

LOADING AND BRACING (TL & LTL) IN CLOSED OR OPEN TOP VAN TRAILERS OF BOXED AMMUNITION AND COMPONENTS ON PALLETS, UNITIZED WITH STRAPPING

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

U.S. ARMY MATERIEL COMMAND DRAWING			
APPROVED, U.S. ARMY ARMAMENT, MUNITIONS AND CHEMICAL COMMAND <i>Em Jones</i>	DRAFTSMAN	TECHNICIAN	ENGINEER
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	<i>AM JNK</i>	<i>w. Francke</i>	<i>W F Ernst</i>
OCTOBER 1989			
U.S. ARMY DEFENSE AMMUNITION CENTER AND SCHOOL	CLASS	DIVISION	DRAWING
REVISION NO. 2	APRIL 1993		FILE
SEE THE REVISION LISTING ON PAGE 4		19	48
		4117	11PA1003

DO NOT SCALE

GENERAL NOTES

(GENERAL NOTES CONTINUED)

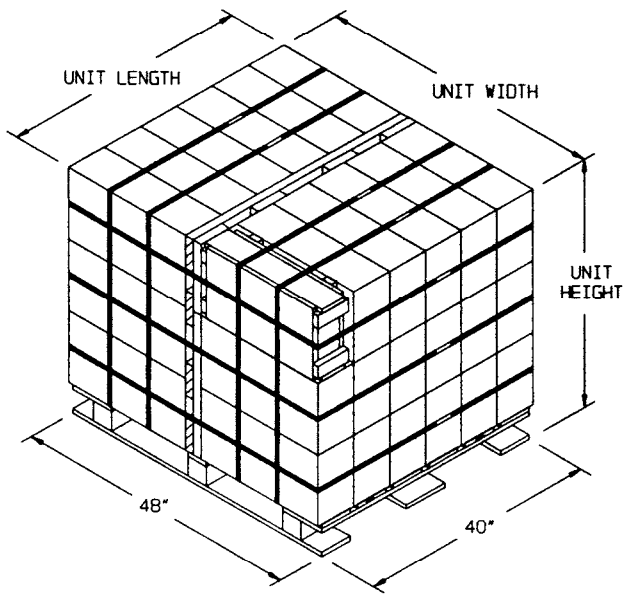
- A. THIS DOCUMENT HAS BEEN PREPARED AND ISSUED IN ACCORDANCE WITH AR 740-1 AND AUGMENTS TM 743-200-1 (CHAPTER 5).
- B. THE UNLOADING PROCEDURES SPECIFIED IN THIS DRAWING ARE APPLICABLE FOR PALLETIZED AMMUNITION AND COMPONENTS PACKED IN WOODEN OR WIREBOUND BOXES.
- C. REFER TO THE APPLICABLE (AMC) 19-48 SERIES DRAWING FOR UNITIZATION PROCEDURES FOR BOXED AMMUNITION AND COMPONENTS ON 4-WAY ENTRY PALLETS.
- D. THE DEPICTED PROCEDURES ARE APPLICABLE FOR UNITS ASSEMBLED ON THE 40" X 48", 35" X 45-1/2" OR THE 42" X 53" 4-WAY ENTRY PALLET.
- E. THE UNLOADING PROCEDURES DEPICTED WITHIN THIS DOCUMENT ARE APPLICABLE FOR SHIPMENTS IN CONVENTIONAL TYPE VAN TRAILERS AND APPLY TO TRAILERS HAVING WOOD, OR WOOD AND METAL, OR ALL METAL FLOORS. VAN TRAILERS WHICH ARE 40'-0" LONG BY 7'-8" WIDE (INSIDE DIMENSION) HAVE BEEN SHOWN, HOWEVER, THE PROCEDURES ARE ALSO APPLICABLE FOR TRAILERS WHICH ARE 89" THRU 99" IN WIDTH AND FOR TRAILERS OF OTHER LENGTHS FROM THE SHORTEST TO THE LONGEST AVAILABLE (REF: 24' TO 53'), AND FOR STRAIGHT TRUCK VANS. THE LOADING AND BRACING PROCEDURES SPECIFIED HEREIN ARE ALSO ADEQUATE (CONFIGURATION WISE AND STRENGTH WISE) FOR LOADS IN SHORTER OR LONGER VANS AND IN NARROWER OR WIDER VANS THAN SHOWN. THE SPECIFIED BRACING IS ADEQUATE FOR LOADS WEIGHING UP TO AND INCLUDING THE MAXIMUM WEIGHTS PERMITTED BY LAW.
- F. THE GROSS WEIGHT AND AXLE DISTRIBUTION OF WEIGHT FOR A LOAD WILL BE THE RESPONSIBILITY OF THE CARRIER. THE CARRIER WILL ADVISE THE SHIPPER OF THE APPLICABLE LOADING REQUIREMENTS, AND THE SHIPPER WILL LOAD ACCORDINGLY. THE TOTAL WEIGHT OF THE LADING, OF THE DUNNAGE, OF THE TRACTOR, AND OF THE SEMITRAILER CARRYING THE LADING MUST NOT EXCEED THE MAXIMUM GROSS WEIGHT ALLOWED FOR THE STATE OR STATES THRU WHICH THE LOAD IS TO BE TRANSPORTED BY MOTOR CARRIER. LIKEWISE, THE GROSS WEIGHT ON A SINGLE OR TANDEM AXLE MUST NOT EXCEED THE MAXIMUM ALLOWABLE WEIGHT. IF THERE IS ANY DOUBT AS TO WHETHER THE TOTAL GROSS WEIGHT OR AXLE WEIGHT EXCEEDS THE MAXIMUM ALLOWED, WEIGHT SHOULD BE VERIFIED BY ACTUALLY WEIGHING THE LOADED VEHICLE.
- G. 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.
- H. NOTICE: A STAGGERED NAILING PATTERN WILL BE USED WHEREVER POSSIBLE WHEN NAILS ARE DRIVEN INTO JOINTS OF DUNNAGE ASSEMBLIES. ALSO, A STAGGERED NAILING PATTERN WILL BE USED WHEN DUNNAGE IS NAILED TO THE FLOOR OF THE TRANSPORTING VEHICLE, OR WHEN LAMINATING DUNNAGE. THE NAILING PATTERN WILL BE ADJUSTED AS REQUIRED SO THAT A NAIL DOES NOT PENETRATE INTO OR NEAR A CRACK BETWEEN FLOOR BOARDS. ADDITIONALLY, THE NAILING PATTERN FOR AN UPPER PIECE OF LAMINATED DUNNAGE WILL BE ADJUSTED AS REQUIRED SO THAT A NAIL FOR THAT PIECE WILL NOT BE DRIVEN THROUGH ONTO OR RIGHT BESIDE A NAIL IN A LOWER PIECE.
- J. POWER DRIVEN STAPLES MAY BE USED AS ALTERNATIVE FASTENERS FOR NAILS WHEN CONSTRUCTING DUNNAGE ASSEMBLIES WHICH ARE TO BE USED IN THE DELINEATED TRAILER LOADS SHOWN THROUGHOUT THIS DRAWING. THE STAPLES TO BE USED MUST BE EQUAL IN LENGTH TO THE SPECIFIED NAIL SIZE AND MUST BE SUBSTITUTED ON A ONE STAPLE FOR ONE NAIL BASIS. STAPLES WHICH ARE 2-1/2" OR LESS IN LENGTH SHOULD BE IN ACCORDANCE WITH FEDERAL SPECIFICATION FF-N-105 AS NEARLY AS PRACTICABLE. STAPLES WHICH ARE LONGER THAN 2-1/2" WILL BE A COMMERCIAL GRADE, OF A QUALITY EQUIVALENT TO THOSE MANUFACTURED BY Senco PRODUCTS INCORPORATED. NOTE: STAPLES WILL NOT BE SUBSTITUTED FOR NAILS IN ANY LOAD RESTRAINING FLOOR DUNNAGE APPLICATION.
- K. WHEN STEEL STRAPPING IS SEALED AT AN END-OVER-END LAP JOINT, A MINIMUM OF ONE SEAL WITH TWO PAIR OF NOTCHES WILL BE USED TO SEAL THE JOINT WHEN A NOTCH-TYPE SEALER IS BEING USED. A MINIMUM OF TWO SEALS, BUTTED TOGETHER WITH TWO PAIR OF CRIMPS PER SEAL WILL BE USED TO SEAL THE JOINT WHEN A CRIMP-TYPE SEALER IS BEING USED. REFER TO THE "STRAP JOINT A" AND "STRAP JOINT B" DETAILS ON PAGE 39 FOR GUIDANCE.
- L. WHEN REFERRING TO THE PALLET UNIT LENGTH OR UNIT WIDTH, THE 40", 35" OR 42" DIMENSION OF THE PALLET BASE CONSTITUTES THE LENGTH AND THE 48", 45-1/2" OR 53" DIMENSION CONSTITUTES THE WIDTH. SEE THE TYPICAL PALLET UNIT DETAILS ON PAGE 3.
- M. ALL FULL TRAILER LOADS SHOWN HEREIN ARE TYPICAL, HOWEVER, THE PROCEDURES ARE ADAPTABLE TO THE SIZE OF THE UNIT TO BE SHIPPED. THE NUMBER OF UNITS ACROSS THE TRAILER WILL BE AS SHOWN FOR A LOAD, ALTHOUGH THE SIZE MAY VARY. THE NUMBER OF UNITS IN THE LENGTH OF THE TRAILER WILL BE DEPENDENT UPON THE LENGTH OR WIDTH, AS APPLICABLE, OF THE UNIT AND THE NUMBER OF TIERS WILL BE BASED UPON THE HEIGHT AND/OR WEIGHT OF THE UNIT BEING LOADED. THE QUANTITIES SHOWN IN THE LESS THAN TRAILER LOAD VIEWS ARE ALSO TYPICAL AND MAY BE ADJUSTED TO SUIT.
- N. BECAUSE OF THE FACT THAT ALL THE LOADS SHOWN HEREIN ARE TYPICAL, IT IS MOST LIKELY THAT THE ACTUAL QUANTITY THAT IS TO BE SHIPPED WILL NOT BE DEPICTED IN ANY OF THE LOADING PROCEDURES HEREIN. A LOAD PLAN SHOULD BE DEVELOPED WHICH WILL BE THE MOST EFFICIENT AS TO THE AMOUNT OF DUNNAGE REQUIRED AND THE EASE OF LOADING, FOR THE QUANTITY THAT IS TO BE SHIPPED, USING THE LOAD PLANNING GUIDANCE CHARTS IN CONJUNCTION WITH THE DEPICTED LOADING PROCEDURES. LOAD PLANNING GUIDANCE CHARTS FOR CONVENTIONAL VAN TRAILERS ARE SHOWN ON PAGES 4 AND 5. IN ORDER TO MAINTAIN SIMILARITY FROM ONE LOAD TO ANOTHER, THOSE INSTALLATIONS WHICH MAKE MULTIPLE SHIPMENTS OF THE SAME ITEM IN THE SAME LENGTH TRAILERS HAVING LIKE FEATURES, SHOULD MAKE AN ACTUAL PENCILLED SKETCH OF THE LOAD, USING THE VARIOUS LOAD PATTERNS AND UNLOADING PROCEDURES SHOWN HEREIN AS GUIDANCE. THIS SKETCH WOULD DEPICT A COMBINATION WHICH WOULD BE MOST ADVANTAGEOUS AS FAR AS EASE OF LOADING AND EFFICIENT USE OF DUNNAGE IS CONCERNED FOR THE SPECIFIC ITEM THAT IS TO BE SHIPPED.
- O. THE "LOAD AS SHOWN" FOR MOST OF THE FULL LOADS DEPICTED HEREIN IS BASED ON AN APPROXIMATE LADING WEIGHT OF 42,000 POUNDS. THE SPECIFIED BLOCKING AND BRACING FOR THE FULL LOADS IS ADEQUATE FOR THE RETENTION OF HEAVIER LOADS, IF IT IS DESIRED TO INCREASE THE LADING WEIGHT.
- P. ALL LOADS ARE SHOWN IN TRAILERS HAVING ROUNDED CORNERS AT THE FORWARD END. IF THE TRAILER BEING USED IS EQUIPPED WITH A SQUARE FRONT OR WITH AN INSTALLED BULKHEAD, OMIT THE FORWARD BLOCKING ASSEMBLY, PIECE MARKED (1), AND POSITION THE PALLET UNITS DIRECTLY AGAINST THE FORWARD PORTION OF THE TRAILER.
- Q. TRAILERS EQUIPPED WITH ROLL-UP TYPE DOORS MAY BE USED; HOWEVER, THE NAILED-HEADER METHOD OF REAR BLOCKING MUST BE INSTALLED. SEE THE "PROCEDURES FOR CONVENTIONAL VAN TRAILERS EQUIPPED WITH ROLL-UP TYPE DOORS" ON PAGE 49 FOR GUIDANCE. NOTE THAT THE NAILED-HEADER METHOD OF REAR BLOCKING MAY ALSO BE USED IN TRAILERS EQUIPPED WITH HINGED DOORS. ALSO NOTE THAT NAILED SIDE BLOCKING, AS SHOWN IN THE LOAD ON PAGE 26, MAY BE USED IN LIEU OF THE DEPICTED ANTI-SWAY BRACES IN THE VARIOUS LOADS THROUGHOUT THIS DRAWING, PROVIDED THE TRAILER IS EQUIPPED WITH A NAILABLE FLOOR.

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MATERIAL SPECIFICATIONS

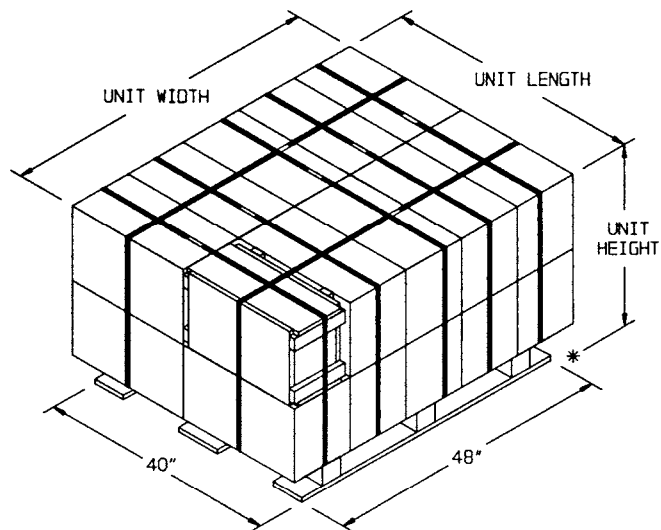
- LUMBER - - - - - : SEE TM 743-200-1 (DUNNAGE LUMBER) AND FED SPEC MM-L-751.
- NAILS - - - - - : FED SPEC FF-N-105; COMMON.
- STRAPPING, STEEL - - : ASTM D3953; FLAT STRAPPING, TYPE 1, HEAVY DUTY, FINISH A, B (GRADE 2), OR C.
- SEAL, STRAP - - - - : ASTM D3953; CLASS H, FINISH A, B (GRADE 2), OR C, DOUBLE NOTCH TYPE, STYLE 1, II, OR IV.

(CONTINUED ON PAGE 4)



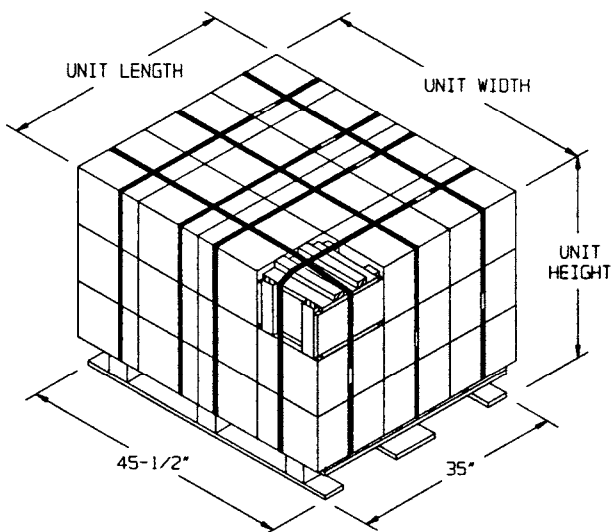
TYPICAL PALLET UNIT (40" X 48" PALLET)

THE UNIT SHOWN IS 44" LONG BY 48" WIDE BY 41-1/2" HIGH.



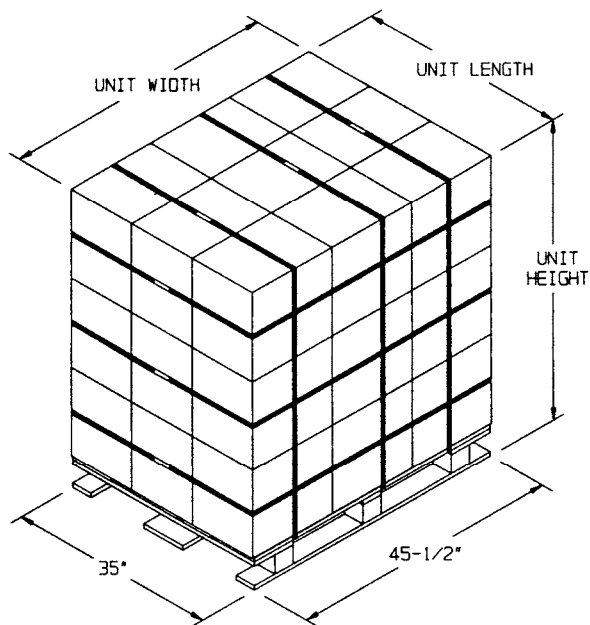
TYPICAL PALLET UNIT (40" X 48" PALLET)

THE UNIT SHOWN IS 43" LONG BY 53-3/4" WIDE BY 30-1/2" HIGH.



TYPICAL PALLET UNIT (35" X 45-1/2" PALLET)

THE UNIT SHOWN IS 38-1/4" LONG BY 46" WIDE BY 34" HIGH.



TYPICAL PALLET UNIT (35" X 45-1/2" PALLET)

THE UNIT SHOWN IS 35" LONG BY 46" WIDE BY 50-1/2" HIGH.

(GENERAL NOTES CONTINUED)

- R. 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 PALLET UNITS.
- S. OTHER TYPES OF LADING ITEMS MAY BE LOADED IN TRAILERS WHICH ARE PARTIALLY LOADED WITH PALLET UNITS OF AMMUNITION 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.
- T. CONVERSION TO METRIC EQUIVALENTS: DIMENSIONS WITHIN THIS DOCUMENT ARE EXPRESSED IN INCHES, AND WEIGHTS ARE EXPRESSED IN POUNDS. WHEN NECESSARY, THE METRIC EQUIVALENTS MAY BE COMPUTED ON THE BASIS OF ONE INCH EQUALS 25.4MM AND ONE POUND EQUALS 0.454KG.
- U. FOR ADDITIONAL GUIDANCE, ATTENTION IS DIRECTED TO THE "SPECIAL NOTES" SECTIONS WHICH ARE IMMEDIATELY ADJACENT TO THE DEPICTED OUTLOADING METHODS, AND TO THE LOAD PLANNING GUIDANCE "SPECIAL NOTES" AND THE ACCOMPANYING CHARTS ON PAGE 5 AND AT RIGHT.

CHART NO. 4				
MAX. NO. OF UNITS PER TRAILER BY WEIGHT				
UNIT WEIGHT IN LBS	NO. OF UNITS			
	40,000 LBS	41,000 LBS	42,000 LBS	43,000 LBS
250	160	164	168	172
300	133	136	140	143
400	100	102	105	107
500	80	82	84	86
600	66	68	70	71
700	57	58	60	61
800	50	51	52	53
900	44	45	46	47
1,000	40	41	42	43
1,100	36	37	38	39
1,200	33	34	35	35
1,300	30	31	32	33
1,400	28	29	30	30
1,500	26	27	28	28
1,600	25	25	26	26
1,700	23	24	24	25
1,800	22	22	23	23
1,900	21	21	22	22
2,000	20	20	21	21
2,100	19	19	20	20
2,200	18	18	19	19
2,300	17	17	18	18
2,400	16	17	17	17
2,500	16	16	16	17
2,600	15	15	16	16
2,700	14	15	15	15
2,800	14	14	15	15
2,900	13	14	14	14
3,000	13	13	14	14
3,100	12	13	13	13
3,200	12	12	13	13
3,300	12	12	12	13
3,400	11	12	12	12
3,500	11	11	12	12
3,600	11	11	11	11
3,700	10	11	11	11
3,800	10	10	11	11
3,900	10	10	10	11
4,000	10	10	10	10

REVISIONS

REVISION NO. 1, DATED OCTOBER 1989, CONSISTS OF:

- 1. UPDATING GENERAL NOTES AND MATERIAL SPECIFICATIONS.
- 2. ADDING TO DIMENSIONAL REFERENCE CHARTS.
- 3. ADDING SPECIAL NOTES TO PAGES 13 AND 53.
- 4. ADDING PROCEDURES FOR COMBINATION 1 AND 2-WIDE LOADS, AND FOR 1-WIDE LOADS WITH APPLICABLE DETAILS.
- 5. DELETING BACK-UP CLEATS AND REFERENCE NOTES TO THEM FROM LTL LOAD ON PAGE 18. ADD REFERENCE NOTES FOR NAILED HEADER METHOD.
- 6. ADD PROCEDURES TO INCLUDE WIDER TRAILERS AND TRAILERS EQUIPPED WITH ROLL-UP TYPE DOORS.
- 7. ADDING THE TYGARD METHOD OF REAR BLOCKING.

REVISION NO. 2, DATED APRIL 1993, CONSISTS OF:

- 1. UPDATING GENERAL NOTES AND MATERIAL SPECIFICATIONS.
- 2. REMOVING THE TYGARD METHOD OF REAR BLOCKING.
- 3. REMOVING TOP OF LOAD ANTI-SWAY BRACES.
- 4. REMOVING TRAILERS EQUIPPED WITH MECHANICAL BRACING DEVICES.
- 5. ADDING NAILED BLOCKING PROCEDURES.

SPECIAL NOTES:

(SPECIAL NOTES CONTINUED)

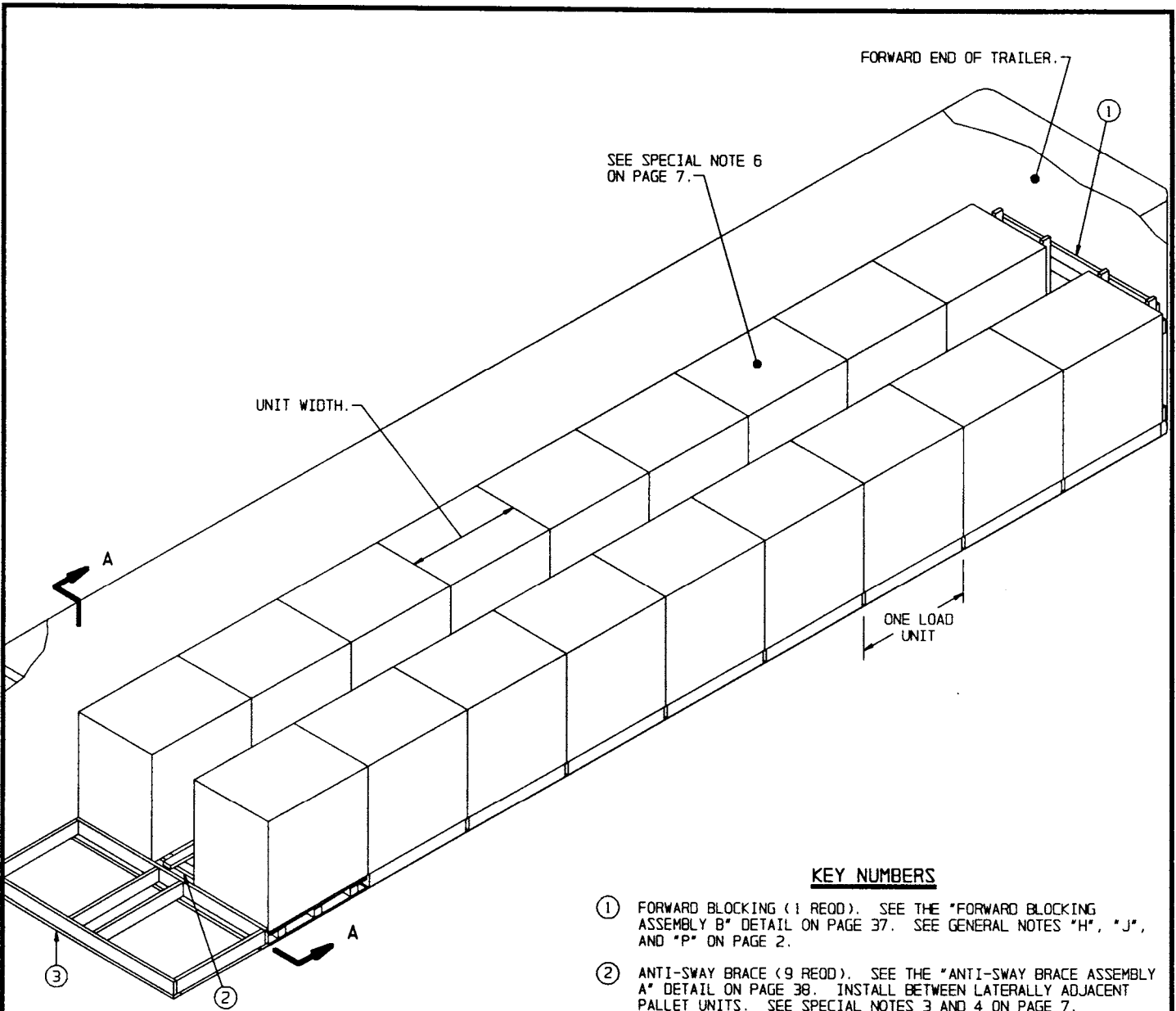
- THE FOLLOWING SPECIAL NOTES AND THE FOUR CHARTS ARE PRESENTED AS GUIDANCE IN THE SELECTION OF A LOAD PATTERN, AND IN DETERMINING THE QUANTITY OF UNITS WHICH CAN BE LOADED IN A CONVENTIONAL VAN TRAILER, BASED ON THE SIZE AND WEIGHT OF THE PALLET UNIT TO BE LOADED.
- CHART NO. 1 MAY BE USED IN SELECTING A LOAD PATTERN FOR THE WIDTH OF THE TRAILER WHICH IS TO BE LOADED. THE LOAD PATTERN WILL BE BASED EITHER ON THE UNIT LENGTH ACROSS THE TRAILER OR ON THE UNIT WIDTH ACROSS THE TRAILER DEPENDENT UPON THE LENGTH OR WIDTH OF THE UNIT TO BE LOADED. UNIT SIZE RANGES AND LOAD PATTERNS FOR NINE OF THE MOST POPULAR TRAILER WIDTHS ARE GIVEN. TRAILERS OF OTHER WIDTHS MAY BE USED, AND THE SIZE RANGE OF UNITS WHICH CAN BE LOADED IN THE TWO PATTERNS CAN BE CALCULATED. THE SMALLER FIGURE SHOWN FOR UNIT SIZE RANGE IS BASED ON THE MINIMUM UNIT LENGTH OR WIDTH, AS APPLICABLE, AND THE LARGER FIGURE IS CALCULATED ON THERE BEING AT LEAST 1" EXCESS LATERAL SPACE REMAINING IN THE TRAILER AFTER THE UNITS ARE POSITIONED.
- CHART NO. 2 MAY BE USED IN DETERMINING THE QUANTITY OF UNITS WHICH CAN BE POSITIONED WITHIN ONE ROW IN THE LENGTH OF A TRAILER. SEPARATE COLUMNS ARE SHOWN FOR SIX OF THE MOST POPULAR TRAILER LENGTHS. TRAILERS OF OTHER LENGTHS MAY BE USED, BUT THE UNIT SIZE RANGE FOR THE NUMBER OF UNITS LONG WILL HAVE TO BE CALCULATED. THE UNIT SIZE RANGE FOR EACH OF THE SPECIFIED TRAILER LENGTHS IS BASED ON THE INSIDE LENGTH OF A TRAILER BEING 6" SHORTER THAN THE OUTSIDE LENGTH, AND IS ALSO BASED ON THE USE OF A FORWARD BLOCKING ASSEMBLY AT THE FRONT END OF THE LOAD. AT LEAST 2" IS ALLOWED TO COVER THE VARIANCE IN THE UNIT SIZES.
- CHART NO. 3 MAY BE USED IN DETERMINING THE NUMBER OF TIERS WHICH CAN BE LOADED IN A TRAILER, BASED ONLY UPON THE HEIGHT OF THE UNIT. FIVE DIFFERENT INSIDE HEIGHTS ARE GIVEN FOR GUIDANCE. THE HEIGHT RANGE OF UNITS SPECIFIED UNDER EACH HEIGHT TRAILER ALLOWS APPROXIMATELY 1" CLEARANCE AT THE ROOF. NO ALLOWANCE HAS BEEN MADE FOR DOOR OPENING HEIGHT CLEARANCE. FOR LOADS WHICH ARE OF SUCH A HEIGHT AS TO EXTEND TO WITHIN 4" OR 5" OF THE ROOF, IT WILL NOT BE POSSIBLE TO PLACE THE TOP UNITS IN THE REARMOST LOAD UNIT, IF THE DISTANCE BETWEEN THAT LOAD UNIT AND THE REAR DOORS IS NOT AT LEAST AS GREAT AS THE DIMENSION OF THE UNIT WHICH IS POSITIONED LENGTHWISE IN THE TRAILER. THE ACTUAL NUMBER OF TIERS WHICH CAN BE LOADED WILL BE BASED ON THE WEIGHT OF THE UNIT AND THE QUANTITY TO BE SHIPPED.
- CHART NO. 4 MAY BE USED AS GUIDANCE IN DETERMINING THE QUANTITY OF UNITS WHICH CAN BE LOADED IN A TRAILER, BASED ONLY UPON THE WEIGHT OF THE UNIT. THE "UNIT WEIGHT IN LBS" COLUMN SPECIFIES WEIGHTS RANGING FROM 250 POUNDS, THE APPROXIMATE MINIMUM, TO 4,000 POUNDS, THE APPROXIMATE MAXIMUM, BY ONE-HUNDRED-POUND INCREMENTS. COLUMNS ARE SHOWN FOR FOUR DIFFERENT LOAD WEIGHTS. THE QUANTITY REQUIRED TO MAKE A SPECIFIED LOAD WEIGHT FOR A UNIT WHICH WEIGHS SOMEWHERE BETWEEN THE EVEN FIGURES GIVEN WILL HAVE TO BE INTERPOLATED. FOR EXAMPLE, 29 UNITS WEIGHING 1,350 POUNDS EACH CAN BE LOADED IN A TRAILER FOR A 40,000 POUND LOAD. THE ACTUAL QUANTITY WHICH MAY BE LOADED CAN BE ONE OR MORE UNITS ABOVE THE SPECIFIED QUANTITY PROVIDING THE TOTAL WEIGHT OF THE LADING AND THE DUNNAGE DOES NOT EXCEED THE MAXIMUM WEIGHT ALLOWABLE. SEE PAGE 4 FOR CHART NO. 4.

(CONTINUED AT RIGHT)

CHART NO. 1					
UNITS IN WIDTH OF TRAILER					
UNIT SIZE RANGE					
VAN WIDTH	LOAD PATTERN	PALLET UNIT LENGTH ACROSS TRAILER		PALLET UNIT WIDTH ACROSS TRAILER	
		UNIT LENGTH	LOAD PAGE	UNIT WIDTH	LOAD PAGE
90"	2-WIDE	35" TO 44-1/2"	6, 8, 10 & 16		
90-1/2"	2-WIDE	35" TO 44-3/4"	6, 8, 10 & 16		
91"	2-WIDE	35" TO 45"	6, 8, 10 & 16		
91-1/2"	2-WIDE	35" TO 45-1/4"	6, 8, 10 & 16		
92"	2-WIDE	35" TO 45-1/2"	6, 8, 10 & 16	45-1/2"	14
92-1/2"	2-WIDE	35" TO 45-3/4"	6, 8, 10 & 16	45-1/2" TO 45-3/4"	14
93"	2-WIDE	35" TO 46"	6, 8, 10 & 16	45-1/2" TO 46"	14
98"	2-WIDE	35" TO 46"	6, 8, 10 & 16	46 TO 48-1/2"	7*, 9*, 14
99"	2-WIDE	35" TO 46"	6, 8, 10 & 16	48-1/2" TO 49"	7*, 9*, 14

CHART NO. 2						
UNITS IN LENGTH OF TRAILER						
NO UNIT LONG	UNIT SIZE RANGE					
	35' TRAILER	38' TRAILER	40' TRAILER	45' TRAILER	48' TRAILER	53' TRAILER
14			35" THRU 35-5/8"	35" THRU 37-3/8"	35" THRU 40"	35" THRU 44"
13			37-3/8" THRU 40-3/8"	40" THRU 43"	40" THRU 43"	44" THRU 47-3/4"
12		35" THRU 36-3/4"	35-5/8" THRU 38-3/4"	40-3/8" THRU 44"	43" THRU 46-3/4"	47-3/4" THRU 51-3/4"
11	35" THRU 36-3/4"	36-3/4" THRU 40"	38-3/4" THRU 42-1/4"	44" THRU 47-5/8"	46-3/4" THRU 51"	51-3/4" THRU 56-1/2"
10	36-3/4" THRU 40-1/2"	40" THRU 44-1/8"	42-1/4" THRU 46-1/2"	47-5/8" THRU 52-1/2"	51" THRU 56"	56-1/2" THRU 59"
9	40-1/2" THRU 45"	44-1/8" THRU 48-7/8"	46-1/2" THRU 51-5/8"	52-1/2" THRU 58-3/8"	56" THRU 59"	
8	45" THRU 50-5/8"	48-7/8" THRU 55-1/4"	51-5/8" THRU 58-1/4"	58-3/8" THRU 59"		
7	50-5/8" THRU 58"	55-1/4" THRU 59"	58-1/4" THRU 59"			
6	58" THRU 59"					

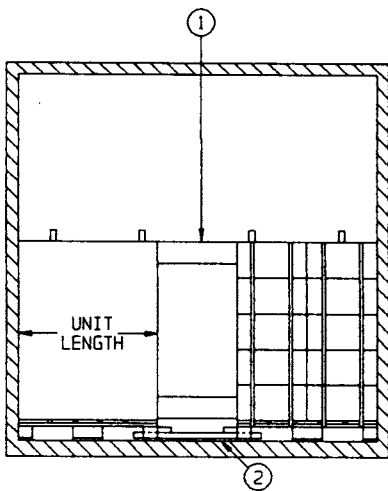
CHART NO. 3					
TIERS IN HEIGHT OF TRAILER					
NO. OF TIERS	UNIT HEIGHT RANGE				
	91" HIGH	94" HIGH	97" HIGH	104" HIGH	107" HIGH
3	22-3/4" THRU 30-1/4"	23-3/8" THRU 31"	24-1/8" THRU 32"	25-7/8" THRU 34-1/4"	26-5/8" THRU 35-1/4"
2	30-1/4" THRU 45"	31" THRU 46-1/2"	32" THRU 48"	34-1/4" THRU 51-1/2"	35-1/4" THRU 53"
1	OVER 45"	OVER 46-1/2"	OVER 48"	OVER 51-1/2"	OVER 53"



KEY NUMBERS

- ① FORWARD BLOCKING (1 REOD). SEE THE "FORWARD BLOCKING ASSEMBLY B" DETAIL ON PAGE 37. SEE GENERAL NOTES "H", "J", AND "P" ON PAGE 2.
- ② ANTI-SWAY BRACE (9 REOD). SEE THE "ANTI-SWAY BRACE ASSEMBLY A" DETAIL ON PAGE 38. INSTALL BETWEEN LATERALLY ADJACENT PALLET UNITS. SEE SPECIAL NOTES 3 AND 4 ON PAGE 7.
- ③ REAR BLOCKING (1 REOD). SEE THE "REAR BLOCKING ASSEMBLY A" DETAIL ON PAGE 40. SEE SPECIAL NOTE 5 ON PAGE 7 AND GENERAL NOTE "O" ON PAGE 2.

ISOMETRIC VIEW



SECTION A-A

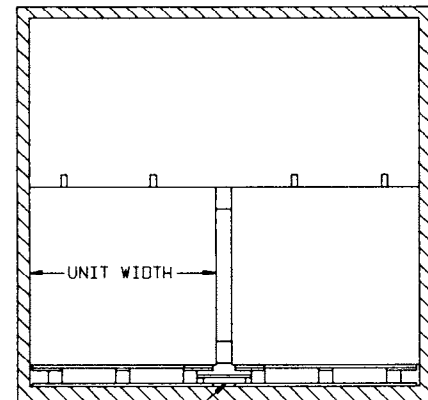
SPECIAL NOTES:

(SPECIAL NOTES CONTINUED)

1. A 40'-0" LONG BY 7'-6" WIDE (INSIDE DIMENSION) CONVENTIONAL VAN TRAILER IS SHOWN. TRAILERS OF OTHER DIMENSIONS CAN BE USED.
2. THE PALLET UNIT SHOWN IN THE TYPICAL 2-WIDE LOAD ON PAGE 6 HAS OVERALL DIMENSIONS OF 35" LONG BY 47" WIDE BY 50-1/2" HIGH. THE DEPICTED PROCEDURES ARE ALSO APPLICABLE FOR UNITS OF OTHER SIZES. REFER TO CHART NOS. 1 THRU 4 ON PAGES 4 AND 5 FOR GUIDANCE IN DETERMINING THE MAXIMUM SIZE AND WEIGHT OF UNITS WHICH CAN BE LOADED IN TRAILERS OF OTHER DIMENSIONS. A 1-TIER LOAD IS SHOWN AS TYPICAL. FOR PROCEDURES APPLICABLE FOR LOADS OF TWO TIERS, REFER TO PAGES 8 AND 9. REFER TO "CHART NO. 3" ON PAGE 5 FOR GUIDANCE AS TO THE MAXIMUM NUMBER OF TIERS WHICH CAN BE LOADED IN VARIOUS HEIGHT VAN TRAILERS BASED ON THE HEIGHT OF THE PALLET UNIT. THE WEIGHT OF THE DEPICTED UNIT IS 1,895 POUNDS. THE NUMBER OF UNITS MAY NEED TO BE ADJUSTED IF THE UNIT BEING LOADED HAS A DIFFERENT WEIGHT. REFER TO "CHART NO. 4" ON PAGE 4 FOR GUIDANCE AS TO THE MAXIMUM NUMBER OF UNITS WHICH CAN BE LOADED, BASED ON THE WEIGHT OF THE UNIT TO BE SHIPPED. SEE SPECIAL NOTE 6.
3. ANTI-SWAY BRACES ARE REQUIRED WHEN THE SPACE BETWEEN LATERALLY ADJACENT UNITS EXCEEDS 3", AS MEASURED FROM BOX TO BOX.
4. IF THERE IS NOT ENOUGH ROOM FOR THE INSTALLATION OF ANTI-SWAY BRACE "A". ANTI-SWAY BRACE "B" DETAILED ON PAGE 38, MAY BE POSITIONED ON THE FLOOR BETWEEN LATERALLY ADJACENT UNITS.
5. IF THE SPACE AT THE REAR OF THE LOAD BETWEEN THE PALLET UNITS AND THE REAR DOOR IS GREATER THAN 1-1/2" OR LESS THAN 9", USE REAR BLOCKING ASSEMBLY "B" AS DETAILED ON PAGE 40. IF THE SPACE AT THE REAR OF THE LOAD IS 9" OR GREATER, USE THE REAR BLOCKING ASSEMBLY "A" AS SHOWN. IF THE SPACE AT THE REAR OF THE LOAD IS 1-1/2" OR LESS, REAR BLOCKING IS NOT REQUIRED.
6. IF THE QUANTITY OF UNITS IS LESS THAN WHAT IS SHOWN DUE TO UNIT SIZE OR WEIGHT, OR IF THE TRAILER TO BE LOADED IS LONGER THAN 40', THE SPACER ASSEMBLY "A" AND/OR SPACER ASSEMBLY "B" DETAILED ON PAGE 43 CAN BE USED FOR THE PURPOSE OF PROVIDING FOR PROPER WEIGHT DISTRIBUTION, OR MAY BE USED IN LIEU OF ONE AND/OR TWO OMITTED UNITS. REFER TO THE LOAD VIEW AND SPECIAL NOTES ON PAGES 18 AND 19 FOR INSTALLATION GUIDANCE.

7. LEFTOVER BOXES IN AN AMOUNT NOT TO EXCEED ONE LAYER MAY BE SECURED TO THE TOP OF A FULL PALLET UNIT FOR SHIPMENT. REFER TO THE "PROCEDURES FOR SHIPMENT OF LEFTOVER BOXES" ON PAGE 45 FOR GUIDANCE.
8. REFER TO PAGES 46, 47, AND 48 FOR GUIDANCE IN SHIPMENT OF PARTIAL PALLET UNITS.
9. PALLET UNITS POSITIONED WITH THE WIDTH OF THE UNIT ACROSS THE WIDTH OF THE TRAILER, AS SHOWN IN THE "TYPICAL REAR VIEW OF AN 8'-2" WIDE VAN" VIEW BELOW, WILL REQUIRE ANTI-SWAY BRACING WHEN THE SPACE BETWEEN LATERALLY ADJACENT UNITS EXCEEDS 3". AS MEASURED FROM BOX TO BOX. SEE THE "ANTI-SWAY BRACE ASSEMBLY C" DETAIL ON PAGE 39.

(CONTINUED AT RIGHT)



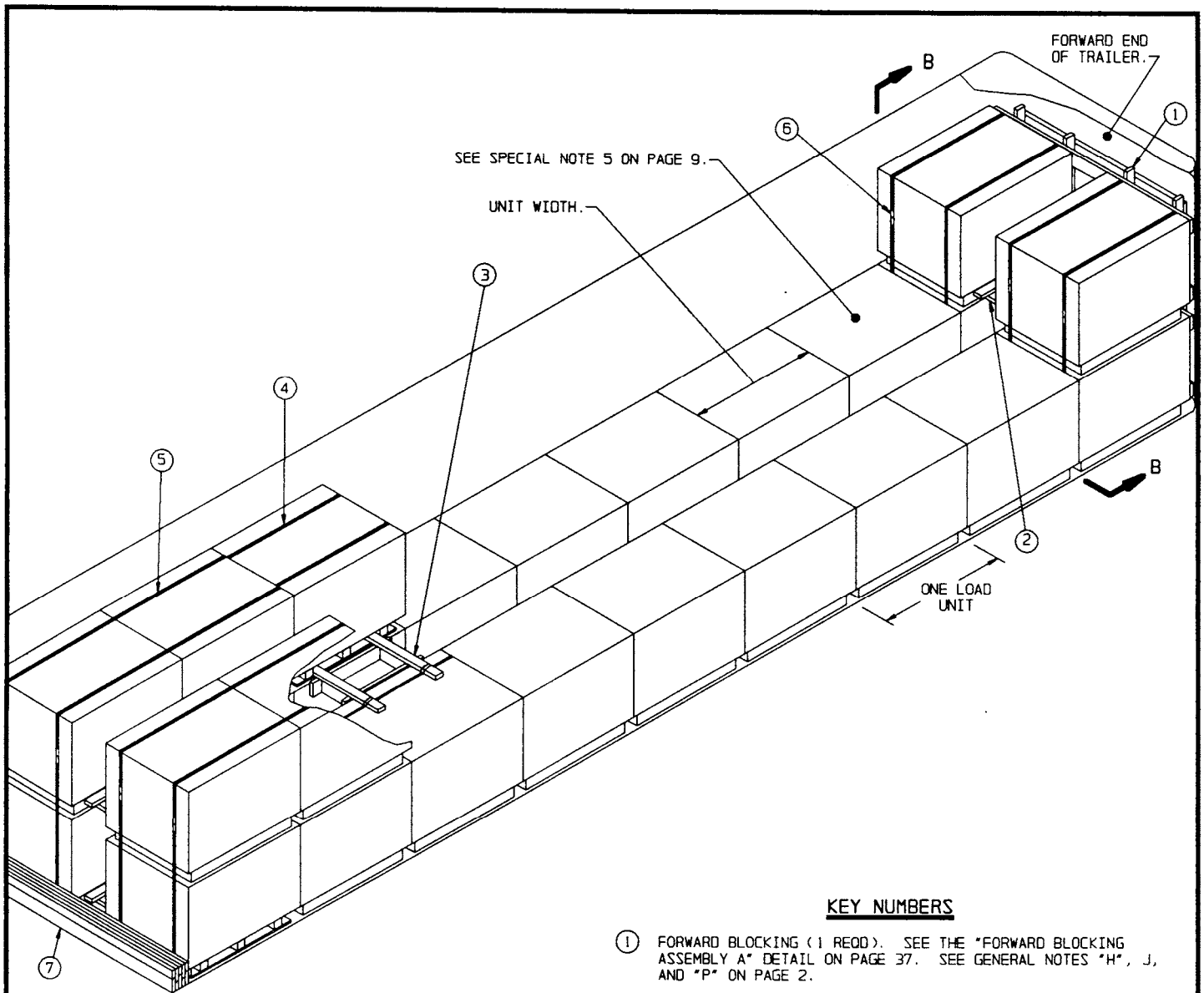
ANTI-SWAY BRACE "C".
SEE SPECIAL NOTE 9 ABOVE.

TYPICAL REAR VIEW OF AN 8'-2" WIDE VAN

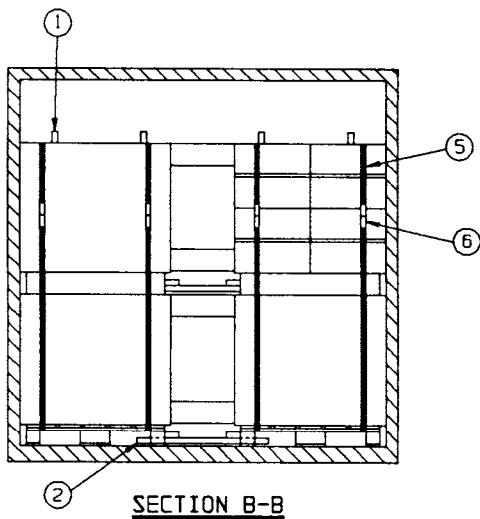
BILL OF MATERIAL (TYPICAL)		
LUMBER	LINEAR FEET	BOARD FEET
2" X 4"	135	90
2" X 6"	57	57
NAILS	NO. REQD	POUNDS
10d (3")	178	2-3/4'

LOAD AS SHOWN (TYPICAL)

ITEM	QUANTITY	WEIGHT (APPROX)
PALLET UNIT	18	34,110 LBS
DUNNAGE		297 LBS
<u>TOTAL WEIGHT</u>		<u>34,407 LBS (APPROX)</u>



ISOMETRIC VIEW



SECTION B-B

KEY NUMBERS

- ① FORWARD BLOCKING (1 REOD). SEE THE "FORWARD BLOCKING ASSEMBLY A" DETAIL ON PAGE 37. SEE GENERAL NOTES "H", "J", AND "P" ON PAGE 2.
- ② ANTI-SWAY BRACE (12 REOD). SEE THE "ANTI-SWAY BRACE A" DETAIL ON PAGE 38. INSTALL BETWEEN LATERALLY ADJACENT PALLET UNITS. SEE SPECIAL NOTE 3 ON PAGE 9.
- ③ TOP-OF-LOAD ANTI-SWAY BRACE (1 REOD). SEE THE "TOP-OF-LOAD ANTI-SWAY BRACE" DETAIL ON PAGE 44. POSITION WITH ONE END OF THE SUPPORT PIECES AGAINST THE PALLET POSTS AND WIRE TIE THE OTHER ENDS OF THE SUPPORT PIECES TO THE PALLET UNIT LOAD STRAPS. SEE THE "TIE WIRE APPLICATION" DETAIL ON PAGE 44. SEE SPECIAL NOTE 4 ON PAGE 9.
- ④ STACK UNITIZING STRAP, 1-1/4" X .035" OR .031" X 23'-6" LONG STEEL STRAPPING (6 REOD). INSTALL SO AS TO ENCIRCLE TWO PALLET UNITS AS SHOWN. SEE SPECIAL NOTE 5 ON PAGE 9.
- ⑤ BUNDLING STRAP, 1-1/4" X .035" OR .031" X 31'-6" LONG STEEL STRAPPING (4 REOD). INSTALL SO AS TO ENCIRCLE TWO PALLET UNITS IN THE SECOND LAYER AND TWO UNITS DIRECTLY BELOW AS SHOWN. SEE SPECIAL NOTE 6 ON PAGE 9.
- ⑥ SEAL FOR 1-1/4" STRAPPING (20 REOD, 2 PER STRAP). DOUBLE CRIMP EACH SEAL. SEE GENERAL NOTE "K" ON PAGE 2.
- ⑦ REAR BLOCKING (1 REOD). SEE THE "REAR BLOCKING ASSEMBLY A" DETAIL ON PAGE 40. SEE SPECIAL NOTE 7 ON PAGE 9.

SPECIAL NOTES:

(SPECIAL NOTES CONTINUED)

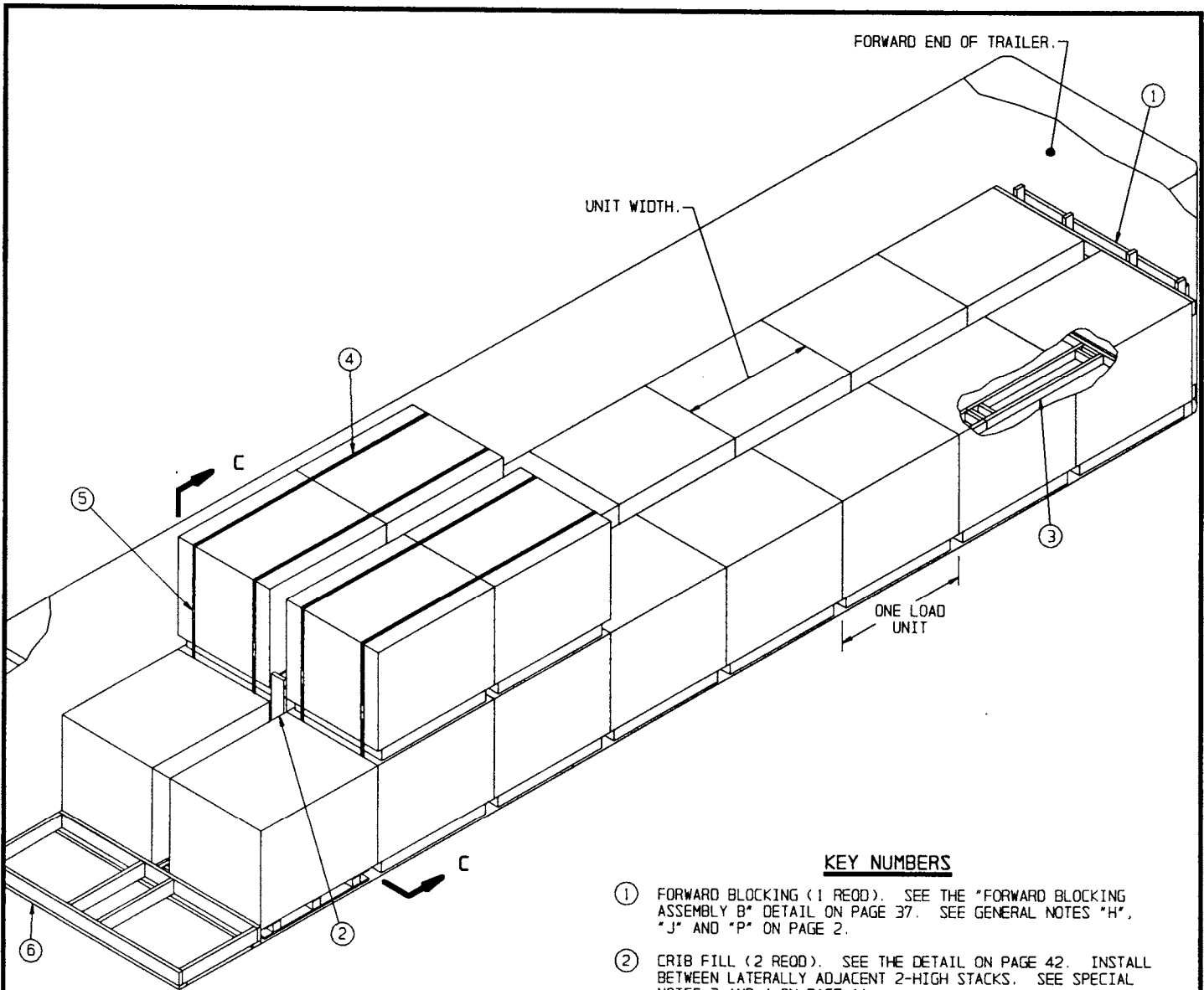
1. A 40'-0" LONG BY 7'-8" WIDE (INSIDE DIMENSION) CONVENTIONAL VAN TRAILER IS SHOWN. TRAILERS OF OTHER DIMENSIONS CAN BE USED.
2. THE PALLET UNIT SHOWN IN THE TYPICAL 2-WIDE LOAD ON PAGE 8 HAS OVERALL DIMENSIONS OF 38" LONG BY 51" WIDE BY 38-1/2" HIGH. THE DEPICTED PROCEDURES ARE ALSO APPLICABLE FOR UNITS OF OTHER SIZES. REFER TO CHART NOS. 1 THRU 4 ON PAGES 4 AND 5 FOR GUIDANCE IN DETERMINING THE MAXIMUM SIZE AND WEIGHT OF UNITS WHICH CAN BE LOADED IN TRAILERS OF OTHER DIMENSIONS. A 2-TIER LOAD IS SHOWN AS TYPICAL. REFER TO "CHART NO. 3 ON PAGE 5 FOR GUIDANCE AS TO THE MAXIMUM NUMBER OF TIERS WHICH CAN BE LOADED IN VARIOUS HEIGHT VAN TRAILERS BASED ON THE HEIGHT OF THE PALLET UNIT. THE WEIGHT OF THE DEPICTED UNIT IS 1,556 POUNDS. THE NUMBER OF UNITS MAY NEED TO BE ADJUSTED IF THE UNIT BEING LOADED HAS A DIFFERENT WEIGHT. REFER TO "CHART NO. 4" ON PAGE 4 FOR GUIDANCE AS TO THE MAXIMUM NUMBER OF UNITS WHICH CAN BE LOADED, BASED ON THE WEIGHT OF THE UNIT.
3. ANTI-SWAY BRACING WILL BE REQUIRED IF THE SPACE BETWEEN LATERALLY ADJACENT UNITS IS MORE THAN 3", AS MEASURED FROM BOX TO BOX. IF THERE IS NOT ENOUGH ROOM FOR THE INSTALLATION OF ANTI-SWAY BRACE "A", ANTI-SWAY BRACE "B" AND CRIB FILL, SHOWN AS PIECES MARKED ② AND ③ IN THE LOAD ON PAGE 10, CAN ALSO BE USED FOR THE DEPICTED LOAD.
4. THE TOP-OF-LOAD ANTI-SWAY BRACE, SHOWN IN THE LOAD AS PIECE MARKED ③, IS ONLY REQUIRED FOR THE BRACING OF AN ODD UNIT IN THE SECOND LAYER. IF ANOTHER PALLET UNIT IS POSITIONED OPPOSITE THE ODD UNIT, ANTI-SWAY BRACE "A" WILL BE INSTALLED IN LIEU OF PIECE MARKED ③.
5. IF THE CENTER PORTION OF THE LENGTH OF THE TOP TIER IS NOT COMPLETE, STACK UNITIZING STRAPS, SHOWN AS PIECE MARKED ④, WILL BE APPLIED AROUND THE REARMOST COMPLETE STACK AND AROUND THE MOST FORWARD COMPLETE STACK IN EACH ROW WHERE THE NUMBER OF TIERS (LAYERS IN THE LOAD) CHANGES BY ONE.
6. IF A STACK AT THE REAR OF THE LOAD IS MORE THAN ONE UNIT HIGH, AS IN THE DEPICTED LOAD, BUNDLING STRAPS, SHOWN AS PIECE MARKED ⑤, MUST BE INSTALLED SO AS TO ENCIRCLE THE REARMOST TWO STACKS IN EACH APPLICABLE ROW.
7. IF THE SPACE AT THE REAR OF THE LOAD BETWEEN THE PALLET UNITS AND THE REAR DOOR IS GREATER THAN 1-1/2" OR LESS THAN 9", USE REAR BLOCKING ASSEMBLY "B" AS SHOWN. IF THE SPACE AT THE REAR OF THE LOAD IS 9" OR GREATER, USE REAR BLOCKING ASSEMBLY "A" AS DETAILED ON PAGE 40. IF THE SPACE AT THE REAR OF THE LOAD IS 1-1/2" OR LESS, REAR BLOCKING IS NOT REQUIRED.
8. THE DEPICTED LOAD CAN BE ADJUSTED TO SUIT THE QUANTITY TO BE SHIPPED, OR TO SUIT THE SIZE AND/OR WEIGHT OF THE UNIT BEING LOADED. A 2-TIER LOAD CAN BE REDUCED BY A MULTIPLE OF FOUR UNITS BY OMITTING ONE OR MORE FULL LOAD UNITS FROM THE LOAD; OR, THE ENTIRE TOP TIER CAN BE LEFT OFF; OR, ONE OR MORE UNITS CAN BE ADDED TO OR OMITTED FROM THE TOP TIER.
9. LEFTOVER BOXES IN AN AMOUNT NOT TO EXCEED ONE LAYER MAY BE SECURED TO THE TOP OF A FULL PALLET UNIT FOR SHIPMENT. REFER TO THE "PROCEDURES FOR SHIPMENT OF LEFTOVER BOXES" ON PAGE 45 FOR GUIDANCE.
10. REFER TO PAGES 46, 47, AND 48 FOR GUIDANCE IN THE SHIPMENT OF PARTIAL PALLET UNITS.

(CONTINUED AT RIGHT)

BILL OF MATERIAL (TYPICAL)		
LUMBER	LINEAR FEET	BOARD FEET
2" X 4"	229	153
2" X 6"	103	103
NAILS	NO. REQD	POUNDS
10d (3")	222	3-1/2
STEEL STRAPPING, 1-1/4" X .035 - - 122' REQD - 18 LBS		
SEAL FOR 1-1/4" STRAPPING - - - - - 8 REQD - NIL		

LOAD AS SHOWN (TYPICAL)

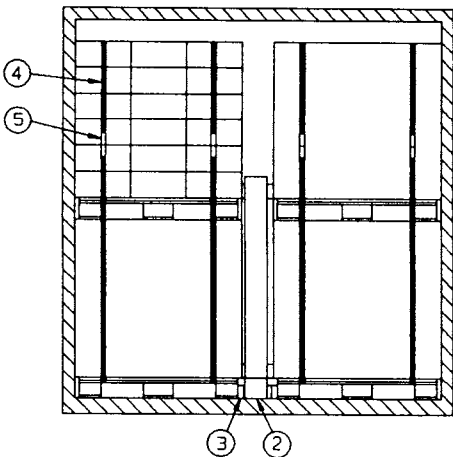
ITEM	QUANTITY	WEIGHT (APPROX)
PALLET UNIT	25	38,900 LBS
DUNNAGE		534 LBS
TOTAL WEIGHT		39,434 LBS (APPROX)



ISOMETRIC VIEW

KEY NUMBERS

- ① FORWARD BLOCKING (1 REOD). SEE THE "FORWARD BLOCKING ASSEMBLY B" DETAIL ON PAGE 37. SEE GENERAL NOTES "H", "J" AND "P" ON PAGE 2.
- ② CRIB FILL (2 REOD). SEE THE DETAIL ON PAGE 42. INSTALL BETWEEN LATERALLY ADJACENT 2-HIGH STACKS. SEE SPECIAL NOTES 3 AND 4 ON PAGE 11.
- ③ ANTI-SWAY BRACE (6 REOD). SEE THE ANTI-SWAY BRACE "B" DETAIL ON PAGE 38. POSITION ON THE FLOOR BETWEEN LATERALLY ADJACENT 1-HIGH PALLET UNITS.
- ④ BUNDLING STRAP, 1-1/4" X .035" X 29'-0" LONG STEEL STRAPPING (4 REOD). PRE-POSITION AND INSTALL SO AS TO ENCIRCLE TWO PALLET UNIT STACKS AS SHOWN. SEE SPECIAL NOTES 6 AND 7 ON PAGE 11.
- ⑤ SEAL FOR 1-1/4" STRAPPING (8 REOD, 2 PER STRAP). DOUBLE CRIMP EACH SEAL. SEE GENERAL NOTE "K" ON PAGE 2.
- ⑥ REAR BLOCKING (1 REOD). SEE THE "REAR BLOCKING ASSEMBLY A" DETAIL ON PAGE 40. SEE SPECIAL NOTE 5 ON PAGE 11, AND GENERAL NOTE "O" ON PAGE 2.



SECTION VIEW

SPECIAL NOTES:

(SPECIAL NOTES CONTINUED)

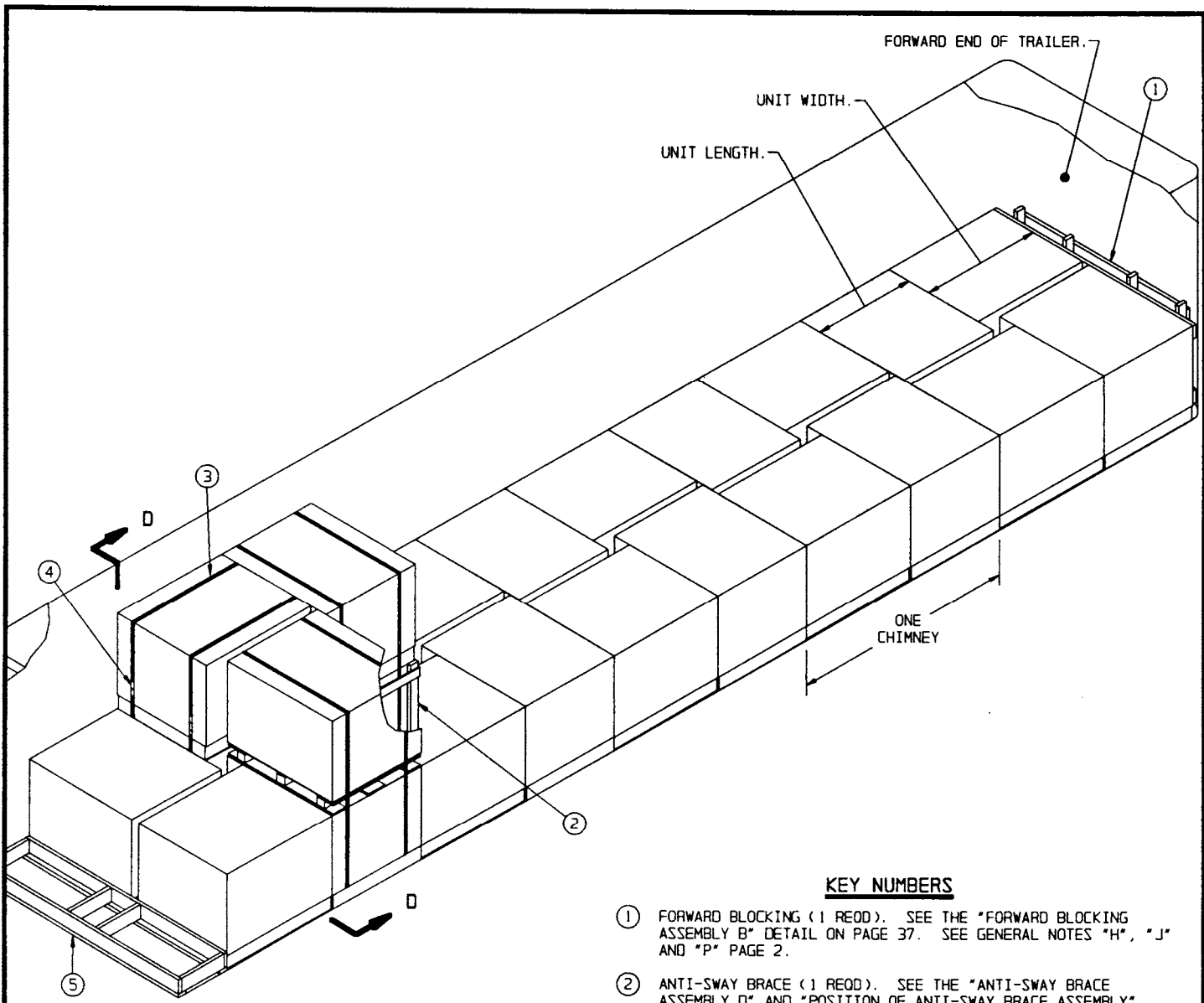
1. A 40'-0" LONG BY 7'-8" WIDE (INSIDE DIMENSION) CONVENTIONAL VAN TRAILER IS SHOWN. TRAILERS OF OTHER DIMENSIONS CAN BE USED.
2. THE PALLET UNIT SHOWN IN THE TYPICAL 2-WIDE LOAD ON PAGE 10 HAS OVERALL DIMENSIONS OF 42" LONG BY 53-3/4" WIDE BY 45-1/4" HIGH. THE DEPICTED PROCEDURES ARE ALSO APPLICABLE FOR UNITS OF OTHER SIZES. A 2-TIER LOAD IS SHOWN AS TYPICAL. REFER TO CHART NOS. 1 THRU 4 ON PAGES 4 AND 5 FOR GUIDANCE IN DETERMINING THE MAXIMUM SIZE AND WEIGHT OF UNITS WHICH CAN BE LOADED IN TRAILERS OF OTHER DIMENSIONS. THE WEIGHT OF THE DEPICTED UNIT IS 2,008 POUNDS. THE NUMBER OF UNITS MAY NEED TO BE ADJUSTED IF THE UNIT BEING LOADED HAS A DIFFERENT WEIGHT. REFER TO "CHART NO. 4" ON PAGE 4 FOR GUIDANCE AS TO THE MAXIMUM NUMBER OF UNITS WHICH CAN BE LOADED, BASED ON THE WEIGHT OF THE UNIT.
3. IF THE SPACE BETWEEN LATERALLY ADJACENT PALLET UNITS PERMIT, AND IF DESIRED, ANTI-SWAY BRACE "A", DETAILED ON PAGE 36, MAY BE USED IN LIEU OF CRIB FILL, PIECE MARKED ②, AND ANTI-SWAY BRACE "B", PIECE MARKED ③.
4. THE ANTI-SWAY BRACES AND CRIB FILL MAY BE OMITTED IF THE SPACE BETWEEN LATERALLY ADJACENT UNITS IS 3" OR LESS, AS MEASURED FROM BOX TO BOX.
5. IF THE SPACE AT THE REAR OF THE LOAD BETWEEN THE PALLET UNITS AND THE REAR DOOR IS GREATER THAN 1-1/2" OR LESS THAN 9", USE REAR BLOCKING ASSEMBLY "B" AS SHOWN. IF THE SPACE AT THE REAR OF THE LOAD IS 9" OR GREATER, USE REAR BLOCKING ASSEMBLY "A" AS DETAILED ON PAGE 40. IF THE SPACE AT THE REAR OF THE LOAD IS 1-1/2" OR LESS, REAR BLOCKING IS NOT REQUIRED.
6. IF THE CENTER PORTION OF THE LENGTH OF THE TOP TIER IS NOT COMPLETE, SIMILAR TO THE LOAD SHOWN ON PAGE 16, STACK UNITIZING STRAPS, SHOWN AS PIECE MARKED ④ ON THAT PAGE, WILL BE APPLIED AROUND THE REAR MOST COMPLETE STACK AND AROUND THE MOST FORWARD COMPLETE STACK IN EACH ROW WHERE THE NUMBER OF TIERS (LAYERS IN THE LOAD) CHANGE.
7. IF A STACK IN THE LOAD UNIT AT THE REAR OF THE TRAILER IS MORE THAN ONE UNIT HIGH, THE BUNDLING STRAPS, PIECES MARKED ④, ON THAT PAGE, WILL BE APPLIED AROUND THE REAR MOST COMPLETE STACK AND AROUND THE MOST FORWARD COMPLETE STACK IN EACH ROW WHERE THE NUMBER OF TIERS (LAYERS IN THE LOAD) CHANGE.
8. AT ANY LOCATION WHERE A LOAD UNIT CONSISTS OF THREE UNITS, THE STACK CONTAINING THE ODD UNIT MUST BE SECURED TO THE STACK IMMEDIATELY FORWARD (OR REARWARD) WITH A BUNDLING STRAP, TO PROVIDE LATERAL STABILITY FOR THE ODD UNIT. NOTE THAT LOADS SHOULD BE PLANNED SO THAT THERE WILL NOT BE A LONE UNIT IN A TOP TIER.
9. THE DEPICTED LOAD CAN BE ADJUSTED TO SUIT THE QUANTITY TO BE SHIPPED, OR TO SUIT THE SIZE AND/OR WEIGHT OF THE UNIT BEING LOADED. A 2-TIER LOAD CAN BE REDUCED BY A MULTIPLE OF FOUR UNITS BY OMITTING ONE OR MORE FULL LOAD UNITS FROM THE LOAD; OR, THE ENTIRE TOP TIER CAN BE LEFT OFF; OR, ONE OR MORE UNITS CAN BE ADDED TO OR OMITTED FROM THE TOP TIER. SEE SPECIAL NOTE 8 AT LEFT.
10. LEFTOVER BOXES IN AN AMOUNT NOT TO EXCEED ONE LAYER MAY BE SECURED TO THE TOP OF A FULL PALLET UNIT FOR SHIPMENT. REFER TO THE "PROCEDURES FOR SHIPMENT OF LEFTOVER BOXES" ON PAGE 45 FOR GUIDANCE.
11. REFER TO PAGES 46, 47, AND 48 FOR GUIDANCE IN THE SHIPMENT OF PARTIAL PALLET UNITS.

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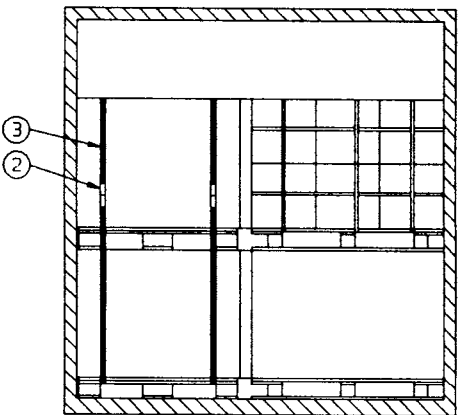
BILL OF MATERIAL (TYPICAL)		
LUMBER	LINEAR FEET	BOARD FEET
1" X 4"	36	12
2" X 4"	102	68
2" X 6"	74	74
NAILS	NO. REQD	POUNDS
6d (2")	22	1/4
10d (3")	166	2-1/2
STEEL STRAPPING, 1-1/4" X .035 -- 116' REQD - 17 LBS		
SEAL FOR 1-1/4" STRAPPING - - - - - 8 REQD - NIL		

LOAD AS SHOWN (TYPICAL)

ITEM	QUANTITY	WEIGHT (APPROX)
PALLET UNIT	20	40,160 LBS
DUNNAGE		328 LBS
TOTAL WEIGHT		40,488 LBS (APPROX)



ISOMETRIC VIEW



SECTION VIEW

KEY NUMBERS

- ① FORWARD BLOCKING (1 REOD). SEE THE "FORWARD BLOCKING ASSEMBLY B" DETAIL ON PAGE 37. SEE GENERAL NOTES "H", "J" AND "P" PAGE 2.
- ② ANTI-SWAY BRACE (1 REOD). SEE THE "ANTI-SWAY BRACE ASSEMBLY D" AND "POSITION OF ANTI-SWAY BRACE ASSEMBLY" DETAILS ON PAGE 13.
- ③ UNITIZING STRAP, 1-1/4" X .035" X 26'-0" LONG STEEL STRAPPING (6 REOD). INSTALL AS SHOWN TO ENCIRCLE TWO PALLET UNITS. SEE SPECIAL NOTE 5 ON PAGE 13.
- ④ SEAL FOR 1-1/4" STRAPPING (12 REOD, 2 PER STRAP). DOUBLE CRIMP EACH SEAL. SEE GENERAL NOTE "K" ON PAGE 2.
- ⑤ REAR BLOCKING (1 REOD). SEE THE "REAR BLOCKING ASSEMBLY A" DETAIL ON PAGE 40. SEE SPECIAL NOTE 7 ON PAGE 13 AND GENERAL NOTE "O" ON PAGE 2.

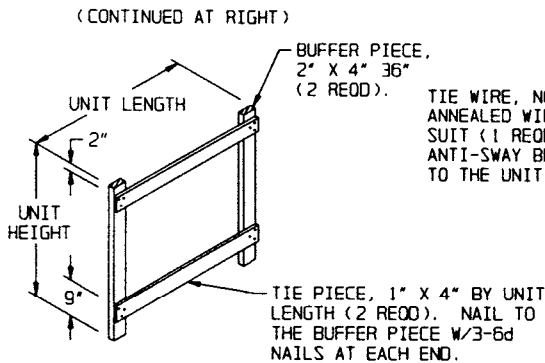
**TYPICAL 23-UNIT CHIMNEY-PATTERN LOAD
IN A 40'-0" LONG CONVENTIONAL VAN TRAILER**

SPECIAL NOTES:

(SPECIAL NOTES CONTINUED)

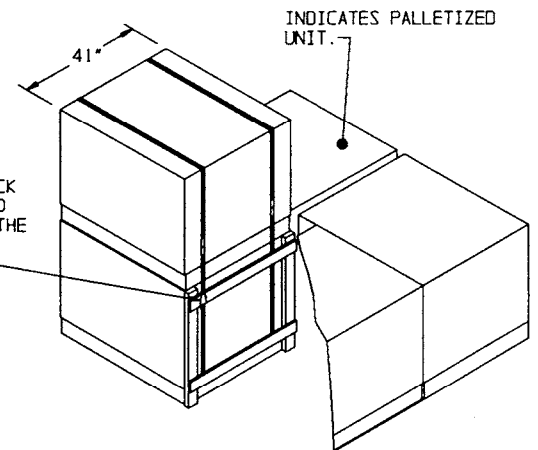
1. A 40'-0" LONG BY 7'-8" WIDE (INSIDE DIMENSION) CONVENTIONAL VAN TRAILER IS SHOWN. TRAILERS OF OTHER DIMENSIONS CAN BE USED.
2. THE PALLET UNIT SHOWN IN THE TYPICAL CHIMNEY-PATTERN LOAD HAS OVERALL DIMENSIONS OF 41" LONG BY 48" WIDE BY 38" HIGH. THE DEPICTED PROCEDURES ARE ALSO APPLICABLE FOR UNITS OF OTHER SIZES, PROVIDING THE TOTAL OF THE LENGTH AND THE WIDTH IS LESS THAN THE INSIDE WIDTH OF THE TRAILER BY AT LEAST 1/2" BUT BY NOT MORE THAN 3" INCHES. SEE THE "PALLET UNIT LENGTH/WIDTH COMBINATIONS" CHART NO. 5 ON PAGE 21 FOR GUIDANCE AS TO THE COMBINATIONS OF LENGTHS AND WIDTHS WHICH ARE ACCEPTABLE FOR CHIMNEY-PATTERN LOADS. THE WEIGHT OF THE DEPICTED UNIT IS 1,804 POUNDS. THE NUMBER OF UNITS MAY NEED TO BE ADJUSTED OR A DIFFERENT LOADING PATTERN MAY NEED TO BE USED IF THE UNIT BEING LOADED HAS A DIFFERENT WEIGHT. REFER TO "CHART NO. 4" ON PAGE 4 FOR GUIDANCE AS TO THE MAXIMUM NUMBER OF UNITS WHICH CAN BE LOADED, BASED ON THE WEIGHT OF THE UNIT TO BE SHIPPED.
3. THE PALLET UNITS IN THE SECOND LAYER MUST NOT BE POSITIONED ON THE REAR MOST PALLET UNITS IN THE FIRST LAYER.
4. IF AN ODD UNIT IS TO BE SHIPPED IN THE SECOND LAYER, POSITION IT WITH THE PALLET LENGTH PARALLEL TO THE SIDEWALL OF THE TRAILER AND USE ANTI-SWAY BRACE ASSEMBLY AS SHOWN IN THE DETAILS ON THIS PAGE TO PREVENT THE UNITIZED PALLET UNITS FROM TIPPING.
5. IF FOUR PALLET UNITS OR LESS ARE POSITIONED IN A SECOND LAYER CHIMNEY, EACH UNIT MUST BE UNITIZED TO A PALLET UNIT IN THE FIRST LAYER. WHEN AN EVEN NUMBER OF PALLET UNITS IN EXCESS OF FOUR ARE POSITIONED IN THE SECOND LAYER ONLY THE UNITS AT EACH END NEED TO BE UNITIZED TO A PALLET UNIT IN THE FIRST LAYER. IF AN ODD NUMBER OF PALLET UNITS IN EXCESS OF FOUR ARE POSITIONED IN THE SECOND LAYER, UNITIZE THE ODD UNIT AND THE END UNITS TO THE CORRESPONDING UNITS IN THE FIRST LAYER. SECOND LAYER UNITS POSITIONED AGAINST THE FRONT WALL OF A SQUARE FRONT TRAILER OR AGAINST A FORWARD BLOCKING ASSEMBLY WILL NOT REQUIRE UNITIZATION.

6. THE DEPICTED LOAD CAN BE ADJUSTED TO SUIT THE QUANTITY TO BE SHIPPED. A LOAD CAN BE REDUCED BY A MULTIPLE OF FOUR UNITS BY OMITTING ONE OR MORE CHIMNEYS AND INCREASING THE LENGTH OF THE REAR BLOCKING ASSEMBLY, PIECE MARKED ⑤. TWO UNITS CAN BE LOADED IN THE PLACE OF ONE CHIMNEY BY USING THE "ALT REAR LOADING PATTERN A" SHOWN ON PAGE 36. ONE UNIT CAN BE POSITIONED AT THE REAR OF A LOAD BY USING THE "ALT REAR LOADING PATTERN B" SHOWN ON PAGE 36. IF THE TRAILER TO BE LOADED IS MORE THAN 40' LONG, OR IF LESS THAN 20 PALLET UNITS ARE TO BE SHIPPED, THE PROCEDURES DEPICTED ON PAGES 20 AND 21 MAY BE EMPLOYED.
7. IF THE SPACE AT THE REAR OF THE LOAD BETWEEN THE PALLET UNITS AND THE REAR DOOR IS GREATER THAN 1-1/2" OR LESS THAN 9", USE REAR BLOCKING ASSEMBLY "B" AS DETAILED ON PAGE 40. IF THE SPACE AT THE REAR OF THE LOAD IS 9" OR GREATER, USE THE REAR BLOCKING ASSEMBLY "A" AS SHOWN. IF THE SPACE AT THE REAR OF THE LOAD IS 1-1/2" OR LESS, REAR BLOCKING IS NOT REQUIRED.
8. LEFTOVER BOXES IN AN AMOUNT NOT TO EXCEED ONE LAYER MAY BE SECURED TO THE TOP OF A FULL PALLET UNIT FOR SHIPMENT. REFER TO THE "PROCEDURES FOR SHIPMENT OF LEFTOVER BOXES" ON PAGE 45 FOR GUIDANCE.
9. REFER TO PAGES 46, 47, AND 48 FOR GUIDANCE IN THE SHIPMENT OF PARTIAL PALLET UNITS.



ANTI-SWAY BRACE ASSEMBLY D

THE ANTI-SWAY BRACE ASSEMBLY IS ADEQUATE TO PROVIDE LATERAL SUPPORT IN TRAILERS WHICH ARE 92" WIDE. FOR TRAILERS WHICH ARE LESS THAN 92" WIDE, THE BUFFER PIECES AND/OR TIE PIECES MAY BE MADE OF 1" X 4" MATERIAL. THE THICKNESS OF THE ASSEMBLY WILL BE ADJUSTED AS REQUIRED TO PROVIDE ADEQUATE LATERAL SUPPORT.



POSITION OF ANTI-SWAY BRACE ASSEMBLY

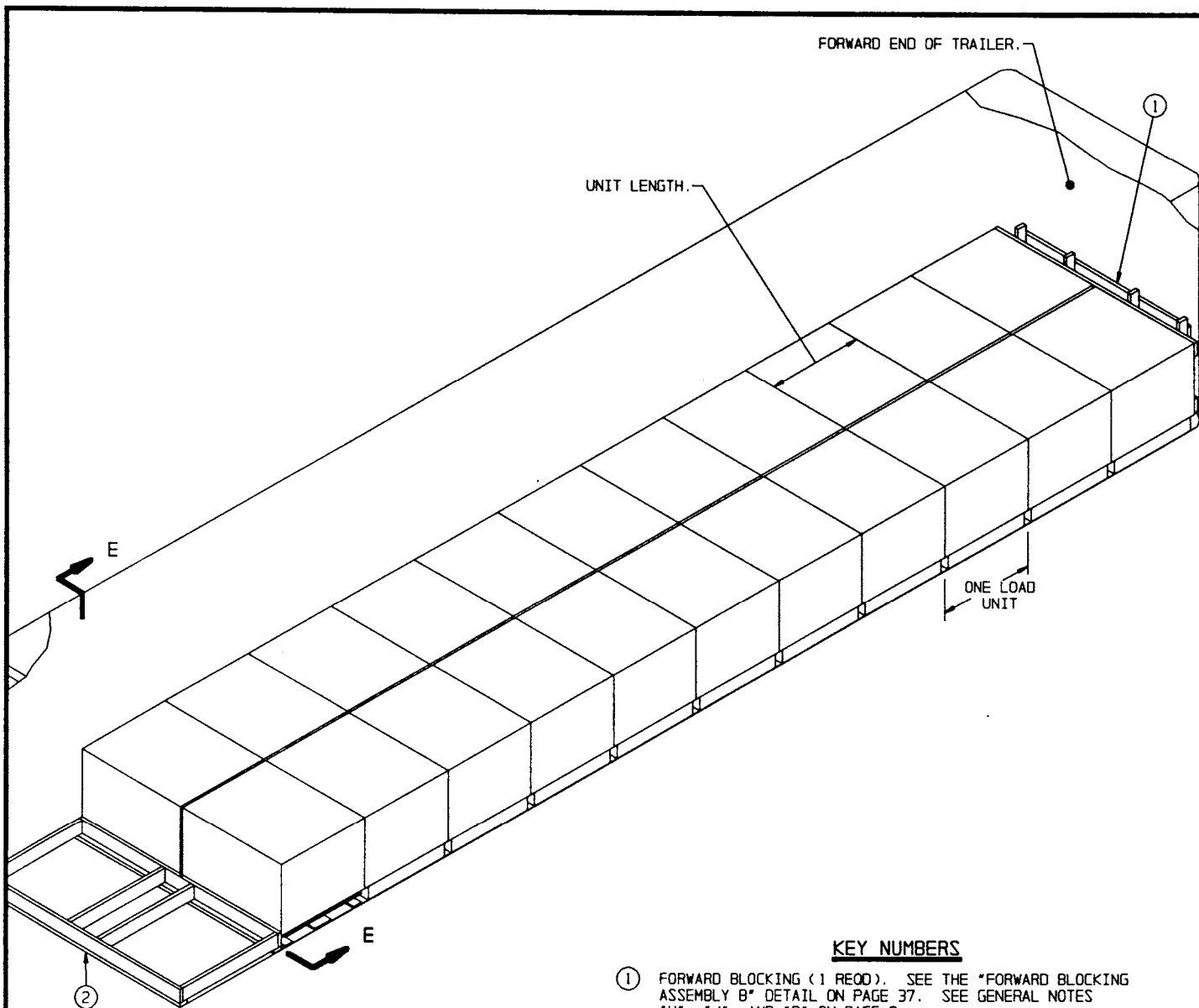
SEE SPECIAL NOTE 4 ON THIS PAGE.

BILL OF MATERIAL (TYPICAL)		
LUMBER	LINEAR FEET	BOARD FEET
1" X 4"	7	3
2" X 4"	36	24
2" X 6"	55	55
NAILS	NO. REOD	POUNDS
6d (2")	12	NIL
10d (3")	70	1-1/4
STEEL STRAPPING, 1-1/4" X .035 --- 156' REOD - 23 LBS		
SEAL FOR 1-1/4" STRAPPING - - - - - 12 REOD - NIL		

LOAD AS SHOWN (TYPICAL)

ITEM	QUANTITY	WEIGHT (APPROX)
PALLET UNIT	23	41,492 LBS
DUNNAGE		189 LBS
TOTAL WEIGHT		41,681 LBS (APPROX)

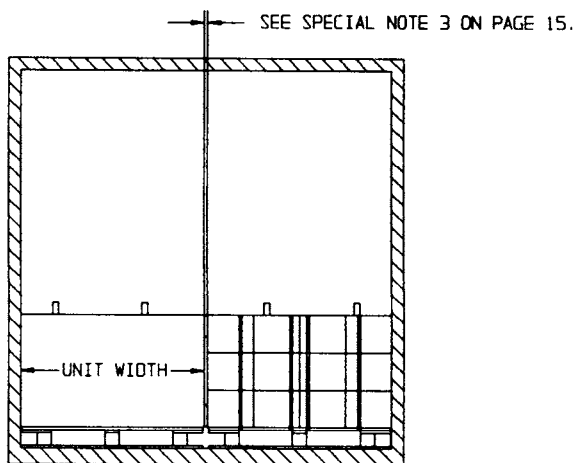
**TYPICAL 23-UNIT CHIMNEY-PATTERN LOAD
IN A 40'-0" LONG CONVENTIONAL VAN TRAILER**



ISOMETRIC VIEW

KEY NUMBERS

- ① FORWARD BLOCKING (1 REOD). SEE THE "FORWARD BLOCKING ASSEMBLY B" DETAIL ON PAGE 37. SEE GENERAL NOTES "H", "J", AND "P" ON PAGE 2.
- ② REAR BLOCKING (1 REOD). SEE THE "REAR BLOCKING ASSEMBLY A" DETAIL ON PAGE 38. SEE SPECIAL NOTE 4 ON PAGE 15, AND GENERAL NOTE Q ON PAGE 2.



SECTION E-E

SPECIAL NOTES:

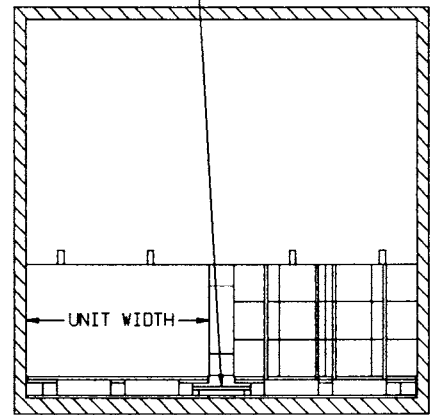
1. A 40'-0" BY 7'-9" WIDE (INSIDE DIMENSION) CONVENTIONAL VAN TRAILER IS SHOWN. TRAILERS OF OTHER DIMENSIONS CAN BE USED.
2. THE PALLET UNIT SHOWN IN THE TYPICAL 2-WIDE LOAD ON PAGE 14 HAS OVERALL DIMENSIONS OF 38-1/4" LONG BY 46" WIDE BY 34" HIGH. THE DEPICTED PROCEDURES ARE ALSO APPLICABLE FOR UNITS OF OTHER SIZES. REFER TO CHART NOS. 1 THRU 4 ON PAGES 4 AND 5 FOR GUIDANCE IN DETERMINING THE MAXIMUM SIZE AND WEIGHT OF UNITS WHICH CAN BE LOADED IN TRAILERS OF OTHER DIMENSIONS. THE WEIGHT OF THE DEPICTED UNIT IS 1,859 POUNDS. THE NUMBER OF UNITS MAY NEED TO BE ADJUSTED IF THE UNIT BEING LOADED HAS A DIFFERENT WEIGHT. REFER TO "CHART NO. 4" ON PAGE 4 FOR GUIDANCE AS TO THE MAXIMUM NUMBER OF UNITS WHICH CAN BE LOADED, BASED ON THE WEIGHT OF THE UNIT.
3. ANTI-SWAY BRACING WILL BE REQUIRED IF THE SPACE BETWEEN LATERALLY ADJACENT UNITS IS MORE THAN 3", AS MEASURED FROM BOX TO BOX. ANTI-SWAY BRACE "C", AS DETAILED ON PAGE 39, WILL BE USED.
4. IF THE SPACE AT THE REAR OF THE LOAD BETWEEN THE PALLET UNITS AND THE REAR DOOR IS GREATER THAN 1-1/2" OR LESS THAN 9", USE REAR BLOCKING ASSEMBLY "B" AS DETAILED ON PAGE 40. IF THE SPACE AT THE REAR OF THE LOAD IS 9" OR GREATER, USE THE REAR BLOCKING ASSEMBLY "A" AS SHOWN. IF THE SPACE AT THE REAR OF THE LOAD IS 1-1/2" OR LESS, REAR BLOCKING IS NOT REQUIRED.
5. IF THE QUANTITY OF UNITS IS DIFFERENT FROM WHAT IS SHOWN, DUE TO UNIT SIZE OR WEIGHT, OR IF THE TRAILER TO BE LOADED IS LONGER THAN 40', THE SPACER ASSEMBLY "A" AND/OR SPACER ASSEMBLY "B" DETAILED ON PAGE 43 CAN BE USED FOR THE PURPOSE OF PROVIDING FOR PROPER WEIGHT DISTRIBUTION, OR MAY BE USED IN LIEU OF ONE AND/OR TWO OMITTED UNITS. SEE KEY NOS. ② AND ③ ON PAGE 22, AND SPECIAL NOTES 4 AND 5 ON PAGE 23 FOR INSTALLATION GUIDANCE.
6. LEFTOVER BOXES IN AN AMOUNT NOT TO EXCEED ONE LAYER MAY BE SECURED TO THE TOP OF A FULL PALLET UNIT FOR SHIPMENT. REFER TO THE "PROCEDURES FOR SHIPMENT OF LEFTOVER BOXES" ON PAGE 45 FOR GUIDANCE.
7. REFER TO PAGES 46, 47, AND 48 FOR GUIDANCE IN THE SHIPMENT OF PARTIAL PALLET UNITS.

(CONTINUED AT RIGHT)

(SPECIAL NOTES CONTINUED)

8. IF THE TRAILER BEING LOADED IS EQUIPPED WITH A WOOD OR WOOD AND METAL FLOOR, AND IF DESIRED, NAILED SIDE BLOCKING MAY BE USED IN LIEU OF ANTI-SWAY BRACE ASSEMBLY "C" IN THE "SECTION E-E" VIEW BELOW. SIDE BLOCKING SHOULD BE PALLET UNIT LENGTH DOUBLED 2" X 4" MATERIAL. NAIL THE FIRST PIECE TO THE TRAILER FLOOR W/4-10d NAILS. NAIL THE SECOND PIECE TO THE FIRST IN A LIKE MANNER. NOTE THAT THE SIDE BLOCKING ON AT LEAST ONE SIDE OF THE LOAD MUST BE PRE-POSITIONED. ALSO NOTE THAT RANDOM LENGTH MATERIAL MAY BE USED. NAIL EACH LAYER W/1-10d NAIL EVERY 12".
9. PALLET UNITS MAY BE POSITIONED IN THE SECOND LAYER IN ORDER TO ATTAIN THE QUANTITY IT IS DESIRED TO SHIP. PALLET UNITS AT EACH END OF THE SECOND LAYER MUST BE STRAPPED TO UNITS IN THE FIRST LAYER, REFER TO PIECE MARKED ④ ON PAGE 8 AND/OR PIECE MARKED ④ ON PAGE 10 AND THE REFERENCED SPECIAL NOTES FOR GUIDANCE.

ANTI-SWAY BRACE (1 REQ'D). SEE THE "ANTI-SWAY BRACE ASSEMBLY C" DETAIL ON PAGE 39. SEE SPECIAL NOTE 9 ABOVE.



SECTION E-E

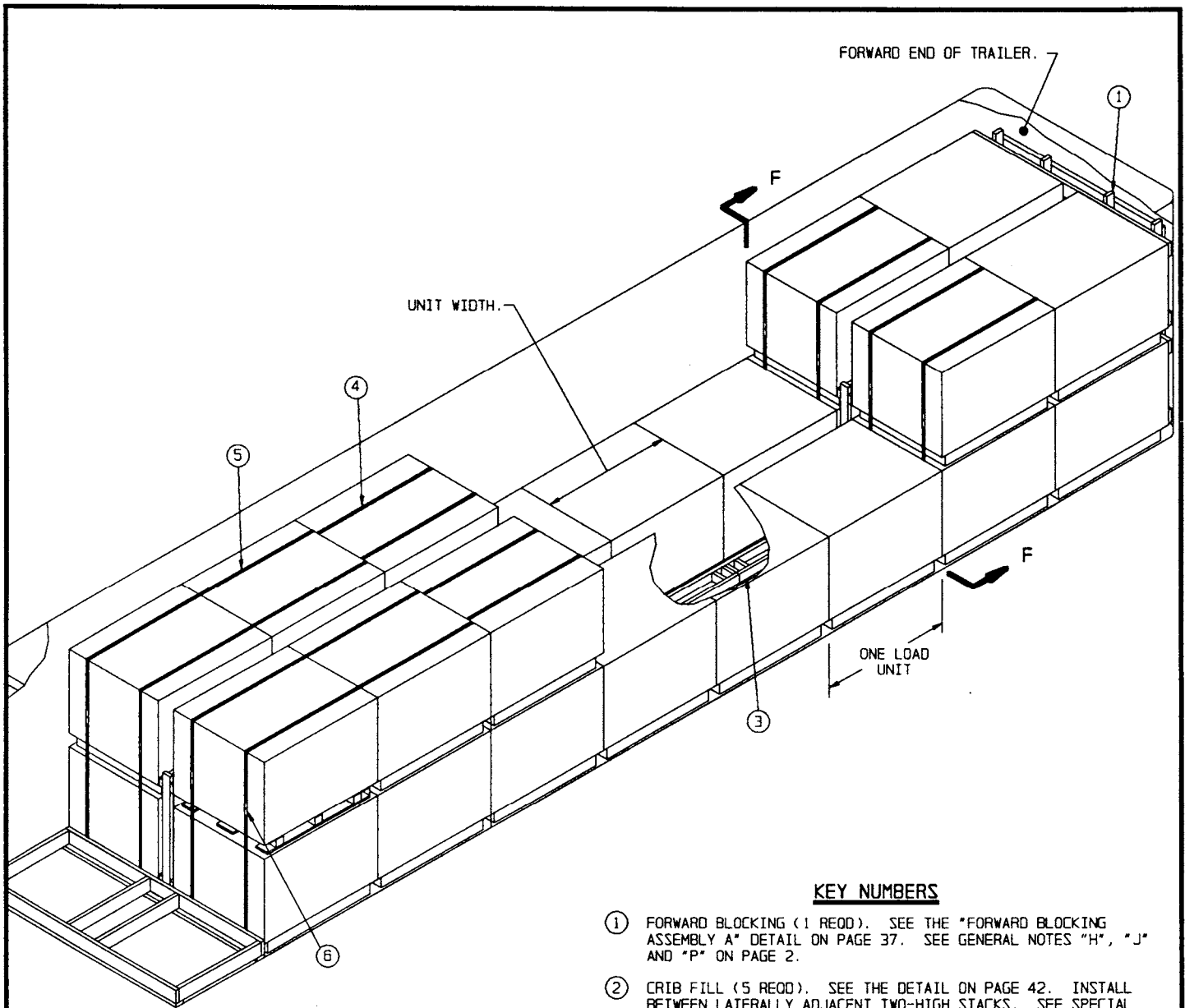
THIS IS A SECTION VIEW OF AN 8'-2" OR 8'-3" WIDE TRAILER.

BILL OF MATERIAL (TYPICAL)

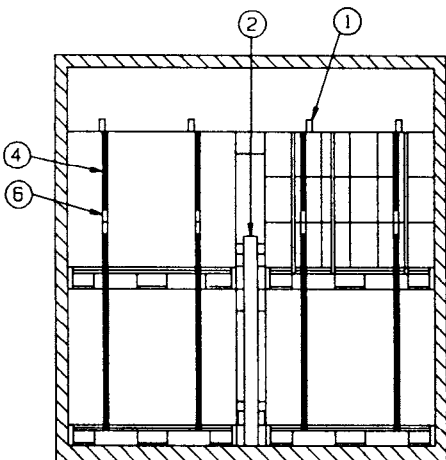
LUMBER	LINEAR FEET	BOARD FEET
2" X 4"	28	19
2" X 6"	57	57
NAILS	NO. REQ'D	POUNDS
10d (3")	70	1-1/4"

LOAD AS SHOWN (TYPICAL)

ITEM	QUANTITY	WEIGHT (APPROX)
PALLET UNIT	22	40,898 LBS
DUNNAGE		154 LBS
TOTAL WEIGHT		41,052 LBS (APPROX)



ISOMETRIC VIEW



SECTION F-F

KEY NUMBERS

- ① FORWARD BLOCKING (1 REOD). SEE THE "FORWARD BLOCKING ASSEMBLY A" DETAIL ON PAGE 37. SEE GENERAL NOTES "H", "J" AND "P" ON PAGE 2.
- ② CRIB FILL (5 REOD). SEE THE DETAIL ON PAGE 42. INSTALL BETWEEN LATERALLY ADJACENT TWO-HIGH STACKS. SEE SPECIAL NOTES 3 AND 4 ON PAGE 17.
- ③ ANTI-SWAY BRACE (3 REOD). SEE THE "ANTI-SWAY BRACE B" DETAIL ON PAGE 38. POSITION ON THE FLOOR BETWEEN LATERALLY ADJACENT ONE-HIGH PALLET UNITS. SEE SPECIAL NOTES 3 AND 4 ON PAGE 17.
- ④ STACK UNITIZING STRAP, 1-1/4" X .035" X 22'-6" LONG (REF) STEEL STRAPPING (8 REOD). INSTALL SO AS TO ENCIRCLE A TOP-LAYER PALLET UNIT AND THE UNIT DIRECTLY BELOW. SEE SPECIAL NOTE 5 ON PAGE 17.
- ⑤ BUNDLING STRAP, 1-1/4" X .035" X 31'-6" LONG (REF) STEEL STRAPPING (4 REOD). INSTALL SO AS TO ENCIRCLE TWO PALLET UNIT STACKS. SEE SPECIAL NOTES 6 AND 7 ON PAGE 17.
- ⑥ SEAL FOR 1-1/4" STRAPPING (24 REOD, 2 PER STRAP). DOUBLE CRIMP EACH SEAL. SEE GENERAL NOTE "K" ON PAGE 2.
- ⑦ REAR BLOCKING (1 REOD). SEE THE "REAR BLOCKING ASSEMBLY A" DETAIL ON PAGE 40. SEE SPECIAL NOTE 8 ON PAGE 17, AND GENERAL NOTE "O" ON PAGE 2.

SPECIAL NOTES:

(SPECIAL NOTES CONTINUED)

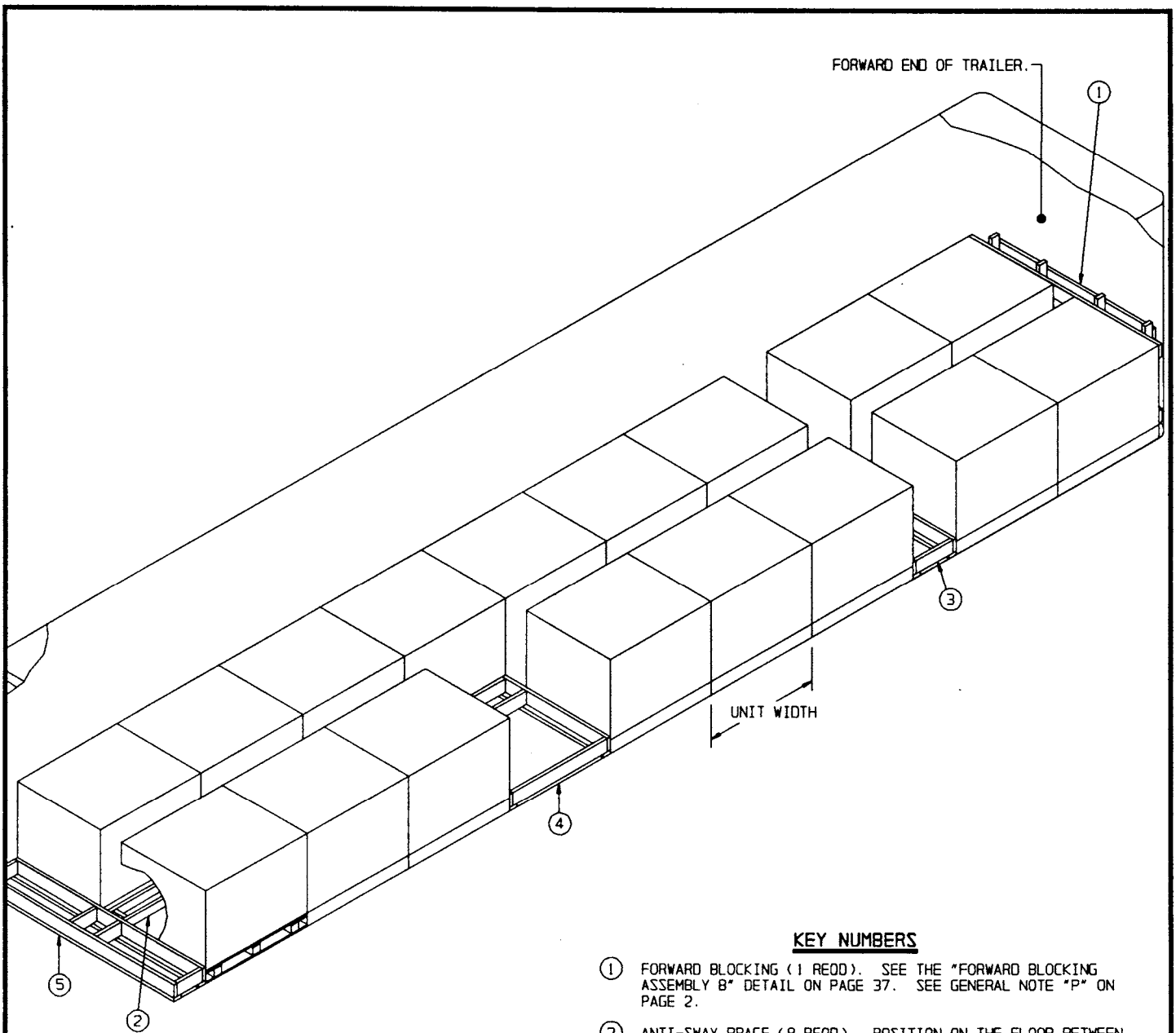
1. A 40'-0" LONG BY 7'-8" WIDE (INSIDE DIMENSION) CONVENTIONAL VAN TRAILER IS SHOWN. TRAILERS OF OTHER DIMENSIONS CAN BE USED.
2. THE PALLET UNIT SHOWN IN THE TYPICAL 2-WIDE LOAD ON PAGE 16 HAS OVERALL DIMENSIONS OF 42-3/8" LONG BY 53-1/4" WIDE BY 40" HIGH. THE DEPICTED PROCEDURES ARE ALSO APPLICABLE FOR UNITS OF OTHER SIZES. REFER TO "CHART NO. 1" ON PAGE 5 FOR GUIDANCE AS TO THE MAXIMUM SIZES OF UNITS WHICH CAN BE LOADED TWO WIDE IN TRAILERS OF OTHER INSIDE WIDTHS. A 2-TIER LOAD IS SHOWN AS TYPICAL. REFER TO "CHART NO. 3" ON PAGE 5 FOR GUIDANCE AS TO THE MAXIMUM NUMBER OF TIERS WHICH CAN BE LOADED IN VARIOUS HEIGHT VAN TRAILERS BASED ON THE HEIGHT OF THE PALLET UNIT. THE WEIGHT OF THE DEPICTED UNIT IS 1,606 POUNDS. THE NUMBER OF UNITS MAY NEED TO BE ADJUSTED IF THE UNIT BEING LOADED HAS A DIFFERENT WEIGHT. REFER TO "CHART NO. 4" ON PAGE 4 FOR GUIDANCE AS TO THE MAXIMUM NUMBER OF UNITS WHICH CAN BE LOADED, BASED ON THE WEIGHT OF THE UNIT.
3. IF THE SPACE BETWEEN LATERALLY ADJACENT PALLET UNITS PERMIT, AND IF DESIRED, ANTI-SWAY BRACE "A", DETAILED ON PAGE 36, MAY BE USED IN LIEU OF CRIB FILL, PIECE MARKED ②, AND SWAY BRACE "B", PIECE MARKED ③.
4. THE ANTI-SWAY BRACES AND CRIB FILL MAY BE OMITTED IF THE SPACE BETWEEN LATERALLY ADJACENT UNITS IS 3' OR LESS, AS MEASURED FROM BOX TO BOX.
5. A STACK UNITIZING STRAP, PIECE MARKED ④, MUST BE APPLIED AROUND THE TWO-HIGH STACKS WHICH ARE IMMEDIATELY ADJACENT TO THE ONE-HIGH UNITS IN EACH ROW. THE UNITIZING STRAPS MUST BE INSTALLED PRIOR TO FINAL POSITIONING OF THE STACK.
6. IF A STACK IN THE LOAD UNIT AT THE REAR OF THE TRAILER IS MORE THAN ONE UNIT HIGH, THE BUNDLING STRAPS, PIECES MARKED ⑤, MUST BE INSTALLED SO AS TO ENCIRCLE THE REARMOST TWO STACKS IN EACH APPLICABLE ROW.
7. AT ANY LOCATION WHERE A LOAD UNIT CONSISTS OF THREE UNITS, THE STACK CONTAINING THE ODD UNIT MUST BE SECURED TO THE STACK IMMEDIATELY FORWARD (OR REARWARD) WITH BUNDLING STRAPS TO PROVIDE LATERAL STABILITY FOR THE ODD UNIT. NOTE THAT LOADS SHOULD BE PLANNED SO THAT THERE WILL NOT BE A LONE UNIT IN A TOP TIER.
8. IF THE SPACE AT THE REAR OF THE LOAD BETWEEN THE PALLET UNITS AND THE REAR DOOR IS GREATER THAN 1-1/2" OR LESS THAN 9", USE REAR BLOCKING ASSEMBLY "B" AS DETAILED ON PAGE 40. IF THE SPACE AT THE REAR OF THE LOAD IS 9" OR GREATER, USE THE REAR BLOCKING ASSEMBLY "A" AS SHOWN. IF THE SPACE AT THE REAR OF THE LOAD IS 1-1/2" OR LESS, REAR BLOCKING IS NOT REQUIRED.
9. THE DEPICTED LOAD CAN BE ADJUSTED TO SUIT THE QUANTITY TO BE SHIPPED, OR TO SUIT THE SIZE AND/OR WEIGHT OF THE UNIT BEING LOADED. A 2-TIER LOAD CAN BE REDUCED BY A MULTIPLE OF FOUR UNITS BY OMITTING ONE OR MORE FULL LOAD UNITS FROM THE LOAD; OR, THE ENTIRE TOP TIER CAN BE LEFT OFF; OR ONE OR MORE UNITS CAN BE ADDED TO OR OMITTED FROM THE TOP TIER. NOTE THAT IF ONE UNIT IS ADDED OR OMITTED FROM THE TOP TIER, CRIB FILL, DETAILED ON PAGE 13, OR THE "TOP-OF-LOAD ANTI-SWAY BRACE", DETAILED ON PAGE 44, MUST BE USED.
10. LEFTOVER BOXES IN AN AMOUNT NOT TO EXCEED ONE LAYER MAY BE SECURED TO THE TOP OF A FULL PALLET UNIT FOR SHIPMENT. REFER TO THE "PROCEDURES FOR SHIPMENT OF LEFTOVER BOXES" ON PAGE 45 FOR GUIDANCE.
11. REFER TO PAGES 46, 47, AND 48 FOR GUIDANCE IN THE SHIPMENT OF PARTIAL PALLET UNITS.

(CONTINUED AT RIGHT)

BILL OF MATERIAL (TYPICAL)		
LUMBER	LINEAR FEET	BOARD FEET
2" X 4"	209	140
2" X 6"	84	84
NAILS	NO. REQD	POUNDS
10d (3")	230	3-1/2
STEEL STRAPPING, 1-1/4" X .035 -- 306' REQD - 44 LBS		
SEAL FOR 1-1/4" STRAPPING - - - - - 24 REQD - 2 LBS		

LOAD AS SHOWN (TYPICAL)

ITEM	QUANTITY	WEIGHT (APPROX)
PALLET UNIT	26	41,756 LBS
DUNNAGE		498 LBS
TOTAL WEIGHT		42,254 LBS (APPROX)



ISOMETRIC VIEW

KEY NUMBERS

- ① FORWARD BLOCKING (1 REOD). SEE THE "FORWARD BLOCKING ASSEMBLY B" DETAIL ON PAGE 37. SEE GENERAL NOTE "P" ON PAGE 2.
- ② ANTI-SWAY BRACE (8 REOD). POSITION ON THE FLOOR BETWEEN LATERALLY ADJACENT PALLET UNITS. SEE THE "ANTI-SWAY BRACE B" DETAIL ON PAGE 38. SEE GENERAL NOTE "H" AND "J" ON PAGE 2 AND SPECIAL NOTES 3 AND 4 ON PAGE 19.
- ③ SPACER (1 REOD). SEE THE "SPACER ASSEMBLY A" DETAIL ON PAGE 43. SEE SPECIAL NOTE 5 ON PAGE 19.
- ④ SPACER (1 REOD). SEE THE "SPACER ASSEMBLY B" DETAIL ON PAGE 43. SEE SPECIAL NOTE 6 ON PAGE 19.
- ⑤ REAR BLOCKING (1 REOD). SEE THE "REAR BLOCKING ASSEMBLY A" DETAIL ON PAGE 40. SEE SPECIAL NOTE 7 ON PAGE 19, AND GENERAL NOTE "O" ON PAGE 2.

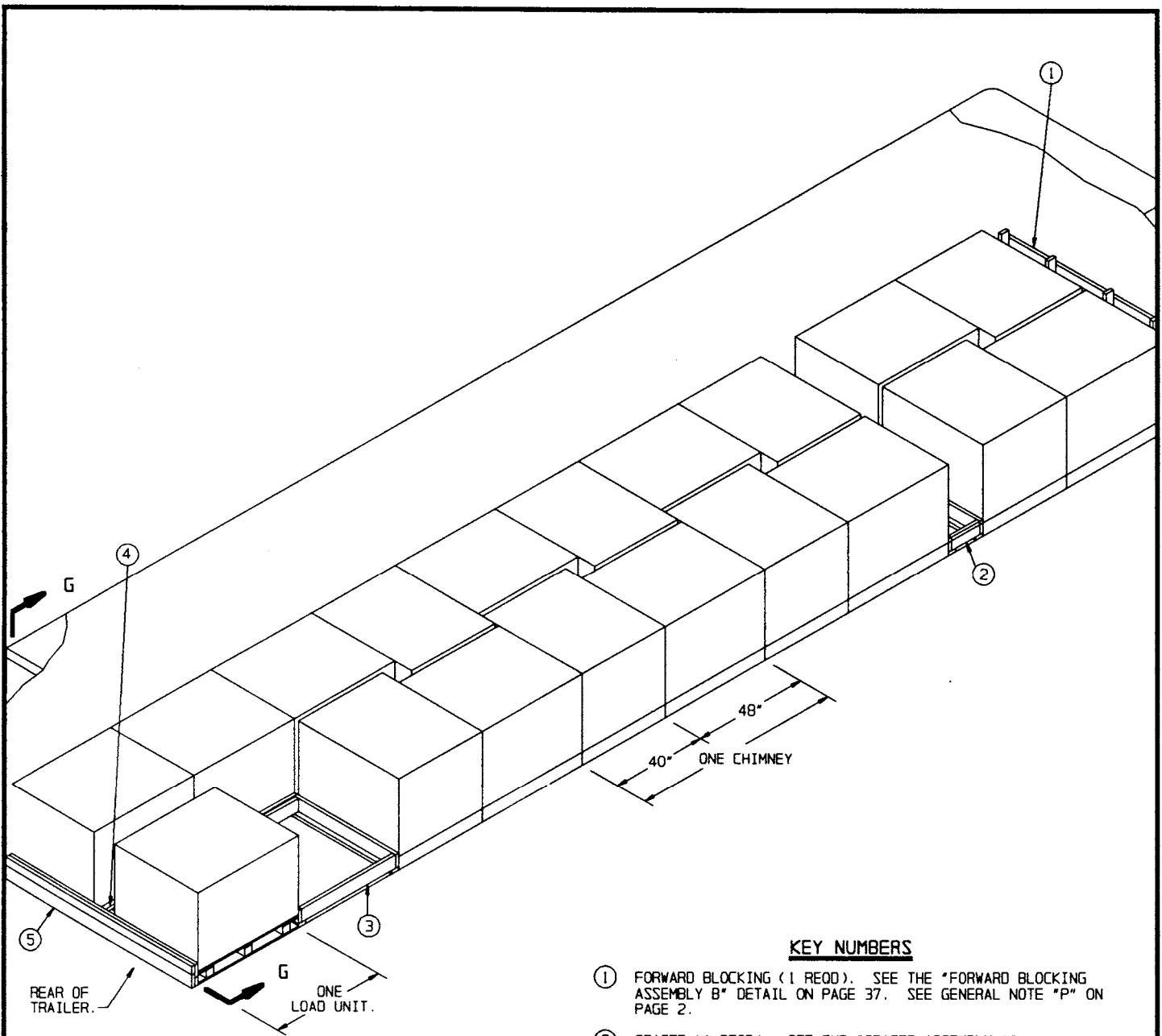
SPECIAL NOTES:

1. A 40'-0" LONG BY 7'-6" WIDE (INSIDE DIMENSION) CONVENTIONAL VAN TRAILER IS SHOWN. TRAILERS OF OTHER DIMENSIONS CAN BE USED.
2. THE PALLET UNIT SHOWN IN THE TYPICAL 2-WIDE LOAD ON PAGE 18 HAS OVERALL DIMENSIONS OF 40' LONG BY 48" WIDE BY 38-1/2" HIGH. THE DEPICTED PROCEDURES ARE ALSO APPLICABLE FOR UNITS OF OTHER LENGTHS AND WIDTHS IN A 7'-8" TRAILER. REFER TO "CHART NO. 1" ON PAGE 5 FOR GUIDANCE AS TO THE MAXIMUM SIZES OF UNITS WHICH CAN BE LOADED TWO WIDE IN TRAILERS OF OTHER INSIDE WIDTHS. REFER TO "CHART NO. 3" ON PAGE 5 FOR GUIDANCE AS TO THE MAXIMUM NUMBER OF TIERS WHICH CAN BE LOADED IN VARIOUS HEIGHT VAN TRAILERS BASED ON THE HEIGHT OF THE PALLET UNIT TO BE LOADED. THE WEIGHT OF THE DEPICTED UNIT IS 2,400 POUNDS. THE NUMBER OF UNITS MAY NEED TO BE ADJUSTED IF THE UNIT BEING LOADED HAS A DIFFERENT WEIGHT. REFER TO "CHART NO. 4" ON PAGE 4 FOR GUIDANCE AS TO THE MAXIMUM NUMBER OF UNITS WHICH CAN BE LOADED, BASED ON THE WEIGHT OF THE UNIT TO BE SHIPPED.
3. ANTI-SWAY BRACES, SHOWN AS PIECES MARKED ②, IN THE LOAD ON PAGE 18 ARE TO BE POSITIONED BETWEEN ALL LATERALLY ADJACENT PALLET UNITS. IF SPACE PERMITS, "ANTI-SWAY BRACE A", DETAILED ON PAGE 38, MAY BE USED IN LIEU OF PIECE MARKED ②.
4. ANTI-SWAY BRACING IS REQUIRED IF THE SPACE BETWEEN LATERALLY ADJACENT UNITS IS MORE THAN 3", AS MEASURED FROM BOX TO BOX.
5. SPACER ASSEMBLY "A" SHOWN AS PIECE MARKED ③ IN THE LOAD ON PAGE 18 IS USED FOR THE PURPOSE OF PROVIDING FOR PROPER WEIGHT DISTRIBUTION, AND IS SHOWN AS TYPICAL ONLY. IF THE TRAILER TO BE LOADED IS LONGER THAN 40', THE LOCATION OF THE ASSEMBLY, AND/OR THE STRUT LENGTHS, MAY BE DIFFERENT FROM WHAT IS SHOWN. IF A SHORTER TRAILER IS USED FOR THE DEPICTED LOAD, THIS ASSEMBLY MAY NOT BE REQUIRED. NOTE THAT A SPACER ASSEMBLY MUST NOT BE POSITIONED ADJACENT TO THE FORWARD BLOCKING ASSEMBLY PIECE MARKED ①.
6. THE SPACER ASSEMBLY SHOWN AS PIECE MARKED ④ IN THE LOAD VIEW, IS ONLY SHOWN TO DEPICT A TYPICAL INSTALLATION. IF A PALLET UNIT IS LOADED IN PLACE OF THE SPACER ASSEMBLY, PIECE MARKED ④ WILL NOT BE REQUIRED. NOTE THAT A SPACER ASSEMBLY MUST BE POSITIONED WHERE THERE WILL BE A PALLET UNIT AT EACH END. A SPACER ASSEMBLY MUST NOT BE POSITIONED ADJACENT TO THE FORWARD BLOCKING ASSEMBLY, PIECE MARKED ①.
7. IF THE SPACE AT THE REAR OF THE LOAD BETWEEN THE PALLET UNITS AND THE REAR DOOR IS GREATER THAN 1-1/2" OR LESS THAN 9", USE REAR BLOCKING ASSEMBLY "B" AS DETAILED ON PAGE 40. IF THE SPACE AT THE REAR OF THE LOAD IS 9" OR GREATER, USE THE REAR BLOCKING ASSEMBLY "A" AS SHOWN. IF THE SPACE AT THE REAR OF THE LOAD IS 1-1/2" OR LESS, REAR BLOCKING IS NOT REQUIRED. SEE SPECIAL NOTE 10.
8. LEFTOVER BOXES IN AN AMOUNT NOT TO EXCEED ONE LAYER MAY BE SECURED TO THE TOP OF A FULL PALLET UNIT FOR SHIPMENT. REFER TO THE "PROCEDURES FOR SHIPMENT OF LEFTOVER BOXES" ON PAGE 45 FOR GUIDANCE.
9. REFER TO PAGES 46, 47, AND 48 FOR GUIDANCE IN THE SHIPMENT OF PARTIAL PALLET UNITS.

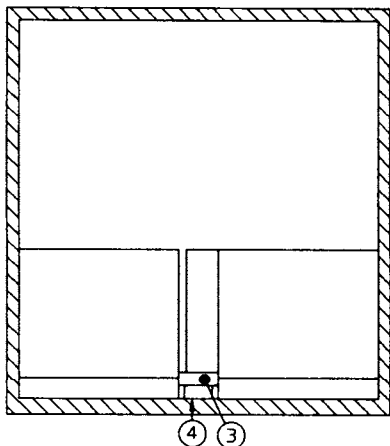
BILL OF MATERIAL (TYPICAL)		
LUMBER	LINEAR FEET	BOARD FEET
2" X 4"	135	94
2" X 6"	87	75
NAILS	NO. REQD	POUNDS
10d (3")	262	4-1/2

LOAD AS SHOWN (TYPICAL)

ITEM	QUANTITY	WEIGHT (APPROX)
PALLET UNIT	17	40,800 LBS
DUNNAGE		349 LBS
TOTAL WEIGHT		41,149 LBS (APPROX)



ISOMETRIC VIEW



SECTION G-G

KEY NUMBERS

- ① FORWARD BLOCKING (1 REOD). SEE THE "FORWARD BLOCKING ASSEMBLY B" DETAIL ON PAGE 37. SEE GENERAL NOTE "P" ON PAGE 2.
- ② SPACER (1 REOD). SEE THE "SPACER ASSEMBLY A" DETAIL ON PAGE 43. SEE SPECIAL NOTE 4 ON PAGE 21.
- ③ SPACER (1 REOD). SEE THE "SPACER ASSEMBLY B" DETAIL ON PAGE 43. SEE SPECIAL NOTE 5 ON PAGE 21.
- ④ ANTI-SWAY BRACE (1 REOD). SEE THE "ANTI-SWAY BRACE B" DETAIL ON PAGE 6. POSITION ON THE FLOOR BETWEEN LATERALLY ADJACENT PALLET UNITS. SEE GENERAL NOTES "H" AND "J" ON PAGE 2.
- ⑤ REAR BLOCKING (1 REOD). SEE THE "REAR BLOCKING ASSEMBLY B" DETAIL ON PAGE 40. SEE SPECIAL NOTE 6 ON PAGE 21.

SPECIAL NOTES:

(SPECIAL NOTES CONTINUED)

1. A 40'-0" LONG BY 7'-6" WIDE (INSIDE DIMENSION) CONVENTIONAL VAN TRAILER IS SHOWN. TRAILERS OF OTHER DIMENSIONS CAN BE USED.
2. THE PALLET UNIT SHOWN IN THE TYPICAL CHIMNEY-PATTERN LOAD HAS OVERALL DIMENSIONS OF 40" LONG BY 48" WIDE BY 38" HIGH. THE DEPICTED PROCEDURES ARE ALSO APPLICABLE FOR UNITS OF OTHER LENGTHS AND WIDTHS, PROVIDING THE TOTAL OF THE LENGTH AND THE WIDTH IS LESS THAN THE INSIDE WIDTH OF THE TRAILER BY AT LEAST ONE-HALF INCH BUT BY NOT MORE THAN THREE INCHES LESS. SEE THE "PALLET UNIT LENGTH/WIDTH COMBINATIONS" CHART BELOW. FOR GUIDANCE AS TO THE COMBINATIONS OF LENGTHS AND WIDTHS WHICH ARE ACCEPTABLE FOR CHIMNEY-PATTERN LOADS, THE WEIGHT OF THE DEPICTED UNIT IS 2,206 POUNDS. THE NUMBER OF UNITS MAY NEED TO BE ADJUSTED OR A DIFFERENT LOADING PATTERN MAY NEED TO BE USED IF THE UNIT BEING LOADED HAS A DIFFERENT WEIGHT. REFER TO "CHART NO. 4" ON PAGE 4 FOR GUIDANCE AS TO THE MAXIMUM NUMBER OF UNITS WHICH CAN BE LOADED, BASED ON THE WEIGHT OF THE UNIT TO BE SHIPPED.
3. A TYPICAL CHIMNEY-PATTERN LOAD IS SHOWN ON PAGE 20. THERE ARE 16 PALLET UNITS WITHIN THE CHIMNEY PATTERNS. THREE ADDITIONAL UNITS AT THE REAR OF THE LOAD ARE POSITIONED WITH THE PALLET UNIT WIDTH PARALLEL TO THE SIDE WALL OF THE TRAILER. AN ANTI-SWAY BRACE, PIECE MARKED (4), IS REQUIRED BETWEEN THE TWO LATERALLY ADJACENT UNITS, AND SPACER ASSEMBLY "B", PIECE MARKED (3), IS REQUIRED TO FILL THE REMAINING SPACE.
4. SPACER ASSEMBLY "A" SHOWN AS PIECE MARKED (2) IN THE LOAD ON PAGE 20 IS USED FOR THE PURPOSE OF PROVIDING FOR PROPER WEIGHT DISTRIBUTION, AND IS SHOWN AS TYPICAL ONLY. IF THE TRAILER TO BE LOADED IS LONGER THAN 40' THE LOCATION OF THE ASSEMBLY, AND/OR THE STRUT LENGTHS, MAY BE DIFFERENT FROM WHAT IS SHOWN. IF A SHORTER TRAILER IS USED FOR THE DEPICTED LOAD, THIS ASSEMBLY MAY NOT BE REQUIRED. NOTE THAT A SPACER ASSEMBLY MUST NOT BE POSITIONED ADJACENT TO THE FORWARD BLOCKING ASSEMBLY, PIECE MARKED (1).
5. THE SPACER ASSEMBLY SHOWN AS PIECE MARKED (3) IN THE LOAD VIEW, IS ONLY SHOWN TO DEPICT A TYPICAL INSTALLATION. NOTE THAT A SPACER ASSEMBLY MUST BE POSITIONED WHERE THERE WILL BE A PALLET UNIT AT EACH END; A SPACER ASSEMBLY MUST NOT BE POSITIONED ADJACENT TO THE FORWARD BLOCKING ASSEMBLY, PIECE MARKED (1).
6. IF THE SPACE AT THE REAR OF THE LOAD, BETWEEN THE PALLET UNITS AND THE REAR DOORS MEASURES 1-1/2" OR LESS, REAR BLOCKING IS NOT REQUIRED. IF THE SPACE AT THE REAR OF THE LOAD IS GREATER THAN 1-1/2" BUT LESS THAN 9", USE REAR BLOCKING ASSEMBLY "B" AS SHOWN. IF THE SPACE AT THE REAR OF THE LOAD IS 9" OR GREATER, REAR BLOCKING ASSEMBLY "A" DETAILED ON PAGE 40 WILL BE USED.
7. THE DEPICTED LOAD CAN BE ADJUSTED TO SUIT THE QUANTITY TO BE SHIPPED. A LOAD CAN BE REDUCED BY A MULTIPLE OF FOUR UNITS BY OMITTING ONE OR MORE CHIMNEYS AND INCREASING THE LENGTH OF THE REAR BLOCKING ASSEMBLY, PIECE MARKED 5. ONE UNIT CAN BE POSITIONED AT THE REAR OF A LOAD BY USING THE "ALT REAR LOADING PATTERN B" SHOWN ON PAGE 36.
8. LEFTOVER BOXES IN AN AMOUNT NOT TO EXCEED ONE LAYER MAY BE SECURED TO THE TOP OF A FULL PALLET UNIT FOR SHIPMENT. REFER TO THE "PROCEDURES FOR SHIPMENT OF LEFTOVER BOXES" ON PAGE 45 FOR GUIDANCE.
9. REFER TO PAGES 46, 47, AND 48 FOR GUIDANCE IN THE SHIPMENT OF PARTIAL PALLET UNITS.

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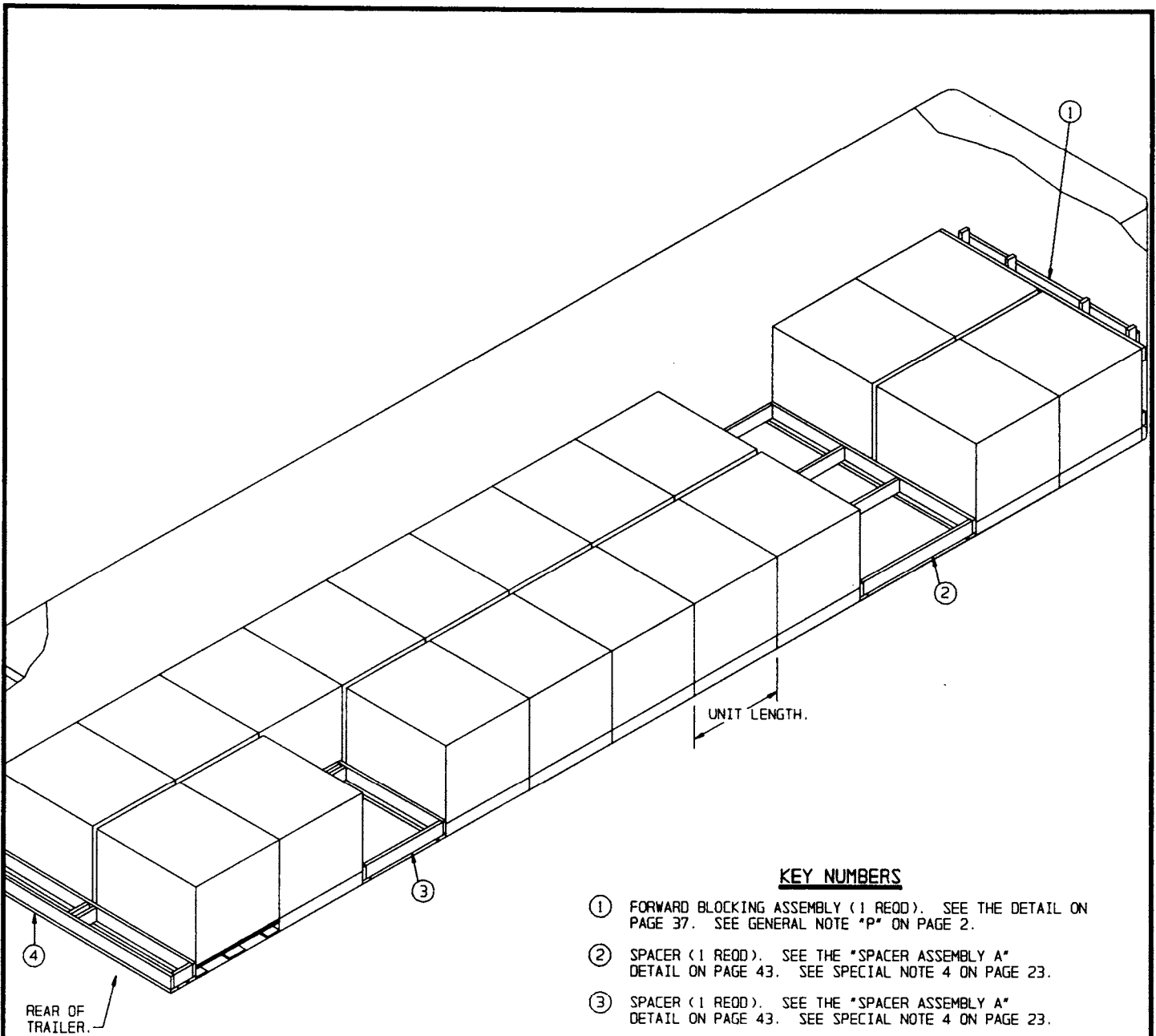
CHART NO. 5						
PALLET UNIT LENGTH/WIDTH COMBINATIONS						
UNIT LENGTH	MINIMUM TO MAXIMUM UNIT WIDTH					
	TRAILER WIDTH (INSIDE DIMENSION)					
	90"	91"	92"	93"	98"	99"
46"	41" TO 43"	42" TO 44"	43" TO 45"	44" TO 46"	49" TO 51"	50" TO 52"
45"	42" TO 44"	43" TO 45"	44" TO 46"	45" TO 47"	50" TO 52"	51" TO 53"
44"	43" TO 45"	44" TO 46"	45" TO 47"	46" TO 48"	51" TO 54"	52" TO 54"
43"	44" TO 46"	45" TO 47"	46" TO 48"	47" TO 49"	52" TO 54"	53" TO 55"
42"	45" TO 47"	46" TO 48"	47" TO 49"	48" TO 50"	53" TO 55"	54" TO 56"
41"	46" TO 48"	47" TO 49"	48" TO 50"	49" TO 51"	54" TO 56"	55" TO 57"
40"	47" TO 49"	48" TO 50"	49" TO 51"	50" TO 52"	55" TO 57"	56" TO 58"
39"	48" TO 50"	49" TO 51"	50" TO 52"	51" TO 53"	56" TO 58"	57" TO 59"
38"	49" TO 51"	50" TO 52"	51" TO 53"	52" TO 54"	57" TO 59"	58" TO 59"
37"	50" TO 52"	51" TO 53"	52" TO 54"	53" TO 55"	58" TO 59"	
36"	51" TO 53"	52" TO 54"	53" TO 55"	54" TO 56"		
35"	52" TO 54"	53" TO 55"	54" TO 56"	55" TO 57"		

BILL OF MATERIAL (TYPICAL)		
LUMBER	LINEAR FEET	BOARD FEET
2" X 4"	61	41
2" X 6"	81	81
NAILS	NO. REQD	POUNDS
10d (3")	128	2

LOAD AS SHOWN (TYPICAL)

ITEM	QUANTITY	WEIGHT (APPROX)
PALLET UNIT	19	41,914 LBS
DUNNAGE		246 LBS

TOTAL WEIGHT ----- 42,160 LBS (APPROX)



ISOMETRIC VIEW

KEY NUMBERS

- ① FORWARD BLOCKING ASSEMBLY (1 REOD). SEE THE DETAIL ON PAGE 37. SEE GENERAL NOTE "P" ON PAGE 2.
- ② SPACER (1 REOD). SEE THE "SPACER ASSEMBLY A" DETAIL ON PAGE 43. SEE SPECIAL NOTE 4 ON PAGE 23.
- ③ SPACER (1 REOD). SEE THE "SPACER ASSEMBLY A" DETAIL ON PAGE 43. SEE SPECIAL NOTE 4 ON PAGE 23.
- ④ REAR BLOCKING (1 REOD). SEE THE "REAR BLOCKING ASSEMBLY A" DETAIL ON PAGE 40. SEE SPECIAL NOTE 6 ON PAGE 23, AND GENERAL NOTE "O" ON PAGE 2.

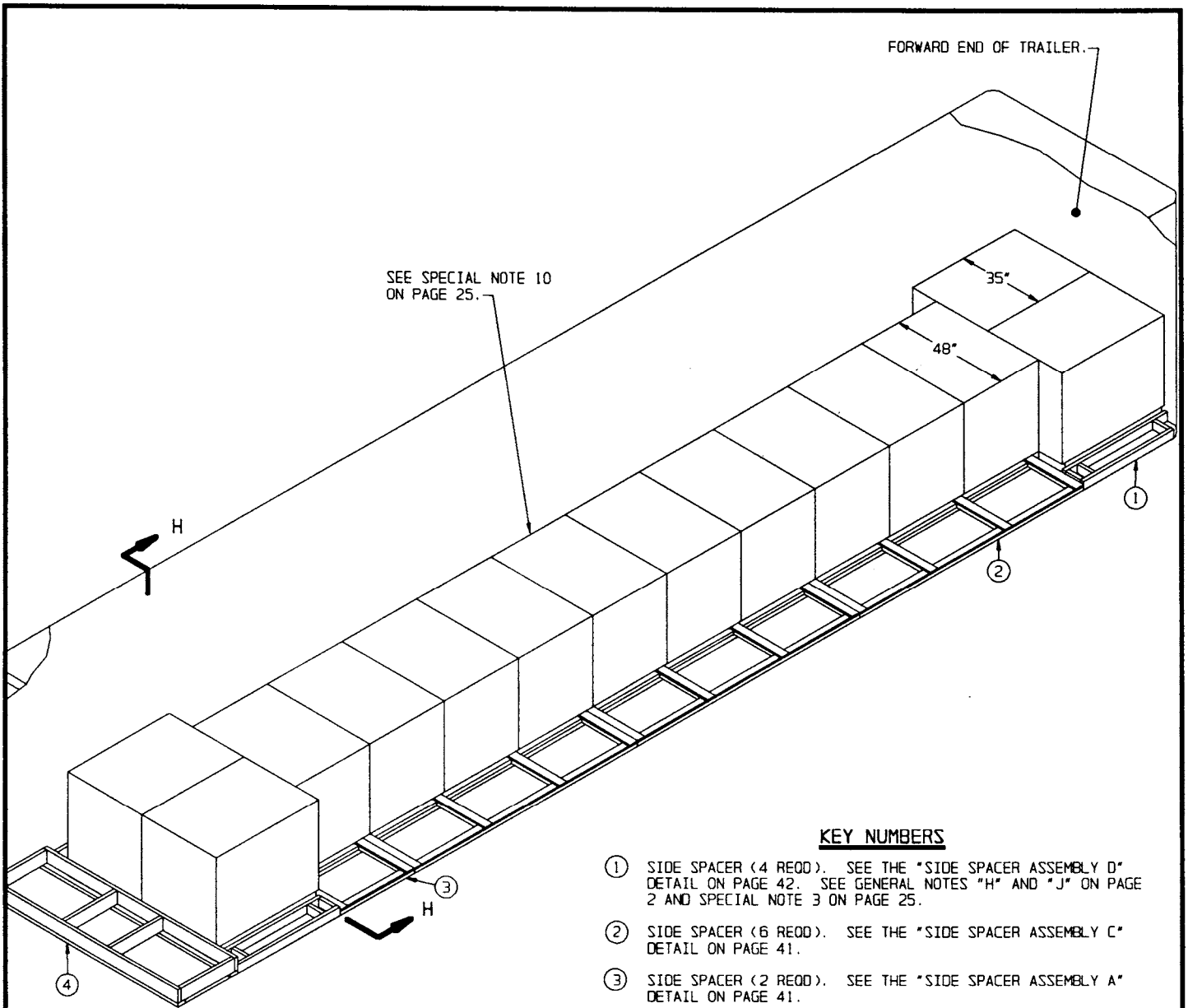
SPECIAL NOTES:

1. A 40'-0" LONG BY 8'-2" WIDE (INSIDE DIMENSION) CONVENTIONAL VAN TRAILER IS SHOWN. TRAILERS OF OTHER DIMENSIONS CAN BE USED.
2. THE PALLET UNIT SHOWN IN THE TYPICAL 2-WIDE LOAD ON PAGE 22 HAS OVERALL DIMENSIONS OF 40" LONG BY 48" WIDE BY 38-1/2" HIGH. THE DEPICTED PROCEDURES ARE ALSO APPLICABLE FOR UNITS OF OTHER LENGTHS AND WIDTHS. REFER TO "CHART NO. 1" ON PAGE 5 FOR GUIDANCE AS TO THE MAXIMUM SIZES OF UNITS WHICH CAN BE LOADED TWO WIDE IN TRAILERS OF OTHER INSIDE WIDTHS. REFER TO "CHART NO. 3" ON PAGE 5 FOR GUIDANCE AS TO THE MAXIMUM NUMBER OF TIERS WHICH CAN BE LOADED IN VARIOUS HEIGHT VAN TRAILERS BASED ON THE HEIGHT OF THE PALLET UNIT TO BE LOADED. THE WEIGHT OF THE DEPICTED UNIT IS 2,206 POUNDS. THE NUMBER OF UNITS MAY NEED TO BE ADJUSTED IF THE UNIT BEING LOADED HAS A DIFFERENT WEIGHT. REFER TO "CHART NO. 4" ON PAGE 4 FOR GUIDANCE AS TO THE MAXIMUM NUMBER OF UNITS WHICH CAN BE LOADED, BASED ON THE WEIGHT OF THE UNIT TO BE SHIPPED.
3. ANTI-SWAY BRACING WILL BE REQUIRED IF THE SPACE BETWEEN LATERALLY ADJACENT UNITS IS MORE THAN 3", AS MEASURED FROM BOX TO BOX.
4. SPACER ASSEMBLY "A" SHOWN AS PIECE MARKED ② IN THE LOAD ON PAGE 22 IS USED FOR THE PURPOSE OF PROVIDING FOR PROPER WEIGHT DISTRIBUTION, AND IS SHOWN AS TYPICAL ONLY. IF THE TRAILER TO BE LOADED IS LONGER THAN 40', THE LOCATION OF THE ASSEMBLY, AND/OR THE STRUT LENGTHS, MAY BE DIFFERENT FROM WHAT IS SHOWN. IF A SHORTER TRAILER IS USED FOR THE DEPICTED LOAD, THIS ASSEMBLY MAY NOT BE REQUIRED. NOTE THAT A SPACER ASSEMBLY MUST NOT BE POSITIONED ADJACENT TO THE FORWARD BLOCKING ASSEMBLY, PIECE MARKED ①.
5. THE SPACER ASSEMBLY SHOWN AS PIECE MARKED ③ IN THE LOAD VIEW, IS ONLY SHOWN TO DEPICT A TYPICAL INSTALLATION. IF A PALLET UNIT IS LOADED IN PLACE OF THE SPACER ASSEMBLY, PIECE MARKED ③ WILL NOT BE REQUIRED. NOTE THAT A SPACER ASSEMBLY MUST BE POSITIONED WHERE THERE WILL BE A PALLET UNIT AT EACH END; A SPACER ASSEMBLY MUST NOT BE POSITIONED ADJACENT TO THE FORWARD BLOCKING ASSEMBLY, PIECE MARKED ①.
6. IF THE SPACE AT THE REAR OF THE LOAD BETWEEN THE PALLET UNITS AND THE REAR DOOR IS GREATER THAN 1-1/2" OR LESS THAN 9", USE REAR BLOCKING ASSEMBLY "B" AS DETAILED ON PAGE 40. IF THE SPACE AT THE REAR OF THE LOAD IS 9" OR GREATER, USE THE REAR BLOCKING ASSEMBLY "A" AS SHOWN. IF THE SPACE AT THE REAR OF THE LOAD IS 1-1/2" OR LESS, REAR BLOCKING IS NOT REQUIRED.
7. LEFTOVER BOXES IN AN AMOUNT NOT TO EXCEED ONE LAYER MAY BE SECURED TO THE TOP OF A FULL PALLET UNIT FOR SHIPMENT. REFER TO THE "PROCEDURES FOR SHIPMENT OF LEFTOVER BOXES" ON PAGE 45 FOR GUIDANCE.
8. REFER TO PAGES 46, 47, AND 48 FOR GUIDANCE IN THE SHIPMENT OF PARTIAL PALLET UNITS.

BILL OF MATERIAL (TYPICAL)		
LUMBER	LINEAR FEET	BOARD FEET
2" X 4"	53	36
2" X 6"	101	101
NAILS	NO. REQD	POUNDS
10d (3")	146	2-1/4

LOAD AS SHOWN (TYPICAL)

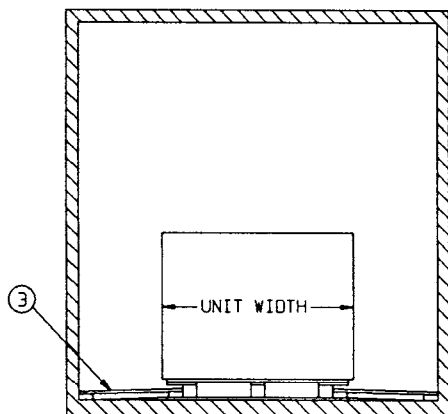
ITEM	QUANTITY	WEIGHT (APPROX)
PALLET UNIT	19	41,914 LBS
DUNNAGE		277 LBS
TOTAL WEIGHT		42,191 LBS (APPROX)



ISOMETRIC VIEW

KEY NUMBERS

- ① SIDE SPACER (4 REOD). SEE THE "SIDE SPACER ASSEMBLY D" DETAIL ON PAGE 42. SEE GENERAL NOTES "H" AND "J" ON PAGE 2 AND SPECIAL NOTE 3 ON PAGE 25.
- ② SIDE SPACER (6 REOD). SEE THE "SIDE SPACER ASSEMBLY C" DETAIL ON PAGE 41.
- ③ SIDE SPACER (2 REOD). SEE THE "SIDE SPACER ASSEMBLY A" DETAIL ON PAGE 41.
- ④ REAR BLOCKING (1 REOD). SEE THE "REAR BLOCKING ASSEMBLY A" DETAIL ON PAGE 40. SEE SPECIAL NOTE 5 ON PAGE 25, AND GENERAL NOTE "Q" ON PAGE 2.



SECTION H-H

COMBINATION 1-WIDE AND 2-WIDE
TYPICAL 14-UNIT LOAD IN A 40'-0" LONG CONVENTIONAL VAN TRAILER

SPECIAL NOTES:

(SPECIAL NOTES CONTINUED)

1. A 40'-0" LONG BY 7'-6" WIDE (INSIDE DIMENSION) CONVENTIONAL VAN TRAILER IS SHOWN. TRAILERS OF OTHER DIMENSIONS CAN BE USED.
2. THE PALLET UNIT SHOWN IN THE TYPICAL COMBINATION ONE AND TWO WIDE LOAD ON PAGE 24 HAS OVERALL DIMENSIONS OF 35" LONG BY 48" WIDE BY 42-1/2" HIGH. THE DEPICTED PROCEDURES ARE ALSO APPLICABLE FOR UNITS OF OTHER DIMENSIONS. THE WEIGHT OF THE DEPICTED UNIT IS 2,820 POUNDS. THE NUMBER OF UNITS MAY NEED TO BE ADJUSTED IF THE ACTUAL UNIT BEING LOADED HAS A DIFFERENT WEIGHT. REFER TO "CHART NO. 4 ON PAGE 4 FOR GUIDANCE AS TO THE MAXIMUM NUMBER OF UNITS WHICH CAN BE LOADED, BASED ON THE WEIGHT OF THE UNIT TO BE SHIPPED.
3. IF THE TRAILER BEING LOADED HAS ROUNDED CORNERS, SIDE SPACER ASSEMBLY "D", PIECE MARKED ①, WILL HAVE TO BE MODIFIED AS SHOWN BY THE DETAIL ON PAGE 42 AND IN THE LOAD VIEW.
4. THE LOADING PROCEDURES SHOWN ON PAGE 24 ARE LIMITED TO 1-LAYER LOADS; PALLET UNITS WILL NOT BE STACKED.
5. IF THE SPACE AT THE REAR OF THE LOAD BETWEEN THE PALLET UNITS AND THE REAR DOOR IS GREATER THAN 1-1/2" OR LESS THAN 9", USE REAR BLOCKING ASSEMBLY "B" AS DETAILED ON PAGE 40. IF THE SPACE AT THE REAR OF THE LOAD IS 9" OR GREATER, USE THE REAR BLOCKING ASSEMBLY "A" AS SHOWN. IF THE SPACE AT THE REAR OF THE LOAD IS 1-1/2" OR LESS, REAR BLOCKING IS NOT REQUIRED.
6. THE DEPICTED LOAD CAN BE ADJUSTED TO SUIT THE QUANTITY TO BE SHIPPED OR THE WEIGHT OR SIZE OF THE UNITS. THE LOAD CAN BE INCREASED BY REPLACING SOME OF THE 1-WIDE UNITS IN THE CENTER PORTION OF THE LOAD WITH 2-WIDE UNITS EITHER AT THE FRONT OR THE REAR OR BOTH. THE LOAD CAN BE REDUCED BY REPLACING EITHER OR BOTH 2-WIDE PORTIONS WITH SINGLE UNITS AS IN THE CENTER OF THE LOAD. SEE SPECIAL NOTE 9.
7. IF A PALLET UNIT WHICH DOES NOT CONTAIN A FULL QUANTITY OF BOXES IS TO BE TRANSPORTED, THAT SHORT UNIT SHOULD BE POSITIONED AT THE REAR OF THE LOAD. LEFTOVER BOXES, 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 BOXES" ON PAGE 45 FOR GUIDANCE.
8. IF THE TRAILER BEING LOADED IS EQUIPPED WITH A WOOD OR WOOD AND METAL FLOOR, AND IF DESIRED, NAILED SIDE BLOCKING MAY BE USED IN LIEU OF THE SIDE SPACERS, PIECES MARKED ① THRU ③. SIDE BLOCKING SHOULD BE DOUBLED 2" X 4" MATERIAL EITHER PALLET UNIT LENGTH OR WIDTH, AS APPLICABLE. NAIL THE FIRST PIECE TO THE TRAILER FLOOR W/4-10d NAILS. NAIL THE SECOND PIECE TO THE FIRST IN A LIKE MANNER. IT MAY BE NECESSARY TO PRE-POSITION THE SIDE BLOCKING FOR THE 2-WIDE PORTION OF THE LOAD, AND ALSO FOR THE 1-WIDE PORTION IF THE BOXES OVERHANG THE PALLET TOO FAR. NOTE THAT RANDOM LENGTH MATERIAL MAY BE USED. NAIL EACH LAYER W/1-10d NAIL EVERY 12".
9. A LOAD MAY BE REDUCED BY TURNING THE UNITS IN THE 1 WIDE PORTION OF THE LOAD SO THE LENGTH OF THE UNIT IS ACROSS THE WIDTH OF THE TRAILER. LATERAL BRACING FOR THE TURNED UNITS WILL THEN BE AS SHOWN BY PIECE MARKED ① ON PAGE 24.

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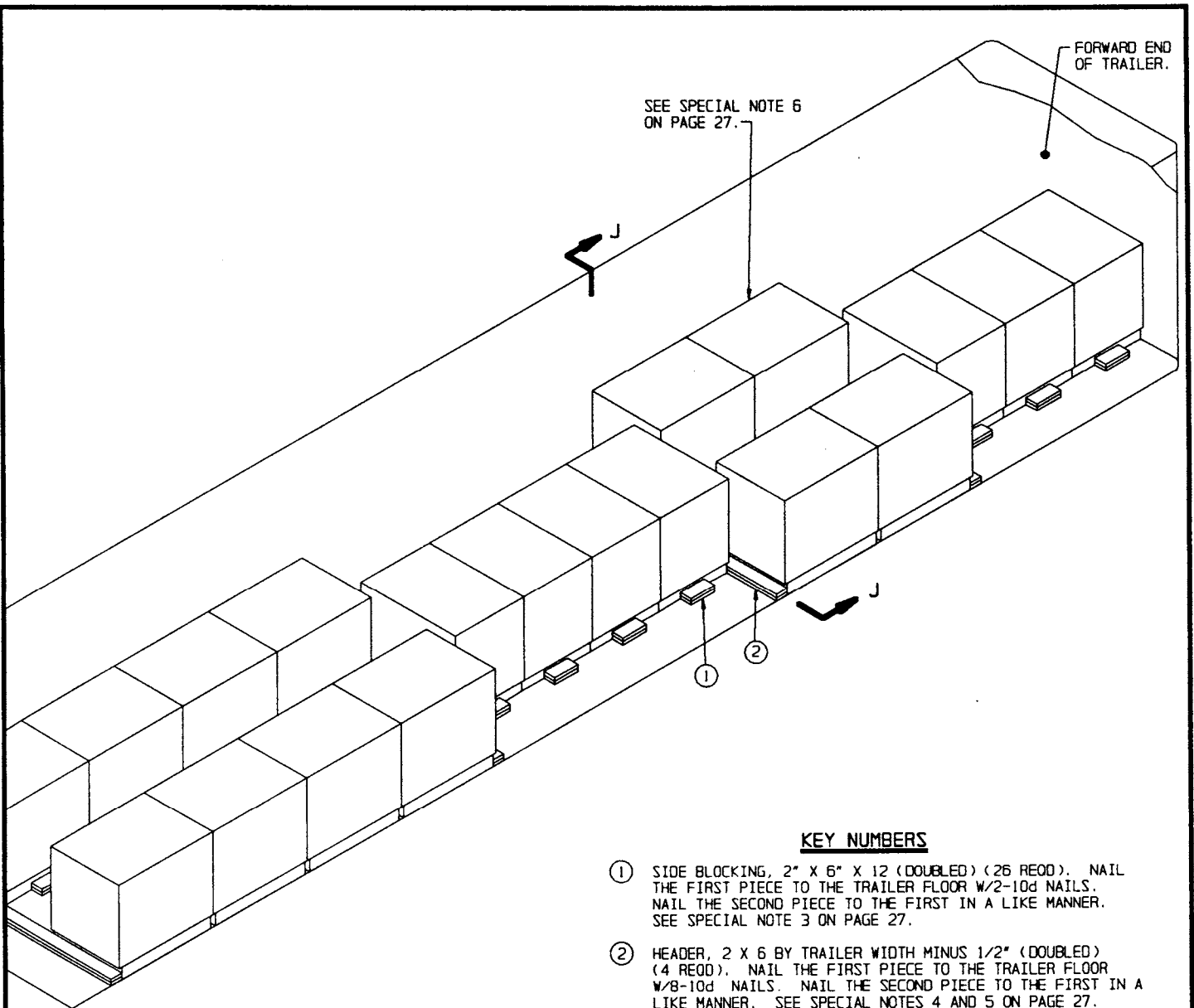
BILL OF MATERIAL (TYPICAL)

LUMBER	LINEAR FEET	BOARD FEET
1" X 4"	60	20
2" X 4"	214	143
2" X 6"	24	24
NAILS	NO. REQD	POUNDS
6d (2")	196	1-1/4
10d (3")	130	2

LOAD AS SHOWN (TYPICAL)

ITEM	QUANTITY	WEIGHT (APPROX)
PALLET UNIT	14	39,480 LBS
DUNNAGE		378 LBS
TOTAL WEIGHT		39,858 LBS (APPROX)

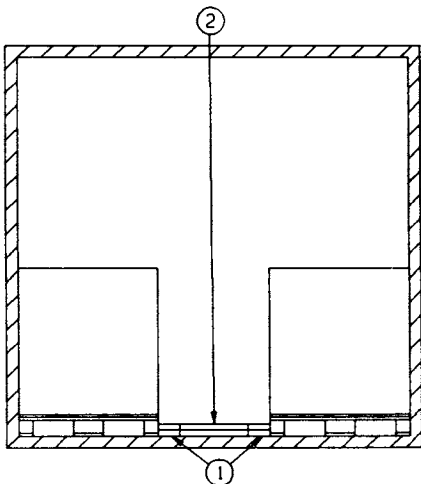
COMBINATION 1-WIDE AND 2-WIDE
TYPICAL 14-UNIT LOAD IN A 40'-0" LONG CONVENTIONAL VAN TRAILER



ISOMETRIC VIEW

KEY NUMBERS

- ① SIDE BLOCKING, 2" X 6" X 12 (DOUBLED) (26 REOD). NAIL THE FIRST PIECE TO THE TRAILER FLOOR W/2-10d NAILS. NAIL THE SECOND PIECE TO THE FIRST IN A LIKE MANNER. SEE SPECIAL NOTE 3 ON PAGE 27.
- ② HEADER, 2 X 6 BY TRAILER WIDTH MINUS 1/2" (DOUBLED) (4 REOD). NAIL THE FIRST PIECE TO THE TRAILER FLOOR W/8-10d NAILS. NAIL THE SECOND PIECE TO THE FIRST IN A LIKE MANNER. SEE SPECIAL NOTES 4 AND 5 ON PAGE 27.



SECTION J-J

**COMBINATION 1-WIDE AND 2-WIDE
TYPICAL 19-UNIT LOADIN A 45'-0" LONG CONVENTIONAL VAN TRAILER**

SPECIAL NOTES:

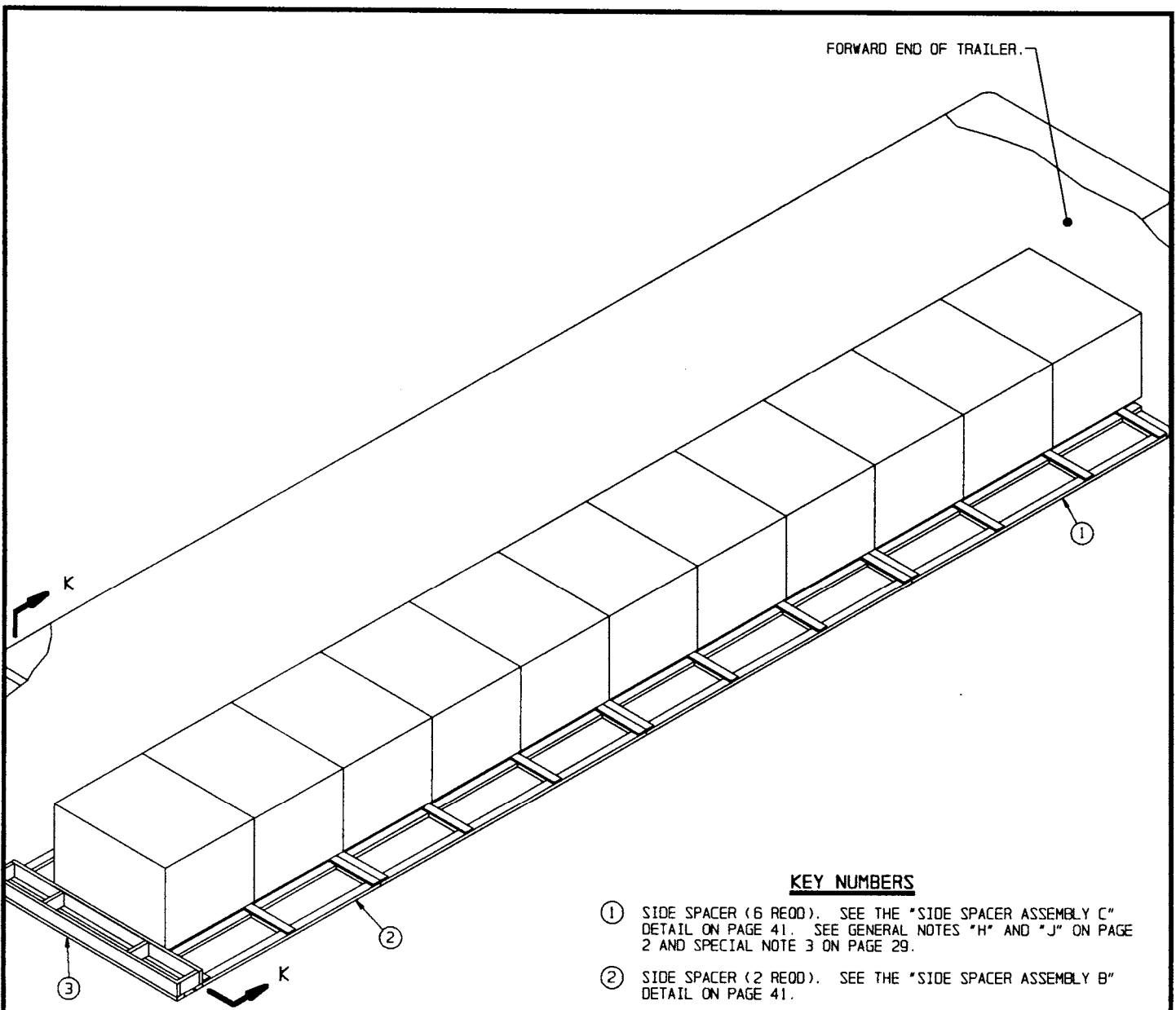
1. A 48'-0" LONG BY 8'-2" WIDE (INSIDE DIMENSION) CONVENTIONAL VAN TRAILER IS SHOWN. TRAILERS OF OTHER DIMENSIONS CAN BE USED.
2. THE PALLET UNIT SHOWN IN THE TYPICAL COMBINATION ONE AND TWO WIDE LOAD ON PAGE 26 HAS OVERALL DIMENSIONS OF 35" LONG BY 48" WIDE BY 42-1/2" HIGH. THE DEPICTED PROCEDURES ARE ALSO APPLICABLE FOR UNITS OF OTHER DIMENSIONS. THE WEIGHT OF THE DEPICTED UNIT IS 2,200 POUNDS. THE NUMBER OF UNITS MAY NEED TO BE ADJUSTED IF THE ACTUAL UNIT BEING LOADED HAS A DIFFERENT WEIGHT. REFER TO "CHART NO. 4 ON PAGE 4 FOR GUIDANCE AS TO THE MAXIMUM NUMBER OF UNITS WHICH CAN BE LOADED, BASED ON THE WEIGHT OF THE UNIT TO BE SHIPPED.
3. IN LIEU OF PIECES MARKED ① WHICH ARE 12" LONG, SIDE BLOCKING CAN BE DOUBLED 2" X 6" MATERIAL EITHER PALLET UNIT LENGTH OR WIDTH, AS APPLICABLE. NAIL THE FIRST PIECE TO THE TRAILER FLOOR W/4-10d NAILS. NAIL THE SECOND PIECE TO THE FIRST IN A LIKE MANNER. IT MAY BE NECESSARY TO PRE-POSITION THE SIDE BLOCKING FOR THE 2-WIDE PORTION OF THE LOAD. NOTE THAT RANDOM LENGTH MATERIAL MAY BE USED. NAIL EACH LAYER W/1-10d NAIL EVERY 24".
4. IF THE SPACE AT THE REAR OF THE LOAD BETWEEN THE PALLET UNITS AND THE REAR DOOR IS GREATER THAN 1-1/2" AND LESS THAN 6", USE REAR BLOCKING ASSEMBLY "B" AS DETAILED ON PAGE 40. IF THE SPACE AT THE REAR OF THE LOAD IS 6" OR GREATER, USE THE HEADER MARKED ② AS SHOWN. IF THE SPACE AT THE REAR OF THE LOAD IS 1-1/2" OR LESS, REAR BLOCKING IS NOT REQUIRED. SEE SPECIAL NOTE 5.
5. IF THE TRAILER IS EQUIPPED WITH A METAL THRESHOLD PLATE AND IT INTERFERS WITH THE NAILING OF PIECE MARKED ② AT THE REAR OF THE LOAD, "REAR BLOCKING ASSEMBLY A", AS DETAILED ON PAGE 40, MUST BE INSTALLED.
6. ONE OR MORE 2-WIDE LOAD UNITS MAY BE POSITIONED NEAR THE FRONT AND/OR CENTER OF THE TRAILER LENGTH IN PLACE OF THE 1-WIDE LOAD UNITS TO PROVIDE FOR PROPER WEIGHT DISTRIBUTION. NOTE THAT THE QUANTITY AND/OR LOCATION OF THESE UNITS MAY BE DIFFERENT FROM WHAT IS SHOWN FOR PALLET UNITS OF OTHER SIZES AND WEIGHTS, AND FOR TRAILERS OF OTHER LENGTHS.
7. THE LOADING PROCEDURES SHOWN ON PAGE 26 ARE LIMITED TO 1-LAYER LOADS; PALLET UNITS WILL NOT BE STACKED.
8. THE DEPICTED LOAD CAN BE ADJUSTED TO SUIT THE QUANTITY TO BE SHIPPED OR THE WEIGHT OR SIZE OF THE UNITS. THE LOAD CAN BE INCREASED BY REPLACING SOME OF THE 1-WIDE UNITS WITH 2-WIDE UNITS, OR THE LOAD CAN BE REDUCED BY REPLACING 2-WIDE PORTIONS WITH SINGLE UNITS.
9. IF A PALLET UNIT WHICH DOES NOT CONTAIN A FULL QUANTITY OF BOXES IS TO BE TRANSPORTED, THAT SHORT UNIT SHOULD BE POSITIONED AT THE REAR OF THE LOAD. LEFTOVER BOXES, 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 BOXES" ON PAGE 45 FOR GUIDANCE.

BILL OF MATERIAL (TYPICAL)		
LUMBER	LINEAR FEET	BOARD FEET
2" X 6"	114	114
NAILS	NO. REQD	POUNDS
10d (3")	168	2-3/4

LOAD AS SHOWN (TYPICAL)

ITEM	QUANTITY	WEIGHT (APPROX)
PALLET UNIT	19	41,990 LBS
DUNNAGE		231 LBS
TOTAL WEIGHT		42,221 LBS (APPROX)

COMBINATION 1-WIDE AND 2-WIDE
TYPICAL 19-UNIT LOAD IN A 48'-0" LONG CONVENTIONAL VAN TRAILER

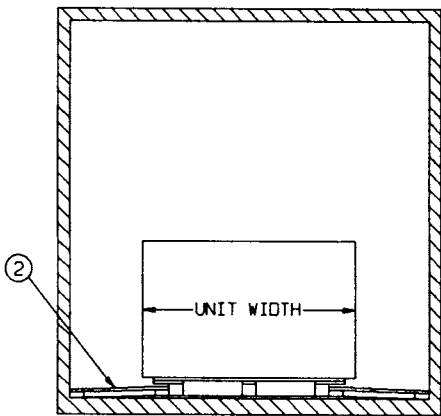


FORWARD END OF TRAILER.

ISOMETRIC VIEW

KEY NUMBERS

- ① SIDE SPACER (6 REQD). SEE THE "SIDE SPACER ASSEMBLY C" DETAIL ON PAGE 41. SEE GENERAL NOTES "H" AND "J" ON PAGE 2 AND SPECIAL NOTE 3 ON PAGE 29.
- ② SIDE SPACER (2 REQD). SEE THE "SIDE SPACER ASSEMBLY B" DETAIL ON PAGE 41.
- ③ REAR BLOCKING (1 REQD). SEE THE "REAR BLOCKING ASSEMBLY A" DETAIL ON PAGE 40. SEE SPECIAL NOTE 4 ON PAGE 27, AND GENERAL NOTE 0 ON PAGE 2.



SECTION K-K

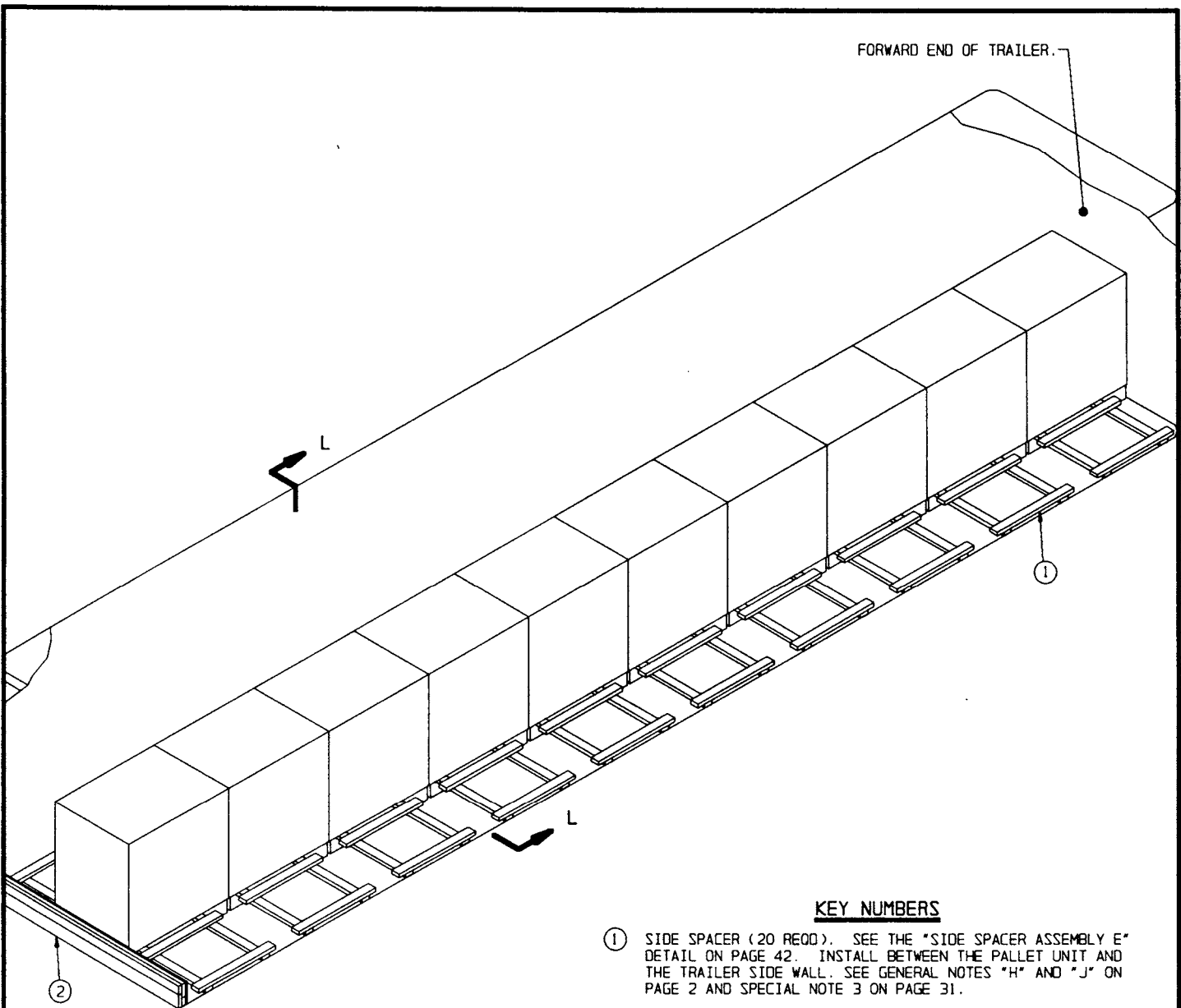
SPECIAL NOTES:

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 PALLET UNIT SHOWN IN THE TYPICAL ONE-WIDE LOAD ON PAGE 28 HAS OVERALL DIMENSIONS OF 42-3/8" LONG BY 53-1/4" WIDE BY 40" HIGH. THE DEPICTED PROCEDURES ARE ALSO APPLICABLE FOR UNITS OF OTHER DIMENSIONS. REFER TO "CHART NO. 2" ON PAGE 5 FOR GUIDANCE AS TO THE MAXIMUM NUMBER OF UNITS WHICH CAN BE LOADED IN THE LENGTH OF THE TRAILER. THE WEIGHT OF THE DEPICTED UNIT IS 3,622 POUNDS. THE NUMBER OF UNITS MAY NEED TO BE ADJUSTED IF THE ACTUAL UNIT BEING LOADED HAS A DIFFERENT WEIGHT. REFER TO "CHART NO. 4" ON PAGE 4 FOR GUIDANCE AS TO THE MAXIMUM NUMBER OF UNITS WHICH CAN BE LOADED, BASED ON THE WEIGHT OF THE UNIT TO BE SHIPPED.
3. IF THE TRAILER BEING LOADED HAS ROUNDED CORNERS, SIDE SPACER ASSEMBLY "C", PIECE MARKED ①, WILL HAVE TO BE MODIFIED AS SHOWN BY THE DETAIL ON PAGE 41, AND IN THE LOAD VIEW.
4. THE LOADING PROCEDURES SHOWN ON PAGE 28 ARE LIMITED TO 1-LAYER LOADS; PALLET UNITS WILL NOT BE STACKED. IF THE SPACE AT THE REAR OF THE LOAD BETWEEN THE PALLET UNITS AND THE REAR DOOR IS GREATER THAN 1-1/2" AND LESS THAN 9", USE REAR BLOCKING ASSEMBLY "B" AS DETAILED ON PAGE 40. IF THE SPACE AT THE REAR OF THE LOAD IS 9" OR GREATER, USE THE REAR BLOCKING ASSEMBLY "A" AS SHOWN. IF THE SPACE AT THE REAR OF THE LOAD IS 1-1/2" OR LESS, REAR BLOCKING IS NOT REQUIRED.
5. THE DEPICTED LOAD CAN BE ADJUSTED TO SUIT THE QUANTITY TO BE SHIPPED OR THE WEIGHT OF THE UNIT.
6. LEFTOVER BOXES IN AN AMOUNT NOT TO EXCEED ONE LAYER MAY BE SECURED TO THE TOP OF A FULL PALLET UNIT FOR SHIPMENT. REFER TO THE "PROCEDURES FOR SHIPMENT OF LEFTOVER BOXES" ON PAGE 45 FOR GUIDANCE.
7. REFER TO PAGES 46, 47, AND 48 FOR GUIDANCE IN THE SHIPMENT OF PARTIAL PALLET UNITS.

BILL OF MATERIAL (TYPICAL)		
LUMBER	LINEAR FEET	BOARD FEET
1" X 4"	64	22
2" X 4"	215	144
2" X 6"	18	18
NAILS	NO. REOD	POUNDS
6d (2")	294	1-3/4
10d (3")	40	3/4

LOAD AS SHOWN (TYPICAL)

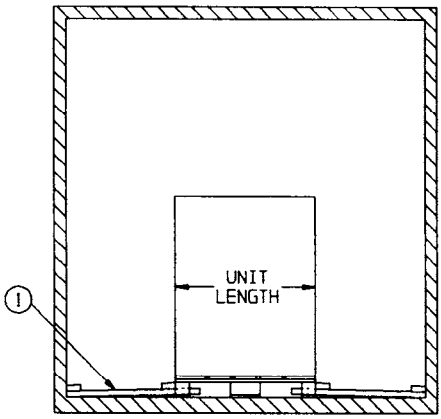
ITEM	QUANTITY	WEIGHT (APPROX)
PALLET UNIT	11	39,842 LBS
DUNNAGE		371 LBS
TOTAL WEIGHT		40,213 LBS (APPROX)



KEY NUMBERS

- ① SIDE SPACER (20 REQD). SEE THE "SIDE SPACER ASSEMBLY E" DETAIL ON PAGE 42. INSTALL BETWEEN THE PALLET UNIT AND THE TRAILER SIDE WALL. SEE GENERAL NOTES "H" AND "J" ON PAGE 2 AND SPECIAL NOTE 3 ON PAGE 31.
- ② REAR BLOCKING (1 REQD). SEE THE "REAR BLOCKING ASSEMBLY B" DETAIL ON PAGE 40. SEE SPECIAL NOTE 6 ON PAGE 31, AND GENERAL NOTE "O" ON PAGE 2.

ISOMETRIC VIEW



SECTION L-L

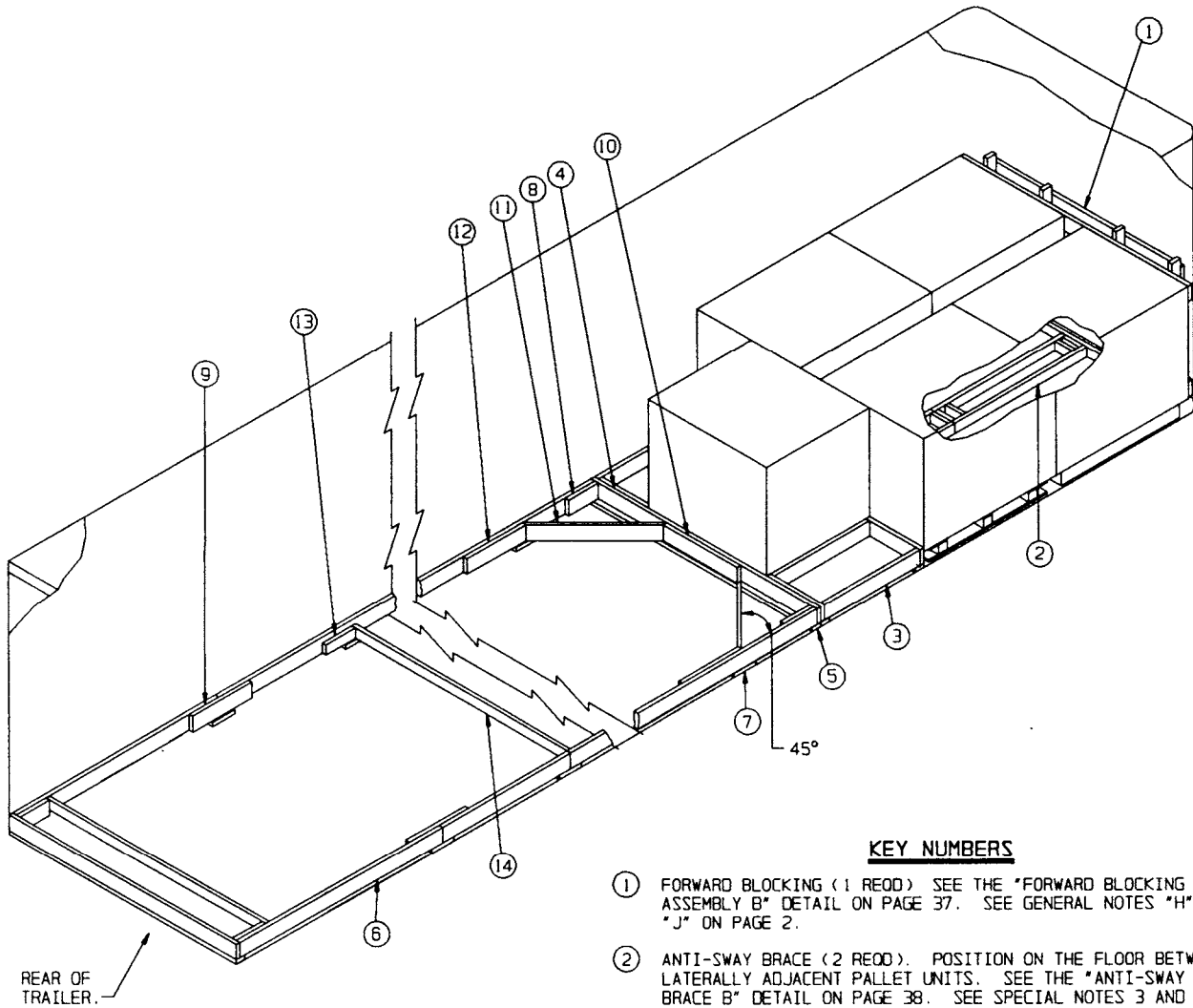
SPECIAL NOTES:

1. A 40'-0" LONG BY 7'-6" WIDE (INSIDE DIMENSION) CONVENTIONAL VAN TRAILER IS SHOWN. TRAILERS OF OTHER DIMENSIONS CAN BE USED.
2. THE PALLET UNIT SHOWN IN THE TYPICAL ONE-WIDE LOAD ON PAGE 30 HAS OVERALL DIMENSIONS OF 35" LONG BY 47" WIDE BY 51" HIGH. THE DEPICTED PROCEDURES ARE ALSO APPLICABLE FOR UNITS OF OTHER DIMENSIONS. REFER TO "CHART NO. 2" ON PAGE 5 FOR GUIDANCE AS TO THE MAXIMUM NUMBER OF UNITS WHICH CAN BE LOADED IN THE LENGTH OF THE TRAILER. THE WEIGHT OF THE DEPICTED UNIT IS 3,425 POUNDS. THE NUMBER OF UNITS MAY NEED TO BE ADJUSTED IF THE ACTUAL UNIT BEING LOADED HAS A DIFFERENT WEIGHT. REFER TO "CHART NO. 4" ON PAGE 4 FOR GUIDANCE AS TO THE MAXIMUM NUMBER OF UNITS WHICH CAN BE LOADED, BASED ON THE WEIGHT OF THE UNIT TO BE SHIPPED.
3. IF THE TRAILER BEING LOADED HAS ROUNDED CORNERS, SIDE SPACER ASSEMBLY "E" MAY HAVE TO BE MODIFIED AS SHOWN BY THE DETAIL ON PAGE 42.
4. THE LOADING PROCEDURES SHOWN ON PAGE 30 ARE LIMITED TO 1-LAYER LOADS; PALLET UNITS WILL NOT BE STACKED.
5. THE DEPICTED LOAD CAN BE ADJUSTED TO SUIT THE QUANTITY TO BE SHIPPED OR THE WEIGHT OF THE UNIT.
6. IF THE SPACE AT THE REAR OF THE LOAD BETWEEN THE PALLET UNITS AND THE REAR DOOR IS GREATER THAN 1-1/2" AND LESS THAN 9", USE REAR BLOCKING ASSEMBLY "B" AS SHOWN. IF THE SPACE AT THE REAR OF THE LOAD IS 9" OR GREATER, USE THE REAR BLOCKING ASSEMBLY "A" AS DETAILED ON PAGE 40. IF THE SPACE AT THE REAR OF THE LOAD IS 1-1/2" OR LESS, REAR BLOCKING IS NOT REQUIRED.
7. LEFTOVER BOXES IN AN AMOUNT NOT TO EXCEED ONE LAYER MAY BE SECURED TO THE TOP OF A FULL PALLET UNIT FOR SHIPMENT. REFER TO THE "PROCEDURES FOR SHIPMENT OF LEFTOVER BOXES" ON PAGE 45 FOR GUIDANCE.
8. REFER TO PAGES 46, 47, AND 48 FOR GUIDANCE IN THE SHIPMENT OF PARTIAL PALLET UNITS.

BILL OF MATERIAL (TYPICAL)		
LUMBER	LINEAR FEET	BOARD FEET
1" X 4"	8	3
1" X 6"	8	4
2" X 4"	247	165
2" X 6"	15	15
NAILS	NO. REQD	POUNDS
6d (2")	16	NIL
10d (3")	256	4

LOAD AS SHOWN (TYPICAL)

ITEM	QUANTITY	WEIGHT (APPROX)
PALLET UNIT	10	34,250 LBS
DUNNAGE		378 LBS
TOTAL WEIGHT		34,628 LBS (APPROX)



ISOMETRIC VIEW

(KEY NUMBERS CONTINUED)

- ⑩ CENTER CLEAT, 2" X 6" X 30" (1 REOD). NAIL TO A HEADER, PIECE MARKED ④, W/6-10d NAILS.
- ⑪ DIAGONAL BRACE, 2" X 6" BY CUT TO FIT (2 REOD). DOUBLE BEVEL EACH END WITH 45° CUTS. INSTALL AT A 45° ANGLE AS SHOWN AND TOENAIL TO THE ADJACENT HEADER AND SIDE STRUT, PIECES MARKED ④ AND ⑥, W/2-16d NAILS AT EACH END.
- ⑫ BACK-UP CLEAT, 2" X 6" X 24" (2 REOD). NAIL TO A SIDE STRUT, PIECE MARKED ⑥, W/8-10d NAILS.
- ⑬ STRUT BRACE RETAINING CLEAT, 2" X 4" X 12" (AS REOD). NAIL TO A SIDE STRUT, PIECE MARKED ⑥, W/3-10d NAILS. SEE SPECIAL NOTE 7 ON PAGE 33.
- ⑭ STRUT BRACE, 2" X 4" BY TRAILER WIDTH MINUS 3" IN LENGTH (MINIMUM OF ONE REQUIRED). NAIL TO THE POCKET CLEATS, PIECES MARKED ⑧, AND/OR TO THE STRUT BRACE RETAINING CLEATS, PIECES MARKED ⑬, W/2-12d NAILS AT EACH END. SEE SPECIAL NOTE 7 ON PAGE 33.

KEY NUMBERS

- ① FORWARD BLOCKING (1 REOD) SEE THE "FORWARD BLOCKING ASSEMBLY B" DETAIL ON PAGE 37. SEE GENERAL NOTES "H" AND "J" ON PAGE 2.
- ② ANTI-SWAY BRACE (2 REOD). POSITION ON THE FLOOR BETWEEN LATERALLY ADJACENT PALLET UNITS. SEE THE "ANTI-SWAY BRACE B" DETAIL ON PAGE 38. SEE SPECIAL NOTES 3 AND 4 ON PAGE 33.
- ③ SPACER ASSEMBLY (2 REOD). SEE THE "SPACER ASSEMBLY C" DETAIL ON PAGE 33. NAIL TO A HEADER, PIECE MARKED ④, W/2-10d NAILS. SEE SPECIAL NOTE 5 ON PAGE 33.
- ④ HEADER, 2" X 6" BY TRAILER WIDTH MINUS 1/2" IN LENGTH (2 REOD). SEE SPECIAL NOTES 9 AND 10 ON PAGE 33.
- ⑤ HEADER AND SIDE STRUT SUPPORT, 2" X 4" BY TRAILER WIDTH MINUS 1/2" IN LENGTH (2 REOD). NAIL TO THE BOTTOM EDGE OF A HEADER, PIECE MARKED ④, W/1-10d NAIL EVERY 8".
- ⑥ SIDE STRUT, 2" X 6" BY CUT TO FIT BETWEEN THE FORWARD AND REAR HEADERS, PIECES MARKED ④ (2 REOD). SEE SPECIAL NOTE 6 ON PAGE 33.
- ⑦ RISER PIECE, 2" X 4" X 9" (AS REOD). CENTER UNDER THE JOINTS OF PIECES MARKED ① AND ②, ③ AND ④, AND UNDER THE SPLICE OF PIECES MARKED ⑥ IF APPLICABLE. NAIL TO SIDE STRUT MARKED ⑥ W/2-10d NAILS.
- ⑧ POCKET CLEAT, 2" X 6" X 12" (4 REOD). NAIL TO A SIDE STRUT, PIECE MARKED ⑥, W/3-10d NAILS. TOENAIL TO THE ADJACENT HEADER, PIECE MARKED ④, W/3-12d NAILS.
- ⑨ SPLICE PIECE, 2" X 6" X 24" (AS REOD). CENTER ON JOINT OF PIECES MARKED ⑤ AND NAIL TO SIDE STRUT MARKED ⑥ W/4-10d NAILS AT EACH END. SEE SPECIAL NOTE 6 ON PAGE 33.

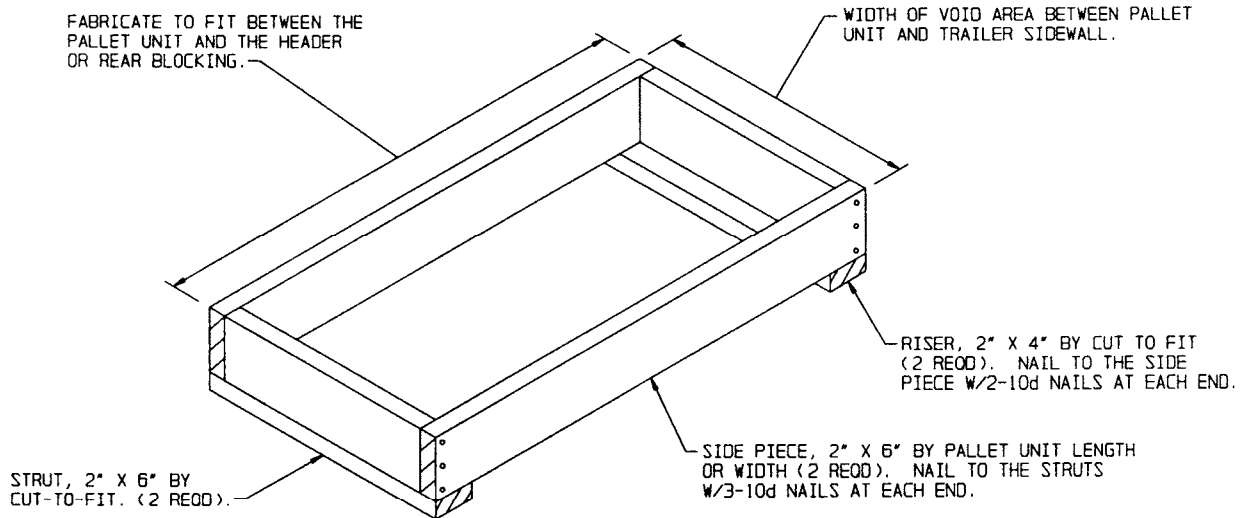
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SPECIAL NOTES:

(SPECIAL NOTES CONTINUED)

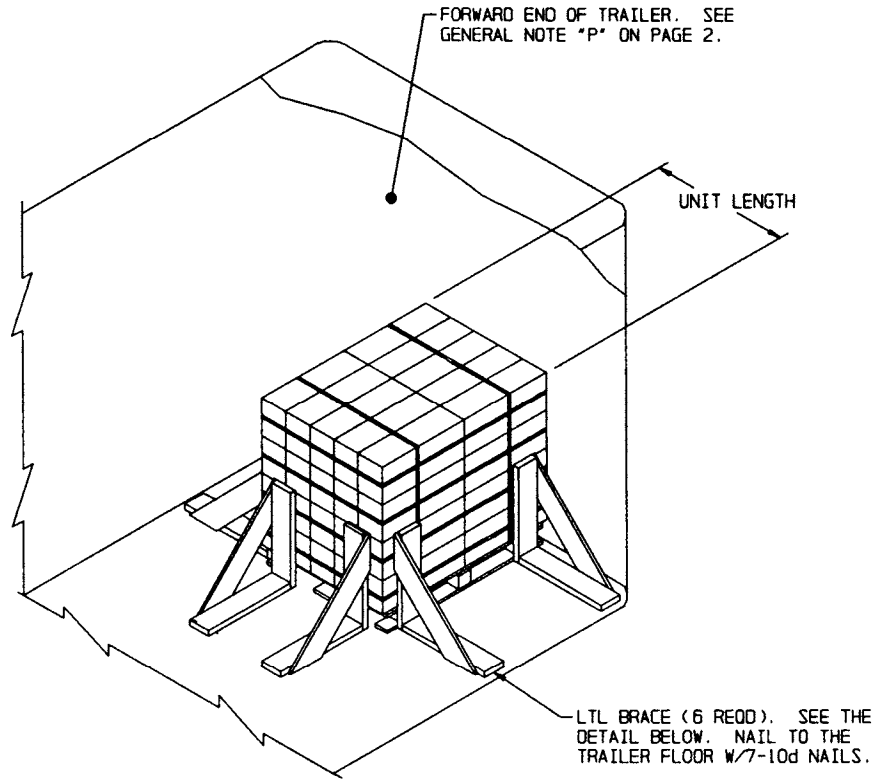
1. A 7'-8" WIDE (INSIDE DIMENSION) CONVENTIONAL VAN TRAILER IS SHOWN. TRAILERS OF OTHER WIDTHS CAN BE USED.
2. THE PALLET UNIT SHOWN IN THE TYPICAL LTL LOAD HAS OVERALL DIMENSIONS OF 42" LONG BY 53-3/4" WIDE BY 45-1/4" HIGH. THE DEPICTED PROCEDURES ARE ALSO APPLICABLE FOR UNITS OF OTHER LENGTHS AND WIDTHS IN A 7'-8" WIDE TRAILER. REFER TO "CHART NO. 1" ON PAGE 5 FOR GUIDANCE AS TO THE MAXIMUM SIZES OF UNITS WHICH CAN BE LOADED TWO WIDE IN TRAILERS OF OTHER WIDTHS.
3. THE ANTI-SWAY BRACE "B", SHOWN IN THE LOAD VIEW AS PIECE MARKED (2), IS DESIGNED FOR USE WITHIN LOADS HAVING PALLET UNITS POSITIONED WITH THE WIDTH PARALLEL TO THE TRAILER SIDE WALL; ANTI-SWAY BRACE "C", AS DETAILED ON PAGE 39, WILL BE USED FOR UNITS POSITIONED WITH THE LENGTH PARALLEL TO THE SIDEWALL.
4. THE ANTI-SWAY BRACING MAY BE OMITTED IF THE SPACE BETWEEN LATERALLY ADJACENT UNITS IS 3" OR LESS, AS MEASURED FROM BOX TO BOX ON LATERALLY ADJACENT UNITS.
5. THE SPACER ASSEMBLIES, PIECE MARKED (3), ARE SHOWN ONLY TO DEPICT A TYPICAL INSTALLATION. SPACER ASSEMBLIES WILL BE USED WHEN A PALLET UNIT IS OMITTED. THEY MAY OR MAY NOT BE REQUIRED, DEPENDING ON THE QUANTITY OF PALLET UNITS TO BE SHIPPED.
6. DEPENDING ON THE NUMBER OF UNITS BEING LOADED, EACH OF THE SIDE STRUTS, PIECES MARKED (6), MAY NEED TO BE FORMED FROM MORE THAN ONE PIECE OF MATERIAL. IF SUCH IS THE CASE, THE SIDE STRUTS MUST BE SPLICED. SPLICING CAN BE ACCOMPLISHED BY CENTERING A 2" X 6" X 24" PIECE ON THE JOINT OF THE SIDE STRUTS AND NAILING IT TO THE SIDE STRUTS W/4-10d NAILS AT EACH END. CAUTION: A RISER PIECE, PIECE MARKED (7), MUST BE POSITIONED UNDER EACH SPLICE JOINT. NOTE: IF DESIRED, THE STRUT BRACING PIECE(S), PIECE MARKED (4), MAY BE NAILED TO THE SPLICE PIECES IN LIEU OF USING ADDITIONAL STRUT BRACE RETAINING CLEATS, PIECES MARKED (3).
7. ALL LTL LOADS, REGARDLESS OF THEIR SIZE, REQUIRE ONE STRUT BRACE POSITIONED AT THE REAR OF THE TRAILER AND NAILED TO PIECE MARKED (8). IF THE SIDE STRUTS, PIECE MARKED (6), ARE LONGER THAN 7'-0", AN ADDITIONAL STRUT BRACE, PIECE MARKED (4), AND TWO STRUT BRACE RETAINING CLEATS, PIECE MARKED (3), AND TWO RISER PIECES MARKED (7), MUST BE APPLIED FOR EVERY 7'-0" OF SIDE STRUT LENGTH.
8. THE "K-BRACE" BLOCKING, SHOWN AS PIECE MARKED (4) THRU (14), IS ADEQUATE FOR RETAINING A MAXIMUM LTL LOAD OF 20,000 POUNDS.
9. TRAILERS EQUIPPED WITH ROLL-UP TYPE DOORS MAY BE USED; HOWEVER, THE NAILED-HEADER METHOD OF REAR BLOCKING MUST BE INSTALLED IN LIEU OF THE "K-BRACE" TYPE BLOCKING. SEE THE "PROCEDURES FOR CONVENTIONAL VAN TRAILERS EQUIPPED WITH ROLL-UP TYPE DOORS ON PAGE 49 FOR GUIDANCE. NOTE THAT THE NAILED-HEADER METHOD OF REAR BLOCKING MAY ALSO BE USED IN TRAILERS EQUIPPED WITH HINGED DOORS, AND MAY BE USED IN LIEU OF PIECES MARKED (4) THRU (14) WHICH APPLY TO TRAILERS HAVING NON-NAILABLE FLOORS.
10. IF DESIRED, IN TRAILERS EQUIPPED WITH NAILABLE FLOORS, THE NAILED-HEADER METHOD OF REAR BLOCKING MAY ALSO BE USED IN LIEU OF THE K-BRACE BLOCKING SHOWN AS PIECES MARKED (4) THRU (14). REFER TO PAGE 49 FOR GUIDANCE.
11. LEFTOVER BOXES IN AN AMOUNT NOT TO EXCEED ONE LAYER MAY BE SECURED TO THE TOP OF A FULL PALLET UNIT FOR SHIPMENT. REFER TO THE "PROCEDURES FOR SHIPMENT OF LEFTOVER BOXES" ON PAGE 45 FOR GUIDANCE.
12. REFER TO PAGES 46, 47, AND 48 FOR GUIDANCE IN THE SHIPMENT OF PARTIAL PALLET UNITS.

(CONTINUED AT RIGHT)



SPACER ASSEMBLY C

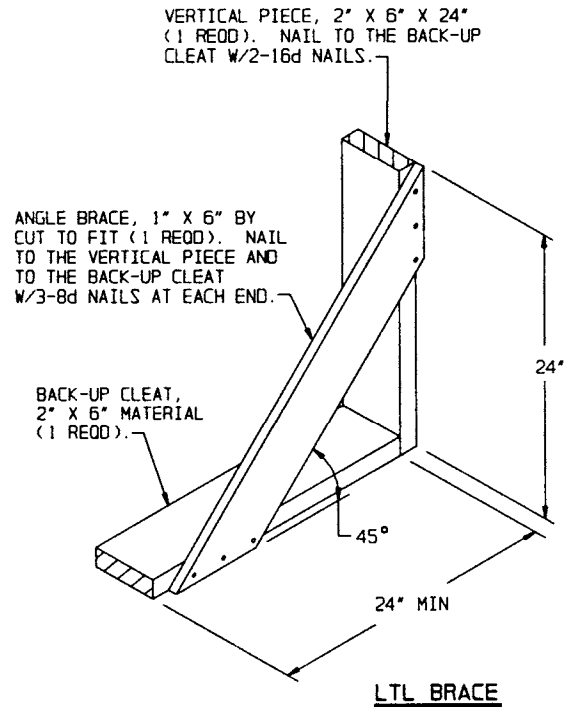
THIS ASSEMBLY IS FOR USE IN THE LTL LOAD SHOWN ON PAGE 30 AND IN THE ALTERNATIVE REAR LOADING PATTERN B VIEW ON PAGE 36.

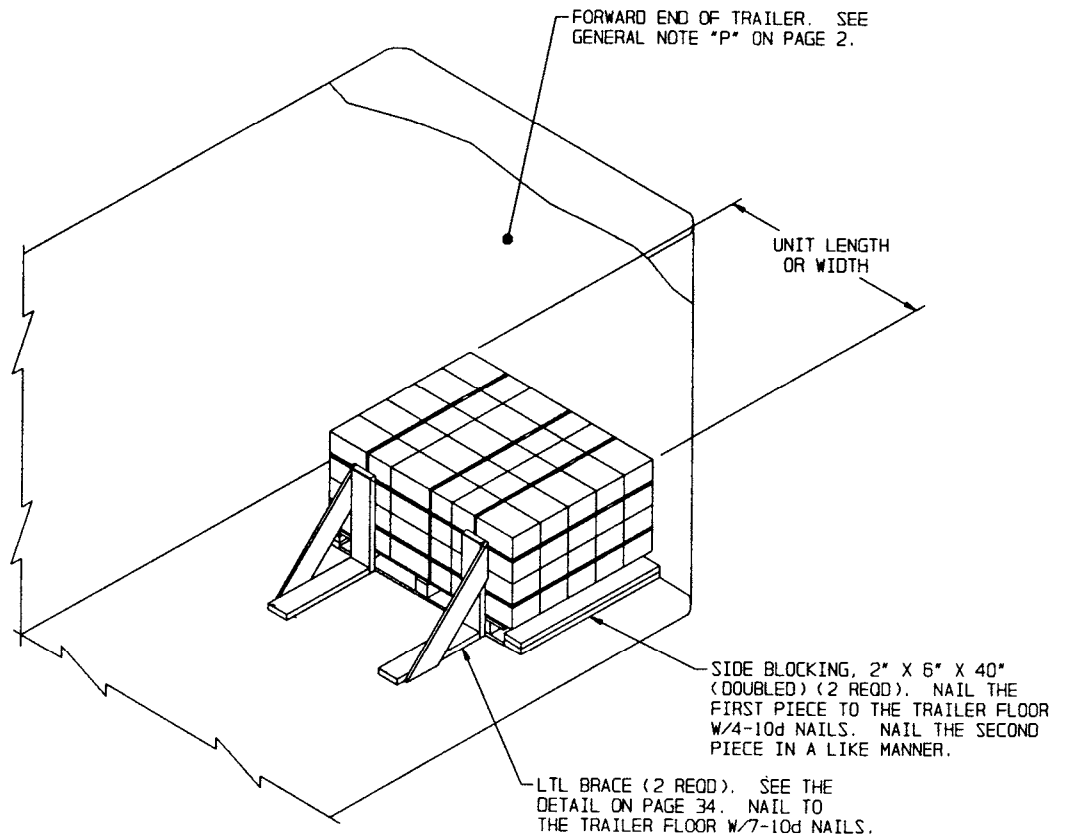


ISOMETRIC VIEW

SPECIAL NOTES:

1. A 7'-6" WIDE (INSIDE DIMENSION) CONVENTIONAL VAN TRAILER WHICH HAS A NAILABLE FLOOR IS SHOWN. TRAILERS OF OTHER WIDTHS CAN BE USED.
2. THE PALLET UNIT SHOWN IN THE TYPICAL LTL LOAD HAS OVERALL DIMENSIONS OF 35" LONG BY 48" WIDE BY 42-1/2" HIGH. THE DEPICTED PROCEDURES ARE ALSO APPLICABLE FOR UNITS OF OTHER SIZES. SEE SPECIAL NOTE 3.
3. THE POSITIONING OF A UNIT IS OPTIONAL. UNITS HAVING A LENGTH OF 39" OR LESS MAY BE POSITIONED AS SHOWN ABOVE. UNITS HAVING A LENGTH GREATER THAN 39" MAY BE POSITIONED AS SHOWN ON PAGE 35 OR MAY BE LOCATED IN THE CORNER OF THE TRAILER, BECAUSE OF INSUFFICIENT SPACE FOR INSTALLATION OF THE LTL BRACES. IF THE TRAILER DOES NOT HAVE A SQUARE FRONT, A "FORWARD BLOCKING ASSEMBLY B" MUST BE INSTALLED WHEN POSITIONING A UNIT IN THE CORNER OF THE TRAILER. SEE THE DETAIL ON PAGE 37.
4. MORE THAN ONE PALLET UNIT CAN BE SHIPPED, PROVIDING THE CAPACITY OF THE LTL BRACES IS NOT EXCEEDED. THE LOAD SHOULD BE FORMED IN ROWS, WITH THE UNITS POSITIONED AGAINST OPPOSITE SIDEWALLS. THE PROPER ANTI-SWAY BRACES, IF REQUIRED, WILL BE INSTALLED BETWEEN THE LATERALLY ADJACENT UNITS. SEE THE DETAILS ON PAGES 39 AND 42.
5. EACH LTL BRACE AS APPLIED FOR LONGITUDINAL BRACING WILL SUPPORT 2,000 POUNDS OF LADING; HOWEVER, NOT LESS THAN TWO BRACES WILL BE USED AGAINST EACH PALLET UNIT ACROSS THE WIDTH OF THE TRAILER.
6. IF THE PALLET UNIT HAS BATTENS, THE LTL BRACES MUST BE POSITIONED AGAINST THE BATTENS.



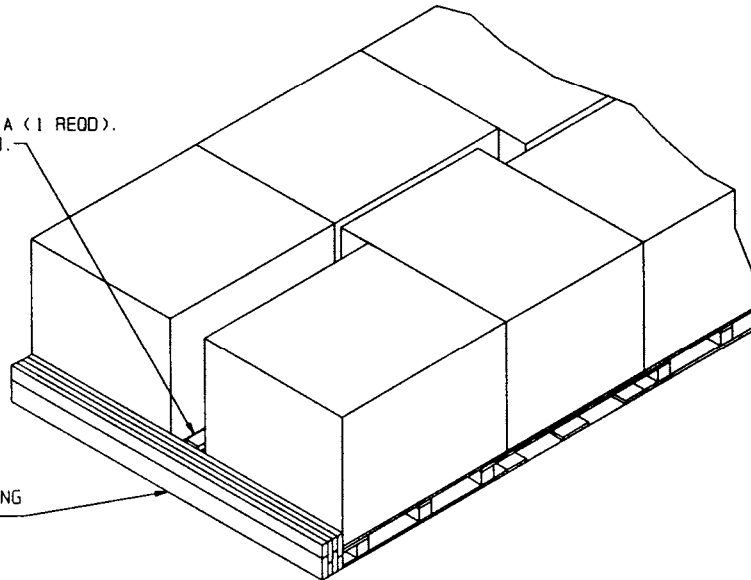


ISOMETRIC VIEW

SPECIAL NOTES:

1. A 7'-6" WIDE (INSIDE DIMENSION) CONVENTIONAL VAN TRAILER WHICH HAS A NAILABLE FLOOR IS SHOWN. TRAILERS OF OTHER WIDTHS CAN BE USED.
2. THE PALLET UNIT SHOWN IN THE TYPICAL LTL LOAD HAS OVERALL DIMENSIONS OF 40-1/8" LONG BY 53-1/4" WIDE BY 28-1/2" HIGH. THE DEPICTED PROCEDURES ARE ALSO APPLICABLE FOR UNITS OF OTHER SIZES. SEE SPECIAL NOTE 3.
3. THE POSITIONING OF A UNIT IS OPTIONAL. UNITS HAVING A LENGTH OF 39" OR LESS MAY BE POSITIONED AS SHOWN ON PAGE 32. UNITS HAVING A LENGTH GREATER THAN 39" MAY BE POSITIONED AS SHOWN ABOVE OR MAY BE LOCATED IN THE CORNER OF THE TRAILER, BECAUSE OF INSUFFICIENT SPACE FOR INSTALLATION OF THE LTL BRACES. IF THE TRAILER DOES NOT HAVE A SQUARE FRONT, A "FORWARD BLOCKING ASSEMBLY B" MUST BE INSTALLED WHEN POSITIONING A UNIT IN THE CORNER OF THE TRAILER. SEE THE DETAIL ON PAGE 37.
4. MORE THAN ONE PALLET UNIT CAN BE SHIPPED, PROVIDING THE CAPACITY OF THE LTL BRACES IS NOT EXCEEDED. THE LOAD SHOULD BE FORMED IN ROWS, WITH THE UNITS POSITIONED AGAINST OPPOSITE SIDEWALLS. THE PROPER ANTI-SWAY BRACES, IF REQUIRED, WILL BE INSTALLED BETWEEN THE LATERALLY ADJACENT UNITS. SEE THE DETAILS ON PAGES 39 AND 42.
5. EACH LTL BRACE AS APPLIED FOR LONGITUDINAL BRACING WILL SUPPORT 2,000 POUNDS OF LADING; HOWEVER, NOT LESS THAN TWO BRACES WILL BE USED AGAINST EACH PALLET UNIT ACROSS THE WIDTH OF THE TRAILER.
6. IF THE PALLET UNIT HAS BATTENS, THE LTL BRACES MUST BE POSITIONED AGAINST THE BATTENS.

ANTI-SWAY BRACE ASSEMBLY A (1 REQD).
SEE THE DETAIL ON PAGE 38.

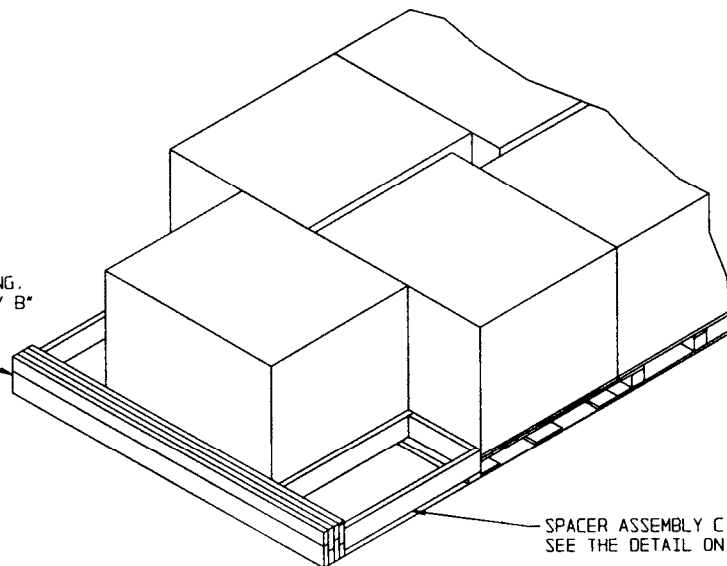


TYPICAL SOLID FILL REAR BLOCKING.
SEE PIECE MARKED ⑦ ON PAGE 8
FOR EXAMPLE. SEE THE "REAR BLOCKING
ASSEMBLY B" DETAIL ON PAGE 40.

ALTERNATIVE REAR LOADING PATTERN A

THIS LOADING PATTERN IS APPLICABLE FOR USE IN OBTAINING A LOAD QUANTITY WHICH IS TWO MORE OR TWO LESS THAN A MULTIPLE OF FOUR WHEN USING A CHIMNEY PATTERN LOAD AS SHOWN ON PAGES 12 AND 20.

TYPICAL SOLID FILL REAR BLOCKING.
SEE THE "REAR BLOCKING ASSEMBLY B"
DETAIL ON PAGE 40.



SPACER ASSEMBLY C (2 REQD).
SEE THE DETAIL ON PAGE 33.

ALTERNATIVE REAR LOADING PATTERN B

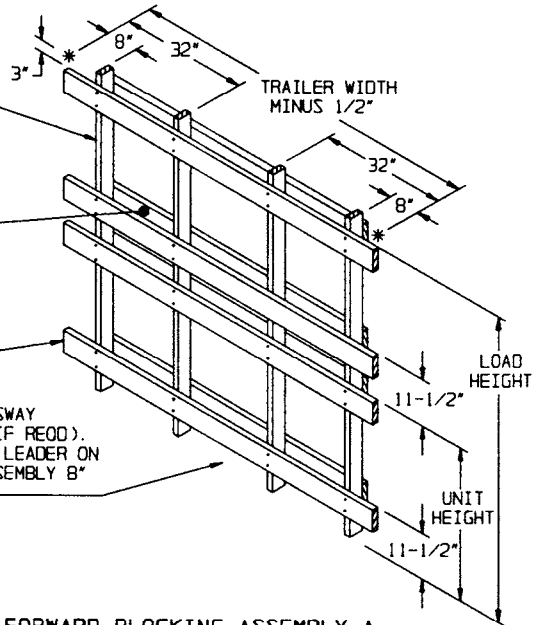
THIS LOADING PATTERN IS APPLICABLE FOR USE IN OBTAINING A LOAD QUANTITY WHICH IS ONE MORE THAN A MULTIPLE OF FOUR WHEN USING A CHIMNEY PATTERN LOAD AS SHOWN ON PAGES 12 AND 20.

VERTICAL PIECE, 2" X 4" BY LOAD HEIGHT PLUS 3" (4 REOD). NOTE THAT FOR LOADS WHICH EXTEND TO A HEIGHT OF LESS THAN 4" FROM THE TRAILER ROOF, THE VERTICAL PIECES MUST BE CUT OFF SUFFICIENTLY TO PROVIDE AT LEAST 1" CLEARANCE.

LATERAL PIECE, 2" X 6" BY TRAILER WIDTH MINUS 16-1/2" (2 REOD PER TIER). ALIGN VERTICALLY WITH THE LOAD BEARING PIECES AND NAIL TO THE VERTICAL PIECES W/2-10d NAILS AT EACH JOINT.

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

STOP PIECE FOR ANTI-SWAY BRACES "B" AND "C" (IF REOD). SEE THE "STOP PIECE" LEADER ON "FORWARD BLOCKING ASSEMBLY B" DETAIL BELOW.



FORWARD BLOCKING ASSEMBLY A

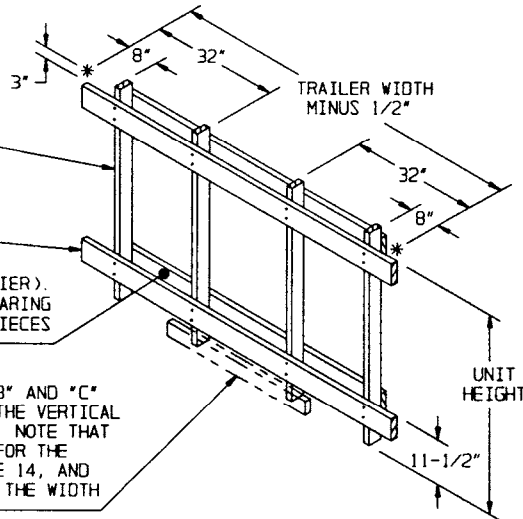
THE FORWARD BLOCKING SHOWN IS APPLICABLE FOR A 2-TIER LOAD. THIS ASSEMBLY IS DESIGNED FOR USE AT THE FRONT END OF A TRAILER HAVING ROUNDED CORNERS, AND IS APPLICABLE FOR A CORNER RADIUS OF NOT MORE THAN 6-1/2". IF THE RADIUS IS FROM 6-1/2" TO 8", 2" X 6" VERTICAL PIECES WILL BE USED IN LIEU OF THE 2" X 4" PIECES. IF THE TRAILER TO BE LOADED HAS LARGE-ANGLED CORNERS AT THE FORWARD END, REFER TO PAGE 50 FOR GUIDANCE.

VERTICAL PIECE, 2" X 4" BY LOAD HEIGHT PLUS 3" (4 REOD).

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

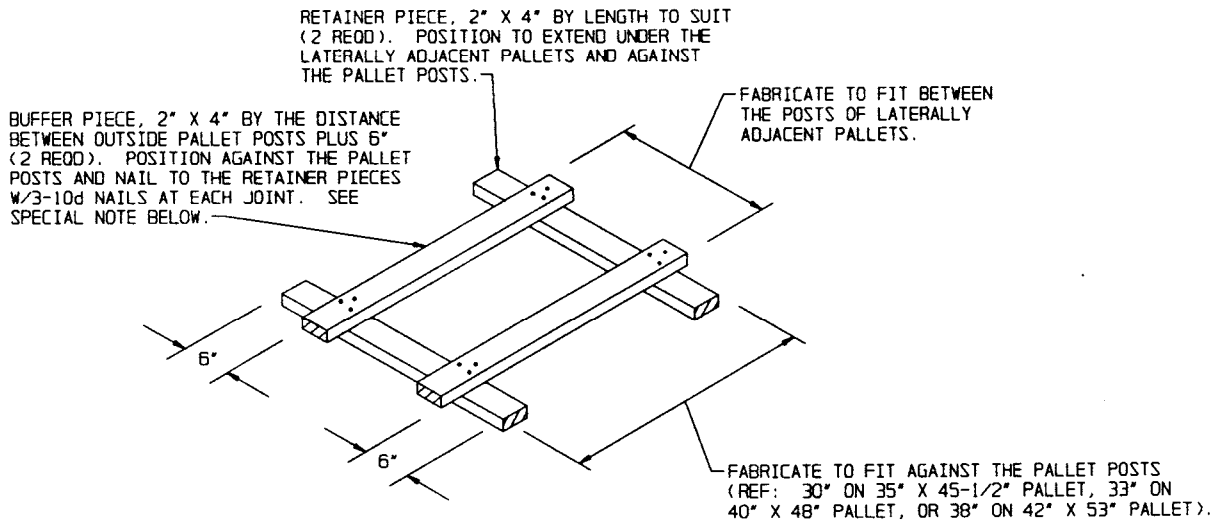
LATERAL PIECE, 2" X 6" BY TRAILER WIDTH MINUS 16-1/2" (2 REOD PER TIER). ALIGN VERTICALLY WITH THE LOAD BEARING PIECES AND NAIL TO THE VERTICAL PIECES W/2-10d NAILS AT EACH JOINT.

STOP PIECE FOR ANTI-SWAY BRACES "B" AND "C" 2" X 4" X 40" (1 REOD). NAIL TO THE VERTICAL PIECES W/2-10d NAILS AT EACH END. NOTE THAT THAT THIS PIECE IS ONLY REQUIRED FOR THE ONLY REQUIRED FOR THE LOAD ON PAGE 14, AND ONLY WHEN THE EXCESS SPACE ACROSS THE WIDTH OF THE LOAD IS MORE THAN 3".



FORWARD BLOCKING ASSEMBLY B

THE FORWARD BLOCKING SHOWN IS APPLICABLE FOR A 1-TIER LOAD. THIS ASSEMBLY IS DESIGNED FOR USE AT THE FRONT END OF A TRAILER HAVING ROUNDED CORNERS, AND IS APPLICABLE FOR A CORNER RADIUS OF NOT MORE THAN 6-1/2". IF THE RADIUS IS FROM 6-1/2" TO 8", 2" X 6" VERTICAL PIECES WILL BE USED IN LIEU OF THE 2" X 4" PIECES. IF THE TRAILER TO BE LOADED HAS LARGE-ANGLED CORNERS AT THE FORWARD END, REFER TO PAGE 50 FOR GUIDANCE.

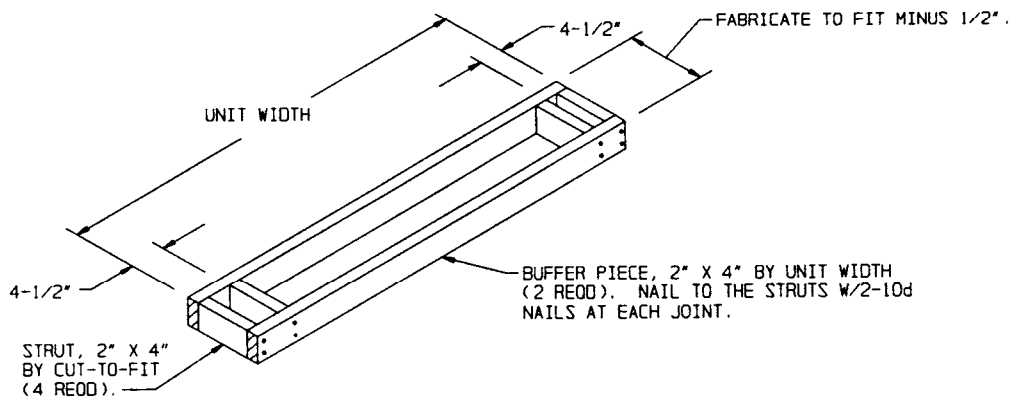


ANTI-SWAY BRACE A

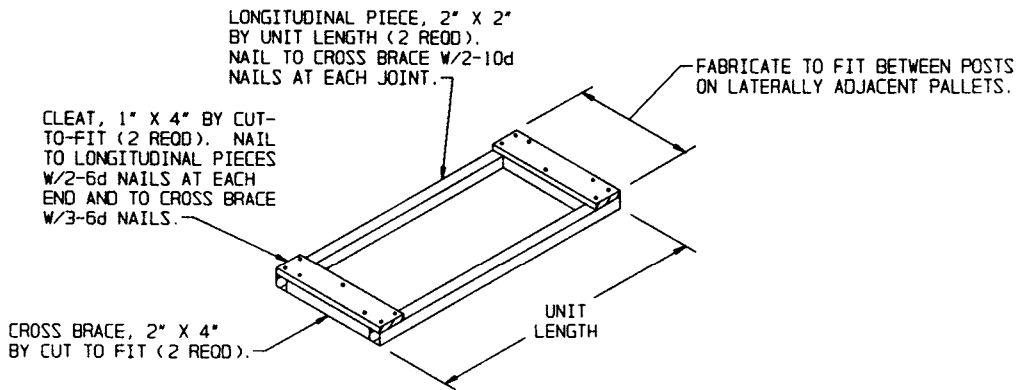
IF DESIRED, THE ANTI-SWAY BRACE CAN BE PARTIALLY PRE-ASSEMBLED; ONE BUFFER PIECE CAN BE NAILED TO BOTH RETAINER PIECES. THE LONG ENDS OF THE ASSEMBLY CAN BE INSTALLED INTO THE FORKLIFT FORKLIFT OPENING OF A LOADED PALLET PRIOR TO POSITIONING THE LATERALLY ADJACENT PALLET.

SPECIAL NOTE:

IF BOXES OVERHANG THE PALLET TO THE EXTENT THAT THE 2" X 4" BUFFER PIECES CANNOT BE NAILED, ONE OR BOTH BUFFER PIECES MUST BE CHANGED TO 2" X 6" MATERIAL. NAIL W/3-10d NAILS AT EACH JOINT.

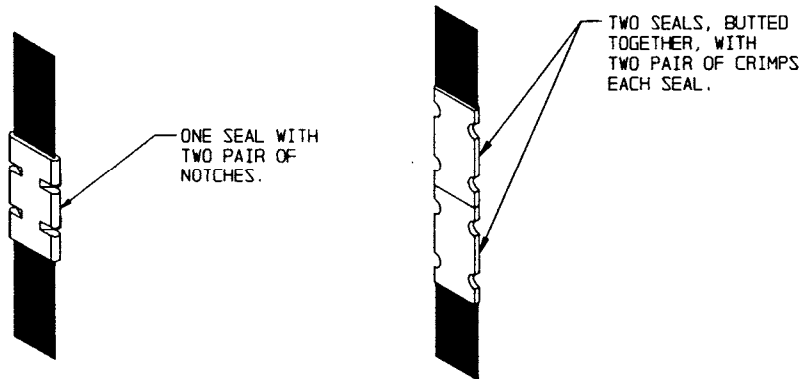


ANTI-SWAY BRACE B



ANTI-SWAY BRACE ASSEMBLY C

THIS ASSEMBLY IS FOR USE BETWEEN LATERALLY ADJACENT UNITS WHEN THE UNIT LENGTH IS PARALLEL TO THE TRAILER SIDEWALL



STRAP JOINT A

METHOD OF SECURING A STRAP JOINT WHEN USING A NOTCH-TYPE SEALER.

STRAP JOINT B

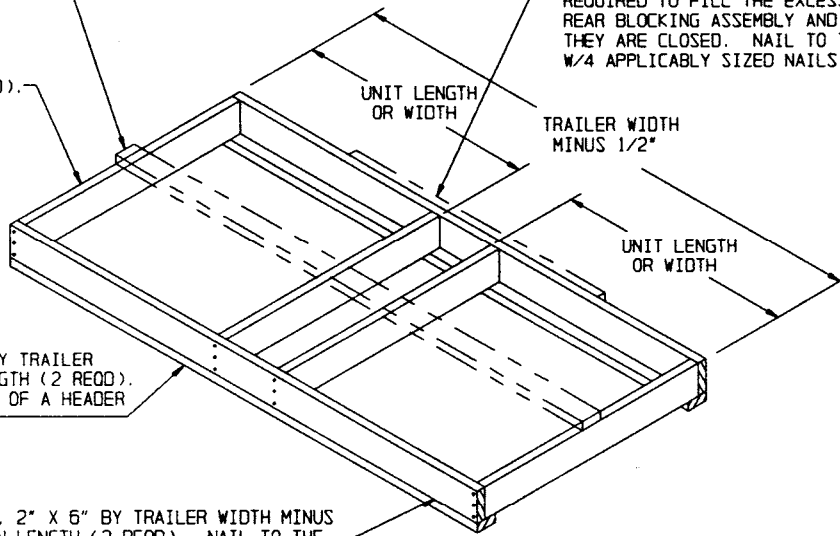
METHOD OF SECURING A STRAP JOINT WHEN USING A CRIMP-TYPE SEALER.

END-OVER-END LAP JOINT DETAILS

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

STRUT, 2" X 6" BY CUT-TO-FIT (4 REED).

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



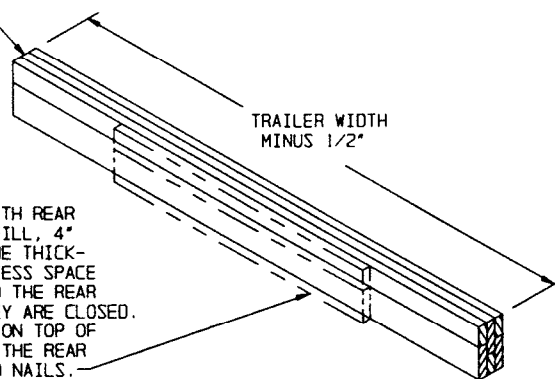
STRUT LEDGER, 2" X 4" BY TRAILER WIDTH MINUS 1/2" IN LENGTH (2 REED). NAIL TO THE BOTTOM EDGE OF A HEADER W/1-10d NAIL EVERY 12".

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

REAR BLOCKING ASSEMBLY A

THIS ASSEMBLY IS DESIGNED FOR USE AT THE REAR OF A LOAD WHEN THE SPACE BETWEEN THE LADING AND THE TRAILER DOOR IS MORE THAN 9". NOTE THAT THE ABOVE VIEW IS ROTATED 180° FROM THE POSITION IN WHICH IT WILL BE INSTALLED.

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

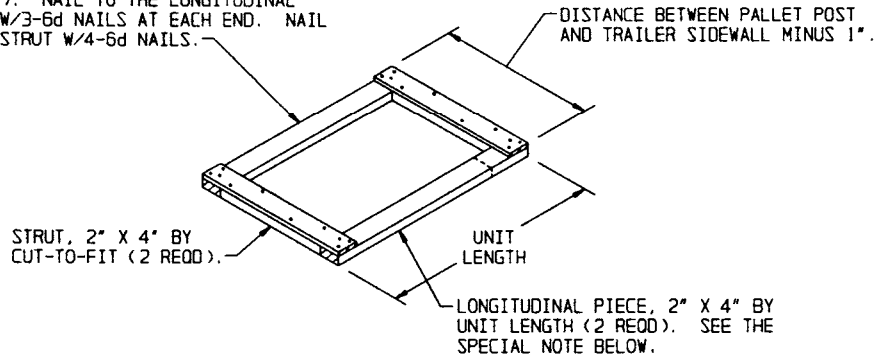


IF THE TRAILER IS EQUIPPED WITH REAR CORNER POSTS, INSTALL SOLID FILL, 4" AND 6" WIDE BY 48" LONG BY THE THICKNESS REQUIRED TO FILL THE EXCESS SPACE BETWEEN THE REAR BLOCKING AND THE REAR DOORS OF THE TRAILER WHEN THEY ARE CLOSED. POSITION PIECES ON EDGE, ONE ON TOP OF THE OTHER AS SHOWN. NAIL TO THE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

REAR BLOCKING ASSEMBLY B

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

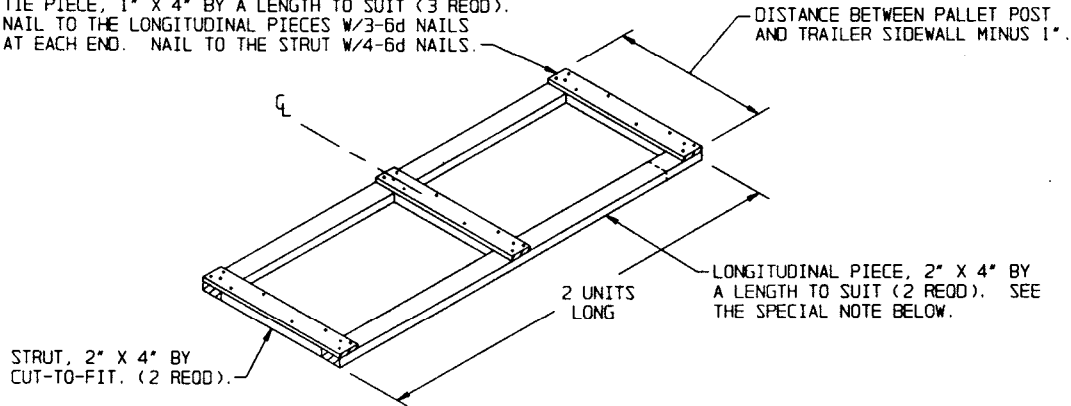
TIE PIECE, 1" X 4" BY A LENGTH TO SUIT (2 REOD). NAIL TO THE LONGITUDINAL PIECES W/3-6d NAILS AT EACH END. NAIL TO THE STRUT W/4-6d NAILS.



SIDE SPACER ASSEMBLY A

SIDE SPACER ASSEMBLIES "A", "B", AND "C" ARE FOR USE IN THE LOADS SHOWN ON PAGES 24 AND 28.

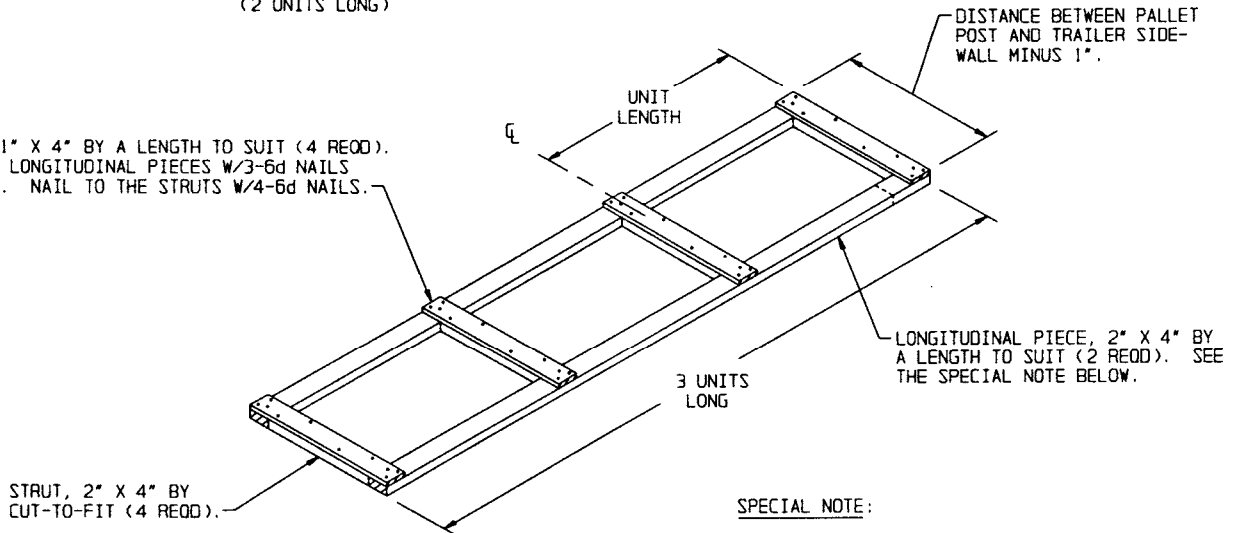
TIE PIECE, 1" X 4" BY A LENGTH TO SUIT (3 REOD). NAIL TO THE LONGITUDINAL PIECES W/3-6d NAILS AT EACH END. NAIL TO THE STRUT W/4-6d NAILS.



SIDE SPACER ASSEMBLY B

(2 UNITS LONG)

TIE PIECE, 1" X 4" BY A LENGTH TO SUIT (4 REOD). NAIL TO THE LONGITUDINAL PIECES W/3-6d NAILS AT EACH END. NAIL TO THE STRUTS W/4-6d NAILS.



SIDE SPACER ASSEMBLY C

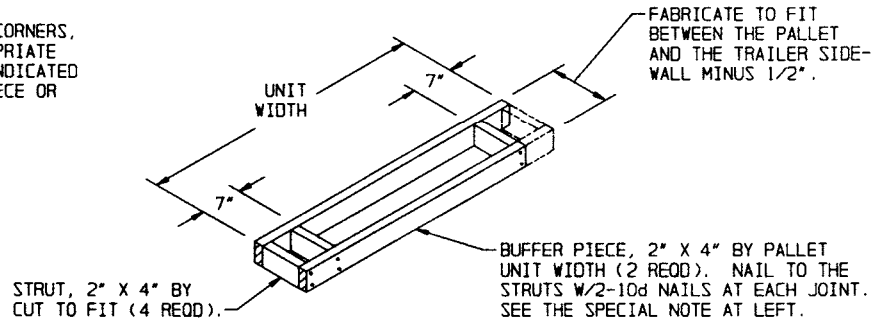
(3 UNITS LONG)

SPECIAL NOTE:

IF THE TRAILER BEING LOADED HAS ROUNDED CORNERS, SHORTEN ONE END OF ONE SIDE OF THE APPROPRIATE SIDE SPACER ASSEMBLY. DELETE THE PART OF THE ASSEMBLY INDICATED BY DOTTED LINES AND INSET THE END TIE PIECE OR STRUT AS NECESSARY.

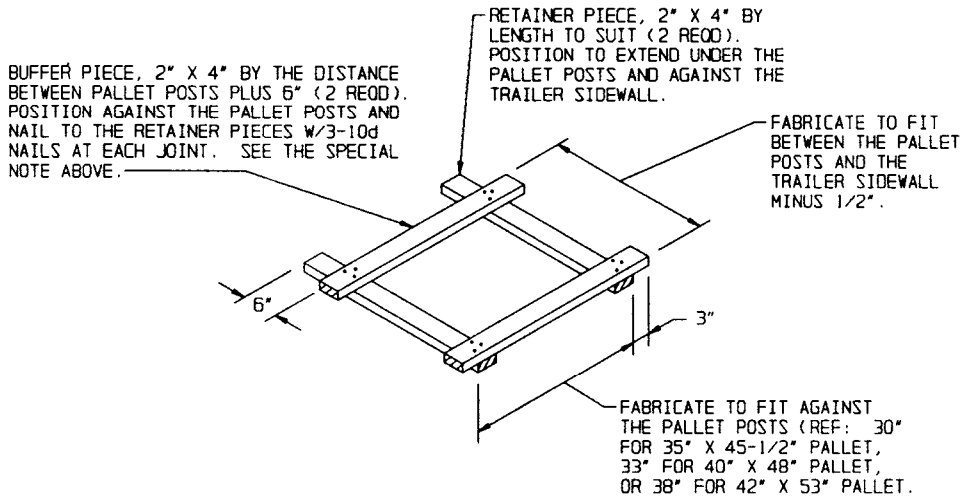
SPECIAL NOTE:

IF THE TRAILER BEING LOADED HAS ROUNDED CORNERS, SHORTEN ONE END OF ONE SIDE OF THE APPROPRIATE SIDE SPACER ASSEMBLY. DELETE THE PART INDICATED BY DOTTED LINES AND INSET THE END TIE PIECE OR STRUT AS NECESSARY.



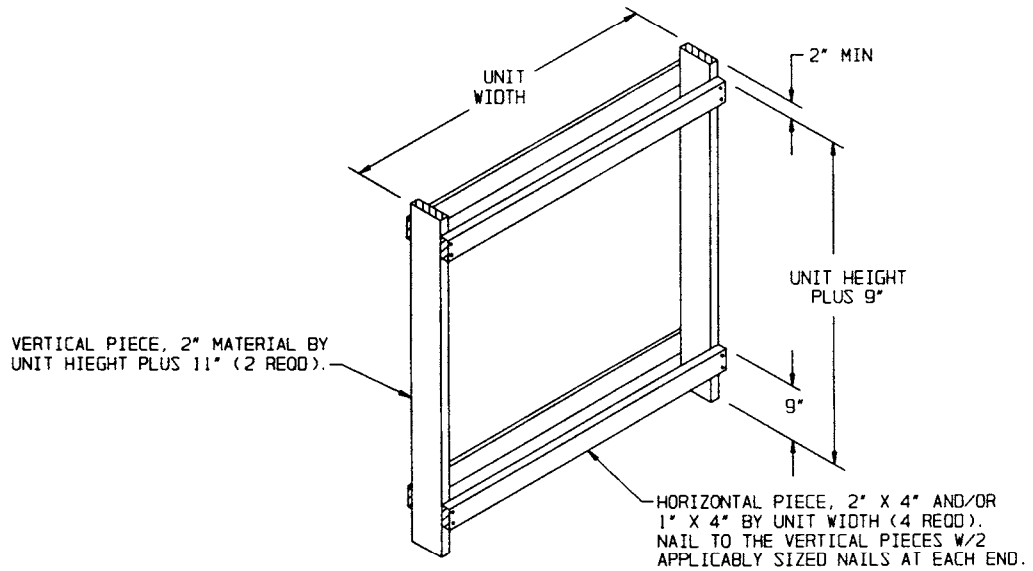
SIDE SPACER ASSEMBLY D

THIS ASSEMBLY IS FOR USE IN THE LOAD SHOWN ON PAGE 24.



SIDE SPACER ASSEMBLY E

THIS ASSEMBLY IS FOR USE IN THE LOAD SHOWN ON PAGE 30.



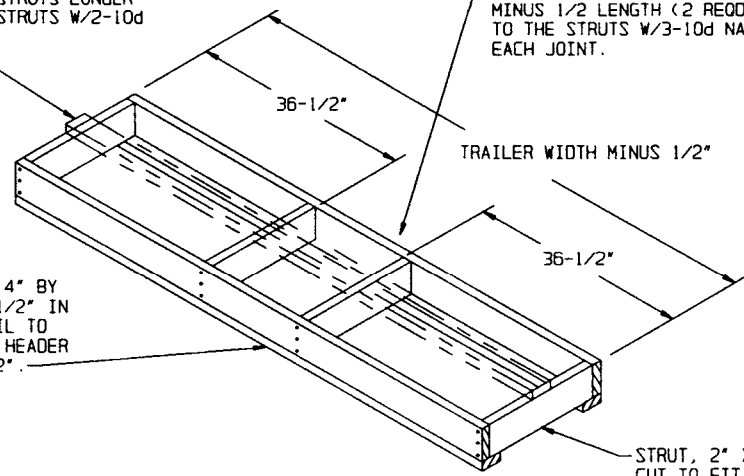
CRIB FILL

DETAILS

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

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

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



SPACER ASSEMBLY A

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

UNIT LENGTH OR UNIT WIDTH

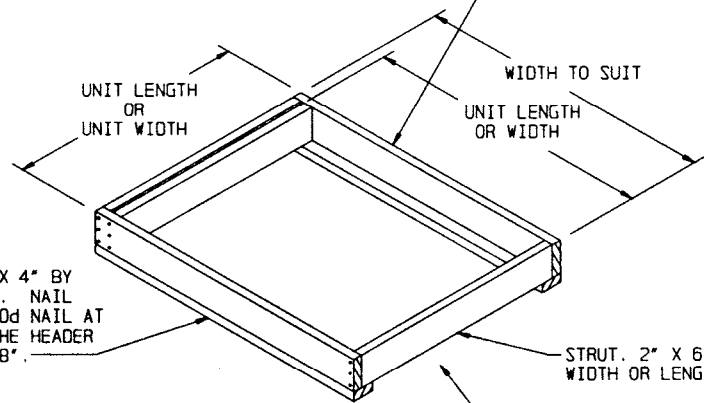
WIDTH TO SUIT

UNIT LENGTH OR WIDTH

HEADER SUPPORT, 2" X 4" BY CUT TO FIT (2 REOD). NAIL TO THE STRUTS W/1-10d NAIL AT EACH JOINT AND TO THE HEADER W/1-10d NAIL EVERY 8".

STRUT, 2" X 6" BY UNIT WIDTH OR LENGTH MINUS 3".

POSITION WITH THIS END NEXT TO THE TRAILER SIDEWALL.

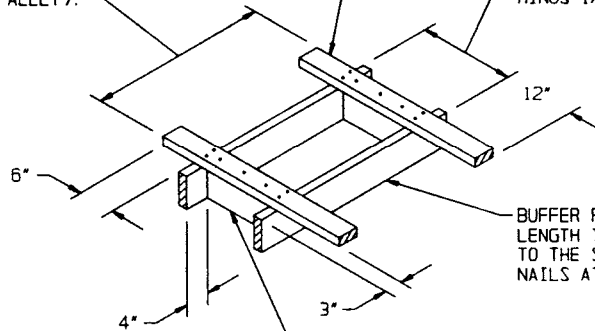


SPACER ASSEMBLY B

FABRICATE TO FIT AGAINST THE PALLET POSTS (REF: 30" FOR 35" X 45-1/2" PALLET, 33" FOR 40" X 48" PALLET, OR 38" FOR 42" X 53" PALLET).

SUPPORT PIECE, 2" X 4" BY A LENGTH TO SUIT (2 REQD). NAIL TO THE SPACER PIECES W/3-10d NAILS AND TO THE BUFFER PIECES W/2-10d NAILS AT EACH JOINT.

SPACE BETWEEN BOXES MINUS 1/2".



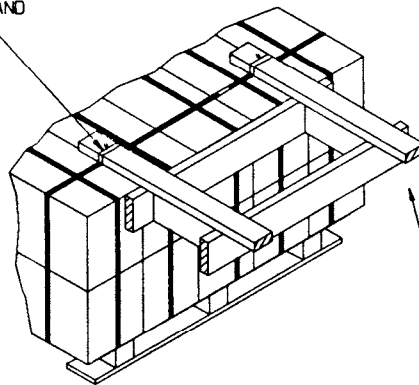
BUFFER PIECE, 2" X 6" X BY LENGTH TO SUIT (2 REQD). NAIL TO THE SPACER PIECES W/2-10d NAILS AT EACH JOINT.

SPACER PIECE, 2" X 6" BY A LENGTH TO SUIT (2 REQD).

TOP-OF-LOAD ANTI-SWAY BRACE

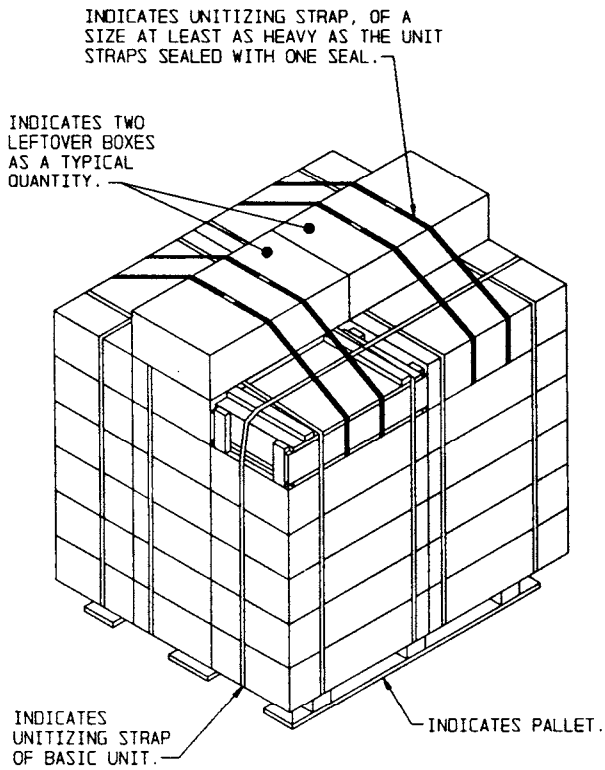
THIS ASSEMBLY IS DESIGNED FOR THE LATERAL BRACING OF A PALLET UNIT IN THE SECOND LAYER WHEN THERE IS NOT A PALLET UNIT DIRECTLY OPPOSITE IT, AS SHOWN IN THE LOAD ON PAGE 8. FABRICATE IN PLACE.

NO. 14 GAGE WIRE BY A LENGTH TO SUIT. FORM A LOOP AROUND THE ANTI-SWAY BRACE, THREAD UNDER UNIT LOAD STRAP. BRING WIRE UP TO TOP OF BRACE, AND TWIST TO SELF AS SHOWN.

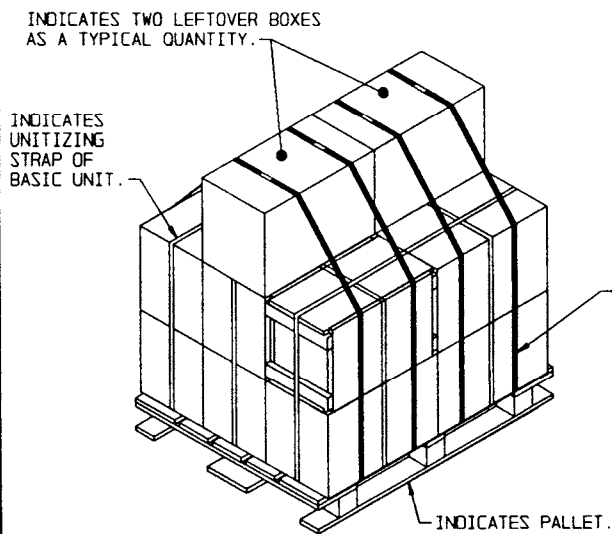


POSITION THIS SIDE OF ANTI-SWAY BRACE AGAINST THE 2-HIGH PALLET STACK.

TIE WIRE APPLICATION



SECUREMENT OF TOP-CLEATED BOXES



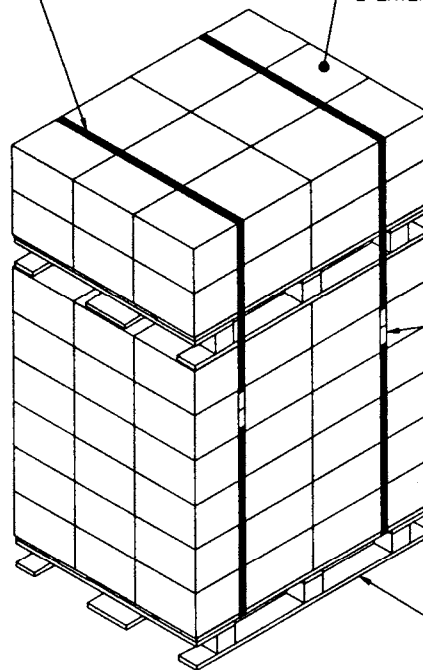
SECUREMENT OF NON-TOP-CLEATED BOXES

SPECIAL NOTES:

1. SHIPMENTS OF PALLET UNITS OF AMMUNITION AND/OR COMPONENTS SHOULD CONSIST OF FULL-HEIGHT 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 BOXES. LEFTOVER BOXES ARE DESCRIBED AS A QUANTITY OF BOXES WHICH IS INSUFFICIENT TO FOR A FULL-LAYERED PARTIAL UNIT FOR SHIPMENT EITHER ON TOP OF A LOAD AS SHOWN ON PAGE 46 OR WITHIN A TIER AS SHOWN ON PAGE 47. THEY ARE USUALLY BOXES OF THE SAME AMMUNITION ITEM AS THE BALANCE OF THE LOAD ALTHOUGH THEY MAY BE ANY OTHER COMPATIBLE ITEM.
2. SHIPMENT OF LEFTOVER BOXES 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 BOXES 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.
3. THE PROCEDURES ON THIS PAGE ARE PRESENTED AS GUIDANCE IN THE SECUREMENT OF LEFTOVER BOXES FOR SHIPMENT. THE VIEW AT TOP LEFT DEPICTS TWO LEFTOVER BOXES SECURED TO A FULL-HEIGHT UNIT WHEN THE BOXES ON THE UNIT HAVE TOP CLEATS. THE VIEW AT LEFT BELOW DEPICTS TWO LEFTOVER BOXES SECURED TO A FULL-HEIGHT UNIT WHEN THE BOXES ON THE UNIT DO NOT HAVE TOP CLEATS. THE QUANTITIES SHOWN ARE TYPICAL. THE PROCEDURES ARE ALSO APPLICABLE FOR SECUREMENT OF LEFTOVER BOXES TO PARTIAL UNITS FOR SHIPMENT ON TOP OF A LOAD. SEE SPECIAL NOTE 4 ON PAGE 46 FOR LIMITATIONS. IN ADDITION, THE PROCEDURES ARE APPLICABLE FOR SECURING LEFTOVER BOXES TO A PARTIAL UNIT FOR SHIPMENT WITHIN A TIER. SEE SPECIAL NOTE 2 ON PAGE 47 FOR LIMITATIONS.
4. THE QUANTITY OF LEFTOVER BOXES WHICH CAN BE SECURED TO FULL OR PARTIAL UNITS MAY VARY FROM ONE TO NOT MORE THAN THE QUANTITY IN ONE LAYER ON THE UNIT. IN OTHER WORDS, NOT MORE THAN THREE BOXES CAN BE STRAPPED TO A 3-BOX LONG UNIT. LEFTOVER BOXES MUST NOT BE STACKED. IF THE QUANTITY OF LEFTOVER BOXES TO BE SHIPPED IS MORE THAN THE QUANTITY IN ONE FULL LAYER, BOXES MUST BE STRAPPED TO MORE THAN ONE UNIT.
5. LEFTOVER BOXES MUST BE SECURED TO A FULL OR PARTIAL UNIT WITH A MINIMUM OF TWO PIECES OF STEEL STRAPPING (SEPARATE FROM UNIT STRAPS) OF A SIZE AT LEAST AS HEAVY AS THE STRAPPING USED TO SECURE THE BOXES ON THE PALLET UNIT UNDERNEATH THE LEFTOVER BOXES TO THE PALLET BASE. THE "SECUREMENT OF TOP-CLEATED BOXES" DETAIL ABOVE DEPICTS A TYPICAL STRAP APPLICATION FOR BOXES HAVING TOP CLEATS. THREAD A STRAP UNDER THE TOP LAYER OF BOXES, AS NEAR AS PRACTICAL TO THE ADJACENT UNIT STRAP, ENCIRCLE THE LEFTOVER BOXES, TENSION, AND SEAL THE JOINT WITH ONE DOUBLE CRIMPED SEAL. THE "SECUREMENT OF NON-TOP-CLEATED BOXES" DETAIL, LOWER LEFT, DEPICTS A TYPICAL STRAP APPLICATION FOR BOXES WHICH DO NOT HAVE TOP CLEATS. THREAD A STRAP UNDER THE TOP DECK BOARDS (AS APPLICABLE) AS NEAR AS PRACTICAL TO A PALLET POST, COMPLETELY ENCIRCLE THE PALLETIZED UNIT AND THE LEFTOVER BOXES, TENSION, AND SEAL THE JOINT WITH ONE DOUBLE CRIMPED SEAL.

VERTICAL UNITIZING STRAP, 1-1/4" X .035" BY
A LENGTH TO SUIT STEEL STRAPPING (2 REED).
POSITION NEAR POSTS OF PALLET BASE.

INDICATES A TYPICAL
2-LAYER PALLET UNIT.



INDICATES TWO
1-1/4" STRAP
SEALS.

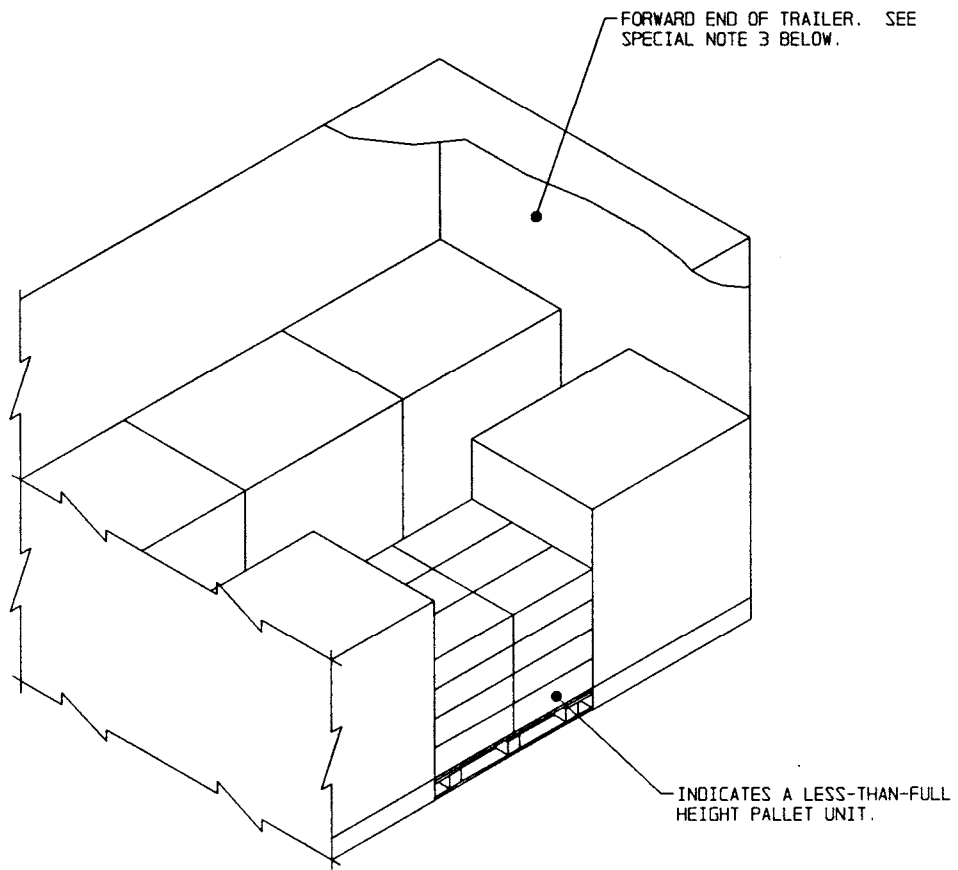
INDICATES A LOWER-
TIER PALLET UNIT.

SECUREMENT OF PARTIAL PALLET UNIT ON TOP

THE PALLET UNITS SHOWN ABOVE ARE TYPICAL. THE PRO-
CEDURES ARE ALSO APPLICABLE FOR OTHER PALLET UNITS.

SPECIAL NOTES:

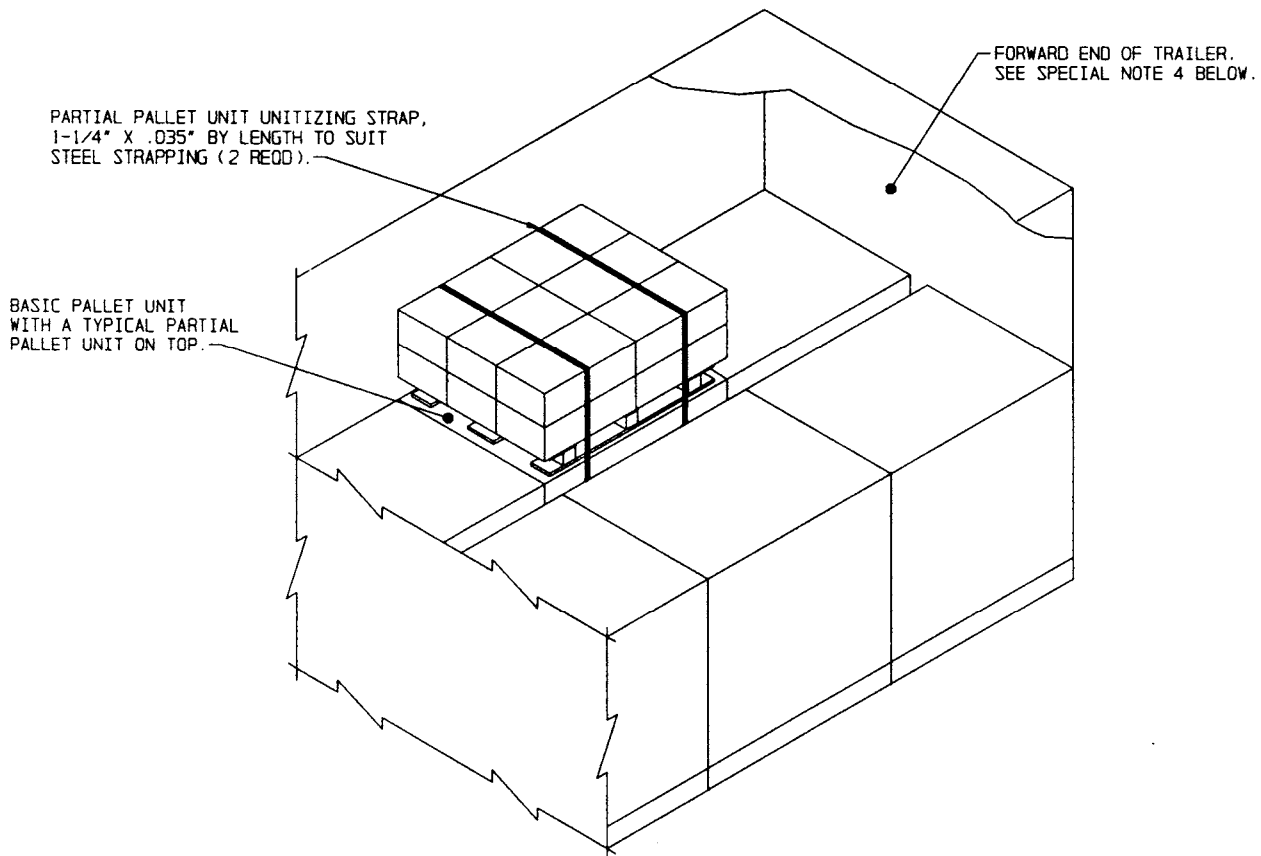
1. SHIPMENTS OF PALLET UNITS OF AMMUNITION AND/OR COM-
PONENTS SHOULD CONSIST OF FULL-HEIGHT AND FULL-LAYER
UNITS TO THE MAXIMUM EXTENT POSSIBLE. HOWEVER, THE END
OF A LOT, OR THE QUANTITY OF ITEMS NEEDED TO FILL A
REQUISITION MAY NECESSITATE THE SHIPMENT OF ONE OR MORE
LESS-THAN-FULL PALLET UNITS WITHIN A LOAD. THE PRO-
CEDURES ON THIS PAGE AND ON PAGE 48 ARE PRESENTED AS
GUIDANCE IN THE SHIPMENT OF THESE PARTIAL UNITS.
2. A LESS-THAN-FULL-HEIGHT PALLET UNIT, WHICH IS TO BE
SHIPPED ON TOP OF A LOAD (TRAILER HEIGHT PERMITTING) IN
ACCORDANCE WITH THE PROCEDURES DELINEATED ON THIS PAGE,
IS NOT LIMITED IN HEIGHT.
3. A LESS THAN FULL HEIGHT PALLET UNIT CAN BE SHIPPED BY
POSITIONING IT EITHER ON THE TOP TIER OF A LOAD (TRAILER
HEIGHT PERMITTING) OR ON THE TOP OF THE LOWER PORTION OF
A LOAD WHEN THE LOAD CONTAINS A PARTIAL TIER IN THE END
OF THE TRAILER. THE PARTIAL UNIT WILL BE STRAPPED TO THE
PALLETIZED UNIT DIRECTLY BELOW WITH TWO VERTICAL
UNITIZING STRAPS. SEE THE "SECUREMENT OF PARTIAL UNIT ON
TOP" VIEW ABOVE FOR GUIDANCE.
4. LEFTOVER BOXES, IN AN AMOUNT WHICH IS LESS THAN THE
QUANTITY IN ONE LAYER OF A UNIT, CAN BE SECURED TO THE
TOP OF A PARTIAL UNIT FOR SECUREMENT ON TOP OF A LOAD.
THE LEFTOVER BOXES MUST BE SECURED TO THE PARTIAL UNIT
WITH THEIR OWN STRAPPING, SEPARATE FROM THE STRAPS FOR
THE PARTIAL UNIT. SEE THE DETAILS ON PAGE 45 FOR
GUIDANCE IN STRAP APPLICATION.



ISOMETRIC VIEW

SPECIAL NOTES:

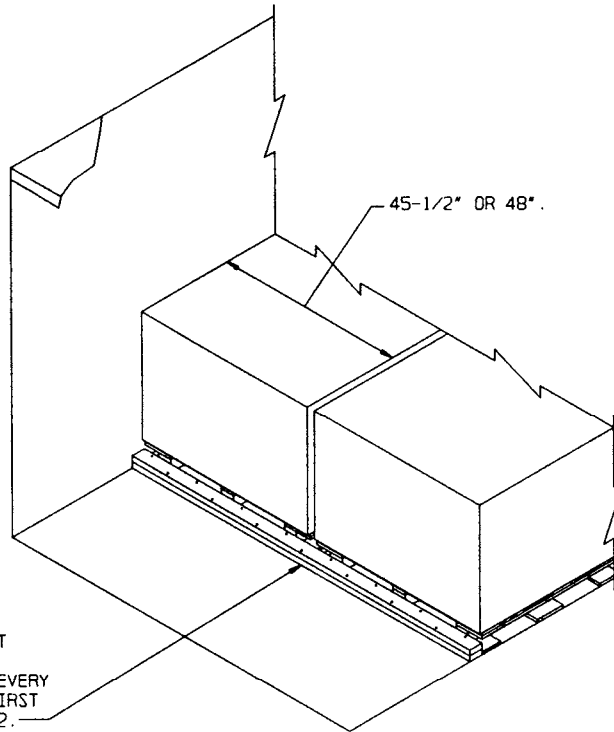
1. SHIPMENTS OF PALLET UNITS SHOULD CONSIST OF FULL-HEIGHT AND FULL-LAYER UNITS TO THE MAXIMUM EXTENT POSSIBLE. HOWEVER, THE END OF A LOT, OR THE QUANTITY OF ITEMS NEEDED TO FILL A REQUISITION, MAY NECESSITATE THE SHIPMENT OF ONE OR MORE LESS-THAN-FULL UNITS WITHIN A LOAD. THE PROCEDURES ON THIS PAGE AND ON PAGE 48 ARE PRESENTED AS GUIDANCE IN THE SHIPMENT OF THESE PARTIAL UNITS.
2. THERE IS NO LIMITATION AS TO THE NUMBER OF LAYERS OF BOXES ON A PARTIAL UNIT. A PARTIAL PALLET UNIT TO BE SHIPPED WITHIN A LAYER OF A LOAD MAY HAVE FROM AS FEW AS ONE FULL LAYER OF BOXES ON THE UNIT TO AS MANY AS ONE LESS LAYER THAN A FULL HEIGHT UNIT.
3. IF THE TRAILER BEING USED IS EQUIPPED WITH ROUNDED CORNERS AT THE FORWARD END, USE A "FORWARD BLOCKING ASSEMBLY B" AS SHOWN IN THE DETAIL ON PAGE 37.



ISOMETRIC VIEW

SPECIAL NOTES:

1. SHIPMENTS OF PALLET 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 47 ARE PRESENTED AS GUIDANCE IN THE SHIPMENT OF THESE PARTIAL UNITS.
2. A PARTIAL PALLET UNIT MUST NOT BE POSITIONED ON THE REAR MOST PALLET UNIT WITH THE LOAD.
3. THE PROCEDURES SHOWN ON THIS PAGE ARE APPLICABLE FOR THE SHIPMENT OF PARTIAL PALLET UNITS CONSISTING OF ONE OR MORE LAYERS OF BOXES AS WELL AS FOR A FULL PALLET UNIT.
4. IF THE TRAILER BEING USED IS EQUIPPED WITH ROUNDED CORNERS AT THE FORWARD END, USE A "FORWARD BLOCKING ASSEMBLY B" AS SHOWN IN THE DETAIL ON PAGE 37.

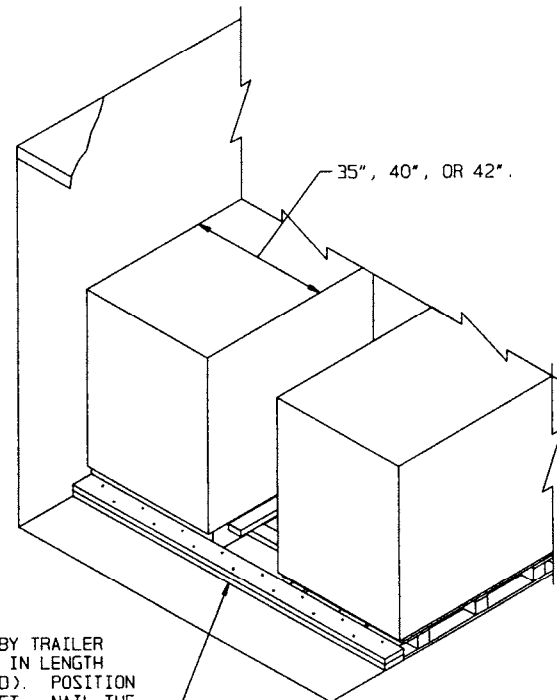


HEADER, 2" X 4" OR 2" X 6" BY TRAILER WIDTH MINUS 1/2" IN LENGTH (DOUBLED) (1 REED). POSITION AGAINST THE PALLET. NAIL THE FIRST PIECE TO THE TRAILER FLOOR W/15-10d NAILS (1 EVERY 6"). NAIL THE SECOND PIECE TO THE FIRST IN A LIKE MANNER. SEE SPECIAL NOTE 2.

METHOD A

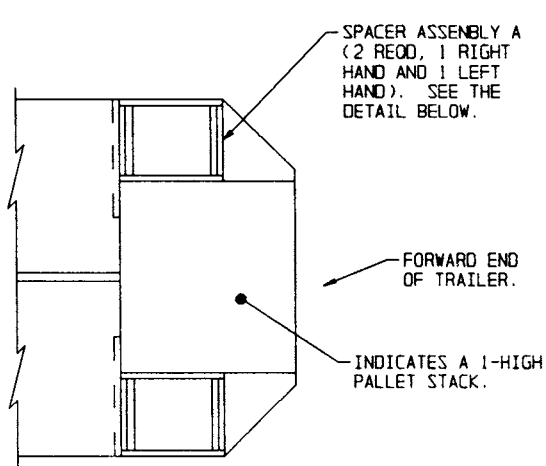
SPECIAL NOTES:

1. THE NAILED HEADER METHOD "A" REAR BLOCKING DEPICTED ABOVE IS APPLICABLE FOR PALLET UNITS WHICH ARE POSITIONED WITH THE 45-1/2" OR 48" DIMENSION OF THE PALLET ACROSS THE WIDTH OF THE TRAILER. THE METHOD "A" PROCEDURE CAN ONLY BE USED IN THE 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 FOUR INCHES.
2. THE PALLET UNIT SHOWN IN THE METHOD "A" VIEW ABOVE HAS OVERALL DIMENSIONS OF 41" LONG BY 48" WIDE BY 38" HIGH. THE DEPICTED PROCEDURES ARE ALSO APPLICABLE FOR UNITS OF OTHER SIZES. IF THE BOXES EXTEND BEYOND THE PALLET MORE THAN ONE INCH, 2" X 6" PIECES MAY BE USED FOR THE HEADER, AS SHOWN IN THE METHOD "B" VIEW AT RIGHT.
3. THE NAILED HEADER METHOD "B" VIEW AT RIGHT HAS OVERALL DIMENSIONS OF 35" LONG BY 48" WIDE BY 50" HIGH. THE DEPICTED PROCEDURES ARE ALSO APPLICABLE FOR UNITS OF OTHER SIZES.
4. THE PALLET UNIT SHOWN IN THE METHOD "B" VIEW AT RIGHT HAS OVERALL DIMENSIONS OF 35" LONG BY 48" WIDE BY 50" HIGH. THE DEPICTED PROCEDURES ARE ALSO APPLICABLE FOR UNITS OF OTHER SIZES.
5. EITHER NAILED HEADER METHOD OF REAR BLOCKING IS ADEQUATE FOR THE RETENTION OF THE MAXIMUM WEIGHT LOAD.
6. EITHER NAILED HEADER METHOD, ALTHOUGH DESIGNED ESPECIALLY FOR TRAILERS HAVING ROLL-UP TYPE DOORS, MAY ALSO BE USED IN TRAILERS EQUIPPED WITH HINGED DOORS.



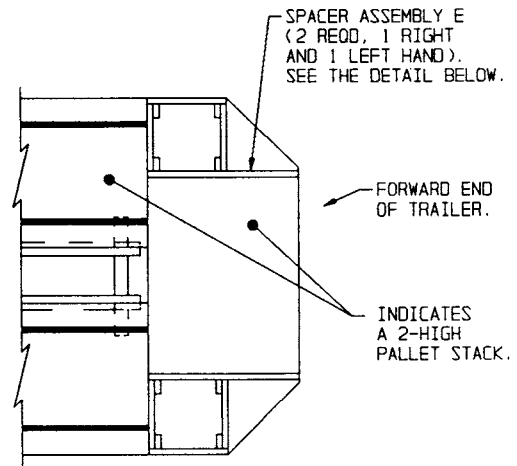
HEADER, 2" X 6" BY TRAILER WIDTH MINUS 1/2" IN LENGTH (DOUBLED) (1 REED). POSITION AGAINST THE PALLET. NAIL THE FIRST PIECE TO THE TRAILER FLOOR W/15-10d NAILS (1 EVERY 6"). NAIL THE SECOND PIECE TO THE FIRST IN A LIKE MANNER. SEE SPECIAL NOTE 2.

METHOD B



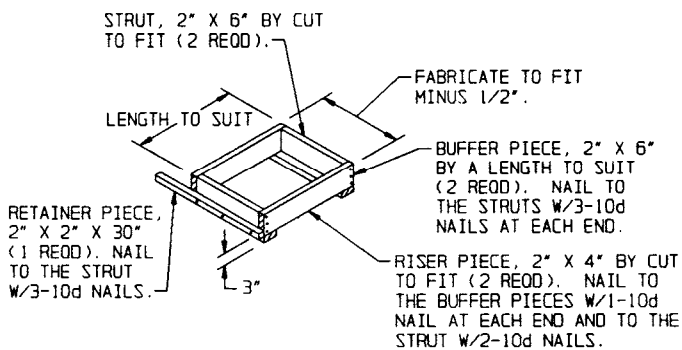
ALTERNATIVE FORWARD LOADING PATTERN A

THIS PROCEDURE IS APPLICABLE TO THE LOADING OF ONE 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.



ALTERNATIVE FORWARD LOADING PATTERN B

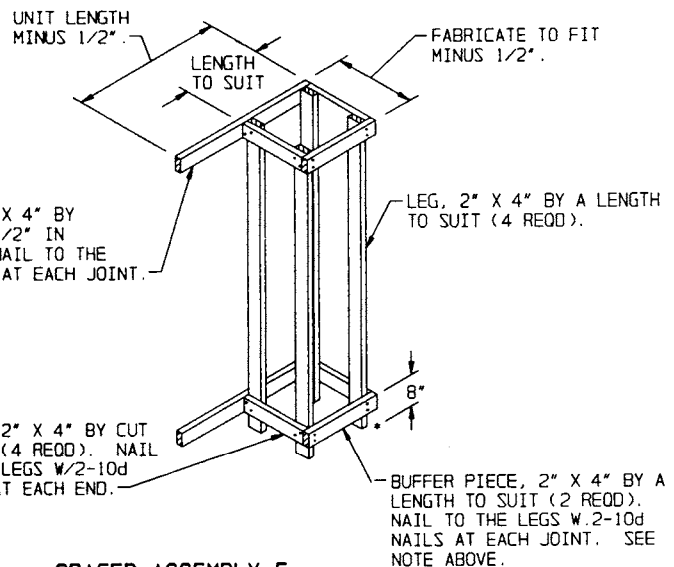
THIS PROCEDURE IS APPLICABLE TO THE LOADING OF A STACK OF TWO PALLET UNITS IN THE FORWARD END OF A CONVENTIONAL VAN TRAILER HAVING LARGE ANGLED FRONT CORNERS (REF: 18°). THE PROCEDURES MAY ALSO BE USED IN TRAILERS HAVING SQUARE CORNERS, OR ROUNDED FRONT CORNERS, OR ANGLED CORNERS OF ANOTHER SIZE. NOTE THAT IF THE LOAD UNIT BEHIND THE STACKED PALLET UNITS IN THE FRONT IS ONLY ONE HIGH, TWO STACK UNITIZING STRAPS MUST BE INSTALLED AROUND THOSE PALLET UNITS IN THE FRONT STACK.



SPACER ASSEMBLY D

NOTE: THE UPPER BUFFER, STRUT, AND RETAINER PIECES SHOULD BE CENTERED ON THE JOINT OF TWO LAYERS OF BOXES AT OR ABOVE THE CENTER OF THE TOP PALLET UNIT.

RETAINER PIECE, 2" X 4" BY UNIT LENGTH MINUS 1/2" IN LENGTH (2 REOD). NAIL TO THE LEGS W/2-10d NAILS AT EACH JOINT.



SPACER ASSEMBLY E

THIS ASSEMBLY IS DESIGNED FOR LATERAL BRACING OF A 2-HIGH PALLET STACK WHICH IS POSITIONED WITH THE WIDTH OF THE UNIT CROSSWISE IN THE TRAILER AND LOCATED IN THE FRONT OF AN ANGLED-CORNER CONVENTIONAL VAN TRAILER AS SHOWN IN THE "ALTERNATIVE FORWARD LOADING PATTERN B" VIEW ABOVE. NOTE THAT THIS VIEW DEPICTS THE ASSEMBLY POSITIONED 180° FROM THE POSITION IN WHICH IT WILL BE INSTALLED IN A LOAD. RIGHT HAND AND LEFT HAND SPACER ASSEMBLIES ARE REQUIRED.

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