INSTALLATION INSTRUCTIONS

Double Car Clopay WindCode® Instructions

(For use with Insulated and Uninsulated Steel Residential Garage Door Instruction Manual)

Things to Know Before You Begin

This is a supplement to the Clopay **Steel Residential Garage Door Instructions (Steel)** and **Insulated Steel Garage Door Instructions (Insulated)** (Referred to as MANUAL). It covers important information unique to Clopay WindCode® Doors. For all other information and safety warnings concerning your Clopay WindCode® garage door, see the MANUAL. Read all of the information below before beginning installation.

WindCode® doors require additional struts and hinge attachments beyond what is required on standard doors. The installation and attachment of these struts and hinges are outlined in this manual. Specifically, these instructions cover the following hardware attachment:

1) Strut Installation
2) End Hinge Installation
3) Top Bracket Installation
4) Roller and Pushnut Installation
5) Jamb Configuration
6) Opener Reinforcement Installation

Each Clopay WindCode® door is included in one of nine categories: W1 - W9. Each category covers a different range of windload and subsequently, a specific strut configuration. (Tables 1 & 2)

Table 1

Windload Category	Test Windload (P.S.F.)	Approximate Test MPH Gust Speed
W1	16 to 23	90
W2	24 to 28	100
W3	29 to 33	110
W4	34 to 42	120
W5	43 to 54	140
W6	55 to 60	150
W7	60 to 68	155
W8	69 to 81	170
W9	81 +	180

Clopay® BUILDING PRODUCTS A Griffon Company

Consumer Hotline 1-800-225-6729

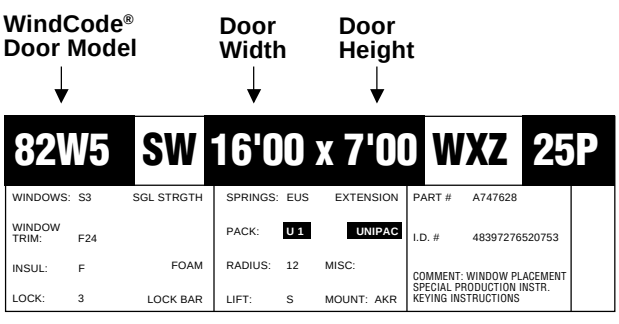
Note: It is the buyer's responsibility to purchase the garage door required to meet local building codes.

Clopay WindCode® garage doors not installed with the proper reinforcement (struts, hinges, jamb brackets, track, fasteners) will not perform as designed to meet the building code requirements.

Windload reinforcement on single car doors (9'0" wide and under) is configured differently than strutting on double car doors (9'2" wide and over).

An electric impact gun is strongly recommended for installation of WindCode® doors.

To determine what door you have, locate the identification sticker found on the end of the door package. This sticker will identify the door size, door model, and windload category. (FIG. 1)



IDENTIFICATION STICKER (Located On Package)
(Example: Model 82 Windload Category W5)

Fig. 1

Strut Attachment

Struts are placed lengthwise across the door to add strength. Strut configurations vary depending on WindCode® category and door size. Table 2 shows six of the most common WindCode® doors and refers to a specific drawing in this manual. These drawings (Figures 11 to 17 in the back of this supplement) include specific strut configuration and detailed technical information for each door. After reviewing the strut configuration, turn to page 3 to begin the actual installation. For specifications and drawings for other door models please call the Clopay Consumer Hotline at 1-800-225-6729.

Table 2

Model Number	Windload Category	Door Width	Strutting* Configuration	Corresponding Figure / Drawing	Pushnuts Required
73/75/82/ 84A/90/94	W3	9'2"-16'0" (Double Car)	2 on bottom, 1 on rest	Figure 11 / 101308	Yes
2050/2051/ 4050/4051	W3	9'2"-16'0" (Double Car)	2-1-2-1**	Figure 12 / 101820	Yes
73/75/82/ 84A/90/94	W4	9'2"-16'0" (Double Car)	2-1-2-1**	Figure 13 / 101711	Yes
2400/2401/4400/ 4401/4300/4301/ 4310/HDG/HDGL	W4	9'2"-16'0" (Double Car)	2 on bottom, 1 on rest	Figure 14 / 101481	No
2400/2401/4400/ 4401/4300/4301/ 4310/HDG/HDGL	W4	16'2"-18'0" (Double Car)	2 per section	Figure 15 / 101247	No
73/75/82/ 84A/90/94	W5	9'2"-16'0" (Double Car)	2 per section	Figure 16 / 101593	Yes
2050/2051/ 4050/4051	W5	9'2"-16'0" (Double Car)	2 per section	Figure 17 / 101595	Yes

** The bottom section is considered the first section, the second section from the bottom is considered the second section, etc.*
***Strut pattern is found only on doors that are four sections high (6'6" to 7'0"). A strut pattern of 2-1-2-1-2 for doors that are five sections high (7'6" to 8'0")*

Bottom Section Strut Installation

Strut Attachment on Bottom of Bottom Section

Depending on the strutting configuration of the WindCode® Door, there are two possible positions that a strut can be installed. For the correct placement, see Table 2 and the corresponding Figures 11 to 17. Position bottom bracket as shown in MANUAL. Position the strut according to the correct figure for the corresponding door model. Drill one 5/32" hole at the top and one 5/32" hole at the bottom of the strut at all hinge locations. If an electric impact gun is used, no holes need to be drilled beforehand. Attach strut to door section with 1/4" x 3/4" self-tapping screws at each drilled hole. (FIG. 2A & 2B)

NOTE: For some models, pushnuts are required with the roller installation. Refer to Table 2 to determine which models use pushnuts. (FIG. 8)

End Hinge Installation

End Hinges

14 Gauge hinges are used at all end stile locations (for more detail see MANUAL). Insert the (4) sheet metal screws as indicated in the MANUAL. Insert the (4) 1/4" x 3/4" self-tapping screws per hinge as shown. (You may have to pilot drill 5/32" holes before installing self-tapping screws.) (FIG. 3)

NOTE: For some models, pushnuts are required with the roller installation. Refer to Table 2 to determine which models use pushnuts. (FIG. 8)

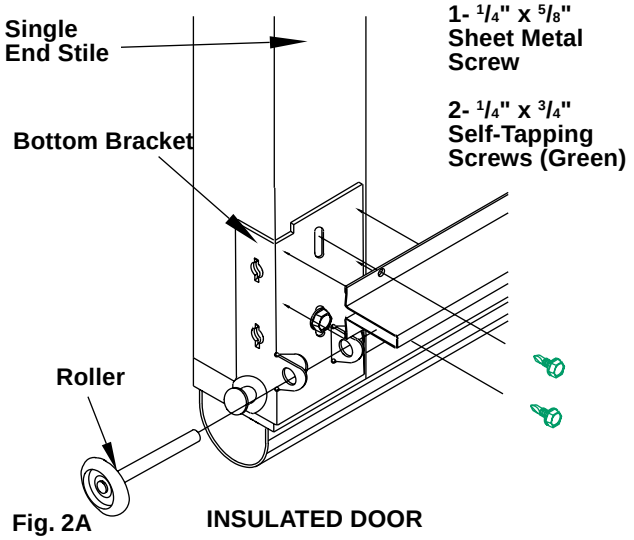


Fig. 2A INSULATED DOOR

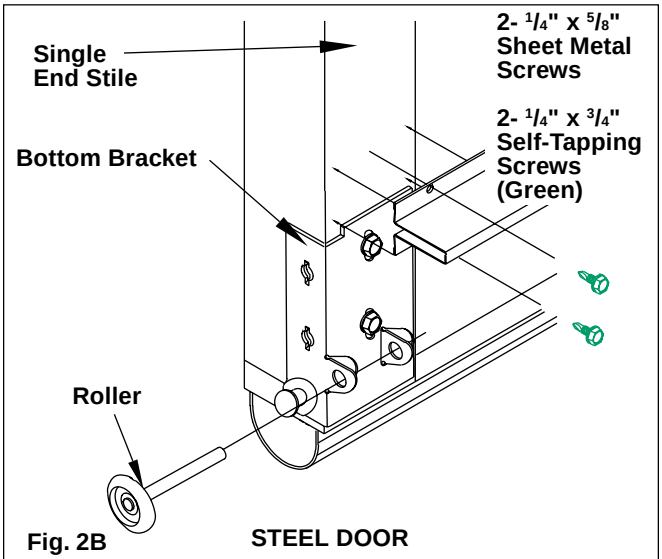


Fig. 2B STEEL DOOR

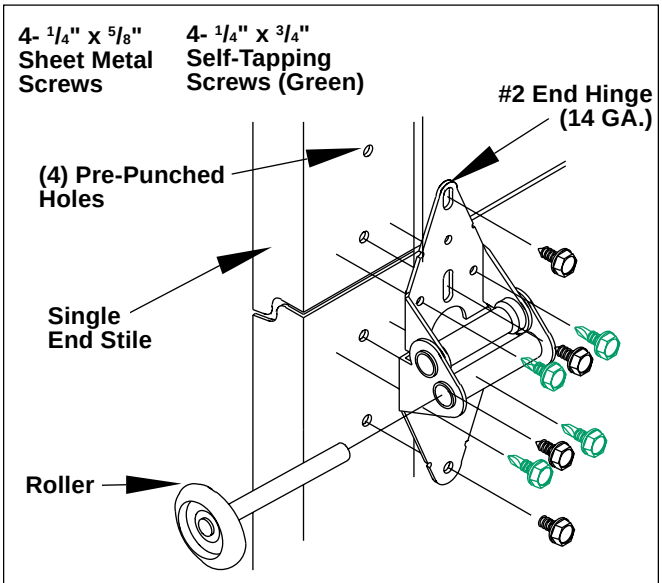


Fig. 3 HINGE INSTALLATION

Intermediate Section Strut Installation

The strut installation for the intermediate section is different for steel and insulated doors. Refer to the appropriate section below.

Single Hinge Strut Attachment (Steel)

Depending on the strutting configuration of the WindCode® Steel Door, there are two possible positions that a strut can be installed. For the correct placement, see Table 2 and the corresponding Figures 11 to 17. To attach strut, position the strut on the door. Drill one 5/32" hole at the top and one 5/32" hole at the bottom of the strut at all hinge locations. If an electric impact gun is being used, no holes need to be drilled beforehand. Attach strut to door section with 1/4" x 3/4" self-tapping screws at each drilled hole. (FIG. 4)

Note that the strut on the top of the section overlaps the bottom leaf of the hinge. If required, a strut mounted at the bottom of the section can be mounted above the hinge leaf. (FIG. 4A)

NOTE: For some models, pushnuts are required with the roller installation. Refer to Table 2 to determine which models use pushnuts. (FIG. 8)

Single Hinge Strut Attachment (Insulated)

Depending on the strutting configuration of the WindCode® insulated door, there are two possible positions that a strut can be installed. For the correct placement, see Table 2 and the corresponding Figures 11 to 17. For insulated doors the struts must overlap the hinge leafs on both the top and bottom. To attach strut, position the strut on the door. Drill one 5/32" hole at the top and one 5/32" hole at the bottom of the strut at all hinge locations. If an electric impact gun is used, no holes need to be drilled beforehand. Attach strut to door section with 1/4" x 3/4" self-tapping screws at each drilled hole. (FIG. 5 & 5A)

NOTE: For some models, pushnuts are required with the roller installation. Refer to Table 2 to determine which models use pushnuts. (FIG. 8)

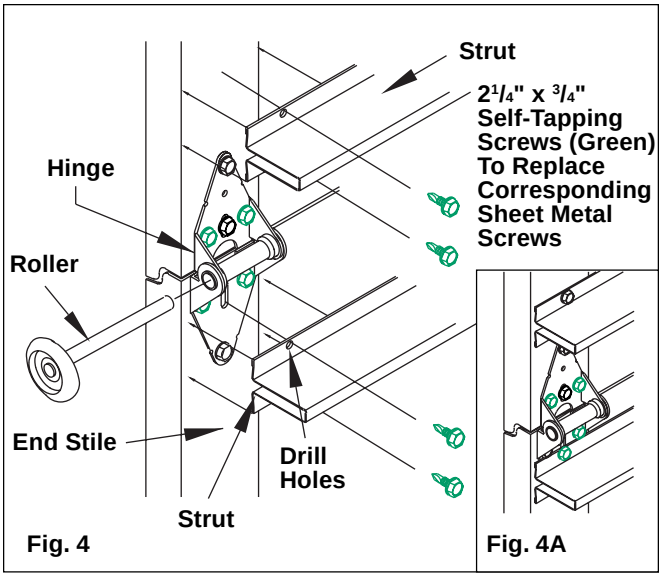


Fig. 4

Fig. 4A

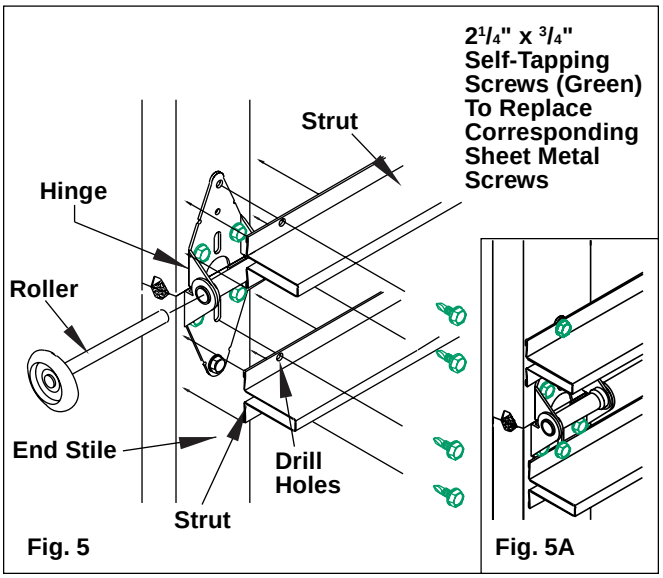


Fig. 5

Fig. 5A

Top Bracket Installation

Top Bracket

In most instances, WindCode® doors use a heavier gauge top bracket. Due to this, the holes in the bracket will not line up with the holes in the stiles. Install the top of the top brackets approximately 3" to 3 1/2" below the top of the section with (4) 1/4" x 3/4" self-tapping screws. Once installed, the slide adjustments must be aligned so that the roller lines up with the track so the door will close flush to the door jamb. (FIG. 6)

NOTE: For some models, pushnuts are required with the roller installation. Refer to Table 2 to determine which models use pushnuts. (FIG. 8)

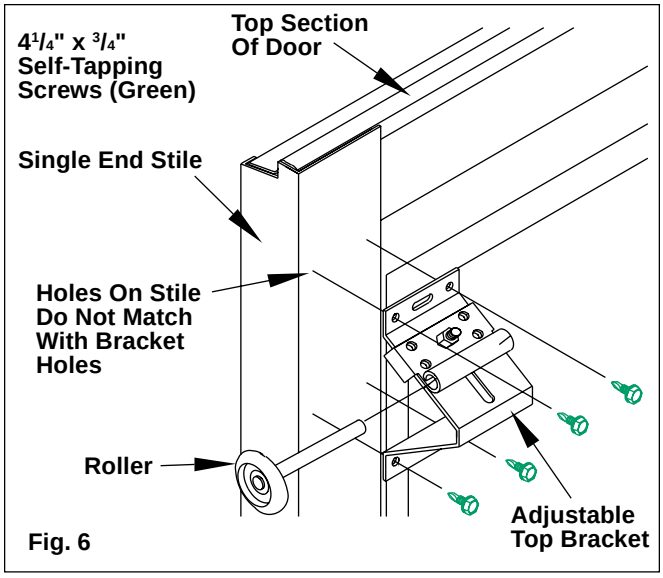


Fig. 6

Top Section Strut Attachment

Depending on the strutting configuration of the WindCode® door, a strut may be required on the top section (See Table 2 and corresponding drawing). To attach a strut at the top of the top section it must be placed above the top roller bracket. Drill one 5/32" hole at the top and one 5/32" hole at the bottom of the strut at all hinge (or back-up plate (insulated) locations.) If an electric impact gun is used, no holes need to be drilled beforehand. Attach strut to door section with 1/4" x 3/4" self-tapping screws at each drilled hole. (FIG. 7)

NOTE: For some models, pushnuts are required with the roller installation. Refer to Table 2 to determine which models use pushnuts. (FIG. 8)

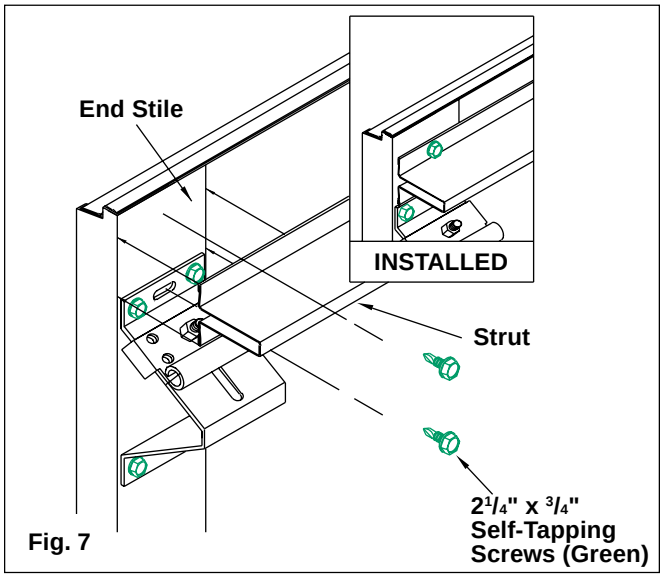


Fig. 7

Roller and Pushnut

To install the pushnut roller, slide the roller into the hinge then slide the pushnut onto the shaft of the roller until it is within an 1/8" to 1/4" from the hinge. (FIG. 8)

Note: Do NOT install pushnut before installing roller into hinge. Use 1/2" Deep Draw socket and hammer to tap on pushnuts.

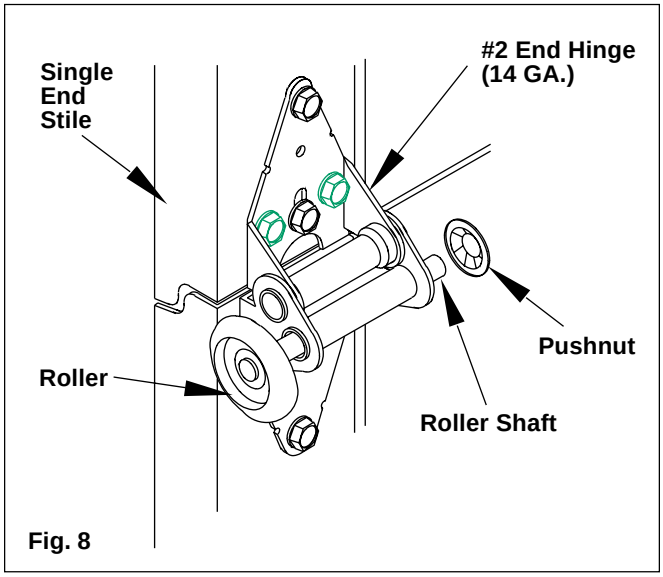


Fig. 8

Jamb Configuration

IMPORTANT

The design of the supporting structural elements (i.e. door jamb) shall be the responsibility of the professional of record for the building or structure and in accordance with current building codes for the loads listed on the technical drawing (attached) for the specific model.

It is also important that the vertical 2 x 6 wood jambs are attached to the supporting structure in a method that is sufficient to transfer the loads exerted by the wind pressures. Some suggested vertical jamb attachment methods are included in the drawings. (FIG. 11 to 17)

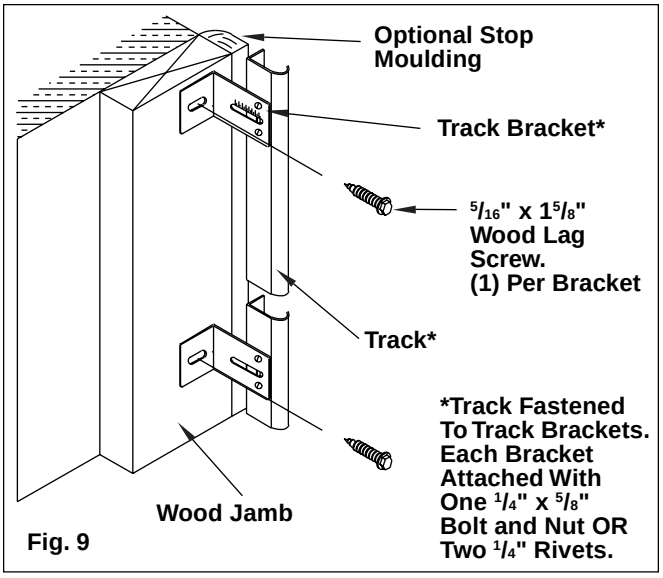


Fig. 9

Track Bracket Placement

Track bracket placement are configured differently according to height. Typically, WindCode® doors require more track brackets than non-WindCode® doors. However, each track bracket is attached to the track and jamb using the same fasteners and method of attachment as shown in the MANUAL. (FIG. 9 & 10)

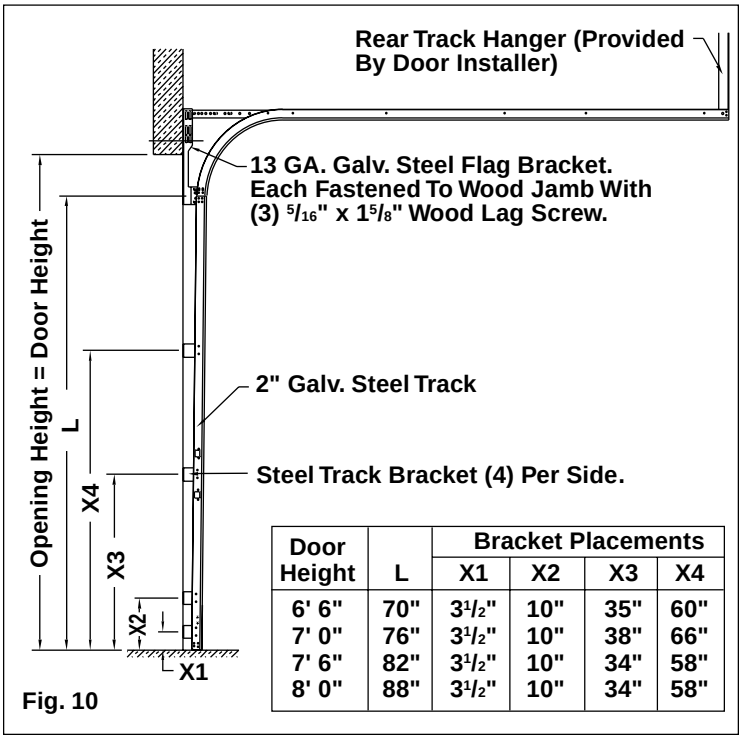


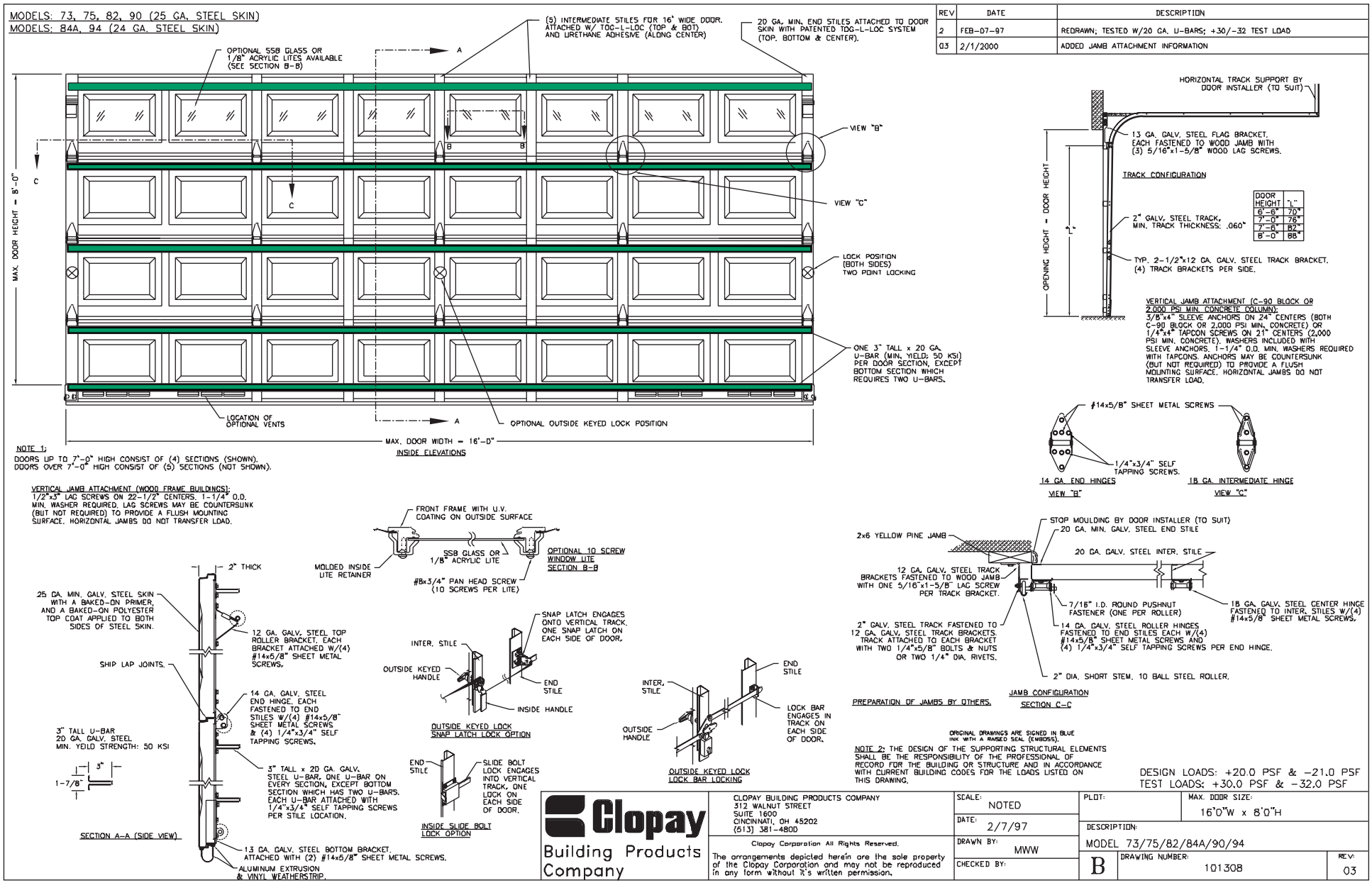
Fig. 10

Door Height	L	Bracket Placements			
		X1	X2	X3	X4
6' 6"	70"	3 1/2"	10"	35"	60"
7' 0"	76"	3 1/2"	10"	38"	66"
7' 6"	82"	3 1/2"	10"	34"	58"
8' 0"	88"	3 1/2"	10"	34"	58"

Opener Reinforcement Installation

Attachment of Opener Reinforcement

Refer to the MANUAL for installation instructions. If the Clopay WindCode® door requires a strut across the top of the top section, this takes the place of any horizontal angle iron required by the MANUAL. The vertical angle as shown in the MANUAL is still required on WindCode® Doors.



REV	DATE	DESCRIPTION
2	FEB-07-97	REDRAWN; TESTED W/20 GA. U-BARS; +30/-32 TEST LOAD
03	2/1/2000	ADDED JAMB ATTACHMENT INFORMATION

Fig. 11

CATEGORY: W3 MODELS: 73, 75, 82, 84A, 90, 94
STRUT PLACEMENT SHOWN IN GREEN

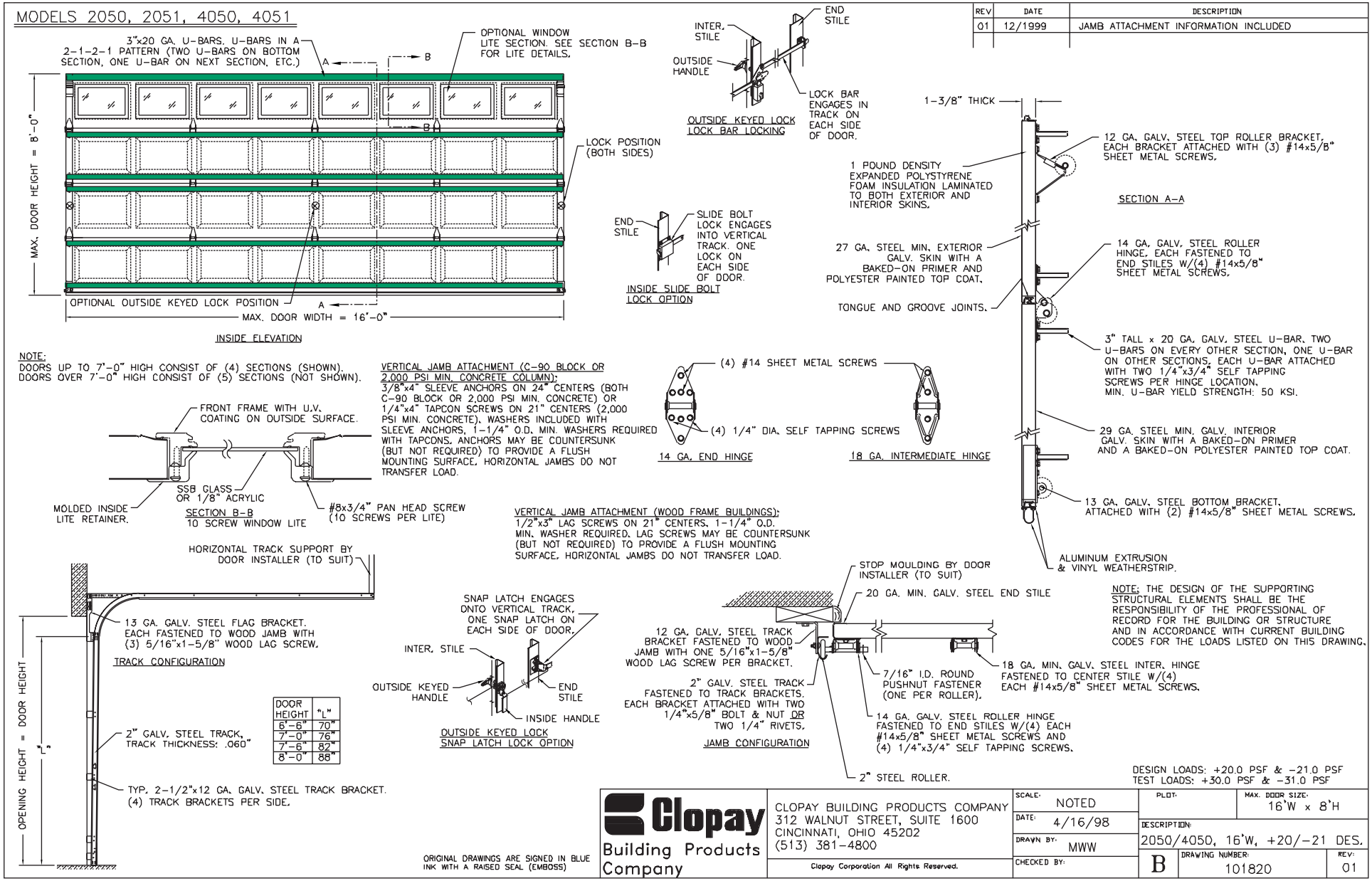


Fig. 12

CATEGORY: W3 MODELS: 2050, 2051, 4050, 4051
STRUT PLACEMENT SHOWN IN GREEN

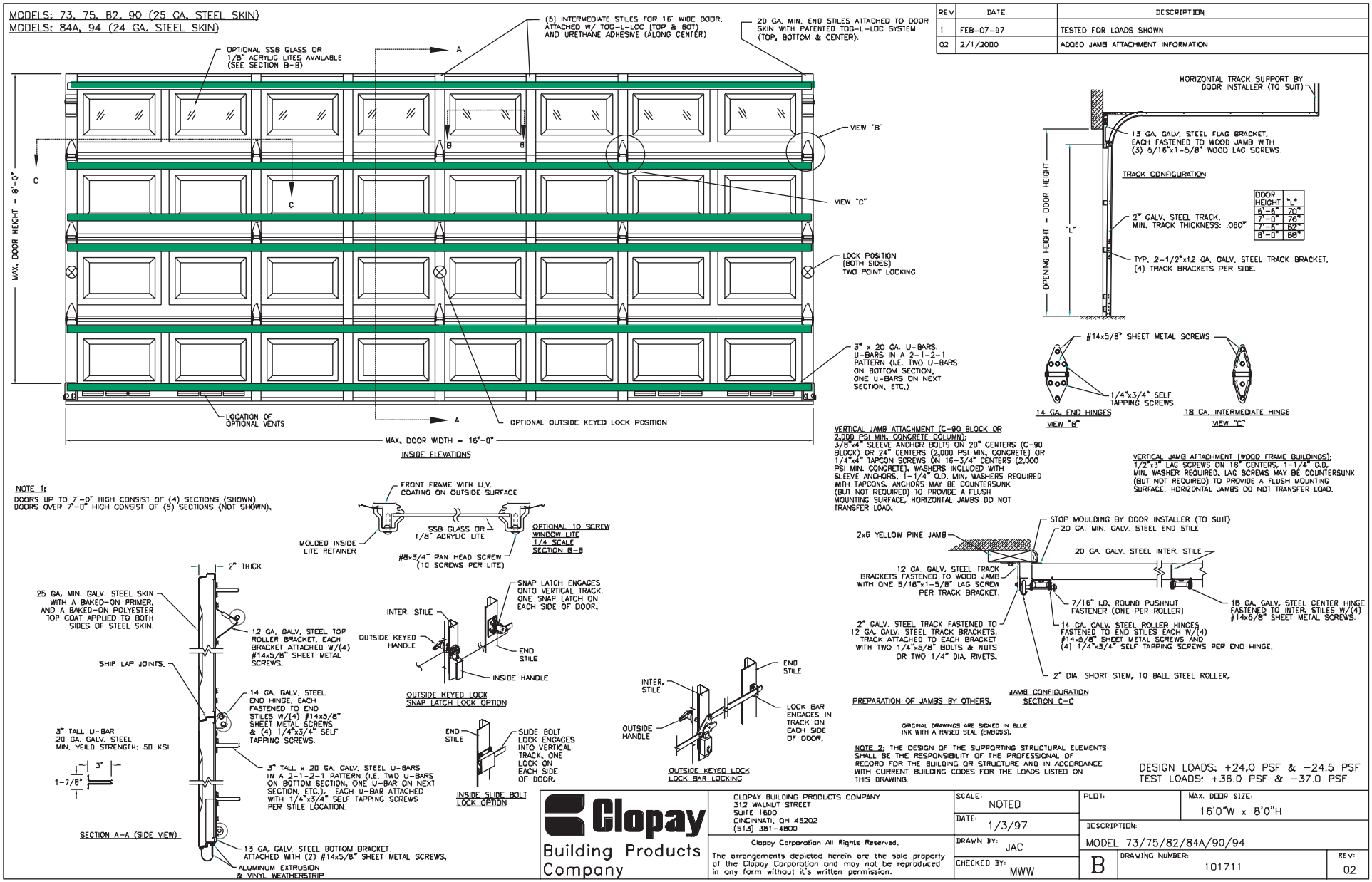
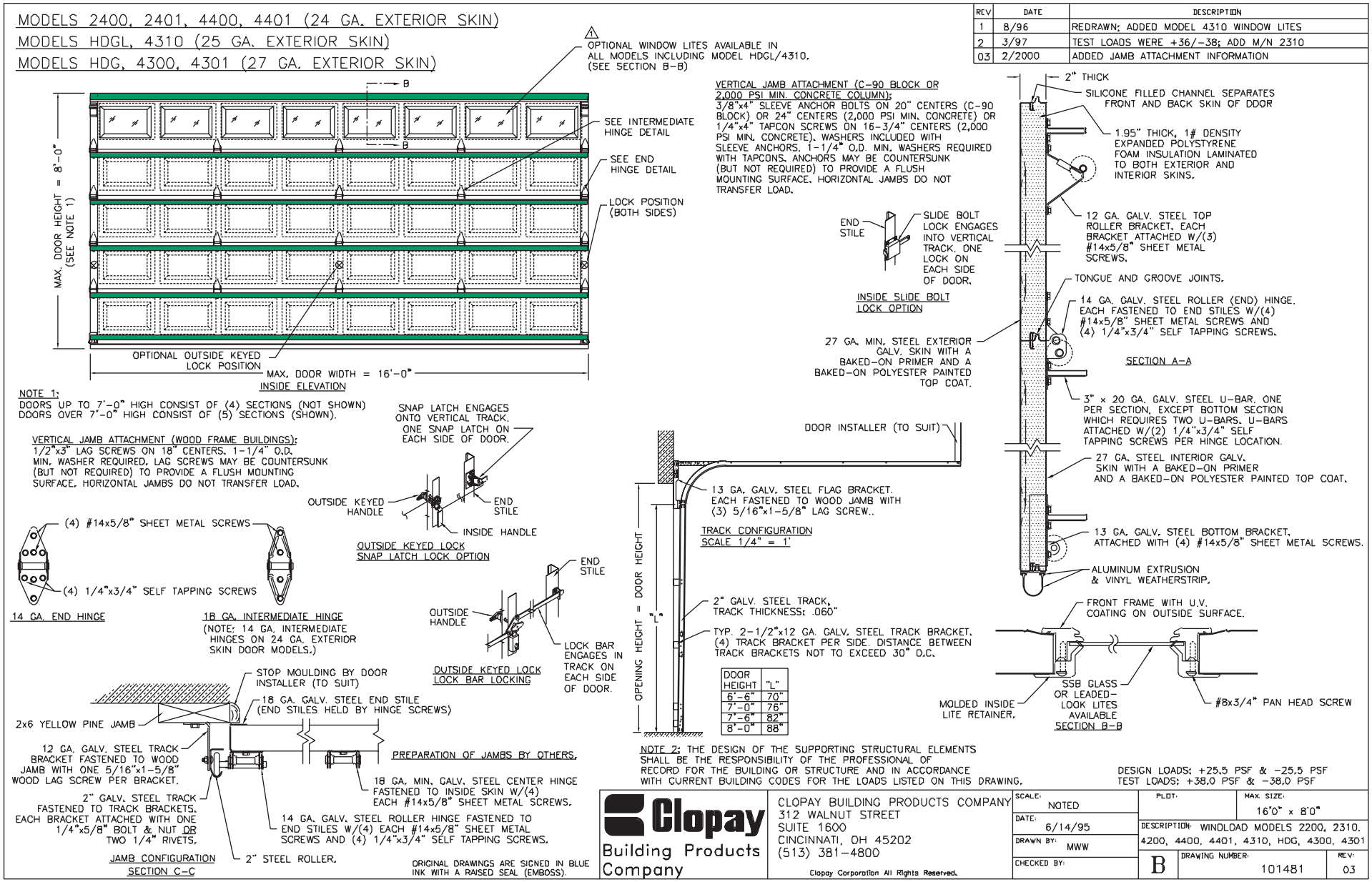


Fig. 13

CATEGORY: W4 MODELS: 73, 75, 82, 84A, 90, 94
STRUT PLACEMENT SHOWN IN GREEN



CATEGORY: W4 MODELS: 2400, 2401, 4400, 4401, 4300, 4301, 4310, HDG, HDGL
STRUT PLACEMENT SHOWN IN GREEN

Fig. 14

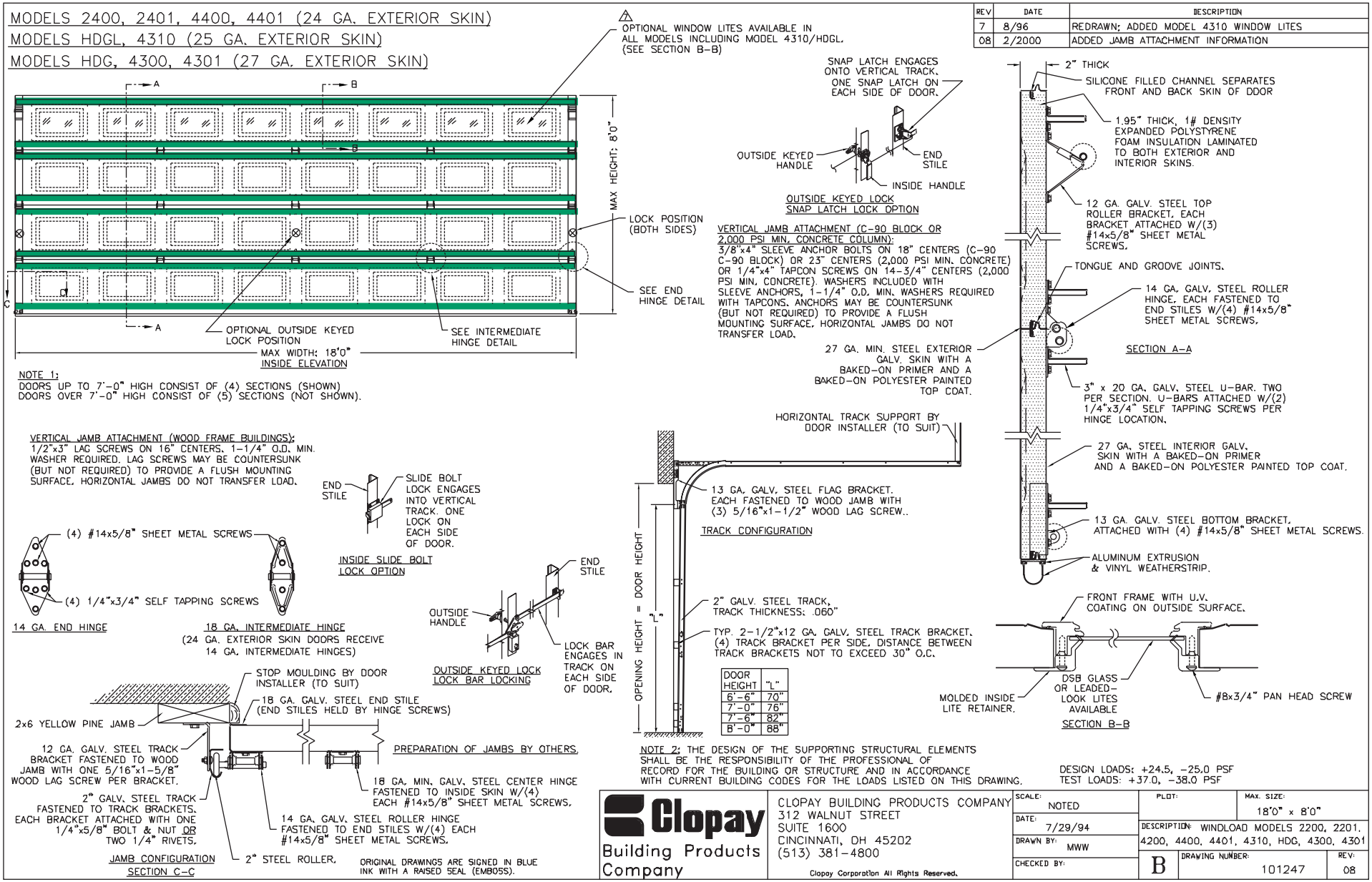


Fig. 15

CATEGORY: W4 2400, 2401, 4400, 4401, 4300, 4301, 4310, HDG, HDGL
STRUT PLACEMENT SHOWN IN GREEN

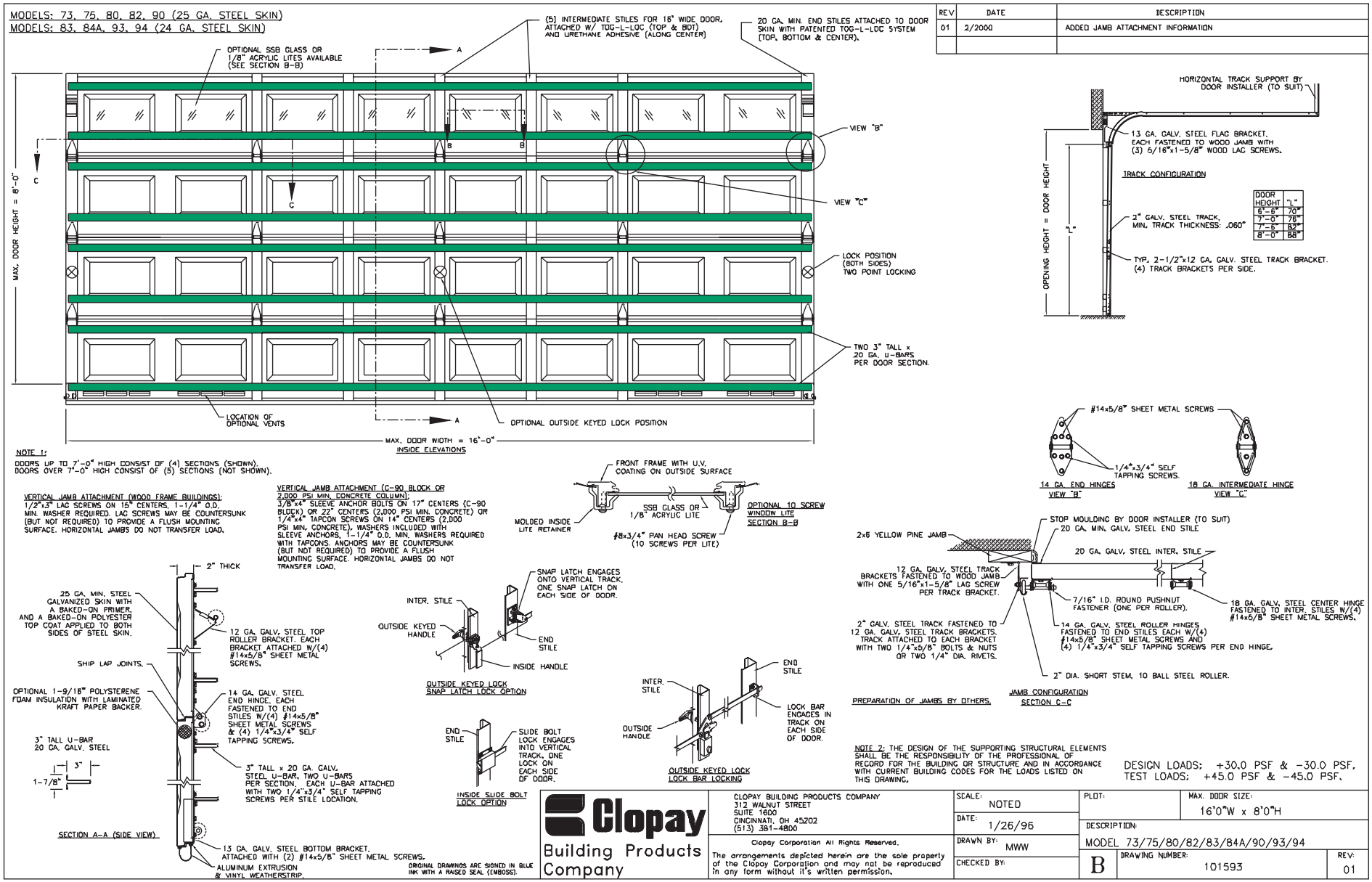
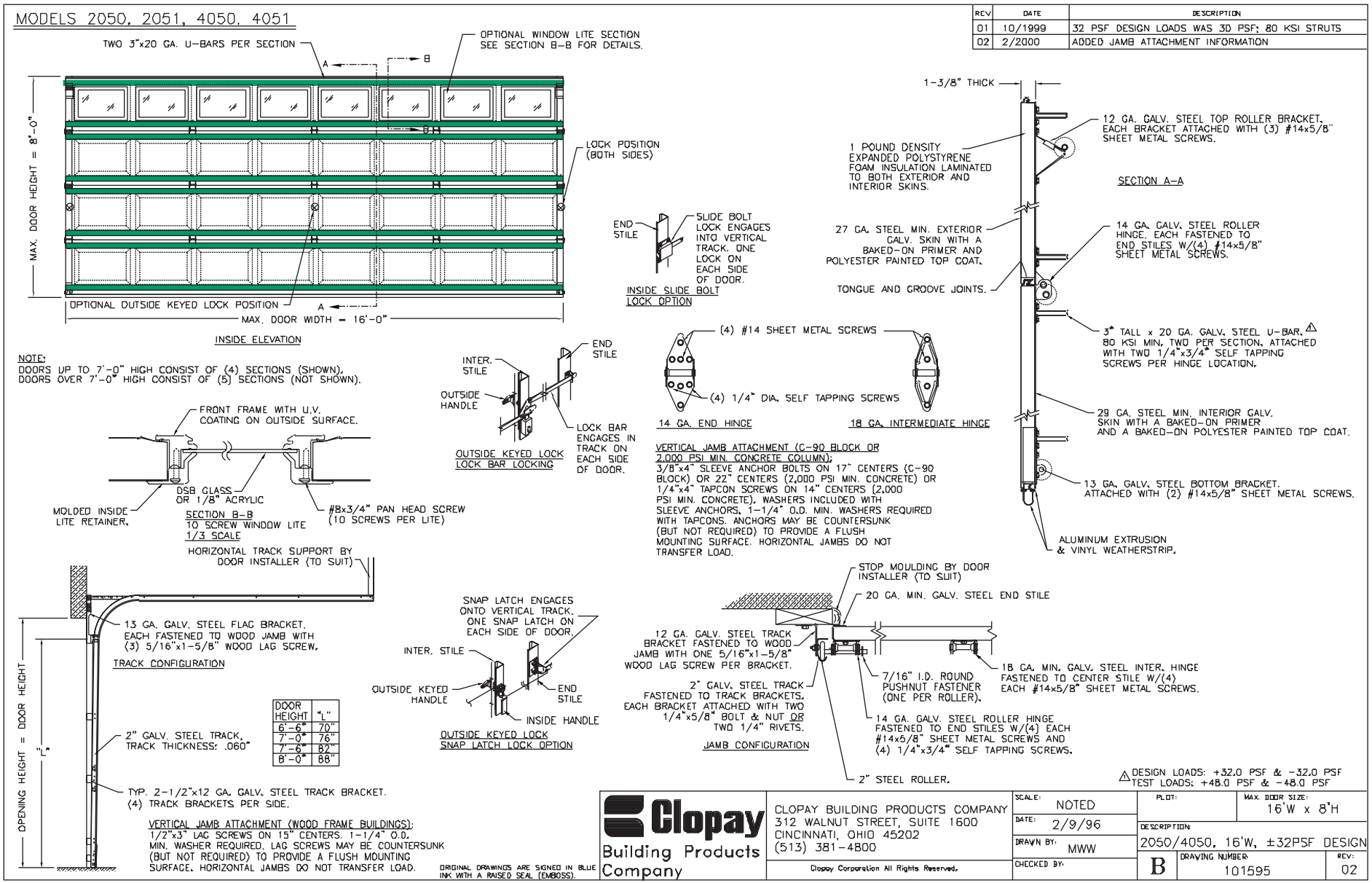


Fig. 16

CATEGORY: W5 MODELS: 73, 75, 82, 84A, 90, 94
STRUT PLACEMENT SHOWN IN GREEN



CATEGORY: W5 MODELS: 2050, 2051, 4050, 4051,
STRUT PLACEMENT SHOWN IN GREEN

Fig. 17

