

APPROVED BY  
 BUREAU OF EXPLOSIVES  
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 SUPERVISOR, MILITARY & INTERMODAL SERVICES  
 DATE 5/29/80

# STINGER

## LOADING AND BRACING (TL & LTL) IN CLOSED OR OPEN TOP VAN TRAILERS OF THE LAUNCH SIMULATOR, PRACTICE, XM32 (PALLETIZED)

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THIS DOCUMENT INCLUDES PROCEDURES FOR CONVENTIONAL TYPE TRAILERS AND FOR TRAILERS EQUIPPED WITH MECHANICAL BRACING DEVICES AS APPROVED BY THE BUREAU OF EXPLOSIVES, ASSOCIATION OF AMERICAN RAILROADS. **CAUTION:** PROCEDURES SHOWN HEREIN, FOR BOTH TYPES OF TRAILERS ARE ONLY APPLICABLE FOR HIGHWAY MOVEMENTS, NOT FOR CONTAINER/ TRAILER-ON-FLAT-CAR MOVEMENTS.

REVISIONS				DRAWN BY <i>JDS/SFS</i>	CHECKED BY <i>RSH</i>	DESIGNED BY <i>ECP/Tms</i>
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		/		U.S. ARMY DARCOM DRAWING		
		/		JUNE 1980		
		/		CLASS	DIVISION	DRAWING
		/		19	48	5965
		/				FILE
		/				GM IISR2

**DO NOT SCALE**

## GENERAL NOTES

## ( GENERAL NOTES CONTINUED )

- 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 THE STINGER LAUNCH SIMULATOR, PRACTICE, XM32, PACKED TWO ( 2 ) PER SHIPPING CONTAINER. SUBSEQUENT REFERENCE TO CONTAINER MEANS SHIPPING CONTAINER WITH CONTENTS. ALSO SUBSEQUENT REFERENCE TO PALLETIZED UNIT MEANS THE PALLETIZED UNIT OF TWELVE ( 12 ) SHIPPING CONTAINERS WITH CONTENTS.
- C. FOR DETAILS OF THE STINGER LAUNCH SIMULATOR SHIPPING CONTAINER, SEE US ARMY MISSILE COMMAND DRAWING NO. 13049401.
- SHIPPING CONTAINER DIMENSIONS--- 54-7/8" LONG BY 9-3/8" DIAMETER,  
GROSS WEIGHT ----- 61.6 POUNDS (APPROX).
- D. FOR DETAILS OF THE PALLETIZED SHIPPING CONTAINERS, SEE US ARMY DARCOM DRAWING NO. 19-48-5244-GM20SR3 AND "PALLETIZED UNIT" DETAIL ON PAGE 5 OF THIS DRAWING.
- PALLETIZED UNIT DIMENSIONS ----- 41" LONG BY 56-3/8" WIDE BY 34-3/4" HIGH,  
GROSS WEIGHT ----- 1,131 POUNDS ( APPROX )  
CUBE ----- 46.5 CUBIC FEET.
- E. THIS ITEM IS A DOT CLASS "B" EXPLOSIVE. THE OUTLOADING PROCEDURES SPECIFIED HEREIN CAN ALSO BE UTILIZED FOR THE SHIPMENT OF THE DEPICTED CONTAINERS 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, UP TO AND INCLUDING 45'-0" LONG. THEY ARE LIMITED TO HIGHWAY MOVEMENT 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 IN THE ISOMETRIC VIEWS ARE FOR CONVENTIONAL TYPE VAN TRAILERS.
- H. THE OUTLOADING PROCEDURES SPECIFIED IN THE "PARTIAL ELEVATION VIEWS" ON PAGES 7 AND 9 AND THE "ISOMETRIC VIEW" ON PAGE 12 ARE FOR TRAILERS EQUIPPED WITH VARIOUS TYPES OF SELF CONTAINED MECHANICAL BRACING DEVICES, AND ARE LIMITED TO HIGHWAY MOVEMENT ONLY. THE HEIGHT REQUIREMENTS SPECIFIED WITHIN THIS DRAWING FOR THE INSTALLATION OF CROSS MEMBERS ARE IDENTICAL WITH THOSE RECOMMENDED BY THE BUREAU OF EXPLOSIVES PAMPHLET 6C, AND APPENDICES THERETO. **CAUTION:** TRAILERS EQUIPPED WITH WALL MEMBERS WHICH DO NOT MEET THE LOCATION REQUIREMENTS MUST NOT BE USED.
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. ONE ( 1 ) CROSS MEMBER WILL BE REQUIRED FOR EACH 10,000 POUNDS OF LADING, AND SHOULD NOT BE RELIED UPON TO RETAIN A GREATER WEIGHT. CROSS MEMBERS WILL NOT BE DOUBLED; THAT IS, TWO CROSS MEMBERS AT THE SAME HEIGHT LOCATION WILL NOT BE PLACED SIDE BY SIDE.
- J. SELECTION OF A VEHICLE TO BE USED TO TRANSPORT THE DESIGNATED ITEM MUST COMPLY WITH AR 55-355, CHAPTER 213, FOR EXPLOSIVES AND OTHER DANGEROUS ARTICLES, IN FULL.
- K. 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 SEMI-TRAILER 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 ANY AXLES ARE OVER-LOADED, OR ANY DOUBT AS TO WHETHER THE TOTAL GROSS WEIGHT EXCEEDS THE MAXIMUM ALLOWED, PROPER WEIGHT DISTRIBUTION SHOULD BE VERIFIED BY ACTUALLY WEIGHING THE LOADED VEHICLE.
- L. THE NUMBER OF LADING UNITS MAY BE ADJUSTED TO SUIT THE CAPACITY OF THE TRAILER BEING LOADED OR THE QUANTITY TO BE SHIPPED. HOWEVER, THE APPROVED METHODS SPECIFIED HEREIN MUST BE FOLLOWED AS CLOSELY AS POSSIBLE FOR BLOCKING, BRACING, AND STAYING OF THE LOADS.
- M. PALLETIZED UNITS WHICH DO NOT CONTAIN A FULL QUANTITY OF CONTAINERS CAN BE TRANSPORTED. A PARTIAL UNIT MAY BE POSITIONED ON TOP OF THE LOAD, TRAILER HEIGHT PERMITTING, AND SECURED TO THE UNIT DIRECTLY BELOW WITH STEEL STRAPPING. REFER TO THE "SHIPMENT OF PARTIAL UNITS" ON PAGE 13 FOR GUIDANCE. FOR THE TRANSPORTATION OF A QUANTITY OF CONTAINERS INSUFFICIENT TO FORM A PARTIAL UNIT ( A PARTIAL UNIT WILL CONSIST OF FULL LAYERS ) REFER TO THE "SHIPMENT OF LEFTOVER CONTAINERS" PROCEDURES ON PAGE 14 FOR GUIDANCE.
- N. OTHER TYPES OF LADING ITEMS MAY BE LOADED INTO TRAILERS WHICH ARE PARTIALLY LOADED WITH THE DESIGNATED ITEMS, 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.
- O. FOR TRAILERS NOT EQUIPPED WITH REAR CORNER POSTS, REAR BLOCKING MUST BE EXTENDED TO CONTACT THE REAR DOORS WHEN THEY ARE CLOSED.
- P. IN SOME INSTANCES CONTAINERS WILL ALREADY BE UNITIZED WHEN OFFERED FOR LOADING. THESE UNITS SHOULD BE INSPECTED AND, AS REQUIRED, LOOSE UNITIZING STEEL STRAPPING MUST BE REPLACED OR RETENSIONED.
- Q. 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 4" X 4" MATERIAL IS ACTUALLY 3-1/2" THICK BY 3-1/2" WIDE.
- R. **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.
- S. PORTIONS OF THE TRAILER BODIES DEPICTED WITHIN THIS PROCEDURAL DRAWING, SUCH AS ONE OF THE SIDE WALLS, HAVE NOT BEEN SHOWN IN THE LOAD VIEWS FOR CLARITY PURPOSES.
- T. WHEN STEEL STRAPPING IS SEALED AT AN END-OVER-END LAP JOINT, A MINIMUM OF TWO ( 2 ) SEALS, BUTTED TOGETHER, WITH TWO ( 2 ) PAIRS OF CRIMPS PER SEAL, MUST BE USED TO SEAL THE JOINT.
- U. WHEN REFERRING TO THE PALLET UNIT LENGTH OR UNIT WIDTH THE 40" DIMENSION OF THE PALLET BASE CONSTITUTES THE LENGTH AND THE 48" DIMENSION CONSTITUTES THE WIDTH. SEE THE PALLETIZED UNIT ON PAGE 5.
- V. FOR ADDITIONAL GUIDANCE, ATTENTION IS DIRECTED TO THE "SPECIAL NOTES" SECTIONS WHICH ARE IMMEDIATELY ADJACENT TO THE DEPICTED OUTLOADING METHODS.

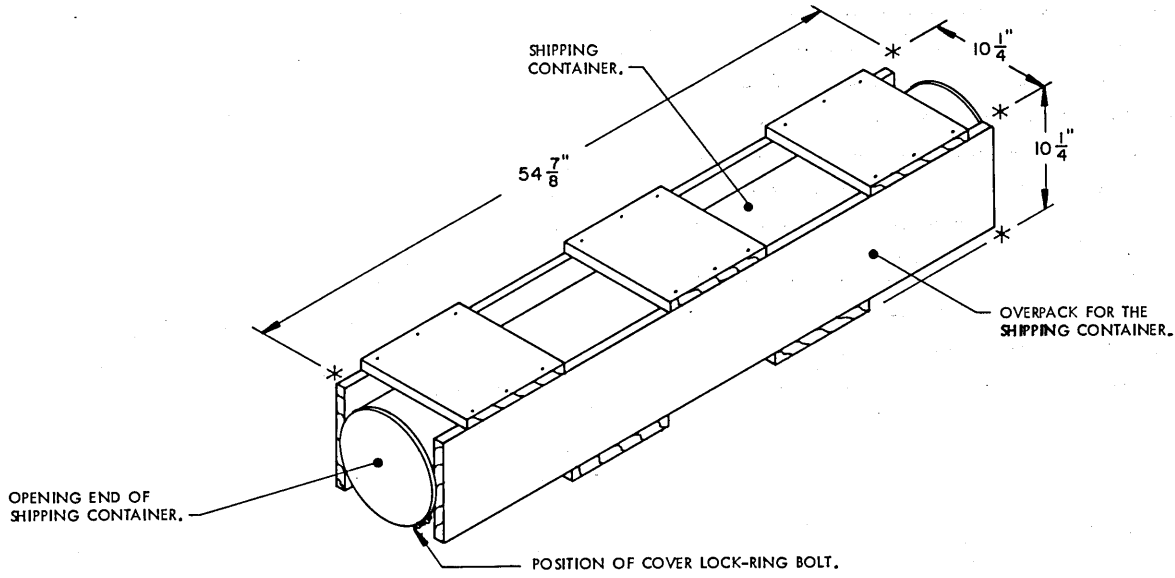
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## MATERIAL SPECIFICATIONS

- LUMBER ----- : SEE TM 743-200-1, DUNNAGE LUMBER; FED SPEC MM-L-751.
- NAILS ----- : FED SPEC FF-N-105, COMMON.
- STRAPPING, STEEL ---- : CLASS I, TYPE I OR II, HEAVY DUTY, FINISH A, B ( GRADE 2 ), OR C; FED SPEC QQ-S-781.
- SEAL, STRAP ----- : TYPE D, STYLE I, II, OR IV, CLASS H, FED SPEC QQ-S-781.
- STAPLE, STRAP ----- : TYPE III, STYLE 3, 15/16" WIDE BY 3/4" LEG LENGTH, OR EQUIVALENT. FED SPEC FF-N-105.
- WIRE ----- : FED SPEC QQ-W-461.

ITEMIZED INDEX

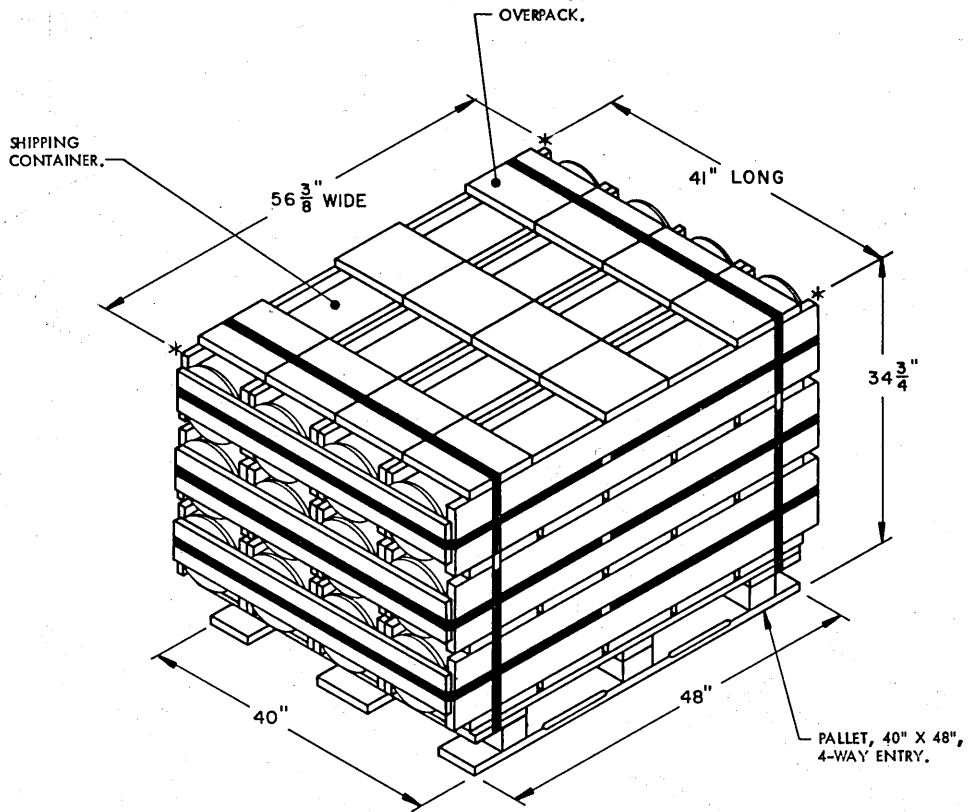
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**SHIPPING CONTAINER IN OVERPACK**

NOTE: EACH SHIPPING CONTAINER CONTAINS TWO (2) LAUNCH SIMULATORS.

**SHIPPING CONTAINER IN OVERPACK**

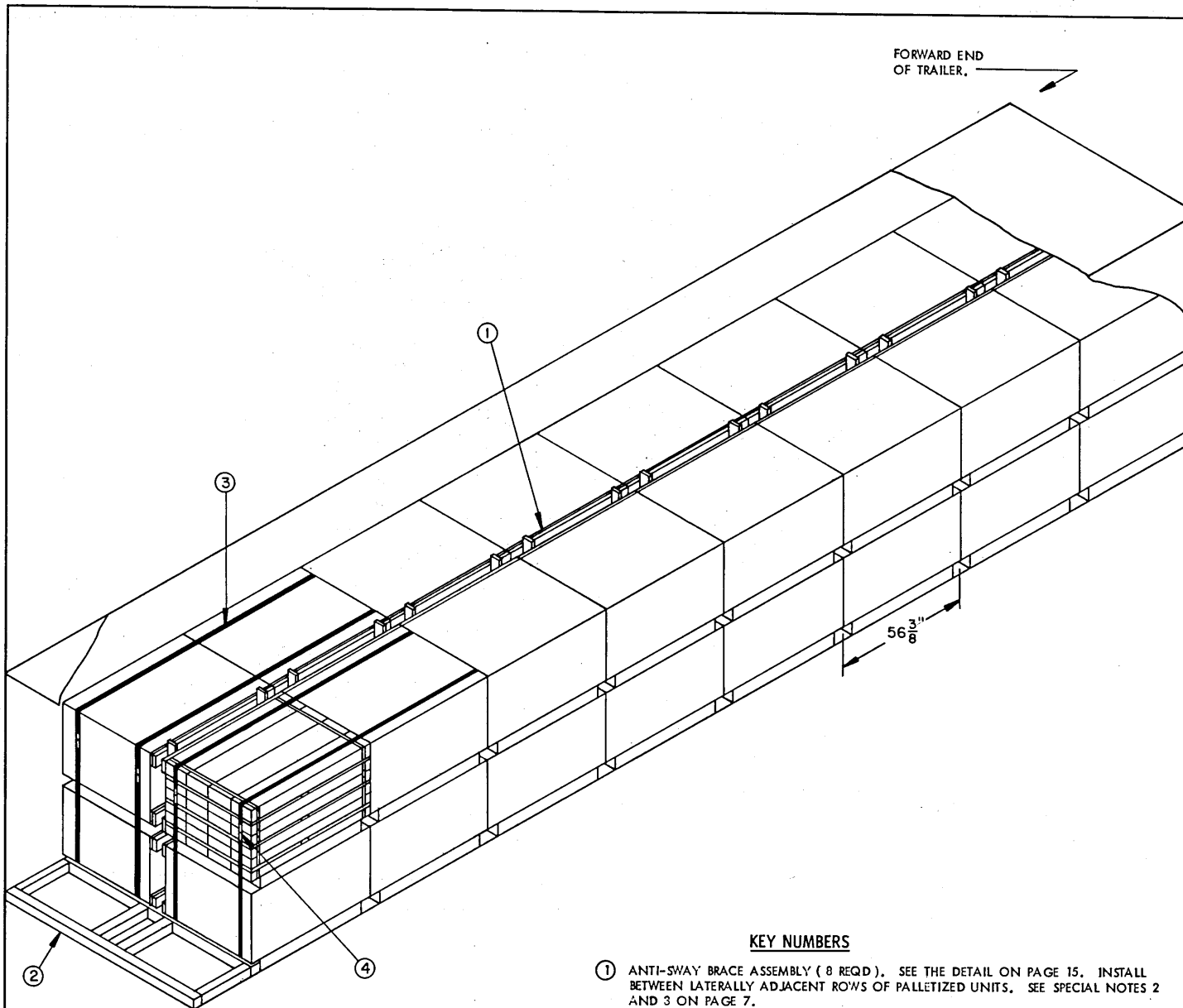


**PALLETIZED UNIT**

**NOTE:** EACH PALLETIZED UNIT CONTAINS TWENTY-FOUR (24) LAUNCH SIMULATORS. (TWELVE SHIPPING CONTAINERS IN OVERPACK).

**UNIT DATA:**

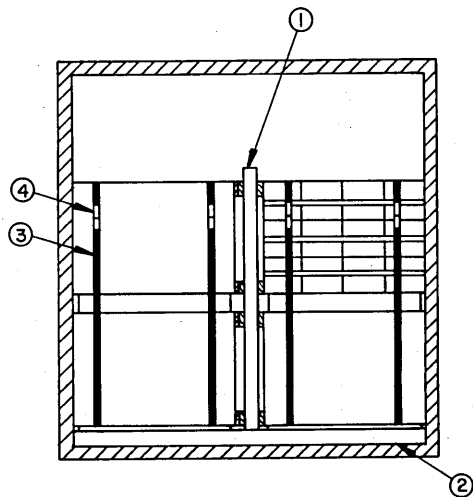
GROSS WEIGHT ----- 1,131 POUNDS (APPROX)  
 CUBE ----- 46.5 CUBIC FEET.



ISOMETRIC VIEW

**KEY NUMBERS**

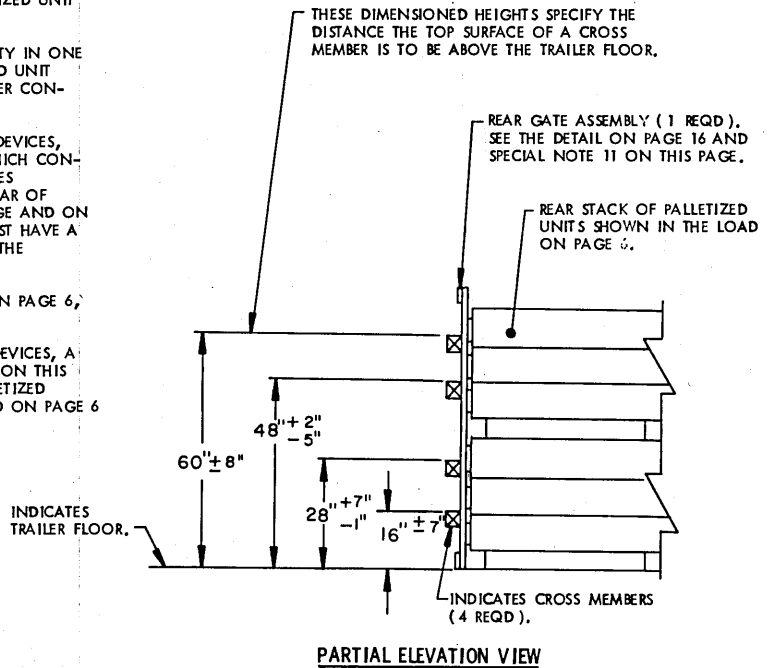
- ① ANTI-SWAY BRACE ASSEMBLY ( 8 REQD ). SEE THE DETAIL ON PAGE 15. INSTALL BETWEEN LATERALLY ADJACENT ROWS OF PALLETIZED UNITS. SEE SPECIAL NOTES 2 AND 3 ON PAGE 7.
- ② REAR BLOCKING ASSEMBLY ( 1 REQD ). SEE THE DETAIL ON PAGE 15. SEE SPECIAL NOTES 4 AND 11 ON PAGE 7.
- ③ BUNDLING STRAP, 1-1/4" X .035" X 32'-0" LONG STEEL STRAPPING ( 4 REQD ). PREPOSITION AND INSTALL EACH STRAP TO ENCIRCLE TWO ( 2 ) PALLETIZED UNIT STACKS AS SHOWN. SEE SPECIAL NOTES 10 AND 11 ON PAGE 7.
- ④ SEAL FOR 1-1/4" STEEL STRAPPING ( 8 REQD, 2 PER STRAP ). DOUBLE CRIMP EACH SEAL. SEE GENERAL NOTE "T" ON PAGE 2.



REAR VIEW

**SPECIAL NOTES:**

1. A LOAD OF 32 PALLETIZED UNITS IS SHOWN IN A 40'-0" LONG BY 7'-6" WIDE (INSIDE DIMENSION) CONVENTIONAL TYPE VAN TRAILER.
2. A WIDER OR NARROWER TRAILER THAN SHOWN MAY BE USED FOR SHIPPING THE DEPICTED LOAD. ADJUST THE WIDTH OF THE "ANTI-SWAY BRACE ASSEMBLY" AS NECESSARY.
3. THE ANTI-SWAY BRACING MAY BE OMITTED IF THE SPACE BETWEEN LATERALLY ADJACENT UNITS IS 4" OR LESS, AS MEASURED FROM CONTAINER TO CONTAINER ON LATERALLY ADJACENT PALLETIZED UNITS.
4. IF THE VOID AT THE REAR OF THE LOAD, BETWEEN THE PALLETIZED UNITS AND THE REAR DOORS, MEASURES LESS THAN 12", USE A "SOLID FILL" BLOCKING OF 2" X 6" BY TRAILER WIDTH MINUS 1/2" IN LENGTH POSITIONED ON EDGE AND LAMINATE 6" WIDE MATERIAL, BY THICKNESS TO SUIT, TO THE 2" X 6" ON EDGE TO FILL THE VOID SPACE BETWEEN THE REAR MOST PALLETIZED UNITS AND THE REAR DOORS. IF THE VOID AT THE REAR OF THE LOAD IS 12" OR GREATER, USE THE "REAR BLOCKING ASSEMBLY" SHOWN IN THE LOAD ON PAGE 6.
5. TO SATISFY THE QUANTITY OF PALLETIZED UNITS TO BE SHIPPED, THE LOAD SHOWN MAY BE DECREASED BY OMITTING FOUR UNITS AT A TIME FROM THE REAR, AND BLOCKING AS SHOWN IN THE LOAD ON PAGE 6, OR OMITTING TWO ADJACENT PALLETIZED UNITS FROM THE REAR OF THE TOP LAYER ( IF THIS IS DONE THE LAST TWO STACKS OF TWO HIGH PALLETIZED UNITS MUST BE UNITIZED WITH 1-1/4" STEEL STRAPPING AS SHOWN IN THE LOAD ON PAGE 6), OR IF AN ODD NUMBER OF PALLETIZED UNITS ARE LOADED, POSITION ONE UNIT AT THE REAR AS SHOWN IN THE LOAD ON PAGE 8, OR THE ENTIRE TOP LAYER CAN BE LEFT OFF. ALSO SEE PAGES 11 AND 12.
6. IF THE TRAILER BEING LOADED HAS A ROUND FRONT OR ROUNDED CORNERS AT THE FORWARD END, A "FORWARD BLOCKING ASSEMBLY" SHOWN AS PIECE MARKED ① IN THE LOAD ON PAGE 8 MUST BE USED.
7. IF A PALLETIZED UNIT WHICH DOES NOT CONTAIN A FULL QUANTITY OF CONTAINERS IS TO BE TRANSPORTED, REFER TO THE "SHIPMENT OF A PARTIAL PALLETIZED UNIT" PROCEDURES ON PAGE 13 FOR GUIDANCE.
8. LEFTOVER CONTAINERS, IN AN AMOUNT NOT TO EXCEED THE QUANTITY IN ONE LAYER OF A UNIT, MAY BE SECURED TO THE TOP OF A FULL PALLETIZED UNIT FOR SHIPMENT. REFER TO THE "PROCEDURES FOR SHIPMENT OF LEFTOVER CONTAINERS" ON PAGE 14 FOR GUIDANCE.
9. IF THE TRAILER BEING OUTLOADED CONTAINS MECHANICAL BRACING DEVICES, SUCH AS A WALL BELT RAIL AND LOAD BLOCKING CROSS MEMBERS, WHICH CONFORM TO SPECIFICATIONS SET FORTH WITHIN THE BUREAU OF EXPLOSIVES PAMPHLET 6C AND APPENDICES THERETO, THEY MAY BE USED AT THE REAR OF THE LOAD AS SHOWN IN THE "PARTIAL ELEVATION VIEW" ON THIS PAGE AND ON PAGE 9. THE MECHANICAL BRACING DEVICE SYSTEM OF A TRAILER MUST HAVE A LENGTH OF AT LEAST 38'-0" AS MEASURED FROM THE FRONT WALL OF THE TRAILER. SEE GENERAL NOTE "H" ON PAGE 2.
10. THE BUNDLING STRAPS, SHOWN AS PIECES MARKED ③ IN THE LOAD ON PAGE 6, MUST BE PREPOSITIONED AS LOADING PROGRESSES.
11. IF THE TRAILER BEING OUTLOADED CONTAINS MECHANICAL BRACING DEVICES, A "REAR GATE ASSEMBLY" AS SHOWN IN THE "PARTIAL ELEVATION VIEW" ON THIS PAGE MUST BE USED BETWEEN THE CROSS MEMBERS AND THE REAR PALLETIZED UNITS. OMIT PIECES MARKED ②, ③, AND ④ SHOWN IN THE LOAD ON PAGE 6 WHEN USING CROSS MEMBERS.

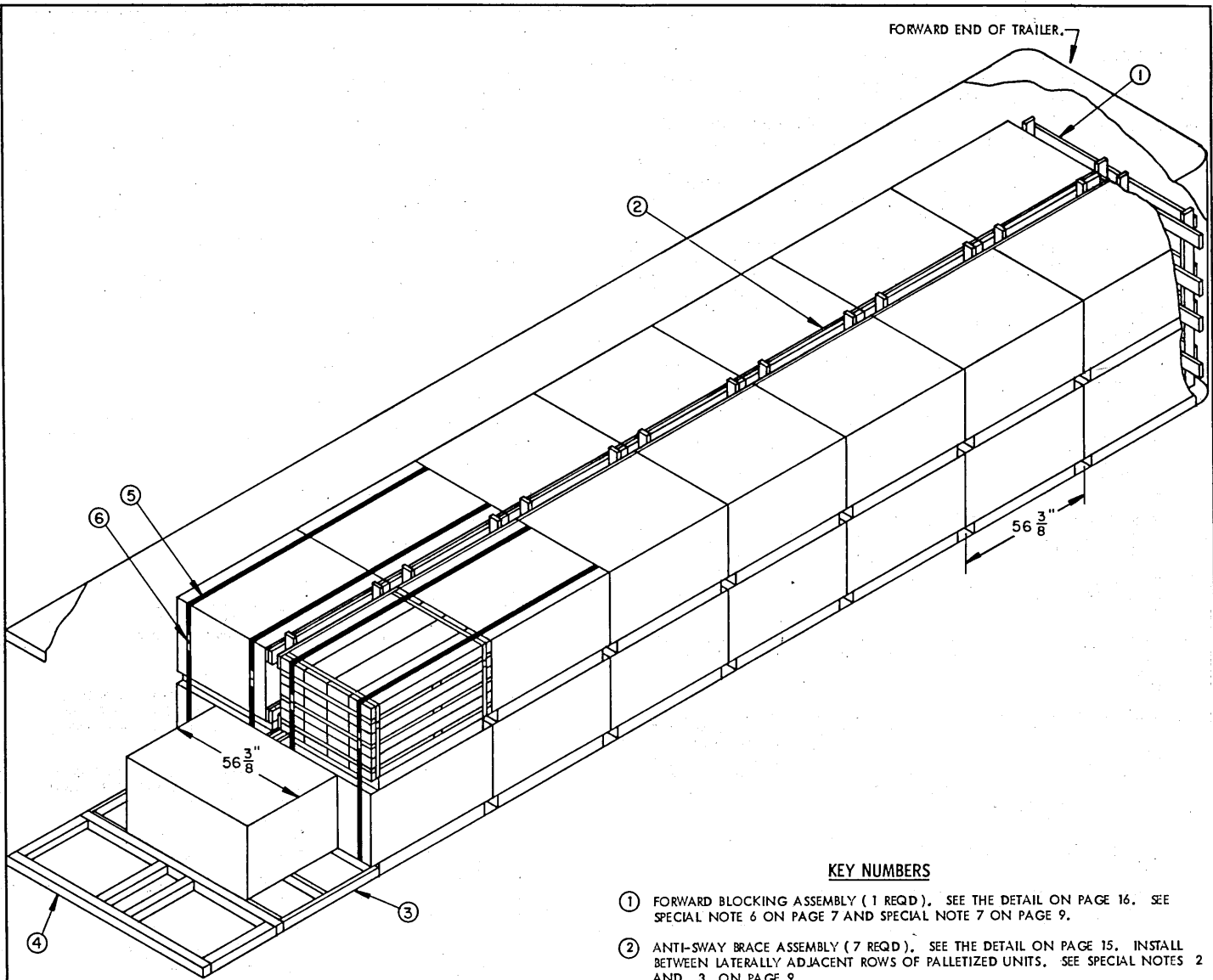


THE VIEW SHOWN ABOVE INDICATES THE REAR PORTION OF THE LOAD SHOWN ON PAGE 6. SEE SPECIAL NOTES 9 AND 11 ON THIS PAGE. WHEN USING THIS METHOD OF REAR BLOCKING, OMIT PIECES MARKED ②, ③, AND ④ SHOWN IN THE LOAD ON PAGE 6.

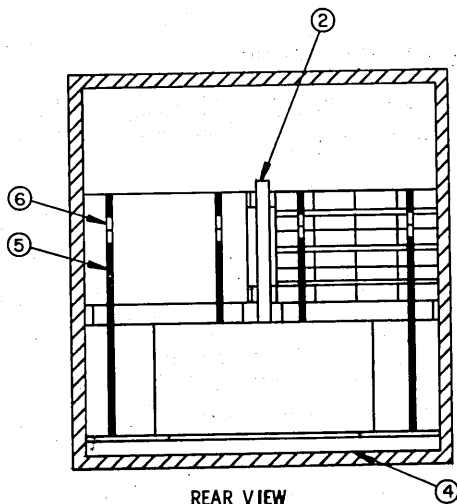
BILL OF MATERIAL		
LUMBER	LINEAR FEET	BOARD FEET
1" X 4"	150	50
2" X 4"	396	264
4" X 4"	22	30
NAILS	NO. REQD	POUNDS
6d (2")	160	1
10d (3")	256	4
16d (3-1/2")	16	1/2
STEEL STRAPPING, 1-1/4" X .035" --- 128' REQD		19 LBS
SEAL FOR 1-1/4" STRAPPING --- 8 REQD		NIL

**LOAD AS SHOWN**

ITEM	QUANTITY	WEIGHT (APPROX)
PALLETIZED UNIT	32	36,192 LBS
DUNNAGE		713 LBS
<b>TOTAL WEIGHT</b>		<b>36,905 LBS</b>



ISOMETRIC VIEW



REAR VIEW

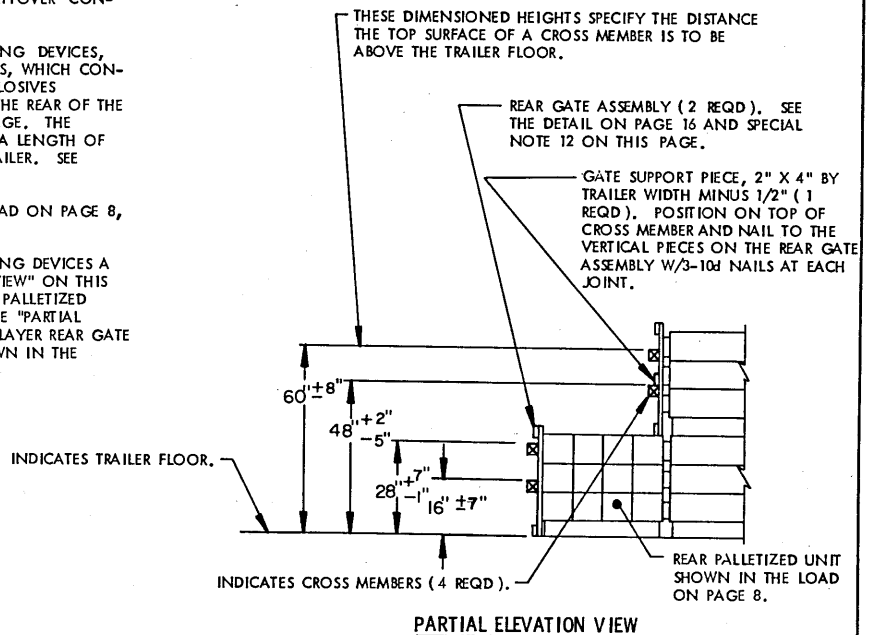
KEY NUMBERS

- ① FORWARD BLOCKING ASSEMBLY ( 1 REQD ). SEE THE DETAIL ON PAGE 16. SEE SPECIAL NOTE 6 ON PAGE 7 AND SPECIAL NOTE 7 ON PAGE 9.
- ② ANTI-SWAY BRACE ASSEMBLY ( 7 REQD ). SEE THE DETAIL ON PAGE 15. INSTALL BETWEEN LATERALLY ADJACENT ROWS OF PALLETIZED UNITS. SEE SPECIAL NOTES 2 AND 3 ON PAGE 9.
- ③ SIDE BLOCKING ASSEMBLY ( 2 REQD ). SEE THE DETAIL ON PAGE 15. SEE SPECIAL NOTE 5 ON PAGE 9.
- ④ REAR BLOCKING ASSEMBLY ( 1 REQD ). SEE THE DETAIL ON PAGE 15. SEE SPECIAL NOTES 4 AND 12 ON PAGE 9.
- ⑤ BUNDLING STRAP, 1-1/4" X .035" X 32'-0" LONG STEEL STRAPPING ( 4 REQD ), PREPOSITION AND INSTALL EACH STRAP TO ENCIRCLE TWO ( 2 ) PALLETIZED UNIT STACKS AS SHOWN. SEE SPECIAL NOTES 11 AND 12 ON PAGE 9.
- ⑥ SEAL FOR 1-1/4" STEEL STRAPPING ( 8 REQD, 2 PER STRAP ). DOUBLE CRIMP EACH SEAL. SEE GENERAL NOTE "T" ON PAGE 2.



**SPECIAL NOTES:**

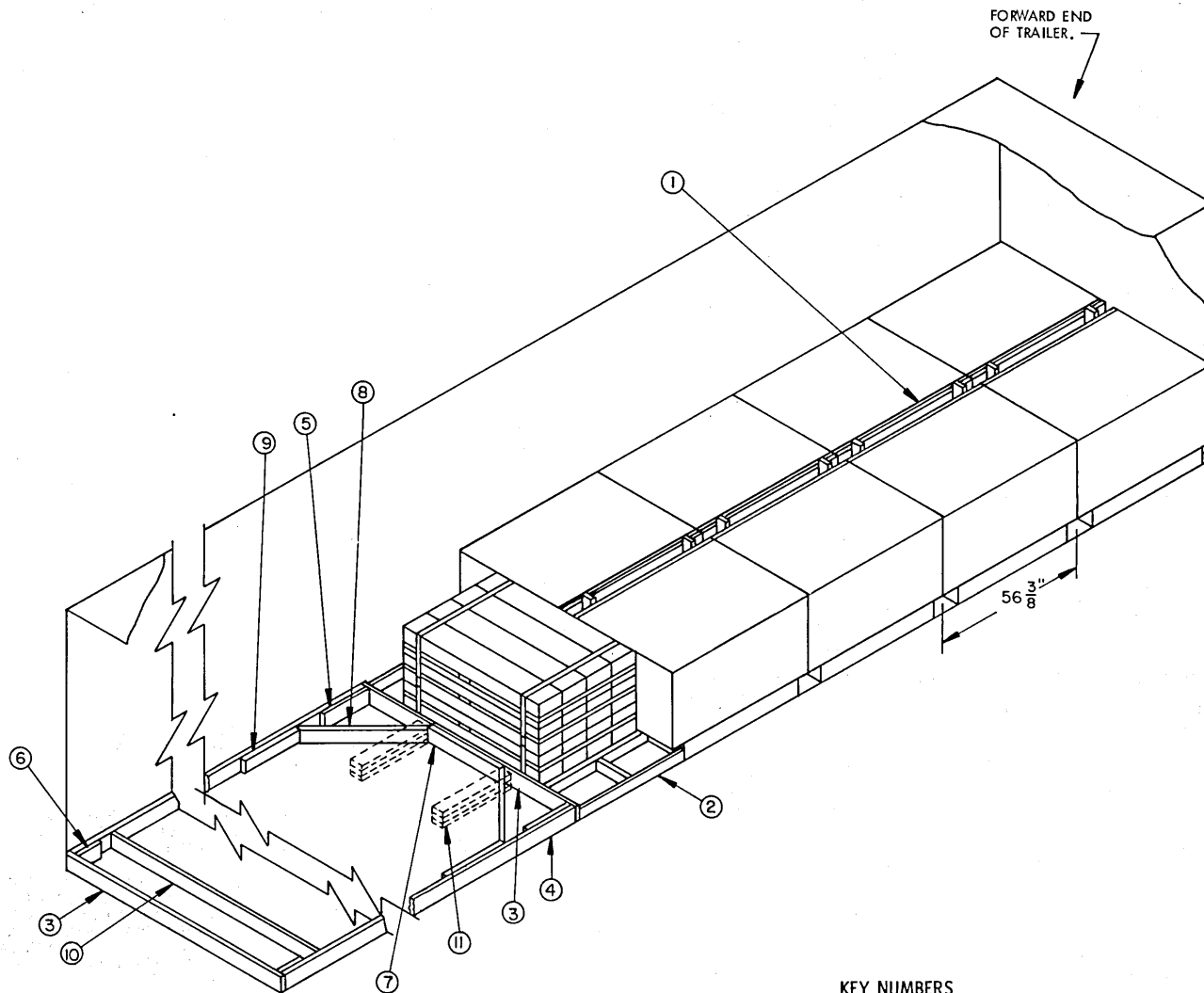
1. A LOAD OF 29 PALLETIZED UNITS IS SHOWN IN A 40'-0" LONG BY 7'-6" WIDE (INSIDE DIMENSION) CONVENTIONAL TYPE VAN TRAILER.
2. A WIDER OR NARROWER TRAILER THAN SHOWN MAY BE USED FOR SHIPPING THE DEPICTED LOAD. ADJUST THE WIDTH OF THE "ANTI-SWAY BRACE ASSEMBLY" AS NECESSARY.
3. THE ANTI-SWAY BRACING MAY BE OMITTED IF THE SPACE BETWEEN LATERALLY ADJACENT UNITS IS 4" OR LESS, AS MEASURED FROM CONTAINER TO CONTAINER ON LATERALLY ADJACENT PALLETIZED UNITS.
4. IF THE VOID AT THE REAR OF THE LOAD, BETWEEN THE PALLETIZED UNIT AND THE REAR DOORS MEASURES LESS THAN 12", USE A "SOLID FILL" BLOCKING OF 2" X 6" BY TRAILER WIDTH MINUS 1/2" IN LENGTH POSITIONED ON EDGE AND LAMINATE 6" WIDE MATERIAL, BY THICKNESS TO SUIT, TO THE 2" X 6" ON EDGE TO FILL THE VOID SPACE BETWEEN THE REARMOST PALLETIZED UNIT AND THE REAR DOORS. IF THE VOID AT THE REAR OF THE LOAD IS 12" OR GREATER, USE THE "REAR BLOCKING ASSEMBLY" SHOWN IN THE LOAD ON PAGE 8.
5. WHEN ONE PALLETIZED UNIT IS POSITIONED AT THE REAR OF A LOAD, AS SHOWN IN THE LOAD ON PAGE 8, IT MUST BE BRACED FROM SIDE MOVEMENT WITH A "SIDE BLOCKING ASSEMBLY" ON EACH SIDE. THIS ASSEMBLY MAY BE FABRICATED OUTSIDE OF THE TRAILER AND SLID INTO POSITION OR PREPOSITIONED ON THE FLOOR PRIOR TO LOADING THE LAST PALLETIZED UNIT.
6. TO SATISFY THE QUANTITY OF PALLETIZED UNITS TO BE SHIPPED, THE LOAD SHOWN MAY BE DECREASED BY OMITTING THE REAR PALLETIZED UNIT OR AS STATED IN SPECIAL NOTE 5 ON PAGE 7.
7. IF THE TRAILER BEING LOADED HAS A SQUARE FRONT OMIT THE "FORWARD BLOCKING ASSEMBLY" AND POSITION THE PALLETIZED UNITS AGAINST THE FORWARD WALL AS SHOWN IN THE LOAD ON PAGE 6.
8. IF A PALLETIZED UNIT WHICH DOES NOT CONTAIN A FULL QUANTITY OF CONTAINERS IS TO BE TRANSPORTED, REFER TO THE "SHIPMENT OF A PARTIAL PALLETIZED UNIT" PROCEDURES ON PAGE 13 FOR GUIDANCE.
9. LEFTOVER CONTAINERS, IN AN AMOUNT NOT TO EXCEED THE QUANTITY IN ONE LAYER OF A UNIT, MAY BE SECURED TO THE TOP OF A FULL PALLETIZED UNIT FOR SHIPMENT. REFER TO THE "PROCEDURES FOR SHIPMENT OF LEFTOVER CONTAINERS" ON PAGE 14 FOR GUIDANCE.
10. IF THE TRAILER BEING OUTLOADED CONTAINS MECHANICAL BRACING DEVICES, SUCH AS A WALL BELT RAIL AND LOAD BLOCKING CROSS MEMBERS, WHICH CONFORM TO SPECIFICATIONS SET FORTH WITHIN THE BUREAU OF EXPLOSIVES PAMPHLET 6C AND APPENDICES THERETO, THEY MAY BE USED AT THE REAR OF THE LOAD AS SHOWN IN THE "PARTIAL ELEVATION VIEW" ON THIS PAGE. THE MECHANICAL BRACING DEVICE SYSTEM OF A TRAILER MUST HAVE A LENGTH OF AT LEAST 38'-0" AS MEASURED FROM THE FRONT WALL OF THE TRAILER. SEE GENERAL NOTE "H" ON PAGE 2.
11. THE BUNDLING STRAPS, SHOWN AS PIECES MARKED ⑤ IN THE LOAD ON PAGE 8, MUST BE PREPOSITIONED AS LOADING PROGRESSES.
12. IF THE TRAILER BEING OUTLOADED CONTAINS MECHANICAL BRACING DEVICES A "REAR GATE ASSEMBLY" AS SHOWN IN THE "PARTIAL ELEVATION VIEW" ON THIS PAGE MUST BE USED BETWEEN THE CROSS MEMBERS AND THE REAR PALLETIZED UNITS. NOTE THAT ONE GATE SUPPORT PIECE, AS SHOWN IN THE "PARTIAL ELEVATION VIEW" ON THIS PAGE, IS REQUIRED ON THE SECOND LAYER REAR GATE ASSEMBLY ONLY. OMIT PIECES MARKED ④, ⑤, AND ⑥, SHOWN IN THE LOAD ON PAGE 8 WHEN USING CROSS MEMBERS.



THE VIEW SHOWN ABOVE INDICATES THE REAR PORTION OF THE LOAD SHOWN ON PAGE 8. SEE SPECIAL NOTES 10 AND 12 ON THIS PAGE. WHEN USING THIS METHOD OF REAR BLOCKING, OMIT PIECES MARKED ④, ⑤, AND ⑥ SHOWN IN THE LOAD ON PAGE 8.

BILL OF MATERIAL		
LUMBER	LINEAR FEET	BOARD FEET
1" X 4"	132	44
2" X 4"	395	264
2" X 6"	25	25
4" X 4"	26	35
NAILS	NO. REQD	POUNDS
6d (2")	140	1
10d (3")	312	5
16d (3-1/2")	16	1/2
STEEL STRAPPING, 1-1/4" X .035" -----	128' REQD -----	19 LBS
SEAL FOR 1-1/4" STRAPPING -----	8 REQD -----	NIL

ITEM	QUANTITY	WEIGHT (APPROX)
PALLETIZED UNIT -----	29 -----	32,799 LBS
DUNNAGE -----	-----	762 LBS
TOTAL WEIGHT -----	-----	33,561 LBS



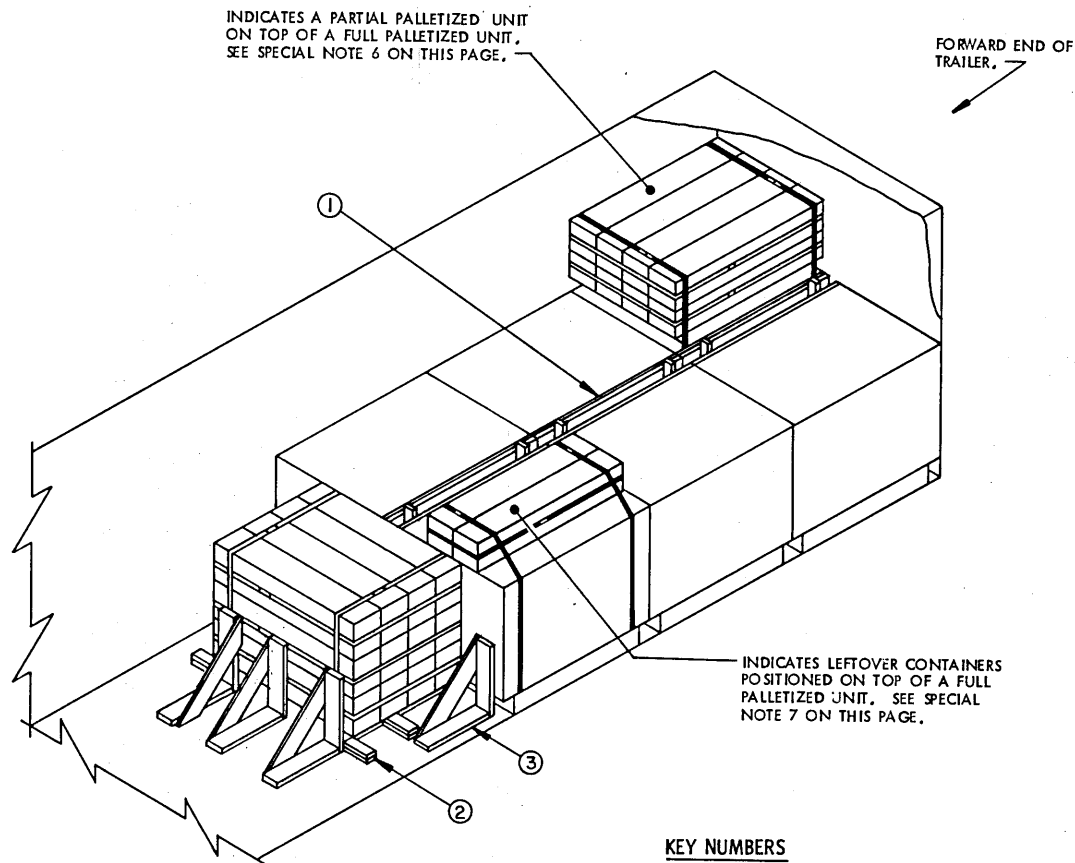
### ISOMETRIC VIEW

#### SPECIAL NOTES:

1. THESE OUTLOADING PROCEDURES DEPICT THE USE OF K-BRACE BLOCKING IN A 7'-5" WIDE (INSIDE DIMENSION) VAN TRAILER WHICH IS EQUIPPED WITH OR WITHOUT NAILABLE FLOORS AND REAR CORNER POSTS.
2. PIECES MARKED ① ARE FOR USE IN A TRAILER WHICH HAS A NAILABLE FLOOR AND SHOULD BE USED, IF POSSIBLE, IN LIEU OF PIECES MARKED ④ THROUGH ⑩ WHICH APPLY TO TRAILERS HAVING NON-NAILABLE FLOORS. FOUR (4) BACK UP CLEATS, SHOWN AS PIECES MARKED ⑪, ARE ADEQUATE FOR RETAINING A MAXIMUM SIZE LTL LOAD OF 20,000 POUNDS. ALSO REFER TO PAGE 11 FOR LOAD BLOCKING SPECIFICATIONS WHICH MAY BE USED IN LIEU OF THE DEPICTED BLOCKING.
3. IF THE TRAILER BEING LOADED HAS ROUNDED CORNERS AT THE FORWARD END, USE A "FORWARD BLOCKING ASSEMBLY" AS SHOWN IN THE LOAD ON PAGE 8.
4. THE DEPICTED K-BRACE BLOCKING WILL RETAIN A MAXIMUM SIZE LTL LOAD.
5. IF THE TRAILER BEING OUTLOADED CONTAINS MECHANICAL BRACING DEVICES, AS DESCRIBED IN GENERAL NOTE "H" ON PAGE 2, THEY MAY BE USED IN LIEU OF THE DEPICTED BLOCKING. SEE THE "PARTIAL ELEVATION VIEW" ON PAGE 9 FOR POSITIONING OF CROSS MEMBERS.
6. IF THE SIDE STRUTS SHOWN AS PIECES MARKED ④ ARE FORMED FROM MORE THAN ONE PIECE OF MATERIAL, THEY MAY BE SPLICED BY CENTERING A 2" X 6" X 24" PIECE ON THE JOINT OF THE SIDE STRUTS AND NAILING W/4-10d NAILS AT EACH END.

#### KEY NUMBERS

- ① ANTI-SWAY ASSEMBLY (4 REQD). SEE THE DETAIL ON PAGE 15. INSTALL BETWEEN LATERALLY ADJACENT ROWS OF PALLETIZED UNITS. SEE SPECIAL NOTES 2 AND 3 ON PAGE 7.
- ② SIDE BLOCKING ASSEMBLY (2 REQD). SEE THE DETAIL ON PAGE 15. SEE SPECIAL NOTE 5 ON PAGE 9.
- ③ HEADER, 2" X 6" BY TRAILER WIDTH (CUT-TO-FIT) (2 REQD). POSITION ON EDGE.
- ④ SIDE STRUT, 2" X 6" BY CUT-TO-FIT BETWEEN HEADERS MARKED ③ (2 REQD). SEE SPECIAL NOTE 6 ON THIS PAGE.
- ⑤ POCKET CLEAT, 2" X 6" X 18" (2 REQD). NAIL TO SIDE STRUT MARKED ④ W/5-10d NAILS. TOENAIL TO THE ADJACENT HEADER MARKED ③ W/3-12d NAILS.
- ⑥ STRUT RETAINING BLOCK, 2" X 6" X 12" (2 REQD). NAIL TO SIDE STRUT MARKED ④ W/3-10d NAILS. TOENAIL TO THE ADJACENT HEADER MARKED ③ W/3-12d NAILS.
- ⑦ CENTER CLEAT, 2" X 6" X 30" (1 REQD). NAIL TO HEADER MARKED ③ W/3-10d NAILS.
- ⑧ 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 THE ADJACENT HEADER MARKED ③ AND STRUT MARKED ④ W/2-16d NAILS AT EACH END.
- ⑨ BACK-UP CLEAT, 2" X 6" X 24" (2 REQD). POSITION AGAINST END OF DIAGONAL BRACE, PIECE MARKED ⑧, AND NAIL TO A STRUT MARKED ④ W/8-10d NAILS.
- ⑩ STRUT BRACING, 2" X 4" BY TRAILER WIDTH MINUS 3" (CUT-TO-FIT) (MINIMUM OF 1 REQD). INSTALL ONE (1) NEAR END OF STRUTS MARKED ④ AS SHOWN. ONE (1) ADDITIONAL PIECE REQUIRED FOR EVERY 7'-0" OF STRUT LENGTH. TOENAIL TO STRUTS MARKED ④ W/4-12d NAILS AT EACH END. CAUTION: USE CARE WHEN TOENAILING TO PREVENT NAILING THRU INTO A SIDE WALL OF THE TRAILER.
- ⑪ BACK-UP CLEAT, 2" X 4" X 30" (TRIPLED) (4 REQD). POSITION ONE AGAINST EACH END OF THE HEADER MARKED ③ AND EQUALLY SPACE THE CENTER TWO. NAIL THE FIRST PIECE TO THE TRAILER FLOOR W/7-12d NAILS. NAIL EACH ADDITIONAL PIECE IN A LIKE MANNER. TOENAIL THE TOP PIECE TO A HEADER PIECE MARKED ③ W/2-12d NAILS. NOTE: PIECES MARKED ① ARE FOR USE IN A TRAILER WHICH HAS A NAILABLE FLOOR AND SHOULD BE USED, IF POSSIBLE, IN LIEU OF PIECES MARKED ④ THROUGH ⑩ WHICH APPLY TO TRAILERS HAVING NON-NAILABLE FLOORS.



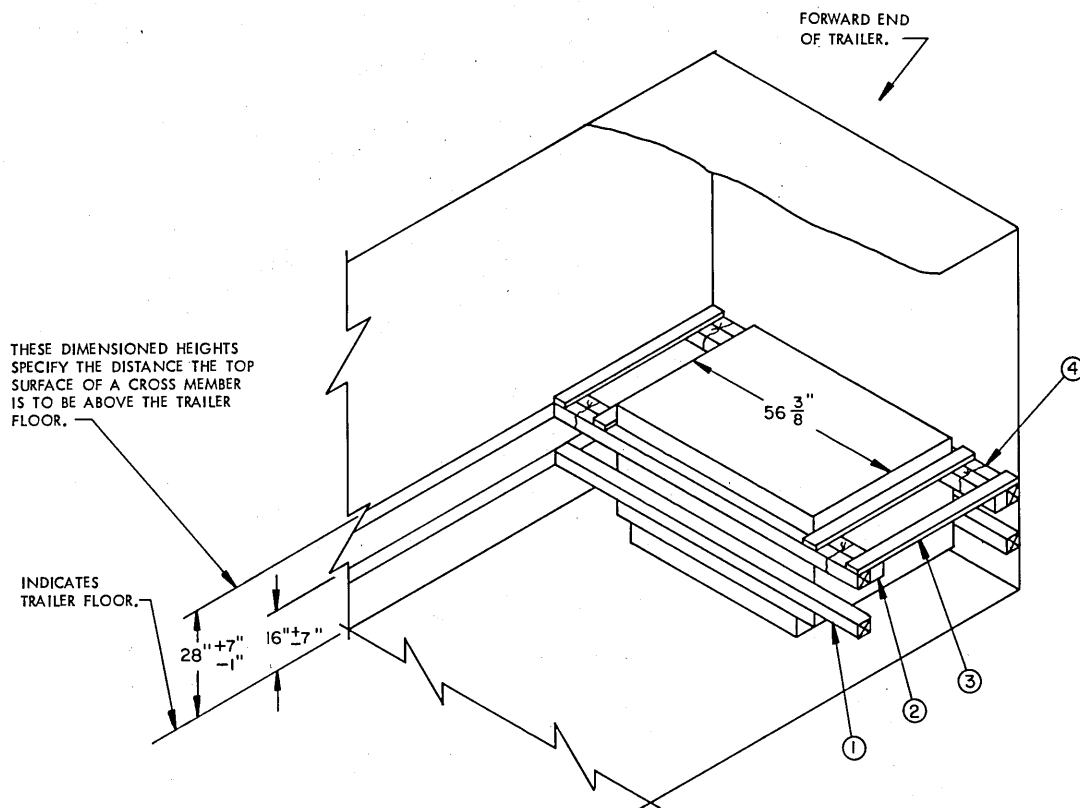
**ISOMETRIC VIEW**

**KEY NUMBERS**

- ① ANTI-SWAY BRACE ASSEMBLY (3 REQD). SEE THE DETAIL ON PAGE 15. INSTALL BETWEEN LATERALLY ADJACENT ROWS OF PALLETIZED UNITS. SEE SPECIAL NOTES 2 AND 3 ON PAGE 7.
- ② SIDE BLOCKING, 2" X 4" X 9" (DOUBLED) (4 REQD). POSITION THE FIRST PIECE AGAINST THE PALLET AND NAIL TO THE TRAILER FLOOR W/3-12d NAILS. NAIL THE SECOND PIECE TO THE FIRST IN A LIKE MANNER.
- ③ LTL BRACE (4 REQD). SEE THE DETAIL ON PAGE 16. POSITION AGAINST STRONG POINTS ON THE PALLETIZED UNITS AND NAIL TO THE TRAILER FLOOR W/10-10d NAILS.

**SPECIAL NOTES:**

1. THESE OUTLOADING PROCEDURES DEPICT THE USE OF LTL BRACE BLOCKING IN A 7'-6" WIDE (INSIDE DIMENSION) VAN TRAILER WHICH IS EQUIPPED WITH NAILABLE FLOORS.
2. A TYPICAL LTL LOAD OF SEVEN (7) FULL PALLETIZED UNITS, ONE (1) PARTIAL PALLETIZED UNIT, AND TWO (2) LEFTOVER CONTAINERS IN OVERPACKS IS SHOWN. THE PROCEDURES ARE ALSO APPLICABLE FOR OTHER QUANTITIES OF PALLETIZED UNITS.
3. IF THE TRAILER BEING LOADED HAS A ROUND-FRONT OR ROUNDED CORNERS AT THE FORWARD END, FOUR (4) ADDITIONAL LTL BRACES MAY BE USED AT THE FORWARD END OF THE LADING, OR A FORWARD BLOCKING ASSEMBLY, SHOWN AS KEY NUMBER ① ON PAGE 8, MAY BE USED.
4. EACH LTL 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 PALLETIZED UNIT ACROSS THE WIDTH OF THE TRAILER.
5. IF THE TRAILER BEING OUTLOADED CONTAINS MECHANICAL BRACING DEVICES, AS STATED IN GENERAL NOTE "H" ON PAGE 2, THEY MAY BE USED IN LIEU OF THE DEPICTED BLOCKING. SEE THE "PARTIAL ELEVATION VIEW" ON PAGE 9 FOR POSITIONING OF CROSS MEMBERS.
6. SHIPMENTS OF PALLETIZED UNITS SHOULD CONSIST OF FULL-HEIGHT AND FULL-LAYER UNITS TO THE MAXIMUM EXTENT POSSIBLE. HOWEVER, THE END OF A LOT OR THE QUANTITY OF ITEMS NEEDED TO FILL A REQUISITION, MAY NECESSITATE THE SHIPMENT OF ONE OR MORE LESS-THAN-FULL UNITS WITHIN A LOAD. THE PROCEDURES ON THIS PAGE AND ON PAGE 13 ARE PRESENTED AS GUIDANCE IN THE SHIPMENT OF PARTIAL UNITS.
7. SHIPMENTS OF PALLETIZED UNITS SHOULD CONSIST OF FULL-HEIGHT AND FULL-LAYER UNITS TO THE MAXIMUM EXTENT POSSIBLE, HOWEVER, THE END OF A LOT OR THE QUANTITY OF ITEMS NEEDED TO FILL A REQUISITION, MAY NECESSITATE THE SHIPMENT OF ONE OR MORE LEFTOVER CONTAINERS WITHIN A LOAD. THE PROCEDURES ON THIS PAGE AND ON PAGE 14 ARE PRESENTED AS GUIDANCE IN THE SHIPMENT OF LEFTOVER CONTAINERS.



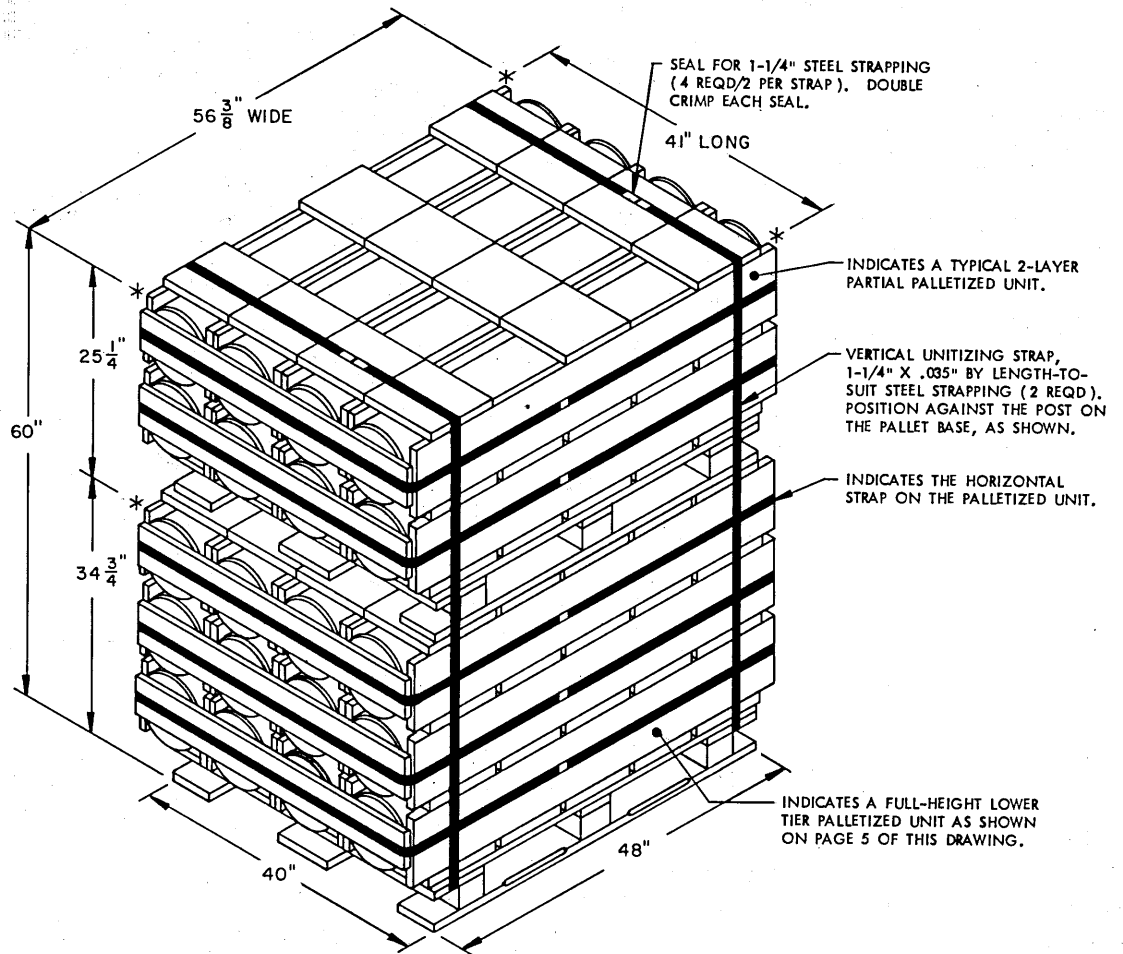
ISOMETRIC VIEW

**SPECIAL NOTES:**

1. THESE OUTLOADING PROCEDURES DEPICT A VAN TRAILER WHICH IS EQUIPPED WITH MECHANICAL BRACING DEVICES.
2. A TYPICAL LTL LOAD OF ONE (1) PALLETIZED UNIT IS SHOWN. IF TWO (2) PALLETIZED UNITS ARE TO BE TRANSPORTED, POSITION THE UNITS TWO ACROSS THE WIDTH OF THE TRAILER. OMIT THE SIDE BLOCKING SHOWN AS PIECES MARKED ②, ③, AND ④ ON THIS PAGE AND POSITION ONE ANTI-SWAY ASSEMBLY, SHOWN AS PIECE MARKED ① ON PAGE 11, BETWEEN THE TWO PALLETIZED UNITS. NOTE: WHEN LOADING TWO (2) PALLETIZED UNITS ACROSS THE WIDTH OF THE TRAILER POSITION THE UNITS AGAINST THE FORWARD END WALL AND OMIT THE TWO CROSS MEMBERS AT THE FORWARD END.
3. THESE PROCEDURES CAN BE USED IN CONJUNCTION WITH THE OUTLOADING PROCEDURES ON PAGES 6 THROUGH 9 FOR THE ADJUSTMENT OF A LOAD QUANTITY. SEE THE "PARTIAL ELEVATION VIEW" ON PAGES 7 AND 9.
4. FOUR (4) PIECES OF NO. 14 GAGE WIRE MAY BE USED IN LIEU OF THE NO. 8 GAGE WIRE. WHEN USING NO. 14 GAGE WIRE, INSTALL TWO (2) COMPLETE LOOPS AROUND THE CROSS MEMBER AND SIDE BLOCKING.

**KEY NUMBERS**

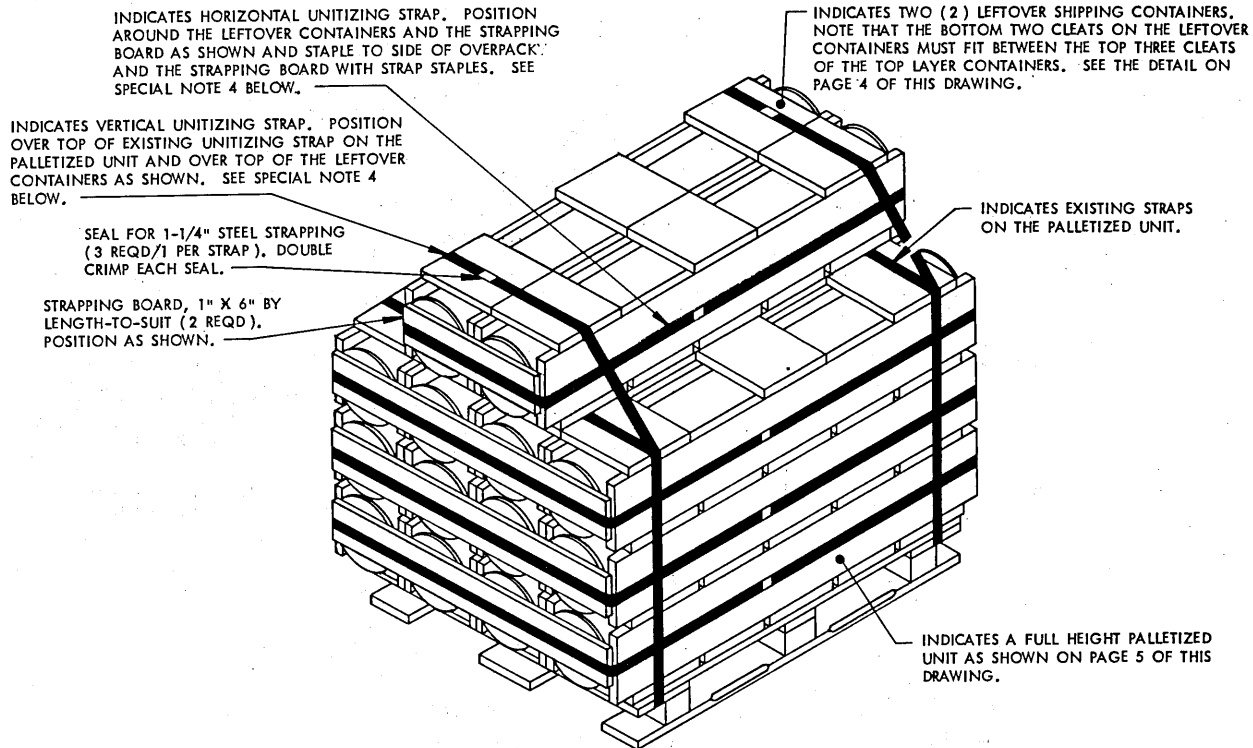
- ① CROSS MEMBER (4 REQD). POSITION AT THE HEIGHTS SPECIFIED IN THE ISOMETRIC VIEW ABOVE. SEE GENERAL NOTE "H" ON PAGE 2. SEE SPECIAL NOTE 2 ON THIS PAGE.
- ② SIDE BLOCKING, 4" X 4" BY CUT-TO-FIT BETWEEN THE PALLETIZED UNIT AND THE TRAILER SIDEWALL (4 REQD). SEE SPECIAL NOTE 2 ON THIS PAGE.
- ③ SUPPORT PIECE, 2" X 4" X 48" (4 REQD). POSITION AS SHOWN AND NAIL TO PIECES MARKED ③ W/3-12d NAILS AT EACH JOINT. SEE SPECIAL NOTE 2 ON THIS PAGE.
- ④ TIE WIRE, NO. 8 GAGE BLACK ANNEALED WIRE 36" LONG (4 REQD). INSTALL TO FORM A COMPLETE LOOP AROUND THE CROSS MEMBER AND SIDE BLOCKING. BRING THE ENDS TOGETHER AND TWIST TAUT. SEE SPECIAL NOTES 2 AND 4 ON THIS PAGE.



**SECUREMENT OF A PARTIAL PALLETIZED UNIT  
ON TOP OF A FULL PALLETIZED UNIT**

**SPECIAL NOTES:**

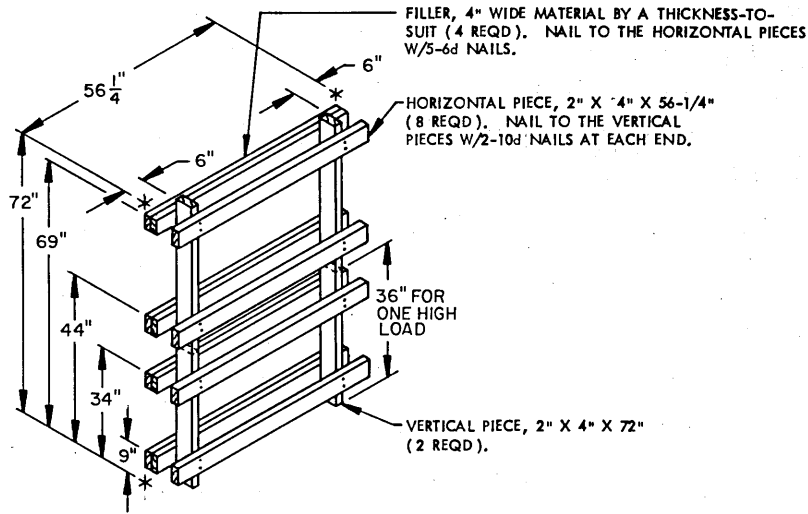
1. THE VIEW SHOWN ABOVE DEPICTS A PARTIAL 2-LAYER PALLETIZED UNIT POSITIONED ON TOP OF A FULL-HEIGHT PALLETIZED UNIT AND UNITIZED WITH TWO VERTICAL UNITIZING STRAPS. PLACEMENT WITHIN THE LOAD IS OPTIONAL.
2. SHIPMENTS OF PALLETIZED UNITS SHOULD CONSIST OF FULL-HEIGHT AND FULL-LAYER UNITS TO THE MAXIMUM EXTENT POSSIBLE. HOWEVER, THE END OF A LOT, OR THE QUANTITY OF ITEMS NEEDED TO FILL A REQUISITION MAY NECESSITATE THE SHIPMENT OF ONE OR MORE LESS-THAN-FULL PALLETIZED UNITS WITHIN A LOAD. THE PROCEDURES ON THIS PAGE AND ON PAGE 11 ARE PRESENTED AS GUIDANCE IN THE SHIPMENT OF THESE PARTIAL UNITS.
3. THE "SHIPMENT OF A PARTIAL PALLETIZED UNIT" PROCEDURES ON THIS PAGE ARE APPLICABLE FOR LOADS IN CONVENTIONAL TYPE VAN TRAILERS AND TRAILERS EQUIPPED WITH MECHANICAL BRACING DEVICES.
4. FOR SHIPMENT OF ONE THROUGH THREE "LEFTOVER" CONTAINERS, SEE THE PROCEDURES ON PAGE 14 OF THIS DRAWING.



### SECUREMENT OF LEFTOVER CONTAINERS

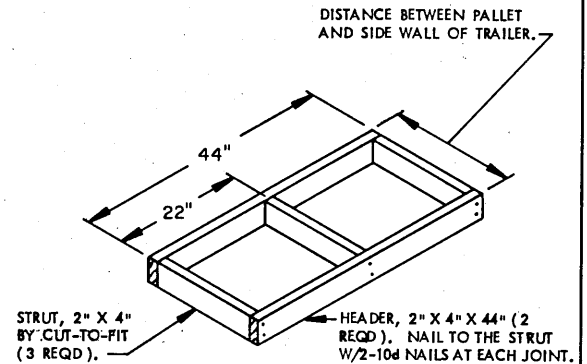
#### SPECIAL NOTES:

1. THE VIEW SHOWN ABOVE DEPICTS TWO (2) LEFTOVER SHIPPING CONTAINERS POSITIONED ON TOP OF A FULL-HEIGHT PALLETIZED UNIT AND UNITIZED WITH TWO VERTICAL UNITIZING STRAPS. PLACEMENT WITHIN THE LOAD IS OPTIONAL.
2. SHIPMENT OF PALLETIZED UNITS SHOULD CONSIST OF FULL-HEIGHT AND FULL-LAYER UNITS TO THE MAXIMUM EXTENT POSSIBLE, HOWEVER, THE END OF A LOT OR THE QUANTITY OF ITEMS NEEDED TO FILL A REQUISITION, MAY NECESSITATE THE SHIPMENT OF ONE OR MORE LEFTOVER CONTAINERS.
3. THE QUANTITY OF LEFTOVER CONTAINERS WHICH CAN BE SECURED TO A FULL HEIGHT PALLETIZED UNIT WILL NOT EXCEED THREE. IF FOUR LEFTOVER CONTAINERS ARE TO BE SHIPPED, TWO CONTAINERS WILL BE SECURED TO THE TOP OF ONE PALLETIZED UNIT AND TWO CONTAINERS WILL BE SECURED TO THE TOP OF A DIFFERENT PALLETIZED UNIT.
4. LEFTOVER CONTAINERS MUST BE SECURED TO A FULL HEIGHT PALLETIZED UNIT WITH TWO (2) PIECES OF STEEL STRAPPING (SEPARATE FROM UNIT STRAPS) OF A SIZE AT LEAST AS HEAVY AS THE UNITIZING STRAPPING. THREAD A STRAP UNDER THE TOP DECK BOARDS IN LINE WITH EXISTING UNITIZING STRAPS, COMPLETELY ENCIRCLE THE PALLETIZED UNIT AND LEFTOVER CONTAINERS, TENSION, AND SEAL THE STRAP JOINT WITH ONE DOUBLE CRIMPED SEAL. ONE (1) PIECE OF STEEL STRAPPING OF A SIZE AT LEAST AS HEAVY AS THE UNITIZING STRAPPING MUST ENCIRCLE THE LEFTOVER CONTAINERS HORIZONTALLY AS SHOWN ABOVE.
5. LEFTOVER CONTAINERS MAY ALSO BE SECURED ON TOP OF A PARTIAL PALLETIZED UNIT.
6. SHIPMENT OF LEFTOVER CONTAINERS IS APPLICABLE FOR CONUS AND OCONUS MOTOR CARRIER SHIPMENTS FROM DEPOT TO DEPOT OR FROM DEPOTS TO POSTS, CAMPS, AND STATIONS, OR UPON APPROVAL FROM HIGHER HEADQUARTERS, FOR SHIPMENTS FROM LOAD, ASSEMBLE AND PACK PLANTS TO DEPOTS. CAUTION: A LOAD CONTAINING LEFTOVER CONTAINERS IN AN AMOUNT WHICH IS LESS THAN A FULL LAYER, AND SECURED TO THE TOP OF A FULL OR PARTIAL UNIT MUST NOT BE DESTINED FOR SHIPMENT OVERSEAS BY WATER CARRIER.



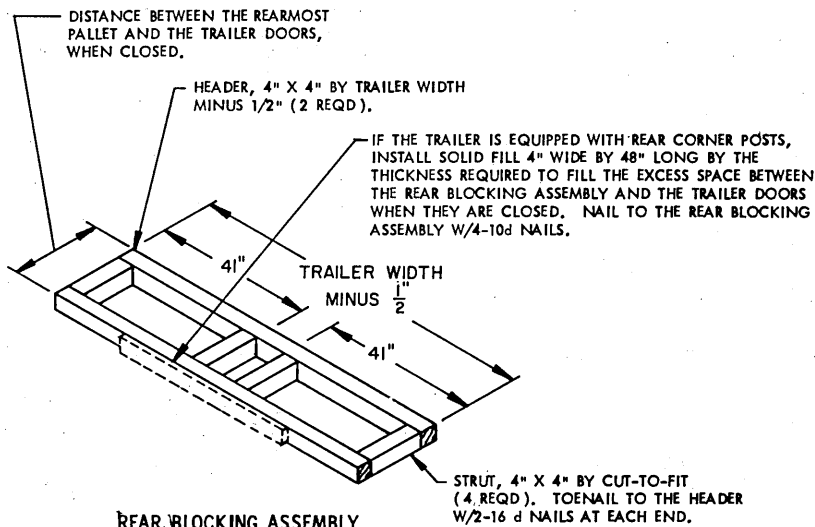
**ANTI-SWAY ASSEMBLY**

THIS ANTI-SWAY ASSEMBLY IS DESIGNED FOR USE BETWEEN 1-TIER OR 2-TIER LOADS OF PALLETIZED UNITS. THE WIDTH MAY BE INCREASED BY LAMINATING FILLER PIECES TO THE HORIZONTAL PIECES OR DECREASED BY OMITTING FILLER PIECES OR USING 1" THICK MATERIAL IN LIEU OF 2" THICK MATERIAL FOR THE HORIZONTAL PIECES.



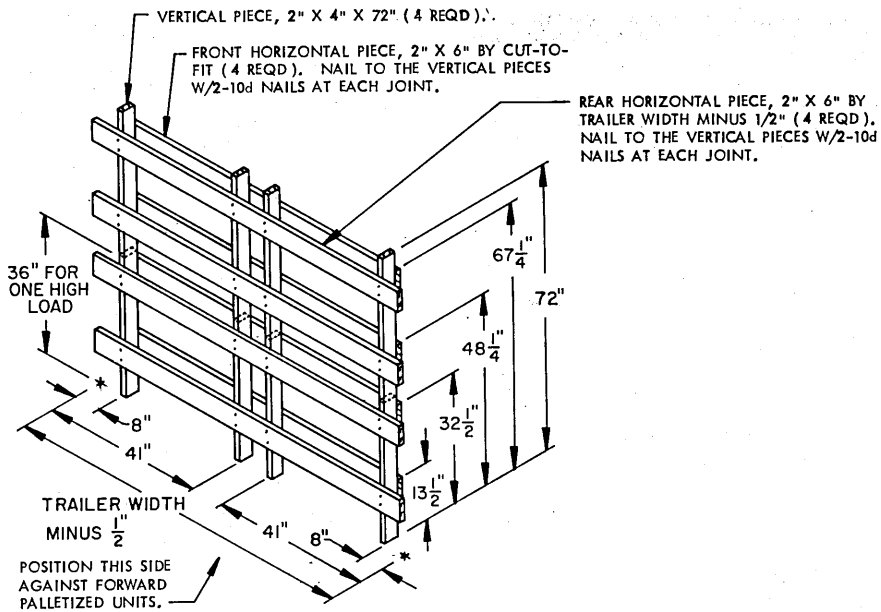
**SIDE BLOCKING ASSEMBLY**

THIS SIDE BLOCKING ASSEMBLY IS DESIGNED FOR USE IN LOADS HAVING ONE PALLETIZED UNIT POSITIONED AT THE REAR.



**REAR BLOCKING ASSEMBLY**

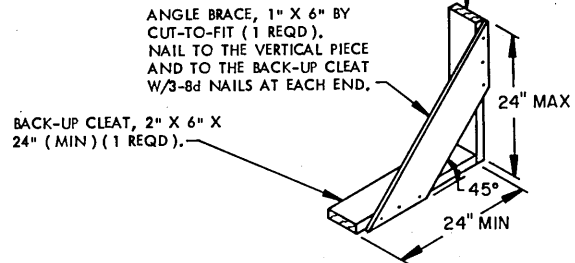
THIS REAR BLOCKING ASSEMBLY IS DESIGNED FOR USE AT THE REAR END OF A LOAD WHEN THE DISTANCE BETWEEN THE REARMOST PALLET AND THE REAR DOORS, WHEN CLOSED, MEASURES 12" OR MORE. CAUTION: STRUTS LONGER THAN 7'-0" WILL NOT BE USED; USE A "K-BRACE" TYPE OF REAR BLOCKING AS DEPICTED ON PAGE 10 TO FACILITATE COMPLIANCE WITH THIS RULE.



**FORWARD BLOCKING ASSEMBLY**

THIS FORWARD BLOCKING ASSEMBLY IS FOR USE BETWEEN THE FORWARD END OF THE LOAD AND THE END WALL OF THE TRAILER. IN TRAILERS HAVING ROUNDED CORNERS WITH A RADIUS OF 6" OR LESS, IF THE RADIUS IS GREATER THAN 6" THE VERTICAL PIECES MUST BE 2" X 6" MATERIAL IN LIEU OF 2" X 4" MATERIAL. NOTE THAT IF THE TRAILER BEING LOADED HAS SQUARE CORNERS AT THE FRONT END, THE FORWARD BLOCKING ASSEMBLY MAY BE OMITTED AND THE PALLETIZED UNITS POSITIONED DIRECTLY AGAINST THE FRONT WALL.

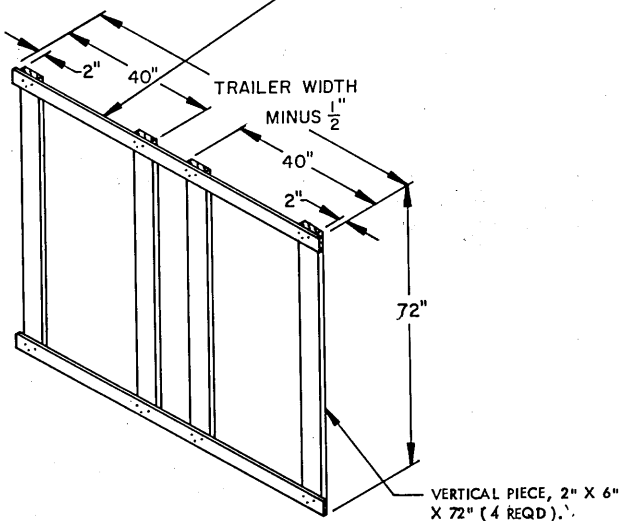
VERTICAL PIECE, 2" X 6" X 24" (1 REQD). NAIL TO THE BACK-UP CLEAT W/2-16d NAILS.



**LTL BRACE**

THIS LTL BRACE IS DESIGNED FOR RETAINING PARTIAL LOADS IN TRAILERS EQUIPPED WITH NAILABLE FLOORS. EACH LTL 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 PALLETIZED UNIT ACROSS THE WIDTH OF THE TRAILER.

TIE PIECE, 1" X 4" BY TRAILER WIDTH MINUS 1/2" (2 REQD). NAIL TO THE VERTICAL PIECES W/3-6d NAILS AT EACH JOINT.



**REAR GATE ASSEMBLY**

THIS GATE ASSEMBLY IS DESIGNED FOR USE IN TRAILERS HAVING MECHANICAL BRACING DEVICES. IT IS USED BETWEEN THE REAR MOST PALLETIZED UNITS AND THE CROSS MEMBERS, TO PROVIDE A BEARING SURFACE FOR THE CROSS MEMBERS. THE GATE SHOWN IS FOR A TWO UNIT HIGH LOAD. FOR A ONE UNIT HIGH LOAD USE 40" HIGH VERTICAL PIECES.

**DETAILS**