

APPROVED BY
 BUREAU OF EXPLOSIVES
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 SUPERVISOR, MILITARY & INTERMODAL SERVICES
 DATE 4/15/86

LOADING AND BRACING (TL & LTL) IN CLOSED OR OPEN TOP VAN TRAILERS OF PALLETIZED BULK EXPLOSIVES (SECURED ON PALLETS WITH STRETCH NET)

INDEX

ITEM	PAGE(S)
GENERAL NOTES, AND MATERIAL SPECIFICATIONS -----	2
PALLET UNIT DETAIL -----	3
26-UNIT LOAD IN A 42'-0" LONG TRAILER -----	4,5
24-UNIT LOAD IN A 42'-0" LONG TRAILER (WOODEN DUNNAGE) -----	6,7
24-UNIT LOAD IN A 42'-0" LONG TRAILER (VOID FILLER) -----	8,9
22-UNIT LOAD IN A 40'-0" LONG TRAILER -----	10,11
20-UNIT LOAD IN A 40'-0" LONG TRAILER -----	12,13
TYGARD METHOD PROCEDURES FOR CONVENTIONAL VAN TRAILERS EQUIPPED WITH ROLL-UP TYPE DOORS -----	14
NAILED-HEADER METHOD PROCEDURES FOR CONVENTIONAL VAN TRAILERS EQUIPPED WITH ROLL-UP TYPE DOORS -----	15
TYPICAL LTL (5-UNIT LOAD) -----	16
TYPICAL LTL (1-UNIT LOAD) -----	17
DETAILS -----	18-20

CAUTION:
 TRANSPORTING EQUIPMENT WHICH HAS A
 SELF-CONTAINED MECHANICAL LOAD-BLOCKING SYSTEM
 MUST NOT BE USED FOR SHIPPING THE COMMODITY
 IDENTIFIED WITHIN THE DRAWING TITLE ABOVE.

REVISIONS				DRAFTSMAN	PROJ ENG
				<i>lb</i>	<i>RSM/llw</i>
				CHECKER	LOG ENGRG OFFICE
				<i>SMM</i>	<i>llw/llw</i>
				APPROVED, U.S. ARMY ARMAMENT, MUNITIONS AND CHEMICAL COMMAND	
				<i>B. J. Fleckman</i>	
				APPROVED BY ORDER OF COMMANDING GENERAL, U.S. ARMY MATERIEL COMMAND (AMC)	
				<i>William L. Berrill</i>	
				U.S. ARMY DEFENSE AMMUNITION CENTER AND SCHOOL	
U.S. ARMY AMC DRAWING					
JUNE 1986					
	CLASS	DIVISION	DRAWING	FILE	
	19	48	4200	11PA 1005	

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 FOR THE SHIPMENT OF BULK EXPLOSIVES PACKED IN FIBERBOARD BOXES UNITIZED TO 35" X 45-1/2" PALLETS USING STRETCH NET MATERIAL.
- C. FOR DETAIL OF THE PALLETIZED UNIT SEE US ARMY AMC DRAWING 19-48-4177/1-20PA1007 AND THE PALLET UNIT DETAIL ON PAGE 3.
PALLET UNIT DIMENSIONS -- 37" LONG BY 45-3/4" WIDE BY 50" HIGH.
GROSS WEIGHT ----- 2,378 POUNDS (APPROX).
CUBE ----- 49.0 CU FT (APPROX).
- D. 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. NOTICE: A SHIPMENT WILL BE POSITIONED IN A TRAILER CONSISTENT WITH THE WEIGHT LAWS OF THE STATES THRU WHICH THE TRAILERS WILL BE TRANSPORTED VIA MOTOR CARRIER.
- E. THE OUTLOADING PROCEDURES DEPICTED WITHIN THIS DOCUMENT ARE BASED ON TRAILERS THAT ARE 40'-0" AND 42'-0" IN LENGTH AND 7'-8" WIDE. ALTHOUGH NOT SHOWN, TRAILERS UP TO AND INCLUDING 53'-0" IN LENGTH AND 102" IN WIDTH MAY BE USED, PROVIDING THEY COMPLY WITH GENERAL NOTE "D" ABOVE. SHORTER TRAILERS (DOWN TO 24') CAN BE USED (SEE SPECIAL DETAILS ON BOTTOM OF PAGE 20 FOR GUIDANCE IF THE SHORT TRAILERS HAVE LARGE-ANGLED FRONT CORNERS). TRAILERS LESS THAN 7'-8" IN WIDTH CAN ALSO BE USED. ALSO, STRAIGHT VAN TRUCKS CAN BE USED FOR SHIPPING THE COMMODITY DESIGNATED WITHIN THIS DRAWING. THE LOADING AND LOAD-BRACING SPECIFICATIONS OF THIS DRAWING WILL BE APPLIED AS CLOSELY AS PRACTICAL WHEN USING TRANSPORTING EQUIPMENT WHICH DIFFERS FROM WHAT IS DISPLAYED HEREIN. NOTICE: THE SEVERAL OUTLOADING PROCEDURES THAT ARE SPECIFIED WITHIN THIS DRAWING HAVE BEEN DESIGNED FOR SPECIFIC PALLET UNIT CONFIGURATIONS OF TYPE C, SIZE 4 FIBERBOARD BOXES AND FOR SPECIFIC TRAILERS BY SIZE, AND FOR SPECIFIC LOADING ARRANGEMENTS. ALTHOUGH THE DELINEATED PROCEDURES COVER SPECIFIC LOADS; THESE PROCEDURES CAN BE USED WITH SLIGHT MODIFICATION FOR SHIPPING OTHER THAN DEPICTED LOAD ARRANGEMENTS, INCLUDING THE SHIPPING OF 4- OR 5- OR 6-HIGH PALLET UNITS OF STRETCH NET SECURED TYPE C, SIZE 4 FIBERBOARD BOXES. IN A SENSE, THE LOADS AS SHOWN ARE TYPICAL IN NATURE, EVEN THOUGH THEY ARE DESIGNED FOR SPECIFIC LOADS. MOST OF THE REQUIRED MODIFICATIONS TO ADJUST AN OUTLOADING PROCEDURE IS ADDRESSED ELSEWHERE WITHIN THIS DRAWING, SUCH AS IN THE "SPECIAL NOTES" SECTION THAT IS ADJACENT TO EACH SPECIFIC OUTLOADING PROCEDURE. REGARDLESS OF MODIFICATIONS IMPLEMENTED, THE SPECIFIED PRINCIPLES OF LOADING AND BRACING MUST BE APPLIED TO A MAXIMUM EXTENT.
- F. 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 FLOORBOARDS. 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.
- G. 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 QUANTITY EQUIVALENT TO THOSE MANUFACTURED BY SENCO PRODUCTS INCORPORATED. NOTE: STAPLES WILL NOT BE SUBSTITUTED FOR NAILS IN ANY LOAD-RE-STRAINING FLOOR DUNNAGE APPLICATION.
- H. 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.
- J. PORTIONS OF THE TRAILER BODY DEPICTED WITHIN THIS PROCEDURAL DRAWING, SUCH AS ONE OF THE SIDEWALLS, HAVE BEEN OMITTED FOR CLARITY PURPOSES.
- K. WHEN REFERRING TO THE PALLET UNIT LENGTH OR WIDTH THE 35" DIMENSION OF THE PALLET BASE CONSTITUTES THE LENGTH AND THE 45-1/2" DIMENSION CONSTITUTES THE WIDTH.

(GENERAL NOTES CONTINUED AT RIGHT)

MATERIAL SPECIFICATIONS

LUMBER ----- : SEE TM 743-200-1, DUNNAGE LUMBER, FED SPEC MM-L-751.

NAILS ----- : COMMON, FED SPEC FF-N-105.

VOID FILLER --- : FIBERBOARD, HANGER - 275 LBS* (DOUBLE WALL), CELL, SIZE - 7" OR LESS, INTERNATIONAL HONEY-COMB CORP (OR EQUAL).

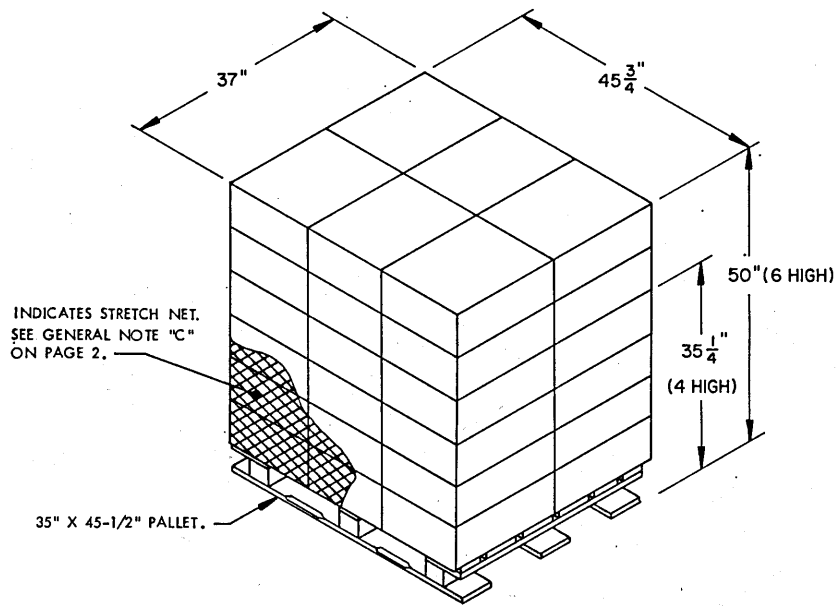
TYGARD ----- : POLYESTER YARN, 1,100 POUNDS/INCH OF WIDTH.

ADHESIVE --- : TYGARD ADHESIVE.

* BASIS WEIGHT PER 1,000 SQ. FT.

(GENERAL NOTES CONTINUED)

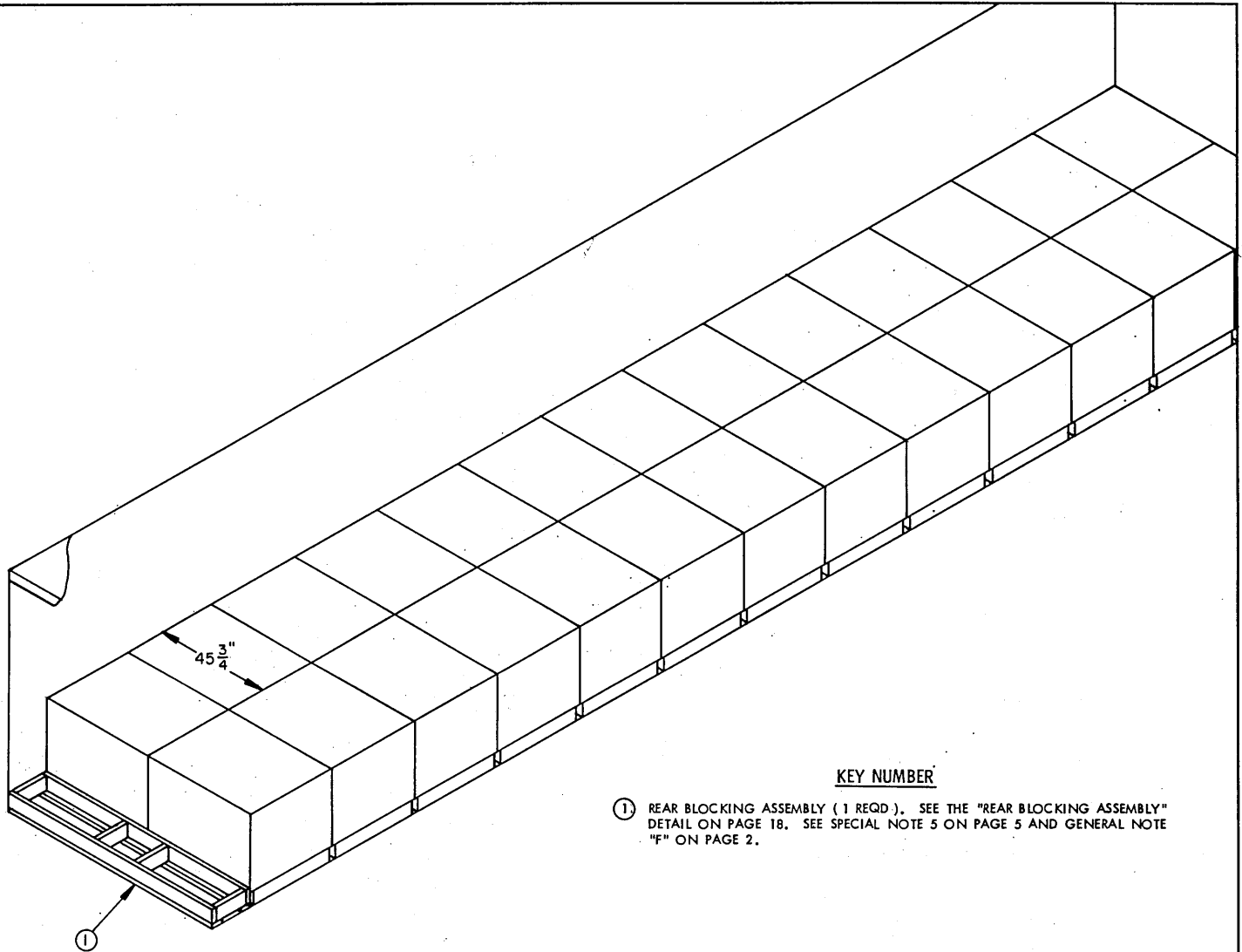
- L. SELECTION OF A VEHICLE TO BE USED TO TRANSPORT THE DESIGNATED ITEM MUST COMPLY WITH AR 55-355, CHAPTER 213, FOR EXPLOSIVES AND OTHER DANGEROUS ARTICLES, IN FULL.
- M. CONVERSION TO METRIC EQUIVALENTS: DIMENSIONS WITHIN THIS DOCUMENT ARE EXPRESSED IN INCHES AND WEIGHTS ARE EXPRESSED IN POUNDS. WHEN NECESSARY, THE METRIC EQUIVALENT MAY BE COMPUTED ON THE BASIS OF 1 INCH EQUALS 25.4MM AND 1 POUND EQUALS 0.454KG.
- N. NOTICE: ALTHOUGH NONE OF THE DELINEATED TRUCKLOADING PROCEDURES WITHIN THIS DRAWING SPECIFY METHODS THAT COVER MIXED-HEIGHT LOADS, EACH OF THE DIFFERENT OUTLOADING PROCEDURES SPECIFIED WITHIN THIS DRAWING IS ALSO APPLICABLE FOR SHIPPING MIXED-HEIGHT LOADS OF PALLETIZED EXPLOSIVES. FOR EXAMPLE, 5-LAYER PALLET UNITS AND 6-LAYER OR 4-LAYER PALLET UNITS CAN BE LOADED IN THE SAME TRANSPORT VEHICLE FOR SHIPMENT. NO ADDITIONAL BLOCKING AND BRACING TO THAT WHICH IS SPECIFIED FOR A LOAD IS REQUIRED. IT SHOULD BE NOTED THAT WHEN SHIPPING A MIXED-HEIGHT LOAD, ALL OR NEARLY ALL OF THE REDUCED-HEIGHT PALLET UNITS SHOULD NOT BE LOADED ON ONE SIDE OF THE TRANSPORTING VEHICLE BECAUSE OF LOAD WEIGHT DISTRIBUTION REQUIREMENTS.
- O. REGARDING THE USE OF LONGER TRAILERS THAN SHOWN HEREIN, THE FORWARD AND REAR BLOCKING METHODS THAT ARE SPECIFIED WITHIN THIS DRAWING FOR BLOCKING THE LOADS THAT ARE SHOWN ARE ALSO ADEQUATE FOR BLOCKING MAXIMUM SIZE LOADS IN LONGER TRAILERS.
- P. IF THE WEIGHT OF THE PALLET UNITS TO BE SHIPPED IS SUCH THAT A LESSER AMOUNT OF UNITS THAN SHOWN WITHIN THIS DRAWING ARE PLACED IN THE TRAILER, REFER TO "DETAIL A" ON PAGE 5 FOR ADDITIONAL GUIDANCE.



PALLET UNIT

* GROSS WEIGHT (6-HIGH) ----- 2,378 LBS (APPROX)
 CUBE ----- 49.0 CU FT.

* WEIGHT SHOWN IS BASED ON A PALLET UNIT CONSISTING OF 36 BOXES OF EXPLOSIVES AT 64 LBS PER BOX. LOADS SHOWN WITHIN THIS DRAWING ARE BASED ON VARIOUS BOX WEIGHTS WHICH WILL DEPEND ON TYPE OF EXPLOSIVES BEING SHIPPED. TYPICAL BOX WEIGHTS VARY FROM 49 TO 64 POUNDS. REFER TO THE SPECIAL NOTES FOR EACH LOAD SHOWN FOR WEIGHTS, SIZES, AND NUMBER OF BOXES PER PALLET UNIT.



ISOMETRIC VIEW

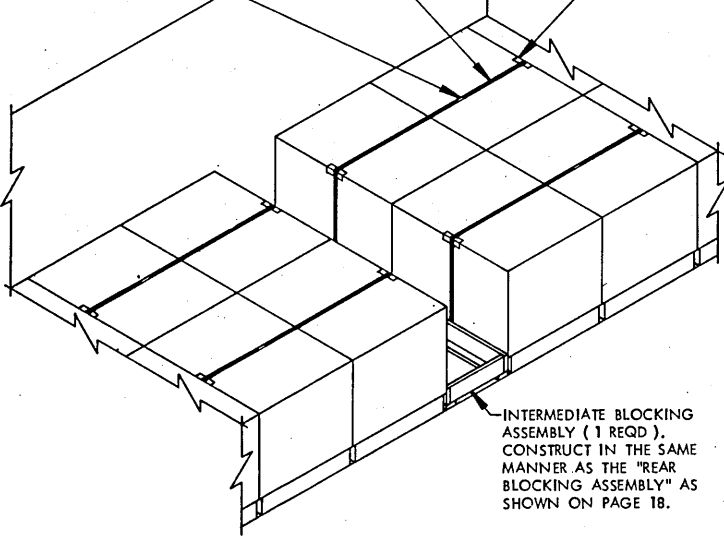
KEY NUMBER

- ① REAR BLOCKING ASSEMBLY (1 REQD). SEE THE "REAR BLOCKING ASSEMBLY" DETAIL ON PAGE 18. SEE SPECIAL NOTE 5 ON PAGE 5 AND GENERAL NOTE "F" ON PAGE 2.

STEEL STRAPPING, 1-1/4" X .035" OR .031" BY LENGTH TO SUIT (4 REQD). INSTALL SO AS TO ENCIRCLE TWO (2) LONGITUDINALLY ADJACENT PALLET UNITS. SEE SPECIAL NOTE 7 AT RIGHT.

SEAL FOR 1-1/4" STRAPPING (4 REQD, 1 PER STRAP). SEAL WITH TWO PAIR OF NOTCHES.

EDGE PROTECTION (8 REQD). SEE SPECIAL NOTE 8 AT RIGHT.



INTERMEDIATE BLOCKING ASSEMBLY (1 REQD). CONSTRUCT IN THE SAME MANNER AS THE "REAR BLOCKING ASSEMBLY" AS SHOWN ON PAGE 18.

DETAIL A

THE ABOVE DETAIL SHOWS A METHOD OF INSTALLING AN INTERMEDIATE BLOCKING ASSEMBLY IN THE CENTER PORTION OF A LOAD WHEN THE PALLET UNIT WEIGHT IS SUCH THAT A REDUCED NUMBER OF PALLETS IS TO BE SHIPPED. THE INTERMEDIATE BLOCKING WILL BE LOCATED SO AS TO PROVIDE PROPER WEIGHT DISTRIBUTION.

SPECIAL NOTES:

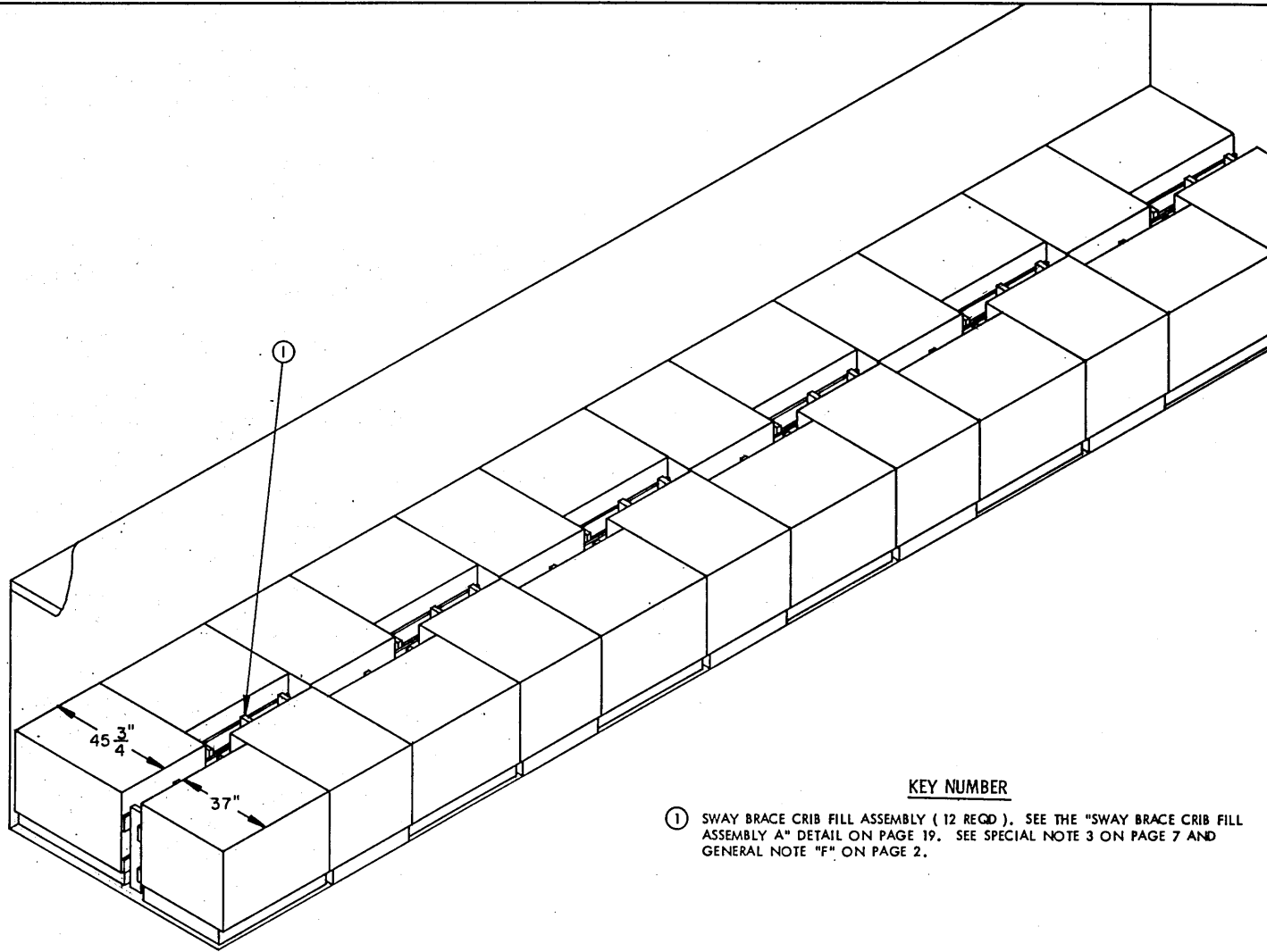
1. A 42'-0" LONG BY 7'-8" WIDE (INSIDE DIMENSION) CONVENTIONAL VAN TRAILER IS SHOWN. TRAILERS OF OTHER LENGTHS AND WIDER TRAILERS CAN BE USED. NARROWER TRAILERS CANNOT BE USED FOR THE LOAD DEPICTED ON PAGE 4.
2. THE PALLETIZED UNIT SHOWN IN THE LOAD ON PAGE 4 IS BASED ON A 4-LAYER PALLET UNIT CONSISTING OF 24 BOXES AT 64 POUNDS PER BOX FOR A TOTAL WEIGHT OF 1,610 POUNDS PER PALLET UNIT. THE HEIGHT OF THE PALLET UNIT SHOWN IS APPROXIMATELY 35-1/4".
3. IF A WIDER TRAILER IS USED FOR SHIPMENT OF THE DEPICTED LOAD AND THE EXCESS SPACE ACROSS THE LOAD IS SIX INCHES (6") OR MORE, VOID FILLER AS SHOWN IN THE LOAD ON PAGE 8 WILL BE USED BETWEEN LATERALLY ADJACENT PALLET UNITS. UNBLOCKED LATERAL VOID IS NOT TO EXCEED 1-1/2" WHEN BLOCKING IS USED. SEE SPECIAL NOTE 6 BELOW.
4. IF THE TRAILER BEING LOADED HAS ROUNDED CORNERS AT THE FORWARD END, REFER TO PAGE 18 FOR "FORWARD BLOCKING ASSEMBLY" SPECIFICATIONS WHICH MUST BE USED.
5. IF THE SPACE BETWEEN THE LADING AND THE TRAILER DOORS IS LESS THAN 9", SOLID FILL TYPE REAR BLOCKING WILL BE USED IN LIEU OF THE DEPICTED REAR BLOCKING ASSEMBLY. SEE THE "REAR BLOCKING", PIECE MARKED ② ON PAGE 10, FOR GUIDANCE. IF THE TRAILER BEING USED HAS ROLL-UP DOORS, AN ALTERNATIVE REAR BLOCKING METHOD SHOWN ON PAGES 14 AND 15 SHOULD BE USED IN LIEU OF THE REAR BLOCKING SPECIFIED ON PAGE 4.
6. IF "VOID FILLER" MATERIAL IS NOT AVAILABLE OR IF DESIRED, SWAY BRACING SIMILAR TO THAT SHOWN AS "SWAY BRACE CRIB FILL ASSEMBLY A" ON PAGE 19 CAN BE USED IN LIEU OF "VOID FILLER" TYPE SWAY BRACING. IT WILL BE NECESSARY TO MODIFY THE ASSEMBLY SHOWN ON PAGE 19 BY:
 - A. ELIMINATING THE 2-1/2" EXTENSION OF THE 1" X 6" HORIZONTAL PIECES AT EACH END OF THE ASSEMBLY.
 - B. CHANGING THE 2" X 6" VERTICAL PIECES TO 2" X 4" PIECES.
 - C. CHANGING THE OVERALL LENGTH OF THE ASSEMBLY FROM 45" TO 37".
7. IF THE PALLET UNIT BEING SHIPPED IS LESS THAN 44" IN HEIGHT, THE STEEL STRAPPING, SEALS, AND EDGE PROTECTION IS NOT REQUIRED. INSTALL STRAP AS SHOWN SO AS TO ENCIRCLE TWO (2) LONGITUDINALLY ADJACENT PALLET UNITS. CARE MUST BE USED WHEN TENSIONING THE STRAP TO PREVENT DAMAGE TO THE FIBERBOARD BOXES.
8. TO PREVENT THE FIBERBOARD BOXES FROM BEING DAMAGED BY THE STRAP, EDGE PROTECTION, SUCH AS "SIGNODE ANGLEBOARD" OR A SIMILAR TYPE OF EDGE PROTECTOR SHALL BE USED. THICKNESSES AND LEG LENGTHS SHALL BE OF AN APPROPRIATE SIZE TO PREVENT CRUSHING OF THE BOXES.

BILL OF MATERIAL

LUMBER	LINEAR FEET	BOARD FEET
2" X 4"	15	10
2" X 6"	20	20
NAILS	NO. REQD	POUNDS
10d (3")	38	1/2

LOAD AS SHOWN

ITEM	QUANTITY	WEIGHT (APPROX)
PALLET UNIT	26	41,860 LBS
DUNNAGE		61 LBS
TOTAL WEIGHT		41,921 LBS



ISOMETRIC VIEW

KEY NUMBER

- ① SWAY BRACE CRIB FILL ASSEMBLY (12 REQD), SEE THE "SWAY BRACE CRIB FILL ASSEMBLY A" DETAIL ON PAGE 19. SEE SPECIAL NOTE 3 ON PAGE 7 AND GENERAL NOTE "F" ON PAGE 2.

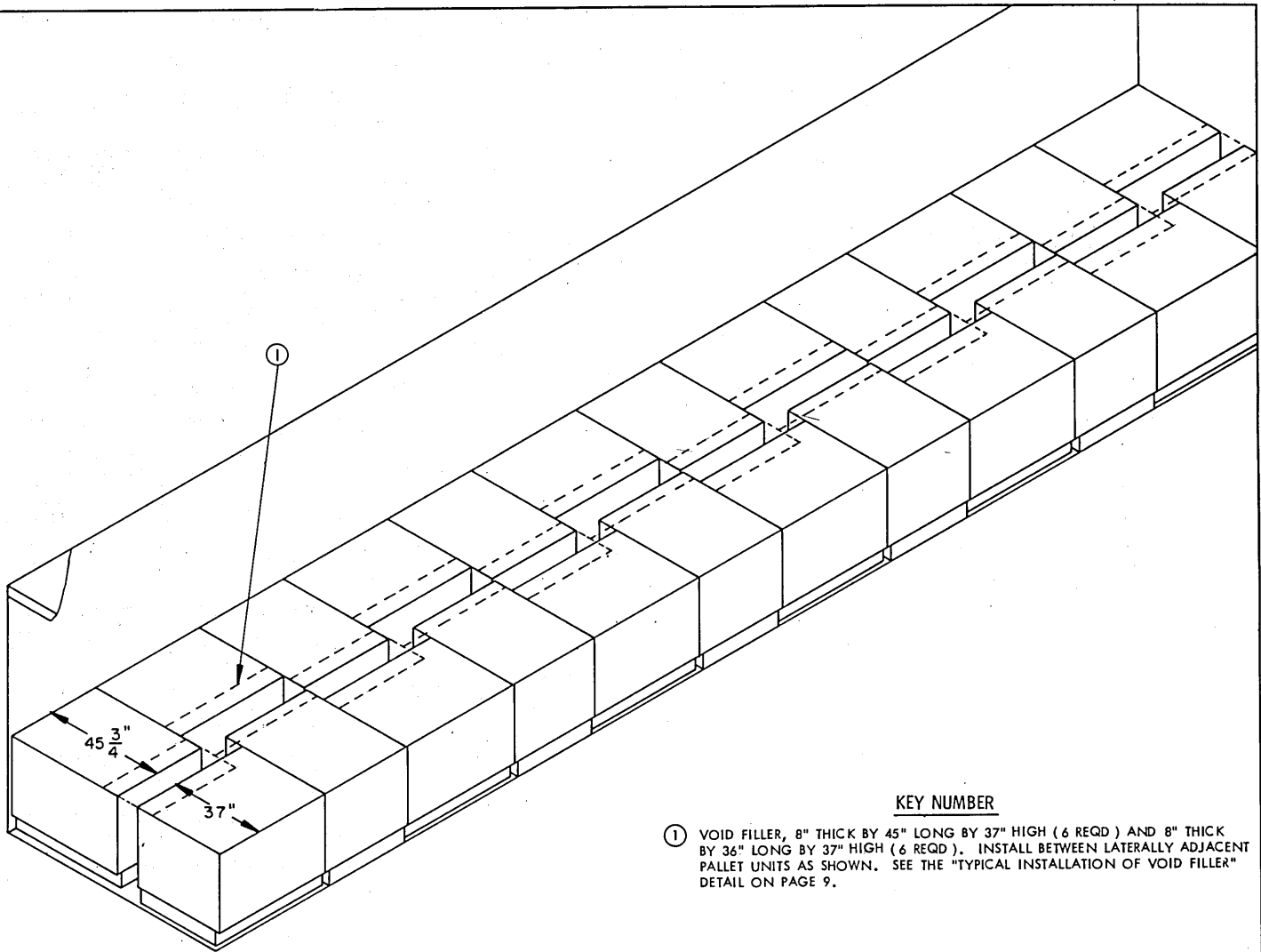
SPECIAL NOTES:

1. A 42'-0" LONG BY 7'-8" WIDE (INSIDE DIMENSION) CONVENTIONAL VAN TRAILER IS SHOWN. TRAILERS OF OTHER DIMENSIONS MAY BE USED. SEE SPECIAL NOTES 3 AND 4 BELOW.
2. THE PALLETIZED UNIT SHOWN IN THE LOAD ON PAGE 6 IS BASED ON A 5-LAYER PALLET UNIT CONSISTING OF 30 BOXES AT 59 POUNDS PER BOX FOR A TOTAL WEIGHT OF 1,844 POUNDS PER PALLET UNIT. THE HEIGHT OF THE PALLET UNIT SHOWN IS APPROXIMATELY 42-5/8".
3. IF A NARROWER TRAILER IS USED FOR SHIPMENT OF THE DEPICTED LOAD, THE VERTICAL PIECES OF THE SWAY BRACE CRIB FILL ASSEMBLIES MAY BE OF A NARROWER MATERIAL THAN IS SHOWN IN THE DETAIL. ALSO, IF A WIDER TRAILER IS USED, THE WIDTH OF THE VERTICAL PIECES MAY BE INCREASED ACCORDINGLY OR, THICKER MATERIAL FOR THE HORIZONTAL PIECES MAY BE USED. UNBLOCKED LATERAL VOID IS NOT TO EXCEED 1-1/2" WHEN BLOCKING IS USED. SWAY BRACING AS SPECIFIED FOR THE LOAD DEPICTED ON PAGE 8 CAN BE USED IN LIEU OF THE SPECIFIED SWAY BRACING, IF DESIRED.
4. THE LOAD AS SHOWN MAY BE SHIPPED IN A SHORTER TRAILER BY REDUCING THE NUMBER OF PALLET UNITS IN MULTIPLES OF FOUR AND ADDING A REAR BLOCKING ASSEMBLY AS SHOWN IN THE LOAD VIEW ON PAGE 4. ALSO, IF THERE IS A SPACE BETWEEN THE LADING AND THE TRAILER DOORS OF 1-1/2" OR MORE, BUT LESS THAN 9", SOLID FILL TYPE REAR BLOCKING SHOWN AS PIECE MARKED ② ON PAGE 10, WILL BE USED. IF THE SPACE IS 9" OR MORE, A "STRUT" TYPE REAR BLOCKING ASSEMBLY WILL BE USED. SEE THE "REAR BLOCKING ASSEMBLY" ON PAGE 18. THE REAR BLOCKING PROCEDURES SHOWN ON PAGES 14 AND 15 ALSO APPLY AND CAN BE USED.
5. IF THE TRAILER BEING LOADED HAS ROUNDED CORNERS AT THE FORWARD END, REFER TO PAGE 18 FOR "FORWARD BLOCKING ASSEMBLY" SPECIFICATIONS WHICH MUST BE USED.
6. THE BASIC LOAD AS SHOWN CAN BE USED FOR SHIPPING 22 PALLET UNITS, WHICH WOULD BE THE MAXIMUM LOAD IF A 40-FOOT TRAILER IS BEING USED. THE LOADING PATTERN AND LOAD-BLOCKING DUNNAGE AT THE REAR OF THE LOAD, HOWEVER, WILL BE CHANGED AS FOLLOWS:
 - A. THE TWO MOST REARWARD PALLET UNITS WILL BE ELIMINATED.
 - B. THE NEXT FORWARD PALLET UNIT THAT IS SHOWN WITH ITS 45-3/4" DIMENSION RUNNING ON THE WIDTH OF THE TRAILER WILL BE TURNED 90 DEGREES SO THAT ITS 37" DIMENSION IS RUNNING ON THE WIDTH OF THE TRAILER.
 - C. TWO PIECES MARKED ① WILL BE ELIMINATED, AND ONE PIECE MARKED AS PIECE ① ON PAGE 10 WILL BE REQUIRED TO BLOCK THE TWO PALLET UNITS OF THE MOST REARWARD STACK.
 - D. REAR BLOCKING AS SPECIFIED WITHIN SPECIAL NOTE 4 ABOVE WILL BE REQUIRED.

BILL OF MATERIAL		
LUMBER	LINEAR FEET	BOARD FEET
1" X 6"	180	90
2" X 6"	90	90
NAILS	NO. REQD	POUNDS
10d (3")	432	6-1/2

LOAD AS SHOWN

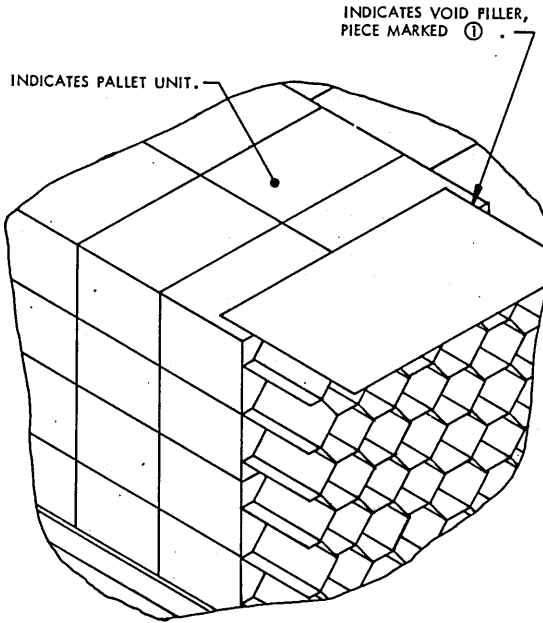
ITEM	QUANTITY	WEIGHT (APPROX)
PALLET UNIT -----	24 -----	44,256 LBS
DUNNAGE -----		367 LBS
TOTAL WEIGHT -----		44,623 LBS



ISOMETRIC VIEW

KEY NUMBER

- ① VOID FILLER, 8" THICK BY 45" LONG BY 37" HIGH (6 REQD) AND 8" THICK BY 36" LONG BY 37" HIGH (6 REQD). INSTALL BETWEEN LATERALLY ADJACENT PALLET UNITS AS SHOWN. SEE THE "TYPICAL INSTALLATION OF VOID FILLER" DETAIL ON PAGE 9.



TYPICAL INSTALLATION OF VOID FILLER

SPECIAL NOTES:

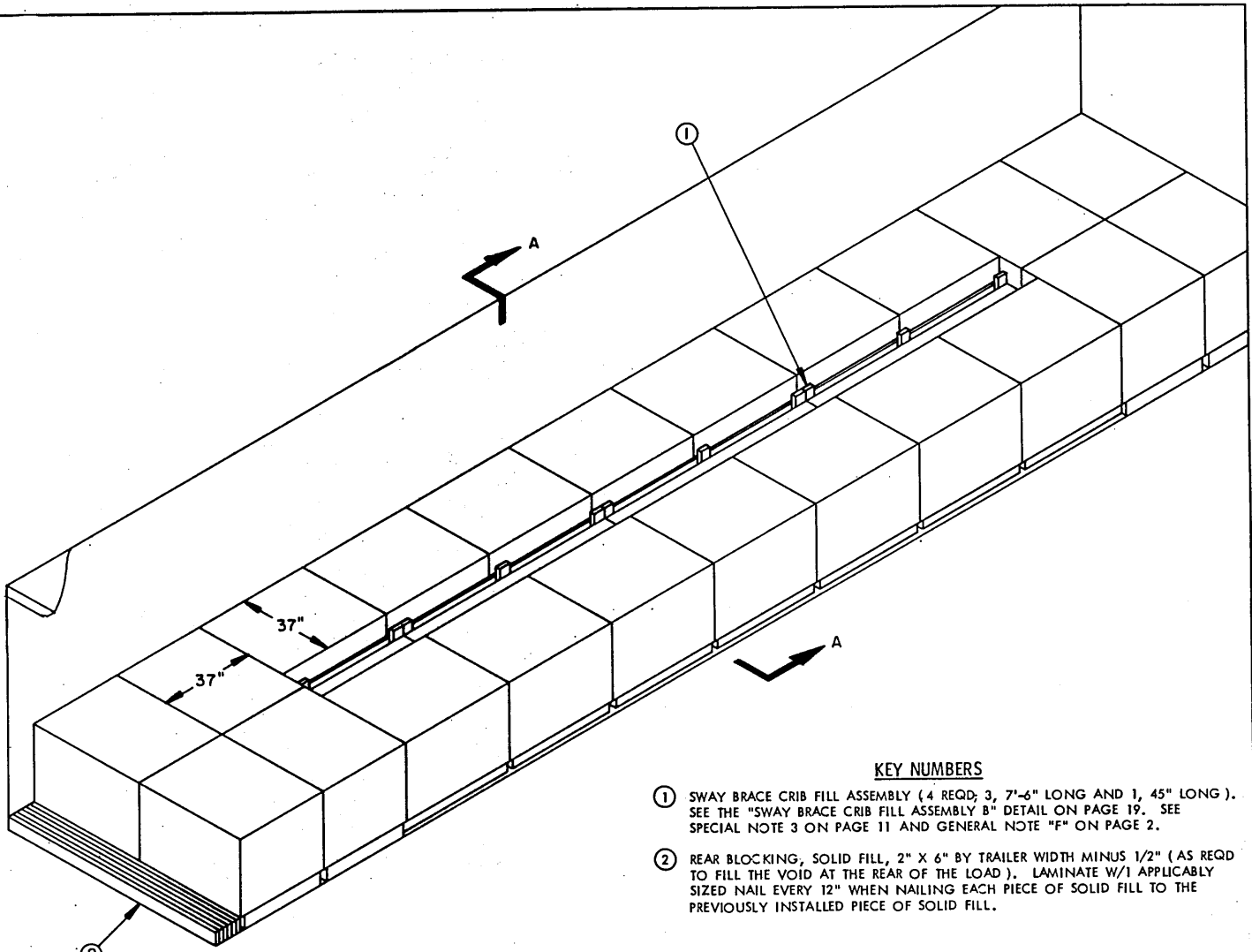
1. A 42'-0" LONG BY 7'-8" WIDE (INSIDE DIMENSION) CONVENTIONAL VAN TRAILER IS SHOWN. TRAILERS OF OTHER DIMENSIONS MAY BE USED. SEE SPECIAL NOTES 3 AND 4 BELOW.
2. THE PALLETIZED UNIT SHOWN IN THE LOAD ON PAGE 8 IS BASED ON A 5-LAYER PALLET UNIT CONSISTING OF 30 BOXES AT 54 POUNDS PER BOX FOR A TOTAL WEIGHT OF 1,694 POUNDS PER PALLET UNIT. THE HEIGHT OF THE PALLET UNIT SHOWN IS APPROXIMATELY 42-5/8".
3. IF A TRAILER OF ANOTHER WIDTH IS USED FOR SHIPMENT OF THE DEPICTED LOAD, VOID FILLER OF A SUFFICIENT THICKNESS SHOULD BE USED BETWEEN PALLET UNITS. UNBLOCKED LATERAL VOID IS NOT TO EXCEED 1-1/2" WHEN BLOCKING IS USED. SWAY BRACING AS SPECIFIED FOR THE LOAD DEPICTED ON PAGE 6 MAY BE USED IN LIEU OF THE SPECIFIED SWAY BRACING, IF DESIRED.
4. THE LOAD AS SHOWN MAY BE SHIPPED IN A SHORTER TRAILER BY REDUCING THE NUMBER OF PALLET UNITS IN MULTIPLES OF FOUR AND ADDING A REAR BLOCKING ASSEMBLY AS SHOWN IN THE LOAD VIEW ON PAGE 4. ALSO, IF THERE IS A SPACE BETWEEN THE LADING AND THE TRAILER DOORS OF 1-1/2" OR MORE, BUT LESS THAN 9", SOLID FILL TYPE REAR BLOCKING, SHOWN AS PIECE MARKED ② ON PAGE 10, WILL BE USED. IF THE SPACE IS 9" OR MORE, A "STRUT" TYPE REAR BLOCKING ASSEMBLY WILL BE USED. SEE THE REAR BLOCKING ASSEMBLY ON PAGE 18. THE REAR BLOCKING PROCEDURES SHOWN ON PAGES 14 AND 15 ALSO APPLY AND CAN BE USED.
5. IF THE TRAILER BEING LOADED HAS ROUNDED CORNERS AT THE FORWARD END, REFER TO PAGE 18 FOR "FORWARD BLOCKING ASSEMBLY" SPECIFICATIONS WHICH MUST BE USED.
6. THE CRITERIA SET FORTH WITHIN SPECIAL NOTE 6 ON PAGE 7 ALSO APPLY.

BILL OF MATERIAL

VOID FILLER, 8" THICK X 45" LONG X 37" HIGH-- 6 REQD-- 50 LBS
 VOID FILLER, 8" THICK X 36" LONG X 37" HIGH-- 6 REQD-- 37 LBS

LOAD AS SHOWN

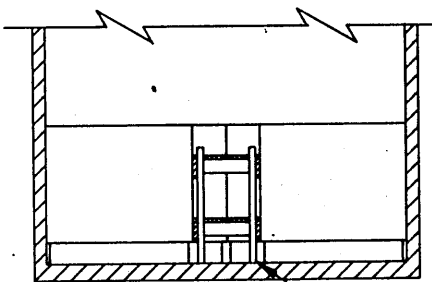
<u>ITEM</u>	<u>QUANTITY</u>	<u>WEIGHT (APPROX)</u>
PALLET UNIT -----	24 -----	40,656 LBS
DUNNAGE -----		87 LBS
TOTAL WEIGHT -----		40,743 LBS



ISOMETRIC VIEW

KEY NUMBERS

- ① SWAY BRACE CRIB FILL ASSEMBLY (4 REQ'D; 3, 7'-6" LONG AND 1, 45" LONG). SEE THE "SWAY BRACE CRIB FILL ASSEMBLY B" DETAIL ON PAGE 19. SEE SPECIAL NOTE 3 ON PAGE 11 AND GENERAL NOTE "F" ON PAGE 2.
- ② REAR BLOCKING, SOLID FILL, 2" X 6" BY TRAILER WIDTH MINUS 1/2" (AS REQ'D TO FILL THE VOID AT THE REAR OF THE LOAD). LAMINATE W/1 APPLICABLY SIZED NAIL EVERY 12" WHEN NAILING EACH PIECE OF SOLID FILL TO THE PREVIOUSLY INSTALLED PIECE OF SOLID FILL.



SECTION A-A

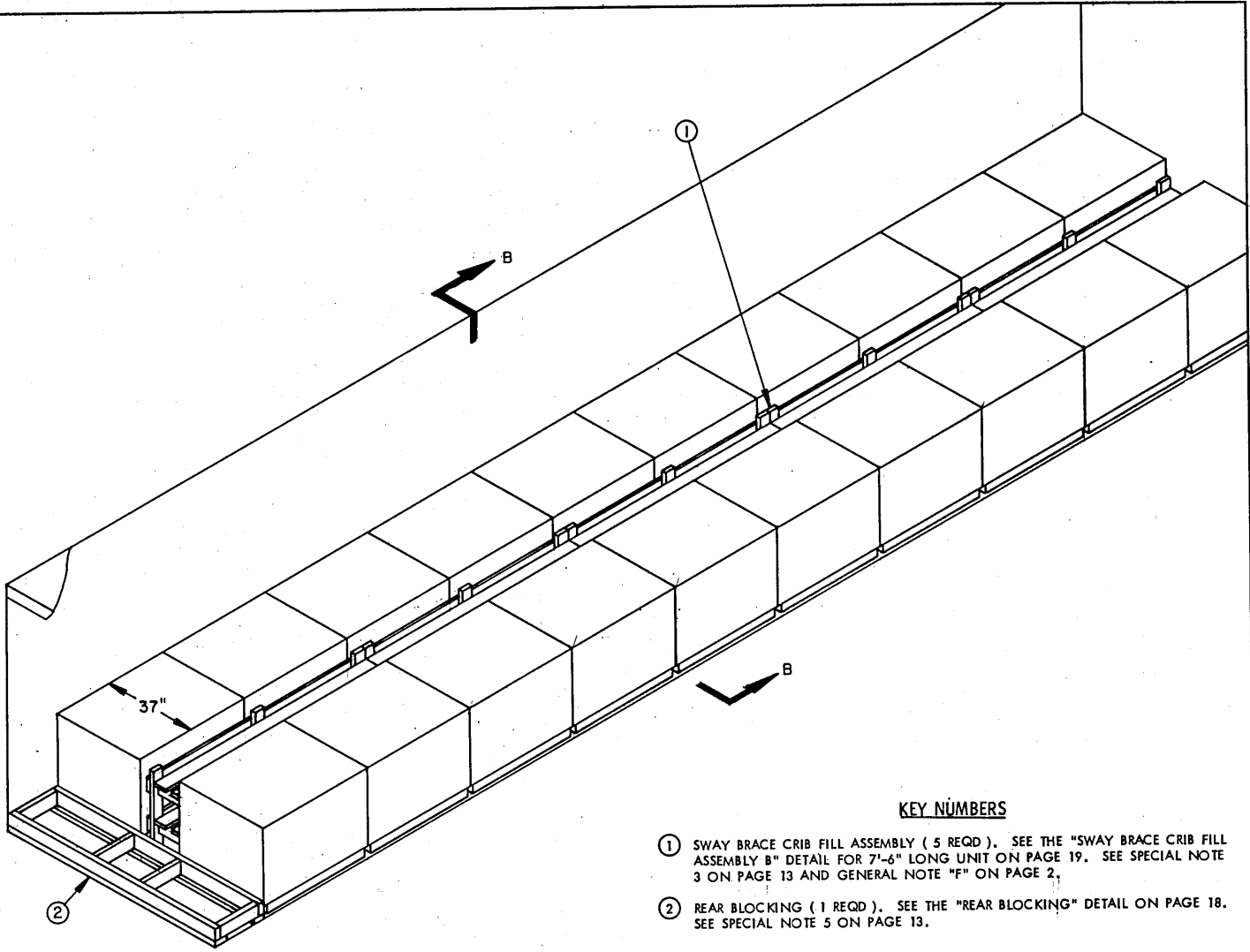
SPECIAL NOTES:

1. A 40'-0" LONG BY 7'-8" WIDE (INSIDE DIMENSION) CONVENTIONAL VAN TRAILER IS SHOWN. TRAILERS OF OTHER LENGTHS AND WIDER TRAILERS CAN BE USED. NARROWER TRAILERS CANNOT BE USED FOR THE LOAD DEPICTED ON PAGE 10.
2. THE PALLETIZED UNIT SHOWN IN THE LOAD ON PAGE 10 IS BASED ON A 5-LAYER PALLET UNIT CONSISTING OF 30 BOXES AT 59 POUNDS PER BOX FOR A TOTAL WEIGHT OF 1,844 POUNDS PER PALLET UNIT. THE HEIGHT OF THE PALLET UNIT SHOWN IS APPROXIMATELY 42-5/8".
3. IF A WIDER TRAILER IS USED FOR SHIPMENT OF THE DEPICTED LOAD AND THE EXCESS SPACE BETWEEN THE 2 FRONT AND 2 REAR LOAD UNITS IS SIX INCHES (6") OR MORE, A MODIFIED (37" LONG) SWAY BRACE CRIB FILL ASSEMBLY "A" AS DETAILED ON PAGE 19 SHOULD BE USED BETWEEN LATERALLY ADJACENT PALLET UNITS OR, IF AVAILABLE, VOID FILLER AS SHOWN IN THE LOAD ON PAGE 8 WILL BE USED BETWEEN LATERALLY ADJACENT PALLET UNITS. THE WIDTH OF THE SPECIFIED CRIB FILL ASSEMBLY MUST BE ADJUSTED ALSO. UNBLOCKED LATERAL VOID IS NOT TO EXCEED 1-1/2" WHEN BLOCKING IS USED.
4. IF THE TRAILER BEING LOADED HAS ROUNDED CORNERS AT THE FORWARD END, REFER TO PAGE 18 FOR "FORWARD BLOCKING ASSEMBLY" SPECIFICATIONS WHICH MUST BE USED.
5. IF THE SPACE BETWEEN THE LADING AND THE TRAILER DOORS IS MORE THAN 9", A "STRUT" TYPE REAR BLOCKING ASSEMBLY WILL BE USED. SEE THE "REAR BLOCKING ASSEMBLY" DETAIL ON PAGE 18 FOR APPLICABLE CONSTRUCTION GUIDANCE.
6. THE LOADING PATTERN AS SHOWN CAN BE ADJUSTED AS REQUIRED TO BEST SUIT THE QUANTITY TO BE SHIPPED AND THE LENGTH OF THE TRANSPORTING VEHICLE BEING USED (MORE OR LESS LENGTHWISE PALLET UNITS AND/OR MORE OR LESS CROSSWISE PALLET UNITS). THE NUMBER AND/OR LENGTH OF PIECES MARKED (1) WILL BE ADJUSTED AS REQUIRED TO SATISFY THE LOAD PATTERN BEING USED.
7. REGARDING SPECIAL NOTE 3 ABOVE, SEE SPECIAL NOTE 6 ON PAGE 5 WHICH PROVIDES GUIDANCE ON HOW TO MODIFY THE SWAY BRACING ASSEMBLY DEPICTED ON PAGE 19 WHEN THE ASSEMBLY IS REQUIRED IN "WIDE" TRAILERS.

BILL OF MATERIAL		
LUMBER	LINEAR FEET	BOARD FEET
1" X 6"	210	105
2" X 4"	79	53
2" X 6"	45	45
NAILS	NO. REQD	POUNDS
6d (2")	288	1-3/4
10d (3")	40	1/2
12d (3-1/4")	96	1-1/2

LOAD AS SHOWN

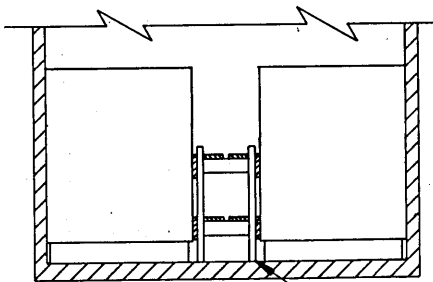
ITEM	QUANTITY	WEIGHT (APPROX)
PALLET UNIT	22	40,568 LBS
DUNNAGE		410 LBS
TOTAL WEIGHT		40,978 LBS



ISOMETRIC VIEW

KEY NUMBERS

- ① SWAY BRACE CRIB FILL ASSEMBLY (5 REQD). SEE THE "SWAY BRACE CRIB FILL ASSEMBLY B" DETAIL FOR 7'-6" LONG UNIT ON PAGE 19. SEE SPECIAL NOTE 3 ON PAGE 13 AND GENERAL NOTE "F" ON PAGE 2.
- ② REAR BLOCKING (1 REQD). SEE THE "REAR BLOCKING" DETAIL ON PAGE 18. SEE SPECIAL NOTE 5 ON PAGE 13.



SECTION B-B ①

SPECIAL NOTES:

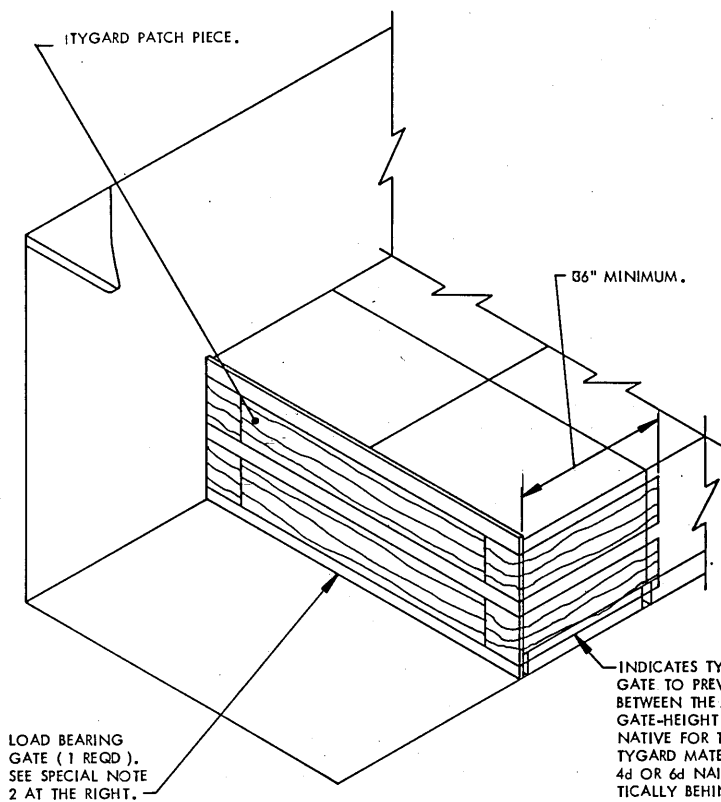
1. A 40'-0" LONG BY 7'-8" WIDE (INSIDE DIMENSION) CONVENTIONAL VAN TRAILER IS SHOWN. TRAILERS OF OTHER DIMENSIONS CAN BE USED.
2. THE PALLETIZED UNIT SHOWN IN THE LOAD ON PAGE 12 IS BASED ON A 6-LAYER PALLET UNIT CONSISTING OF 36 BOXES AT 54 POUNDS PER BOX FOR A TOTAL WEIGHT OF 2,018 POUNDS PER PALLET UNIT. THE HEIGHT OF THE PALLET UNIT SHOWN IS APPROXIMATELY 50".
3. IF AVAILABLE, VOID FILLER AS SHOWN IN THE LOAD ON PAGE 8 WILL BE USED BETWEEN LATERALLY ADJACENT PALLET UNITS IN PLACE OF THE SWAY BRACE CRIB FILL ASSEMBLIES SHOWN. IF THE SPECIFIED FILL ASSEMBLIES ARE USED OR IF "VOID FILLER" UNITS ARE USED, THE WIDTH OF THESE BLOCKING DEVICES MUST BE ADJUSTED AS REQUIRED SO THAT THE UNBLOCKED LATERAL VOID WILL NOT EXCEED 1-1/2" REGARDLESS OF THE WIDTH OF THE TRANSPORTING VEHICLE BEING USED.
4. IF THE TRAILER BEING LOADED HAS ROUNDED CORNERS AT THE FORWARD END, REFER TO PAGE 18 FOR "FORWARD BLOCKING ASSEMBLY" SPECIFICATIONS WHICH MUST BE USED.
5. IF THE SPACE BETWEEN THE LADING AND THE TRAILER DOORS IS LESS THAN 9", SOLID FILL TYPE REAR BLOCKING, SHOWN AS PIECE MARKED ② ON PAGE 10, WILL BE USED IN LIEU OF THE SPECIFIED REAR BLOCKING.

BILL OF MATERIAL

LUMBER	LINEAR FEET	BOARD FEET
1" X 6"	300	150
2" X 4"	120	80
2" X 6"	20	20
NAILS	NO. REQD	POUNDS
6d (2")	360	2
10d (3")	40	1/2
12d (3-1/4")	120	2

LOAD AS SHOWN

<u>ITEM</u>	<u>QUANTITY</u>	<u>WEIGHT (APPROX)</u>
PALLET UNIT -----	20 -----	40,360 LBS
DUNNAGE -----		505 LBS
TOTAL WEIGHT -----		40,865 LBS



SPECIAL NOTES:

1. THE TYGARD METHOD OF REAR BLOCKING DEPICTED AT LEFT CAN ONLY BE USED IN TRAILERS WHICH HAVE REASONABLY SMOOTH AND ADEQUATELY SECURED SIDEWALL PANELS IN THE AREA WHERE THE TYGARD MATERIAL IS TO BE APPLIED.
2. A LOAD-HEIGHT (48" MAXIMUM) BY LOAD WIDTH MINUS 1/2" PLYWOOD GATE MUST BE INSTALLED AT THE REAR OF THE LOAD TO PROVIDE A SMOOTH SURFACE FOR THE TYGARD MATERIAL TO EXTEND AROUND.
3. TYGARD MATERIAL MUST BE INSTALLED AT TWO LEVELS ON THE REAR LOAD UNIT.
4. THE TYGARD MATERIAL AND THE ADHESIVE FOR ATTACHING IT ARE COMMERCIAL PRODUCTS. FOR A SOURCE OF SUPPLY, CONTACT WALNUT INDUSTRIES, INC., 1344 ADAMS ROAD, P. O. BOX "E", BENSALEM, PA 19020-0860, PHONE 1-800-523-6536. APPLICATION INSTRUCTIONS AND GUIDANCE CAN ALSO BE OBTAINED FROM THAT OFFICE.
5. THE TYGARD METHOD, ALTHOUGH ESPECIALLY FOR TRAILERS HAVING ROLL-UP TYPE DOORS, MAY ALSO BE USED IN TRAILERS EQUIPPED WITH HINGED DOORS.
6. **NOTICE:** IF THE AREA OF A SIDEWALL WHERE THE TYGARD SHOULD BE ATTACHED IS ROUGH AND/OR BROKEN, THE APPLICABLE PIECE (5) OF TYGARD CAN BE LENGTHENED A SUITABLE AMOUNT AND ATTACHED TO THE SIDEWALL AHEAD OF THE INDICATED PREFERRED LOCATION.

INDICATES TYGARD MATERIAL. STAPLE TO THE LOAD-BEARING GATE TO PREVENT SAGGING. IF THERE IS A LATERAL VOID BETWEEN THE LAST TWO PALLET UNITS WITHIN THE LOAD, A GATE-HEIGHT PIECE OF 1" X 4" MATERIAL MAY, AS AN ALTERNATIVE FOR THE STAPLING REQUIREMENT, BE NAILED THRU THE TYGARD MATERIAL INTO THE LOAD-BEARING GATE WITH FIVE 4d OR 6d NAILS. **CAUTION:** ALIGN THE 1" X 4" PIECE VERTICALLY BEHIND THE VOID BETWEEN THE PALLET UNITS.

TYGARD METHOD

RECOMMENDED EQUIPMENT/INSTALLATION PROCEDURES

EQUIPMENT REQUIRED

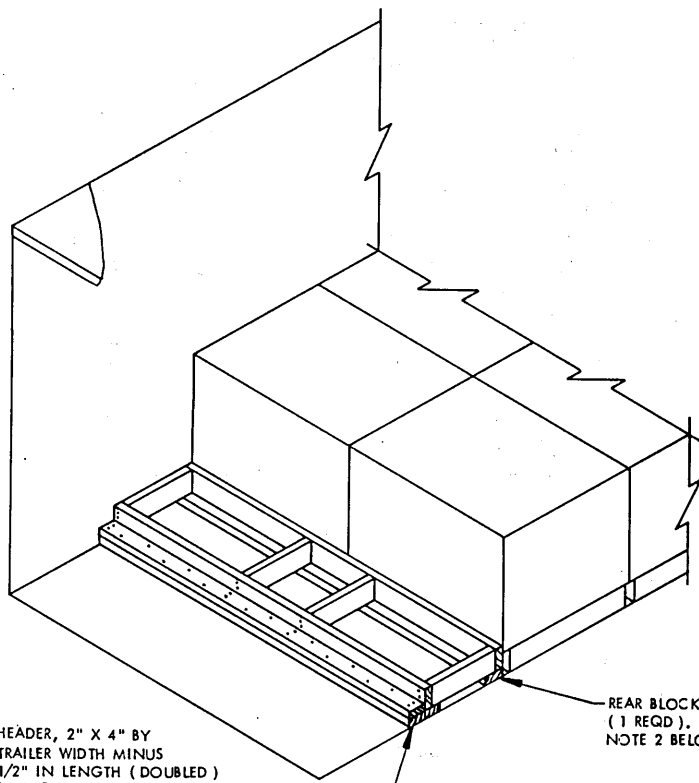
PAINT ROLLER, LATEX
 PAINT ROLLER PAN
 TENSIONING ROD/TOOL
 PRESSURE ROLLER
 RATCHET WRENCH (12" TO 15" HANDLE)
 OPEN END OR BOX WRENCH (12" TO 15" HANDLE)
 SCISSORS OR KNIFE
 TYGARD (15" WIDE ROLL)
 TYGARD ADHESIVE

BASIC INSTALLATION GUIDANCE

1. CUT TO LENGTH THE REQUIRED NUMBER OF TYGARD PIECES FOR ATTACHMENT TO THE TRAILER SIDEWALL. PIECES WILL BE OF A LENGTH AS REQUIRED TO PROVIDE PROPER BONDING TO THE TRAILER SIDEWALL AND TO EXTEND 60" ACROSS THE REAR OF THE LOAD. ALSO, CUT 72" LONG "PATCH" PIECES OF TYGARD MATERIAL, ONE FOR EACH SET OF TWO PIECES PREVIOUSLY CUT.
2. PRIOR TO POSITIONING OF THE PALLETS IN THE REARMOST LOAD UNIT, APPLY TYGARD ADHESIVE TO THE PROPER PORTIONS OF THE TRAILER SIDEWALLS AND TO THE CORD SIDE OF A CORRESPONDING LENGTH OF EACH OF THE TYGARD PIECES THAT ARE TO BE ATTACHED TO THE SIDEWALLS OF THE TRAILER. ALLOW TIME FOR THE ADHESIVE TO "CURE" BEFORE PLACING A STRIP OF TYGARD ONTO A SIDEWALL (ADHESIVE WILL FEEL ALMOST DRY WHEN TOUCHED). **NOTE:** APPLICATION OF TYGARD IS SIMILAR TO THE APPLICATION OF "FORMICA".
3. APPLY THE TYGARD PIECES TO EACH SIDEWALL OF THE TRAILER SO THAT THE PIECES ARE PARALLEL OR NEARLY PARALLEL TO THE FLOOR. ROLL THE TYGARD WITH THE PRESSURE ROLLER TO ENSURE PROPER BONDING IS ACHIEVED. TEMPORARILY SECURE THE LOOSE ENDS TO THE TRAILER SIDEWALL OR TO AN OPEN HINGED TYPE DOOR OR TO THE OUTSIDE WALL, AS APPLICABLE.
4. POSITION THE PALLETS OF THE REARMOST LOAD UNIT INTO THE TRAILER AND INSTALL THE SPECIFIED SWAY BRACING, AS APPLICABLE.
5. UNDO THE PREVIOUSLY SECURED LOOSE ENDS AND BRING A SET OF TWO PIECES TOGETHER ACROSS THE REAR OF THE LOAD. POSITION THE TENSIONING ROD SO THAT THE LOOSE ENDS OF THE TYGARD MATERIAL EXTEND THRU THE SLOT IN ROD. USING THE TWO WRENCHES, ROLL UP THE TYGARD TO TENSION IT ACROSS REAR OF THE LOAD. POSITION A WRENCH SO AS TO MAINTAIN THE TENSION IN THE TYGARD PIECES. CUT OFF AND DISCARD EXCESS MATERIAL FROM ONE PIECE OF THE TYGARD.
6. APPLY TYGARD ADHESIVE TO THE TENSIONED TYGARD PIECES AND ALSO TO THE CORD SIDE OF THE PREVIOUSLY CUT "PATCH" PIECE. APPLY THE "PATCH" AND ROLL WITH THE PRESSURE ROLLER TO ENSURE PROPER BONDING.

TYGARD METHOD

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



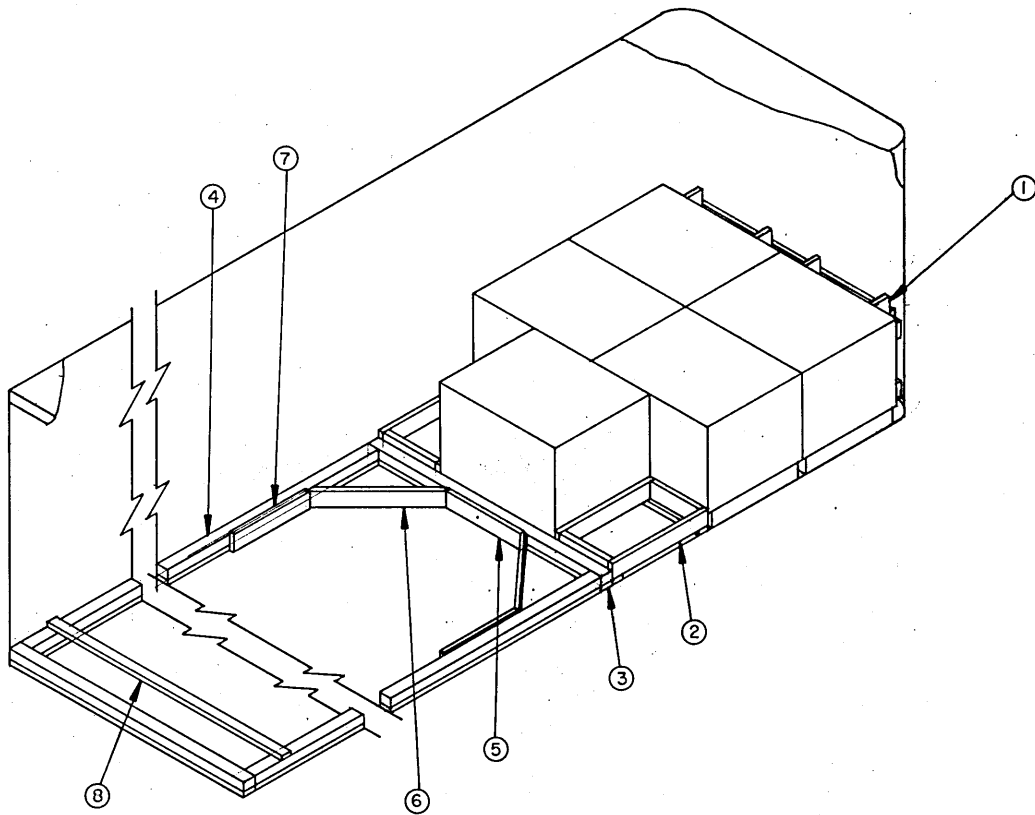
HEADER, 2" X 4" BY TRAILER WIDTH MINUS 1/2" IN LENGTH (DOUBLED) (1 REQD). POSITION AGAINST THE REAR BLOCKING ASSEMBLY. NAIL THE FIRST PIECE TO THE TRAILER FLOOR W/15-10d NAILS (1 EVERY 6"). NAIL THE SECOND PIECE TO THE FIRST IN A LIKE MANNER AND TOENAIL TO THE REAR BLOCKING ASSEMBLY W/4-10d NAILS.

REAR BLOCKING ASSEMBLY (1 REQD). SEE SPECIAL NOTE 2 BELOW.

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 FOURTEEN INCHES (14").
2. THE REAR BLOCKING ASSEMBLY IS SHOWN FOR A TYPICAL INSTALLATION. THE REAR BLOCKING ASSEMBLY WHICH IS SPECIFIED WITHIN THE KEY NUMBERS FOR THE ITEM BEING LOADED WILL BE USED AT THE REAR OF THE LOAD. CONSTRUCT THE ASSEMBLY USING 6" (MINIMUM) LONG STRUTS.
3. THE NAILED-HEADER METHOD OF REAR BLOCKING IS ADEQUATE FOR THE RETENTION OF THE MAXIMUM WEIGHT LOAD.
4. THE NAILED-HEADER METHOD, ALTHOUGH DESIGNED ESPECIALLY FOR TRAILERS HAVING ROLL-UP TYPE DOORS, MAY ALSO BE USED IN TRAILERS EQUIPPED WITH HINGED DOORS.



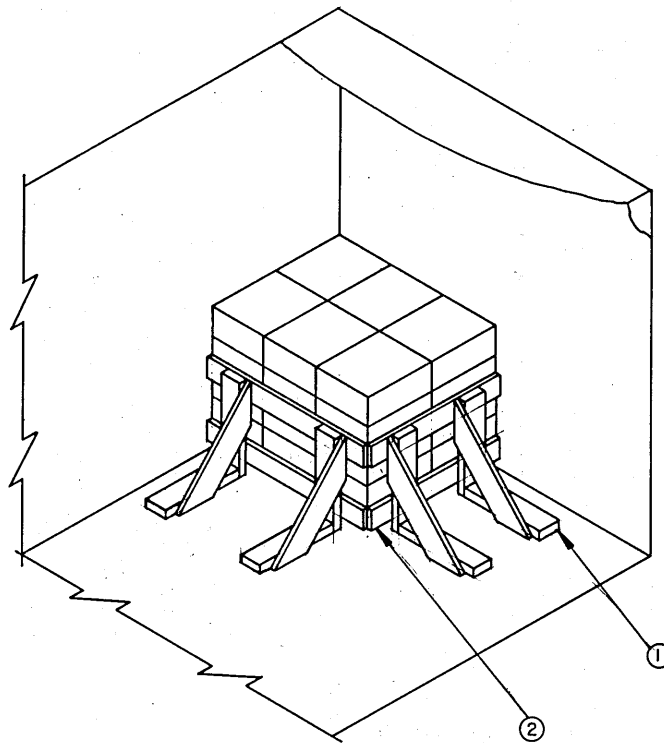
ISOMETRIC VIEW

KEY NUMBERS

- ① FORWARD BLOCKING ASSEMBLY (1 REQD). SEE THE DETAIL ON PAGE 18. SEE GENERAL NOTE "F" ON PAGE 2.
- ② SIDE BLOCKING ASSEMBLY (2 REQD). SEE THE DETAIL ON PAGE 20. NAIL TO THE ADJACENT HEADER, PIECE MARKED ③, W/2-10d NAILS.
- ③ HEADER, 4" X 4" AND 2" X 4" BY TRAILER WIDTH MINUS 1/2" IN LENGTH (2 REQD). LAMINATE THE 2" X 4" TO THE 4" X 4" W/1-10d NAIL EVERY 8". SEE SPECIAL NOTE 4 AT THE LEFT.
- ④ SIDE STRUT, 4" X 4" AND 2" X 4" BY CUT TO FIT BETWEEN THE FORWARD AND REAR HEADERS, PIECES MARKED ③, (2 REQD). TOENAIL TO THE HEADERS W/2-16d NAILS AT EACH END. SEE SPECIAL NOTE 6 AT THE LEFT.
- ⑤ CENTER CLEAT, 2" X 6" X 30" (1 REQD). NAIL TO THE FRONT HEADER, PIECE MARKED ③, W/7-10d NAILS.
- ⑥ 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 FRONT HEADER AND A SIDE STRUT, PIECES MARKED ③ AND ④, W/2-16d NAILS AT EACH END.
- ⑦ SIDE CLEAT, 2" X 6" X 30" (2 REQD). NAIL TO A SIDE STRUT, PIECE MARKED ④, W/8-10d NAILS.
- ⑧ STRUT BRACE, 2" X 4" BY TRAILER WIDTH MINUS 1/2" IN LENGTH (MINIMUM OF ONE REQUIRED). POSITION NEAR REAR OF TRAILER AND NAIL TO THE SIDE STRUTS, PIECES MARKED ④, W/2-12d NAILS AT EACH END. SEE SPECIAL NOTE 3 AT THE LEFT.

SPECIAL NOTES:

1. A 7'-8" WIDE (INSIDE DIMENSION) CONVENTIONAL VAN TRAILER IS SHOWN. WIDER TRAILERS CAN BE USED.
2. IF A WIDER TRAILER IS USED FOR SHIPMENT OF THE DEPICTED LOAD AND THE EXCESS SPACE ACROSS THE LOAD IS SIX INCHES (6") OR MORE, VOID FILLER AS SHOWN IN THE LOAD ON PAGE 8 OR ADJUSTED CRIB FILL AS SHOWN ON PAGE 6 WILL BE USED BETWEEN LATERALLY ADJACENT PALLET UNITS. UNBLOCKED LATERAL VOID IS NOT TO EXCEED 1-1/2" WHEN BLOCKING IS USED.
3. ALL LTL LOADS, REGARDLESS OF THEIR SIZE, REQUIRE ONE STRUT BRACE POSITIONED NEAR THE REAR OF THE TRAILER AND NAILED TO THE SIDE STRUTS. IF THE SIDE STRUTS, PIECES MARKED ④, ARE LONGER THAN 7'-0", AN ADDITIONAL STRUT BRACE, PIECE MARKED ⑧, MUST BE APPLIED FOR EVERY 7'-0" OF SIDE STRUT LENGTH.
4. THE "K"-BRACE BLOCKING, SHOWN AS PIECES MARKED ③ THRU ⑧, IS ADEQUATE FOR RETAINING A MAXIMUM LOAD OF 26,000 POUNDS. IF DESIRED, REAR-OF-LOAD BLOCKING AS SPECIFIED ON PAGE 15 MAY BE SUBSTITUTED FOR PIECES MARKED ③ THRU ⑧, OR THE TYGARD METHOD SHOWN ON PAGE 14 MAY BE USED IF THE LTL LOAD IS TWO PALLET SIZES AT THE REAR OF THE LOAD.
5. FIVE (5) PALLETIZED UNITS ARE SHOWN AS A TYPICAL LCL LOAD. THE NUMBER OF UNITS CAN BE ADJUSTED TO SUIT THE QUANTITY THAT IS TO BE SHIPPED.
6. DEPENDING ON THE NUMBER OF UNITS BEING LOADED, EACH OF THE SIDE STRUTS, PIECES MARKED ④, 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 4" X 24" PIECE ON TOP OF THE JOINT IN A SIDE STRUT AND NAILING IT TO THE SIDE STRUT W/4-10d NAILS AT EACH END.
7. REGARDING SPECIAL NOTE 2 ABOVE, SEE SPECIAL NOTE 6 ON PAGE 5 WHICH PROVIDES GUIDANCE ON HOW TO MODIFY THE SWAY BRACING ASSEMBLY DEPICTED ON PAGE 19 WHEN THE ASSEMBLY IS REQUIRED IN "WIDE" TRAILERS.



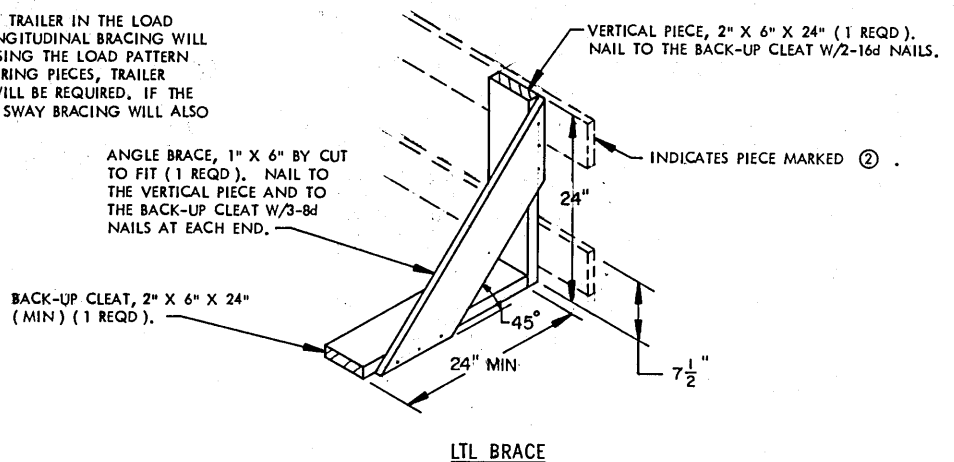
ISOMETRIC VIEW

KEY NUMBERS

- ① LTL BRACE (4 REQD). SEE THE DETAIL, BELOW. NAIL EACH LONGITUDINAL BRACE TO THE TRAILER FLOOR W/7-10d NAILS AND EACH LATERAL BRACE TO THE TRAILER FLOOR W/7-10d NAILS. SEE GENERAL NOTE "F" ON PAGE 2.
- ② BEARING PIECE, 1" X 6" BY UNIT LENGTH OR WIDTH (4 REQD). NAIL TO THE VERTICAL PIECES OF THE LTL BRACES W/3-6d NAILS AT EACH JOINT PRIOR TO PLACING AGAINST THE LADING. SEE THE "LTL BRACE" BELOW FOR LOCATION GUIDANCE.

SPECIAL NOTES:

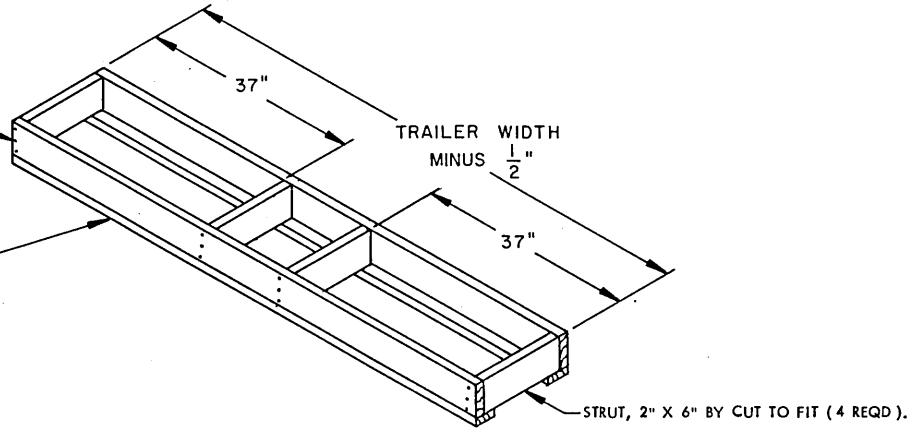
1. A 7'-6" WIDE (INSIDE DIMENSION) CONVENTIONAL VAN TRAILER IS SHOWN. TRAILERS OF OTHER WIDTHS CAN BE USED.
2. EACH LTL BRACE AS APPLIED FOR LONGITUDINAL BRACING WILL RETAIN 2,000 POUNDS OF LADING. A MINIMUM OF TWO (2) BRACES MUST BE USED FOR LONGITUDINAL BRACING. EACH LTL BRACE AS APPLIED FOR LATERAL BRACING WILL SUPPORT 3,000 POUNDS OF LADING. A MINIMUM OF TWO (2) BRACES IS REQUIRED. FOR EXAMPLE, IF TWO 6-LAYER, 2,378-POUND PALLET UNITS WHICH ARE LOADED IN A 1-WIDE LOADING PATTERN ARE TO BE SHIPPED, THREE LTL BRACES BLOCKING AGAINST LONGITUDINAL MOVEMENT AND TWO BRACES BLOCKING AGAINST LATERAL MOVEMENT ARE REQUIRED. NOTE THAT FOR MULTI-LENGTH LOADS, NO LESS THAN ONE LTL BRACE WILL BE USED PER PALLET UNIT FOR LATERAL BLOCKING (A 3-LONG LOAD REQUIRES THREE LTL BRACES FOR LATERAL BLOCKING).
3. IF TWO (2) PALLET UNITS ARE POSITIONED IN THE TRAILER IN THE LOAD PATTERN SUCH AS SHOWN ON PAGE 4, ONLY LONGITUDINAL BRACING WILL BE APPLIED. THE SAME IS TRUE WHEN SHIPPING USING THE LOAD PATTERN AS SHOWN ON PAGE 12; HOWEVER, TWO (2) BEARING PIECES, TRAILER WIDTH MINUS 1/2", AND FOUR (4) LTL BRACES WILL BE REQUIRED. IF THE LOADING PATTERN SHOWN ON PAGE 12 IS USED, SWAY BRACING WILL ALSO BE REQUIRED.



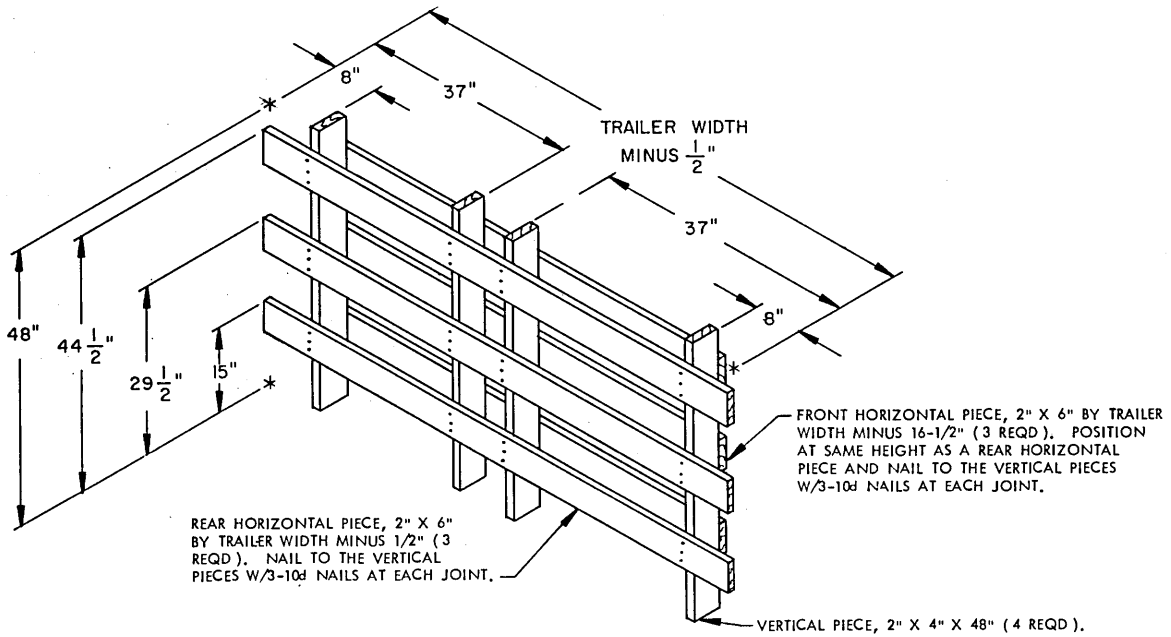
TYPICAL LTL (1-UNIT LOAD)

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

HEADER RISER, 2" X 4" BY TRAILER WIDTH MINUS 1/2" (2 REQD). NAIL TO A HEADER W/1-10d NAIL EVERY 12".

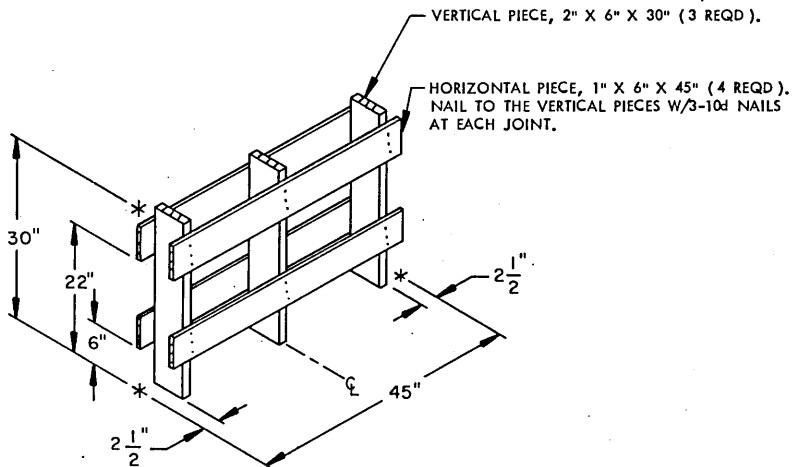


REAR BLOCKING ASSEMBLY

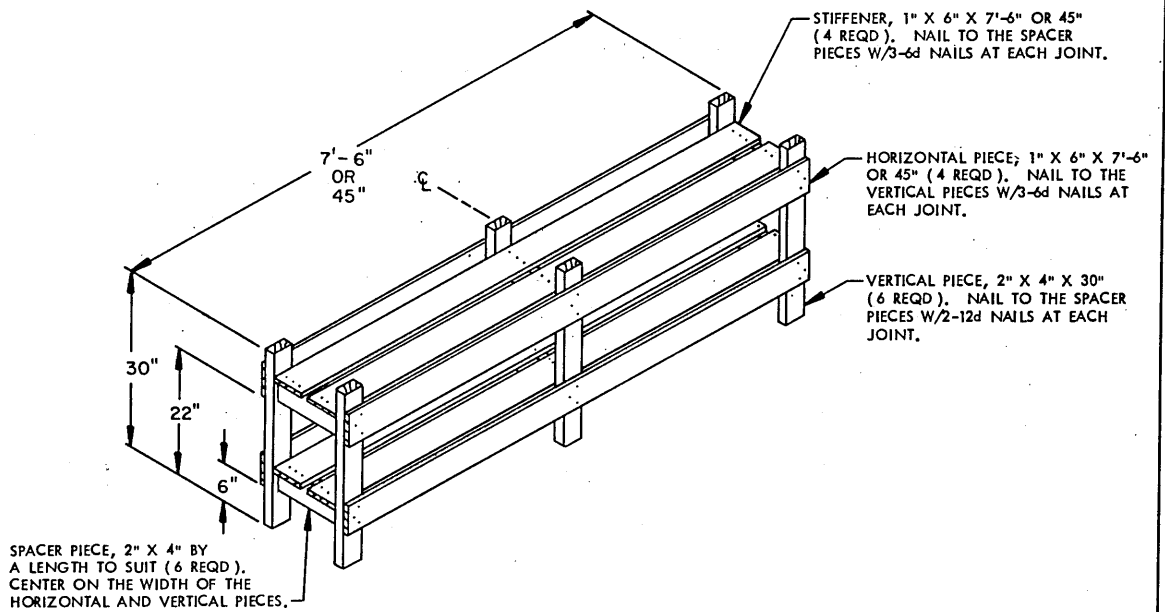


FORWARD BLOCKING ASSEMBLY

NOTE: WHEN SHIPPING 4-LAYER PALLET UNITS, THE VERTICAL PIECES MAY BE REDUCED TO 30" IN LENGTH AND THE TOP FRONT AND REAR HORIZONTAL PIECES ELIMINATED FROM THE ASSEMBLY AS SHOWN ABOVE.

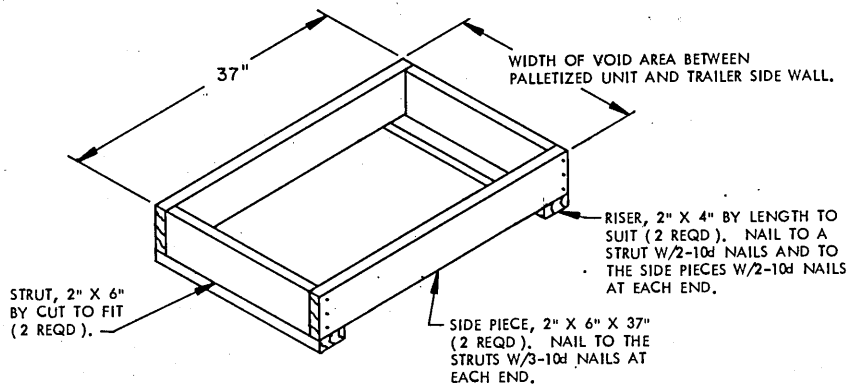


SWAY BRACE CRIB FILL ASSEMBLY A

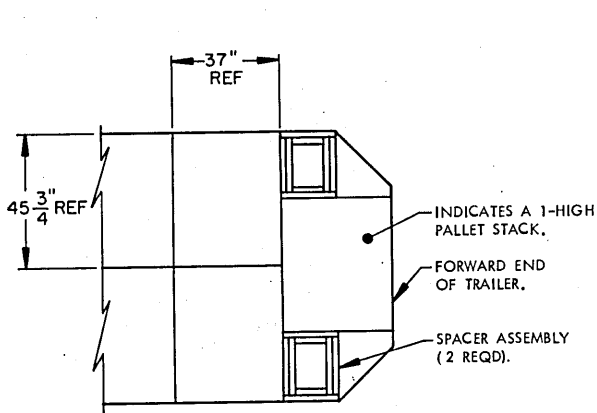


SWAY BRACE CRIB FILL ASSEMBLY B

TWO DIMENSIONS ARE SPECIFIED FOR THE LENGTH OF THE ABOVE ASSEMBLY. THE NUMBER OF LATERALLY ADJACENT PALLET UNITS DETERMINES THE LENGTH USED. FOR USE WITH ONE LOAD UNIT, THE 45\"/>



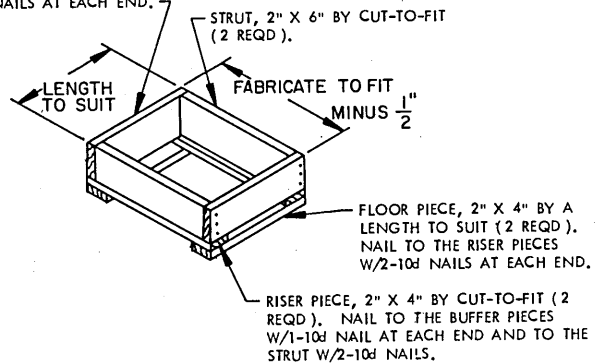
SIDE BLOCKING ASSEMBLY



ALTERNATIVE FORWARD LOADING PATTERN

THIS PROCEDURE IS APPLICABLE TO THE LOADING OF ONE (1) PALLET UNIT 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. ALTHOUGH THE LOADING PATTERN SHOWN ABOVE FOR THE PALLET UNITS LOADED BEHIND THE 1-WIDE PALLET UNIT DEPICTS THE PALLET UNITS LOADED CROSSWISE, THE FORWARD LOAD-BLOCKING PROCEDURES SPECIFIED ABOVE CAN ALSO BE USED WITH ANY OF THE DIFFERENT LOADING PATTERNS DISPLAYED WITHIN THIS DRAWING. ADDITIONALLY, THE 1-WIDE PALLET UNIT CAN ALSO BE POSITIONED LENGTHWISE, IF DESIRED.

BUFFER PIECE, 2" X 6" BY A LENGTH TO SUIT (2 REQD). NAIL TO THE STRUTS W/3-10d NAILS AT EACH END.



SPACER ASSEMBLY

THIS ASSEMBLY IS DESIGNED FOR LATERAL BRACING OF A SINGLE PALLET UNIT POSITIONED IN THE FRONT OF AN ANGLED-CORNER CONVENTIONAL VAN TRAILER AS SHOWN IN THE "ALTERNATIVE FORWARD LOADING PATTERN" VIEW AT THE LEFT.