

FRAMELESS HARDWARE COMPANY LLC ACOUSTICAL PERFORMANCE TEST REPORT

SCOPE OF WORK

ASTM E90 SOUND TRANSMISSION LOSS TESTING ON AN ASPIRE DOUBLE DOOR

REPORT NUMBER

T6275.01-303-11-R0

TEST DATE

04/06/26

ISSUE DATE

06/17/26

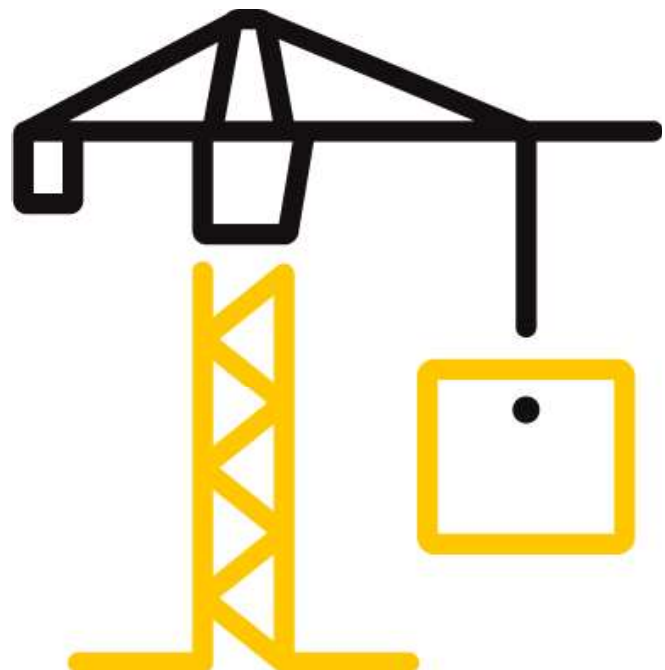
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TEST REPORT FOR FRAMELESS HARDWARE COMPANY LLC

Report No.: T6275.01-303-11-R0

Date: 06/17/26

REPORT ISSUED TO

FRAMELESS HARDWARE COMPANY LLC

2323 Firestone Blvd
South Gate, CA 90280

SECTION 1

SCOPE

Architectural Testing, Inc. (an Intertek company) dba Intertek Building & Construction (B&C) was contracted by Frameless Hardware Company LLC to conduct a sound transmission loss test. Results obtained are tested values and were secured by using the designated test methods. The complete test data is included herein. The client provided the test specimen. All measurements were conducted in the HT test chambers at Intertek B&C located in Lake Forest, California.

This report does not constitute certification of this product nor an opinion or endorsement by this laboratory. Intertek B&C will service this report for the entire test record retention period. The test record retention period ends four years after the test date. Test records, such as detailed drawings, datasheets, representative samples of test specimens, or other pertinent project documentation, will be retained for the entire test record retention period.

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For INTERTEK B&C:

COMPLETED BY	Yahya Paya	REVIEWED BY	Todd D. Kister
TITLE	Acoustic Lab Manager	TITLE	Senior Regional Manager
SIGNATURE	 Digitally Signed by: Yahya Paya	SIGNATURE	 Digitally Signed by: Todd D. Kister
DATE	06/17/26	DATE	06/17/26

YP:lcr

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Lab Code 600258-0

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SECTION 2

SUMMARY OF TEST RESULTS

SERIES/MODEL	Aspire
TYPE	Double door
GLAZING	1-1/32" IG (7/16" laminated exterior, 13/32" airspace, 3/16" tempered interior); 75F glass temperature
DATA FILE NO.	T6275.01B
STC	35
OITC	31

SECTION 3

TEST METHODS

The specimens were evaluated in accordance with the following:

ASTM E90-23, *Standard Test Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions and Elements*

ASTM E413-22, *Classification for Rating Sound Insulation*

ASTM E1332-22, *Standard Classification for Rating Outdoor-Indoor Sound Attenuation*

ASTM E2235-04 (2020), *Standard Test Method for Determination of Decay Rates for Use in Sound Insulation Test Methods*

SECTION 4

SPECIMEN INSTALLATION

A sound transmission loss test was initially performed on a filler wall.

The specimen plug was removed from the filler wall assembly. The specimen was placed on an isolation pad in the test opening. Duct seal was used to seal the perimeter of the specimen to the test opening on both sides. The interior side of the specimen, when installed, was approximately 1/4" from being flush with the receive room side of the filler wall. A stethoscope was used to check for any abnormal air leaks around the test specimen prior to testing. Operable portions of the test specimen, if any, were cycled at least five times prior to testing.

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SECTION 5

EQUIPMENT

The equipment listed below meets the requirements of the test methods stated in Section 3 of this report.

INSTRUMENT	MANUFACTURER	MODEL	DESCRIPTION	ASSET #	CAL DATE
Data Acquisition Card	National Instruments	PXIe-4464	Data Acquisition Card*	INT00837	09/25
Data Acquisition Card	National Instruments	PXIe-4464	Data Acquisition Card*	INT00625	07/25
Data Acquisition Card	National Instruments	PXIe-4464	Data Acquisition Card*	INT00396	09/25
Source Room Microphone	PCB Piezotronics	378C20	Microphone and Preamplifier	INT00235	10/25
Source Room Microphone	PCB Piezotronics	378C20	Microphone and Preamplifier	INT00234	10/25
Source Room Microphone	PCB Piezotronics	378C20	Microphone and Preamplifier	INT00236	10/25
Source Room Microphone	PCB Piezotronics	378C20	Microphone and Preamplifier	INT00237	10/25
Source Room Microphone	PCB piezotronics	378C20	Microphone and Preamplifier	INT00238	10/25
Receive Room Microphone	PBC Piezotronics	378C20	Microphone and Preamplifier	INT00239	05/25
Receive Room Microphone	PCB Piezotronics	378C20	Microphone and Preamplifier	INT00240	05/25
Receive Room Microphone	PCB Piezotronics	378C20	Microphone and Preamplifier	INT00241	05/25
Receive Room Microphone	PCB Piezotronics	378C20	Microphone and Preamplifier	INT00242	05/25
Receive Room Microphone	PCB Piezotronics	378C20	Microphone and Preamplifier	INT00243	05/25
Receive Room Environmental Indicator	Comet	T7510	Receive Room	INT00300	07/25
Source Room Environmental Indicator	Comet	T7510	Source Room	INT00299	07/25
Microphone Calibrator	Norsonic	1251	Pistonphone Calibrator	INT00288	06/25

*- Note: The calibration frequency for this equipment is every two years per the manufacturer's recommendation.

TEST CHAMBER

	VOLUME	DESCRIPTION
RECEIVE ROOM	231 m ³	Rotating vane and stationary diffusers Temperature and humidity controlled Isolation pads under the floor
SOURCE ROOM	196 m ³	Stationary diffusers only Temperature and humidity controlled

	MAXIMUM SIZE	DESCRIPTION
TL TEST OPENING	4.27 m wide by 3.05 m high	Vibration break between source and receive rooms

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SECTION 6

LIST OF OFFICIAL OBSERVERS

NAME	COMPANY
Mario Salazar	Frameless Hardware Company LLC
Marco Ramirez	Frameless Hardware Company LLC
Michael Richie	Intertek B&C
Yahya Paya	Intertek B&C

SECTION 7

TEST PROCEDURE

The sensitivity of the microphones was checked before measurements were conducted.

The transmission loss values were obtained for a single direction of measurement.

Two background noise sound pressure levels and five sound absorption measurements were conducted at each of five microphone positions.

Two sound pressure level measurements were made simultaneously in receive and source rooms at each of five microphone positions.

The air temperature and relative humidity conditions were monitored and recorded during all measurements.

Data for flanking limit tests, repeatability measurements, and reference specimen tests are available upon request.

Intertek B&C will save photographs of the sampled test specimens.

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SECTION 8

ACOUSTICAL TEST CALCULATIONS

Transmission loss (TL) at each 1/3 octave frequency is the average source room sound pressure level minus the average receive room sound pressure level, plus, 10 times the log of the specimen area divided by the sound absorption of the receive room with the sample in place.

STC Rating

To obtain the Sound Transmission Class (STC), read the TL of the contour curve at 500 Hz. The sum of the deficiencies below the contour curve must not exceed 32. The maximum deficiency at any one frequency must not exceed 8.

OITC Rating

The Outdoor-Indoor Transmission Class (OITC) is calculated by subtracting the logarithmic summation of the TL values from the logarithmic summation of the A-weighted transportation noise spectrum stated in ASTM E1332.

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SECTION 9

SPECIMEN DESCRIPTION

	FRAME	VENT (2X)
SIZE	76-5/8" by 84"	36-7/8" by 83-1/8"
THICKNESS	2-3/8"	2-1/2"
CORNERS	Mitered	Mitered
FASTENERS	Screws	Screws
SEAL METHOD	N/A	N/A
MATERIAL	Aluminum	Aluminum
REINFORCEMENT	N/A	N/A
THERMAL BREAK MATERIAL	Polyamide 66 with glass-fiber reinforced	Polyamide 66 with glass-fiber reinforced
DAYLIGHT OPENING SIZE	N/A	34-5/8" by 68-1/2"

Note: There was silicone sealant in the threshold to frame joint.

MEASURED OVERALL INSULATION GLASS UNIT THICKNESS LEFT PANEL	1.030"
SPACER TYPE	Black Aluminum

	EXTERIOR SHEET	GAP	INTERIOR SHEET
MEASURED THICKNESS	0.432"	0.408"	0.190"
MUNTIN PATTERN	N/A	N/A	N/A
MATERIAL	Laminated	Air*	Tempered
LAMINATE MATERIAL	QS 41 (Acoustical) PVB*	N/A	N/A

GLAZING METHOD	Channel
GLAZING MATERIAL	Aluminum with EPDM

* - Stated per Client/Manufacturer, N/A-Not Applicable

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	TYPE	QUANTITY	LOCATION
WEATHERSTRIP	Bulb gasket	1 Row	Stiles and meeting stiles
	Center fin pile	2 Rows	Top rails
	Center fin pile	1 Row	Bottom rails
	Drop seal	1	Bottom rails
HARDWARE	Dual purpose bottom pivot	2	Jambs
	Top pivot	2	Jambs
	Cylinder lock	4	Top and bottom rails
	Keeper	4	Head and sill
	Thermally broken Threshold	1	Sill
DRAINAGE	No drainage		

TOTAL WEIGHT (lbs)	AVERAGE WEIGHT (lbs/ft ²)
450.71	10.08

Photographs are included in Section 11.

A drawing of the test specimen is included in Section 12.

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SECTION 10

TEST RESULTS

ASTM E90 AIRBORNE SOUND TRANSMISSION LOSS



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TEST DATE	04/06/26				
DATA FILE NO.	T6275.01B				
CLIENT	Frameless Hardware Company LLC				
DESCRIPTION	Aspire double door with 1-1/32" IG (7/16" laminated exterior, 13/32" airspace, 3/16" annealed interior); 75F glass temperature				
SPECIMEN AREA	4.15 m ²	RECEIVE TEMP.	22.9 °C	SOURCE TEMP.	22.8 °C
TECHNICIAN	Michael Rich	RECEIVE HUMIDITY	35%	SOURCE HUMIDITY	37%

FREQ (Hz)	BACKGROUND SPL (dB)	ABSORPTION (m ²)	SOURCE SPL (dB)	RECEIVE SPL (dB)	SPECIMEN TL (dB)	95% SAMPLING LIMIT (dB)	NUMBER OF DEFICIENCIES
80	21.6	4.6	97	72	25	4.10	-
100	23.1	6.0	95	70	24	2.71	-
125	36.3	5.3	98	72	24	1.84	0
160	27.6	4.6	99	72	27	1.73	0
200	20.4	5.9	102	78	22	1.67	3
250	17.3	7.0	103	73	28	1.50	0
315	13.5	7.1	105	71	31	0.98	0
400	15.0	6.3	106	72	32	0.80	2
500	15.5	5.7	104	70	33	0.73	2
630	18.8	5.9	104	69	34	0.51	2
800	23.4	6.0	103	68	34	0.36	3
1000	10.2	6.0	105	68	35	0.41	3
1250	8.5	6.3	103	64	37	0.53	2
1600	9.0	6.9	100	59	39	0.46	0
2000	8.0	8.3	98	54	41	0.33	0
2500	7.0	9.5	98	56	39	0.50	0
3150	7.6	11.2	99	58	37	0.54	2
4000	7.9	14.1	97	54	38	0.59	1
5000	8.7	18.0	93	47	39	1.03	-
STC RATING	35 (Sound Transmission Class)						
DEFICIENCIES	20 (Sum of Deficiencies)						
OITC RATING	31 (Outdoor-Indoor Transmission Class)						

- Notes:**
- 1) Receive Room levels less than 6 dB above the Background levels are red.
 - 2) Specimen TL levels listed in red indicate the lower limit of the transmission loss.
 - 3) Specimen TL levels listed in green indicate that there has been a filler wall correction applied

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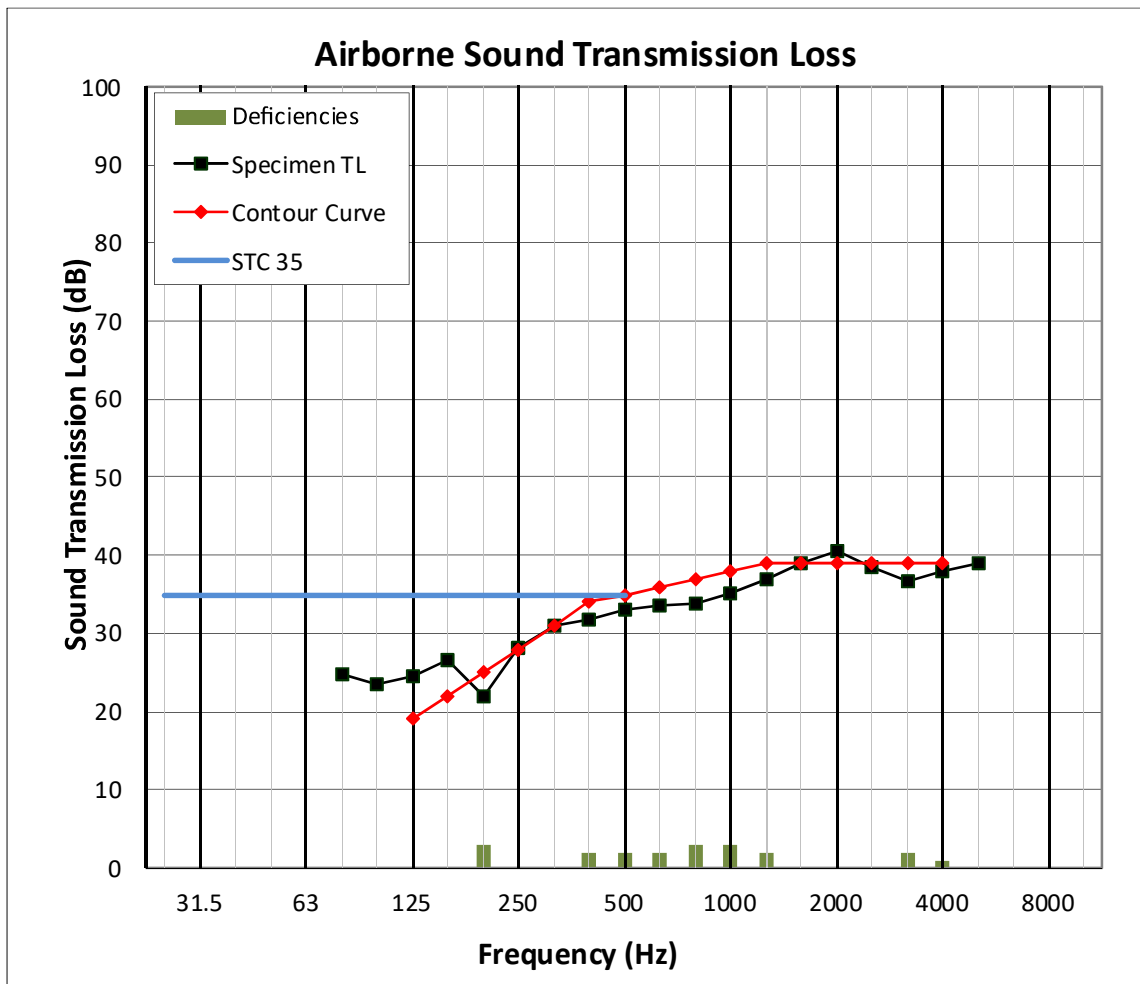
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SECTION 11

PHOTOGRAPHS



Photo No. 1
Receive Room View of Installed Specimen



Photo No. 2
Source Room View of Installed Specimen

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SECTION 12 DRAWING

BILL OF MATERIALS			
TYPE	ITEM	PART NUMBER	DESCRIPTION
FRAME	F1	ASDHRTDPU	ASPIRE HEADER FOR TOP PIVOT DARK BRONZE
	F2	ASDWMCMPSU	ASPIRE DOOR JAMB AT WALL COMPOSITE DARK BRONZE
	F3	ASDTRDMPMSA	ASPIRE 8" THRESHOLD COMPOSITE CLEAR ANODIZE
DOOR	D1	ASVDGDMPSU	ASPIRE VERTICAL DOOR STYLE HOUSING 1" I.G. DARK BRONZE
	D2	ASRCDMPDU	ASPIRE 4" DOOR RAIL HOUSING 1" I.G. COMPOSITE DARK BRONZE
	D3	ASRCDMU	ASPIRE DOOR RAIL CONTROL MEMBER 1" I.G. DARK BRONZE
	D4	ASRCDU	ASPIRE DOOR RAIL GLASS CLAMP 1" I.G. DARK BRONZE
	D5	ASVDGDCDU	ASPIRE VERTICAL DOOR STYLE GLASS CLAMP 1" I.G. DARK BRONZE
	D6	ASRDCMPSU	ASPIRE 18" DOOR RAIL HOUSING 1" I.G. COMPOSITE DARK BRONZE
CLAD	C1	ASDHRTCLDCA	ASPIRE HEADER FOR TOP PIVOT CLADDING CLEAR ANODIZE
	C2	ASDWMCLDCA	ASPIRE DOOR JAMB AT WALL CLADDING CLEAR ANODIZE
	C3	ASDWMCLDCA	ASPIRE VERTICAL MULLION AT WALL CLADDING CLEAR ANODIZE
	C4	ASRCDCLDCA	ASPIRE 4" DOOR RAIL CLADDING 1" I.G. 5/8" 1/2" CLEAR ANODIZE
	C5	ASVDCLDCA	ASPIRE VERTICAL DOOR STYLE CLADDING 1" I.G. CLEAR ANODIZE
GASKET	G1	ASBLUSL	ASPIRE BULB SEAL FOR VERTICAL MULLIONS
	G2	AVGGLG1	ASPIRE VERTICAL DOOR STYLE CLAMP GASKET
	G3	AKR10UG1	ASPIRE DOOR RAIL 1" I.G. CLAMP GASKET
	G4	9720	BLACK HEAVY DENSITY QUIET CENTER FIN FLEECE (0.187" X 0.302")
	HARDWARE	H1	RFAD1MB
H2		PRAGRB8	FHC RADJL PIVOT SLIDE BLOCK ASSEMBLY FOR ASPIRE DOORS
H3		SEV10HP	FHC HEAVY DUTY ADJUSTABLE DUAL PURPOSE BOTTOM PIVOT SET
H4		RCT12GA	FHC MORTISE KEYED CYLINDER W/ 3MM TRIM RING SATIN ANODIZE
H5		R777S	FHC STANDARD DOOR RAIL FLOOR LOCK 11/16" THROW
H6		SPS1B5	FHC DUST PROOF KEEPER NON-LOCKING WITH PLATE BRUSHED STAINLESS STEEL
H7		PLA2096	PLANET DRIP SEAL 90MM (3.75")
SCREWS	S1	ASDRCFST	3/8"-16 X 1-1/4" DUP-POINT SET SCREW 18-8 STAINLESS ASPIRE DOOR RAIL CLAMPING FASTENER WITH NYLON PATCH
	S2	ASDUPST	ASPIRE 3/8"-16 X 1-1/2" LOW PROFILE SOCKET CAP SCREW 18-8 STAINLESS STEEL
	S3	ASDCRFST	ASPIRE CORNER BLOCK FASTENERS W/PATCH
	S4	63071PHR180	5-23 7/16" PHILLIPS FLAT HEAD UNDERCUT 18-8 STAINLESS
	S5	ASVDGCFST	ASPIRE #10-24 X 1/2" CONE POINT SET SCREW 18-8 STAINLESS STEEL W/ NYLON PATCH
	S6	HR64	86-30 X 1/4" LONG 18-8 STAINLESS STEEL HEX DRIVE FLAT HEAD SCREW
	S7	ASDCRFST	ASPIRE 1/4" 28 X 3/8" SOCKET CAP SCREW 18-8 STAINLESS - CORNER BLOCK FASTENERS
	S8	9024A207	PHI 3/8" X 2" LONG 18-8 STAINLESS STEEL PHILLIPS FLAT HEAD SCREW FOR WOOD
MISC	M1	AS1AGL5	1" THICK INSULATED TEMP GLASS PANEL 3/16" CLEAR TEMP X 3/8" AIR SPACER X 3/16" CLEAR TEMP 2507 25.41 (ACROSTICAL) FIN 3/16" CLEAR TEMP
	M2	VD55CAP	ASPIRE WEATHER STRIP CAP
	M3	AS1DUP5BLK	ASPIRE DOOR JACK PUSHING BLOCK
	M4	AS1CRNBLAC	DOOR CORNER BLOCK FOR ALUMINUM CLADDED ASPIRE DOOR
	M5	VH8110	PVC VHB ADHESIVE TAPE 310 X 1"
	M6	VH81240	775 X 340 X 100 ACRYLIC VERY HIGH-BOND ADHESIVE TAPE
	M7	VH81240	ACRYLIC VHB ADHESIVE TAPE 340 X 1-1/2"
	M8	SS2B2	FHC 1.87" X 1.14" X 4" BLACK SILICONE 80 DURETOMETER SETTING BLOCK
	M9	COBR14C	FHC BRACKET ROD CLOSED CELL 1/4" DIA
	M10	DC7568	FHC 760 DOWN COMING SILICONE BUILDING SEALANT - BLACK
M11	51001	5047-1540-000005 ACRYLIC 21.88" DIA X 100" L X 1/2" THICK	

FHC
Framing Hardware Company

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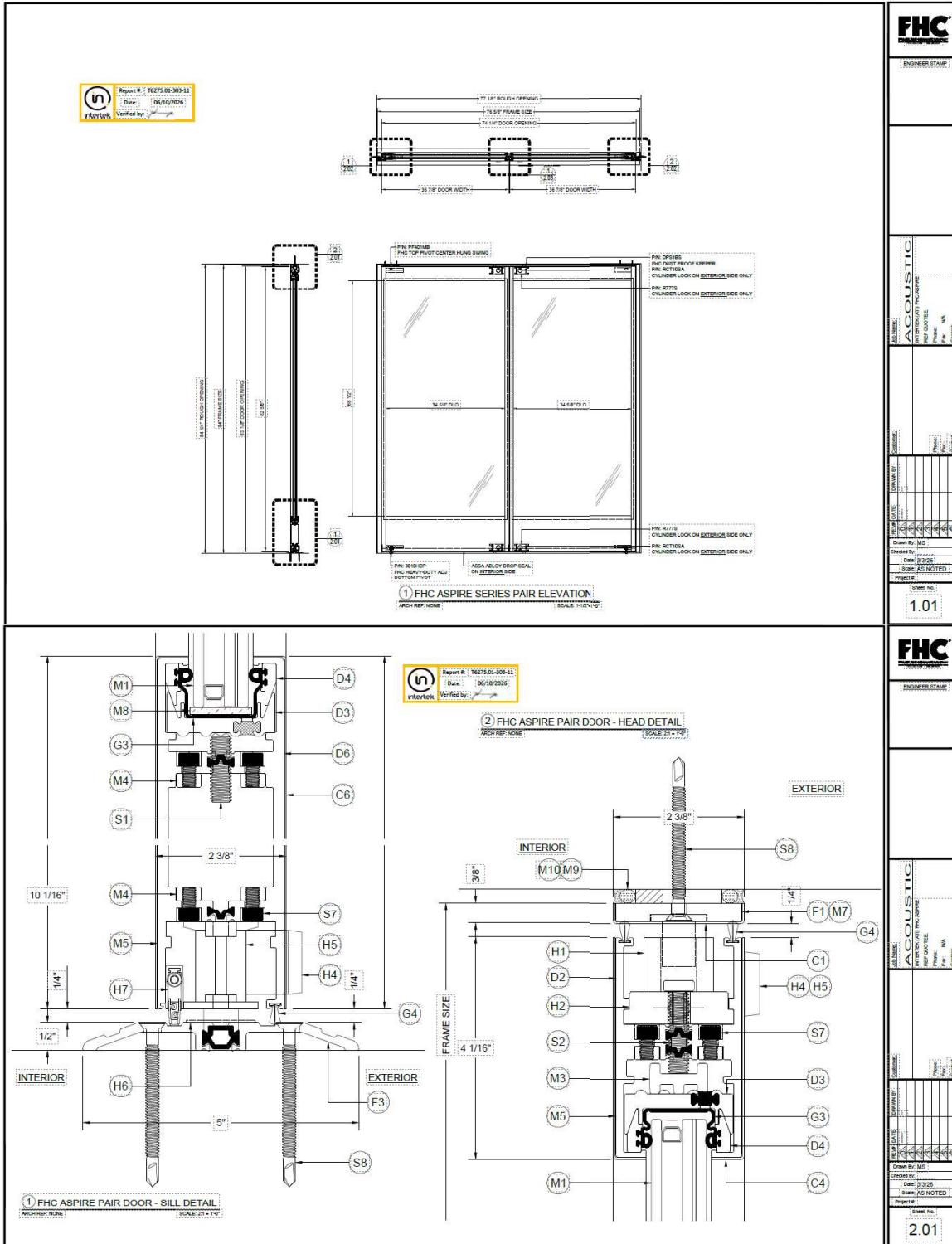
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ARCHITECT: ACCUSTIC	
PROJECT: ACCUSTIC	
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ENGINEER: STAFF	
ARCHITECT: ACCUSTIC	
PROJECT: ACCUSTIC	
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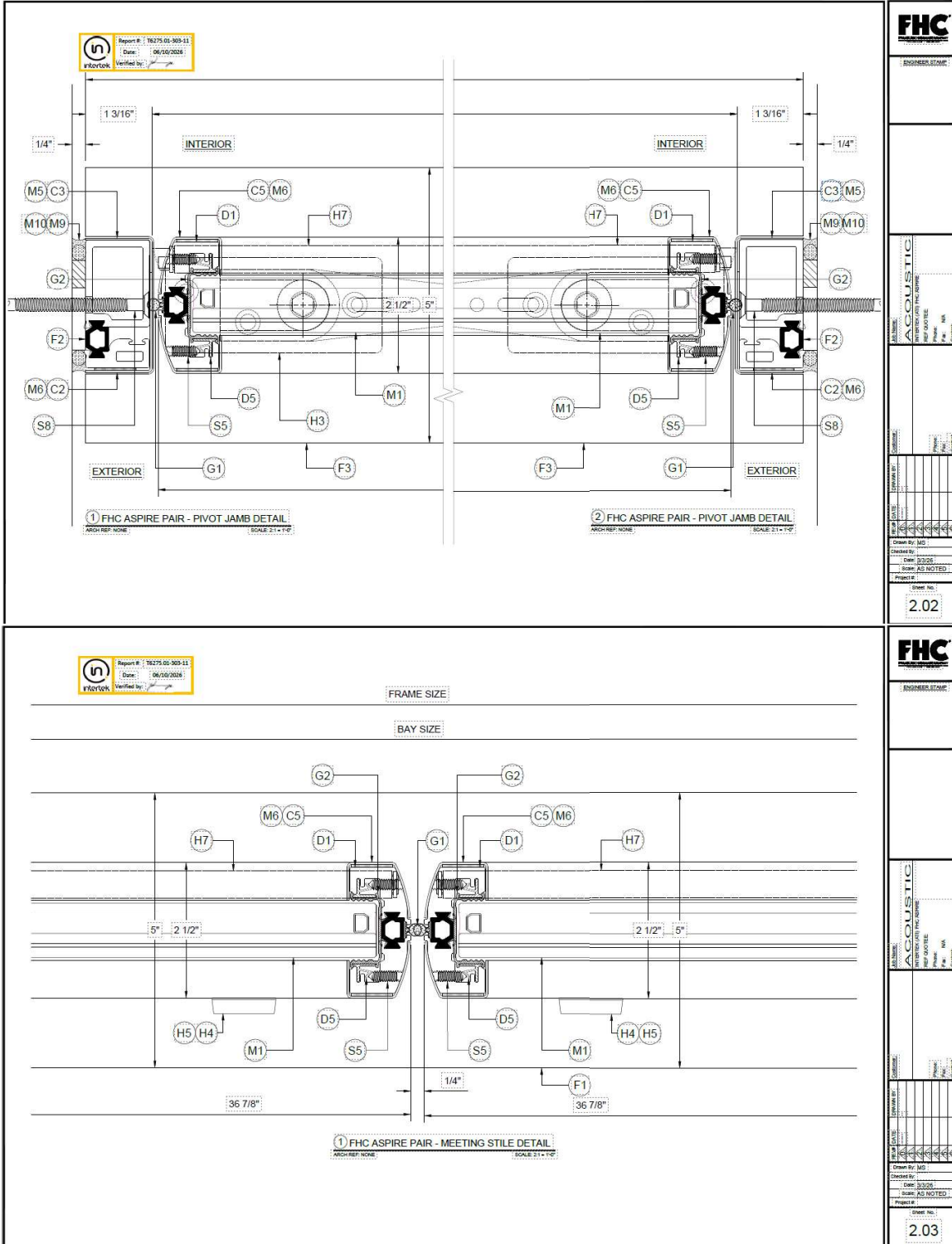
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SECTION 13

REVISION LOG

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