

LOADING AND BRACING (TL AND LTL) IN VAN TRAILERS[⊕] OF PALLETIZED PROPELLING CHARGES PACKED IN CYLINDRICAL METAL CONTAINERS

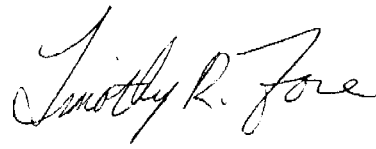
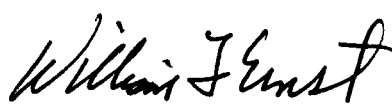
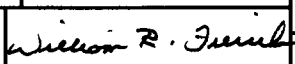
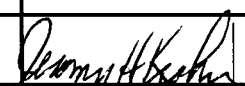

PA92 SERIES CONTAINERS

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⊕ CAUTION: THE LOADING PROCEDURES SHOWN HEREIN ARE ONLY APPLICABLE TO HIGHWAY MOVEMENTS, NOT TRAILER-ON FLATCAR (TOFC) MOVEMENTS.

U.S. ARMY MATERIEL COMMAND DRAWING

APPROVED, U.S. ARMY INDUSTRIAL OPERATIONS COMMAND 	ENGINEER	BASIC		DO NOT SCALE			
		REV.	MICHAEL SARDONE				
	TECHNICIAN	BASIC	PATTY BRIGHT	JANUARY 1987			
	REV.						
APPROVED BY ORDER OF COMMANDING GENERAL, U.S. ARMY MATERIEL COMMAND 	DRAFTSMAN	BASIC	BETTY BOWMAN	REVISION NO. 1	APRIL 1998		
		REV.		SEE THE REVISION LISTING ON PAGE 3			
	TRANSPORTATION ENGINEERING DIVISION			CLASS	DIVISION	DRAWING	FILE
VALIDATION ENGINEERING DIVISION			19	48	4042C/ 13	11PM1000	
LOGISTICS ENGINEERING OFFICE							

GENERAL NOTES

(GENERAL NOTES CONTINUED)

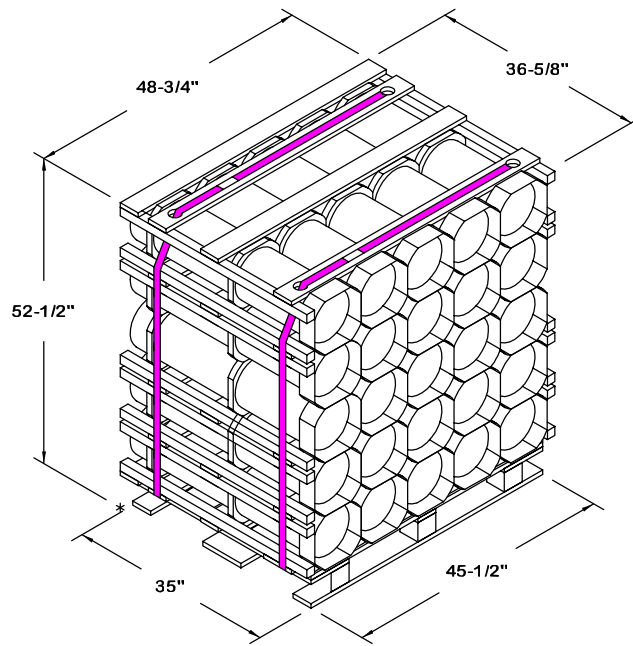
- A. THIS DOCUMENT HAS BEEN PREPARED AND ISSUED IN ACCORDANCE WITH AR 740-1 AND AUGMENTS TM 743-200-1 (CHAPTER 5).
- B. THE OUTLOADING PROCEDURES SPECIFIED IN THIS DRAWING ARE APPLICABLE FOR THE PA92 SERIES PROPELLING CHARGE CONTAINER ASSEMBLED ON THE 35" X 45-1/2" 4-WAY ENTRY PALLET. SEE THE PICTORAL VIEWS ON PAGE 3 FOR SIZES AND WEIGHTS. SEE U.S. ARMY MATERIEL COMMAND DRAWING 19-48-4042A/14-20PM1001 FOR UNITIZATION PROCEDURES FOR THE PA92 SERIES CONTAINERS.
- C. THE OUTLOADING PROCEDURES DEPICTED WITHIN THIS DOCUMENT ARE APPLICABLE FOR SHIPMENTS IN CONVENTIONAL TYPE VAN TRAILERS AND APPLY TO TRAILERS HAVING WOOD, OR WOOD AND METAL, OR ALL METAL FLOORS. REGARDLESS OF THE DIMENSIONS OF THE VAN TRAILERS SHOWN, 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 SPECIFIED BRACING IS ADEQUATE FOR LOADS WEIGHING UP TO AND INCLUDING THE MAXIMUM WEIGHTS PERMITTED BY LAW.
- D. SELECTION OF A VEHICLE FOR THE TRANSPORT OF THE DESIGNATED ITEM IS THE RESPONSIBILITY OF THE ORIGINATING CARRIER AND THE SHIPPER. ONLY VEHICLES IN ACCORDANCE WITH THE REQUIREMENTS OF THE APPLICABLE REGULATORY DOCUMENTS WILL BE SELECTED FOR USE.
- E. THE GROSS WEIGHT AND AXLE DISTRIBUTION OF WEIGHT FOR A LOAD WILL BE THE RESPONSIBILITY OF THE CARRIER. THE CARRIER WILL ADVISE THE SHIPPER OF THE APPLICABLE LOADING REQUIREMENTS, AND THE SHIPPER WILL LOAD ACCORDINGLY. THE TOTAL WEIGHT OF THE LADING, OF THE DUNNAGE, OF THE TRACTOR, AND OF THE SEMITRAILER CARRYING THE LADING MUST NOT EXCEED THE MAXIMUM GROSS WEIGHT ALLOWED FOR THE STATE OR STATES THRU WHICH THE LOAD IS TO BE TRANSPORTED BY MOTOR CARRIER. LIKEWISE, THE GROSS WEIGHT ON A SINGLE OR TANDEM AXLE MUST NOT EXCEED THE MAXIMUM ALLOWABLE WEIGHT. IF THERE IS ANY DOUBT AS TO WHETHER THE TOTAL GROSS WEIGHT OR AXLE WEIGHT EXCEEDS THE MAXIMUM ALLOWED, WEIGHT SHOULD BE VERIFIED BY ACTUALLY WEIGHING THE LOADED VEHICLE.
- F. NOTICE: A SHIPMENT WILL BE POSITIONED IN THE TRAILER CONSISTENT WITH STATE WEIGHT LAWS. THE NUMBER OF LADING UNITS MAY BE ADJUSTED TO FIT THE SIZE OF THE TRAILER TO BE LOADED OR THE QUANTITY TO BE SHIPPED. COMBINATIONS OF THE OUTLOADING PROCEDURES SPECIFIED MAY BE USED, HOWEVER, THE APPROVED METHODS SHOWN MUST BE FOLLOWED AS CLOSELY AS POSSIBLE FOR BLOCKING, BRACING, AND STAYING OF THE DESIGNATED ITEMS.
- G. THE "LOAD AS SHOWN" FOR MOST OF THE FULL LOADS DEPICTED HEREIN IS BASED ON AN APPROXIMATE LADING WEIGHT OF 43,000 POUNDS. THE SPECIFIED BLOCKING AND BRACING FOR THE FULL LOADS IS ADEQUATE FOR THE RETENTION OF LOADS, UP TO 45,000 POUNDS, IF IT IS DESIRED TO INCREASE THE LADING WEIGHT.
- H. OTHER TYPES OF LADING ITEMS MAY BE LOADED INTO TRAILERS WHICH ARE PARTIALLY LOADED WITH PALLET UNITS OF PROPELLING CHARGES, 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.

- J. ALL LOADS ARE SHOWN IN TRAILERS HAVING ROUNDED CORNERS AT THE FORWARD END. IF THE CONVENTIONAL VAN TRAILER BEING USED IS EQUIPPED WITH A SQUARE FRONT OR WITH AN INSTALLED BULKHEAD, OMIT THE FORWARD BLOCKING ASSEMBLY, PIECE MARKED (1), AND POSITION THE PALLET UNITS DIRECTLY AGAINST THE FORWARD PORTION OF THE TRAILER.
- K. 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.
- L. 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.
- M. 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 THE PIECE ON TO OR RIGHT BESIDE A NAIL IN A LOWER PIECE.
- N. 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 ASTM F1667 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.
- O. PORTIONS OF THE TRAILERS, SUCH AS SIDEWALLS, ENDWALLS, AND ROOFS, HAVE NOT BEEN SHOWN IN THE LOAD VIEWS FOR CLARITY PURPOSES.
- P. CAUTION: WHEN POWER OR PNEUMATIC NAILERS ARE BEING USED IN THE APPLICATION OF NAILED FLOORLINE BLOCKING OR BRACING, PALLET UNITS BEING LOADED INTO THE CONVEYANCE MUST BE POSITIONED TO ALLOW A CLEAR PATH OF EXIT FOR THE OPERATOR AT ALL TIMES, SHOULD AN EMERGENCY EXIT BECOME NECESSARY.
- Q. PALLET UNITS WHICH DO NOT CONTAIN A FULL QUANTITY OF ITEMS CAN BE TRANSPORTED. SEE THE "SHIPMENT OF A PARTIAL PALLET UNIT" DETAILS ON PAGE 19. FOR "SHIPMENT OF LEFT-OVER CONTAINERS" SEE THE DETAILS ON PAGE 18.
- R. THESE PROCEDURES CAN ALSO BE UTILIZED FOR THE SHIPMENT OF PALLET UNITS OF PA92 SERIES CONTAINERS WHEN THEY ARE LOADED WITH AN ITEM OTHER THAN THE SPECIFIED PROPELLING CHARGES, OR WHEN THEY ARE EMPTY.
- S. 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 0.454 KG.
- T. THE PALLET UNITS DEPICTED ON PAGE 3 MAY BE LOADED AS A MIXED LOAD IN THE SAME TRAILER. FOR MIXED-HEIGHT LOADS, POSITION ALL PALLET UNITS OF ONE HEIGHT IN ONE LAYER, WITH THE BASIC HEIGHT UNITS IN THE BOTTOM LAYER. IF FULL LAYERS OF ONE HEIGHT UNIT ARE NOT POSSIBLE FOR THE QUANTITY OF EACH SIZE TO BE SHIPPED, THE BASIC HEIGHT UNITS WILL BE LOADED IN THE FORWARD PORTION OF THE BOTTOM LAYER, AND THE SHORTER UNITS IN THE REAR PORTION.

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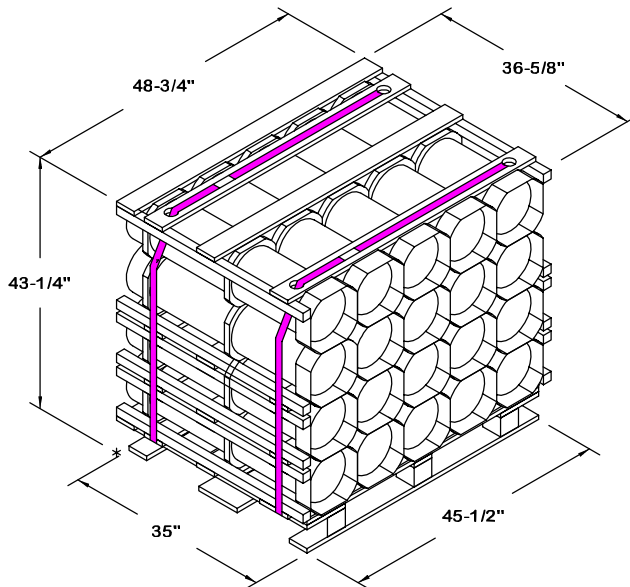
MATERIAL SPECIFICATIONS

- LUMBER - - - - - : SEE TM 743-200-1 (DUNNAGE LUMBER) AND VOLUNTARY PRODUCT STANDARD PS 20.
- NAILS - - - - - : ASTM F1667; COMMON STEEL NAIL (NLCMS OR NLCMS).
- 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 I, II, OR IV.
- WIRE, CARBON STEEL - : ASTM A853; ANNEALED AT FINISH, BLACK OXIDE FINISH, .0800" DIA, GRADE 1006 OR BETTER.
- STAPLE, STRAP - - - : COMMERCIAL GRADE.



PALLET UNIT (BASIC HEIGHT)

CONTAINER - - - - - 25 EACH @ 71 LBS (APPROX)
 CUBE - - - - - 54.2 CUBIC FEET (APPROX)
 GROSS WEIGHT - - - - - 1,955 LBS (APPROX)



PALLET UNIT (DECREASED HEIGHT)

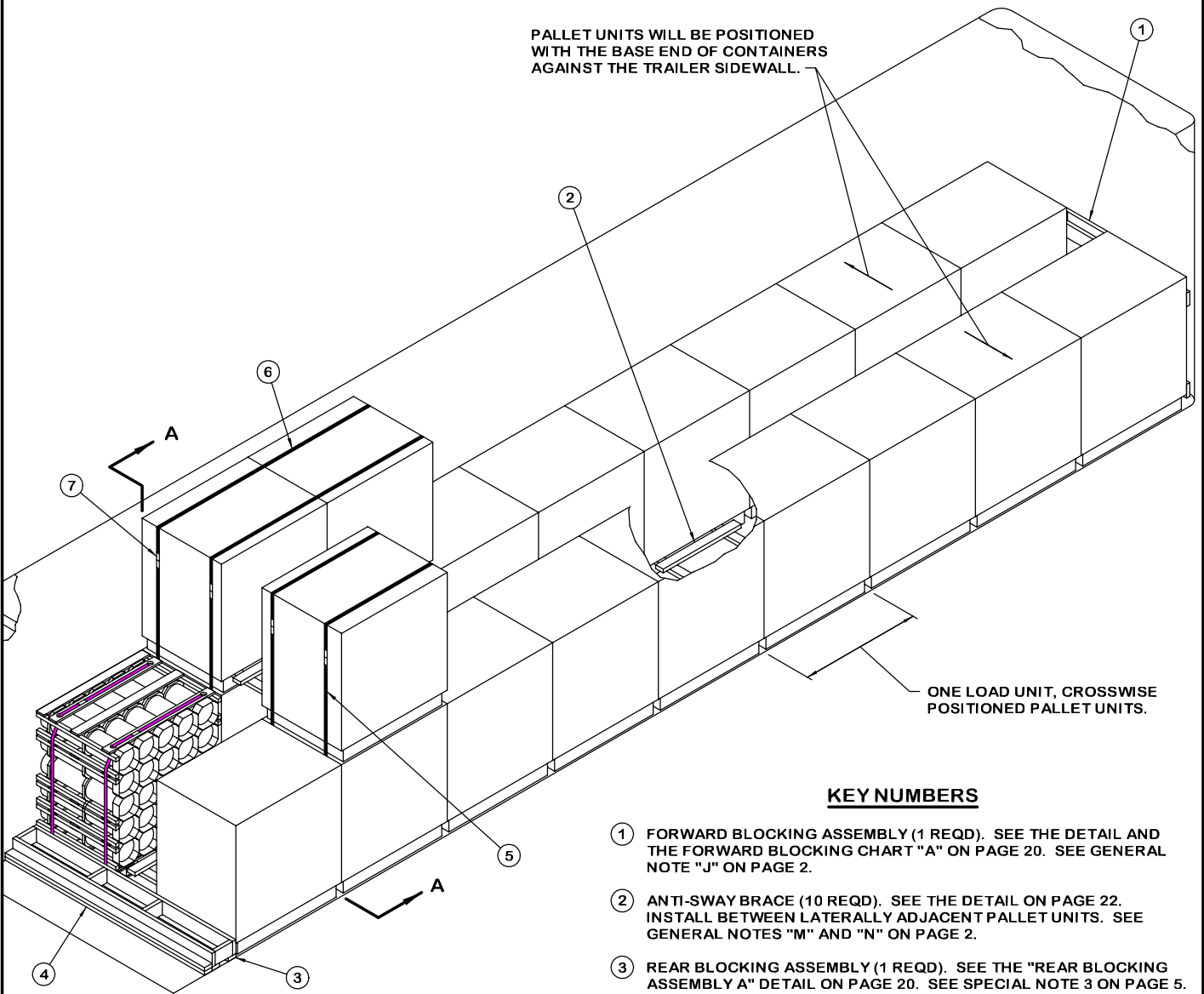
CONTAINER - - - - - 20 EACH @ 71 LBS (APPROX)
 CUBE - - - - - 44.7 CUBIC FEET (APPROX)
 GROSS WEIGHT - - - - - 1,558 LBS (APPROX)

REVISION

REVISION NO. 1 DATED APRIL 1998, CONSISTS OF:

1. INCORPORATING NAILED-HEADER METHOD INTO LOAD DRAWINGS.
2. REMOVING LOADS IN TRAILERS EQUIPPED WITH MECHANICAL BRACING DEVICES.
3. REMOVING MOST TOP-OF-LOAD ANTI-SWAY BRACES FROM LOAD DRAWINGS.
4. REMOVING TYGARD METHOD OF LOAD RESTRAINT.
5. UPDATING GENERAL NOTES AND DRAWING FORMAT.

PALLET UNITS WILL BE POSITIONED WITH THE BASE END OF CONTAINERS AGAINST THE TRAILER SIDEWALL.

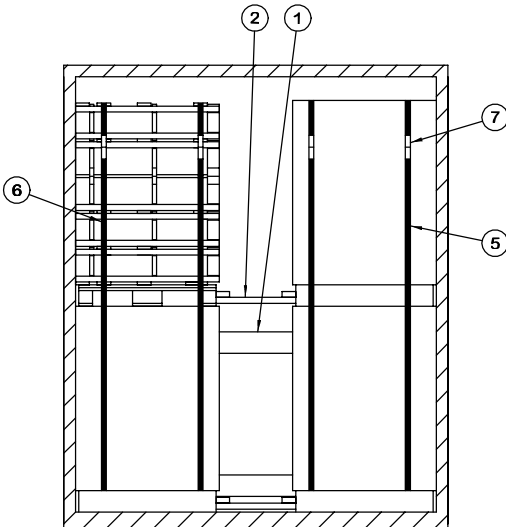


ONE LOAD UNIT, CROSSWISE POSITIONED PALLET UNITS.

KEY NUMBERS

- ① FORWARD BLOCKING ASSEMBLY (1 REQD). SEE THE DETAIL AND THE FORWARD BLOCKING CHART "A" ON PAGE 20. SEE GENERAL NOTE "J" ON PAGE 2.
- ② ANTI-SWAY BRACE (10 REQD). SEE THE DETAIL ON PAGE 22. INSTALL BETWEEN LATERALLY ADJACENT PALLET UNITS. SEE GENERAL NOTES "M" AND "N" ON PAGE 2.
- ③ REAR BLOCKING ASSEMBLY (1 REQD). SEE THE "REAR BLOCKING ASSEMBLY A" DETAIL ON PAGE 20. SEE SPECIAL NOTE 3 ON PAGE 5.
- ④ REAR HEADER, 2" X 4" BY TRAILER WIDTH MINUS 1/2" IN LENGTH (DOUBLED) (1 REQD). POSITION AGAINST THE REAR BLOCKING ASSEMBLY, PIECE MARKED ③. NAIL THE FIRST PIECE TO THE TRAILER FLOOR W/17-10d NAILS. NAIL THE SECOND PIECE TO THE FIRST IN A LIKE MANNER AND TOENAIL TO THE REAR BLOCKING ASSEMBLY W/4-10d NAILS. FOR OTHER LOAD WEIGHTS, SEE THE NAILING CHART ON PAGE 5.
- ⑤ STACK UNITIZING STRAP, 1-1/4" X .035" OR .031" X 26'-6" LONG STEEL STRAPPING (2 REQD). INSTALL SO AS TO ENCIRCLE TWO PALLET UNITS AS SHOWN. SEE SPECIAL NOTE 4 ON PAGE 5.
- ⑥ BUNDLING STRAP, 1-1/4" X .035" OR .031" X 35'-0" LONG STEEL STRAPPING (2 REQD). INSTALL TO ENCIRCLE TWO PALLET UNITS IN THE SECOND LAYER AND TWO UNITS DIRECTLY BELOW AS SHOWN. SEE SPECIAL NOTE 5 ON PAGE 5.
- ⑦ SEAL FOR 1-1/4" STRAPPING (8 REQD). DOUBLE CRIMP EACH SEAL. SEE GENERAL NOTE "K" ON PAGE 2.

ISOMETRIC VIEW



SECTION A-A

FORWARD HEADER NAILING CHART •	
# NAILS	MAX. LOAD WEIGHT (LBS)
3	15,000
4	20,000
5	25,000
6	30,000
7	35,000
8	40,000
9	45,000

• HEADERS AT THE FRONT END OF A LOAD OR AT THE FRONT END OF A DIVIDED LOAD WILL BE DOUBLED 2" X 6" MATERIAL. THE NUMBER OF NAILS INDICATED ABOVE REFERS TO THE NUMBER OF NAILS USED IN EACH LAMINATION OF A HEADER, FOR EXAMPLE 8 NAILS MEANS THE FIRST BOARD IS NAILED TO THE TRAILER FLOOR W/8-10d NAILS, AND THE SECOND BOARD IS LAMINATED TO THE FIRST W/8-20d NAILS, FOR A TOTAL OF 8-10d AND 8-20d NAILS PER HEADER.

REAR HEADER NAILING CHART *	
# NAILS	MAX. LOAD WEIGHT (LBS)
6	15,000
7	17,500
8	20,000
9	22,500
10	25,000
11	27,500
12	30,000
13	32,500
14	35,000
15	37,500
16	40,000
17	42,500
18	45,000

* HEADERS AT THE REAR OF A FULL LOAD OR AT THE REAR END OF A DIVIDED LOAD WILL BE DOUBLED 2" X 4" MATERIAL. THE NUMBER OF NAILS INDICATED ABOVE REFERS TO THE NUMBER OF NAILS USED IN EACH LAMINATION OF A HEADER, FOR EXAMPLE 8 NAILS MEANS THE FIRST BOARD IS NAILED TO THE TRAILER FLOOR W/8-10d NAILS, AND THE SECOND BOARD IS LAMINATED TO THE FIRST W/8-10d NAILS, FOR A TOTAL OF 16-10d NAILS. NOTE: REAR HEADERS MAY BE HANDLED IN THE SAME MANNER AS FORWARD HEADERS, USING 2" X 6" MATERIAL WITH 10d AND 20d NAILS, IF DESIRED.

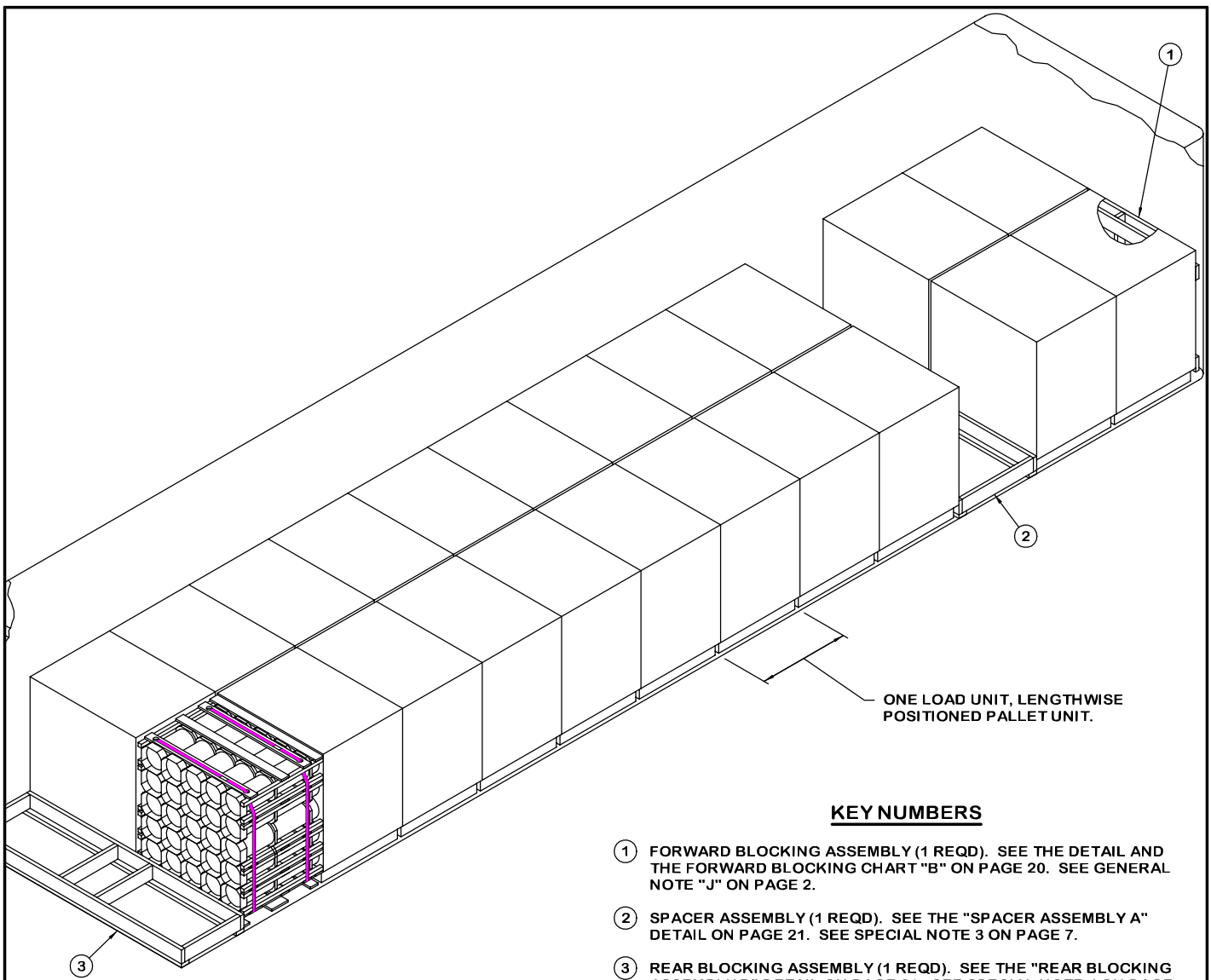
SPECIAL NOTES:

1. A 21-UNIT LOAD IS SHOWN IN A 40'-0" LONG BY 7'-8" WIDE (INSIDE DIMENSION) CONVENTIONAL VAN TYPE TRAILER. WIDER OR NARROWER TRAILERS MAY BE USED FOR SHIPMENT OF THE DEPICTED LOAD. IF THE TRAILER BEING LOADED DOES NOT HAVE A DOOR OPENING HEIGHT OF AT LEAST 8'-11" IT WILL BE NECESSARY TO LIMIT THE REARMOST LOAD UNIT TO ONE PALLET UNIT IN HEIGHT. IF A TRAILER WHICH IS 8'-2" OR WIDER IS FURNISHED FOR LOADING, THE LOADING PATTERN DEPICTED ON PAGE 6 MAY BE USED IN LIEU OF THE PROCEDURES DEPICTED ON PAGE 4.
2. THE PALLET UNIT SHOWN IN THE LOAD ON PAGE 4 IS THE BASIC HEIGHT UNIT HAVING OVERALL DIMENSIONS OF 36-5/8" LONG BY 48-3/4" WIDE BY 52-1/2" HIGH AND WEIGHING APPROXIMATELY 1,955 POUNDS.
3. 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 "C" DETAILED ON PAGE 24. IF THE SPACE AT THE REAR OF THE LOAD IS 9" OR GREATER, REAR BLOCKING ASSEMBLY "A", PIECE MARKED ③ ON PAGE 4, WILL BE USED. SEE SPECIAL NOTE 10.
4. THE STACK UNITIZING STRAPS, PIECES MARKED ⑤ IN THE LOAD ON PAGE 4, WILL BE INSTALLED TO SECURE AN UNSUPPORTED PALLET UNIT IN THE SECOND LAYER TO A CORRESPONDING UNIT IN THE FIRST LAYER, EXCEPT AT THE VERY REAR OF THE LOAD. SEE SPECIAL NOTE 5.
5. IF A STACK AT THE REAR OF THE LOAD IS MORE THAN ONE UNIT HIGH, BUNDLING STRAPS MUST BE INSTALLED SO AS TO ENCIRCLE THE REARMOST TWO STACKS IN EACH APPLICABLE ROW. SEE PIECE MARKED ⑥ ON PAGE 8 FOR A TYPICAL INSTALLATION.
6. IF ONLY ONE PALLET UNIT IS TO BE LOADED IN THE SECOND LAYER OF EITHER ROW, IT MUST NOT BE POSITIONED ON TOP OF THE REARMOST UNIT IN THE FIRST LAYER.
7. REFER TO PAGE 19 FOR GUIDANCE IN THE SHIPMENT OF PARTIAL PALLET UNITS.
8. LEFTOVER CONTAINERS IN AN AMOUNT NOT TO EXCEED FOUR MAY BE SECURED TO THE TOP OF A FULL PALLET UNIT FOR SHIPMENT. REFER TO THE "PROCEDURES FOR SHIPMENT OF LEFT-OVER CONTAINERS" ON PAGE 18 FOR GUIDANCE.
9. FOR SHIPMENT OF LESS THAN FULL LOADS, REFER TO PAGES 14 THROUGH 17.
10. TRAILERS EQUIPPED WITH ROLL-UP TYPE DOORS MAY BE USED; HOWEVER, SPECIAL REAR BLOCKING MUST BE INSTALLED. THE NAILED-HEADER METHOD IS SHOWN ON PAGES 4 AND 5. NOTE THAT THE SPECIAL REAR BLOCKING FOR TRAILERS EQUIPPED WITH ROLL-UP TYPE DOORS MAY ALSO BE USED IN TRAILERS EQUIPPED WITH HINGED DOORS.

BILL OF MATERIAL		
LUMBER	LINEAR FEET	BOARD FEET
2" X 4"	165	110
2" X 6"	47	47
NAILS	NO. REQD	POUNDS
10d (3")	242	3-3/4
1-1/4" STEEL STRAPPING - - 123 ¹ REQD - - - 17-3/4 LBS		
SEAL FOR 1-1/4" STRAPPING - 8 REQD - - - 1/2 LB		

LOAD AS SHOWN

ITEM	QUANTITY	WEIGHT (APPROX)
PALLET UNIT - - - - -	21 - - - - -	41,055 LBS
DUNNAGE - - - - -	- - - - -	336 LBS
TOTAL WEIGHT - - - - -		41,391 LBS (APPROX)



ONE LOAD UNIT, LENGTHWISE POSITIONED PALLET UNIT.

KEY NUMBERS

- ① FORWARD BLOCKING ASSEMBLY (1 REQD). SEE THE DETAIL AND THE FORWARD BLOCKING CHART "B" ON PAGE 20. SEE GENERAL NOTE "J" ON PAGE 2.
- ② SPACER ASSEMBLY (1 REQD). SEE THE "SPACER ASSEMBLY A" DETAIL ON PAGE 21. SEE SPECIAL NOTE 3 ON PAGE 7.
- ③ REAR BLOCKING ASSEMBLY (1 REQD). SEE THE "REAR BLOCKING ASSEMBLY B" DETAIL ON PAGE 21. SEE SPECIAL NOTE 4 ON PAGE 7.

ISOMETRIC VIEW

SPECIAL NOTES:

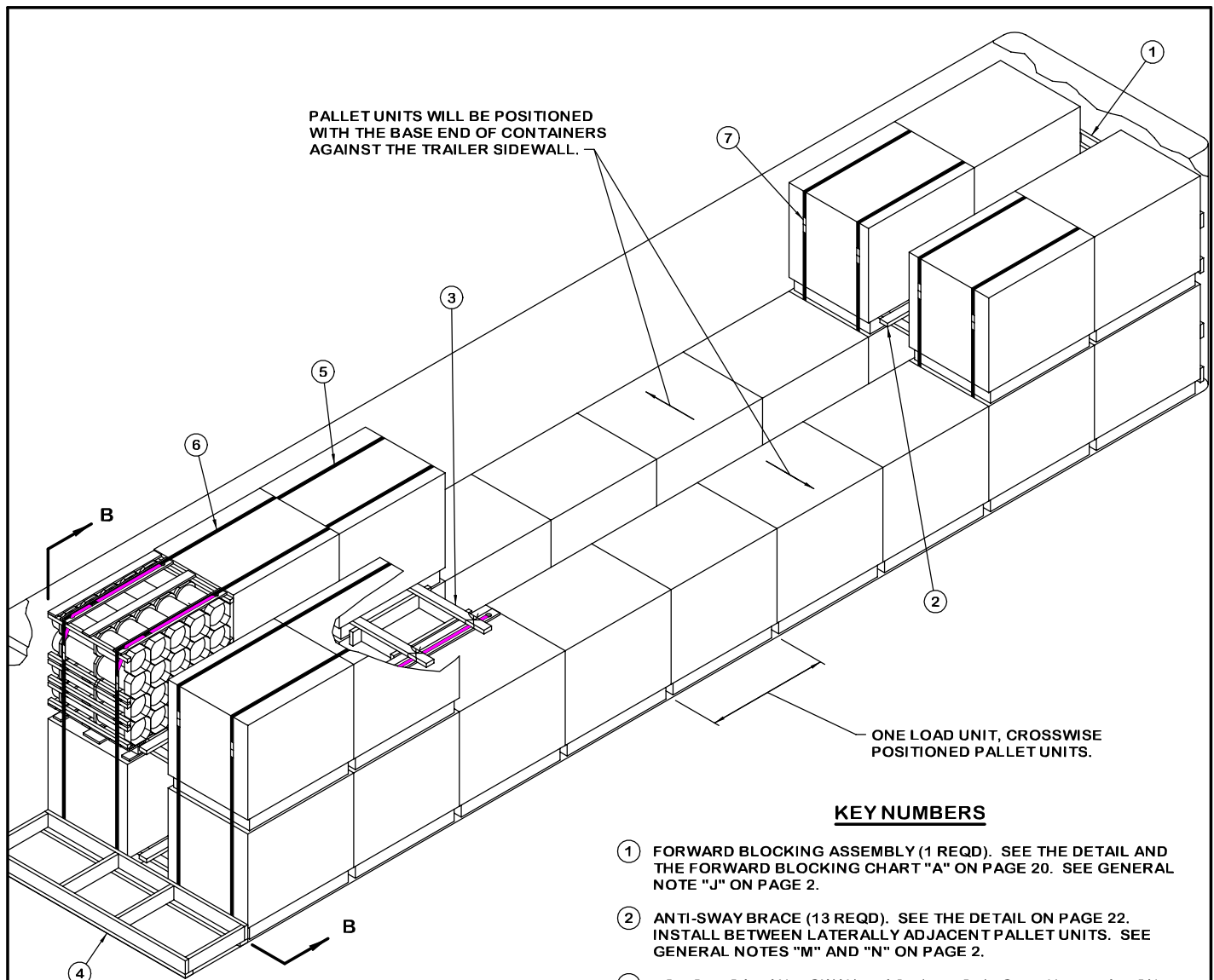
1. A 22-UNIT LOAD IS SHOWN IN A 40'-0" LONG BY 8'-2-1/2" WIDE (INSIDE DIMENSION) CONVENTIONAL VAN TYPE TRAILER. WIDER TRAILERS MAY BE USED, HOWEVER, IF THE TRAILER BEING LOADED DOES NOT HAVE A DOOR OPENING HEIGHT OF AT LEAST 8'-11" IT WILL BE NECESSARY TO LIMIT THE REAR MOST LOAD UNIT TO ONE PALLET UNIT IN HEIGHT.
2. THE PALLET UNIT SHOWN IN THE LOAD ON PAGE 6 IS THE BASIC HEIGHT UNIT HAVING OVERALL DIMENSIONS OF 36-5/8" LONG BY 48-3/4" WIDE BY 52-1/2" HIGH AND WEIGHING APPROXIMATELY 1,955 POUNDS.
3. SPACER ASSEMBLY "A" SHOWN AS PIECE MARKED ② IN THE LOAD ON PAGE 6 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.
4. 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 "C" AS DETAILED ON PAGE 24. IF THE SPACE AT THE REAR OF THE LOAD IS 9" OR GREATER, REAR BLOCKING ASSEMBLY "B" WILL BE USED AS SHOWN. SEE SPECIAL NOTE 9.
5. IF PALLET UNITS ARE TO BE LOADED IN THE TOP LAYER OF THE DEPICTED LOAD, REFER TO KEY NUMBERS ②, ④, AND ⑤ ON PAGE 10, AND SPECIAL NOTES 3 THROUGH 6 ON PAGE 11 FOR DUNNAGE REQUIREMENTS NOT SHOWN HEREIN.
6. REFER TO PAGE 19 FOR GUIDANCE IN THE SHIPMENT OF PARTIAL PALLET UNITS.
7. LEFTOVER CONTAINERS IN AN AMOUNT NOT TO EXCEED FOUR MAY BE SECURED TO THE TOP OF A FULL PALLET UNIT FOR SHIPMENT. REFER TO THE "PROCEDURES FOR SHIPMENT OF LEFTOVER CONTAINERS" ON PAGE 18 FOR GUIDANCE.
8. FOR SHIPMENT OF LESS THAN FULL LOADS, REFER TO PAGES 14 THROUGH 17.
9. TRAILERS EQUIPPED WITH ROLL-UP TYPE DOORS MAY BE USED; HOWEVER, SPECIAL REAR BLOCKING MUST BE INSTALLED. THE NAILED-HEADER METHOD IS SHOWN ON PAGES 4 AND 5. NOTE THAT THE REAR BLOCKING ASSEMBLY, PIECE MARKED ③, IS NOT REQUIRED WHEN USING THE NAILED-HEADER METHOD. ALSO NOTE THAT THE SPECIAL REAR BLOCKING FOR TRAILERS EQUIPPED WITH ROLL-UP TYPE DOORS MAY ALSO BE USED IN TRAILERS EQUIPPED WITH HINGED DOORS.

BILL OF MATERIAL

LUMBER	LINEAR FEET	BOARD FEET
2" X 3"	4	2
2" X 4"	50	34
2" X 6"	85	85
NAILS	NO. REQD	POUNDS
10d (3")	128	2

LOAD AS SHOWN

ITEM	QUANTITY	WEIGHT (APPROX)
PALLET UNIT	22	43,010 LBS
DUNNAGE		244 LBS
TOTAL WEIGHT		43,254 LBS (APPROX)



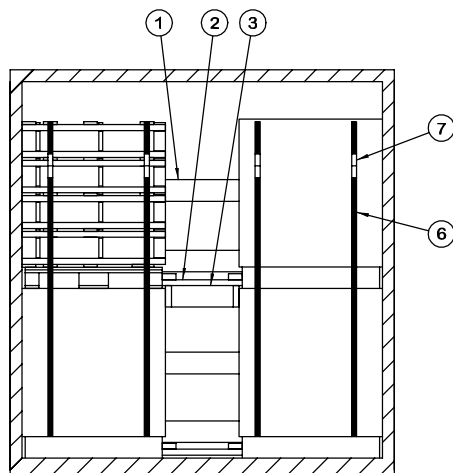
PALLET UNITS WILL BE POSITIONED WITH THE BASE END OF CONTAINERS AGAINST THE TRAILER SIDEWALL.

ONE LOAD UNIT, CROSSWISE POSITIONED PALLET UNITS.

KEY NUMBERS

- ① FORWARD BLOCKING ASSEMBLY (1 REQD). SEE THE DETAIL AND THE FORWARD BLOCKING CHART "A" ON PAGE 20. SEE GENERAL NOTE "J" ON PAGE 2.
- ② ANTI-SWAY BRACE (13 REQD). SEE THE DETAIL ON PAGE 22. INSTALL BETWEEN LATERALLY ADJACENT PALLET UNITS. SEE GENERAL NOTES "M" AND "N" ON PAGE 2.
- ③ TOP-OF-LOAD ANTI-SWAY BRACE (1 REQD). SEE THE DETAIL ON PAGE 22. POSITION WITH ONE END OF THE SUPPORT PIECES AGAINST THE PALLET POSTS AND WIRE TIE THE OTHER ENDS OF THE SUPPORT PIECES TO THE UNIT LOAD STRAP. SEE THE "TIE WIRE APPLICATION" DETAIL ON PAGE 22. SEE SPECIAL NOTE 3 ON PAGE 9.
- ④ REAR BLOCKING ASSEMBLY (1 REQD). SEE THE "REAR BLOCKING ASSEMBLY A" DETAIL ON PAGE 20. SEE SPECIAL NOTE 4 ON PAGE 9.
- ⑤ STACK UNITIZING STRAP, 1-1/4" X .035" OR .031" X 23'-6" LONG STEEL STRAPPING (6 REQD). INSTALL SO AS TO ENCIRCLE TWO PALLET UNITS AS SHOWN. SEE SPECIAL NOTE 5 ON PAGE 9.
- ⑥ BUNDLING STRAP, 1-1/4" X .035" OR .031" X 31"-6" LONG STEEL STRAPPING (4 REQD). INSTALL TO ENCIRCLE TWO PALLET UNITS IN THE SECOND LAYER AND TWO UNITS DIRECTLY BELOW AS SHOWN. SEE SPECIAL NOTE 6 ON PAGE 9.
- ⑦ SEAL FOR 1-1/4" STRAPPING (20 REQD). DOUBLE CRIMP EACH SEAL. SEE GENERAL NOTE "K" ON PAGE 2.

ISOMETRIC VIEW



SECTION B-B

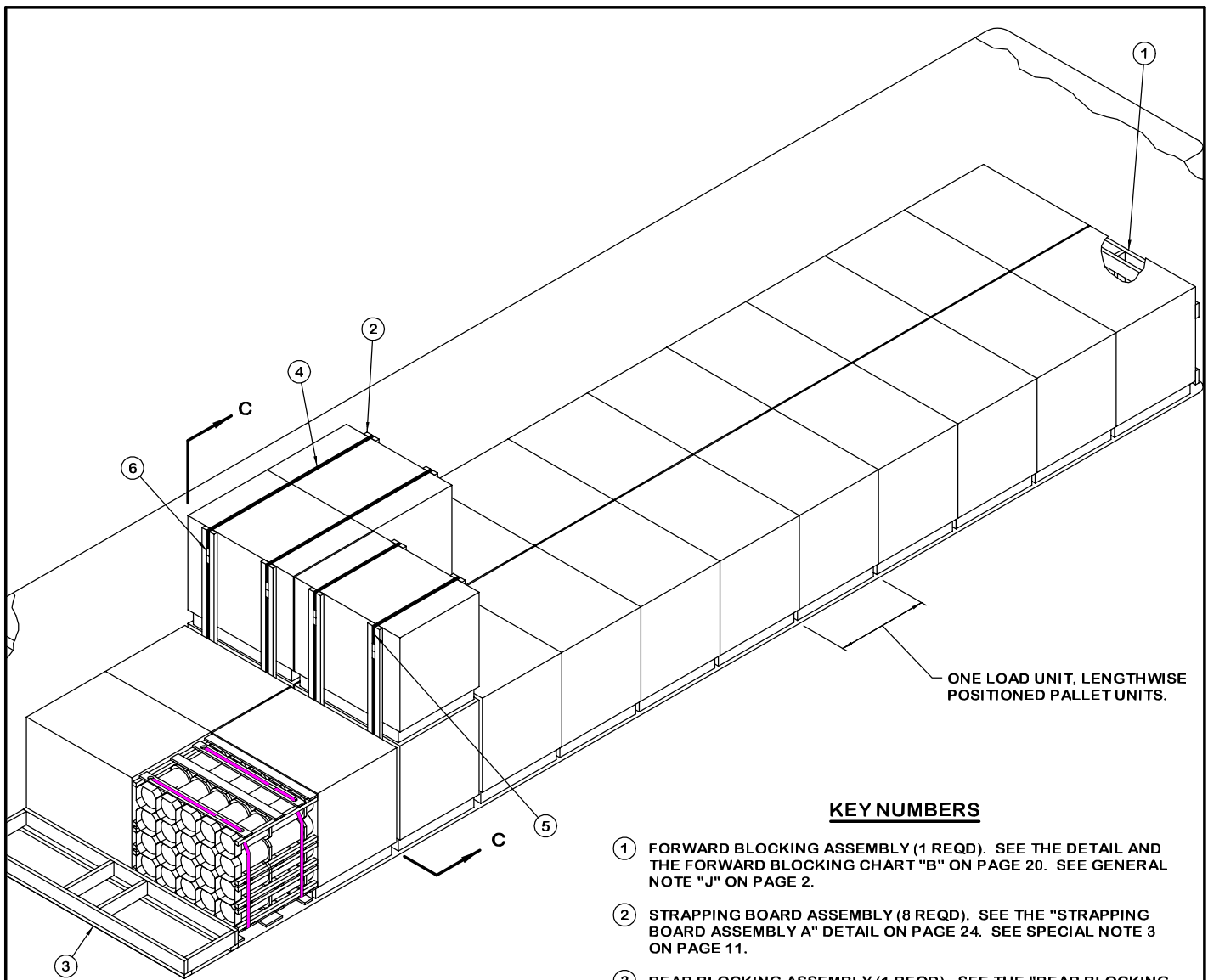
SPECIAL NOTES:

1. A 27-UNIT LOAD IS SHOWN IN A 40'-0" LONG BY 7'-8" WIDE (INSIDE DIMENSION) CONVENTIONAL VAN TYPE TRAILER. WIDER OR NARROWER TRAILERS MAY BE USED.
2. THE PALLET UNIT SHOWN IN THE LOAD ON PAGE 8 IS THE DECREASED HEIGHT UNIT HAVING OVERALL DIMENSIONS OF 36-5/8" LONG BY 48-3/4" WIDE BY 43-1/4" HIGH AND WEIGHING APPROXIMATELY 1,558 POUNDS.
3. IF ONLY ONE PALLET UNIT IS TO BE LOADED IN THE SECOND LAYER OF EITHER ROW, IT MUST NOT BE POSITIONED ON TOP OF THE REARMOST PALLET UNIT IN THE FIRST LAYER. PROVIDE LONGITUDINAL BRACING BY INSTALLING UNITIZING STRAPS, PIECE MARKED (5). PROVIDE LATERAL BRACING BY INSTALLING A "TOP-OF-LOAD ANTI-SWAY BRACE, SHOWN AS PIECE MARKED (3).
4. IF THE SPACE BETWEEN THE LADING AND THE TRAILER DOORS IS LESS THAN 9", SOLID FILL REAR BLOCKING WILL BE USED IN LIEU OF THE DEPICTED REAR BLOCKING ASSEMBLY. SEE THE "REAR BLOCKING ASSEMBLY C" DETAIL ON PAGE 24. IF THE SPACE IS LESS THAN 1-1/2" REAR BLOCKING IS NOT REQUIRED. SEE SPECIAL NOTE 10.
5. THE STACK UNITIZING STRAPS, PIECES MARKED (5) IN THE LOAD VIEW ON PAGE 8, WILL BE INSTALLED TO SECURE AN UNSUPPORTED PALLET UNIT IN THE SECOND LAYER TO A CORRESPONDING UNIT IN THE FIRST LAYER, EXCEPT AT THE VERY REAR OF THE LOAD.
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 (6), MUST BE INSTALLED SO AS TO ENCIRCLE THE REARMOST TWO STACKS IN EACH APPLICABLE ROW.
7. REFER TO PAGE 19 FOR GUIDANCE IN THE SHIPMENT OF PARTIAL PALLET UNITS.
8. LEFTOVER CONTAINERS IN AN AMOUNT NOT TO EXCEED FOUR MAY BE SECURED TO THE TOP OF A FULL PALLET UNIT FOR SHIPMENT. REFER TO THE "PROCEDURES FOR SHIPMENT OF LEFTOVER CONTAINERS" ON PAGE 18 FOR GUIDANCE.
9. FOR SHIPMENT OF LESS THAN FULL LOADS, REFER TO PAGES 14 THROUGH 17.
10. TRAILERS EQUIPPED WITH ROLL-UP TYPE DOORS MAY BE USED; HOWEVER, SPECIAL REAR BLOCKING MUST BE INSTALLED. THE NAILED-HEADER METHOD IS SHOWN ON PAGES 4 AND 5. NOTE THAT THE SPECIAL REAR BLOCKING FOR TRAILERS EQUIPPED WITH ROLL-UP TYPE DOORS MAY ALSO BE USED IN TRAILERS EQUIPPED WITH HINGED DOORS.

BILL OF MATERIAL		
LUMBER	LINEAR FEET	BOARD FEET
2" X 4"	199	133
2" X 6"	91	91
NAILS	NO. REQD	POUNDS
10d (3")	294	4-3/4
1-1/4" STEEL STRAPPING - - 267' REQD - - - 38-1/4 LBS		
SEAL FOR 1-1/4" STRAPPING - 20 REQD - - - - 1 LBS		
.0800" DIA. WIRE - - - - - 4' REQD - - - - - NIL		

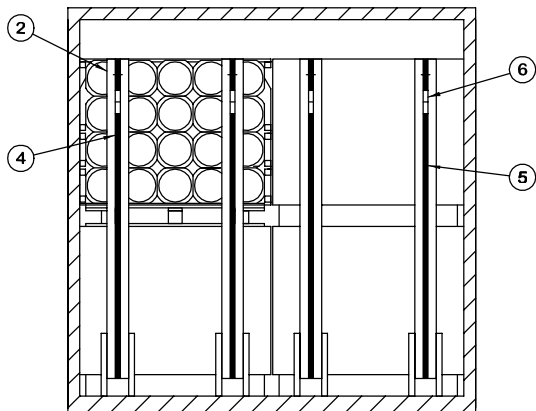
LOAD AS SHOWN

<u>ITEM</u>	<u>QUANTITY</u>	<u>WEIGHT (APPROX)</u>
PALLET UNIT - - - - -	27 - - - - -	42,066 LBS
DUNNAGE - - - - -	- - - - -	492 LBS
TOTAL WEIGHT - - - - -		42,558 LBS (APPROX)



ONE LOAD UNIT, LENGTHWISE POSITIONED PALLET UNITS.

ISOMETRIC VIEW



SECTION D-D

KEY NUMBERS

- ① FORWARD BLOCKING ASSEMBLY (1 REQD). SEE THE DETAIL AND THE FORWARD BLOCKING CHART "B" ON PAGE 20. SEE GENERAL NOTE "J" ON PAGE 2.
- ② STRAPPING BOARD ASSEMBLY (8 REQD). SEE THE "STRAPPING BOARD ASSEMBLY A" DETAIL ON PAGE 24. SEE SPECIAL NOTE 3 ON PAGE 11.
- ③ REAR BLOCKING ASSEMBLY (1 REQD). SEE THE "REAR BLOCKING ASSEMBLY B" DETAIL ON PAGE 21 AND SPECIAL NOTE 7 ON PAGE 11.
- ④ BUNDLING STRAP, 1-1/4" X .035" OR .031" X 28'-0" LONG STEEL STRAPPING (2 REQD). INSTALL SO AS TO ENCIRCLE TWO PALLET UNIT STACKS AND THE STRAPPING BOARD ASSEMBLIES, PIECE MARKED ②, AS SHOWN. STAPLE TO THE UPPER PORTION OF THE STRAPPING BOARD ASSEMBLY W/1 STAPLE. SEE SPECIAL NOTE 6 ON PAGE 11.
- ⑤ STACK UNITIZING STRAP, 1-1/4" X .035" OR .031" X 22'-0" LONG STEEL STRAPPING (2 REQD). INSTALL SO AS TO ENCIRCLE A PALLET UNIT STACK AND THE STRAPPING BOARD ASSEMBLIES, PIECE MARKED ②, AS SHOWN. STAPLE TO THE UPPER PORTION OF THE STRAPPING BOARD ASSEMBLY W/1 STAPLE. SEE SPECIAL NOTES 4 AND 5 ON PAGE 11.
- ⑥ SEAL FOR 1-1/4" STRAPPING (8 REQD, 2 PER STRAP). DOUBLE CRIMP EACH SEAL. SEE GENERAL NOTE "K" ON PAGE 2.

SPECIAL NOTES:

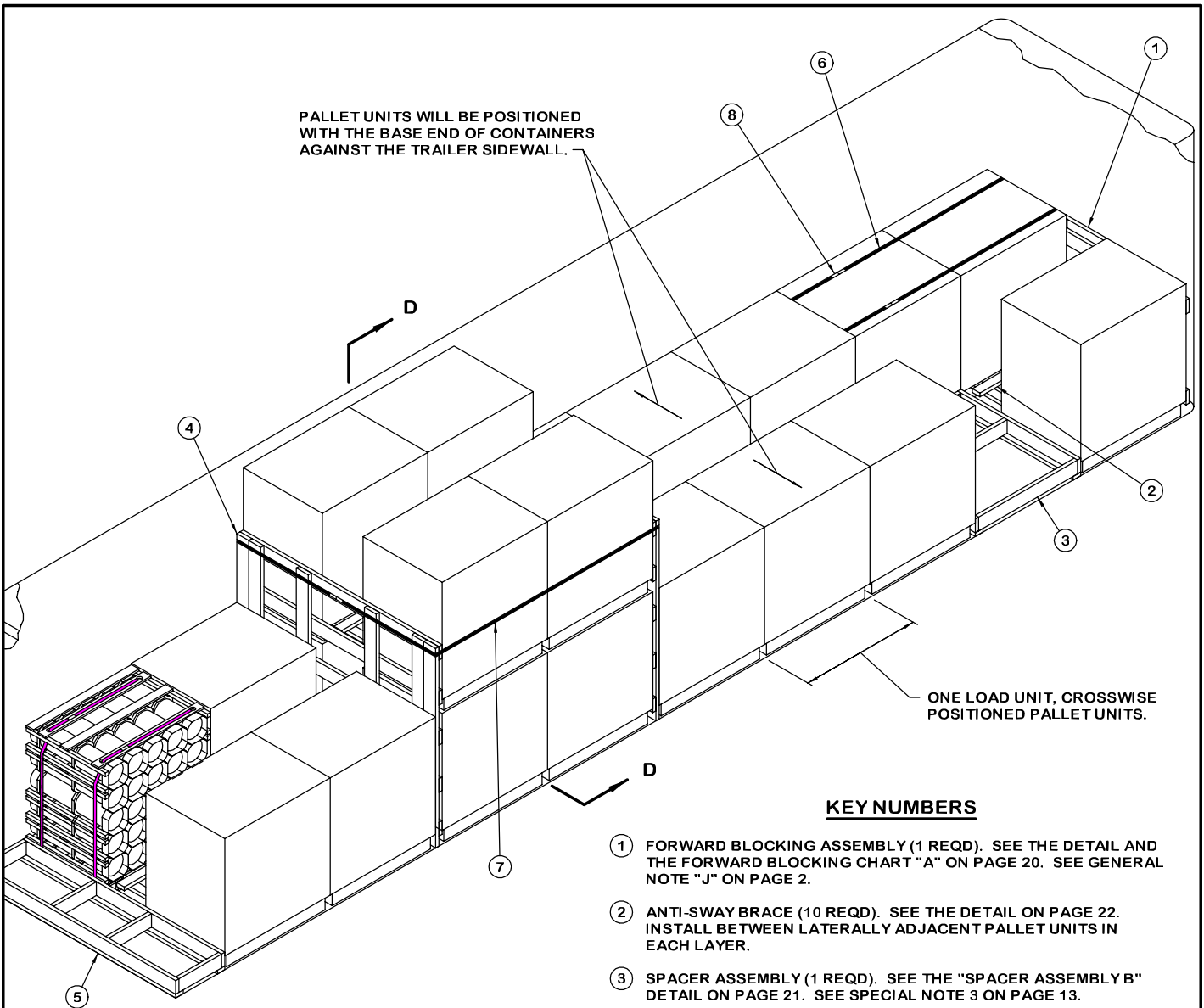
1. A 27-UNIT LOAD IS SHOWN IN A 40'-0" LONG BY 8'-2" WIDE (INSIDE DIMENSION) CONVENTIONAL VAN TYPE TRAILER. WIDER TRAILERS MAY BE USED, HOWEVER, IF THE TRAILER BEING LOADED DOES NOT HAVE A DOOR OPENING HEIGHT OF AT LEAST 7'-5" IT WILL BE NECESSARY TO LIMIT THE REARMOST LOAD UNIT TO ONE PALLET UNIT IN HEIGHT.
2. THE PALLET UNIT SHOWN IN THE LOAD ON PAGE 10 IS THE DECREASED HEIGHT UNIT HAVING OVERALL DIMENSIONS OF 36-5/8" LONG BY 48-3/4" WIDE BY 43-1/4" HIGH AND WEIGHING APPROXIMATELY 1,558 POUNDS.
3. FOR EASE OF INSTALLATION, A STRAPPING BOARD ASSEMBLY "B" MAY BE USED IN LIEU OF EACH PAIR OF STRAPPING BOARD ASSEMBLIES, PIECE MARKED (2). SEE THE "STRAPPING BOARD ASSEMBLY B" DETAIL ON PAGE 24.
4. A PALLET UNIT AT EACH END OF THE SECOND LAYER PORTION OF THE LOAD MUST BE UNITIZED TO A PALLET UNIT IN THE FIRST LAYER, UNLESS THE STACKED UNITS ARE AGAINST THE FRONT WALL OF A SQUARE FRONT TRAILER, AGAINST THE FORWARD BLOCKING ASSEMBLY, OR AT THE VERY REAR OF THE LOAD. THE BUNDLING STRAPS, PIECE MARKED (4), AND THE STRAPPING BOARD ASSEMBLIES, PIECE MARKED (2), MUST BE INSTALLED PRIOR TO FINAL POSITIONING OF THE STACK.
5. IF ONLY ONE PALLET IS TO BE LOADED IN THE SECOND LAYER OF EITHER ROW IT MUST NOT BE POSITIONED ON THE REARMOST PALLET UNIT IN THE FIRST LAYER. PROVIDE LONGITUDINAL BRACING BY INSTALLING STRAPPING BOARD ASSEMBLIES AND UNITIZING STRAPS, PIECES MARKED (2) AND (5).
6. IF A STACK IN THE LOAD UNIT AT THE REAR OF THE LOAD IS MORE THAN ONE UNIT HIGH, BUNDLING STRAPS, SHOWN AS PIECE MARKED (3), MUST BE INSTALLED SO AS TO ENCIRCLE THE REARMOST TWO STACKS AND TWO PAIR OF STRAPPING BOARD ASSEMBLIES, PIECE MARKED (2), IN EACH APPLICABLE ROW.
7. 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 "C" AS DETAILED ON PAGE 24. IF THE SPACE AT THE REAR OF THE LOAD IS 9" OR GREATER, REAR BLOCKING ASSEMBLY "B" WILL BE USED AS SHOWN. SEE SPECIAL NOTE 11.
8. REFER TO PAGE 19 FOR GUIDANCE IN THE SHIPMENT OF PARTIAL PALLET UNITS.
9. LEFTOVER CONTAINERS IN AN AMOUNT NOT TO EXCEED FOUR MAY BE SECURED TO THE TOP OF A FULL PALLET UNIT FOR SHIPMENT. REFER TO THE "PROCEDURES FOR SHIPMENT OF LEFTOVER CONTAINERS" ON PAGE 18 FOR GUIDANCE.
10. FOR SHIPMENT OF LESS THAN FULL LOADS, REFER TO PAGES 14 THROUGH 17.
11. TRAILERS EQUIPPED WITH ROLL-UP TYPE DOORS MAY BE USED; HOWEVER, SPECIAL REAR BLOCKING MUST BE INSTALLED. THE NAILED-HEADER METHOD IS SHOWN ON PAGES 4 AND 5. NOTE THAT THE REAR BLOCKING ASSEMBLY, PIECE MARKED (3), IS NOT REQUIRED WHEN USING THE NAILED-HEADER METHOD. ALSO NOTE THAT THE SPECIAL REAR BLOCKING FOR TRAILERS EQUIPPED WITH ROLL-UP TYPE DOORS MAY ALSO BE USED IN TRAILERS EQUIPPED WITH HINGED DOORS.

BILL OF MATERIAL		
LUMBER	LINEAR FEET	BOARD FEET
2" X 2"	22	8
2" X 3"	4	2
2" X 4"	29	20
2" X 6"	111	111
NAILS	NO. REQD	POUNDS
10d (3")	134	2-1/4
1-1/4" STEEL STRAPPING - - 100' REQD - - - 14-1/2 LBS		
SEAL FOR 1-1/4" STRAPPING - 24 REQD - - - 1-1/4 LBS		
STAPLE - - - - - 8 REQD - - - - - NIL		

LOAD AS SHOWN

<u>ITEM</u>	<u>QUANTITY</u>	<u>WEIGHT (APPROX)</u>
PALLET UNIT - - - - -	27 - - - - -	42,066 LBS
DUNNAGE - - - - -	- - - - -	300 LBS
TOTAL WEIGHT - - - - -		42,366 LBS (APPROX)

PALLET UNITS WILL BE POSITIONED WITH THE BASE END OF CONTAINERS AGAINST THE TRAILER SIDEWALL.

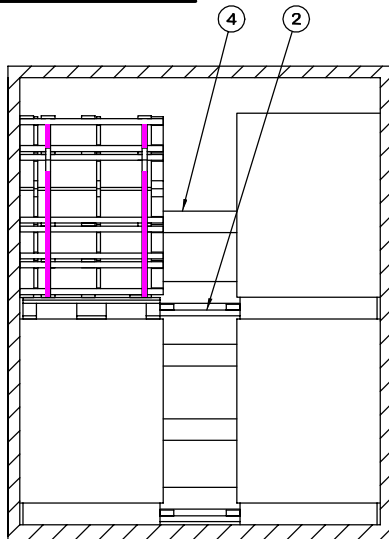


ONE LOAD UNIT, CROSSWISE POSITIONED PALLET UNITS.

KEY NUMBERS

- ① FORWARD BLOCKING ASSEMBLY (1 REQD). SEE THE DETAIL AND THE FORWARD BLOCKING CHART "A" ON PAGE 20. SEE GENERAL NOTE "J" ON PAGE 2.
- ② ANTI-SWAY BRACE (10 REQD). SEE THE DETAIL ON PAGE 22. INSTALL BETWEEN LATERALLY ADJACENT PALLET UNITS IN EACH LAYER.
- ③ SPACER ASSEMBLY (1 REQD). SEE THE "SPACER ASSEMBLY B" DETAIL ON PAGE 21. SEE SPECIAL NOTE 3 ON PAGE 13.
- ④ BULKHEAD GATE (2 REQD). SEE THE DETAIL AND THE "BULKHEAD GATE CHART" ON PAGE 23.
- ⑤ REAR BLOCKING ASSEMBLY (1 REQD). SEE THE REAR BLOCKING ASSEMBLY "A" DETAIL ON PAGE 20. SEE SPECIAL NOTES 4 AND 5 ON PAGE 13.
- ⑥ BUNDLING STRAP, 1-1/4" X .035" OR .031" X 26'-0" LONG STEEL STRAPPING (2 REQD). INSTALL SO AS TO ENCIRCLE TWO PALLET UNITS. SEE SPECIAL NOTE 6 ON PAGE 13.
- ⑦ BUNDLING STRAP, 1-1/4" X .035" OR .031" X 34'-0" LONG STEEL STRAPPING (1 REQD). INSTALL SO AS TO ENCIRCLE FOUR UPPER-LAYER PALLET UNITS AS SHOWN. SEE SPECIAL NOTE 7 ON PAGE 13.
- ⑧ SEAL FOR 1-1/4" STRAPPING (6 REQD, 2 PER STRAP). DOUBLE CRIMP EACH SEAL. SEE GENERAL NOTE "K" ON PAGE 2.

ISOMETRIC VIEW



SECTION D-D

ALTERNATIVE LOADING PROCEDURES FOR ALL UNITS
21-UNIT LOAD IN A 40'-0" LONG BY 7'-8" WIDE HI-VOLUME VAN TYPE TRAILER

SPECIAL NOTES:

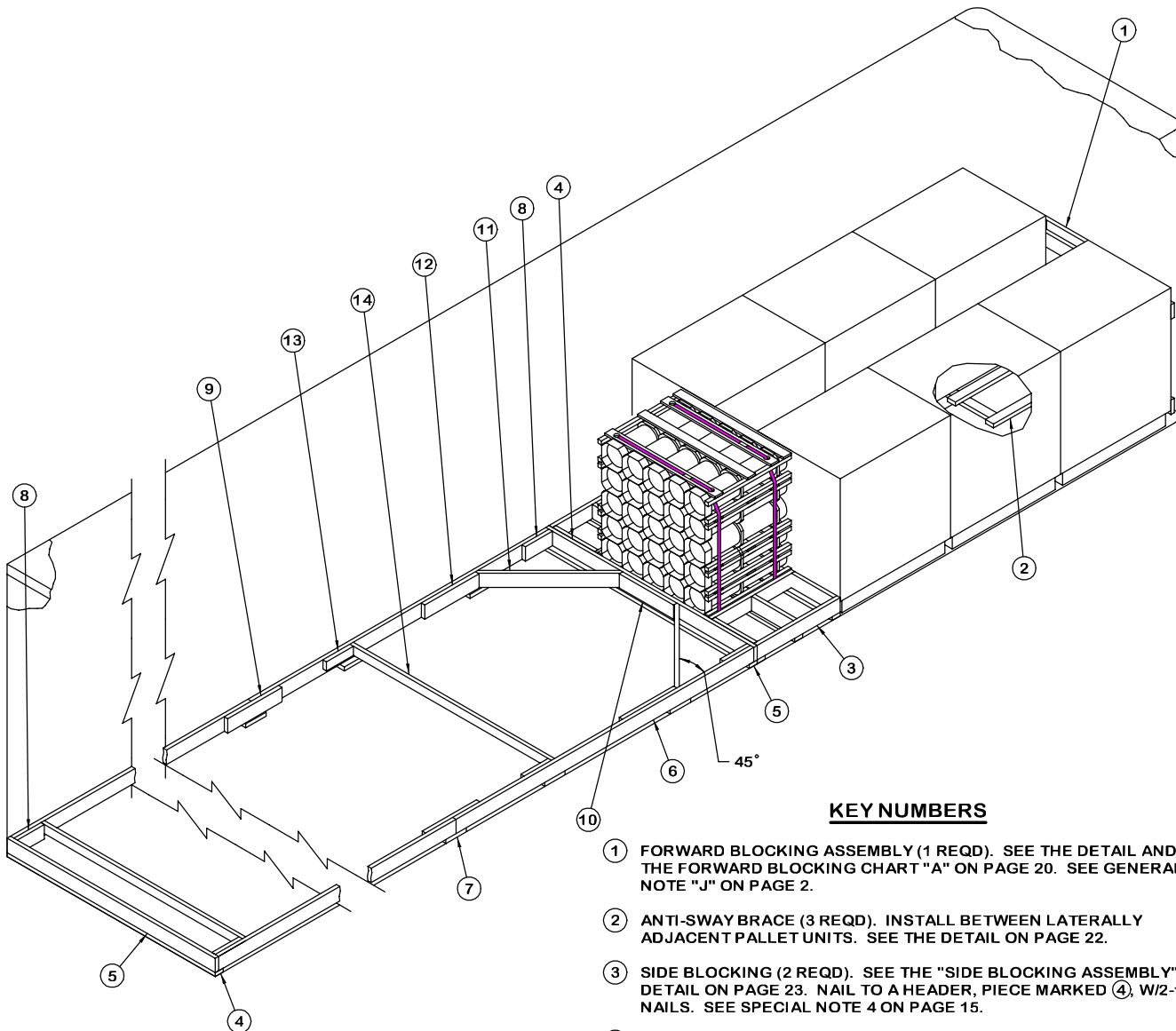
1. A 21-UNIT LOAD IS SHOWN IN A 40'-0" LONG BY 7'-8" WIDE (INSIDE DIMENSION) CONVENTIONAL VAN TYPE TRAILER. WIDER OR NARROWER TRAILERS MAY BE USED. HIGH-VOLUME TRAILERS MAY BE REQUIRED.
2. THE PALLET UNIT SHOWN IN THE LOAD ON PAGE 12 IS THE BASIC HEIGHT UNIT HAVING OVERALL DIMENSIONS OF 36-5/8" LONG BY 48-3/4" WIDE BY 52-1/2" HIGH AND WEIGHING APPROXIMATELY 1,955 POUNDS. THE PROCEDURES ARE ALSO APPLICABLE FOR THE DECREASED HEIGHT UNIT.
3. THE SPACER ASSEMBLY, SHOWN IN THE LOAD VIEW AS PIECE MARKED ③, IS ONLY SHOWN TO DEPICT A TYPICAL INSTALLATION. IF A PALLET UNIT IS LOADED IN PLACE OF A SPACER ASSEMBLY, THE BUNDLING STRAPS, SHOWN AS PIECE MARKED ⑥, 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 OR A BULKHEAD GATE, PIECES MARKED ① AND ④.
4. IF THE VOID 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 VOID AT THE REAR OF THE LOAD IS GREATER THAN 1-1/2" BUT LESS THAN 9", USE REAR BLOCKING ASSEMBLY "C" DETAILED ON PAGE 24. IF THE VOID AT THE REAR OF THE LOAD IS 9" OR GREATER, REAR BLOCKING ASSEMBLY "A" WILL BE USED AS SHOWN.
5. TRAILERS EQUIPPED WITH ROLL-UP TYPE DOORS MAY BE USED; HOWEVER, SPECIAL REAR BLOCKING MUST BE INSTALLED. THE NAILED-HEADER METHOD IS SHOWN ON PAGES 4 AND 5. NOTE THAT THE SPECIAL REAR BLOCKING FOR TRAILERS EQUIPPED WITH ROLL-UP TYPE DOORS MAY ALSO BE USED IN TRAILERS EQUIPPED WITH HINGED DOORS.
6. A PALLET UNIT THAT DOES NOT HAVE A PALLET UNIT DIRECTLY OPPOSITE MUST BE SECURED BY INSTALLING BUNDLING STRAPS, SHOWN AS PIECE MARKED ⑥ IN THE LOAD ON PAGE 12, AROUND THAT PALLET UNIT AND THE PALLET UNIT IMMEDIATELY ADJACENT; A PALLET UNIT WILL NOT BE OMITTED FROM THE SECOND LAYER PORTION OF THE LOAD.
7. THE SECOND LAYER PORTION OF THE LOAD IS LIMITED TO NOT MORE THAN TEN BASIC HEIGHT UNITS OR TWELVE DECREASED HEIGHT UNITS. IF THE SECOND LAYER CONTAINS SIX UNITS OR MORE, ONE ADDITIONAL BUNDLING STRAP, PIECE MARKED ⑦, WILL BE REQUIRED.
8. REFER TO PAGE 19 FOR GUIDANCE IN THE SHIPMENT OF PARTIAL PALLET UNITS.
9. LEFTOVER CONTAINERS IN AN AMOUNT NOT TO EXCEED FOUR MAY BE SECURED TO THE TOP OF A FULL PALLET UNIT FOR SHIPMENT. REFER TO THE "PROCEDURES FOR SHIPMENT OF LEFTOVER CONTAINERS" ON PAGE 18 FOR GUIDANCE.

BILL OF MATERIAL		
LUMBER	LINEAR FEET	BOARD FEET
2" x 4"	159	106
2" x 6"	231	231
NAILS	NO. REQD	POUNDS
10d (3")	416	6-1/2
1-1/4" STEEL STRAPPING -- 86' REQD -- -- 12-1/2 LBS		
SEAL FOR 1-1/4" STRAPPING - 6 REQD -- -- 1/2 LB		

LOAD AS SHOWN

ITEM	QUANTITY	WEIGHT (APPROX)
PALLET UNIT	21	41,055 LBS
DUNNAGE		694 LBS
TOTAL WEIGHT		41,749 LBS (APPROX)

**ALTERNATIVE LOADING PROCEDURES FOR ALL UNITS
21-UNIT LOAD IN A 40'-0" LONG BY 7'-8" WIDE HI-VOLUME VAN TYPE TRAILER**



ISOMETRIC VIEW

(KEY NUMBERS CONTINUED)

- ⑫ BACK-UP CLEAT, 2" X 6" X 24" (2 REQD). NAIL TO A SIDE STRUT, PIECE MARKED ⑥, W/8-10d NAILS.
- ⑬ STRUT BRACE RETAINING CLEAT, 2" X 4" X 12" (AS REQD). NAIL TO A SIDE STRUT, PIECE MARKED ⑥, W/3-10d NAILS. SEE SPECIAL NOTE 6 ON PAGE 15.
- 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 STRUT BRACE RETAINING CLEATS, PIECES MARKED ⑬, W/2-12d NAILS AT EACH END. SEE SPECIAL NOTE 6 ON PAGE 15.

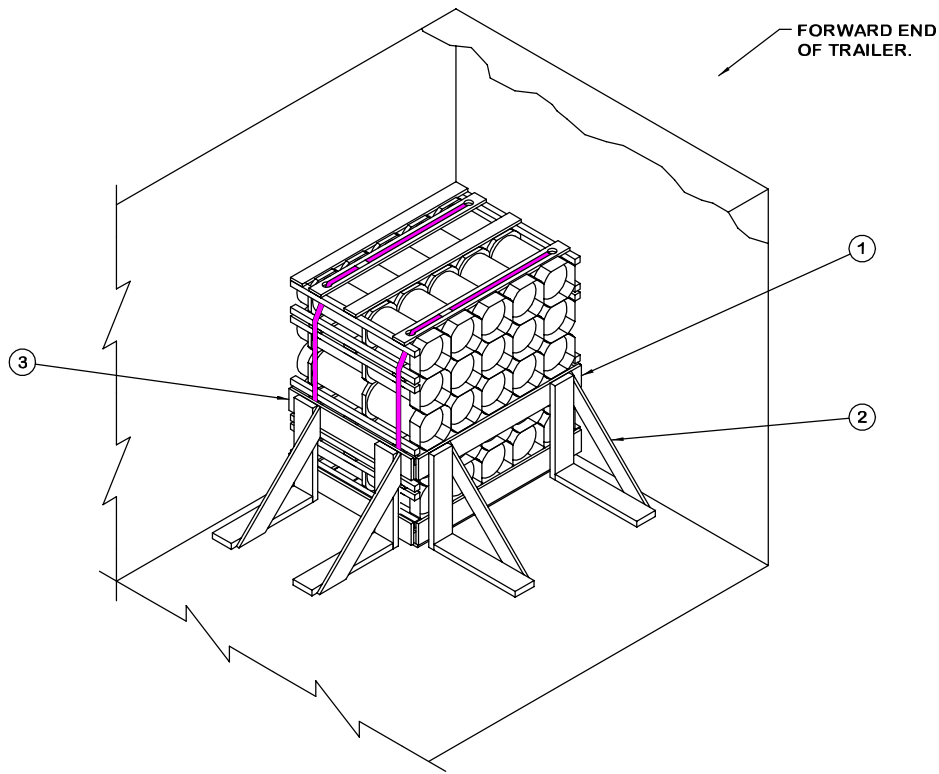
KEY NUMBERS

- ① FORWARD BLOCKING ASSEMBLY (1 REQD). SEE THE DETAIL AND THE FORWARD BLOCKING CHART "A" ON PAGE 20. SEE GENERAL NOTE "J" ON PAGE 2.
- ② ANTI-SWAY BRACE (3 REQD). INSTALL BETWEEN LATERALLY ADJACENT PALLET UNITS. SEE THE DETAIL ON PAGE 22.
- ③ SIDE BLOCKING (2 REQD). SEE THE "SIDE BLOCKING ASSEMBLY" DETAIL ON PAGE 23. NAIL TO A HEADER, PIECE MARKED ④, W/2-10d NAILS. SEE SPECIAL NOTE 4 ON PAGE 15.
- ④ HEADER, 2" X 6" BY TRAILER WIDTH MINUS 1/2" IN LENGTH (2 REQD). SEE SPECIAL NOTE 8 ON PAGE 15.
- ⑤ HEADER AND SIDE STRUT SUPPORT, 2" X 4" BY TRAILER WIDTH MINUS 1/2" IN LENGTH (2 REQD). 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 REQD). SEE SPECIAL NOTE 5 ON PAGE 15.
- ⑦ RISER PIECE, 2" X 4" X 9" (AS REQD). CENTER UNDER THE JOINTS OF PIECES MARKED ⑪ AND ⑫, ⑬ AND ⑭, 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 REQD). 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 REQD). CENTER ON JOINT OF PIECES MARKED ⑥ AND NAIL TO SIDE STRUT MARKED ⑥ W/4-10d NAILS AT EACH END. SEE SPECIAL NOTE 5 ON PAGE 15.
- ⑩ CENTER CLEAT, 2" X 6" X 24" (1 REQD). NAIL TO A HEADER, PIECE MARKED ④, W/6-10d NAILS.
- ⑪ DIAGONAL BRACE, 2" X 6" BY CUT-TO-FIT (2 REQD). DOUBLE BEVEL EACH END WITH 45° CUTS. INSTALL AT A 45° ANGLE AS SHOWN AND TOENAIL TO THE ADJACENT HEADER AND SIDE STRUT, PIECES MARKED ④ AND ⑥, W/2-12d NAILS AT EACH END.

(CONTINUED AT LEFT)

SPECIAL NOTES:

1. THESE OUTLOADING PROCEDURES COVER THE USE OF BOTH "K-BRACE" AND NAILED FLOOR LINE BLOCKING IN A 7'-8" WIDE (INSIDE DIMENSION) VAN TRAILER WHICH IS EQUIPPED WITH OR WITHOUT NAILABLE FLOORS AND REAR CORNER POSTS. WIDER OR NARROWER TRAILERS MAY BE USED. SEE SPECIAL NOTES 7 AND 8.
2. THE PALLET UNIT SHOWN IS THE BASIC HEIGHT UNIT HAVING OVERALL DIMENSIONS OF 36-5/8" LONG BY 48-3/4" WIDE BY 52-1/2" HIGH AND WEIGHING APPROXIMATELY 1,955 POUNDS. THE PROCEDURES ARE ALSO APPLICABLE FOR THE DECREASED HEIGHT UNIT DEPICTED ON PAGE 3.
3. THE SIDE BLOCKING ASSEMBLIES, PIECE MARKED ③, ARE SHOWN ONLY TO DEPICT A TYPICAL INSTALLATION. SIDE BLOCKING ASSEMBLIES WILL BE USED WHEN AN ODD NUMBER OF PALLET UNITS IS TO BE SHIPPED.
4. DEPENDING ON THE NUMBER OF UNITS BEING LOADED, EACH OF THE SIDE STRUTS, PIECES MARKED ⑥, MAY BE 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 PIECES, PIECE MARKED ⑭, MAY BE NAILED TO THE SPLICE PIECES IN LIEU OF USING ADDITIONAL STRUT BRACE RETAINING CLEATS, PIECES MARKED ⑬.
5. ALL LTL LOADS, REGARDLESS OF THEIR SIZE, REQUIRE ONE STRUT BRACE POSITIONED AT THE REAR OF THE TRAILER AND NAILED TO PIECE MARKED ⑧. IF THE SIDE STRUTS, PIECE MARKED ⑥, ARE LONGER THAN 7'-0", AN ADDITIONAL STRUT BRACE, PIECE MARKED ⑭, TWO STRUT BRACE RETAINING CLEATS, PIECE MARKED ⑬, AND TWO RISER PIECES MARKED ⑦, MUST BE APPLIED FOR EVERY 7'-0" OF SIDE STRUT LENGTH.
6. THE K-BRACE BLOCKING SHOWN AS PIECES MARKED ④ THRU ⑭ IS ADEQUATE FOR RETAINING A MAXIMUM LTL LOAD OF 20,000 POUNDS.
7. TRAILERS EQUIPPED WITH ROLL-UP TYPE DOORS MAY BE USED; HOWEVER, SPECIAL REAR BLOCKING MUST BE INSTALLED IN LIEU OF THE "K-BRACE" TYPE BLOCKING. THE NAILED HEADER METHOD IS SHOWN ON PAGES 4 AND 5. NOTE THAT THE SPECIAL REAR BLOCKING FOR TRAILERS EQUIPPED WITH ROLL-UP TYPE DOORS 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.
8. IF DESIRED, IN TRAILERS EQUIPPED WITH NAILABLE FLOORS, THE NAILED HEADER METHOD OF REAR BLOCKING MAY BE USED IN LIEU OF THE K-BRACE BLOCKING SHOWN AS PIECES MARKED ④ THRU ⑭. REFER TO PAGE 17 FOR GUIDANCE.



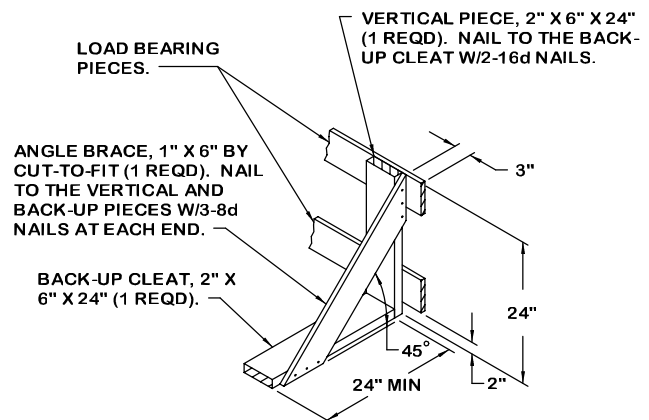
ISOMETRIC VIEW

SPECIAL NOTES:

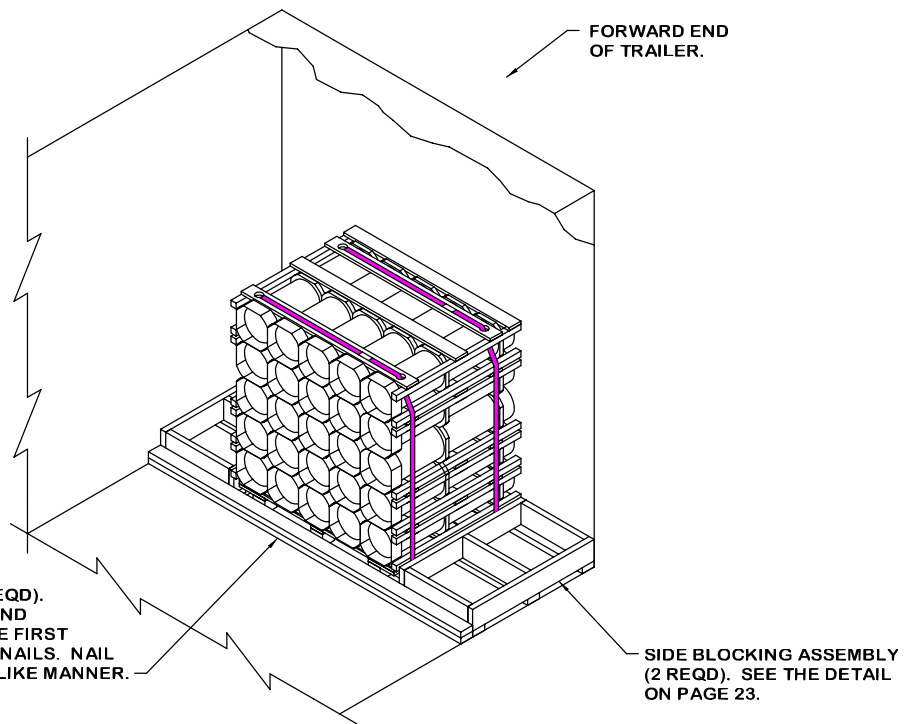
1. THESE OUTLOADING PROCEDURES DEPICT THE USE OF LTL BRACE BLOCKING IN A CONVENTIONAL VAN TYPE TRAILER EQUIPPED WITH A NAILABLE FLOOR. TRAILERS WITH ALL METAL FLOORS CANNOT BE USED.
2. THE PALLET UNIT SHOWN IS THE BASIC HEIGHT UNIT HAVING OVERALL DIMENSIONS OF 36-5/8" LONG BY 48-3/4" WIDE BY 52-1/2" HIGH AND WEIGHING APPROXIMATELY 1,955 POUNDS. THE PROCEDURES ARE ALSO APPLICABLE FOR THE DECREASED HEIGHT PALLET UNIT DEPICTED ON PAGE 3.
3. IF THE TRAILER BEING LOADED HAS ROUNDED FRONT CORNERS, TWO ADDITIONAL LTL BRACES, AND TWO ADDITIONAL LOAD BEARING PIECES MAY BE POSITIONED AT THE FORWARD END OF THE LADING OR A FORWARD BLOCKING ASSEMBLY, SHOWN AS PIECE MARKED ① ON PAGE 4, MAY BE USED.
4. EACH LTL BRACE AS APPLIED FOR LONGITUDINAL BRACING WILL SUPPORT 2,000 POUNDS OF LADING, HOWEVER, NOT LESS THAN TWO BRACES WILL BE USED AGAINST EACH PALLET UNIT ACROSS THE WIDTH OF THE TRAILER.
5. MORE THAN ONE PALLET UNIT CAN BE SHIPPED PROVIDING THE CAPACITY OF THE LTL BRACES IS NOT EXCEEDED. THE LOAD SHOULD BE FORMED IN TWO ROWS, WITH THE UNITS POSITIONED AGAINST OPPOSITE SIDEWALLS. ANTI-SWAY BRACES WILL BE INSTALLED BETWEEN LATERALLY ADJACENT UNITS.

KEY NUMBERS

- ① LOAD BEARING PIECE, 1" X 6" X 48" (2 REQD). LOCATE AT HEIGHTS SPECIFIED IN "LTL BRACE" DETAIL BELOW. NAIL TO THE VERTICAL PIECES OF THE LTL BRACE W/4-6d NAILS AT EACH JOINT.
- ② LTL BRACE (4 REQD). SEE THE DETAIL BELOW. NAIL EACH LTL BRACE TO TRAILER FLOOR W/7-10d NAILS. SEE SPECIAL NOTE 4 AT LEFT.
- ③ LOAD BEARING PIECE, 1" X 6" X 36" (2 REQD). LOCATE AT HEIGHTS SPECIFIED IN THE DETAIL BELOW. NAIL TO THE VERTICAL PIECES OF THE LTL BRACE W/4-6d NAILS AT EACH JOINT.



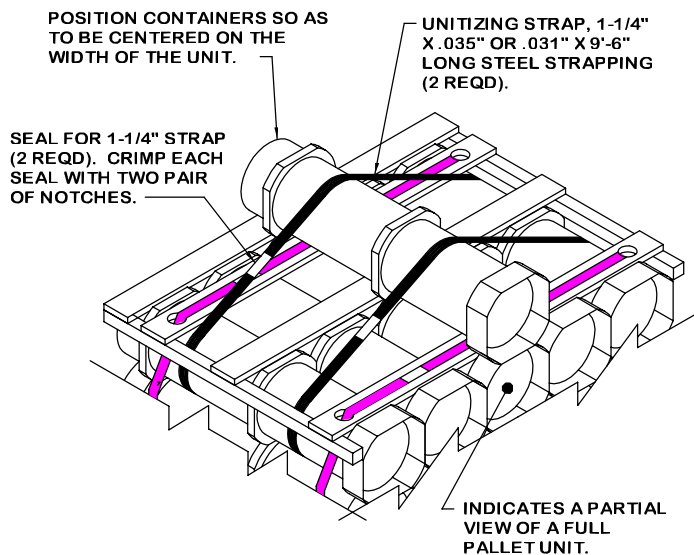
LTL BRACE



ISOMETRIC VIEW

SPECIAL NOTES:

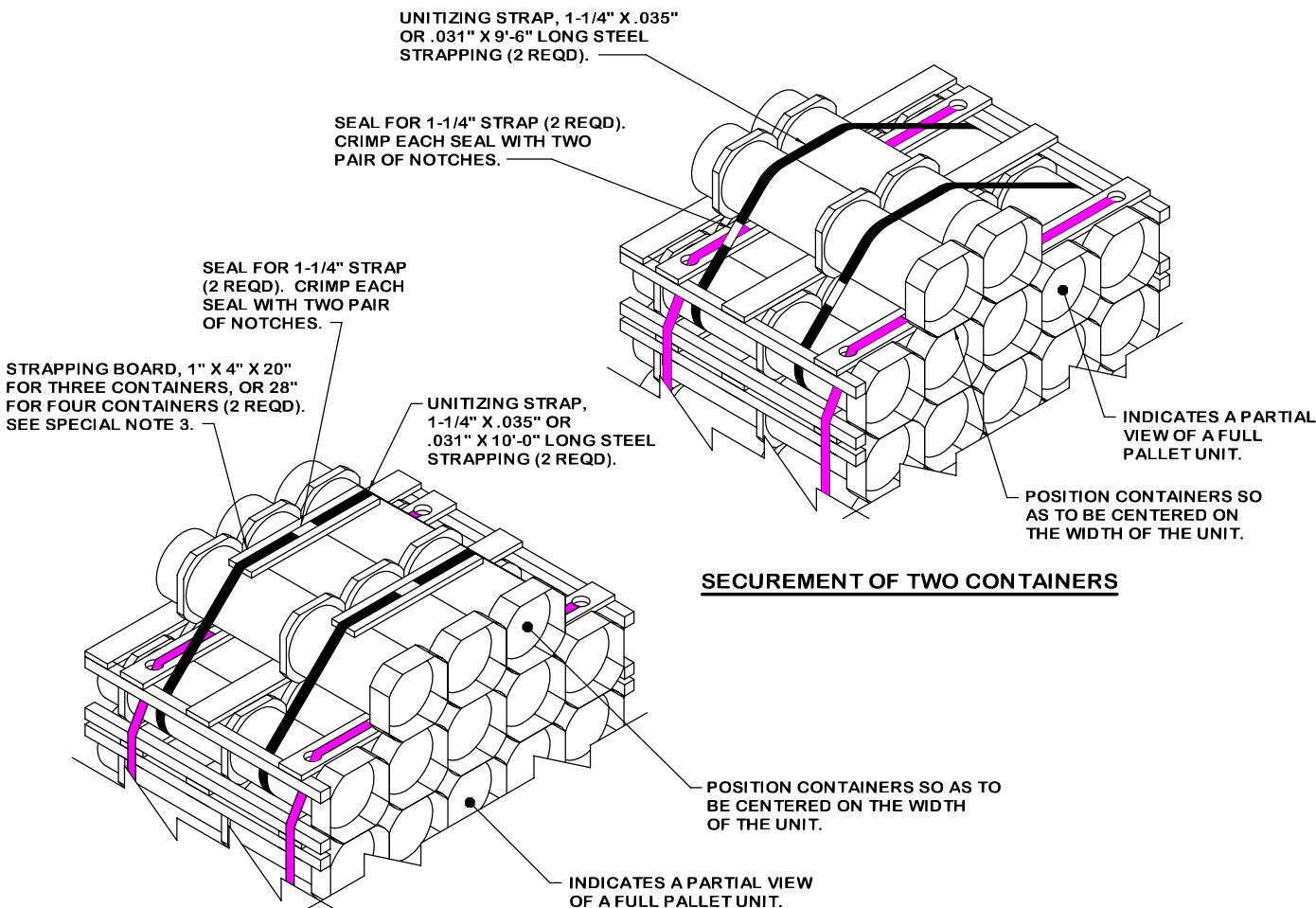
1. THESE OUTLOADING PROCEDURES DEPICT THE USE OF NAILED HEADER BLOCKING IN A CONVENTIONAL VAN TYPE TRAILER EQUIPPED WITH A NAILABLE FLOOR. TRAILERS WITH ALL METAL FLOORS CANNOT BE USED.
2. THE PALLET UNIT SHOWN IS THE BASIC HEIGHT UNIT HAVING OVERALL DIMENSIONS OF 36-5/8" LONG BY 48-3/4" WIDE BY 52-1/2" HIGH AND WEIGHING APPROXIMATELY 1,955 POUNDS. THE PROCEDURES ARE ALSO APPLICABLE FOR THE DECREASED HEIGHT PALLET UNIT DEPICTED ON PAGE 3.
3. IF THE TRAILER BEING LOADED HAS ROUNDED FRONT CORNERS, A FORWARD BLOCKING ASSEMBLY, SHOWN AS PIECE MARKED ① ON PAGE 4, MAY BE USED.
4. FOR AN EVEN NUMBER OF PALLET UNITS TO BE LOADED, THE LOAD SHOULD BE FORMED IN TWO ROWS WITH THE UNITS POSITIONED AGAINST OPPOSITE SIDEWALLS. ANTI-SWAY BRACES WILL BE INSTALLED BETWEEN LATERALLY ADJACENT PALLET UNITS AS IN THE LOAD ON PAGE 4, AND A REAR BLOCKING ASSEMBLY, PIECE MARKED ③ ON PAGE 4, WILL ALSO BE INSTALLED. IF THE TRAILER TO BE LOADED IS GREATER THAN 8'-2" WIDE, THE CONTAINERS WILL BE POSITIONED LENGTHWISE AND NO REAR BLOCKING ASSEMBLY WILL BE REQUIRED. FOR OTHER QUANTITY LTL LOADS USING THE NAILED HEADER METHOD, REFER TO THE NAILING CHARTS ON PAGE 5 FOR GUIDANCE.



SECUREMENT OF ONE CONTAINER

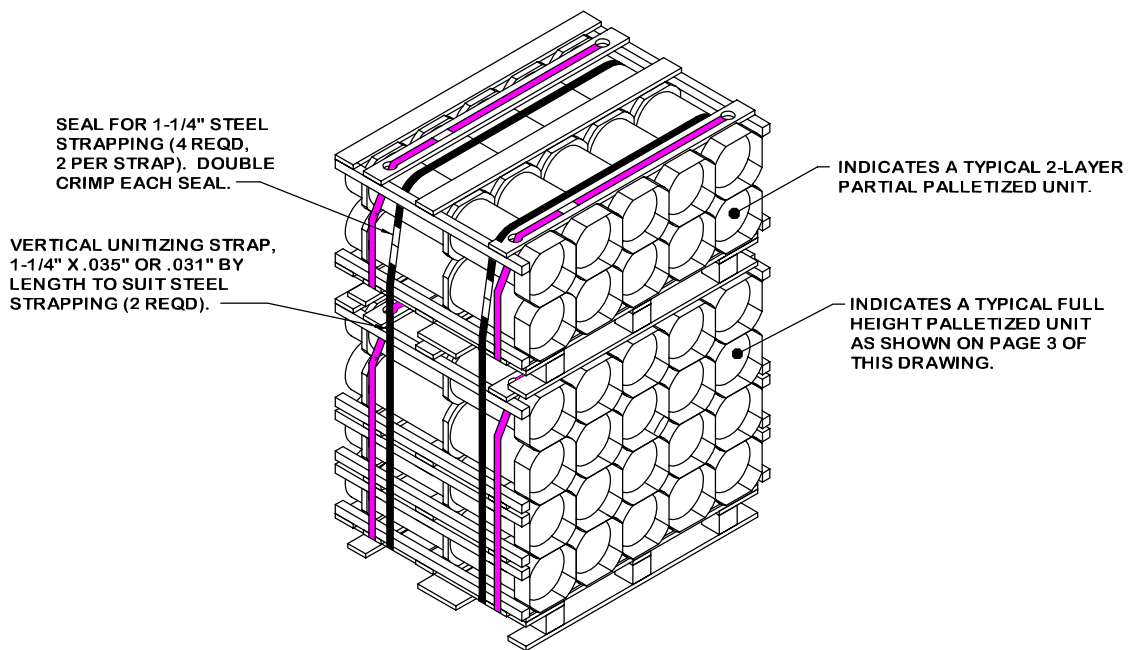
SPECIAL NOTES:

1. SHIPMENTS OF PROPELLING CHARGES SHOULD CONSIST OF FULL-HEIGHT AND FULL-LAYER UNITS TO THE MAXIMUM EXTENT POSSIBLE. HOWEVER, THE END OF A LOT, OR THE QUANTITY OF ITEMS NEEDED TO FILL A REQUISITION, MAY NECESSITATE THE SHIPMENT OF ONE OR MORE LEFTOVER CONTAINERS. LEFTOVER CONTAINERS ARE DESCRIBED AS A QUANTITY OF CONTAINERS WHICH IS INSUFFICIENT TO FORM A FULL-LAYERED PARTIAL UNIT FOR SECUREMENT ON TOP OF A FULL PALLET UNIT AS SHOWN ON PAGE 19.
2. SHIPMENT OF LEFTOVER CONTAINERS IS APPLICABLE FOR CONUS AND OCONUS MOTOR CARRIER SHIPMENTS FROM DEPOT TO DEPOT OR FROM DEPOTS TO POSTS, CAMPS AND STATIONS, OR UPON APPROVAL FROM HIGHER HEADQUARTERS, FOR SHIPMENTS FROM LOAD, ASSEMBLE, AND PACK PLANTS TO DEPOTS. CAUTION: A LOAD CONTAINING LEFTOVER CONTAINERS IN AN AMOUNT WHICH IS LESS THAN A FULL LAYER, AND SECURED TO THE TOP OF A FULL OR PARTIAL UNIT, MUST NOT BE DESTINED FOR SHIPMENT OVERSEAS BY WATER CARRIER.
3. THE PROCEDURES ON THIS PAGE ARE REQUIRED AS GUIDANCE IN THE SECUREMENT OF LEFTOVER CONTAINERS FOR SHIPMENT. THE VIEW AT TOP LEFT DEPICTS ONE LEFTOVER CONTAINER SECURED TO A FULL-HEIGHT PALLET UNIT. THE VIEWS BELOW DEPICT TWO OR THREE LEFTOVER CONTAINERS SECURED TO A FULL-HEIGHT PALLET UNIT. WHEN THREE OR FOUR LEFTOVER CONTAINERS ARE BEING SHIPPED, A STRAPPING BOARD WILL BE NEEDED. LEFTOVER CONTAINERS MUST BE SECURED WITH A MINIMUM OF TWO PIECES OF STEEL STRAPPING. NOTE THAT THE UNITIZING STRAPS MUST BE THREADED BEHIND THE 2" X 2" PIECES OF THE TOP DUNNAGE ASSEMBLY.
4. THE PREFERRED LOCATION FOR THE POSITIONING OF A PALLET UNIT HAVING ONE OR MORE CONTAINERS STRAPPED TO THE TOP WOULD BE WITHIN THE ONE-HIGH PORTION OF THE LOAD; IT MUST NOT HAVE A PALLET UNIT STACKED ON TOP.
5. THE PROCEDURES ON THIS PAGE ARE APPLICABLE FOR THE SHIPMENT OF LEFTOVER CONTAINERS IN ANY OF THE LOADS DEPICTED HEREIN.



SECUREMENT OF TWO CONTAINERS

SECUREMENT OF THREE CONTAINERS



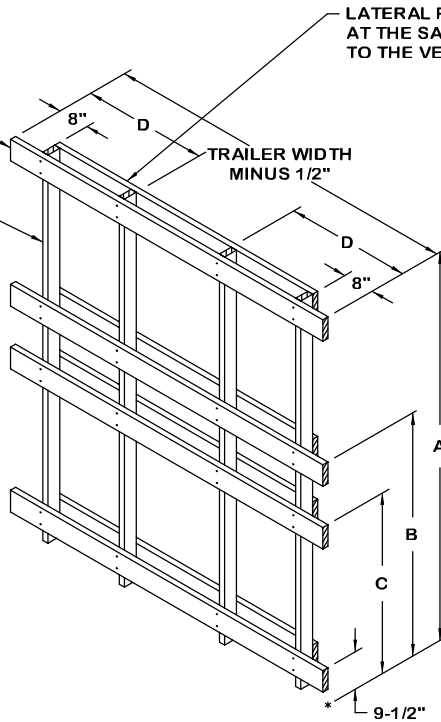
**SECUREMENT OF A PARTIAL PALLET UNIT
POSITIONED ON A FULL HEIGHT PALLET UNIT**

SPECIAL NOTES:

1. THE VIEW SHOWN ABOVE DEPICTS A PARTIAL 2-LAYER PALLET UNIT POSITIONED ON TOP OF A FULL-HEIGHT PALLET UNIT AND UNITIZED WITH TWO VERTICAL UNITIZING STRAPS. PLACEMENT WITHIN THE LOAD IS OPTIONAL, EXCEPT THAT IT WILL NOT BE POSITIONED WITHIN A GROUP WHICH IS BUNDLED TOGETHER OR WITHIN A STACK WHICH IS UNITIZED. THE PREFERRED LOCATION WOULD BE WITHIN A ONE-HIGH PORTION OF A LOAD (NOT IN THE REAR LOAD UNIT) IF AVAILABLE, OR WITHIN THE TOP LAYER OF A LOAD IF THE TRAILER HEIGHT PERMITS.
2. 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 PALLET UNITS WITHIN A LOAD.
3. FOR SHIPMENT OF ONE THROUGH FOUR "LEFTOVER" CONTAINERS, SEE THE PROCEDURES ON PAGE 18 FOR GUIDANCE.

LOAD BEARING PIECE, 2" X 6" BY TRAILER WIDTH MINUS 1/2" IN LENGTH (4 REQD). NAIL TO THE VERTICAL PIECES W/2-10d NAILS AT EACH JOINT.

VERTICAL PIECE, 2" X 4" BY LENGTH TO SUIT (4 REQD).



LATERAL PIECE, 2" X 6" BY CUT-TO-FIT (4 REQD). POSITION AT THE SAME HEIGHT AS THE LOAD BEARING PIECES. NAIL TO THE VERTICAL PIECES W/2-10d NAILS AT EACH JOINT.

FORWARD BLOCKING CHART A *

PALLET UNIT TYPE	A	B	C	D
BASIC HEIGHT	8' - 3"	62"	46"	32"
DECREASED HEIGHT	71"	53"	27"	32"
BASIC W/DECREASED HEIGHT ON TOP	6' - 8"	62"	46"	32"

* FORWARD BLOCKING CHART "A" IS USED FOR CROSSWISE POSITIONED PALLET UNITS AS SHOWN IN THE LOAD ON PAGE 4. IF THE UNITS ARE POSITIONED LENGTHWISE AS SHOWN IN THE LOAD ON PAGE 6, USE FORWARD BLOCKING CHART "B" BELOW.

FORWARD BLOCKING CHART B

PALLET UNIT TYPE	A	B	C	D
BASIC HEIGHT	8' - 3"	62"	46"	32"
DECREASED HEIGHT	71"	53"	27"	32"
BASIC W/DECREASED HEIGHT ON TOP	6' - 8"	62"	46"	32"

FORWARD BLOCKING ASSEMBLY

THIS ASSEMBLY IS DESIGNED FOR USE AT THE FRONT END OF A TRAILER HAVING ROUNDED FRONT 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 25 FOR GUIDANCE.

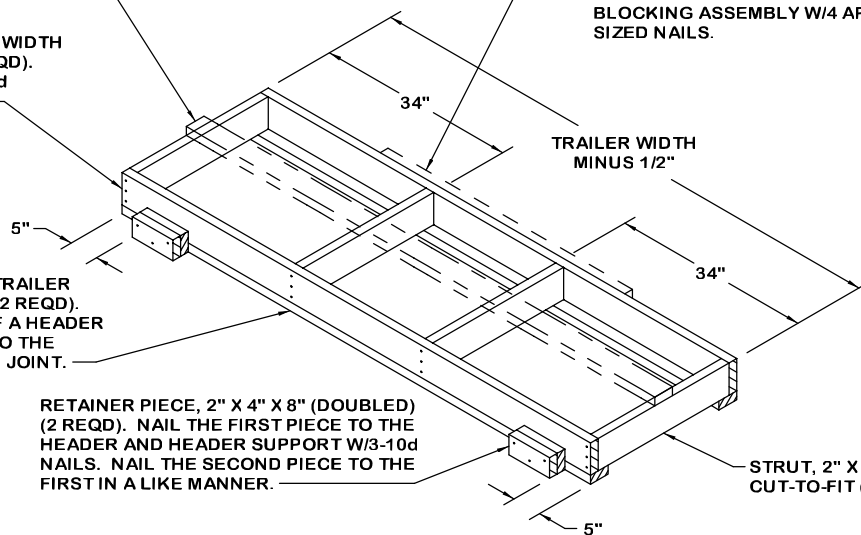
STRUT BRACING, 2" X 4" BY TRAILER WIDTH MINUS 1/2" IN LENGTH (1 REQD FOR EVERY 7'-0" OF STRUT LENGTH FOR STRUTS LONGER THAN 7'-0"). NAIL TO THE STRUTS W/2-10d NAILS AT EACH JOINT.

HEADER, 2" X 4" BY TRAILER WIDTH MINUS 1/2" IN LENGTH (2 REQD). 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 REQD). NAIL TO THE BOTTOM EDGE OF A HEADER W/1-10d NAIL EVERY 12" AND TO THE STRUTS W/1-10d NAIL AT EACH JOINT.

RETAINER PIECE, 2" X 4" X 8" (DOUBLED) (2 REQD). NAIL THE FIRST PIECE TO THE HEADER AND HEADER SUPPORT W/3-10d NAILS. NAIL THE SECOND PIECE TO THE FIRST IN A LIKE MANNER.

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



REAR BLOCKING ASSEMBLY A

THIS ASSEMBLY IS FOR USE AT THE REAR END OF CROSSWISE POSITIONED UNITS WHEN THE SPACE BETWEEN THE LADING AND THE TRAILER DOORS IS 9" OR GREATER. NOTE THAT THE ABOVE VIEW IS ROTATED 180° FROM THE POSITION IN WHICH IT WILL BE INSTALLED.

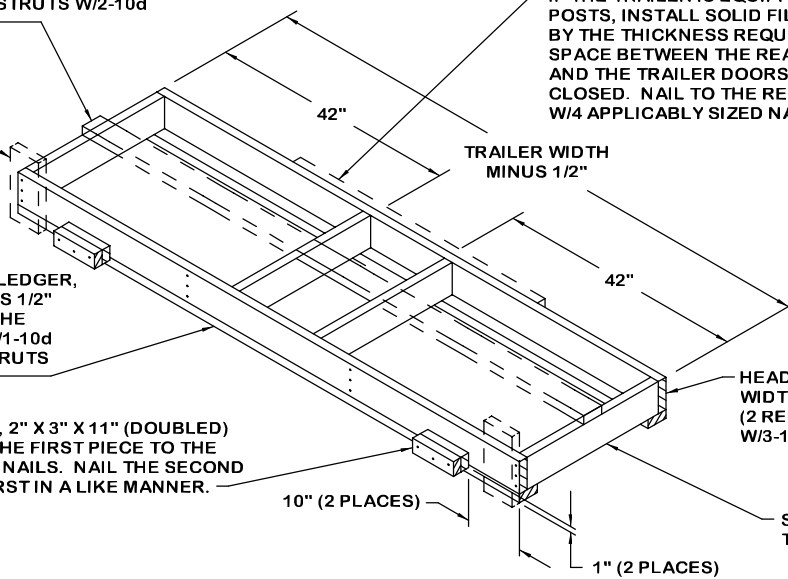
STRUT BRACING, 2" X 4" BY TRAILER WIDTH MINUS 1/2" IN LENGTH (1 REQD FOR EVERY 7'-0" OF STRUT LENGTH FOR STRUTS LONGER THAN 7'-0"). NAIL TO THE STRUTS W/2-10d NAILS AT EACH JOINT.

RETAINER PIECE, 2" X 6" X 12" (2 REQD). NAIL TO THE HEADER W/4-10d NAILS.

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

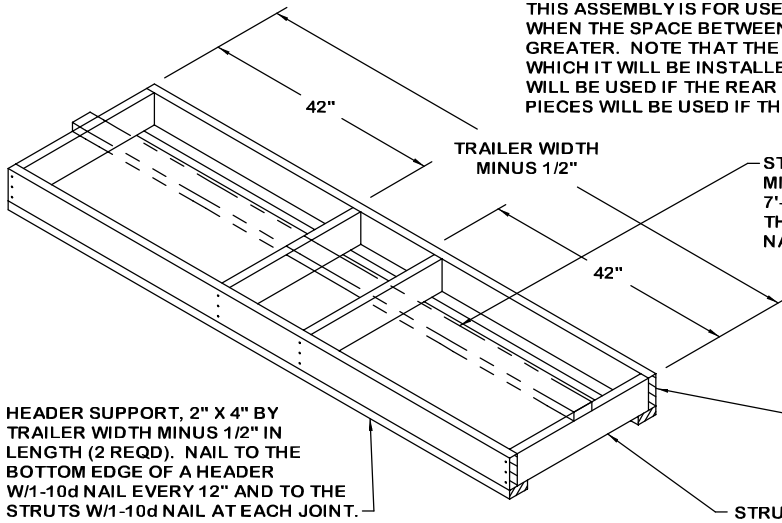
RETAINER PIECE, 2" X 3" X 11" (DOUBLED) (2 REQD). NAIL THE FIRST PIECE TO THE HEADER W/3-10d NAILS. NAIL THE SECOND PIECE TO THE FIRST IN A LIKE MANNER.

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



REAR BLOCKING ASSEMBLY B

THIS ASSEMBLY IS FOR USE AT THE REAR END OF LENGTHWISE POSITIONED UNITS WHEN THE SPACE BETWEEN THE LADING AND THE TRAILER DOORS IS 9" OR GREATER. NOTE THAT THE ABOVE VIEW IS ROTATED 180° FROM THE POSITION IN WHICH IT WILL BE INSTALLED. NOTE THAT THE DOUBLED 2" X 3" RETAINER PIECES WILL BE USED IF THE REAR LOAD UNIT IS 1-HIGH; THE DOTTED 2" X 6" RETAINER PIECES WILL BE USED IF THE REAR LOAD UNIT IS STACKED.



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

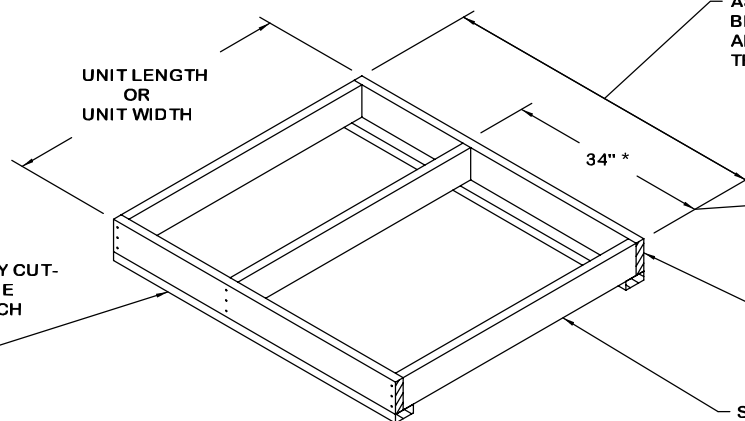
HEADER SUPPORT, 2" X 4" BY TRAILER WIDTH MINUS 1/2" IN LENGTH (2 REQD). NAIL TO THE BOTTOM EDGE OF A HEADER W/1-10d NAIL EVERY 12" AND TO THE STRUTS W/1-10d NAIL AT EACH JOINT.

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

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

SPACER ASSEMBLY A

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



AS REQUIRED TO FILL THE VOID BETWEEN THE PALLET UNIT AND THE SIDEWALL OF THE TRAILER MINUS 1/2" (MAX).

* THIS DIMENSION WILL BE 25" IF THE UNITS ARE POSITIONED LENGTHWISE.

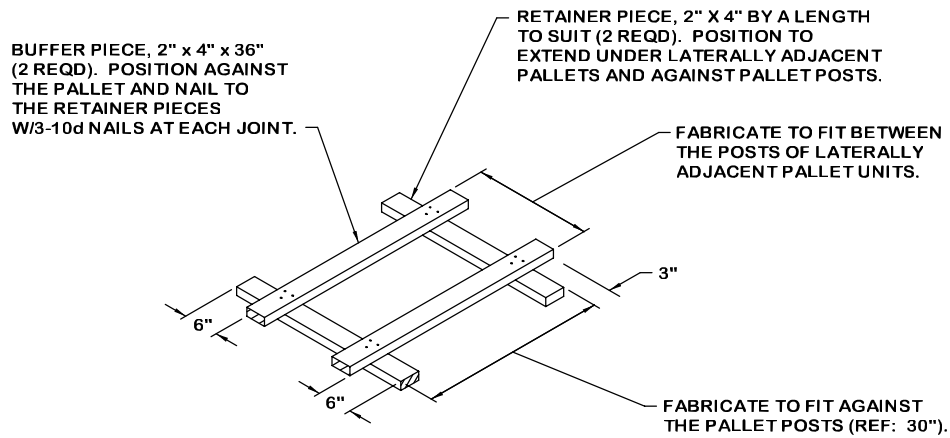
HEADER, 2" X 6" BY CUT-TO-FIT (2 REQD). NAIL TO THE STRUTS W/3-10d NAILS AT EACH JOINT.

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

SPACER ASSEMBLY B

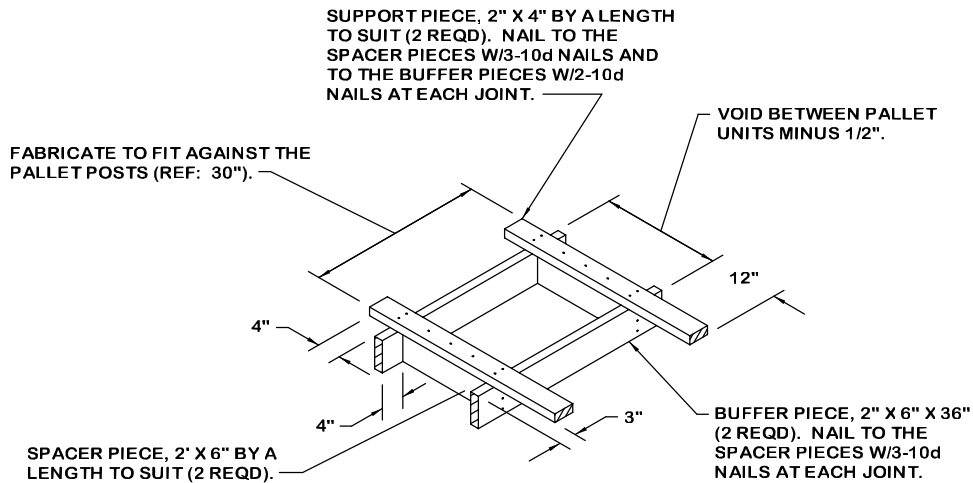
THIS ASSEMBLY IS DESIGNED FOR USE IN PLACE OF AN OMITTED PALLET UNIT, AS USED IN THE LOAD ON PAGE 12.

DETAILS



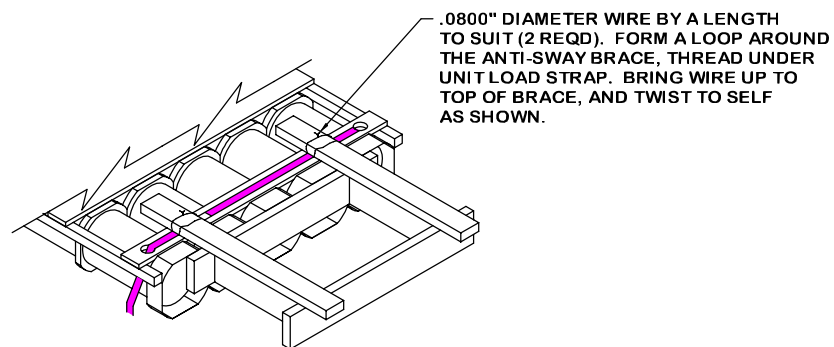
ANTI-SWAY BRACE

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



TOP-OF-LOAD ANTI-SWAY BRACE

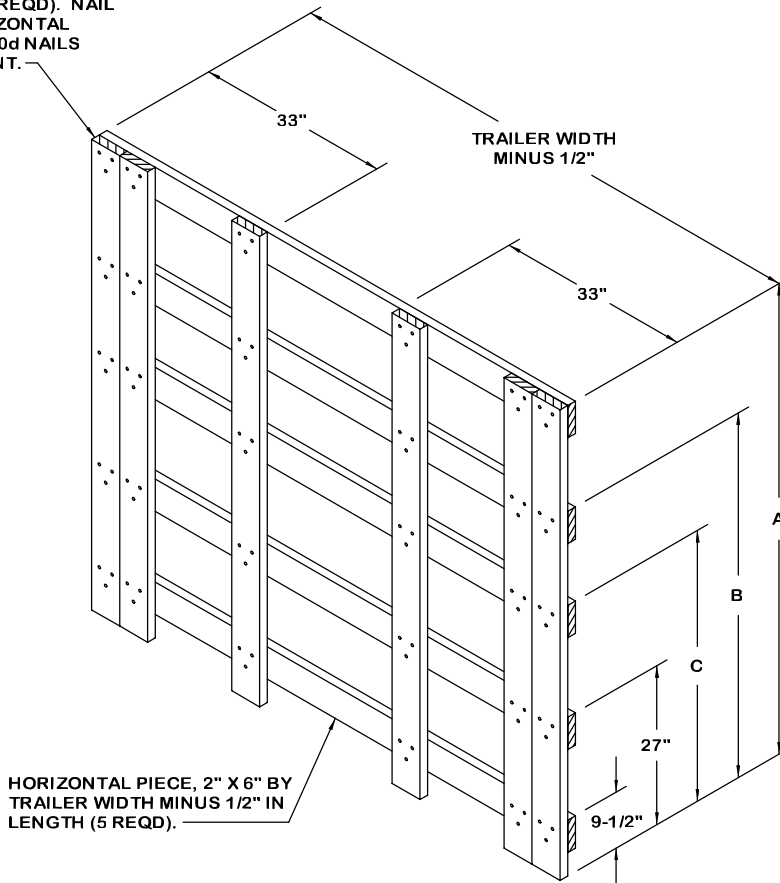
THIS ASSEMBLY IS DESIGNED FOR THE LATERAL BRACING OF A PALLET UNIT IN THE SECOND LAYER WHEN THERE IS NOT A PALLET UNIT DIRECTLY OPPOSITE IT AND TOP-OF-LOAD ANTI-SWAY BRACING IS REQUIRED.



TIE WIRE APPLICATION

NOTE: THE TOP-OF-LOAD ANTI-SWAY BRACE MUST BE WIRE TIED TO THE LOAD STRAPS OF THE LATERALLY ADJACENT PALLET UNIT THAT THE BRACE IS RESTRAINING.

VERTICAL PIECE, 2" X 6" MATERIAL (6 REQD). NAIL TO THE HORIZONTAL PIECES W/3-10d NAILS AT EACH JOINT.

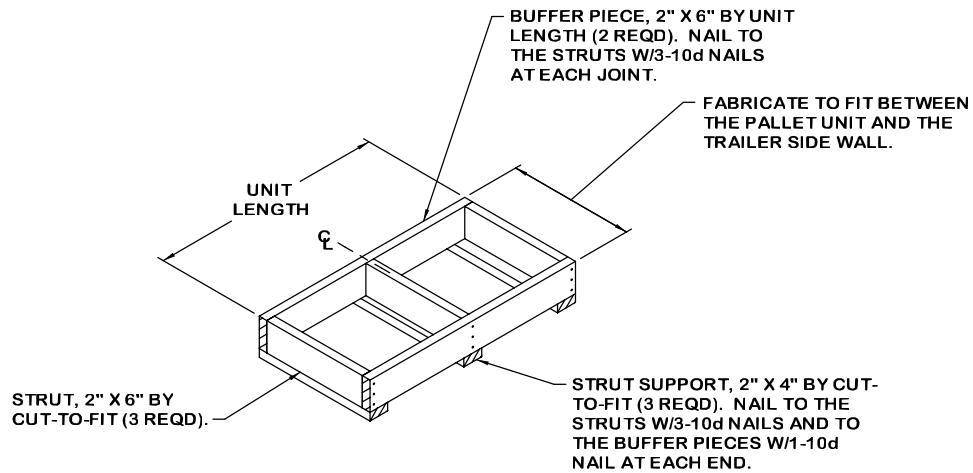


HORIZONTAL PIECE, 2" X 6" BY TRAILER WIDTH MINUS 1/2" IN LENGTH (5 REQD).

BULKHEAD GATE CHART			
PALLET UNIT TYPE	DIMENSIONS		
	A	B	C
BASIC HEIGHT	6' - 8"	62"	46"
DECREASED HEIGHT	70"	53"	44"
BASIC HEIGHT W/ DECREASED ON TOP	6' - 8"	62"	46"

BULKHEAD GATE

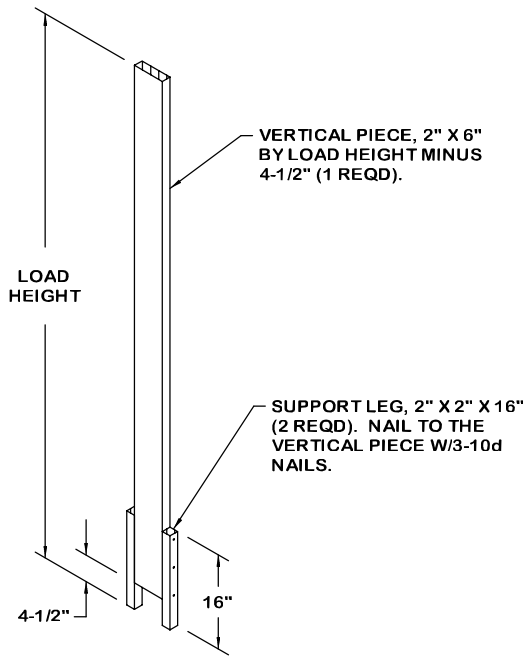
THIS GATE IS DESIGNED FOR USE IN THE ALTERNATIVE PROCEDURE LOAD ON PAGE 12.



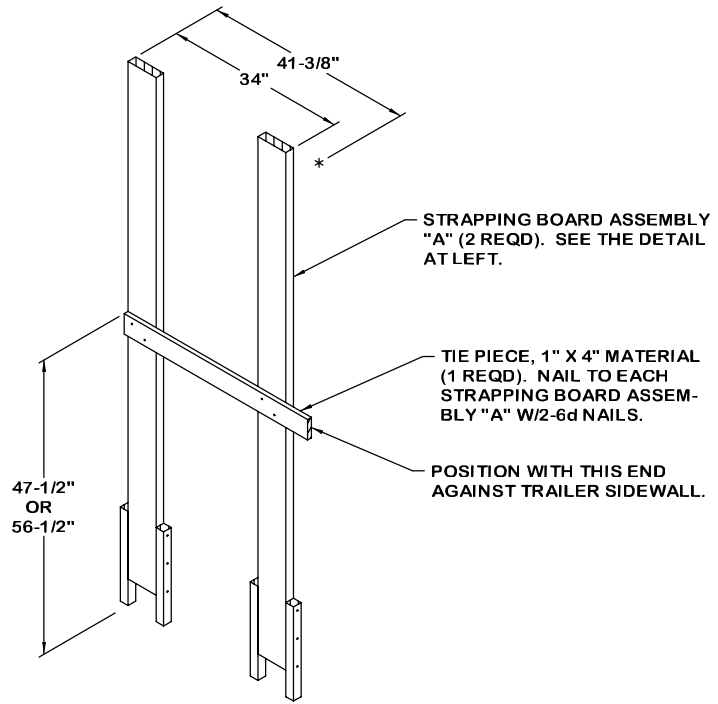
SIDE BLOCKING ASSEMBLY

THIS ASSEMBLY IS DESIGNED FOR USE AS LATERAL BRACING IN THE TYPICAL LTL LOADS SHOWN ON PAGES 14 AND 17.

DETAILS

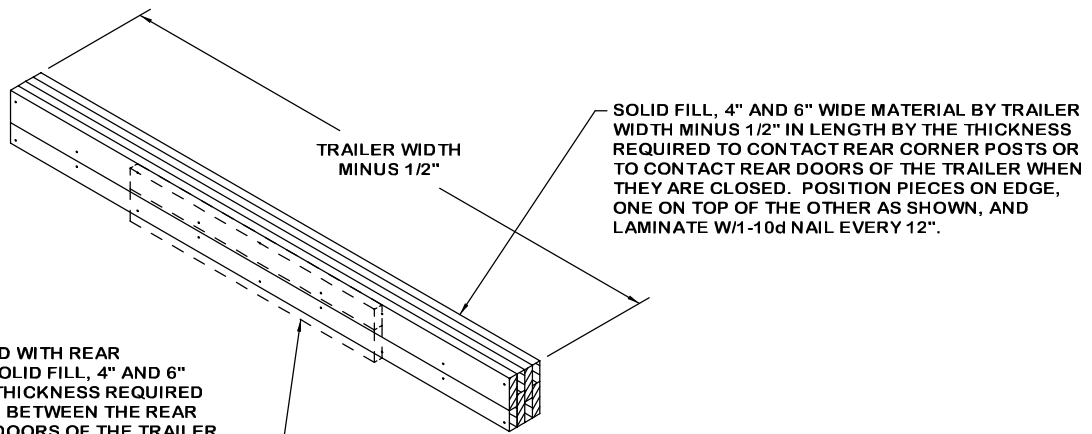


STRAPPING BOARD ASSEMBLY A



STRAPPING BOARD ASSEMBLY B

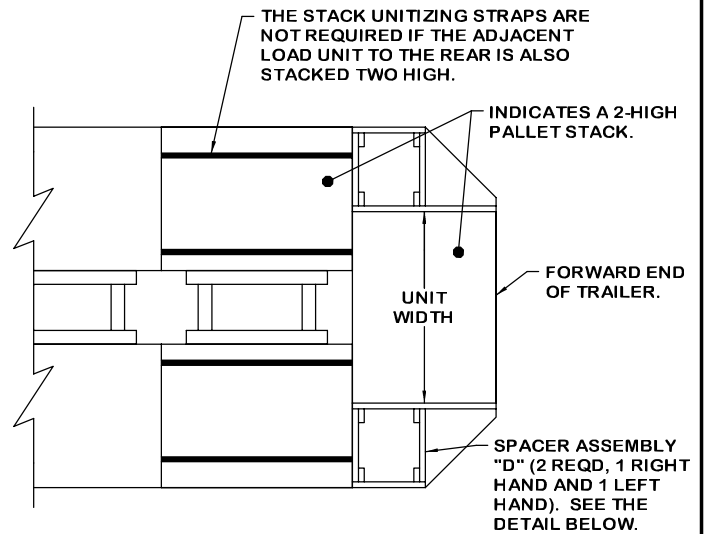
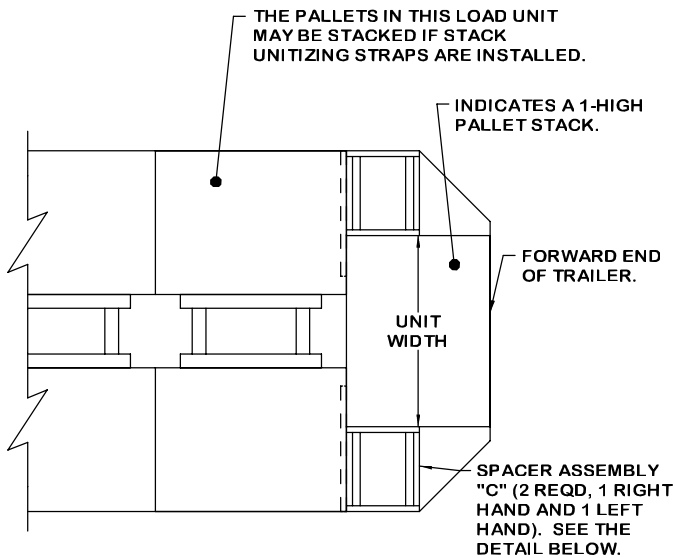
RIGHT HAND AND LEFT HAND ASSEMBLIES ARE REQUIRED. THIS ASSEMBLY IS AN ALTERNATIVE FOR A PAIR OF STRAPPING BOARD ASSEMBLIES "A".



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, AND NAIL TO THE REAR BLOCKING W/4 APPLICABLY SIZED NAILS.

REAR BLOCKING ASSEMBLY C

THIS REAR BLOCKING IS DESIGNED FOR USE AT THE REAR END OF A LOAD WHEN THE SPACE BETWEEN THE LADING AND THE TRAILER DOORS IS LESS THAN 9". RETAINER PIECES WILL BE REQUIRED ON THE LOAD BEARING SIDE. REFER TO REAR BLOCKING "A" OR "B" FOR LOCATION AND NAILING GUIDANCE.

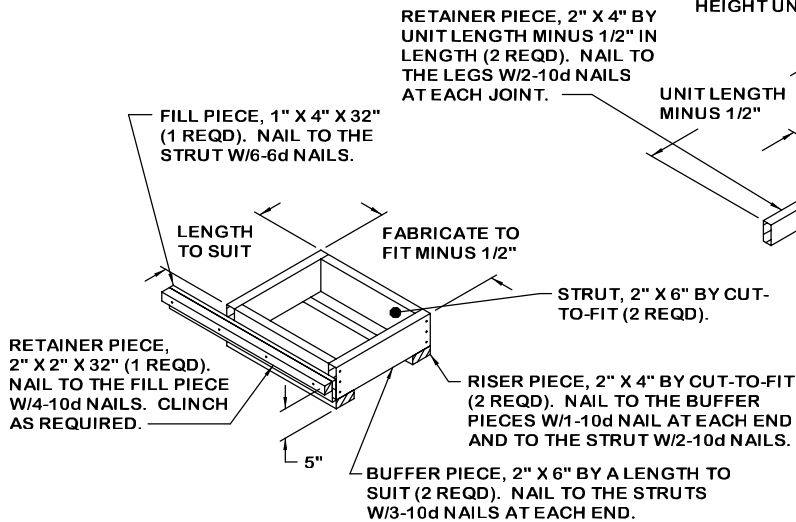


ALTERNATIVE FORWARD LOADING PATTERN A

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. THE BASIC HEIGHT UNIT IS SHOWN. THE PROCEDURES ARE ALSO APPLICABLE FOR THE DECREASED HEIGHT UNIT DEPICTED ON PAGE 3.

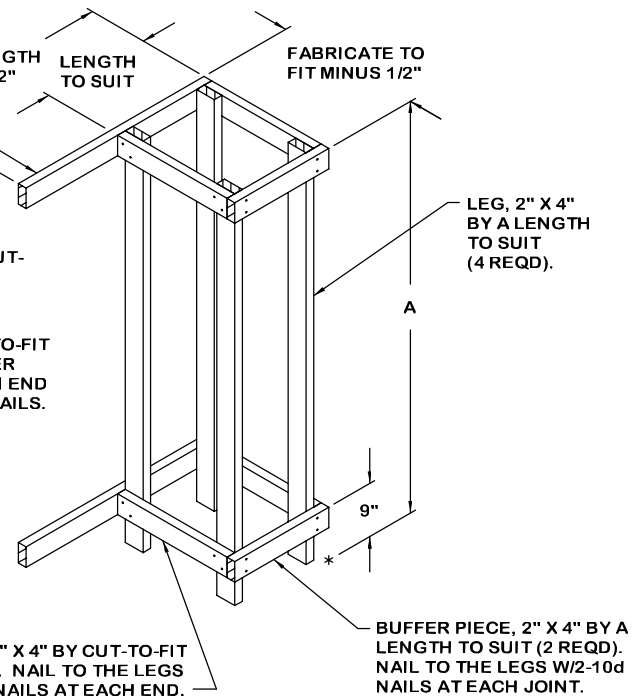
ALTERNATIVE FORWARD LOADING PATTERN B

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 OF THE TRAILER IS ONLY ONE HIGH, TWO STACK UNITIZING STRAPS MUST BE INSTALLED AROUND THOSE PALLET UNITS IN THE FRONT STACK. THE BASIC HEIGHT UNIT IS SHOWN. THE PROCEDURES ARE ALSO APPLICABLE FOR THE DECREASED HEIGHT UNIT DEPICTED ON PAGE 3.



SPACER ASSEMBLY C

THIS ASSEMBLY IS DESIGNED FOR LATERAL BRACING OF A SINGLE PALLET UNIT WHICH IS TURNED 90° FROM THE NORMAL LOADING ORIENTATION AND POSITION IN THE FRONT OF AN ANGLED-CORNER CONVENTIONAL VAN TRAILER AS SHOWN IN THE "ALTERNATIVE FORWARD LOADING PATTERN A" VIEW ABOVE. RIGHT HAND AND LEFT HAND ASSEMBLIES ARE REQUIRED.



SPACER ASSEMBLY D

THIS ASSEMBLY IS DESIGNED FOR LATERAL BRACING OF A 2-HIGH PALLET STACK WHICH IS TURNED 90° FROM THE NORMAL LOADING ORIENTATION AND POSITIONED 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 90° FROM THE POSITION IN WHICH IT WILL BE INSTALLED IN A LOAD. RIGHT HAND AND LEFT HAND SPACER ASSEMBLIES ARE REQUIRED.

SPACER ASSEMBLY D CHART	
PALLET UNIT TYPE	DIM A
BASIC HEIGHT	6' - 6"
DECREASED HEIGHT	70"
BASIC W/DECREASED ON TOP	6' - 6"

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