

496 NEWHALL ST., HAMDEN, CT 06517

The Lab at ConnCORP

ENGINEERING CONSULTANT

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BID DOCUMENTS

SVIGALS PROJECT NUMBER: 21053-1 **ISSUE DATE :**

12/20/24

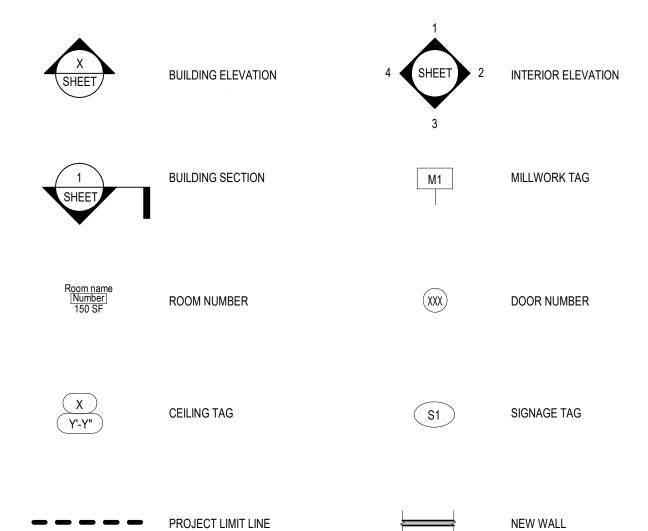
ABBREVIATIONS

ABBREVIATIONS		
ABBREVIATION	TERM	
A	AT	
@ AB	AT ANCHOR BOLT	
ABV	ABOVE	
ACT	ACOUSTICAL CEILING TILE	
ADJ	ADJACENT	
ADMIN	ADMINISTRATION	
AFF	ABOVE FINISHED FLOOR	
AHU		
ALT	ALTERNATE	
ALUM APPROX	ALUMINUM	
ARCH	ARCHITECT(URAL)	
В		
BD	BOARD	
BF	BOTH FACES	
BIT	BITUMINOUS	
BLDG	BUILDING	
BLK	BLOCK	
BLKG BM	BLOCKING BEAM	
BOT	BOTTOM	
BRK	BRICK	
BS	BOTH SIDES	
BSMT	BASEMENT	
BUR	BUILT-UP ROOFING	
С		
C, [CHANNEL	
C-C	CENTER TO CENTER	
CAB		
CB CEM	CATCH BASIN CEMENT	
CFL	COUNTER FLASHING	
CFT	CERAMIC FLOOR TILE	
CI	CAST IRON	
CJ	CONTROL JOINT	
CJT	CONSTRUCTION JOINT	
CL	CENTERLINE	
CLG	CEILING	
CLK		
CLL CLOS	CONTRACT LIMIT LINE CLOSET	
CLOS	CLEAR	
	CLASSROOM	
CMU	CONCRETE MASONRY UNIT	
CNJT	CONTROL JOINT	
CO	CONVENIENCE OUTLET	
COL	COLUMN	
COMB	COMBINATION	
CONC	CONCRETE	
CONST	CONSTRUCTION	
CONT	CONTINUOUS	
CORR		
CP CPC		
CPG CPT	COPING CARPET	
CRS, C	COURSE	
CT	CERAMIC TILE	
СТВ	CERAMIC TILE BASE	
CTR	CENTER	
CTSK	COUNTERSINK	
CUH	CABINET UNIT HEATER	
CWT	CERAMIC WALL TILE	

ABBREVIATION	TERM
	· · · · · · · · · · · · · · · · · · ·
D	
DBL	DOUBLE
DIA	DIAMETER
DIAG	DIAGONAL
DIFF	DIFFUSER
DIM, DIMS	DIMENSION(S)
DN DO	DOWN
DO DP	DAMPROOFING
DP DR	DOOR
DRN	DRAIN
DTL	DETAIL
DWG, DWGS	DRAWING(S)
5110, 51100	
E	
E	EAST
EA	EACH
EC	EXPOSED CONSTRUCTION
EF	EXHAUST FAN
ELEC	ELECTRICAL/ELECTRIC
ELEV, EL	ELEVATION
EMERG	EMERGENCY
EMEYE	EMERGENCY EYEWASH
EMSHW	EMERGENCY SHOWER
EQ, =	EQUAL
EQUIP	EQUIPMENT
EST	ESTIMATE(D)
ETR	EXISTING TO REMAIN
EW	EXTERIOR WALL
EWC	ELECTRIC WATER COOLER
EXH	EXHAUST
EXP	EXPANSION
EXT	EXTERIOR
EXTG	EXISTING
F	
F FBRK	FACE BRICK
FDRA	FLOOR DRAIN
FE	FIRE EXTINGUISHER
FEC	FIRE EXTINGUISHER CABINET
FF	FINISH FLOOR
FIN	FINISH
FIN GRD	FINISH GRADE
FIXT	FIXTURE
FL	FLUSH
FLG	FLASHING
FLR	FLOOR
FNDN	FOUNDATION
FP	FIREPROOF
FPL	FIREPLACE
FT	FOOT (FEET)
FTG	FOOTING
FUT	FUTURE
G	1
GA	GAUGE
GALV	GALVANIZED
GFB	GROUND FACE BLOCK
GL	GLASS, GLAZING GRADE
GRD	

	BREVIATIONS
ABBREVIATION	TERM
н	
Н	HIGH
HC HD	HANDICAP(PED) HAND
HDRM	HEADROOM
HDW	HARDWARE
HGT	HEIGHT
HM	
HOR HTG	HORIZONTAL
HVAC	HEATING/VENTILATION/AIR
-	CONDITIONING
HWD, HDWD	HARDWOOD
1	
ID	INSIDE DIAMETER
IN	INCH
INCL	INCLUDING
INCR	INCREASE
INSUL	INSULATION
INTERM	
INV	INVERT
J	
JC	JANITOR CLOSET
JNT/JT	JOINT
к	
KD	KNOCK DOWN
КО	KNOCK OUT
KS	KNEE SPACE
1	
L	ANGLE
L	LENGTH
LAM	LAMINATE
LAV	LAVATORY
LB	POUND
LBL LH	LABEL LEFT HAND
LIN	LINEAR
LMS, LIMS	LIMESTONE
LTG	LIGHTING
LTG. STND	LIGHTING STAND
LW	LIGHT WEIGHT
Μ	
M	METER
MAS	MASONRY
MATL	MATERIAL
MAX	MAXIMUM
MBL	MARBLE
MECH MFG, MANUF	MANUFACTURER
MH O, MANOI	MANHOLE
MIN	MINIMUM
MISC	MISCELLANEOUS
MO	MASONRY OPENING
MTD MTL	MOUNTED METAL
MWK	METAL

GRAPHIC LEGEND



ABBREVIATION	TERM	ABBREV
N N	NODTH	S
NEG	NORTH NEGATIVE	S SC
NIC	NOT IN CONTRACT	SCHED
NO, #	NUMBER	SCS
NOM	NOMINAL	SD
NTS	NOT TO SCALE	SEC
		SERV
0		SF
OA	OVERALL	SHTHG
OC, O/C	ON CENTER	SIM
OD	OUTSIDE DIAMETER	SLDG
OFF	OFFICE	SPEC
OH	OVERHEAD	SPL
OH, OPH	OPPOSITE HAND	SQ
OPG	OPENING	SS, ST S
OPP		SSM
ORD	OVERFLOW ROOF DRAIN	ST
ORL	OVERFLOW RAIN LEADER	STD
Р		STL STRUCT
P PC	PRECAST	SUSP
PERF	PRECAST PERFORATE(D)	SYM
PERF	PANEL FABRIC	SYS
PL	PLATE	
PL	PROPERTY LINE	— Т
PLAM, PL	PLASTIC LAMINATE	
PLAS	PLASTER	 T&B
PNL	PANEL	T&G
PNT	POINT	T/BLK
POL	POLISHED	T/CONC
POS	POSITIVE	T/CURB
PROJ	PROJEC(TION)	T/DECK,
PSF	POUNDS PER SQ FT	T/FTG
PSI	POUNDS PER SQ INCH	T/SLAB
PT	PAINT	T/STL
PTD	PAINTED	T/WALL
PTN	PARTITION	ТВ
PVMT	PAVEMENT	TBD
PVR	PAVER	TD
PWD, PLYWD	PLYWOOD	TEL
0		TEMP
Q		THK
QT QUTB	QUARRY TILE QUARRY TILE BASE	THRES TR
QUID	QUARRY TILE BASE	TYP
R		TZ
R	RISER	TZB
RAD, R	RADIUS	TZT
RADN	RADIATOR, RADIATION	
RB	RUBBER BASE	U
RCP	REFLECTED CEILING PLAN	UC
RD	ROOF DRAIN	UL
REF	REFERENCE	UNFIN
REQD	REQUIRED	UNO
REV	REVERSE	UOD
RF	RUBBER FLOORING	
RFG	ROOFING	V
RH	RIGHT HAND	VB
RH	REVERSE HAND	VCT
RM	ROOM	VERT
RO	ROUGH OPENING	VET
ROW	RIGHT OF WAY	VIF
		VNR
RS RWB	ROLLER SHADE RESILIENT WALL BASE	VIR

	BREVIATIONS
DDREVIATION	IERW
	SOUTH
HED	SOLID CORE SCHEDULE
S	SEALED CONCRETE SURFACE
	STORM DRAIN
С	SECTION
RV	SERVICE
TU0	SQUARE FOOT
THG //	SHEATHING
DG	SLIDING
EC	SPECIFICATION
L	SPRINKLER
!	SQUARE
, ST STL	STAINLESS STEEL
М	SOLID SURFACE MATERIAL
D	STAIN
L	STEEL
RUCT	STRUCTURAL
SP	SUSPENDED
M	SYMMETRICAL
S	SYSTEM
	THERMOSTAT
В	TOP & BOTTOM
G	TONGUE & GROOVE
BLK	TOP OF BLOCK
CONC	
	TOP OF CURB TOP OF DECK
ECK, TOD	TOP OF FOOTING
SLAB	TOP OF SLAB
STL	TOP OF STEEL
VALL	TOP OF WALL
	TACKBOARD
D	
L	TRENCH DRAIN
L MP	TEMPERATURE
K	ТНІСК
RES	THRESHOLD
	TREAD
Р	TYPICAL
D	TERRAZZO
в Т	TERRAZZO BASE
I	
•	UNDER COUNTER
	UNDERWRITERS LABORATORIES
FIN	UNIFINISHED
	UNLESS NOTED OTHERWISE UNDERSIDE OF DECK
D	UNDERSIDE OF DECK
	VAPOR BARRIER
T	VINYL COMPOSITE TILE
RT	VERTICAL
T	
P	VERIFY IN FIELD
R R	VENEER
к /С	VINYL WALL COVERING
	-

ABBREVIATIONS			
ABBREVIATION TERM			
w			
W	WEST		
W/	WITH		
W/O	WITHOUT		
WB	WOOD BASE		
WD	WOOD		
WF	WALL FABRIC		
WI	WIDTH		
WIN, WNDW	WINDOW		
WP	WATERPROOFING		
WSCT	WAINSCOT		
WT, WGT	WEIGHT		
WTR	WATER		
WWF	WELDED WIRE FABRIC		

DRAWING
COVER T1.00 T1.01 T1.02 T1.03 T1.10 T1.11 T1.12
DEMOLITION D1.01
ARCHITECTUR A1.00
A5.30
A6.00 A6.01 A6.30
A7.00 A7.10
A8.00 A8.10 A8.11 A8.12 A8.20
A9.00

A9.01

A9.12

4. DIMENSIONING:

- CONSTRUCTION ZONES FROM OCCUPIED FLOORS OF THE BUILDING.
- PURPOSES ONLY.

X	COLUMN GRID LINES		ELEVATION POINT	X	KEYNOTE / DEMOLITION KEYNOTE
1 SHEET	DETAIL	\bigwedge	REVISION	CUIPMENT NAME	LAB EQUIPMENT TAG
EW-X	EXTERIOR WALL TYPE	WX	WINDOW TAG	ROOM 101 WALL BASE FLOOR	ROOM FINISH TAG
XX	INTERIOR WALL TYPE	SF-X	STOREFRONT TAG	FINX	FINISH ACCENT TAG
├─── ┤	EXISTING WALL	⊨ ::≓	DEMOLISH		

DRAWING LIST

M/E/P DRAWING LIST

P1.01

P2.00

P2.01

MECH

DM1.00 M1.00

M1.01

M2.00

M2.01

M2.02

E1.01

E2.00

E2.01

E2.02

COVER SHEET DRAWING LIST, NOTES AND ABBREVIATIONS CODE SUMMARY ACCESSIBLE MOUNTING HEIGHTS & CLEARANCES
PROJECT SPECIFICATIONS
PROJECT SPECIFICATIONS
PROJECT SPECIFICATIONS
DEMOLITION PLANS

ITECTURAL

PROPOSED FLOOR PLANS **TOILET ROOM PLANS & ELEVATIONS**

INTERIOR ELEVATIONS STOREFRONT/ GLASS ELEVATIONS & DETAILS MILLWORK DETAILS

PROPOSED REFLECTED CEILING PLANS ENLARGED CEILING PLANS/ CEILING DETAILS

INTERIOR PARTITION TYPES DOOR DETAILS & SCHEDULE SIGNAGE ELEVATIONS & SCHEDULE SIGNAGE ELEVATIONS & SCHEDULE MAILBOX EXPANSION DRAWINGS

FINISH PLANS FINISH DETAILS FURNITURE PLANS

FIRE PROTECTION GARDEN LEVEL AND THIRD FLOOR FIRE PROTECTION PLANS FP1.00 FP2.00 FIRE PROTECTION DETAILS, LEGENDS, NOTES, & SPECIFICATIONS PLUMBING P1.00

UNDERGROUND AND GARDEN LEVEL PLUMBING PLANS THIRD FLOOR PLUMBING PLANS PLUMBING DETAILS, LEGENDS, NOTES, AND SCHEDULES PLUMBING SPECIFICATIONS

GARDEN LEVEL AND THIRD FLOOR MECHANICAL DEMOLITION PLANS GARDEN LEVEL MECHANICAL PLANS THIRD FLOOR MECHANICAL PLANS

- MECHANICAL DETAILS
- MECHANICAL NOTES, LEGENDS, AND SCHEDULES MECHANICAL SPECIFICATIONS

ELECTRICAL DE1.00 GARDEN LEVEL AND THIRD FLOOR ELECTRICAL DEMOLITION PLANS E1.00

GARDEN LEVEL ELECTRICAL PLANS THIRD FLOOR ELECTRICAL PLANS

ELECTRICAL RISERS AND SCHEDULES ELECTRICAL NOTES, LEGENDS, AND DETAILS

ELECTRICAL SPECIFICATIONS

1. ALL WORK SHALL IN BE CONFORMANCE WITH ALL APPLICABLE STATE AND LOCAL CODES, ORDINANCES AND STATUTES.

2. VERIFY ALL DIMENSIONS IN FIELD, REPORT DISCREPANCIES TO ARCHITECT.

3. DIMENSIONS FLAGGED WITH AND ASTERISK (*) INDICATE A CRITICAL MEASUREMENT, WHICH MUST BE VERIFIED BY CONTRACTOR AND ARCHITECT

A. DIMENSIONS ARE TO FACE OF FINISH.

B. DIMENSIONS TO EXISTING WALLS ARE TO FACE OF FINISH. C. WALLS ADJACENT TO EXISTING FINISH SHOULD ALIGN UNLESS NOTED OTHERWISE.

D. REFER TO ENLARGED PLANS FOR DIMENSIONAL INFORMATION OF THAT AREA WHEN GIVEN. E. ALL DIMENSIONS NOTED "HOLD" ARE CRITICAL. INFORM THE ARCHITECT IF A HOLD DIMENSION CANNOT BE SATISFIED DUE TO FIELD CONSTRAINTS.

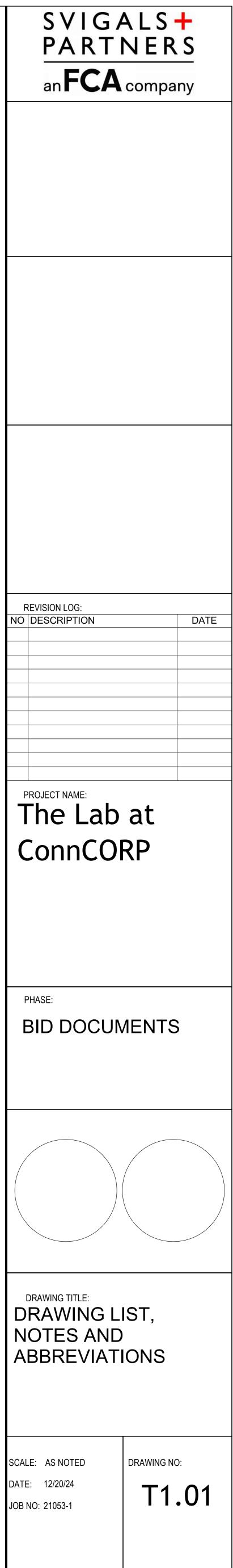
5. APPLY FIRE STOPPING AT ALL EXISTING AND NEW FLOOR PENETRATIONS, INCLUDING EXISTING CORRIDOR CHASE FLOOR OPENINGS.

6. CONTRACTOR RESPONSIBLE FOR PATCHING AND REPAIRING ALL SURFACES PRIOR TO INSTALLATION OF ALL NEW FINISHES AS REQUIRED; UNLESS NOTED OTHERWISE, ALL SURFACES TO ALIGN. 7. ANY EXISTING TO REMAIN FLOORING OR BASE IS TO BE PROTECTED DURING THE CONSTRUCTION, AND THOROUGHLY CLEANED AND WAXED AFTER PROJECT COMPLETION.

8. THE ENTIRE BUILDING WILL REMAIN OCCUPIED DURING CONSTRUCTION. CONTRACTOR IS TO PROVIDE CONSTRUCTION BARRIERS AND ASSOCIATED SIGNAGE FOR THE SEPARATION OF

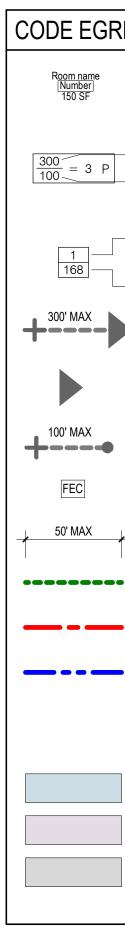
9. ALL FURNITURE SHOWN ON NEW/ PROPOSED FLOOR PLANS, UNLESS NOTED OTHERWISE, ARE NOT PART OF THE PROJECT (N.I.C.) AND ARE SHOWN FOR REFERENCE AND COORDINATION

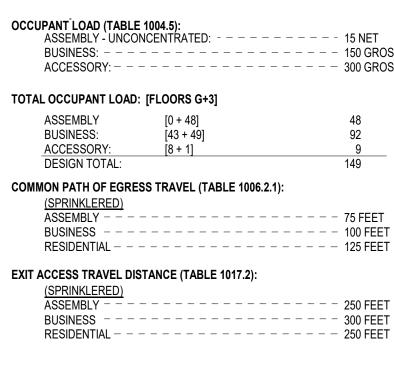
10. ANY REQUIRED PHASING OF EXISTING SPACES TO BE COORDINATED BY CONTRACTOR WITH CLIENT AND BUILDING FACILITIES. 11. ALL NEW PARTITION TYPES REQUIRE A MINIMUM 24" SEPARATION BETWEEN CENTERLINES OF OUTLET BOXES OR RECEPTACLES SET INTO OPPOSITE SIDES OF SINGLE STUD WALLS. CONDUITS CONNECTING SUCH BOXES SHALL BE FLEXIBLE AND SHALL PROVIDE 6" SLACK PER 24" OF RUN.











	ROOM TAG
	AREA OCCUPANCY LOAD
	- AREA IN SQUARE FEET
	- OCCUPANCY LOAD FACTOR
	EXIT CAPACITY
	- ACTUAL EGRESS OCCUPANCY OF DOOR OR STAIR
	MAXIMUM ALLOWABLE EGRESS OCCUPANCY OF DOOR OR STAIR
	MAXIMUM TRAVEL DISTANCE FROM FURTHEST POINT
	EXIT
	COMMON PATH OF TRAVEL
	FIRE EXTINGUISHER CABINET
+	DEAD END CORRIDOR LIMIT
-	SMOKE BARRIER
-	1 HOUR FIRE RATED WALL
_	2 HOUR FIRE RATED WALL
	OCCUPANCY LOAD FACTOR LEGEND
	ASSEMBLY UNCONCENTRATED - 15 NE
	BUSINESS BUSINESS - 150 GROSS
	STORAGE / MECHANICAL 300 GROSS

ASSEMBLY - UNCONCENTRATED: 15 NET BUSINESS: 150 GROSS ACCESSORY: 300 GROSS TOTAL OCCUPANT LOAD: [FLOORS G+3] [0 + 48] [43 + 49] [8 + 1] COMMON PATH OF EGRESS TRAVEL (TABLE 1006.2.1): (<u>SPRINKLERED</u>) ASSEMBLY - - - - - - - - - - - - - - - 75 FEET BUSINESS - - - - - - - - - - - - - - - - 100 FEET RESIDENTIAL - - - - - - - - - - - - - 125 FEET EXIT ACCESS TRAVEL DISTANCE (TABLE 1017.2): (<u>SPRINKLERED)</u> ASSEMBLY - - - - - - - - - - - - - - - - 250 FEET

APPLICABLE CODES:

22 CONNECTICUT STATE BUILDING CODE (CSBC):	
21 INTERNATIONAL BUILDING CODE (IBC)	
121 INTERNATIONAL EXISTING BUILDING CODE (IEBC)	
21 INTERNATIONAL MECHANICAL CODE (IMC)	
21 INTERNATIONAL PLUMBING CODE (IPC)	
21 INTERNATIONAL ENERGY CONSERVATION CODE (IECC)	
)20 NFPA 70, NATIONAL ELECTRICAL CODE (NEC)	
17 ICC/ANSI A117.1 ACCESSIBLE AND USABLE BUILDINGS AND FACILITIES	
22 CONNECTICUT STATE FIRE SAFETY CODE (CSFSC):	
ART III: NEW CONSTRUCTION, ALTERATIONS, RENOVATIONS, CHANGES OF USE	
ART IV: EXISTING BUILDINGS / OCCUPANCIES	
2021 NFPA 101 LIFE SAFETY CODE	
122 CONNECTICUT STATE FIRE PREVENTION CODE: 121 NFPA 1 FIRE CODE	
OMPLIANCE METHOD FOR ALTERATIONS (IEBC 301.3)	WORK AREA (301 3 2)
	- 1 EVEL 2
SE, OCCUPANCY & CONSTRUCTION TYPE	
SE GROUP CLASSIFICATION	BUSINESS GROUP (B)
ENOVATION FLOOR AREA —————————————————————————————————	16,191 SQ. FT
DTAL EXISTING FLOOR AREA	38,998 SQ. FT
INIMUM TYPE OF CONSTRUCTION REQUIRED	
YPE OF CONSTRUCTION PROVIDED —	
TPE OF CONSTRUCTION PROVIDED	
TAL OCCUPANT LOAD	149 PERSONS
STAIRWAY, RAMPS AND CORRIDORS	
HYSICAL HANDICAPPED ACCESS	
RE RESISTIVE CONSTRUCTION	
BEARING WALLS - EXTERIOR	
BEARING WALLS - EXTERIOR	
NON-BEARING PARTITIONS (INTERIOR)	
FLOOR CONSTRUCTION	
ROOF CONSTRUCTION	
	1 HOUR
FIRE AND PARTY WALLS	1 HOUR 1 HOUR
FIRE AND PARTY WALLS	
FIRE AND PARTY WALLS	CLASS B
FIRE AND PARTY WALLS	CLASS B
FIRE AND PARTY WALLS	CLASS B
FIRE AND PARTY WALLS	CLASS B CLASS C CLASS C 1 HOUR
FIRE AND PARTY WALLS	CLASS B CLASS C CLASS C 1 HOUR

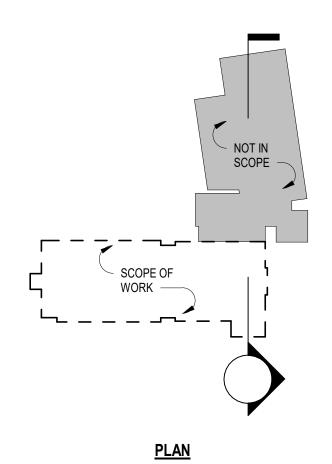
OTHER INFORMATION BUILDING OWNER ----- THE LAB AT CONNCORP

SPECIFIC ADDRESS ----- 496 NEWHALL STREET

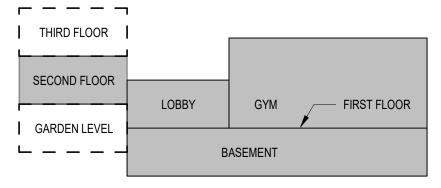
BUILDING _ _ _ _ CONNCORP INCUBATOR BUILDING

PLUMBING FIXTURE SUMMARY FOR THE WORK AREA							
	OCCUPANT LOAD	LAVATORIES		DRINKING	OTHER		
		MALE	FEMALE	MALE	FEMALE	FOUNTAINS	OTHER
TOTAL EXISTING		0	0	0	0	0	0 SERVICE SINK
TOTAL REQUIRED		1.5	1.5	1.5	1.5	2	1 SERVICE SINK
TOTAL PROVIDED	149	2	2	2	2	2	2 SERVICE SINKS

KEY PLAN

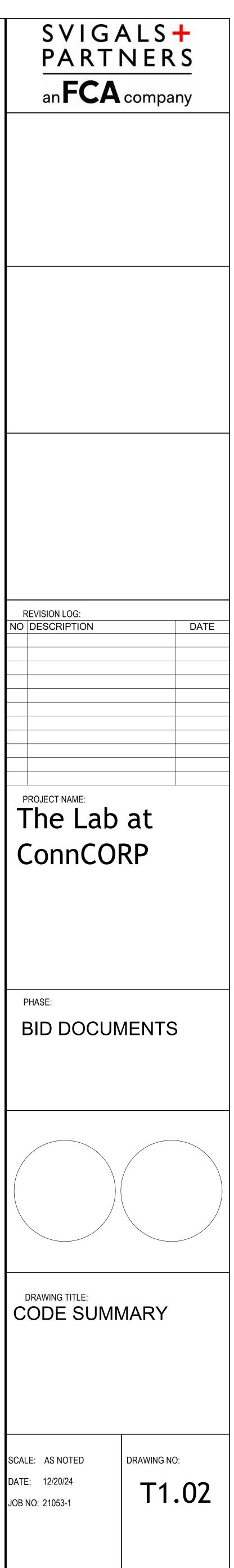


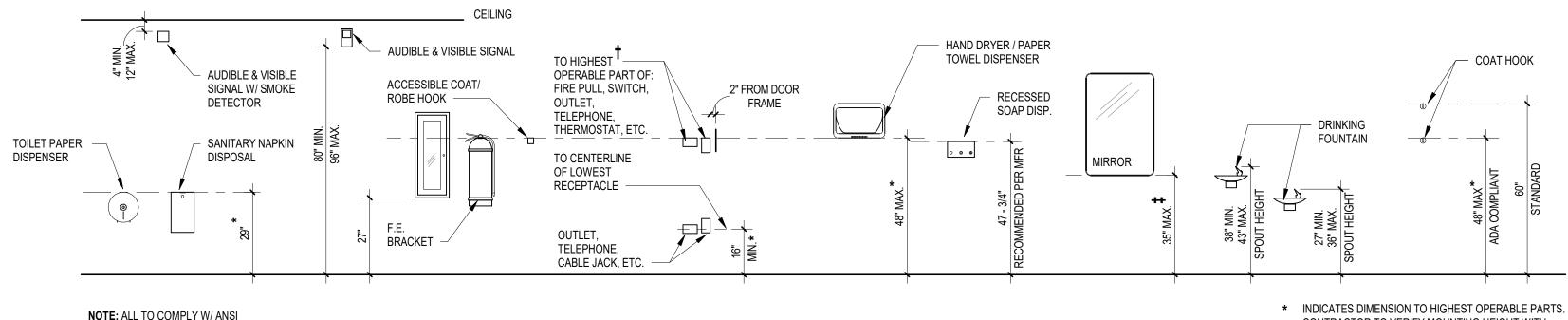
NOT IN SCOPE OF CONTRACT



SECTION



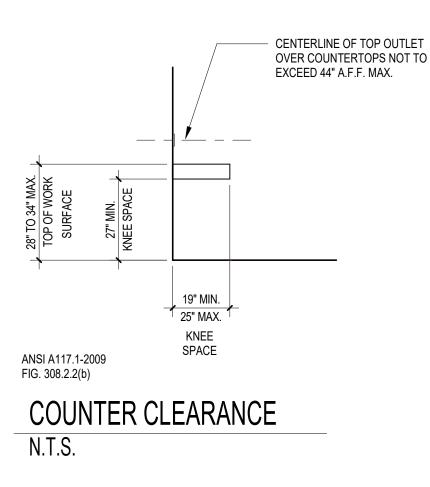




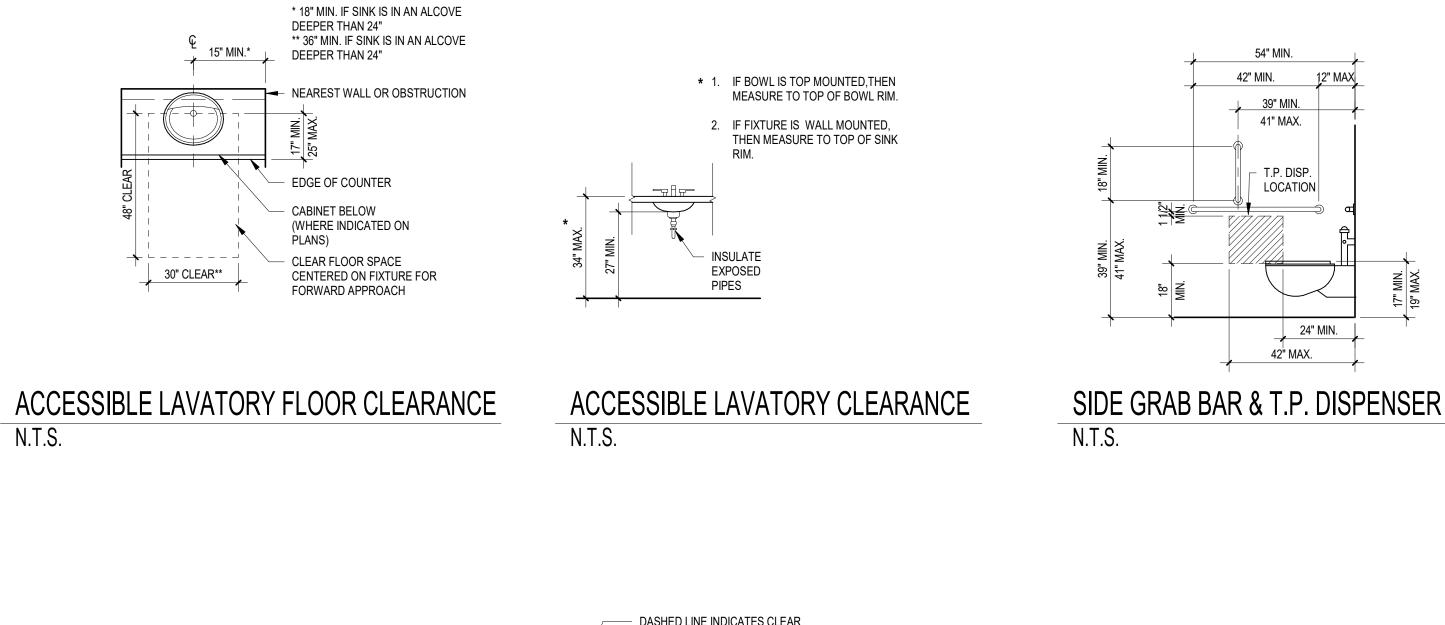
NOTE: ALL TO COMPLY W/ ANSI **REQUIREMENTS & REACH RANGES**

TYPICAL MOUNTING HEIGHTS N.T.S.

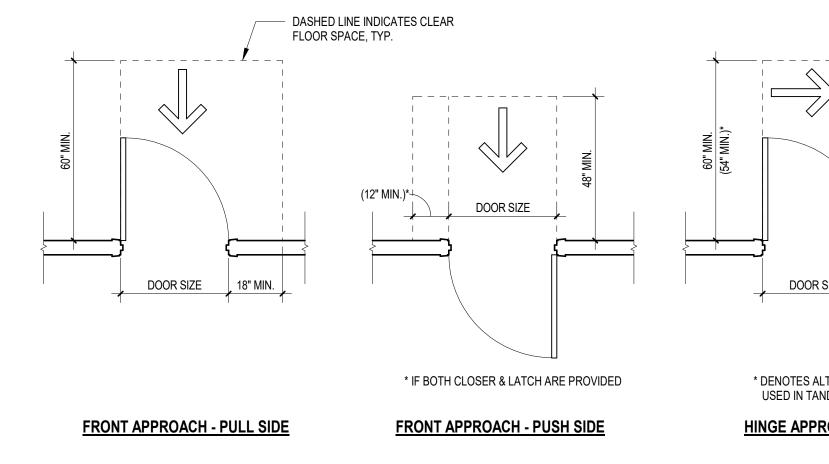
N.T.S.



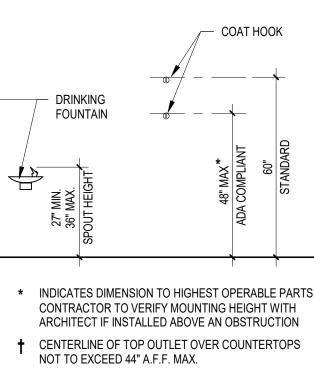


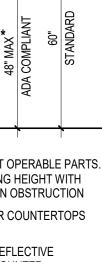


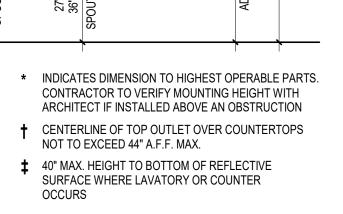


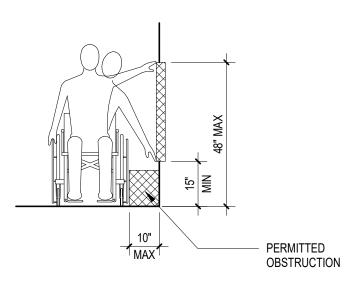


MANEUVERING CLEARANCE AT DOORS N.T.S.

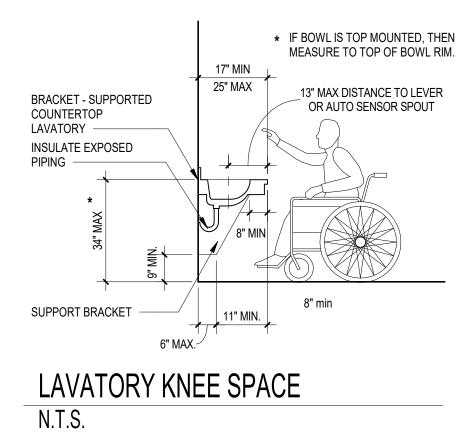








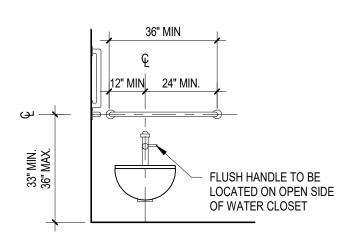




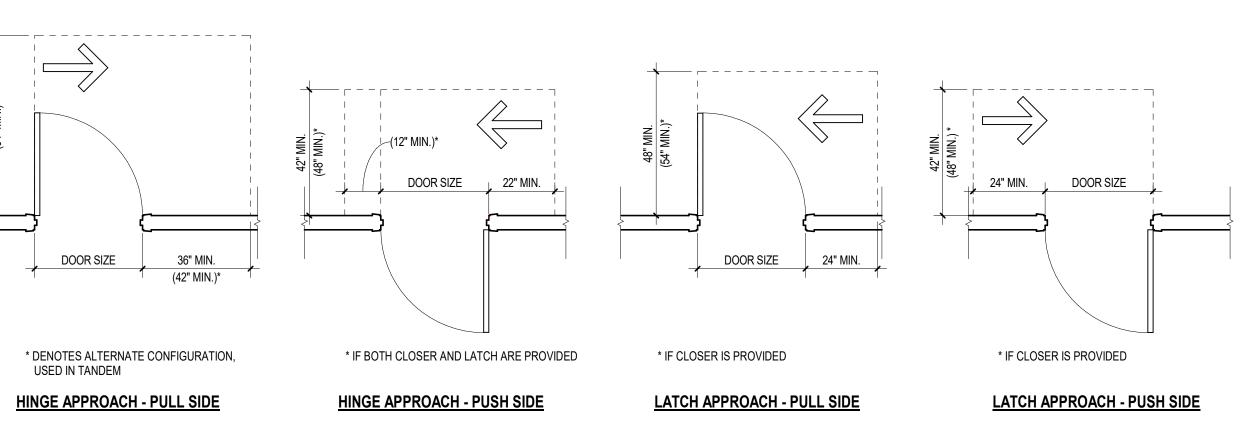
15" MIN. (STD) 17"-19" (AMBULATORY) 16"-18" (ADA) _ _ _ _ _ _ _ _ _ _ _ 30" MIN. (STD) 60" MIN. (ADA) 36" MIN. (AMBULATORY)

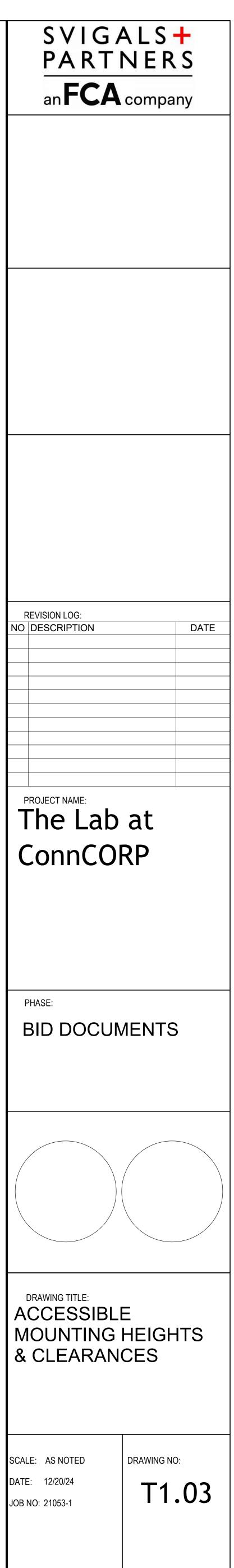
* 59" MIN. IF FLOOR MOUNTED WATER CLOSET IN A TOILET COMPARTMENT

TOILET LOCATION & CLEARANCE N.T.S.



REAR GRAB BAR N.T.S.





SPECIFICATIONS

DIVISION 01 - GENERAL REQUIREMENTS

SECTION 010200 - ALLOWANCES

PART 1 - GENERAL

- 1.1 DESCRIPTION
- A. Related Work Specified Elsewhere:
- 1. The General Conditions state that the Contract Documents are complementary.
- 2. Temporary facilities and controls are specified in Section 015000. Cooperate in ensuring adequate protection. 3. General material, equipment, and workmanship standards are specified in Section 016000.
- 1.2 ALLOWANCES
- A. Lump sum allowances as described in the individual sections shall be included in the Guaranteed maximum Price submitted by the Contractor B. The allowance sum specified does not include the General Contractor's overhead, profit, or installation cost. Contractor is to include such costs in the stipulated sum for the base bid.
- END OF SECTION 010200
- SECTION 010320 BUILDING PROCEDURES
- PART 1 GENERAL
- 1.1. GENERAL REQUIREMENTS
- A. The Contractor shall review Owner expectations pertaining to circulation, noise, sanitation, safety, and behavior. B. The Contractor shall abide by the directions of the Owner in matters affecting the operation, safety, and security of the facility and its
- C. The Contractor shall abide by all directions of the Fire Marshall in matters affecting fire safety preventive measures.
- 1.3 NOISE CONTROL
- A. The Contractor shall execute the Work in this Contract as guietly as practical to avoid unnecessary disturbances to patients and staff within the building premise
- B. Any complaints duly registered by the Owner of unacceptable noise levels shall be cause for the use of special precautions and methods of operation by the Contractor to reduces noises to acceptable levels. C. All slab penetrations and work in adjoining spaces is to be done off hours, contractor is to notify the building manager at least 1 week
- prior to work.
- 1.4 PERSONNEL PARKING
- A. Contractor parking shall be coordinated with the building manager.
- 1.5 LIMIT OF OPERATIONS
- A. Normal Limit of Operations
- 1. The Contractor's normal limit of operations shall be confined within the Limits of Work Area as designated on the drawings.
- 2. The Owner will prohibit his personnel from using these areas. 3. The Owner, Architect, and other contractors performing work within these limits of operation shall be allowed access at all times. 1.6 OWNERS PROPERTY
- A. Existing Unattached Equipment
- All existing equipment to be salvaged or reused will be removed from the Limits of Operation by the Owner prior to start of construction by the Contractor.
- B. Existing Attached Equipment
- Existing attached equipment which has been tagged and marked for salvage and reuse by the Owner shall be disconnected and removed by the Contractor. Such equipment shall be removed in the largest possible sections, convenient for handling.
- The Contractor shall disconnect and cap all services and utilities serving such equipment, and make any necessary patching required All tagged and marked equipment shall remain the property of the Owner and shall be delivered by the Contractor to such storage areas within the owner's property as designated by the Owner.
- In addition to existing attached equipment which has been tagged and marked for salvage and reuse, the Contractor shall also disconnect and remove the following items listed herein affected by new construction and deposit same at locations as designated by the owner.
- 1. Fire Alarm System 2. Alarm System
- 3. Finish Hardware 4. Fire Extinguishers

All other equipment not tagged shall be removed by the Contractor. It shall remain the Owner's property until such time that the Contractor removes such equipment from the site. Upon removal from the site, such equipment shall become the property of the Contractor.

- 1.7 SCHEDULING AND COORDINATION
- A. Supervision
- In order to insure proper coordination of work between trades, the Contractor will be required to have a full-time superintendent on the job site at all times. The Superintendent shall not be changed except with the consent or at the insistence of the Owner. The Superintendent shall represent the Contractor in his absence, and all directions given to him shall be as binding as if given to the Contractor. On Written Request, such directions will be confirmed in writing to the Contractor.
- B. Observation by the Architect, the Owner, or his representative does not make them responsible for defective work, unsafe procedures or the consequences of same. Responsibility for correction thereto shall be the Contractor's.
- 1.8 SCHEDULING
- A. All arrangements for work which will involve interference with normal user function, shall be scheduled in advance with the Owner to provide for a minimum of disruption and inconvenience.
- 1.9 OUTAGES
- A. Utility and service outages shall be kept to a minimum, and will be permitted only with approval of the Owner.
- 1.10 LABELS
- A. Labels on pipes, conduit and equipment shall follow building standard.
- 1.11 OVERNIGHT STORAGE
- A. Do not store materials and equipment in public areas as to impede existing building.

SECTION 012000 - PROJECT MEETINGS

PART 1 - GENERAL

END OF SECTION 010320

- 1.1 DESCRIPTION
- A. The General Conditions state that the Contract Documents are complementary. Contradictions in documentation shall be reviewed with the architect for clarification.
- **1.2 JOB PROGRESS MEETINGS**
- A. Periodic job meetings will be scheduled by Owner or Architect during the course of construction. The Contractor shall have his principal subcontractors attend such meetings and be prepared to furnish answers to questions on progress, workmanship or any
- other subject which the Owner or Architect might reasonably require information B. Questions from the contractor which arise between meetings should be conveyed to the Architect in advance of the scheduled
- meetings whenever possible, to enable answers to be formulated in time for the next meeting. Attendance of regularly scheduled meetings shall be a contract requirement and not an option. D. Contractor will be responsible for writing, typing and distributing meeting minutes of all job progress meetings.
- END OF SECTION 012000

SECTION 012300 - ALTERNATES AND ALLOWANCES

- PART 1 GENERAL 1.1 DESCRIPTION
- A. Related Work Specified Elsewhere:
- 1. The General Conditions state that the Contract Documents are complementary.
- Temporary facilities and controls are specified in Section 01500. Cooperate in ensuring adequate protection. 3. General material, equipment, and workmanship standards are specified in Section 01600.
- 1.2 ALTERNATES
- A. Alternate #1: Provide cost to replace door hardware in kind at existing exterior exit doors at Stair 2 and Stair 3. (Basis of Design Existing door hardware to remain at existing exterior doors.)
- 1.3 ALLOWANCES
- A. Allowance #1: \$6,000 for the labor and chalk to create (1) chalk murals as shown in the project documents. END OF SECTION 012300
- SECTION 012300 ALTERNATES AND ALLOWANCES
- PART 1 GENERAL
- 1.1 DESCRIPTION
- A. Related Work Specified Elsewhere:
- 1. The General Conditions state that the Contract Documents are complementary. Temporary facilities and controls are specified in Section 01500. Cooperate in ensuring adequate protection. 3. General material, equipment, and workmanship standards are specified in Section 01600.

1.2 ALTERNATES

- A. Alternate #1: Provide cost to replace door hardware in kind at existing exterior exit doors at Stair 2 and Stair 3. (Basis of Design Existing door hardware to remain at existing exterior doors.)
- 1.3 ALLOWANCES
- A. Allowance #1: \$6,000 for the labor and chalk to create (1) chalk murals as shown in the project documents. END OF SECTION 012300
- SECTION 015000 CONSTRUCTION FACILITIES AND TEMPORARY CONTROLS
- PART 1 GENERAL
- 1.1 DESCRIPTION
- A. Related Work Specified Elsewhere: 1. The General Conditions state that the Contract Documents are complementary. 2. General material, equipment, and workmanship standards are specified in Section 01600.
- 1.2 RECORD DOCUMENTS
- A. Refer to General Conditions paragraph 3.11, which requires record copies of Drawings, Specifications, Addenda, Change Orders and other modifications, and approved submittals. The following requirements apply to record copies. B. Line not used.
- . Label each record document "PROJECT RECORD".
- Keep record documents current. E. Do not permanently conceal any work until required information has been recorded. F. Contract Drawings: Legibly mark to record actual construction. Horizontal and vertical location of underground utilities and appurtenances referred to permanent surface improvements.
- . Locations of internal utilities and appurtenances concealed in construction. Field changes of dimension and detail 4. Changes made by Change Order or Field Order.
- G. Specifications and Addenda: Legibly mark up each section to record: 1. Manufacturer, trade name, catalog number, and supplier of each product and item of equipment actually installed.
- Changes made by Change Order or Field Order. . Other matters not originally specified.
- H. Shop drawings: Maintain as record documents. Legibly annotate to record changes made after review. I. Submit record documents to Architect at completion of Project.
- 1.3 SAFETY

A. Applicable portions of the Occupational Safety and Health Act (OSHA), latest edition, are hereby made a part of the specification. PART 2 - PRODUCTS

2.1 EQUIPMENT

- A. Electrical outlets: Provide properly configured NEMA polarized outlets to prevent insertion of 110-120 volt plugs into higher voltage outlets.
- equipment B. Electrical Power Cords: Provide grounded extension cords; use "hard-service" cords where exposed to abrasion and traffic. Provide
- waterproof connectors to connect separate lengths of electric cords, if single lengths will not reach areas where construction activities are
- or tempered glass enclosures where exposed to breakage. Provide exterior fixtures where exposed to moisture. D. First Aid Supplies: Comply with governing regulations.
- E. Fire Extinguishers: Provide hand-carried portable UL-rated, class "ABC" dry chemical extinguishers, or a combination of extinguishers of NFPA recommended classes for the exposures. 1. Comply with NFPA 10 and 241 for classification, extinguishing agent and size required by location and class of fire exposure.
- PART 3 EXECUTION
- 3.1 INSTALLATION

3.4 SECURITY AND PROTECTION FACILITIES INSTALLATION

Store combustible materials in containers in fire safe locations.

SECTION 016000 - MATERIAL, EQUIPMENT, AND WORKMANSHIP STANDARDS

1.2 GENERAL STANDARDS APPLICABLE TO ALL SPECIFICATION SECTIONS

Contract Documents, request interpretations from Architect and follow his interpretations.

G. Adjust and operate all items of equipment, leaving them full ready for use.

to abuse of the Project or abnormal faults which result in inadequate design.

- minimum interference with performance of the work. Relocate and modify facilities as required. B. Provide each facility ready for use when needed to avoid delay. Maintain and modify as required. Do not remove until facilities are no longer needed, or are replaced by authorized use of completed permanent facilities.
- 3.2 WASTE

for fighting fires.

A. Related work specified elsewhere

standards and tolerances.

judged by the Architect

iudaed by the Architect

proceed according to their instructions.

products are removed from existing construction.

1.4 DELIVERY, STORAGE AND HANDLING

END OF SECTION 016000

PART 1 - GENERAL

1.2 DEFINITIONS

1.1 SECTION INCLUDES

DIVISION 02 - SITE REQUIREMENTS

A. This section includes the following:

2. Patching and repairs.

to protect against damage.

in their original locations.

1.3 MATERIALS OWNERSHIP

Contractor's option.

SECTION 020700 - SELECTIVE DEMOLITION

1. Demolition and removal of selected portions of a building.

Reinstall items in the same locations or in locations indicated.

damage, deterioration and loss, including theft.

END OF SECTION 015000

PART 1 - GENERAL

1.1 DESCRIPTION

Provide receptacle outlets equipped with ground-fault circuit interrupters, reset button and pilot light, for connection of power tools and

C. Lamps and Light Fixtures: Provide general service incandescent lamps of wattage required for adequate illumination. Provide guard cages

A. Use qualified personnel for installation of temporary facilities. Locate facilities where they will serve the project adequately and result in

A. Collection and Disposal of Waste: Collect waste from construction areas and elsewhere daily. Comply with requirements of NFPA 241 for removal of combustible waste material and debris. Enforce requirements strictly. Do not hold materials more than 7 days during norma weather or 3 days when the temperature is expected to rise above 80 degrees F (27 degrees C). Handle hazardous, dangerous, or unsanitary waste materials separately from other waste by containerizing properly. Dispose of material in a lawful manner...

A. Temporary Fire Protection: Until fire protection needs are supplied by permanent facilities, install and maintain temporary fire protection facilities of the types needed to protect against reasonably predictable and controllable fire losses. Comply with NFPA 10 "Standard for Portable Fire Extinguishers," and NFPA 241 "Standard for Safeguarding Construction, Alternations, and Demolition Operations." 1. Locate fire extinguishers where convenient and effective for their intended purpose, and near each usable stairwell.

. Maintain unobstructed access to fire extinguishers, fire hydrants, temporary fire protection facilities, stairways and other access routes 4. Provide supervision of welding operations, combustion type temporary heating units, and similar sources of fire ignition.

1. The General Conditions state that the Contract Documents are complementary. 2. Temporary facilities an controls are specified in Section 01500. Cooperate in ensuring adequate protection.

A. These provisions, standards, and tolerances shall apply to all work under this Contract. Where stricter standards and tolerances are specified elsewhere in these Specifications or in references specified in these Specifications, they shall take precedence over these

B. Build and install parts of the Work level, plumb, square, and in correct position unless specifically shown or specified otherwise. 1. No part shall be out of plumb, level, square, or correct position so much as to impair the proper functioning of the part of the Work as 2. No part shall be out of plumb, level, square or correct position so much as to impair the aesthetic effect of the part of the Work as

3. The following tolerances shall apply to plane surfaces unless stricter tolerances are specified or are general standards of the applicable trade. Consult Architect for applicability of these tolerances before beginning work. a. No point in the plane surface shall be out of correct position by more than 1/4".

C. Make joints tight and neat. If such is impossible, apply moldings, sealant, or other joint treatment as directed by the Architect. D. Manufacturers, subcontractors, and workmen shall be experienced and skillful in performing the work assigned to them. Verify critical dimensions in the field before fabricating items which must fit adjoining construction. Follow manufacturers' instructions for assembling, installing, and adjusting products. Where manufacturers' instructions conflict with

H. All warranties, guarantees, and service maintenance agreements shall commence on the date of Substantial Completion of the Work or of the item being guaranteed, whichever is later, so that Owner receives full use of the item for the guarantee or warranty period. The Drawings do not attempt to show ever item of existing work to be demolished and every item of repair required to existing surfaces. Perform work required to remove existing materials which are not to be saved and to restore existing surfaces to condition equivalent to new as judged by Architect. if possible, repairs shall be indistinguishable from adjacent sound surfaces to remain, notify Architect, and

J. All materials and equipment shall comply with the Occupational Safety and Health Act, including all amendments. 1.3 GENERAL WORK TO BE PERFORMED AS PART OF GENERAL CONSTRUCTION

and shrinkage during the first year after substantial completion. This requirement does not include cracks and other damage which are due

A. Provide adequate blocking, bracing, nailers, fastenings, and other supports to install parts of the Work securely. Installed parts shall be able to withstand 2 1/2 times the maximum anticipated load as estimated by Architect. Blocking, bracing, nailers, fastenings, and other supports shall be of a type not subject to deterioration or weakening as the result of environmental conditions or aging. B. Perform cutting and patching required for all trades. Workmen who perform cutting and patching shall be skilled in such work. Patch holes

where ducts, conduit, pipes, and other products pass through existing construction. Patch holes where ducts, conduit, pipes, and other C. Coordinate access doors and panels as required for access to equipment requiring adjustment, inspection, maintenance, or other access and as required for access to spaces not otherwise accessible, such as attics and crawl spaces. Access panels shall be one of the types specified in Section 08305. Furnish access doors under the Specifications section for equipment to which access is required. D. As part of one-year warranty specified in the General Conditions, repair cracks and other damage which occur as a result of settlement

A. Deliver, store and handle products in accordance with the manufacturer's recommendations, using means and methods that will prevent

A. Remove: Remove and legally dispose of items except those indicated to be reinstalled, salvaged, or to remain the Owner's property. B. Remove and Salvage: Items indicated to be removed and salvaged remain the Owner's property. Remove, clean, and pack or crate items C. Remove and Reinstall: Remove items indicated; clean, service, and otherwise prepare them for reuse; store and protect against damage.

D. Existing to Remain: Protect construction indicated to remain against damage and soiling during selective demolition. When permitted by the Architect, items may be removed to a suitable, protected storage location during selective demolition and then cleaned and reinstalled

A. Except for items or materials indicated to be reused, salvaged, reinstalled, or otherwise indicated to remain the Owner's property. demolished materials shall become the Contractor's property and shall be removed from the site with further disposition of the

1.4 PROJECT CONDITIONS

A. Owner will occupy portion of the building immediately adjacent to selective demolition area. Conduct selective demolition so that Owner's operations will not be disrupted. Provide not less than 72 hours' notice to Owner of activities that will affect Owner's operations. B. Owner assumes no responsibility for actual condition of buildings to be selectively demolished.

2. Asbestos: If any materials suspected of containing asbestos are encountered, do not disturb the materials. Immediately notify the Owner. D. Storage or sale or removed items or materials on-site will not be permitted.

1.5 SCHEDULING

A. Arrange selective demolition schedule so as not to interfere with Owner's on-site operations.

PART 2 - PRODUCTS 2.1 REPAIR MATERIALS

A. Use repair materials identical to existing materials.

1. Where identical materials are unavailable or cannot be used for exposed surfaces, use materials that visually match existing adjacent surfaces to the fullest extent possible. 2. Use materials whose installed performance equals or surpasses that of existing materials.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Verify that utilities have been disconnected and capped. B. Survey existing conditions and correlate with requirements indicated to determine extent of selective demolition required. . Inventory and record the condition of items to be removed and items to be removed and salvaged.

D. When unanticipated mechanical, electrical, or structural elements that conflict with the intended function or design are encountered, investigate and measure the nature and extent of the conflict. Promptly submit a written report to the Architect.

E. Survey the condition of the building to determine whether removing any element might result in structural deficiency or unplanned collapse of any portion of the structure or adjacent structures during selective demolition. END OF SECTION 020700

DIVISION 3 - CONCRETE

033000 - CONCRETE PART 1 - GENERAL

1.1 SUMMARY

A. Provide self-leveling cementious concrete as required to establish level surface for new flooring finishes. Field verify locations with Architect prior to commencement of work. B. Provide trowel-applied levelastic (or sim.) to prepare all flooring for new finishes. This applies to all locations that unlevel, uneven or cracked. Dissimilar floor substrate locations should be brought to the attention of the Architect prior to the commencement of work.

1.2 SUBMITTALS

- A. Product Data: Manufacturer's technical literature for each product indicated, specified, or required. Include manufacturer's technical data, application instructions, and recommendations.
- B. Installer Qualifications: Data for company, principal personnel, experience, and training specified by selected polishing system. C. Field Quality Control - Static Coefficient of Friction Test Reports: D. Maintenance Data: For inclusion in maintenance manual required by Division 01.
- 1. Include manufacturer's instructions for maintenance of installed work, including methods and frequency recommended for maintaining optimum condition under anticipated use 2. Include precautions against cleaning products and methods which may be detrimental to finishes and performance.

END OF SECTION 033000

DIVISION 4 - MASONRY

SECTION 040100 - MASONRY

1.01 SECTION INCLUDES

- A. Water cleaning of all surfaces. B. Selective repointing of mortar joints. C. Repair of damaged masonry.
- 1.02 RELATED REQUIREMENTS
- A. Section 04 05 11 Mortar and Masonry Grout.
- B. Section 04 20 00 Unit Masonry: Brick masonry units.
- 1.03 REFERENCE STANDARDS
- A. TMS 402/602 Building Code Requirements and Specification for Masonry Structures; 2016.
- 1.04 ADMINISTRATIVE REQUIREMENTS
- A. Preinstallation Meeting: Convene one week prior to commencing work of this section. 1. Require attendance of parties directly affecting work of this section.
- 2. Review conditions of installation, installation procedures, and coordination with related work. B. Scheduling:
- 1. Coordinate timing of cleaning and washing of masonry with building owner.

1.05 SUBMITTALS

A. See Section 01 30 00 - Administrative Requirements, for submittal procedures B. Product Data: Provide data on cleaning compounds. C. Manufacturer's Instructions: For cleaning materials, indicate special procedures, conditions requiring special attention, and test area.

1.06 QUALITY ASSURANCE

A. Comply with provisions of TMS 402/602, except where exceeded by requirements of the contract documents. . Maintain one copy of each document on project site.

B. Restorer: Company specializing in masonry restoration with minimum three years of documented experience.

1.07 MOCK-UP

- A. Restore and repoint an existing masonry wall area sized 8 feet long by 6 feet high; include in mock-up area instances of mortar, accessories, wall openings, and flashings.
- B. Clean a 10 ft by 10 ft panel of wall to determine extent of cleaning.
- . Repeat, using different cleaning methods for up to three different panels. . Locate where directed.
- . Acceptable panel and procedures employed will become the standard for work of this section.

E. Mock-up may remain as part of the Work.

- 1.08 FIELD CONDITIONS
- A. Cold and Hot Weather Requirements: Comply with requirements of TMS 402/602 or applicable building code, whichever is more stringent
- PART 2 PRODUCTS
- 2.01 MANUFACTURERS
- A. Restoration and Cleaning Chemicals: . Diedrich Technologies, Inc; Product : www.diedrichtechnologies.com/#sle.
- 2. HMK Stone Care System; Product : www.hmkstonecare.com/#sle. . PROSOCO; Product_: www.prosoco.com/#sle.
- 4. Substitutions: See Section 01 60 00 Product Requirements.
- 2.02 CLEANING MATERIALS
- A. Cleaning Agent: Detergent type. B. Cleaning Agent: 0.5 lb of sodium hydrosulphite mixture to one gallon
- 2.03 MORTAR MATERIALS
- A. Comply with requirements of Section 04 05 11
- 2.04 MASONRY MATERIALS
- A. Brick: Section 04 20 00.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify that surfaces to be cleaned are ready for work of this section.
- 3.02 PREPARATION
- A. Protect surrounding elements from damage due to restoration procedures.
- B. Carefully remove and store removable items located in areas to be restored, including fixtures, fittings, finish hardware, and accessories; reinstall upon completion 2. Separate areas to be protected from restoration areas using means adequate to prevent damage.
- . Cover existing landscaping with tarpaulins or similar covers.
- Mask immediately adjacent surfaces with material that will withstand cleaning and restoration procedures. F. When using cleaning methods that involve water or other liquids, install drainage devices to prevent runoff over adjacent surfaces unless those surfaces are impervious to damage from runoff.

A. Cut out damaged and deteriorated masonry with care in a manner to prevent damage to any adjacent remaining materials.

G. Install built in masonry work to match and align with existing, with joints and coursing true and level, faces plumb and in line. Build in all

Premoisten joint and apply mortar. Pack tightly in maximum 1/4 inch layers. Form a smooth, compact concave joint to match existing.

G. Do not allow cleaning runoff to drain into sanitary or storm sewers.

B. Support structure as necessary in advance of cutting out units.

. Cut away loose or unsound adjoining masonry as directed.

E. Mortar Mix: Colored and proportioned to match existing work.

F. Ensure that anchors are correctly located and built in.

openings, accessories and fittings.

D. Do not damage masonry units.

G. Moist cure for 72 hours.

. Build in new units following procedures for new work specified in other section(s).

A. Perform repointing of loose or deteriorated areas prior to cleaning masonry surfaces.

E. When cutting is complete, remove dust and loose material by brushing.

C. Use power tools only after test cuts determine no damage to masonry units will result.

B. Cut out loose or disintegrated mortar in joints to minimum 1/2 inch depth or until sound mortar is reached.

3.03 REBUILDING

3.04 REPOINTING

A. Clean surfaces and remove large particles with wood scrapers or non-ferrous wire brush.

3.05 RESTORATION CLEANING

C. Clean surrounding surfaces.

END OF SECTION 04 01 00

SECTION 040511 - GROUT

1.01 SECTION INCLUDES

1.02 REFERENCE STANDARDS

PART 1 GENERAL

A. Mortar for masonry.

B. Grout for masonry.

1.03 SUBMITTALS

reports per ASTM C780.

1.04 QUALITY ASSURANCE

1.07 FIELD CONDITIONS

stringent.

PART 2 PRODUCTS

2.02 MATERIALS

1. Color: Match existing.

1. Color: Match existing.

2. Color: Standard gray.

F. Masonry Cement: ASTM C91/C91M

G. Hydrated Lime: ASTM C207, Type S.

I. Mortar Aggregate: ASTM C144.

ASTM C979/C979M.

K. Water: Clean and potable.

L. Bonding Agent: Latex type.

2.03 MORTAR MIXING

2.04 GROUT MIXING

PART 3 EXECUTION

3.01 PREPARATION

3.02 INSTALLATION

3.03 GROUTING

B. Low-Lift Grouting:

arout is poured

END OF SECTION 04 05 11

PART 1 - GENERAL

1.1 DESCRIPTION

1.3 SUBMITTALS

3.04 FIELD QUALITY CONTROL

DIVISION 5 - METALS (NOT USED)

DIVISION 6 - WOODS AND PLASTICS

A. Related Work Specified Elsewhere

1.2 REFERENCE STANDARD

1. Limit height of pours to 12 inches.

1. Type: Type N; ASTM C91/C91M.

1.05 PRECONSTRUCTION TESTING

1.06 DELIVERY, STORAGE, AND HANDLING

evaluation reports to requirements of ASTM C1019.

3.06 CLEANING

B. Provide a second application if required to match mock-up area. C. Allow sufficient time for solution to remain on masonry and agitate with soft fiber brush or sponge. D. Rinse from the bottom up with potable water applied at 400 psi and at a rate of 4 gal/min.

A. Immediately remove stains, efflorescence, or other excess resulting from the work of this section. B. Remove excess mortar, smears, and droppings as work proceeds and upon completion.

A. TMS 402/602 - Building Code Requirements and Specification for Masonry Structures; 2016. B. ASTM C5 - Standard Specification for Quicklime for Structural Purposes; 2018.

C. ASTM C91/C91M - Standard Specification for Masonry Cement; 2012. D. ASTM C94/C94M - Standard Specification for Ready-Mixed Concrete; 2017a. E. ASTM C144 - Standard Specification for Aggregate for Masonry Mortar; 2017.

F. ASTM C150/C150M - Standard Specification for Portland Cement; 2018. G. ASTM C207 - Standard Specification for Hydrated Lime for Masonry Purposes; 2018.

H. ASTM C270 - Standard Specification for Mortar for Unit Masonry; 2014a. ASTM C387/C387M - Standard Specification for Packaged, Dry, Combined Materials for Concrete and High Strength Mortar; 2015 J. ASTM C476 - Standard Specification for Grout for Masonry; 2018. K. ASTM C780 - Standard Test Method for Preconstruction and Evaluation of Mortars for Plain and Reinforced Unit Masonry; 2018a.

L. ASTM C979/C979M - Standard Specification for Pigments for Integrally Colored Concrete; 2016. M. ASTM C1019 - Standard Test Method for Sampling and Testing Grout; 2016.

A. See Section 01 30 00 - Administrative Requirements, for submittal procedures. B. Product Data: Include design mix and indicate whether the Proportion or Property specification of ASTM C270 is to be used. Also include required environmental conditions and admixture limitations.

C. Samples: Submit two samples of mortar, illustrating mortar color and color range. D. Reports: Submit reports on mortar indicating compliance of mortar to property requirements of ASTM C270 and test and evaluation E. Reports: Submit reports on grout indicating compliance of component grout materials to requirements of ASTM C476 and test and

F. Manufacturer's Certificate: Certify that products meet or exceed specified requirements. G. Manufacturer's Installation Instructions: Submit packaged dry mortar manufacturer's installation instructions.

A. Comply with provisions of TMS 402/602, except where exceeded by requirements of the contract documents. 1. Maintain one copy of each document on project site.

A. Testing will be conducted by an independent test agency, in accordance with provisions of Section 01 40 00 - Quality Requirements. B. Mortar Mixes: Test mortars prebatched by weight in accordance with ASTM C780 recommendations for preconstruction testing. 1. Test results will be used to establish optimum mortar proportions and establish quality control values for construction testing.

C. Grout Mixes: Test grout batches in accordance with ASTM C1019 procedures. 1. Test results will be used to establish optimum grout proportions and establish quality control values for construction testing.

A. Maintain packaged materials clean, dry, and protected against dampness, freezing, and foreign matter.

A. Cold and Hot Weather Requirements: Comply with requirements of TMS 402/602 or applicable building code, whichever is more

2.01 MORTAR AND GROUT APPLICATIONS

A. At Contractor's option, mortar and grout may be field-mixed from packaged dry materials, made from factory premixed dry materials with addition of water only, or ready-mixed. B. Mortar Color: Natural gray unless otherwise indicated. C. Mortar Mix Designs: ASTM C270, Property Specification.

1. Exterior Masonry Veneer: Type N.

A. Packaged Dry Material for Mortar for Unit Masonry: Premixed masonry cement and mason's sand; complying with ASTM C387/C387M and capable of producing mortar of the specified strength in accordance with ASTM C270 with the addition of water only. B. Packaged Dry Material for Mortar for Repointing: Premixed Portland cement, graded sand, and chemical admixtures complying with

ASTM C91/C91M with the addition of water only. D. Packaged Dry Material for Grout for Masonry: Premixed cementitious materials and dried aggregates; capable of producing grout of the specified strength in accordance with ASTM C476 with the addition of water only.

E. Portland Cement: ASTM C150/C150M. 1. Type: Type I - Normal: ASTM C150/C150M.

H. Quicklime: ASTM C5, non-hydraulic type.

J. Pigments for Colored Mortar: Pure, concentrated mineral pigments specifically intended for mixing into mortar and complying with

A. Thoroughly mix mortar ingredients using mechanical batch mixer, in accordance with ASTM C270 in quantities needed for immediate B. Maintain sand uniformly damp immediately before the mixing process. C. Do not use anti-freeze compounds to lower the freezing point of mortar.

D. If water is lost by evaporation, re-temper only within two hours of mixing.

A. Mix grout in accordance with ASTM C94/C94M. B. Thoroughly mix grout ingredients in quantities needed for immediate use in accordance with ASTM C476 for fine and coarse grout

A. Apply bonding agent to existing concrete surfaces.

B. Plug clean-out holes for grouted masonry with brick masonry units. Brace masonry to resist wet grout pressure.

A. Install mortar and grout to requirements of section(s) in which masonry is specified. B. Work grout into masonry cores and cavities to eliminate voids. C. Do not displace reinforcement while placing grout.

D. Remove excess mortar from grout spaces.

A. Perform all grouting by means of low-lift technique. Do not employ high-lift grouting.

2. Limit height of masonry to 16 inches above each pour. 3. Pour grout only after vertical reinforcing is in place; place horizontal reinforcing as grout is poured. Prevent displacement of bars as 4. Place grout for each pour continuously and consolidate immediately; do not interrupt pours for more than 1-1/2 hours.

A. An independent testing agency will perform field tests, in accordance with provisions of Section 01 40 00 - Quality Requirements. B. Test and evaluate mortar in accordance with ASTM C780 procedures. C. Test and evaluate grout in accordance with ASTM C1019 procedures.

SECTION 061000 - ROUGH CARPENTRY

1. General material, equipment, and workmanship standards are specified in Section 016000.

A. Conform to the requirements of NATIONAL Forest Products Association "National Design Specification for Wood Construction."

A. Submittals Requirements and Procedures are specified in Section 013000. B. Submit product data sheets for metal framing anchors, etc.

C. Submit letter stating whether S_DRY lumber and corrosion resistant fasteners are specified in this section will be used and if not, why.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Wood and plywood indicated on drawings to be decay resistant, wood within 6" of grade, nailers embedded in masonry, roof nailers, and other wood exposed to persistent dampness shall be pressure treated according to A.W.P.I. Standard C2. Treatment shall be for soil contact if wood is in contact with soil and for above ground use elsewhere. Wood shall be dried after treatment to 19% moisture content or less. B. Fasteners and accessories:
- 1. See Section 016000, which stipulates that fasteners used in damp and potentially damp locations shall be corrosion resistant. 2. Provide accessories for framing, such as anchors and framing connectors. For use on the exterior and in other locations where accessories may be exposed to dampness, accessories shall be hot dip galvanized.

C. Construction adhesive: Equal to Contech "PL500". PART 3 - EXECUTION

3.1 INSTALLATION

- A. Nailing shall conform to recommended nailing schedule of state building code. B. Execute rough carpentry according to established good practice:
- 1. Anchor work firmly to adjoining structure. C. Provide fire-resistant wood blocking in gypsum drywall partitions for door stops, casework, shelf standards, accessories, and other
- applied products. D. Install plywood according to recommendations of American Plywood Association and manufacturer. Leave gaps at edges as recommended by APA and manufacturer.
- END OF SECTION 061000

SECTION 064000 - ARCHITECTURAL WOODWORK

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provision of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this section.

B. Related Sections: The following Sections contain requirements that relate to this Section: 1. Section 06100, Rough Carpentry.

1.2 DESCRIPTION

- A. Related Work Specified Elsewhere:
- 1. The General Conditions state that the Contract Documents are complementary. 2. Temporary facilities and controls are specified in Section 01500. Cooperate in ensuring adequate protection.
- 3. General material, equipment, and workmanship standards are specified in Section 01600.
- 4. Wood and plywood not specified in this section are specified in Section 06100. The portion of the Work specified in this section shall include all interior woodwork exposed to view, except for items listed above. Provide finished 3/4" thick oak cap on top of the new short wall. Match quality and look of doors and other millwork. D. Provide finish casings at all window heads, jambs and stools. Refer to drawings for locations, details and wood species/finish.
- 1.3 SUBMITTALS
- A. Submit shop drawings for woodwork. Detail sections shall be at 3" = 1'-0" scale or larger scale.
- **1.4 QUALITY ASSURANCE**
- A. The Architectural Woodwork Quality Standards of the Architectural Woodwork Institute shall apply and are hereby incorporated by reference. This reference is referred to in this section as "A.W.I. Standards". B. The woodwork manufacturer shall have a reputation for doing satisfactory work on time and shall have completed comparable work
- satisfactorily.

PART 2 - PRODUCTS

A. Casework for transparent finish.

1. A.W.I. quality grade: Premium Grade 1 2. Construction: Details shall conform to flush overlay design.

2.1 CASEWORK (see also Finishes Drawings)

- 3. Exposed parts to be solid, rift cut Oak veneer with clear finish. Sample to be provided by furniture supplier.
- 4. Semi-exposed parts: As governed by A.W.I. quality grade. 5. Shelves shall be lumber core or veneer core. Do not use particle board cores for shelves.
- 6. All wall-mounted and base cabinets to be provided with cam locks. Casework doors, including those 3/4" thick and thicker, shall have solid cores
- C. Provide casework hardware under this section.
- 1. Hinges shall be equivalent to dampened hold-open swing type door hinges in US26D satin chrome (2 per leaf), soft close. 2. Pulls: Hafele Aluminum Elite Black 3". 111.95.320
- 3. Drawer slides: Accuride No. 7950, clear zinc finish, soft close 4. Door catch: Stanley #SP41 (US28) single magnetic cabinet catch or Stanley #SP45 (US28) double magnetic catch.
- 5. Shelf Standards: Knape & Vogtt #255 shelf standards.
- Shelf Support Clips: Knape & Vogt #256 shelf support clips.
- 7. Finish: Equal to hardware finish specified in Section 087100 8. Hardware not specified above or indicated on drawings shall be optional with manufacturer. List all hardware on shop drawings, and make reasonable substitutions by Architect.
- Plastic Laminate: 1. A.W.I. quality grade: Custom.
- 2. Laminate selection: High pressure plastic laminate, in color, texture, and pattern selected by Architect, 1/15" thick. Refer to finish 3. Provide laminate edges.

1. Include data for fire-retardant treatment from chemical-treatment manufacturer and certification by treating plant that treated

A. Fabricator Qualifications: Shop that employs skilled workers who custom-fabricate products similar to those required for this Project

A. Quality Standard: Unless otherwise indicated, comply with the "Architectural Woodwork Standards" for grades of flush wood paneling

A. Basis of Design: Heitink Veneers, White Oak, Stained and finish to match existing wood doors. Coordinate matching in field with

G. Fire-Retardant-Treated Paneling: Panels are to consist of wood-veneer and fire-retardant particleboard or fire-retardant, medium-

A. Materials, General: Provide materials that comply with requirements of referenced quality standard for each quality grade specified

density fiberboard (MDF). Panels are to be listed and labeled by a testing and inspecting agency acceptable to authorities having

1. Provide inspections of fabrication and installation together with labels and certificates from AWI certification program indicating that

A. Source Limitations: Engage a qualified woodworking firm to assume undivided responsibility for production of paneling.

(wood-veneer wall surfacing) indicated for construction, finishes, installation, and other requirements.

- 4. Interior Surfaces: Melamine 6-10 mil sheet rolled onto luan core plywood. 5. Countertops: with matching edge banding
- 6. Adjustable shelves: with matching edge banding
- E. Solid Surface Window Sills: I. Solid, non-porous, homogeneous surfacing material composed of quartz in thickness shown in architectural details. 2. Minimum joints
- 3. Product and Color per finish legend.
- PART 3 EXECUTION

3.1 INSTALLATION

- A. Install finish carpentry in a manner consistent with specified quality of manufacture.
- Distribute allowed defects to best overall advantage. . House or cope interior corners.
- D. Blind miter exterior joints.
- E. Set fasteners for puttying. Where factory finish is specified, fill and finish fastener holes. F. After installation, perform touch-up of factory finished items as required to achieve uniform finish.

END OF SECTION 064000

SECTION 064216 - WOOD VENEER PANELS (see also Finishes Drawings)

- 1.1 SUMMARY
- A. Section Includes: 1. Shop finishing.
- 2. Flush wood paneling (wood-veneer wall panels) 3. Fire-retardant-treated materials.

materials comply with requirements.

1. Include plans, elevations, sections, and attachment details.

2. Apply AWI Quality Certification Program label to Shop Drawings.

C. Samples: For each exposed product and for each color and finish specified.

A. Quality Standard Compliance Certificates: AWI Quality Certification Program

and whose products have a record of successful in-service performance.

woodwork complies with requirements of grades specified.

E. Panel Core Construction: Fire-retardant particleboard or fire-retardant MDF

F. Exposed Panel Edges: Wood-veneer edgeband matching faces

2.3 FLUSH WOOD PANELING (WOOD-VENEER WALL SURFACING)

Architect. Designated as WD-1 on Drawings.

2. Veneer Matching Method: Refer to finish leaend

D. Panel-Matching Method: Refer to finish legend

1. Thickness: As indicated on Drawings.

H. Assemble panels by gluing and concealed fastening.

1. Shop Certification: AWI's Quality Certification Program accredited participant

B. Shop Drawings: For flush wood paneling.

- **1.2 ACTION SUBMITTALS**
- A. Product Data: For each type of product.

1.3 INFORMATIONAL SUBMITTALS

1.4 QUALITY ASSURANCE

PART 2 - PRODUCTS

2.1 PANELING FABRICATORS

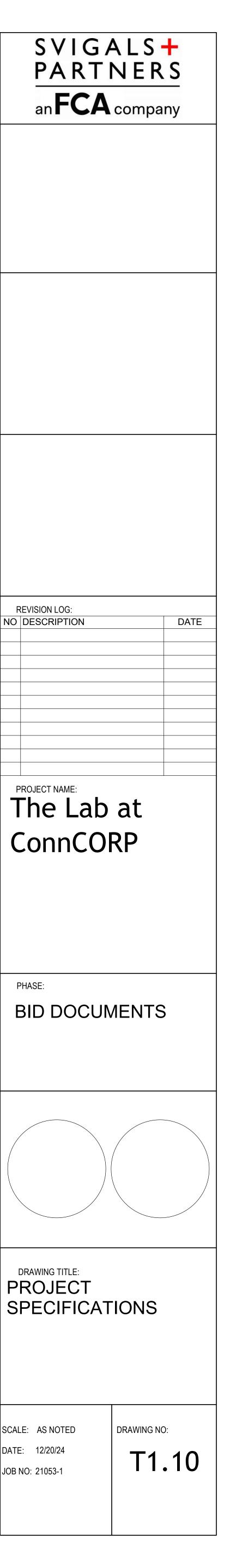
2.2 PANELING, GENERAL

B. Grade: Premium.

2.4 MATERIALS

unless otherwise indicated

B. Wood Moisture Content: 5 to 10 percent.



2.5 FIRE-RETARDANT-TREATED MATERIALS

- A. Fire-Retardant-Treated Materials, General: Where fire-retardant-treated materials are indicated, use materials that are acceptable to authorities having jurisdiction and with fire-test-response characteristics specified as determined by testing identical products per test method indicated by a qualified testing agency.
- 1. Use treated materials that comply with requirements of referenced quality standard. Do not use materials that are warped, discolored, or otherwise defective.
- 2. Use fire-retardant-treatment formulations that do not bleed through or otherwise adversely affect finishes. Do not use colorants to distinguish treated materials from untreated materials. 3. Identify fire-retardant-treated materials with appropriate classification marking of qualified testing agency in the form of removable paper label or imprint on surfaces that will be concealed from view after installation.
- 2.6 INSTALLATION MATERIALS
- A. Furring, Blocking, Shims, and Hanging Strips: Fire-retardant-treated softwood lumber, kiln-dried to less than 15 percent moisture content. B. Anchors: Select material, type, size, and finish required for each substrate for secure anchorage. Provide metal expansion sleeves or expansion bolts for post-installed anchors. Use nonferrous-metal or hot-dip galvanized anchors and inserts at inside face of exterior
- C. Installation Adhesive: Product recommended by panel fabricator for each substrate for secure anchorage.
- 2.7 FABRICATION
- A. Sand fire-retardant-treated wood lightly to remove raised grain on exposed surfaces before fabrication.
- B. Complete fabrication, including assembly, to maximum extent possible, before shipment to Project site. C. Shop cut openings, to maximum extent possible, to receive hardware, appliances, plumbing fixtures, electrical work, and similar items.
- 2.8 SHOP FINISHING
- A. General: Finish paneling at fabrication shop as specified in this Section. Defer only final touchup, cleaning, and polishing until after installation. B. Shop Priming: Shop apply the prime coat including backpriming, if any, for transparent-finished paneling specified to be field finished. See
- Section 09 93 00 "Staining and Transparent Finishing" for material and application requirements. C. Preparation for Finishing: Comply with referenced quality standard for sanding, filling countersunk fasteners, sealing concealed surfaces, and
- similar preparations for finishing paneling, as applicable to each unit of work. 1. Backpriming: Apply two coats of sealer or primer, compatible with finish coats, to concealed surfaces of paneling.
- D. Transparent Finish: 1. Grade: Premium.
- 2. Finish: System 9, UV curable acrylated epoxy, polyester, or urethane 3. Staining: Match existing door finish in the field.
- 4. Filled Finish for Open-Grain Woods: After staining, apply wash-coat sealer and allow to dry. Apply paste wood filler and wipe off excess. Tint filler to match stained wood. Sheen matte.
- PART 3 EXECUTION

3.1 INSTALLATION

- A. Before installation, condition paneling to humidity conditions in installation areas.
- B. Grade: Install paneling to comply with quality standard grade of paneling to be installed. C. Install paneling level, plumb, true in line, and without distortion. Shim as required with concealed shims. Install level and plumb to a tolerance of 1/8 inch in 96 inches. Install with no more than 1/16 inch in 96-inch vertical cup or bow and 1/8 inch in 96-inch horizontal variation from a
- 1. For flush paneling with revealed joints, install with variations in reveal width, alignment of top and bottom edges, and flushness between adjacent panels not exceeding 1/32 inch. D. Anchor paneling to supporting substrate with concealed panel-hanger clips.
- 1. Do not use face fastening unless otherwise indicated.
- E. Complete finishing work specified in this Section to extent not completed at shop or before installation of paneling. Fill nail holes with matching filler where exposed. F. See Section 09 93 00 "Staining and Transparent Finishing" for final finishing of installed paneling.

END OF SECTION 064216

DIVISION 7 - THERMAL AND MOISTURE PROTECTION

- SECTION 078400 FIRESTOPPING
- PART 1 GENERAL
- 1.01 SECTION INCLUDES
- A. Firestopping systems. Firestopping of all penetrations and interruptions to fire rated assemblies
- B. Firestopping shall be used in locations including, but not limited to, the following:
- 1. Penetrations for the passage of duct, cable, cable trays, conduit, piping, electrical busways, electrical raceways through fire-rated vertical barriers (walls and partitions), horizontal barriers (floor slabs/decks and floor/ceiling assemblies), and vertical service shafts. Construction joints between structurally separate walls or floors.
- Between stories unless within a fire-rated shaft. 4. Above walls or partitions extending to the underside of floor, ceiling or roof assemblies above.
- 5. Concealed furring spaces behind finishes as required.
- 6. Where pipes, conduits, ducts and other items pass through any fire-rated assembly. 7. Openings for items mounted on or within fire-rated assemblies
- 8. All other firestopping indicated or required by the Connecticut State Building Code including all Supplements and Amendments. D. Where a specific firestop system is not indicated on the Drawings for a through penetration, the Contractor shall include proposed firestop system designs in submittals.
- E. Where there is no specific UL Firestop System available for a particular application, the Contractor shall obtain a system drawing with pertinent data from the firestop manufacturer and submit them to the Architect for approval prior to installation.
- 1.02 RELATED REQUIREMENTS
- A. Related Documents: General provisions of the Contract, including General and Supplementary Conditions and Division 1 Specifications, apply
- to this section. B. The General Conditions state that the Contract Documents are complementary. Examine all Drawings and all other Sections of the
- Specification for requirements therein effecting the Work of this Section. . Examine Contract Documents for requirements that effect work of this Section. Other Specification Sections that directly relate to work of this Section include, but are not limited to: 1. The Contract Documents are complementary.
- 2. Section 01 60 10 General Standards for Material and Workmanship
- 3. Section 01 74 20 Construction Waste Management 4. Section 07 90 05 - Joint Sealers
- 5. Section 09 21 16 Gypsum Board Assemblies
- 1.03 REFERENCE STANDARDS
- A. ASTM E119 Standard Test Methods for Fire Tests of Building Construction and Materials; 2015. B. ASTM E814 - Standard Test Method for Fire Tests of Penetration Firestop Systems; 2013a (Reapproved 2017).
- C. ASTM E1966 Standard Test Method for Fire Resistive Joint Systems; 2007 (Reapproved 2011). D. ITS (DIR) - Directory of Listed Products; current edition.
- E. FM 4991 Approval Standard for Firestop Contractors; 2013. F. FA (AG) - FM Approval Guide; Factory Mutual Research Corporation; current edition.
- G. UL 2079 Standard for Tests for Fire Resistance of Building Joint Systems; Current Edition, Including All Revisions.
- H. UL (FRD) Fire Resistance Directory; current edition. I. SCAQMD Rule 1168 dated 10/3/03
- 1.04 SUBMITTALS
- A. See Section 01 30 20 Submittals, for submittal procedures
- B. Schedule of Firestopping: List each type of penetration, fire rating of the penetrated assembly, firestopping test or design number, and FM Approval Designation 1. Schedule shall indicate construction of wall or floor assembly; sixe, number and material of penetrating item; required F-rating, Trating and remarks, where applicable.
- C. Submit Shop Drawings detailing materials, installation methods and relationships to adjacent / adjoining construction elements for each through-penetration firestop system, and each kind construction condition penetrated and each kind of penetrating item. Include forestop design designation of qualified testing and inspection agency evidencing compliance with the requirements for each condition indicate 1. Submit documentation including illustrations, from a qualified testing and inspection agency, that is applicable to each construction condition of each through-penetration firestop configuration.
- 2. Where project conditions require modification of a qualified testing and inspection agency's illustration to suit a particular firestop condition, submit illustration approved by the firestopping manufacturer's fire protection engineer clearly indicating all modifications. D. Sustainable Design Submittal: Submit VOC content documentation for all non-preformed materials. . Manufacturer's Installation Instructions: Indicate preparation and installation instructions.
- F. Product test reports from, and based upon tests by, a qualified testing and inspection agency evidencing compliance of firestopping with
- requirements based on testing of current products. G. Manufacturer's Certificate: Certify that products meet or exceed specified requirements. H. Submit complete list of all firestop systems and materials to be utilized, including documentation of UL Classifications or approved third party testing.
- 1. Include all individual component materials required for each system. Indicate manufacturer's product name and number for each material.
- Submit qualification data for firms and persons specified in the "Quality Assurance" article to demonstrate their capabilities and experience Include list of completed projects with names, addresses and other information as specified. J. Certificate from authority having jurisdiction indicating approval of materials used.
- K. Installer Qualification: Submit qualification statements for installing mechanics. . Low-Emitting Materials, for each product in the listing, state the VOC level (in GL./LTR exempt water), the applicable standard, the
- classification of the material and the VOC limit.

1.05 QUALITY ASSURANCE

- A. Fire Testing: Provide firestopping assemblies of designs that provide the scheduled fire ratings when tested in accordance with methods 1. Listing in the current-year classification or certification books of UL, FM, or ITS (Warnock Hersey) will be considered as constituting an acceptable test report.
- Submission of actual test reports is required for assemblies for which none of the above substantiation exists. . Fire-Resistive Ratings of Joint Sealants are identical to those tested for characteristics per ASTM E 119 or UL 2079, under conditions where the positive furnace pressure differential is at least 0.01 inch of water, as measured 0.78 inch from the face exposed to furnace fire. Provide systems also in compliance with the following requirements: a. Fire-Resistance Ratings of Joint Sealants: As indicated by reference to design designations listed by UL in their "Fire
- Resistance Directory" or by another qualified testing and inspection agency. b. Joint sealants, including backing materials, shall bear classification marking of a qualified testing and inspection agency. Manufacturer Qualifications: Company specializing in manufacturing the products specified in this section with minimum three years documented experience.
- . Single Source Responsibility: Obtain through-penetration firestop systems for each individual construction condition from one single manufacturer. Materials of differing manufacture shall not be intermixed. . Installer Qualifications: Company specializing in performing the work of this section and:
- . Trained by manufacturer. Approved by Factory Mutual Research under FM Standard 4991, Approval of Firestop Contractors and listed in the FM Directory. Submit qualifications of individuals certified by FM testing as "Designated Responsible Individual". 3. The installer shall have the necessary experience, staff and training to install classified firestopping systems with references.
- 4. With minimum 3 years documented experience installing work of this type. 5. Able to show at least 5 satisfactorily completed projects of comparable size and type.
- 6. It is the intent that all firestopping work be performed by one single contractor or subcontractor as a sole source. Licensed by local authorities having jurisdiction (AHJ).
- 8. Approved by firestopping systems manufacturer.
- 9. At the completion of the Work, and prior to Substantial Completion, the certified installer shall provide an Affidavit to the Architect indicating that all firestopping work has been installed in accordance with the Construction Documents, UL requirements and the current and complete Connecticut State Building Code.
- Provide firestopping products containing no detectable asbestos as determined by the method specified in 40 CFR Part 763, Subpart F, Appendix A. "Polarized Light Microscopy."
- . Coordinating Work: Coordinate construction of openings and penetrating items to ensure that designated through-penetration firestop systems are installed per specified requirements.

- A. Locate mock-ups on site in locations indicated or, if not indicated, as directed. B. Notify Architect one week in advance of the dates and times when mock-ups will be constructed. C. Install one firestopping assembly representative of each fire rating design required on project. 1. Where one design may be used for different penetrating items or in different wall or floor constructions, install one assembly for each different combination.
- D. If accepted, mock-up will represent minimum standard for the Work. E. If accepted and undisturbed at the time of Substantial Completion, mock-ups may remain as part of the Work. Remove and replace
- mock-ups not accepted. 1.10 FIELD CONDITIONS

- A. Comply with firestopping manufacturer's recommendations for temperature and conditions during and after installation. Maintain minimum temperature before, during, and for 3 days after installation of materials. B. All firestopping materials shall be delivered to the Project site in the manufacturer's original un-opened containers with intact and legible manufacturer's labels identifying product and manufacturer; date of manufacture; lot number; shelf life, if applicable; gualified testing and inspection agency's classification markings applicable to the Project; curing time and mixing instructions for Multicomponent C. Provide ventilation in areas where solvent-cured materials are being installed.
- PART 2 PRODUCTS

2.01 MANUFACTURERS

- A. Firestopping Manufacturers: 1. 3M Fire Protection Products; : www.3m.com/firestop/#sle. . Hilti, Inc; : www.us.hilti.com/#sle. 3. Tremco Commercial Sealants & Waterproofing; TREMstop Acrylic: www.tremcosealants.com/#sle.
- 2.02 FIRESTOPPING GENERAL REQUIREMENTS
- A. Manufacturers:
- B. Firestopping Materials: Any materials meeting requirements. C. Primers, Sleeves, Forms, Insulation, Packing, Stuffing, and Accessories: Type required for tested assembly design.
- 2.03 FIRESTOPPING, GENERAL
- A. FM Approval: Only FM approved assemblies are acceptable.
- B. Firestopping:Compatibility: Provide materials, free of carcinogens and asbestos, that are compatible with each other, the substrates forming openings, and the items penetrating the firestopping under .
- requirements. Use only components specified by the firestopping manufacturer and approved by Factory Mutual "FM" for the designated fire-resistance-rated systems. Accessories include, but are not limited to, the following items: Permanent forming/damming/backing materials including the following:
- a. Semi-refractory fiber (mineral wool) insulation. b. Ceramic fiber.
- d. Fire-rated formboard.
- e. Joint fillers for joint sealants.
- performance and other requirements. E. Materials shall conform to UL 1479 and ASTM E 814.
- F. Self-extinguishing damming materials shall be used, as specified by the manufacturer, as part of the designated firestop system. G. Firestop materials used shall be suitable and compatible with the penetrating item(s) including the surrounding materials / construction. PART 1 - GENERAL
- 2.04 FIRE-SAFING BOARD INSULATION

insulation and tape as necessary.

1. Biostop 500+; Bio Fireshield.

1. Novasit K-10; Rectorseal Corp.

2. STI SpecSeal Firestop Collars

1. Firestop Pillows; Rectorseal Corp.

1. Biostop Wrap Strip; Bio Fireshield

3. Fire Barrier FS195 Wrap strip; 3M 4. CS240 Intumescent Wrap; Hilti

A. Provide damming / forming materials in accord with the manufacturer's recommendations

recommended by the firestopping material manufacturer.

B. Remove incompatible materials that could adversely affect bond.

C. Install backing materials to prevent liquid material from leakage.

2. SpecSeal Wrap Strip; STI

3. PLW Firestop Pillow; Nelso Firestop.

2. KBS Sealbags; W.R. Grace

4. STI SpecSeal Pillows.

Hilti Fireblock.

2.10 WRAP STRIPS

specified requirements:

2.11 COMPOSITE BOARDS

2.13 MIXING

2.15 MATERIALS

PART 3 EXECUTION

3.01 EXAMINATION

3.02 PREPARATION

material

undisturbed.

2.09 FIRESTOP BAGS / PILLOWS

3. Hilti CP 642/CP643 Firestop Collars.

3. Flamesafe; W.R. Grace.

6. STI SpecSeal S100.

2.07 FIRESTOP MORTAR

4. STI SpecSeal Mortar.

2.08 FIRESTOP COLLARS

requirements:

suitable for in-place density of 6 pcf to 12 pcf.

Fire-Barrier Series; 3M Fire Protection products.

Project site to form a non-shrinking and homogenous mortar.

2. KBS Mortar Seal; International Protective Coatings Corp.

3. CMP Firestop Compound; Nelson Firestop.

5. Hilti FS-635 Trowelable Firestop Compound.

1. Bio Fireshield Firestop Collars; Rectorseal Corp.

insoluble expansion agents and fire-retardant additives

CLK Adhesive Firestop; Nelson Firestop.

5. Hilti FS-601 Elastomeric Firestop Sealant

2.05 MINERAL WOOL

2.06 CAULK AND PUTTY

A. Proved material tested, listed and labeled by UL and listed by UL in designs similar to applications required. Provide semi-rigid, nonasbestos mineral fiber board, rated non-combustible when tested in accord with ASTM E 136. 1. k-Value: 0.25 at 75 degrees F.

C. Light Gage Bent Metal Retainer: Provide 14 gage, galvanized steel bent angle with 1 inch upturned leg set, continuous, to retain safing

- 2. Thickness as required to achieve necessary fire-rating 3. Density: Nominal 4 pcf. 4. Product: U.S. Gypsum Co., Thermafiber Safing Insulation; Partek Insulation Inc., Paroc Safing Insulation; Fibrex, Inc., FBX Fire
- Safing Insulation. B. Intumescent Tape: Pemko Hot Smoke Seal, adhesive-backed intumescent, Item HSS2000, manufactured by Pemko Mfg. Co., Memphis, Tenn., or equivalent as manufactured by Dow Corning or Bio Fireshield.

- C. Accessories: Provide components for each firestopping system that are needed to install fill materials and to comply with Part 1
- c. Sealants nudes in combination with other forming/damming materials to prevent leakage of fill materials in a liquid state
- D. Applications: Provide firestopping systems composed of materials specified by the manufacturer as specified, that comply with system
- H. Firestop materials containing solvents which adversely effect plastics shall not be used.
- A. Provide loose mineral wool, rated non-combustible when tested in accord with ASTM E 136, free of asbestos and glass fiber, and
- A. Provide one of the following products that meet or exceed specified requirements:
- A. Packaged dry-mix composed of a blend of inorganic binders, fillers and lightweight aggregate formulated for mixing with water at B. Provide one of the following products that meet or exceed specified requirements:
- A. Provide pre-manufactured fire protective pipe sleeves equal to one of the following products, that meet or exceed specified
- A. Bags / Pillows: Re-usable, heat-expanding composed of glass-fiber cloth cases filled with a combination of mineral-fiber, water-B. Provide one of the following products that meet or exceed specified requirements:
- A. Single-component, elastomeric sheet with aluminum foil on one side. Provide one of the following products that meet or exceed
- A. Provide one of the following products that meet or exceed specified requirements: 1. Provide Sheet material; 3M or equivalent by Johns manville or Firetemp.

B. Provide fasteners and anchorage accessories complying with UL designs and other components and accessories as needed and as

- 2.12 DAMMING / FORMING MATERIALS, FASTENERS AND ANCHORAGE ACCESSORIES
- A. For those products requiring mixing prior to application, comply with firestopping manufacturer's directions for accurate proportioning of all elements and materials, mixing equipment, mixing speeds, containers, times and all other procedures necessary to produce firestopping products of uniform quality and with the optimum performance characteristics required for the intended application.
- 2.14 FIRE RATINGS: USE ANY SYSTEM THAT IS LISTED BY FM, ITS (DIR), OR UL (FRD) AND TESTED IN ACCORDANCE WITH ASTM E814 OR ASTM E119 WITH F RATING EQUAL TO FIRE RATING OF PENETRATED ASSEMBLY AND MINIMUM T RATING EQUAL TO F RATING AND IN COMPLIANCE WITH OTHER SPECIFIED REQUIREMENTS.
- A. Elastomeric Silicone Firestopping: Single component silicone elastomeric compound and compatible silicone sealant; B. Foam Firestoppping: Single component silicone foam compound; conforming to the following:
- C. Fibered Compound Firestopping: Formulated compound mixed with incombustible non-asbestos fibers; D. Fiber Firestopping: Mineral fiber insulation used in conjunction with elastomeric surface sealer forming airtight bond to opening; E. Intumescent Putty: Compound that expands on exposure to surface heat gain; F. Primers, Sleeves, Forms, Insulation, Packing, Stuffing, and Accessories: Type required for tested assembly design.
- A. With installer present, examine substrates and conditions for compliance with the requirements for opening configurations, penetrating items, substrates and other conditions that may effect the performance of firestopping work. Verify all are ready to receive the Work of this section and do not proceed with this Work until all unsatisfactory conditions have been corrected.
- A. Clean substrate surfaces of dirt, dust, grease, oil, loose material, or other matter that could adversely affect bond of firestopping
- D. Prime: Prime all substrates where recommended by the firestopping manufacturer using teh manufacturer's recommended procedures. products and methods. Confine primers to areas of contact and bond; do not allow spillage or migration onto exposed surfaces. E. Masking Tape: Use masking tape to prevent firestopping from contact with adjacent or adjoining surfaces that may remain exposed upon completion of the Work and would otherwise be stained or damaged by such contact or by any methods of cleaning that may be employed. Tape shall be removed as soon as possible without causing any damage to substrates and leaving the firestopping seal

3.03 INSTALLATION OF THROUGH-PENETRATION SYSTEM FIRESTOPS

- A. General: Comply with the specified requirements indicated in Part 1 and the through-penetration firestop manufacturer's installation instructions and drawings or illustrations pertaining to the products and applications indicated. 1. Coordinate with all trades as required to assure that all pipe, conduit, cable, cable travs and any other items which are to penetrate fire-rated construction have been permanently installed prior to the installation of firestops, smoke seals or any other Work of this Section.
- 2. Schedule and sequence the Work to ensure that all partitions, and all other construction which would conceal penetrations are not erected prior to the installation of firestop and smoke seals. 3. All rated gypsum board wall assemblies shall be firestopped where they meet structure above.
- 4. Provide a minimum of one-hour rating for all penetrations, expansion joints and slab edge conditions. B. Install forming / damming materials and other accessories of types required to support fill materials during their application and in a position needed to produce the cross-sectional shapes and depths required to achieve required fire-ratings. After installing fill materials, remove all materials that are not indicated as a permanent component of the firestop systems. C. Install fill materials for through-penetration firestop systems by proven techniques to produce the following results:
- Completely fill all voids and cavities formed by openings, forming materials, accessories and penetrating items. 2. Ensure full contact and adhesion of all firestopping elements with all substrates and penetrating items. 3. Finish all Work exposed to view to produce a smooth and uniform surface, flush with adjacent / adjoining surfaces.
- 3.04 INSTALLING FIRE-RESISTIVE JOINT SEALANTS
- A. General: Comply with all specified items indicated inPart 1, all other specified requirements, with ASTM C 1193 and with the sealant manufacturer's installation instructions and illustrations pertaining to products and applications indicated. B. Install joint fillers to provide support of sealants during application and at a position required to produce the cross-sectional
- shapes and depths of installed sealants relative to joint widths tat allow optimum sealant movement / recovery compatibility and to develope the fire-resistance rating required. C. Install sealants by proven methods and techniques that result in direct wet full contact with joint substrates, completely filling
- recesses provided for each joint configuration and in sufficient sections and depths to provide optimum sealant movement. Install all joint fillers at the same time sealants are installed. D. Completely tool non-sag sealants immediately after application prior to skinning or curing. Form smooth uniform beads as
- indicated to produce the required fire-rating. Remove excess sealant. E. Install materials in manner described in fire test report and in accordance with manufacturer's instructions, completely closing openings.
- 3.05 CLEANING
- A. Clean adjacent surfaces of firestopping materials
- 3.06 PROTECTION
- A. Clean adjacent surfaces of excess fill materials and sealants adjacent to openings and joints as work progresses using methods, materials and prceedures approved by firestopping manufacturers and without damaging surrounding finishes. B. Protect firestopping during and after curing periods from contact with contaminating substances or from construction activity related damage. If, after and despite such protection, damage or deterioration occurs, prior ti the time of Substantial Completion, cut out and remove damaged or deteriorated firestopping immediately and install new materials to produce firestopping complying with the specified requirements. C. Protect adjacent surfaces from damage by material installation.
- END OF SECTION 07 84 00

SECTION 079000 - JOINT SEALANT

- 1.1 SUBMITTALS
- A. Submit manufacturer's product data and color samples (complete color set of actual materials). Data shall indicate conformity to reference specifications listed below. Included requirements for primers, if any. include Manufacturer's application instruction. **1.2 QUALITY ASSURANCE**
- A. Approved manufacturers in addition to those listed below:
- Pecora Corporation Tremco, Inc.
- Dow Corning General Electric Co.
- PART 2 PRODUCTS
- 2.1 MATERIALS
- A. Sealant for non-moving exterior joints such as door and small window frames; one-part acrylic polymeric sealant. B. Sealant for interior uses other than described in A. and B. above: One-part acrylic latex sealant conforming to the requirements of
- A.S.T.M. C834, equal to Pecora AC-20. Primers: As recommended by manufacturer for sealant and building surfaces where used. D. Joint backing: waxed closed cell ethafoam. For slid-backed joints, use polyethylene bond breaker tape. For exterior silicone
- sealant, if specified, use open cell polyurethane foam approved and recommended by sealant manufacturer. Color: As selected by the Architect.
- F. Fire-tolerant sealant for use adjacent to flues and similar hot surfaces: Dow Corning795 or equal to low-modules silicone sealant as manufactured by G.E. G. Fire-resistive sealant: 3M - Fire Barrier Penetration Sealing System
- PART 3 EXECUTION

3.1 PREPARATION

- A. Clean surfaces to which sealant is to be applied. Brush off dust. Remove loose materials. Wash off grease, oil, and other contaminants. Apply primers unless manufacturer specifically recommends against their use. If primer is applied to exposed surfaces outside of sealed joints, remove immediately with toluene, Zip Jelly, or other solvent recommended by primer manufacturer.
- 3.2 APPLICATION
- A. Apply sealant only on dry or relatively dry day, at temperature of 40 degrees F or above.
- B. Seal the following joints: Opening in walls, including doors, windows, mechanical opening, s control joints, coping joints, joints between different materials and components and in front of metal lintels. Where both sides are exposed seal both inside and outside. a. Use polyurethane sealant and backer rod over backup of impregnated Foam sealant at joints which move significantly; use acrylic terpolymer sealant at joints which are not subject to movement. use latex sealant at interior joints.
- 2. Seal control joints and expansion joints, including tile joints, in interior surfaces. Seal masonry partitions where they join structure
- a. Use polyurethane sealant and backer rod at control joints. use latex sealant at other interior joints. 3. Seal above reglets and flashings inserted into and attached to masonry and concrete.
- a. Use acrylic terpolymer sealant.
- 4. Seal around posts embedded in concrete or masonry. Use acrylic terpolic sealant.
- Seal other joints as indicated on drawings. 6. Seal joints and penetrations in fire-rated systems using fire sealant.
- 7. Seal between window and doors and adjacent masonry. a. Use impregnated foam sealant, backer rod, and polyurethane sealant.
- Note: If the word "caulk" appears on drawings, it means "seal".
- END OF SECTION 079000
- **DIVISION 8 DOORS AND WINDOWS**
- SECTION 081100 HOLLOW METAL DOOR AND WINDOW FRAMES PART 1 - GENERAL
- 1.1 SUBMITTALS
- A. Submittals Requirements and Procedures are specified in Section 01300. B. Submit shop drawings for work specified in section. Indicate types of anchorage.
- PART 2 PRODUCTS
- 2.1 MATERIALS
- A. Sheet steel: Commercial quality sheet steel, cold-rolled annealed and free from scale, pitting, rust, and other defects. B. Gauges:Interior frames: 16 gauge. Frames to be welded construction.
- C. Primer For non-galvanized steel, primer shall be manufacturer's standard rust-resistant metal primer. For galvanized steel, primer shall be zinc dust-zinc oxide or other primer certified by manufacturer for excellent adhesion to galvanized steel.
- 2.2 FABRICATION
- A. General: Fabricate steel frame units to comply with ANSI A250.8 free from defects including warp and buckle. Where practical, fit and assemble units in manufacturer's plant. B. Clearances for Non-Fire-Rated doors. Not more than 1/8 inch (3.2 mm) at jambs and heads, except not more than 1/4 inch (6.4
- mm) between pairs of doors. Not more than 3/4 inch (19 mm) at bottom. Tolerances: Comply with SDI 117.
- D. Prepare frames to receive mortised and concealed hardware according to final door hardware schedule. Comply with applicable requirements in ANSI A250.6 & A115 Series for door and frame preparation for hardware. PART 3 - EXECUTION
- 3.1 INSTALLATION
- A. Anchor work securely to adjacent construction. B. Set door accurately, plumb and square. Brace until attached to adjacent construction.
- END OF SECTION 081100
- SECTION 082000 WOOD DOORS (see also Finishes Drawings)
- PART 1 GENERAL 1.1 SUBMITTALS
- A. Submittals Requirements and Procedures are specified in Section 01300.
- B. Submit door schedule, showing sizes, hand, specifications, and other details.
- PART 2 PRODUCTS
- 2.1 MATERIALS AND FABRICATION
- A. The Architectural Woodwork Quality Standards and Guide Specifications, published by A.W.I., is hereby incorporated by reference.
- B. Basis of Design: 1. VT Eggers Stile and Rail with single panel solid or glass (per schedule).

C. Interior doors: Quality grade: Premium quality 2. Face veneer: Rift Cut Oak stained to match Architect's sample. (Refer to WD-1 in finish legend) 3. Door shall have solid cores. 4. Core types for fire-rated wood doors: A.W.I. Type FD 1 1/2, with 1 1/2 hour label and FD 3/4, with 3/4 hour label. 5. Core type for non-rated solid core flush doors: A.W.I. type PC-7 particle core. 6. Prefit and premachine doors for hardware. Undercut doors 1". At time of shop drawing approval, architect will verify undercuts.

- 8. Ship doors individually wrapped in corrugated cardboard cartons.
- PART 3 EXECUTION 3.1 INSTALLATION
- A.W.I. Wipe off excess. C. Just before substantial completion, touch-up defective and damaged shop-applied finish

END OF SECTION 082000

SECTION 087100 - DOOR HARDWARE

PART 1 - GENERAL

1.2 SUMMARY

1.1 RELATED DOCUMENTS

apply to this Section.

1. Swinging doors.

2. Sliding Doors.

Automatic operators.

C. Related Sections:

1.3 SUBMITTALS

1. Mechanical door hardware.

5. Cylinders specified for doors in other sections.

3. NFPA 70 - National Electrical Code.

5. NFPA 101 - Life Safety Code.

instructions with each item or package.

1.5 WARRANTY

1.6 MAINTENANCE SERVICE

2.1 SCHEDULED DOOR HARDWARE

application for the opening.

PART 2 - PRODUCTS

PART 3 - Execution

3.1 DOOR HARDWARE SETS

as noted for each item.

C. Manufacturer's Abbreviations

1. MK - McKinney

3. RO - Rockwood

5. AD - Adams Rite

4. YA - Assa Abloy Accentra

3 Hinges - By Assembly Manufacturer - OT

1 Inside Trim - 4600 (deadlatches) MI - BSP - AD

Deadlatch - 4600 - 335 - AD

1 Outside Trim - 3080 MI - BSP - AD

1 Surface Closer (HO) - 2711 - BSP - YA

3 Hinges By Assembly Manufacturer - OT

Deadlatch - 4900 - 335 - AD - 087100

1 Drop Plate 3158 - BSP - YA - 087100

1 Wall Stop RM860 - BSP - RO - 087100

6 Hinges By Assembly Manufacturer - OT

2 Drop Plate - 3158 - BSP - YA - 087100

2 Wall Stop - RM860 - BSP - RO - 087100

Electric Strike - 7400 - 335 AD

1 Drop Plate 3158 - BSP - YA

1 Wall Stop RM860 - BSP - RO

1 Wiring Diagram - WD SYSPK - SA

2. OT - Other

6. HS - HES

7. RF - Rixson

8. SA - Sargeant

Hardware Sets

Set 1.0

Set 3.0

Set 4.0

SU - Securitron

7. Prefinish doors, including all surfaces, according to A.W.I. finish system #TR-5 Vinyl Catalyzed medium rubbed sheen, open grain

A. Hang doors according to instructions of manufacturer and the provisions of Section 01600. B. If on the job cuts are made after finishing, immediately seal cut surfaces with clear water repellent toxic fungicide solution approved by

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections,

A. This Section references specification sections relating to commercial door hardware for the following:

3. Other doors to the extent indicated.

B. Commercial door hardware includes, but is not necessarily limited to, the following: 2. Electromechanical and access control door hardware. 3. Electromechanical and access control door hardware power supplies, back-ups and surge protection.

1. Division 08 Section "Door Hardware". 2. Division 28 Section "Access Control". D. Codes and References: Comply with the version year adopted by the Authority Having Jurisdiction. 1. ANSI A117.1 - Accessible and Usable Buildings and Facilities. 2. ICC/IBC - International Building Code.

4. NFPA 80 - Fire Doors and Windows. 6. NFPA 105 - Installation of Smoke Door Assemblies. 7. State Building Codes, Local Amendments.

E. Standards: Reference Related Sections for requirements regarding compliance with applicable industry standards.

A. Product Data: Manufacturer's product data sheets including installation details, material descriptions, dimensions of individual components and profiles, operational descriptions and finishes. B. Door Hardware Schedule: Prepared by or under the supervision of supplier, detailing fabrication and assembly of door hardware, as well

as procedures and diagrams. Coordinate the final Door Hardware Schedule with doors, frames, and related work to ensure proper size, thickness, hand, function, and finish of door hardware. 1. Format: Comply with scheduling sequence and vertical format in DHI's "Sequence and Format for the Hardware Schedule." 2. Organization: Organize the Door Hardware Schedule into door hardware sets indicating complete designations of every item

required for each door or opening. Organize door hardware sets in same order as in the Door Hardware Sets at the end of Part 3. Submittals that do not follow the same format and order as the Door Hardware Sets will be rejected and subject to

3. Content: Include the following information: a. Type, style, function, size, label, hand, and finish of each door hardware item. b. Manufacturer of each item.

c. Fastenings and other pertinent information. d. Location of door hardware set, cross-referenced to Drawings, both on floor plans and in door and frame schedule. e. Explanation of abbreviations, symbols, and codes contained in schedule. Mounting locations for door hardware.

g. Door and frame sizes and materials 4. Submittal Sequence: Submit the final Door Hardware Schedule at earliest possible date, particularly where approval of the Door Hardware Schedule must precede fabrication of other work that is critical in the Project construction schedule. Include Product Data, Samples, Shop Drawings of other work affected by door hardware, and other information essential to the coordinated

review of the Door Hardware Schedule. C. Keying Schedule: Prepared under the supervision of the Owner, separate schedule detailing final keying instructions for locksets and cylinders in writing. Include keying system explanation, door numbers, key set symbols, hardware set numbers and special instructions. Owner to approve submitted keying schedule prior to the ordering of permanent cylinders. D. Product Test Reports: Indicating compliance with cycle testing requirements, based on evaluation of comprehensive tests performed by manufacturer and witnessed by a qualified independent testing agency. E. Operating and Maintenance Manuals: Provide manufacturers operating and maintenance manuals for each item comprising the complete door hardware installation in quantity as required in Division 01, Closeout Submittals. The manual to include the name, address, and contact information of the manufacturers providing the hardware and their nearest service representatives. The final copies delivered after completion of the installation test to include "as built" modifications made during installation, checkout, and acceptance.

F. Warranties and Maintenance: Special warranties and maintenance agreements specified in the Related Sections. 1.4 DELIVERY, STORAGE, AND HANDLING

A. Inventory door hardware on receipt and provide secure lock-up and shelving for door hardware delivered to Project site. Do not store electronic access control hardware, software or accessories at Project site without prior authorization. B. Tag each item or package separately with identification related to the final Door Hardware Schedule, and include basic installation

C. Deliver, as applicable, permanent keys, cylinders, cores, access control credentials, software and related accessories directly to Owner via registered mail or overnight package service. Instructions for delivery to the Owner shall be established at the "Keying Conference".

A. General Warranty: Reference Division 01, General Requirements. Special warranties specified in this Article shall not deprive Owner of other rights Owner may have under other provisions of the Contract Documents and shall be in addition to, and run concurrent with, other warranties made by Contractor under requirements of the Contract Documents.

A. Maintenance Tools and Instructions: Furnish a complete set of specialized tools and maintenance instructions as needed for Owner's continued adjustment, maintenance, and removal and replacement of door hardware.

A. Refer to "Part 3 - EXECUTION" for required specification sections

A. The door hardware sets represent the design intent and direction of the owner and architect. They are a guideline only and should not be considered a detailed hardware schedule. Discrepancies, conflicting hardware and missing items should be brought to the attention of the architect with corrections made prior to the bidding process. Omitted items not included in a hardware set should be scheduled with the appropriate additional hardware required for proper application and functionality. 1. Quantities listed are for each pair of doors, or for each single door.

2. The supplier is responsible for handing and sizing all products. 3. Where multiple options for a piece of hardware are given in a single line item, the supplier shall provide the appropriate

4. At existing openings with new hardware the supplier shall field inspect existing conditions prior to the submittal stage to verify the specified hardware will work as required. Provide alternate solutions and proposals as needed.

B. Products listed in the hardware sets shall be supplied by and in accordance with the requirements described in the specification section

1. Section 08 71 00 - Door Hardware. 2. Section 28 13 00 – Access Control. 4 Hinges By Assembly Manufacturer - OT 2 Door Pull - RM3301-48 - BSP - RO - 087100 1 Wall Stop - RM860 - BSP - RO - 087100

3 Hinge, Full Mortise - TA2714 - BSP - MK - 087100 1 Fire Rated Rim Exit, Passage - 6100FED TS628F - BSP - YA - 087100 1 Surface Closer (HO) - 2711 (Top Jamb Mount)) - BSP - YA - 087100 1 Kick Plate - K1050 10" high CSK BEV - BSP - RO - 087100 1 Wall Stop - RM860 - BSP - RO - 087100 3 Silencer - 608 - RO - 087100

5 Hinge, Full Mortise - TA2714 - BSP - MK - 087100 1 Hinge, Full Mortise - TA2714 QC - BSP - MK - 087100

1 Dust Proof Strike - 570 - BSP - RO - 087100 2 Flush Bolt - 555 - BSP - RO - 087100 1 Storeroom or Closet Lock - TSR 8805RL - BSP - YA - 087100

1 Electric Strike - 1600-CS - BSP - HS - 087100 1 Conc Overhead Hold Open - 1-X26 - BSP - RF - 087100 1 Surface Closer - 2721T - BSP - YA - 087100

2 Silencer - 608 - RO - 087100 1 ElectroLynx Harness - Frame - QC-C1500P - MK - 087100 1 ElectroLynx Harness - Door - QC-CXXX (Size as Required) - MK - 087100 1 Wiring Diagram - WD-SYSPK - SA - 087100 2 Position Switch - DPS-M-BK - SU - 087100

1 Motion Sensor - XMS - SU - 087100 1 Card Reader by Security System Supplier - OT - 281300 1 Power Supply AQL-E1 Series (Amps & Relays as Required) - SU - 087100

1 Power Supply - AQL-E1 Series (Amps & Relays as Required) - SU - 087100

3 Hinge, Full Mortise - TA2714 - BSP - MK - 087100 1 Storeroom or Closet Lock - TSR 8805RL - BSP - YA - 087100 1 Electric Strike - 1600-CS - BSP - HS - 087100 1 Surface Closer - 2721T - BSP - YA - 087100 3 Silencer - 608 - RO - 087100 1 Wiring Diagram - WD-SYSPK - SA - 087100

1 Position Switch - DPS-M-BK - SU - 087100 1 Motion Sensor - XMS - SU - 087100 1 Card Reader by Security System Supplier - OT - 281300

3 Hinge, Full Mortise - TA2714 - BSP - MK - 087100 1 Storeroom or Closet Lock - TSR 8805RL - BSP - YA - 087100 1 Conc Overhead Stop - 1-X36 - BSP - RF - 087100 3 Silencer - 608 - RO - 087100

6 Hinge, Full Mortise - TA2714 - BSP - MK - 087100 1 Flush Bolt - 555 - BSP - RO - 087100 1 Storeroom or Closet Lock - TSR 8805RL - BSP - YA - 087100 2 Conc Overhead Stop - 1-X36 - BSP - RF - 087100 2 Silencer - 608 - RO - 087100 Notes: Top flush bolt only

2 Hinge, Full Mortise - TA2714 - BSP - MK - 087100 1 Magnetic Catch - 901 - ALM - RO - 087100 1 Flush Pull - 95B - BSP - RO - 087100

2 Silencer - 608 - RO - 087100 3 Hinge, Full Mortise - TA2714 - BSP - MK - 087100

1 Bathroom Lock - TSR 8862RL V21 - BSP - YA - 087100 1 Surface Closer - 2701 - BSP - YA - 087100 1 Wall Stop - RM860 - BSP - RO - 087100 3 Silencer - 608 - RO - 087100

END OF SECTION 087100

SECTION 088000 - GLAZING

PART 1 - GENERAL

1.1 SUMMARY

- A. This Section includes glazing for the following products and applications, including those specified in other Sections where glazing requirements are specified by reference to this Section: 1. Doors and windows: Provide min. 1/2" laminated glazing.
- 1.2 PERFORMANCE REQUIREMENTS
- A. General: Provide glazing systems capable of withstanding normal thermal movement and wind and impact loads (where applicable) without failure, including loss or glass breakage attributable to the following: defective manufacture, fabrication, and installation; failure of sealants or gaskets to remain watertight and airtight; deterioration of glazing materials; or other defects in construction.
- 1.3 QUALITY ASSURANCE
- A. Safety Glazing Products: Comply with testing requirements in 16 CFR 1201 and, for wired glass, ANSI Z97.1. B. Glazing Publications: Comply with published recommendations of glass product manufacturers and organizations below, unless more stringent requirements are indicated. Refer to these publications for glazing terms not otherwise defined in this Section or in referenced
- 1. GANA Publications: GANA's "Glazing Manual."
- PART 2 PRODUCTS 2.1 GLASS PRODUCTS
- A. Laminated Glass: Float glass laminated in accordance with HYPERLINK "http://global.ihs.com/doc detail.cfm? rid=BSD&document name=ASTM%20C1172" ASTM C1172
- 1. Laminated Safety Glass: Complies with HYPERLINK "http://global.ihs.com/doc_detail.cfm?rid=BSD&document_name=ANSI% 20Z97.1" ANSI Z97.1 and HYPERLINK "http://www.ecfr.gov" 16 CFR 1201 test requirements for Category II.

2.2 MISCELLANEOUS GLAZING MATERIALS

- A. General: Provide products of material, size, and shape complying with referenced glazing standard, requirements of manufacturers of glass and other glazing materials for application indicated, and with a proven record of compatibility with surfaces contacted in installation.
- 2.3 FABRICATION OF GLAZING UNITS
- A. Fabricate glazing units in sizes required to glaze opening indicated for Project, with edge and face clearances, edge and surface conditions and bite complying with written instructions of product manufacturer and referenced publications, to comply with system performance requirements.

PART 3 - EXECUTION

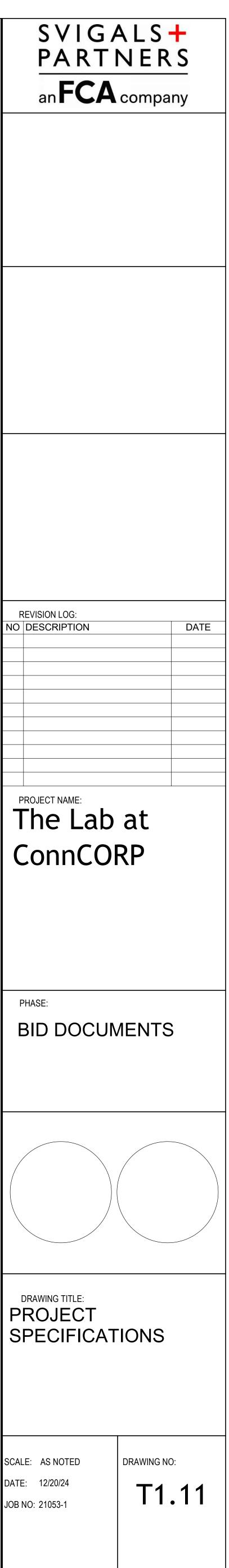
3.1 GLAZING

- A. General: Comply with combined written instructions of manufacturers of glass, sealants, gaskets, and other glazing materials, unless more stringent requirements are indicated, including those in referenced glazing publications.
- 1. Glazing channel dimensions, as indicated on Drawings, provide necessary bite on glass, minimum edge and face clearances, and adequate sealant thicknesses, with reasonable tolerances. Adjust as required by Project conditions during installation. Protect glass edges from damage during handling and installation. Remove damaged glass from project site and legally dispose
- of off Project site. Damaged glass is glass with edge damage or other imperfections that, when installed, could weaken glass and impair performance and appearance. 3. Apply primers to joint surfaces where required for adhesion of sealants, as determined by preconstruction sealant-substrate
- 4. Install setting blocks in sill rabbets, sized and located co comply with referenced glazing publications, unless otherwise required by glass manufacturer.
- 5. Do not exceed edge pressures stipulated by glass manufacturers for installing glass lites 6. Provide spacers for glass lites where length plus width is larger than 50 inches (1270 mm).
- 7. Provide edge blocking where indicated or needed to prevent glass lites from moving sideways in glazing channel, as
- recommended in writing by glass manufacturer and according to requirements in referenced glazing publications. B. Gasket Glazing (Dry); Fabricate compression gaskets in lengths recommended by gasket manufacturer to fit openings exactly, with allowance for stretch during installation. 1. Insert soft compression gasket between glass and frame or fixed stop so it is securely in place with joints' miter cut and bonded
- together at corners. 2. Center glass lites in openings on setting blocks and press firmly against soft compression gasket by inserting dense compression gaskets formed and installed to lock in place against faces of removable stops. Start gasket application at corners
- and work toward centers of openings. Compress gaskets to produce a weathertight seal without developing bending stresses in glass. Seal gasket joints with sealant recommended by gasket manufacturer. 3. Install gaskets so they protrude past face of glazing stops.
- 3.2 CLEANING AND PROTECTION
- A. Protect exterior glass from damage immediately after installation by attaching crossed streamers to framing held away from glass. Do not apply markers to glass surface. Remove nonpermanent labels, and clean surfaces. Protect glass from contact with contaminating substances resulting from construction operations, including weld splatter. If, despite such protection, contaminating substances do come into contact with glass, remove substances immediately as recommended by gasket manufacturer. Remove and replace glass that is broken, chipped, cracked, or abraded or that is damaged from natural causes, accidents, and vandalism, during construction period

1 Inside Trim - 4600 (deadlatches) MI - BSP - AD - 087100 1 Outside Trim - 3080 MI 9 - US10B - AD - 087100 1 Surface Closer (HO) - 2711 - BSP - YA - 087100

4 Door Pull - RM3301-48 - BSP - RO - 087100 2 Surface Closer (HO) - 2711 - BSP - YA - 087100

END OF SECTION 088000



DIVISION 9 - FINISHES

SECTION 09 05 61 - COMMON WORK RESULTS FOR FLOORING PREPARATION PART 1 GENERAL

1.01 SECTION INCLUDES

- A. This section applies to floors identified in contract documents that are receiving the following types of floor coverings: 1. Resilient tile and sheet.
- Carpet tile.
- Porcelain Tile B. Removal of existing floor coverings.
- C. Preparation of new and existing concrete floor slabs for installation of floor coverings. D. Testing of concrete floor slabs for moisture and alkalinity (pH).
- E. Remediation of concrete floor slabs due to unsatisfactory moisture or alkalinity (pH) conditions.
- 1. Contractor shall perform all specified remediation of concrete floor slabs. If such remediation is indicated by testing agency's report and is due to a condition not under Contractor's control or could not have been predicted by examination prior to entering into the contract, a contract modification will be issued. F. Patching compound.

G. Remedial floor coatings. H. Remedial floor sheet membrane.

- 1.03 ADMINISTRATIVE REQUIREMENTS
- A. Coordinate scheduling of cleaning and testing, so that preliminary cleaning has been completed for at least 24 hours prior to testing.

1.04 SUBMITTALS

- A. Visual Observation Report: For existing floor coverings to be removed. B. Floor Covering and Adhesive Manufacturers' Product Literature: For each specific combination of substrate, floor covering, and adhesive to be used; showing:
- 1. Moisture and alkalinity (pH) limits and test methods. 2. Manufacturer's required bond/compatibility test procedure.
- C. Testing Agency's Report: 1. Description of areas tested; include floor plans and photographs if helpful.
- 2. Summary of conditions encountered. 3. Moisture and alkalinity (pH) test reports.
- 4. Copies of specified test methods.
- 5. Recommendations for remediation of unsatisfactory surfaces. 6. Submit report directly to Owner.
- 7. Submit report not more than two business days after conclusion of testing. D. Adhesive Bond and Compatibility Test Report.
- E. Copy of RFCI (RWP).

1.05 QUALITY ASSURANCE

- A. Moisture and alkalinity (pH) testing will be performed by an independent testing agency employed and paid by Owner. B. Testing Agency Qualifications: Independent testing agency experienced in the types of testing specified.
- 1. Submit evidence of experience consisting of at least 3 test reports of the type required, with project Owner's project contact information. C. Contractor's Responsibility Relating to Independent Agency Testing:
- 1. Provide access for and cooperate with testing agency. 2. Confirm date of start of testing at least 10 days prior to actual start.
- 3. Allow at least 4 business days on site for testing agency activities. 4. Achieve and maintain specified ambient conditions.
- 5. Notify Owner when specified ambient conditions have been achieved and when testing will start.

1.06 DELIVERY, STORAGE, AND HANDLING

- A. Deliver, store, handle, and protect products in accordance with manufacturer's instructions and recommendations. B. Deliver materials in manufacturer's packaging; include installation instructions.
- C. Keep materials from freezing.

1.07 FIELD CONDITIONS

- A. Maintain ambient temperature in spaces where concrete testing is being performed, and for at least 48 hours prior to testing, at not less than 65 degrees F or more than 85 degrees F. B. Maintain relative humidity in spaces where concrete testing is being performed, and for at least 48 hours prior to testing, at not less than 40 percent and not more than 60 percent.
- PART 2 PRODUCTS

2.01 MATERIALS

- A. Patching Compound: Floor covering manufacturer's recommended product, suitable for conditions, and compatible with adhesive and floor covering. In the absence of any recommendation from flooring manufacturer, provide a product with the following characteristics: 1. Cementitious moisture-, mildew-, and alkali-resistant compound, compatible with floor, floor covering, and floor covering adhesive, and capable of being feathered to nothing at edges. 2. Latex or polyvinyl acetate additions are permitted; gypsum content is prohibited.
- 3. Compressive Strength: 3000 psi, minimum, after 28 days, when tested in accordance with ASTM C109/C109M or ASTM C472, whichever is appropriate.
- B. Flooring Adhesive: Floor covering manufacturer's recommended product, suitable for the moisture and pH conditions present; low-VOC. In the absence of any recommendation from flooring manufacturer, provide a product recommended by adhesive manufacturer as suitable for substrate and floor covering and for conditions present. Basis-of-Design: ISE Logik MVBA 500.
- . Remedial Floor Coating: Single- or multi-layer coating or coating/overlay combination intended by its manufacturer to resist water vapor transmission to degree sufficient to meet flooring manufacturer's emission limits, resistant to the level of alkalinity (pH) found, and suitable for adhesion of flooring without further treatment. Barrier One with accelerator is acceptable product and should be utilized though-out all existing ground floor concrete slabs.

PART 3 EXECUTION

3.01 CONCRETE SLAB PREPARATION

- A. Follow recommendations of testing agency.
- B. Perform following operations in the order indicated 1. Existing concrete slabs (on-grade and elevated) with existing floor coverings:
- a. Visual observation of existing floor covering, for adhesion, water damage, alkaline deposits, and other defects. b. Removal of existing floor covering.
- 2. Existing concrete slabs with coatings or penetrating sealers/hardeners/dustproofers: a. Do not attempt to remove coating or penetrating material.
- b. Do not abrade surface. 3. Preliminary cleaning.
- 4. Moisture vapor emission tests; 3 tests in the first 1000 square feet and one test in each additional 1000 square feet, unless otherwise
- indicated or required by flooring manufacturer. 5. Internal relative humidity tests; in same locations as moisture vapor emission tests, unless otherwise indicated.
- 6. Alkalinity (pH) tests; in same locations as moisture vapor emission tests, unless otherwise indicated. 7. Specified remediation, if required.
- 8. Patching, smoothing, and leveling, as required. 9. Other preparation specified.
- Adhesive bond and compatibility test 11. Protection.
- C. Remediations:
- 1. Active Water Leaks or Continuing Moisture Migration to Surface of Slab: Correct this condition before doing any other remediation; retest after correction. 2. Excessive Moisture Emission or Relative Humidity: If an adhesive that is resistant to the level of moisture present is available and acceptable to flooring manufacturer, use that adhesive for installation of the flooring; if not, apply remedial floor coating or remedial sheet
- membrane over entire suspect floor area. 3. Excessive Alkalinity (pH): If remedial floor coating is necessary to address excessive moisture, no additional remediation is required; if not, if an adhesive that is resistant to the level present is available and acceptable to the flooring manufacturer, use that adhesive for installation of the flooring; otherwise, apply a skim coat of specified patching compound over entire suspect floor area.
- 3.02 REMOVAL OF EXISTING FLOOR COVERINGS

A. Comply with local, State, and federal regulations and recommendations of RFCI Recommended Work Practices for Removal of Resilient Floor Coverings, as applicable to floor covering being removed.

B. Dispose of removed materials in accordance with local, State, and federal regulations and as specified.

3.03 PRELIMINARY CLEANING

A. Clean floors of dust, solvents, paint, wax, oil, grease, asphalt, residual adhesive, adhesive removers, film-forming curing compounds, sealing compounds, alkaline salts, excessive laitance, mold, mildew, and other materials that might prevent adhesive bond. B. Do not use solvents or other chemicals for cleaning. Shot blasting may be required in areas scheduled for tiling or resilient flooring to achieve the manufacturer's recommendation of cleanliness prior to application.

3.04 MOISTURE VAPOR EMISSION TESTING

- A. Where the floor covering manufacturer's requirements conflict with either the referenced test method or this specification, comply with the manufacturer's requirements. B. Where this specification conflicts with the referenced test method, comply with the requirements of this section.
- C. Test in accordance with ASTM F1869 and as follows. D. Plastic sheet test and mat bond test may not be substituted for the specified ASTM test method, as those methods do not quantify the
- moisture content sufficiently. E. In the event that test values exceed floor covering manufacturer's limits, perform remediation as indicated. In the absence of manufacturer limits, perform remediation if test values exceed 3 pounds per 1000 square feet per 24 hours. F. Report: Report the information required by the test method.
- 3.05 ALKALINITY TESTING
- A. Where the floor covering manufacturer's requirements conflict with either the referenced test method or this specification, comply with the manufacturer's requirements. B. The following procedure is the equivalent of that described in ASTM F710, repeated here for the Contractor's convenience. 2. Use a wide range alkalinity (pH) test paper, its associated chart, and distilled or deionized water.
- D. Place several drops of water on a clean surface of concrete, forming a puddle approximately 1 inch in diameter. Allow the puddle to set for approximately 60 seconds, then dip the alkalinity (pH) test paper into the water, remove it, and compare immediately to chart to determine alkalinity (pH) reading.
- E. In the event that test values exceed floor covering manufacturer's limits, perform remediation as indicated. In the absence of manufacturer limits, perform remediation if alkalinity (pH) test value is over 10.
- 3.06 PREPARATION
- A. See individual floor covering section(s) for additional requirements.
- B. Comply with requirements and recommendations of floor covering manufacturer. C. Fill and smooth surface cracks, grooves, depressions, control joints and other non-moving joints, and other irregularities with patching
- D. Do not fill expansion joints, isolation joints, or other moving joints.
- 3.07 ADHESIVE BOND AND COMPATIBILITY TESTING
- A. Comply with requirements and recommendations of floor covering manufacturer.

- 3.08 APPLICATION OF REMEDIAL FLOOR COATING
- A. Comply with requirements and recommendations of coating manufacturer.
- END OF SECTION 09 05 61

099723 CONCRETE AND MASONRY COATINGS

PART 1 - GENERAL

1.01 SUMMARY

- A. Section Includes: 1. Interior Masonry Dustproofer is applied to interior exposed masonry, brick, terrace B. Related Sections:
- 1. Section 01 33 00 Submittal Procedures. 2. Section 04 01 10 - Unit Masonry Cleaning.
- 3. Section 04 20 00 Unit Masonry.

1.02 REFERENCES

- A. Definitions: the masonry dustproofer. B. Reference Standards: 1. The date of the standard is that in effect as the date of receipt of bids for the project.
- 2. Living Building Challenge (LBC). 3. ASTM International (ASTM): a. D2369- Standard Test Method for Volatile Content of Coatings.
- 1.03 SUBMITTALS
- . Submit manufacturer's instructions for methods and application procedures. D. Submit manufacturer's certification indicating masonry dustproofer treatment conforms to or Exceeds requirements stated herein.

1.04 QUALITY ASSURANCE

- interior masonry dustproofing application.
- C. Tests and Approvals: 1. Sample Area:
- typically gains its water repellency properties in 72 hours.]
- procedures planned for general application

1.05 PROJECT CONDITIONS

4. Surfaces should be dry.

A. Interior Masonry Dustproofer [Coating]:

their naturalappearance.

B. Small Scale Application: Brush or Rollers.

C. Allow surfaces to dry prior to application.

3.02 INTERIOR DUSTPROOFING APPLICATION

Do NOT dilute the interior masonry dustproofer.

C. Correct damage by cleaning, as approved by A/E.

A. This Section is meant to apply to the following:

Ceiling fascias and soffits enclosures.

1. Steel Studs and Runners: ASTM C 645, in depth indicated.

1. Interior gypsum wallboard.

2. Non-load-bearing steel framing.

a. Do not spray apply at pressures exceeding 50 psi.

end of each elevation to the other.

Spray Application:

3.03 PROTECTION

END OF SECTION 09 97 23

PART 1 - GENERAL

PART 2 - PRODUCTS

2.1 STEEL FRAMING

A. Partition and Soffit Framing:

B. Minimum Base Metal Thickness: 20ga.

members to substrates.

B. Gypsum Wallboard: ASTM C 36

2.4 JOINT TREATMENT MATERIALS

A. General: Comply with ASTM C 475

1. Type X: Thickness 5/8" with long edges tapered.

1. Cornerbead: Use at outside corners.

2. LC-Bead: Use at exposed panel edges.

1. Interior Gypsum Wallboard: Paper.

fibers manufactured from glass, slag wool, or rock wool.

A. Interior Trim: ASTM C 1047. Standard eelctro-galvanized steel products.

2.2 PANEL PRODUCTS

2.3 TRIM ACCESSORIES

indicated.

B. Joint Tape:

successive coats.

taping compound.

END OF SECTION 092500

1.1 SUMMARY

092500 - GYPSUM WALLBOARD

3. Approved Products:

2. Physical and Performance Properties:

PART 2 PRODUCTS

2.01 MATERIALS

2.02 EQUIPMENT

PART 3 EXECUTION

3.01 PREPARATION

5. Apply only in well ventilated areas.

A. Protection:

7. All caulking (sealants) should be cured prior to application.

a. Total Solids per ASTM D2369: Four (4) percent.

c. Living Building Challenge Red List Compliant.

	PART 1 - GENERAL
cotta, and mortar, at walls and exposed decking.	 DESCRIPTION Related Work Specified Elsewhere. The General Conditions state that the Contract Documents are complementary. Temporary facilities and controls are specified in Section 01500. Cooperate in ensuring adequate protection. General material, equipment, and workmanship standards are specified in Section 01600.
	1.2 QUALIFICATIONSA. The manufacturers and products included in the finish legend are approved: Architect will not consider any substitutions.
	1.3 SUBMITTALS

1. Wet-on-Wet Application: Wet-on-wet is a technique in which the masonry dustproofer is applied to the previously applied, still wet, application of

A. General: Submit the following according to the Conditions of the Contract and Division 01 General Requirements specification sections. B. Submit product data including detailed test results of materials applied to surfaces similar to requirements of this Section.

A. The Contractors involved with work covered by this Section shall have had a minimum of three (3) years of experience using specified techniques for B. Tradesman must be competent and experienced and shall demonstrate reasonable care during performance of operations described in this Section.

a. Contractor shall apply a test area of wall surface from four square feet in size for inspection and approval by the Owner's Representative after treatment has cured. Test area shall be available for comparison during the specified scope of work. [Interior Masonry Dustproofer b. Sample Area should be used to confirm suitability, coverage rate, and desired results before beginning the overall application.

c. Include in the test area any previous repairs and patches, including aesthetic cementitious finishes. Different surface compositions may result in absorption and/or appearance differences. Test with the same equipment, recommended surface Preparation, and application 2. If any part of this work shall be found defective (because of improper preparation of surfaces or application of treatment) at any time before the final acceptance of the item, the Contractor shall, at his own expense, make good such defect to the satisfaction of the A/E.

. Contractor shall provide, at all times, covered access to premises and necessary utilities, space for storage of material and equipment, etc. 2. All activities shall be in compliance with local and governmental regulations and codes. 3. The surface and atmospheric temperature should be at least 40 degrees Fahrenheit and rising during application and for eight hours following. Surface and air temperatures should not exceed 95 degrees Fahrenheit.

6. Newly re-pointed and constructed surfaces should cure for 28 days before application. 8. The Contractor shall require applicators to observe safety precautions as outlined on containers and labels.

1. Use breathable, clear-drying, penetrating, water-based silicone emulsion for dustproofing interior masonry, brick, terra cotta, and mortar, materials and protecting them from further dusting, while protecting from efflorescence, mildew and other moisture-related stains without altering

b. Comply with national, state, and district AIM VOC regulations.

a. "Sure Klean Weather Seal Interior Masonry Dustproofer"; PROSOCO, Inc. (800-255-4255) (Basis of Design).

A. Spray Equipment: Provide equipment for controlled spray application of [interior masonry dustproofer], at rates indicated for pressure, measured at spray tip, and for volume. Adjust pressure and volume, as required, to ensure not to damage [masonry][brick][mortar][natural stone]. 1. Fan spray tips are recommended to avoid atomization of the material.

A. Verify surfaces to receive interior masonry dustproofer are absorbent and free of debris, or other foreign matter detrimental to application. B. Remove loose particles and foreign matter. Brush or vacuum debris from the surface. Remove grease or oil with a solvent, effective alkaline cleaner, or detergent as recommended by the interior masonry dustproofer manufacturer.

). Protect all surrounding areas as recommended by the manufacturer or as directed by the Architect. E. Ensure fresh air entry and cross ventilation during application and drying.

A. Test each surface and/or material to be treated to ensure compatibility and desired water-resistanttreatment results. The surface to be treated must be clean and free of all foreign matter and as dry as possible to ensure proper penetration of interior masonry dustproofer treatment.

2. Proceed with application in an orderly manner once the application rate has been tested; work from bottom to top of each scaffold width and from one . Apply to dry surfaces that comply with manufacturer's written instructions; use brush or spray application methods, at Contractor's option. Preferred method of application is with low pressure, spray equipment. Use roller or brush for small scale applications or when spray applications are

not appropriate. Apply in coverage rate as recommended by manufacturer for type of material. 1. Uniformly saturate the surface using the "wet-on-wet" application method from bottom up, creating a 6 to 8 inch rundown below the spray contact point. Avoid excessive overlapping. Apply in accordance with manufacturer recommendation.

2. Let the interior masonry dustproofer penetrate for 2 to 3 minutes. 3. Immediately brush out heavy runs and drips to prevent buildup.

A. Protect adjacent surfaces not scheduled to receive treatment. If applied on unscheduled surfaces, remove immediately, by manufacturer approved B. Protect treated surfaces from water for at least 6 hours after application.

1. Deep-Leg Deflection Track: ASTM C 645 top runner with 2-inch-deep flanges. 2. Hat-Shaped, Rigid Furring Channels: ASTM C 645, in depth indicated. 3. Resilient Furring Channels: 1/2-inch deep, steel sheet members designed to reduce sound transmission. Asymmetrical or hat shaped, with face attached to single flange by a slotted leg (web) or attached to two flanges by slotted or expanded metal legs. 4. Fasteners for Metal Framing: Of type, material, size, corrosion resistance, holding power, and other properties required to fasten steel

A. Panel Size, General: Provide in maximum lengths and widths available that will minimize joints in each area and correspond with support system

C. Joint Compound for interior Gypsum Wallboard: For each coat use formulation that is compatible with other compounds applied on previous or for

1. Prefilling: At open joints and damaged surface areas, use setting-type taping compound. 2. Embedding and First Coat: For embedding tape and first coat on joints, flanges of trim accessories, and fasteners, use setting-type

D. Use setting-type compound for installing paper-faced metal trim accessories. . Fill Coat: For second coat, use setting-type, sandable topping compound. Finish coat: For third coat, use setting-type, sandable topping compound.

E. 2.5 Sound Attenuation Blanket: ASTM C 665, Type 1 (blanket without membrane facing) produced by combining thermosetting resins with mineral 1. Rire-Resistence Rated Assemblies: Comply with mineral - fiber requirements of the assembly.

D. Submit list of underlayment, adhesives and cements, and other products to be used. 1.4 ENVIRONMENTAL CONDITIONS A. Temperatures before and after installation shall be minimum 65 degrees F for 48 hours. A minimum temperature of 55 degrees F shall be

A. Submittals Requirements and Procedures are specified in Section 013000.

If requested, submit full size samples of selected floor tiles.

SECTION 096500 - RESILIENT FLOORING (See also Finishes Drawings)

maintained after installation. PART 2 - PRODUCTS

- 2.1 MATERIALS
- A. Luxury vinyl tile: Refer to finish legend B. Resilient base: Cove Base, resilient top set, refer to finish legend.
- . Rubber Stair Treads and Risers: Refer to finish legend. . Transition strips: Refer to flooring transition sill details. Color will be selected by Architect.
- Vinvl Composition Tile: Refer to finish legend F. Adhesives: Products recommended by manufacturers of finish products for the materials and conditions applicable on this job. Where color

3. Submit complete range of selected manufacturer's samples of all finish products for Architect's selection.

variation is normal, distribute such variation randomly. PART 3 - EXECUTION

3.1 PREPARATION

- A. Preparation shall conform to the requirements and recommendations of the publication, Addressing Moisture Related Problems Relevant to Resilient Floor Coverings Installed over Concrete, 1985, published by the Resilient Floor Covering Institute.
- B. Examine surfaces to receive resilient flooring. Report defects which do not conform to the requirements specified in the paragraph above and conditions which are likely to have adverse effects on resilient flooring to Architect in writing.
- C. Clean surfaces to receive resilient flooring. If recommended by manufacturer, prime surfaces.
- 3.2 Installation
- A. Apply adhesives to clean or strip substrates as recommended by manufacturer. Lay tile parallel with main axis of space unless shown otherwise. B. Install cove base tight to wall. Install in maximum lengths recommended by manufacturer. . Install edge strip where flooring ends adjacent to another flooring material.

D. All locations where materials transition at doors, locate seam at centerline of door unless otherwise noted.

END OF SECTION 096500

SECTION 096800 - CARPET TILE (See also Finish Schedule)

PART 1 - GENERAL

1.1 SUBMITTALS A. Submit full size samples of selected carpet tiles.

- B. Submit list of underlayment, adhesives and cements, and other products to be used.
- PART 2 PRODUCTS

2.1 MATERIALS A. Modular carpet tile per finish schedule.

PART 3 - EXECUTION

3.1 INSTALLATION

A. Wet spread with backing specific adhesives as recommended by manufacturer. B. Installation Pattern: Ashlar pattern per finish schedule.

END OF SECTION 096800

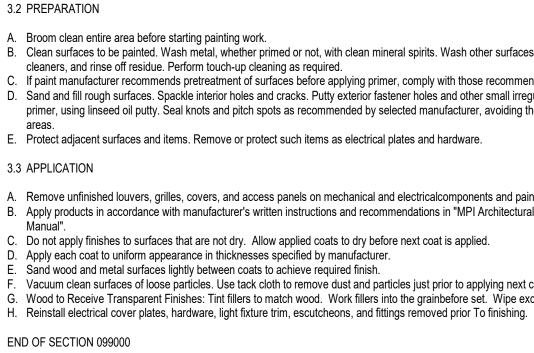
SECTION 099000 - PAINTING (See also Finishes Drawings)

PART 1 - GENERAL

- 1.1 SECTION INCLUDES
- A. Surface preparation. B. Field application of paints.

C. Scope: Finish interior surfaces exposed to view, unless fully factory-finished and unless otherwise

- 1. Both sides and edges of plywood backboards for electrical and telecom equipment before installing equipment. 2. Mechanical and Electrical:
- a. In finished areas, paint insulated and exposed pipes, conduit, boxes, insulated and exposed ducts, hangers, brackets, collars and supports, mechanical equipment, and electrical equipment, unless otherwise indicated. b. In finished areas, paint shop-primed items.
- c. Paint interior surfaces of air ducts and convector and baseboard heating cabinets that are visible through grilles and louvers with one coat of flat black paint to visible surfaces. d. Paint dampers exposed behind louvers, grilles, and convector and baseboard cabinets to match face
- Do Not Paint or Finish the Following Items: Items factory-finished unless otherwise indicated; materials and products having factory-applied primers are not considered factory finished.
- Items indicated to receive other finishes. 3. Items indicated to remain unfinished.
- 4. Fire rating labels, equipment serial number and capacity labels, bar code labels, and operating parts of equipment. 5. Floors, unless specifically indicated.
- 6. Ceramic and other tiles.
- Glass. 8. Acoustical materials, unless specifically indicated.
- 9. Concealed pipes, ducts, and conduits. A. Related Work Specified Elsewhere:
- 1. The General Conditions state that the Contract Documents are complementary. Temporary facilities and controls are specified in Section 01500. Cooperate in ensuring adequate protection.
- 3. General material, equipment, and workmanship standards are specified in Section 01600. 1.2 QUALITY ASSURANCE
- A. The following manufacturers are approved.
- Benjamin Moore or Sherwin Williams
- 1.3 SUBMITTALS
- A. Product Data: Provide complete list of products to be used, with the following information for each: 1. Manufacturer's name, product name and/or catalog number, and general product category (e.g., "alkyd enamel").
- 2. MPI product number (e.g., MPI #47).
- 3. Cross-reference to specified paint system(s) product is to be used in; include description of each system. Manufacturer's installation instructions. B. Samples: Submit three paper "draw down" samples, 8-1/2 by 11 inches in size, illustrating range of colors available for each finishing product
- 1. Where sheen is specified, submit samples in only that sheen. 2. Where sheen is not specified, discuss sheen options with Architect before preparing samples to eliminate sheens not required.
- C. Maintenance Data: Submit data including product technical data sheets, material safety datasheets (MSDS), care and cleaning instructions, touch-up procedures, and repair of painted and finished surfaces. D. Maintenance Materials: Furnish the following for Owner's use in maintenance of project.
- 1. See Section 01 60 00 Product Requirements, for additional provisions. 2. Extra Paint and Finish Materials: 1 gallon of each color; from the same product run, store where directed.
- 3. Label each container with color in addition to the manufacturer's label.
- 1.4 PRODUCT HANDLING
- A. Store products so as to minimize danger of fire and so as to protect building surfaces and equipment from spills. Do not store flammable materials in building. Refer to Section 01500, par. 1.9
- PART 2 PRODUCTS
- A. Paint I-OP Interior Surfaces to be Painted, Unless Otherwise Indicated: Including gypsum board, wood, uncoated steel, shop primed steel, and aluminum.
- 1. Two top coats and one coat primer. B. Paint WI-OP-3L - Wood, Opaque, Latex, 3 Coat:
- One coat of latex primer sealer. 2. Semi-gloss: Two coats of latex enamel.
- C. Paint MI-OP-3A Ferrous Metals, Unprimed, Alkyd, 3 Coat:
- 1. One coat of alkyd primer. Gloss: Two coats of alkyd enamel.
- D. Paint MI-OP-2A Ferrous Metals, Primed, Alkyd, 2 Coat:
- 1. Touch-up with alkyd primer. 2. Gloss: Two coats of alkvd enamel.
- E. Paint MgI-OP-3A Galvanized Metals, Alkyd, 3 Coat: 1. One coat galvanize primer.
- 2. Gloss: Two coats of alkyd enamel. F. Paint Mal-OP-3A - Aluminum, Unprimed, Alkyd, 3 Coat:
- 1. One coat etching primer. 2. Gloss: Two coats of alkyd enamel.
- G. Paint GI-OP-3L Gypsum Board/Plaster, Latex, 3 Coat:
- 1. One coat of latex primer sealer. 2. Eggshell: Two coats of latex enamel.
- H. Paint I E Interior Surfaces Two part Epoxy, at Toilet Rooms
- 1. One coat of fire-retardant primer sealer. 2. Gloss: One coat of intumescent coating, flame/smoke rating of 25/50.
- I. Paint FI-OP-3A Fabrics/Insulation Jackets, Alkyd, 3 Coat: 1. One coat of alkyd primer sealer.
- 2. Gloss: Two coats of alkyd enamel.



DIVISION 10 - SPECIALTIES SECTION 101400 - SIGNAGE PART 1 - GENERAL

DIVISION 13 - SPECIAL CONSTRUCTION (NOT USED)

PART 3 - EXECUTION 3.1 CONDITION OF SURFACES

A. If surfaces are not fit to receive paint properly, notify Architect in writing. Follow manufacturers' instructions concerning surface suitability. Do not apply paint to unfit surfaces.

A. Broom clean entire area before starting painting work.

B. Clean surfaces to be painted. Wash metal, whether primed or not, with clean mineral spirits. Wash other surfaces if dirty, with appropriate cleaners, and rinse off residue. Perform touch-up cleaning as required. C. If paint manufacturer recommends pretreatment of surfaces before applying primer, comply with those recommendations.

D. Sand and fill rough surfaces. Spackle interior holes and cracks. Putty exterior fastener holes and other small irregularities after applying primer, using linseed oil putty. Seal knots and pitch spots as recommended by selected manufacturer, avoiding the use of shellac in damp

A. Remove unfinished louvers, grilles, covers, and access panels on mechanical and electrical components and paint separately. B. Apply products in accordance with manufacturer's written instructions and recommendations in "MPI Architectural Painting Specification

C. Do not apply finishes to surfaces that are not dry. Allow applied coats to dry before next coat is applied. D. Apply each coat to uniform appearance in thicknesses specified by manufacturer.

E. Sand wood and metal surfaces lightly between coats to achieve required finish. F. Vacuum clean surfaces of loose particles. Use tack cloth to remove dust and particles just prior to applying next coat. G. Wood to Receive Transparent Finishes: Tint fillers to match wood. Work fillers into the grainbefore set. Wipe excess from surface.

1.1 GENERAL: Provide signage per documents for all rooms and for custom ConnCORP sign for 3rd floor elevator lobby

END OF SECTION 101400

DIVISION 11 - EQUIPMENT (NOT USED)

DIVISION 12 - FURNISHINGS (NOT USED)

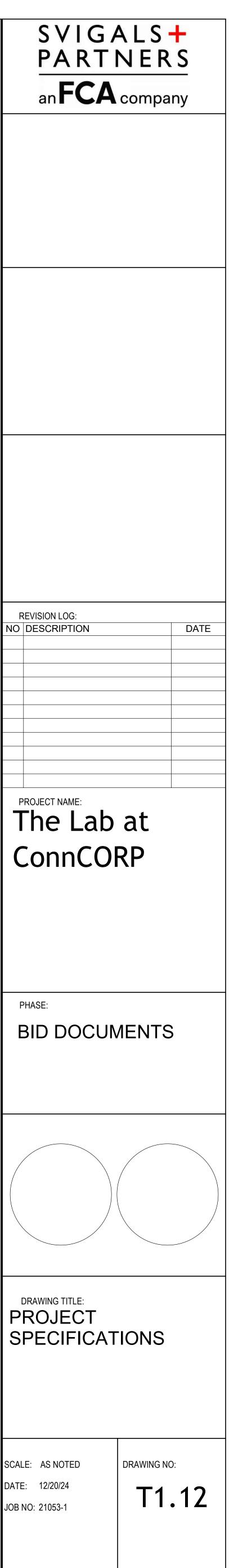
DIVISION 14 - CONVEYING SYSTEMS (NOT USED)

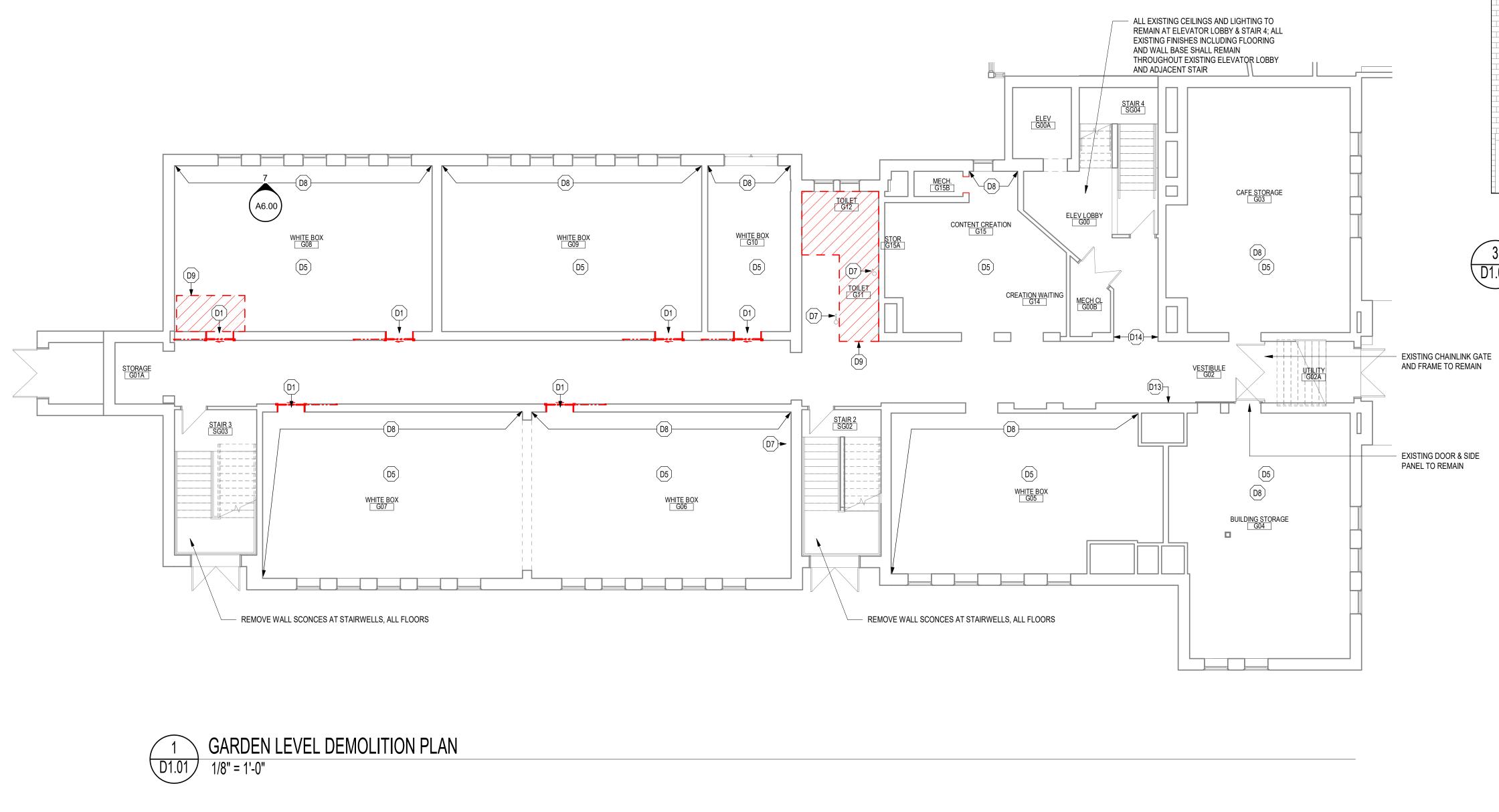
DIVISION 21 - FIRE SUPPRESSION - REFER TO FIRE PROTECTION DRAWINGS

DIVISION 22 - PLUMBING - REFER TO PLUMBING DRAWINGS

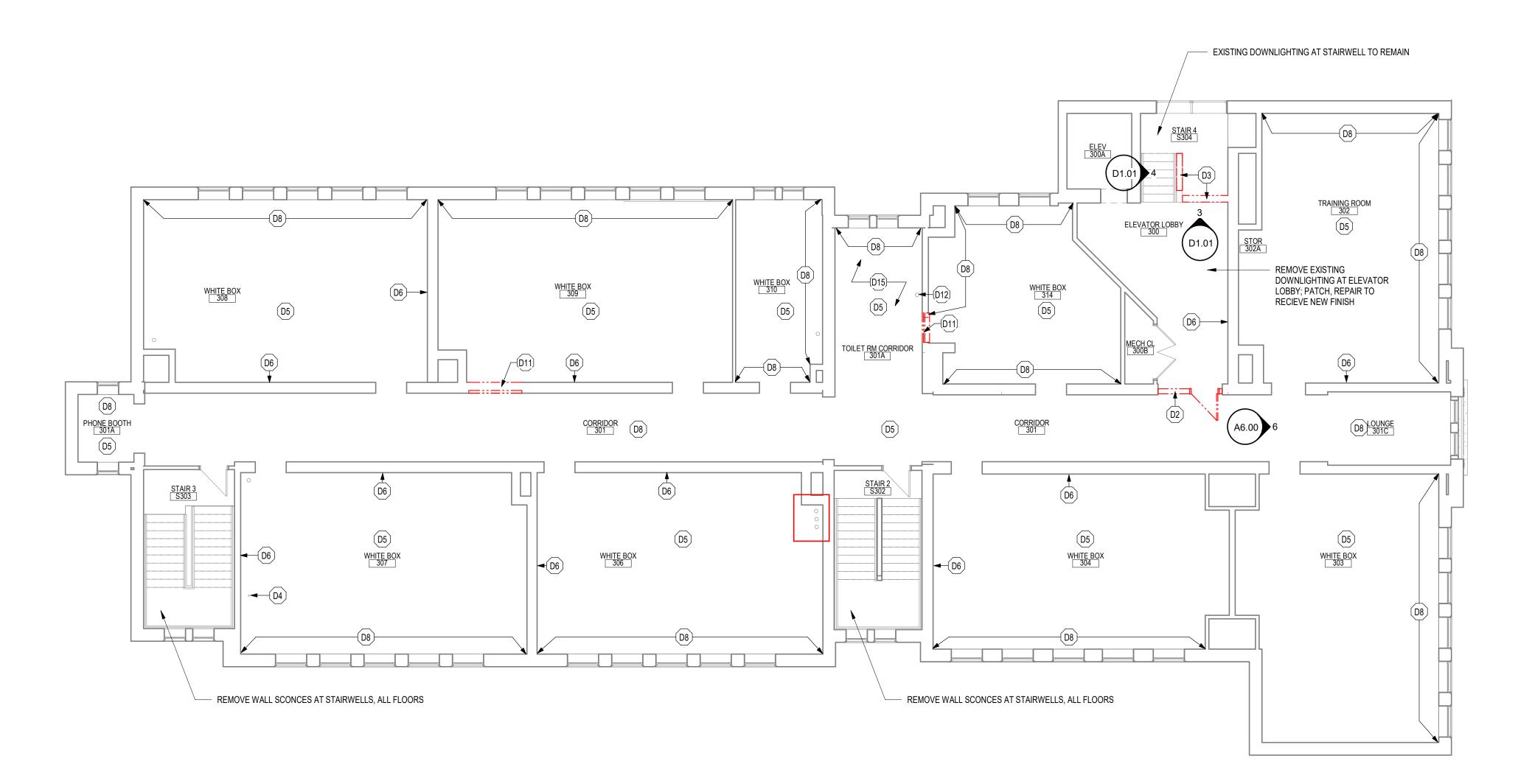
DIVISION 23 - MECHANICAL - REFER TO MECHANICAL DRAWINGS

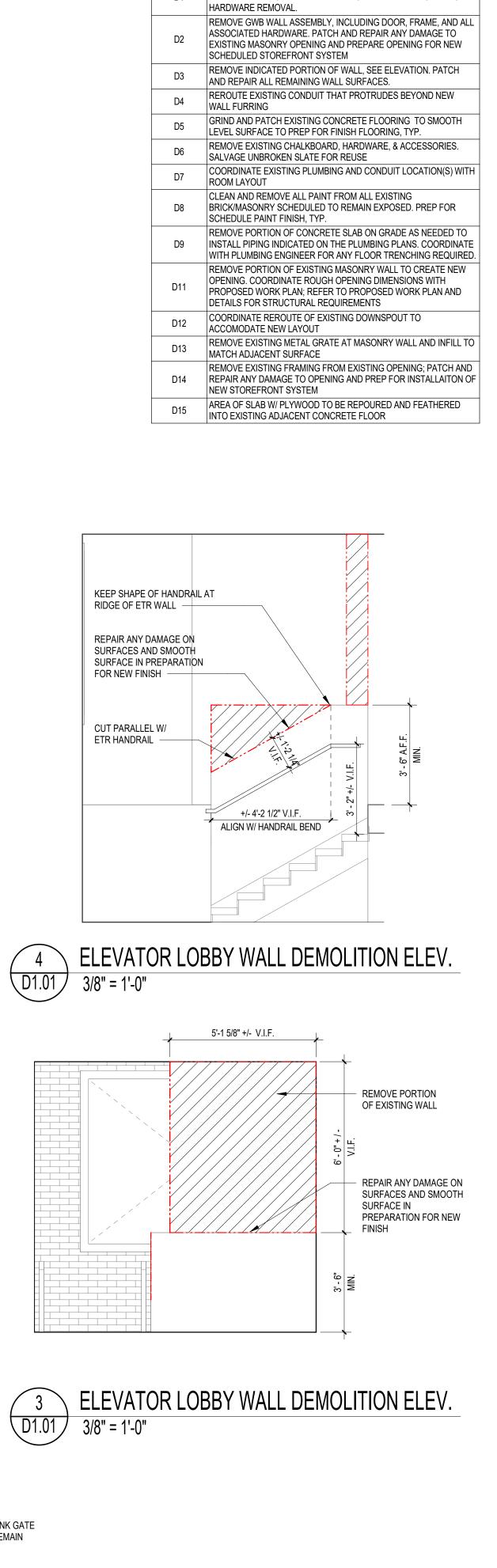
DIVISION 26 - ELECTRICAL - REFER TO ELECTRICAL DRAWING









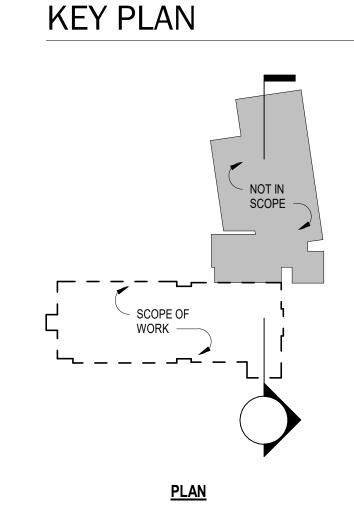


DEMO KEYNOTES

REMOVE EXISTING SLIDING DOOR, FRAME, AND ASSOCIATED D1 HARDWARE. PATCH AND REPAIR MASONRY PENETRATIONS FROM

KEYNOTE DESCRIPTION

		EXISTING ITEM TO BE REMOVED
		EXISTING WALL TO BE REMOVED. COORDINATE WITH
=:		STRUCTURAL PRIOR TO DEMOLITION AND PROVIDE SHORING AS REQ'D
		EXISTING WALL TO REMAIN
		EXISTING DOOR TO REMAIN
		EXISTING DOOR TO BE REMOVED
D	EMOLITI	ON GENERAL NOTES
	COMPLETE ALL REMOVE OR RE REMOVED OR R	NBOR, EQUIPMENT, MATERIALS AND COORDINATE AS REQUIRED TO DEMOLITION SCOPE SHOWN IN THESE DOCUMENTS. PAIR ANY ITEM NOT SPECIFICALLY IDENTIFIED, BUT REQUIRED TO BE EPAIRED TO PREPARE FOR THE NEW WORK OR OTHERWISE PRODUCE A
3.	ITEMS TO BE RE THERMOSTATS ARE SHOWN TO	UCT AS INDICATED IN THE DOCUMENTS. MOVED SHALL INCLUDE ALL ACCESSORIES (SUCH AS SWITCHES, OUTLETS, MILLWORK, ETC.) IN ANY AREA WHERE ADJOINING PARTITIONS BE REMOVED. REVIEW ANY QUESTIONABLE ITEMS TO BE REMOVED WITH
4.	DEMOLITION PL WINDOWS, ETC	⁻ BEFORE PROCEEDING. ANS SHOW THE APPROXIMATE LAYOUT OF EXISTING PARTITIONS, DOORS ., AND ARE NOT INTENDED TO REPRESENT EXACT AS-BUILT CONDITIONS.
	SELECTIVE DEM	ON SHALL BE VERIFIED IN FIELD BY THE CONTRACTOR. THE INTENT OF TH IOLITION WORK IS TO REMOVE EXISTING FIT-OUT CONSTRUCTION
	INDICATE ALL IT	NEW CONSTRUCTION TO PROCEED. THE DEMOLITION DRAWINGS MAY NO EMS TO BE REMOVED AND ARE TO BE USED AS A PART OF THE GENERAL ON SITE SURVEY TO DETERMINE THE COMPLETE SCOPE OF THE
-	DEMOLITION WO THE ON-SITE CO	DRK, AS INDICATED BY THE CONTRACT DOCUMENTS AND REQUIRED BY DNDITIONS.
5.	AND/OR AUTHO	LL SHUTDOWNS AND/OR SERVICE INTERRUPTIONS WITH THE OWNER RITIES HAVING JURISDICTION. NO SHUTDOWNS AND/OR SERVICE S SHALL TAKE PLACE WITHOUT WRITTEN AUTHORIZATION FROM THE
		E TO COORDINATE PROPOSED SHUTDOWNS IN A TIMELY FASHION IS NO
	DEMOLITION OF APPROVED DEM	ERATIONS SHALL TAKE PLACE ONLY WITHIN THE PARAMETERS OF THE IOLITION SCHEDULE.
7.	WITH LOCAL FIF	DRARY UTILITIES, SAFETY DEVICES, FIRE PROTECTION IN ACCORDANCE RE DEPARTMENT, BARRIERS, ETC., AS REQUIRED, TO MAINTAIN A SAFE
8.	PATCH AND/OR	RONMENT DURING DEMOLITION OPERATIONS. REPAIR ANY ITEMS TO REMAIN THAT ARE DAMAGED BY REMOVAL REFINISH TO MATCH EXISTING ADJACENT FINISH, OR AS NOTED HEREIN.
	DOCUMENT ANY PRIOR TO PRICI	Y PRE-EXISTING DAMAGE AND NOTIFY THE ARCHITECT OF ANY DAMAGE NG OR, AFTER AWARD, PRIOR TO PROCEEDING WITH ADJACENT WORK.
9.	WHERE FINISHE ETC., UTILIZE A	S ARE TO BE REMOVED, SUCH AS FLOORING, BASE, WALLCOVERING, HIGH "STANDARD OF CARE" DURING REMOVAL TO MAINTAIN A SMOOTH
10.	SCRAPE AND R	STRATE WHICH CAN BE PREPARED TO RECEIVE NEW FINISHES. EMOVE ALL EXISTING IRREGULAR MATERIALS WHICH CAUSE RISES OR N THE ELOOPING SUBFACE, SUCH AS EASTENERS, OUTLET CORES
	COVER PLATES	N THE FLOORING SURFACE, SUCH AS FASTENERS, OUTLET CORES, , RESILIENT FLOOR COVERINGS, CARPET, CARPET PAD, FLASH PATCH, , PLYWOOD, ETC.
	TERMINATE AND CONDUITS, DEV	D REMOVE ALL PROJECT-RELEVANT POWER AND COMMUNICATION ICES, RACEWAYS, ETC., BACK TO PANELS OR JUNCTIONS.
12.	ALL DEVICES IN BROUGHT BACK	PARTITIONS SLATED TO BE REMOVED, SHALL ALSO BE REMOVED, TO SOURCE OR RE-ROUTED / RELOCATED TO MAINTAIN FUNCTIONALITY
13.		SPECIFICALLY IDENTIFIED, BUT REQUIRED TO BE REMOVED OR REPAIRE OR NEW WORK AS SHOWN IN THE CONTRACT DOCUMENTS, IS THE
14.	RESPONSIBILITY	Y OF THE GENERAL CONTRACTOR. ATERIALS IN A WORKMANLIKE MANNER AS APPROVED BY THE OWNER.
	OPENINGS, HOL DIMENSIONS RE	ES, ETC., SHALL BE NEATLY CUT, PLUMB, SQUARE, AND TRUE TO THE EQUIRED.
	SPECIFICATION	
	WITH THE OWN	S OR MATERIALS INDICATED TO BE REUSED OR SALVAGED. COORDINATE ER FOR DELIVERY OF SALVAGED ITEMS OR MATERIALS. SURFACES OF FINISHES WHICH ARE SCRATCHED, MARRIED OR
	OTHERWISE DA	MAGED BY THE INSTALLATION, MOVEMENT OR REMOVAL OF EQUIPMENT ITH DEMOLITION PROCEDURES (E.G. SCAFFOLDING, CONTAINERS, ETC.)
18.	SHALL BE MAIN	Y SYSTEMS SHALL REMAIN ACTIVE DURING DEMOLITION. THE SPACE TAINED AND LEFT IN A SAFE CONDITION. ALL FLOOR OPENINGS, HAZARDS
19.	PROVIDE PROP	DNDITIONS SHALL BE IDENTIFIED AND THE GENERAL CONTRACTOR SHALL ER NOTIFICATION AND OBSTACLES TO SECURE PUBLIC SAFETY. "EMS TO REMAIN THAT ARE EXPOSED TO SELECTIVE DEMOLITION. LOCAT
5.	DUST-PROOF TH WORK/OCCUPIE	EMPORARY BARRIERS/PARTITIONS AS REQUIRED TO CONTROL ED AREAS. ALL FIRE EGRESS AND LIFE SAFETY ROUTES FOR OCCUPIED
20.	SCHEDULE ALL	REMAIN ACCESSIBLE DURING ALL PHASES OF WORK. SHUTDOWNS THAT AFFECT UTILITIES AND PORTIONS OF THE BUILDING AAN IN OPERATION WITH THE OWNER AND PROPER AUTHORITIES PRIOR
21	TO IMPLEMENTI	<i>I</i> AIN IN OPERATION WITH THE OWNER AND PROPER AUTHORITIES PRIOR NG. ORK SHALL BE SCHEDULED AT ALL TIMES AND BE SUBJECT TO THE
	DIRECTION AND TO OCCUPIED A	APPROVAL OF THE OWNER AND IMPLEMENTED WITHOUT DISTRIBUTION REAS OF THE BUILDING SURROUNDING THE DEMOLITION ZONE.
22.	CLEAN AND FRE	HALKBOARD SLATE SHOWN TO BE REUSED OR SALVAGED, SHALL BE E OF DEFECTS, PROTECTED, SAVED AND REUSED, RETURNED TO
23.	FURNISH A SYS	K, OR DISPOSED OF AS DIRECTED. TEM OF TEMPORARY LIGHT AND POWER IN THE SPACE DURING D CONSTRUCTION.
24.	DESIGN, PROVID FRAMING, OR S	DE, ERECT, AND MAINTAIN NECESSARY TEMPORARY SHORING, BRACING, UPPORT WHERE LOAD BEARING STRUCTURAL OR SUPPORTING MEMBER
	OPERATIONS AI) BY CUT OR OPENINGS OR SUBJECT TO DAMAGE FROM DEMOLITION ND OTHERWISE AS REQUIRED FOR SAFETY OR TO PROTECT FINISH
25.		M DAMAGE. AL, ELECTRICAL AND PLUMBING DEMOLITION SHALL BE THE Y OF THE GENERAL CONTRACTOR AND SHALL COMPLY WITH ALL
~	APPLICABLE CO COUNTY, AND S	DES, ORDINANCES, RULES, REGULATIONS OF LOCAL CITY, TOWNSHIP, TATE REQUIREMENTS.
26.	NEW FLOOR FIN	PARE CONCRETE FLOOR SLABS AS REQUIRED TO RECEIVE SPECIFIED IISH. FILL AND FIRESTOP ALL OPENINGS IN FLOORS, CEILINGS AND OTHEF
27.	THE GENERAL (LIES TO MAINTAIN RATING INTEGRITY. CONTRACTOR SHALL IDENTIFY EQUIPMENT AND MATERIALS TO BE D COORDINATE THEIR METHODS OF REMOVAL, SAFE STORAGE,
28.	INVENTORY, ET PROVIDE A DUS	C. PRIOR TO START OF DEMOLITION WORK. T PROOF BARRIER AROUND AREAS OF CONSTRUCTION FOR DURATION C
	WORK. FOREIGI BUILDING VENT	N OBJECTS AND ODORS ARE TO BE PREVENTED FROM ENTERING THE ILATION SYSTEM.
∠9.	STRUCTURAL IN	REMOVE CONSTRUCTION WHICH MIGHT WEAKEN OR IMPAIR THE ITEGRITY OR STRENGTH OF THE STRUCTURAL FRAMING OR SUPPORT H ARE TO REMAIN.
30.	THE BUILDING A	ND SITE SHALL BE LEFT BROOM CLEAN & DRY AT THE END OF EACH DAY MPLETION OF ALL DEMOLITION WORK.
31.	ALL EXISTING P PARTITION LAYO	LUMBING PIPING TO REMAIN SHALL BE COORDINATED WITH NEW DUT AND ENCLOSED/CONCEALED. CONTRACTOR TO COORDINATE WITH
ბი	FIELD CONDITIC	ADJUSTMENTS REQUIRED TO ARCHITECTURAL LAYOUT DUE TO EXISTIN NS AND REVIEW WITH ARCHITECT PRIOR TO CONSTRUCTION.
J∠.	PER NEW LAYO	IECHANCIAL UNITS AND EQUIPMENT TO REMAIN SHALL BE CONCEALED UT. CONTRACTOR TO COORDINATE WITH ARCHITECT ANY ADJUSTMENTS .RCHITECTURAL LAYOUT DUE TO EXISTING FIELD CONDITIONS AND
33.	REVIEW WITH A	RCHITECTORAL LAYOUT DUE TO EXISTING FIELD CONDITIONS AND RCHITECT PRIOR TO CONSTRUCTION. RD FLOOR BRICK WANESCOTING TO REMAIN AT CORRIDOR. CLEAN AND
	PREP SURFACE ALL EXISTING M	TO RECEIVE NEW FINISH. ASONRY WALLS SCHEDULED TO REMAIN EXPOSED SHALL BE CLEANED
35.		SH, PAINT REMOVED AND SURFACE PREPPED TO RECEIVE NEW FINISH. GHT FIXTURES AND ASSOCIATED WIRING TO BE REMOVED THROUGHOUT
36.	PATCH AND REP	IK, U.N.O. PAIR ALL PENTRATIONS IN EXISTING MASONRY (EXAMPLE: SPRINKLER MATERIALS SHOULD MATCH EXISTING ADJACENT CONSTRUCTION.
	CONTRACTOR S TIMBER JOISTS,	SHALL CARRY AN ALLOWANCE FOR REPAIIR OF 10% OF EXISTING EXPOSE AS REQUIRED THROUGHOUT SCOPE OF THIRD FLOOR WORK.
20	CONTRACTOR S	SHALL CARRY AND ALLOWANCE FOR REPAIR AND PATCHING OF 5% OF

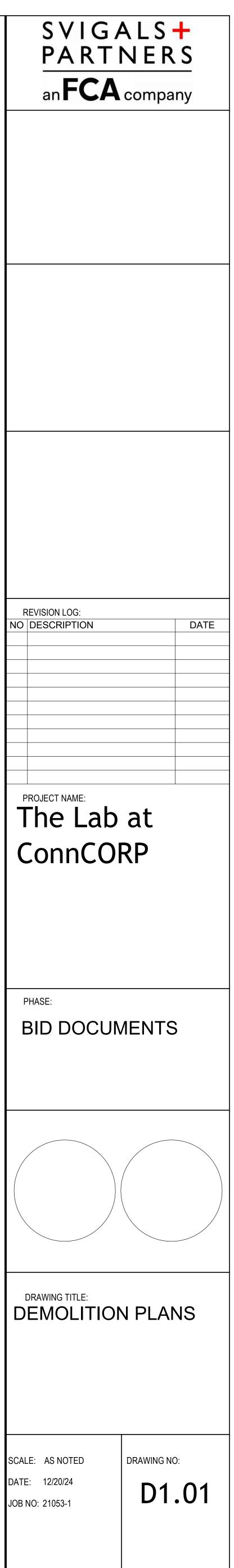


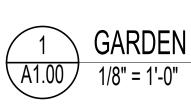
			
THIRD FLOOR			
·			
SECOND FLOOR			
	LOBBY	GYM	/ FIRST FLOOR
GARDEN LEVEL			/
GARDEN LEVEL			
	В	ASEMENT	

NOT IN SCOPE OF CONTRACT

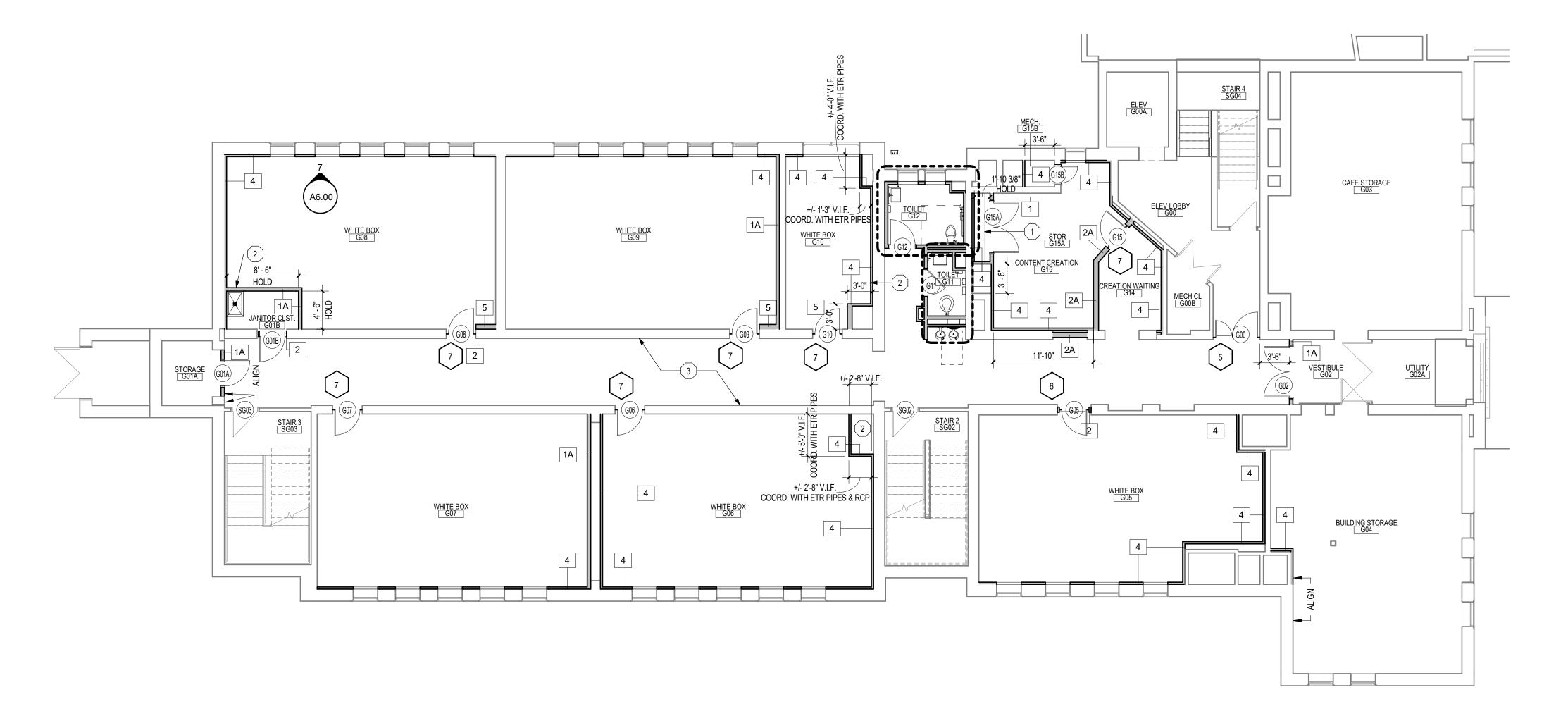
SECTION



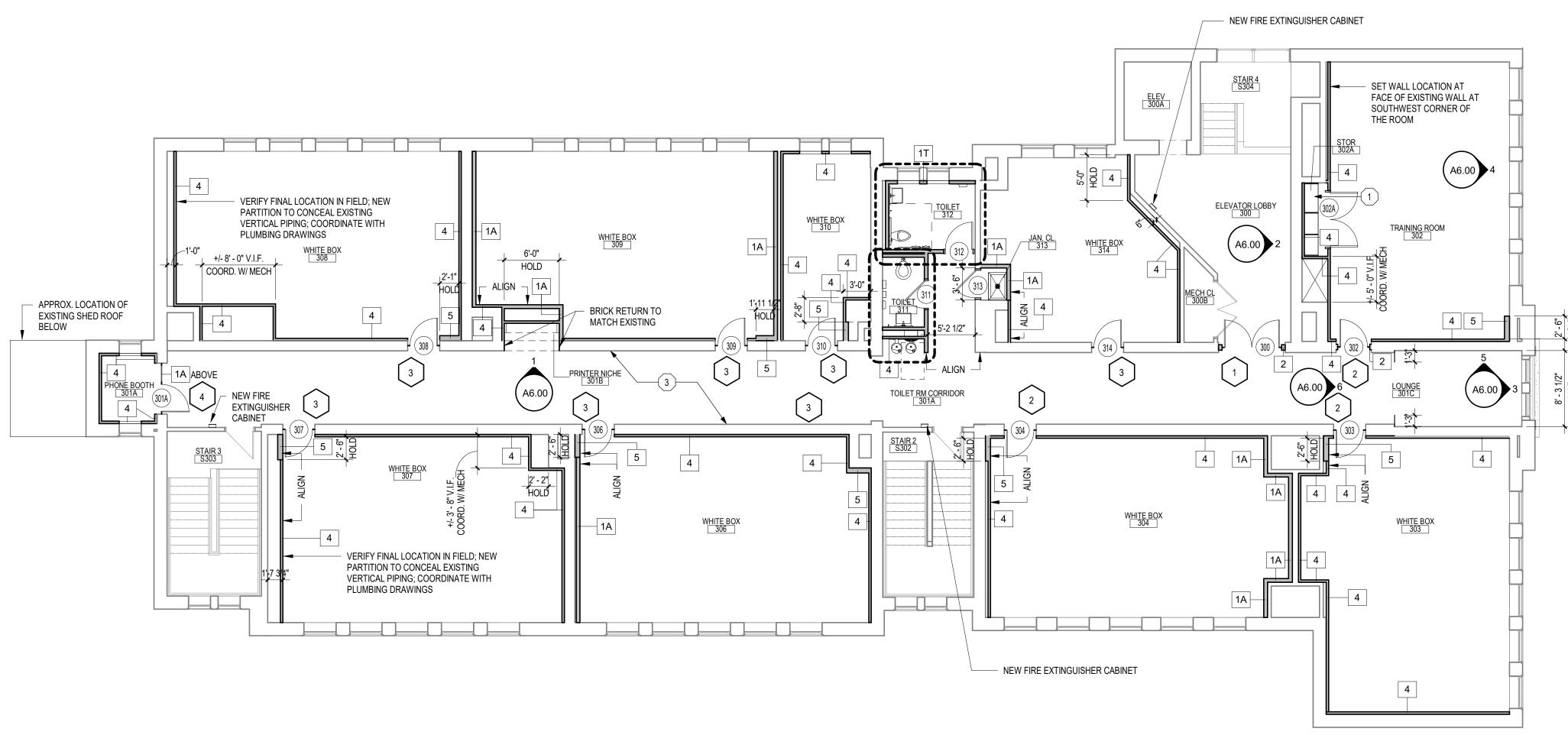




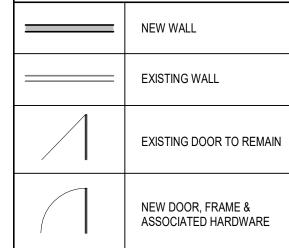
GARDEN LEVEL FLOOR PLAN 1/8" = 1'-0"







PLAN LEGEND



ARCH KEYNOTES

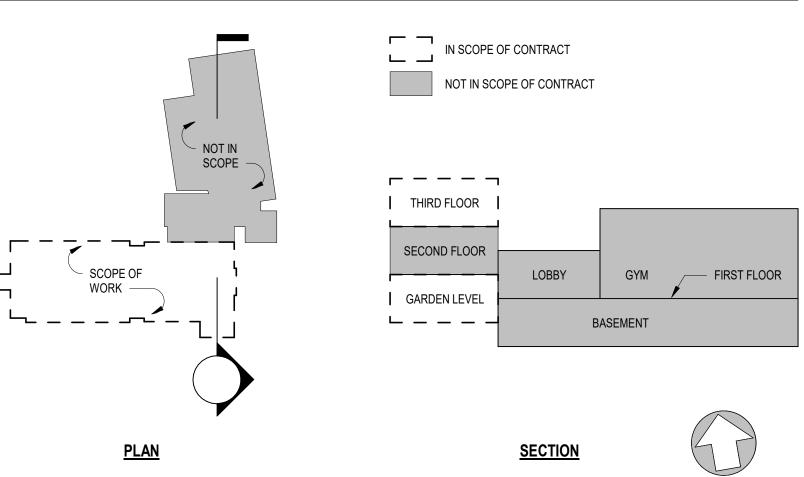
1 PROVIDE FULL HEIGHT PLASTIC LAMINATE ADJUSTABLE SHELVING WALL MOUNTED ON STANDARDS BRACKETS; REFER TO MILLWORK DETAILS. 2 COORDINATE EXISTING DOWNSPOUT LOCATION(S) WITH PARTITION LAYOUT	KEYNOTE	DESCRIPTION
WALL MOUNTED ON STANDARDS BRACKETS; REFER TO MILLWORK DETAILS. 2 COORDINATE EXISTING DOWNSPOUT LOCATION(S) WITH PARTITION		
	1	WALL MOUNTED ON STANDARDS BRACKETS; REFER TO MILLWORK
	2	
3 EXISTING PLASTER SURFACING AT CORRIDOR WALLS TO REMAIN; PATCH AND REPAIR AS NEEDED FOR FINAL PAINT FINISH (TYP)	3	

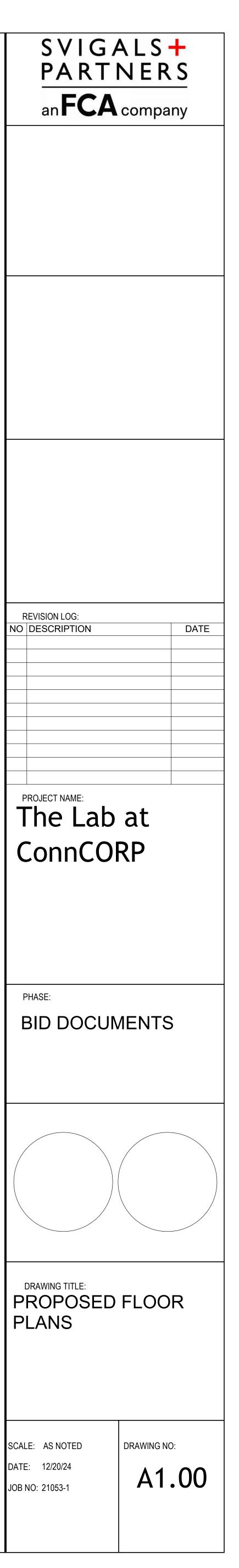
ARCH GENERAL NOTES

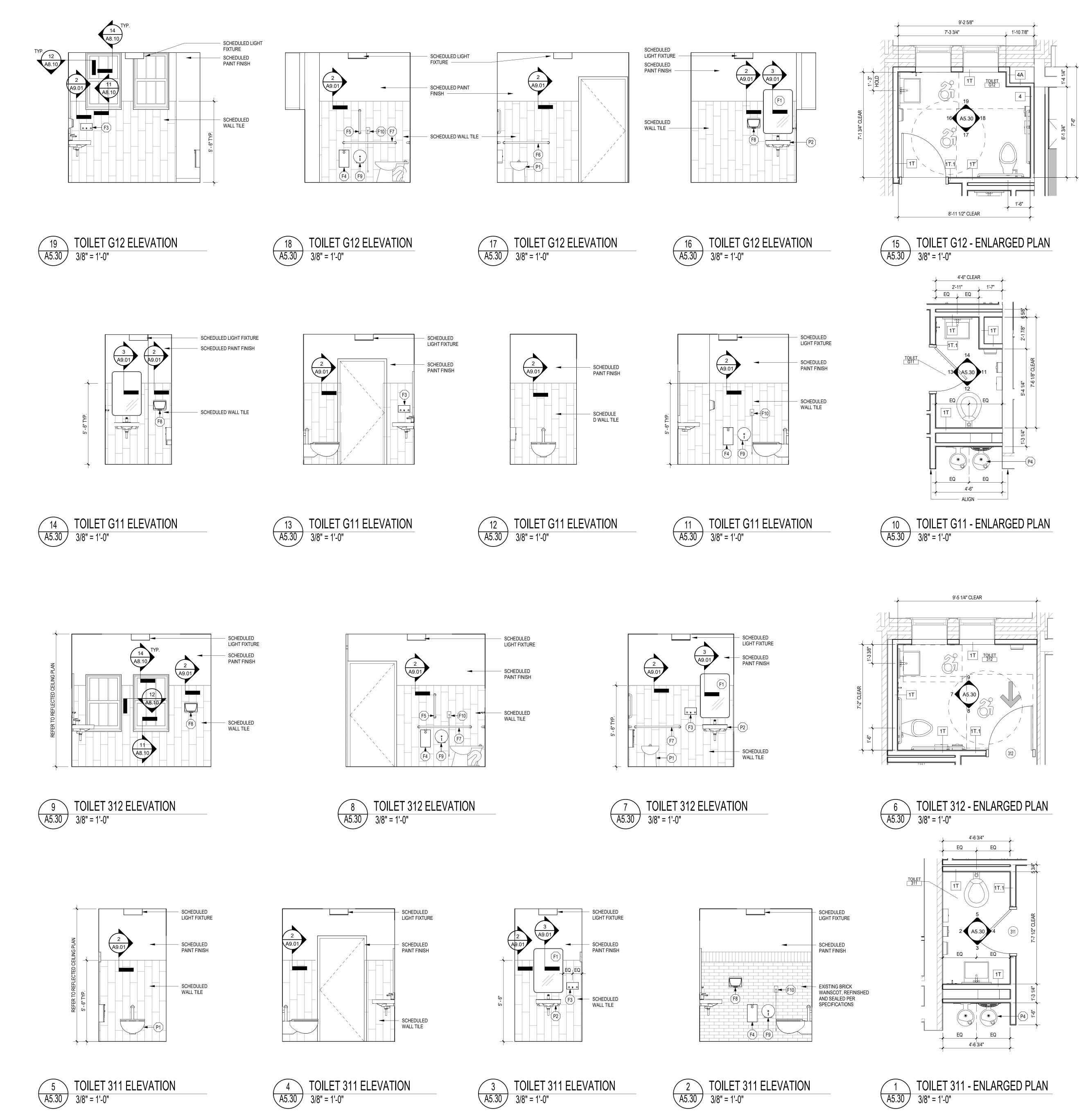
NOTED. REFER TO SPECIFICATION.

- 1. AT ALL OPENINGS SCHEDULED TO RECEIVE NEW STOREFRONT SYSTEM, PROVIDE CEMENT MORTAR INFILLAT MULTI-WYTHE BRICK JAMBS. PROVIDE
- SMOOTH PLASTER FINISH COAT AT JAMBS.
 WHERE ONE-SIDED PARTITIONS ARE SCHEDULED, LOCATE AS TIGHT AS POSSIBLE TO EXISTING WALL CONSTRUCTION; VERIFY IN FIELD LOCATION OF EXISITING MECHANICAL AND PLUMBING. COORDINATE FINAL SIZE OF
- ENCLOSURES WITH ARCHITECT.3. ALL EXISTING EXPOSED BRICK AND MASONRY SCHEDULED TO REMAIN EXPOSED SHALL RECEIVE DUSTPROOFER FINISH, UNLESS OTHERWISE

KEY PLAN

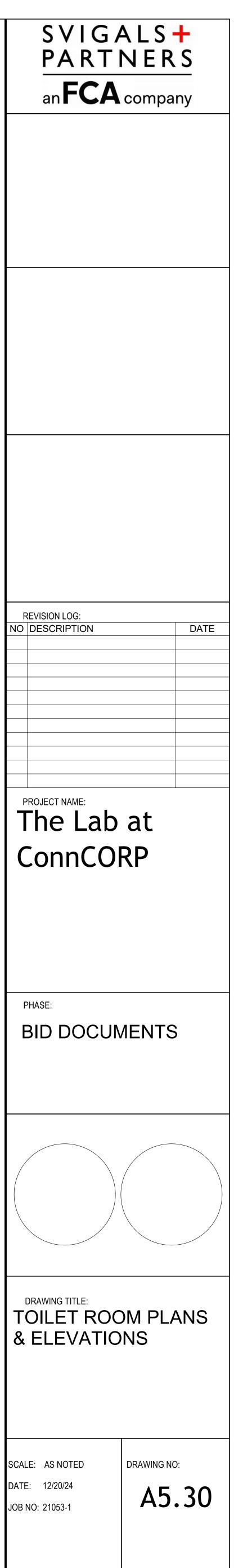


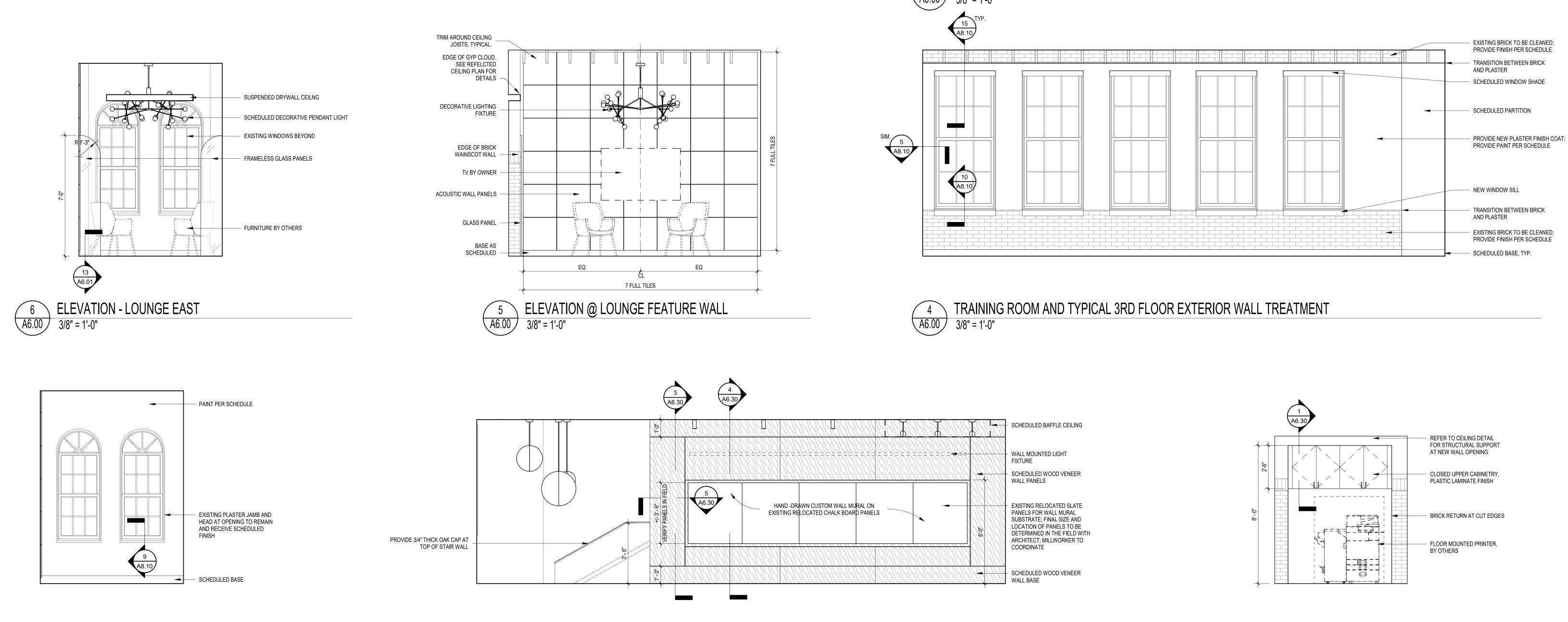




BATHROOM FIXTURE SCHEDULE							
TAG No.	DESCRIPTION	MANUFACTURER	MODEL NUMBER	FINISH	COMMENTS		
F1	24" x 36" MIRROR	KOHLER	K-31364	BGL - BRUSHED MODERNE GOLD	SEE MOUNTING HEIGHT REQUIREMENTS ON SHEET T1.03		
F1	24" x 36" MIRROR	KOHLER	K-31364	BGL - BRUSHED MODERNE GOLD	SEE MOUNTING HEIGHT REQUIREMENTS ON SHEET T1.03		
F1	24" x 36" MIRROR	KOHLER	K-31364	BGL - BRUSHED MODERNE GOLD			
F2	NOT USED	-	-	-			
F3	SOAP DISPENSER	BOBRICK	B-306	MBLK - MATTE BLACK	SEE MOUNTING HEIGHT REQUIREMENTS ON SHEET T1.03		
F3	SOAP DISPENSER	BOBRICK	B-306	MBLK - MATTE BLACK			
F4	SANITARY DISPOSAL	BOBRICK	B-35139	MBLK - MATTE BLACK	SEE MOUNTING HEIGHT REQUIREMENTS ON SHEET T1.03		
F5	18" GRAB BAR	BOBRICK	150CX18	MBLK - MATTE BLACK	SEE MOUNTING HEIGHT REQUIREMENTS ON SHEET T1.03. IN-WALL BLOCKING AS REQ'D FOR SUPPORT.		
F6	36" GRAB BAR	BOBRICK	150CX36	MBLK - MATTE BLACK	SEE MOUNTING HEIGHT REQUIREMENTS ON SHEET T1.03. IN-WALL BLOCKING AS REQ'D FOR SUPPORT.		
F7	42" GRAB BAR	BOBRICK	150CX42	MBLK - MATTE BLACK	SEE MOUNTING HEIGHT REQUIREMENTS ON SHEET T1.03. IN-WALL BLOCKING AS REQ'D FOR SUPPORT.		
F7	42" GRAB BAR	BOBRICK	150CX42	MBLK - MATTE BLACK			
F8	HAND DRYER	AMERICAN SPECIALTIES, INC	0199-1-41	41 - MATTE BLACK	SEE MOUNTING HEIGHT REQUIREMENTS ON SHEET T1.03		
F9	TOILET TISSUE DISPENSER	AMERICAN SPECIALTIES, INC	0042-41	41 - MATTE BLACK	SEE MOUNTING HEIGHT REQUIREMENTS ON SHEET T1.03		
F10	EMERGENCY CALL-FOR-AID				DOME LIGHT ABOVE DOOR - COORDINATE WITH ELECTRICAL DRAWINGS		
F11	COAT HOOK	BOBRICK	B-9542	MBLK - MATTE BLACK	APPLIED TO INTERIOR SIDE OF BATHROOM DOORS. SEE MOUNTING HEIGHT REQUIREMENTS ON SHEET T1.03		
P1	ADA COMPLIANT TOILET	COORDINATE W/ PLUMBING DRAWINGS	COORDINATE W/ PLUMBING DRAWINGS	COORDINATE W/ PLUMBING DRAWINGS	SEE MOUNTING HEIGHT REQUIREMENTS ON SHEET T1.03		
P1	ADA COMPLIANT TOILET	COORDINATE W/ PLUMBING DRAWINGS	COORDINATE W/ PLUMBING DRAWINGS	COORDINATE W/ PLUMBING DRAWINGS			
P1	ADA COMPLIANT TOILET	COORDINATE W/ PLUMBING DRAWINGS	COORDINATE W/ PLUMBING DRAWINGS	COORDINATE W/ PLUMBING DRAWINGS			
P2	LAVATORY & FAUCET	COORDINATE W/ PLUMBING DRAWINGS	COORDINATE W/ PLUMBING DRAWINGS	COORDINATE W/ PLUMBING DRAWINGS	SEE MOUNTING HEIGHT REQUIREMENTS ON SHEET T1.03. IN-WALL BLOCKING AS REQ'D FOR SUPPORT.		
P4	DRINKING FOUNTAIN	COORDINATE W/ PLUMBING DRAWINGS	COORDINATE W/ PLUMBING DRAWINGS	COORDINATE W/ PLUMBING DRAWINGS	SEE MOUNTING HEIGHT REQUIREMENTS ON SHEET T1.03. IN-WALL BLOCKING AS REQ'D FOR SUPPORT.		



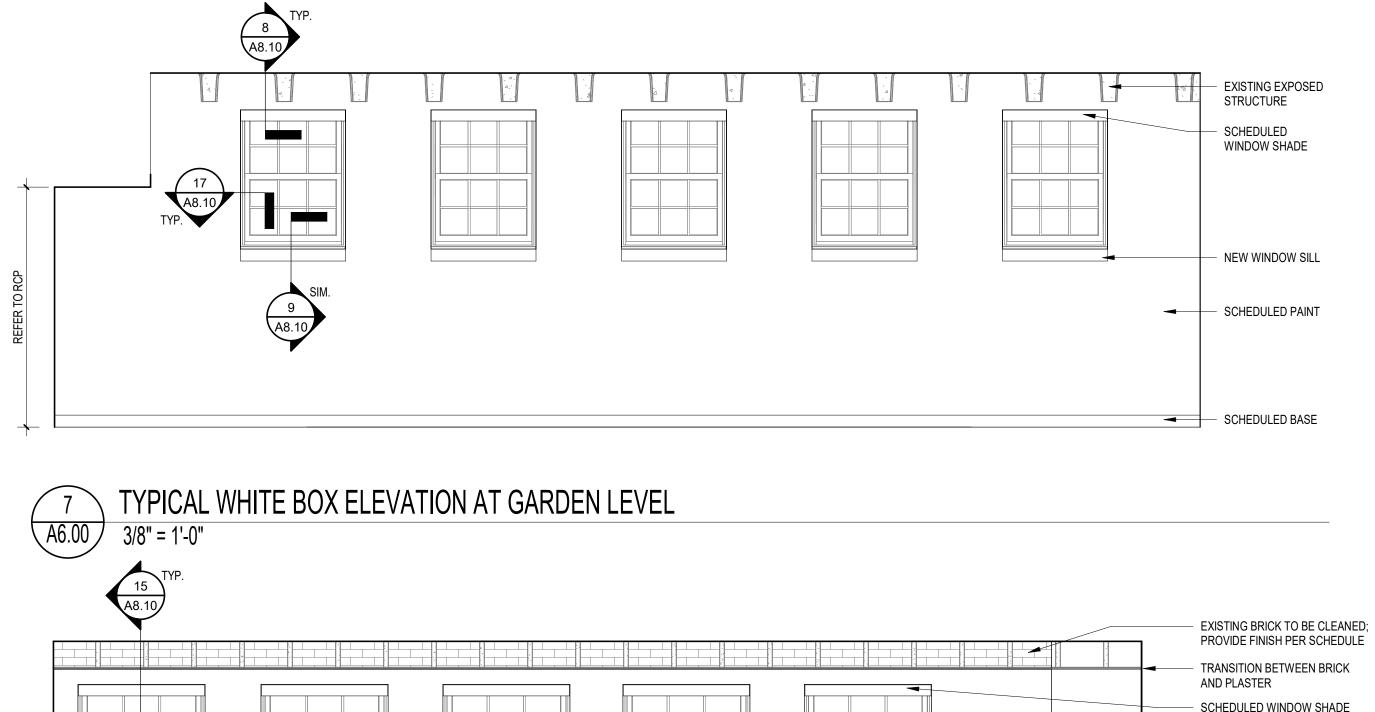


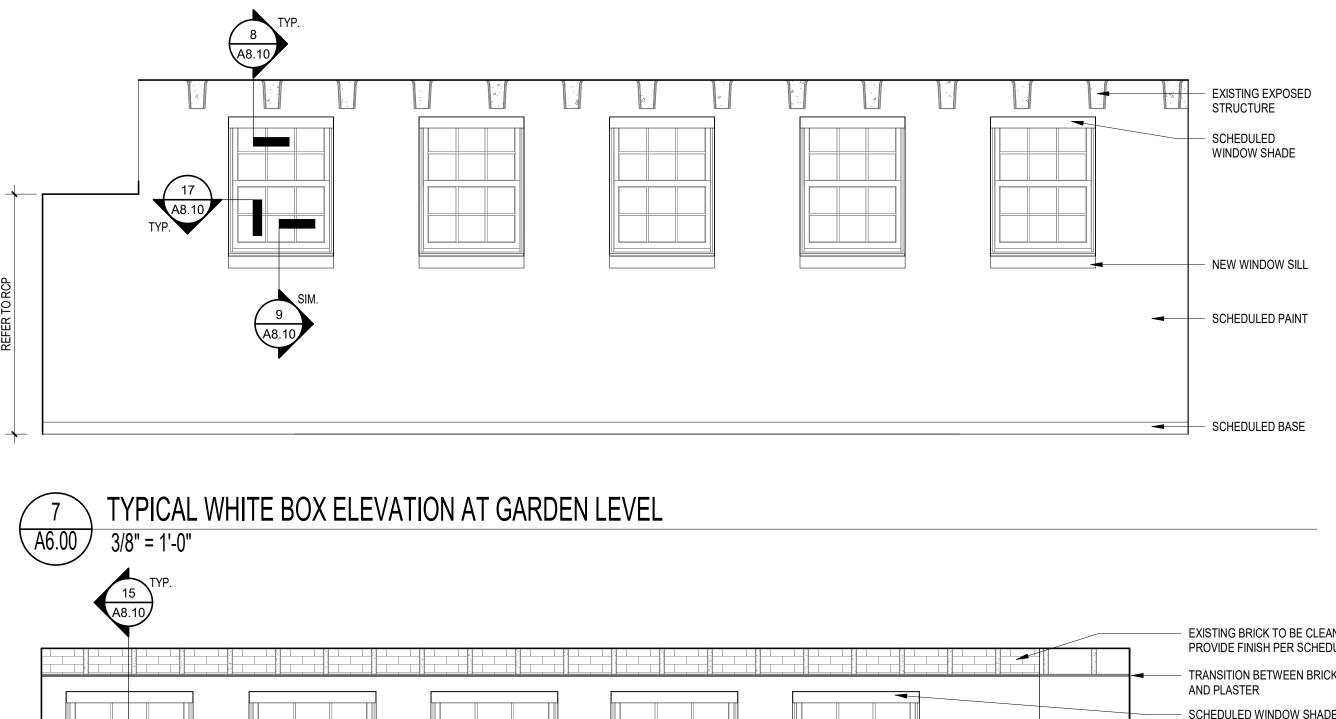


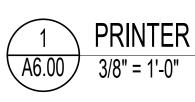




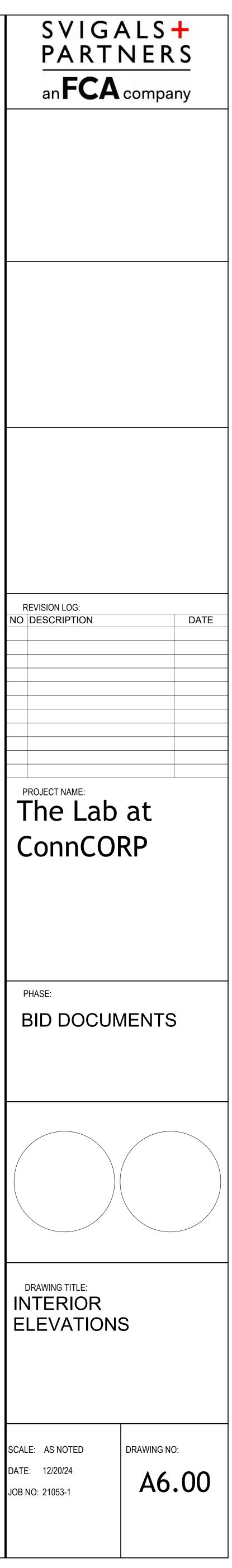


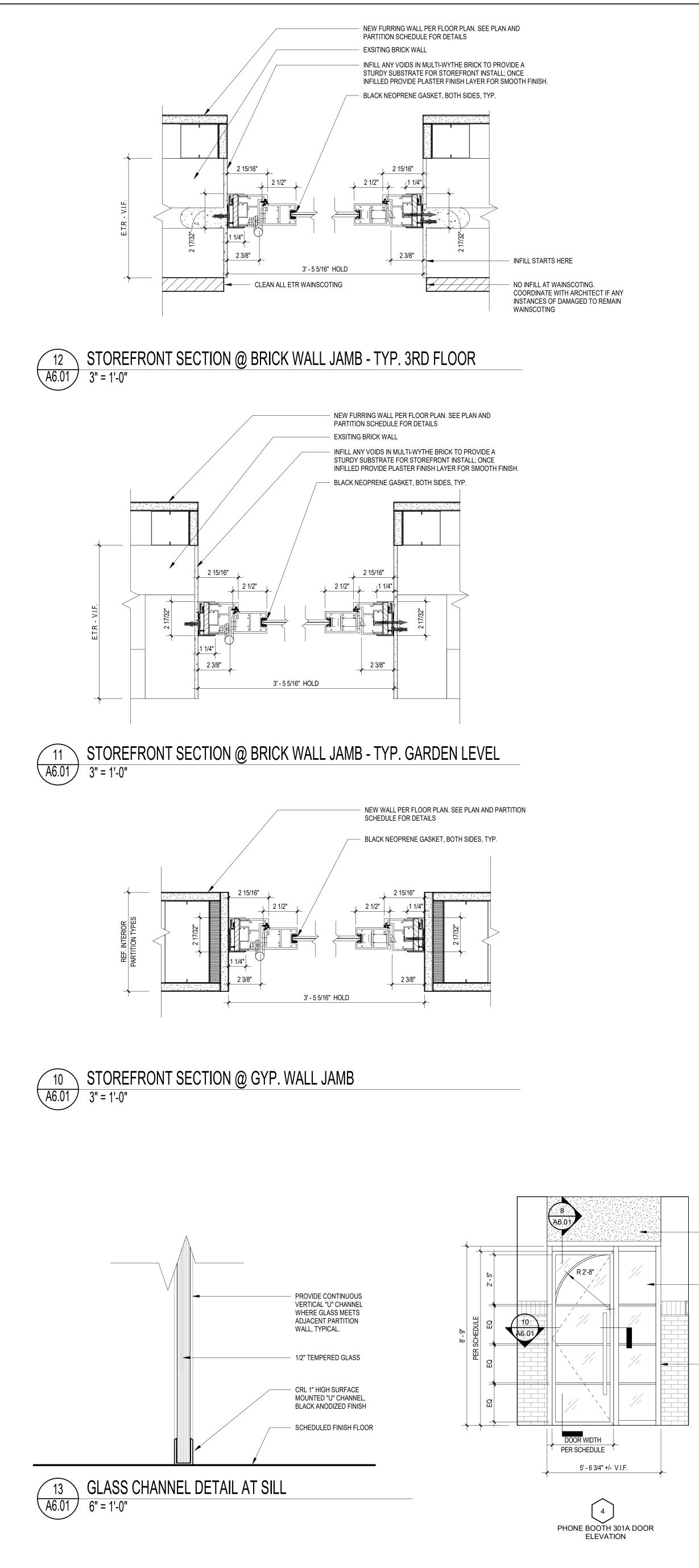


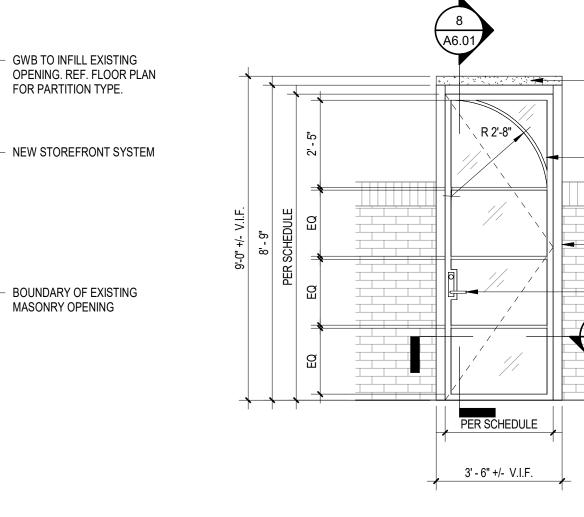


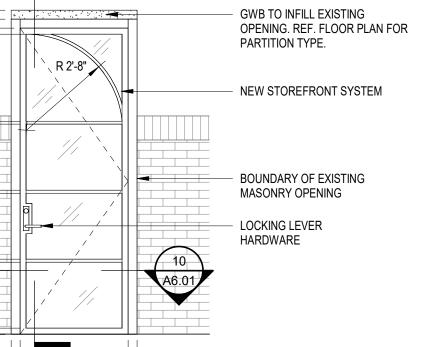






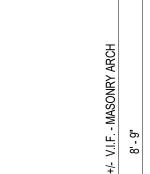


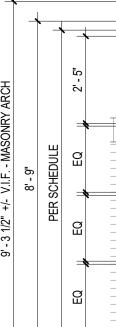




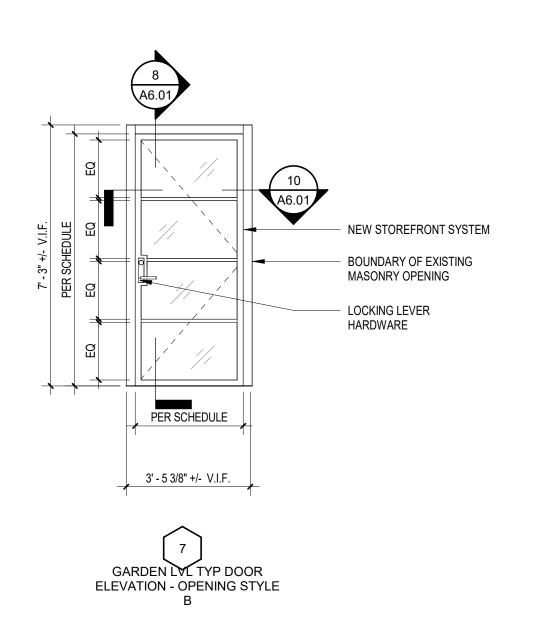
3RD FL TYP DOOR ELEVATION

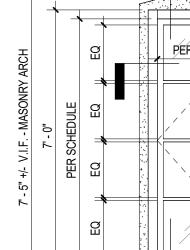
- OPENING STYLE B





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A6.01

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10 A6.01

OPENING

PER SCHEDULE

3' - 6"

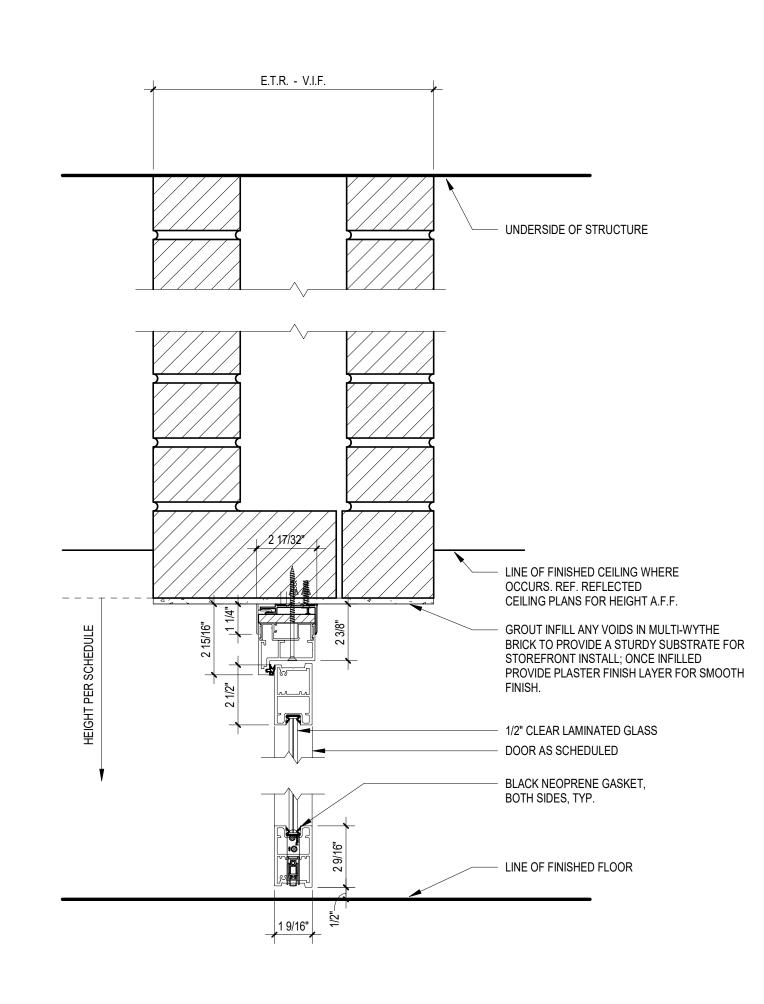
4'-0"+/- V.I.F.

GARDEN LVL TYP DOOR ELEVATION - OPENING STYLE

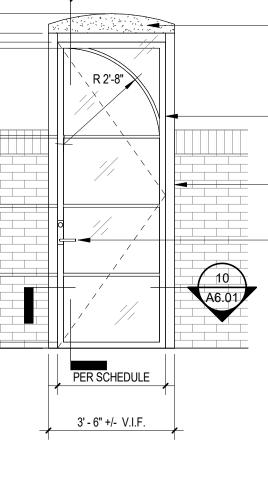
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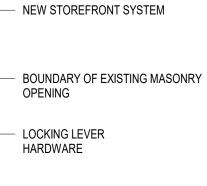
A6.01

9 STOREFRONT SECTION @ BRICK WALL HEAD A6.01 3" = 1'-0"



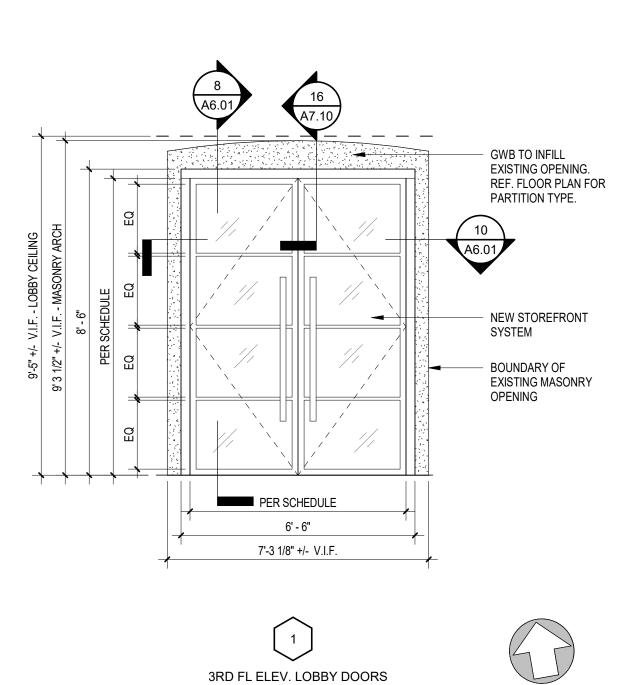






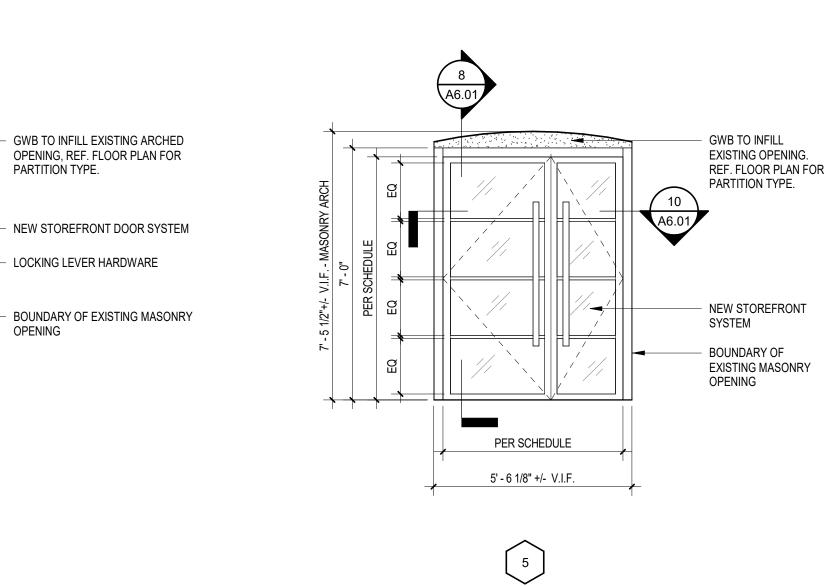
GWB TO INFILL EXISTING OPENING. REF. FLOOR PLAN FOR

PARTITION TYPE.

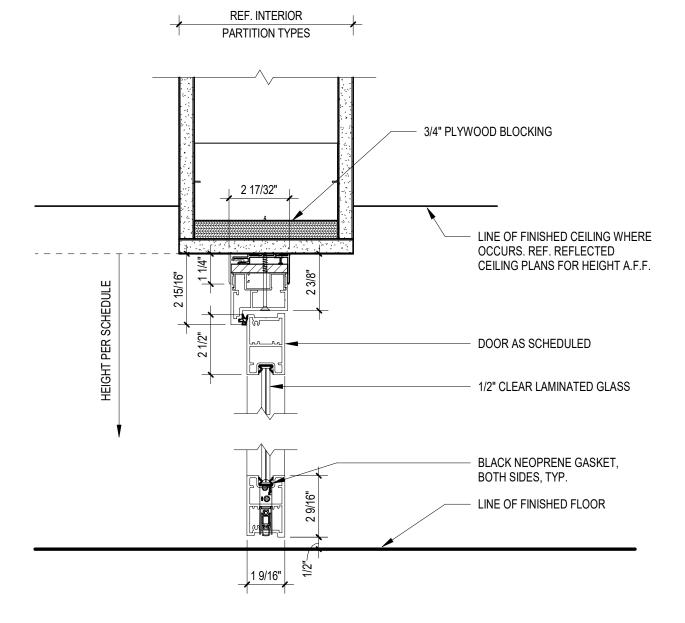


3RD FL ELEV. LOBBY DOORS

GARDEN ELEV. LOBBY DOOR







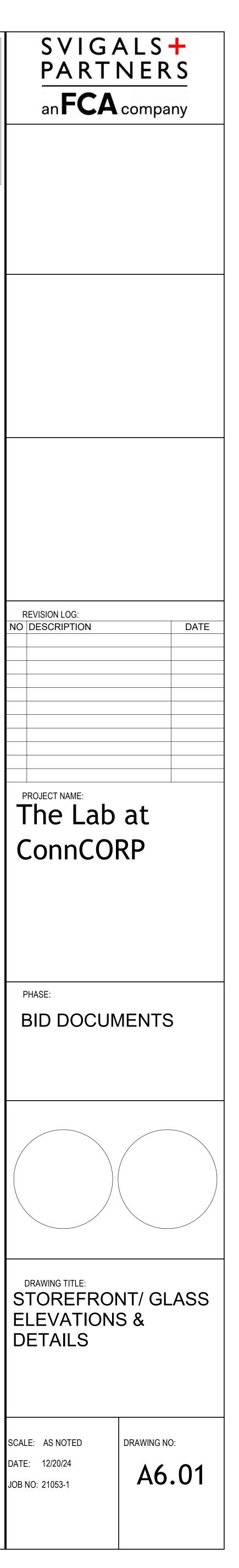
NOTES: COORDINATE DOOR HARDWARE SELECTIONS WITH STOREFRONT MANUFACTURER DURING SHOP DRAWING PROCESS. WIRING FOR ALL PROPOSED ELECTRIC STRIKES AND CARD READERS SHALL RUN THROUGH ALUMINUM STOREFRONT FRAMING.

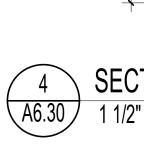
MANUFACTURER: VERWOL SYSTEM SERIES: CV-30 DOOR TYPE: NARROW STILE AND RAIL GLASS DOOR WITH ALUMINUM FRAME AND 1" APPLIED MULLIONS (BOTH SIDES) PER ELEVATIONS (CURVED AND STRAIGHT MULLIONS) SYSTEM DEPTH: 2 17/32"

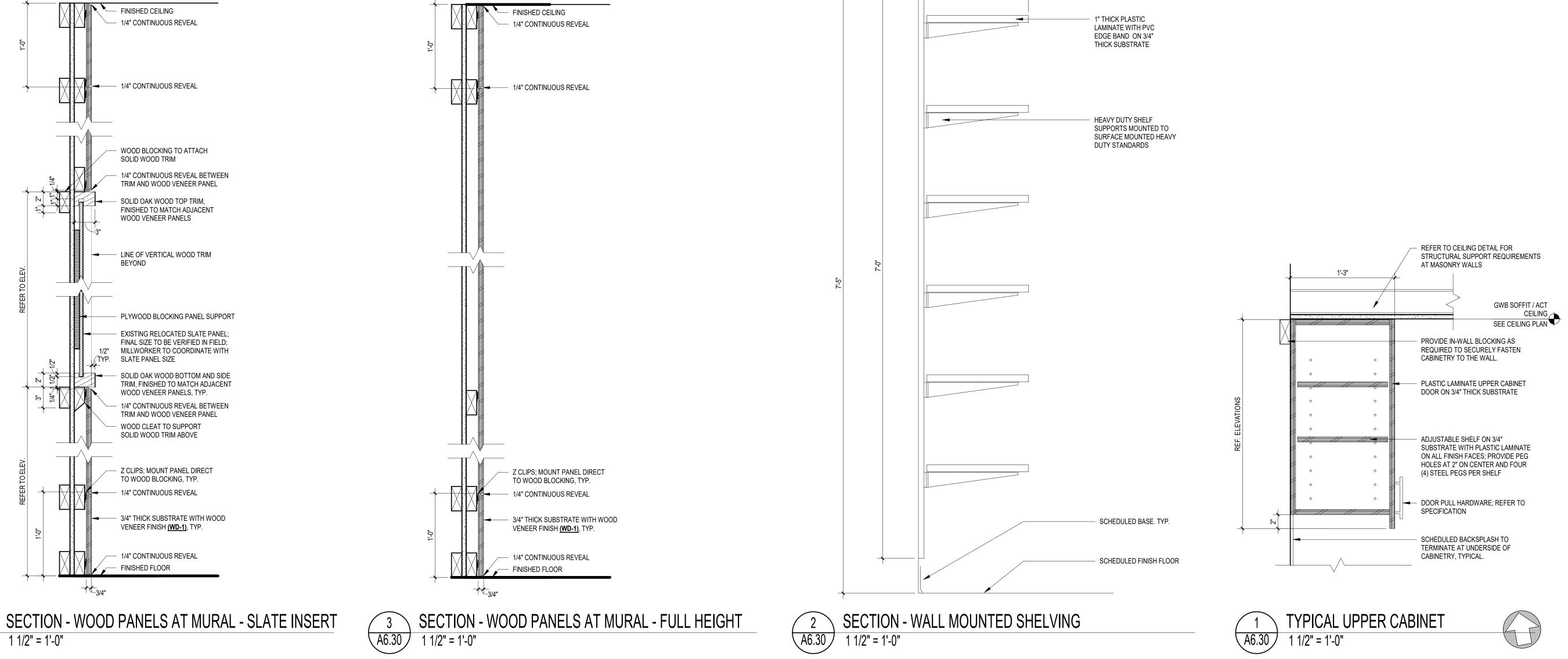
FINISH: ALL ALUMINUM FRAME SHALL HAVE BLACK POWDER COAT FINISH

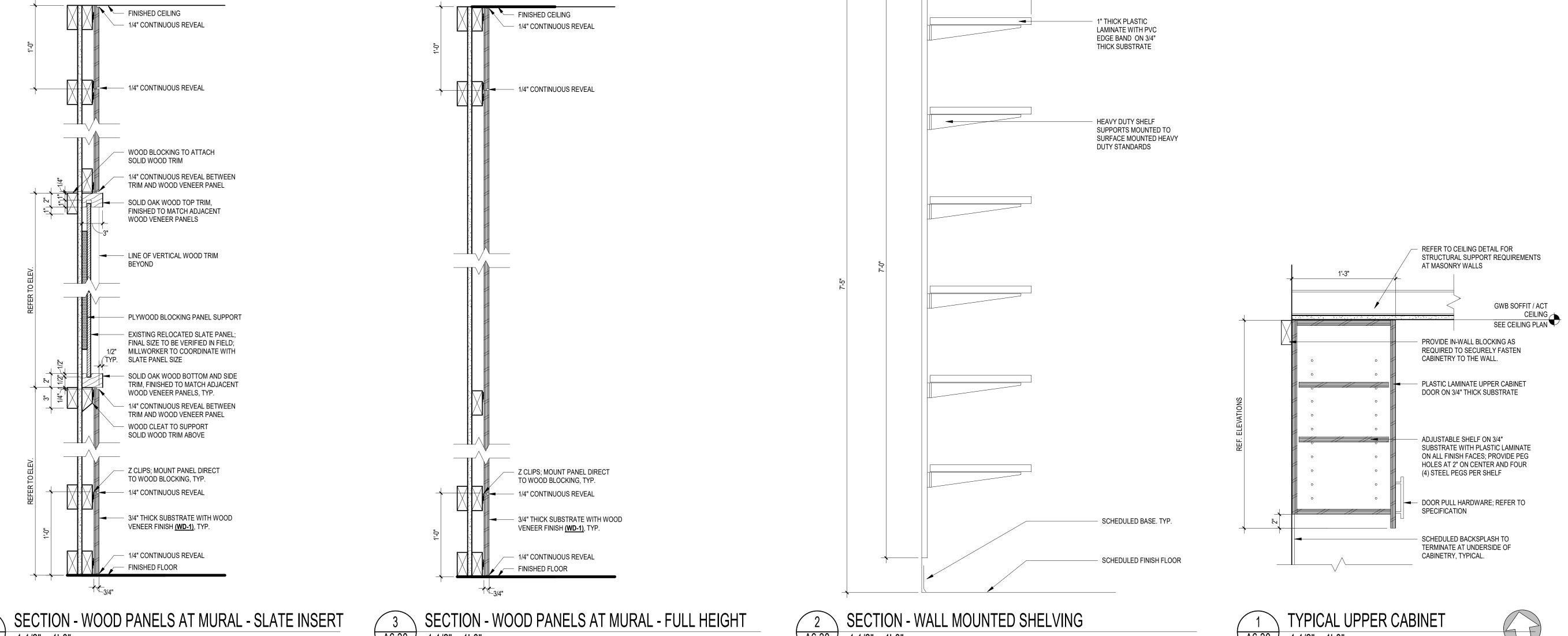
STOREFRONT SPECIFICATION:

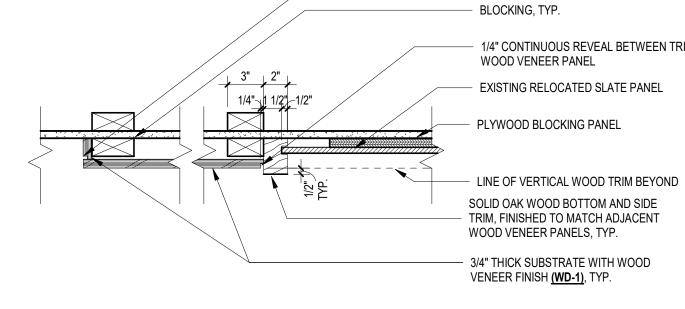
GLAZING: 1/2" THICK CLEAR LAMINATED GLASS









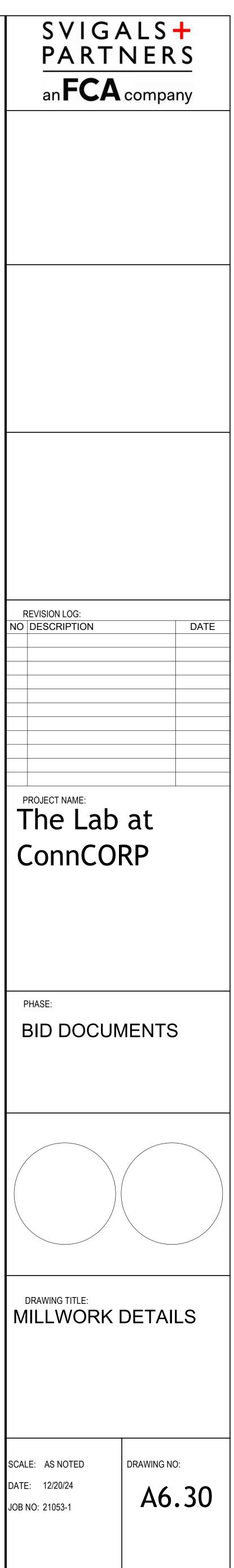


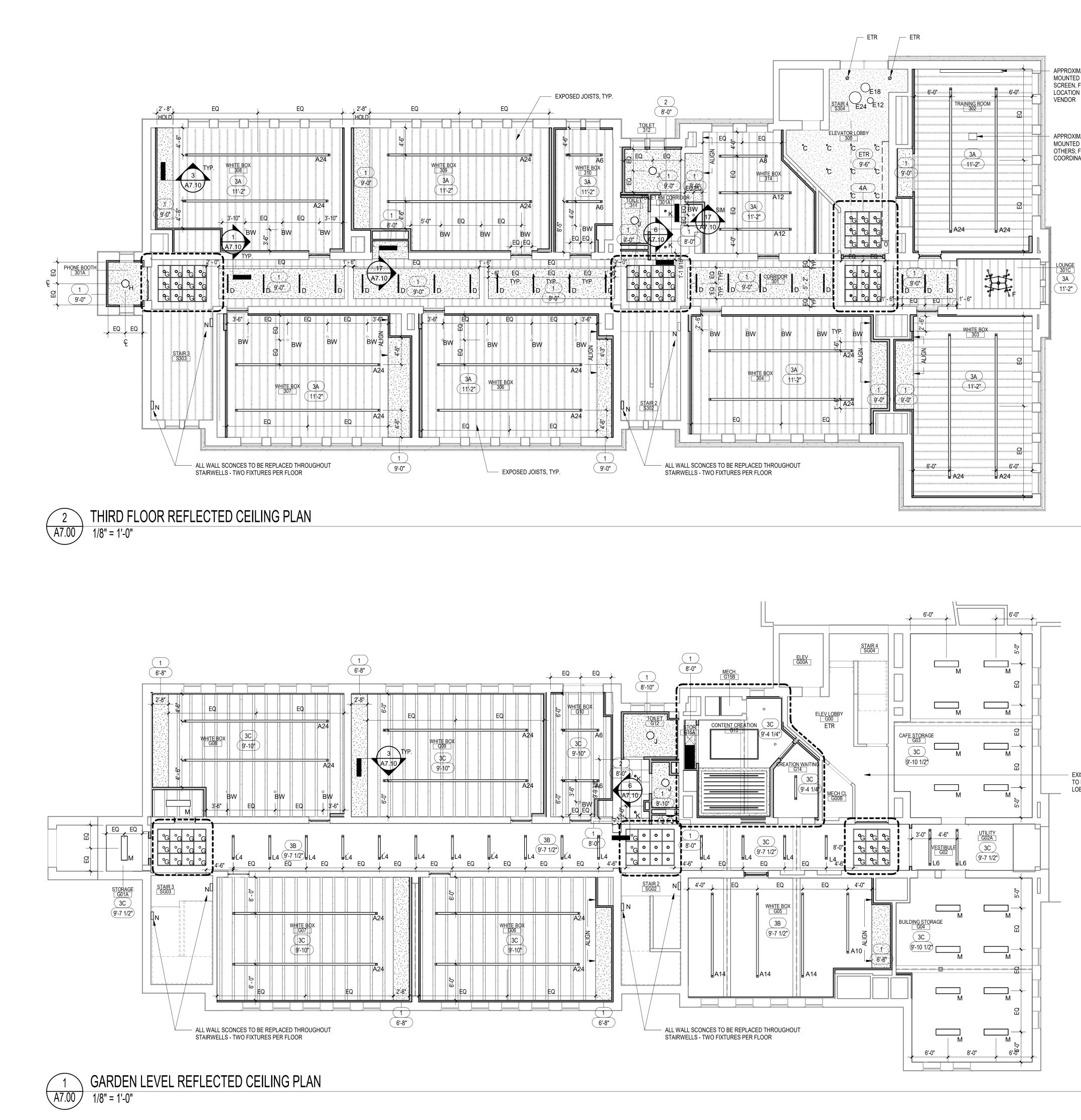
5 PLAN - WOOD PANELS AT MURAL A6.30 1 1/2" = 1'-0"

- 1/4" CONTINUOUS REVEAL BETWEEN TRIM AND WOOD VENEER PANEL - EXISTING RELOCATED SLATE PANEL - PLYWOOD BLOCKING PANEL

- 1/4" CONTINUOUS REVEAL

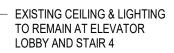
1'-3"



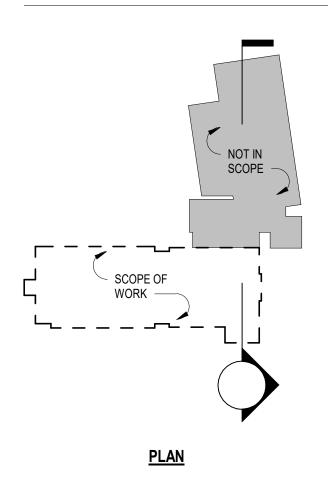


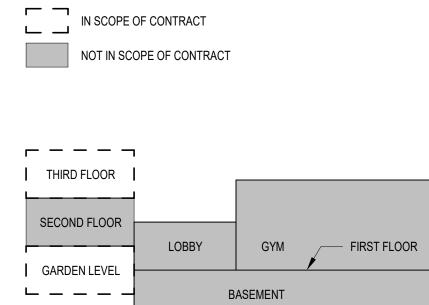


RCP LEGEND
ACOUSTICAL CEILING TILE AND GRID
I I * **** ***** ***** PAINTED GWB CEILING
RECESSED LINEAR FIXTURE
PENDANT LIGHT FIXTURE
⊘ RECESSED CAN
HVAC FIXTURES; REFER TO HVAC DRAWINGS
SPRINKLER HEAD, REFER TO FP DRAWINGS
WALL MOUNTED LINEAR LIGHT FIXTURE
WALL MOUNTED SCONCE
REFERENCE ALL MEP DWGS FOR MORE INFORMATION. ALL FINAL MOUNTING HEIGHTS SHALL BE CONFIRMED WITH ARCHITECT IN THE FIELD PRIOR TO INSTALLATION.
CEILING TYPES
CEILING TYPE
(Z' - Z") CEILING HEIGHT A.F.F.
1 PAINTED GWB 5/8" GWB @ 3-5/8" MTL STUDS @ 16" O.C., TYP. REF. ASSOCIATED DETAILS. 3 COATS; 1 PRIMER, 2 FINISH
2 ACOUSTICAL CEILING TILE ARMSTRONG 24" X 24" X 1" CALLA SQUARE TEGULAR, WHITE 15/16" GRID, WHITE
3A OPEN TO DECK ABOVE - WOOD JOISTS PAINT OUT DECK & ALL ASSOC. ELEMENTS REF. FINISH SCHEDULE
3B OPEN TO STRUCTURE ABOVE - EXPOSED SLAB PAINT OUT DECK & ALL ASSOC. ELEMENTS REF. FINISH SCHEDULE
3C OPEN TO STRUCTURE ABOVE - TERRACOTTA TILE / METAL VAULT PAINT OUT DECK & ALL ASSOC. ELEMENTS REF. FINISH SCHEDULE
4A GRID BAFFLE SYSTEM - SURFACE MOUNT MANUFACTURER: TURF SERIES: SWITCHBLADE (CUSTOMIZED) PROFILE: CUSTOM ARCH SHAPE - MAX 12" DEPTH / MIN 7.5" DEPTH 3/4" WIDE X 1/4" THICK FERROUS BAR STOCK FASTENED TO EXISTING GWB CEILING (PAINT TO MATCH CEILING FINISH) LAYOUT: CLASSIC 24"X24" GRID LAYOUT EXPOSED MAGNET EMBEDDED WITHIN BAFFLE
4B GRID BAFFLE SYSTEM - SUSPENDED MANUFACTURER: TURF SERIES: SWITCHBLADE (CUSTOMIZED) PROFILE: CUSTOM ARCH SHAPE - MAX 12" DEPTH/ MIN 7.5" DEPTH CEILING GRID: FERROUS 9/16" GRID, GRID PAINTED TO MATCH FELT BAFFLE MATERIAL LAYOUT: CLASSIC 24"X24" GRID LAYOUT EXPOSED MAGNET EMBEDDED WITHIN BAFFLE
5 ACOUSTIC BAFFLES - SUSPENDED MANUFACTURER: TURF SERIES: STRAIGHT BLADE LENGTH: 10' - 0" BLADE DEPTH: 12" CONNECTION: UNISTRUT P1000T W/ FELTLOCK; UNISTRUT PAINTED TO MATCH FELT BAFFLE MATERIAL THICKNESS: 9MM COLOR: 06 CHARCOAL
REFERENCE SPECIFICATIONS FOR MORE INFORMATION



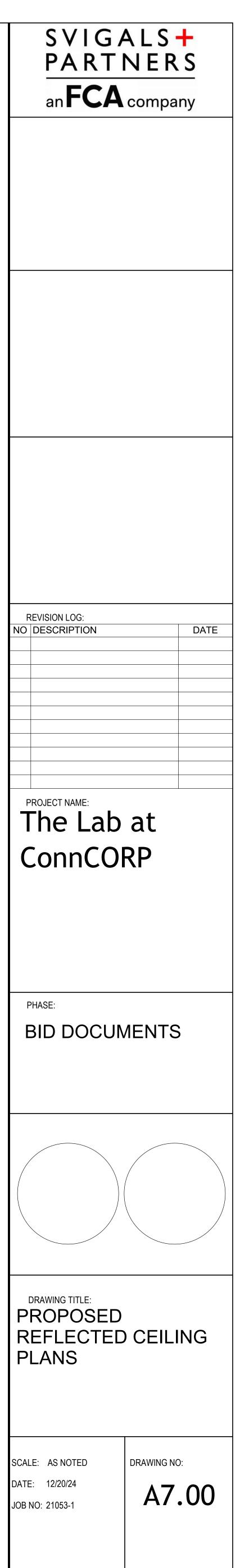


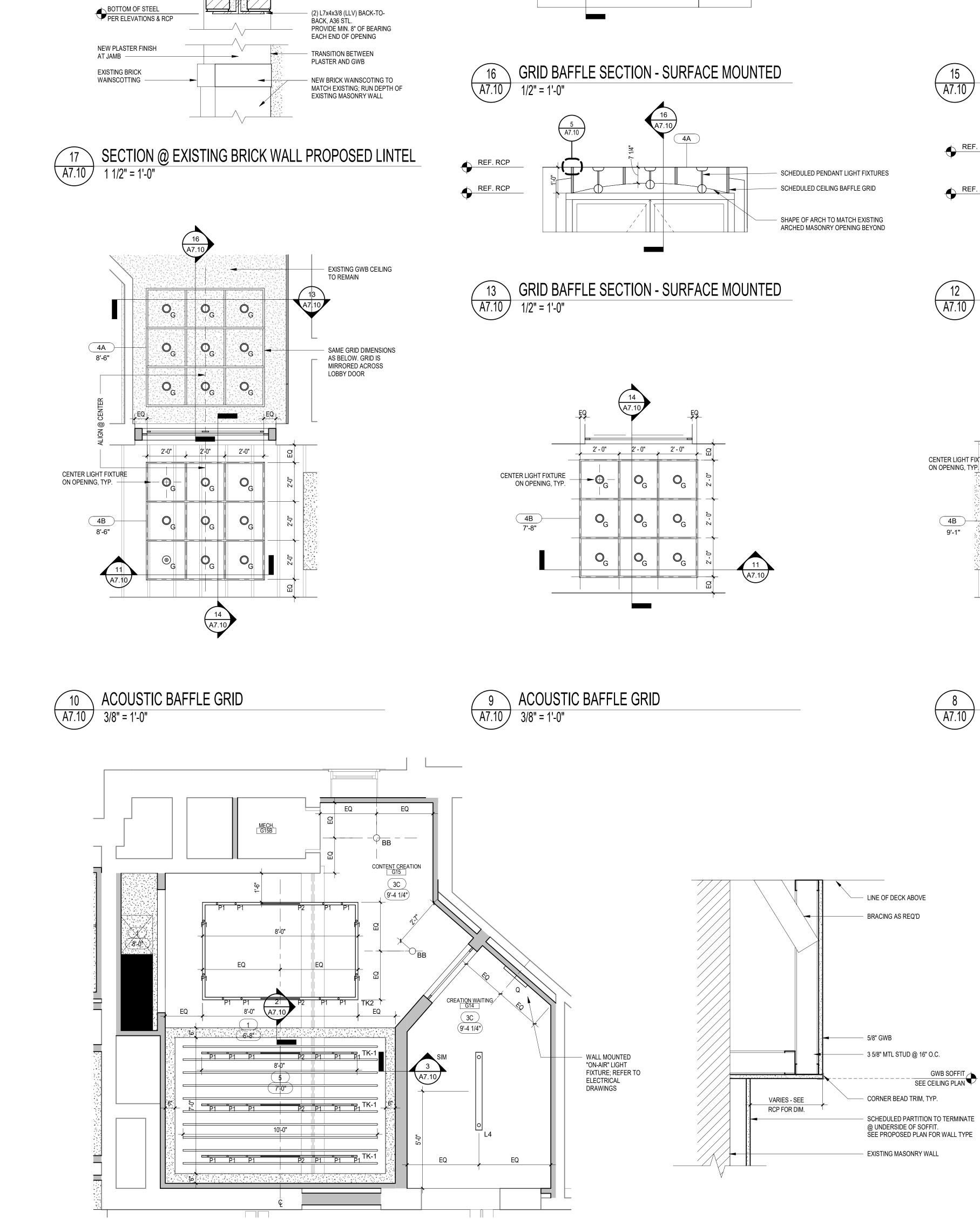




SECTION







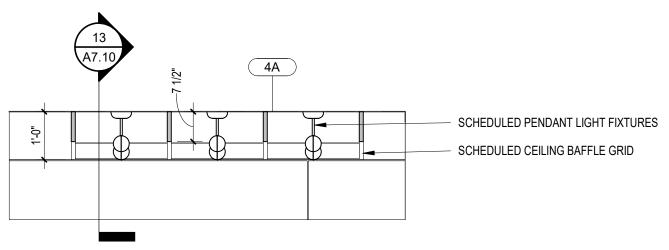
+/- 10" V.I.F.

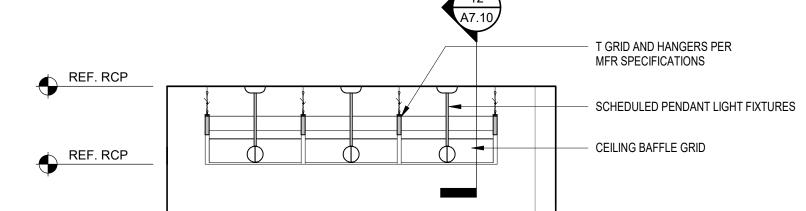
EXISTING MULTI-WYTHE BRICK SHORE WALL AND/OR

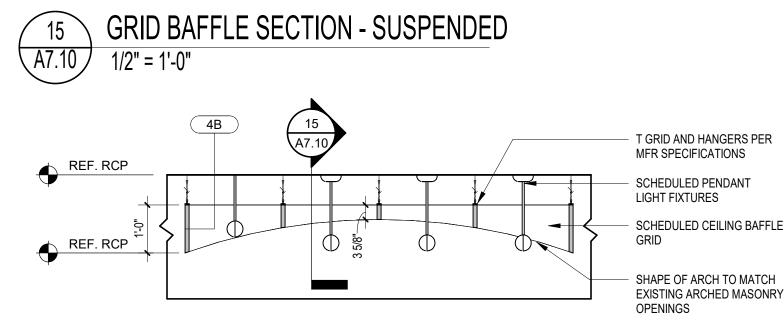
FRAMING ABOVE AS REQ'D FOR INSTALLATION OF

PLASTER FINISH WHERE

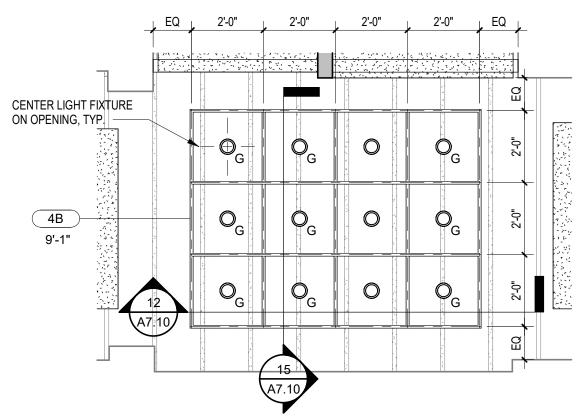
LINTELS -



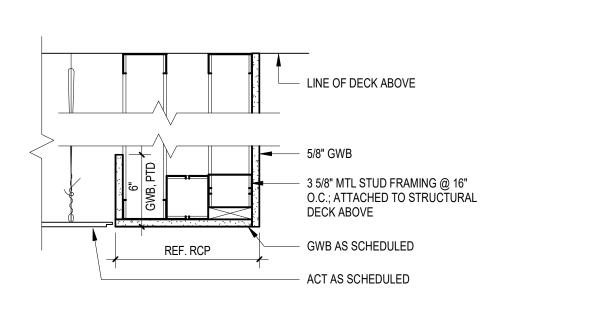


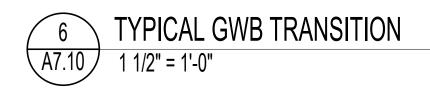


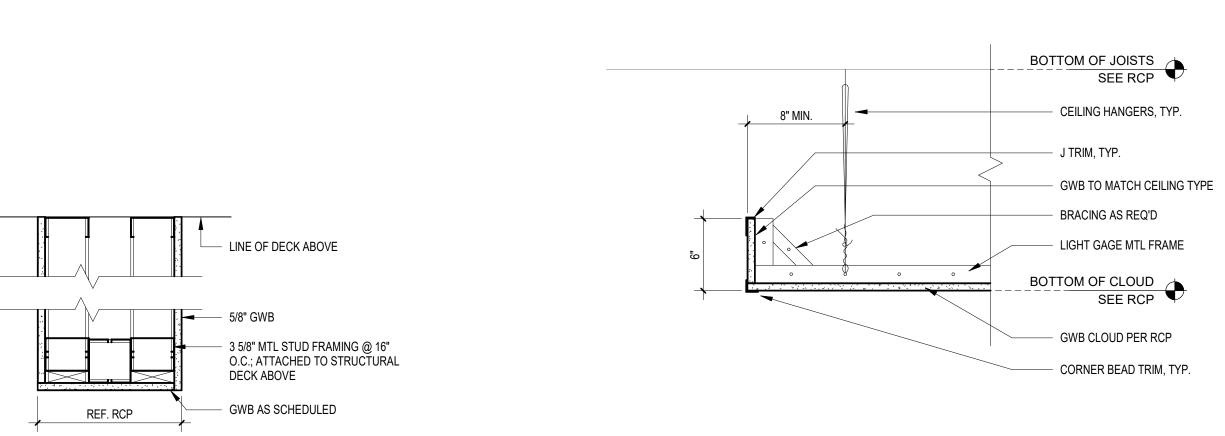










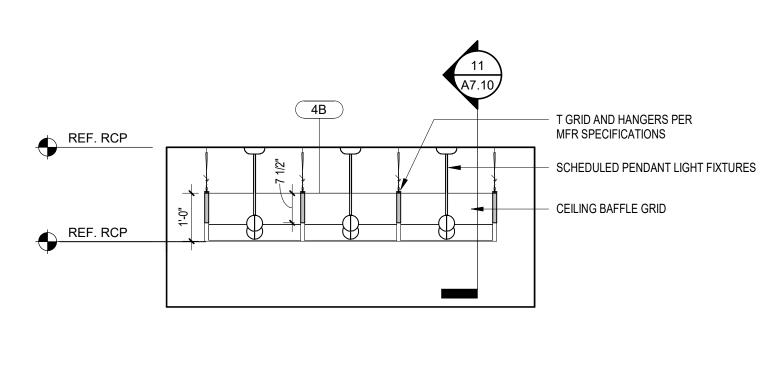












T GRID AND HANGERS PER

SCHEDULED PENDANT LIGHT FIXTURES

- SHAPE OF ARCH TO MATCH EXISTING ARCHED MASONRY OPENING BEYOND

SCHEDULED CEILING BAFFLE GRID

MFR SPECIFICATIONS

GRID BAFFLE SECTION - SUSPENDED

T GRID AND HANGERS PER MFR SPECIFICATIONS SCHEDULED PENDANT LIGHT FIXTURES SCHEDULED CEILING BAFFLE GRID - SHAPE OF ARCH TO MATCH

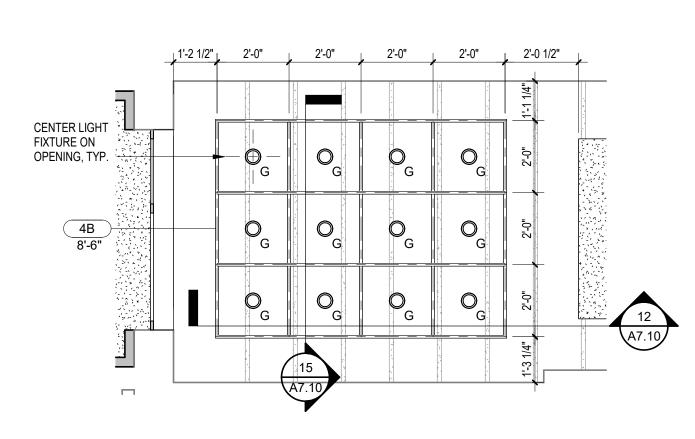
14

A7.10

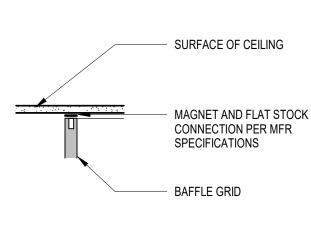
1/2" = 1'-0"

4B







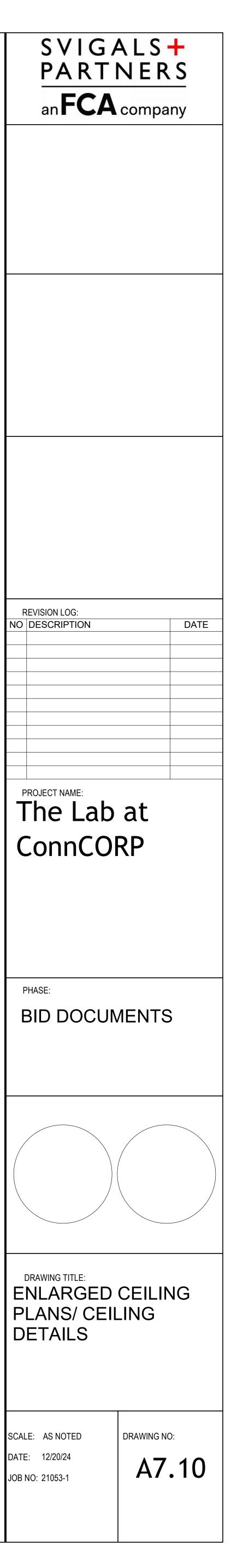


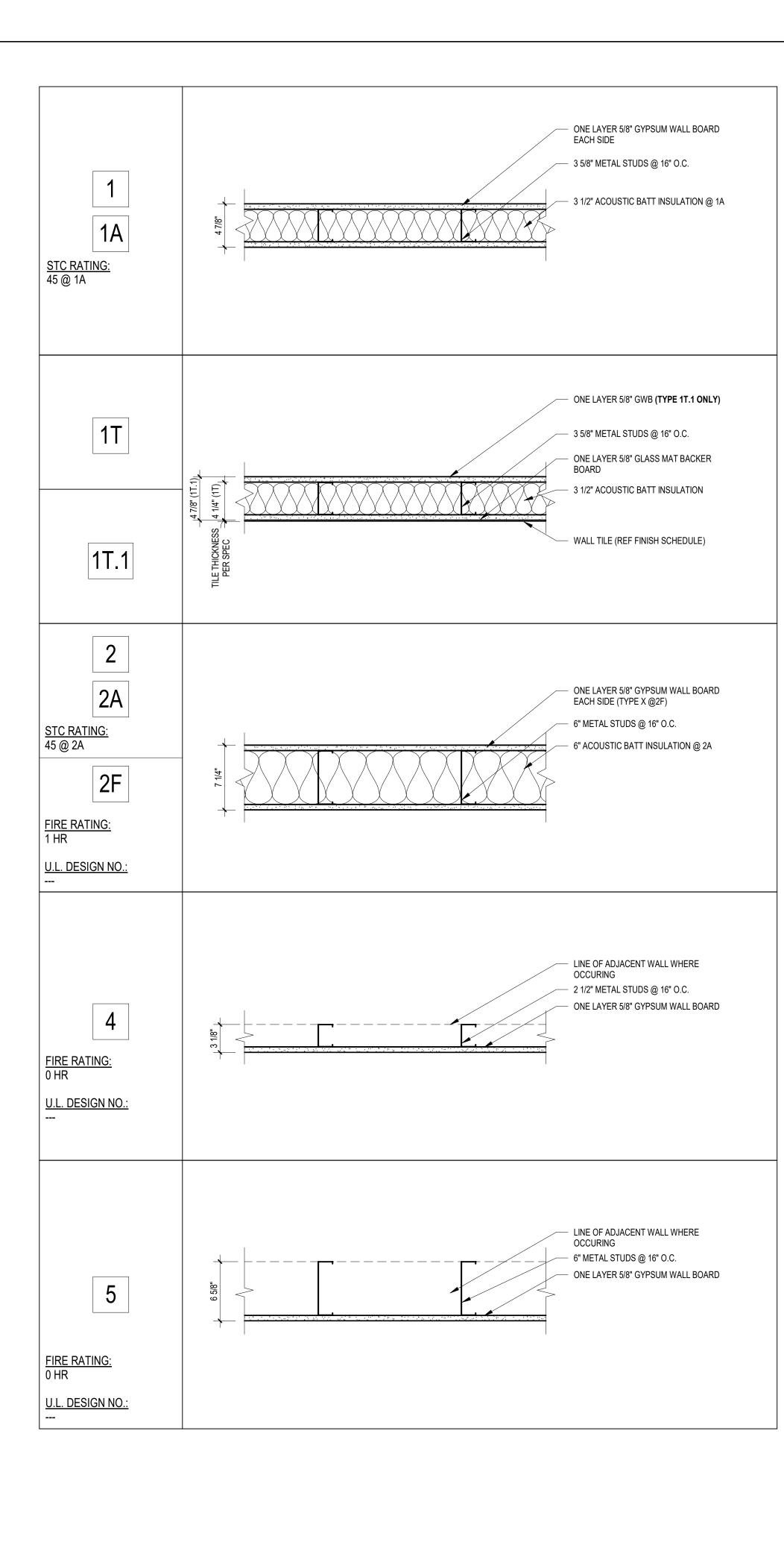
5 SURFACE MOUNTED BAFFLE CONNECTION DETAIL A7.10 1 1/2" = 1'-0"

2 GWB TRANSITION @ CONTENT CREATION ROOM A7.10 1 1/2" = 1'-0"

SECTION DETAIL @ GWB CLOUD 1 (A7.10) 1 1/2" = 1'-0"



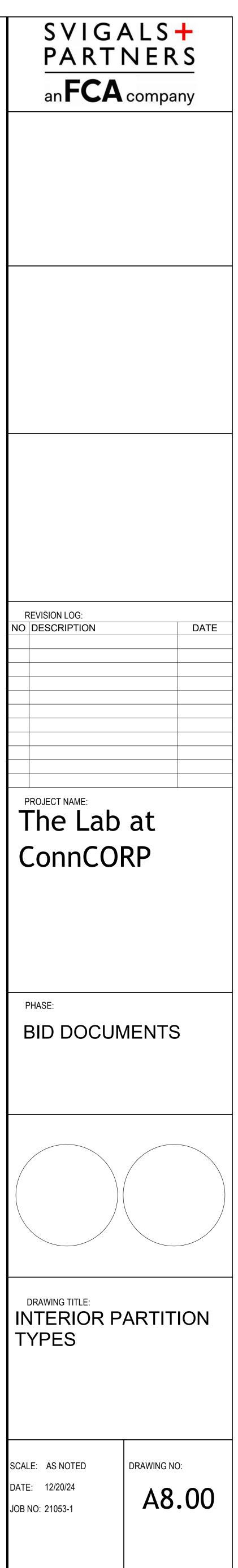


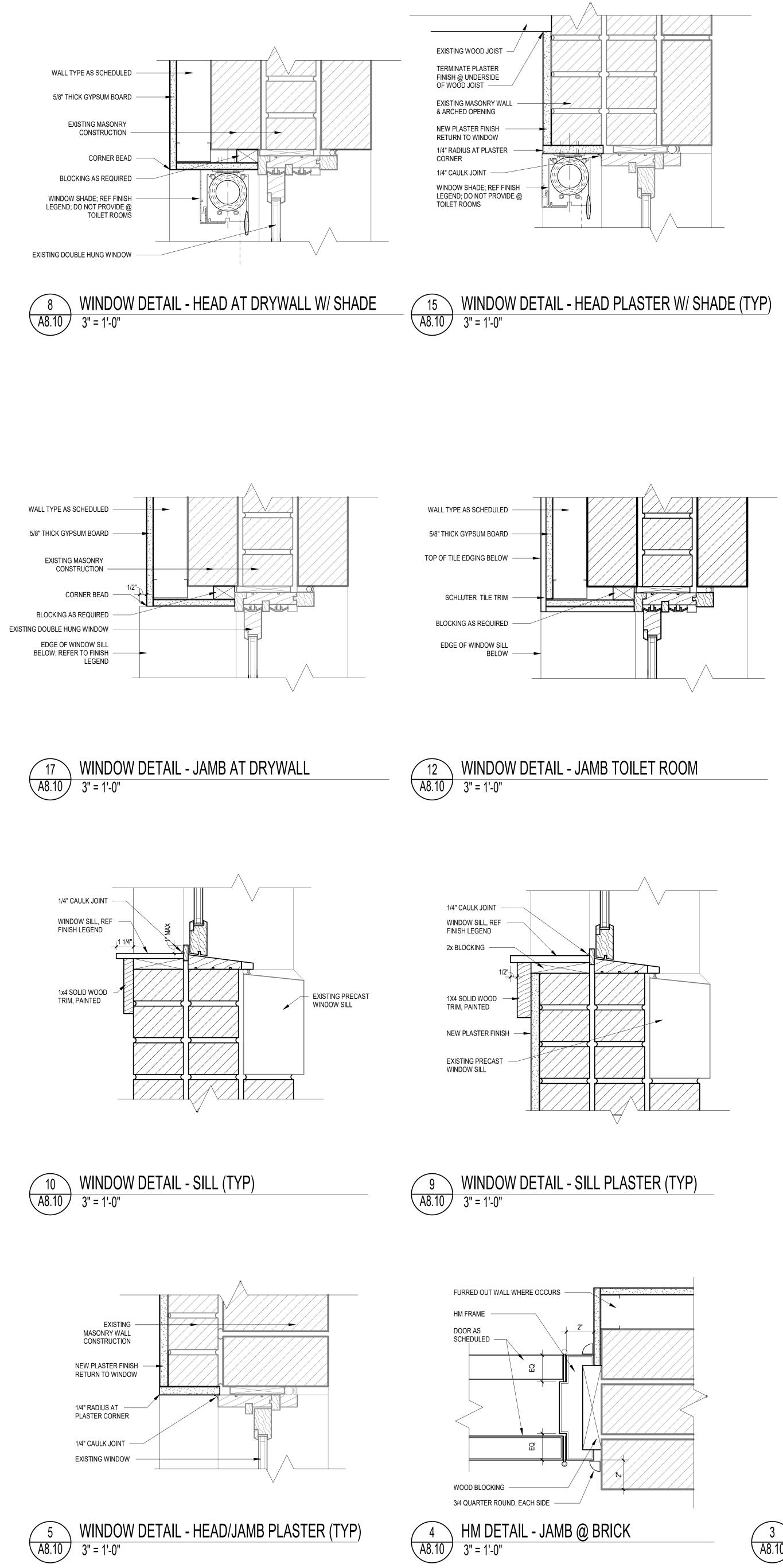


WALL TYPES GENERAL NOTES

- 1. ALL WALLS ARE TO EXTEND TO THE UNDERSIDE OF STRUCTURE UNLESS NOTED OTHERWISE. 2. WALLS BETWEEN CORRIDORS AND ADJACENT SPACES ARE TO BE FULLY SEALED TO RESIST THE PASSAGE OF SMOKE.
- 3. WALLS SCHEDULED TO RECEIVE CERAMIC TILE ARE TO BE FACED WITH 5/8" COATED GLASS MAT BACKER BOARD IN LIEU OF TYPE X GYPSUM BOARD
- WALLS SCHEDULED TO RECEIVE CERAMIC THE ARE TO BE FACED WITH 7/8 COATED GLASS WAT BACKER BOARD IN LIEU OF THE A GT SOM BOARD
 SIZE GAUGE OF STEEL STUD TO ACHIEVE MAXIMUM L/600 DEFLECTION.
 WALLS WITHOUT CERAMIC TILE IN ROOMS OR SPACES SUBJECT TO MOISTURE SHALL RECEIVE MOISTURE RESISTANT (MR) GYPSUM BOARD.
 ALL PENETRATIONS (DUCTS, ELEC. DEVICES, ETC.) THRU WALLS WITH AN ASSIGNED STC OR FIRE RATING ARE TO BE SEALED APPROPRIATELY FOR THE LABELED RATING.
- FOR CONCRETE UNIT MASONRY WALLS, REFER TO STRUCTURAL DRAWINGS FOR REINFORCING REQUIREMENTS.
 CM TO COORDINATE LAYOUT OF ROOMS WITH WALL TILE WITH ALL REQUIRED CLEARANCES.

 \mathcal{C}







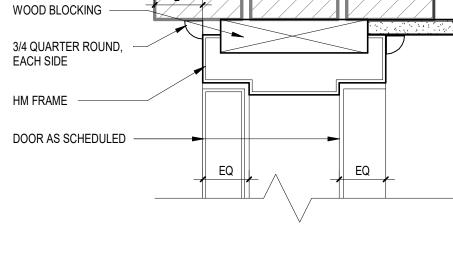
FURRED OUT WALL,

WHERE OCCURS

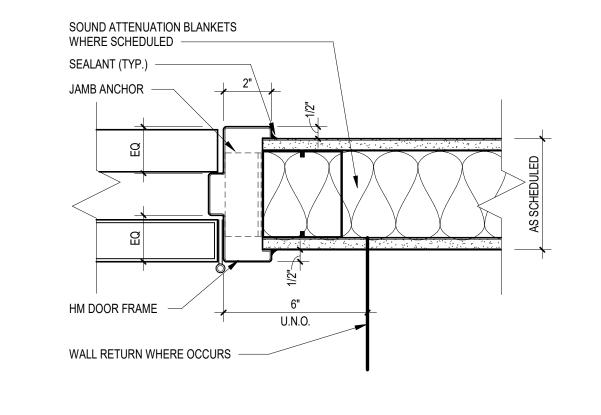
EXISTING BRICK/

CONSTRUCTION

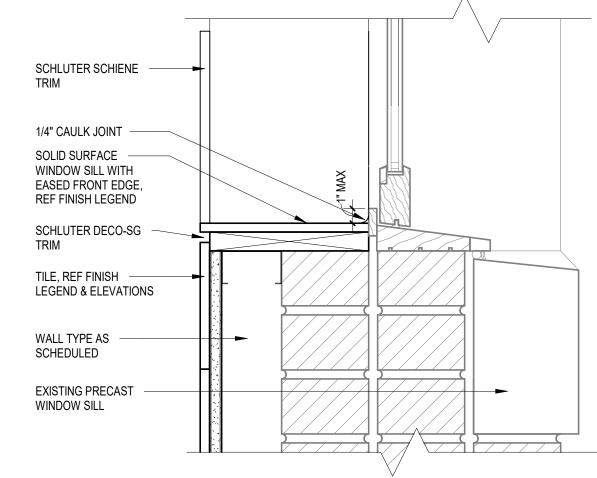
MASONRY



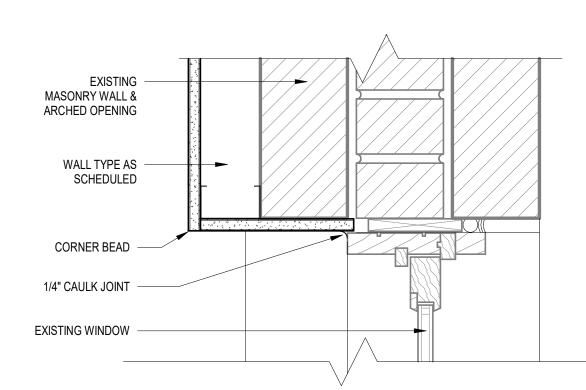
- / **/**



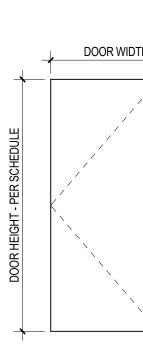
A8.10 3" = 1'-0"



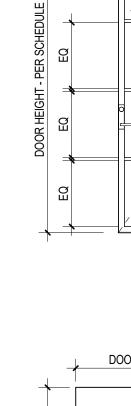
11WINDOW DETAIL - SILL TOILET ROOMA8.103" = 1'-0"

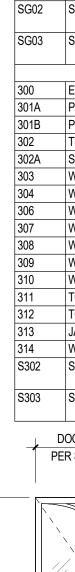


(14) WINDOW DETAIL - HEAD TOILET ROOMA8.10) 3" = 1'-0"



C4





Mark

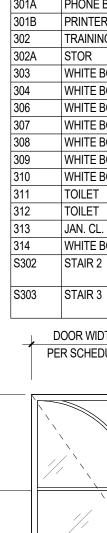
G05

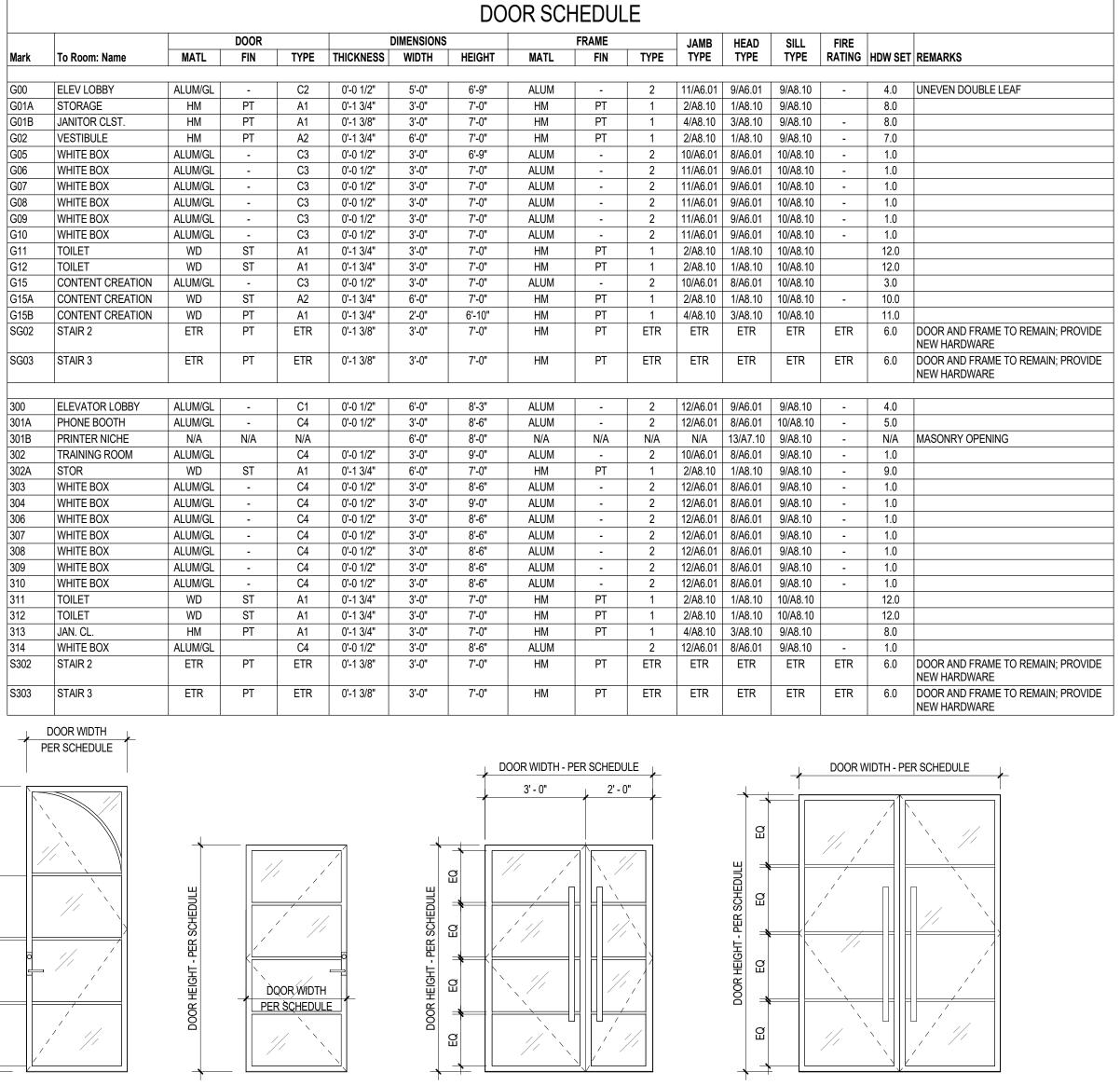
G07

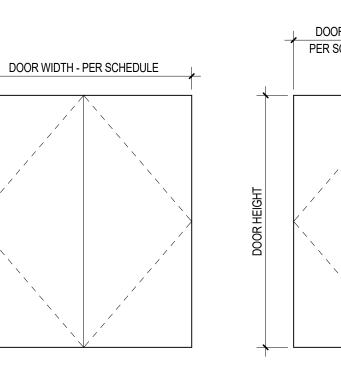
G08

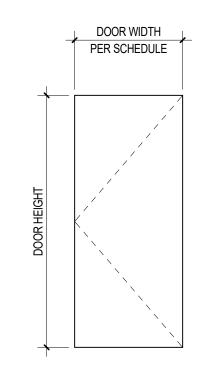
G09

G15





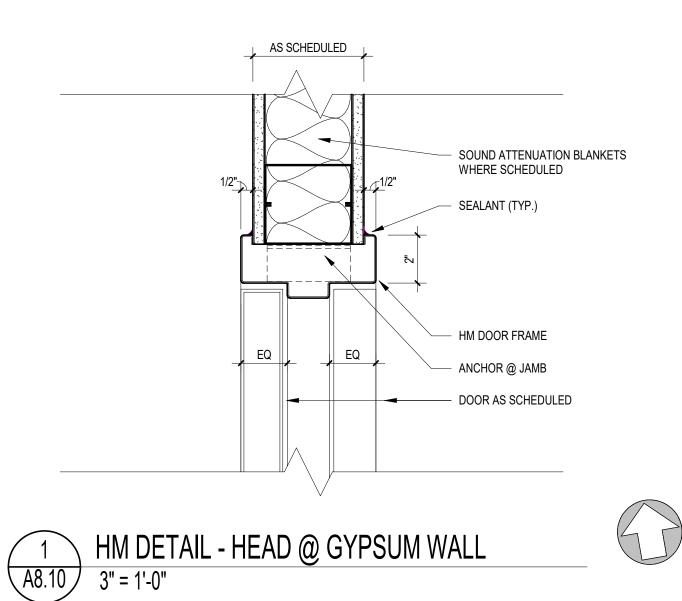


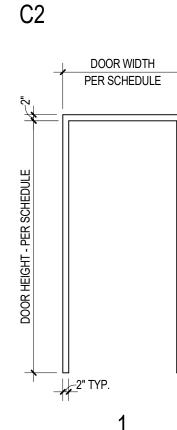


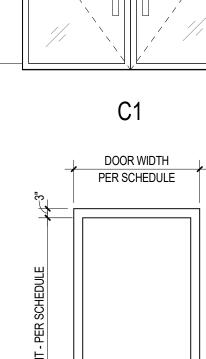
C3

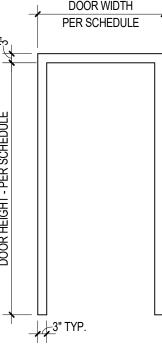


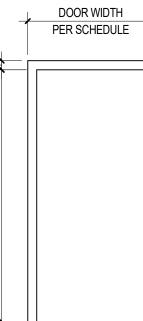
2 HM DETAIL - JAMB @ METAL STUD WALL

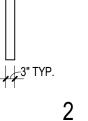


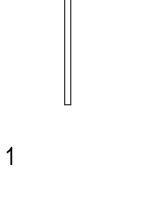




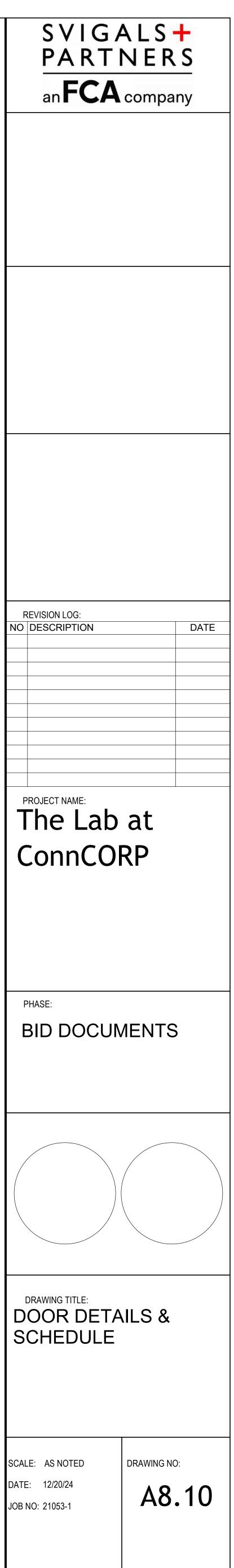


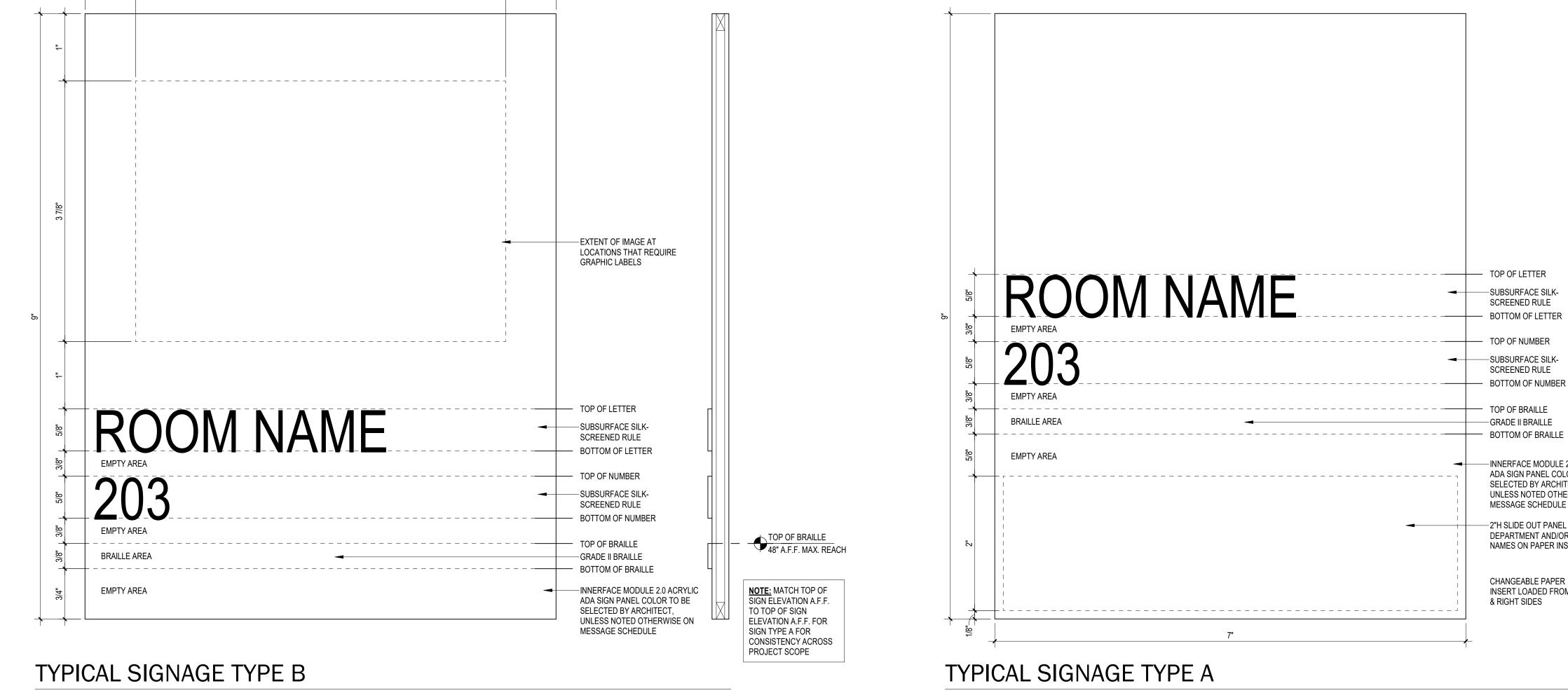












5 1/2"

3/4"

3/4"

TOP OF LETTER - BOTTOM OF LETTER

- TOP OF NUMBER -SUBSURFACE SILK-SCREENED RULE

- BOTTOM OF NUMBER

-GRADE II BRAILLE

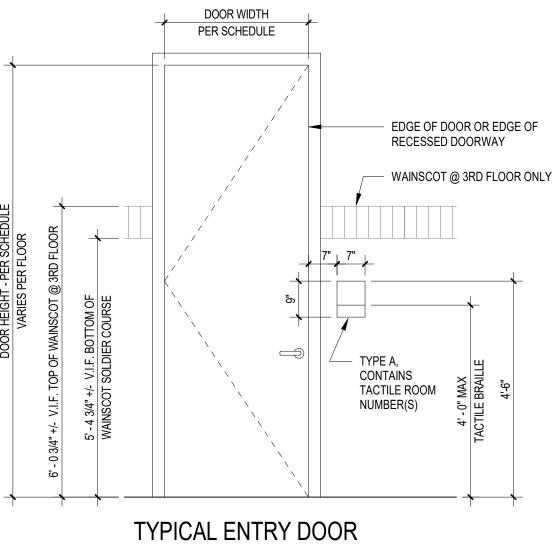
-INNERFACE MODULE 2.0 ACRYLIC

-2"H SLIDE OUT PANEL -DEPARTMENT AND/OR OCCUPANT NAMES ON PAPER INSERT

CHANGEABLE PAPER ——— INSERT LOADED FROM LEFT & RIGHT SIDES

ADA SIGN PANEL COLOR TO BE SELECTED BY ARCHITECT, UNLESS NOTED OTHERWISE ON MESSAGE SCHEDULE

TYPICAL SIGNAGE MOUNTING HEIGHT

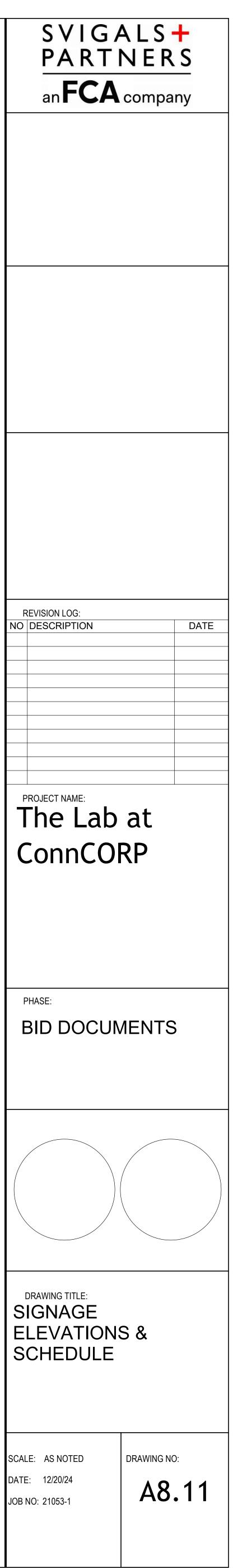


3. RAISED CHARACTER COLOR: WHITE, RUSTICA SEMI LIGHT IN 56/65, WITH 23 PT BRAILLE (BRAILLE TO BE BLACK) 4. ALL SIGNS SHALL BE FURNISHED WITH MATCHING BLACK VINYL REMOVABLE BLANK INSERTS AND SHALL BE LOCATED AT LATCH SIDE OF DOOR. 5. SIGNAGE VENDOR TO CONFIRM AND FINALIZE ALL SIGNAGE TEXT WITH OWNER. 6. SIGNS TO BE INSTALLED SO THAT TOP OF SIGNS ARE NO HIGHER THAN 60" AFF. SIDE EDGE OF SIGN TO BE 7" OFF OF DOOR FRAME WHERE POSSIBLE. SEE DETAIL BELOW. 7. SIGNAGE DRAWINGS SHOWN FOR DESIGN INTENT ONLY. ALL NEW PROPOSED SIGNAGE SHALL BE COORDINATED TO MATCH EXISTING INSTALLED SIGNAGE. 8. PER OWNER - ONLY WHITE BOX ROOMS SHALL HAVE PRINTED ROOM NUMBERS. ANY SIGNAGE MARKED WITH "-" AT THE LOCATION FOR "PRINTED ROOM NUMBER" SHALL NOT RECIEVE A ROOM NUMBER ON ITS SIGN.

2. SIGN COLOR: MATTE BLACK ACRYLIC. IN ACCORDANCE WITH YSM DESIGN STANDARDS

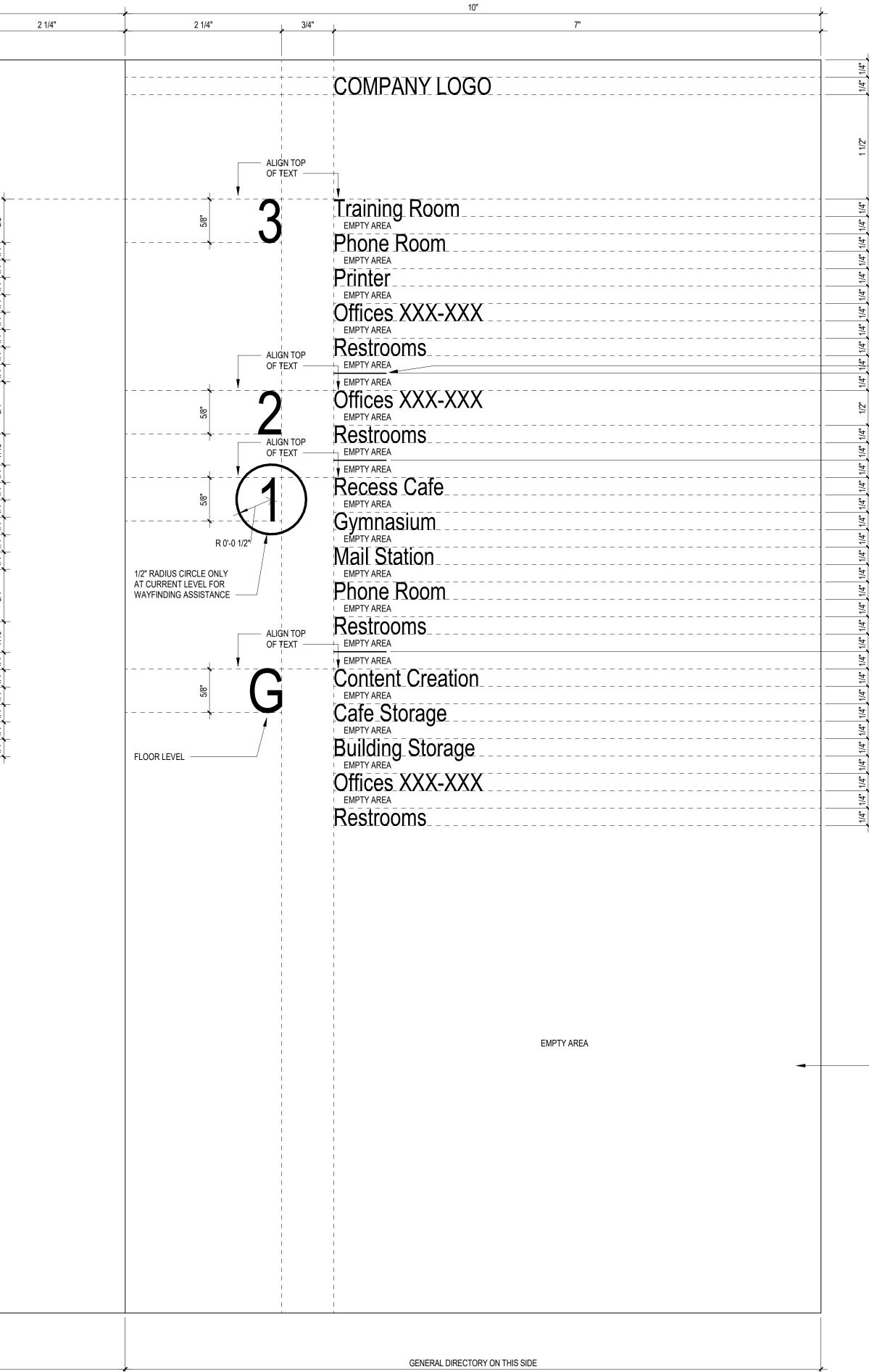
ON PLANS	ROOM NAME	SIGN TYPE	PRINTED ROOM NUMBER	MESSAGE	Comments
01 GARDEN				-	
G00	ELEV LOBBY	В	-	ELEVATOR LOBBY	
G00A	ELEV	C	-		
G00B	MECH CL	В	-	MECHANICAL CLOSET	
G01A	STORAGE	В	-	STORAGE	
G01B	JANITOR CLST.	В	-	CUSTODIAL CLOSET	
G02	VESTIBULE	В	-	STORAGE	ATTACH SIGN @ CORRIDOR FACING SIDE
G03	CAFE STORAGE	В	S2	CAFE STORAGE	
G04	BUILDING STORAGE	В	S1	BUILDING STORAGE	
G05	WHITE BOX	A	G1		
G06	WHITE BOX	A	G2		
G07	WHITE BOX	A	G3		
G08	WHITE BOX	A	G4		
G09	WHITE BOX		G5		
		A			
G10	WHITE BOX	A	G6		
G11	TOILET	B	-	RESTROOM	INCLUDE GRAPHIC TO MATCH EXISTING STYLE
G12	TOILET	B	-	RESTROOM	INCLUDE GRAPHIC TO MATCH EXISTING STYLE
G14	CREATION WAITING	В	-	CONTENT CREATION	ATTACH SIGN @ CORRIDOR FACING SIDE
G15	CONTENT CREATION		-		
G15A	STOR		-		
G15B	MECH.		-		
SG02	STAIR 2	В	-	STAIR 2	INCLUDE GRAPHIC & ATTACH SIGN @ CORRIDOR FACING SIDE
SG03	STAIR 3	В	-	STAIR 3	INCLUDE GRAPHIC & ATTACH SIGN @ CORRIDOR FACING SIDE
SG04	STAIR 4	В	-	STAIR 4	INCLUDE GRAPHIC & ATTACH SIGN @ CORRIDOR FACING SIDE
	5				
300	ELEVATOR LOBBY	В	-	ELEVATOR LOBBY	
300 300A	ELEVATOR LOBBY ELEV	С	-		
300 300A 300B	ELEVATOR LOBBY ELEV MECH CL	C B	- -	MECHANICAL CLOSET	
300 300A 300B 301A	ELEVATOR LOBBY ELEV MECH CL PHONE BOOTH	С	- - -		ATTACH SIGN @ CORRIDOR FACING SIDE
300 300A 300B 301A 301B	ELEVATOR LOBBY ELEV MECH CL PHONE BOOTH PRINTER NICHE	C B	- - - -	MECHANICAL CLOSET	ATTACH SIGN @ CORRIDOR FACING SIDE
300 300A 300B 301A 301B 301C	ELEVATOR LOBBY ELEV MECH CL PHONE BOOTH PRINTER NICHE LOUNGE	C B B	- - - - -	MECHANICAL CLOSET PHONE ROOM	ATTACH SIGN @ CORRIDOR FACING SIDE
300 300A 300B 301A 301B 301C 302	ELEVATOR LOBBY ELEV MECH CL PHONE BOOTH PRINTER NICHE LOUNGE TRAINING ROOM	C B B C	- - - - -	MECHANICAL CLOSET PHONE ROOM TRAINING ROOM	ATTACH SIGN @ CORRIDOR FACING SIDE
300 300A 300B 301A 301B 301C 302 302A	ELEVATOR LOBBY ELEV MECH CL PHONE BOOTH PRINTER NICHE LOUNGE TRAINING ROOM STOR	C B B B B B	- - - - - -	MECHANICAL CLOSET PHONE ROOM	ATTACH SIGN @ CORRIDOR FACING SIDE
300 300A 300B 301A 301B 301C 302 302A 303	ELEVATOR LOBBY ELEV MECH CL PHONE BOOTH PRINTER NICHE LOUNGE TRAINING ROOM	C B B C	- - - - - - - 301	MECHANICAL CLOSET PHONE ROOM TRAINING ROOM	ATTACH SIGN @ CORRIDOR FACING SIDE
300 300A 300B 301A 301B 301C 302 302A 303	ELEVATOR LOBBY ELEV MECH CL PHONE BOOTH PRINTER NICHE LOUNGE TRAINING ROOM STOR	C B B B B B	- - - - - - - 301 302	MECHANICAL CLOSET PHONE ROOM TRAINING ROOM	ATTACH SIGN @ CORRIDOR FACING SIDE
300 300A 300B 301A 301B 301C 302 302A 303 304	ELEVATOR LOBBY ELEV MECH CL PHONE BOOTH PRINTER NICHE LOUNGE TRAINING ROOM STOR WHITE BOX	C B B B B B A		MECHANICAL CLOSET PHONE ROOM TRAINING ROOM	ATTACH SIGN @ CORRIDOR FACING SIDE
300 300A 300B 301A 301B 301C 302 302A 303 304 306	ELEVATOR LOBBY ELEV MECH CL PHONE BOOTH PRINTER NICHE LOUNGE TRAINING ROOM STOR WHITE BOX WHITE BOX	C B B B B B A A A	302	MECHANICAL CLOSET PHONE ROOM TRAINING ROOM	ATTACH SIGN @ CORRIDOR FACING SIDE
300 300A 300B 301A 301B 301C 302 302A 302A 303 304 306 307	ELEVATOR LOBBY ELEV MECH CL PHONE BOOTH PRINTER NICHE LOUNGE TRAINING ROOM STOR WHITE BOX WHITE BOX WHITE BOX	C B B B B B A A A A	302 303	MECHANICAL CLOSET PHONE ROOM TRAINING ROOM	ATTACH SIGN @ CORRIDOR FACING SIDE
300 300A 300B 301A 301B 301C 302 302A 303 304 306 307 308	ELEVATOR LOBBY ELEV MECH CL PHONE BOOTH PRINTER NICHE LOUNGE TRAINING ROOM STOR WHITE BOX WHITE BOX WHITE BOX WHITE BOX WHITE BOX	C B B B B B A A A A A	302 303 304	MECHANICAL CLOSET PHONE ROOM TRAINING ROOM	ATTACH SIGN @ CORRIDOR FACING SIDE
300 300A 300B 301A 301B 301C 302 302A 303 304 306 307 308 309	ELEVATOR LOBBY ELEV MECH CL PHONE BOOTH PRINTER NICHE LOUNGE TRAINING ROOM STOR WHITE BOX WHITE BOX WHITE BOX WHITE BOX WHITE BOX WHITE BOX	C B B B B B A A A A A A A	302 303 304 305	MECHANICAL CLOSET PHONE ROOM TRAINING ROOM	ATTACH SIGN @ CORRIDOR FACING SIDE
300 300A 300B 301A 301B 301C 302 302A 303 304 306 307 308 309 310	ELEVATOR LOBBY ELEV MECH CL PHONE BOOTH PRINTER NICHE LOUNGE TRAINING ROOM STOR WHITE BOX WHITE BOX WHITE BOX WHITE BOX WHITE BOX WHITE BOX WHITE BOX WHITE BOX	C B B B B A A A A A A A A A A	302 303 304 305 306	MECHANICAL CLOSET PHONE ROOM TRAINING ROOM STORAGE	
300 300A 300B 301A 301B 301C 302 302A 303 304 306 307 308 309 310 311	ELEVATOR LOBBY ELEV MECH CL PHONE BOOTH PRINTER NICHE LOUNGE TRAINING ROOM STOR WHITE BOX WHITE BOX WHITE BOX WHITE BOX WHITE BOX WHITE BOX WHITE BOX WHITE BOX WHITE BOX TOILET	C B B B B A A A A A A A A A B	302 303 304 305 306	MECHANICAL CLOSET PHONE ROOM TRAINING ROOM STORAGE	INCLUDE GRAPHIC TO MATCH EXISTING STYLE
300 300A 300B 301A 301B 301C 302 302A 303 304 306 307 308 309 311 312	ELEVATOR LOBBY ELEV MECH CL PHONE BOOTH PRINTER NICHE LOUNGE TRAINING ROOM STOR WHITE BOX WHITE BOX WHITE BOX WHITE BOX WHITE BOX WHITE BOX WHITE BOX WHITE BOX WHITE BOX TOILET TOILET	C B B B B A A A A A A A A A B B B	302 303 304 305 306	MECHANICAL CLOSET PHONE ROOM TRAINING ROOM STORAGE RESTROOM RESTROOM	
300 300A 300B 301A 301B 301C 302 302A 303 304 306 307 308 309 311 312 313	ELEVATOR LOBBY ELEV MECH CL PHONE BOOTH PRINTER NICHE LOUNGE TRAINING ROOM STOR WHITE BOX WHITE BOX WHITE BOX WHITE BOX WHITE BOX WHITE BOX WHITE BOX WHITE BOX WHITE BOX WHITE BOX TOILET TOILET JAN. CL.	C B B B B B A A A A A A A A B B B B B	302 303 304 305 306 307 - - - -	MECHANICAL CLOSET PHONE ROOM TRAINING ROOM STORAGE	INCLUDE GRAPHIC TO MATCH EXISTING STYLE
300 300A 300B 301A 301B 301C 302 302A 303 304 306 307 308 309 311 312 313 314	ELEVATOR LOBBY ELEV MECH CL PHONE BOOTH PRINTER NICHE LOUNGE TRAINING ROOM STOR WHITE BOX WHITE BOX WHITE BOX WHITE BOX WHITE BOX WHITE BOX WHITE BOX WHITE BOX WHITE BOX TOILET TOILET TOILET JAN. CL. WHITE BOX	C B B B B A A A A A A A A B B B B A	302 303 304 305 306	MECHANICAL CLOSET PHONE ROOM TRAINING ROOM STORAGE RESTROOM RESTROOM CUSTODIAL CLOSET	INCLUDE GRAPHIC TO MATCH EXISTING STYLE INCLUDE GRAPHIC TO MATCH EXISTING STYLE
03 THIRD FLOOF 300 300A 300B 301A 301B 301C 302 302A 302 302A 303 304 306 307 308 309 310 311 312 313 312 313 314 \$302	ELEVATOR LOBBY ELEV MECH CL PHONE BOOTH PRINTER NICHE LOUNGE TRAINING ROOM STOR WHITE BOX WHITE BOX STAIR 2	C B B B B A A A A A A A A B B B B B B B	302 303 304 305 306 307 - - - -	MECHANICAL CLOSET PHONE ROOM TRAINING ROOM STORAGE RESTROOM RESTROOM CUSTODIAL CLOSET STAIR 2	INCLUDE GRAPHIC TO MATCH EXISTING STYLE INCLUDE GRAPHIC TO MATCH EXISTING STYLE INCLUDE GRAPHIC TO MATCH EXISTING STYLE
300 300A 300B 301A 301B 301C 302 302A 303 304 306 307 308 309 311 312 313 314	ELEVATOR LOBBY ELEV MECH CL PHONE BOOTH PRINTER NICHE LOUNGE TRAINING ROOM STOR WHITE BOX WHITE BOX WHITE BOX WHITE BOX WHITE BOX WHITE BOX WHITE BOX WHITE BOX WHITE BOX TOILET TOILET TOILET JAN. CL. WHITE BOX	C B B B B A A A A A A A A B B B B A	302 303 304 305 306 307 - - - -	MECHANICAL CLOSET PHONE ROOM TRAINING ROOM STORAGE RESTROOM RESTROOM CUSTODIAL CLOSET	INCLUDE GRAPHIC TO MATCH EXISTING STYLE INCLUDE GRAPHIC TO MATCH EXISTING STYLE INCLUDE GRAPHIC & ATTACH SIGN @ CORRIDOR

SIGNAGE SCHEDULE



1 1/2" 6 1/4" 5/8" WAYFINDING GRAPHICS FOR -CURRENT FLOOR ------EMPTY AREA Gymnasium EMPTY AREA Mail Station EMPTY AREA Phone Room EMPTY AREA Restrooms EMPTY AREA 7/16" 1/8" 7/16" WAYFINDING GRAPHICS FOR UPPER FLOORS -- **N**-**C**-- i - - - - - - - - -EMPTY AREA Training Room EMPTY AREA Printer EMPTY AREA Offices XXX-XXX EMPTY AREA 7/16" 1/8" 7/16" Wayfinding Graphics for Lower Floors EMPTY AREA **Content Creation** EMPTY AREA . _ _ _ _ _ _ _ Storage EMPTY AREA Offices XXX-XXX EMPTY AREA DIRECTIONS AND WAYFINDING ON THIS SIDE SIDE 2 - STAIR SIDE

TYPICAL SIGNAGE TYPE C



SIDE 1 - ELEVATOR SIDE

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TOP OF LETTER (TYP)

3/4" BOLD LINE TO

SEPARATE FLOORS (TYP)

- BOTTOM OF LETTER (TYP)

ADA SIGN PANEL COLOR TO BE
SELECTED BY ARCHITECT,
UNLESS NOTED OTHERWISE ON
MESSAGE SCHEDULE

010					
G15A	STOR		-		
G15B	MECH.		-		
SG02	STAIR 2	В	-	STAIR 2	
SG03	STAIR 3	В	-	STAIR 3	
SG04	STAIR 4	В	-	STAIR 4	
03 THIRD FL	OOR	1	1		
300	ELEVATOR LOBBY	В	-	ELEVATOR LOBBY	
300A	ELEV	С	-		·
300B	MECH CL	В	-	MECHANICAL CLOSET	
301A	PHONE BOOTH	В	-	PHONE ROOM	
301B	PRINTER NICHE		-		
301C	LOUNGE		-		
302	TRAINING ROOM	В	-	TRAINING ROOM	
302A	STOR	В	-	STORAGE	
303	WHITE BOX	A	301		
304	WHITE BOX	A	302		
306	WHITE BOX	A	303		
307	WHITE BOX	A	304		
308	WHITE BOX	A	305		
309	WHITE BOX	A	306		
310	WHITE BOX	A	307		
311	TOILET	В	-	RESTROOM	
312	TOILET	В	-	RESTROOM	
313	JAN. CL.	В	-	CUSTODIAL CLOSET	
314	WHITE BOX	A	308		
S302	STAIR 2	В	-	STAIR 2	
S303	STAIR 3	В	-	STAIR 3	
S304	STAIR 4	В	-	STAIR 4	

ROOM NUMBER ON PLANS

1 GARDEN

G00A

G01A

G00B

ROOM NAME

ELEV LOBBY ELEV

JANITOR CLS

WHITE BOX

WHITE BOX

WHITE BOX WHITE BOX

WHITE BOX TOILET

CREATION WAITING CONTENT CREATION

TOILET

CAFE STORAGE

BUILDING STORAGE WHITE BOX

VESTIBULE

MECH CL STORAGE B -C -B -B -B -B -B S2

B S

A (

A G

A G A G4 A G5

 A
 G6

 B

 B

 B

INCLUDE GRAPHIC & ATTACH SIGN @ CORRIDOR FACING SIDE INCLUDE GRAPHIC & ATTACH SIGN @ CORRIDOR FACING SIDE INCLUDE GRAPHIC & ATTACH SIGN @ CORRIDOR

RESTROOM

RESTROOM

CONTENT CREATION

INCLUDE GRAPHIC & ATTACH SIGN @ CORRIDOR FACING SIDE INCLUDE GRAPHIC & ATTACH SIGN @ CORRIDOR FACING SIDE SIGNAGE NOTES: 2. SIGN COLOR: MATTE BLACK ACRYLIC, IN ACCORDANCE WITH YSM DESIGN STANDARDS 3. RAISED CHARACTER COLOR: WHITE, RUSTICA SEMI LIGHT IN 56/65, WITH 23 PT BRAILLE (BRAILLE TO BE BLACK) 4. ALL SIGNS SHALL BE FURNISHED WITH MATCHING BLACK VINYL REMOVABLE BLANK INSERTS AND SHALL BE LOCATED AT LATCH SIDE OF DOOR. 5. SIGNAGE VENDOR TO CONFIRM AND FINALIZE ALL SIGNAGE TEXT WITH OWNER. 6. SIGNS TO BE INSTALLED SO THAT TOP OF SIGNS ARE NO HIGHER THAN 60" AFF. SIDE EDGE OF SIGN TO BE 7" OFF OF DOOR FRAME WHERE POSSIBLE. SEE TYPICAL SIGNAGE MOUNTING HEIGHT" DETAIL ON A8.11 7. SIGNAGE DRAWINGS SHOWN FOR DESIGN INTENT ONLY. ALL NEW PROPOSED SIGNAGE SHALL BE COORDINATED TO MATCH EXISTING INSTALLED SIGNAGE. 8. PER OWNER - ONLY WHITE BOX ROOMS SHALL HAVE PRINTED ROOM NUMBERS. ANY SIGNAGE MARKED WITH "-" AT THE LOCATION FOR "PRINTED ROOM

> MOUNTED TO 2 FACES OF WALL, WRAPPING CORNER.

FINAL TEXT TBD. 10" x 18" EACH FACE

NUMBER" SHALL NOT RECIEVE A ROOM NUMBER ON ITS SIGN



VATOR Ш . $\overline{}$ SIDE

SIDE 2 - STAIR



SIGNAGE SCHEDULE SIGN PRINTED ROOM TYPE NUMBER

ELEVATOR LOBBY

STORAGE

STORAGE

CAFE STORAGE

MECHANICAL CLOSET

CUSTODIAL CLOSET

BUILDING STORAGE

MESSAGE

Comments

ATTACH SIGN @ CORRIDOR FACING SIDE

INCLUDE GRAPHIC TO MATCH EXISTING STYLE

INCLUDE GRAPHIC TO MATCH EXISTING STYLE

ATTACH SIGN @ CORRIDOR FACING SIDE

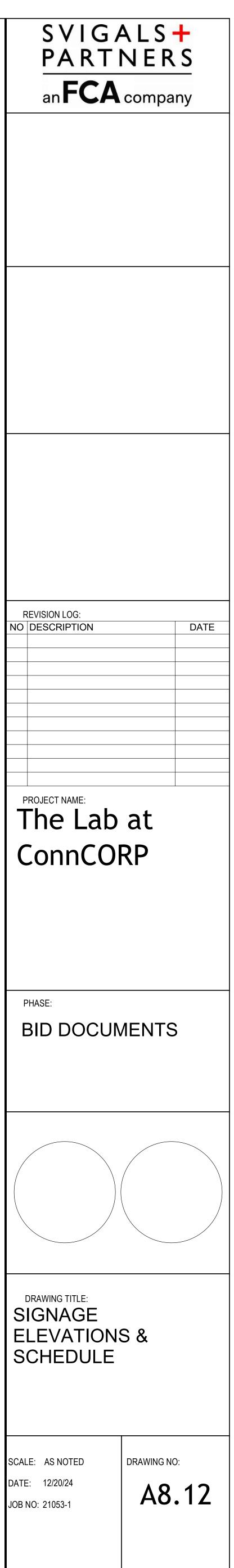
ATTACH SIGN @ CORRIDOR FACING SIDE

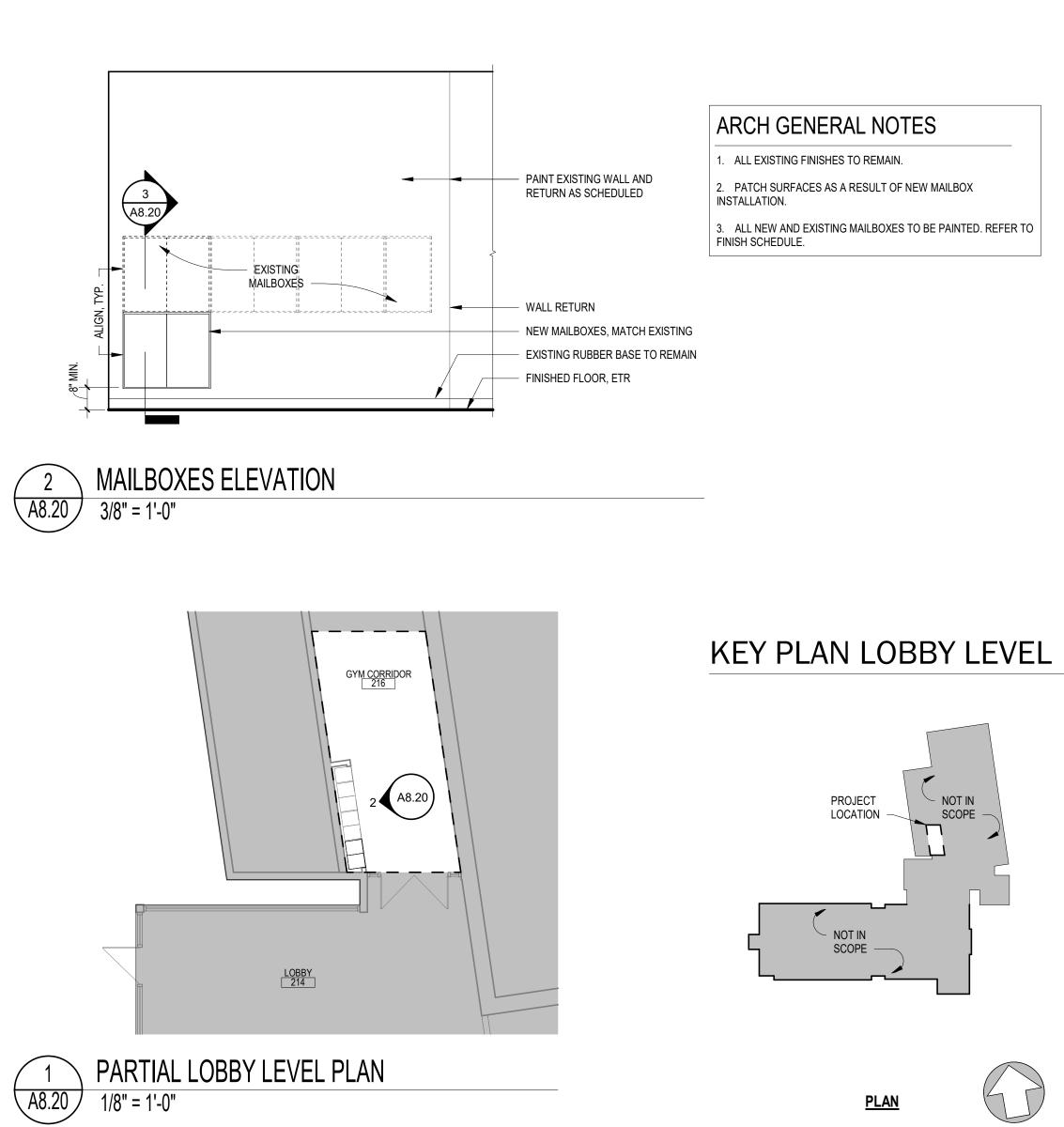
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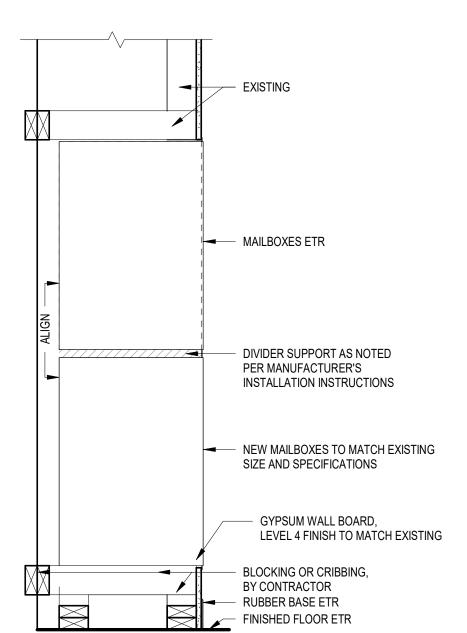
INCLUDE GRAPHIC TO MATCH EXISTING STYLE

INCLUDE GRAPHIC & ATTACH SIGN @ CORRIDOR FACING SIDE

FACING SIDE

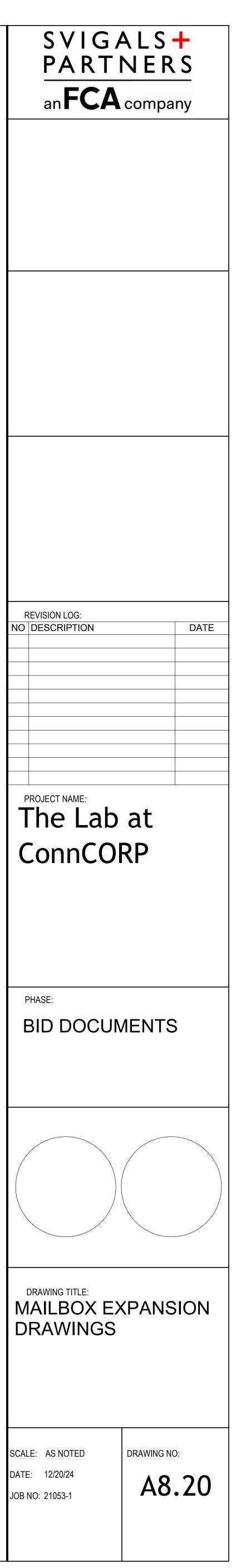




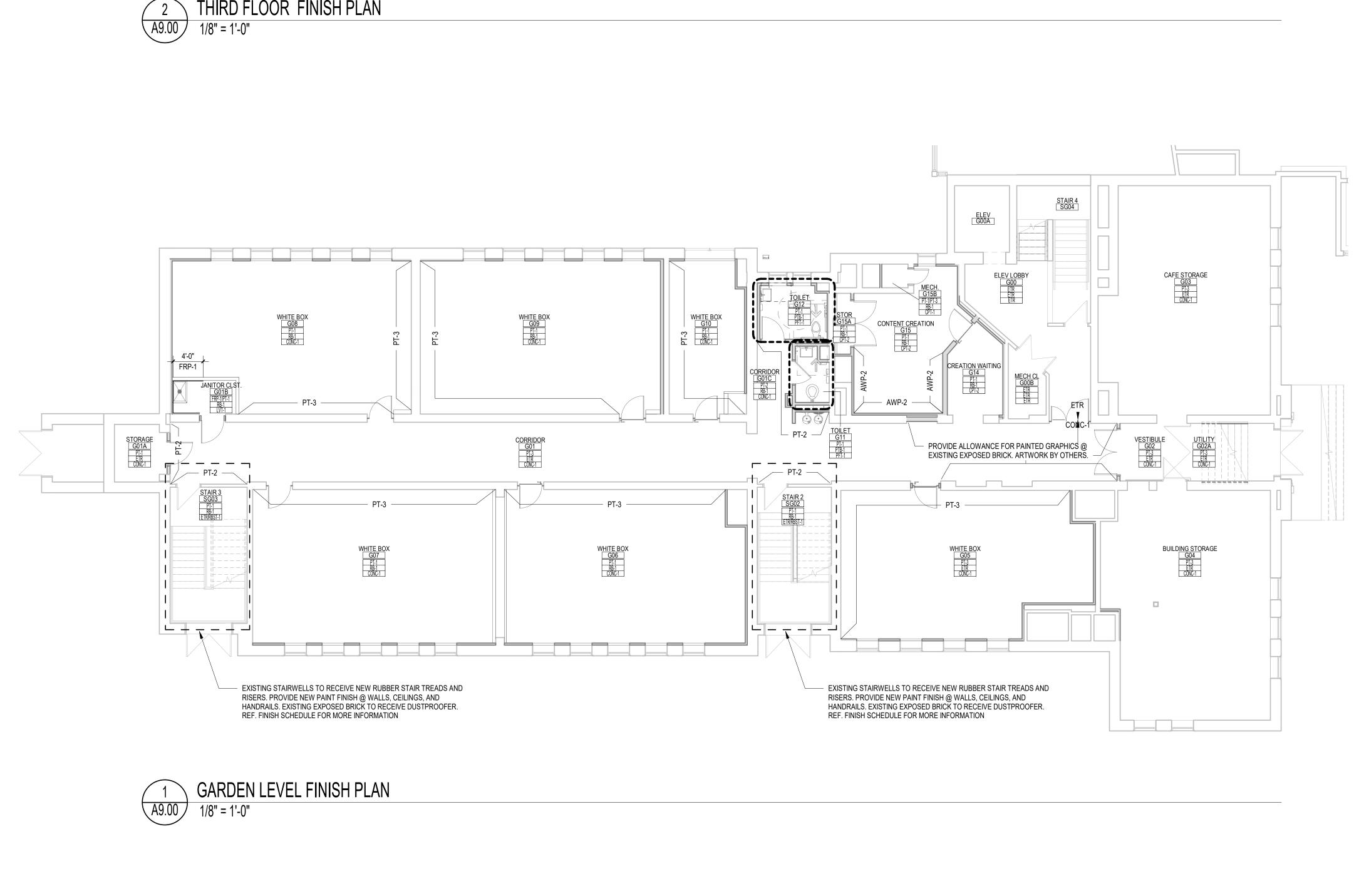


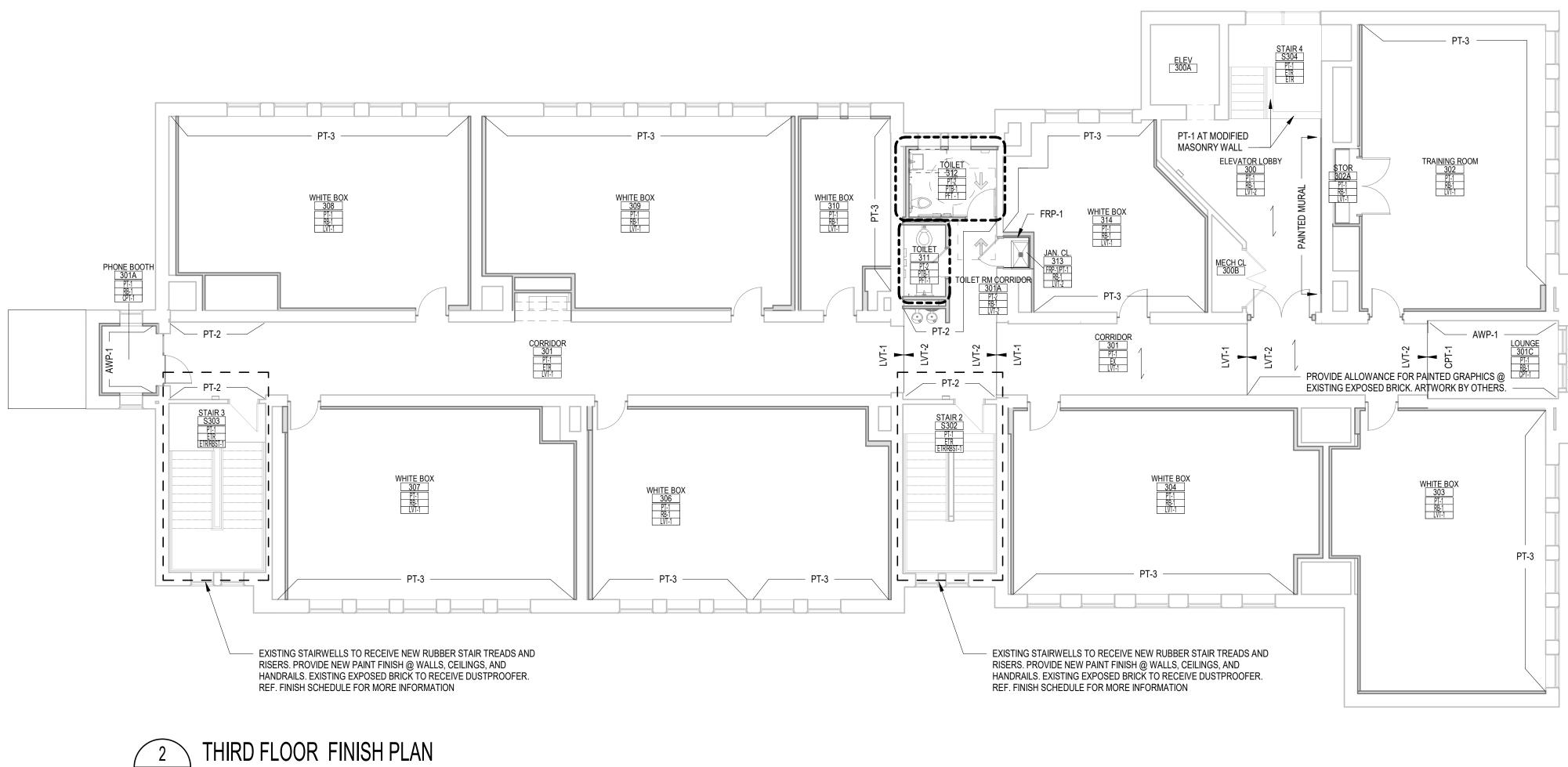
3 MAILBOXES SECTION A8.20 1" = 1'-0"



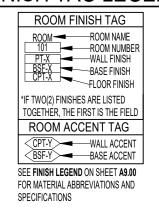




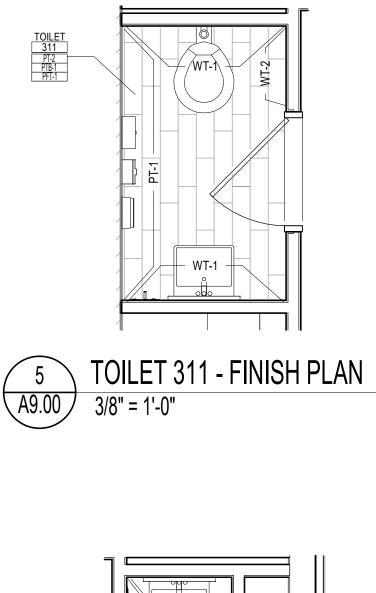


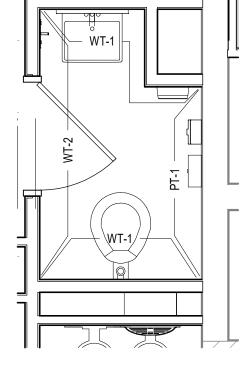






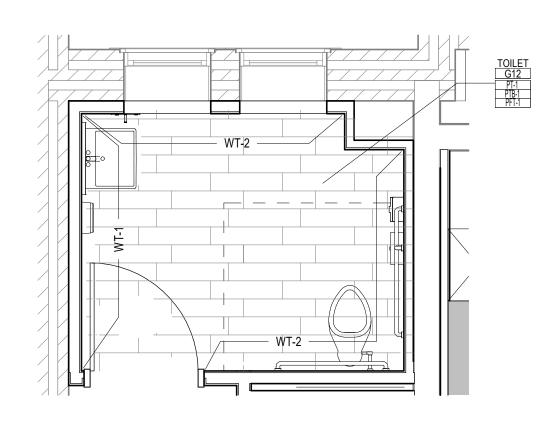
			FINISH LEGEN		1
Name	Finish Material	Manufacturer	Product	Notes	Location
FLOOR CONC-1	CONCRETE FLOORING FINISH	PROSOCO	TOPPER: PROVIDE CONCRETE TOPPER/OVERLAYMENT FOR REPAIR OF EXISTING SLAB, DENSIFIER: PROSOCO LS GUARD SEAL DENSIFIER, POLISH: 800 GRIT LEVEL 3 POLISH, FINISH: PROSOCO POLISH GUARD		
CPT-1	CARPET TILE	SHAWCONTRACT	STYLE: 5T451 - IN COMMON TILE, COLOR: 50210 TOGETHER COLOR	INSTALL METHOD: RANDOM STAGGER, TILE SIZE 9" X 36"	LOUNGE/PHONE BOOTH
CPT-2	CARPET TILE	SHAWCONTRACT	5T487 - ZEST TILE, COLOR: 87500 - GUSTO	INSTALL METHOD: ASHLAR, TILE SIZE: 24" X 24"	CONTENT CREATION
LVT-1	LVT	MOHAWK GROUP	HOT & HEAVY II COLLECTION, BOLDER 2.5. STYLE No: C2107, COLOR: 925 SLATE, 18"x36" TILES, 2.5MM THICKNESS	INSTALL METHOD: STAGGER	TYPICAL FIELD, U.N.O.
LVT-2	LVT	MOHAWK GROUP	HOT & HEAVY II COLLECTION, BOLDER 2.5. STYLE No: C2107, COLOR: 969 OBSIDIAN, 18"x36" TILES, 2.5MM THICKNESS	INSTALL METHOD: STAGGER	ACCENT WHERE SCHEDULED; REF. FINISH PLAN
PFT-1	PORCELAIN TILE	CREATIVE MATERIALS CORPORATION	CHALK - DARK GREY - MATTE - RECTIFIED	INSTALL METHOD: RANDOM STAGGER, GROUT COLOR: TBD, TILE SIZE 6" X 24" (12 X 24" TILES TO BE CUT IN HALF)	TOILET ROOMS
RBST-1	RUBBER STAIR TREADS & RISERS	TBD	MATCH EXISTING		PER PLAN
BASE					
PTB-1	PORCELAIN TILE	CREATIVE MATERIALS CORPORATION	CHALK - WHITE - MATTE	SIZE 3" X 12" BULLNOSE	TOILET ROOM WALLS WITHOUT TILE SCHEDULED
RB-1	RUBBER BASE	TBD	4" HIGH TRADITIONAL COVE, COLOR: BLACK		MATCH EXISTING SPECIFICATION (NOT SCHEDULED FOR EXPOSED BRICK/MASONRY WALLS)
WALL					
AWP-1	ACOUSTIC WALLCOVERING	KIREI	PATTERN: RACETRACK TILES, TILE SIZE: 23" X 23", COLOR: PACIFIC 045, THICKNESS: 12MM TILE PATTERN: VARIETY OF TILES INCLUDING PLANE, PATH, AND CURVE PATTERNS; FINAL LAYOUT TO BE CONFIRMED WITH ARCHITECT		LOUNGE/PHONE BOOTH; REF. ELEVATIONS;FINAL LAYOUT AND TILE CONFIGURATION TO BE CONFIRMED WITH ARCHITECT
AWP-2	ACOUSTIC WALL PANELS	TURF	PATTERN: RACETRACK TILES TILE SIZE: 23" X 23", COLOR: THICKNESS: 12MM TILE PATTERN: PLANE TILE, FINAL PATTERN TO BE COORDINATED WITH ARCHITECT.		CONTENT CREATION
FRP-1	FIBER REINFORCED PANEL	MARLITE	STANDARD FRP BRIGHT WHITE P 199 CLASS A	INCLUDE ALL TRIM & ACCESSORIES, AS NEEDED	JANITOR'S CLOSET - UP TO 48" A.F.F.
GF-1	GLAZING FILM	3M	Milky Crystal SH2MLCRX		RESTROOM - EXTERIOR WINDOWS
P-CLG-1	PAINT	SHERWIN WILLIAMS	SW 7757, HIGH REFLECTIVE WHITE	FINISH: FLAT	TYPICAL DRYWALL CEILINGS AND SOFFITS; 3RD FLOOR EXPOSED CEILING/DECK, U.N.O.
P-CLG-2	PAINT	SHERWIN WILLIAMS	SW 7617, MEDITERRANEAN	FINISH: FLAT	3RD FLOOR EXPOSED CEILING/DECK @ CORRDIDOR AND LOUNGE
PT-1 PT-2	PAINT - FIELD	SHERWIN WILLIAMS	COLOR: TBD (MATCH EXISTING)	FINISH: EGGSHELL	TYPICAL FIELD, U.N.O.
PT-2 PT-2A	PAINT - ACCENT PAINT - ACCENT	SHERWIN WILLIAMS	COLOR: TBD, EGGSHELL FINISH COLOR: TBD, SEMI-GLOSS FINISH		GREY ACCENT AS SCHEDULED; REF. FINISH PLAN HOLLOW METAL DOOR FRAMES AS SCHEDULED; REF.
PT-3	PAINT - EXPOSED MASONRY DUSTSTOPPER	PROSOCO	SURE KLEAN WEATHER SEAL PROTECTIVE TREATMENTS, INTERIOR MASONRY DUSTPROOFER		FINISH PLAN TYP. @ ALL EXPOSED BRICK, MASONRY, CONCRETE, AND STRUCTURAL MEMBERS AT WALLS AND EXPOSED CEILING SLAB ABOVE, AND ALL GARDEN LEVEL EXPOSED CEILINGS
PT-4	PAINT - GREY ACCENT		SW7076, CYBERSPACE		PER PLAN
PT-5 WD-1	PAINT -ACCENT WOOD VENEER WALL	SHERWIN WILLIAMS HEITINK VENEERS	COLOR: TBD, SEMIGLOSS FINISH SPECIES: WHITE OAK, CUT: RIFT, MATCH: SLIP AND		ACCENT PAINT AT EXPOSED CONDUIT WALL MOUNTED PANELS SURROUNDING MURAL @ 3RD
VVD-1	PANEL	HEITINK VENEEKS	BALANCED MATCHED, GRADE: RIFT OAK GRADE A, FINISH: STAINED TO MATCH EXISTING WOOD DOORS		FLOOR ELVATOR LOBBY
WT-1	WALL TILE	CREATIVE MATERIALS CORPORATION	CHALK - DARK GREY - MATTE - RECTIFIED	INSTALL METHOD: RANDOM STAGGER, GROUT COLOR: TBD, TILE SIZE 6" X 24" (12 X 24" TILES TO BE CUT IN HALF)	TOILET ROOMS AS SCHEDULED
WT-2	WALL TILE	CREATIVE MATERIALS CORPORATION	CHALK - WHITE - MATTE - RECTIFIED	INSTALL METHOD: RANDOM STAGGER, GROUT COLOR: TBD, TILE SIZE 6" X 24" (12 X 24" TILES TO BE CUT IN HALF)	TOILET ROOMS AS SCHEDULED
MILLWORK					
PL-1	PLASTIC LAMINATE	FORMICA GROUP	COLORCORE2 - 928C-58 MOUSE, MATTE TEXTURE		PER PLAN
SS-1	SOLID SURFACE	CORIAN OR SIMILAR	TBD MATCH EXISTING	Notes	WINDOW SILLS AT EXISTING EXTERIOR WINDOWS
VISC					
WS-1	WINDOW SHADE	MECHO SHADE (OR SIMILAR)	MATCH EXISTING SOLAR SHADE ON SECOND FLOOR SINGLE ROLL MANUAL SOLAR SHADE OPENNESS: VERIFY IN FIELD COLOR: MATCH EXISTING - TO BE COORDINATED WITH ARCHITECT PROVIDE CABLE GUIDES AT WINDOW OPENING	MATCH EXISTING PRODUCT AND COLOR; PROVIDE METAL FASCIA TRIM,TYP.	EXTERIOR WINDOWS, U.O.N. (NO WINDOW TREATMENTS A LOUNGE OR TOILET ROOMS)

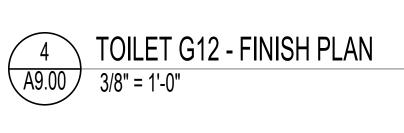


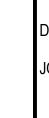


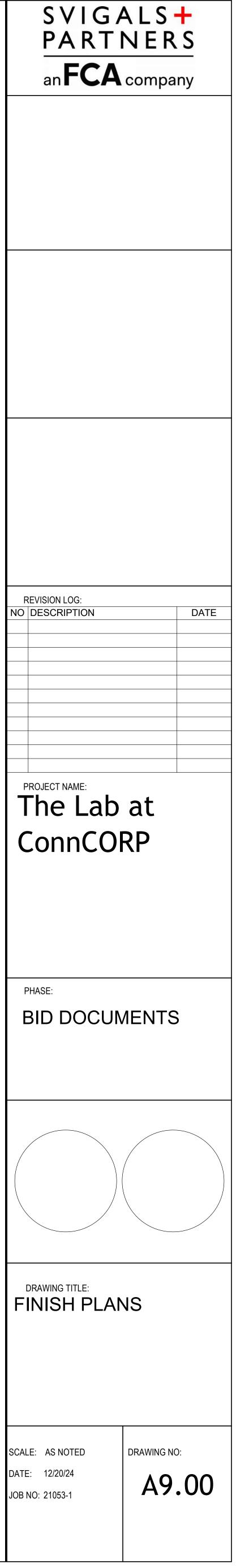




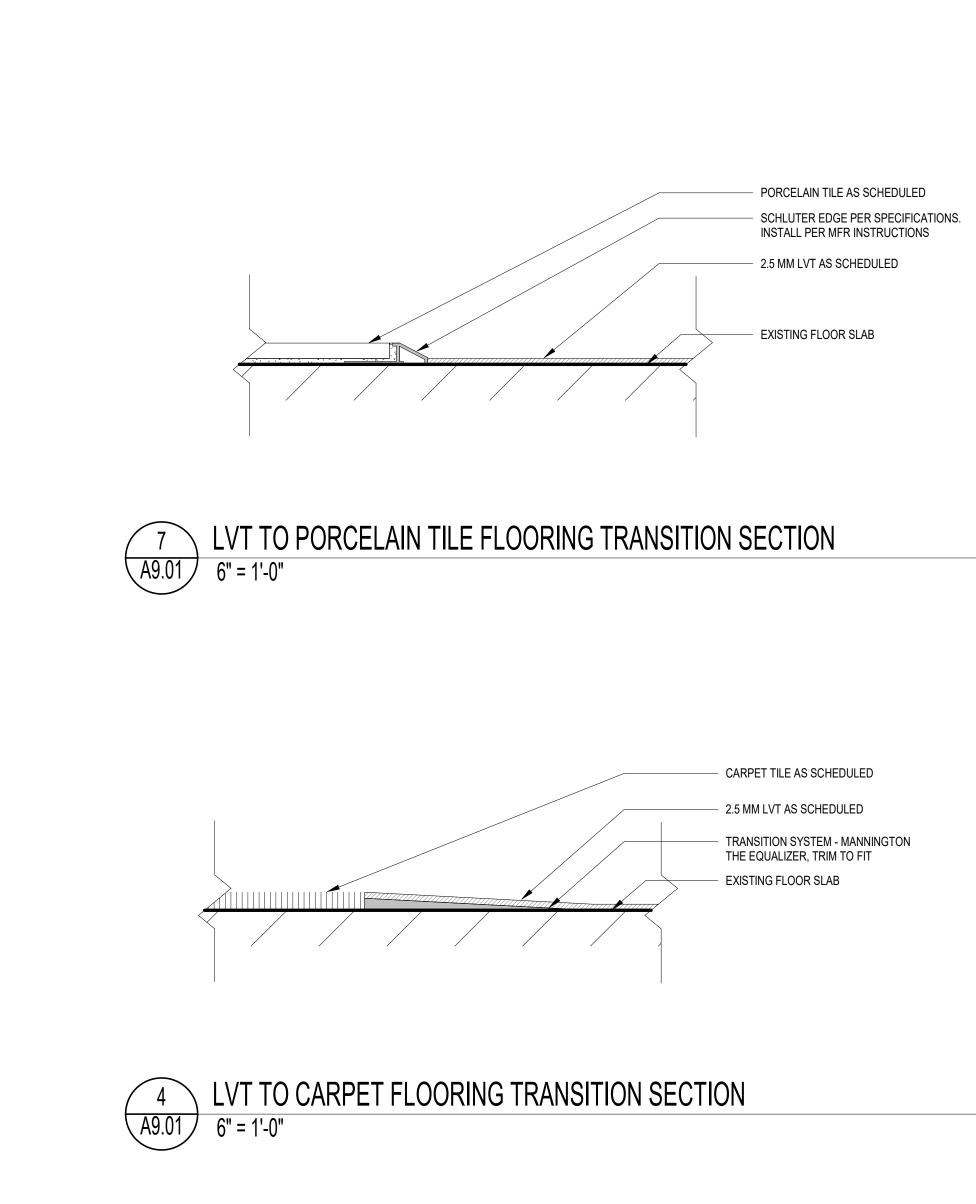




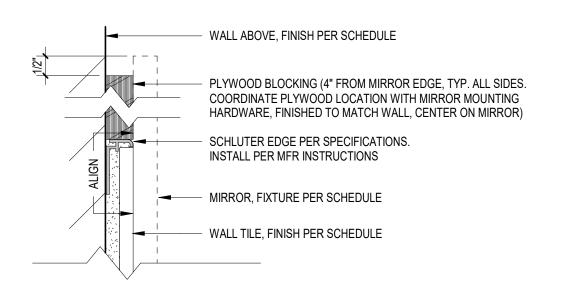


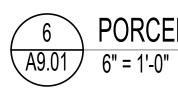




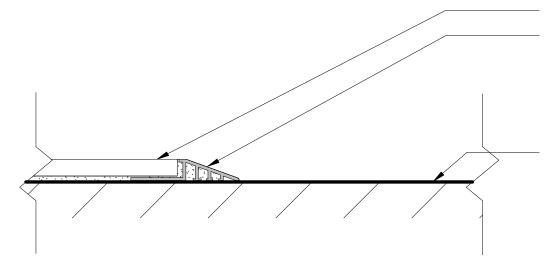








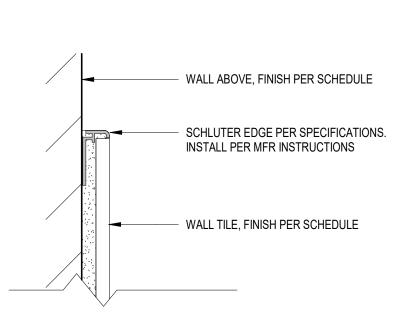
PORCELAIN TILE TO CONCRETE SLAB FLOORING TRANSITION SECTION

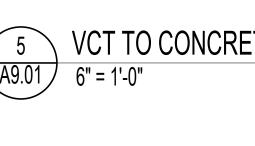


- FINISHED CONCRETE FLOOR SLAB

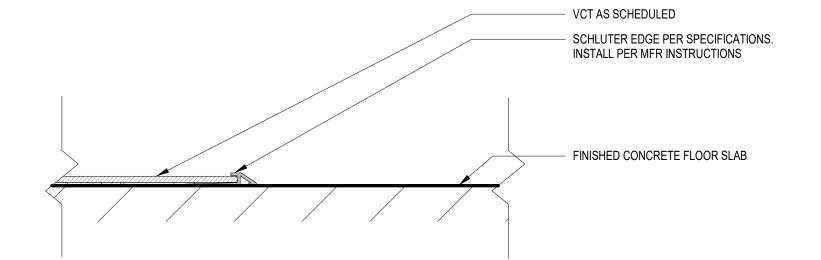
PORCELAIN TILE AS SCHEDULED SCHLUTER EDGE PER SPECIFICATIONS. INSTALL PER MFR INSTRUCTIONS



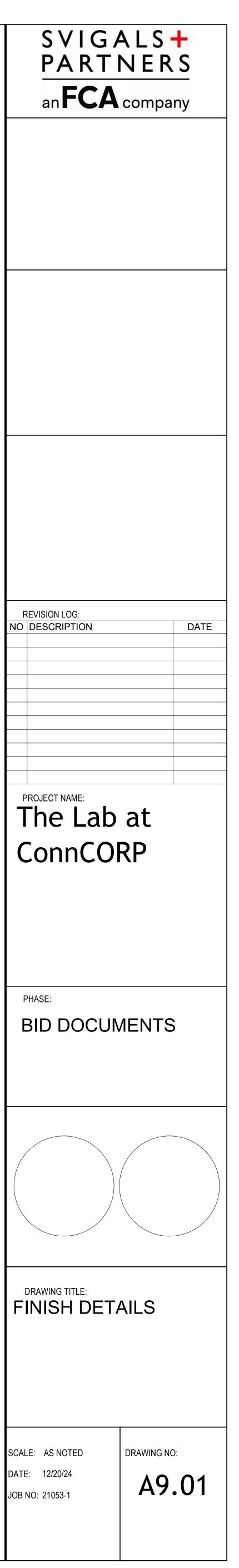




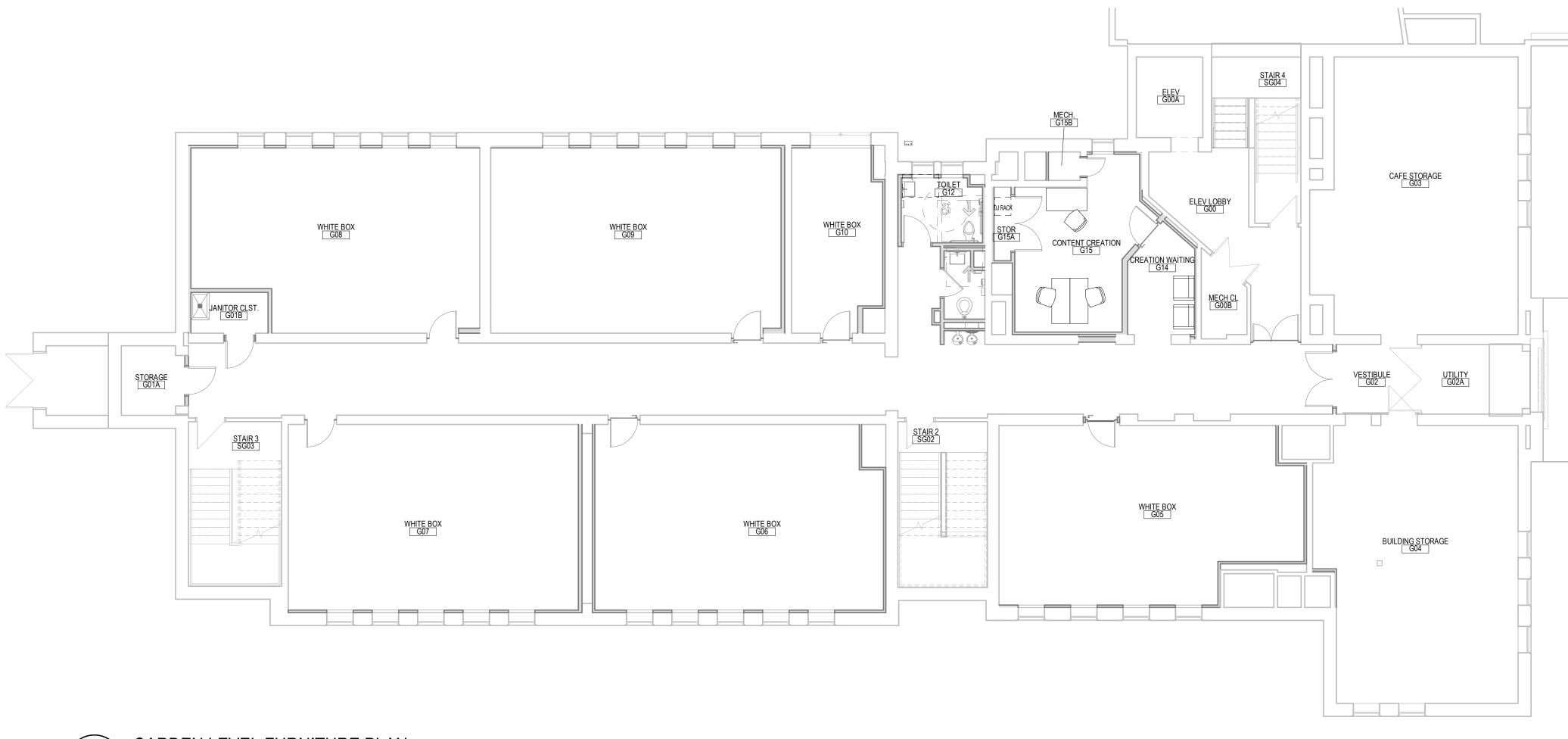
5 VCT TO CONCRETE SLAB FLOORING TRANSITION SECTION A9.01 6" = 1'-0"

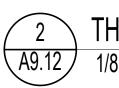




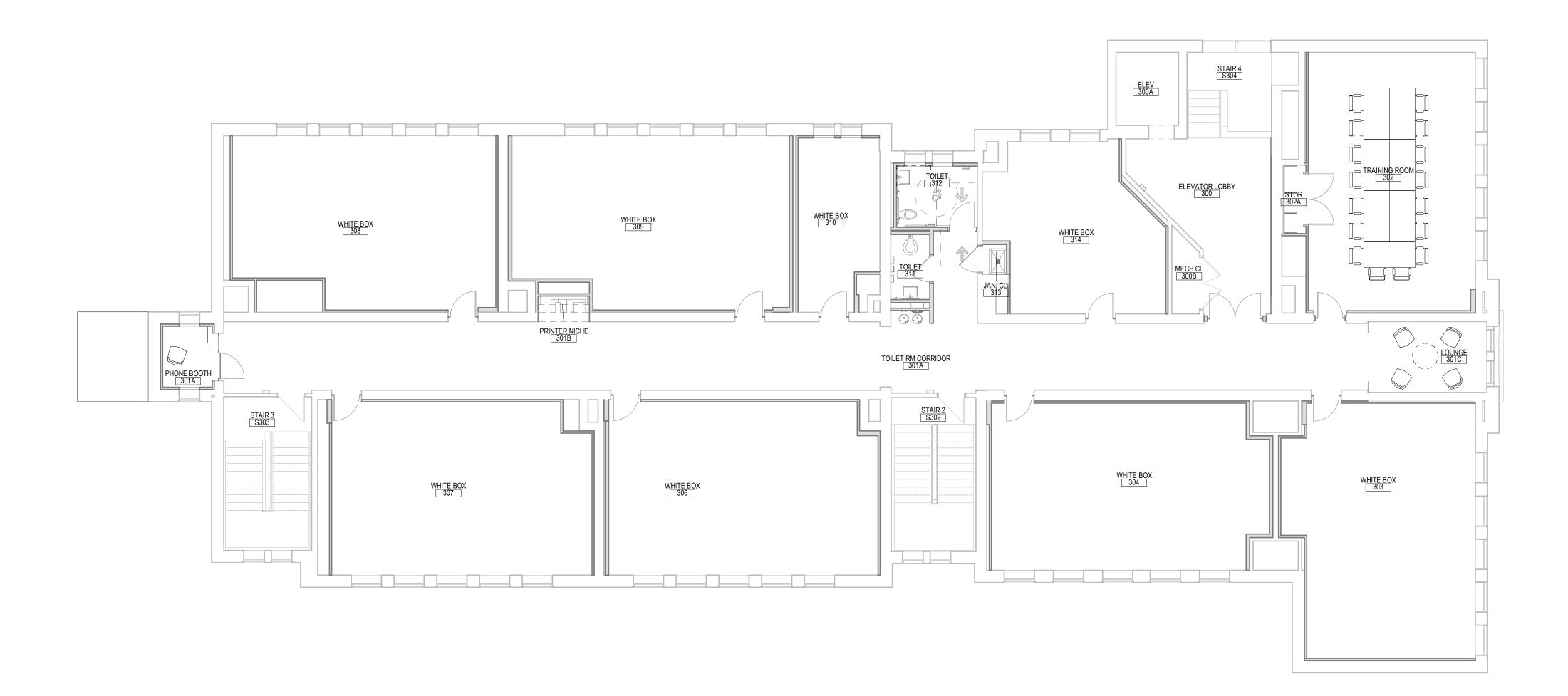






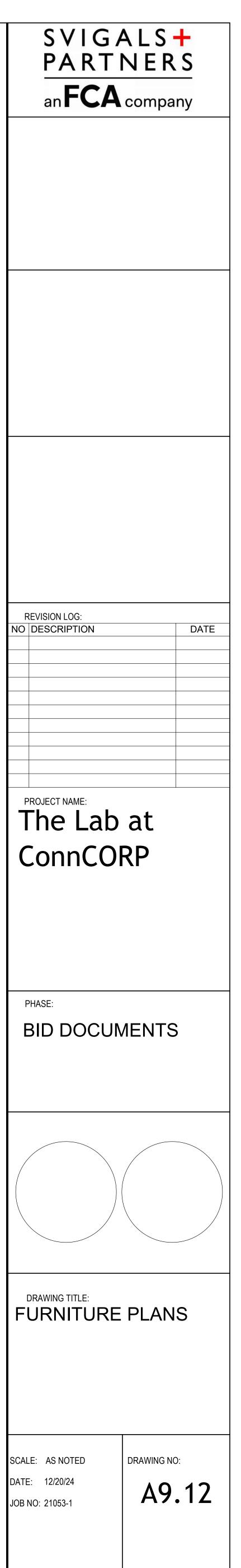


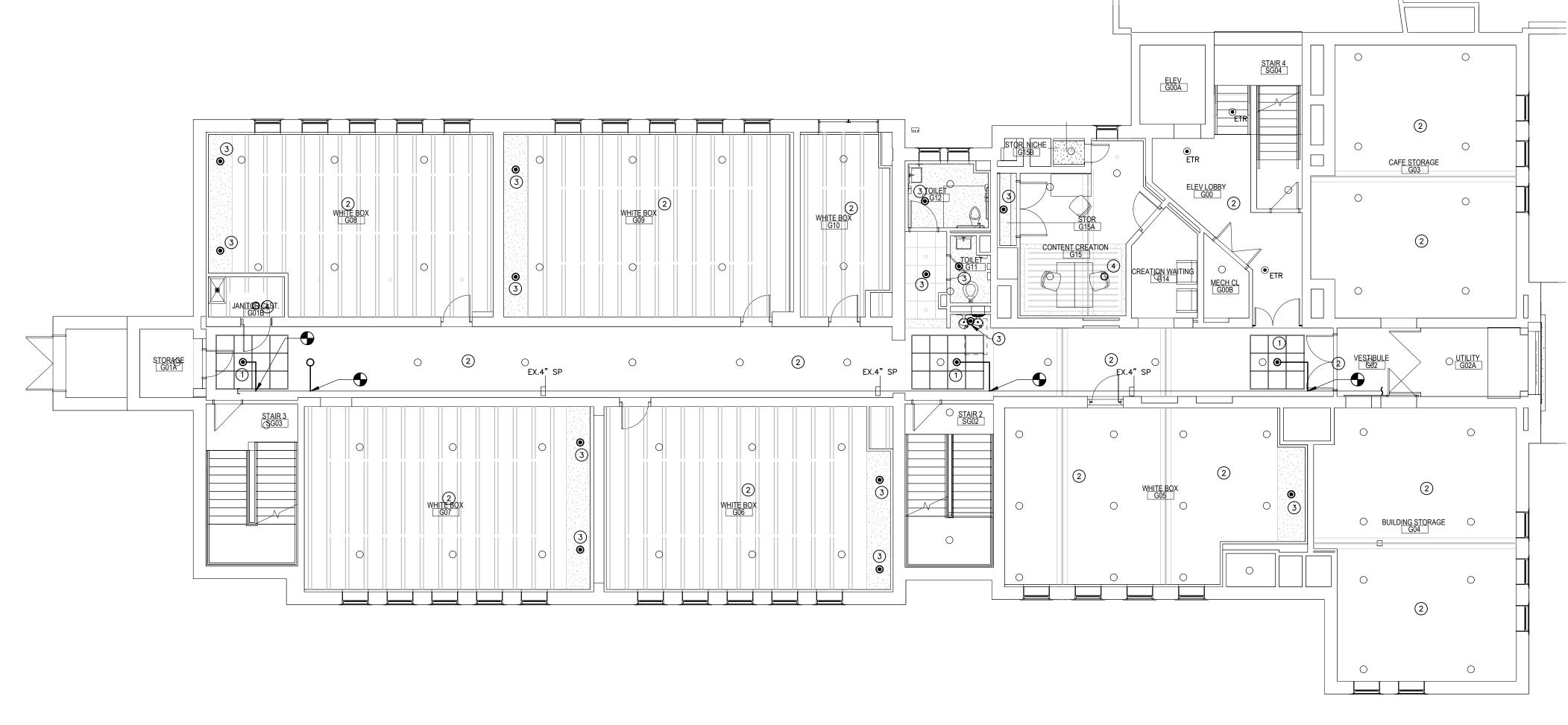
2 THIRD FLOOR FURNITURE PLAN A9.12 1/8" = 1'-0"

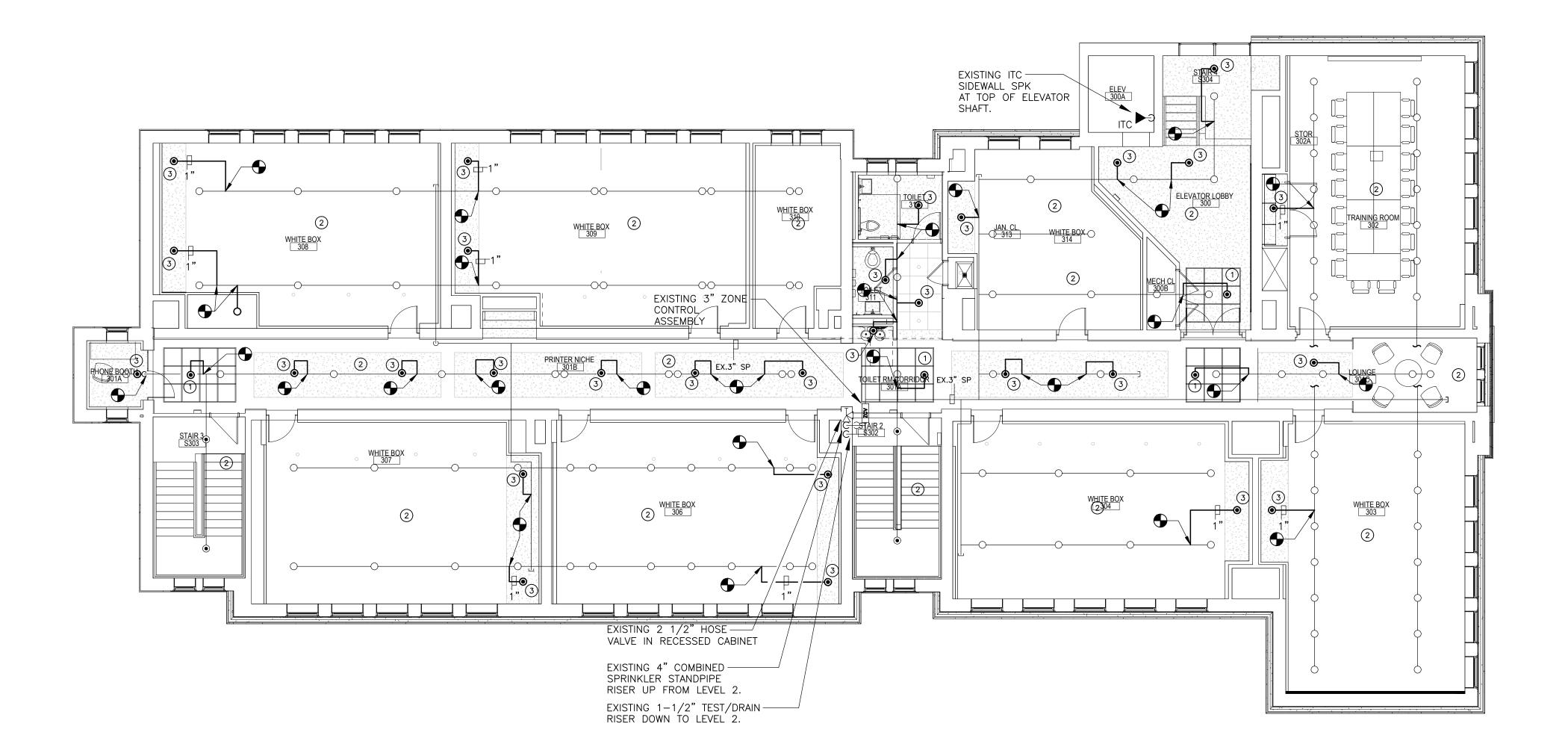




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THIRD FLOOR FIRE PROTECTION PLAN SCALE: 1/8"= 1'-0"

GARDEN LEVEL FIRE PROTECTION PLAN SCALE: 1/8"= 1'-0"

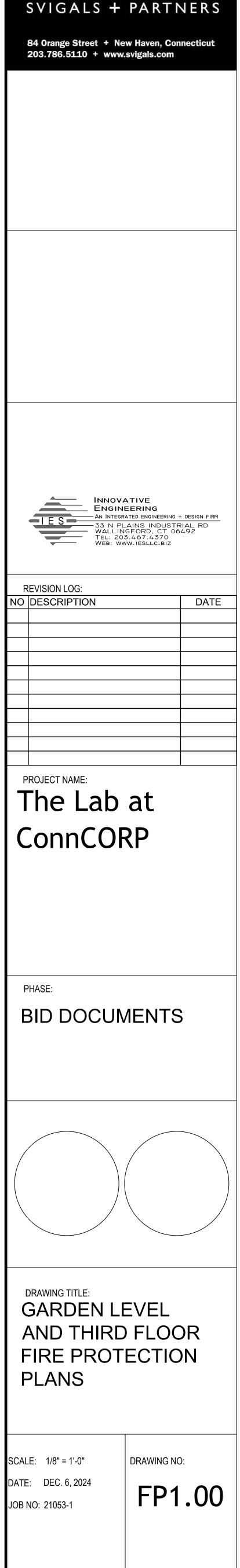


- (1) CONTRACTOR SHALL PROVIDE CONCEALED SPRINKLER AND PROVIDE IT FLUSH WITH LIGHTING BAFFEL SYSTEM. REFER TO ARCHITECTURAL DRAWINGS FOR LOCATION AND COLOR SELECTION OF SPRINKLER ESCUTCHEON COVER.
- (2) EXISTING WET SPRINKLER PIPING AND UPRIGHT SPRINKLER HEADS SHALL REMAIN.
- (3) PROVIDE NEW CONCEALED SPRINKLER HEAD AND CONNECT TO EXISTING WET SPRINKLER PIPING SYSTEM. REFER TO DETAILS AND SCHEDULES FOR ADDITIONAL INFORMATION.
- PROVIDE NEW UPRIGHT SPRINKLER HEAD AND CONNECT TO EXISTING WET SPRINKLER PIPING SYSTEM. REFER TO DETAILS AND SCHEDULES FOR ADDITIONAL INFORMATION.

GENERAL FIRE PROTECTION NOTE

EXISTING FIRE PROTECTION SYSTEM SHALL REMAIN.





TECHNICAL REQUIREMENTS

THESE SPECIFICATIONS CALL OUT CERTAIN DUTIES OF THE CONTRACTOR AND HIS SUBCONTRACTOR. THEY ARE NOT INTENDED AS SUBCONTRACT DOCUMENTS, NOR ARE THEY INTENDED AS A MATERIAL LIST OF ITEMS REQUIRED BY THE CONTRACT. PROVIDE ALL ITEMS AND WORK CALLED FOR IN THIS DIVISION OF THE SPECIFICATIONS IN ACCORDANCE WITH THE CONTRACT DOCUMENTS. THIS INCLUDES ALL INCIDENTALS. EQUIPMENT, APPLIANCES, SERVICES, HOISTING, SCAFFOLDING, SUPPORTS, TOOLS, SUPERVISION LABOR, CONSUMABLE ITEMS, FEES, LICENSES, ETC., NECESSARY TO PROVIDE COMPLETE SYSTEMS. PERFORM START UP AND CHECK OUT EACH ITEM AND SYSTEM TO PROVIDE FULLY OPERABLE SYSTEMS. INTENT OF DRAWINGS

PIPING SHOWN ON DRAWINGS IS DIAGRAMMATIC, AND INDICATES GENERAL ARRANGEMENT OF WORK. LOCATE SPRINKLER HEADS AS INDICATED ON DRAWINGS. CONNECT TO EXISTING, OR RUN NEW PIPING, AS REQUIRED FOR A COMPLETE AND OPERATIONAL SYSTEM IN ACCORDANCE WITH NFPA 13.

DO NOT SCALE DRAWINGS. CHECK EXISTING SPACE CONDITIONS AT THE JOB SITE. CODES AND STANDARDS

INTERNATIONAL BUILDING CODE IBC, 2021 EDITION, AS AMENDED BY THE STATE OF CONNECTICUT 2022 AMENDMENTS. INTERNATIONAL FIRE CODE IFC, 2021 EDITION, AS AMENDED BY THE STATE OF

CONNECTICUT 2022 AMENDMENTS. THE 2022 STATE OF CONNECTICUT FIRE PREVENTION CODE.

THE 2022 STATE OF CONNECTICUT FIRE SAFETY CODE.

NFPA 101, LIFE SAFETY CODE, 2021 EDITION, AS AMENDED BY THE STATE OF CONNECTICUT 2022 AMENDMENTS NFPA 70: NATIONAL ELECTRICAL CODE, 2020 EDITION, AS AMENDED BY THE STATE OF CONNECTICUT 2022 AMENDMENTS.

NFPA 13 2019 EDITION.

NFPA 72: NATIONAL FIRE ALARM CODE, 2019 EDITION.

OCCUPATIONAL SAFETY AND HEALTH STANDARDS. DEPARTMENT OF ENVIRONMENTAL PROTECTION.

INTERNATIONAL ENERGY CONSERVATION CODE, 2021, AS AMENDED BY THE STATE OF CONNECTICUT 2022 AMENDMENTS.

STATE DEMOLITION CODE. LOCAL BUILDING CODE.

ICC/ANSI A117.1, 2017, ACCESSIBLE AND USABLE BUILDINGS AND FACILITIES, AS AMENDED BY THE STATE OF CONNECTICUT 2018 AMENDMENTS. COMPLY WITH ALL APPLICABLE GOVERNMENTAL REGULATIONS, COMPLY WITH ALL FEDERAL STATE, CITY, INSURANCE UNDERWRITERS AND OTHER APPLICABLE CODES AND ORDINANCES. IF ANY CONFLICT ARISES BETWEEN THESE SPECIFICATIONS, CODES AND ORDINANCES, IMMEDIATELY NOTIFY THE ENGINEER. DO NOT DEVIATE FROM THE SPECIFICATIONS NOR INSTALL ANY WORK WHICH MAY BE IN CONFLICT WITH CODES AND ORDINANCES UNTIL THE CONFLICT IS RESOLVED AND THE SOLUTION APPROVED BY THE ENGINEER. <u>SUBMITTALS</u>

PRODUCT DATA: SUBMIT MANUFACTURER'S TECHNICAL PRODUCT DATA, INCLUDING RATED CAPACITIES OF SELECTED MODEL CLEARLY INDICATED, FURNISHED SPECIALTIES AND ACCESSORIES; AND INSTALLATION INSTRUCTIONS.

SHOP DRAWINGS: SUBMIT MANUFACTURER'S ASSEMBLY TYPE SHOP DRAWINGS INDICATING DIMENSIONS, ROUGHING-IN REQUIREMENTS, REQUIRED CLEARANCES, AND METHODS OF ASSEMBLY OF COMPONENTS AND ANCHORAGES.

MAINTENANCE DATA: SUBMIT MAINTENANCE DATA AND PARTS LISTS FOR EACH TYPE OF PLUMBING FIXTURE AND ACCESSORY; INCLUDING "TROUBLE SHOOTING" MAINTENANCE GUIDE. INCLUDE THIS DATA, PRODUCT DATA AND SHOP DRAWINGS IN MAINTENANCE MANUAL. MAKE SUBMITTALS OF SHOP DRAWINGS OF ALL FIRE PROTECTION EQUIPMENT AS FOLLOWS: SPRINKLER HEADS

CERTAIN TERMS SUCH AS "SHALL, PROVIDE, INSTALL, COMPLETE, START-UP" ARE NOT USED IN SOME PARTS OF THESE SPECIFICATIONS. THIS DOES NOT INDICATE ITEMS SHALL BE LESS THAN COMPLETELY INSTALLED OR THAT SYSTEMS SHALL BE LESS THAN COMPLETE

CONFORM THE FIRE PROTECTION WORK TO THE REQUIREMENTS HEREIN. PROVIDE OFFSETS, FITTINGS, DRAINS AND ACCESSORIES WHICH MAY BE REQUIRED. INVESTIGATE THE STRUCTURAL AND FINISH CONDITIONS AFFECTING THE WORK, AND ARRANGE THE WORK ACCORDINGLY. PROVIDE SUCH PIPING, FITTINGS, VALVES AND ACCESSORIES AS MAY BE REQUIRED TO MEET SUCH CONDITIONS.

SUBMIT SHOP DRAWINGS OR CATALOG CUTS APPROVED BY "INSURANCE COMPANY" SHOWING NEW SPRINKLER EQUIPMENT, ALARM EQUIPMENT, VALVES AND GAGES.

SUBMIT, FOR ENGINEER AND OWNER'S USE TWO PRINT COPIES OF UPDATED WORKING DRAWINGS STAMPED "APPROVED" BY INSURANCE COMPANY. SUBMIT, TO BOTH STATE AND LOCAL FIRE MARSHAL, ONE SIGNED COPY OF "CONTRACTOR'S MATERIAL AND TEST CERTIFICATE".

SUBMIT WORKING SPRINKLER DRAWINGS TO LOCAL FIRE MARSHAL.

A COMPLETE SET OF DETAILED CONTRACTOR'S INSTALLATION DRAWINGS TO INCLUDE A FUL HEIGHT CROSS SECTION, LOCATIONS OF ALL WALLS, PARTITIONS, LIGHTS, DIFFUSERS, GRIDS, MAJOR EQUIPMENT AND DUCTWORK, SIZE OF SITE WATER MAIN AND PRESSURE, NOMINAL PIPE SIZES, CUTTING LENGTHS AND FINISHED FLOOR TO PIPE ELEVATION LENGTH, LOCATION OF ALL VALVES, MAINS, BRANCH PIPING AND SPRINKLER HEADS HYDRAULIC NAMEPLATE DATA AND ALL PERTINENT INFORMATION.

SUBMITTAL INFORMATION OUTLINED IN NFPA 13 SECTION 1-9.

A COMPLETE SET OF DETAILED HYDRAULIC CALCULATIONS FOR EACH SYSTEM WITH HYDRAULIC REFERENCE POINTS, AS PER NFPA 13. SUBMITTAL INFORMATION OUTLINED IN NFPA 13 SECTION 7-3. PERMITS AND FEES

SECURE AND PAY COSTS OF PERMITS, CERTIFICATES, LICENSES, INSPECTIONS AND APPROVALS. ADJUSTMENTS

UPON COMPLETION OF WORK, PERFORM THE FOLLOWING ADJUSTMENT PROCEDURES: ADJUST SYSTEMS COMPONENTS FOR PROPER PERFORMANCE OPEN AND CLOSE VALVES, SET IN PROPER OPERATING POSITION.

ACCESSIBILITY PLACE VALVES, UNIONS, DRAINS, AND ITEMS REQUIRING MAINTENANCE, ADJUSTMENT, OR REPAIR, IN ACCESSIBLE LOCATIONS. COORDINATE ACCESS PANELS WITH ARCHITECT.

<u>APPROVALS</u> OBTAIN INSURANCE SERVICE'S OFFICE APPROVAL OF WORKING DRAWINGS. OBTAIN CERTIFICATES OF APPROVAL FROM FIRE ADMINISTRATION OFFICIAL. REFERENCE PUBLICATIONS

AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM) AND AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI) PUBLICATIONS ARE REFERRED TO HEREIN. BECAUSE THESE PUBLICATIONS ARE REVISED FREQUENTLY, DATES FOLLOWING PUBLICATION NUMBERS HAVE BEEN OMITTED. REFER TO LATEST EDITION. COORDINATION OF WORK

FIRE PROTECTION SYSTEMS SHALL BE COMPLETELY OPERATIONAL UPON COMPLETION OF WORK, RE-PIPE AND RECONFIGURE SYSTEM FEED AND CROSS MAINS (AS REQUIRED) BACK TO AUTOMATIC SPRINKLER RISER FOR WATER SUPPLY. TEST AND ENSURE THAT ALARM AND TEST EQUIPMENT IS OPERATIONAL.

CAREFULLY CHECK SPACE REQUIREMENTS WITH OTHER TRADES TO INSURE THAT ALL MATERIALS CAN BE INSTALLED IN THE SPACES ALLOTTED THERETO, INCLUDING FINISHED SUSPENDED CEILING.

TRANSMIT TO OTHER TRADES ALL INFORMATION REQUIRED FOR WORK TO BE PROVIDED UNDER THEIR RESPECTIVE SECTIONS IN AMPLE TIME FOR INSTALLATION. WHEREVER WORK INTERCONNECTS WITH WORK OF OTHER TRADES. COORDINATE WITH OTHER TRADES TO INSURE THAT ALL TRADES HAVE THE INFORMATION NECESSARY SO THEY MAY PROPERLY INSTALL ALL THE NECESSARY CONNECTIONS AND EQUIPMENT. IDENTIFY ALL

WORK ITEMS (VALVES, DRAINS, ETC.) IN AN APPROVED MANNER IN ORDER THAT THE CEILING SUBCONTRACTOR WILL KNOW WHERE TO INSTALL ACCESS DOORS AND PANELS. CONSULT WITH OTHER TRADES REGARDING EQUIPMENT SO, WHEREVER POSSIBLE, MOTORS AND CONTROL ARE OF THE SAME MANUFACTURER. FURNISH AND SET ALL SLEEVES FOR PASSAGE OF PIPES AND CONDUITS THROUGH

STRUCTURAL MASONRY AND CONCRETE WALL AND FLOORS, AND ELSEWHERE AS WILL BE REQUIRED FOR THE PROTECTION OF EACH PIPE PASSING THROUGH BUILDING SURFACES PROVIDE REQUIRED SUPPORTS AND HANGERS FOR PIPING, FIXTURES AND EQUIPMENT, SO LOADING WILL NOT EXCEED ALLOWABLE LOADINGS OF STRUCTURE.

ELECTRICAL CONNECTIONS

POWER SUPPLY AND ALARM WIRING WILL BE PROVIDED UNDER DIVISION 16, AND CONNECTIONS MADE TO ANY NEW WATER FLOW ALARM DEVICES, ALARM BELLS, VALVE SUPERVISORY DEVICES, AND OTHER ELECTRICAL ITEMS. TO FACILITATE ELECTRICAL CONNECTIONS EQUIP ELECTRICAL ITEMS WITH NEMA ENCLOSURES HAVING ADEQUATE KNOCKOUTS, CONNECTORS, TERMINAL BLOCKS AND/OR CONTACTS. PIPING IDENTIFICATION

CONSPICUOUSLY IDENTIFY NEW PIPING WITH SELF-ADHERING VINYL PLASTIC COLOR BANDS AND PIPE MARKERS IMPRINTED WITH LEGEND, BASED ON ANSO A13.1 "SCHEME FOR THE IDENTIFICATION OF PIPING SYSTEMS'

APPLY LEGENDS TO FEED AND CROSS MAIN PIPING ADJACENT TO CHANGES IN DIRECTION WHERE PIPES PASS THROUGH WALLS OR FLOORS, AT INTERVALS NOT EXCEEDING 40 FEET IN STRAIGHT PIPING RUNS, AND ADJACENT TO CROSS MAIN CONNECTIONS WITH FEED MAIN. MINIMUM LETTER SIZE:

1/2" FOR PIPING 3/4" TO 1-1/4" OD 3/4" FOR PIPING 1-1/2" TO 2" OD 1-1/4" FOR PIPING 2-1/2" TO 6" OD

MINIMUM COLOR BAND WIDTH: 8" FOR PIPING 3/4" TO 2" OD

12" FOR PIPING 2-1/2" TO 6" OD IDENTIFICATION SIGNS

PROVIDE ENAMELED STEEL IDENTIFICATION SIGNS FOR ALL NEW ALARM DEVICES AND ALL NEW CONTROL, DRAIN AND TEST VALVES.

OPERATING INSTRUCTIONS INSTRUCT OWNER'S OPERATING PERSONNEL ON PROPER CARE, MAINTENANCE AND

OPERATING PROCEDURES. MAINTENANCE MANUAL

INCLUDE FOLLOWING IN MANUALS:

MANUFACTURER'S DESCRIPTIVE DATA OPERATION AND MAINTENANCE INSTRUCTIONS

REPLACEMENT PART LISTS WIRING DIAGRAMS MANUFACTURER'S WARRANTY & SERVICE CERTIFICATES INSTRUCTIONS FOR PERIODIC CLEANING AND MAINTENANCE PROCEDURES FOR SYSTEMS START-UP AND SHUT-DOWN VALVE LOCATION AND TAG NUMBER CHARTS NFPA 25 "CARE AND MAINTENANCE OF SPRINKLER SYSTEMS"

<u>CLEANING</u>

CLEAN PIPING PRIOR TO PAINTING. UPON COMPLETION OF WORK, PERFORM THE FOLLOWING CLEANING PROCEDURES:

REMOVE PROTECTIVE COVERS AFTER PAINTING CLEAN PIPING AND EQUIPMENT REMOVE SURPLUS MATERIALS AND RUBBISH RESTORE DAMAGED SURFACE FINISHES

ADJUSTMENTS

UPON COMPLETION OF WORK, PERFORM THE FOLLOWING ADJUSTMENT PROCEDURES: ADJUST SYSTEMS COMPONENTS FOR PROPER PERFORMANCE OPEN AND CLOSE VALVES, SET IN PROPER OPERATING POSITION. SEAL CONTROL VALVES OPEN

<u>GUARANTEE</u> SUPPLY TWO COPIES OF A WARRANTY COUNTERSIGNED AND GUARANTEED BY CONTRACTOR STATING THAT IMPERFECT SYSTEM OPERATION AND ALL DEFECTS IN LABOR AND MATERIALS OF FIRE PROTECTION WORK WILL BE REPAIRED WITHOUT COST TO OWNER FOR A PERIOD OF ONE YEAR FROM DATE OF SUBSTANTIAL COMPLETION, AND STATING THAT ALL FIRE

PROTECTION EQUIPMENT HAS BEEN FULLY SERVICED AND LEFT IN PROPER OPERATING CONDITION ALSO GUARANTEE THAT SERVICING WILL BE PROVIDED WITHOUT COST DURING GUARANTEE

PIPE SLEEVE INSTALLATION

PROVIDE FOR PIPING PASSING THROUGH WALLS, PARTITIONS AND SLAB, SLEEVES SIZED AT LEAST 1 INCH LARGER THAN OD OF PIPE. SLEEVES ARE REQUIRED FOR PIPING PASSING THROUGH FIRE-RATED WALLS CONSTRUCTED OF METAL STUDS AND GYPSUM WALLBOARD. TERMINATE SLEEVES THROUGH WALLS. PARTITIONS AND CEILINGS FLUSH WITH FINISHED

SURFACES: THROUGH SLABS 1/2" ABOVE FLOOR FINISH IN HABITABLE SPACES AND 2" ABOVE ROUGH FINISH IN PIPE SPACES AND OTHER UNFINISHED AREAS. ET SLEEVES IN PLACE BEFORE PLACING CONCRETE, OR SECURELY FASTEN AND GROUT IN PLACE WITH CONCRETE. EXERCISE CARE IN LOCATING AND SETTING OF SLEEVES TO ASSURE ACCURATE ALIGNMENT. IN ABSENCE OF SLEEVES, USE CORE DRILLED HOLES AND

PROVIDE CURBS TO PREVENT PASSAGE OF WATER FILL VOID SPACES BETWEEN PIPING AND PIPE SLEEVES WITH PENETRATION SEAL, OR APPROVED ELASTROMERIC CAULKING MATERIALS. ESCUTCHEON INSTALLATION

PROVIDE ESCUTCHEONS ON PIPE PROTRUSIONS AT WALLS, PARTITIONS, CEILING AND FLOORS. ESCUTCHEONS SHALL FIT SNUGLY AROUND PIPING AND COVER SURFACE OPENING. FIRE STOPPING

FILL VOID SPACE BETWEEN PIPING AND PIPING SLEEVES WITH DOW CORNING 3 - 6548 TV SILICONE FOAM, OR WITH FIBROUS GLASS SEALED WITH FIRE TESTED AND APPROVED ELASTOMERIC CAULKING MATERIALS.

<u>ACCESSORIES</u> FLANGE DIMENSIONS, DRILLING AND FACING: ANSI B16.1 PIPE THREADS: ANSI B2.1 IDENTIFICATION OF PIPING SYSTEMS: ANSI A13.1 PIPE HANGERS AND SUPPORTS: MSS SP-58, NFPA 13, NON-METALLIC PIPE

FLANGE GASKETS: ANSI B16.21 WHERE PIPING IS TO BE RUN THROUGH EXPANSION JOINTS CONTRACTOR SHALL INSTALL EXPANSION LOOPS AT THAT POINT.

PIPE HANGER COMPONENTS AND SUPPORT INSTALLATION (GENERAL) TYPE OF HANGERS, HANGER COMPONENTS, SUPPORTS, SPACING AND INSTALLATION METHODS SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF NFPA-13, CHAPTER <u>PIPE SLEEVES</u>

INTERIOR PARTITIONS: #20 GAGE GALVANIZED STEEL, LOCK SEAM JOINT. INTERIOR MASONRY WALL AND SLABS: SCHEDULE 40 GALVANIZED STEEL PIPE. ESCUTCHEONS

PAINTED SURFACES: PRIME COATED SHEET STEEL. BEATON & CADWELL 13 OR 40. ACOUSTICAL SURFACES: FACTORY PAINTED TO MATCH SURFACE SHEET STEEL. BEATON & CADWELL 13 OR 40. PREFINISHED SURFACES: CHROME PLATED CAST BRASS. BEATON & CADWELL 3S.

METAL FRAMING MATERIAL: RUST RESISTANT, CONTINUOUS SLOT STEEL CHANNEL OR SLOTTED STEEL ANGLE,

WITH MATCHING FITTINGS ASSEMBLED WITH RUST RESISTANT HEX HEAD BOLTS AND NUTS. DESIGN LOADING: AS RECOMMENDED BY MANUFACTURER. PIPE, FITTINGS AND VALVES

PIPE: SCHEDULE 40 BLACK STEEL, ASTM A53. CROSS MAIN AND BRANCH LINE PIPING AT CEILINGS JOINED BY WELDING OR BE ROLL GROOVED PIPE COUPLING MAY BE SCHEDULE 10 (LIGHT WALL) STEEL SPRINKLER PIPE, ASTM A135. SYSTEM RISERS AND FEED MAINS MUST BE SCHEDULE 40 PIPE. THREADED SCHEDULE 10 PIPING WILL NOT BE ACCEPTABLE. THREAD FITTINGS: 175 PSI WOG MALLEABLE IRON, ANSI B16.3 AND ASTM A47.

INSTALLATION <u>PIPE_JOINTS</u>

GENERAL: CUT PIPE ENDS SQUARE, REMOVE BURRS AND REAM TO ORIGINAL BORE. CLEAN JOINT SURFACES PRIOR TO ASSEMBLY. WIPE OFF EXCESS JOINING COMPOUNDS. SCREWED: USE AMERICAN STANDARD TAPER PIPE THREADS CUT SHARP AND TRUE, AND SUITABLE FOR NORMAL ENGAGEMENT. SCREW THREADED ITEMS UP CLOSE TO SHOULDERS WITH NOT MORE THAN THREE INCOMPLETE THREADS EXPOSED. DO NOT USE LAMP WICK, CORD, WOOL, OR OTHER "WICKING" MATERIALS. REPAIR LEAKS WITH NEW MATERIALS, DO NOT PREEN OF CAULK. "TEFLON" PIPE JOINT TAPE OR JOINT COMPOUNDS COMPOSED OF RED LEAD AND GRAPHITE GROUND IN LINSEED OIL WILL BE PERMITTED, APPLIED TO MALE

FLANGE FITTINGS: CLASS 250, CAST IRON, ANSI B16.1, ASTM A126.

GROOVED PIPE FITTINGS: FM APPROVED MALLEABLE/DUCTILE IRON

RESILIENT ELASTMERIC GASKET, GROOVED PIPE CONFIGURATION.

CHECK VALVES -2-1/2 INCH AND LARGER: IBBM, FLANGED.

BUILT IN SUPERVISORY SWITCH.

EQUIVALENT TO ONE SPRINKLER.

SPRINKLER EQUIPMENT

SPRINKLER HEADS

#TY-FRB-TY3131.

ALARM VALVES

WITH TRIM KIT.

AND AIR MAINTENANCE.

VALVE SUPERVISORY DEVICES

VAC. POTTER-ROEMER #6220.

MODEL #TY-FRB-TY3331.

SIZE TO CONTAIN HEADS AND WRENCH.

HEAVY FLAT GLASS CRYSTAL, 0-300 PSI RANGE.

HEAD. VICTAULIC "TESTMASTER" STYLE 718/719.

MECHANICAL GROOVED COUPLINGS: FM APPROVED, MALLEABLE OR DUCTILE IRON HOUSING,

CONTROL VALVES - 2-1/2 INCH AND SMALLER: ALL BRONZE, SLOW BUTTERFLY BALL WITH

TEST PIPE OUTLETS: CORROSION RESISTANT SMOOTH BORE PIPE NIPPLE HAVING FLOW

PRESSURE GAUGES: LISTED 3-1/2" DIAL, STEM MOUNTED, BOURDON TUBE TYPE, WITH BRASS CASE AND RING, PHOSPHOR BRONZE TUBE, BRASS SOCKET, BRASS MOVEMENT,

INSPECTORS TEST CONNECTION: U.L. LISTED, FM APPROVED, 300 PSI MAXIMUM WORKING

CONNECTIONS, EQUIPPED WITH BRONZE FITTED TEST AND DRAIN VALVES, ACRYLIC SIGHT

GLASS. INSTALL 1/2" ALUMINUM ORIFICE INSETS GIVING FLOW EQUAL TO ONE SPRINKLER

AUTOMATIC TYPE: UPRIGHT, CONCEALED PENDENT, OR SIDEWALL TO MEET CONDITIONS AND

PENDENT HEADS - CONCEALED PIPING: BRIGHT CHROME PLATED BRONZE, FUSIBLE LINK,

SIDEWALL: BRIGHT CHROME PLATED BRONZE, FUSIBLE LINK, WITH WALL FLANGE. TYCO

TYPE AND RATING PER EACH 100 SIMILAR HEADS, OR PART THEREOF, INSTALLED.

SPARE HEAD CABINET: BAKED ENAMELED STEEL CABINET, HINGED COVER, OF ADEQUATE

PROVIDE TYCO MODEL AV1-300 WET SYSTEM VERTICAL ALARM CHECK VALVE COMPLETE

VALVE SUPERVISORY DEVICES: U.L. LABELED FM APPROVED, TAMPER-PROOF SIGNALING

PROVIDE TYCO MODEL DPV-1 DRY SYSTEM ALARM CHECK VALVE COMPLETE WITH TRIM KIT

INITIATING SWITCH ARRANGED TO DETECT CLOSED VALVE POSITION. ELECTRICAL WIRING: 120

SPARE HEADS: NOT LESS THAN 12, TOTAL NUMBER BASED ON ONE SPARE HEAD OF EACH

OF PROPER TEMPERATURE RATING. DEFLECTOR TO BE MARKED TO INDICATE POSITION.

UPRIGHT HEADS: BRIGHT CHROME PLATED BRONZE, FUSIBLE LINK. TYCO MODEL

WITH SPRINKLER CUP ASSEMBLY. TYCO MODEL #TY-FRB-TY3231.

HEAD GUARDS: REQUIRED FOR HEADS SUBJECT TO MECHANICAL INJURY.

HEAD WRENCH: PROVIDE AT LEAST ONE, WITH SUITABLE OPENINGS.

PRESSURE, ONE PIECE DUCTILE IRON BODY, ASTM A536, 1-1/4" INLET AND OUTLET

DRAIN AND TEST VALVES: ALL BRONZE THREADED AND GLOBE OR ANGLE VALVE.

CHECK VALVES - 2 INCH AND SMALLER: ALL BRONZE THREADED END.

CONTROL VALVES - 3 INCH AND LARGER: IBBM OSY FLANGED GATE VALVE.

GAUGE VALVES: 1/4" SOFT METAL SEAT GLOBE VALVE WITH DRAIN PLUG.

FLANGED: USE FLANGES COMPATIBLE WITH SYSTEM MATERIALS. MATING FLANGES SHALL HAVE SIMILAR FACINGS. ASSEMBLE JOINTS WITH GASKETS AND AMERICAN STANDARD CARBON STEEL BOLTS AND HEX NUTS MADE-UP WITH TORQUE LIMITING WRENCH. GROOVED PIPE COUPLINGS: USE MANUFACTURER'S MATERIAL AND METHODS.

<u>PAINTING</u>

SPRINKLER INSTALLATION

THREADS

PAINT FERROUS HANGER ROD AND PIPE HANGER COMPONENTS WITH ZINC CHROMATE PRIMER, UNLESS FACTORY COATED. VALVE SEALS

PROVIDE STURDY PADLOCKS, CHAIN AND OTHER SECURING DEVICES TO SEAL - OPEN ANY NEW INDICATING VALVES 1-1/2" AND LARGER NOT EQUIPPED WITH VALVE SUPERVISORY DEVICE

PADLOCKS: CORROSION RESISTANT TUMBLER TYPE, BREAK RESISTANT, EXCEPT BY HEAVY DUTY BOLT CUTTERS, KEYED ALIKE. PROVIDE VALVES SMALLER THAN 1-1/2" WITH CORROSION RESISTANT TAMPER-PROOF SEALS

INSPECTOR'S TEST CONNECTION: INSTALL AT END OF MOST REMOTE BRANCH LINE. PLACE TEST VALVE IN ACCESSIBLE HEATED LOCATION, NOT OVER 7 FEET ABOVE FLOOR, AND PIPE O BUILDING EXTERIOR OR OTHER ACCESSIBLE DRAINAGE POINT. TERMINATE WITH 45 DEGREE ELBOW AND TEST PIPE OUTLET.

VALVE SUPERVISORY DEVICES: INSTALL ON ALL CONTROL VALVES. DRAIN TERMINATIONS: PROVIDE GALVANIZED ESCUTCHEONS, 45 DEGREE ELBOW, AND PLAIN END NIPPLE. INSTALL SPRINKLER BENEATH DUCTS AND CEILING MOUNTED EQUIPMENT MORE THAN 4

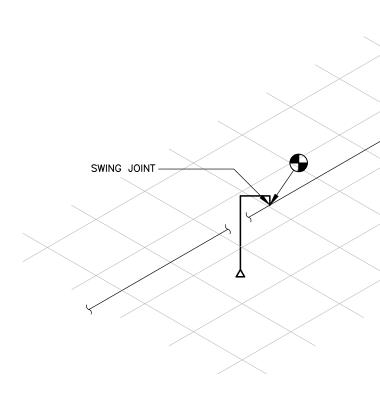
FEET WIDE. INSTALL FIRE EXTINGUISHER IN ACCORDANCE WITH NFPA 10 LATEST APPROVED EDITION. ADHERE TO FIRE EXTINGUISHER MOUNTING HEIGHT REQUIREMENTS.

<u>FLUSHING</u> FLUSH SPRINKLER PIPING BE HYDRAULIC METHOD. REMOVE PENDENT HEADS AFTER FLUSHING, AND CLEAN.

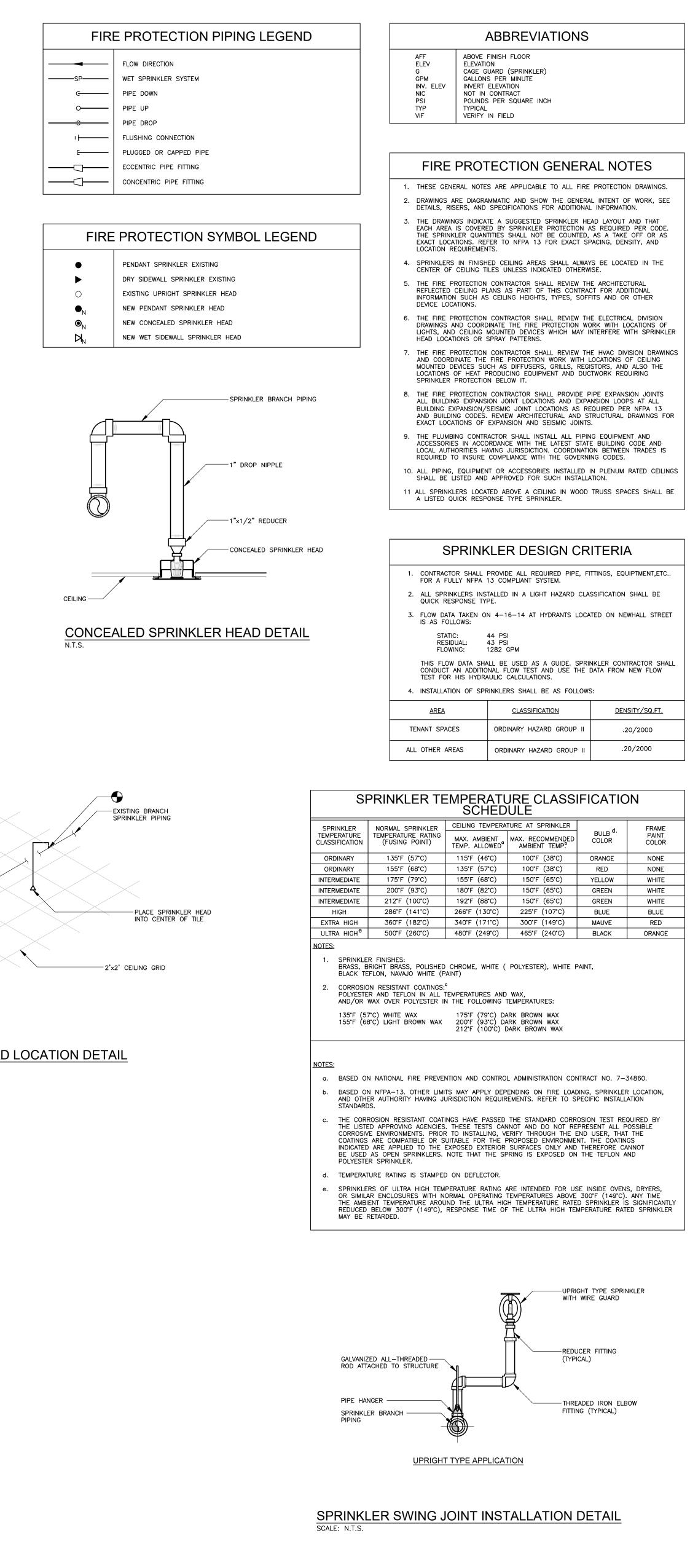
<u>TESTS</u>

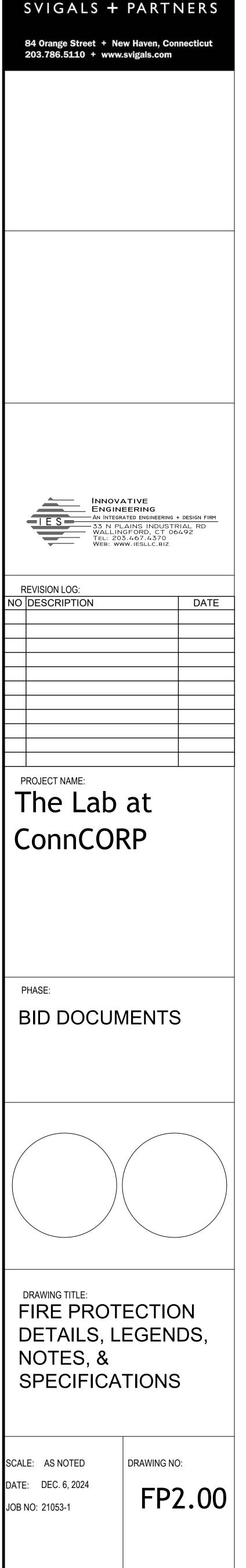
TEST ALL PIPING UNDER HYDROSTATIC PRESSURE OF 200 PSI FOR 2 HOURS, TEST PRESSURE TO BE READ FROM A GAGE LOCATED AT THE LOWEST ELEVATION POINT OF THE SYSTEM BEING TESTED. PERMISSIBLE LEAKAGE: NOT ALLOWED.

TEST WATER FLOW ALARM DEVICES UNDER OPERATING CONDITIONS. CLOSE AND OPEN CONTROL VALVES UNDER SYSTEM WATER PRESSURE TO ENSURE PROPER OPERATION

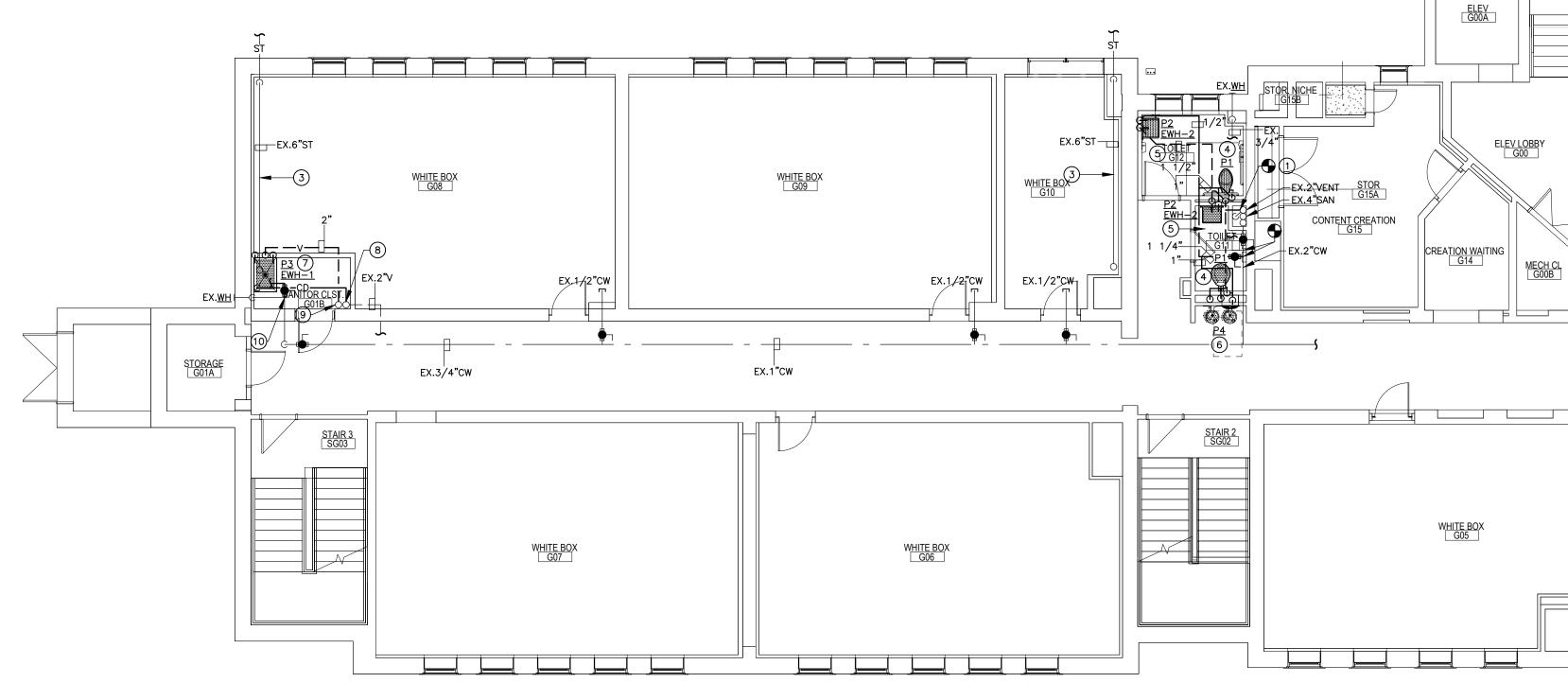


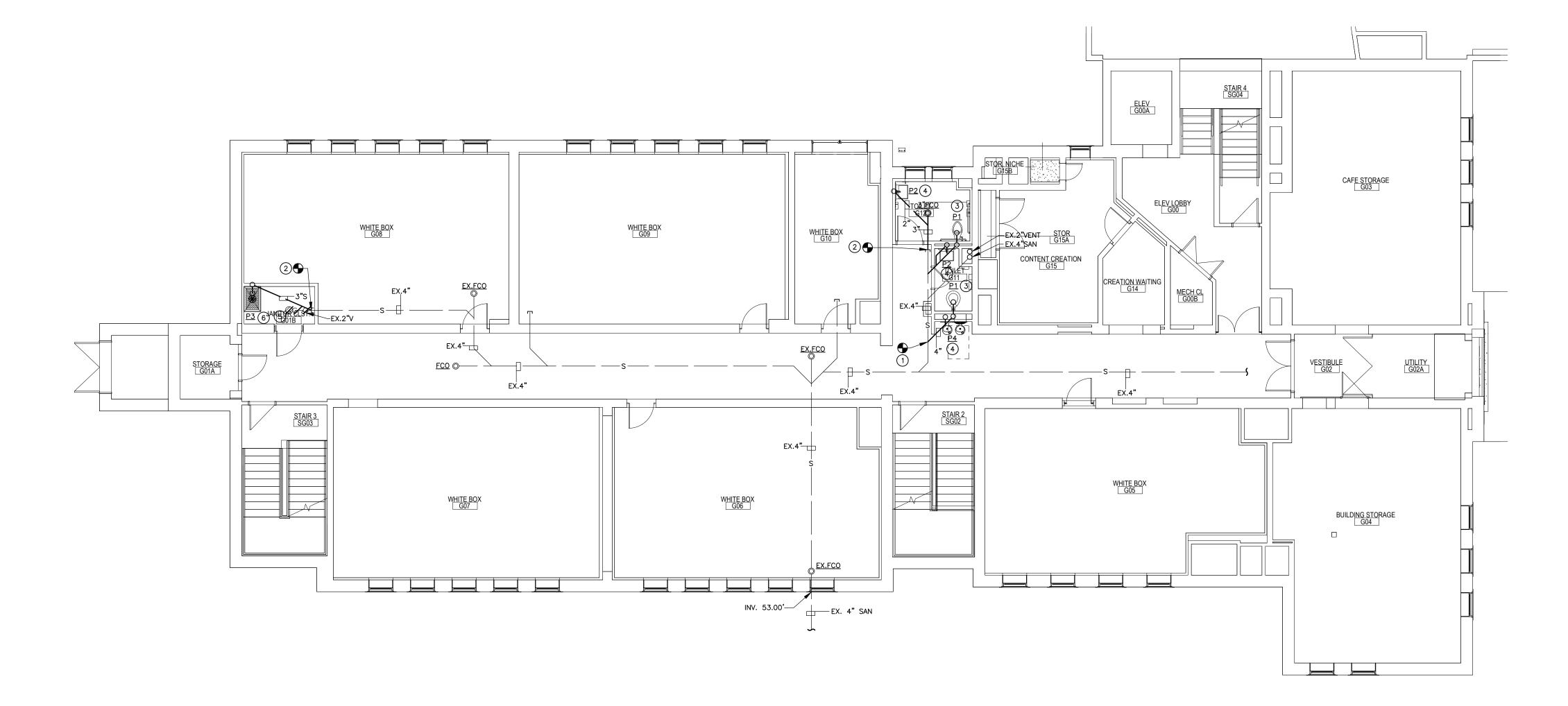
DROP CEILING SPRINKLER HEAD LOCATION DETAIL





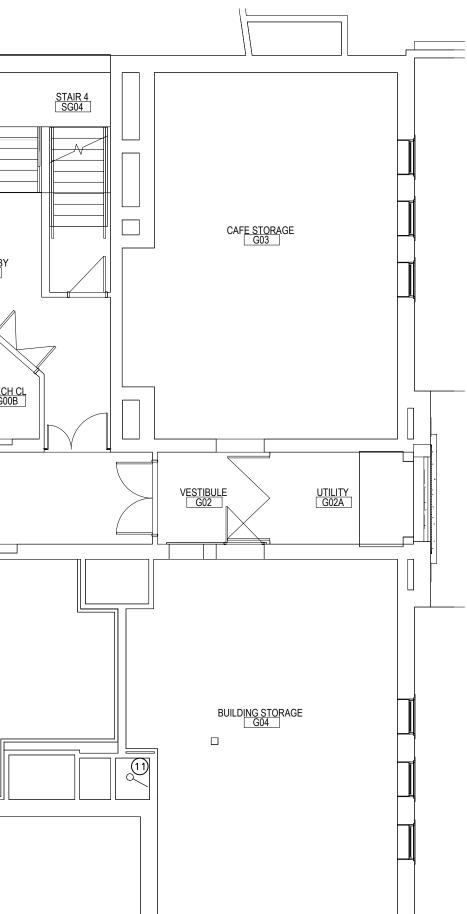
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GARDEN LEVEL PLUMBING PLAN SCALE: 1/8"= 1'-0"

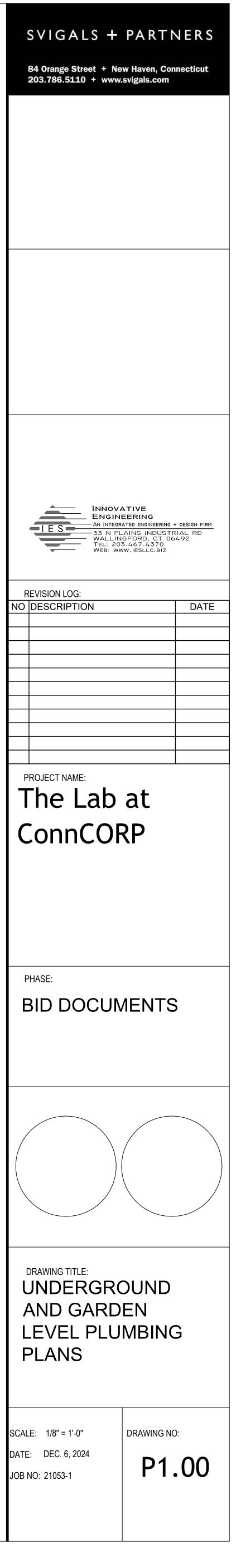


PLUMBING DRAWING NOTES

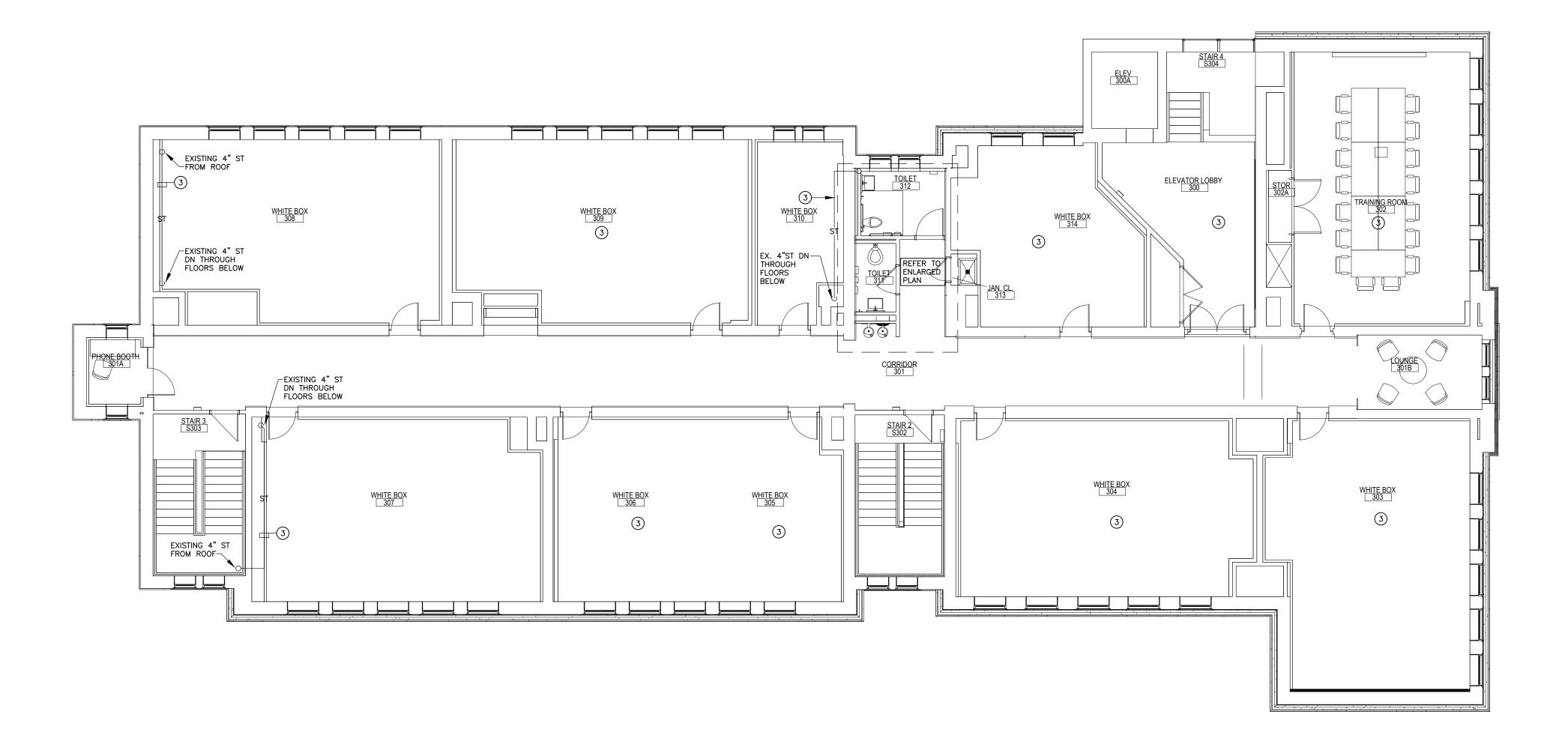
- 1 RELOCATE EXISTING 2" VENT AND 1 1/2" CW BELOW FINISHED FLOOR TO NEW LOCATION IN THE PLUMBING CHASE WALL.
- 2 CONNECT NEW 3" VENT TO EXISTING 4" VTR.
 3 CONTRACTOR SHALL INSULATE WITH 1" THICK INSULATION, EXISTING 6"
- STORM WATER HORIZONTAL PIPING AND 3'-0" DOWN ON THE VERTICAL PIPING.
- PROVIDE NEW WATER CLOSET WITH 4" SANITARY DN, CONNECT TO EXISTING SANITARY PIPING. PROVIDE 2" VENT, AND 1" CW PIPING FROM FIXTURE. REFER TO DETAILS AND SCHEDULES FOR ADDITIONAL INFORMATION.
- 5 PROVIDE NEW LAVATORY WITH 2" WASTE DN, CONNECT TO EXISTING SANITARY PIPING. PROVIDE 1 1/2" VENT, 1/2" HW, 1/2" CW PIPING FROM LAVATORY. REFER TO DETAILS AND SCHEDULES FOR ADDITIONAL INFORMATION.
- 6 PROVIDE NEW ELECTRIC WATER COOLER WITH 2" WASTE DN, CONNECT TO EXISTING SANITARY PIPING. PROVIDE 1 1/2" VENT, 1/2" CW PIPING FROM ELECTRIC WATER COOLER. REFER TO DETAILS AND SCHEDULES FOR
- ADDITIONAL INFORMATION. PROVIDE NEW MOP SINK WITH 3" WASTE DN, CONNECT TO EXISTING SANITARY MAIN IN CEILING BELOW, 2" VENT, 1/2" HW AND 1/2" CW PIPING FROM MOP SINK. REFER TO SCHEDULES AND DETAILS FOR ADDITIONAL INFORMATION. PROVIDE 20 GALLON ELECTRIC WATER HEATER SUSPENDED FROM STRUCTURE ABOVE. REFER TO SCHEDULES AND DETAILS FOR ADDITIONAL INFORMATION.
- 8 REMOVE EXISTING 2" CONDENSATE PIPING RUNNING DOWN THE WALL AND REROUTE TO INDIRECT DRAIN AT THE MOP SINK BASIN.
- 9 REMOVE EXISTING 2" VENT PIPING RUNNING DOWN THE WALL AND CONNECT NEW 2" VENT FROM THE MOP SINK.
- (10) CONNECT NEW 3/4" CW PIPING WITH VALVE AND RUN PIPING OVER TO EWH-1 AND MOP SINK BELOW.
- 1) PLUMBING CONTRACTOR SHALL INVESTIGATE 4" ABANDONED PIPE AND REPORT FINDINGS BACK TO MEP DESIGN TEAM.

UNDERGROUND PLUMBING DRAWING NOTES

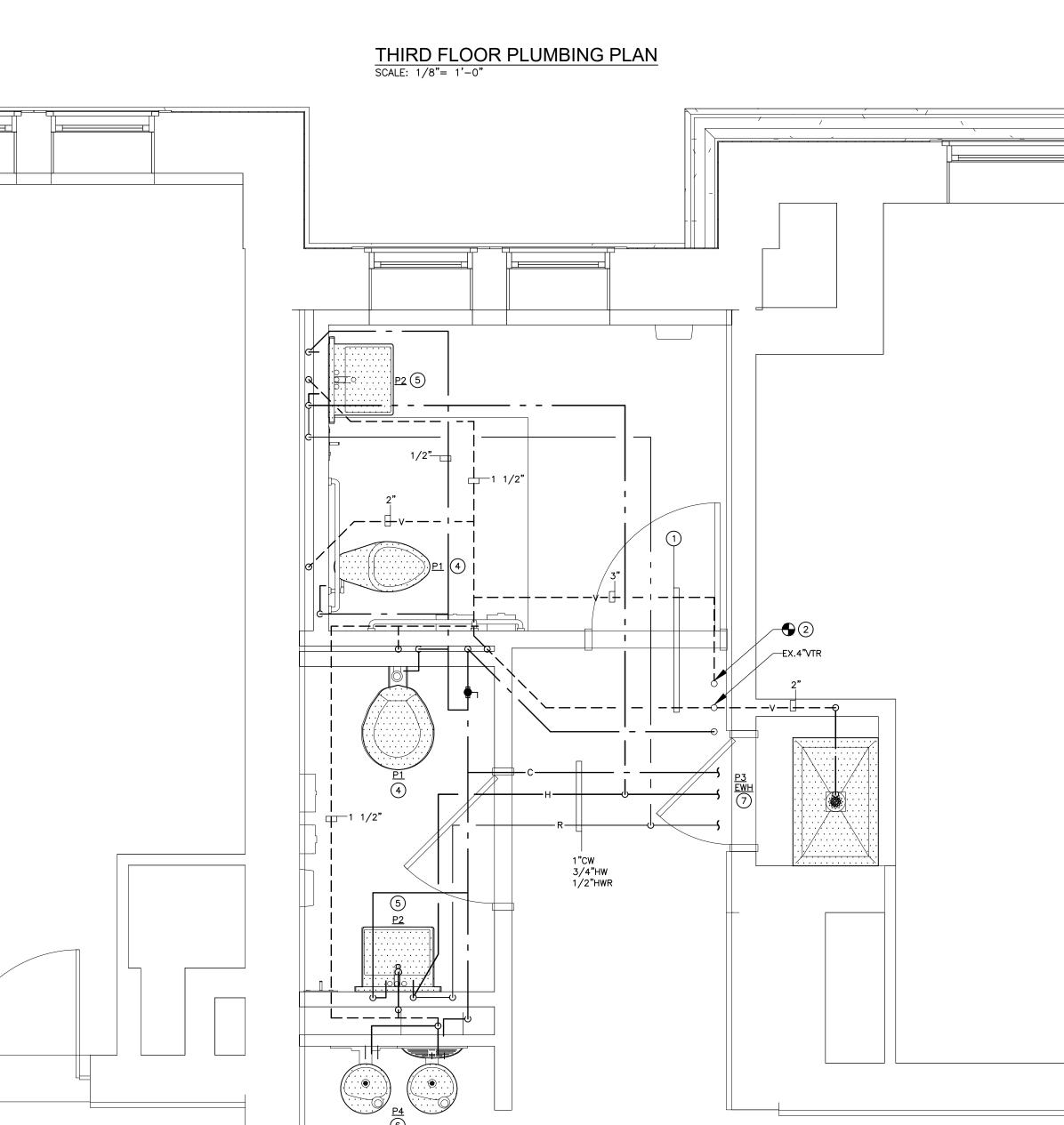
- (1) CONNECT NEW 4" SANITARY TO EXISTING 4" SANITARY BELOW SLAB. CONTRACTOR SHALL FIELD VERIFY EXISTING LOCATION OF EXISTING SANITARY.
- (2) CONNECT NEW 3" SANITARY TO EXISTING 4" SANITARY BELOW SLAB. CONTRACTOR SHALL FIELD VERIFY EXISTING LOCATION OF EXISTING SANITARY.
- 3 PROVIDE 4" SANITARY AND 2" VENT RISE PIPING FROM WATER CLOSET.
 4 PROVIDE 2" SANITARY PIPING 2'-0" ABOVE FINISHED FLOOR.
- 5 DISCONNECT AND REMOVE EXISTING 4" FD, 4" SANITARY AND 2" VENT PIPING.
- 6 PROVIDE NEW FLOOR MOUNT MOP BASIN, 3" SANITARY AND 2" VENT PIPING ABOVE FINISHED FLOOR. REFER TO DETAILS AND SCHEDULES FOR ADDITIONAL INFORMATION.

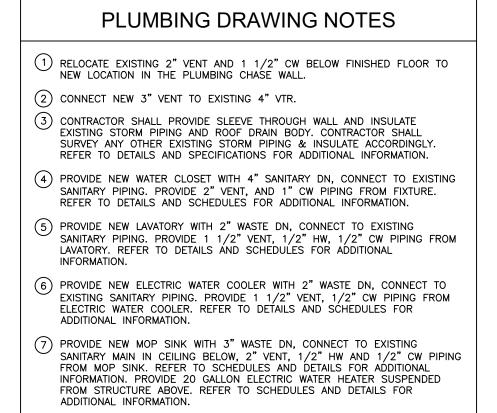


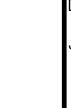
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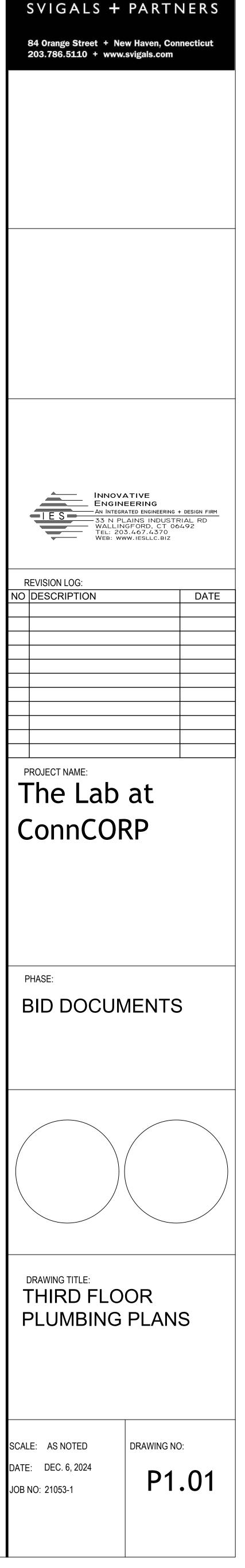


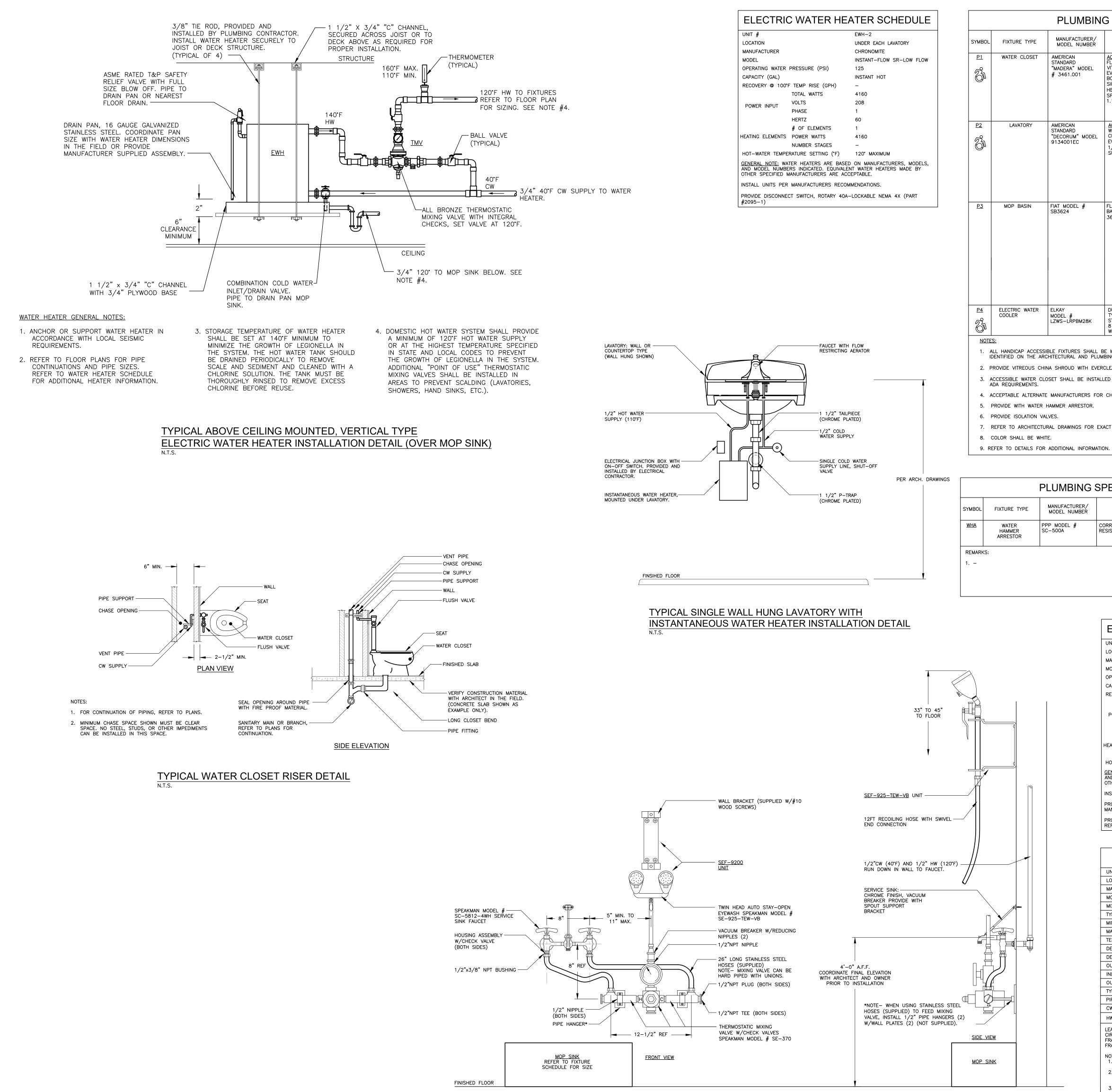
THIRD FLOOR ENLARGED PLUMBING PLAN SCALE: 1/2"= 1'-0"











MOP SINK SERVICE FAUCET INSTALLATION DETAIL

	PLUMBIN	G FIXTURE SC	HEDULE	
URE TYPE	MANUFACTURER/ MODEL NUMBER	DESCRIPTION	ACCESSORIES AND TRIM	REMARKS
ER CLOSET	AMERICAN STANDARD "MADERA" MODEL # 3461.001	ACCESSIBLE: FLOOR MOUNTED, VITREOUS CHINA, EVERCLEAN, ELONGATED BOWL, 12-INCH ROUGH, SIPHON JET, 16 1/2" HEIGHT, 1-1/2" TOP SPUD, 1.1 - 1.6 GPF.	FLUSH VALVE, 1.28 GPF, DIAPHRAGM TYPE, HIGH EFFICIENCY, CHROME PLATED, EXPOSED MANUAL, VACUUM BREAKER, OSCILLATING HANDLE, SLOAN MODEL #111-1.28, COMMERCIAL GRADE SEAT AMERICAN STANDARD MODEL #5901.100,	#1,3,4,5,6,,7,8,9
AVATORY	AMERICAN STANDARD "DECORUM" MODEL 9134001EC	ACCESSIBLE: WALL HUNG, VITREOUS CHINA, REAR OVERFLOW, EVERCLEAN, 21"x20 1/4", CONCEALED ARM SUPPORTS.	AMERICAN STANDARD "ASPIRATIONS" MODEL #7061131: BLACK FINISH FAUCET, 5 1/2-INCH SPOUT, 1.2 GPM FLOW RESTRICTOR, POP-UP DRAIN AND LIFT ROD, AMERICAN STANDARD MODEL #0062.000 ACRYLIC SHROUD/ KNEE CONTACT, CONCEALED ARM SUPPORT JR SMITH SERIES 700.	# 1,2,4,6,7,8,9
P BASIN	FIAT MODEL # SB3624	FLOOR MOUNTED MOP BASIN, MOLDED STONE, 36"x24"x6" HIGH	PROVIDE ONE PIECE, PRECAST TERRAZO BLACK AND WHITE MARBLE CHIP BASE WITH 3" PIPE CONNECTION STAINLESS STEEL STRAINER MODEL #1453BB, HOSE & BRACKET COMPONENT MODEL #832AA, SILICONE SEALENT MODEL #832AA, SPEAKMAN SERVICE FAUCET MODEL #SC-5812-4WH, SPEAKMAN TWIN HEAD EMERGENCY EYEWASH MODEL #SE-925-TEW-VB AND SPEAKMAN THERMOSTATIC MIXING VALVE MODEL #SE-370	# 5,6,7,9
IRIC WATER ER	ELKAY MODEL # LZWS-LRPBM28K	DUEL HEIGHT 18 GAUGE, TYPE 304 STAINLESS STEEL WATER COOLER, 8 GPH CHILLER CAPACITY, WATER FILTER SYSTEM.	WALL MOUNTING FRAME.	#1,5,6,7

. ALL HANDICAP ACCESSIBLE FIXTURES SHALL BE MOUNTED IN ACCORDANCE WITH ADA SPECIFICATIONS WHERE IDENTIFIED ON THE ARCHITECTURAL AND PLUMBING DRAWINGS. 2. PROVIDE VITREOUS CHINA SHROUD WITH EVERCLEAN FOR WALL HUNG SINK MODEL #0059020EC.020.

3. ACCESSIBLE WATER CLOSET SHALL BE INSTALLED AT REQUIRED HEIGHT OF 17" - 19" A.F.F. TO TOP OF SEAT PER 4. ACCEPTABLE ALTERNATE MANUFACTURERS FOR CHINA PLUMBING FIXTURES SHALL BE KOHLER.

5. PROVIDE WITH WATER HAMMER ARRESTOR.

7. REFER TO ARCHITECTURAL DRAWINGS FOR EXACT LOCATION AND MOUNTING HEIGHTS OF PLUMBING FIXTURES.

PLUMBING SPECIALTIES SCHEDULE				
TYPE	MANUFACTURER/ MODEL NUMBER	DESCRIPTION	ACCESSORIES AND TRIM	REMARKS
R NR	PPP MODEL # SC-500A	CORROSION RESISTANT BRASS	-	-

ELECTRIC	C WATER HEA	TER SCHEDULE
UNIT #		EWH-1
LOCATION		JANITOR'S CLOSET ROOM
MANUFACTURER		A.O. SMITH
MODEL		DEL-20
OPERATING WATER	PRESSURE (PSI)	125
CAPACITY (GAL)		20
RECOVERY @ 100°F	F TEMP RISE (GPH)	18
	TOTAL KILOWATTS	4.5
POWER INPUT	VOLTS	208
	PHASE	1
	HERTZ	60
	# OF ELEMENTS	1
HEATING ELEMENTS	POWER EACH-KW	4.5
	NUMBER STAGES	-
HOT-WATER TEMPE	RATURE SETTING (*F)	140
<u>GENERAL NOTE:</u> WATER HEATERS ARE BASED ON MANUFACTURERS, MODELS, AND MODEL NUMBERS INDICATED. EQUIVALENT WATER HEATERS MADE BY OTHER SPECIFIED MANUFACTURERS ARE ACCEPTABLE.		
INSTALL UNITS PER MANUFACTURERS RECOMMENDATIONS.		
PROVIDE WITH HEAT TRAP ON HOT WATER OUTLET AS RECOMMENDED BY MANUFACTURER.		

PROVIDE WITH DRAIN PAN AND PLATFORM STAND PLATFORM AS INDICATED. REFER TO DETAIL FOR ADDITIONAL INFORMATION.

MIXING VALVE S	SCHEDULE MX1	
UNIT #	МХ	
LOCATION	RM 314	
MANUFACTURER	ACORN CONTROLS	
MODEL	MV17 SERIES	
MIXING VALVE MODEL	MV-17-1	
TYPE	THERMOSTATIC MIXING VALVE	
MINIMUM FLOW (GPM)	.5	
MAXIMUM FLOW (GPM)	45	
TEMPERATURE RANGE (*F)	0-140	
DESIGN FLOW (GPM)	15	
DESIGN FLOW(GPM) @ 10 PSI DROP	21.2	
OUTLET FLUID TEMPERATURE (*F)	120°F	
INLET SIZE (IN)	3/4"	
OUTLET SIZE (IN)	3/4"	
TYPE END CONNECTIONS	THREADED	
PIPING SYSTEM	DOMESTIC HW	
CW INLET TEMPERATURE RANGE(*F)	40°F-80°F	
HW INLET TEMPERATURE RANGE (*F)	120°F-140°F	
LEAD FREE CONSTRUCTION, THERMOSTATIC MIXING ASSEMBLY AND CIRCULATION SYSTEM. VANDAL RESISTANT LOCKING MECHANISM, MOUNTING FRAME, PRE-ASSEMBLED PIPING, VALVES AND GAUGES ON HEAVY DUTY FRAMEWORK. WITH BY-PASS		
NOTES: 1. INSTALL VALVE ASSEMBLY AS RECOMMENDED BY THE MANUFACTURER PIPING METHOD.		

 2. REVIEW RECOMMENDED CIRCULATION AND MIXING METHOD AND BALANCE
 ASSEMBLY TO DELIVER REQUIRED SUPPLY AND RETURN TEMPERATURES
 AS DIRECTED BY MANUFACTURE. 3. REFER TO DETAIL DRAWING FOR ADDITIONAL INFORMATION. 120V/60/1Ø POWER TO RECIRCULATION PUMP PROVIDED BY ELECTRICA CONTRACTOR

PLUMBING FIXTURE CONNECTION SCHEDULE					
FIXTURE TYPE	HOT WATER	COLD WATER	SAN. WASTE	VENT	REMARKS
WATER CLOSET FLUSH VALVE	_	1 1/2"	4"	2"	_
LAVATORY	1/2"	1/2"	1 1/2"	1 1/2"	-
WATER COOLER		1/2"	1 1/2"	1 1/2"	-

	PLUMBING DEMOLITION NOTES
PLU	IMBING DEMOLITION NOTES:
1.	THE PLUMBING CONTRACTOR SHALL REMOVE ALL PLUMBING FIXTURES, CARRIERS, TRIM, ACCESSORIES, EQUIPMENT, FLOOR DRAINS AND PIPING AS SHOWN OR INDICATED ON THE DRAWINGS.
2.	ALL PIPING TO BE REMOVED SHALL BE REMOVED COMPLETELY OR AS OTHERWISE SHOWN OR INDICATED ON DRAWINGS. ALL PIPE HANGERS, SLEEVES, RISER CLAMPS, ETC. SHALL BE REMOVED COMPLETELY WITH PIPING. NO EXISTING HANGER SYSTEMS SHALL BE REUSED FOR NEW PIPING.
3.	ALL PIPING TO BE REMOVED SHALL BE REMOVED TO BELOW FLOOR, ABOVE CEILING OR IN WALLS BACK TO MAINS OR SHUT OFF VALVES AT MAINS AND PROPERLY CAPPED PER CODE WITHOUT LEAVING DEAD ENDED PIPING.
4.	NO EQUIPMENT OR DEVICES THAT HAVE BEEN DISCONNECTED AND OR ABANDONED SHALL REMAIN.
5.	ALL EXISTING PIPING AND EQUIPMENT SHOWN HAS BEEN TAKEN FROM THE BEST AVAILABLE EXISTING INFORMATION. THE DRAWINGS ARE DIAGRAMMATIC AND ALL FIXTURES, PIPING, AND DEVICES MAY NOT BE SHOWN. THE INTENT OF THESE DRAWINGS IS THAT IN ALL AREAS OF RENOVATION THAT THEY ARE REMOVED, WHETHER OR NOT SHOWN.
6.	THE PLUMBING CONTRACTOR SHALL VISIT THE SITE AND BECOME FAMILIAR WITH THE EXISTING SYSTEMS AND CONDITIONS IN AREAS OF RENOVATION.
7.	ANY SYSTEMS OR EQUIPMENT TO REMAIN ACTIVE DURING RENOVATION SHALL BE KEPT IN OPERATION BY PROVIDING TEMPORARY PIPING CONNECTIONS AS REQUIRED UNTIL NEW SYSTEMS ARE INSTALLED AND OPERATIONAL.
8.	THE PLUMBING CONTRACTOR SHALL COORDINATE WITH THE OWNER, CM, AND OR GENERAL CONTRACTOR ANY AND ALL PHASING OF THE PLUMBING DEMOLITION WORK IN ORDER TO SATISFY THE CONSTRUCTION SCHEDULE AND OWNERS OCCUPANCY REQUIREMENTS.
9.	ANY FIXTURE OR EQUIPMENT TO BE REMOVED AND REUSED OR TURNED OVER TO THE OWNER, AT OWNERS REQUEST, OR AS INDICATED ON THE DRAWINGS SHALL BE CAREFULLY REMOVED AND STORED TO PREVENT DAMAGE.
10.	THE PLUMBING CONTRACTOR SHALL ALSO REVIEW THE ARCHITECTURAL DEMOLITION DRAWINGS AS PART OF THIS CONTRACT FOR ADDITIONAL INFORMATION AND REQUIREMENTS.

- 11. ALL SERVICE INTERRUPTIONS SHALL BE COORDINATED AND APPROVED WITH THE OWNER IN ADVANCE PRIOR TO COMMENCEMENT OF ANY WORK
- 12. THE PLUMBING CONTRACTOR SHALL COORDINATE HIS DEMOLITION WORK WITH THAT OF OTHER TRADES IN ORDER TO AVOID CONFLICTS.

PLUMBING GENERAL NOTES

- PLUMBING GENERAL NOTES 1. THESE GENERAL NOTES ARE APPLICABLE TO ALL PLUMBING DRAWINGS. 2. DRAWINGS ARE DIAGRAMMATIC AND SHOW GENERAL INTENT OF WORK,
- SEE DETAILS, SCHEDULES AND SPECIFICATIONS FOR ADDITIONAL INFORMATION. 3. PLUMBING CONTRACTOR MUST REVIEW DRAWINGS OF THE OTHER TRADES AS PART OF THIS CONTRACT FOR ADDITIONAL WORK REQUIRED AND OR COORDINATION OF HIS WORK FOR OPERATIONS OR CONNECTIONS TO OTHER SYSTEMS.
- 4. THE PLUMBING CONTRACTOR SHALL PROVIDE PIPE EXPANSION JOINTS ON PIPING PASSING THRU ALL BUILDING EXPANSION JOINT LOCATIONS AS REQUIRED PER BUILDING CODES WHETHER OR NOT SHOWN ON DRAWINGS. REVIEW ARCHITECTURAL AND STRUCTURAL DRAWINGS FOR EXACT BUILDING EXPANSION JOINT LOCATIONS AND EXPANSION DIMENSIONS.
- 5. THE PLUMBING CONTRACTOR SHALL INSTALL ALL PIPING EQUIPMENT AND ACCESSORIES IN ACCORDANCE WITH THE LATEST STATE BUILDING CODE AND LOCAL AUTHORITIES HAVING JURISDICTION. COORDINATION BETWEEN TRADES IS REQUIRED TO INSURE COMPLIANCE WITH THE GOVERNING
- 6. ALL PIPING, EQUIPMENT OR ACCESSORIES INSTALLED IN PLENUM RATED CEILINGS SHALL BE LISTED AND APPROVED FOR SUCH INSTALLATION.

ABBREVIATIONS

AFF	ABOVE FINISHED FLOOR
C, CW	COLD WATER
CO	CLEANOUT
CTE	CONNECT TO EXISTING
EWC	ELECTRIC WATER COOLER
EWH	ELECTRIC WATER HEATER
FD	FLOOR DRAIN
GPM	GALLONS PER MINUTE
H, HW	HOT WATER
HC	HANDICAP ACCESSIBLE
LAV	LAVATORY
NIC	NOT IN CONTRACT
PSI	POUNDS PER SQUARE INCH
S	SOIL
SS	SOIL STACK
ST	STORM
SAN	SANITARY
T&P	TEMPERATURE & PRESSURE RELIEF VALVE
TP	TRAP PRIMER
TMV	THERMOSTATIC MIXING VALVE
TYP	TYPICAL
V	VENT
VS	VENT STACK
VIF	VERIFY IN FIELD
W	WASTE
W&V	WASTE & VENT
WC	WATER CLOSET
WCO	WALL CLEANOUT
WHA	WATER HAMMER ARRESTOR

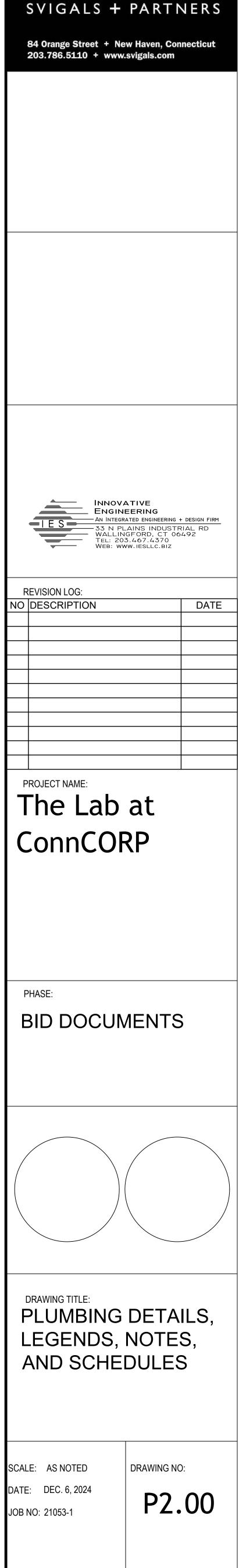
PLUMBING PIPING LEGEND

	COLD WATER
	HOT WATER
	WASTE, SANITARY OR SOIL
ST	STORM
	VENT
	DIRECTION OF FLOW
++++++++	EXISTING PIPING TO BE REMOVED
G	PIPE DOWN
	PIPE DROP
o	PIPE RISE
——————————————————————————————————————	PIPE ANCHOR
	PIPE GUIDE or SLEEVE
	PIPE EXPANSION FITTING (AT BLDG. EXP.JOINTS)
	VIBRATION ISOLATION FITTING
E	PLUGGED OR CAPPED PIPE
iı	CLEANOUT
O	FLOOR CLEANOUT

PLU	MBING SYMBOL LEGEND
IP IP IP IP IP IN IP IN IN IN IN IN IN IN IN IN IN IN IN IN	TEMPERATURE GAUGE PRESSURE GAUGE WATER HAMMER ARRESTER STRAINER – 'Y' TYPE P–TRAP UNION BALL VALVE CHECK VALVE THERMOSTATIC MIXING VALVE
Υ k 1 Ρ Γ	DRAIN VALVE TEMPERATURE & PRESSURE RELIEF VALVE (T&P) PLUMBING WORK ITEM NOTE PLUMBING FIXTURE DESIGNATION CONNECT TO EXISTING







PLUMBING SPECIFICATIONS

TECHNICAL REQUIREMENTS

THESE SPECIFICATIONS CALL OUT CERTAIN DUTIES OF THE CONTRACTOR AND HIS SUBCONTRACTOR. THEY ARE NOT INTENDED AS SUBCONTRACT DOCUMENTS, NOR ARE INTENDED AS A MATERIAL LIST OF ITEMS REQUIRED BY THE CONTRACT. PROVIDE ALL ITEMS AND WORK CALLED FOR IN THIS DIVISION OF THE SPECIFICATIONS ACCORDANCE WITH THE CONTRACT DOCUMENTS. THIS INCLUDES ALL INCIDENTALS, EQUIPMENT, APPLIANCES, SERVICES, HOISTING, SCAFFOLDING, SUPPORTS, TOOLS, SUPERVISION LABOR, CONSUMABLE ITEMS, FEES, LICENSES, ETC., NECESSARY TO PROV COMPLETE SYSTEMS. PERFORM START UP AND CHECK OUT EACH ITEM AND SYSTEM TO PROVIDE FULLY OPERABLE SYSTEMS.

INTENT OF DRAWINGS DO NOT SCALE DRAWINGS. CHECK EXISTING SPACE CONDITIONS AT THE JOB SITE. CODES AND STANDARDS

INTERNATIONAL BUILDING CODE IBC, 2021 EDITION, AS AMENDED BY THE STATE OF CONNECTICUT 2022 AMENDMENTS. INTERNATIONAL PLUMBING CODE, 2021 EDITION, AS AMENDED BY THE STATE OF CONNECTICUT 2022 AMENDMENTS.

NFPA 101, LIFE SAFETY CODE, 2021 EDITION, AS AMENDED BY THE STATE OF CONNECTICUT 2022 AMENDMENTS. NFPA 70: NATIONAL ELECTRICAL CODE, 2020 EDITION, AS AMENDED BY THE STATE OF

CONNECTICUT 2022 AMENDMENTS. CONNECTICUT DEPARTMENT OF PUBLIC HEALTH CODE.

OCCUPATIONAL SAFETY AND HEALTH STANDARDS. DEPARTMENT OF ENVIRONMENTAL PROTECTION.

INTERNATIONAL ENERGY CONSERVATION CODE, 2021, AS AMENDED BY THE STATE OF CONNECTICUT 2022 AMENDMENTS.

STATE DEMOLITION CODE.

LOCAL BUILDING CODE.

ICC/ANSI A117.1, 2017, ACCESSIBLE AND USABLE BUILDINGS AND FACILITIES, AS AMEN BY THE STATE OF CONNECTICUT 2022 AMENDMENTS. COMPLY WITH ALL APPLICABLE GOVERNMENTAL REGULATIONS. COMPLY WITH ALL FEDERA STATE, CITY, INSURANCE UNDERWRITERS AND OTHER APPLICABLE CODES AND ORDINANC IF ANY CONFLICT ARISES BETWEEN THESE SPECIFICATIONS, CODES AND ORDINANCES, IMMEDIATELY NOTIFY THE ENGINEER. DO NOT DEVIATE FROM THE SPECIFICATIONS NOR INSTALL ANY WORK WHICH MAY BE IN CONFLICT WITH CODES AND ORDINANCES UNTIL CONFLICT IS RESOLVED AND THE SOLUTION APPROVED BY THE ENGINEER.

<u>SUBMITTALS</u> PRODUCT DATA: SUBMIT MANUFACTURER'S TECHNICAL PRODUCT DATA, INCLUDING RATED CAPACITIES OF SELECTED MODEL CLEARLY INDICATED, FURNISHED SPECIALTIES AND ACCESSORIES; AND INSTALLATION INSTRUCTIONS.

SHOP DRAWINGS: SUBMIT MANUFACTURER'S ASSEMBLY TYPE SHOP DRAWINGS INDICATIN DIMENSIONS, ROUGHING-IN REQUIREMENTS, REQUIRED CLEARANCES, AND METHODS OF ASSEMBLY OF COMPONENTS AND ANCHORAGES. MAINTENANCE DATA: SUBMIT MAINTENANCE DATA AND PARTS LISTS FOR EACH TYPE OF

PLUMBING FIXTURE AND ACCESSORY; INCLUDING "TROUBLE SHOOTING" MAINTENANCE (INCLUDE THIS DATA, PRODUCT DATA AND SHOP DRAWINGS IN MAINTENANCE MANUAL. PROVIDE SHOP DRAWING SUBMITTALS OF ALL PLUMBING EQUIPMENT INCLUDING: FIXTURES

VALVES SPECIALTIES

CERTAIN TERMS SUCH AS "SHALL, PROVIDE, INSTALL, COMPLETE, START-UP" ARE NOT USED IN SOME PARTS OF THESE SPECIFICATIONS. THIS DOES NOT INDICATE ITEMS SHAI BE LESS THAN COMPLETELY INSTALLED OR THAT SYSTEMS SHALL BE LESS THAN COMPLETE. PERMITS AND FEES

SECURE AND PAY COSTS OF PERMITS, CERTIFICATES, LICENSES, INSPECTIONS AND APPROVALS. ADJUSTMENTS

UPON COMPLETION OF WORK, PERFORM THE FOLLOWING ADJUSTMENT PROCEDURES: ADJUST SYSTEMS COMPONENTS FOR PROPER PERFORMANCE. OPEN AND CLOSE VALVES, SET IN PROPER OPERATING POSITION.

ACCESSIBILITY PLACE VALVES, UNIONS, DRAINS, AND ITEMS REQUIRING MAINTENANCE, ADJUSTMENT, OR REPAIR, IN ACCESSIBLE LOCATIONS. COORDINATE ACCESS PANELS WITH ARCHITECT.

REFERENCE PUBLICATIONS AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM) AND AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI) PUBLICATIONS ARE REFERRED TO HEREIN, BECAUSE THES PUBLICATIONS ARE REVISED FREQUENTLY, DATES FOLLOWING PUBLICATION NUMBERS HA BEEN OMITTED. REFER TO LATEST EDITION.

COORDINATION OF WORK TRANSMIT TO OTHER TRADES ALL INFORMATION REQUIRED FOR WORK TO BE PROVIDED UNDER THEIR RESPECTIVE SECTIONS IN AMPLE TIME FOR INSTALLATION. WHEREVER WORK INTERCONNECTS WITH WORK OF OTHER TRADES, COORDINATE WITH

TRADES TO INSURE THAT ALL TRADES HAVE THE INFORMATION NECESSARY SO THEY M PROPERLY INSTALL ALL THE NECESSARY CONNECTIONS AND EQUIPMENT. IDENTIFY ALL WORK ITEMS (VALVES, DRAINS, ETC.) IN AN APPROVED MANNER IN ORDER THAT THE CEILING SUBCONTRACTOR WILL KNOW WHERE TO INSTALL ACCESS DOORS AND PANELS. CONSULT WITH OTHER TRADES REGARDING EQUIPMENT SO, WHEREVER POSSIBLE, MOTOR AND CONTROL ARE OF THE SAME MANUFACTURER.

FURNISH AND SET ALL SLEEVES FOR PASSAGE OF PIPES AND CONDUITS THROUGH STRUCTURAL MASONRY AND CONCRETE WALL AND FLOORS, AND ELSEWHERE AS WILL E REQUIRED FOR THE PROTECTION OF EACH PIPE PASSING THROUGH BUILDING SURFACE PROVIDE REQUIRED SUPPORTS AND HANGERS FOR PIPING, FIXTURES AND EQUIPMENT, LOADING WILL NOT EXCEED ALLOWABLE LOADINGS OF STRUCTURE. CONFORM THE PLUMBING WORK TO THE REQUIREMENTS HEREIN. PROVIDE OFFSETS, FITTINGS, DRAINS, AND ACCESSORIES WHICH MAY BE REQUIRED. INVESTIGATE THE STRUCTURAL AND FINISH CONDITIONS AFFECTING THE WORK, AND ARRANGE THE WORK

ACCORDINGLY. PROVIDE SUCH PIPING, FITTINGS, VALVES AND ACCESSORIES AS MAY BE REQUIRED TO MEET SUCH CONDITIONS. ELECTRICAL CONNECTIONS POWER SUPPLY WILL BE PROVIDED UNDER DIVISION 16, AND CONNECTIONS MADE TO A NEW ELECTRICAL ITEMS. TO FACILITATE ELECTRICAL CONNECTIONS EQUIP ELECTRICAL ITEMS WITH NEMA ENCLOSU

HAVING ADEQUATE KNOCKOUTS, CONNECTORS, TERMINAL BLOCKS AND/OR CONTACTS. PIPING IDENTIFICATION CONSPICUOUSLY IDENTIFY NEW PIPING WITH SELF-ADHERING VINYL PLASTIC COLOR BANDS

AND PIPE MARKERS IMPRINTED WITH LEGEND, BASED ON ANSO A13.1 "SCHEME FOR THE IDENTIFICATION OF PIPING SYSTEMS". APPLY LEGENDS TO FEED AND CROSS MAIN PIPING ADJACENT TO CHANGES IN DIRECTION WHERE PIPES PASS THROUGH WALLS OR FLOORS, AT INTERVALS NOT EXCEEDING 40 FEET IN STRAIGHT PIPING RUNS, AND ADJACENT TO CROSS MAIN CONNECTIONS WITH FEED MAIN.

MINIMUM LETTER SIZE: 1/2" FOR PIPING 3/4" TO 1-1/4" OD

3/4" FOR PIPING 1-1/2" TO 2" OD 1-1/4" FOR PIPING 2-1/2" TO 6" OD MINIMUM COLOR BAND WIDTH:

8" FOR PIPING 3/4" TO 2" OD

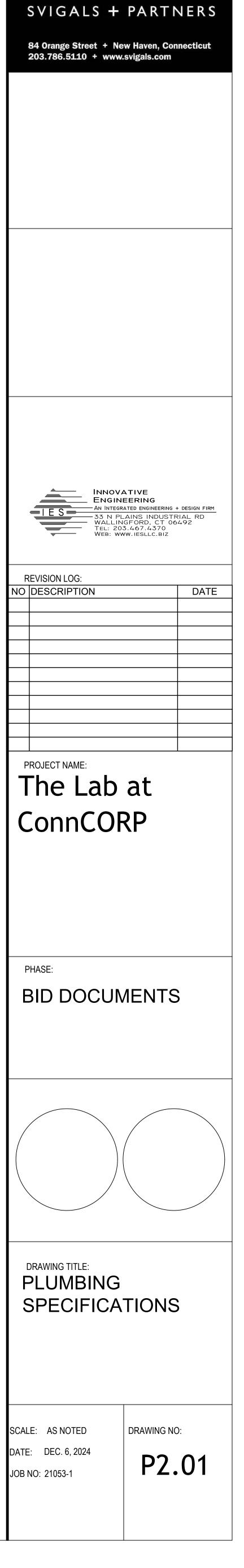
12" FOR PIPING 2-1/2" TO 6" OD OPERATING INSTRUCTIONS

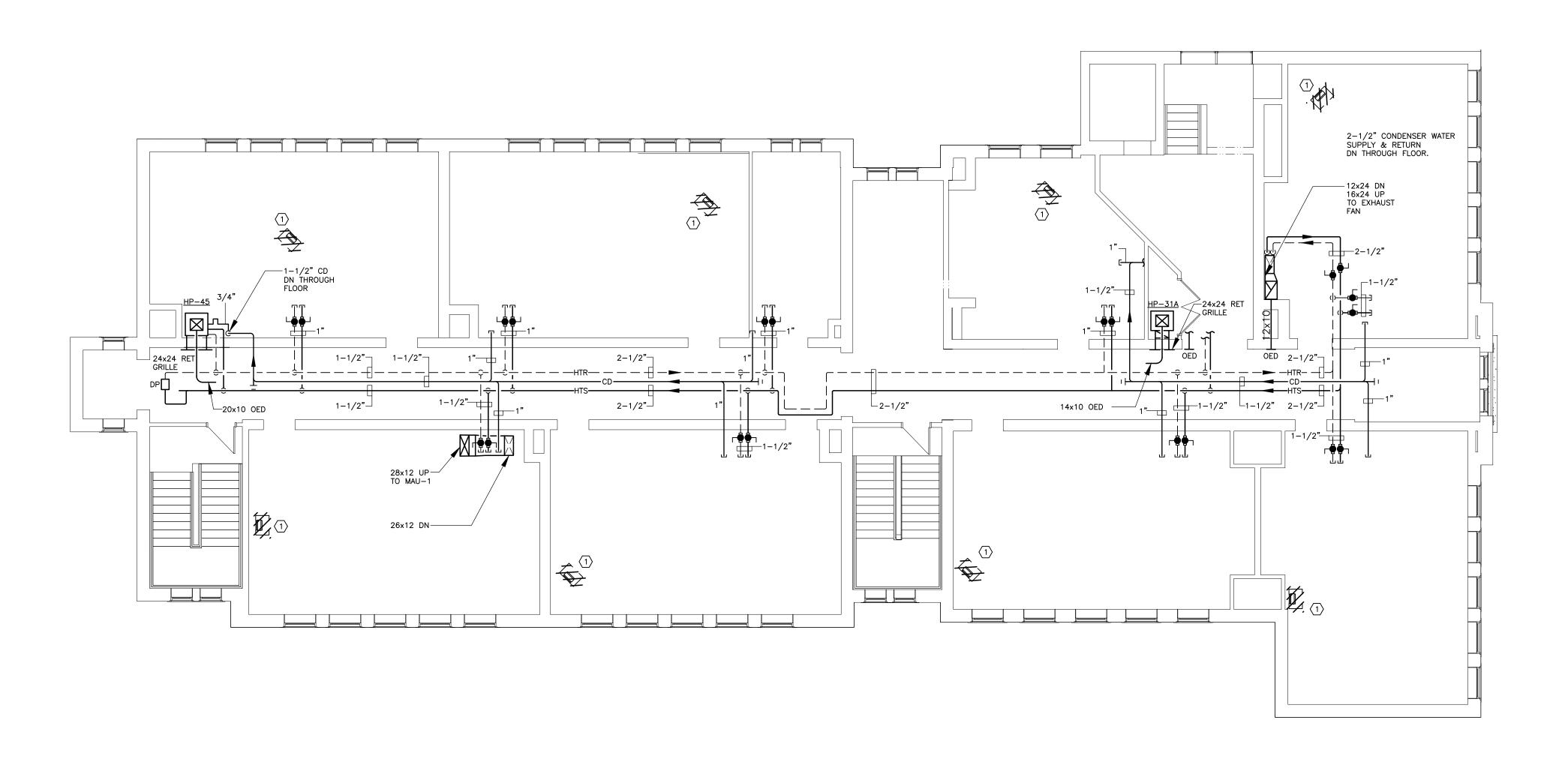
INSTRUCT OWNER'S OPERATING PERSONNEL ON PROPER CARE, MAINTENANCE AND OPERATING PROCEDURES.

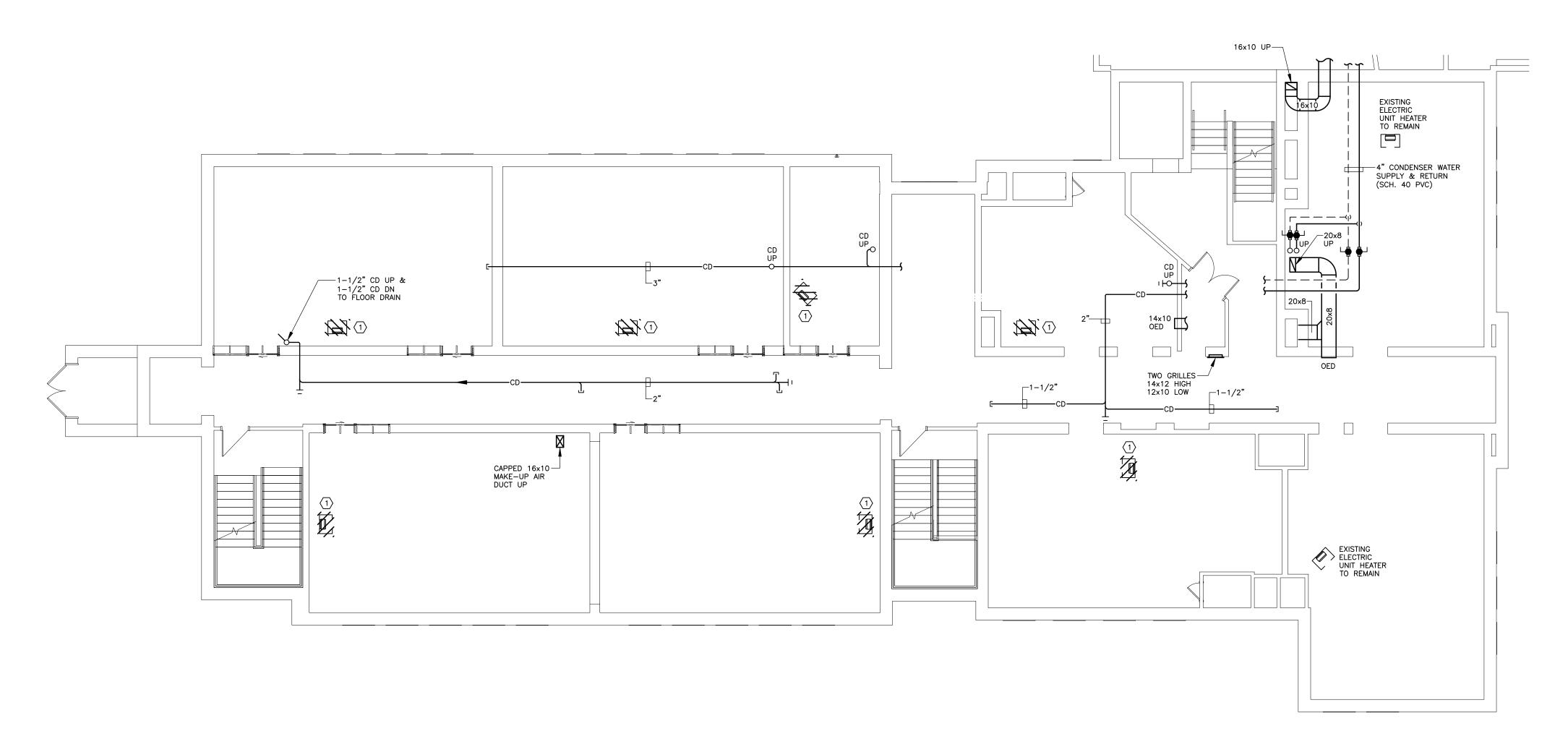
	MAINTENANCE_MANUAL	PIPE HANGER MATERIAL STANDARDS
E THEY	INCLUDE FOLLOWING IN MANUALS:	BOLTING – ASTM A307, GRADE A CAST IRON – ASTM A48, GRADE 30
	MANUFACTURER'S DESCRIPTIVE DATA OPERATION AND MAINTENANCE INSTRUCTIONS	FORGOINGS – AST, A521, GRADE CA MALLEABLE IRON – ASTM A47, ASTM A
NS IN	REPLACEMENT PART LISTS WIRING DIAGRAMS	STEEL – ASTM A36, ASTM A569, ASTM STEEL PIPE – ASTM A53, ASTM A120
ROVIDE TO	MANUFACTURER'S WARRANTY & SERVICE CERTIFICATES INSTRUCTIONS FOR PERIODIC CLEANING AND MAINTENANCE	STEEL ROD – ASTM A36, ASTM A575 PIPE HANGER COMPONENTS
10	PROCEDURES FOR SYSTEMS START-UP AND SHUT-DOWN VALVE LOCATION AND TAG NUMBER CHARTS.	COMPONENTS: DESIGNED WITH MINIMUM
	CLEANING	CONSTRUCTION; ASSEMBLED WITH COR AND SQUARE OR HEX HEAD NUTS, ST
	CLEAN PIPING PRIOR TO PAINTING.	SELF-DISENGAGEMENT.
	UPON COMPLETION OF WORK, PERFORM THE FOLLOWING CLEANING PROCEDURES:	PIPE ATTACHMENTS: CAPABLE OF VERT PIPING, SIZED ALLOW CONTINUOUS INS
	REMOVE PROTECTIVE COVERS AFTER PAINTING CLEAN PIPING AND EQUIPMENT REMOVE SURPLUS MATERIALS AND RUBBISH	SURFACE FINISH – GENERALLY: CORRO
	RESTORE DAMAGED SURFACE FINISHES	SURFACE FINISH – UNINSULATED COP PLASTIC COATED.
	ADJUSTMENTS	SURFACE FINISH – CHROME PLATED F
DF	UPON COMPLETION OF WORK, PERFORM THE FOLLOWING ADJUSTMENT PROCEDURES:	ESCUTCHEONS
	ADJUST SYSTEMS COMPONENTS FOR PROPER PERFORMANCE OPEN AND CLOSE VALVES, SET IN PROPER OPERATING POSITION. SEAL CONTROL VALVES OPEN	PAINTED SURFACES: PRIME COATED SH
	GUARANTEE	ACOUSTICAL SURFACES: FACTORY PAIN
	SUPPLY TWO COPIES OF A WARRANTY COUNTERSIGNED AND GUARANTEED BY CONTRACTOR,	PREFINISHED SURFACES: CHROME-PLA
-	STATING THAT IMPERFECT SYSTEM OPERATION AND ALL DEFECTS IN LABOR AND MATERIALS WILL BE REPAIRED WITHOUT COST TO OWNER FOR A PERIOD OF ONE YEAR FROM DATE OF SUBSTANTIAL COMPLETION, AND STATING THAT ALL PLUMBING EQUIPMENT HAS BEEN FULLY SERVICED AND LEFT IN PROPER OPERATING CONDITION.	PIPE SLEEVES, SEALS AND ADAPTERS INTERIOR PARTITIONS: #20 GAUGE GAL
	ALSO GUARANTEE THAT SERVICING WILL BE PROVIDED WITHOUT COST DURING GUARANTEE	PIPE INSULATION
	PERIOD. PIPE SLEEVE INSTALLATION	PIPE: SECTIONAL PREMOLDED FIBROUS BARRIER JACKET.
IENDED	PROVIDE FOR PIPING PASSING THROUGH WALLS, PARTITIONS AND SLAB, SLEEVES SIZED AT	MINIMUM DENSITY: 3.5 LBS PCF. MAXIMUM K—FACTOR: 0.25 AT 75 DEG
ERAL, ANCES.	LEAST 1 INCH LARGER THAN OD OF PIPE. SLEEVES ARE REQUIRED FOR PIPING PASSING THROUGH FIRE—RATED WALLS CONSTRUCTED	VALVES AND FITTINGS: PREMOLED, FIBI MITERED SEGMENTS OF PIPE INSULATIO EMBEDDED IN SURFACE COATING. NO
, R IL THE	OF METAL STUDS AND GYPSUM WALLBOARD. TERMINATE SLEEVES THROUGH WALLS, PARTITIONS AND CEILINGS FLUSH WITH FINISHED	SURFACE FINISH - EXPOSED: UNIFORM
	SURFACES: THROUGH SLABS $1/2$ " ABOVE FLOOR FINISH IN HABITABLE SPACES AND 2" ABOVE ROUGH FINISH IN PIPE SPACES AND OTHER UNFINISHED AREAS.	SURFACE FINISH — CONCEALED: NONE <u>WATER PIPING SPECIALTIES</u>
TED	SET SLEEVES IN PLACE BEFORE PLACING CONCRETE, OR SECURELY FASTEN AND GROUT IN PLACE WITH CONCRETE. EXERCISE CARE IN LOCATING AND SETTING OF SLEEVES TO ASSURE ACCURATE ALIGNMENT. IN ABSENCE OF SLEEVES, USE CORE DRILLED HOLES AND PROVIDE CURBS TO PREVENT PASSAGE OF WATER.	SHOCK ABSORBER: SA: ALL COPPER, BELLOWS, THREADED INLET; 150 PSI V 201 AND A.S.S.E. STANDARD 1010.
TING DF	FILL VOID SPACES BETWEEN PIPING AND PIPE SLEEVES WITH PENETRATION SEAL, OR APPROVED ELASTROMERIC CAULKING MATERIALS. ESCUTCHEON INSTALLATION	
OF GUIDE.	PROVIDE ESCUTCHEONS ON PIPE PROTRUSIONS AT WALLS, PARTITIONS, CEILING AND	
00.02.	FLOORS. ESCUTCHEONS SHALL FIT SNUGLY AROUND PIPING AND COVER SURFACE OPENING.	
	FIRE STOPPING	
	FILL VOID SPACE BETWEEN PIPING AND PIPING SLEEVES WITH DOW CORNING 3 – 6548 RTV SILICONE FOAM, OR WITH FIBROUS GLASS SEALED WITH FIRE TESTED AND APPROVED ELASTOMERIC CAULKING MATERIALS.	
тс	INSTALLATION - GENERAL	
SHALL	PREPARATION: CUT PIPE AND TUBING ENDS SQUARE, REMOVE BURRS AND REAM TO ORIGINAL BORE. CLEAN JOINT SURFACES PRIOR TO ASSEMBLY. WIPE OFF EXCESS JOINING COMPOUNDS AND FLUX RESIDUE.	
	SCREWED: USE AMERICAN STANDARD TAPER PIPE THREADS CUT SHARP AND TRUE AND SUITABLE FOR NORMAL ENGAGEMENT. SCREW THREADED ITEMS UP CLOSE TO SHOULDERS WITH NOT MORE THAN THREE INCOMPLETE THREADS EXPOSED. DO NOT USE LAMP WICK, CORD, WOOL OR OTHER "WICKING" MATERIALS. REPAIR LEAKS WITH NEW MATERIALS, DO NOT PEEN OR CAULK. "TEFLON" PIPE JOINT TAPE OR JOINT COMPOUNDS COMPOSED OF RED LEAD AND GRAPHITE GROUND IN LINSEED OIL WILL BE PERMITTED, APPLIED TO MALE THREADS ONLY.	
	SOLDER: MAKE UP JOINTS WITH 95-5 TIN-ANTIMONY WIRE SOLDER AND NON-CORROSIVE FLUX. DO NOT USE 50-50 OR OTHER TIN-LEAD SOLDERS.	
	MECHANICAL COUPLINGS: USE MANUFACTURER'S MATERIALS AND METHODS.	
OR	PIPE HANGER AND SUPPORT INSTALLATION	
	REFER TO MSS-SP-58; STANDARD FOR PIPE HANGERS AND SUPPORTS.	
IESE	SUPPORT, ANCHOR AND GUIDE PIPING SYSTEMS TO WITHSTAND STATIC AND DYNAMIC LOAD CONDITIONS, TO ALLOW FOR EXPANSION AND CONTRACTION; TO PREVENT VIBRATION AND SWAYING; TO MAINTAIN ALIGNMENT AND MINIMIZE VERTICAL DEFLECTION.	
HAVE	DO NOT SUPPORT PIPING FROM OTHER PIPING OR DUCTWORK. DO NOT USE WIRE, TAPE, METAL BAND, OR OTHER MAKE—SHIFT DEVICES AS MEANS OF SUPPORT OR ATTACHMENT. <u>TESTING</u>	
ED	GENERAL: TEST PLUMBING SYSTEMS TO SATISFACTION OF BUILDING OFFICIAL. DO NOT CLOSE IN, CONCEAL, OR COVER UP ANY WORK UNTIL IT HAS BEEN TESTED, INSPECTED, AND APPROVED BY ENGINEER AND LOCAL OFFICIALS.	
OTHER MAY	FLUSH PIPING, PRIOR TO TESTING, TO REMOVE FOREIGN MATERIAL WHICH MAY HAVE	
L E	ENTERED DURING COURSE OF INSTALLATION. CLEAN FILTERS AND STRAINERS AFTER FLUSHING.	
LS. DTORS	PLUMBING MATERIALS	
	DOMESTIC HOT AND COLD WATER: PIPING - HARD DRAWN COPPER TUBING TYPE "L" WITH SOLDERED JOINTS.	
_ BE CES. T, SO	DOMESTIC WATER PIPING UNDERGROUND – SOFT COPPER TUBE, ASTM B 88 TYPE K OR L AND WROUGHT – COPPER FITTINGS SOLDER–JOINT, ASME B16.18 OR BRONZE FLANGE TYPE FITTINGS ASME B16.22. PE PIPING ASTM D 2239 AND PR FITTINGS MOLDED ASTM D 3350.	
	SANITARY WASTE AND VENT PIPING ABOVE GROUND: — STANDARD WEIGHT HUBLESS CAST IRON PIPE.	
RK BE	SANITARY WASTE AND VENT PIPING BELOW GROUND: – STANDARD WEIGHT HUB AND SPIGOT CAST IRON PIPE.	
O ANY	<u>VALVES</u> CHECK VALVE: ALL BRONZE, HORIZONTAL SWING, REGRINDING TYPE, Y PATTERN, RENEWABLE SEAT AND DISC, 200 PSI NON—SHOCK COLD WATER BY NIBCO OR EQUAL.	
OSURES	BALL VALVE – 2" AND SMALLER: LEAD FREE BRONZE BODY AND BALL, TEFLON SEATS AND SEALS, LEVER HANDLE, 400 PSI WOG, NIBCO, APOLLO OR EQUAL.	
	SEALS, LEVEN HEADEL, TOU I SE MOUS, MIDOU, AFULLU UN EQUAL.	

ST IRON – ASTM A48, GRADE 30 ORGOINGS – AST, A521, GRADE CA ALLEABLE IRON – ASTM A47, ASTM A197 EEL - ASTM A36, ASTM A569, ASTM A570 EL PIPE – ASTM A53, ASTM A120 EL ROD – ASTM A36, ASTM A575 HANGER COMPONENTS MPONENTS: DESIGNED WITH MINIMUM SAFETY FACTOR OF 5; OF ALL METAL STRUCTION; ASSEMBLED WITH CORROSION RESISTANT SQUARE HEAD MACHINE BOLTS SQUARE OR HEX HEAD NUTS, STEEL WASHERS; IN SUCH A MANNER AS TO PREVENT -DISENGAGEMENT. ATTACHMENTS: CAPABLE OF VERTICAL ADJUSTMENT UNDER LOAD, SHAPED TO OD IF PING, SIZED ALLOW CONTINUOUS INSULATION. RFACE FINISH - GENERALLY: CORROSION RESISTANT PAINT COATING. RFACE FINISH – UNINSULATED COPPER AND BRASS PIPING; COPPER–PLATED OR ASTIC COATED. RFACE FINISH - CHROME PLATED PIPING: CHROME PLATED. <u>CUTCHEONS</u> INTED SURFACES: PRIME COATED SHEET METAL OUSTICAL SURFACES: FACTORY PAINTED TO MATCH SURFACE SHEET STEEL EFINISHED SURFACES: CHROME-PLATED CAST BRASS SLEEVES, SEALS AND ADAPTERS TERIOR PARTITIONS: #20 GAUGE GALVANIZED STEEL, LOCK SEAM JOINT INSULATION SECTIONAL PREMOLDED FIBROUS GLASS, FACTORY APPLIED FLAME RETARDANT VAPOR RRIER JACKET. INIMUM DENSITY: 3.5 LBS PCF. AXIMUM K–FACTOR: 0.25 AT 75 DEGREES FAHRENHEIT, MEAN. LVES AND FITTINGS: PREMOLED, FIBROUS GLASS FITTING COVERS, OR FABRICATED TERED SEGMENTS OF PIPE INSULATION, FINISHED WITH 20-20 COUNT GLASS CLOT IBEDDED IN SURFACE COATING. NO STAPLES, TACKS OR BANDS. RFACE FINISH - EXPOSED: UNIFORM COAT OF SURFACE COATING RFACE FINISH - CONCEALED: NONE REQUIRED. TER PIPING SPECIALTIES OCK ABSORBER: SA: ALL COPPER, MECHANICAL-PNEUMATIC TYPE, HERMETICALLY SEALED LLOWS, THREADED INLET; 150 PSI WWP. SIZE AND PLACEMENT DETERMINATION: PDI-WH







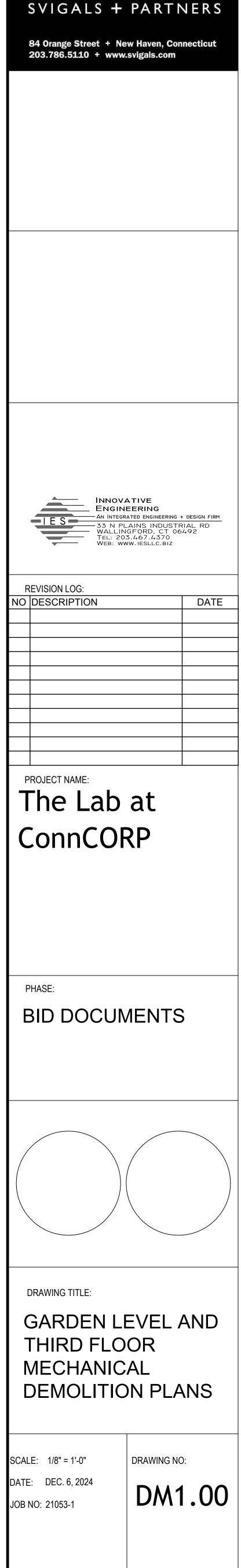


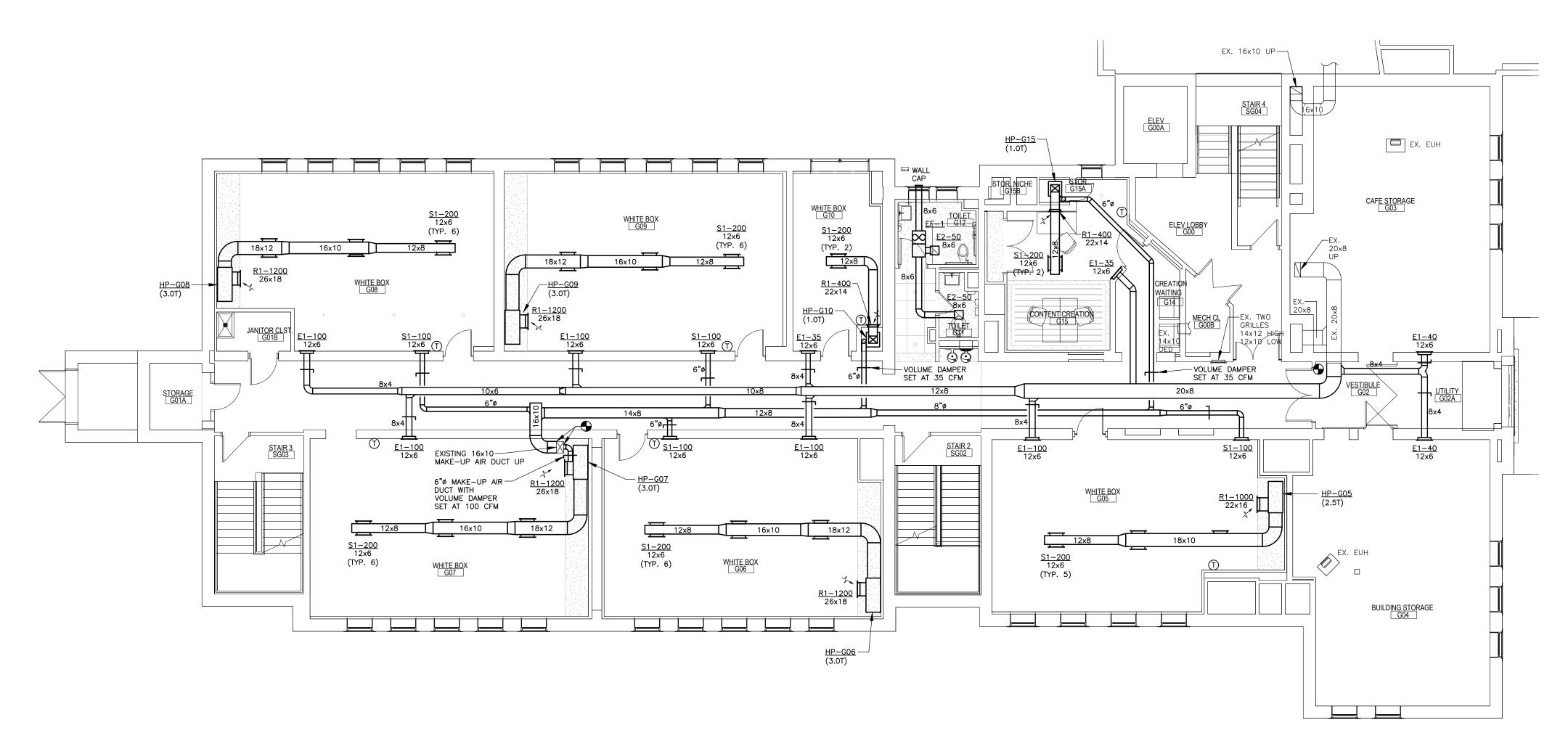
THIRD FLOOR MECHANICAL DEMOLITION PLAN SCALE: 1/8"= 1'-0"

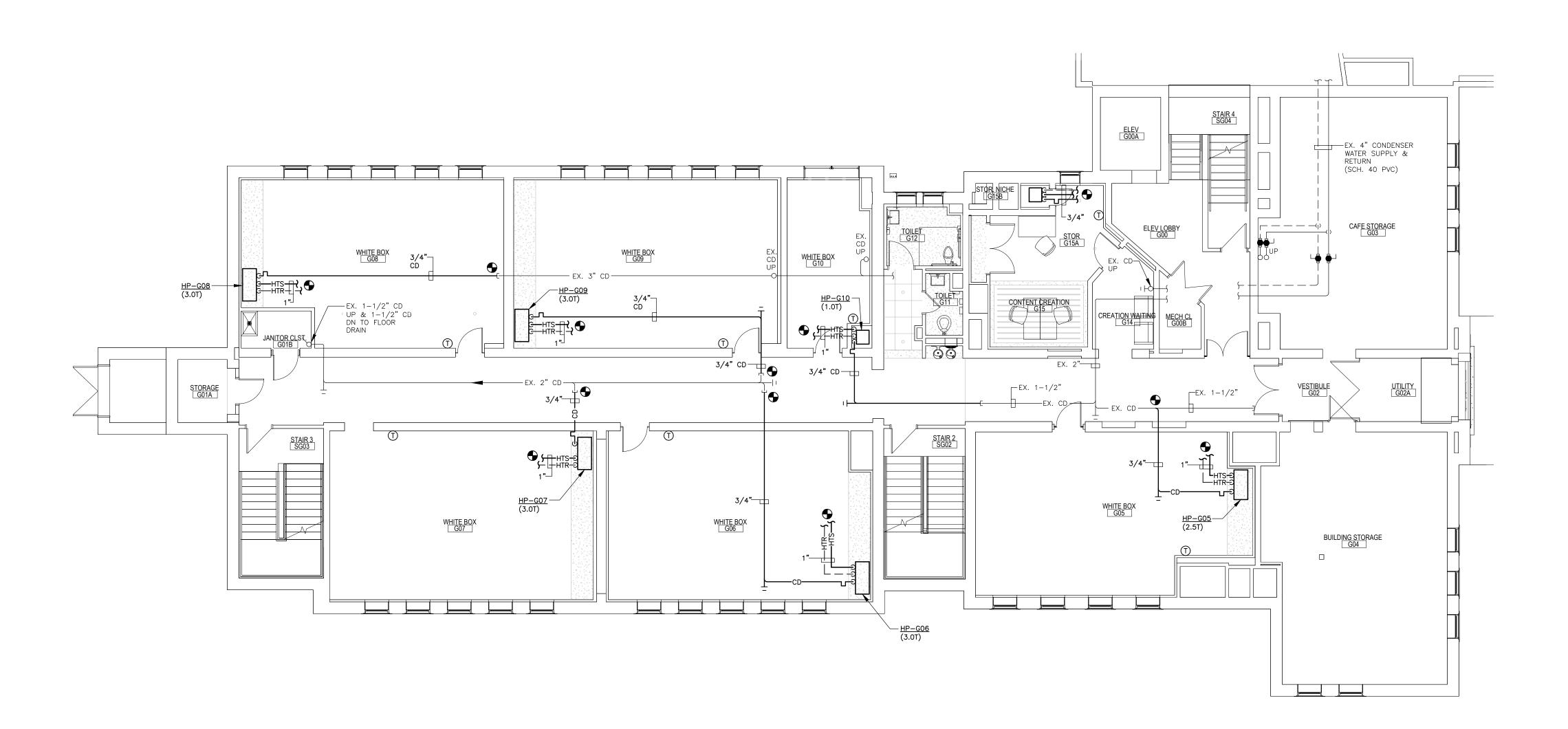
GARDEN LEVEL MECHANICAL DEMOLITION PLAN SCALE: 1/8"= 1'-0"

MECHANICAL DEMOLITION NOTES DISCONNECT, REMOVE, AND DISCARD EXISTING HORIZONTAL ELECTRIC UNIT HEATER INCLUDING BUT NOT LIMITED TO ASSOCIATED MOUNTING BRACKETS, HARDWARE, WIRING, ETC.

MECHANICAL DEMOLITION NOTES DISCONNECT, REMOVE, AND DISCARD EXISTING HORIZONTAL ELECTRIC UNIT HEATER INCLUDING BUT NOT LIMITED TO ASSOCIATED MOUNTING BRACKETS, HARDWARE, WIRING, ETC.

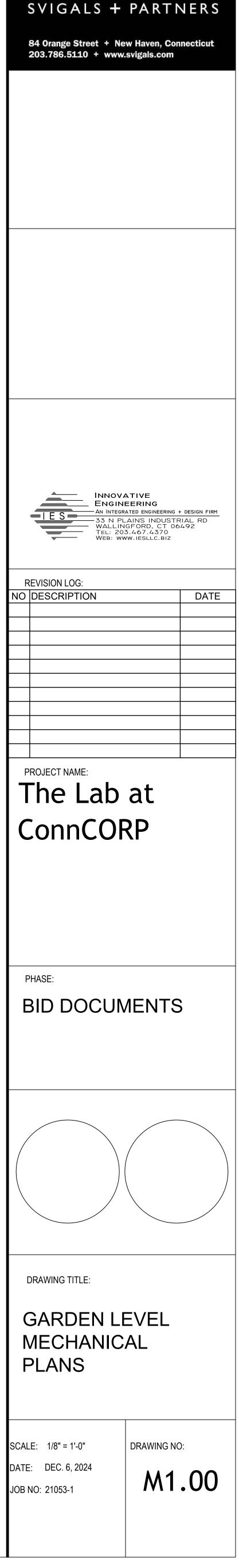


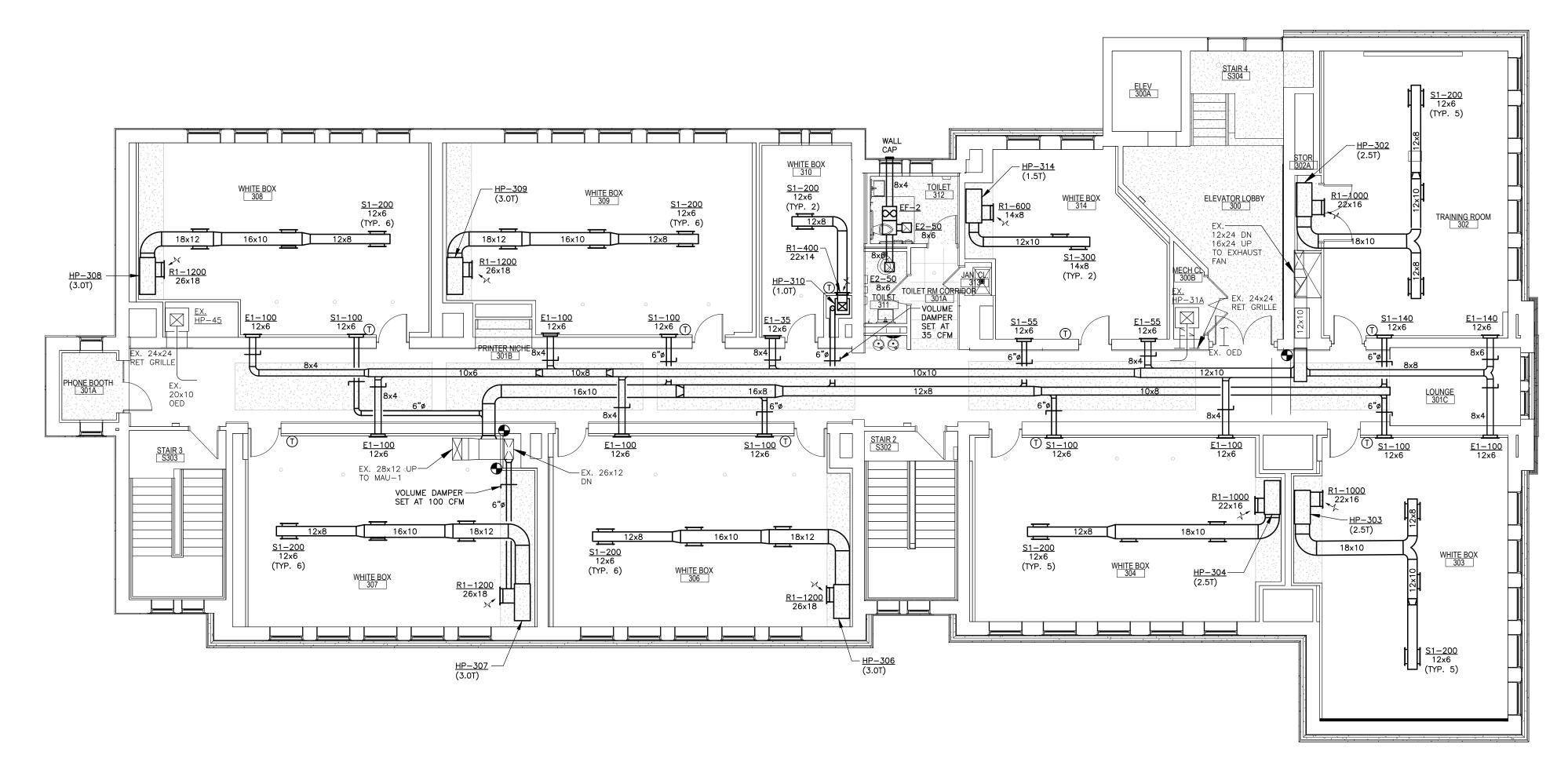


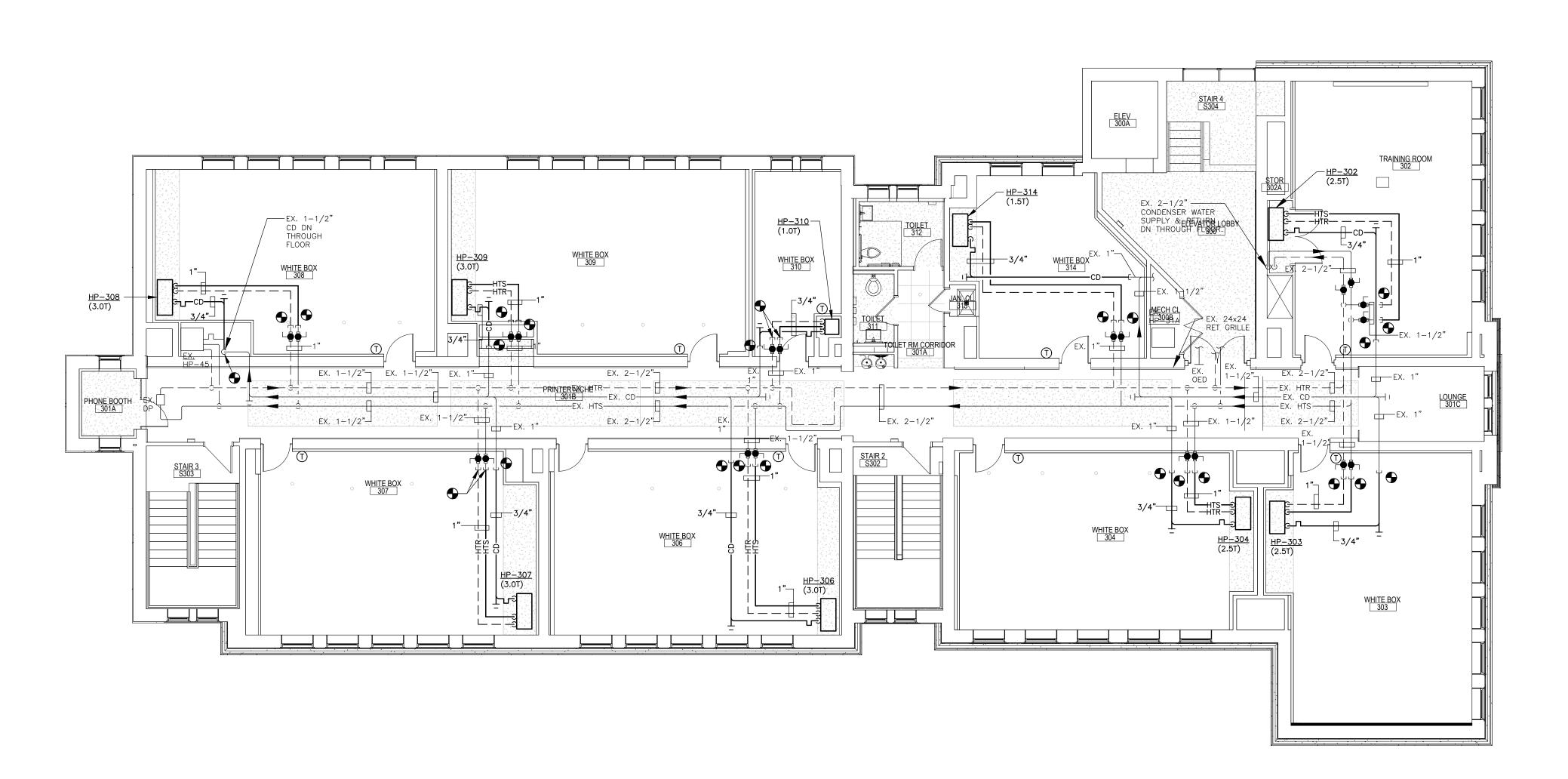


GARDEN LEVEL MECHANICAL PLAN SCALE: 1/8"= 1'-0"

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

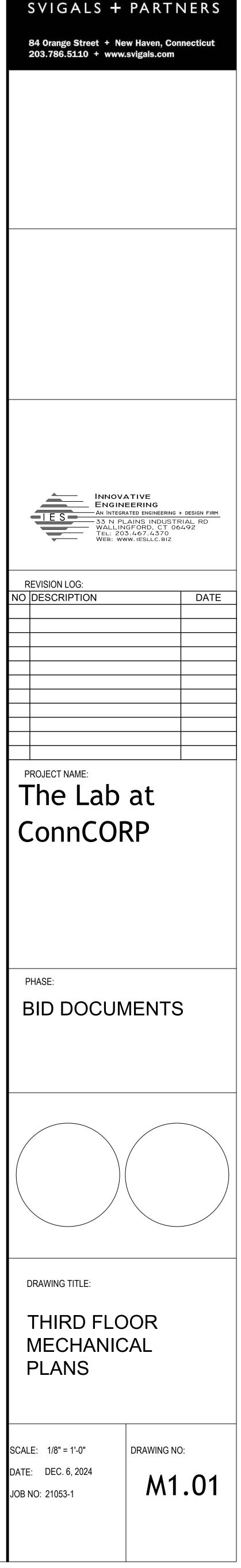


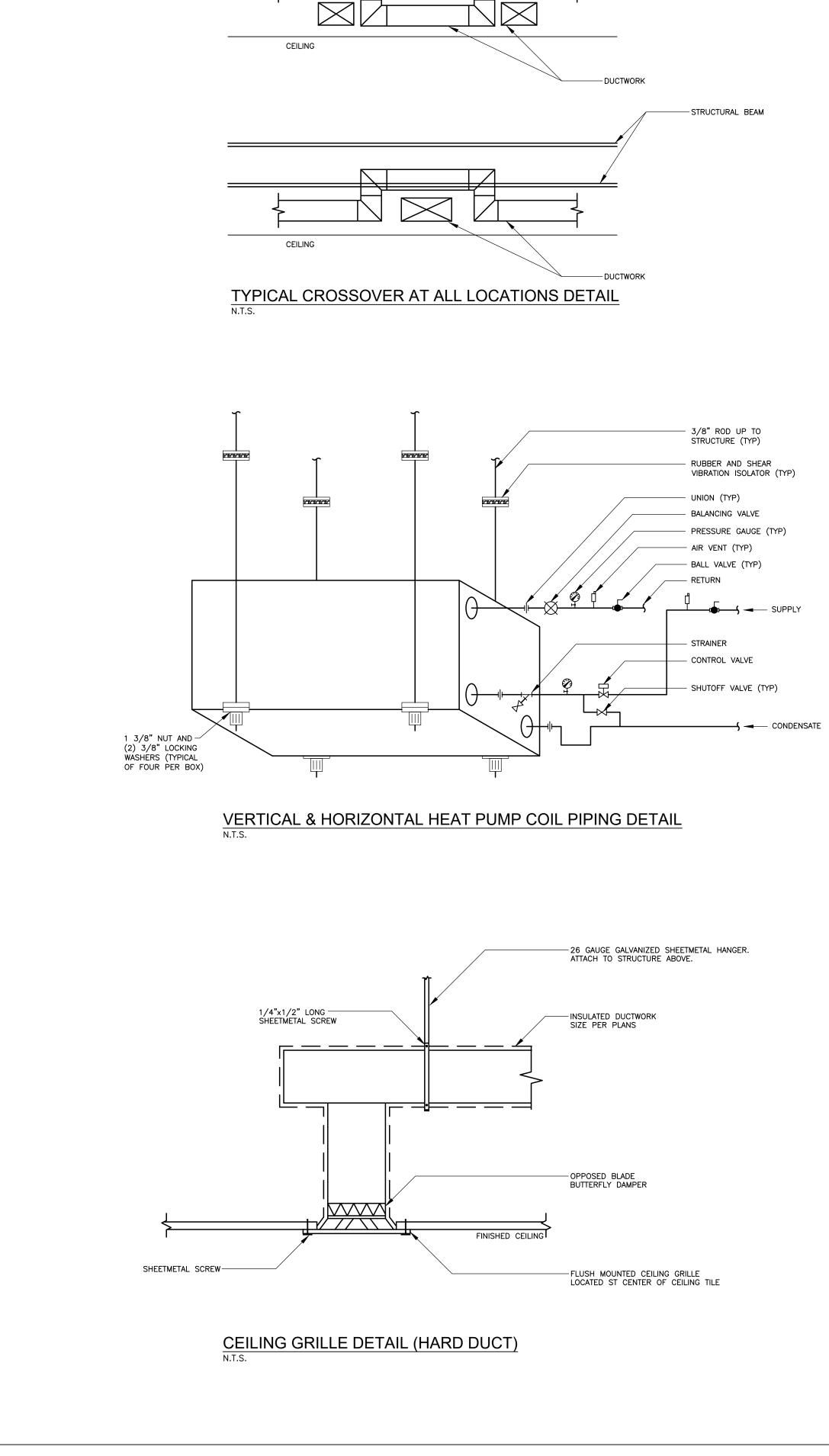




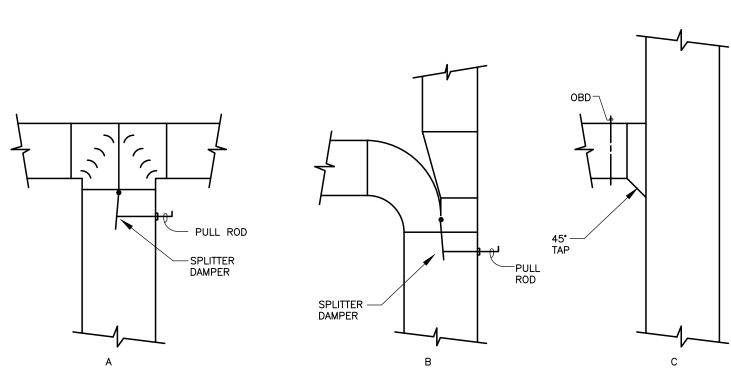
THIRD FLOOR MECHANICAL PLAN SCALE: 1/8"= 1'-0"





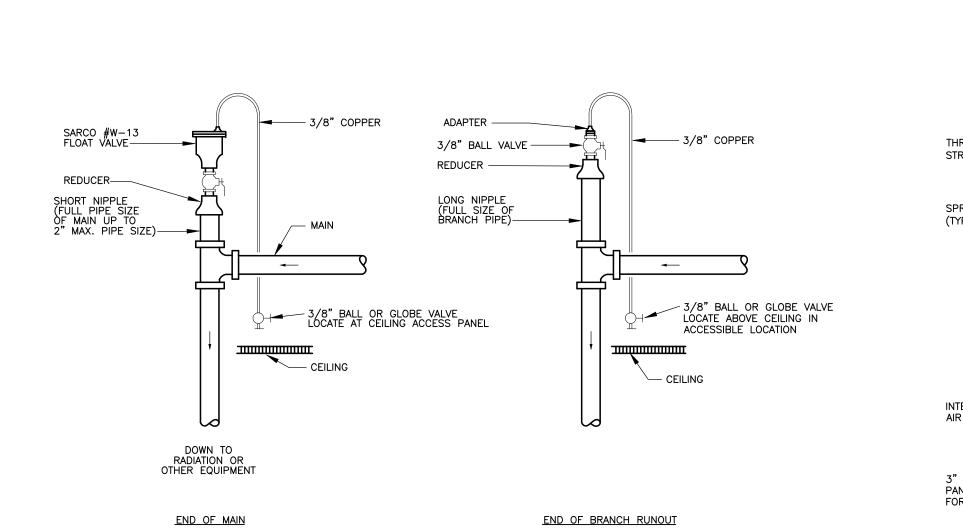


TYPICAL DUCT DETAIL

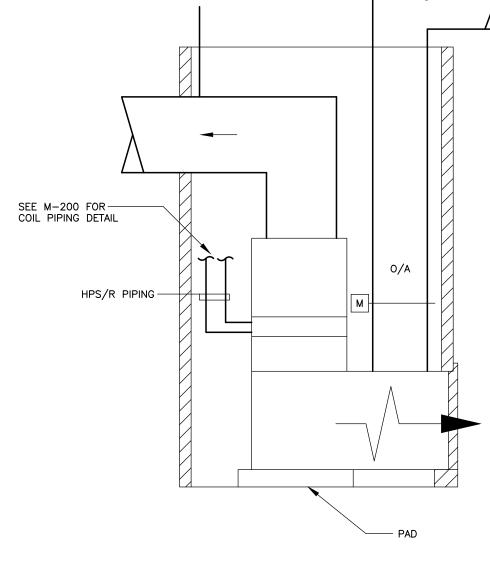


TYPICAL AIR VENT PIPING DETAIL

N.T.S.

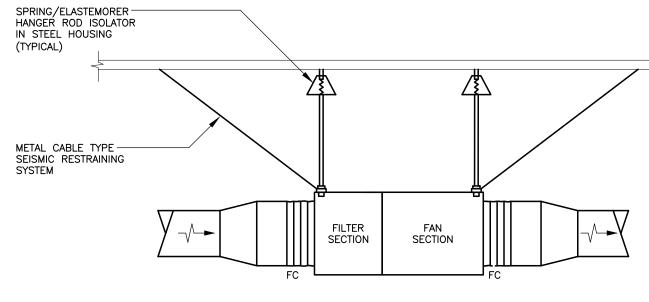


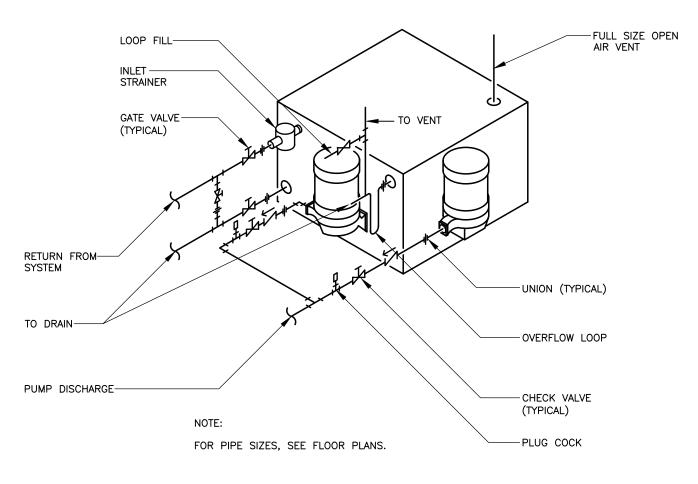
-STRUCTURAL BEAM



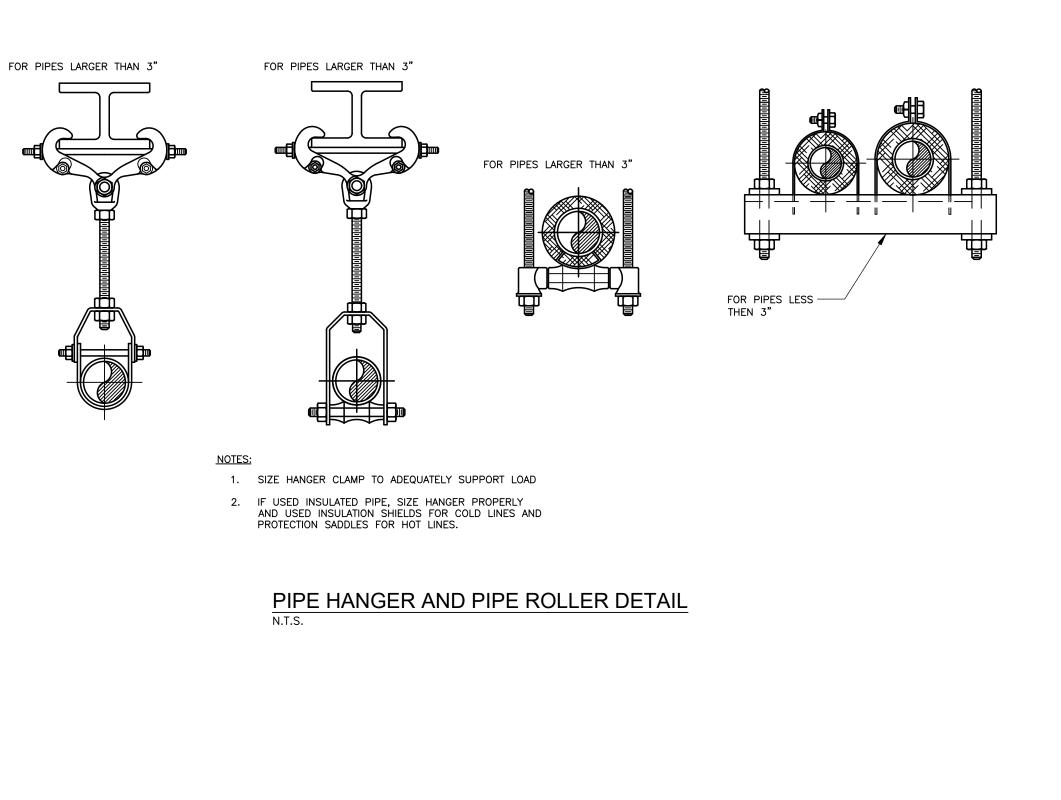


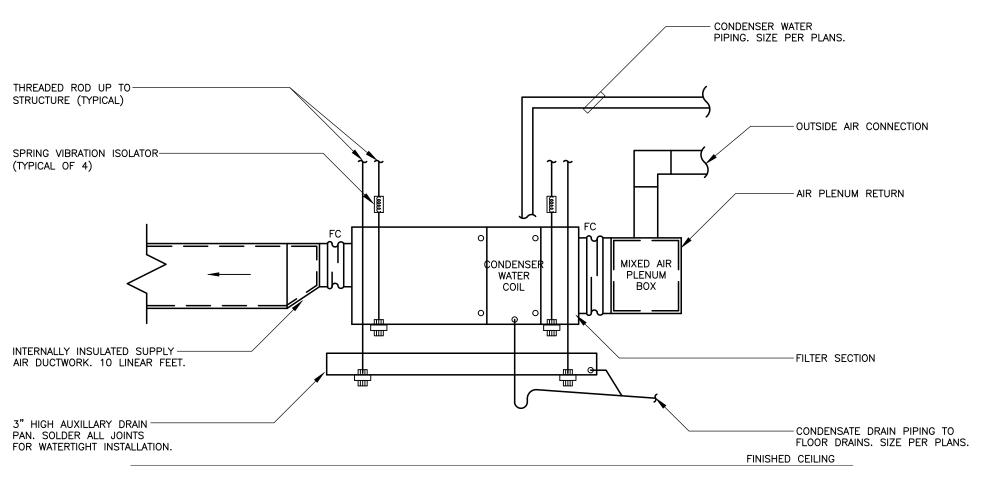
FILTER SECTION FAN SECTION INLINE FAN DETAIL -



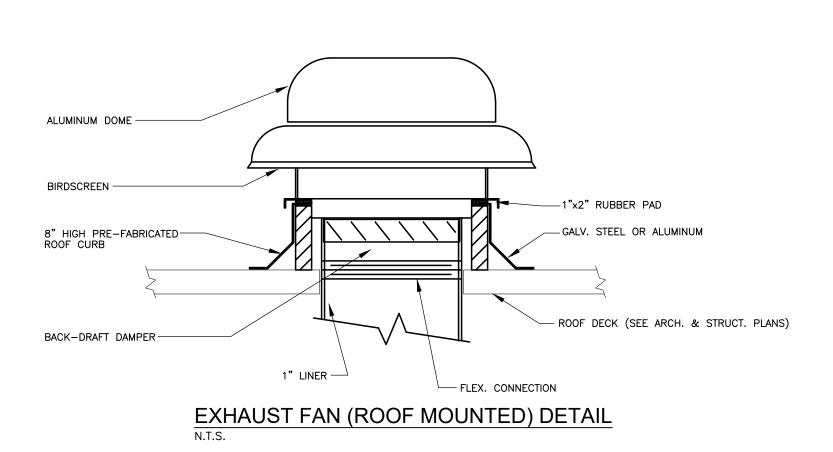


CONDENSATE UNIT PIPING DETAIL N.T.S.

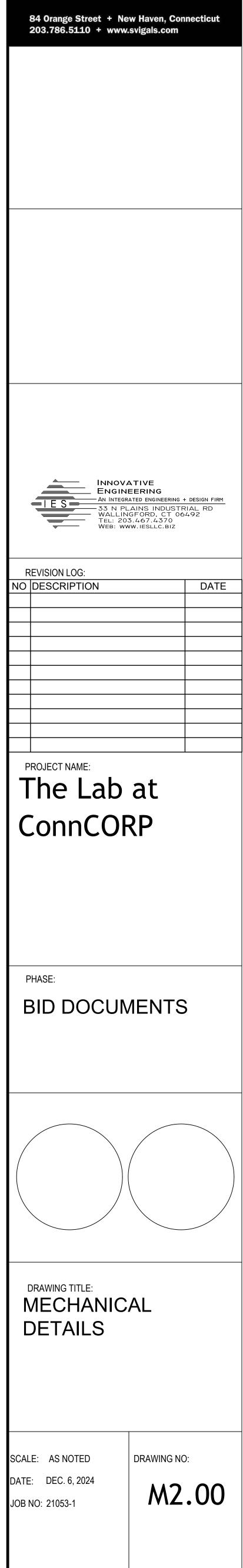




HORIZONTAL MOUNTED HEAT PUMP UNIT DETAIL N.T.S



G



SVIGALS + PARTNERS

	WATER SOURCE HEAT PUMP UNIT SCHEDULE (ALTERNATE #1)																															
		GENERAL	DATA					FAN DATA					HEATING	DATA (DATA E	BASED ON FU	L LOAD)						CLG DATA	A (DATA BASE	D ON FULL LO	AD UON)				EI INCLUE	LECTRICAL (NC DING ELECTRIC)T HEAT)	
SYMBOL	MANUFACTURER MODEL NUMBER	TYPE	SYSTEM SERVED	DIMENSIONS (IN) (W-D-H)	OPERATING WEIGHT (LB)		FLOW FULL LOAD CFM	ESP. IN W.G.	SPEED SETTING	FAN MOTOR HP	HTG CAP PART LOAD MBH	HTG CAP FULL LOAD MBH	HEAT EXTRACTION MBH	HE GENERATOR MBH	POWER KW	FLOW GPM	EWT/LWT F	WPD FT	TOTAL CLG PART LOAD MBH	SENS CLG PART LOAD MBH	TOTAL CLG FULL LOAD MBH	SENS CLG FULL LOAD MBH	HEAT REJECTION MBH	HW GENERATOR MBH	POWER KW	FLOW GPM	EWT/LWT F	WPD FT	GENERAL V/HZ/PH	MIN CIRC AMPS	MAX FUSE SIZE	NOTES
HP-G05	CARRIER 50PCH030	HPHP	G05	20.1-43.1-18.3	190	-	1000	.15	5 HI	.4	-	34.5	_	-	2.2	7.0	-/62.1	12.7	-	-	29.1	21.2	34.2	-	1.7	7	-/94.8	12.7	208–1	19		1,2,3,4,5,6
HP-G06	CARRIER 50PCH036	HPHP	G06	20.1-47.1-21.0	226	-	1200	.43	5 MED	.4	-	41.4	_	-	2.31	9.0	-/62.1	12.5	-	-	37.6	29.1	44.4	_	1.7	9	-/94.8	12.5	208–1	19		1,2,3,4,5,6
HP-G07	CARRIER 50PCH036	HPHP	G07	20.1-47.1-21.0	226	-	1200	.43	5 MED	.4	_	41.4	_	-	2.31	9.0	-/62.1	12.5	-	-	37.6	29.1	44.4	-	1.7	9	-/94.8	12.5	208–1	19		1,2,3,4,5,6
HP-G08	CARRIER 50PCH036	HPHP	G08	20.1-47.1-21.0	226	-	1200	.43	5 MED	.4	_	41.4	_	_	2.31	9.0	-/62.1	12.5	-	-	37.6	29.1	44.4	_	1.7	9	-/94.8	12.5	208-1	19		1,2,3,4,5,6
HP-G09	CARRIER 50PCH036	HPHP	G09	20.1-47.1-21.0	226	-	1200	.43	5 MED	.4	_	41.4	_	_	2.31	9.0	-/62.1	12.5	-	_	37.6	29.1	44.4	_	1.7	9	-/94.8	12.5	208-1	19		1,2,3,4,5,6
HP-G10	CARRIER 50PCH015N	VPHP	G10	20.1-41.3-17.0			400																									
HP-302	CARRIER 50PCH030	HPHP	302	20.1-43.1-18.3	190	-	1000	.15	5 HI	.4	-	34.5	_	_	2.2	7.0	-/62.1	12.7	-	_	29.1	21.2	34.2	_	1.7	7	-/94.8	12.7	208–1	19		1,2,3,4,5,6
HP-303	CARRIER 50PCH030	HPHP	303	20.1-43.1-18.3	190	-	1000	.15	5 HI	.4	-	34.5	_	_	2.2	7.0	-/62.1	12.7	-	_	29.1	21.2	34.2	_	1.7	7	-/94.8	12.7	208–1	19		1,2,3,4,5,6
HP-304	CARRIER 50PCH030	HPHP	304	20.1-43.1-18.3	190	-	1000	.15	5 HI	.4	-	34.5	-	_	2.2	7.0	-/62.1	12.7	-	-	29.1	21.2	34.2	_	1.7	7	-/94.8	12.7	208–1	19		1,2,3,4,5,6
HP-306	CARRIER 50PCH036	HPHP	307	20.1-47.1-21.0	226	-	1200	.43	5 MED	.4	-	41.4	-	_	2.31	9.0	-/62.1	12.5	-	_	37.6	29.1	44.4	-	1.7	9	-/94.8	12.5	208–1	19		1,2,3,4,5,6
HP-307	CARRIER 50PCH036	HPHP	307	20.1-47.1-21.0	226	-	1200	.43	5 MED	.4	-	41.4	-	-	2.31	9.0	-/62.1	12.5	-	_	37.6	29.1	44.4	-	1.7	9	-/94.8	12.5	208–1	19		1,2,3,4,5,6
HP-308	CARRIER 50PCH036	HPHP	308	20.1-47.1-21.0	226	-	1200	.43	5 MED	.4	-	41.4	-	-	2.31	9.0	-/62.1	12.5	-	_	37.6	29.1	44.4	_	1.7	9	-/94.8	12.5	208-1	19		1,2,3,4,5,6
HP-309	CARRIER 50PCH036	HPHP	309	20.1-47.1-21.0	226	-	1200	.43	5 MED	.4	-	41.4	_	_	2.31	9.0	-/62.1	12.5	-	_	37.6	29.1	44.4	_	1.7	9	-/94.8	12.5	208-1	19		1,2,3,4,5,6
HP-310	CARRIER 50PCH015N	VPHP	310	20.1-41.3-17.0			400																									
HP-314	CARRIER 50PCH018	HPHP	314	20.1-43.1-17.0	174	-	600	.27	3 НІ	.25	-	22.9	_	_	1.8	5.0	-/62.1	13.4	-	-	19.2	16.0	19.0	_	1.5	5.0	-/94.8	13.4	208-1	20		1,2,3,4,5,6
HP-310	CARRIER 50PCH015N	VPHP	310	20.1-41.3-17.0			400																									

TYPES: HPHP: HORIZONTAL PACKAGE HEAT PUMP VPHP: VERTICAL PACKAGE HEAT PUMP SPLIT: SYSTEM HEAT PUMP W–W: WATER TO WATER HEAT PUMP

NOTES: 1. PROVIDE WITH FLEXIBLE HOSE KIT.

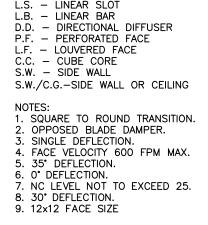
PROVIDE WITH FLEXIBLE HOSE KIT.
 PROVIDE WITH SOUND PACKAGE (3/4" FIBERGLASS INSULATION ON ENTIRE UNIT AS WELL AS HEAVY DAMPENING MATERIAL ON BOTTOM).
 PROVIDE AUXILIARY OVER FLOW SWITCH.
 PROVIDE STARTER. REFER TO SEQUENCE OF OPERATIONS, COORDINATE STARTER TYPE AS REQUIRED.
 PROVIDE HOT GAS BYPASS.
 PROVIDE WITH AUTO CHANGEOVER THERMOSTAT WITH NIGHT SETBACK AND OFF FUNCTION.

FAN	SCHEDUL	Е

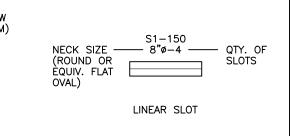
	FAN SCHEDULE														
SYMBOL	MANUFACTURER MODEL NUMBER	LOCATION	SERVING	TYPE	AIR FLOW CFM	ESP IN. WS.	FAN RPM	DRIVE	CONTROL	BHP (W)	HP (W)	ELECTRICAL V—PH—RPM	SONES (LWA)	NOTES	
EF-1	LOREN COOK GN-144	TOILET G12	GARDEN LEVEL TOILET ROOMS	INLINE	100	0.375"	1100	DIRECT		0.14	1/6	120-1-1725	3.2	1,2,3	
EF-2	LOREN COOK GN-144	TOILET 312	THIRD FLOOR TOILET ROOMS	INLINE	100	0.375"	1100	DIRECT		0.14	1/6	120-1-1725	3.2	1,2,3	

NOTES: 1. PROVIDE FACTORY HANGER AND ISOLATOR KIT. 2. PROVIDE INTEGRAL SELF-ACTING BACKDRAFT DAMPER AT EXHAUST OUTLET. 3. PROVIDE WITH FACTORY WALL CAP (LOREN COOK WCG-2)

	GRILLE,	DIFFU	SER AN	D REGI	STER S	SCHEDU	JLE	
SYMPOL	MANUFACTURER	DUTY	TYPE	BORDER		CONSTRUCTION	I	NOTES
SYMBOL	MODEL NUMBER	DUIT	TTPE	TYPE	OBD	FRAME	BLADES	NOTES
S1	TITUS TDCA—AA	SUPPLY	D.D.	-	ALUM.	ALUM.	ALUM.	2,4,7
S2	TITUS S301FL	SUPPLY	L.F.	_	ALUM.	ALUM.	ALUM.	2,4,7
S3	TITUS FL—30	SUPPLY	L.S.	_	ALUM.	ALUM.	ALUM.	2,4,7
S4	TITUS 250–AA	SUPPLY	S.W.	_	ALUM.	ALUM.	ALUM.	2,4,7
R1	TITUS 350ZRL	RETURN	S.W.	_	ALUM.	ALUM.	ALUM.	4,5,7
E1	TITUS 350ZRL	EXHAUST	S.W	-	ALUM.	ALUM.	ALUM.	4,5,7
E2	TITUS 350ZRL	EXHAUST	C.G	_	ALUM.	ALUM.	ALUM.	4,5,7
TYPES: L.S. – LINEAR								



DESIGNATIONS: SYMBOL FLOW (CFM) TYPICAL RDG



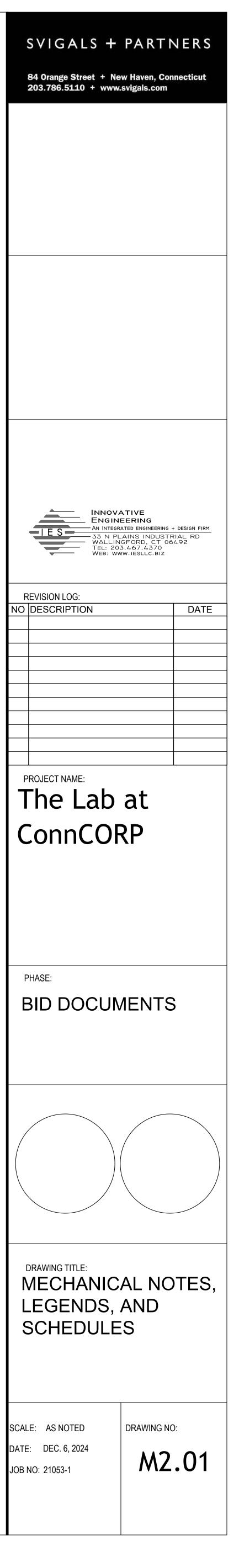
IOTES
2,4,7
2,4,7
2,4,7
2,4,7
4,5,7
4,5,7
4,5,7
QTY. OF GLOTS

	ABBREVIATIONS
AFF	ABOVE FINISHED FLOOR
AHU	AIR HANDLING UNIT
AMB	AMBIENT
AMP	AMPERE (AMP, AMPS)
BAL	BALANCE
BTU CAP	BRITISH THERMAL UNIT CAPACITY
CAP	CUBIC FEET PER MINUTE
CHWS	CHILLED WATER SUPPLY
CHWR	CHILLED WATER RETURN
CLG	COOLING
CU	CONDENSING UNIT
EAT EF	ENTERING AIR TEMPERATURE EXHAUST FAN
ESP	EXTERNAL STATIC PRESSURE
ET	EXPANSION TANK
EWT	ENTERING WATER TEMPERATURE
EXH	EXHAUST
F	DEGREES FAHRENHEIT
	FLEXIBLE CONNECTION
FD FPM	FIRE DAMPER FEET PER MINUTE
T	FEET
TR	FIN TUBE RADIATION
GPH	GALLONS PER HOUR
PM	GALLONS PER MINUTE
I-1	HUMIDIFIER
IWC IP	HOT WATER COIL HORSE POWER
۱۲ HTR	HEATING RETURN (HOT WATER)
ITS	HEATING SUPPLY (HOT WATER)
ITG	HEATING
Ηz	FREQUENCY
N.	INCH
N. WG _AT	INCHES WATER GAUGE LEAVING AIR TEMPERATURE
_BS	POUNDS
_BS/HR	POUNDS PER HOUR
WT	LEAVING WATER TEMPERATURE
ИBH	BTU PER HOUR (THOUSAND)
N.T.S.	NOT TO SCALE
).A.	OUTSIDE AIR OPEN END DUCT
DED P-1	PUMP
PD	PRESSURE DROP
ΡĤ	PHASE
PSI	POUNDS PER SQUARE INCH
RDG	REGISTER DIFFUSER GRILLE
RET	
rh RPM	RELATIVE HUMIDITY ROTATIONS PER MINUTE
SP-1	SUMP PUMP
SQ.FT.	SQUARE FEET
SUP	SUPPLY
ſ&P	TEMPERATURE & PRESSURE RELIEF VALVE
ΥP	
JH JON	UNIT HEATER UNLESS OTHERWISE NOTED
/D	VOLUME DAMPER
/IF	VERIFY IN FIELD
VB	WET BULB
٧P	WORKING PRESSURE
ZC	ZONE CONTROLLER
V	ZONE VALVE

	MECHANICAL GENERAL NOTES

- 1. THESE GENERAL NOTES ARE APPLICABLE TO ALL MECHANICAL DRAWINGS. DRAWINGS ARE DIAGRAMMATIC AND SHOW GENERAL INTENT OF WORK. SEE DETAILS, SCHEDULES AND SPECIFICATIONS FOR ADDITIONAL INFORMATION.
- MECHANICAL CONTRACTOR MUST REVIEW DRAWINGS OF THE OTHER TRADES AS PART OF THIS CONTRACT FOR ADDITIONAL WORK REQUIRED AND OR COORDINATION OF HIS WORK FOR OPERATIONS OR CONNECTIONS TO OTHER SYSTEMS.

ME	CHANICAL LEGEND
	DIFFUSER/GRILLE – SUPPLY
	GRILLE/REGISTER - RETURN
	GRILLE/REGISTER - EXHAUST
\bigcirc	ROUND DUCT UP
\bigcirc	ROUND DUCT DN
	SIDEWALL GRILLE/REGISTER – SUPPLY/RETURN/EXHAUST
	LINEAR SLOT DIFFUSER/BAR GRILLE – SUPPLY
>	AIR FLOW DIRECTION INDICATOR - SUPPLY
∕►	AIR FLOW DIRECTION INDICATOR - RETURN
Σ	DUCT RISER - SUPPLY/COMBUSTION AIR
\sum	DUCT DROP - SUPPLY/COMBUSTION AIR
λ	DUCT RISER – RETURN/EXHAUST
	DUCT DROP – RETURN/EXHAUST
 [8]	EXHAUST FAN
	DUCTLESS SPLIT 4–WAY CASSETTE
Ť	THERMOSTAT
	VOLUME DAMPER
	MOTORIZED DAMPER
D	REDUCER
нтs	HOT WATER SUPPLY - HEATING
— — — HTR— — —	HOT WATER RETURN – HEATING
CHWS	CHILLED WATER SUPPLY
— — — CHWR— — —	CHILLED WATER RETURN
	REFRIGERANT LIQUID LINE
— — —RSL— — —	REFRIGERANT SUCTION LINE
CD	CONDENSATE WASTE
F0S	FUEL OIL SUPPLY
— — — FOR— — —	FUEL OIL RETURN
GG	GAS (NATURAL OR LPG)
A	COMPRESSED AIR
	DIRECTION OF FLOW
G	PIPE DOWN
÷	PIPE DROP
o	PIPE RISE
	PIPE ANCHOR
	PIPE GUIDE or SLEEVE
	PIPE EXPANSION FITTING (AT BLDG. EXP.JOINTS)
E	PLUGGED OR CAPPED PIPE
//////	EXISTING TO BE REMOVED
•	CONNECT TO EXISTING
L L	TEMPERATURE GAUGE
+ ₽	PRESSURE GAUGE
F OR TJ	STRAINER – 'Y' TYPE
	UNION
"'	BALANCING VALVE
	BALL VALVE
, Zi ₽	CHECK VALVE
×	3-WAY VALVE (MOTORIZED)
Ŕ	SOLENOID VALVE
₹	GAS VALVE (BALL OR PLUG)
μ Τ	HOSE BIBB (H.B.)
⊗	GAS PRESSURE REGULATOR
R	TEMPERATURE & PRESSURE RELIEF VALVE (T&P)
\bigcirc	CIRCULATOR PUMP
<u> </u>	



<u>GENERAL</u>

<u>SCOPE</u> THE GENERAL SCOPE OF THE HVAC WORK IS TO REMOVE EXISTING SYSTEMS. MODIFY THE EXISTING SYSTEMS, AND PROVIDE NEW SYSTEMS AS INDICATED ON THESE DOCUMENTS THE WORK TO BE DONE UNDER THIS DIVISION OF THE SPECIFICATIONS INCLUDE TH FURNISHING OF ALL EQUIPMENT, SUPPLIES, LABOR, SUPERVISION AND ALL MATERIALS NOT SPECIFICALLY MENTIONED BUT NECESSARY OR REQUIRED TO PROVIDE COMPLETE AND FULLY OPERATIONAL HVAC SYSTEMS. IT IS THE INTENTION OF THE SPECIFICATIONS AND DRAWINGS TO CALL FOR FINISHED WORK, TESTED AND READY FOR OPERATION. IT IS THE INTENT THAT ALL MECHANICAL WORK AND MATERIALS NECESSARY TO COMPLETE THE ENTIRE PROJECT IN ACCORDANCE WITH THE CONTRACT PLANS AND SPECIFICATIONS

MATERIALS NECESSARY TO FULFILL THIS INTENT SHALL BE SUPPLIED UNDER THE MECHANICAL SPECIFICATIONS WITHOUT ADDITIONAL COST TO THE OWNER. **DEFINITIONS**

OR SPECIFIED OTHERWISE. <u>'WORK'</u> - LABOR, MATERIALS, EQUIPMENT, APPARATUS, CONTROLS, ACCESSORIES AND ALL OTHER ITEMS CUSTOMARILY FURNISHED AND/OR REQUIRED FOR PROPER AND COMPLETE

INSTALLATION OF WORK 'EXPOSED' - NOT INSTALLED UNDERGROUND OR 'CONCEALED' AS DEFINED ABOVE. <u>'INDICATE' OR 'SHOWN'</u> – AS INDICATED OR SHOWN ON DRAWINGS OR SPECIFIED WITH SPECIFICATIONS.

<u>'PIPING'</u> - PIPE, FITTINGS, FLANGES, VALVES, CONTROLS, HANGLING, HAND, STRATE, INSULATION AND ITEMS CUSTOMARILY OR REQUIRED IN CONNECTION WITH OR RELATING TO SUCH PIPING. <u>'SUPPLY'</u> – TO PURCHASE, PRODUCE, ACQUIRE AND DELIVER COMPLETE WITH ALL RELATED

<u>'INSTALL'</u> – TO ERECT, MOUNT AND CONNECT UP COMPLETE WITH ALL RELATED ACCESSORIES. 'NOTED' - AS INDICATED ON DRAWINGS AND/OR SPECIFIED. CODES, RULES, PERMITS AND FEES

THIS CONTRACTOR SHALL GIVE ALL NECESSARY NOTICES OBTAIN ALL PERMITS AND PAY ALL STATE AND LOCAL TAXES, FEES AND OTHER COSTS IN CONNECTION WITH HIS WORK; TILE ALL NECESSARY PLANS, PREPARE ALL DOCUMENTS AND OBTAIN ALL NECESSARY APPROVALS OF ALL STATE AND LOCAL DEPARTMENTS HAVING JURISDICTION; OBTAIN ALL REQUIRED CERTIFICATES OF INSPECTION FOR HIS WORK AND DELIVERY OF SAME TO THE OWNER BEFORE REQUEST FOR ACCEPTANCE AND FINAL PAYMENT FOR THE WORK. THIS CONTRACTOR SHALL INCLUDE IN THE WORK, WITHOUT EXTRA COST TO THE OWNER, ANY LABOR, MATERIALS, SERVICES, APPARATUS, DRAWINGS (IN ADDITION TO CONTRACT

DRAWINGS AND DOCUMENTS), IN ORDER TO COMPLY WITH ALL APPLICABLE LAWS, ORDINANCES, RULES AND REGULATIONS WHETHER OR NOT SHOWN ON THE DRAWINGS AND/OR SPECIFIED. THIS CONTRACTOR SHALL PERFORM AND FILE ALL TESTS IN ACCORDANCE WITH THE CURRENT REGULATIONS OF THE STATE AND LOCAL AUTHORITIES. HE SHALL FURNISH AND INSTALL SIGNS REQUIRED BY THE STATE AND LOCAL AUTHORITIES.

ALL MATERIALS FURNISHED AND ALL WORK INSTALLED SHALL COMPLY WITH THE RULES AND RECOMMENDATIONS OF THE NATIONAL BOARD OF FIRE UNDERWRITERS, WITH AL REQUIREMENTS OF LOCAL UTILITIES COMPANIES, WITH THE RECOMMENDATIONS OF THE FIRE INSURANCE RATING ORGANIZATION HAVING JURISDICTION. CODES, REGULATIONS AND STANDARDS

ALL MECHANICAL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE FOLLOWING APPROVED CODES, REGULATIONS AND STANDARDS: IBC - INTERNATIONAL BUILDING CODE, 2021 EDITION, AS AMENDED BY THE STATE OF CONNECTICUT 2022 AMENDMENTS. IMC - INTERNATIONAL MECHANICAL CODE, 2021 EDITION. WITH 2022 CONNECTICUT

AMENDMENTS. IFC - INTERNATIONAL FIRE CODE, 2021 EDITION, AS AMENDED BY THE STATE OF CONNECTICUT 2022 AMENDMENTS. 2022 CONNECTICUT STATE FIRE SAFETY CODE

STATE DEMOLITION CODE

LOCAL BUILDING CODE NFPA – NATIONAL FIRE PROTECTION CODE NFPA 70 - NATIONAL ELECTRICAL CODE, 2020 EDITION, AS AMENDED BY THE STATE OF CONNECTICUT 2022 AMENDMENTS. NFPA 72 - NATIONAL FIRE ALARM CODE, 2019 EDITION NFPA 99 - HEALTH CARE FACILITIES CODE, 2021 EDITION NFPA 101 - LIFE SAFETY CODE, 2021 EDITION, AS AMENDED BY THE STATE OF CONNECTICUT 2022 AMENDMENTS.

IECC - INTERNATIONAL ENERGY CONSERVATION CODE, 2021, AS AMENDED BY THE STATE OF CONNECTICUT 2022 AMENDMENTS. ICC/ANSI A117.1, 2017, ACCESSIBLE AND USABLE BUILDINGS AND FACILITIES, AS AMENDED BY THE STATE OF CONNECTICUT 2018 AMENDMENTS. ANSI – AMERICAN NATIONAL STANDARDS INSTITUTE

ASTM - AMERICAN SOCIETY FOR TESTING AND MATERIALS OSHA - OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION U.I. - UNDERWRITERS LABORATORIES EPA - ENVIRONMENTAL PROTECTION AGENCY

COMPLY WITH REQUIREMENTS OF LOCAL AUTHORITY HAVING JURISDICTION. **INSURANCE** THE MECHANICAL CONTRACTOR SHALL FURNISH STATUTORY COMPENSATION INSURANCE CERTIFICATES FOR PERSONAL AND PROPERTY DAMAGE DISABILITY/LIABILITY AS REQUIRED BY THE OWNER AND/OR AS HEREINBEFORE DESCRIBED.

GUARANTEE AND SERVICE THE CONTRACTOR SHALL GUARANTEE ALL MATERIALS AND WORKMANSHIP FOR A PERIOD OF

ONE YEAR FROM THE DATE OF ACCEPTANCE OF THE INSTALLATION. IN ADDITION, THE CONTRACTOR SHALL PROVIDE, FREE OF CHARGE, ONE YEAR'S MAINTENANCE GUARANTEE ON MAINTAINED SERVICE AND ADJUSTMENT OF ALL EQUIPMENT IN THIS CONTRACT. ALL COMPRESSORS TO HAVE (5) FIVE YEAR EXTENDED WARRANTEES. DRAWINGS AND INTENT

DRAWINGS ARE INTENDED AS WORKING DRAWINGS FOR GENERAL LAYOUT OF THE VARIOUS HVAC SYSTEMS. HOWEVER, LAYOUT OF EQUIPMENT, ACCESSORIES, SPECIALTIES, DUCTWORK, AND PIPING SYSTEMS ARE DIAGRAMMATIC UNLESS SPECIFICALLY DIMENSIONED, AND DO NOT NECESSARILY INDICATE EVERY REQUIRED PIPE, VALVE, FITTINGS, TRAP, ELBOW, TRANSITION, OFFSETS, OR SIMILAR ITEMS REQUIRED FOR A COMPLETE INSTALLATION. ALL EXISTING CONDITIONS ARE NOT INDICATED ON THE DOCUMENTS AND THOSE SHOWN ARE APPROXIMATIONS. THE CONTRACTOR IS TO VERIFY, IN THE FIELD, ALL EXISTING CONDITIONS. EXAMINATION OF PREMISES - SPECIAL NOTE: NO CONSIDERATION OR ALLOWANCE WILL BE

GRANTED FOR FAILURE TO VISIT SITE, OR ANY ALLEGED MISUNDERSTANDING OF MATERIAL TO BE FURNISHED, OR WORK TO BE DONE; IT BEING THAT TENDER OF PROPOSAL INDICATED WITH ITS AGREEMENT TO ITEMS AND CONDITIONS REFERRED TO HEREIN OR INDICATED ON AFOREMENTIONED DRAWINGS. MEASUREMENTS

ALL MEASUREMENTS TAKEN AT THE BUILDING SHALL TAKE PRECEDENCE OVER SCALE DIMENSIONS. EVERY PART OF THE PLANS SHALL BE FITTED TO THE ACTUAL CONDITIONS AT THE BUILDING. IF IN CONFLICT WITH SCALE DIMENSIONS, CONTACT ARCHITECT FOR CLARIFICATION

TEMPORARY SERVICES THE HVAC CONTRACTOR IS TO COORDINATE WITH THE GENERAL CONTRACTOR, PRIOR TO PERFORMING WORK REQUIRING INTERRUPTION OF EXISTING SERVICES, THE CONTRACTOR SHALL SECURE FROM THE OWNER, APPROVAL OF THE PROPOSED OPERATION. WORK SHALL BE ARRANGED FOR CONTINUOUS PERFORMANCE WHENEVER POSSIBLE. THE MECHANICAL CONTRACTOR SHALL PROVIDE TEMPORARY SERVICES AND/OR CONNECTIONS WHERE REQUIRED AND/OR SCHEDULE AND PERFORM OVERTIME WORK FOR ANY OPERATION WHICH REQUIRED SHUTDOWN OF THE FACILITIES AT NO ADDITIONAL COST TO THE OWNER. THE AREA OF CONSTRUCTION AND/OR ADJACENT SPACES MAY BE OCCUPIED DURING THE CONSTRUCTION PERIOD. THE CONTRACTOR IS TO TAKE ALL NECESSARY MEASURES AND

PROVIDE ALL MATERIALS TO ENSURE A SAFE ENVIRONMENT FOR THE FACILITY'S OCCUPANTS

WHETHER SPECIFICALLY MENTIONED HERE OR NOT, SHALL BE FURNISHED. ALL WORK AND

<u>'FURNISH' OR 'PROVIDE'</u> – TO FURNISH, ERECT, INSTALL AND CONNECT UP COMPLETE AND READY FOR OPERATION PARTICULAR WORK REFERRED TO, UNLESS SPECIFICALLY INDICATED

CONTINUITY OF EXISTING SYSTEMS

WHEREVER AN EXISTING SYSTEM IS REMOVED, PARTIALLY REMOVED, OR MODIFIED THE REMAINING SYSTEM IS TO FUNCTION FULLY AS BEFORE. MAINTAIN CONTINUITY OF THE EXISTING AIR SYSTEMS, HYDRONIC SYSTEMS, AND CONTROL SYSTEMS TO THE AREAS NOT AFFECTED BY THIS ALTERATION. SCAFFOLDING, RIGGING AND HOISTING

UNLESS OTHERWISE SPECIFIED, CONTRACTOR SHALL FURNISH ALL SCAFFOLDING, RIGGING, HOISTING AND SERVICES NECESSARY FOR ERECTION AND DELIVERY INTO THE PREMISES OF ANY EQUIPMENT AND APPARATUS FURNISHED. THE CONTRACTOR SHALL REMOVE SAME FROM PREMISES WHEN NO LONGER REQUIRED.

HOUSEKEEPING THIS CONTRACTOR SHALL BE RESPONSIBLE FOR KEEPING STOCK OF MATERIALS AND

EQUIPMENT STORED ON PREMISES, AT LOCATIONS DESIGNATED FOR SUCH USE, IN A NEAT AND ORDERLY MANNER THIS CONTRACTOR SHALL AT ALL TIMES, KEEP THE PREMISES FREE FROM ACCUMULATION OF WASTE MATERIAL OR RUBBISH CAUSED BY HIS EMPLOYEES AT WORK. HE SHALL

REMOVE HIS RUBBISH AND SURPLUS MATERIALS FROM THE JOB SITE AT THE END OF EACH WORK DAY AND SHALL LEAVE THE PREMISES AND HIS WORK IN A CLEAN AND ORDERLY CONDITION.

ALL MATERIAL SCHEDULED FOR REMOVAL IS TO BE DISPOSED OF IN A MANNER MEETING ALL FEDERAL, STATE, AND LOCAL REGULATIONS.

PROTECTION OF MATERIALS AND EQUIPMENTS CLOSE PIPE OPENINGS WITH CAPS OR PLUGS DURING INSTALLATION.

PROVIDE TEMPORARY CLOSURES ON OPEN ENDED DUCTS DURING CONSTRUCTION PERIOD. TIGHTLY COVER AND PROTECT FIXTURES AND EQUIPMENT AGAINST DIRT, WATER AND CHEMICAL OR MECHANICAL INJURY.

AT COMPLETION OF ALL WORK, FIXTURES, EXPOSED MATERIALS AND EQUIPMENT SHALL BE THOROUGHLY CLEANED WORK NOT INCLUDED

ALL ELECTRICAL WORK CUTTING AND PATCHING LINTELS AND STRUCTURAL FRAMING

ALL CONCRETE WORK ALL PAINTING THIS CONTRACTOR SHALL FURNISH THE GENERAL CONTRACTOR WITH THE SIZES AND

SHOP DRAWINGS

LOCATIONS OF CHASES AND OPENINGS WHICH OCCUR IN WALLS, PARTITIONS, FLOORS, ROOFS. ETC., REQUIRED FOR THE INSTALLATION OF THE WORK CALLED FOR UNDER THIS CONTRACT. THIS WORK WILL BE DONE BY THE GENERAL CONTRACTOR, EXCEPT CUTTING REQUIRED FOR THE INSTALLATION OF HANGERS.

PRIOR TO DELIVERY TO THE JOB SITE, BUT SUFFICIENTLY IN ADVANCE OF REQUIREMENTS NECESSARY TO ALLOW ENGINEER AMPLE TIME FOR REVIEW, CONTRACTOR SHALL SUBMIT FOR APPROVAL, FIVE (5) COPIES OF EACH SHOP DRAWING.

INDICATE ON EACH SUBMISSION: . PROJECT NAME AND LOCATION

ARCHITECT AND ENGINEER ITEM IDENTIFICATION 4. APPROVAL STAMP OF PRIME CONTRACTOR

ALL DUCTWORK SHOP DRAWINGS AND COORDINATION DRAWINGS SHALL BE SUBMITTED ON 3/8 IN SCALE DRAWINGS AND SHALL INCLUDE LOCATIONS AND SIZES OF EXISTING FOUIPMENT ALONG WITH NEW WORK. DRAWINGS SHALL INDICATE LOCATIONS OF HANGERS, SUPPORTS, EXPANSION JOINTS, GUIDES, ANCHORS AND ANCHOR LOADS. COORDINATION DRAWINGS SHALL INDICATE ALL MEP EQUIPMENT, DUCTS AND PIPES AND

PERTINENT ARCHITECTURAL ITEMS. MOUNTING HEIGHTS SHALL BE NOTED. SUBMIT SHOP DRAWINGS FOR THE FOLLOWING

1. DUCTWORK LAYOUT, SHEET METAL DETAILS/STANDARDS 2. COORDINATION DRAWINGS

<u>SUBMITTALS</u>

PRIOR TO DELIVERY TO THE JOB SITE, BUT SUFFICIENTLY IN ADVANCE OF REQUIREMENTS NECESSARY TO ALLOW ENGINEER AMPLE TIME FOR REVIEW, CONTRACTOR SHALL SUBMIT FOR APPROVAL, FIVE (5) COPIES OF EACH SHOP DRAWING. INDICATE ON EACH SUBMISSION:

1. PROJECT NAME AND LOCATION ARCHITECT AND ENGINEER . ITEM IDENTIFICATION

4. APPROVAL STAMP OF PRIME CONTRACTOR SUBMIT SUBMITTALS ON THE FOLLOWING:

1. PIPING MATERIAL PIPING SPECIALTIES PIPING INSULATIONS

4. DUCT MATERIALS DUCTWORK SPECIALTIES 6. DUCTWORK INSULATORS AIR OUTLETS (RGD)

8. HEATING EQUIPMEN 9. AIR CONDITIONING EQUIPMENT 11. CONTROLS HYDRONIC SYSTEMS BALANCING REPORTS

13. AIR SYSTEMS BALANCING REPORTS EQUIPMENT DEVIATION

THE PLANS AND/OR SPECIFICATIONS INDICATE THE NAME, MODEL NUMBER OR TYPE OF EQUIPMENT OR MATERIALS SPECIFIED TO SET THE STANDARD OF THE EQUIPMENT FOR THE PROJECT. THE ENGINEER WILL ENTERTAIN THE USE OF OTHER MANUFACTURER'S EQUIPMENT OF LIKE FUNCTIONS AND EQUAL QUALITY. FINAL ACCEPTANCE OF SUBSTITUTES IS AT THE ENGINEER'S DISCRETION. SHOULD THE BIDDER DESIRE TO USE EQUIPMENT OR MATERIALS OR A MANUFACTURER OTHER THAN THOSE SPECIFIED OR SHOWN, HE SHALL ATTACH A RIDER TO THE BID FORM LISTING THE DEDUCTIONS AND/OR ADDITIONS TO HIS BASE BID, TOGETHER WITH THE MANUFACTURE'S NAME AND MODEL NUMBERS OF THE EQUIPMENT OR MATERIALS HE PROPOSED TO FURNISH AS 'SUBSTITUTES'. IF NO SUBSTITUTE INFORMATION IS FURNISHED, IT WILL BE EXPRESSLY UNDERSTOOD THAT ALL EQUIPMENT AND MATERIALS NAMED WILL BE FURNISHED IN FULL ACCORDANCE WITH THE PLANS AND/OR SPECIFICATIONS RECORD DRAWINGS

CONTRACTOR SHALL KEEP ACCURATE RECORD OF ALL DEVIATIONS IN WORK AS ACTUALLY INSTALLED FROM WORK INDICATED PAYING PARTICULAR ATTENTION TO DIMENSIONING OUTSIDE UNDERGROUND UTILITY LINES, THEIR OFFSETS AND VALVES. AT THE CLOSE-OUT OF THE PROJECT THE CONTRACTOR IS TO DELIVER TO THE OWNER TWO SETS OF "AS-BUILT" DRAWINGS COPIES OF ALL APPROVED SHOP DRAWINGS. OWNER'S INSTRUCTIONS AND SYSTEM OPERATION

THE CONTRACTOR IS TO INSTRUCT THE OWNER, OR HIS REPRESENTATIVE, ON THE OPERATION AND MAINTENANCE PROCEDURES FOR ALL OF THE INSTALLED SYSTEMS AND EQUIPMENT. IN ADDITION TO THE VERBAL INSTRUCTIONS, THESE INSTRUCTIONS SHALL BE WRITTEN IN LAYMAN'S LANGUAGE AND SHALL BE INSERTED IN VINYL-COVERED THREE-RING LOOSE LEAF BINDER. THIS INFORMATION IN BINDER SHALL BE FIRST SENT TO AND APPROVED BY THE ARCHITECT/ENGINEER BEFORE TURNING OVER TO OWNER. INSTALLATIONS

<u>SLEEVES</u> PROVIDE NO. 22 GA. GALVANIZED IRON SLEEVES EXTENDED THROUGH CONSTRUCTION AT ALL PENETRATIONS THROUGH CEILINGS, WALLS AND PARTITIONS.

FOR INSULATED PIPING THE SLEEVE IS TO BE SIZED TO ALLOW INSULATION TO PASS THROUGH SLEEVE, PROVIDE 1/2 INCH SPACE BETWEEN PIPE AND/OR INSULATION AND

FIRE SEAL ALL SLEEVES IN ACCORDANCE WITH BUILDING CODE AND APPLICABLE SECTIONS OF THE NFPA. EXPANSION ANCHORS

SUSPEND HANGERS FROM EXPANSION ANCHORS IN SOLID CONCRETE SLABS SIMILAR TO HILTI HDI. PROVIDE HANGER IN PLACE WITH DOUBLE NUTS PROVIDE PROTECTION SHIELDS IN INSULATED PIPING. INSTALL HANGERS OVER INSULATION AND SHIELDS.

WHERE OVERHEAD CONSTRUCTION DOES NOT PERMIT FASTENING HANGER RODS IN REQUIRED LOCATIONS, PROVIDE ADDITIONAL STEEL FRAMING AS REQUIRED AND REVIEWED.

BUT SHALL BE SUPPORTED WITH PIPE HANGERS SUITABLE FOR THE SIZE OF PIPE AND PROPER STRENGTH AND QUALITY AT PROPER INTERVALS SO THAT THE PIPING CANNOT BE MOVED ACCIDENTALLY FROM THE INSTALLED POSITION AS FOLLOWS: AT CENTER OF CENTER SPACING PROVIDE CLEVIS HANGERS <u>(UNLESS OTHERWISE NOTED)</u> 1/2 INCH PIPE OR TUBING 6 FFFT 8 FEET

HANGERS AND SUPPORTING

3/4 INCH OR 1 INCH PIPE OR TUBING 1-1/4 INCH OR LARGER (HORIZONTAL) 10 FFFT EVERY FLOOR LEVEL 1-1/4 INCH OR LARGER (VERTICAL)

DUCT HANGING AND SUPPORTING - DUCTWORK SHALL NOT BE SUPPORTED BY OTHER DUCTWORK OR PIPING, BUT SHALL BE SUPPORTED WITH HANGERS OF TYPE AND AT SPACING AS PER SMACNA STANDARDS. VIBRATION AND SEISMIC CONTROL

VIET OPERATION - ALL WORK SHALL OPERATE UNDER ALL CONDITIONS OF LOAD WITHOUT OR VIBRATION WHICH IS OBJECTIONABLE IN THE OPINION OF THE ENGINEER IN CASE OF MOVING MACHINERY, SOUND OR VIBRATION NOTICEABLE OUTSIDE OF ROOM IN WHICH IT IS INSTALLED. OR ANNOYING INSIDE ITS OWN ROOM. WILL BE CONSIDERED DBJECTIONABLE BY THE ENGINEER AND SHALL BE REMEDIED IN APPROVED MANNER BY THE CONTRACTOR AT HIS EXPENSE.

PROVIDE FLEXIBLE PIPE CONNECTIONS AT ALL PIPING CONNECTED TO MOVING EQUIPMENT. PROVIDE FLEXIBLE DUCT CONNECTIONS AT ALL DUCTWORK CONNECTED TO MOVING EQUIPMENT. FLEXIBLE CONNECTIONS SHALL BE 29 OZ. NEOPRENE COATED FIBERGLASS, & WIDE. BURNING PROPERTIES SHALL CONFORM TO NFPA 90A. FASTEN TO DUCTWORK PER MANUFACTURER'S RECOMMENDATIONS. FABRIC SHALL NOT BE STRESSED OTHER THAN BY AIR PRESSURE. ALLOW AT LEAST ONE INCH SLACK TO INSURE THAT NO VIBRATION IS TRANSMITTED

PROVIDE VIBRATION ISOLATION SPRINGS OR PADS AT MOUNTING AND SUPPORTS FOR ALL EQUIPMENT CAPABLE OF TRANSMITTING VIBRATIONS. SEISMIC RESTRAINTS

SEISMIC RESTRAINTS DESIGNED AND CONSTRUCTED FOR LATERAL FORCES IN ANY DIRECTION SHALL BE PROVIDED FOR ALL MECHANICAL EQUIPMENT IN ACCORDANCE WITH THE STATE BUILDING CODE.

SEISMIC RESTRAINTS SHALL NOT BE REQUIRED FOR THE FOLLOWING:

. PIPING IN BOILER AND MECHANICAL ROOMS LESS THAN 1-1/4 INCH INSIDE DIAMETER. ALL OTHER PIPING LESS THAN 2-1/2 INCH INSIDE DIAMETER. RECTANGULAR AIR-HANDLING DUCTS LESS THAN 6 SQUARE FEET IN CROSS-SECTIONAL 4. ROUND AIR-HANDLING DUCTS LESS THAN 28 INCHES IN DIAMETER.

5. PIPING SUSPENDED BY INDIVIDUAL HANGERS 12 INCHES OR LESS IN LENGTH FROM THE TOP OF THE PIPE TO THE BOTTOM OF THE SUPPORT FOR THE HANGER 6. DUCTS SUSPENDED BY HANGERS 12 INCHES OR LESS IN LENGTH FROM THE TOP OF THE DUCT TO THE BOTTOM OF THE SUPPORT FOR THE HANGER

SEISMIC RESTRAINT FOR DUCTWORK; PROVIDE REQUIRED BRACING MATERIAL. DUCTWORK SHALL BE SUPPORTED AND BRACED TO RESIST ALL DIRECTIONAL (TRANSVERSE ONGITUDINAL AND VERTICAL) FORCES EQUAL TO 10 PERCENT OF THE WEIGHT OF THE DUCT SYSTEM. **IDENTIFICATION**

ALL IDENTIFICATION LABELING IS TO COMPLY WITH ASME A13.1

ALL PIPING IS TO BE LABELED WITH INDICATIONS OF SERVICE AND DIRECTION OF FLOW. ALL DUCTWORK IS TO BE LABELED WITH INDICATIONS OF SERVICE, DIRECTION OF FLOW AND ASSOCIATED SYSTEM DESIGNATION.

ALL EQUIPMENT IS TO HAVE PERMANENT LABELS INDICATING EQUIPMENT DESIGNATION. PIPING INSTALLATION SIZES AND APPROXIMATE LOCATION OF PIPING SYSTEMS ARE SHOWN ON THE DRAWINGS.

CHECK CAREFULLY WITH THE ARCHITECTURAL DRAWINGS. DRAWINGS SHOWING WORK OF OTHER TRADES. AND EXISTING FIELD CONDITIONS TO MAKE SURE THAT THERE WILL BE NO CONFLICT BETWEEN THESE TRADES AND THE PIPING SYSTEMS. PIPES SHALL BE OFFSET AS REQUIRED TO CLEAR STRUCTURAL MEMBERS AND EXISTING FIELD CONDITIONS.

PIPING TO BE INSTALLED WITH PROPER PITCH TO LOW POINTS. PROVIDE DRAIN VALVES AT ALL LOW POINTS AND AIR VENTS AT ALL HIGH POINTS OF THE PIPING SYSTEM. INSTALL PIPING TO ALLOW FOR PIPE EXPANSION.

DUCT INSTALLATION SIZES AND APPROXIMATE LOCATION OF ALL DUCTS ARE SHOWN ON THE DRAWINGS. CHECK

CAREFULLY WITH THE ARCHITECTURAL DRAWINGS, DRAWINGS SHOWING WORK OF OTHER TRADES, AND EXISTING FIELD CONDITIONS TO MAKE SURE THAT THERE WILL BE NO CONFLICT BETWEEN THESE TRADES AND THE DUCTS. DUCTS SHALL BE OFFSET AS REQUIRED TO CLEAR STRUCTURAL MEMBERS AND EXISTING FIELD CONDITIONS; IF NECESSARY, THE DIMENSIONS OF THE DUCT MAY BE ALTERED PROVIDED THE CROSS-SECTIONAL AREA IS IN NO CASE REDUCED. FIELD QUALITY CONTROL

PERFORM THE FOLLOWING FIELD TESTS AND INSPECTIONS ACCORDING TO SMACNA'S "HVAC AIR DUCT LEAKAGE TEST MANUAL" AND PREPARE TEST REPORTS: DISASSEMBLE, REASSEMBLE AND SEAL SEGMENTS OF SYSTEMS TO ACCOMMODATE LEAKAGE TESTING AND FOR COMPLIANCE WITH TEST REQUIREMENTS.

CONDUCT TESTS AT STATIC PRESSURES EQUAL TO MAXIMUM DESIGN PRESSURE OF SYSTEM OR SECTION BEING TESTED. IF PRESSURE CLASSES ARE NOT INDICATED, TEST ENTIRE SYSTEM AT MAXIMUM SYSTEM DESIGN PRESSURE. DO NOT PRESSURIZE SYSTEMS ABOVE MAXIMUM DESIGN OPERATING PRESSURE. GIVE SEVEN DAYS ADVANCE NOTICE FOR TESTING.

MAXIMUM ALLOWABLE LEAKAGE: COMPLY WITH REQUIREMENTS FOR LEAKAGE CLASS 3 FOR ROUND AND FLAT-OVAL DUCTS, LEAKAGE CLASS 12 FOR RECTANGULAR DUCTS IN PRESSURE CLASSES LOWER THAN AND EQUAL TO 2-INCH WG (500 PA) (BOTH POSITIVE AND NEGATIVE PRESSURES), AND LEAKAGE CLASS 6 FOR PRESSURE CLASSES FROM 2-TO 10- WG (500 TO 2500 PA).

REMAKE LEAKING JOINTS AND RETEST UNTIL LEAKAGE IS EQUAL TO OR LESS THAN MAXIMUM ALLOWABLE. <u>MATERIALS</u>

DISSIMILAR METALS

WHENEVER DISSIMILAR PIPING MATERIALS ARE CONNECTED THE TWO SHALL BE SEPARATED WITH AN 'INSULATION' CONNECTION (DIELECTRIC) FITTING. PIPING

<u>STEAM & CONDENSATE RETURN PIPING</u>

CONDENSER WATER PIPING

STANDARD WEIGHT. SCHEDULE 40. OPEN HEARTH STEEL, NATIONAL OR EQUAL. FITTINGS FOR STEEL PIPE SHALL BE AS FOLLOWS: GENERALLY, BUTT WELDING FITTINGS OVER TWO INCHES SHALL BE USED AND EITHER SOCKET-WELD OR SCREWED FOR TWO INCHES AND UNDER. WELDING FITTINGS SHALL BE STANDARD FORGED STEEL WITH CHAMFERED ENDS. ALL BRANCHES SHALL BE WELDED WITH EITHER WELDOLETE OR TEES.

HOT WATER HEATING PIPING TYPE L COPPER TUBING WITH SWEAT FITTINGS WITH 95-5 SOLDER OR STANDARD WEIGHT, SCHEDULE 40, OPEN HEARTH STEEL, NATIONAL OR EQUAL. FITTINGS FOR STEEL PIPE SHALL BE AS FOLLOWS: GENERALLY, BUTT WELDING FITTINGS OVER TWO INCHES SHALL BE USED AND FITHER SOCKET-WELD OR SCREWED FOR TWO INCHES AND UNDER. WELDING FITTINGS SHALL BE STANDARD FORGED STEEL WITH CHAMFERED ENDS. ALL BRANCHES SHALL BE WELDED WITH EITHER WELDOLETE OR TEES, OR MATCH EXISTING MATERIALS.

CHILLED WATER PIPING TYPE L COPPER TUBING WITH SWEAT FITTINGS WITH 95-5 SOLDER OR STANDARD WEIGHT, SCHEDULE 40, OPEN HEARTH STEEL, NATIONAL OR EQUAL. FITTINGS FOR STEEL PIPE SHALL BE AS FOLLOWS: GENERALLY, BUTT WELDING FITTINGS OVER TWO INCHES SHALL BE AND EITHER SOCKET-WELD OR SCREWED FOR TWO INCHES AND UNDER. WELDING FITTINGS SHALL BE STANDARD FORGED STEEL WITH CHAMFERED ENDS. ALL BRANCHES SHALL BE WELDED WITH EITHER WELDOLETE OR TEES, OR MATCH EXISTING MATERIALS

TYPE L COPPER TUBING WITH SWEAT FITTINGS WITH 95-5 SOLDER OR PVC (EXCEPT IF LOCATED IN A SPACE USED AS AN AIR PLENUM) OR MATCH EXISTING MATERIALS.

PIPE HANGING AND SUPPORTING - PIPING SHALL NOT BE SUPPORTED BY OTHER PIPING,

CONDENSATION DRAIN PIPING TYPE DWV COPPER TUBING WITH DWV SWEAT FITTINGS OR PVC (EXCEPT IF LOCATED IN A

SPACE USED AS AN AIR PLENUM)

REFRIGERANT PIPING TYPE ACR SERVICE COPPER TUBING MEETING ASTM B280: HARD DRAWN (ANY SIZE) OR SOFT DRAWN (1-5/8" ID OR SMALLER), OR AS PER MANUFACTURER'S RECOMMENDATIONS.

PIPE INSULATION

THE FOLLOWING PIPING SYSTEMS ARE TO BE INSULATED: STEAM SUPPLY PIPING STEAM CONDENSATE RETURN PIPING WITHIN 10'-0" OF THE FLOOR

HEATING HOT WATER SUPPLY AND RETURN PIPING CHILLED WATER SUPPLY AND RETURN PIPING CONDENSATION DRAIN PIPING

REFRIGERANT SUCTION LINE PIPING

HOT WATER & STEAM HEATING AND CHILLED WATER PIPING INSULATION

INSULATE WITH RIGID PREFORMED FIBERGLASS WITH AP-T PLUS JACKET, SCHULLER MICRO-LOK OR EQUAL. INSULATION THICKNESS SHALL BE 1" THICK FOR BELOW 1 $\frac{1}{2}$ " OR SMALLER PIPING, 1-1/2" THICK FOR 2" TO 3" PIPING AND 2" THICK FOR PIPING 4" AND LARGER. PROVIDE ZESTON COVERS ON ALL FITTINGS. CONDENSATE DRAIN PIPING INSULATION

INSULATE WITH 1/2" THICK HEAVY DENSITY FIBERGLASS 25 ASJ WITH VAPOR BARRIER AND

LAP ADHESIVE JACKET. INSULATION ON FITTINGS SHALL BE FIBERGLASS WITH PRE-MOLDED JACKE REFRIGERANT PIPING INSULATION

INSULATE SUCTION LINE AND LIQUID WITH ARMAFLEX INSULATION. MINIMUM INSULATION

THICKNESS SHALL BE 1 VALVES AND SPECIALTIES

BALANCING FITTINGS

PROVIDE "B & G" CIRCUIT SETTER BALANCING FITTINGS ON ALL WATER SYSTEMS WHENEVER REQUIRED FOR BALANCING OF SYSTEMS HOT AND CHILLED WATER VALVES

MILWAUKEE #F-2885M (FLANGED) OS&Y TYPE VALVES TO BE IRON BODY. BRONZE

BALL TYPE VALVES TO BE JAMESBURY, CLINCHER, OR APOLLO GATE TYPE VALVES TO BE

MOUNTED OR (SCREWED), BRONZE, RISING STEM. CHECK VALVES TO BE CRANE/JENKINS

SHALL BE TRERICE UNIVERSAL ANGLE TYPE #L80732, SOLID LIQUID FILLED, 4 $\frac{1}{2}$ " DIAL

STEAM SPECIALTIES ALL STEAM TRAPS AND SPECIALTIES TO BE B & G OR SARCO.

SIZE. FURNISH WITH SEPARABLE SOCKET WITH 2" EXTENSION NECK.

<u>DUCTWORK</u>

VALVES.

THERMOMETERS

SHEET METAL DUCTWORK

FLEXIBLE DUCTWORK

ALL DUCTWORK SHALL BE CONSTRUCTED OF #1 QUALITY SHEETS OF GALVANIZED STEEI FREE OF CRACKS OR BLEMISHES. WHEN PITTSBURGING OR SNAP LOCKING A JOINT. GALVANIZED STEEL SHALL NOT BE CHIPPED OFF. ALL PARTS OF THE SHEET METAL DUCT SYSTEM SHALL BE OF THE GAGE, CONSTRUCTION, HANGING METHOD, AND INSTALLED IN STRICT ACCORDANCE WITH THE CURRENT EDITION OF THE SMACNA STANDARDS, INCLUDING DUCT LEAKAGE REQUIREMENTS.

FLEXIBLE DUCTS TO BE INSULATED TYPE; UL 181, CLASS 1, 2-PLY VINYL FILM SUPPORTED BY HELICALLY WOUND, SPRING-STEEL WIRE WITH FIBROUS-GLASS INSULATION

AND POLYETHYLENE VAPOR BARRIER FILM. THE LENGTH OF FLEXIBLE DUCT IS NOT TO EXCEED 12'-O". FLEXIBLE DUCT MAY ONLY BE USED ON THE SUPPLY AIR SIDE OF LOW PRESSURE DUCT SYSTEMS. MOISTURE LADEN AIR DUCTWORK

DUCTWORK WHICH CONVEYS AIR WITH A HIGH MOISTURE CONTENT, SUCH AS SHOWER EXHAUST AIR, SHALL BE CONSTRUCTED OF ALUMINUM SHEET MATERIAL MEETING SMACNA STANDARDS.

DUCT INSULATION

SOUND (ACOUSTIC) INSULATION PROVIDE INTERNAL SOUND INSULATION IN ALL DUCTS WITHIN 10'-0" OF THE DISCHARGE

OF AN AIR HANDLING UNIT AND WHERE INDICATED ON THE DRAWINGS. THE DUCTWORK SHALL BE LINED WITH JOHNS MANVILLE PERMACOTE LINACOUSTIC. THICKNESS, UNLESS SPECIFIED OTHERWISE, SHALL BE 1". LINER SHALL BE APPLIED TO DUCT IN STRICT ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS AND SMACNA GUIDELINES, LATEST EDITION. WHERE SOUND INSULATION IS INDICATED, DUCTWORK SIZES DENOTED ARE THE INSIDE DIMENSIONS AFTER THE INSULATION HAS BEEN INSTALLED. THERMAL INSULATION

COVER ALL CONCEALED UNLINED SUPPLY AIR AND OUTSIDE AIR DUCTWORK WITH FIBERGLASS DUCT WRAP HAVING A MIN R-6 FOUAL TO JOHNS MANVILLE R-SERIES

MICROLITE WITH F.R.G. VAPOR BARRIER. ALL SUPPLY DUCTS, LOCATED IN ATTIC SHALL BE INSULATED TO MINIMUM R-8. COVER ALL EXPOSED UNLINED SUPPLY AIR AND OUTSIDE AIR DUCTWORK WITH RIGID FIBERGLASS BOARD INSULATION HAVING MIN. R-6. PROVIDE ALL TAPE, MASTICS, SEALANTS, MOUNTING PINS, AND ETC. TO INSTALL INSULATION AS RECOMMENDED BY THE MANUFACTURER.

THERMAL INSULATION SCHEDULE

DUCT INSULATION - EXTERIOR DUCTWORK

INSULATE DUCTS IN COMPLIANCE WITH THE INTERNATIONAL ENERGY CONSERVATION CODE COMMERCIAL DUCTWORK SHALL BE INSULATED TO R-6 WHEN IN UNCONDITIONED SPACES AND R-8 WHEN LOCATED OUTSIDE THE BUILDING. COMMERCIAL DUCTWORK IN CONDITIONED SPACES DOES NOT REQUIRE INSULATION. RESIDENTIAL DUCTS OUTSIDE THE BUILDING ENVELOPE SHALL BE INSULATED TO A MINIMUM OF R-8. RESIDENTIAL DUCTWORK INSIDE THE BUILDINGS THERMAL ENVELOPE DOES NOT REQUIRE INSULATION. ALL EXTERIOR DUCTS TO BE INSULATED TO A MINIMUM OR R-8.

DUCT SEALING SEAL ALL DUCTWORK IN COMPLIANCE WITH THE INTERNATIONAL ENERGY CONSERVATION

CONNECTIONS

COMMERCIAL DUCTS, SEAL ALL LONGITUDINAL AND TRANSVERSE JOINTS, SEAMS AND

RESIDENTIAL DUCTS, VERIFY DUCT LEAKAGE WITH POST CONSTRUCTION OR ROUGH-IN TEST. RESIDENTIAL DUCT LEAKAGE VERIFICATION NOT REQUIRED IF AIR HANDLER AND ALL DUCTS ARE LOCATED WITHIN "CONDITIONED SPACE."

EXTERIOR DUCTWORK SHOULD FIRST BE WRAPPED WITH 1-1/2" THICK RIGID FIBERGLASS INSULATION, COVERED WITH #907 MASTIC, WEATHERPROOF MEMBRANE APPLIED AND WRAPPED FOR THE ENTIRE LENGTH, THEN RE-APPLY MASTIC AS FINAL SEALING AGENT. DUCT CLEANING - EXISTING DUCTWORK

COMPLY WITH NADCA ARC, INCLUDING ITEMS IDENTIFIED AS "RECOMMENDED," "ADVISED,"

AND "SUGGESTED." PERFORM ELECTRICAL LOCKOUT AND TAGOUT ACCORDING TO OWNER'S STANDARDS OR AUTHORITIES HAVING JURISDICTION. REMOVE NON-ADHERED SUBSTANCES AND DEPOSITS FROM WITHIN THE HVAC SYSTEM. COMPLETE CLEANING IN ACCORDANCE WITH OWNER-CONTRACTOR AGREED-UPON SCOPE OF WORK. SYSTEMS AND COMPONENTS TO BE CLEANED: ALL AIR-MOVING AND DISTRIBUTION EQUIPMENT. DEBRIS REMOVED FROM THE HVAC SYSTEM SHALL BE DISPOSED OF ACCORDING TO APPLICABLE FEDERAL, STATE, AND

LOCAL REQUIREMENTS. DUCT ACCESSORIES VOLUME DAMPERS

SINGLE BLADE OR OPPOSED BLADE MULTI-LOUVER TYPE AS DETAILED IN SMACNA STANDARDS. PROVIDE END BEARING FOR ALL DAMPERS. QUADRANT OR OTHER OPERATOR FOR EXTERNALLY INSULATED DUCT SHALL HAVE STAND-OFF MOUNT SO OPERATION IS CLEAR OF THE INSULATION. PROVIDE VOLUME DAMPER IN DUCTWORK AT ALL RUN-OUT DUCT TO EACH CEILING DIFFUSER, AT ALL BRANCH DUCTS AND WHERE INDICATED.

SMOKE AND/OR FIRE DAMPERS PROVIDE SMOKE AND/OR FIRE DAMPERS AS REQUIRED, WHETHER INDICATED OR NOT, AT

ALL FIRE AND SMOKÉ RATED PARTITIONS. REVIEW ARCHITECTURAL PLANS FOR DESIGNATIONS. FIRE DAMPERS SHALL BE RUSKIN IBD 2, VERTICAL OR HORIZONTAL, STYLE B OR STYLE C FOR ROUND DUCTS, OR EQUAL EACH SHALL BE FURNISHED AND INSTALLED IN ACCORDANCE WITH NFPA 90A LATEST EDITION AND BEAR U.L. LABEL AND SHALL CONFORM TO BULLETIN #UL-555. INSTALL IN ALL RATED WALLS AND CEILINGS AS REQUIRED AND/OR INDICATED ON DRAWINGS. DUCT ACCESS DOORS

PROVIDE ACCESS DOORS. SIZED AND LOCATED FOR MAINTENANCE WORK, UPSTREAM WHERE

POSSIBLE, FOR EACH DUCT MOUNTED SMOKE DETECTOR AND EACH FIRE DAMPER OR DEVICE WITHIN THE DUCT THAT REQUIRES SERVICE OR INSPECTION. ACCESS SECTIONS IN INSULATED DUCTS SHALL BE DOUBLE-WALL, INSULATED. REFER TO SMACNA STANDARDS. PROVIDE LOCK TYPE 2 (DOOR LATCH, NOT SASH LOCK).

COMMERCIAL APPLICATIONS

MOTORIZED DAMPERS PROVIDE MOTORIZED SHUTOFF DAMPERS ON EXHAUST AND OUTDOOR AIR SUPPLY OPENINGS IN COMPLIANCE WITH THE IECC.

<u>EQUIPMENT</u>

<u>CONTROLS</u> <u>GENERAL</u>

PROVIDE ALL TEMPERATURE, OPERATION AND SAFETY CONTROLS, LOW VOLTAGE CONTROL WIRING, HARDWARE, SOFTWARE, AND ACCESSORIES NECESSARY TO ACHIEVE A FULLY OPERATIONAL HVAC CONTROL SYSTEM. POWER WIRING SHALL BE PROVIDED BY THE ELECTRICAL CONTRACTOR.

PROVIDE A PROGRAMMABLE THERMOSTAT(S) IN COMPLIANCE WITH THE INTERNATIONAL ENERGY CONSERVATION CODE INCLUDING SETBACK (55°F HEAT, 85° COOL) DEADBAND (5°F COMMERCIAL) AND TIMECLOCK (7 DAY COMMERCIAL) TESTING AND BALANCING

<u>GENERAL</u>

COMPLETELY TEST AND BALANCE HOT AND CHILLED WATER SYSTEMS AND ALL SUPPLY, RETURN AND EXHAUST AIR SYSTEMS AND PROVE THE CAPACITIES OF THE SYSTEM AND THE SYSTEM COMPONENTS. SUBMIT RESULTS TO ENGINEER FOR APPROVAL

GENERAL PIPE TEST UNLESS OTHERWISE NOTED. TEST ALL PIPING HYDROSTATICALLY AT NOT LESS THAN 200

PSIG (# PER SQUARE INCH PRESSURE) FOR TWO HOURS AND ALL DEFECTIVE MATERIAL SHALL "BE REPLACED. BEFORE MAKING FINAL APPROVAL. THE SUBCONTRACTOR SHOULD PRODUCE A WRITTEN STATEMENT. SIGNED BY A REPRESENTATIVE OF THE OWNER'S UNDERWRITER, THAT THE WORK HAS BEEN COMPLETED AND TESTED IN ACCORDANCE WITH APPROVED SPECIFICATIONS AND PLANS. UNLESS OTHERWISE NOTED, PERFORM PRESSURE TESTS AND OBTAIN APPROVAL OF TEST RESULTS BEFORE STARTING CLEANING OR CONCEALING OF PIPE UNDER INSULATION OR OTHER FINISH. INSULATION REMOVAL AND

REINSTALLATION WHICH IS REQUIRED BECAUSE INSULATION WAS INSTALLED PRIOR TO TESTING SHALL BE DONE BE THE CONTRACTOR AT NO EXTRA COST. TESTS ARE SATISFACTORY ONLY WHEN JOISTS SHOW NO VISIBLE LEAKS AND TEST

PRESSURE REMAINS CONSTANT AFTER CONTINUOUS TEST PERIOD REPAIR LEAKS AND REMOVE AND REPLACE DEFECTIVE PIPE, FITTINGS AND JOISTS WITH NEW MATERIAL, UNTIL ACCEPTED BY ARCHITECT AND INSPECTING AUTHORITY. WICKING, CAULKING, COMPOUNDING, PEENING, OR OTHER MAKESHIFT TYPE OF REPAIRS ARE NOT PERMITTED. REPEAT TESTS AFTER REPAIRS UNTIL SYSTEMS ARE PROVEN TIGHT.

HOT OR CHILLED WATER PIPE TEST

TESTS SHALL BE MAINTAINED AS LONG AS NECESSARY TO COMPLETELY INSPECT PIPING (MINIMUM 4 HOURS). TEST WATER PIPING BY APPLYING HYDROSTATIC PRESSURE USING PUMP; ENSURE

THAT LINES ARE VENTED OF ALL AIR. FOLLOWING PRECAUTIONS SHALL BE TAKEN DURING PRESSURE TESTS:

1. HOT WATER SYSTEM RELIEF VALVE SHALL BE REMOVED 2. SYSTEM PRESSURE GAUGES WITH SCALE RANGES LOWER THAN TEST PRESSURE SHALL BE REMOVED OR ISOLATED

3. WATER CONTROL VALVES SHALL BE REMOVED. REFRIGERANT PIPE TEST

TEST FOR LEAKS BY FILLING SYSTEM WITH DRY NITROGEN. COMPRESSOR SUCTION AND DISCHARGE VALVES SHALL BE CLOSED. EXPANSION VALVES SHALL BE PLUGGED. USE SEPARATE PUMP OR AVAILABLE GAS CYLINDER PRESSURE TO PRESSURIZE SYSTEM. MAXIMUM TEST PRESSURE SHALL NOT EXCEED 120% OF FOLLOWING MINIMUM TEST

PRESSURE: A. REFRIGERANT HIGH SIDE PIPING: 250 PSIG B. REFRIGERANT LOW SIDE PIPING

APPLY SOAPY WATER MIXTURE AND VISUALLY INSPECT EACH PIPE JOINT, VALVE PACKING AND BONNET FLANGE SIGHT CLASS FITTING AND PIECE OF FOURPMENT FOR LEAKAGE LIQUID LEAK DETECTOR SHALL NOT BE USED EXCEPT WITH PRIOR WRITTEN APPROVAL FROM ARCHITECT. AFTER PRESSURE TESTS HAVE BEEN COMPLETED AND ACCEPTED, EVACUATE SYSTEMS TO ATMOSPHERE AND PROCEED WITH EVACUATION TESTS.

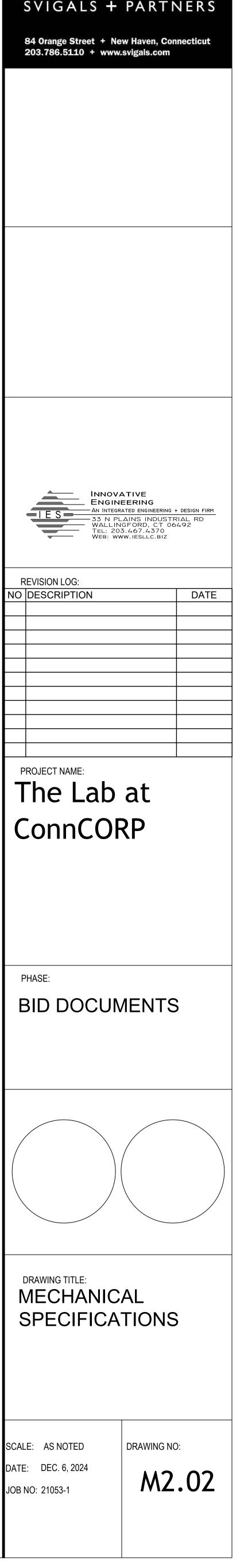
AIR SYSTEMS BALANCING

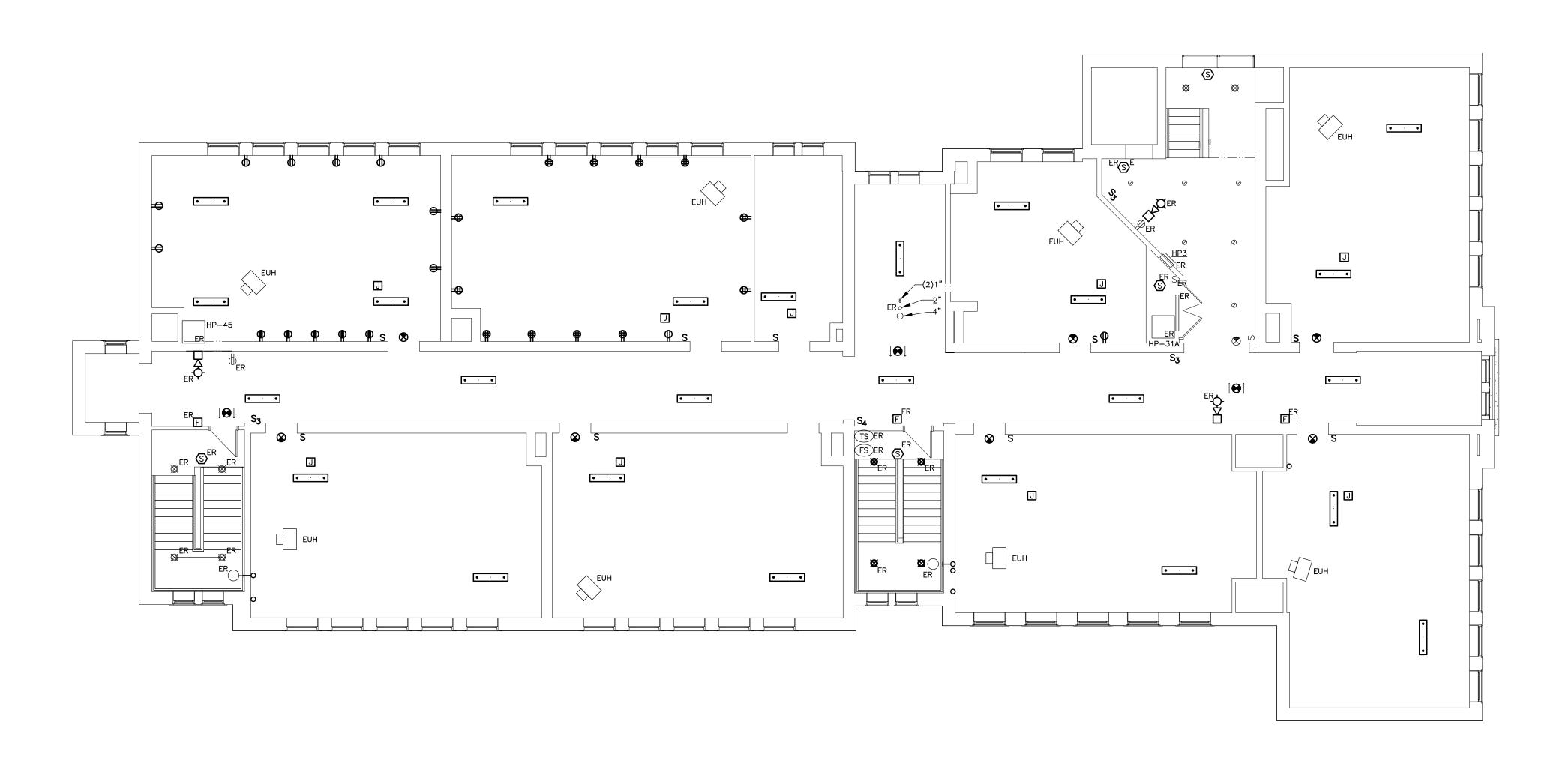
PROCURE THE SERVICES OF A CERTIFIED BALANCING CO. TO PERFORM THE TESTING AND BALANCING OF THE AIR SYSTEMS. COMPLETELY TEST AND BALANCE ALL SUPPLY, RETURN AND EXHAUST AIR SYSTEMS AND PROVE THE CAPACITIES OF THE SYSTEM AND THE SYSTEM COMPONENTS. BALANCE THE GRILLES, REGISTERS, DIFFUSERS AND EQUIPMENT TO OBTAIN THE RESULTS INDICATED ON THE DWGS. SUBMIT A BALANCING REPORT INDICATING THE RESULTS TO ENGINEER FOR APPROVAL

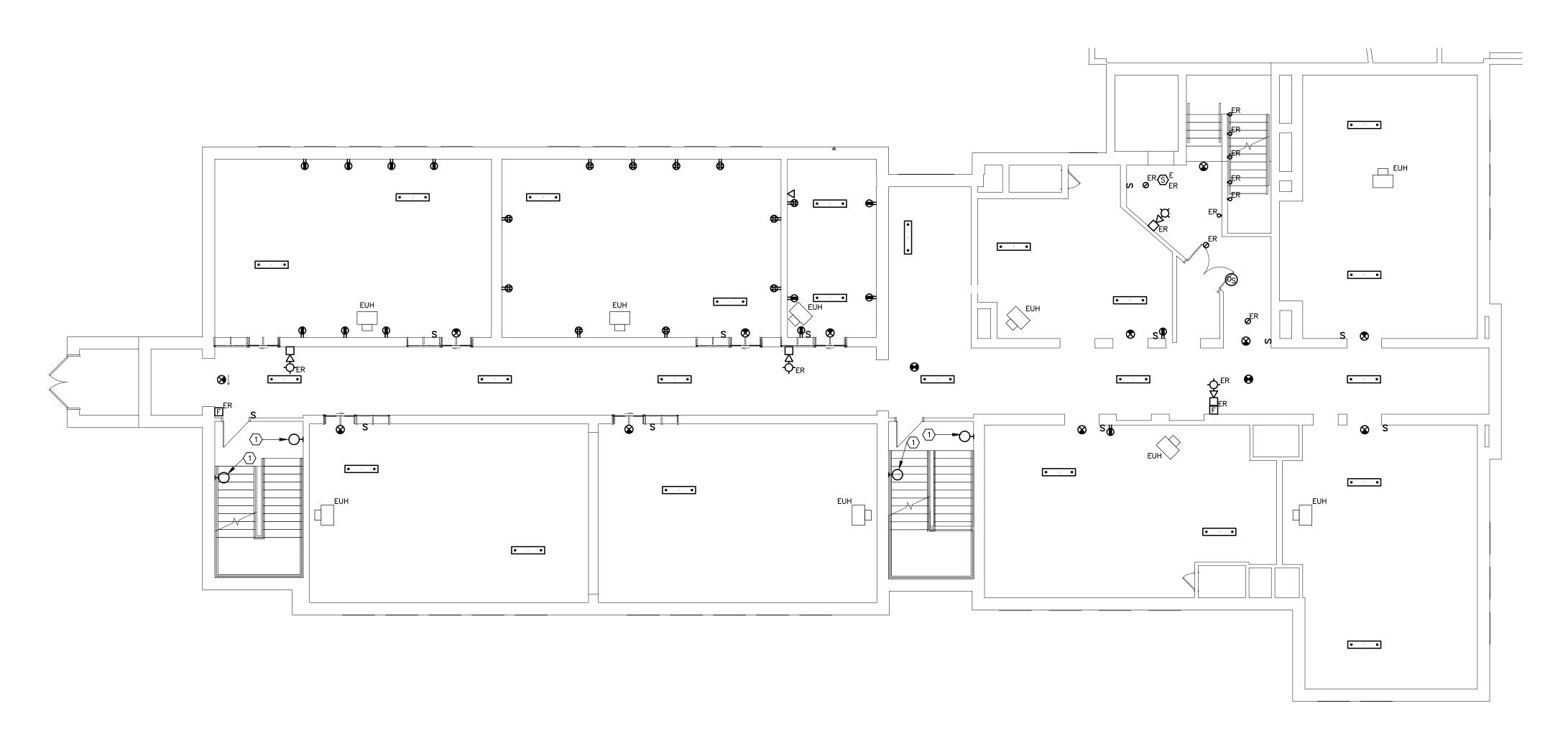
WATER SYSTEMS BALANCING

PROCURE THE SERVICES OF A CERTIFIED BALANCING CO. TO PERFORM THE TESTING AND BALANCING OF THE WATER SYSTEMS. COMPLETELY TEST AND BALANCE ALL SUPPLY AND RETURN PIPING SYSTEMS. BALANCE FLOWS TO DESIGN/SCHEDULED LISTING FOR EACH PIECE OF EQUIPMENT (PUMP, COIL, TERMINAL UNIT, ETC.). INCLUDE SIZE, CV VALUE OF EACH CONTROL VALVE, AND EQUIPMENT SERVED IN THE FINAL BALANCING REPORT. SUBMIT THE REPORT TO THE ENGINEER FOR APPROVAL.







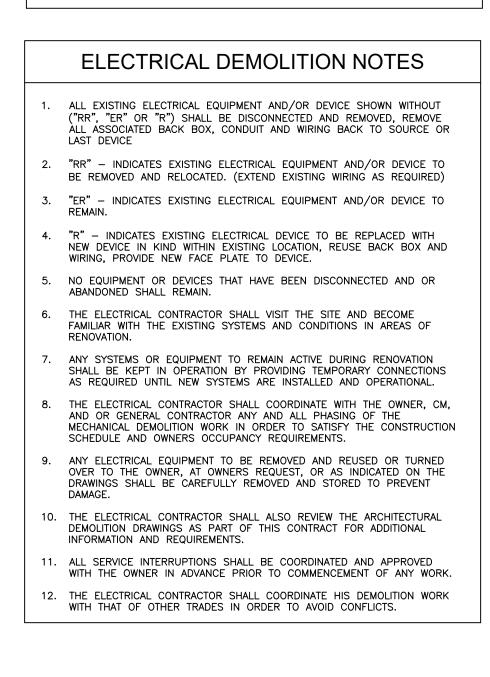


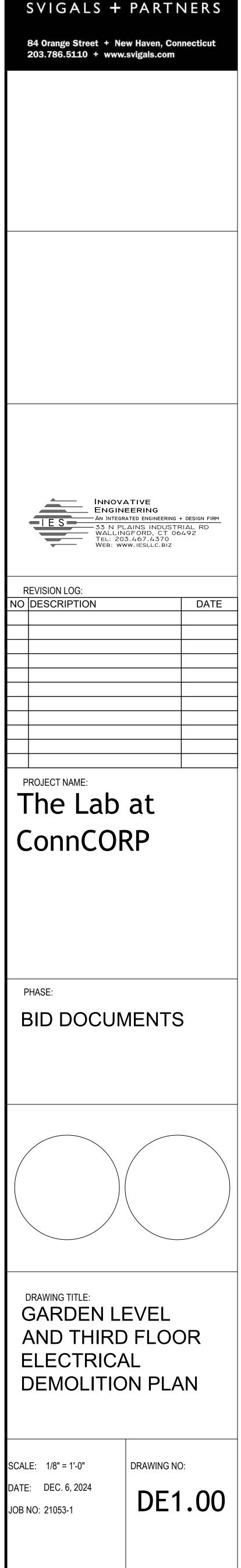
THIRD FLOOR ELECTRICAL DEMOLITION PLAN SCALE: 1/8"= 1'-0"

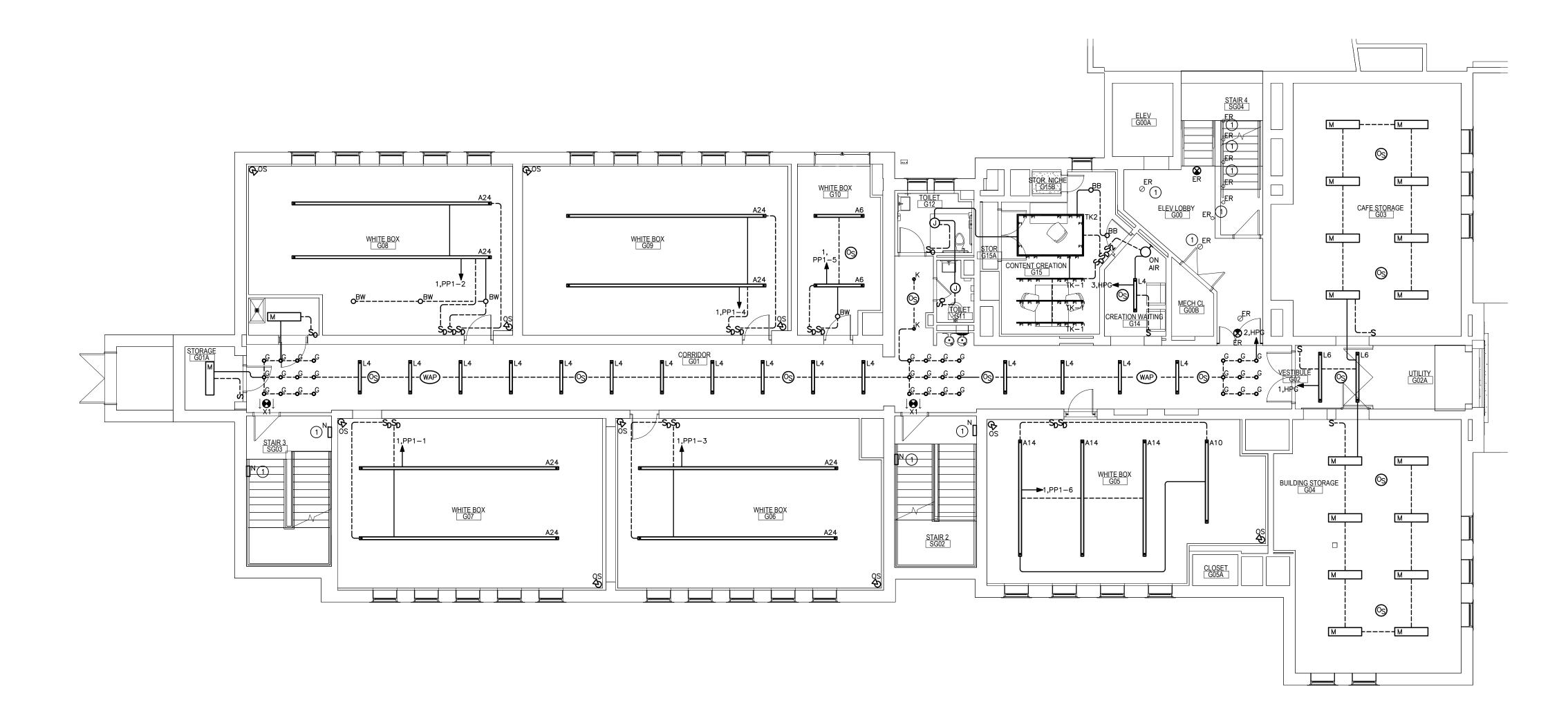
GARDEN LEVEL ELECTRICAL DEMOLITION PLAN SCALE: 1/8"= 1'-0"

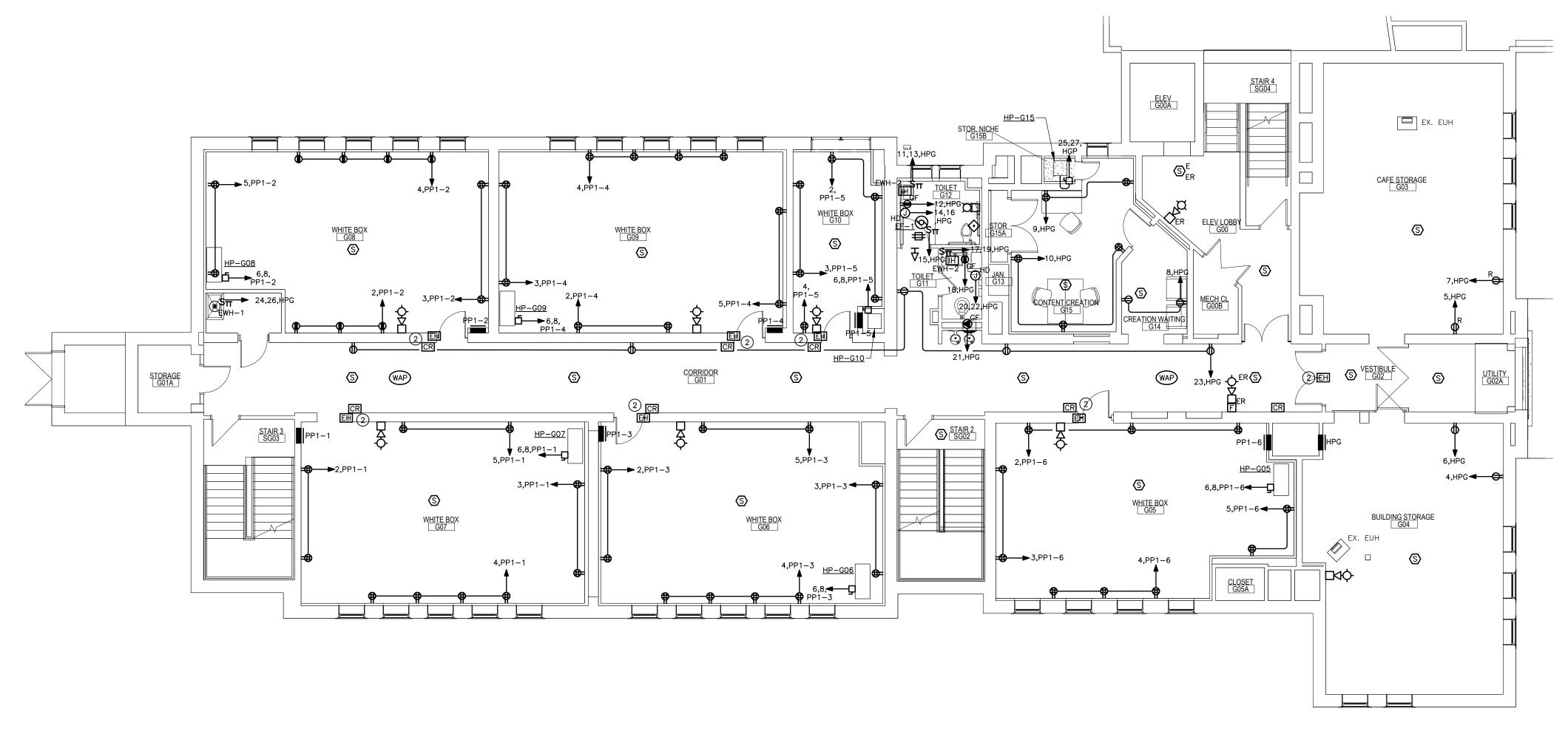
DEMOLITION NOTES

1 REMOVE EXISTING LIGHT FIXTURE. EXISTING BRANCH CIRCUIT WIRING SHALL REMAIN AND BE REUSED.



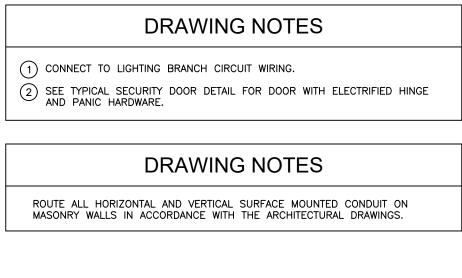




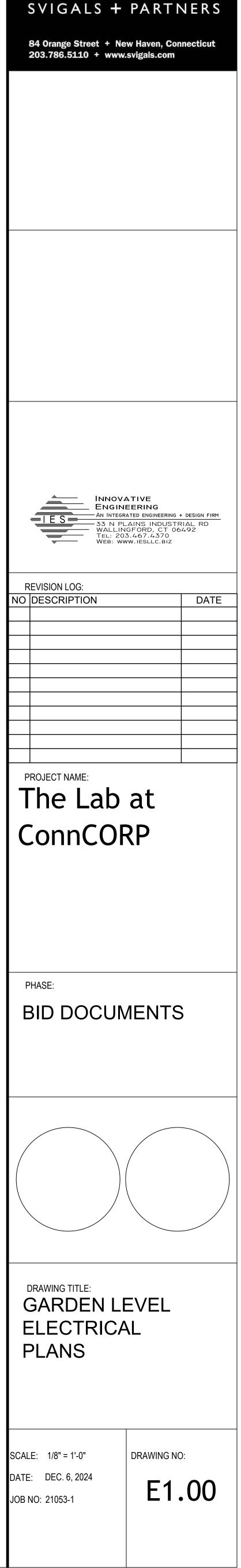


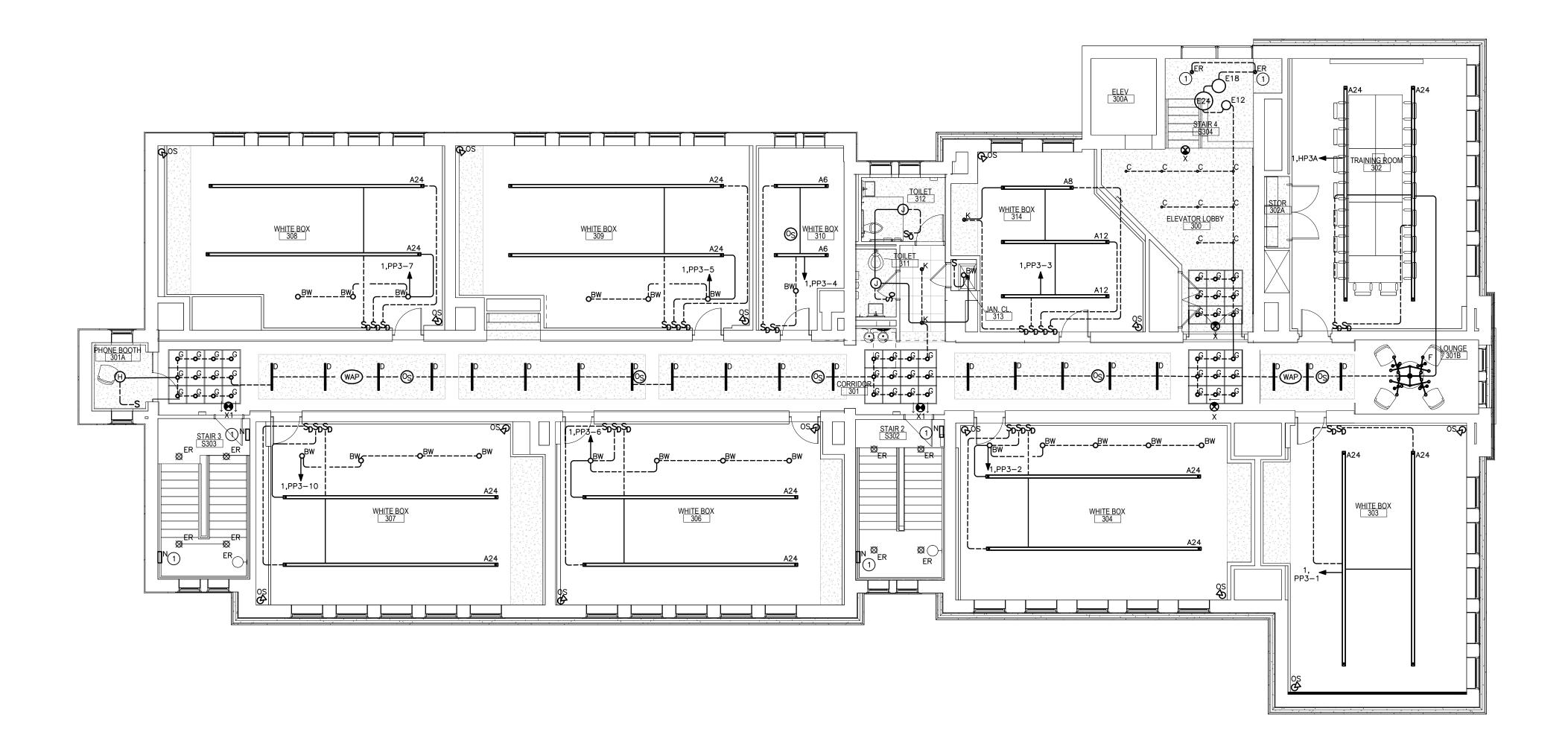
GARDEN LEVEL POWER PLAN SCALE: 1/8"= 1'-0"

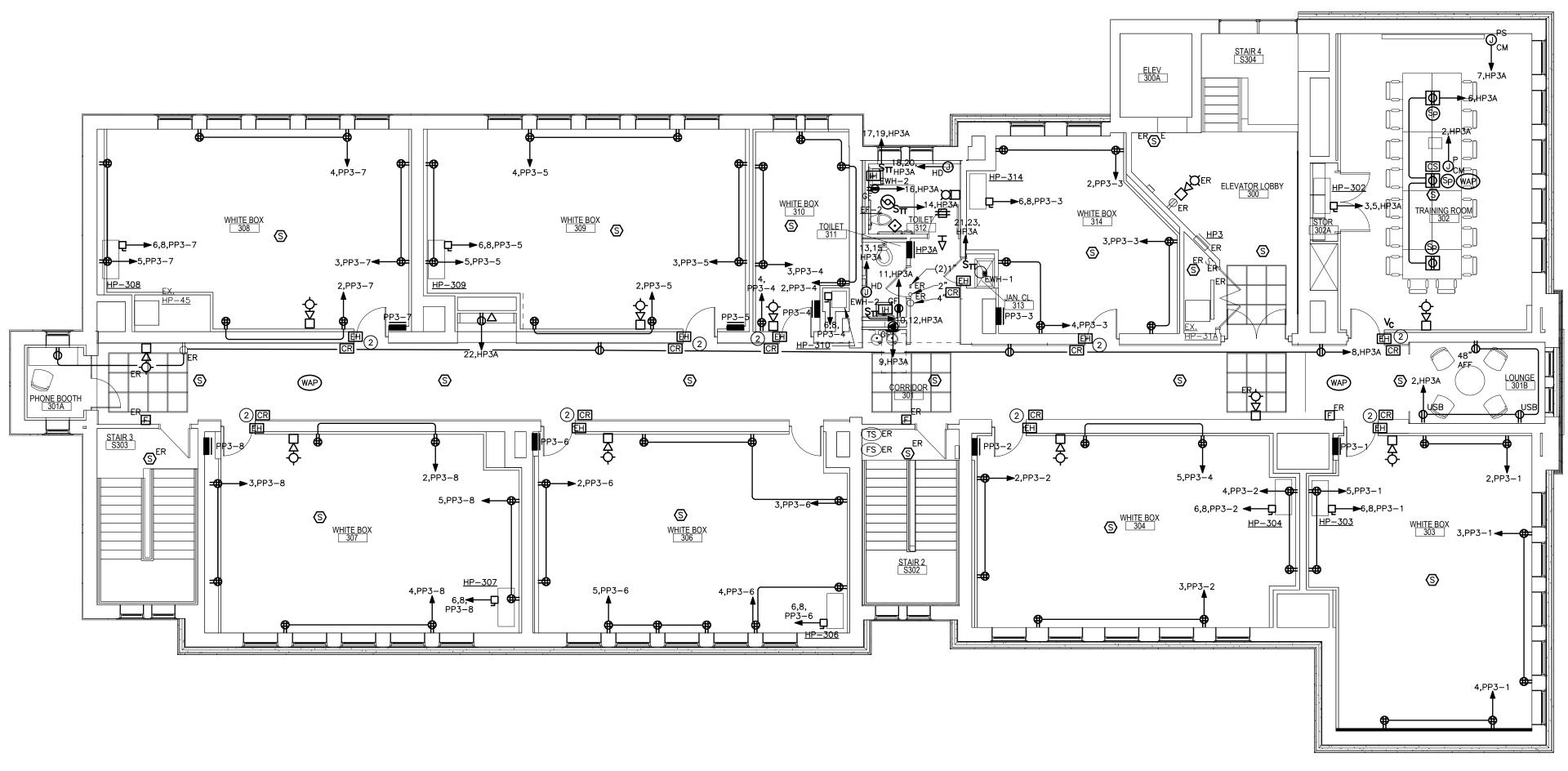












THIRD FLOOR POWER PLAN SCALE: 1/8"= 1'-0"

THIRD FLOOR LIGHTING PLAN SCALE: 1/8"= 1'-0"

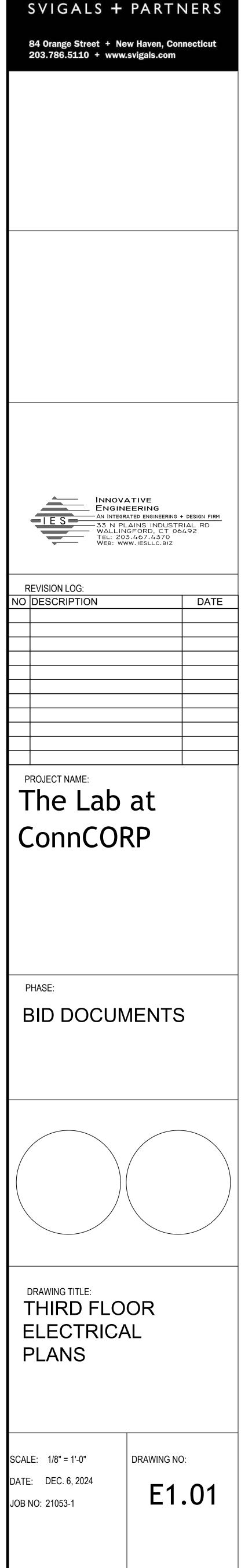
DRAWING NOTES

(1) CONNECT TO LIGHTING BRANCH CIRCUIT WIRING. (2) SEE TYPICAL SECURITY DOOR DETAIL FOR DOOR WITH ELECTRIFIED HINGE AND PANIC HARDWARE.

DRAWING NOTES

ROUTE ALL HORIZONTAL AND VERTICAL SURFACE MOUNTED CONDUIT ON MASONRY WALLS IN ACCORDANCE WITH THE ARCHITECTURAL DRAWINGS.



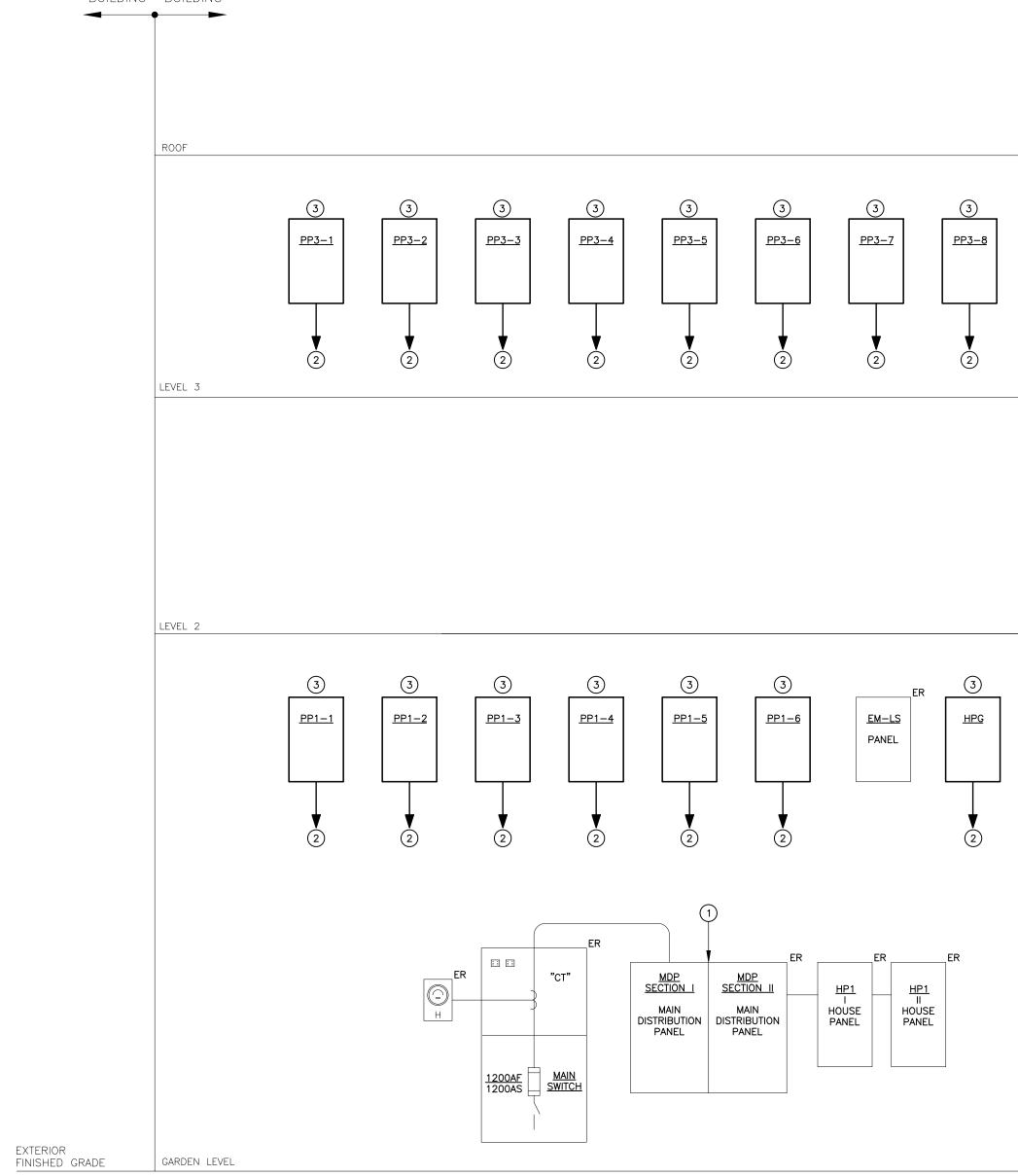


	HVAC FEEDER SCHEDULE														
SYMBOL	V – PH	AMP	C/B	DISC. SW.	FEEDER	STARTER NEMA SIZE	HP (KW)	NOTES							
HP-G05-G10, HP-302-305,307 -314	208,1ø	19	30A, 2P	30A, 2P, 240V DISC. SWITCH	3/4"C, 2#10, #10G	-	-								
HP-306	208,1ø	20	30A, 2P	30A, 2P, 240V DISC. SWITCH	3/4"C, 2#10, #10G	_	-								
NOTES:															

MAIN DEVICE: MLO INTERRUPTING RATIN	AL 125A MAIN BUS		PANEL HP3A	LOCATION: THIRD FLOOR CORRI MOUNTING: ⊠ FLUSH □ SU TRIM: ⊠ SINGLE DOOR	RFACE	RATING: 208Y/120V 3Ø, 4W MAIN BUS: ⊠ CU □ AL 125A MAIN BUS MAIN DEVICE: MLO INTERRUPTING RATING: 10KAIC			PANEL HP	G	LOCATION: BUILDING STORAGE MOUNTING: ⊠ FLUSH □ S TRIM: ⊠ SINGLE DOOR	SURFACE	MAIN BUS: MAIN DEVIC INTERRUPTI	208/120V, 1ø, 3W ⊠ CU □ AL 100A MAIN BUS CE: 100A MCB ING RATING: 10KAIC	TENANT PANEL (TYPICAL FOR PP1-1 THRU PP1-6)				LOCATION: TENANT SPACE MOUNTING: ⊠ FLUSH □ SURFACE TRIM: ⊠ SINGLE DOOR □ DOOR-IN-DOO	
CKT. BKR. NO. TRIP AMPS POLES	DESCRIPTION	WIRE & CONDUIT	KVA A B C KVA WIRE & CONDUIT	DESCRIPTION	CKT. BKR. POLES TRIP AMPS	CKT. CKT. BKR. NO. TRIP AMPS POLES	DESCRIPTION	WIRE & CONDUIT	KVA A B	C KVA WIRE & CONDUIT	DESCRIPTION	CKT. BKR. CKT. POLES TRIP NO. AMPS	CKT. NO. TRIP AMPS		WIRE & CONDUIT	KVA A	B	WIRE & CONDUIT	DESCRIPTION	CKT. BKR. CH POLES TRIP AMPS
1 20 1	LIGHTING-COMMON AREA	3/4"C, 2#12, #12G	0.0 - 0.6 3/4"C, 2#12, #12G	RECEPTACLE-LOUNGE	1 20 2	1 20 1	LIGHTING-STORAGE	3/4"C, 2#12, #12G	0.0		LIGHTING-CORRIDOR	1 20 2	1 20		3/4"C, 2#12, #12G			3/4"C, 2#12, #12G	RECEPTACLE	1 20 2
3 30 2	HP-302	3/4"C, 2#10, #10G	1.9 • 0.2 3/4"C, 2#12, #12G	RECEPTACLE-PROJECTOR	1 20 4	3 20 1	LIGHTING-CREATION	3/4"C, 2#12, #12G	0.0		RECEPTACLE-BUILDING STOR	RAGE 1 20 4	3 20	1 RECEPTACLE	3/4"C, 2#12, #12G			3/4"C, 2#12, #12G	RECEPTACLE	1 20 4
5 – –	-	-	1.9 • 0.6 3/4"C, 2#12, #12G	RECEPTACLE-TRAINING ROOM	1 20 6	** 5 20 1	RECEPTACLE-CAFE STORAGE	3/4"C, 2#12, #12G	0.2		RECEPTACLE-BUILDING STOR		** 5 20		3/4"C, 2#12, #12G				HEAT PUMP	2 * 6
7 20 1	PROJECTOR SCREEN MOTOR	3/4"C, 2#12, #12G	0.4 • 1.0 3/4"C, 2#12, #12G	RECEPTACLE-CORRIDOR	1 20 8	* 7 20 1	RECEPTACLE-CAFE STORAGE	3/4"C, 2#12, #12G	0.2 -	0.4 3/4"C, 2#12, #12G	RECEPTACLE-CREATION WAITI	ING 1 20 8	7 20		-		2.0			3 – –
9 20 1	RECEPTACLE-WATER FOUNTAIN	3/4"C, 2#12, #12G	0.2 2.0 3/4"C, 2#10, #10G	EWH-2	2 30 10	9 20 1	RECEPTACLE-CONTENT CREATION	3/4"C, 2#12, #12G	0.8	1.2 3/4"C, 2#12, #12G	RECEPTACLE-CREATION CONT	TENT 1 20 10	9 20		-		0.0		SPARE	1 20 1
11 20 1	RECEPTACLE-TOILET 311	3/4"C, 2#12, #12G	0.2 2.0 -	_	12	11 30 2	EWH-2	3/4"C, 2#10, #10G	2.0	0.2 3/4"C, 2#12, #12G	RECEPTACLE-TOILET (G12)	1 20 12	11 20		-		0.0		SPARE	1 20 1
13 20 2	HAND DRYER	3/4"C, 2#12, #12G	0.5 • 0.5 3/4"C, 2#12, #12	EF-2	1 20 14	13 – –	-	-		0.5 3/4"C, 2#12, #12G	HAND DRYER	2 20 14	13 20		-	0.0 -	0.0	-	SPARE	1 20 1
15 – –	-	-	0.5 0.2 3/4°C, 2#12, #12	RECEPTACLE-TOILET 312	1 20 16	15 20 1	EF-2	3/4"C, 2#12, #12G	0.5	0.5 –	-	16	15 20		-	0.0	0.0	-	SPARE	1 20 1
17 30 2	EWH-2	3/4"C, 2#10, #10G	2.0 0.5 3/4"C, 2#12, #12	HAND DRYER	2 20 18	17 30 2	EWH-2	3/4"C, 2#10, #10G	2.0	0.2 3/4"C, 2#12, #12G	RECEPTACLE-TOILET (G11)	1 20 18	17 20		-		0.0		SPARE	1 20 1
19 – –	-	-	2.0 0.5 -	-	20	19 – –	-	-	2.0	0.5 3/4"C, 2#12, #12G	HAND DRYER	2 20 20	19 20		-		0.0		SPARE	1 20 2
21 30 2		3/4"C, 2#10, #10G	2.2 0.2 3/4°C, 2#12, #12	RECEPTACLE-COPIER	1 20 22	21 20 1	RECEPTACLE-WATER FOUNTAIN	3/4"C, 2#12, #12G	0.1	0.5 -	-	22	21 20		-		0.0		SPARE	1 20 2
23 – –	-	-	2.2 0.0 -	SPARE	1 20 24	23 20 1	RECEPTACLE-CORRIDOR	3/4"C, 2#12, #12G	1.0	2.2 3/4"C, 2#10, #10G	EWH-1	1 20 24	23 20		-		0.0		SPARE	1 20 2
25 20 1	SPARE	-	0.0 - 0.0 -	SPARE	1 20 26	25 30 2	HP-G15	3/4"C, 2#10, #10G	0.0	2.2 -	-	1 20 26	25 20		-		0.0		SPARE	1 20 2
27 20 1	SPARE	-	0.0 - 0.0 -	SPARE	1 20 28	27 – –	-	-	0.0	0.0 –	SPARE	1 20 28	27 20	1 SPARE	-		0.0		SPARE	
29 20 1	SPARE	-	0.0 - 0.0 -	SPARE	1 20 30	29 20 1	SPARE	-	0.0	↓ 0.0 −	SPARE	1 20 30		1 SPARE	-		0.0	-	SPARE	1 20 3
	SPARE	-	0.0 - 0.0 -	SPARE	1 20 32	31 20 1	SPARE	-	0.0		SPARE	1 20 32		O HVAC FEEDER SCHEDULE FOR D FEEDER SIZE	TOTALS PER PHASE		3.6			
33 20 1	-	-	0.0 - 0.0 -	_	1 20 34	33 20 1	SPARE	-	0.0		SPARE	1 20 34	•	SPARE CIRCUIT BREAKER FOR	GRAND TOTAL	7.2				
35 20 1	-	-	0.0 - 0.0 -	-	1 20 36	35 20 1	-	-	0.0		-	1 20 36		OARD PP1-5 ONLY.						
37 20 1	-	-	0.0 - 0.0 -	-	1 20 38	37 20 1	_	-	0.0	0.0 –	-	1 20 38								
39 20 1	-	-	0.0 - 0.0 -	-	1 20 40	39 20 1		-	0.0		-									
41 20 1	-	-	0.0 - 0.0 -	-	1 20 42	41 20 1	-	-	0.0		-	1 20 42								
		TOTALS PER PHASE	5.5 7.4 9.4			* PROVIDE G.F.C.I. ** BREAKER FOR A	/A.F.C.I. CIRCUIT	TOTALS PER PHASE	7.8 3.8	8.0										
		GRAND TOTAL	22.3			BREAKER FOR A	LL REFRIGERATORS.	GRAND TOTAL	19.6											

INTERRI	DEVIC	⊠ CU □ AL 100A MAIN BUS : 100A MCB G RATING: 10KAIC	IOOA MCB ATING: 10KAIC		-3, PP3-4)	LOCATION: TENANT SPACE MOUNTING: I FLUSH I SURFACE TRIM: I SINGLE DOOR I DOOR-IN-DOOR			RATING: 208/120V, 1Ø, 3W MAIN BUS: ⊠ CU □ AL 100A MAIN BUS MAIN DEVICE: 100A MCB INTERRUPTING RATING: 10KAIC			(TYPICAL F	OR PP3 PP	ENANT PA 5—1, PP3 3—7, PP	₽3−6,	LOCATION: TENANT SPACE MOUNTING: ⊠ FLUSH □ SURFACE TRIM: ⊠ SINGLE DOOR □ DOOR-IN-DOOR				
NO. TR	CKT. RIP MPS	BKR. POLES DESCRIPTION	WIRE & CONDUIT	KVA	A B	KVA WIRE & CONDUIT	DESCRIPTION	CKT. BKR. CKT. POLES TRIP AMPS	CKT. NO.	. CKT. E TRIP AMPS	BKR. Poles	DESCRIPTION	WIRE & CONDUIT	KVA	A B	KVA WIRE & (CONDUIT	DESCRIPTION	CKT. BK POLES	R. CKT. TRIP NO. MPS
1 2	20	1 LIGHTING	3/4"C, 2#12, #12G	0.0	•	0.8 3/4"C, 2#12, #12G	RECEPTACLE	1 20 2	1	20	1	LIGHTING	3/4"C, 2#12, #12G	0.0	+	0.8 3/4"C, 2#12, #	# 12G	RECEPTACLE	1	20 2
3 2	20	1 RECEPTACLE	3/4"C, 2#12, #12G	0.8	_ 	0.8 3/4"C, 2#12, #12G	RECEPTACLE	1 20 4	3	20	1	RECEPTACLE	3/4"C, 2#12, #12G	0.8	_ _ _ ++	0.8 3/4"C, 2#12, #	#12G	RECEPTACLE	1	20 4
5 2	20	1 SPARE	-	0.0	_ +	2.0 *	HEAT PUMP	2 * 6	5	20	1	RECEPTACLE	3/4"C, 2#12, #12G	0.8	+	2.0 *		HEAT PUMP	2	* 6
7 2	20	1 SPARE	-	0.0		2.0 -	-	8	7	20	1	SPARE	-	0.0	++	2.0 –		-	-	- 8
9 2	20	1 SPARE	-	0.0	•	0.0 –	SPARE	1 20 10	9	20	1	SPARE	-	0.0	•	0.0 –		SPARE	1	20 10
11 2	20	1 SPARE	-	0.0	- -+	0.0 –	SPARE	1 20 12	11	20	1	SPARE	-	0.0	- 	0.0 -		SPARE	1	20 12
13 2	20	1 SPARE	-	0.0	•	0.0 –	SPARE	1 20 14	13	20	1	SPARE	-	0.0	•	0.0 –		SPARE	1	20 14
15 2	20	1 SPARE	-	0.0	- -+	0.0 –	SPARE	1 20 16	15	20	1	SPARE	-	0.0	- 	0.0 -		SPARE	1	20 16
17 2	20	1 SPARE	-	0.0	•	0.0 –	SPARE	1 20 18	17	20	1	SPARE	-	0.0	•	0.0 –		SPARE	1	20 18
19 2	20	1 SPARE	-	0.0	- -+	0.0 –	SPARE	1 20 20	19	20	1	SPARE	-	0.0	- 	0.0 –		SPARE	1	20 20
21 2	20	1 SPARE	-	0.0	•	0.0 –	SPARE	1 20 22	21	20	1	SPARE	-	0.0	•	0.0 -		SPARE	1	20 22
23 2	20	1 SPARE	-	0.0	- -+	0.0 –	SPARE	1 20 24	23	20	1	SPARE	-	0.0	++	0.0 –		SPARE	1	20 24
25 2	20	1 SPARE	-	0.0	•	0.0 -	SPARE	1 20 26	25	20	1	SPARE	-	0.0	+	0.0 -		SPARE	1	20 26
27 2	20	1 SPARE	-	0.0	++	0.0 -	SPARE	1 20 28	27	20	1	SPARE	-	0.0	++	0.0 -		SPARE	1	20 28
29 2	20	1 SPARE	-	0.0	- +	0.0 -	SPARE	1 20 30	29	20	1	SPARE	-	0.0	+	0.0 -		SPARE	1	20 30
		HVAC FEEDER SCHEDULE FOR	TOTALS PER PHASE		2.8 3.6							FEEDER SCHEDULE FOR	TOTALS PER PHASE		3.6 3.6					
С/В /	AND	FEEDER SIZE	GRAND TOTAL	6.4	<u> </u>				C	/B AND	FEEDE	R SIZE	GRAND TOTAL	7.2	•	-				





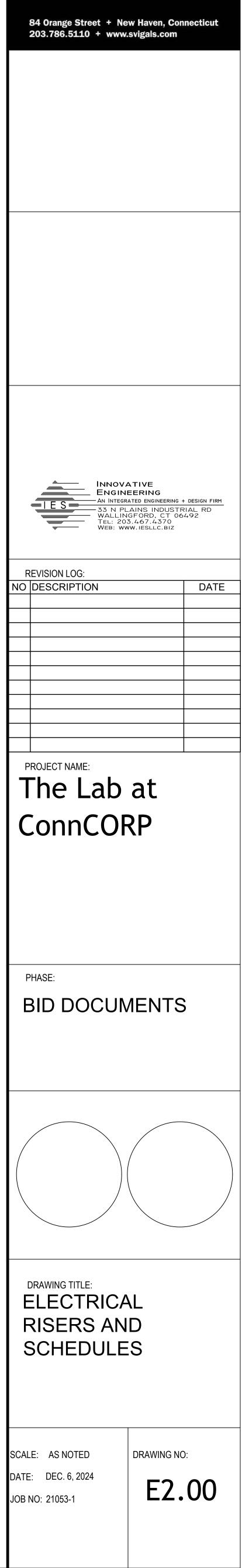
POWER RISER DIAGRAM SCALE: N.T.S.

POWER RISER NOTES

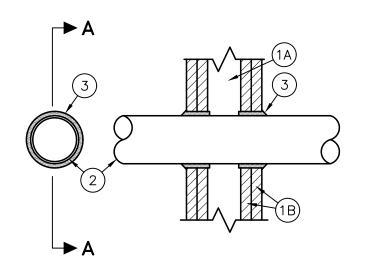
- EXISTING MAIN DISTRIBUTION PANEL TO REMAIN: 208Y/120V, 3-PHASE, 4-WIRE, 1200A, SIEMENS TYPE P5 SERIES.
- 2 1-1/2"C, 3#1, #8G, TO 2P, 100 AMPERE CB IN EXISTING MDP.
- (3) TYPICAL TENANT PANEL, SEE PANEL SCHEDULES. 4 2"C, 4#1, #8G.
- 5 PROVIDE 3P,100A CB.

INTERIOR OF EXTERIOR OF BUILDING BUILDING **----**

ER HP3 HOUSE PANEL 5 ER HP3A HOUSE PANEL FANEL



SVIGALS + PARTNERS



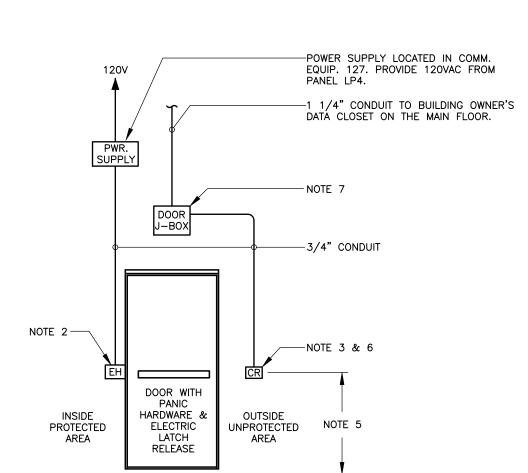
UL RATED FIRE PENETRATION DETAIL

- 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 HR FIRE RATED ASSEMBLIES) OR STEEL CHANNEL STUDS. WOOD STUDS TO CONSIST OF NOM 2 BY 4 IN. LUMBER SPACED 16 IN. ÓC WITH NOM 2 BY 4 IN. LUMBER END PLATES AND CROSS BRACES. STEEL STUDS TO BE MIN 3-5/8 IN. WIDE BY 1-3/8 IN. DEEP CHANNELS SPACED MAX 24 IN. OC. B. WALLBOARD, GYPSUM*-NOM 1/2 OR 5/8 IN. THICK, 4 FT. 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 IN 13-1/2 IN. 2. PIPE OR CONDUIT-NOM 12 IN. DIAM (OR SMALLER) SCHEDULE 10 (OR HEAVIER) STEEL PIPE, NOM 12 IN. DIAM (OR SMALLER) SERVICE WEIGHT (OR HEAVIER) DUCTILE IRON PRESSURE PIPE, NOM 6 IN. DIAM (OR
- SMALLER) STEEL ELECTRICAL METALLIC TUBING, NOM 6 IN. DIAM (OR SMALLER) FLEXIBLE STEEL CONDUIT. WHEN COPPER PIPE IS USED, MAX F RATING OF FIRESTOP SYSTEM (ITEM 3) IS 2 H. STEEL PIPES OR CONDUITS LARGER THAN NOM 4 IN. DIAM MAY ONLY BE USED IN WALLS CONSTRUCTED USING STEEL CHANNEL STUDS. A MAX OF ONE PIPE OR CONDUIT IS PERMITTED IN THE FIRESTOP SYSTEM. PIPE OR CONDUIT TO BE INSTALLED NEAR CENTER OF STUD CAVITY WIDTH AND TO BE RIGIDLY SUPPORTED ON BOTH SIDES OF WALL ASSEMBLY.
- 3. FILL, VOID OR CAVITY MATERIAL*-CAULK-CAULK FILL MATERIAL INSTALLED TO COMPLETELY FILL ANNULAR SPACE BETWEEN PIPE OR CONDUIT AND GYPSUM WALLBOARD AND WITH A MIN 1/4 IN. DIAM BEAD OF CAULK APPLIED TO PERIMETER OF PIPE OR CONDUIT AT ITS EGRESS FROM THE WALL. CAULK INSTALLED SYMMETRICALLY ON BOTH SIDES OF WALL ASSEMBLY. 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:

#0 TO 1−1/2 IN. AN	E IS USED, T RATING IS O H. NULAR SPACE APPLIES ONLY WH OF THE GYPSUM WALLBOARD IS		
MAX PIPE	ANNULAR	F	Т
OR CONDUIT	SPACE	RATING	RATING
DIAM, IN.	IN.	HR	HR
1	0 TO 3/16	1 OR 2	0+, 1 OR 2
1	1/4 TO 1/2	3 OR 4	3 OR 4
4	0 TO 1/4	1 OR 2	0
4	0 TO 1-1/2	1 OR 2	0
	· · · / -		

1/4 TO 1/2

3/16 TO 3/8



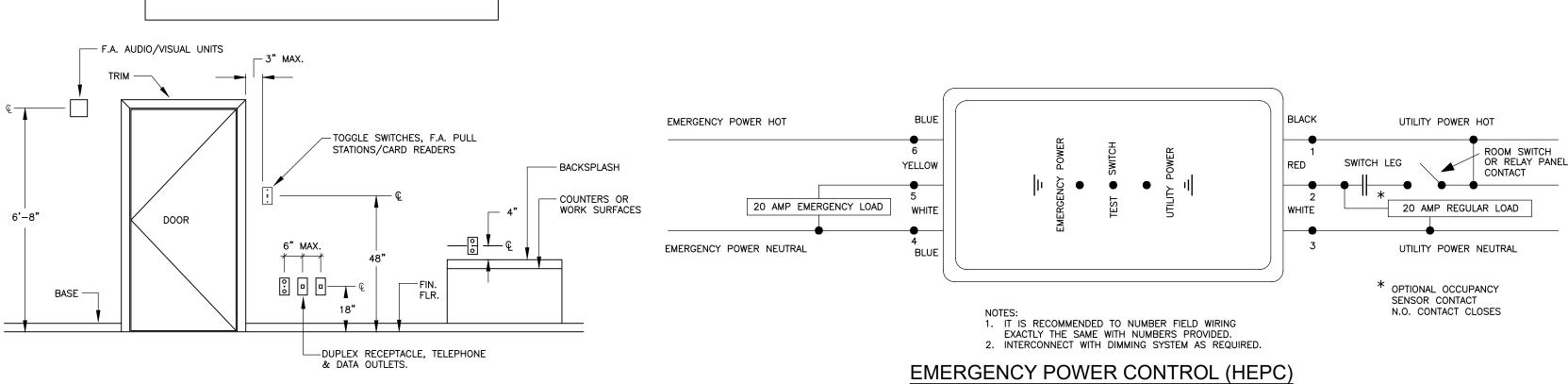
3 OR 4

1 OR 2

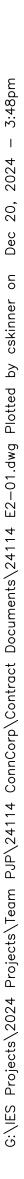
TYPICAL SECURITY DOOR DETAIL SCALE: N.T.S.

SECURITY DOOR NOTES

- . DETAIL IS SCHEMATIC ONLY. COORDINATE EXACT REQUIREMENTS OF RACEWAYS, BACKBOXES, JUNCTION BOXES, ETC., WITH SECURITY VENDOR PRIOR TO INSTALLATION. ALL CONDUIT RACEWAYS TO BE RECESSED TO EVERY EXTENT POSSIBLE. PROVIDE WIREMOLD AL2000 RACEWAY & FITTINGS IN INTERIOR SPACES WHEN CONDUIT CAN NOT BE RECESSED.
- . ELECTRIC TRANSFER HINGE AT DOOR'S HINGE SIDE FOR ELECTRIC LATCH RELEASE ON PANIC HARDWARE OR ELECTRIFIED MORTISE LOCK. COORDINATE WITH ARCHITECTURAL HARDWARE REQUIREMENTS. . PROVIDE A SINGLE GANG JUNCTION BOX MOUNTED VERTICALLY.
- LEAVE PULL STRING FOR SECURITY CARD/FOB READER.
- ELECTRIC TRANSFER HINGE AT DOOR'S HINGE SIDE FOR ELECTRONIC RELEASE OF ELECTRIFIED MORTISE LOCK. COORDINATE WITH ARCHITECTURAL HARDWARE REQUIREMENTS.
- . COORDINATE EXACT LOCATION AND MOUNTING HEIGHT OF ALL DEVICES WITH ARCHITECTURALS AND EQUIPMENT PROVIDER.
- . COORDINATE WITH OWNER EXACT LOCATIONS OF CARD READER AND PUSH PLATE(S) FOR EACH LOCATION.
- . 6"x6"x4" JUNCTION BOX WITH TAMPER PROOF HARDWARE: MOUNT DOOR JUNCTION BOX INSIDE PROTECTED AREA, ON WALL ABOVE DOOR OR ABOVE ACCESSIBLE CEILING SPACE.
- 3. COORDINATE RACEWAY REQUIREMENTS WITH ARCHITECTURAL DRAWINGS AND EQUIPMENT PROVIDER. LEAVE PULL STRING IN ALL CONDUIT, EXTEND CONDUIT TO ACCESSIBLE LOCATION ABOVE CEILING CAVITY, AND TERMINATE BOTH ENDS OF CONDUIT WITH CONNECTOR AND INSULATING BUSHING.
- ALL CONDUITS SHALL BE TERMINATED WITH CONNECTOR AND INSULATING BUSHING AT BOTH ENDS. 0. PROVIDE ASSOCIATED CONTROL WIRING FROM PUSH PLATE TO DOOR CONTROLLER, TYPICAL.



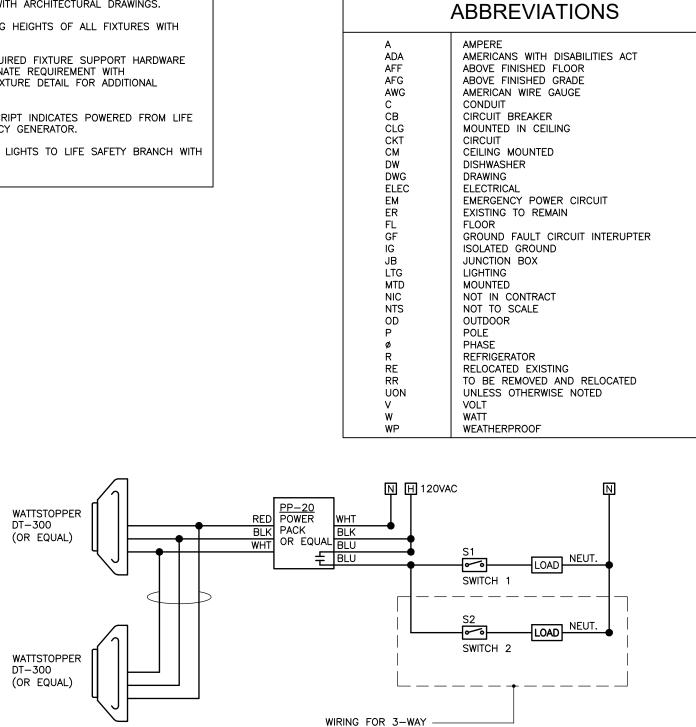
DEVICE MOUNTING DETAIL SCALE: N.T.S.



LIGHTING FIXTURE TYPE	A6
	PHA-CS-D-44-W-PS
VOLTAGE	LED CABLE SUSPENDE
DRIVER	
LENS/LOUVER REMARKS	LAMBERTIAN
LIGHTING FIXTURE TYPE	A8
MANUFACTURER	AYO LIGHTING PHA-CS-D-44-W-PS
FIXTURE DESCRIPTION	1D-W-W-W-MW
DRIVER	7.2W PER FT/ 825LM 0-10V DIMMING
HOUSING	
REMARKS	
	A12
LIGHTING FIXTURE TYPE	AYO LIGHTING
FIXTURE DESCRIPTION	PHA-CS-D-44-W-PS 1D-W-W-W-MW LED CABLE SUSPENDE
DRIVER	7.2W PER FT/ 825LM 0-10V DIMMING
	CABLE SUSPENDED EXTRUDED ALUMINUM LAMBERTIAN
LIGHTING FIXTURE TYPE	A14
MANUFACTURER	AYO LIGHTING PHA-CS-D-44-W-PS
VOLTAGE	1D-W-W-W-MW LED CABLE SUSPENDE
DRIVER	7.2W PER FT/ 825LM 0-10V DIMMING CABLE SUSPENDED
HOUSING LENS/LOUVER REMARKS	
LIGHTING FIXTURE TYPE	A24
	PHA-CS-D-44-W-PS
VOLTAGE LAMP & DESIGNATION	
DRIVER	0-10V DIMMING CABLE SUSPENDED EXTRUDED ALUMINUM
LENS/LOUVER REMARKS	LAMBERTIAN
LIGHTING FIXTURE TYPE	o ^{BB}
MANUFACTURER	CORONET LED DROP-W-6-35-MED-
MANUFACTURER CATALOG NO FIXTURE DESCRIPTION VOLTAGE	CORONET LED DROP-W-6-35-MED- WFL-NA LED PENDANT UNV
MANUFACTURER CATALOG NO FIXTURE DESCRIPTION VOLTAGE LAMP & DESIGNATION DRIVER MOUNTING	CORONET LED DROP-W-6-35-MED- WFL-NA LED PENDANT UNV
MANUFACTURER CATALOG NO FIXTURE DESCRIPTION VOLTAGE LAMP & DESIGNATION DRIVER	CORONET LED DROP-W-6-35-MED- WFL-NA LED PENDANT UNV 12W, 1031LM, 3500K 0-10V DIMMING PENDANT CABLE
MANUFACTURER CATALOG NO FIXTURE DESCRIPTION VOLTAGE LAMP & DESIGNATION DRIVER MOUNTING HOUSING LENS/LOUVER REMARKS LIGHTING FIXTURE TYPE	CORONET LED DROP-W-6-35-MED- WFL-NA LED PENDANT UNV 0-10V DIMMING PENDANT CABLE ALUMINUM o ^{BW}
MANUFACTURER CATALOG NO FIXTURE DESCRIPTION VOLTAGE LAMP & DESIGNATION DRIVER MOUNTING HOUSING LENS/LOUVER REMARKS LIGHTING FIXTURE TYPE MANUFACTURER CATALOG NO	CORONET LED
MANUFACTURER CATALOG NO FIXTURE DESCRIPTION VOLTAGE LAMP & DESIGNATION DRIVER MOUNTING HOUSING LENS/LOUVER REMARKS LIGHTING FIXTURE TYPE MANUFACTURER CATALOG NO FIXTURE DESCRIPTION VOLTAGE	CORONET LED
MANUFACTURER CATALOG NO FIXTURE DESCRIPTION VOLTAGE LAMP & DESIGNATION DRIVER MOUNTING HOUSING LENS/LOUVER REMARKS LIGHTING FIXTURE TYPE MANUFACTURER CATALOG NO FIXTURE DESCRIPTION VOLTAGE LAMP & DESIGNATION DRIVER MOUNTING	CORONET LED
MANUFACTURER CATALOG NO FIXTURE DESCRIPTION VOLTAGE LAMP & DESIGNATION DRIVER MOUNTING HOUSING LENS/LOUVER REMARKS LIGHTING FIXTURE TYPE MANUFACTURER CATALOG NO FIXTURE DESCRIPTION VOLTAGE LAMP & DESIGNATION DRIVER	CORONET LED
MANUFACTURER CATALOG NO FIXTURE DESCRIPTION VOLTAGE LAMP & DESIGNATION DRIVER MOUNTING HOUSING LENS/LOUVER REMARKS LIGHTING FIXTURE TYPE MANUFACTURER CATALOG NO FIXTURE DESCRIPTION VOLTAGE LAMP & DESIGNATION DRIVER MOUNTING HOUSING LENS/LOUVER	CORONET LED
MANUFACTURER CATALOG NO FIXTURE DESCRIPTION VOLTAGE LAMP & DESIGNATION DRIVER MOUNTING HOUSING LENS/LOUVER REMARKS LIGHTING FIXTURE TYPE MANUFACTURER CATALOG NO FIXTURE DESCRIPTION VOLTAGE LAMP & DESIGNATION DRIVER MOUNTING HOUSING LENS/LOUVER REMARKS LIGHTING FIXTURE TYPE MANUFACTURER CATALOG NO	CORONET LED
MANUFACTURER CATALOG NO FIXTURE DESCRIPTION VOLTAGE LAMP & DESIGNATION DRIVER MOUNTING HOUSING LENS/LOUVER REMARKS LIGHTING FIXTURE TYPE MANUFACTURER CATALOG NO FIXTURE DESCRIPTION VOLTAGE LAMP & DESIGNATION REMARKS LIGHTING FIXTURE TYPE MANUFACTURER REMARKS	CORONET LED
MANUFACTURER CATALOG NO FIXTURE DESCRIPTION VOLTAGE LAMP & DESIGNATION DRIVER MOUNTING HOUSING LENS/LOUVER REMARKS LIGHTING FIXTURE TYPE MANUFACTURER CATALOG NO FIXTURE DESCRIPTION VOLTAGE LAMP & DESIGNATION DRIVER MOUNTING HOUSING LENS/LOUVER REMARKS LIGHTING FIXTURE TYPE MANUFACTURER CATALOG NO FIXTURE DESCRIPTION VOLTAGE LIGHTING FIXTURE TYPE MANUFACTURER CATALOG NO FIXTURE DESCRIPTION VOLTAGE LAMP & DESIGNATION DRIVER	CORONET LED
MANUFACTURER CATALOG NO FIXTURE DESCRIPTION VOLTAGE LAMP & DESIGNATION DRIVER MOUNTING HOUSING LENS/LOUVER REMARKS LIGHTING FIXTURE TYPE MANUFACTURER CATALOG NO FIXTURE DESCRIPTION VOLTAGE LAMP & DESIGNATION DRIVER MOUNTING LIGHTING FIXTURE TYPE MANUFACTURER REMARKS LIGHTING FIXTURE TYPE MANUFACTURER CATALOG NO FIXTURE DESCRIPTION VOLTAGE LAMP & DESIGNATION FIXTURE DESCRIPTION VOLTAGE LAMP & DESIGNATION DRIVER	CORONET LED DROP-W-6-35-MED- WFL-NA LED PENDANT .LED PENDANT CABLE
MANUFACTURER CATALOG NO FIXTURE DESCRIPTION VOLTAGE LAMP & DESIGNATION DRIVER MOUNTING HOUSING ENS/LOUVER REMARKS LIGHTING FIXTURE TYPE MANUFACTURER CATALOG NO FIXTURE DESCRIPTION VOLTAGE LAMP & DESIGNATION DRIVER MOUNTING HOUSING LENS/LOUVER REMARKS LIGHTING FIXTURE TYPE MANUFACTURER CATALOG NO FIXTURE DESCRIPTION VOLTAGE LIGHTING FIXTURE TYPE MANUFACTURER CATALOG NO FIXTURE DESCRIPTION VOLTAGE LAMP & DESIGNATION DRIVER MOUNTING HOUSING LAMP & DESIGNATION DRIVER MOUNTING HOUSING LENS/LOUVER REMARKS LIGHTING FIXTURE TYPE	CORONET LED DROP-W-6-35-MED- WFL-NA LED PENDANT .LED PENDANT CABLE
MANUFACTURER CATALOG NO	CORONET LED
MANUFACTURER CATALOG NO FIXTURE DESCRIPTION VOLTAGE LAMP & DESIGNATION DRIVER MOUNTING HOUSING LENS/LOUVER REMARKS LIGHTING FIXTURE TYPE MANUFACTURER CATALOG NO FIXTURE DESCRIPTION VOLTAGE LAMP & DESIGNATION DRIVER MOUNTING HOUSING LENS/LOUVER REMARKS LIGHTING FIXTURE TYPE MANUFACTURER CATALOG NO FIXTURE DESCRIPTION VOLTAGE LAMP & DESIGNATION DRIVER MOUNTING HOUSING LAMP & DESIGNATION DRIVER MOUNTING HOUSING LAMP & DESIGNATION DRIVER MOUNTING HOUSING LIGHTING FIXTURE TYPE MANUFACTURER REMARKS LIGHTING FIXTURE TYPE MANUFACTURER CATALOG NO FIXTURE DESCRIPTION VOLTAGE LIGHTING FIXTURE TYPE MANUFACTURER CATALOG NO FIXTURE DESCRIPTION VOLTAGE LIGHTING FIXTURE TYPE MANUFACTURER CATALOG NO FIXTURE DESCRIPTION VOLTAGE LAMP & DESIGNATION DRIVER	CORONET LED
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MANUFACTURER CATALOG NO	CORONET LED
MANUFACTURER CATALOG NO	CORONET LED DROP-W-6-35-MED- WFL-NA LED PENDANT LED PENDANT CABLE ALUMINUM CORONET LED DROP-W-6-35-MED- WFL-NA LED PENDANT CORONET LED DROP-W-6-35-MED- WFL-NA LED PENDANT UNV 12W, 1031LM, 3500K .0-10V DIMMING PENDANT CABLE ALUMINUM
MANUFACTURER CATALOG NO FIXTURE DESCRIPTION VOLTAGE LAMP & DESIGNATION DRIVER MOUNTING HOUSING LENS/LOUVER REMARKS LIGHTING FIXTURE TYPE MANUFACTURER CATALOG NO FIXTURE DESCRIPTION VOLTAGE LAMP & DESIGNATION DRIVER MOUNTING HOUSING LENS/LOUVER REMARKS LIGHTING FIXTURE TYPE MANUFACTURER CATALOG NO FIXTURE DESCRIPTION VOLTAGE LAMP & DESIGNATION DRIVER MOUNTING HOUSING LAMP & DESIGNATION DRIVER MOUNTING HOUSING LIGHTING FIXTURE TYPE MANUFACTURER CATALOG NO FIXTURE DESCRIPTION VOLTAGE LIGHTING FIXTURE TYPE MANUFACTURER CATALOG NO FIXTURE DESCRIPTION VOLTAGE LAMP & DESIGNATION DRIVER MOUNTING HOUSING LIGHTING FIXTURE TYPE MANUFACTURER CATALOG NO FIXTURE DESCRIPTION VOLTAGE LIGHTING FIXTURE TYPE MANUFACTURER CATALOG NO FIXTURE DESCRIPTION VOLTAGE LIGHTING FIXTURE TYPE MANUFACTURER CATALOG NO FIXTURE DESCRIPTION VOLTAGE LIGHTING FIXTURE TYPE	CORONET LED DROP-W-6-35-MED- WFL-NA LED PENDANT LED PENDANT CABLE ALUMINUM CORONET LED DROP-W-6-35-MED- WFL-NA LED PENDANT UNV 12W, 1031LM, 3500K 0-10V DIMMING PENDANT CABLE ALUMINUM CORONET LED DROP-N-4-35-MED- WFL-NA LED SURFACE MOUNT UNV 12W, 1031LM, 3500K 0-10V DIMMING SURFACE ALUMINUM
MANUFACTURER CATALOG NO	CORONET LED DROP-W-6-35-MED- WFL-NA LED PENDANT LED PENDANT CABLE ALUMINUM
MANUFACTURER CATALOG NO	CORONET LED DROP-W-6-35-MED- WFL-NA LED PENDANT LED PENDANT CABLE ALUMINUM CORONET LED DROP-W-6-35-MED- WFL-NA LED PENDANT LED PENDANT UNV 12W, 1031LM, 3500K 0-10V DIMMING PENDANT CABLE ALUMINUM CORONET LED DROP-N-4-35-MED- WFL-NA LED SURFACE MOUNT DROP-N-4-35-MED- WFL-NA LED SURFACE MOUNT UNV 12W, 1031LM, 3500K 0-10V DIMMING SURFACE ALUMINUM D D D D D D D D D D D D D D D D D
MANUFACTURER CATALOG NO FIXTURE DESCRIPTION VOLTAGE LAMP & DESIGNATION DRIVER MOUNTING HOUSING LENS/LOUVER REMARKS LIGHTING FIXTURE TYPE MANUFACTURER CATALOG NO FIXTURE DESCRIPTION VOLTAGE LAMP & DESIGNATION DRIVER MOUNTING HOUSING LIGHTING FIXTURE TYPE MANUFACTURER CATALOG NO FIXTURE DESCRIPTION VOLTAGE LAMP & DESIGNATION DRIVER MOUNTING HOUSING LAMP & DESIGNATION DRIVER MOUNTING HOUSING LIGHTING FIXTURE TYPE MANUFACTURER CATALOG NO FIXTURE DESCRIPTION VOLTAGE LAMP & DESIGNATION PRIVER MOUNTING HOUSING LIGHTING FIXTURE TYPE MANUFACTURER CATALOG NO FIXTURE DESCRIPTION VOLTAGE LAMP & DESIGNATION PRIVER MOUNTING HOUSING LIGHTING FIXTURE TYPE MANUFACTURER CATALOG NO FIXTURE DESCRIPTION VOLTAGE LIGHTING FIXTURE TYPE	CORONET LED DROP-W-6-35-MED- WFL-NA LED PENDANT LED PENDANT CABLE ALUMINUM CORONET LED DROP-W-6-35-MED- WFL-NA LED PENDANT LED PENDANT UNV 12W, 1031LM, 3500K 0-10V DIMMING PENDANT CABLE ALUMINUM CORONET LED DROP-N-4-35-MED- WFL-NA LED SURFACE MOUNT DROP-N-4-35-MED- WFL-NA LED SURFACE MOUNT UNV 12W, 1031LM, 3500K 0-10V DIMMING SURFACE ALUMINUM D D D D D D D D D D D D D D D D
MANUFACTURER CATALOG NO FIXTURE DESCRIPTION VOLTAGE LAMP & DESIGNATION DRIVER MOUNTING HOUSING LENS/LOUVER REMARKS LIGHTING FIXTURE TYPE MANUFACTURER CATALOG NO FIXTURE DESCRIPTION VOLTAGE LAMP & DESIGNATION DRIVER MOUNTING HOUSING LIGHTING FIXTURE TYPE MANUFACTURER CATALOG NO FIXTURE DESCRIPTION VOLTAGE LAMP & DESIGNATION DRIVER MOUNTING HOUSING LAMP & DESIGNATION DRIVER MOUNTING HOUSING LIGHTING FIXTURE TYPE MANUFACTURER CATALOG NO FIXTURE DESCRIPTION VOLTAGE LAMP & DESIGNATION PRIVER MOUNTING HOUSING LIGHTING FIXTURE TYPE MANUFACTURER CATALOG NO FIXTURE DESCRIPTION VOLTAGE LAMP & DESIGNATION PRIVER MOUNTING HOUSING LIGHTING FIXTURE TYPE MANUFACTURER CATALOG NO FIXTURE DESCRIPTION VOLTAGE LIGHTING FIXTURE TYPE	CORONET LED DROP-W-6-35-MED- WFL-NA LED PENDANT LED PENDANT CABLE ALUMINUM CORONET LED DROP-W-6-35-MED- WFL-NA LED PENDANT UNV 12W, 1031LM, 3500K 0-10V DIMMING PENDANT CABLE ALUMINUM CORONET LED DROP-N-4-35-MED- WFL-NA LED SURFACE MOUNT DROP-N-4-35-MED- WFL-NA LED SURFACE MOUNT UNV 12W, 1031LM, 3500K 0-10V DIMMING SURFACE ALUMINUM D AYO LIGHTING D C C C C C C C C C C C C C
MANUFACTURER CATALOG NO FIXTURE DESCRIPTION VOLTAGE LAMP & DESIGNATION DRIVER MOUNTING HOUSING LENS/LOUVER REMARKS LIGHTING FIXTURE TYPE MANUFACTURER CATALOG NO FIXTURE DESCRIPTION VOLTAGE LAMP & DESIGNATION DRIVER MOUNTING HOUSING LIGHTING FIXTURE TYPE MANUFACTURER CATALOG NO FIXTURE DESCRIPTION VOLTAGE LAMP & DESIGNATION DRIVER MOUNTING HOUSING LAMP & DESIGNATION DRIVER MOUNTING HOUSING LIGHTING FIXTURE TYPE MANUFACTURER CATALOG NO FIXTURE DESCRIPTION VOLTAGE LAMP & DESIGNATION PRIVER MOUNTING HOUSING LIGHTING FIXTURE TYPE MANUFACTURER CATALOG NO FIXTURE DESCRIPTION VOLTAGE LAMP & DESIGNATION PRIVER MOUNTING HOUSING LIGHTING FIXTURE TYPE MANUFACTURER CATALOG NO FIXTURE DESCRIPTION VOLTAGE LIGHTING FIXTURE TYPE	CORONET LED DROP-W-6-35-MED- WFL-NA LED PENDANT LED PENDANT CABLE ALUMINUM CORONET LED DROP-W-6-35-MED- WFL-NA LED PENDANT UNV 12W, 1031LM, 3500K 0-10V DIMMING PENDANT CABLE ALUMINUM CORONET LED DROP-N-4-35-MED- WFL-NA LED SURFACE MOUNT DROP-N-4-35-MED- WFL-NA LED SURFACE MOUNT UNV 12W, 1031LM, 3500K 0-10V DIMMING SURFACE ALUMINUM D AYO LIGHTING D C C C C C C C C C C C C C
MANUFACTURER CATALOG NO FIXTURE DESCRIPTION VOLTAGE LAMP & DESIGNATION DRIVER MOUNTING HOUSING LENS/LOUVER REMARKS LIGHTING FIXTURE TYPE MANUFACTURER CATALOG NO FIXTURE DESCRIPTION VOLTAGE LAMP & DESIGNATION DRIVER MOUNTING HOUSING LIGHTING FIXTURE TYPE MANUFACTURER CATALOG NO FIXTURE DESCRIPTION VOLTAGE LAMP & DESIGNATION DRIVER MOUNTING HOUSING LAMP & DESIGNATION DRIVER MOUNTING HOUSING LIGHTING FIXTURE TYPE MANUFACTURER CATALOG NO FIXTURE DESCRIPTION VOLTAGE LAMP & DESIGNATION PRIVER MOUNTING HOUSING LIGHTING FIXTURE TYPE MANUFACTURER CATALOG NO FIXTURE DESCRIPTION VOLTAGE LAMP & DESIGNATION PRIVER MOUNTING HOUSING LIGHTING FIXTURE TYPE MANUFACTURER CATALOG NO FIXTURE DESCRIPTION VOLTAGE LIGHTING FIXTURE TYPE	CORONET LED DROP-W-6-35-MED- WFL-NA LED PENDANT LED PENDANT CABLE ALUMINUM CORONET LED DROP-W-6-35-MED- WFL-NA LED PENDANT LED PENDANT UNV 12W, 1031LM, 3500K 0-10V DIMMING PENDANT CABLE ALUMINUM CORONET LED DROP-N-4-35-MED- WFL-NA LED SURFACE MOUNT DROP-N-4-35-MED- WFL-NA LED SURFACE MOUNT UNV 12W, 1031LM, 3500K 0-10V DIMMING SURFACE ALUMINUM D D D D D D D D D D D D D D D D

N.T.S.

ING	MANUFACTURERSPI LIGHTING		
D-44-W-PSW-CL-CR-935-VL-L-	CATALOG NO	MANUFACTURERECLIPSE LIGHTING CATALOG NOCK-S-SLED-SCCT-UNV-BK-OC	С
W-MW E SUSPENDED LUMINAIRE	VOLTAGE120	FIXTURE DESCRIPTIONLED WALL MOUNT VOLTAGEUNV	
FT/ 825LM PER FT/ 3500K	LAMP & DESIGNATION	LAMP & DESIGNATION28W, 4150LM, 3500K DRIVER0-10V DIMMING	
MMÍNG	MOUNTINGCABLE MOUNTED HOUSINGALUMINUM	MOUNTINGWALL	
SPENDED ALUMINUM	LENS/LOUVERUV-STABILIZED ACRYLIC	HOUSINGALUMINUM LENS/LOUVERPOLYCARBONATE DIFFUSER	
N	REMÄRKS	REMÁRKS	
	LIGHTING FIXTURE TYPE		
	O	LIGHTING FIXTURE TYPE	
	MANUFACTURERSPI LIGHTING CATALOG NOAIP12043		
ING D-44-W-PSW-CL-CR-935-VL-L-	FIXTURE DESCRIPTIONLED PENDANT SPHERE VOLTAGE	MANUFACTURERCORONET LED CATALOG NOMAG-SP-SM-35-MED-BLK-FL-	-NA
W-MW SUSPENDED LUMINAIRE	LAMP & DESIGNATION	FIXTURE DESCRIPTIONLED TRACK LUMINAIRE VOLTAGE	
	DRIVERO—10V DIMMING MOUNTINGCABLE MOUNTED	LAMP & DESIGNATION	
FT/ 825LM PER FT/ 3500K	HOUSINGALUMINUM	DRIVERDIMMABLE MOUNTINGMAGNETICALLY MOUNT	
SPENDED ALUMINUM	LENS/LOUVERUV—STABILIZED ACRYLIC REMARKS	HOUSING EXTRUDED, RECYCLED, ALUMINU LENS/LOUVER	N
N	9 9 F	REMARKS	
	of of of		
		<u>P2</u>	
	LIGHTING FIXTURE TYPE	LIGHTING FIXTURE TYPE	
NG	MANUFACTURERKUZCO LIGHTING	MANUFACTURER	
-44-W-PSW-CL-CR-935-VL-L-	CATALOG NOCH97358 FIXTURE DESCRIPTIONLED CHANDELIER	CATALOG NOMAG-LIN-2-35-MED-BLK-NA FIXTURE DESCRIPTIONLED LINEAR	
N-MW SUSPENDED LUMINAIRE	VOLTAGE	VOLTAGE	00K
FT/ 825LM PER FT/ 3500K	LAMP & DESIGNATION	DRIVERDIMMABLE	551
MING	MOUNTINGCEILING HOUSINGALUMINUM, STEEL	MOUNTINGMAGNETICALLY MOUNT HOUSINGEXTRUDED, RECYCLED, ALUMINU	M
PENDED	LENS/LOUVEROPAL GLASS	LENS/LOUVER	
١	REMÁRKS		
	G		
	LIGHTING FIXTURE TYPE OG		
	MANUFACTURERSPI LIGHTING		
NG	CATALOG NOF FIXTURE DESCRIPTIONLED PENDANT SPHERE	MANUFACTURERCORONET LED	
-44-W-PSW-CL-CR-935-VL-L-	VOLTAGE	CATALOG NOMAG-TRK-8-NA-35-MED-UNV-	-DB-DR60-
V-MW SUSPENDED LUMINAIRE	LAMP & DESIGNATION	BLK-SM FIXTURE DESCRIPTION	
	MOUNTINGCABLE MOUNTED	VOLTAGEUNV	
FT/ 825LM PER FT/ 3500K MING	HOUSINGALUMINUM LENS/LOUVERUV–STABILIZED ACRYLIC	LAMP & DESIGNATION60W DRIVER DRIVER0-10V DIMMING	
PENDED ALUMINUM	REMARKS	MOUNTINGSURFACE HOUSINGEXTRUDED ALUMINUM	
		LENS/LOUVER	
	LIGHTING FIXTURE TYPE Θ	REMÁRKS	
	MANUFACTURERWEST ELM	ТК2	
	CATALOG NOOLIVIA PENDANT FIXTURE DESCRIPTIONLED 29" PENDANT		
	VOLTAGEUNV LAMP & DESIGNATION		
NG -44-W-PSW-CL-CR-935-VL-L-	DRIVER0-10V DIMMING	LIGHTING FIXTURE TYPE	
V-MW	MOUNTINGCEILING HOUSINGBRASS		
SUSPENDED LUMINAIRE	LENS/LOUVERGLASS GLOBE	MANUFACTURERCORONET LED CATALOG NOMAG-TRK-8-NA-35-MED-UNV-	-DB-DR60-
FT, 825LM PER FT, 3500K		BLK-SM	
	LIGHTING FIXTURE TYPE \bigcirc	MAG-TRK-X'-X"-NA-35-MED- DR60-BLK-SM	JNV-DB-
		FIXTURE DESCRIPTION	
`	MANUFACTURERALORA MOOD CATALOG NOFM554215	LAMP & DESIGNATION60W DRIVER	
	FIXTURE DESCRIPTION LED SURFACE MOUNT	DRIVERD-10V DRIVER MOUNTINGSURFACE	
	VOLTAGE120 LAMP & DESIGNATION	HOUSINGEXTRUDED ALUMINUM	
50	DRIVERELV DIMMER MOUNTINGSURFACE	LENS/LOUVER REMARKS	
ED 5–35–MED–UNV–DB–BLK–PC–	HOUSINGSTEEL		
NT	LENS/LOUVERFROSTED GLASS REMARKS	X	
LM, 3500K IMING		LIGHTING FIXTURE TYPE	
CABLE	LIGHTING FIXTORE TIFE	MANUFACTURERSIGNTEX CRYSTAL CATALOG NOCRSBB-2RCW-AB-TW	
	MANUFACTURERKUZCO LIGHTING CATALOG NOB60–35–8014–P–	FIXTURE DESCRIPTION SELF-CONTAINED EMERGENCY E	XIT SIGN
	120-R3P-SCP-R-T	VOLTAGE120 LAMP & DESIGNATIONLED	
	FIXTURE DESCRIPTIONLED 3" DOWNLIGHT	DRIVER	
ED	LAMP & DESIGNATION	MOUNTINGCEILING HOUSINGEXTRUDED ALUMINUM	
ED -35-MED-UNV-DB-W-PC-	DRIVER0-10V DIMMING MOUNTINGRECESSED	LENS/LOUVERACRYLIC REMARKS	
NT	HOUSINGALUMINUM LENS/LOUVERAPERTURE LENS		
	REMARKS		
LM, 3500K MING	۱ ۵	LIGHTING FIXTURE TYPE	
ABLE	LIGHTING FIXTURE TYPE		
	MANUFACTURERAYO LIGHTING	CATALOG NOCAEBB-2RCW-AB-TW FIXTURE DESCRIPTIONSELF-CONTAINED EMERGENCY E	XIT SIGN
	CATALOG NOO3S-CS-D-44-W-W-CL-CR_835-VL-L- 1D-W-W	VOLTAGE120	
	FIXTURE DESCRIPTIONLED CABLE SUSPENDED LUMINAIRE	LAMP & DESIGNATIONLED DRIVER	
	VOLTAGE120 LAMP & DESIGNATION	MOUNTINGCEILING HOUSINGEXTRUDED ALUMINUM	
	DRIVER	LENS/LOUVERACRYLIC	
-35-MED-UNV-DB-W-SM-	MOUNTINGCABLE_SUSPENDED HOUSINGEXTRUDED_ALUMINUM	REMARKS	
CE MOUNT	LENS/LOUVERLAMBERTIAN REMARKS		
	MANUFACTURERAYO LIGHTING		
	MANUFACTURERAYO LIGHTING CATALOG NOO3S-CS-D-44-W-W-CL-CR_835-VL-L- FIXTURE DESCRIPTION		
MIŃG	MANUFACTURERAYO LIGHTING CATALOG NO03S-CS-D-44-W-W-CL-CR_835-VL-L- FIXTURE DESCRIPTION1D-W-W VOLTAGELED CABLE SUSPENDED LUMINAIRE		
NG 835-VL-L-1D-	MANUFACTURER		
NG 835-VL-L-1D-	MANUFACTURERAYO LIGHTING CATALOG NO		
NG 835-VL-L-1D- SED LUMINAIRE FT, 480LM PER FT, 3500K	AYO LIGHTING CATALOG NO		
MÍŃG 835–VL–L–1D– SED LUMINAIRE FT, 480LM PER FT, 3500K	MANUFACTURERAYO LIGHTING CATALOG NOO3S-CS-D-44-W-W-CL-CR_835-VL-L- FIXTURE DESCRIPTION1D-W-W VOLTAGELED CABLE SUSPENDED LUMINAIRE LAMP & DESIGNATION120 DRIVER	LIGHTING SCHEDULE NOTES:	
NG 835-VL-L-1D- SED LUMINAIRE FT, 480LM PER FT, 3500K MING ALUMINUM	AYO LIGHTING CATALOG NO		
NG 835-VL-L-1D- SED LUMINAIRE FT, 480LM PER FT, 3500K MING ALUMINUM	MANUFACTURER	1. ALL LAMP/LED COLORS SHALL BE CONFIRMED BY ARCHITECT.	
MIŃG NG 835-VL-L-1D- SED LUMINAIRE FT, 480LM PER FT, 3500K MING ALUMINUM	MANUFACTURER AYO LIGHTING CATALOG NO. O3S-CS-D-44-W-W-CL-CR_835-VL-L- FIXTURE DESCRIPTION 1D-W-W VOLTAGE LED CABLE SUSPENDED LUMINAIRE LAMP & DESIGNATION 120 DRIVER 3.6W PER FT, 485LM PER FT, 3500K MOUNTING 0-10V DIMMING HOUSING CABLE SUSPENDED LENS/LOUVER EXTRUDED ALUMINUM REMARKS LAMBERTIAN - -		NGS.
MIŃG NG 835-VL-L-1D- SED LUMINAIRE FT, 480LM PER FT, 3500K MING ALUMINUM	MANUFACTURER AYO LIGHTING CATALOG NO. O3S-CS-D-44-W-W-CL-CR_835-VL-L- FIXTURE DESCRIPTION 1D-W-W VOLTAGE LED CABLE SUSPENDED LUMINAIRE LAMP & DESIGNATION 120 DRIVER 3.6W PER FT, 485LM PER FT, 3500K MOUNTING 0-10V DIMMING HOUSING CABLE SUSPENDED LENS/LOUVER EXTRUDED ALUMINUM REMARKS LAMBERTIAN - - LIGHTING FIXTURE TYPE M MANUFACTURER COLUMBIA LIGHTING	 ALL LAMP/LED COLORS SHALL BE CONFIRMED BY ARCHITECT. CONFIRM FINISHES OF ALL FIXTURES WITH ARCHITECTURAL DRAW CONFIRM CEILING TYPES AND MOUNTING HEIGHTS OF ALL FIXTUR 	
LM, 3500K MING 835–VL–L–1D– SED LUMINAIRE FT, 480LM PER FT, 3500K MING ALUMINUM	MANUFACTURER AYO LIGHTING CATALOG NO. O3S-CS-D-44-W-W-CL-CR_835-VL-L- FIXTURE DESCRIPTION 1D-W-W VOLTAGE LED CABLE SUSPENDED LUMINAIRE LAMP & DESIGNATION 120 DRIVER 3.6W PER FT, 485LM PER FT, 3500K MOUNTING 0-10V DIMMING HOUSING CABLE SUSPENDED LENS/LOUVER EXTRUDED ALUMINUM REMARKS LAMBERTIAN - -	 ALL LAMP/LED COLORS SHALL BE CONFIRMED BY ARCHITECT. CONFIRM FINISHES OF ALL FIXTURES WITH ARCHITECTURAL DRAW 	
MÍNG 835-VL-L-1D- SED LUMINAIRE FT, 480LM PER FT, 3500K MING ALUMINUM	MANUFACTURER AYO LIGHTING CATALOG NO. O3S - CS - D - 44 - W - W - CL - CR_835 - VL - L - FIXTURE DESCRIPTION 1D - W - W VOLTAGE LED CABLE SUSPENDED LUMINAIRE LAMP & DESIGNATION 120 DRIVER 3.6W PER FT, 485LM PER FT, 3500K MOUNTING O - 10V DIMMING HOUSING CABLE SUSPENDED LENS/LOUVER EXTRUDED ALUMINUM REMARKS LAMBERTIAN - - LIGHTING FIXTURE TYPE M MANUFACTURER COLUMBIA LIGHTING CATALOG NO. MPS-4-35-VW-C-W-ED-U FIXTURE DESCRIPTION LED 4FT LINEAR VOLTAGE UNV	 ALL LAMP/LED COLORS SHALL BE CONFIRMED BY ARCHITECT. CONFIRM FINISHES OF ALL FIXTURES WITH ARCHITECTURAL DRAW CONFIRM CEILING TYPES AND MOUNTING HEIGHTS OF ALL FIXTUR ARCHITECTURAL DRAWINGS. CONTRACTOR SHALL PROVIDE ALL REQUIRED FIXTURE SUPPORT F 	es with
MÍNG 835-VL-L-1D- SED LUMINAIRE FT, 480LM PER FT, 3500K MING ALUMINUM	MANUFACTURER AYO LIGHTING CATALOG NO. O3S-CS-D-44-W-W-CL-CR_835-VL-L- FIXTURE DESCRIPTION 1D-W-W VOLTAGE LED CABLE SUSPENDED LUMINAIRE LAMP & DESIGNATION 120 DRIVER 3.6W PER FT, 485LM PER FT, 3500K MOUNTING O-10V DIMMING HOUSING CABLE SUSPENDED LENS/LOUVER EXTRUDED ALUMINUM REMARKS LAMBERTIAN - - LIGHTING FIXTURE TYPE M MANUFACTURER COLUMBIA LIGHTING CATALOG NO. MPS-4-35-VW-C-W-ED-U FIXTURE DESCRIPTION LED 4FT LINEAR VOLTAGE UNV LAMP & DESIGNATION 23.6W, 3223LM, 3500K DRIVER O-10V DIMMING	 ALL LAMP/LED COLORS SHALL BE CONFIRMED BY ARCHITECT. CONFIRM FINISHES OF ALL FIXTURES WITH ARCHITECTURAL DRAW CONFIRM CEILING TYPES AND MOUNTING HEIGHTS OF ALL FIXTUR ARCHITECTURAL DRAWINGS. CONTRACTOR SHALL PROVIDE ALL REQUIRED FIXTURE SUPPORT H FOR EACH FIXTURE LOCATION. COORDINATE REQUIREMENT WITH ARCHITECTURAL PLANS. SEE LAY-IN FIXTURE DETAIL FOR ADDITION 	ES WITH IARDWARE
NG 835-VL-L-1D- SED LUMINAIRE FT, 480LM PER FT, 3500K MING ALUMINUM	MANUFACTURER AYO LIGHTING CATALOG NO. .03S-CS-D-44-W-W-CL-CR_835-VL-L- FIXTURE DESCRIPTION .1D-W-W VOLTAGE .LED CABLE SUSPENDED LUMINAIRE LAMP & DESIGNATION .120 DRIVER .3.6W PER FT, 485LM PER FT, 3500K MOUNTING .O-10V DIMMING HOUSING .CABLE SUSPENDED LENS/LOUVER .EXTRUDED ALUMINUM REMARKS	 ALL LAMP/LED COLORS SHALL BE CONFIRMED BY ARCHITECT. CONFIRM FINISHES OF ALL FIXTURES WITH ARCHITECTURAL DRAW CONFIRM CEILING TYPES AND MOUNTING HEIGHTS OF ALL FIXTUR ARCHITECTURAL DRAWINGS. CONTRACTOR SHALL PROVIDE ALL REQUIRED FIXTURE SUPPORT FOR EACH FIXTURE LOCATION. COORDINATE REQUIREMENT WITH 	ES WITH IARDWARE
NG 835-VL-L-1D- SED LUMINAIRE FT, 480LM PER FT, 3500K MING ALUMINUM I G NT SPHERE	MANUFACTURER AYO LIGHTING CATALOG NO. O3S-CS-D-44-W-W-CL-CR_835-VL-L- FIXTURE DESCRIPTION 1D-W-W VOLTAGE LED CABLE SUSPENDED LUMINAIRE LAMP & DESIGNATION 120 DRIVER 3.6W PER FT, 485LM PER FT, 3500K MOUNTING O-10V DIMMING HOUSING CABLE SUSPENDED LENS/LOUVER EXTRUDED ALUMINUM REMARKS EXTRUDED ALUMINUM REMARKS MANUFACTURER VOLTAGE COLUMBIA LIGHTING CATALOG NO. MPS-4-35-VW-C-W-ED-U FIXTURE DESCRIPTION LED 4FT LINEAR VOLTAGE UNV LAMP & DESIGNATION 23.6W, 3223LM, 3500K DRIVER O-10V DIMMING MOUNTING SURFACE HOUSING CODE GAUGE STEEL LENS/LOUVER FROSTED LENS	 ALL LAMP/LED COLORS SHALL BE CONFIRMED BY ARCHITECT. CONFIRM FINISHES OF ALL FIXTURES WITH ARCHITECTURAL DRAW CONFIRM CEILING TYPES AND MOUNTING HEIGHTS OF ALL FIXTUR ARCHITECTURAL DRAWINGS. CONTRACTOR SHALL PROVIDE ALL REQUIRED FIXTURE SUPPORT H FOR EACH FIXTURE LOCATION. COORDINATE REQUIREMENT WITH ARCHITECTURAL PLANS. SEE LAY-IN FIXTURE DETAIL FOR ADDITION REQUIREMENTS. HALF-SHADED FIXTURE AND 'E' SUBSCRIPT INDICATES POWERED 	ES WITH IARDWARE INAL
NG 835-VL-L-1D- SED LUMINAIRE FT, 480LM PER FT, 3500K MING ALUMINUM	MANUFACTURER AYO LIGHTING CATALOG NO. .03S-CS-D-44-W-W-CL-CR_835-VL-L- FIXTURE DESCRIPTION .1D-W-W VOLTAGE .LED CABLE SUSPENDED LUMINAIRE LAMP & DESIGNATION .120 DRIVER .3.6W PER FT, 485LM PER FT, 3500K MOUNTING	 ALL LAMP/LED COLORS SHALL BE CONFIRMED BY ARCHITECT. CONFIRM FINISHES OF ALL FIXTURES WITH ARCHITECTURAL DRAW CONFIRM CEILING TYPES AND MOUNTING HEIGHTS OF ALL FIXTUR ARCHITECTURAL DRAWINGS. CONTRACTOR SHALL PROVIDE ALL REQUIRED FIXTURE SUPPORT FOR EACH FIXTURE LOCATION. COORDINATE REQUIREMENT WITH ARCHITECTURAL PLANS. SEE LAY-IN FIXTURE DETAIL FOR ADDITIC REQUIREMENTS. 	ES WITH IARDWARE INAL



TYPICAL LOW VOLTAGE SENSOR LIGHTING CONTROL SCHEMATIC SCALE: N.T.S. <u>NOTE</u>:

EXACT QUANTITY OF DEVICES MAY DIFFER FROM THIS DETAIL. CONTRACTOR SHALL PROVIDE ACTUAL QUANTITY REQUIRED. REFER TO LIGHTING FLOOR PLAN.

ELECTRICAL LEGEND

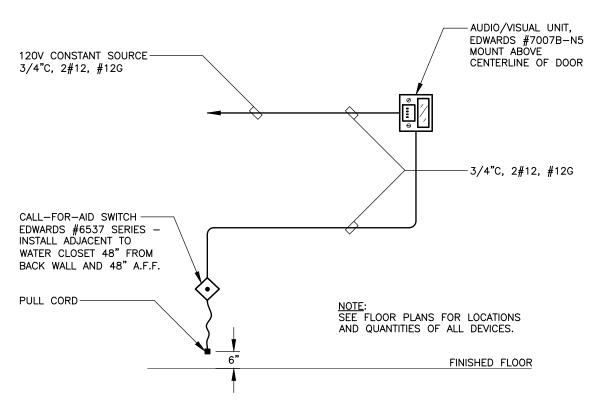
SYMBOL	DESCRIPTION
S	SINGLE POLE TOGGLE SWITCH
S3	THREE WAY TOGGLE SWITCH
S ₄	FOUR WAY TOGGLE SWITCH
Sp	SINGLE POLE DIMMER SWITCH
SF	FAN SWITCH
So	OCCUPANCY SENSOR SWITCH
Sπ	MANUAL MOTOR STARTER WITH THERMAL OVERLOAD PROTECTION
φ	DUPLEX RECEPTACLE
₽	DUPLEX RECEPTACLE, MOUNTED ABOVE COUNTER
₽	DOUBLE DUPLEX RECEPTACLE
#	DOUBLE DUPLEX RECEPTACLE, MOUNTED ABOVE COUNTER
₽ ^{USB}	DUPLEX RECEPTACLE TAMPER PROOF WITH GROUND FAULT PROTECTION, AND COMBINATION TYPE A/C USB
Ф	FLUSH FLOOR MOUNTED BOX WITH DUPLEX RECEPTACLE (TAMPER RESISTANT)
٩	OUTLET TO SUIT EQUIPMENT (CONTRACTOR TO VERIFY)
P/D	POWER/DATA POKE THRU SERVICE FITTING. LEGRAND SERIES #RC3ATCBK-LJB.
-	208Y/120V PANEL
	EXISTING PANELBOARD
	CONDUIT AND WIRE
	CONDUIT AND WIRE, SWITCHED
1,LP —►	HOMERUN TO PANELBOARD, NUMBERS/LETTERS INDICATE CIRCU AND PANELBOARD TERMINATION UNLESS OTHERWISE INDICATED.
J	JUNCTION BOX
U D	HAND DRYER
PS CM	CEILING MOUNTED MOTORIZED PROJECTOR SCREEN
смО	CEILING MOUNTED PROJECTOR
\otimes	MOTOR
Б	SAFETY DISCONNECT SWITCH
\mathbb{O}	CABLE T.V. OUTLET WITH COAXIAL CABLE BACK TO CATV SERVIC LOCATION.
03	OCCUPANCY SENSOR
TC	TIME CLOCK SWITCH
\diamond	CALL-FOR-AID PULL STATION
소	CALL-FOR-AID AUDIO/VISUAL UNIT
ф	CALL-FOR-AID TRANSFORMER
VFD	VARIABLE FREQUENCY DRIVE
IH	INSTA-HOT WATER HEATER
PP	POWER PACK, 20A 120V (PHOTOCELL AND OCCUANCY SENSOR)
\bigtriangledown	DATA OUTLET
WAP	WIRELESS ACCESS POINT, (1) CAT. 6A, 4PR/23 AWG COMMSCOPE PLENUM RATED (BLUE).
� ^{os}	WALL MOUNTED OCCUPANCY SENSOR
CR	CARD READER
EH	ELECTRIC HARDWARE
Vc	VOLUME CONTROL

SWITCHING ONLY

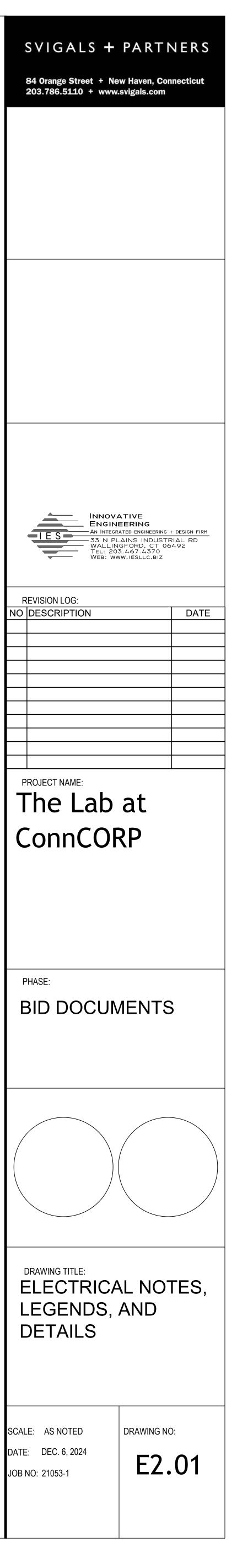
	GENERAL NOTES
1.	THE ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR ALL WORK REQUIRED FOR A COMPLETE, FULLY OPERABLE INSTALLATION. ALL WORK TO BE DONE IN ACCORDANCE WITH THE LATEST APPROVED ISSUE OF THE NE AND APPLICABLE LOCAL CODES.
2.	THIS IS AN EXISTING BUILDING, WITH AN EXISTING SERVICE. THE ELECTRICAL CONTRACTOR SHALL VISIT THE SITE PRIOR TO SUBMITTING A BID TO ASCERTAIN FIELD CONDITIONS AS THEY EXIST AND JUDGE THEIR EFFECT ON THE WORK TO BE DONE. NO ALLOWANCE WILL BE MADE FOR FAILURE TO VISIT THE JOB SITE AND MAKE THIS DETERMINATION.
	THE DRAWINGS SHOW THE GENERAL LAYOUT AND SOME OF THE DETAIL, BUT THEY DO NOT SHOW EVERY FITTING, BEND, ETC. ELECTRICAL CONTRACTOR SHALL PROVIDE ALL SUCH MATERIALS TO MAKE A COMPLETE INSTALLATION DO NOT SCALE DRAWINGS; ACTUAL FIELD MEASUREMENTS AND DIMENSIONS TAKE PRECEDENCE IN ALL CASES.
	ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE STANDARD GENERAL CONDITIONS OF THE CONSTRUCTION CONTRACT, AIA DOCUMENT 201, LATEST EDITION.
6.	ELECTRICAL CONTRACTOR SHALL INSTALL ALL EQUIPMENT IN ACCORDANCE WITH MANUFACTURERS INSTRUCTIONS AND OR REQUIREMENTS FOR PROPER OPERATION AND MAINTENANCE.
	ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR TESTING OF ALL PHASES OF THE WORK AND TO DEMONSTRATE TO OWNER THAT THE EQUIPMENT IS IN FULL OPERATING ORDER.
	THE TERM "PROVIDE" SHALL MEAN TO FURNISH AND INSTALL IN COMPLETE WORKING ORDER. THE SCOPE OF WORK IS AS SHOWN ON THE PLANS AND DETAILED IN THE SPECIFICATIONS.
	ALL THE WIRE SIZES ARE BASED ON COPPER, ALUMINUM IS NOT TO BE USED. ALL WIRING METHODS ARE TO BE IN ACCORDANCE WITH THE CURRENT ISSUE OF THE NATIONAL ELECTRICAL CODI AND APPLICABLE LOCAL CODES. ALL WIRING IS TO BE IN CONDUIT, UNLESS SPECIFICALLY NOTED OTHERWISE. A
12.	WIRING IS TO BE CONCEALED. PROVIDE INDEPENDENT SEISMIC SUPPORT OF ALL ELECTRICAL EQUIPMENT PER IBC CODE.
13.	ELECTRICAL CONTRACTOR SHALL SECURE ALL PERMITS AND PAY FOR ALL REQUIRED FEES, INCLUDING ALL UTILITY FEES.
14.	ELECTRICAL CONTRACTOR SHALL WARRANT AND GUARANTEE ALL MATERIALS AND WORKMANSHIP FOR A PERIOD OF ONE YEAR FROM THE DATE OF FINAL ACCEPTANCE BY THE OWNER.
15.	ELECTRICAL CONTRACTOR SHALL PROVIDE PROOF OF LIABILITY AND PROPERTY INSURANCE TO THE OWNER, ALL DEDUCTIBLES SHALL BE PAID FOR BY THE ELECTRICAL CONTRACTOR IN THE EVENT OF A CLAIM.
16.	PERSONNEL SAFETY IS OF PRIME IMPORTANCE. NO HAZARDOUS CONDITION MUST BE ALLOWED. EVERY CARE MUST BE TAKEN TO PROTECT CONSTRUCTION AND OTHER PERSONNEL. CLEANUP IS TO BE DONE ON A DAILY BASIS. ELECTRICAL CONTRACTOR TO REMOVE AND DISPOSE OF REFUSE FROM SITE.
17.	ELECTRICAL CONTRACTOR SHALL PROVIDE SHOP DRAWINGS FOR APPROVAL FOR ALL LIGHTING FIXTURES, PANELS, SWITCHES, RECEPTACLES, ETC.
18.	ELECTRICAL CONTRACTOR TO VERIFY LIGHTING FIXTURE MOUNTING REQUIREMENTS FOR VARIOUS CEILING TYPES AN ORDER APPROPRIATE HARDWARE.
19.	REMOVAL OF EXISTING ELECTRICAL EQUIPMENT, PANELS, SWITCHES, RECEPTACLES, CONDUIT, WIRE TIME CLOCKS, EMERGENCY LIGHTING UNITS, FIXTURES ETC ARE A PART OF THE SCOPE OF WORK. ALL UNUSED ELECTRICALS SHALL BE REMOVED AS MUCH AS POSSIBLE. THE ELECTRICAL PLANS DO NOT SHOW ALL OF THE ELECTRICAL REMOVAL WORK. PROVIDE TEMPORARY EXTENSION OF SYSTEMS THAT ARE TO BE REPLACED SO THAT CRITICAL SYSTEMS MAY BE KEPT IN PARTIAL OPERATION DURING THE CONSTRUCTION EFFORT.
20.	COORDINATE EXACT PLACEMENT OF EQUIPMENT WITH ARCHITECTURAL AND MECHANICAL PLANS, MAKE FIELD ADJUSTMENTS AS REQUIRED TO AVOID CONFLICTS, VERIFY WITH OWNER.
	ASBESTOS, 'TRANSITE' OR UNKNOWN MATERIAL ENCOUNTERED DURING THE CONSTRUCTION SUSPECTED TO BE ASBESTOS SHALL BE BROUGHT TO THE ATTENTION OF OWNER FOR DISPOSITION. STOP ALL WORK AND CONTACT OWNER IMMEDIATELY IN THIS EVENT.
22.	ELECTRICAL CONTRACTOR TO COORDINATE WITH ARCHITECTURAL AND MECHANICAL CONTRACTOR FOR ITEMS SUPPLI BY THE MECHANICAL/OTHER DIVISIONS BUT INSTALLED BY THE ELECTRICAL CONTRACTOR. ELECTRICAL CONTRACTOR TO REVIEW ALL THE PLANS FOR THE PROJECT FOR ELECTRICAL WORK.
23.	ELECTRICAL CONTRACTOR TO VERIFY ALL EQUIPMENT POWER NEEDS WITH THE ACTUAL SHOP DRAWINGS FOR THE EQUIPMENT TO BE USED, PRIOR TO STARTING ANY ELECTRICAL WORK.
	ALL BALLASTS TO BE HPF AND HAVE THE LOWEST POSSIBLE ENERGY CONSUMPTION FOR THE SPECIFIED LAMP.
	ALL ELECTRICAL PENETRATIONS TO BE FIREPROOFED TO MAINTAIN INTEGRITY OF FIRE WALLS/FLOORS/CEILINGS. NON-FIRE RATED WALLS SHALL BE SEALED AIR TIGHT.
	PROVIDE LAMICOID NAMEPLATES FOR ALL ELECTRICAL DISTRIBUTION AND DISCONNECT EQUIPMENT. THE DISPOSAL OF ALL UNUSED EXISTING ELECTRICAL EQUIPMENT REMOVED IS A PART OF THE SCOPE OF WORK. THE ELECTRICAL CONTRACTOR SHALL DISPOSE OF ALL SUCH EQUIPMENT, INCLUDING HAZARDOUS PCB CONTAINING BALLASTS, IN A MANNER CONSISTENT WITH STATE OF CT. DEPARTMENT OF ENVIRONMENTAL PROTECTION REGULATIONS, CURRENT ISSUE.
	SHARED NEUTRALS ARE NOT TO BE USED. PROVIDE SEPARATE NEUTRALS FOR ALL CIRCUITS. PRIOR TO SUBMISSION OF BIDS GIVE WRITTEN NOTICE TO ARCHITECT AND ENGINEER OF ANY MATERIAL OR APPARATUS THAT IS INADEQUATE, UNSUITABLE FOR THE USE, IN VIOLATION OF LAWS, ORDINANCES, RULES, CODES OR ANY REGULATIONS OF AUTHORITIES HAVING JURISDICTION OR ANY NECESSARY ITEMS OF WORK THAT HAS BEE OMITTED. CONTRACTOR AFFIRMS THAT ABSENT SUCH NOTICE, ALL SYSTEMS WILL FUNCTION SATISFACTORILY WITHOUT
30.	ADDITIONAL EXTRA COMPENSATION. ALL PART NUMBERS ARE PROVIDED FOR THE CONVENIENCE OF THE CONTRACTOR. THEY ARE NOT TO BE CONSIDERED THE COMPLETE SPECIFICATION OF THE PRODUCT. THE PART NUMBER AND DESCRIPTION WILL BE THE COMPLETE SPECIFICATION. IN THE EVENT OF A DISCREPANCY BETWEEN THE TWO, THE MORE STRINGENT, MORE COSTLY FEATURE/PERFORMANCE WILL BE REQUIRED.
31.	FOR ALL ROOFTOP OR GRADE LEVEL HVAC EQUIPMENT, THE ELECTRICAL CONTRACTOR SHALL SUPPLY A GFCI WP, 20A RECEPTACLE FOR EQUIPMENT SERVICING. ALL DISCONNECT SWITCHES ARE TO BE HEAVY DUTY, FUSED, WEATH PROOF (WP) DEVICES.
32.	AT THE CONCLUSION OF THE PROJECT WHILE THE PROJECT IS OCCUPIED AND OPERATING NORMALLY, THE CONTRACTOR IS TO TAKE AND RECORD OPERATING CURRENTS IN THE DISTRIBUTION SYSTEM AND REPORT THESE READINGS TO THE ENGINEER FOR EVALUATION. ENGINEER SHOULD BE ADVISED WHEN THE READINGS ARE TO BE MADE SO THAT HE MAY ATTEND AND WITNESS SAME.
33.	RISER DIAGRAMS ARE PROVIDED TO SHOW DIAGRAMMATIC GENERAL WIRING REQUIREMENTS. WIRING IS TO BE PROVIDED FOR THE PARTICULAR VENDOR/SYSTEM APPROVED FOR THE PROJECT. ALL WIRING IS TO BE CONCEALE
	ALL WIRING IN AIR PLENUM CEILINGS SHALL BE TEFLON COATED AND RATED FOR USE WITHIN THE PLENUM.
	NO LOW VOLTAGE WIRING SHALL BE PERMITTED IN THE SAME RACEWAY AS POWER WIRING. EMERGENCY SERVICES SHALL BE RUN IN SEPARATE RACEWAYS FROM ALL OTHER SYSTEMS.
	PROVIDE DRAG LINES IN ALL EMPTY RACEWAYS. CIRCUIT NUMBERS ARE INDICATED FOR INTENT ONLY. THE ELECTRICAL CONTRACTOR SHALL ADJUST ACCORDINGLY
	THE FIELD, TO BALANCE CIRCUITS EVENLY ON ALL PHASES. REFER TO ARCHITECTURAL DRAWINGS FOR THE EXACT LOCATION AND MOUNTING HEIGHTS OF ALL DEVICES AND
	OUTLETS. CONTRACTOR TO PROVIDE ALL COORDINATION FOR UTILITY SERVICES FOR THE PROJECT. THIS INCLUDES POWER
	UTILITY, TELEPHONE COMPANY AND CABLE TV OPERATOR. CONTRACTOR TO PROVIDE ALL TEMPORARY POWER FOR THE PROJECT. PROVIDE ALL UTILITY COMPANY COORDINATI FOR ALL SERVICES.
	FOR ALL WALL, CEILING, AND FLOOR BOXES WITH DATA COMMUNICATIONS SERVICES PROVIDE EMPTY CONDUIT WITH DRAG LINE TO HUNG CEILING OR OTHER ACCESSIBLE SPACE. REFER TO ELECTRICAL LEGEND FOR CONDUIT SIZE.
	ELECTRICAL CONTRACTOR SHALL PAY ANY ADDITIONAL COST FOR THE UTILITY WORK ASSOCIATED WITH THE PROJECT MINIMUM CONDUCTOR SIZE FOR A FULLY LOADED 20A CIRCUIT, UNLESS OTHERWISE NOTED, SHALL BE #12 FOR ALL BRANCH CIRCUIT RUNS UP TO THE FIRST OUTLET; OVER 60 FEET, #10; OVER 105 FEET, #8; INCREASE CONDUIT SIZE TO SUIT.
45.	ELECTRICAL CONTRACTOR TO VERIFY LOADS, SETTINGS, OVERCURRENT PROTECTION ETC TO INSURE COMPATIBILIT OF EQUIPMENT.
46.	DISCONNECT SWITCHES AND CIRCUIT BREAKER USED AS SWITCHES SHALL BE INSTALLED IN ACCORDANCE WITH AL LOCAL CODES AND THE LATEST VERSION OF THE NATIONAL ELECTRICAL CODE "NEC" SECTION 404.8. ALL DISCONNECT SWITCHES AND CIRCUIT BREAKERS SHALL BE LOCATED SO THAT THEY MAY BE OPERATED FROM A READILY ACCESSIBLE PLACE. THEY SHALL BE INSTALLED SUCH THAT THE CENTER OF THE GRIP OF THE OPERATIN HANDLE OF THE SWITCH OR CIRCUIT BREAKER, WHEN IN ITS HIGHEST POSITION, IS NOT MORE THAN 6'-7" ABOV THE FLOOR OR WORKING PLATFORM
47.	ALL DISCONNECT SWITCHES AND CIRCUIT BREAKER SHALL BE INSTALLED IN ACCORDANCE WITH ALL LOCAL CODES AND THE LATEST VERSION OF THE NATIONAL ELECTRICAL CODE "NEC" SECTION 110.26 TABLE 110.26(A)(1).
48.	ALL NEW FIRE ALARM DEVICES SHALL MATCH THE EXISTING BUILDING STANDARD MANUFACTURER. THE FIRE ALARM SYSTEM'S SOFTWARE AND DISPLAY SHALL BE UPGRADED AS REQUIRED WITH NEW ROOM NAMES AND FLOOR PLAN LAYOUT. THE FIRE ALARM SYSTEM SHALL BE TESTED UPON COMPLETION OF ALL NEW AND/OR RELOCATED FIRE ALARM DEVICES ACCORDING TO [NFPA72 14.4.1.2.1.4] WHEN CHANGES ARE MADE TO SITE SPECIFIC SOFTWARE, T FOLLOWING SHALL APPLY:
	 (1) ALL FUNCTIONS KNOWN TO BE AFFECTED BY THE CHANGE, OR IDENTIFIED BY A MEANS THAT INDICATES CHANGES, SHALL BE 100 PERCENT TESTED.
	(2) IN ADDITION, 10 PERCENT OF INITIATING DEVICES THAT ARE NOT DIRECTLY AFFECTED BY THE CHANGE, UP T

(2) IN ADDITION, 10 PERCENT OF INITIATING DEVICES THAT ARE NOT DIRECTLY AFFECTED BY THE CHANGE, UP TO A MAXIMUM OF 50 DEVICES, ALSO SHALL BE TESTED AND CORRECT SYSTEM OPERATION SHALL BE VERIFIED.

(3) A REVISED RECORD OF COMPLETION IN ACCORDANCE WITH 10.18.2.1 SHALL BE PREPARED TO REFLECT THESE CHANGES.



TYPICAL CALL-FOR-AID WIRING DETAIL



PART 1 - GENERAL PROVISIONS FOR ELECTRICAL WORK

<u>REFERENCES</u> THIS SECTION COVERS THE GENERAL REQUIREMENTS FOR ELECTRICAL WORK; EXAMINE ALL CONTRACT DRAWINGS AND ALL OTHER SECTIONS OF THE SPECIFICATIONS FOR ADDITIONAL WORK RELATED TO THE WORK OF THIS DIVISION.

DEFINITIONS PROVIDE' - TO FURNISH, INSTALL AND CONNECT UP COMPLETE AND READY FOR SAFE AND REGULAR OPERATION OF PARTICULAR WORK REFERRED TO UNLESS, SPECIFICALLY OTHERWISE NOTED.

'INSTALL' - TO ERECT, MOUNT AND CONNECT COMPLETE WITH RELATED ACCESSORIES. 'WORK' - LABOR. MATERIALS. EQUIPMENT, APPARATUS, CONTROLS, ACCESSORIES AND OTHER ITEMS REQUIRED FOR PROPER AND COMPLETE INSTALLATION. WIRING' – RACEWAY, FITTINGS, WIRE, BOXES, MOUNTING HARDWARE AND RELATED ITEMS. 'CONCEALED' - EMBEDDED IN MASONRY OR OTHER CONSTRUCTION CAVITY, INSTALLED IN FURRED SPACES, WITHIN DOUBLE PARTITIONS OR HUNG CEILINGS. 'SIMILAR' OR 'EQUAL' - EQUAL MATERIALS, WEIGHT, SIZE, DESIGN AND EFFICIENCY OF

SPECIFIED PRODUCT. 'CONTRACTOR' - THE ELECTRICAL CONTRACTOR. 'NOTED' - AS INDICATED ON THE DRAWINGS AND/OR SPECIFICATIONS.

<u>SCOPE</u> THIS WORK SHALL CONSIST OF THE FURNISHINGS OF ALL LABOR, MATERIALS AND SERVICES REQUIRED COMPLETE, READY FOR CORRECT OPERATION FOR ALL ELECTRICAL WORK CALL FOR BY THE ACCOMPANYING DRAWINGS AND SPECIFICATIONS. ALL ELECTRICAL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE, STATE AND LOCAL

THE DATA INDICATED IN THESE DRAWINGS AND SPECIFICATIONS ARE AS EXACT AS COULD BE SECURED. BUT THEIR ABSOLUTE ACCURACY IS NOT GUARANTEED. DO NOT SCALE DRAWINGS. EXACT LOCATIONS, DISTANCES, LEVELS AND OTHER CONDITIONS WILL BE GOVERNED BY THE BUILDING. USE THE DRAWINGS AND SPECIFICATIONS FOR GUIDANCE AND SECURE THE ENGINEER'S APPROVAL OF CHANGES IN LOCATIONS. CIRCUITS, WHERE SHOWN ON AN ELECTRICAL DRAWINGS, ARE SO INDICATED PRIMARILY FOR THE PURPOSE (NDICATING THE GENERAL CIRCUIT PLAN AND DO NOT NECESSARILY INDICATE THE EXACT LOCATION OF ROUTING OF THE RACEWAYS UNLESS SPECIFICALLY INDICATED. CIRCUITS SHALL BE RUN IN SUIT CONDITIONS CONSIDERING STRUCTURAL FEATURES, OTHER TRADES, CONSTRUCTION METHODS AND GOOD INSTALLATION PRACTICE. BEFORE SUBMITTING A BID, THE CONTRACTOR SHALL VISIT THE SITE AND BECOME THOROUGHLY FAMILIAR WITH ALL EXISTING CONDITIONS UNDER WHICH THE WORK AND WORK OF OTHER TRADES WILL BE INSTALLED. THIS CONTRACT INCLUDES ALL NECESSAR' OFFSETS, TRANSITIONS, MODIFICATIONS AND RELOCATION REQUIRED TO INSTALL ALL NEW QUIPMENT IN NEW OR EXISTING SPACES. CONTRACTOR SHALL INCLUDE ANY MODIFICATIONS REQUIRED IN EXISTING ELECTRICAL EQUIPMENT FOR INSTALLATION OF NEW ELECTRICAL

CONDUIT WIRING, ETC.) ALL NEW AND EXISTING EQUIPMENT AND SYSTEMS SHALL BE FULLY OPERATIONAL UNDER THIS CONTRACT BEFORE THE PROJECT IS CONSIDERED COMPLETE. THE CONTRACTOR SHALL BE HELD RESPONSIBLE FOR ANY ASSUMPTIONS THAT ARE MADE, ANY OMISSIONS OR ERRORS MADE AS A RESULT OF FAILURE TO VISIT THE SITE AND BECOME THOROUGHLY FAMILIAR WITH THE EXISTING CONDITIONS AND THE CONTRACT DOCUMENTS OF ALL TRADES CODES, REGULATIONS AND STANDARDS

APPROVED CODES. REGULATIONS AND STANDARDS: IBC - INTERNATIONAL BUILDING CODE, 2021 EDITION, AS AMENDED BY THE STATE OF CONNECTICUT 2022 AMENDMENTS IFC - INTERNATIONAL FIRE CODE, 2021 EDITION, AS AMENDED BY THE STATE OF CONNECTICUT 2022 AMENDMENTS 2022 CONNECTICUT STATE FIRE SAFETY CODE STATE DEMOLITION CODE LOCAL BUILDING CODE

NFPA - NATIONAL FIRE PROTECTION CODE NFPA 70 - NATIONAL ELECTRICAL CODE, 2020 EDITION, AS AMENDED BY THE STATE OF CONNECTICUT 2022 AMENDMENTS. NFPA 72 - NATIONAL FIRE ALARM CODE, 2019 EDITION NFPA 101 - LIFE SAFETY CODE, 2021 EDITION, AS AMENDED BY THE STATE OF CONNECTICUT 2022 AMENDMENTS. IECC - INTERNATIONAL ENERGY CONSERVATION CODE, 2021, AS AMENDED BY THE STATE OF CONNECTICUT 2022 AMENDMENTS. ICC/ANSI A117.1, 2017, ACCESSIBLE AND USABLE BUILDINGS AND FACILITIES, AS AMENDED BY THE STATE OF CONNECTICUT 2018 AMENDMENTS.

ANSI - AMERICAN NATIONAL STANDARDS INSTITUTE ASTM - AMERICAN SOCIETY FOR TESTING AND MATERIALS OSHA - OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION U.L. – UNDERWRITERS LABORATORIES

EPA – ENVIRONMENTAL PROTECTION AGENCY

IEEE - INSTITUTE OF ELECTRICAL AND ELECTRONIC ENGINEERS NEMA - NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION PERMITS, FEES AND INSPECTIONS

THE CONTRACTOR SHALL GIVE ALL NECESSARY NOTICES, OBTAIN ALL PERMITS, PAY FOR L GOVERNMENT, STATE SALES TAXES AND APPLICABLE FEES. THE CONTRACTOR SHALL FILE ALL DRAWINGS, COMPLETE ALL DOCUMENTS AND OBTAIN ALL NECESSARY APPROVALS FROM THE PROPER AUTHORITY OR AGENCY HAVING JURISDICTION. OBTAIN ALL REQUIRED CERTIFICATES OF INSPECTION COVERING WORK. THE CONTRACTOR SHALL SEE THAT ALL REQUIRED INSPECTIONS AND TESTS ARE MADE AND SHALL COOPERATE TO MAKE THESE TESTS AS THOROUGH AND AS READILY MADE AS POSSIBLE. <u>MATERIALS AND WORKMANSHIF</u>

ALL MATERIALS AND APPARATUS REQUIRED FOR THE WORK, EXCEPT AS OTHERWISE SPECIFIED, SHALL BE NEW AND OF FIRST-CLASS QUALITY. IT SHALL BE FURNISHED DELIVERED, ERECTED, CONNECTED, FINISHED IN EVERY DETAIL AND SO SELECTED AND ARRANGED AS TO FIT PROPERLY INTO THE BUILDING SPACES. WHERE NO SPECIFIC KIND OR QUALITY MATERIAL IS GIVEN, A FIRST-CLASS STANDARD ARTICLE AS ACCEPTED BY THE ENGINEER SHALL BE FURNISHED.

CONSIDERED FOR THIS PROJECT. ALL WORK SHALL BE OF A QUALITY CONSISTENT WITH GOOD TRADE PRACTICE AND SHALL RE INSTALLED IN A NEAT WORKMANLIKE MANNER. THE ENGINEER/OWNER RESERVES THE RIGHT TO REJECT ANY WORK WHICH. IN HIS OPINION. HAS BEEN INSTALLED IN A SUBSTANDARD, DANGEROUS OR IN A UNSERVICEABLE MANNER. THE CONTRACTOR SHALL REPLACE REJECTED WORK IN A SATISFACTORY MANNER AT NO EXTRA COST TO THE

<u>GUARANTEES</u>

REPAIR AND/OR REPLACE ALL DEFECTIVE EQUIPMENT, MATERIAL AND/OR WORK AT NO EXTRA CHARGE TO THE OWNER. RECORD DRAWINGS MAINTAIN, AT THE JOB SITE, A SET OF ELECTRICAL DRAWINGS INDICATING ALL CHANGES IN

THE PROJECT THE CONTRACTOR SHALL TURN OVER THE RECORD DRAWINGS TO THE ENGINEER/OWNER. <u>COORDINATION</u>

AND FULL COORDINATION DRAWINGS SHALL BE CREATED IN ORDER THAT ALL WORK MAY PROCEED WITH A MINIMUM OF DELAY AND INTERFERENCE. SHOP DRAWINGS

DRAWINGS OF ALL EQUIPMENT AND MATERIAL SPECIFIED. THE CONTRACTOR SHALL REVIEW ALL SHOP DRAWINGS PRIOR TO SUBMISSION TO THE ENGINEER FOR REVIEW. NO MATERIAL OR EQUIPMENT MAY BE DELIVERED TO THE JOB SITE OR INSTALLED UNTIL CONTRACTOR HAS IN THEIR POSSESSION, APPROVED SHOP DRAWINGS FOR THE PARTICULAR MATERIAL OR QUIPMENT. SHOP DRAWINGS SHALL BE SPECIFIC WITH ITEMS SUBMITTED FOR APPROVAL CLEARLY IDENTIFIED.

a. SERVICE ENTRANCE CABINET PANELBOARDS LOAD CENTERS SAFETY/DISCONNECT_SWITCHES CIRCUIT BREAKERS

FUSES CONDUIT, WIRE AND CABLE FIRE ALARM EQUIPMENT . DEVICES (RECEPTACLES, TOGGLE SWITCHES, ETC.)

OPERATING INSTRUCTIONS THE CONTRACTOR SHALL FURNISH TO THE ENGINEER, FOUR (4) COMPLETE BOUND SETS

SYSTEMS AND EQUIPMENT INCLUDED IN THIS DIVISION, MANUFACTURER'S ADVERTISING ITERATURE OR CATALOGS WILL NOT BE ACCEPTABLE FOR OPERATING AND MAINTENANCE NSTRUCTIONS.

THE CONTRACTOR, IN THE ABOVE-MENTIONED INSTRUCTIONS, SHALL INCLUDE THE MAINTENANCE SCHEDULE FOR THE PRINCIPAL ITEMS OF EQUIPMENT FURNISHED UNDER THIS DIVISION. AN AUTHORIZED MANUFACTURER'S REPRESENTATIVE SHALL ATTEST IN WRITING THAT HIS

EQUIPMENT HAS BEEN PROPERLY INSTALLED PRIOR TO STARTUP. THESE LETTERS WILL BE BOUND INTO OPERATING AND MAINTENANCE BOOKS. EQUIPMENT PROTECTION

PROPERLY AND COMPLETELY PROTECT AGAINST ALL DAMAGE, ALL APPARATUS, EQUIPMENT, ETC., INCLUDED IN THIS CONTRACT. THE CONTRACTOR WILL BE HELD RESPONSIBLE FOR ANY DAMAGE TO FURNISHED APPARATUS, EQUIPMENT, ETC., UNTIL FINAL ACCEPTANCE. PROPERTY PROTECTION

PROTECT OWNER'S PROPERTY WITHIN THE WORKING AREAS FROM DUST. DEBRIS AND OTHER MATTER GENERATED BY THE WORK. NO WORK SHALL COMMENCE IN AREAS WHERE PROTECTION IS REQUIRED UNTIL APPROVAL HAS BEEN GIVEN TO THE CONTRACTOR BY THE

MANUFACTURER'S INSTRUCTION INSTALL ALL EQUIPMENT IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS OR REQUIREMENTS FOR PROPER OPERATION AND MAINTENANCE.

EQUIPMENT AND NEW EQUIPMENT OF OTHER TRADES. (LIGHTING FIXTURES, DEVICES,

ALL ELECTRICAL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE FOLLOWING

ALL EQUIPMENT AND MATERIALS SHALL BE SPECIFICATION GRADE AND BEAR THE UNDERWRITER'S LABEL. NO SUBSTITUTE OR ALTERNATE EQUIPMENT, MATERIAL, ETC. WILL BE

ALL WORKMANSHIP AND MATERIALS SHALL BE FULLY GUARANTEED FOR A PERIOD OF ONE YEAR AFTER ACCEPTANCE OF THE ENTIRE INSTALLATION COVERED BY THIS CONTRACT SHOULD ANY DEFECTS OCCUR DURING THE GUARANTEED PERIOD. THE CONTRACTOR SHALL

LOCATION AND CIRCUITING OF THE EQUIPMENT, PANELS, DEVICES, ETC. FROM THE ORIGINAL LAYOUT. CLEARLY MARK IN RED ALL CHANGES ON THE DRAWINGS. AT THE COMPLETION OI

ALL WORK SHALL BE COORDINATED AND CARRIED OUT IN CONJUNCTION WITH ALL TRADES

SUBMIT ELECTRONIC PDF FORMAT OR EIGHT (8) COPIES FOR REVIEW, DETAILED SHOP

THE FOLLOWING IS A LIST OF ELECTRICAL ITEMS THAT MUST BE SUBMITTED FOR REVIEW:

OF TYPEWRITTEN OR BLUEPRINTED INSTRUCTIONS FOR OPERATING AND MAINTAINING ALL

THE CONTRACTOR SHALL TAKE WHATEVER MEANS NECESSARY AND/OR REQUIRED TO

EQUIPMENT PAINTING AND CLEANING

AND SHALL BE REMOVED FROM THE SITE.

ACCEPTABLE BY THE OWNER.

INDICATED ON DRAWINGS.

OTHERWISE INDICTED.

PENETRATION SEALAN

FIRE STOPS AND SEALS

ACCESS PANELS

THOROUGHLY CLEAN ALL ELECTRICAL EQUIPMENT DEVICES AND ENCLOSURES UPON COMPLETION OF ALL WORK. REPAINT ANY EQUIPMENT WHOSE FINISH IS DAMAGED OR RUSTED. MATCH MANUFACTURER'S ORIGINAL FINISH.

THOROUGHLY FAMILIAR WITH ALL EXISTING CONDITIONS UNDER WHICH HIS WORK WILL BE

ALL EXISTING ACTIVE CIRCUITS WHICH FEED EQUIPMENT OR DEVICES THAT ARE TO REMAIN,

OWNER DOES NOT WISH TO RETAIN SHALL BECOME THE PROPERTY OF THIS CONTRACTOR

ALL MATERIAL CHOSEN TO BE RETAINED BY THE OWNER SHALL BE DELIVERED BY THE

MATERIAL TO BE REUSED SHALL BE CAREFULLY REMOVED AND STORED AND SHALL BE

DAMAGE OR LOSS OF MATERIAL TO BE REUSED SHALL BE THE CONTRACTOR'S

REINSTALLED IN AS-FOUND CONDITION EXCEPT AS OTHERWISE INDICATED ON THE PLANS.

RESPONSIBILITY AND SHALL BE REPAIRED OR REPLACED WITH THE EQUIVALENT MATERIAL

DISCONNECT AND REMOVE ALL EXISTING ELECTRICAL WORK IN CONTRACT AREA AS

RUBBISH, AND AT COMPLETION OF WORK DAY, SHALL REMOVE ALL RUBBISH AND

ALL WIRING AND CABLING SHALL BE REMOVED BACK TO ORIGINATION PANEL, UNLESS

IMPLEMENTS TO A DESIGNATED LOCATION, IF AVAILABLE, LEAVING WORK AREAS BROOM

CLEAN. UNUSED OUTLET BOXES AND PLASTER RINGS SHALL BE PROVIDED WITH BLANK

ALL PENETRATIONS SHALL BE SEALED WITH 3M INTUMESCENT FIRE BARRIER PENETRATION

THE GENERAL CONTRACTOR SHALL PERFORM ALL CUTTING, PATCHING, REPAIRING AND

PAINTING FOR ALL ELECTRICAL ITEMS AND EQUIPMENT CALLED FOR UNDER THIS CONTRACT.

PENETRATIONS THROUGH FIRE-RATED WALLS, CEILING OR FLOORS IN WHICH CABLES OR

CONDUITS PASS SHALL BE FILLED SOLIDLY BY U.L. APPROVED FIRE-STOP MATERIALS, CLASSIFIED FOR AN HOUR RATING EQUAL TO THE FIRE RATING OF THE WALL, CEILING OR

FLOOR. PROVIDE TO 3M BRAND FIRE BARRIER CP25WB CAULK OR APPROVED EQUIVALENT.

THE CONTRACTOR SHALL FURNISH AND INSTALL ACCESS PANELS AND DOORS AS REQUIRED

SEALING BUSHINGS SHALL BE USED ON CONDUIT AND CABLE ENDS TO EFFECTIVELY

PREVENT THE INTRUSION OF WATER, A DAMP OR CORROSIVE ATMOSPHERE, DRAFT OR

FOR ACCESS TO INACCESSIBLE PULLBOXES, JUNCTION BOXES AND OTHER SPECIALTIES.

THE CONTRACTOR SHALL COORDINATE THE LOCATIONS OF ACCESS PANELS AND DOORS WITH THE GENERAL CONTRACTOR AND OTHER TRADES. FINAL LOCATIONS SHALL BE

PRIOR TO PERFORMING WORK REQUIRING INTERRUPTION OF EXISTING SERVICES, THE

THE CONTRACTOR SHALL PROVIDE ALL NECESSARY LABOR, INCLUDING OVERTIME, OF REQUIRED TO ASSURE THAT THE EXISTING OPERATING SERVICES WILL BE SHUT DOWN

ONLY DURING THE TIME ACTUALLY REQUIRED TO MAKE NECESSARY CONNECTIONS.

HE NATIONAL ELECTRICAL CODE, O.S.H.A. AND WITH ALL REQUIREMENTS OF ANY

CONNECTION TO A CONSTRUCTION TRAILER. THE LOCATION OF THE TRAILER IS TO BE DETERMINED ON SITE. PROVIDE FEEDER TO TRAILER OF SUFFICIENT SIZE TO POWER

ALL MATERIALS AND EQUIPMENT PROVIDED UNDER THIS SECTION SHALL BE NEW, FIRST

REQUIREMENTS OF ALL STANDARDS SET UP TO GOVERN THE MANUFACTURER OF

ELECTRICAL MATERIALS AND COMPLY WITH ALL APPLICABLE CODES AND STANDARDS.

GRADE, BEST OF THEIR RESPECTIVE KINDS AND IN NO WAY SHALL THEY BE LESS THAN THE QUALITY AND INTENT SET FOURTH UNDER THIS SECTION. THEY SHALL MEET THE

CONDUCTORS SHALL BE U.L. LISTED, 600 VOLTS, 90 DEG. C., SINGLE CONDUCTOR TYPE

COVERED WITH NYLON SHEATH JACKET. TESTED IN ACCORDANCE WITH THE REQUIREMENTS

OF UNDERWRITERS LABORATORIES STANDARD 83. WIRE SHALL BE IDENTIFIED BY SURFACE

VOLTAGE RATING, U.L. SYMBOL AND TYPE DESIGNATION. CONDUCTORS SHALL BE STRANDED. MINIMUM SIZE SHALL BE #12 AWG UNLESS OTHERWISE INDICATED. MANUFACTURED BY ROME CABLE, TRIANGLE WIRE & CABLE, GENERAL CABLE OR ESSEX WIRE & CABLE.

RIGID STEEL CONDUIT SHALL BE FULL WEIGHT, HEAVY WALL STEEL PIPE WITH GALVANIZED

PROTECTIVE COATING. MANUFACTURED BY TRIANGLE WIRE AND CABLE, ALLIED TUBE AND

CONDUIT, REPUBLIC OR STEELDUCT. CONDUIT FITTINGS SHALL BE MALLEABLE IRON,

RIGID POLYVINYL CHLORIDE CONDUIT SHALL BE TYPE DB, SCHEDULE 40, SUNLIGHT

ELECTRICAL METALLIC TUBING SHALL BE GALVANIZED THIN WALL STEEL CONDUIT.

STEELDUCT. THE CONNECTORS AND COUPLINGS SHALL BE HEAVY DUTY, STEEL-ZINC

FLEXIBLE METALLIC CONDUIT SHALL BE OF HEAVY GALVANIZED SHEET METAL STRIP IN

FLEXIBLE CONDUIT OR ELECTRIC-FLEX. THE CONNECTORS SHALL BE SQUEEZE TYPE

CONDUIT BODIES FOR RIGID GALVANIZED STEEL CONDUIT (RGS) SHALL BE MALLEABLE

ALUMINUM-ALUMINUM ENAMEL FINISH WITH SET SCREW HUBS AND ALUMINUM COVER.

ARMORED CABLE CONNECTOR SHALL BE MALLEABLE IRON-ZINC PLATED, MALE HUB

CONDUIT FITTINGS SHALL BE MANUFACTURED BY 0/Z GEDNEY, CROUSE-HINDS OR

SUPPORT CHANNEL SHALL BE ROLL-FORMED #12 GAUGE STEEL, SOLID BASE OR BOLT

NUTS, CONDUIT SUPPORTS, 3/8" OR 1/2" THREADED RODS (SIZE REQUIRED FOR LOAD),

HOLE BASE - HOT DIP GALVANIZED FINISH, COMPLETE WITH ANGLE FITTINGS, SPRING

CABLE TIES SHALL BE FABRICATED OF ONE-PIECE HALLAR WITH NO METAL PARTS.

FUSES SHALL NOT BE INSTALLED UNTIL EQUIPMENT IS READY TO BE ENERGIZED. THIS

ALL FUSES SHALL BE FURNISHED AND INSTALLED BY THE CONTRACTOR. FUSES SHALL BE

CURRENT LIMITING FUSES WITH AN INTERRUPTING RATING OF 200,000 A.I.C. U.L. LISTED

CIRCUITS 601 TO 3000 AMPERE SHALL BE PROTECTED BY TIME DELAY, CURRENT LIMITING

MOTOR CIRCUITS SHALL BE PROTECTED BY DUAL ELEMENT, TIME DELAY, CURRENT LIMITING

LARGE MOTORS SHALL BE PROTECTED BY TIME DELAY, CURRENT LIMITING FUSES WITH AN

CIRCUIT BREAKER PANELBOARDS SHALL BE PROTECTED BY DUAL ELEMENT, TIME DELAY,

FUSES SHALL HAVE VOLTAGE RATING BASED ON DISTRIBUTION REQUIREMENT SYSTEMS.

UPON COMPLETION OF THE WORK, THE CONTRACTOR SHALL PROVIDE THE OWNER WITH

CURRENT LIMITING FUSES WITH AN INTERRUPTING RATING OF 200,000 A.I.C. U.L. LISTED

FUSES WITH AN INTERRUPTING RATING OF 200,000 A.I.C. U.L. LISTED CLASS 'L', KLP-C.

THE SAME MANUFACTURER, COPPER BUSSMAN, FERRAZ SHAWMUT OR LITTLEFUSE. FUSE

MEASURE PREVENTS FUSE DAMAGE DURING SHIPMENT OF THE EQUIPMENT FROM THE

TYPES DESCRIBE BELOW SHALL BE U.L. LISTED DUAL ELEMENT TIME DELAY TYPE.

CIRCUIT 0 TO 600 AMPERE SHALL BE PROTECTED BY DUAL ELEMENT, TIME DELAY,

FUSES WITH AN INTERRUPTING RATING OF 200,000 A.I.C. U.L. LISTED CLASS 'RK1'.

INTERRUPTING RATING OF 200,000 A.I.C. U.L. LISTED CLASS 'L' KLP-C.

INSULATION BUSHINGS SHALL BE HIGH IMPACT THERMOPLASTIC PHENOLIC WITH 150 DEG.

IRON-ZINC PLATED WITH TAPERED HUBS AND GASKETED ALUMINUM COVER.

CONDUIT BODIES FOR ELECTRICAL METALLIC TUBING (EMT) SHALL BE CAST

INTERLOCKED CONSTRUCTION. MANUFACTURED BY TRIANGLE WIRE AND CABLE, AMERICAN

RESISTANT, RATED OR USE WITH 90 DEGREES C. CONDUCTORS, U.L. RATED. ALL PVC CONDUIT AND FITTINGS SHALL BE SOLVENT WELDED. MANUFACTURED BY CARLON,

MANUFACTURED BY TRIANGLE WIRE AND CABLE, ALLIED TUBE AND CONDUIT, REPUBLIC OR

THWN/THHN. 98% CONDUCTIVITY, ANNEALED UNCOATED COPPER WITH PVC INSULATION

MARKING INDICATING MANUFACTURER'S IDENTIFICATION CONDUCTOR SIZE AND METAL

AUTHORITY HAVING JURISDICTION OVER THE WORK. PROVIDE TEMPORARY POWER

HEATING, AIR CONDITIONING, GENERAL POWER AND LIGHTING.

RIGID GALVANIZED STEEL CONDUIT (RGS)

CADMIUM PLATED WITH FULL THREADED HUBS.

<u>RIGID POLYVINYL CHLORIDE CONDUIT (PVC)</u>

ELECTRI-FLEX OR PLASTILINE.

PLATED. SET SCREW TYPE.

THREADS WITH LOCKNUT.

MANUFACTURER TO THE JOB SITE.

THE SPARE FUSES LISTED BELOW.

APPLETON.

CABLE TIES

CLASS 'RK1'.

<u>FUSES</u>

SUPPORT FITTINGS

FITTINGS

ELECTRIC METALLIC TUBING (EMT)

FLEXIBLE METALLIC CONDUIT (FMC)

MALLEABLE IRON, CADMIUM PLATED.

CONTRACTOR SHALL SECURE FROM THE OWNER, APPROVAL OF THE PROPOSED OPERATION. (48 HOURS IN ADVANCE) WORK SHALL BE ARRANGED FOR CONTINUOUS PERFORMANCE.

FURNISH AND INSTALL TEMPORARY ELECTRICAL SERVICE OF SUFFICIENT SIZE FOR POWER

AND LIGHTING USE BY ALL TRADE CONTRACTORS DURING THE COURSE OF CONSTRUCTION.

ALL TEMPORARY WORK SHALL BE DONE IN COMPLIANCE WITH ALL APPLICABLE ARTICLES IN

CONTRACTOR SHALL KEEP PREMISES FREE FROM ACCUMULATION OF WASTE MATERIAL AND

ALL ITEMS BEING REMOVED SHALL REMAIN THE PROPERTY OF THE CONTRACTOR AND REMOVED FROM THE SITE UNLESS OTHERWISE INDICATED. EQUIPMENT AND DEVICES THE

SHALL BE MAINTAINED IN SERVICE AND SHALL BE PERMANENTLY REFED.

CONTRACTOR TO SUCH POINT AS DESIGNATED BY THE OWNER.

COVER PLATES AND MATCH DEVICE PLATES WITHIN THE ROOM.

SEALANT, APPLIED PER MANUFACTURER'S AND U.L. GUIDELINES.

CUTTING, PATCHING, REPAIRING AND PAINTING

SUBJECT TO THE APPROVAL OF THE ARCHITECT.

INTERRUPTION OF EXISTING SERVICES

TEMPORARY LIGHT AND POWER

<u>PART 2 – PRODUCTS</u>

DESCRIPTION

WIRE

INSTALLED

DEMOLITION/REMOVAL AND RECONNECTION BEFORE SUBMITTING A BID, THE CONTRACTOR SHALL VISIT THE SITE AND BECOME

WITHOUT EXCESSIVE BENDING OR CRIMPING OF THE CONDUCTORS AND DAMAGING OF CONDUCTOR INSULATION. MANUFACTURED BY STEEL CITY OR RACO.

OUTLET BOXES SHALL BE SECURED FIRMLY IN PLACE TO THE BUILDING STRUCTURE AN SET TRUE AND SQUARE. PROVIDE SUITABLE MEANS TO SUPPORT OUTLET BOX TO TAKE HE WEIGHT OF THE LIGHTING FIXTURE OR DEVICE. OUTLET BOXED OR BOX EXTENSION RINGS SHALL BE SET FLUSH TO THE FINISHED WALL OR CEILING. BOXES MUST BE ATTACHED THAT THEY WILL NOT 'ROCK'. 'SHIFT' OR 'MOVE IN AND OUT' WHEN DEVICES ARE USED. IN NO CASE SHALL BOXES BE INSTALLED BACK-TO-BACK IN A COMMON WA DIVIDING TWO SPACES.

WHERE MORE THAN ONE OUTLET IS SHOWN OR SPECIFIED TO BE THE SAME ELEVATION ONE ABOVE THE OTHER, ALIGN THEM EXACTLY ON CENTER LINES HORIZONTALLY OR VERTICALLY

OUTLET BOXES SHALL BE GALVANIZED STEEL, FLUSH OR SURFACE MOUNTED AND OF

UTILIZED, BOXES SHALL BE ADEQUATE SIZE FOR THE INSTALLATION OF CONDUCTORS

PROPER TYPE AND SIZE AS REQUIRED FOR THE PARTICULAR APPLICATION. SIZE AND T

DICTATED BY THE NUMBER OF DEVICES. NUMBER OF CONDUCTORS AND WIRING METHOI

MULTIPLE SWITCHES SHOWN AT ONE LOCATION SHALL BE INSTALLED GANGED TOGETHER UNDER ONE WALL PLATE. SWITCHES SHALL BE ARRANGED IN AN ORDER APPROPRIATE T THE LOCATIONS OF LIGHTING FIXTURE BEING CONTROLLED. CIRCUIT BREAKERS

BRANCH CIRCUIT BREAKERS SHALL BE QUICK-MAKE, QUICK-BREAK, (PLUG-IN) (BOLT-I THERMAL MAGNETIC TYPE WITH VISIBLE CURRENT RATING AND TRIP POSITION. MANUFACTURED BY ABB, SIEMENS, SQUARE 'D' OR CUTLER HAMMER. REFER TO SCHEDULES FOR AIC RATING.

FOR CIRCUIT BREAKER SIZES 100 AMPS AND LARGER PROVIDE THE FOLLOWING. ELECTRONIC TRIP CIRCUIT BREAKERS WITH RMS SENSING; FIELD-REPLACEABLE RATING PLUG OR FIELD-REPLICABLE ELECTRONIC TRIP; AND THE FOLLOWING FIELD-ADJUSTABLE SETTINGS

INSTANTANEOUS TRIP 2. LONG AND SHORT TIME PICKUP LEVELS

3. LONG AND SHORT TIME ADJUSTMENTS ALL MULTI-POLE BREAKERS SHALL BE EQUIPPED WITH HANDLE TIES FOR MULTI-POLE

LOAD CENTER PANELS

OUTLET BOXES

LOAD CENTERS SHALL BE THE COMBINATION THERMAL/MAGNETIC CIRCUIT BREAKER TYP PHASE, 3 WIRE, SOLID NEUTRAL WITH THE NUMBER OF BRANCH CIRCUITS AS INDICATED ON THE DRAWINGS. COPPER GROUND BUS AND LUGS SIZED TO ACCOMMODATE WIRE PANELS SHALL BE U.L. LISTED. BOXES SHALL BE CORROSION RESISTANT, ZINC FINISHE GALVANIZED. FRONTS SHALL BE REINFORCED STEEL POWDER FINISH PAINTED LIGHT GRA (ANSI-61) AND BE EQUIPPED WITH CONCEALED HINGES AND CONCEALED TRIM ADJUSTIN SCREWS. DIRECTORY CARD HOLDERS SHALL BE CLEAR LEXAN PERMANENTLY MOUNTED THE FRONT DOOR AND DOOR LOCK SHALL BE CORROSION PROOF VALOX WITH RETRACTABLE LATCH. BUS BARS SHALL BE SEQUENCED WITH PHASES FULLY INSULATED, [COPPER] [ALUMINUM]. MINIMUM AIC RATING SHALL BE INDICATED ON THE SCHEDULES CIRCUIT BREAKERS SHALL BE PLUG-IN TYPE. PANELBOARD RATINGS SHALL BE DISPLAY ON THE DEAD FRONT SHIELD AND TOTALLY VISIBLE WITH THE DOOR OPEN. MANUFACTUR BY ABB, SIEMENS, SQUARE 'D', OR CUTLER HAMMER.

PHASE SEQUENCE AND BALANCING

MAINTAIN CORRECT PHASE SEQUENCE OF ALL FEEDERS AND CIRCUITS WITH PHASE IDENTIFICATION THROUGHOUT THE ENTIRE SYSTEM. BALANCING ALL FEEDERS AND CIRCUIT TO WITHIN 10 PERCENT.

FIRE ALARM SYSTEM

FURNISH AND INSTALL 4010 SERIES ADDRESSABLE FIRE ALARM CONTROL PANEL. PROVID THE FOLLOWING MINIMUM FEATURES: PERIPHERAL DEVICES

4098-9710 PHOTOELECTRIC ANALOG ADDRESSABLE SMOKE DETECTOR.

4098-9732 PROGRAMMABLE ANALOG HEAT WITH ADDRESSABLE BASE. 4098-9753 ANALOG DUCT SMOKE DETECTOR HOUSING WITH SAMPLING TUBES, EACH

DETECTOR SHALL CONTAIN AN ADDRESSABLE CONTROL MODULE FOR FAN SHUTDOWN T CAN BE CONTROLLED INDEPENDENTLY OF THE DUCT DETECTOR. REMOTE TEST SWITCH. 2099-9795 ADDRESSABLE MANUAL PULL STATION - RED LEXAN. SURFACE BACKBOX WHERE REQUIRED.

4190 SERIES ADDRESSABLE MONITOR MODULES FOR MOUNTING ON A 4" SQUARE BOX. SAFETY/DISCONNECT SWITCHES

DISCONNECT/SAFETY SWITCHES SHALL BE MOTOR RATED, METAL ENCLOSED, INTERLOCKIN FUSIBLE OR NONFUSED AS INDICATED. HEAVY DUTY TYPE, WITH APPROPRIATE VOLTAGE RATINGS, QUICK-MAKE, QUICK-BREAK MECHANISMS, SOLID NEUTRAL AND U.L. LISTED SWITCHES SHALL HAVE PROPER TYPE METAL ENCLOSURES; STANDARD, WEATHERPROOF DUSTPROOF, ETC., TO SUIT THEIR SPECIFIC LOCATIONS. MANUFACTURED BY ABB, SIEMEN SQUARE 'D', OR CUTLER HAMMER. COMBINATION MOTOR STARTERS

FURNISH AND INSTALL COMBINATION MOTOR STARTER, NEMA SIZE X, NEMA TYPE X, RATE FOR (208, 480 VOLT), 3 PHASE, (NON-FUSED, FUSED, THERMAL MAGNETIC CIRCUIT BREAKER, MOTOR CIRCUIT PROTECTOR), FULL VOLTAGE, NON-REVERSING, MELTING ALLO OVERLOADS, HAND-OFF-AUTO SWITCH AND AUXILIARY CONTACTS. MANUFACTURED BY ABE SIEMENS, SQUARE D OR ALLEN BRADLEY.

MANUAL MOTORS STARTERS

FURNISH AND INSTALL FRACTIONAL HORSEPOWER MANUAL MOTOR STARTERS WITH ON-OF CONTROL, THERMAL OVERLOAD RELAY AND PILOT LIGHTS. MANUFACTURED BY ABB, SIEMENS, SQUARE 'D', OR ALLEN BRADLEY. SQUARE 'D' ALLEN BRADLEY SIEMENS <u>ABB</u>

1 POLE, SURFACE CR101Y11 2510FG1P 600-TAX4 SMFFG1P 2 POLE, SURFACE CR101H11 2510FG2P 600-TAX5 SMFFG2P JUNCTION BOXES, PULLBOXES AND WIREWAYS

JUNCTION BOXES, PULLBOXES AND WIREWAYS SHALL BE OF PROPER TYPE AND SIZES REQUIRED. CODE GAUGE, GALVANIZED STEEL WITH KNOCKOUTS AND FLANGES TO RECEIV THE COVERS. COVERS SHALL BE FLAT, OF THE SAME MATERIAL AS THE BOX AND FASTENED TO THE BOX WITH MACHINE SCREWS. MANUFACTURED BY HOFFMAN, SQUARE OR LEE PRODUCTS.

GROUND RODS

GROUND RODS SHALL BE HIGH STRENGTH STEEL CORE WITH ELECTROLYTIC ALLY BONDE COPPER JACKET, GROUND RODS SHALL CONFORM TO THE REQUIREMENTS OF THE U.I. SPEC. NO. 467 (ANSI C-33.8-1972). MINIMUM SIZE SHALL BE 5/8 INCH DIAMETER BY EIGHT (8') FT. UNLESS OTHERWISE INDICATED. LENGTH MANUFACTURED BY ERICO, BLACKBURN PRODUCTS, ANIXTER, OR GAVIN. WIRING DEVICES

ALL DEVICES SHALL BE COMMERCIAL SPECIFICATION GRADE, U.L. LISTED, SELF-GROUNDII GROUND LUG, SIDE/BACK WIRED, COLOR SHALL BE SELECTED BY ARCHITECT OR OWNE UNLESS OTHERWISE INDICATED. MANUFACTURED BY HUBBELL, LEVITON, OR PASS &

ALL DEVICES SHALL BE HOSPITAL GRADE, U.L. LISTED, SELF-GROUNDING, GROUND LUG BACK AND SIDE WIRED. COLOR SHALL BE SELECTED BY ARCHITECT OR OWNER UNLESS OTHERWISE INDICATED. MANUFACTURED BY HUBBELL, LEVITON, OR PASS & SEYMOUR.

DEVICES COLOR SHALL BE SELECTED BY ARCHITECT OR OWNER UNLESS OTHERWISE INDICATED FOR NORMAL POWER CIRCUITS AND RED FOR EMERGENCY POWER CIRCUITS.

RECEPTACLES THAT HAVE A POWER FEED THRU (FEED IN - FEED OUT) ARRANGEMENT SHALL BE PIGTAILED. FEED THRU FEATURE ON DUPLEX RECEPTACLES USE IS NOT ACCEPTABLE.

FACILITY ENGINEERING.

CIRCUIT BREAKER NUMBERS.

SHALL BE EQUAL TO T&B, PANDUIT OR IDEAL.

USE PLASTIC-COATED WIRE MARKERS OF THE SELF-ADHESIVE. WRAPAROUND TYPE WITH

WIRE MARKERS SHALL BE SECURELY ATTACHED AT BOTH ENDS, IDENTIFYING PANEL AND

ALL CONDUCTORS SHALL BE PERMANENTLY TAGGED AT TIME OF INSTALLATION. LABELS

PERMANENT FACTORY-PRINTED NUMBER, LETTERS AND SYMBOLS.

ACCEFTABLE.				
SWITCHES: 20A 120/277	V	HUBBELL	<u>LEVITON</u>	PASS & SEYMOU
SINGLE POLE SWITCH DOUBLE POLE SWITCH THREE-WAY SWITCH FOUR-WAY SWITCH SINGLE POLE SWITCH &	PILOT	CSB120 CSB220 CSB320 CSB420 HBL1221PLC	CSB1-20 CSB2-20 CSB3-20 CSB4-20 1221-LHC (IND. SEPC)	CSB20AC1 CSB20AC2 CSB20AC3 CSB20AC4 PS20AC1-CPL (CLEAR COLOR)
RECEPTACLES: 20A	125V	HUBBELL	<u>LEVITON</u>	PASS & SEYMOU

IG20CR 5362IG DUPLEX RECEPTACLE - IG IG5362 DUPLEX RECEPTACLE – TR CRS20_TR TBR20 TR20 DUPLEX RECEPTACLE – TR/GFI/NL GFTRST20INL GFNL2–W PT2097NTLTRW ALL INSTALLED RECEPTACLES UNDER THIS PROJECT SHALL BE TESTED AND CERTIFIED A PFR JOINT COMMISION CERTIFICATION REQUIREMENTS. THE CONTRACTOR SHALL UTILIZE HOSPITAL FURNISHED EQUIPMENT TO PERFORM REQUIRED TESTING. CONSULT WITH FACILITIES ENGINEER FOR REQUIREMENTS.

WALL PLATES FOR SWITCHES AND RECEPTACLES SHALL BE SMOOTH THERMOPLASTIC OR NYLON IN FURNISHED AREAS. COLOR TO MATCH DEVICES. MANUFACTURED BY HUBBELL LEVITON.

WALL PLATES FOR SWITCHES AND RECEPTACLES SHALL BE STAMPED STEEL FOR FURNISH AREAS. MANUFACTURED BY HUBBELL. WALL PLATES FOR SWITCHES AND RECEPTACLES SHALL HAVE PANELBOARD AND CIRCUIT DESIGNATION ENGRAVED AT TOP OF PLATE. WALL PLATES FOR SWITCHES AND RECEPTAC SHALL BE STAINLESS STEEL 302/304. MANUFACTURED BY HUBBELL OR LEVITON. NYLON PLATES ARE NOT ACCEPTABLE

RECEPTACLES LOCATED IN WET LOCATIONS SHALL BE INSTALLED WITH AN OUTLET ENCLOSURE CLEARLY MARKED 'SUITABLE FOR WET LOCATIONS WHILE IN USE'. THERE MU BE A GASKET BETWEEN THE COVER AND THE BASE TO ASSURE A PROPER SEAL. THE NCLOSURE MUST EMPLOY STAINLESS STEEL MOUNTING HARDWARE AND BE CONSTRUCTION OF IMPACT RESISTANT POLYCARBONATE. THE OUTLET ENCLOSURE SHALL BE U.L. LISTED. MANUFACTURED BY HUBBELL, OR APPROVED EQUAL.

OCCUPANCY SENSORS

OCCUPANCY SENSOR SWITCHES SHALL BE RATED FOR 120/277 VOLT AND BE CAPABLE SWITCHING ZERO TO 600 WANS OF ELECTRONIC BALLAST LOADS WITH TIME DELAY SETII FROM 30 SECONDS TO 20 MINUTES. SENSOR SWITCHING RELAY SHALL BE TV-5 RATED HIGHER. MANUFACTURED BY SENSOR SWITCH, INC., WATT-STOPPER OR HUBBELL. COLOR SELECTED BY ARCHITECT.

	HUBBELL	SENSOR SWITCH, INC.	WATT-STOPPER
WALL SWITCH LARGE AREA WALL SWITCH CEILING MOUNTED SENSOR RELAY	ADT1277I WS1277 ADT1000C CU300A	WSD-PDT LWS-PDT CMPDT10	DW-100 DT-300
RELAY	CUSUUA		

10% (MINIMUM OF THREE) OF EACH TYPE AND RATING INSTALLED, 0 TO 600 AMPERES. THREE FUSES OF EACH RATING INSTALLED, 601 AMPERE OR LARGER. SPARE FUSE CABINET, CATALOG NUMBER 'LSFCL, SHALL BE PROVIDED TO STORE THE ABOVE SPARES (SIZE 30"H x 24"W x 12"D).

C. UL TEMPERATURE RATING. INSULATED GROUNDING BUSHINGS SHALL BE MALLEABLE IRON ZINC PLATED WITH MOLDED ON PHENOLIC INSULATION AND LAY-IN GROUNDING LUG CONDUIT LOCKNUTS SHALL BE HEAVY NUT STOCK STEEL-ZINC PLATED. OFFSET NIPPLES SHALL BE MALLEABLE IRON ZINC PLATED WITH RIGID CONDUIT THREADING AND 3/4" OFFSET. CONNECTORS AND COUPLINGS FOR ELECTRICAL METALLIC TUBING (EMT) SHALL BE HEAVY STEEL-ZINC PLATED WITH PRE-SET/PRE-SHAKED SET SCREWS. CONDUIT STRAPS SHALL BE SNAP-TYPE, DOUBLE RIBBED STEEL-ZINC PLATED. METAL CLAD CABLE AND FLEXIBLE METALLIC CONDUIT CONNECTORS SHALL BE MALLEABLE

IRON-ZINC PLATED, MALE HUB THREADS WITH LOCKNUT.

MANUFACTURED BY BURNDY, T&B, PANDUIT OR BLACKBURN,

	LIGHTING FIXTURES
ΈE	FURNISH AND INSTALL ALL LIGHTING FIXTURES AS SPECIFIED ON THE SCHEDULES, COMPLETE WITH ALL ACCESSORIES AND MOUNTING HARDWARE. THE FIXTURES SHOWN ARE
)	MARKED AS TYPE A, B, C, ETC. PROVIDE LAMPS FOR ALL FIXTURES OF WATTAGES AND TYPES INDICATED.
D	CLEAN AND REMOVE ALL PAINT, STICKERS, DIRT, SMUDGES AND FINGERPRINTS FROM LIGHTING FIXTURES AFTER FINAL BUILDING CLEAN—UP.
	LAY—IN TROFFERS AND PENDANT LIGHT FIXTURES SHALL HAVE A 12 GAUGE SAFETY WIRE FASTENED FROM BUILDING STRUCTURE TO ALL FIXTURE CORNERS.
ALL	RECESSED DOWNLIGHTS SHALL BE SUPPORTED TO THE BUILDING STRUCTURE USING
OR	CHANNEL AND BAR HANGERS. A 12-GAUGE SAFETY WIRE SHALL BE FASTENED FROM BUILDING STRUCTURE TO FIXTURE AT TWO LOCATIONS OPPOSITE FROM EACH OTHER.
	EMERGENCY LIGHTING AND EXIT LIGHTING SYSTEM FURNISH AND INSTALL WHERE SHOWN ON PLANS, A SYSTEM OF UNITS SO ARRANGED THAT
0	IN CASE OF POWER FAILURE, THESE LIGHTS WILL AUTOMATICALLY ILLUMINATE THE EGREES AND EXIT AREAS. UNIT SHALL BE U.L. LISTED AND SHALL MEET THE REQUIREMENTS OF
	THE N.E.C., N.F.P.A. 101 LIFE SAFETY CODE. CONNECT EMERGENCY LIGHTING AND EXIT SIGNAGE TO LOCAL LIGHTING BRANCH CIRCUIT AHEAD OF SWITCHING DEVICE (CONSTANT POWER).
IN)	POWER AND CONTROL WIRING
	FURNISH AND INSTALL ALL POWER WIRING, CONTROL WIRING (120VAC), CONDUIT AND FITTINGS FOR ALL PLUMBING, HEATING AND VENTILATING AND AIR CONDITIONING EQUIPMENT
	AND FINAL CONNECTIONS. MANUAL MOTOR STARTERS SHALL BE FURNISHED, INSTALLED AND WIRED BY THE ELECTRICAL CONTRACTOR. EVERY MOTOR SHALL BE PROVIDED WITH RUNNING OVERLOAD PROTECTION. UPON COMPLETION OF WORK, CHECK OUT EACH ITEM. ITEMS TO
	BE CHECKED ARE VOLTAGE, ROTATION AND OVERLOAD PROTECTION.
	PART 3 – EXECUTION
USE.	ALL WORK, MATERIALS AND MANNER OF INSTALLING SAME SHALL BE IN STRICT ACCORDANCE WITH THE LATEST REQUIREMENTS OF THE NATIONAL ELECTRIC CODE.
	ALL CONDUIT AND WIRING SHALL BE INSTALLED CONCEALED UNLESS OTHERWISE NOTED.
E, 1) ZES.	WIRING IN UNFINISHED AREAS SHALL BE INSTALLED EXPOSED USING EMT OR RGS CONDUIT.
) (Y 1G	WIRING IN FINISHED AREAS SHALL BE INSTALLED IN WIREMOLD RACEWAY.
ГО	RACEWAYS RACEWAYS, ENCLOSURES AND BOXES SHALL BE MECHANICALLY JOINED TO FORM A
, ED	CONTINUOUS ELECTRICAL PATH.
RED	THE CONTRACTOR SHALL PROVIDE APPROVED TYPE PULL BOXES AS REQUIRED.
	FURNISH NYLON PULL STRINGS IN ALL EMPTY CONDUIT RUNS.
TS	FURNISH LOCKNUTS AND BUSHINGS FOR ALL CONDUIT TERMINATIONS IN ALL OUTLET BOXES, PANELS, PULL BOXES, CONDUIT STUBS, ETC.
	RIGID GALVANIZED STEEL CONDUIT (RGS) SHALL BE USED FOR WIRING IN THE FOLLOWING
DE	LOCATIONS:
	2. BURIED UNDER GRADE FOR SERVICE ENTRANCE CONDUCTORS 3. WITHIN CONCRETE SLABS
	4. EXPOSED TO MOISTURE AND MECHANICAL DAMAGE 5. EXTERIOR INSTALLATIONS
	ELECTRICAL METALLIC TUBING (EMT) SHALL BE USED FOR CONCEALED AND EXPOSED WIRING IN DRY LOCATIONS AS FOLLOWS:
AT	1. INTERIOR PANEL FEEDERS 2. EXPOSED TO MOISTURE WITH WATER PROOF COMPRESSION FITTINGS
	3. INTERIOR LIGHTING, RECEPTACLE AND POWER BRANCH CIRCUIT WIRING
	RIGID POLYVINYL CHLORIDE (PVC) SHALL BE USED FOR WIRING IN THE FOLLOWING LOCATIONS:
	1. BURIED UNDER GRADE FOR SERVICE ENTRANCE PRIMARY AND SECONDARY CONDUCTORS. 2. LIGHTING AND POWER BRANCH CIRCUIT WIRING BURIED UNDER GRADE
NG,	3. BELOW CONCRETE SLABS 4. EXPOSURE TO MOISTURE
NS,	EXTERIOR FEEDERS SHALL BE INSTALLED IN RGS CONDUIT.
	ALL CONDUIT SHALL BE INSTALLED IN PARALLEL AND PERPENDICULAR TO THE BUILDING LINES.
ED	ALL CONDUIT SHALL BE SUPPORTED USING CADMIUM PLATED CONDUIT STRAPS AND HANGERS.
Y IB,	SEPARATE CONDUIT SYSTEMS SHALL BE INSTALLED FOR NORMAL AND EMERGENCY POWER.
	WIRING PROVIDE WIRING TO ALL OUTLETS, EQUIPMENT, APPARATUS AND OTHER SPECIALTIES UNDER
FF	THIS DIVISION THAT WHICH FURNISHED OR PROVIDED UNDER OTHER DIVISIONS OR BY THE OWNER.
	THE TERM 'WIRING' SHALL BE CONSIDERED TO BE COMPRISED OF THE CONDUIT, CONDUCTORS, CONNECTIONS, ETC.
	ALL WIRING ON DRAWINGS IS SIZED FOR TYPE THWN/THHN COPPER CONDUCTORS.
	MINIMUM SIZE WIRE SHALL BE $\#12$ UNLESS OTHERWISE INDICATED. ALL WIRING SHALL BE COLOR CODED.
46	EXERCISE CAUTION IN PULLING CONDUCTORS INTO RACEWAYS SO AS NOT TO DAMAGE THE INSULATION, CABLE PULLING LUBRICANT SHALL BE USED TO ASSIST IN PULLING.
AS Æ	CONDUCTOR WITHIN PANELBOARDS, JUNCTION BOXES, TROUGHS AND OTHER EQUIPMENT
'D',	WHERE CONCENTRATIONS OF CONDUCTORS ARE ENCLOSED, SHALL BE NEATLY ARRANGED AND TIED WITH CABLE TIES.
-0	CIRCUITS SHALL BE SO CONNECTED TO THE PANELBOARDS THAT THE TOTAL LOAD IS DISTRIBUTED AS NEATLY AS POSSIBLE, EQUALLY BETWEEN EACH LINE AND NEUTRAL. 10% WILL BE CONSIDERED A REASONABLE AND ALLOWABLE UNBALANCE.
ED (BRANCH CIRCUIT WIRING FOR SWITCHES, RECEPTACLES, DEVICES AND LIGHTING IN DRYWALL CONSTRUCTION AND ACCESSIBLE HUNG CEILING SPACE, HOME-RUN CIRCUIT SHALL BE
	INSTALLED WITHIN EMT RACEWAY, BRANCH WIRING WITHIN PARTITIONS SHALL BE IN METAL SHEATHED 'MC', 'AC', OR 'HFC' TYPE CABLE. CABLE SHALL BE SUPPORTED FROM
	STRUCTURE 4" O.C. WITH APPROVED CABLE SUPPORTS. PROVIDE APPROPRIATE GROMMETS FOR HORIZONTAL RUNS IN METAL STUD PARTITIONS. CABLE SHALL NOT LAY ON CEILING STRUCTURE OR TILES. PROVIDE ANTI–SHORT BUSHINGS (RED HEAD) UNDER ARMOR JACKET
ING, R	AT TERMINATIONS.
	COMMON NEUTRAL FOR MULTIPLE BRANCH CIRCUITS IS NOT ACCEPTABLE. PROVIDE SEPARATE NEUTRAL FOR EACH BRANCH CIRCUIT.
	WIRING IN OUTLET BOXES, JUNCTION BOXES, CABINET PANELBOARDS OR EQUIPMENT SHALL HAVE A MINIMUM OF EIGHT (8") INCHES LENGTH LEADS FOR CONNECTING WIRING DEVICES TO MAKE UP CIRCUIT SPLICES.
	PROVIDE FLEXIBLE METAL CONDUIT FOR DRY TYPE TRANSFORMER CONNECTIONS. LENGTH
	OF FLEXIBLE METAL CONDUIT DO NOT EXCEED THREE FEET (3'). INSTALL COPPER GREEN INSULATED GROUNDING CONDUCTOR IN ALL CONDUITS AND
	RACEWAYS.
<u>UR</u>	<u>SPLICING</u> SPLICING SHALL BE DONE WITH INSULATED OR NON-INSULATED CONNECTORS OF
	APPROPRIATE TYPES AND CURRENT-CARRYING CAPACITY. NON-INSULATED CONNECTORS SHALL BE WRAPPED WITH INSULATING TAPE TO THE THICKNESS OF THE INSULATION OF THE CONDUCTORS BEING SPLICED. ELECTRICAL TAPE SHALL BE 3M OR SUPER 88 SCOTCH
	VINYL FLAME-RETARDANT , COLD AND WEATHER RESISTANT.
	SPLICES FOR CONDUCTORS, SIZES #10 AWG OR SMALLER SHALL BE MADE WITH U.L. LISTED SPRING-TYPE CONNECTORS OR APPROPRIATE CURRENT CARRYING CAPACITY.
<u>UR</u>	SPLICES, TAPS AND TERMINALS FOR CONDUCTORS #8 AWG OR LARGER SHALL BE MADE WITH U.L. LISTED BOLTED PRESSURE CONNECTORS OF BRONZE OR COPPER CONSTRUCTION, OF APPROPRIATE CURRENT CARRYING CAPACITY. EQUAL TO O-Z/GEDNEY,
	BURNDY OR BLACKBURN.
S	CONDUCTOR IDENTIFICATION CONDUCTORS #8 AWG AND SMALLER SHALL HAVE A COLOR-CODED INSULATION.
	" CONDUCTORS #6 AWG AND LARGER SHALL BE IDENTIFIED WITH TAPES APPLIED NEAR THE
OR	ENDS OF THE CONDUCTORS.
SHED	208/120V/3PH
	PHASE A BLACK PHASE B RED
LES	PHASE B RED PHASE C BLUE NEUTRAL WHITE
	GROUND GREEN ALL FEEDERS, MAINS AND BRANCH CIRCUIT CONDUCTORS SHALL BE TAGGED AT BOTH
UST	ALL FEEDERS, MAINS AND BRANCH CIRCUIT CONDUCTORS SHALL BE TAGGED AT BOTH ENDS WITH WIRE MARKERS IN ALL PANELS, MOTOR CONTROLS, JUNCTION BOXES, OUTLET BOXES AND DEVICE BOXES.
ED	IDENTIFICATION
	FURNISH AND INSTALL NAMEPLATES FOR ALL ELECTRICAL EQUIPMENT, IDENTIFYING ITEMS BY NAME, FUNCTION AND/OR CONTROL.
OF	IDENTIFYING NAMEPLATES SHALL BE LAMINATED, PLASTIC TYPE, CONSISTING OF TWO BLACK PLASTIC SHEETS WITH ONE WHITE PLASTIC SHEET BONDED TO AND BETWEEN THE TWO
NGS OR R	OUTER BLACK SHEETS AND HAVING THE LETTERS ENGRAVED IN ONE BLACK TO THE DEPTH OF THE WHITE PLASTIC. FASTEN NAMEPLATES TO EQUIPMENT WITH SUITABLE ADHESIVES OR STAINLESS STEEL SCREWS.
	ALL PANELS SHALL HAVE TYPEWRITTEN CIRCUIT DIRECTORIES IDENTIFYING ALL BRANCH CIRCUITS, PROVIDE ADDITIONAL COPY OF COMPLETE UPDATED PANEL DIRECTORY TO
	THE THE REPORT OF THE OFFICE OF THE OFFICE OF THE DIRECTORY IN THE OFFICE OF THE OFFICE OFFIC

LL ELECTRICAL WORK SHALL BE GROUNDED AND BONDED IN FULL CONFORMANCE WITH E LATEST APPROVED EDITION OF THE NATIONAL ELECTRICAL CODE AND LOCAL REQUIREMENTS.

<u>GROUNDING</u>

ALL ELECTRICAL EQUIPMENT, TRANSFORMERS, PANELBOARD ENCLOSURES, MOTOR FRAMES, SAFETY SWITCHES, METAL ENCLOSURES, ELECTRICAL DEVICE CLOSURES AND ALL OTHER EQUIPMENT SHALL BE MADE TO FORM A CONTINUOUS CONDUCTING, GROUND PATH OF LOW IMPEDANCE FOR GROUND FAULT CIRCUITS AND OPERATION OF THE CIRCUIT PROTECTIVE DEVICES WITHIN EACH CIRCUIT. PROVIDE GROUNDING CONDUCTOR IN ALL RACEWAYS.

GROUND CONNECTIONS WITH THE GROUNDING CONDUCTORS SHALL BE MADE AT EACH OUTLET BOX, LIGHTING FIXTURE, MOTOR AND OTHER EQUIPMENT COMPONENTS BY MEANS OF A POSITIVELY SECURED GROUNDING CLAMP. SCREW OR CLIP. CONNECTIONS TO GROUNDING RODS, OTHER GROUNDING ELECTRODE CONDUCTORS SHALL BE MADE WITH ADWELL TYPE, EXOTHEMIC WELD PROCESS UNLESS OTHERWISE NOTED. CONNECTIONS TO PIPES SHALL BE MADE WITH APPROVED BRONZE OR BRASS CLAMPS.

BONDING SHALL BE PROVIDED TO ASSURE ELECTRICAL CONTINUITY AND THE CAPACITY TO SAFELY CONDUCT ANY FAULT CURRENT LIKELY TO BE IMPOSED. ALL DEVICES (SWITCHES, RECEPTACLES, ETC.), SHALL BE GROUNDED TO CONDUIT SYSTEM WITH SIX (6") INCH SOLID COPPER #12 AWG INSULATED WIRE (GREEN) CONNECTED TO GROUND SCREW IN DEVICE AND FASTENED TO BACKBOX WITH 10-32x3/8" SLOTTED

HEXAGON HEAD WASHER FACE GROUND WITH GREEN DYE FINISH. <u>VOICE/DATA_SYSTEM</u> FURNISH OUTLET BOXES, RACEWAYS AND PLATES FOR THE VOICE/DATA SYSTEMS.

ALL WORK RELATED TO THE VOICE/DATA SYSTEM SHALL CONFORM TO THE REQUIREMENTS OF TIA/EIA TELECOMMUNICATION BUILDING WIRING STANDARDS AND BICSI TELECÓMMUNICATION DISTRIBUTION STANDARDS.

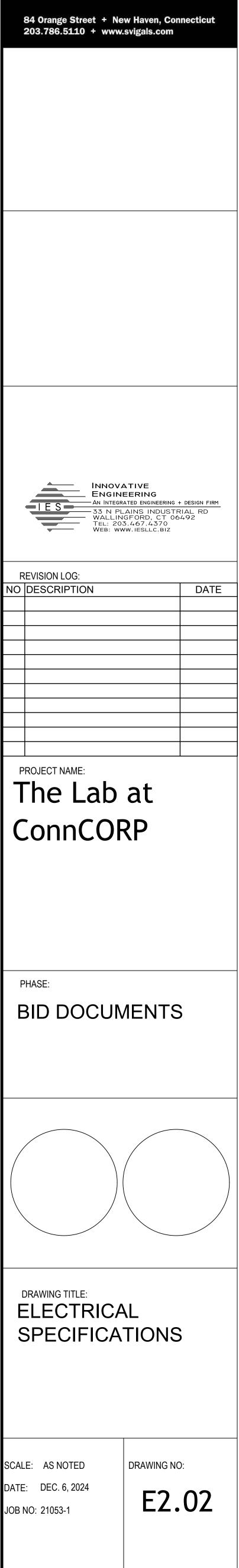
INSTALL 3' SERVICE LOOPS AT BOTH ENDS OF EACH CABLE. INSTALL ALL LOW VOLTAGE CABLE ON J-HOOKS (CADDY CAT64 OR EQUIVALENT) ABOVE

END OF ELECTRICAL SPECIFICATIONS

HUNG CEILING SPACE APPROXIMATELY 4' ON CENTER, OR CLOSER AS REQUIRED TO PREVENT CABLES FROM CONTACTING CEILING GRID, DUCT PIPES, CONDUITS, STRUCTURE, ETC. PROVIDE 4" CONDUIT FOR CABLE PATHWAY REQUIREMENTS SPANNING AREAS WHERE ERE IS NO HUNG CEILING. PROVIDE ALL J-HOOKS, CONDUITS, SUPPORTS, ETC. FOR A COMPLETE LOW VOLTAGE CABLING RACEWAY SYSTEM. SEISMIC RESTRAINT

SEISMIC LATERAL RESTRAINTS DESIGNED TO RESIST HORIZONTAL MOVEMENT IN ANY DIRECTIONS SHALL BE INSTALLED IN ALL SUSPENDED CONDUITS 2-1/2 INCHES IN DIAMETER OR GREATER. QUANTITY AND LOCATION OF THE LATERAL RÉSTRAINTS SHALL BE BASED ON THE CONDUIT SYSTEM LAYOUT AND IN GENERAL, SHALL BE INSTALLED AT CONDUIT BENDS, JUNCTION BOXES AND APPROXIMATELY EVERY 20 FEET ALONG CONDUIT RUNS. SEISMIC LATERAL RESTRAINTS ARE NOT REQUIRED FOR ANY PIPING SUSPENDED BY INDIVIDUAL HANGERS 12 INCHES OR LESS IN LENGTH FROM TOP OF PIPING TO THE BOTTOM OF THE SUPPORT FOR THE HANGER.





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