

# LOADING AND BRACING (TL & LTL) IN VAN TRAILERS<sup>⊕</sup> OF CBU ITEMS PACKED IN MK427 CONTAINERS

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

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**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 CBU ITEMS PACKED IN THE MK427 MOD 0 OR MOD 1 CONTAINERS WHEN ONE OF THE FOLLOWING ITEMS IS PACKED THEREIN:  
 CBU-MK20 AND MODS (ROCKEYE II)  
 CBU-78/B (GATOR)  
 CBU-59/B, COMPLETE (APAM)  
 CBU (T-1)/B, TRAINING

SUBSEQUENT REFERENCE TO CONTAINER HEREIN MEANS THE MK427 MOD 0 OR MOD 1 CONTAINER WITH CBU ITEMS INSTALLED.

MK427 MOD 0 CONTAINER:  
102-17/32" L X 23-5/32" W X 25-31/32" H  
CUBE - 35.7 CU FT  
GROSS WEIGHT - 915 LBS OR 1,143 LBS.

MK427 MOD 1 CONTAINER:  
103" L X 23-5/8" W X 26-1/4" H  
CUBE - 37.0 CU FT  
GROSS WEIGHT - 965 LBS (E173), 972 LBS (E819), OR 1,179 LBS.

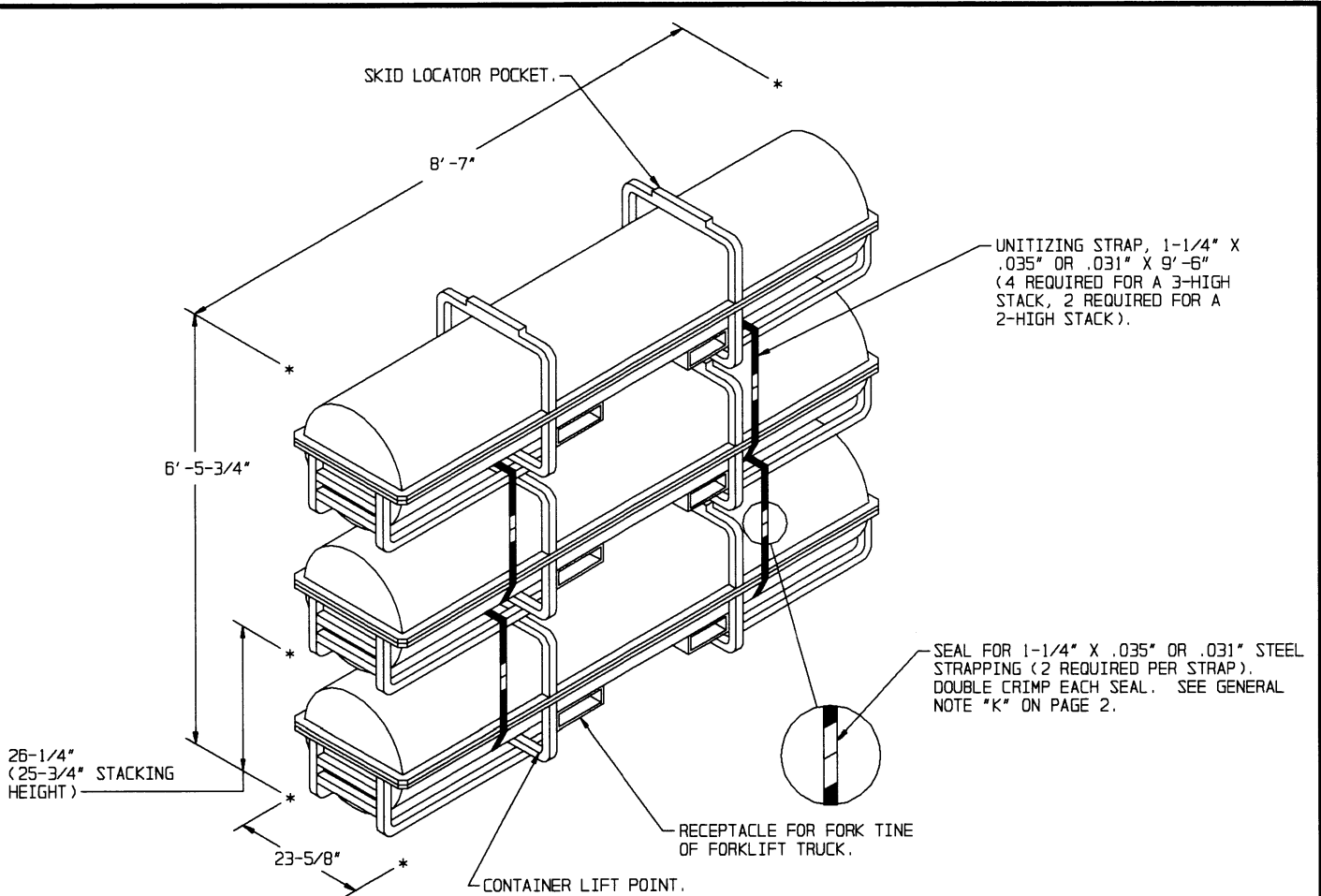
- C. THE OUTLOADING PROCEDURES DEPICTED WITHIN THIS DOCUMENT ARE APPLICABLE FOR SHIPMENTS IN CONVENTIONAL TYPE VAN TRAILERS AND APPLY TO TRAILERS HAVING WOOD, OR WOOD AND METAL, OR ALL METAL FLOORS. VAN TRAILERS WHICH ARE 45'-0" LONG BY 8'-2" WIDE (INSIDE DIMENSION) AND 45'-0" LONG BY 7'-8" WIDE HAVE BEEN SHOWN, HOWEVER, THE PROCEDURES ARE ALSO APPLICABLE FOR TRAILERS WHICH ARE 89" THRU 99" IN WIDTH AND FOR TRAILERS OF OTHER LENGTHS FROM THE SHORTEST TO THE LONGEST AVAILABLE (REF: 24' TO 53'), AND FOR STRAIGHT TRUCK VANS. THE 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 SEMITRAILER CARRYING THE LADING MUST NOT EXCEED THE MAXIMUM GROSS WEIGHT ALLOWED FOR THE STATE OR STATES THRU WHICH THE LOAD IS TO BE TRANSPORTED BY MOTOR CARRIER. LIKEWISE, THE GROSS WEIGHT ON A SINGLE OR TANDEM AXLE MUST NOT EXCEED THE MAXIMUM ALLOWABLE WEIGHT. IF THERE IS ANY DOUBT AS TO WHETHER THE TOTAL GROSS WEIGHT OR AXLE WEIGHT EXCEEDS THE MAXIMUM ALLOWED, WEIGHT SHOULD BE VERIFIED BY ACTUALLY WEIGHING THE LOADED VEHICLE.
- F. NOTICE: A SHIPMENT WILL BE POSITIONED IN THE TRAILER CONSISTENT WITH STATE WEIGHT LAWS. THE NUMBER OF LADING UNITS MAY BE ADJUSTED TO FIT THE SIZE OF THE TRAILER TO BE LOADED OR THE QUANTITY TO BE SHIPPED. COMBINATIONS OF THE OUTLOADING PROCEDURES SPECIFIED MAY BE USED, HOWEVER, THE APPROVED METHODS SHOWN MUST BE FOLLOWED AS CLOSELY AS POSSIBLE FOR BLOCKING, BRACING, AND STAYING OF THE DESIGNATED ITEMS.
- G. THE "LOAD AS SHOWN" FOR THE LOADS DEPICTED HEREIN ARE 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.

(CONTINUED AT RIGHT)

**MATERIAL SPECIFICATIONS**

- LUMBER - - - - - : SEE TM 743-200-1 (DUNNAGE LUMBER) AND FED SPEC MM-L-751.
- NAILS - - - - - : FED SPEC FF-N-105; COMMON.
- STRAPPING, STEEL - - : ASTM D3953; FLAT STRAPPING, TYPE 1, HEAVY DUTY, FINISH A, B (GRADE 2), OR C.
- SEAL, STRAP - - - - : ASTM D3953; CLASS H, FINISH A, B (GRADE 2), OR C, DOUBLE NOTCH TYPE, STYLE I, II, OR IV.
- WIRE, CARBON STEEL - - : ASTM A853; ANNEALED AT FINISH, BLACK OXIDE FINISH, .0800" DIA, GRADE 1006 OR BETTER.

- H. OTHER TYPES OF LADING ITEMS MAY BE LOADED INTO TRAILERS WHICH ARE PARTIALLY LOADED WITH THE DESIGNATED CBU ITEMS, PROVIDING THE TOTAL LOAD IS COMPATIBLE, EXISTING DIRECTIVES ARE NOT VIOLATED, AND THE OTHER LADING ITEMS ARE BLOCKED AND BRACED TO EQUAL THE BLOCKING AND BRACING CRITERIA SPECIFIED HEREIN.
- J. MOST LOADS ARE SHOWN IN TRAILERS HAVING ROUNDED CORNERS AT THE FORWARD END. IF THE 8'-2" WIDE CONVENTIONAL VAN TRAILER BEING USED FOR A 4-WIDE LOAD IS EQUIPPED WITH A SQUARE FRONT OR WITH AN INSTALLED BULKHEAD, OMIT THE FORWARD BLOCKING ASSEMBLY, PIECE MARKED ①, AND POSITION THE MK427 CONTAINERS DIRECTLY AGAINST THE FORWARD PORTION OF THE TRAILER. A FORWARD BLOCKING ASSEMBLY IS REQUIRED IN THE TRAILERS FOR THE 3-WIDE LOADS TO PROVIDE FOR LATERAL BRACING OF THE CONTAINERS.
- K. WHEN STEEL STRAPPING IS SEALED AT AN END-OVER-END LAP JOINT, A MINIMUM OF ONE SEAL WITH TWO PAIR OF NOTCHES WILL BE USED TO SEAL THE JOINT WHEN A NOTCH-TYPE SEALER IS BEING USED. A MINIMUM OF TWO SEALS, BUTTED TOGETHER WITH TWO PAIR OF CRIMPS PER SEAL WILL BE USED TO SEAL THE JOINT WHEN A CRIMP-TYPE SEALER IS BEING USED. REFER TO THE "STRAP JOINT A" AND "STRAP JOINT B" DETAILS ON PAGE 20 FOR GUIDANCE.
- L. DUNNAGE LUMBER SPECIFIED THROUGHOUT THIS PROCEDURAL DRAWING IS OF NOMINAL SIZE. FOR EXAMPLE, 1" X 4" MATERIAL IS ACTUALLY 3/4" THICK BY 3-1/2" WIDE AND 2" X 6" MATERIAL IS ACTUALLY 1-1/2" THICK BY 5-1/2" WIDE.
- M. NOTICE: A STAGGERED NAILING PATTERN WILL BE USED WHEREVER POSSIBLE WHEN NAILS ARE DRIVEN INTO JOINTS OF DUNNAGE ASSEMBLIES. ALSO, A STAGGERED NAILING PATTERN WILL BE USED WHEN DUNNAGE IS NAILED TO THE FLOOR OF THE TRANSPORTING VEHICLE, OR WHEN LAMINATING DUNNAGE. THE NAILING PATTERN WILL BE ADJUSTED AS REQUIRED SO THAT A NAIL DOES NOT PENETRATE INTO OR NEAR A CRACK BETWEEN FLOOR BOARDS. ADDITIONALLY, THE NAILING PATTERN FOR AN UPPER PIECE OF LAMINATED DUNNAGE WILL BE ADJUSTED AS REQUIRED SO THAT A NAIL FOR THAT PIECE WILL NOT BE DRIVEN THROUGH THE PIECE 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. IF THE SPACE AT THE REAR OF THE LOAD, BETWEEN THE MK427 CONTAINERS AND THE REAR DOOR MEASURES 1-1/2" OR LESS REAR BLOCKING IS NOT REQUIRED. IF THE SPACE AT THE REAR OF THE LOAD IS GREATER THAN 1-1/2" BUT LESS THAN 9", USE THE "REAR BLOCKING ASSEMBLY A" AS DEPICTED ON PAGE 15. IF THE VOID AT THE REAR OF THE LOAD IS 9" OR GREATER, USE THE "REAR BLOCKING ASSEMBLY B", AS SHOWN ON PAGE 19.
- Q. CAUTION: WHEN POWER OR PNEUMATIC NAILERS ARE BEING USED IN THE APPLICATION OF NAILED FLOORLINE BLOCKING OR BRACING, CONTAINERS 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. 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 25.4 MM AND ONE POUND EQUALS 0.454 KG.



**TYPICAL STACK DETAIL**

MOD 1 SHOWN.

(UNITIZING AND HANDLING GUIDANCE CONTINUED)

UNITIZING AND HANDLING GUIDANCE

1. STACKING CONTAINERS FOR UNITIZING.

- A. AN UPPER CONTAINER SHOULD BE PLACED AS CLOSE AS POSSIBLE IN VERTICAL ALIGNMENT WITH THE NEXT LOWER CONTAINER.
- B. POSITION THE AFT END OF AN UPPER CONTAINER ABOVE THE AFT END OF THE NEXT LOWER CONTAINER.
- C. THE CONTAINER SKIDS OF AN UPPER CONTAINER SHOULD BE FULLY SEATED IN THE SKID LOCATOR POCKETS ON THE COVER OF THE NEXT LOWER CONTAINER.

2. INSTALLATION OF 1-1/4" X .035" OR .031" UNITIZING STRAPPING.

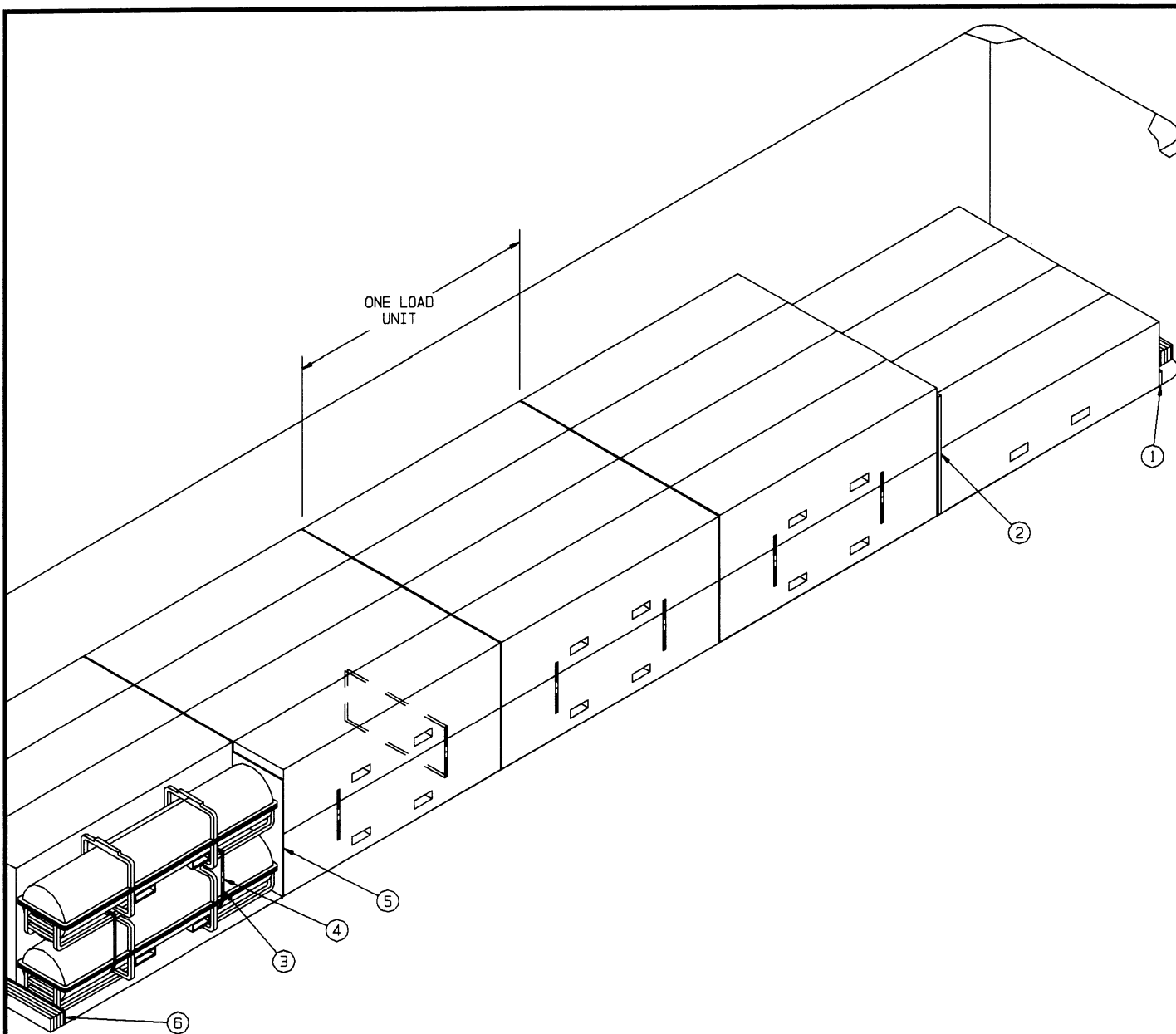
- A. EACH OF THE TWO SETS OF UNITIZING STRAPS SHOULD BE POSITIONED AROUND THE CONTAINERS AS SHOWN, SO THAT STRAPPING LAYS FLAT AND STRAIGHT WITH THE BODY SURFACES OF THE CONTAINERS; I.E., VERTICAL ALONG SIDES AND STRAIGHT ACROSS TOP AND BOTTOM OF THE STACK.
- B. STRAPPING WILL BE FIRMLY TENSIONED, AND EACH END-OVER-END LAP JOINT WILL BE SEALED WITH TWO DOUBLE CRIMPED STRAP SEALS AS SHOWN. THE LAP JOINTS WILL BE MADE ALONG THE SIDE OF THE STACK SO THAT THE SEALS WILL NOT BE IN CONTACT WITH THE CONTAINERS. DURING STRAP TENSIONING, CARE SHOULD BE EXERCISED TO ENSURE THAT THE CONTAINERS ARE NOT DAMAGED. EXCESS STRAPPING (STRAP ENDS) SHOULD BE CUT OFF OR BROKEN OFF NEAR THE JOINT SEALS.

3. CONTAINER OR CONTAINER STACK HANDLING.

NOTES: (1) APPROVED MATERIAL HANDLING EQUIPMENT (FORKLIFT TRUCKS, CRANES, HAND TRUCKS, DOLLIES, ROLLER ASSEMBLIES, SLINGS, SPREADER BARS, ETC.) IS SPECIFIED ELSEWHERE.

(CONTINUED AT RIGHT)

- A. ONLY APPROVED AND APPROPRIATELY SIZED MATERIALS HANDLING EQUIPMENT WILL BE USED FOR HANDLING THE DEPICTED CONTAINERS.
- B. IF HANDLING IS ACCOMPLISHED WITH A FORKLIFT TRUCK, THE CONTAINERS SHOULD BE HANDLED FROM A SIDE POSITION AS MUCH AS POSSIBLE. CARE MUST BE EXERCISED WHEN INSERTING FORKS UNDER A CONTAINER, TO PREVENT DAMAGE TO THE CONTAINER BY THE FORK TINES OR THE FORKLIFT PACKAGE GUARD. FOR END HANDLING MOVEMENTS, SUCH AS WILL BE NECESSARY DURING TRAILER LOADING, A UNITIZED STACK MAY BE HANDLED BY INSERTING THE FORK OF A FORKLIFT TRUCK UNDER THE SKIDS OF AN UPPER CONTAINER.
- C. IF ONE CONTAINER IS HANDLED BY SLINGING, THE SLING MAY BE ATTACHED TO THE LIFTING POINTS ON THE CONTAINER. HOWEVER, IF A TWO OR THREE-HIGH STACK IS HANDLED BY SLINGING, DO NOT ATTACH THE SLING TO THE LIFTING POINTS ON A CONTAINER. THE SLING USED MUST BE OF SUCH A DESIGN THAT THE LIFTING IS DONE ON THE BOTTOM OF THE LOWEST CONTAINER.
- D. WHEN LOADING A CONTAINER OR CONTAINER STACK, THE CONTAINER OR STACK WILL BE PARTIALLY PLACED INTO THE END OF THE TRAILER BY HANDLING WITH A FORKLIFT FROM THE SIDE. THE FORKLIFT THEN MUST INSERT ITS TINES FROM THE END OF THE CONTAINER OR STACK, LIFT THE END SLIGHTLY, THEN PROCEED TO PUSH THE CONTAINER OR STACK INTO ITS FINAL POSITION WITHIN THE TRAILER. CARE MUST BE EXERCISED TO AVOID DAMAGE TO THE CONTAINER ENDS, ETC., DURING PUSHING OPERATIONS.
- E. WHEN UNLOADING A CONTAINER OR CONTAINER STACK FROM THE TRAILER, THE FORKLIFT TINES WILL BE INSERTED UNDER THE LOWER CONTAINER, THE FORKLIFT WILL THEN ELEVATE THE END SLIGHTLY ABOVE THE FLOOR, AND BEGIN DRAGGING THE CONTAINER OR STACK FROM THE TRAILER AFTER ATTACHING A CHAIN OR WEB STRAP FROM A LOWER CONTAINER LIFT POINT AROUND THE FORKLIFT MAST TO A LOWER LIFT POINT ON THE OPPOSITE SIDE OF THE CONTAINER.



**ISOMETRIC VIEW**

**KEY NUMBERS**

- ① FORWARD BLOCKING ASSEMBLY A (1 REQD). SEE THE DETAIL ON PAGE 15. SEE GENERAL NOTES "J", "M", AND "N" ON PAGE 2.
- ② SEPARATOR GATE A FOR 2-HIGH (1 REQD). SEE THE DETAIL ON PAGE 15. POSITION WITH THE 2" X 6" VERTICAL PIECES ON THE FORWARD SIDE.
- ③ BUNDLING STRAP, 1-1/4" X .035" OR .031" X 13'-0" STEEL STRAPPING (16 REQD). INSTALL TO PASS OVER THE SKIDS OF TWO SECOND-LAYER CONTAINERS AND UNDER THE BODIES OF TWO FIRST-LAYER CONTAINERS PRIOR TO LOADING INTO THE TRAILER. SEE SPECIAL NOTES 3 AND 4 ON PAGE 5.
- ④ SEAL FOR 1-1/4" STEEL STRAPPING (32 REQD, 2 PER STRAP). DOUBLE CRIMP EACH SEAL. SEE GENERAL NOTE "K" ON PAGE 2 AND THE "END-OVER-END LAP JOINT DETAILS" ON PAGE 18.
- ⑤ SEPARATOR, 1/2" X 48" X 8'-0" PLYWOOD (3 REQD). POSITION BETWEEN LONGITUDINALLY ADJACENT 2-HIGH LOAD UNITS.
- ⑥ REAR BLOCKING ASSEMBLY A (1 REQD). SEE THE DETAIL ON PAGE 15. SEE SPECIAL NOTES 6 AND 7 ON PAGE 5.

36-UNIT LOAD OF CBU-59/B (APAM) OR  
 CBU (T-1)/B, TRAINING, IN A 45'-0" LONG BY 8'-2" WIDE TRAILER

(SPECIAL NOTES CONTINUED)

10. IF A 48'-0" LONG TRAILER IS FURNISHED FOR LOADING, FIVE LOAD UNITS CAN BE SHIPPED. THE THIRD LOAD UNIT WILL BE JUST ONE LAYER HIGH IN LIEU OF THE FRONT LOAD UNIT. A "SEPARATOR GATE A" WILL BE USED BETWEEN THE THIRD AND FOURTH LOAD UNITS. TO PROVIDE FOR PROPER WEIGHT DISTRIBUTION, POSITION A 36" LONG ASSEMBLY AT THE FRONT OF THE TRAILER, CONSTRUCTED LIKE THE "REAR BLOCKING ASSEMBLY B". SEE THE DETAIL ON PAGE 19. IF A FORWARD BLOCKING ASSEMBLY IS NOT USED, INCREASE THE LENGTH OF THE ASSEMBLY BY 6-1/2". THIS LOAD PATTERN AND DUNNAGE USE IS NOT MANDATORY. IT IS FURNISHED AS GUIDANCE AND MAY BE ADJUSTED TO SUIT.
11. IN THE "LOAD AS SHOWN", THE TOTAL WEIGHT SHOWN IS FOR THE MOD 1 CONTAINERS IN UNIT LOADS OF TWO EACH; THE TOTAL WEIGHT WITH NO UNIT LOADS IS 42,879 POUNDS. THE TOTAL WEIGHT FOR MOD 0 CONTAINERS IN UNIT LOADS IS 41,655 POUNDS OR 41,493 POUNDS WITH NO UNIT LOADS.

SPECIAL NOTES:

1. A 36-UNIT LOAD IS SHOWN IN A 45'-0" LONG BY 8'-2" WIDE (INSIDE DIMENSION) VAN TRAILER. TRAILERS OF OTHER LENGTHS AND WIDTHS MAY BE USED, HOWEVER, THE TRAILER MUST BE APPROXIMATELY 8'-0" OR WIDER IN ORDER TO LOAD FOUR CONTAINERS ACROSS THE TRAILER. SEE SPECIAL NOTE 9.
2. THE DEPICTED PROCEDURES ARE APPLICABLE FOR THE CBU-59/B, COMPLETE (APAM) AND THE CBU(T-1)/B, TRAINING, PACKED IN EITHER THE MOD 0 OR THE MOD 1 CONTAINERS. THE MOD 1 CONTAINER IS SHOWN. THE CONTAINERS MAY BE UNITIZED TWO EACH SIDE-BY-SIDE WHEN FURNISHED FOR LOADING.
3. IF CONTAINERS ARE FURNISHED AS UNIT LOADS OF TWO EACH SIDE-BY-SIDE, A UNIT LOAD IN THE SECOND LAYER MUST BE BUNDLED WITH A UNIT LOAD IN THE FIRST LAYER USING THE BUNDLING STRAPS, PIECES MARKED ③, TO FORM GROUPS OF FOUR CONTAINERS, AS APPLICABLE, PRIOR TO LOADING INTO THE TRAILER. PLACE A UNIT LOAD ON TOP OF ANOTHER WITH THE CONTAINERS IN THE SAME DIRECTION. FORM THE GROUPS AT THE REAR OF THE TRAILER, WITH ONE END OF THE GROUP RESTING JUST INSIDE THE TRAILER. THE GROUP CAN THEN BE PARTIALLY LIFTED FROM THE REAR AND PUSHED INTO THE TRAILER.
4. FOR EASE OF HANDLING, IF INDIVIDUAL CONTAINERS ARE FURNISHED FOR LOADING, THE CONTAINERS SHOULD BE FORMED IN GROUPS OF FOUR, AS APPLICABLE. PLACE A CONTAINER ON TOP OF ANOTHER WITH THE AFT END FACING IN THE SAME DIRECTION AS THE LOWER CONTAINER. FOR THE MOD 0 CONTAINERS, THE LATERALLY ADJACENT CONTAINER WILL FACE IN THE OPPOSITE DIRECTION. FOR THE MOD 1 CONTAINERS, THE LATERALLY ADJACENT CONTAINER WILL FACE IN THE SAME DIRECTION. BUNDLE THE GROUPS OF FOUR WITH PIECES MARKED ③. FORM THE GROUPS AT THE REAR OF THE TRAILER, WITH ONE END OF THE GROUP RESTING JUST INSIDE THE TRAILER. THE GROUP CAN THEN BE PARTIALLY LIFTED FROM THE REAR AND PUSHED INTO THE TRAILER.
5. THE DEPICTED LOADING PATTERN IS APPLICABLE FOR A LOAD IN A "WESTERN" TYPE TRAILER. FOR A LOAD IN A TRAILER OTHER THAN A "WESTERN" TYPE, THE ONE-LAYER PORTION OF THE LOAD SHOULD BE LOCATED IN THE THIRD LOAD UNIT. A "SEPARATOR GATE A" MUST THEN BE USED BETWEEN THE THIRD AND FOURTH LOAD UNITS IN LIEU OF A PIECE MARKED ⑤. THESE LOCATIONS ARE NOT MANDATORY AND MAY BE ADJUSTED TO SUIT.
6. IF THE EXCESS SPACE AT THE REAR OF THE LOAD IS LESS THAN 1-1/2", REAR BLOCKING IS NOT REQUIRED. IF THE SPACE IS FROM 1-1/2" TO 9", SOLID FILL SHOULD BE USED, AS SHOWN. SEE THE "REAR BLOCKING ASSEMBLY A" DETAIL ON PAGE 15. IF THE EXCESS SPACE IS GREATER THAN 9", AS WHEN THE FORWARD BLOCKING ASSEMBLY, PIECE MARKED ①, IS NOT USED, OR WHEN THE MOD 0 CONTAINERS ARE BEING SHIPPED, THE "REAR BLOCKING ASSEMBLY B" WILL BE USED. SEE THE DETAIL ON PAGE 19.
7. IF THE TRAILER HAS A NAILABLE FLOOR AT THE REAR OF THE LOAD, A NAILED HEADER MAY BE USED IN LIEU OF THE DEPICTED REAR BLOCKING, PIECE MARKED ⑥. SEE THE "NAILED HEADER METHOD" DETAIL ON PAGE 20.
8. A LOAD CAN BE ADJUSTED TO SUIT THE QUANTITY TO BE SHIPPED. TWO CONTAINERS CAN BE ADDED AT THE FRONT OF THE DEPICTED LOAD IN A "WESTERN" TYPE TRAILER OR TWO CAN BE ADDED IN THE THIRD LOAD UNIT IF LOADING A TRAILER OTHER THAN A "WESTERN" TYPE, PROVIDING THE AXLE DISTRIBUTION OF WEIGHT WILL NOT BE EXCEEDED. A PAIR OF CONTAINERS MAY BE OMITTED FROM A LOAD UNIT. IF THE LOAD IS TO BE REDUCED BY FOUR CONTAINERS, THE LATERALLY ADJACENT PAIR OF CONTAINERS SHOULD BE OMITTED.
9. IF THE TRAILER FURNISHED FOR LOADING IS NOT AT LEAST 8'-0" WIDE, THE PROCEDURES SHOWN ON PAGES 6 AND 7 MUST BE USED.

(CONTINUED AT LEFT)

BILL OF MATERIAL		
LUMBER	LINEAR FEET	BOARD FEET
1" X 6"	7	4
2" X 6"	64	64
NAILS	NO. REQD	POUNDS
6d (2")	39	1/4
10d (3")	45	3/4
STEEL STRAPPING, 1-1/4" -- 208' REQD	---	30 LBS
SEAL FOR 1-1/4" STRAPPING -- 32 REQD	---	1-1/2 LBS
PLYWOOD, 1/2" ----- 128 SQ FT REQD	---	176 LBS

LOAD AS SHOWN

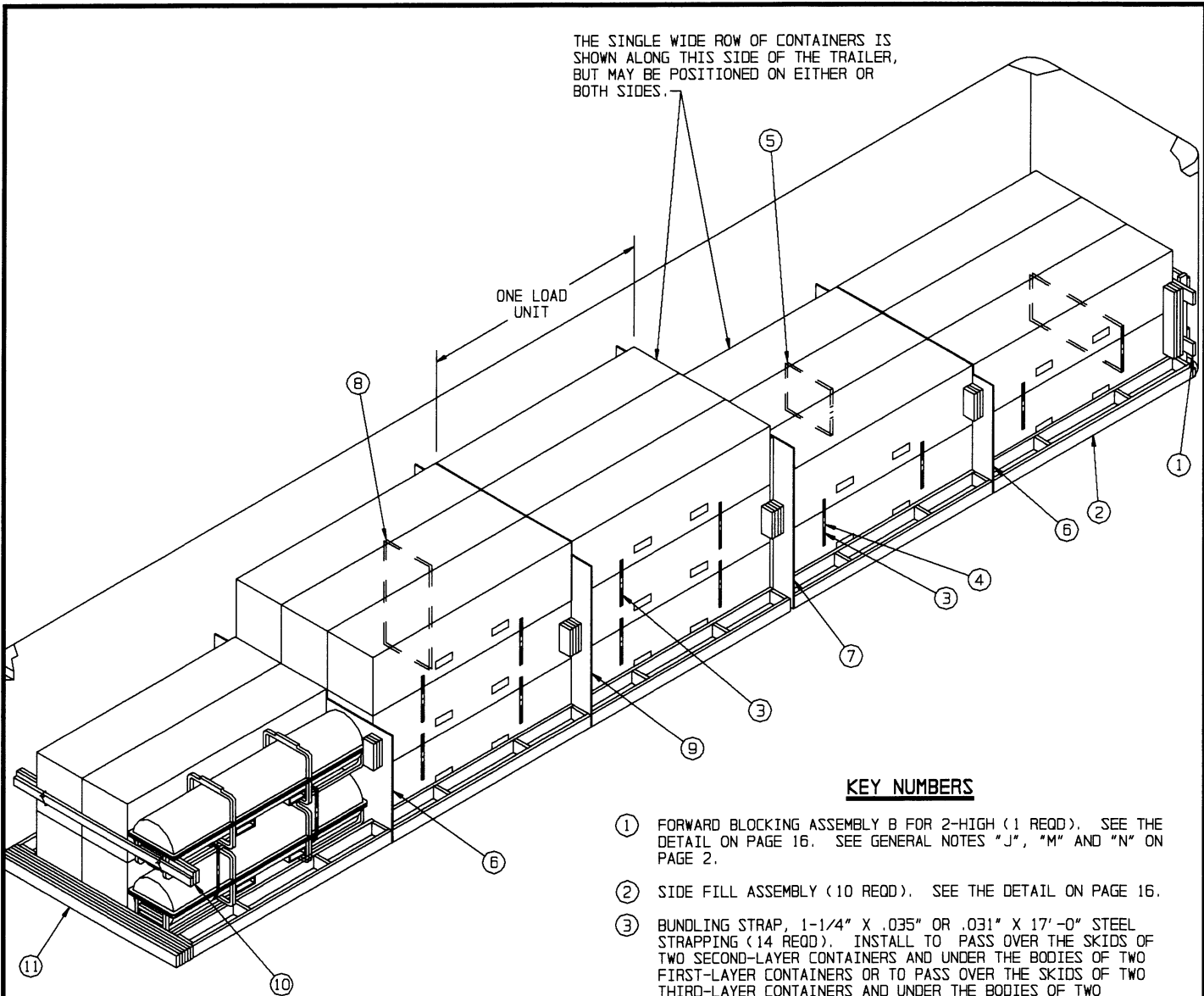
ITEM	QUANTITY	WEIGHT (APPROX)
CONTAINER (MOD 1)	36	42,624 LBS
DUNNAGE	---	345 LBS

TOTAL WEIGHT ----- 42,969 LBS (APPROX) \*

\* SEE SPECIAL NOTE 11 ABOVE.

36-UNIT LOAD OF CBU-59/B (APAM) OR  
CBU (T-1)/B, TRAINING, IN A 45'-0" LONG BY 8'-2" WIDE TRAILER

THE SINGLE WIDE ROW OF CONTAINERS IS SHOWN ALONG THIS SIDE OF THE TRAILER, BUT MAY BE POSITIONED ON EITHER OR BOTH SIDES.



**ISOMETRIC VIEW**

**KEY NUMBERS**

- ① FORWARD BLOCKING ASSEMBLY B FOR 2-HIGH (1 REOD). SEE THE DETAIL ON PAGE 16. SEE GENERAL NOTES "J", "M" AND "N" ON PAGE 2.
- ② SIDE FILL ASSEMBLY (10 REOD). SEE THE DETAIL ON PAGE 16.
- ③ BUNDLING STRAP, 1-1/4" X .035" OR .031" X 17'-0" STEEL STRAPPING (14 REOD). INSTALL TO PASS OVER THE SKIDS OF TWO SECOND-LAYER CONTAINERS AND UNDER THE BODIES OF TWO FIRST-LAYER CONTAINERS OR TO PASS OVER THE SKIDS OF TWO THIRD-LAYER CONTAINERS AND UNDER THE BODIES OF TWO SECOND-LAYER CONTAINERS PRIOR TO LOADING INTO THE TRAILER. SEE SPECIAL NOTES 3 AND 4 ON PAGE 7.
- ④ SEAL FOR 1-1/4" STEEL STRAPPING (48 REOD, 2 PER STRAP). DOUBLE CRIMP EACH SEAL. SEE GENERAL NOTE "K" ON PAGE 2 AND THE "END-OVER-END LAP JOINT DETAILS" ON PAGE 19.
- ⑤ UNITIZING STRAP FOR 2-HIGH, 1-1/4" X .035" OR .031" X 9'-6" STEEL STRAPPING (6 REOD, 2 PER STACK). INSTALL TO PASS OVER THE SKIDS OF AN UPPER CONTAINER IN A 2-HIGH STACK AND UNDER THE BODY OF A BOTTOM CONTAINER PRIOR TO LOADING INTO THE TRAILER. SEE THE "UNITIZATION AND HANDLING PROCEDURES" ON PAGE 3. SEE SPECIAL NOTE 5 ON PAGE 7.
- ⑥ SEPARATOR GATE B (2 REOD). SEE THE DETAIL ON PAGE 17. POSITION BETWEEN THE LONGITUDINALLY ADJACENT 2-HIGH LOAD UNITS AND/OR AT THE FORWARD END OF THE REAR 2-HIGH LOAD UNIT.
- ⑦ SEPARATOR GATE C FOR 3-HIGH (1 REOD). SEE THE DETAIL ON PAGE 18. POSITION AT THE FORWARD END OF THE FRONT 3-HIGH LOAD UNIT. POSITION WITH THE 2" X 6" VERTICAL PIECES ON THE FORWARD SIDE.
- ⑧ UNITIZING STRAP FOR 3-HIGH, 1-1/4" X .035" OR .031" X 13'-0" STEEL STRAPPING (4 REOD, 2 PER STACK). INSTALL TO PASS OVER THE SKIDS OF AN UPPER CONTAINER IN A 3-HIGH STACK AND UNDER THE BODY OF THE BOTTOM CONTAINER PRIOR TO LOADING INTO THE TRAILER. SEE SPECIAL NOE 5 ON PAGE 7.
- ⑨ SEPARATOR GATE D FOR 3-HIGH (1 REOD). SEE THE DETAIL ON PAGE 18. POSITION BETWEEN LONGITUDINALLY ADJACENT 3-HIGH LOAD UNITS.

(CONTINUED ON PAGE 7)

**36-UNIT LOAD OF CBU-59/B (APAM) OR CBU (T-1)/B, TRAINING, IN A 45'-0" LONG BY 7'-8" WIDE TRAILER**

- ⑩ ANTI-SWAY BRACE A (1 REQD). SEE THE DETAIL ON PAGE 17. WIRE TIE EACH END TO THE CONTAINER RUNNER (SKID) REINFORCING PIECE WITH TWO WRAPS OF NO. 14 GAGE WIRE.
- ⑪ REAR BLOCKING ASSEMBLY A (1 REQD). SEE THE DETAIL ON PAGE 15. SEE SPECIAL NOTES 7 AND 8 AT RIGHT.

SPECIAL NOTES:

1. A 36-UNIT LOAD IS SHOWN IN A 45'-0" LONG BY 7'-8" WIDE (INSIDE DIMENSION) VAN TRAILER. TRAILERS OF OTHER LENGTHS AND WIDTHS MAY BE USED.
2. THE DEPICTED PROCEDURES ARE APPLICABLE FOR THE CBU-59/B, COMPLETE (APAM) AND THE CBU (T-1)/B, TRAINING, PACKED IN EITHER THE MOD 0 OR THE MOD 1 CONTAINERS. THE MOD 1 CONTAINER IS SHOWN. THE CONTAINERS MAY BE UNITIZED TWO EACH SIDE-BY-SIDE WHEN FURNISHED FOR LOADING.
3. IF CONTAINERS ARE FURNISHED AS UNIT LOADS OF TWO EACH SIDE-BY-SIDE, FOR TWO ROWS IN THE LOAD A UNIT LOAD IN THE SECOND LAYER MUST BE BUNDLED WITH A UNIT LOAD IN THE FIRST LAYER USING THE BUNDLING STRAPS, PIECES MARKED ③, TO FORM GROUPS OF FOUR CONTAINERS PRIOR TO LOADING INTO THE TRAILER. IF APPLICABLE, A UNIT LOAD IN THE THIRD LAYER MUST BE BUNDLED IN THE SAME MANNER WITH THE UNIT LOAD IN THE SECOND LAYER TO FORM A GROUP OF SIX CONTAINERS, PRIOR TO LOADING INTO THE TRAILER. FORM THE GROUPS AT THE REAR OF THE TRAILER, WITH ONE END OF THE GROUP RESTING JUST INSIDE THE TRAILER. THE GROUP CAN THEN BE PARTIALLY LIFTED FROM THE REAR AND PUSHED INTO THE TRAILER.
4. FOR EASE OF HANDLING, IF INDIVIDUAL CONTAINERS ARE FURNISHED FOR LOADING, THE CONTAINERS SHOULD BE FORMED INTO GROUPS OF FOUR. PLACE A CONTAINER ON TOP OF ANOTHER WITH THE AFT END FACING IN THE SAME DIRECTION AS THE LOWER CONTAINER. FOR THE MOD 0 CONTAINERS, THE LATERALLY ADJACENT CONTAINER WILL FACE IN THE OPPOSITE DIRECTION. FOR THE MOD 1 CONTAINERS, THE LATERALLY ADJACENT CONTAINER WILL FACE IN THE SAME DIRECTION. BUNDLE THE GROUP OF FOUR WITH PIECES MARKED ③. IF THE GROUP IS TO BE THREE LAYERS HIGH, BUNDLE THE THIRD LAYER TO THE SECOND IN A LIKE MANNER. FORM THE GROUPS AT THE REAR OF THE TRAILER, WITH ONE END OF THE GROUP RESTING JUST INSIDE THE TRAILER. THE GROUP CAN THEN BE PARTIALLY LIFTED FROM THE REAR AND PUSHED INTO THE TRAILER.
5. FOR THE THIRD ROW IN A LOAD, THE CONTAINERS WILL BE UNITIZED INTO INDIVIDUAL 2-HIGH AND/OR 3-HIGH STACKS, AS REQUIRED, BY EMPLOYING THE PROCEDURES SHOWN BY THE "UNITIZATION AND HANDLING PROCEDURES" SHOWN ON PAGE 3. THE UNITIZED STACK SHOULD BE FORMED AT THE REAR OF THE TRAILER AS DELINEATED IN SPECIAL NOTES 3 AND 4 ABOVE.
6. THE DEPICTED LOADING PATTERN IS APPLICABLE FOR A LOAD IN EITHER A "WESTERN" TYPE TRAILER OR IN A TRAILER OTHER THAN A "WESTERN" TYPE. THIS LOADING PATTERN IS NOT MANDATORY AND MAY BE ADJUSTED TO SUIT.
7. IF THE EXCESS SPACE AT THE REAR OF THE LOAD IS LESS THAN 1-1/2", REAR BLOCKING IS NOT REQUIRED. IF THE SPACE IS FROM 1-1/2" TO 9", SOLID FILL SHOULD BE USED, AS SHOWN. SEE THE "REAR BLOCKING ASSEMBLY A" DETAIL ON PAGE 15. IF THE EXCESS SPACE IS GREATER THAN 9", AS IT WILL BE IF THE MOD 0 CONTAINERS ARE BEING SHIPPED, THE "REAR BLOCKING ASSEMBLY B" WILL BE USED. SEE THE DETAIL ON PAGE 19.
8. IF THE TRAILER HAS A NAILABLE FLOOR AT THE REAR OF THE LOAD, A NAILED HEADER MAY BE USED IN LIEU OF THE DEPICTED REAR BLOCKING, PIECE MARKED ①. SEE THE "NAILED HEADER METHOD" DETAIL ON PAGE 20.
9. THE DEPICTED LOAD CAN BE ADJUSTED TO SUIT THE QUANTITY TO BE SHIPPED. IF MOD 1 CONTAINERS ARE BEING LOADED, ONE CONTAINER CAN BE ADDED AT THE REAR OF THE LOAD IN A "WESTERN" TYPE TRAILER OR AT THE FRONT OF THE LOAD IN A TRAILER OTHER THAN A "WESTERN" TYPE. FOR MOD 0 CONTAINERS, TWO CONTAINERS CAN BE ADDED IN THE SAME WAY, IF THE AXLE DISTRIBUTION OF WEIGHT WILL NOT BE EXCEEDED.
10. IN THE "LOAD AS SHOWN", THE TOTAL WEIGHT SHOWN IS FOR THE MOD 1 CONTAINERS WITH 12 UNIT LOADS OF TWO EACH AND 12 INDIVIDUAL CONTAINERS; THE TOTAL WEIGHT WITH NO UNIT LOADS IS 43,384 POUNDS. THE TOTAL WEIGHT FOR MOD 0 CONTAINERS WITH 12 UNIT LOADS AND 12 INDIVIDUAL CONTAINERS IS 42,196 POUNDS OR 42,088 POUNDS WITH NO UNIT LOADS.

BILL OF MATERIAL		
LUMBER	LINEAR FEET	BOARD FEET
1" X 4"	6	2
1" X 6"	8	4
2" X 4"	26	18
2" X 6"	346	346
NAILS	NO. REQD	POUNDS
6d (2")	30	1/4
8d (2-1/2")	39	1/2
10d (3")	436	6-3/4
STEEL STRAPPING, 1-1/4" -- 347' REQD ---- 50 LBS		
SEAL FOR 1-1/4" STRAPPING -- 48 REQD ---- 2 LBS		
PLYWOOD, 1/2" ----- 107 SQ FT REQD ---- 148 LBS		

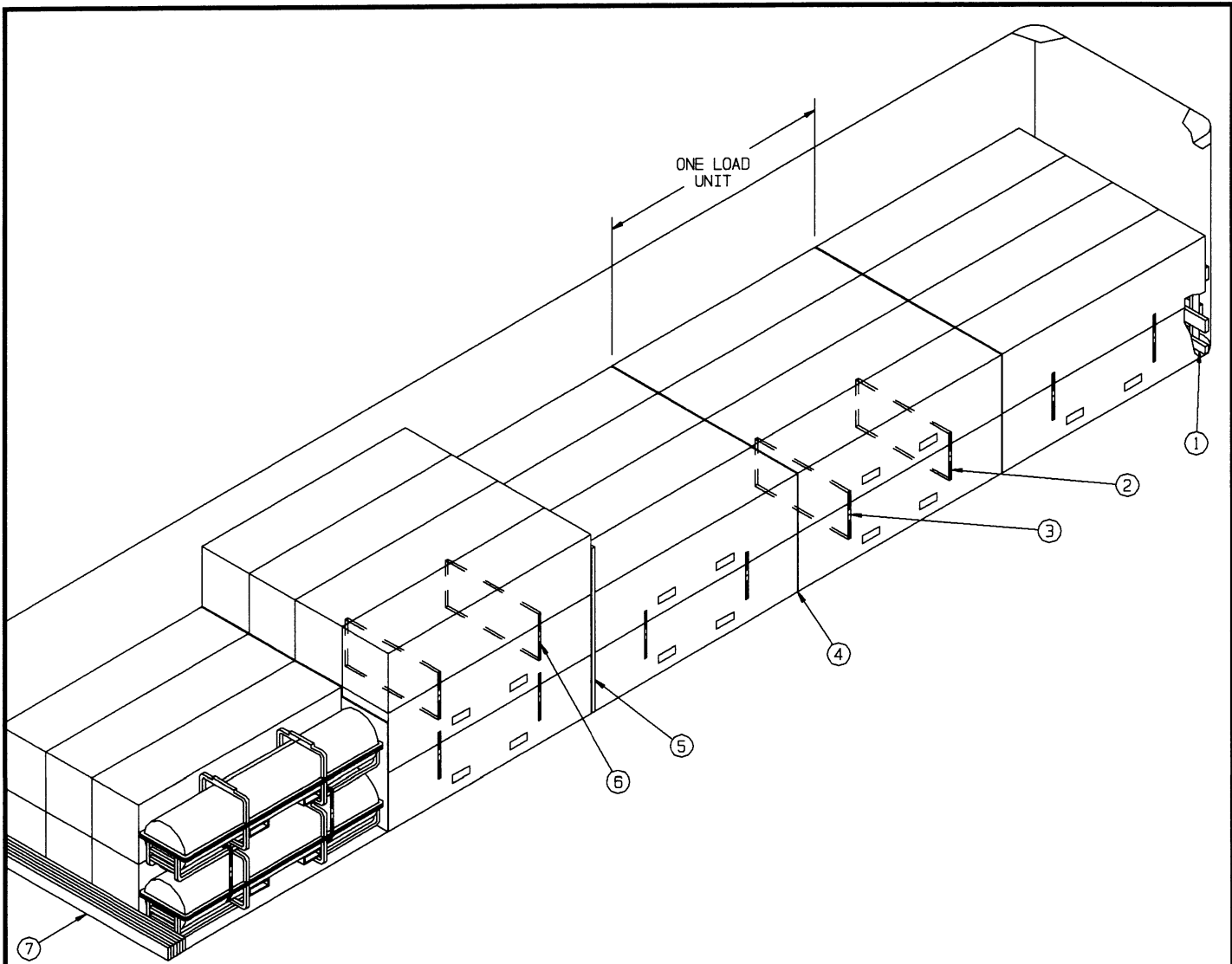
LOAD AS SHOWN

ITEM	QUANTITY	WEIGHT (APPROX)
CONTAINER (MOD 1)	36	42,564 LBS
DUNNAGE		948 LBS

TOTAL WEIGHT ----- 43,512 LBS (APPROX) \*

\* SEE SPECIAL NOTE 10 ABOVE.

36-UNIT LOAD OF CBU-59/B (APAM) OR  
CBU (T-1)/B, TRAINING, IN A 45'-0" LONG BY 7'-8" WIDE TRAILER



ISOMETRIC VIEW

KEY NUMBERS

- ① FORWARD BLOCKING ASSEMBLY C (1 REQD). SEE THE DETAIL ON PAGE 18. SEE GENERAL NOTES "J", "M" AND "N" ON PAGE 2.
- ② BUNDLING STRAP, 1-1/4" X .035" OR .031" X 13'-0" STEEL STRAPPING (20 REQD). INSTALL TO PASS OVER THE SKIDS OF TWO SECOND-LAYER CONTAINERS AND UNDER THE BODIES OF TWO FIRST-LAYER CONTAINERS PRIOR TO LOADING INTO THE TRAILER. SEE SPECIAL NOTE 2 ON PAGE 9 AND SPECIAL NOTES 3 AND 4 ON PAGE 7.
- ③ SEAL FOR 1-1/4" STEEL STRAPPING (48 REQD, 2 PER STRAP). DOUBLE CRIMP EACH SEAL. SEE GENERAL NOTE "K" ON PAGE 2 AND THE "END-OVER-END LAP JOINT DETAILS" ON PAGE 19.
- ④ SEPARATOR, 1/2" X 48" X 8'-0" PLYWOOD (3 REQD). POSITION BETWEEN LONGITUDINALLY ADJACENT 2-HIGH LOAD UNITS AND/OR AT THE FORWARD END OF THE REAR 2-HIGH LOAD UNIT.
- ⑤ SEPARATOR GATE A FOR 3-HIGH (1 REQD). SEE THE DETAIL ON PAGE 15. POSITION AT THE FORWARD END OF THE 3-HIGH LOAD UNIT. POSITION WITH THE 2" X 6" VERTICAL PIECES ON THE FORWARD SIDE.
- ⑥ BUNDLING STRAP, 1-1/4" X .035" OR .031" X 13'-0" STEEL STRAPPING (4 REQD). INSTALL TO EXTEND OVER THE SKIDS OF TWO CONTAINERS IN THE THIRD LAYER AND UNDER THE BODIES OF TWO CONTAINERS IN THE SECOND LAYER PRIOR TO LOADING INTO THE TRAILER. SEE SPECIAL NOTES 3 AND 4 ON PAGE 7.
- ⑦ REAR BLOCKING ASSEMBLY A (1 REQD). SEE THE DETAIL ON PAGE 15. SEE SPECIAL NOTES 4 AND 5 ON PAGE 9.

44-UNIT LOAD OF CBU-MK20 (ROCKEYE II) OR  
 CBU-78/B (GATOR) IN A 45'-0" LONG BY 8'-2" WIDE TRAILER



**SPECIAL NOTES:**

1. A 44-UNIT LOAD IS SHOWN IN A 45'-0" LONG BY 8'-2" WIDE (INSIDE DIMENSION) VAN TRAILER. TRAILERS OF OTHER LENGTHS AND WIDTHS MAY BE USED, HOWEVER, THE TRAILER MUST BE APPROXIMATELY 8'-0" OR WIDER IN ORDER TO LOAD FOUR CONTAINERS ACROSS THE TRAILER. SEE SPECIAL NOTE 8.
2. THE DEPICTED PROCEDURES ARE APPLICABLE FOR THE CBU-MK 20 (ROCKEYE II) AND THE CBU-78/B (GATOR), PACKED IN EITHER THE MOD 0 OR THE MOD 1 CONTAINERS. THE MOD 1 CONTAINER IS SHOWN. THE CONTAINERS MAY BE UNITIZED IN GROUPS OF FOUR WHEN FURNISHED FOR LOADING. IF THEY ARE, THE BUNDLING STRAPS, PIECES MARKED ② AND 48 SEALS, PIECES MARKED ③, WILL NOT BE REQUIRED.
3. THE DEPICTED LOADING PATTERN IS APPLICABLE FOR A LOAD IN EITHER A "WESTERN" TYPE TRAILER OR A TRAILER OTHER THAN A "WESTERN" TYPE.
4. IF THE EXCESS SPACE AT THE REAR OF THE LOAD IS LESS THAN 1-1/2", REAR BLOCKING IS NOT REQUIRED. IF THE SPACE IS FROM 1-1/2" TO 9", SOLID FILL SHOULD BE USED, AS SHOWN. SEE THE "REAR BLOCKING ASSEMBLY A" DETAIL ON PAGE 15. IF THE EXCESS SPACE IS GREATER THAN 9", AS IT WILL BE IF THE FORWARD BLOCKING ASSEMBLY, PIECE MARKED ①, IS NOT USED, OR IF THE MOD 0 CONTAINERS ARE BEING SHIPPED, THE "REAR BLOCKING ASSEMBLY B" WILL BE USED. SEE THE DETAIL ON PAGE 19.
5. IF THE TRAILER HAS A NAILABLE FLOOR AT THE REAR OF THE LOAD, A NAILED HEADER MAY BE USED IN LIEU OF THE DEPICTED REAR BLOCKING, PIECE MARKED ③. SEE THE "NAILED HEADER METHOD" DETAIL ON PAGE 20.
6. THE DEPICTED LOAD CAN BE REDUCED TO SUIT THE QUANTITY TO BE SHIPPED. THE LOAD CAN BE REDUCED BY TWO CONTAINERS BY OMITTING THE TOP LAYER OF CONTAINERS WHICH WERE ADDED TO ONE UNIT LOAD, OR WHICH WERE ADDED TO A BUNDLED GROUP. FOUR CONTAINERS CAN BE OMITTED BY LEAVING OFF ALL ADDED TOP-LAYER CONTAINERS.
7. IF A 48'-0" LONG TRAILER IS FURNISHED FOR LOADING, FIVE LOAD UNITS CAN BE SHIPPED. TO PROVIDE FOR PROPER WEIGHT DISTRIBUTION, POSITION A 36" LONG ASSEMBLY AT THE FRONT OF THE TRAILER, CONSTRUCTED LIKE THE "REAR BLOCKING ASSEMBLY A". IF A FORWARD BLOCKING ASSEMBLY IS NOT USED, INCREASE THE LENGTH OF THE ASSEMBLY BY 6-1/2". THIS LOAD PATTERN AND DUNNAGE USE IS NOT MANDATORY. IT IS FURNISHED AS GUIDANCE AND MAY BE ADJUSTED TO SUIT.
8. IF THE TRAILER FURNISHED FOR LOADING IS NOT AT LEAST 8'-0" WIDE, THE PROCEDURES SHOWN ON PAGES 10 AND 11 MUST BE USED.
9. IN THE "LOAD AS SHOWN", THE TOTAL WEIGHT SHOWN IS FOR THE MOD 1, E819 CONTAINERS WITH 10 UNIT LOADS OF FOUR EACH AND FOUR INDIVIDUAL CONTAINERS; THE TOTAL WEIGHT WITH NO UNIT LOADS IS 43,242 POUNDS. THE TOTAL WEIGHT FOR THE MOD 1, E173 CONTAINERS WITH 10 UNIT LOADS OF FOUR EACH AND FOUR INDIVIDUAL CONTAINERS IS 43,314 POUNDS; THE TOTAL WEIGHT WITH NO UNIT LOADS IS 42,934 POUNDS. THE TOTAL WEIGHT FOR THE MOD 0 CONTAINERS WITH 10 UNIT LOADS OF FOUR EACH AND FOUR INDIVIDUAL CONTAINERS IS 41,134 POUNDS; THE TOTAL WEIGHT WITH NO UNIT LOADS IS 40,734 POUNDS.

BILL OF MATERIAL		
LUMBER	LINEAR FEET	BOARD FEET
1" X 6"	9	5
2" X 4"	14	10
2" X 6"	95	95
NAILS	NO. REQD	POUNDS
6d (2")	8	NIL
8d (2-1/2")	52	3/4
10d (3")	64	1
STEEL STRAPPING, 1-1/4" -- 312' REQD --- 45 LBS		
SEAL FOR 1-1/4" STRAPPING -- 48 REQD --- 2 LBS		
PLYWOOD, 1/2" ----- 144 SQ FT REQD --- 198 LBS		

**LOAD AS SHOWN**

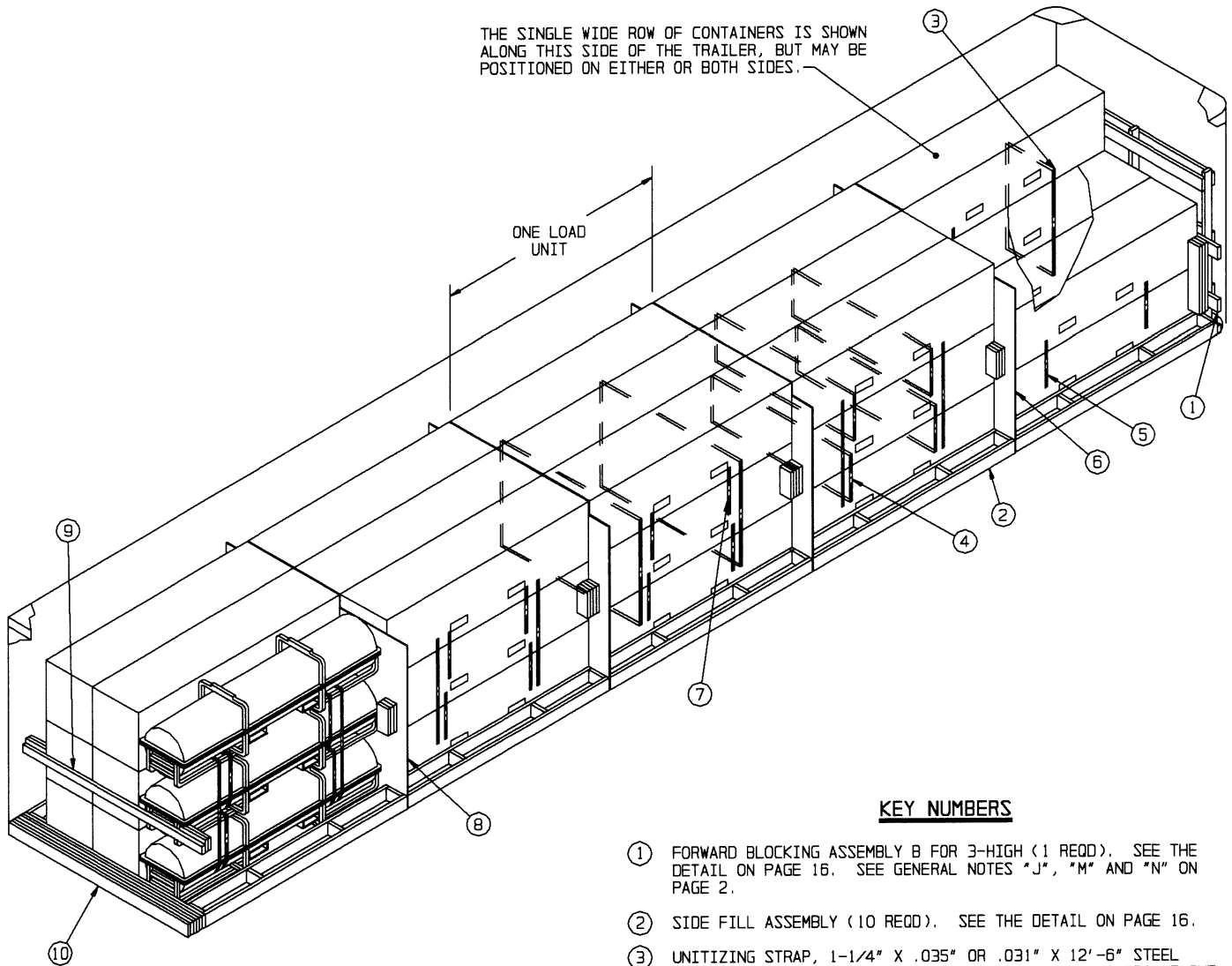
ITEM	QUANTITY	WEIGHT (APPROX)
CONTAINER (MOD 1, E819)	44	43,148 LBS
DUNNAGE		467 LBS

TOTAL WEIGHT ----- 43,615 LBS (APPROX) \*

\* SEE SPECIAL NOTE 9 ABOVE.

44-UNIT LOAD OF CBU-MK20 (ROCKEYE II) OR  
CBU-78/B (GATOR) IN A 45'-0" LONG BY 8'-2" WIDE TRAILER

THE SINGLE WIDE ROW OF CONTAINERS IS SHOWN ALONG THIS SIDE OF THE TRAILER, BUT MAY BE POSITIONED ON EITHER OR BOTH SIDES.



ISOMETRIC VIEW

KEY NUMBERS

- ① FORWARD BLOCKING ASSEMBLY B FOR 3-HIGH (1 REQD). SEE THE DETAIL ON PAGE 16. SEE GENERAL NOTES "J", "M" AND "N" ON PAGE 2.
- ② SIDE FILL ASSEMBLY (10 REQD). SEE THE DETAIL ON PAGE 16.
- ③ UNITIZING STRAP, 1-1/4" X .035" OR .031" X 12'-6" STEEL STRAPPING (10 REQD). INSTALL TO PASS OVER THE SKIDS OF ONE OR MORE THIRD-LAYER CONTAINERS AND UNDER THE BODY OF ONE OR MORE OF THE FIRST-LAYER CONTAINERS PRIOR TO LOADING INTO THE TRAILER. SEE THE "UNITIZATION AND HANDLING PROCEDURES" ON PAGE 3. SEE SPECIAL NOTE 5 ON PAGE 11.
- ④ SEAL FOR 1-1/4" STEEL STRAPPING (56 REQD, 2 PER STRAP). DOUBLE CRIMP EACH SEAL. SEE GENERAL NOTE "K" ON PAGE 2 AND THE "END-OVER-END LAP JOINT" DETAIL ON PAGE 19.
- ⑤ BUNDLING STRAP, 1-1/4" X .035" OR .031" X 13'-0" STEEL STRAPPING (10 REQD). INSTALL TO EXTEND OVER THE SKIDS OF THE SECOND-LAYER CONTAINERS AND UNDER THE BODIES OF THE FIRST-LAYER CONTAINERS PRIOR TO LOADING INTO THE TRAILER. SEE SPECIAL NOTES 2, 3, AND 4 ON PAGE 11.
- ⑥ SEPARATOR GATE C FOR 3-HIGH (1 REQD). SEE THE DETAIL ON PAGE 18. POSITION AT THE FORWARD END OF THE FRONT 3-HIGH FULL LOAD UNIT. POSITION WITH THE 2" X 6" VERTICAL PIECES ON THE FORWARD SIDE.
- ⑦ BUNDLING STRAP, 1-1/4" X .035" OR .031" X 13'-0" STEEL STRAPPING (8 REQD). INSTALL TO EXTEND OVER THE SKIDS OF THE THIRD-LAYER SIDE-BY-SIDE CONTAINERS AND UNDER THE BODIES OF THE SECOND-LAYER SIDE-BY-SIDE CONTAINERS. SEE SPECIAL NOTES 3 AND 4 ON PAGE 11.
- ⑧ SEPARATOR GATE D FOR 3-HIGH (3 REQD). SEE THE DETAIL ON PAGE 18.
- ⑨ ANTI-SWAY BRACE A (1 REQD). SEE THE DETAIL ON PAGE 17. WIRE TIE EACH END TO THE CONTAINER RUNNER (SKID) REINFORCING PIECE WITH TWO WRAPS OF NO. 14 GAGE WIRE.
- ⑩ REAR BLOCKING ASSEMBLY A (1 REQD). SEE THE DETAIL ON PAGE 15. SEE SPECIAL NOTES 7 AND 8 ON PAGE 11.

43-UNIT LOAD OF CBU-MK20 (ROCKEY II) OR  
CBU-78/B (GATOR) IN A 45'-0" LONG BY 7'-8" WIDE TRAILER

(SPECIAL NOTES CONTINUED)

10. IN THE "LOAD AS SHOWN", THE TOTAL WEIGHT SHOWN IS FOR THE MOD 1, EB19 CONTAINERS WITH FIVE UNIT LOADS OF FOUR EACH AND 23 INDIVIDUAL CONTAINERS; THE TOTAL WEIGHT WITH NO UNIT LOADS IS 42,823 POUNDS. THE TOTAL WEIGHT FOR THE MOD 1, E173 CONTAINERS WITH FIVE UNIT LOADS OF FOUR EACH AND 23 INDIVIDUAL CONTAINERS IS 42,712 POUNDS; THE TOTAL WEIGHT WITH NO UNIT LOADS IS 42,522 POUNDS. THE TOTAL WEIGHT FOR THE MOD 0 CONTAINERS WITH FIVE UNIT LOADS AND 23 INDIVIDUAL CONTAINERS IS 40,5752 POUNDS; THE TOTAL WEIGHT WITH NO UNIT LOADS IS 40,372 POUNDS.

SPECIAL NOTES:

1. A 43-UNIT LOAD IS SHOWN IN A 45'-0" LONG BY 7'-8" WIDE (INSIDE DIMENSION) VAN TRAILER. TRAILERS OF OTHER LENGTHS AND WIDTHS MAY BE USED.
2. THE DEPICTED PROCEDURES ARE APPLICABLE FOR THE CBU MK 20 (ROCKEYE II) AND THE CBU-78/B (GATOR), PACKED IN EITHER THE MOD 0 OR THE MOD 1 CONTAINERS. THE MOD 1 CONTAINER IS SHOWN. THE CONTAINERS MAY BE UNITIZED IN GROUPS OF FOUR WHEN FURNISHED FOR LOADING. IF THEY ARE, THE BUNDLING STRAPS, PIECES MARKED ⑤, AND 20 SEALS, PIECES MARKED ④, WILL NOT BE REQUIRED.
3. IF CONTAINERS ARE FURNISHED AS UNIT LOADS OF FOUR CONTAINERS, FOR TWO ROWS IN THE LOAD THE CONTAINERS IN THE THIRD LAYER MUST BE BUNDLED WITH THE UNIT LOAD BELOW USING THE BUNDLING STRAPS, PIECES MARKED ⑦, TO FORM GROUPS OF SIX CONTAINERS, PRIOR TO LOADING INTO THE TRAILER. FORM THE GROUPS AT THE REAR OF THE TRAILER, WITH ONE END OF THE UNIT LOAD OF FOUR RESTING JUST INSIDE THE TRAILER. PLACE THE THIRD LAYER OF CONTAINERS ON TOP OF THE GROUP OF FOUR WITH THE AFT END OF EACH CONTAINER FACING IN THE SAME DIRECTION AS THE CONTAINER IT IS BEING PLACED UPON. THE GROUP OF SIX CAN THEN BE PARTIALLY LIFTED FROM THE REAR AND PUSHED INTO THE TRAILER.
4. FOR EASE OF HANDLING, IF INDIVIDUAL CONTAINERS ARE FURNISHED FOR LOADING, THE CONTAINERS SHOULD BE FORMED INTO GROUPS OF FOUR. PLACE A CONTAINER ON TOP OF ANOTHER WITH THE AFT END FACING IN THE SAME DIRECTION AS THE LOWER CONTAINER. FOR THE MOD 0 CONTAINERS, THE LATERALLY ADJACENT CONTAINER WILL FACE IN THE OPPOSITE DIRECTION. FOR THE MOD 1 CONTAINERS, THE LATERALLY ADJACENT CONTAINER WILL FACE IN THE SAME DIRECTION. BUNDLE THE GROUP OF FOUR WITH PIECES MARKED ④ AND ⑤ PRIOR TO LOADING INTO THE TRAILER. CONTAINERS IN THE THIRD LAYER MUST BE BUNDLED TO THE GROUP OF FOUR USING PIECES MARKED ⑦ TO FORM GROUPS OF SIX CONTAINERS, PRIOR TO LOADING INTO THE TRAILER. FORM THE GROUPS AT THE REAR OF THE TRAILER, WITH ONE END OF THE GROUP RESTING JUST INSIDE THE TRAILER. THE GROUP CAN THEN BE PARTIALLY LIFTED FROM THE REAR AND PUSHED INTO THE TRAILER.
5. FOR THE THIRD ROW IN A LOAD, THE CONTAINERS WILL BE UNITIZED INTO INDIVIDUAL 3-HIGH STACKS BY EMPLOYING THE PROCEDURES SHOWN BY THE "UNITIZATION AND HANDLING PROCEDURES" SHOWN ON PAGE 3. THE UNITIZED STACKS SHOULD BE FORMED AT THE REAR OF THE TRAILER AS DELINEATED IN SPECIAL NOTES 3 AND 4 ABOVE.
6. THE DEPICTED LOADING PATTERN IS APPLICABLE FOR A LOAD IN A "WESTERN" TYPE TRAILER. FOR A LOAD IN A TRAILER OTHER THAN A "WESTERN" TYPE, THE LOAD UNIT WHICH IS TWO CONTAINERS SHORT SHOULD BE POSITIONED IN THE CENTER OF THE LOAD. THESE LOADING PATTERNS ARE NOT MANDATORY AND MAY BE ADJUSTED TO SUIT.
7. IF THE EXCESS SPACE AT THE REAR OF THE LOAD IS LESS THAN 1-1/2", REAR BLOCKING IS NOT REQUIRED. IF THE SPACE IS FROM 1-1/2" TO 9", SOLID FILL SHOULD BE USED, AS SHOWN. SEE THE "REAR BLOCKING ASSEMBLY A" DETAIL ON PAGE 15. IF THE EXCESS SPACE IS GREATER THAN 9", THE "REAR BLOCKING BLOCKING ASSEMBLY B" WILL BE USED. SEE THE DETAIL ON PAGE 19.
8. IF THE TRAILER HAS A NAILABLE FLOOR AT THE REAR OF THE LOAD, A NAILED HEADER MAY BE USED IN LIEU OF THE DEPICTED REAR BLOCKING, PIECE MARKED ⑩. SEE THE "NAILED HEADER METHOD" DETAIL ON PAGE 20.
9. THE DEPICTED LOAD CAN BE REDUCED TO SUIT THE QUANTITY TO BE SHIPPED. ONE OR MORE CONTAINERS CAN BE OMITTED FROM THE TOP LAYER OF THE SINGLE ROW OR PAIRS OF CONTAINERS CAN BE OMITTED FROM THE THIRD LAYER WHICH IS BUNDLED TO THE UNIT LOADS BELOW. CONTAINERS CANNOT BE ADDED TO THE DEPICTED LOAD WITHOUT EXCEEDING THE AXLE WEIGHT LIMITATIONS.

(CONTINUED AT LEFT)

BILL OF MATERIAL		
LUMBER	LINEAR FEET	BOARD FEET
1" X 4"	18	6
1" X 6"	8	4
2" X 4"	32	22
2" X 6"	325	325
NAILS	NO. REQD	POUNDS
6d (2")	80	1/2
8d (2-1/2")	39	1/2
10d (3")	396	6-1/4
STEEL STRAPPING, 1-1/4"	359' REQD	52 LBS
SEAL FOR 1-1/4" STRAPPING	56 REQD	2-1/2 LBS
PLYWOOD, 1/2"	182 SQ FT REQD	251 LBS
WIRE, NO. 14 GAGE	8' REQD	NIL

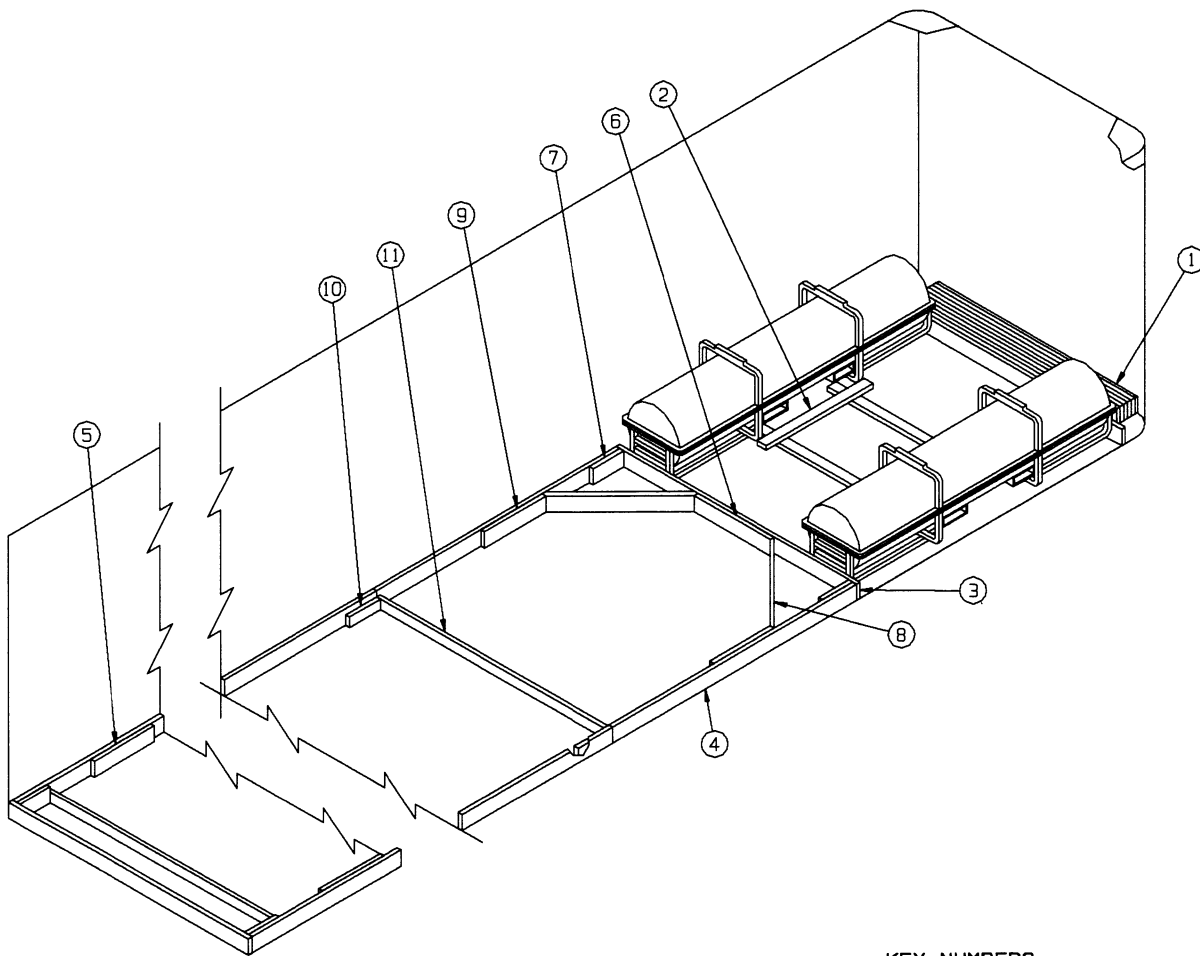
**LOAD AS SHOWN**

ITEM	QUANTITY	WEIGHT (APPROX)
CONTAINER (MOD 1, EB19)	43	41,986 LBS
DUNNAGE		1,027 LBS

TOTAL WEIGHT - - - - - 43,013 LBS (APPROX) \*

\* SEE SPECIAL NOTE 10 ABOVE.

43-UNIT LOAD OF CBU-MK20 (ROCKEYE II) OR  
CBU-78/B (GATOR) IN A 45'-0" LONG BY 7'-8" WIDE TRAILER



**ISOMETRIC VIEW**

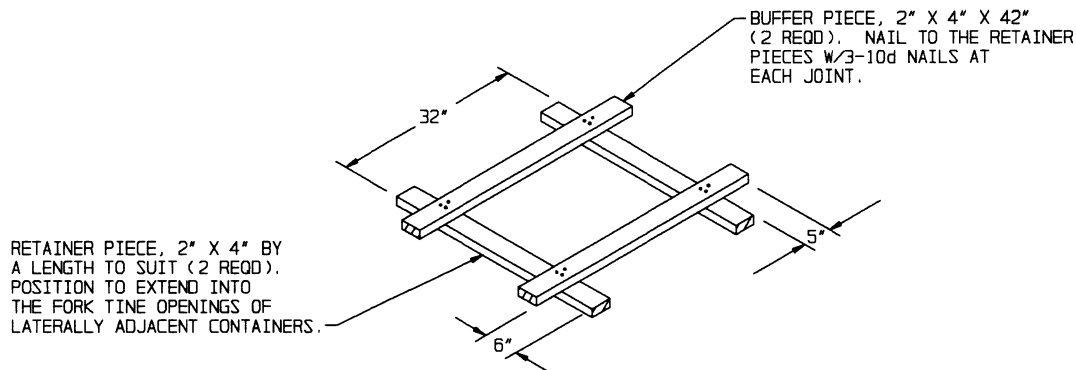
**KEY NUMBERS**

- ① FORWARD BLOCKING ASSEMBLY A (1 REQD). SEE THE DETAIL ON PAGE 15. SEE GENERAL NOTES "J", "M", AND "N" ON PAGE 2. SEE SPECIAL NOTE 2 ON PAGE 13.
- ② ANTI-SWAY BRACE B (1 REQD). SEE THE DETAIL ON PAGE 13.
- ③ HEADER, 2" X 6" BY TRAILER WIDTH (CUT TO FIT) (2 REQD).
- ④ SIDE STRUT, 2" X 6" BY CUT TO FIT BETWEEN THE HEADERS, PIECES MARKED ③.
- ⑤ SPLICE PIECE, 2" X 6" X 24" (AS REQD). POSITION SO AS TO CENTER ON THE JOINT OF THE SIDE STRUTS, PIECES MARKED ④, AND NAIL W/4-10d NAILS AT EACH END.
- ⑥ CENTER CLEAT, 2" X 6" X 30" (1 REQD). NAIL TO THE FORWARD HEADER, PIECE MARKED ③, W/6-10d NAILS.
- ⑦ POCKET CLEAT, 2" X 6" X 12" (4 REQD). NAIL TO A SIDE STRUT, PIECE MARKED ④, W/5-10d NAILS. TOENAIL TO THE ADJACENT HEADER, PIECE MARKED ③, W/3-12d NAILS.
- ⑧ DIAGONAL BRACE, 2" X 6" BY CUT TO FIT (2 REQD). DOUBLE BEVEL EACH END WITH 45° CUTS. INSTALL AT A 45° ANGLE AS SHOWN AND TOENAIL TO THE ADJACENT HEADER, PIECE MARKED ③, AND/OR THE SIDE STRUT, PIECE MARKED ④, W/2-16d NAILS AT EACH END.
- ⑨ BACK-UP CLEAT, 2" X 6" X 24" (2 REQD). NAIL TO A SIDE STRUT, PIECE MARKED ④, W/8-10d NAILS.
- ⑩ STRUT BRACE RETAINER CLEAT, 2" X 4" X 12" (AS REQD). NAIL TO A SIDE STRUT, PIECE MARKED ④, W/3-10d NAILS. SEE SPECIAL NOTE 3 ON PAGE 13.
- ⑪ STRUT BRACE, 2" X 4" BY TRAILER WIDTH MINUS 3" (CUT TO FIT) (MINIMUM OF ONE REQD). NAIL TO THE POCKET CLEATS, PIECES MARKED ⑦, AND/OR TO THE STRUT BRACE RETAINER CLEATS, PIECES MARKED ⑩, W/2-12d NAILS AT EACH END.

**TYPICAL LTL (2-UNIT LOAD)**

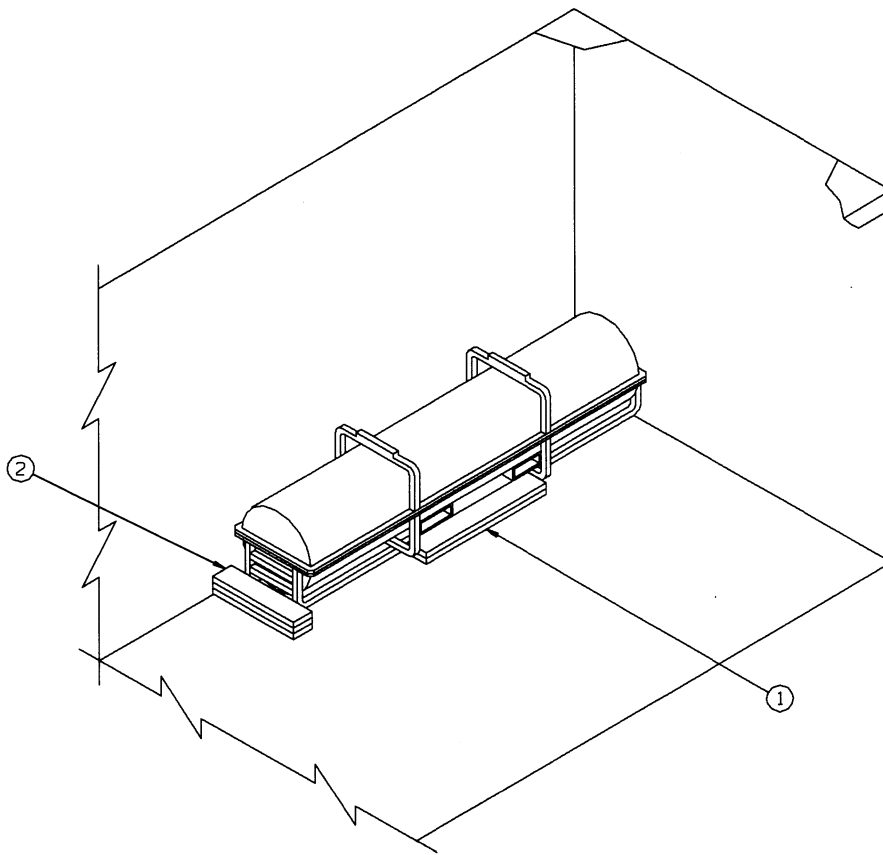
SPECIAL NOTES:

1. A 2-UNIT LOAD IS SHOWN IN A 7'-8" WIDE (INSIDE DIMENSION) VAN TRAILER. TRAILERS OF OTHER WIDTHS CAN BE USED.
2. A TRAILER EQUIPPED WITH ROUNDED FRONT CORNERS IS SHOWN. IF THE TRAILER TO BE LOADED HAS A SQUARE FRONT, OMIT THE FORWARD BLOCKING ASSEMBLY, PIECE MARKED ①, AND POSITION THE CONTAINERS DIRECTLY AGAINST THE TRAILER FRONT WALL.
3. ALL LTL LOADS, REGARDLESS OF THEIR SIZE, REQUIRE ONE STRUT BRACE POSITIONED AT THE REAR OF THE TRAILER AND NAILED TO THE POCKET CLEATS, PIECES MARKED ⑦. IF THE SIDE STRUTS, PIECES MARKED ④, ARE LONGER THAN 7'-0", AN ADDITIONAL STRUT BRACE, PIECE MARKED ①, AND TWO STRUT BRACE RETAINING CLEATS, PIECES MARKED ⑩, MUST BE APPLIED FOR EVERY 7'-0" OF SIDE STRUT LENGTH.
4. THE K-BRACE BLOCKING, SHOWN AS PIECES MARKED ③ THRU ①, IS ADEQUATE FOR RETAINING A MAXIMUM OF 22 CBU-59/B (APAM) OR CBU (T-1) B CONTAINERS, 26 CONTAINERS WITH E173 OR E819 ITEMS OR 28 CBU-MK 20 OR CBU-78/B MOD 0 CONTAINERS.
5. TRAILERS EQUIPPED WITH ROLL-UP TYPE DOORS MAY BE USED; HOWEVER, THE NAILED-HEADER TYPE METHOD OF REAR BLOCKING MUST BE INSTALLED IN LIEU OF THE "K-BRACE" TYPE BLOCKING, PIECES MARKED ③ THRU ①. SEE THE "NAILED-HEADER METHOD" DETAIL ON PAGE 20. A HEADER WILL BE NAILED WITH NOT LESS THAN 6-10d NAILS IN EACH LAYER. A HEADER WITH 6 NAILS IS ADEQUATE FOR AN LTL LOAD OF NOT MORE THAN 12 CONTAINERS. A HEADER WITH 10 NAILS PER LAYER WILL RETAIN 21 CONTAINERS. USE A HEADER WITH 12 NAILS FOR 25 CONTAINERS OR WITH 14 NAILS FOR 29 CONTAINERS. ADD ONE NAIL FOR EACH TWO ADDITIONAL CONTAINERS.



ANTI-SWAY BRACE B

TYPICAL LTL (2-UNIT LOAD)



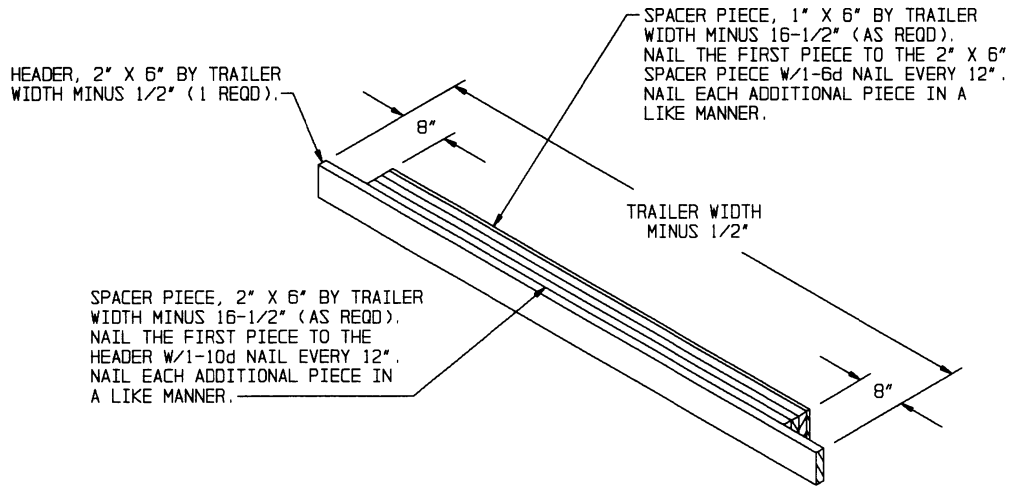
ISOMETRIC VIEW

SPECIAL NOTES:

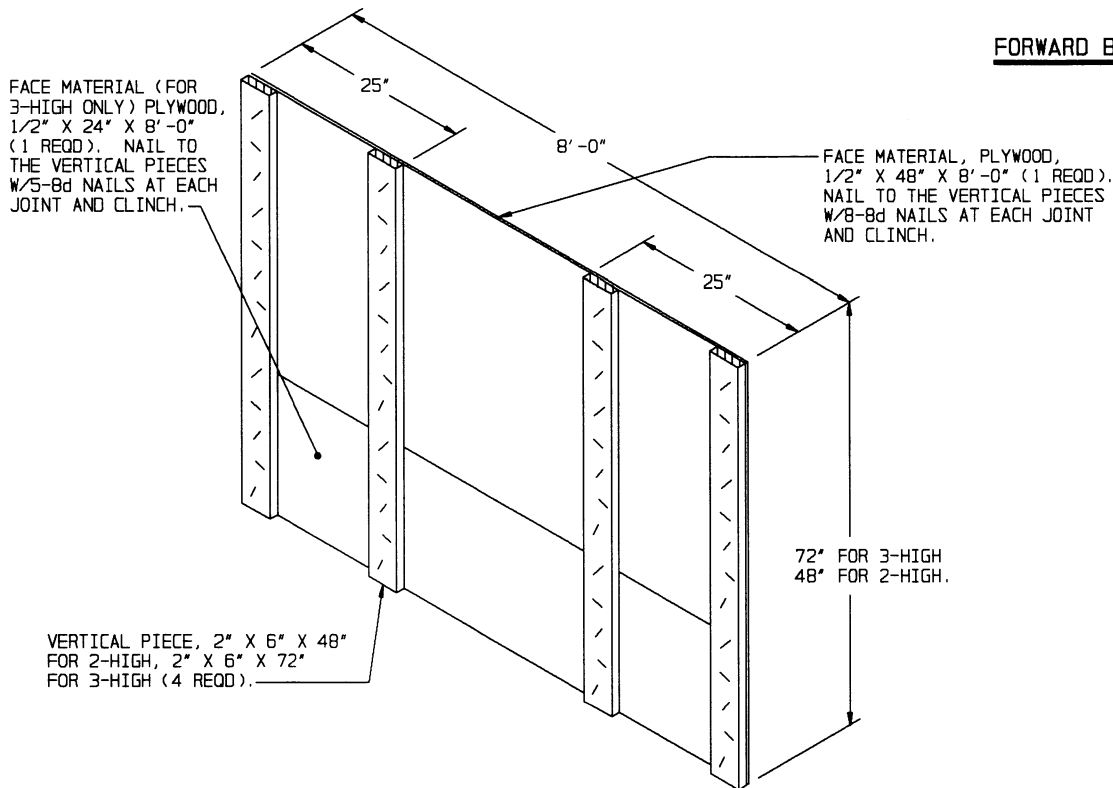
1. A 1-UNIT LOAD IS SHOWN IN A 7'-8" WIDE (INSIDE DIMENSION) VAN TRAILER WHICH HAS A NAILABLE FLOOR. OTHER WIDTH TRAILERS CAN BE USED.
2. IF THE TRAILER BEING LOADED IS EQUIPPED WITH ROUNDED FRONT CORNERS, THE CONTAINER SHOULD BE POSITIONED IN THE CENTER OF THE TRAILER WIDTH AND SIDE BLOCKING INSTALLED ON BOTH SIDES OF THE CONTAINER. IN LIEU OF DOING THAT, A "FORWARD BLOCKING ASSEMBLY A" MAY BE INSTALLED. SEE THE DETAIL ON PAGE 15.
3. THE HEADER, SHOWN AS PIECE MARKED ②, WILL NOT BE RELIED UPON TO RETAIN MORE THAN THREE CONTAINERS.
4. IF MORE THAN ONE CONTAINER IS TO BE TRANSPORTED, THE LOAD SHOULD BE FORMED IN ROWS, WITH THE CONTAINERS POSITIONED AGAINST OPPOSITE SIDEWALLS, AS SHOWN IN THE TYPICAL LTL VIEW ON PAGE 12. SIDE BLOCKING, SHOWN AS PIECE MARKED ①, MUST BE INSTALLED FOR THE ADDED CONTAINER(S), OR ANTI-SWAY BRACES WILL BE USED. SEE PIECE MARKED ② ON PAGE 12 FOR A TYPICAL INSTALLATION. IF THE TRAILER HAS ROUNDED CORNERS AT THE FORWARD END, INSTALL A "FORWARD BLOCKING ASSEMBLY A". SEE THE DETAIL ON PAGE 15.

KEY NUMBERS

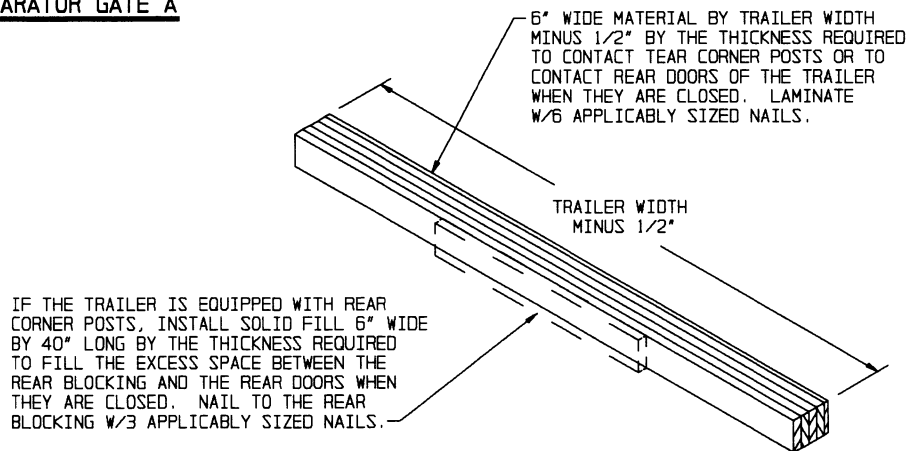
- ① SIDE BLOCKING, 2" X 6" X 36" (DOUBLED) (1 REQD). POSITION AS SHOWN. NAIL THE FIRST PIECE TO THE TRAILER FLOOR W/3-10d NAILS. NAIL THE SECOND PIECE TO THE FIRST IN A LIKE MANNER. SEE GENERAL NOTE "M" ON PAGE 2. SEE SPECIAL NOTE 2 AT LEFT.
- ② HEADER, 2" X 6" X 24" (TRIPLED) (1 REQD). NAIL THE FIRST PIECE TO THE TRAILER FLOOR W/3-10d NAILS. NAIL THE SECOND PIECE TO THE FIRST AND THE THIRD PIECE TO THE SECOND IN A LIKE MANNER. SEE SPECIAL NOTES 3 AND 4 AT LEFT.



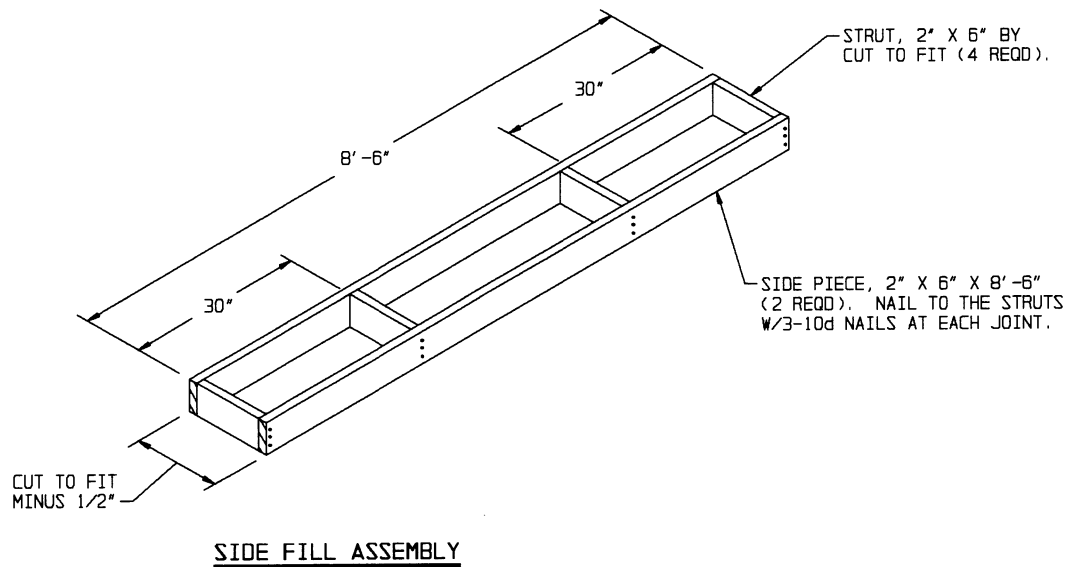
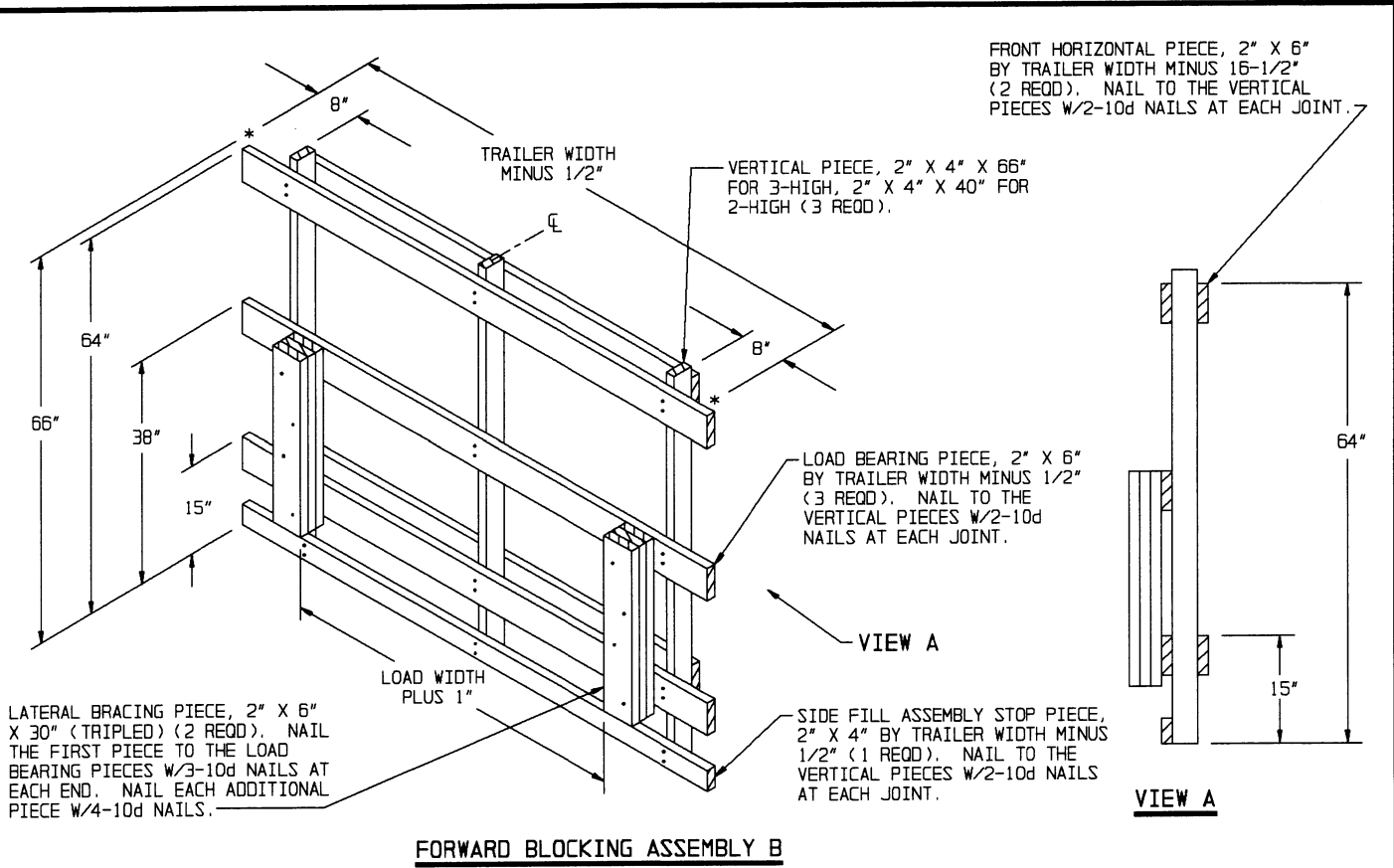
**FORWARD BLOCKING ASSEMBLY A**



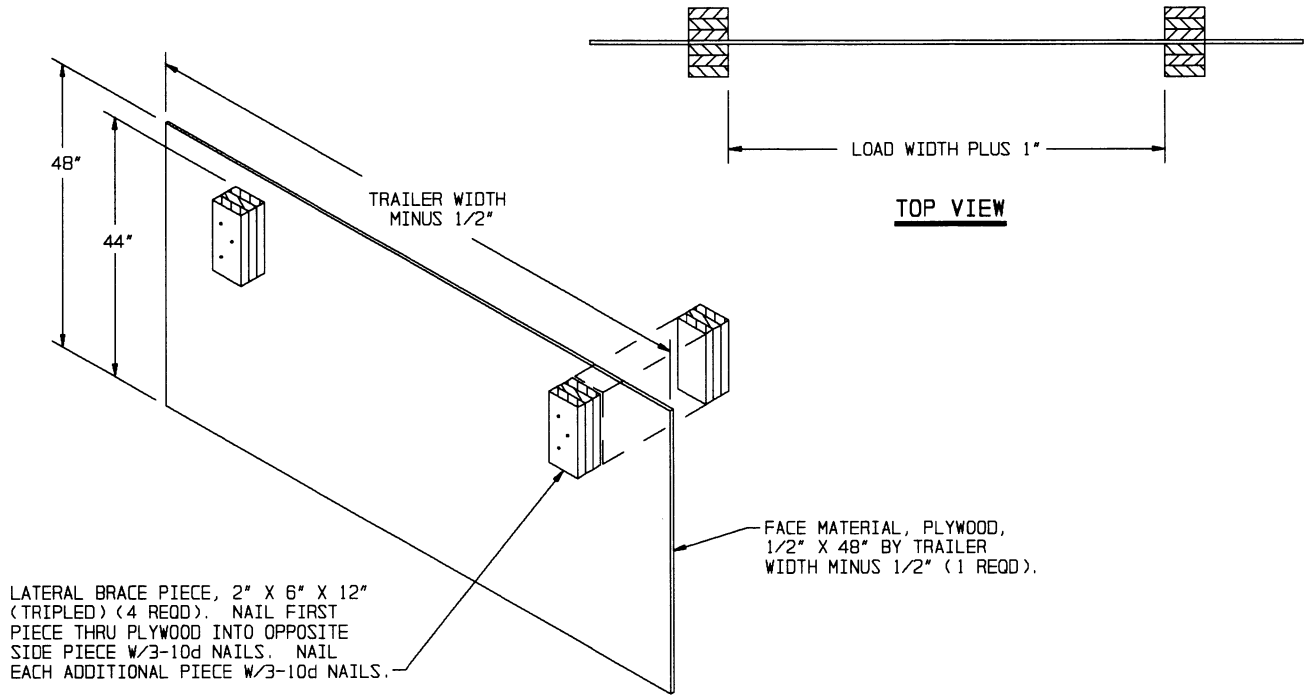
**SEPARATOR GATE A**



**REAR BLOCKING ASSEMBLY A**

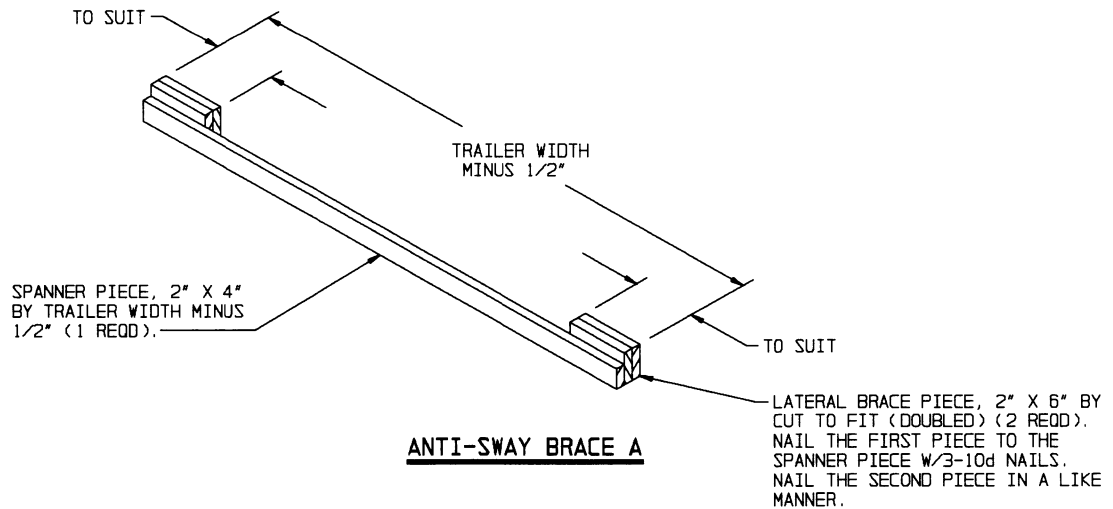






LATERAL BRACE PIECE, 2" X 6" X 12"  
(TRIPLED) (4 REQD). NAIL FIRST  
PIECE THRU PLYWOOD INTO OPPOSITE  
SIDE PIECE W/3-10d NAILS. NAIL  
EACH ADDITIONAL PIECE W/3-10d NAILS.

**SEPARATOR GATE B**

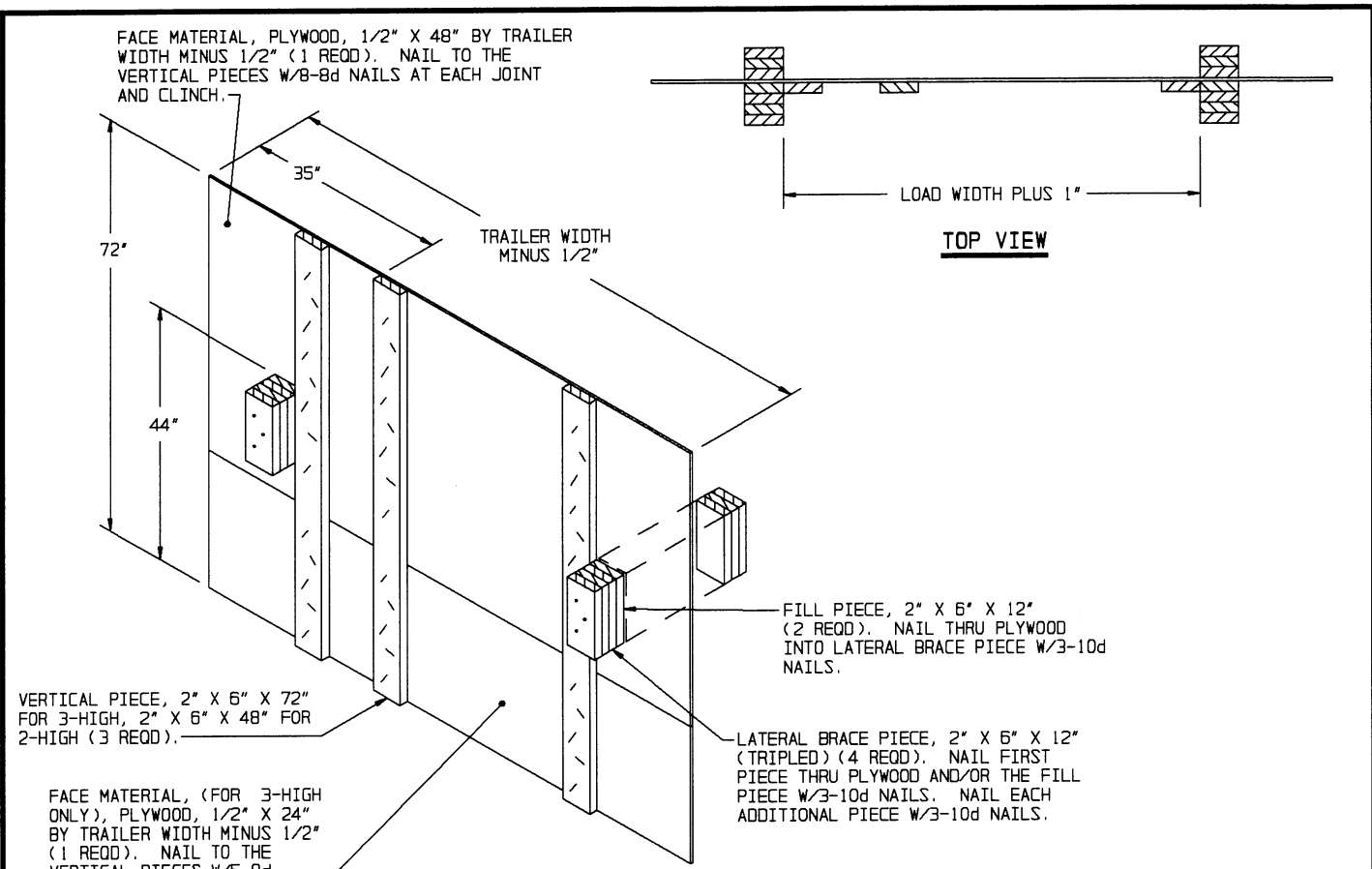


SPANNER PIECE, 2" X 4"  
BY TRAILER WIDTH MINUS  
1/2" (1 REQD).

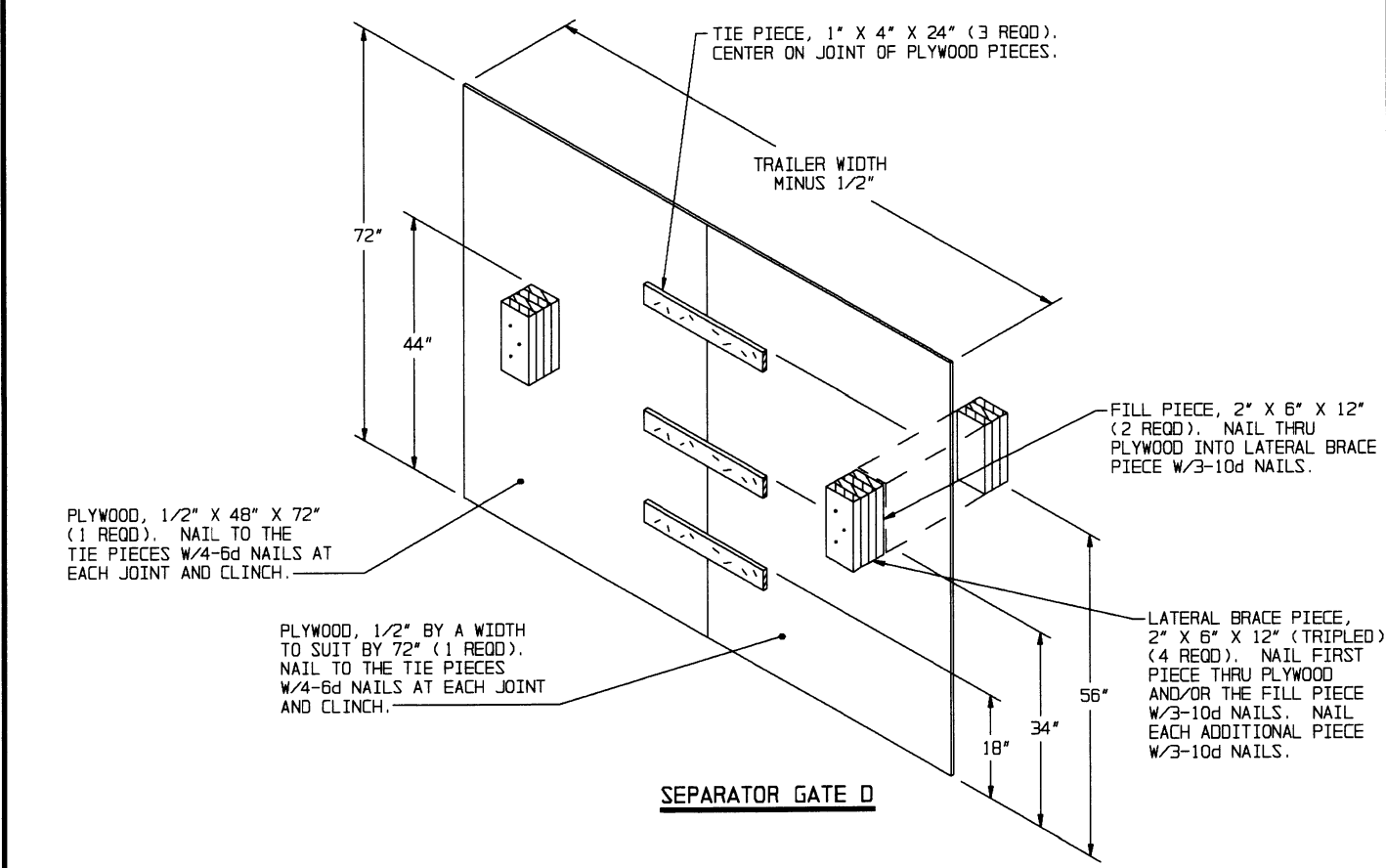
LATERAL BRACE PIECE, 2" X 6" BY  
CUT TO FIT (DOUBLED) (2 REQD).  
NAIL THE FIRST PIECE TO THE  
SPANNER PIECE W/3-10d NAILS.  
NAIL THE SECOND PIECE IN A LIKE  
MANNER.

**ANTI-SWAY BRACE A**

**DETAILS**

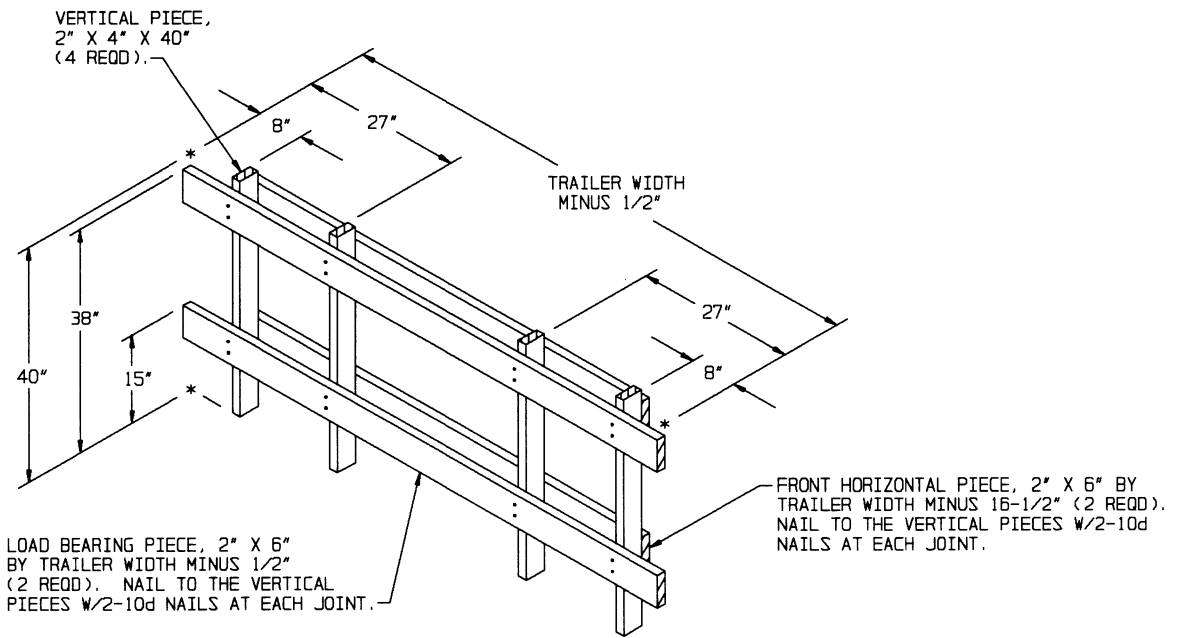


**SEPARATOR GATE C**

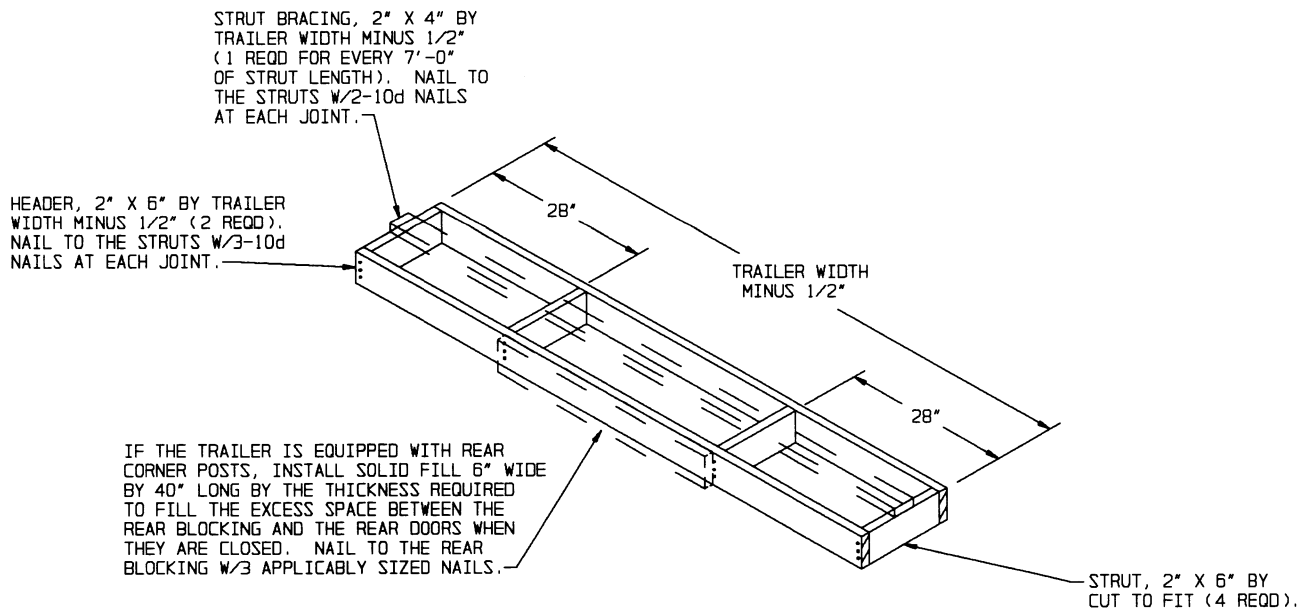


**SEPARATOR GATE D**

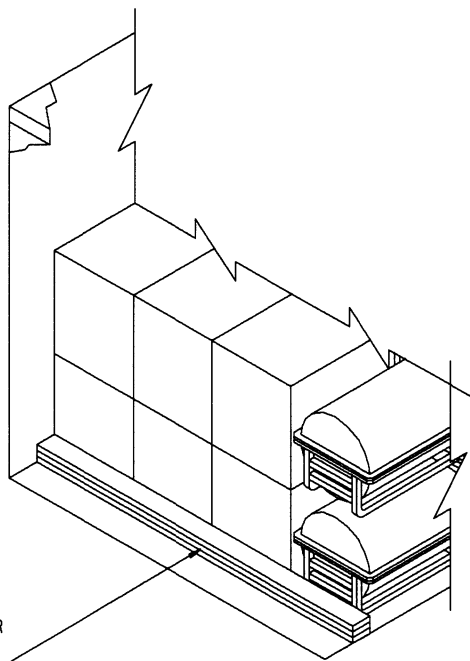
**DETAILS**



**FORWARD BLOCKING ASSEMBLY C**

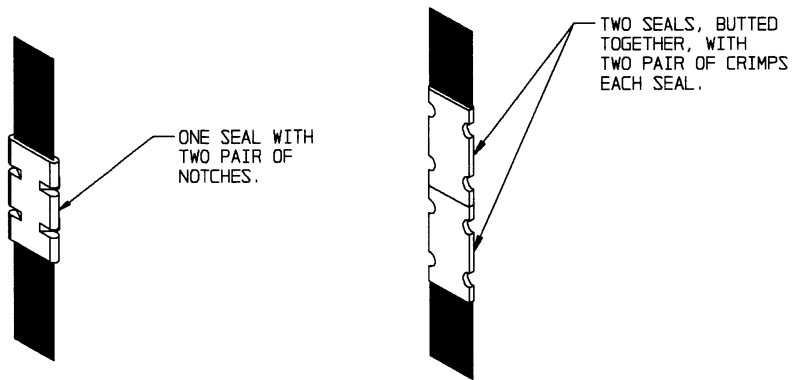


**REAR BLOCKING ASSEMBLY B**



HEADER, 2" X 6" BY TRAILER WIDTH  
MINUS 1/2" (TRIPLED) (1 REOD).  
NAIL THE FIRST PIECE TO THE TRAILER  
FLOOR W/18-10d NAILS. NAIL EACH  
ADDITIONAL PIECE IN A LIKE MANNER.

**NAILED-HEADER METHOD**



ONE SEAL WITH  
TWO PAIR OF  
NOTCHES.

TWO SEALS, BUTTED  
TOGETHER, WITH  
TWO PAIR OF CRIMPS  
EACH SEAL.

**STRAP JOINT A**

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

**STRAP JOINT B**

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

**END-OVER-END LAP JOINT DETAILS**