

**ADDENDUM NO. 1**

Issued: December 20, 2023

Project: Heritage Middle School Renovations

Project No. 23024

Owner: Liberty Public Schools  
8 Victory Lane  
Liberty, Missouri 64068

Bidding Documents Issued: 12.13.2023

This Addendum includes these 2 page[s] and the following attachments:

Drawings:

Revised Architectural Sheets: A331, A501, A502, A504, and A662  
Refer to Smith & Boucher, MEP Addendum No. 1

**DRAWINGS REVISIONS**

**A1 SHEET A331 – WALL SECTIONS - EXTERIOR**

- A1.1 ADD window shades to section A5 per attached sheet A331.
- A1.2 ADD detail callout for roller shades to section A9 per attached sheet A331.

**A2 SHEET A501 – DOOR SCHEDULE**

- A2.1 REVISE jamb detail references on openings B202, B203, B302, B308, and B309 per attached sheet A501.

**A3 SHEET A502 – DOOR & FRAME TYPES**

- A3.1 ADD new jamb details G1, G5, G9, and G13 per attached sheet A502.

**A4 SHEET A504 – DOOR & WINDOW DETAILS 1964 ADDITION - EXTERIOR**

- A4.1 ADD new detail M5 per attached sheet A504.
- A4.2 ADD roller shade to detail D17 per attached sheet A504.

**A5 SHEET A662 – INTERIOR DETAILS**

- A5.1 REVISE door casing trim type to WT-10 per attached sheet A662.

**M1 REFERENCE ATTACHED MEP ADDENDUM NO. 1**

**E1 REFERENCE ATTACHED MEP ADDENDUM NO. 1**

**P1 REFERENCE ATTACHED MEP ADDENDUM NO. 1**



#### **SUBSTITUTION REQUEST APPROVALS**

This portion of the addendum designates those materials, products and equipment approved prior to submission of bids, as set forth in the contract documents. Items added to the proposed contract documents by this addendum are the only proposed substitutions received and approved by the architect in accordance with those provisions. No other items shall be substituted or bid as “equals”.

It is understood that all items allowed by this addendum are subject to the full provisions of the original proposed contract documents and all modifications thereto and, as such, shall match standards of the original specified items with respect to materials, workmanship, design, size, capacity, type, function, finish, performance, quality, warranty, etc. Nothing in this addendum shall be construed as altering those original standards or modifications thereto.

Approvals are based upon the opinion, knowledge, information and belief of the architect at time of issuance of this addendum and reliance upon data submitted. Approvals are therefore interim in nature and subject to reconsideration as additional data, materials, workmanship and coordination with other work are observed and reviewed. In proposing items allowed by this addendum, bidder assumes all risk, costs and responsibility for item's final acceptance, integration into the work and performance.

#### **SECTION 072500 – WEATHER BARRIERS**

W.R. Meadows – AIR-SHIELD SMP sheet membrane vapor permeable air barrier is acceptable for the water-resistive barrier.

**END OF ADDENDUM NO. 01**



# ADDENDUM NO. 1

**Heritage Middle School Renovation  
Smith & Boucher Project No. 2314708**

**12-20-2023**

**To Documents Titled:**

Heritage Middle School Renovation  
100% Construction Documents  
December 20<sup>th</sup> 2023

**Architect-of-Record:**

Hollis + Miller Architects  
1828 Walnut Street Suite 922  
Kansas City, MO 64108

The Contract Documents for the above referenced project and the Work covered thereby are modified as described herein.

## DRAWINGS

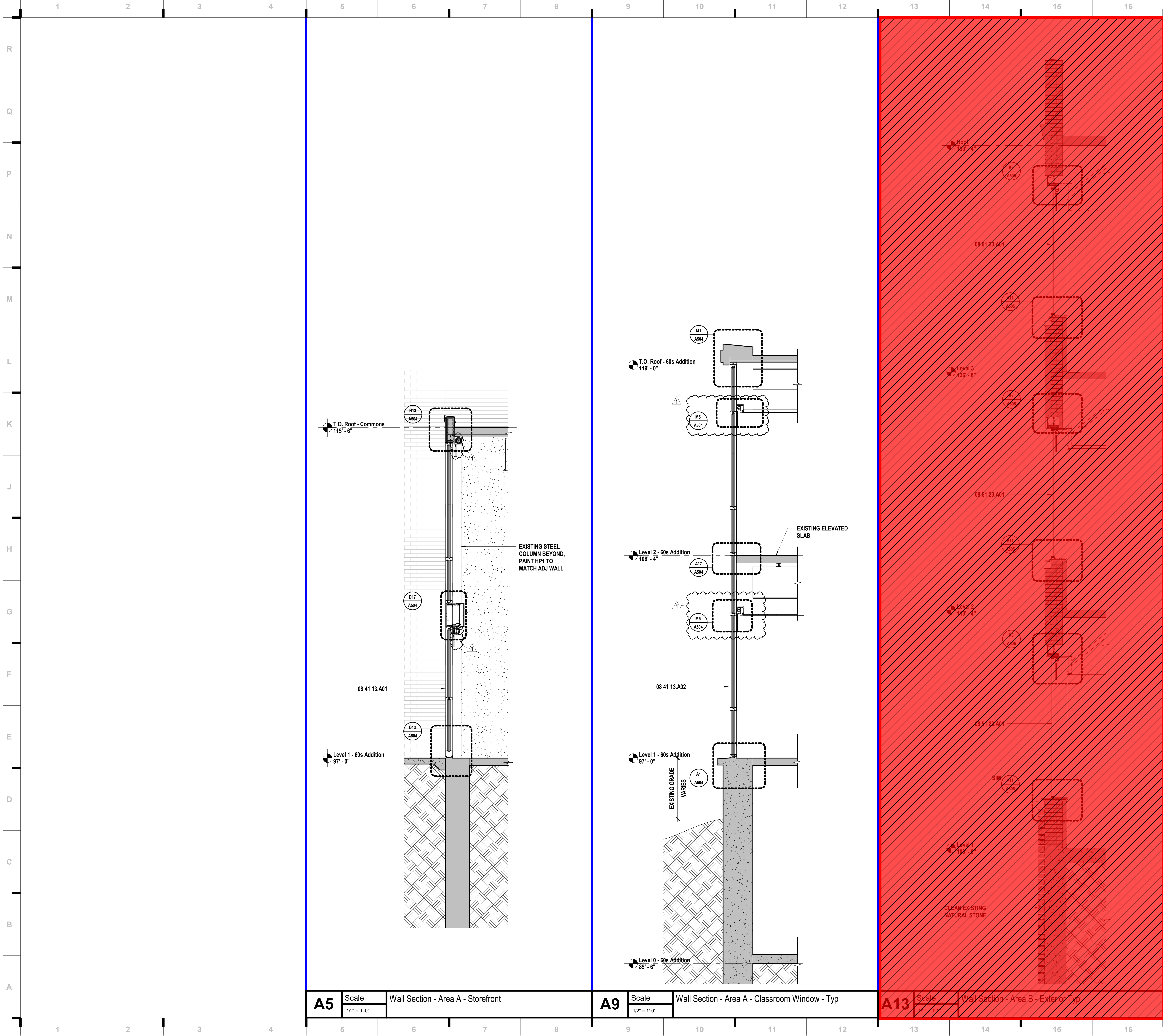
1. Sheet ME301 – Mechanical and Electrical- Schedules
  - a. Revised VAV schedule heating coil entering and leaving water temperatures, and revised heating coil GMP.
2. Sheet ME302 – Mechanical and Electrical- Schedules
  - a. Revised Fan Coil Unit schedule heating coil entering and leaving water temperatures, and revised heating coil GMP.
  - b. Revised Heat Recovery Unit chilled water and hot water coil capacity.
3. Sheet ME303 – Mechanical and Electrical- Schedules
  - a. Revised Air Handling Unit schedule heating coil and cooling coil entering and leaving water temperatures, and revised heating coil and cooling coil GMP and capacity.
  - b. Revised Air Handling Unit schedule electrical information.
  - c. Revised Air Handling Unit schedule UV light info.
4. Sheet M200A – HVAC Piping Plan- Level 0 – Area A
  - a. Revised hot water supply and return pipe size.
5. Sheet M201A – HVAC Piping Plan- Level 1 – Area A
  - a. Revised hot water supply and return pipe size.
6. Sheet M202A – HVAC Piping Plan- Level 2 – Area A
  - a. Revised hot water supply and return pipe size.

## Attachments

- ME301
- ME302
- ME303
- M200A
- M201A
- M202A

END OF MEP ITEMS FOR ADDENDUM NO. 1

12/20/2023 9:35:04 AM



## SHEET KEYNOTE LEGEND

- 08 41 13.A01 THERMAL BROKEN STOREFRONT FRAMING (4.5")  
08 41 13.A02 THERMAL BROKEN STOREFRONT FRAMING (6")
- = Phase 2 Scope of Work  
(Not included in this Bid Package)

## SHEET NOTES

- PATCH AND REPAIR SURROUNDING GYP/PLASTER/FINISH WALL SURFACE AS NEEDED AT ALL WALL LOCATIONS FOR DEMO & REINSTALLATION OF NEW DOORS, WINDOWS, AND STOREFRONT FRAMING.
- REMOVE AND REPLACE DETERIORATED OR DAMAGED HEAD/JAMB/SILL MATERIAL AS NEEDED WITH NEW BLOCKING. VERIFY W/ ARCHITECT.
- ALL PERIMETER ALUMINUM SNAP TRIM TO BE REMOVED AT ALL NEW WINDOW REPLACEMENT LOCATIONS AT 1923 BUILDING.
- EXISTING WALL CONDITIONS SHOWN TO THE BEST OF AVAILABLE KNOWLEDGE BY SITE OBSERVATIONS AND AVAILABLE AS-BUILT DRAWINGS. CONNECTIONS TO EXISTING HEAD/JAMB/SILL CONDITIONS MAY DIFFER FROM DOCUMENTS. VERIFY IN FIELD AND REPORT ALL DISCREPANCIES TO ARCHITECT BEFORE PROCEEDING WITH NEW WORK.

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Architecture # 000051

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**mha Food Facility Consultants, LLC**  
Food Facility Planner  
7940 Conser Street  
Overland Park, Johnson County, KS 66204  
785.266.5696 phone

**Heritage Middle School Renovations**  
Liberty Public Schools  
600 W. Kansas Street  
Liberty, MO 64068

**100% CONSTRUCTION DOCUMENTS**

**REVISIONS:**

#	Description	Date
1	ADDENDUM #1	12.20.2023

**STATE OF MISSOURI**  
KEVIN E. NELSON  
A-2019015618  
ARCHITECT

DECEMBER 20, 2023  
Kevin E. Nelson  
A-2019015618

This Professional Architectural Seal and Affixed to this sheet signifies only to the original and bona fide owner of this sheet. All drawings, specifications and documents are prepared by the architect and are the property of the architect. The architect assumes no responsibility for the accuracy or completeness of the drawings, specifications and documents prepared by the architect. The architect assumes no responsibility for the accuracy or completeness of the drawings, specifications and documents prepared by the architect.

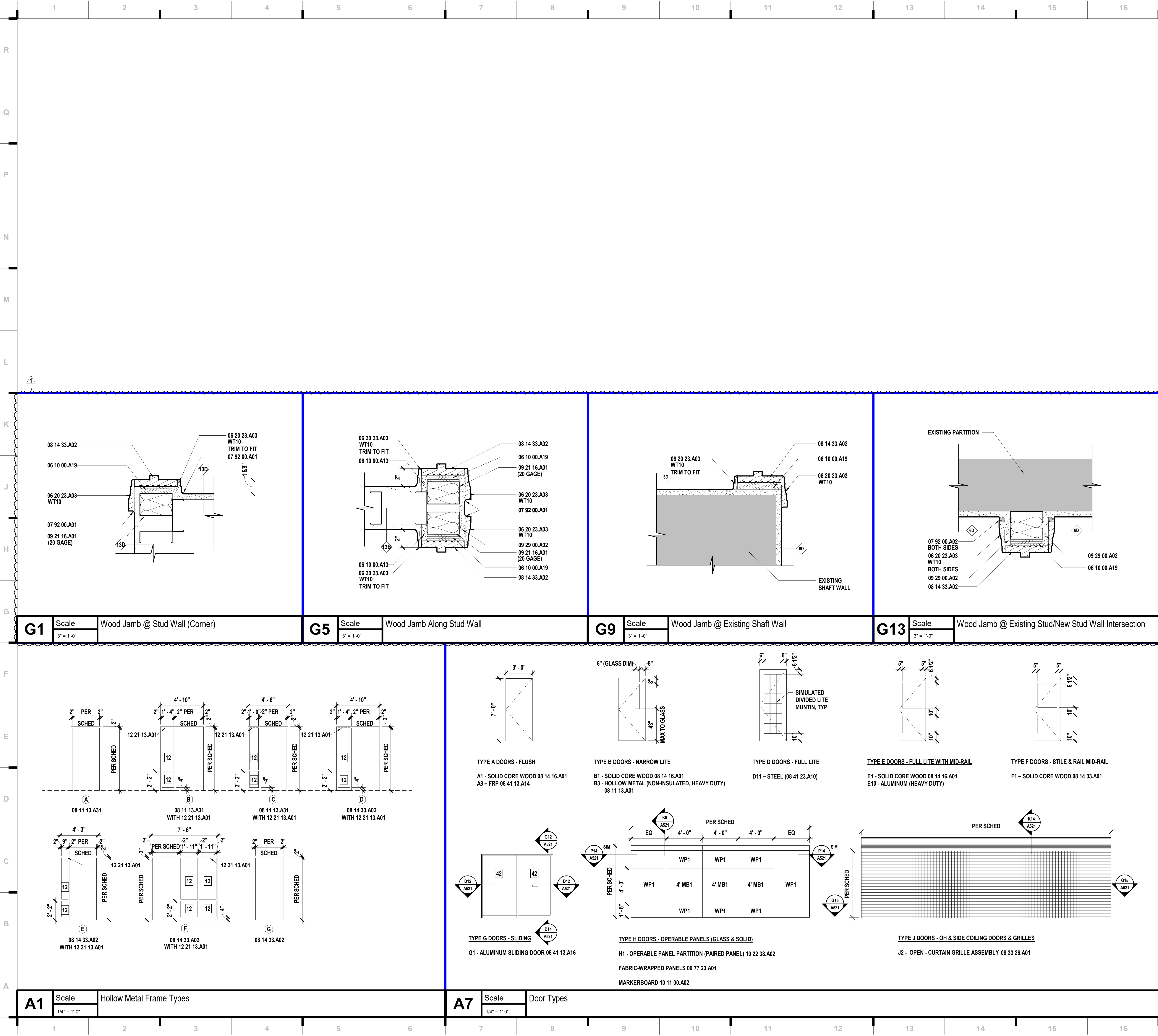
JOB NO: 23024  
DRAWN BY: MW  
CHECKED BY: JB  
DATE: 12.07.2023

**A331**



[illegible]





## SHEET KEYNOTE LEGEND

06 10 00.A13	WOOD BLOCKING/NAILERS
06 10 00.A19	PLYWOOD BLOCKING AND BACKING PANELS
06 20 23.A03	MOLDINGS - TRANSPARENT
07 92 00.A01	SEALANT
07 92 00.A02	SEALANT W/BACKER ROD
08 14 33.A02	INTERIOR WOOD DOOR FRAMES
08 33 26.A01	OVERHEAD COILING GRILLES
08 41 13.A16	ALUMINUM SLIDING DOOR
09 21 16.A01	NON-STRUCTURAL FRAMING
09 29 00.A02	GYPSUM BOARD - TYPE X
10 22 38.A02	OPERABLE PANEL PARTITION (PAIRED PANEL)
12 21 13.A01	HORIZONTAL LOUVER BLINDS (MANUAL)

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Architecture # 0000561

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Food Facility Planner  
7940 Conser Street  
Overland Park, Johnson County, KS 66204  
785.266.5696 phone

## GLASS LEGEND

GLASS TYPE = 1

### FULLY-TEMPERED MONOLITHIC FLOAT GLASS

- 11 08 80 00.A11 1/4" CLEAR FULLY-TEMPERED MONOLITHIC FLOAT GLASS
- 12 08 80 00.A12 3/8" CLEAR FULLY-TEMPERED MONOLITHIC FLOAT GLASS
- 13 08 80 00.A13 1/2" CLEAR FULLY-TEMPERED MONOLITHIC FLOAT GLASS

### INSULATING GLASS

- 31 08 80 00.A31 LOW-E CLEAR INSULATED GLASS

### INSULATING FULL-TEMPERED GLASS

- 41 08 80 00.A41 LOW-E CLEAR INSULATED FULLY-TEMPERED GLASS
- 42 08 80 00.A42 CLEAR INSULATED FULLY-TEMPERED GLASS

### SPANDREL GLASS

- 62 08 80 00.A62 LOW-E INSULATED SPANDREL GLASS

### FIRE GLASS

- 72 08 80 00.A72 90 MINUTE FIRE-RESISTIVE GLASS
- 74 08 80 00.A74 20 MINUTE FIRE-PROTECTIVE GLASS
- 75 08 80 00.A75 45 MINUTE FIRE-PROTECTIVE GLASS

### SPECIALTY/DECORATIVE GLASS

- 92 08 80 00.A92 CUSTOM - LOW-E TINTED ACID-ETCHED INSULATING GLASS

## DOOR TYPE NOTES

- REFER TO DOOR SCHEDULE FOR OVERALL DOOR DIMENSIONS
- DIMENSIONS ASSOCIATED WITH VISION LITES ARE TO THE OUTSIDE OF THE VISION LITE FRAME UNLESS NOTED OTHERWISE
- REFER TO DOOR SCHEDULE TO DETERMINE WHICH DOORS ARE REQUIRED TO BE FIRE RATED
- REFER TO DOOR SCHEDULE FOR GLASS TYPES IN DOORS

100% CONSTRUCTION DOCUMENTS

Heritage Middle School Renovations  
Liberty Public Schools  
600 W. Kansas Street  
Liberty, MO 64068

### REVISIONS:

#	Description	Date
1	ADDENDUM #1	12.20.2023



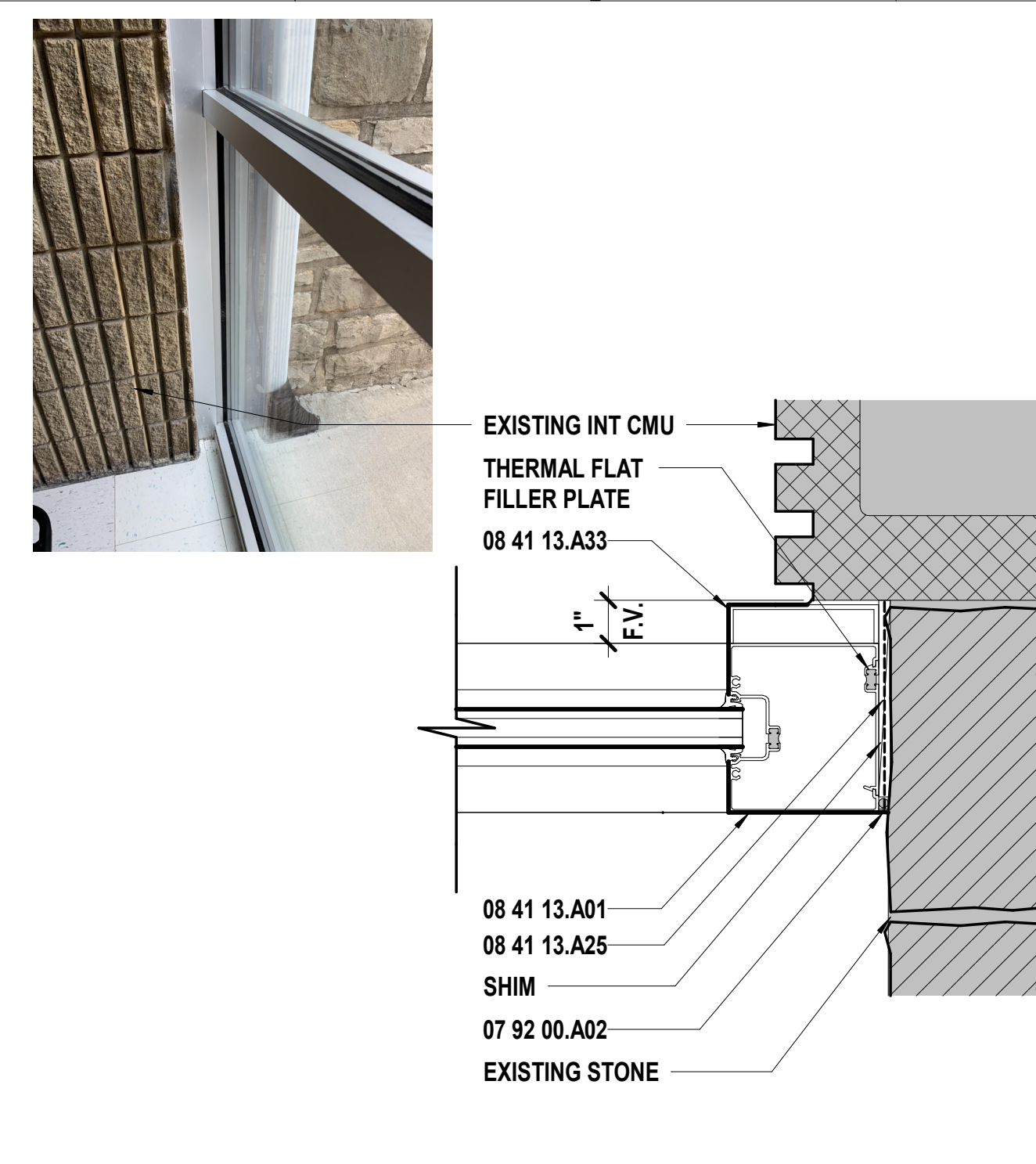
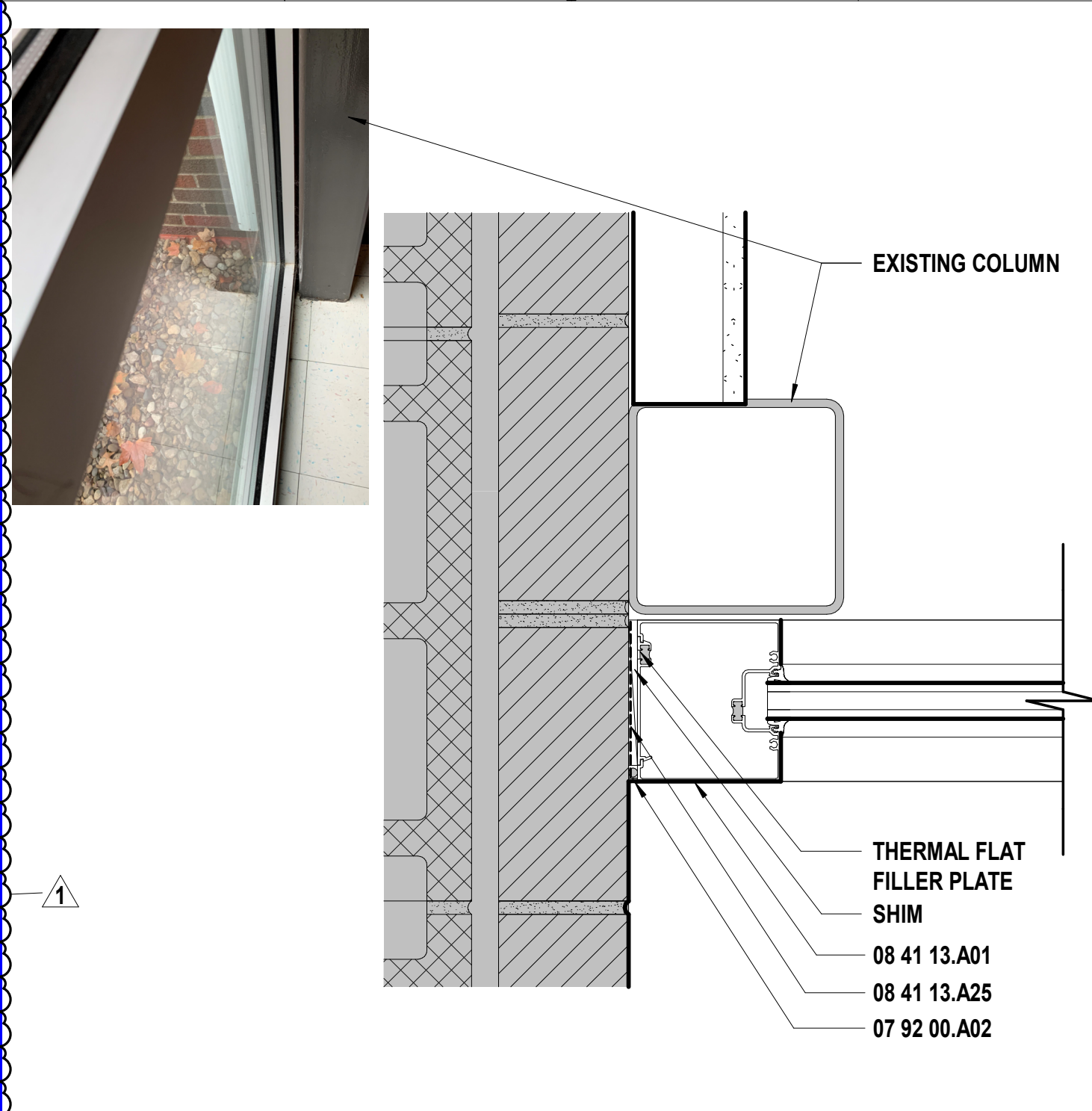
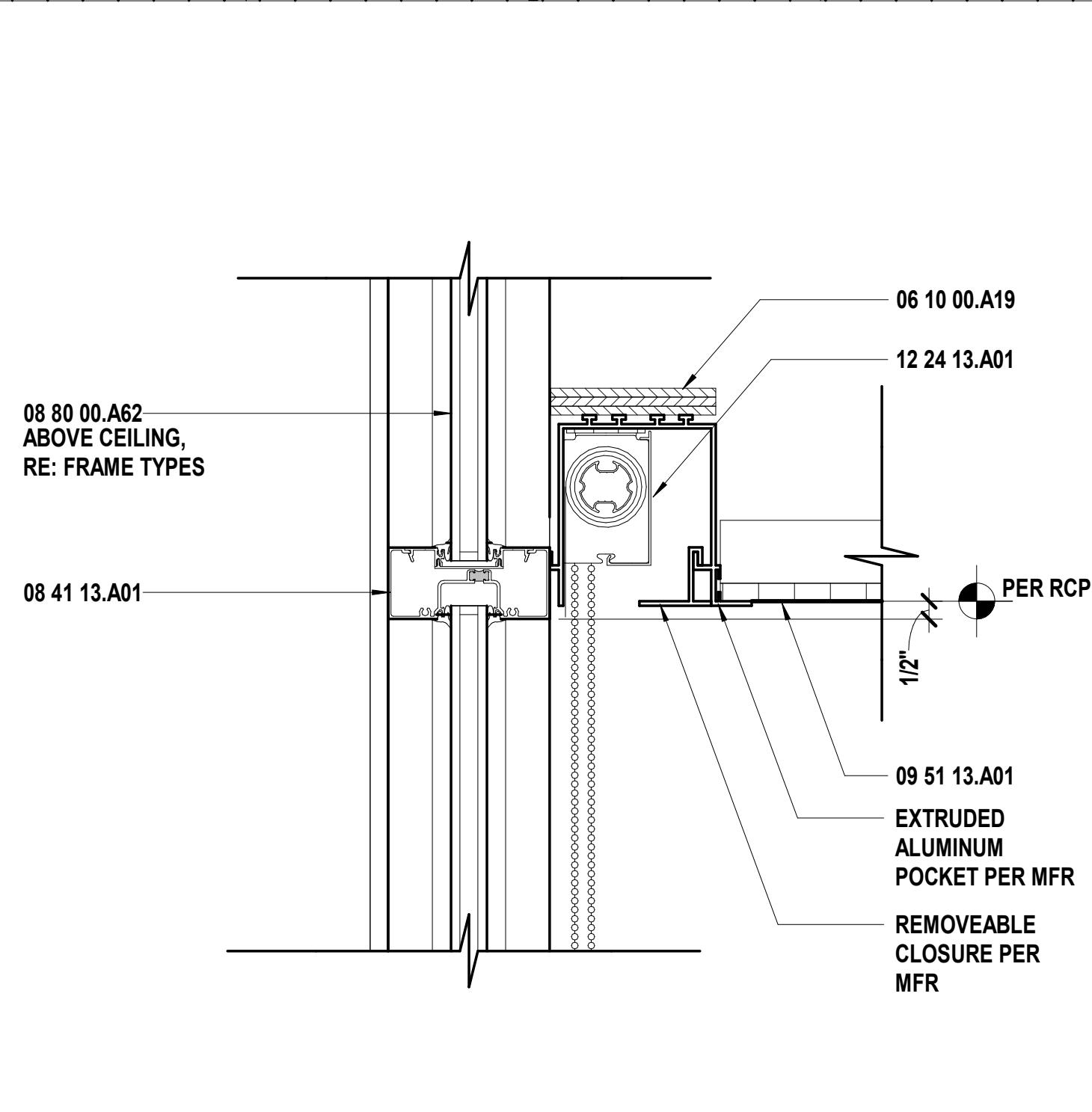
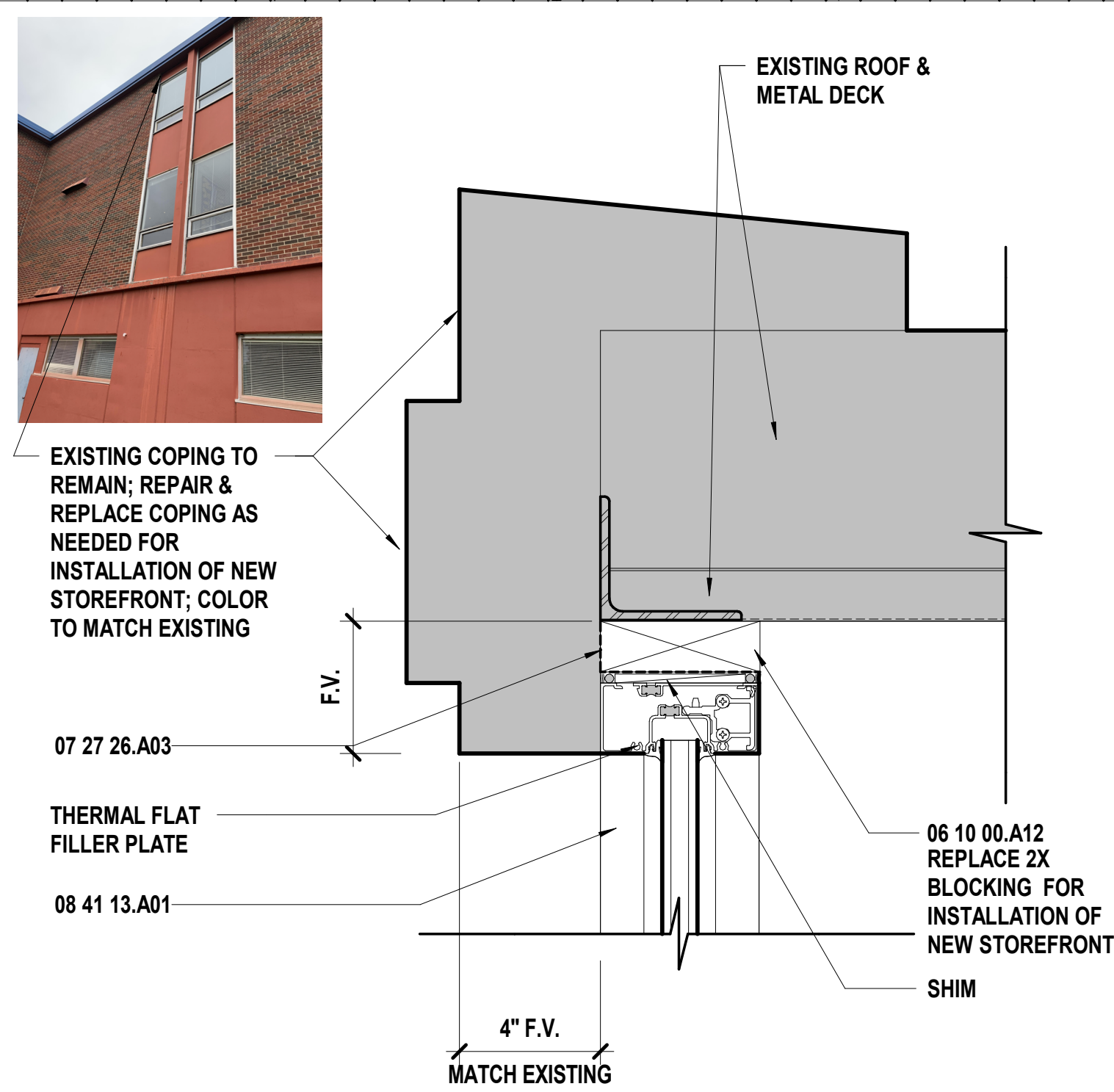
Kevin E. Nelson  
A-2019015618  
ARCHITECT

JOB NO: 23024  
DRAWN BY: ARH  
CHECKED BY: JB  
DATE: 12.07.2023

A502

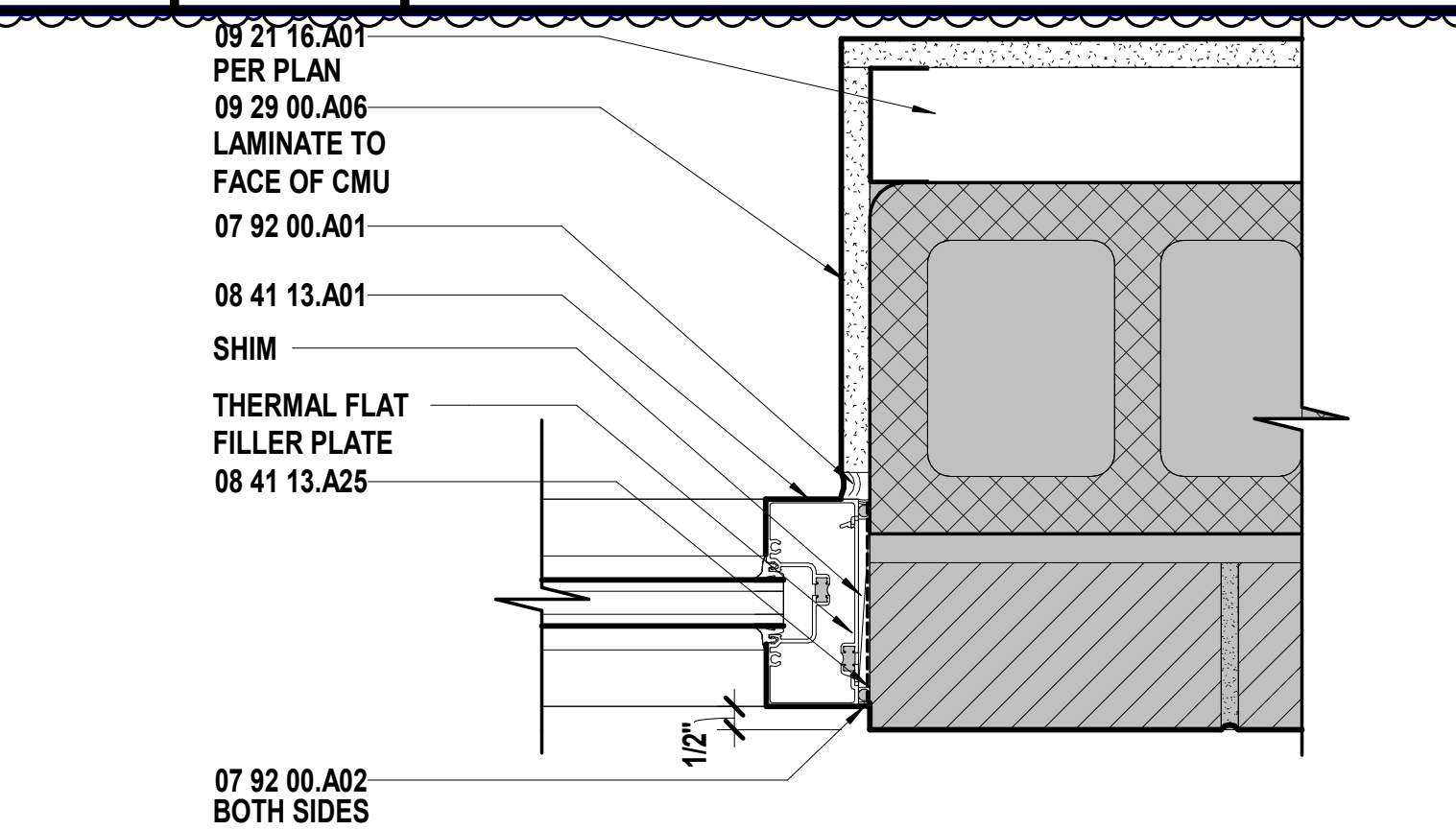
DOOR & FRAME TYPES



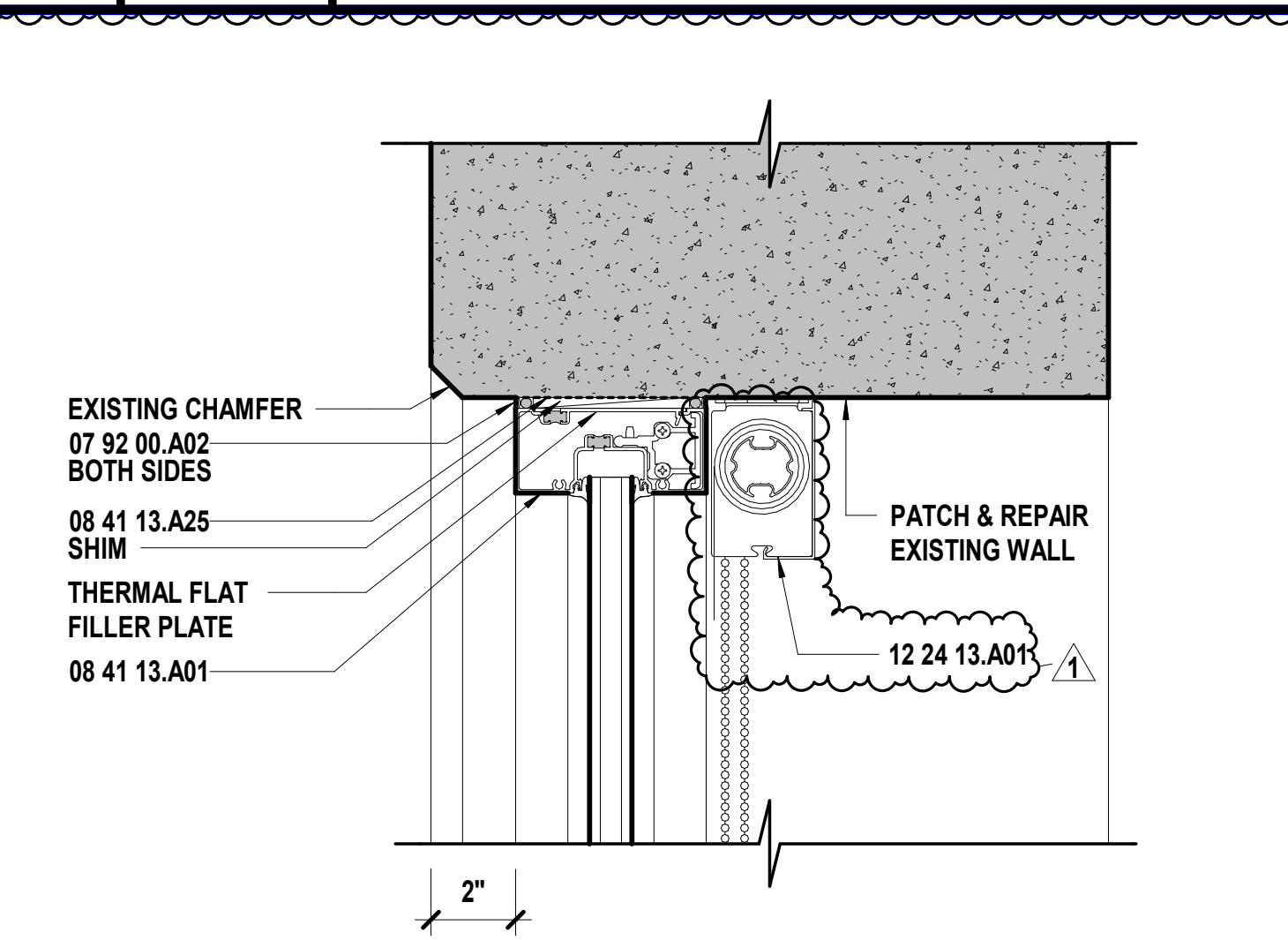


SHEET KEYNOTE LEGEND	
05 40 00.A0.001	COLD-FORMED METAL FRAMING
06 10 00.A12	PRESERVATIVE TREATED WOOD BLOCKING/NAILERS
06 10 00.A19	PLYWOOD BLOCKING AND BACKING PANELS
06 10 00.A22	PRESERVATIVE TREATED PLYWOOD BLOCKING
06 16 00.A02	FIRE-RETARDANT TREATED PLYWOOD
07 21 00.A12	SPRAY-IN FOAM INSULATION
07 25 00.A02	SELF-ADHERING WEATHER BARRIERS
07 27 26.A03	TRANSITION MEMBRANE
07 51 13.A01	BUILT-UP ASPHALT ROOFING SYSTEM
07 62 00.A01	UNDERLAYMENT
07 62 00.A13	COPING
07 62 00.A35	PRE-FINISHED MISC METAL FLASHING
07 62 00.A36	CLEAT
07 92 00.A01	SEALANT
07 92 00.A02	SEALANT W/BACKER ROD
08 41 13.A01	THERMAL BROWN STOREFRONT FRAMING (4.5")
08 41 13.A21	ALUMINUM SUBSILL
08 41 13.A25	JAMB CLOSURE MEMBRANE
08 41 13.A33	MULLION EXTENSION
08 71 00.A01	THRESHOLDS
08 80 00.A62	LOW-E INSULATED SPANDREL GLASS
09 21 16.A01	NON-STRUCTURAL FRAMING
09 29 00.A06	MOLD AND MOISTURE RESISTANT GYPSUM BOARD
09 51 13.A01	ACOUSTICAL CEILING PANELS
12 24 13.A01	ROLLER SHADES (MANUAL)
12 24 13.A02	ROLLER SHADES (MOTORIZED)

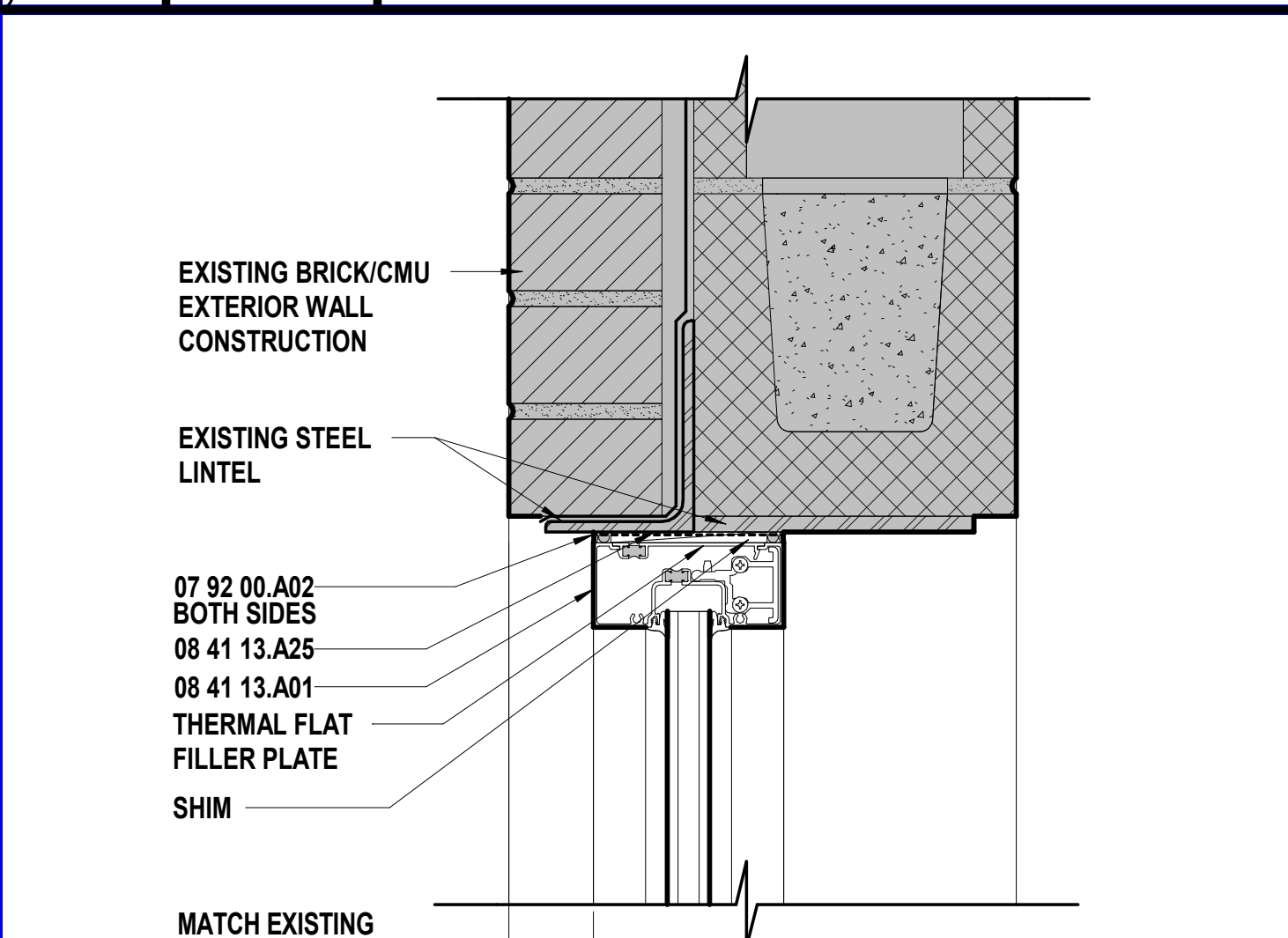
<b>M1</b>	Scale	Storefront Head @ Coping (1964 Addition)
	3" = 1'-0"	



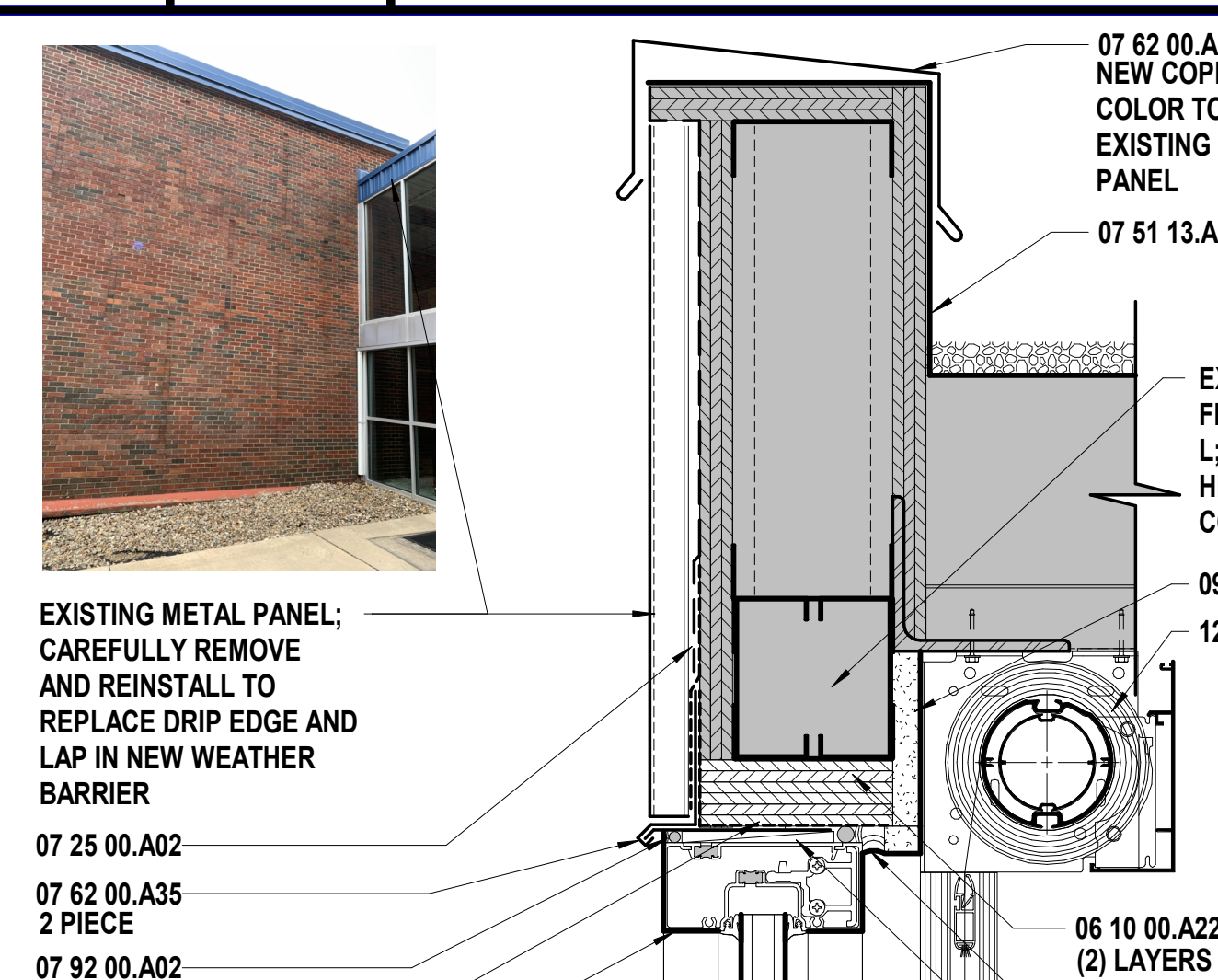
<b>J1</b>	Scale	Storefront Jamb @ Brick/CMU (1964 Addition)
	3" = 1'-0"	



<b>M9</b>	Scale	Storefront Jamb @ Commons Entry W
	3" = 1'-0"	

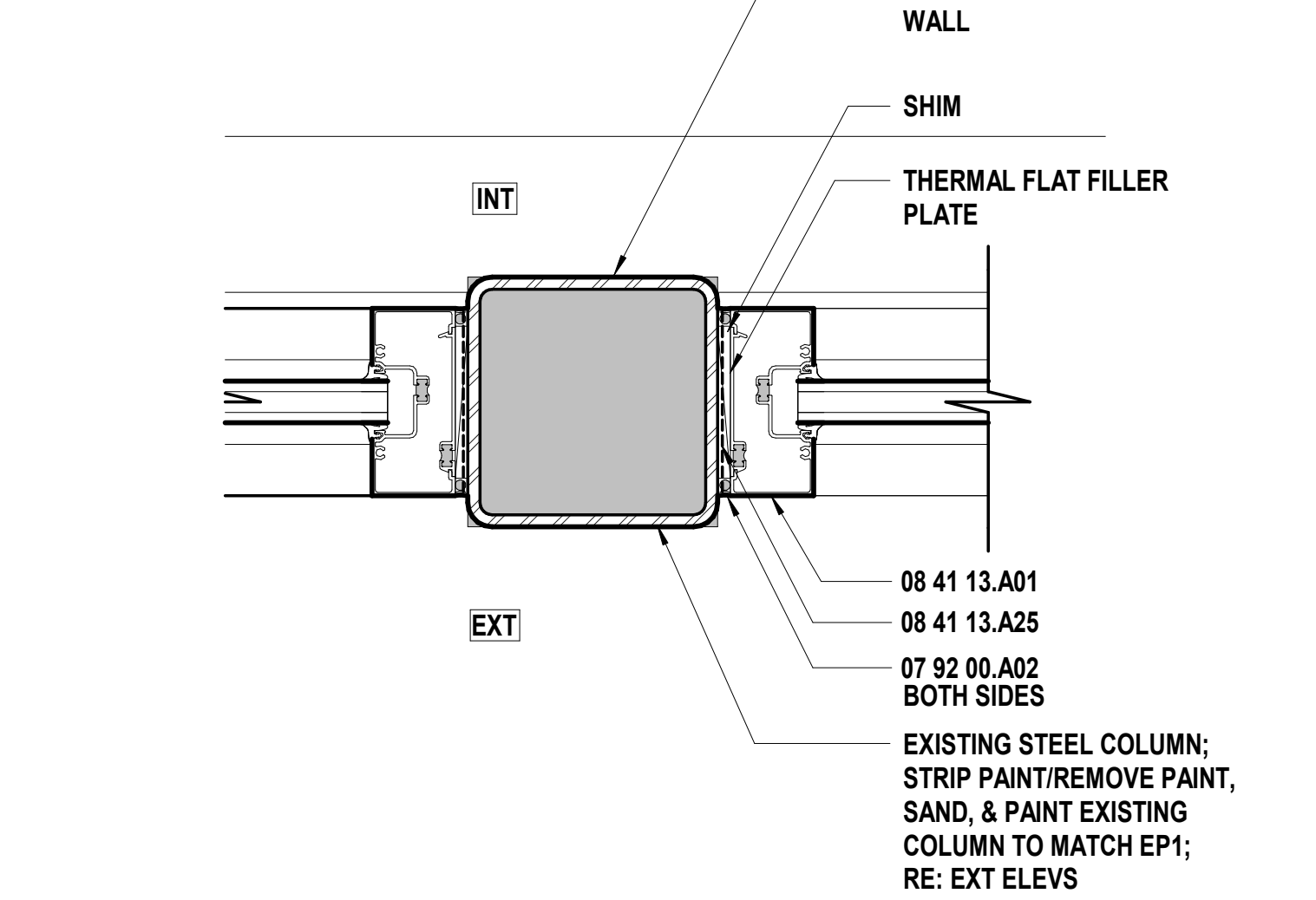


<b>M13</b>	Scale	Storefront Jamb @ Commons Entry E
	3" = 1'-0"	

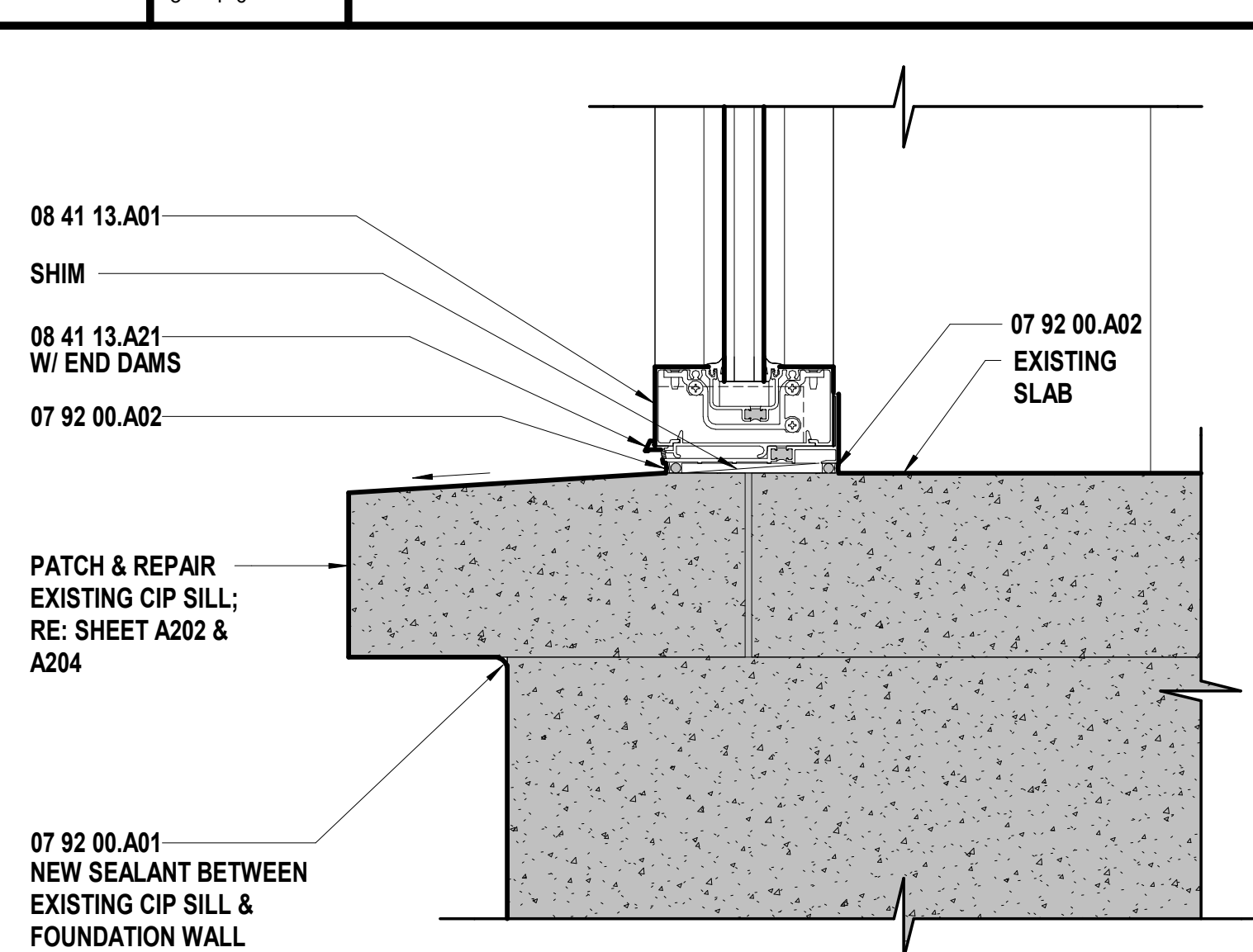


SHEET NOTES

STRIP PAINT/REMOVE PAINT,  
SAND, & PAINT EXISTING  
COLUMN TO MATCH ADJ

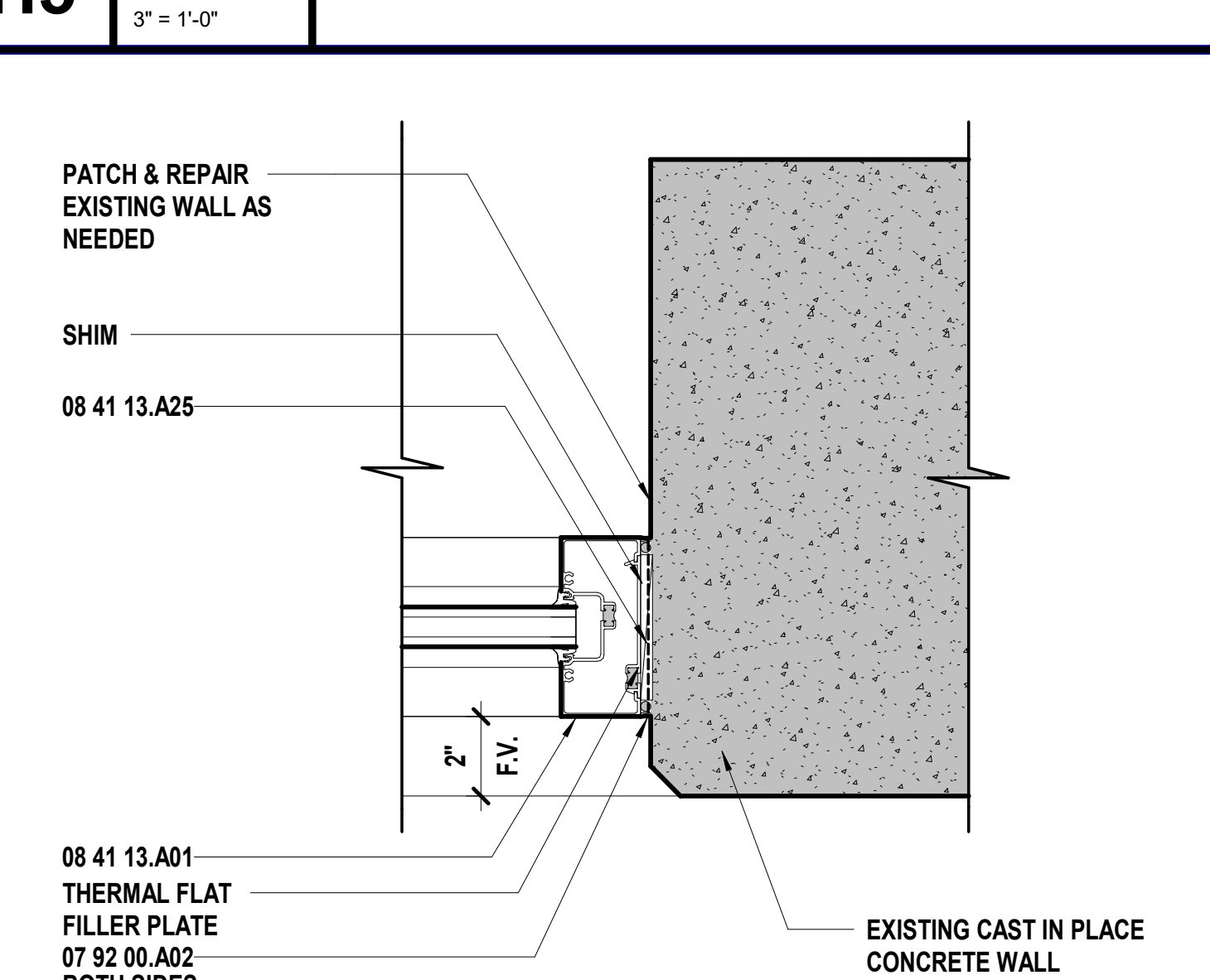


<b>E1</b>	Scale	Storefront Jamb @ Column (1964 Addition)
	3" = 1'-0"	

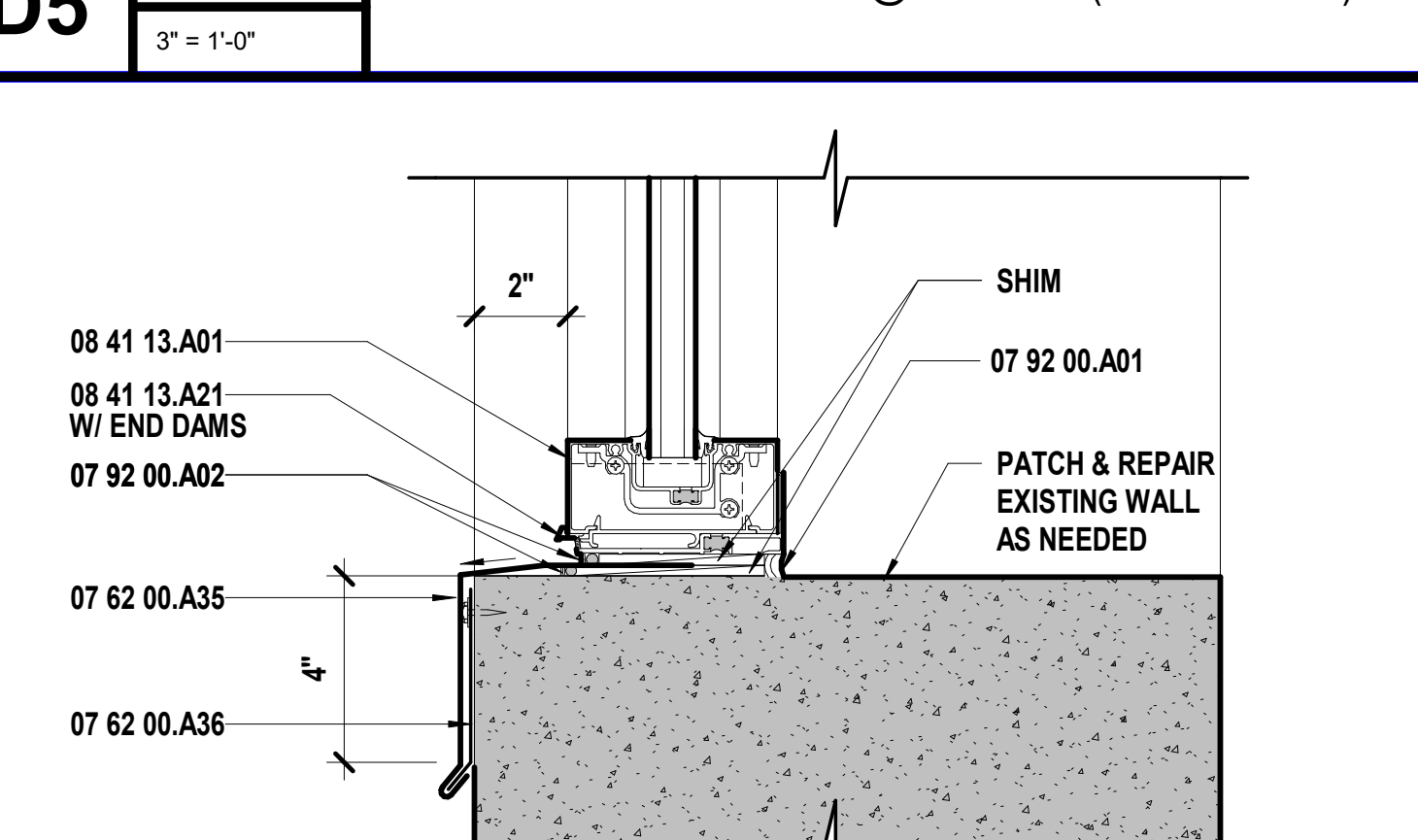


A1	Scale	Storefront Sill @ Concrete (1964 Bldg)
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H5	Scale	Storefront/Alum Door Head @ Concrete (1964 Addition)

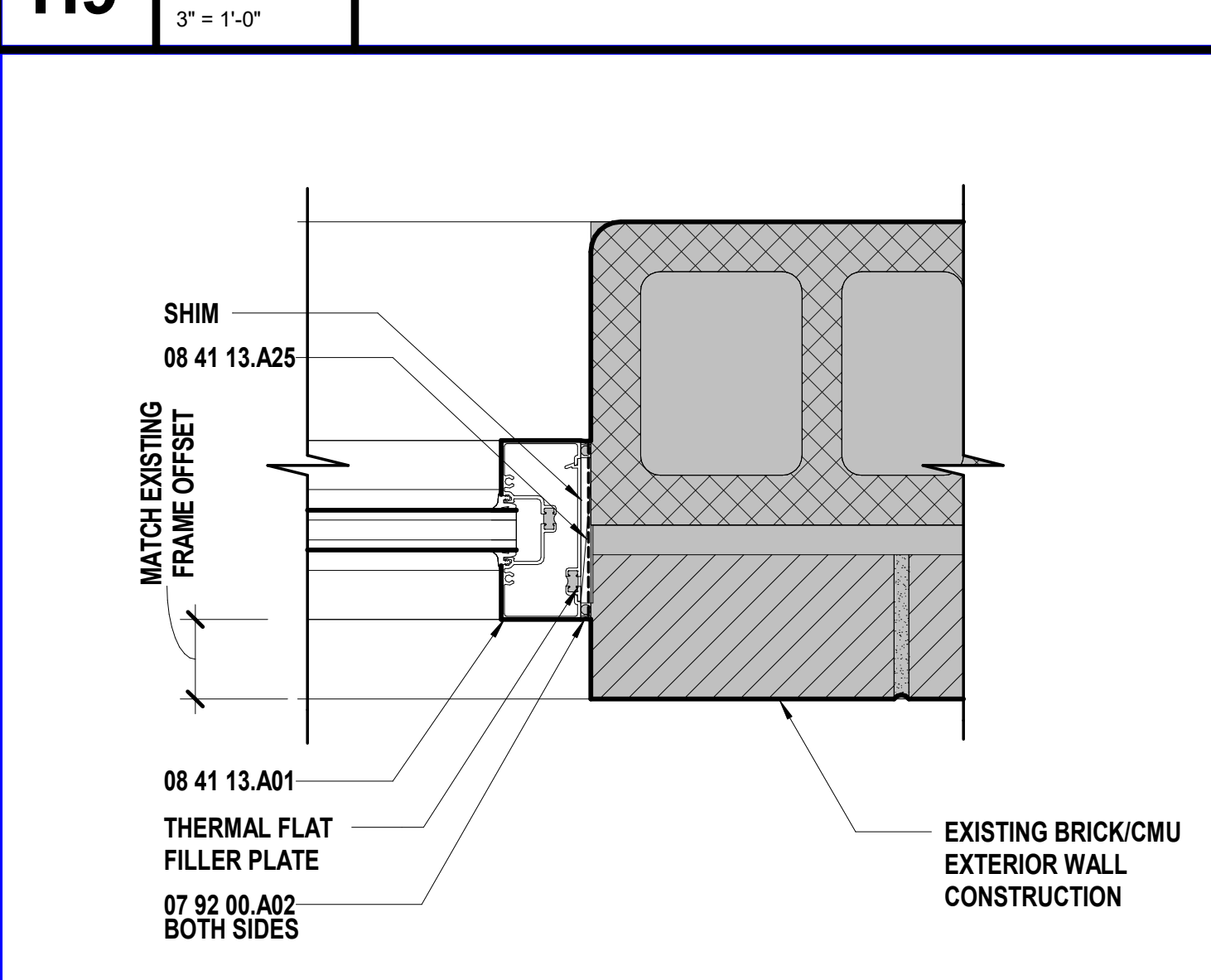


BOTH SIDES		
D5	Scale	Storefront/Alum Door Jamb @ Concrete (1964 Addition)

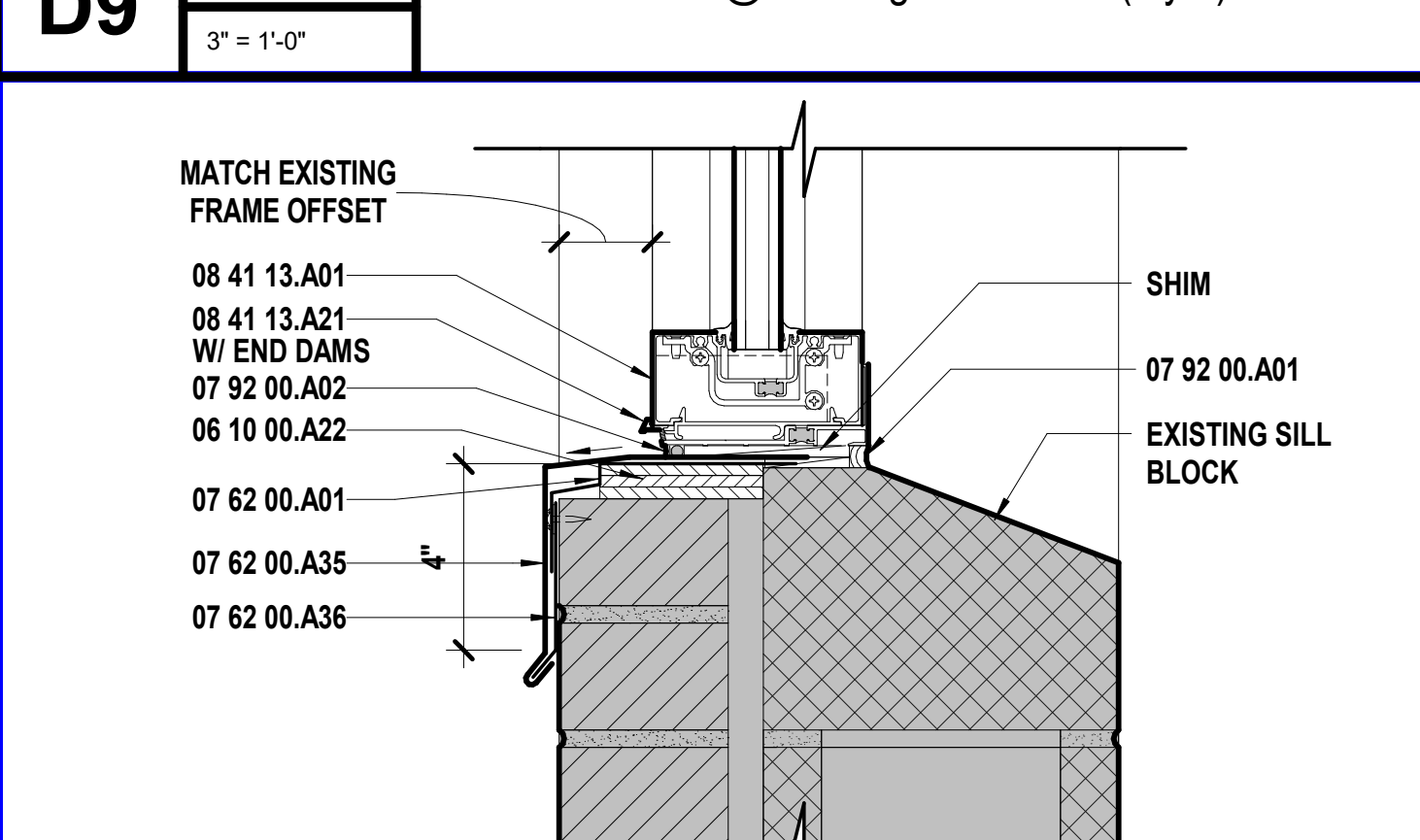


45	Scale	Storefront/Alum Door Sill @ Concrete (1964 Addition)
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H9	Scale	Storefront Head @ Existing Brick/CMU (Gym)

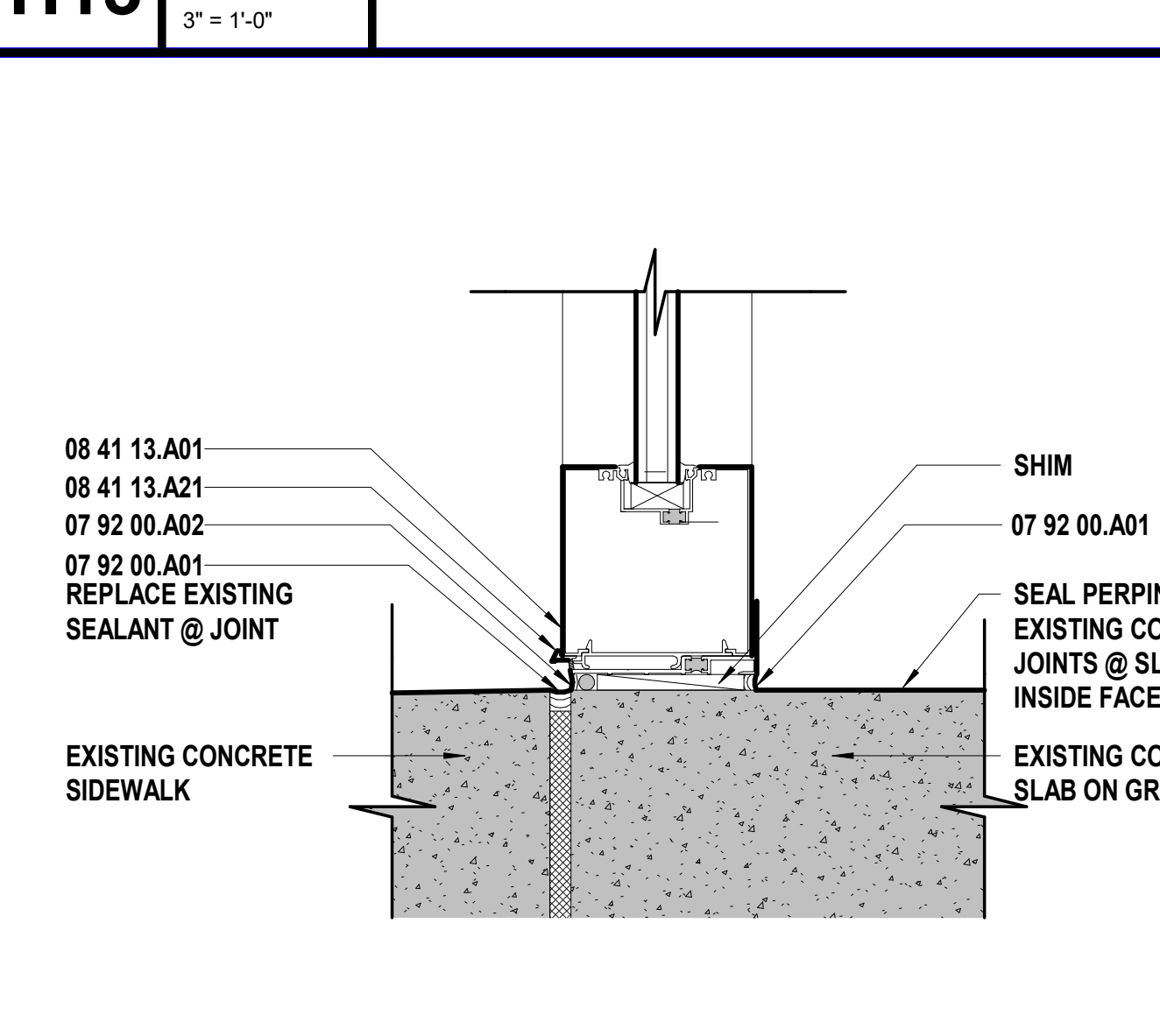


D3	Scale	Storefront Jamb @ Existing Brick/CMU (Gym)
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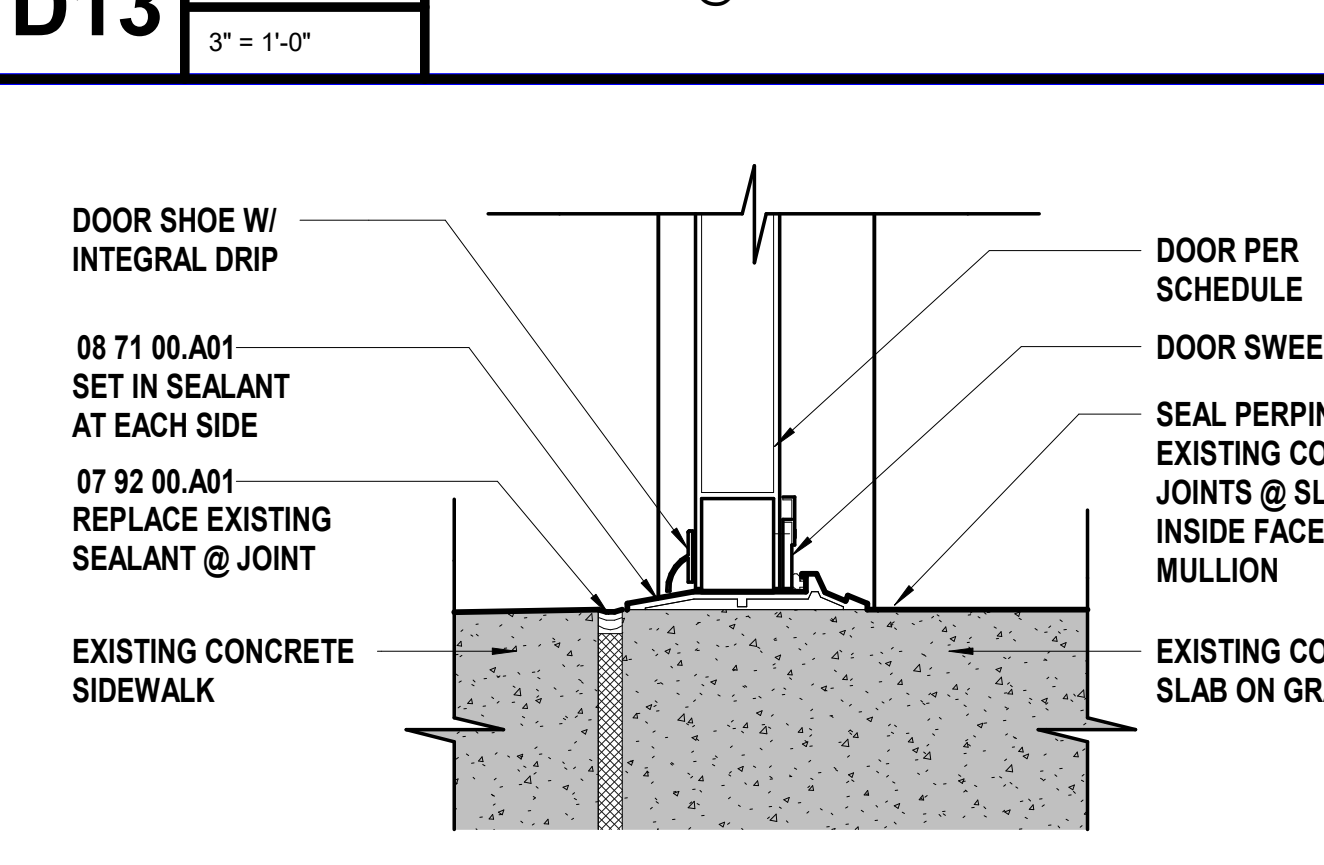


40	Scale	Storefront Sill @ Existing Brick/CMU (Gym)
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H13	Scale	Storefront Head @ Commons Entry

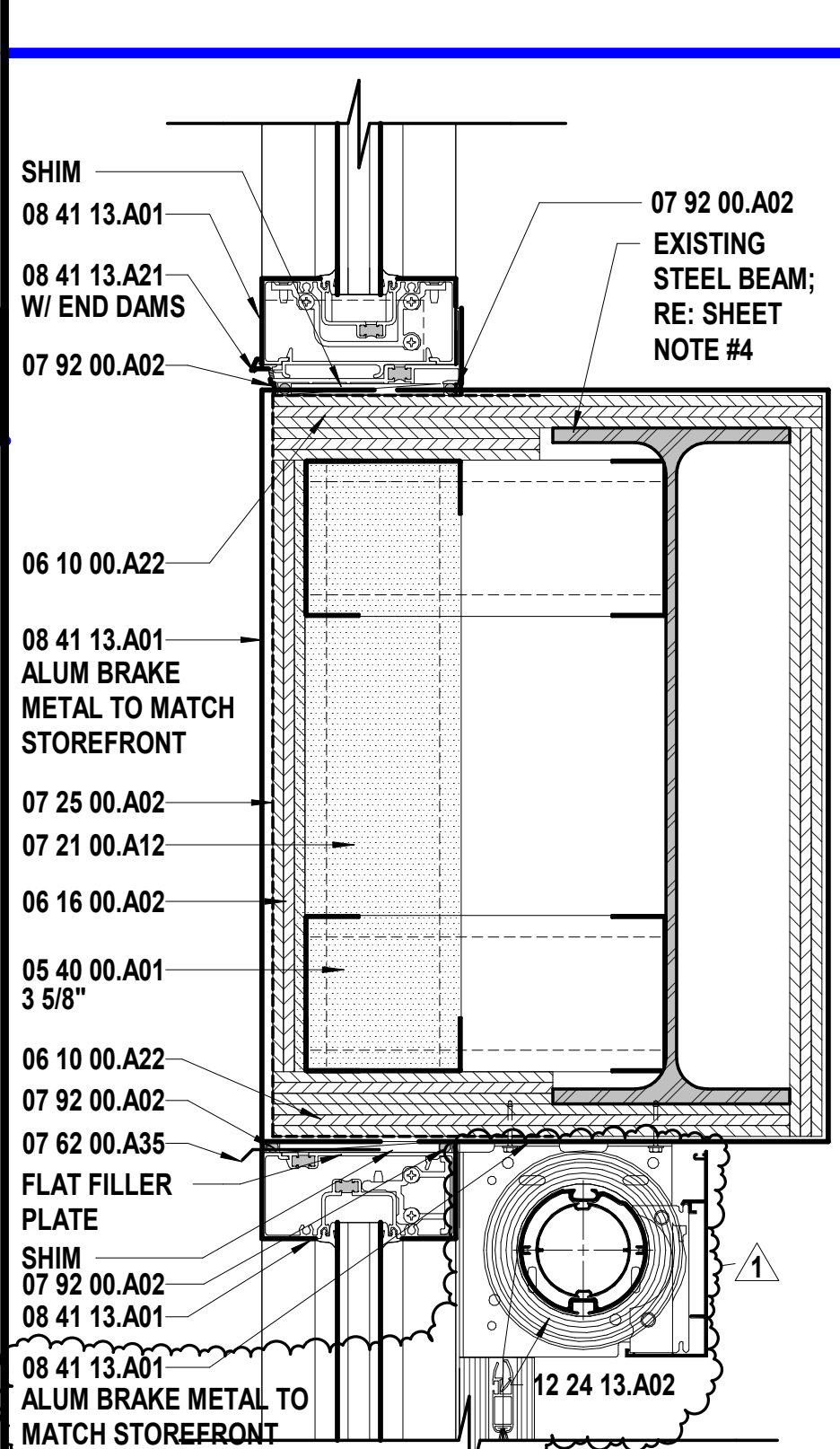


D13	Scale	Storefront Sill @ Sidewalk
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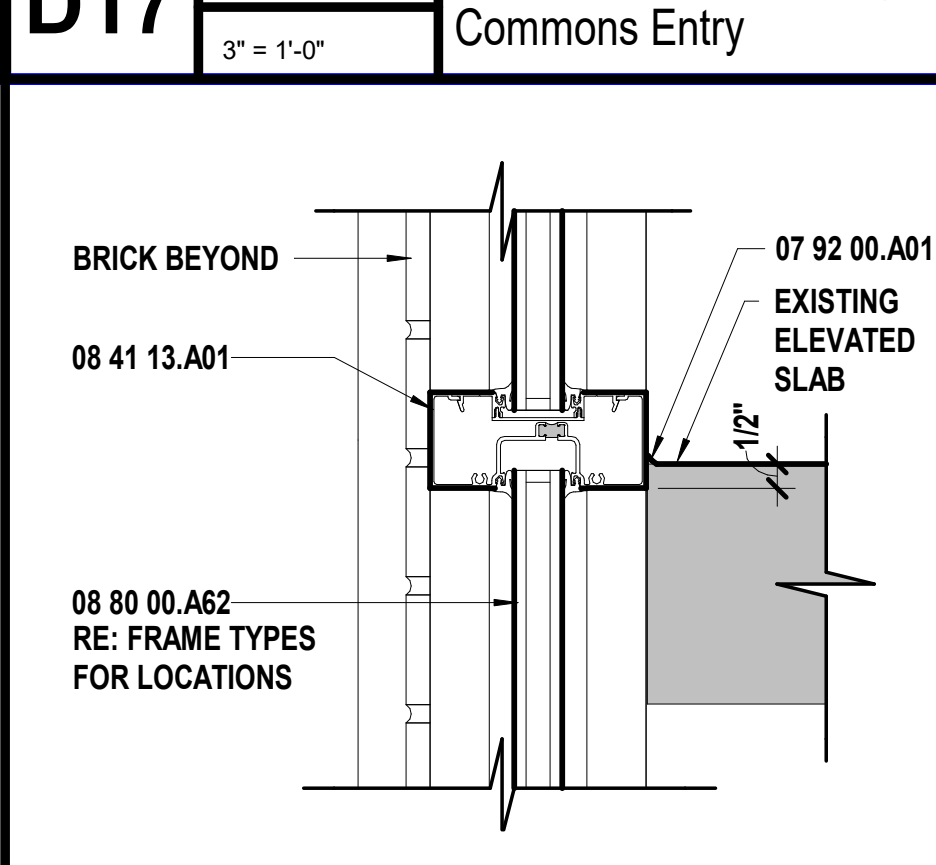


<b>A13</b>	Scale	Threshold @ Commons Entry
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1. PATCH AND REPAIR SURROUNDING GYPSUM/PLASTER/FINISH WALL SURFACE AS NEEEDED AT ALL WALL LOCATIONS FOR DEMO & REINSTALLATION OF NEW DOORS, WINDOWS, AND STOREFRONT FRAMING.
2. REMOVE AND REPLACE DETERIORATED OR DAMAGED HEAD/JAMB/SILL MATERIAL AS NEEDED WITH NEW BLOCKING. VERIFY W/ ARCHITECT.
3. ALL PERIMETER ALUMINUM SNAP TRIM TO BE REMOVED AT ALL NEW WINDOW REPLACEMENT LOCATIONS AT 1923 BUILDING.
4. EXISTING WALL CONDITIONS SHOWN TO THE BEST OF AVAILABLE KNOWLEDGE BY SITE OBSERVATIONS AND AVAILABLE AS-BUILT DRAWINGS. CONNECTIONS TO EXISTING HEAD/JAMB/SILL CONDITIONS MAY DIFFER FROM DOCUMENTS. VERIFY IN FIELD AND REPORT ALL DISCREPANCIES TO ARCHITECT BEFORE PROCEEDING WITH NEW WORK.



D17	Scale	Storefront Steel Beam @
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A17	Scale	Storefront Mullion @
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Bob D. Campbell Structural Engineer State Certificate of Authority #000442 4538 Bellevue Ave Kansas City, Jackson County, MO 64111 816.531.4144 phone 816.531.8572 fax		
Smith & Boucher Engineers Mech/Elect/Plumb Engineer State Certificate of Authority #EGC-0001787 25618 W 103rd St Olathe, KS 66061 913.345.2127 phone 913.345.0617 fax		
mha Food Facility Consultants, LLC Food Facility Planner 7840 Conser Street Overland Park, Johnson County, KS 66204 785.266.5696 phone		
Heritage Middle School Renovations Liberty Public Schools 600 W. Kansas Street Liberty, MO 64068		
100% CONSTRUCTION DOCUMENTS		
REVISIONS:		
#	Description	Date
1	ADDENDUM #1	12.20.2023
STATE OF MISSOURI KEVIN E. NELSON A-2019015618 ARCHITECT DECEMBER 20, 2023 A-2019015618		
The Professional Architect and Engineer in this state design only in the corporate and their names in this state. All other states and jurisdictions are not responsible for their design. The architect and engineer are not responsible for their design. The architect and engineer are not responsible for their design. The architect and engineer are not responsible for their design.		
JOB NO: 23024 DRAWN BY: HB CHECKED BY: JB DATE: 12.07.2023		
A504		







PROJECT NAME: 2314708 Liberty St 2023 - Heritage Middle School Renovations  
DRAWN BY: JRM  
LAST CORRECTION: 12/17/23  
DATE: 12/17/23  
PLOTTED BY: JRM  
DATE: 12/17/23

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	
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PIPING MATERIAL SCHEDULE - PLUMBING			
APPLICATION	SIZE	LOCATION	PIPE MATERIAL
DOMESTIC WATER	ALL SIZES	BELOW GROUND	SOFT COPPER TUBE, SEAMLESS, TYPE K
DOMESTIC WATER	2" AND SMALLER	ABOVE GROUND	HARD COPPER TUBE, ASTM B88, TYPE L; CAST OR WROUGHT COPPER SOLDER-JOINT FITTINGS, AND BRAZED JOINTS. OR CPVC PIPE, CPVC SOCKET FITTINGS, AND SOLVENT-CEMENTED JOINTS. OR PEXA PIPE AND FITTINGS (FOR USE INSIDE DWELLING UNITS ONLY; NOT INTENDED FOR BUILDING MAINS); PEXA PIPE AND FITTINGS NOT ALLOWED.
DOMESTIC WATER	2-1/2" AND LARGER	ABOVE GROUND	HARD COPPER TUBE, ASTM B88, TYPE L; CAST OR WROUGHT COPPER SOLDER-JOINT FITTINGS, AND BRAZED JOINTS. OR CPVC PIPE, CPVC SOCKET FITTINGS, AND SOLVENT-CEMENTED JOINTS.
DOMESTIC WATER	ALL SIZES	BELOW GROUND	SOFT COPPER TUBE, SEAMLESS, TYPE K
SOIL/WASTE/VENT	ALL SIZES	BELOW GROUND	HUBLESS, CAST-IRON SOIL PIPE AND FITTINGS; HEAVY-DUTY CAST-IRON HUBLESS-PIPING COUPLINGS; AND COUPLED JOINTS. OR SOLID WALL SCHEDULE 40 PVC PIPE; PVC SOCKET FITTINGS, AND SOLVENT-CEMENTED JOINTS. PVC SHALL NOT BE INSTALLED WITHIN RETURN AIR PLENUMS UNLESS FULLY ENCAPSULATED WITH PLENUM RATED MATERIAL.
SOIL/WASTE/VENT	ALL SIZES	ABOVE GROUND	HUBLESS, CAST-IRON SOIL PIPE AND FITTINGS; HEAVY-DUTY CAST-IRON HUBLESS-PIPING COUPLINGS; AND COUPLED JOINTS. OR SOLID WALL SCHEDULE 40 PVC PIPE; PVC SOCKET FITTINGS, AND SOLVENT-CEMENTED JOINTS. PVC SHALL NOT BE INSTALLED WITHIN RETURN AIR PLENUMS UNLESS FULLY ENCAPSULATED WITH PLENUM RATED MATERIAL.

PIPE INSULATION SCHEDULE - PLUMBING		
SERVICE	PIPE SIZE	INSULATION
DOMESTIC COLD WATER	1/2" - 2"	1/2" FIBERGLASS, ASJ
	2-1/2" AND LARGER	1" FIBERGLASS, ASJ
DOMESTIC HOT WATER		
RECIRCULATING HOT WATER	ALL	1" FIBERGLASS, ASJ
EXPOSED FIXTURE WASTETRAPS AND DOMESTIC HOT WATER AT HANDICAPPED ACCESSIBLE SINKS AND LAVATORIES	ALL	TRUBRO LAV AGUARD MOLDED PROTECTIVE PIPE COVER OVER 1/2" FIBERGLASS INSULATION

NOTE: FOR ALL PIPING 2-1/2" AND LARGER, PROVIDE RIGID FOAM INSERTS AT ALL HANGERS AND SUPPORT LOCATIONS.

VAV TERMINAL SCHEDULE (HOT WATER HEAT)						
DESIGNATION	VAV 6-01	VAV 6-02	VAV 6-03	VAV 6-04	VAV 6-05	VAV 6-06
ASSOCIATED AIR HANDLER	AHU-6	AHU-6	AHU-6	AHU-6	AHU-6	AHU-6
SERVICE	RE: DWGS	RE: DWGS	RE: DWGS	RE: DWGS	RE: DWGS	RE: DWGS
UNIT	MANUFACTURER	PRICE	PRICE	PRICE	PRICE	PRICE
	MODEL NO.	SDV	SDV	SDV	SDV	SDV
	UNIT SIZE	12	12	14	12	12
	DESIGN CFM	1,200	1,200	1,500	1,200	1,500
	MIN. CFM	175	400	500	400	500
	HEATING CFM	325	600	750	600	750
COIL DATA	EAT (°F)	55	55	55	55	55
	LAT (°F)	75	80	100	80	100
	MBH	13.1	16.2	36.5	16.2	36.5
	GPM AT 180°F EWT 150°F LWT	1.0	2.0	2.5	2.0	2.0
ELEC. CONT. DATA	VOLTS/PHASE	NOTE 3	NOTE 3	NOTE 3	NOTE 3	NOTE 3
	PANEL & CIRCUIT	NOTE 3	NOTE 3	NOTE 3	NOTE 3	NOTE 3
	WIRE & CONDUIT	NOTE 3	NOTE 3	NOTE 3	NOTE 3	NOTE 3
	OVERCURRENT DEVICE	NOTE 3	NOTE 3	NOTE 3	NOTE 3	NOTE 3
	DISCONNECT	INTEGRAL	INTEGRAL	INTEGRAL	INTEGRAL	INTEGRAL
	CONTROL SEQUENCE	RE: DWGS	RE: DWGS	RE: DWGS	RE: DWGS	RE: DWGS
REFERENCE DRAWING/DETAIL	M101A/M201A	M101A/M201A	M101A/M201A	M102A/M202A	M102A/M202A	M102A/M202A
REMARKS	1, 2	1, 2	1, 2	1, 2	1, 2	1, 2

- NOTES:
- PROVIDE COIL ROWS AS NEEDED TO MEET THE SCHEDULED LOAD.
  - HOT WATER COILS TO BE SIZED FOR A 35% PROPYLENE GLYCOL SOLUTION
  - CONTROL CONTRACTOR TO PROVIDE 12V, 24V, OR 120V POWER AS REQUIRED FOR PROJECT. PANEL/CKT L2-41 SHALL BE

DUCTWORK SCHEDULE					
SERVICE	DUCT MATERIAL	DUCT SHAPE	SMACNA REQUIREMENTS		
			CLASSIFICATION	SEAL CLASS	LEAKAGE CLASS
MEDIUM PRESSURE SUPPLY AIR DUCTS (TYPICAL APPLICATION - BETWEEN VAV AIR-HANDLING UNITS AND TERMINAL UNITS)	GALVANIZED STEEL	RECTANGULAR	6" WG POSITIVE	A	3
		(WITHIN 1ST 100 FEET OF AHU CONNECTION)			
		ALL OTHER RECTANGULAR	4" WG POSITIVE	A	3
LOW PRESSURE SUPPLY AIR DUCTS CONNECTED DOWNSTREAM OF EQUIPMENT SUCH AS TERMINAL UNITS, FAN COIL UNITS, SINGLE ZONE AHUS, ENERGY RECOVERY UNITS ETC.	GALVANIZED STEEL	RECTANGULAR	2" WG POSITIVE	B	12
		ROUND/FLAT OVAL (EXPOSED)	4" WG POSITIVE SPIRAL SEAM-FLAT OVAL	B	3
RETURN AIR AND TRANSFER AIR DUCTWORK	GALVANIZED STEEL	RECTANGULAR	2" WG NEGATIVE	B	12
OUTSIDE AIR DUCTWORK	GALVANIZED STEEL	RECTANGULAR	2" WG NEGATIVE	B	12
GENERAL EXHAUST DUCTS TO THE INLET OF THE FAN	GALVANIZED STEEL	RECTANGULAR OR ROUND	2" WG NEGATIVE	B - RECTANGULAR A - ROUND	12 - RECTANGULAR 3 - ROUND

- NOTES:
- SEE DUCTWORK INSULATION SCHEDULE FOR REQUIREMENTS ON DUCT INSULATION

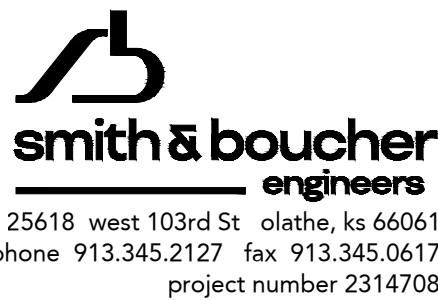
DUCTWORK INSULATION SCHEDULE	
SERVICE	INSULATION
CASINGS, HOUSINGS AND PLENUMS	2", 6 LB. FIBERGLASS BOARD, GCVB
EXPOSED DUCTWORK (EXCLUDING MECHANICAL ROOMS) AS FOLLOWS:	1-1/2"; 3 LB. RIGID FIBERGLASS BOARD, VAPOR BARRIER FACED, WITH HEAVY DUTY PAINTABLE, ALL SERVICE JACKET.
MEDIUM PRESSURE SUPPLY AIR (RECTANGULAR AND ROUND)	
EXPOSED DUCTWORK (WITHIN MECHANICAL ROOMS) AS FOLLOWS:	1-1/2", 1.5 LB. RIGID FIBERGLASS BLANKET, VAPOR BARRIER FACED, WITH HEAVY DUTY FOIL-SCRIM-KRAFT FACING.
OUTSIDE AIR (FROM OA PLENUM TO AHU)	
MEDIUM PRESSURE SUPPLY AIR IN MECHANICAL ROOMS	
CONCEALED DUCTWORK AS FOLLOWS:	1-1/2", 1.5 LB. RIGID FIBERGLASS BLANKET, VAPOR BARRIER FACED, WITH HEAVY DUTY FOIL-SCRIM-KRAFT FACING.
MEDIUM PRESSURE SUPPLY AIR (ROUND AND RECTANGULAR)	
ALL ROUND SUPPLY AIR AND UNLINED BRANCH TAKE-OFFS FOR ROUND DUCTS	
AND IN-LINE TRANSITIONS.	
EXHAUST AIR BETWEEN ISOLATION DAMPER AND PENTRATION OF BUILDING EXTERIOR	
OUTSIDE AIR	
MIXED AIR	

- NOTES:
- SEE DUCTWORK SCHEDULE FOR ITEMS THAT ARE TO BE LINED.
  - EXPOSED, LOW PRESSURE, ROUND AND FLAT OVAL SUPPLY AIR DUCTWORK IS NOT INSULATED.

PIPING MATERIAL SCHEDULE - HVAC			
SERVICE	PIPE SIZE	PIPE MATERIAL	FITTINGS
CONDENSATE DRAIN	1/2" - 1-1/2"	DRAWN-TEMPER COPPER TUBE, SEAMLESS, TYPE K OR L	WROUGHT COPPER SOLDER OR PRESSFIT
	2" AND LARGER	SCHEDULE 40, GRADE B, STEEL PIPE	SCHEDULE 40 STEEL, THREADED
CHILLED WATER SUPPLY AND RETURN	2" AND SMALLER	DRAWN-TEMPER COPPER TUBE, SEAMLESS, TYPE K OR L	WROUGHT COPPER SOLDER OR PRESSFIT
HEATING HOT WATER SUPPLY AND RETURN	2-1/2" AND LARGER	SCHEDULE 40, GRADE B, STEEL PIPE	GROOVED, MECHANICAL JOINT COUPLING AND FITTING OR WROUGHT-STEEL FITTINGS AND WELDED JOINTS
CHILLED WATER SUPPLY AND RETURN	ALL	CARRIER PIPE: SCHEDULE 40, GRADE B, STEEL PIPE INSULATION: POLYURETHANE FOAM, RIGID, CELLULAR, HIGH PRESSURE INJECTED; 2LB/CF DENSITY CASING: BLACK HDPE, 100 MIL THICKNESS SIZES UP TO 12", 125 MIL FOR SIZES GREATER THAN 12"	WROUGHT-STEEL FITTINGS AND WELDED JOINTS
HEATING HOT WATER SUPPLY AND RETURN	ALL	CARRIER PIPE: HDPE, SDR 17.6, ASTM D-3350 INSULATION: POLYURETHANE FOAM, RIGID, CELLULAR, HIGH PRESSURE INJECTED; 2 LB/CF DENSITY CASING: BLACK HDPE, 100 MIL THICKNESS SIZES UP TO 12", 125 MIL FOR SIZES GREATER THAN 12"	HEAT FUSION BUTT WELD
CHILLED WATER SUPPLY AND RETURN	ALL	CARRIER PIPE: HDPE, SDR 17.6, ASTM D-3350 INSULATION: POLYURETHANE FOAM, RIGID, CELLULAR, HIGH PRESSURE INJECTED; 2 LB/CF DENSITY CASING: BLACK HDPE, 100 MIL THICKNESS SIZES UP TO 12", 125 MIL FOR SIZES GREATER THAN 12"	HEAT FUSION BUTT WELD
HEATING HOT WATER SUPPLY AND RETURN	ALL	CARRIER PIPE: HDPE, SDR 17.6, ASTM D-3350 INSULATION: POLYURETHANE FOAM, RIGID, CELLULAR, HIGH PRESSURE INJECTED; 2 LB/CF DENSITY CASING: BLACK HDPE, 100 MIL THICKNESS SIZES UP TO 12", 125 MIL FOR SIZES GREATER THAN 12"	JOINTS FIELD INSULATED WITH URETHANE FOAM
REFRIGERANT SUCTION	ALL	COPPER, TYPE ACR OR TYPE L, DRAWN COPPER TUBING	HEAT FUSION BUTT WELD
REFRIGERANT HOT GAS	ALL	COPPER, TYPE ACR OR TYPE L, DRAWN COPPER TUBING	WROUGHT COPPER FITTINGS WITH BRAZED OR SOLDERED JOINTS
REFRIGERANT LIQUID	ALL	COPPER, TYPE ACR OR TYPE L, DRAWN COPPER TUBING	WROUGHT COPPER FITTINGS WITH BRAZED OR SOLDERED JOINTS

VAV TERMINAL SCHEDULE (HOT WATER HEAT)																
DESIGNATION	VAV 5-01	VAV 5-02	VAV 5-03	VAV 5-04	VAV 5-05	VAV 5-06	VAV 5-07	VAV 5-08	VAV 5-09	VAV 5-10	VAV 5-11	VAV 5-12	VAV 5-13	VAV 5-14	VAV 5-15	
ASSOCIATED AIR HANDLER	AHU-5	AHU-5	AHU-5	AHU-5	AHU-5	AHU-5	AHU-5	AHU-5	AHU-5	AHU-5	AHU-5	AHU-5	AHU-5	AHU-5	AHU-5	
SERVICE	RE: DWGS	RE: DWGS	RE: DWGS	RE: DWGS	RE: DWGS	RE: DWGS	RE: DWGS	RE: DWGS	RE: DWGS	RE: DWGS	RE: DWGS	RE: DWGS	RE: DWGS	RE: DWGS	RE: DWGS	
UNIT	MANUFACTURER	PRICE	PRICE	PRICE	PRICE	PRICE	PRICE	PRICE	PRICE	PRICE	PRICE	PRICE	PRICE	PRICE	PRICE	
	MODEL NO.	SDV	SDV	SDV	SDV	SDV	SDV	SDV	SDV	SDV	SDV	SDV	SDV	SDV	SDV	
	UNIT SIZE	12	10	7	10	7	12	5	10	12	10	7	10	7	12	
	DESIGN CFM	1,200	900	350	900	350	1,200	175	900	1,200	900	350	900	510	1,200	
	MIN. CFM	400	300	117	300	117	400	58	300	400	300	117	300	170	400	
	HEATING CFM	600	450	175	450	175	600	87.5	450	600	450	175	450	255	600	
COIL DATA	EAT (°F)	55	55	55	55	55	55	55	55	55	55	55	55	55	55	
	LAT (°F)	100	100	80	80	85	100	90	100	90	100	80	90	86	100	
	MBH	29.2	21.9	4.7	12.2	5.7	29.2	3.3	21.9	29.2	17.0	4.7	17.0	8.5	29.2	
	GPM AT 180°F EWT 150°F LWT	2.0	2.0	1.0	2.0	1.0	2.0	1.0	2.0	2.0	1.0	1.0	1.0	1.0	2.0	
ELEC. CONT. DATA	VOLTS/PHASE	NOTE 3	NOTE 3	NOTE 3	NOTE 3	NOTE 3	NOTE 3	NOTE 3	NOTE 3	NOTE 3	NOTE 3	NOTE 3	NOTE 3	NOTE 3	NOTE 3	
	PANEL & CIRCUIT	NOTE 3	NOTE 3	NOTE 3	NOTE 3	NOTE 3	NOTE 3	NOTE 3	NOTE 3	NOTE 3	NOTE 3	NOTE 3	NOTE 3	NOTE 3	NOTE 3	
	WIRE & CONDUIT	NOTE 3	NOTE 3	NOTE 3	NOTE 3	NOTE 3	NOTE 3	NOTE 3	NOTE 3	NOTE 3	NOTE 3	NOTE 3	NOTE 3	NOTE 3	NOTE 3	
	OVERCURRENT DEVICE	NOTE 3	NOTE 3	NOTE 3	NOTE 3	NOTE 3	NOTE 3	NOTE 3	NOTE 3	NOTE 3	NOTE 3	NOTE 3	NOTE 3	NOTE 3	NOTE 3	
	DISCONNECT	INTEGRAL	INTEGRAL	INTEGRAL	INTEGRAL	INTEGRAL	INTEGRAL	INTEGRAL	INTEGRAL	INTEGRAL	INTEGRAL	INTEGRAL	INTEGRAL	INTEGRAL	INTEGRAL	
	CONTROL SEQUENCE	RE: DWGS	RE: DWGS	RE: DWGS	RE: DWGS	RE: DWGS	RE: DWGS	RE: DWGS	RE: DWGS	RE: DWGS	RE: DWGS	RE: DWGS	RE: DWGS	RE: DWGS	RE: DWGS	
REFERENCE DRAWING/DETAIL	M101A/M201A	M101A/M201A	M101A/M201A	M101A/M201A	M101A/M201A	M101A/M201A	M101A/M201A	M101A/M201A	M101A/M201A	M101A/M201A	M102A/M202A	M102A/M202A	M102A/M202A	M102A/M202A	M102A/M202A	
REMARKS	1, 2	1, 2	1, 2	1, 2	1, 2	1, 2	1, 2	1, 2	1, 2	1, 2	1, 2	1, 2	1, 2	1, 2	1, 2	

- NOTES:
- PROVIDE COIL ROWS AS NEEDED TO MEET THE SCHEDULED LOAD.
  - HOT WATER COILS TO BE SIZED FOR A 35% PROPYLENE GLYCOL SOLUTION
  - CONTROL CONTRACTOR TO PROVIDE 12V, 24V, OR 120V POWER AS REQUIRED FOR PROJECT. PANEL/CKT L1-35 SHALL BE UTILIZED AS REQUIRED.



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100% CONSTRUCTION DOCUMENTS

Heritage Middle School Renovations  
Liberty Public Schools  
600 W. Kansas Street  
Liberty, MO 64068

REVISIONS:

#	Description	Date
1	ADDENDUM 1	12-20-23

STATE OF MISSOURI  
RYAN JEROD DIEDERICH  
NUMBER 2-00156671  
EXPIRATION 12/17/23

The Professional Architect seal affixed to this sheet applies only to the material and items shown on this sheet. All drawings, specifications or other documents are subject to the seal and shall be considered property of the architect, and the architect accepts no responsibility for the seal and shall be considered property of the architect.

JOB NO: 23024  
DRAWN BY: SBI  
CHECKED BY: RJD  
DATE: 12.07.2023

ME301

MECHANICAL AND ELECTRICAL - SCHEDULES



## FAN COIL UNIT SCHEDULE

DESIGNATION		EXP-24	EXP-25	EXP-26	EXP-27	EXP-28	EXP-29	EXP-30	EXP-31
LOCATION		CORRIDOR	CLASSROOM	CLASSROOM	CLASSROOM	CLASSROOM	CLASSROOM	CLASSROOM	CORRIDOR
UNIT	MANUFACTURER	PRICE	PRICE	PRICE	PRICE	PRICE	PRICE	PRICE	PRICE
	MODEL	FCH05	FCH10	FCH10	FCH250	FCH250	FCH250	FCH250	FCH388
	MOUNTING	ABOVE CEILING	ABOVE CEILING	ABOVE CEILING	ABOVE CEILING	ABOVE CEILING	ABOVE CEILING	ABOVE CEILING	ABOVE CEILING
	CONFIGURATION	HORIZONTAL	HORIZONTAL	HORIZONTAL	HORIZONTAL	HORIZONTAL	HORIZONTAL	HORIZONTAL	HORIZONTAL
	CFM	600	900	900	1,800	1,800	1,800	1,800	900
	OUTSIDE AIR CFM	—	—	—	—	—	—	—	—
	E.S.P. (IN. WG)	0.5	0.8	0.5	0.5	0.5	0.8	0.5	0.5
	MOTOR HP	0.02	(0.025)	(0.02)	0.04	0.04	(0.05)	(0.05)	0.025
	BHP	—	—	—	—	—	—	—	—
	ECM	YES	YES	YES	YES	YES	YES	YES	YES
COOLING COIL	TOTAL CAP. (MBH)	31	16	19	36	36	58	58	17
	SENS. CAP. (MBH)	8	13	12	26	26	32	32	10
	ENT. AIR TEMP.(DB/WB °F)	78/60	75/60	75/60	78/60	78/60	75/60	75/60	75/60
	LVG. AIR TEMP. (°F)	55/54	55/54	55/54	58/54	58/54	55/54	55/54	58/54
	GPM	3.4	3	4	6	6	9	9	4
	EWT (°F)	44	44	44	44	44	44	44	44
	LWT (°F)	55	55	55	55	55	55	55	55
	WATER PRESS. DROP (FT. H2O)	2	3	5	5	5	3	3	5
HEATING COIL	MBH	28	34	39	57	57	81	81	25
	ENT. AIR TEMP. (°F)	75	75	79	75	75	75	79	75
	LVG. AIR TEMP. (°F)	55	55	58	55	55	55	58	55
	GPM	3	3	4	4	4	4	4	2.5
	EWT (°F)	100	100	100	100	100	100	100	100
	LWT (°F)	192	190	190	190	190	190	190	190
	WATER PRESS. DROP (FT. H2O)	—	—	1	1	1	1	1	1
	ELECTRICAL DATA	VOLTAGE/PHASE	120/1	120/1	120/1	120/1	120/1	120/1	120/1
MCA		3.5	4.0	4.3	9.8	9.8	13.0	13.0	3.5
MOPC		165	165	154	185	185	165	154	155
PANEL & CIRCUIT		L2S-9PARK	L2S-6PARK	L2S-9PARK	L2S-40	L2S-12	M2S-8	M2S-8	L2S-40
WIRE & CONDUIT		2#12-5/16, 1/2"	2#12-1/8, 1/2"	2#12-1/8, 1/2"	2#12-5/16, 1/2"	2#12-5/16, 1/2"	2#12-1/8, 1/2"	2#12-1/8, 1/2"	2#12-5/16, 1/2"
OVERCURRENT DEVICE		NOTE 2	NOTE 2	NOTE 2	NOTE 2	NOTE 2	NOTE 2	NOTE 2	NOTE 2
CONTROL SEQUENCE		RE-DWGS	RE-DWGS	RE-DWGS	RE-DWGS	RE-DWGS	RE-DWGS	RE-DWGS	RE-DWGS
COMBINATION STARTER		INTEGRAL	INTEGRAL	INTEGRAL	INTEGRAL	INTEGRAL	INTEGRAL	INTEGRAL	INTEGRAL
REFERENCE DRAWING/DETAIL									
REMARKS									

NOTES:

1. PROVIDE UNIT WITH ECM MOTOR FOR VARIABLE SPEED FAN CONTROL AND FILTER RACK.
2. PROVIDE WITH OPTIONAL DISCONNECT SWITCH.
3. PROVIDE WITH 11% ETHYLENE GLYCOL.

## SPLIT SYSTEM A/C UNIT SCHEDULE

INDOOR UNIT		
DESIGNATION		AC-1
UNIT DATA	MANUFACTURER	DAIKIN
	MODEL	FTXS30LVJU
	SERVICE	I/TELEC
	CFM	705
	TOTAL COOLING CAP (MBH)	23.6 / 21.7
ELEC DATA	TOTAL HEATING CAP @17°F (MBH)	-
	WEIGHT (LBS)	40
	VOLTAGE/PHASE	208/1
	PANEL AND CIRCUIT	NOTE 5
	WIRE AND CONDUIT	(3)#10, #10G, 1/2" C.
	OVERCURRENT DEVICE	NOTE 5
	DISCONNECT	NOTE 7
CONTROLS	NOTE 6	
REMARKS		1, 2,
OUTDOOR UNIT		
DESIGNATION		ACCU-1
UNIT DATA	MANUFACTURER	DAIKIN
	MODEL NO.	RKS30LVJU
	TOTAL COOLING CAP (MBH)	23.6 / 21.7
	TOTAL HEATING CAP (MBH)	-
	SEER	19.3
ELEC DATA	AMBIENT AIR TEMP (°F.)	95° - 40
	WEIGHT (LBS)	190.0
	VOLTAGE/PHASE	208/1
	PANEL AND CIRCUIT	L2-14-16
	WIRE AND CONDUIT	(2)#10, #10G, 1/2" C.
	MCA	19.5
	OVERCURRENT DEVICE	25A/2P
DISCONNECT	NEMA 3R 30A-NF	
VIBRATION ISOLATION		NEOPRENE
REMARKS		1, 2, 3

**NOTES:**

- 1: INSULATE ALL REFRIGERANT LINES
- 2: PROVIDE LOW AMBIENT KIT FOR RATED COOLING OPERATION DOWN TO -40°F
- 3: PROVIDE QUICK SLING SUPPORT TO ELEVATE THE EQUIPMENT 18" ABOVE THE ROOF AND SECURE UNIT TO THE
- 4: PROVIDE CONTROL WIRING PER MANUFACTURERS RECOMMENDATIONS.
- 5: INDOOR UNIT CIRCUITED THROUGH OUTDOOR UNIT.
- 6: PROVIDE WIRED THERMOSTAT (WIRELESS, BATTERY NOT ALLOWED)
- 7: PROVIDE TOGGLE SWITCH ADJACENT TO UNIT.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
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HEAT RECOVERY UNIT SCHEDULE			
CONFIGURATION		HSU4	
LOCATION	ROOF		
MANUFACTURER	REJCO		
MODEL NO.	RSC409		
SYSTEM	054F9		
WEIGHT (LBS)	13,600		
SERVICE	CLASSROOMS		
SUPPLY AIRFLOW (CFM)	8,150		
OUTSIDE AIR (CFM)	8,150		
MINIMUM EXD OUTSIDE AIR			
MINIMUM AIRFLOW (CFM)			
EXTERNAL STATIC PRESSURE (IN. W.C.)	0.75		
TOTAL STATIC PRESSURE (IN. W.C.)	3.772		
QUANTITY	2		
FAN SPEED (RPM)	3851		
BRAKE HORSEPOWER (EACH) (SPLY/EXH)	500		
MOTOR HORSEPOWER (EACH) (SPLY/EXH)	7.5/7.4		
DRIVE (EACH)	DRGT1		
MAXIMUM FACE VELOCITY (FPM)	590		
ENT. AIR (DDBWDB)	41.745		
LVE. AIR (DDBWDB)	55.344		
MAX FINS/MIN. ROWS	12/6		
TOTAL COOLING CAPACITY (MBH)	300		
SENSIBLE COOLING CAPACITY (MBH)	184		
SPRM @ 44 DBT, 10 WTD	65.4		
MR. PRESSURE DROP (IN. W.C.)	0.18		
WATER PRESSURE DROP (FT.) (MAX.)	15		
MAXIMUM FACE VELOCITY (FPM)	590		
ENT. AIR (DB)	34		
LVE. AIR (DB)	75		
MAX FINS/MIN. ROWS	22/11		
HEATING CAPACITY (MBH)	75		
SPRM @ 140 DBT, 30 WTD	18		
MR. PRESSURE DROP (IN. W.C.)	0.18		
WATER PRESSURE DROP (FT.) (MAX.)	15		
TYPE	2" PLUBATO		
MEVU RATING	MEVU 4V		
MEAN RPD (IN. W.C.)	1.47		
CAPACITY (MBH)	65.25		
ELECTRIC SPACE HEATER (KW)	25		
EXT. FB (SUPPLY/EXHAUST)	101/78		
EXT. WB (SUPPLY/EXHAUST)	62/60		
LAT-CB (SUPPLY/EXHAUST)	64/62		
LAT-WB (SUPPLY/EXHAUST)	70/68		
KPD (IN. W.C.) (SUPPLY/EXHAUST)	50/75		
NIPKEL EFFECT PRESS	30.80%		
VOLTAGE PHASE	90/0		
WCR	171.7		
WCR	110A		
PANEL & CIRCUIT	F02		
WIRE & CONDUIT	300146 3-110C		
OVERCURRENT DEVICE	100A3P		
COMBINATION STARTER	NOTE 8		
VIBRATION ISOLATION	HTEPINK		
CONTROL	HE/EMS DINGS		
REMARKS	1 2 3 4 5 6 7 8 9 10		

1. PROVIDE WITH ROOF CURB ADAPTOR AS REQUIRED
2. INCLUDE 100% OUTSIDE AIR BOOS WITH TWO POSITION MOTORISED DAMPER
3. PROVIDE WITH STAINLESS STEEL DRAIN PAN
4. FIFE A LARM CONTRACTOR TO FLUSH AND INSTALL STALL SMOKE DETECTOR IN RETIEN AIR INLET FOR UNIT SHUT DOWN, CONNECT TO UNIT AND FIRE ALARM SYSTEM
5. PROVIDE MANUAL RESET HIGH PRESSURE SWITCHES AND AUTO RESET LOW PRESSURE SWITCHES
6. PROVIDE WITH 100% RPF CONDENSER PUMP MOTOR FOR HEAT PRESSURE CONTROL  
PROVIDE SUPPLY PANS WITH PEEP RINGS FOR ARIOW MEASUREMENT AND CONTROL PANS HAVE TWO MOTOR FOR SPEED CONTROL THROUGH  
PROVIDE FUSIBLE COMBINATIONS TARTER WITH UNITING PIPES THAT  
PROVIDE AVAILABLE FLOW CURRENTLY TO LESS THAN THE EQUIPMENT  
WITHSTAND RATING
7. PROVIDE FIRE CHASE FOR HOT WATER SUPPLY, HOT WATER SUPPLY, COLD WATER RETURN AND HOT WATER RETURN PIPING
8. CHILLED WATER AND HOT WATER COLD COLD WITH 1W ETHYLENE GLYCOL SOLUTION

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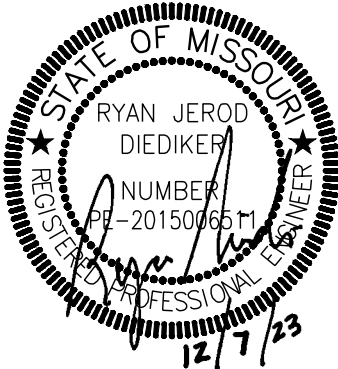
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100% CONSTRUCTION DOCUMENTS


K  
—  
J

**Heritage Middle School Renovations**  
Liberty Public Schools  
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JOB NO: 23024  
DRAWN BY: SBI  
CHECKED BY: RJD  
DATE: 12.07.2023

# ME302

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project number 2314708

## MECHANICAL AND ELECTRICAL - SCHEDULES



2314708 Liberty St 2023 - Heritage Middle School Renovations  
PROJECT NAME: 2314708 Liberty St 2023 - Heritage Middle School Renovations  
LAST CORRECTION: 11/14/2023 11:47:47 AM  
PRINTED BY: J. J. BOUCHER  
DATE: 12/20/2023 9:54:43 AM  
2314708 Liberty St 2023 - Heritage Middle School Renovations  
PROJECT NAME: 2314708 Liberty St 2023 - Heritage Middle School Renovations  
LAST CORRECTION: 11/14/2023 11:47:47 AM  
PRINTED BY: J. J. BOUCHER  
DATE: 12/20/2023 9:54:43 AM

## PLUMBING FIXTURE SCHEDULE

MARK	MFGR / MODEL	DESCRIPTION	MANUFACTURER/MODEL	FITTINGS DESCRIPTION	NOTE	PIPING CONNECTIONS			
						CW	HW	SAN	VENT
WC-1	SLOAN ST-2029	ADA COMPLIANT WATER CLOSET: WHITE VITREOUS CHINA, ELONGATED BOWL, FLOOR MOUNTED, FLUSH VALVE BOWL WITH TOP SPUD AND FLAT BOLT COVERS, 1.6 GALLON SIPHON JET FLUSHING ACTION.	SLOAN REGAL 111 SFSM-1.6	ADA COMPLIANT EXPOSED WATER CLOSET BATTERY OPERATED ELECTRONIC FLUSH VALVE, CHROME PLATED METAL, WITH, 1" I.P.S. SCREWDRIVER BAK-CHEK ANGLE STOP WITH PROTECTIVE CAP, ADJUSTABLE TAILPIECE, VACUUM BREAKER FLUSH CONNECTION AND SPUD COUPLING FOR 1 1/2" TOP SPUD, 1.6 GALLON FLUSH. PROVIDE WALL AND SPUD FLANGES.	---	1"	---	4"	2"
WC-2	SLOAN ST-2009	WATER CLOSET: WHITE VITREOUS CHINA, ELONGATED BOWL, FLOOR MOUNTED, FLUSH VALVE BOWL WITH TOP SPUD AND FLAT BOLT COVERS, 1.6 GALLON SIPHON JET FLUSHING ACTION.	SLOAN REGAL 111 SFSM-1.6	EXPOSED WATER CLOSET BATTERY OPERATED ELECTRONIC FLUSH VALVE, CHROME PLATED METAL, WITH, 1" I.P.S. SCREWDRIVER BAK-CHEK ANGLE STOP WITH PROTECTIVE CAP, ADJUSTABLE TAILPIECE, VACUUM BREAKER FLUSH CONNECTION AND SPUD COUPLING FOR 1 1/2" TOP SPUD, 1.6 GALLON FLUSH. PROVIDE WALL AND SPUD FLANGES.	---	1"	---	4"	2"
WC-3	SLOAN WETS-8029,8010-STG	ADA COMPLIANT WATER CLOSET: WHITE VITREOUS CHINA, ELONGATED BOWL, FLOOR MOUNTED, PRESSURE-ASSISTED TANK, PRESSURE-ASSISTED SIPHON JET FLUSH ACTION.	---	---	---	1"	---	4"	2"
U-1	SLOAN SU-1009	ADA COMPLIANT URINAL: WHITE VITREOUS CHINA WALL HUNG URINAL WITH 3/4" TOP SPUD, 1.0 GALLON SIPHON JET FLUSHING ACTION.	SLOAN ROYAL 186 SMO-0.25-DBP-OR	ADA COMPLIANT EXPOSED URINAL BATTERY OPERATED ELECTRONIC FLUSHOMETER WITH CROME PLATED METAL, 3/4" I.P.S. SCREWDRIVER BACKCHECK ANGLE STOP, VANDAL RESISTANT CAP, AND ADJUSTIBLE TAILPIECE FOR 3/4" TOP SPUD URINALS. PROVIDE WALL AND SPUD FLANGES.	---	3/4"	---	2"	2"
U-2	SLOAN SU-1009	WHITE VITREOUS CHINA WALL HUNG URINAL WITH 3/4" TOP SPUD, 1.0 GALLON SIPHON JET FLUSHING ACTION.	SLOAN ROYAL 186 SMO-0.25-DBP-OR	ADA COMPLIANT EXPOSED URINAL BATTERY OPERATED ELECTRONIC FLUSHOMETER WITH CROME PLATED METAL, 3/4" I.P.S. SCREWDRIVER BACKCHECK ANGLE STOP, VANDAL RESISTANT CAP, AND ADJUSTIBLE TAILPIECE FOR 3/4" TOP SPUD URINALS. PROVIDE WALL AND SPUD FLANGES.	---	3/4"	---	2"	2"
L-1	SLOAN SS-3103	ADA COMPLIANT WALL HUNG LAVATORY: WHITE VITREOUS CHINA, WITH SPLASHBACK AND FRONT OVERFLOW. SINGLE HOLE CENTERSET FAUCET.	CHICAGO FAUCETS 116.599 AB.1  WATTS MINIMIXING 2297321	ADA COMPLIANT BATTERY OPERATED DUAL BEAM INFRARED SENSOR, CHROME PLATED DIE CAST METAL HAND WASHING FAUCET, METAL GRID DRAIN ASSEMBLY, 0.5GPM FLOW RATE.  POINT OF USE THERMOSTATIC MIXING VALVE. CHROME FINISH. 1/2" FITTINGS. WALL MOUNTING PLATE.	1, 2, 3, 4, 5 R	1/2"	1/2"	2"	2"
WF-1	SLOAN EW-72000	WASHFOUNTAIN: SLOANSTONE, WALL HUNG, 3-STATION, WITH INTEGRAL OVERFLOWS, VANDAL RESISTANT, ADA COMPLIANT. FINISH AS SPECIFIED BY ARCHITECT. REINFORCE WALL AS REQUIRED TO SUPPORT WEIGHT OF FIXTURE.	SLOAN EW-72000	SLOAN ELECTRONIC SENSOR OPERATED FAUCETS INTEGRAL TO FIXTURE. BELOW DECK THERMOSTATIC MIXING VALVE.	1, 2, 3, 4, 5	1/2"	1/2"	1-1/2"	1-1/2"
WF-2	SLOAN EW-72000	WASHFOUNTAIN: SLOANSTONE, WALL HUNG, 2-STATION, WITH INTEGRAL OVERFLOWS, VANDAL RESISTANT, ADA COMPLIANT. FINISH AS SPECIFIED BY ARCHITECT. REINFORCE WALL AS REQUIRED TO SUPPORT WEIGHT OF FIXTURE.	SLOAN EW-72000	SLOAN ELECTRONIC SENSOR OPERATED FAUCETS INTEGRAL TO FIXTURE. BELOW DECK THERMOSTATIC MIXING VALVE.	1, 2, 3, 4, 5	1/2"	1/2"	1-1/2"	1-1/2"
DF-1	ELKAY LZSL8WSLK	ELECTRIC DRINKING FOUNTAIN: ADA COMPLIANT, BLEVEL BARRIER FREE ELECTRIC WATER COOLER, SENSOR OPERATED BOTTLE FILLER ABOVE ADA FOUNTAIN. FRONT PUSHBUTTON, NON-CORROSIVE STAINLESS STEEL BASIN.	---	---	---	1/2"	---	2"	1-1/2"
DF-2	ELKAY LZS8WSVRSK	ELECTRIC DRINKING FOUNTAIN: ADA COMPLIANT, SINGLE BARRIER FREE ELECTRIC WATER COOLER, SENSOR OPERATED BOTTLE FILLER ABOVE ADA FOUNTAIN. FRONT PUSHBUTTON, NON-CORROSIVE STAINLESS STEEL BASIN.	---	---	---	1/2"	---	2"	1-1/2"
S-1	ELKAY LRAD2219	SINGLE BOWL DROP IN SINK, 18 GAUGE LUSTERTONE CLASSIC STAINLESS STEEL, 22"X 19-1/2"X 7-5/8", CENTER DRAIN PLACEMENT.	CHICAGO FAUCET 895  WATTS MINIMIXING 2297321	DECK MOUNTED GOOSENECK FAUCET WITH VANDAL PROOF WRISTBLADE HANDLES, 4" FIXED CENTERS, 5" RIGID/SWING GOOSENECK SPOUT, 2.2GPM FLOW RATE.  POINT OF USE THERMOSTATIC MIXING VALVE. CHROME FINISH. 1/2" FITTINGS. WALL MOUNTING PLATE.	3, 4, 5	1/2"	1/2"	1-1/2"	1-1/2"
S-2	ELKAY LRAD312250	ADA COMPLIANT SINK: SINGLE BOWL, DROP IN ADA SINK, LUSTERTONE CLASSIC STAINLESS STEEL 31"X22"X6".	CHICAGO FAUCET 2301-ABCP  WATTS MINIMIXING 2297321	DECK MOUNTED SINGLE HOLE. SINGLE LEVER HOT AND COLD WATER MISING SINK FAUCET WITH SIDE SPRAY, 2.2GPM FLOW RATE, 3/8" CPRESSED FLEXIBLE STAINLESS STEEL HOSE, 1" CENTER TO CENTER INTEGRAL CAST BRASS SWINT SPOUT.  POINT OF USE THERMOSTATIC MIXING VALVE. CHROME FINISH. 1/2" FITTINGS. WALL MOUNTING PLATE.	3, 4, 5	1/2"	1/2"	1-1/2"	1-1/2"
SH-1	-	-	AMERICAN STANDARD RELIANT 3 TL385507  AMERICAN STANDARD RU10ISS  WATTS MINIMIXING 2297321	SHOWER TRIM ONLY: METAL LEVER HANDLE, CERAMIC DISC CARTRIDGE, INTEGRATED CHECK VALVES, ADJUSTABLE HOT LIMIT SAFETY STOP, 1.75 GPM, WATER SENSE LABELED.  VALVE BODY: CAST BRASS, SCREWDRIVER STOPS.  POINT OF USE THERMOSTATIC MIXING VALVE. CHROME FINISH. 1/2" FITTINGS. WALL MOUNTING PLATE.	-	1/2"	1/2"	1-1/2"	1-1/2"
JS-1	STERN WILLIAMS SB-800	PRECAST TERRAZO RECEPTOR, FLOOR MOUNTED, 24"X24" WITH BRASS DRAIN, STAINLESS STEEL STRAINER, WITHOUT TILING FLANGES.	STERN WILLIAMS T-15 VB	SERVICE SINK FAUCET WITH VACUUM BREAKER, ADJUSTABLE TOP BRACE, 3/4" HOSE THREAD SPOUT, AND POLISHED CROME FINISH.	-	1/2"	1/2"	3"	1-1/2"
RH-1	HOEPTNER EXECUTIVE #2131RE	NON-FREEZE ROOF HYDRANT WITH GALVANIZED CASING AND ADJUSTABLE FLOW WHEEL. LOCKABLE HANDLE. HYDRANT SHALL NOT REQUIRE DRAIN LINE OR WINTERIZING TO MAINTAIN FROST PROTECTION.	---	---	-	3/4"	---	---	---

- NOTES:
1. PROVIDE CHROME PLATED BRASS TAILPIECE AND GRID DRAIN.
  2. PROVIDE CHROME PLATED BRASS P-TRAP.
  3. PROVIDE LOOSE KEY STOPS AND FLEXIBLE RISERS.
  4. INSULATE EXPOSED TAILPIECE, P-TRAP, AND WATER RISERS.
  5. PROVIDE WITH ALL MOUNTING HARDWARE AS REQUIRED. FIXTURE STUDS AND NUTS SHALL BE STAINLESS STEEL.

## FAN SCHEDULE

DESIGNATION		EF-1
FAN TYPE		CEILING
SERVICE		IT
MANUFACTURER		COOK
MODEL		GC322
UNIT DATA	CFM	150
	STATIC PRESSURE	0.3
	FAN RPM	1590
	BRAKE HORSEPOWER	[39.0 W]
	MOTOR HORSEPOWER	---
ELECT. DATA	VOLTAGE/PHASE	120/1
	DRIVE	DIRECT
	PANEL & CIRCUIT	PP1-1(PART)
	WIRE & CONDUIT	(2)#12, #12G, 1/2" C
	OVERCURRENT DEVICE	20A/1P
	DISCONNECT	INTEGRAL
	CONTROL	NOTE 2
REFERENCE DRAWING/DETAIL		
NOTES		1

## AIR CURTAIN SCHEDULE

DESIGNATION		ACT-1	ACT-2
MANUFACTURER		BERNER	BERNER
MODEL		ALC08-2084A	ALC08-2084A
CFM		2,424	2,424
AIR VELOCITY (FPM)		3,000	3,000
HEATING CAPACITY (KW)		—	—
TEMPERATURE RISE (°F)		—	—
LENGTH (IN.)		84	84
MOTOR HORSEPOWER		2 @ 1/5	2 @ 1/5
WEIGHT (LBS)		100	100
VOLTS/PHASE		120/1	120/1
ELEC / CONTROL DATA	MCA	6.8	6.8
	MOC	15A	15A
	PANEL & CIRCUIT	L1-39	L1-41
	WIRE & CONDUIT	(2)#12, #12G, 1/2" C	(2)#12, #12G, 1/2" C
	OVERCURRENT DEVICE	20A-1P	20A-1P
	DISCONNECT	NOTE 1	NOTE 1
	CONTROL	SENSOR (INTEGRAL)	SENSOR (INTEGRAL)
	REFERENCE DRAWING/DETAIL		M101A
REMARKS		2,3	2,3

## AIR HANDLING UNIT SCHEDULE

DESIGNATION	AHU-1	AHU-2	AHU-3	AHU-4	AHU-5	AHU-6
LOCATION	BASEMENT 1964 BUILDING	BASEMENT 1964 BUILDING	BASEMENT 1964 BUILDING	BASEMENT 1964 BUILDING	ROOF 1964 BUILDING	ROOF 1964 BUILDING
MANUFACTURER	TRANE	TRANE	TRANE	TRANE	TRANE	TRANE
MODEL NO.	BCVE048	BCVE036	BCVE036	BCVE060	CSAA025	CSAA017
SYSTEM	CONST. VOL	CONST. VOL	CONST. VOL	CONST. VOL	VAV	VAV
WEIGHT (LBS)	350	250	250	400	7,500	7,000
SERVICE	CLASSROOMS	CLASSROOMS	CLASSROOMS	CLASSROOMS	CLASSROOMS	CLASSROOMS
SUPPLY AIRFLOW (CFM)	1,000	700	700	1,650	12,000	8,000
OUTSIDE AIR (CFM)	250	250	250	500	6,500	4,000
MINIMUM CO2 OUTSIDE AIR	-	-	-	-	-	-
MINIMUM AIRFLOW (CFM)	-	-	-	-	10,833	6,867
EXTERNAL STATIC PRESSURE (IN. W.C.)	0.75	0.75	0.75	0.75	2.00	2.00
TOTAL STATIC PRESSURE (IN. W.C.)	1.26	1.317	1.317	1.693	4.5	4.3
QUANTITY	1	1	1	1	2	2
FAN SPEED (RPM)	1000	1322	1322	1163	2209	2425
BRAKE HORSEPOWER (EACH)	0.37	0.2677	0.2677	0.806	14.5	9.2
MOTOR HORSEPOWER (EACH)	0.5	0.5	0.5	1	15	10
DRIVE (EACH)	DIRECT	DIRECT	DIRECT	DIRECT	DIRECT	DIRECT
MAXIMUM FACE VELOCITY (FPM)	500	500	500	500	500	500
ENT. AIR (DBWB)	81 / 65	81 / 65	81 / 65	81 / 65	86 / 69	85 / 69
LVG. AIR (DBWB)	56 / 55	56 / 55	56 / 55	56 / 55	53 / 52	53 / 52
MAX FINS / MIN. ROWS	12/6	12/6	12/6	12/6	12/6	12/6
TOTAL COOLING CAPACITY (MBH)	41	23	23	44	600	400
SENSIBLE COOLING CAPACITY (MBH)	21	21	21	42	436	291
GPM @ 45 EWT, 10 WTD	8.7	5.2	5.2	10.3	132	88
AIR PRESSURE DROP (IN. W.C.)	0.6	0.6	0.6	0.6	0.76	0.76
WATER PRESSURE DROP (FT.) (MAX.)	15	15	15	15	15	15
MAXIMUM FACE VELOCITY (FPM)	500	500	500	500	500	500
MINIMUM HTG AIRFLOW (CFM)	1,000	700	700	1,650	6,000	4,000
ENT. AIR (DB)	54	46	46	50	27	27
LVG. AIR (DB)	105	105	105	105	55	55
MAX FINS / MIN. ROWS	12/1	12/1	12/1	12/1	12/1	12/1
HEATING CAPACITY (MBH)	56	45	45	95	245	150
GPM @ 180 EWT, 30 WTD	4.0	3	3	7	17	11
AIR PRESSURE DROP (IN. W.C.)	0.15	0.15	0.15	0.15	0.15	0.15
WATER PRESSURE DROP (FT.) (MAX.)	15	15	15	15	15	15
TYPE	2" PLEATED	2" PLEATED	2" PLEATED	2" PLEATED	2" PLEATED	2" PLEATED
MERV RATING	MERV 8	MERV 8	MERV 8	MERV 8	MERV 8	MERV 8
MEAN APD (IN. W.C.)	0.6	0.6	0.6	0.6	0.6	0.6
TYPE	2" PLEATED	2" PLEATED	2" PLEATED	2" PLEATED	2" PLEATED	2" PLEATED
MERV RATING	MERV 13	MERV 13	MERV 13	MERV 13	MERV 13	MERV 13
MEAN APD (IN. W.C.)	1.07	1.07	1.07	1.07	1.07	1.07
VOLTAGE/PHASE	230/1	230/1	230/1	230/1	480/3	480/3
MCA	5.33	5.33	5.33	9.66	43.3	32.8
MOC	15	15	15	15	60	45
PANEL & CIRCUIT	P2-9,11 (EXISTING)	P2-13,15 (EXISTING)	P2-8,10 (EXISTING)	P2-12,14 (EXISTING)	LP1-19,21,23	LP1-25,27,29
WIRE & CONDUIT	(2)#12,12G,1/2"C (EXISTING)	(2)#12,12G,1/2"C (EXISTING)	(2)#12,12G,1/2"C (EXISTING)	(2)#12,12G,1/2"C (EXISTING)	(3)#4,10G,1"C	(3)#6,10G,3/4"C
OVERCURRENT DEVICE	15A-2P (EXISTING)	15A-2P (EXISTING)	15A-2P (EXISTING)	15A-2P (EXISTING)	60A-3P (NOTE 11)	45A-3P (NOTE 11)
COMBINATION STARTER	EXISTING	EXISTING	EXISTING	EXISTING	NOTE 8	NOTE 8
VOLTAGE/PHASE					120/1	120/1
FLA					8	8
MOC					20A	20A
PANEL & CIRCUIT					L2-18	L2-20
WIRE & CONDUIT					(2)#12, #12G, 1/2"C	(2)#12, #12G, 1/2"C
OVERCURRENT DEVICE					20A-1P	20A-1P
VIBRATION ISOLATION						
CONTROL	RE-BMS DWGS	RE-BMS DWGS	RE-BMS DWGS	RE-BMS DWGS	RE-BMS DWGS	RE-BMS DWGS
REFERENCE DRAWING/DETAIL	M100A	M100A	M100A	M100A	ME202A	ME202A
REMARKS	1, 2, 3, 5, 8, 10	1, 2, 3, 5, 8, 10	1, 2, 3, 5, 8, 10	1, 2, 3, 5, 8, 10	1, 2, 3, 4, 5, 6, 7, 8, 9, 10	1, 2, 3, 4, 5, 6, 7, 8, 9, 10

- NOTES:
1. CONTROL CONTRACTOR TO PROVIDE OUTSIDE AIRFLOW STATIONS.
  2. REFER TO AHU DRAWING SCHEMATICS FOR ADDITIONAL REQUIREMENTS.
  3. PROVIDE FAN SECTION WITH PERFORATED ACOUSTICAL HOUSING.
  4. FIRE ALARM CONTRACTOR TO FURNISH AND INSTALL SMOKE DETECTOR IN RETURN AIR INLET FOR UNIT SHUT DOWN. CONNECT TO UNIT BMS AND FIRE ALARM SYSTEM.
  5. PROVIDE STAINLESS STEEL DRAIN PAN IN COOLING COIL SECTION.
  6. PROVIDE AHU WITH MARINE LIGHTS WITHIN EACH ACCESSIBLE SECTION.
  7. PROVIDE SUPPLY FANS WITH PIEZO RINGS FOR AIRFLOW MEASUREMENT AND CONTROL. FANS HAVE A VFD MOTOR FOR SPEED CONTROL THROUGH THE BMS.
  8. PROVIDE FUSIBLE COMBINATION STARTER WITH LIMITING FUSES THAT REDUCE AVAILABLE FAULT CURRENT TO LESS THAN THE EQUIPMENT WITHSTAND RATING.
  9. PROVIDE PIPE CHASE FOR COLD WATER SUPPLY, HOT WATER SUPPLY, COLD WATER RETURN AND HOT WATER RETURN PIPING.
  10. CHILLED WATER AND HOT WATER COIL SIZED WITH 35% POLYPROPYLENE GLYCOL SOLUTION.
  11. CIRCUIT TO PANEL INDICATED ON LOWER LEVEL ELECTRICAL ROOM. SEE SHEET E200A. PROVIDE BREAKER INDICATED IN PLACE OF EXISTING 20A-1P SPARE BREAKERS. FIELD DETERMINE EXACT EXTENTS.

## GLYCOL FEEDER

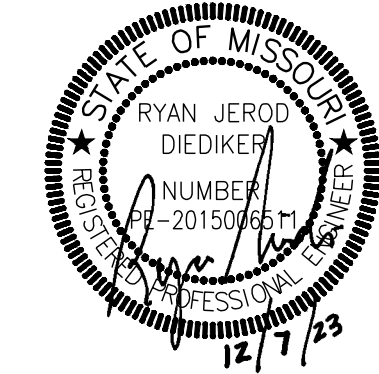
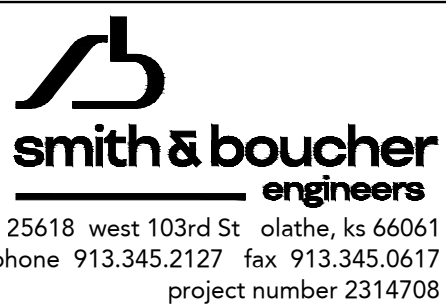
DESIGNATION	GF-1	GF-2
LOCATION	MECH RM	MECH RM
MANUFACTURER	NEPTUNE	NEPTUNE
SERVICE	HW	CW
TYPE	AUTOMATIC	AUTOMATIC
MODEL	G-50-1	G-50-1
CAPACITY (GALLONS)	50	50
FLOW RATE (GPM)	1.5	1.5
PRESSURE (PSIG)	100	100
VOLTAGE/PHASE	120/1	120/1
PANEL & CIRCUIT	P2-21	P2-23
WIRE & CONDUIT	(2)#12, #12G, 1/2"C	(2)#12, #12G, 1/2"C
OVERCURRENT DEVICE	20A-1P (NOTE 2)	20A-1P (NOTE 2)
DISCONNECT	NOTE 3	NOTE 3
REFERENCE DRAWING/DETAIL		
REMARKS		1

- NOTES:
1. PROVIDE WITH DRY CONTACT FOR BMS LOW LEVEL INDICATION.
  2. PROVIDE CIRCUIT BREAKER IN PANEL INDICATED. REFER TO SHEET E200A.
  3. PROVIDE MOTOR RATED, SPST TOGGLE DISCONNECT SWITCH.

## GRILLE, REGISTER & DIFFUSER SCHEDULE

PLAN MARK	MANUFACTURER	MODEL NUMBER	SERVICE	MOUNT TYPE	VOLUME DAMPER	MATERIAL	COLOR	REMARKS
SD-1	PRICE	SPD	SUPPLY	LAY-IN/SURFACE	NOTE 4.2	STEEL	WHITE	-
SD-2	PRICE	SDGE	SUPPLY	DUCT	NOTE 4.2	ALUMINUM	NOTE 1	8
SD-3	PRICE	CFPJS (2 SLOT)	SUPPLY	LAY-IN/SURFACE	NOTE 4.2	ALUMINUM	NOTE 1	3
SD-4	PRICE	CFPJS (2 SLOT)	SUPPLY	LAY-IN/SURFACE	---	ALUMINUM	NOTE 1	5
SD-5	PRICE	CFPJS (2 SLOT)	SUPPLY	LAY-IN/SURFACE	NOTE 4.2	ALUMINUM	NOTE 7	3
SD-6	PRICE	500	SUPPLY	SURFACE	NOTE 4.2	STEEL	NOTE 6	-
RG-1	PRICE	500	RETURN	LAY-IN/SURFACE	NOTE 4.2	STEEL	NOTE 1	-
RG-2	PRICE	500	RETURN	LAY-IN/SURFACE	NOTE 4.2	STEEL	NOTE 6	-
EG-1	PRICE	10A	EXHAUST	SURFACE	NOTE 4, 2	ALUMINUM	NOTE 1	-

- NOTES:
1. FURNISH WITH WHITE FINISH FOR CEILING MOUNTED APPLICATIONS AND PAINTABLE FINISH FOR WALL MOUNTED APPLICATIONS.
  2. FURNISH WITH VOLUME DAMPER AT THE DUCT TAP.
  3. PREMANUFACTURED PLENUM ACCEPTABLE WHERE SPACE ALLOWS.
  4. FURNISH WITH REMOTE CABLE OPERATED DAMPER ACTUATOR FOR INACCESSIBLE CEILING APPLICATIONS.
  5. PROVIDE BLANK OFF PLATES.
  6. FURNISH WITH PAINTABLE FINISH. COLOR BY ARCHITECT.
  7. FURNISH WITH BORDER 66 AND COLOR CHART FOR SELECTION BY INTERIORS. MAY REQUIRE MULTIPLE COLORS.
  8. FURNISH WITH AIR SCOOP.



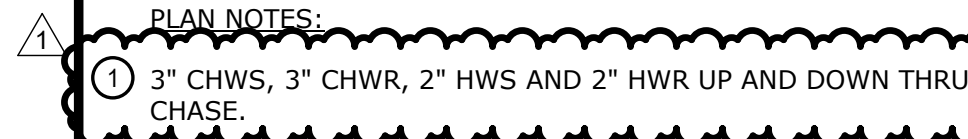
JOB NO: 23024  
DRAWN BY: SBI  
CHECKED BY: RJD  
DATE: 12/07/2023

# ME303









GENERAL NOTES:

1. REFER TO GENERAL NOTES ON M100A.

PLAN NOTES:

① 3" CHWS, 3" CHWR, 2" HWS AND 2" HWR UP AND DOWN THRU CHASE.

we design the future

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**115 Wilcox Street Suite 210**  
Castle Rock, CO 80104  
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HOLLISANDMILLER.COM

Hollis + Miller Architects  
Missouri State Certificate of Authority  
Architecture # 0000181  
Structure # 2006031333

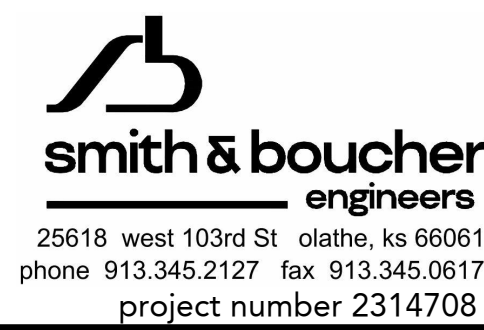
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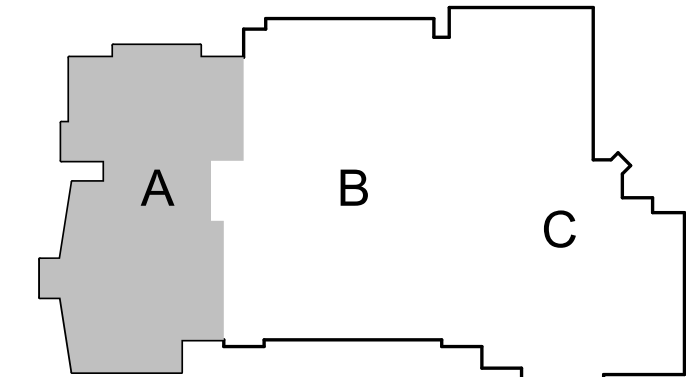
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Food Facility Planner  
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Overland Park, Johnson County, KS 662  
785.266.5696 phone

**Heritage Middle School Renovations**  
Liberty Public Schools  
600 W. Kansas Street  
Liberty, MO 64068

#	Description	Date
1	ADDENDUM 1	12-20-2023

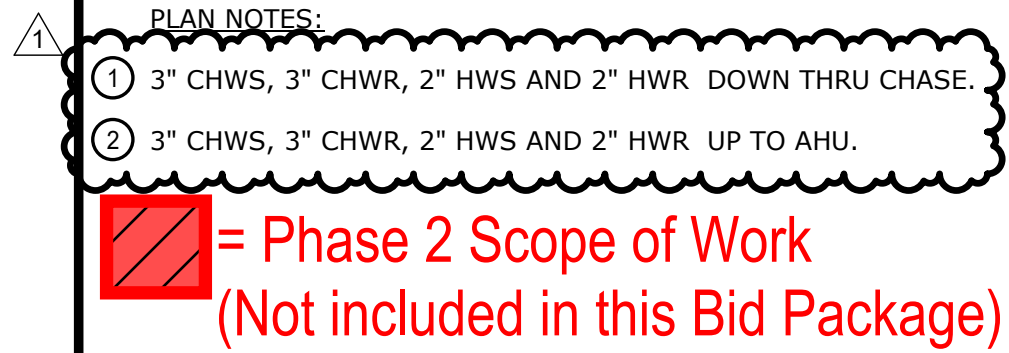


## KEY PLAN



JOB NO: 23024  
DRAWN BY: SBI  
CHECKED BY: RJ  
DATE: 12.07.2023

M201A



② 3" CHWS, 3" CHWR, 2" HWS AND 2" HWR UP TO AHU.

 = Phase 2 Scope of Work  
(Not included in this Bid Package)

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Architecture # 0000181  
Structure # 2006031333

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Overland Park, Johnson County, KS 66204  
785.266.5696 phone

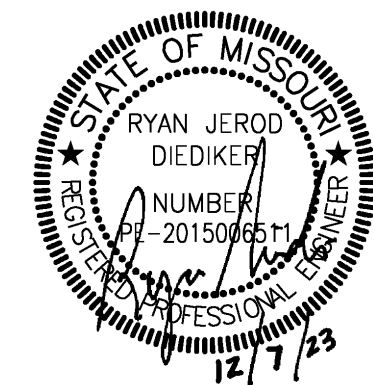
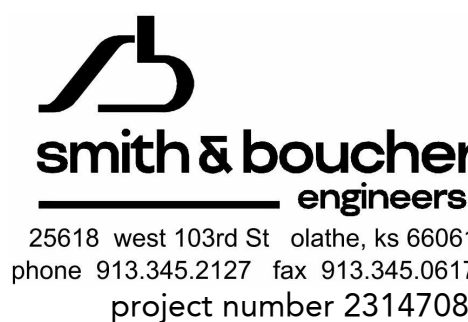
**100% CONSTRUCTION DOCUMENTS**

## Heritage Middle School Renovations

Liberty Public Schools

**600 W. Kansas Street**

REVISIONS:		
#	Description	Date
1	ADDENDUM 1	12-20-2023

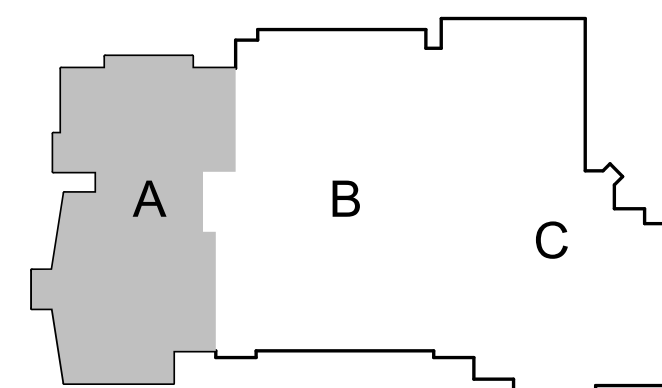


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JOB NO: 23024  
DRAWN BY: SBI  
CHECKED BY: RJD  
DATE: 12.07.2023


# M202A

## KEY PLAN



PROJECT NORTH  TRUE NORTH 

## HVAC PIPING PLAN - LEVEL 2 - AREA A

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