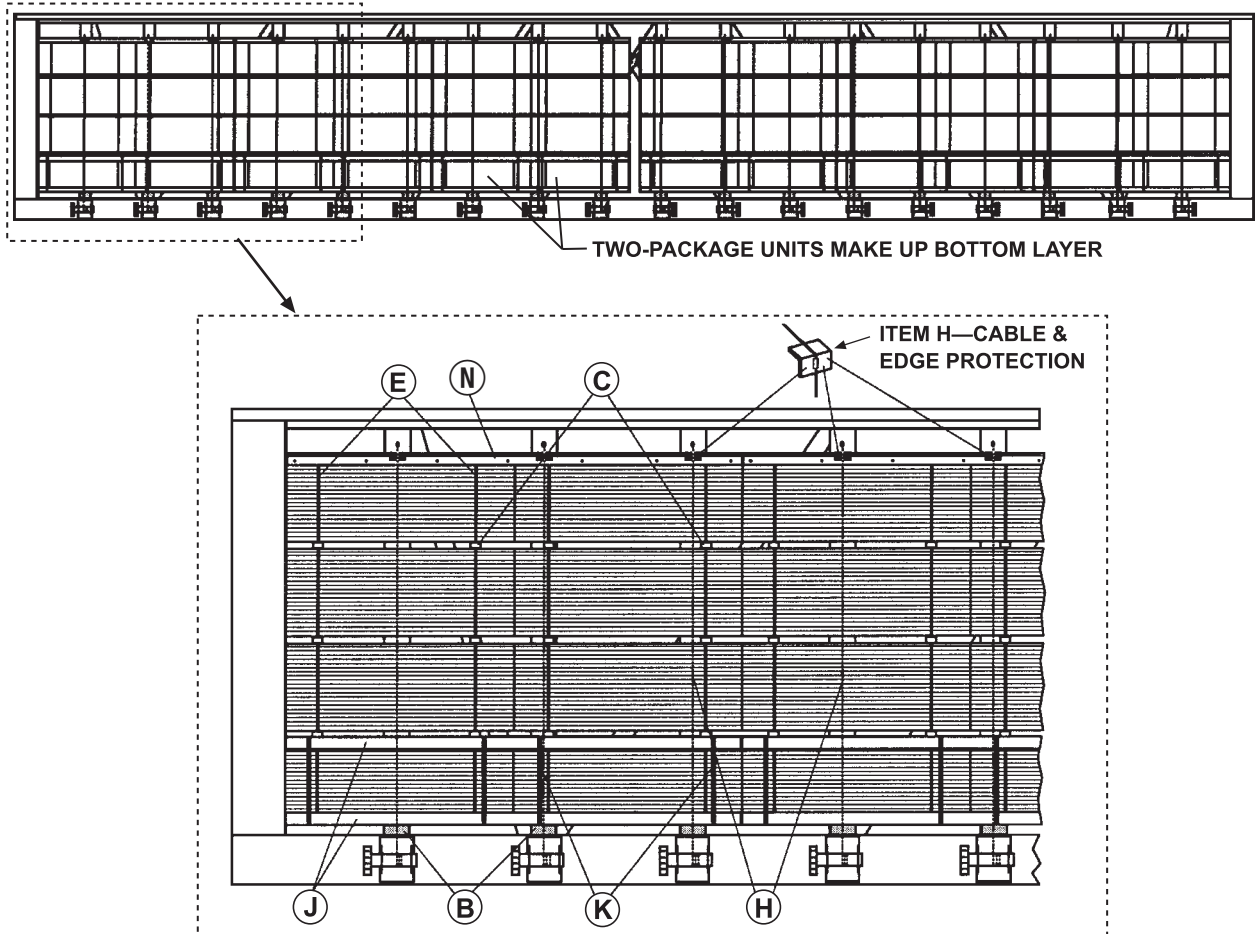


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Fig. 54-B (Rev. 11/19)
(New 6/97)

LUMBER, 4 FT TO 8 FT LONG, PACKAGED—CENTER A-FRAME FLATCARS, WITH CABLE TIE-DOWNS

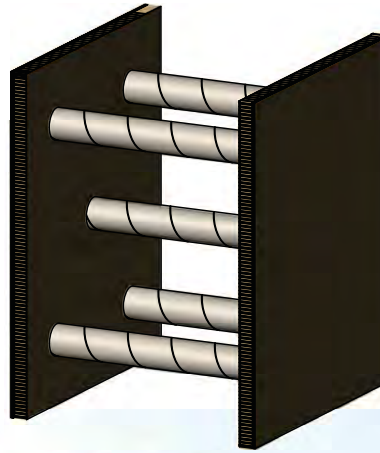


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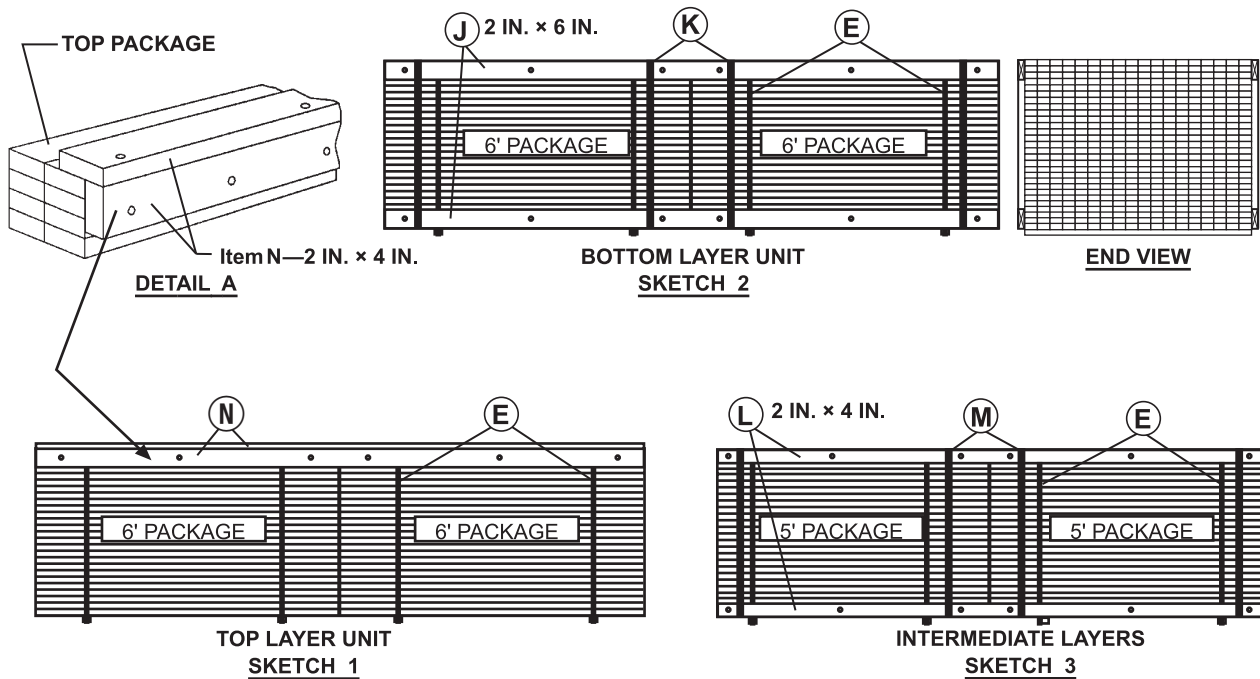
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Fig. 54-B (Rev. 11/19) (Continued)
(New 6/97)

LUMBER, 4 FT TO 8 FT LONG, PACKAGED—CENTER A-FRAME FLATCARS, WITH CABLE TIE-DOWNS



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**Fig. 54-B (Rev. 11/19) (Continued)
(New 6/97)**

LUMBER, 4 FT TO 8 FT LONG, PACKAGED—CENTER A-FRAME FLATCARS, WITH CABLE TIE-DOWNS

Item	No. of Pcs.	Description
A		When required, all packages in the top and bottom layers must consist of two packages joined end-to-end and referred to as units. Refer to drawings and these specifications for details. See Note 14.
B	Minimum 2 per unit.	Bearing pieces: cars are equipped with permanent floor bearing pieces wedged 90° to the A-frame.
Alternate Item B—For cars not equipped with permanent bearing pieces		
Alt B	Minimum 2 per package.	Bearing pieces: lumber of one piece, preferably rough. Width must be 2 in. greater than height and the length equal to width of bottom package. Locate approximately 12–18 in. from each end of package, with remaining pieces, if used, equally spaced. May be attached to package with Item E package ties. Note: When item Alt B is required, Items J and K may be omitted provided all packages in the bottom layer are 6 ft long or over. See Sketch 2.
C	Minimum 2 per package.	Separators: lumber, 2 in. × 2 in. minimum. Height must not be greater than width. Length to be equal to width of pile and in one piece. Locate approximately 12 in. from each end of package. Separators with a minimum width of 3 in. may be secured to top or bottom of packages in the bottom and intermediate layers with Item E package ties. Separators must not be attached to the top of packages in the top layer. (Use optional.)
D	Minimum 2 per separation in each package.	Stickers: minimum size 3/8 in. × 1 1/2 in. Length must be equal to, but not greater than, width of package. When used, they must be of uniform thickness throughout. Not shown on drawings. (Use optional.)
E	2 per package.	Package ties: 1,600 lb minimum breaking strength, high tension bands or wire. Locate one tie about 12 in. from each end of package, but outside of Item D stickers. This banding may be substituted with approved non-metallic strapping as permitted in Section 1, General Rule 19.
F	As required.	Void filler: LLP dunnage system. Comprised of two honeycomb end panels and five wax-coated/weather-resistant sono tubes. Panels must be wrapped/protected from the elements. This system is required in bottom two layers on both sides of the car with voids from 13 in. up to 36 in. Void filler must be secured to prevent displacement.
G	1 band on top package on either side of a void space greater than 2 ft.	Compression package band: 1 1/4 in. × .029 in. high tension band. May be substituted with approved 1 1/4 in. wide Type IA, Grade 4, polyester strapping per Section 1, General Rule 19. Locate near the center of the package as shown in Detail A. In accordance with Detail A, apply two compression blocks, one on top of the package and one on the side of the package facing away from the centerbeam. Blocks are to be lumber, minimum 2 in. × 4 in., length equal to about one third the width of the surface to which they are to be applied. Position each block centrally across the package surface as shown. Secure each block with a minimum of two nails. The nail length must be sufficient to penetrate package material at least 1 in. and have about 3/4 in. remaining above the block. Encircle the package with the band, placing it over both blocks, then bend the nail heads over the band as shown. See Sketch 4, Detail A and B. See Sketch 5 for required location of compression package(s).
H	Minimum 2 per each top unit.	Cables: 3/8 in. diameter, minimum of 8,800 lb breaking strength. Cable assemblies must be equipped with edge protectors (steel or plastic). Winch assemblies must be equipped with a device to maintain tension. Prior to tightening, there must be a minimum of 2 1/2 wraps of cable around the winch drum. All cables must be used and must be free of kinks and tangles. Tension to be applied with the use of an 18 in. bar or 3/4 in. ratchet. Cables are to be secured to A-frame in slot nearest to top of top package. (See Note 16.)

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Fig. 54-B (Rev. 11/19) (Continued)
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LUMBER, 4 FT TO 8 FT LONG, PACKAGED—CENTER A-FRAME FLATCARS, WITH CABLE TIE-DOWNS

Item	No. of Pcs.	Description
Method A—Bottom Layer Preparation		
To be used for combining two packages into a unit for loading on the bottom layer of load. Units can be formed from the combination of two packages of any length totaling a minimum of 8 ft long.		
J	4 per each unit.	Unit boards: lumber, 2 in. × 6 in., length equal to length of the unit. Locate boards flush with the top and bottom of two end-to-end packages, comprising a unit, on the front and back side. Secure each board to each individual package with a minimum of three 16-D nails evenly spaced. All packages in bottom layer less than 8 ft long must be part of a unit comprised of two packages. See Sketch 2 and End View.
K	4 per each unit.	Unit bands: 3/4 in. × .022 in. high tension bands or Type 1A, Grade 4 Strapping. Locate two bands around each package and Items J in each unit, approximately 12 in. from the end of packages. See Sketch 2 for preparation of units.
Method B—Intermediate Layer Preparation		
Required Only for Packaged Lumber Less than 6 ft Long To be used for combining two packages into a unit for loading on the intermediate layers of load. Units are to be formed from the combination of two packages of any length totaling a minimum of 8 ft.		
L	4 per each unit.	Unit boards: lumber, 2 in. × 4 in., length equal to length of the unit. Locate boards flush with the top and bottom of two end-to-end packages, comprising a unit, on the front and back side. Secure each board to each individual package with a minimum of three 16-D nails evenly spaced. All packages less than 6 ft long in the intermediate layers must be part of a unit comprised of two packages. See Sketch 3.
M	4 per each unit.	Unit bands: 3/4 in. × .022 in. high tension bands or Type 1A, Grade 4 Strapping. Locate two bands around each package and Items L in each unit, approximately 12 in. from the end of packages. See drawings in Sketch 3 for preparation of units.
N	1 cap per unit.	Top corner cap: each cap assembly to consist of two pieces lumber, minimum 2 in. × 4 in., length equal to length of unit package. Locate one piece along the top outside edge of one unit (comprised of two end-to-end packages) in top layer, positioning the 4 in. width vertically. Make flush with top and ends of packages and secure to side of packages with 16-D nails spaced about every 12 in. Locate second piece along top of packages and flush with the outside edge of the first piece, forming a corner angle over unit. Secure top piece to edge of lower piece with 16-D nails spaced approximately 24 in. apart as shown in drawings. Any top-layer package that is not fully protected by two Item H cables must be part of unit comprised of two packages, each protected by Item N. See Sketch 1 and Detail A.

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Fig. 54-B (Rev. 11/19) (Continued)
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LUMBER, 4 FT TO 8 FT LONG, PACKAGED—CENTER A-FRAME FLATCARS, WITH CABLE TIE-DOWNS

Notes and Additional Requirements:

1. This figure is intended for packaged dimensional lumber 4 ft to less than 8 ft in length that, when placed in the top layer, could result in less than two Item H cables protecting the package. Lumber 8 ft long may be included in this figure and should be located in the top layer first to minimize the need for Item N top corner caps, and then in the bottom layer. (Lumber 8 ft long and over may be loaded to Fig. 54 in this Section.)
2. Load must comply with Item F when either of the bottom two layers have voids of 13 in. up to 36 in.
3. Voids, if any, must be in center of load and kept to a minimum.
4. Finished packages must have sides square and must be composed of pieces of uniform length, width, and thickness.
5. Packages must be placed tight against A-frame to prevent loosening of cables.
6. Packages must not exceed 48 in. in height. All packages in same layer must be of equal height.
7. Bottom units must not overhang the outside edge of permanent bearing pieces by more than one half the width of the outside board in bottom package.
8. All units in the top and bottom layers must be composed of packages of equal width.
9. Any full length package that is not covered by a package above it is considered to be a top layer package and must be protected by Item N.
10. Top packages on either side of a void space greater than 2 ft must be protected using Item G. A top layer package is defined as any package with no packages loaded directly above. A package that is not "completely" covered by a package above is also considered a top package and is required to have a compression package band applied. (See Detail B). Where customer requirements mandate the use of package wrap, the compression package band must be applied over the package wrap.
11. Height of load must not exceed height of A-frame.
12. Intermediate layers are those located between the top and bottom layers. Any packages shorter than 6 ft in an intermediate layer must be prepared in accordance with Method B. If only one package is shorter than 6 ft in such a layer, it must be combined with a 6-ft package as described.
13. Dunnage, attached or otherwise, must not be placed on top of permanent floor risers or bearing pieces.
14. When the bottom package is supported by two bearing pieces located not less than 12 in. from the ends of the package, it is not required to join two packages as a unit. When the top package is secured by two tie-down cables located not less than 12 in. from the ends of the package, it is not required to join two packages as a unit.
15. In lieu of Item N "Top Corner Caps," top packages that do not accommodate two Item H "Cables" may be unitized by one Type 1A, Grade 7 Strap encircling packages on both sides of the car and secured with an approved ladder buckle. Straps are to be positioned 1 ft from the ends of the packages they are unitizing.

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Fig. 54-B (Rev. 11/19) (Continued)
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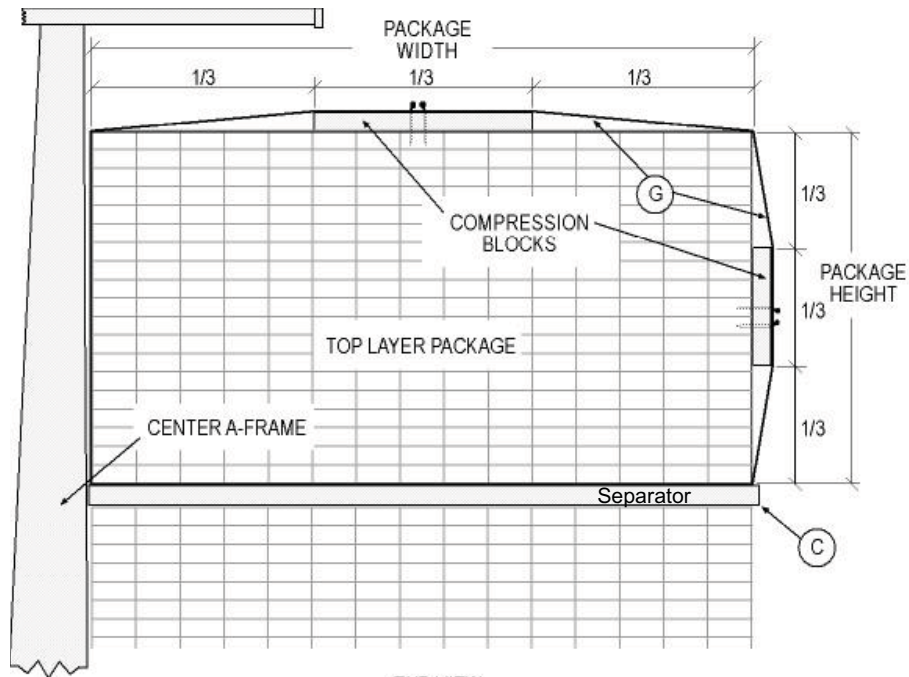
LUMBER, 4 FT TO 8 FT LONG, PACKAGED—CENTER A-FRAME FLATCARS, WITH CABLE TIE-DOWNS

Notes and Additional Requirements (concluded):

16. When it is not possible to get two cables over each package on both sides of the centerbeam, Type 1A Grade 7 encircling bands (may be used to encircle all packages on both sides of the centerbeam).

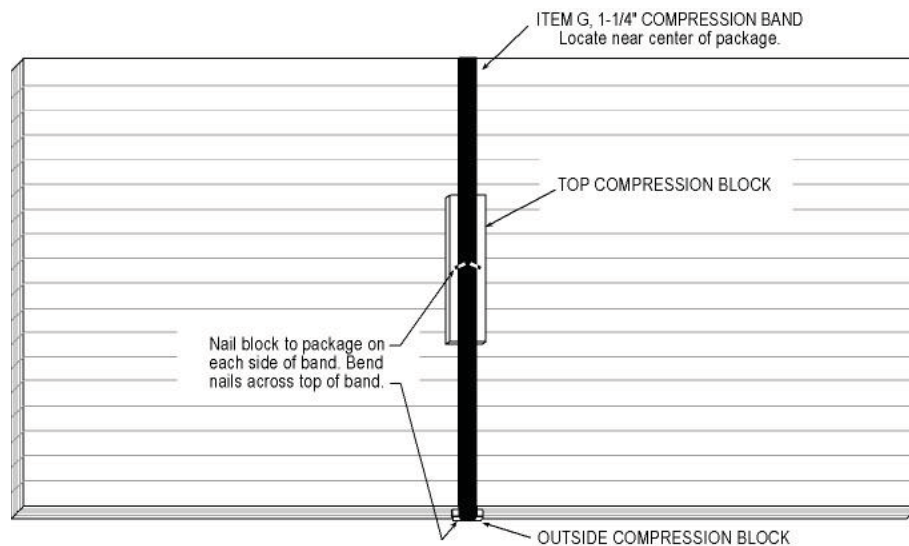
Reference the General Rules in Section 1 of the *Open Top Loading Rules Manual* for additional details.

SKETCH 4—DETAILS A AND B



END VIEW

DETAIL A



TOP VIEW

DETAIL B

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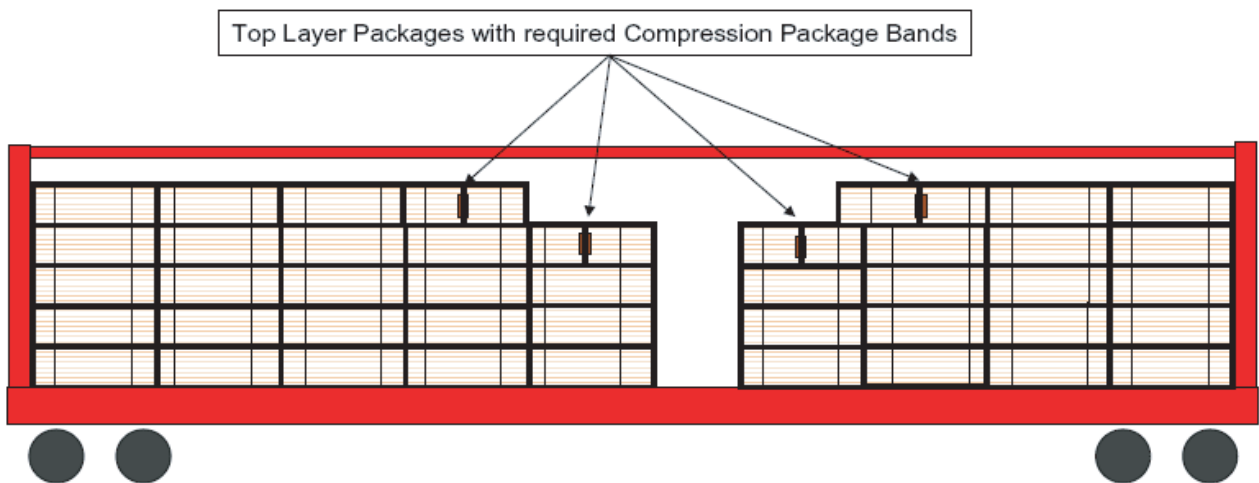
Fig. 54-B (Rev. 11/19) (Concluded)
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LUMBER, 4 FT TO 8 FT LONG, PACKAGED—CENTER A-FRAME FLATCARS, WITH CABLE TIE-DOWNS

THE SPACING OF THE CABLES AND THE LENGTH OF THE PACKAGES MAKE IT POSSIBLE TO ADD ONLY ONE CABLE TO PACKAGES 1, 3, 5, 7, 9, AND 11. ADD TYPE 1A GRADE 7 STRAP TO THOSE LOCATIONS TO PROPERLY SECURE THE LOAD.



SKETCH 5



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