

Abbreviations

A.F.F.	ABOVE FINISH FLOOR	L.D.R.	LEADER
ALUM.	ALUMINUM	L.P.	LOW POINT
@	AT	M.H.	MANHOLE
ACT	ACOUSTIC CEILING TILE	M.O.	MASONRY OPENING
ALT.	ALTERNATE	MAX.	MAXIMUM
BM.	BEAM	M.E.P.	MECHANICAL, ELECTRICAL & PLUMBING
B.E.J.	BUILDING EXPANSION JOINT	M.E.R.	MECHANICAL EQUIPMENT ROOM
BET.	BETWEEN	MTL.	METAL
BLK.	BLOCK OR BLOCKING	M.F.D.	METAL FLOOR DECK
BD.	BOARD	M.F.T.R.	MANUFACTURER
BOT.	BOTTOM	M.R.D.	METAL ROOF DECK
BLDG.	BUILDING	MISC.	MISCELLANEOUS
B.O.	BOTTOM OF	N.R.	NOT REQUIRED
C.B.	COLLECTOR BOX	N.J.P.E.	NEW JERSEY PROFESSIONAL ENGR.
CEM.	CEMENT	N.I.C.	NOT IN CONTRACT
CEM. PLAS.	CEMENT PLASTER	N.T.S.	NOT TO SCALE
C.L.	CENTER LINE	NO.	NUMBER
CONC.	CONCRETE	O.C.	ON CENTER
C.M.U.	CONCRETE MASONRY UNIT	OPNG.	OPENING
CONT.	CONTINUOUS	O.D.	OUTSIDE DIAMETER
CONTR.	CONTRACTOR	O.A.	OVERALL
C.J.	CONTROL JOINT	PART.	PARTITION
COORD.	COORDINATE	PLAS.	PLASTER
CT.	CERAMIC TILE	PL.	PLATE
DET.	DETAIL	PNT.	PAINT
DIAM.	DIAMETER	P.T.	PRESSURE TREATED
D.F.	DRINKING FOUNTAIN	PTD.	PAINTED
DR.	DOOR	REV.	REVISION
DN.	DOWN	R.	RISERS
EA.	EACH	R.D.	ROOF DRAIN
EL.	ELEVATION	RM.	ROOM
E.O.S.	EDGE OF SLAB	R.O.	ROUGH OPENING
EXIST.	EXISTING	SECT.	SECTION
EXP. JT.	EXPANSION JOINT	S.P.	STEEL PIPE COLUMN
EXP.	EXPOSED	SPECS.	SPECIFICATIONS
EXT.	EXTERIOR	SQ.	SQUARE
EQ.	EQUAL	SQ. FT.	SQUARE FEET
FT.	FEET	S.S.	STAINLESS STEEL
FIN.	FINISH	ST. STL.	STAINLESS STEEL
FIN. FLR.	FINISH FLOOR	STL.	STEEL
F.G.	FINISH GRADE	STRUCT.	STRUCTURAL
F.E.	FIRE EXTINGUISHER	SUSP.	SUSPENDED
F.P.	FIREPROOFING	T.O.	TOP OF
F.O.	FACE OF	T.O.C.	TOP OF CURB
FL.	FLOOR	T.O.S.	TOP OF SLAB
F.D.	FLOOR DRAIN	T.O.STL.	TOP OF STEEL
F.O.W.	FACE OF WALL	TERR.	TERRAZZO FLOOR
FNDTN.	FOUNDATION	TER. T.	TERRAZZO TILE
GALV.	GALVANIZED	T.O.W.	TOP OF WALL
GA.	GAUGE	TYP.	TYPICAL
G.C.	GENERAL CONTRACTOR	U.L.	UNDERWRITERS LABORATORY
H.R.	HAND RAIL	U.O.N.	UNLESS OTHERWISE NOTED
HDWR.	HARDWARE	VERT.	VERTICAL
H.S.S.	STEEL TUBE BEAM OR COLUMN	V.I.F.	VERIFY IN FIELD
HT.	HEIGHT	W.C.	WATER CLOSET
H.P.	HIGH POINT	W.F.	WIDE FLANGE BEAM OR COLUMN
H.M.	HOLLOW METAL	W.P.	WORK POINT
HOR.	HORIZONTAL	W.PFG.	WATERPROOFING
I.D.	INSIDE DIAMETER	WWM.	WELDED WIRE MESH
I.D.F.	INTERMEDIATE DISTRIBUTION FRAME	W/	WITH
INSUL.	INSULATION	WD.	WOOD

Symbols

MATERIAL DESIGNATION

	GRAVEL OR POROUS FILL		STEEL
	EARTH		CONCRETE
	CONCRETE MASONRY UNITS		RIGID INSULATION
	BRICK/CMU VENEER		NEW PARTITION COORD. WITH PARTITION TYPE
	GROUT		
	PROTECTION BOARD/GYPSUM BOARD		
	PLYWOOD		

DETAILS & ELEVATIONS

	WALL SECTION		DOOR TAG (WITH NO AREA)
	BUILDING CROSS SECTION		
	EXTERIOR ELEVATION		
	DETAIL		

MISCELLANEOUS

	INTERIOR ELEVATION		TOILET ACCESSORY BUILT-IN EQUIPMENT		DEMOLITION NOTE
	GENERAL NOTE		ALIGN		

GENERAL NOTES:

- THE CONTRACTOR SHALL CHECK AND VERIFY ALL LEVELS, LINES, AND DIMENSIONS ON THE DRAWINGS INCLUDING EXISTING STRUCTURES AND NOTIFY THE ARCHITECT OF ANY DISCREPANCY IN DRAWINGS AND/OR EXISTING CONDITIONS BEFORE STARTING THE WORK.
- THE CONTRACTOR SHALL FURNISH AND INSTALL ALL WORK AS INDICATED ON THE DRAWINGS AND SPECIFICATIONS.
- ALL JOINTS NOT OTHERWISE FILLED OR COVERED, SHALL BE CAULKED WITH A PERMANENT SEALANT, AS SPECIFIED BY MANUFACTURER, TO MATCH ADJACENT SURFACES UNLESS OTHERWISE NOTED OR SHOWN. PUTTY WILL NOT BE PERMITTED.
- WHEREVER ELECTRICAL CONDUIT, MECHANICAL DUCTS, OR PIPES ARE INSTALLED INTO NEW OR EXISTING SURFACES, FINISH SURFACES WITH MATERIAL TO MATCH ADJACENT MATERIALS UNLESS OTHERWISE DIRECTED.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING, PROTECTING AND/OR RELOCATING ANY EXISTING UTILITIES ENCOUNTERED IN THE WORK AREAS.
- WHEREVER OTHER ITEMS ARE REMOVED FROM WALLS, PATCH AS REQUIRED TO MATCH MATERIAL, TEXTURE AND FINISH OF ADJACENT WALL SURFACES.
- ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH LOCAL, STATE AND NATIONAL BUILDING, PLUMBING, AND ELECTRIC CODES.
- THE CONTRACTOR SHALL COORDINATE ALL OF ITS OPERATIONS WITH THE OWNER.
- THE CONTRACTOR SHALL COORDINATE ALL OF ITS OPERATIONS WITH ANY EQUIPMENT AND ITS INSTALLER.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR DAMAGE TO THE BUILDING OR GOODS ON THE INTERIOR OF THE BUILDING NEAR OR ADJACENT TO THEIR WORK AREA WHEN SUCH DAMAGE IS DUE TO THEIR ACTIONS OR NEGLIGENCE.
- REFERENCE NOTES: NOTES PERTAINING TO SPECIFIC MATERIALS, DIMENSIONS, AND/ OR DESCRIPTIONS OF WORK AS THEY RELATE TO THE DRAWINGS ON WHICH THEY APPEAR. ALL REFERENCE NOTES ARE COMPLIMENTARY TO EACH DRAWING AND ARE TO BE CAREFULLY REVIEWED PRIOR TO CONSTRUCTION.
- DOCUMENT REVIEW: EACH CONTRACTOR IS RESPONSIBLE FOR REVIEWING ALL ARCHITECTURAL, HVAC, PLUMBING, AND ELECTRICAL DRAWINGS. ALL DOCUMENTS CONTAIN INFORMATION WHICH IS COMPLIMENTARY TO EACH TRADE AND MUST BE REVIEWED & UNDERSTOOD PRIOR TO BIDDING THIS PROJECT.
- GENERAL CONTRACTOR SHALL VERIFY ALL CONDITIONS AND CHECK ALL MEASUREMENTS ON THE JOB AND SHALL BE RESPONSIBLE FOR SAME.
- SHOULD UNFORESEEN CONDITIONS OR OTHER CAUSES NECESSITATE CONSTRUCTION DETAILS NOT IN ACCORDANCE WITH THESE DRAWINGS, THE CONTRACTOR SHALL NOTIFY THE ARCHITECT AND SUBMIT DETAILS, FOR ARCHITECT'S REVIEW SHOWING THE PROPOSED METHODS TO ACCOMPLISH THE REQUIRED RESULTS, AND AWAIT ARCHITECT'S INSTRUCTIONS.
- PROTECT FROM DAMAGE ALL STRUCTURES, FINISHES, UTILITIES, EQUIPMENT, VEGETATION, ETC. SCHEDULED TO REMAIN. MAINTAIN THE STRUCTURAL INTEGRITY OF THE BUILDING AND TEMPORARY SHORING AS REQUIRED. PROVIDE TEMPORARY PROTECTIVE DUST AND WATERTIGHT ENCLOSURES WHERE AND WHEN REQUIRED.
- EACH SUB-CONTRACTOR SHALL BE RESPONSIBLE FOR ADEQUATELY BRACING AND PROTECTING ALL WORK DURING CONSTRUCTION AGAINST DAMAGE, BREAKAGE, COLLAPSE, DISTORTIONS AND MISALIGNMENT ACCORDING TO THE APPLICABLE CODES, STANDARDS AND GOOD PRACTICE.
- THE BUILDING GROUNDS SHALL BE KEPT CLEAN AT ALL TIMES BY EACH SUB-CONTRACTOR. REMOVE ALL DEBRIS FROM THE SITE TO A POINT OF LEGAL DISPOSAL. THE GENERAL CONTRACTOR WILL SUPPLY A CONTAINER FOR THIS PURPOSE. ARCHITECT TO INSTRUCT OF APPROVED TEMPORARY ON-SITE LOCATION.
- USE ADEQUATE NUMBERS OF SKILLED WORKMAN WHO ARE THOROUGHLY TRAINED AND EXPERIENCED IN THE NECESSARY CRAFTS AND WHO ARE COMPLETELY FAMILIAR WITH THE SPECIFIED METHODS FOR PROPER PERFORMANCE OF THE WORK. IN ADDITION TO COMPLYING WITH PERTINENT CODES AND REGULATIONS OF GOVERNMENT AGENCIES HAVING JURISDICTION.

TOP OF WALL JOINT: 2-HR CONCRETE WALL OR BLOCK WALL ASSEMBLY
System No. HW-D-0080
Assembly Rating - 2 HR
Nominal Joint Width - 3/4 in.
Class II Movement Capabilities - 33% Compression or Extension

- Floor Assembly - The fire-rated fluted steel floor unit/concrete floor assembly shall be constructed of the materials and in the manner described in the individual Floor-Ceiling Design in the UL Fire Resistance Directory and shall include the following construction features:
A. Steel Floor and Form Units* - Max 3 in. deep galv steel fluted floor units.
B. Concrete - Min 2-1/2 in. thick reinforced concrete, as measured from the top plane of the floor units.
- Wall Assembly - Min 5 in. thick reinforced lightweight or normal weight (100-150 pcf) structural concrete. Wall may also be constructed of any UL Classified Concrete Blocks*
See Concrete Blocks (CAZT) category in the Fire Resistance Directory for names of manufacturers.
- Joint System - Max separation between bottom of floor and top of wall is 3/4 in. The joint system is designed to accommodate a max 33 percent compression or extension from its installed width. The joint system consists of a packing material and a fill material between the top of the wall and the bottom of the steel floor units, as follows:
A. Forming Material* - Min 4-1/2 in. thickness of min 4 pcf density mineral wool batt insulation was cut to the shape of the fluted deck, approximately 20 percent larger than the area of the flutes and compressed into the flutes of the steel floor units above the wall assembly. The forming material shall be recessed 1/4 in. from each side of the wall.
B. Fibrex Insulations, Inc. - FBX Soiling Insulation
C. Void or Cavity Material* - Sealant - Min 1/4 in. thickness of fill material installed on each side of the wall in the flutes of the steel floor units, flush with each surface of the wall.
HILTI, Inc. - CP601S Elastomeric Firestop Sealant
*Bearing the UL Classification Marking

MULTIPLE ITEMS THROUGH CONCRETE FLOOR/WALL OR BLOCK WALL
System No. C-AJ-8056
F RATING = 3-HR.
T RATING = 0 HR.
L Rating At Ambient - 5 CFM/Sq ft
L Rating At 400 F - 2 CFM/Sq ft

- Floor or Wall Assembly - Min 4-1/2 in. thick reinforced lightweight or normal weight (100-150 pcf) concrete. Wall may also be constructed of any UL Classified Concrete Blocks*. Max area of opening is 1296 sq in. with max dimension of 36 in.
See Concrete Blocks (CAZT) category in the Fire Resistance Directory for names of manufacturers.
- Cable Tray* - Max 18 in. wide by max 6 in. deep open-ladder cable tray with channel-shaped side rails formed of 0.060 in. thick aluminum or steel and with 1-1/2 in. wide by 1 in. channel shape rungs spaced 9 in. OC. One cable tray to be installed in the opening. The max annular space between the cable trays is 9 in. and between the periphery of the opening shall be min 1-1/2 in. to max 4-1/2 in. Cable tray to be rigidly supported on both sides of floor or wall assembly.
- Cables - Aggregate cross-sectional area of cables in cable tray to be max 30 percent of the cross-sectional area of the cable tray based on a max 3 in. cable loading depth within the cable tray. Any combination of the following types and sizes of copper conductor or fiber optic cables may be used:
A. 7/C No. 12 AWG with polyvinyl chloride (PVC) insulation and PVC jacket.
B. 25 pair - No. 24 AWG cable with PVC insulation and jacket.
C. 2/C No. 10 AWG cable with PVC insulation and jacket.
D. 3/C No. 8 AWG aluminum clad cable with cross-linked polyethylene (XLPE) insulation and PVC jacket.
E. Type RC - 62 A/U coaxial cable with air core and PVC jacket.
F. 24 fiber optic cable with PVC sub unit and jacket.
- Pipe Covering* - Nom 1-1/2 in. thick hollow cylindrical heavy density (min 3.5 pcf) glass fiber units jacketed on the outside with an all service jacket. Longitudinal joints sealed with metal fasteners or factory applied self-sealing lap tape. Transverse joints secured with metal fasteners or with built tape supplied with the product.
See Pipe and Equipment Covering - Materials (BROU) category in the Building Materials Directory for names of manufacturers. Any pipe covering material meeting the above specifications and bearing the UL Classification Marking with a Flame Spread Index of 25 or less and a Smoke Developed Index of 50 or less may be used.
- Cables - Max 2 in. diam light bundle of cables centered in opening and rigidly supported on both surfaces of floor and wall. Any combination of the following types and sizes of cables may be used:
A. 7/C No. 12 AWG with polyvinyl chloride (PVC) insulation and PVC jacket.
B. 25 pair - No. 24 AWG cable with PVC insulation and jacket.
C. 2/C No. 10 AWG cable with PVC insulation and jacket.
D. 3/C No. 8 AWG aluminum clad cable with cross-linked polyethylene (XLPE) insulation and PVC jacket.
E. Type RC - 62 A/U coaxial cable with air core and PVC jacket.
F. 24 fiber optic cable with PVC sub unit and jacket.

PLASTIC PIPE THROUGH CONCRETE FLOOR/WALL OR BLOCK WALL
System No. C-AJ-2109
F RATING = 3-HR.
T RATING = 0, 2 & 3 HR. (See Item 2)

- Floor or Wall Assembly - Min 4-1/2 in. thick reinforced lightweight or normal weight (100-150 pcf) concrete. Wall May also be constructed of any UL Classified Concrete Blocks*. Max diam of opening is 7 in.
See Concrete Blocks (CAZT) category in the Fire Resistance Directory for names of manufacturers.
- Through Penetrants - One nonmetallic pipe or tubing to be installed either concentrically or eccentrically within the firestop system. The annular space between the pipe and periphery of opening shall be min 0 in. (point contact) to max 1/2 in. Pipe to be rigidly supported on both sides of floor or wall assembly. The T Ratings are dependent on the size and/or type of pipe as shown in the table below. The following types and sizes of nonmetallic pipes may be used:
A. Polyvinyl Chloride (PVC) Pipe - Nom 6 in. diam (or smaller) Schedule 40 solid-core of cellular core PVC pipe for use in closed (process or supply) or vented (drain, waste or vent) piping system.
B. Chlorinated Polyvinyl Chloride (CPVC) Pipe - Nom 6 in. diam (or smaller) SDR17 CPVC pipe for use in closed (process or supply) or vented (drain, waste or vent) piping systems.
C. Acrylonitrile Butadiene Styrene Pipe - Nom 6 in. diam (or smaller) Schedule 40 solid-core or cellular core ABS pipe for use in closed (process or supply) or vented (drain, waste or vent) piping systems.
D. Flame Retardant Polypropylene (CPVC) Pipe - Nom 6 in. diam (or smaller) Schedule 40 FRPP pipe for use in closed (process or supply) or vented (drain, waste or vent) piping systems.

Pipe Type	Nom Pipe Diam, in.	T Rating, hr
PVC, CPVC		
ABS, FRPP	1-1/2, 2, 3	2
PVC, CPVC		
ABS, FRPP	4,	3
PVC, CPVC		
ABS+, FRPP	6,	3
ABS++	6,	0

+ - indicates solid core ABS only
++ - indicates cellular core ABS only

- Fill, Void or Cavity Material* - Sealant - Min 1/2 in. thickness of fill material applied within the annulus, flush with bottom surface of floor or with both surfaces of wall.
- Firestop Device* - Firestop Collar - Firestop collar shall be installed in accordance with the accompanying installation instructions. Collar to be installed and latched around the pipe and secured to underside of floor or both sides of wall using the anchor hooks provided with the collar. (Minimum 2 anchor hooks for 1-1/2 and 2 in. diam pipes, 3 anchor hooks for 3 and 4 in. diam pipes, and 6 anchor hooks for 6 in. diam pipes). The anchor hooks are to be secured with 1/4 in. diam by min 1-1/2 in. long steel expansion bolts, or equivalent, in conjunction with steel nuts and min 3/4 in. diam steel washers with one anchor bolt in each anchor hook.
HILTI, Inc. - CP 643 50/1.5", CP 643 63/2" CP 643 90/3", CP 643 110/4" OR CP 642 160/6" Firestop Collar.
*Bearing the UL Classification Marking

Department of Community Affairs
Construction Project Review
Project No. AC-04429
Partial Release
Building
Peter Hegeman
Released: 3/20/2020
N.J.S.A. 52:27D-119 ET SEQ., AS AMENDED

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Certificate of Authorization: 24GA28014000
SH JOB # 2566A

NO.	REVISION	DATE

ISSUED FOR:

BID/ PERMIT

BOILER PROJECT AT BOZORTH HALL & HAWTHORN HALL ROWAN UNIVERSITY MEMORIAL CIRCLE, GLASSBORO, NJ 08028

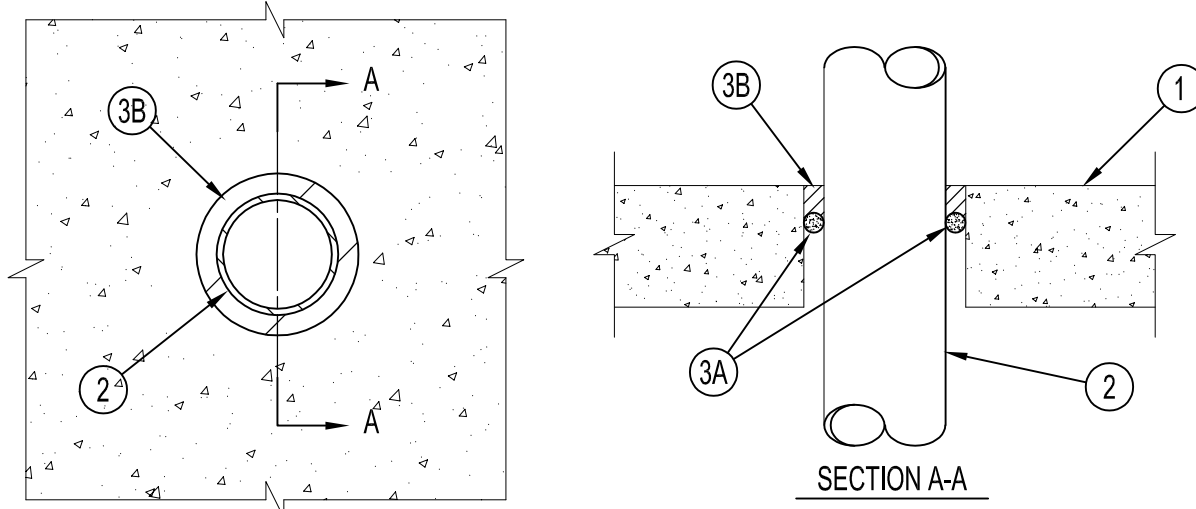
FIRESTOPPING DETAILS

PROJECT NO.:	25.063
DRAWN BY:	KT
CHECKED BY:	KG
DATE:	03/06/2026
SCALE:	
DRAWING NO.:	A-001

THIS DRAWING IS FORMATTED TO BE PRINTED AT 36"x24"

METAL PIPE THROUGH CONCRETE FLOOR/WALL OR BLOCK WALL

System No. C-AJ-1276
F RATING = 3-HR.
T RATING = 0-HR.

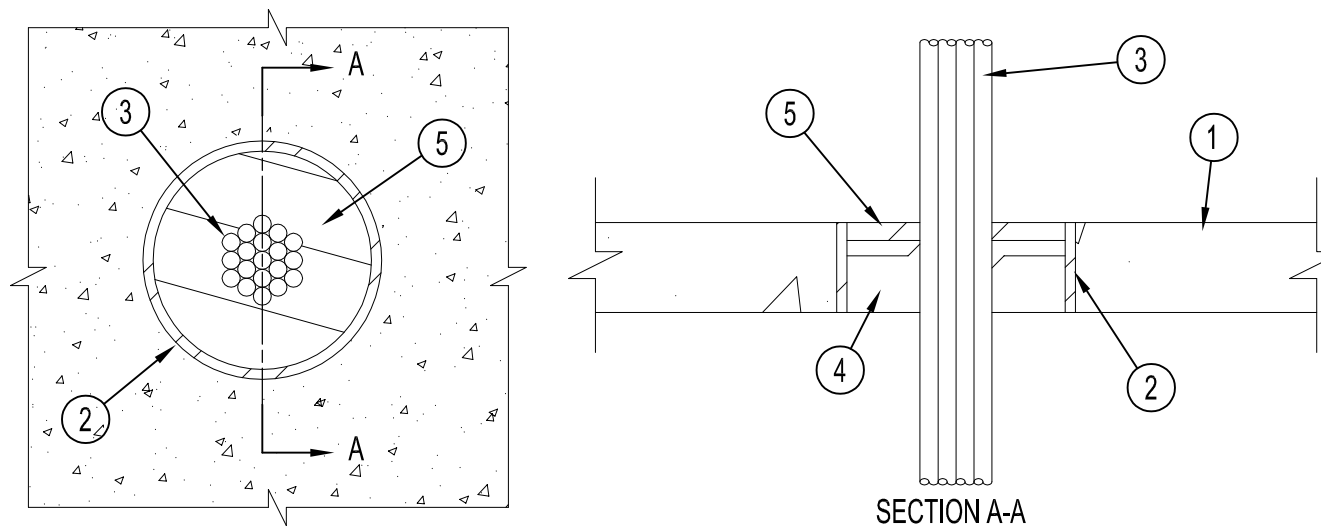


- Floor or Wall Assembly - Min 4-1/2 in. thick reinforced lightweight or normal weight (100-150 pcf) concrete. Wall may also be constructed of any UL Classified Concrete Blocks*. Max diam of opening is 6 in. See Concrete Blocks (CAZT) category in the Fire Resistance Directory for names of manufacturers.
- Through Penetrants - One metallic pipe, conduit or tubing to be centered within the firestop system. Pipe, conduit or tubing to be rigidly supported on both sides of floor or wall assembly. The following types and sizes of metallic pipes, conduits or tubing may be used:
 - Steel Pipe - Nom 4 in. diam (or smaller) Schedule 10 (or heavier) steel pipe. A nom annular space of 3/4 in. is required within the firestop system.
 - Conduit - Nom 4 in. diam (or smaller) steel electrical metallic tubing or steel conduit. A nom annular space of 3/4 in. is required within the firestop system.
- Firestop System - The firestop system shall consist of the following:
 - Packing or Forming Materials - Optional - One of the following packing or forming materials may be used:

- Foam backer rod tightly packed into the opening as a permanent form. Packing material to be recessed from the top surface of floor or both surfaces of wall as required to accommodate the required thickness of putty.
 - Mineral wool batt insulation, min 4 pcf, tightly packed into the opening as a permanent form. Packing material to be recessed from the top surface of floor or both surfaces of wall as required to accommodate the required thickness of putty.
 - Forming materials* - Forming material to be foamed into the opening as a permanent form. Forming material to be recessed from the top surface of floor or both surfaces of wall as required to accommodate the required thickness of putty.
 - HLTI, Inc. - CF128 Foam Sealant
- B. Fill, Void or Cavity Material* - Putty - Min 1 in. thickness of putty applied within the annulus, flush with top surface of floor or with both surfaces of wall.
- *Bearing the UL Classification Marking

SINGLE OR MULTIPLE CABLES THROUGH CONCRETE FLOOR/WALL OR BLOCK WALL

System No. C-AJ-3095
F RATING = 3-HR.
T RATING = 0, 1/2 & 3/4 HR. (See Item 3)



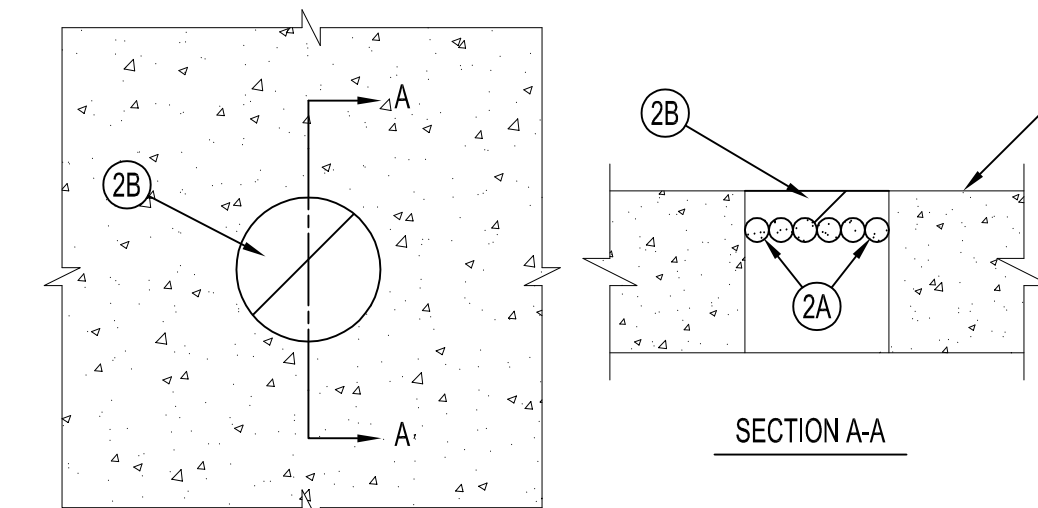
- Floor or Wall Assembly - Min 2-1/2 in. thick reinforced lightweight or normal weight (100-150 pcf) concrete floor or min 3 in. thick reinforced lightweight or normal weight concrete wall. Wall may also be constructed of any UL Classified Concrete Blocks*. Max diam of opening is 6 in. See Concrete Blocks (CAZT) category in the Fire Resistance Directory for names of manufacturers.
- Steel Sleeve (Optional) - Nom 6 in. diam (or smaller) Schedule 10 (or heavier) steel pipe cast or grouted into floor or wall assembly, flush with floor or wall surfaces.
- Cables - Aggregate cross-sectional area of cables in opening to be min 25 percent to max 45 percent of the aggregate cross-sectional area of the opening. Cables to be rigidly supported on both sides of floor or wall assembly. Any combination of the following types and sizes of metallic conductor or fiber optic cable may be used:
 - Max 500 kcmil single conductor power cable with thermoplastic insulation and polyvinyl chloride (PVC) jacket. When single copper conductor power cable is used, T Rating is 0 hr.

- Max 350 kcmil single conductor power cables with either aluminum or copper conductors and cross-linked polyethylene (XLPE) insulation. When single aluminum conductor power cable is used, T Rating is 0 hr. When single copper conductor power cable is used, T Rating is 1/2 hr.
- Max 300 pair No. 24 AWG copper conductor telecommunication cables with polyvinyl chloride (PVC) insulation and jacket material. When telecommunication cable is used, T Rating is 0 hr.
- Max 3/8 copper conductor No. 12 AWG multicore power and control cables with PVC or cross-linked polyethylene (XLPE) insulation and PVC jacket. When multicore power and control cable is used, T Rating is 3/4 hr.
- Multiple fiber optical communication cables jacketed with PVC and having a max outside diam of 1/2 in. When fiber optic cable is used, T Rating is 3/4 hr.

- Max 3/8 copper conductor No. 12 AWG with Bare aluminum ground, polyvinyl chloride (PVC) insulated steel, Metal-clad cable+. When MC cable is used, T Rating is 0 hr. AFC Cable Systems, Inc.
 - Packing Material - Min 2 in. thickness of min 4 pcf mineral wool batt insulation firmly packed into opening as a permanent form. Packing material to be recessed 1/2 in. from top surface of floor or from both surfaces of wall as required to accommodate the required thickness of fill material.
 - Fill, Void or Cavity Material* - Sealant - Min 1/2 in. thickness of fill material applied within the annulus, flush with top surface of floor or with both surfaces of wall.
 - HLTI, Inc. - FS-ONE Sealant
- *Bearing the UL Classification Marking

BLANK OPENING IN CONCRETE FLOOR/WALL OR BLOCK WALL

System No. C-AJ-0058
F RATING = 3-HR.
T RATING = 1-HR.



- Floor or Wall Assembly - Min 4-1/2 in. thick reinforced lightweight or normal weight (100-150 pcf) concrete. Wall may also be constructed of any UL Classified Concrete Blocks*. Max diam of opening is 4 in. See Concrete Blocks (CAZT) category in the Fire Resistance Directory for names of manufacturers.
 - Firestop System - The firestop system shall consist of the following:
 - Packing or Forming Materials - One of the following packing or forming materials may be used:
 - Foam backer rod tightly packed into the opening as a permanent form. Packing material to be recessed from the top surface of floor or both surfaces of wall as required to accommodate the required thickness of putty.
 - Mineral wool batt insulation, min 4 pcf, tightly packed into the opening as a permanent form. Packing material to be recessed from the top surface of floor or both surfaces of wall as required to accommodate the required thickness of putty.
 - Forming materials* - Forming material to be foamed into the opening as a permanent form. Forming material to be recessed from the top surface of floor or both surfaces of wall as required to accommodate the required thickness of putty.
 - HLTI, Inc. - CF128 Foam Sealant
 - Fill, Void or Cavity Material* - Putty - Min 3/4 in. thickness of putty applied within the annulus, flush with top surface of floor or with both surfaces of wall.
 - HLTI, Inc. - CP 618 Firestop Putty Stick
- *Bearing the UL Classification Marking

Department of Community Affairs
Construction Project Review
Project No. AC-044-20
Partial Release
Building
Peter Hegeman
Released: 3/20/2020
N.J.S.A. 52:27D-119 ET SEQ., AS AMENDED

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Certificate of Authorization: 24GA28014000
SH JOB # 2566A

NO.	REVISION	DATE

ISSUED FOR:

BID/ PERMIT

BOILER PROJECT AT
BOZORTH HALL & HAWTHORN HALL
ROWAN UNIVERSITY
MEMORIAL CIRCLE, GLASSBORO, NJ 08028

PROJECT NO.:	25.063
DRAWN BY:	KT
CHECKED BY:	KG
DATE:	03/06/2026
SCALE:	

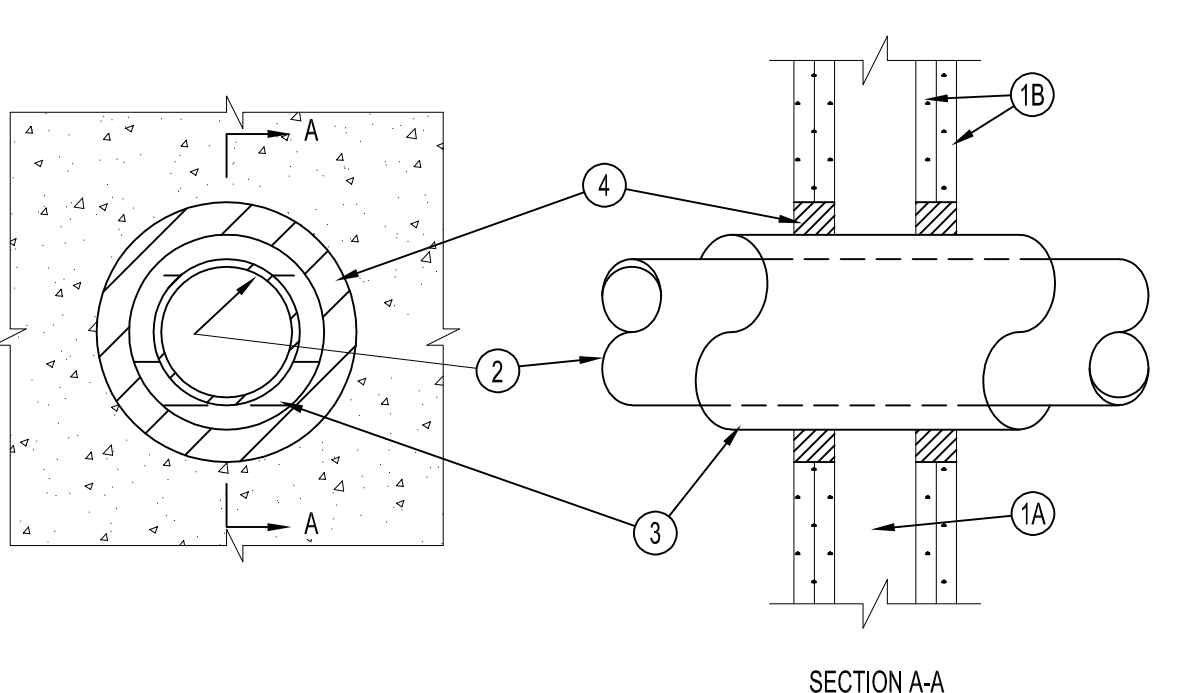
DRAWING NO.:

A-002

FIRESTOPPING DETAILS

INSULATED METAL PIPE THROUGH 1-HR OR 2-HR GYPSUM WALL ASSEMBLY

System No. WL-5028
F Ratings - 1 and 2 Hr (See Item 1)
T Ratings - 1/2 and 3/4 Hr



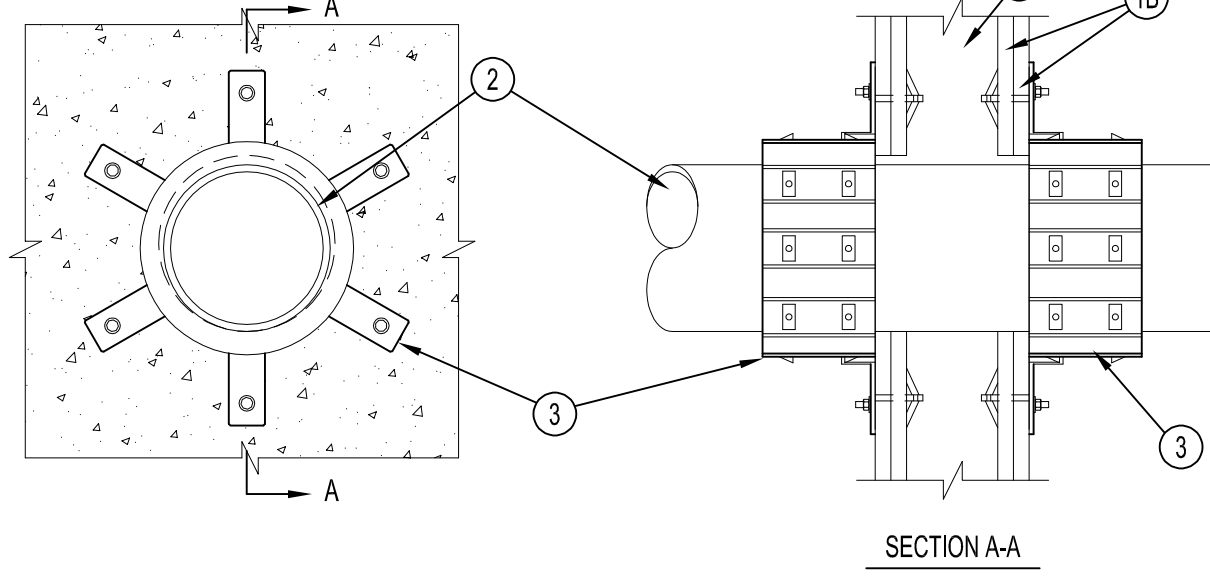
- Wall Assembly - The 1 or 2 hr fire-rated gypsum wallboard/stud wall assembly shall be constructed of the materials and in the manner specified in the individual U300 or U400 Series Wall and Partition Designs in the UL Fire Resistance Directory and shall include the following construction features:
 - Studs - Wall framing may consist of either wood studs or steel channel studs. Wood studs to consist of nom 2 by 4 in. lumber spaced max 24 in. OC.
 - Wallboard, Gypsum* - 5/8 in. thick, 4 ft wide with square or tapered edges. The gypsum wallboard type, thickness, number of layers, fastener type and sheath orientation shall be as specified in the individual Wall and Partition Design. Max diam of opening is 7-1/2 in. The hourly F Rating of the firestop system is equal to the hourly fire rating of the wall assembly in which it is installed.
 - Through Penetrants - One metallic pipe, conduit or tubing to be centered within the firestop system. Pipe, conduit or tubing to be rigidly supported on both sides of wall assembly. The following types and sizes of metallic pipes, conduits or tubing may be used:
 - Steel Pipe - Nom 4 in. diam (or smaller) Schedule 40 (or heavier) steel pipe.
 - Conduit - Nom 4 in. diam (or smaller) electrical metallic tubing or steel conduit.
 - Copper Tubing - Nom 2 in. diam (or smaller) Type L (or heavier) copper tubing.
 - Copper Pipe - Nom 2 in. diam (or smaller) Regular (or heavier) copper pipe.
 - Tube Insulation - Plastics+ - Nom 3/4 in. thick acrylonitrile butadiene/polyvinyl chloride (AB/PVC) flexible foam furnished in the form of tubing. An annular space of min 0 in. (point contact) to max 1-1/2 in. is required within the firestop system. See Plastics+ (QMFZ) category in the Recognized Component Directory for names of manufacturers. Any Recognized Component tube insulation material meeting the above specifications and having a UL 94 Flammability Classification of 94-SW may be used. The hour 1 Rating of the firestop system is dependent on the hourly fire rating of the wall assembly in which it is installed, the size and type of through penetrant and the pipe covering thickness, as shown in the table below:

Wall Assembly Rating	Through Penetrant Type+	Max Diam In.	T Rating Hr
1	A or B	4	1/2
1	A, B, C or D	2	3/4
2	A or B	4	1/2
2	A, B, C or D	2	3/4

- +Indicates penetrant type as itemized in Item 2.
- Fill, Void or Cavity Material* - Sealant - Min 5/8 in. or 1-1/4 in. thickness of fill material applied within the annulus, flush with both surfaces of wall for 1 or 2 hr walls, respectively. At the point contact location between pipe covering and gypsum wallboard, a min 1/2 in. diam bead of fill material shall be applied at the pipe covering/gypsum wallboard interface on both surfaces of wall.
 - HLTI, Inc. - FS-ONE Sealant
- *Bearing the UL Classification Marking

PLASTIC PIPE THROUGH 1-HR OR 2-HR GYPSUM WALL ASSEMBLY

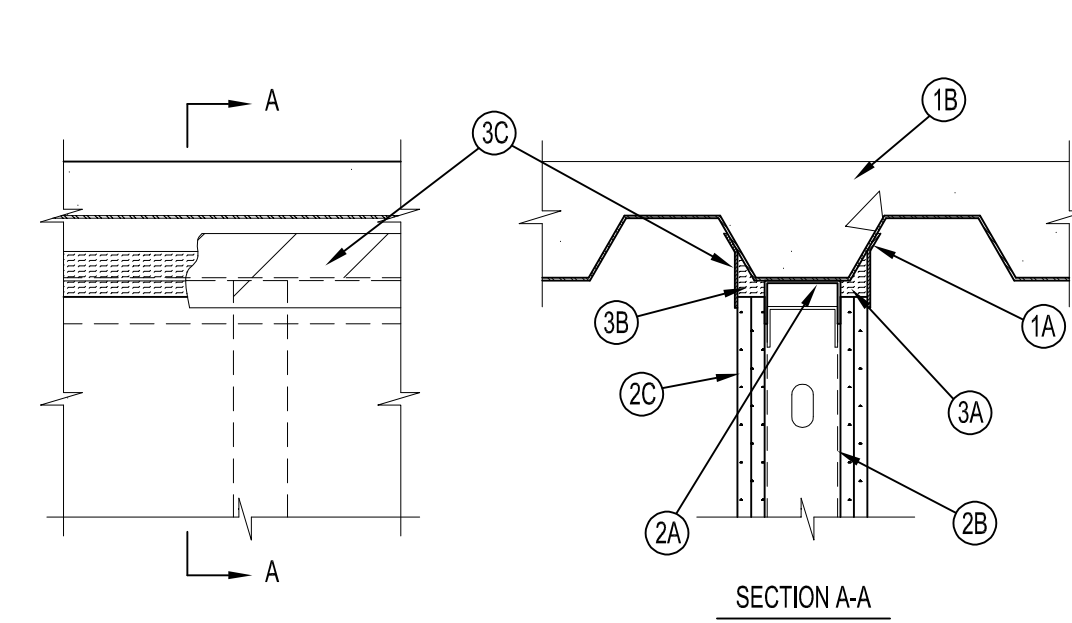
System No. WL-2078
F Ratings - 1 & 2 Hr (See Item 1)
T Ratings - 1 & 2 Hr (See Item 1)



- Wall Assembly - The fire-rated gypsum wallboard/stud wall assembly shall be constructed of the materials and in the manner specified in the individual U300 or U400 Series Wall and Partition Designs in the UL Fire Resistance Directory and shall include the construction features noted below. The hourly F Rating and T Rating of the firestop system is equal to the hourly fire rating of the wall assembly in which it is installed:
 - Studs - Wall framing may consist of either wood studs or steel channel studs. Wood studs to consist of nom 2 by 4 in. lumber spaced 16 in. OC. Steel studs to be min 2-1/2 in. wide and spaced max 24 in. OC.
 - Wallboard, Gypsum* - Nom 5/8 in. thick gypsum wallboard, as specified in the individual Wall and Partition Design. Max diam of opening is 7 in.
 - Through-Penetrants - One nonmetallic pipe, conduit or tubing to be installed within the firestop system. The annular space between pipe and periphery of opening shall be min 0 in. (point contact) to max 1/2 in. Pipe or conduit to be rigidly supported on both sides of the wall assembly. The following types and sizes of nonmetallic pipes may be used:
 - Polyvinyl Chloride (PVC) Pipe - Nom 6 in. diam (or smaller) Schedule 40 solid-core or cellular core PVC pipe for use in closed (process or supply) or vented (drain, waste or vent) piping systems.
 - Chlorinated Polyvinyl Chloride (CPVC) Pipe - Nom 6 in. diam (or smaller) SDR17 CPVC pipe for use in closed (process or supply) or vented (drain, waste or vent) piping systems.
 - Acrylonitrile Butadiene Styrene (ABS) Pipe - Nom 6 in. diam (or smaller) Schedule 40 solid-core or cellular core ABS pipe for use in closed (process or supply) or vented (drain, waste or vent) piping systems.
 - Flame Retardant Polypropylene (FRPP) Pipe - Nom 6 in. diam (or smaller) Schedule 40 FRPP pipe for use in closed (process or supply) or vented (drain, waste or vent) piping system.
 - Firestop Device* - Firestop Collar - Firestop collar shall be installed in accordance with the accompanying installation instructions. Collar to be installed and latched around the pipe and secured to both sides of the wall using the anchor hooks provided with the collar. (Minimum 2 anchor hooks for 1-1/2 and 2 in. diam pipes, 3 anchor hooks for 3 and 4 in. diam pipes, and 6 anchor hooks for 6 in. diam pipes). The anchor hooks are to be secured to the surface of wall with 3/16 2-1/2 in. long toggle bolts along with washers.
 - HLTI, Inc. - CP 643 50/1.5", CP 643 63/2", CP 643 90/3", CP 643 110/4" or CP 642 160/6" Firestop Collar
- *Bearing the UL Classification Marking

TOP OF WALL JOINT: 1-HR OR 2-HR GYPSUM WALL ASSEMBLY

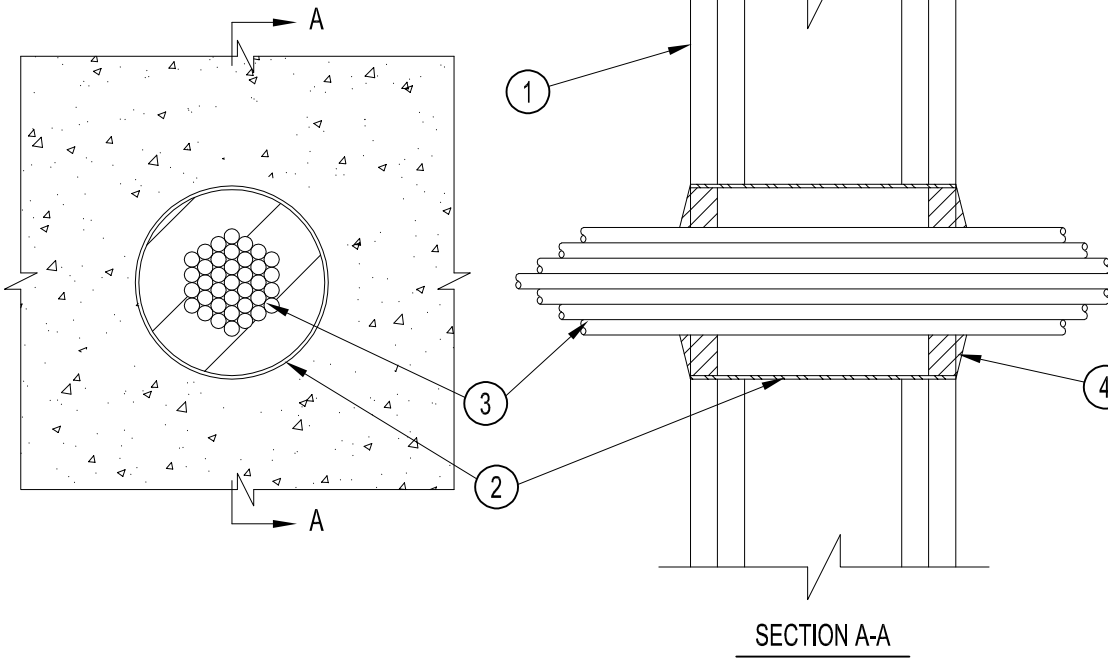
System No. HW-D-0049
Assembly Ratings - 1 and 2 Hr (See Items 2 and 3B)
Nominal Joint Width - 1 in.
Class II Movement Capabilities - 50% Compression or Extension



- Floor Assembly - The fire-rated fluted steel deck/concrete floor assembly shall be constructed of the materials and in the manner described in the individual Floor-Ceiling Design in the UL Fire Resistance Directory and shall include the following construction features:
 - Steel Floor and Form Units* - Max 3 in. deep galv fluted units.
 - Concrete - Min 2-1/2 in. thick reinforced concrete, as measured from the top plane of the floor units.
 - Wall Assembly - The 1 or 2 hr fire-rated gypsum wallboard/steel stud assembly shall be constructed of the materials and in the manner described in the individual U400-Series Wall and Partition Designs in the UL Fire Resistance Directory and shall include the following construction features:
 - Steel Floor and Ceiling Runners - Floor and ceiling runners of wall assembly shall consist of min 25 gauge galv steel channels sized to accommodate steel studs (Item 2B). Ceiling runner to be provided with 2 in. flanges. Ceiling runner secured to valleys of steel floor units (Item 1A) with steel fasteners spaced max 12 in. OC.
 - Studs - Steel studs to be min 2-1/2 in. wide. Studs cut 5/8 to 3/4 in. less in length than assembly height with bottom nesting in and resting on floor runner and with top nesting in ceiling runner without attachment. Stud spacing not to exceed 24 in. OC.
 - Wallboard, Gypsum* - Wallboard sheets installed to a min total thickness of 5/8 or 1-1/4 in. on each side of wall, for 1 and 2 hr. rated assemblies, respectively. Wall to be constructed as specified in the individual Wall and Partition Design in the UL Fire Resistance Directory, except that a nom 1 in. gap shall be maintained between the top of the wallboard and the bottom of the steel floor units and the top row of screws shall be installed into the studs 3-1/2 to 4 in. below the lower surface of the floor.
 - Joint System - Max separation between bottom of floor and top of wall at time of installation of joint system is 1 in. The joint system is designed to accommodate a max 50 percent compression or extension from its installed width. The joint system consists of forming material and a fill material, as follows:
 - Forming Material* - Nom 5/8 to 1-1/4 in. wide by 1-1/2 in. high strips of min 8 pcf mineral wool batt insulation are to be cut to fill the 1 in. gap between the top of the wallboard and bottom of the steel floor units. The strips of mineral wool are compressed and firmly packed, cut edge first, into the gap between the top of the wallboard and bottom of the steel floor units on both sides of the wall.
 - Rock Wool Mfg. Co. - Delta-8
 - Fill, Void or Cavity Material* - Min 1/8 in. wet thickness of fill material sprayed or troweled on each side of the wall to completely cover mineral wool forming material and to overlap a min of 1/2 in. onto wallboard and steel deck on both sides of wall.
 - HLTI, Inc. - CP672 Firestop Spray
- *Bearing the UL Classification Marking

CABLE BUNDLE THROUGH 1-HR OR 2-HR GYPSUM WALL ASSEMBLY

System No. WL-3111
F Ratings - 1 and 2 Hr
T Rating - 0 Hr



- Wall Assembly - The fire-rated gypsum wallboard/stud wall assembly shall be constructed of the materials and in the manner specified in the individual U300 or U400 Series Wall and Partition Designs in the Fire Resistance Directory and shall include the following construction features:
 - Studs - Wall framing shall consist of either wood studs or channel shaped steel studs. Wood studs to consist of 2 by 4 in. lumber spaced 16 in. OC. Steel studs to be min 2-1/2 in. wide, fabricated from min 25 MSG galvanized steel, spaced max 24 in. OC.
 - Wallboard, Gypsum* - 5/8 in. 4 ft wide with square or tapered edges. The gypsum wallboard type, number of layers and sheet orientation shall be as specified in the individual U300 or U400 Series Designs in the UL Fire Resistance Directory. Max diam of opening is 4 in.
 - Metallc Sleeve - The nominal 4 in. diam steel electrical metallic tubing (EMT) or Schedule 5 steel pipe friction fit into wall assembly and installed flush with wall surfaces.
 - Cables - Aggregate cross-sectional area of cables to be max 25 percent of the cross-sectional area of the opening. The annular space between the cable bundle and the periphery of the opening to be min 1/8 in. to max 3/4 in. Cables to be rigidly supported on both sides of the wall assembly. Any combination of the following types and sizes of cables may be used:
 - 6 pair - No. 24 AWG telephone cable with polyvinyl chloride (PVC) insulation and PVC jacket.
 - 24 fiber optic cable with polyvinyl chloride (PVC) outer and subunit jacket.
 - Type RGU/59 coaxial cable with polyethylene (PE) insulation and polyvinyl (PVC) jacket.
 - The 2/C No. 10 AWG cable with ground with polyvinyl (PVC) insulation and jacket.
 - 3/C No. 12 AWG cable with polyvinyl chloride (PVC) insulation in a nominal 1/2 in. flexible metal conduit.
 - Fill, Void or Cavity Material* - Putty - Min 5/8 in. thickness of fill material applied within annulus, flush with both surfaces of wall. Fill material to be forced into interstices of cable bundle to the max extent possible on both surfaces of wall. Additional fill material to be installed such that a min 1/4 in. crown is formed around the cable bundle and lapped over the steel sleeve.
 - HLTI, Inc. - CP618 Firestop Putty Stick
- *Bearing the UL Classification Marking

NOTE:
CORING THROUGH SLAB RIBS FOR PIPE/CONDUIT PENETRATIONS SHOULD BE AVOIDED. AT LOCATIONS WHERE PENETRATIONS HAVE BEEN CORED, THE PORTION OF THE OVER CORE THAT IS AWAY FROM THE PIPE SHALL BE INFILLED WITH NON-SHRINK GROUT. FIRE RATING TO BE MAINTAINED.

THIS DRAWING IS FORMATTED TO BE PRINTED AT 36"x24"

DOOR NUMBER	ROOM NAME	ROOM NUMBER	DOOR TYPE	DOOR MAT'L	FIRE RAT'G	DOOR WIDTH	DOOR HEIGHT	FRAME TYPE	HEAD/JAMB	HDWR SET	REMARKS
107.1	MECHANICAL ROOM	107	D2	HM	1 HR.	(1) 2'-0" (1) 3'-0"	± 6'-8"	HMF-2	H1/ J1	1	PANIC HARDWARE
107.2	MECHANICAL ROOM	107	D1	HM	1 HR.	2'-8"	± 6'-8"	HMF-1	H1/ J1	5	PANIC HARDWARE/ 180° SWING/ CARD READER
107A.1	ELEV. MECH.	107A	D1	HM	1 HR.	3'-0"	± 6'-8"	HMF-1	H2/ J2	3	
107B.1	PHONE DATA ROOM	107B	D1	HM	1 HR.	3'-0"	± 6'-8"	HMF-1	H2/ J2	4	CARD READER BY G.C.
B101.1	MECHANICAL ROOM	B101	D1	HM	1 HR.	± 2'-8"	± 6'-8"	HMF-1	H3/ J3	2	PANIC HARDWARE

PRECAST LOOSE LINTEL SCHEDULE

PRECAST CONCRETE LINTELS AS PER CASTEX CORP. (OR APPROVED EQUAL)

CLEAR SPAN (MASONRY OPENING)	LINTEL SIZE / LINTEL TYPE NUMBER	
	WALL THICKNESS (BLOCK SIZE)	
6'-0"	8"	12"
	1 - 8x8 / 576C - 8	1 - 4x8 / 576C 1 - 8x8 / 576C - 8
7'-0"	1 - 8x8 / 586C - 8	1 - 8x8 / 586C 1 - 8x8 / 586C - 8

FINISH SPECIFICATION

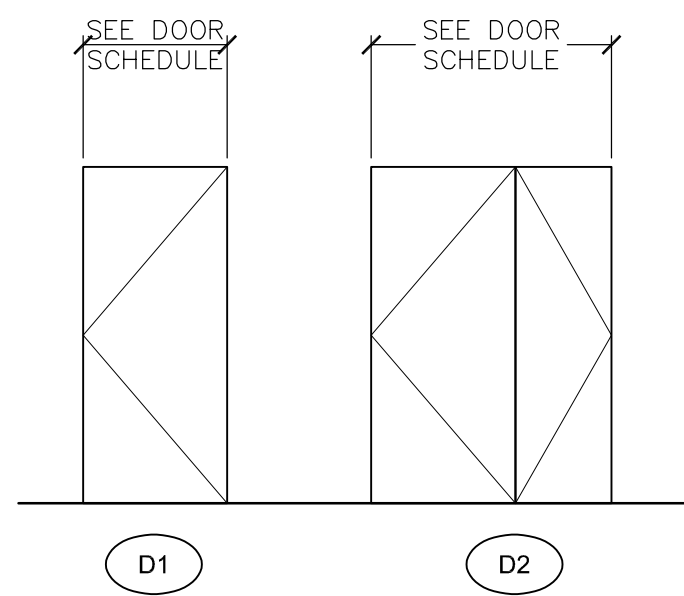
WALLS:

(PNT-1) Wall Paint
 MANUF: SHERWIN WILLIAMS
 COLOR: TBD
 FINISH: EGGSHELL

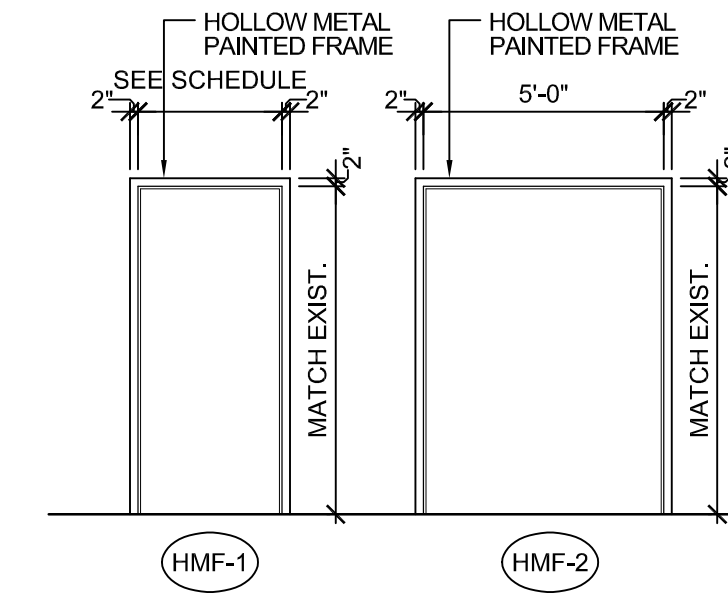
DOORS:

(PNT-3) Hollow Metal Doors and Frames
 MANUF: SHERWIN WILLIAMS
 COLOR: TBD
 FINISH: SEMI GLOSS

- REFER TO FLOOR PLANS FOR PROPER ORIENTATION AND HANDING OF ALL FRAME SYSTEMS AND DOORS. IT SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR TO VERIFY EACH SCHEDULED DOOR.
- ALL ROUGH-IN DIMENSIONS ARE TO BE VERIFIED IN FIELD (V.I.F.) PRIOR TO FABRICATION. NOTIFY ARCHITECT IN WRITING IMMEDIATELY IF ANY DISCREPANCIES OCCUR.
- INSTALL DOORS IN PREPARED OPENINGS, PLUMB AND TRUE, WITH EVEN MARGINS AT HEAD AND JAMB, AND TO CLEAR THE FINISHED DOOR BY 1/4". DOORS & FRAMES SHALL BE PROTECTED FROM DAMAGE UNTIL TIME OF OCCUPANCY. ALL DOORS AND FRAMES DAMAGED DURING CONSTRUCTION SHALL BE REPAIRED OR REPLACED AT NO ADDITIONAL COST TO THE OWNER.
- REFER TO PROJECT SPECIFICATIONS FOR HARDWARE SCHEDULE, SETS & ADDITIONAL INFORMATION.
- REFER TO SPECIFICATION SECTION 087100 FOR HARDWARE SETS.
- PROVIDE ROOM IDENTIFICATION SIGNS FOR ALL DOORS LISTED ON THE DOOR SCHEDULE.
- ALL KEYING AND LOCKING SHALL BE COORDINATED BY GC WITH OWNER. NEW CORES TO BE PROVIDED AND INSTALLED BY GC.
- ALL LOCKS SHALL BE PROVIDED WITH CHANGEABLE CORE. CORE TYPE TO BE COORDINATED WITH THE OWNER.
- PAINT ALL HOLLOW METAL DOOR AND FRAMES



7 DOOR TYPES
SCALE: 1/4" = 1'-0"

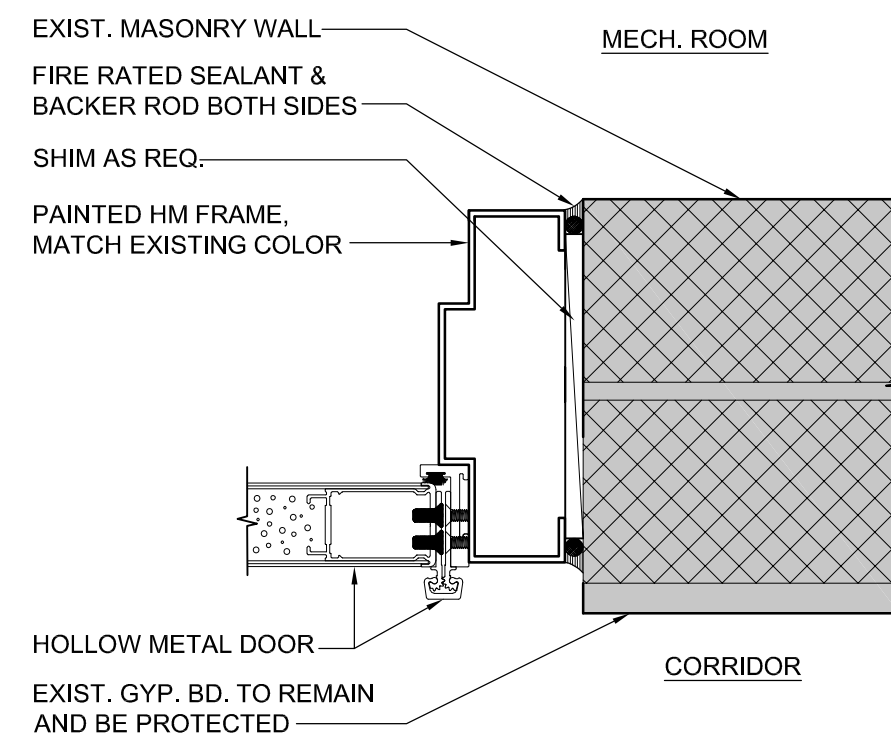


6 FRAME TYPES
SCALE: 1/4" = 1'-0"

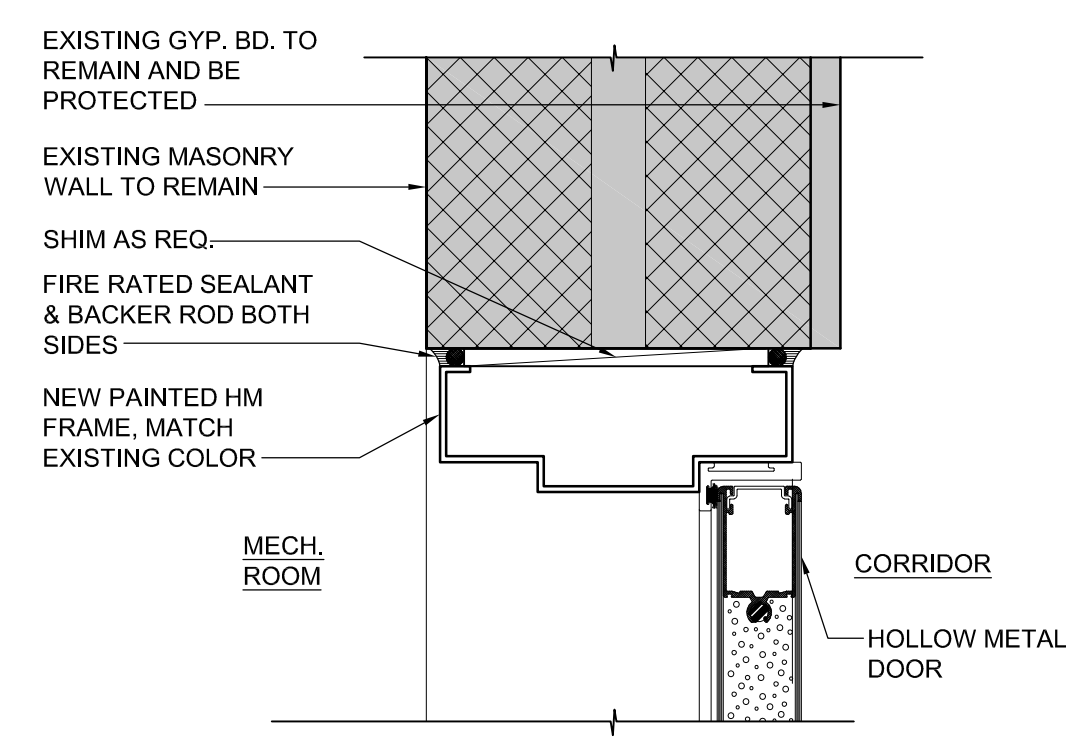


5 ACCESS DOOR SIGNAGE
SCALE: N.T.S. PROVIDE AND INSTALL (2)

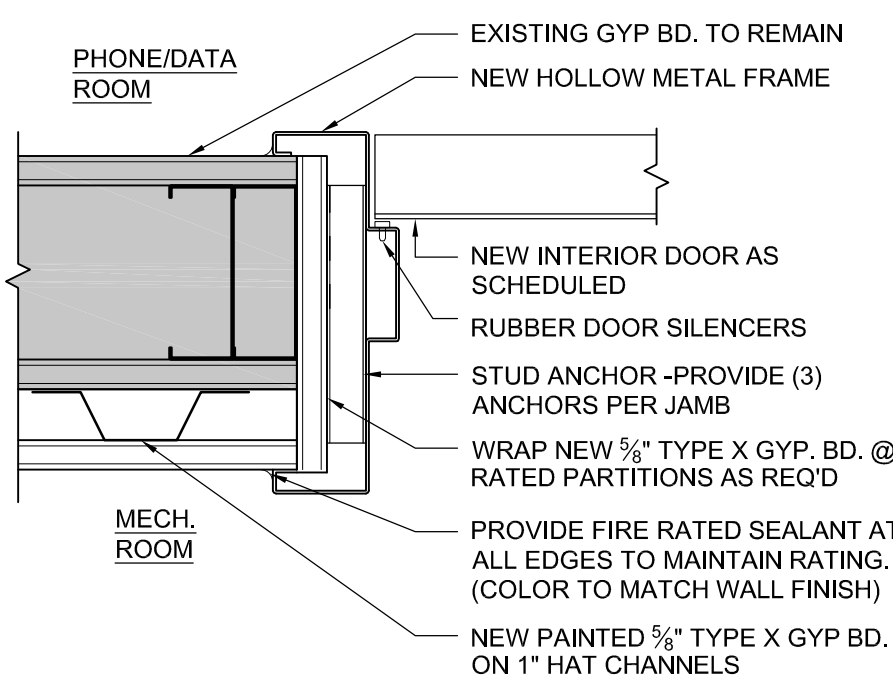
BASIS OF DESIGN BY EMEDCO
 STYLE: 43428BBHPLYALU
 SIZE: 10" H x 14" W
 ALUMINUM, NON-REFLECTIVE SELF ADHESIVE



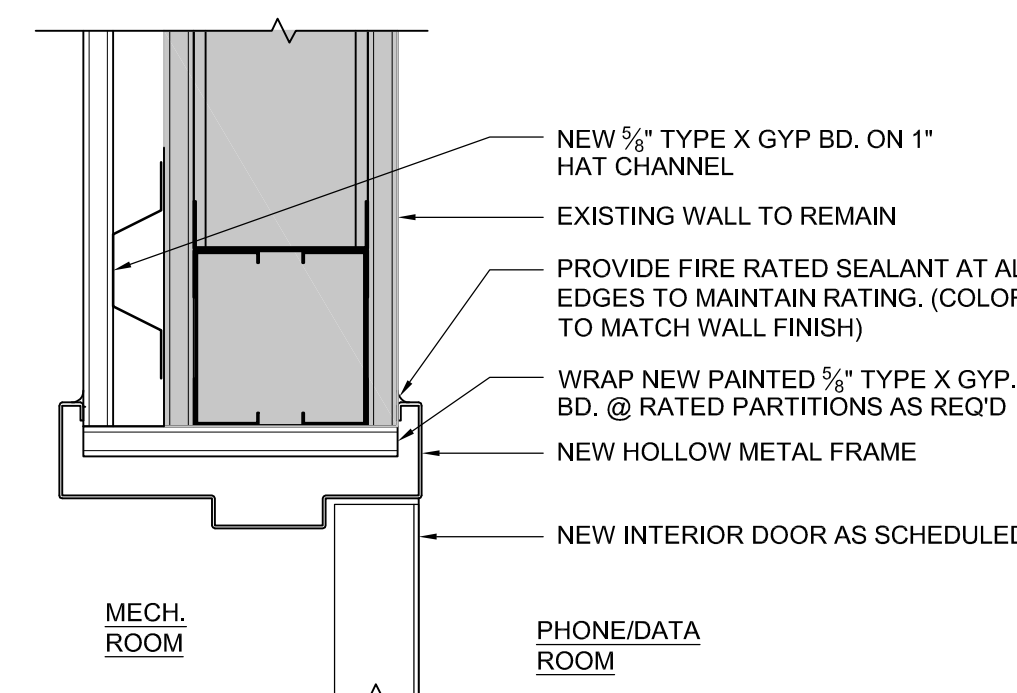
J1 Jamb Detail
SCALE: 3"=1'-0"



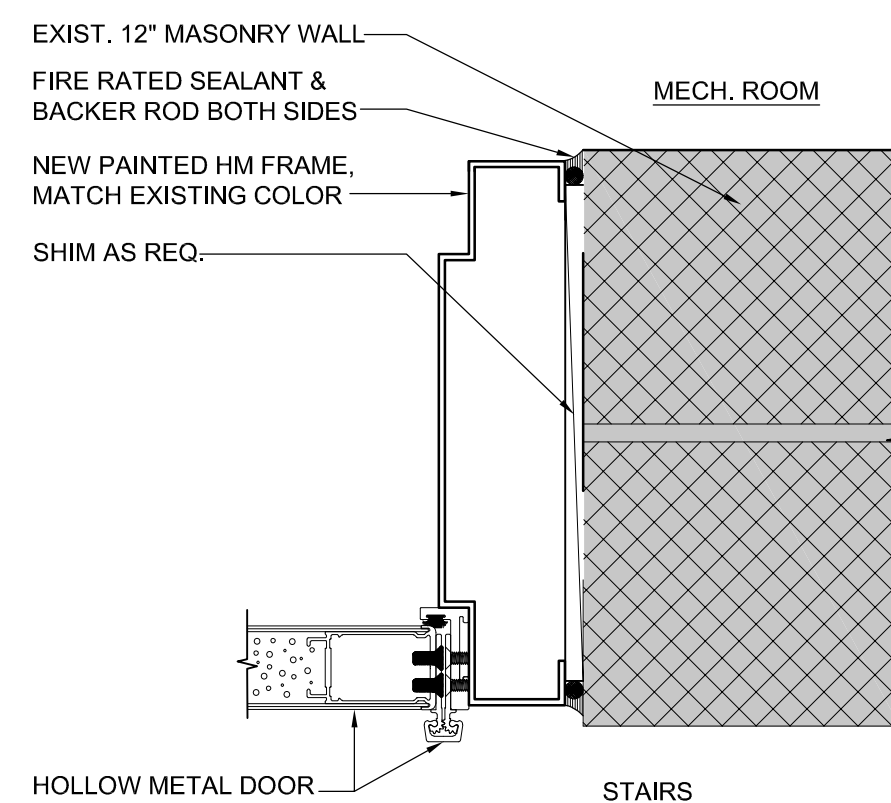
H1 Head Detail
SCALE: 3"=1'-0"



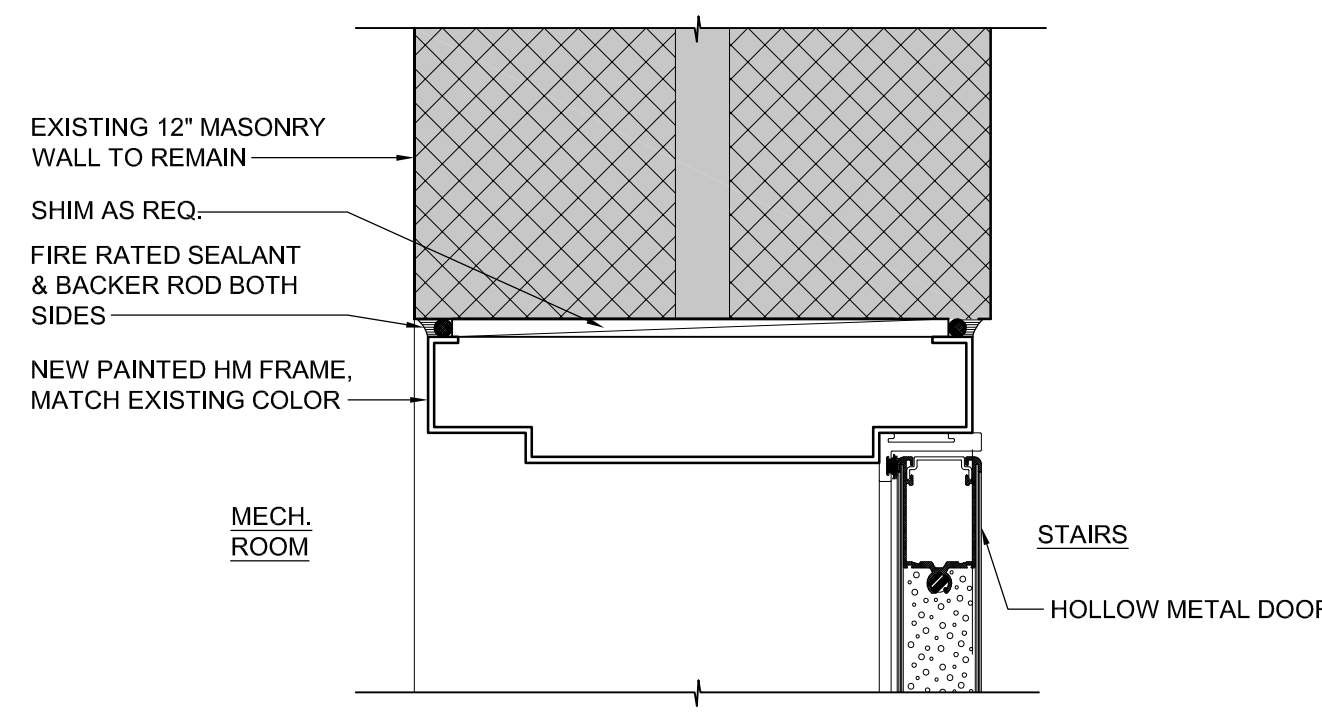
J2 Jamb Detail
SCALE: 3"=1'-0"



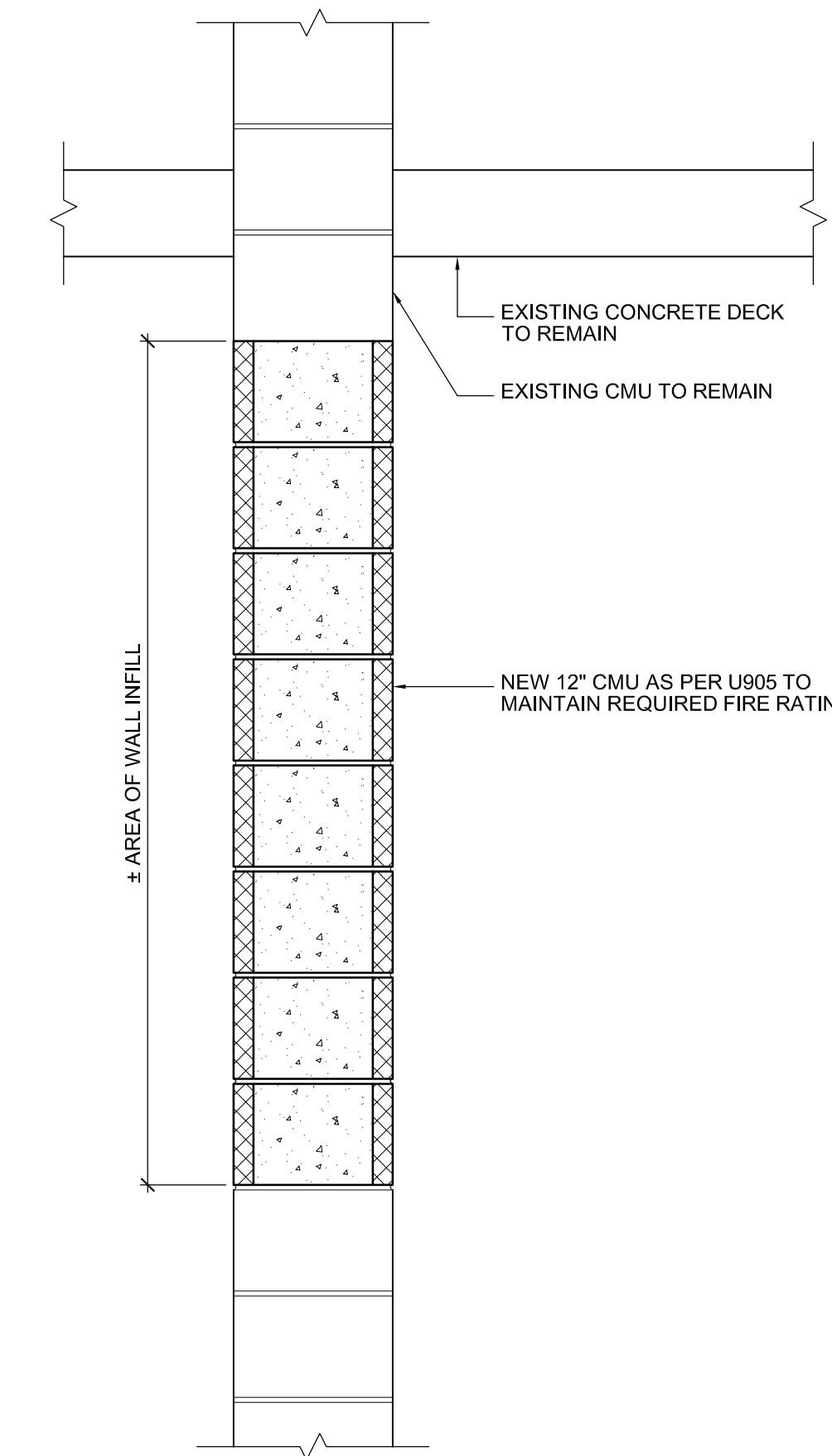
H2 Head Detail
SCALE: 3"=1'-0"



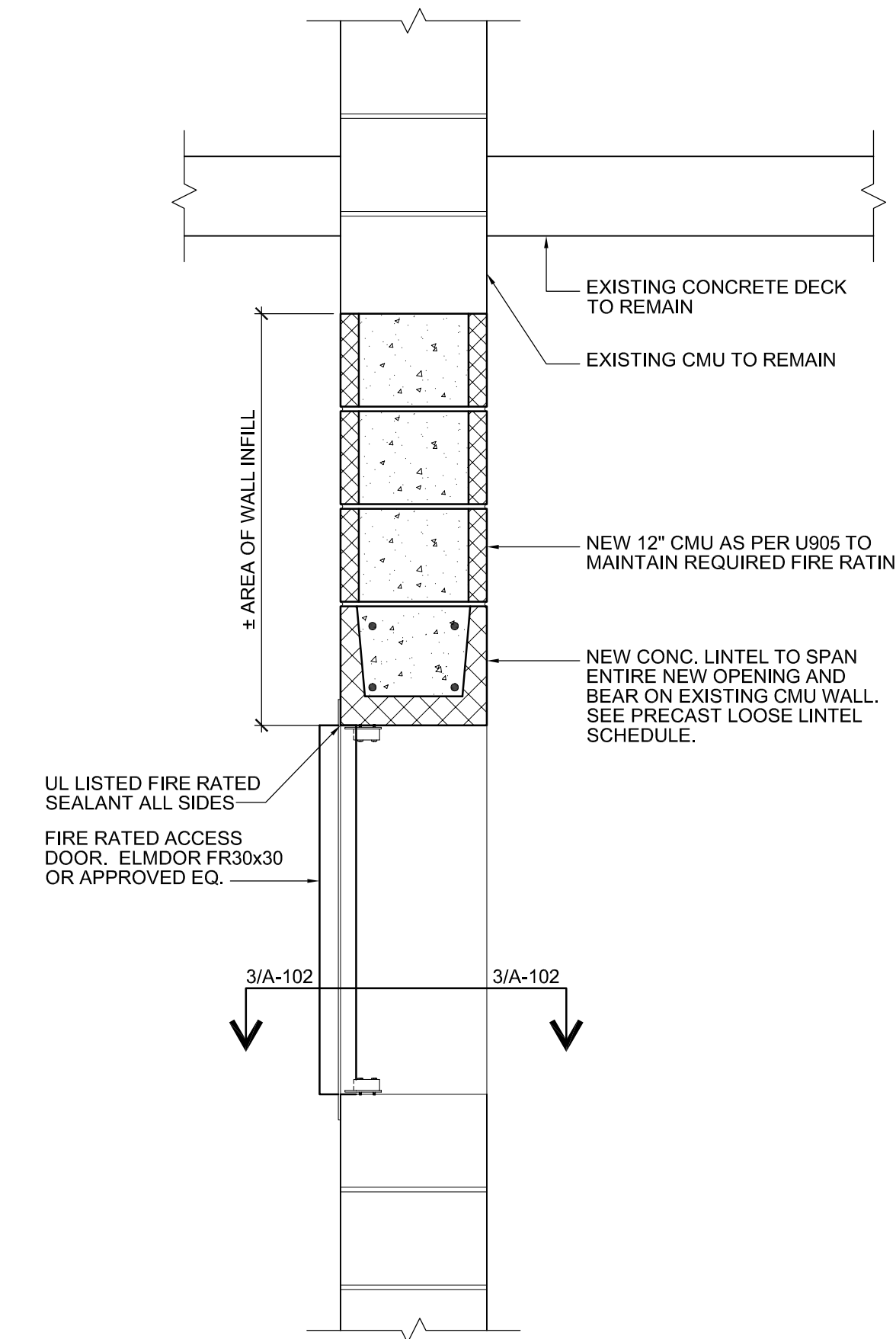
J3 Jamb Detail
SCALE: 3"=1'-0"



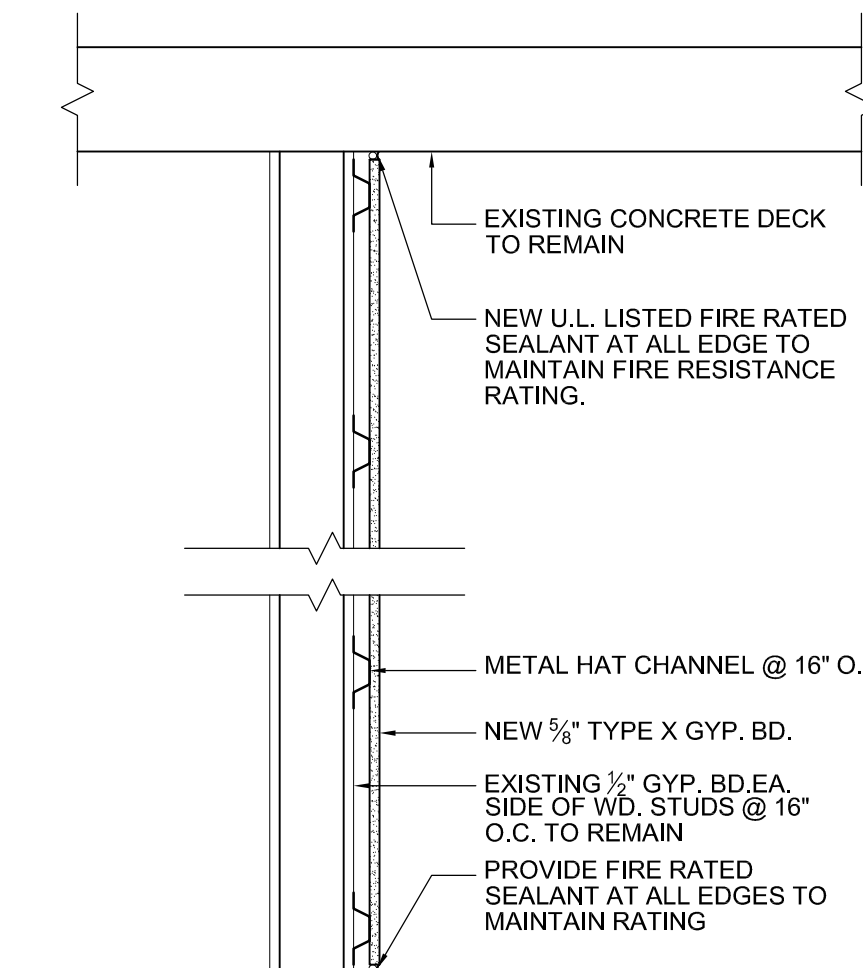
H3 Head Detail
SCALE: 3"=1'-0"



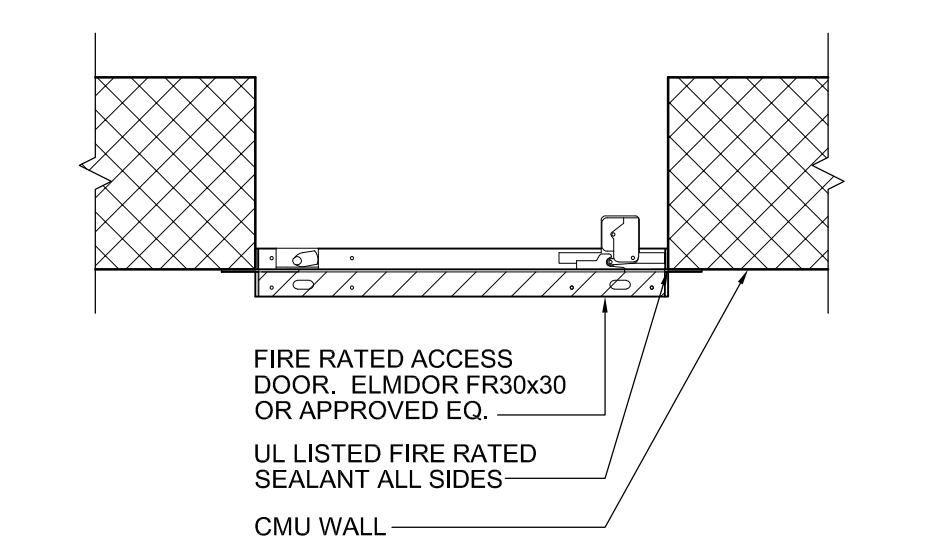
3 WALL INFILL DETAIL
SCALE: 1" = 1'-0"



2 ACCESS PANEL DETAIL
SCALE: 1" = 1'-0"



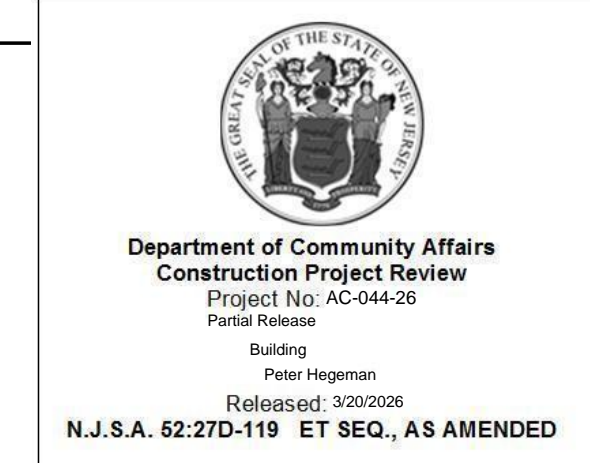
4 NEW WALL DETAIL
SCALE: 1" = 1'-0"



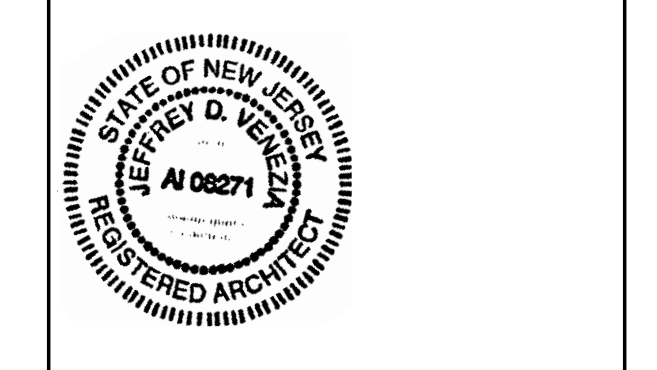
1 PLAN DETAIL
SCALE: 1" = 1'-0"

EXCLUDING THE 20 MIN. FIRE RATING ACHIEVED WITH THE EXISTING WOOD STUDS @ 16" O.C. PER IBC TABLE 722.6.2(2), THE EXISTING WALL ASSEMBLY WITH A NEW LAYER OF 5/8" TYPE X GYP. BD. ACHIEVES A FIRE RATING OF 70 MINS. THIS IS IN REFERENCE TO IBC TABLE 722.1.4(2).

A. FIRE-RESISTANCE 15 MIN. + 15 MIN. RATING OF THE EXISTING 5/8" GYP. BD. EA. SIDE OF WD. STUDS PLUS 40 MINS. OF ADDED 5/8" TYPE X GYP. BD. = 70 MINUTE FIRE RESISTANCE RATING.
 B. NOTE: IF EXISTING WALL CONSTRUCTION IS FOUND TO BE DIFFERENT THAN DESCRIBED INFORM THE ARCHITECT IMMEDIATELY.



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 Suite 200 F: 215.886.8956
 Blue Bell, PA 19422 www.schillerhersh.com
 Certificate of Authorization: 24GA28014000
 SH JOB # 2566A

NO.	REVISION	DATE

BID/ PERMIT

BOILER PROJECT AT
 BOZORTH HALL & HAWTHORN HALL
 ROWAN UNIVERSITY
 MEMORIAL CIRCLE, GLASSBORO, NJ 08028

PROJECT NO.: 25.063
 DRAWN BY: KT
 CHECKED BY: KG
 DATE: 03/06/2026
 SCALE:

DRAWING NO.: **A-003**

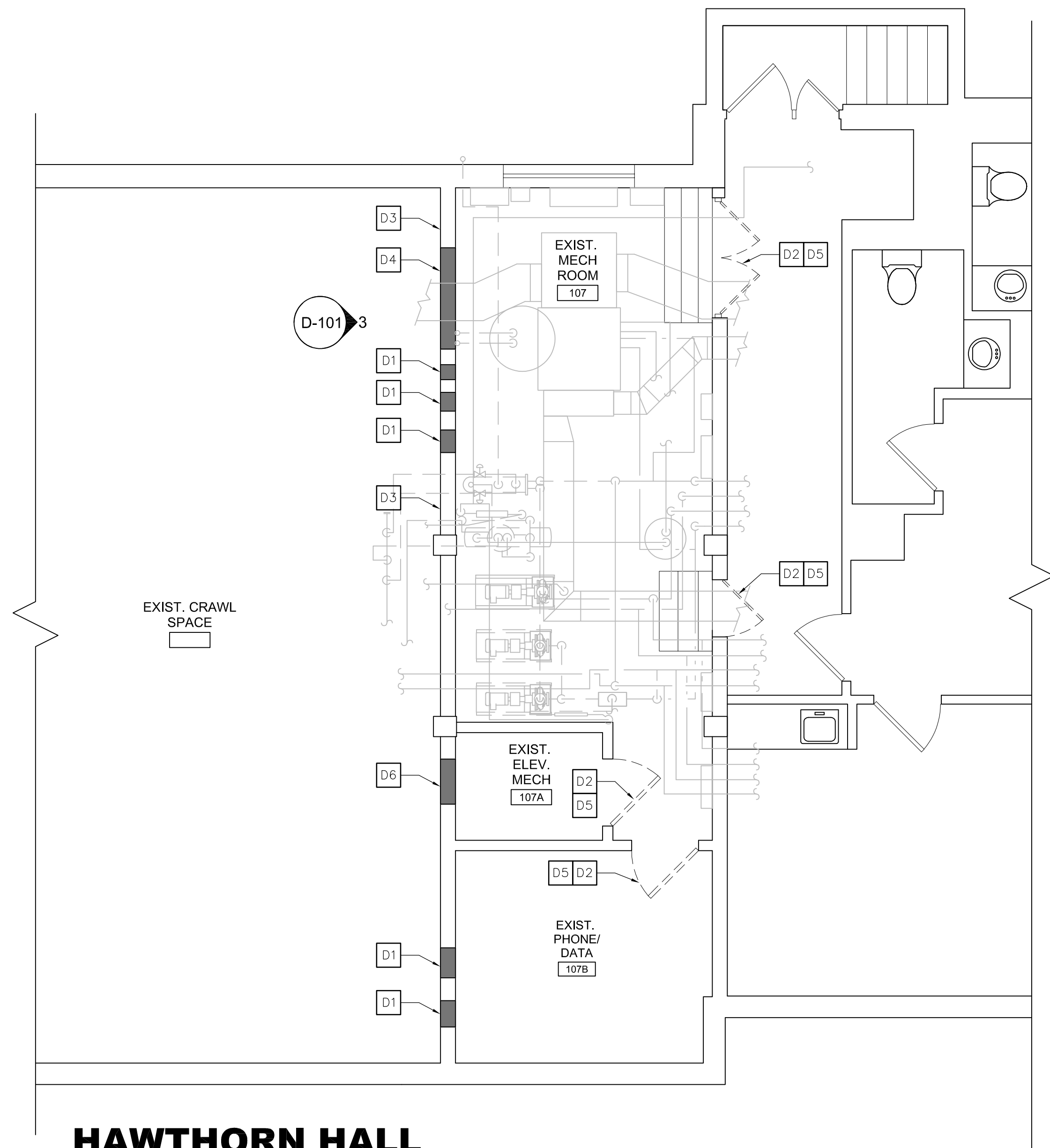
THIS DRAWING IS FORWARDED TO BE PRINTED AT 36"x24"



**HAWTHORN HALL
EXIST. ACCESS PANEL OPENING**

2 SCALE: N.T.S.

Demolition Notes	
D1	MODIFY EXISTING PENETRATION OPENING TO PROVIDE NEW RATED INFILL. REMOVE PORTION OF EXISTING WALL AROUND EXISTING WALL PENETRATION TO PROVIDE A CLEAN MASONRY DIMENSION AND PROPERLY DISPOSE REMOVED MATERIAL. SEE DEMOLITION INTERIOR ELEVATIONS FOR MORE INFORMATION.
D2	REMOVE EXISTING DOOR AND FRAME ASSEMBLY AND PROPERLY DISPOSE. PREPARE OPENING FOR NEW RATED FRAMES AND DOORS.
D3	REMOVE PORTION OF EXISTING WALL FOR NEW PENETRATIONS. COORDINATE LOCATIONS WITH MEP LOCATIONS. MAINTAIN WALL RATING.
D4	REMOVE EXISTING ACCESS DOOR ASSEMBLY; FRAMED OPENING IN ITS ENTIRETY AND PROPERLY DISPOSE. SEE 2/D-101 AND 3/D-101 FOR MORE INFORMATION.
D5	REMOVE EXISTING DOOR SIGNAGE AND PROPERLY DISPOSE. PROVIDE AND INSTALL NEW SIGNAGE AS SPECIFIED.
D6	EXISTING VENT OPENING TO REMAIN.
D7	EXISTING DUCT TO REMAIN AND BE PROTECTED.
D8	REMOVE BLOCK IN HATCHED AREA TO 'TOOTH IN' NEW LINTEL
D9	AREA OF MISSING BLOCK TO BE INFILLED. GC TO V.I.F. ALL LOCATIONS AND QUANTITIES.



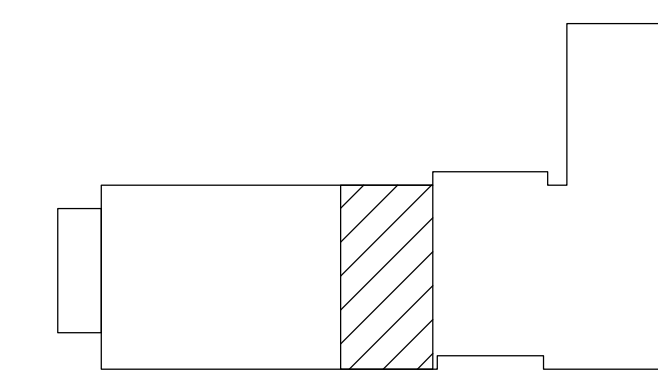
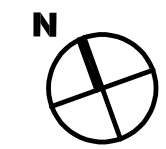
**HAWTHORN HALL
BASEMENT DEMOLITION PLAN**

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

**3 HAWTHORN HALL
DEMOLITION INTERIOR ELEVATION**

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

KEY PLAN:
HAWTHORN HALL

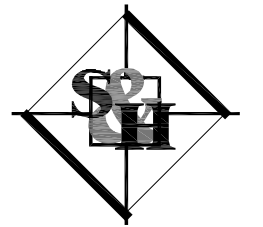
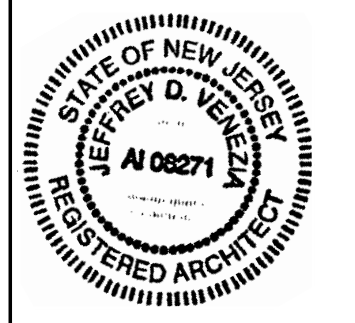


Department of Community Affairs
Construction Project Review
Project No. AC-044-20
Partial Release
Building
Peter Hageman
Released: 3/20/2026
N.J.S.A. 52:27D-119 ET SEQ., AS AMENDED

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Certificate of Authorization: 24GA28014000
SH_JOB # 2566A

NO.	REVISION	DATE

ISSUED FOR:
BID/ PERMIT

BOILER PROJECT AT
BOZORTH HALL & HAWTHORN HALL
ROWAN UNIVERSITY
MEMORIAL CIRCLE, GLASSBORO, NJ 08028

HAWTHORN DEMOLITION PLAN, GENERAL
NOTES, AND SYMBOLS

PROJECT NO.:	25.063
DRAWN BY:	KT
CHECKED BY:	KG
DATE:	03/06/2026
SCALE:	

DRAWING NO.:

D-101

(b) EGRESS DOORWAYS: A MINIMUM OF TWO EGRESS DOORWAYS SHALL BE REQUIRED FOR ALL ROOMS AND SPACES WITH AN OCCUPANT LOAD GREATER THAN 50 OR IN WHICH THE TRAVEL DISTANCE EXCEEDS 75 FEET. ALL EGRESS DOORS SERVING AN OCCUPANT LOAD GREATER THAN 50 SHALL SWING IN THE DIRECTION OF EXIT TRAVEL.

1. EXCEPTION: STORAGE ROOMS WITH A MAXIMUM OCCUPANT LOAD OF 10 SHALL NOT BE REQUIRED TO HAVE TWO EGRESS DOORWAYS. (PLAN REVIEW--BUILDING, FIRE, INSPECTION--BUILDING)

(c) CAPACITY OF MEANS OF EGRESS: THE CAPACITY OF THE MEANS OF EGRESS IN EACH WORK AREA SHALL BE DETERMINED IN ACCORDANCE WITH N.J.A.C. 5:23-6.11(B). (PLAN REVIEW--BUILDING, FIRE, INSPECTION--BUILDING)

(d) DEAD END CORRIDORS: EXISTING DEAD END CORRIDORS SHALL NOT EXCEED 35 FEET IN LENGTH.

(e) MEANS OF EGRESS LIGHTING: ARTIFICIAL LIGHTING WITH AN INTENSITY OF NOT LESS THAN ONE FOOT CANDLE AT FLOOR LEVEL SHALL BE REQUIRED DURING ALL TIMES THAT THE CONDITIONS OF OCCUPANCY OF THE BUILDING REQUIRE THAT THE EXITS BE AVAILABLE. LIGHTING SHALL ALSO BE REQUIRED TO ILLUMINATE THE EXIT DISCHARGE. IN ALL BUILDINGS, ROOMS OR SPACES REQUIRED TO HAVE MORE THAN ONE EXIT OR EXIT ACCESS, MEANS OF EGRESS LIGHTING SHALL BE CONNECTED TO AN EMERGENCY ELECTRICAL SYSTEM CONFORMING TO NFPA 70 (NEC) EXCEPT THAT CONTINUED ILLUMINATION SHALL BE REQUIRED TO BE PROVIDED FOR NOT LESS THAN ONE HOUR IN THE CASE OF PRIMARY POWER LOSS. (PLAN REVIEW--BUILDING, FIRE, ELECTRIC, INSPECTION--BUILDING)

(f) ILLUMINATED EXIT SIGNS: ILLUMINATED EXIT SIGNS SHALL BE PROVIDED FOR ALL REQUIRED MEANS OF EGRESS IN ALL BUILDINGS, ROOMS OR SPACES REQUIRED TO HAVE MORE THAN ONE EXIT OR EXIT ACCESS. EXIT SIGNS SHALL BE VISIBLE FROM THE EXIT ACCESS AND SUPPLEMENTED BY DIRECTIONAL SIGNS WHEN NECESSARY. (EXCEPTION: APPROVED MAIN EXTERIOR DOORS THAT ARE CLEARLY IDENTIFIED AS EXITS ARE NOT REQUIRED TO HAVE EXIT SIGNS.) EXIT SIGNS SHALL MEET THE FOLLOWING CRITERIA:

1. RED OR GREEN LETTERS AT LEAST SIX INCHES HIGH; MINIMUM WIDTH OF EACH STROKE 3/4 INCH ON A WHITE BACKGROUND OR IN OTHER APPROVED DISTINCTIBLE COLORS. ARROWS, IF PROVIDED, SHALL BE SUCH THAT THE DIRECTION CANNOT READILY BE CHANGED. THE WORD "EXIT" SHALL BE CLEARLY DISCERNIBLE WHEN THE SIGN IS NOT ENERGIZED.

2. EXIT SIGNS SHALL BE ILLUMINATED AT ALL TIMES WHEN THE BUILDING IS OCCUPIED BY A SOURCE PROVIDING AT LEAST FIVE FOOT CANDLES AT THE ILLUMINATED SURFACE OR SHALL BE APPROVED SELF-LUMINOUS SIGNS WHICH PROVIDE EVENLY ILLUMINATED LETTERS WITH A MINIMUM LUMINANCE OF 0.06 FOOT LAMBERTS; EXIT SIGNS SHALL BE CONNECTED TO AN EMERGENCY ELECTRICAL SYSTEM CONFORMING TO NFPA 70 (NEC) EXCEPT THAT CONTINUED ILLUMINATION SHALL BE REQUIRED TO BE PROVIDED FOR NOT LESS THAN ONE HOUR IN THE CASE OF PRIMARY POWER LOSS. NO EMERGENCY POWER SHALL BE REQUIRED FOR APPROVED SELF-LUMINOUS SIGNS. (PLAN REVIEW--BUILDING, FIRE, INSPECTION--BUILDING)

(g) HANDRAILS: EVERY REQUIRED EXIT STAIRWAY HAVING THREE OR MORE RISERS AND NOT PROVIDED WITH HANDRAILS OR IN WHICH THE EXISTING HANDRAILS ARE IN DANGER OF COLLAPSING WHEN USED UNDER EMERGENCY EXITING CONDITIONS, SHALL BE PROVIDED WITH HANDRAILS FOR THE FULL LENGTH OF THE RUN OF STEPS ON AT LEAST ONE SIDE. ALL EXIT STAIRWAYS MORE THAN 66 INCHES WIDE SHALL HAVE HANDRAILS ON BOTH SIDES UNLESS THE FULL WIDTH OF THE STAIRWAY IS NOT NEEDED TO ACCOMMODATE THE DESIGN OCCUPANCY. (PLAN REVIEW--BUILDING, FIRE, INSPECTION--BUILDING)

(h) GUARDS: EVERY OPEN PORTION OF A STAIR, LANDING OR BALCONY WHICH IS MORE THAN 30 INCHES ABOVE THE FLOOR OR GRADE BELOW AND IS NOT PROVIDED WITH GUARDS OR THOSE IN WHICH THE EXISTING GUARDS ARE IN DANGER OF COLLAPSING WHEN USED UNDER EMERGENCY EXITING CONDITIONS, SHALL BE PROVIDED WITH GUARDS. (PLAN REVIEW--BUILDING, FIRE, INSPECTION--BUILDING)

(i) VERTICAL OPENING PROTECTION: VERTICAL OPENING PROTECTION FOR INTERIOR STAIRWAYS AND OTHER VERTICAL OPENINGS SHALL BE PROVIDED AS FOLLOWS:

1. FOR VERTICAL OPENINGS CONNECTING MORE THAN SIX FLOOR LEVELS, APPROVED ASSEMBLIES HAVING A FIRE RESISTANCE RATING OF NOT LESS THAN TWO HOURS WITH APPROVED OPENING PROTECTIVES SHALL BE REQUIRED.

2. FOR VERTICAL OPENINGS CONNECTING FOUR TO SIX FLOOR LEVELS, APPROVED ASSEMBLIES HAVING A FIRE RESISTANCE RATING OF NOT LESS THAN ONE HOUR WITH APPROVED OPENING PROTECTIVES SHALL BE REQUIRED.

3. FOR VERTICAL OPENINGS NOT EXCEEDING THREE STORIES, A MINIMUM 30-MINUTE UFC FIRE BARRIER SHALL BE REQUIRED, WITH THE FOLLOWING EXCEPTION:

i. NO VERTICAL OPENING PROTECTION SHALL BE REQUIRED FOR VERTICAL OPENINGS OF UP TO THREE STORIES IN BUILDINGS NOT EXCEEDING 3,000 SQUARE FEET PER FLOOR OR IN BUILDINGS WITH AN AUTOMATIC SPRINKLER SYSTEM THROUGHOUT. (PLAN REVIEW--BUILDING, FIRE, INSPECTION--BUILDING)

(j) STRUCTURAL ELEMENTS: STRUCTURAL ELEMENTS WHICH ARE UNCOVERED DURING THE COURSE OF THE REHABILITATION AND WHICH ARE FOUND TO BE UNSOUND OR OTHERWISE STRUCTURALLY DEFICIENT, SHALL BE REINFORCED, SUPPORTED OR REPLACED IN ACCORDANCE WITH THE APPLICABLE STRUCTURAL DESIGN CRITERIA OF THE BUILDING SUBCODE. WHERE STRUCTURAL ELEMENTS ARE SOUND, THERE IS NO EXCESSIVE DEFLECTION (DEFINED AS DEFLECTION IN EXCESS OF THE STANDARDS SET FORTH IN N.J.A.C. 5:23-6.7(C)1), AND FIXED LOADS ARE NOT CHANGING IN A WAY THAT WILL INCREASE THE STRESSES ON EXISTING STRUCTURES BEYOND THAT WHICH IS PERMITTED BY N.J.A.C. 5:23-6.7(C), EXISTING STRUCTURAL ELEMENTS SHALL BE PERMITTED TO REMAIN. (BUILDING)

(k) PLUMBING FIXTURES: (NOT IN THE SCOPE OF THIS PROJECT)

(l) MECHANICAL REQUIREMENTS: ALL SPACES INTENDED FOR OCCUPANCY SHALL BE PROVIDED WITH EITHER NATURAL OR MECHANICAL VENTILATION.

1. SPACES INTENDED TO BE NATURALLY VENTILATED SHALL BE PROVIDED WITH OPENABLE DOORS, WINDOWS, LOUVERS, OR OTHER OPENINGS TO THE OUTDOORS. THE MINIMUM OPENABLE AREA TO THE OUTDOORS SHALL BE FOUR PERCENT OF THE FLOOR AREA BEING VENTILATED. WHERE ROOMS WITHOUT OPENINGS TO THE OUTDOORS ARE VENTILATED THROUGH AN ADJOINING ROOM, THE UNOBSTRUCTED OPENING TO THE ADJOINING ROOM SHALL BE AT LEAST EIGHT PERCENT OF THE FLOOR AREA OF THE INTERIOR ROOM OR SPACE, BUT NOT LESS THAN 25 SQUARE FEET. THE VENTILATION OPENINGS TO THE OUTDOORS SHALL BE BASED ON THE TOTAL FLOOR AREA BEING VENTILATED.

2. MECHANICALLY-VENTILATED SPACES SHALL COMPLY WITH THE FOLLOWING:

i. NEWLY-INSTALLED HVAC SYSTEMS SHALL COMPLY WITH THE REQUIREMENTS OF THE MECHANICAL SUBCODE.

ii. EXISTING SYSTEMS THAT ARE ALTERED OR EXTENDED SHALL NOT REDUCE THE AMOUNT OF OUTSIDE AIR BELOW THE EXISTING RATE PER PERSON OR THE RATE INCLUDED IN THE MECHANICAL SUBCODE, WHICHEVER IS LOWER. AS A MINIMUM, MECHANICALLY-VENTILATED SPACES SHALL BE PROVIDED WITH FIVE CFM PER PERSON OF OUTDOOR AIR AND 15 CFM OF VENTILATION AIR PER PERSON.

3. ALL NEWLY-INTRODUCED DEVICES, EQUIPMENT OR OPERATIONS THAT PRODUCE AIRBORNE PARTICULATES, ODORS, FUMES, SPRAYS, VAPORS, SMOKE OR GASES IN SUCH QUANTITIES TO BE IRRITATING OR INJURIOUS TO HEALTH SHALL BE PROVIDED WITH LOCAL EXHAUST. (BUILDING)

(m) INTERIOR FINISHES SHALL COMPLY WITH N.J.A.C. 5:23-6.11(C). (PLAN REVIEW--BUILDING, FIRE, INSPECTION--BUILDING)

(n) SPECIFIC OCCUPANCY AREAS: SPECIFIC OCCUPANCY AREAS WITHIN THE WORK AREA, AS LISTED IN N.J.A.C. 5:23-6.30(H), SHALL COMPLY WITH THE REQUIREMENTS ESTABLISHED IN THAT SECTION FOR SEPARATION AND/OR PROTECTION. (BUILDING)

NEW JERSEY UCC REHABILITATION SUBCODE (NJAC 5:23-6)

§5:23-6.17A SUPPLEMENTAL REQUIREMENTS--GROUP B

(a) MANUAL ALARM SYSTEM: WHEN THE WORK AREA EXCEEDS 50 PERCENT OF THE GROSS ENCLOSED FLOOR AREA OF THE BUILDING, A FIRE ALARM SYSTEM SHALL BE INSTALLED THROUGHOUT THE BUILDING.

1. EXCEPTION: MANUAL ALARM SYSTEMS ARE NOT REQUIRED IN BUILDINGS WHICH DO NOT HAVE OCCUPIED FLOORS WHICH ARE TWO OR MORE STORIES ABOVE THE LOWEST LEVEL OF EXIT DISCHARGE OR FLOORS TWO OR MORE STORIES BELOW THE HIGHEST LEVEL OF EXIT DISCHARGE. (FIRE)

(b) VERTICAL OPENING PROTECTION: WHEN THE WORK AREA EXCEEDS 50 PERCENT OF THE GROSS ENCLOSED FLOOR AREA OF THE BUILDING, VERTICAL OPENING PROTECTION SHALL BE PROVIDED THROUGHOUT THE BUILDING AS FOLLOWS:

1. A MINIMUM TWO HOUR FIRE RATED ASSEMBLY WITH APPROVED OPENING PROTECTIVES SHALL BE REQUIRED FOR INTERIOR STAIRWAYS AND OTHER VERTICAL OPENINGS CONNECTING MORE THAN SIX FLOOR LEVELS.

2. A MINIMUM ONE HOUR FIRE RATED ASSEMBLY WITH APPROVED OPENING PROTECTIVES SHALL BE REQUIRED FOR INTERIOR STAIRWAYS AND OTHER VERTICAL OPENINGS CONNECTING FOUR TO SIX FLOOR LEVELS.

3. A MINIMUM 30-MINUTE UFC FIRE BARRIER SHALL BE REQUIRED FOR INTERIOR STAIRWAYS AND OTHER VERTICAL OPENINGS NOT EXCEEDING THREE STORIES.

i. EXCEPTION: NO VERTICAL OPENING PROTECTION SHALL BE REQUIRED FOR BUILDINGS UP TO 3,000 SQUARE FEET PER FLOOR OR FOR BUILDINGS WITH AN AUTOMATIC SPRINKLER SYSTEM THROUGHOUT. (PLAN REVIEW--BUILDING, FIRE, INSPECTION--BUILDING)

(c) NOT APPLICABLE

(d) ELEVATOR DEVICES: NOT IN PROJECT'S SCOPE OF WORK

§5:23-6.29 MIXED USE BUILDINGS (NOT APPLICABLE)

§5:23-6.30 SPECIAL TECHNICAL REQUIREMENTS--ALL GROUPS

(c) WINDOWLESS STORIES: IN ALL BUILDINGS, ANY WINDOWLESS BASEMENT OR STORY LOCATED BELOW THE SEVENTH STORY WHICH IS CREATED BY THE WORK BEING PERFORMED OR ANY EXISTING WINDOWLESS BASEMENT OR STORY LOCATED BELOW THE SEVENTH STORY IN WHICH THE WORK AREA EXCEEDS 50 PERCENT OF THE GROSS ENCLOSED FLOOR AREA OF THE WINDOWLESS STORY SHALL BE EQUIPPED THROUGHOUT WITH AN AUTOMATIC SPRINKLER SYSTEM INSTALLED IN ACCORDANCE WITH THE NEW JERSEY UNIFORM CONSTRUCTION CODE. (NOT APPLICABLE BECAUSE THERE IS A WINDOW IN THE BASEMENT MECHANICAL ROOM).

(e) TECHNICAL REQUIREMENTS FOR SMOKE BARRIERS: WHEREVER SMOKE BARRIERS ARE REQUIRED BY THIS SUBCHAPTER, THEY SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE FOLLOWING PROVISIONS:

1. SMOKE BARRIERS SHALL HAVE A FIRE RESISTANCE RATING OF NOT LESS THAN ONE-HALF HOUR AND SHALL FORM AN EFFECTIVE MEMBRANE CONTINUOUS FROM OUTSIDE WALL TO OUTSIDE WALL AND FROM FLOOR SLAB TO FLOOR OR ROOF DECK ABOVE, INCLUDING CONTINUITY THROUGH ALL CONCEALED SPACES, SUCH AS THOSE FOUND ABOVE SUSPENDED CEILINGS, AND INCLUDING INTERSTITIAL STRUCTURAL AND MECHANICAL SPACES, TRANSFER GRILLES, WHETHER EQUIPPED WITH FUSIBLE LINK-OPERATED DAMPERS OR NOT, SHALL NOT BE USED IN THESE PARTITIONS. WIRE GLASS PANELS NOT EXCEEDING 1,296 SQUARE INCHES IN APPROVED STEEL FRAMES MAY BE USED IN SMOKE BARRIERS.

i. EXCEPTION: SMOKE BARRIERS ARE NOT REQUIRED IN INTERSTITIAL SPACES WHEN SUCH SPACES ARE DESIGNED AND CONSTRUCTED WITH CEILINGS THAT PROVIDE RESISTANCE TO THE PASSAGE OF FIRE AND SMOKE EQUIVALENT TO THAT PROVIDED BY SMOKE BARRIERS.

2. A MEANS OF EGRESS SHALL BE PROVIDED FROM EACH SMOKE COMPARTMENT CREATED BY SMOKE BARRIERS SUCH THAT IT IS POSSIBLE TO REACH AN EXIT WITHOUT RE-ENTERING THE SMOKE COMPARTMENT.

3. DOORS IN SMOKE BARRIERS SHALL HAVE A FIRE-RESISTANCE RATING OF NOT LESS THAN 20 MINUTES WHEN TESTED IN ACCORDANCE WITH ASTM E152 WITHOUT THE HOSE STREAM AND LABELED BY AN APPROVED AGENCY. DOUBLE EGRESS CORRIDOR DOORS SHALL HAVE VISION PANELS OF ONE-QUARTER INCH THICK LABELED WIRE GLASS MOUNTED IN APPROVED STEEL FRAMES. SUCH PANELS MAY ALSO BE PROVIDED IN OTHER DOORS IN SMOKE BARRIERS. THE GLASS AREA OF THE VISION PANELS SHALL BE LIMITED TO 1,296 SQUARE INCHES FOR EACH DOOR. THE DOORS SHALL CLOSE THE OPENINGS WITH ONLY THE CLEARANCE NECESSARY FOR PROPER OPERATION UNDER SELF-CLOSING OR AUTOMATIC CLOSING AND SHALL BE WITHOUT UNDERCUTS, LOUVERS OR GRILLES, RABBETS OR ASTRAGALS ARE REQUIRED AT THE MEETING EDGES OF DOUBLE EGRESS DOORS, AND STOPS ARE REQUIRED ON THE HEAD AND JAMBS OF ALL DOORS IN SMOKE BARRIERS. POSITIVE LATCHING DEVICES ARE NOT REQUIRED ON DOUBLE EGRESS CORRIDOR DOORS, AND CENTER MULLIONS ARE PROHIBITED.

i. EXCEPTION: PROTECTION AT THE MEETING EDGES OF DOORS AND STOPS AT THE HEAD AND SIDES OF DOOR FRAMES MAY BE OMITTED IN BUILDINGS EQUIPPED WITH AN APPROVED ENGINEERED SMOKE CONTROL SYSTEM. THE ENGINEERED SMOKE CONTROL SYSTEM SHALL RESPOND AUTOMATICALLY, PREVENTING THE TRANSFER OF SMOKE ACROSS THE BARRIER.

4. DOORS IN SMOKE BARRIERS SHALL BE SELF-CLOSING OR SHALL BE PROVIDED WITH APPROVED DOOR HOLD-OPEN DEVICES OF THE FAIL-SAFE TYPE WHICH SHALL RELEASE THE DOORS CAUSING THEM TO CLOSE UPON THE ACTUATION OF SMOKE DETECTORS AS WELL AS UPON THE APPLICATION OF A MAXIMUM MANUAL PULL OF 50 POUNDS AGAINST THE HOLD-OPEN DEVICE.

5. AN APPROVED DAMPER DESIGNED TO RESIST THE PASSAGE OF SMOKE SHALL BE PROVIDED AT EACH POINT A DUCT PENETRATES A SMOKE BARRIER. THE DAMPER SHALL CLOSE UPON DETECTION OF SMOKE BY AN APPROVED SMOKE DETECTOR LOCATED WITHIN THE DUCT.

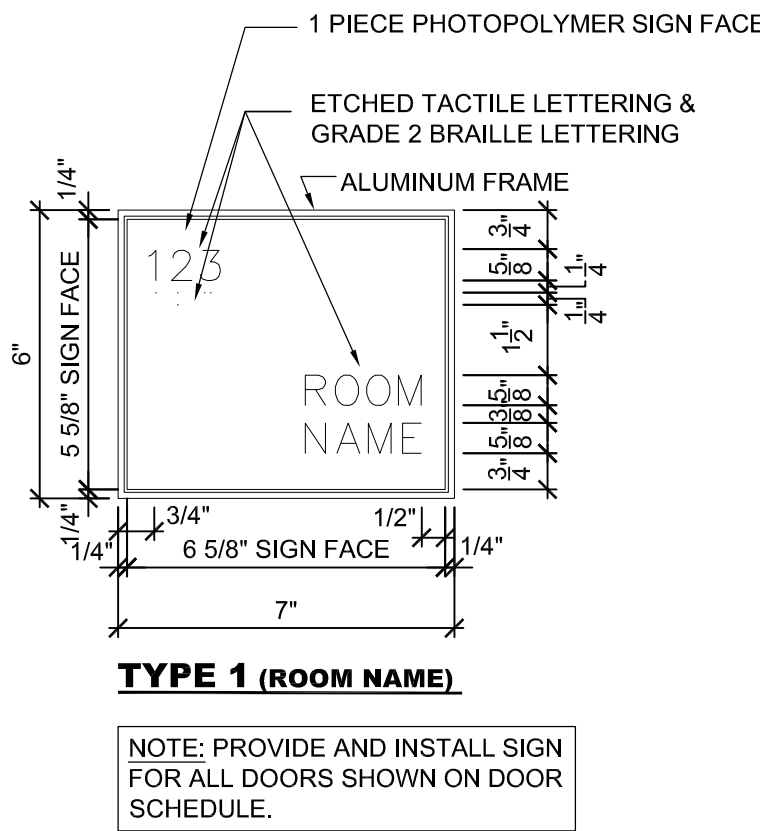
i. IN LIEU OF AN APPROVED SMOKE DETECTOR LOCATED WITHIN THE DUCT, DUCTS WHICH PENETRATE SMOKE BARRIERS ABOVE DOORS ARE PERMITTED TO HAVE THE APPROVED DAMPER ARRANGED TO CLOSE UPON DETECTION OF SMOKE ON EITHER SIDE OF THE SMOKE BARRIER DOOR OPENING.

ii. DAMPERS ARE NOT REQUIRED IN BUILDINGS EQUIPPED WITH AN APPROVED ENGINEERED SMOKE CONTROL SYSTEM.

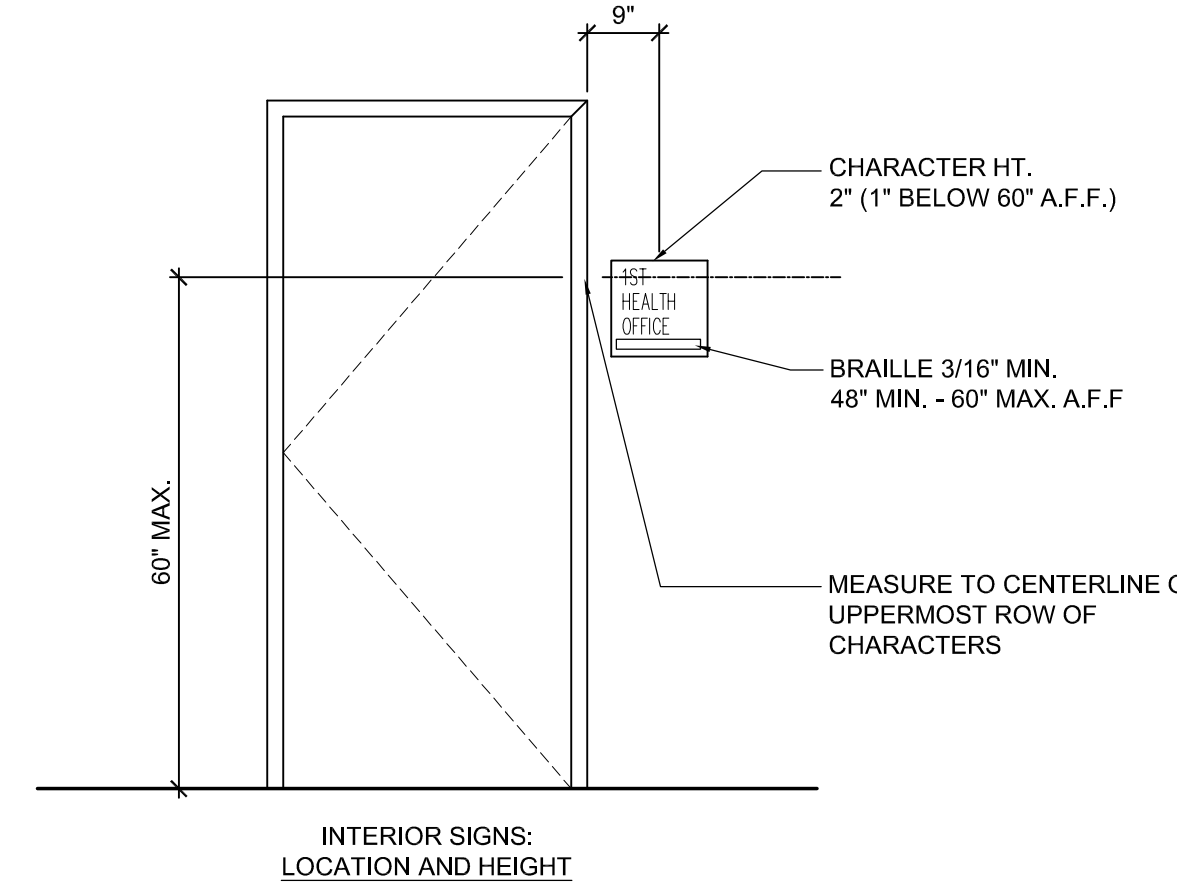
iii. DAMPERS ARE NOT REQUIRED WHERE THE OPENINGS IN DUCTS ARE LIMITED TO A SINGLE SMOKE COMPARTMENT AND THE DUCTS ARE OF STEEL CONSTRUCTION. (PLAN REVIEW--BUILDING, FIRE, INSPECTION--BUILDING)

(f) EXISTING ALARM SYSTEMS AND AUTOMATIC SPRINKLER SYSTEMS SHALL BE ACCEPTED PROVIDED THAT THEY MEET THE REQUIREMENTS OF N.J.A.C. 5:23-6.8, MATERIALS AND METHODS, AND THE STANDARDS APPLICABLE AT THE TIME OF THEIR INSTALLATION AND PROVIDED THAT THERE IS NO INCREASE IN THE HAZARD OF THE USE OR IN THE LOAD. (FIRE)

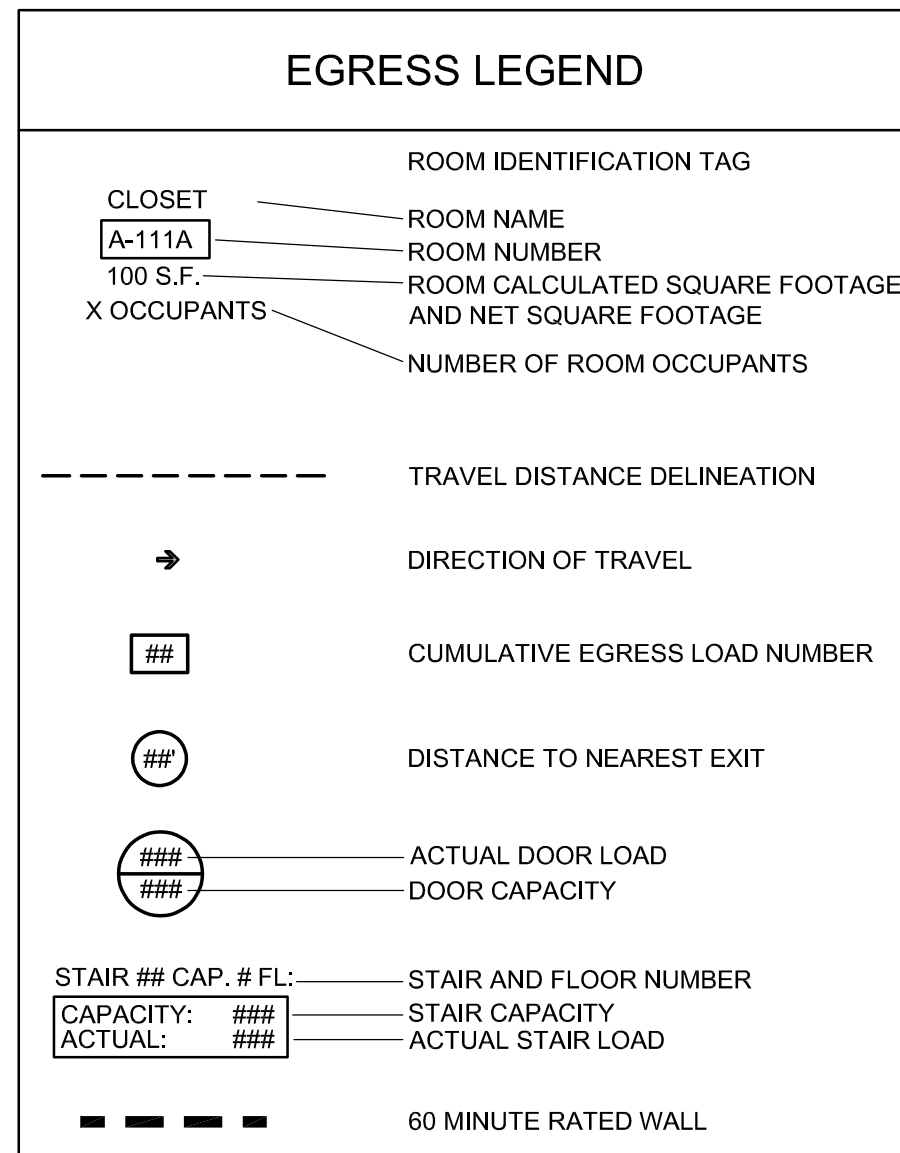
(g) TECHNICAL REQUIREMENTS FOR ELEVATOR DEVICES: (EXISTING ELEVATOR IS NOT PART OF THE PROJECT'S SCOPE).



3 TYPICAL SIGNAGE
SCALE: 3" = 1'-0"



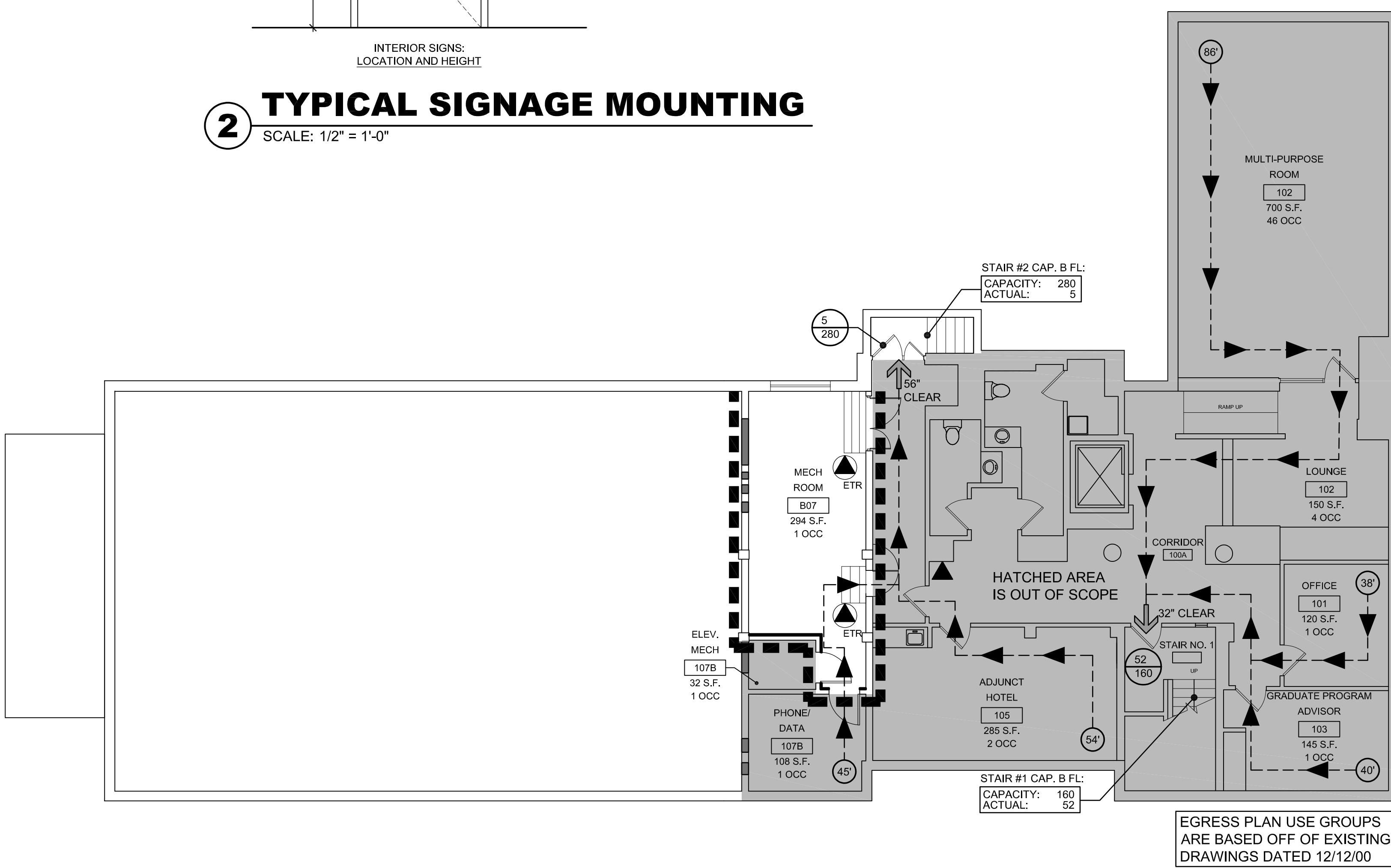
2 TYPICAL SIGNAGE MOUNTING
SCALE: 1/2" = 1'-0"



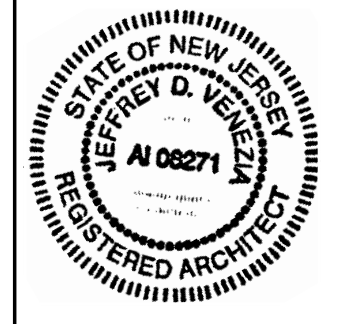
FIRE EXTINGUISHER COUNT AND LOCATIONS
BASED ON ONE (1) FIRE EXTINGUISHER FOR EACH 2,500 S.F. OF FLOOR AREA OR FRACTION THEREOF, SO DISTRIBUTED THAT ONE (1) EXTINGUISHER SHALL NOT BE MORE THAN 75 FEET TRAVEL DISTANCE FROM ANY POINT IN THE CORRIDOR.

HAWTHORN

MARK	DESCRIPTION	LOCATION	PROPOSED
ETR	EXISTING EXTINGUISHER TO REMAIN	SEE PLAN THIS SHEET	2 ETR



1 HAWTHORN BASEMENT EGRESS PLAN
SCALE: 1/8" = 1'-0"



NO.	REVISION	DATE
















ISSUED FOR:
BID/ PERMIT

**BOILER PROJECT AT
BOZORTH HALL & HAWTHORN HALL
ROWAN UNIVERSITY
MEMORIAL CIRCLE, GLASSBORO, NJ 08028**

CODE ANALYSIS AND EGRESS PLANS

PROJECT NO.:	25.063
DRAWN BY:	KT
CHECKED BY:	KG
DATE:	03/06/2026
SCALE:	

SYMBOL LEGEND

-  EXISTING ELECTRICAL PANEL
-  NEW ELECTRICAL PANEL
- DD1:12 ELECTRICAL CIRCUITING INFORMATION. IN THIS EXAMPLE, EC SHALL WIRE DEVICE TO CIRCUIT #12 IN PANEL "DD1".
-  DENOTES POINT OF CONNECTION BETWEEN NEW AND EXISTING WORK
-  DENOTES LIMIT OF DEMOLITION WORK
-  EXISTING WORK
-  NEW WORK
-  DEMOLITION WORK
-  PHOTOELECTRIC SMOKE DETECTOR
-  MULTI-CRITERIA DETECTOR (SMOKE, CARBON MONOXIDE, AND HEAT)
-  HEAT DETECTOR
-  MANUAL PULL STATION WITH PROTECTIVE COVER WITHOUT ALARM HORN. WALL MOUNT AT 42" AFF (BOTTOM OF BOX).
-  EMERGENCY SHUTOFF PUSHBUTTON. REFER TO BOILER EMERGENCY SHUTOFF DIAGRAM DETAIL 1 ON DRAWING E-001 FOR ADDITIONAL INFORMATION.
-  EXIT SIGN WITH EMERGENCY HEADS AND BATTERY BACKUP
-  WIRELESS ACCESS POINT
-  HORN AND STROBE (MOUNT AT MIN 80" AFF OR MAX 96" AFF TO BOTTOM OF DEVICE)

ABBREVIATIONS

- 1P ONE POLE
- 2P TWO POLE
- 3P THREE POLE
- Ø PHASE
- A AMPERE
- AF AMP FRAME
- AFF ABOVE FINISHED FLOOR
- AIC AMPERE INTERRUPTING CAPACITY
- A/V AUDIO/VISUAL
- C CONDUIT
- C/B CIRCUIT BREAKER
- CKT CIRCUIT
- (E) EXISTING
- EC ELECTRICAL CONTRACTOR
- F/A FIRE ALARM
- FLA FULL LOAD AMPS
- GC GENERAL CONTRACTOR
- GFI GROUND FAULT INTERRUPTER
- GND GROUND
- IG ISOLATED GROUND
- KVA KILOVOLT AMPERE
- KW KILOWATT
- MC MECHANICAL CONTRACTOR
- MCA MINIMUM CIRCUIT AMPACITY
- MCB MAIN CIRCUIT BREAKER
- MLO MAIN LUGS ONLY
- (REL) RELOCATE
- TRANSF. TRANSFORMER
- TYP TYPICAL
- V VOLT
- W WATT
- WP WEATHER PROOF

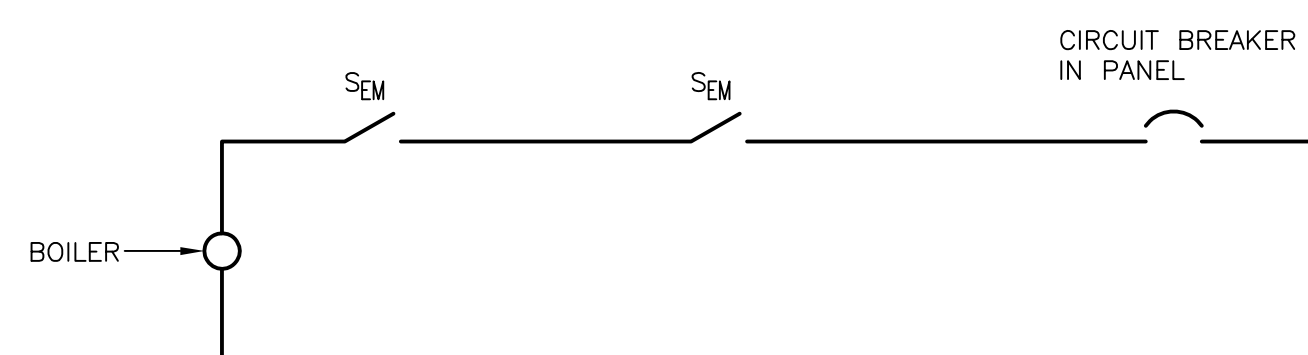
GENERAL NOTES

1. ALL BRANCH WIRING SHALL BE MINIMUM 3/4"C-2#12+1#12GND. OR HCF-MC CABLE.
2. EXACT LOCATIONS OF ALL ELECTRICAL EQUIPMENT SHALL BE COORDINATED IN THE FIELD WITH MECHANICAL, FIRE PROTECTION AND PLUMBING CONTRACTORS. ALL CLEARANCES AS REQUIRED BY ARTICLE 110 OF THE NEC SHALL BE MAINTAINED.
3. DEVICES LOCATED IN FIRE RATED WALLS THAT ARE GREATER THAN 16 SQ/IN SHALL BE PROVIDED WITH SPECSEAL SSP PUTTY PADS OR EQUAL ON EACH BACKBOX.
4. COORDINATE SPEAKER, OCCUPANCY SENSOR, AND FIRE ALARM DEVICE LOCATIONS WITH LIGHTING FIXTURES, SPRINKLERS, AIR DIFFUSERS, AND OTHER CEILING MOUNTED EQUIPMENT. COORDINATE WITH THE REFLECTED CEILING PLAN.
5. ALL EQUIPMENT ON FIRE ALARM DRAWINGS ARE APPROXIMATE. FINAL LOCATIONS SHALL BE COORDINATED WITH THE ARCHITECT. THE CONTRACTOR SHALL INSTALL ALL EQUIPMENT SHOWN, AT LOCATIONS AS DIRECTED BY THE ARCHITECT WITHOUT ADDITIONAL COMPENSATION.
6. FOLLOW DIMENSIONS, WHERE INDICATED ON DRAWINGS, DO NOT SCALE DRAWINGS.
7. ALL WORK SHALL BE IN ACCORDANCE WITH THE 2020 NATIONAL ELECTRICAL CODE AND OTHER APPLICABLE CODES AND STANDARDS.
8. FUSES SHALL BE DUAL ELEMENT, TIME DELAY TYPE UNLESS OTHERWISE NOTED. COORDINATE FUSE SIZES WITH THE MOTORS FURNISHED UNDER THE MECHANICAL AND GENERAL CONTRACTS.
9. ALL CONDUCTORS SHALL BE COPPER.
10. FIRE STOPPING: WHERE CONDUITS PENETRATE FIRE AND SMOKE BARRIERS INCLUDING WALLS, PARTITIONS, FLOORS, AND CEILINGS, INSTALL FIRE-STOPPING AT PENETRATIONS AFTER CABLES ARE INSTALLED.
11. MATERIALS FOR FIRE STOPPING SHALL BE UL LISTED AND LABELED AND FM APPROVED FOR FIRE RATINGS CONSISTENT WITH PENETRATED BARRIERS. SLEEVES SHALL BE SCHEDULE 40, WELDED, BLACK STEEL PIPE SLEEVES. SIZES AS REQUIRED FOR EQUIVALENT AREA AS THE WIREWAYS. SEALING FITTINGS SHALL BE SUITABLE FOR SEALING CABLES IN SLEEVES OR CORE DRILLED HOLES. TWO-PART SEALANT: FORMED-IN-PLACE SEALANT FIRE-RESISTANT JOINT SEALERS.
12. UNLESS OTHERWISE NOTED ALL INDOOR ELECTRICAL EQUIPMENT SHALL BE PROVIDED WITH, AND HOUSED IN, A NEMA 1 ENCLOSURE. ALL OUTDOOR ELECTRICAL EQUIPMENT SHALL BE INSTALLED IN NEMA 3R ENCLOSURE.
13. COMMON NEUTRALS ARE NOT ACCEPTABLE.
14. ELECTRICAL CONTRACTOR SHALL EXAMINE THE DRAWINGS OF ALL TRADES AND COORDINATE THEIR WORK TO AVOID INTERFERENCE WITH STRUCTURE, AND ALL EQUIPMENT ABOVE AND BELOW THE CEILING.
15. THE ELECTRICAL CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS AT THE SITE BEFORE PROCEEDING WITH THE WORK.
16. PROVIDE MATCHING CORD AND PLUGS FOR ALL RECEPTACLES OTHER THAN STANDARD 20A DUPLEX RECEPTACLES.
17. CONTRACTOR MUST COORDINATE ROOMS NAMES ON THE PANEL SCHEDULES WITH THE FINAL ROOM NAMES, IN THE FIELD. ALL PANELS SHALL BE PROVIDED WITH TYPED PANEL SCHEDULE.
18. PROVIDE FIBER BUSHINGS ON THE ENDS OF ALL CONDUIT STUBS.
19. ALL OF THE NOTES UNDER THE "GENERAL NOTES" SHALL APPLY TO ALL OF THE ELECTRICAL DRAWINGS.
20. ALL SWITCHES, RECEPTACLES, PANELBOARDS, FIRE ALARM PANELS, POWER SUPPLIES AND DISCONNECTS SHALL BE LABELED WITH SOURCE PANEL AND CIRCUIT.
21. ALL SPARE CONDUITS SHALL BE PROVIDED WITH A PULL STRING.
22. ALL PANELS THAT HAVE NEW CIRCUITS OR REMOVED CIRCUITS SHALL HAVE NEW TYPED UPDATED PANEL SCHEDULES.
23. ALL SWITCHES, RECEPTACLES, PANELBOARDS, DISCONNECTS AND EQUIPMENT SHALL BE LABELED WITH SOURCE PANEL AND CIRCUIT.
24. ALL POWER OUTAGES THAT AFFECT AREAS OUTSIDE OF THE CONSTRUCTION AREA ARE REQUIRED TO BE PERFORMED ON 3RD SHIFT. COORDINATE ALL POWER OUTAGE WITH UNIVERSITY IN WRITING A MINIMUM 14 DAYS IN ADVANCE.
25. CONTRACTOR SHALL HIRE UNIVERSITY'S FIRE ALARM VENDOR, WAYMAN FIRE PROTECTION, 302-994-5757, TO PROVIDE PRICING FOR NEW CARBON MONOXIDE DETECTORS LISTED FOR USE WITH EXISTING EDWARDS EST3 FIRE ALARM SYSTEM. VENDOR SHALL PROVIDE SIGNED AND SEALED FIRE ALARM DRAWINGS, PROGRAMMING, AND NFPA 72 TESTING.

DEMOLITION NOTES

1. ALL WORK UNDER THIS SECTION SHALL BE COORDINATED WITH ALL OTHER TRADES PRIOR TO DEMOLITION.
2. DEMOLITION/RELOCATIONS: EACH TRADE CONTRACTOR SHALL BE RESPONSIBLE FOR DEMOLITION AND RELOCATIONS OF SERVICES, EQUIPMENT AND MATERIAL RELATING TO THEIR RESPECTIVE TRADE.
3. PRIOR TO DEMOLITION CONTRACTOR SHALL REVIEW WITH OWNER ALL MATERIALS TO BE REMOVED. SHOULD THE OWNER OPT TO KEEP ANY MATERIALS, THE CONTRACTOR SHALL REMOVE AND DELIVER THE PARTS TO THE OWNER ON THE SITE WHERE SO DIRECTED. OTHERWISE, ALL DEMOLISHED OR REMOVED MATERIALS SHALL BECOME THE PROPERTY OF THE CONTRACTOR, SHALL BE REMOVED FROM THE SITE, AND BE DISPOSED OF IN A LEGAL MANNER.
4. DEMOLITION SHALL INCLUDE REMOVAL OF ALL PARTS AND PIECES IN THEIR ENTIRETY BACK TO THE POINTS INDICATED OR IF NOT INDICATED BACK TO THEIR POINT OF SOURCE. WHERE CONDITIONS PROHIBIT TOTAL REMOVAL OF THE WORK, THE REMAINING PORTION SHALL BE CUT FLUSH WITH THE SURROUNDING SURFACE SHALL BE REFINISHED IN AN APPROVED MANNER.
5. MAINTAIN EXISTING UTILITIES INDICATED OR WHERE REQUIRED TO REMAIN, KEEP IN SERVICE, AND PROTECT AGAINST DAMAGE DURING DEMOLITION OPERATIONS. DO NOT INTERRUPT EXISTING UTILITIES SERVING OCCUPIED OR USED FACILITIES, EXCEPT WHEN SCHEDULED WITH THE OWNER.
6. DO NOT REMOVE EXISTING STRUCTURAL WORK. DO NOT REMOVE OPERATIONAL ELEMENTS AND SAFETY-RELATED COMPONENTS IN A MANNER RESULTING IN A REDUCTION OF CAPACITIES TO PERFORM IN THE MANNER INTENDED OR RESULTING IN DECREASED OPERATIONAL LIFE, INCREASED MAINTENANCE, OR DECREASED SAFETY.
7. REMOVALS, DISCONNECTIONS, AND RELOCATIONS SHALL BE PERFORMED BY WORKMEN SKILLED IN THE TRADE INVOLVED AND SHALL BE EMPLOYED BY A CONTRACTOR LICENSED IN THE TRADE INVOLVED. ALL WORK SHALL BE DONE IN ACCORDANCE WITH ACCEPTED TRADE PRACTICES.
8. PROVIDE ADEQUATE TEMPORARY SUPPORT FOR WORK TO REMAIN TO PREVENT FAILURE. DO NOT ENDANGER OTHER WORK.
9. PROTECTION: PROVIDE ADEQUATE PROTECTION WHERE REQUIRED FOR THE PRESENT BUILDING AND ITS CONTENTS. CONTRACTOR SHALL TAKE EVERY PRECAUTION AGAINST FIRE BY EMPLOYING FIRE DEPARTMENT TYPE HOSES AND PORTABLE FIRE EXTINGUISHERS AS REQUIRED BY OSHA AND/OR THE OWNER'S INSURANCE UNDERWRITER.
10. ALL EXISTING EQUIPMENT REQUIRED TO BE REUSED SHALL BE CLEANED, RECONDITIONED, CALIBRATED AND ADJUSTED. IN ALL INSTANCES WHERE CONTRACTOR FINDS THAT EXISTING EQUIPMENT IS DEFECTIVE TO THE POINT WHERE IT CANNOT BE PROPERLY RESTORED AND WILL NOT OPERATE PROPERLY, THEY SHALL REPORT THE SPECIFIC INSTRUMENTS OR EQUIPMENT TO THE ENGINEER FOR DIRECTIONS.
11. ALL DRAWINGS ARE DIAGRAMMATIC. CONTRACTOR SHALL CAREFULLY EXAMINE EXISTING CONDITIONS PRIOR TO STARTING WORK.
12. DEMOLITION SHALL INCLUDE REMOVAL OF ALL PARTS AND PIECES IN THEIR ENTIRETY BACK TO THE POINTS INDICATED OR IF NOT INDICATED BACK TO THEIR POINT OF SOURCE. MAINTAIN (E) CIRCUIT INTEGRITY.

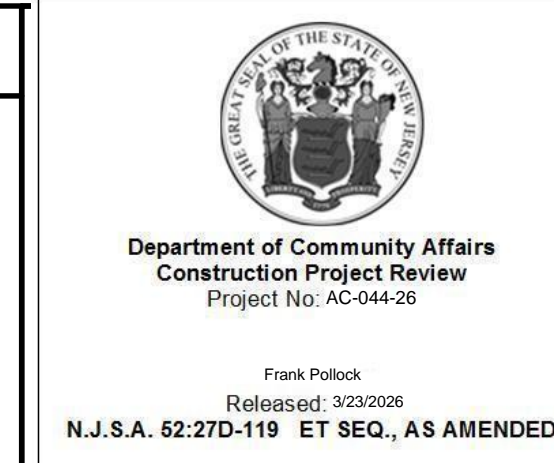
DETAILS



1 BOILER EMERGENCY SHUTDOWN (SEM)
SCALE: NOT TO SCALE

LIGHTING FIXTURE SCHEDULE

FIXTURE TYPE	MANUFACTURER	CATALOG NUMBER	ALTERNATE MANUFACTURERS	VOLTS	LIGHT ENGINE				DRIVER	MOUNTING	WARRANTY	REMARKS
					LUMENS	WATTS	COLOR	HOURS@70				
A1	COLUMBIA	LCL4-35ML-ED-U	LITHONIA, CREE, OR APPROVED EQUAL	120/277	5,329	42	3500K	50,000	LED	0-10V DIMMING	5 YEARS	4' LED STRIP LIGHT FIXTURE WITH FROSTED ACYLIC LENS AND HEAVY DUTY DIE FORMED STEEL CHANNEL WITH WHITE BAKED ENAMEL PAINT. PROVIDE WITH CHAIN HANGER ASSEMBLY FOR SUSPENSION MOUNTING.
E1	DUAL-LITE	HXCURW-03LRC12	OR APPROVED EQUAL	120/277	-	4.5	RED	-	LED	-	5 YEARS	EXIT SIGN WITH THERMOPLASTIC HOUSING, LED LAMPS AND MIRRORRED BACKGROUND FOR SINGLE FACE SIGNS OR STANDARD DOUBLE FACE SIGNS. CONTRACTOR SHALL REFER TO THE CONTRACT DRAWINGS FOR THE MOUNTING REQUIREMENTS, NUMBER OF FACES AND ARROW REQUIREMENTS FOR EACH EXIT SIGN. BATTERY SHALL BE CAPABLE OF PROVIDING (2)INTEGRAL 3-WATT MR16 LED LAMPS AND (2)REMOTE 3-WATT MR16 LED LAMPS FOR MINIMUM 90 MINUTES.



Department of Community Affairs
Construction Project Review
Project No. AC-04429
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N.J.S.A. 52:27D-119 ET SEQ., AS AMENDED

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Certificate of Authorization: 24GA28014000
SH JOB # 2566A

NO.	REVISION	DATE

ISSUED FOR:
BID / PERMIT

BOILER PROJECT AT
 BOZORTH HALL AND HAWTHORN HALL
 ROWAN UNIVERSITY
 MEMORIAL CIRCLE, GLASSBORO, NJ 08028
**ELECTRICAL
 COVER SHEET**

PROJECT NO.:	2566A
DRAWN BY:	MTZ
CHECKED BY:	RLD
DATE:	03/06/2026
SCALE:	AS NOTED

DRAWING NO.:
E-001

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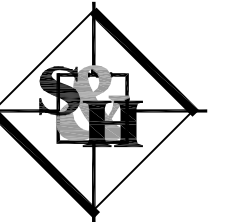
Department of Community Affairs
Construction Project Review
Project No. AC-04420

Frank Pollock
Released: 3/23/2026
N.J.S.A. 52:27D-119 ET SEQ., AS AMENDED

MECHANICAL EQUIPMENT - ELECTRICAL DATA SCHEDULE										
EQUIPMENT NAME	V-Φ-Hz	HP/V/A	WIRE AND CONDUIT	CIRCUIT BREAKER	PANEL,CKT #(S)	STARTER/DISCONNECT FURNISHED BY MC/PC INSTALLED BY EC	STARTER/DISCONNECT FURNISHED BY EC INSTALLED BY EC	SUPPLY SMOKE DETECTOR QUANTITY	RETURN SMOKE DETECTOR QUANTITY	REMARKS
B-1	120-1-60	15A MOCP	3/4"C-2#12+1#12GND	15/1	PPB;1	-	UNISTRUT MOUNT	-	-	BOILER DISCONNECTS SHALL BE UNISTRUT MOUNTED NEXT TO EACH BOILER (NOT MOUNTED ON BOILER). CONTRACTOR TO INSTALL UNISTRUT FRAMING WITH FLOOR SUPPORTS FOR MOUNTING OF DISCONNECTS. WIRE VIA EMERGENCY SHUTOFF, REFER TO DETAIL FOR ADDITIONAL REQUIREMENTS.
B-2	120-1-60	15A MOCP	3/4"C-2#12+1#12GND	15/1	PPB;3	-	UNISTRUT MOUNT	-	-	BOILER DISCONNECTS SHALL BE UNISTRUT MOUNTED NEXT TO EACH BOILER (NOT MOUNTED ON BOILER). CONTRACTOR TO INSTALL UNISTRUT FRAMING WITH FLOOR SUPPORTS FOR MOUNTING OF DISCONNECTS. WIRE VIA EMERGENCY SHUTOFF, REFER TO DETAIL FOR ADDITIONAL REQUIREMENTS.
B-3	120-1-60	15A MOCP	3/4"C-2#12+1#12GND	15/1	PPB;5	-	UNISTRUT MOUNT	-	-	BOILER DISCONNECTS SHALL BE UNISTRUT MOUNTED NEXT TO EACH BOILER (NOT MOUNTED ON BOILER). CONTRACTOR TO INSTALL UNISTRUT FRAMING WITH FLOOR SUPPORTS FOR MOUNTING OF DISCONNECTS. WIRE VIA EMERGENCY SHUTOFF, REFER TO DETAIL FOR ADDITIONAL REQUIREMENTS.
BP-1	120-1-60	480 W	3/4"C-2#12+1#12GND	15/1	PPB;7	WALL MOUNTED	-	-	-	
BP-2	120-1-60	480 W	3/4"C-2#12+1#12GND	15/1	PPB;9	WALL MOUNTED	-	-	-	
BP-3	120-1-60	480 W	3/4"C-2#12+1#12GND	15/1	PPB;11	WALL MOUNTED	-	-	-	
HWP-1	208-3-60	5 HP	3/4"C-3#10+1#10GND	25/3	PPB;2,4,6	WALL MOUNTED	-	-	-	
HWP-2	208-3-60	5 HP	3/4"C-3#10+1#10GND	25/3	PPB;8,10,12	WALL MOUNTED	-	-	-	
CHWP-1	208-3-60	7.5 HP	3/4"C-3#8+1#10GND	35/3	PPB;14,16,18	WALL MOUNTED	-	-	-	
EWH-1	208-1-60	3 kW	3/4"C-2#12+1#12GND	20/2	PPB;13,15	INTEGRAL	-	-	-	

LOCATION: BASEMENT HAWTHORN HALL		PANEL SCHEDULE FOR PANEL: "PPB" 120/208V, 3PH, 4W, 225A BUS, 225A MLO										SURFACE MOUNTED		
CKT NO	POLES	AMP	REMARKS	A	B	C	A	B	C	REMARKS	AMP	POLES	CKT NO	
1	1	15	B-1	1440			2003						2	
3	1	15	B-2		1440			2003					4	
5	1	15	B-3			1440			2003				6	
7	1	15	BP-1	480			2003						8	
9	1	15	BP-2		480			2003					10	
11	1	15	BP-3			480			2003				12	
13				1500			2903						14	
15	2	20	EWH-1		1500			2903					16	
17	1	20	ATC PANEL			1000			2903				18	
19	1	20	SPARE	0			0						20	
21	1	20	SPARE	0	0		0						22	
23	1	20	SPARE			0			0				24	
25	1	20	SPARE	0			0						26	
27	1	20	SPARE		0			0					28	
29	1	20	SPARE			0	0		0				30	
31	1	20	SPARE	0			0						32	
33	1	20	SPARE		0			0					34	
35	1	20	SPARE			0			0				36	
37	1	20	SPARE	0			0						38	
39	1	20	SPARE		0			0					40	
41	1	20	SPARE			0			0				42	
				3420	3420	2920	6909	6909	6909					
				PHASE A: 10.33 kVA										
				PHASE B: 10.33 kVA										
				PHASE C: 9.83 kVA										
				TOTAL: 30.49 kVA										

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BOILER PROJECT AT
BOZORTH HALL AND HAWTHORN HALL
ROWAN UNIVERSITY
MEMORIAL CIRCLE, GLASSBORO, NJ 08028

HAWTHORN HALL
SCHEDULES

PROJECT NO.:	2566A
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E-202

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ABBREVIATIONS

(A) ABANDON	DWG DRAWING	I/O INPUT/OUTPUT	RPM REVOLUTIONS PER MINUTE
AAV AUTOMATIC AIR VENT	(E) EXISTING	IPS INTERNATIONAL PIPE STANDARD	RS REFRIGERANT SUCTION
AC AIR CONDITIONER	EA EXHAUST AIR	KW KILOWATT	RTU ROOFTOP UNIT
ABS ABSOLUTE	EAT ENTERING AIR TEMPERATURE	L LOUVER OR LENGTH	RV RELIEF VALVE
ABV ABOVE	EC ELECTRICAL CONTRACTOR	LAT LEAVING AIR TEMP	SA SUPPLY AIR
AD ACCESS DOOR	EER ENERGY EFFICIENCY RATIO	LB POUND	SD SUPPLY DIFFUSER
AFF ABOVE FINISHED FLOOR	EF EXHAUST FAN	LD LINEAR DIFFUSER	SEC SECONDS
AHU AIR HANDLING UNIT	EG EXHAUST AIR GRILLE	LF LINEAR FEET	SF SUPPLY FAN
AI ANALOG INPUT	EHC ELECTRIC HEATING COIL	LPG LIQUEFIED PETROLEUM GAS	SG SUPPLY GRILLE
AO ANALOG OUTPUT	ELEC ELECTRICAL	LPR LOW PRESSURE STEAM CONDENSATE RETURN	SP STATIC PRESSURE
AP ACCESS PANEL	ELEV ELEVATION	LPS LOW PRESSURE STEAM	SQ SQUARE
APD AIR PRESSURE DROP	ENT ENTERING	LVG LEAVING	SR SUPPLY REGISTER
ATC AUTOMATIC TEMPERATURE CONTROL	EQUIP EQUIPMENT	LVR LOUVER	STC STEAM CONDENSATE
ATM ATMOSPHERE	ER EXHAUST REGISTER	LWT LEAVING WATER TEMP	STM STEAM
AS AIR SEPARATOR	ERU ENERGY RECOVERY UNIT	MAU MAKEUP AIR UNIT	TDH TOTAL DYNAMIC HEAD
AVG AVERAGE	ESP EXTERNAL STATIC PRESSURE	MAV MANUAL AIR VENT	TDV TRIPLE DUTY VALVE
AWT AVERAGE WATER TEMPERATURE	ET EXPANSION TANK	MAX MAXIMUM	TG TRANSFER GRILLE
BCU BLOWER COIL UNIT	EWH ELECTRIC WALL HEATER	MBH 1,000 BTUH	TSP TOTAL STATIC PRESSURE
BDD BACK DRAFT DAMPER	EWT ENTERING WATER TEMPERATURE	MC MECHANICAL CONTRACTOR	TYP TYPICAL
BFP BACKFLOW PREVENTER	EXP EXPANSION	MECH MECHANICAL	UC UNDER CUT
BI BINARY INPUT	F FAHRENHEIT	MIN MINIMUM	UH UNIT HEATER
BLR BOILER	FA FACE AREA	MISC MISCELLANEOUS	UNO UNLESS NOTED OTHERWISE
BLW BELOW	F&T FLOAT & THERMOSTATIC	(N) NEW	UV UNIT VENTILATOR
BNR BURNER	FD FIRE DAMPER	NC NOISE CRITERIA	VA VOLT AMPERE
BO BINARY OUTPUT	FF FINAL FILTER	NK NECK	VAV VARIABLE AIR VOLUME
BOD BOTTOM OF DUCT	FIN FINISH	NTS NOT TO SCALE	VB VACUUM BREAKER
BOP BOTTOM OF PIPE	FLR FLOOR	OA OUTSIDE AIR	VD VOLUME DAMPER
BTU BRITISH THERMAL UNIT	G NATURAL GAS	OAD OUTSIDE AIR DAMPER	VEL VELOCITY
BTUH BTU PER HOUR	GAL GALLON	OAI OUTSIDE AIR INTAKE	VFD VARIABLE FREQUENCY DRIVE
BYP BYPASS	GC GENERAL CONTRACTOR	OAT OUTSIDE AIR TEMPERATURE	VP VELOCITY PRESSURE
CAP CAPACITY	GPH GALLONS PER HOUR	OD OUTSIDE DIMENSIONS OR OUTSIDE DIAMETER	W WIDTH
CD CONDENSATE DRAIN	GPM GALLONS PER MINUTE	OED OPEN END DUCT	W/ WITH
CFM CUBIC FEET PER MINUTE	GRV GRAVITY RELIEF VENTILATOR	OS&Y OUTSIDE SCREW & YOKE	WB WET BULB
CH CHILLER	H HUMIDIFIER	P PUMP	W/O WITHOUT
CHWP CHILLED WATER PUMP	HC HEATING COIL	PD PRESSURE DROP	WC WATER COLUMN
CHWR CHILLED WATER RETURN	HOA HAND OFF AUTO	PF PRE FILTER	WH WATER HEATER
CHWS CHILLED WATER SUPPLY	HORIZ HORIZONTAL	PH PHASE	WMS WIRE MESH SCREEN
CKT CIRCUIT	HP HEAT PUMP OR HORSEPOWER	PHC PREHEAT COIL	WT WEIGHT
CLG CEILING	HPLR HEAT PUMP WATER LOOP RETURN	PHR PREHEAT WATER RETURN	
CONC CONCRETE	HPLS HEAT PUMP WATER LOOP SUPPLY	PHS PREHEAT WATER SUPPLY	
COP COEFFICIENT OF PERFORMANCE	HPR HIGH PRESSURE STEAM CONDENSATE RETURN	PPM PARTS PER MILLION	
CP CONDENSATE PUMP	HPS HIGH PRESSURE STEAM	PRV PRESSURE REDUCING VALVE	
CRP CONDENSATE RETURN PUMP	HR HOUR	PSI POUNDS PER SQUARE INCH	
CUH CABINET UNIT HEATER	HT HEIGHT	PSIA POUNDS PER SQUARE INCH ABSOLUTE	
CW COLD WATER (DOMESTIC)	HW HOT WATER	PUH PROPELLER UNIT HEATER	
CWP CONDENSER WATER PUMP	HWP HOT WATER PUMP	PVC POLYVINYL CHLORIDE	
CWR CONDENSER WATER RETURN	HWR HEATING HOT WATER RETURN	QTY QUANTITY	
CWS CONDENSER WATER SUPPLY	HWS HEATING HOT WATER SUPPLY	(R) REMOVE	
DB DRY BULB TEMPERATURE	HZ HERTZ	RA RETURN AIR	
DDC DIRECT DIGITAL CONTROL	ID INSIDE DIMENSIONS OR INSIDE DIAMETER	RAG RELIEF AIR GRILLE	
DEG DEGREE	IL INTERNALLY LINED	RAV RELIEF AIR VENT	
DIA DIAMETER	IN INCHES	(REL) RELOCATE	
DN DOWN		RG RETURN GRILLE	

GENERAL NOTES

- THE FOLLOWING NOTES APPLY TO ALL MECHANICAL DRAWINGS.
- ALL WORK SHALL BE IN ACCORDANCE WITH THE INTERNATIONAL MECHANICAL CODE 2021 AND ALL OTHER APPLICABLE CODES AND STANDARDS.
- MECHANICAL CONTRACTOR SHALL ENSURE 36" MIN. CLEARANCE IN FRONT OF ALL ACCESS PANELS.
- ALL DRAWINGS ARE DIAGRAMMATIC. MECHANICAL CONTRACTOR SHALL CAREFULLY EXAMINE EXISTING CONDITIONS PRIOR TO STARTING WORK.
- CONTRACTOR TO FIELD VERIFY ALL DIMENSIONS, SIZES, CLEARANCES AND LOCATIONS PRIOR TO THE START OF CONSTRUCTION. WHEN CONFLICTS ARISE, MAKE ANY NECESSARY CHANGES TO ROUTING OF DUCTWORK AND PIPING AT NO ADDITIONAL COST.
- ALL EQUIPMENT SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S WRITTEN INSTRUCTIONS.
- SCHEDULES DO NOT REPRESENT EQUIPMENT QUANTITIES. REFER TO THE PLANS FOR ACTUAL QUANTITIES.
- DUCT SIZES SHOWN ON DRAWINGS REFER TO INSIDE CLEAR DIMENSIONS UNLESS OTHERWISE NOTED.
- ALL BRANCH DUCTS TO SUPPLY/RETURN/EXHAUST REGISTERS AND DIFFUSERS SHALL BE 2" LARGER (WIDER) THAN REGISTER/DIFFUSER NECK SIZE, UNLESS NOTED OTHERWISE.
- MECHANICAL CONTRACTOR SHALL PROVIDE FLEXIBLE CONNECTIONS AT ALL DUCTWORK TO EQUIPMENT CONNECTIONS.
- COORDINATE ALL THERMOSTAT/TEMPERATURE SENSOR LOCATIONS WITH THE OWNER PRIOR TO INSTALLATION.
- MECHANICAL CONTRACTOR SHALL PROVIDE "UL" LISTED FIRE DAMPERS FOR ALL DUCTWORK PENETRATIONS THROUGH FIRE RATED SURFACES AND "UL" LISTED FIRE/SMOKE DAMPERS FOR ALL DUCTWORK PENETRATIONS THROUGH FIRE/SMOKE RATED SURFACES.
- MECHANICAL CONTRACTOR SHALL PROVIDE "UL" LISTED THROUGH PENETRATION FIRESTOP SYSTEMS WITH FIREPROOF SLEEVES AT ALL NEW PIPING PENETRATIONS THRU FIRE RATED WALLS AND FLOORS.
- INDICATED DUCT AND PIPING ARE DIAGRAMMATIC. MECHANICAL CONTRACTOR SHALL DETERMINE ALL REQUIRED OFFSETS AND DIRECTION CHANGES BEFORE FABRICATION AND INSTALLATION TO AVOID INTERFERENCE WITH OTHER TRADES.
- UNLESS OTHERWISE NOTED, ALL PIPING IS OVERHEAD, TIGHT TO UNDERSIDE OF SLAB/STEEL, WITH SPACE FOR INSULATION.
- MANUFACTURERS AND MODEL NUMBERS INDICATED ON THE PLANS, SCHEDULES AND SKETCHES ARE PROVIDED AS A BASIS OF DESIGN ONLY. SIMILAR PRODUCTS FROM OTHER MANUFACTURERS MAY BE FURNISHED PROVIDED THEY MEET THE INTENT OF THE SPECIFICATIONS. ANY CHANGES TO THE DESIGN REQUIRED AS A RESULT OF A SUBSTITUTION ARE THE RESPONSIBILITY OF THE MECHANICAL CONTRACTOR.
- PROVIDE P-TRAP OF SUFFICIENT SEAL DEPTH TO OVERCOME UNIT STATIC PRESSURE ON ALL UNITS

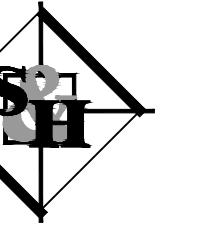
GENERAL DEMOLITION NOTES

- ALL WORK UNDER THIS SECTION SHALL BE COORDINATED WITH ALL OTHER TRADES PRIOR TO INSTALLATION.
- DEMOLITION/RELOCATIONS: EACH TRADE CONTRACTOR SHALL BE RESPONSIBLE FOR DEMOLITION AND RELOCATIONS OF SERVICES, EQUIPMENT AND MATERIAL RELATING TO THEIR RESPECTIVE TRADE.
- PRIOR TO DEMOLITION CONTRACTOR SHALL REVIEW WITH OWNER ALL MATERIALS TO BE REMOVED. SHOULD THE OWNER OPT TO KEEP ANY MATERIALS, THE CONTRACTOR SHALL REMOVE AND DELIVER THE PARTS TO THE OWNER ON THE SITE WHERE SO DIRECTED. OTHERWISE, ALL DEMOLISHED OR REMOVED MATERIALS SHALL BECOME THE PROPERTY OF THE CONTRACTOR, SHALL BE REMOVED FROM THE SITE, AND BE DISPOSED OF IN A LEGAL MANNER.
- DEMOLITION SHALL INCLUDE REMOVAL OF ALL PARTS AND PIECES IN THEIR ENTIRETY BACK TO THE POINTS INDICATED OR IF NOT INDICATED BACK TO THEIR POINT OF SOURCE. WHERE CONDITIONS PROHIBIT TOTAL REMOVAL OF THE WORK, THE REMAINING PORTION SHALL BE CUT FLUSH WITH THE SURROUNDING SURFACE AND SHALL BE REFINISHED IN AN APPROVED MANNER.
- MAINTAIN EXISTING UTILITIES INDICATED OR WHERE REQUIRED TO REMAIN, KEEP IN SERVICE, AND PROTECT AGAINST DAMAGE DURING DEMOLITION OPERATIONS. DO NOT INTERRUPT EXISTING UTILITIES SERVING OCCUPIED OR USED FACILITIES, EXCEPT WHEN SCHEDULED WITH THE OWNER.
- DO NOT REMOVE EXISTING STRUCTURAL WORK. DO NOT REMOVE OPERATIONAL ELEMENTS AND SAFETY-RELATED COMPONENTS IN A MANNER RESULTING IN A REDUCTION OF CAPACITIES TO PERFORM IN THE MANNER INTENDED OR RESULTING IN DECREASED OPERATIONAL LIFE, INCREASED MAINTENANCE, OR DECREASED SAFETY.
- REMOVALS, DISCONNECTIONS, AND RELOCATIONS SHALL BE PERFORMED BY WORKMEN SKILLED IN THE TRADE INVOLVED AND SHALL BE EMPLOYED BY A CONTRACTOR LICENSED IN THE TRADE INVOLVED. ALL WORK SHALL BE DONE IN ACCORDANCE WITH ACCEPTED TRADE PRACTICES.
- PROTECTION: PROVIDE ADEQUATE PROTECTION WHERE REQUIRED FOR THE PRESENT BUILDING AND ITS CONTENTS. TEMPORARY DUSTPROOF BARRIERS AND BARRICADES SHALL BE ERRECTED WHERE REQUIRED FOR PROTECTION OF PERSONNEL, PROTECTION FROM DUST AND DIRT, FOR SECURITY, FIRE AND WEATHER PROTECTIVE REASONS. CONTRACTOR SHALL TAKE EVERY PRECAUTION AGAINST FIRE BY EMPLOYING FIRE DEPARTMENT TYPE HOSES AND PORTABLE FIRE EXTINGUISHERS AS REQUIRED BY OSHA AND/OR THE OWNER'S INSURANCE UNDERWRITER.
- ALL EXISTING EQUIPMENT REQUIRED TO BE REUSED SHALL BE CLEANED, RECONDITIONED, CALIBRATED AND ADJUSTED. IN ALL INSTANCES WHERE CONTRACTOR FINDS THAT EXISTING EQUIPMENT IS DEFECTIVE TO THE POINT WHERE IT CANNOT BE PROPERLY RESTORED AND WILL NOT OPERATE PROPERLY, THEY SHALL REPORT THE SPECIFIC INSTRUMENTS OR EQUIPMENT TO THE ENGINEER FOR DIRECTIONS.
- EXTREME CARE SHALL BE EXERCISED FOR ALL EXISTING ITEMS THAT ARE TO REMAIN IN SERVICE UNTIL NEW ITEMS ARE INSTALLED FOR THE SAME SERVICE. ALL SHUTDOWNS OF ANY SYSTEM SHALL BE COORDINATED WITH THE OWNER.
- ALL DRAWINGS ARE DIAGRAMMATIC. CONTRACTOR SHALL CAREFULLY EXAMINE EXISTING CONDITIONS PRIOR TO STARTING WORK.



Department of Community Affairs
Construction Project Review
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Patrick Summers
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**MECHANICAL
COVER SHEET**

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CHECKED BY:	RLD
DATE:	03/06/2026
SCALE:	AS NOTED

DRAWING NO.:

M-001

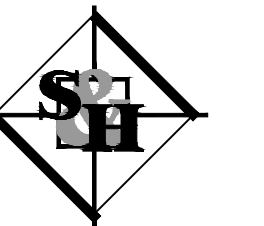
SYMBOL LEGEND

	EQUIPMENT MARKER (TYPE SF, NUMBER 1)		SQUARE ELBOW WITH TURNING VANE		PIPE REDUCER		PUMP
	SECTION INDICATOR (SECTION 1 ON DWG M301)		DUCT TO OFFSET UP IN DIRECTION OF ARROW TO AVOID OBSTRUCTION		PIPE FLANGE		FUNNEL DRAIN
	DETAIL INDICATOR (DETAIL 1 ON DWG M501)		FLEXIBLE DUCT		PIPE UNION		RELIEF VALVE
	KEY NOTE INDICATOR (REFERS TO NOTES ON SAME SHEET)		BACKDRAFT DAMPER		Y-TYPE STRAINER		AIR VENT
	RECTANGULAR SUPPLY DUCT TURNED UP		MOTORIZED ATC DAMPER		TEMPERATURE AND PRESSURE PORT		GAS PIPE
	RECTANGULAR SUPPLY DUCT TURNED DOWN		FIRE DAMPER		FLEXIBLE PIPE CONNECTION		HPS HIGH PRESSURE STEAM SUPPLY PIPE
	ROUND DUCT TURNED UP		MANUAL VOLUME DAMPER		PIPE CAP		HPR HIGH PRESSURE STEAM RETURN PIPE
	ROUND DUCT TURNED DOWN		EXISTING WORK TO REMAIN		PIPE TURNED DOWN		HWS HOT WATER SUPPLY PIPE
	FLEXIBLE DUCT CONNECTION		WORK TO BE REMOVED		PIPE TURNED UP		HWR HOT WATER RETURN PIPE
	RECTANGULAR RETURN/EXHAUST DUCT TURNED UP		NEW WORK		GAS PRESSURE REGULATOR		FOS FUEL OIL SUPPLY PIPE
	RECTANGULAR RETURN/EXHAUST DUCT TURNED DOWN		THERMOSTAT/TEMPERATURE SENSOR		CHECK VALVE		FOR FUEL OIL RETURN PIPE
			THERMOMETER IN THERMOWELL		LOCKSHIELD BALL VALVE		LPS LOW PRESSURE STEAM SUPPLY PIPE
			PRESSURE GAUGE W/SHUTOFF COCK		BUTTERFLY VALVE		LPR LOW PRESSURE STEAM RETURN PIPE
					GATE VALVE		PC PUMPED STEAM CONDENSATE
					BALL VALVE		CD COOLING COIL CONDENSATE DRAIN
					2-WAY CONTROL VALVE		DENOTES CONNECT TO EXISTING
					3-WAY CONTROL VALVE		DENOTES LIMIT OF DEMOLITION

THIS DRAWING IS FORWARDED TO BE PRINTED AT 36"x24"



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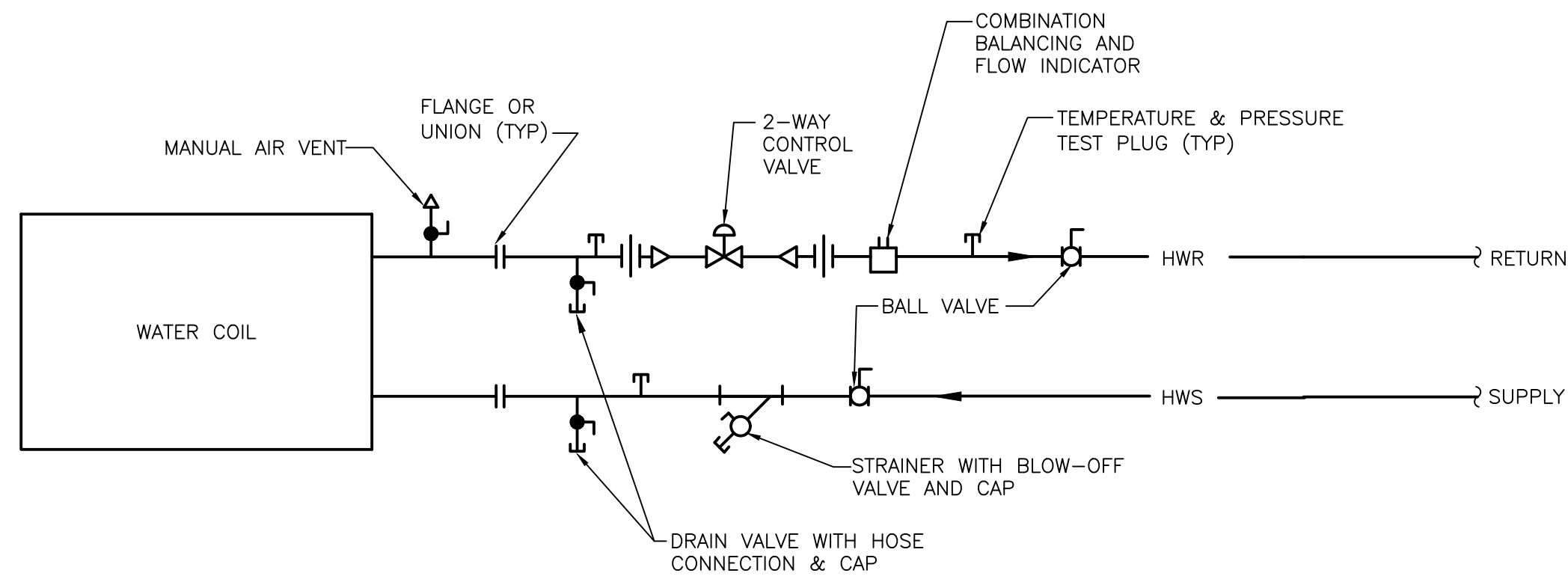
MECHANICAL DETAILS

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DRAWN BY: JDA
CHECKED BY: RLD
DATE: 03/06/2026
SCALE: AS NOTED

DRAWING NO.:

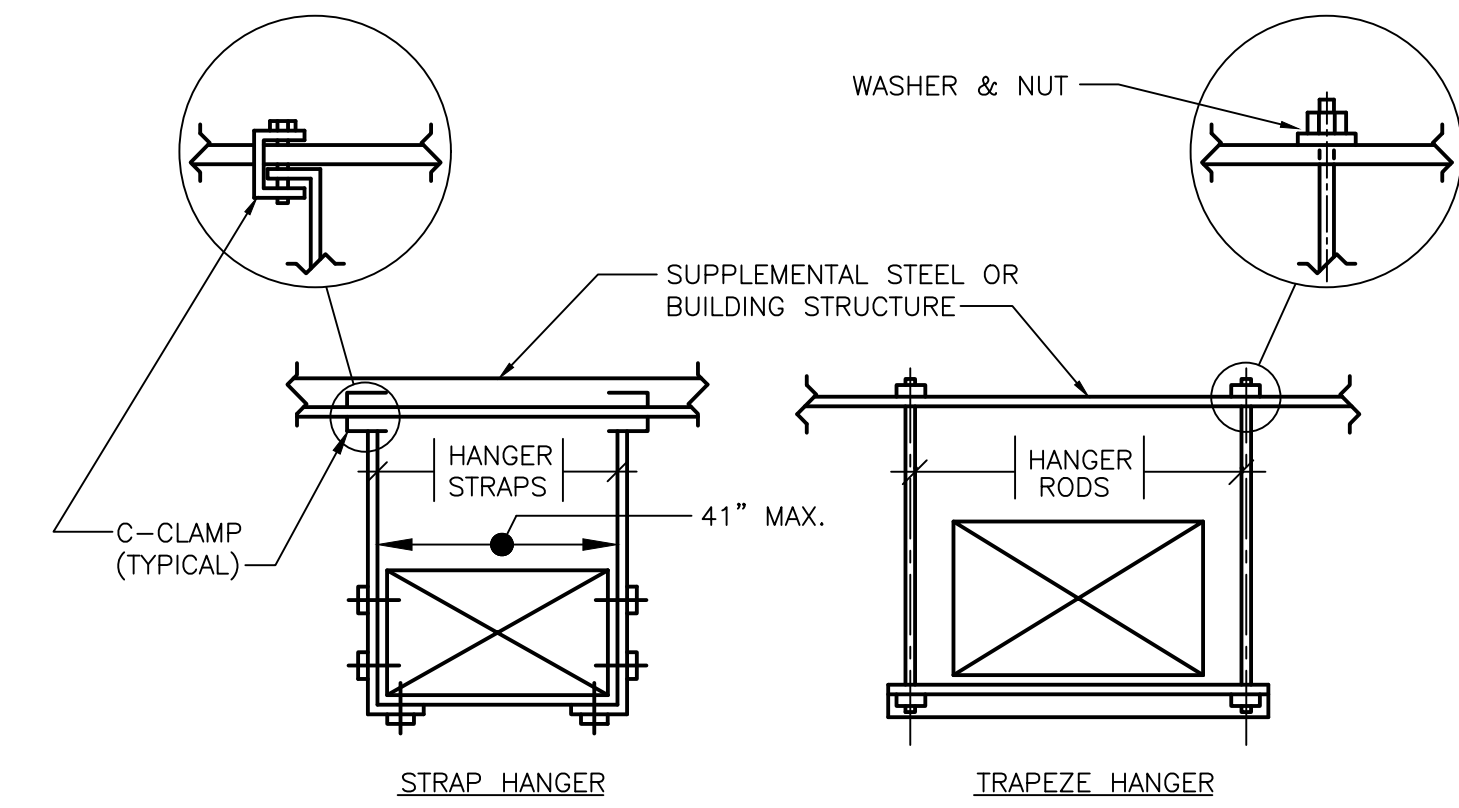
M-302

THIS DRAWING IS FORMATTED TO BE PRINTED AT 36"x24"



1 COIL PIPING DETAIL (2-WAY VALVE)

NOT TO SCALE

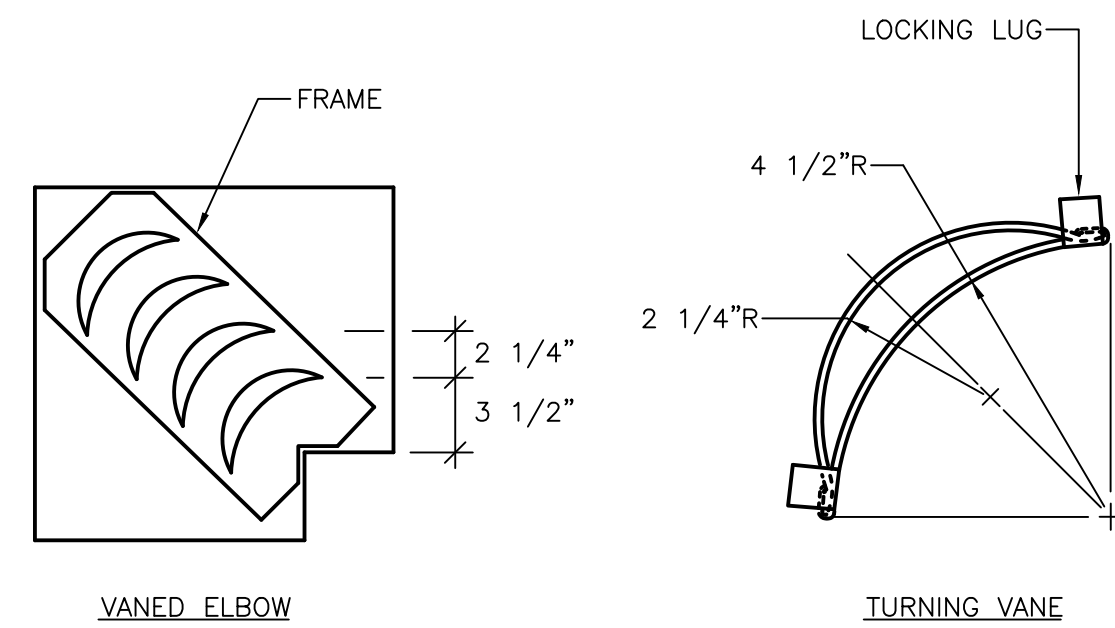


NOTES:

- 1. NO POP RIVETS ALLOWED, USE SELF-TAPPING SHEETMETAL SCREWS ONLY.

2 DUCT HANGER DETAIL

NOT TO SCALE

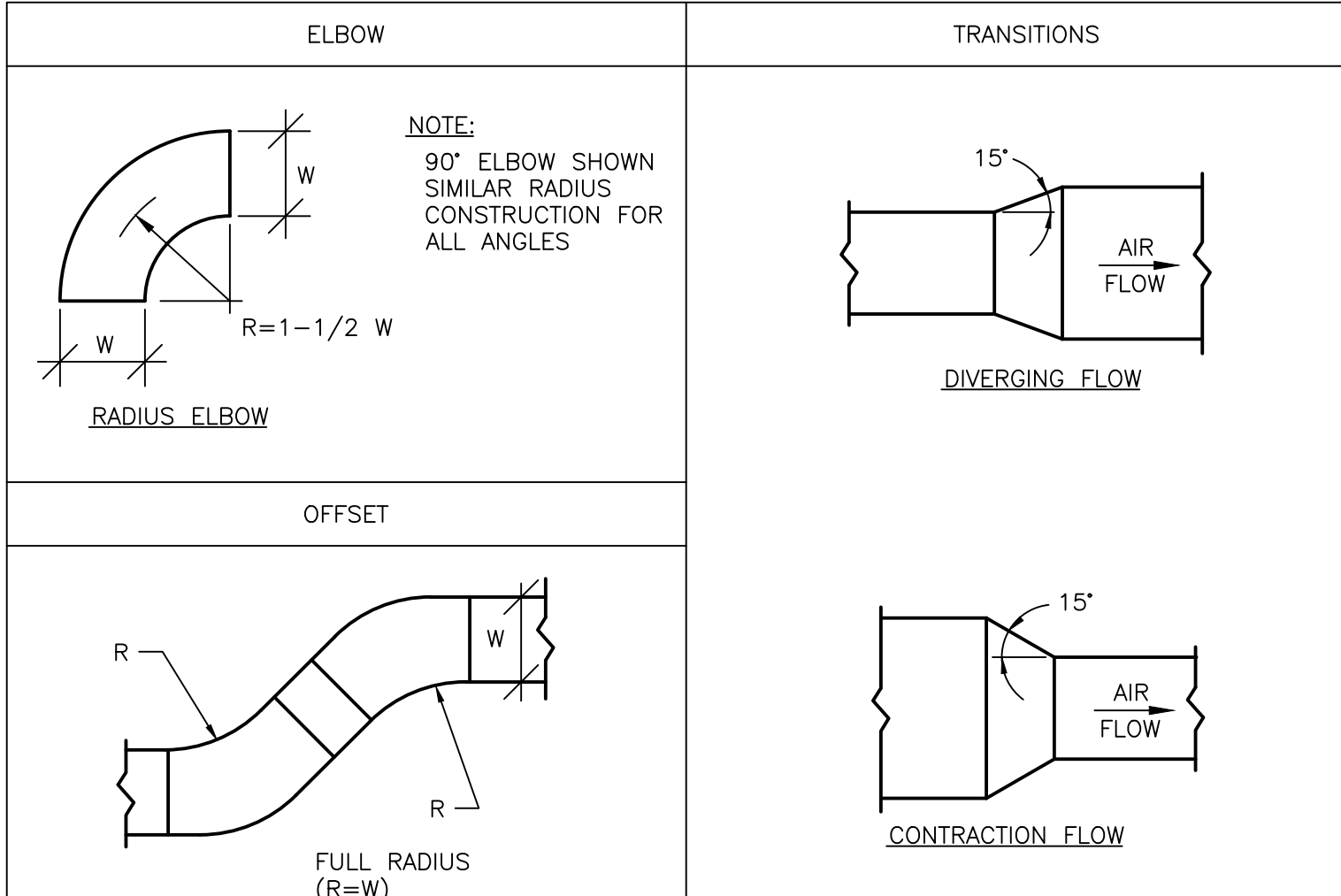


NOTES:

- 1. LOCKING LUGS INTEGRAL WITH VANE.
- 2. MAXIMUM UNSUPPORTED VANE LENGTH 48"
- 3. FRAMES - BOLTED OR RIVETED TO ELBOW
- 4. VANES AND FRAMES - SAME GAUGE AS ELBOW

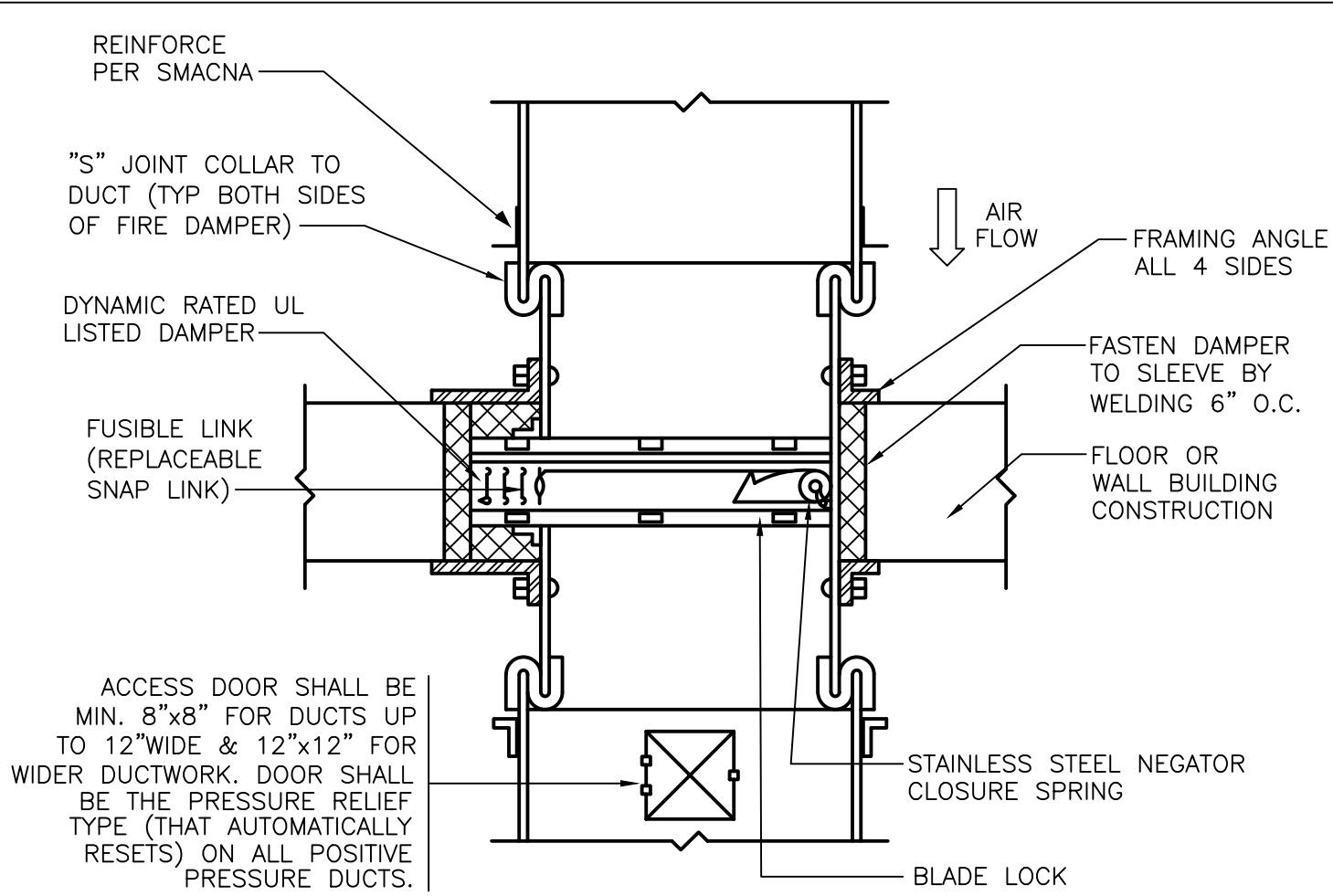
3 DOUBLE THICKNESS TURNING VANES FOR SQUARE ELBOW DETAIL

NOT TO SCALE



4 RECTANGULAR TRANSITIONS, OFFSETS AND ELBOWS DETAIL

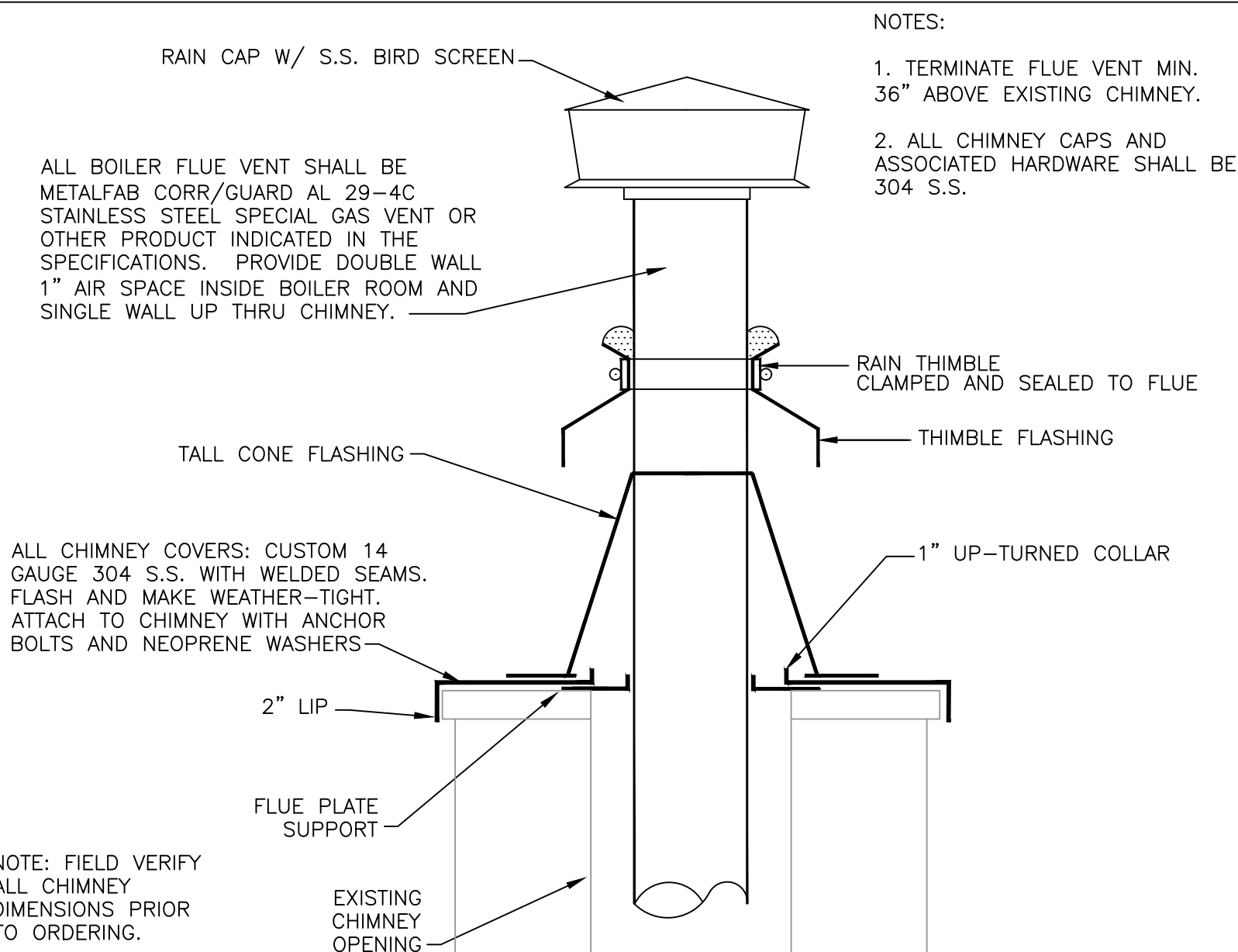
NOT TO SCALE



NOTE: FIRE DAMPER INSTALLATION TO MEET "UL" REQUIREMENTS.

5 FIRE DAMPER WITH BLADES OUTSIDE THE AIRSTREAM DETAIL

NOT TO SCALE



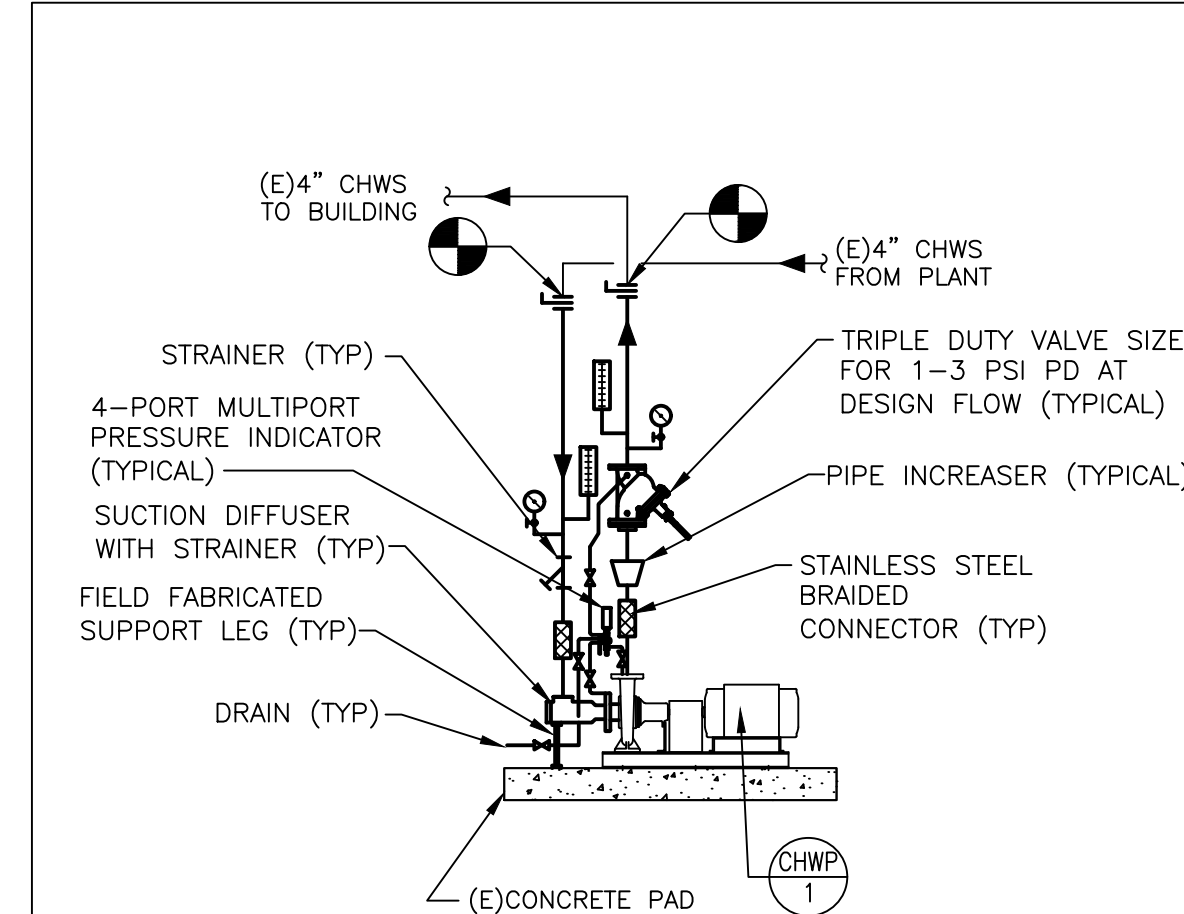
NOTES:

- 1. TERMINATE FLUE VENT MIN. 36" ABOVE EXISTING CHIMNEY.
- 2. ALL CHIMNEY CAPS AND ASSOCIATED HARDWARE SHALL BE 304 S.S.

NOTE: FIELD VERIFY ALL CHIMNEY DIMENSIONS PRIOR TO ORDERING.

6 BOILER FLUE TERMINATION DETAIL

NOT TO SCALE

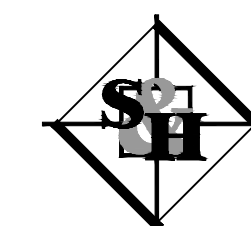


7 CHILLED WATER PUMP PIPING REPLACEMENT DETAIL

NOT TO SCALE



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SH JOB # 2566A

NO.	REVISION	DATE
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ISSUED FOR:

BID / PERMIT

BOILER PROJECT AT
BOZORTH HALL AND HAWTHORN HALL
ROWAN UNIVERSITY
MEMORIAL CIRCLE, GLASSBORO, NJ 08028
MECHANICAL DETAILS

PROJECT NO.:	2566A
DRAWN BY:	JDA
CHECKED BY:	RLD
DATE:	03/06/2026
SCALE:	AS NOTED

DRAWING NO.:

M-303

THIS DRAWING IS FORMATTED TO BE PRINTED AT 36"x24"

(1) POLYPROPYLENE PIPE OR CONDUIT TO BE SUPPORTED ON BOTH SIDES OF PARTITION

(2) CONCRETE MASONRY WALL

(3) 3M* FIRE BARRIER PLENUM WRAP 5A+ OR EQUIVALENT FIBERGLASS INSULATION WITH FOIL - SINGLE LAYER OF 1/2" THICK FIBERGLASS INSULATION INSTALLED AS PER THIRD PARTY AGENCIES FLAME SPREAD AND SMOKE DEVELOPMENT LISTED INSTALLATION INSTRUCTIONS. INSULATION TO BE TIGHTLY BUTTED TO TOP AND BOTTOM OF COLLAR FOR BOTH FLOOR OR WALL ASSEMBLIES. ALL SEAMS LONGITUDINAL AND TRANSVERSE JOINTS TO BE SEALED WITH MIN 2 INCH (51MM) WIDE ALUMINUM FOIL TAPE.

(4) PFP PARTNERS - WS1 WRAP STRIP* - NOMINAL 1/8" THICK INTUMESCENT MATERIAL SUPPLIED IN 2" WIDE STRIPS. MIN 1 LAYER OF STRIP TO BE WRAPPED TIGHTLY ROUND INNOFLUE AND FASTENED IN PLACE WITH ALUMINUM FOIL TAPE. WRAP STRIP TO BE FLUSH WITH BOTTOM SURFACE OF FLOOR OR BOTH SIDES OF THE WALL.

(5) FILLER MATERIAL, MINERAL ROCK WOOL INSULATION WITH A MINIMUM DENSITY OF 4-6 PCF COMPRESSED A MINIMUM OF 25% INTO THE ANNULAR SPACE AT A MINIMUM DEPTH OF 2" ON EACH SIDE OF THE FLOOR OR WALL ASSEMBLY. RECESS FILLER MATERIAL 1/2" FOR SEALANT PLACEMENT, NOT REQUIRED FOR WALL ASSEMBLIES. FOR WALLS, FILLER MATERIAL TO BE FLUSH WITH BOTH SIDES OF THE ASSEMBLY.

(6) PFP PARTNERS - PLASTIC PIPE COLLAR* (PPC) SPECIFICALLY SIZED FOR DIAMETER OF INNOFLUE. PPC SECURED TO FLOOR/CEILING ASSEMBLY OR WALL ASSEMBLY USING 1/4" DIAMETER BY 1 - 1/4" LONG STEEL MASONRY ANCHORS OVER FENDER WASHERS. FOR WALLS, THE SYSTEM SHALL BE SYMMETRICAL, WITH PPC INSTALLED ON EACH SIDE OF THE ASSEMBLY AND FIXED IN THE MANNER AS DESCRIBED FOR FLOOR PENETRATIONS.

MAXIMUM DIAMETER OF POLYPROPYLENE PIPE 2-6"

MAXIMUM HOLE SIZE 8"

* REFER TO UL FIRE RESISTANCE DIRECTORY FOR FURTHER REQUIREMENTS.

THROUGH WALL PENETRATION FIRESTOP SYSTEMS FOR NON-METALLIC CLOSED SYSTEM
F-RATING 2 HR, FH-RATING 2 HR, FTH-RATING 2 HR
TEST FURNACE INTERNAL POSITIVE PRESSURE DIFFERENTIAL: 0.2 INCHES H2O
CSI CODE 07 84 13 PENETRATION FIRESTOPPING

1 THROUGH WALL PENETRATION FIRESTOP SYSTEM NOT TO SCALE
ASTM E-814, UL1479

(1) NON METALLIC PIPE OR CONDUIT TO BE SUPPORTED ON BOTH SIDES OF PARTITION

(2) CONCRETE MASONRY WALL

FILL VOID OR CAVITY WITH CAULK

FIRE STOP SCHEDULE

NOM PIPE DIA. (IN.)	WRAP STRIP	WRAP STRIP THICK. x W (IN.)	MAX DIA. OPENING (IN.)	ANNULAR SPACE (IN.)	
				MIN	MAX
2	CP 648S - 2" US	3/16x1	3	3/16	5/16
4	CP 648S - 4" US	3/8x1-3/4	5-3/8	3/8	1/2
6	CP 648S - 6" US	1/2x1-3/4	8	9/16	13/16

THROUGH WALL PENETRATION FIRESTOP SYSTEMS No. W-J-2205
F-RATING 2 HR, T-RATING 0 HR

* REFER TO UL FIRE RESISTANCE DIRECTORY FOR FURTHER REQUIREMENTS.

MAXIMUM DIAMETER OF CPVC PIPE 6"

MAXIMUM DIAMETER OF PVC PIPE 6"

2 THROUGH WALL PENETRATION FIRESTOP SYSTEM NOT TO SCALE
GRADE DETAIL W-K-2001

KEY NOTES:

1 FILL, VOID OR CAVITY MATERIAL* - WRAP STRIP - SEE TABLE FOR MIN SIZE OF INTUMESCENT WRAP STRIP. THE WRAP STRIP IS CONTINUOUSLY WRAPPED AROUND THE OUTER CIRCUMFERENCE OF THE PIPE ONCE AND SLID INTO THE ANNULAR SPACE SUCH THAT APPROX. 1/8 IN. OF THE WRAP STRIP PROTRUDES FROM THE WALL SURFACE. WRAP STRIP IS HELD IN PLACE WITH INTEGRAL FASTENING TAPE. WRAP STRIP INSTALLED ON EACH SURFACE OF WALL.

HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC - CP 648S - 1.5" US, CP 648S - 2" US, CP 648S - 3" US, CP 648S - 4" US AND CP 648S - 6" US

2 FILL, VOID OR CAVITY MATERIAL* - CAULK - MIN 1/4 IN. (6 MM) THICKNESS OF FILL MATERIAL APPLIED WITHIN THE ANNULUS, FLUSH WITH BOTH SURFACES OF WALL. FOR 2 HR FIRE-RATED WALLS, 1/4 IN. BEAD FILL MATERIAL ALSO APPLIED AT WRAP STRIP/WALL INTERFACE. IN 1 HR FIRE-RATED WALLS, FILL MATERIAL IS OPTIONAL FOR NOM 1-1/2, 2, 3 AND 4 IN. DIA. PENETRANTS. IN 2 HR FIRE-RATED WALLS, FILL MATERIAL IS OPTIONAL FOR NOM 1-1/2, 2 AND 3 IN. DIA. PENETRANTS. FILL MATERIAL IS REQUIRED TO BE USED TO ATTAIN L RATINGS.

HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC - FS-ONE SEALANT OR FS-ONE MAX INTUMESCENT SEALANT.