

90 m.p.h. Wind Resistant Garage Door and Frame Installation

Code Reference:

2003 International Residential Code (IRC) – Section R301.2
2003 International Building Code (IBC) – Section 1609

Similar to other doors and windows, the design and installation of garage doors and frames shall comply with the design wind load for the structure. The basic wind speed for the Kansas City Metropolitan area is 90 mph (3-second gust). For urban and suburban areas, Exposure Category B, this wind speed translates into 12.8 psf positive wind pressure and 14.8 negative wind pressure for a 9'x7' door; for larger doors the pressure exerted is 12.4 psf positive and 13.8 psf negative. Exposure B can be assumed unless the site meets the definition of another category (RE: IRC Section R301.2.1.4)

One means of establishing that the door is code compliant is through labeling. The trade association known as the Door and Access Systems Manufacturers Association International (DASMA) has a certified labeling program. The label that DASMA allows to be affixed to the door clearly indicates the wind speed (in psf) for which the door has been certified. For more information on this program see DASMA's web site at: www.dasma.com/articles/features/features65.asp. Also see DASMA Technical Data Sheet #155 for an overview of the IRC requirements.

Garage doors are usually the largest openings in a house, and their failure in strong winds can lead to partial collapse of the house.

Installation Procedures -

Installation shall comply with the attached diagrams (Figures 1, 2, 3, and 4).

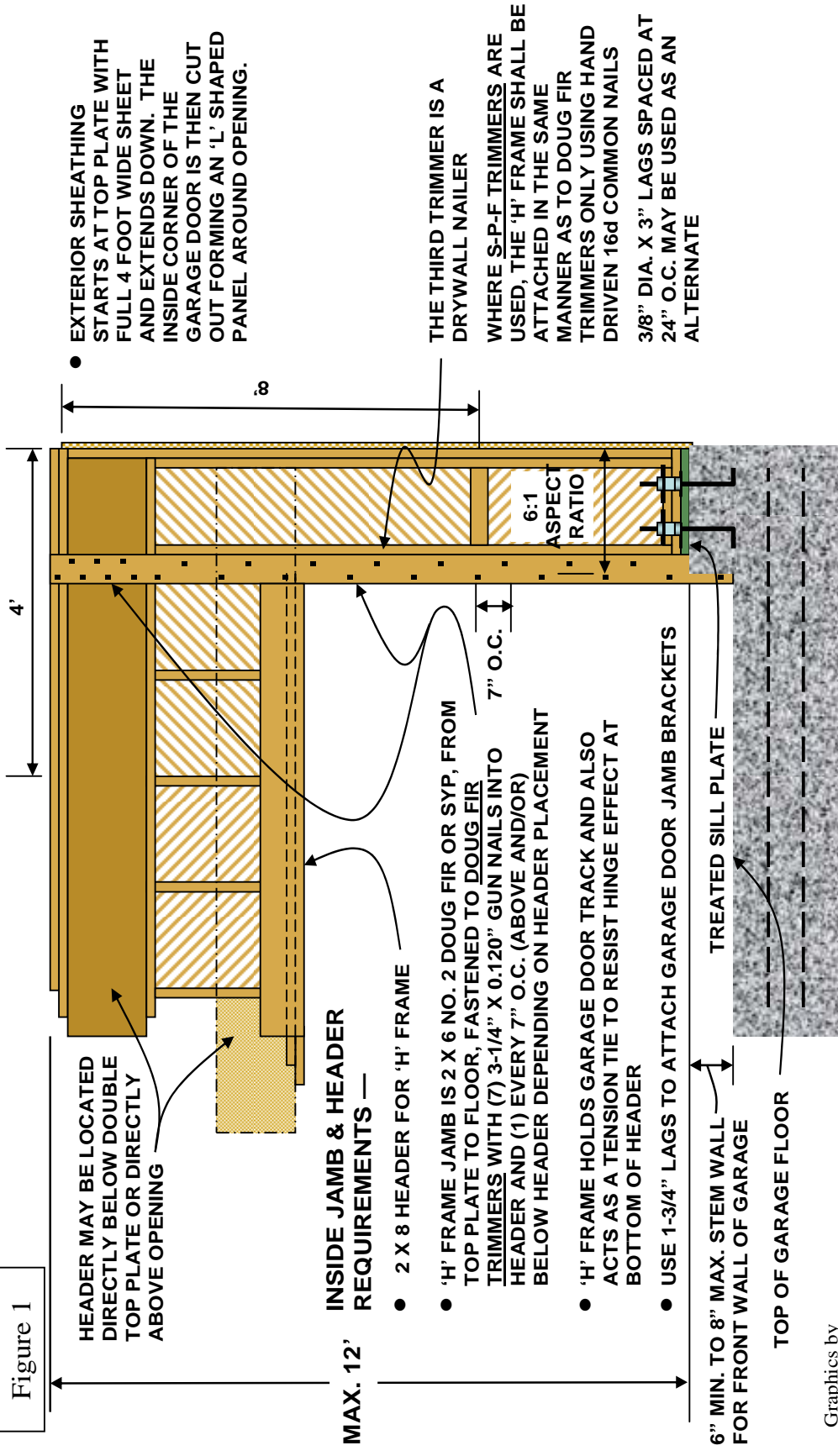
The door and track installation shall comply with the attached diagrams or the manufacturers installation instructions, whichever is most restrictive.

Inspection Procedures - Door and frame installation shall be verified for compliance prior to final inspection.

- A copy of the manufacturers installation instructions shall be attached to the back of the garage door.
- The installer shall attach a certification label to the door indicating compliance with the wind 90 mph wind load conditions and that the installation conforms to the manufacturers installation instructions.

This initiative has been developed by agreement with the Johnson County Building Officials (JOCOBO) and the Home Builders Association of Greater Kansas City.

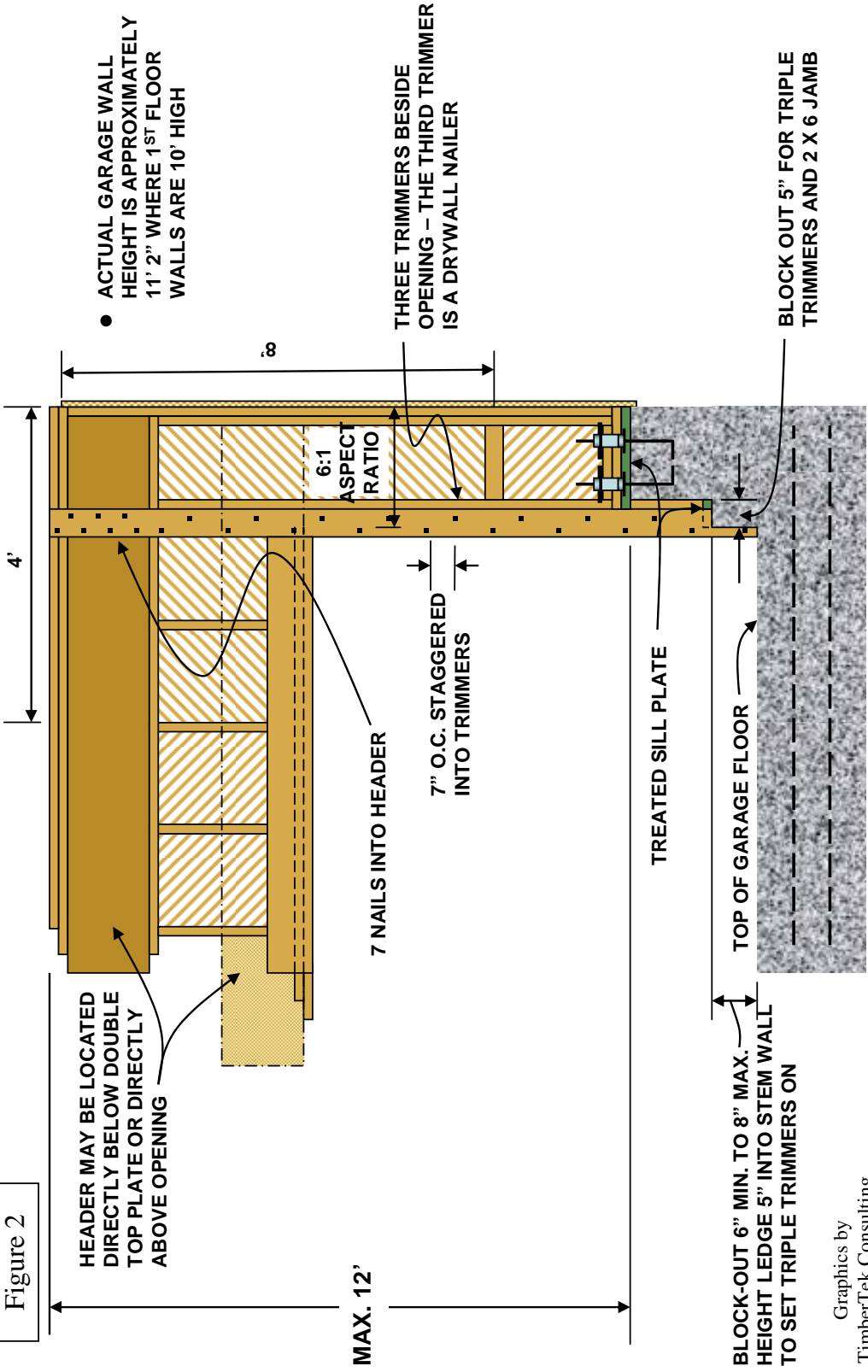
INSIDE VIEW "H" FRAME DETAIL FOR GARAGE DOOR OPENINGS



OTHER ENGINEERED METHODS ON PLANS SUPERSEDE THIS DETAIL

INSIDE VIEW

ALTERNATE TO POURING FRONT STEM WALL 6" TO 8" HIGH



● ACTUAL GARAGE WALL HEIGHT IS APPROXIMATELY 11' 2" WHERE 1ST FLOOR WALLS ARE 10' HIGH

THREE TRIMMERS BESIDE OPENING – THE THIRD TRIMMER IS A DRYWALL NAILER

BLOCK OUT 5" FOR TRIPLE TRIMMERS AND 2 X 6 JAMB

Figure 2

HEADER MAY BE LOCATED DIRECTLY BELOW DOUBLE TOP PLATE OR DIRECTLY ABOVE OPENING

MAX. 12'

7 NAILS INTO HEADER

7" O.C. STAGGERED INTO TRIMMERS

TREATED SILL PLATE

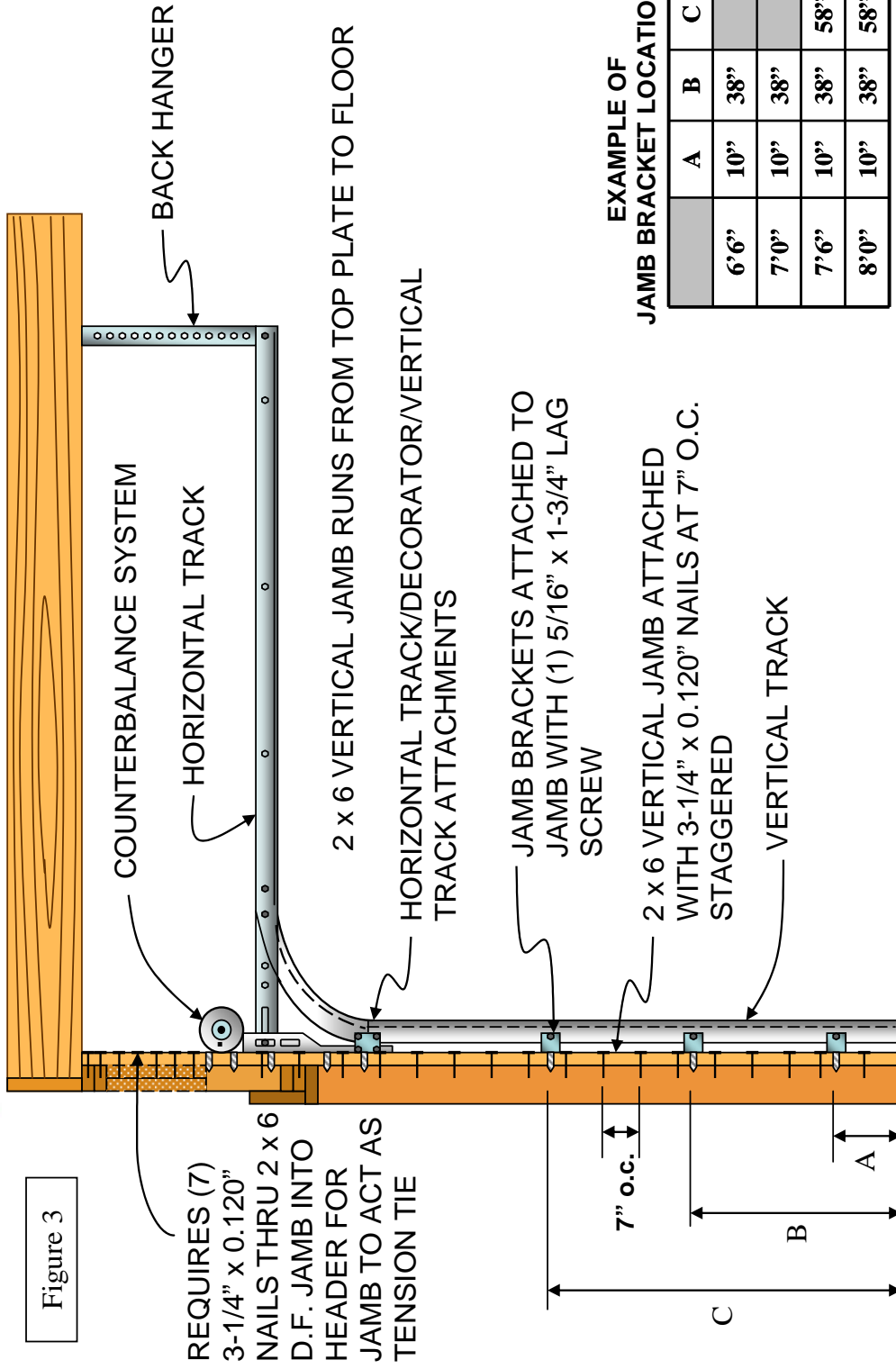
BLOCK-OUT 6" MIN. TO 8" MAX. HEIGHT LEDGE 5" INTO STEM WALL TO SET TRIPLE TRIMMERS ON

TOP OF GARAGE FLOOR

Graphics by TimberTek Consulting

BLOCK-OUT BESIDE GARAGE DOOR OPENING IF STEM WALL IS OVER 8 INCHES HIGH

2 x 6 VERTICAL JAMB ATTACHMENT & BRACKET MOUNTING

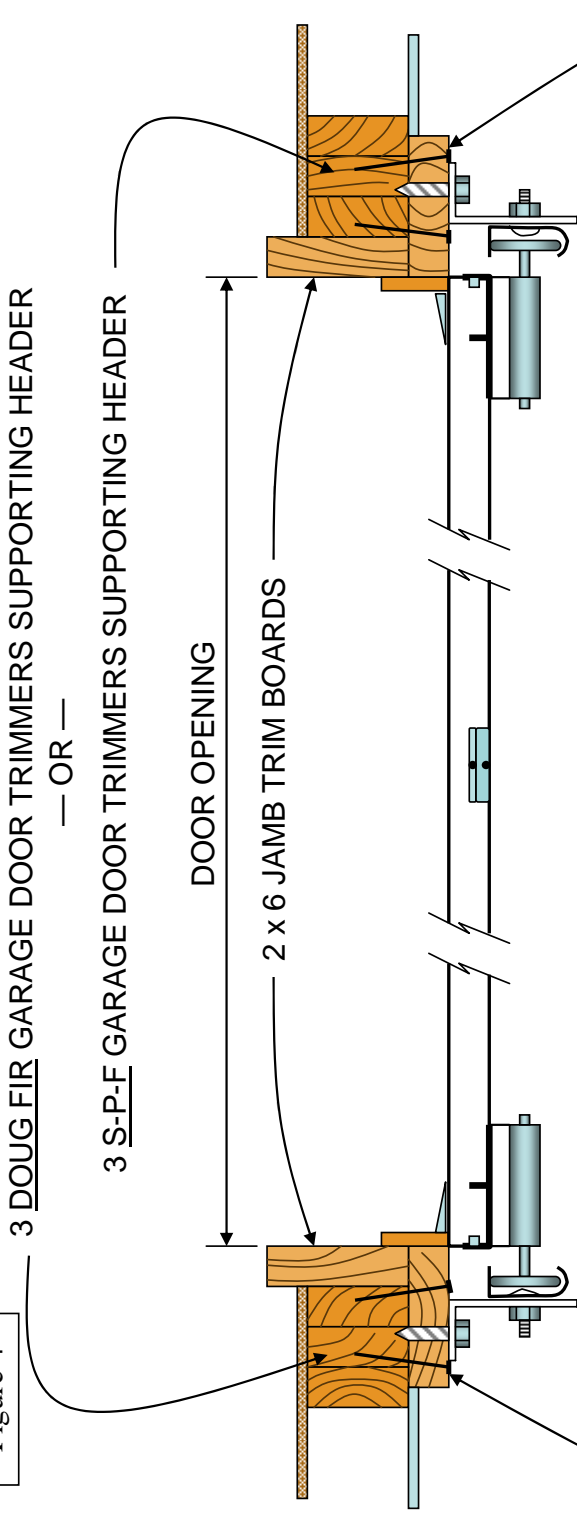


Graphics by: TimberTek Consulting

* Locations will vary based on door size, style and manufacturer.

2 x 6 VERTICAL JAMB ATTACHMENT

Figure 4



- 2 x 6, NO. 2, DOUG FIR OR SYP 'H' FRAME JAMB RUNS FROM TOP PLATE TO FLOOR
- 'H' FRAME ATTACHED TO FRAMING WITH (7) 3-1/4" x 0.120" GUN NAILS INTO HEADER AND (1) EVERY 7" O.C. STAGGERED INTO THE D.F. TRIMMERS (ABOVE AND/OR BELOW THE HEADER)
- 'H' FRAME ATTACHED IN SAME MANNER ONLY USE HAND DRIVEN 16d COMMON NAILS AT 7" O.C. STAGGERED INTO S-P-F TRIMMERS