

APPROVED BY
 BUREAU OF EXPLOSIVES
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 DATE 9/19/69

LOADING AND BRACING (TL & LTL) IN CLOSED OR OPEN TOP VAN TRAILERS OF SKIDDED UNITS (STRAPPED) OF BOMB FUZES, M914, MI66, AND MI88 SERIES, PACKED IN METAL DRUM

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● THIS OUTLOADING PROCEDURE DRAWING
 ALSO INCLUDES UNITIZATION PROCEDURES.

○ INCLUDES PROCEDURES FOR CONVENTIONAL
 TRAILERS AND TRAILERS EQUIPPED WITH
 MECHANICAL BRACING DEVICES AS APPROVED
 BY THE BUREAU OF EXPLOSIVES,
 ASSOCIATION OF AMERICAN RAILROADS.

CAUTION:
 PROCEDURES SHOWN HEREIN FOR MECHANICAL
 DEVICE EQUIPPED TRAILERS ARE ONLY
 APPLICABLE FOR HIGHWAY MOVEMENT; NOT
 FOR CONTAINER/TRAILER-ON-FLAT-CAR
 MOVEMENT.

DO NOT SCALE

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REVISIONS			AMMUNITION PROCUREMENT & SUPPLY AGENCY
			APPROVED BY ORDER OF COMMANDING GENERAL U. S. ARMY MATERIEL COMMAND
			<i>P. ...</i>
			U. S. ARMY MATERIEL COMMAND
			NOVEMBER 1969
			CLASS DIVISION DRAWING FILE
			19 48 4089 IIPF 1000

GENERAL NOTES

(GENERAL NOTES CONTINUED)

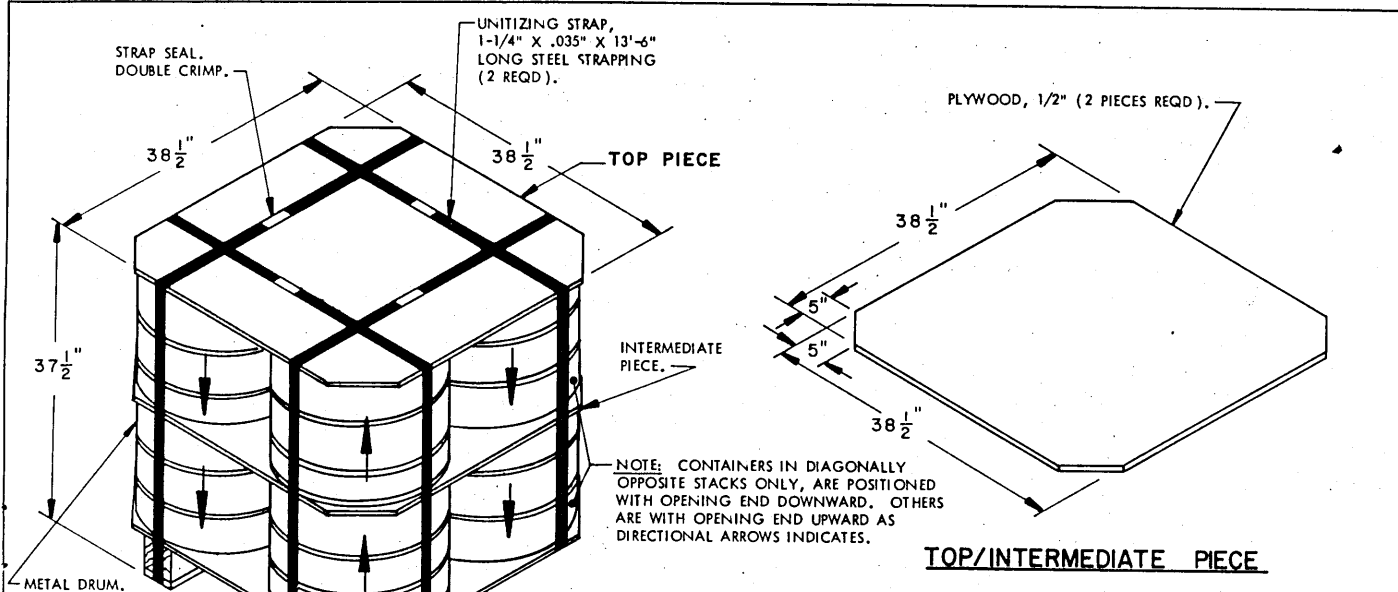
- A. THIS DOCUMENT HAS BEEN PREPARED AND ISSUED IN ACCORDANCE WITH AMCR 740-13, AND AUGMENTS TM 743-200-1 (CHAPTER 5).
- B. THE OUTLOADING PROCEDURES SPECIFIED HEREIN ARE APPLICABLE TO SKIDDED UNITS (STRAPPED) OF BOMB FUZES, PACKED IN METAL DRUMS. SUBSEQUENT REFERENCE TO UNIT HEREIN MEANS THE SKIDDED UNIT OF DRUMS WITH CONTENTS.
- C. FOR DETAIL OF DRUM SEE DRAWING NO. 76-16-492 AND 76-16-493.
DRUM DIMENSIONS ----- 19-9/16" DIA BY 15-3/4" HIGH.
GROSS WEIGHT ----- 58 LBS (APPROX).
- D. FOR DETAIL OF STRAPPED UNIT SEE PAGE 3 OF THIS DRAWING.
UNIT DIMENSIONS ----- 38-1/2" LONG X 38-1/2" WIDE X 37-1/2" HIGH.
GROSS WEIGHT ----- 534 LBS (APPROX).
CUBE ----- 32.17 CUBIC FEET.
- E. THIS ITEM IS A DOT CLASS "A" EXPLOSIVE. THE OUTLOADING PROCEDURES SPECIFIED HEREIN CAN ALSO BE UTILIZED FOR THE SHIPMENT OF THE DEPICTED UNITS WHEN THEY ARE LOADED WITH AN ITEM WHICH IS IDENTIFIED DIFFERENTLY BY NOMENCLATURE THAN THE ITEM DESIGNATED WITHIN THE DRAWING TITLE.
- F. THE LOADS AS SHOWN HEREIN ARE FOR CLOSED OR OPEN TOP VAN TRAILERS WHICH ARE 89" TO 93" WIDE (INSIDE DIMENSION) AND OF VARIOUS LENGTHS, AND THEY ARE LIMITED TO HIGHWAY MOVEMENTS ONLY. THE DEPICTED LOADS ARE BASED ON TRAILERS OF THE CONVENTIONAL TYPE OR ARE BASED ON TRAILERS WHICH ARE EQUIPPED WITH SELF-CONTAINED MECHANICAL BRACING DEVICES (CROSS MEMBERS AND WALL MEMBERS) AND APPLY TO TRAILERS HAVING WOOD, WOOD AND METAL, OR METAL FLOORS.
- G. THE OUTLOADING PROCEDURES SPECIFIED ON PAGES 4 THROUGH 9 ARE FOR CONVENTIONAL TYPE VAN TRAILERS.
- H. THE OUTLOADING PROCEDURES SPECIFIED ON PAGES 10 THROUGH 14 ARE FOR TRAILERS EQUIPPED WITH VARIOUS TYPES OF SELF-CONTAINED MECHANICAL BRACING DEVICES. HOWEVER, CROSS MEMBER ATTACHMENT FACILITIES WITHIN THESE TRAILERS MUST PROVIDE FOR THE INSTALLATION OF LOAD BLOCKING CROSS MEMBERS AT THE HEIGHTS SPECIFIED HEREIN. **CAUTION:** TRAILERS EQUIPPED WITH FACILITIES WHICH DO NOT MEET THE LOCATION REQUIREMENTS MUST NOT BE USED. THE HEIGHT DIMENSIONS SPECIFIED WITHIN THIS DRAWING FOR INSTALLATION OF CROSS MEMBERS ARE IDENTICAL WITH THOSE RECOMMENDED BY THE BUREAU OF EXPLOSIVES PAMPHLET 6C, AND APPENDICES THERETO.
1. VOIDS LENGTHWISE WITHIN THE LOAD MUST BE HELD TO A MINIMUM. CROSS MEMBERS MUST BE PLACED AGAINST THE LADING AS TIGHTLY AS THE HOLE SPACING IN THE CROSS MEMBER ATTACHMENT FACILITY PERMITS. EACH CROSS MEMBER WILL BE INSTALLED WITH THE ENDS ATTACHED AS NEARLY AS POSSIBLE IN "MATED" POSITIONS (AT EQUAL HEIGHTS AND AT EQUAL DISTANCES FROM THE END OF THE TRAILER).
 2. CROSS MEMBERS IN EMPTY TRAILERS AND THOSE NOT USED IN LOADED TRAILERS MUST BE SECURED FOR SHIPMENT. COMPONENTS ASSIGNED TO EACH TRAILER MUST REMAIN THEREWITH EVEN THOUGH UNUSED DURING SOME SHIPMENTS.
 3. A CROSS MEMBER WILL NOT BE RELIED UPON TO RETAIN MORE UNITS THAN SHOWN IN THE LOAD VIEWS.
- J. 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.
- K. THE APPROVED BLOCKING, BRACING, AND STAYING METHODS FOR THE LOADS SPECIFIED HEREIN MUST BE FOLLOWED. THE NUMBER OF UNITS MAY BE ADJUSTED TO FIT THE SIZE OF THE VEHICLE TO BE LOADED OR THE QUANTITY TO BE SHIPPED. FOR A LOAD QUANTITY OTHER THAN SPECIFIED, THE APPROVED METHODS MUST BE FOLLOWED AS CLOSELY AS POSSIBLE.
- L. OTHER TYPES OF LADING ITEMS MAY BE LOADED INTO TRAILERS WHICH ARE PARTIALLY LOADED WITH THE DESIGNATED ITEM, 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.
- M. DUNNAGE LUMBER SPECIFIED THROUGHOUT THIS PROCEDURAL DRAWING IS OF NOMINAL SIZE. FOR EXAMPLE, 2" X 4" MATERIAL IS ACTUALLY 1-5/8" THICK BY 3-5/8" WIDE AND 2" X 6" MATERIAL IS ACTUALLY 1-5/8" THICK BY 5-5/8" WIDE.
- N. FOR CONVENTIONAL TYPE TRAILERS NOT EQUIPPED WITH REAR CORNER POSTS, REAR BLOCKING MUST BE EXTENDED TO CONTACT THE REAR DOORS OF THE TRAILER WHEN THEY ARE CLOSED.
- P. **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. 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.
- Q. PORTIONS OF THE TRAILER BODY DEPICTED WITHIN THIS PROCEDURAL DRAWING, SUCH AS ONE OF THE SIDE WALLS, HAVE NOT BEEN SHOWN IN THE LOAD VIEWS FOR CLARITY PURPOSES.
- R. FOR ADDITIONAL GUIDANCE, ATTENTION IS DIRECTED TO THE "DETAIL OF UNIT" ON PAGE 3 AND TO THE "SPECIAL NOTES" SECTION WHICH IS IMMEDIATELY ADJACENT TO A DEPICTED OUTLOADING METHOD.
- S. WHEN 1-1/4" STEEL STRAPPING IS SEALED AT AN END-OVER-END LAP JOINT FOR A STRAP APPLICATION OTHER THAN FOR UNITIZING, A MINIMUM OF TWO (2) SEALS, BUTTED TOGETHER, WITH TWO (2) PAIR OF CRIMPS PER SEAL MUST BE USED.

(CONTINUED AT THE RIGHT)

MATERIAL SPECIFICATIONS

- LUMBER** -----: SEE TM 743-200-1, DUNNAGE LUMBER, FED SPEC MM-L-751.
- NAILS** -----: COMMON, CEMENT COATED OR CHEMICALLY ETCHED,
FED SPEC FF-N-105.
ALT: ANNULAR-RING TYPE NAIL OF THE SAME SIZE.
- WIRE** -----: FED SPEC QQ-W-461.
- PLYWOOD** -----: GROUP B OR C, GRADE *C-D (EXTERIOR); FED SPEC NN-P-530.
- STRAPPING, STEEL**: TYPE I OR IV, CLASS A OR B FOR UNITIZING AND CLASS A, B, OR C FOR OUTLOADING, FED SPEC QQ-S-781.
- STRAP SEAL,
STAPLE** -----: COMMERCIAL GRADE.

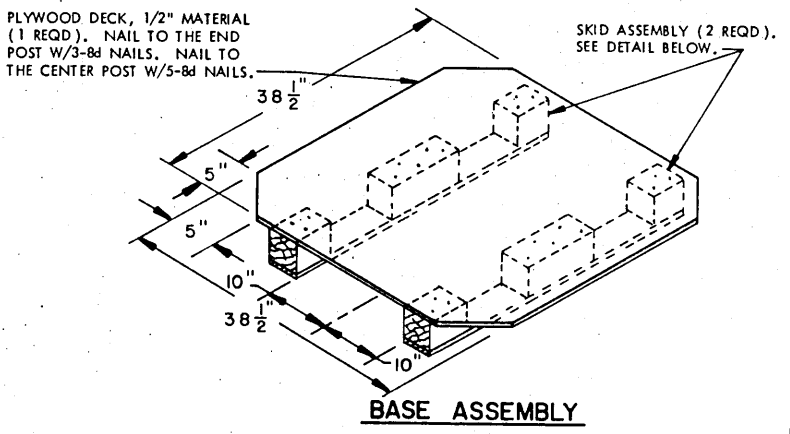
* IF SPECIFIED GRADE IS NOT AVAILABLE,
A BETTER GRADE MAY BE USED.



UNIT LOAD

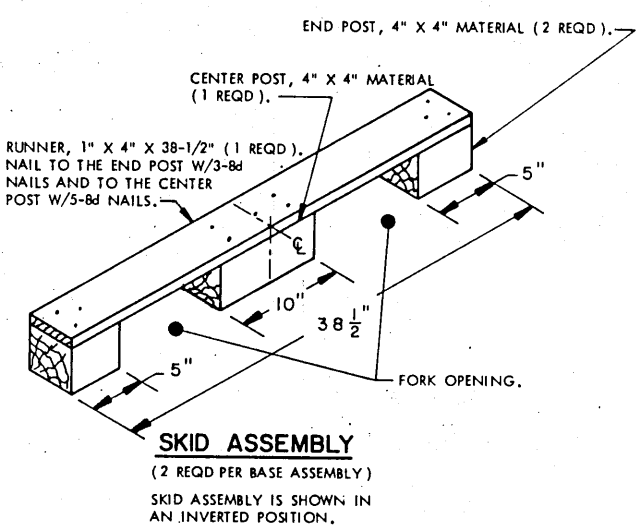
UNIT LOAD DATA

METAL DRUM W/CONTENTS	8 @ 58 LBS	464 LBS
DUNNAGE		70 LBS
TOTAL WEIGHT		534 LBS (APPROX)



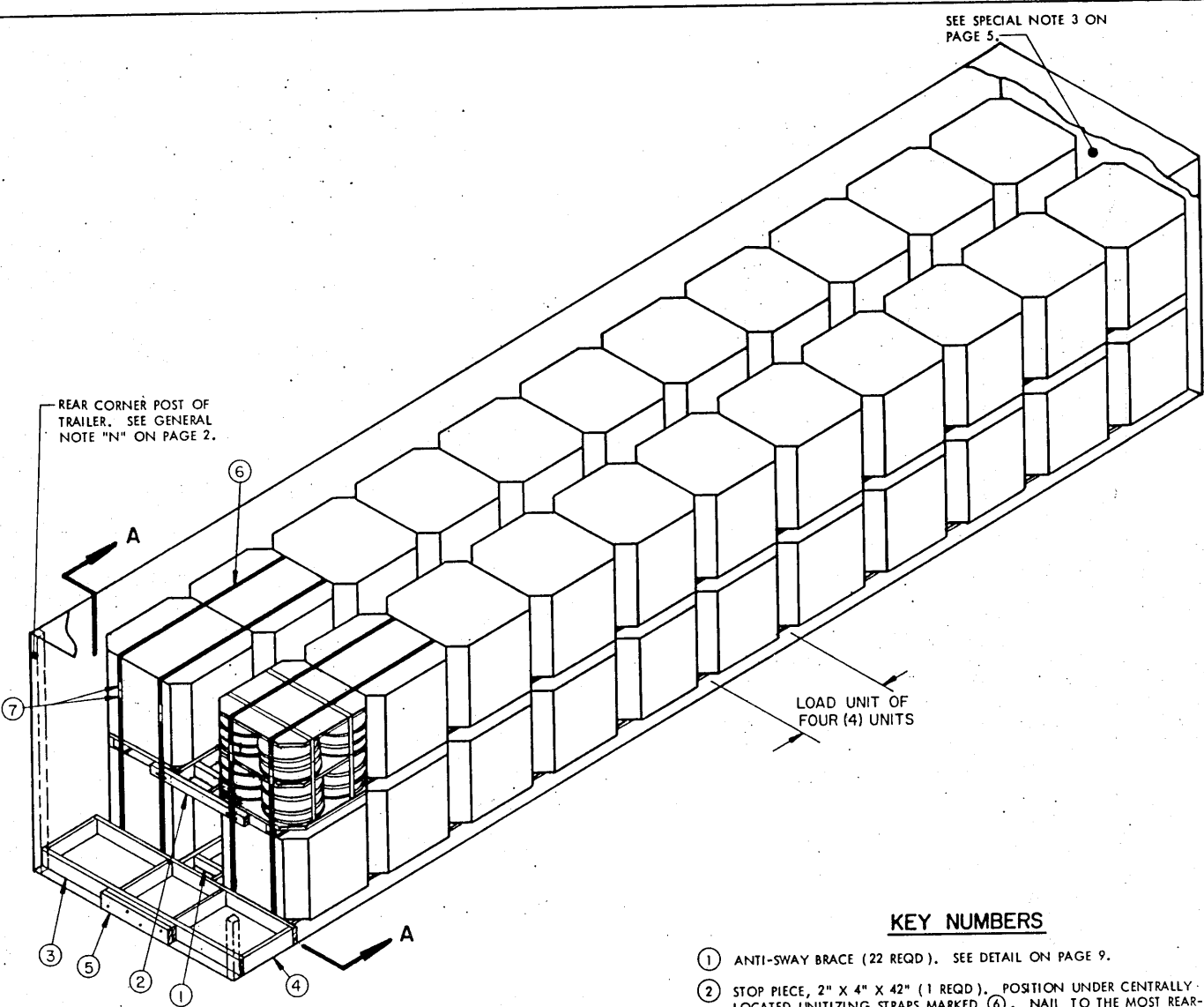
BILL OF MATERIAL / UNIT LOAD			
LUMBER	NO. REQD	LINEAR FEET	BOARD FEET
1" X 4" X 38-1/2"	2	6.42	2.14
4" X 4" X 5"	4	1.67	2.23
4" X 4" X 10"	2	1.67	2.23
PLYWOOD		NO. PCS	SQUARE FEET
1/2" X 38-1/2" X 38-1/2"		3	31
NAILS		NO. REQD	POUND
8d (2-1/2")		44	1/2
STEEL STRAPPING, 1-1/4" X .035"		56' REQD	8 LBS
SEAL FOR 1-1/4" STRAPPING		4 REQD	NIL
STAPLES, 1-3/8" X 3/4"		6 REQD	NIL

FOR MATERIAL SPECIFICATIONS SEE PAGE 2.



SEE SPECIAL NOTE 3 ON PAGE 5

REAR CORNER POST OF TRAILER. SEE GENERAL NOTE "N" ON PAGE 2.

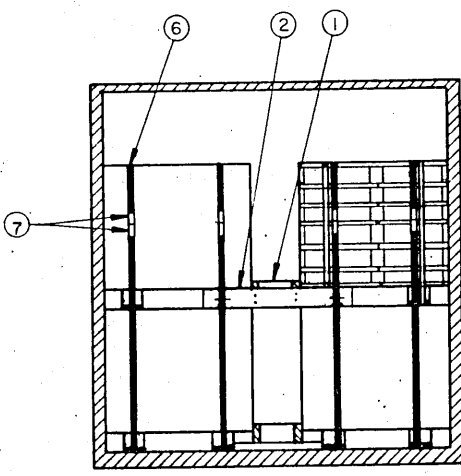


ISOMETRIC VIEW

LOAD UNIT OF FOUR (4) UNITS

KEY NUMBERS

- ① ANTI-SWAY BRACE (22 REQD). SEE DETAIL ON PAGE 9.
- ② STOP PIECE, 2" X 4" X 42" (1 REQD). POSITION UNDER CENTRALLY LOCATED UNITIZING STRAPS MARKED ⑥. NAIL TO THE MOST REARWARD SECOND LAYER ANTI-SWAY BRACE W/2-12d NAILS AT EACH JOINT.
- ③ HEADER, 2" X 6" BY TRAILER WIDTH MINUS 1/2" (2 REQD).
- ④ STRUTS, 2" X 6" BY CUT TO FIT (8" MIN) (4 REQD). TOENAIL TO HEADERS MARKED ③ W/2-12d NAILS AT EACH JOINT. SEE SPECIAL NOTE 4 ON PAGE 5.
- ⑤ SOLID FILL, 6" WIDE MATERIAL BY 36" LONG BY THE THICKNESS REQUIRED TO CONTACT THE REAR DOORS OF THE TRAILER WHEN THEY ARE CLOSED. NAIL THE FIRST PIECE TO THE REAR HEADER W/4-10d NAILS. NAIL EACH ADDITIONAL PIECE IN A LIKE MANNER. NOT REQUIRED FOR TRAILERS THAT DO NOT HAVE REAR CORNER POSTS.
- ⑥ UNITIZING STRAP, 1-1/4" X .035" X 20'-6" LONG STEEL STRAPPING (4 REQD). PRE-POSITION UNDER SKIDS OF UNITS IN THE BOTTOM LAYER. SECURE TO STOP PIECE MARKED ② W/1-1-3/8" X 3/4" STAPLE EACH STRAP. SEE GENERAL NOTE "S" ON PAGE 2.
- ⑦ SEAL FOR 1-1/4" STRAP (8 REQD). DOUBLE CRIMP.



SECTION A-A

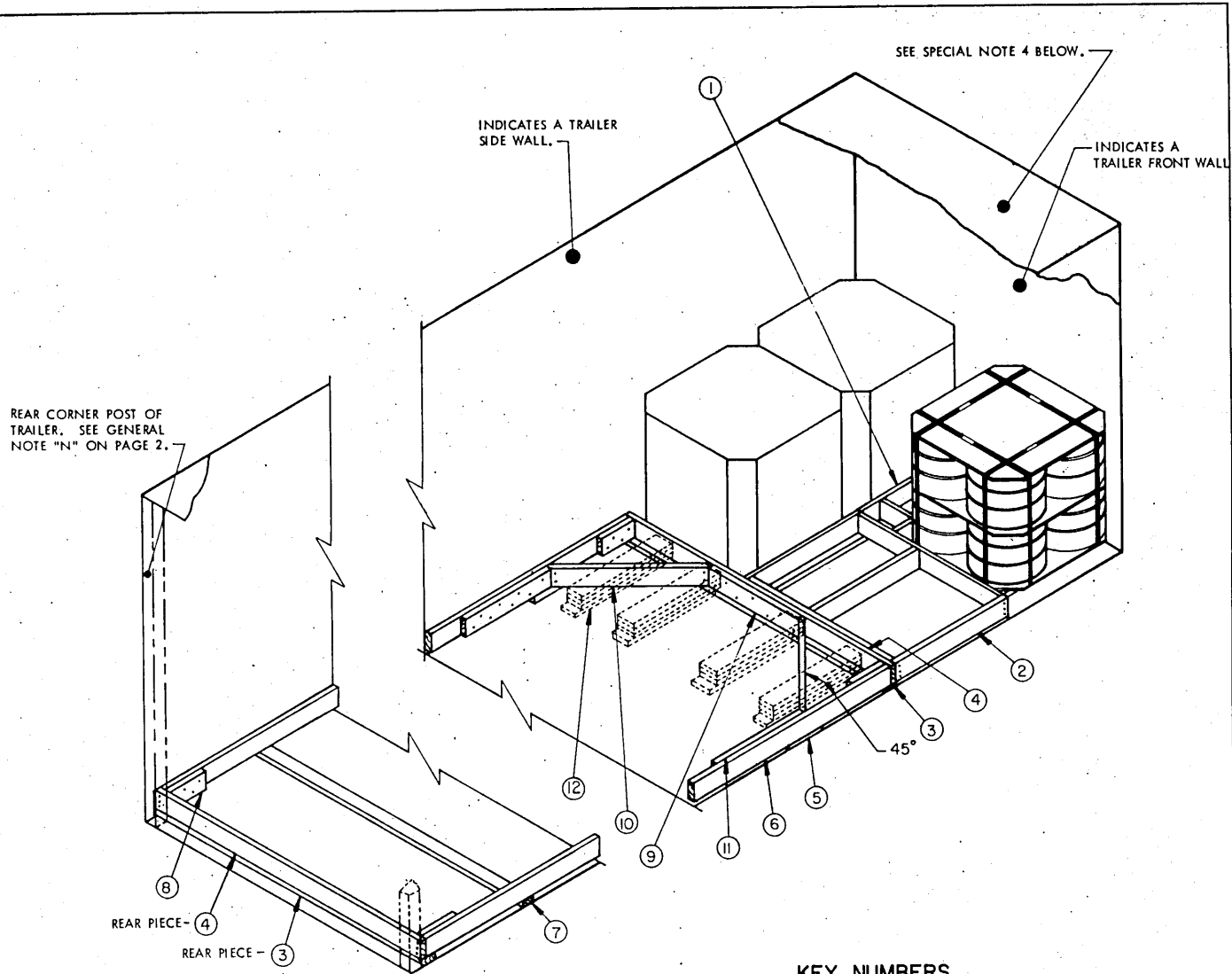
SPECIAL NOTES:

1. A 44-UNIT LOAD IS SHOWN IN A 7'-6" WIDE (INSIDE DIMENSION) BY 38'-0" LONG TRAILER, EQUIPPED WITH A SQUARE FRONT AND REAR CORNER POSTS. WIDER OR NARROWER TRAILERS MAY BE USED FOR THE DEPICTED LOAD.
2. A 44-UNIT LOAD CAN BE LOADED IN A 36'-0" LONG TRAILER EQUIPPED WITH A SQUARE FRONT. SEE THE PROCEDURE DEPICTED ON PAGE 9. A 44-UNIT LOAD CAN BE LOADED IN A 37'-0" LONG TRAILER EQUIPPED WITH ROUNDED-CORNERS AT THE FORWARD END. ALSO, A 48-UNIT LOAD CAN BE LOADED IN A 40'-0" LONG TRAILER EQUIPPED WITH A SQUARE FRONT OR ROUNDED-CORNERS AT THE FORWARD END.
3. IF THE TRAILER BEING LOADED HAS ROUNDED-CORNERS AT THE FORWARD END, OR IF THE TRAILER HAS A ROUND FRONT, REFER TO PAGE 8 FOR BLOCKING SPECIFICATIONS WHICH MUST BE USED. ALSO, IF "FORWARD BLOCKING-METHOD A" OR "FORWARD BLOCKING-METHOD B" IS USED THE TWO (2) MOST FORWARD LOAD UNITS OF EIGHT (8) UNITS MUST BE UNITIZED IN THE SAME MANNER AS THE TWO (2) MOST REARWARD LOAD UNITS OF EIGHT (8) UNITS.
4. IF THE EXCESS SPACE BETWEEN THE LADING AND THE TRAILER REAR DOORS WHEN CLOSED IS 12" OR LESS SEE THE PROCEDURES DEPICTED ON PAGE 9 WHICH MUST BE USED.

BILL OF MATERIAL		
LUMBER	LINEAR FEET	BOARD FEET
2" X 4"	81	54
2" X 6"	206	206
NAILS	NO. REQD	POUNDS
10d (3")	272	4-1/4
12d (3-1/4")	284	4-3/4
STEEL STRAPPING, 1-1/4" X .035" -----	82' REQD -----	12 LBS
SEAL FOR 1-1/4" STRAP -----	8 REQD -----	NIL
STAPLE, 1-3/8" X 3/4" -----	2 REQD -----	NIL

LOAD AS SHOWN

ITEM	QUANTITY	WEIGHT (APPROX)
UNIT -----	44 -----	23,496 LBS
DUNNAGE -----	-----	671 LBS
TOTAL WEIGHT -----		24,167 LBS



ISOMETRIC VIEW

SPECIAL NOTES:

1. THESE OUTLOADING PROCEDURES ARE SHOWN DEPICTING THE USE OF TWO METHODS OF BLOCKING, THE USE OF A "K-BRACE" AND "NAILED FLOOR LINE" BLOCKING IN A 7'-6" WIDE TRAILER. A WIDER OR NARROWER TRAILER CAN ALSO BE USED.
2. THE "K-BRACE" BLOCKING SHOWN AS PIECES MARKED REAR PIECES ③ AND ④ THRU ⑪ IS ADEQUATE FOR RETAINING A MAXIMUM LTL LOAD.
3. PIECES MARKED ⑫ ARE FOR USE IN A TRAILER WHICH HAS A NAILABLE FLOOR AND SHOULD BE USED, IF POSSIBLE, IN LIEU OF PIECES MARKED REAR PIECES ③ AND ④ THRU ⑪ WHICH APPLY TO TRAILERS HAVING NON-NAILABLE FLOORS. FOUR (4) BACK-UP CLEATS, SHOWN AS PIECES MARKED ⑫ ARE ADEQUATE FOR RETAINING A MAXIMUM LTL LOAD.
4. A TRAILER HAVING A SQUARE FRONT IS SHOWN; HOWEVER, IF A TRAILER IS OFFERED FOR SHIPMENT HAVING ROUNDED CORNERS AT THE FORWARD END OR HAS A ROUND FRONT REFER TO PAGE 8 FOR BLOCKING SPECIFICATIONS WHICH MUST BE USED.
5. THE USE OF THE "FILLER ASSEMBLY" IS SPECIFIED FOR THE DEPICTED LOAD ONLY TO SHOW A TYPICAL APPLICATION. IF IT IS DESIRED, "ALTERNATIVE LOAD PATTERN A" DEPICTED ON PAGE 8 MAY BE USED IN LIEU OF THE METHOD DEPICTED IN THE ISOMETRIC VIEW ABOVE.

SEE SPECIAL NOTE 4 BELOW.

INDICATES A TRAILER SIDE WALL.

INDICATES A TRAILER FRONT WALL.

REAR CORNER POST OF TRAILER. SEE GENERAL NOTE "N" ON PAGE 2.

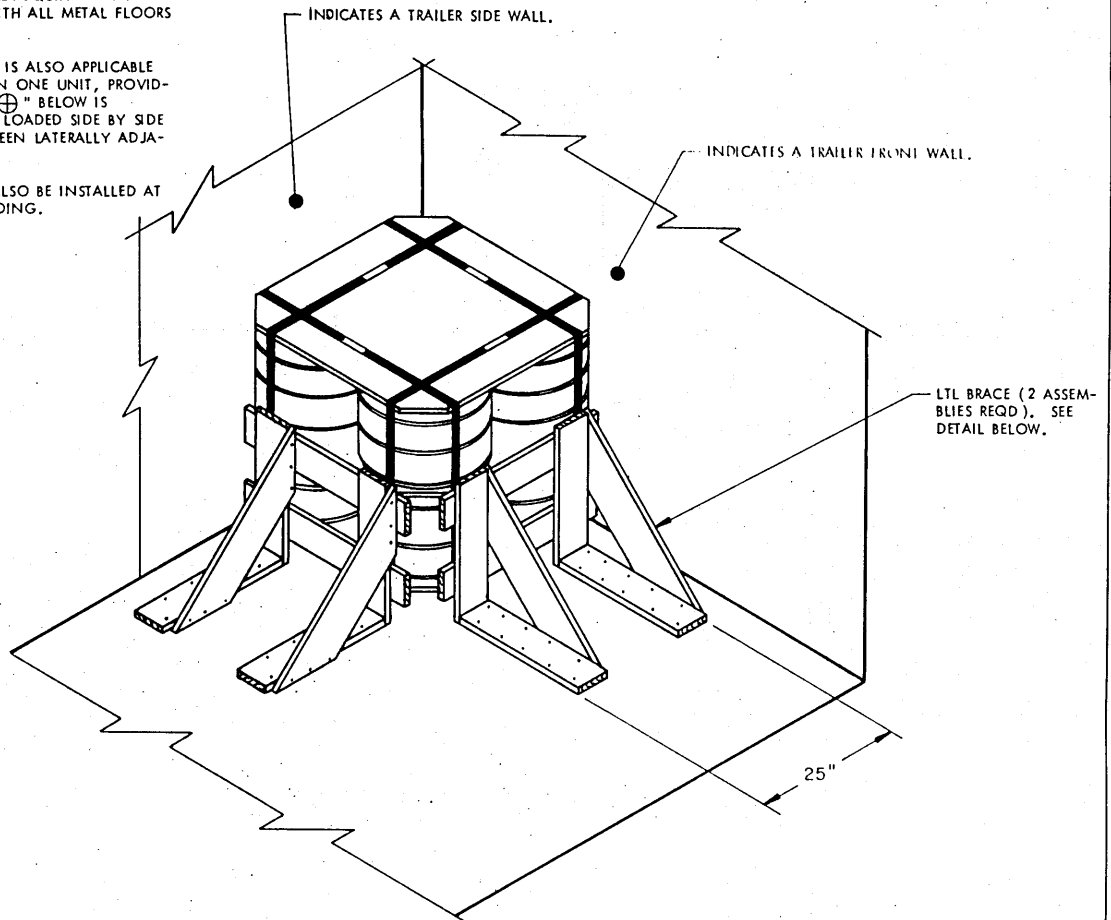
REAR PIECE - ④
REAR PIECE - ③

KEY NUMBERS

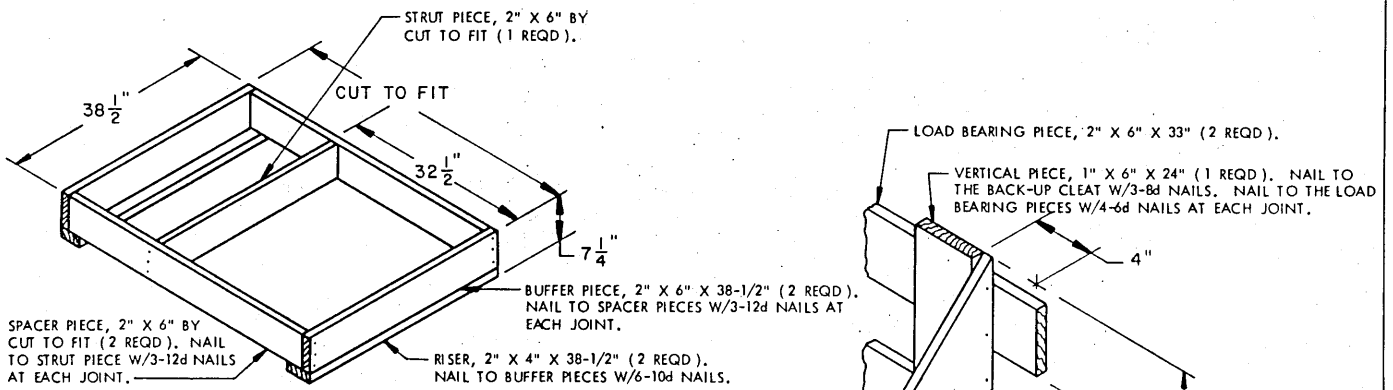
- ① ANTI-SWAY BRACE (1 REQD). SEE DETAIL ON PAGE 9.
- ② FILLER ASSEMBLY (1 REQD). SEE DETAIL ON PAGE 7.
- ③ RISER, 2" X 4" BY TRAILER WIDTH MINUS 1/2" (2 REQD). NAIL TO HEADER MARKED ④ W/1-10d NAIL EVERY 12".
- ④ HEADER, 2" X 6" BY TRAILER WIDTH MINUS 1/2" (2 REQD).
- ⑤ RISER BLOCK, 2" X 4" X 12" (2 REQD). NAIL TO SIDE STRUT MARKED ⑥ W/3-10d NAILS. SEE SPECIAL NOTE 2 AT LEFT.
- ⑥ SIDE STRUT, 2" X 6" BY CUT TO FIT (2 REQD). TOENAIL TO STRUT BRACING MARKED ⑦ W/2-12d NAILS AT EACH JOINT.
- ⑦ STRUT BRACING, 2" X 4" BY TRAILER WIDTH MINUS 1/2" (MINIMUM OF ONE REQD). ONE ADDITIONAL PIECE IS REQUIRED FOR EVERY 7'-0" OF STRUT LENGTH.
- ⑧ CLEAT, 2" X 6" X 12" (4 REQD). NAIL TO SIDE STRUTS MARKED ⑥ W/3-10d NAILS. TOENAIL TO HEADERS MARKED ④ W/2-12d NAILS AT EACH JOINT.
- ⑨ CENTER CLEAT, 2" X 6" X 30" (1 REQD). NAIL TO HEADER MARKED ④ W/7-10d NAILS.
- ⑩ DIAGONAL BRACE, 2" X 6" BY CUT TO FIT (2 REQD). DOUBLE BEVEL EACH END WITH 45° CUTS. INSTALL AT A 45° ANGLE AS SHOWN AND TOENAIL TO HEADER MARKED ④ AND RISER BLOCK MARKED ⑤ W/2-12d NAILS AT EACH JOINT.
- ⑪ SIDE CLEAT, 2" X 6" X 30" (2 REQD). NAIL TO SIDE STRUT MARKED ⑥ W/8-10d NAILS.
- ⑫ BACK-UP CLEAT, 2" X 6" X 30" (QUADRUPLED) (4 REQD). NAIL THE FIRST PIECE TO THE TRAILER FLOOR W/7-12d NAILS. NAIL EACH ADDITIONAL PIECE IN A LIKE MANNER. TOENAIL TOP PIECE TO HEADERS MARKED ④ W/2-12d NAILS AT EACH JOINT. SEE SPECIAL NOTE 3 AT LEFT AND GENERAL NOTE "P" ON PAGE 2.

SPECIAL NOTES:

1. A ONE-UNIT LOAD IS SHOWN DEPICTING THE USE OF LTL BRACES IN A TRAILER EQUIPPED WITH A NAILABLE FLOOR. TRAILERS WITH ALL METAL FLOORS CANNOT BE USED.
2. THIS OUTLOADING PROCEDURE IS ALSO APPLICABLE FOR LTL LOADS OF MORE THAN ONE UNIT, PROVIDING THE CRITERIA OF "NOTE ⊕" BELOW IS OBSERVED. UNITS SHOULD BE LOADED SIDE BY SIDE WITH ANTI-SWAY BRACES BETWEEN LATERALLY ADJACENT UNITS.
3. IF DESIRED, LTL BRACES MAY ALSO BE INSTALLED AT THE FORWARD END OF THE LADING.



ISOMETRIC VIEW



FILLER ASSEMBLY

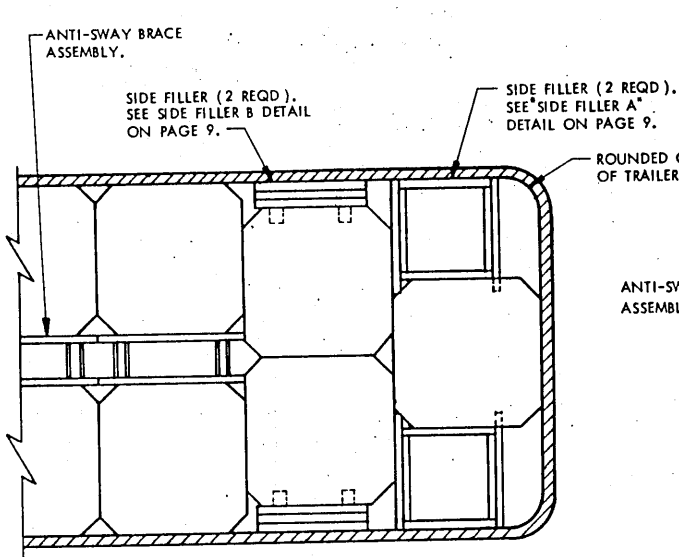
LTL BRACE

TYPICAL LTL (1-UNIT LOAD)

NOTE ⊕:

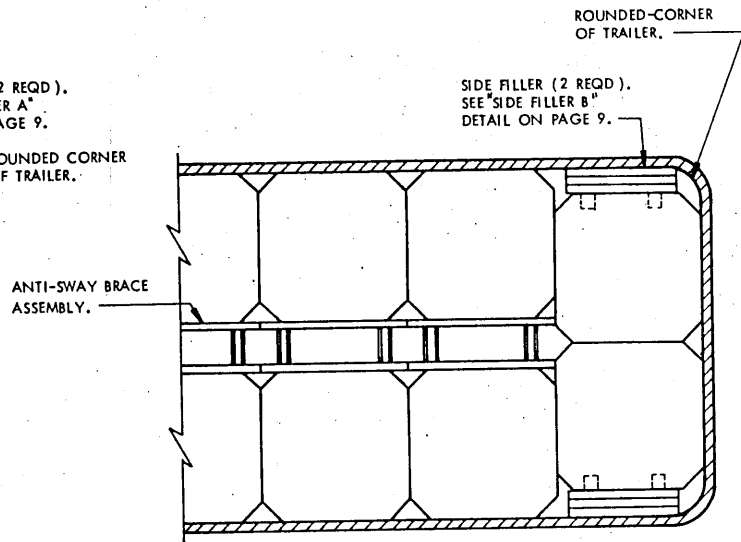
EACH BRACE AS APPLIED FOR LONGITUDINAL BRACING WILL SUPPORT 2,000 POUNDS OF LADING; HOWEVER, NOT LESS THAN TWO (2) BRACES WILL BE USED AGAINST EACH UNIT ACROSS THE WIDTH OF THE TRAILER. RELATIVE TO APPLYING LTL BRACES FOR LATERAL BLOCKING, NOT LESS THAN TWO (2) BRACES WILL BE USED AGAINST THE SIDE OF EACH UNIT AS SHOWN.

SEE "NOTE ⊕" AT LEFT.



**ALTERNATIVE FORWARD
LOADING PATTERN A**

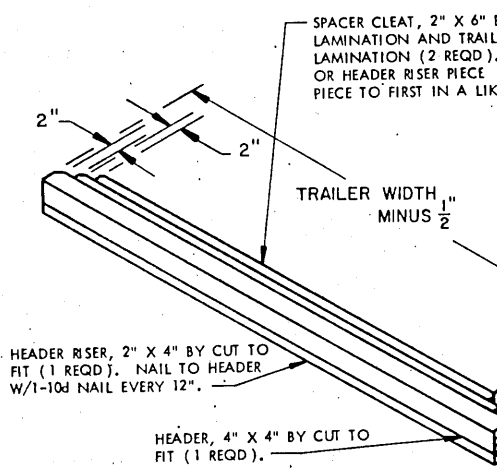
THIS PROCEDURE IS APPLICABLE TO THE LOADING OF ONE (1) UNIT IN THE FORWARD END OF A TRAILER HAVING ROUNDED FRONT CORNERS. THE PROCEDURE IS ALSO APPLICABLE FOR THE SHIPMENT OF AN ODD NUMBER OF UNITS IN EITHER A ROUNDED CORNER OR A SQUARE-FRONT TRAILER.



**ALTERNATIVE FORWARD
LOADING PATTERN B**

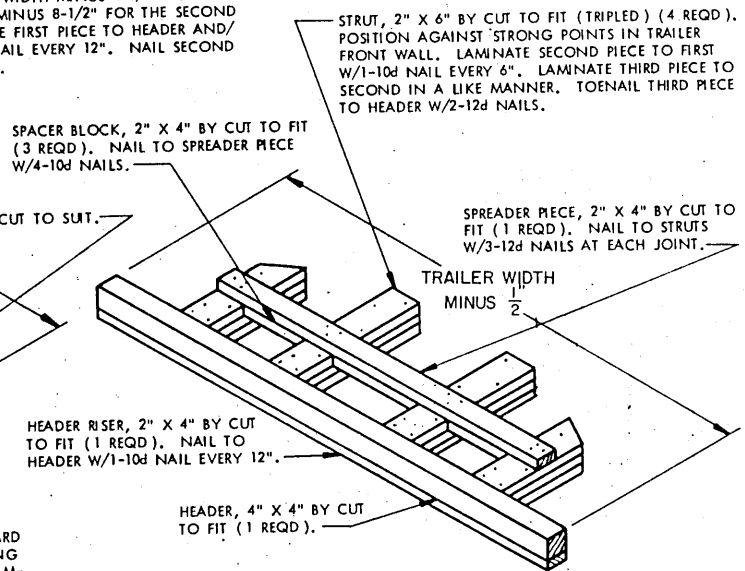
THIS PROCEDURE IS APPLICABLE TO TRAILERS HAVING ROUNDED CORNERS AT THE FORWARD END. CARE MUST BE EXERCISED TO ENSURE THAT THE FIRST TWO UNITS HAVE FULL BEARING SURFACE OF THE UNIT AGAINST THE FORWARD WALL OF THE TRAILER. FORWARD BLOCKING, "METHOD A" MAY BE USED WITH THIS LOADING PATTERN IF THE CONTOUR OF THE TRAILER WALL DICTATES.

ONE LAYER PROCEDURES



FORWARD BLOCKING METHOD A

THIS "FORWARD BLOCKING" ASSEMBLY IS DESIGNED FOR USE AT THE FORWARD END OF A 2-WIDE LOAD UNIT WHICH IS TO BE SHIPPED IN A TRAILER HAVING ROUNDED CORNERS OF AN INSIDE-RADIUS OF 5" OR LESS. ADDITIONAL LAMINATIONS MUST BE ADDED TO THE BACK SIDE OF THE SPACER CLEATS TO COMPENSATE FOR LARGER SIZE CORNERS. ADD ONE THICKNESS FOR A RADIUS OF 5" TO 7", TWO THICKNESSES FOR A RADIUS OF 7" TO 8", THREE THICKNESSES FOR A RADIUS OF 8" TO 10", AND FOUR THICKNESSES FOR A 10" THRU 12" RADIUS. NOTE: FOR TRAILERS WHICH HAVE LARGER CORNERS, USE "METHOD B" PROCEDURES.



FORWARD BLOCKING METHOD B

THIS "FORWARD BLOCKING" ASSEMBLY IS DESIGNED FOR USE AT THE FORWARD END OF EITHER A ONE (1) UNIT WIDE OR A TWO (2) UNIT WIDE-LOAD UNIT WHICH IS TO BE SHIPPED IN A TRAILER HAVING A ROUND FRONT.

TWO LAYER PROCEDURES

ADDITIONAL UNITIZING STRAPS ARE REQUIRED ON ALL THE MOST FORWARD TWO (2) HIGH LOAD UNITS. SEE KEY NUMBERS ⑥ AND ⑦ ON PAGE 4.

FORWARD STOP PIECE, 2" X 4" BY TRAILER WIDTH MINUS 33" (1 REQD). POSITION UNDER FORWARD UNITIZING STRAPS AND NAIL TO ANTI-SWAY BRACE W/2-12d NAILS AT EACH JOINT. IF AN EVEN NUMBER OF UNITS ARE TO BE SHIPPED, USE THE STOP PIECE DEPICTED AT THE REAR OF THE TRAILER.

UNITIZING STRAP, PIECE MARKED ⑥ ON PAGE 4.

REAR CORNER POST OF TRAILER. SEE GENERAL NOTE "N" ON PAGE 2.

STOP PIECE, PIECE MARKED ② ON PAGE 4.

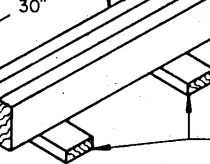
ANTI-SWAY BRACE, PIECE MARKED ① ON PAGE 4.

SOLID FILL, PIECE MARKED ⑤

SOLID FILL, 6" WIDE MATERIAL BY TRAILER WIDTH (AS REQD TO FILL THE VOID FROM THE REAR OF THE LADING TO REAR CORNER POSTS OR REAR DOORS WHEN CLOSED). LAMINATE W/1-10d NAIL EVERY 12".

FILLER PIECE, 2" X 6" X 30" (AS REQD). LAMINATE EACH LAYER W/5-10d NAILS.

FABRICATE TO FIT BETWEEN UNIT AND TRAILER SIDE WALL.



RISER/HOLD-DOWN, 2" X 4" BY CUT TO SUIT (2 REQD). NAIL TO FILLER PIECES W/3-10d NAILS.

SIDE FILLER B

ISOMETRIC VIEW

THIS VIEW DEPICTS THE METHOD OF SHIPPING A PARTIAL SECOND LAYER IN A TRAILER WITH REAR CORNER POSTS AND WITH A SOLID FILL TYPE BLOCKING AT THE REAR OF THE TRAILER.

FABRICATE TO FIT BETWEEN UNITS

SPACER PIECE, 2" X 6" BY CUT TO FIT (2 REQD).

ANTI-SWAY BRACE

BUFFER PIECE, 2" X 6" X 38-1/2" (2 REQD). NAIL TO SPACER PIECES W/3-12d NAILS AT EACH JOINT.

RISER PIECE, 2" X 4" BY CUT TO FIT (2 REQD). NAIL TO BUFFER PIECE AND TO SPACER PIECE W/2-10d NAILS AT EACH JOINT.

FABRICATE TO FIT BETWEEN UNIT AND TRAILER SIDE WALL

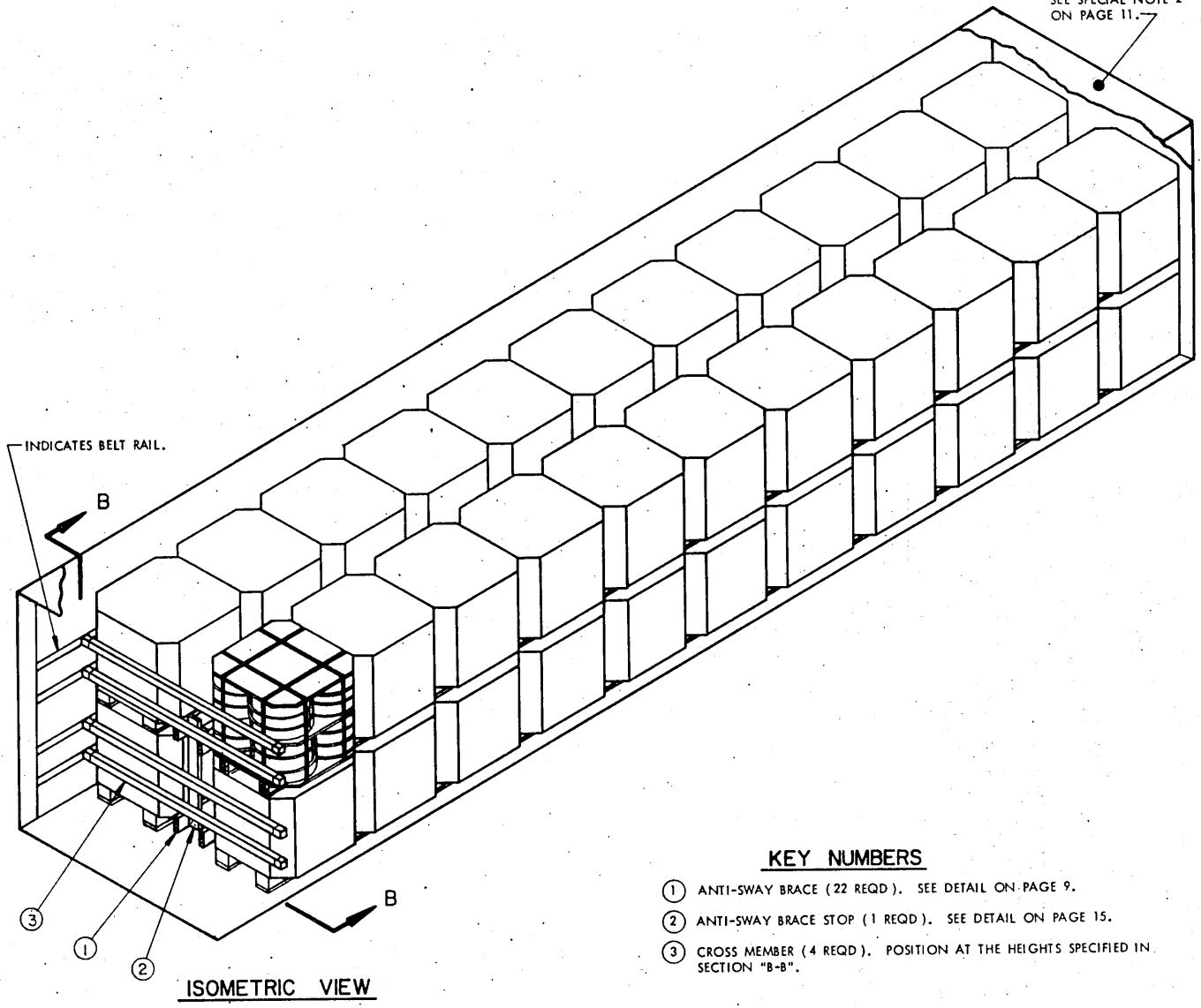
BUFFER PIECE, 2" X 6" X 30" (2 REQD). NAIL TO SPACER PIECE W/3-12d NAILS AT EACH END.

SPACER PIECE, 2" X 6" MATERIAL (2 REQD).

SIDE FILLER A

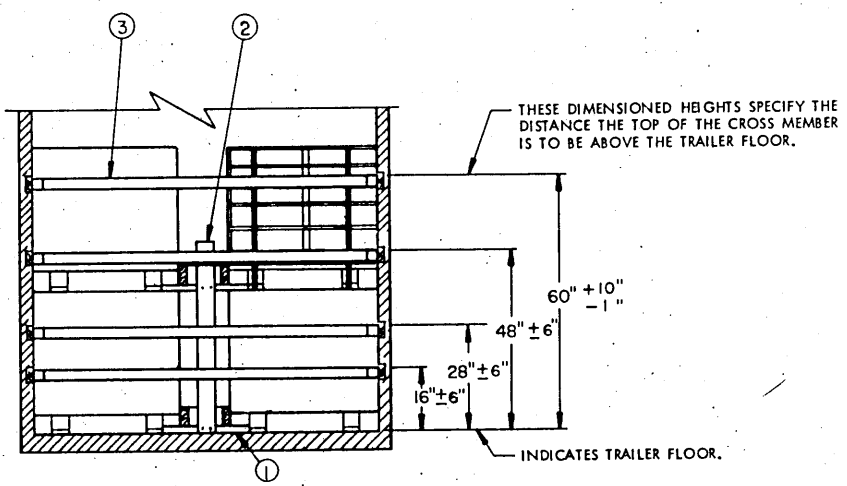
RISER/HOLD-DOWN, 2" X 4" BY CUT TO FIT (2 REQD). NAIL TO SPACER PIECES W/3-10d NAILS AND TO BUFFER PIECES W/1-10d NAIL AT EACH JOINT.

SEE SPECIAL NOTE 2 ON PAGE 11.



KEY NUMBERS

- ① ANTI-SWAY BRACE (22 REQD). SEE DETAIL ON PAGE 9.
- ② ANTI-SWAY BRACE STOP (1 REQD). SEE DETAIL ON PAGE 15.
- ③ CROSS MEMBER (4 REQD). POSITION AT THE HEIGHTS SPECIFIED IN SECTION "B-B".



SECTION B-B

44-UNIT LOAD IN A 38'-0" LONG TRAILER (MECHANICAL)

SPECIAL NOTES:

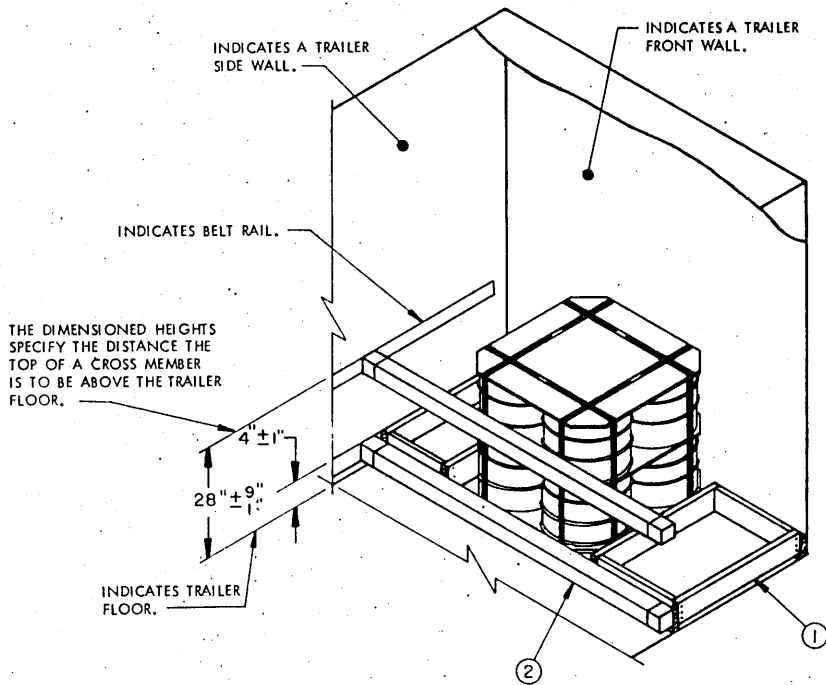
1. A 44-UNIT LOAD IS SHOWN IN A 38'-0" LONG BY 7'-6" WIDE (INSIDE DIMENSION) TRAILER WHICH IS EQUIPPED WITH A MECHANICAL LOAD BLOCKING SYSTEM THAT CONTAINS AT LEAST FOUR (4) CROSS MEMBERS, AND IS AT LEAST 35'-7" IN LENGTH AS MEASURED FROM THE FRONT WALL OF THE TRAILER. A WIDER OR NARROWER TRAILER CAN BE USED.
2. A SQUARE-FRONT TRAILER IS SHOWN IN THE LOAD VIEW. IF THE TRAILER HAS ROUNDED-CORNERS AT THE FORWARD END, FOUR (4) ADDITIONAL CROSS MEMBERS MAY BE POSITIONED AT THE FRONT OF THE TRAILER AT THE SAME HEIGHTS AS SPECIFIED IN SECTION "B-B" ON PAGE 10. A TRAILER WITH ROUNDED-CORNERS AT THE FORWARD END MUST HAVE A MECHANICAL LOAD BLOCKING SYSTEM OF AT LEAST 35'-10".
3. A 48-UNIT LOAD CAN BE OUTLOADED IN A TRAILER WHICH HAS A MECHANICAL LOAD BLOCKING SYSTEM THAT MEASURES 38'-9" FROM THE FRONT WALL OF THE TRAILER, IF THE TRAILER HAS A SQUARE FRONT WALL.

BILL OF MATERIAL

LUMBER	LINEAR FEET	BOARD FEET
2" X 4"	82	54
2" X 6"	177	177
NAILS	NO. REQD	POUNDS
10d (3")	264	4
12d (3-1/4")	268	4-1/2

LOAD AS SHOWN

<u>ITEM</u>	<u>QUANTITY</u>	<u>WEIGHT (APPROX)</u>
UNIT -----	44	23,496 LBS
DUNNAGE -----		586 LBS
TOTAL WEIGHT ---		24,082 LBS



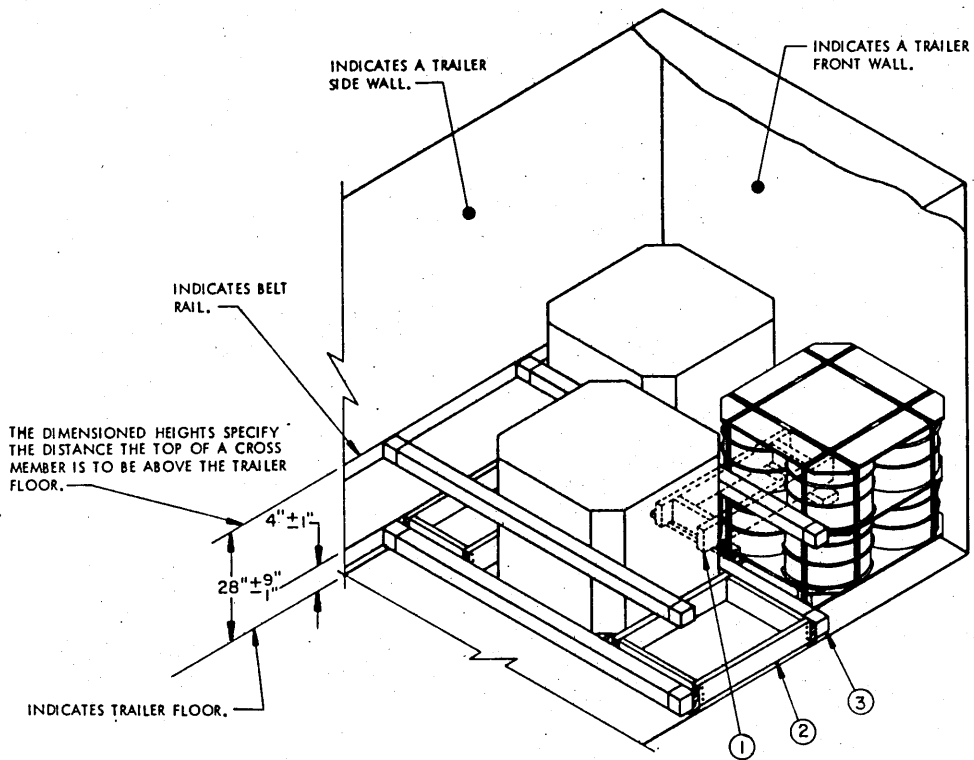
ISOMETRIC VIEW

SPECIAL NOTES:

1. A ONE (1) UNIT LOAD IS SHOWN IN A TRAILER EQUIPPED WITH MECHANICAL BRACING DEVICES.
2. IF IT IS DESIRED, OR IF THE TRAILER HAS ROUNDED-CORNERS AT THE FORWARD END, TWO (2) ADDITIONAL CROSS MEMBERS MAY BE USED AT THE FRONT OF THE TRAILER AT THE HEIGHTS SPECIFIED IN THE ISOMETRIC VIEW ABOVE.

KEY NUMBERS

- ① SIDE FILLER (2 REQD). SEE SIDE FILLER A DETAIL ON PAGE 9.
- ② CROSS MEMBER (2 REQD). POSITION AT THE HEIGHTS SPECIFIED IN THE ISOMETRIC VIEW.



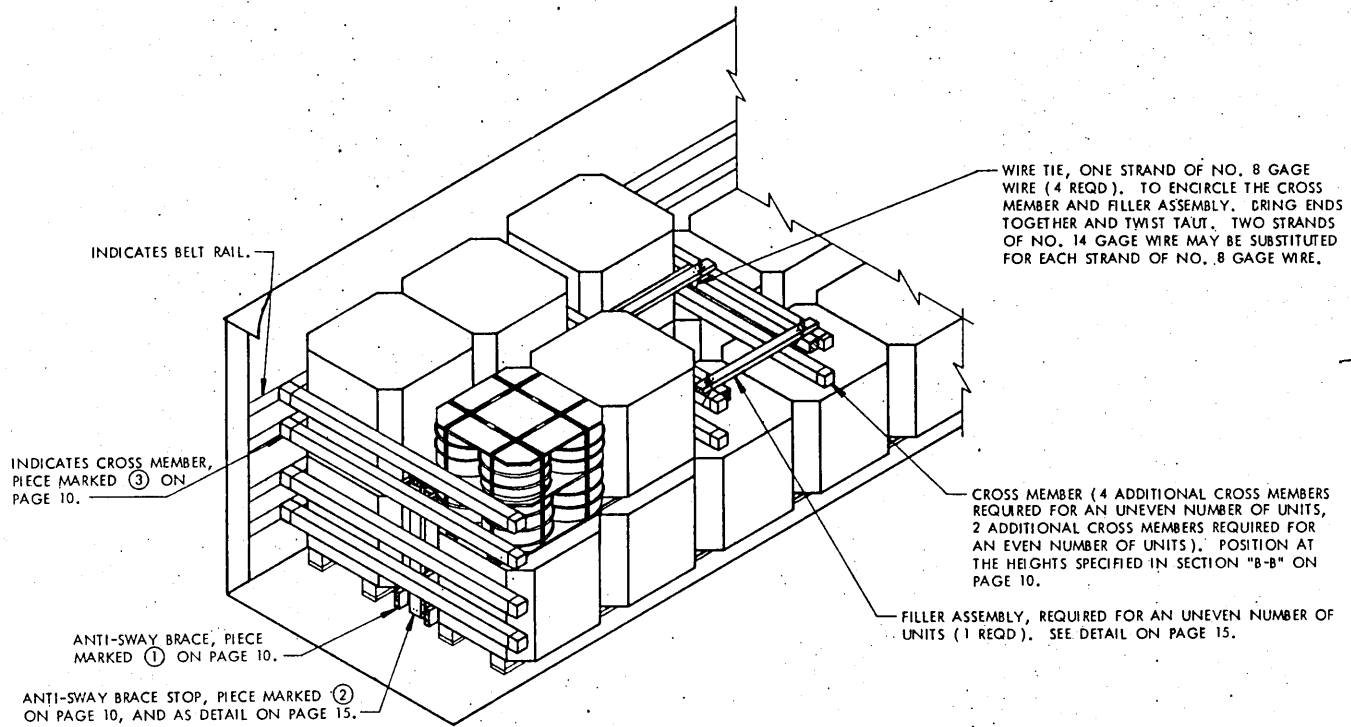
ISOMETRIC VIEW

SPECIAL NOTES:

1. A THREE (3) UNIT LOAD IS SHOWN IN A TRAILER EQUIPPED WITH MECHANICAL BRACING DEVICES.
2. IF IT IS DESIRED, OR IF THE TRAILER HAS ROUNDED-CORNERS AT THE FORWARD END, TWO (2) ADDITIONAL CROSS MEMBERS MAY BE USED AT THE FRONT OF THE TRAILER AT THE HEIGHTS SPECIFIED IN THE ISOMETRIC VIEW ABOVE.
3. THE USE OF THE "SIDE FILLER" IS SPECIFIED FOR THE DEPICTED LOAD ONLY TO SHOW A TYPICAL APPLICATION. THEY ARE ONLY REQUIRED WHEN SHIPPING AN UNEVEN NUMBER OF UNITS. IF AN EVEN NUMBER OF UNITS ARE LOADED DELETE THE SIDE FILLERS AND USE ADDITIONAL ANTI-SWAY BRACES.

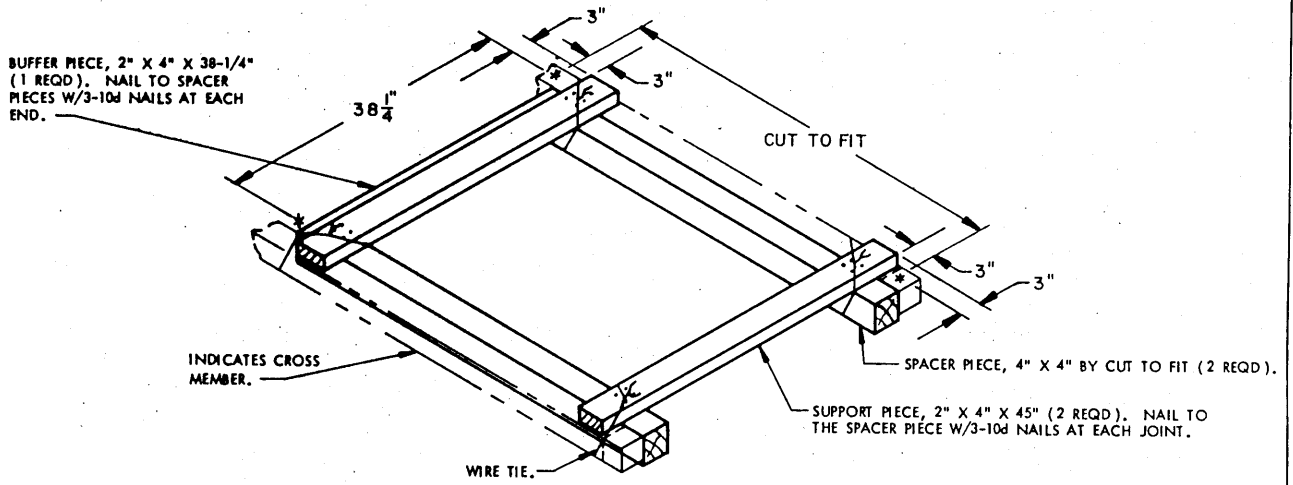
KEY NUMBERS

- ① ANTI-SWAY BRACE (1 REQD). SEE THE DETAIL ON PAGE 9.
- ② SIDE FILLER (2 REQD). SEE "SIDE FILLER A" DETAIL ON PAGE 9.
- ③ CROSS MEMBER (4 REQD). POSITION AT THE HEIGHTS SPECIFIED IN THE ISOMETRIC VIEW.



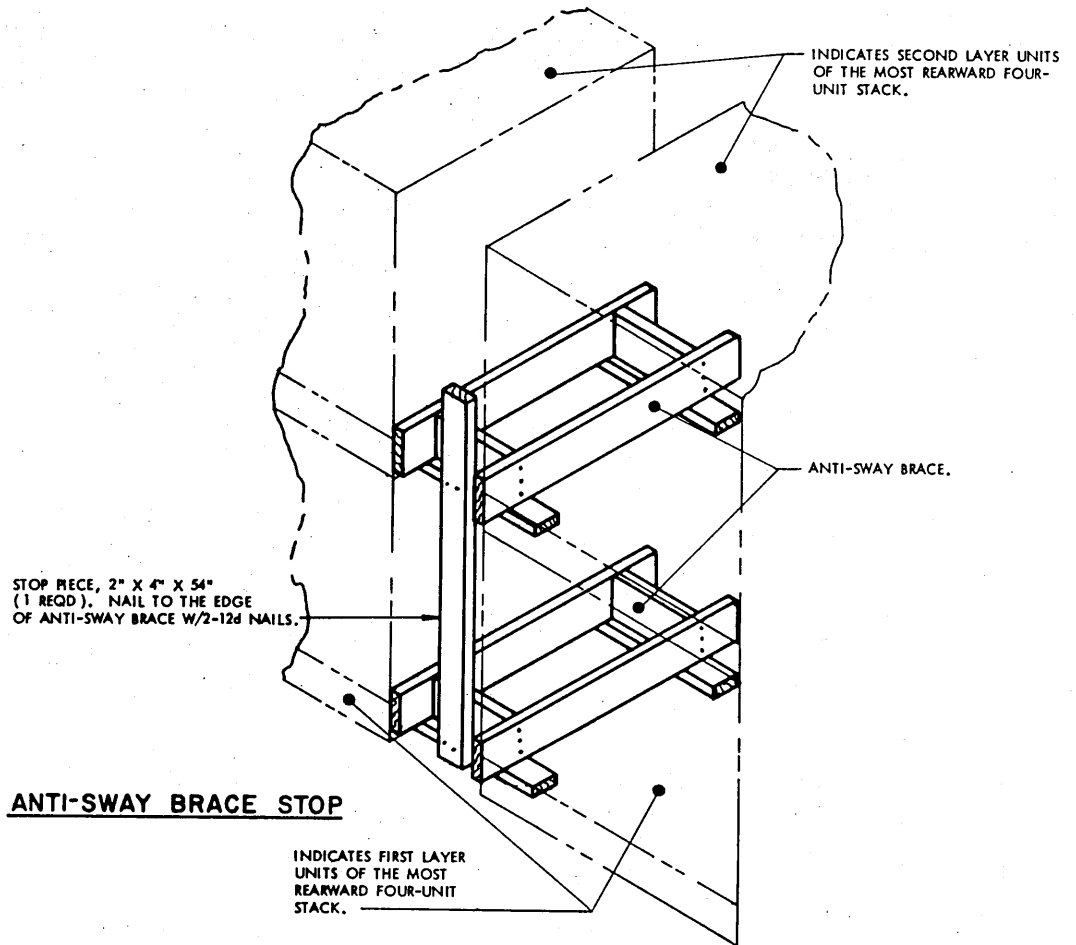
ISOMETRIC VIEW

THIS VIEW DEPICTS THE METHOD OF SHIPPING A PARTIAL LAYER IN A TRAILER EQUIPPED WITH MECHANICAL BRACING DEVICES. IF AN EVEN NUMBER OF UNITS ARE TO BE SHIPPED, DELETE THE FILLER ASSEMBLY AND THE TWO (2) CROSS MEMBERS BETWEEN THE UNITS IN THE SECOND LAYER.



FILLER ASSEMBLY

REQUIRED IN A LOAD THAT CONTAINS AN UNEVEN
 NUMBER OF UNITS IN THE SECOND LAYER.



DETAILS

