

MONTGOMERY COUNTY HISTORIC PRESERVATION COMMISSION
STAFF REPORT

Address:	201 Ethan Allen Ave., Takoma Park	Meeting Date:	4/23/2025
Resource:	Non-Contributing Resource Takoma Park Historic District	Report Date:	4/16/2025
Project Contact:	Marty Bates, Architect	Public Notice:	4/9/2025
Review:	HAWP	Tax Credit:	no
Case Number:	1112653	Staff:	Dan Bruechert
Proposal:	Demolition of Temporary Building and Construction of New Accessory Structure		

RECOMMENDATION

Staff recommends that the Historic Preservation Commission **approve** the HAWP.

PROPERTY DESCRIPTION

SIGNIFICANCE: Non-Contributing Resource to the Takoma Park Historic District
STYLE: Commercial
DATE: c.1930s



Figure 1: The subject property is located in the Takoma Junction section of the Takoma Park Historic District.

BACKGROUND

On March 20, 2024,¹ the HPC approved a Historic Area Work Permit (HAWP) to replace the mechanical systems at the subject property and for other changes. HVAC mechanicals were to be installed on the roof of the subject property, and a compressor for refrigeration was installed in the parking lot to the east of the building. A chain link fence surrounding the compressor was included in the HAWP approval.

After the October 2024 installation of these new systems, residents submitted a complaint to the Department of Permitting Services (DPS) regarding the noise created by the compressor. An inspector verified that the compressor exceeded the county's noise ordinance. To mitigate the noise, the applicant installed the existing structure surrounding the compressor with acoustic noise panels. This structure was installed without a HAWP or commercial building permit.

While the structure did reduce the compressor's volume, residents surrounding the subject property were still being impacted by lower frequency noise from the new system. Additional complaints alerted Historic Preservation and DPS Commercial Building to the presence of this new structure. The applicant received notice from the County that permits were required for the existing building and for any new structure.

The applicant has redesigned the structure surrounding the on-grade compressor and seeks the HPC's approval.

PROPOSAL

The applicant proposes to a CMU structure surrounding the on-grade compressor.

APPLICABLE GUIDELINES

When reviewing alterations and additions for new construction to Non-Contributing Resources within the Takoma Park Historic District, decisions are guided by the Takoma Park Historic District Design Guidelines (*Design Guidelines*) and Montgomery County Code Chapter 24A (*Chapter 24A*) and the Secretary of the Interior's Standards for Rehabilitation (*The Standards*).

Takoma Park Historic District Design Guidelines

There are two very general, broad planning and design concepts which apply to all categories. These are:

The design review emphasis will be restricted to changes that are at all visible from the public right-of-way, irrespective of landscaping or vegetation (it is expected that the majority of new additions will be reviewed for their impact on the overall district), and,

The importance of assuring that additions and other changes to existing structures act to reinforce and continue existing streetscape, landscape, and building patterns rather than to impair the character of the district.

Non-Contributing/Out-of-Period Resources should receive the most lenient level of design review. Most alterations and additions to Non-Contributing/Out-of-Period Resources should be approved as a matter of

¹ The Staff Report for the March 2024 HAWP is available here: <https://montgomeryplanning.org/wp-content/uploads/2024/03/I.G-201-Ethan-Allen-Avenue-Takoma-Park-1060954.pdf>. It was approved by consent without a hearing.

course. The only exceptions would be major additions and alterations to the scale and massing of Non-Contributing/Out-of-Period Resources which affect the surrounding streetscape and/or landscape and could impair character of the district as a whole.

Montgomery County Code, Chapter 24A Historic Resources Preservation

(b) The commission shall instruct the director to issue a permit, or issue a permit subject to such conditions as are found to be necessary to insure conformity with the purposes and requirements of this chapter, if it finds that:

- (1) The proposal will not substantially alter the exterior features of an historic site or historic resource within an historic district; or
- (2) The proposal is compatible in character and nature with the historical, archeological, architectural or cultural features of the historic site or the historic district in which an historic resource is located and would not be detrimental thereto or to the achievement of the purposes of this chapter; or
- (3) The proposal would enhance or aid in the protection, preservation and public or private utilization of the historic site or historic resource located within an historic district in a manner compatible with the historical, archeological, architectural or cultural value of the historic site or historic district in which an historic resource is located; or
- (4) The proposal is necessary in order that unsafe conditions or health hazards be remedied; or
- (5) The proposal is necessary in order that the owner of the subject property not be deprived of reasonable use of the property or suffer undue hardship; or
- (6) In balancing the interests of the public in preserving the historic site or historic resource located within an historic district, with the interests of the public from the use and benefit of the alternative proposal, the general public welfare is better served by granting the permit.

(d) In the case of an application for work on an historic resource located within an historic district, the commission shall be lenient in its judgment of plans for structures of little historical or design significance or for plans involving new construction, unless such plans would seriously impair the historic or architectural value of surrounding historic resources or would impair the character of the historic district. (Ord. No. 9-4, § 1; Ord. No. 11-59.)

Secretary of the Interior's Standards for Rehabilitation

2. The historic character of a property shall be retained and preserved. The removal of historic materials or alteration of features and spaces that characterize a property shall be avoided.
9. New additions, exterior alterations, or related new construction will not destroy historic materials, features, and spatial relationships that characterize the property. The new work shall be differentiated from the old and will be compatible with the historic materials, features, size, scale and proportions, and massing to protect the integrity of the property and its environment.
10. New additions and adjacent or related new construction will be undertaken in such a manner that, if removed in the future, the essential form and integrity of the historic property and its environment would be unimpaired.

STAFF DISCUSSION

The subject property is a one-story commercial building, with brick and terra cotta block siding. The non-historic commercial storefront system faces north. There is open parking to the east (on the subject property) and to the west (a lot owned by the City of Takoma Park). In late 2024, the applicant

constructed an unpermitted framed structure surrounding the on-grade compressor which had been approved as part of the March 2024 HAWP. The existing structure has T1-11 siding and a shed roof covered in asphalt shingles. The applicant proposes to demolish the unpermitted structure and construct a new accessory structure to surround the compressor. The objective of the new structure is to both visually obscure and mitigate noise from the compressor.

Existing Structure Demolition

The existing T1-11-sided structure was installed without a HAWP or commercial building permit. Staff finds its demolition will return the site to its permitted condition and should be approved as a matter of course.

Accessory Structure Construction

The applicant proposes to construct a new accessory structure in the location of the unpermitted structure. The proposed structure measures approximately 23' × 11' (twenty-three feet wide by eleven feet deep) and 14' 6" (fourteen feet, six inches) at its tallest. The structure will be constructed using CMU blocks, with fiber cement trim, aluminum gutters and downspouts, and asphalt shingles on its shed roof. On the north side of the structure, the applicant proposes to install a solid aluminum door. The exterior of the CMU wall will be covered in a mural which will be commissioned by the subject property's tenant. Staff finds this should be considered a 'painted' finish so repainting the mural at a future date does not require HPC review and approval. The applicant should check with DPS Zoning to see if the mural qualifies as signage that would need to meet size requirements or other Zoning requirements.

The proposed structure will have two openings for ventilation; on the west elevation, there is a 15' 5" × 4' (fifteen-foot, five-inch wide by four-foot tall) opening and a matching opening at the top of the roof.

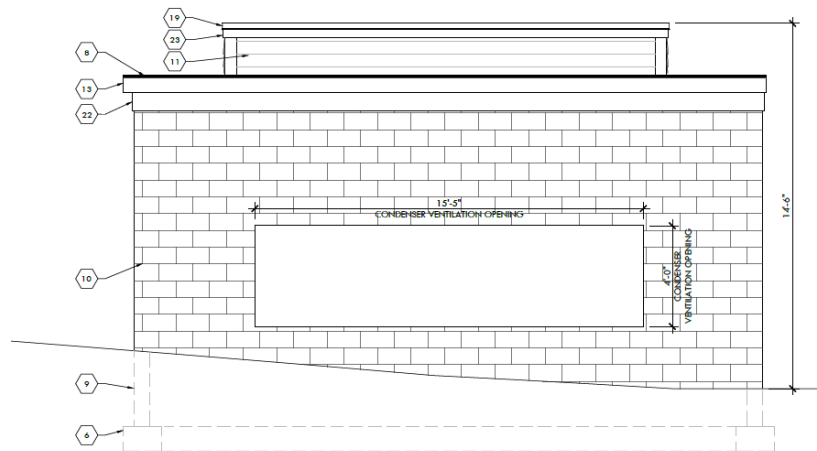


Figure 2: West elevation of the proposed structure showing the opening facing the existing building.

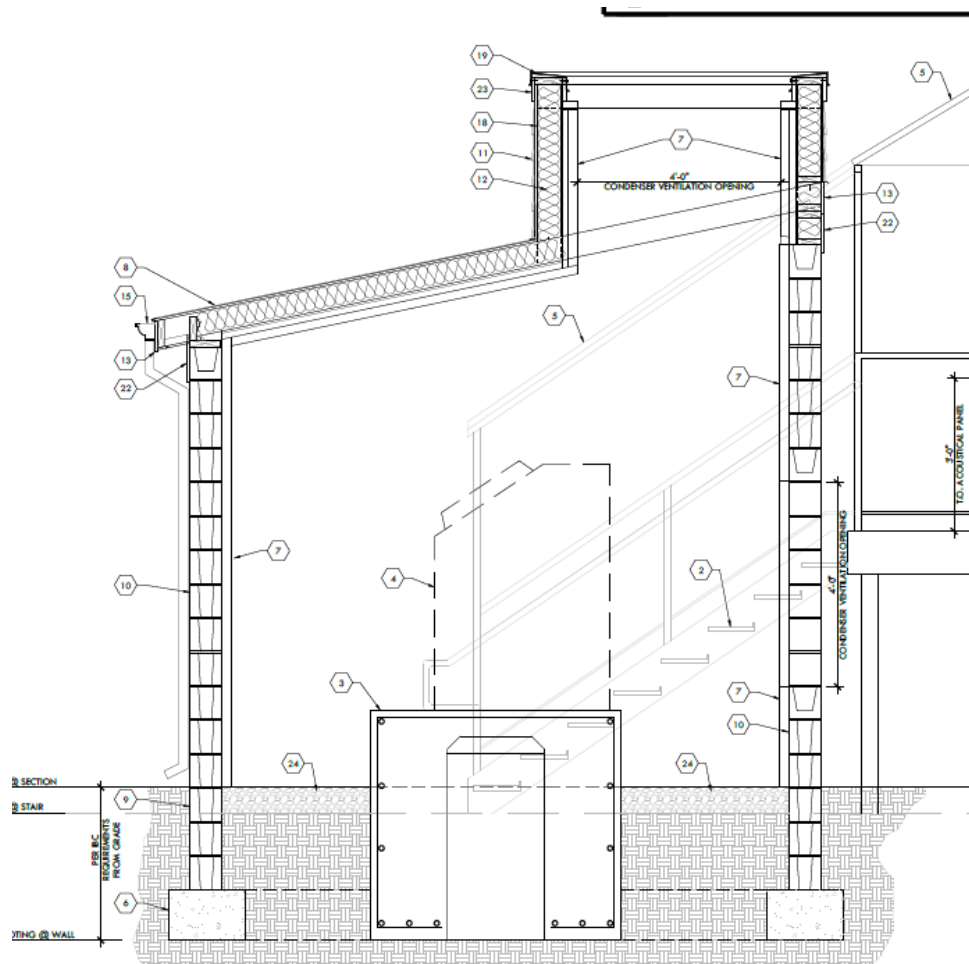


Figure 3: Section of the proposed structure showing the vent at the top of the structure.

The applicant also seeks approval for eight concrete bollards surrounding the structure. These bollards were installed when the existing unpermitted structure was installed. The bollards are installed to the north and east of the structure.

Staff finds the size and scale of the proposed structure will not overwhelm the character of the space or surrounding district. The proposed structure is approximately half of the height of the existing non-contributing building. Staff additionally finds that its simple utilitarian design is generally compatible with the brick and block construction of the existing building. Reviewed under the *Design Guidelines* for non-contributing resources, Staff finds that the proposed structure's size and mass will not detract from the surrounding streetscape.

Staff finds the proposed materials are generally consistent with the commercial/industrial character of the rear of the subject building; and finds that painting the exterior of the building will help the proposed structure to better blend in with the surrounding Takoma Junction section of the Takoma Park Historic District.

Staff notes that this structure could be removed in the future and the lot returned to its previous appearance.

Based on the design, materials, and placement of the proposed structure Staff recommends the HPC

approve the proposed accessory structure under 24A-8(b)(2) and (d), the *Design Guidelines*, and *Standards #2, 9, and 10*.

Sound-Reduction Mitigation

The non-permitted structure, discussed above, was constructed in response to a determination that the compressor was louder than permitted under the county's sound ordinance. After the structure was constructed, the measurable noise fell below the statutory maximum, however, a number of complaints regarding low-frequency noise remained. On a previous site visit, Staff observed the low-frequency noise which seems to be felt rather than heard.

While the provided acoustic analysis is helpful in addressing a known issue, Staff does not find a justification in the *Standards*, 24A-8, or the *Design Guidelines* that would allow the known acoustic issue to be a determining factor in the final disposition of this HAWP. However, Staff recognizes that this issue influenced the overall design and construction of the proposed structure and includes a discussion of the mitigating measures to better illustrate the project background.

The applicant consulted with Phoenix Noise & Vibration (report attached to the application) to measure the existing conditions and to help ameliorate the effects of those frequencies. The analysis submitted shows that there were higher levels of tonal low-frequency noise in the range of 63-80 Hz (hertz). The acoustic consultant focused on reducing the transmission of these specific lower frequencies in the design of the proposed structure.

The interior walls will be constructed using grout-filled CMU block with a 2" (two-inch) engineered noise barrier. The roof will have the same engineered noise barrier, but will also include noise-dampening sheetrock, plywood sheathing, fiberglass insulation, and asphalt roof shingles. An engineered noise barrier will also be installed on the existing building opposite the proposed structure's west ventilation opening.

The modeling shows that the wall construction will significantly reduce the transmission of low-frequency noise compared to the existing conditions. The proposed roof has much less impact on sound transmission at these lower frequencies, but does substantially reduce the noise transmission at frequencies above 80 Hz. The analysis notes that the comparison between the walls and the existing conditions does not account for the ventilated openings.

Staff lacks the expertise in acoustic engineering to provide thorough feedback from this analysis. Because Staff lacks this background, Staff cannot identify any additional materials that may be necessary to more thoroughly evaluate the proposal; and encourages the architects and engineers on the HPC to determine if any additional materials on this topic are necessary.

STAFF RECOMMENDATION

Staff recommends that the Commission **approve** the HAWP application; under the Criteria for Issuance in Chapter 24A-8(b)(2), and (d), having found that the proposal will not substantially alter the exterior features of the historic resource and is compatible in character with the district and the purposes of Chapter 24A;

and with the *Guidelines* and with the *Secretary of the Interior's Standards for Rehabilitation #2, #9, and #10*;

and with the general condition that the applicant shall present an electronic set of drawings, if

applicable, to Historic Preservation Commission (HPC) staff for review and stamping prior to submission for the Montgomery County Department of Permitting Services (DPS) building permits;

and with the general condition that final project design details, not specifically delineated by the Commission, shall be approved by HPC staff or brought back to the Commission as a revised HAWP application at staff's discretion;

and with the general condition that the applicant shall notify the Historic Preservation Staff if they propose to make **any alterations** to the approved plans. Once the work is completed the applicant will contact the staff person assigned to this application at 301-563-3400 or dan.bruechert@montgomeryplanning.org to schedule a follow-up site visit.



FOR STAFF ONLY:
HAWP# 1112653
DATE ASSIGNED _____

APPLICATION FOR HISTORIC AREA WORK PERMIT

HISTORIC PRESERVATION COMMISSION
301.563.3400

APPLICANT:

Name: _____

E-mail: _____

Address: _____

City: _____ Zip: _____

Daytime Phone: _____

Tax Account No.: _____

AGENT/CONTACT (if applicable):

Name: _____

E-mail: _____

Address: _____

City: _____ Zip: _____

Daytime Phone: _____

Contractor Registration No.: _____

LOCATION OF BUILDING/PREMISE: MIHP # of Historic Property _____

Is the Property Located within an Historic District? Yes/District Name _____

No/Individual Site Name _____

Is there an Historic Preservation/Land Trust/Environmental Easement on the Property? If YES, include a map of the easement, and documentation from the Easement Holder supporting this application.

Are other Planning and/or Hearing Examiner Approvals /Reviews Required as part of this Application? (Conditional Use, Variance, Record Plat, etc.?) If YES, include information on these reviews as supplemental information.

Building Number: _____ Street: _____

Town/City: _____ Nearest Cross Street: _____

Lot: _____ Block: _____ Subdivision: _____ Parcel: _____

TYPE OF WORK PROPOSED: See the checklist on Page 4 to verify that all supporting items for proposed work are submitted with this application. Incomplete Applications will not be accepted for review. Check all that apply:

☐ New Construction

☐ Deck/Porch

☐ Shed/Garage/Accessory Structure

☐ Addition

☐ Fence

☐ Solar

☐ Demolition

☐ Hardscape/Landscape

☐ Tree removal/planting

☐ Grading/Excavation

☐ Roof

☐ Window/Door

☐ Other: _____

I hereby certify that I have the authority to make the foregoing application, that the application is correct and accurate and that the construction will comply with plans reviewed and approved by all necessary agencies and hereby acknowledge and accept this to be a condition for the issuance of this permit.

Clifford Bates

Signature of owner or authorized agent

Date

Building Owner:

R&D TURNER FAMILY LLC (81-2509891)

18341 CARRICO MILLS RD
STEVENSBURG VA 22741

Phone: 540-229-0116 (ATTN: Dianne Matthews)

Applicant (Tenant & Owner's Representative):

Mike Houston, of TAKOMA PARK SILVER SPRING CO-OP

201 Ethan Allen Avenue

Takoma Park, MD 20912

Phone: 301-891-2667

Tax Account No:

Agent/Primary Contact (for Tenant & Owner):

Marty Bates, of BATES ARCHITECTS, LLC

121 N. Court Street,
Frederick, MD 21701

Phone: 301-644-0440 (x700)

Maryland State License No.: 5933A

HAWP APPLICATION: MAILING ADDRESSES FOR NOTIFYING
[Owner, Owner's Agent, Adjacent and Confronting Property Owners]

Owner's mailing address	Owner's Agent's mailing address
Adjacent and confronting Property Owners mailing addresses	
7127 Sycamore Avenue Takoma Park, Md. 20912	

Description of Property: Please describe the building and surrounding environment. Include information on significant structures, landscape features, or other significant features of the property:

Description of Work Proposed: Please give an overview of the work to be undertaken:

Work Item 1: _____

Description of Current Condition:

Proposed Work:

Work Item 2: _____

Description of Current Condition:

Proposed Work:

Work Item 3: _____

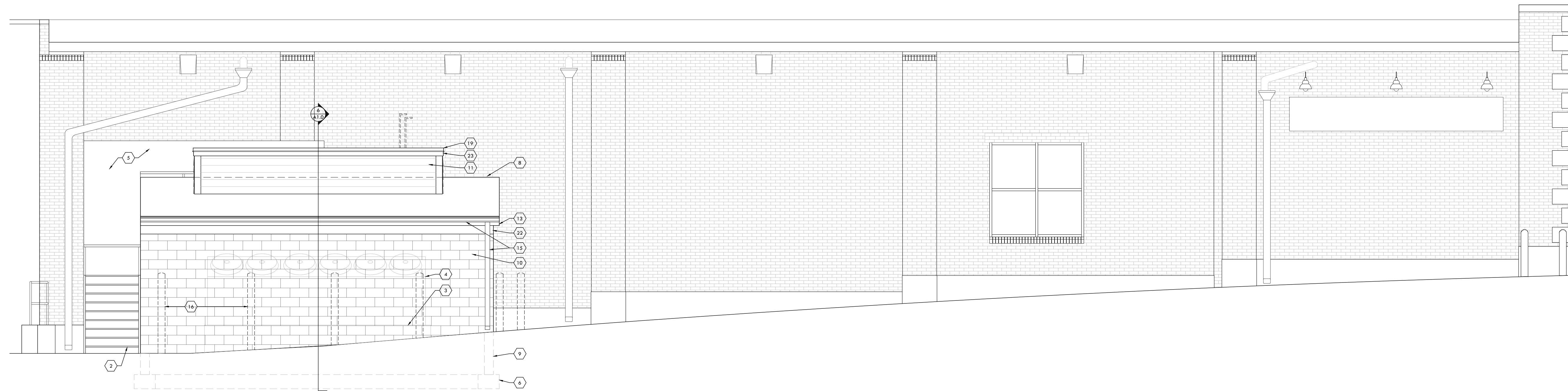
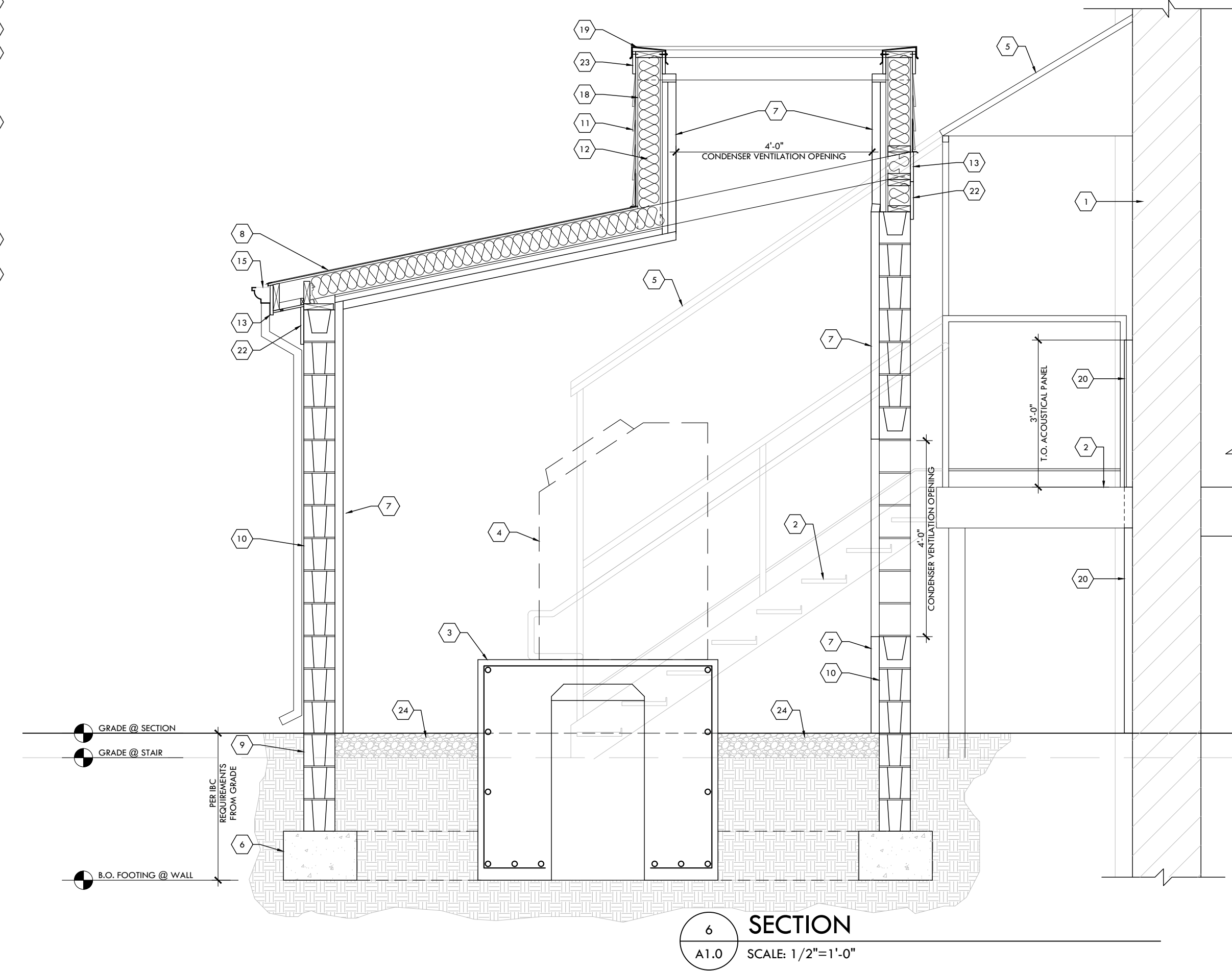
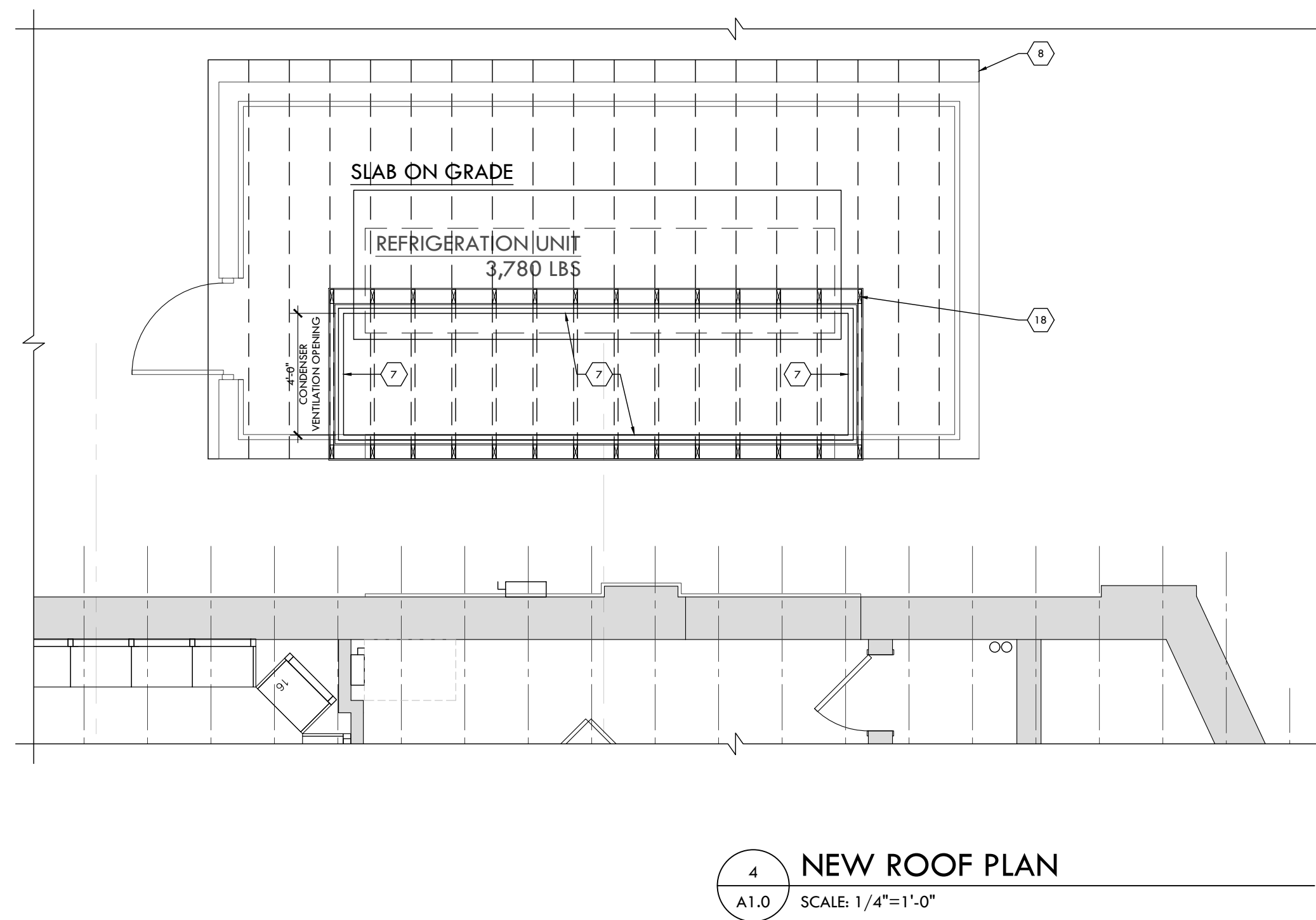
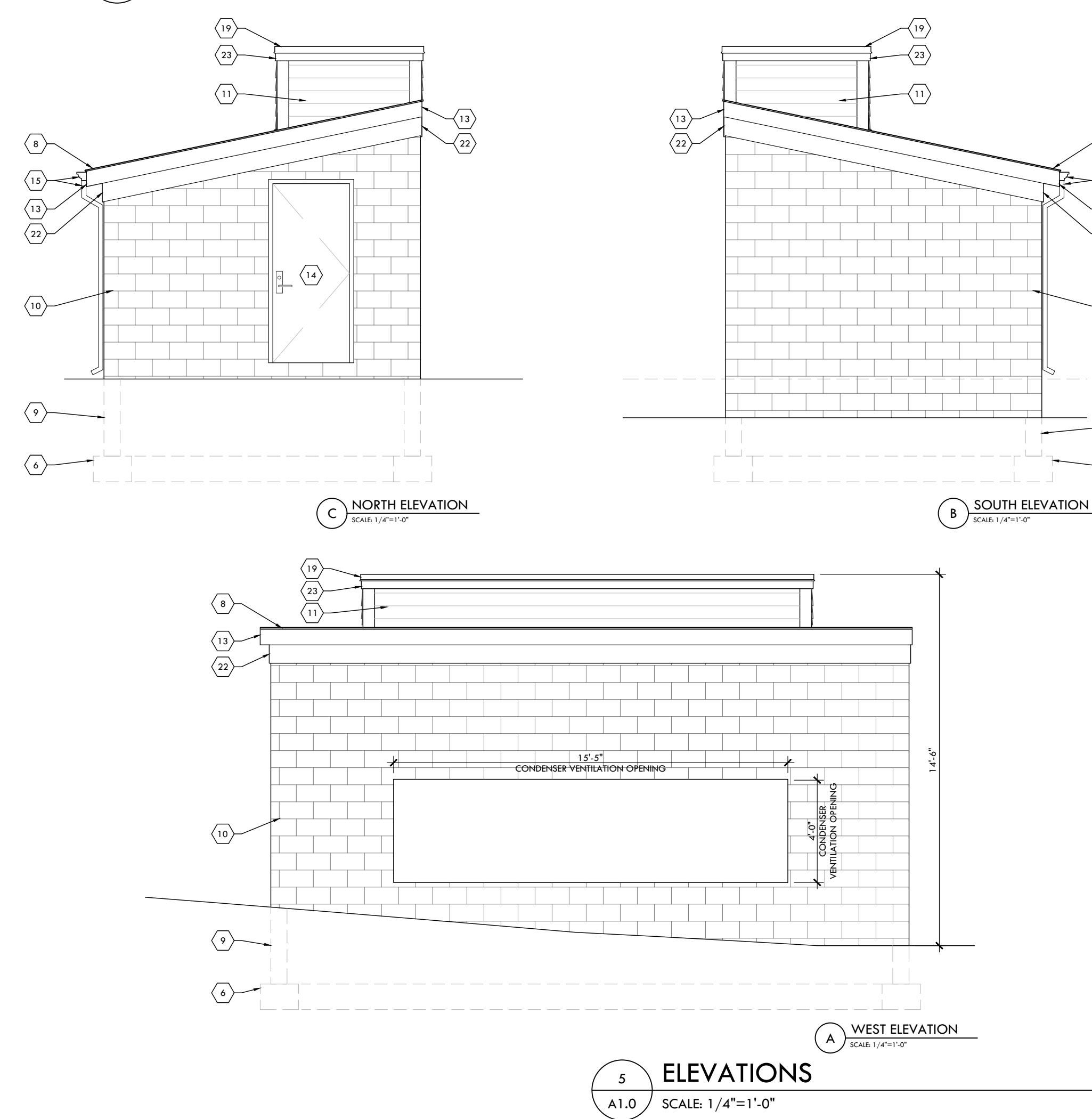
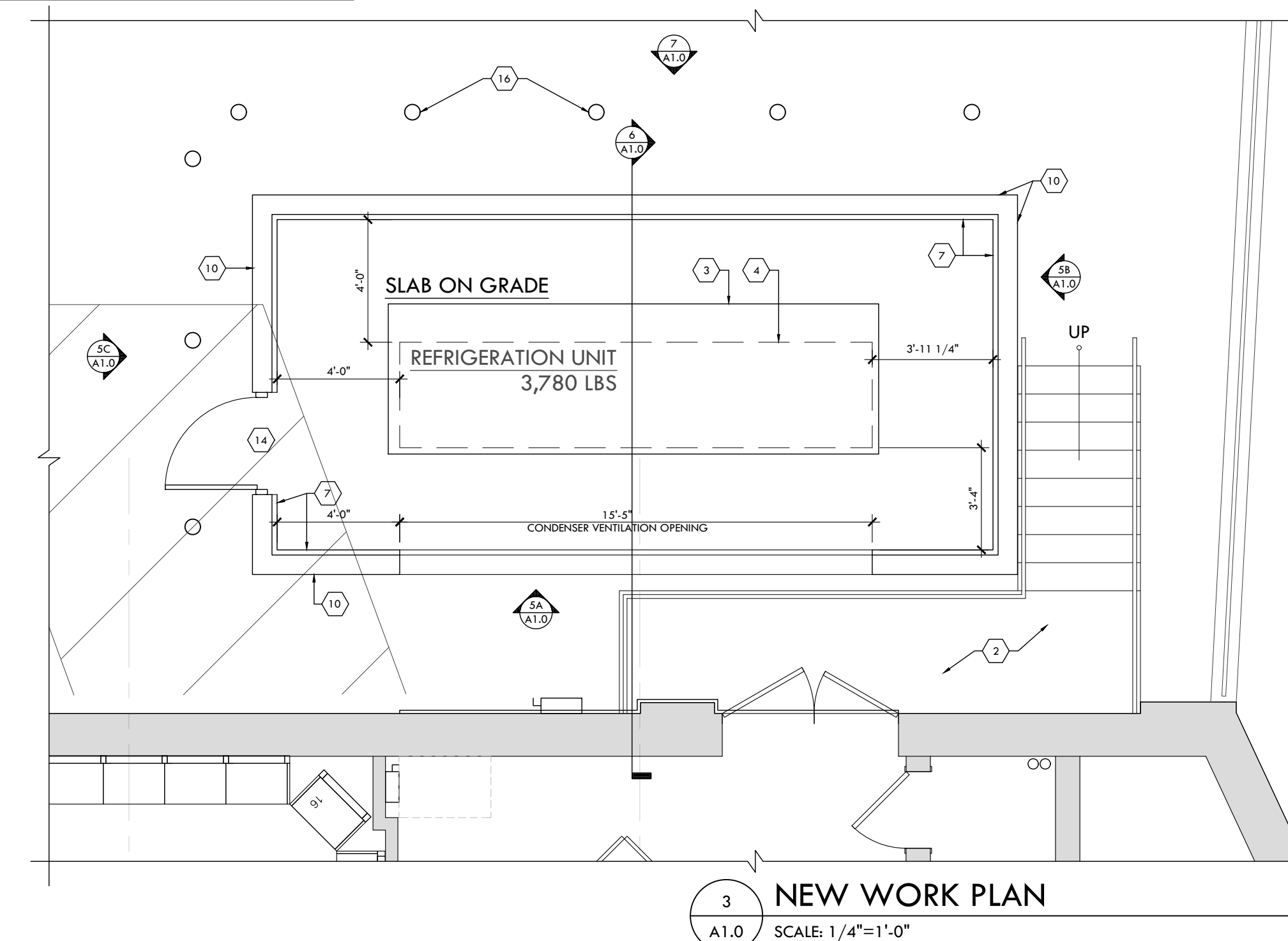
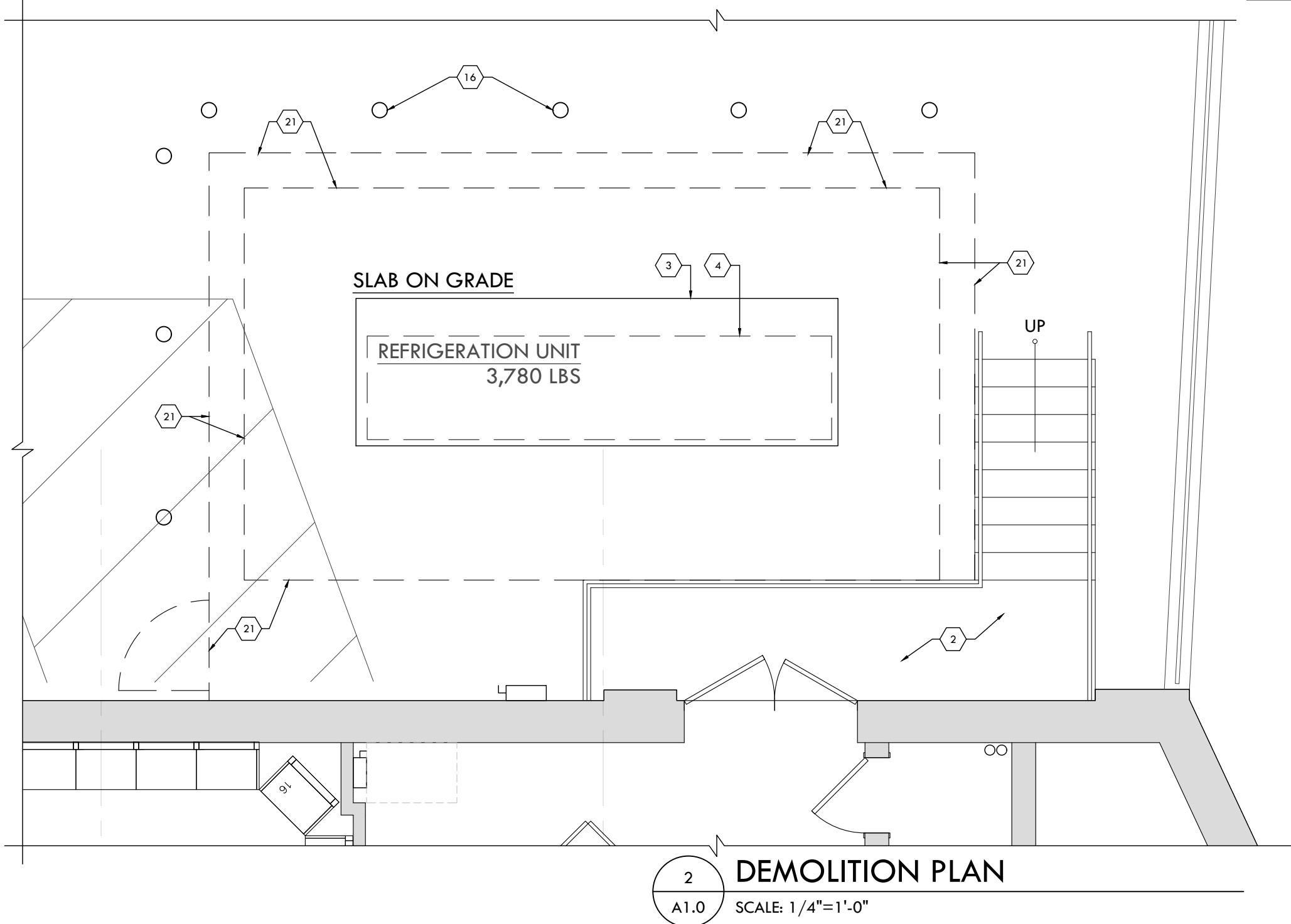
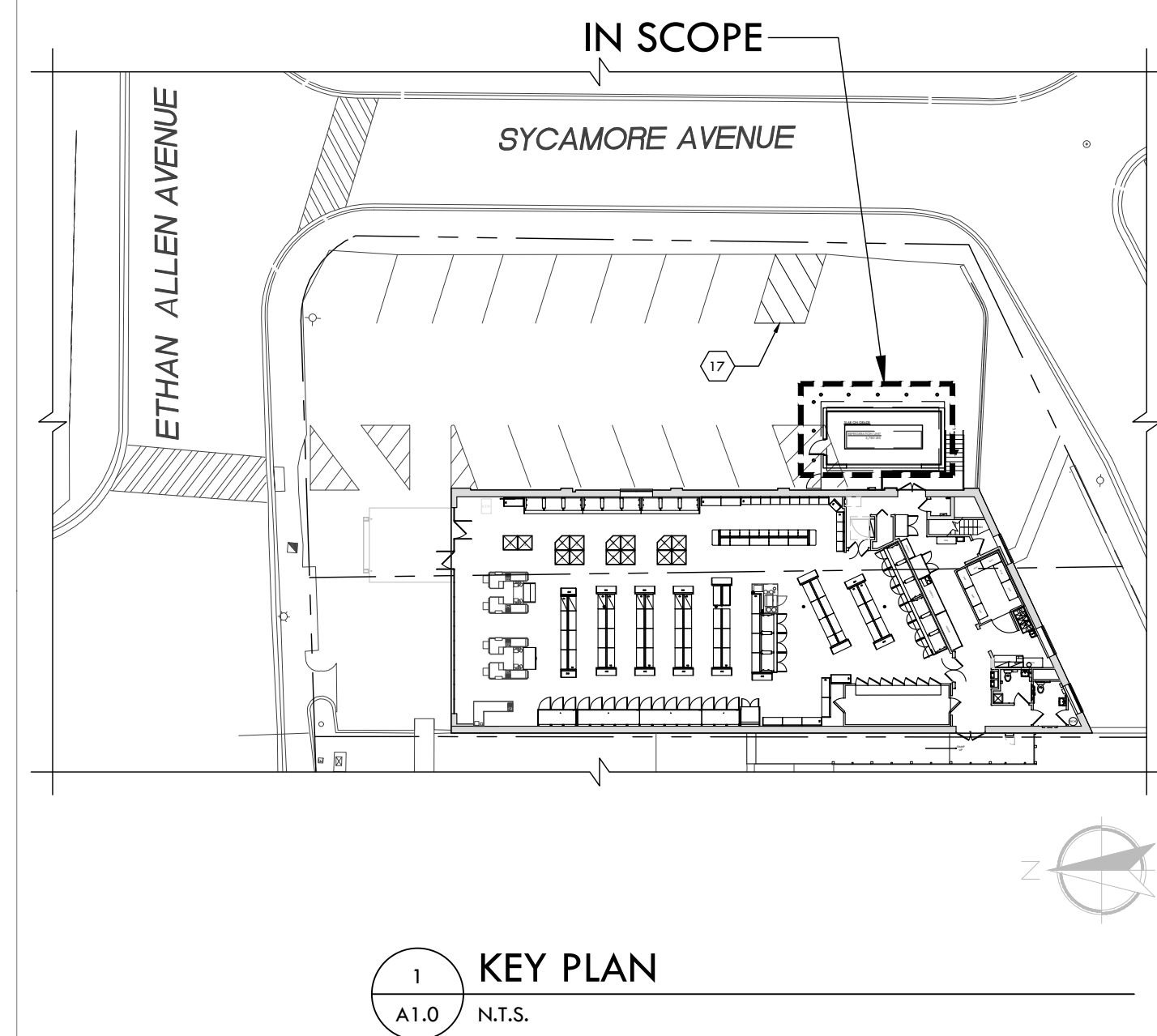
Description of Current Condition:

Proposed Work:

HISTORIC AREA WORK PERMIT CHECKLIST OF APPLICATION REQUIREMENTS

	Required Attachments						
Proposed Work	I. Written Description	2. Site Plan	3. Plans/ Elevations	4. Material Specifications	5. Photographs	6. Tree Survey	7. Property Owner Addresses
New Construction	*	*	*	*	*	*	*
Additions/ Alterations	*	*	*	*	*	*	*
Demolition	*	*	*		*		*
Deck/Porch	*	*	*	*	*	*	*
Fence/Wall	*	*	*	*	*	*	*
Driveway/ Parking Area	*	*		*	*	*	*
Grading/Excavation/ Landscaping	*	*		*	*	*	*
Tree Removal	*	*		*	*	*	*
Siding/ Roof Changes	*	*	*	*	*		*
Window/ Door Changes	*	*	*	*	*		*
Masonry Repair/ Repoint	*	*	*	*	*		*
Signs	*	*	*	*	*		*

*NOTE: REFERENCE ATTACHED MEMO FROM ACOUSTICAL ENGINEER FOR INFORMATION REGARDING ACOUSTICAL ANALYSIS ON PROPOSED CONDENSER ENCLOSURE.



KEYED NEW WORK NOTES

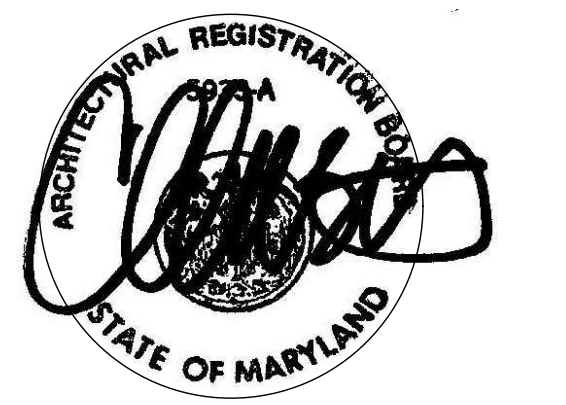
- 1 EXISTING BUILDING EXTERIOR WALL. PROTECT DURING CONSTRUCTION AS REQD.
- 2 EXISTING STAIR AND STAIR LANDING TO REMAIN. PROTECT DURING CONSTRUCTION AS REQD.
- 3 EXISTING FOOTING & SLAB ON GRADE TO REMAIN. PROTECT DURING CONSTRUCTION AS REQD.
- 4 EXISTING REFRIGERATION CONDENSER UNIT TO REMAIN. PROTECT DURING CONSTRUCTION AS REQD.
- 5 EXISTING MEAL. ROOF TO REMAIN. PROTECT DURING CONSTRUCTION AS REQD.
- 6 NEW CONC. FOOTING W/ REINFORCING.
- 7 (1) LAYER SOUND SLAB BBC-EXT-R-2" NOISE BARRIER. SECURE TO INSIDE FACE OF WALL STRUCTURE.
- 8 ROOF CONSTRUCTION (FROM EXTERIOR TO INTERIOR):
 - ASPHALT ROOF SHINGLES (40 YEARS) BY OWENS CORNING, MODEL TRUFIDURATION DURATION FLEX SHINGLES, FINISH - ONYX BLACK.
 - ICE AND WATER SHIELD
 - 1/2" PLYWOOD SHEATHING
 - 2x6 P.T. WOOD RAFTERS
 - FIBERGLASS ACoustICAL INSULATION - SPEC. T.B.D.
 - 1/2" PLYWOOD SHEATHING
 - 1 3/8" QUIETROCK 545 SOUND REDUCING GYPSUM PANEL
 - (1) LAYER SOUND SLAB BBC-EXT-R-2" NOISE BARRIER.
- 9 NEW 8" CMU BLOCK FOUNDATION WALL.
- 10 NEW 8" CMU BLOCK WALL. CMU TO BE GROUTED SOLID. TENANT TO COMMISSION THIRDED AURAL FACE OF CMU WALL.
- 11 NEW SMOOTH HARDIE PLANK LAP SIDING BY JAMES HARDIE BUILDING PRODUCTS, FINISH - PRIMED TO PAINT.
- 12 FIBERGLASS ACoustICAL INSULATION - SPEC. T.B.D.
- 13 PTD. ROOF EAVE TRIM WITH 7" EXPOSURE BY JAMES HARDIE BUILDING PRODUCTS, FINISH - PRIMED TO PAINT.
- 14 NEW 3"x6" INSULATED DOOR, W/ INSULATED METAL FRAME. DOOR & FRAME FINISH - PAINT TO MATCH EXISTING BUILDING STANDARD. HARDWARE, ENTRY LOCKSET WITH ADA COMPLIANT LEVER HANDLE ON EXTERIOR SIDE, MORTISE LOCK, NRP HINGES, CLOSER, & WEATHER STRIPPING. HARDWARE FINISH - STAINLESS STEEL.
- 15 6"x6-KITILE MT. GUTTER & ALUMINUM RECTANGULAR DOWNSPOUT. FINISH - MATCH EXISTING BUILDING STANDARD GUTTER/DOWNSPOUT FINISH.
- 16 EXISTING BOLLARDS TO REMAIN, TYP. PROTECT DURING CONSTRUCTION AS REQD.
- 17 EXISTING PARKING SPACE TO BE HATCHED DUE TO NEW EQUIPMENT ENCLOSURE.
- 18 1 LAYER OF 1/2" PLYWOOD SHEATHING, EACH SIDE, ON 2x6 P.T. FRAMING, 1 3/8" QUIETROCK 545 SOUND REDUCING GYPSUM PANEL ON INSIDE FACE. FASTEN TO 2x6 FRAMING PER IRC REQUIREMENTS. PROVIDE INTERMEDIARY 2x P.T. BRACING AS REQUIRED PER IRC REQUIREMENTS.
- 19 NEW MT. COPING BY PAC-CLAD, MODEL PAC-TITE TAPERED, FINISH - MATCH EXISTING BUILDING STANDARD COPING, SECURE TO 2x P.T. WOOD BLOCKING.
- 20 (1) LAYER SOUND SLAB BBC-EXT-R-2" NOISE BARRIER. SECURE TO FACE OF EXISTING BUILDING EXTERIOR WALL.
- 21 EXISTING TEMPORARY SOUND MITIGATING ENCLOSURE, ASSOCIATED CHAIN LINK FENCING & MAIN GATE, AND ACUSTIC PANELING TO BE REMOVED. SALVAGE EXISTING ACUSTIC PANELING AS REQD.
- 22 PTD. TRIM WITH 6" EXPOSURE BY JAMES HARDIE BUILDING PRODUCTS, FINISH - PRIMED TO PAINT.
- 23 PTD. TRIM WITH 6" EXPOSURE BY JAMES HARDIE BUILDING PRODUCTS, FINISH - PRIMED TO PAINT.
- 24 PROVIDE 6" OF COMPACTED GRAVEL FILL.



BATES ARCHITECTS
121 NORTH COURT STREET
FREDERICK, MARYLAND 21701
TEL 301.644.0444 | FAX 301.644.0446
WEB WWW.BATESARCHITECTSPC.COM

PROFESSIONAL CERTIFICATION

I, CLIFFORD BATES, CERTIFY THAT THIS DOCUMENT WAS PREPARED OR APPROVED BY ME, AND THAT I AM DULY LICENSED ARCHITECT UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NUMBER: 5933A, EXPIRATION DATE: APRIL 14, 2026.

TPSS CO-OP
CONDENSER ENCLOSURE

201 ETHAN ALLEN AVENUE
TAKOMA PARK, MARYLAND

NEW WORK PLANS & DETAILS

[illegible]

PROJECT NUMBER	23015-09
DATE	04.02.25
DRAWN BY	GMS
CHECKED BY	CMB

A1.0

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*NOTE: REFERENCE ATTACHED MEMO FROM ACOUSTICAL ENGINEER FOR INFORMATION REGARDING ACOUSTICAL ANALYSIS ON PROPOSED CONDENSER ENCLOSURE.



1
A1.1
EXISTING EAST ELEVATION



2
A1.1
PROPOSED EAST ELEVATION
N.T.S.



BATES ARCHITECTS
121 NORTH COURT STREET
FREDERICK, MARYLAND 21701
TEL 301.644.0444 | FAX 301.644.0446
WEB WWW.BATESARCHITECTSPC.COM

PROFESSIONAL CERTIFICATION
I, CLIFFORD BATES, CERTIFY THAT THIS DOCUMENT WAS PREPARED OR APPROVED BY ME, AND THAT I AM DULY LICENSED ARCHITECT UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NUMBER: 5933A, EXPIRATION DATE: APRIL 14, 2026.



TPSS CO-OP
CONDENSER ENCLOSURE

201 ETHAN ALLEN AVENUE
TAKOMA PARK, MARYLAND

EAST ELEVATION -
EXISTING & PROPOSED

NO.	DESCRIPTION	DATE
	HPC SUBMISSION	04.02.25

PROJECT NUMBER	23015-09
DATE	04.02.25
DRAWN BY	GMS
CHECKED BY	CMB

A1.1

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MEMO

To: Mike Houston, Takoma Park Co-op
From: Jordan Higgins, Engineer
Date: April 1, 2025
Reference: Takoma Park Co-op
Project No. TPK2401

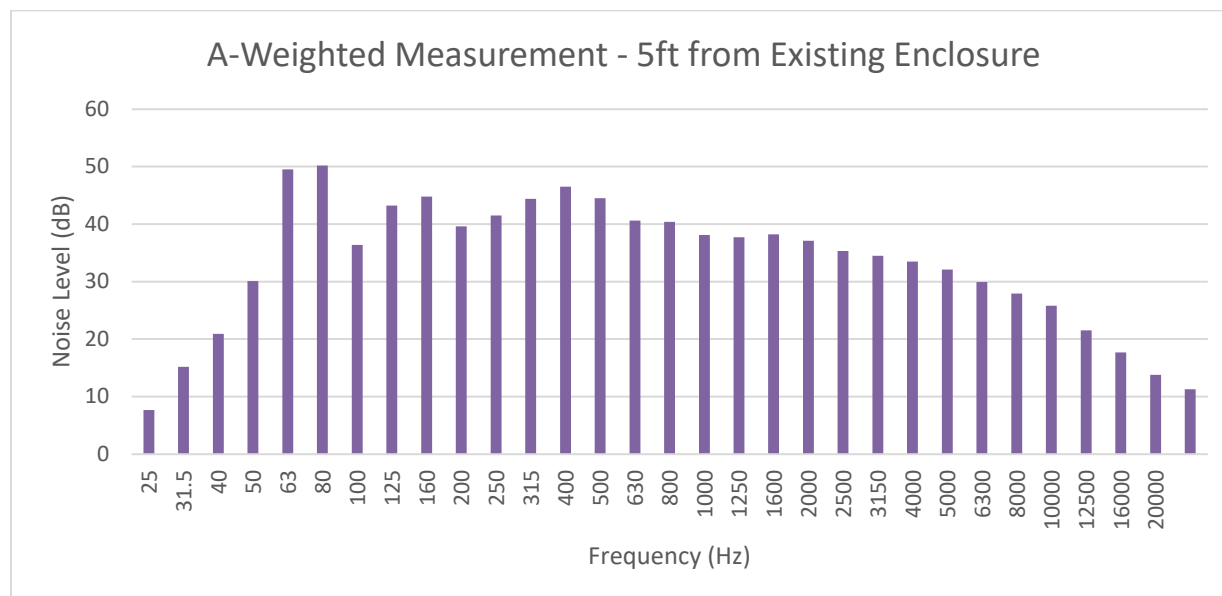


Phoenix Noise & Vibration, LLC
5216 Chairmans Court, Suite 107
Frederick, Maryland 21703
301.846.4227 (phone)
301.846.4355 (fax)
www.phoenixnv.com

Phoenix Noise & Vibration has conducted an analysis of the proposed and current condensing unit enclosure at the Takoma Park Co-op in the City of Takoma Park, Maryland. Phoenix Noise and Vibration has previously been on-site at the Takoma Park Co-op in order to complete sound level measurements of the condenser noise with the current enclosure. The analysis was performed due to complaints from nearby residents regarding the low frequency noise from the Takoma Park Co-op condenser reaching their residence. The proposed enclosure's goal is to provide more sound attenuation at the lower frequencies to assist in reducing any low frequency noise that is currently heard at the nearby residential properties.

As seen in Graph 1 below, based on field measurements 5-ft outside of the current enclosure, the measurement indicates tonal low frequency noise at 63-80 Hz. These tonal frequencies are most noticeable and are likely causing the issues with the nearby residences. Therefore, the proposed enclosure should focus on having higher transmission losses at these specific lower frequencies, 63-80 Hz.

Graph 1: Existing roof materials compared to proposed roof materials composite transmission loss.



The existing enclosure wall construction was observed from an on-site visit and the details of which were provided by the Takoma Park Co-op general manager. From interior to exterior the existing wall construction is as follows:

- 1 layer of Sound Seal G BSC 25 8 Noise Barrier
- chain-link fence
- 12" air gap
- 1 layer of Sound Seal G BSC 25 8 Noise Barrier
- 1" hard foam
- ½" plywood.

Similarly, the existing roof construction of the enclosure (from interior to exterior) is:

- 1 layer of Sound Seal G BSC 25 8 Noise Barrier
- 4" air gap
- ½" plywood.

There is a proposal to remove the entire exiting enclosure and replace it with CMU based walls and a plywood based roof.

The proposed enclosure wall construction¹ from interior to exterior:

- 1 layer of Sound Seal BBC-EXT-R-2" Noise Barrier
- 1 layer 8" grout-filled CMU

The proposed roof construction of the enclosure from interior to exterior:

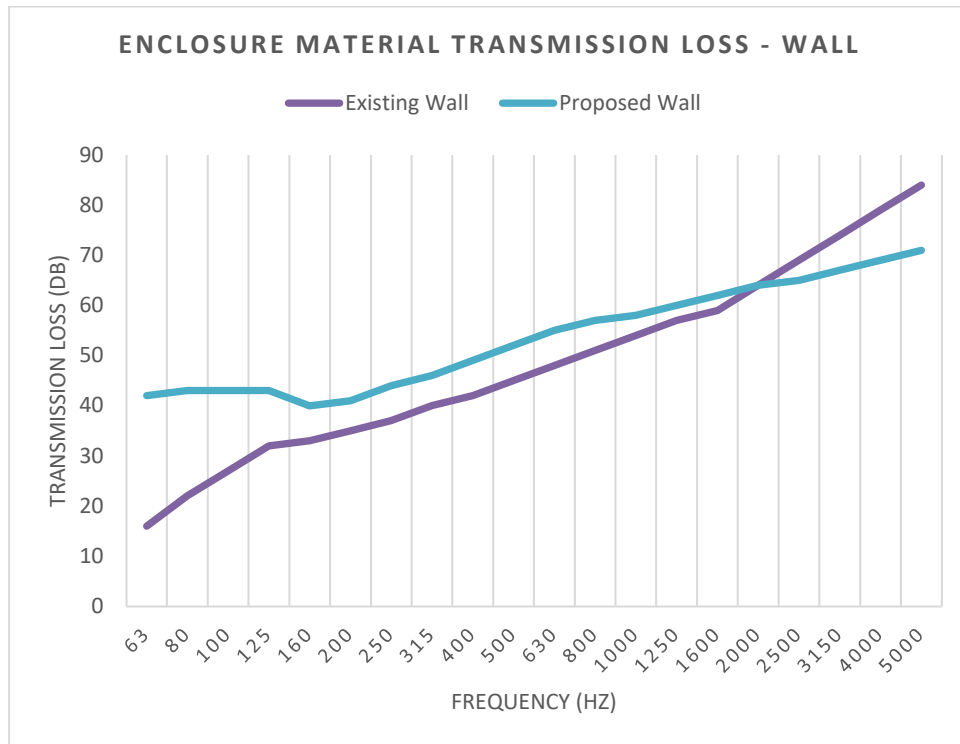
- 1 Layer Sound Seal BBC-EXT-R-2" Noise Barrier
- 1 3/8" QuietRock 545
- ½" plywood
- fiberglass insulation
- 2x6 wood rafters
- ½" plywood
- asphalt roof shingles

The existing and proposed enclosure assemblies were analyzed, using the Insul modeling software to determine the composite low frequency sound reduction they achieve. It was found that the proposed enclosure wall materials provide significantly better sound attenuation at the lower frequency compared to the existing enclosure wall materials, as seen in Graph 2. Additionally, the proposed enclosure roof materials provide better sound attenuation at all frequencies, except for the 63 Hz where the transmission loss is the same, as seen in Graph 3. In other words, the proposed enclosure materials will provide more transmission loss at the low frequencies.

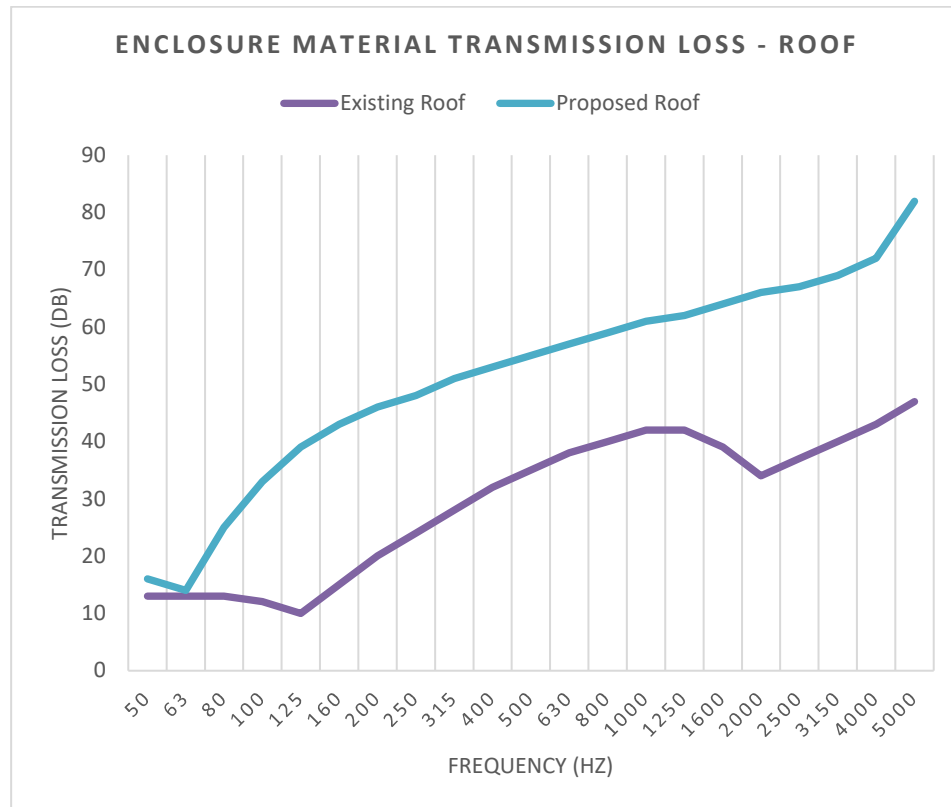
¹ Provided by Bates Architecture, *TPSS Co-op Renovation* dated 02 April 2025.

Note, this analysis **only** compares the composite transmission loss of the enclosure wall and roof assemblies and **not** the overall effectiveness of the enclosure in reducing low frequency from reaching nearby residences. The enclosure design features openings on the top and side facing the Takoma Park Co-op that condenser noise can leak through. Analysis to address the enclosure openings and overall enclosure effectiveness is not accounted for in this analysis.

Graph 2: Existing wall materials compared to proposed wall materials composite transmission loss



Graph 3: Existing roof materials compared to proposed roof materials composite transmission loss.



STEELCRAFT®

Falcon SZ Series

Steel doors



Overview

The Steelcraft SZ Series flush door is an affordable, square-edge solution for commercial applications. The construction combines the rigid stability of steel with the integrity of a laminate core. Steelcraft SZ Series square edge flush doors offer a solution that is simple to order and stock with quality you can depend on.

Features and benefits

- Square-edge with non-handed hinge preparation
- 4 1/2" universal hinge prep with reversible hinge filler plates included
- Variety of stock held at all locations and sold as bundled or individual units
- Expanded RAPID offering
 - Adds expanded sizes
 - Adds alternate hardware locations
 - Adds availability of 3/8" undercut

About Allegion

Allegion (NYSE: ALLE) is a global pioneer in seamless access, with leading brands like CISA®, Interflex®, LCN®, Schlage®, SimonsVoss® and Von Duprin®. Focusing on security around the door and adjacent areas, Allegion secures people and assets with a range of solutions for homes, businesses, schools and institutions. For more, visit www.allegion.com.

KRYPTONITE ■ LCN ■ SCHLAGE ■ STEELCRAFT ■ VON DUPRIN

Performance

- Honeycomb core system standard, optional polystyrene core available
- Specification requirements
 - Door construction meets the requirements of ANSI A250.8-2003 (SDI 100)
 - Hardware preparations and reinforcements are in accordance with ANSI A250.6-2003. Locations are in accordance with ANSI/DHI A115; alternate locations are available in the RAPID program only.

Ratings

- Doors are factory labeled with a Warnock Hersey / ITS 1 1/2 hour (90min) mylar label
- Doors can be modified under authorized distributor licensing programs

Durability

- Corrosion resistance
 - 18 gauge CRS face sheets standard with Galvannealed (A60) face sheets optional factory applied rust inhibiting primer standard
- Full height, visible mechanical interlock edges; polystyrene core doors come standard with a closed top
- Standard, 14 gauge closer reinforcement

STEELCRAFT®

Thermal Break FT Series

Steel frames



Overview

Because of the high thermal conductivity of steel, metal frames transfer exterior heat or cold to the interior of a building. In extreme conditions, this can create higher heating and cooling costs. In cold climates, moisture or frost can appear on the indoor side of frames.

To combat these concerns, Steelcraft is offering 3-sided thermal break frames using a separator material to break this energy transfer. The result is a lower U-factor, lower energy costs and increased comfort for occupants.

Features and benefits

- Thermal Break 3-Sided Frames with die-mitered corners
- Lower thermal costs and improved comfort and productivity
- Jambs and Head components are factory assembled
- Sizes Single 1668 thru 4080, Double 4068 thru 8080
- KD or Face Welded, 14g or 16g, 2" Face (2" or 4" Head)
- Equal or unequal double rabbet 5 3/4" thru 12 3/4"
- Galvanealloy A-60 and mark numbers (required) no charge
- Hardware reinforcements and anchoring designed to maintain thermal break functionality

Performance

- The FT Series frame provides 95% better resistance to thermal conductivity over non-thermal break frames
- Our FT weather-stripping and separator material provides a more secure seal and is more durable in freezing conditions compared to vinyl
- For exterior openings, use with Zero 525 Rabbeted Aluminum Thermal Break Threshold or similar
- For additional thermal benefits use with Steelcraft Polystyrene or Polyurethane doors and insulate frames with batting

Ratings

- Tested to ASTM C 1363 for Thermal Performance, with a U-factor of 0.45
- Fire rating not available

Ordering

- Order by fax or email (not available through OEWS)
- See price page and tech data for additional details

About Allegion

Allegion (NYSE: ALLE) is a global pioneer in safety and security, with leading brands like CISA®, Interflex®, LCN®, Schlage® and Von Duprin®. Focusing on security around the door and adjacent areas, Allegion produces a range of solutions for homes, businesses, schools and other institutions. Allegion is a \$2 billion company, with products sold in almost 130 countries. For more, visit www.allegion.com.

STEELCRAFT®

Hollow metal
doors and
frames





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STEELCRAFT®

Steel doors and frames that set the industry standard

No other manufacturer offers as robust a selection of steel doors and frames as Steelcraft. Our emphasis on design, performance, and quality makes us stand out as an industry leader. Whether your application is institutional, commercial, or industrial Steelcraft is ready to meet your needs with a full portfolio of trusted, reliable doors and frames.

Steelcraft locations

Main factory

Steelcraft operates a main factory, boasting over 550,000 sq ft in Blue Ash, OH. This facility includes most of the Steelcraft Customer Care, Operations, Engineering teams and supplies a complete portfolio of doors and frames, with a full set of service capabilities, to reliably meet the requirements of your projects.

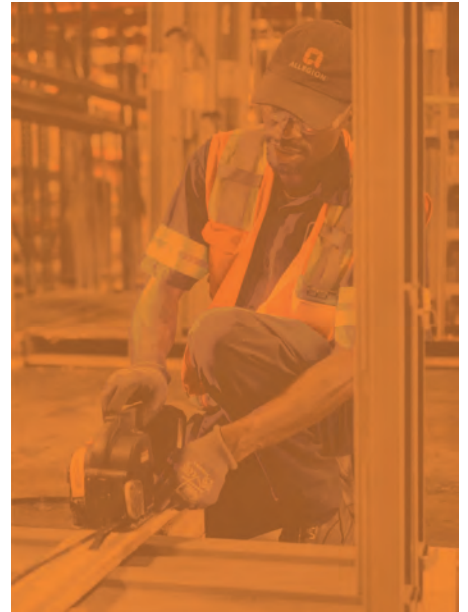
Regional Centers

In addition to the main facility, Steelcraft operates regional centers in California and Kansas to serve local clients with prompt service and dedicated support. Steelcraft's Regional Centers are stocked with a wide variety of doors and frames for your regional market needs. The experienced staff at our Regional Centers have onsite modification capabilities to pull from existing stock and quickly fulfill orders. Each center has stock and capabilities tailored to regional market preferences.

- **West Coast Regional Manufacturing Center** offers custom frame manufacturing
- **Kansas City Service Center** stocks Tornado resistant frames for fast-turn applications

All orders can be picked up at the service center or shipped directly to your site, resulting in lower freight costs. Each center is backed by the factory in Blue Ash to ensure that all the known, trusted Steelcraft benefits are available to you.

Visit www.steelcraft.com for details and a full list of capabilities by regional center.



Contact us

Customer care and project inquiries

- (877) 671-7011
- Contactus@allegion.com

Technical product support

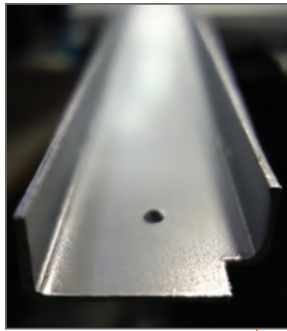
- (877) 671-7011
- Doors_frames_techprodsupport@allegion.com

NOTE: Reach out to your local Allegion sales representative for information on Order Entry Works (OEI) electronic ordering.

The only door good enough to be called Steelcraft



Recessed Designer™ glass trim



Heavy 14-gauge top and bottom channels



- Factory installed screw-in flush top and bottom caps
- Optional seamless vertical edges



Universal hinge preparations with true 7-gauge reinforcements

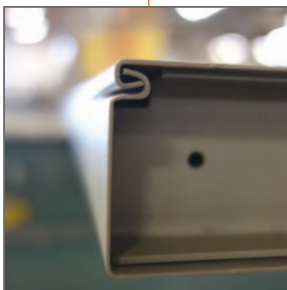


Mortise lock body stabilizers



Structural honeycomb core design
Optional cores:

- Polystyrene
- Polyurethane
- Steel stiffened - fiberglass batts
- Temp rise mineral fiber board



- Beveled hinge and lock edges
- Full height, epoxy-filled mechanical interlock edges



61L cylindrical lock and many other standard hardware preps

Standard door construction features and benefits

- **Beveled hinge and lock edges** Tighter tolerances and opening fit with a $\frac{3}{32}$ " gap, ensuring easier operation and eliminating binding and sticking; max allowable meeting edge gap is $\frac{3}{16}$ " (per NFPA 80 allowable gap $\frac{1}{8}$ " + $\frac{1}{16}$ " tolerance)
- **Full height, epoxy-filled mechanical interlock edges** Structural support and stability the full height of the door
- **Universal hinge preparations** Patented design creating fast and easy field conversion from the standard weight .134" to heavy weight .180" hinges
- **True 7-gauge hinge reinforcements** Strong internal support for hinges to keep the door from sagging during everyday use and abuse
- **Recessed Designer™ glass trim** Interior welds and fasteners, inset into a recessed perimeter channel for a clean, neat, and flush finish
- **Screwed-in top caps** Flush cap installed into top and bottom channels for additional protection from the elements, dirt and debris
- **Heavy 14-gauge top and bottom channels** Performance and stability for the top and bottom door edges
- **Seamless edge** Option creating a finished, one-piece look with clean lines
- **Mortise lock body stabilizers** Easier installation by centering the lock body in the door
- **61L cylindrical lock preparation** Universal features accommodate any cylindrical lock in the market with a $3\frac{7}{16}$ " or larger rose
- **Structural honeycomb core design** Greater structural integrity than steel stiffened doors while reducing overall weight, successfully tested to 10,000,000 cycles including 23 twist tests using 300 pounds of applied force. Optional cores for better insulating value include polystyrene, polyurethane, steel stiffened with fiberglass batting, and temperature rise mineral fiber board.
- **Factory applied baked-on rust inhibiting primer** Provides the best possible protection against corrosion, abrasion and weather, and is an excellent base for our finish paint in standard or custom colors. In accordance with ANSI A250.10-1998 (R2004).



Frames

Steelcraft manufactures a wide variety of frames in jamb depths for virtually any wall condition or entryway requirement.

Flush frames

Flush (F, FE and FN Series) frames are designed to be installed as part of the wall framing sequence for exterior and interior walls of wood stud, steel stud and masonry construction. Frames are manufactured from 16-, 14- and 12-gauge (F only) commercial-quality carbon steel in cold-rolled, A60 galvanized and G90 galvanized steel. Flush frame corners in 16 and 14 gauge may lock together by bending over four integral tabs, and may also be welded and ground smooth.

Multiple use frames

Multiple use (MU Series) frames have a jamb profile similar to drywall frames but are designed to be installed as part of the wall framing sequence. MU Series frames are available in 16- or 14-gauge cold-rolled, A60 galvanized or G90 galvanized steel.

Drywall frames

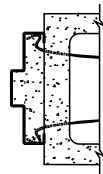
Drywall (DW, K, C and CK Series) frames are designed to be installed in rough openings after the wall is constructed. They can be installed in minutes and can be relocated without damage to the frame. Drywall frame corners lock together once the frame is assembled. The tab design prohibits the head from raising, and keeps the head and jamb members in the same plane. C and CK frames do not have backbends and are designed to have architectural trim casing applied.

Specifications

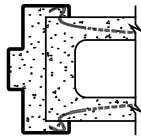
Door thickness	1 ³ / ₄ " (45mm)			
Standard heights	6'8"	(2032mm)	7'0"	(2134mm)
	8'0"	(2438mm)	9'0"	(2743mm)
Standard widths	7'2"		(2184mm)	
	10'0"		(3048mm)	
Standard widths	Increments of 2" (50mm) from 1'6" (457mm) to 8'0" (2438mm)			

Custom sizes per request.

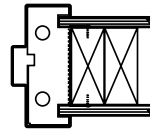
Typical wall conditions – F and FN Series



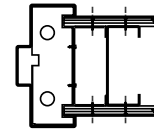
Butted masonry



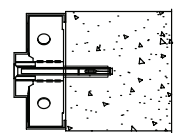
Wrap-around masonry



Wood stud



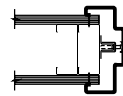
Closed steel stud wall



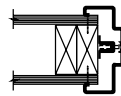
Existing wall

Typical wall conditions – DW and K Series

Drywall frames are designed for drywall construction using wood studs or steel studs. DW and K Series frames are available in 16- or 14-gauge cold-rolled, A60 galvanized or G90 galvanized steel.



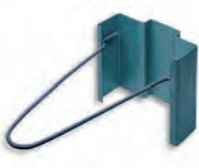
Steel stud



Wood stud

Frames

Anchors – F and FN Series



Adjustable wire anchor for masonry



Wood stud anchor



Closed steel stud anchor



Adjustable base anchor - F, FN and C

Anchors – DW and K Series



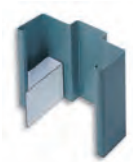
Lock in base anchor – DW Series



Quick and easy base anchor - K and CK Series

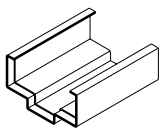


Compression anchor - DW, K and CK Series

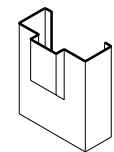


Optional security anchor

Design options

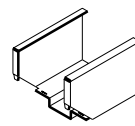


14-gauge closer reinforcing sleeve

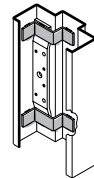


Hospital stop

(F, FN, DW, and MU Series only)



4" face head



10-gauge high frequency reinforcement (F, MU, DW and FE Series only)

High frequency hinge reinforcement

Frame profiles



F Series



MU Series



FE Series



DE Series



DW Series



C/CK Series

Relative cost

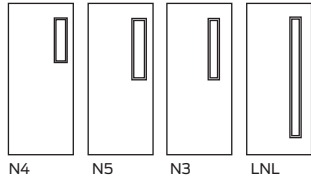
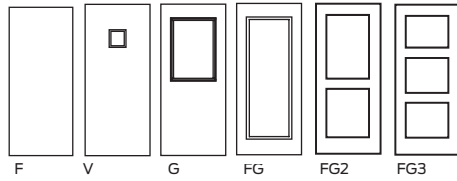
F16, 1 3/4" (45mm), 3'0" (914mm) x 7'0" (2134mm), 5 3/4" (147mm) prime painted, CRS knock down frame used as base of 100.

F16-4	CRS	16-gauge, 1 3/4" KD 100
F16-4	CRS 7'2"	16-gauge, 1 3/4" KD 102
F16-4	Galvannealed	16-gauge, 1 3/4" KD 114
F16-4	Label	16-gauge, 1 3/4" KD 116
FN16-4	CRS	16-gauge, 1 3/4" KD 100

F14-4	CRS	14-gauge, 1 3/4" KD 123
F12-4	CRS	12-gauge, 1 3/4" KD 161
DW16-4	Drywall	16-gauge, 1 3/4" KD 102
MU16-4	Multi-use	16-gauge, 1 3/4" KD 102

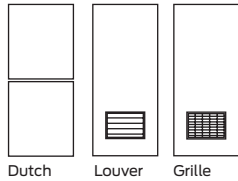
Typical elevations

Flush panel and glass doors

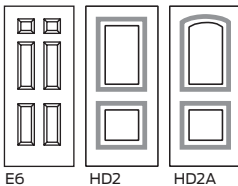


Dutch doors

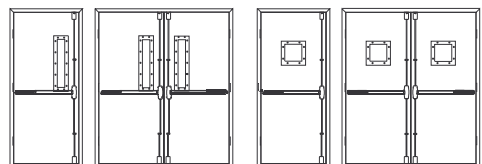
Doors with louvers or grilles



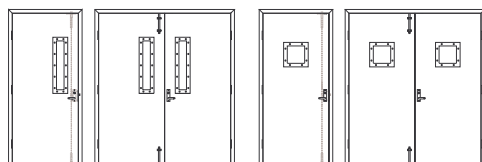
Embossed panel doors



ADA Compliant PN(F) Narrow and PN(F) Vision Lights – WS98/9927, WS98/9957



PN(F) Narrow and PV(F) Vision Lights – LM 9300



Flush doors

Flush doors are defined as having no seams on the face, with seams permitted on the edges. Doors are available in commercial-quality carbon steel or A-60 galvanized steel, G-90 galvanized steel and stainless steel (Type 304 and 316).

L Series

The L Series door has a honeycomb core, beveled hinge, and lock edge with a visible seam on both edges. Optional cores are polystyrene or polyurethane. L Series doors are available in 14-, 16-, 18- and 20-gauge steel.

B Series

The B Series door has a steel-stiffened core with visible seams on the hinge and lock edges. 20-gauge vertical steel stiffeners are welded to the inside of one face sheet and bonded to the opposite face. Void areas between the stiffeners are filled with fiber bat insulation. B Series doors are available in 14-, 16- and 18-gauge steel.

T Series

The T Series doors are designed to meet the requirements for temperature rise fire-rated applications. These doors include the same construction features of the L Series doors, yet include a mineral board core for a 250° or 450° temperature rise rating. T Series doors are available in 14-, 16-, 18- and 20-gauge steel.

CE Series

CE Series are decorative doors featuring deeply embossed panels on both sides, creating the appearance of hand-carved doors. The door includes all construction features of the L Series door and is available with a variety of glass sizes. These doors are available in 16-, 18- and 20-gauge steel.

H Series

H Series hurricane-rated doors offer the utmost in life safety solutions. Each door, frame and hardware configuration offered has been tested and certified as an assembly to meet stringent Florida Building Code, Miami Dade and Texas Department of Insurance standards. With this approach of assembly approval, Allegion offers the assurance of a turnkey solution that is certified as a whole, while also expediting project approval.

Paladin™ Series

The Paladin opening system is designed and tested to ICC 500 standards and FEMA 361/320 guidelines, and those established by the Red Cross to protect the general public from the extreme environmental effects of tornadoes. The severe storm opening system is designed for commercial and residential tornado storm shelters. Paladin options include patented factory installed ADA glass lights from Technical Glass Products (TGP).

Design options

GRAINTECH™

GRAINTECH™ doors are L, T, H or CE Series doors, produced using steel sheets that have been embossed to create a wood grain appearance. GRAINTECH™ doors are fabricated from stainable steel and available with an optional factory finish in six standard color stains, including a factory-applied clear coat with ultraviolet (UV) inhibitors. GRAINTECH™ gives you the look of wood with the durability and fire-rating of a steel door.

Specifications

Door thickness	1 3/4" (45mm)	
Standard heights	6'8" (2032mm)	7'0" (2134mm)
L and B Series	7'2" (2184mm)	8'0" (2438mm)
	9'0" (2743mm)	10'0" (3048mm)
Standard heights	6'8" (2032mm)	7'0" (2134mm)
CE Series	8'0" (2438mm)	
Standard widths	Increments of 2" (50mm) from 1'6" (457mm) to 4'0" (1219mm) Custom dimensions available on request	
L and B Series		
Standard widths	Increments of 2" (50mm) from 2'6" (762mm) to 3'8" (1118mm)	
CE Series		

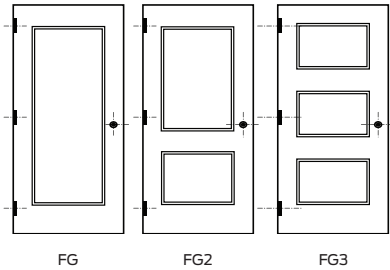
Custom sizes per request.

Full glass entrance doors

Steelcraft heavy-duty A-14 Series doors provide trouble-free service and attractive styling for high traffic areas such as main entrances.

A-14 Series

The A-14 Series doors are designed to meet the architectural requirements for exterior entrance applications. It has a honeycomb core, beveled hinge and seamless edges with full height, epoxy filled with interlocked edges. The A-14 Series doors are available for high frequency openings and entrances where large full glass lights are required.



Specifications			
Door thickness	1¾" (45mm)		
Standard heights	6'8" (2032mm)	7'0" (2134mm)	
A-14 Series	7'2" (2184mm)	8'0" (2438mm)	
Standard widths	Increments of 2" (50mm) from 1'6" (457mm)		
A-14 Series	to 4'0" (1219mm)		
Custom sizes per request.			

Get flexible performance with removable keyed mullions.

Mullions provide single door performance in double door openings with rim exit devices. Keyed removable mullions make removal faster and easier by a single operation of the mortise cylinder. The unit will self-lock when re-installed without the use of a cylinder key.

When ordering, specify KR before the mullion model number.



Relative cost

L18, 1 3/4" (45mm), 3'0" (914mm) x 7'0" (2134mm) flush door used as base of 100.

L18	Flush, 18-gauge	100	B18	Flush, 18-gauge, steel stiffened	125
L20	Flush, 20-gauge	87	B16	Flush, 16-gauge, steel stiffened	149
LF20	Flush, 20-gauge	96	BW16	Flush, 16-gauge, steel stiffened (edge welded)	161
L18	Galvannealed, flush, 18-gauge	113	B14	Flush, 14-gauge, steel stiffened	173
L18	UL flush, 18-gauge	115	CE20	Embossed, 20-gauge	105
L18	Finished paint, flush, 18-gauge	116	CE18	Embossed, 18-gauge	122
LF18	Full flush, 18-gauge (edge filled)	110	CE16	Embossed, 16-gauge	139
LW18	Full flush, 18-gauge (edge welded)	112	L16	Stainable, 16-gauge, factory finished	149
T18	UL temperature rise, 18-gauge	154	L18	Stainable, 18-gauge, factory finished	143
L16	Flush, 16-gauge	123			
LF16	Flush, 16-gauge (edge filled)	133			
LW16	Flush, 16-gauge (edge welded)	139			
L14	Flush, 14-gauge	148			

GRAINTECH™ doors

Clear coat
baked on for the
ultimate in UV and
graffiti resistance

Multiple finishes
provide options
for a variety
of applications

**Superior structural
and insulation**
qualities provide
ultimate performance



Custom colors available
for our GRAINTECH doors.

Designer™ trim
flush lite kits, stained
to match the door

**Patented universal
hinge preps**
allow for easy field
conversion from
standard to heavy-
weight hinges

**Strength and
durability**
L, T, H and CE Series
door construction
provides proven
strength and reliability

The beauty of wood with the strength of steel

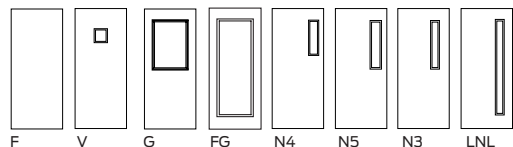
Steelcraft's GRAINTECH Series of stainable steel doors provides the beauty of wood with the features and benefits of steel. Our exclusive engraving and staining process simulates a wide variety of wood finishes, from ash to walnut, including custom finish matching.

GRAINTECH doors are available in a wide variety of options including size, glass lite designs, gauges and hardware preps, and are designed for interior and exterior applications.

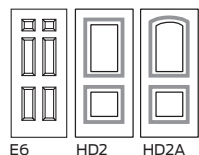
Unlike veneered or solid wood doors, GRAINTECH can be used as exterior openings with confidence, is less susceptible to damage, and will never warp, crack, peel or bow. It is also available in CE Series panel doors, L Series flush doors, T Series temperature rise doors, and H Series hurricane doors. The GRAINTECH Series is available with a full range of positive pressure fire-ratings, from 20 minutes to three hours.

Glass lite options

Flush doors (L Series and T Series)



Embossed panel doors (CE Series)



CE Series GRAINTECH doors

- Six-panel embossed design
- Available in 16-gauge heavy-duty or 18-gauge extra heavy-duty
- Available in six standard finishes, as well as custom-matched finishes
- Half-glass and top-lite available featuring Designer trim, a Steelcraft exclusive
- Polystyrene core system for structural integrity
- Fire-rated 20 minutes to three hours

L Series GRAINTECH Doors

- Laminated flush design
- Available in 16 or 18-gauge to fit any application from standard to extra heavy-duty
- Available in six standard finishes, as well as custom-matched finishes
- Half-glass, narrow lite, vision lite or custom size lites featuring Designer trim, a Steelcraft exclusive
- Available with honeycomb, polystyrene or polyurethane insulated cores

T Series GRAINTECH doors

- Temperature rise-rated full-flush design
- Available in 16 or 18-gauge to fit any application from standard to extra heavy-duty
- Available in six standard finishes as well as custom matched finishes
- Mineral board core provides a 250° or 450° temperature rise-rating



Mahogany

Birch

Ash

Maple

Oak

Walnut



Severe weather doors

Tough weather protection

Whether you're in a coastal area subject to hurricane-force storms, or in one of the many areas across the country at risk for tornadoes, Steelcraft offers a tough, dependable solution. Our Paladin tornado doors and H Series hurricane-rated doors are built to exacting standards that provide peace of mind and protection when it's needed most.

Standard construction

- **A60 galvanized steel for superior corrosion resistance** on exterior openings
- **Full height lock-side reinforcement channel** ensures structural stability and locking hardware functionality under extreme pressure conditions
- **Full height, epoxy-filled mechanical interlock edges** provide structural support and stability the full height of the door edges
- **Patented universal hinge preparations** allow for easy field conversion from standard-weight hinges to heavy-weight hinges
- **14-gauge top and bottom channels** provide stability and protection from abuse for the top and bottom edges
- **Beveled hinge and lock edges** allow for tighter tolerances, ensure easier operation, and eliminate binding and sticking
- **Recessed Dezigner glass trim** provides a clean, neat and flush finish with the door surface*
- **Factory-applied baked-on rust inhibiting primer** in accordance with ANSI A250.10

*Not available on Paladin

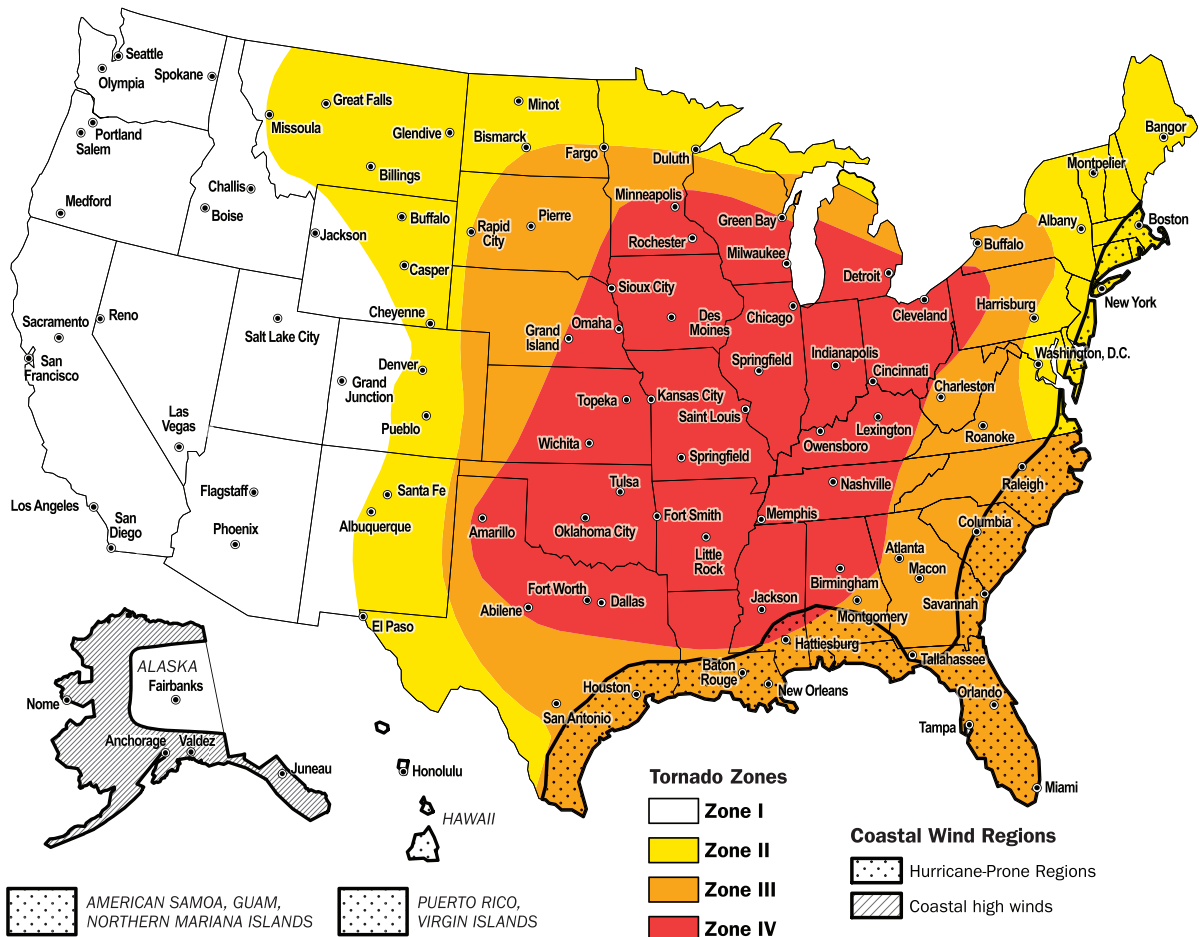


Figure 2-8: Wind hazards in the United States

Note: always reference local codes for specific jurisdiction requirements.



Acoustical doors

Reduced noise

Steelcraft sound control doors and frames are an ideal solution for applications ranging from sound studios to school band rooms, hospitals, office complexes and museums. Control the atmosphere and ensure the privacy across your facility with these quality, specialized doors.

Note: STC ratings vary by door series and core type, please see the Specialty Section of our Technical Data Manual for a complete listing.



High definition doors

Sophisticated style

From executive office settings to multi-family housing units to university conference facilities, the Steelcraft commercial embossed high definition two panel doors enhance any environment. Crafted detailing gives these doors a face of beauty and elegant style that's sure to upgrade the appearance of your setting. Available in standard paint or GRAINTECH finishes, these doors feature two inset panels with deep shadow detail and your choice of straight cut or arched top design.

Durable core

Steelcraft construction combines the strength and dimensional stability of steel with the structural integrity of our laminate core. Our process of continuous bonding seals the core to steel face sheets for a flat door finish, free of face welding marks. Lab studies prove this door outperforms all others in its class, meeting the requirements of fire-rated doors from 20 minutes to 3 hours.



HD2A

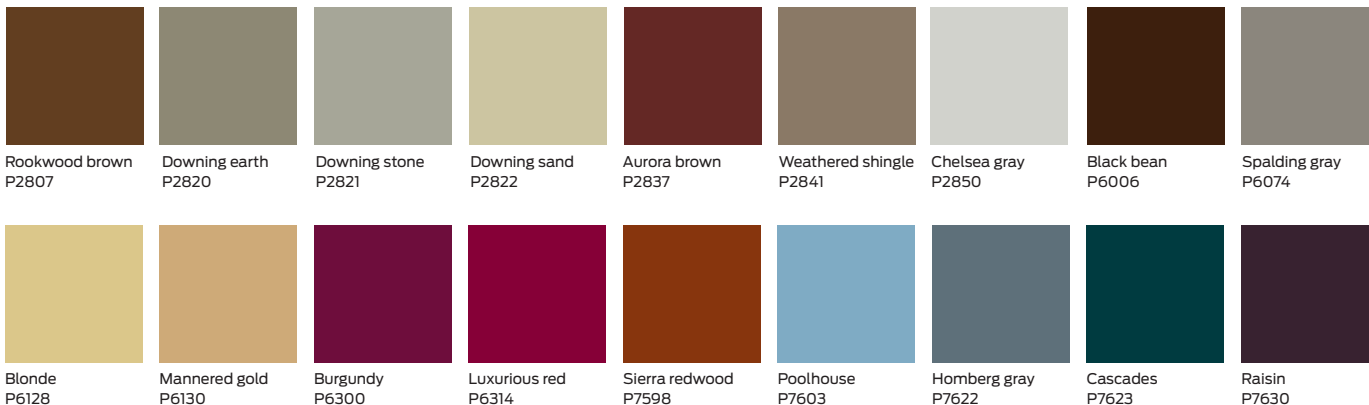


HD2

Factory finish paint

Steelcraft's factory finish paint offers a variety of popular standard color choices along with custom match options. The finish paint is applied to our quality commercial grade doors, carefully packaged and supplied to our customer, pre-finished. Our efficient method of application and pre-finished delivery saves in money and time—without compromising quality or reliability.

Our 16 standard color options:





Stainless steel doors and frames

LS Series doors and FS Series frames

Steelcraft stainless steel LS series doors and FS Series frames are designed and built to withstand the harshest environments. These solutions utilize all stainless steel construction, including reinforcement components and anchors. They are available in either 304 or 316 alloy for maximum durability and corrosion protection.

In addition to standard flush and panel doors, custom doors are available in a wide range of polished, embossed and etched finishes. The nearly unlimited choice of design options can provide you the performance and creative look to meet your special project needs.

Doors are seamless with interlocking edge; core options include polystyrene, honeycomb or polyurethane. Stainless steel stiffeners are epoxy-glued to eliminate surface imperfections associated with welding.

Available ratings:

- Three hour Class A fire-rated
- STC 51 sound rated
- Hurricane approved

INPACT™ integrated door system

INPACT Series L and T Series doors

INPACT door systems are designed to meet life safety and clear opening width requirements in cross corridor applications with factory installed Von Duprin 94/95 Series INPACT recessed exit devices.

This Allegion all-in-one door solution uses L and T Series doors ordered from Steelcraft through pre-configured hardware system sets for a reliable assembly of industry-leading Allegion hardware options to meet the aesthetic and functional requirements of the opening.

Pre-configured application system sets

All hardware shown below is ordered from Steelcraft and ships with the INPACT door from Steelcraft. If required hardware is not provided in system sets, they may be ordered from Steelcraft as L or T Series doors prep only, with hardware ordered separately from Allegion brands for field installation.



	System set available												A la carte
	D1-D4= "Double Egress"				P1-P4 = "Same Swing"				S1-S4 = "Single"				From Steelcraft
	D1 90x90	D2 90x90	D3 90x90	D4 90x180	P1 90x90	P2 90x90	P3 180x180	P4 180x180	S1 90x90	S2 90x90	S3 180x180	S4 180x180	
Steelcraft doors													
L Series	■	■	■	■	■	■	■	■	■	■	■	■	■
T Series	■	■	■	■	■	■	■	■	■	■	■	■	■
Von Duprin exit devices													
94/9547 Series CVR with LBR option	■	■	■	■	■	■	■	■	—	—	—	—	■
94/9575 Series Mortise exit	—	—	—	—	—	—	—	—	■	■	■	■	■
LCN closers													
4040XP Closer	—	—	—	■	—	—	■	■	—	—	■	■	■
4000T Wall mounted closer	■	■	■	■	■	■	—	—	■	■	—	—	■
LCN magnetic holders													
SEM 7850 Magnetic holder	■	■	■	■	■	■	■	■	■	■	■	■	■
IVES hinges and pivots													
700 Stainless pin and barrel continuous	■	—	—	■	—	—	■	—	■	—	■	—	■
711BSC Beveled swing clear continuous	—	■	—	—	■	—	—	■	—	■	—	■	■
91105F pocket pivot	—	—	■	—	—	■	—	—	—	—	—	—	■
224HD AL geared continuous	—	—	—	—	—	—	—	—	—	—	—	—	■
224XY AL geared continuous	—	—	—	—	—	—	—	—	—	—	—	—	■
041XY AL geared swing clear continuous	—	—	—	—	—	—	—	—	—	—	—	—	■
040XY AL geared wide throw continuous	—	—	—	■	—	—	—	—	—	—	—	—	■
5BB1HW 4.5" or 5" butt hinges	—	—	—	—	—	—	—	—	—	—	—	—	■
5BB1HWBSC 4.5" or 5" butt hinges	—	—	—	—	—	—	—	—	—	—	—	—	■
*D4 is shown with 2 different hinges to accommodate a wide throw condition using an available aluminum geared 040XY. Typically hinges should be the same material.													
Steelcraft frames													
FE Series (special profile for swing clear or pocket pivot)	■	■	■	■	—	—	—	—	—	—	—	—	■
F Series (double or single rabbet)	—	—	—	—	■	■	■	■	■	■	■	■	■

NOTES:



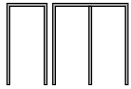


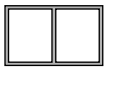
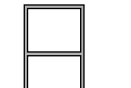

1 For system sets All hardware is installed or shipped with the door. Frame is ordered separately since frames are typically required earlier.

2 If ordering a la carte, changes to frames, hinges or closers may change your wall configuration, opening size and clear opening width.

Fire-rated frames

Frame type

Frame size

Three sided frames	Max. overall size	Max. door size	Max. rating	Jamb depths	Max. panel size	Max. glass area
 F16, FN16 F14, FN14, F12		4'0" x 10'0" single (1219mm x 3048mm) 8'0" x 10'0" pair (2438mm x 3048mm)	3 hour	Min. 3" (76mm) Max. 14" (350mm) Max. 20" (F16 and F14 masonry)		
Three sided frames						
 DW16, K16 DW14, K14		4'0" x 8'10" single (1219mm x 2692mm) 8'0" x 8'10" pair (2438mm x 3048mm)	1½ hour	Min. 3 ½" (121mm) Max. 14"		
Three sided frames						
 F14		4'0" x 8'0" single 8'0" x 8'0" pair	3 hour	Min. 5 ¾" (146mm) Max. 10 ¾" (273mm)		
Transom frames with panel, without bar						
	4'4" single (1319mm x 3505mm) 8'4" pair (2538mm x 3505mm) 11'4" OA height	4'0" x 8'0" single (1219mm x 2438mm) 8'0" x 8'0" pair (2438mm x 2438mm)	3 hour - masonry 1½ hour - stud (10'2" OA height)	Min. 3" (121mm) Max. 14" (324mm)	8'0" x 4'0" (2438mm x 1219mm)	
Transom frames with bar						
 F16, F14 MU16, MU14 FN16, FN14	4'4" x 12'2" single (1319mm x 3531mm) 8'4" x 12'2" pair (2538mm x 3531mm) without mullion 8'6" x 12'2" (2590mm x 3531mm) with mullion	4'0" x 10'0" single (1219mm x 3048mm) 8'0" x 10'0" pair (2438mm x 3048mm)	1½ hour	Min. 3" (121mm) Max. 14" (324mm)	8'0" x 3'2" (2438mm x 965mm)	Per glass mfr.
Borrowed lite frames						
 F16, F14 MU16, MU14 FN16, FN14	13'2" x 12'2" (4013mm x 3531mm) stud wall 13'6" x 12'2" masonry		1½ hour	Min. 3" (121mm) Max. 14" (324mm)		Per glass mfr.
Borrowed lite frames						
 DW16, DW14	8'4" x 7'2" single (2540mm x 2184mm) 4'4" x 9'0" (with Horiz rem mullion)		1 hour	Min. 3 ½" (121mm) Max. 14" (324mm)		Per glass mfr.
Transom/sidelite frames						
 F16, F14 MU16, MU14 FN16, FN14	13'2" x 12'2" (4013mm x 3531mm) stud wall 13'6" x 12'2" masonry	4'0" x 10'0" single (1219mm x 3048mm) 8'0" x 10'0" pair (2438mm x 3048mm)	1½ hour	Min. 3" (121mm) Max. 14" (324mm)	Transom or side panel 8'0" x 3'2" 2438mm x 965mm)	Per glass mfr.

Interior dividing members may have a minimum 1" (25mm) face. Maximum size frame available will vary with wall construction. See Steelcraft spec sheets for exact sizes.
Approved glazing required in all fire-rated products.

Fire-rated doors

Maximum glass area for labeled doors

Label	A	B	C	D*	E*		
Rating	3 hour	1½ hour	¾ hour	1½ hour	¾ hour	20 minutes	
Max. glass area	100 sq. in. ¹ (0.6 sq. m)	1850 sq. in. ² mfg. (1.19 sq. m) list	2700 sq. in.	none	2700 sq. in. (1.74 sq. m)	as tested	

*Exterior rated openings ¹Firelite glass ²[1296 sq. in. (84 sq. M)] with Firelite glass.

Single doors label rating

Doors	Max. size	3 hour	1½ hour	¾ hour	1½ hour	¾ hour	20 minute
L20	3'0" x 7'2" (914mm x 2184mm)	A	B	C	D	E	✓
L20	3'0" x 8'0" (914mm x 2438mm)		B	C	D	E	✓
L18, L16	4'0" x 10'0" (1219mm x 3048mm)		B	C	D	E	✓
L14	4'0" x 10'0" (1219mm x 3048mm)	A	B	C	D	E	✓
B18, B16	4'0" x 10'0" (1219mm x 3048mm)	A	B	C	D	E	✓
B14	4'0" x 8'0"/10'0" (1219mm x 2438mm)	A - 8'0" 4'0" x 8'0"	B - 10'0"	C - 10'0"	D - 10'0"	E - 10'0"	✓ - 10'0"
A14	4'0" x 8'0" (1219mm x 2438mm)		B - (FG2, FG3)	C - (FG, FG2, FG3)		E - (FG2, FG3)	✓ - (FG, FG2, FG3)
T20, T18 T16, T14	4'0" x 9'0" (1219mm x 2743mm)	A - 250° temp. rise	B - 250° or 450° temp. rise				
CE20, CE16	3'0" x 8'0" (914mm x 2438mm)	A - (3'0" x 7'0" CE20)	B	C	D	E	✓
CE18	3'8" x 8'0" (1118mm x 2438mm)	A	B	C	D	E	✓
PW14	4'0" x 8'0" single 8'0" x 8'0" pair	A	B	C			✓
H16/H14	4'0" x 8'0" single 8'0" x 8'0" pair	A	B	C			✓
TH16/TH14	4'0" x 8'0" single 8'0" x 8'0" pair	A	B - (100 sq in max.)				
HD16, HD18	3'8" x 7'0" single 3'0" x 8'0" single	A	B	C	D	E	✓
HD16, HD18	7'4" x 7'0" pair 6'0" x 8'0" pair	A	B	C	D	E	✓

Pair of doors label rating

Doors	Max. size	3 hour	1½ hour	¾ hour	1½ hour	¾ hour	20 minutes
L20	6'0" x 7'2" (1892mm x 2184mm)		B	C	D	E	✓
L18, L16	8'0" x 8'0" (2438mm x 2438mm)	A	B	C	D	E	✓
L14	8'0" x 10'0" (2438mm x 3048mm)	A - 8'0"	B - 9'0"	C - 9'0"	D - 9'0"	E - 9'0"	✓ - 9'0"
B18, B16	8'0" x 10'0" (2438mm x 3048mm)	A	B	C	D	E	✓
B14	8'0" x 8'0"/10'0" (2438mm x 2438mm)	A - 8'0"	B - 10'0"	C - 10'0"	D - 10'0"	E - 10'0"	✓ - 10'0"
A14	8'0" x 8'0" (2438mm x 2438mm)		B - (FG2, FG3)	C - (FG2, FG3)		E - (FG2, FG3)	✓ - (FG, FG2, FG3)
T20, T18 T16, T14	8'0" x 9'0" (2438mm x 2438mm)	A - 250° temp. rise	B - 250° or 450° temp. rise (FG2, FG3)				
CE20	6'0" x 7'0" (1892mm x 2134mm)		B	C	D	E	✓
CE18	7'4" x 8'0" (2235mm x 2438mm)	A	B	C	D	E	✓
CE16	6'0" x 8'0" (1892mm x 2438mm)	A	B	C	D	E	✓

L, B, T, H Series label doors are available with the seams filled or welded. Doors over 8'0" (2438mm) high require two pair of heavy-weight hinges.
Note: Consult the factory or an authorized Steelcraft distributor for specific fire-rated applications.

About Allegion

Allegion (NYSE: ALLE) is a global pioneer in seamless access. We keep people and their assets safe, wherever they are, bringing together simple solutions, convenient access and advanced technology.

For more, visit www.allegion.com

KRYPTONITE ■ LCN ■  ■ STEELCRAFT ■ VON DUPRIN

7000 SERIES

Architectural Exit Devices



INTRODUCTION

ASSA ABLOY ACCENTRA™ offers innovative and reliable products to solve the challenges of commercial, retail, hospitality, assisted living, mixed-use, and multi-family properties. Our door hardware expertise extends beyond products to people - and provides the service and support you expect.

Featuring durable products to meet all your facilities' requirements - and the quality you expect from a leader in the hardware industry.


ASSA ABLOY ACCENTRA™ Exit Devices			
6000 Series <small>BHMA CERTIFIED</small>	2100 Series <small>BHMA CERTIFIED</small>	1800 Series <small>BHMA CERTIFIED</small>	1500 Series <small>BHMA CERTIFIED</small>
			
<ul style="list-style-type: none"> • Ideal for facilities that require modern form and full functionality to meet their life safety needs • Wide & Narrow Stile Applications • Rim, Squarebolt, CVR, SVR & Mortise • Mechanical & Electro-Mechanical Functions • Available with Motorized Electric Latch Retraction • Aluminum rail assembly with Architectural Metals • Solid Cast Flush End Cap • ANSI/BHMA Certified Grade 1 • UL Rated for Panic & Fire • 10 Year Warranty and 2-Year Limited Warranty on Electronic Components 	<ul style="list-style-type: none"> • Ideal for commercial applications and budget conscious end users • Narrow & Wide Stile Applications • Rim, Squarebolt, CVR & SVR • Mechanical Functions • ANSI/BHMA Grade 1 Certified • UL Rated for Panic & Fire • Architectural & Painted Finishes • 3 Year Warranty 	<ul style="list-style-type: none"> • Ideal for back of the house where function and code compliance are the requirement • Wide Stile Applications • Rim & SVR • Mechanical Functions • ANSI/BHMA Certified Grade 1 • UL Rated for Panic & Fire • Powder-coat Painted Finishes • 3 Year Warranty 	<ul style="list-style-type: none"> • Ideal for renovation projects where historical preservation is the desired look • Wide Stile Applications • Rim, CVR, SVR & Mortise • ANSI/BHMA Certified Grade 1 • UL Rated for Panic & Fire • Architectural & Painted Finishes • 1 Year Warranty

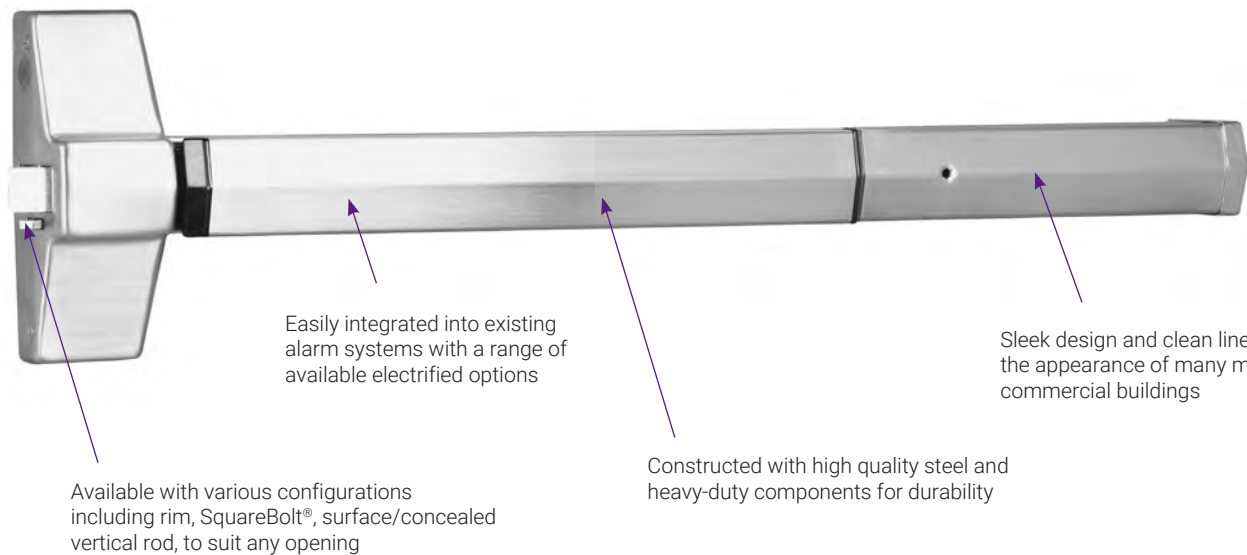
BENEFITS & FEATURES

Benefits

- **Innovative:** Featuring security options including SquareBolt® latchbolt and delayed egress function
- **Durable:** Heavy-duty steel components are ANSI/BHMA Grade 1 certified for the ultimate in strength and security
- **Flexibility:** Various options available to customize this exit device to suit any opening
- **Clean, modern look:** Sleek design with a variety of attractive finish options to suit any decor

Features

- High quality steel chassis and heavy-duty components
- Full range of mechanical and electromechanical options to suit any life safety application and pair with existing security systems
- ANSI/BHMA Grade 1 certified
- UL/cUL listed for panic and fire doors
- Windstorm certified (refer to local codes)  Hurricane
- Five year mechanical warranty, two year warranty on electrical options and components







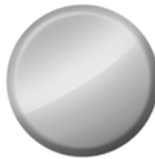








Available with Motorized Electric Latch Retraction!

The Motorized Electric Latch Retraction (MELR) feature provides remote-controlled latch retraction that delivers quiet, smooth operation for convenient, hassle-free egress. Easily installed in new applications and available as retrofit rail kit assemblies for field updates, the MELR features maintenance-free design with few moving parts using 86% less power consumption during retraction than solenoid devices. Plus, MELR is powered by a standard power supply, simplifying installation and increasing system design flexibility. See page 32 for more details.



FINISHES

ANSI/BHMA Code Finish Description				
605 Bright Brass, Clear Coated	606 Satin Brass, Clear Coated	611 Bright Bronze, Clear Coated	612 Satin Bronze, Clear Coated	613E Dark Oxidized Satin Bronze - equivalent
				
619* Satin Nickel Plated, Clear Coated	625 Bright Chrome Plated (540F trim only)	626* Satin Chrome Plated (Trim only)	629 Bright Stainless Steel	630* Satin Stainless Steel
				
693 Black Painted	BSP Black Suede Powder Coat	WSP White Suede Powder Coat		
				

613, 626 and 722 finishes available as Special Product Requests only. Please contact Customer Service for more information.

*Finish available with MicroShield® antimicrobial coating, additional finishes by special application. Consult factory for availability.

MicroShield coating may vary finish color from architectural standards. MicroShield is not intended as a substitute for traditional infection control programs such as hand hygiene or use of disinfectants. Coated products must still be cleaned to ensure the surfaces will be free of destructive microbes. ASSA ABLOY ACCENTRA™ makes no representations or warranties, express or implied, as to the efficacy of MicroShield.

Finishes For Touchbar Covers Only

ANSI/BHMA Code	Finish Description
BN	Semi-gloss black fused polymer
LUM	Lumi-lite Photoluminescence
SS	Stainless Steel


Lumi-Lite

Lumi-lite uses photoluminescence technology to provide visibility of exit doors in low-light, no light or smoky conditions. Lumi-lite can be ordered with your 7000 Series Exit Device or easily retrofitted to existing devices. See Lumi-lite Touchpad Cover on page 57 for more information.



HOW TO ORDER

From this outline select the Model Number for the ASSA ABLOY ACCENTRA™ 7000 Exit Device Series you require.

7	X	X	X	Mechanical/Electrical	Size	Design	Trim	Finish	Other Info.
	Second Digit: "1" - Standard device, 4-1/2" (114mm) or wider door stile. "2" - Narrow stile door or narrow escutcheon trim (500F, 510F Series)	Third Digit: "0" - Rim Device, Pullman Latch "1" - SVR Device up to 8' "2" - CVR Device, Metal Doors up to 8' "3" - Mortise Device "5" - SquareBolt®, Rim Security "6" - CVR Device over 8', wood door or LBR "7" - SVR Device over 8' or LBR	Fourth Digit: "0" - Standard "5" - Cylinder Dogging (Not with suffix "F")	Mechanical Feature  "F" - Fire Exit Device "M" - Narrow escutcheon trim in 4-1/2" (114mm) or wider door stile "LBR" - Less Bottom Rod ² "L5" - Mortise Device, Entry by Key with/without Rigid Lever ¹ "L8" - Mortise Device, Entry by Lever "T5" - Mortise Device with Thumbpiece Trim "T8" - Mortise Device, Active Thumbpiece Trim "2" - Double Cylinder Device ³ "WS" - Windstorm Certified Products ^{5, 6, 7} 5CH - 5LB pressure release ⁸ Electrical Feature "A" - Alarm Kit "B" - Bar Monitor or Signaling "D" - Delayed Egress "O" - Outside Trim Monitor or Signaling "MELR" - Motorized Electric Latch Retraction "S" - Latchbolt Status Monitor or Signaling "Safe" - Mortise Device Trim Control (lever only) "Secure" - Mortise Device Trim Control (lever only)		Trim Design (Lever only)	Trim Model Number	See page 5	Other Information: Door Hand - RHR or LHR Door Thickness - Over 1-3/4" (45mm) Fastener Options - TORX® Security Screws SNB (wood, composite, or unreinforced metal doors) Specialty Cylinders & Components Lumi-lite: LUM

Ordering Examples

Exit Device Only

7150D-36 x 619 x RHR x SNB

Exit Device with Trim and Cylinder

7170F90-9-48 x AU626F x 605 x LHR x 1109 GA 0-bit

Trim Only

M0656F x 630 x RHR x LC

Double Cylinder Exit Device with Trim

7150F-2-36 x AU626F x 630

It is recommended that exit devices and trim for the same opening be ordered together. Standard product is for 1-3/4" (44mm) reinforced metal doors. Accessories detached from the device and trim should be specified separately. Materials by others are required to be fit for the purpose as detailed in this catalog and the product installation literature.

Notes:

1. Required for electrical feature, Suffix "SAFE" or "SECURE".
2. LBR available on 7160(F90) and 7170(F90) devices only.
3. For double cylinder devices, suffix "-2" after fourth digit.
4. If "-24" device is to be used with a DOW greater than 24", the device will ship without UL label. The 12" touchpad will not cover 50% of the device touchbar length.
5. "WS" applies only to 7150(F), 7250M(F) and 7170(F) devices.
6. Maximum opening size 8'0" x 8'0".
7. Contact Ceco, Curries® or Fleming for detailed frame/door requirements and limitations.
8. 5CH applies only to 7100 devices.

7100(F) RIM

The 7100(F) is a rim exit device to be used with single doors or pairs of doors constructed of metal, wood or composite materials. Designed for application in high-use areas, the 7100(F) comes in a variety of finishes and can be combined with a variety of trims to match any desired style.



Features

- Designed for wide stile doors
- 3/4" throw deadlocking stainless steel pullman latchbolt
- Electroplated ferrous components provide corrosion resistance
- Available in double cylinder function (handing must be specified)

Applications

- Non-handed for easy installation
- Single swing doors
- Pairs of doors with removable mullions
- Metal, wood or composite door materials

Specifications

Door Opening Width	-24 for 24" (60cm) doors -36 for 30" - 36" (76cm - 91cm) doors -48 for 36" - 48" (91cm - 122cm) doors Optional sizes can be special ordered. Consult Technical Product Support.
Door Thickness	1-3/4" (44mm) standard. Optional door thicknesses available to 3-1/2"; specify door thickness when ordering.
Minimum Stile Width	4-1/2" (114mm)
Projection	3-1/4" (83mm) active, 2-3/4" (70mm) dogged
Latchbolt	3/4" (19mm) deadlocking stainless steel pullman-type
Strike	757F, 793 optional (double door application, panic only)
Fasteners	Machine screws and wood door fasteners standard for panic hardware. Sex nuts and bolts supplied standard for fire exit hardware.
Trims	620F series escutcheon trim, 630F series pull/thumbpiece trim, 680F series offset pull trim, 540F series rose trim, 121NL cylinder only. See pages 22-24.
ANSI/BHMA	Certified A156.3 Type 1, Grade 1
UL/cUL	FVSR/FVSR - Panic hardware; GXHX/GXHX7 - Fire exit hardware (F) (4' x 8' single, 8' x 8' pairs, 3 hr.)
Dogging	Hex key dogging supplied standard on panic devices
Options	Cylinder dogging, shim kit #723, sex nuts and bolts, MicroShield®, Lumi-lite
Warranty	5-year limited

7200 RIM

The 7200 is a narrow stile rim exit device compatible with the aesthetics and functional requirements of contemporary doors. The 7200 comes in varied finishes and can be combined with a variety of trims to match any desired style.



Features

- Designed for narrow stile doors
- 3/4" throw deadlocking stainless steel pullman latch
- Non-handed for easy installation

Applications

- Single swing narrow stile doors
- Pairs of narrow stile doors with removable mullions
- Metal and aluminum doors
- For panic-rated doors only

Specifications

Door Opening Width	-24 for 24" (60cm) doors -36 for 30" - 36" (76cm - 91cm) doors -48 for 36" - 48" (91cm - 122cm) doors Optional sizes can be special ordered. Consult Technical Product Support.
Door Thickness	1-3/4" (44mm) standard. 2" (51mm) and 2-1/4" (57mm); specify when ordering.
Minimum Stile Width	2" (51mm)
Projection	3-1/4" (83mm) active, 2-3/4" (70mm) dogged
Latchbolt	3/4" (19mm) deadlocking stainless steel pullman type.
Strike	Standard: 759. Optional: 793 (double door applications, panic only)
Fasteners	Machine screws standard for panic hardware
Trims	500F series escutcheon trim, 510F series pull/thumbpiece trim, 480F series offset pull trim. See pages 25-26.
ANSI/BHMA	A156.3, Type 4, Grade 1
UL/cUL	FVSR/FVSR7 - Panic hardware
Dogging	Hex key dogging supplied standard
Options	Cylinder dogging, shim kit #723NS, sex nuts and bolts, MicroShield®, Lumi-lite
Warranty	5-year limited

7200M(F) RIM

The 7200M(F) rim exit device provides the appearance of a narrow stile rim exit device for use on wide stile or flush doors. Using the 7200M(F) with narrow stile trim provides design continuity and pleasing aesthetics when matching exit devices for inside doors to outside narrow stile doors.



Features

- Narrow stile appearance designed for wide stile or flush doors
- 3/4" throw deadlocking stainless steel pullman latchbolt
- Non-handed for easy installation
- Fully adjustable surface mounted 3/8" diameter roller strike complete with positive locking plate and shims

Applications

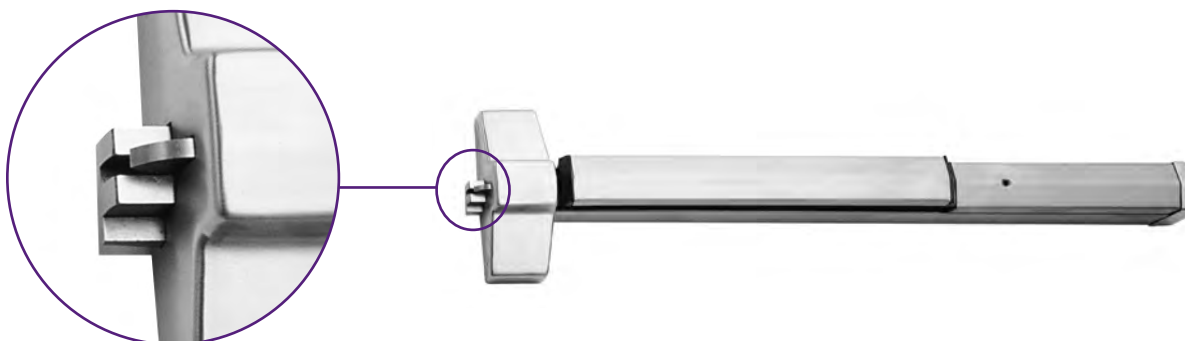
- Single swing doors
- Pairs of doors with removable mullions
- Metal, wood or composite door materials

Specifications


Door Opening Width	-24 for 24" (60cm) doors -36 for 30" - 36" (76cm - 91cm) doors -48 for 36" - 48" (91cm - 122cm) doors Optional sizes can be special ordered. Consult Technical Product Support.
Door Thickness	1-3/4" (44mm) standard. 2" (51mm) and 2-1/4" (57mm); specify when ordering.
Minimum Stile Width	4-1/2" (114mm)
Projection	3-1/4" (83mm) active, 2-3/4" (70mm) dogged
Latchbolt	3/4" (19mm) deadlocking stainless steel pullman type
Strike	757F, 793 optional (double door application, panic only)
Fasteners	Machine screws and wood door fasteners standard for panic hardware. Sex nuts and bolts supplied standard for fire exit hardware.
Trims	500F series escutcheon trim, 510F series pull/thumbpiece trim, 480F series offset pull trim. See pages 25-26.
ANSI/BHMA	A156.3, Type 4, Grade 1
UL/cUL	FVSR/FVSR7 - Panic hardware; GXHX/GXHX7 - Fire exit hardware (F) (4' x 8' single, 8' x 8' pairs, 3 hr.)
Dogging	Hex key dogging supplied standard on panic devices
Options	Cylinder dogging, shim kit #723NS, sex nuts and bolts, MicroShield®, Lumi-lite
Warranty	5-year limited

7150(F) RIM SQUAREBOLT®

Just as easy to open as traditional latchbolts, the SquareBolt® exit device's unique construction offers innovative protection. Its SquareBolt design presents an improved physical barrier over standard rim latchbolts. The SquareBolt exit device locks into place and stays there. Credit cards, crowbars, door rattling and shaking are resisted, significantly reducing the threat of unauthorized entry.



Features

- SquareBolt security deadbolt designed for maximum holding power
- Non-handed for easy installation
- Can be retrofitted onto existing 7100 series templated doors
- Fully adjustable surface-mounted 3/8" diameter roller strike complete with positive locking plate and shims
- Available in double cylinder function (handing must be specified)
- Available certified hurricane resistant (refer to local codes). Specify 7150(F)WS  Hurricane

Applications

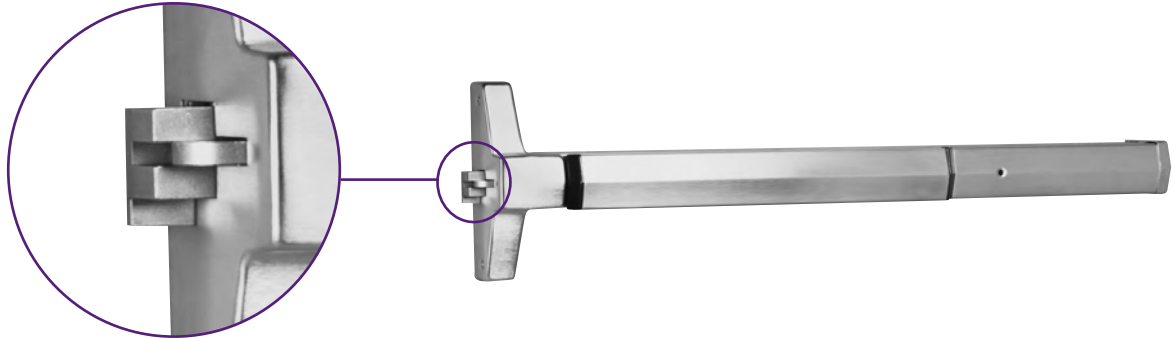
- Single swing doors
- Pairs of doors with removable mullions
- Metal, wood or composite door materials

Specifications

Door Opening Width	-24 for 24" (60cm) doors -36 for 30" - 36" (76cm - 91cm) doors -48 for 36" - 48" (91cm - 122cm) doors Optional sizes can be special ordered. Consult Technical Product Support.
Door Thickness	1-3/4" (44mm) standard. Optional door thicknesses available to 3-1/2"; specify door thickness when ordering.
Minimum Stile Width	4-1/2" (114mm)
Projection	3-1/4" (83mm) active, 2-3/4" (70mm) dogged
Deadbolt	1" (25mm) slide projection bolt with full 3/4" (19mm) projection
Strike	757F, 793 optional (double door application, panic only)
Fasteners	Machine screws and wood door fasteners standard for panic hardware. Sex nuts and bolts supplied standard for fire exit hardware.
Trims	620F series escutcheon trim, 630F series pull/thumbpiece trim, 680F series offset pull trim, 540F series rose trim, 121NL cylinder only. See pages 22-24.
ANSI/BHMA	A156.3, Type 4 or 28, Grade 1
UL/cUL	FVSR/FVSR7 - Panic hardware; GXHX/GXHX7 - Fire exit hardware (F) (4' x 8' single, 8' x 8' pairs, 3 hr.); ZHEM - Latching hardware; ZHLA - Windstorm rated assemblies
Dogging	Hex key dogging supplied standard on panic devices
Options	Cylinder dogging, shim kit #723, sex nuts and bolts, MicroShield®, Lumi-lite
Warranty	5-year limited

7250 RIM SQUAREBOLT®

The unique construction of the SquareBolt exit device offers innovative protection. The square latchbolt design provides an improved physical barrier over standard pullman-type rim latchbolts. It locks into place and stays there. Credit cards, crowbars, door rattling and shaking are resisted, significantly reducing the threat of unauthorized entry, especially in applications that include removable mullions. The 7250 SquareBolt is designed for narrow stile doors.



Features

- SquareBolt security deadbolt designed for maximum holding power
- Non-handed for easy installation
- Maintains the look of the 7200 series architectural exit devices, allowing for continuity in both design and finish
- Fully adjustable surface mounted 3/8" diameter roller strike complete with positive locking plate and shims
- Used with narrow stile trim

Applications

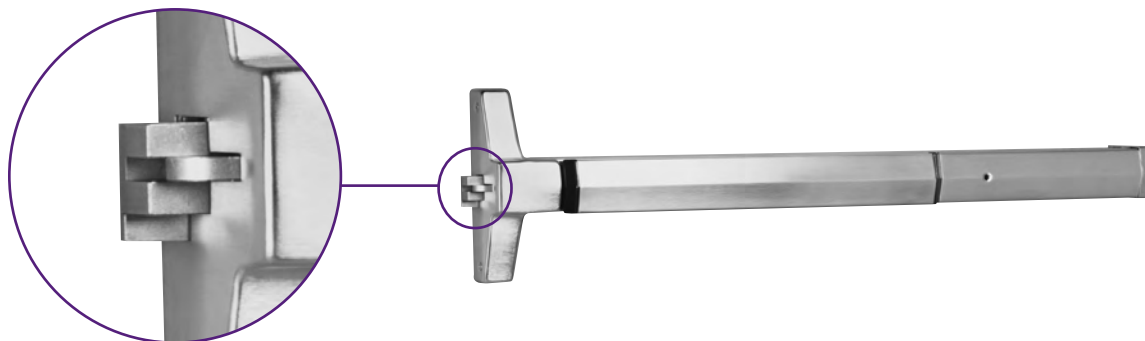
- Single swing narrow stile doors
- Pairs of narrow stile doors with removable mullions
- Metal and aluminum doors
- For panic-rated doors only

Specifications

Door Opening Width	-24 for 24" (60cm) doors -36 for 30" - 36" (76cm - 91cm) doors -48 for 36" - 48" (91cm - 122cm) doors Optional sizes can be special ordered. Consult Technical Product Support.
Door Thickness	1-3/4" (44mm) standard. 2" and 2-1/4" (51mm and 57mm); specify when ordering.
Minimum Stile Width	2" (51mm)
Projection	3-1/4" (83mm) active, 2-3/4" (70mm) dogged
Latchbolt	1" (25mm) slide projection bolt with full 3/4" (19mm) projection
Strike	Standard: 759. Optional: 793 (double door applications, panic only)
Fasteners	Machine screws standard for panic hardware
Trims	500F series escutcheon trim, 510F series pull/thumbpiece trim, 480F series offset pull trim. See pages 25-26.
ANSI/BHMA	Certified A156.3, Type 4 or 28, Grade 1
UL/cUL	FVSR/FVSR7 - Panic hardware
Dogging	Hex key dogging supplied standard
Options	Cylinder dogging, shim kit #723NS, sex nuts and bolts, MicroShield®, Lumi-lite
Warranty	5-year limited

7250M(F) RIM SQUAREBOLT®

The unique construction of the 7250M(F) SquareBolt exit device offers innovative protection while maintaining the appearance of a narrow stile exit device. The square latchbolt design provides an improved physical barrier over standard pullman-type latchbolts. The 7250M(F) SquareBolt is designed for wide stile or flush doors and provides design continuity of the 7200 series exit devices.



Features

- SquareBolt security deadbolt designed for maximum holding power
- Non-handed for easy installation
- Maintains the look of the 7200 series architectural exit devices, allowing for continuum in both design and finish
- Fully adjustable surface mounted 3/8" diameter roller strike complete with positive locking plate and shims
- Used with narrow stile trim
- Available certified hurricane resistant (refer to local codes). Specify 7250M(F)WS



Applications

- Single swing doors
- Pairs of doors with removable mullions
- Metal, wood or composite door materials

Specifications

Door Opening Width	-24 for 24" (60cm) doors -36 for 30" - 36" (76cm - 91cm) doors -48 for 36" - 48" (91cm - 122cm) doors Optional sizes can be special ordered. Consult Technical Product Support.
Door Thickness	1-3/4" (44mm) standard. 2" (51mm) and 2-1/4" (57mm); specify when ordering.
Minimum Stile Width	4-1/2" (114mm)
Projection	3-1/4" (83mm) active, 2-3/4" (70mm) dogged
Deadbolt	1" (25mm) slide projection bolt with full 3/4" (19mm) projection
Strike	757F, 793 optional (double door application, panic only)
Fasteners	Machine screws and wood door fasteners standard for panic hardware. Sex nuts and bolts supplied standard for fire exit hardware.
Trims	500F series escutcheon trim, 510F series pull/thumbpiece trim, 480F series offset pull trim. See pages 25-26.
ANSI/BHMA	Certified A156.3, Type 4 or 28, Grade 1
UL/cUL	FVSR/FVSR7 - Panic hardware; GXHX/GXHX7 - Fire exit hardware (F) (4' x 8' single, 8' x 8' pairs, 3 hr.); ZHEM - Latching hardware; ZHLA - Windstorm rated assemblies
Dogging	Hex key dogging supplied standard on panic devices
Options	Cylinder dogging, shim kit #723NS, sex nuts and bolts, MicroShield®, Lumi-lite
Warranty	5-year limited

7130(F) MORTISE

The 7130(F) is an exit device integrated with the ASSA ABLOY ACCENTRA™ 8700 Series Mortise Lock for use on single doors or active leaf of a pair of doors where life safety and extra security are required. The 8700 Series Mortise Lock used is modified for use with exit devices only.



Applications

- Single swing doors
- Pairs of doors with vertical rod devices or automatic flush bolts
- Metal, wood or compatible door materials

Order as follows, according to function.	
7130-K5(F)	(01) Exit only.
	(02) Entry by pull when dogged.
	(03) Key retracts latchbolt.
	Electrical control for trim, w/wo key override.
7130-L5(F)	(02) Entry by rigid lever when dogged.
	(03) Key retracts latchbolt.
	Electrical control for trim, w/wo key override.
7130-T5(F)	(02) Entry by pull when dogged. (03) Key retracts latchbolt.
7130-L8(F)	(08) Entry by lever lock/unlocked by key or lever only (passage).
7130-L8(F)-2	(08) Entry by lever lock/unlocked by key either side or lever only (passage).
7130-T8(F)	(05) Entry by thumbpiece lock/unlocked by key or thumbpiece only (passage).

Specifications

Door Opening Width	-24 for 24" (60cm) doors -36 for 30" - 36" (76cm - 91cm) doors -48 for 36" - 48" (91cm - 122cm) doors Optional sizes can be special ordered. Consult Technical Product Support.
Door Thickness	1-3/4" (44mm) standard. 2" and 2-1/4" (51mm and 57mm) optional; specify when ordering.
Minimum Stile Width	4-1/2" (114mm)
Projection	3-1/4" (83mm) active, 2-3/4" (70mm) dogged
Latchbolt	Two piece mechanical 3/4" (19mm) deadlocking stainless steel with anti-friction insert and auxiliary deadlocking latch
Strike	Curved lip, non-handed 798. Optional 712 for door pairs with astragals. Optional 718 open back strike.
Fasteners	Machine screws and wood door fasteners standard for panic hardware. Sex nuts and bolts supplied standard for fire exit hardware.
Trims	620F/650F series escutcheon trim, 630F/660F/670F series pull/thumbpiece trim, 684F offset pull trim. See pages 22-24.
ANSI/BHMA	Certified A156.3 Type 3, Grade 1
UL/cUL	FVSR/FVSR7 - Panic hardware; GXHX/GXHX7 - Fire exit hardware (F) (4' x 8' single, 8' x 8' pairs, 3 hr.) (4' x 9' single, 8' x 9' pairs, 1-1/2 hr.)
Dogging	Hex key dogging supplied standard on panic devices
Options	Cylinder dogging, shim kit #723, sex nuts and bolts, MicroShield®, Lumi-lite
Warranty	5-year limited

7110(F) SURFACE VERTICAL ROD

The 7110(F) is a surface vertical rod exit device to be used on wide stile or flush doors up to 8' (fire) and 10' (panic) where two-point latching is desired.

Features

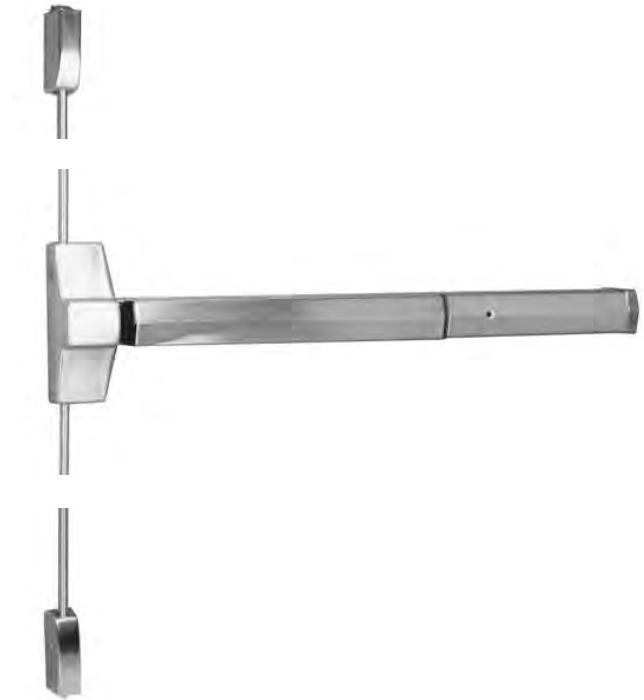
- Designed for wide stile and flush doors
- Handed. Specify hand (field reversible)
- Bottom deadbolt for secure latching
- Fully adjustable roller strike

Applications

- Pairs of doors
- Double egress
- Metal, wood or composite door materials

Specifications

Door Opening Width	-24 for 24" (60cm) doors -36 for 30" - 36" (76cm - 91cm) doors -48 for 36" - 48" (91cm - 122cm) doors Optional sizes can be special ordered. Consult Technical Product Support.
Door Opening Height	Standard door height 7' (213cm), with the device centerline at 39-15/16" (101cm) from floor. Optional heights up to 8' (fire) and 10' (panic) available by using rod extensions. For fire rated openings over 8', see 7170F SVR.
Door Thickness	1-3/4" (44mm) standard. Optional door thicknesses available to 3-1/2"; specify door thickness when ordering.
Minimum Stile Width	4-1/2" (114mm)
Projection	3-1/4" (83mm) active, 2-3/4" (70mm) dogged
Latchbolt	Top: 3/4" (19mm) throw, pullman-type with automatic deadlatching Bottom: 5/8" (16mm) throw deadbolt, held retracted during door swing
Vertical Rods	1/2" O.D. tubular brass, bronze or stainless steel with rod guides
Strike	Top: Roller type 791. Bottom: Flush mounted 790. 794 floor strike optional (threshold openings).
Fasteners	Machine screws and wood door fasteners standard for panic hardware. Sex nuts and bolts supplied standard for fire exit hardware.
Trims	620F series escutcheon trim, 630F series pull/thumbpiece trim, 680F series offset pull trim, 540F series rose trim. See pages 22-24.
ANSI/BHMA	Certified A156.3 Type 2, Grade 1
UL/cUL	FVSR/FVSR7 - Panic hardware; GXHX/GXHX7 - Fire exit hardware (F) (8' x 8' pairs, 3 hr.)
Dogging	Hex key dogging supplied standard on panic devices
Options	Cylinder dogging, shim kit #724, sex nuts and bolts, rod extensions, bottom pullman latch (panic only) MicroShield®, Lumi-lite
Warranty	5-year limited



7170(F) SURFACE VERTICAL ROD

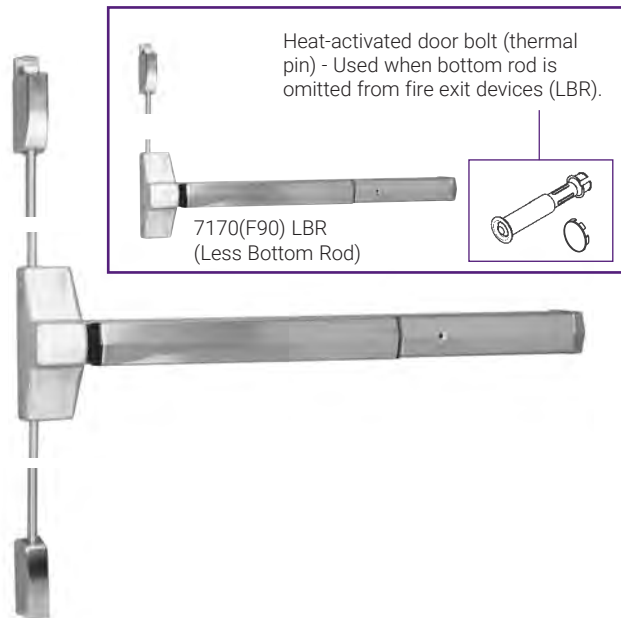
The 7170(F) is a surface vertical rod exit device to be used on wide stile and flush doors up to 10' where one- or two-point latching is desired. A Less Bottom Rod (LBR) option is available.

Features

- Designed for wide stile and flush doors
- Handed. Specify hand (field reversible)
- Interlocking top strike and latch mounting plate
- Available less bottom rod (LBR option)
- Available certified hurricane resistant (refer to local codes ~ not approved for LBR). Specify 7170(F)WS



Hurricane



Applications

- Pairs of doors
- Double egress
- Metal or wood doors

Specifications

Door Opening Width	-24 for 24" (60cm) doors -36 for 30" - 36" (76cm - 91cm) doors -48 for 36" - 48" (91cm - 122cm) doors Optional sizes can be special ordered. Consult Technical Product Support.
Door Opening Height	Standard door height 7' (213cm), with the device centerline at 39-15/16" (101cm) from floor. Optional heights specify suffix -8, -9, -10.
Door Thickness	1-3/4" (44mm) standard. Optional door thicknesses available to 3-1/2"; specify door thickness when ordering.
Minimum Stile Width	4-1/2" (114mm)
Projection	3-1/4" (83mm) active, 2-3/4" (70mm) dogged
Latchbolt	Top: 3/4" (19mm) throw, pullman-type with automatic deadlatching Bottom: 5/8" (16mm) throw deadbolt, held retracted during door swing
Vertical Rods	1/2" O.D. tubular brass, bronze or stainless steel with rod guides
Strike	Top: 726. Bottom: Flush-mounted 790. 794 floor strike optional (threshold openings).
Fasteners	Machine screws and wood door fasteners standard for panic hardware. Sex nuts and bolts supplied standard for fire exit hardware.
Trims	620F series escutcheon trim, 630F series pull/thumbpiece trim, 680F series offset pull trim, 540F series rose trim. See pages 22-24.
ANSI/BHMA	Certified A156.3 Type 2, Grade 1
UL/cUL	FVSR/FVSR7 - Panic hardware; GXHX/GXHX7 - Fire exit hardware (F) (8' x 10' pairs, 1-1/2 hr.) (8' x 8' pairs, 3 hr.); ZHEM - Latching hardware; ZHLA - Windstorm rated assemblies
Dogging	Hex key dogging supplied standard on panic devices
Options	Cylinder dogging, shim kit #724, sex nuts and bolts, bottom pullman latch (panic only), less bottom rod (LBR), -8, -9, -10 opening height, rod extensions, MicroShield®, Lumi-lite.
Warranty	5-year limited

7210 SURFACE VERTICAL ROD

The 7210 is a narrow stile surface vertical rod exit device to be used on narrow stile, aluminum and metal doors where two-point latching is desired.

Features

- Designed for narrow stile doors
- Handed. Specify hand (field reversible)
- Bottom deadbolt for secure latching
- Fully adjustable roller strike

Applications

- Pairs of narrow stile doors
- Metal and aluminum doors
- For panic-rated doors only



Specifications

Door Opening Width	-24 for 24" (60cm) doors -36 for 30" - 36" (76cm - 91cm) doors -48 for 36" - 48" (91cm - 122cm) doors Optional sizes can be special ordered. Consult Technical Product Support.
Door Opening Height	Standard door height 7' (213mm), with the device centerline at 39-15/16" (101cm) from floor. Optional heights specify suffix -8, -9, -10.
Door Thickness	1-3/4" (44mm) standard. 2" (51mm) and 2-1/4" (57mm); specify when ordering.
Minimum Stile Width	2" (51mm).
Projection	3-1/4" (83mm) active, 2-3/4" (70mm) dogged
Latchbolt	Top: 3/4" (19mm) stainless steel throw, pullman-type with automatic deadlatching. Bottom: 5/8" (16mm) throw deadbolt, held retracted during door swing.
Vertical Rods	1/2" (13mm) O.D. tubular brass, bronze or stainless steel with rod guides.
Strike	Top: Roller type 791. Bottom: Flush mounted 790. 794 floor strike optional (threshold openings).
Fasteners	Machine screws standard for panic hardware.
Trims	500F series escutcheon trim, 510F series pull/thumbpiece trim, 480F series offset pull trim. See pages 25-26.
ANSI/BHMA	Certified A156.3 Type 5, Grade 1
UL/cUL	FVSR/FVSR7 - Panic hardware
Dogging	Hex key dogging supplied standard
Options	Cylinder dogging, shim kit #724, sex nuts and bolts, -8, -9, -10 opening height, rod extensions, bottom pullman latch, MicroShield®, Lumi-lite
Warranty	5-year limited

7210M(F) SURFACE VERTICAL ROD

The 7210M(F) is a narrow appearance surface vertical rod exit device to be used on wide stile and flush metal or wood doors where two-point latching is desired.

Features

- Narrow stile appearance designed for wide stile doors
- Handed. Specify hand (field reversible)
- Fully adjustable roller strike

Applications

- Pairs of doors
- Double egress
- Metal, wood or composite door materials

Specifications

Door Opening Width	-24 for 24" (60cm) doors -36 for 30" - 36" (76cm - 91cm) doors -48 for 36" - 48" (91cm - 122cm) doors Optional sizes can be special ordered. Consult Technical Product Support.
Door Opening Height	Standard door height 7' (213mm), with the device centerline at 39-15/16" (101cm) from floor. Optional heights specify suffix -8 (fire and panic), -9, -10 (panic only).
Door Thickness	1-3/4" (44mm) standard. 2" (51mm) and 2-1/4" (57mm); specify when ordering.
Minimum Stile Width	4-1/2" (114mm)
Projection	3-1/4" (83mm) active, 2-3/4" (70mm) dogged
Latchbolt	Top: 3/4" (19mm) stainless steel throw, pullman-type with automatic deadlatching. Bottom: 5/8" (16mm) throw deadbolt, held retracted during door swing.
Vertical Rods	1/2" (13mm) O.D. tubular brass, bronze or stainless steel with rod guides.
Strike	Top: Roller type 791. Bottom: Flush mounted 790. 794 floor strike optional (threshold openings).
Fasteners	Machine screws and wood door fasteners standard for panic hardware. Sex nuts and bolts supplied standard for fire exit hardware.
Trims	500F series escutcheon trim, 510F series pull/thumbpiece trim, 480F series offset pull trim. See pages 25-26.
ANSI/BHMA	Certified A156.3, Type 5, Grade 1
UL/cUL	FVSR/FVSR7 - Panic hardware; GXHX/GXHX7 - Fire exit hardware (F) (8' x 8' pairs, 3 hr.)
Dogging	Hex key dogging supplied standard on panic devices
Options	Cylinder dogging, shim kit #724NS, sex nuts and bolts, bottom pullman latch (panic only), -8, -9, -10 opening height, rod extensions, MicroShield®, Lumi-lite
Warranty	5-year limited



7120(F) CONCEALED VERTICAL ROD

The 7120(F) is a concealed vertical rod exit device to be used on metal doors only up to 8' (fire) and 10' (panic) where two-point latching is desired.

Features

- Designed for wide stile and flush doors
- Handed. Specify hand (field reversible)
- Bottom deadbolt for secure latching
- Fully adjustable roller strike

Applications

- Pairs of doors
- Double egress
- Metal doors only

Specifications



Door Opening Width	-24 for 24" (60cm) doors -36 for 30" - 36" (76cm - 91cm) doors -48 for 36" - 48" (91cm - 122cm) doors Optional sizes can be special ordered. Consult Technical Product Support.
Door Opening Height	Standard door height adjustable to 8' (244cm), with the device centerline at 39-15/16" (101cm) from floor. Optional heights up to 10' (panic) available by using rod extensions. For fire rated openings over 8', see 7160F CVR.
Door Thickness	1-3/4" (44mm) standard. 2" and 2-1/4" (51mm and 57mm) optional; specify when ordering.
Minimum Stile Width	4-1/2" (114mm)
Projection	3-1/4" (83mm) active, 2-3/4" (70mm) dogged
Latchbolt	Top: 3/4" (19mm) throw, pullman-type with automatic deadlatching Bottom: 5/8" (16mm) throw deadbolt, held retracted during door swing
Vertical Rods	1/2" (13mm) O.D. telescoping tubular rods
Strike	Top: Roller type 791 (panic and fire). Bottom: Flush mounted 790 (panic and fire). 794 floor strike optional (threshold openings).
Fasteners	Machine screws standard for panic hardware. Sex nuts and bolts supplied standard for fire exit hardware.
Trims	620F series escutcheon trim, 630F series pull/thumbpiece trim, 680F series offset pull trim, 540F series rose trim. See pages 22-24.
ANSI/BHMA	Certified A156.3 Type 8, Grade 1
UL/cUL	FVSR/FVSR7 - Panic hardware; GXHX/GXHX7 - Fire exit hardware (F) (8' x 8' pairs, 3 hr.)
Dogging	Hex key dogging supplied standard on panic devices
Options	Cylinder dogging, shim kit #723, sex nuts and bolts, rod extensions, bottom pullman latch (panic only) MicroShield®, Lumi-lite
Warranty	5-year limited

Note: Not available with Less Bottom Rod option



7160(F) CONCEALED VERTICAL ROD

The 7160(F) is a concealed vertical rod exit device to be used on wood and metal doors up to 10' where one- or two-point latching is desired. A Less Bottom Rod (LBR) option is available.

Features

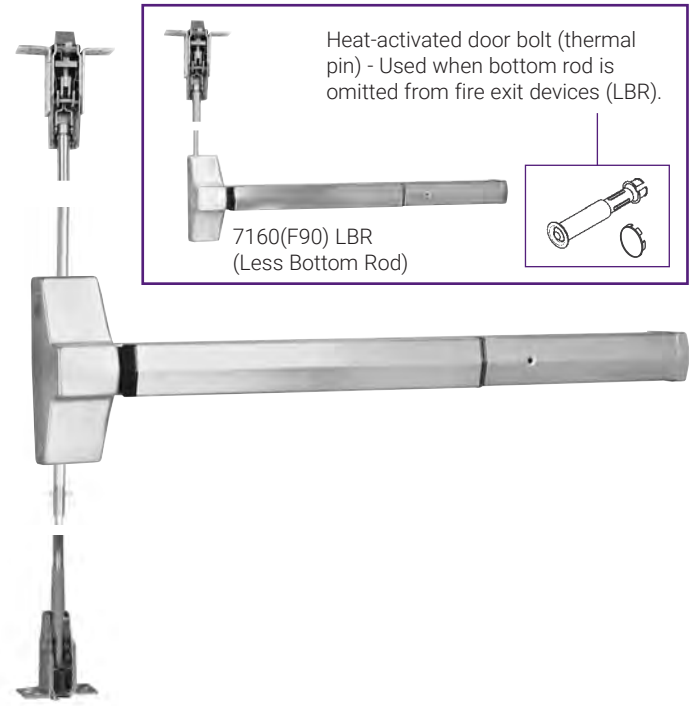
- Designed for wide stile and flush doors
- Handed. Specify hand (field reversible)
- Mortised top strike
- Available less bottom rod (LBR option)

Applications

- Pairs of doors
- Double egress
- Metal, wood, or composite door materials

Specifications

Door Opening Width	-24 for 24" (60cm) doors -36 for 30" - 36" (76cm - 91cm) doors -48 for 36" - 48" (91cm - 122cm) doors Optional sizes can be special ordered. Consult Technical Product Support.
Door Opening Height	Standard door height adjustable to 8' (244cm), with the device centerline at 39-15/16" (101cm) from floor. Optional heights specify suffix -9, -10.
Door Thickness	1-3/4" (44mm) standard. 2" and 2-1/4" (51mm and 57mm) optional; specify when ordering.
Minimum Stile Width	4-1/2" (114mm)
Projection	3-1/4" (83mm) active, 2-3/4" (70mm) dogged
Latchbolt	Top: 3/4" (19mm) throw, pullman-type with automatic deadlatching Bottom: 5/8" (16mm) throw deadbolt, held retracted during door swing
Vertical Rods	1/2" (13mm) O.D. telescoping tubular rods
Strike	Top: Mortised 761. Bottom: Flush mounted 790. 794 floor strike optional (threshold openings).
Fasteners	Machine screws and wood door fasteners standard for panic hardware. Sex nuts and bolts supplied standard for fire exit hardware.
Trims	620F series escutcheon trim, 630F series pull/thumbpiece trim, 680F series offset pull trim, 540F series rose trim. See pages 22-24.
ANSI/BHMA	Certified A156.3 Type 7 and 8, Grade 1
UL/cUL	FVSR/FVSR7 - Panic hardware; GXHX/GXHX7 - Fire exit hardware (F) (8' x 10' pairs, 1-1/2 hr.) (8' x 8' pairs, 3 hr.)
Dogging	Hex key dogging supplied standard on panic devices
Options	Cylinder dogging, shim kit #723, sex nuts and bolts, less bottom rod (LBR), -9, -10 opening height, rod extensions, bottom pullman latch (panic only), MicroShield®, Lumi-lite.
Warranty	5-year limited



7220 CONCEALED VERTICAL ROD

The 7220 is a narrow stile concealed vertical rod exit device to be used on narrow stile, aluminum and metal doors where two-point latching is desired.

Features

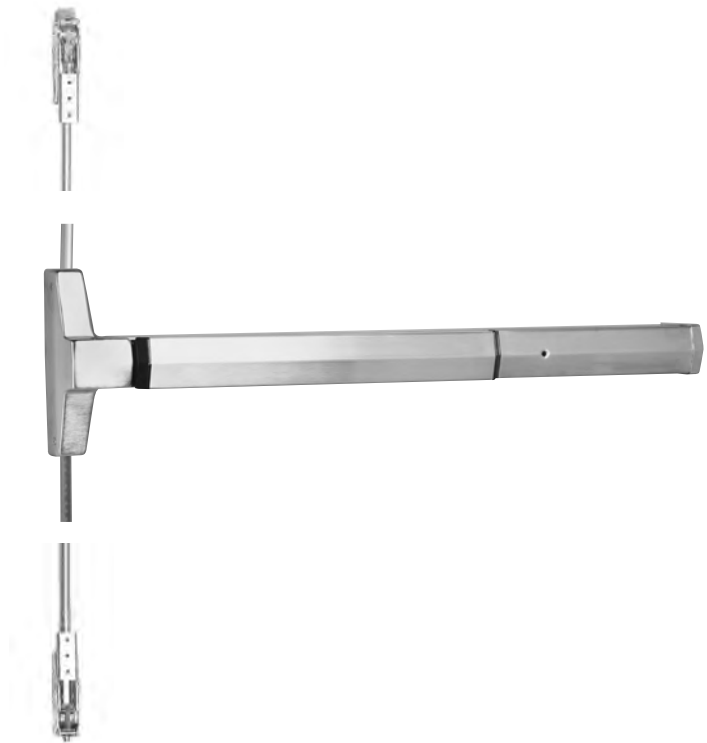
- Designed for narrow stile doors
- Handed. Specify hand (field reversible)
- Bottom deadbolt for secure latching
- Fully adjustable roller strike

Applications

- Pairs of narrow stile doors
- Metal and aluminum doors
- For panic-rated doors only

Specifications

Door Opening Width	-24 for 24" (60cm) doors -36 for 30" - 36" (76cm - 91cm) doors -48 for 36" - 48" (91cm - 122cm) doors Optional sizes can be special ordered. Consult Technical Product Support.
Door Opening Height	Standard top rod adjustable to 7' to 8' (213cm to 244cm), with the device centerline at 39-15/16" (101cm) from floor. Optional heights specify suffix -9, -10
Door Thickness	1-3/4" (44mm) standard. 2" (51mm) and 2-1/4" (57mm); specify when ordering.
Minimum Stile Width	2" (51mm).
Projection	3-1/4" (83mm) active, 2-3/4" (70mm) dogged
Latchbolt	Top: 3/4" (19mm) stainless steel throw, pullman-type with automatic deadlatching. Bottom: 5/8" (16mm) throw deadbolt, held retracted during door swing.
Vertical Rods	1/2" (13mm) O.D. telescoping tubular rods
Strike	Top: Roller type 791. Bottom: Flush mounted 790. 794 floor strike optional (threshold openings).
Fasteners	Machine screws standard for panic hardware.
Trims	500F series escutcheon trim, 510F series pull/thumbpiece trim, 480F series offset pull trim. See pages 25-26.
ANSI/BHMA	Certified A156.3 Type 6, Grade 1
UL/cUL	FVSR/FVSR7 - Panic hardware
Dogging	Hex key dogging supplied standard
Options	Cylinder dogging, shim kit #723NS, sex nuts and bolts, -9, -10 opening height, rod extensions, bottom pullman latch, MicroShield®, Lumi-lite
Warranty	5-year limited



7220M(F) CONCEALED VERTICAL ROD

The 7220M(F) is a narrow appearance concealed vertical rod exit device for wide stile and flush metal doors only and is to be used where two-point latching is desired.

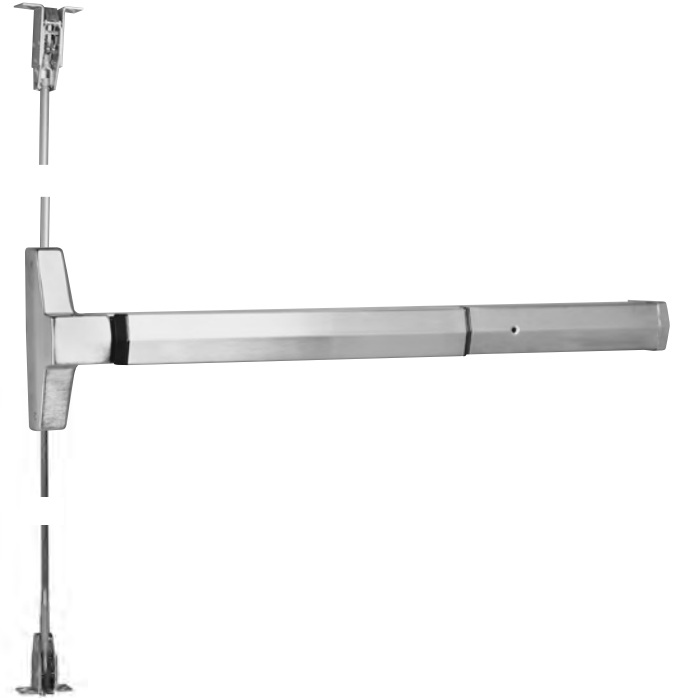
Features

- Narrow stile look designed for wide stile doors
- Handed. Specify hand (field reversible)
- Bottom deadbolt for secure latching
- Fully adjustable roller strike

Applications

- Pairs of doors
- Double egress
- Metal doors only

Specifications



Door Opening Width	-24 for 24" (60cm) doors -36 for 30" - 36" (76cm - 91cm) doors -48 for 36" - 48" (91cm - 122cm) doors Optional sizes can be special ordered. Consult Technical Product Support.
Door Opening Height	Standard door height adjustable to 8' (244mm), with the device centerline at 39-15/16" (101cm) from floor. Optional heights specify suffix -9, -10 (panic only).
Door Thickness	1-3/4" (44mm) standard. 2" (51mm) and 2-1/4" (57mm); specify when ordering.
Minimum Stile Width	4-1/2" (114mm)
Projection	3-1/4" (83mm) active, 2-3/4" (70mm) dogged
Latchbolt	Top: 3/4" (19mm) stainless steel throw, pullman-type with automatic deadlatching. Bottom: 5/8" (16mm) throw deadbolt, held retracted during door swing.
Vertical Rods	1/2" (13mm) O.D. telescoping tubular rods.
Strike	Top: Roller type 791. Bottom: Flush mounted 790. 794 floor strike optional (threshold openings).
Fasteners	Machine screws and wood door fasteners standard for panic hardware. Sex nuts and bolts supplied standard for fire exit hardware.
Trims	500F series escutcheon trim, 510F series pull/thumbpiece trim, 480F series offset pull trim. See pages 25-26.
ANSI/BHMA	Certified A156.3, Type 8, Grade 1
UL/cUL	FVSR/FVSR7 - Panic hardware; GXHX/GXHX7 - Fire exit hardware (F) (8' x 8' pairs, 3 hr.)
Dogging	Hex key dogging supplied standard on panic devices
Options	Cylinder dogging, shim kit #723NS, sex nuts and bolts, bottom pullman latch (panic only), -9, -10 opening height, rod extensions, MicroShield®, Lumi-lite
Warranty	5-year limited

TRIM DESIGNS

Escutcheons

480F Series	500F Series	510F Series	620F/650F Series	630F/660F/670F Series	680F Series
					
Projection: 2-13/32" (61mm)	Projection: see levers	Projection: see levers	Projection: see levers	Projection: 2-1/8" (54mm)	Projection: see levers

Roses

540F Series



Projection: 3-1/2" (89mm)

Standard Trims



























All ASSA ABLOY ACCENTRA™ exit device trims (except mortise trim) feature the unique Free-Wheeling lever mechanism, similar to our 5400LN cylindrical lock. This Free-Wheeling trim features a clutch mechanism which allows the lever to float down 60 degrees when operated in the locked condition, improving vandal resistance.

Arcadia AR 	Augusta AU 	Carmel CR 
		
Projection: 3-1/4" (82mm)	Projection: 2-5/8" (61mm)	Projection: 3-1/8" (79mm)
Jefferson JN 	Monroe MO 	Pacific Beach PB 
		
Projection: 2-9/16" (65mm)	Projection: 3" (76mm)	Projection: 3-5/16" (84mm)
Pinehurst PN 	Virginia VI 	Hampton HA 
		
Projection: 3-1/16" (78mm)	Projection: 3-1/8" (79mm)	Projection: 3-3/8" (86mm)

Note: Projection dimensions are provided using the 620F series escutcheon plates.

TRIM DESIGNS

Reflections® Levers

Hudson	TB	UB	TC	TD	UC		
							
Projection	3-1/16" (78mm)	3-1/4" (83mm)	3" (76mm)	3-7/16" (87mm)	3-7/16" (87mm)		
Spree	RS	RT	RU	RV			
							
Projection	3-1/8" (79mm)	3-1/8" (79mm)	3-13/32" (87mm)	3" (76mm)			
Seine	TE	TG	TI	TJ	TK	GT	
							
Projection	3" (76mm)	2-13/16" (61mm)	3-3/8" (85mm)	3-1/16" (78mm)	3-1/4" (83mm)	3-1/4" (83mm)	
Thames	TM	TN	TP	TR	TS	TQ	
							
Projection	3-1/16" (78mm)	3-1/16" (78mm)	3-5/16" (84mm)	3-1/16" (78mm)	3-1/8" (80mm)	3-1/16" (78mm)	
Victoria	TT	TU	TW	TX	UX	TY	WG
							
Projection	2-11/16" (68mm)	3-1/4" (83mm)	3" (76mm)	3-5/8" (92mm)	3-7/16" (87mm)	3-5/16" (84mm)	3-5/8" (92mm)
Niagara	MA	RA	RB	RC			
							
Projection	2-13/16" (71mm)	3-11/16" (94mm)	2-13/16" (71mm)	2-13/16" (71mm)			

Notes:

Projection dimensions are provided using the 620F Series escutcheon plates.

The following Reflections levers are not available in 629 or 630 finish: Victoria TT, TU, TW, TX, TY, UX; Seine TG, TJ, TK, TE, TI; Hudson TD; Niagara CH, DW, MA, RA, RB, RC. Please consider the 618 or 619 finish as an alternative. Reflections levers are not available with knurling option.

7100 SERIES TRIMS

620F and 650F Series Escutcheon Trim



- Certified ANSI/BHMA A156.3, Grade 1.
- Trim thrubolts to exit device for strength.
- Beveled sides improve attack resistance.
- Solid forged escutcheon and Free-Wheeling trim resists vandalism and abuse.
- Flush cylinder in 6-pin applications for additional security.
- 1-3/4" (44mm) door standard. For doors through 2-1/4" (57mm) or shim-mounted devices, specify on order.
- Dimensions: 3" x 10-1/4" x 13/16" (76mm x 260mm x 19mm).
- Cylinders not included. See page 45-48 for cylinder options. 1-1/2" mortise cylinder required for mortise trim.
- Available with AR, AU, CR, JN, MO, PB, PN, VI and HA lever designs. See page 22.
 - Finishes: 605, 606, 611, 612, 613E, 619, 626, 629, 630, 693, BSP, WSP
- Available with Reflections® lever designs. See page 23.
 - Finishes: 605, 606, 611, 612, 613E, 619, 626, 629, 630, BSP, WSP
- Trim ordering example: AU626F x 626 x RHR.
- 5-year limited warranty.

Application	Cylinder	Classroom/ Storeroom Cylinder Controls Thumbturn	Exit Only Blank Plate	Nightlatch Access by Key	Classroom Cylinder Controls Lever	Storeroom Cylinder Controls Lever	Nightlatch Cylinder by Lever	Passage	Dummy Trim Free- Wheeling	Dummy Rigid Lever
7100(F) 7150(F) 7110(F) 7120(F) 7160(F) 7170(F)	Rim	603F ¹	620F	621F ²	626F	626F ¹	627F ²	628F	628F ¹	629F
7130(F)	Mortise	—	620F	651F	656F	—	656F	658F	—	658F
7100(F)-2 7150(F)-2	Rim x Rim	—	—	—	626F	—	—	—	—	—
7130(F)-2	Mortise x Rim	—	—	—	656F	—	—	—	—	—
ANSI		11/12	01	03	08	09	03	14	02	02

1. 09, 12 and Free Wheeling 02 achieved with single trim modification at installation.

2. Not recommended for use with vertical rod devices.

3. 08 only

For 626, 629 & 630 finishes the escutcheon is plated to simulate stainless steel.

For 629 & 630 finishes the standard levers are plated to simulate stainless steel.

Free-Wheeling is not available on mortise trim.

For 620F series trim, optional door thickness available up to 3-1/2", specify on order.

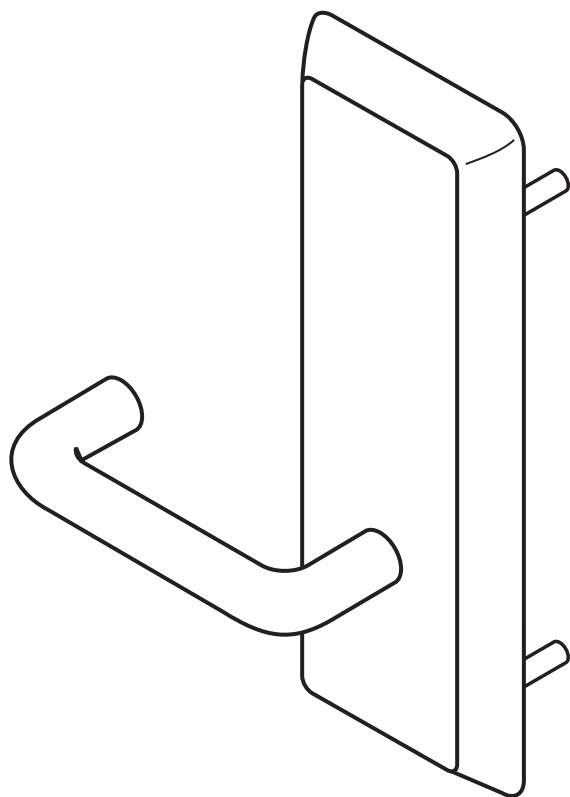
656F and 658F Mortise Exit Device Trim

Installation Instructions

ACCENTRA

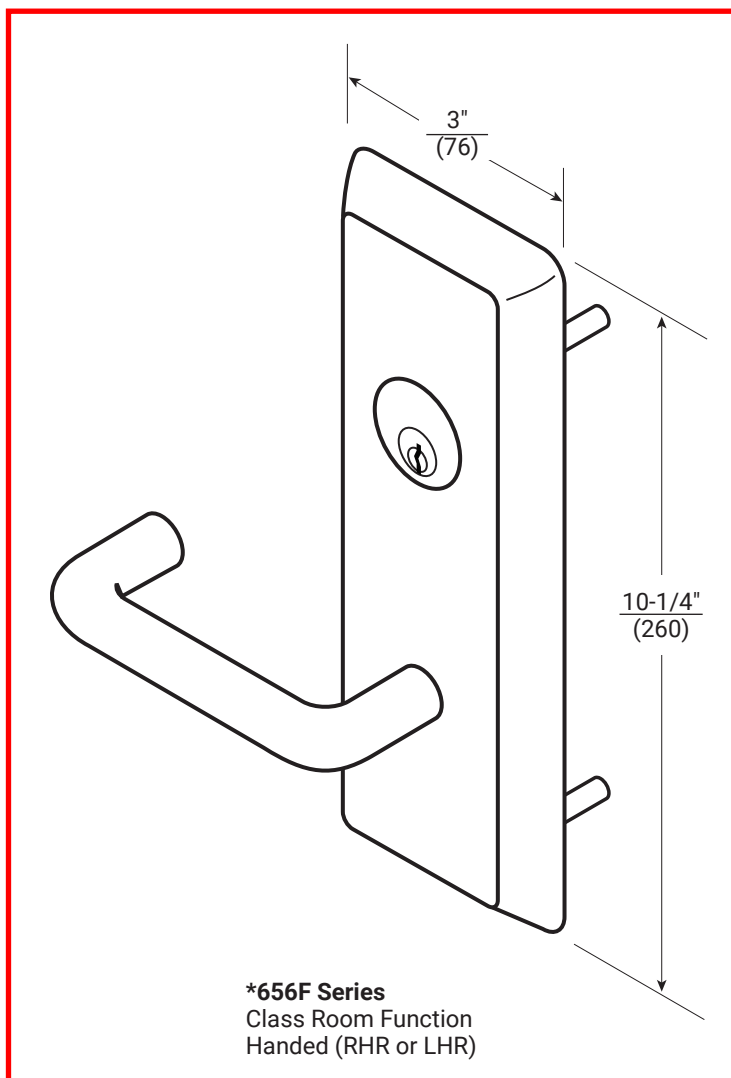
ASSA ABLOY

**For use with 7130 Series
Exit Devices (Wood and Metal Doors)**



***658F Series**
Passage Function Trim
Handed (RHR or LHR) Lever Always Active

Dummy Trim
Handed (RHR or LHR) Rigid Lever



***656F Series**
Class Room Function
Handed (RHR or LHR)

Nightlatch Function
Handed (RHR or LHR) Rigid Lever

* Represents prefix letter(s) for various lever designs.

WARNING

This product can expose you to lead which is known to the state of California to cause cancer and birth defects or other reproductive harm. For more information go to www.P65warnings.ca.gov.

WARNING

Attention Installer: Any retrofit or other field modification to a fire rated opening can potentially impact the fire rating of the opening, and ASSA ABLOY makes no representations or warranties concerning what such impact may be in any specific situation. When retrofitting any portion of an existing fire-rated opening, or specifying and installing a new fire-rated opening, please consult with a code specialist or local code official (Authority Having Jurisdiction) to ensure compliance with all applicable codes and ratings.

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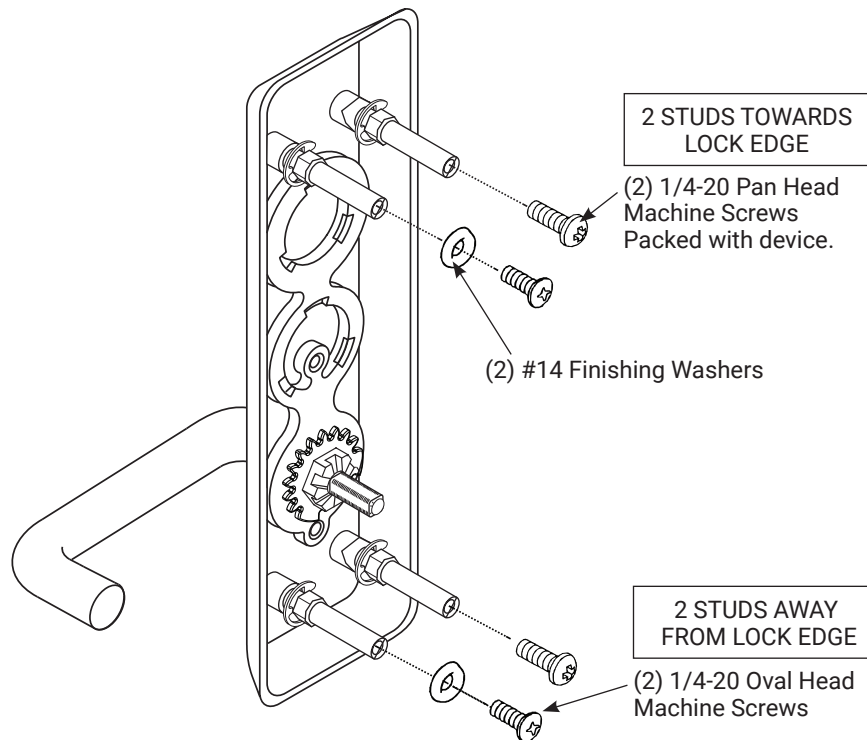
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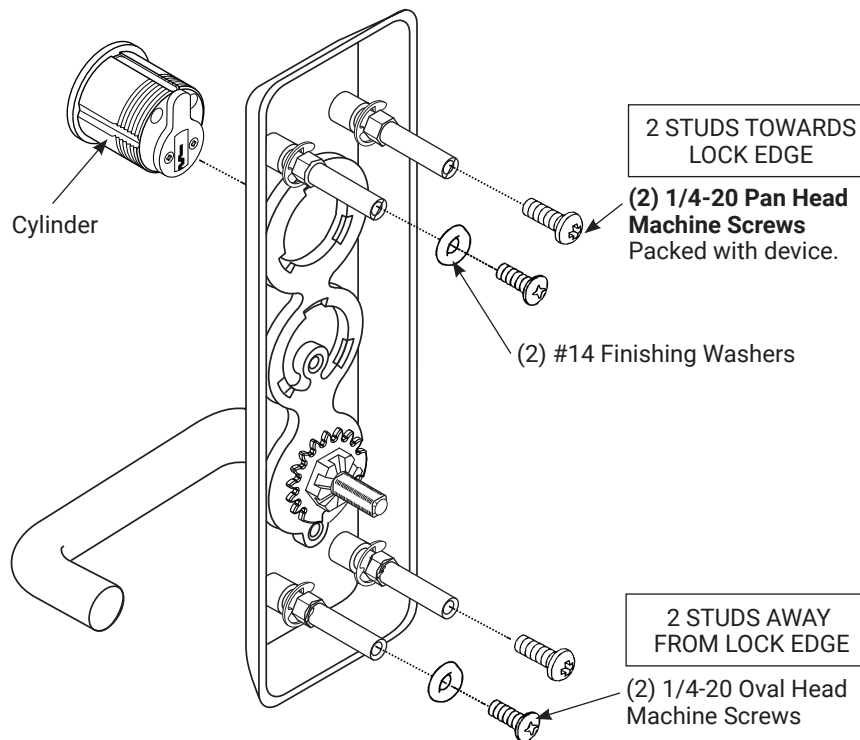
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Trim Components

658F Series



656F Series



656F and 658F Mortise Exit Device Trim

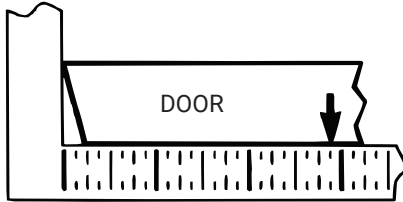
Installation Instructions

ACCENTRA

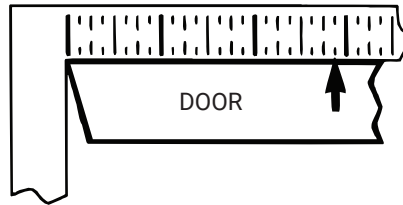
ASSA ABLOY

1. Check box for contents. See previous page for components.
2. After marking door inside face for device location (Device Instructions), transfer Vertical Reference Centerline from inside to outside door face. Follow steps 2a. and 2b. below.

2a. Measure inside line location.

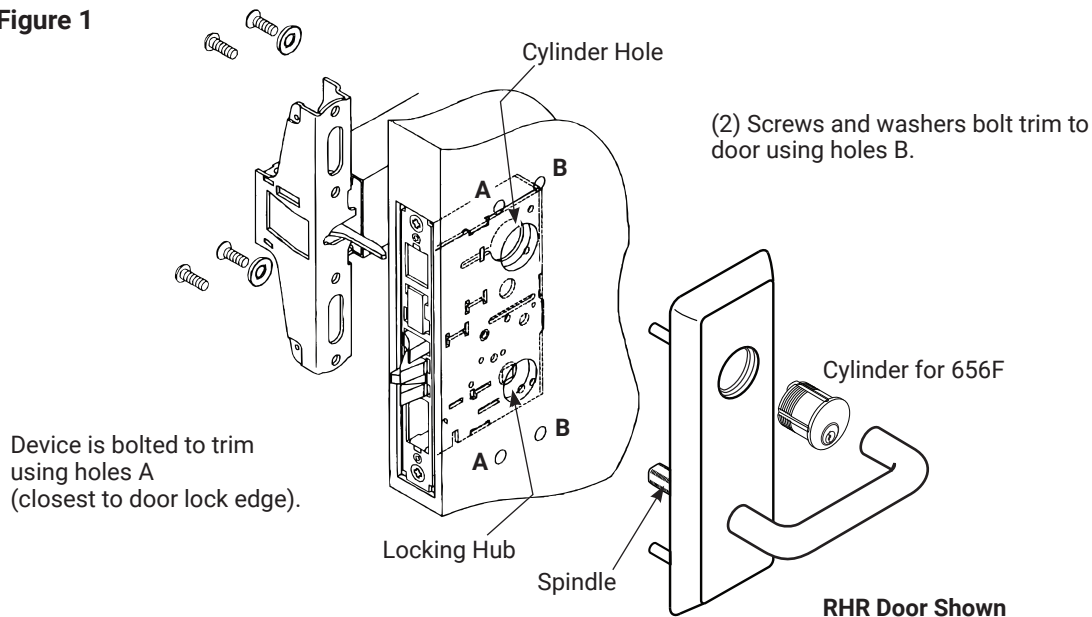


2b. Transfer dimension to outside face.



3. Transfer Horizontal Reference Centerline from inside to outside door face.
4. Align trim template and tape to outside door face.
Caution: Office copiers and facsimile machines may change the size of a drawing and make the template inaccurate to use as a door marker. If this is not the original template packed with the trim, use only the dimensions written on the template to locate the holes on the door (do not use the template as a door marker).
5. Spot holes and prepare door for trim.
6. **For 658F Passage Function:**
Be sure mortise lock is **unlocked** before installing trim.
For 658F Dummy Trim:
Be sure mortise lock is locked before installing trim. To change to locked or unlocked mode, reach into cylinder hole of mortise lock with finger or screwdriver and move lever until it clicks into locked or unlocked position.
7. Rotate lever of trim for proper handing and engage spindle into mortise locking hub. Mount trim to door thru holes B. Fasten, finger tight only, with 2 screws and washers seating on door as shown in **Figure 1**.
8. **For 656F Functions:**
Thread cylinder into mortise lock until seated within escutcheon recess with keyway positioned vertically and with plug in lower cylinder as shown in **Figure 1**. Tighten cylinder locking screw thru mortise lock front.
9. Continue as shown in device instructions.

Figure 1

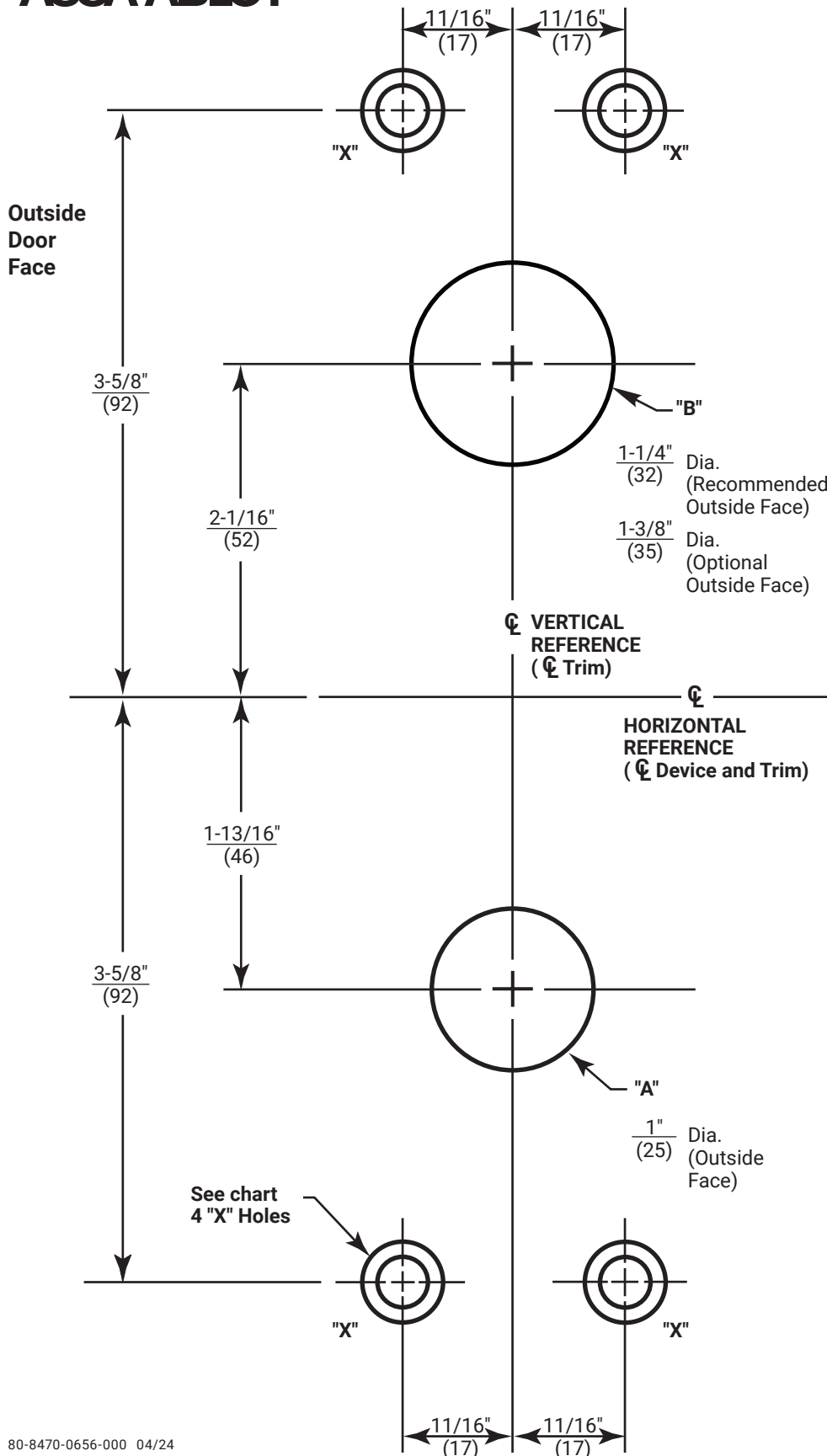


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Trim Template

Holes Marked "X" (4 Places)	
Metal Doors:	
Inside Face	5/16" (8) Dia.
Outside Face	1/2" (13) Dia.
Wood Doors:	1/2" (13) Dia. Thru

Dimensions given in $\frac{\text{Inches}}{\text{(mm)}}$

Trim	Holes
658F	A
656F	A, B

Caution: Office copiers and facsimile machines may change the size of a drawing and make the template inaccurate to use as a door marker. If this is not the original template packed with the trim, use only the dimensions written on the template to locate the holes on the door (do not use the template as a door marker).

Get one-on-one support when you become a member of the James Hardie™ ALLIANCE!




Learn more here. →

 > Product Catalog > Exterior Siding Products > **Hardie® Plank Lap Siding | James Hardie**

Hardie® Plank Lap Siding

Protect and transform your home with our best-selling product line from the #1 brand of fiber cement siding in North America*, available in stunning finishes to suit every style.

 Showing products for: 21769

Hardie® Plank

Find your style

Your home is a blank canvas. Experiment with a variety of Hardie® Plank siding styles, textures, and stunning colors featuring our ColorPlus® Technology finishes to create your masterpiece.



Primed for Paint product samples are not available.
Please check with your contractor or local dealer for
availability in your area.

Select your color collection

Statement
Collection®

**Primed for
Paint**

 Did not find the color you're looking for? [Click here.](#)

Choose Hardie® Plank?

...and it's more than transform your home's look—it helps
protect your home for decades to come.



Superior durability

Hardie® siding is noncombustible—it will not burn.** It resists damage from moisture and holds no appeal for pests like woodpeckers or termites.



Engineered for Climate®

Our fiber cement siding and trim products are formulated to offer superior performance based on your region's unique climate needs, and help protect against damage from weather extremes, hurricanes, winter storms and more.



Lasting value

Enjoy a low-maintenance exterior with a 30-year non-prorated limited, transferrable substrate warranty for lasting peace of mind and quality you can trust.



Create unmatched curb appeal

ColorPlus® Technology finishes provide countless color options, such as Hardie's 2025 Color of the Year: Evening Blue, in an ultra-durable finish. Our factory-applied, baked-on color is cured between coats for superior color consistency, adhesion and durability.

Tech specs and documents

Learn everything you need to know about installing and caring for Hardie® Plank.

Specs: Select Cedarmill® 

Specs: Smooth 


Specs: Beaded Select Cedarmill® 

Specs: Beaded Smooth 



Quick Start Installation Guide

Get an overview of the installation process for Hardie® Plank. In English and Spanish.

Download PDF 



How to Install Hardie® Plank

From starter strips to correct gap length, it's important to know the basics for siding installation.

Watch video 



Browse Tech Docs Library

Quickly browse and gather all the docs you need for a successful install project, from CAD files to install instructions to safety sheets.

See docs for this product →

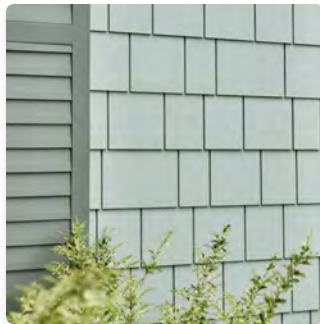
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Explore more products

See how Hardie® products can help your home look beautiful for years to come!



Hardie® Panel ↗



Hardie® Shingle ↗



Hardie® Soffit ↗



Hardie® Trim Batten Boards ↗

Start your renovation

Ready to take the next step? Find a local pro to help you execute your design vision with Hardie® siding.



**Based on Freedonia 2022 Global Siding (Cladding) demand estimates and James Hardie sales in North America.*

***Hardie® siding complies with ASTM E136 as a noncombustible cladding and is recognized by firefighters and fire departments across the U.S. including Chicago IL, St. Paul MN, Flagstaff, AZ and Wayne County, OH. Fiber cement fire resistance does not extend to applied paints or coatings, which may be damaged or char when exposed to flames.*

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Get one-on-one support when you become a member of the James Hardie™ ALLIANCE!




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Hardie® Trim Boards

Whether your style is sleek and modern or rustic and traditional, Hardie® Trim boards are the perfect finishing touch.

 Showing products for: 21769

Hardie® Trim

Find your style

Your home is a blank canvas. Experiment with a variety of Hardie® Trim styles, textures, and stunning colors featuring our ColorPlus® Technology finishes to create your masterpiece.



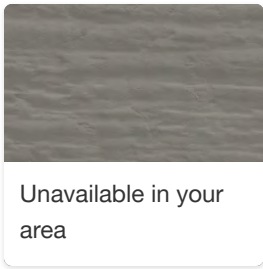
Primed for Paint product samples are not available.
Please check with your contractor or local dealer for
availability in your area.



Smooth



Roughsawn



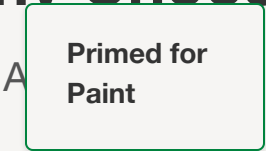
Unavailable in your
area

Rustic Grain

Select your color collection

Why Choose Hardie® Trim Boards?

Statement
Collection®



Did not find the color you're looking for? [Click here](#)

finishing touches that are built to last.



Superior durability

Hardie® siding is noncombustible—it will not burn.** It resists damage from moisture and holds no appeal for pests like woodpeckers or termites.



Engineered for Climate®

Our fiber cement siding and trim products are formulated to offer superior performance based on your region's unique climate needs, and help protect against damage from weather extremes, hurricanes, winter storms and more.



Lasting value

Enjoy a low-maintenance exterior with a 30-year non-prorated limited, transferrable substrate warranty for lasting peace of mind and quality you can trust.



Create unmatched curb appeal

ColorPlus® Technology finishes provide countless color options, such as Hardie's 2025 Color of the Year: Evening Blue, in an ultra-durable finish. Our factory-applied, baked-on color is cured between coats for superior color consistency, adhesion and durability.

Tech specs and documents

Learn everything you need to know about installing and caring for Hardie® Trim Boards.

Specs: Smooth



Specs: Roughsawn



How to Install Hardie® Trim

From starter strips to correct gap length, it's important to know the basics for siding installation.

Watch video →



Browse Tech Docs Library

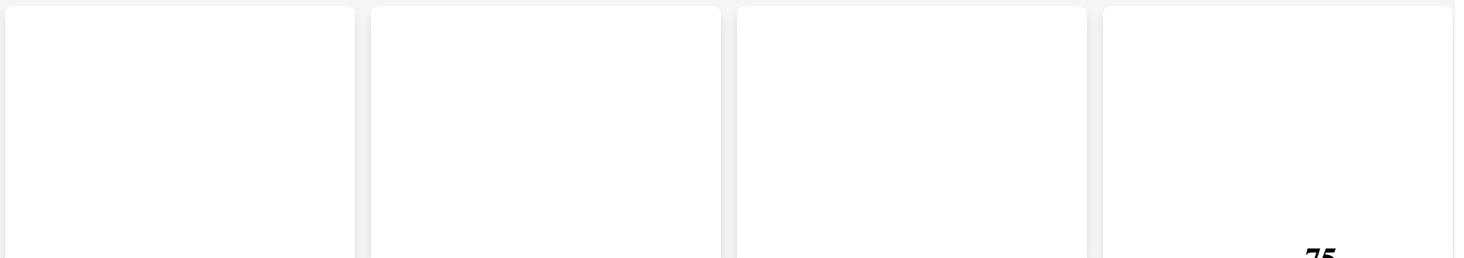
Quickly browse and gather all the docs you need for a successful install project, from CAD files to install instructions to safety sheets.

See docs for this product →

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Explore more products

See how Hardie® products can help your home look beautiful for years to come.





Start your renovation

Ready to take the next step? Find a local pro to help you execute your design vision with Hardie® siding.

[Find a local contractor](#)



**When tested for ASTM E84 (Standard Test Method for Surface Burning Characteristics of Building Materials).*

Quick Links



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Hardie® Plank Lap Siding

Submittal Form

01
Submitted to:

☐ **HZ5® Product Zone** ☐ **HZ10® Product Zone**
Project Name:

Product Width: ☐ 5-1/4in ☐ 6-1/4in ☐ 7-1/4in ☐ 8in ☐ 8-1/4in ☐ 9-1/4in ☐ 12in

Submitted by:

Product Finish: ☐ **Primed** ☐ **ColorPlus® Technology**
Date:

Product Texture: ☐ **Smooth** ☐ **Select Cedarmill®** ☐ **Colonial Roughsawn®**
☐ **Colonial Smooth®** ☐ **Rustic Cedar**

Hardie® Plank Lap Siding

Specification Sheet

01
DIVISION: 07 00 00 THERMAL AND MOISTURE PROTECTION
SECTION: 07 46 46 FIBER CEMENT SIDING

HARDIE® PLANK LAP SIDING

Manufacturer

James Hardie Building Products, Inc.

The products are manufactured at the following locations, with quality control inspections by ICC-ES:

- Cleburne, Texas
- Plant City, Florida
- Reno, Nevada
- Waxahachie, Texas
- Prattville, Alabama
- Peru, Illinois
- Pulaski, Virginia
- Tacoma, Washington
- Fontana, California
- Summerville, South Carolina

Compliance with the following codes

- 2006 thru 2021 International Building Code (IBC)
- 2006 thru 2021 International Residential Code (IRC)

For more information about other compliances and applicable uses, refer to ICC-ES ESR-2290

Features

- Noncombustible
- Dimensionally Stable
- Resists damage from pests
- Weather Resistant-Engineered for Climate®
- Impact resistant
- Sustainable

Use

Hardie® fiber-cement lap siding is used as exterior wall covering. The product complies with IBC Section 1403.9 and IRC Section R703.10. The product may be used on exterior walls of buildings of Type I, II, III and IV construction (IBC)

Description

Hardie® Plank lap siding is a single-faced, cellulose fiber-reinforced cement (fiber-cement) product. Hardie® Plank lap siding complies with ASTM C1186, as Grade II, Type A; has a flame-spread index of 0 and a smoke-developed index of 5 when tested in accordance with ASTM E84; and is classified as noncombustible when tested in accordance with ASTM E136.

Available Sizes

Product	Width (in)	Length	Thickness (in)
Hardie® Plank lap siding*	5-1/4, 6-1/4, 7-1/4, 8, 8-1/4, 9-1/4, 12	12 feet	5/16

* HZ5: 9-1/4, 12 only available primed HZ10: 5-1/4, 9-1/4, 12 only available primed.

Weight 2.31 lbs. per square foot

Texture & Finish

Hardie® Plank lap siding comes in a variety of textures and finishes. The product is available in smooth or wood grain texture. Additional textures are available on a regional basis. Finish options are primed for field paint, or factory finished with ColorPlus® Technology. Color availability varies by region.

Engineered for Climate®

Hardie® Plank lap siding is engineered for performance to specific weather conditions by climate zones as identified by the following map.



Performance Properties

	General Property	Test Method	Unit or Characteristic	Requirement	Result
PHYSICAL ATTRIBUTES	Dimensional Tolerances	ASTM C1185	Length	± 0.5% or ± 1/4 in	Pass
			Width	± 0.5% or ± 1/4 in	
			Thickness	± 0.04 in	
			Squareness	Δ in diagonals ≤ 1/32 in/ft of sheet length. Opposite sheet sides shall not vary in length by more than 1/32 in/ft	
			Edge Straightness	≤ 1/32 in/ft of length	
	Density, lb/ft³	ASTM C1185		As reported	83
	Water Absorption, % by mass	ASTM C1185		As reported	36
THERMAL	Water Tightness	ASTM C1185	Physical Observations	No drop formation	Pass
	Flexural Strength	ASTM C1185	Wet conditioned, psi	>1015 psi	Pass
			Equilibrium conditioned, psi	>1450 psi	
	Thermal Conductivity	ASTM C177	(BTU/(hr·ft²·F))/inch	As reported	2.07
DURABILITY	Actual Thermal Conductivity		(K _{eff})		6.62
	Thermal Resistance		R=1/ K _{eff}		0.48
	Actual Thermal Resistance		(R)		0.15
	Warm Water Resistance	ASTM C1185	Physical Observations	No visible cracks or structural alteration	Pass
	Heat/Rain Resistance	ASTM C1185	Physical Observations	No visible cracks or structural alteration	Pass
	Freeze/Thaw Resistance	ASTM C1185	Physical Observations	No visible cracks or structural alteration	Pass
			Mass Loss, %	≤ 3.0%	
FIRE CHARACTERISTICS			Freeze/Thaw, % strength retention	≥ 80%	
	UV Accelerated Weathering Test	ASTM G23	Physical Observations	No cracking, checking, or crazing	Pass
	Surface Burning Characteristics	ASTM E84	Flame Spread Index (FSI)		0
			Smoke Developed Index (SDI)		≤ 5
			Fuel Contributed		0
			NFPA Class		A
			Uniform Building Code Class	As reported	1
	Noncombustibility	ASTM E136	Noncombustible	Pass/fail	Pass
	Fire Resistance Rated Construction	ASTM E119	Fire Resistance Rating	1-hour	Note 1

Note 1: listed on Warnock Hersey and ESR 2290

Installation

Install Hardie® Plank lap siding in accordance with:

- Hardie® Plank lap siding installation instructions
- ICC-ES ESR 2290
- Requirements of authorities having jurisdiction

Warranty

Hardie® Plank lap siding: 30-year, Non-Prorated, Limited Warranty
ColorPlus® Technology: 15-year Limited Finish Warranty

Sustainable Design Contribution

- Regionally sourced content- varies by project location
- Avoidance of certain chemicals or Red List Compliance

Detailed product information for LEED projects, or other state or regional sustainability programs is available through James Hardie Technical Services.

Storage and Handling

Store flat and keep dry and covered prior to installation.

Technical Services

Contact James Hardie Technical Services online at JamesHardie.com, or by phone at (800)426-4051

IMPORTANT: Failure to install and finish this product in accordance with applicable building codes and James Hardie written application instructions may affect system performance, violate local building codes, void the product-only warranty and lead to personal injury. **DESIGN ADVICE:** Any information or assistance provided by James Hardie in relation to specific projects must be approved by the relevant specialists engaged for the project eg. builder, architect or engineer. James Hardie will not be responsible in connection with any such information or assistance.

Pro Industrial™ Heavy Duty Block Filler

B42W00150 White


**SHERWIN
WILLIAMS®**

CHARACTERISTICS

Pro Industrial Heavy Duty Block Filler is a commercial strength block filler formulated for precast concrete, concrete block, and cinder block, and is suitable for both interior and exterior applications.

- Excellent Filling Properties
- Good Hiding
- Topcoat with high performance coatings such as epoxies and urethanes
- Applies by Brush, Roller or Spray
- Interior-Exterior
- Suitable for use in USDA inspected facilities

Color: White

Coverage:

Wet mils: 16.0-21.0
Dry mils: 8.0-10.5
Coverage sq.ft. per gallon 75-100

Approximate spreading rates are calculated on volume solids and do not include any application loss. Note: Brush or roll application may require multiple coats to achieve maximum film thickness and uniformity of appearance.

Drying Schedule @ 50% RH, 16 mils wet:
temperature and humidity dependent

@ 77°F
Touch: 2 hours
Recoat: itself 1 hour
Recoat: with water borne: 18 hours
Recoat: with solvent borne: 72 hours

Drying time is temperature, humidity, and film thickness dependent.

Finish: Flat

White B42W00150

V.O.C. (less exempt solvents):

less than 50 grams per litre; 0.42 lbs. per gallon
As per 40 CFR 59.406

Volume Solids: 50 ± 2%
Weight Solids: 70 ± 2%
Weight per Gallon: 13.99 lb
Flash Point: NA
Vehicle Type: Acrylic Latex
Shelf Life: 36 months, unopened

COMPLIANCE

As of 06/02/2021, Complies with:

OTC Yes
OTC Phase II Yes
S.C.A.Q.M.D. Yes
CARB Yes
CARB SCM 2007 Yes
CARB SCM 2020 Yes
Canada Yes
LEED® v4 & v4.1 Emissions Yes
LEED® v4 & v4.1 V.O.C. Yes
EPD-NSF® Certified Yes
MIR-Manufacturer Inventory Yes
MPI® Yes

APPLICATION

Temperature:
minimum-maximum 50°-95°F

The following is a guide. Changes in pressures and tip sizes may be needed for proper spray characteristics. Always purge spray equipment before use with listed reducer. Any reduction must be compatible with the existing environmental and application conditions.

Reducer: No reduction necessary

Airless Spray:
Pressure 2300 p.s.i.
Hose 3/8 inch I.D.
Tip .019-.028 inch

Brush Nylon-polyester

Roller Cover Backroll with 3/4 to 1 1/4 inch synthetic cover

Stir thoroughly with a paddle or Jiffy Mixer before using. Apply paint at the recommended film thickness and spreading rate as indicated. Spreading rates are calculated on volume solids and do not include an application loss factor due to surface profile, roughness or porosity of the surface, skill and technique of the applicator, method of application, various surface irregularities, material lost during mixing, spillage, over thinning, climatic conditions, and excessive film build. Excessive reduction of material can affect film build, appearance, and adhesion.

For repairing exterior cracks, bugholes, air pockets, and voids use an elastomeric patch or seal.

Make sure material is forced into pores and bugholes in order to provide a pinhole free surface.

Do not use below grade as a hydrostatic waterproofer or in immersion service.

Rolling will provide a textured finish. Squeegee will provide a smoother finish.

For better filling results, apply by airless spray and immediately back roll.

Must be topcoated for exterior use. Do not apply over existing coatings. Do not apply to damp or wet surfaces.

APPLICATION TIPS

Heavy Duty Block Filler is ready-to-spray (airless) and does not require thinning. Mix material thoroughly to a uniform consistency with power agitation and apply by brush, roller, or spray. Follow by squeegee, trowel, or roller, being careful to force material into pores in order to produce a relatively smooth surface. In wet areas, a smooth continuous pinhole-free appearance is necessary for proper protection before topcoating. Two coats will provide the most uniform surface.

RECOMMENDED SYSTEMS

Concrete, Masonry, Cement

1 coat Pro Industrial Heavy Duty Block Filler
2 coats Appropriate topcoat

CMU, Block, Split-face Block:

1 coat Pro Industrial Heavy Duty Block Filler
2 coats Appropriate topcoat

Recommended Architectural Topcoats:

A-100® Exterior Latex
Loxon® Masonry Coatings
SuperPaint® Exterior
Duration® Exterior
Emerald® Exterior
Emerald® Interior
Duration Home®
ProClassic® Interior
ProMar® Interior
SuperPaint® Interior

Recommended Industrial Topcoats:

Acrolon® 218 Polyurethane
Hi-Solids Polyurethane
Pro Industrial™ Series
Epolon® II Multi-Mil Epoxy
Industrial Enamels
Macropoxy® HS Epoxy
Macropoxy® 646
Steel Master® 9500 Silicone Alkyd
Tile-Clad® HS Epoxy
Water Based Catalyzed Epoxy

The systems listed above are representative of the product's use, other systems may be appropriate.

For exterior use, **Pro Industrial Heavy Duty Block Filler** must be topcoated within 14 days to prevent degradation due to weathering.

Pro Industrial™

Heavy Duty Block Filler

SURFACE PREPARATION

WARNING! Removal of old paint by sanding, scraping or other means may generate dust or fumes that contain lead. Exposure to lead dust or fumes may cause brain damage or other adverse health effects, especially in children or pregnant women. Controlling exposure to lead or other hazardous substances requires the use of proper protective equipment, such as a properly fitted respirator (NIOSH approved) and proper containment and cleanup. For more information, call the National Lead Information Center at **1-800-424-LEAD** (in US) or contact your local health authority.

Surface must be clean, dry, and in sound condition. Remove all oil, dust, grease, dirt, loose rust, and other foreign material to ensure adequate adhesion. Masonry surfaces must be dry before priming. Moisture content must be 15% or lower, and the pH between 6 and 9. If the pH is greater than 9, use Loxon Acrylic Block Surfer in place of Pro Industrial Heavy Duty Block Filler.

Concrete-Masonry:

New: For surface preparation, refer to SSPC-SP13, NACE 6, or ICRI No. 310.2, CSP 1-3. Surface must be clean, dry, sound, and offer sufficient profile to achieve adequate adhesion. Minimum substrate cure is 28 days at 75°F (24°C). Remove all form release agents, curing compounds, salts, efflorescence, laitance, and other foreign matter by sandblasting, shotblasting, mechanical scarification, or suitable chemical means. Refer to ASTM D4260. Rinse thoroughly to achieve a final pH between 6.0 and 9.0. Allow to dry thoroughly prior to coating.

Old: For surface preparation, refer to SSPC-SP13, NACE 6, or ICRI No. 310.2, CSP 1-3. Surface preparation is done in much the same manner as new concrete; however, if the concrete is contaminated with oils, grease, chemicals, etc., they must be removed by cleaning with a strong detergent. Refer to ASTM D4258. Form release agents, hardeners, etc. must be removed by sandblasting, shotblasting, mechanical scarification, or suitable chemical means. Do not apply to smooth, slick surfaces, existing coatings or peeling may result. Recognize that any surface preparation short of total removal of the old coating may compromise the service length of the system.

SURFACE PREPARATION

Mildew:

Prior to attempting to remove mildew, it is always recommended to test any cleaner on a small, inconspicuous area prior to use. Bleach and bleaching type cleaners may damage or discolor existing paint films. Bleach alternative cleaning solutions may be advised.

Mildew may be removed before painting by washing with a solution of 1 part liquid bleach and 3 parts water. Apply the solution and scrub the mildewed area. Allow the solution to remain on the surface for 10 minutes. Rinse thoroughly with water and allow the surface to dry before painting. Wear protective eyewear, waterproof gloves, and protective clothing. Quickly wash off any of the mixture that comes in contact with your skin. Do not add detergents or ammonia to the bleach-water solution.

PHYSICAL PROPERTIES

Do not paint on wet surfaces.

B42W00150

Water Vapor Permeance (US) : 67.96 perms

Method: ASTM D1653 grains/(hr ft² in Hg)

CAUTIONS

Protect from freezing.

Before using, carefully read **CAUTIONS** on label.

CRYSTALLINE SILICA: Use only with adequate ventilation. To avoid overexposure, open windows and doors or use other means to ensure fresh air entry during application and drying. If you experience eye watering, headaches, or dizziness, increase fresh air, or wear respiratory protection (NIOSH approved) or leave the area. Adequate ventilation required when sanding or abrading the dried film. If adequate ventilation cannot be provided wear an approved particulate respirator (NIOSH approved). Follow respirator manufacturer's directions for respirator use. Avoid contact with eyes and skin. Wash hands after using. Keep container closed when not in use. Do not transfer contents to other containers for storage. **FIRST AID:** In case of eye contact, flush thoroughly with large amounts of water. Get medical attention if irritation persists. If swallowed, call Poison Control Center, hospital emergency room, or physician immediately. **DELAYED EFFECTS FROM LONG TERM OVEREXPOSURE.** Abrading or sanding of the dry film may release crystalline silica which has been shown to cause lung damage and cancer under long term exposure. **WARNING:** This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm. **DO NOT TAKE INTERNALLY. KEEP OUT OF THE REACH OF CHILDREN.**

HOTW 06/02/2021 B42W00150 19 10
FRC

CLEANUP INFORMATION

Clean spills, spatters, hands and tools immediately after use with soap and warm water. After cleaning, flush spray equipment with a compliant cleanup solvent to prevent rusting of the equipment. Follow manufacturer's safety recommendations when using solvents.

Loxon® XP

Waterproofing Masonry Coating-Flat

LX11-50 Series


**SHERWIN
WILLIAMS®**

CHARACTERISTICS

Loxon XP is an exterior, high build coating that provides excellent flexibility, durability and weather resistance. This product will protect against wind-driven rain when used on concrete, CMU, stucco and shotcrete-gunite. It is highly alkali and efflorescence resistant. This may be applied to a surface with a pH of 6 to 13.

Apply directly to fresh concrete (at least 7 days old). Shotcrete/gunite surfaces may be painted after 3 days.

Can be applied over high pH (up to 13) substrates, no primer required.

Can be applied down to 35°F.

Color: Most Colors

1 coat system, brush, roller, or spray applied, coverage per coat:

Wet mils: 14.5-18.5
Dry mils: 6.5-8.4
Coverage sq.ft. per gallon 85-110

Can be applied up to 40 mils wet.

Coverage will vary with the substrate and the texture. Coverage on porous & rough stucco 80 square feet per gallon.

Drying Schedule @ 50% RH: temperature and humidity dependent.

	@35-45°F	@ 45°F+
Touch:	6 hrs	4 hrs
Recoat:	24-48 hrs	24 hrs

Drying time is temperature, humidity, and film thickness dependent.

Finish: 0-10 units @ 85°

Tinting with CCE only:

Base	oz.per gallon	Strength
Extra White	0-6	SherColor
Deep Base	4-12	SherColor
Ultradeep	10-12	SherColor
Light Yellow	0-12	SherColor

Extra White LX11W0051

(may vary by color)

V.O.C. (less exempt solvents):

less than 50 grams per litre; 0.42 lbs. per gallon
As per 40 CFR 59.406

Volume Solids: 45 ± 2%

Weight Solids: 61 ± 2%

Weight per Gallon: 11.46 lb

Flash Point: N.A.

Vehicle Type: Proprietary Acrylic

Shelf Life: 36 months, unopened

Mildew Resistant:

This coating contains agents which inhibit the growth of mildew on the surface of this coating film. Passes ASTM D3273/D3274

COMPLIANCE

As of 2/4/2022, Complies with:

OTC	Yes
OTC Phase II	Yes
S.C.A.Q.M.D	Yes
CARB	Yes
CARB SCM 2007	Yes
CARB SCM 2020	Yes
Canada	Yes
LEED® v4 & v4.1 Emissions	N.A.
LEED® v4 & v4.1 V.O.C.	Yes
EPD-NSF® Certified	No
MIR-Manufacturer Inventory	No
MPI®	Yes
SWRI®- Wall Coating	Yes

APPLICATION

Temperature:

minimum 35°F

The following is a guide. Changes in pressures and tip sizes may be needed for proper spray characteristics. Always purge spray equipment before use with listed reducer. Any reduction must be compatible with the existing environmental and application conditions.

Reducer: Do not reduce

Airless Spray:

Pressure	2300 p.s.i.
Tip	.021 inch
Brush	Use a nylon/polyester brush

Roller Cover	Use a ½ to 1½ inch nap synthetic roller cover.
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The substrate and its condition will determine the application procedure. Considerations to minimize pinholes:

- 2 coat application with overnight drying between coats
- Spray application with backrolling
- Power rolling

Spray and backroll on porous & rough stucco to achieve required film build and a pin-hole free surface.

When the air temperature is at 35°F, substrates may be colder. Prior to painting, check to be sure the air, surface, and material temperatures are above 35°F and at least 5°F above the dew point. Avoid using if rain or snow is expected within 2-3 hours.

Do not apply at air or surface temperatures below 35°F or when air or surface temperatures may drop below 35°F within 48 hours.

Do not reduce.

APPLICATION TIPS

For proper waterproofing performance and to resist alkalies, 2 coats of the coating **MUST** be applied between 14.5 -18.5 mils wet per coat.

A total dry film thickness of 13 - 16.8 mils of topcoat and a surface with 10 or less pinholes per square foot is required for a waterproofing system.

For extremely porous block a coat of Loxon Block Surfer may be required to achieve a pinhole free surface.

For rehabilitating existing concrete water tanks, additional products may be used.

RECOMMENDED SYSTEMS

Concrete, Stucco, Concrete Block, CMU, Split-face Block, and other Cementitious surfaces

1 coat Loxon Acrylic Block Surfer
(if needed) or
Loxon Conditioner (if needed)

1-2 coats Loxon XP

Previously Coated in good condition:

After power washing, apply 1 coat of Loxon XP over the surface.

Incidental Wood:

1 coat Exterior Latex Wood Primer1-
2 coats Loxon XP

Incidental Metal:

(steel, galvanized, or aluminum):
1 coat Pro Industrial Pro-Cryl Primer
1-2 coats Loxon XP

Waterproofing System:

- Two coats of topcoat
- 6.5 to 8.4 mils d.f.t. per coat
- 13 to 16.8 mils total dry film thickness
- 10 or less pinholes per square foot

Loxon® XP

Waterproofing Masonry Coating-Flat

SURFACE PREPARATION

WARNING! Removal of old paint by sanding, scraping or other means may generate dust or fumes that contain lead. Exposure to lead dust or fumes may cause brain damage or other adverse health effects, especially in children or pregnant women. Controlling exposure to lead or other hazardous substances requires the use of proper protective equipment, such as a properly fitted respirator (**NIOSH** approved) and proper containment and cleanup. For more information, call the National Lead Information Center at **1-800-424-LEAD** (in US) or contact your local health authority.

Remove all surface contamination by washing with an appropriate cleaner, rinse thoroughly and allow to dry. Scrape and sand peeled or checked paint to a sound surface. Sand glossy surfaces dull. Seal stains from water, smoke, ink, pencil, grease, etc. with the appropriate primer-sealer. Recognize that any surface preparation short of total removal of the old coating may compromise the service length of the system.

Concrete, CMU, Stucco:

On tilt-up and poured-in-place concrete, commercial detergents and sandblasting may be necessary to remove sealers, release compounds, and to provide an anchor pattern. Concrete and mortar must be cured at least 7 days at 75°F. Fill bugholes, air pockets, cracks, and other voids with an elastomeric patch or sealant. Rough surfaces can be filled to provide a smooth surface.

Incidental Metal:

Wash to remove any oil, grease, or other surface contamination. All corrosion must be removed with sandpaper, wire brush, or other abrading method. Primer required.

Incidental Wood:

Sand any exposed wood to a fresh surface. Patch all holes and imperfections with a wood filler or putty and sand smooth. All patched areas must be primed. Primer required.

Sealing and Patching—After cleaning the surface thoroughly, prime the concrete surface with Loxon XP, apply an elastomeric patch or sealant if needed, allow to dry, then topcoat.

To improve the performance, consider:

- Use caution when preparing the substrate to create a uniform surface.
- Cracks, crevices, and through-wall openings must be patched with an elastomeric patch or sealant.
- Fill voids and openings around window and doors with an elastomeric patch or sealant.
- Stripe coat all inside and outside corners and edges with 1 coat of Loxon XP coating.

SURFACE PREPARATION

Mildew:

Prior to attempting to remove mildew, it is always recommended to test any cleaner on a small, inconspicuous area prior to use. Bleach and bleaching type cleaners may damage or discolor existing paint films. Bleach alternative cleaning solutions may be advised.

Mildew may be removed before painting by washing with a solution of 1 part liquid bleach and 3 parts water. Apply the solution and scrub the mildewed area. Allow the solution to remain on the surface for 10 minutes. Rinse thoroughly with water and allow the surface to dry before painting. Wear protective eyewear, waterproof gloves, and protective clothing. Quickly wash off any of the mixture that comes in contact with your skin. Do not add detergents or ammonia to the bleach-water solution.

PHYSICAL PROPERTIES

Do not paint on wet surfaces.

LX11W0051

Wind-Driven Rain Test : Pass
Method: ASTM D6904 7 day cure
2 coats Loxon XP @ 8.1 mils d.f.t. per coat

Water Vapor Permeance:
(perms) 18.03 grains/h-ft²-in Hg.
Method: ASTM D1653 7 day cure @ 73°F & 50% RH: Method B, Condition A-Wet cup
2 coats Loxon XP @ 8.1 mils d.f.t. per coat

Elongation : 312%
Method: ASTM D412, 7 day cure @ 72°F & 50% RH 20 inch per minute
2 coats Loxon XP @ 8.1 mils d.f.t. per coat

Tensile Strength : 295 p.s.i.
Method: ASTM D412, 7 day cure @ 72°F & 50% RH 20 inch per minute
2 coats Loxon XP @ 8.1 mils d.f.t. per coat

Flexibility:
Method: ASTM D522, 9 mils d.f.t., 1 day cure
Result: Pass 1/8 inch

Alkali Resistance:
Method: ASTM D1308, 7 day cure,
11.25 mils d.f.t.
Result: Pass

Chloride Ion Permeability:
Result: 243 coulombs
Result: "Very Low" Permeability Class

CO₂ Diffusion (anti-carbonation):
Method: ASTM F2476
Result: 344 meters
equivalent air thickness >50 meters to pass
8.0 g/m²/24 hrs

Crack Bridging: Class A5 Pass
Method: EN 1062-7 Method A
Result: up to 2.5 mm @ -10°C

Efflorescence:
Method: ASTM D7072-19
1 coat, 1 day cure, 7.2 d.f.t.
Result: Pass

Adhesion:
Method: ASTM D4541
2 coats, 7 day cure, 7.2 d.f.t. per coat
Result: 375 average p.s.i.

CAUTIONS

For exterior use only.

Protect from freezing.

Non-photochemically reactive.

Not for use on horizontal surfaces (floors, roofs, decks, etc.) where water will collect.

Not for use below grade. Will not withstand hydrostatic pressure.

Before using, carefully read **CAUTIONS** on label.

ZINC. Use only with adequate ventilation. To avoid overexposure, open windows and doors or use other means to ensure fresh air entry during application and drying. If you experience eye watering, headaches, or dizziness, increase fresh air, or wear respiratory protection (**NIOSH** approved) or leave the area. Avoid contact with eyes and skin. Wash hands after using. Keep container closed when not in use. Do not transfer contents to other containers for storage. **FIRST AID:** In case of eye contact, flush thoroughly with large amounts of water. Get medical attention if irritation persists. If swallowed, call Poison Control Center, hospital emergency room, or physician immediately. **WARNING:** This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm. **DO NOT TAKE INTERNALLY. KEEP OUT OF THE REACH OF CHILDREN.**

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CLEANUP INFORMATION

Clean spills, spatters, hands and tools immediately after use with soap and warm water. After cleaning, flush spray equipment with a compliant cleanup solvent to prevent rusting of the equipment. Follow manufacturer's safety recommendations when using solvents.

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TruDefinition®

DURATION FLEX®

SHINGLES

(0)

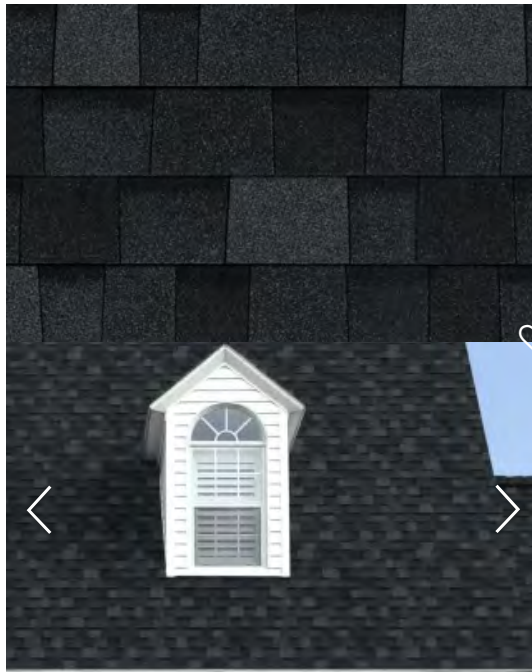
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PAGE MENU



HELP PROTECT WITH THE POWER OF FLEX

Unlike standard shingles, TruDefinition® Duration FLEX® shingles are made with a proprietary blend of SBS polymer modified asphalt. The rubberizing effect of the uniquely blended SBS modified asphalt makes the shingle pliable and gives them greater flexibility and enhanced durability and toughness, especially under intense storm conditions. With Duration FLEX®, you are getting a shingle that has the highest impact rating possible: UL 2218 Class 4¹ and may qualify for a homeowner insurance discount - check with your insurance company.



Color Selected:

Onyx Black

Black shingle with prominent dark gray and black granules





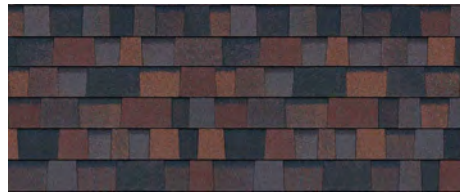
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COLOR ACCURACY

As color experts, we know getting the shingle color right is a big part of any roofing purchase. We recommend you start online to research and narrow down your shingle color options. Due to computer monitor color variations, we suggest you request an actual shingle sample to see how it will appear on your home and with your home's exterior elements in various natural lighting conditions. Lastly, verify your color choice by seeing it installed on an actual home; your roofing contractor or supplier can provide a sample and may be able to direct you to a local installation.

Duration FLEX® Protection for All Seas...



PERFORMANCE FOR ALL SEASONS

Every season brings with it unpredictable weather conditions, from winds to hail storms, high heat to freezing temperatures. Duration FLEX® is designed to help protect your roof to withstand conditions in every season. It's the only shingle in the market that brings together the resilience of SBS polymer modified asphalt with the outstanding hold of SureNail® Technology. This unique pairing of flexibility and grip enables your roof to help withstand the elements, including up to 130-MPH wind resistance*, storm debris, icy winter cold and scorching summer heat.

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Topper Construction Co



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★★★★★ (3 reviews)

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Apex Roofing And Construction



★★★★★ (11 reviews)

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GALLERY



Black Sable



Brownwood



Driftwood



Sand Dune



Summer Harvest



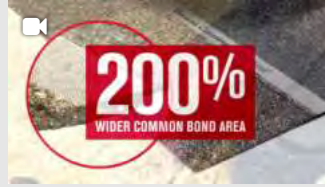
Roofing: Duration FLEX® Performance Tests



Onyx Black



Storm Cloud

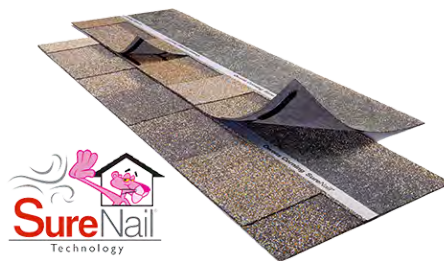


Duration® Series Shingles with SureNail® Technology



Duration FLEX® Protection for All Seasons

FEATURES & BENEFITS



SURENAIL® TECHNOLOGY™

It's the nailing line on your shingles. The difference between a good shingle and a great shingle is having SureNail® Technology. With SureNail® Technology, strength and durability are built into every Duration® Series shingle, thanks to the unique fabric strip in the nailing area. This unique shingle design provides outstanding gripping power.

- Patented SureNail® Technology
- Breakthrough Design
- Triple Layer Protection®
- Outstanding Grip
- Exceptional Wind Resistance

[Learn more](#)



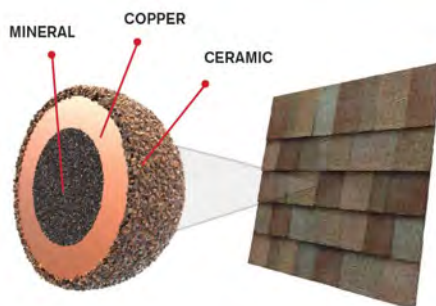
PREMIUM COLOR BLENDS

For a bold and brilliant roof that pairs beautifully with colorful exterior accessories, choose from our selection of vibrant dimensional color combinations in the TruDefinition® color platform. These multi-tonal shingle colors are expertly formulated with a mixture of timeless base colors and contrasting granules to bring added depth and visual interest to your roof.



TRUDEFINITION® COLOR PLATFORM

TruDefinition® is our color design platform trademark on shingles that are specially formulated to capture the bright, vibrant hues and dramatic shades that showcase the aesthetic appeal of your home. Shingles feature multiple-granule colors and shadowing to provide an extraordinary look that will enhance your home and complement its natural surroundings.



STREAKGUARD® ALGAE RESISTANCE PROTECTION

Don't let algae growth ruin the exterior appearance of your home. As an industry leader in innovation, Owens Corning blends copper-lined granules, which help resist algae growth, into our colorful granules in a way that is proprietary to us and is scientifically developed to meet the needs of specific regional climates.

Owens Corning® StreakGuard® Algae Resistance Protection helps inhibit the growth of blue-green algae to provide protection against those ugly black streaks.

*See actual warranty for complete details, limitations and requirements.

[Learn more](#)



SBS MODIFIED ASPHALT

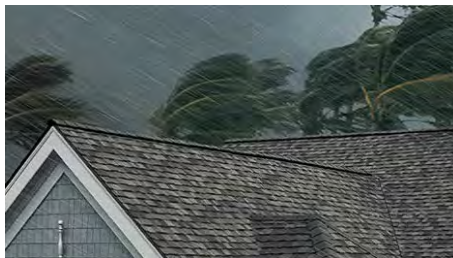
The rubberizing effect of our uniquely blended SBS modified asphalt makes the shingles pliable and gives them greater flexibility than standard shingles. The result is a premium architectural asphalt shingle with enhanced durability and toughness, especially under intense storm conditions, to help deliver lasting protection for your home.



LIMITED LIFETIME WARRANTY*

If you purchase any of the System warranties, make sure you tell your contractors to register them with us and give you the proof of purchase! Having your roof installed by an Owens Corning Roofing Preferred Contractor or an Owens Corning Roofing Platinum Preferred Contractor can have an impact on your warranty coverage.

[Learn more](#)



WIND RESISTANCE

Significant wind can cause shingles to blow off the roof deck. Missing shingles can lead to leaks and other interior damage. The quality and performance of the sealant on a shingle play an important part in wind resistance performance. Owens Corning certifies our shingles to industry recognized wind resistance standards through independent third-party testing laboratories. To see the wind resistance warranty on this product, refer to the Technical Information section.

[Learn more](#)

TECHNICAL INFORMATION











Technical Characteristics (nominal values)

PROPERTY (UNIT)	VALUE
Warranty	Limited Lifetime
Wind Resistance	130 MPH 209 KMH
Algae Resistance [§]	25 Years*
Nominal Size	13 1/4" x 39 3/8"
Exposure	5 5/8"
Shingles Per Square	64
Bundles Per Square	3
Coverage Per Square	98.4 sq. ft.

Applicable Standards

- PRI ER 1378E01
- ASTM D228
- ASTM D3018, Type I
- ASTM D3161, Class F Wind Resistance
- ASTM D3462
- ASTM D7158
- ASTM E108/UL 790, Class A Fire Resistance
- CSA A123.5
- FM 4473 (Class 4 Impact Resistance)
- UL 2218 (Class 4 Impact Resistance)

Technical Documents

-  [PRI Evaluation Report PDF](#) | 0.7 MB
-  [3-part spec \(pdf\)](#)
-  [3-part spec \(word\)](#)
-  [Data Sheet PDF](#) | 16.8 MB
-  [Storm and Flex Installation Instructions PDF](#) | 1.8 MB
-  [Installation Instructions \(Web\)](#)
-  [Beauty Books PDF](#) | 38.5 MB
-  [All Weather Brochure PDF](#) | 15.1 MB
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-  [SDS](#)

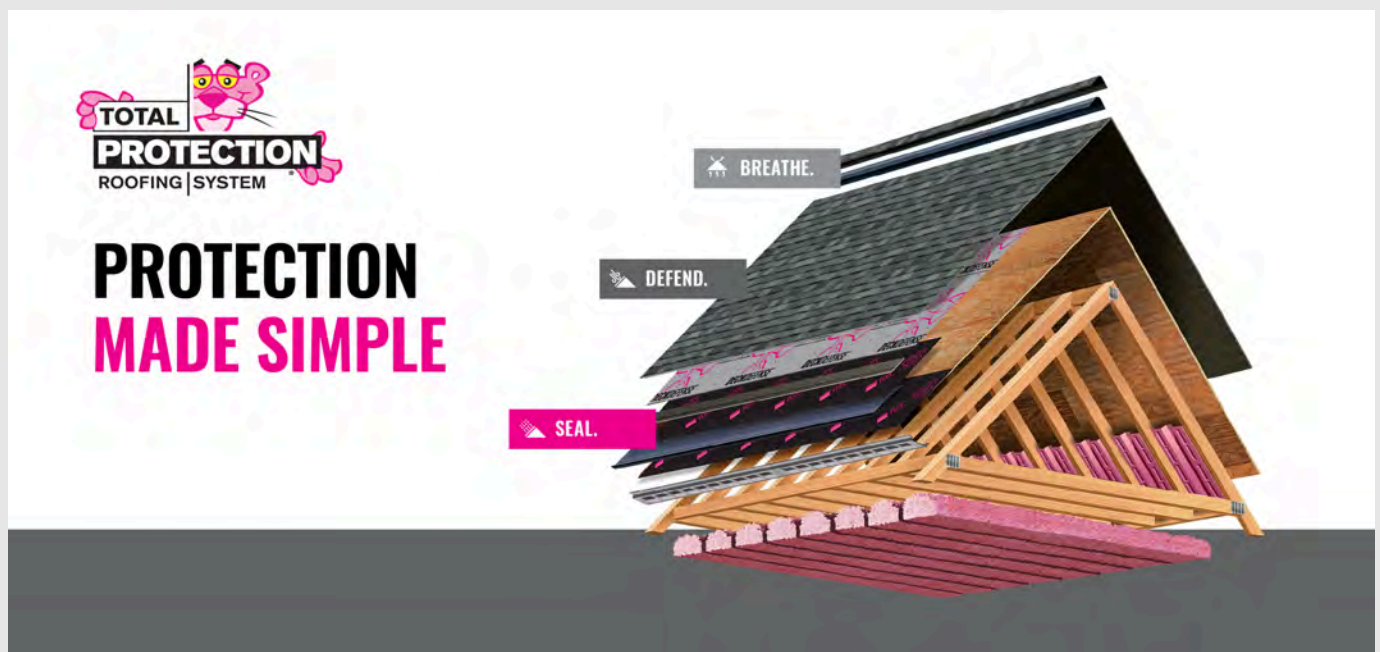
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Protection with a Finishing Touch

A new roof can give your home a whole new look and Owens Corning® Hip & Ridge Shingles provide the finishing touch. Add a tough, yet beautiful layer of defense with strong adhesion that resists blow offs and helps protect the most vulnerable areas such as hips & ridges. Part of the Owens Corning® Total Protection Roofing System***

[Learn more](#)



Total Protection is more than Shingle Deep

It takes more than shingles to protect your home. It takes an integrated system of components and layers designed to help perform in three critical areas. Create a water-proof barrier, protect against nature's elements, and achieve balanced attic ventilation with Owens Corning® Total Protection Roofing System®.

HELP WITH COLOR



Visualize Your Roof

Get a real picture of how your roof will look before you purchase. Our Design EyeQ® visualization software lets you upload a picture of your home and 'try on' new roof colors. When you're done, you can print the picture for reference, share it via social media, or send it to an Owens Corning Network member for an estimate.

[Visualize your home](#)

View Style Board Inspiration

Need help deciding on the best color and look for your home? Don't fret — Owens Corning has you covered. We've expertly paired fashion-forward colors with our Duration® Series shingles. Explore expert color pairings and a variety of style boards to match for inspiration on your next project.

[View all style boards](#)

How to Create a Mood Board...



Building Your Own Style Board

Trying to figure out your personal exterior design style but don't know how to start? We can help. It's

WOMEN'S CHOICE AWARD

WOMEN LOVE OWENS CORNING

Owens Corning® is honored to have earned the 2018-2025 Women's Choice Award® as America's Most Recommended™ Roofing Products. This award is given by women for women. It is based on a national survey that measures brand preference by female consumers.



We strive to accurately reproduce all photographs of shingles in literature and for onscreen viewing. The roofing product colors you see are as accurate as technology allows. We suggest that you view a roofing display or several shingles to get a better idea of the actual color. To accurately judge your shingle and color choice, we recommend that you view it on an actual roof with a pitch similar to your own roof prior to making your final color selection.

¹ImpactRidge® Hip & Ridge Shingles are required to complete UL 2218 and/or FM 4473 Class 4 Impact-Resistant Roof System. Due to the variability in real storm conditions, a Class Rating on any product does not guarantee that it will withstand damage from hailstorms or other acts of God. Owens Corning shingles are not covered under a warranty for hail damage.

† SureNail® Technology is not a guarantee of performance in all weather conditions.

†† Only on product sold in Canada

‡ This image depicts Triple Layer Protection® and the amount of Triple Layer Protection may vary on a shingle-to-shingle basis.

For patent information, visit www.owenscorning.com/patents

* See actual warranty for complete details, limitations, and requirements.

** Excludes non-Owens Corning® products such as flashing, fasteners, and wood decking.

§ This coverage is effective 01/01/2024; Installation must include use of an approved Owens Corning® Hip & Ridge product. See actual warranty for details. Shingles are algae resistant to help control growth of algae and discoloration.

ROOFING

Products



Resources and Support



Get Started



Roofing on Social Media



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[Investors](#)

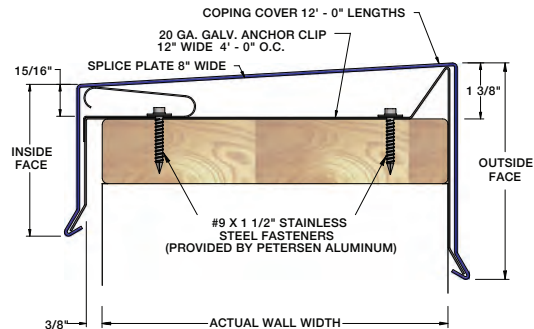
[Privacy Policy](#)

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The color PINK is a registered trademark of Owens Corning. THE PINK PANTHER™ & © 1964–2024 Metro-Goldwyn-Mayer Studios Inc. All Rights Reserved.

PAC-TITE COPING

TAPERED VERSION



PRODUCT FEATURES

- ▶ Superior, efficient design for ease of installation
- ▶ Accommodates wall widths up to 34"
- ▶ Extensively tested for reliable long-term performance
- ▶ Snap-on design eliminates field-crimping
- ▶ Concealed splice plates provide watertight installation
- ▶ Pre-fabricated miters and accessories for proper system fit
- ▶ Custom fabrication available for job-specific details
- ▶ Stainless steel springs factory attached to 12" wide, pre-punched anchor clips
- ▶ Wide variety of colors, finishes and gauges
- ▶ Convenient 12' lengths
- ▶ Recyclable material
- ▶ Custom and radius capabilities available
- ▶ All fasteners, splice plates and anchor clips are included

MATERIALS

- ▶ 17 Stocked PAC-CLAD Finishes (22 gauge steel)
- ▶ 48 Stocked PAC-CLAD Finishes (24 gauge steel)
- ▶ 26 Stocked PAC-CLAD Finishes (.040 aluminum)
- ▶ 21 Stocked PAC-CLAD Finishes (.050 aluminum)
- ▶ 6 Stocked PAC-CLAD Finishes (.063 aluminum)
- ▶ Mill Finish Aluminum (.040, .050 & .063 aluminum)
- ▶ Clear and Colored Anodized (.040, .050 & .063 aluminum)

ACCESSORIES

- ▶ Miters (90 Degrees and Non-90 Degrees, Welded or Quicklocked)
- ▶ Transitions
- ▶ Endcaps
- ▶ Endwall Flashing

TESTING

- ▶ ANSI/SPRI/FM ES-1 Standard to comply with the International Building Code
- ▶ Factory Mutual approved
- ▶ Miami-Dade Approved to comply with the High Velocity Hurricane Zone of the Florida Building Code.

WARRANTY

A 20-Year, 120 mph Wind Warranty is available on orders to meet a project's specification. It provides a maximum of 20 years, 120 mph coverage for the repair or replacement of any portion of the roof edge system that has failed due to a defect in the supplied materials.



SOUND CURTAINS
BY SOUND SEAL



BBC-EXT-R-2"

EXTERIOR GRADE NOISE BARRIER/SOUND ABSORBER COMPOSITE

The configuration of Sound Seal's **BBC-EXT-R-2"** product offers the benefits of both a sound absorber and noise barrier for outdoor applications. Each curtain is custom fabricated to include exterior grade, UV resistant heavy-duty VCP faced quilted fiberglass absorber bonded to a one-pound per sq. ft. reinforced loaded vinyl noise barrier. Each is finished with grommets across the top and bottom, and exterior-grade vertical-mating Velcro along the edges for easy installation.

FEATURES:

- Excellent acoustical performance (STC-33/NRC .75)
- Temperature range -20° to +180° F
- Nominal Thickness: 2"
- Weight: 1.50 lb psf
- Maximum durability and longevity outdoors

APPLICATIONS:

- Used as modular curtain panels on long-term construction projects
- Permanent outdoor applications such as enclosing HVAC equipment, dust collectors or similar machinery
- In areas where UV and abuse resistance is required
- Available with a two-inch thick quilted fiberglass absorber, or with a two-pound per sq. ft. reinforced barrier



BBC-EXT-R-2" panel will utilize exterior-grade Vecro and extra grommets



BBC-EXT-R-2" EXTERIOR GRADE NOISE BARRIER/SOUND ABSORBER COMPOSITE

ACOUSTICAL PERFORMANCE

Sound Transmission Loss Coefficients at the Octave Band Frequencies (Hz)

Frequency (Hz)	125	250	500	1K	2K	4K	STC
BBC-EXT-R-2"	14	20	32	41	42	41	33

ASTM E-90 & E 413

Sound Absorption Coefficients at the Octave Band Frequencies

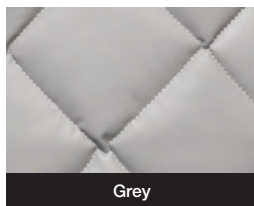
Frequency (Hz)	125	250	500	1K	2K	4K	NRC
BBC-EXT-R-2"	.45	.96	.87	.66	.47	.28	.75

ASTM C 423

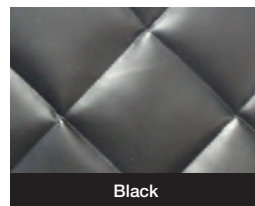
SIZING

Standard rolls measure 54" x 20' L

AVAILABLE COLORS



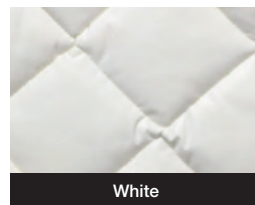
Grey



Black



Tan



White

Color Disclaimer — Due to inconsistencies of various monitors, lighting sources, digital photography and fabric dye lot variations, we cannot guarantee that the color you see on your screen accurately portrays the true color of the product. Screen images are intended as a guide only. Swatch samples available upon request.

AVAILABLE BARRIER COLORS

Gray, Tan, Black, Light Blue*

*subject to availability



SPECIFICATIONS:

Visit www.soundseal.com
or call 1.800.569.1294

soundseal.com/bbcx

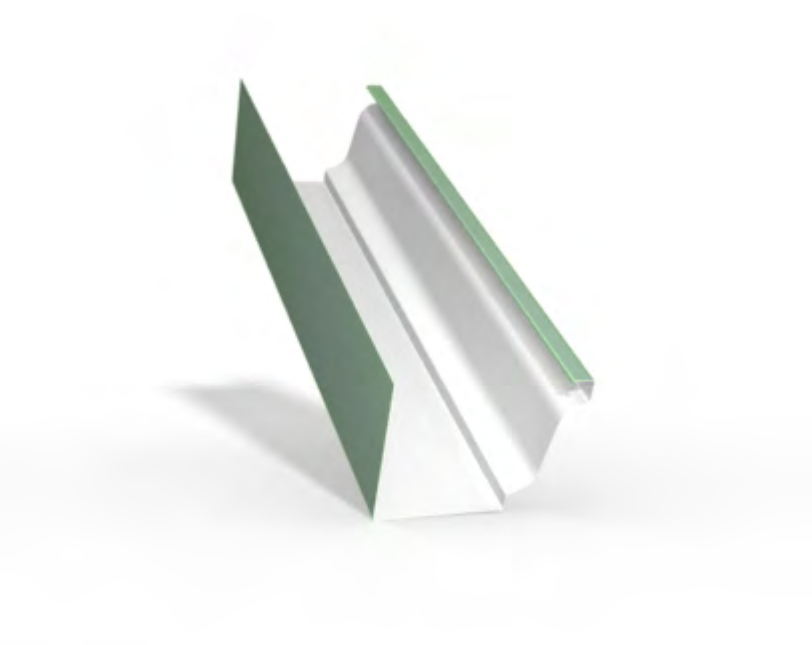


www.soundseal.com



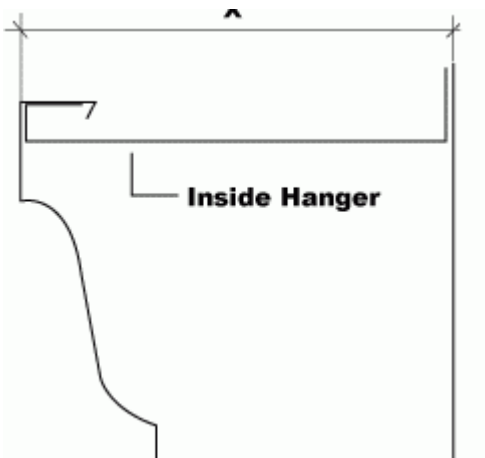
A CATALYST ACOUSTICS GROUP COMPANY

K STYLE GUTTER



ROOF DRAINAGE

The K Style gutter can be manufactured in 5" or 6" widths.



PRODUCT DATA	COLOR GUIDE	WARRANTIES	SUSTAINABILITY	ACCESSORIES
<div>Available Materials Galvalume (22, 24, 26 gauge) Aluminum (.032, .040, .050) Copper (16 & 20 oz)</div> <div>Available Widths 5" or 6" * Custom sizes available upon request</div> <div>Finish Kynar 500 (35 year non-prorated finish warranty) Siliconized Polyester</div> <div>Options * Can be manufactured on-site</div>				



METAL ROOFING
SYSTEMS



SEE REVERSE SIDE FOR MATERIAL AVAILABILITY



ENVIRONMENTALLY SMART COLORS - DESIGNED ENERGY EFFICIENT



SIERRA TAN



MEDIUM BRONZE



MANSARD BROWN



DARK BRONZE



MATTE BLACK



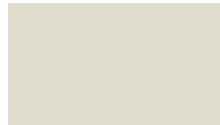
TERRA COTTA



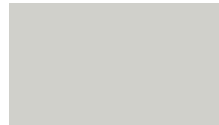
SURREY BEIGE



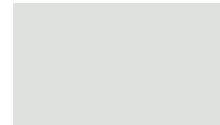
SANDSTONE



BONE WHITE



STONE WHITE



REGAL WHITE



COLONIAL RED



ASH GRAY



DOVE GRAY



SLATE GRAY



CHARCOAL GRAY



SLATE BLUE



BURGUNDY



PATINA GREEN



HEMLOCK GREEN



EVERGREEN

NON-PAINTED

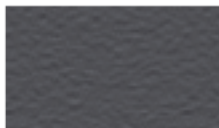


ACRYLIC-COATED GALVALUME*

TEXTURED COLORS - PREMIUM UPCHARGE



TLG BLACK



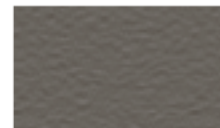
TLG CHARCOAL GRAY



TLG DARK BRONZE

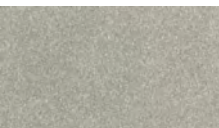


TLG MEDIUM BRONZE



TLG MOONSTONE™

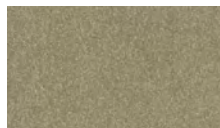
METALLIC / PREMIUM COLORS - PREMIUM UPCHARGE



SILVER



COPPER



CHAMPAGNE



PRE-WEATHERED GALVALUME*



HARTFORD GREEN



REGAL RED



REGAL BLUE

* CONTACT YOUR REPRESENTATIVE FOR EXACT COLOR CHIP SAMPLE



LOCATIONS

Stanley, NC
Fayetteville, NC

Conway, SC
Gallatin, TN

Pinellas Park, FL

Jackson, MS

www.metalroofingsystems.com

Faster. Smarter. Better. Period.



Colors shown are matched as accurately as possible, but may vary slightly from finished product. These rich and vibrant colors are produced with either Kynar® 500 or Hylar® 5000 resins, which provide superior color retention, and allow us to offer non-prorated coating warranties for most applications. Coating warranty varies for Regal Red, Matte Black, Copper, Silver, Champagne, and Pre-Weathered Galvalume. Metallics are warranted for chip, crack, and peel only. Please contact your representative for more information.

STOCK AVAILABILITY MATRIX	LEED V4.1	ISR	EMI	3 YR. SRI	SRI	GALVALUME		ALUMINUM			
						24 GA.	22 GA.	.032	.040	.050	.063
Acrylic Coated Galvalume®	L	0.67	0.14	N/A	56	●	●				
Ash Gray		0.32	0.83	31	31	●		●	●		
Bone White	L	0.65	0.83	77	77	●		●	●	●	●
Burgundy		0.31	0.86	29	32	●					
Champagne		0.32	0.83	31	31	●					
Charcoal Gray		0.25	0.83	22	22	●	●	●	●		
Colonial Red		0.25	0.83	22	22	●		●			
Copper	L	0.35	0.75	32	32	●		●			
Dark Bronze		0.25	0.83	22	22	●	●	●	●	●	●
Dove Gray	L	0.35	0.83	35	35	●	●	●	●		
Evergreen		0.25	0.83	22	22	●		●	●		
Hartford Green		0.25	0.83	22	22	●		●	●	●	
Hemlock Green		0.25	0.83	22	22	●					
Mansard Brown		0.25	0.83	22	22	●	●	●	●	●	
Matte Black		0.25	0.83	22	22	●	●	●	●	●	●
Medium Bronze		0.25	0.83	22	22	●	●	●	●	●	●
Patina Green		0.32	0.83	31	31	●					
Pre-weathered Galvalume®		0.24	0.83	19	21	●		●			
Regal Blue		0.25	0.83	22	22	●					
Regal Red	L	0.35	0.83	35	35	●					
Regal White	L	0.65	0.83	77	77	●	●	●	●	●	●
Sandstone	L	0.35	0.83	35	35	●		●	●		
Sierra Tan		0.31	0.87	28	31	●		●	●		
Silver	L	0.54	0.77	55	60	●		●	●	●	
Slate Blue		0.25	0.83	22	22	●		●			
Slate Gray	L	0.35	0.83	35	35	●	●	●	●	●	
Stone White	L	0.55	0.83	59	63	●		●	●		
Surrey Beige	L	0.35	0.75	32	32	●		●			
Terra Cotta	L	0.35	0.83	35	35	●		●	●		
TLG Black		0.25	0.83	22	22	●					
TLG Charcoal Gray		0.25	0.83	22	22	●					
TLG Dark Bronze		0.25	0.83	22	22	●					
TLG Medium Bronze		0.25	0.83	22	22	●					
TLG Moonstone™		0.32	0.83	31	31	●					

*** IF DESIRED COLOR IS NOT LISTED ON MATRIX PLEASE CONTACT METAL ROOFING SYSTEMS FOR AVAILABILITY**

NOTES	KEY
<ul style="list-style-type: none"> All metal is painted with a .20 mil primer and .70-.90 mil Top Coat and 70% Kynar® 500 or Hylar® 5000. The reverse side has a .20 primer and .30-.40 backer coating. 22-gauge steel available upon request. For low slope roofing to meet LEED V4.1 requirements, the initial SRI must be ≥ 82 OR the 3-year SRI must be ≥ 64. For steep slope roofing to meet LEED V4.1 requirements, the initial SRI for 75% of the roof must be ≥ 39 OR the 3-year SRI must be ≥ 32. Low slope roofing is defined as ≤ 2:12. Steep slope roofing is defined as > 2:12. 	<ul style="list-style-type: none"> ● Stocked Item L LEED V4.1 Compliant ISR Initial Solar Reflectance EMI Emissivity SRI Solar Reflectance Index

Oil canning is an aesthetic issue and is an inherent part of light gauge cold formed metal products. By using coil that has been processed properly, designing for thermal movement, following stringent specifications for installation, and proper handling, most oil canning can be eliminated. Oil canning is not grounds for coil/panel rejection.

Galvalume® is a registered trademark of BIEC. Hylar® 5000 is a registered trademark of Solvay Solexis, Inc. Kynar® 500 is a registered trademark of Atofina, Inc.



METAL ROOFING
SYSTEMS



www.metalroofingsystems.com

100

35-Year Limited COOLR Coastal "Paint" Warranty For Aluminum Substrates

EXCLUSIVE WARRANTY

This Warranty (collectively, the "Warranty") is issued by Metal Roofing Systems, Inc. (hereinafter referred to as "MRS"), to the customer identified in this Certificate (hereinafter referred to as "Customer") and applies to the finish on Aluminum flat sheet and coil products (hereinafter referred to as the "Product") with PVDF based coating consisting of KYNAR 500® or Hylar 5000® resin (hereinafter referred to as the "Coating") if erected anywhere within the Continental United States including Alaska, Hawaii and Canada.

1. Subject to the provisions contained herein, MRS warrants that during the Thirty-Five (35) Year Warranty Period, MRS's COOLR stock Coatings will not chip, crack, peel, flake or check (except for such slight crazing or cracking as may occur on tightly roll-formed edges or break bends at the time of roll forming or other fabrication of pre-painted sheet or coil and which is accepted in the industry as standard). Subject to the provisions contained herein, MRS warrants that for Thirty-Five (35) years from the date of installation of panels, the Coating will not chalk in excess of ASTM D-4214-89 method D659 number eight (8) rating, or change color more than Five (5.0) Hunter ΔE units as determined by ASTM method D-2244-2. Color change will be measured on an exposed painted surface that has been cleaned of surface soils and chalk, and the corresponding values measured on the original or unexposed surface. It is understood that fading or color change may not be uniform, if the surfaces are not equally exposed to the sun and elements.

2. This Warranty does not apply to circumstances beyond MRS's control, including:

- Coated product is installed beyond the water's edge.
- Significant differences in insulation below the coated metal panel.
- Fire or other casualty or physical damage;
- Unusual harmful fumes, foreign substances in the atmosphere or standing water.
- Improper treatment of or defects in the metal or in the fabrication or areas where items such as snow guards or solar panels are attached / adhered to the product.
- Intermittent or continual submersion in water or any other liquid or solid material;
- Damage from wind, deliberate damage, improper handling by erectors, from abrasive or chemical cleaners.
- Mishandled Products, e.g., ANY PRODUCT WHICH HAS BEEN ABUSED, ALTERED, MODIFIED, USED IN A MANNER NOT ORIGINALLY INTENDED, OR STORED CONTRARY TO OUR INSTRUCTIONS.
- Stored or installed in a way that allows for poor air circulation, standing water, contact with animals or animal waste.
- Embossing that fractures or severely stretches the film (i.e. film is diminished at the point of emboss by greater than 0.2 mils.)
- Any damage caused by failure of the building owner to perform a "sweet water" / fresh tap water rinse twice a year, or more frequent, to avoid salt residue accumulation.

3. This Warranty does not cover damage or deterioration resulting from moisture contamination or entrapment or any other contamination detrimental to the coating, which occurs prior to installation of the Products, including, without limitation, contamination occurring during shipment of the Product to the jobsite or during storage at the jobsite. This Warranty does not cover failure due to corrosion of substrate.

4. EXCLUDED ATMOSPHERIC CONDITIONS

This Warranty does not apply to sheet exposed at any time to corrosive, aggressive, harmful or other abnormal atmospheric conditions, including but not limited to:

A. Areas subject to fallout exposure to corrosive chemicals, ash, fumes, cement dust, animal waste, or it's decomposition by-products, fallout from copper, lead, nickel or silver mining or refining operations and carbon black;

B. Conditions/circumstances where corrosive fumes or condensation are generated or released inside the building;

C. Areas subject to water run-off from lead or copper flashing or piping or areas in contact with lead or copper or lumber containing same;

5. All Warranty work will be performed by MRS, or any company, dealer, contractor, applicator, or distributor selected by MRS. Since there may be a color variance between the replacement or repainted Product and the originally installed Product due to normal weathering (i.e. exposure to sunlight and extremes of temperature and weather) of the originally installed products, this condition shall not be indicative of a defect.

6. NOT WITHSTANDING ANYTHING TO THE CONTRARY CONTAINED HEREIN, SHEFFIELD'S LIABILITY SHALL NOT EXCEED THE LESSER OF THE FOLLOWING: (I) THE CUSTOMER'S LIABILITY DIRECTLY ATTRIBUTABLE TO A BREACH OF THIS WARRANTY, OR (II) THE REFINISHING OR REPLACEMENT OF THE FAILED COATED MATERIAL, OR AT MRS'S OPTION, REFUND OF THE PURCHASE PRICE WHICH SHALL NOT EXCEED AN AMOUNT EQUAL TO ONE HUNDRED PERCENT (100%) OF THE AMOUNTS PAID TO MRS BY THE CUSTOMER FOR THE PURCHASE OF THE DEFECTIVE PRODUCT. MRS SHALL NOT BE LIABLE FOR INJURY TO PROPERTY OTHER THAN THE FLAT SHEET AND/OR COIL PRODUCTS COATED WITH FLUOROCARBON PAINT SYSTEMS, IN THE CONDITION AND AS PURCHASED BY CUSTOMER FROM MRS, IN ALL INSTANCES, SHALL HAVE THE SOLE AND EXCLUSIVE RIGHT TO DETERMINE WHETHER OR NOT REFINISHING OR REPLACEMENT OF THE FAILED AREAS IS REQUIRED, AND TO FULFILL ITS OBLIGATION UNDER THE WARRANTY. MRS RESERVES THE RIGHT TO NEGOTIATE AND APPROVE ANY FINAL CONTRACT LET FOR REFINISHING AND REPLACEMENT AS THE CASE MAY BE.

7. This Warranty applies only to products manufactured by the customer within six (6) months from shipment thereof by MRS Metals International.

8. Claims under this Warranty must be presented by the customer to MRS in writing during the warranty period and within thirty (30) days after Customer becomes aware that any warranted condition has occurred. Time is of the essence and failure to give notice within the specified time shall discharge MRS from any obligations under this Warranty. MRS must be given a reasonable opportunity to do an on-site inspection to determine if there is a coating failure.

9. The laws of the State of Ohio shall exclusively govern the rights and duties of the parties to this Warranty. Any controversy or claim arising out of or related to this Warranty, or the breach thereof shall be brought before a court of competent jurisdiction in Cleveland, Ohio under the substantive and procedural laws of the State of Ohio.

10. Customer acknowledges that MRS is not the manufacturer or applicator of the coating warranted herein and agrees that all issues arising from or related to the exceptions set forth herein shall be determined finally and conclusively as to Customer, by the original manufacturer.

11. Due to pigment limitations, Matte Black is covered by a number six (6) rating for chalk, and nine (9) ΔE units for fade for a period of twenty (20) years from installation. L/S Antique Black are covered by a number eight (8) rating for chalk, and five (5) ΔE units for fade for a period of ten (10) years from installation. Copper and other metallic colors have no rating available for color change.

12. This Warranty applies solely to MRS "inventoried stock" colors. Custom matched colors and non-inventoried items may have different Warranty terms, or not be warranted.

13. For this Warranty to apply, the Customer must retain certain records. In order for MRS to process a claim, we will need to be told the original coil or skid tag number. Also the building owner shall perform a "sweet water" / fresh tap water rinse twice a year, or more frequent, to avoid salt residue accumulation in accordance with AAMA 610.1.1979, records must be kept of the maintenance.

14. THIS WARRANTY IS GIVEN AS THE SOLE AND EXCLUSIVE WARRANTY AND EXCLUSIVE REMEDY BY OR AGAINST MRS, AND NO OTHER WARRANTIES, EITHER EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR PURPOSES, ARE MADE, AND ANY SUCH OTHER WARRANTIES ARE EXPRESSLY DISCLAIMED. THERE ARE NO WARRANTIES THAT EXTEND BEYOND THE DESCRIPTION

CONTAINED IN THIS INSTRUMENT. CUSTOMER WAIVES THE BENEFIT OF ANY RULE THAT THE DISCLAIMERS OF WARRANTY SHALL BE CONSTRUED AGAINST THE SELLER, AND AGREES THAT THE DISCLAIMERS IN THIS INSTRUMENT SHALL BE CONSTRUED LIBERALLY IN FAVOR OF MRS SHALL NOT BE LIABLE FOR ANY SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES. MRS HEREBY DISCLAIMS ALL LIABILITIES FOR DAMAGES BASED ON THEORIES OF NEGLIGENCE AND STRICT PRODUCT LIABILITY. THIS WARRANTY IS EXTENDED TO CUSTOMER ALONE AND NO OTHERS, IS NON-TRANSFERABLE AND NON-ASSIGNABLE, AND MAY NOT BE ENLARGED IN ITS SCOPE BY ANY REPRESENTATIVE, SALES PERSON, AGENT OR OTHER EMPLOYEE OF MRS. THE CUSTOMER SHALL NOT PERMIT ANYONE TO CLAIM OR IMPLY THAT THIS WARRANTY EXTENDS OR CAN BE "PASSED THROUGH" TO ANYONE OTHER THAN THE CUSTOMER. THIS PROVISION IS A MATERIAL TERM OF THIS WARRANTY AND ITS VIOLATION OR BREACH BY CUSTOMER OR ANY OF CUSTOMER'S AGENTS OR REPRESENTATIVES, SHALL VOID AND CANCEL THIS WARRANTY FOR ALL PURPOSES.

THE LIABILITY OF SELLER MRS SHALL NOT EXTEND TO PERSONAL INJURY, PROPERTY DAMAGE, LOSS OF PROFIT, DELAY OR ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES RESULTING FROM THE FAILURE OF ANY PRODUCT OR COATING TO CONFORM WITH THE PROVISIONS OF THIS LIMITED WARRANTY.

MRS SHALL NOT IN ANY EVENT BE LIABLE TO THE CUSTOMER OR ANY OTHER PERSON OR ENTITY FOR ANY ACTIONS, CLAIMS, CAUSES OF ACTION, DAMAGES, EXPENSES AND/OR LIABILITIES ARISING FROM OR RELATED TO THE DESIGN, USE OR FAILURE OF THE PRODUCT OR COATING, FOR THE INTERRUPTION OF THE CUSTOMER'S OPERATIONS OR BUSINESS, FOR THE COST OF LABOR EXPENDED BY OTHERS ON ANY DEFECTIVE PRODUCT OR COATING OR FOR ANY SPECIAL, INDIRECT OR CONSEQUENTIAL DAMAGES WHATSOEVER OR LOSS OF PROFIT OR OTHER FINANCIAL LOSS ARISING OUT OF THE USE OR FAILURE OF THE PRODUCT OR COATING, EVEN IF MRS HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH ACTIONS, CLAIMS, CAUSES OF ACTION, DAMAGES, EXPENSE, LOSS AND/OR LIABILITIES, WHETHER ARISING FROM BREACH OF CONTRACT, BREACH OF WARRANTY, TORT, INCLUDING NEGLIGENCE, STRICT LIABILITY OR OTHERWISE TO ANYONE BY REASON OF THE FACT THAT SUCH PRODUCT OR COATING SHALL HAVE BEEN DEFECTIVE.

SIGNATURE:

This Warranty is not valid unless signed by an authorized employee or agent of Metal Roofing Systems, Inc.

By: _____

Name Printed:

Title:

Date:

Issued To:

For:

Job:

Color:

Completion Date:

R091808

40-Year Limited COOLR "Paint" Warranty AZ50 Galvalume®, G90 Galvanized, or Aluminum

EXCLUSIVE WARRANTY

This Warranty (collectively, the "Warranty") is issued by Metal Roofing Systems, Inc. (hereinafter referred to as "MRS"), to the customer identified in this Certificate (hereinafter referred to as "Customer") and applies to the finish on AZ50 Galvalume®, G90 Galvanized, or Aluminum flat sheet and coil products (hereinafter referred to as the "Product") with PVDF based coating consisting of KYNAR 500® or Hylar 5000® resin (hereinafter referred to as the "Coating") if erected anywhere within the Continental United States including Alaska, Hawaii and Canada.

1. Subject to the provisions contained herein, MRS warrants that during the Forty (40) Year Warranty Period, MRS's COOLR stock Coatings will not chip, crack, peel, flake or check (except for such slight crazing or cracking as may occur on tightly roll-formed edges or break bends at the time of roll forming or other fabrication of pre-painted sheet or coil and which is accepted in the industry as standard). Subject to the provisions contained herein, MRS warrants that for Thirty (30) years from the date of installation of panels, the Coating will not chalk in excess of ASTM D-4214 method A659 number eight (8) rating when properly maintained in accordance with Valspar's printed guidelines. Will not change color more than Five (5.0) Hunter ΔE units as determined by ASTM method D-2244 when properly maintained in accordance with Valspar's printed guidelines. Color change will be measured on an exposed painted surface that has been cleaned of surface soils and chalk, and the corresponding values measured on the original or unexposed surface. It is understood that fading or color change may not be uniform, if the surfaces are not equally exposed to the sun and elements.

2. This Warranty does not apply to circumstances beyond Sheffield's control, including:

- Fire or other casualty or physical damage;
- Unusual harmful fumes, foreign substances in the atmosphere or standing water. No warranty is provided for the coating on any substrate that is subjected to sea spray or installed on a property located 1500 or fewer feet from a coastline, salt or brackish water, or any salt water environment;
- Improper treatment of or defects in the metal or in the fabrication or areas where items such as snow guards or solar panels are attached / adhered to the product.
- Intermittent or continual submersion in water or any other liquid or solid material;
- Damage from wind, deliberate damage, improper handling by erectors, from abrasive or chemical cleaners.
- Mishandled Products, e.g., ANY PRODUCT WHICH HAS BEEN ABUSED, ALTERED, MODIFIED, USED IN A MANNER NOT ORIGINALLY INTENDED, OR STORED CONTRARY TO OUR INSTRUCTIONS.
- Stored or installed in a way that allows for poor air circulation, contact with animals or animal waste.
- Embossing that fractures or severely stretches the film (i.e. film is diminished at the point of emboss by greater than 0.2 mils).

3. This Warranty does not cover damage or deterioration resulting from moisture contamination or entrapment or any other contamination detrimental to the coating, which occurs prior to installation of the Products, including, without limitation, contamination occurring during shipment of the Product to the jobsite or during storage at the jobsite. This Warranty does not cover failure due to corrosion of substrate.

4. EXCLUDED ATMOSPHERIC CONDITIONS

This Warranty does not apply to sheet exposed at any time to corrosive, aggressive, harmful or other abnormal atmospheric conditions, including but not limited to:

- Areas subject to fallout exposure to corrosive chemicals, ash, fumes, cement dust, animal waste, or it's decomposition by-products, fallout from copper, lead, nickel or silver mining or refining operations and carbon black;
- Conditions/circumstances where corrosive fumes or condensation are generated or released inside the building;
- Areas subject to water run-off from lead or copper flashing or piping or areas in contact with lead or copper or lumber containing same;

5. All Warranty work will be performed by MRS, or any company, dealer, contractor, applicator, or distributor selected by MRS. Since there may be a color variance between the replacement or repainted Product and the originally installed Product due to normal weathering (i.e. exposure to sunlight and extremes of temperature and weather) of the originally installed Products, this condition shall not be indicative of a defect.

6. NOT WITHSTANDING ANYTHING TO THE CONTRARY CONTAINED HEREIN, MRS'S LIABILITY SHALL NOT EXCEED THE LESSER OF THE FOLLOWING: (I) THE CUSTOMER'S LIABILITY DIRECTLY ATTRIBUTABLE TO A BREACH OF THIS WARRANTY, OR (II) THE REFINISHING OR REPLACEMENT OF THE FAILED COATED MATERIAL, OR AT SHEFFIELD'S OPTION, REFUND OF THE PURCHASE PRICE WHICH SHALL NOT EXCEED AN AMOUNT EQUAL TO ONE HUNDRED PERCENT (100%) OF THE AMOUNTS PAID TO MRS BY THE CUSTOMER FOR THE PURCHASE OF THE DEFECTIVE PRODUCT. MRS SHALL NOT BE LIABLE FOR INJURY TO PROPERTY OTHER THAN THE FLAT SHEET AND/OR COIL PRODUCTS COATED WITH FLUOROCARBON PAINT SYSTEMS, IN THE CONDITION AND AS PURCHASED BY CUSTOMER FROM MRS, IN ALL INSTANCES, SHALL HAVE THE SOLE AND EXCLUSIVE RIGHT TO DETERMINE WHETHER OR NOT REFINISHING OR REPLACEMENT OF THE FAILED AREAS IS REQUIRED, AND TO FULFILL ITS OBLIGATION UNDER THE WARRANTY. MRS RESERVES THE RIGHT TO NEGOTIATE AND APPROVE ANY FINAL CONTRACT LET FOR REFINISHING AND REPLACEMENT AS THE CASE MAY BE.

7. This Warranty applies only to products manufactured by the customer within six (6) months from shipment thereof by MRS Metals International.

8. Claims under this Warranty must be presented by the

customer to MRS in writing during the warranty period and within thirty (30) days after Customer becomes aware that any warranted condition has occurred. Time is of the essence and failure to give notice within the specified time shall discharge MRS from any obligations under this Warranty. MRS must be given a reasonable opportunity to do an on-site inspection to determine if there is a coating failure.

9. The laws of the State of Ohio shall exclusively govern the rights and duties of the parties to this Warranty. Any controversy or claim arising out of or related to this Warranty, or the breach thereof shall be brought before a court of competent jurisdiction in Cleveland, Ohio under the substantive and procedural laws of the State of Ohio.

10. Customer acknowledges that MRS is not the manufacturer or applicator of the coating warranted herein and agrees that all issues arising from or related to the exceptions set forth herein shall be determined finally and conclusively as to Customer, by the original manufacturer.

11. Due to pigment limitations, Regal Red, Matte Black and L/S Antique Black are covered by a number eight (8) rating for chalk, and five (5) ΔE units for fade for a period of ten (10) years from installation. Copper and other metallic colors have no rating available for color change.

12. This Warranty applies solely to MRS "inventoried stock" colors. Custom matched colors and non-inventoried items may have different Warranty terms, or not be warranted.

13. For this Warranty to apply, the Customer must retain certain records. In order for MRS to process a claim, we will need to be told the original coil or skid tag number.

14. THIS WARRANTY IS GIVEN AS THE SOLE AND EXCLUSIVE WARRANTY AND EXCLUSIVE REMEDY BY OR AGAINST MRS, AND NO OTHER WARRANTIES, EITHER EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR PURPOSES, ARE MADE, AND ANY SUCH OTHER WARRANTIES ARE EXPRESSLY DISCLAIMED. THERE ARE NO WARRANTIES THAT EXTEND BEYOND THE DESCRIPTION CONTAINED IN THIS INSTRUMENT. CUSTOMER WAIVES THE BENEFIT OF ANY RULE THAT THE DISCLAIMERS OF WARRANTY SHALL BE CONSTRUED AGAINST THE SELLER, AND AGREES THAT THE DISCLAIMERS IN THIS INSTRUMENT

SHALL BE CONSTRUED LIBERALLY IN FAVOR OF MRS SHALL NOT BE LIABLE FOR ANY SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES. MRS HEREBY DISCLAIMS ALL LIABILITIES FOR DAMAGES BASED ON THEORIES OF NEGLIGENCE AND STRICT PRODUCT LIABILITY. THIS WARRANTY IS EXTENDED TO CUSTOMER AND IS TRANSFERABLE AND ASSIGNABLE TO A SUBSEQUENT OWNER OF THE SUBJECT BUILDING. MRS WILL REQUIRE THE SUBJECT BUILDING TO BE INSPECTED BY AN AUTHORIZED MRS REPRESENTATIVE BEFORE ANY TRANSFER CAN TAKE PLACE. THE FEE FOR THIS INSPECTION IS AT THE OWNERS EXPENSE. THIS WARRANTY MAY NOT BE ENLARGED IN ITS SCOPE BY ANY REPRESENTATIVE, SALES PERSON, AGENT OR OTHER EMPLOYEE OF MRS, EXCEPT AS OTHERWISE EXPLICITLY PROVIDED HEREIN. THE CUSTOMER SHALL NOT PERMIT ANYONE TO CLAIM OR IMPLY THAT THIS WARRANTY EXTENDS OR CAN BE "PASSED THROUGH" TO ANYONE OTHER THAN THE CUSTOMER. THIS PROVISION IS A MATERIAL TERM OF THIS WARRANTY AND ITS VIOLATION OR BREACH BY CUSTOMER OR ANY OF CUSTOMER'S AGENTS OR REPRESENTATIVES, SHALL VOID AND CANCEL THIS WARRANTY FOR ALL PURPOSES. IN THE EVENT THIS WARRANTY IS TRANSFERRED OR ASSIGNED TO A SUBSEQUENT OWNER OF THE SUBJECT BUILDING, SUCH SUBSEQUENT OWNER SHALL COMPLY WITH ALL OF THE TERMS AND CONDITIONS OF THIS WARRANTY.

THE LIABILITY OF SELLER MRS SHALL NOT EXTEND TO PERSONAL INJURY, PROPERTY DAMAGE, LOSS OF PROFIT, DELAY OR ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES RESULTING FROM THE FAILURE OF ANY PRODUCT OR COATING TO CONFORM WITH THE PROVISIONS OF THIS LIMITED WARRANTY.

MRS SHALL NOT IN ANY EVENT BE LIABLE TO THE CUSTOMER OR ANY OTHER PERSON OR ENTITY FOR ANY ACTIONS, CLAIMS, CAUSES OF ACTION, DAMAGES, EXPENSES AND/OR LIABILITIES ARISING FROM OR RELATED TO THE DESIGN, USE OR FAILURE OF THE PRODUCT OR COATING, FOR THE INTERRUPTION OF THE CUSTOMER'S OR ANY OTHER PERSON'S OR ENTITY'S OPERATIONS OR BUSINESS, FOR THE COST OF LABOR EXPENDED BY OTHERS ON ANY DEFECTIVE PRODUCT OR COATING OR FOR ANY SPECIAL, INDIRECT OR CONSEQUENTIAL DAMAGES WHATSOEVER OR LOSS OF PROFIT OR OTHER FINANCIAL LOSS ARISING OUT OF THE USE OR FAILURE OF THE PRODUCT OR COATING, EVEN IF MRS HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH ACTIONS, CLAIMS, CAUSES OF ACTION, DAMAGES, EXPENSE, LOSS AND/OR LIABILITIES, WHETHER ARISING FROM BREACH OF CONTRACT, BREACH OF WARRANTY, TORT, INCLUDING NEGLIGENCE, STRICT LIABILITY OR OTHERWISE TO ANYONE BY REASON OF THE FACT THAT SUCH PRODUCT OR COATING SHALL HAVE BEEN DEFECTIVE.

SIGNATURE:

This Warranty is not valid unless signed by an authorized employee or agent of Metal Roofing Systems, Inc.

By: _____

Name Printed:

Title:

Date:

Issued To:

For:

Job:

Color:

Completion Date:



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Aluminum Rectangular Downspouts

Product Highlights:

- Available in 2" x 3", 3" x 4", and 4" x 5" sizes
- All sizes come in 10-foot lengths
- Perfect for K-Style gutter systems

[See more details](#)





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Aluminum Rectangular Downspouts

Product Highlights:

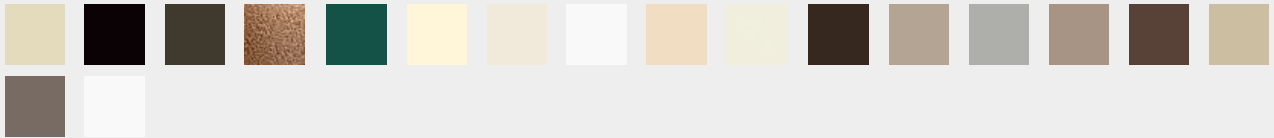
- Available in 2" x 3", 3" x 4", and 4" x 5" sizes
- All sizes come in 10-foot lengths
- Perfect for K-Style gutter systems



Size

Select Size

Color



Gauge

.019

.024

Quantity

Add to Cart



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Description

For simple drainage and a sleek, clean look, aluminum rectangular downspouts are a popular choice. These gutters are ideal for several commercial and residential applications, and they come in sizes to handle any drainage needs. These pair well with the K-Style gutter systems and can be enhanced with

- Available in 0.019 gauge (2x3 and 3x4 inches) and 0.24 gauge (4x5 inches)
- Each piece measures 10 feet long and can be connected for longer drainage needs
- Durable aluminum construction features corrugated ridges for increased durability



- Can be cut to fit lengths shorter than 10 feet

Specifications



Specifications: 2x3 = Gauge .017-.019, 10 ft. lengths 3x4 = Gauge .017-.019, 10 ft. lengths 4x5 = Gauge .024, 10 ft. lengths Downspout diameters are sized according to the roof area they drain. The following is the general rule used in the industry: 2x3 = 600 sq. ft. of roof 3x4 = 1200 sq. ft. of roof 4x5 = 2000 sq. ft. of roof

Related Products



2x3 A Elbow

\$2.12/EACH

Select Options



2x3 B Elbow

\$2.12/EACH

Select Options



Diamond Pipe Band

\$0.78/EACH

Select Options



2x3 Pipe Clip

\$0.70/EACH

Select Options



1/4 x 1/2 #8 Zip Screws

\$3.31/BAG

Select Options