

LOADING AND BRACING (TL & LTL) IN CLOSED OR OPEN TOP VAN TRAILERS OF 105MM AMMUNITION IN PA84 FIBER CONTAINER PACKED 39 PER WIREBOUND BOX

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● CAUTION: THE PROCEDURES SHOWN HEREIN ARE ONLY APPLICABLE FOR HIGHWAY MOVEMENTS; NOT FOR TRAILER-ON-FLATCAR MOVEMENTS.

U.S. ARMY MATERIEL COMMAND DRAWING			
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DO NOT SCALE

GENERAL NOTES

- A. THIS DOCUMENT HAS BEEN PREPARED AND ISSUED IN ACCORDANCE WITH AR 740-1 AND AUGMENTS TM 743-200-1 (CHAPTER 5).
- B. THE OUTLOADING PROCEDURES SPECIFIED IN THIS DRAWING ARE APPLICABLE TO 105MM AMMUNITION IN PAB4 FIBER CONTAINER PACKED 39 PER PALLET BOX. SUBSEQUENT REFERENCE TO PALLET BOX MEANS THE PALLET BOX WITH CONTENTS. SEE THE PICTORIAL VIEW ON PAGE 3 FOR SIZE AND WEIGHT. REFER TO U.S. ARMY ARMAMENT RESEARCH AND DEVELOPMENT COMMAND DRAWING 9328578 FOR DETAILS OF THE WIREBOUND PALLET BOX.
- C. THE OUTLOADING PROCEDURES DEPICTED WITHIN THIS DOCUMENT ARE APPLICABLE FOR SHIPMENTS IN CONVENTIONAL TYPE VAN TRAILERS, AND APPLY TO TRAILERS HAVING WOOD, OR WOOD AND METAL, OR ALL METAL FLOORS. VAN TRAILERS WHICH ARE 40'-0" LONG BY 7'-8" WIDE (INSIDE DIMENSION) HAVE BEEN SHOWN, HOWEVER, THE PROCEDURES ARE ALSO APPLICABLE FOR TRAILERS WHICH ARE 89" THRU 99" IN WIDTH AND FOR TRAILERS OF OTHER LENGTHS FROM THE SHORTEST TO THE LONGEST AVAILABLE (REF: 24' TO 53'), AND FOR STRAIGHT TRUCK VANS. THE LOADING AND BRACING PROCEDURES SPECIFIED HEREIN ARE ALSO ADEQUATE (CONFIGURATION WISE AND STRENGTH WISE) FOR LOADS IN SHORTER OR LONGER VANS AND IN NARROWER OR WIDER VANS THAN SHOWN. THE SPECIFIED BRACING IS ADEQUATE FOR LOADS WEIGHING UP TO AND INCLUDING THE MAXIMUM WEIGHTS PERMITTED BY LAW.
- D. SELECTION OF A VEHICLE TO BE USED TO TRANSPORT THE DESIGNATED ITEM MUST COMPLY WITH AR 55-355, CHAPTER 29, FOR EXPLOSIVES AND OTHER DANGEROUS ARTICLES, IN FULL.
- E. THE GROSS WEIGHT AND AXLE DISTRIBUTION OF WEIGHT FOR A LOAD WILL BE THE RESPONSIBILITY OF THE CARRIER. THE CARRIER WILL ADVISE THE SHIPPER OF THE APPLICABLE LOADING REQUIREMENTS, AND THE SHIPPER WILL LOAD ACCORDINGLY. THE TOTAL WEIGHT OF THE LADING, OF THE DUNNAGE, OF THE TRACTOR, AND OF THE SEMITRAILER CARRYING THE LADING MUST NOT EXCEED THE MAXIMUM GROSS WEIGHT ALLOWED FOR THE STATE OR STATES THRU WHICH THE LOAD IS TO BE TRANSPORTED BY MOTOR CARRIER. LIKEWISE, THE GROSS WEIGHT ON A SINGLE OR TANDEM AXLE MUST NOT EXCEED THE MAXIMUM ALLOWABLE WEIGHT. IF THERE IS ANY DOUBT AS TO WHETHER THE TOTAL GROSS WEIGHT OR AXLE WEIGHT EXCEEDS THE MAXIMUM ALLOWED, WEIGHT SHOULD BE VERIFIED BY ACTUALLY WEIGHING THE LOADED VEHICLE.
- F. NOTICE: A SHIPMENT WILL BE POSITIONED IN THE TRAILER CONSISTENT WITH STATE WEIGHT LAWS. THE NUMBER OF LADING UNITS MAY BE ADJUSTED TO FIT THE SIZE OF THE TRAILER TO BE LOADED OR THE QUANTITY TO BE SHIPPED. COMBINATIONS OF THE OUTLOADING PROCEDURES SPECIFIED MAY BE USED, HOWEVER, THE APPROVED METHODS SHOWN MUST BE FOLLOWED AS CLOSELY AS POSSIBLE FOR BLOCKING, BRACING, AND STAYING OF THE DESIGNATED ITEMS.
- G. THE "LOAD AS SHOWN" FOR THE FULL LOAD DEPICTED HEREIN IS BASED ON AN APPROXIMATE LADING WEIGHT OF 42,000 POUNDS. THE SPECIFIED BLOCKING AND BRACING FOR THE FULL LOAD IS ADEQUATE FOR THE RETENTION OF HEAVIER LOADS, IF IT IS DESIRED TO INCREASE THE LADING WEIGHT.
- H. OTHER TYPES OF LADING ITEMS MAY BE LOADED INTO TRAILERS WHICH ARE PARTIALLY LOADED WITH PALLET BOXES PROVIDING THE TOTAL LOAD IS COMPATIBLE, EXISTING DIRECTIVES ARE NOT VIOLATED, AND THE OTHER LADING ITEMS ARE BLOCKED AND BRACED TO EQUAL THE BLOCKING AND BRACING CRITERIA SPECIFIED HEREIN.

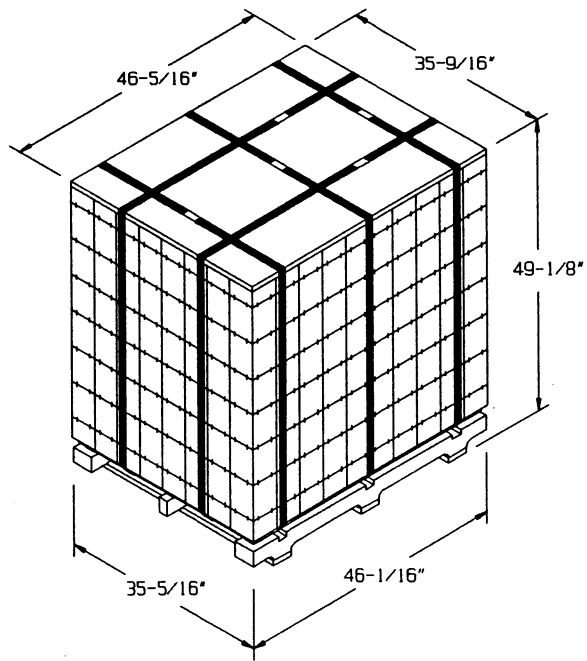
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MATERIAL SPECIFICATIONS

- LUMBER - - - - - : FED SPEC MM-L-751. SEE TM 743-200-1.
(DUNNAGE LUMBER)
- NAILS - - - - - : FED SPEC FF-N-105; COMMON.

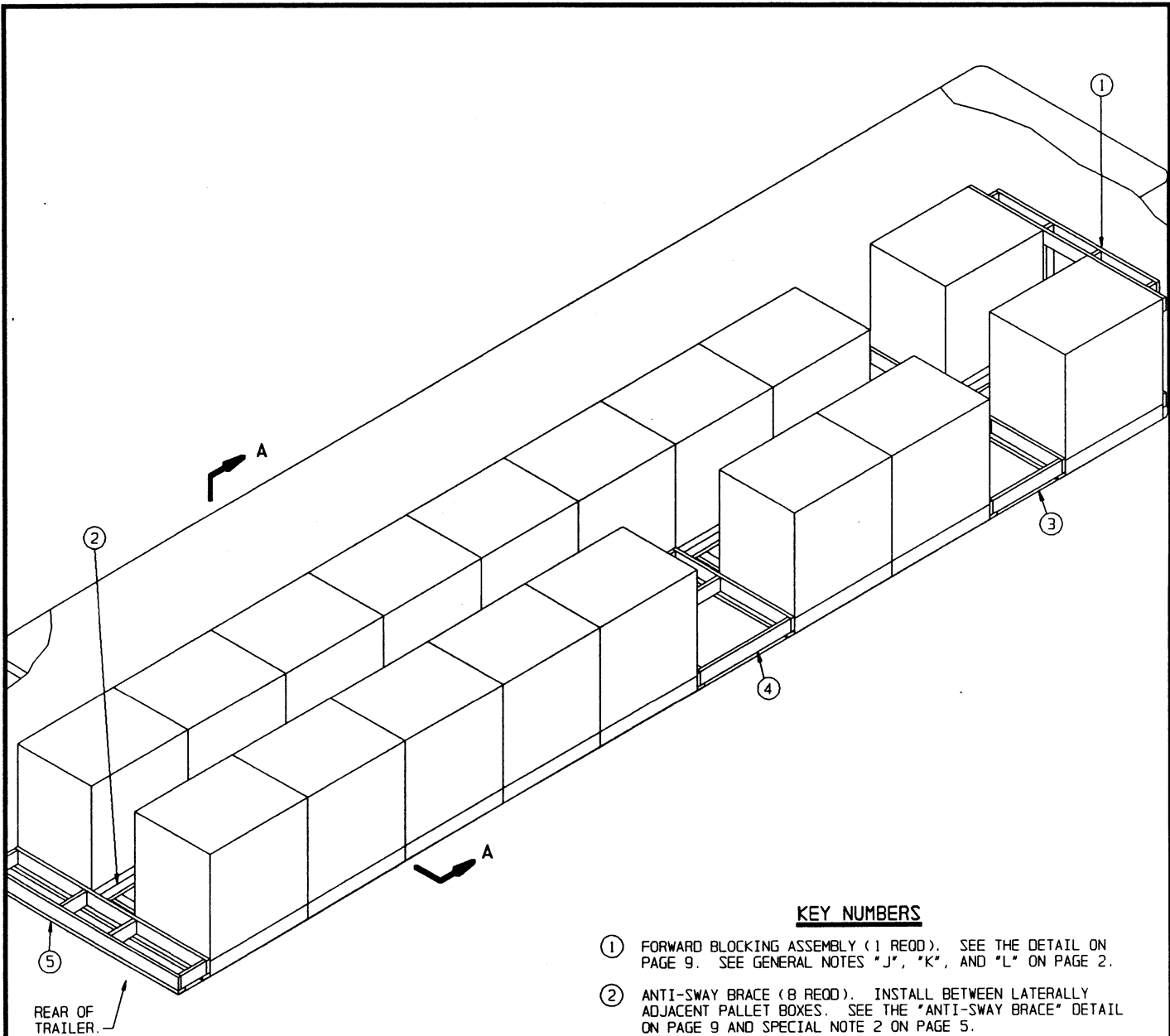
(GENERAL NOTES CONTINUED)

- J. SOME LOADS ARE SHOWN IN TRAILERS HAVING ROUNDED CORNERS AT THE FORWARD END. IF THE CONVENTIONAL VAN TRAILER BEING USED IS EQUIPPED WITH A SQUARE FRONT OR WITH AN INSTALLED BULKHEAD, OMIT THE FORWARD BLOCKING ASSEMBLY, PIECE MARKED (1), AND POSITION THE PALLET UNITS DIRECTLY AGAINST THE FORWARD PORTION OF THE TRAILER.
- K. NOTICE: A STAGGERED NAILING PATTERN WILL BE USED WHEREVER POSSIBLE WHEN NAILS ARE DRIVEN INTO JOINTS OF DUNNAGE ASSEMBLIES. ALSO, A STAGGERED NAILING PATTERN WILL BE USED WHEN DUNNAGE IS NAILED TO THE FLOOR OF THE TRANSPORTING VEHICLE, OR WHEN LAMINATING DUNNAGE. THE NAILING PATTERN WILL BE ADJUSTED AS REQUIRED SO THAT A NAIL DOES NOT PENETRATE INTO OR NEAR A CRACK BETWEEN FLOOR BOARDS. ADDITIONALLY, THE NAILING PATTERN FOR AN UPPER PIECE OF LAMINATED DUNNAGE WILL BE ADJUSTED AS REQUIRED SO THAT A NAIL FOR THAT PIECE WILL NOT BE DRIVEN THROUGH, ONTO, OR RIGHT BESIDE A NAIL IN A LOWER PIECE.
- L. POWER DRIVEN STAPLES MAY BE USED AS ALTERNATIVE FASTENERS FOR NAILS WHEN CONSTRUCTING DUNNAGE ASSEMBLIES WHICH ARE TO BE USED IN THE DELINEATED TRAILER LOADS SHOWN THROUGHOUT THIS DRAWING. THE STAPLES TO BE USED MUST BE EQUAL IN LENGTH TO THE SPECIFIED NAIL SIZE AND MUST BE SUBSTITUTED ON A ONE STAPLE FOR ONE NAIL BASIS. STAPLES WHICH ARE 2-1/2" OR LESS IN LENGTH SHOULD BE IN ACCORDANCE WITH FEDERAL SPECIFICATION FF-N-105 AS NEARLY AS PRACTICABLE. STAPLES WHICH ARE LONGER THAN 2-1/2" WILL BE A COMMERCIAL GRADE, OF A QUALITY EQUIVALENT TO THOSE MANUFACTURED BY SENC0 PRODUCTS INCORPORATED. NOTE: STAPLES WILL NOT BE SUBSTITUTED FOR NAILS IN ANY LOAD RESTRAINING FLOOR DUNNAGE APPLICATION.
- M. DUNNAGE LUMBER SPECIFIED THROUGHOUT THIS PROCEDURAL DRAWING IS OF NOMINAL SIZE. FOR EXAMPLE, 2" X 4" MATERIAL IS ACTUALLY 1-1/2" THICK BY 3-1/2" WIDE AND 2" X 6" MATERIAL IS ACTUALLY 1-1/2" THICK BY 5-1/2" WIDE.
- N. TRAILERS EQUIPPED WITH ROLL-UP TYPE DOORS MAY BE USED; HOWEVER, THE NAILED-HEADER METHOD OF REAR BLOCKING MUST BE INSTALLED. SEE THE "PROCEDURES FOR CONVENTIONAL VAN TRAILERS EQUIPPED WITH ROLL-UP TYPE DOORS" ON PAGE 12 FOR GUIDANCE. NOTE THAT THE NAILED-HEADER METHOD OF REAR BLOCKING FOR TRAILERS EQUIPPED WITH ROLL-UP TYPE DOORS MAY ALSO BE USED IN TRAILERS EQUIPPED WITH HINGED DOORS.
- O. PORTIONS OF THE TRAILERS, SUCH AS SIDEWALLS, ENDWALLS, AND ROOFS, HAVE NOT BEEN SHOWN IN THE LOAD VIEWS FOR CLARITY PURPOSES.
- P. FOR ADDITIONAL GUIDANCE, ATTENTION IS DIRECTED TO THE "SPECIAL NOTES" SECTIONS WHICH ARE IMMEDIATELY ADJACENT TO THE DEPICTED OUTLOADING METHODS.
- Q. CAUTION: WHEN POWER OR PNEUMATIC NAILERS ARE BEING USED IN THE APPLICATION OF NAILED FLOORLINE BLOCKING OR BRACING, PALLET BOXES OR CONTAINERS BEING LOADED INTO THE CONVEYANCE MUST BE POSITIONED TO ALLOW A CLEAR PATH OF EXIT FOR THE OPERATOR AT ALL TIMES, SHOULD AN EMERGENCY EXIT BECOME NECESSARY.



WIREBOUND PALLET BOX

UNIT WEIGHT - - - - - 2,432 LBS (APPROX)
CUBE - - - - - 46.9 CU FT (APPROX)

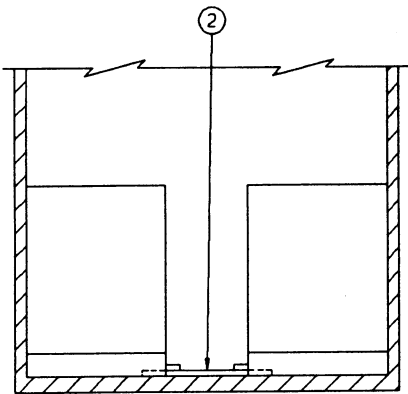


ISOMETRIC VIEW

REAR OF TRAILER.

KEY NUMBERS

- ① FORWARD BLOCKING ASSEMBLY (1 REOD). SEE THE DETAIL ON PAGE 9. SEE GENERAL NOTES "J", "K", AND "L" ON PAGE 2.
- ② ANTI-SWAY BRACE (8 REOD). INSTALL BETWEEN LATERALLY ADJACENT PALLET BOXES. SEE THE "ANTI-SWAY BRACE" DETAIL ON PAGE 9 AND SPECIAL NOTE 2 ON PAGE 5.
- ③ SPACER ASSEMBLY (1 REOD). SEE THE "SPACER ASSEMBLY A" DETAIL ON PAGE 10. SEE SPECIAL NOTE 3 ON PAGE 5.
- ④ SPACER ASSEMBLY (1 REOD). SEE THE "SPACER ASSEMBLY B" DETAIL ON PAGE 10. SEE SPECIAL NOTE 4 ON PAGE 5.
- ⑤ REAR BLOCKING ASSEMBLY (1 REOD). SEE THE "REAR BLOCKING ASSEMBLY A" DETAIL ON PAGE 11. SEE SPECIAL NOTE 5 ON PAGE 5, AND GENERAL NOTE "N" ON PAGE 2.



SECTION A-A

PIECES MARKED ① AND ④ OMITTED FOR CLARITY.

SPECIAL NOTES:

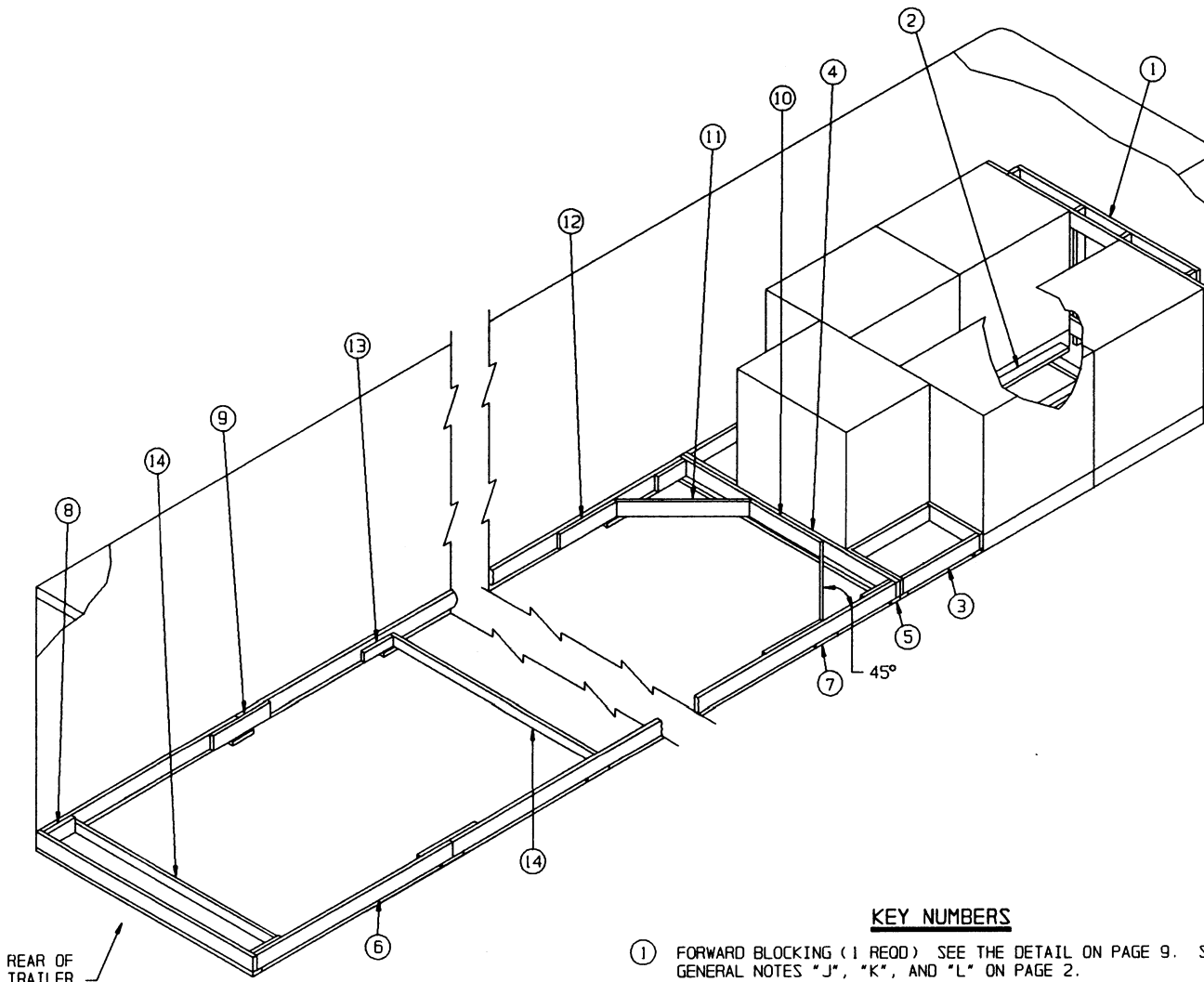
1. A 17-UNIT LOAD IS SHOWN IN A 40'-0" LONG BY 7'-8" WIDE (INSIDE DIMENSION) CONVENTIONAL VAN TRAILER. TRAILERS OF OTHER DIMENSIONS CAN BE USED.
2. ANTI-SWAY BRACES, SHOWN AS PIECES MARKED ② IN THE LOAD ON PAGE 4, ARE REQUIRED BETWEEN ALL Laterally ADJACENT PALLET BOXES.
3. SPACER ASSEMBLY "A" SHOWN AS PIECE MARKED ③ IN THE LOAD ON PAGE 4 IS USED FOR THE PURPOSE OF PROVIDING FOR PROPER WEIGHT DISTRIBUTION, AND IS SHOWN AS TYPICAL ONLY. IF THE TRAILER TO BE LOADED IS LONGER THAN 40' THE LOCATION OF THE ASSEMBLY, AND/OR THE STRUT LENGTHS, MAY BE DIFFERENT THAN WHAT IS SHOWN. IF A SHORTER TRAILER IS USED FOR THE DEPICTED LOAD, THIS ASSEMBLY MAY NOT BE REQUIRED. NOTE THAT A SPACER ASSEMBLY MUST NOT BE POSITIONED ADJACENT TO THE FORWARD BLOCKING ASSEMBLY, PIECE MARKED ①.
4. SPACER ASSEMBLY "B" SHOWN AS PIECE MARKED ④ IN THE LOAD VIEW, IS ONLY SHOWN TO DEPICT A TYPICAL INSTALLATION. IF A PALLET BOX IS LOADED IN PLACE OF A SPACER ASSEMBLY, PIECE MARKED ④ WILL NOT BE REQUIRED. NOTE THAT A SPACER ASSEMBLY MUST BE POSITIONED WHERE THERE WILL BE A PALLET BOX AT EACH END; A SPACER ASSEMBLY MUST NOT BE POSITIONED ADJACENT TO THE FORWARD BLOCKING ASSEMBLY, PIECE MARKED ①.
5. IF THE SPACE AT THE REAR OF THE LOAD BETWEEN THE PALLET BOXES AND THE REAR DOOR MEASURES 1-1/2" OR LESS, REAR BLOCKING IS NOT REQUIRED. IF THE SPACE AT THE REAR OF THE LOAD IS GREATER THAN 1-1/2" BUT LESS THAN 9", USE "REAR BLOCKING ASSEMBLY B" AS DETAILED ON PAGE 11. IF THE SPACE AT THE REAR OF THE LOAD IS 9" OR GREATER, USE THE "REAR BLOCKING ASSEMBLY A", PIECE MARKED ⑤ ON PAGE 4.

BILL OF MATERIAL

LUMBER	LINEAR FEET	BOARD FEET
2" X 4"	151	101
2" X 6"	95	95
NAILS	NO. REOD	POUNDS
10d (3")	236	3-3/4

LOAD AS SHOWN

ITEM	QUANTITY	WEIGHT (APPROX)
PALLET UNIT	17	41,344 LBS
DUNNAGE		393 LBS
TOTAL WEIGHT		41,737 LBS (APPROX)



ISOMETRIC VIEW

(KEY NUMBERS CONTINUED)

- ⑩ CENTER CLEAT, 2" X 6" X 30" (1 REOD). NAIL TO A HEADER, PIECE MARKED ④, W/6-10d NAILS.
- ⑪ DIAGONAL BRACE, 2" X 6" BY CUT TO FIT (2 REOD). DOUBLE BEVEL EACH END WITH 45° CUTS. INSTALL AT A 45° ANGLE AS SHOWN AND TOENAIL TO THE ADJACENT HEADER AND SIDE STRUT, PIECES MARKED ④ AND ⑥, W/2-16d NAILS AT EACH END.
- ⑫ BACK-UP CLEAT, 2" X 6" X 24" (2 REOD). NAIL TO A SIDE STRUT, PIECE MARKED ⑥, W/8-10d NAILS.
- ⑬ STRUT BRACE RETAINING CLEAT, 2" X 4" X 12" (AS REOD). NAIL TO A SIDE STRUT, PIECE MARKED ⑥, W/3-10d NAILS. SEE SPECIAL NOTE 5 ON PAGE 7.
- ⑭ STRUT BRACE, 2" X 4" BY TRAILER WIDTH MINUS 3" IN LENGTH (MINIMUM OF ONE REQUIRED). NAIL TO THE POCKET CLEATS, PIECES MARKED ⑧, AND/OR TO THE STRUT BRACE RETAINING CLEATS, PIECES MARKED ⑬, W/2-12d NAILS AT EACH END. SEE SPECIAL NOTE 5 ON PAGE 7.

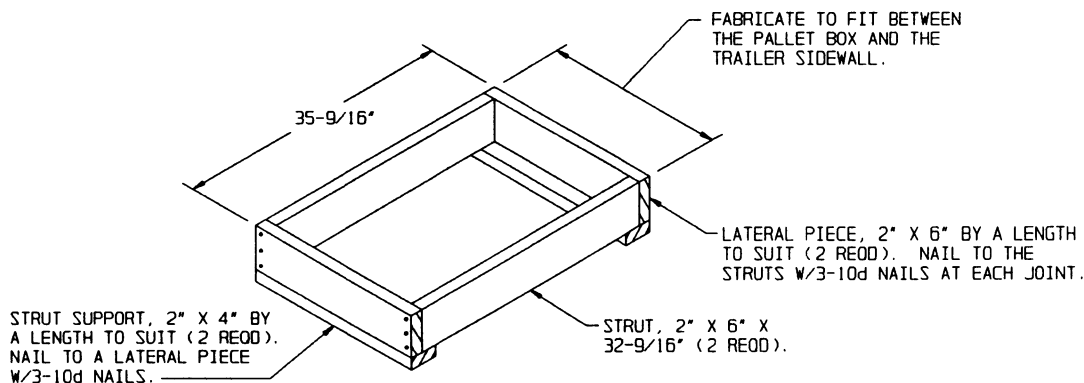
KEY NUMBERS

- ① FORWARD BLOCKING (1 REOD) SEE THE DETAIL ON PAGE 9. SEE GENERAL NOTES "J", "K", AND "L" ON PAGE 2.
- ② ANTI-SWAY BRACE (2 REOD). INSTALL BETWEEN LATERALLY ADJACENT PALLET BOXES. SEE THE "ANTI-SWAY BRACE" DETAIL ON PAGE 9. SEE SPECIAL NOTE 2 ON PAGE 7.
- ③ SPACER ASSEMBLY (2 REOD). SEE THE "SPACER ASSEMBLY C" DETAIL ON PAGE 7. NAIL TO A HEADER, PIECE MARKED ④, W/2-10d NAILS. SEE SPECIAL NOTE 3 ON PAGE 7.
- ④ HEADER, 2" X 6" BY TRAILER WIDTH MINUS 1/2" IN LENGTH (2 REOD). SEE SPECIAL NOTES 7 AND 8 ON PAGE 7.
- ⑤ HEADER AND SIDE STRUT SUPPORT, 2" X 4" BY TRAILER WIDTH MINUS 1/2" IN LENGTH (2 REOD). NAIL TO THE BOTTOM EDGE OF A HEADER, PIECE MARKED ④, W/1-10d NAIL EVERY 8".
- ⑥ SIDE STRUT, 2" X 6" BY CUT TO FIT BETWEEN THE FORWARD AND REAR HEADERS, PIECES MARKED ④ (2 REOD). SEE SPECIAL NOTE 4 ON PAGE 7.
- ⑦ RISER PIECE, 2" X 4" X 9" (AS REOD). CENTER UNDER THE JOINTS OF PIECES MARKED ① AND ②, ③ AND ④, AND UNDER THE SPLICE OF PIECES MARKED ⑥ IF APPLICABLE. NAIL TO SIDE STRUT MARKED ⑥ W/2-10d NAILS.
- ⑧ POCKET CLEAT, 2" X 6" X 12" (4 REOD). NAIL TO A SIDE STRUT, PIECE MARKED ⑥, W/3-10d NAILS. TOENAIL TO THE ADJACENT HEADER, PIECE MARKED ④, W/2-12d NAILS.
- ⑨ SPLICE PIECE, 2" X 6" X 24" (AS REOD). CENTER ON JOINT OF PIECES MARKED ⑥ AND NAIL TO SIDE STRUT MARKED ⑥ W/4-10d NAILS AT EACH END. SEE SPECIAL NOTE 4 ON PAGE 7.

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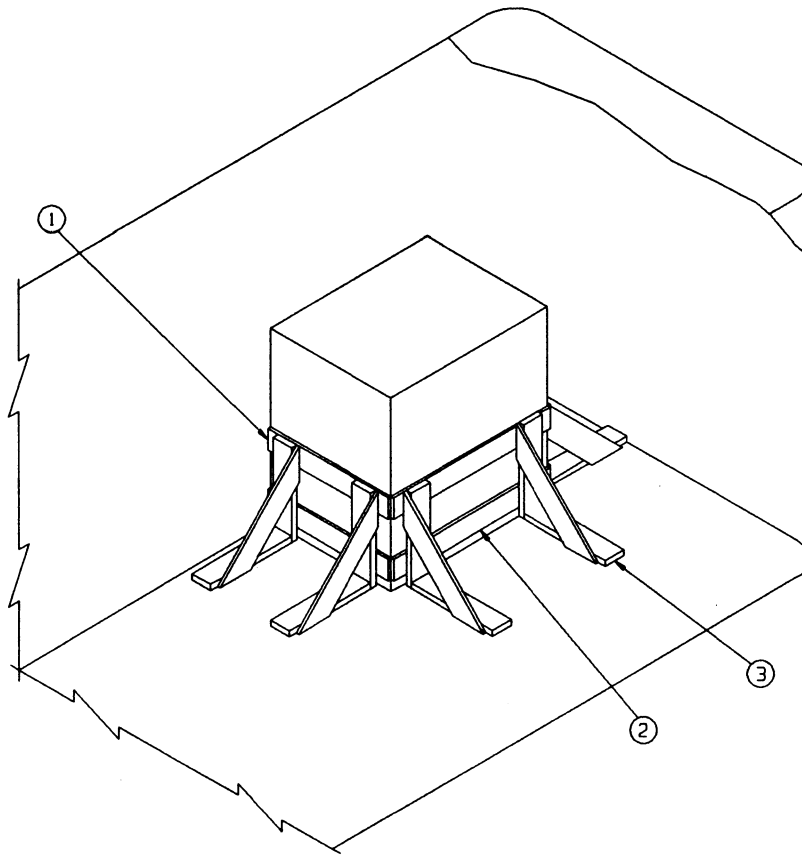
SPECIAL NOTES:

1. THESE OUTLOADING PROCEDURES COVER THE USE OF BOTH "K-BRACE" AND NAILED FLOOR LINE BLOCKING IN A 7'-8" WIDE (INSIDE DIMENSION) VAN TRAILER WHICH IS EQUIPPED WITH OR WITHOUT NAILABLE FLOORS AND REAR CORNER POSTS. WIDER OR NARROWER TRAILERS MAY BE USED. SEE SPECIAL NOTES 7 AND 8 BELOW.
2. ANTI-SWAY BRACES, SHOWN AS PIECES MARKED ② IN THE LOAD ON PAGE 6, ARE TO BE POSITIONED BETWEEN ALL LATERALLY ADJACENT PALLET BOXES.
3. THE SPACER ASSEMBLIES, PIECE MARKED ③, ARE SHOWN ONLY TO DEPICT A TYPICAL INSTALLATION. SPACER ASSEMBLIES WILL BE USED WHEN A PALLET BOX IS OMITTED. THEY MAY OR MAY NOT BE REQUIRED, DEPENDING ON THE QUANTITY OF PALLET TYPE BOXES TO BE SHIPPED.
4. DEPENDING ON THE NUMBER OF UNITS BEING LOADED, EACH OF THE SIDE STRUTS, PIECE MARKED ⑥, MAY NEED TO BE FORMED FROM MORE THAN ONE PIECE OF MATERIAL. IF SUCH IS THE CASE, THE SIDE STRUTS MUST BE SPLICED. SPLICING CAN BE ACCOMPLISHED BY CENTERING A 2" X 6" X 24" PIECE ON THE JOINT OF THE SIDE STRUTS AND NAILING IT TO THE SIDE STRUTS W/4-10d NAILS AT EACH END. CAUTION: A RISER PIECE, PIECE MARKED ⑦, MUST BE POSITIONED UNDER EACH SPLICE JOINT. NOTE: IF DESIRED, THE STRUT BRACING PIECE(S), PIECE MARKED ⑭, MAY BE NAILED TO THE SPLICE PIECES IN LIEU OF USING ADDITIONAL STRUT BRACE RETAINING CLEATS, PIECE MARKED ③.
5. ALL LTL LOADS, REGARDLESS OF THEIR SIZE, REQUIRE ONE STRUT BRACE POSITIONED AT THE REAR OF THE TRAILER AND NAILED TO PIECE MARKED ⑧. IF THE SIDE STRUTS, PIECE MARKED ⑥, ARE LONGER THAN 7'-0", AN ADDITIONAL STRUT BRACE, PIECE MARKED ⑭, AND TWO STRUT BRACE RETAINING CLEATS, PIECE MARKED ③, AND TWO RISER PIECES MARKED ⑦, MUST BE APPLIED FOR EVERY 7'-0" OF SIDE STRUT LENGTH.
6. THE "K-BRACE" BLOCKING, SHOWN AS PIECE MARKED ④ THRU ⑭, IS ADEQUATE FOR RETAINING A MAXIMUM LTL LOAD OF 20,000 POUNDS.
7. TRAILERS EQUIPPED WITH ROLL-UP TYPE DOORS MAY BE USED; HOWEVER, THE NAILED-HEADER METHOD OF REAR BLOCKING MUST BE INSTALLED IN LIEU OF THE "K-BRACE" TYPE BLOCKING. SEE THE "PROCEDURES FOR CONVENTIONAL VAN TRAILERS EQUIPPED WITH ROLL-UP TYPE DOORS" ON PAGE 12 FOR GUIDANCE.
8. IF DESIRED, IN TRAILERS EQUIPPED WITH NAILABLE FLOORS, THE NAILED-HEADER METHOD OF REAR BLOCKING MAY BE USED IN LIEU OF THE K-BRACE BLOCKING SHOWN AS PIECES MARKED ④ THRU ⑭. REFER TO PAGE 12 FOR GUIDANCE.



SPACER ASSEMBLY C

THIS ASSEMBLY IS DESIGNED FOR USE AS LATERAL BRACING OF A SINGLE PALLET BOX AS IN THE LOAD ON PAGE 6.



ISOMETRIC VIEW

KEY NUMBERS

- ① LOAD BEARING PIECE, 1" X 6" X 35" (4 REQD). LOCATE AT THE HEIGHTS AS SPECIFIED IN THE "LTL BRACE" DETAIL BELOW. NAIL TO THE LTL BRACES W/4-6d NAILS AT EACH JOINT. SEE GENERAL NOTE "K" ON PAGE 2.
- ② LOAD BEARING PIECE, 1" X 6" X 46" (2 REQD). LOCATE AT THE HEIGHTS AS SPECIFIED IN THE "LTL BRACE" DETAIL BELOW. NAIL TO THE LTL BRACES W/4-6d NAILS AT EACH JOINT.
- ③ LTL BRACE (6 REQD). SEE THE "LTL BRACE" DETAIL BELOW. NAIL TO THE TRAILER FLOOR W/10-10d NAILS.

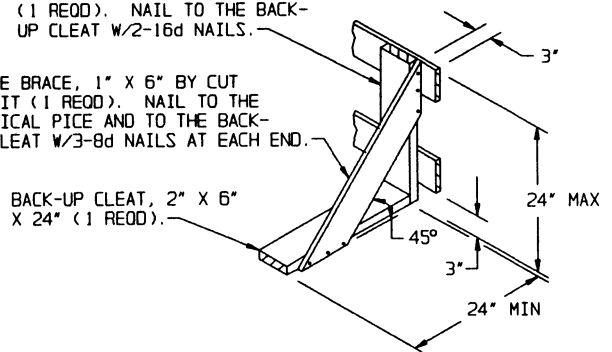
SPECIAL NOTES:

1. A 7'-6" WIDE (INSIDE DIMENSION) TRAILER WHICH HAS A NAILABLE FLOOR IS SHOWN. TRAILERS OF OTHER WIDTHS CAN BE USED.
2. THE POSITIONING OF A SINGLE PALLET BOX IS OPTIONAL. IF THE TRAILER HAS A SQUARE FRONT, THE TWO FORWARD LTL BRACES MAY BE OMITTED AND THE UNIT POSITIONED AGAINST THE ENDWALL.
3. MORE THAN ONE PALLET BOX CAN BE SHIPPED PROVIDING THE CAPACITY OF THE LTL BRACES IS NOT EXCEEDED. THE LOAD SHOULD BE FORMED IN ROWS WITH THE UNITS POSITIONED AGAINST OPPOSITE SIDEWALLS. AN ANTI-SWAY BRACE, DETAILED ON PAGE 9, MUST BE INSTALLED BETWEEN LATERALLY ADJACENT UNITS.
4. EACH LTL BRACE AS APPLIED FOR LONGITUDINAL BRACING WILL SUPPORT 2,000 POUNDS OF LADING, HOWEVER, NOT LESS THAN TWO BRACES WILL BE USED AGAINST EACH PALLET BOX ACROSS THE WIDTH OF THE TRAILER. ADDITIONAL BRACES MAY BE INSTALLED FOR THE RETENTION OF A HEAVIER LOAD.

VERTICAL PIECE, 2" X 6" X 24"
(1 REQD). NAIL TO THE BACK-
UP CLEAT W/2-16d NAILS.

ANGLE BRACE, 1" X 6" BY CUT
TO FIT (1 REQD). NAIL TO THE
VERTICAL PICE AND TO THE BACK-
UP CLEAT W/3-8d NAILS AT EACH END.

BACK-UP CLEAT, 2" X 6"
X 24" (1 REQD).

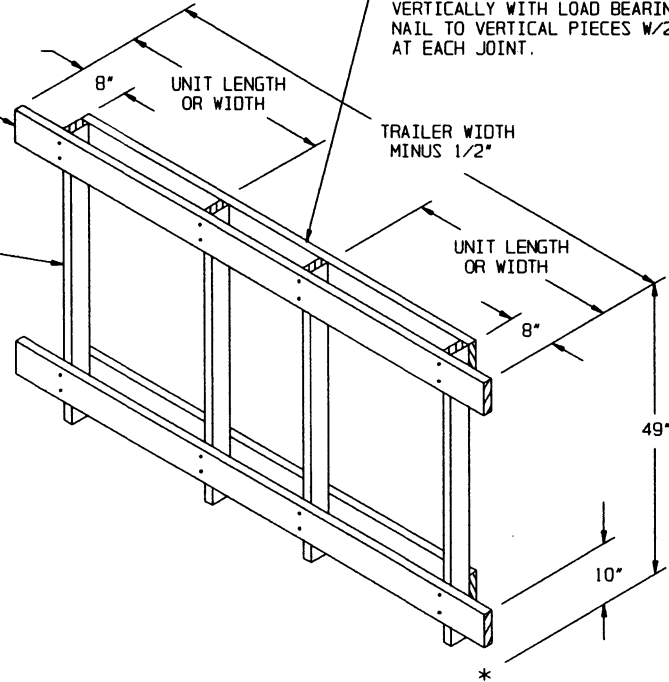


LTL BRACE

LOAD BEARING PIECE, 2" X 6" BY TRAILER WIDTH MINUS 1/2" IN LENGTH (2 REOD). NAIL TO VERTICAL PIECES W/2-10d NAILS AT EACH JOINT.

VERTICAL PIECE, 2" X 4" X 49" (4 REOD).

LATERAL PIECE, 2" X 4" BY TRAILER WIDTH MINUS 16-1/2" IN LENGTH (2 REOD). ALIGN VERTICALLY WITH LOAD BEARING PIECES AND NAIL TO VERTICAL PIECES W/2-10d NAILS AT EACH JOINT.

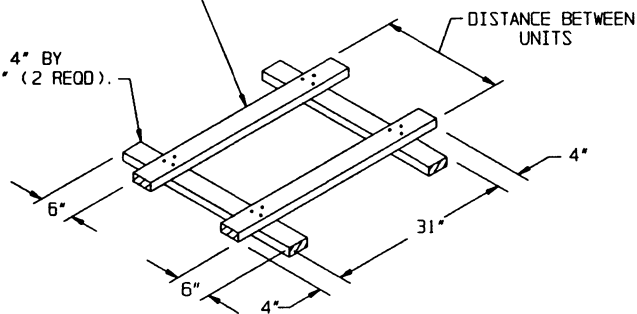


FORWARD BLOCKING ASSEMBLY

THIS ASSEMBLY IS DESIGNED FOR USE AT THE FRONT END OF A TRAILER HAVING ROUNDED CORNERS, AND IS APPLICABLE FOR A CORNER RADIUS OF NOT MORE THAN 6-1/2". IF THE RADIUS IS FROM 6-1/2" TO 8", 2" X 6" VERTICAL PIECES WILL BE USED IN LIEU OF THE 2" X 4" PIECES. IF THE TRAILER TO BE LOADED HAS LARGE-ANGLED CORNERS AT THE FORWARD END, REFER TO PAGE 13 FOR GUIDANCE.

BUFFER PIECE, 2" X 4" X 39" (2 REOD). POSITION AGAINST THE PALLET AND NAIL TO THE RETAINER PIECES W/3-10d NAILS AT EACH JOINT.

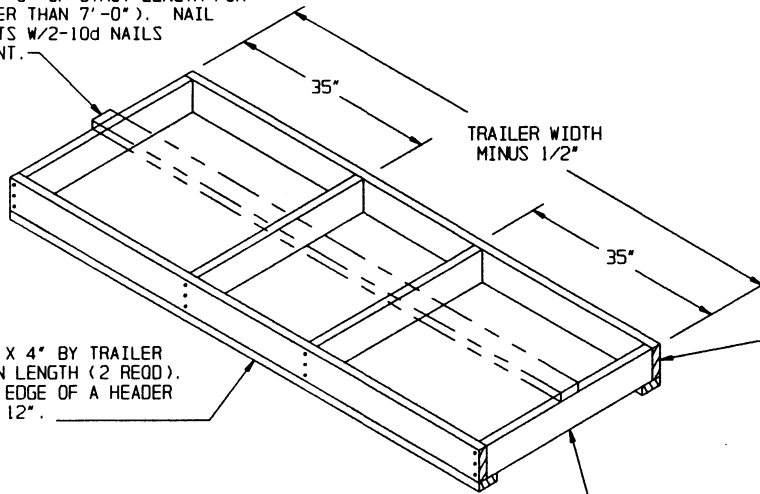
RETAINER PIECE, 2" X 4" BY LATERAL VOID PLUS 12" (2 REOD).



ANTI-SWAY BRACE ASSEMBLY

IF DESIRED, THE ANTI-SWAY BRACE CAN BE PARTIALLY PRE-ASSEMBLED; ONE BUFFER PIECE CAN BE NAILED TO BOTH RETAINER PIECES. THE LONG ENDS OF THE ASSEMBLY CAN BE INSTALLED INTO THE FORKLIFT OPENING OF A LOADED PALLET PRIOR TO POSITIONING THE LATERALLY ADJACENT PALLET.

STRUT BRACING, 2" X 4" BY TRAILER WIDTH MINUS 1/2" IN LENGTH (1 REOD FOR EVERY 7'-0" OF STRUT LENGTH FOR STRUTS LONGER THAN 7'-0"). NAIL TO THE STRUTS W/2-10d NAILS AT EACH JOINT.



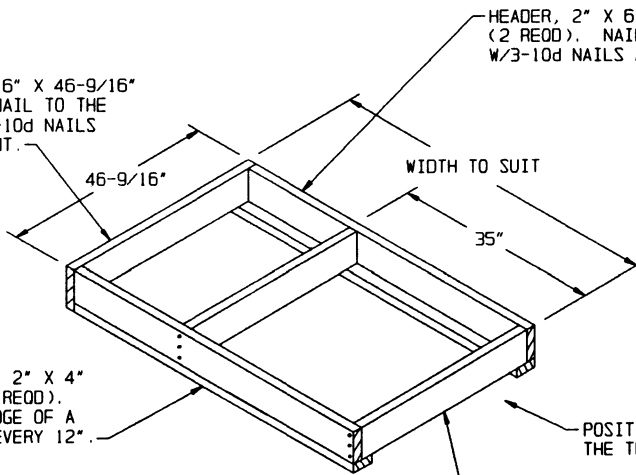
HEADER SUPPORT, 2" X 4" BY TRAILER WIDTH MINUS 1/2" IN LENGTH (2 REOD). NAIL TO THE BOTTOM EDGE OF A HEADER W/1-10d NAIL EVERY 12".

HEADER, 2" X 6" BY TRAILER WIDTH MINUS 1/2" IN LENGTH (2 REOD). NAIL TO THE STRUTS W/3-10d NAILS AT EACH JOINT.

STRUT, 2" X 6" BY CUT TO FIT (REF: 32") (4 REOD). SEE SPECIAL NOTE 3 ON PAGE 5.

SPACER ASSEMBLY A

STRUT, 2" X 6" X 46-9/16" (1 REOD). NAIL TO THE HEADERS W/3-10d NAILS AT EACH JOINT.



HEADER, 2" X 6" BY LENGTH TO SUIT (2 REOD). NAIL TO THE STRUTS W/3-10d NAILS AT EACH JOINT.

HEADER SUPPORT PIECE, 2" X 4" BY LENGTH TO SUIT (2 REOD). NAIL TO THE BOTTOM EDGE OF A HEADER W/1-10d NAIL EVERY 12".

POSITION THIS END NEXT TO THE TRAILER SIDEWALL.

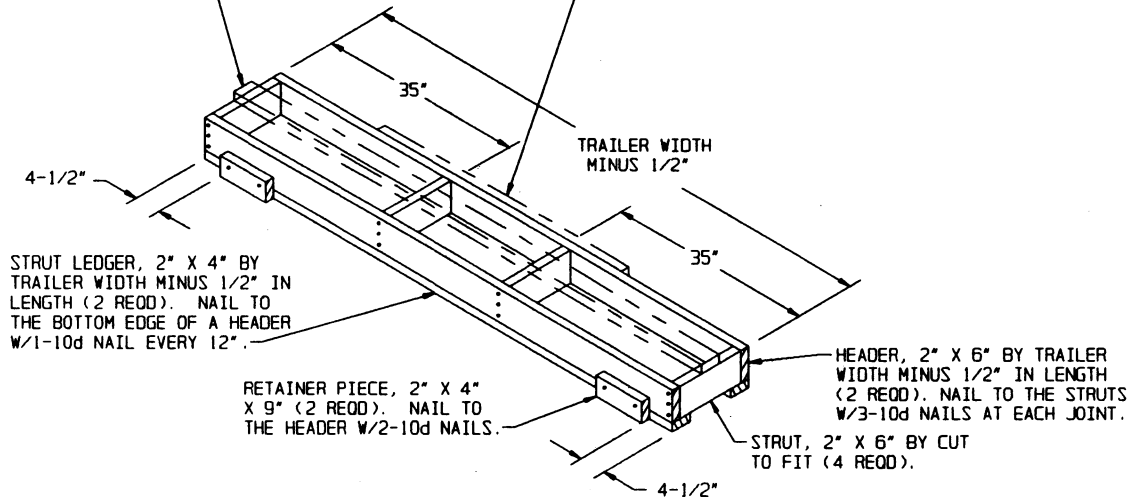
STRUT, 2" X 6" X 43-9/16" (2 REOD).

SPACER ASSEMBLY B

THIS ASSEMBLY IS DESIGNED FOR USE IN PLACE OF A PALLET BOX WHICH IS OMITTED FROM THE LOAD AS TYPICALLY SHOWN IN THE LOAD ON PAGE 4.

STRUT BRACING, 2" X 4" BY TRAILER WIDTH MINUS 1/2" IN LENGTH (1 REOD FOR EVERY 7'-0" OF STRUT LENGTH FOR STRUTS LONGER THAN 7'-0"). NAIL TO THE STRUTS W/2-10d NAILS AT EACH JOINT.

IF THE TRAILER IS EQUIPPED WITH REAR CORNER POSTS, INSTALL SOLID FILL 6" WIDE BY 48" LONG BY THE THICKNESS REQUIRED TO FILL THE EXCESS SPACE BETWEEN THE REAR BLOCKING ASSEMBLY AND THE TRAILER DOORS WHEN THEY ARE CLOSED. NAIL TO THE REAR BLOCKING ASSEMBLY W/4 APPLICABLY SIZED NAILS.

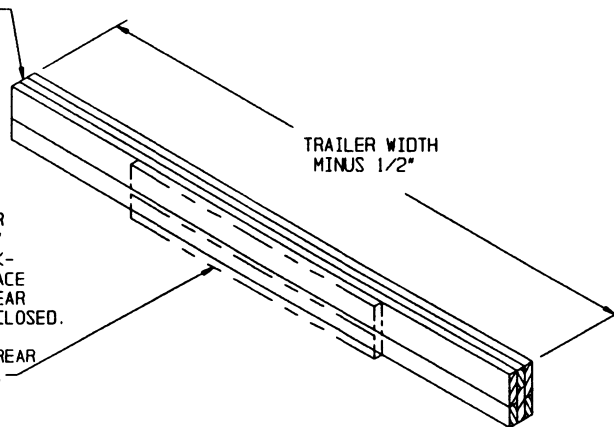


REAR BLOCKING ASSEMBLY A

THIS ASSEMBLY IS FOR USE AT THE REAR END OF THE LOAD AS SHOWN ON PAGE 4, WHEN THE SPACE BETWEEN THE LADING AND THE TRAILER DOORS IS GREATER THAN 9". NOTE THAT THE ABOVE VIEW IS ROTATED 180° FROM THE POSITION IN WHICH IT WILL BE INSTALLED.

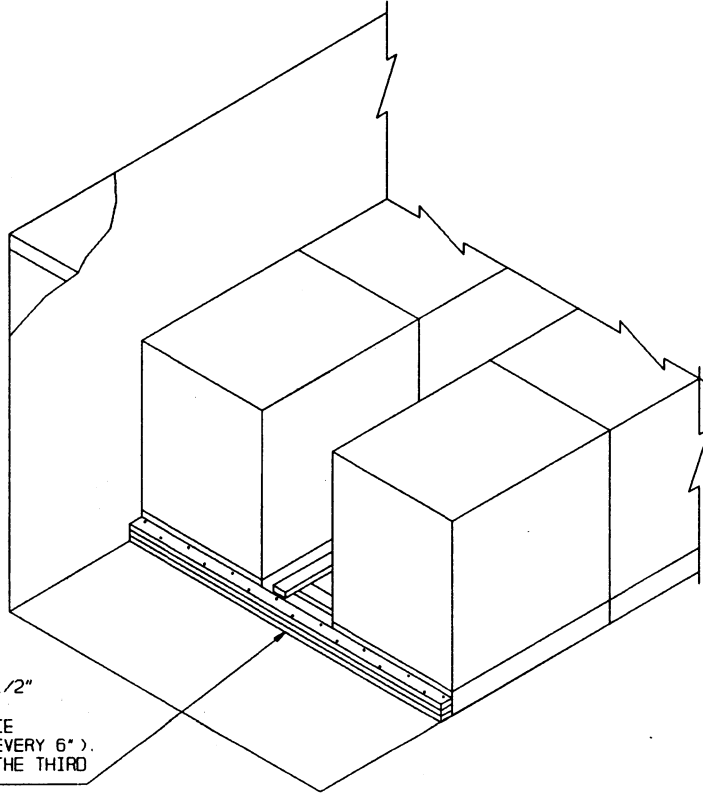
SOLID FILL, 4" AND 6" WIDE MATERIAL BY TRAILER WIDTH MINUS 1/2" IN LENGTH BY THE THICKNESS REQUIRED TO CONTACT REAR CORNER POST OR TO CONTACT REAR DOORS OF THE TRAILER WHEN THEY ARE CLOSED. POSITION PIECES ON EDGE, ONE ON TOP OF THE OTHER AS SHOWN, AND LAMINATE W/1-10d NAIL EVERY 12".

IF THE TRAILER IS EQUIPPED WITH REAR CORNER POSTS, INSTALL SOLID FILL, 4" AND 6" WIDE BY 48" LONG BY THE THICKNESS REQUIRED TO FILL THE EXCESS SPACE BETWEEN THE REAR BLOCKING AND THE REAR DOORS OF THE TRAILER WHEN THEY ARE CLOSED. POSITION PIECES ON EDGE, ONE TOP OF THE OTHER AS SHOWN AND NAIL TO THE REAR BLOCKING W/4 APPLICABLY SIZED NAILS.



REAR BLOCKING ASSEMBLY B

THIS REAR BLOCKING IS DESIGNED FOR USE AT THE REAR END OF A LOAD WHEN THE SPACE BETWEEN THE LADING AND THE TRAILER DOORS IS LESS THAN 9".



HEADER, 2" X 4" BY TRAILER WIDTH MINUS 1/2"
 IN LENGTH (TRIPLED) (1 REOD). POSITION
 AGAINST THE PALLET. NAIL THE FIRST PIECE
 TO THE TRAILER FLOOR W/15-10d NAILS (1 EVERY 6").
 NAIL THE SECOND PIECE TO THE FIRST AND THE THIRD
 PIECE TO THE SECOND IN A LIKE MANNER.

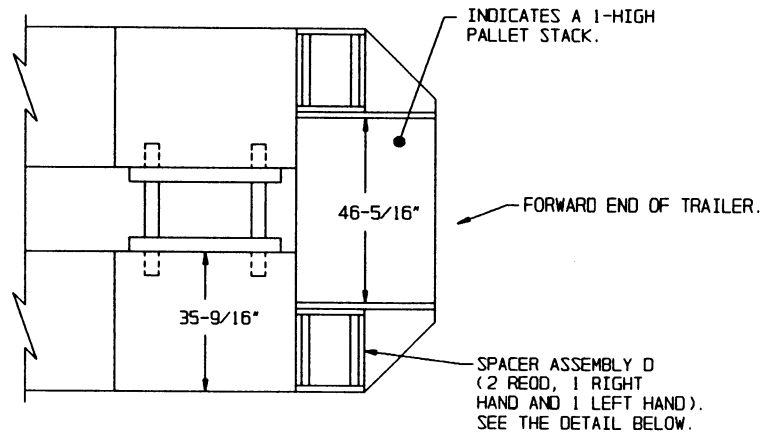
NAILED-HEADER METHOD

SPECIAL NOTES:

1. THE NAILED-HEADER METHOD OF REAR BLOCKING DEPICTED ABOVE CAN ONLY BE USED IN TRAILERS HAVING A NAILABLE FLOOR AREA BETWEEN THE LADING AND THE METAL THRESHOLD, OR A THRESHOLD PLATE IF THE TRAILER IS SO EQUIPPED, OF AT LEAST SIX INCHES.
2. THE NAILED-HEADER METHOD OF REAR BLOCKING IS ADEQUATE FOR THE RETENTION OF THE MAXIMUM WEIGHT LOAD.
3. THE NAILED-HEADER METHOD, ALTHOUGH DESIGNED ESPECIALLY FOR TRAILERS HAVING ROLL-UP TYPE DOORS, MAY ALSO BE USED IN TRAILERS EQUIPPED WITH HINGED DOORS.

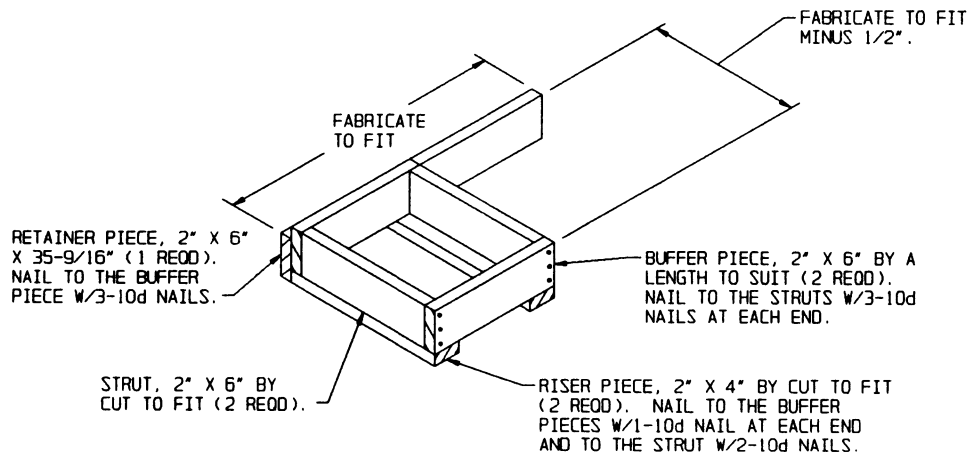
NAILED-HEADER METHOD

PROCEDURES FOR CONVENTIONAL VAN TRAILERS EQUIPPED WITH ROLL-UP TYPE DOORS



ALTERNATIVE FORWARD LOADING PATTERN

THIS PROCEDURE IS APPLICABLE TO THE LOADING OF ONE PALLET BOX IN THE FORWARD END OF A CONVENTIONAL VAN TRAILER HAVING LARGE-ANGLED FRONT CORNERS (REF: 18°). THE PROCEDURES MAY ALSO BE USED IN TRAILERS HAVING SQUARE CORNERS, OR ROUNDED FRONT CORNERS, OR ANGLED CORNERS OF ANOTHER SIZE.



SPACER ASSEMBLY D

THIS ASSEMBLY IS DESIGNED FOR LATERAL BRACING OF A SINGLE PALLET UNIT WHICH IS POSITIONED IN THE FRONT OF AN ANGLED-CORNER CONVENTIONAL VAN TRAILER AS SHOWN IN THE "ALTERNATIVE FORWARD LOADING PATTERN" VIEW ABOVE. RIGHT HAND AND LEFT HAND SPACERS ARE REQUIRED.

