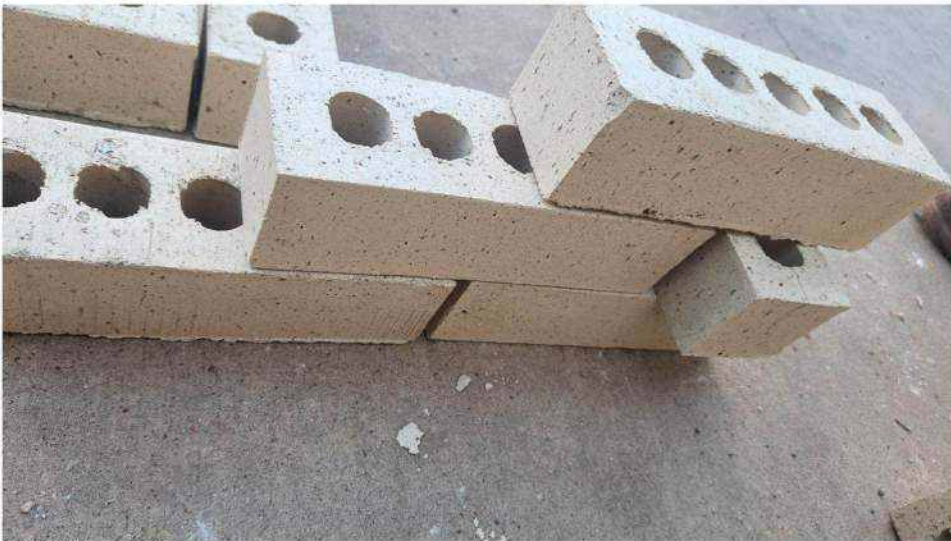


**SECTION 042113**  
**ANCHORED BRICK VENEER UNITS**



INTERSTATE BRICK  
ARTIC WHITE  
RUFF AND MATTE FINISH AS SPECIFIED  
9-5/8"X3"X2-5/8"



RUNNING BOND



1/4 TWIST COLUMN BASE



CORNER LAP - PRE-GROUT END CELL WITH PREMIXED

**SECTION 042113****ANCHORED BRICK VENEER UNITS****PART 1 GENERAL****1.01 SUMMARY**

- A. Section Includes: Brick masonry units.
- B. Related Sections:
  - 1. Section 013119 - Project Meetings.
  - 2. Section 071900 - Water Repellents.
  - 3. Section 079000 - Joint Sealers.

**1.02 REFERENCES**

- A. American Society for Testing and Materials (ASTM):
  - 1. C 33 - Specification for Concrete Aggregates.
  - 2. C 67 - Test Methods of Sampling and Testing Brick and Structural Clay Tile.
  - 3. C 126 - Specification for Ceramic Glazed Structural Clay Facing Tile, Facing Brick, and Solid Masonry Units.
  - 4. C 216 - Specification for Facing Brick.
  - 5. C 270 - Specification for Mortar for Unit Masonry.
- B. International Building Code (IBC) adopted addition
- C. Building Code Requirements and Specification for Masonry Structures (TMS 402/602) adopted addition
- D. Most current editions of ASTM standards as cited herein.

**1.03 SUBMITTALS**

- A. Product Data, and Evaluation Reports as required for installation.
- B. Shop Drawings: Include elevations of each wall indicating type and layout of units.
- C. Samples: Include samples of stretcher units in sufficient quantity to illustrate color range.

**1.04 QUALITY ASSURANCE**

- A. Inspection: NIC
- B. Mock-up:
  - 1. Prior to starting construction of masonry, construct minimum 4-foot square mock-up.
  - 2. Use accepted materials, containing each different kind and color of brick masonry units to illustrate wall design.
  - 3. Show color range, texture range, bond, mortar color, joint tooling, critical design details and quality of workmanship.
  - 4. Masonry construction may not proceed until the Architect approves mock-up.
  - 5. When not accepted, construct another mock-up.

6. When accepted, mock-up will be standard of comparison for remainder of masonry work.
  7. Upon completion and acceptance of Project, dispose of mock-ups in legal manner at offsite location.
- C. Certification: Furnish manufacturer's certification that clay brick units provided meet or exceed the requirements of this specification.

### **1.05 DELIVERY, STORAGE, AND HANDLING**

- A. Store masonry units above ground to prevent contamination by mud, dust or other materials likely to cause staining or other defects.
- B. Cover and protect masonry units from inclement weather to maintain quality control and physical requirements.
- C. Transport and handle brick masonry units as required to prevent discoloration, chipping, and breakage.
- D. Locate storage piles, stacks, and bins to protect materials from heavy traffic.
- E. Remove chipped, cracked, and otherwise defective units from jobsite upon discovery.

### **1.06 PROJECT CONDITIONS**

- A. Cold Weather Requirements:
  1. In accordance TMS 602 Section 1.8 C.
  2. Provide adequate equipment for heating masonry materials when air temperature is below 40 degrees Fahrenheit.
- B. Hot Weather Requirements:
  1. In accordance with TMS 602 Section 1.8 D.
  2. When ambient air temperature exceeds 100 degrees Fahrenheit, or when ambient air temperature exceeds 90 degrees Fahrenheit and wind velocity is greater than 8 miles per hour, implement hot weather protection procedures.
  3. Wet mortar board before loading and cover mortar to retard drying when not being used.
  4. Do not spread mortar beds more than 48 inches ahead of placing masonry units.
  5. Place masonry units within one minute of spreading mortar.
- C. Wetting of Brick: shall be required at the time of laying if the unit's initial rate of absorption (IRA) exceeds 30 grams per 30 square inches per minute or 1 g/ 645mm<sup>2</sup>.
- D. Assess substrate wall condition prior to starting brick installation and confirm all preceding work is complete and ready to cover up. Document all issues found unsuitable or not within project parameters (location, plumbness, etc.), that will impact brick installation. Report such found items to the general contractor or construction manager, as appropriate, and seek resolution prior to initiating work.

## **PART 2 PRODUCTS**

### **2.01 FACE BRICK VENEER UNITS**

- A. Manufacturers:



1. Interstate Brick: [www.interstatebrick.com](http://www.interstatebrick.com)
  - a. Sales Representative:
    - 1) ZACK EASLEY
    - 2) 405 990 5489
    - 3) ZACK@TRINITYBRICK.COM
- B. Type: ASTM C 216, Grade SW, Type FBX, with minimum gross compressive strength of 6000 psi.
- C. Surface Texture: MATTE AT ALL RUNNING BOND (To be selected by Architect from manufacturer's full range of available textures.) RUFF AT ALL WINDOW SOLDIER COURSES
- D. Colors:
  1. ARTIC WHITE
- E. Size: 3 inches wide by 2-5/8 inches high by 9-5/8 inches long, unless otherwise **indicated on the Drawings.**
- F. Special Sizes and Shapes: As required for window and door soldier coursing and custom sills where indicated, corners, piers, lintels, control joints, and other special applications to minimize cutting.

## **2.02 MORTAR**

Mortar shall comply ASTM C 270 and/or requirements of Section 04101

## **2.03 TIES AND ANCHORS**

All ties and anchors shall be non-corrodible, or corrosion protected, and shall comply with the applicable local building codes. In the absence of local building codes comply with current adopted IBC or TMS 402.

# **PART 3 EXECUTION**

## **3.01 PREPARATION**

- A. Protect adjacent construction with appropriate means from mortar droppings and other effects of laying of brick masonry units.
- B. Thoroughly clean foundations of laitance, grease, oil, mud, dirt, mortar droppings, and other objectionable matter.

## **3.02 BRICK MASONRY UNITS**

- A. Provide Custom Level of Quality in accordance with ASTM C216.
- B. Review brick material prior to installation and report any units deemed unsatisfactory to the manufacturer. Set aside (do not discard or remove from site) all units deemed unsatisfactory for further assessment by testing agency and/or brick manufacturer's authorized representative, as deemed mutually acceptable. immediately notify supplier if quantities that are set aside are projected to create a shortfall of useable units. Installation or units placed in service constitutes mason's acceptance of, and responsibility for, the brick quality

- C. Select units from multiple (at least 3) pallets or cubes to blend hues to create a uniform random pattern when placed in service to avoid patches of light and dark brick. Install patterns of color as directed where a specific blend of colors is specified. In all cases lay brick in a pattern acceptable to the Architect.
- D. Lay units in uniform and true courses, level, plumb, and without projections or offset of adjacent units, unless indicated in the drawings.
- E. Install units with full bed mortar joints. Install full vertical head joints for the thickness of units, and shove joints tightly together so that mortar bonds to both masonry units.
- F. Embed veneer ties for a minimum of 1½ in. into the mortar joints with at least 5/8 in. exterior cover. Ties shall be mill galvanized, hot dip galvanized or stainless steel.
- G. Maintain cavity space between the brick veneer and the backing clear of mortar droppings, debris, and other obstructions and materials.
- H. When positions of units shift after mortar has stiffened, bond is broken, or cracks are formed, relay units in new mortar.

### 3.03 MORTAR JOINTS

- A. Make joints straight, clean, smooth, and uniform in thickness.
- B. Tooling: Tool exposed joints when thumb print hard, slightly concave. Strike concealed joints flush.
- C. Joint Thickness: Make vertical and horizontal joints as required to achieve nominal dimensions on drawings and within tolerances listed in TMS 602 Section 3.3 F.
- D. Where fresh masonry joins totally or partially set masonry, clean and roughen set masonry before laying new units.

### 3.04 BOND PATTERN

- A. Lay brick masonry units in running bond pattern, unless otherwise **indicated on the Drawings** – REFER TO ELEVATIONS FOR ADDITIONAL NOTES

### 3.05 CUTTING BRICK MASONRY UNITS

- A. When possible, use full units of the proper size in lieu of cut units. Cut units as required to form chases, openings, for anchorage, and for other appurtenances.
- B. Cut and fit units with power-driven carborundum or diamond disc blade saw.

### 3.06 CONTROL JOINTS / EXPANSION JOINTS

- A. Provide in masonry joints where **indicated on the Drawings**.
- B. Make full height and continuous in appearance.
- C. Stop horizontal reinforcing at expansion joints
- D. Insert control joint filler in joints as wall is constructed.

- E. Insert 50% (minimum) compressible neoprene expansion joint material in expansion joints.
- F. Apply sealant as specified in Section 079000

### **3.07 OTHER EMBEDDED ITEMS**

- A. Build in wall plugs, accessories, flashings, pipe sleeves, and other items required to be built-in as the masonry work progresses.

### **3.08 PATCHING**

- A. Patch exposed brick masonry units at completion of the Work and in such manner that patching will be indistinguishable from similar surroundings and adjoining construction.

### **3.09 MISCELLANEOUS**

- A. Build in required items, such as anchors, flashings, sleeves, frames, structural steel, lintels, anchor bolts, and metal fabrications, as required for complete installation.

### **3.10 WATER REPELLENT**

- A. Apply water repellent as specified in Section 071900.

### **3.11 FIELD QUALITY CONTROL**

- A. Employ and pay acceptable independent testing laboratory to perform installation inspections.
- B. Do not attach construction supports to masonry walls.

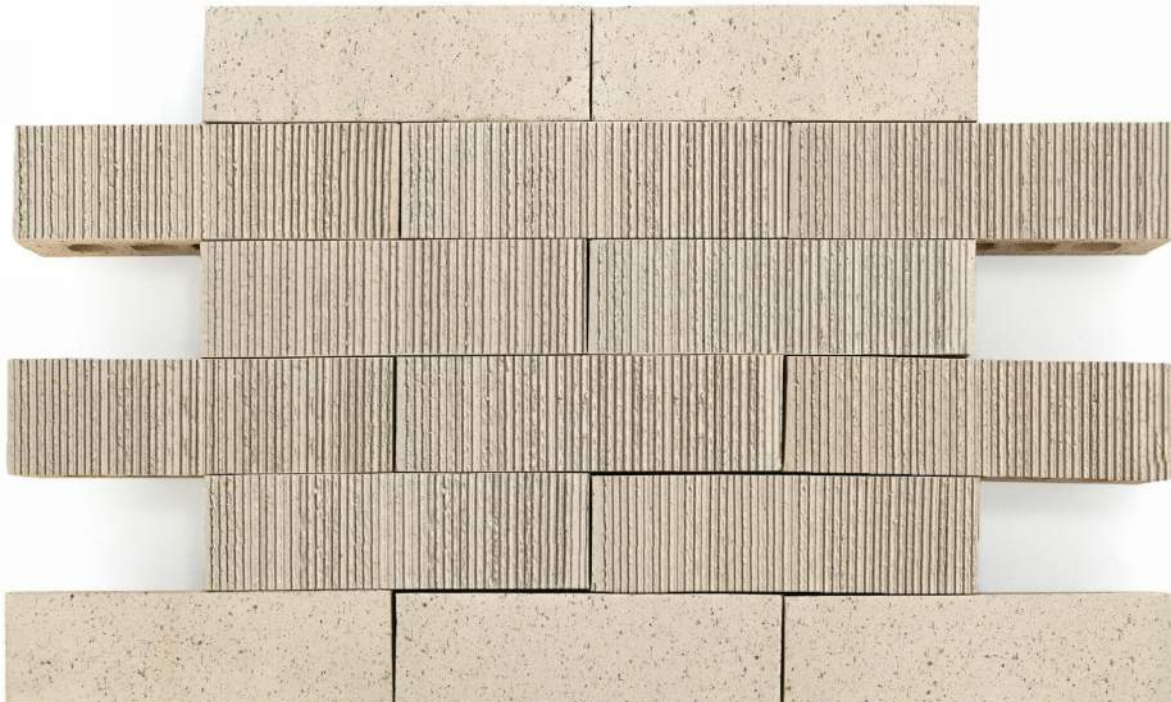
### **3.12 CLEANING**

- A. Exercise extreme care to avoid damaging the brick and to prevent mortar spills and blotches.
- B. Wash off brick scum and mortar spills before they set, using least aggressive means and methods that produce acceptable results, and using products, equipment, materials, and methods, recommended by the brick manufacturer.
- C. Remove mortar stains from walls and clean installed masonry using the least aggressive products, equipment, means and/or methods that produce acceptable results by using products, materials, and methods, recommended by the brick manufacturer.
  - 1. Test proposed cleaning products, means, and methods in an inconspicuous area and receive approval prior to extending cleaning operations to the entire project.
- D. Remove scaffolding and equipment. Dispose of debris, refuse, and surplus material offsite legally.
- E. Remove efflorescence that occurs on exposed surfaces during construction activities with commercially prepared cleaning solution, from new unopened containers, using means and methods as recommended by the masonry unit manufacturer.

1. Apply cleaning solution in strict accordance with cleaning solution manufacturer's printed instructions.
- F. Do not use straight muriatic acid or any other acid, diluted or undiluted, as a cleaning solution.
- G. Do not use abrasive blast cleaning equipment, materials, and/or methods to clean the brick.


### 3.13 PROTECTION

- A. Provide temporary protection for exposed masonry corners subject to damage.
- B. Bracing:
  1. Adequately brace masonry walls over 8 feet in height to prevent overturning and to prevent collapse unless wall is adequately supported by permanent supporting elements, so wall will not overturn or collapse.
  2. Keep bracing in place until permanent supporting elements of structure are in place.
- C. Limited Access Zone:
  1. Establish limited access zone prior to start of masonry wall construction.
  2. Zone shall be immediately adjacent to wall and equal to height of wall to be constructed plus 4 feet by entire length of wall on non-scaffolded side of wall.
  3. Limit access to zone to workers actively engaged in constructing wall. Do not permit other persons to enter zone.
  4. Keep zone in place until wall is adequately supported or braced by permanent supporting elements to prevent overturning and collapse.
  5. Limit duration of vibration to time necessary to produce satisfactory consolidation without causing segregation.





EXTERIOR SIDING:




### 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.


#### Select your siding texture




Select CedarMill®




Smooth




Beaded Select CedarMill®



Beaded Smooth



Custom Colonial Roughsawn



Custom Colonial Smooth

#### Select your color collection

Statement Collection®

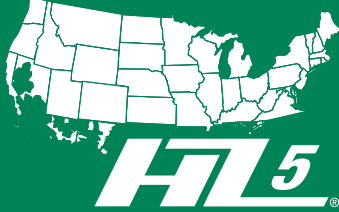
Magnolia Home | James Hardie Collection

Primed for Paint

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

Primed for Paint offers unlimited color opportunities for your home's exterior. Primed and ready for field painting, it's a durable, high-performance canvas for your vision.

SEE WALL SECTIONS SHEET A302 FOR TRIM AND REVEAL INFORMATION



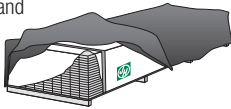
# HardiePlank® Lap Siding

EFFECTIVE SEPTEMBER 2019

**IMPORTANT: FAILURE TO FOLLOW JAMES HARDIE WRITTEN INSTALLATION INSTRUCTIONS AND COMPLY WITH APPLICABLE BUILDING CODES MAY VIOLATE LOCAL LAWS, AFFECT BUILDING ENVELOPE PERFORMANCE AND MAY AFFECT WARRANTY COVERAGE. FAILURE TO COMPLY WITH ALL HEALTH AND SAFETY REGULATIONS WHEN CUTTING AND INSTALLING THIS PRODUCT MAY RESULT IN PERSONAL INJURY. BEFORE INSTALLATION, CONFIRM YOU ARE USING THE CORRECT HARDIEZONE® PRODUCT INSTRUCTIONS BY VISITING [HARDIEZONE.COM](http://HARDIEZONE.COM) OR CALL 1-866-942-7343 (866-9-HARDIE)**

## STORAGE & HANDLING:

Store flat and keep dry and covered prior to installation. Installing siding wet or saturated may result in shrinkage at butt joints. Carry planks on edge. Protect edges and corners from breakage. James Hardie is not responsible for damage caused by improper storage and handling of the product.



## CUTTING INSTRUCTIONS

### OUTDOORS

- Position cutting station so that airflow blows dust away from the user and others near the cutting area.
- Cut using one of the following methods:
  - Best:** Circular saw equipped with a HardieBlade® saw blade and attached vacuum dust collection system. Shears (manual, pneumatic or electric) may also be used, not recommended for products thicker than 7/16 in.
  - Better:** Circular saw equipped with a dust collection feature (e.g. Roan® saw) and a HardieBlade saw blade.
  - Good:** Circular saw equipped with a HardieBlade saw blade.

### INDOORS

DO NOT grind or cut with a power saw indoors. Cut using shears (manual, pneumatic or electric) or the score and snap method, not recommended for products thicker than 7/16 in.

- DO NOT dry sweep dust; use wet dust suppression or vacuum to collect dust.
- For maximum dust reduction, James Hardie recommends using the "Best" cutting practices. Always follow the equipment manufacturer's instructions for proper operation.
- For best performance when cutting with a circular saw, James Hardie recommends using HardieBlade® saw blades.
- Go to [jameshardiepros.com](http://jameshardiepros.com) for additional cutting and dust control recommendations.

**IMPORTANT:** The Occupational Safety and Health Administration (OSHA) regulates workplace exposure to silica dust. For construction sites, OSHA has deemed that cutting fiber cement with a circular saw having a blade diameter less than 8 inches and connected to a commercially available dust collection system per manufacturer's instructions results in exposures below the OSHA Permissible Exposure Limit (PEL) for respirable crystalline silica, without the need for additional respiratory protection.

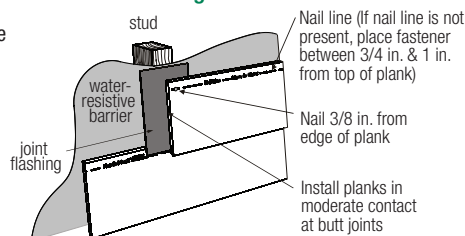
If you are unsure about how to comply with OSHA silica dust regulations, consult a qualified industrial hygienist or safety professional, or contact your James Hardie technical sales representative for assistance. James Hardie makes no representation or warranty that adopting a particular cutting practice will assure your compliance with OSHA rules or other applicable laws and safety requirements.

**IMPORTANT:** To prevent damage to the drip edge, extra care should be taken when removing planks from the pallet, while handling, and when installing with a lap gauge. Please see additional handling requirements on page 4.

## GENERAL REQUIREMENTS:

- HardiePlank® lap siding can be installed over braced wood or steel studs, 20 gauge (33 mils) minimum to 16 gauge (54 mils) maximum, spaced a maximum of 24 in o.c. or directly to minimum 7/16 in thick OSB sheathing. See General Fastening Requirements. Irregularities in framing and sheathing can mirror through the finished application. Correct irregularities before installing siding.
- Information on installing James Hardie products over non-nailable substrates (ex: gypsum, foam, etc.) can be located in JH Tech Bulletin 19 at [www.jamehardie.com](http://www.jamehardie.com)
- A water-resistive barrier is required in accordance with local building code requirements. The water-resistive barrier must be appropriately installed with penetration and junction flashing in accordance with local building code requirements. James Hardie will assume no responsibility for water infiltration. James Hardie does manufacture HardieWrap® Weather Barrier, a non-woven non-perforated housewrap<sup>1</sup>, which complies with building code requirements.
- Adjacent finished grade must slope away from the building in accordance with local building codes - typically a minimum of 6 in. in the first 10 ft..
- Do not use HardiePlank lap siding in Fascia or Trim applications.
- Do not install James Hardie products, such that they may remain in contact with standing water.
- HardiePlank lap siding may be installed on flat vertical wall applications only.
- For larger projects, including commercial and multi-family projects, where the span of the wall is significant in length, the designer and/or architect should take into consideration the coefficient of thermal expansion and moisture movement of the product in their design. These values can be found in the Technical Bulletin "Expansion Characteristics of James Hardie® Siding Products" at [www.jameshardie.com](http://www.jameshardie.com).
- James Hardie Building Products provides installation /wind load information for buildings with a maximum mean roof height of 85 feet. For information on installations above 60 feet, please contact JH technical support.

Figure 2

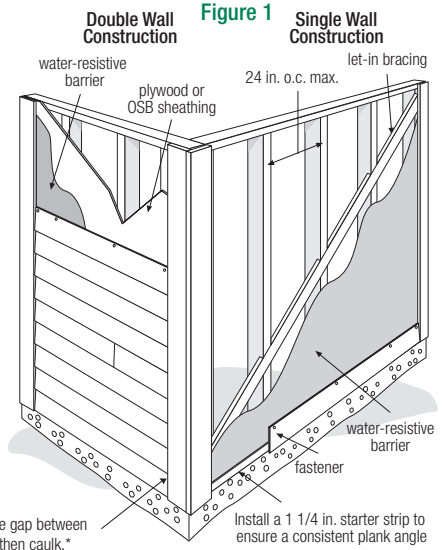


## INSTALLATION: JOINT TREATMENT

One or more of the following joint treatment options are required by code (as referenced 2009 IRC R703.10.2)

- Joint Flashing (James Hardie recommended)
- Caulking\* (Caulking is not recommended for ColorPlus for aesthetic reasons as the Caulking and ColorPlus will weather differently. For the same reason, do not caulk nail heads on ColorPlus products.)
- "H" jointer cover

Figure 1



Note: Field painting over caulking may produce a sheen difference when compared to the field painted PrimePlus. \*Refer to Caulking section in these instructions.

<sup>1</sup>For additional information on HardieWrap® Weather Barrier, consult James Hardie at 1-866-4Hardie or [www.hardiewrap.com](http://www.hardiewrap.com)

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HS11117 P1/4 09/19  
2024



## CLEARANCE AND FLASHING REQUIREMENTS

Figure 3  
Roof to Wall

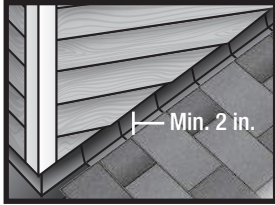


Figure 4  
Horizontal Flashing

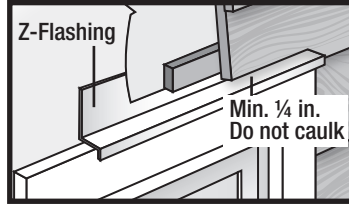


Figure 5  
Kickout Flashing

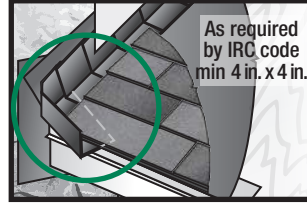


Figure 6  
Slabs, Path, Steps to Siding

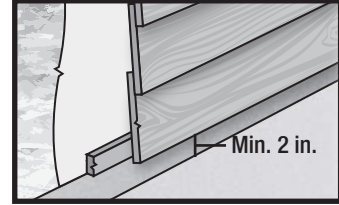


Figure 7  
Deck to Wall

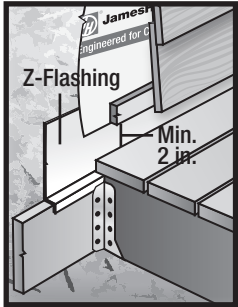


Figure 8  
Ground to Siding

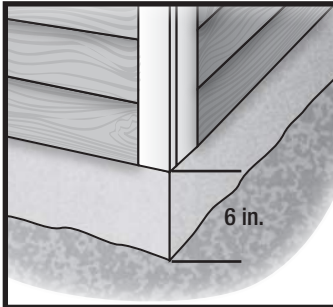


Figure 9  
Gutter to Siding



Figure 10  
Sheltered Areas

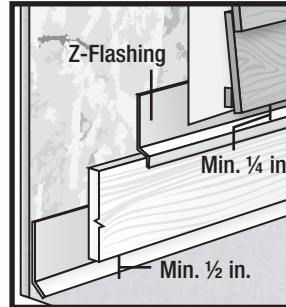


Figure 11  
Mortar/Masonry

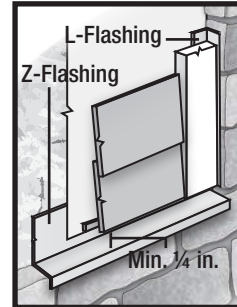


Figure 12  
Drip Edge

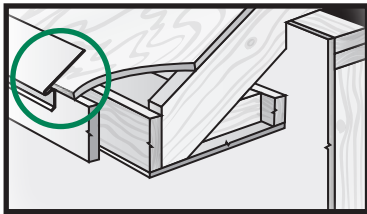


Figure 13  
Block Penetration

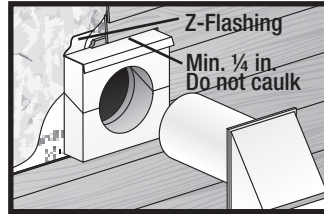
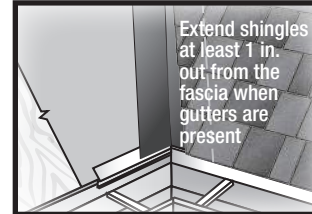


Figure 14  
Valley/Shingle Extension



## FASTENER REQUIREMENTS\*

Refer to the applicable ESR report online to determine which fastener meets your wind load design criteria.

Blind Nailing is the preferred method of installation for HardiePlank® lap siding products. Face nailing should only be used where required by code for high wind areas and must not be used in conjunction with Blind nailing (Please see JH Tech bulletin 17 for exemption when doing a repair).

### BLIND NAILING

#### Nails - Wood Framing

- Siding nail (0.09 in. shank x 0.221 in. HD x 2 in. long)
- 11ga. roofing nail (0.121 in. shank x 0.371 in. HD x 1.25 in. long)

#### Screws - Steel Framing

- Ribbed Wafer-head or equivalent (No. 8 x 1 1/4 in. long x 0.375 in. HD) Screws must penetrate 3 threads into metal framing.

#### Nails - Steel Framing

- ET & F Panelfast® nails or equivalent (0.10 in. shank x 0.313 in. HD x 1-1/2 in. long) Nails must penetrate minimum 1/4 in. into metal framing.

#### OSB minimum 7/16 in.

- Siding nail (0.09 in. shank x 0.215 in. HD x 1-1/2 in. long)
- Ribbed Wafer-head or equivalent (No. 8 x 1 5/8 in. long x 0.375 in. HD).

### FACE NAILING

#### Nails - Wood Framing

- 6d (0.113 in. shank x 0.267 in. HD x 2 in. long)
- Siding nail (0.09" shank x 0.221" HD x 2" long)

#### Screws - Steel Framing

- Ribbed Bugle-head or equivalent (No. 8-18 x 1-5/8 in. long x 0.323 in. HD) Screws must penetrate 3 threads into metal framing.

#### Nails - Steel Framing

- ET & F pin or equivalent (0.10 in. shank x 0.25 in. HD x 1-1/2 in. long) Nails must penetrate minimum 1/4 in. into metal framing.

#### OSB minimum 7/16 in.

- Siding nail (0.09 in. shank x 0.221 in. HD x 1-1/2 in. long)

\*Also see General Fastening Requirements; and when considering alternative fastening options refer to James Hardie's Technical Bulletin USTB 5 - Fastening Tips for HardiePlank Lap Siding.

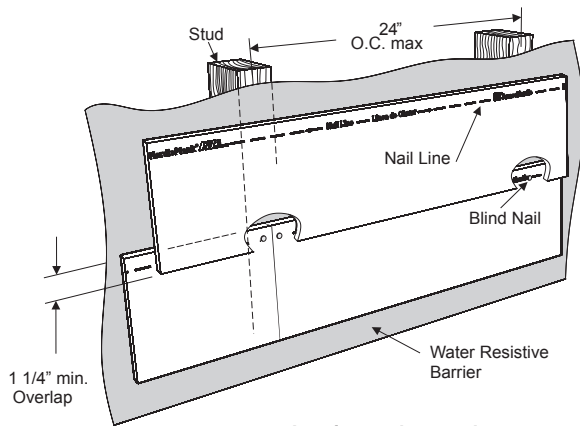
FASTENER REQUIREMENTS *continued*

Figure 14

Minimum overlap  
for Both Face  
and Blind Nailing

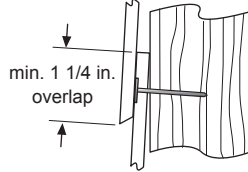
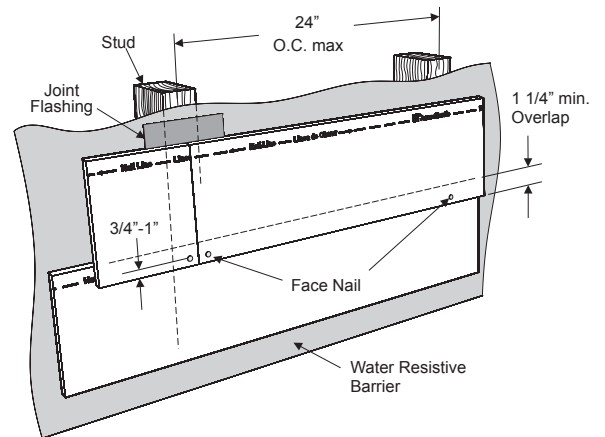


Figure 15



Laminate sheet to be removed immediately after installation of each course for ColorPlus® products.

Pin-backed corners may be done for aesthetic purposes only. Finish nails are recommended for pin-backs. Headed siding nails are allowed. Place pin-backs no closer than 1 in. from plank ends and 3/4 in. from plank edge into min. 3/8 in. wood structural panel. Pin-backs are not a substitute for blind or face nailing.

## GENERAL FASTENING REQUIREMENTS

Fasteners must be corrosion resistant, galvanized, or stainless steel. Electro-galvanized are acceptable but may exhibit premature corrosion. James Hardie recommends the use of quality, hot-dipped galvanized nails. James Hardie is not responsible for the corrosion resistance of fasteners. Stainless steel fasteners are recommended when installing James Hardie® products near the ocean, large bodies of water, or in very humid climates.

Manufacturers of ACQ and CA preservative-treated wood recommend spacer materials or other physical barriers to prevent direct contact of ACQ or CA preservative-treated wood and aluminum products. Fasteners used to attach HardieTrim Tabs to preservative-treated wood shall be of hot dipped zinc-coated galvanized steel or stainless steel and in accordance to 2009 IRC R317.3 or 2009 IBC 2304.9.5

- Consult applicable product evaluation or listing for correct fasteners type and placement to achieve specified design wind loads.
- NOTE: Published wind loads may not be applicable to all areas where Local Building Codes have specific jurisdiction. Consult James Hardie Technical Services if you are unsure of applicable compliance documentation.
- Drive fasteners perpendicular to siding and framing.
- Fastener heads should fit snug against siding (no air space).
- NOTE: Whenever a structural member is present, HardiePlank should be fastened with even spacing to the structural member. The tables allowing direct to OSB or plywood should only be used when traditional framing is not available.

## CUT EDGE TREATMENT

Caulk, paint or prime all field cut edges. James Hardie touch-up kits are required to touch-up ColorPlus products.

## CAULKING

For best results use an Elastomeric Joint Sealant complying with ASTM C920 Grade NS, Class 25 or higher or a Latex Joint Sealant complying with ASTM C834. Caulking/Sealant must be applied in accordance with the caulking/sealant manufacturer's written instructions.

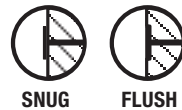
**Note: some caulking manufacturers do not allow "tooling".**

## PAINTING

DO NOT use stain, oil/alkyd base paint, or powder coating on James Hardie® products. Factory-primed James Hardie products must be painted within 180 days of installation. 100% acrylic topcoats are recommended. Do not paint when wet. For application rates refer to paint manufacturers specifications. Back-rolling is recommended if the siding is sprayed.

## PNEUMATIC FASTENING

James Hardie products can be hand nailed or fastened with a pneumatic tool. Pneumatic fastening is highly recommended. Set air pressure so that the fastener is driven snug with the surface of the siding. A flush mount attachment on the pneumatic tool is recommended. This will help control the depth the nail is driven. If setting the nail depth proves difficult, choose a setting that under drives the nail. (Drive under driven nails snug with a smooth faced hammer - Does not apply for installation to steel framing).



## DO NOT



UNDER  
DRIVE

## IF, THEN

WOOD  
FRAME



HAMMER  
FLUSH

STEEL  
FRAME



REMOVE &  
REPLACE

## DO NOT



OVER  
DRIVE



SLANT

## IF, THEN ADDITIONAL NAIL

FACE  
NAIL



COUNTERSINK  
& FILL

## DO NOT USE



ALUMINUM  
FASTENERS



CLIPPED  
HEAD NAILS



STAPLES



## COLORPLUS® TECHNOLOGY CAULKING, TOUCH-UP & LAMINATE

- Care should be taken when handling and cutting James Hardie ColorPlus® products. During installation use a wet soft cloth or soft brush to gently wipe off any residue or construction dust left on the product, then rinse with a garden hose.
- Touch up nicks, scrapes and nail heads using the ColorPlus® Technology touch-up applicator. Touch-up should be used sparingly. If large areas require touch-up, replace the damaged area with new HardiePlank® lap siding with ColorPlus® Technology.
- Laminate sheet must be removed immediately after installation of each course.
- Terminate non-factory cut edges into trim where possible, and caulk. Color matched caulks are available from your ColorPlus® product dealer.
- Treat all other non-factory cut edges using the ColorPlus Technology edge coaters, available from your ColorPlus product dealer.

**Note:** James Hardie does not warrant the usage of third party touch-up or paints used as touch-up on James Hardie ColorPlus products.

Problems with appearance or performance arising from use of third party touch-up paints or paints used as touch-up that are not James Hardie touch-up will not be covered under the James Hardie ColorPlus Limited Finish Warranty.

## COVERAGE CHART/ESTIMATING GUIDE

Number of 12 ft. planks, does not include waste

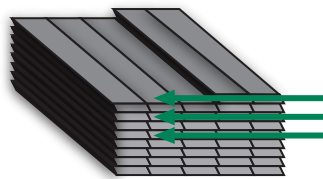
COVERAGE AREA LESS OPENINGS		HARDIEPLANK® LAP SIDING WIDTH								
SQ (1 SQ = 100 sq.ft.)	(exposure)	5 1/4 4	6 1/4 5	7 1/4 6	7 1/2 6 1/4	8 6 3/4	8 1/4 7	9 1/4 8	9 1/2 8 1/4	12 10 3/4
1		25	20	17	16	15	14	13	13	9
2		50	40	33	32	30	29	25	25	19
3		75	60	50	48	44	43	38	38	28
4		100	80	67	64	59	57	50	50	37
5		125	100	83	80	74	71	63	63	47
6		150	120	100	96	89	86	75	75	56
7		175	140	117	112	104	100	88	88	65
8		200	160	133	128	119	114	100	100	74
9		225	180	150	144	133	129	113	113	84
10		250	200	167	160	148	143	125	125	93
11		275	220	183	176	163	157	138	138	102
12		300	240	200	192	178	171	150	150	112
13		325	260	217	208	193	186	163	163	121
14		350	280	233	224	207	200	175	175	130
15		375	300	250	240	222	214	188	188	140
16		400	320	267	256	237	229	200	200	149
17		425	340	283	272	252	243	213	213	158
18		450	360	300	288	267	257	225	225	167
19		475	380	317	304	281	271	238	238	177
20		500	400	333	320	296	286	250	250	186

This coverage chart is meant as a guide. Actual usage is subject to variables such as building design. James Hardie does not assume responsibility for over or under ordering of product.

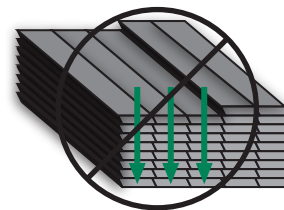
## ADDITIONAL HANDLING REQUIREMENTS

**IMPORTANT:** To prevent damage to the drip edge, extra care should be taken when removing planks from the pallet, while handling, and when installing with a lap gauge. Planks are interlocked together on the pallet, therefore they should be removed from the pallet horizontally (side to side) to allow planks to unlock themselves from one another.

Pull from across the stack



Do not go down the stack



HS11117 P4/4 09/19

### SILICA WARNING

**DANGER:** May cause cancer if dust from product is inhaled. Causes damage to lungs and respiratory system through prolonged or repeated inhalation of dust from product. Refer to the current product Safety Data Sheet before use. The hazard associated with fiber cement arises from crystalline silica present in the dust generated by activities such as cutting, machining, drilling, routing, sawing, crushing, or otherwise abrading fiber cement, and when cleaning up, disposing of or moving the dust. When doing any of these activities in a manner that generates dust you must (1) comply with the OSHA standard for silica dust and/or other applicable law, (2) follow James Hardie cutting instructions to reduce or limit the release of dust; (3) warn others in the area to avoid breathing the dust; (4) when using mechanical saw or high speed cutting tools, work outdoors and use dust collection equipment; and (5) if no other dust controls are available, wear a dust mask or respirator that meets NIOSH requirements (e.g. N-95 dust mask). During clean-up, use a well maintained vacuum and filter appropriate for capturing fine (respirable) dust or use wet clean-up methods - never dry sweep.

**WARNING:** This product can expose you to chemicals including respirable crystalline silica, which is known to the State of California to cause cancer. For more information go to [P65Warnings.ca.gov](http://P65Warnings.ca.gov).

**RECOGNITION:** In accordance with ICC-ES Evaluation Report ESR-2290, HardiePlank® lap siding is recognized as a suitable alternate to that specified in the 2006, 2009, 2012 & 2015 International Residential Code for One and Two-Family Dwellings, and the 2006, 2009, 2012 & 2015 International Building Code. HardiePlank lap siding is also recognized for application in the following: City of Los Angeles Research Report No. 24862, State of Florida Product Approval FL#13192, Miami-Dade County Florida NOA No. 17-0406.06, U.S. Dept. of HUD Materials Release 1263f, Texas Department of Insurance Product Evaluation EC-23, City of New York MEA 223-93-M, and California DSA PA-019. These documents should also be consulted for additional information concerning the suitability of this product for specific applications.

**MAILBOXES:****4C HORIZONTAL MAILBOXES - Recessed Mounted**

- Available as front loading or rear loading, recessed mounted 4C Horizontal Mailboxes are U.S.P.S. approved and manufactured by Salsbury Industries to USPS-STD-4C Specifications.
- Required for new construction and major renovations and ideal for apartments, commercial buildings, residential developments and other applications.
- For indoor or outdoor use and required for new construction and major renovations.

**STANDARD CONFIGURATIONS****MAXIMUM HEIGHT UNITS - 57-1/8" H****11 DOOR HIGH UNITS - 41-3/8" H****10 DOOR HIGH UNITS - 37-7/8" H\*****6 DOOR HIGH UNITS - 23-7/8" H\***

\*ADA Height Compliant

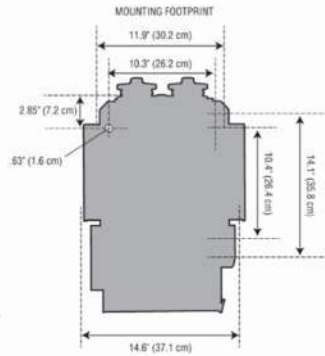
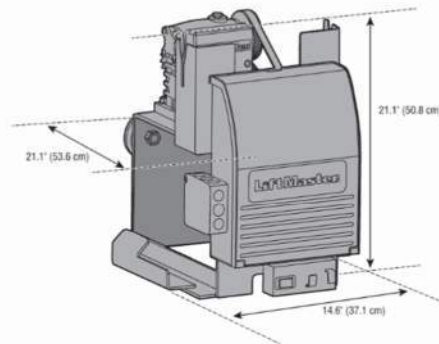
**COLOR OPTIONS / CUSTOM ENGRAVING**To view replacement parts and more options visit us at: [www.mailboxes.com/commercial-mailboxes-usps/](http://www.mailboxes.com/commercial-mailboxes-usps/)

**MAILBOXES:**

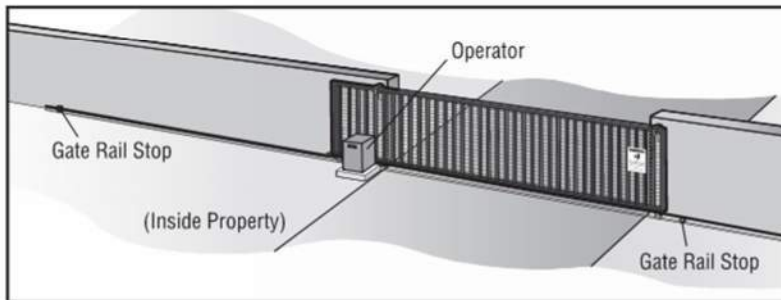
EXAMPLE IMAGE ONLY, SEE PREVIOUS PAGE FOR SIZE AND COLOR SELECTION

## LIFTMASTER GATE AND CUSTOM GATE:

GATE OPERATOR: CSL24ULWK: 24VDC High-Traffic Commercial Slide Gate Operator

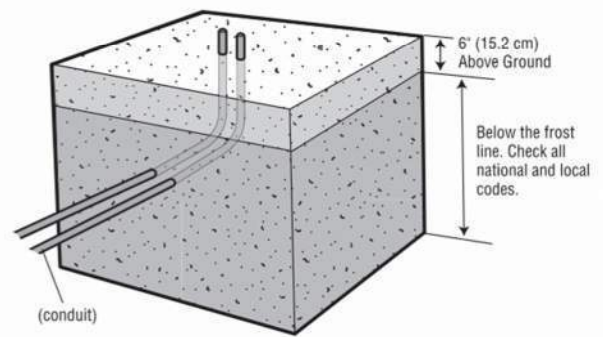
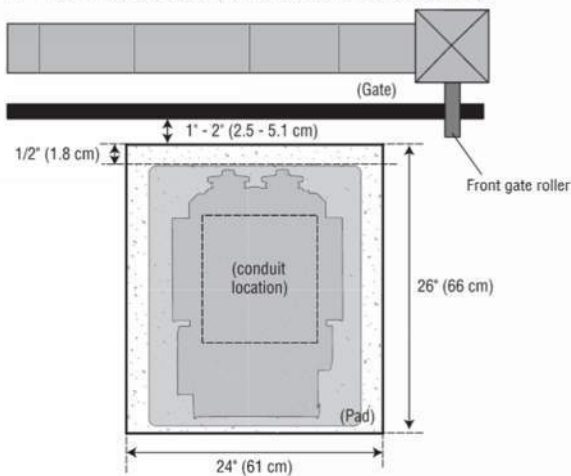


### Standard Installation

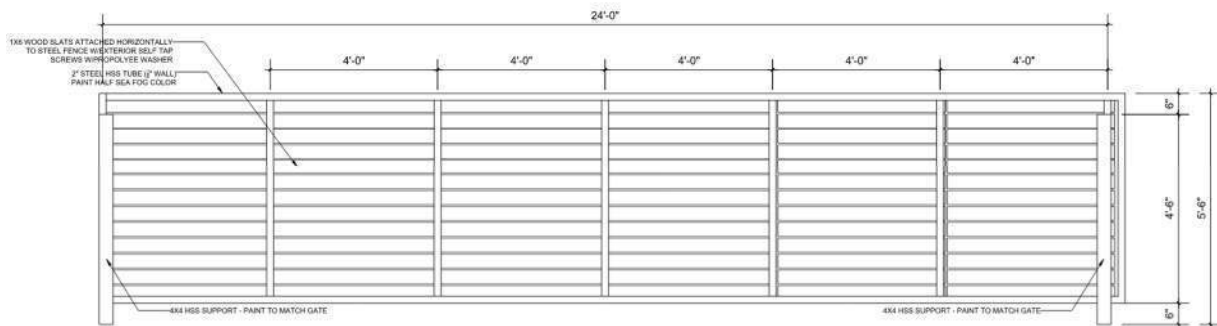


### Standard Installation

1. The gate operator should be installed near the front roller of the gate. Lay out the concrete pad.
2. Install the electrical conduit.
3. Pour a concrete pad (reinforced concrete is required).





**CUSTOM GATE:**

NW 30<sup>TH</sup> AND REFER TO DRAWING SHEET A303 FOR ENLARGED VIEW OF GATE SHOWN ABOVE

**LEVEL 01 EXTERIOR DOORS:**DOORS FACING NW 30<sup>TH</sup> AND N. HUDSON AVE ON 1<sup>ST</sup> LEVEL:

HOELSCHER MAHOGANY DOORS-additional information from Manuf. To be provided

**True Divided Lite & Simulated Divided Lite**

**6 Lite 1 Panel - No Moulding**

**Mahogany TDL Door**  
Size Stock Number  
24" M6L1P2080NRM  
30" M6L1P2680NRM  
32" M6L1P2880NRM  
36" M6L1P3080NRM  
No Raised Moulding  
**Mahogany TDL Sidelite**  
14" M3LSL1280NRM  
No Raised Moulding  
**Glass**  
Clear Beveled Low-E Insulated  
Privacy rating: 1



**6 Lite**

**6/8 Knotty Alder TDL Door**  
Size Stock Number  
36" KA6LCBLE3068  
**8/0 Knotty Alder TDL Door**  
Size Stock Number  
36" KA6LCBLE3080  
8/0 door shown.  
**Glass**  
Clear Beveled Low-E Insulated  
Privacy rating: 1



**3068 3/4 Lite 1 Panel for SDL**

**Mahogany Door**  
Size Stock Number  
30" M34LE1P2668NRM  
32" M34LE1P2868NRM  
36" M34LE1P3068NRM  
No Raised Moulding  
**Mahogany TDL Sidelite**  
12" M34SLE1068NRM  
No Raised Moulding  
**Glass**  
Clear Low-E Insulated  
Privacy rating: 1



**3080 3/4 Lite 1 Panel for SDL**

**Mahogany Door**  
Size Stock Number  
30" M34LE1P2680NRM  
32" M34LE1P2880NRM  
36" M34LE1P3080NRM  
No Raised Moulding  
**Mahogany TDL Sidelite**  
12" M34SLE1080NRM  
No Raised Moulding  
**Glass**  
Clear Low-E Insulated  
Privacy rating: 1



**Simulated Divided Lite Bar**



Size Stock Number  
8' MSDLBAR11480      Size Stock Number  
8' MSDLBAR7880

Available door unit configurations: 1-3, 8  
See page 5 for more information.

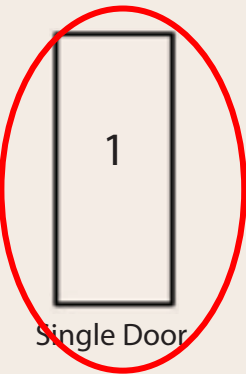
True Divided Lite - 6 Lite & Simulated Divided Lite

105

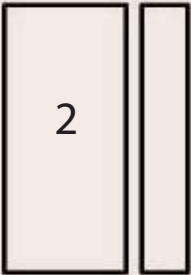
# Door Unit Configurations

Door Unit Configurations

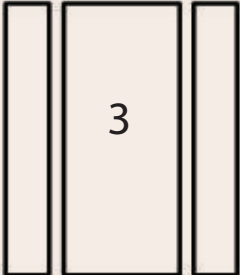
Prehung or prepackaged jamb systems are available in the 12 standard configurations shown below. Door systems can be prehung and shipped as a complete unit or prehung and shipped knocked-down for you to assemble. Stock jamb widths are from 4-9/16" to 6-9/16". Component jamb materials are available individually. In addition to the 12 standard configurations shown, custom sizes and configurations are available and quoted upon request. Door systems include an adjustable threshold, door sweep and hinges. Double door systems also include a t-astragal and flush bolts. All hardware items are available in satin-nickel or oil-rubbed bronze finishes.



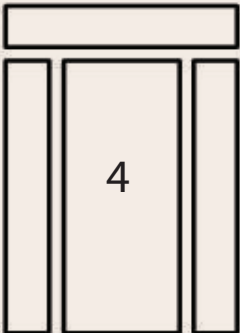
Single Door



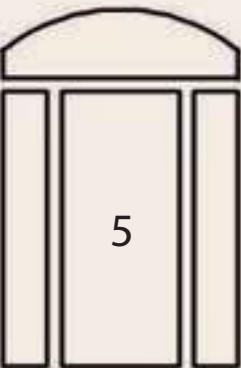
Single Door  
1 Sidelites



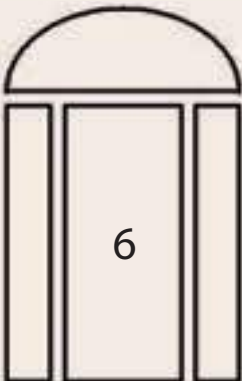
Single Door  
2 Sidelites



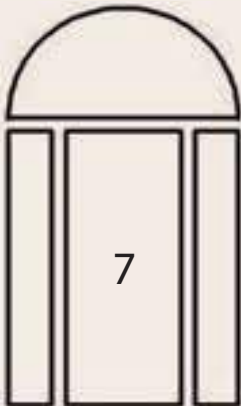
Single Door  
2 Sidelites  
Rectangle Transom



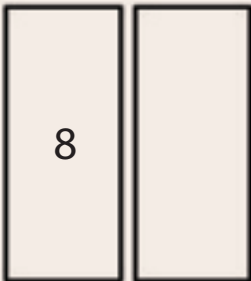
Single Door  
2 Sidelites  
Segment Transom



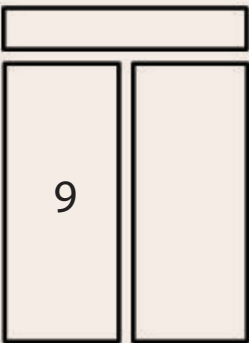
Single Door  
2 Sidelites  
Elliptical Transom



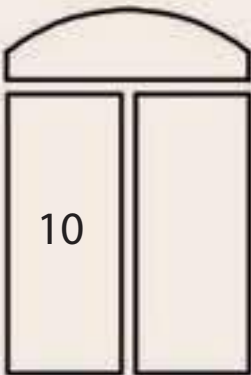
Single Door  
2 Sidelites  
1/2 Round Transom



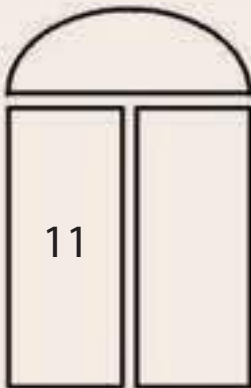
Double Door



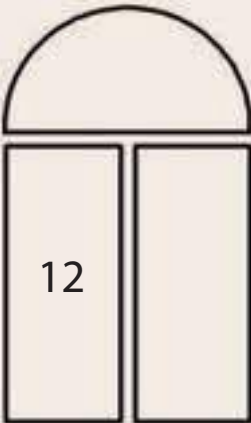
Double Door  
Rectangle Transom



Double Door  
Segment Transom



Double Door  
Elliptical Transom



Double Door  
1/2 Round Transom

# Glass and Glass Privacy

**Hoelscher** offers a wide variety of glass designs and it can be difficult to tell the privacy level provided by different design options. To help you decide which option is right for your entry, consult the privacy rating information that accompanies each door.

## Leaded Glass and Privacy

The privacy ratings in this publication are based on the surface texture of the glass in each design. Clear untextured glass has a privacy rating of 1 (transparent) and allows a unobstructed view through the glass into or out of your home. At the other end of the scale, the Granite texture has a privacy rating of 8 (translucent) and allows only a view of shadows and color without any distinguishable shapes. Solid doors, without any glass panels, have a privacy level of 10. Glass panels with multiple textures have an averaged glass privacy rating. A privacy rating for each traditional leaded glass type are shown below.

## Traditional Leaded Glass Textures

4



Clear Bevel  
Privacy rating: 1



Baroque  
Privacy rating: 2



Gluechip Bevel  
Privacy rating: 3



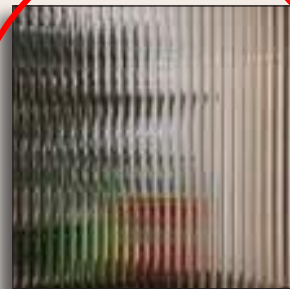
Gluechip  
Privacy rating: 4



Water  
Privacy rating: 5



Hammered  
Privacy rating: 6



Reeded  
Privacy rating: 7



Granite  
Privacy rating: 8

## CAMING OPTIONS

Caming is the H shaped metal channels used in traditional hand-crafted leaded glass panel assembly.



Patina



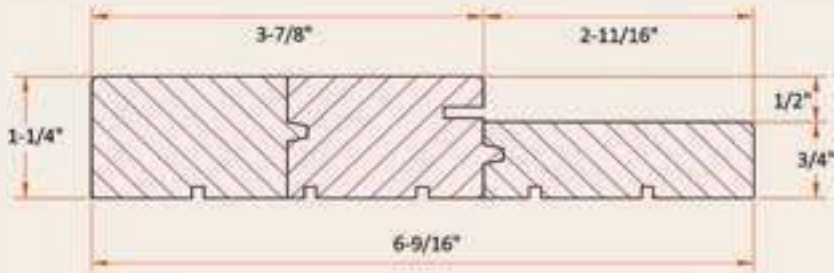
Zinc

Privacy ratings are subjective and open to interpretation. The higher the privacy rating, the more private and less transparent that particular textured glass option will be. 12" x 12" glass photographs.

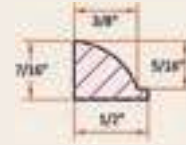


# JAMB COMPONENTS

Jamb Components

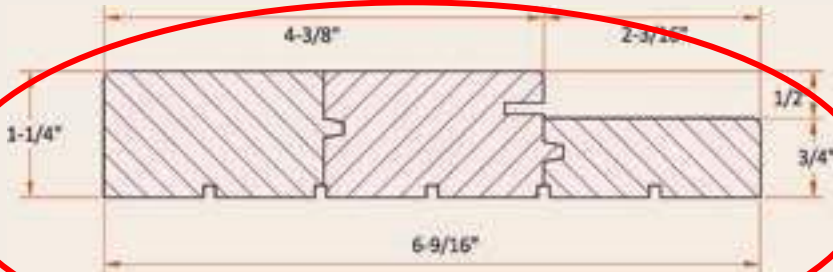


MJ680-2 6-9/16" Mahogany Jamb 8-0 100" (2-1/4" thick door)  
KAJ680-2 6-9/16" Knotty Alder Jamb 8-0 100" (2-1/4" thick door)



Scale: 1:2

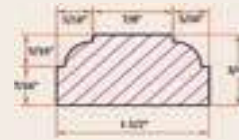
MGB80 Mahogany Glass Bead 8-0 100"  
KAGB80 Knotty Alder Glass Bead 8-0 100"



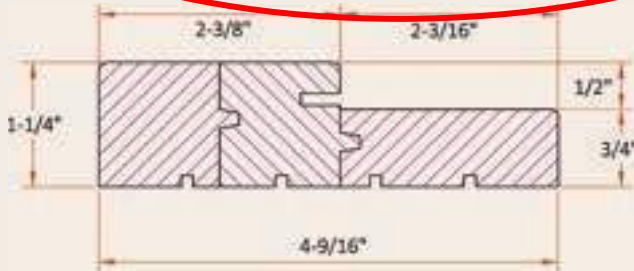
MJ680 6-9/16" Mahogany Jamb 8-0 100" (1-3/4" thick door)  
KAJ680 6-9/16" Knotty Alder Jamb 8-0 100" (1-3/4" thick door)



MIMC80 Mahogany Interior Mull Cover 8-0 100"  
KAIMC80 K. Alder Interior Mull Cover 8-0 100"



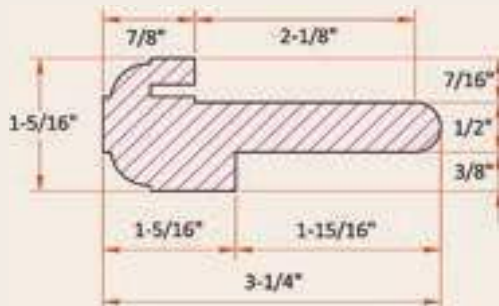
MXMC80 Mahogany Exterior Mull Cover 8-0 100"  
KAXMC80 K. Alder Exterior Mull Cover 8-0 100"



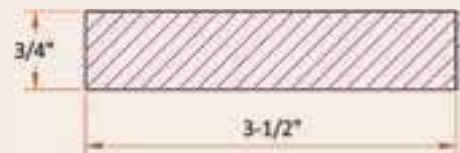
MJ480 4-9/16" Mahogany Jamb 8-0 100" (1-3/4" thick door)  
KAJ480 4-9/16" Knotty Alder Jamb 8-0 100" (1-3/4" thick door)



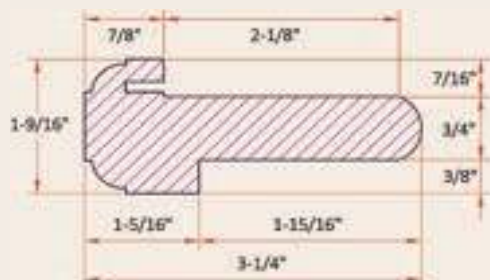
MBMC80 Mahogany Brick Mould 8-0 104"  
KABMC80 Knotty Alder Brick Mould 8-0 104"



MTAST1280 1/2" Mahogany T-Astragal 8-0 96" (1-3/4" thick door)  
KATAST1280 1/2" Knotty Alder T-Astragal 8-0 96" (1-3/4" thick door)



MSC80 Mahogany 1x4 Casing 8-0 104"  
KASC80 Knotty Alder 1x4 Casing 8-0 104"



MTAST3480 3/4" Mahogany T-Astragal 8-0 96" (1-3/4" thick door)  
KATAST3480 3/4" Knotty Alder T-Astragal 8-0 96" (1-3/4" thick door)



MCSG380 Mahogany Casing 8-0 104"  
KACSG380 Knotty Alder Casing 8-0 104"

**LEVEL 01 EXTERIOR DOORS CONTINUED:**DOORS FACING WEST AND SOUTH ON 1<sup>ST</sup> LEVEL:

HOELSCHER FIBERGLASS DOORS-additional information from Manuf. To be provided

**MAHOGANY GRAIN** 23  
*3-0 x 6-8 3/4 Lite TDL w/ 1 Shaker Panel Btm*

**3/4 Lite 1 Panel**

**Glass Selections**

FG34FL1P3068  
Flemish FlGtz

FG34RN1P3068  
Rain FlGtz

FG34SN1P3068  
Satin FlGtz

FG34LE1P3068  
Clear Low E FlGtz

Shown in Midnight with Flemish Glass  
FG34FL1PF3068

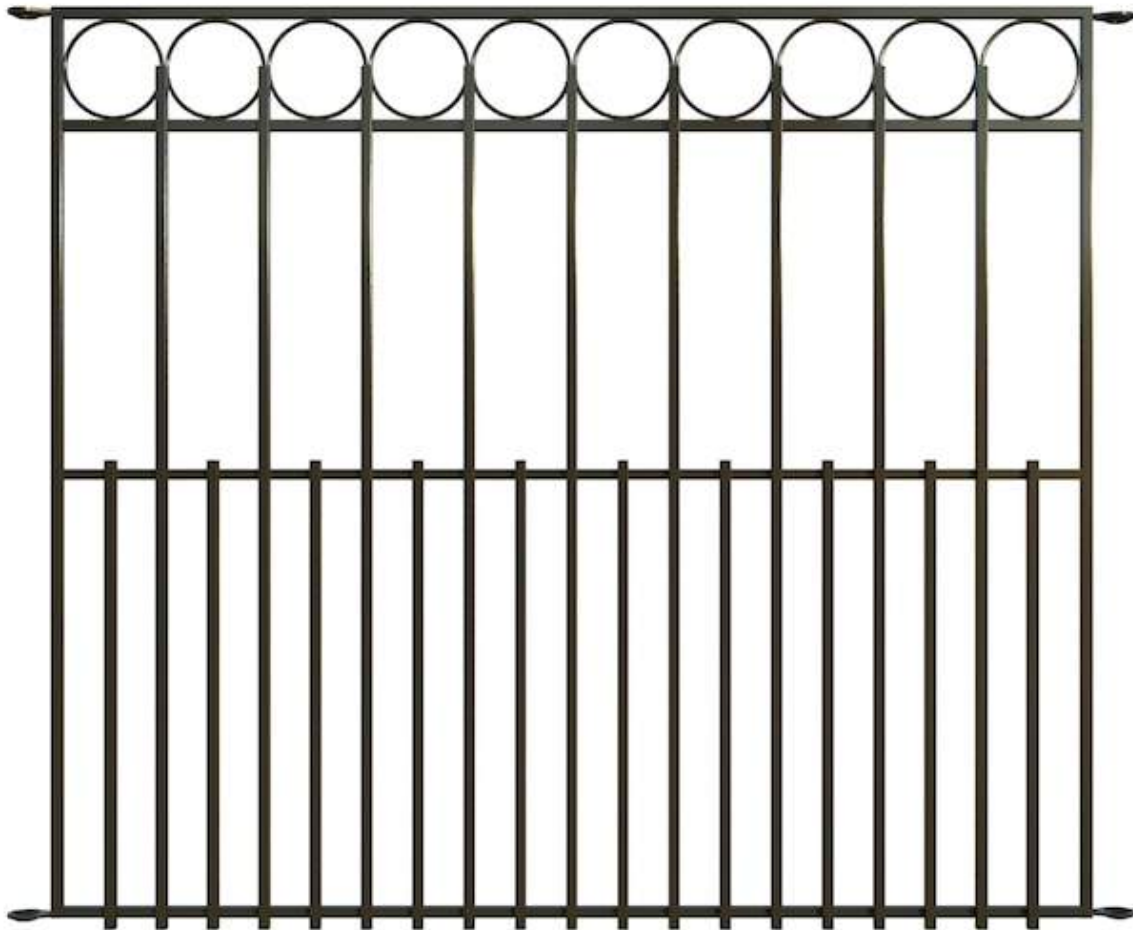
Whitney Iron Grille\*

no iron grille

primed for paint

\*Doors will accept same iron grilles as Mahogany and Knotty Alder collections

PRIMED FOR PAINT

**METAL FENCING:**

YARDLINK: Grand Ambrose 3-ft H x 4-ft W Powder Coated Galvanized Steel No Dig Flat-top No Dig Decorative Fence Panel

Item #5654572 |

Model #061610

**NOTE:** a fabricated version of this fencing “may” be installed at the north colonnade and entablature between columns should safety concerns arise. Currently this is not in the drawings as we do not intend to install it upon construction.

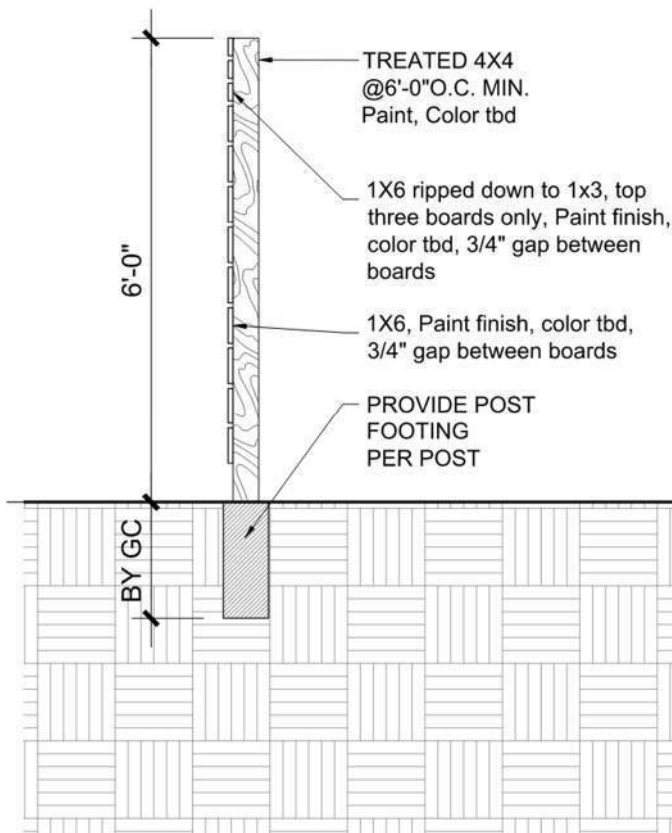
**WOOD FENCING:**

CUSTOM BUILD HORIZONTAL FENCING

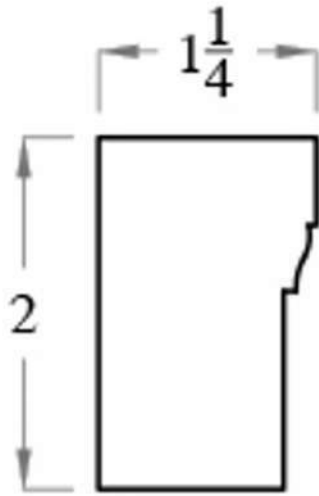
6'-0" HIGH

4X4 TREATED POSTS (PAINT)@6'-0"OC – BEVEL TOP (NO METAL CAP)

1X6 HORIZONTAL SLATS W/1/2" GAP VERTICALLY



**BRICK MOULDING:** SEE DRAWING PROVIDED IN ADDENDUM TO HP SUBMISSION PACKAGE FOR LOCATION OF MOULDING AT WINDOWS



Standard Brickmold style 180

Primed finger-jointed Pine



Shingle Molding style

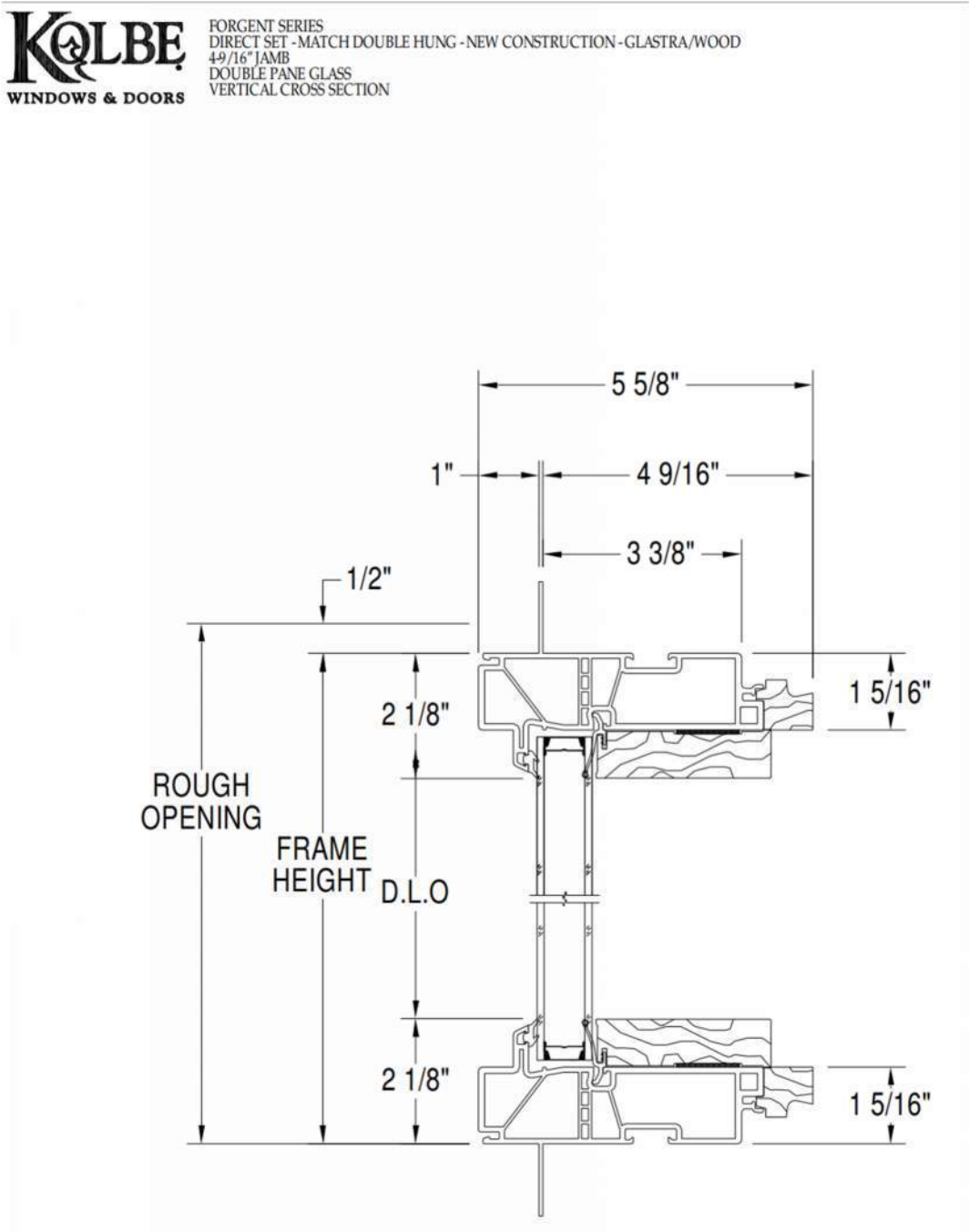
Profile Measurement: 5/8" x 1-5/8"

Primed pine



WINDOWS:

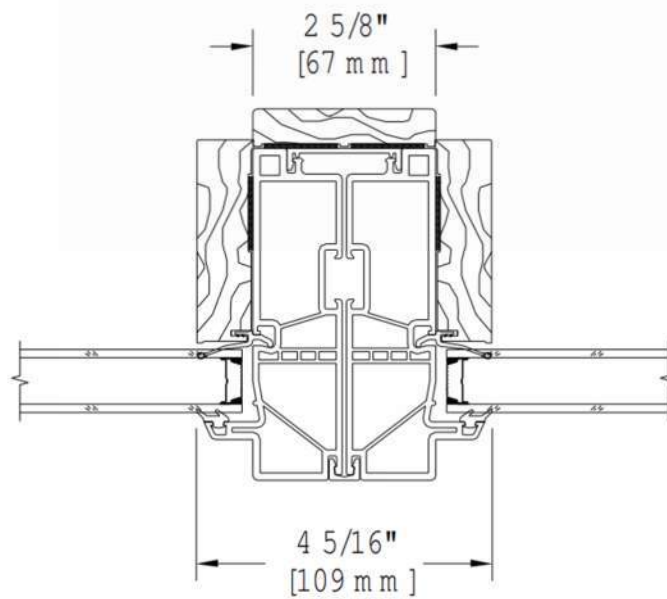
TYPICAL DOUBLE HUNG WINDOW VERTICAL SECTION:



**WINDOWS:****MULLED WINDOW DETAIL:**

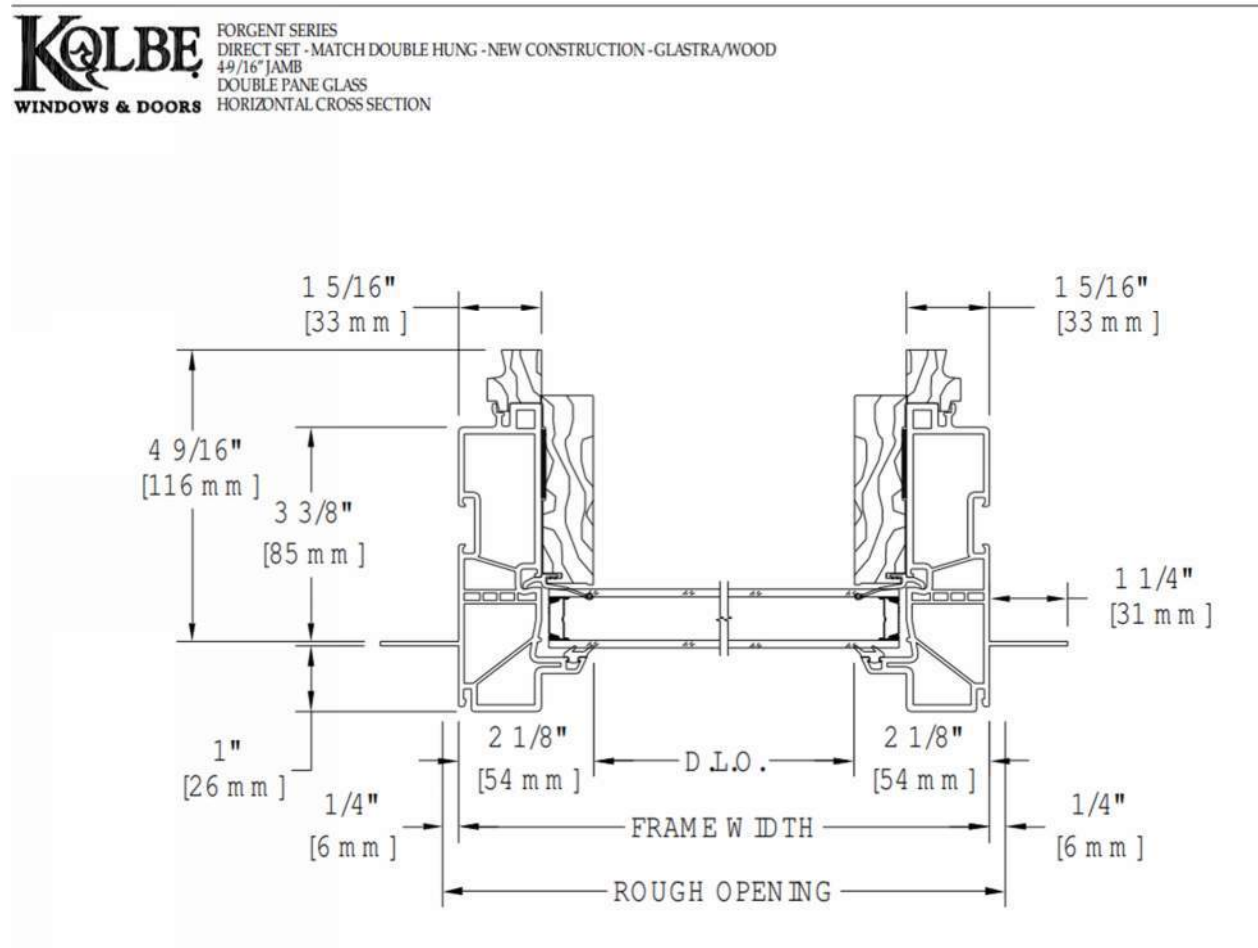
**KOLBE**  
WINDOWS & DOORS

FORGENT SERIES  
DIRECT SET MULLED TO DIRECT SET - MATCH DOUBLE HUNG - NEW CONSTRUCTION - GLASTRA/WOOD  
FLUSH MULL - FIXED/FIXED  
DOUBLE PANE GLASS  
MULLING DETAIL



## WINDOWS:

TYPICAL WINDOW HORIZONTAL CROSS-SECTION:



## WINDOWS:

BRICK EXAMPLE IMAGE:



- IMAGE PROVIDED FOR VISUAL REFERENCE ONLY. PROJECT DOES NOT INCLUDE DIVIDED LITES
- Forgent® Series double hung
- 7/8" wide performance divided lite bars in top sash of double hungs
- Glastra® exterior in Midnight color

**WINDOWS:**

SIDING EXAMPLE IMAGE:



- IMAGE PROVIDED FOR VISUAL REFERENCE ONLY. PROJECT DOES NOT INCLUDE DIVIDED LITES
- Forgent® Series double hung
- 7/8" wide performance divided lite bars in top sash of double hungs
- Glastra® exterior in Midnight color



**STEEL STAIR:**

36" wide stair, 12" channel stringer rolled to spec., 1.25" posts, 1/2" square vertical pickets, molded steel cap rail. CUSTOM FABRICATED.



EXAMPLE IMAGE OF SIMILARLY SPECIFIED STAIR.



# FORGENT® SERIES





# THE FORGENT® SERIES

Forgent Series windows and doors incorporate innovative design and state-of-the-art technology with a proprietary Glastra® material. Engineered for strength, resilience, and ease-of-installation, this high-performance product line is a perfect choice for new construction or replacement projects.





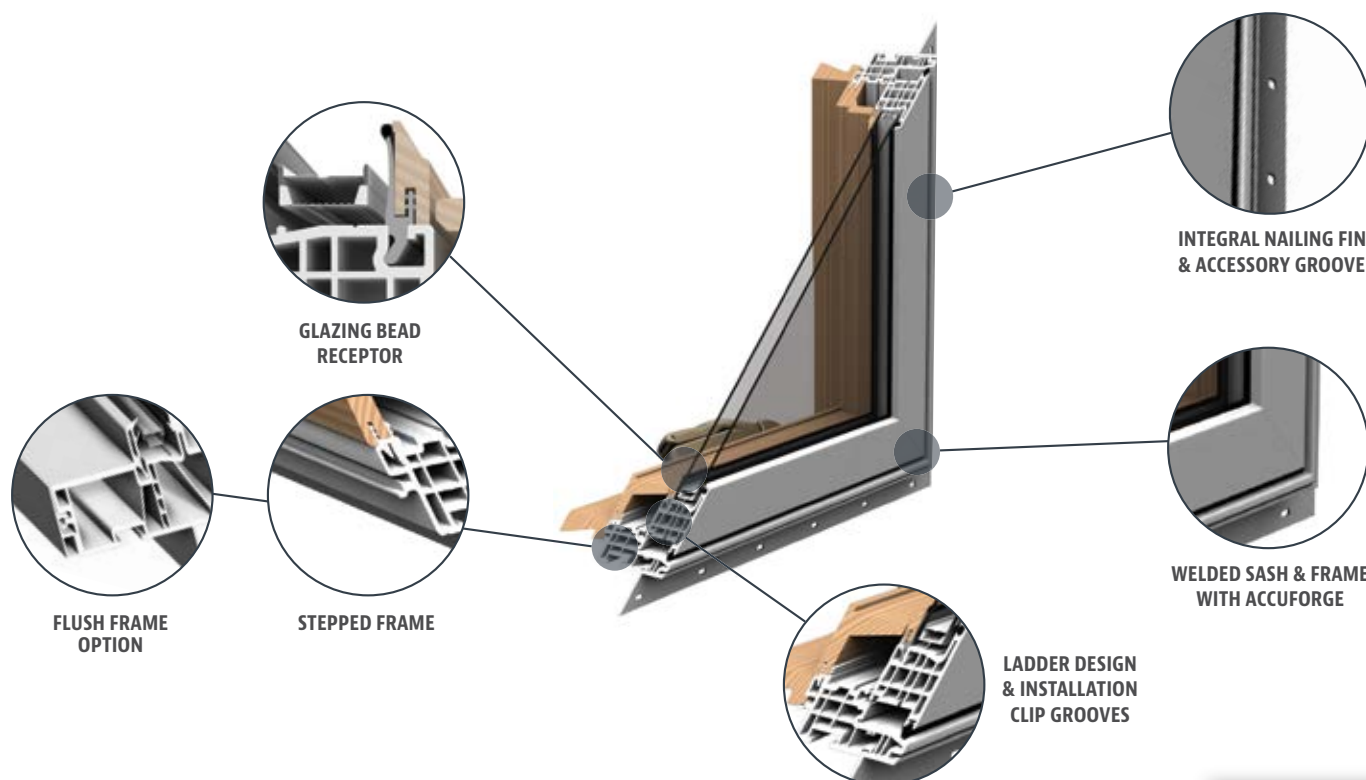
The Forgent Series provides:

### STRENGTH & PERFORMANCE:

- Strong and resilient Glastra exterior with Glastra or Wood interior
- Advanced ladder design with multiple chambers for strength and energy efficiency
- Welded sash and frame with AccuForge™ technology for a smooth, air and watertight seam
- Integral nailing fin has fewer sealing points, for rigidity and a watertight installation
- Impact performance capabilities to meet the demands of coastal hurricane zones

### EASE OF INSTALLATION:

- Three convenient installation methods: integral nailing fin, installation clips, screw through frame
- Glazing bead receptor helps create a clean break-point during painting and staining
- Accessory groove allows for quick installation of exterior accessories without additional clips
- Dry glazed sash allows for serviceable sash and components





# INNOVATION & TECHNOLOGY



© Photo courtesy of Next Polymers Ltd./Brunet Group

## MATERIAL

Forgent Series products are comprised of Glastra, a proprietary hybrid of fiberglass and UV stable polymer. To better match décor and performance requirements, a Glastra exterior with a choice of Glastra or Wood interior is available in select colors and finishes.

Glastra is an innovative, recyclable material that helps form the resilient foundation of Forgent Series products. Manufacturing byproducts are repurposed for use in other industries, such as underground industrial piping.

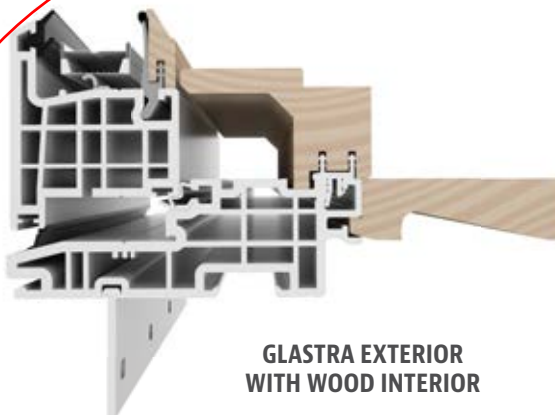


shown  
in photo  
above



**GLASTRA EXTERIOR  
WITH GLASTRA INTERIOR**

Both the exterior and interior are comprised of Glastra, with finishes available in Cloud, Sahara, Midnight or Bronze.

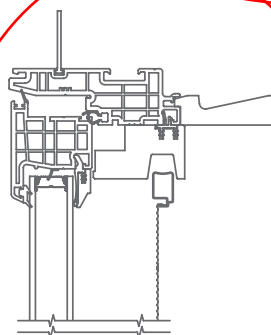


**GLASTRA EXTERIOR  
WITH WOOD INTERIOR**

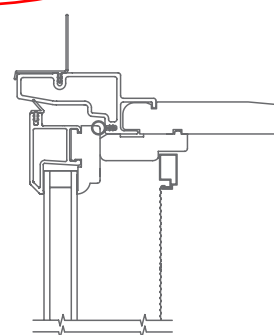
The exterior is comprised of Glastra, while the interior is Pine wood, available in popular pre-finishes including: Double Clear Coat, Latex Primer, Black Paint, White Paint, or a variety of stains.

## CONSTRUCTION

Forgent Series windows are constructed of multi-chambered Glastra extrusions in an advanced ladder design for numerous benefits – the chambers add strength and promote energy efficiency. The same structural framework is used for All Glastra and Glastra/Wood products, for consistent performance.



**FORGENT SERIES  
CONSTRUCTION**



**TYPICAL FIBERGLASS  
CONSTRUCTION**

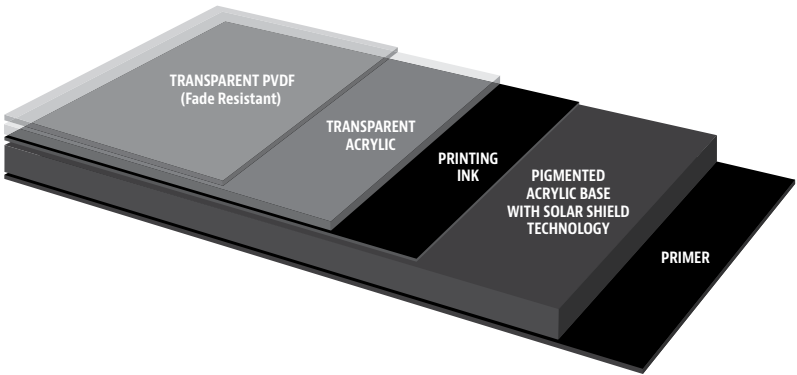




© Kim Smith Photo

## ACRYLIC FILM

A Midnight or Bronze film can be applied to Forgent Series products with a Glastra exterior and interior. This film utilizes a pigmented acrylic base technology that reduces heat absorption and resists fading. A profile lamination process permanently bonds the film to the Glastra material, enabling it to withstand the harshest of conditions – from extreme heat to extreme cold. And because the film has a very low surface tension, typical dirt, debris – even paint – can be removed from the surface with mild soap and water.



## ACCUFORGE™

Forgent Series window frames\* and sash feature AccuForge™, an innovative miter joint technology. This state-of-the-art nip welding process creates a stronger air and watertight seam with a smooth, high-end finish.



## COMPRESSION SEAL

Forgent Series windows and doors feature EPDM gaskets in the glazing system as well as between the operable sash and frame, to seal the joint and create an air and watertight seal. Similar to those used on commercial windows, cars and airplane doors, they also keep noise out, for a quieter, drier, more comfortable environment.

Thermal Expansion (In/In F° x 10 <sup>-6</sup> )									
Vinyl									
Cellular PVC									
<b>Glastra</b>									
Aluminum									
Pine									
	0	5	10	15	20	25	30	35	40

## THERMAL EXPANSION

All materials are subject to some level of expansion as temperatures fluctuate. Forgent Series Glastra material is less affected by these changes, with a lower expansion rate than many composite products, and less than half the rate of vinyl products.

AccuForge™ is a trademark of Kolbe & Kolbe Millwork Co., Inc.  
 \*Specialty windows (geometric and radius) and sliding doors are not manufactured with AccuForge technology.  
 Forgent Series exterior films are compliant with and have achieved 307-16 certification from the American Architectural Manufacturers Association (AAMA). The AAMA 307-16 designation specifically refers to Voluntary Specifications for Laminates Intended for Use on AAMA Certified Profiles.

# DOUBLE HUNG

OPERATING | STUDIO



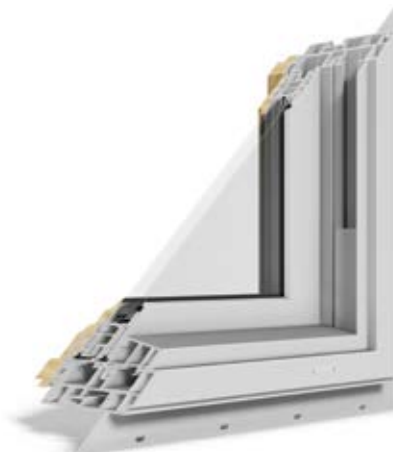
## DOUBLE HUNG STANDARD FEATURES

- ▶ All Glastra units with Cloud or Sahara integral color\* (see pg. 58)
- ▶ Flush frame groove filler for drywall return (New Construction - no extension jamb)
- ▶ Energy efficient, insulating Solar Low-E glass (see pg. 60)
- ▶ Equal glass sizing provides matching sight lines from sash to sash
- ▶ Dry glazed to the interior with beveled glazing bead
- ▶ Accessory grooves are integral to the extruded frames for the easy addition of accessories
- ▶ Full frame insect screen with BetterVue® fiberglass mesh and Water Shed Technology™ (see screen finishes, pg. 62)
- ▶ Stainless steel, constant force balance system provides durability and ease of operation
- ▶ Sash lock and tilt latches are color matched to the interior (pg. 17)
- ▶ Lift handle on bottom sash is color matched to the interior (only on All Glastra units; pg. 17)
- ▶ Integral 1-1/4" nailing fin provides easier installation and helps seal the window opening (New Construction)

NOTE: All measurements are nominal.



**GLASTRA/WOOD  
NEW CONSTRUCTION DOUBLE HUNG**  
(interior)



**GLASTRA/WOOD  
NEW CONSTRUCTION DOUBLE HUNG**  
(exterior)

BetterVue® and Water Shed Technology™ are registered trademarks of PHIFER INCORPORATED. Limitations may apply. Please consult your local Kolbe dealer for more details.



## DOUBLE HUNG OPTIONS

### Glass (see pg. 60):

- ▶ Solar Gain Low-E
- ▶ Solar Control Low-E
- ▶ Solar Advanced Control Low-E
- ▶ Turtle Glass
- ▶ ThermaPlus™ Low-E
- ▶ Neat™
- ▶ Triple pane
- ▶ Tinted, colored or patterned
- ▶ Tempered
- ▶ Laminated
- ▶ Preserve® Film
- ▶ Other options standard to the industry

### ~~Divided Lites (see pg. 61):~~

- ▶ ~~Performance divided lites with 7/8", 1-1/8" or 2-1/4" bars~~
- ▶ ~~Grilles-in-the-air-space~~

NOTE: All measurements are nominal.

### Other Options:

- ▶ Replacement double hungs  
*(3-1/4" overall frame depth for All Glastra units, 4-1/8" for Glastra/Wood units)*
- ▶ Glastra/Wood: Unfinished pine interior with no visible fasteners or wood exposed to the exterior
- ▶ Latex primed interior\* *(Glastra/Wood units, see pg. 59)*
- ▶ Interior prefinishing *(Glastra/Wood units, see pg. 59)*
- ▶ Exterior acrylic film in Midnight or Bronze  
*(available on All Glastra or Glastra/Wood units; see pg. 58)*
- ▶ Interior acrylic film in Midnight or Bronze  
*(only on All Glastra units with Midnight or Bronze exterior; see pg. 58)*
- ▶ Fixed top sash
- ▶ Multiple trim accessories *(shipped loose; see pg. 63)*
- ▶ Insect screen available with aluminum or UltraVue® mesh *(see screen finishes, pg. 62)*
- ▶ Extension jambs available in depths up to 9" overall
- ▶ Offset extension jambs
- ▶ Stepped frame groove filler for drywall return  
*(no extension jamb)*
- ▶ Glastra/Wood: Wood glazing bead receptor
- ▶ Galvanized steel installation clips
- ▶ Window Opening Control Device (WOCD) *(see pg. 62)*
- ▶ Sash limiters for safety *(non by-passable and does not meet WOCD requirements)*
- ▶ Cottage and reverse cottage style
- ▶ Impact performance modifications *(see pg. 65)*

\*Latex primer is not a final finish.

## HARDWARE (see hardware finishes, pg. 62):

A sash lock and tilt latches are applied to all double hung windows as standard.



**SASH LOCK**  
(shown in Clay)



**TILT LATCHES**  
(shown in Clay)



**LIFT HANDLE – ALL GLASTRA UNITS**  
(shown in White)

Also available: Satin Nickel | White | Matte Black | Rustic Umber

























































Also available: Clay | Matte Black | Rustic Umber

UltraVue® is a registered trademark of PHIFER INCORPORATED. Limitations may apply. Please consult your local Kolbe dealer for more details. Finish colors will vary from printed images. Please make selections using actual color samples available from your local Kolbe dealer. Not all hardware color options are available on all products.



# DOUBLE HUNG | Elevation Charts

## NEW CONSTRUCTION DOUBLE HUNG

F.S.	1'-5 1/2"	1'-11 1/2"	2'-5 1/2"	2'-7 1/2"	2'-11 1/2"	3'-1 1/2"	3'-5 1/2"	3'-11 1/2"
R.O.	1'-6"	2'-0"	2'-6"	2'-8"	3'-0"	3'-2"	3'-6"	4'-0"
G.S.	12'-1/4"	18'-1/4"	24'-1/4"	26'-1/4"	30'-1/4"	32'-1/4"	36'-1/4"	42'-1/4"
2'-11 1/2" 3'-0" 14'-5/16"	 MNCDH 1630	 MNCDH 2030	 MNCDH 2630	 MNCDH 2830	 MNCDH 3030	 MNCDH 3230	 MNCDH 3630	 MNCDH 4030
3'-5 1/2" 3'-6" 17'-5/16"	 MNCDH 1636	 MNCDH 2036	 MNCDH 2636	 MNCDH 2836	 MNCDH 3036	 MNCDH 3236	 MNCDH 3636	 MNCDH 4036
3'-11 1/2" 4'-0" 20'-5/16"	 MNCDH 1640	 MNCDH 2040	 MNCDH 2640	 MNCDH 2840	 MNCDH 3040	 MNCDH 3240	 MNCDH 3640	 MNCDH 4040
4'-5 1/2" 4'-6" 23'-5/16"	 MNCDH 1646	 MNCDH 2046	 MNCDH 2646	 MNCDH 2846	 MNCDH 3046	 MNCDH 3246	 MNCDH 3646	 MNCDH 4046
4'-11 1/2" 5'-0" 26'-5/16"	 MNCDH 1650	 MNCDH 2050	 MNCDH 2650	 MNCDH 2850	 MNCDH 3050	 MNCDH 3250*	 MNCDH 3650*	 MNCDH 4050*
5'-5 1/2" 5'-6" 29'-5/16"	 MNCDH 1656	 MNCDH 2056	 MNCDH 2656	 MNCDH 2856	 MNCDH 3056*	 MNCDH 3256*	 MNCDH 3656*	 MNCDH 4056*
5'-11 1/2" 6'-0" 32'-5/16"	 MNCDH 1660	 MNCDH 2060	 MNCDH 2660	 MNCDH 2860	 MNCDH 3060*	 MNCDH 3260*	 MNCDH 3660*	 MNCDH 4060*

F.S. = Frame Size • R.O. = Rough Opening • G.S. = Glass Size

\* Units meet most national emergency escape and rescue requirements

NOTE: All measurements are nominal. Elevation charts are not to scale.

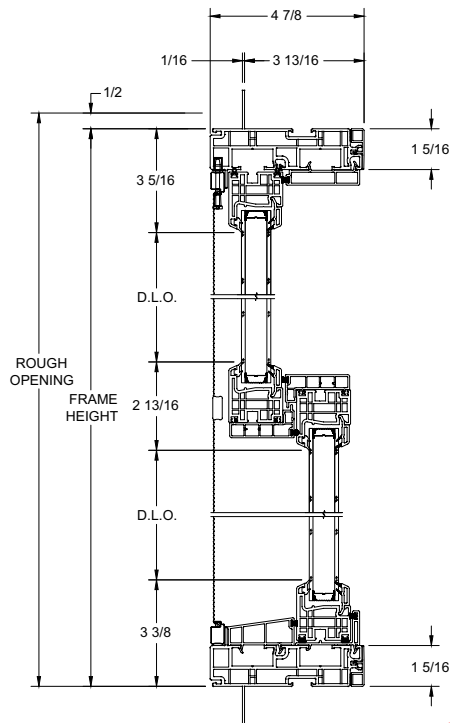
Divided lites are optional.

Some installation procedures will require a larger rough opening than noted (i.e. installations utilizing our installation clips), therefore, you may need to increase the rough opening size accordingly. Rough opening gaps may be increased up to a maximum of 1/2" on all sides and still be within good practice guidelines. For rough opening recommendations, see pg. 68.

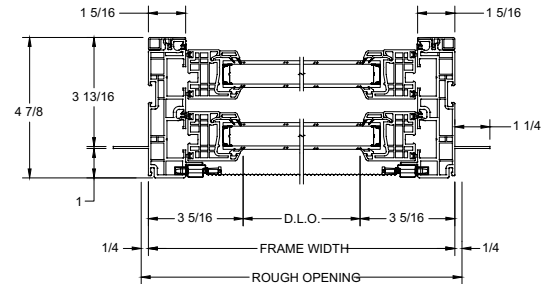
# DOUBLE HUNGs | Cross Section Drawings

## NEW CONSTRUCTION DOUBLE HUNGs – ALL GLASTRA

Vertical Section

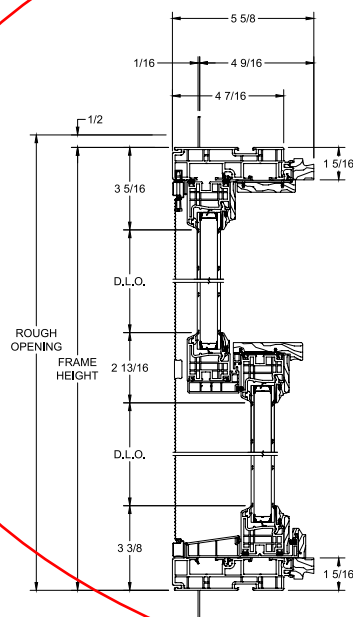


Horizontal Section

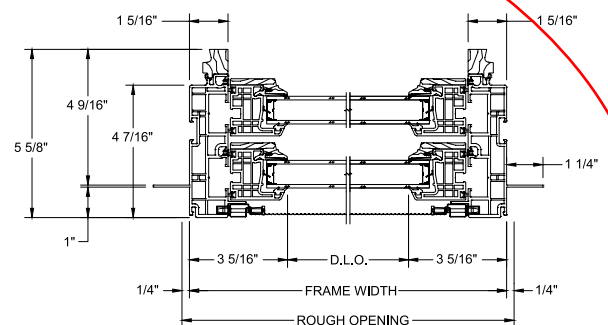


## NEW CONSTRUCTION DOUBLE HUNGs – GLASTRA/WOOD

Vertical Section



Horizontal Section



NOTE: Drawings are not to scale. For Forgent Series accessory drawings, see pg. 63. Additional and the most current drawings are available at [kolbewindows.com](http://kolbewindows.com)



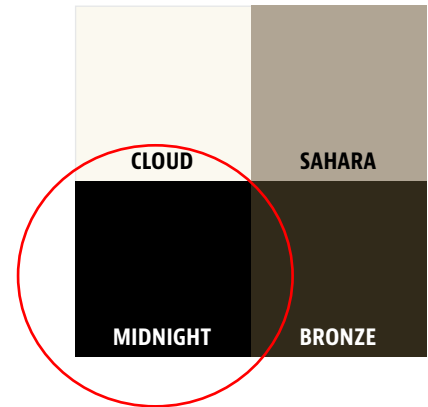
# FINISH OPTIONS

## EXTERIOR FINISHES - ALL GLASTRA & GLASTRA/WOOD UNITS

Forgent Series windows and doors have a durable and resilient Glastra exterior. Cloud and Sahara are integral to the Glastra material, while Midnight and Bronze are applied as an acrylic film.\*

Forgent Series exterior films (Midnight and Bronze) are compliant with and have achieved 307-16 certification from the American Architectural Manufacturers Association (AAMA). The AAMA 307-16 designation specifically refers to Voluntary Specifications for Laminates Intended for Use on AAMA Certified Profiles.

\*See more film details on pg. 7





© Spacecrafting Photography,  
Denali Custom Homes, Redstone Interiors



© Photo courtesy Adamo Homes

## INTERIOR FINISHES - ALL GLASTRA UNITS

Coordinating finishes are available for Glastra interiors; however, the Midnight or Bronze interior finish is only available on units with a Midnight or Bronze exterior, respectively. Ask your Kolbe dealer for details.




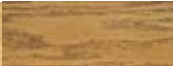




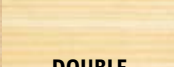






Forgent Series exterior films (Midnight and Bronze) are compliant with and have achieved 307-16 certification from the American Architectural Manufacturers Association (AAMA). The AAMA 307-16 designation specifically refers to Voluntary Specifications for Laminates Intended for Use on AAMA Certified Profiles.

\*See more film details on pg. 7

CLOUD	SAHARA
MIDNIGHT	BRONZE

## INTERIOR FINISHES - GLASTRA/WOOD UNITS

Forgent Series Glastra/Wood windows and doors are offered with a Pine interior. For units that are ready to install upon delivery, Forgent Series windows and doors can be prefinished on the interior with one of the water-based stains or paints shown. Stained units are given two coats of satin finish clear sealer. Because our interior finishes are water-based, low-VOC stains and paints, you can rest assured you've made an environmentally conscious decision.

 <b>UNFINISHED PINE*</b>	 <b>DOUBLE CLEAR COAT</b>	 <b>WHEAT</b>	 <b>RED WHEAT</b>	 <b>LIGHT OAK 998</b>	 <b>EBONY</b>	 <b>COFFEE BEAN</b>	 <b>LIBRARY RED</b>
	 <b>CHERRY</b>	 <b>CHESTNUT</b>	 <b>SUNSET OAK</b>	 <b>SPICED WALNUT</b>	 <b>LATEX PRIMER**</b>	 <b>WHITE†</b>	 <b>BLACK†</b>

Printed images of wood species and stain options will vary from actual product colors. Selections should be made based on color samples available from your Kolbe dealer. Stain colors are shown on Pine. Since no two trees are identical, wood can be expected to differ both in color and graining. These factors will influence the stain's final color. Color-matched interior paint is available through any Sherwin-Williams retail store in the United States and Canada.

\*All units supplied with unfinished pine interiors must be finished in the field.

\*\*Latex primer is not a final finish.

†White and Black are single coat interior paint finishes with some visible wood grain.

Back priming of casement operator and jamb covers is available.



# GLASS OPTIONS

Kolbe offers glazing options to provide optimum energy efficiency for the geographic region in which you live. Low-E is a “smart” coating that reduces energy transfer through the insulating glass unit. The result is reduced heating and cooling costs throughout the year. Low-E coatings also reduce the potential for condensation, as well as provide protection against fading of furniture, fabrics and carpeting.

Kolbe also offers the following Low-E glass options, as well as many specialized options:

## Solar Gain Low-E

When the weather turns frigid, Solar Gain Low-E glass is the perfect cold remedy. It keeps homes warmer and more comfortable by blocking heat loss to the outside and letting the sun's heat stream in to increase solar heat gain.

## Solar Low-E (Kolbe's Standard)

Suitable for most climates and meets most energy zone requirements. Solar Low-E glass is designed to reflect room-side heat back into the room during winter months. In summer, visible sunlight is allowed in while blocking most of the sun's infrared heat energy.

## Solar Control Low-E

Offers an ideal balance of solar control and high visibility by blocking 95% of UV rays while maintaining the interior temperature.

## Solar Advanced Control Low-E

A tinted glass recommended for warm climates that achieves greater solar control over a wide range of the spectrum, while also helping to reduce glare.

## Turtle Glass

Achieves the Turtle Code of less than 45% Visible Transmittance utilizing laminated glass with Solar Control Low-E and gray tint.

## ThermaPlus™ Low-E

An additional Low-E coating which helps to meet the strictest energy requirements by providing protection against heat loss and UV damage. Available with dual pane versions of Solar Gain Low-E, Solar Low-E, Solar Control Low-E, Solar Advanced Control Low-E, and Solar Increased Control Low-E glass.

## Triple Pane

Provides a greater energy performing window that keeps indoor air warm and comfortable, prevents heat loss, and lowers your heating bills. It is constructed with three panes of glass, thermal spacer bars and is available in Solar Gain Low-E, Solar Low-E, Solar Control Low-E, Solar Advanced Control Low-E, and Solar Increased Control Low-E glass.

## Preserve® Film

A protective film that protects the glass surfaces from scratches during transit and construction, as well as reducing the time involved in job site clean-up.

## Tinted, Colored or Patterned

Provides shading, privacy or visual interest.

## Tempered

Standard in Kolbe doors to address safety concerns. Also available in window units to meet specific building codes.

## Laminated

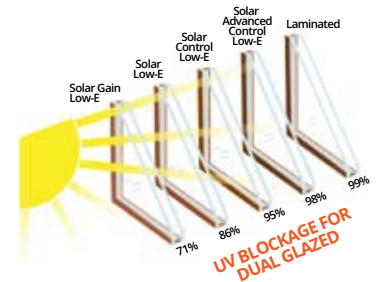
Benefits include safety, security, sound control and provides the ultimate in UV blockage.

## Impact

Glazing utilized to withstand harsh environmental conditions, especially in coastal regions. Combined with an impact rated product, this glazing offers the highest level of security.

## Neat+™

Harnesses the sun's UV rays to loosen dirt so water can rinse it away, leaving windows cleaner, longer. A special sputter-coating process makes the glass ultra smooth, so the water “sheets off” more readily than it would on uncoated glass, allowing you to spend less time cleaning.



NOTE: Tested units include argon. The laminate has 1/4" inner pane. Based on Lawrence Berkeley Lab (LBL) Window 5.2 © 2003 analysis for classical UV transmission data.



NOTES: Not all glass is available on all products. Please contact your Kolbe dealer for product specifics. Neat+ and Preserve are trademarks of Cardinal Glass Industries, Inc. Low-E insulating glass with a stainless steel spacer bar carries a 20-year warranty. Not all glass options listed have the same glass warranty. Please contact your dealer for details.

# OPTIONS

## WINDOW HARDWARE FINISHES

CLAY	SATIN NICKEL
MATTE BLACK	WHITE
RUSTIC UMBER	

## DOOR HARDWARE FINISHES

CLAY	SATIN NICKEL PVD†	SMOKY GRAY PVD†
MATTE BLACK	WHITE	BRIGHT BRASS PVD†
RUSTIC UMBER	GOLD PAINTED	

## WINDOW SCREEN FINISHES

SAND	BRONZE
BLACK	WHITE
RUSTIC	

†PVD (Physical Vapor Deposition) finish is an application over the color which helps protect the hardware against tarnishing, peeling and cracking. Printed images of hardware finishes will vary slightly from actual colors. Not all hardware color options are available on all products. Selections should be made based on color samples available from your Kolbe dealer.

## WINDOW OPENING CONTROL DEVICES (WOCDs)

Kolbe offers Window Opening Control Devices (WOCDs) that restrict the size of the open window area to less than 4 inches, and feature a limit release mechanism to allow for emergency escape. These devices allow the window to latch into place at a predetermined position and automatically re-latch when closed. The WOCDs meet the ASTM F2090-13 requirements.

### WOCD for Double Hungs & Sliding Windows

WOCDs can be factory applied to Forgent Series double hungs and sliding windows, or shipped loose as a kit for field installation.



**WOCD APPLIED TO DOUBLE HUNG**  
(Glastra/Wood unit)

### WOCD for Casements

This sleek, non-visible device for crank-out casements can be factory applied or shipped loose as a kit for field installation.



**WOCD APPLIED TO CASEMENT**  
(All Glastra unit)

This device meets the stringent safety requirement of ASTM F2090-13 if applied per recommendations. Factory-applied WOCDs are available as kits for application on the job site. Not all windows are available with window opening control devices. Please ask your local Kolbe dealer about availability.

# ENERGY PERFORMANCE DATA

## ENERGY STAR® – UNITED STATES

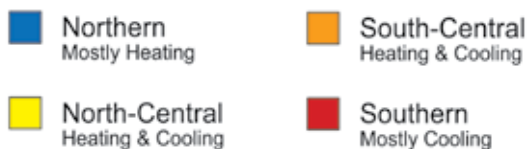
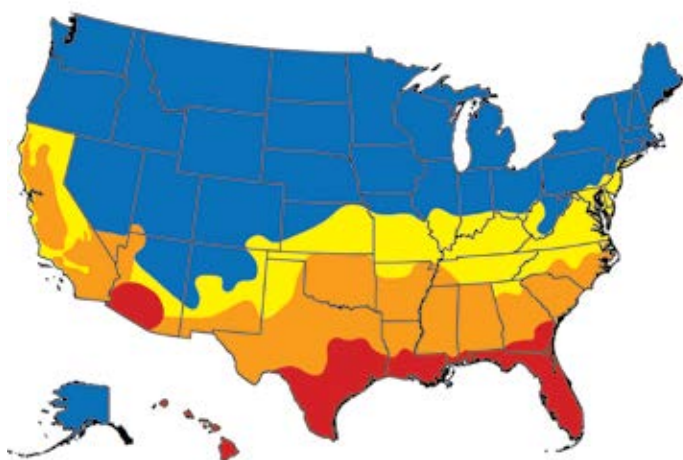


Energy Star is a government-regulated program that was created by the Environmental Protection Agency (EPA), and the U.S. Department of Energy (DOE), to help consumers quickly and easily identify energy saving products.

The Energy Star program uses energy values obtained by window and door manufacturers through the National Fenestration Rating Council (NFRC) program. NFRC ratings are based on the energy performance of the total window or door – both glass and frame.

The Energy Star program for the United States divides the nation into four separate climate zones – Northern, North-Central, South-Central, and Southern.

The performance criteria that needs to be met in order to be Energy Star compliant in specific climate zones are shown in the charts provided. Note that this information is per criteria that took effect in 2015 and 2016.



### 2015 & 2016 ENERGY STAR – Qualification Criteria for Windows\*

Climate Zones – U.S.	U-Factor	SHGC
Northern**	$\leq 0.27$	Any
Northern**	$= 0.28$	$\geq 0.32$
Northern**	$= 0.29$	$\geq 0.37$
Northern**	$= 0.30$	$\geq 0.42$
North-Central	$\leq 0.30$	$< 0.40$
South-Central	$\leq 0.30$	$\leq 0.25$
Southern	$\leq 0.40$	$\leq 0.25$

\*The effective date for the Northern Zone prescriptive and equivalent energy performance criteria for windows was January 1, 2016. North-Central, South-Central, and Southern criteria will continue to follow 2015 guidelines.

\*\*Northern zone windows can meet prescriptive (1st row) or alternative energy performance (2nd, 3rd, and 4th rows) criteria to qualify for ENERGY STAR.

### 2015 ENERGY STAR – Qualification Criteria for Doors

Glazing	U-Factor	SHGC
Opaque	$\leq 0.17$	No rating
$\leq 1/2$ -Lite	$\leq 0.25$	$\leq 0.25$
$> 1/2$ -Lite	$\leq 0.30$	Northern North-Central
		Southern South-Central
		$\leq 0.40$
		$\leq 0.25$

### CALIFORNIA'S TITLE 24

Kolbe's Forgent Series windows and doors can meet the strict California Title 24 Building Energy Efficiency Standards. Talk to your dealer about Forgent Series products with glass options that help meet these stringent energy efficiency requirements.

For energy performance data, visit:

► [www.kolbewindows.com/energy](http://www.kolbewindows.com/energy)

Kolbe demonstrates a commitment to providing accurate energy data by having products independently simulated, tested, inspected and listed in the NFRC certification program, and making that data available at [kolbewindows.com](http://kolbewindows.com) and on window labels.

Energy performance data and air, water, structural data is updated on a continuous basis. For the most current information, contact your local Kolbe dealer.







# KOLBE

WINDOWS & DOORS

We're for the visionaries.®

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715.842.5666

[www.kolbewindows.com](http://www.kolbewindows.com)

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Front cover photo © Spacecrafting Photography | Denali Custom Homes | Redstone Interiors

### EXTERIOR WALL SCONCE:





**EXTERIOR WALL SCONCE AT MAILBOXES:**



**Dominion Gooseneck Light**

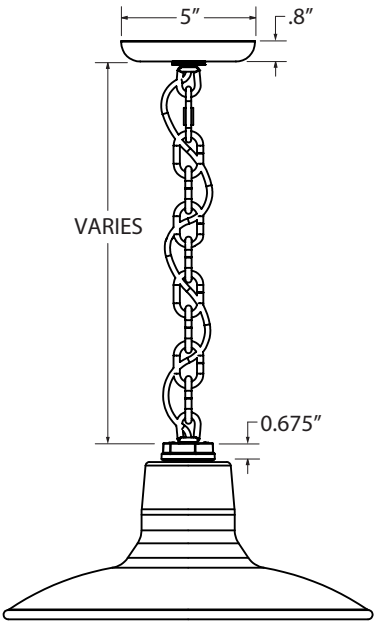
BARN LIGHT ELECTRIC COMPANY – SEE SPECIFICATION LIST FOLLOWING PAGES



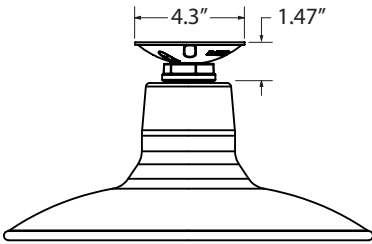


MOUNTING STYLE

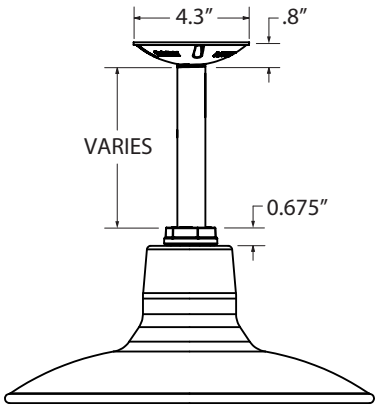
CHAIN HUNG PENDANT (CN)



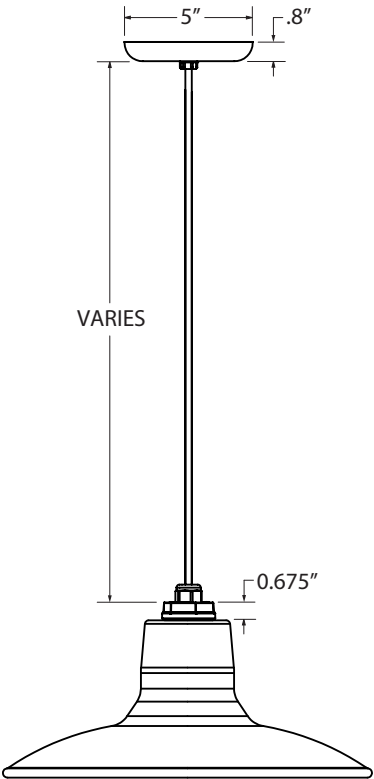
FLUSH MOUNT (F)



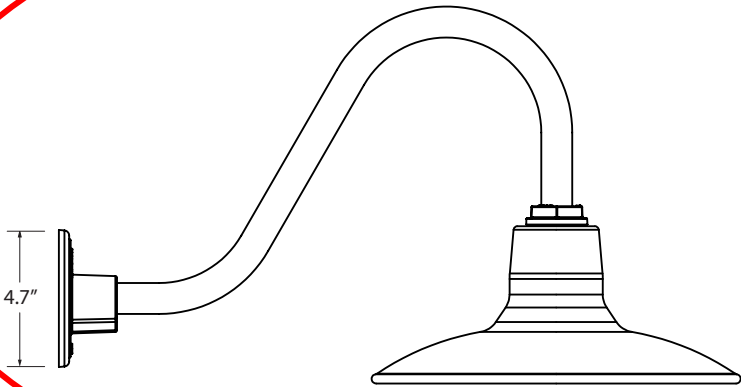
STEM MOUNT PENDANT (S)



CORD HUNG PENDANT (C)

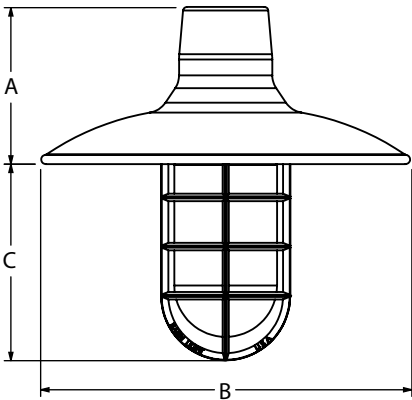


GOOSENECK (G)



SHOWN WITH: G15 GOOSENECK ARM

LUMINAIRE DIMENSIONS



SHOWN WITH: OPTIONAL GUARD & GLASS ACCESSORY

SHADE CODE	HEIGHT (A)	DIAMETER (B)	EXTENSION (C)
SBD12	5.25"	12"	6.4"
SBD14	6"	14"	5.5"
SBD16	6.75"	16"	4.7"

PRELIMINARY EXTERIOR COLORS:

- TRIM, FIBER GLASS DOORS, STAIR, MOULDING COLOR:



### HALF SEA FOG

 N470-3


 Interior/Exterior One-Coat Hide

 Color Fade Protection


LRV 46    R 169    G 184    B 187

Gray color family

- SIDING COLOR:



### WHEAT BREAD

 720C-3

 Interior One-Coat Hide

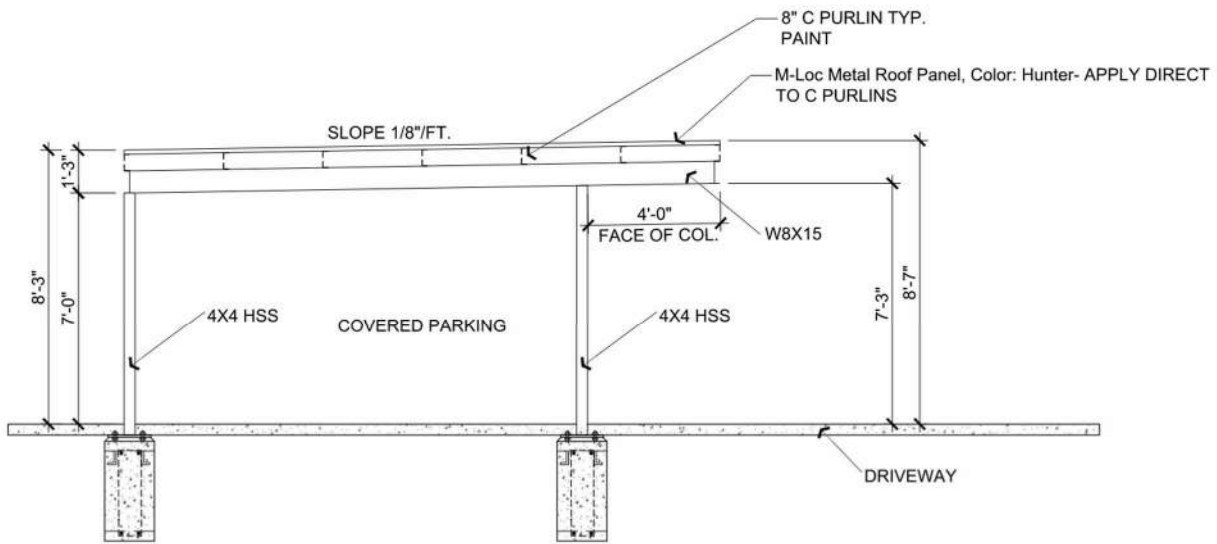
 Color Fade Protection

LRV 56    R 205    G 196    B 183

Neutral color family

**PARKING STRUCTURE:**

- Refer to sheet A303 for additional information for the parking structure



03: PARKING CANOPY - SECTION- SCALE: 1/4"=1'-0"



## LAUD STUDIO – LANDSCAPE ELEMENTS:

### MATERIALS BOARD:





## LAUD STUDIO – LANDSCAPE ELEMENTS:

### PAVERS AND PATTERN:



### CROSSVILLE PAVER



### ROSEMARY



### CHECKERBOARD PATTERN

# TREES

## *Betula nigra* 'Dura Heat'

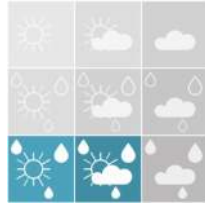
River Birch



Bn

HEIGHT: 40'-70'

SPREAD: 40'-60'



## *Carpinus betulus*

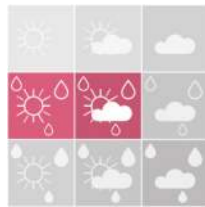
Common Hornbeam



Cb

HEIGHT: 30'-

SPREAD: 20'-



## *Ginkgo biloba* 'Skytower'

Skytower Maidenhair Tree



Gb

HEIGHT: 15'-

SPREAD: 6'-



## TREES CONT.

### *Gymnocladus dioica*

Kentucky Coffee Tree



Gd

HEIGHT: 15'-

SPREAD: 10'-



### *Liquidambar styraciflua* Slender Silhouette'

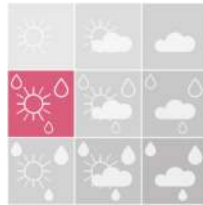
Slender Silhouette Sweetgum



Ls

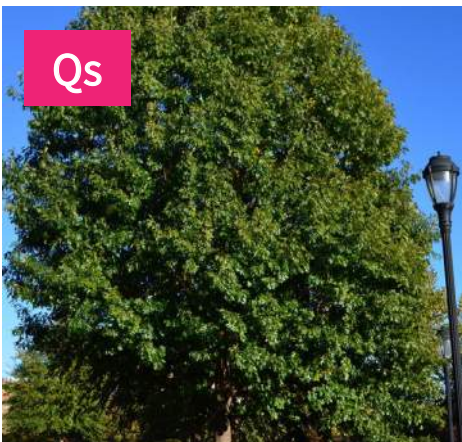
HEIGHT: 60'-

SPREAD: 3'-6'



### *Quercus shumardii*

Shumard Oak



Qs

HEIGHT: 40'-

SPREAD: 30'-





## TREES CONT.

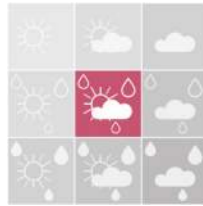
### *Ulmus crassifolia*

Cedar Elm



HEIGHT: 30'-

SPREAD: 30'-



### *Taxodium ascendens*

Pond Cypress



HEIGHT: 30'-70'

SPREAD: 15'-20'





## SHRUBS

### *Buxus spp. 'Dee Runk'*

Dee Runk



HEIGHT: 2'-

SPREAD: 8'-



Winter Spring Summer Fall



### *Juniperus conferta 'Blue Pacific'*

Shore Juniper



HEIGHT: 12"-

SPREAD: 6'-



Winter Spring Summer Fall



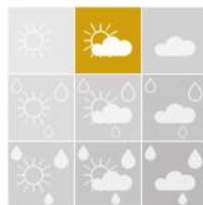
### *Rhus aromatica 'Gro-Low'*

Gro-Low Sumac



HEIGHT: 2'-

SPREAD: 8'-



Winter Spring Summer Fall



## GRASSES & FORBS

### *Carex divulsa*

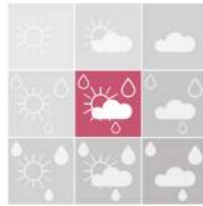
Berkeley Sedge



Cd

HEIGHT: 18"-

SPREAD: 18"-



### *Chasmanthium latifolium*

Inland Sea Oats



Cl

HEIGHT: 24"-5'

SPREAD: 12"-30"



### *Sporobolus heterolepis*

Prairie Dropseed



Sh

HEIGHT: 3'-

SPREAD: 3'-



# COURTYARD GROUNDCOVER

## *Brunnera macrophylla* 'Jack Frost'

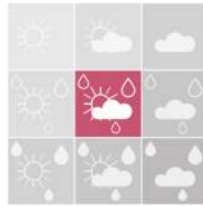
Siberian Bugloss



Bm

HEIGHT: 18"-

SPREAD: 18"-



## *Helleborus ornamentalis*

Lenten Rose



He

HEIGHT: 12"-

SPREAD: 12"-



## *Helenium autumnale* 'Rubinzweg'

Rubinzweg Sneezeweed



Ha

HEIGHT: 12"-

SPREAD: 9"-





## COURTYARD GROUNDCOVER CONT.

*Polygonatum spp.*

Solomon's Seal



HEIGHT: 12"-

SPREAD: 12"-





## GROUNDCOVER

### *Euonymus fortunei* 'Coloratus'

Purple Winter Creeper



Ef

HEIGHT: 1'-

SPREAD: 6'-



### *Achillea* 'Moonshine'

Yarrow



Ac

HEIGHT: 12"-

SPREAD: 9"-



### *Knautia macedonica* Knautia

Knautia



Km

HEIGHT: 24"-

SPREAD: 24"-



## GROUNDCOVER CONT.

### *Rosa SPP. Scrivjean'*

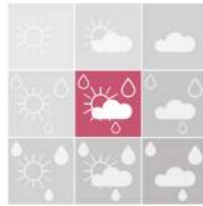
Oso Easy Honey Bun



RI

HEIGHT: 6'-

SPREAD: 6'-



### *Rudbeckia maxima*

Giant Coneflower



Rm

HEIGHT: 7'-

SPREAD: 4'-



### *Salvia nemerosa 'Ostfriesland'*

East Friesland



Sn

HEIGHT: 12"-

SPREAD: 12"-

