

# Veneer and Composite

## Concrete Masonry Units

### Veneer and Composite Units

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For current product information and the full range of available units and configurations, please visit [www.AngelusBlock.com](http://www.AngelusBlock.com)



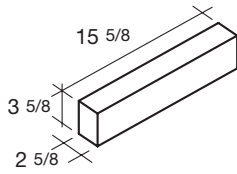
# Precision

## 3 Wide

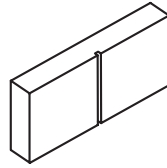
## 4 Wide

**All units are SPECIAL ORDER ONLY**

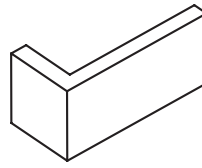
When used as veneers, these units require an **anchored masonry veneer** application.



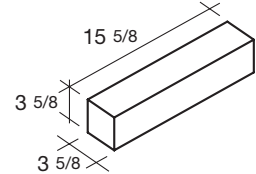
3x4x16  
Solid



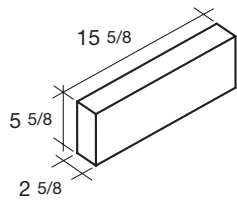
3x8x16  
1-Score Solid



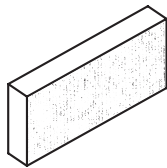
8x8x16  
L-Veneer\*



4x4x16  
Solid

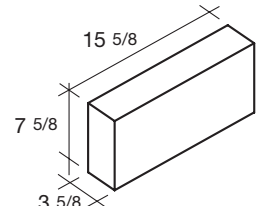


3x6x16  
Solid

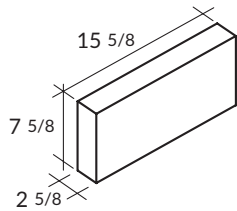


3x8x16  
Veneer Combed 1-Side

\* May be provided as a cut from other units at manufacturer's option depending on quantities required.



4x8x16  
Solid

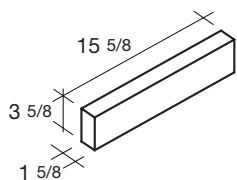


3x8x16  
Solid

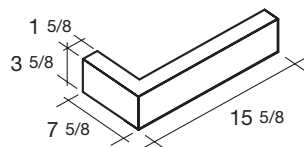
## 2 Wide

**All units are SPECIAL ORDER ONLY**

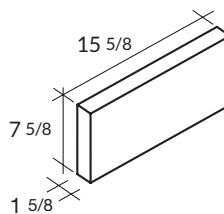
Thin Veneer units require an **adhered masonry veneer** application, and must be ordered in Lightweight.



2x4x16  
Thin Veneer



8x4x16  
Thin Veneer L-Corner



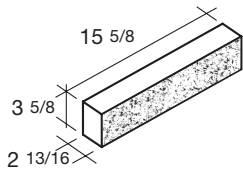
2x8x16  
Thin Veneer

# Split Face

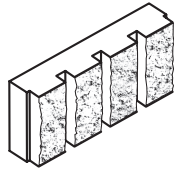
## 3 Wide

## 4 Wide

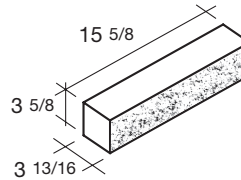
**All units are SPECIAL ORDER ONLY**  
When used as veneers, these units require an **anchored masonry veneer** application.



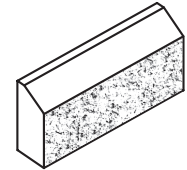
3x4x16  
Solid Split 1-Side



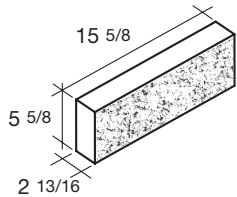
3x8x16  
4-Score Solid Split 1-Side



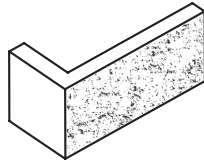
4x4x16  
Solid Split 1-Side



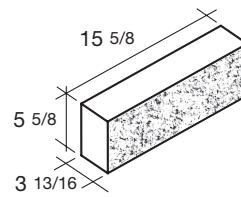
4x8x16  
Solid Split 1-Side  
30-Degree Chamfer



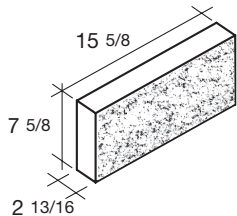
3x6x16  
Solid Split 1-Side



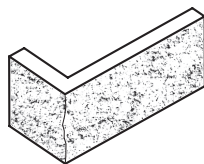
8x8x16  
L-Veneer Split 1-Side\*



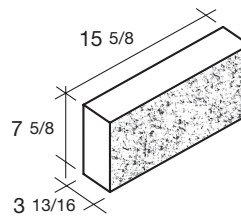
4x6x16  
Solid Split 1-Side



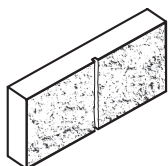
3x8x16  
Solid Split 1-Side



8x8x16  
L-Veneer Split 1-Side 1-End\*



4x8x16  
Solid Split 1-Side



3x8x16  
1-Score Solid Split 1-Side

\* May be provided as a cut from other units at manufacturer's option depending on quantities required.

**NOTES RELATED TO SPLIT TEXTURE:**

**Aggregate exposure** in all scored split units is affected by the molding process resulting in little to none of the larger aggregates exposed near the top of the unit (as manufactured). It is typically unnoticeable within the overall field of a completed wall.

**Split face dimensions**, for the face that is split, is not considered in Permissible Variations of ASTM C90, as split faces inherently vary. Only precision, non-split faces are held to the tolerances.

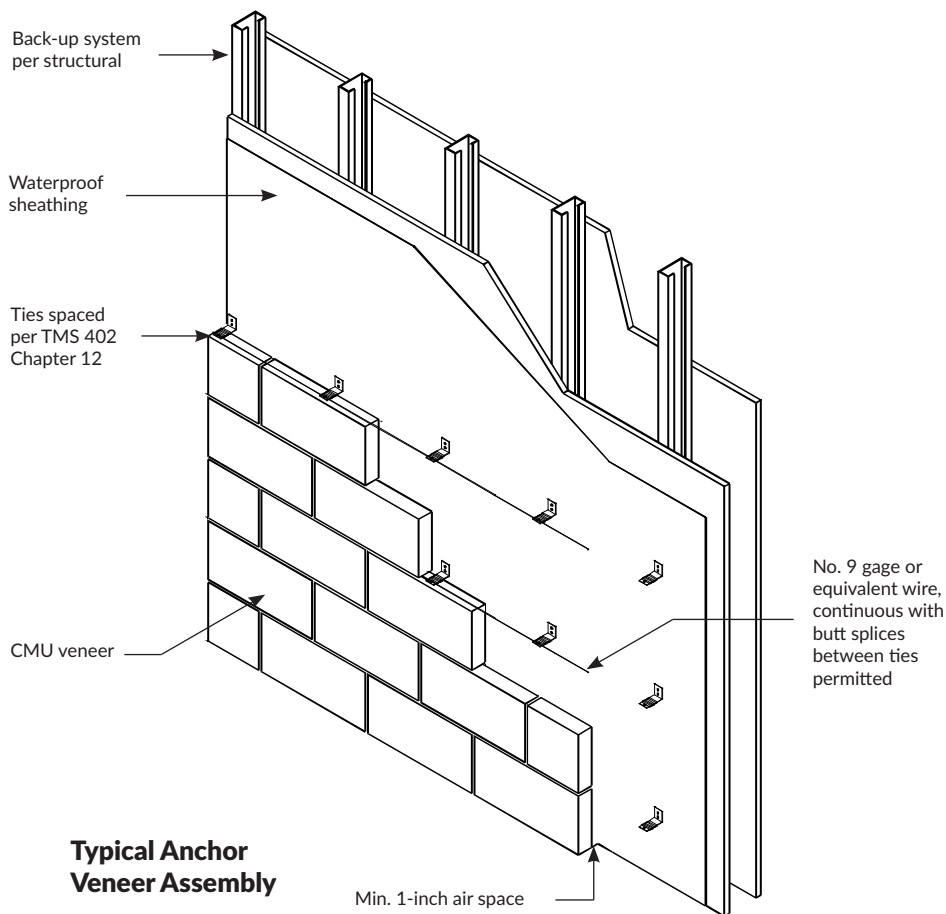
# Anchored Veneer

## Applications

Where a full concrete masonry wall is not practical or possible, Veneer units manufactured by Angelus Block afford the same attractive and maintenance-free wall surface as a structural concrete masonry unit (CMU) wall. Certain conditions may exist that would dictate use of Veneers instead of a full CMU wall, such as weight limitations in a wall, cantilever, long spans, existing walls, etc. Otherwise, it is generally more economical to construct a conventional structural CMU wall. The installed cost of concrete masonry veneer is very near that of a full hollow unit wall of like face texture, and, added to the cost of the structural backing, will likely total more than a self-supporting CMU wall.

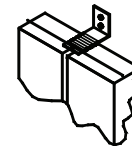
## Construction

Anchored veneer construction and materials are governed by Chapter 14 of the California Building Code, and Chapter 12 of TMS 402. See Code References at [www.AngelusBlock.com](http://www.AngelusBlock.com). Please refer to the appropriate code for specific requirements.

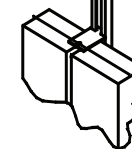


## Basic Wall Tie Types

Corrugated

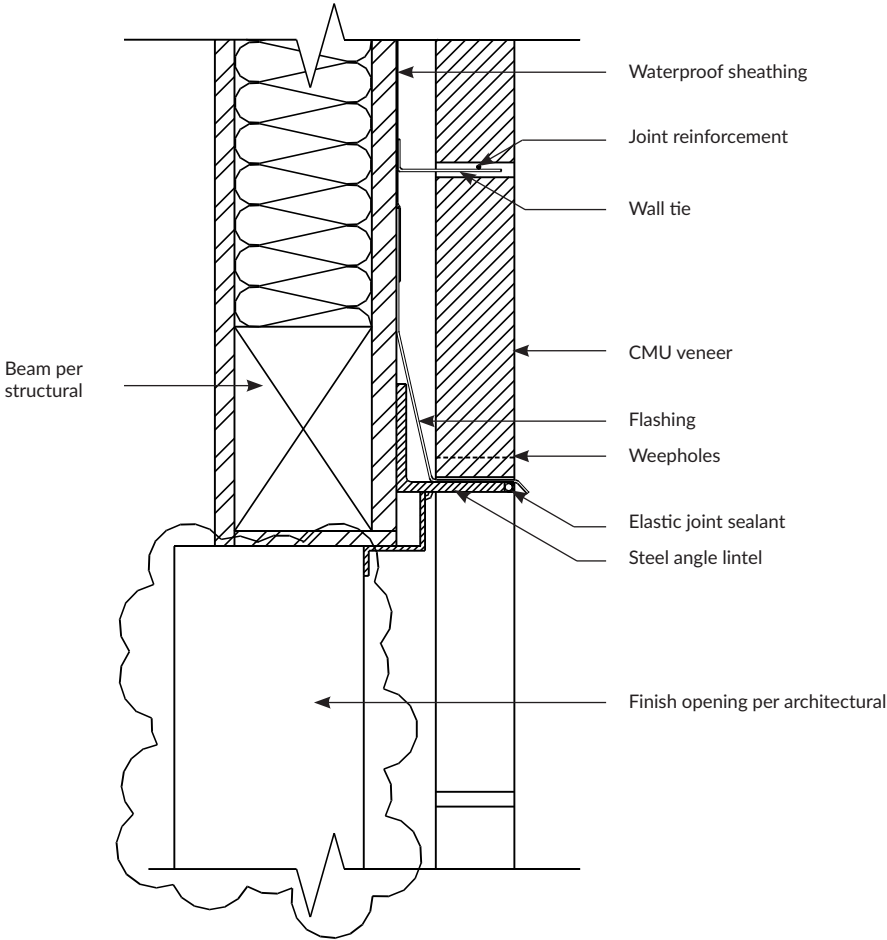


Slot



# Anchored Veneer

## Typical Shelf Angle Above Opening



## Standards

Though veneer by definition is non-structural, Angelus Block manufactures concrete masonry veneers of the same methods and materials as hollow load-bearing CMU. Chapter 14 of the code refers non-specifically to Chapter 21 for the masonry unit requirements.

## Specification

Please see the Guide Specifications at [www.AngelusBock.com/specifications.cfm](http://www.AngelusBock.com/specifications.cfm).

Note: The illustrations herein are very generalized and may not account for conditions and requirements specific to your project. Anchored veneer is not a proprietary, CMU-specific installation, but is governed by building codes. CMU is simple and straightforward in its installation. However, other materials and layers as required for the project may be manufacturer-specific in their installation. Therefore, we recommend obtaining details and assistance from manufacturers of such specified items.

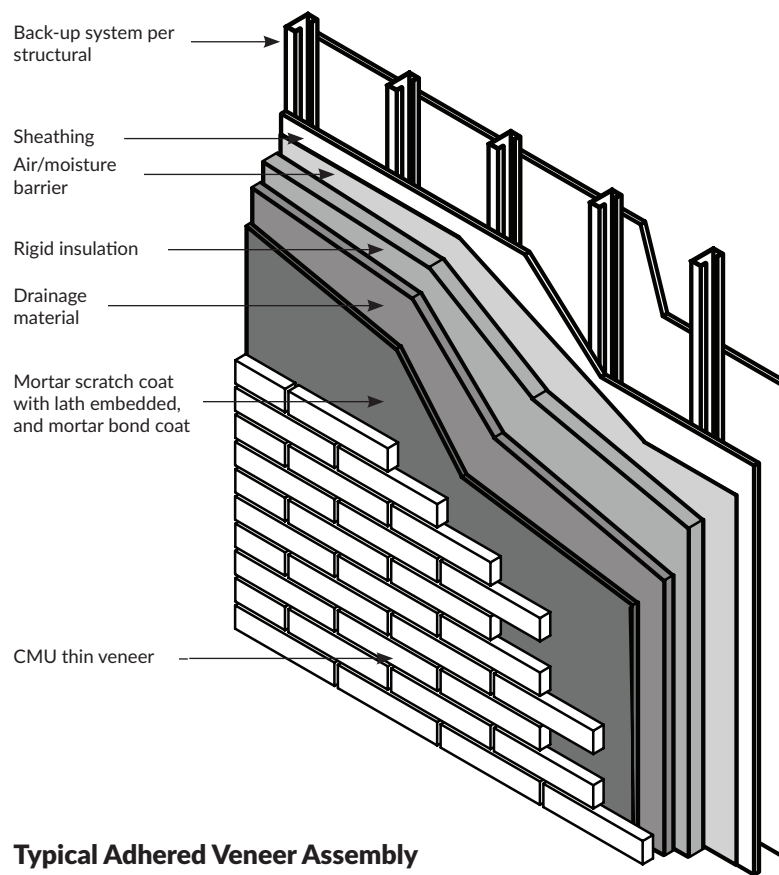
# Adhered Veneer

## Applications

While most CMU veneer require anchored applications, Angelus has Thin Veneer that can be adhered when made in a lightweight mix<sup>1</sup>. A 4-inch high stretcher and L-corner are available in any of our colors (except Glacier White), and in ForzaBrik™, the blended color CMU that provides brick-like character with CMU economy and durability. Consult your representative for availability of other heights.

## Construction

Construction and materials are governed by Chapter 14 of the California Building Code, which refers to Chapter 12 of TMS 402. Section 12.3 - Adhered veneer. Please refer to the appropriate code for specific requirements.



<sup>1</sup> As of the date of this publication, the current 2022 California Building Code and TMS 402/602 set weight per square foot limitations that may require lightweight densities. *HOWEVER*, editions of the codes beginning with the 2025 version of CBC are expected to allow higher square foot weights, thereby allowing higher density units in adhered veneer.

Note: The illustrations herein are very generalized and may not account for conditions and requirements specific to your project. Adhered veneer is not a proprietary, CMU-specific installation, but is governed by building codes. CMU is simple and straightforward in its installation. However, other materials and layers as required for the project may be manufacturer-specific in their installation. Therefore, we recommend obtaining details and assistance from manufacturers of such specified items.

# Composite Masonry

## Applications

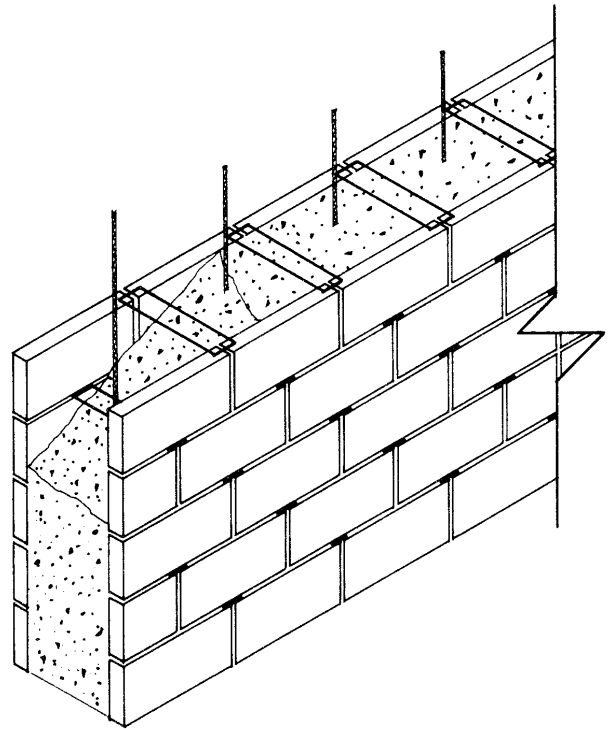
Composite, multiwythe grouted masonry is a versatile solution for a variety of construction situations. Variable wall widths from 8 inches to 24 inches, or more, in 1 inch increments, are facilitated by the length of wall tie used. Note that for normal design conditions, standard types of hollow load-bearing CMU are best for wall construction up through 12-inch or 16-inch widths. For greater wall widths or for certain design considerations, composite masonry may be considered.

The challenge of limited construction clearance due to zero lot line or existing structures can be mitigated with composite masonry. Where it would be impossible to build and strip conventional forms for poured-in-place concrete, multiwythe units can be laid up from one side of the wall after reinforcement is in place.

Extreme reinforcement requirements are not a hindrance as multiwythe construction provides a continuous grout space. These thinner, solid units maneuver through and around in-place reinforcing bars.

## Construction

Construction consists of solid units, manufactured to the standard appropriate for the code jurisdiction, in two wythes, and tied together by approved wall ties embedded in the mortar joints. The grout space between the wythes contains the reinforcement and is solid grouted. Please see Code References at [www.AngelusBock.com/products/concrete\\_masonry\\_code\\_reference.cfm](http://www.AngelusBock.com/products/concrete_masonry_code_reference.cfm).



## Standards

Angelus units for use in composite construction are manufactured to the appropriate standard specified for a given project:

ASTM C90, Hollow and Solid Load-Bearing Concrete Masonry Units.

ASTM C55, Concrete Building Brick, for projects designed to Chapter 21A of the California Building Code.

## Specification

Please see Guide Specifications at [www.AngelusBock.com](http://www.AngelusBock.com).



[www.AngelusBlock.com](http://www.AngelusBlock.com)    [info@AngelusBlock.com](mailto:info@AngelusBlock.com)

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