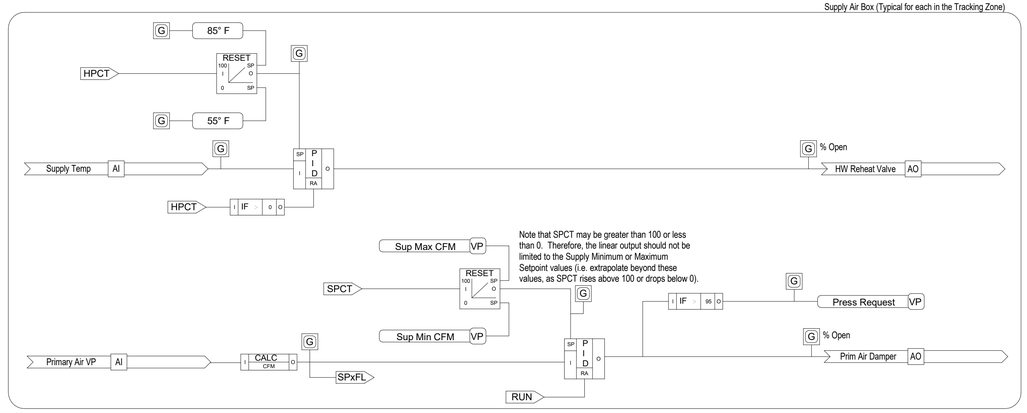
Heating & Cooling Loops



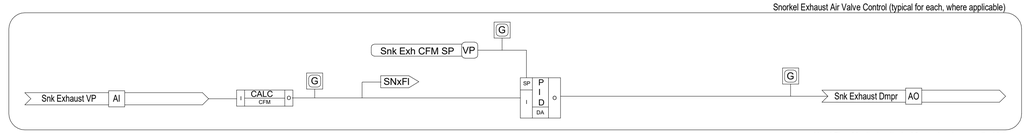
General Exhaust Air Valve Control (typical for each, where applicable)



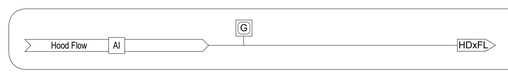
Supply Air Box (Typical for each in the Tracking Zone)



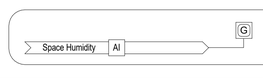
Snorkel Exhaust Air Valve Control (typical for each, where applicable)



Hood Flow Monitoring (typical for each, where applicable)



Misc Monitoring (typical for each, where applicable)



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MECHANICAL CONTROL DIAGRAMS

GENERAL

#	DEMOLITION KEYED NOTE.
#◆	NEW WORK KEYED NOTE.
	REMOVE WIRING, CABLING, ETC. TO THIS POINT.
	CONNECT WIRING, CABLING, ETC. TO THIS POINT.
X XXX	FEEDER TAG - SEE FEEDER SCHEDULE
PR	PRESENT LIGHTING FIXTURE, SWITCH, DEVICE, ETC., TO REMAIN.
PRN	PRESENT LIGHTING FIXTURE, SWITCH, DEVICE, ETC., TO BE REMOVED AND REPLACED WITH NEW.
PRR	PRESENT LIGHTING FIXTURE, SWITCH, DEVICE, ETC., SHOWN AT NEW LOCATION
PRX	PRESENT LIGHTING FIXTURE, SWITCH, DEVICE, ETC., TO BE REMOVED AND OUTLET BOX EXTENSION INSTALLED FOR SURFACE CONDUIT OR SMR AND WIRE EXTENSION TO NEW OUTLET SHOWN. REINSTALL PRESENT LIGHTING FIXTURE, SWITCH, DEVICE, ETC.
RPC	REMOVE PRESENT FIXTURE, SWITCH, DEVICE, ETC., AND CAP OUTLET
RPP	REMOVE PRESENT FIXTURE, SWITCH, DEVICE, ETC., PATCH THE PLASTER IF IN PLASTER: CAP IF IN METAL OR WOOD.
RPR	REMOVE PRESENT FIXTURE, SWITCH, DEVICE, ETC., TO BE REMOVED AND RELOCATED.
RPX	REMOVE PRESENT FIXTURE, SWITCH, DEVICE, ETC., WIRE AND ALL RELATED EXPOSED RACEWAY INSOFAR AS IS POSSIBLE. ALL DAMAGED SURFACES TO BE REPAIRED.

LIGHTING FIXTURES

SURFACE, RECESSED, OR WALL MOUNTED LIGHTING FIXTURE. SEE LIGHTING FIXTURE KEY FOR TAG INFORMATION. SEE LIGHTING FIXTURE SCHEDULE FOR EXACT REQUIREMENTS.

SURFACE, RECESSED, OR WALL MOUNTED LIGHTING FIXTURE CONNECTED TO EMERGENCY/LIFE SAFETY BRANCH CIRCUIT OR PROVIDE EMERGENCY DRIVER. SEE LIGHTING FIXTURE KEY FOR TAG INFORMATION. SEE LIGHTING FIXTURE SCHEDULE FOR EXACT REQUIREMENTS.

SURFACE, RECESSED, OR WALL MOUNTED LIGHTING FIXTURE CONNECTED TO CRITICAL BRANCH CIRCUIT OR PROVIDE EMERGENCY DRIVER. SEE LIGHTING FIXTURE KEY FOR TAG INFORMATION. SEE LIGHTING FIXTURE SCHEDULE FOR EXACT REQUIREMENTS.

SURFACE MOUNTED TRACK LIGHTING SYSTEM. LETTER INDICATES TYPE. SEE LIGHTING FIXTURE KEY FOR TAG INFORMATION. SEE LIGHTING FIXTURE SCHEDULE FOR EXACT TRACK AND FIXTURE REQUIREMENTS.

MONO-POINT HEAD LIGHT FIXTURE. LETTER INDICATES TYPE. SEE LIGHTING FIXTURE KEY FOR TAG INFORMATION. SEE LIGHTING FIXTURE SCHEDULE FOR EXACT TRACK AND FIXTURE REQUIREMENTS.

CEILING MOUNTED EXIT SIGN, SHADED AREA INDICATES FACE WITH DIRECTIONAL ARROWS AS SHOWN. SEE LIGHTING FIXTURE SCHEDULE FOR EXACT REQUIREMENTS. CONNECT UNSWITCHED TO INDICATED BRANCH CIRCUIT.

WALL MOUNTED EXIT SIGN, SHADED AREA INDICATES FACE WITH DIRECTIONAL ARROWS AS SHOWN. SEE LIGHTING FIXTURE SCHEDULE FOR EXACT REQUIREMENTS. CONNECT UNSWITCHED TO INDICATED BRANCH CIRCUIT.

POLE MOUNTED ROUND SITE LIGHTING FIXTURE. NUMBER OF HEADS AS SHOWN ON PLANS

POLE MOUNTED SQUARE SITE LIGHITNG FIXTURE. NUMBER OF HEADS AS SHOWN ON PLANS

STRIP FIXTURE

DOWNLIGHT FIXTURE

WALL WASHER FIXTURE

BOLLARD

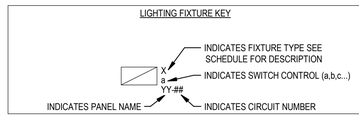
PENDANT LIGHT

EMERGENCY BATTERY PACK UNIT WITH NUMBER OF LAMPS AS INDICATED WITH SELF DIAGNOSTICS. SEE LIGHTING FIXTURE SCHEDULE FOR EXACT REQUIREMENTS. CONNECT UNSWITCHED TO INDICATED BRANCH CIRCUIT.

EMERGENCY REMOTE LIGHTING FIXTURE WITH SINGLE LAMP. LETTER (WHERE SHOWN) INDICATES TYPE. SEE LIGHTING FIXTURE SCHEDULE FOR EXACT REQUIREMENTS. CONNECT UNSWITCHED TO REMOTE BATTERY PACK, SEE PLANS.

EMERGENCY REMOTE LIGHTING FIXTURE WITH DOUBLE LAMPS. LETTER (WHERE SHOWN) INDICATES TYPE. SEE LIGHTING FIXTURE SCHEDULE FOR EXACT REQUIREMENTS. CONNECT UNSWITCHED TO REMOTE BATTERY PACK, SEE PLANS.

LIGHTING FIXTURE KEY



LIGHTING CONTROLS

WALL	CEILING	
OS X	OS X	DUAL TECHNOLOGY OCCUPANCY SENSOR IN FLUSH (FINISHED SPACES) OR SURFACE (UNFINISHED SPACES) CEILING-MOUNTED OUTLET BOX. X - DENOTES CONTROL ZONE
VS X	VS X	DUAL TECHNOLOGY VACANCY SENSOR IN FLUSH (FINISHED SPACES) OR SURFACE (UNFINISHED SPACES) CEILING-MOUNTED OUTLET BOX. X - DENOTES CONTROL ZONE
D X	D X	DAYLIGHT SENSOR
PC C X	PC C X	CLOSED LOOP LIGHTING PHOTOCELL. MOUNT PER MANUFACTURER'S REQUIREMENTS. X - DENOTES CONTROL ZONE
PC O X	PC O X	OPEN LOOP LIGHTING PHOTOCELL. MOUNT PER MANUFACTURER'S REQUIREMENTS. X - DENOTES CONTROL ZONE
SBD		SWITCH BYPASS DEVICE.
LC		LIGHTING CONTROL STATION - REFER TO KEY NOTES OR TYPE DETAIL FOR MORE INFORMATION # INDICATES TYPE NUMBER (1,2,3,...)
LC#		
ZM		LIGHTING OR SWITCHED RECEPTACLE ZONE MODULE.
PP		NORMAL POWER LIGHTING POWER PACK. SEE E200 FOR BASIS OF DESIGN.
EM		EMERGENCY POWER LIGHTING POWER PACK. SEE E200 FOR BASIS OF DESIGN
$^X		SINGLE-POLE SWITCH IN FLUSH (FINISHED SPACES) OR SURFACE (UNFINISHED SPACES) OUTLET BOX. X - DENOTES TYPE (MAY BE MULTIPLE):

a,b,c	SWITCH / CONTROL ZONE/GROUP	LVD	LOW VOLTAGE DIMMER
3	THREE WAY	MC	MOMENTARY CONTACT
4	FOUR WAY	M	MOTOR STARTER
D	DIMMER	P	PILOT LIGHT
OS	DUAL TECH OCCUPANCY SENSOR	T	TIMER SWITCH WITH VISUAL AND AUDIBLE OFF WARNING
OS2	DUAL TECH, DUAL CIRCUIT OCCUPANCY SENSOR	VS	VACANCY SWITCH
E	EMERGENCY (RED COLOR)	VSD	VACANCY SWITCH DIMMER
F	FAN	W	WET LOCATION
K	KEY OPERATED	WP	WEATHER PROOF COVER
LV	LOW VOLTAGE	X	EXPLOSION PROOF

DATA / COMMUNICATION - PATHWAYS & BOXES

WALL	FLOOR	CEILING	
▽	▽	V	DATA OUTLET - 4" SQUARE BOX WITH SINGLE GANG DEVICE BRACKET FLUSH (FINISHED SPACES) OR SURFACE (UNFINISHED SPACES). MINIMUM 1" CONDUIT TO ABOVE ACCESSIBLE CEILING WITH PULL STRING.
▼	▼	V	VOICE OUTLET - 4" SQUARE BOX WITH SINGLE GANG DEVICE BRACKET FLUSH (FINISHED SPACES) OR SURFACE (UNFINISHED SPACES). MINIMUM 1" CONDUIT TO ABOVE ACCESSIBLE CEILING WITH PULL STRING.
▼	▼	V	VOICE/DATA OUTLET - 4" SQUARE BOX WITH SINGLE GANG DEVICE BRACKET FLUSH (FINISHED SPACES) OR SURFACE (UNFINISHED SPACES). MINIMUM 1" CONDUIT TO ABOVE ACCESSIBLE CEILING WITH PULL STRING.
		WAP	WIRELESS ACCESS POINT - 4" SQUARE BOX WITH SINGLE GANG DEVICE BRACKET CEILING MOUNTED FLUSH (FINISHED SPACES) OR SURFACE (UNFINISHED SPACES) OUTLET BOX.
		TV	TELEVISION CABLE OUTLET - 4" SQUARE BOX WITH SINGLE GANG DEVICE BRACKET FLUSH (FINISHED SPACES) OR SURFACE (UNFINISHED SPACES) OUTLET BOX. MINIMUM 1" CONDUIT TO ABOVE ACCESSIBLE CEILING WITH PULL STRING.

WALL	CEILING	
SP	SP	COMMUNICATION SYSTEM SPEAKER. SUBSCRIPT, WHEN SHOWN, INDICATES ZONE.
	AI	AUDIO INPUT
	MIC	MICROPHONE
		BASKET TRAY - (width)" x (height)" AS INDICATED.

ACCESS CONTROL - PATHWAY & BOXES

ACP	FLUSH MOUNTED ACCESS CONTROL CARD READER MOUNTED 46-INCHES ABOVE FINISHED FLOOR UNLESS OTHERWISE INDICATED.
CR	FLUSH MOUNTED ACCESS CONTROL CARD READER MOUNTED 46-INCHES ABOVE FINISHED FLOOR UNLESS OTHERWISE INDICATED.
KP	FLUSH MOUNTED ACCESS CONTROL KEY PAD MOUNTED 46-INCHES ABOVE FINISHED FLOOR UNLESS OTHERWISE INDICATED.
DR	DOOR RELEASE BUTTON. SUBSCRIPT, WHEN SHOWN, INDICATES ZONE.
HS	INFRARED HAND SENSOR FOR HANDS FREE DOOR OPERATION. SUBSCRIPT, WHEN SHOWN, INDICATES ZONE.
	REQUEST TO EXIT
REX	ELECTRIC DOOR STRIKE
ES	MAG LOCK DEVICE - PROVIDE 120V TO THIS LOCATION.
ML	DOOR CONTACTS. SUBSCRIPT, WHEN SHOWN, INDICATES ZONE.
DC	PROVIDE POWER RACEWAYS, EMPTY 1" CONDUIT WITH PULL STRING AND BACK BOXES FOR TELECOM, SECURITY AND AV DEVICES AND EQUIPMENT AS REQUIRED.

POWER EQUIPMENT

480/277 VOLT PANELBOARD, FLUSH AND SURFACE MOUNTED RESPECTIVELY. DESIGNATION AS INDICATED. REFER TO PANELBOARD SCHEDULES FOR EXACT REQUIREMENTS.

208Y/120 OR 120/240 VOLT PANELBOARD, FLUSH AND SURFACE MOUNTED RESPECTIVELY, DESIGNATION AS INDICATED. REFER TO PANELBOARD SCHEDULES FOR EXACT REQUIREMENTS.

EXISTING PANELBOARD, FLUSH AND SURFACE MOUNTED RESPECTIVELY. DESIGNATION AS INDICATED. REFER TO PANELBOARD SCHEDULES FOR EXACT REQUIREMENTS.

ELECTRICAL POWER POLE, MOUNTING AND CONFIGURATION AS SPECIFIED.

MOTOR CONNECTION. ELECTRICAL CONTRACTOR TO COORDINATE WITH MECHANICAL CONTRACTOR FOR FINAL CONNECTION.

CB — ENCLOSED CIRCUIT BREAKER. FRAME SIZE AND TRIP RATING AS INDICATED ON PLANS.

MANUAL MOTOR STARTER. STARTER TYPE AND SIZE AS INDICATED ON PLANS.

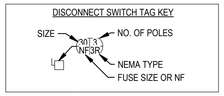
NON-FUSED DISCONNECT. FRAME SIZE AS INDICATED ON PLANS.

FUSED DISCONNECT. FRAME SIZE AND TRIP RATING AS INDICATED ON PLANS. PROVIDE FUSES PER NAMEPLATE OF EQUIPMENT SERVED UNLESS OTHERWISE INDICATED.

COMBINATION MOTOR STARTER & DISCONNECT. FRAME SIZE, TRIP RATING, AND STARTER SIZE AS INDICATED ON PLANS.

SPECIAL EQUIPMENT CONNECTION. SEE KEYED NOTE OR EQUIPMENT CONNECTION SCHEDULE FOR EXACT REQUIREMENTS.

DISCONNECT SWITCH TAG KEY



VFD — VARIABLE FREQUENCY DRIVE - ELECTRICAL CONTRACTOR TO COORDINATE WITH MECHANICAL CONTRACTOR FOR FINAL CONNECTION.

ATS — AUTOMATIC TRANSFER SWITCH - SEE RISER DIAGRAM

Txx — TRANSFORMER - SEE RISER DIAGRAM

WIRING, RACEWAY, & GROUNDING

CONDUIT WITH BUSHING AND CAP

CONDUIT TURNED UP

CONDUIT TURNED DOWN

CONDUIT CONTINUED

SURFACE METAL RACEWAY, MOUNTING AND CONFIGURATION AS SPECIFIED.

CONCEALED CONDUIT AND WIRING

UNDER FLOOR OR UNDER GROUND CONDUIT AND WIRING

GND — GROUND CABLE

GROUNDING TRIODE

GROUNDING ROD

B1-3 — WIRING HOMERUN - INDICATES CIRCUIT CONDUIT AND WIRE TO PANELBOARD SEE PANEL SCHEDULE

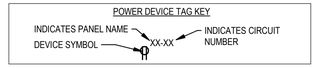
POWER DEVICES

WALL	FLOOR	CEILING	
			125 VOLT, 3 WIRE DUPLEX RECEPTACLE FLUSH (FINISHED SPACES) OR SURFACE (UNFINISHED SPACES) OUTLET BOX.
			125 VOLT, 3 WIRE DUPLEX RECEPTACLE GFI FLUSH (FINISHED SPACES) OR SURFACE (UNFINISHED SPACES) OUTLET BOX.
			EMERGENCY DUPLEX RECEPTACLE
			EMERGENCY GFI DUPLEX RECEPTACLE
			QUAD RECEPTACLE
			EMERGENCY QUAD RECEPTACLE
			SPECIAL EQUIPMENT RECEPTACLE. SUBSCRIPT INDICATES NEMA CONFIGURATION, IF APPLICABLE.
	J	J	JUNCTION BOX FLUSH (FINISHED SPACES) OR SURFACE (UNFINISHED SPACES) OUTLET BOX. COORDINATE LOCATION WITH MANUFACTURER FOR EQUIPMENT MOUNTED BOXES.

POWER DEVICE NOMENCLATURE

+	ABOVE COUNTER	WP	WEATHER PROOF
+#	CUSTOM MOUNTING HEIGHT	EWC	ELECTRIC WATER COOLER
IG	ISOLATED GROUND	USB	DUPLEX WITH USB-A & USB-C PORTS
TR	TAMPER RESIDENT		

POWER DEVICE TAG KEY



ELECTRIC PUSH BUTTON - FLUSH (FINISHED SPACES) OR SURFACE (UNFINISHED SPACES) OUTLET BOX. MOUNT 46-INCHES ABOVE FINISHED FLOOR UNLESS OTHERWISE INDICATED OR REQUIRED BY SITE CONDITIONS.

PUSH BUTTON (3 POSITION) - FLUSH (FINISHED SPACES) OR SURFACE (UNFINISHED SPACES) OUTLET BOX. MOUNT 46-INCHES ABOVE FINISHED FLOOR UNLESS OTHERWISE INDICATED OR REQUIRED BY SITE CONDITIONS.

EMERGENCY STOP MUSHROOM TYPE BUTTON IN SURFACE MOUNTED BOX. MOUNT 46-INCHES ABOVE FINISHED FLOOR UNLESS OTHERWISE INDICATED OR REQUIRED BY SITE CONDITIONS.

POKE-THRU. PROVIDE ELECTRICAL DEVICE. SAME DEVICE MAYBE SHOWN ON BOTH POWER AND SYSTEMS PLANS.

POKE-THRU. PROVIDE COMBINATION ELECTRICAL/DATA DEVICE. SAME DEVICE IS SHOWN ON BOTH POWER AND SYSTEMS PLANS.

POKE-THRU. PROVIDE DATA DEVICE. SAME DEVICE MAYBE SHOWN ON BOTH POWER AND SYSTEMS PLANS.

CORE DRILL

FLOOR BOX - PROVIDE DEVICES AND COUNTS AS SHOWN OR NOTED

FURNITURE FEED

CR — CORD REEL

M — MOTORIZED DAMPER - PROVIDE 120V POWER AND LOCAL DISCONNECT. COORDINATE EXACT LOCATIONS WITH M.C.

CP — EQUIPMENT CONTROL PANEL. FINAL CONNECTION BY E.C.

ELECTRICAL SHEET INDEX

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REVISION:

SCO REVIEW	9/15/25
2nd SCO REVIEW	10/24/25
Construction Set	11/17/25

CONSTRUCTION SET

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 053121 11/17/25 JESSE C. ALONZO

CLIENT NAME: THE UNIVERSITY OF NORTH CAROLINA AT CHAPEL HILL
JOB NAME: UNC VENABLE HALL LOWER LEVEL UPFIT
LOCATION: VENABLE HALL LOWER LEVEL
101 South RD
CHAPEL HILL, NC 27514
SCO ID: 24-28389-01A

ISSUE DATE: 11-17-25
JOB. NO.: 10021-0001
DWG. NO.:

E001

ELECTRICAL
LEGEND SHEET

LUMINAIRE SCHEDULE

TYPE	MANUFACTURER	CATALOG NUMBER	LAMP DATA		DRIVER DATA		MOUNTING	INPUT WATTS	DESCRIPTION
			NO.	TYPE	NO.	TYPE			
A	LITHONIA EATON HUBBELL OR ENGINEER APPROVED EQUAL	LSIX-4FT-6000LM-80CRI-40K-BFR-SWL-MINI-ZT-MVOLT-MW	NA	LED 4000K	NA	DIMMING	RECESSED	51 WATTS	6"X4' LOW-PROFILE LINEAR RECESSED LED, MATTE WHITE FINISH, BEZEL FRAME, 80CRI+
AE	LITHONIA EATON HUBBELL OR ENGINEER APPROVED EQUAL	LSIX-4FT-6000LM-80CRI-40K-BFR-SWL-MINI-ZT-MVOLT-MW-E10WLCP	NA	LED 4000K	NA	DIMMING	RECESSED	51 WATTS	6"X4' LOW-PROFILE LINEAR RECESSED LED, MATTE WHITE FINISH, BEZEL FRAME, 80CRI+ EM SELF DIAGNOSTIC BATTERY PACK-10W
B	LITHONIA EATON HUBBELL OR ENGINEER APPROVED EQUAL	GRD-LSL-8FT-MSL4-80CRI-40K-ID1300LMF-20/80-MIN1-MVOLT-SCT-F1-24A-C110	NA	LED 4000K	NA	DIMMING	SUSPENDED	62 WATTS	4' DIRECT AND INDIRECT LINEAR PENDANT, PAINTED ALUMINUM (LOW GLOSS)
C	LITHONIA EATON HUBBELL OR ENGINEER APPROVED EQUAL	ZL1D-L48-3000LM-FST-MVOLT-40K-80CRI-HC36M12	NA	LED	NA		SUSPENDED	30 WATTS	4' INDUSTRIAL STRIP WITH CURVED REFLECTOR AND NARROW DISTRIBUTION, CONSTANT OUTPUT, PROVIDE WITH MOUNTING KIT AS NECESSARY
EX	LITHONIA EATON HUBBELL OR ENGINEER APPROVED EQUAL	LRP-1-RC-X-120/277	NA	LED	NA		SURFACE	2 WATTS	LED EDGE-LIT EXIT SIGN, BRUSHED ALUMINUM HOUSING, SINGLE FACE, RED ON CLEAR, NICKEL-CADMIUM BATTERY, SELF DIAGNOSTICS.

INTERIOR LIGHTING POWER (NEW)

ROOM #	ROOM NAME	AVG. (FC)	IES RECOMMENDED AGV. (FC)
G301B	TEACHING LAB	71.6	50-75
G301C	TEACHING LAB	60.2	50-75
11M	STORAGE	10	10-20

INTERIOR LIGHTING POWER (NEW)

LUMINAIRE TYPE	WATTS(W)	QTY	TOTAL WATTS(W)	
A	51	31	1581	
B1	31	1	31	
B2	62	5	310	
D	15	8	120	
			2042	(TOTAL)

INTERIOR LIGHTING POWER ALLOWANCE PER NCECC 405.4.2

SPACE NAME	AREA(SQFT)	WATTS/SQFT	TOTAL WATTS ALLOWED(W)		
TEACHING LAB G301B	1554.72	1.43	2223.2		
TEACHING LAB G301C	1556.9	1.43	2226.4		
STORAGE 11M	63.02	0.63	39.7		
			4489.3	x 0.9	4040.4 (W)
				(*)	(ALLOWED)

Note (*): 0.9 IS PER NCECC 406.3.2 REDUCE LIGHTING POWER DENSITY BASED ON AREA BEING RENOVATED.

2018 APPENDIX B
BUILDING CODE SUMMARY FOR ALL COMMERCIAL PROJECTS

ELECTRICAL DESIGN

(PROVIDE ON THE ELECTRICAL SHEETS IF APPLICABLE)

ELECTRICAL SUMMARY

ELECTRICAL SYSTEM AND EQUIPMENT

Method of Compliance: Energy Code: ☒ Prescriptive ☐ Performance
ASHRAE 90.1: ☐ Prescriptive ☐ Performance

Lighting schedule (each fixture type)

lamp type required in fixture SEE LUMINAIRE SCHEDULE
number of lamps in fixture SEE LUMINAIRE SCHEDULE
ballast type used in the fixture SEE LUMINAIRE SCHEDULE
number of ballasts in fixture SEE LUMINAIRE SCHEDULE
total wattage per fixture SEE LUMINAIRE SCHEDULE
total interior wattage specified vs. allowed (whole building or space by space) 2042W VS. 4040W
total exterior wattage specified vs. allowed N/A

Additional Efficiency Package Options
(When using the 2018 NCECC; not required for ASHRAE 90.1)

- ☐ C406.2 More Efficient Mechanical Equipment
- ☒ C406.3 Reduced Lighting Power Density
- ☐ C406.4 Enhanced Digital Lighting Controls
- ☐ C406.5 On-Site Renewable Energy
- ☐ C406.6 Dedicated Outdoor Air System
- ☐ C406.7 Reduced Energy Use in Service Water Heating

ELECTRICAL ABBREVIATIONS

ABBREVIATION	DESCRIPTION	ABBREVIATION	DESCRIPTION	ABBREVIATION	DESCRIPTION
A/AMP	AMPERE	G, GND,GRD	GROUND	NFPA	NATIONAL FIRE PROTECTION ASSOCIATION
AFCI	ARC FAULT INTERRUPTER	GC	GENERAL CONTRACTOR	NIC	NOT IN THIS CONTRACT
AFF	ABOVE FINISHED FLOOR	GEN	GENERATOR	NM	NON-METTALIC
AFG	ABOVE FINISHED GRADE	GFI	GROUND FAULT INTERRUPTER	NO	NORMALLY OPEN
AHJ	AUTHORITY HAVING JURISDICTION	GTB	GROUND TERMINAL BOX	NTS	NOT TO SCALE
AL	ALUMINUM	HID	HIGH INTENSITY DISCHARGE	OC	ON CENTER
ANSI	AMER. NATIONAL STANDARDS INSTITUTE	HP	HORSE POWER	OEM	ORIGINAL EQUIPMENT MANUFACTURER
ASA	AMERICAN STANDARDS ASSOCIATION	HPF	HIGH POWER FACTOR	OSHA	OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION
ASTM	AMER. SOCIETY OF TESTING MATERIALS	HR	HOMERUN	P	POLE
AWG	AMERICAN WIRE GAUGE	HTR	HEATER	PBOX	PULL BOX
AT	AMPERE TRIP	HVAC	HEATING, VENTILATION, AIR CONDITIONING CONTRACTOR	PC	PHOTOCELL
ATS	AUTOMATIC TRANSFER SWITCH	HV	HIGH VOLTAGE	P.C.	PLUMBING CONTRACTOR
BL	BLANK	HZ	HERTZ	PH / Ø	PHASE
BKR	BREAKER	ICEA	INTERNATIONAL CABLE ENGR. ASSOC.	PNL	PANEL
C	CONDUIT	IEEE	INSTITUTE OF ELECTRICAL AND ELECTRONIC ENGINEERS	POS	POSITION
CB, C/B	CIRCUIT BREAKER	IES	ILLUMINATING ENGINEERING SOCIETY	PRI	PRIMARY
CKT BKR	-	IN	INCH	PWR	POWER
CKT	CIRCUIT	INCAN	INCANDESCENT	REC / RECPT	RECEPTACLE
CCTV	CLOSED CIRCUIT TV	IR	INFRA-RED	RGS	RIGID GALVANIZED STEEL
CLG	CEILING	JB/JBOX	JUNCTION BOX	RMC	RIGID GALVANIZED METAL CONDUIT
CO	CONVENIENCE OUTLET	K	THOUSAND	RT	RAIN TIGHT
CONN	CONNECTION	KVA	KILOVOLT-AMPERE	SCHED	SCHEDULE
CU	COPPER	KW	KILOWATT	SEC	SECONDARY
DB	DIRECT BURIAL	KWH	KILOWATT HOUR	SIG	SIGNAL
DISC	DISCONNECT	LA	LIGHTING ARRESTER	SM	SURFACE MOUNTED
DN	DOWN	LCP	LIGHTING CONTROL PANEL	SMR	SURFACE MOUNTED RACEWAY
DWG	DRAWING	LED	LIGHT EMITTING DIODE	SP	SPARE
EA	EACH	LTS	LIGHTS	SS	SAFETY SWITCH
E.C.	ELECTRICAL CONTRACTOR	LTG	LIGHTING	SW	SW
EF	EXHAUST FAN	LV	LOW VOLTAGE	SWBD	SWITCHBOARD
EH	ELECTRIC HEAT	MC	METAL CLAD	TEL / TELE	TELEPHONE
EIA	ELECTRONIC INDUSTRIES ASSOC.	M.C.	MECHANICAL CONTRACTOR	TL	TWIST LOCK
EMT	ELECTRIC METALLIC TUBING	MCB	MAIN CIRCUIT BREAKER	TP	TAMPER PROOF
XP	EXPLOSION PROOF	MCC	MOTOR CONTROL CENTER	TX / XFMR	TRANSFORMER
E, EM	EMERGENCY	MDP	MAIN DISTRIBUTION PANEL	TTB	TELEPHONE TERMINAL BOARD
ELEC	ELECTRIC	MFR	MANUFACTURER	TV	TELEVISION
EMT	ELECTRIC METALLIC TUBING	MH	MANHOLE	TYP	TYPICAL
EQ/EQPM	EQUIPMENT	MLO	MAIN LUGS ONLY	UH	UNIT HEATER
EUH	ELECTRIC UNIT HEATER	MISC	MISCELLANEOUS	UL	UNDERWRITERS' LABORATORIES, INC
EWC	ELECTRIC WATER COOLER	MTD	MOUNTED	UNO	UNLESS NOTED OTHERWISE
EX	EXISTING	MTG HGT	MOUNTING HEIGHT	V	VOLTAGE
F	FIXTURE	MTR	MOTOR	VT	VAPOR TIGHT
FA	FIRE ALARM	N/A	NOT APPLICABLE	W	WIRE; WATT
FAAP	FIRE ALARM ANNUNCIATOR PANEL	NC	NORMALLY CLOSED	W/	WITH
FACP	FIRE ALARM CONTROL PANEL	NF	ON-FUSED SAFETY SWITCH	W/O	WITHOUT
FCU	FAN COIL UNIT	NEC	NATIONAL ELECTRIC CODE	WP	WEATHER PROOF
FDR	FEEDER	NEMA	NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION	WT	WATER TIGHT
FIXT	FIXTURE				
FL	FLOOR				
FLUOR	FLUORESCENT				
FSS	FUSED SAFETY SWITCH				
FT	FEET				

GENERAL NOTES

1. ALL ELECTRICAL WORK SHALL BE IN ACCORD WITH ALL APPLICABLE ORDINANCES, CODES AND REGULATIONS OF ALL AUTHORITIES HAVING JURISDICTION. ALL ELECTRICAL WORK SHALL BE INSPECTED AND APPROVED BY THE LOCAL ELECTRICAL INSPECTION AGENCY MONDAY THRU FRIDAY DURING NORMAL BUSINESS HOURS. THE ELECTRICAL CONTRACTOR SHALL PROVIDE ALL NECESSARY FEES AND PERMITS, INCLUDING THE CERTIFICATE OF ELECTRICAL INSPECTION.
2. THE ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR CONSTRUCTION SAFETY. ARCHITECT AND/OR ENGINEER SHALL ASSUME NO RESPONSIBILITY FOR WORKMAN'S, OR PEDESTRIAN'S SAFETY. NOTHING IN THE CONTRACT DOCUMENTS SHALL BE CONSTRUED TO INSTRUCT PROCEDURES OR COMPONENTS FOR PROJECT SAFETY.
3. WHERE A CONFLICT ARISES BETWEEN PLANS, SPECIFICATIONS, DETAILS, SCHEDULES, APPLICABLE CODES OR REGULATIONS, THE MOST STRINGENT SHALL APPLY.
4. NOTHING CONTAINED IN THE CONTRACT DOCUMENTS SHALL BE CONSTRUED TO CONFLICT WITH ANY NATIONAL, STATE, MUNICIPAL, OR LOCAL LAWS OR REGULATIONS GOVERNING THE WORK INDICATED OR SPECIFIED. THE ELECTRICAL CONTRACTOR AT NO ADDITIONAL EXPENSE TO THE OWNER SHALL SATISFY ALL SUCH REQUIREMENTS.
5. THE CONTRACT DOCUMENTS ARE COMPRISED OF DRAWINGS AND SPECIFICATIONS. EACH ELECTRICAL BIDDER SHALL VISIT SITE TO DETERMINE EXISTING CONDITIONS PRIOR TO SUBMITTING BID PROPOSAL. BIDS SHALL BE BASED ON THE COMPLETE EXAMINATION OF THE DRAWINGS, SPECIFICATIONS AND EXISTING CONDITIONS. NO CONSIDERATION WILL BE GIVEN ANY CONTRACTOR WHO FAILS TO DO SO.
6. THE WORK UNDER THIS CONTRACT SHALL INCLUDE THE FURNISHING OF ALL NECESSARY MATERIALS, TOOLS, AND LABOR FOR A COMPLETE, AND WORKING INSTALLATION AS DEFINED BY THE PLANS AND SPECIFICATIONS. THE ELECTRICAL CONTRACTOR SHALL WARRANT THE WORK INDICATED AND SPECIFIED FOR A PERIOD OF ONE YEAR. THE WORK SHALL FUNCTION AS INTENDED, BE COMPLETE IN ALL DETAILS, AND SHALL INCLUDE ALL INDICATED, SPECIFIED, OR REQUIRED ACCESSORIES FOR A FUNCTIONING SYSTEM.
7. THE ELECTRICAL CONTRACTOR SHALL PROVIDE TEMPORARY LIGHT AND POWER AS REQUIRED BY THE GENERAL CONDITIONS OF THE SPECIFICATION.
8. THE ELECTRICAL CONTRACTOR SHALL COORDINATE HIS WORK WITH ALL OTHER TRADES. ALL DEVICES PROVIDED BY OTHERS THAT REQUIRE LINE VOLTAGE ELECTRICAL POWER SHALL BE CONNECTED BY THE ELECTRICAL CONTRACTOR. POWER, PHONE, DATA, TV, AND SIMILAR DEVICE OUTLET LOCATIONS SHALL BE COORDINATED WITH THE ARCHITECTURAL INTERIOR LAYOUTS, THE GENERAL CONTRACTOR, AND THE OWNER.
9. THE ELECTRICAL CONTRACTOR SHALL COORDINATE WITH OWNER'S PROJECT MANAGER PRIOR TO AND FOR SCHEDULING ANY INTERRUPTION OF ANY BUILDING UTILITY.
10. THE ELECTRICAL CONTRACTOR SHALL COORDINATE WITH THE LOCAL UTILITIES AND ARRANGE FOR THE FOLLOWING SERVICES: ELECTRICAL POWER, CABLE TV, AND TELEPHONE SERVICE. THE ELECTRICAL CONTRACTOR SHALL MEET WITH THE REPRESENTATIVES OF THE ELECTRICAL UTILITY & TELE/COMM UTILITY TO CONFIRM DETAILS ON THE SERVICE AND METERING. THE ELECTRICAL CONTRACTOR SHALL PAY ALL NECESSARY COSTS, FEES, AND PERMITS INVOLVED IN BRINGING SERVICE TO THE BUILDING.
11. THE ELECTRICAL CONTRACTOR AT THE SITE SHALL VERIFY ALL DIMENSIONS AND EXISTING CONDITIONS PERTAINING TO THE INSTALLATION OF THE ELECTRICAL SYSTEMS. WHERE A CONTRACTOR UNCOVERS CONDITIONS NOT INDICATED ON THE PLANS OR IN THE SPECIFICATIONS, THEY SHALL NOTIFY THE ARCHITECT PRIOR TO PROCEEDING WITH ANY WORK. FAILURE TO NOTIFY THE ARCHITECT WILL MAKE THE CONTRACTOR RESPONSIBLE FOR ALL COSTS AND CONSEQUENCES OF SUCH FAILURE.
12. THE ELECTRICAL DRAWINGS ARE DIAGRAMMATIC AND REPRESENT THE DESIGN/LAYOUT INTENT ONLY. THE ELECTRICAL CONTRACTOR SHALL DETERMINE CIRCUITING, ROUTING, WIRING ETC.., AS REQUIRED BY THE SITE CONDITIONS, AND ALL APPLICABLE CODES.
13. ALL WIRING SHALL BE CONCEALED IN FINISHED AREAS AS SPECIFIED. USE EMT CONDUIT, MINIMUM 3/4" UNLESS NOTED OR SPECIFIED OTHERWISE. USE OF MC CABLE IS NOT ALLOWED PER UNC ELECTRICAL AND EMERGENCY GENERATOR GUIDELINES.
14. THE FOLLOWING CONDUCTORS SHALL BE RUN IN HEAVY WALL CONDUIT:
    14.1.ALL FEEDERS RUN IN SLAB - MAY BY SCHEDULE 80 PVC.
    14.2.WHERE REQUIRED BY THE N.E.C.
    14.3.EXPOSED WIRING ON A ROOF - SEAL PROPERLY.
    14.4.EXTERIOR, ABOVE GRADE WIRING.
15. FOLLOWING FEEDERS SHALL BE IN EMT:
    15.1.BRANCH FEEDERS TO PANELS.
16. TRENCHING AND BACKFILL FOR UNDERGROUND CONDUITS SHALL BE BY THE ELECTRICAL CONTRACTOR.
17. UPON THE COMPLETION OF WORK THE E.C. SHALL PROVIDE ALL PANELBOARDS WITH TYPED PANEL SCHEDULES TO CLEARLY DEFINE THE EQUIPMENT SERVED.
18. UPON THE COMPLETION OF WORK THE E.C. SHALL PROVIDE ALL DISTRIBUTION EQUIPMENT WITH TYPED NAMEPLATES TO CLEARLY DEFINE THE EQUIPMENT SERVED AND RECEPTACLE PLATES WITH CIRCUITS SERVING EACH.
19. CHANNELING OF THE FLOORS SHALL BE MINIMIZED.
20. REFER TO ARCHITECTURAL REFLECTED CEILING PLANS FOR THE COORDINATED PLACEMENT OF LIGHTS, DIFFUSERS, SPRINKLERS, AND RETURN AIR GRILLES.
21. E.C. SHALL COORDINATE ALL RECEPTACLE AND LIGHT FIXTURES LOCATIONS WITH CASEWORK PLAN WHICH WILL BE DIMENSIONED.
22. ALL HOMERUNS WITH MORE THAN SIX (6) TOTAL CONDUCTORS SHALL BE A MINIMUM OF NO. 10 THWN WIRE UNLESS SPECIFICALLY SIZED OTHERWISE.
23. ALL WORK SHOWN ON THE ELECTRICAL DRAWINGS SHALL BE BY THE ELECTRICAL CONTRACTOR UNLESS SPECIFICALLY NOTED OTHERWISE.
24. CONTRACTOR SHALL REMOVE DEMOLITION DEBRIS COMPLETELY. CONTRACTOR SHALL SCHEDULE WITH THE OWNER THE TIME, LOCATION, ELEVATOR AND HAULING ROUTE.
25. CONTRACTOR SHALL CLEAN UP ALL DEBRIS AT THE END OF EACH WORK DAY.
26. EXACT COUNTS/QUANTITIES FOR CONTRACT PURPOSES SHALL BE VERIFIED IN THE FIELD BY THE CONTRACTOR AND INCLUDED AS PART OF THE BASE BID.
27. REFER TO ARCHITECTURAL DRAWING FOR ALL WALL HEIGHTS.
28. VERIFY EXACT LOCATION OF ALL MECHANICAL EQUIPMENT WITH THE MECHANICAL CONTRACTOR, PRIOR TO ROUGH-IN. E.C. SHALL ALSO INCLUDE COORDINATION WITH DEVICES BY M.C., WIRING REQUIREMENTS, INTERCONNECTIONS, AND TERMINATIONS AND PROVIDE AS REQUIRED.
29. ALL CONDUITS RUN IN EXPOSED AREAS SHALL BE MOUNTED TIGHT TO THE UNDERSIDE OF THE STRUCTURAL STEEL. THIS APPLIES FOR ALL BRANCH CIRCUIT AND FEEDER CONDUITS.
30. ALL HOLES AND OPENINGS CREATED TO EXTEND THE ELECTRICAL SYSTEMS THROUGH FLOORS AND FIRE RATED ASSEMBLIES SHALL BE FIRESTOPPED.
31. DURING THE BIDDING PROCESS, ELECTRICAL CONTRACTOR SHALL REVIEW DRAWINGS AND SPECIFICATIONS OF ALL OTHER TRADES (GENERAL, HVAC, AND PLUMBING). ALL ITEMS REQUIRING POWER INDICATED ON THESE DRAWINGS BUT NOT INDICATED ON THE ELECTRICAL DRAWINGS SHALL BE CONSIDERED A PART OF THE ELECTRICAL CONTRACTORS WORK. THIS WORK SHALL BE INSTALLED AS PER NEC AT NO ADDITIONAL COST TO THE OWNER
32. WHERE CONDUIT SIZES HAVE BEEN OMITTED, THE CONTRACTOR SHALL INSTALL THE CORRECT SIZES REQUIRED BY THE N.E.C. AS DETERMINED BY THE NUMBER OF WIRES TO BE INSTALLED. WHERE THE NUMBER AND OR SIZES OF HAVE BEEN OMITTED, THE CONTRACTOR SHALL INSTALL THE REQUIRED NUMBER AND OR SIZES AS DETERMINED BY THE EQUIPMENT REQUIREMENTS OR FROM ADJACENT SECTIONS AND CIRCUIT NUMBERS.
33. WIRE SIZE FOR BRANCH CIRCUITS SHALL BE ADJUSTED TO COMPENSATE FOR VOLTAGE DROP CALCULATIONS AS REQUIRED BY NEC. IF CIRCUIT RUN EXCEEDS 100FT. IN WIRE LENGTH, NEXT WIRE SIZE (#10) SHALL BE USED.
34. STARTERS, COMBINATION STARTERS, CONTRACTORS, ETC.. FOR MECHANICAL EQUIPMENT SHALL BE PROVIDED BY THE MECHANICAL CONTRACTOR. ALL POWER WIRING AND CONDUIT TO EQUIPMENT TERMINALS SHALL BE PROVIDED BY THE ELECTRICAL CONTRACTOR AT EQUIPMENT TERMINALS. POWER TO MECHANICAL EQUIPMENT SHALL BE TURNED ON ONLY BY THE MECHANICAL CONTRACTOR. MECHANICAL NAME PLATE DATA SHALL NOT BE COVERED BY ELECTRICAL DEVICES.
35. THE ELECTRICAL CONTRACTOR SHALL FURNISH SUBMITTALS IN ACCORDANCE WITH THE SPECIFICATIONS. ALL SUBMITTALS SHALL BE REVIEWED AND STAMPED BY THE ENGINEER PRIOR TO INSTALLATION.
36. THE ELECTRICAL CONTRACTOR SHALL PROVIDE AS-BUILT DRAWINGS FOR THE ENTIRE PROJECT AS DEFINED IN THE SPECIFICATIONS
37. THIS CONTRACTOR SHALL VISIT THE SITE AND FULLY INFORM HIMSELF OF ALL THE EXISTING CONDITIONS, WHICH IN ANY WAY WILL AFFECT THE EXECUTION OF HIS WORK AND THE REQUIREMENTS OF THIS CONTRACT AS SHOWN OR REASONABLY INFERRED ON THE DRAWINGS AND PRODUCT SPECIFICATIONS.

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CONSTRUCTION SET

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 053121 JESSE C. ALONZO JR. 11/17/25

CLIENT NAME: THE UNIVERSITY OF NORTH CAROLINA AT CHAPEL HILL
JOB NAME: UNC VENABLE HALL LOWER LEVEL UPFIT
LOCATION: VENABLE HALL LOWER LEVEL
101 South RD
CHAPEL HILL, NC 27514
SCO ID: 24-28389-01A

ISSUE DATE: 11-17-25
JOB. NO. 10021-0001
DWG. NO.

E002

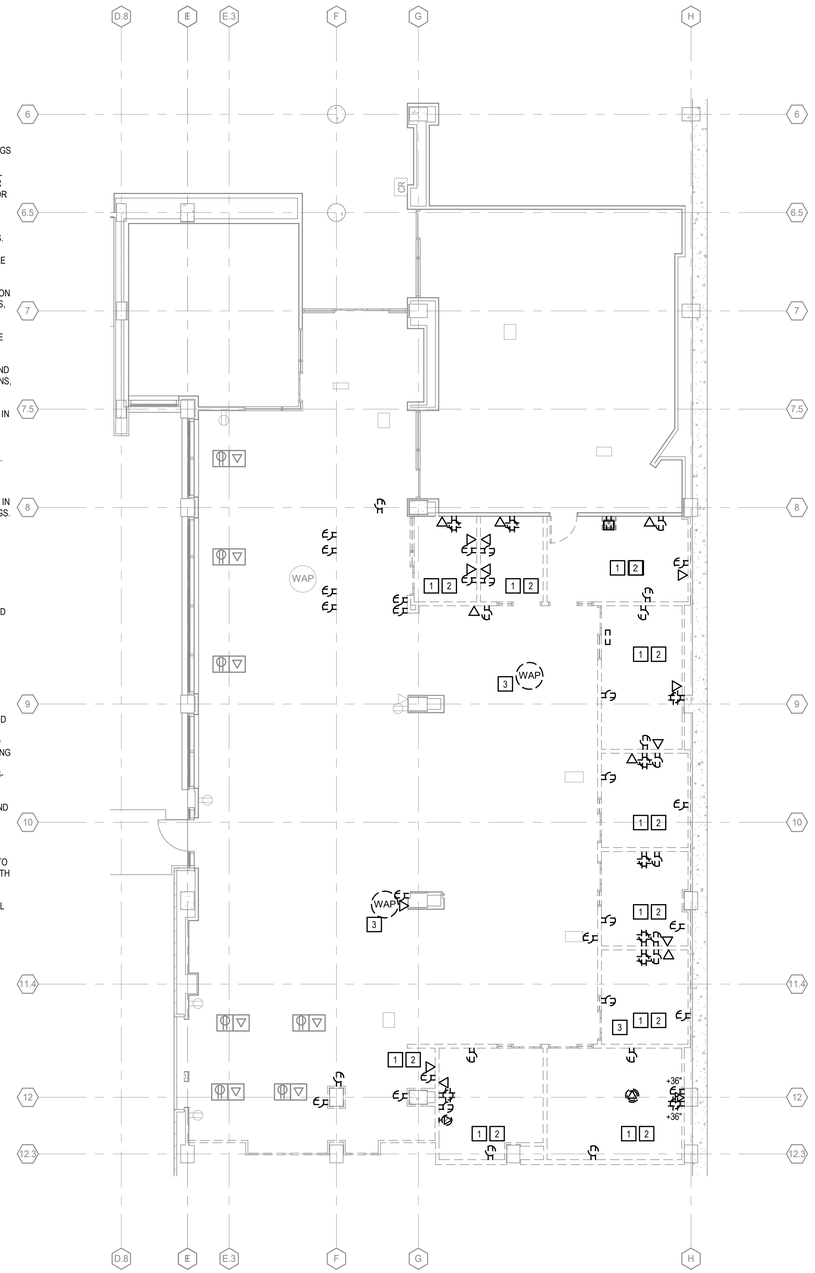
ELECTRICAL NOTES AND ABBREVIATION

DEMOLITION GENERAL NOTES

1. EXISTING CIRCUIT NUMBERING IN FIELD IS INCONSISTENT BETWEEN DEVICE LABELING, SCHEDULE IN PANEL DOOR, AND RECORD DRAWINGS THEREFORE THE LABLING ON THE FLOOR PLANS SHALL BE CONFIRMED BY EC. CONTRACTOR SHALL TRACE CIRCUITS UTILIZING CIRCUIT TRACERS FOR ALL CIRCUITS IN THE AREA OF WORK. CONTRACTOR SHALL DOCUMENT EXISTING CIRCUITING IN PREPARATION FOR DEMOLITION WORK AND TO FACILITATE NEW WORK INCLUDING UPDATED LABELING AS REQUIRED PER THE SPECIFICATIONS.
2. ALL PENETRATIONS OF EXISTING FLOORS AND FIRE RATED WALL OR SMOKE PARTITIONS SHALL BE PATCHED & REPAIRED AS REQUIRED TO MAINTAIN THE EXISTING FIRE RATING OR SMOKE INFILTRATION INTEGRITY OF THE WALL. ALL SLEEVES, WIREWAYS, CABLE TRAYS, PIPES, DUCTWORK, ETC. SHALL BE FIRE SEALED TIGHT TO THE WALL OR FLOOR PENETRATIONS TO MAINTAIN THE REQUIRED CODE COMPLIANT FIRE RATING.
3. ELECTRICAL CONTRACTOR SHALL FIELD VERIFY AND COORDINATEALL EXISTING CONDITIONS, LOCATIONS, AND CIRCUITING OF ALL EXISTING ELECTRICAL EQUIPMENT LOCATED IN THE AREAS OF CONSTRUCTION INCLUDING EQUIPMENT LOCATED IN ADJACENT AREAS SERVED BY THE CIRCUITING LOCATED IN THESE SPACES.
4. DEMOLITION WORK SHALL BE COMPLETED IN FULL. ALL CONDUIT AND WIRING SHALL BE DEMOLISHED BACK TO SOURCE UNLESS OTHERWISE NOTED. PANELS SCHEDULES SHALL BE UPDATED WHERE APPLICABLE. NO RACEWAY SHALL BE ABANDONED IN PLACE UNLESS SPECIFICALLY NOTED ON DRAWINGS.
5. IN AREAS OF REMOVAL OF WALL AND CEILING MOUNTED DEVICES, CONTRACTOR SHALL REPAIR, PATCH AND CLEAN WALLS, WALL BASES, AND CEILING AS REQUIRED TO MATCH EXISTING FINISHES.
6. CONTRACTOR SHALL MAINTAIN ALL CIRCUITS RUNNING THROUGH THE AREA OF DEMOLITION AND THE AREA OF NEW CONSTRUCTION.

DEMOLITION KEY NOTES

1. DEMOLISH EXISTING RECEPTACLES (HATCHED) AND ASSOCIATED WIRING, RACEWAY, BOXES, AND SUPPORTS COMPLETELY BACK TO SOURCE OR TO FIRST JUNCTION BOX SERVING EXISTING CIRCUITING TO REMAIN. EXISTING CIRCUIT SOURCE AND NUMBER SHALL BE CONFIRMED AND NOTED ON AS-BUILT DRAWSINGS PRIOR TO ANY DEMO WORK.
2. DEMOLISH EXISTING DATA OUTLETS (HATCHED) AND ASSOCIATED CABLING, RACEWAY, BOXES, AND SUPPORTS COMPLETELY BACK TO SOURCE.
3. EXISTING CEILING MOUNTED WIRELESS ACCESS POINT SHALL BE DISCONNECTED AND SALVAGED TO BE INSTALLED IN NEW LOCATION. COORDINATE WITH OWNER.
4. DEMOLISH EXISTING CONNECTION TO MECHANICAL EQUIPMENT AND ASSOCIATED WIRING, RACEWAY, BOXES, AND SUPPORTS COMPLETELY BACK TO SOURCE.



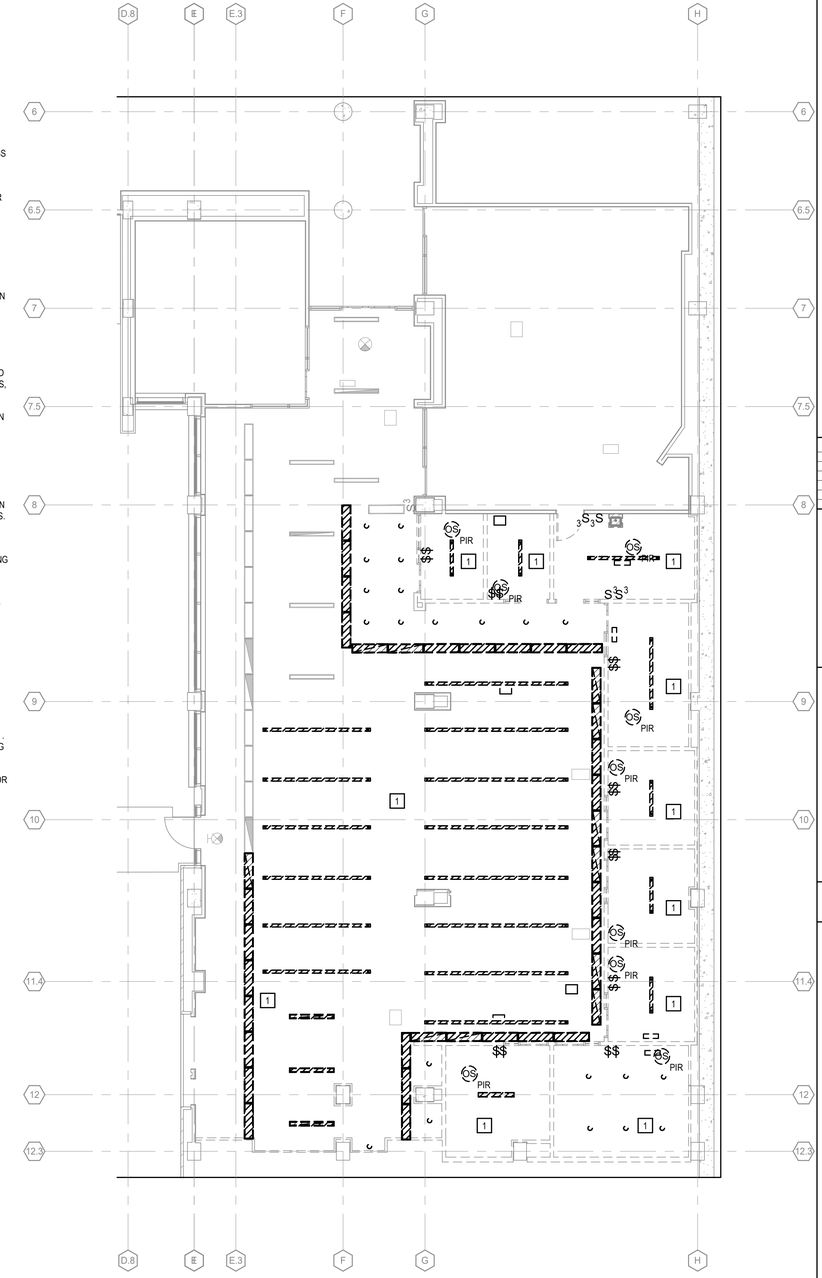
1 GROUND FLOOR DEMO PLAN - POWER AND SPECIAL SYSTEMS
SCALE: 1/8" = 1'-0"

DEMOLITION GENERAL NOTES

1. EXISTING CIRCUIT NUMBERING IN FIELD IS INCONSISTENT BETWEEN DEVICE LABELING, SCHEDULE IN PANEL DOOR, AND RECORD DRAWINGS THEREFORE THE LABLING ON THE FLOOR PLANS SHALL BE CONFIRMED BY EC. CONTRACTOR SHALL TRACE CIRCUITS UTILIZING CIRCUIT TRACERS FOR ALL CIRCUITS IN THE AREA OF WORK. CONTRACTOR SHALL DOCUMENT EXISTING CIRCUITING IN PREPARATION FOR DEMOLITION WORK AND TO FACILITATE NEW WORK INCLUDING UPDATED LABELING AS REQUIRED PER THE SPECIFICATIONS.
2. ALL PENETRATIONS OF EXISTING FLOORS AND FIRE RATED WALL OR SMOKE PARTITIONS SHALL BE PATCHED & REPAIRED AS REQUIRED TO MAINTAIN THE EXISTING FIRE RATING OR SMOKE INFILTRATION INTEGRITY OF THE WALL. ALL SLEEVES, WIREWAYS, CABLE TRAYS, PIPES, DUCTWORK, ETC. SHALL BE FIRE SEALED TIGHT TO THE WALL OR FLOOR PENETRATIONS TO MAINTAIN THE REQUIRED CODE COMPLIANT FIRE RATING.
3. ELECTRICAL CONTRACTOR SHALL FIELD VERIFY AND COORDINATEALL EXISTING CONDITIONS, LOCATIONS, AND CIRCUITING OF ALL EXISTING ELECTRICAL EQUIPMENT LOCATED IN THE AREAS OF CONSTRUCTION INCLUDING EQUIPMENT LOCATED IN ADJACENT AREAS SERVED BY THE CIRCUITING LOCATED IN THESE SPACES.
4. DEMOLITION WORK SHALL BE COMPLETED IN FULL. ALL CONDUIT AND WIRING SHALL BE DEMOLISHED BACK TO SOURCE UNLESS OTHERWISE NOTED. PANELS SCHEDULES SHALL BE UPDATED WHERE APPLICABLE. NO RACEWAY SHALL BE ABANDONED IN PLACE UNLESS SPECIFICALLY NOTED ON DRAWINGS.
5. IN AREAS OF REMOVAL OF WALL AND CEILING MOUNTED DEVICES, CONTRACTOR SHALL REPAIR, PATCH AND CLEAN WALLS, WALL BASES, AND CEILING AS REQUIRED TO MATCH EXISTING FINISHES.
6. CONTRACTOR SHALL MAINTAIN ALL CIRCUITS RUNNING THROUGH THE AREA OF DEMOLITION AND THE AREA OF NEW CONSTRUCTION.

DEMOLITION KEY NOTES

1. DEMOLISH EXISTING LUMINARIES SHOWN (WITH SUPPORTS) AND ASSOCIATED CONTROLS IN HATCH . CONTRACTOR SHALL REMOVE CONDUIT AND WIRING BACK TO THE LAST JUNCTION BOX SERVING EXISTING LUMINAIRES TO REMAIN. LINESIDE CIRCUITING SHALL REMAIN AND BE MADE READY FOR RE-CONNECTION. THE DISPOSAL OF FLUORESCENT LAMPS, BALLASTS, AND OTHER MERCURY CONTAINING DEVICES MUST COMPLY WITH NC GENERAL STATUTES G.S. 130A-310.60 WHICH APPLY TO ALL STATE AND LOCAL AGENCIES MANAGING DISCARDED MERCURY CONTAINING DEVICES, INCLUSIVE OF THOSE GENERATED THROUGH CONSTRUCTION/RENOVATION.



2 GROUND FLOOR DEMO PLAN - LIGHTING
SCALE: 1/8" = 1'-0"

1/8"=1'-0" 8' 4' 0 8' 16'

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REVISION:

SCO REVIEW	9/15/25
2nd SCO REVIEW	10/24/25
Construction Set	11/17/25

CONSTRUCTION SET

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 053121 11/17/25 JESSE C. ALONZO

CLIENT NAME: THE UNIVERSITY OF NORTH CAROLINA AT CHAPEL HILL
JOB NAME: UNC VENABLE HALL LOWER LEVEL UPFIT
LOCATION: VENABLE HALL LOWER LEVEL
101 South RD
CHAPEL HILL, NC 27514
SCO ID: 24-28389-01A

ISSUE DATE: 11-17-25
JOB. NO.: 10021-0001
DWG. NO.:

E100

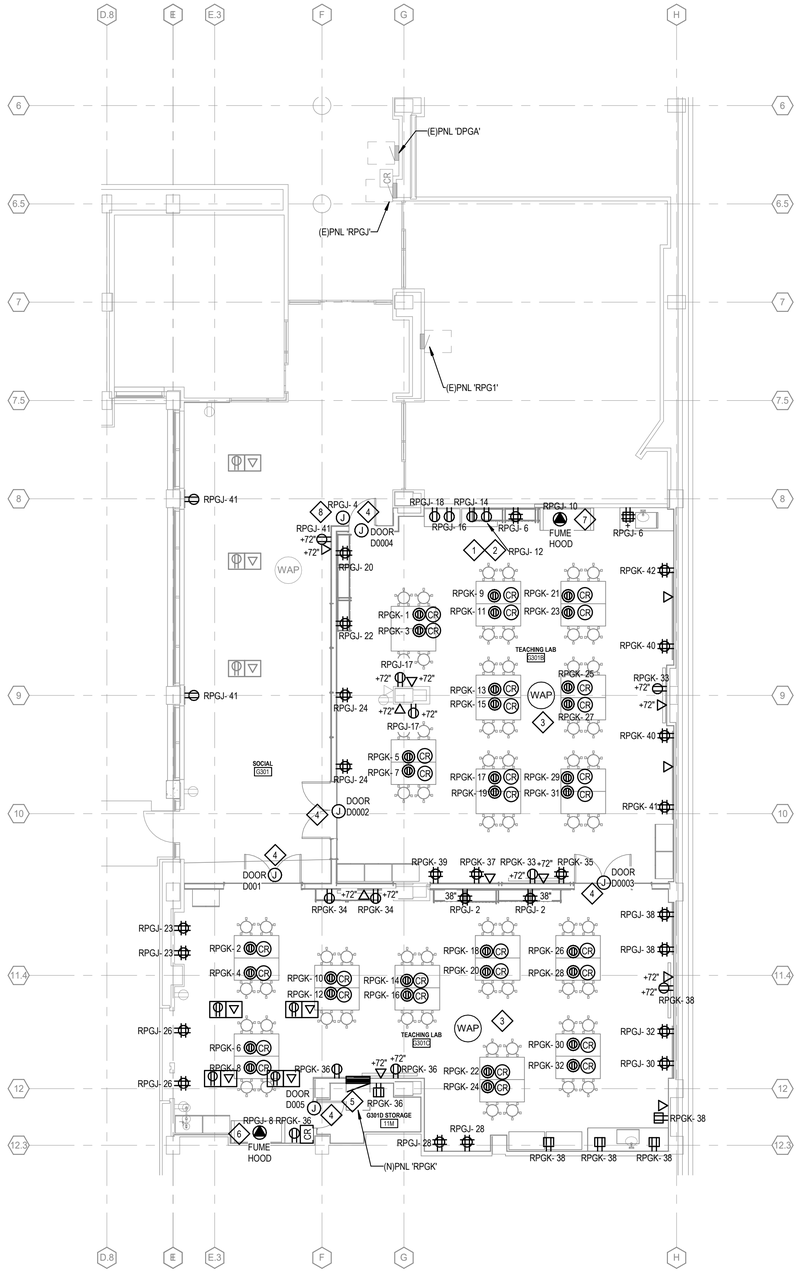
ELECTRICAL DEMOLITION PLANS

NEW WORK GENERAL NOTES

1. EXISTING CIRCUIT NUMBERING IN FIELD SHALL BE CONFIRMED BY EC. CONTRACTOR SHALL TRACE CIRCUITS UTILIZING CIRCUIT TRACERS FOR ALL CIRCUITS IN THE AREA OF WORK. CONTRACTOR SHALL DOCUMENT EXISTING CIRCUITING IN PREPARATION FOR DEMOLITION WORK AND TO FACILITATE NEW WORK INCLUDING UPDATED LABELING AS REQUIRED PER THE SPECIFICATIONS.
2. ELECTRICAL CONTRACTOR SHALL FIELD VERIFY AND COORDINATE ALL EXISTING CONDITIONS, LOCATIONS, AND CIRCUITING OF ALL EXISTING ELECTRICAL (POWER, LIGHTING, SPECIAL SYSTEMS, ETC.) EQUIPMENT LOCATED IN AREAS OF DEMOLITION/CONSTRUCTION INCLUDING EQUIPMENT LOCATED IN ADJACENT AREAS SERVED BY CIRCUITING LOCATED IN THESE SPACES. THE CONTRACTOR SHALL VISIT THE JOB SITE AND BECOME FAMILIAR WITH ALL EXISTING CONDITIONS PRIOR TO BID AND ANY WORK.
3. EXISTING ELECTRICAL PANELBOARDS SHALL REMAIN. PANELBOARDS AND ASSOCIATED CIRCUITS SHALL BE MODIFIED AS NOTED IN THE DRAWINGS.
4. IN AREAS OF REMOVAL OF WALL AND CEILING MOUNTED DEVICES, CONTRACTOR SHALL REPAIR, PATCH AND CLEAN WALLS, WALL BASES, AND CEILING AS REQUIRED TO MATCH EXISTING FINISHES.
5. REFER TO DRAWING E001 AND E002 FOR GENERAL PROJECT NOTES, SYMBOLS & ABBREVIATIONS.
6. REFER TO DRAWING E500 FOR ELECTRICAL DETAILS.

POWER AND SYSTEMS NEW WORK KEYED NOTES:

1. PROVIDE NEW POWER/DATA DEVICE (S) AS SHOWN. EXTEND 2 #12 GND IN 3/4" CONDUIT FROM EXISTING CIRCUIT MADE AVAILABLE FROM DEMO AND RE-CONNECT TO NEW WHERE APPLICABLE. OTHERWISE PROVIDE NEW CIRCUITING FROM CIRCUIT SHOWN TO NEW RECEPTACLE LOCATIONS. FOR DATA OUTLETS: PROVIDE DOUBLE GANG BOX AND FLUSH SINGLE GANG MUD RING. PROVIDE 1" EMT CONDUIT FROM BOX TO ABOVE FINISHED CEILING AND PROVIDE 90 BEND WITH INSULATING BUSHING, AND 100 LBS. TEST NYLON PULL STRING. PROVIDE DUAL CATEGORY 6A OUTLET AND ASSOCIATED DATA CABLING (CAT 6A) FOR COMPLETE INSTALLATION.
2. PROVIDE 20A, 120V CORD REEL (BY LEGRAND 1000 SERIES OR APPROVED EQUIVALENT) WITH 4 AC OUTLETS AND USB PORTS. CORD REEL SHALL BE TERMINATED WITH QUAD RECEPTACLE. PROVIDE MOUNTING HARDWARE TO MOUNT REEL BASE ALUMINUM FRAMING. PROVIDE FLUSH CEILING MOUNTED DUPLEX RECEPTACLE FOR SERVICE TO CORD REEL.
3. REINSTALL CEILING WIRELESS ACCESS POINT(S). COORDINATE LOCATIONS WITH OWNER.
4. PROVIDE 120V POWER TO ELECTRIC DOOR HARDWARE. PROVIDE JUNCTION BOX AND ASSOCIATED RACEWAY FOR DOOR POWER SUPPLY. PROVIDE SINGLE GANG BOX AS REQUIRED FOR DOOR HARDWARE PROVIDED BY OTHERS. REFER TO DETAILS SHOWN ON E501. COORDINATE WITH ARCHITECT AS NECESSARY.
5. PROVIDE NEW RECESSED ELECTRICAL PANEL 'RPGK', 100A MCB, 208Y/120V, 22KAIC IN NEW STORAGE ROOM 111M. PROVIDE FEEDER BREAKER IN EXISTING DISTRIBUTION PANEL 'DPGA' TO SERVER NEW BRANCH PANEL 'RPGK'.
6. PROVIDE POWER CONNECTION FOR FUME HOOD AS SHOWN. PROVIDE JUNCTION BOX FOR POWER ACCESS ABOVE THE FUME HOOD. COORDINATE FUME HOOD CONNECTION REQUIREMENTS WITH MECHANICAL CONTRACTOR. EXHAUST FANS THAT SUPPLY FUME HOODS ARE ON EMERGENCY POWER.
7. ADD ALTERNATE 01: PROVIDE POWER CONNECTION FOR FUME HOOD AS SHOWN. PROVIDE JUNCTION BOX FOR POWER ACCESS ABOVE THE FUME HOOD. COORDINATE FUME HOOD FINAL CONNECTION REQUIREMENTS WITH MECHANICAL CONTRACTOR. EXHAUST FANS THAT SUPPLY FUME HOODS ARE ON EMERGENCY POWER.
8. PROVIDE 120V POWER TO DOOR POWER SUPPLY. COORDINATE EXACT LOCATION AND REQUIREMENTS WITH DOOR HARDWARE SUPPLIER AND ARCHITECT PRIOR TO INSTALLATION AND ROUGH-IN.



1 ELECTRICAL NEW WORK PLAN - POWER & SYSTEMS

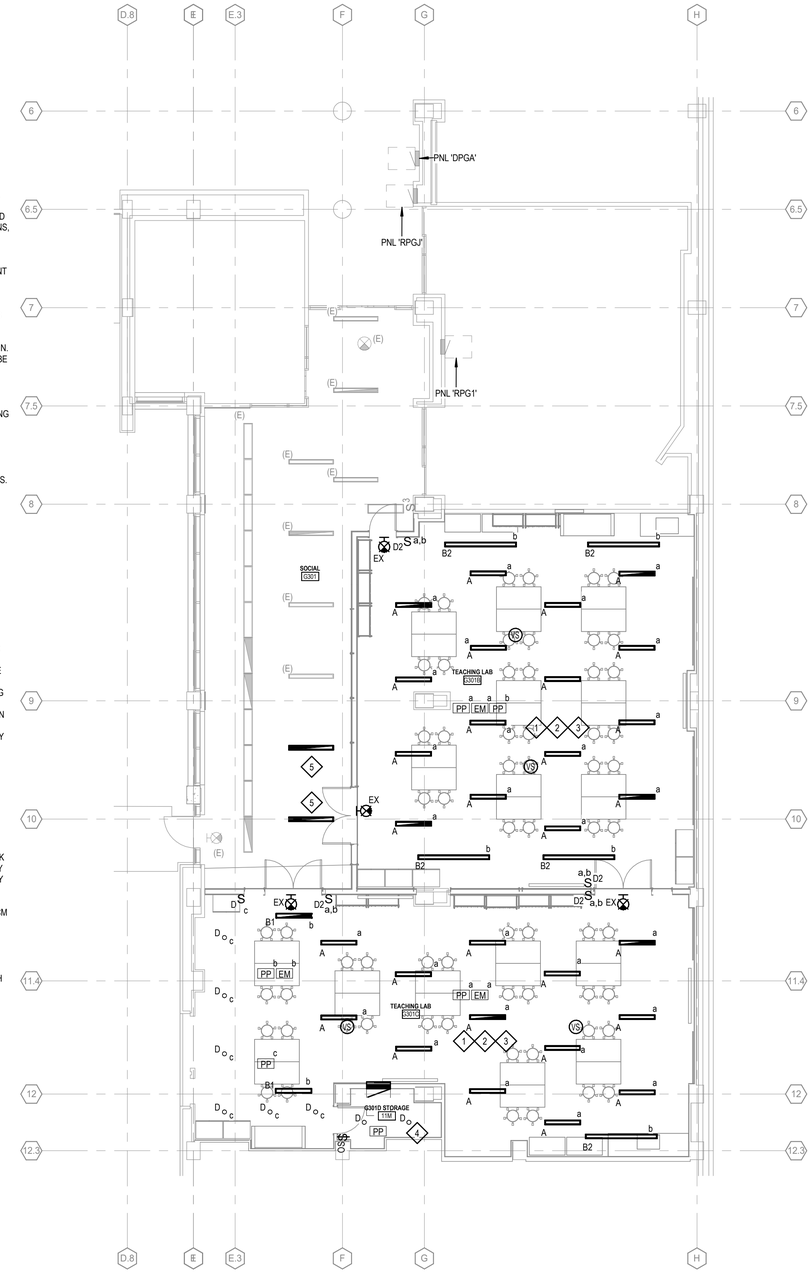
SCALE: 1/8" = 1'-0"

NEW WORK GENERAL NOTES

1. EXISTING CIRCUIT NUMBERING IN FIELD SHALL BE CONFIRMED BY EC. CONTRACTOR SHALL TRACE CIRCUITS UTILIZING CIRCUIT TRACERS FOR ALL CIRCUITS IN THE AREA OF WORK. CONTRACTOR SHALL DOCUMENT EXISTING CIRCUITING IN PREPARATION FOR DEMOLITION WORK AND TO FACILITATE NEW WORK INCLUDING UPDATED LABELING AS REQUIRED PER THE SPECIFICATIONS.
2. ELECTRICAL CONTRACTOR SHALL FIELD VERIFY AND COORDINATE ALL EXISTING CONDITIONS, LOCATIONS, AND CIRCUITING OF ALL EXISTING ELECTRICAL (POWER, LIGHTING, SPECIAL SYSTEMS, ETC.) EQUIPMENT LOCATED IN AREAS OF DEMOLITION/CONSTRUCTION INCLUDING EQUIPMENT LOCATED IN ADJACENT AREAS SERVED BY CIRCUITING LOCATED IN THESE SPACES. THE CONTRACTOR SHALL VISIT THE JOB SITE AND BECOME FAMILIAR WITH ALL EXISTING CONDITIONS PRIOR TO BID AND ANY WORK.
3. EXISTING ELECTRICAL PANELBOARDS SHALL REMAIN. PANELBOARDS AND ASSOCIATED CIRCUITS SHALL BE MODIFIED AS NOTED IN THE DRAWINGS.
4. IN AREAS OF REMOVAL OF WALL AND CEILING MOUNTED DEVICES, CONTRACTOR SHALL REPAIR, PATCH AND CLEAN WALLS, WALL BASES, AND CEILING AS REQUIRED TO MATCH EXISTING FINISHES.
5. REFER TO DRAWING E001 AND E002 FOR GENERAL PROJECT NOTES, SYMBOLS & ABBREVIATIONS.
6. REFER TO DRAWING E500 FOR ELECTRICAL DETAILS.

LIGHTING NEW WORK KEYED NOTES:

1. PROVIDE NEW LIGHT FIXTURE (S) AND ASSOCIATED CONTROLS AS SHOWN. EXTEND 2 #12 GND IN 3/4" CONDUIT FROM EXISTING CIRCUIT MADE AVAILABLE FROM DEMO AND RE-CONNECT TO NEW WHERE APPLICABLE. OTHERWISE PROVIDE NEW CIRCUITING FROM CIRCUIT SHOWN TO NEW LIGHT LOCATIONS. FOR CIRCUIT(S) EXCEEDING THE LENGTHS NOTED IN THE PLANS AND SPECS, UPSIZE ACCORDINGLY. TYPICAL OF ALL LIGHT FIXTURES. WIRE EMERGENCY LIGHTING FIXTURES AHEAD OF ANY SWITCHING. (TYPICAL)
2. LIGHTING CONTROL INSTALLATION SHALL INCLUDE CONTROLS, DATA CABLING, AND 0-10V DIMMING WIRING,ETC. AS NECESSARY FOR COMPLETE AND FUNCTIONAL INSTALLATION. (TYPICAL FOR ALL SPACES). ALL LIGHTING SHALL BE CONTROLLED (NORMAL AND EMERGENCY).
3. LIGHTING CONTROL BASIS OF DESIGN: POWER PACK FOR NORMAL POWER LUMINARIES SHALL BE ACUITY nLIGHT nPP16D EFP; POWER PACK FOR EMERGENCY POWER LUMINARIES SHALL BE ACUITY nLIGHT nPP16D ER EFP (PROVIDED WITH TEST SWITCH); OCCUPANCY SENSORS SHALL BE ACUITY nLIGHT nCM PDT 10 RJB; SWITCHES SHALL BE ACUITY nLIGHT nPODMA DX WH; REVIEWED EQUIVALENT IS ACCEPTABLE. (TYPICAL FOR ALL SPACES)
4. WALL SWITCH OCCUPANCY SENSOR: SENSOR SWITCH WSXA PDT. COLOR TO BE CONFIRMED WITH OWNER AND ARCHITECT AT SUBMITTAL STAGE. REVIEWED EQUIVALENT IS ACCEPTABLE.
5. REINSTALL EXISTING LUMINAIRES WITH BATTERY PACKS SALVAGED FROM EXISTING CEILING TILES. EXTEND EXISTING WIRING AND CONDUIT AS NECESSARY FOR POWER AND CONTROLS. WIRE EMERGENCY LIGHTING FIXTURES AHEAD OF ANY SWITCHING.



2 ELECTRICAL NEW WORK PLAN - LIGHTING

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

1/8"=1'-0" 8' 4' 0 8' 16'

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CONSTRUCTION SET

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 053121 11/17/25 ISSAC C. ALONZO, JR.

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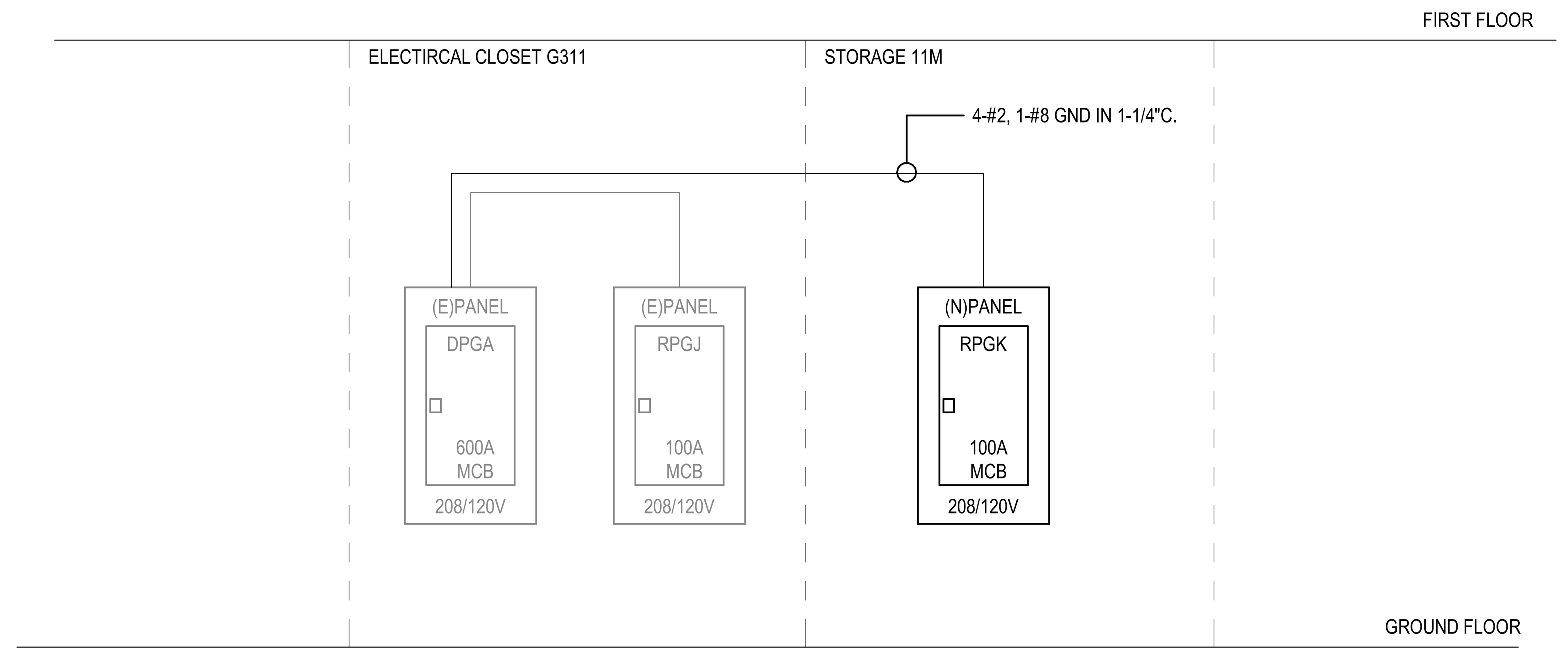
E200

ELECTRICAL NEW WORK PLANS



1 **ELECTRICAL PARTIAL RISER DIAGRAM**
SCALE: NTS

EXISTING PANELBOARD RPGJ

SERVED FROM: DPGA | AMPERE RATING: 100 A | VOLTAGE (L-L): 208 | PHASE: 3 | 22 ,000 MINIMUM RMS
ENCLOSURE RATING: NEMA 1 | MAIN BREAKER: 100 A | VOLTAGE (L-N): 120 | WIRE: 4 | SYMMETRICAL AIC RATING
MOUNTING: RECESSED | LUG OPTIONS: MCB | LOCATION: ELEC CLOSET OUTSIDE CLASSROOM G311

CIR. NO.	LOAD DESCRIPTION	LTG	H/C	MOT	KIT	REC	MISC	PHASE SIZE	G SIZE	CND IN.	BRKR RTG		BRKR RTG	PHASE SIZE	G SIZE	CND IN.	LTG	H/C	MOT	KIT	REC	MISC	LOAD DESCRIPTION	CIR. NO.
1	EWC RM. G301					0.36		EXISTING			20/1	A	20/1	EXISTING							0.18		REC./CLOCK RM. G301	2
3	REC. RM. G301					0.18		EXISTING			20/1	B	20/1	EXISTING							0.36		FLOOR BOX RM. G301	4
5	REC. RM. G301					0.36		EXISTING			20/1	C	20/1	EXISTING							0.36		SPARE ABOVE CEILING G01B (OFF)	6
7	**REC. RM. G301**					**0.36**		EXISTING			20/1	A	20/1	EXISTING							0.72		REC. RM. G301B,C	8
9	FLOOR BOX RM. G301					0.36		EXISTING			20/1	B	20/1	EXISTING							0.72		REC. RM. G301B,C	10
11	FLOOR BOX RM. G301					0.36		EXISTING			20/1	C	20/1	EXISTING							0.36		REC. RM. G301D	12
13	FLOOR BOX RM. G301					0.36		EXISTING			20/1	A	20/1	EXISTING							0.36		REC. RM. G301D	14
15	**REC. RM. G301**					**0.36**		EXISTING			20/1	B	20/1	EXISTING							0.54		REC. RM. G301E	16
17	REC. RM. G301					0.18		EXISTING			20/1	C	20/1	EXISTING							0.72		REC. RM. G301E,F	18
19	FLOOR BOX RM. G301					0.36		EXISTING			20/1	A	20/1	EXISTING							0.54		REC. RM. G301F	20
21	REC. RM. G301					0.36		EXISTING			20/1	B	20/1	EXISTING							0.54		REC. RM. G301G	22
23	REC. COPIER RM. G301					0.54		EXISTING			20/1	C	20/1	EXISTING							0.72		REC. RM. G301G,H	24
25	SMR W WALL RM. G301A					0.36		EXISTING			20/1	A	20/1	EXISTING							0.54		REC. RM. G301H	26
27	SMR W WALL RM. G301A					0.36		EXISTING			20/1	B	20/1	EXISTING							0.54		REC. RM. G301I	28
29	SMR W WALL RM. G301A					0.36		EXISTING			20/1	C	20/1	EXISTING							0.72		REC. RM. G301J, G301K	30
31	SMR E WALL RM. G301A					0.36		EXISTING			20/1	A	20/1	EXISTING							0.54		REC. RM. G301K	32
33	SMR E WALL RM. G301A					0.36		EXISTING			20/1	B	20/1	EXISTING							0.36		REF STATIONS	34
35	SMR E WALL RM. G301A					0.36		EXISTING			20/1	C	20/1	EXISTING							0.18		MTR SCREEN RM. G301J	36
37	REC. RM. G301A					0.72		EXISTING			20/1	A	20/1										SPARE	38
39	REC. RM. G301A					0.36		EXISTING			20/1	B	20/1										SPARE	40
41	MTR SCREEN RM. G301A					0.18		EXISTING			20/1	C	20/1	EXISTING							0.18		REC. G401	42

PANELBOARD NOTES:
1. EXISTING PANELBOARD IS EATON PRL1A.
2. ITEMS IN BOLD IN HATCH DENOTE DEMOLITION.

LARGEST MOTOR (KVA): _______

LOAD TOTALS (KVA):	CONNECTED	DEMAND
LIGHTING/CONTINUOUS	0.00	0.00
HEATING/COOLING	0.00	0.00
MOTORS	0.00	0.00
KITCHEN	0.00	0.00
RECEPTACLES	16.74	13.37
MISCELLANEOUS	0.00	0.00
TOTAL	16.74	13.37

LOAD BALANCE
PHASE A 103.23%
PHASE B 96.77%
PHASE C 100.00%
TOTAL DEMAND AMPS x 37
LARGEST UNBALANCE PHASE %: 1.0323
LARGEST UNBALANCE PHASE AMPS: **38.31**

MODIFIED Panelboard: RPGJ

VOLTAGE: 208/120 Wye | MAINS TYPE: MCB | SERVED FROM: DPGA | 22 :KAIC RATING
PHASE: 3 | MAINS RATING: 100 A | ENCLOSURE NEMA RATING: Type 1 | LOCATION: ELEC CLOSET OUTSIDE CLASSROOM G311...
WIRE: 4 | MCB RATING: 100 A | MOUNTING: Recessed

LOAD CLASS	WIRE SIZE PH / N / GND	COND IN.	LOAD DESCRIPTION	BRKR RTG	CIR NO	A		B		C		CIR NO	BRKR RTG	LOAD DESCRIPTION	COND IN.	WIRE SIZE PH / N / GND	LOAD CLASS
REC	EXISTING	EX	EWC R. G301	20	1	0.36	2					2	20	**QUADS N WALL G301C**	**3/4"**	**1-#10, 1-#10, 1-#10**	**REC**
REC	EXISTING	EX	REC. RM G301	20	3			0.18	0.25			4	20	**POWER SUPPLY FOR DOORS**	**3/4"**	**1-#12, 1-#12, 1-#12**	**MISC**
REC	EXISTING	EX	REC. RM G301	20	5					0.36	0.72	6	20	**QUADS NE WALL G301B**	**3/4"**	**1-#12, 1-#12, 1-#12**	**REC**
REC	EXISTING	EX	REC. RM G301	20	7	0.18	1					8	20	**FUME HOOD G301C**	**3/4"**	**1-#12, 1-#12, 1-#12**	**MISC**
REC	EXISTING	EX	FLOOR BOX RM. G301	20	9			0.36	1			10	20	**FUME HOOD G301B (ALT. #2)**	**3/4"**	**1-#12, 1-#12, 1-#12**	**MISC**
REC	EXISTING	EX	FLOOR BOX RM. G301	20	11					0.36	0.18	12	20	**INSTRON G301B**	**3/4"**	**1-#12, 1-#12, 1-#12**	**REC**
REC	EXISTING	EX	FLOOR BOX RM. G301	20	13	0.36	0.18					14	20	**INSTRON G301B**	**3/4"**	**1-#12, 1-#12, 1-#12**	**REC**
REC	EXISTING	EX	REC. RM G301	20	15			0.18	0.18			16	20	**INSTRON G301B**	**3/4"**	**1-#12, 1-#12, 1-#12**	**REC**
REC	**1-#12, 1-#12, 1-#12**	**3/4"**	**TV RECS LAB G301B**	20	17					1	0.18	18	20	**INSTRON G301B**	**3/4"**	**1-#12, 1-#12, 1-#12**	**REC**
REC	EXISTING	EX	FLOOR BOX RM. G301	20	19	0.36	0.36					20	20	**QUADS W WALL G301B**	**3/4"**	**1-#12, 1-#12, 1-#12**	**REC**
REC	EXISTING	EX	REC. RM G301	20	21			0.36	0.36			22	20	**QUADS W WALL G301B**	**3/4"**	**1-#12, 1-#12, 1-#12**	**REC**
REC	**1-#10, 1-#10, 1-#10**	**3/4"**	**QUADS W WALL G301C**	20	23					2	0.72	24	20	**QUADS W WALL G301B**	**3/4"**	**1-#12, 1-#12, 1-#12**	**REC**
REC	EXISTING	EX	SMR W WALL RM. G301A	20	25	0.36	2					26	20	**QUADS W WALL G301C**	**3/4"**	**1-#10, 1-#10, 1-#10**	**REC**
REC	EXISTING	EX	SMR W WALL RM. G301A	20	27			0.36	2			28	20	**QUADS S WALL G301C**	**3/4"**	**1-#10, 1-#10, 1-#10**	**REC**
REC	EXISTING	EX	SMR W WALL RM. G301A	20	29					0.36	0.36	30	20	**QUADS E WALL 301B**	**3/4"**	**1-#12, 1-#12, 1-#12**	**REC**
REC	EXISTING	EX	SMR E WALL RM. G301A	20	31	0.36	0.36					32	20	**QUADS E WALL 301B**	**3/4"**	**1-#12, 1-#12, 1-#12**	**REC**
REC	EXISTING	EX	SMR E WALL RM. G301A	20	33			0.36	0.36			34	20	REF STATIONS	EX	EXISTING	REC
REC	EXISTING	EX	SMR E WALL RM. G301A	20	35					0.72	0.36	36	20	MTR. SCREEN RM. G301J	EX	EXISTING	REC
REC	EXISTING	EX	REC. RM G301	20	37	0.72	0.72					38	20	**QUADS E WALL 301B**	**3/4"**	**1-#12, 1-#12, 1-#12**	**REC**
REC	**1-#12, 1-#12, 1-#12**	**3/4"**	**DESK REC. SOCIAL G301**	20	39			0.9	0			40	20	**SPARE**	**-**	**-**	**--**
REC	**1-#12, 1-#12, 1-#12**	**3/4"**	**TV REC. SOCIAL G301**	20	41					0.86	0.9	42	20	REC. G401	EX	EXISTING	REC
			TOTAL CONN. LOAD (kVA):			9.32		6.85		9.08							

LOAD CLASSIFICATION	CONNECTED	DEMAND FACTOR	DEMAND
REC	23000 VA	72%	16500 VA
MISC	2250 VA	100%	2250 VA

TOTAL CONNECTED AMPS: 70 A
TOTAL CONNECTED LOAD: 25.25 kVA
TOTAL ESTIMATED DEMAND AMPS: 52 A
TOTAL ESTIMATED DEMAND LOAD: 18.75 kVA

NOTES:
1. EXISTING PANELBOARD IS EATON PRL1A.
2. ITEMS IN BOLD DENOTE MODIFICATION.

EXISTING PANELBOARD DPGA

SERVED FROM: DPG | AMPERE RATING: 600 A | VOLTAGE (L-L): 208 | PHASE: 3 | 22 ,000 MINIMUM RMS
ENCLOSURE RATING: NEMA 1 | MAIN BREAKER: 600 A | VOLTAGE (L-N): 120 | WIRE: 4 | SYMMETRICAL AIC RATING
MOUNTING: SURFACE | LUG OPTIONS: MCB | LOCATION: ELEC CLOSET OUTSIDE CLASSROOM G311

CIR. NO.	LOAD DESCRIPTION	LTG	H/C	MOT	KIT	REC	MISC	PHASE SIZE	G SIZE	CND IN.	BRKR RTG		BRKR RTG	PHASE SIZE	G SIZE	CND IN.	LTG	H/C	MOT	KIT	REC	MISC	LOAD DESCRIPTION	CIR. NO.
1							0.90					A												2
3	RPGH						0.90	EXISTING			100/3	B	100/3										SPARE	4
5							2.16					C												6
7							3.60					A												8
9	RPGI						3.78	EXISTING			100/3	B	100/3										SPARE	10
11							3.42					C												12
13							5.76					A												14
15	RPGJ						5.40	EXISTING			100/3	B	100/3										SPARE	16
17							5.58					C												18
19												A												20
21	**SPARE**										100/3	B	225/3										SPARE	22
23												C												24
25												A												26
27	SPARE										100/3	B	225/3										SPARE	28
29												C												30
31												A												32
33												B												34
35												C												36
37												A												38
39												B												40
41												C												42

PANELBOARD NOTES:
1. EXISTING PANELBOARD IS EATON PRL4.
2. ITEMS IN BOLD DENOTE MODIFICAITON.
3. EXISTING LOAD ARE BASED ON AS-BUILTS.

LARGEST MOTOR (KVA): _______

LOAD TOTALS (KVA):	CONNECTED	DEMAND
LIGHTING/CONTINUOUS	0.00	0.00
HEATING/COOLING	0.00	0.00
MOTORS	0.00	0.00
KITCHEN	0.00	0.00
RECEPTACLES	0.00	0.00
MISCELLANEOUS	31.50	31.50
TOTAL	31.50	31.50

LOAD BALANCE
PHASE A 97.71%
PHASE B 96.00%
PHASE C 106.29%
TOTAL DEMAND AMPS x 87
LARGEST UNBALANCE PHASE %: 1.0629
LARGEST UNBALANCE PHASE AMPS: **92.93**

MODIFIED PANELBOARD DPGA

SERVED FROM: DPG | AMPERE RATING: 600 A | VOLTAGE (L-L): 208 | PHASE: 3 | 22 ,000 MINIMUM RMS
ENCLOSURE RATING: NEMA 1 | MAIN BREAKER: 600 A | VOLTAGE (L-N): 120 | WIRE: 4 | SYMMETRICAL AIC RATING
MOUNTING: RECESSED | LUG OPTIONS: MCB | LOCATION: ELEC CLOSET OUTSIDE CLASSROOM G311

CIR. NO.	LOAD DESCRIPTION	LTG	H/C	MOT	KIT	REC	MISC	PHASE SIZE	G SIZE	CND IN.	BRKR RTG		BRKR RTG	PHASE SIZE	G SIZE	CND IN.	LTG	H/C	MOT	KIT	REC	MISC	LOAD DESCRIPTION	CIR. NO.
1							0.90					A												2
3	RPGH						0.90	EXISTING			100/3	B	100/3										SPARE	4
5							2.16					C												6
7							3.60					A												8
9	RPGI						3.78	EXISTING			100/3	B	100/3										SPARE	10
11							3.42					C												12
13		**0.00**	**0.00**	**0.00**	**0.00**	**4.70**	**1.50**					A												14
15	RPGJ	**0.00**	**0.00**	**0.00**	**0.00**	**4.06**	**1.50**	EXISTING			100/3	B	100/3										SPARE	16
17		**0.00**	**0.00**	**0.00**	**0.00**	**7.38**	**0.00**					C												18
19		**0.00**	**0.00**	**0.00**	**0.00**	**6.22**	**0.00**					A												20
21	**RPGK**	**0.00**	**0.00**	**0.00**	**0.00**	**5.36**	**0.00**	**SEE RISER**			100/3	B	225/3										SPARE	22
23		**0.00**	**0.00**	**0.00**	**0.00**	**5.68**	**0.00**					C												24
25												A												26
27	SPARE										100/3	B	225/3										SPARE	28
29												C												30
31												A												32
33												B												34
35												C												36
37												A												38
39												B												40
41												C												42

PANELBOARD NOTES:
1. EXISTING PANELBOARD IS EATON PRL4.
2. ITEMS IN BOLD DENOTE MODIFICAITON.
3. EXISTING LOAD ARE BASED ON AS-BUILTS.

LARGEST MOTOR (KVA): _______

LOAD TOTALS (KVA):	CONNECTED	DEMAND
LIGHTING/CONTINUOUS	0.00	0.00
HEATING/COOLING	0.00	0.00
MOTORS	0.00	0.00
KITCHEN	0.00	0.00
RECEPTACLES	37.54	23.77
MISCELLANEOUS	17.76	17.76
TOTAL	55.30	41.53

LOAD BALANCE
PHASE A 91.79%
PHASE B 98.19%
PHASE C 110.02%
TOTAL DEMAND AMPS x 115
LARGEST UNBALANCE PHASE %: 1.1002
LARGEST UNBALANCE PHASE AMPS: **126.82**

Panelboard: RPGK

VOLTAGE: 208/120 Wye | MAINS TYPE: MCB | SERVED FROM: | :KAIC RATING
PHASE: 3 | MAINS RATING: 100 A | ENCLOSURE NEMA... Type 1
WIRE: 4 | MCB RATING: 100 A | MOUNTING: Recessed | LOCATION: G301D STORAG...

LOAD CLASS	WIRE SIZE PH / N / GND	COND IN.	LOAD DESCRIPTION	BRKR RTG	CIR NO	A		B		C		CIR NO	BRKR RTG	LOAD DESCRIPTION	COND IN.	WIRE SIZE PH / N / GND	LOAD CLASS
REC	1-#12, 1-#12, 1-#12	3/4"	CEILING REC. G301B	20	1	0.36	0.36					2	20	CEILING REC. G301C	3/4"	1-#12, 1-#12, 1-#12	REC
REC	1-#12, 1-#12, 1-#12	3/4"	CEILING REC. G301B	20	3			0.36	0.36			4	20	CEILING REC. G301C	3/4"	1-#12, 1-#12, 1-#12	REC
REC	1-#12, 1-#12, 1-#12	3/4"	CEILING REC. G301B	20	5					0.36	0.36	6	20	CEILING REC. G301C	3/4"	1-#12, 1-#12, 1-#12	REC
REC	1-#12, 1-#12, 1-#12	3/4"	CEILING REC. G301B	20	7	0.36	0.36					8	20	CEILING REC. G301C	3/4"	1-#12, 1-#12, 1-#12	REC
REC	1-#12, 1-#12, 1-#12	3/4"	CEILING REC. G301B	20	9			0.36	0.36			10	20	CEILING REC. G301C	3/4"	1-#12, 1-#12, 1-#12	REC
REC	1-#12, 1-#12, 1-#12	3/4"	CEILING REC. G301B	20	11					0.36	0.36	12	20	CEILING REC. G301C	3/4"	1-#12, 1-#12, 1-#12	REC
REC	1-#12, 1-#12, 1-#12	3/4"	CEILING REC. G301B	20	13	0.36	0.36					14	20	CEILING REC. G301C	3/4"	1-#12, 1-#12, 1-#12	REC
REC	1-#12, 1-#12, 1-#12	3/4"	CEILING REC. G301B	20	15			0.36	0.36			16	20	CEILING REC. G301C	3/4"	1-#12, 1-#12, 1-#12	REC
REC	1-#12, 1-#12, 1-#12	3/4"	CEILING REC. G301B	20	17					0.36	0.36	18	20	CEILING REC. G301C	3/4"	1-#12, 1-#12, 1-#12	REC
REC	1-#12, 1-#12, 1-#12	3/4"	CEILING REC. G301B	20	19	0.36	0.36					20	20	CEILING REC. G301C	3/4"	1-#12, 1-#12, 1-#12	REC
REC	1-#12, 1-#12, 1-#12	3/4"	CEILING REC. G301B	20	21			0.36	0.36			22	20	CEILING REC. G301C	3/4"	1-#12, 1-#12, 1-#12	REC
REC	1-#12, 1-#12, 1-#12	3/4"	CEILING REC. G301B	20	23					0.36	0.36	24	20	CEILING REC. G301C	3/4"	1-#12, 1-#12, 1-#12	REC
REC	1-#12, 1-#12, 1-#12	3/4"	CEILING REC. G301B	20	25	0.36	0.36					26	20	CEILING REC. G301C	3/4"	1-#12, 1-#12, 1-#12	REC
REC	1-#12, 1-#12, 1-#12	3/4"	CEILING REC. G301B	20	27			0.36	0.36			28	20	CEILING REC. G301C	3/4"	1-#12, 1-#12, 1-#12	REC
REC	1-#12, 1-#12, 1-#12	3/4"	CEILING REC. G301B	20	29					0.36	0.36	30	20	CEILING REC. G301C	3/4"	1-#12, 1-#12, 1-#12	REC
REC	1-#12, 1-#12, 1-#12	3/4"	CEILING REC. G301B	20	31	0.36	0.36					32	20	CEILING REC. G301C	3/4"	1-#12, 1-#12, 1-#12	REC
REC	1-#12, 1-#12, 1-#12	3/4"	SCREEN RECS G301B	20	33			1	0.36			34	20	REC N WALL G301C	3/4"	1-#12, 1-#12, 1-#12	REC
REC	1-#12, 1-#12, 1-#12	3/4"	QUADS S WALL 301B	20	35					1	0.72	36	20	REC SW WALL G301C	3/4"	1-#12, 1-#12, 1-#12	REC
REC	1-#12, 1-#12, 1-#12	3/4"	QUADS S WALL 301B	20	37	1	0.9					38	20	REC E, SE WALL G301C	3/4"	1-#12, 1-#12, 1-#12	REC
REC	1-#12, 1-#12, 1-#12	3/4"	QUADS S WALL 301B	20	39			1	1			40	20	QUADS E WALL 301B	3/4"	1-#12, 1-#12, 1-#12	REC
REC	1-#12, 1-#12, 1-#12	3/4"	QUADS E WALL 301B	20	41					1	1	42	20	QUADS E WALL 301B	3/4"	1-#12, 1-#12, 1-#12	REC
			TOTAL CONN. LOAD (kVA):			6.22		6.96		7.32							

LOAD CLASSIFICATION	CONNECTED	DEMAND FACTOR	DEMAND
REC	20500 VA	74%	15250 VA

TOTAL CONNECTED AMPS: 57 A
TOTAL CONNECTED LOAD: 20.50 kVA
TOTAL ESTIMATED DEMAND AMPS: 42 A
TOTAL ESTIMATED DEMAND LOAD: 15.25 kVA

NOTES:
1. BASIS OF DESIGN: EATON PRL1A.

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212 W MAIN ST, SUITE E,
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(919) 223-8091
(919) 233-8031 Fax
NC License# F-1222

REVISION:	
SCO REVIEW	9/15/25
2nd SCO REVIEW	10/24/25
Construction Set	11/17/25

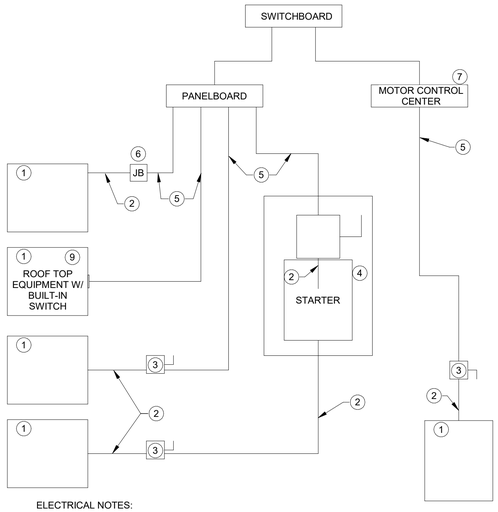
CONSTRUCTION SET

NORTH CAROLINA PROFESSIONAL SEAL 053121 ENGINEER JESSE C. ALONZO JR. 11/14/25

CLIENT NAME: THE UNIVERSITY OF NORTH CAROLINA AT CHAPEL HILL
JOB NAME: UNC VENABLE HALL LOWER LEVEL UPFIT
LOCATION: VENABLE HALL LOWER LEVEL
101 South RD
CHAPEL HILL, NC 27514
SCO ID: 24-28389-01A

ISSUE DATE: 11-17-25
JOB. NO.: 10021-0001
DWG. NO.: **E300**

ELECTRICAL RISER DIAGRAM AND PANEL SCHEDULES

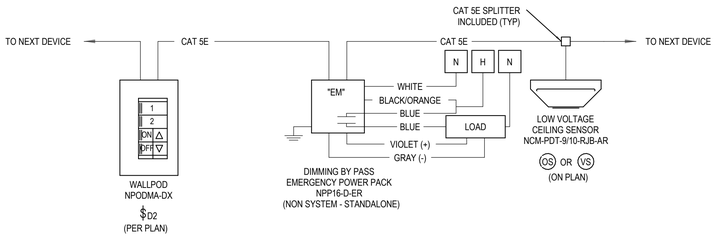


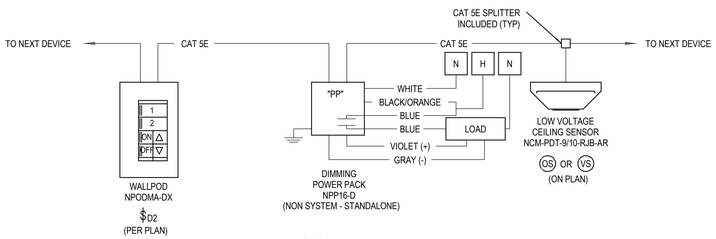
ELECTRICAL NOTES:

1. EQUIPMENT OF TRADES OTHER THAN ELECTRICAL.
2. CONDUIT & WIRING BY HVAC, PLUMBING CONTRACTOR OR OTHER TRADES.
3. IF AN ADDITIONAL DISCONNECT IS REQUIRED BY NEC, IT SHALL BE PROVIDED AND INSTALLED BY THE EQUIPMENT CONTRACTOR.
4. A COMBINATION STARTER OR VFD MAY BE USED IN LIEU OF A SEPARATE DISCONNECT SWITCH AND STARTER LOCATE ADJACENT TO EQUIPMENT.
5. FEEDER CIRCUIT WIRING AND CONDUIT IN ELECTRICAL WORK. SEE PANELBOARD SCHEDULES FOR WIRE AND BREAKER SIZES.
6. JUNCTION BOX MAY BE SHOWN ON ELECTRICAL PLANS FOR SOME EQUIPMENT IF NO STARTER OR DISCONNECT IS SUPPLIED. A JUNCTION BOX SHALL BE INSTALLED ADJACENT TO EQUIPMENT. THE ELECTRICAL CONTRACTOR SHALL PROVIDE LINE SIDE WIRING TO THE JUNCTION BOX, LOAD SIDE WIRING SHALL BE PROVIDED BY MECHANICAL CONTRACTOR OR OTHER TRADES.
7. PROJECTS UTILIZING AN MCC, THE STARTER, CB OR VFD IN THE MCC ARE PROVIDED BY THE ELECTRICAL CONTRACTOR.
8. IN ALL CASES, THE EQUIPMENT CONTRACTOR SHALL MAKE FINAL CONNECTIONS, START UP AND TEST EQUIPMENT.
9. IF THE ROOF TOP EQUIPMENT IS NOT PROVIDED WITH BUILT IN SWITCH, THE ELECTRICAL CONTRACTOR SHALL PROVIDE A DISCONNECT SWITCH.

5 NC SCO ELECTRICAL CONNECTION COORDINATION DIAGRAM

SCALE: NTS



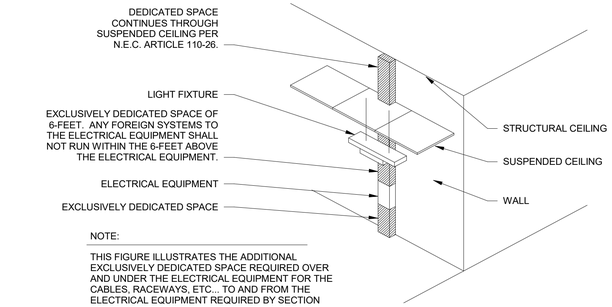


NOTES:

1. ALL SWITCH DESIGNATION LABELS MUST BE CLEARLY ENGRAVED ON EACH BUTTON.
2. FINAL SCENE PRESET TO BE DESIGNATED BY OWNER.
3. QUANTITY OF DEVICES AS INDICATED ON DRAWINGS.
4. BASIS OF DESIGN IS ACUITY NLIGHT (OR APPROVED EQUIVALENT BY LUTRON OR WATTSTOPPER).

6 TYPICAL STANDALONE ZONED DIMMING LIGHTING CONTROL WIRING DIAGRAM - NORMAL AND EMERGENCY WIRING

SCALE: NTS



NOTE:

THIS FIGURE ILLUSTRATES THE ADDITIONAL EXCLUSIVELY DEDICATED SPACE REQUIRED OVER AND UNDER THE ELECTRICAL EQUIPMENT FOR THE CABLES, RACEWAYS, ETC... TO AND FROM THE ELECTRICAL EQUIPMENT REQUIRED BY SECTION 110-26 OF THE NATIONAL ELECTRICAL CODE.

2 ELECTRICAL EQUIPMENT DEDICATED SPACE

SCALE: NTS

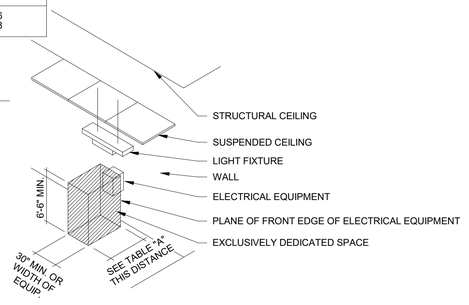
TABLE A - WORKING CLEARANCES			
VOLTAGE TO GROUND NOMINAL	MINIMUM CLEAR DISTANCE (INCHES) CONDITION: 1	2	3
0 - 150	36	36	36
151 - 600	36	42	48

WHERE THE "CONDITIONS" ARE AS FOLLOWS:

1. EXPOSED LIVE PARTS ON ONE SIDE AND NO LIVE OR GROUNDED PARTS ON THE OTHER SIDE OF THE WORKING SPACE, OR EXPOSED LIVE PARTS ON BOTH SIDES EFFECTIVELY GUARDED BY SUITABLE WOOD OR OTHER INSULATING MATERIALS. INSULATED WIRE OR INSULATED BUSBARS OPERATING AT NOT OVER 300V SHALL NOT BE CONSIDERED LIVE PARTS.
2. EXPOSED LIVE PARTS ON ONE SIDE AND GROUNDED PARTS ON THE OTHER SIDE.
3. EXPOSED LIVE PARTS ON BOTH SIDES OF THE WORK SPACE (NOT GUARDED AS PROVIDED IN CONDITION 1) WITH THE OPERATOR BETWEEN.

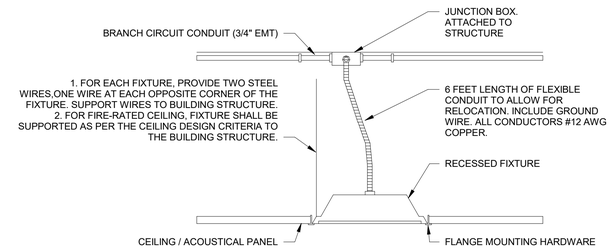
NOTE:

THIS FIGURE ILLUSTRATES THE WORKING SPACE IN FRONT OF THE ELECTRICAL EQUIPMENT REQUIRED BY SECTION 110-26 OF THE NATIONAL ELECTRICAL CODE.



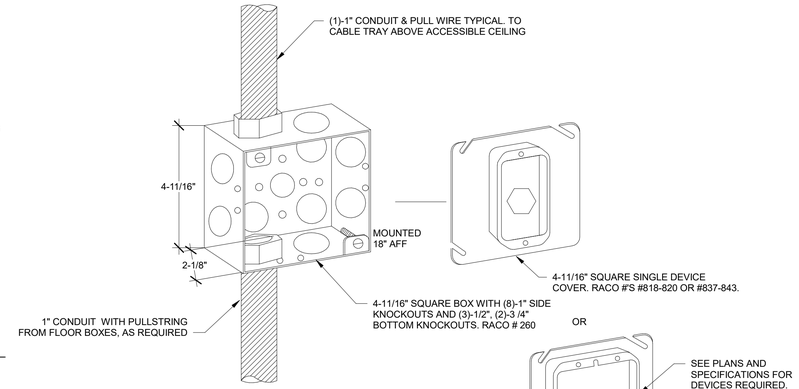
3 ELECTRICAL EQUIPMENT WORKING CLEARANCE

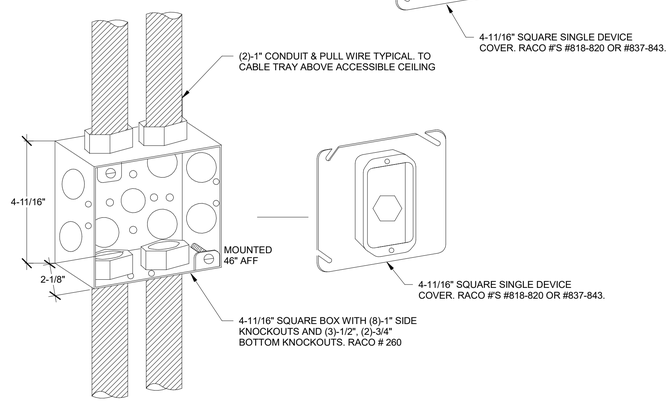
SCALE: NTS

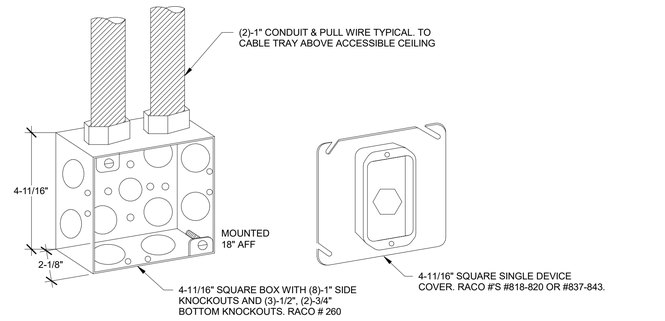


4 LIGHT FIXTURE CEILING MOUNTING DETAIL

SCALE: NTS







OTHER ACCEPTABLE MANUFACTURERS ARE APPLETON, T&B, AND MIDLAND ROSS/STEEL CITY

NOTES:

1. CONTRACTOR PROVIDE WALL BOXES AND CONDUIT ONLY. CONDUIT TO EXTEND AND TURN OUT ABOVE CEILING OR AN ACCESSIBLE SPACE ABOVE ADJACENT CEILING. 1"C. MIN. PHONE/DATA CABLING BY TELECOMMUNICATIONS CONTRACTOR.
2. BOX AND RING NUMBERS SHOWN FOR STUD WALL CONSTRUCTION.
3. SUBSTITUTE MASONRY BOX EQUIVALENT WHERE LOCATED IN CMU OR CONCRETE WALLS.

1 TELE/DATA OUTLET BOX DETAIL

SCALE: NTS

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REVISION:	
SCO REVIEW	9/15/25
2nd SCO REVIEW	10/24/25
Construction Set	11/17/25

CONSTRUCTION SET

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 053121 11/17/25 JESSE C. ALONZO, JR.

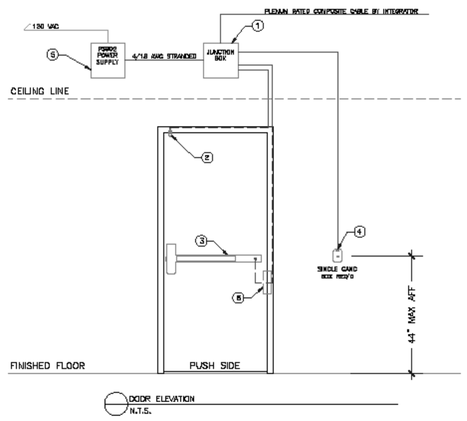
CLIENT NAME: THE UNIVERSITY OF NORTH CAROLINA AT CHAPEL HILL
JOB NAME: UNC VENABLE HALL LOWER LEVEL UPFIT
LOCATION: VENABLE HALL LOWER LEVEL
101 South RD
CHAPEL HILL, NC 27514
SCO ID: 24-28389-01A

ISSUE DATE: 11-17-25
JOB. NO.: 10021-0001
DWG. NO.:

E500

ELECTRICAL DETAILS

This diagram applies to Door D004.



DOOR ELEVATION
N.T.S.

DOOR HARDWARE

1. JUNCTION BOX BY OTHERS
2. SCHLAGE 678-CB DOOR POSITION SWITCH
3. VON DUPRIN RX-QEL / FALCON RX-NEL EXIT DEVICE (24 VDC)
4. SCHLAGE MT11 OR MT15
5. VON DUPRIN PS822 X 900-2RS POWER SUPPLY
6. VON DUPRIN ELECTRIC POWER TRANSFER

WIRE REQUIREMENTS

2/20 AWG STRANDED FOR DPS
4/18 AWG STRANDED FOR ELECTRIFIED EXIT DEVICE
  2 WIRES FOR POWER
  2 WIRES FOR REQUEST TO EXIT SIGNAL
4/18 AWG STRANDED FROM POWER SUPPLY TO J-BOX
  2 WIRES FOR EACH LATCH RETRACTION EXIT DEVICE
  2 WIRES FOR ACCESS CONTROL INPUT
8/22 AWG SHIELDED TO CARD READER. VERIFY REQUIREMENTS W/ CARD READER MANUFACTURER.
PLENUM RATED CABLE FROM ACCESS PANEL TO J-BOX
  INTEGRATOR TO VERIFY REQUIREMENTS AND PROVIDE AS REQUIRED FOR SYSTEM DESIGN.
ANY WIRE RUNS GREATER THAN 300 FEET VERIFY GAUGE WITH MANUFACTURER.

GENERAL NOTES:

ALL LOW VOLTAGE WIRE TO RUN IN MINIMUM 3/4" CONDUIT OR INSIDE DRYWALL UNLESS NOTED OTHERWISE
ALL LOW VOLTAGE WIRE TO BE STRANDED WIRE
ALL DARD BOXES BY ELECTRICAL CONTRACTOR AS REQUIRED
ALL LOW VOLTAGE WIRING TO BE LABELED CLEARLY AT BOTH ENS
ALL MOUNTING HEIGHTS AS SHOWN
COORDINATE MOUNTING LOCATIONS WITH ELECTRICAL/ARCHITECTURAL PLANS
ANY DEVIATION FROM HARDWARE SPECIFIED IN SECTION 08710 WILL NEGATE ALL REQUIREMENTS SHOWN HEREON AND REQUIRE NEW DRAWINGS BY OTHERS TO MATCH SUBSTITUTED HARDWARE

OPERATIONAL DESCRIPTION:

DOOR NORMALLY CLOSED AND LOCKED.
ENTRY BY VALID CREDENTIAL AT CARD READER OR BY KEY AT LOCK.
REQUEST TO EXIT SWITCH / SENSOR SHUNTS DOOR FORCED OPEN IN ACCESS CONTROL SYSTEM.
KEY CYCH-RIM WILL CAUSE DOOR FORCED ALARM IN ACCESS CONTROL SYSTEM
FREE EGRESS AT ALL TIMES.

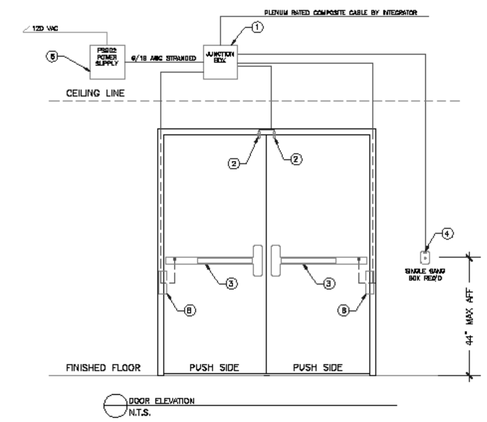
ALLEGION

ELECTRIFIED ELEVATION DRAWINGS

ELEVATION DRAWING

Name: Jason Rehyes EDIT, DHC
Date: 03-23-2021
Revision: 1
Scale: N.T.S.
Drawing No. 3002

This diagram applies to Doors D001, D002, and D003.



DOOR ELEVATION
N.T.S.

DOOR HARDWARE

1. JUNCTION BOX BY OTHERS
2. SCHLAGE 678-CB DOOR POSITION SWITCH
3. VON DUPRIN RX-QEL / FALCON RX-NEL EXIT DEVICE (24 VDC)
4. SCHLAGE MT11 OR MT13
5. NOT USED
6. VON DUPRIN PS822 X 900-2RS
7. NOT USED
8. VON DUPRIN ELECTRIC POWER TRANSFER

WIRE REQUIREMENTS

2/20 AWG STRANDED FOR DPS (WIRE IN SCREW)
4/18 AWG STRANDED FOR ELECTRIFIED EXIT DEVICE
  2 WIRES FOR LATCH RETRACTION
  2 WIRES FOR REQUEST TO EXIT SIGNAL
4/18 AWG STRANDED FROM POWER SUPPLY TO J-BOX
  2 WIRES FOR EACH LATCH RETRACTION EXIT DEVICE
  2 WIRES FOR ACCESS CONTROL INPUT
8/22 AWG SHIELDED TO CARD READER. VERIFY REQUIREMENTS W/ CARD READER MANUFACTURER.
PLENUM RATED CABLE FROM ACCESS PANEL TO J-BOX
  INTEGRATOR TO VERIFY REQUIREMENTS AND PROVIDE AS REQUIRED FOR SYSTEM DESIGN.
ANY WIRE RUNS GREATER THAN 300 FEET VERIFY GAUGE WITH MANUFACTURER.

GENERAL NOTES:

ALL LOW VOLTAGE WIRE TO RUN IN MINIMUM 3/4" CONDUIT OR INSIDE DRYWALL UNLESS NOTED OTHERWISE
ALL LOW VOLTAGE WIRE TO BE STRANDED WIRE
ALL DARD BOXES BY ELECTRICAL CONTRACTOR AS REQUIRED
ALL LOW VOLTAGE WIRING TO BE LABELED CLEARLY AT BOTH ENS
ALL MOUNTING HEIGHTS AS SHOWN
COORDINATE MOUNTING LOCATIONS WITH ELECTRICAL/ARCHITECTURAL PLANS
ANY DEVIATION FROM HARDWARE SPECIFIED IN SECTION 08710 WILL NEGATE ALL REQUIREMENTS SHOWN HEREON AND REQUIRE NEW DRAWINGS BY OTHERS TO MATCH SUBSTITUTED HARDWARE

OPERATIONAL DESCRIPTION:

DOOR NORMALLY CLOSED AND LOCKED.
ENTRY BY VALID CREDENTIAL AT CARD READER OR BY KEY AT LOCK.
REQUEST TO EXIT SWITCH / SENSOR SHUNTS DOOR FORCED OPEN IN ACCESS CONTROL SYSTEM.
KEY CYCH-RIM WILL CAUSE DOOR FORCED ALARM IN ACCESS CONTROL SYSTEM
FREE EGRESS AT ALL TIMES.

ALLEGION

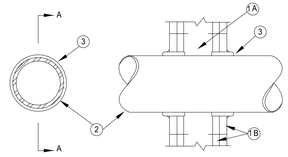
ELECTRIFIED ELEVATION DRAWINGS

ELEVATION DRAWING

Name: Jason Rehyes EDIT, DHC
Date: 03-23-2021
Revision: 1
Scale: N.T.S.
Drawing No. 3290

SYSTEM NO. W-L-1001
JUNE 15, 2005

F RATINGS - 1, 2, 3 AND 4 HR (SEE ITEMS 2 AND 3)
T RATINGS - 0, 1, 2, 3 AND 4 HR (SEE ITEM 3)
L RATING AT AMBIENT - LESS THAN 1 CFM PER SQ. FT.
L RATING AT 400°F - LESS THAN 1 CFM PER SQ. FT.



SECTION A-A

1. WALL ASSEMBLY - THE 1, 2, 3 OR 4 HR FIRE-RATED GYPSUM WALLBOARD/STUD WALL ASSEMBLY SHALL BE CONSTRUCTED OF THE MATERIALS AND IN THE MANNER DESCRIBED IN THE INDIVIDUAL U300 OR U400 SERIES WALL OR PARTITION DESIGNS IN THE UL FIRE RESISTANCE DIRECTORY AND SHALL INCLUDE THE FOLLOWING CONSTRUCTION FEATURES:

   A. STUDS - WALL FRAMING MAY CONSIST OF EITHER WOOD STUDS (MAX 2 H FIRE RATED ASSEMBLIES) OR STEEL CHANNEL STUDS. WOOD STUDS TO CONSIST OF NOM 2 BY 4 IN. (51 BY 102 MM) LUMBER SPACED 16 IN. (406 MM OC WITH NOM 2 BY 4 IN. (51 BY 102 MM) LUMBER END PLATES AND CROSS BRACES. STEEL STUDS TO BE MIN 3-5/8 IN. (92 MM) WIDE BY 1-3/8 IN. (35 MM) DEEP CHANNELS SPACED MAX 24 IN. (610 MM) OC.

   B. GYPSUM BOARD* - NOM 1/2 OR 5/8 IN. (13 OR 16 MM) THICK, 4 FT. (122 CM) WIDE WITH SQUARE OR TAPERED EDGES. THE GYPSUM WALLBOARD TYPE, THICKNESS, NUMBER OF LAYERS, FASTENER TYPE AND SHEET ORIENTATION SHALL BE AS SPECIFIED IN THE INDIVIDUAL U300 OR U400 SERIES DESIGN IN THE UL FIRE RESISTANCE DIRECTORY. MAX DIAM OF OPENING IS 26 IN. (660 MM).

2. THROUGH-PENETRANT - ONE METALLIC PIPE, CONDUIT OR TUBING INSTALLED EITHER CONCENTRICALLY OR ECCENTRICALLY WITHIN THE FIRESTOP SYSTEM. THE ANNULAR SPACE BETWEEN PIPE, CONDUIT OR TUBING AND PERIPHERY OF OPENING SHALL BE MIN 0 IN. / (0 MM). (POINT CONTACT) TO MAX 2 IN. (51 MM) PIPE, CONDUIT OR TUBING TO BE RIGIDLY SUPPORTED ON BOTH SIDES OF WALL ASSEMBLY. THE FOLLOWING TYPES AND SIZES OF METALLIC PIPES, CONDUITS OR TUBING MAY BE USED:

   A. STEEL PIPE -- NOM 24 IN. (610 MM) DIAM (OR SMALLER) SCHEDULE 10 (OR HEAVIER) STEEL PIPE.

   B. IRON PIPE - NOM 24 IN. (610 MM) DIAM (OR SMALLER) SERVICE WEIGHT (OR HEAVIER) CAST IRON SOIL PIPE, NOM 12 IN. (305 MM) DIAM (OR SMALLER) OR CLASS 50 (OR HEAVIER) DUCTILE IRON PRESSURE PIPE.

   C. CONDUIT - NOM 6 IN. (152 MM) DIAM (OR SMALLER) STEEL CONDUIT OR NOM 4 IN. (102 MM) DIAM (OR SMALLER) STEEL ELECTRICAL METALLIC TUBING.

   D. COPPER TUBING - NOM 6 IN. (152 MM) DIAM (OR SMALLER) TYPE L (OR HEAVIER) COPPER TUBING.

   E. COPPER PIPE - NOM 6 IN. (152 MM) DIAM (OR SMALLER) REGULAR (OR HEAVIER) COPPER PIPE.

   F. THROUGH PENETRATING PRODUCT* - FLEXIBLE METAL PIPING THE FOLLOWING TYPES OF STEEL FLEXIBLE METAL GAS PIPING MAY BE USED:

      1. NOM 2 IN. (51 MM) DIAM (OR SMALLER) STEEL FLEXIBLE METAL GAS PIPING. PLASTIC COVERING ON PIPING MAY OR MAY NOT BE REMOVED ON BOTH SIDES OF FLOOR OR WALL ASSEMBLY.

         OMEGA FLEX INC

      2. NOM 1 IN. (25 MM) DIAM (OR SMALLER) STEEL FLEXIBLE METAL GAS PIPING. PLASTIC COVERING ON PIPING MAY OR MAY NOT BE REMOVED ON BOTH SIDES OF FLOOR OR WALL ASSEMBLY.

         TITEFLEX CORP A BUNDY CO

      3. NOM 1 IN. (25 MM) DIAM (OR SMALLER) STEEL FLEXIBLE METAL GAS PIPING. PLASTIC COVERING ON PIPING MAY OR MAY NOT BE REMOVED ON BOTH SIDES OF FLOOR OR WALL ASSEMBLY.

         WARD MFG INC

3. FILL, VOID OR CAVITY MATERIAL* - CAULK OR SEALANT- MIN 5/8, 1-1/4, 1-7/8 AND 2-1/2 IN. (16, 32, 48 AND 64 MM) THICKNESS OF CAULK FOR 1, 2, 3 AND 4 HR RATED ASSEMBLIES, RESPECTIVELY, APPLIED WITHIN ANNULUS, FLUSH WITH BOTH SURFACES OF WALL. MIN 1/4 IN. (6 MM) DIAM BEAD OF CAULK APPLIED TO GYPSUM BOARD/PENETRANT INTERFACE AT POINT CONTACT LOCATION ON BOTH SIDES OF WALL. THE HOURLY F RATING OF THE FIRESTOP SYSTEM IS DEPENDENT UPON THE HOURLY FIRE RATING OF THE WALL ASSEMBLY IN WHICH IT IS INSTALLED, AS SHOWN IN THE FOLLOWING TABLE. THE HOURLY T RATING OF THE FIRESTOP SYSTEM IS DEPENDENT UPON THE TYPE OR SIZE OF THE PIPE OR CONDUIT AND THE HOURLY FIRE RATING OF THE WALL ASSEMBLY IN WHICH IT IS INSTALLED, AS TABULATED BELOW:

MAX PIPE OR CONDUIT DIAM IN (MM)	F RATING HR.	T RATING HR
1 (25)	1 OR 2	0+, 1 OR 2
1 (25)	3 OR 4	3 OR 4
4 (102)	1 OR 2	0
6 (152)	3 OR 4	0
12 (305)	1 OR 2	0

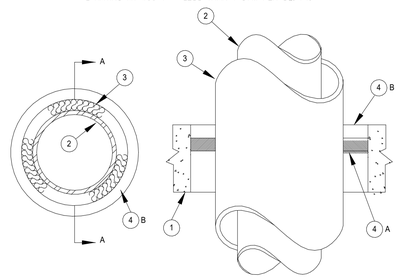
+ WHEN COPPER PIPE IS USED, T RATING IS 0 H.

3M COMPANY - CP 25WB+ OR FB-3000 WT.

* BEARING THE UL CLASSIFICATION MARK.

SYSTEM NO. C-AJ-5001
MARCH 05, 2007

F RATINGS – 1-1/2, 2 AND 3 HR (SEE ITEM 4)
T RATINGS – 0, 1/2, 3/4 AND 1 HR (SEE ITEMS 1A AND 4)
L RATING AT AMBIENT – 2 CFM PER SQ. FT.
L RATING AT 400° F – LESS THAN 1 CFM PER SQ. FT.



SECTION A-A

1. FLOOR OR WALL ASSEMBLY - MIN 2-1/2 IN. (64 MM) THICK REINFORCED LIGHTWEIGHT OR NORMAL WEIGHT (100-150 PCF OR 1600-2400 KG/M3) CONCRETE. WALL MAY ALSO BE CONSTRUCTED OF ANY UL CLASSIFIED CONCRETE BLOCKS*. MAX DIAM OF OPENING IS 18 IN. (457 MM).

   SEE CONCRETE BLOCKS (CAZT) CATEGORY IN THE FIRE RESISTANCE DIRECTORY FOR NAMES OF MANUFACTURERS.

1A. STEEL SLEEVE - (OPTIONAL, NOT SHOWN) - NOM 10 IN. (254 MM) (OR SMALLER) SCHEDULE 10 (OR HEAVIER) STEEL SLEEVE CAST OR GROUTED INTO FLOOR OR WALL ASSEMBLY. SLEEVE MAY EXTEND A MAX OF 2 IN. (51 MM) ABOVE TOP OF FLOOR OR BEYOND EITHER SURFACE OF WALL. AS AN ALTERNATE, NOM 10 IN. (254 MM) DIAM (OR SMALLER) SLEEVE FABRICATED FROM NOM 0.019 IN. (0.48 MM) THICK GALV STEEL CAST OR GROUTED INTO FLOOR OR WALL ASSEMBLY FLUSH WITH FLOOR OR WALL SURFACES. T RATING IS 0 HR WHEN SLEEVE IS USED.

2. THROUGH PENETRANT - NOM 4 IN. (102 MM) DIAM (OR SMALLER) TYPE L (OR HEAVIER) COPPER PIPE, NOM 12 IN. (305 MM) DIAM (OR SMALLER) SERVICE WEIGHT (OR HEAVIER) CAST IRON SOIL PIPE, NOM 12 IN. (305 MM) DIAM (OR SMALLER) CLASS 50 (OR HEAVIER) DUCTILE IRON PRESSURE PIPE OR NOM 12 IN. (305 MM) DIAM (OR SMALLER) SCHEDULE 10 (OR HEAVIER) STEEL PIPE CENTERED IN THE OPENING AND RIGIDLY SUPPORTED ON BOTH SIDES OF THE FLOOR OR WALL ASSEMBLY.

3. PIPE COVERING* - NOM 1/2 TO 2 IN. (13 TO 51 MM) THICK HOLLOW CYLINDRICAL HEAVY DENSITY (MIN 3.5 PCF OR 56 KG/M3) GLASS FIBER UNITS JACKETED ON THE OUTSIDE WITH AN ALL SERVICE JACKET. LONGITUDINAL JOINTS SEALED WITH METAL FASTENERS OR FACTORY-APPLIED SELF-SEALING LAP TAPE. TRANSVERSE JOINTS SECURED WITH METAL FASTENERS OR WITH BUTT STRIP TAPE SUPPLIED WITH THE PRODUCT.

   SEE PIPE AND EQUIPMENT COVERING - MATERIALS* (BRGU) CATEGORY IN BUILDING MATERIALS DIRECTORY FOR NAMES OF MANUFACTURERS. ANY PIPE COVERING MATERIAL MEETING THE ABOVE SPECIFICATIONS AND BEARING THE UL CLASSIFICATION MARKING WITH A FLAME SPREAD INDEX OF 25 OR LESS AND A SMOKE DEVELOPED INDEX OF 50 OR LESS MAY BE USED.

4. FIRESTOP SYSTEM - THE DETAILS OF THE FIRESTOP SYSTEM SHALL BE AS FOLLOWS:

   A. PACKING MATERIAL - MIN 1 IN. (25 MM) THICKNESS OF FIRMLY PACKED MINERAL WOOL BATT INSULATION USED AS A PERMANENT FORM. PACKING MATERIAL TO BE RECESSED FROM TOP SURFACE OF FLOOR OR SLEEVE OR FROM BOTH SURFACES OF WALL AS REQUIRED TO ACCOMMODATE THE REQUIRED THICKNESS OF CAULK FILL MATERIAL (ITEM B).

   B. FILL, VOID OR CAVITY MATERIAL* - CAULK OR SEALANT - APPLIED TO FILL THE ANNULAR SPACE FLUSH WITH THE TOP SURFACE OF THE FLOOR OR SLEEVE OR FLUSH WITH BOTH SURFACES OF WALL. WHEN NOM PIPE COVERING THICKNESS IS 2 IN. (51 MM), MIN THICKNESS OF CAULK FILL MATERIAL IS 2 IN. (51 MM). WHEN NOM PIPE COVERING THICKNESS IS 1-1/2 IN. (38 MM) OR LESS, MIN THICKNESS OF CAULK FILL MATERIAL IS 1 IN. (25 MM). THE HOURLY F AND T RATINGS OF THE FIRESTOP SYSTEM ARE DEPENDENT UPON THE THICKNESS OF THE FLOOR OR WALL, THE SIZE OF PIPE, THE THICKNESS OF PIPE COVERING MATERIAL AND THE SIZE OF THE ANNULAR SPACE (BETWEEN THE PIPE COVERING MATERIAL AND THE EDGE OF THE CIRCULAR THROUGH OPENING) AS SHOWN IN THE FOLLOWING TABLE:

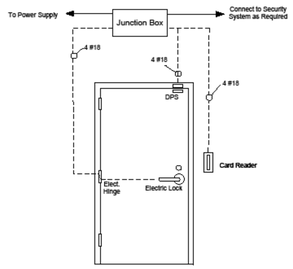
MIN FLOOR OR WALL THKNS, IN. (MM)	MAX PIPE DIAM, IN. (MM)	NOM PIPE COVERING THKNS, IN. (MM)	ANNULAR SPACE IN. (MM)	F RATING HR.	T RATING HR.
2-1/2 (64)	4 (102)	1 or 1-1/2 (25 or 38)	1/2 to 2-3/8 (13 to 60)	2	1
4-1/2 (114)	4 (102)	2 (51)	1/4 to 3-5/8 (6 to 92)	2	1-1/2
2-1/2 (64)	12 (305)	1 (25)	1/2 to 1-1/2 (13 to 38)	2	1/2
4-1/2 (114)	12 (305)	1 (25)	1/2 to 2-3/8 (13 to 60)	3	1
2-1/2 (64)	12 (305)	1/2 (13)	1/2 to 2-3/8 (13 to 60)	2	0

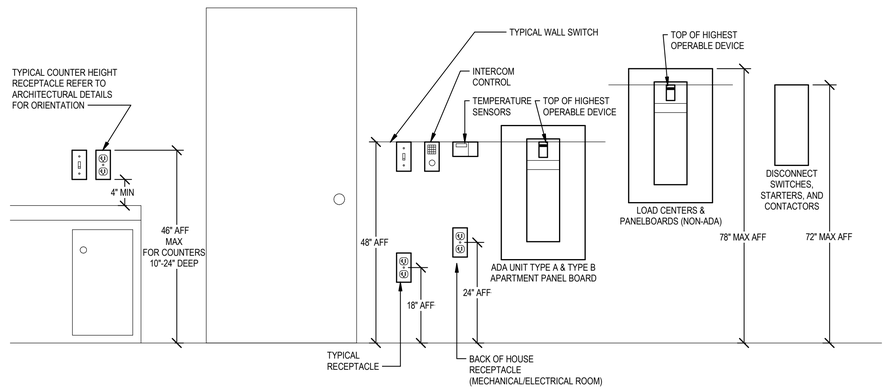
3M COMPANY - CP 25WB+ or FB-3000 WT

* BEARING THE UL CLASSIFICATION MARK.

Project: **UNC – Venable/Kenan Ground Floor APS Labs**

Door #: D005





1 DEVICE MOUNTING HEIGHT DETAIL
SCALE: NTS

ALLEGION

Drawn By: TJG

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NC License# F-1222

REVISION:

SCO REVIEW	9/15/25
2nd SCO REVIEW	10/24/25
Construction Set	11/17/25

CONSTRUCTION SET

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 053121 11/17/2025 JESSE C. ALONZO JR.

CLIENT NAME: THE UNIVERSITY OF NORTH CAROLINA AT CHAPEL HILL
JOB NAME: UNC VENABLE HALL LOWER LEVEL UPFIT
LOCATION: VENABLE HALL LOWER LEVEL
101 South RD
CHAPEL HILL, NC 27514
SCO ID: 24-28389-01A

ISSUE DATE: 11-17-25

JOB. NO.: 10021-0001

DWG. NO.: E501

ELECTRICAL DETAILS

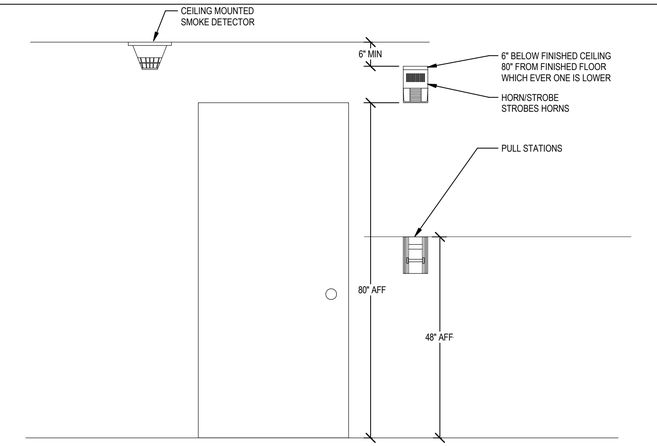
FIRE ALARM GENERAL NOTES

1. THE WIRING REQUIREMENTS CHANGE FROM MANUFACTURER TO MANUFACTURER. VERIFY WIRING WITH THE FIRE ALARM MANUFACTURER AND INSTALL AS DIRECTED AND APPROVED.
2. THE FIRE ALARM SYSTEM PRODUCT DATA INFORMATION, BATTERY CALCULATIONS, VOLTAGE DROP CALCULATIONS, INSTALLATION DRAWINGS AND DETAILS WILL BE PROVIDED AS A DEFERRED SUBMISSION TO THE FIRE ALARM PERMIT REVIEWER FROM THE CONTRACTOR AFTER THE FIRE ALARM SYSTEM VENDOR HAS SUBMITTED THE INFORMATION TO BE REVIEWED AND APPROVED BY THE ENGINEER.
3. SOUND PRESSURE COVERAGE THROUGHOUT THE BUILDING WILL BE DETERMINED AFTER THE FIRE ALARM SYSTEM HAS BEEN INSTALLED. ADDITIONAL DEVICES WILL BE ADDED IF THE COVERAGE IS DEEMED TO BE INADEQUATE BY THE INSPECTOR DURING THE FIRE ALARM SYSTEM TEST.
4. 25 PERCENT SPARE CAPACITY SHALL BE PROVIDED ON ALL NOTIFICATION APPLIANCE CIRCUITS FOR ANY ADDITIONAL DEVICES THAT MAY BE ADDED IN THE FUTURE. ALL EMPLOYEE WORK AREAS SHALL HAVE AUDIBLE AND VISUAL APPLIANCES.
5. ALL AUDIBLE DEVICES SHALL PROVIDE A SOUND PRESSURE LEVEL OF 15 DECIBELS ABOVE THE AVERAGE AMBIENT SOUND LEVEL OR 5 DECIBELS ABOVE THE MAXIMUM SOUND LEVEL FOR A DURATION OF NOT LESS THAN 60 SECONDS, WHICHEVER IS GREATER. PER 907.5.2.1.1.

System Outputs

System Inputs	Actuate Evacuation Signals - All Floors	Actuate Ground Floor Alarm Indicator	Actuate 1st Floor Alarm Indicator	Actuate 2nd Floor Alarm Indicator	Actuate 3rd Floor Alarm Indicator	Actuate 4th Floor Alarm Indicator	Actuate Penthouse Alarm Indicator	Actuate Common Alarm Signal Indicator	Actuate Common Alarm Signal	Actuate Common Supervisory Signal Indicator	Actuate Audible Supervisory Signal	Actuate Common Trouble Signal Indicator	Actuate Audible Common Trouble Signal	Display/Print Change of Status	Transmit Fire Alarm Signal To Supervising Station	Transmit Supervisory Signal to Supervising Station	Transmit Trouble Signal to Supervising Station	Release Magnetically Held Smoke Doors	Unlock All Exit Doors	Close Associated Smoke/Fire Dampers in Rated Wall	Shutdown AHU-1 Supply Fans, Close Smoke Isolation Damper, Close Associated Fire/Smoke Dampers	Shutdown AHU-2 Supply Fans, Close Smoke Isolation Damper, Close Associated Fire/Smoke Dampers	Shutdown AHU-3A Supply Fans, Close Smoke Isolation Damper, Close Associated Fire/Smoke Dampers	Shutdown AHU-3B Supply Fans, Close Smoke Isolation Damper, Close Associated Fire/Smoke Dampers	Shutdown AHU-4 Supply Fans, Close Smoke Isolation Damper, Close Associated Fire/Smoke Dampers	Signal BAS Ground Floor Smoke Detected for Smoke Control System	Signal BAS First Floor Smoke Detected for Smoke Control System	Signal BAS Second Floor Smoke Detected for Smoke Control System	Signal BAS Third Floor Smoke Detected for Smoke Control System	Signal BAS Fourth Floor Smoke Detected for Smoke Control System	Signal BAS Penthouse Floor Smoke Detected for smoke Control System	Start Stair Pressurization Fans	Recall Elevators To Primary Recall Floor	Recall Elevators to Alternate Recall Floor
Manual Pull Station Ground Floor	X	X						X	X					X	X			X	X															
Manual Pull Station First Floor	X		X					X	X					X	X			X	X															
Manual Pull Station Second Floor	X			X				X	X					X	X			X	X															
Manual Pull Station Third Floor	X				X			X	X					X	X			X	X															
Manual Pull Station Fourth Floor	X					X		X	X					X	X			X	X															
Manual Pull Station Penthouse	X						X	X	X					X	X			X	X															
Smoke Detector Ground Floor	X	X						X	X					X	X			X	X								X				X			
Smoke Detector First Floor	X		X					X	X					X	X			X	X									X				X		
Smoke Detector Second Floor	X			X				X	X					X	X			X	X										X			X		
Smoke Detector Third Floor	X				X			X	X					X	X			X	X											X		X		
Smoke Detector Fourth Floor	X					X		X	X					X	X			X	X												X	X		
Smoke Detector Penthouse	X						X	X	X					X	X			X	X													X		
Smoke Detector Elev. Lobby G																																	X	
Smoke Detector Elev. Lobby 1																																	X	
Smoke Detector Elev. Lobby 2																																		X
Smoke Detector Elev. Lobby 3																																	X	
Smoke Detector Elev. Lobby 4																																	X	
Smoke Detector Elev. Lobby P																																	X	
Heat Detector Ground Floor	X	X						X	X					X	X			X	X								X							
Heat Detector First Floor	X		X					X	X					X	X			X	X									X						
Heat Detector Second Floor	X			X				X	X					X	X			X	X										X					
Heat Detector Third Floor	X				X			X	X					X	X			X	X											X				
Heat Detector Fourth Floor	X					X		X	X					X	X			X	X												X			
Heat Detector Penthouse	X						X	X	X					X	X			X	X													X		
Duct Mounted Smoke Detectors At Fire/Smoke Dampers	X						X	X	X					X	X			X	X	X												X		
AHU-1 Duct Mounted Smoke Detector	X						X	X	X					X	X			X	X		X											X		
AHU-2 Duct Mounted Smoke Detector	X						X	X	X					X	X			X	X			X										X		
AHU-3A Duct Mounted Smoke Detector	X					X		X	X					X	X			X	X				X									X		
AHU-3B Duct Mounted Smoke Detector	X					X		X	X					X	X			X	X					X								X		
AHU-4 Duct Mounted Smoke Detector	X						X	X	X					X	X			X	X						X							X		
Sprinkler Main Waterflow	X	X						X	X					X	X			X	X															
Sprinkler Ground Floor Zone Waterflow	X	X												X	X			X	X								X							
Sprinkler First Floor Zone Waterflow	X		X											X	X			X	X									X						
Sprinkler Second Floor Zone Waterflow	X			X										X	X			X	X										X					
Sprinkler Third Floor Zone Waterflow	X				X									X	X			X	X											X				
Sprinkler Fourth Floor Zone Waterflow	X					X								X	X			X	X												X			
Sprinkler Penthouse Zone Waterflow	X						X	X	X					X	X			X	X													X		
Sprinkler Tamper Switch										X	X			X		X																		
Fire Alarm AC Power Failure												X	X	X				X	X	X														
Fire Alarm Low Battery												X	X	X				X																
Open Circuit												X	X	X				X																
Ground Fault												X	X	X				X																
Notification Appliance Circuit Short												X	X	X				X																
General Alarm (Keman)																			X															

3 FIRE ALARM MATRIX
SCALE: NTS



1 DEVICE MOUNTING HEIGHT DETAIL
SCALE: NTS

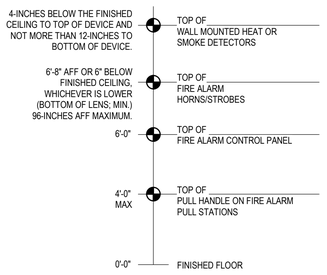
FIRE ALARM

WALL	CEILING	
	(HS)x	HORN AND STROBE FIRE ALARM SYSTEM. X = cd
	(SS)x	SPEAKER AND STROBE FIRE ALARM SYSTEM. X = cd
	(F)x	HORN ONLY, FIRE ALARM SYSTEM.
	(S)	SPEAKER FIRE ALARM SYSTEM
x	(x)	FIRE ALARM STROBE ONLY DEVICE. X=cd

- (F) MANUAL FIRE ALARM PULL STATION
- (DD) DUCT DETECTOR, FURNISHED BY E.C. INSTALLED BY M.C. REQUIRED FOR ALL HVAC SYSTEM OVER 2000 CFM, COORDINATE FINAL COUNTS AND LOCATIONS WITH M.C.
- (L) FLUSH MOUNTED CEILING FIRE ALARM SYSTEM DUCT DETECTOR REMOTE TEST STATION AND ALARM INDICATING LAMP.
- (R) FIRE ALARM SYSTEM RELAY. SUBSCRIPT, WHEN SHOWN, INDICATES ZONE.
- (SD) LOCAL 120v SMOKE DETECTOR.
- (S) SYSTEM SMOKE DETECTOR.

  SMOKE DETECTOR NOMENCLATURE — P PHOTOELECTRIC; I IONIZATION; R RELAY BASE
- (S) SYSTEM SMOKE DETECTOR WITH SOUNDER BASE
- (S)# SYSTEM SMOKE DETECTOR WITH STROBE BASE
- (SE) SYSTEM SMOKE DETECTOR FOR ELEVATOR RECALL.
- (HD) LOCAL 120v HEAT DETECTOR.
- (H) SYSTEM HEAT DETECTOR.
- (HR) SYSTEM HEAT DETECTOR. RATE OF RISE
- (HF)# SYSTEM HEAT DETECTOR. FIXED TEMP, #° = ACTIVATING TEMP
- (CO) CARBON MONOXIDE DETECTOR
- (CO2) CARBON DIOXIDE DETECTOR
- (FS) SYSTEM FIRE WATER FLOW MONITORING SWITCH.
- (TS) SYSTEM FIRE WATER TAMPER MONITORING SWITCH.
- [HO] MAGNETIC DOOR HOLD OPEN. PROVIDE 120v AND FIRE ALARM INTERFACE. HOLD OPEN WILL DE-ENERGIZE ALLOWING DOOR TO CLOSE WHEN FIRE ALARM IS ACTIVATED
- [FACP] FIRE ALARM CONTROL PANEL
- [FAA] FIRE ALARM ANNUNCIATOR PANEL
- [FAPS] FIRE ALARM POWER SUPPLY
- [FATC] FIRE ALARM TERMINAL CABINET
- [CM] FIRE ALARM ADDRESSABLE CONTROL MODULE
- [MM] FIRE ALARM ZONE INTERFACE MODULE WITH RELAY
- [PS] PRESSURE SWITCH FOR DRY TYPE SPRINKLER SYSTEM. FURNISHED AND INSTALLED BY THE PLUMBING CONTRACTOR AND WIRED BY THE ELECTRICAL CONTRACTOR.
- [GDS] GAS DETECTION SYSTEM
- FSD [Z] DD [CM] FIRE SMOKE DAMPER (BY MC), PROVIDE DUCT DETECTOR, 120V POWER, CONTROL MODULE, & INTERFACE MODULE TO FIRE ALARM SYSTEM. COORDINATE FINAL COUNTS AND LOCATIONS WITH M.C.

MOUNTING HEIGHT SCHEDULE



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REVISION:	
SCO REVIEW	9/15/25
2nd SCO REVIEW	10/24/25
Construction Set	11/17/25

CONSTRUCTION SET

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 053121 11/17/2025 JOSE C. ALONZO JR.

CLIENT_NAME: THE UNIVERSITY OF NORTH CAROLINA AT CHAPEL HILL
JOB_NAME: UNC VENABLE HALL LOWER LEVEL UPFIT
LOCATION: VENABLE HALL LOWER LEVEL
101 South RD
CHAPEL HILL, NC 27514
SCO ID: 24-28389-01A

ISSUE DATE: 11-17-25
JOB. NO.: 10021-0001
DWG. NO.:

FA001

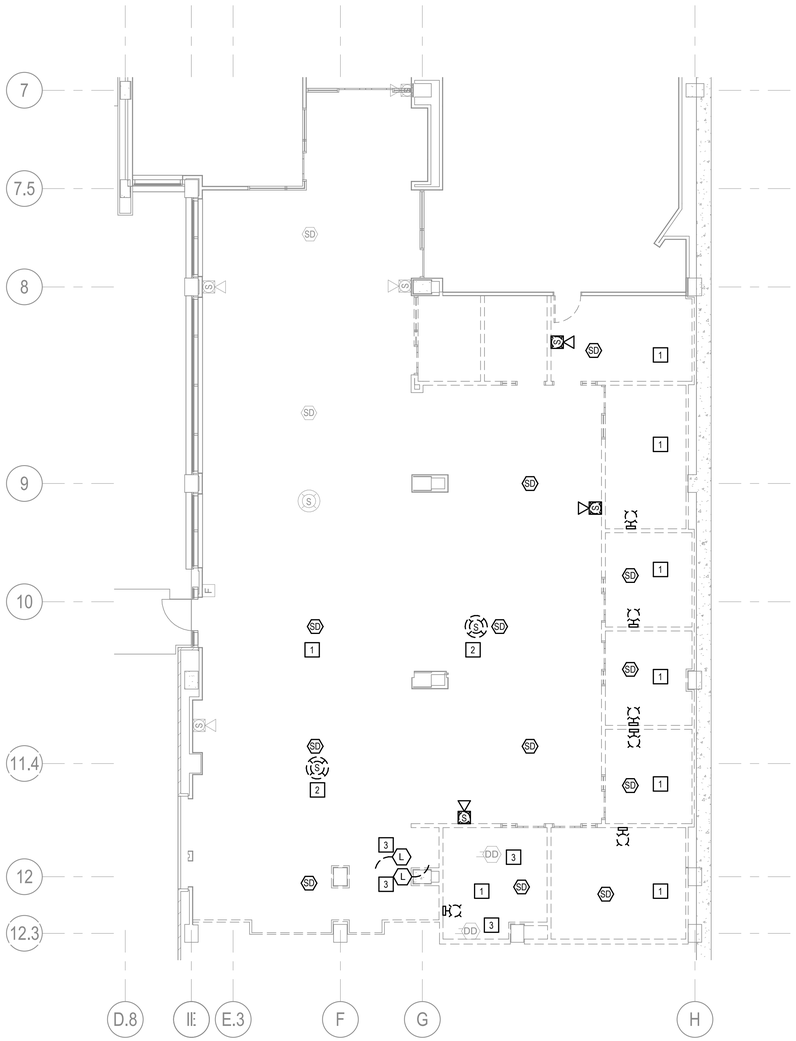
ELECTRICAL FIRE ALARM LEGEND SHEET

DEMOLITION GENERAL NOTES

1. ALL PENETRATIONS OF EXISTING FLOORS AND FIRE RATED WALL OR SMOKE PARTITIONS SHALL BE PATCHED & REPAIRED AS REQUIRED TO MAINTAIN THE EXISTING FIRE RATING OR SMOKE INFILTRATION INTEGRITY OF THE WALL. ALL SLEEVES, WIREWAYS, CABLE TRAYS, PIPES, DUCTWORK, ETC. SHALL BE FIRE SEALED TIGHT TO THE WALL OR FLOOR PENETRATIONS TO MAINTAIN THE REQUIRED CODE COMPLIANT FIRE RATING.
2. ELECTRICAL CONTRACTOR SHALL FIELD VERIFY AND COORDINATEALL EXISTING CONDITIONS, LOCATIONS, AND CIRCUITING OF ALL EXISTING ELECTRICAL EQUIPMENT LOCATED IN THE AREAS OF CONSTRUCTION INCLUDING EQUIPMENT LOCATED IN ADJACENT AREAS SERVED BY THE CIRCUITING LOCATED IN THESE SPACES.
3. DEMOLITION WORK SHALL BE COMPLETED IN FULL. ALL CONDUIT AND WIRING SHALL BE DEMOLISHED BACK TO SOURCE UNLESS OTHERWISE NOTED. PANELS SCHEDULES SHALL BE UPDATED WHERE APPLICABLE. NO RACEWAY SHALL BE ABANDONED IN PLACE UNLESS SPECIFICALLY NOTED ON DRAWINGS.
4. IN AREAS OF REMOVAL OF WALL AND CEILING MOUNTED DEVICES, CONTRACTOR SHALL REPAIR, PATCH AND CLEAN WALLS, WALL BASES, AND CEILING AS REQUIRED TO MATCH EXISTING FINISHES.
5. CONTRACTOR SHALL MAINTAIN ALL CIRCUITS RUNNING THROUGH THE AREA OF DEMOLITION AND THE AREA OF NEW CONSTRUCTION.

DEMOLITION KEY NOTES

1. EXISTING HORN STROBE/STROBE, SMOKE DETETOR SHOWN IN HATCH SHALL BE REMOVED. EXISTING CONDUIT(S) AND CABLING SHALL BE DEMOLISEHD AS REQUIRED.
2. EXISTING CEILING MOUNTED SPEAKER STROBE SHALL BE DISCONNECTED AND SALVAGED TO BE INSTALLED IN NEW LOCATION OR RETURNED TO OWNER. COORDINATE WITH OWNER.
3. EXISTING DUCT DETECTOR TO REMAIN, ASSOCIATED RAIL DEVICES SHALL BE TEMPORARILY DISCONNECTED AND MADE READY TO BE RELOCATED TO NEW LOCATION. COORDINATE WITH MECHANICAL CONTRACTOR AND OWNER.



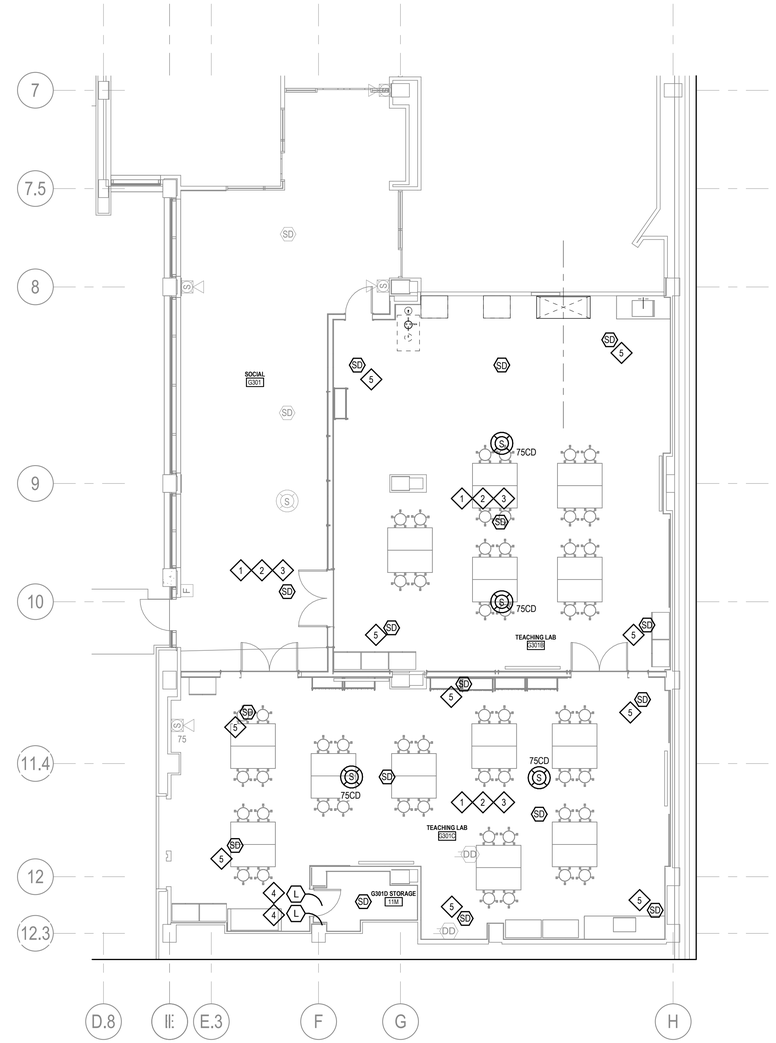
1 GROUND FLOOR DEMO PLAN - FIRE ALARM
SCALE: 1/8" = 1'-0"

NEW WORK GENERAL NOTES

1. ELECTRICAL CONTRACTOR SHALL FIELD VERIFY AND COORDINATE ALL EXISTING CONDITIONS, LOCATIONS, AND CIRCUITING OF ALL EXISTING ELECTRICAL (POWER, LIGHTING, SPECIAL SYSTEMS, ETC.) EQUIPMENT LOCATED IN AREAS OF DEMOLITION/CONSTRUCTION INCLUDING EQUIPMENT LOCATED IN ADJACENT AREAS SERVED BY CIRCUITING LOCATED IN THESE SPACES. THE CONTRACTOR SHALL VISIT THE JOB SITE AND BECOME FAMILIAR WITH ALL EXISTING CONDITIONS PRIOR TO BID AND ANY WORK.
2. IN AREAS OF REMOVAL OF WALL AND CEILING MOUNTED DEVICES, CONTRACTOR SHALL REPAIR, PATCH AND CLEAN WALLS, WALL BASES, AND CEILING AS REQUIRED TO MATCH EXISTING FINISHES.
3. REFER TO DRAWING FA001 FOR FIRE ALARM GENERAL PROJECT NOTES, SYMBOLS & ABBREVIATIONS.

NEW WORK KEYED NOTES:

1. PROVIDE NEW FIRE ALARM NOTIFICATION DEVICE, SMOKE DETECTOR(S), CABLING, RACEWAY, ETC. AS REQUIRED FOR COMPLETE INSTALLATION. DEVICE AND WIRING SHALL MATCH EXISTING AND BE UL LISTED FOR USE WITH EXISTING SYSTEM. CONTRACTOR SHALL PROVIDE CALCULATIONS TO CONFIRM POWER SUPPLY/CIRCUIT WILL ACCOMMODATE MODIFICATIONS AS REQUIRED.
2. FIRE ALARM SYSTEM OPERATING MATRIX SHALL MATCH EXISTING. COORDINATE WITH OWNER. TYPICAL FOR ALL SPACES. FIRE ALARM SYSTEM SHALL BE TESTED PER NFPA 72 2013 SECTION 14.4.2 - REACCEPTANCE TESTING UPON COMPLETION OF THE INSTALLATION. NEW VISUAL NOTIFICATION DEVICES SHALL SYNC WITH ANY VISUAL NOTIFICATION DEVICES OUTSIDE PROJECT PARAMETERS IF TWO (2) OR MORE CAN BE SEEN. COORDINATE PRE-TEST OF FIRE ALARM SYSTEM WITH OWNER.
3. UPON COMPLETION OF THE INSTALLATION, PROVIDE TESTING OF THE FIRE ALARM SYSTEM PER NFPA 72 REQUIREMENTS AS WELL AS PROVIDING AN UPDATED NFPA 72 2013 RECORD OF COMPLETION FOR THE CURRENT VERSION OF THE CODE BEING UTILIZED BY SCO. THIS TESTING SHALL INCLUDE 100% TESTING OF ALL NEW DEVICES AS WELL AS 10% OF THE EXISTING DEVICES, ETC. TYPICAL OR ALL AREAS OF FIRE ALARM WORK. COORDINATE ALL TESTING AND SCHEDULING WITH OWNER.
4. NEW LOCATION OF EXISTING RAIL LIGHTS. EXTEND CONDUIT AND CONDUCTOR AS NECESSARY.
5. NEW SMOKE DETECTOR SHALL BE MOUNTED TO DECK.



2 GROUND FLOOR NEW WORK PLAN - FIRE ALARM
SCALE: 1/8" = 1'-0"

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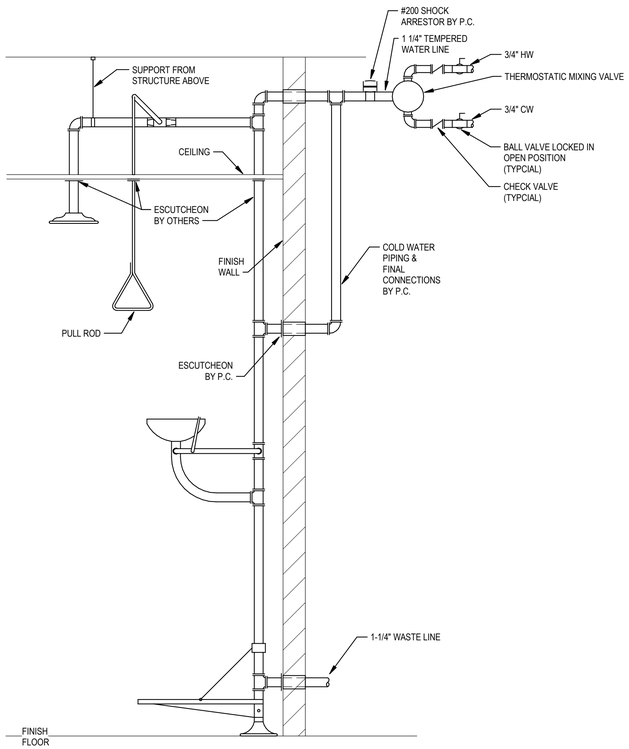
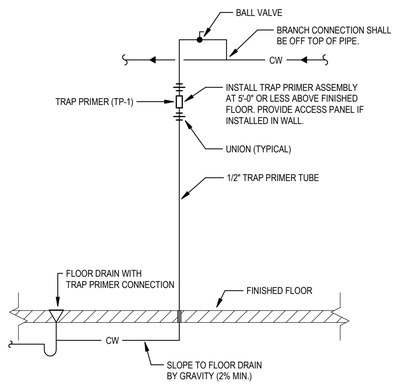
FIRE ALARM DEMO AND NEW WORK PLANS



1 EMERGENCY SHOWER/EYEWASH WITH THERMOSTATIC MIXING VALVE

SCALE: NTS



NOTES:
1. PROVIDE MULTIPLE OUTLET DISTRIBUTION AS REQUIRED.
2. IN FINISHED AREA, ROUTE PIPING WITHIN WALL AND LOCATE TRAP PRIMER IN A RECESSED BOX. BOX SHALL BE FULL SIZE TO SERVICE VALVE AND TRAP PRIMER ASSEMBLY. MINIMUM 12" X 12" FOR ONE ASSEMBLY.
3. ALL INACCESSIBLE PIPING, SUCH AS BURIED IN CONCRETE, SHALL BE SOFT COPPER WITH MECHANICAL CONNECTIONS. ALL OTHER PIPING SHALL BE HARD COPPER.

2 TRAP PRIMER DETAIL

SCALE: NTS

PLUMBING SYMBOLS

PIPE DROP — PIPE UP

AV	ACID VENT
AW	ACID WASTE
	COLD WATER
CA	COMPRESSED AIR
DI	DEIONIZED WATER
	EXISTING TO BE REMOVED
FD	FOUNDATION DRAIN
G	GAS
GW	GREASE LADEN WASTE BELOW GRADE
GW	GREASE LADEN WASTE ABOVE GRADE
	HOT WATER SUPPLY (120°)
	HOT WATER RETURN (120°)
140°	HOT WATER SUPPLY (140°)
140° HWR	HOT WATER RETURN (140°)
IA	INSTRUMENT AIR
LA	LABORATORY AIR
LW	LABORATORY WASTE
LPG	LIQUEFIED PETROLEUM GAS (PROPANE)
MCA	MEDICAL COMPRESSED AIR
MVAC	MEDICAL VACUUM / SUCTION
N	NITROGEN GAS
NO	NITROUS OXIDE GAS
ORC	OVERFLOW RAIN CONDUCTOR
O2	MEDICAL OXYGEN GAS
PS	PRESSURE SANITARY SEWER
PD	PUMP DISCHARGE
RWC	RAIN WATER CONDUCTOR
SAN	SANITARY SEWER BELOW GRADE
SAN	SANITARY SEWER ABOVE GRADE
V	SANITARY VENT PIPING
ST	STORM SEWER ABOVE GRADE
ST	STORM SEWER BELOW GRADE
TW	TEMPERED WATER
VAC	VACUUM LINE
WAGD	WASTE ANESTHETIC GAS DISPOSAL

V.	AIR VENT
	BALANCING VALVE
BFP	BACKFLOW PREVENTER
	BALL VALVE
	BUTTERFLY VALVE
	CAPPED CONNECTION
	CHECK VALVE
	GAS PRESSURE REGULATOR
	GATE VALVE
	MIXING VALVE
	PLUG VALVE
P.G.	PRESSURE GAUGE
	PRESSURE REGULATING VALVE
	P-TRAP
	RELIEF VALVE
	SOLENOID VALVE
	STRAINER
T.	THERMOMETER
	UNION
	VALVE IN RISER

HB	HOSE BIBB
WH	WALL HYDRANT
NFWH	NON-FREEZE WALL HYDRANT
	MEDICAL COMPRESSED AIR OUTLET
	MEDICAL VACUUM OUTLET W/SLIDE
	OXYGEN OUTLET
FH	FIRE HYDRANT
MH	MANHOLE
GV	GAS VALVE BOX
WV	WATER VALVE BOX
AD	AREA DRAIN (No. indicates type)
FD	FLOOR DRAIN (No. indicates type)
FS	FLOOR SINK (No. indicates type)
RD	ROOF DRAIN
CO	CLEAN OUT
CO	FLOOR CLEANOUT
WHA	WATER HAMMER ARRESTOR
AVTR	ACID VENT THRU ROOF
CSS	CLINIC SERVICE SINK
DD	DECK DRAIN (No. indicates type)
DF	DRINKING FOUNTAIN (No. indicates type)
ES	EMERGENCY SHOWER
ES/EW	EMER SHOWER/EYEWASH COMBINATION
EEW	EMERGENCY EYEWASH
EWC	ELECTRIC WATER COOLER (No. indicates type)
EX	EXISTING
IMOB	ICE MAKER OUTLET BOX (No. indicates type)
L	LAVATORY (No. indicates type)
MR	MOP RECEPTOR
MV	MIXING VALVE (No. indicates type)
NFRH	NON-FREEZE ROOF HYDRANT
NFWH	NON-FREEZE WALL HYDRANT
ORC	OVERFLOW RAIN CONDUCTOR
RD	ROOF DRAIN (No. indicates type)
S	COUNTER SINK (No. indicates type)
SAN	SANITARY
SH	SHOWER (No. indicates type)
UR	URINAL (No. indicates type)
V	VENT
V.C.	VALVE CABINET
VTR	VENT THRU ROOF
W	WASTE
WC	WATER CLOSET (No. indicates type)
WMSD	WASHING MACHINE SUPPLY & DRAIN
Z.V.B.	MEDICAL GAS ZONE VALVE BOX
	CONNECT TO EXISTING PIPING

TAG	MANUFACTURER	MODEL	DESCRIPTION	WASTE	VENT	CW	HW	SPECIFICATION
S-1	ELKAY	ELUHAD281655PD	LAB SINK	1-1/2"	1-1/2"	1/2"	1/2"	30-1/2" x 18-1/2" x 5-3/8", UNDERMOUNT SINGLE COMPARTMENT ADA COMPLIANT SINK. SINK SHALL BE FULLY SOUND-DEADENED, EIGHTEEN (18) GAUGE, TYPE 304 STAINLESS STEEL. PROVIDE SINK COMPLETE WITH CHROME PLATED SEMI-CAST BRASS P-TRAP WITH CLEANOUT, CHROME PLATED BRASS WASTE TO WALL WITH CHROME PLATED BRASS ESCUTCHEON, STAINLESS STEEL PERFORATED GRID STRAINER WITH CHROME PLATED BRASS TAILPIECE. PROVIDE INSULATION KIT FOR OFFSET DRAIN ASSEMBLY. PROVIDE WITH CONSEALED DECK-MOUNTED DUAL INLET FAUCET, 8" CENTERS WITH 8" RIGID/SWIVEL GOOSENECK SPOUT WITH VACUUM BREAKER, SERRATED NOZZLE WITH FLOW CONTROL AND 4" ADA COMPLIANT WRIST BLADE HANDLES, CHICAGO FAUCETS MODEL LWM2-B43-F OR APPROVED EQUAL. PROVIDE WITH DECK MOUNTED LAB FAUCET FOR PURE WATER, SINGLE CONTROL, RIGID GOOSENECK, SERRATED TIP, 3/8" NPT FEMALE INLET, CHICAGO 830-PVDF OR APPROVED EQUAL.
EWS-1	GUARDIAN	GBF1909	COMBINATION EYEWASH/ EMERGENCY SHOWER	1-1/4"	-	1-1/4"	-	GUARDIAN BARRIER-FREE SAFETY STATION WITH WIDEAREA EYE/FACE WASH, PLASTIC SHOWER HEAD, 10" DIAMETER SHOWER HEAD WITH 1" IPS CHROMES PLATED BRASS STAY-OPEN BALL VALVE WITH STAINLESS STEEL ACTUATING ARM AND 47-1/2" STAINLESS STEEL PULL ROD. 11-1/2" STAINLESS STEEL; EYE/FACE WASH BOWL WITH 1/2" IPS CHROME PLATED BRASS STAY-OPEN BALL VALVE WITH FLAG HANDLE. PROVIDE WITH G6040 THERMOSTATIC MIXING VALVE WITH 3/4" HW & CW INLETS TO THE SINGLE 1-1/4" TEMPERED WATER OUTLET.
FD-1	ZURN	ZN415-4NH	4" FLOOR DRAIN WITH TRAP PRIMER CONNECTION	4"	-	-	-	ZURN 4" HEAVY-DUTY CAST IRON FLOOR DRAIN WITH 5" ROUND STRAINER INCLUDED WITH 1/2" TRAP PRIMER CONNECTION. PROVIDE WITH ZURN Z1022 TRAP PRIMER.

PLUMBING SYSTEM NOTES

A. ALL PLUMBING WORK SHALL BE IN ACCORDANCE WITH THE 2018 NORTH CAROLINA PLUMBING CODE. ALL PLUMBING WORK SHALL BE INSPECTED AND APPROVED BY THE LOCAL AUTHORITY HAVING JURISDICTION. THE PLUMBING CONTRACTOR SHALL PROVIDE ALL NECESSARY FEES AND PERMITS, INCLUDING THE CERTIFICATE OF PLUMBING INSPECTION.

B. THE PLUMBING CONTRACTOR SHALL BE RESPONSIBLE FOR CONSTRUCTION SAFETY. ARCHITECT AND/OR ENGINEER SHALL ASSUME NO RESPONSIBILITY FOR WORKMAN'S, OR PEDESTRIAN'S SAFETY. NOTHING IN THE CONTRACT DOCUMENTS SHALL BE CONSTRUED TO INSTRUCT PROCEDURES OR COMPONENTS FOR PROJECT SAFETY.

C. NOTHING CONTAINED IN THE CONTRACT DOCUMENTS SHALL BE CONSTRUED TO CONFLICT WITH ANY NATIONAL, STATE, MUNICIPAL, OR LOCAL LAWS OR REGULATIONS GOVERNING THE WORK INDICATED OR SPECIFIED. ALL SUCH REQUIREMENTS SHALL BE SATISFIED BY THE PLUMBING CONTRACTOR AT NO ADDITIONAL EXPENSE TO THE OWNER.

D. WHERE A CONFLICT ARISES BETWEEN PLANS, SPECIFICATIONS, DETAILS, SCHEDULES, APPLICABLE CODES OR REGULATIONS; THE MOST STRINGENT SHALL APPLY.

E. THE CONTRACT DOCUMENTS ARE COMPRISED OF DRAWINGS AND SPECIFICATIONS. EACH PLUMBING BIDDER SHALL VISIT SITE TO DETERMINE EXISTING CONDITIONS PRIOR TO SUBMITTING BID PROPOSAL. BIDS SHALL BE BASED ON THE COMPLETE EXAMINATION OF THE DRAWINGS, SPECIFICATIONS AND EXISTING CONDITIONS. NO CONSIDERATION WILL BE GIVEN ANY CONTRACTOR WHO FAILS TO DO SO.

F. THE WORK UNDER THIS CONTRACT SHALL INCLUDE THE FURNISHING OF ALL NECESSARY MATERIALS, TOOLS, AND LABOR FOR A COMPLETE, AND WORKING INSTALLATION AS DEFINED BY THE PLANS AND SPECIFICATIONS. THE PLUMBING CONTRACTOR SHALL WARRANT THE WORK INDICATED AND SPECIFIED. THE WORK SHALL FUNCTION AS INTENDED, BE COMPLETE IN ALL DETAILS, AND SHALL INCLUDE ALL INDICATED, SPECIFIED, OR REQUIRED ACCESSORIES FOR A FUNCTIONING SYSTEM.

G. PLUMBING CONTRACTOR SHALL COORDINATE HIS WORK WITH ALL OTHER TRADES.

H. CONTRACTOR SHALL REMOVE DEMOLITION DEBRIS COMPLETELY. CONTRACTOR SHALL SCHEDULE WITH THE CONSTRUCTION MANAGER THE TIME, LOCATION, ELEVATOR AND HAULING ROUTE.

I. THE PLUMBING CONTRACTOR SHALL CLEAN UP ALL DEBRIS AT THE END OF EACH WORK DAY.

J. HORIZONTAL DRAINAGE PIPING SHALL BE INSTALLED IN UNIFORM ALIGNMENT AT UNIFORM SLOPES NOT LESS THAN 1/4 INCH PER FOOT FOR THREE (3) INCH DIAMETER AND LESS, AND NOT LESS THAN 1/8 INCH PER FOOT FOR DIAMETERS OF FOUR (4) INCHES OR MORE.

K. ALL PIPING IS SCHEMATIC; SUPPORTS, UNIONS, VIBRATION ISOLATION, VALVES, INSULATION, ETC. SHALL BE AS REQUIRED FOR A COMPLETE AND OPERATING SYSTEM.

L. ALL PIPING IS TO BE CONCEALED IN WALLS OR ABOVE CEILING UNLESS NOTED OTHERWISE.

M. THE PLUMBING CONTRACTOR SHALL COORDINATE WITH THE GENERAL CONTRACTOR PRIOR TO AND FOR SCHEDULING ANY INTERRUPTION OF ANY BUILDING UTILITY.

N. ALL EQUIPMENT PROVIDED OR INSTALLED BY THIS CONTRACTOR SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S INSTALLATION INSTRUCTIONS.

O. ALL PIPING SHALL BE RUN AT THE SLOPES INDICATED. WHERE ELEVATIONS ARE NOT INDICATED, COORDINATE THE PIPE ROUTING WITH THE DUCT ROUTING INDICATED ON THE MECHANICAL PLANS, AS WELL AS ALL OTHER TRADES.

P. FINAL LOCATION OF ALL PLUMBING FIXTURES, SINKS, ELECTRIC WATER COOLERS, CLEANOUTS, AND THE LIKE, SHALL BE VERIFIED AND COORDINATED WITH THE ARCHITECTURAL DRAWINGS.

Q. ALL WORK SHOWN ON THE PLUMBING DRAWINGS SHALL BE BY THE PLUMBING CONTRACTOR UNLESS SPECIFICALLY NOTED OTHERWISE.

R. ALL SANITARY PIPING CONNECTIONS TO FIXTURES SHALL BE SIZED AS SCHEDULED. ALL OTHER SANITARY PIPING SHALL BE 4" UNLESS NOTED OTHERWISE.

S. ALL INVERT ELEVATIONS SHOWN ON THE DRAWINGS ARE APPROXIMATE AND MUST BE VERIFIED BY THE CONTRACTOR PRIOR TO INSTALLATION.

T. PROVIDE CLEANOUTS AT LEAST EVERY 100 FT IN SANITARY PIPING IN ADDITION TO THOSE SHOWN ON THE DRAWINGS. PROVIDE A CLEANOUT AT EACH CHANGE IN DIRECTION OF 90 DEGREES IN A SINGLE FITTING.

U. PROVIDE A CLEAN OUT AT EACH CHANGE IN DIRECTION GREATER THEN 45 DEGREES.

V. ALL VENT PIPING CONNECTIONS TO FIXTURES SHALL BE SIZED AS SCHEDULED. ALL OTHER VENT PIPING SHALL BE 2" UNLESS NOTED OTHERWISE.

W. PROVIDE 1/4 TURN STOP VALVES AT ALL FIXTURES.

X. PROVIDE APPROPRIATE BACKFLOW PREVENTION DEVICES WHERE REQUIRED BY CODE.

Y. SEE SPECIFICATION SECTION 011000 FOR TIMING OF ALL WORK AND COORDINATE.

PLUMBING SHEET INDEX

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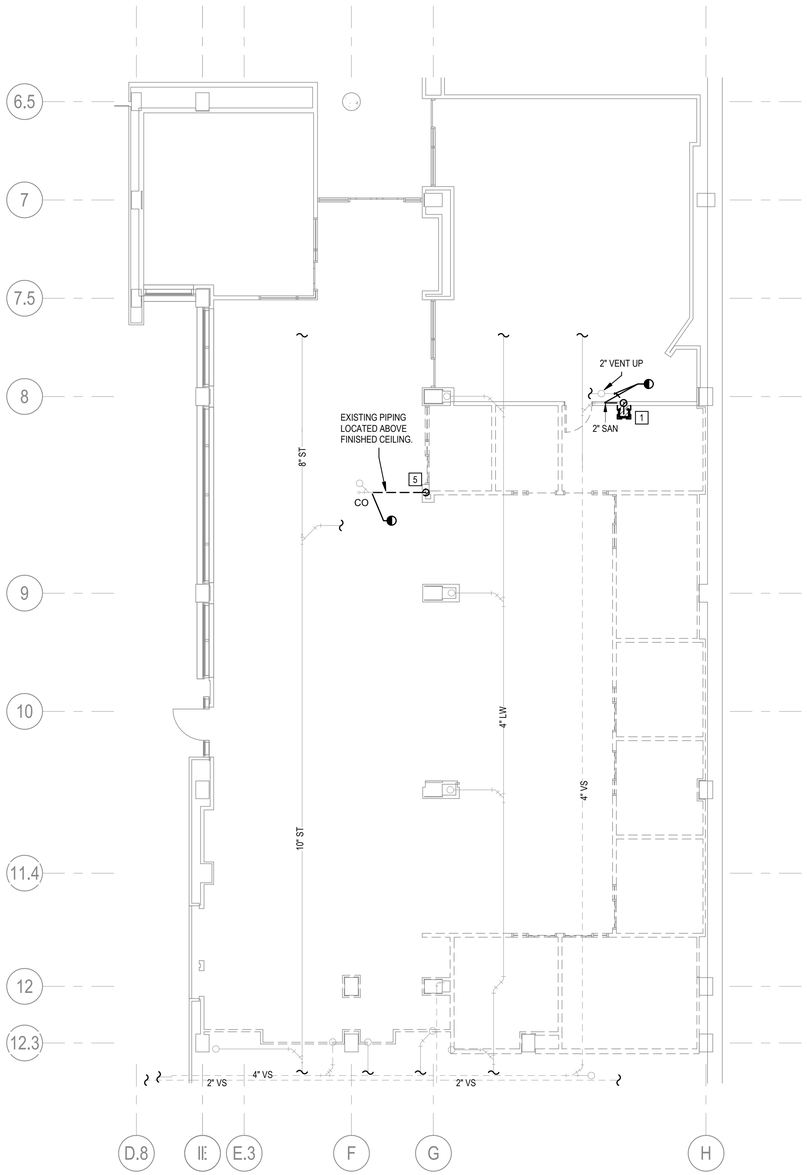
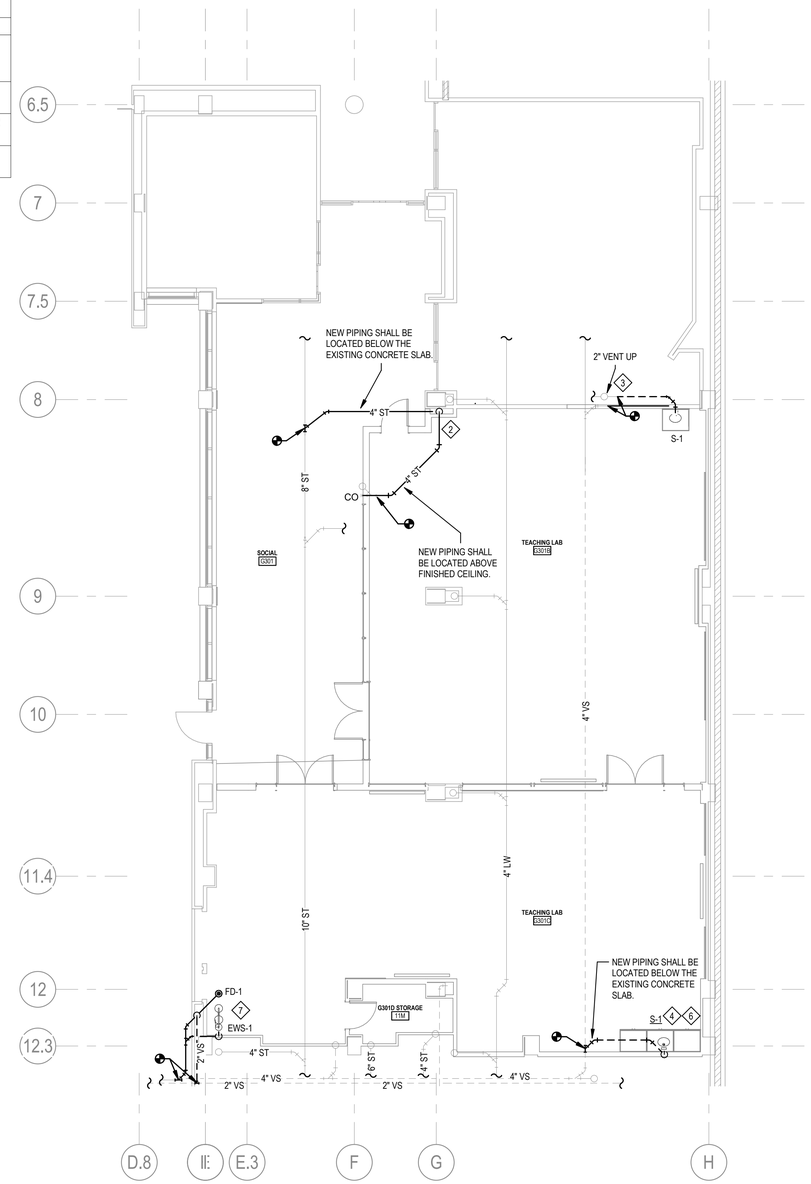
PLUMBING DATA SHEET

KEYED NOTES	
1	REMOVE EXISTING FIXTURE AND ALL CONNECTED PIPING BACK TO MAIN OR LAST FIXTURE SERVED AS SHOWN ON PLANS. COORDINATE EXTENTS OF DEMOLITION WITH NEW WORK PLANS.
2	PROVIDE NEW 4" STORM LINE. NEW LINE SHALL DROP DOWN TO BELOW CONCRETE SLAB. ROUTE NEW LINE BELOW THE EXISTING CONCRETE SLAB AND CONNECT TO THE EXISTING 4" STORM DRAIN LINE.
3	CONNECT NEW LINE OF SIZE INDICATED INTO MAIN AS SHOWN.
4	PROVIDE AND INSTALL NEW PLUMBING FIXTURE AS SCHEDULED ON P001. PROVIDE NEW DECK MOUNTED PVC GOOSENECK FAUCET WITH SERRATED NOZZLE AND HANDLE. MOUNT ADJACENT TO NEW SINK.
5	REMOVE EXISTING 4" STORM DRAIN THAT DROPS DOWN IN EXISTING WALL. REMOVE EXISTING LINE BELOW CONCRETE SLAB AND CAP.
6	PROVIDE AND INSTALL NEW AAV IN CASEWORK BELOW SINK. CONTRACTOR TO VERIFY INSTALLATION HEIGHT OF AAV TO BE ABOVE P-TRAP FOR SINK.
7	PROVIDE NEW EMERGENCY EYEWASH/SHOWER (EWS-1) AND FLOOR DRAIN AND ASSOCIATED BRANCH PIPING.



2 SANITARY GROUND DEMOLITION PLAN
SCALE: 1/8" = 1'-0"



1 SANITARY GROUND PLAN
SCALE: 1/8" = 1'-0"

1/8"=1'-0" 8' 4' 0 8' 16'

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SANITARY - GROUND FLOOR PLAN

KEYED NOTES	
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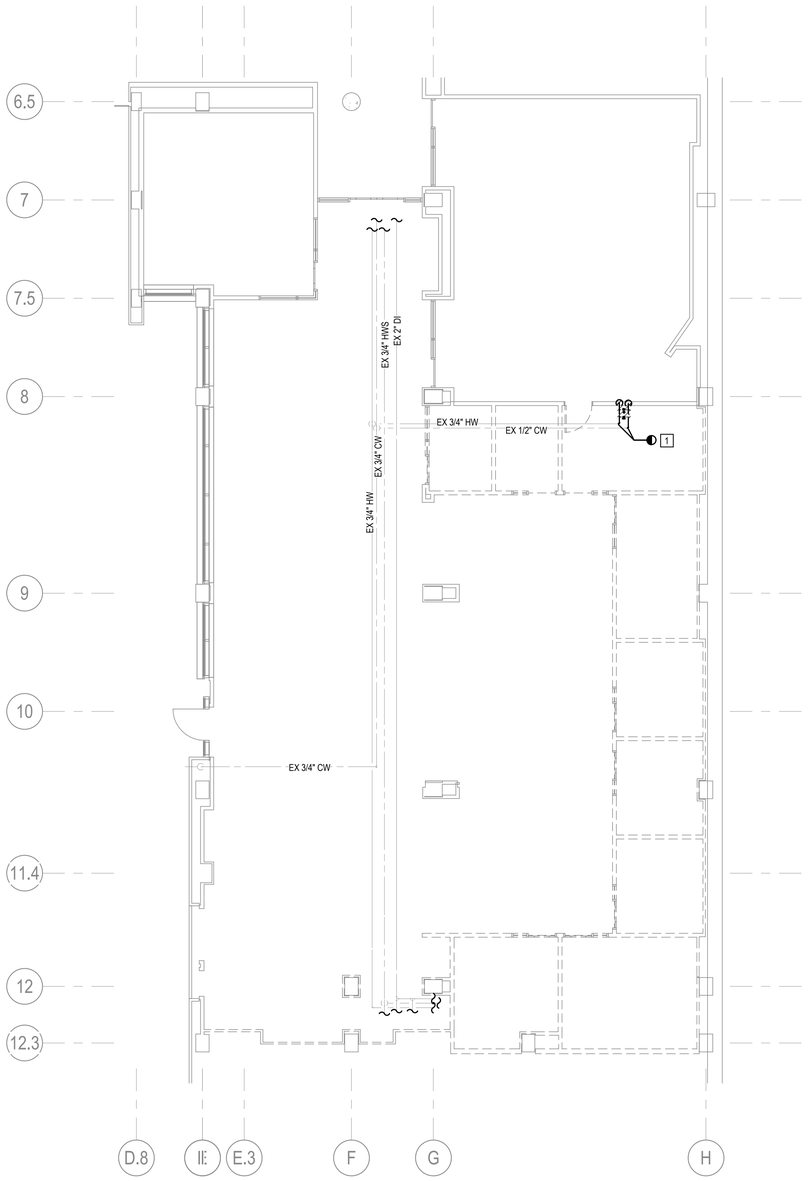
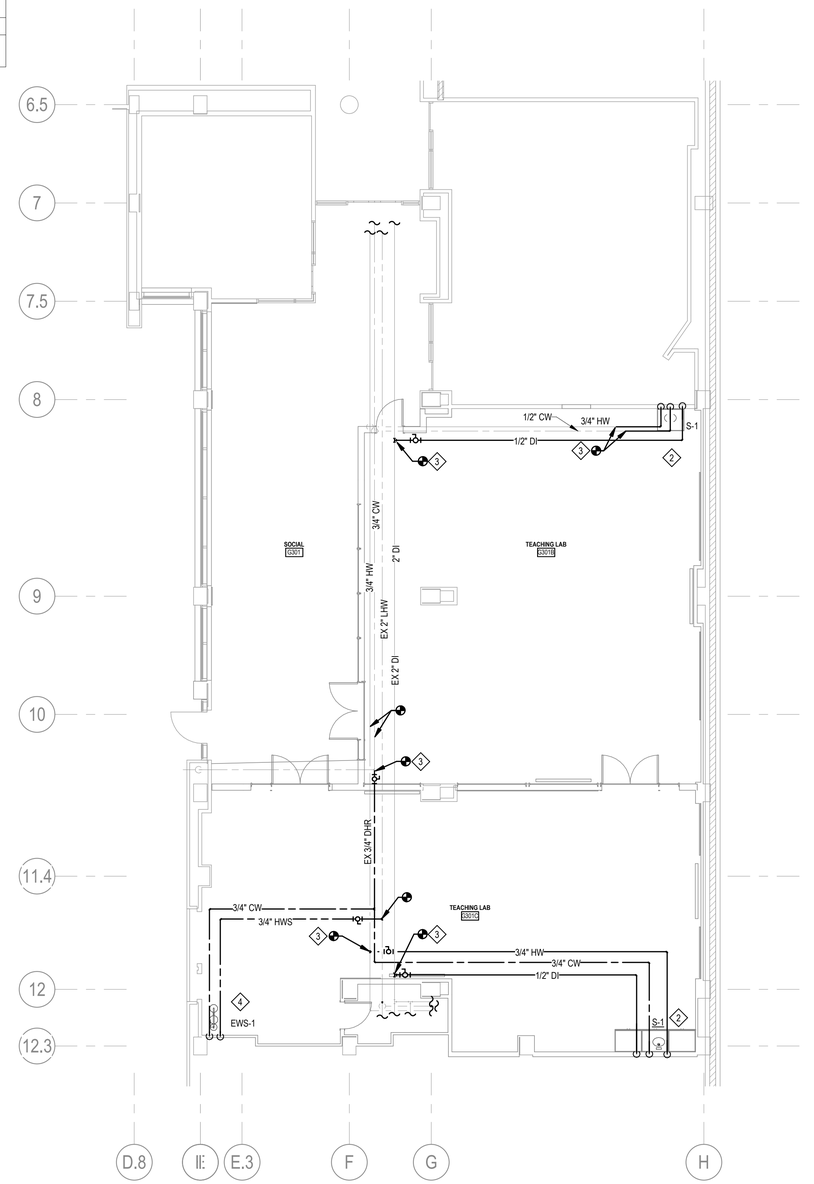
2	PROVIDE AND INSTALL NEW PLUMBING FIXTURE AS SCHEDULED ON P001. PROVIDE NEW DECK MOUNTED PVC GOOSENECK FAUCET WITH SERRATED NOZZLE AND HANDLE. MOUNT ADJACENT TO NEW SINK.
3	CONNECT NEW LINE OF SIZE INDICATED INTO MAIN AS SHOWN.
4	PROVIDE NEW EMERGENCY EYEWASH/SHOWER (EWS-1) AND FLOOR DRAIN AND ASSOCIATED BRANCH PIPING.



2 PRESSURE PIPNG GROUND DEMOLITION PLAN

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



1 PRESSURE PIPING GROUND PLAN

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

1/8"=1'-0" 8' 4' 0 8' 16'

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LOCATION: VENABLE HALL LOWER LEVEL
101 South RD
CHAPEL HILL, NC 27514
SCO ID: 24-28389-01A

ISSUE DATE: 11-17-25

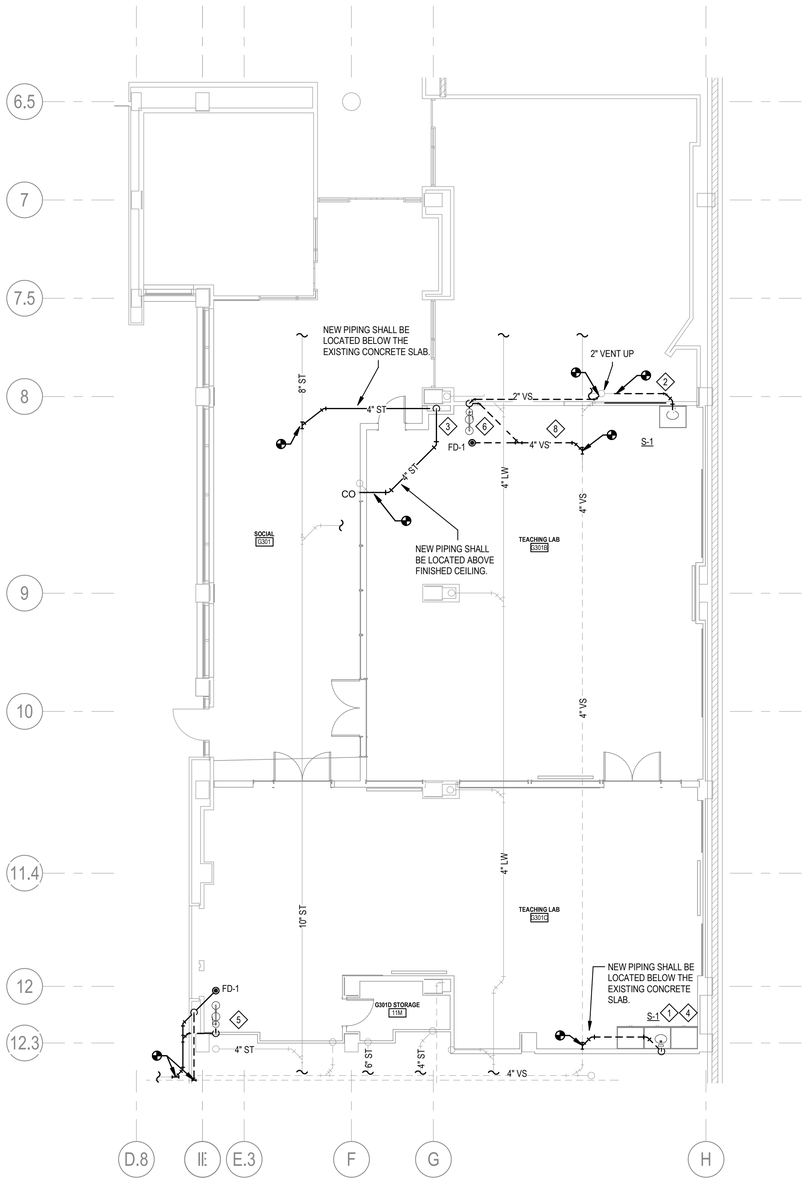
JOB. NO. 10021-0001

DWG. NO.

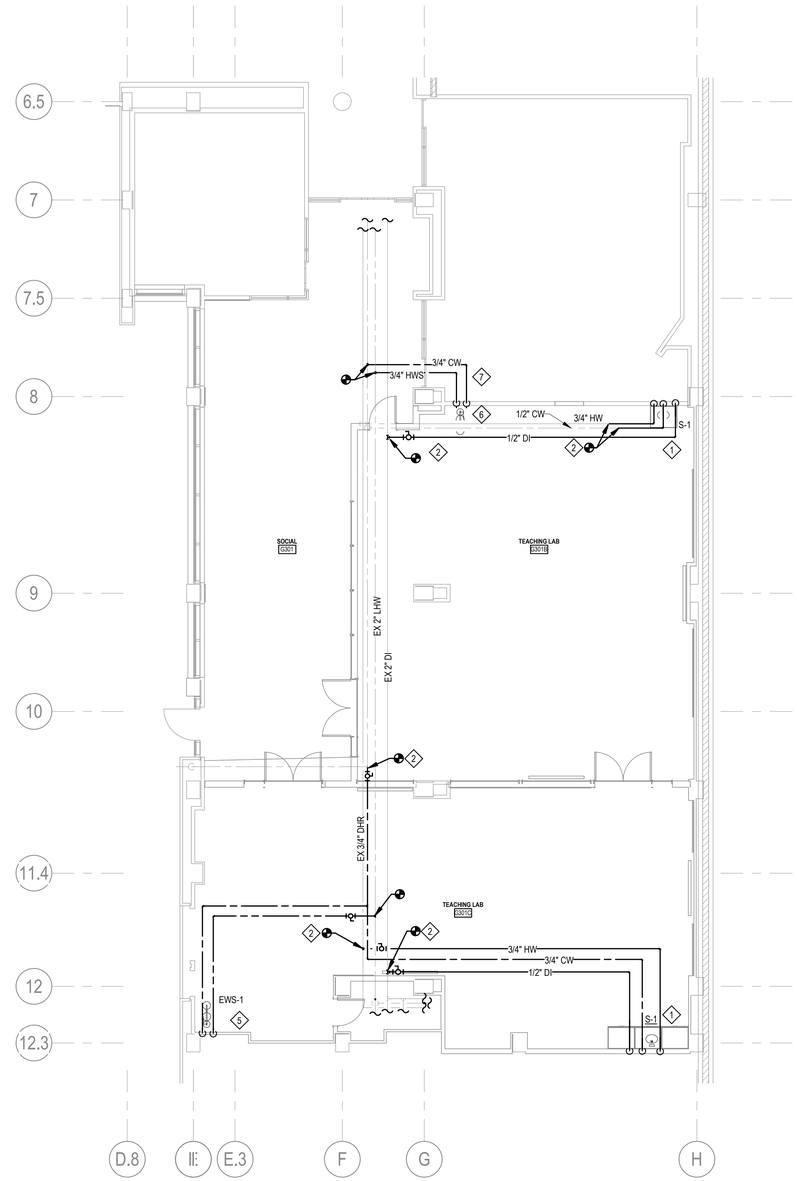
P211

DOMESTIC - GROUND FLOOR PLAN

KEYED NOTES	
1	PROVIDE AND INSTALL NEW PLUMBING FIXTURE AS SCHEDULED ON P001. PROVIDE NEW DECK MOUNTED PVC GOOSENECK FAUCET WITH SERRATED NOZZLE AND HANDLE. MOUNT ADJACENT TO NEW SINK.
2	CONNECT NEW LINE OF SIZE INDICATED INTO MAIN AS SHOWN.
3	PROVIDE NEW 4" STORM LINE. NEW LINE SHALL DROP DOWN TO BELOW CONCRETE SLAB. ROUTE NEW LINE BELOW THE EXISTING CONCRETE SLAB AND CONNECT TO THE EXISTING 4" STORM DRAIN LINE.
4	PROVIDE AND INSTALL NEW AAV IN CASEWORK BELOW SINK. CONTRACTOR TO VERIFY INSTALLATION HEIGHT OF AAV TO BE ABOVE P-TRAP FOR SINK.
5	PROVIDE NEW EMERGENCY EYEWASH/SHOWER (EWS-1) AND FLOOR DRAIN AND ASSOCIATED BRANCH PIPING.
6	ADD ALTERNATE 01: PROVIDE NEW EMERGENCY EYEWASH/SHOWER (EWS-1).
7	ADD ALTERNATE 01: PROVIDE NEW HW AND CW CONNECTIONS TO NEW EMERGENCY EYEWASH/SHOWER.
8	ADD ALTERNATE 01: PROVIDE NEW SANITARY WASTE PIPING TO NEW EMERGENCY EYEWASH/SHOWER. PROVIDE NEW FLOOR DRAIN AND ASSOCIATED SANITARY PIPING.



1 SANITARY GROUND PLAN ALTERNATE 1
SCALE: 1/8" = 1'-0"



2 PRESSURE PIPING GROUND PLAN ALTERNATE 1
SCALE: 1/8" = 1'-0"

1/8"=1'-0" 8' 4' 0 8' 16'

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CONSTRUCTION SET

NORTH CAROLINA PROFESSIONAL SEAL 019692 ENGINEER MITCHELL A. BROOM 11/7/25

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P311

PLUMBING ALT 1 - GROUND FLOOR PLAN

THE UNIVERSITY of NORTH CAROLINA at CHAPEL HILL

Annual Fire Pump Inspection Report

VENTURI

Facilities Services
Life Safety Shop 501
919-843-8997

BUILDING NAME	LOCATION	TECH	LICENSE#	DATE
JRRAY-VENABLE HA	Chapel Hill, NC	Dan Thacker		10/17/20224

FIRE PUMP DATA

MANUFACTURER:	Fairbanks Morse			SUPPLY	City		STATIC	55	PSI
MODEL:	5" 1822CF								
SN:	09-1826778								
TYPE:	Horizontal Split Case			CHURN	160	PSI	0	GPM	
RATED RP	3560	GPM:	1000	100% FLOW	138	PSI	1000	GPM	
STAGE:	1	HP:	100	150% FLOW	111	PSI	1500	GPM	

ELECTRIC MOTOR DATA

MANUFACTURER:	Marathon			RATED RPM:	3550	RATED HP:	100	CODE	G
MODEL:	365TSTDS14008AN W			VOLTAGE:	460				
SN WAA053487		FRAME	365TS	FLA:	120	1.15 SF			

FIRE PUMP CONTROLLER PANEL DATA

MANUFACTURER:	Cutler Hammer			VOLTAGE:	460		AUTO ST(	Yes	
MODEL:	FT30-100DL1			TRANSFER SWITCH:	Yes				
SN	16BH493E1			MINIMUM RUN TIMER SET	YES		MINUTES	10	
TYPE:	Soft Start			ACCELERATION TIMER SE	NA		SECOND:	NA	

JOCKEY PUMP CONTROLLER DATA				JOCKEY PUMP DATA					
MANUFACTURER:	Cutler Hammer			MANUFACTURER:	Baldor				
MODEL:	FDJP-3D			MODEL:	35Q659S255G2				
SN:	16BH493J				PVM2-90				
VOLTAGE:	460	HP:	3.00	VOLTAGE:	460	FLA:	3.7	HP:	3.00

Utility			Zero Flow				No Load Voltage			Generator Transfer Time		Generator		
PH	VOLTS	AMPS					AB	481			SEC	PH	VOLTS	AMPS
AB	483	88	RPM	DISC	SUCT	NET	BC	481				AB		
BC	482	90	3576	210	50	160	CA	481				BC		
CA	481	85	3560	208		158	TIP	PSI	GPM			CA		
50% Flow			Corrected to rated speed											
AB	482	99	RPM	DISC	SUCT	NET				Totals				
BC	482	101	3573	204	49	155				50.00%				
CA	480	96	3560	203		154				500	GPM			
100% Flow			Corrected to rated speed				TIP	PSI	GPM			100% Flow		
AB	481	115	RPM	DISC	SUCT	NET				Totals		AB		
BC	481	116	3562	186	48	138				100.00%		BC		
CA	476	113	3560	186		138				1000	GPM	CA		
150% Flow			Corrected to rated speed				TIP	PSI	GPM			150% Flow		
AB	481	124	RPM	DISC	SUCT	NET						AB		
BC	481	124	3555	159	48	111				Totals		BC		
CA	480	122	3560	159		111				150.00%		CA		
			Corrected to rated speed							1500	GPM			

VENTURI

AUTO STARTS	6	MANUAL STARTS	JOCKEY PUMP STOP
	6	EMERGENCY STARTS	JOCKEY PUMP START
			FIRE PUMP START

COMMENT See 2007 NFPA 20 A.14.2.7.4.f for the Affinity Laws used for the pressure correction to the rated speed of the fire pump

FIRE PROTECTION GENERAL NOTES:

1. THE INTENT OF THE DRAWINGS AND SPECIFICATIONS IS TO PROVIDE A COMPLETE FIRE PROTECTION SYSTEM FOR THE PROPOSED PROJECT. THE SYSTEMS PROVIDED SHALL CONFORM TO THE DETAILS STATED IN THE SPECIFICATIONS AND SHOWN ON THE DRAWINGS. ITEMS OR WORK NOT SHOWN OR SPECIFIED, BUT REQUIRED FOR A COMPLETE FIRE PROTECTION SYSTEM, SHALL BE PROVIDED AND SHALL CONFORM TO ACCEPTED TRADE PRACTICES, LOCAL CODES, AND GOVERNING AUTHORITIES.
2. DO NOT SCALE DRAWINGS. BECAUSE OF THE SCALE OF THE DRAWINGS, IT IS NOT POSSIBLE TO INDICATE OFFSETS, FITTINGS, VALVES OR SIMILAR ITEMS WHICH MAY BE REQUIRED TO MAKE A COMPLETE OPERATING SYSTEM. CAREFULLY INVESTIGATE CONDITIONS AFFECTING WORK. INSTALL WORK IN SUCH A MANNER THAT INTERFERENCES BETWEEN PIPING, CONDUIT, DUCTS, EQUIPMENT, ARCHITECTURAL AND STRUCTURAL FEATURES ARE AVOIDED. PROVIDE ITEMS THAT MAY BE REQUIRED TO MEET THE CONDITIONS AT THE BUILDING, WITHOUT ADDITIONAL COSTS TO THE OWNER.
3. FIRE PROTECTION CONTRACTOR SHALL HAVE SUFFICIENT EXPERTISE (MINIMUM OF 5 YEARS) IN THE TYPE OF CONSTRUCTION TO REALIZE THE EXTENT OF THE WORK REQUIRED. THEREFORE, IT SHOULD BE OBVIOUS TO ANY PRUDENT FIRM WITH EXPERIENCE IN THIS FIELD THAT THESE DOCUMENTS MAY NOT EXPLICITLY DISCLOSE FINAL DETAILS. HOWEVER, CONTRACTORS SHALL HAVE THE EXPERTISE NECESSARY TO INCLUDE NECESSARY APPOINTMENTS.
4. FIRE PROTECTION BRANCH LINES SHALL BE SLOPED TO DRAIN BACK TO CROSS MAINS. THE CROSS MAINS SHALL BE SLOPED TO DRAIN BACK TO BULK MAINS OR MAIN RISER. INSTALL AUXILIARY DRAINS WHERE TRAPPED PIPING RUNS ARE UNAVOIDABLE. THE SPRINKLER SYSTEM SHALL BE FULLY DRAINABLE.
5. UNLESS OTHERWISE NOTED, ALL PIPING IS OVERHEAD, TIGHT TO UNDERSIDE OF FLOOR SLAB WITH SPACE FOR INSULATION AND HANGERS AS REQUIRED.
6. INSTALL PIPING SO THAT VALVES ARE ACCESSIBLE. VALVE STEMS SHALL BE VERTICAL, POINTING UP. ADJUST VALVES FOR SMOOTH AND EASY OPERATION.
7. COORDINATE ALL WORK WITH WORK OF OTHER TRADES SHOWN ON OTHER DRAWINGS.
8. PROVIDE APPROVED FIRESAFING AT ALL FLOOR AND WALL PENETRATIONS.
9. NO PIPING SHALL BE LOCATED IN ANY ELECTRICAL ROOMS, CLOSETS OR TELECOMMUNICATION ROOMS UNLESS THOSE PIPES SERVE ONLY THAT SPACE AND ARE INDICATED ON DRAWINGS UNLESS INDICATED OTHERWISE
10. ALL VALVES AND EQUIPMENT IDENTIFICATION SHALL BE IN ACCORDANCE WITH ANSI STANDARD IDENTIFICATION SYSTEM. CONTRACTORS ARE RESPONSIBLE FOR ANY REQUIRED CROSS REFERENCE BETWEEN THESE DRAWINGS AND SPECIFICATIONS AND OTHER DISCIPLINES.
11. COORDINATE THE EXACT LOCATION OF ALL FIRE PROTECTION EQUIPMENT AND DEVICES WITH GENERAL CONTRACTOR PRIOR TO ROUGH-IN AND INSTALLATION.
12. REFER TO FIRE PROTECTION DRAWINGS FOR LOCATION OF EQUIPMENT AND SPRINKLER HEADS. THE SPRINKLER CONTRACTOR SHALL COORDINATE EXACT PLACEMENT OF SPRINKLER HEADS WITH ARCHITECTURAL AND ELECTRICAL DRAWINGS.
13. FOLLOW THE FIRE PROTECTION INSTALLATION REQUIREMENTS BASED UPON NFPA 13, NFPA 14, NFPA 20, NFPA 24, NFPA 25, AND THE NORTH CAROLINA BUILDING CODE.
14. CONTRACTOR SHALL HYDRAULICALLY DESIGN THE SPRINKLER SYSTEM BASED ON THE WATER FLOW AND HYDRAULIC PRESSURE PROJECTED FOR SCOPE OF WORK. THE WORK INDICATED ON THE DRAWINGS ARE FOR BIDDING PURPOSES ONLY. FINAL SPACING AND LOCATIONS FOR THE SPRINKLER HEADS, PIPE SIZING, AND PIPE ROUTING WILL BE BY THE SPRINKLER CONTRACTOR AND VERIFIED BY HYDRAULIC CALCULATIONS.
15. DESIGN STANDARDS: 2018 NORTH CAROLINA BUILDING CODE, STATE OF NORTH CAROLINA FIRE CODE, NFPA 13 STANDARD FOR THE INSTALLATION OF SPRINKLER SYSTEMS, NFPA 14 STANDARD FOR THE INSTALLATION OF STANDPIPES AND HOSE SYSTEMS AND LOCAL AUTHORITY HAVING JURISDICTION.
16. ALL SYSTEM COMPONENTS SHALL BE UL LISTED AND FM APPROVED.
17. THE FIRE PROTECTION DRAWINGS SHOW THE GENERAL INTENT OF THE FIRE SUPPRESSION SYSTEM. THE FIRE PROTECTION CONTRACTOR SHALL HYDRAULICALLY CALCULATE AND PROVIDE A FULLY SPRINKLED BUILDING AND SHALL MAKE THE APPROPRIATE ADJUSTMENTS TO THE PIPE RUNS AND SPRINKLER HEAD LOCATIONS INDICATED ON THE DRAWINGS TO COORDINATE WITH ALL TRADES WHILE MEETING ALL CODE REQUIREMENTS.
18. THE FIRE PROTECTION CONTRACTOR SHALL INCLUDE AN INSPECTORS TEST CONNECTION IN ACCORDANCE WITH NFPA 13.
19. THE FIRE PROTECTION CONTRACTOR SHALL SUBMIT SHOP DRAWINGS TO THE ARCHITECT FOR REVIEW PRIOR TO ORDERING OR PURCHASING ANY FIRE PROTECTION EQUIPMENT. SUBMITTALS SHALL CONTAIN SPRINKLER DRAWINGS, CALCULATIONS, MATERIALS AND ACCESSORIES. DRAWINGS SHALL BE STAMPED WITH A REGISTERED PROFESSIONAL ENGINEER'S SEAL.DRAWINGS SHALL BE 1/4" SCALE MINIMUM.
20. THE FIRE PROTECTION CONTRACTOR SHALL COORDINATE SPACE REQUIREMENTS WITH ALL TRADES PRIOR TO COMMENCEMENT OF WORK.
21. ALL SPRINKLER PIPING SHALL BE SUPPORTED BY THE BUILDING STRUCTURE, PIPES SHALL NOT BE SUPPORTED FROM CEILING TILES, CEILING SUPPORT STRUCTURES, OR OTHER PIPES.
22. FIRE PROTECTION BRACH LINES SHALL BE SLOPED BACK TO THE MAIN OR LOW POINT FOR POSITIVE DRAINAGE. INSTALL AUXILIARY DRAINS WHERE NECESSARY WHERE PIPING MAY BE TRAPPED WITHOUT RESOLUTION. THE SPRINKLER SYSTEM SHALL BE FULLY DRAINABLE.
23. THE FIRE PROTECTION CONTRACTOR SHALL COORDINATE EXACT PLACEMENT OF SPRINKLER HEADS WITH THE ARCHITECTURAL DRAWINGS AND ELECTRICAL DRAWINGS.
24. NO SPRINKLER PIPING SHALL BE LOCATED IN ELECTRICAL ROOMS.
25. FIRE PROTECTION PIPING IS TO BE ABOVE THE CEILING UNLESS NOTED OTHERWISE; PROVIDE HANGERS ACCORDING TO NFPA SPACING CRITERIA, THE CONTRACTOR SHALL PROVIDE ANY ADDITIONAL SUPPLEMENTAL STEEL REQUIRED TO ACCOMMODATE HANGER SPACING DISTANCES.
26. THE FIRE PROTECTION CONTRACTOR SHALL PROVIDE ANY NECESSARY FIRE STOPPING MATERIALS I.E., SEALANTS OR CAULKING AS REQUIRED IN THE DESIGN FOR THE SYSTEM.
27. ALL PIPING AND SPRINKLER HEADS SHOWN ARE FOR BIDDING PURPOSES ONLY. FINAL SPACING OF THE SPRINKLER HEADS WILL BE LOCATED AND VERIFIED BY HYDRAULIC CALCULATIONS. FINAL PIPE SIZING AND ROUTING WILL BE DETERMINED AND VERIFIED BY HYDRAULIC CALCULATIONS.
28. THE SPRINKLER SYSTEM SHALL BE TESTED UPON COMPLETION TO THE REQUIREMENTS OF NFPA 13 AND TO ANY OTHER AUTHORITY HAVING JURISDICTION (THE MOST STRINGENT SHALL BE APPLICABLE).

FIRE PROTECTION SHEET INDEX

FIRE PROTECTION SPECIFICATION - GENERAL

1. HYDRAULIC CALCULATIONS SHALL BE PREPARED IN ACCORDANCE WITH NFPA 13, CHAPTER 22.
2. VELOCITIES IN UNDERGROUND PIPE SHALL NOT EXCEED 16 FEET PER SECOND.
3. TOTAL SPRINKLER FLOW SHALL NOT EXCEED 110 PERCENT OF THE REQUIRED FLOW.
4. THE SPRINKLER AND STANDPIPE RISERS SHALL ACCOMMODATE BOTH THE SPRINKLER AND STANDPIPE HOSE STREAM FLOWS. EACH RISER SHALL ACCOMMODATE 250 GALLONS PER MINUTE FLOW FOR STANDPIPE HOSE STREAM.
5. PROVIDE 10 PSI LESS STATIC AND RESIDUAL PRESSURE AN 10% LESS FLOW FOR ALL SPRINKLER SYSTEM HYDRAULIC CALCULATIONS.
6. SPRINKLERS SHALL BE FM APPROVED AND SHALL NOT INCLUDE "O-RING" SEALS.
7. SPRINKLER HEADS LOCATED IN AREAS OF IMPACT SHALL BE PROVIDED WITH PROTECTIVE WIRE GUARDS LISTED FOR USE WITH THE MODEL OF SPRINKLER.
8. QUICK-RESPONSE SPRINKLERS MAY BE USED IN LIGHT AND ORDINARY HAZARD APPLICATIONS FOR THE QUICK RESPONSE HYDRAULIC DESIGN AREA REDUCTION PER NFPA 13 FOR UTILIZING QUICK RESPONSE HEADS.
9. PIPING FOR WET SYSTEMS 2 INCHES AND UNDER SHALL BE: SCHEDULE 40 PIPING, BLACK STEEL, SEAMLESS, ASTM 53/A, GRADE B, WITH THREADED OR VICTAULIC ENDS.
10. FITTINGS: MALLEABLE IRON OR CAST IRON SCREWED, ASTM-A-47 AND ASME B-16.3
11. PIPING 2-1/2 INCHES AND ABOVE: SCHEDULE 10 PIPING, SEAMLESS, BLACK STEEL, ROLL GROOVED, ASTM-A-135, WITH GROOVED MECHANICAL JOINTS AND FITTING FROM THE SAME MANUFACTURER, UL LISTED AND FM APPROVED FOR FIRE SERVICE.
12. ALL EXPOSED SPRINKLER PIPING SHALL BE PAINTED "RED" UNLESS OTHERWISE PROHIBITED BY CODE OR AHJ).

HANGER INSTALLATION REQUIREMENTS

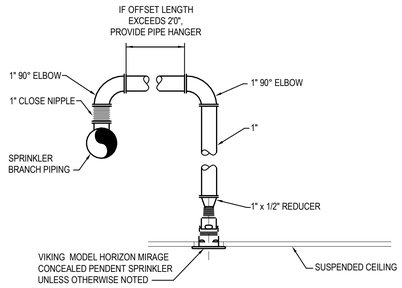
MAXIMUM DISTANCE BETWEEN HANGERS

NOMINAL PIPE SIZE	3/4"	1"	1-1/4"	1-1/2"	2"	2-1/2"	3"	4"	6"
SCH. 40 GALV. STEEL	5' 6"	6' 0"	6' 6"	7' 0"	8' 0"	9' 0"	10' 0"	N/A	N/A
THREADABLE LIGHTWALL	N/A	12' 0"	12' 0"	12' 0"	12' 0"	12' 0"	12' 0"	N/A	N/A
STEEL PIPE (10' 40)	N/A	12' 0"	12' 0"	15' 0"	15' 0"	15' 0"	15' 0"	15' 0"	15' 0"

THE UNSUPPORTED LENGTH BETWEEN THE END SPRINKLER AND THE LAST HANGER ON THE LINE SHALL NOT EXCEED 36" FOR 1" PIPE, 48" FOR 1 1/4" PIPE AND 60" FOR 1 1/2" PIPE OR LARGER.

TRAPEZE INSTALLATION REQUIREMENTS

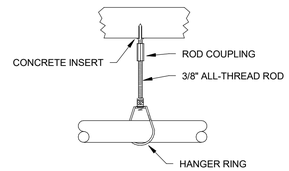
SPAN OF TRAPEZE (Schedule 10)	NOMINAL PIPE SIZE SUPPORTED							
	1"	1-1/4"	1-1/2"	2"	2-1/2"	3"	4"	6"
1 FT. 6 IN.	1"	1"	1"	1"	1"	1"	1-1/4"	1-1/4"
2 FT. 0 IN.	1"	1"	1"	1-1/4"	1-1/4"	1-1/4"	1-1/4"	1-1/2"
2 FT. 6 IN.	1-1/4"	1-1/4"	1-1/4"	1-1/4"	1-1/4"	1-1/4"	1-1/2"	2"
3 FT. 0 IN.	1-1/4"	1-1/4"	1-1/4"	1-1/4"	1-1/2"	1-1/2"	1-1/2"	2"
4 FT. 0 IN.	1-1/2"	1-1/2"	1-1/2"	1-1/2"	2"	2"	2"	2-1/2"
5 FT. 0 IN.	2"	2"	2"	2"	2"	2"	2-1/2"	2-1/2"
6 FT. 0 IN.	2"	2"	2"	2"	2"	2-1/2"	2-1/2"	3"
7 FT. 0 IN.	2"	2"	2"	2-1/2"	2-1/2"	2-1/2"	2-1/2"	3"
8 FT. 0 IN.	2-1/2"	2-1/2"	2-1/2"	2-1/2"	2-1/2"	2-1/2"	2-1/2"	3"
9 FT. 0 IN.	2-1/2"	2-1/2"	2-1/2"	2-1/2"	2-1/2"	2-1/2"	3"	4"
10 FT. 0 IN.	2-1/2"	2-1/2"	2-1/2"	2-1/2"	2-1/2"	3"	3"	4"



GENERAL NOTES:
1. ALL PENDENT SPRINKLER HEADS, WHICH ARE TO BE LOCATED IN A SUSPENDED CEILING, ARE TO BE CAREFULLY COORDINATED AND POSITIONED IN THE CENTER OF THE CEILING TILE.
2. ALL PENDENT SPRINKLER HEADS SHALL BE INSTALLED WITH RETURN BENDS. REFER TO TYPICAL DETAIL.

1 CONCEALED PENDENT SPRINKLER
SCALE: N.T.S.

NOTE: PIPE SUPPORTS SHALL BE IN ACCORDANCE WITH NFPA 13-2013. MAXIMUM HANGER SPACING SHALL BE 6' FOR 3/4" DIA. PIPING AND 7' FOR 1" DIA. PIPING.



2 HANGER DETAIL
SCALE: N.T.S.

FIRE PROTECTION SYMBOLS

- F — FIRE PROTECTION PIPING (STANDPIPE)
- SPR — SPRINKLER PIPING (WET SYSTEM)
- DW — DOMESTIC COLD WATER
- DP — SPRINKLER PIPING (DRY SYSTEM)
- D — DRAIN PIPING
- T — OS & Y GATE VALVE W/ TAMPER SWITCH
- T — BUTTERFLY VALVE WITH TAMPER SWITCH
- P — PRESSURE SWITCH
- F — FLOW SWITCH
- CHECK VALVE
- STRAINER
- BUTTERFLY VALVE
- BACKFLOW PREVENTER (BFP)
- DRAIN VALVE WITH CAP AND CHAIN
- (FDC) FIRE DEPARTMENT SIAMESE CONNECTION
- STANDPIPE HOSE VALVE CONNECTION
- ELBOW TURNED UP
- ELBOW TURNED DOWN
- DIRECTION OF FLOW
- DIRECTION OF SLOPE
- CAPPED PIPING
- PRESSURE GAUGE
- REDUCER
- UNION OR FLANGED CONNECTION
- BALL VALVE
- CONCEALED SPRINKLER HEAD
- RECESSED PENDANT HEAD
- UPRIGHT PENDANT SPRINKLER HEAD
- SIDEWALL SPRINKLER HEAD
- $\times_D$ DRY UPRIGHT SPRINKLER HEAD
- $\blacktriangledown_D$ DRY SIDEWALL SPRINKLER HEAD
- DENOTES CONNECT TO EXISTING
- DENOTES POINT OF DISCONNECTION
- (X) KEYED NOTE DESIGNATOR

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FIRE PROTECTION DATA SHEET

KEYED NOTES	
1	REMOVE EXISTING SPRINKLER HEADS AND PROVIDE NEW HEADS. NEW FLOATING CEILING IS NOT CONTINUOUS IN THE SPACE. PROVIDE NEW SPRINKLER HEADS IN THE PARTIAL CEILING GRID AND PROVIDE UPRIGHT PENDANT HEADS ABOVE THE PARTIAL CEILING TO PROVIDE COMPLETE COVERAGE IN ACCORDANCE WITH NFPA 13.
2	EXISTING SPRINKLER MAIN AND ALL BRANCH PIPING CONNECTED DOWNSTREAM SHALL BE REMOVED AND RAISED AS REQUIRED FOR THE INSTALLATION OF THE NEW CEILING IN THE RENOVATED SPACES. COORDINATE NEW MOUNTING HEIGHT OF SPRINKLER MAIN PIPING WITH NEW CEILING HEIGHT AS SHOWN ON ARCHITECTURAL PLANS. CONNECT NEW BRANCH PIPING AS NEEDED TO CONNECT NEW SPRINKLER HEADS.
3	ALL EXISTING AND NEW SPRINKLER PIPING THAT IS VIABLE FROM THE FINISHED FLOOR WILL BE PAINTED BY THE GC.
4	REMOVE EXISTING SPRINKLER HEADS AND PROVIDE NEW SPRINKLER HEADS AND MODIFY BRANCH PIPING IN SOCIAL G301 AS REQUIRED TO PROVIDE CONVERAGE IN ACCORDANCE WITH NFPA 13.

1 FIRE PROTECTION GROUND PLAN

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

1/8"=1'-0" 8' 4' 0 8' 16'

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FIRE PROTECTION
- GROUND FLOOR
PLAN