

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

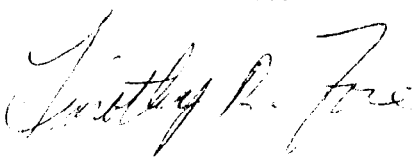
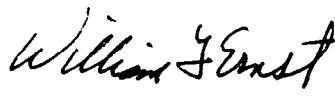
PA37 SERIES CONTAINERS

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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		WEBSITE: HTTP://WWW.DAC.ARMY.MIL				
	TECHNICIAN	BASIC	RALPH ARNOLD		JULY 1986				
	REV.			REVISION NO. 1		NOVEMBER 1997			
APPROVED BY ORDER OF COMMANDING GENERAL, U.S. ARMY MATERIEL COMMAND  U.S. ARMY DEFENSE AMMUNITION CENTER	DRAFTSMAN	BASIC	BARBARA LEONARD		SEE THE REVISION LISTING ON PAGE 3				
		REV.			CLASS	DIVISION	DRAWING	FILE	
	TRANSPORTATION ENGINEERING DIVISION			<i>W.R. Frie</i>		19	48	4042C/8	11PM1000
	VALIDATION ENGINEERING DIVISION			<i>W.R. Frie</i>					
LOGISTICS ENGINEERING OFFICE			<i>William Ernest</i>						

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 PA37 SERIES PROPELLING CHARGE CONTAINER ASSEMBLED ON THE 35" X 45-1/2" 4-WAY ENTRY PALLET 4-WAY ENTRY PALLET. SEE THE PICTORAL VIEWS ON PAGES 4 AND 5 FOR SIZES AND WEIGHTS. SEE U.S. ARMY MATERIEL COMMAND DRAWING 19-48-4042A/9-20PM1001 FOR UNITIZATION PROCEDURES FOR THE PA37 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 TO BE USED TO TRANSPORT THE DESIGNATED ITEM MUST COMPLY WITH AR 55-355, CHAPTER 29, FOR EXPLOSIVES AND OTHER DANGEROUS ARTICLES, IN FULL.
- 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 SEMI TRAILER CARRYING THE LADING MUST NOT EXCEED THE MAXIMUM GROSS WEIGHT ALLOWED FOR THE STATE OR STATES THRU WHICH THE LOAD IS TO BE TRANSPORTED BY MOTOR CARRIER. LIKEWISE, THE GROSS WEIGHT ON A SINGLE OR TANDEM AXLE MUST NOT EXCEED THE MAXIMUM ALLOWABLE WEIGHT. IF THERE IS ANY DOUBT AS TO WHETHER 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.

(CONTINUED AT RIGHT)

MATERIAL SPECIFICATIONS

<u>LUMBER</u> - - - - -	SEE TM 743-200-1 (DUNNAGE LUMBER) AND VOLUNTARY PRODUCT STANDARD PS 20.
<u>NAILS</u> - - - - -	ASTM F1667; COMMON STEEL NAIL (NLCMS OR NLCMMS).
<u>STRAPPING, STEEL</u> - -	ASTM D3953; FLAT STRAPPING, TYPE 1, HEAVY DUTY, FINISH A, B (GRADE 2), OR C.
<u>SEAL, STRAP</u> - - - - -	ASTM D3953; CLASS H, FINISH A, B (GRADE 2), OR C, DOUBLE NOTCH TYPE, STYLE I, II, OR IV.

- J. MOST 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 WHENEVER 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 ONTO 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 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.
- O. PORTIONS OF THE TRAILERS, SUCH AS SIDEWALLS, ENDWALLS, AND ROOFS, HAVE NOT BEEN SHOWN IN THE LOAD VIEWS FOR CLARITY PURPOSES.
- P. THE UNBLOCKED SPACE ACROSS THE WIDTH OF A LOAD BAY IS NOT TO EXCEED 6". EXCESSIVE SLACK CAN BE ELIMINATED FROM A LOAD BY LAMINATING ADDITIONAL PIECES OF APPROPRIATE THICKNESS TO THE CRIB FILL. NAIL EACH ADDITIONAL PIECE TO THE BUFFER PIECE W/1 APPROPRIATELY SIZED NAIL EVERY 12". ADDITIONALLY, THE THICKNESS AND QUANTITY OF THE LUMBER USED IN CRIB FILL AND ANTI-SWAY BRACE ASSEMBLIES MAY BE ADJUSTED AS REQUIRED TO FACILITATE VARIANCE IN THE SIZE OF THE PALLET UNIT.
- Q. **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.
- R. 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 43. FOR "SHIPMENT OF LEFT-OVER CONTAINERS" SEE THE DETAILS ON PAGE 44.
- S. THESE PROCEDURES CAN ALSO BE UTILIZED FOR THE SHIPMENT OF PALLET UNITS OF PA37 SERIES CONTAINERS WHEN THEY ARE LOADED WITH AN ITEM OTHER THAN THE SPECIFIED PROPELLING CHARGES, OR WHEN THEY ARE EMPTY.
- 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 0.454 KG.
- U. ANY OF THE PALLET UNITS DEPICTED ON PAGES 4 AND 5 MAY BE LOADED AS A MIXED LOAD IN THE SAME TRAILER, INCLUDING THE BASIC HEIGHT UNITS WITH THE INCREASED AND/OR DECREASED HEIGHT UNITS. FOR MIXED-HEIGHT LOADS, POSITION ALL PALLET UNITS OF ONE HEIGHT IN ONE LAYER, WITH THE TALLER 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 TALLER UNITS WILL BE LOADED IN THE FORWARD PORTION OF THE BOTTOM LAYER, AND THE SHORTER UNITS IN THE REAR PORTION.

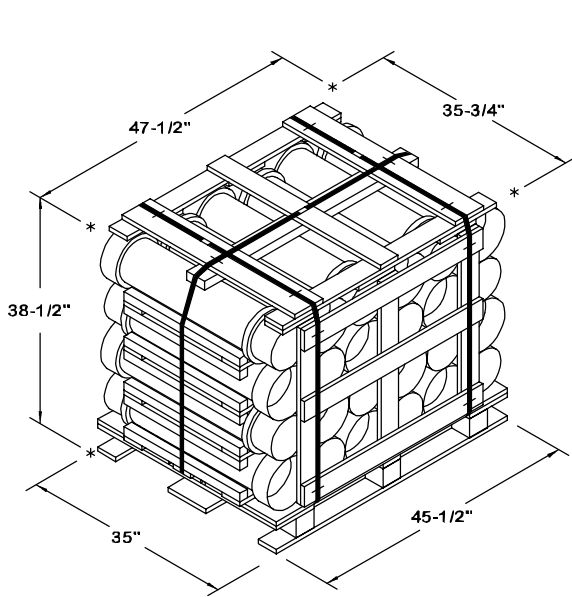
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REVISION

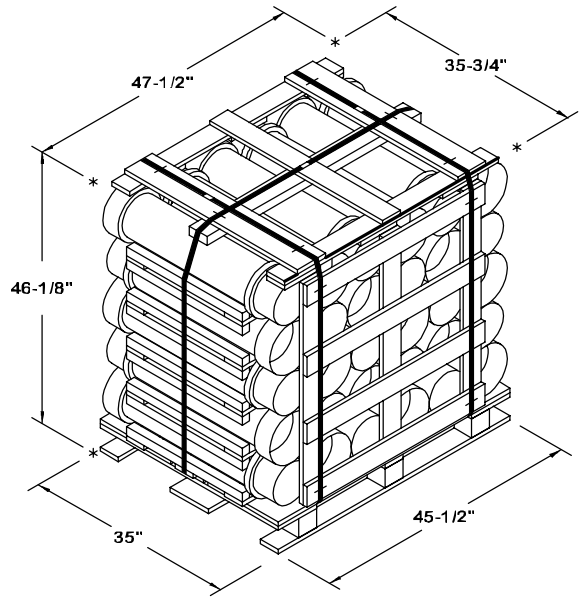
REVISION NO. 1, DATED NOVEMBER 1997, CONSISTS OF:

1. INCLUDING LOAD DRAWINGS OF LONGER AND WIDER TRAILERS.
2. INCLUDING CROSSWISE LOADING PATTERN FOR ALTERNATED CONTAINERS UNIT.
3. INCLUDING CHIMNEY PATTERN LOADS FOR FLAT AND ROUTED DUNNAGE METHOD UNITS.
4. INCORPORATING NAILED-HEADER METHOD INTO LOAD DRAWINGS.
5. REMOVING LOADS REFERENCING "ORIGINAL PROCEDURE" FOR FLAT DUNNAGE METHOD UNITS.
6. REMOVING LOADS IN TRAILERS EQUIPPED WITH MECHANICAL BRACING DEVICES.
7. REMOVING TOP-OF-LOAD ANTI-SWAY BRACES FROM LOAD DRAWINGS.
8. REMOVING TYGARD METHOD OF LOAD RESTRAINT.
9. UPDATING GENERAL NOTES AND DRAWING FORMAT.



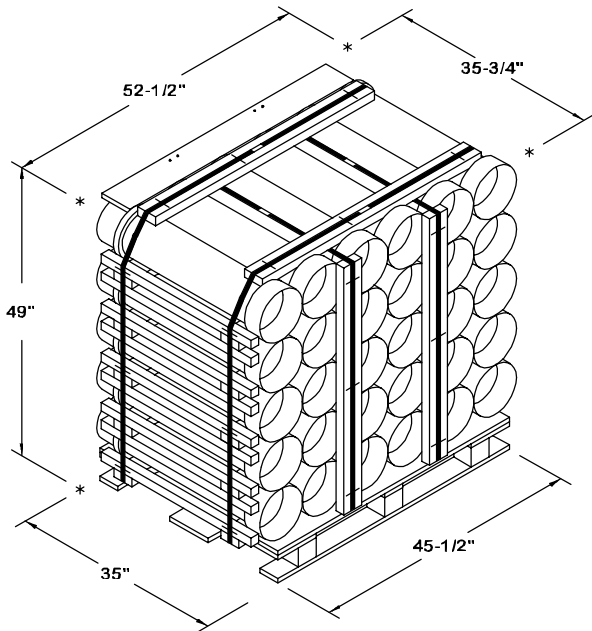
ALTERNATED CONTAINERS UNIT (BASIC HEIGHT)

CONTAINER - - - - - 24 EACH @ 42 LBS (APPROX)
 CUBE - - - - - 37.8 CUBIC FEET (APPROX)
 GROSS WEIGHT - - - - - 1,163 LBS (APPROX)



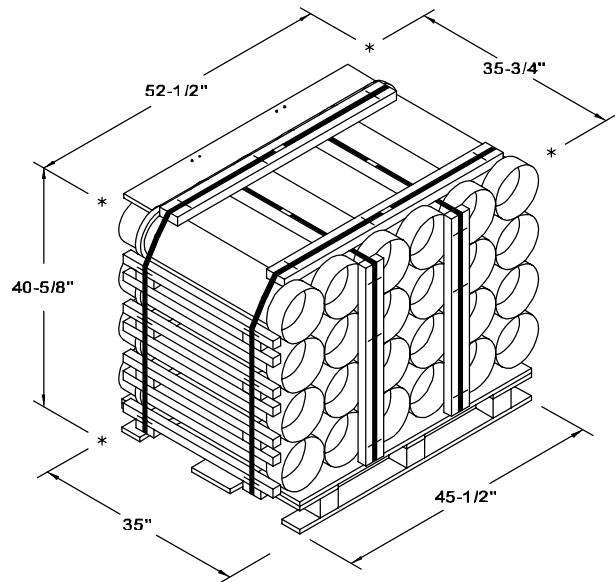
ALTERNATED CONTAINERS UNIT (INCREASED HEIGHT)

CONTAINER - - - - - 30 EACH @ 42 LBS (APPROX)
 CUBE - - - - - 45.3 CUBIC FEET (APPROX)
 GROSS WEIGHT - - - - - 1,432 LBS (APPROX)



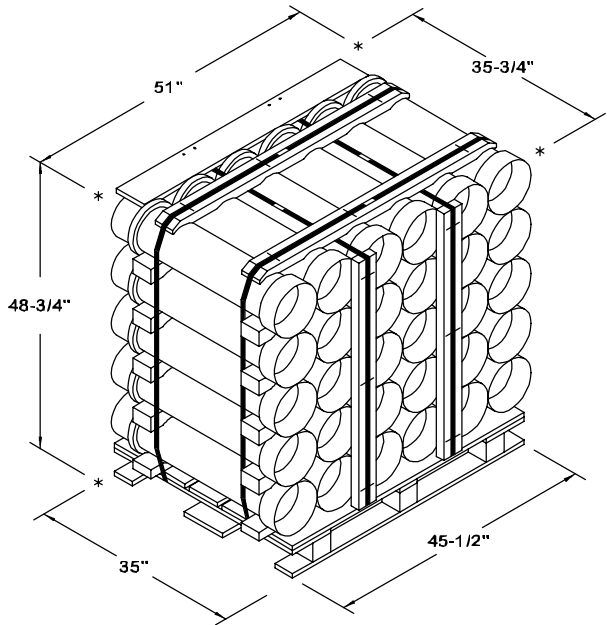
FLAT DUNNAGE METHOD UNIT (BASIC HEIGHT)

CONTAINER - - - - - 30 EACH @ 42 LBS (APPROX)
 CUBE - - - - - 53.2 CUBIC FEET (APPROX)
 GROSS WEIGHT - - - - - 1,452 LBS (APPROX)



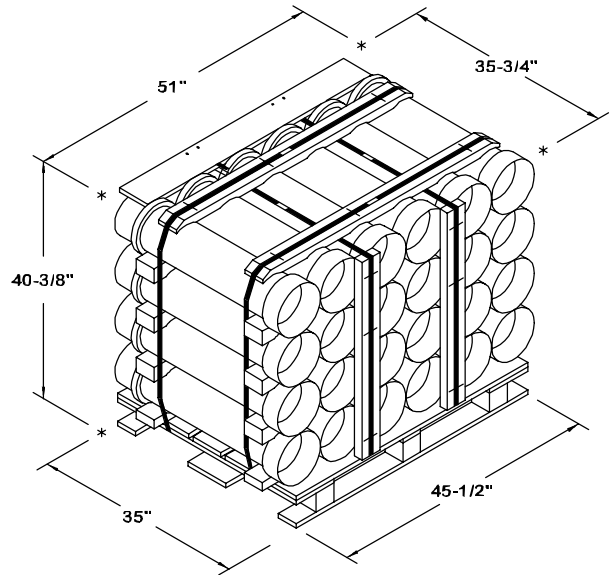
FLAT DUNNAGE METHOD UNIT (DECREASED HEIGHT)

CONTAINER - - - - - 24 EACH @ 42 LBS (APPROX)
 CUBE - - - - - 44.1 CUBIC FEET (APPROX)
 GROSS WEIGHT - - - - - 1,195 LBS (APPROX)



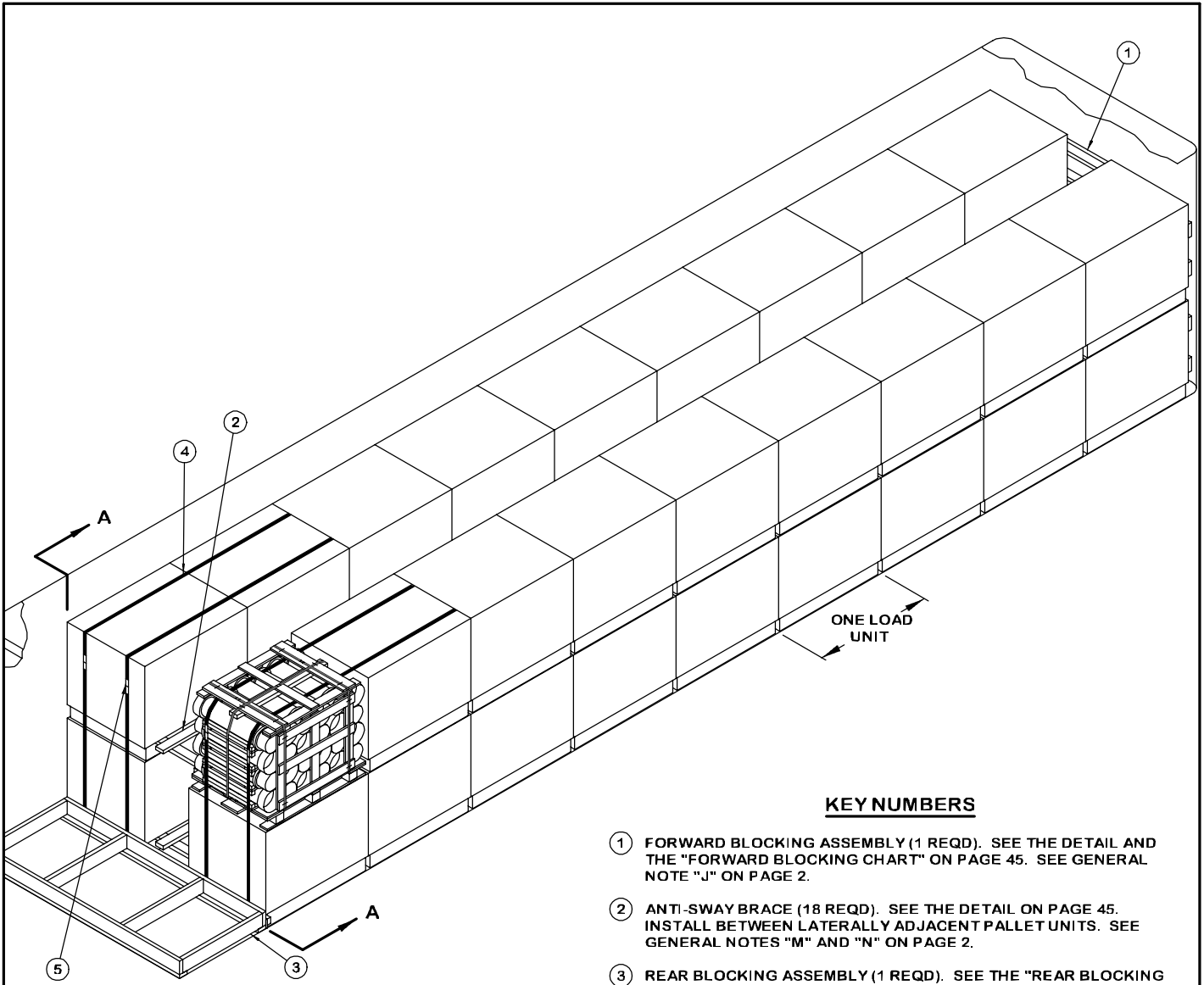
ROUTED DUNNAGE METHOD UNIT (BASIC HEIGHT)

CONTAINER - - - - - 30 EACH @ 42 LBS (APPROX)
 CUBE - - - - - 51.4 CUBIC FEET (APPROX)
 GROSS WEIGHT - - - - - 1,429 LBS (APPROX)



ROUTED DUNNAGE METHOD UNIT (DECREASED HEIGHT)

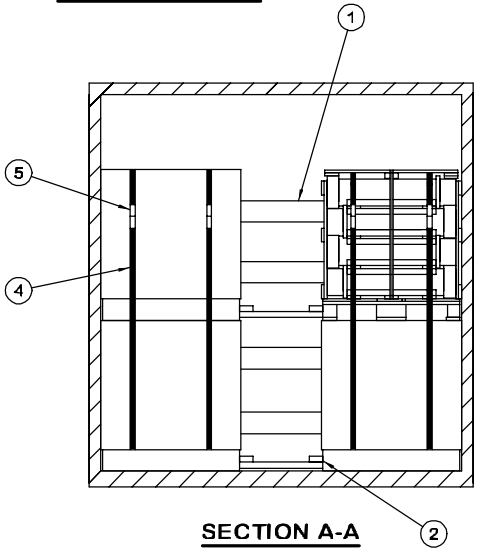
CONTAINER - - - - - 24 EACH @ 42 LBS (APPROX)
 CUBE - - - - - 42.6 CUBIC FEET (APPROX)
 GROSS WEIGHT - - - - - 1,161 LBS (APPROX)



ISOMETRIC VIEW

KEY NUMBERS

- ① FORWARD BLOCKING ASSEMBLY (1 REQD). SEE THE DETAIL AND THE "FORWARD BLOCKING CHART" ON PAGE 45. SEE GENERAL NOTE "J" ON PAGE 2.
- ② ANTI-SWAY BRACE (18 REQD). SEE THE DETAIL ON PAGE 45. 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 B" DETAIL ON PAGE 47. SEE SPECIAL NOTE 3 ON PAGE 7.
- ④ BUNDLING STRAP, 1-1/4" X .035" OR .031" X 30'-0" LONG STEEL STRAPPING (4 REQD). INSTALL SO AS TO ENIRCLE TWO COMPLETE STACKS. POSITION STRAP SO AS TO EXTEND UNDER THE TOP DUNNAGE ASSEMBLIES OF THE UPPER PALLET UNITS. SEE SPECIAL NOTE 4 ON PAGE 7.
- ⑤ SEAL FOR 1-1/4" STRAPPING (8 REQD, 2 PER STRAP). DOUBLE CRIMP EACH SEAL. SEE GENERAL NOTE "K" ON PAGE 2.



SECTION A-A

**ALTERNATED CONTAINERS UNIT (BASIC HEIGHT)
36-UNIT LOAD IN A 40'-0" LONG BY 7'-8" WIDE CONVENTIONAL VAN TRAILER**

SPECIAL NOTES:

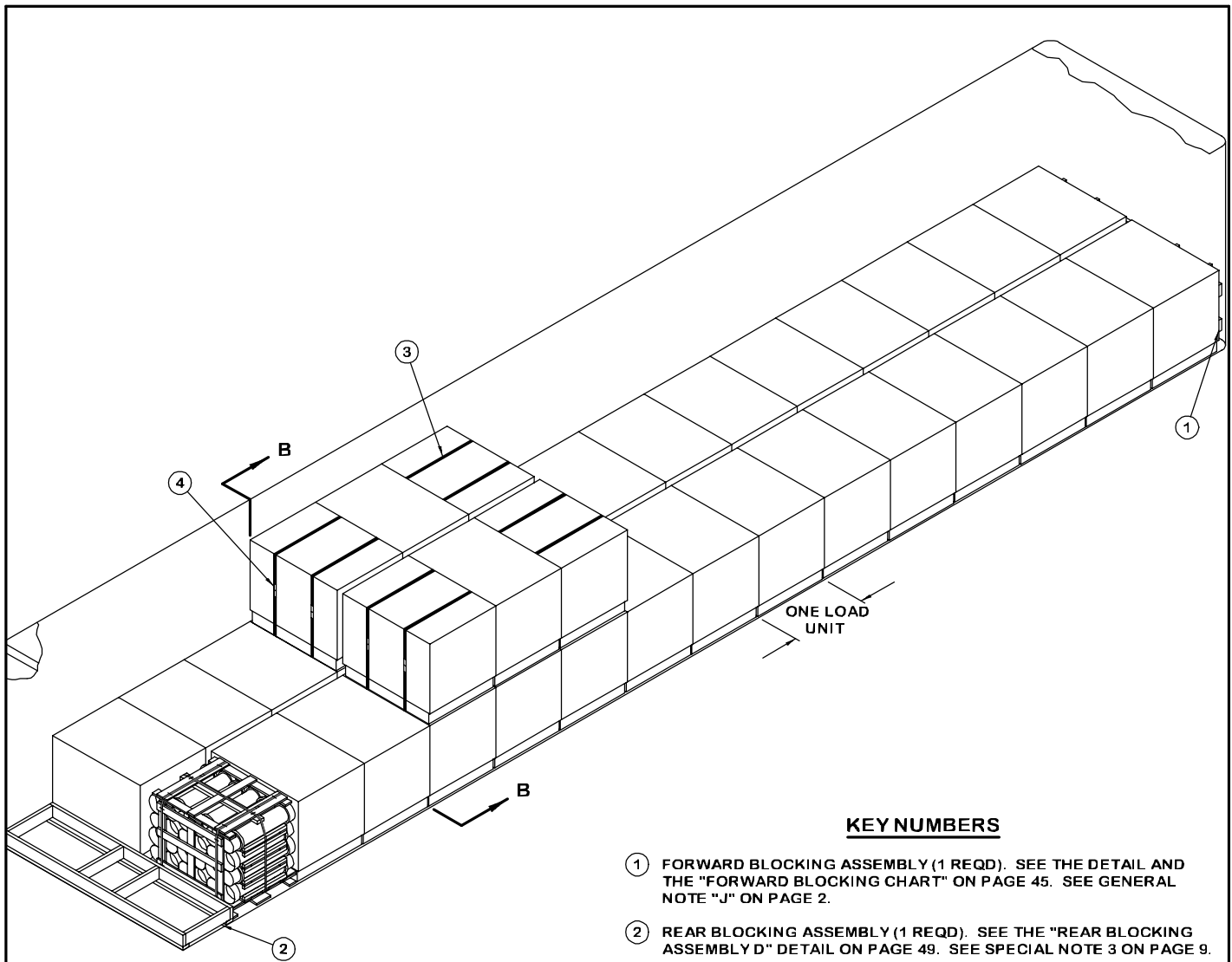
1. A 36-UNIT LOAD IS SHOWN IN A 40'-0" LONG BY 7'-8" WIDE (INSIDE DIMENSION) CONVENTIONAL VAN TRAILER HAVING ROUNDED CORNERS. TRAILERS OF OTHER DIMENSIONS CAN BE USED.
2. THE PALLET UNIT SHOWN ON PAGE 6 IS THE ALTERNATED CONTAINERS UNIT (BASIC HEIGHT) HAVING OVERALL DIMENSIONS OF 35-3/4" LONG BY 47-1/2" WIDE BY 38-1/2" HIGH AND WEIGHING APPROXIMATELY 1,163 POUNDS.
3. IF THE VOID AT THE REAR OF THE LOAD, BETWEEN THE PALLET UNITS AND THE REAR DOOR, 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 A" AS DETAILED ON PAGE 46. IF THE VOID AT THE REAR OF THE LOAD IS 9" OR GREATER, USE THE REAR BLOCKING ASSEMBLY, PIECE MARKED ③ ON PAGE 6. SEE SPECIAL NOTE 10.
4. IF A STACK IN THE LOAD UNIT AT THE REAR OF THE LOAD IS MORE THAN ONE UNIT HIGH, BUNDLING STRAPS, PIECE MARKED ④, MUST BE INSTALLED SO AS TO ENCIRCLE THE REARMOST TWO STACKS IN EACH APPLICABLE ROW.
5. IF THE SECOND LAYER OF THE LOAD IS NOT COMPLETE, 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. UNITIZING STRAPS, SIMILAR TO PIECE MARKED ④ ON PAGE 10, MUST BE INSTALLED PRIOR TO FINAL POSITIONING OF THE STACK.
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 PALLET UNIT IN THE FIRST LAYER. PROVIDE LONGITUDINAL BRACING BY INSTALLING UNITIZING STRAPS, SHOWN AS PIECE MARKED ④ ON PAGE 10.
7. REFER TO PAGE 43 FOR GUIDANCE IN SHIPMENT OF PARTIAL PALLET UNITS.
8. LEFTOVER CONTAINERS, IN AN AMOUNT NOT TO EXCEED FIVE, MAY BE SECURED TO THE TOP OF A FULL OR PARTIAL PALLET UNIT FOR SHIPMENT. REFER TO THE "PROCEDURES FOR SHIPMENT OF LEFTOVER CONTAINERS" ON PAGE 44 FOR GUIDANCE.
9. FOR SHIPMENT OF LESS THAN FULL LOADS, REFER TO THE APPLICABLE GUIDANCE ON PAGES 40 THROUGH 42.
10. TRAILERS EQUIPPED WITH ROLL-UP TYPE DOORS MAY BE USED, HOWEVER, SPECIAL REAR BLOCKING MUST BE INSTALLED. SEE THE NAILED-HEADER METHOD ON PAGES 12 AND 34 AND THE SPECIAL NOTES ON THE SUCCEEDING PAGES FOR GUIDANCE. NOTE THAT THE SPECIAL REAR BLOCKING FOR TRAILERS EQUIPPED WITH THE ROLL-UP TYPE DOORS MAY ALSO BE USED IN TRAILERS EQUIPPED WITH HINGED DOORS.

BILL OF MATERIAL		
LUMBER	LINEAR FEET	BOARD FEET
1" X 4"	2	1
2" X 3"	2	1
2" X 4"	248	165
2" X 6"	86	86
NAILS	NO. REQD	POUNDS
6d (2")	8	NIL
10d (3")	326	5-1/4
1-1/4" STEEL STRAPPING - - 120' REQD - - - 17-1/4 LBS		
SEAL FOR 1-1/4" STRAPPING - 8 REQD - - - 1/2 LB		

LOAD AS SHOWN

ITEM	QUANTITY	WEIGHT (APPROX)
PALLET UNIT - - - - -	36 - - - - -	41,868 LBS
DUNNAGE - - - - -	- - - - -	529 LBS
TOTAL WEIGHT - - - - -		42,397 LBS (APPROX)

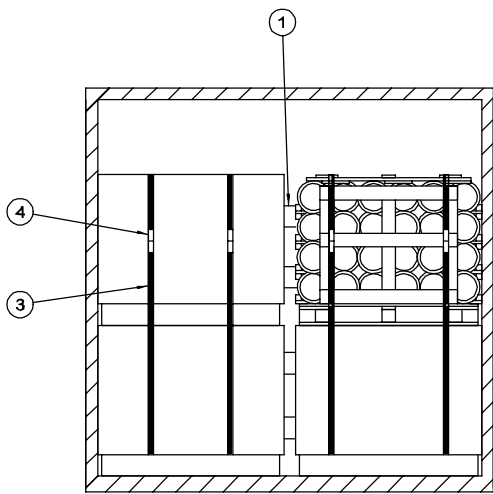
**ALTERNATED CONTAINERS UNIT (BASIC HEIGHT)
36-UNIT LOAD IN A 40'-0" LONG BY 7'-8" WIDE CONVENTIONAL VAN TRAILER**



ISOMETRIC VIEW

KEY NUMBERS

- ① FORWARD BLOCKING ASSEMBLY (1 REQD). SEE THE DETAIL AND THE "FORWARD BLOCKING CHART" ON PAGE 45. SEE GENERAL NOTE "J" ON PAGE 2.
- ② REAR BLOCKING ASSEMBLY (1 REQD). SEE THE "REAR BLOCKING ASSEMBLY D" DETAIL ON PAGE 49. SEE SPECIAL NOTE 3 ON PAGE 9.
- ③ STACK UNITIZING STRAP, 1-1/4" X .035" OR .031" X 20'-0" LONG STEEL STRAPPING (8 REQD). INSTALL SO AS TO ENCIRCLE A TOP-LAYER PALLET UNIT AND THE UNIT DIRECTLY BELOW. POSITION STRAP SO AS TO EXTEND UNDER THE TOP DUNNAGE ASSEMBLIES OF THE UPPER PALLET UNITS. SEE SPECIAL NOTE 5 ON PAGE 9.
- ④ SEAL FOR 1-1/4" STRAPPING (16 REQD, 2 PER STRAP). DOUBLE CRIMP EACH SEAL. SEE GENERAL NOTE "K" ON PAGE 2.



SECTION B-B

**ALTERNATED CONTAINERS UNIT (BASIC HEIGHT)
36-UNIT LOAD IN A 48'-0" LONG BY 8'-2" WIDE CONVENTIONAL VAN TRAILER**

SPECIAL NOTES:

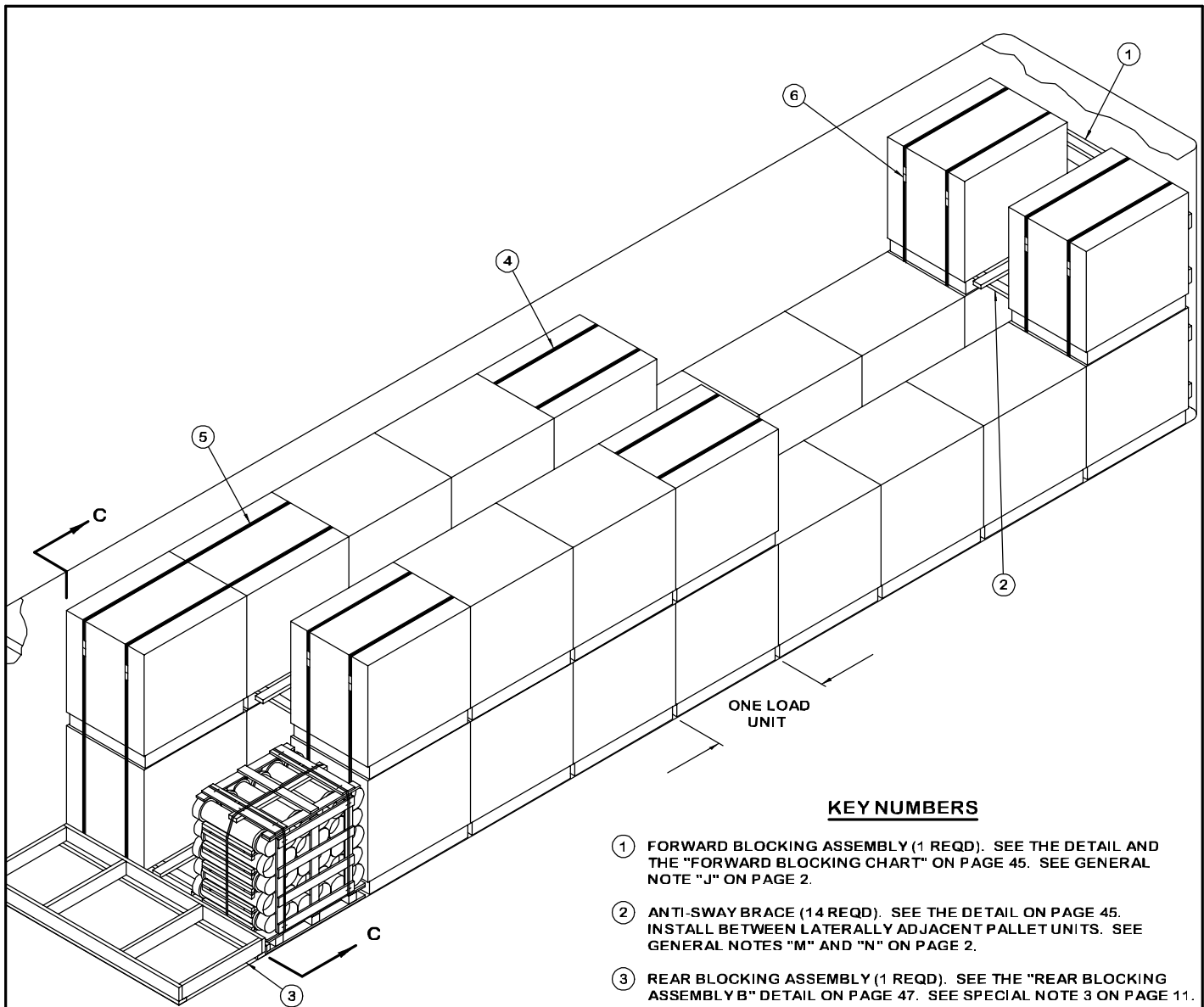
1. A 36-UNIT LOAD IS SHOWN IN A 48'-0" LONG BY 8'-2" WIDE (INSIDE DIMENSION) CONVENTIONAL VAN TRAILER HAVING ROUNDED CORNERS. TRAILERS OF OTHER LENGTHS CAN BE USED, BUT TRAILERS NARROWER THAN 8'-0" CANNOT BE USED FOR THIS LOAD CONFIGURATION.
2. THE PALLET UNIT SHOWN ON PAGE 8 IS THE ALTERNATED CONTAINERS UNIT (BASIC HEIGHT) HAVING OVERALL DIMENSIONS OF 35-3/4" LONG BY 47-1/2" WIDE BY 38-1/2" HIGH AND WEIGHING APPROXIMATELY 1,163 POUNDS.
3. IF THE VOID AT THE REAR OF THE LOAD, BETWEEN THE PALLET UNITS AND THE REAR DOOR, 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 A" AS DETAILED ON PAGE 46. IF THE VOID AT THE REAR OF THE LOAD IS 9" OR GREATER, USE THE REAR BLOCKING ASSEMBLY, PIECE MARKED ② ON PAGE 8. SEE SPECIAL NOTE 10.
4. IF A STACK IN THE LOAD UNIT AT THE REAR OF THE LOAD IS MORE THAN ONE UNIT HIGH, BUNDLING STRAPS, PIECE MARKED ④ ON PAGE 6, MUST BE INSTALLED SO AS TO ENCIRCLE THE REARMOST TWO STACKS IN EACH APPLICABLE ROW.
5. 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. UNITIZING STRAPS, PIECE MARKED ③, MUST BE INSTALLED PRIOR TO FINAL POSITIONING OF THE STACK.
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 PALLET UNIT IN THE FIRST LAYER. PROVIDE LONGITUDINAL BRACING BY INSTALLING UNITIZING STRAPS, PIECE MARKED ③.
7. REFER TO PAGE 43 FOR GUIDANCE IN SHIPMENT OF PARTIAL PALLET UNITS.
8. LEFTOVER CONTAINERS, IN AN AMOUNT NOT TO EXCEED FIVE, MAY BE SECURED TO THE TOP OF A FULL OR PARTIAL PALLET UNIT FOR SHIPMENT. REFER TO THE "PROCEDURES FOR SHIPMENT OF LEFTOVER CONTAINERS" ON PAGE 44 FOR GUIDANCE.
9. FOR SHIPMENT OF LESS THAN FULL LOADS, REFER TO THE APPLICABLE GUIDANCE ON PAGES 40 THROUGH 42.
10. TRAILERS EQUIPPED WITH ROLL-UP TYPE DOORS MAY BE USED, HOWEVER, SPECIAL REAR BLOCKING MUST BE INSTALLED. SEE THE NAILED-HEADER METHOD ON PAGES 12 AND 34 AND THE SPECIAL NOTES ON THE SUCCEEDING PAGES FOR GUIDANCE. NOTE THAT THE SPECIAL REAR BLOCKING FOR TRAILERS EQUIPPED WITH THE 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"	2	1
2" X 4"	29	20
2" X 6"	56	56
NAILS	NO. REQD	POUNDS
10d (3")	80	1-1/4
1-1/4" STEEL STRAPPING - - 160' REQD - - - - 23 LBS		
SEAL FOR 1-1/4" STRAPPING - 16 REQD - - - - 3/4 LB		

LOAD AS SHOWN

ITEM	QUANTITY	WEIGHT (APPROX)
PALLET UNIT - - - - -	36 - - - - -	41,868 LBS
DUNNAGE - - - - -	- - - - -	179 LBS
TOTAL WEIGHT - - - - -		42,047 LBS (APPROX)

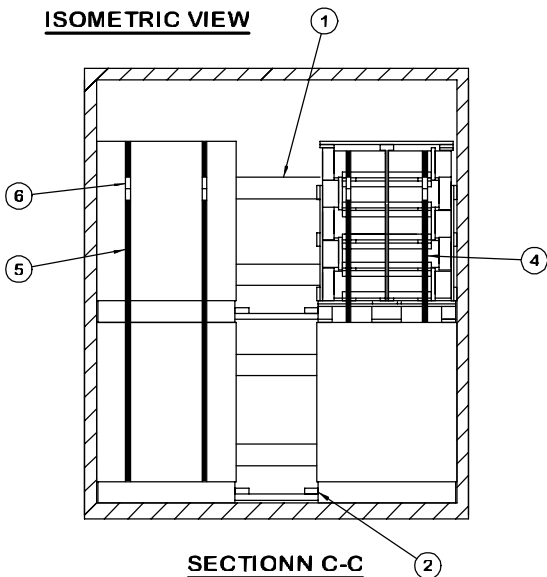
**ALTERNATED CONTAINERS UNIT (BASIC HEIGHT)
36-UNIT LOAD IN A 48'-0" LONG BY 8'-2" WIDE CONVENTIONAL VAN TRAILER**



KEY NUMBERS

- ① FORWARD BLOCKING ASSEMBLY (1 REQD). SEE THE DETAIL AND THE "FORWARD BLOCKING CHART" ON PAGE 45. SEE GENERAL NOTE "J" ON PAGE 2.
- ② ANTI-SWAY BRACE (14 REQD). SEE THE DETAIL ON PAGE 45. 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 B" DETAIL ON PAGE 47. SEE SPECIAL NOTE 3 ON PAGE 11.
- ④ STACK UNITIZING STRAP, 1-1/4" X .035" OR .031" X 24'-0" LONG STEEL STRAPPING (10 REQD). INSTALL SO AS TO ENCIRCLE A TOP-LAYER PALLET UNIT AND THE UNIT DIRECTLY BELOW. POSITION STRAP SO AS TO EXTEND UNDER THE TOP DUNNAGE ASSEMBLIES OF THE UPPER PALLET UNITS. SEE SPECIAL NOTE 4 ON PAGE 11.
- ⑤ BUNDLING STRAP, 1-1/4" X .035" OR .031" X 33'-0" LONG STEEL STRAPPING (2 REQD). INSTALL SO AS TO ENCIRCLE TWO COMPLETE STACKS. POSITION STRAP SO AS TO EXTEND UNDER THE TOP DUNNAGE ASSEMBLIES OF THE UPPER PALLET UNITS. SEE SPECIAL NOTE 5 ON PAGE 11.
- ⑥ SEAL FOR 1-1/4" STRAPPING (24 REQD, 2 PER STRAP). DOUBLE CRIMP EACH SEAL. SEE GENERAL NOTE "K" ON PAGE 2.

ISOMETRIC VIEW



SECTION C-C

**ALTERNATED CONTAINERS UNIT (INCREASED HEIGHT)
29-UNIT LOAD IN A 40'-0" LONG BY 7'-8" WIDE CONVENTIONAL VAN TRAILER**

SPECIAL NOTES:

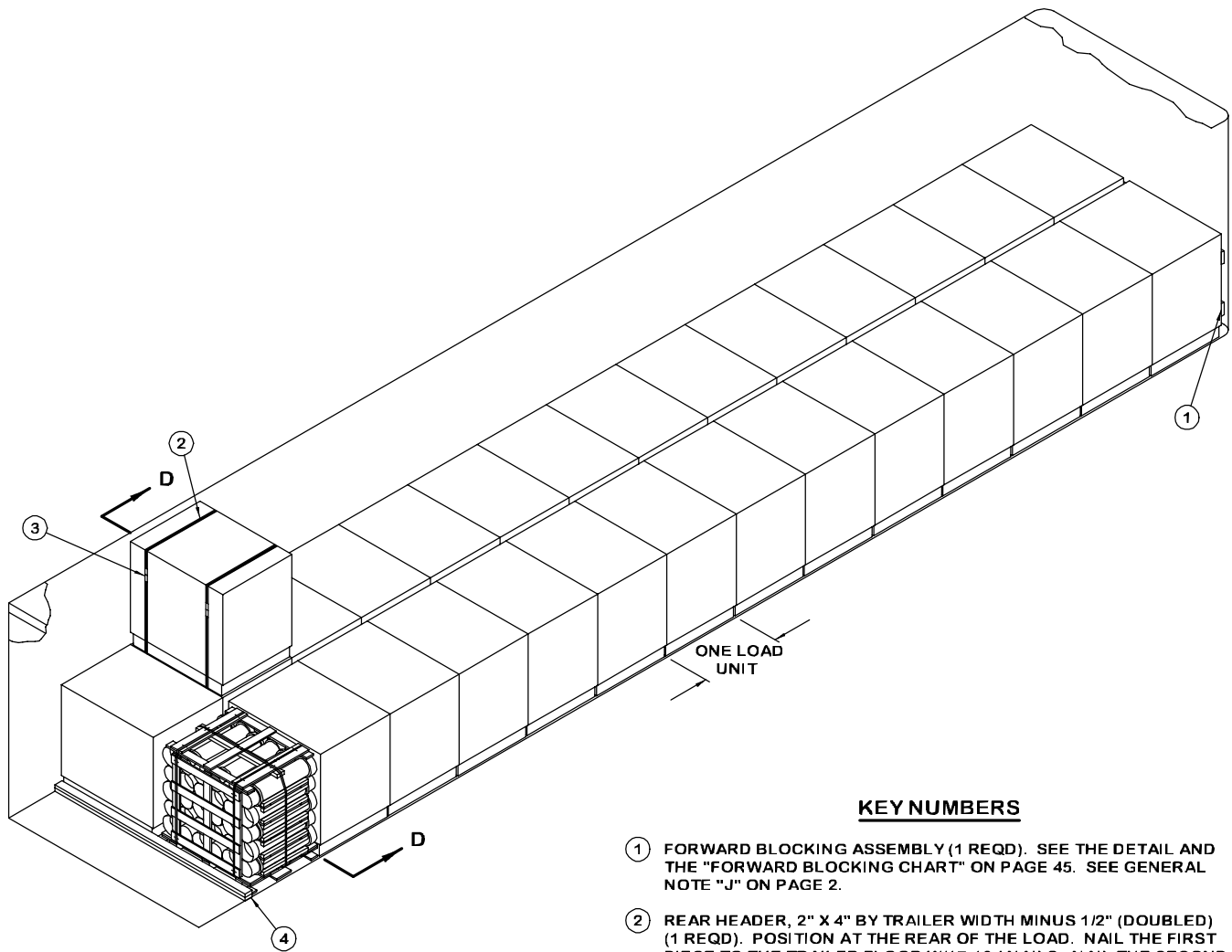
1. A 29-UNIT LOAD IS SHOWN IN A 40'-0" LONG BY 7'-8" WIDE (INSIDE DIMENSION) CONVENTIONAL VAN TRAILER HAVING ROUNDED CORNERS. TRAILERS OF OTHER DIMENSIONS CAN BE USED.
2. THE PALLET UNIT SHOWN ON PAGE 10 IS THE ALTERNATED CONTAINERS UNIT (INCREASED HEIGHT) HAVING OVERALL DIMENSIONS OF 35-3/4" LONG BY 47-1/2" WIDE BY 46-1/8" HIGH AND WEIGHING APPROXIMATELY 1,432 POUNDS.
3. IF THE VOID AT THE REAR OF THE LOAD, BETWEEN THE PALLET UNITS AND THE REAR DOOR, 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 A" AS DETAILED ON PAGE 46. IF THE VOID AT THE REAR OF THE LOAD IS 9" OR GREATER, USE THE REAR BLOCKING ASSEMBLY, PIECE MARKED ③ ON PAGE 10. SEE SPECIAL NOTE 10.
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. UNITIZING STRAPS, PIECE MARKED ④, MUST BE INSTALLED PRIOR TO FINAL POSITIONING OF THE STACK.
5. IF A STACK IN THE LOAD UNIT AT THE REAR OF THE LOAD IS MORE THAN ONE UNIT HIGH, AS IN THE CASE WITH THE LEFT HAND ROW IN THE DEPICTED LOAD, BUNDLING STRAPS, PIECE MARKED ⑤, MUST BE INSTALLED SO AS TO ENCIRCLE THE REARMOIST TWO STACKS IN EACH APPLICABLE ROW.
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 REARMOIST PALLET UNIT IN THE FIRST LAYER. PROVIDE LONGITUDINAL BRACING BY INSTALLING UNITIZING STRAPS, SHOWN AS PIECE MARKED ④ ON PAGE 10.
7. REFER TO PAGE 43 FOR GUIDANCE IN SHIPMENT OF PARTIAL PALLET UNITS.
8. LEFTOVER CONTAINERS, IN AN AMOUNT NOT TO EXCEED FIVE, MAY BE SECURED TO THE TOP OF A FULL OR PARTIAL PALLET UNIT FOR SHIPMENT. REFER TO THE "PROCEDURES FOR SHIPMENT OF LEFTOVER CONTAINERS" ON PAGE 44 FOR GUIDANCE.
9. FOR SHIPMENT OF LESS THAN FULL LOADS, REFER TO THE APPLICABLE GUIDANCE ON PAGES 40 THROUGH 42.
10. TRAILERS EQUIPPED WITH ROLL-UP TYPE DOORS MAY BE USED, HOWEVER, SPECIAL REAR BLOCKING MUST BE INSTALLED. SEE THE NAILED-HEADER METHOD ON PAGES 12 AND 34 AND THE SPECIAL NOTES ON THE SUCCEEDING PAGES FOR GUIDANCE. NOTE THAT THE SPECIAL REAR BLOCKING FOR TRAILERS EQUIPPED WITH THE ROLL-UP TYPE DOORS MAY ALSO BE USED IN TRAILERS EQUIPPED WITH HINGED DOORS.
11. IF THE TRAILER BEING LOADED DOES NOT HAVE A DOOR OPENING HEIGHT OF AT LEAST 7'-9", IT WILL BE NECESSARY TO LIMIT THE REARMOIST LOAD UNIT TO ONE PALLET IN HEIGHT. IF THE SECOND LAYER AT THE REAR OF THE LOAD IS MOVED FORWARD, THE BUNDLING STRAPS, PIECE MARKED ⑤, WILL NOT BE REQUIRED.

BILL OF MATERIAL		
LUMBER	LINEAR FEET	BOARD FEET
1" X 4"	2	1
2" X 3"	2	1
2" X 4"	206	138
2" X 6"	86	86
NAILS	NO. REQD	POUNDS
6d (2")	8	NIL
10d (3")	278	4-1/2
1-1/4" STEEL STRAPPING - - 120' REQD - - - 17-1/4 LBS		
SEAL FOR 1-1/4" STRAPPING - 8 REQD - - - 1/2 LB		

LOAD AS SHOWN

ITEM	QUANTITY	WEIGHT (APPROX)
PALLET UNIT - - - - -	29 - - - - -	41,528 LBS
DUNNAGE - - - - -	- - - - -	502 LBS
TOTAL WEIGHT - - - - -		42,030 LBS (APPROX)

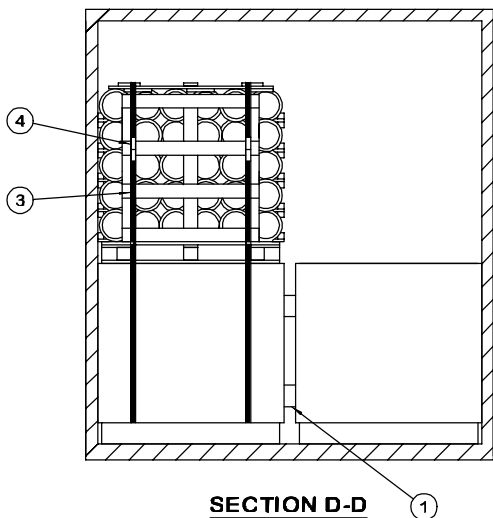
**ALTERNATED CONTAINERS UNIT (INCREASED HEIGHT)
29-UNIT LOAD IN A 40'-0" LONG BY 7'-8" WIDE CONVENTIONAL VAN TRAILER**



ISOMETRIC VIEW

KEY NUMBERS

- ① FORWARD BLOCKING ASSEMBLY (1 REQD). SEE THE DETAIL AND THE "FORWARD BLOCKING CHART" ON PAGE 45. SEE GENERAL NOTE "J" ON PAGE 2.
- ② REAR HEADER, 2" X 4" BY TRAILER WIDTH MINUS 1/2" (DOUBLED) (1 REQD). POSITION AT THE REAR OF THE LOAD. NAIL THE FIRST PIECE TO THE TRAILER FLOOR W/17-10d NAILS. NAIL THE SECOND PIECE TO THE FIRST IN A LIKE MANNER. SEE THE NAILING CHART ON PAGE 13 FOR GUIDANCE. SEE SPECIAL NOTE 3 ON PAGE 13.
- ③ STACK UNITIZING STRAP, 1-1/4" X .035" OR .031" X 20'-6" LONG STEEL STRAPPING (2 REQD). INSTALL SO AS TO ENCIRCLE A TOP-LAYER PALLET UNIT AND THE UNIT DIRECTLY BELOW. POSITION STRAP SO AS TO EXTEND UNDER THE TOP DUNNAGE ASSEMBLIES OF THE UPPER PALLET UNITS. SEE SPECIAL NOTE 4 ON PAGE 13.
- ④ SEAL FOR 1-1/4" STRAPPING (4 REQD, 2 PER STRAP). DOUBLE CRIMP EACH SEAL. SEE GENERAL NOTE "K" ON PAGE 2.



SECTION D-D

**ALTERNATED CONTAINERS UNIT (INCREASED HEIGHT)
29-UNIT LOAD IN A 45'-0" LONG BY 8'-2" WIDE CONVENTIONAL VAN TRAILER**

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.

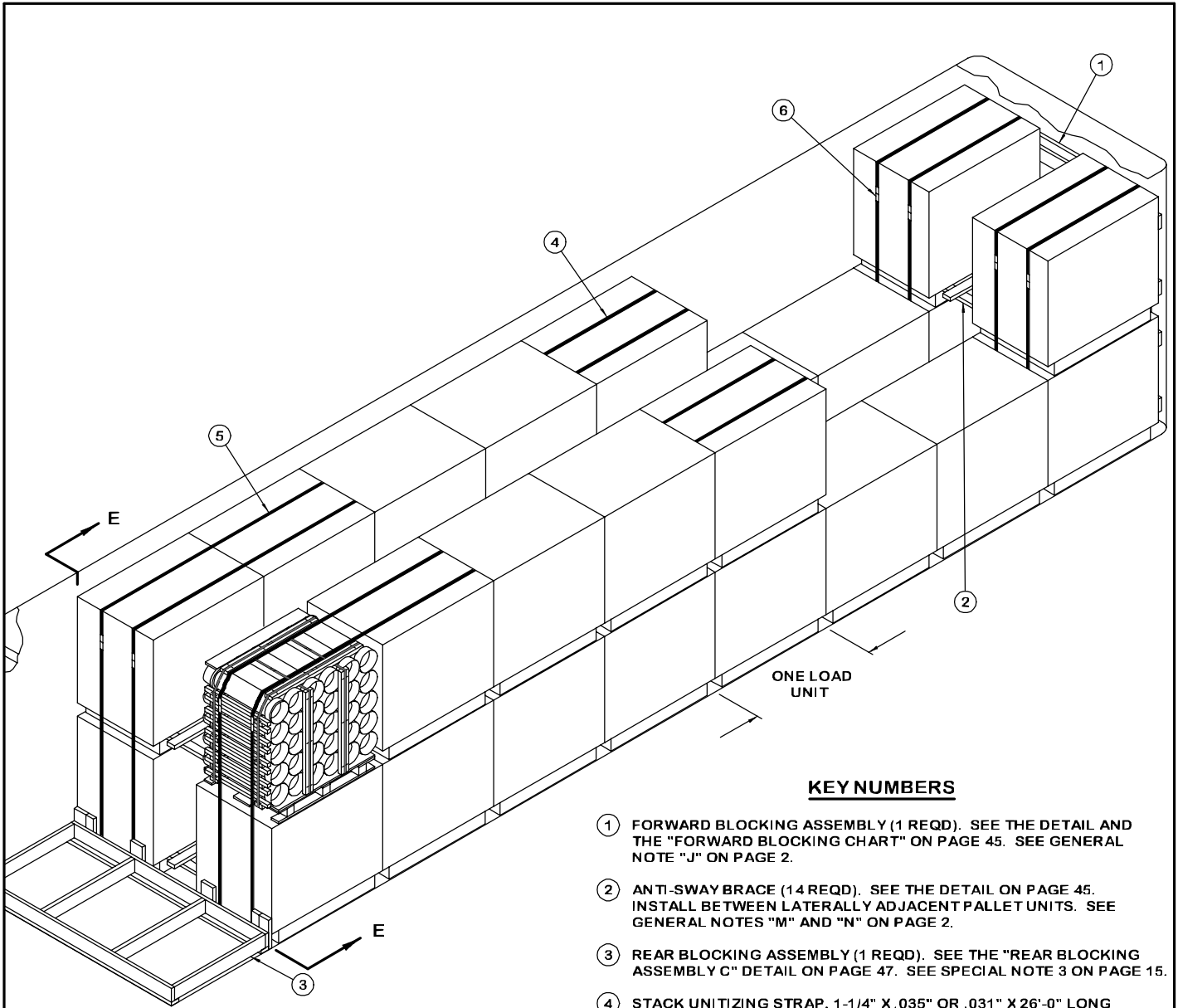
SPECIAL NOTES:

1. A 29-UNIT LOAD IS SHOWN IN A 45'-0" LONG BY 8'-2" WIDE (INSIDE DIMENSION) CONVENTIONAL VAN TRAILER HAVING ROUNDED CORNERS AND NAILABLE FLOORS. TRAILERS OF OTHER LENGTHS CAN BE USED, BUT TRAILERS NARROWER THAN 8'-0" CANNOT BE USED FOR THIS LOAD CONFIGURATION.
2. THE PALLET UNIT SHOWN ON PAGE 12 IS THE ALTERNATED CONTAINERS UNIT (INCREASED HEIGHT) HAVING OVERALL DIMENSIONS OF 35-3/4" LONG BY 47-1/2" WIDE BY 46-1/8" HIGH AND WEIGHING APPROXIMATELY 1,432 POUNDS.
3. IF THE VOID AT THE REAR OF THE LOAD, BETWEEN THE PALLET UNITS AND THE REAR DOOR, 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 A" AS DETAILED ON PAGE 46. ON A NON-NAILABLE FLOOR OR IF DESIRED ON A NAILABLE FLOOR, IF THE VOID AT THE REAR OF THE LOAD IS 9" OR GREATER, USE "REAR BLOCKING ASSEMBLY D" AS DETAILED ON PAGE 49. SEE SPECIAL NOTE 10.
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. UNITIZING STRAPS, PIECE MARKED (3), MUST BE INSTALLED PRIOR TO FINAL POSITIONING OF THE STACK.
5. IF A STACK IN THE LOAD UNIT AT THE REAR OF THE LOAD IS MORE THAN ONE UNIT HIGH, BUNDLING STRAPS, SIMILAR TO PIECE MARKED (5) ON PAGE 10, MUST BE INSTALLED SO AS TO ENCIRCLE THE REARMOST TWO STACKS IN EACH APPLICABLE ROW.
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 PALLET UNIT IN THE FIRST LAYER. PROVIDE LONGITUDINAL BRACING BY INSTALLING UNITIZING STRAPS, SHOWN AS PIECE MARKED (3).
7. REFER TO PAGE 43 FOR GUIDANCE IN SHIPMENT OF PARTIAL PALLET UNITS.
8. LEFTOVER CONTAINERS, IN AN AMOUNT NOT TO EXCEED FIVE, MAY BE SECURED TO THE TOP OF A FULL OR PARTIAL PALLET UNIT FOR SHIPMENT. REFER TO THE "PROCEDURES FOR SHIPMENT OF LEFTOVER CONTAINERS" ON PAGE 44 FOR GUIDANCE.
9. FOR SHIPMENT OF LESS THAN FULL LOADS, REFER TO THE APPLICABLE GUIDANCE ON PAGES 40 THROUGH 42.
10. FOR TRAILERS EQUIPPED WITH ROLL-UP TYPE DOORS, THE REAR BLOCKING METHOD SHOWN ON PAGE 12 MUST BE USED. SEE THE NAILING CHARTS AT LEFT FOR GUIDANCE. FOR EASE OF INSTALLATION, 2" X 6" REAR HEADERS MAY BE USED IN LIEU OF 2" X 4" PIECES. NOTE THAT THE SPECIAL REAR BLOCKING FOR TRAILERS EQUIPPED WITH THE ROLL-UP TYPE DOORS MAY ALSO BE USED IN TRAILERS EQUIPPED WITH HINGED DOORS.
11. IF THE TRAILER BEING LOADED DOES NOT HAVE A DOOR OPENING HEIGHT OF AT LEAST 7'-9", IT WILL BE NECESSARY TO LIMIT THE REARMOST LOAD UNIT TO ONE PALLET IN HEIGHT.

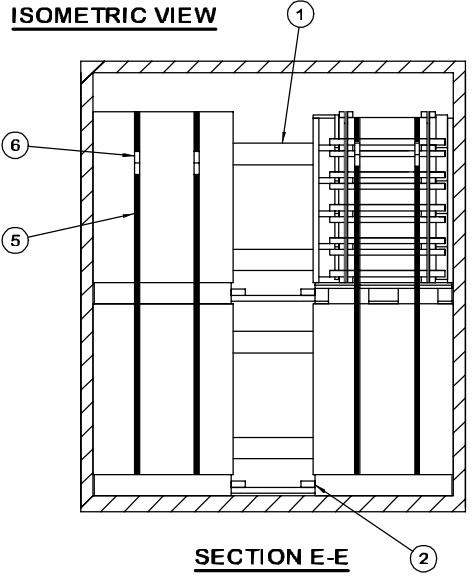
BILL OF MATERIAL		
LUMBER	LINEAR FEET	BOARD FEET
2" x 4"	31	21
2" x 6"	31	31
NAILS	NO. REQD	POUNDS
10d (3")	66	1
1-1/4" STEEL STRAPPING - -	41' REQD - - - - -	6 LBS
SEAL FOR 1-1/4" STRAPPING -	4 REQD - - - - -	1/4 LB

LOAD AS SHOWN

ITEM	QUANTITY	WEIGHT (APPROX)
PALLET UNIT - - - - -	29 - - - - -	41,528 LBS
DUNNAGE - - - - -	- - - - -	112 LBS
TOTAL WEIGHT - - - - -		42,640 LBS (APPROX)



ISOMETRIC VIEW



SECTION E-E

KEY NUMBERS

- ① FORWARD BLOCKING ASSEMBLY (1 REQD). SEE THE DETAIL AND THE "FORWARD BLOCKING CHART" ON PAGE 45. SEE GENERAL NOTE "J" ON PAGE 2.
- ② ANTI-SWAY BRACE (14 REQD). SEE THE DETAIL ON PAGE 45. 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 C" DETAIL ON PAGE 47. SEE SPECIAL NOTE 3 ON PAGE 15.
- ④ STACK UNITIZING STRAP, 1-1/4" X .035" OR .031" X 26'-0" LONG STEEL STRAPPING (8 REQD). INSTALL SO AS TO ENCIRCLE A TOP-LAYER PALLET UNIT AND THE UNIT DIRECTLY BELOW. POSITION STRAP SO AS TO EXTEND UNDER THE TOP DUNNAGE ASSEMBLIES OF THE UPPER PALLET UNITS. SEE SPECIAL NOTE 4 ON PAGE 15.
- ⑤ BUNDLING STRAP, 1-1/4" X .035" OR .031" X 35'-0" LONG STEEL STRAPPING (4 REQD). INSTALL SO AS TO ENCIRCLE TWO COMPLETE STACKS. SEE SPECIAL NOTE 5 ON PAGE 15.
- ⑥ SEAL FOR 1-1/4" STRAPPING (24 REQD, 2 PER STRAP). DOUBLE CRIMP EACH SEAL. SEE GENERAL NOTE "K" ON PAGE 2.

**FLAT DUNNAGE METHOD UNIT (BASIC HEIGHT)
28-UNIT LOAD IN A 40'-0" LONG BY 7'-8" WIDE HI-VOLUME VAN TRAILER**

SPECIAL NOTES:

1. A 28-UNIT LOAD IS SHOWN IN A 40'-0" LONG BY 7'-8" WIDE (INSIDE DIMENSION) CONVENTIONAL VAN TRAILER HAVING ROUNDED CORNERS. TRAILERS OF OTHER DIMENSIONS CAN BE USED.
2. THE PALLET UNIT SHOWN ON PAGE 14 IS THE FLAT DUNNAGE METHOD UNIT (BASIC HEIGHT) HAVING OVERALL DIMENSIONS OF 35-3/4" LONG BY 52-1/2" WIDE BY 49" HIGH AND WEIGHING APPROXIMATELY 1,452 POUNDS.
3. IF THE VOID AT THE REAR OF THE LOAD, BETWEEN THE PALLET UNITS AND THE REAR DOOR, 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 A" AS DETAILED ON PAGE 46. IF THE VOID AT THE REAR OF THE LOAD IS 9" OR GREATER, USE THE REAR BLOCKING ASSEMBLY, PIECE MARKED ③ ON PAGE 14. SEE SPECIAL NOTE 10.
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. UNITIZING STRAPS, PIECE MARKED ④, MUST BE INSTALLED PRIOR TO FINAL POSITIONING OF THE STACK.
5. IF A STACK IN THE LOAD UNIT AT THE REAR OF THE LOAD IS MORE THAN ONE UNIT HIGH, BUNDLING STRAPS, PIECE MARKED ⑤, MUST BE INSTALLED SO AS TO ENCIRCLE THE REAR MOST TWO STACKS IN EACH APPLICABLE ROW.
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 REAR MOST PALLET UNIT IN THE FIRST LAYER. PROVIDE LONGITUDINAL BRACING BY INSTALLING UNITIZING STRAPS, SHOWN AS PIECE MARKED ④.
7. REFER TO PAGE 43 FOR GUIDANCE IN SHIPMENT OF PARTIAL PALLET UNITS.
8. LEFTOVER CONTAINERS, IN AN AMOUNT NOT TO EXCEED FIVE, MAY BE SECURED TO THE TOP OF A FULL OR PARTIAL PALLET UNIT FOR SHIPMENT. REFER TO THE "PROCEDURES FOR SHIPMENT OF LEFTOVER CONTAINERS" ON PAGE 44 FOR GUIDANCE.
9. FOR SHIPMENT OF LESS THAN FULL LOADS, REFER TO THE APPLICABLE GUIDANCE ON PAGES 40 THROUGH 42.
10. TRAILERS EQUIPPED WITH ROLL-UP TYPE DOORS MAY BE USED, HOWEVER, SPECIAL REAR BLOCKING MUST BE INSTALLED. SEE THE NAILED-HEADER METHOD ON PAGES 12 AND 34 AND THE SPECIAL NOTES ON THE SUCCEEDING PAGES FOR GUIDANCE. NOTE THAT THE SPECIAL REAR BLOCKING FOR TRAILERS EQUIPPED WITH THE ROLL-UP TYPE DOORS MAY ALSO BE USED IN TRAILERS EQUIPPED WITH HINGED DOORS.
11. IF THE TRAILER BEING LOADED DOES NOT HAVE A DOOR OPENING HEIGHT OF AT LEAST 8'-3", IT WILL BE NECESSARY TO LIMIT THE REAR MOST LOAD UNIT TO ONE PALLET IN HEIGHT. IF THE SECOND LAYER AT THE REAR OF THE LOAD IS MOVED FORWARD, THE BUNDLING STRAPS, PIECE MARKED ⑤, WILL NOT BE REQUIRED.

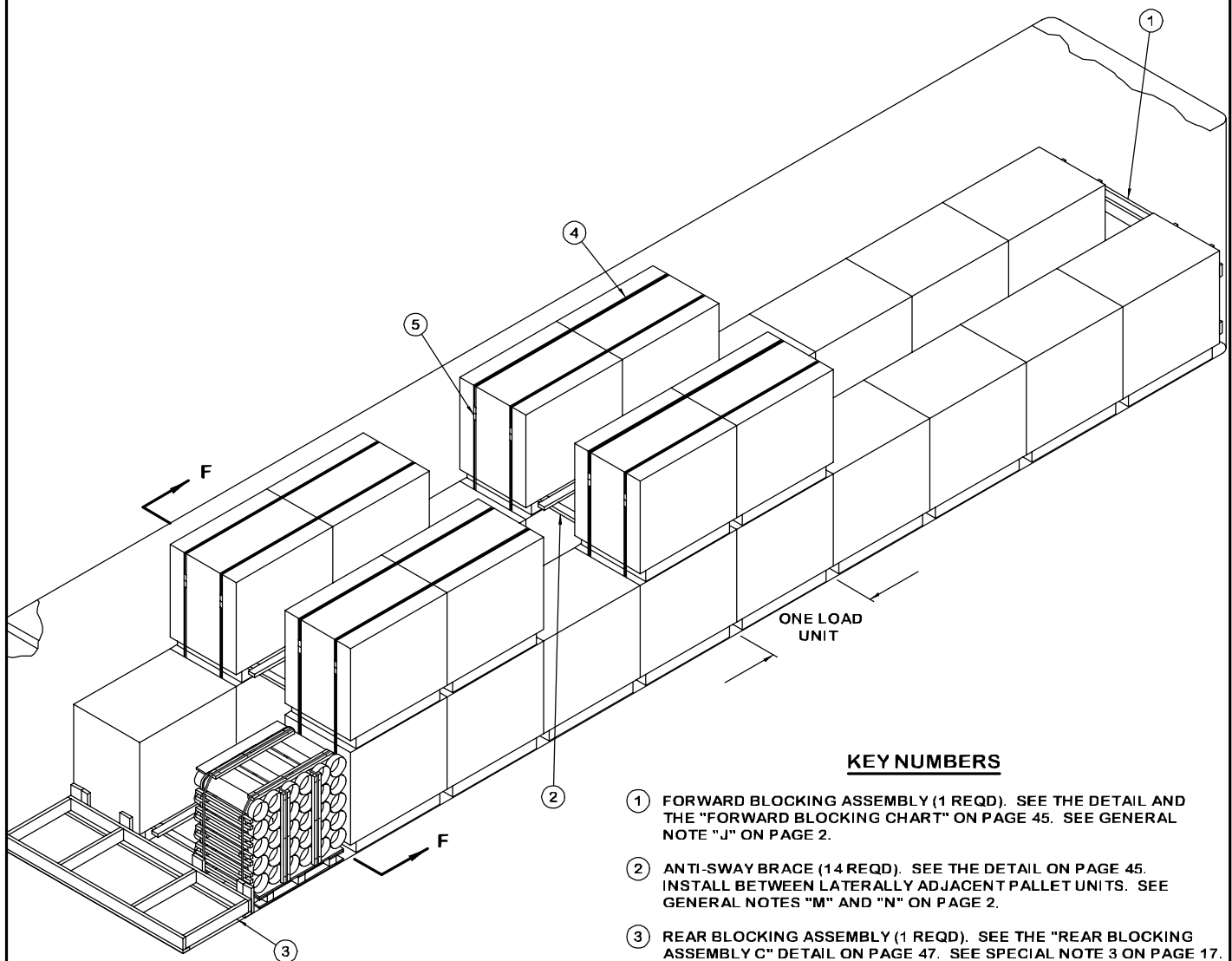
BILL OF MATERIAL

LUMBER	LINEAR FEET	BOARD FEET
2" x 4"	211	141
2" x 6"	92	92
NAILS	NO. REQD	POUNDS
10d (3")	296	4-3/4
1-1/4" STEEL STRAPPING - - 348' REQD - - - 49-3/4 LBS		
SEAL FOR 1-1/4" STRAPPING - 24 REQD - - - 1-1/4 LBS		

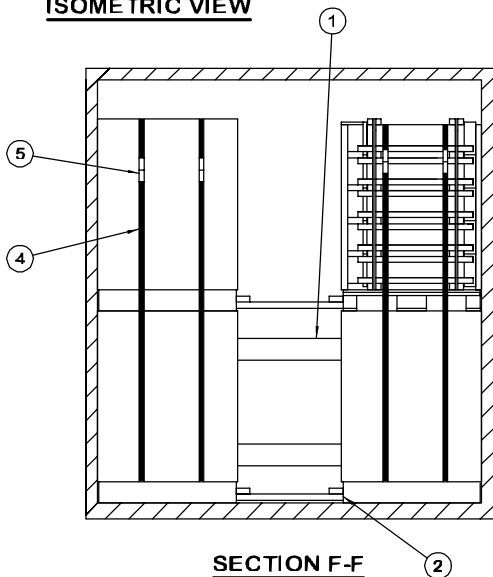
LOAD AS SHOWN

ITEM	QUANTITY	WEIGHT (APPROX)
PALLET UNIT - - - - -	28 - - - - -	40,656 LBS
DUNNAGE - - - - -	- - - - -	522 LBS
TOTAL WEIGHT - - - - -		41,178 LBS (APPROX)

**FLAT DUNNAGE METHOD UNIT (BASIC HEIGHT)
28-UNIT LOAD IN A 40'-0" LONG BY 7'-8" WIDE HI-VOLUME VAN TRAILER**



ISOMETRIC VIEW



SECTION F-F

KEY NUMBERS

- ① FORWARD BLOCKING ASSEMBLY (1 REQD). SEE THE DETAIL AND THE "FORWARD BLOCKING CHART" ON PAGE 45. SEE GENERAL NOTE "J" ON PAGE 2.
- ② ANTI-SWAY BRACE (14 REQD). SEE THE DETAIL ON PAGE 45. 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 C" DETAIL ON PAGE 47. SEE SPECIAL NOTE 3 ON PAGE 17.
- ④ BUNDLING STRAP, 1-1/4" X .035" OR .031" X 35'-0" LONG STEEL STRAPPING (8 REQD). INSTALL SO AS TO ENCIRCLE TWO COMPLETE STACKS. SEE SPECIAL NOTE 4 ON PAGE 17.
- ⑤ SEAL FOR 1-1/4" STRAPPING (16 REQD, 2 PER STRAP). DOUBLE CRIMP EACH SEAL. SEE GENERAL NOTE "K" ON PAGE 2.

SPECIAL NOTES:

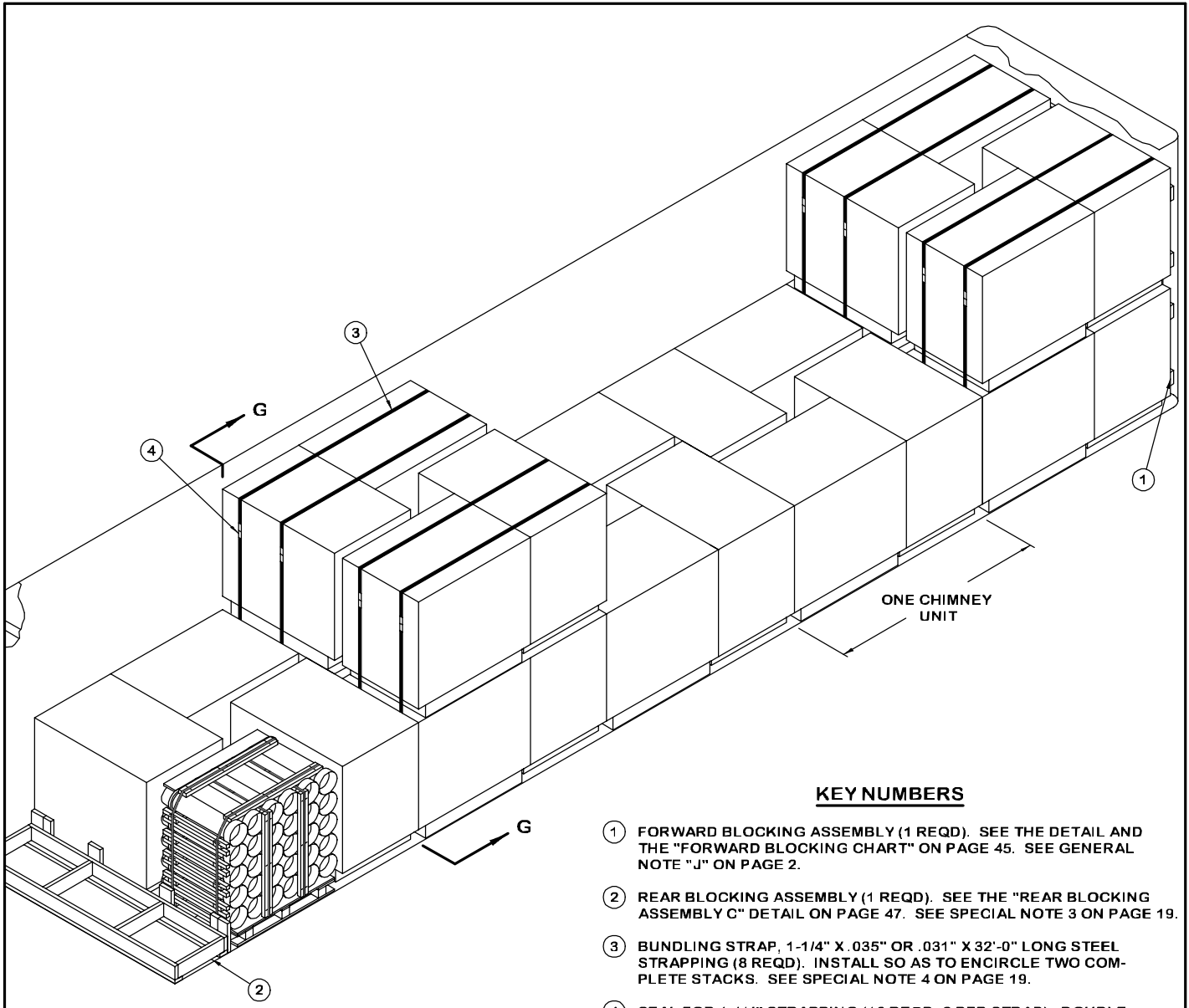
1. A 28-UNIT LOAD IS SHOWN IN A 48'-0" LONG BY 8'-2" WIDE (INSIDE DIMENSION) CONVENTIONAL VAN TRAILER HAVING ROUNDED CORNERS. TRAILERS OF OTHER DIMENSIONS CAN BE USED.
2. THE PALLET UNIT SHOWN ON PAGE 16 IS THE FLAT DUNNAGE METHOD UNIT (BASIC HEIGHT) HAVING OVERALL DIMENSIONS OF 35-3/4" LONG BY 52-1/2" WIDE BY 49" HIGH AND WEIGHING APPROXIMATELY 1,452 POUNDS.
3. IF THE VOID AT THE REAR OF THE LOAD, BETWEEN THE PALLET UNITS AND THE REAR DOOR, 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 A" AS DETAILED ON PAGE 46. IF THE VOID AT THE REAR OF THE LOAD IS 9" OR GREATER, USE THE REAR BLOCKING ASSEMBLY, PIECE MARKED ③ ON PAGE 14. SEE SPECIAL NOTE 10.
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. UNITIZING STRAPS, PIECE MARKED ④ ON PAGE 14, MUST BE INSTALLED PRIOR TO FINAL POSITIONING OF THE STACK.
5. IF A STACK IN THE LOAD UNIT AT THE REAR OF THE LOAD IS MORE THAN ONE UNIT HIGH, BUNDLING STRAPS, PIECE MARKED ④, MUST BE INSTALLED SO AS TO ENCIRCLE THE REAR MOST TWO STACKS IN EACH APPLICABLE ROW.
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 REAR MOST PALLET UNIT IN THE FIRST LAYER. PROVIDE LONGITUDINAL BRACING BY INSTALLING UNITIZING STRAPS, SHOWN AS PIECE MARKED ④ ON PAGE 14.
7. REFER TO PAGE 43 FOR GUIDANCE IN SHIPMENT OF PARTIAL PALLET UNITS.
8. LEFTOVER CONTAINERS, IN AN AMOUNT NOT TO EXCEED FIVE, MAY BE SECURED TO THE TOP OF A FULL OR PARTIAL PALLET UNIT FOR SHIPMENT. REFER TO THE "PROCEDURES FOR SHIPMENT OF LEFTOVER CONTAINERS" ON PAGE 44 FOR GUIDANCE.
9. FOR SHIPMENT OF LESS THAN FULL LOADS, REFER TO THE APPLICABLE GUIDANCE ON PAGES 40 THROUGH 42.
10. TRAILERS EQUIPPED WITH ROLL-UP TYPE DOORS MAY BE USED, HOWEVER, SPECIAL REAR BLOCKING MUST BE INSTALLED. SEE THE NAILED-HEADER METHOD ON PAGES 12 AND 34 AND THE SPECIAL NOTES ON THE SUCCEEDING PAGES FOR GUIDANCE. NOTE THAT THE SPECIAL REAR BLOCKING FOR TRAILERS EQUIPPED WITH THE ROLL-UP TYPE DOORS MAY ALSO BE USED IN TRAILERS EQUIPPED WITH HINGED DOORS.
11. IF THE TRAILER BEING LOADED DOES NOT HAVE A DOOR OPENING HEIGHT OF AT LEAST 8'-3", IT WILL BE NECESSARY TO LIMIT THE REAR MOST LOAD UNIT TO ONE PALLET IN HEIGHT.

BILL OF MATERIAL		
LUMBER	LINEAR FEET	BOARD FEET
2" x 4"	210	140
2" x 6"	64	64
NAILS	NO. REQD	POUNDS
10d (3")	266	4-1/4
1-1/4" STEEL STRAPPING - - 280' REQD - - - - - 40 LBS		
SEAL FOR 1-1/4" STRAPPING - 16 REQD - - - - - 3/4 LB		

LOAD AS SHOWN

ITEM	QUANTITY	WEIGHT (APPROX)
PALLET UNIT - - - - -	28 - - - - -	40,656 LBS
DUNNAGE - - - - -	- - - - -	453 LBS
TOTAL WEIGHT - - - - -		41,109 LBS (APPROX)

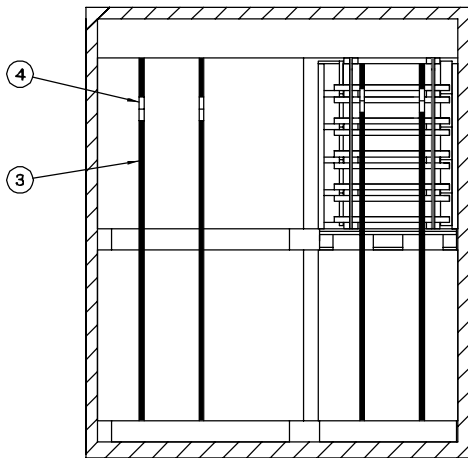
**FLAT DUNNAGE METHOD UNIT (BASIC HEIGHT)
28-UNIT LOAD IN A 48'-0" LONG BY 8'-2" WIDE HI-VOLUME VAN TRAILER**



ISOMETRIC VIEW

KEY NUMBERS

- ① FORWARD BLOCKING ASSEMBLY (1 REQD). SEE THE DETAIL AND THE "FORWARD BLOCKING CHART" ON PAGE 45. SEE GENERAL NOTE "J" ON PAGE 2.
- ② REAR BLOCKING ASSEMBLY (1 REQD). SEE THE "REAR BLOCKING ASSEMBLY C" DETAIL ON PAGE 47. SEE SPECIAL NOTE 3 ON PAGE 19.
- ③ BUNDLING STRAP, 1-1/4" X .035" OR .031" X 32'-0" LONG STEEL STRAPPING (8 REQD). INSTALL SO AS TO ENCIRCLE TWO COMPLETE STACKS. SEE SPECIAL NOTE 4 ON PAGE 19.
- ④ SEAL FOR 1-1/4" STRAPPING (16 REQD, 2 PER STRAP). DOUBLE CRIMP EACH SEAL. SEE GENERAL NOTE "K" ON PAGE 2.



SECTION G-G

**FLAT DUNNAGE METHOD UNIT (BASIC HEIGHT) (CHIMNEY PATTERN)
28-UNIT LOAD IN A 40'-0" LONG BY 7'-8" WIDE HI-VOLUME VAN TRAILER**

SPECIAL NOTES:

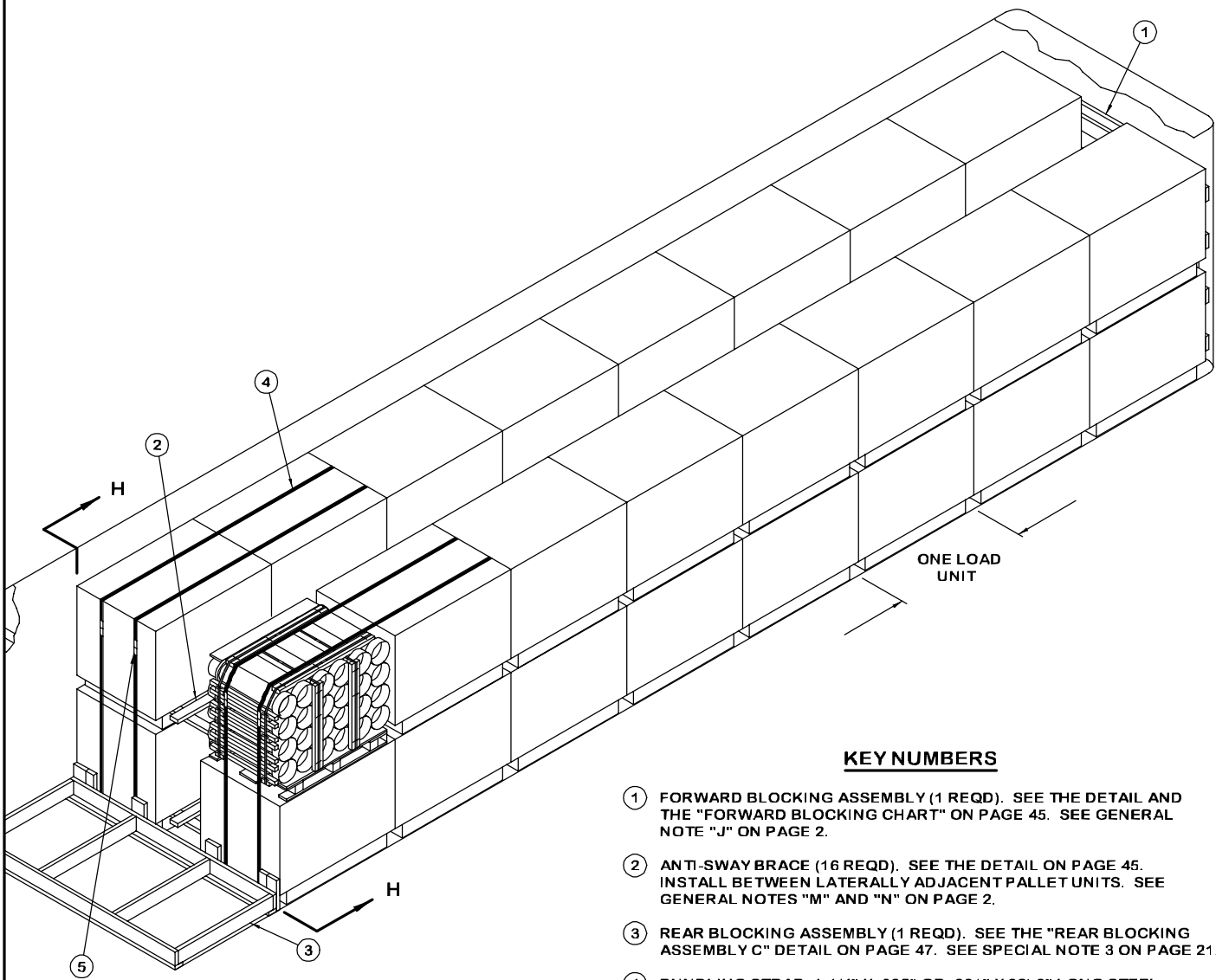
1. A 28-UNIT LOAD IS SHOWN IN A 40'-0" LONG BY 7'-8" WIDE (INSIDE DIMENSION) CONVENTIONAL VAN TRAILER HAVING ROUNDED CORNERS. TRAILERS OF OTHER LENGTHS CAN BE USED, BUT TRAILERS WIDER THAN 7'-10" CANNOT BE USED FOR THIS LOAD CONFIGURATION.
2. THE PALLET UNIT SHOWN ON PAGE 18 IS THE FLAT DUNNAGE METHOD UNIT (BASIC HEIGHT) HAVING OVERALL DIMENSIONS OF 35-3/4" LONG BY 52-1/2" WIDE BY 49" HIGH AND WEIGHING APPROXIMATELY 1,452 POUNDS.
3. IF THE VOID AT THE REAR OF THE LOAD, BETWEEN THE PALLET UNITS AND THE REAR DOOR, 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 A" AS DETAILED ON PAGE 46. IF THE VOID AT THE REAR OF THE LOAD IS 9" OR GREATER, USE THE REAR BLOCKING ASSEMBLY, PIECE MARKED ② ON PAGE 18. SEE SPECIAL NOTE 10.
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. UNITIZING STRAPS, SIMILAR TO PIECE MARKED ④ ON PAGE 14, MUST BE INSTALLED PRIOR TO FINAL POSITIONING OF THE STACK.
5. IF A STACK IN THE LOAD UNIT AT THE REAR OF THE LOAD IS MORE THAN ONE UNIT HIGH, BUNDLING STRAPS, PIECE MARKED ③, MUST BE INSTALLED SO AS TO ENCIRCLE THE REARMOST TWO STACKS IN EACH APPLICABLE ROW.
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 PALLET UNIT IN THE FIRST LAYER. PROVIDE LONGITUDINAL BRACING BY INSTALLING UNITIZING STRAPS, SHOWN AS PIECE MARKED ③.
7. REFER TO PAGE 43 FOR GUIDANCE IN SHIPMENT OF PARTIAL PALLET UNITS.
8. LEFTOVER CONTAINERS, IN AN AMOUNT NOT TO EXCEED FIVE, MAY BE SECURED TO THE TOP OF A FULL OR PARTIAL PALLET UNIT FOR SHIPMENT. REFER TO THE "PROCEDURES FOR SHIPMENT OF LEFTOVER CONTAINERS" ON PAGE 44 FOR GUIDANCE.
9. FOR SHIPMENT OF LESS THAN FULL LOADS, REFER TO THE APPLICABLE GUIDANCE ON PAGES 40 THROUGH 42.
10. TRAILERS EQUIPPED WITH ROLL-UP TYPE DOORS MAY BE USED, HOWEVER, SPECIAL REAR BLOCKING MUST BE INSTALLED. SEE THE NAILED-HEADER METHOD ON PAGES 12 AND 34 AND THE SPECIAL NOTES ON THE SUCCEEDING PAGES FOR GUIDANCE. NOTE THAT THE SPECIAL REAR BLOCKING FOR TRAILERS EQUIPPED WITH THE ROLL-UP TYPE DOORS MAY ALSO BE USED IN TRAILERS EQUIPPED WITH HINGED DOORS.
11. IF THE TRAILER BEING LOADED DOES NOT HAVE A DOOR OPENING HEIGHT OF AT LEAST 8'-3", IT WILL BE NECESSARY TO LIMIT THE REARMOST LOAD UNIT TO ONE PALLET IN HEIGHT.

BILL OF MATERIAL		
LUMBER	LINEAR FEET	BOARD FEET
2" x 4"	49	33
2" x 6"	85	85
NAILS	NO. REQD	POUNDS
10d (3")	128	2
1-1/4" STEEL STRAPPING - - 256' REQD - - - 36-3/4 LBS		
SEAL FOR 1-1/4" STRAPPING - 16 REQD - - - 3/4 LB		

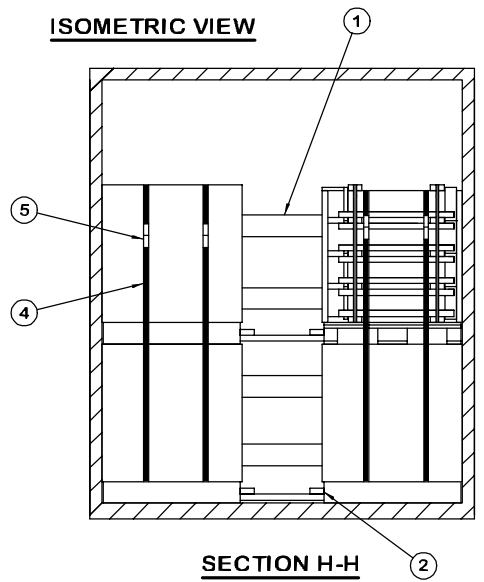
LOAD AS SHOWN

ITEM	QUANTITY	WEIGHT (APPROX)
PALLET UNIT - - - - -	28 - - - - -	40,656 LBS
DUNNAGE - - - - -	- - - - -	276 LBS
TOTAL WEIGHT - - - - -		40,932 LBS (APPROX)

**FLAT DUNNAGE METHOD UNIT (BASIC HEIGHT) (CHIMNEY PATTERN)
28-UNIT LOAD IN A 40'-0" LONG BY 7'-8" WIDE HI-VOLUME VAN TRAILER**



ISOMETRIC VIEW



SECTION H-H

KEY NUMBERS

- ① FORWARD BLOCKING ASSEMBLY (1 REQD). SEE THE DETAIL AND THE "FORWARD BLOCKING CHART" ON PAGE 45. SEE GENERAL NOTE "J" ON PAGE 2.
- ② ANTI-SWAY BRACE (16 REQD). SEE THE DETAIL ON PAGE 45. 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 C" DETAIL ON PAGE 47. SEE SPECIAL NOTE 3 ON PAGE 21.
- ④ BUNDLING STRAP, 1-1/4" X .035" OR .031" X 32'-0" LONG STEEL STRAPPING (4 REQD). INSTALL SO AS TO ENCIRCLE TWO COMPLETE STACKS. SEE SPECIAL NOTE 4 ON PAGE 21.
- ⑤ SEAL FOR 1-1/4" STRAPPING (8 REQD, 2 PER STRAP). DOUBLE CRIMP EACH SEAL. SEE GENERAL NOTE "K" ON PAGE 2.

SPECIAL NOTES:

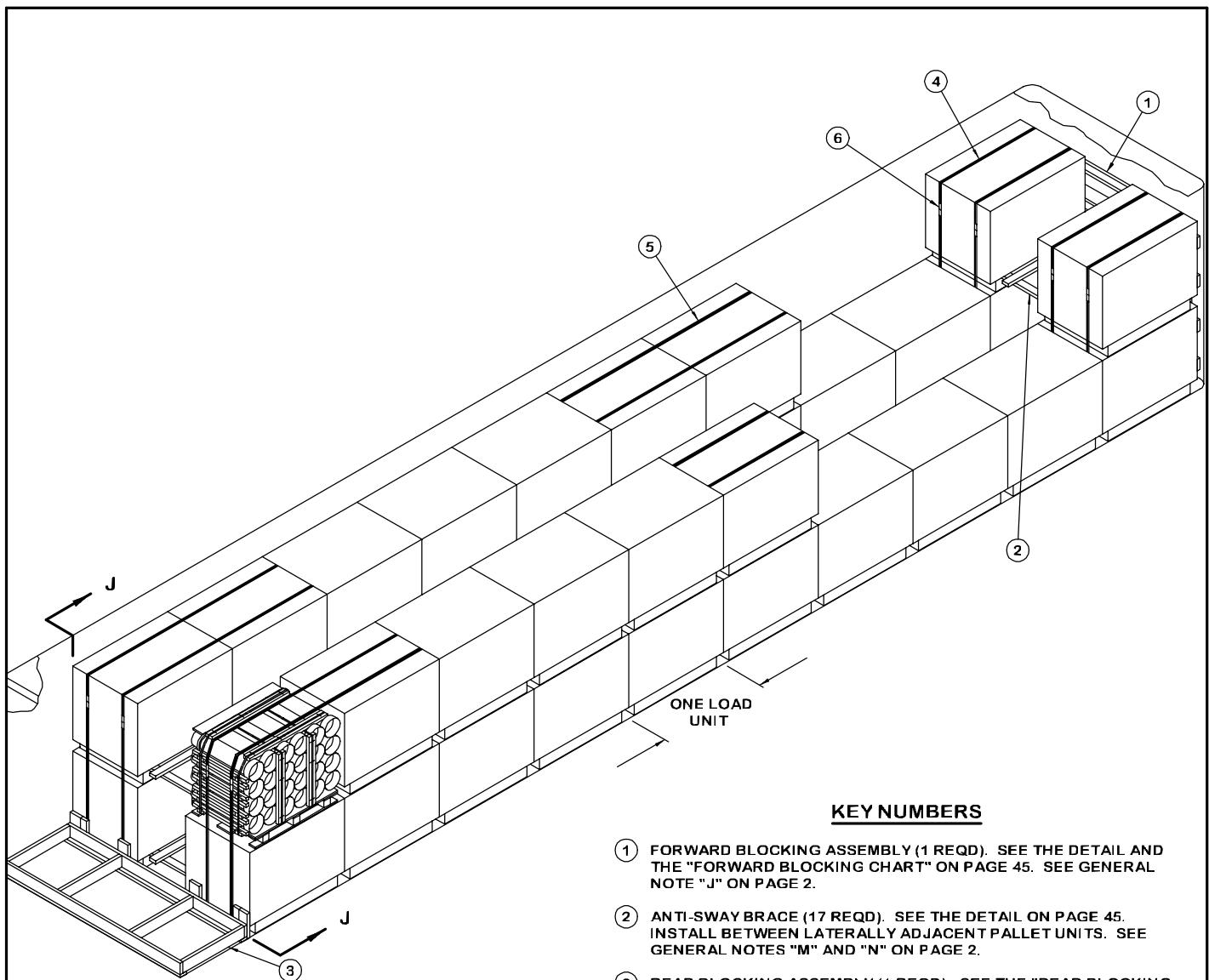
1. A 32-UNIT LOAD IS SHOWN IN A 40'-0" LONG BY 7'-8" WIDE (INSIDE DIMENSION) CONVENTIONAL VAN TRAILER HAVING ROUNDED CORNERS. TRAILERS OF OTHER DIMENSIONS CAN BE USED.
2. THE PALLET UNIT SHOWN ON PAGE 20 IS THE FLAT DUNNAGE METHOD UNIT (DECREASED HEIGHT) HAVING OVERALL DIMENSIONS OF 35-3/4" LONG BY 52-1/2" WIDE BY 40-5/8" HIGH AND WEIGHING APPROXIMATELY 1,195 POUNDS.
3. IF THE VOID AT THE REAR OF THE LOAD, BETWEEN THE PALLET UNITS AND THE REAR DOOR, 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 A" AS DETAILED ON PAGE 46. IF THE VOID AT THE REAR OF THE LOAD IS 9" OR GREATER, USE THE REAR BLOCKING ASSEMBLY, PIECE MARKED ③ ON PAGE 20. SEE SPECIAL NOTE 10.
4. IF A STACK IN THE LOAD UNIT AT THE REAR OF THE LOAD IS MORE THAN ONE UNIT HIGH, BUNDLING STRAPS, PIECE MARKED ④, MUST BE INSTALLED SO AS TO ENCIRCLE THE REARMOST TWO STACKS IN EACH APPLICABLE ROW.
5. IF THE SECOND LAYER OF THE LOAD IS NOT COMPLETE, 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. UNITIZING STRAPS, SIMILAR TO PIECE MARKED ④ ON PAGE 10, MUST BE INSTALLED PRIOR TO FINAL POSITIONING OF THE STACK.
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 PALLET UNIT IN THE FIRST LAYER. PROVIDE LONGITUDINAL BRACING BY INSTALLING UNITIZING STRAPS, SHOWN AS PIECE MARKED ④ ON PAGE 10.
7. REFER TO PAGE 43 FOR GUIDANCE IN SHIPMENT OF PARTIAL PALLET UNITS.
8. LEFTOVER CONTAINERS, IN AN AMOUNT NOT TO EXCEED FIVE, MAY BE SECURED TO THE TOP OF A FULL OR PARTIAL PALLET UNIT FOR SHIPMENT. REFER TO THE "PROCEDURES FOR SHIPMENT OF LEFTOVER CONTAINERS" ON PAGE 44 FOR GUIDANCE.
9. FOR SHIPMENT OF LESS THAN FULL LOADS, REFER TO THE APPLICABLE GUIDANCE ON PAGES 40 THROUGH 42.
10. TRAILERS EQUIPPED WITH ROLL-UP TYPE DOORS MAY BE USED, HOWEVER, SPECIAL REAR BLOCKING MUST BE INSTALLED. SEE THE NAILED-HEADER METHOD ON PAGES 12 AND 34 AND THE SPECIAL NOTES ON THE SUCCEEDING PAGES FOR GUIDANCE. NOTE THAT THE SPECIAL REAR BLOCKING FOR TRAILERS EQUIPPED WITH THE ROLL-UP TYPE DOORS MAY ALSO BE USED IN TRAILERS EQUIPPED WITH HINGED DOORS.
11. IF A TRAILER FURNISHED FOR LOADING HAS A SQUARE FRONT AND IS AT LEAST 39'-6" LONG (INSIDE DIMENSION), AN ADDITIONAL LOAD UNIT MAY BE TRANSPORTED FOR A TOTAL NET WEIGHT OF 43,020 POUNDS.

BILL OF MATERIAL		
LUMBER	LINEAR FEET	BOARD FEET
1" X 4"	2	1
2" X 3"	2	1
2" X 4"	248	165
2" X 6"	86	86
NAILS	NO. REQD	POUNDS
6d (2")	8	NIL
10d (3")	326	5-1/4
1-1/4" STEEL STRAPPING - - 120' REQD - - - 17-1/4 LBS		
SEAL FOR 1-1/4" STRAPPING - 8 REQD - - - 1/2 LB		

LOAD AS SHOWN

ITEM	QUANTITY	WEIGHT (APPROX)
PALLET UNIT - - - - -	36 - - - - -	41,868 LBS
DUNNAGE - - - - -	- - - - -	529 LBS
TOTAL WEIGHT - - - - -		42,397 LBS (APPROX)

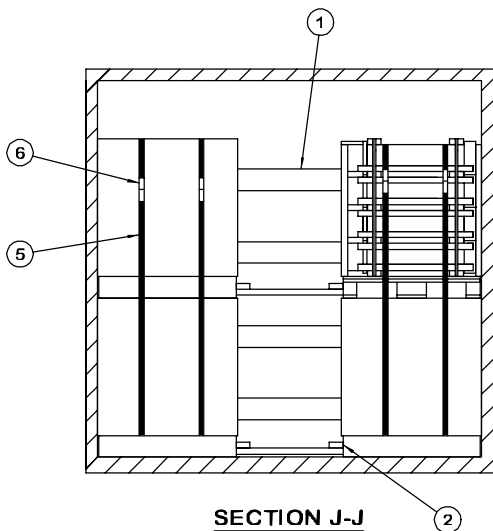
**FLAT DUNNAGE METHOD UNIT (DECREASED HEIGHT)
32-UNIT LOAD IN A 40'-0" LONG BY 7'-8" WIDE CONVENTIONAL VAN TRAILER**



ISOMETRIC VIEW

KEY NUMBERS

- ① FORWARD BLOCKING ASSEMBLY (1 REQD). SEE THE DETAIL AND THE "FORWARD BLOCKING CHART" ON PAGE 45. SEE GENERAL NOTE "J" ON PAGE 2.
- ② ANTI-SWAY BRACE (17 REQD). SEE THE DETAIL ON PAGE 45. 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 C" DETAIL ON PAGE 47. SEE SPECIAL NOTE 3 ON PAGE 23.
- ④ STACK UNITIZING STRAP, 1-1/4" X .035" OR .031" X 23'-6" LONG STEEL STRAPPING (6 REQD). INSTALL SO AS TO ENCIRCLE A TOP-LAYER PALLET UNIT AND THE UNIT DIRECTLY BELOW. SEE SPECIAL NOTE 5 ON PAGE 23.
- ⑤ BUNDLING STRAP, 1-1/4" X .035" OR .031" X 32'-0" LONG STEEL STRAPPING (6 REQD). INSTALL SO AS TO ENCIRCLE TWO COMPLETE STACKS. SEE SPECIAL NOTE 4 ON PAGE 23.
- ⑥ SEAL FOR 1-1/4" STRAPPING (24 REQD, 2 PER STRAP). DOUBLE CRIMP EACH SEAL. SEE GENERAL NOTE "K" ON PAGE 2.



SECTION J-J

**FLAT DUUNAGE METHOD UNIT (DECREASED HEIGHT)
35-UNIT LOAD IN A 48'-0" LONG BY 8'-2" WIDE CONVENTIONAL VAN TRAILER**

SPECIAL NOTES:

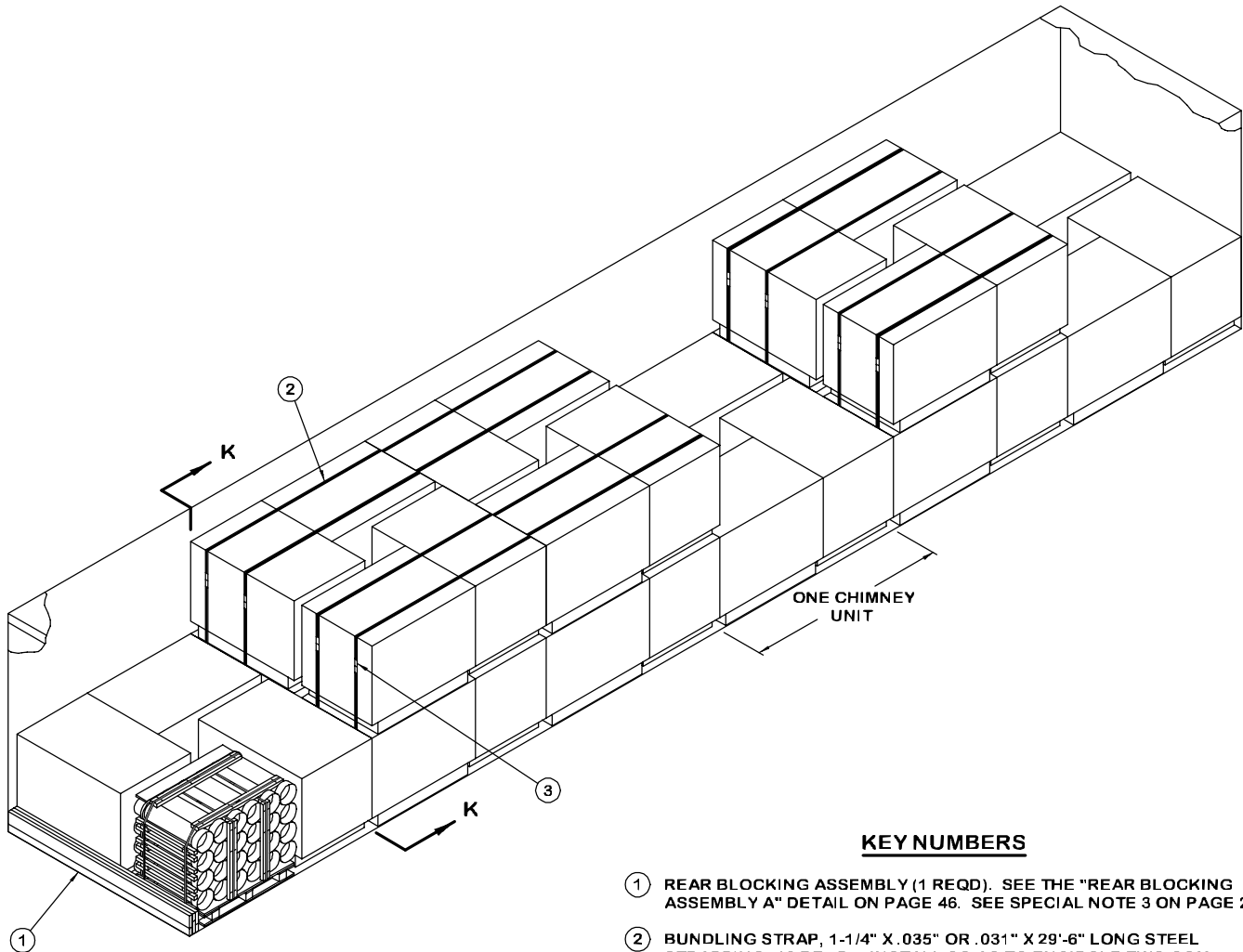
1. A 35-UNIT LOAD IS SHOWN IN A 48'-0" LONG BY 8'-2" WIDE (INSIDE DIMENSION) CONVENTIONAL VAN TRAILER HAVING ROUNDED CORNERS. TRAILERS OF OTHER DIMENSIONS CAN BE USED.
2. THE PALLET UNIT SHOWN ON PAGE 22 IS THE FLAT DUNNAGE METHOD UNIT (DECREASED HEIGHT) HAVING OVERALL DIMENSIONS OF 35-3/4" LONG BY 52-1/2" WIDE BY 40-5/8" HIGH AND WEIGHING APPROXIMATELY 1,195 POUNDS.
3. IF THE VOID AT THE REAR OF THE LOAD, BETWEEN THE PALLET UNITS AND THE REAR DOOR, 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 A" AS DETAILED ON PAGE 46. IF THE VOID AT THE REAR OF THE LOAD IS 9" OR GREATER, USE THE REAR BLOCKING ASSEMBLY, PIECE MARKED (3) ON PAGE 22. SEE SPECIAL NOTE 10.
4. IF A STACK IN THE LOAD UNIT AT THE REAR OF THE LOAD IS MORE THAN ONE UNIT HIGH, BUNDLING STRAPS, PIECE MARKED (5), MUST BE INSTALLED SO AS TO ENCIRCLE THE REAR MOST TWO STACKS IN EACH APPLICABLE ROW.
5. IF THE SECOND LAYER OF THE LOAD IS NOT COMPLETE, 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. UNITIZING STRAPS, PIECE MARKED (4), MUST BE INSTALLED PRIOR TO FINAL POSITIONING OF THE STACK.
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 REAR MOST PALLET UNIT IN THE FIRST LAYER. PROVIDE LONGITUDINAL BRACING BY INSTALLING UNITIZING STRAPS, PIECE MARKED (4).
7. REFER TO PAGE 43 FOR GUIDANCE IN SHIPMENT OF PARTIAL PALLET UNITS.
8. LEFTOVER CONTAINERS, IN AN AMOUNT NOT TO EXCEED FIVE, MAY BE SECURED TO THE TOP OF A FULL OR PARTIAL PALLET UNIT FOR SHIPMENT. REFER TO THE "PROCEDURES FOR SHIPMENT OF LEFTOVER CONTAINERS" ON PAGE 44 FOR GUIDANCE.
9. FOR SHIPMENT OF LESS THAN FULL LOADS, REFER TO THE APPLICABLE GUIDANCE ON PAGES 40 THROUGH 42.
10. TRAILERS EQUIPPED WITH ROLL-UP TYPE DOORS MAY BE USED, HOWEVER, SPECIAL REAR BLOCKING MUST BE INSTALLED. SEE THE NAILED-HEADER METHOD ON PAGES 12 AND 34 AND THE SPECIAL NOTES ON THE SUCCEEDING PAGES FOR GUIDANCE. NOTE THAT THE SPECIAL REAR BLOCKING FOR TRAILERS EQUIPPED WITH THE 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"	232	155
2" x 6"	93	93
NAILS	NO. REQD	POUNDS
10d (3")	334	5-1/4
1-1/4" STEEL STRAPPING - - 333' REQD - - - 47-3/4 LBS		
SEAL FOR 1-1/4" STRAPPING - 24 REQD - - - 1-1/4 LBS		

LOAD AS SHOWN

ITEM	QUANTITY	WEIGHT (APPROX)
PALLET UNIT - - - - -	35 - - - - -	41,825 LBS
DUNNAGE - - - - -	- - - - -	550 LBS
TOTAL WEIGHT - - - - -		42,375 LBS (APPROX)

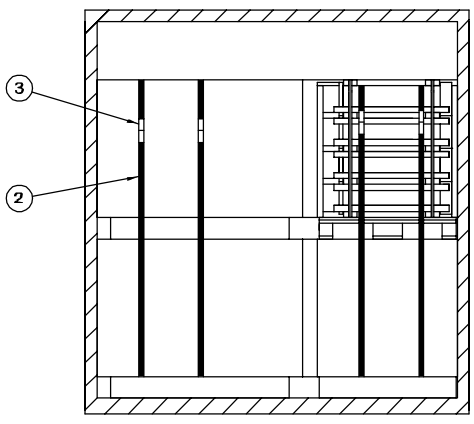
**FLAT DUNNAGE METHOD UNIT (DECREASED HEIGHT)
35-UNIT LOAD IN A 48'-0" LONG BY 8'-2" WIDE CONVENTIONAL VAN TRAILER**



ISOMETRIC VIEW

KEY NUMBERS

- ① REAR BLOCKING ASSEMBLY (1 REQD). SEE THE "REAR BLOCKING ASSEMBLY A" DETAIL ON PAGE 46. SEE SPECIAL NOTE 3 ON PAGE 25.
- ② BUNDLING STRAP, 1-1/4" X .035" OR .031" X 29'-6" LONG STEEL STRAPPING (12 REQD). INSTALL SO AS TO ENCIRCLE TWO COMPLETE STACKS. SEE SPECIAL NOTE 4 ON PAGE 25.
- ③ SEAL FOR 1-1/4" STRAPPING (24 REQD, 2 PER STRAP). DOUBLE CRIMP EACH SEAL. SEE GENERAL NOTE "K" ON PAGE 2.



SECTION K-K

**FLAT DUNNAGE METHOD UNIT (DECREASED HEIGHT) (CHIMNEY PATTERN)
36-UNIT LOAD IN A 45'-0" LONG BY 7'-8" WIDE CONVENTIONAL VAN TRAILER**

SPECIAL NOTES:

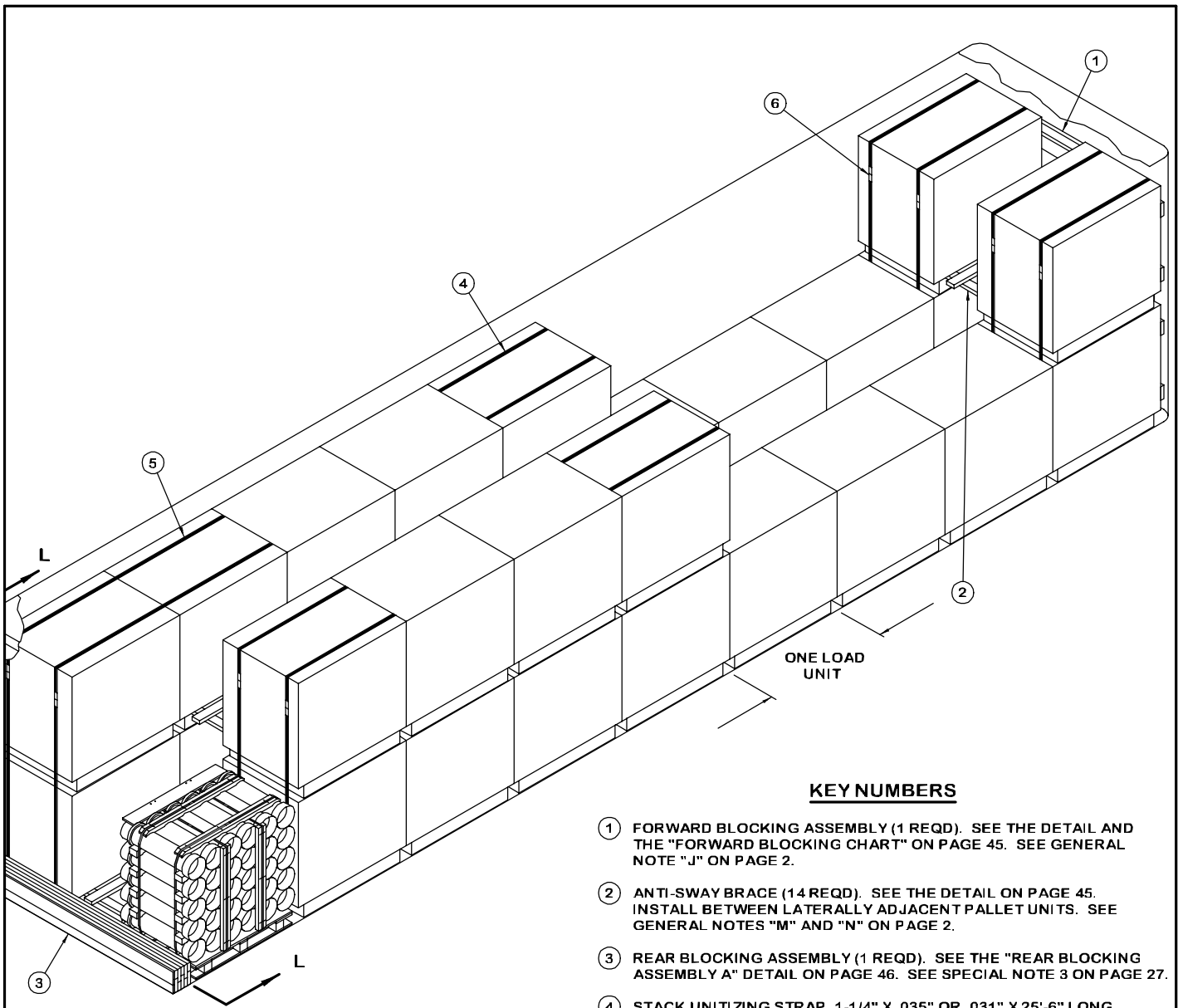
1. A 36-UNIT LOAD IS SHOWN IN A 45'-0" LONG BY 7'-8" WIDE (INSIDE DIMENSION) CONVENTIONAL VAN TRAILER HAVING SQUARE CORNERS. TRAILERS OF OTHER LENGTHS CAN BE USED, BUT TRAILERS WIDER THAN 7'-10" CANNOT BE USED FOR THIS LOAD CONFIGURATION.
2. THE PALLET UNIT SHOWN ON PAGE 24 IS THE FLAT DUNNAGE METHOD UNIT (DECREASED HEIGHT) HAVING OVERALL DIMENSIONS OF 35-3/4" LONG BY 52-1/2" WIDE BY 40-5/8" HIGH AND WEIGHING APPROXIMATELY 1,195 POUNDS.
3. IF THE VOID AT THE REAR OF THE LOAD, BETWEEN THE PALLET UNITS AND THE REAR DOOR, 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 A", PIECE MARKED ① ON PAGE 24. IF THE VOID AT THE REAR OF THE LOAD IS 9" OR GREATER, USE "REAR BLOCKING ASSEMBLY D", AS DETAILED ON PAGE 49. SEE SPECIAL NOTE 10.
4. IF A STACK IN THE LOAD UNIT AT THE REAR OF THE LOAD IS MORE THAN ONE UNIT HIGH, BUNDLING STRAPS, PIECE MARKED ②, MUST BE INSTALLED SO AS TO ENCIRCLE THE REAR MOST TWO STACKS IN EACH APPLICABLE ROW.
5. 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. UNITIZING STRAPS, SIMILAR TO PIECE MARKED ④ ON PAGE 22, MUST BE INSTALLED PRIOR TO FINAL POSITIONING OF THE STACK.
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 REAR MOST PALLET UNIT IN THE FIRST LAYER. PROVIDE LONGITUDINAL BRACING BY INSTALLING UNITIZING STRAPS, SHOWN AS PIECE MARKED ④ ON PAGE 22.
7. REFER TO PAGE 43 FOR GUIDANCE IN SHIPMENT OF PARTIAL PALLET UNITS.
8. LEFTOVER CONTAINERS, IN AN AMOUNT NOT TO EXCEED FIVE, MAY BE SECURED TO THE TOP OF A FULL OR PARTIAL PALLET UNIT FOR SHIPMENT. REFER TO THE "PROCEDURES FOR SHIPMENT OF LEFTOVER CONTAINERS" ON PAGE 44 FOR GUIDANCE.
9. FOR SHIPMENT OF LESS THAN FULL LOADS, REFER TO THE APPLICABLE GUIDANCE ON PAGES 40 THROUGH 42.
10. TRAILERS EQUIPPED WITH ROLL-UP TYPE DOORS MAY BE USED, HOWEVER, SPECIAL REAR BLOCKING MUST BE INSTALLED. SEE THE NAILED-HEADER METHOD ON PAGES 12 AND 34 AND THE SPECIAL NOTES ON THE SUCCEEDING PAGES FOR GUIDANCE. NOTE THAT THE SPECIAL REAR BLOCKING FOR TRAILERS EQUIPPED WITH THE 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"	23	16
2" x 6"	23	23
NAILS	NO. REQD	POUNDS
10d (3")	32	1/2
1-1/4" STEEL STRAPPING - - 354' REQD - - - 50-3/4 LBS		
SEAL FOR 1-1/4" STRAPPING - 24 REQD - - - 1-1/4 LBS		

LOAD AS SHOWN

ITEM	QUANTITY	WEIGHT (APPROX)
PALLET UNIT - - - - -	36 - - - - -	43,020 LBS
DUNNAGE - - - - -	- - - - -	131 LBS
TOTAL WEIGHT - - - - -		43,151 LBS (APPROX)

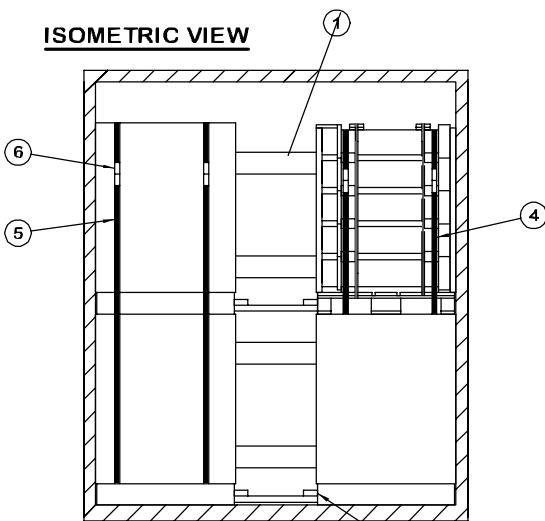
**FLAT DUNNAGE METHOD UNIT (DECREASED HEIGHT) (CHIMNEY PATTERN)
36-UNIT LOAD IN A 45'-0" LONG BY 7'-8" WIDE CONVENTIONAL VAN TRAILER**



KEY NUMBERS

- ① FORWARD BLOCKING ASSEMBLY (1 REQD). SEE THE DETAIL AND THE "FORWARD BLOCKING CHART" ON PAGE 45. SEE GENERAL NOTE "J" ON PAGE 2.
- ② ANTI-SWAY BRACE (14 REQD). SEE THE DETAIL ON PAGE 45. 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 46. SEE SPECIAL NOTE 3 ON PAGE 27.
- ④ STACK UNITIZING STRAP, 1-1/4" X .035" OR .031" X 25'-6" LONG STEEL STRAPPING (10 REQD). INSTALL SO AS TO ENCIRCLE A TOP-LAYER PALLET UNIT AND THE UNIT DIRECTLY BELOW. SEE SPECIAL NOTE 4 ON PAGE 27.
- ⑤ BUNDLING STRAP, 1-1/4" X .035" OR .031" X 34'-0" LONG STEEL STRAPPING (2 REQD). INSTALL SO AS TO ENCIRCLE TWO COMPLETE STACKS. SEE SPECIAL NOTE 5 ON PAGE 27.
- ⑥ SEAL FOR 1-1/4" STRAPPING (24 REQD, 2 PER STRAP). DOUBLE CRIMP EACH SEAL. SEE GENERAL NOTE "K" ON PAGE 2.

ISOMETRIC VIEW



SECTION L-L

**ROUTED DUNNAGE METHOD UNIT (BASIC HEIGHT)
29-UNIT LOAD IN A 40'-0" LONG BY 7'-8" HI-VOLUME VAN TRAILER**

SPECIAL NOTES:

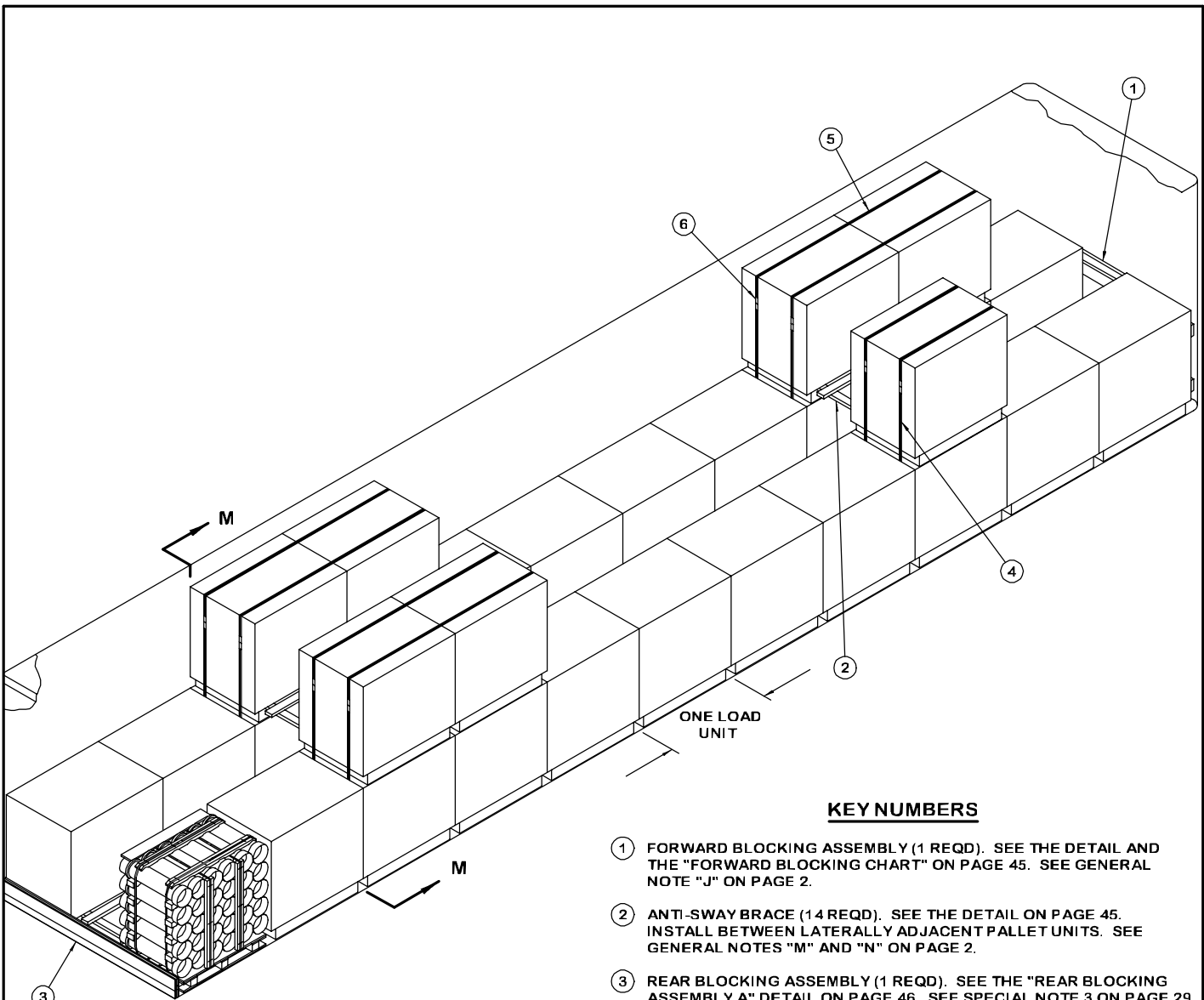
1. A 29-UNIT LOAD IS SHOWN IN A 40'-0" LONG BY 7'-8" WIDE (INSIDE DIMENSION) CONVENTIONAL VAN TRAILER HAVING ROUNDED CORNERS. TRAILERS OF OTHER DIMENSIONS CAN BE USED.
2. THE PALLET UNIT SHOWN ON PAGE 26 IS THE ROUTED DUNNAGE METHOD UNIT (BASIC HEIGHT) HAVING OVERALL DIMENSIONS OF 35-3/4" LONG BY 51" WIDE BY 49" HIGH AND WEIGHING APPROXIMATELY 1,429 POUNDS.
3. IF THE VOID AT THE REAR OF THE LOAD, BETWEEN THE PALLET UNITS AND THE REAR DOOR, 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 A", PIECE MARKED ③ ON PAGE 26. IF THE VOID AT THE REAR OF THE LOAD IS 9" OR GREATER, USE "REAR BLOCKING ASSEMBLY C", AS DETAILED ON PAGE 47. SEE SPECIAL NOTE 10.
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. UNITIZING STRAPS, PIECE MARKED ④, MUST BE INSTALLED PRIOR TO FINAL POSITIONING OF THE STACK.
5. IF A STACK IN THE LOAD UNIT AT THE REAR OF THE LOAD IS MORE THAN ONE UNIT HIGH, AS IN THE CASE WITH THE LEFT HAND ROW IN THE DEPICTED LOAD, BUNDLING STRAPS, PIECE MARKED ⑤, MUST BE INSTALLED SO AS TO ENCIRCLE THE REARMOST TWO STACKS IN EACH APPLICABLE ROW.
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 PALLET UNIT IN THE FIRST LAYER. PROVIDE LONGITUDINAL BRACING BY INSTALLING UNITIZING STRAPS, SHOWN AS PIECE MARKED ④.
7. REFER TO PAGE 43 FOR GUIDANCE IN SHIPMENT OF PARTIAL PALLET UNITS.
8. LEFTOVER CONTAINERS, IN AN AMOUNT NOT TO EXCEED FIVE, MAY BE SECURED TO THE TOP OF A FULL OR PARTIAL PALLET UNIT FOR SHIPMENT. REFER TO THE "PROCEDURES FOR SHIPMENT OF LEFTOVER CONTAINERS" ON PAGE 44 FOR GUIDANCE.
9. FOR SHIPMENT OF LESS THAN FULL LOADS, REFER TO THE APPLICABLE GUIDANCE ON PAGES 40 THROUGH 42.
10. TRAILERS EQUIPPED WITH ROLL-UP TYPE DOORS MAY BE USED, HOWEVER, SPECIAL REAR BLOCKING MUST BE INSTALLED. SEE THE NAILED-HEADER METHOD ON PAGES 12 AND 34 AND THE SPECIAL NOTES ON THE SUCCEEDING PAGES FOR GUIDANCE. NOTE THAT THE SPECIAL REAR BLOCKING FOR TRAILERS EQUIPPED WITH THE ROLL-UP TYPE DOORS MAY ALSO BE USED IN TRAILERS EQUIPPED WITH HINGED DOORS.
11. IF THE TRAILER BEING LOADED DOES NOT HAVE A DOOR OPENING HEIGHT OF AT LEAST 8'-3", IT WILL BE NECESSARY TO LIMIT THE REARMOST LOAD UNIT TO ONE PALLET IN HEIGHT. IF THE SECOND LAYER AT THE REAR OF THE LOAD IS MOVED FORWARD, THE BUNDLING STRAPS, PIECE MARKED ⑤, WILL NOT BE REQUIRED.

BILL OF MATERIAL		
LUMBER	LINEAR FEET	BOARD FEET
2" x 4"	239	160
2" x 6"	103	103
NAILS	NO. REQD	POUNDS
10d (3")	312	5
1-1/4" STEEL STRAPPING - - 323' REQD - - - 46-1/4 LBS		
SEAL FOR 1-1/4" STRAPPING - 24 REQD - - - 1-1/4 LBS		

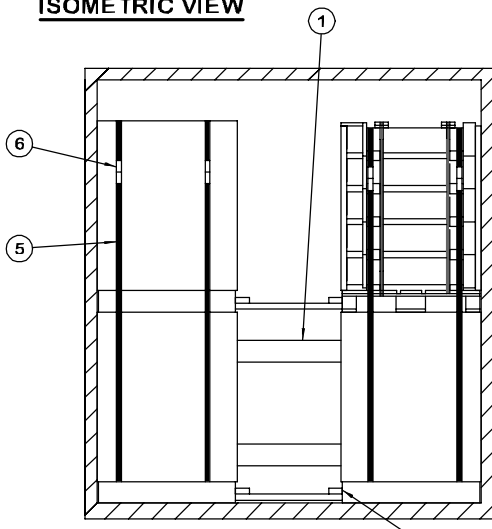
LOAD AS SHOWN

ITEM	QUANTITY	WEIGHT (APPROX)
PALLET UNIT - - - - -	29 - - - - -	41, 441 LBS
DUNNAGE - - - - -	- - - - -	579 LBS
TOTAL WEIGHT - - - - -		42, 020 LBS (APPROX)

**ROUTED DUNNAGE METHOD UNIT (BASIC HEIGHT)
29-UNIT LOAD IN A 40'-0" LONG BY 7'-8" HI-VOLUME VAN TRAILER**



ISOMETRIC VIEW



SECTION M-M

KEY NUMBERS

- ① FORWARD BLOCKING ASSEMBLY (1 REQD). SEE THE DETAIL AND THE "FORWARD BLOCKING CHART" ON PAGE 45. SEE GENERAL NOTE "J" ON PAGE 2.
- ② ANTI-SWAY BRACE (14 REQD). SEE THE DETAIL ON PAGE 45. 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 46. SEE SPECIAL NOTE 3 ON PAGE 29.
- ④ STACK UNITIZING STRAP, 1-1/4" X .035" OR .031" X 25'-6" LONG STEEL STRAPPING (2 REQD). INSTALL SO AS TO ENCIRCLE A TOP-LAYER PALLET UNIT AND THE UNIT DIRECTLY BELOW. SEE SPECIAL NOTE 4 ON PAGE 29.
- ⑤ BUNDLING STRAP, 1-1/4" X .035" OR .031" X 34'-0" LONG STEEL STRAPPING (6 REQD). INSTALL SO AS TO ENCIRCLE TWO COMPLETE STACKS. SEE SPECIAL NOTE 5 ON PAGE 29.
- ⑥ SEAL FOR 1-1/4" STRAPPING (16 REQD, 2 PER STRAP). DOUBLE CRIMP EACH SEAL. SEE GENERAL NOTE "K" ON PAGE 2.

**ROUTED DUNNAGE METHOD UNIT (BASIC HEIGHT)
29-UNIT LOAD IN A 48'-0" LONG BY 8'-2" WIDE HI-VOLUME VAN TRAILER**

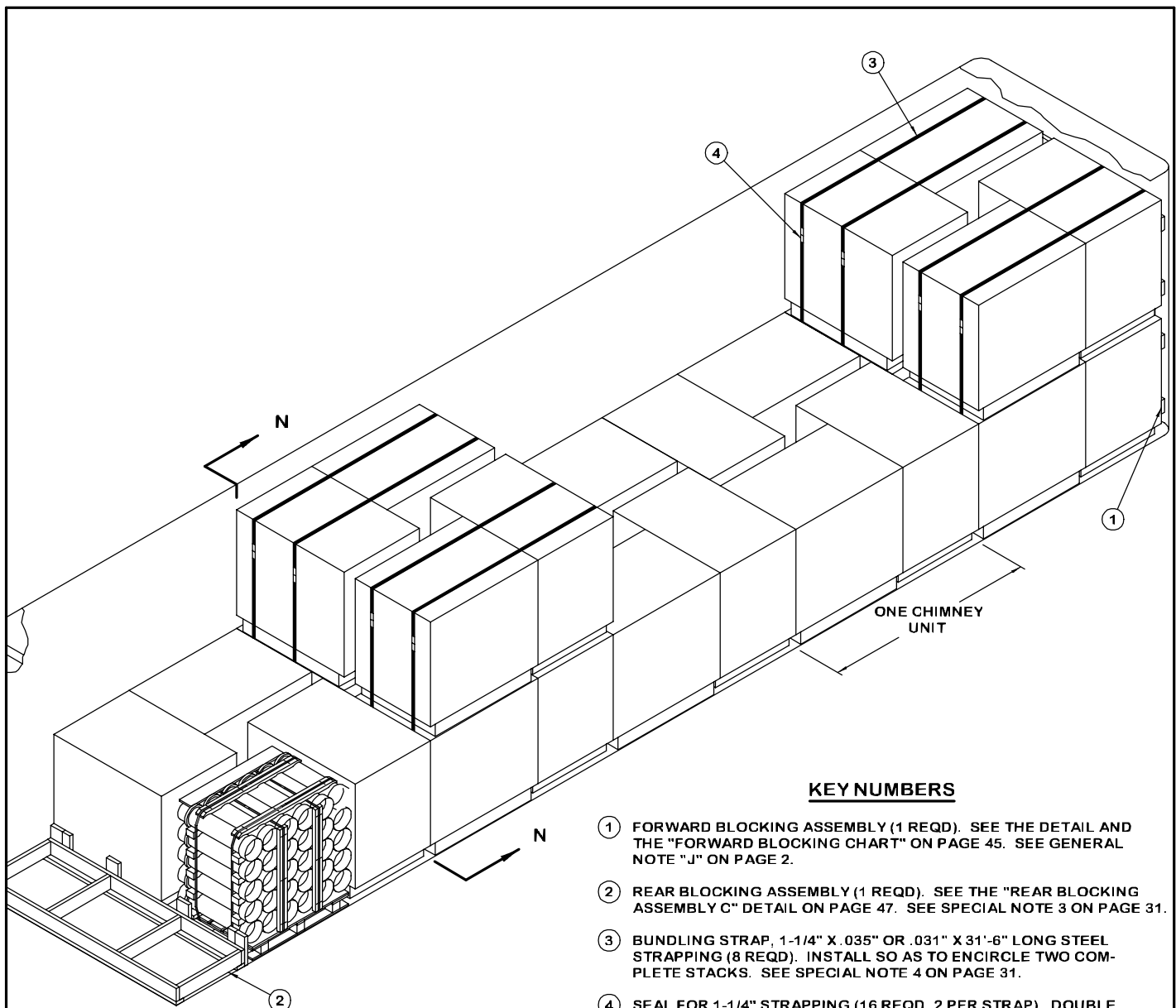
SPECIAL NOTES:

1. A 29-UNIT LOAD IS SHOWN IN A 48'-0" LONG BY 8'-2" WIDE (INSIDE DIMENSION) CONVENTIONAL VAN TRAILER HAVING ROUNDED CORNERS. TRAILERS OF OTHER DIMENSIONS CAN BE USED.
2. THE PALLET UNIT SHOWN ON PAGE 28 IS THE ROUTED DUNNAGE METHOD UNIT (BASIC HEIGHT) HAVING OVERALL DIMENSIONS OF 35-3/4" LONG BY 51" WIDE BY 49" HIGH AND WEIGHING APPROXIMATELY 1,429 POUNDS.
3. IF THE VOID AT THE REAR OF THE LOAD, BETWEEN THE PALLET UNITS AND THE REAR DOOR, 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 A", PIECE MARKED ③ ON PAGE 28. IF THE VOID AT THE REAR OF THE LOAD IS 9" OR GREATER, USE "REAR BLOCKING ASSEMBLY C", AS DETAILED ON PAGE 47. SEE SPECIAL NOTE 10.
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. UNITIZING STRAPS, PIECE MARKED ④, MUST BE INSTALLED PRIOR TO FINAL POSITIONING OF THE STACK.
5. IF A STACK IN THE LOAD UNIT AT THE REAR OF THE LOAD IS MORE THAN ONE UNIT HIGH, AS IN THE CASE WITH THE LEFT HAND ROW IN THE DEPICTED LOAD, BUNDLING STRAPS, PIECE MARKED ⑤, MUST BE INSTALLED SO AS TO ENCIRCLE THE REARMOST TWO STACKS IN EACH APPLICABLE ROW.
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 PALLET UNIT IN THE FIRST LAYER. PROVIDE LONGITUDINAL BRACING BY INSTALLING UNITIZING STRAPS, SHOWN AS PIECE MARKED ④.
7. REFER TO PAGE 43 FOR GUIDANCE IN SHIPMENT OF PARTIAL PALLET UNITS.
8. LEFTOVER CONTAINERS, IN AN AMOUNT NOT TO EXCEED FIVE, MAY BE SECURED TO THE TOP OF A FULL OR PARTIAL PALLET UNIT FOR SHIPMENT. REFER TO THE "PROCEDURES FOR SHIPMENT OF LEFTOVER CONTAINERS" ON PAGE 44 FOR GUIDANCE.
9. FOR SHIPMENT OF LESS THAN FULL LOADS, REFER TO THE APPLICABLE GUIDANCE ON PAGES 40 THROUGH 42.
10. TRAILERS EQUIPPED WITH ROLL-UP TYPE DOORS MAY BE USED, HOWEVER, SPECIAL REAR BLOCKING MUST BE INSTALLED. SEE THE NAILED-HEADER METHOD ON PAGES 12 AND 34 AND THE SPECIAL NOTES ON THE SUCCEEDING PAGES FOR GUIDANCE. NOTE THAT THE SPECIAL REAR BLOCKING FOR TRAILERS EQUIPPED WITH THE ROLL-UP TYPE DOORS MAY ALSO BE USED IN TRAILERS EQUIPPED WITH HINGED DOORS.
11. IF THE TRAILER BEING LOADED DOES NOT HAVE A DOOR OPENING HEIGHT OF AT LEAST 8'-3", IT WILL BE NECESSARY TO LIMIT THE REARMOST LOAD UNIT TO ONE PALLET IN HEIGHT.

BILL OF MATERIAL		
LUMBER	LINEAR FEET	BOARD FEET
1" x 4"	25	9
2" x 3"	25	13
2" x 4"	191	128
2" x 6"	30	30
NAILS	NO. REQD	POUNDS
6d (2")	30	1/2
10d (3")	200	3-1/4
1-1/4" STEEL STRAPPING - - 255' REQD - - - 36-1/2 LBS		
SEAL FOR 1-1/4" STRAPPING - 16 REQD - - - 3/4 LB		

LOAD AS SHOWN

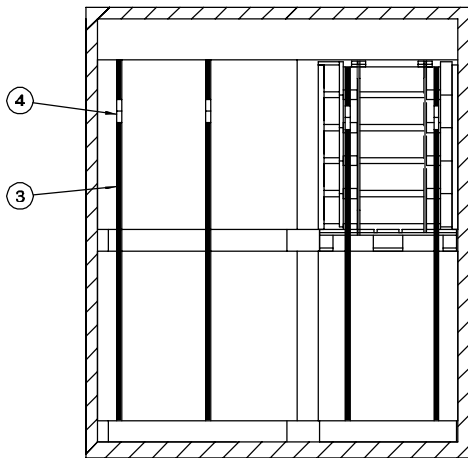
ITEM	QUANTITY	WEIGHT (APPROX)
PALLET UNIT - - - - -	29 - - - - -	41,441 LBS
DUNNAGE - - - - -	- - - - -	401 LBS
TOTAL WEIGHT - - - - -		41,842 LBS (APPROX)



ISOMETRIC VIEW

KEY NUMBERS

- ① FORWARD BLOCKING ASSEMBLY (1 REQD). SEE THE DETAIL AND THE "FORWARD BLOCKING CHART" ON PAGE 45. SEE GENERAL NOTE "J" ON PAGE 2.
- ② REAR BLOCKING ASSEMBLY (1 REQD). SEE THE "REAR BLOCKING ASSEMBLY C" DETAIL ON PAGE 47. SEE SPECIAL NOTE 3 ON PAGE 31.
- ③ BUNDLING STRAP, 1-1/4" X .035" OR .031" X 31'-6" LONG STEEL STRAPPING (8 REQD). INSTALL SO AS TO ENCIRCLE TWO COMPLETE STACKS. SEE SPECIAL NOTE 4 ON PAGE 31.
- ④ SEAL FOR 1-1/4" STRAPPING (16 REQD, 2 PER STRAP). DOUBLE CRIMP EACH SEAL. SEE GENERAL NOTE "K" ON PAGE 2.



SECTION N-N

**ROUTED DUNNAGE METHOD (BASIC HEIGHT) (CHIMNEY PATTERN)
28-UNIT LOAD IN A 40'-0" LONG BY 7'-8" WIDE HI-VOLUME VAN TRAILER**

SPECIAL NOTES:

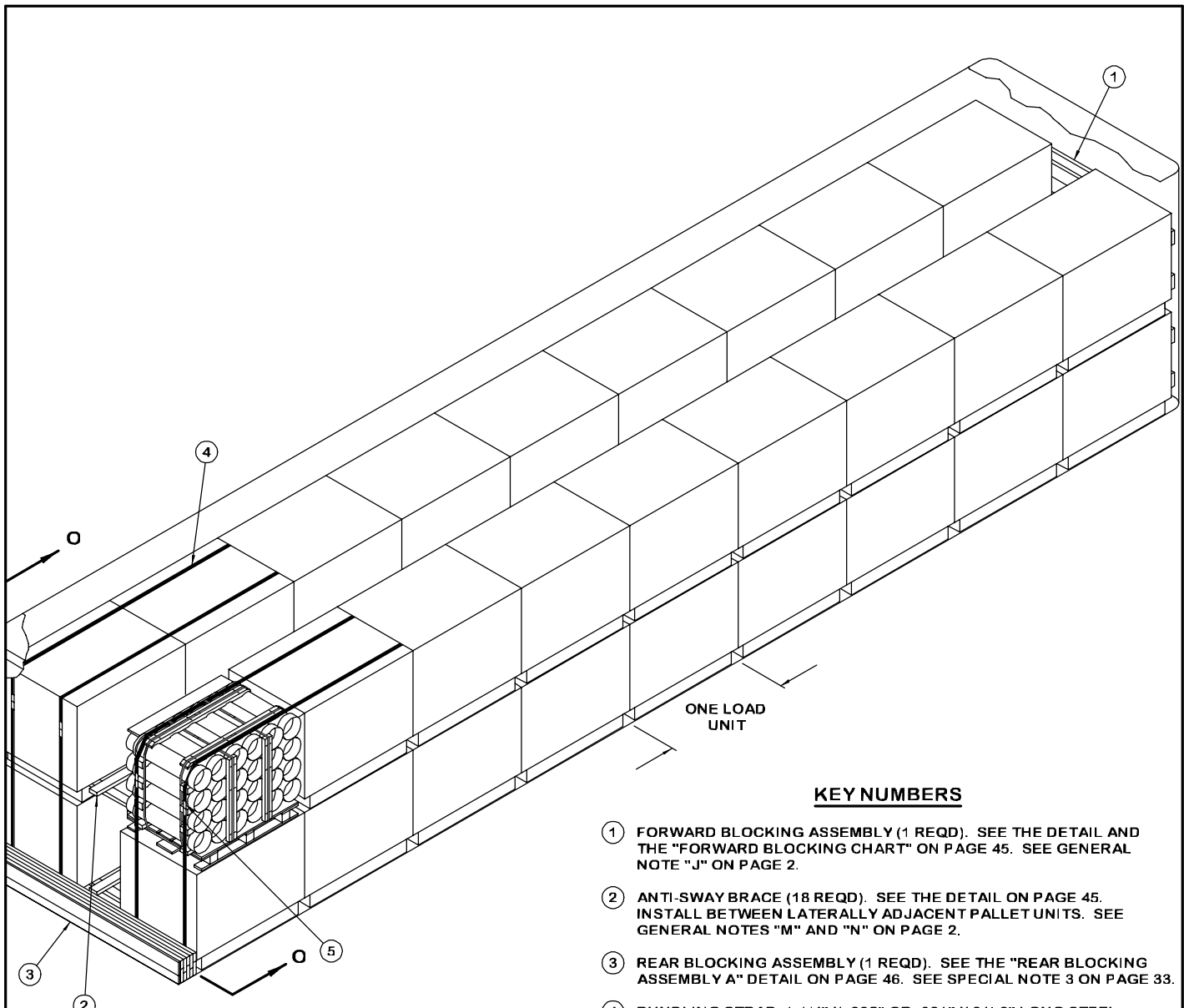
1. A 28-UNIT LOAD IS SHOWN IN A 40'-0" LONG BY 7'-8" WIDE (INSIDE DIMENSION) CONVENTIONAL VAN TRAILER HAVING ROUNDED CORNERS. TRAILERS OF OTHER LENGTHS CAN BE USED, BUT TRAILERS WIDER THAN 7'-8-1/2" CANNOT BE USED FOR THIS LOAD CONFIGURATION.
2. THE PALLET UNIT SHOWN ON PAGE 30 IS THE ROUTED DUNNAGE METHOD UNIT (BASIC HEIGHT) HAVING OVERALL DIMENSIONS OF 35-3/4" LONG BY 51" WIDE BY 49" HIGH AND WEIGHING APPROXIMATELY 1,429 POUNDS.
3. IF THE VOID AT THE REAR OF THE LOAD, BETWEEN THE PALLET UNITS AND THE REAR DOOR, 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 A", AS DETAILED ON PAGE 46. IF THE VOID AT THE REAR OF THE LOAD IS 9" OR GREATER, USE "REAR BLOCKING ASSEMBLY D", PIECE MARKED ② ON PAGE 30. SEE SPECIAL NOTE 10.
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.
5. IF A STACK IN THE LOAD UNIT AT THE REAR OF THE LOAD IS MORE THAN ONE UNIT HIGH, AS IN THE CASE WITH THE LEFT HAND ROW IN THE DEPICTED LOAD, BUNDLING STRAPS, PIECE MARKED ③, MUST BE INSTALLED SO AS TO ENCIRCLE THE REARMOST TWO STACKS IN EACH APPLICABLE ROW.
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 PALLET UNIT IN THE FIRST LAYER. PROVIDE LONGITUDINAL BRACING BY INSTALLING UNITIZING STRAPS, SHOWN AS PIECE MARKED ④ ON PAGE 26.
7. REFER TO PAGE 43 FOR GUIDANCE IN SHIPMENT OF PARTIAL PALLET UNITS.
8. LEFTOVER CONTAINERS, IN AN AMOUNT NOT TO EXCEED FIVE, MAY BE SECURED TO THE TOP OF A FULL OR PARTIAL PALLET UNIT FOR SHIPMENT. REFER TO THE "PROCEDURES FOR SHIPMENT OF LEFTOVER CONTAINERS" ON PAGE 44 FOR GUIDANCE.
9. FOR SHIPMENT OF LESS THAN FULL LOADS, REFER TO THE APPLICABLE GUIDANCE ON PAGES 40 THROUGH 42.
10. TRAILERS EQUIPPED WITH ROLL-UP TYPE DOORS MAY BE USED, HOWEVER, SPECIAL REAR BLOCKING MUST BE INSTALLED. SEE THE NAILED-HEADER METHOD ON PAGES 12 AND 34 AND THE SPECIAL NOTES ON THE SUCCEEDING PAGES FOR GUIDANCE. NOTE THAT THE SPECIAL REAR BLOCKING FOR TRAILERS EQUIPPED WITH THE ROLL-UP TYPE DOORS MAY ALSO BE USED IN TRAILERS EQUIPPED WITH HINGED DOORS.
11. IF THE TRAILER BEING LOADED DOES NOT HAVE A DOOR OPENING HEIGHT OF AT LEAST 8'-3", IT WILL BE NECESSARY TO LIMIT THE REARMOST LOAD UNIT TO ONE PALLET IN HEIGHT.

BILL OF MATERIAL		
LUMBER	LINEAR FEET	BOARD FEET
2" x 4"	49	33
2" x 6"	87	87
NAILS	NO. REQD	POUNDS
10d (3")	128	2
1-1/4" STEEL STRAPPING - - 252' REQD - - - - 36 LBS		
SEAL FOR 1-1/4" STRAPPING - 16 REQD - - - - 3/4 LB		

LOAD AS SHOWN

ITEM	QUANTITY	WEIGHT (APPROX)
PALLET UNIT - - - - -	28 - - - - -	40,012 LBS
DUNNAGE - - - - -	- - - - -	279 LBS
TOTAL WEIGHT - - - - -		40,291 LBS (APPROX)

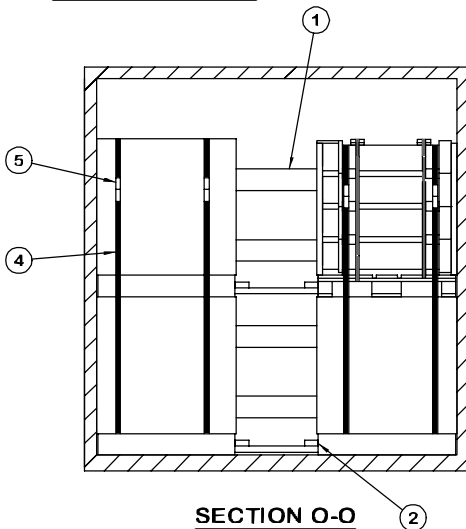
**ROUTED DUNNAGE METHOD (BASIC HEIGHT) (CHIMNEY PATTERN)
28-UNIT LOAD IN A 40'-0" LONG BY 7'-8" WIDE HI-VOLUME VAN TRAILER**



ISOMETRIC VIEW

KEY NUMBERS

- ① FORWARD BLOCKING ASSEMBLY (1 REQD). SEE THE DETAIL AND THE "FORWARD BLOCKING CHART" ON PAGE 45. SEE GENERAL NOTE "J" ON PAGE 2.
- ② ANTI-SWAY BRACE (18 REQD). SEE THE DETAIL ON PAGE 45. 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 46. SEE SPECIAL NOTE 3 ON PAGE 33.
- ④ BUNDLING STRAP, 1-1/4" X .035" OR .031" X 31'-6" LONG STEEL STRAPPING (4 REQD). INSTALL SO AS TO ENCIRCLE TWO COMPLETE STACKS. SEE SPECIAL NOTE 4 ON PAGE 33.
- ⑤ SEAL FOR 1-1/4" STRAPPING (8 REQD, 2 PER STRAP). DOUBLE CRIMP EACH SEAL. SEE GENERAL NOTE "K" ON PAGE 2.



SECTION O-O

**ROUTED DUNNAGE METHOD UNIT (DECREASED HEIGHT)
36-UNIT LOAD IN A 40'-0" LONG BY 7'-8" WIDE CONVENTIONAL VAN TRAILER**

SPECIAL NOTES:

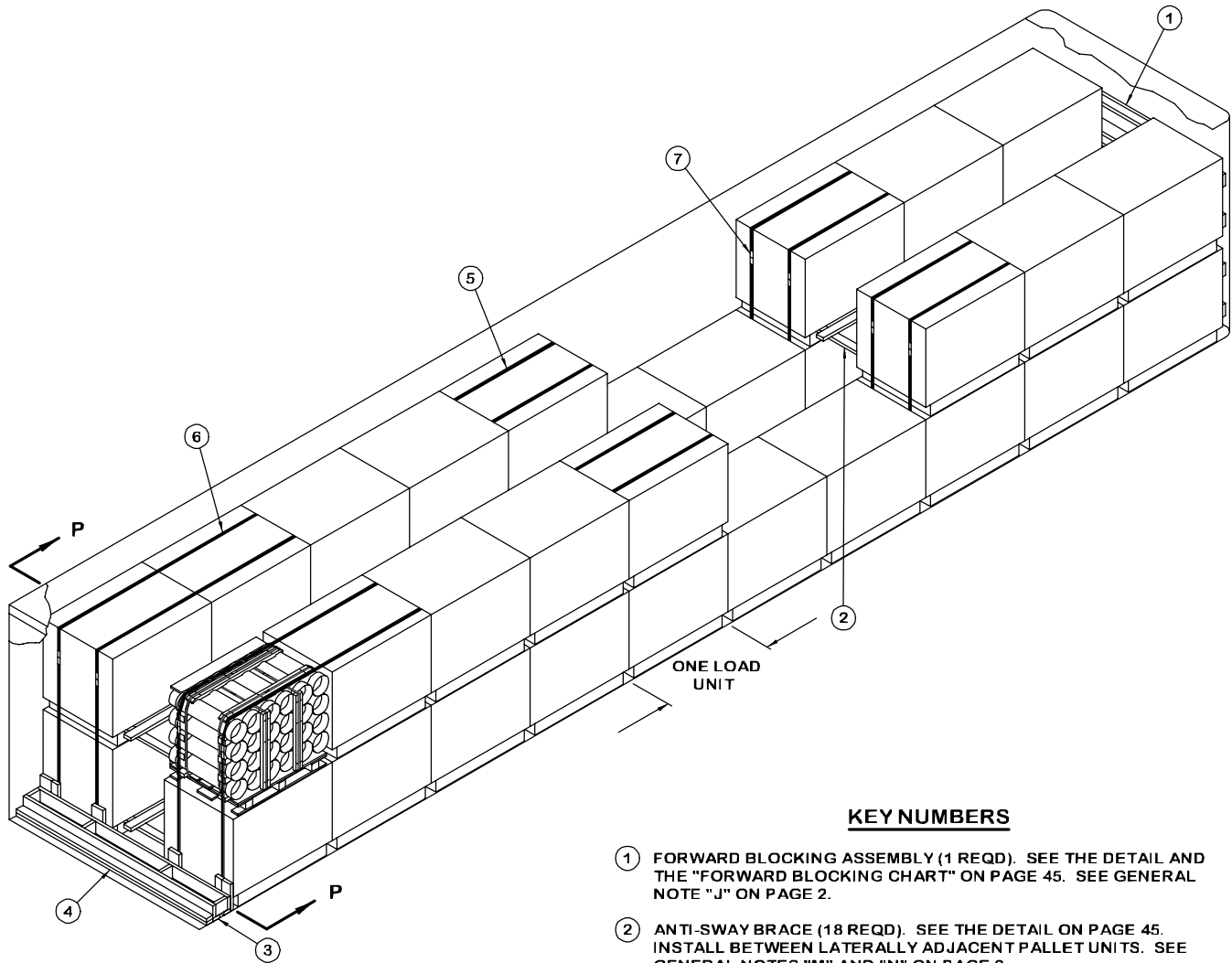
1. A 36-UNIT LOAD IS SHOWN IN A 40'-0" LONG BY 7'-8" WIDE (INSIDE DIMENSION) CONVENTIONAL VAN TRAILER HAVING ROUNDED CORNERS. TRAILERS OF OTHER DIMENSIONS CAN BE USED.
2. THE PALLET UNIT SHOWN ON PAGE 32 IS THE ROUTED DUNNAGE METHOD UNIT (DECREASED HEIGHT) HAVING OVERALL DIMENSIONS OF 35-3/4" LONG BY 51" WIDE BY 40-3/8" HIGH AND WEIGHING APPROXIMATELY 1,161 POUNDS.
3. IF THE VOID AT THE REAR OF THE LOAD, BETWEEN THE PALLET UNITS AND THE REAR DOOR, 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 A", PIECE MARKED ③. IF THE VOID AT THE REAR OF THE LOAD IS 9" OR GREATER, USE "REAR BLOCKING ASSEMBLY C" AS DETAILED ON PAGE 47. SEE SPECIAL NOTE 10.
4. IF A STACK IN THE LOAD UNIT AT THE REAR OF THE LOAD IS MORE THAN ONE UNIT HIGH, BUNDLING STRAPS, PIECE MARKED ④, MUST BE INSTALLED SO AS TO ENIRCLE THE REARMOST TWO STACKS IN EACH APPLICABLE ROW.
5. IF THE SECOND LAYER OF THE LOAD IS NOT COMPLETE, 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. UNITIZING STRAPS, SIMILAR TO PIECE MARKED ④ ON PAGE 10, MUST BE INSTALLED PRIOR TO FINAL POSITIONING OF THE STACK.
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 PALLET UNIT IN THE FIRST LAYER. PROVIDE LONGITUDINAL BRACING BY INSTALLING UNITIZING STRAPS, SHOWN AS PIECE MARKED ④ ON PAGE 10.
7. REFER TO PAGE 43 FOR GUIDANCE IN SHIPMENT OF PARTIAL PALLET UNITS.
8. LEFTOVER CONTAINERS, IN AN AMOUNT NOT TO EXCEED FIVE, MAY BE SECURED TO THE TOP OF A FULL OR PARTIAL PALLET UNIT FOR SHIPMENT. REFER TO THE "PROCEDURES FOR SHIPMENT OF LEFTOVER CONTAINERS" ON PAGE 44 FOR GUIDANCE.
9. FOR SHIPMENT OF LESS THAN FULL LOADS, REFER TO THE APPLICABLE GUIDANCE ON PAGES 40 THROUGH 42.
10. TRAILERS EQUIPPED WITH ROLL-UP TYPE DOORS MAY BE USED, HOWEVER, SPECIAL REAR BLOCKING MUST BE INSTALLED. SEE THE NAILED-HEADER METHOD ON PAGES 12 AND 34 AND THE SPECIAL NOTES ON THE SUCCEEDING PAGES FOR GUIDANCE. NOTE THAT THE SPECIAL REAR BLOCKING FOR TRAILERS EQUIPPED WITH THE 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"	279	186
2" x 6"	103	103
NAILS	NO. REQD	POUNDS
10d (3")	360	5-1/2
1-1/4" STEEL STRAPPING - - 126' REQD - - - - 18 LBS		
SEAL FOR 1-1/4" STRAPPING - 8 REQD - - - - 1/2 LB		

LOAD AS SHOWN

ITEM	QUANTITY	WEIGHT (APPROX)
PALLET UNIT - - - - -	36 - - - - -	41,796 LBS
DUNNAGE - - - - -	- - - - -	602 LBS
TOTAL WEIGHT - - - - -		42,398 LBS (APPROX)

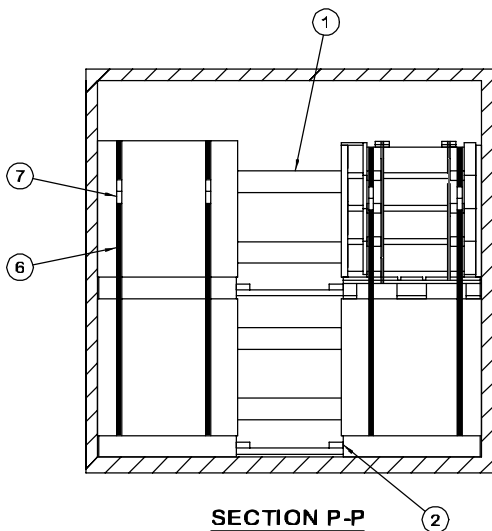
**ROUTED DUNNAGE METHOD UNIT (DECREASED HEIGHT)
36-UNIT LOAD IN A 40'-0" LONG BY 7'-8" WIDE CONVENTIONAL VAN TRAILER**



ISOMETRIC VIEW

KEY NUMBERS

- ① FORWARD BLOCKING ASSEMBLY (1 REQD). SEE THE DETAIL AND THE "FORWARD BLOCKING CHART" ON PAGE 45. SEE GENERAL NOTE "J" ON PAGE 2.
- ② ANTI-SWAY BRACE (18 REQD). SEE THE DETAIL ON PAGE 45. 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 C" DETAIL ON PAGE 47. SEE SPECIAL NOTE 3 ON PAGE 35.
- ④ REAR HEADER, 2" X 4" BY TRAILER WIDTH MINUS 1/2" (DOUBLED) (1 REQD). POSITION AT THE REAR OF THE LOAD. NAIL THE FIRST PIECE TO THE TRAILER FLOOR W/17-10d NAILS. NAIL THE SECOND PIECE TO THE FIRST IN A LIKE MANNER. SEE THE NAILING CHART ON PAGE 13 FOR GUIDANCE. SEE SPECIAL NOTE 3 ON PAGE 35.
- ⑤ STACK UNITIZING STRAP, 1-1/4" X .035" OR .031" X 23'-0" LONG STEEL STRAPPING (8 REQD). INSTALL SO AS TO ENCIRCLE A TOP-LAYER PALLET UNIT AND THE UNIT DIRECTLY BELOW. SEE SPECIAL NOTE 5 ON PAGE 35.
- ⑥ BUNDLING STRAP, 1-1/4" X .035" OR .031" X 31'-6" LONG STEEL STRAPPING (4 REQD). INSTALL SO AS TO ENCIRCLE TWO COMPLETE STACKS. SEE SPECIAL NOTE 4 ON PAGE 35.
- ⑦ SEAL FOR 1-1/4" STRAPPING (24 REQD, 2 PER STRAP). DOUBLE CRIMP EACH SEAL. SEE GENERAL NOTE "K" ON PAGE 2.



SECTION P-P

**ROUTED DUNNAGE METHOD UNIT (DECREASED HEIGHT)
36-UNIT LOAD IN A 45'-0" LONG BY 8'-2" WIDE CONVENTIONAL VAN TRAILER**

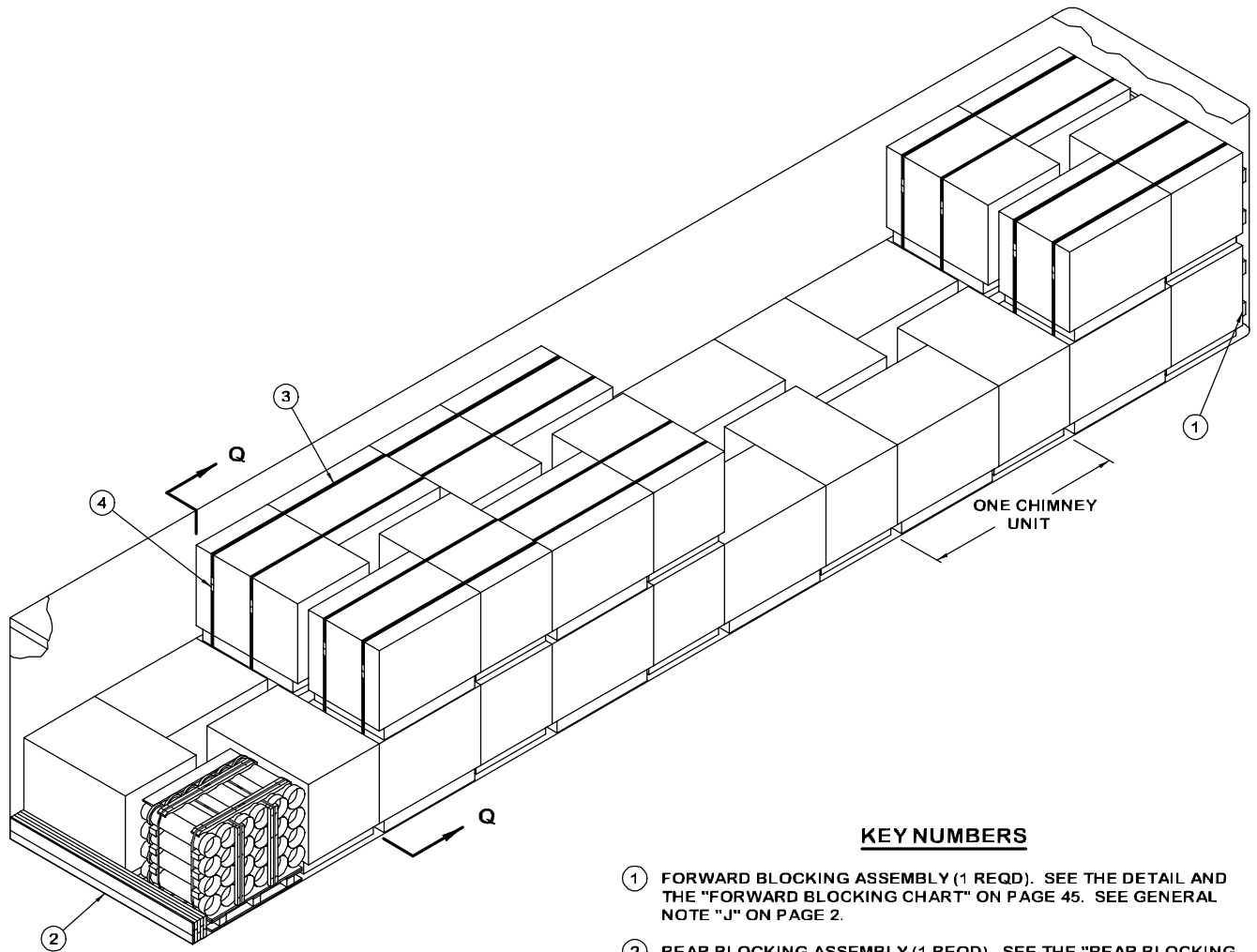
SPECIAL NOTES:

1. A 36-UNIT LOAD IS SHOWN IN A 45'-0" LONG BY 8'-2" WIDE (INSIDE DIMENSION) CONVENTIONAL VAN TRAILER HAVING ROUNDED CORNERS. TRAILERS OF OTHER DIMENSIONS CAN BE USED.
2. THE PALLET UNIT SHOWN ON PAGE 34 IS THE ROUTED DUNNAGE METHOD UNIT (DECREASED HEIGHT) HAVING OVERALL DIMENSIONS OF 35-3/4" LONG BY 51" WIDE BY 40-3/8" HIGH AND WEIGHING APPROXIMATELY 1,161 POUNDS.
3. IF THE VOID AT THE REAR OF THE LOAD, BETWEEN THE PALLET UNITS AND THE REAR DOOR, 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 A" AS DETAILED ON PAGE 46. IF THE VOID AT THE REAR OF THE LOAD IS 9" OR GREATER, USE "REAR BLOCKING ASSEMBLY C", PIECE MARKED (3) ON PAGE 34. FOR A NAILABLE FLOOR, THE STRUT LENGTHS OF PIECE MARKED (3) SHOULD BE 6". SEE SPECIAL NOTE 10.
4. IF A STACK IN THE LOAD UNIT AT THE REAR OF THE LOAD IS MORE THAN ONE UNIT HIGH, BUNDLING STRAPS, PIECE MARKED (6), MUST BE INSTALLED SO AS TO ENCIRCLE THE REARMOST TWO STACKS IN EACH APPLICABLE ROW.
5. IF THE SECOND LAYER OF THE LOAD IS NOT COMPLETE, 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. UNITIZING STRAPS, PIECE MARKED (5), MUST BE INSTALLED PRIOR TO FINAL POSITIONING OF THE STACK.
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 PALLET UNIT IN THE FIRST LAYER. PROVIDE LONGITUDINAL BRACING BY INSTALLING UNITIZING STRAPS, SHOWN AS PIECE MARKED (5).
7. REFER TO PAGE 43 FOR GUIDANCE IN SHIPMENT OF PARTIAL PALLET UNITS.
8. LEFTOVER CONTAINERS, IN AN AMOUNT NOT TO EXCEED FIVE, MAY BE SECURED TO THE TOP OF A FULL OR PARTIAL PALLET UNIT FOR SHIPMENT. REFER TO THE "PROCEDURES FOR SHIPMENT OF LEFTOVER CONTAINERS" ON PAGE 44 FOR GUIDANCE.
9. FOR SHIPMENT OF LESS THAN FULL LOADS, REFER TO THE APPLICABLE GUIDANCE ON PAGES 40 THROUGH 42.
10. TRAILERS EQUIPPED WITH ROLL-UP TYPE DOORS MAY BE USED, HOWEVER, SPECIAL REAR BLOCKING MUST BE INSTALLED. SEE THE NAILED-HEADER METHOD ON PAGES 12 AND 34 AND THE SPECIAL NOTES ON THE SUCCEEDING PAGES FOR GUIDANCE. NOTE THAT THE SPECIAL REAR BLOCKING FOR TRAILERS EQUIPPED WITH THE 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"	287	192
2" x 6"	84	84
NAILS	NO. REQD	POUNDS
10d (3")	378	6
1-1/4" STEEL STRAPPING - - 310' REQD - - - 44-1/2 LBS		
SEAL FOR 1-1/4" STRAPPING - 24 REQD - - - 1-1/4 LBS		

LOAD AS SHOWN

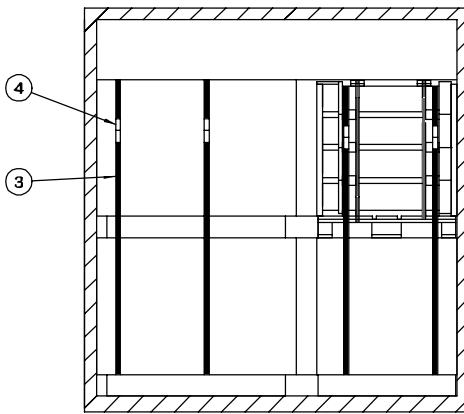
ITEM	QUANTITY	WEIGHT (APPROX)
PALLET UNIT - - - - -	36 - - - - -	41,796 LBS
DUNNAGE - - - - -	- - - - -	604 LBS
TOTAL WEIGHT - - - - -		42,400 LBS (APPROX)



ISOMETRIC VIEW

KEY NUMBERS

- ① FORWARD BLOCKING ASSEMBLY (1 REQD). SEE THE DETAIL AND THE "FORWARD BLOCKING CHART" ON PAGE 45. SEE GENERAL NOTE "J" ON PAGE 2.
- ② REAR BLOCKING ASSEMBLY (1 REQD). SEE THE "REAR BLOCKING ASSEMBLY A" DETAIL ON PAGE 46. SEE SPECIAL NOTE 3 ON PAGE 37.
- ③ BUNDLING STRAP, 1-1/4" X .035" OR .031" X 29'-0" LONG STEEL STRAPPING (12 REQD). INSTALL SO AS TO ENCIRCLE TWO COMPLETE STACKS. SEE SPECIAL NOTE 4 ON PAGE 37.
- ④ SEAL FOR 1-1/4" STRAPPING (24 REQD, 2 PER STRAP). DOUBLE CRIMP EACH SEAL. SEE GENERAL NOTE "K" ON PAGE 2.



SECTION Q-Q

**ROUTED DUNNAGE METHOD UNIT (DECREASED HEIGHT) (CHIMNEY PATTERN)
36-UNIT LOAD IN A 45'-0" LONG BY 7'-8" WIDE CONVENTIONAL VAN TRAILER**

SPECIAL NOTES:

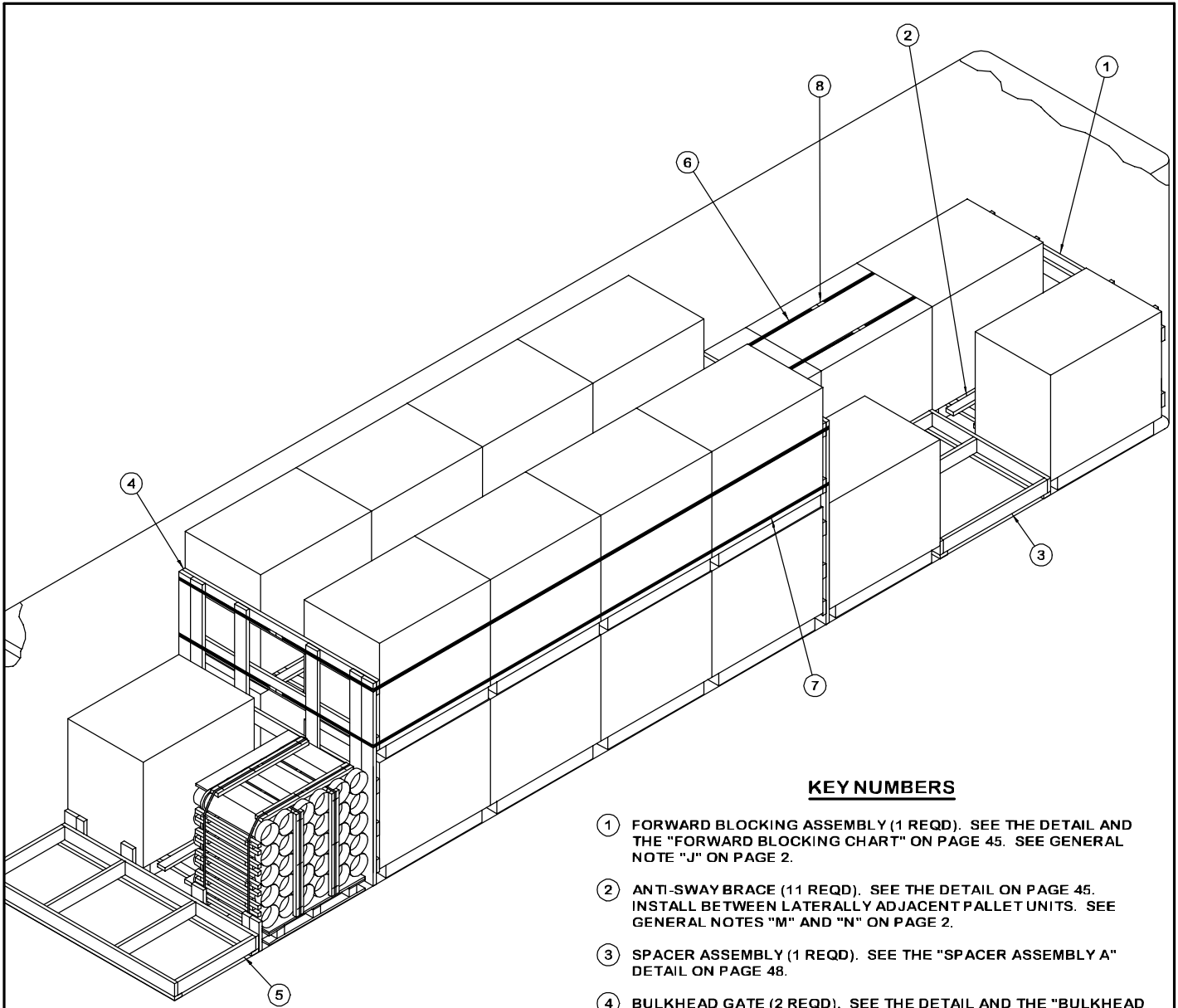
1. A 36-UNIT LOAD IS SHOWN IN A 45'-0" LONG BY 7'-8" WIDE (INSIDE DIMENSION) CONVENTIONAL VAN TRAILER HAVING ROUNDED CORNERS. TRAILERS OF OTHER LENGTHS CAN BE USED, BUT TRAILERS WIDER THAN 7'-8-1/2" CANNOT BE USED FOR THIS LOAD CONFIGURATION.
2. THE PALLET UNIT SHOWN ON PAGE 36 IS THE ROUTED DUNNAGE METHOD UNIT (DECREASED HEIGHT) HAVING OVERALL DIMENSIONS OF 35-3/4" LONG BY 51" WIDE BY 40-3/8" HIGH AND WEIGHING APPROXIMATELY 1,161 POUNDS.
3. IF THE VOID AT THE REAR OF THE LOAD, BETWEEN THE PALLET UNITS AND THE REAR DOOR, 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 A", PIECE MARKED (2). IF THE VOID AT THE REAR OF THE LOAD IS 9" OR GREATER, USE "REAR BLOCKING ASSEMBLY D" AS DETAILED ON PAGE 49. SEE SPECIAL NOTE 10.
4. IF A STACK IN THE LOAD UNIT AT THE REAR OF THE LOAD IS MORE THAN ONE UNIT HIGH, BUNDLING STRAPS, PIECE MARKED (3), MUST BE INSTALLED SO AS TO ENCIRCLE THE REARMOST TWO STACKS IN EACH APPLICABLE ROW.
5. 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. UNITIZING STRAPS, SIMILAR TO PIECE MARKED (5) ON PAGE 34, MUST BE INSTALLED PRIOR TO FINAL POSITIONING OF THE STACK.
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 PALLET UNIT IN THE FIRST LAYER. PROVIDE LONGITUDINAL BRACING BY INSTALLING UNITIZING STRAPS, SHOWN AS PIECE MARKED (5) ON PAGE 34.
7. REFER TO PAGE 43 FOR GUIDANCE IN SHIPMENT OF PARTIAL PALLET UNITS.
8. LEFTOVER CONTAINERS, IN AN AMOUNT NOT TO EXCEED FIVE, MAY BE SECURED TO THE TOP OF A FULL OR PARTIAL PALLET UNIT FOR SHIPMENT. REFER TO THE "PROCEDURES FOR SHIPMENT OF LEFTOVER CONTAINERS" ON PAGE 44 FOR GUIDANCE.
9. FOR SHIPMENT OF LESS THAN FULL LOADS, REFER TO THE APPLICABLE GUIDANCE ON PAGES 40 THROUGH 42.
10. TRAILERS EQUIPPED WITH ROLL-UP TYPE DOORS MAY BE USED, HOWEVER, SPECIAL REAR BLOCKING MUST BE INSTALLED. SEE THE NAILED-HEADER METHOD ON PAGES 12 AND 34 AND THE SPECIAL NOTES ON THE SUCCEEDING PAGES FOR GUIDANCE. NOTE THAT THE SPECIAL REAR BLOCKING FOR TRAILERS EQUIPPED WITH THE 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"	64	43
2" x 6"	96	96
NAILS	NO. REQD	POUNDS
10d (3")	128	2
1-1/4" STEEL STRAPPING - - 348' REQD - - - 49-3/4 LBS		
SEAL FOR 1-1/4" STRAPPING - 24 REQD - - - 1-1/2 LBS		

LOAD AS SHOWN

ITEM	QUANTITY	WEIGHT (APPROX)
PALLET UNIT - - - - -	36 - - - - -	41,796 LBS
DUNNAGE - - - - -	- - - - -	331 LBS
TOTAL WEIGHT - - - - -		42,127 LBS (APPROX)

**ROUTED DUNNAGE METHOD UNIT (DECREASED HEIGHT) (CHIMNEY PATTERN)
36-UNIT LOAD IN A 45'-0" LONG BY 7'-8" WIDE CONVENTIONAL VAN TRAILER**



ISOMETRIC VIEW

KEY NUMBERS

- ① FORWARD BLOCKING ASSEMBLY (1 REQD). SEE THE DETAIL AND THE "FORWARD BLOCKING CHART" ON PAGE 45. SEE GENERAL NOTE "J" ON PAGE 2.
- ② ANTI-SWAY BRACE (11 REQD). SEE THE DETAIL ON PAGE 45. INSTALL BETWEEN LATERALLY ADJACENT PALLET UNITS. SEE GENERAL NOTES "M" AND "N" ON PAGE 2.
- ③ SPACER ASSEMBLY (1 REQD). SEE THE "SPACER ASSEMBLY A" DETAIL ON PAGE 48.
- ④ BULKHEAD GATE (2 REQD). SEE THE DETAIL AND THE "BULKHEAD GATE CHART" ON PAGE 48.
- ⑤ REAR BLOCKING ASSEMBLY (1 REQD). SEE THE "REAR BLOCKING ASSEMBLY C" DETAIL ON PAGE 47. SEE SPECIAL NOTE 4 ON PAGE 39.
- ⑥ BUNDLING STRAP, 1-1/4" X .035" OR .031" X 26'-6" LONG STEEL STRAPPING (2 REQD). INSTALL SO AS TO ENCIRCLE TWO PALLET UNITS. SEE SPECIAL NOTE 3 ON PAGE 39.
- ⑦ BUNDLING STRAP, 1-1/4" X .035" OR .031" X 54'-0" LONG STEEL STRAPPING (2 REQD). INSTALL SO AS TO ENCIRCLE EIGHT UPPER UNITS AND TWO BULKHEAD GATES. SEE SPECIAL NOTE 5 ON PAGE 39.
- ⑧ 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 23-UNIT LOAD IS SHOWN IN A 40'-0" LONG BY 7'-8" WIDE (INSIDE DIMENSION) HI-VOLUME VAN TRAILER HAVING ROUNDED FRONT CORNERS. TRAILERS OF OTHER DIMENSIONS CAN BE USED. HI-VOLUME TRAILERS WILL NOT BE REQUIRED FOR ALL LOADS. SEE SPECIAL NOTE 9.
2. THE PALLET UNIT SHOWN IN THE LOAD ON PAGE 38 IS THE FLAT DUNNAGE METHOD UNIT (BASIC HEIGHT) HAVING OVERALL DIMENSIONS OF 35-3/4" LONG BY 52-1/2" WIDE BY 49" HIGH AND WEIGHING APPROXIMATELY 1,452 POUNDS. THE PROCEDURES ARE ALSO APPLICABLE FOR OTHER UNITS DEPICTED ON PAGES 4 AND 5.
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 THE SPACER ASSEMBLY, THE BUNDLING STRAPS, PIECE MARKED ⑥, WILL NOT BE REQUIRED. NOTE THAT A SPACER ASSEMBLY MUST BE POSITIONED WHERE THERE WILL BE A PALLET UNIT AT THE FRONT OR AT EACH END, AS APPLICABLE; A SPACER ASSEMBLY MUST NOT BE POSITIONED ADJACENT TO A FORWARD BLOCKING ASSEMBLY, PIECE MARKED ①, OR ADJACENT TO A BULKHEAD GATE, PIECE MARKED 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 A" AS DETAILED ON PAGE 46. IF THE VOID AT THE REAR OF THE LOAD IS 9" OR GREATER, A STRUT TYPE OF REAR BLOCKING MUST BE USED. SEE THE KEY NUMBERS FOR THE CONVENTIONAL VAN TRAILER LOAD APPLICABLE TO THE PALLET UNIT BEING SHIPPED FOR THE PROPER REAR BLOCKING ASSEMBLY. SEE SPECIAL NOTE 8.
5. IF ONE BUNDLING STRAP IS USED, THE SECOND LAYER PORTION OF THE LOAD IS LIMITED TO NOT MORE THAN SIX INCREASED HEIGHT ALTERNATED CONTAINERS UNITS OR BASIC HEIGHT FLAT AND/OR ROUTED DUNNAGE METHOD UNITS. EIGHT BASIC HEIGHT ALTERNATED CONTAINERS UNITS OR DECREASED HEIGHT FLAT AND/OR ROUTED DUNNAGE METHOD UNITS MAY BE LOADED. IF TWO BUNDLING STRAPS ARE USED, 12 INCREASED HEIGHT ALTERNATED CONTAINERS UNITS OR BASIC HEIGHT FLAT AND/OR ROUTED DUNNAGE METHOD UNITS, OR 16 BASIC HEIGHT ALTERNATED CONTAINERS UNITS OR DECREASED HEIGHT FLAT AND/OR ROUTED DUNNAGE METHOD UNITS MAY BE LOADED.
6. REFER TO PAGE 43 FOR GUIDANCE IN THE SHIPMENT OF PARTIAL PALLET UNITS.
7. LEFTOVER CONTAINERS, IN AN AMOUNT NOT TO EXCEED ONE LESS THAN THE QUANTITY IN ONE LAYER OF A UNIT, MAY BE SECURED TO THE TOP OF A FULL OR PARTIAL PALLET UNIT FOR SHIPMENT. REFER TO THE "PROCEDURES FOR SHIPMENT OF LEFTOVER CONTAINERS" ON PAGE 44 FOR GUIDANCE.
8. TRAILERS EQUIPPED WITH ROLL-UP TYPE DOORS MAY BE USED; HOWEVER, SPECIAL REAR BLOCKING MUST BE INSTALLED. SEE THE NAILED-HEADER METHOD ON PAGES 12 AND 34 AND THE SPECIAL NOTES ON THE SUCCEEDING PAGES FOR GUIDANCE. NOTE THAT THE SPECIAL REAR BLOCKING FOR TRAILERS EQUIPPED WITH THE ROLL-UP TYPE DOORS MAY ALSO BE USED IN TRAILERS EQUIPPED WITH HINGED DOORS.
9. A 23-UNIT LOAD IS SHOWN AS A TYPICAL QUANTITY. THE NUMBER OF PALLET UNITS MAY BE INCREASED OR DECREASED, AS DESIRED.

BILL OF MATERIAL		
LUMBER	LINEAR FEET	BOARD FEET
2" x 4"	170	114
2" x 6"	246	246
NAILS	NO. REQD	POUNDS
10d (3")	436	6-3/4
1-1/4" STEEL STRAPPING - - 161' REQD - - - - - 23 LBS		
SEAL FOR 1-1/4" STRAPPING - 8 REQD - - - - - 1/2 LB		

LOAD AS SHOWN

ITEM	QUANTITY	WEIGHT (APPROX)
PALLET UNIT - - - - -	23 - - - - -	33,396 LBS
DUNNAGE - - - - -	- - - - -	751 LBS
TOTAL WEIGHT - - - - -		34,147 LBS (APPROX)

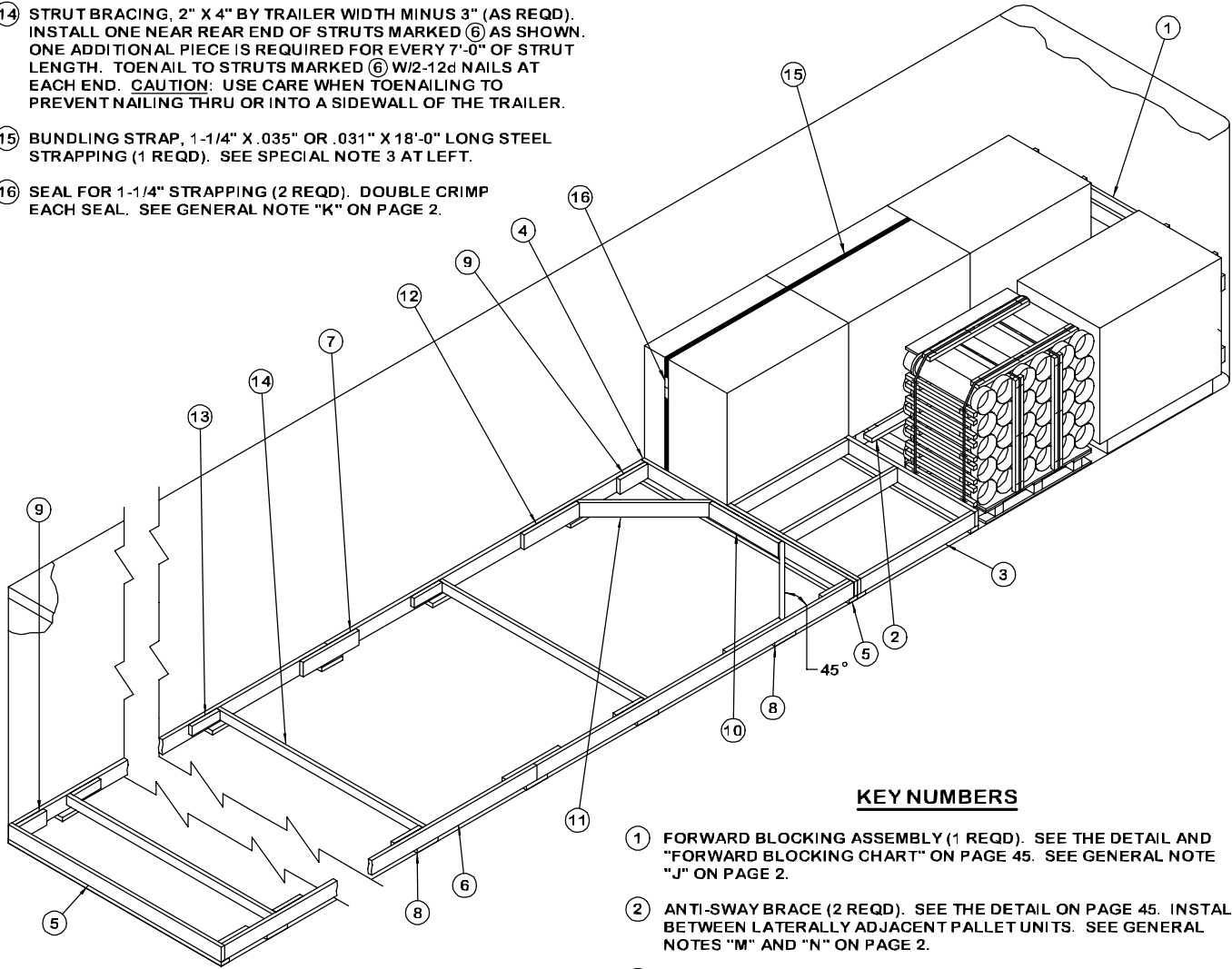
**ALTERNATIVE LOADING PROCEDURE FOR ALL-UNITS
23-UNIT LOAD IN A 40'-0" LONG BY 7'-8" WIDE HI-VOLUME VAN TRAILER**

(SPECIAL NOTES CONTINUED)

⑭ STRUT BRACING, 2" X 4" BY TRAILER WIDTH MINUS 3" (AS REQD). INSTALL ONE NEAR REAR END OF STRUTS MARKED ⑥ AS SHOWN. ONE ADDITIONAL PIECE IS REQUIRED FOR EVERY 7'-0" OF STRUT LENGTH. TOENAIL TO STRUTS MARKED ⑥ W/2-12d NAILS AT EACH END. CAUTION: USE CARE WHEN TOENAILING TO PREVENT NAILING THRU OR INTO A SIDEWALL OF THE TRAILER.

⑮ BUNDLING STRAP, 1-1/4" X .035" OR .031" X 18'-0" LONG STEEL STRAPPING (1 REQD). SEE SPECIAL NOTE 3 AT LEFT.

⑯ SEAL FOR 1-1/4" STRAPPING (2 REQD). DOUBLE CRIMP EACH SEAL. SEE GENERAL NOTE "K" ON PAGE 2.



ISOMETRIC VIEW

SPECIAL NOTES:

1. A 5-UNIT LOAD IS SHOWN IN A 7'-8" WIDE (INSIDE DIMENSION) VAN TRAILER WHICH IS EQUIPPED WITH OR WITHOUT A NAILABLE FLOOR. WIDER OR NARROWER TRAILERS MAY BE USED.
2. THE PALLET UNIT SHOWN IS THE FLAT DUNNAGE METHOD UNIT (BASIC HEIGHT). THE PROCEDURES ARE ALSO APPLICABLE FOR THE OTHER UNITS DEPICTED ON PAGES 4 AND 5.
3. THE BUNDLING STRAP AND SEALS, PIECES MARKED ⑮ AND ⑯, ARE ONLY REQUIRED FOR SECUREMENT OF THE ODD UNIT WHEN SHIPPING THE INCREASED HEIGHT ALTERNATED CONTAINERS UNITS, THE BASIC HEIGHT FLAT DUNNAGE METHOD UNITS, AND THE BASIC HEIGHT ROUTED DUNNAGE METHOD UNITS.
4. THE "K-BRACE" BLOCKING, PIECES MARKED ④ THRU ⑭, WILL RETAIN A MAXIMUM LTL LOAD OF 20,000 POUNDS.
5. TRAILERS EQUIPPED WITH ROLL-UP TYPE DOORS MAY BE USED, HOWEVER, SPECIAL REAR BLOCKING MUST BE INSTALLED. SEE THE NAILED-HEADER METHOD ON PAGES 12 AND 34 AND THE SPECIAL NOTES ON THE SUCCEEDING PAGES FOR GUIDANCE. NOTE THAT THE SPECIAL REAR BLOCKING FOR TRAILERS EQUIPPED WITH THE 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.

KEY NUMBERS

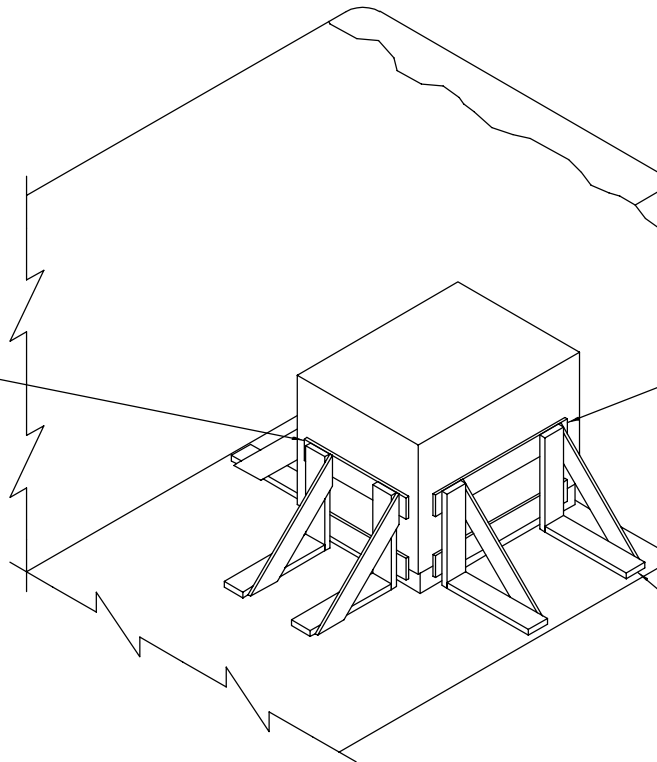
- ① FORWARD BLOCKING ASSEMBLY (1 REQD). SEE THE DETAIL AND "FORWARD BLOCKING CHART" ON PAGE 45. SEE GENERAL NOTE "J" ON PAGE 2.
- ② ANTI-SWAY BRACE (2 REQD). SEE THE DETAIL ON PAGE 45. INSTALL BETWEEN LATERALLY ADJACENT PALLET UNITS. SEE GENERAL NOTES "M" AND "N" ON PAGE 2.
- ③ SPACER ASSEMBLY (1 REQD). SEE THE "SPACER ASSEMBLY A" DETAIL ON PAGE 48.
- ④ HEADER, 2" X 6" BY TRAILER WIDTH MINUS 1/2" IN LENGTH (2 REQD). POSITION ON EDGE.
- 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 W/1-10d NAIL EVERY 12".
- ⑥ SIDE STRUT, 2" X 6" BY CUT TO FIT BETWEEN HEADERS MARKED ④ (2 REQD).
- ⑦ SPLICE PIECE, 2" X 6" X 24" (2 REQD). CENTER ON A JOINT OF PIECES MARKED ⑥ AND NAIL W/4-10d NAILS AT EACH END.
- ⑧ RISER PIECE, 2" X 4" X 9" (AS REQD). NAIL TO THE BOTTOM EDGE OF PIECE MARKED ⑥ W/2-10d NAILS.
- ⑨ POCKET CLEAT, 2" X 6" X 12" (4 REQD). NAIL TO PIECE MARKED ⑥ W/3-10d NAILS. TOENAIL TO THE ADJACENT PIECE MARKED ④ W/2-12d NAILS.
- ⑩ CENTER CLEAT, 2" X 6" X 24" (1 REQD). NAIL TO THE HEADER, PIECE MARKED ④, W/6-10d NAILS.
- ⑪ DIAGONAL PIECE, 2" X 6" BY CUT-TO-FIT (2 REQD). DOUBLE BEVEL EACH END WITH 45° CUTS. INSTALL AT A 45° ANGLE AS SHOWN AND TOENAIL TO THE ADJACENT HEADER MARKED ④ AND STRUT MARKED ⑥ W/2-12d NAILS AT EACH END.
- ⑫ SIDE CLEAT, 2" X 6" X 24" (2 REQD). NAIL TO PIECE MARKED ⑥ W/8-10d NAILS.
- ⑬ STRUT BRACING SUPPORT PIECE, 2" X 4" X 12" (AS REQD). NAIL TO SIDE STRUT, PIECE MARKED ⑥, W/3-10d NAILS.

(CONTINUED AT LEFT)

BEARING PIECE, 1" X 6" X 30"
(2 REQD). NAIL TO THE LTL
BRACES W/4-6d NAILS AT
EACH JOINT.

BEARING PIECE, 1" X 6" X 39"
(4 REQD). NAIL TO THE LTL
BRACES W/4-6d NAILS AT
EACH JOINT.

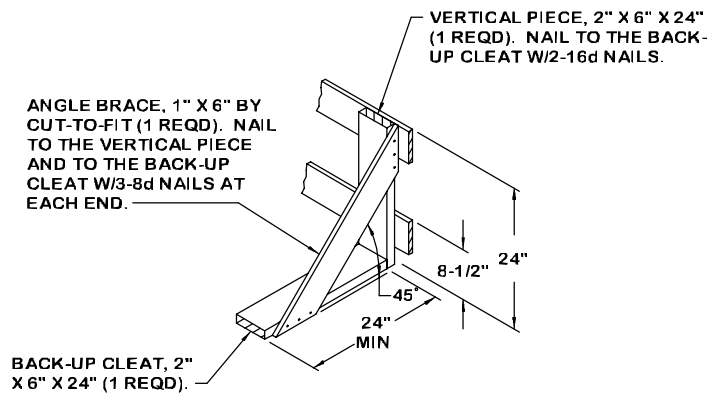
LTL BRACE (6 REQD). SEE THE
DETAIL BELOW. NAIL EACH LTL
BRACE TO THE TRAILER FLOOR
W/7-10d NAILS. SEE SPECIAL
NOTE 5 BELOW.



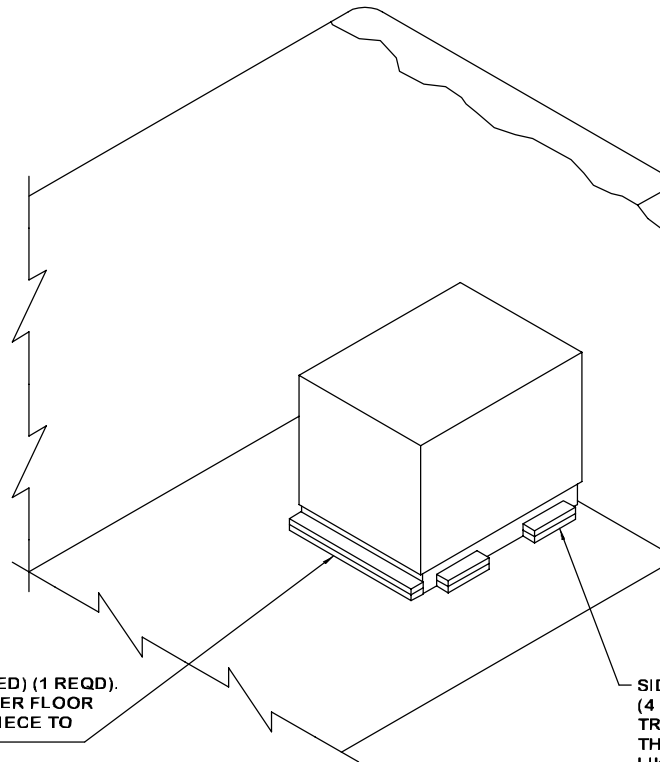
ISOMETRIC VIEW

SPECIAL NOTES:

1. A 7'-8" 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 IS THE ALTERNATED CONTAINERS UNIT (BASIC HEIGHT) HAVING OVER-ALL DIMENSIONS OF 35-3/4" LONG BY 47'-2" WIDE BY 38-1/2" HIGH AND WEIGHING APPROXIMATELY 1,432 POUNDS. THE DEPICTED PROCEDURES ARE ALSO APPLICABLE FOR THE OTHER UNITS DEPICTED ON PAGES 4 AND 5.
3. THE POSITIONING OF A UNIT IS OPTIONAL. THE UNIT MAY BE POSITIONED AS SHOWN ABOVE OR MAY BE LOCATED IN THE CORNER OF THE TRAILER. IF THE TRAILER DOES NOT HAVE A SQUARE FRONT, A FORWARD BLOCKING ASSEMBLY MUST BE INSTALLED WHEN POSITIONING A UNIT IN THE CORNER OF THE TRAILER.
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 TWO ROWS, WITH THE UNITS POSITIONED AGAINST OPPOSITE SIDEWALLS. ANTI-SWAY BRACES WILL BE INSTALLED BETWEEN THE LATERALLY ADJACENT UNITS.
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.



LTL BRACE

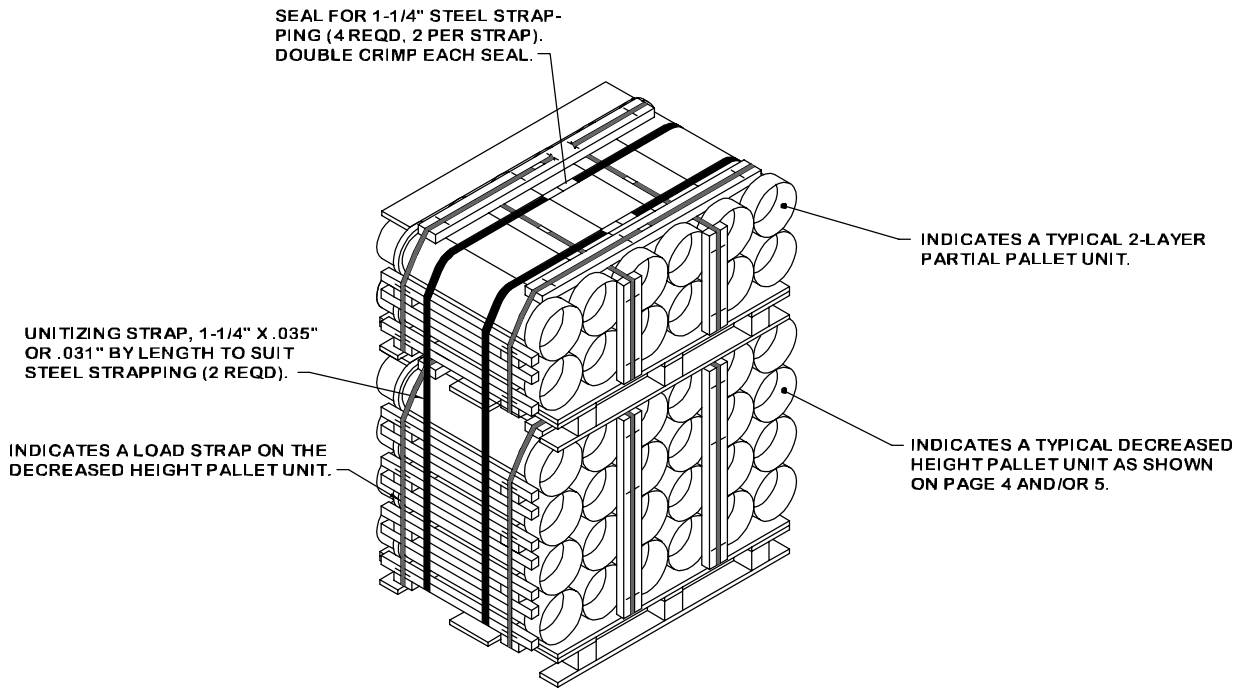


REAR HEADER, 2" X 6" X 36" (DOUBLED) (1 REQD).
NAIL THE FIRST PIECE TO THE TRAILER FLOOR
W/3-10d NAILS. NAIL THE SECOND PIECE TO
THE FIRST IN A LIKE MANNER.

SIDE BLOCKING, 2" X 6" X 12" (DOUBLED)
(4 REQD). NAIL THE FIRST PIECE TO THE
TRAILER FLOOR W/4-10d NAILS. NAIL
THE SECOND PIECE TO THE FIRST IN A
LIKE MANNER.

SPECIAL NOTES:

1. A 7'-8" 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 IS THE ALTERNATED CONTAINERS UNIT (INCREASED HEIGHT), HAVING OVERALL DIMENSIONS OF 35-3/4" LONG BY 48" WIDE BY 46-1/8" HIGH AND WEIGHING APPROXIMATELY 1,432 POUNDS. THE PROCEDURES ARE ALSO APPLICABLE FOR THE OTHER UNITS ON PAGES 4 AND 5.
3. THE POSITIONING OF THE UNIT IS OPTIONAL. IF THE TRAILER BEING LOADED HAS A SQUARE FRONT, THE PALLET UNIT MAY BE LOCATED IN THE CORNER OF THE TRAILER AND TWO LESS SIDE BLOCKING PIECES WILL BE USED.
4. FOR EASE OF INSTALLATION, 2" X 6" PIECES MAY BE USED IN LIEU OF 2" X 4" LUMBER.
5. FOR GREATER LTL LOADS USING THE NAILED HEADER METHOD, REFER TO THE NAILING CHARTS ON PAGE 13 FOR GUIDANCE.



SECUREMENT OF A PARTIAL PALLET UNIT ON TOP OF A FULL PALLET UNIT

SPECIAL NOTES:

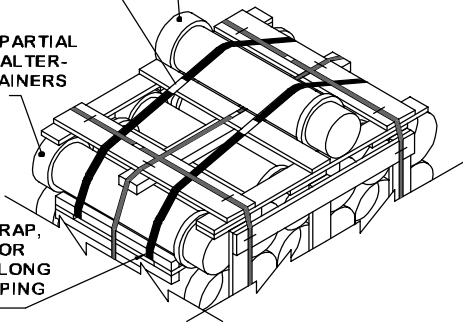
1. THE VIEW SHOWN ABOVE DEPICTS A PARTIAL 2-LAYER PALLET UNIT POSITIONED ON TOP OF A FULL-HEIGHT PALLET UNIT AND UNITIZED WITH TWO VERTICAL UNITIZING STRAPS. PLACEMENT WITHIN THE LOAD IS OPTIONAL, EXCEPT THAT IT WILL NOT BE POSITIONED WITHIN A GROUP WHICH IS BUNDLED TOGETHER OR WITHIN A STACK WHICH IS 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. THE PROCEDURES ON THIS PAGE ARE PRESENTED AS GUIDANCE IN THE SHIPMENT OF THESE PARTIAL UNITS.
3. FOR SHIPMENT OF ONE THROUGH FIVE "LEFTOVER" CONTAINERS, SEE THE PROCEDURES ON PAGE 44 OF THIS DRAWING.

SEAL FOR 1-1/4" STRAP (2 REQD, 1 PER STRAP). CRIMP EACH SEAL WITH TWO PAIR OF NOTCHES.

INDICATES A PARTIAL VIEW OF THE ALTERNATED CONTAINERS PALLET UNIT.

UNITIZING STRAP, 1-1/4" X .035" OR .031" X 11'-6" LONG STEEL STRAPPING (2 REQD).

INDICATES ONE LEFTOVER CONTAINER. POSITION AS SHOWN FOR ALTERNATED CONTAINERS UNITS OR SO AS TO BE CENTERED ON WIDTH OF UNIT FOR FLAT DUNNAGE AND ROUTED DUNNAGE METHOD UNITS.



SECUREMENT OF ONE CONTAINER

(ALTERNATED CONTAINERS UNIT)

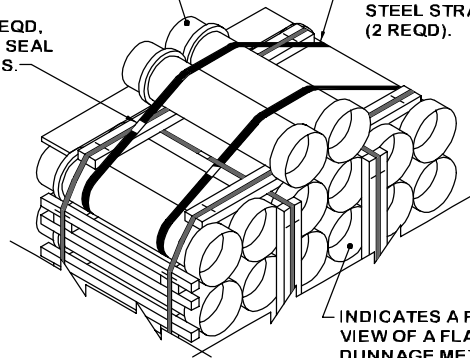
SPECIAL NOTES:

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 WHICH IS INSUFFICIENT TO FORM A FULL-LAYERED PARTIAL UNIT FOR SECUREMENT ON TOP OF A FULL PALLET UNIT AS SHOWN ON PAGE 43.
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. FOR THE ALTERNATED CONTAINERS UNITS AND THE FLAT DUNNAGE METHOD UNITS, THE UNITIZING STRAP MUST NOT GO AROUND THE INTERMEDIATE DUNNAGE ASSEMBLY. THE STRAP MUST BE THREADED BEHIND THE 2" X 2" PIECES OF THE 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.

INDICATES TWO LEFTOVER CONTAINERS. POSITION SO AS TO BE CENTERED ON THE WIDTH OF THE UNIT (CENTER ON JOINTS FOR ROUTED DUNNAGE METHOD UNIT).

SEAL FOR 1-1/4" STRAP (2 REQD, 1 PER STRAP). CRIMP EACH SEAL WITH TWO PAIR OF NOTCHES.

UNITIZING STRAP, 1-1/4" X .035" OR .031" X 12'-0" LONG STEEL STRAPPING (2 REQD).



INDICATES A PARTIAL VIEW OF A FLAT DUNNAGE METHOD PALLET UNIT.

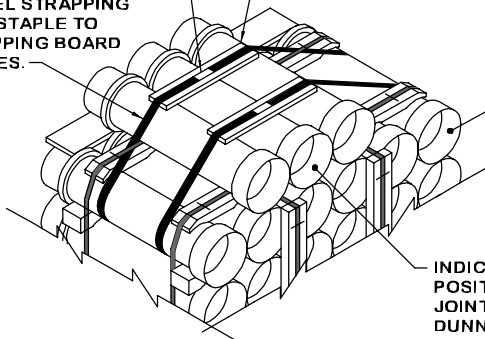
SECUREMENT OF TWO CONTAINERS

(FLAT DUNNAGE METHOD UNIT)

SEAL FOR 1-1/4" STRAP (2 REQD, 1 PER STRAP). CRIMP EACH SEAL WITH TWO PAIR OF NOTCHES.

UNITIZING STRAP, 1-1/4" X .035" OR .031" X 12'-6" LONG STEEL STRAPPING (2 REQD). STAPLE TO THE STRAPPING BOARD W/2 STAPLES.

STRAPPING BOARD, 1" X 4" X 18" (2 REQD). INCREASE THE LENGTH OF THE STRAPPING BOARD 9" FOR EACH ADDITIONAL CONTAINER BEING SECURED.

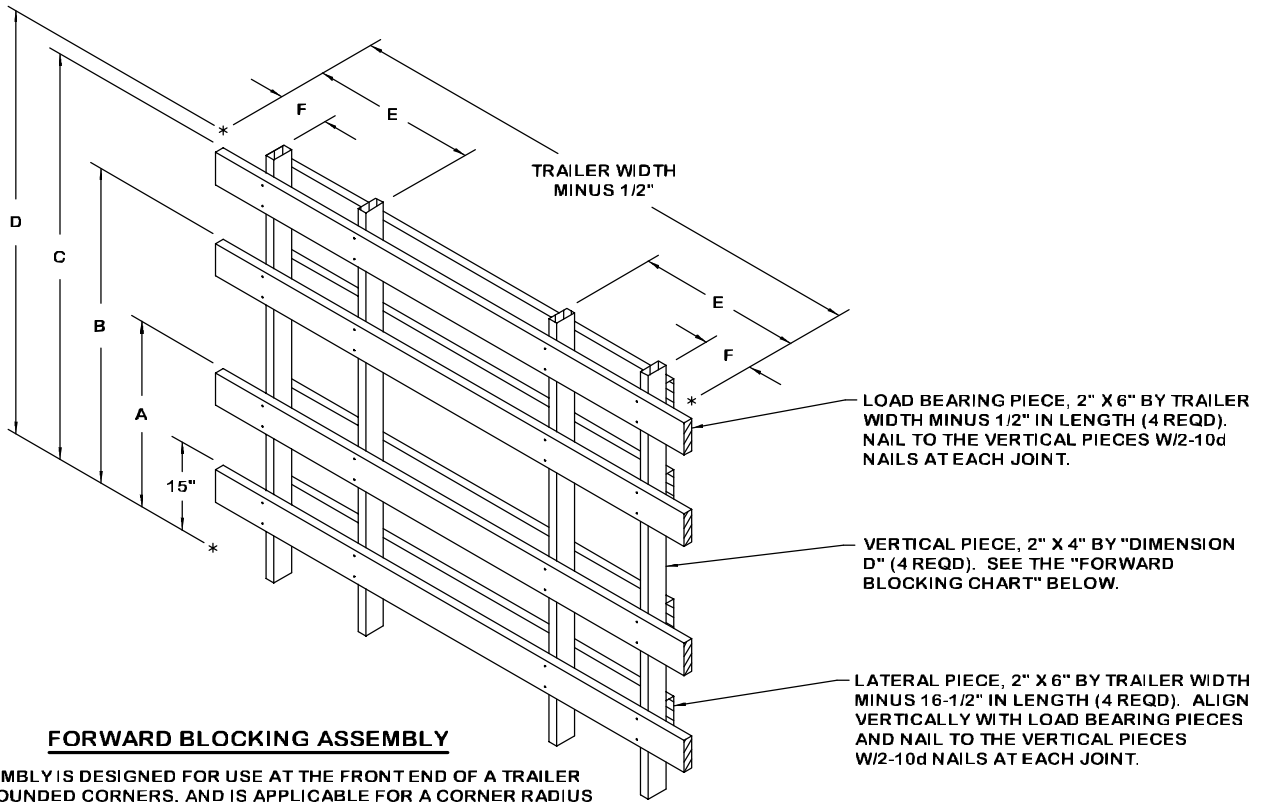


INDICATES A PARTIAL VIEW OF THE ROUTED DUNNAGE METHOD PALLET UNIT.

INDICATES THREE LEFTOVER CONTAINERS. POSITION SO AS TO BE CENTERED ON THE JOINTS OF CONTAINERS BELOW FOR ROUTED DUNNAGE METHOD UNIT, OR CENTERED ON WIDTH OF UNIT FOR FLAT DUNNAGE METHOD OR ALTERNATED CONTAINERS UNIT.

SECUREMENT OF THREE CONTAINERS

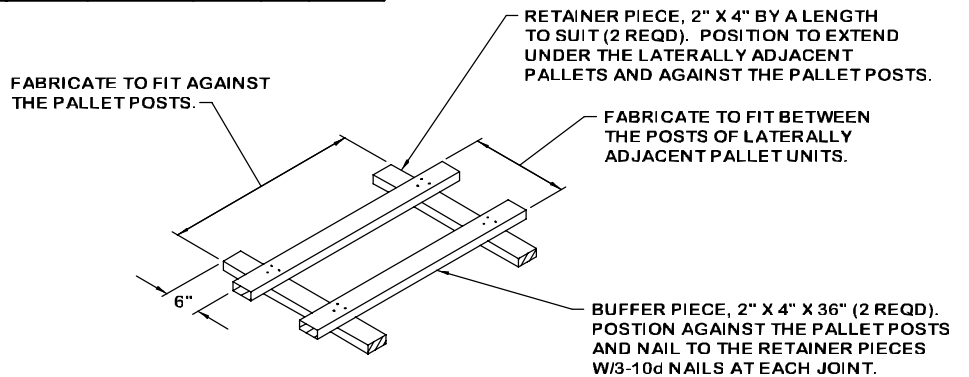
(ROUTED DUNNAGE METHOD UNIT)



FORWARD BLOCKING ASSEMBLY

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.

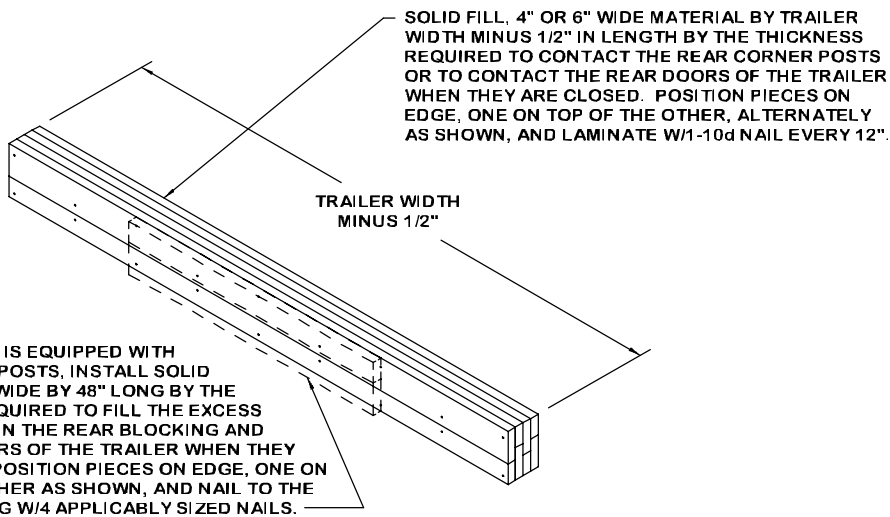
FORWARD BLOCKING CHART						
PALLET UNIT TYPE	DIMENSIONS					
	A	B	C	D	E	F
ALTERNATED (BASIC)	31-1/2"	53-1/2"	69"	72"	28"	8-1/2"
ALTERNATED (INCREASED) ■	38"	61"	6'-11"	7'-0"	28"	8-1/2"
FLAT (BASIC) ▲	42"	63"	7'-6"	7'-9"	29"	8"
FLAT (DECREASED)	33-1/2"	55"	6'-1-1/2"	6'-4"	29"	8"
ROUTED (BASIC) ●	41-1/2"	63-1/2"	7'-6"	7'-8"	28"	8"
ROUTED (DECREASED)	33"	55"	6'-1"	6'-3"	28"	8"
■ INCREASED W/BASIC ON TOP	38"	61"	6'-5"	6'-8"	28"	8-1/2"
▲ BASIC W/DECREASED ON TOP	42"	63"	6'-9"	7'-0"	29"	8"
● BASIC W/DECREASED ON TOP	41-1/2"	63-1/2"	6'-9"	7'-0"	28"	8"



ANTI-SWAY BRACE

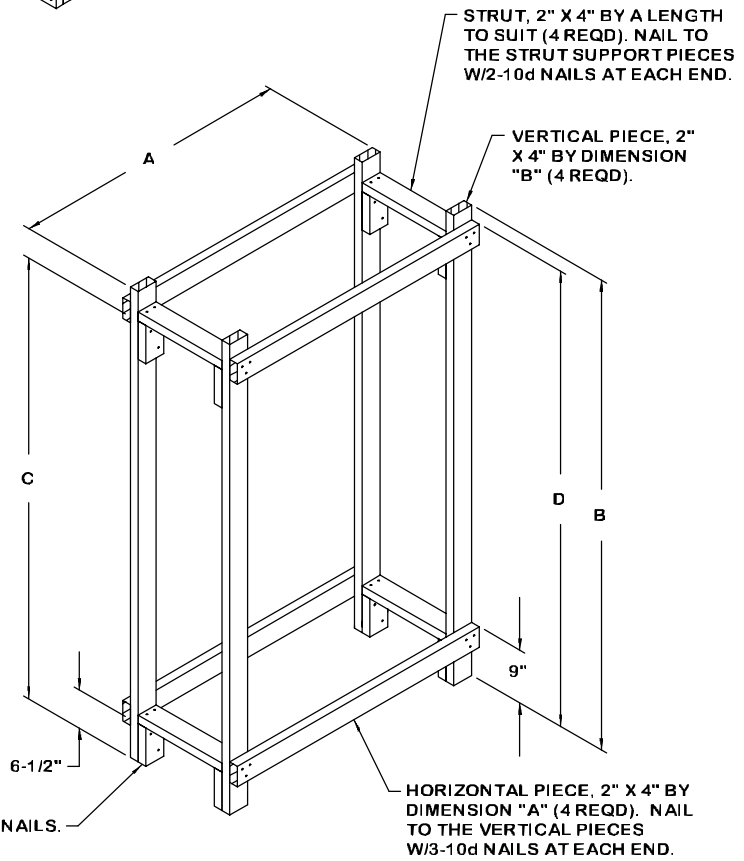
SEE THE "CRIB FILL" DETAIL ON PAGE 46 FOR AN ALTERNATIVE METHOD OF LATERAL BRACING.

DETAILS



REAR BLOCKING ASSEMBLY A

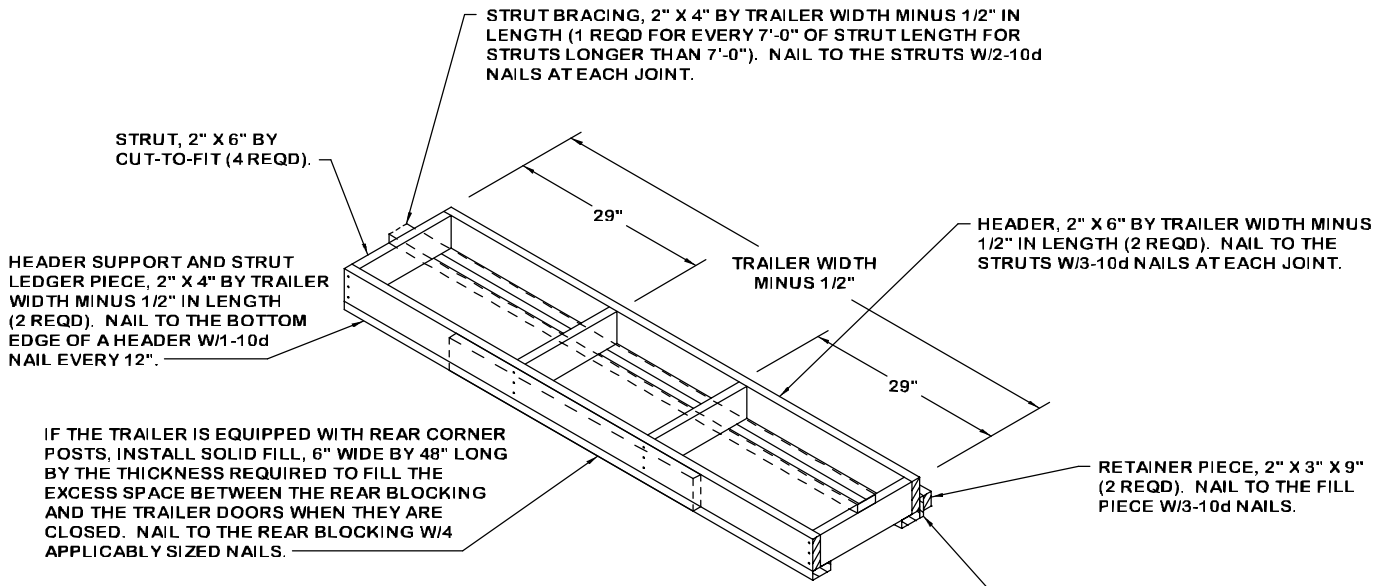
THIS REAR BLOCKING IS DESIGNED FOR USE AT THE REAR OF ANY OF THE FULL LOADS SHOWN HEREIN WHEN THE SPACE BETWEEN THE LADING AND THE TRAILER DOORS IS LESS THAN 9" BUT MORE THAN 1-1/2".



CRIB FILL

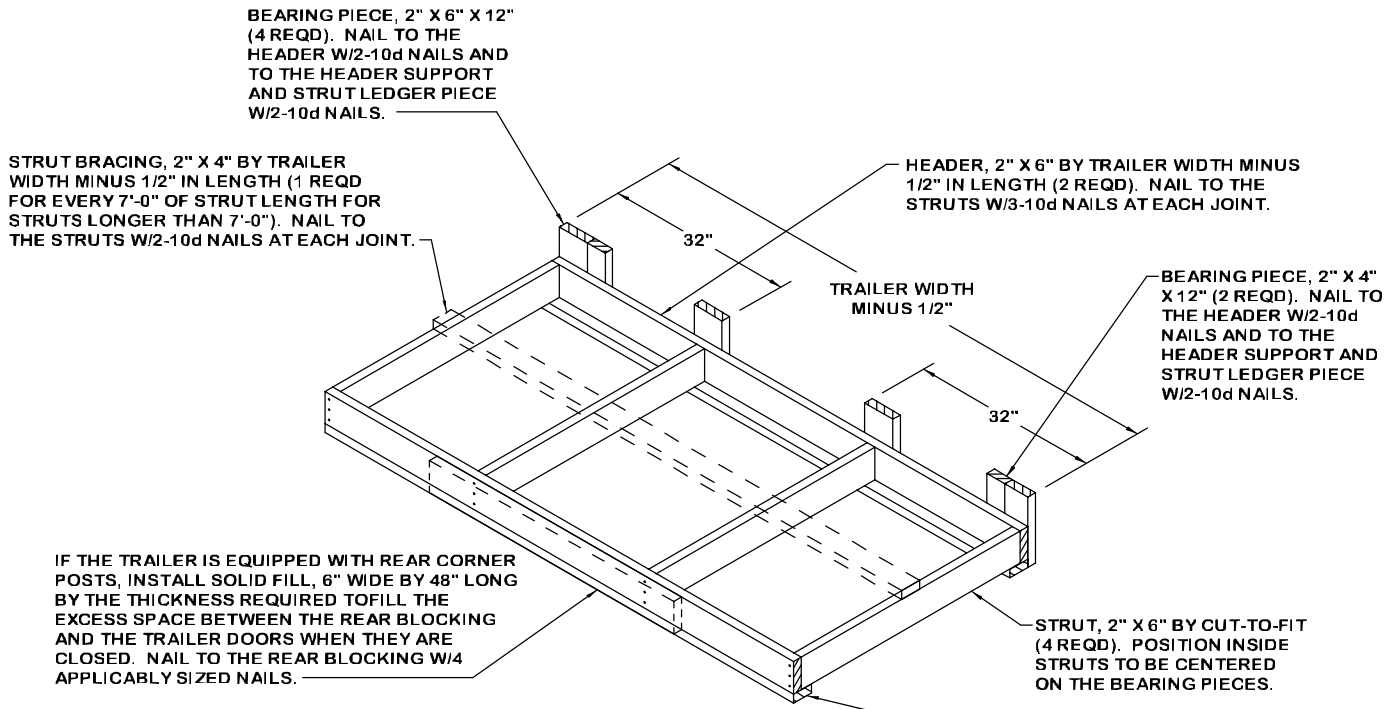
CRIB FILL MAY BE USED WITHIN A LOAD IN LIEU OF A SPECIFIED ANTI-SWAY BRACE, IF DESIRED.

CRIB FILL CHART							
PALLET UNIT	DIMENSION						
	A	1-HIGH			2-HIGH		
		B	C	D	B	C	D
ALTERNATED (BASIC)	47-1/2"	26"	21"	23-1/2"	65"	59-1/2"	62"
ALTERNATED (INCREASED)	47-1/2"	34"	29"	31-1/2"	6'-8"	6'-3"	6'-5-1/2"
FLAT (BASIC)	52-1/2"	36"	31"	33-1/2"	7'-0"	6'-7"	6'-9-1/2"
FLAT (DECREASED)	52-1/2"	28"	22-1/2"	25"	67"	62"	64-1/2"
ROUTED (BASIC)	51"	36"	30-1/2"	33"	7'-0"	6'-7"	6'-9-1/2"
ROUTED (DECREASED)	51"	27"	22"	24-1/2"	67"	62"	64-1/2"



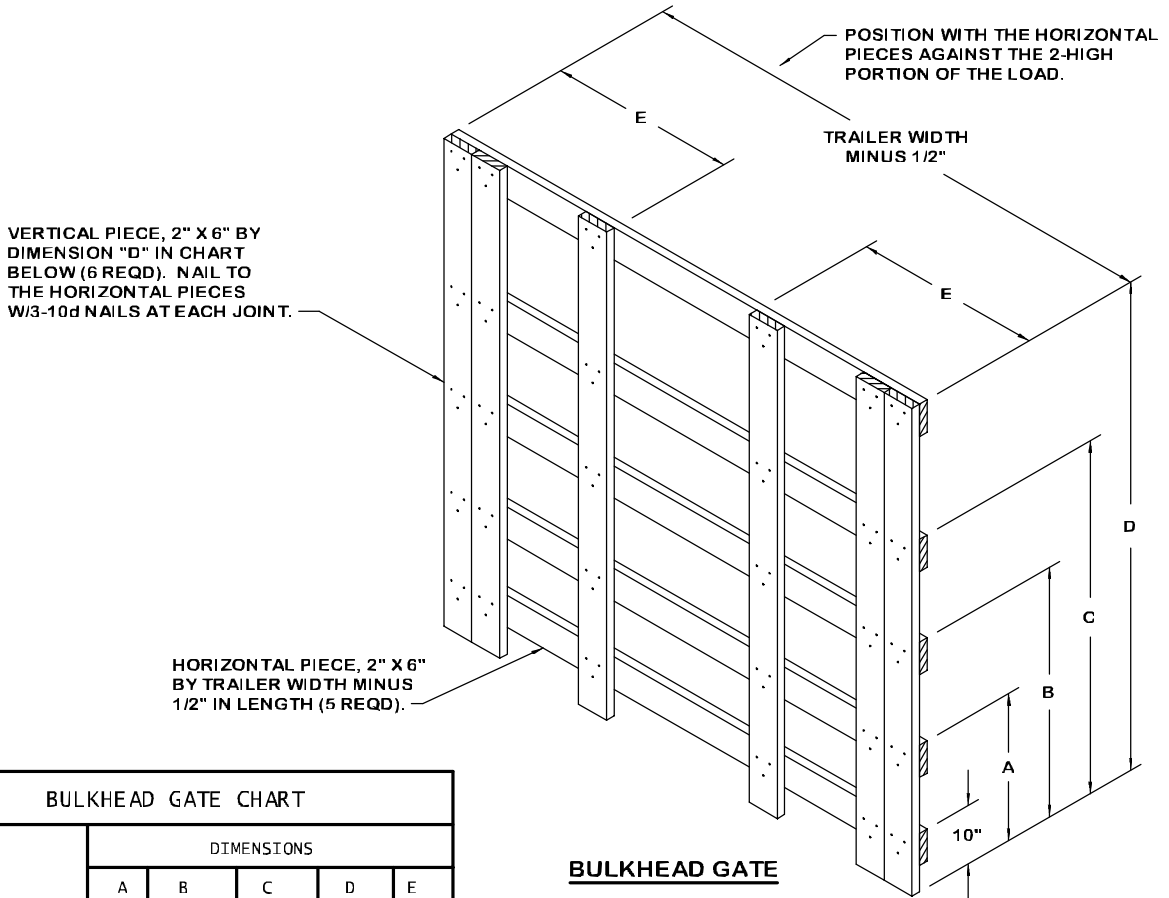
REAR BLOCKING ASSEMBLY B

THIS ASSEMBLY IS DESIGNED FOR USE AT THE REAR OF THE ALTERNATED CONTAINERS UNIT LOADS SHOWN ON PAGES 6 AND 10 WHEN THE EXCESS SPACE BETWEEN THE LADING AND THE TRAILER DOORS IS MORE THAN 9".



REAR BLOCKING ASSEMBLY C

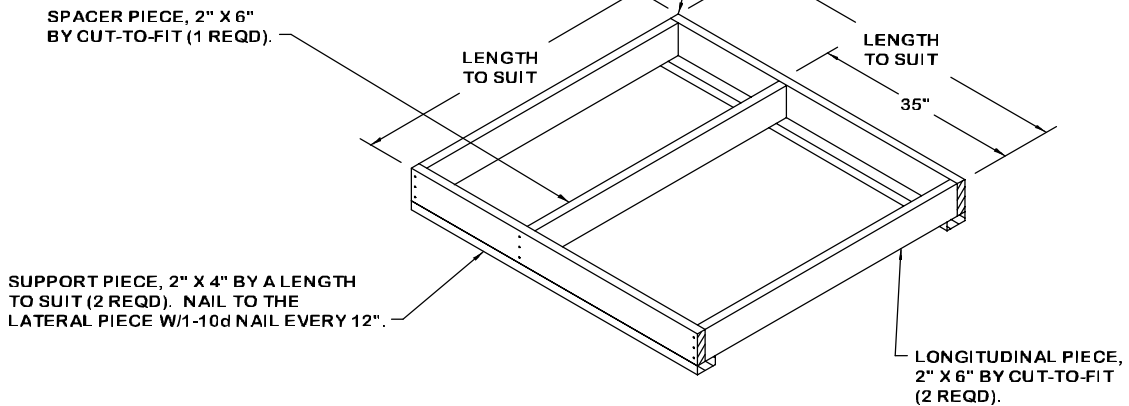
THIS ASSEMBLY IS DESIGNED FOR USE AT THE REAR OF THE FLAT DUNNAGE METHOD UNIT LOADS AND THE ROUTED DUNNAGE METHOD UNIT LOADS WHEN THE EXCESS SPACE BETWEEN THE LADING AND THE TRAILER DOORS IS MORE THAN 9".



BULKHEAD GATE

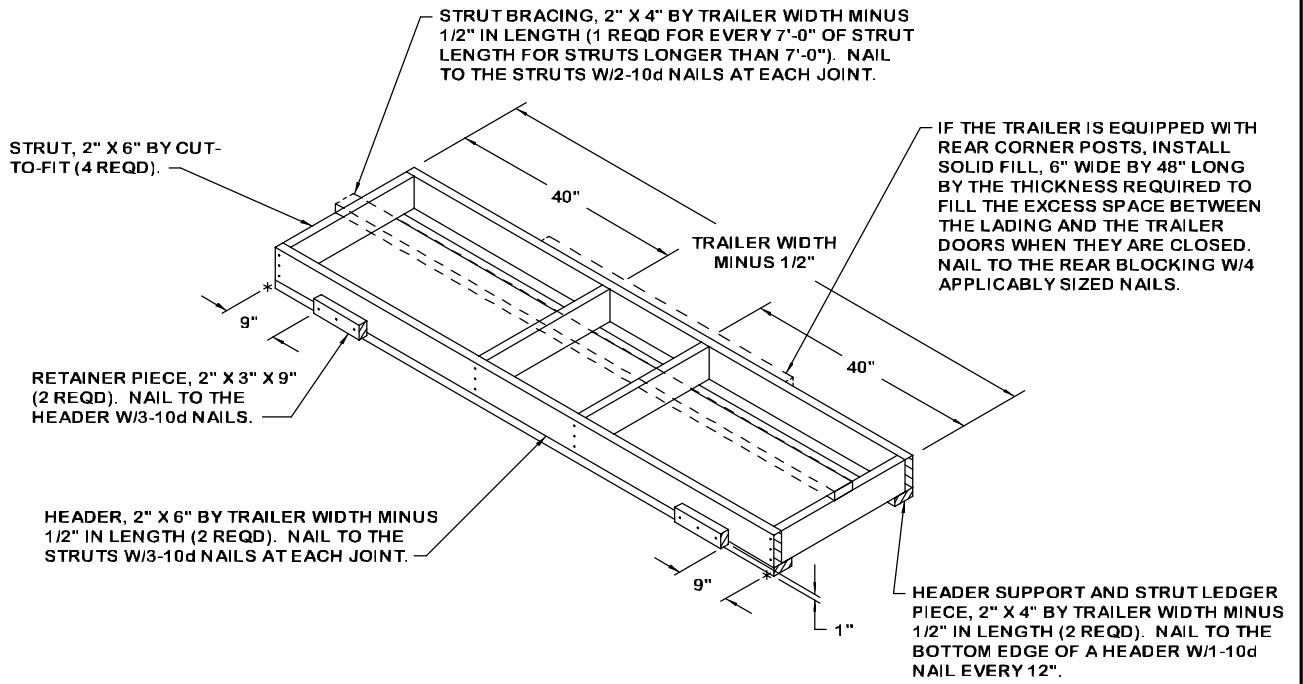
THIS GATE IS DESIGNED FOR USED IN THE ALTERNATIVE LOADING PROCEDURE LOAD ON PAGE 38.

BULKHEAD GATE CHART					
PALLET UNIT TYPE	DIMENSIONS				
	A	B	C	D	E
ALTERNATED (BASIC)	24"	32"	48-1/2"	63"	31"
ALTERNATED (INCREASED) ■	24"	39-1/2"	56"	6'-6"	31"
FLAT (BASIC) ▲	25"	42-1/2"	60"	6'-11"	32"
FLAT (DECREASED)	25"	34"	50"	66"	32"
ROUTED (BASIC) ●	25"	42-1/2"	60"	6'-11"	32"
ROUTED (DECREASED)	25"	34"	50"	66"	32"
■ INCREASED W/BASIC ON TOP	24"	39-1/2"	56"	70"	31"
▲ BASIC W/DECREASED ON TOP	24"	42-1/2"	59"	6'-3"	32"
● BASIC W/DECREASED ON TOP	25"	42-1/2"	59"	6'-2"	32"



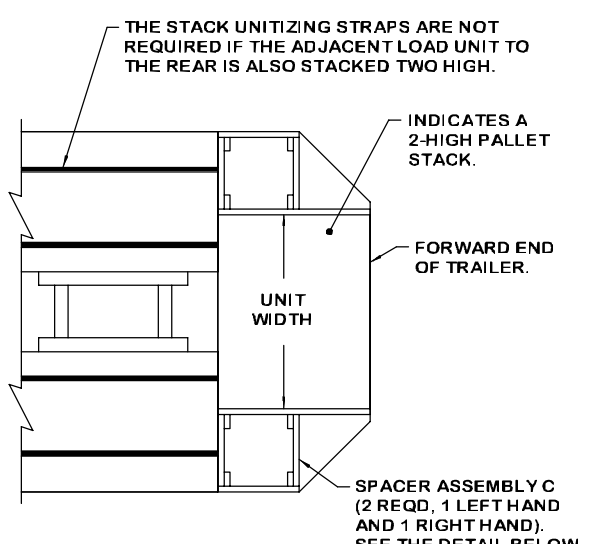
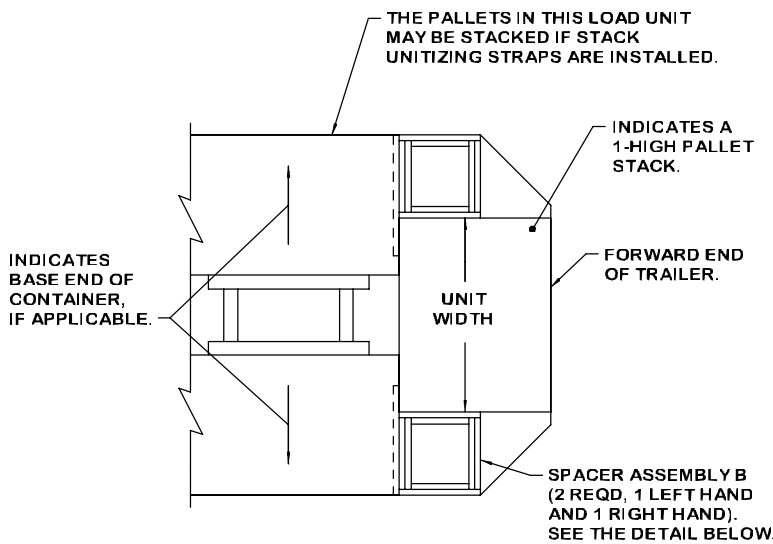
SPACER ASSEMBLY A

THIS ASSEMBLY IS DESIGNED FOR USE IN THE PLACE OF A PALLET UNIT WHICH IS OMITTED FROM THE BOTTOM LAYER OF A LOAD IN A CONVENTIONAL VAN TRAILER, AS TYPICALLY SHOWN IN THE LOAD ON PAGE 38.



REAR BLOCKING ASSEMBLY D

THIS ASSEMBLY IS FOR USE AT THE REAR OF AN ALTERNATED CONTAINERS UNIT LOAD AS SHOWN ON PAGES 8 AND 12 WHEN THE EXCESS SPACE BETWEEN THE LADING AND THE TRAILER DOORS IS MORE THAN 9". NOTE THAT THE ABOVE VIEW IS ROTATED 180° FROM THE POSITION IN WHICH THE REAR BLOCKING ASSEMBLY WILL BE INSTALLED.



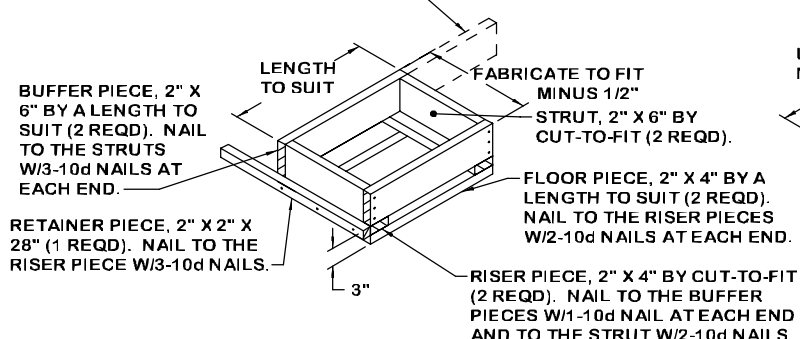
ALTERNATIVE FORWARD LOADING PATTERN A

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 ROUTED DUNNAGE METHOD UNIT (BASIC HEIGHT) IS SHOWN. THE PROCEDURES ARE ALSO APPLICABLE FOR THE OTHER UNITS DEPICTED ON PAGES 4 AND 5.

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 PALLETS 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 ROUTED DUNNAGE METHOD (BASIC HEIGHT) IS SHOWN. THE PROCEDURES ARE ALSO APPLICABLE FOR THE OTHER UNITS DEPICTED ON PAGES 4 AND 5.

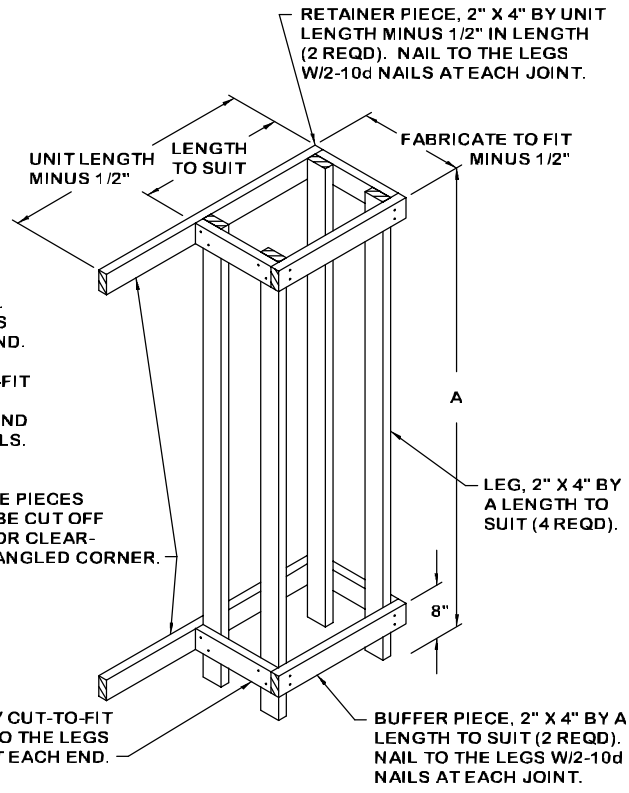
IF THE LONGITUDINALLY ADJACENT LOAD UNIT IS STACKED AND SECURED WITH STRAPPING AND STRAPPING BOARD ASSEMBLIES, THIS BUFFER PIECE MUST BE EXTENDED TO WITHIN 1/2" OF THE FRONT WALL OF THE TRAILER IN LIEU OF USING THE RETAINER PIECE.



SPACER ASSEMBLY B

THIS ASSEMBLY IS DESIGNED FOR LATERAL BRACING OF A SINGLE PALLET UNIT 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 A" VIEW ABOVE. RIGHT HAND AND LEFT HAND SPACER ASSEMBLIES ARE REQUIRED.

ENDS OF THESE PIECES MAY NEED TO BE CUT OFF TO PROVIDE FOR CLEARANCE OF THE ANGLED CORNER.



SPACER ASSEMBLY C

THIS ASSEMBLY IS DESIGNED FOR LATERAL BRACING OF A TWO-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 180° FROM THE POSITION IN WHICH IT WILL BE INSTALLED IN A LOAD. RIGHT HAND AND LEFT HAND SPACER ASSEMBLIES ARE REQUIRED.

SPACER ASSEMBLY C CHART	
PALLET UNIT TYPE	DIM A
ALTERNATED (BASIC)	46"
ALTERNATED (INCREASED) ■	6' - 5"
FLAT (BASIC) ▲	6' - 10"
FLAT (DECREASED)	49"
ROUTED (BASIC) ●	6' - 9"
ROUTED (DECREASED)	64"
■ INCREASED W/BASIC ON TOP	54"
▲ BASIC W/DECREASED ON TOP	57"
● BASIC W/DECREASED ON TOP	57"