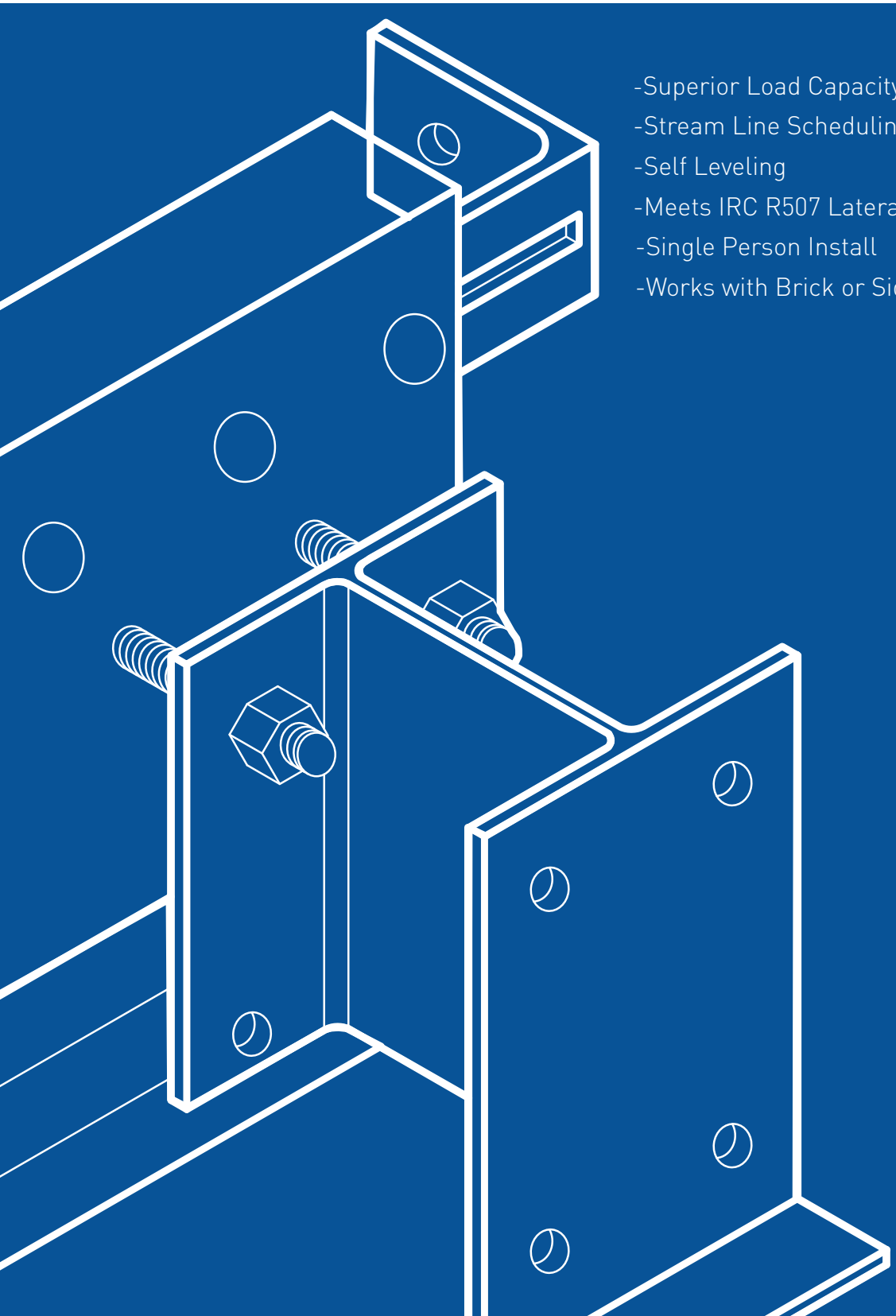
DeckStruc©

Technical Manual

859.250.4989 deckstruc.com

ICC- ES ESR-5372



-Superior Load Capacity
-Stream Line Scheduling
-Self Leveling
-Meets IRC R507 Lateral Load Requirements
-Single Person Install
-Works with Brick or Siding

ments when installed
Air Barrier Material require
48-9835 tyvek
ADE IN THE

Table of Contents

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Web: www.deckstruc.com

Patented: U.S. PATENT # 10,240,340 B2

ICC- ES ESR-5372

Why DeckStruc?

Brick veneer deck ledger boards have become a cumbersome detail since the International Residential Building Code has prohibited transfer of structural load into the brick veneer.

The traditional method utilizes a series of 10" through bolts spaced 12" on center, penetrating the wall assembly. This installation method relies on the deck load being transferred to the house band board, which is not ideal.

This has become a difficult detail to execute and does not eliminate load transfer to the brick veneer, as well as allowing water to potentially penetrate the moisture barrier. Interior materials such as insulation and drywall are dependent on the installation of the exterior brick veneer, which causes a slowdown in construction.

DeckStruc©™ eliminates these issues with its two-step installation process and only two parts:

Interior Mounting Channel
Exterior Ledger Support

DeckStruc©™ is installed by simply placing the interior channel on the top wall plate of the frame wall. By installing on the top plate, the bracket automatically levels itself. This allows the interior trades to work independent of the brick installation, speeding up the construction process which can be fully completed by one worker. Brackets can be spaced at 48" on center because all structural load is transferred into the joist and frame wall, relieving the house band board or brick veneer of any structural deck loads.

KELLY BROS.
HOME & DESIGN CENTRE
Tyvek

Load Tables

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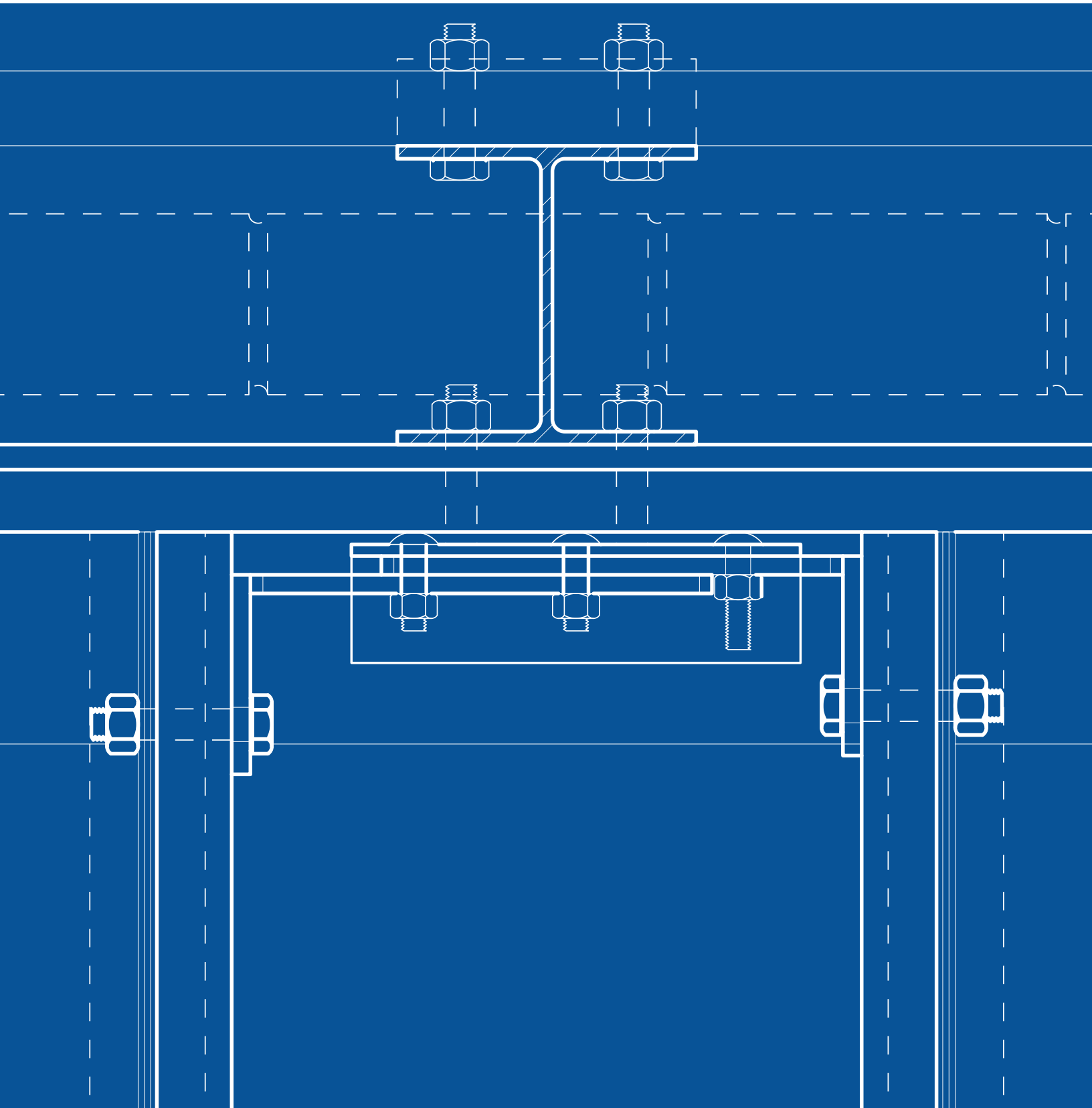


DeckStruc - Allowable Load Table (ASD)

Residential Deck Application

Design Criteria

Dead Load - 10 lbs.
Live Load - 40 lbs.

Allowable Loads

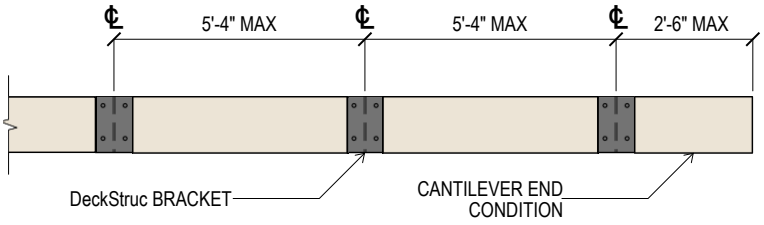
Vertical Load - 2000 lbs.

All load criteria is based on Southern Yellow Pine framing members with a specific gravity of 0.55

Residential Application

Deck Joist Span	Bracket Spacing
12'-0"	5'-4" O.C.
14'-0"	5'-4" O.C.
16'-0"	4'-0" O.C.
18'-0"	4'-0" O.C.
20'-0"	4'-0" O.C.

Ledger board continuous over 3 brackets @ cantilever end condition



Commercial Deck Application

Design Criteria

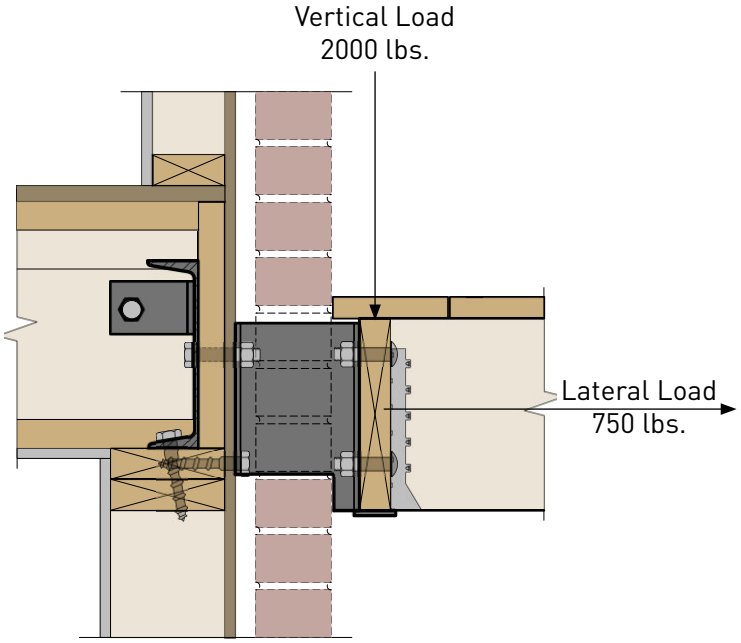
Dead Load - 80 lbs.
Live Load - 20 lbs.

Allowable Loads

Vertical Load - 2000 lbs.

Commercial Application

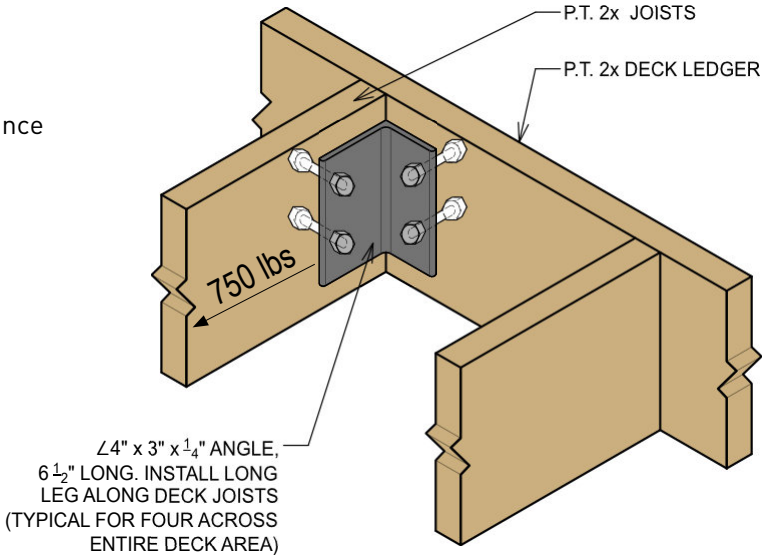
Deck Joist Span	Bracket Spacing
12'-0"	3'-0" O.C.
14'-0"	2'-6" O.C.
16'-0"	2'-4" O.C.
18'-0"	2'-0" O.C.
20'-0"	1'-8" O.C.



Lateral Angle Bracket

- (4) Required per deck structure.
- (4 brackets x 750 lbs = 3000 lbs lateral resistance

-Meets IRC R507 Lateral Load Requirements



Bracket Specifications

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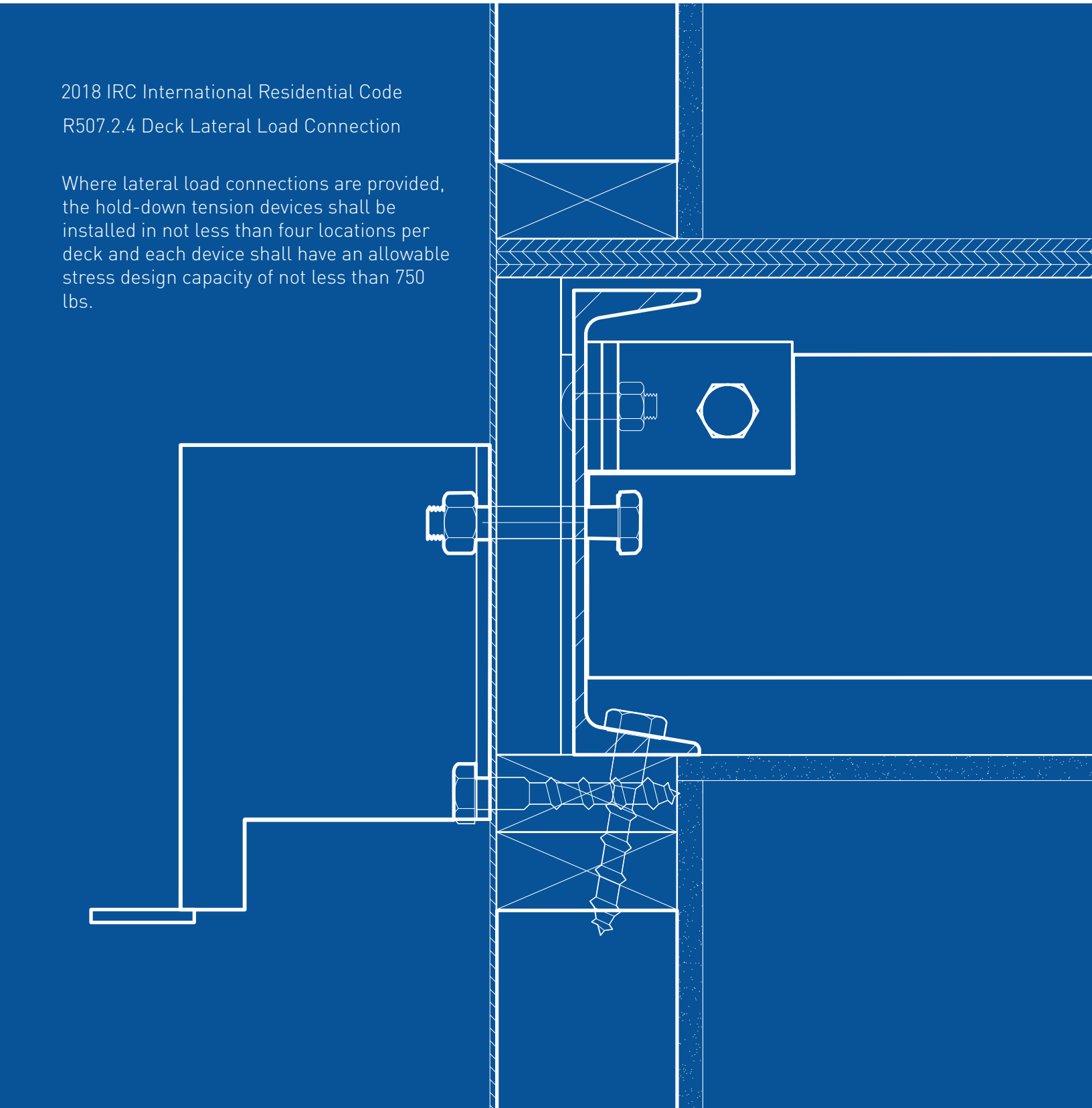
2018 IRC International Residential Code

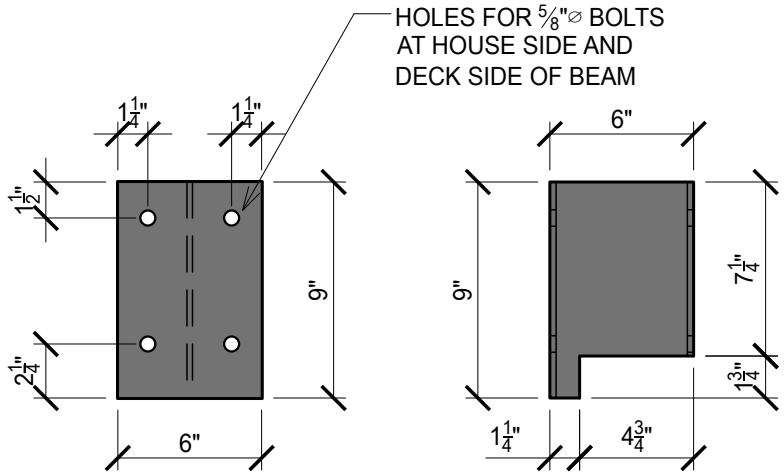
R507.2.4 Deck Lateral Load Connection

Where lateral load connections are provided, the hold-down tension devices shall be installed in not less than four locations per deck and each device shall have an allowable stress design capacity of not less than 750 lbs.



Bracket Specifications - Bracket Dimensions

BRACKET IS FACTORY COATED
WITH RUST PROHIBITIVE PAINT



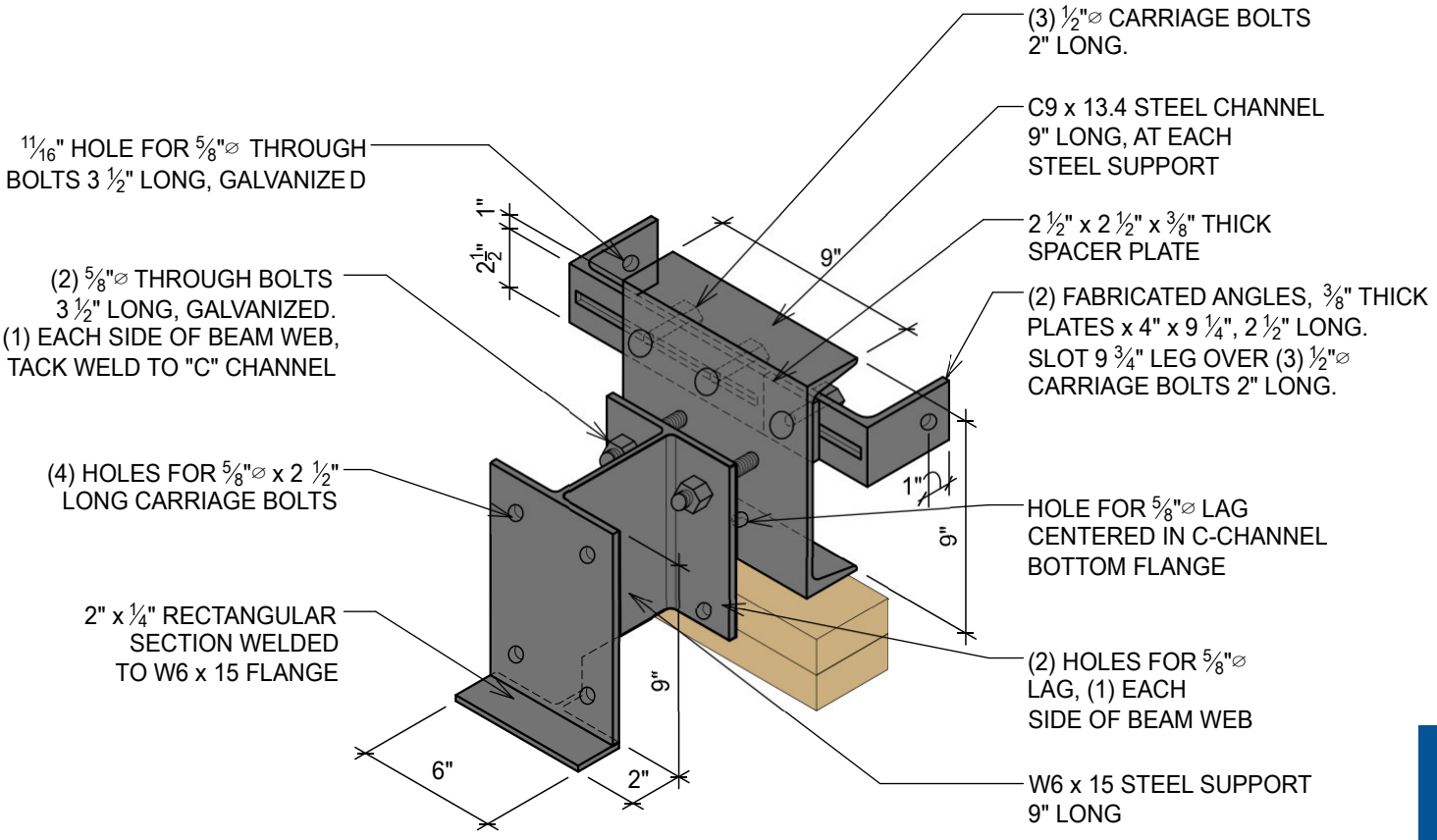
Steel Support Elevation View

Steel Support Section View

BOLTS PER BRACKET (GALVANIZED)

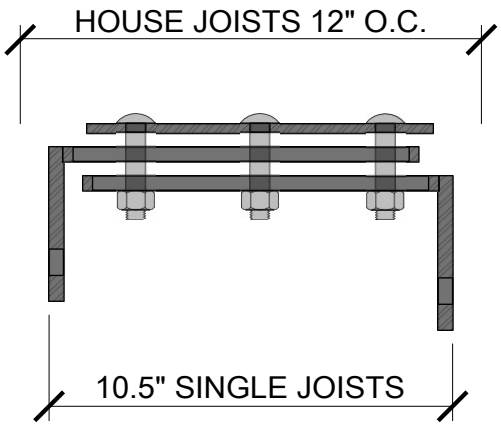
***(2) 5/8"⌀ x 3 1/2" LONG THROUGH BOLTS**
(3) 5/8"⌀ x 4" LONG LAG BOLTS
(4) 5/8"⌀ x 2 1/2" LONG CARRIAGE BOLTS

***DOUBLE JOISTS REQUIRE 4 1/2" LONG BOLTS**

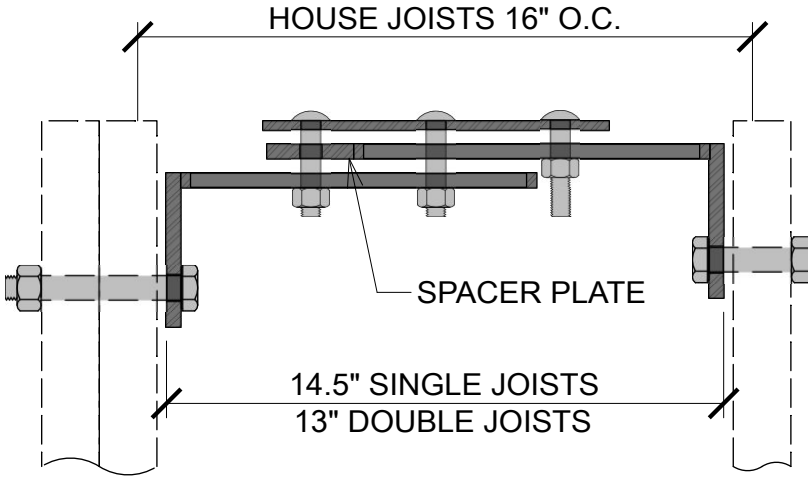


Standard DeckStruc Bracket

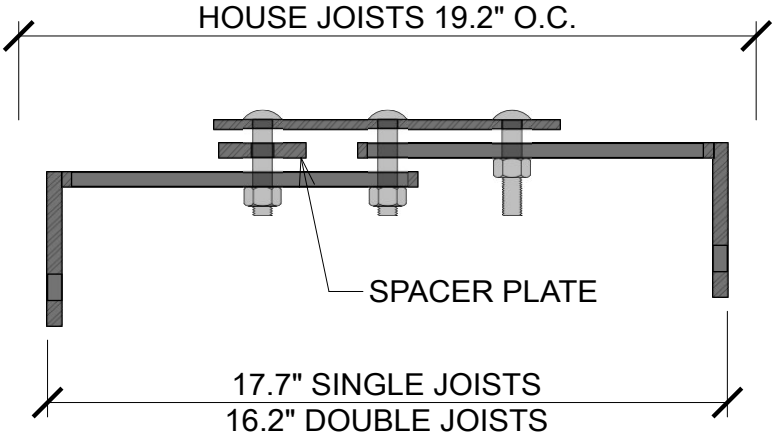
Bracket Specifications - Bracket Adjustment Diagrams



Bracket position for 12” O.C House Joists

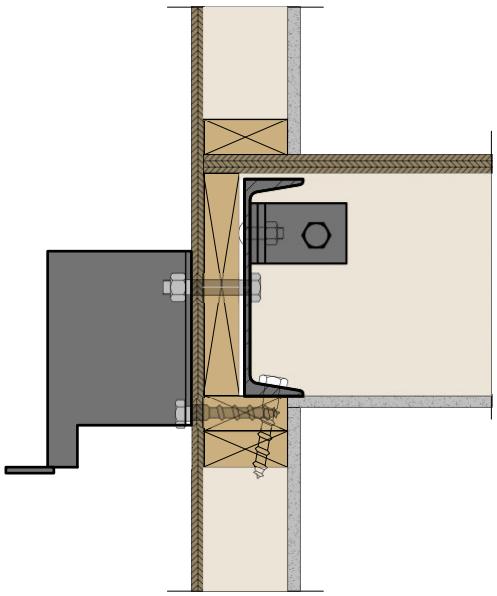


Bracket position for 16” O.C House Joists

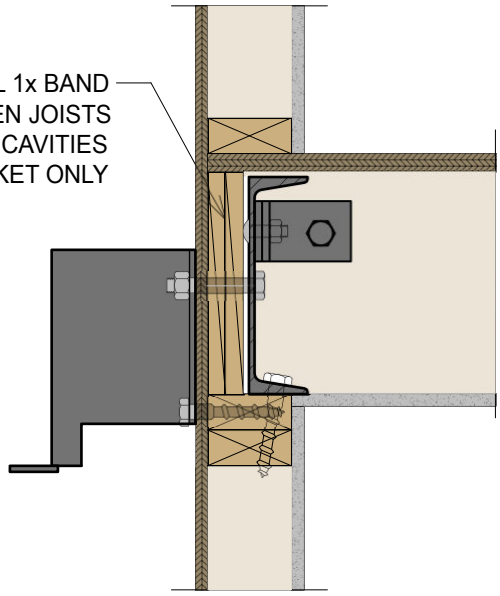


Bracket position for 19.2” O.C House Joists

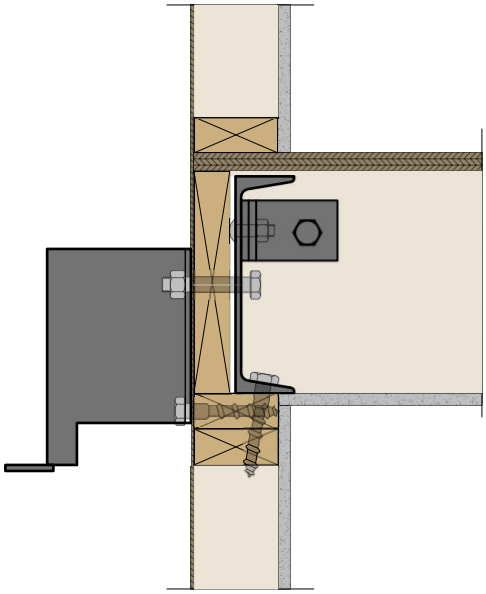
Bracket Specifications - Bandboard Thickness



2X Bandboard with 1/2” Wall Sheathing

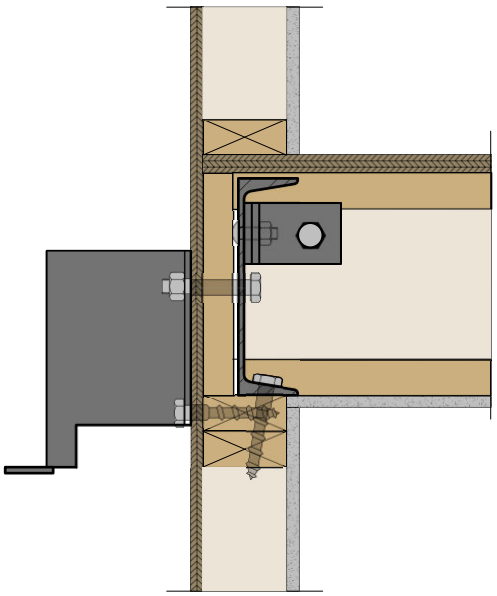


1X Bandboard with 1/2” Wall Sheathing

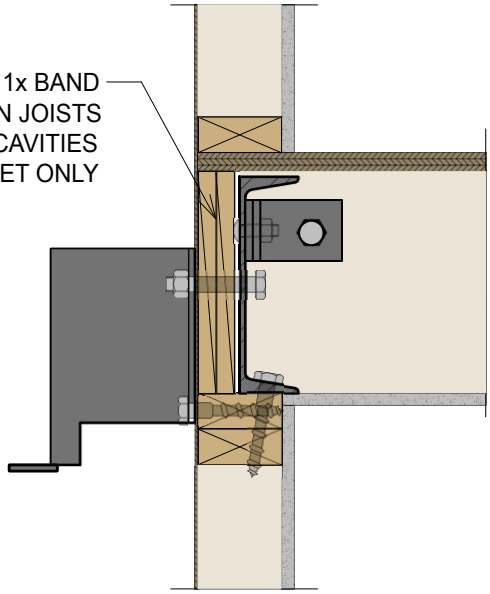


2X Bandboard with 1/8” Structural Sheathing

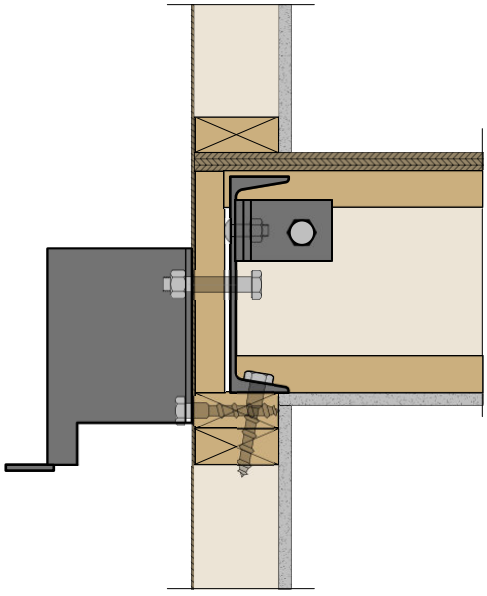
Bracket Specifications - Bandboard Thickness



1 1/4” Rim Joist with 1/2” Wall Sheathing

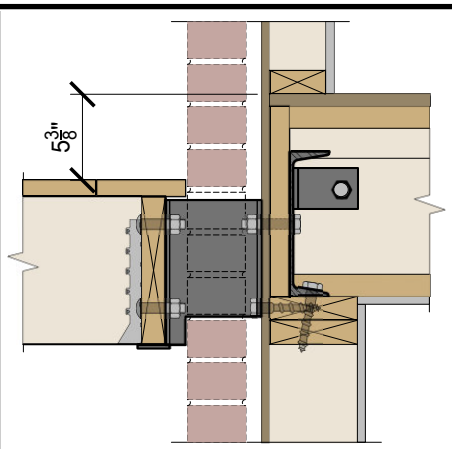


1X Bandboard with 1/8” Structural Wall Sheathing

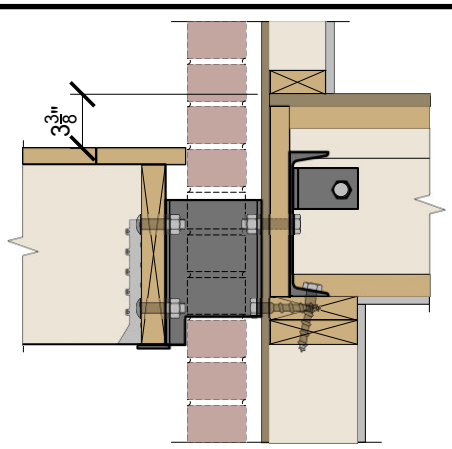


1 1/4” Rim Joist with 1/8” Structural Wall Sheathing

Bracket Specifications - Standard House Floor to Deck Step

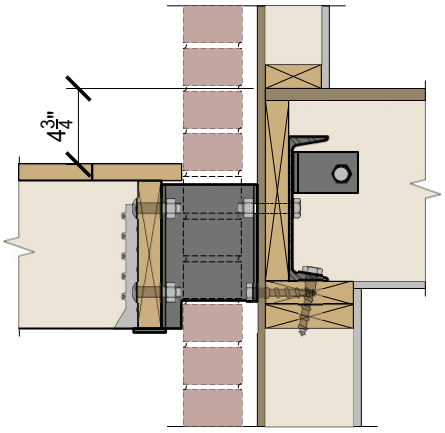


2 x 10 P.T. DECK JOISTS | 11 7/8" TALL HOUSE I-JOISTS

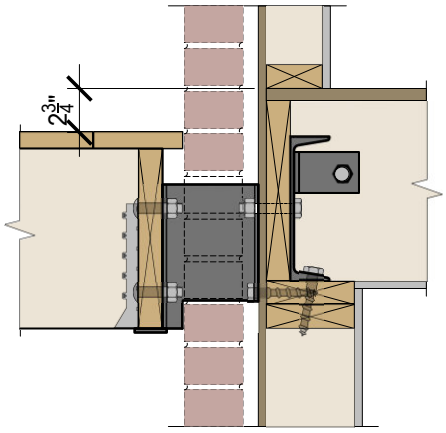


2 x 12 P.T. DECK JOISTS | 11 7/8" TALL HOUSE I-JOISTS

House Floor to Deck Step - 5 3/8" & 3 3/8" Section View

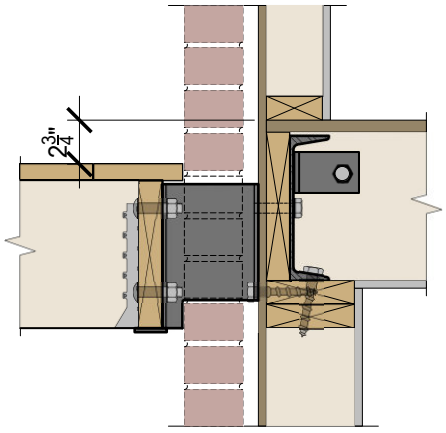


2 x 10 P.T. DECK JOISTS | 2 x 12 HOUSE JOISTS

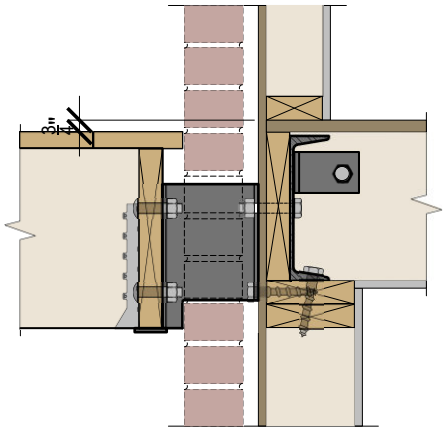


2 x 12 P.T. DECK JOISTS | 2 x 12 HOUSE JOISTS

House Floor to Deck Step - 4 3/4" & 2 3/4" Section View



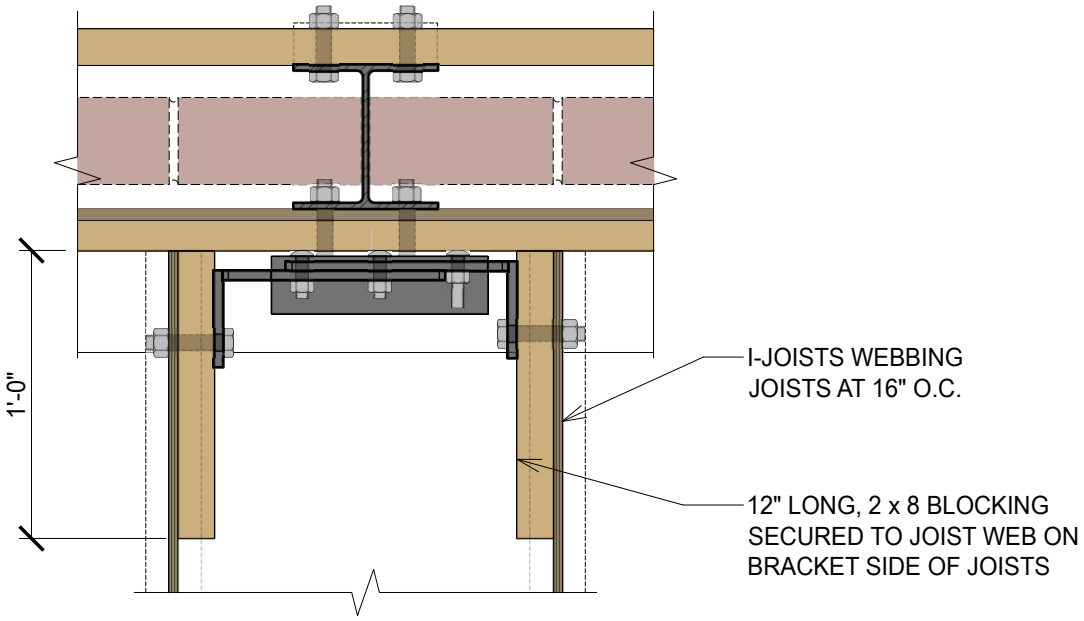
2 x 10 P.T. DECK JOISTS | 2 x 10 HOUSE JOISTS



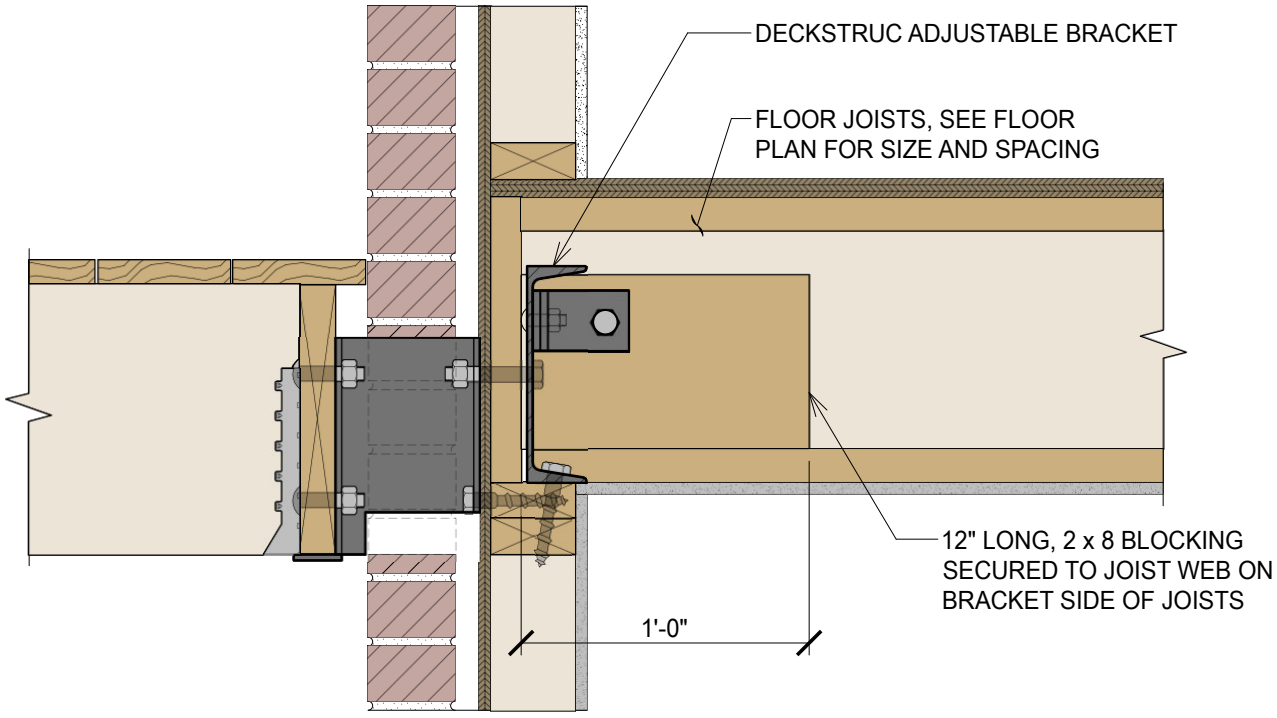
2 x 12 P.T. DECK JOISTS | 2 x 10 HOUSE JOISTS

House Floor to Deck Step - 2 3/4" & 3/4" Section View

Bracket Specifications - Wood I-Joists Application



Wood I-Joist Framing Plan View



Wood I-Joist Framing Section

Brick Veneer Application

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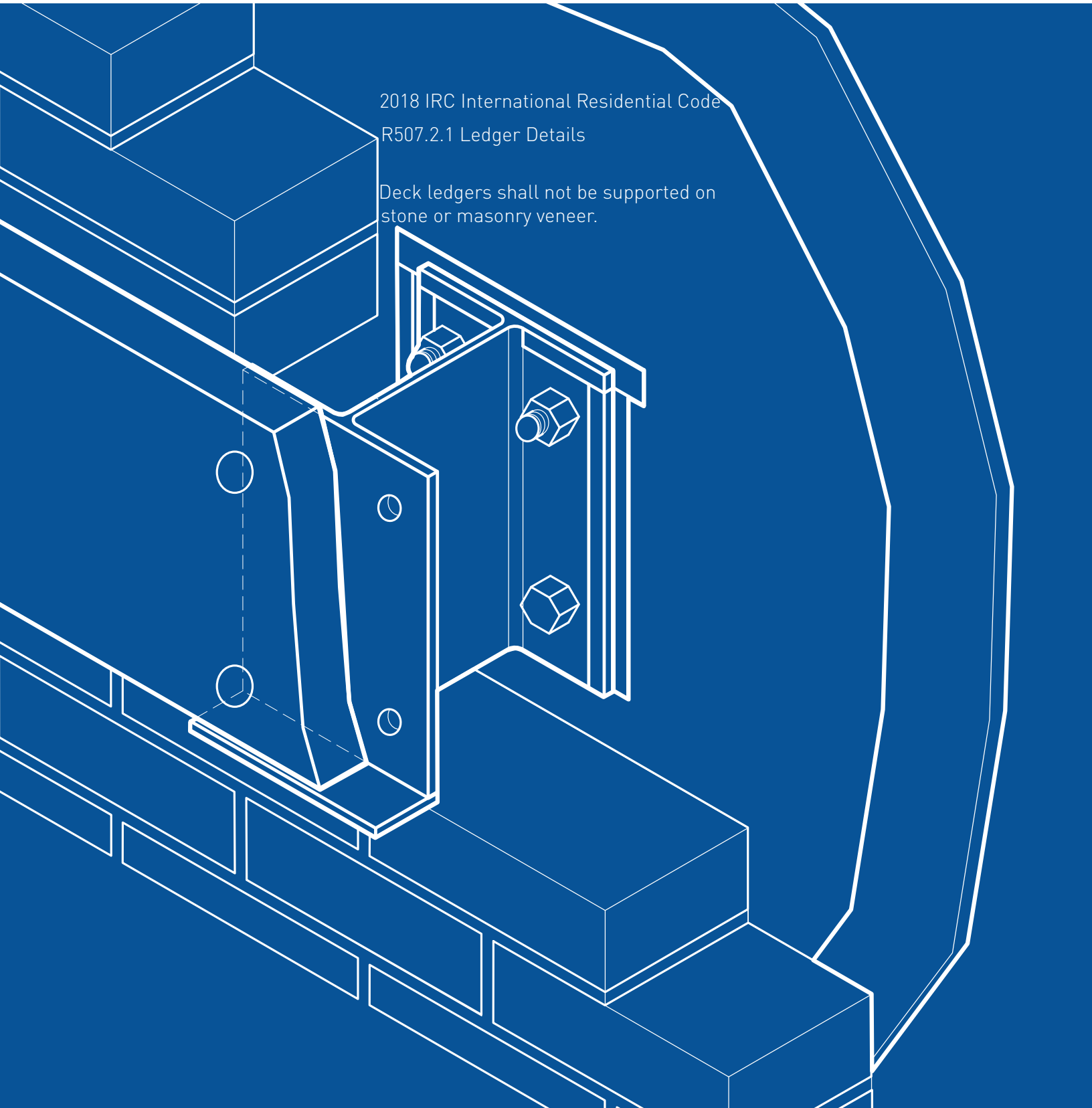
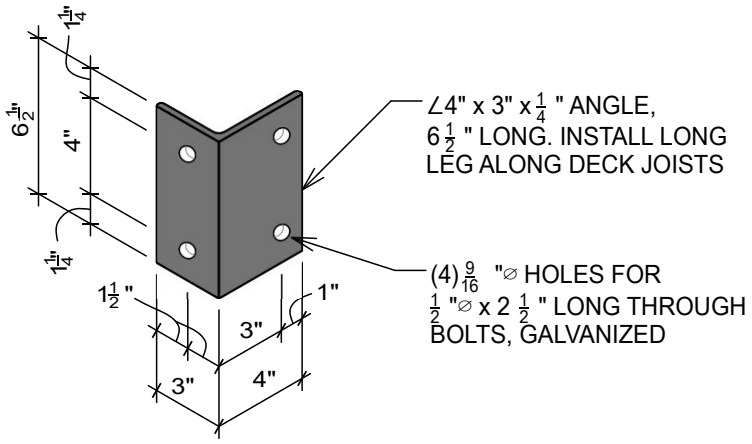
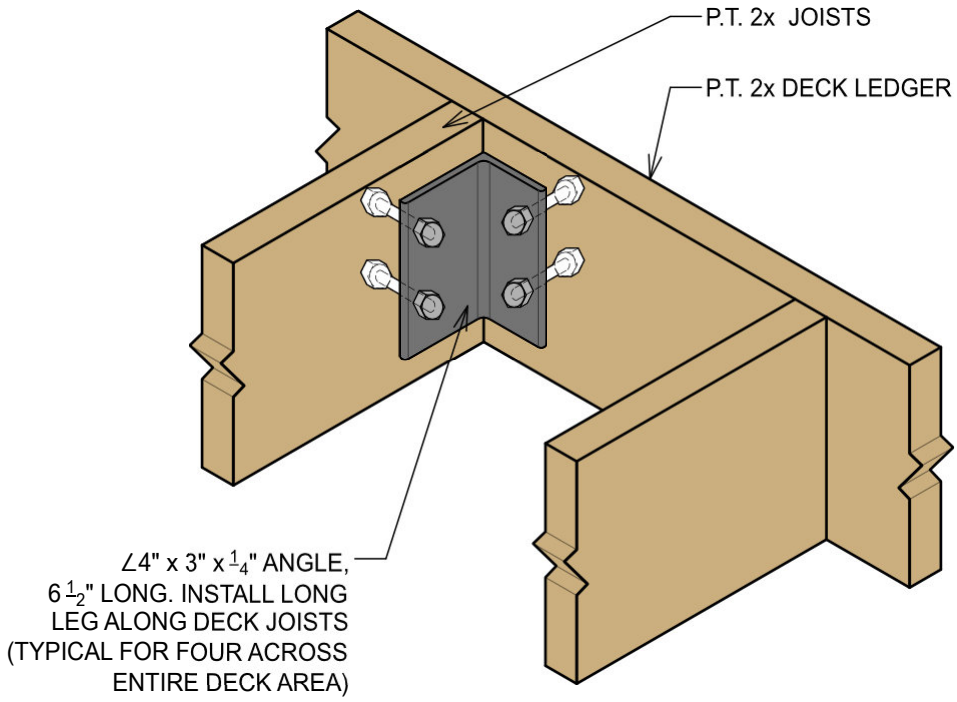


(4) LATERAL ANGLES REQUIRED PER DECK

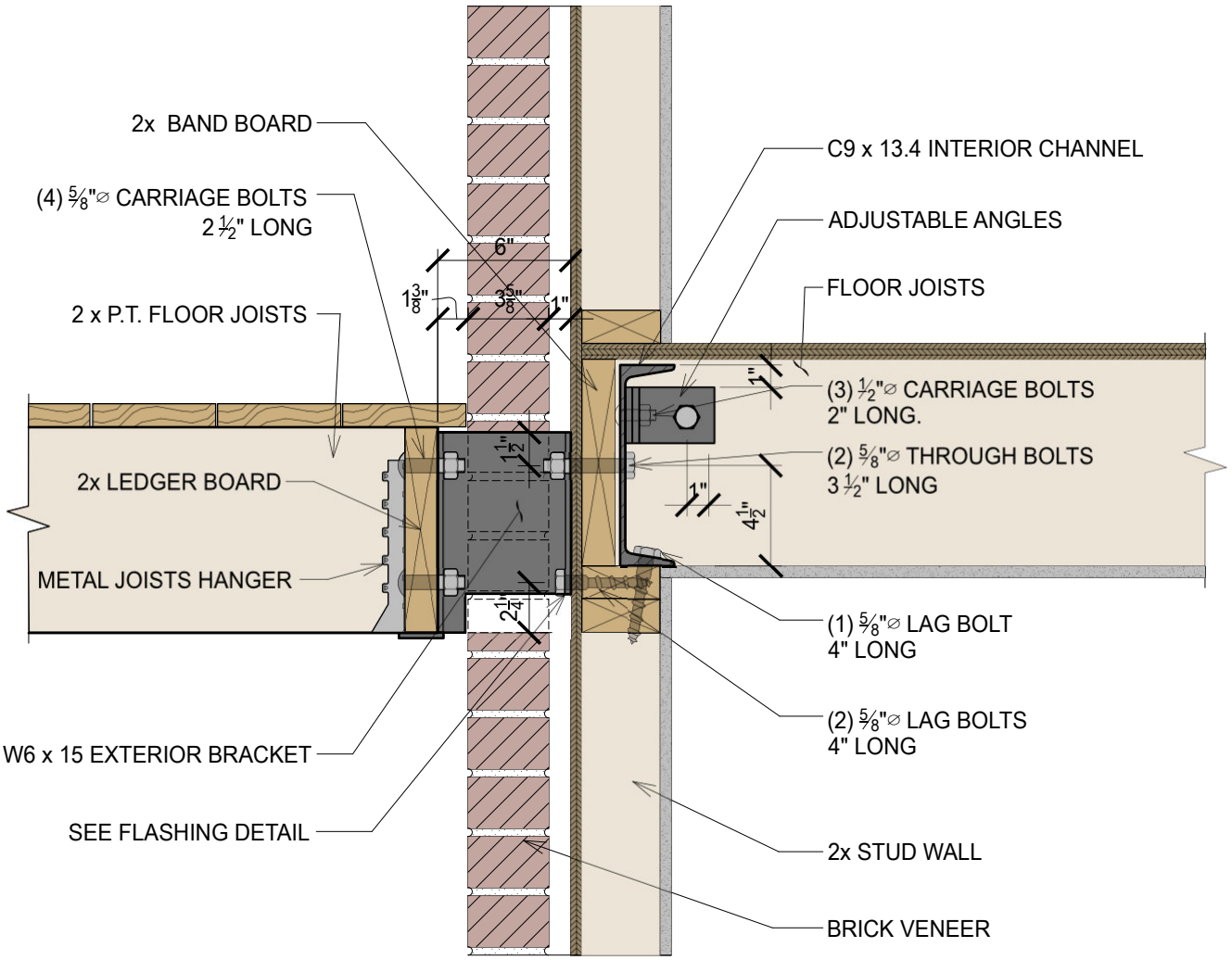


Lateral Angle Bracket - Isometric



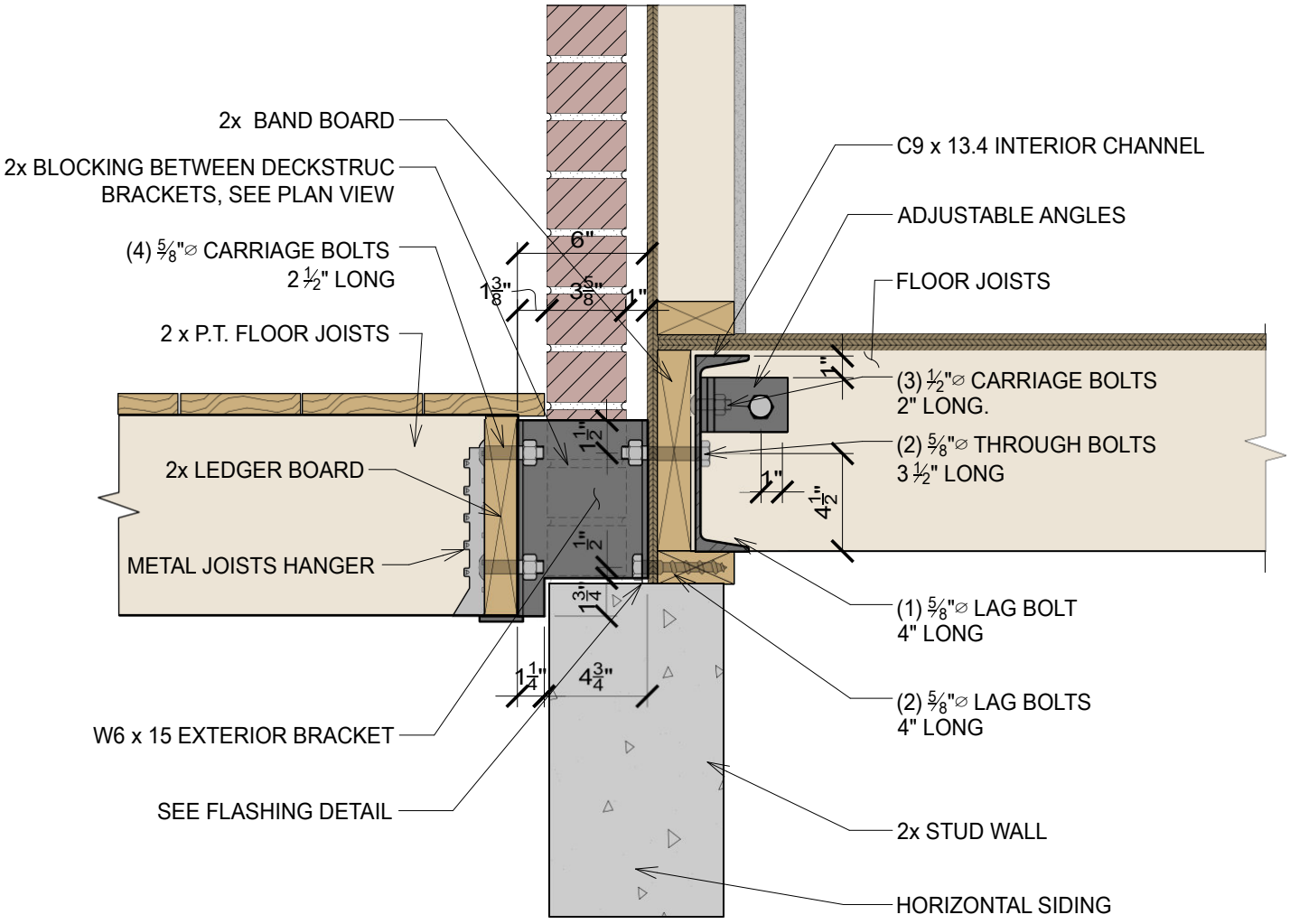
Steel Bracket Installation - Isometric

Bracket Specifications - Full Height Brick



Deck Framing at Full Height Brick

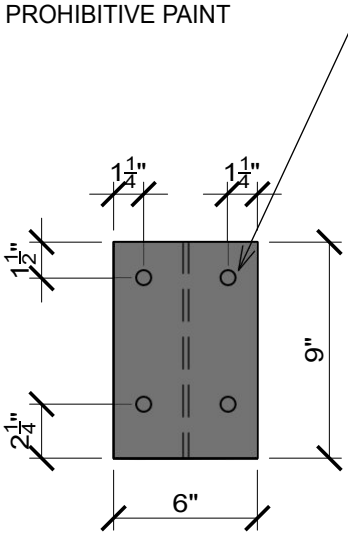
Brick Veneer Application - Full Height Foundation



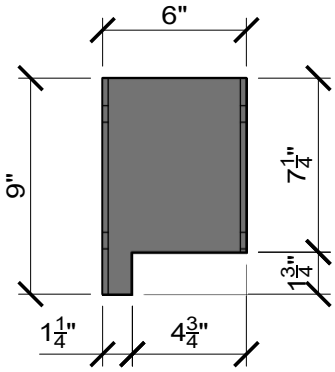
Deck Framing at Full Foundation

Brick Veneer Application - Full Height Foundation

NOTE:
COAT BEAM WITH RUST
PROHIBITIVE PAINT



Steel Support Elevation View

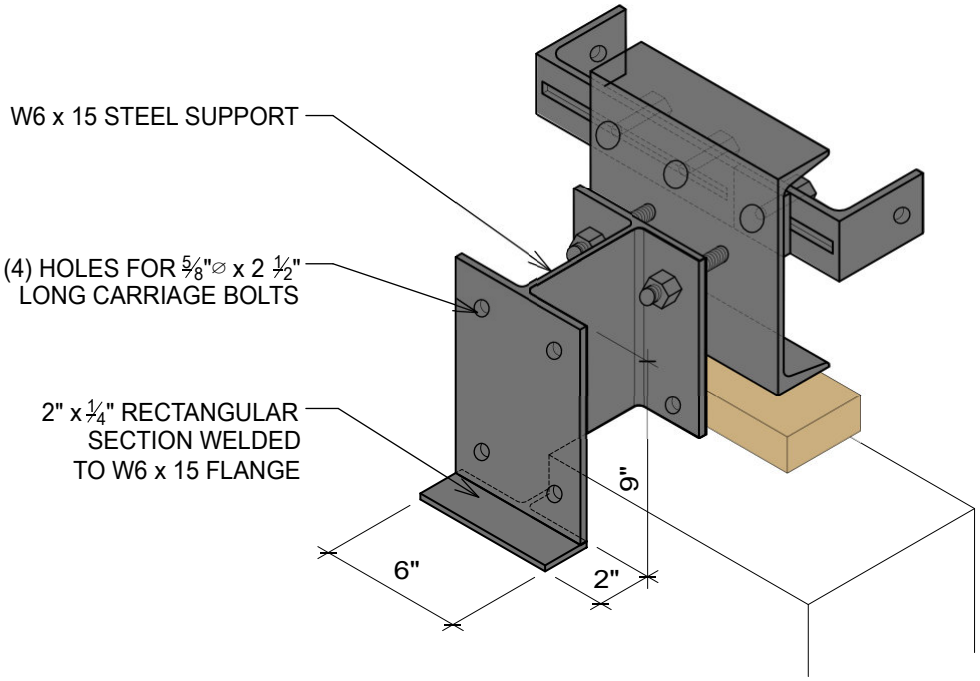


Steel Support Section View

(x) BRACKET REQUIRED

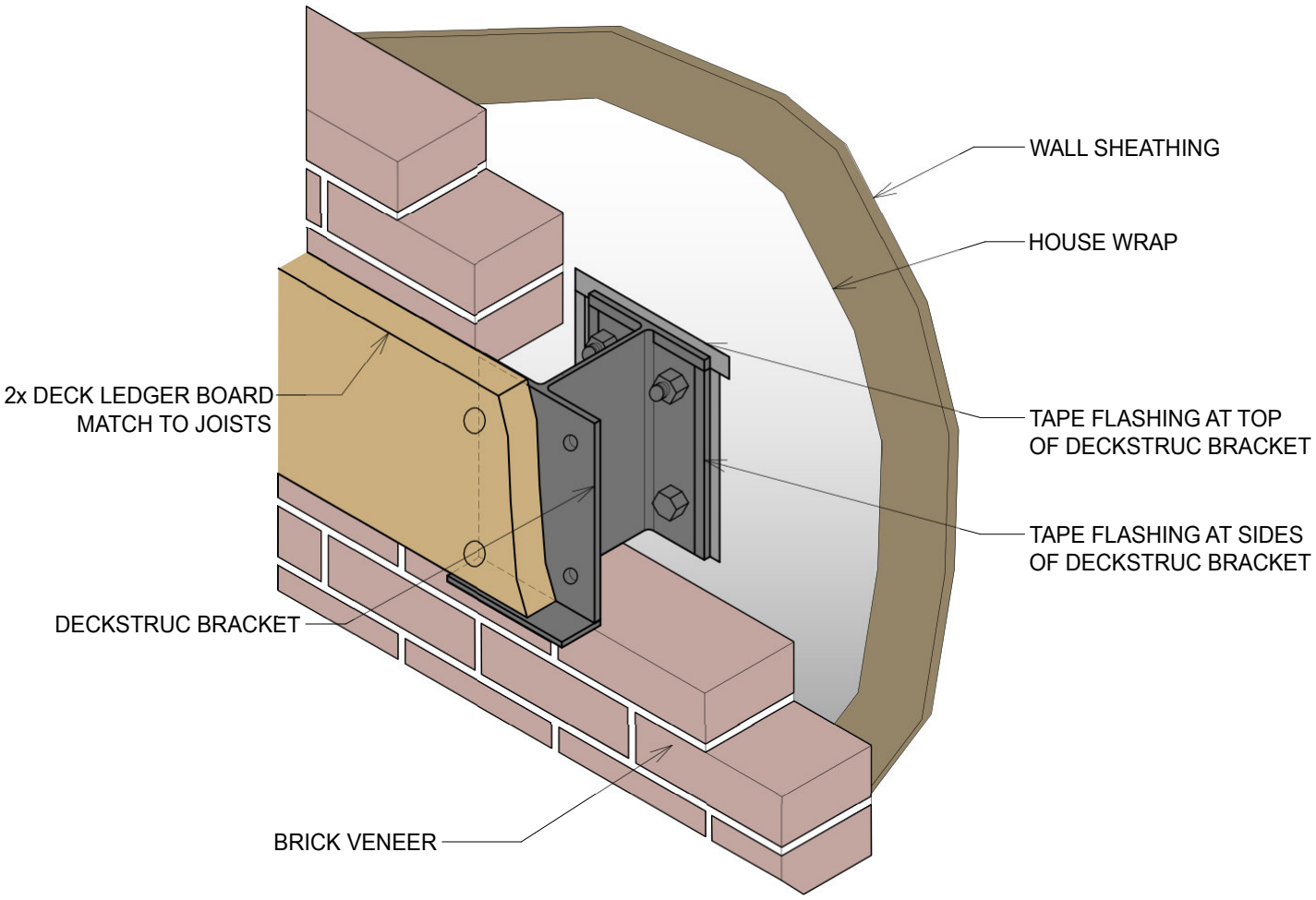
BOLTS PER BRACKET (GALVANIZED)
*(2) 5/8"⌀ x 3 1/2" LONG
THROUGH BOLTS
(3) 5/8"⌀ x 4" LONG
LAG BOLTS
(4) 5/8"⌀ x 2 1/2" LONG
CARRIAGE BOLTS

*DOUBLE JOISTS REQUIRE
4 1/2" LONG BOLTS



Deck Framing at Full Foundation

Brick Veneer Application - Brick Veneer Flashing Detail



DeckStruc Flashing Detail with Brick Veneer

Siding Application

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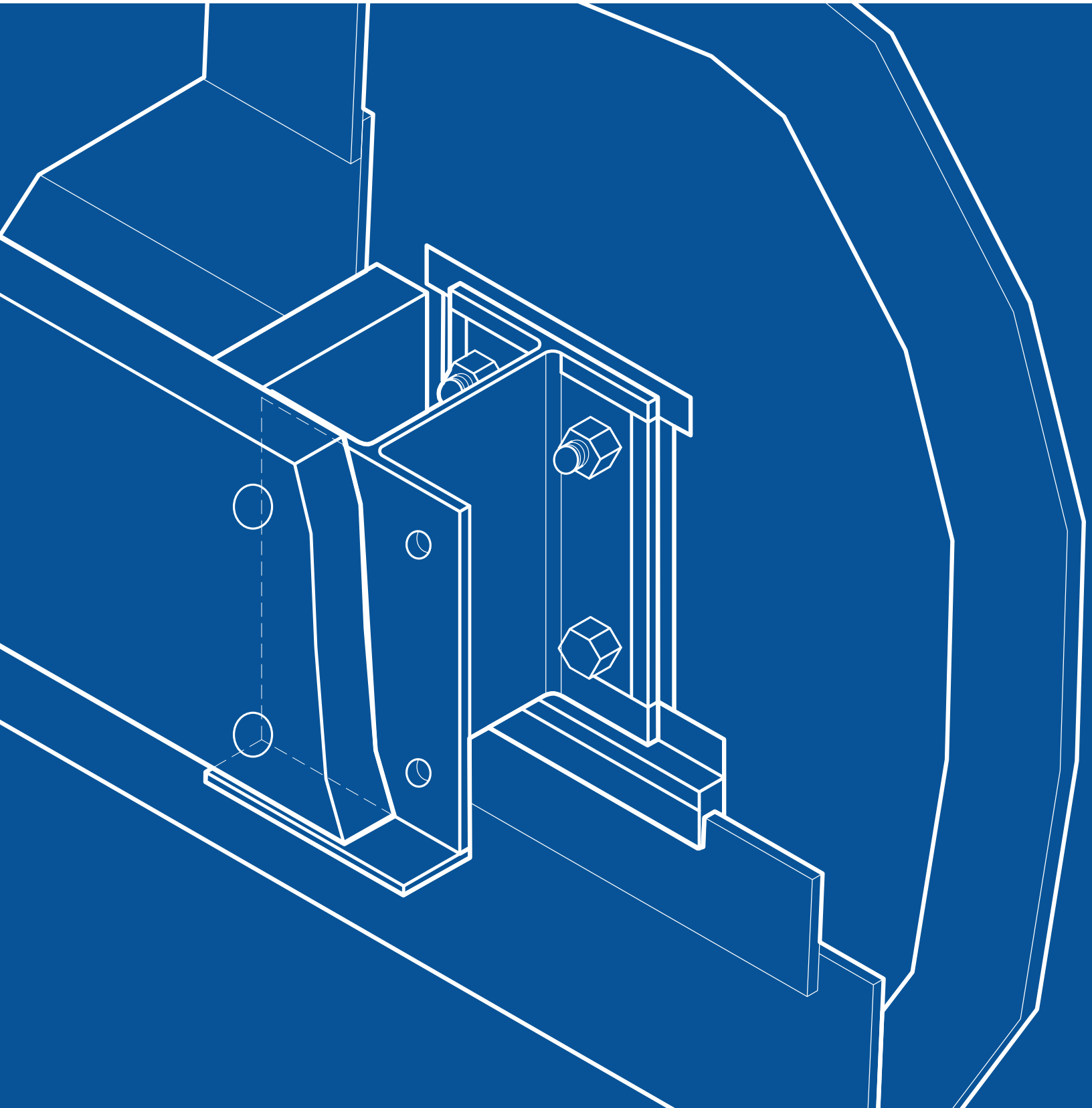
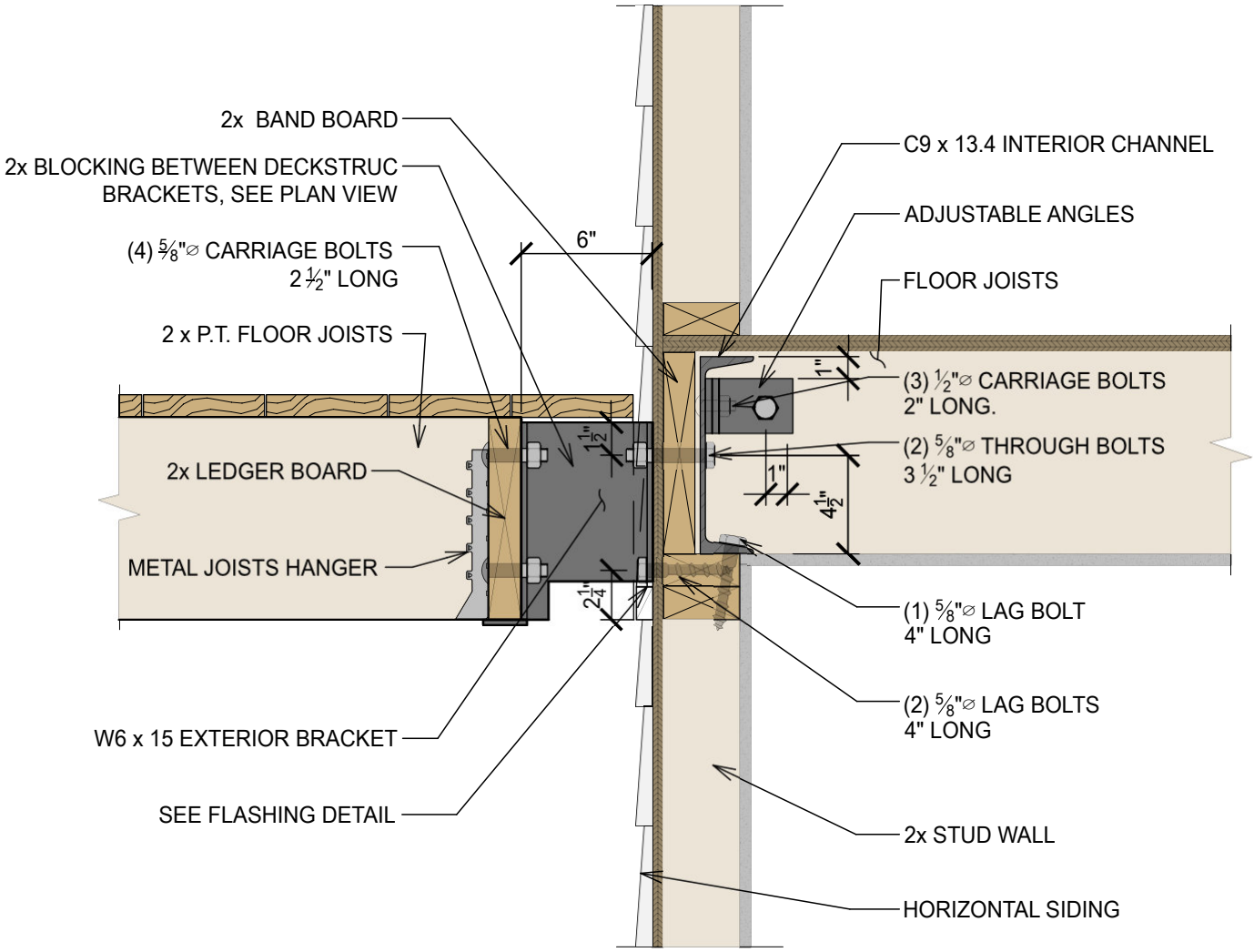
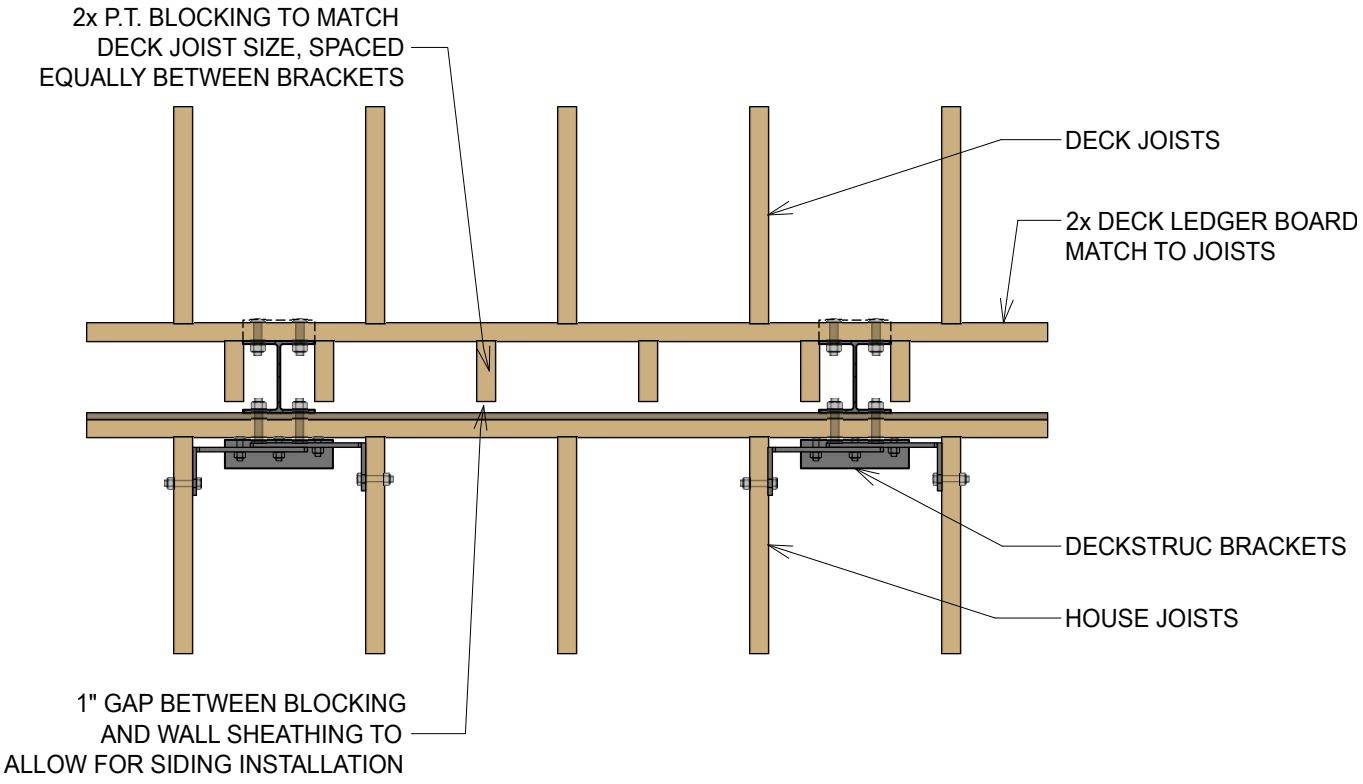


Siding Application - Full Height Siding

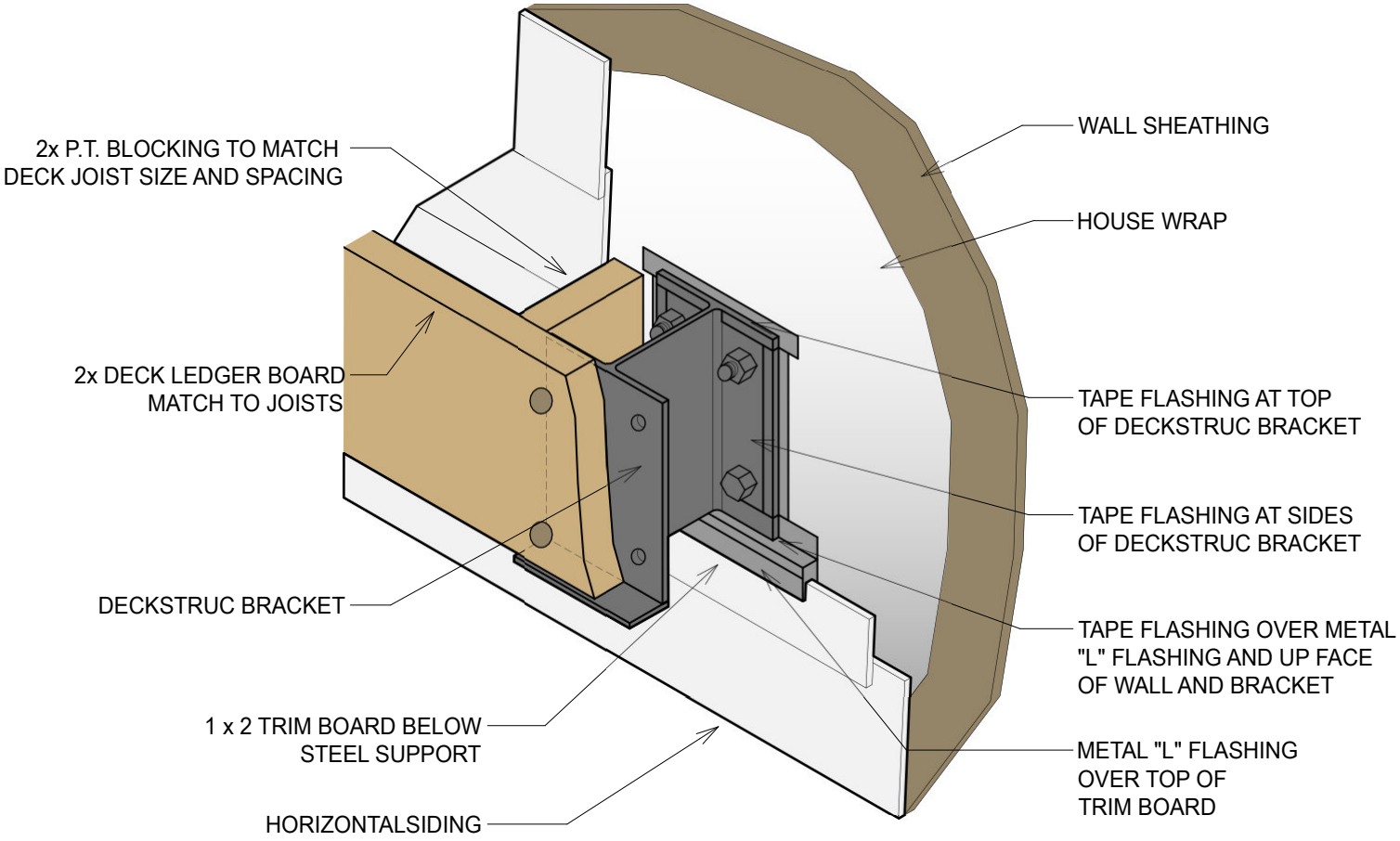


DeckStruc Framing at Full Height Siding

Siding Application - Deck Framing Plan with Siding



Deck Framing with Siding - Plan



DeckStruc Flashing Detail with Horizontal Siding

Specialty Applications

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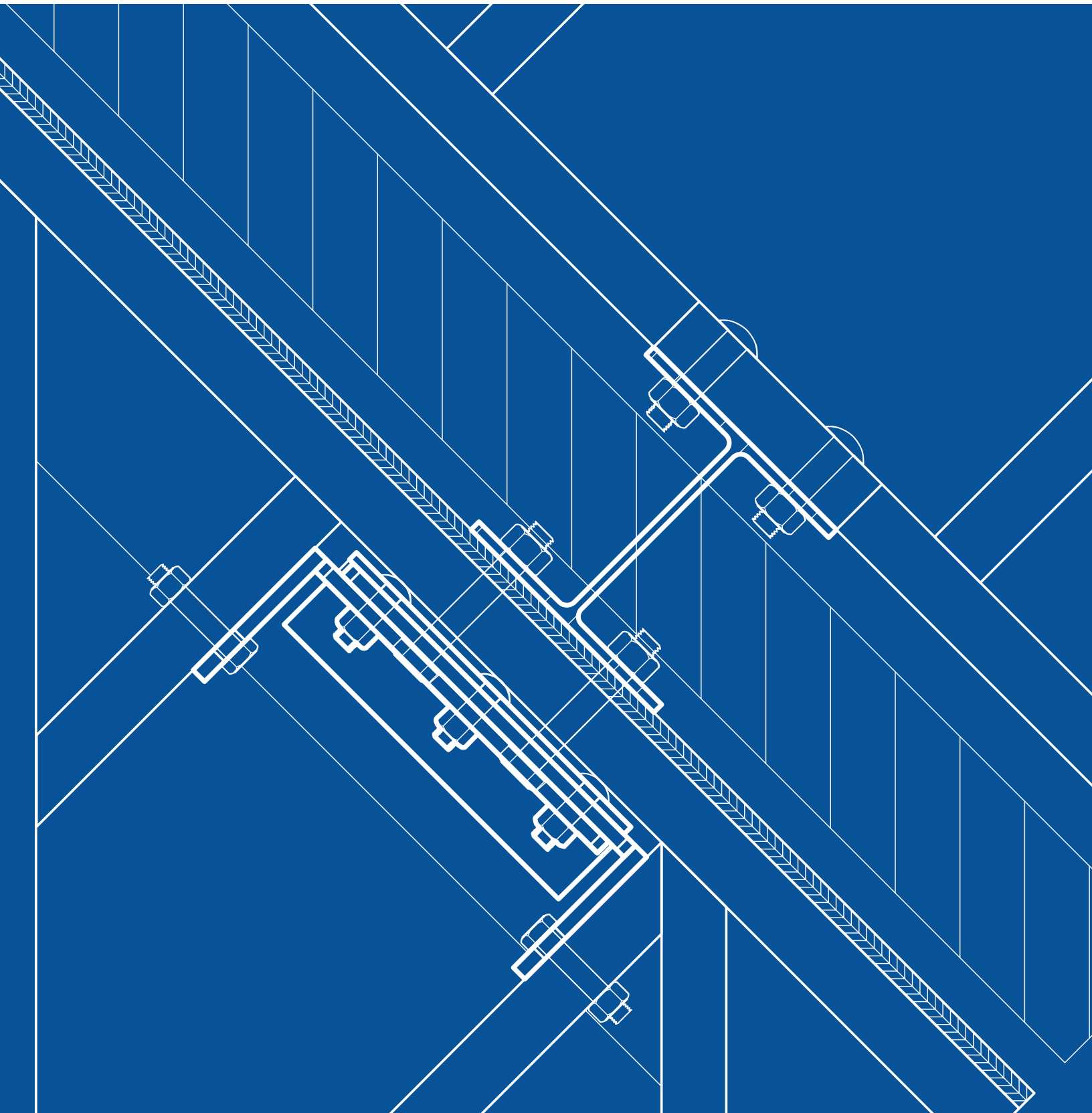
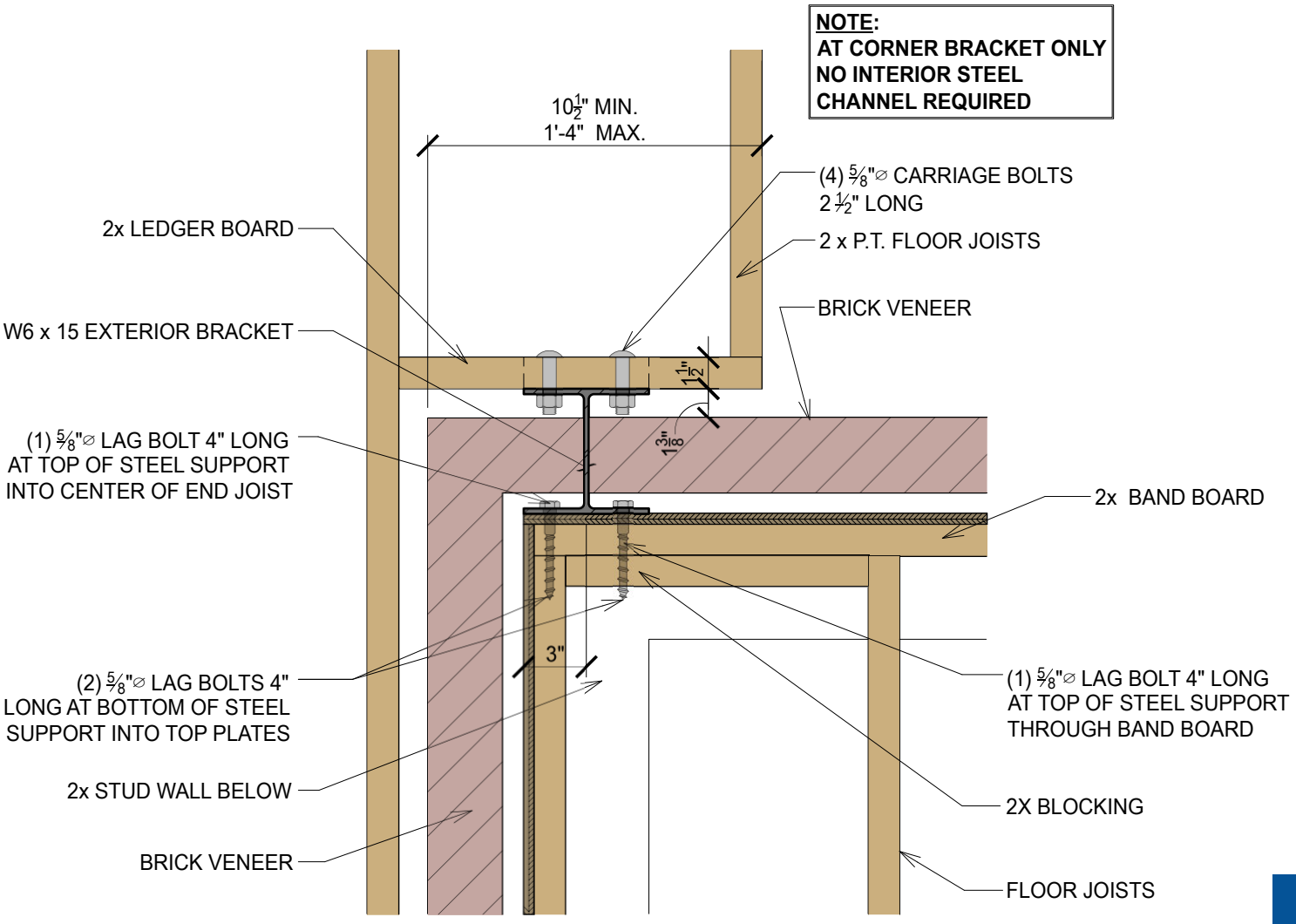


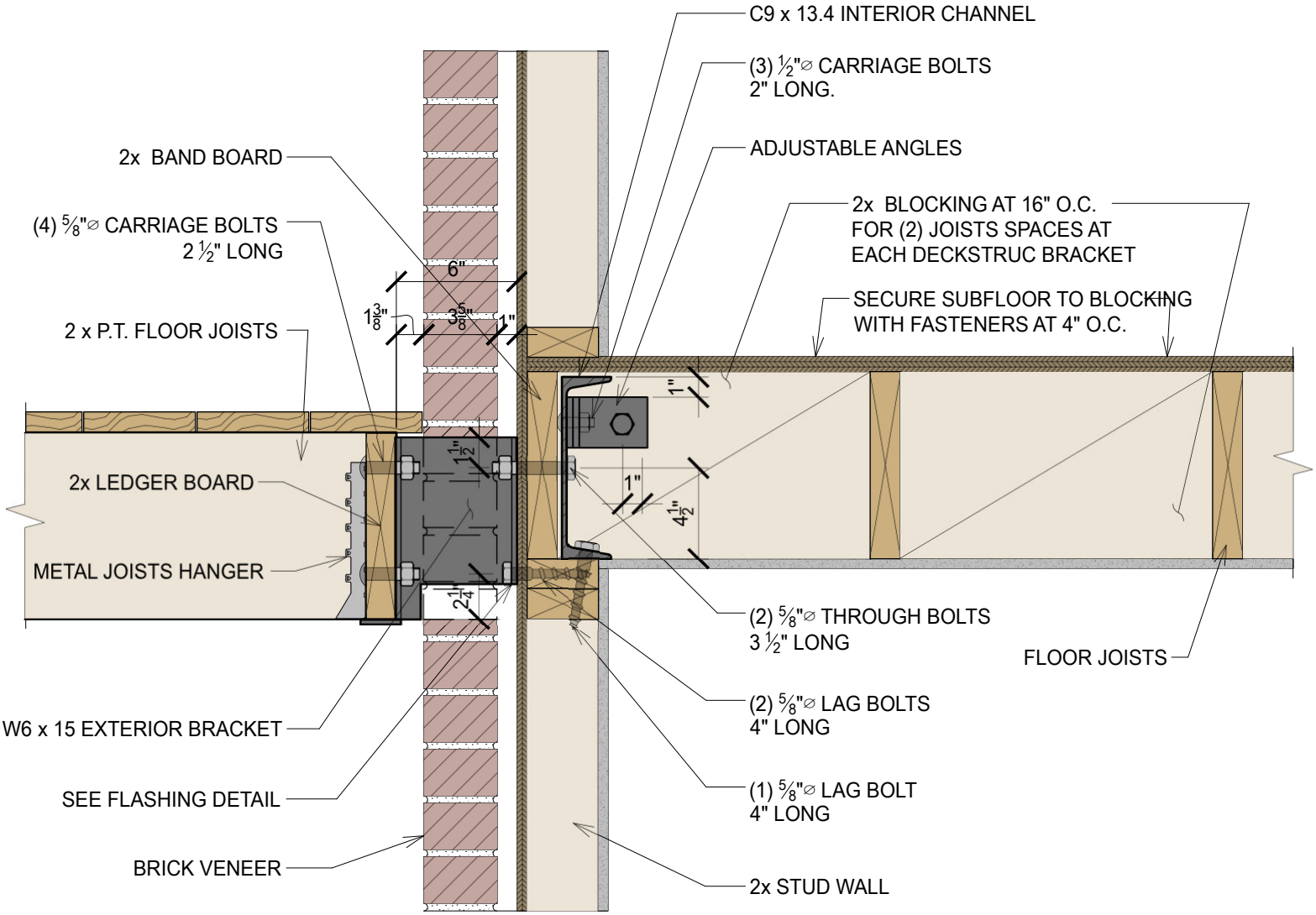
BOLTS PER BRACKET

(4)⅝"⌀ x 4" LONG LAG BOLTS



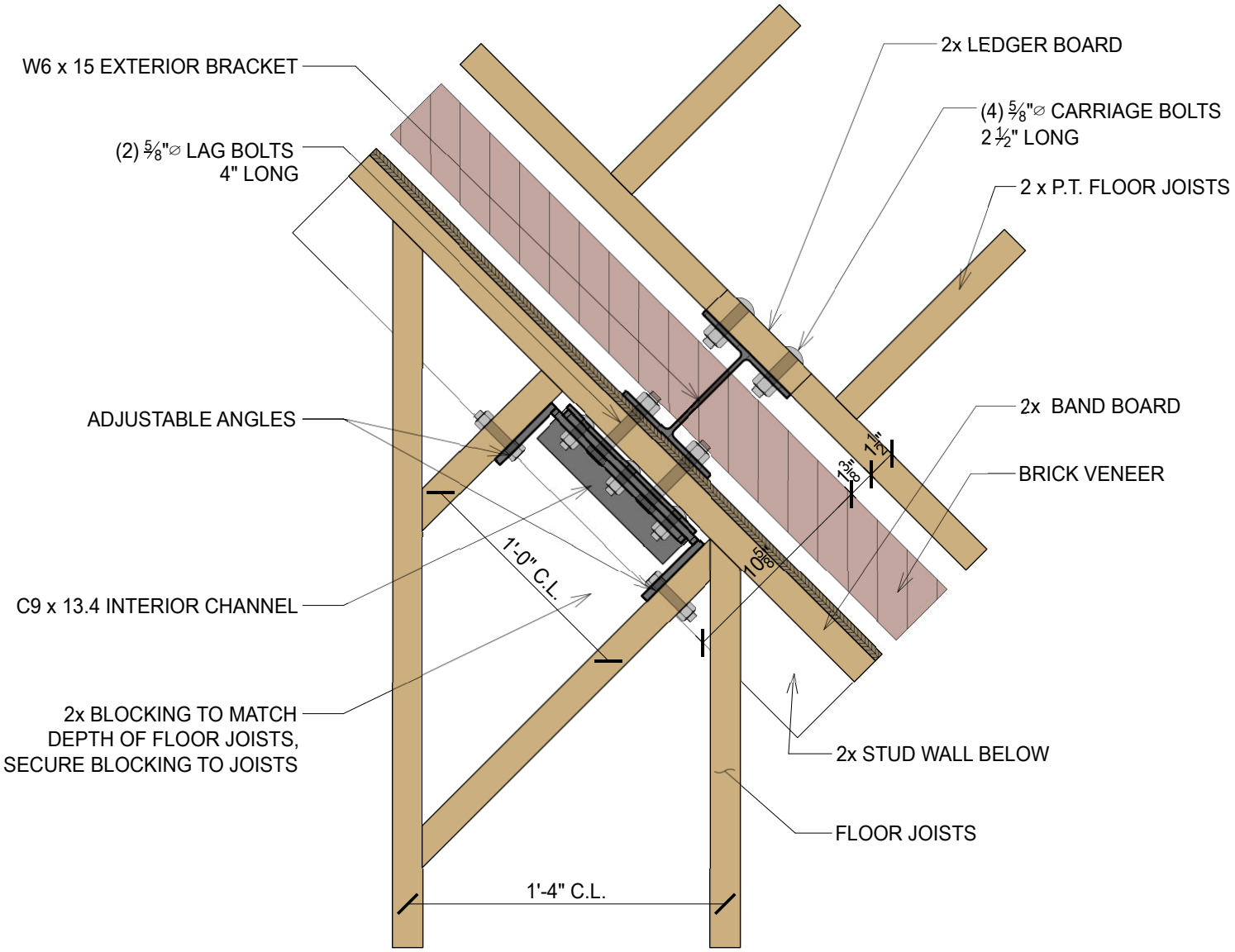
Deck Framing at Wall - Plan

Specialty Details - Perpendicular to House Wall



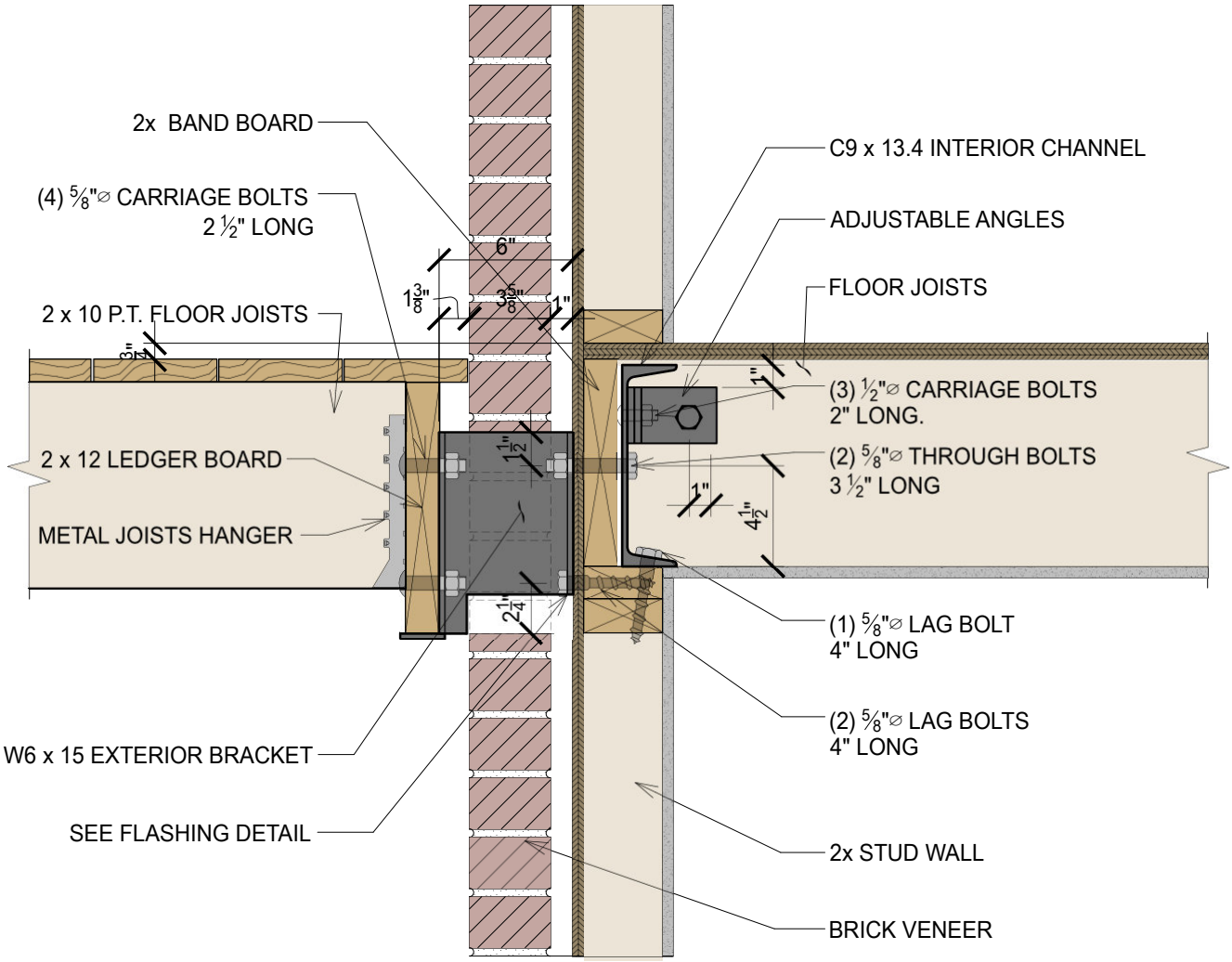
Deck Framing with Full Height Brick (Deck Joists Parallel to House Joists)

Specialty Details - Angled to House Wall



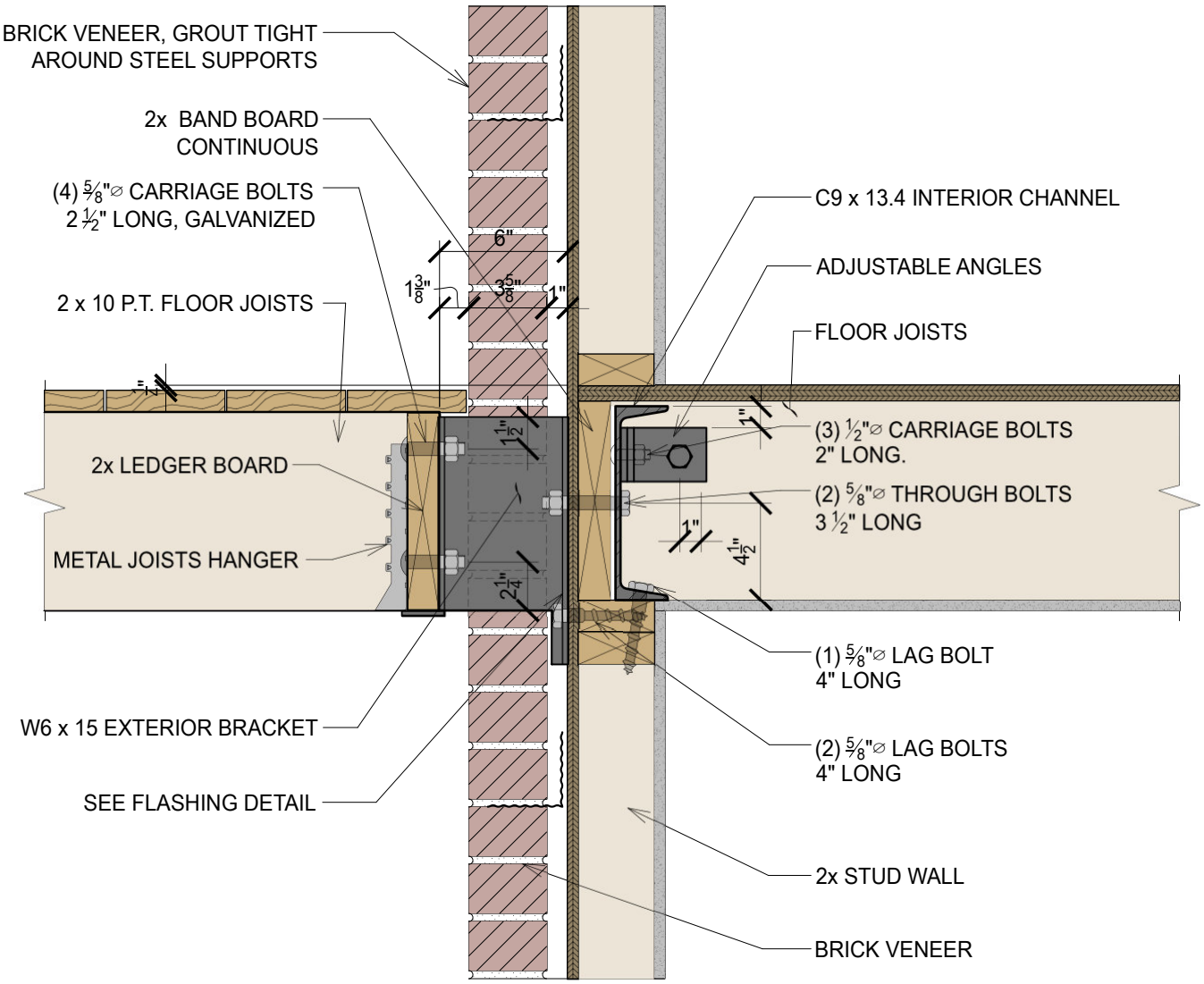
Deck Framing at Full Height Brick (Deck Joists Angled to House Joists)

Standard Bracket - Flush Deck to House Floor



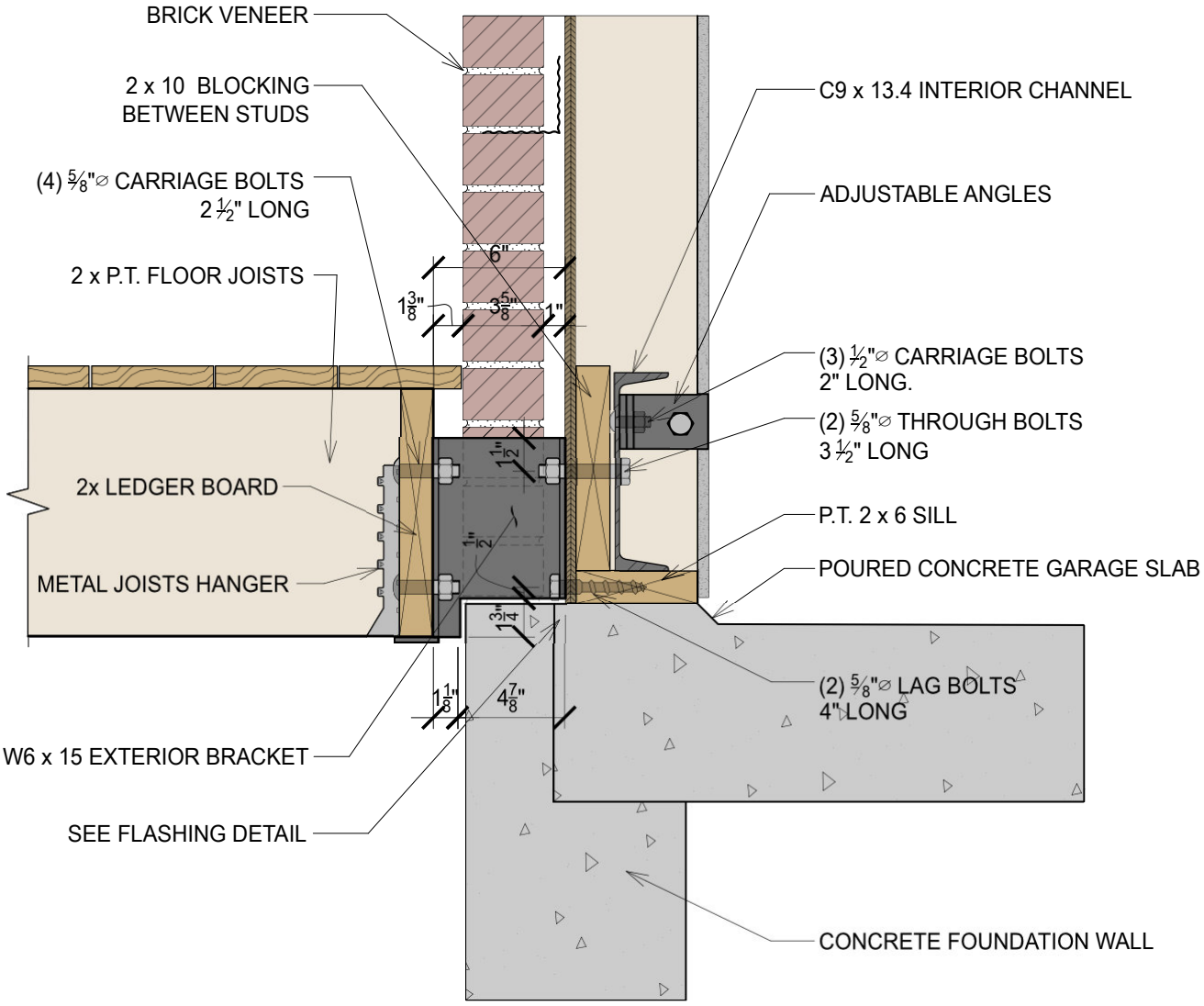
Deck Framing with Full Height Brick - Flush Deck to House Floor

Custom Bracket - Flush Deck to House Floor



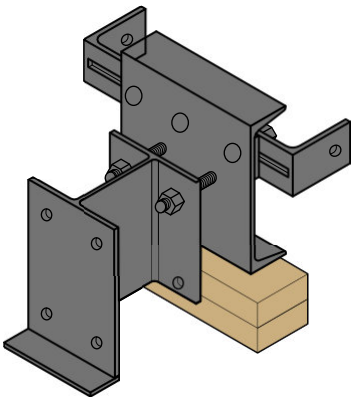
Deck Framing at Full Height Brick (Flush Deck to House Floor)

Custom Applications - Deck Framing at Garage Wall



Deck Framing with Section at Wall (Garage)

Ordering Information

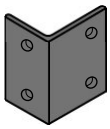


Standard Bracket

*(2) $\frac{5}{8}$"∅ x 3 $\frac{1}{2}$" Long Through Bolts
(3) $\frac{5}{8}$"∅ x 4" Long Lag Bolts
(4) $\frac{5}{8}$"∅ x 2 $\frac{1}{2}$" Long Carriage Bolts

*Double Joists Require 4 $\frac{1}{2}$" Long Bolts

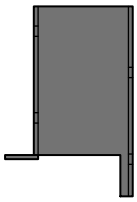
BOLTS AND BRACKET UNIT PRICE $150.00



Lateral Bracket Angle

(4) $\frac{1}{2}$"∅ x 2 " Long Lag Bolts

(4) ANGLES INCLUDED WITH FULL DECK ORDER OF STANDARD BRACKET (3 OR MORE UNITS)



Custom Bracket

Flush Deck to House Floor, Garage Slab, or Any Custom Deck Height Application

CUSTOM BRACKETS ARE PRICED PER INDIVIDUAL JOB AND COORDINATED WITH SUPPLIER

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