

APPROVED	
BUREAU OF EXPLOSIVES	
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DATE <i>3/1/67</i>	MILITARY ASSISTANT

LOADING & BRACING (TL & LTL) IN CLOSED OR OPEN TOP VAN TRAILERS OF MINE DISPERSING SYSTEM, AIRCRAFT, XM47, PACKED IN THE XM551 CONTAINER

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THIS DRAWING SUPERSEDES
"INTERIM PROCEDURES" DRAWING
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DO NOT SCALE

GENERAL NOTES

- A. THE LOAD AS SHOWN ON PAGE 4 IS BASED ON A CLOSED OR OPEN TOP VAN TRAILER 35'-0" LONG X 7'-6" WIDE (INSIDE DIMENSION) HAVING A WOOD OR A WOOD AND METAL, OR A METAL FLOOR. THE DELINEATED PROCEDURES ARE ALSO APPLICABLE TO LONGER TRAILERS AND TO TRAILERS WHICH ARE 89" THROUGH 93" WIDE. A 33'-0" LONG TRAILER IS THE MINIMUM LENGTH TRAILER WHICH CAN BE USED FOR SHIPPING A 21-UNIT LOAD. CAUTION: IF A TRAILER IS TO BE LOADED THROUGH THE REAR DOOR OPENING, THE HEIGHT OF THE DOOR OPENING, MEASURED FROM THE TRAILER FLOOR TO THE TOP FRAME MEMBER, MUST BE AT LEAST 90", TO ALLOW FOR THE PASSAGE OF 3-HIGH CONTAINER STACKS.
- B. THE OUTLOADING PROCEDURES SPECIFIED HEREIN ARE APPLICABLE TO THE XM47 AIRCRAFT MINE DISPERSING SYSTEM WHEN PACKAGED IN THE XM551 SERIES CONTAINER. SUBSEQUENT REFERENCE TO CONTAINER HEREIN MEANS THE XM551 CONTAINER WITH CONTENTS.
- C. FOR DETAILS OF THE XM551 CONTAINER SEE DRAWING NO. 9206909:
CONTAINER DIMENSIONS -- 108" LONG X 29-1/8" WIDE X 31-1/2" HIGH.
GROSS WEIGHT ----- 1,140 POUNDS (APPROX).
TARE WEIGHT ----- 500 POUNDS (APPROX).
- D. THIS ITEM IS AN ICC CLASS "A" EXPLOSIVE.
- E. THE "MONITORING" END OF CONTAINERS MUST BE POSITIONED WITHIN THE TRAILER AS SHOWN BY ARROWS ON THE ISOMETRIC VIEWS OF THE DEPICTED LOADS TO FACILITATE MONITORING DURING TRANSIT.
- F. 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.
- G. THE NUMBER OF UNITS MAY BE ADJUSTED TO FIT THE SIZE OF THE TRAILER TO BE LOADED OR THE QUANTITY TO BE SHIPPED, AND COMBINATIONS OF THE OUTLOADING PROCEDURES SPECIFIED FOR THE VARIOUS LOADS SHOWN HEREIN MAY BE USED AS REQUIRED. HOWEVER, THE APPROVED METHODS SHOWN HEREIN MUST BE FOLLOWED AS CLOSELY AS POSSIBLE FOR BLOCKING, BRACING AND STAYING OF THE DESIGNATED ITEM.
- H. 1-1/4" STEEL STRAPPING WILL BE USED TO UNITIZE CONTAINERS AS SHOWN ON PAGE 3. IT IS RECOMMENDED THAT CONTAINERS BE UNITIZED PRIOR TO PLACEMENT ABOARD THE TRAILER. SEE GENERAL NOTE "P" BELOW.
- J. WHEN ANY STRAP IS SEALED AT AN END-OVER-END LAP JOINT, A MINIMUM OF TWO (2) SEALS WITH TWO (2) CRIMPS PER SEAL MUST BE USED.
- K. FOR TRAILERS NOT EQUIPPED WITH REAR CORNER POSTS, REAR BLOCKING MUST BE EXTENDED TO CONTACT THE REAR DOORS WHEN THEY ARE CLOSED.
- L. OTHER TYPES OF LADING ITEMS MAY BE LOADED IN THE TRAILERS WHICH ARE PARTIALLY LOADED WITH THE DESIGNATED ITEM, PROVIDING THE TOTAL LOAD IS COMPATIBLE, EXISTING DIRECTIVES ARE NOT VIOLATED, THE INSPECTION/MONITORING PORT OF THIS ITEM IS ACCESSIBLE, AND THE OTHER LADING ITEMS ARE BLOCKED AND BRACED TO EQUAL THE BLOCKING AND BRACING CRITERIA SPECIFIED HEREIN.
- M. DUNNAGE LUMBER SPECIFIED THROUGHOUT THIS PROCEDURAL DRAWING IS OF NOMINAL SIZE. FOR EXAMPLE, 2" X 4" MATERIAL IS ACTUALLY 1-5/8" THICK BY 3-5/8" WIDE AND 1" X 4" MATERIAL IS ACTUALLY 3/4" THICK BY 3-5/8" WIDE.
- N. PORTIONS OF THE SEMITRAILER BODIES DEPICTED WITHIN THIS PROCEDURAL DRAWING, SUCH AS ONE OF THE SIDE WALLS, HAVE NOT BEEN SHOWN IN THE LOAD VIEWS FOR CLARITY PURPOSES.
- O. FOR SPECIFIC GUIDANCE, ATTENTION IS DIRECTED TO THE "UNITIZATION AND HANDLING PROCEDURES" ON PAGE 3 AND TO THE DELINEATED OUTLOADING METHODS CONTAINED HEREIN.
- P. IN SOME INSTANCES, CONTAINERS WILL ALREADY BE UNITIZED INTO STACKS WHEN OFFERED FOR LOADING. THESE UNITIZED STACKS SHOULD BE INSPECTED AND AS REQUIRED, LOOSE UNITIZING STEEL STRAPPING MUST BE REPLACED.

MATERIAL SPECIFICATIONS

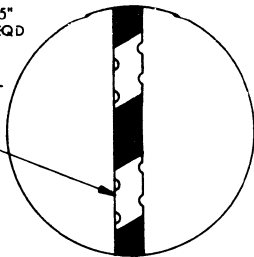
LUMBER -----: SEE TM 715-5500-1, DUNNAGE LUMBER; FED SPEC MM-L-751.

NAILS -----: COMMON, CEMENT COATED OR CHEMICALLY ETCHED, FED SPEC FF-N-105.
ALT: ANNULAR-RING TYPE NAIL OF SAME SIZE.

STRAPPING, STEEL -----: TYPE I OR IV, CLASS A OR B, FED SPEC QQ-5-781.

ANTI-CHAFING MATERIAL: NEUTRAL BARRIER MATERIAL, MIL-B-121 (OR EQUAL).

SEAL FOR 1-1/4" X .035" STEEL STRAPPING (2 REQD PER STRAP). DOUBLE CRIMP EACH SEAL AS SHOWN. SEE GENERAL NOTE "J" ON PAGE 2.



ANTI-CHAFING NEUTRAL BARRIER MATERIAL (AS REQD TO PROTECT THE CONTAINERS AT ALL POINTS OF CONTACT WITH STRAPPING).

CONTAINER STACKING PAD.

INDICATES CONTAINER END WHICH HAS INSPECTION/MONITORING PORT. SEE GENERAL NOTE "E" ON PAGE 2.

CONTAINER LIFTING POINT.

INSPECTION/MONITORING PORT.

1-1/4" X .035" UNITIZING STEEL STRAPPING (4 REQD PER STACK).

7'-5 1/2"

RECEPTACLE FOR FORK TINE OF FORKLIFT TRUCK.

9'-0"

29 1/8"

STACK DETAIL

UNITIZING AND HANDLING PROCEDURAL GUIDANCE

1. STACKING CONTAINERS FOR UNITIZING.

- AN UPPER CONTAINER SHOULD BE PLACED AS CLOSE AS POSSIBLE IN VERTICAL ALIGNMENT WITH THE NEXT LOWER CONTAINER.
- POSITION THE INSPECTION/MONITORING PORT OF AN UPPER CONTAINER ABOVE THE INSPECTION/MONITORING PORT OF THE NEXT LOWER CONTAINER. SEE GENERAL NOTE "E" ON PAGE 2.

2. INSTALLATION OF 1-1/4" X .035" UNITIZING STEEL STRAPPING. SEE GENERAL NOTE "P" ON PAGE 2.

- EACH OF THE TWO SETS OF UNITIZING STRAPS SHOULD BE POSITIONED AROUND THE CONTAINERS AS SHOWN. PLACE STRAPPING AS NEAR AS PRACTICAL TO THE INSIDE ENDS OF THE SKIDS. THE STRAPPING SHOULD LAY FLAT AND STRAIGHT WITH THE CONTOUR OF THE CONTAINERS; I.E., VERTICAL ALONG SIDES AND STRAIGHT ACROSS THE TOP AND BOTTOM OF THE STACK.
- PLACE ANTI-CHAFING MATERIAL UNDER THE STRAPPING AT ALL POINTS OF STRAPPING/CONTAINER CONTACT, AND SECURE TO PREVENT DISLODGE DURING AND AFTER STRAP APPLICATION. STRIPS OF ANTI-CHAFING MATERIAL MAY BE TAPED OR STRING-TIED TO THE CONTAINERS OR STRAPPING, OR IT CAN BE FORMED INTO STRAP EN-CIRCLING TUBES BY WINDING THE MATERIAL AROUND AND AROUND THE STRAPPING TO FORM A SELF-WELDING UNIT.
- 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 A STACK SO THAT THE SEALS WILL NOT BE IN CONTACT WITH THE CONTAINERS. DURING STRAP TENSIONING, CARE SHOULD BE EXERCISED TO INSURE THAT THE CONTAINERS ARE NOT DAMAGED. EXCESS STRAPPING (STRAP ENDS) SHOULD BE CUT OFF OR BROKEN OFF NEAR THE JOINT SEALS.

(UNITIZING AND HANDLING PROCEDURAL GUIDANCE CONTINUED)

3. CONTAINER OR CONTAINER STACK HANDLING.

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

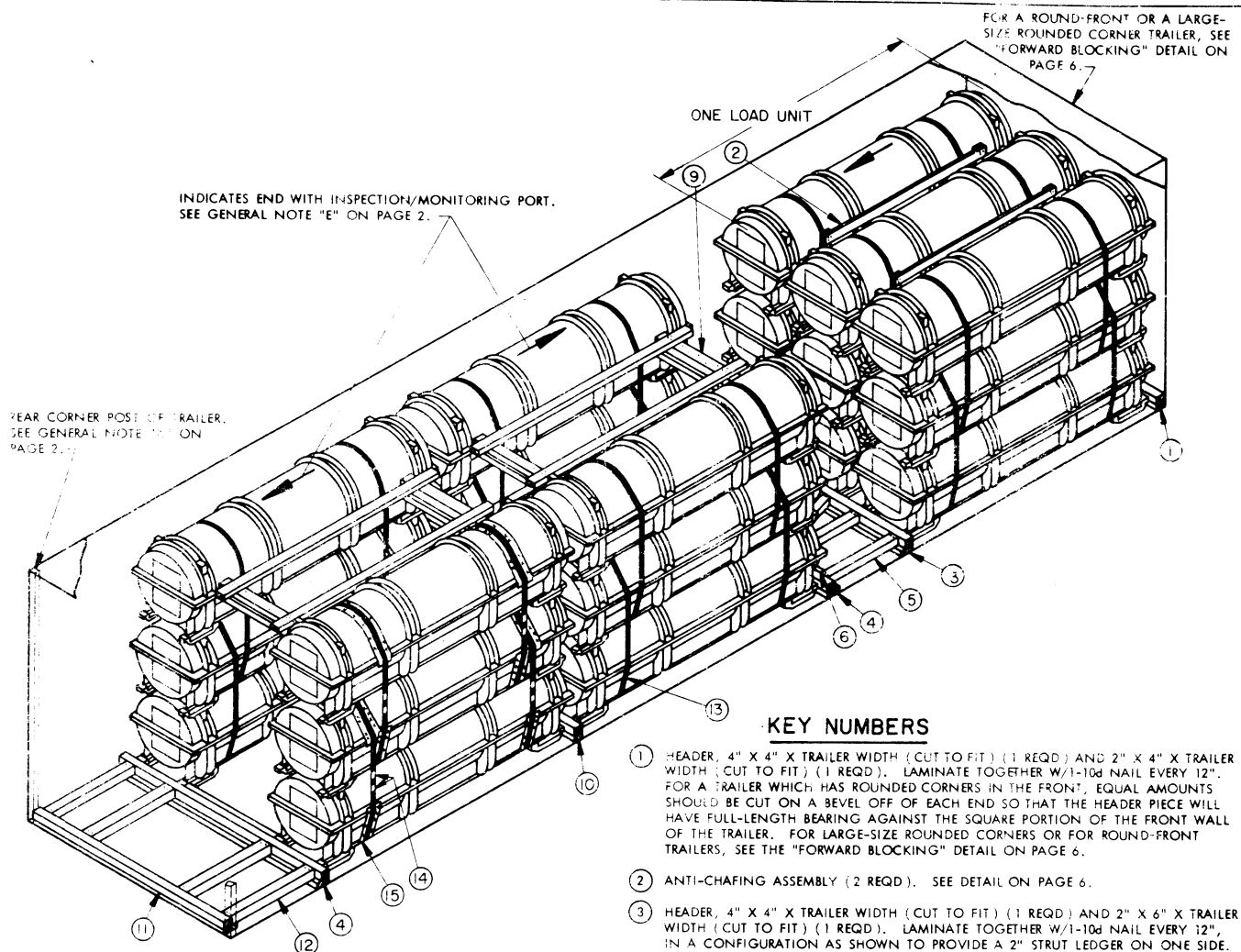
(2) PRECAUTIONARY HANDLING TECHNIQUES NORMALLY EMPLOYED OR AS SPECIFIED FOR THE TYPE OF COMMODITY INVOLVED WILL BE OBSERVED.

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. **CAUTION:** THE USUALLY APPLIED END-HANDLING IS NOT PERMITTED; FORK TINES MAY BE PLACED UNDER THE SKIDS. 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 VERY SHORT "INCHING" SPEED MOVEMENTS, SUCH AS WILL BE EXPERIENCED DURING TRAILER LOADING, A UNITIZED TWO OR THREE CONTAINER STACK MAY BE HANDLED BY INSERTING THE FORKS OF THE FORKLIFT TRUCK UNDER THE BODY OF AN UPPER CONTAINER.

C. IF ONE CONTAINER IS HANDLED BY SLINGING, THE SLING MAY BE ATTACHED TO THE LIFTING POINTS OF THE CONTAINER. HOWEVER, IF A 2 OR 3-HIGH STACK IS HANDLED BY SLINGING, DO NOT ATTACH THE SLING TO THE LIFTING POINTS ON THE CONTAINERS. THE SLING USED MUST BE OF SUCH A DESIGN THAT LIFTING IS DONE ON THE BOTTOM OF THE LOWER CONTAINER.

UNITIZATION AND HANDLING PROCEDURES



ISOMETRIC VIEW

A 21-UNIT LOAD IN A 35'-0" LONG TRAILER IS SHOWN. SEE SPECIAL NOTE 1 BELOW.

SPECIAL NOTES:

1. FOR THE SHIPMENT OF A QUANTITY WHICH IS LESS THAN SHOWN, THE FOLLOWING IS APPLICABLE:
 - A. WHEN SHIPPING A 20-UNIT LOAD, OMIT THE CENTER THIRD-LAYER CONTAINER AT FRONT OF TRAILER. REDUCE HEIGHT OF PIECES MARKED ② AS REQUIRED.
 - B. WHEN SHIPPING A 19 OR 17-UNIT LOAD, OMIT THE TWO TOP CONTAINERS FROM A TWO-WIDE LOAD UNIT. POSITION THE ANTI-SWAY ASSEMBLY AT THE SECOND LAYER.
 - C. WHEN SHIPPING ANY OTHER QUANTITY LOAD, USE A COMBINATION OF A AND B ABOVE, OR OMIT A COMPLETE LOAD UNIT, OR OMIT THE CENTER STACK FROM THE FRONT LOAD UNIT WHICH THEN CAN BE BLOCKED AND BRACED LIKE THE OTHER TWO-WIDE LOAD UNITS.
2. A LOAD OF THIRTY-SIX (36) EMPTY CONTAINERS CAN BE SHIPPED IN A 40'-0" LONG TRAILER BY LOADING FOUR (4) LOAD UNITS OF NINE (9) CONTAINERS EACH INTO THE TRAILER AND BLOCKING AND BRACING THEM BY A METHOD SIMILAR TO THE METHOD SHOWN. OMIT PIECES MARKED ③ THROUGH ⑤ BETWEEN THE FRONT AND SECOND LOAD UNIT, AND SUBSTITUTE A HEADER MARKED ①. USE TWO ADDITIONAL PIECES MARKED ①, SUBSTITUTING ONE FOR PIECE MARKED ⑩. DELETE SPACER ASSEMBLIES MARKED ⑨ AND SUBSTITUTE ANTI-CHAFING ASSEMBLIES MARKED ② AS REQUIRED.

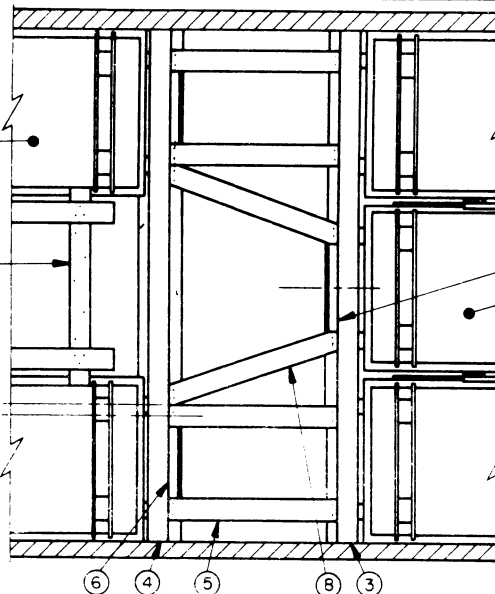
KEY NUMBERS

- ① HEADER, 4" X 4" X TRAILER WIDTH (CUT TO FIT) (1 REQD) AND 2" X 4" X TRAILER WIDTH (CUT TO FIT) (1 REQD). LAMINATE TOGETHER W/1-10d NAIL EVERY 12". FOR A TRAILER WHICH HAS ROUNDED CORNERS IN THE FRONT, EQUAL AMOUNTS SHOULD BE CUT ON A BEVEL OFF OF EACH END SO THAT THE HEADER PIECE WILL HAVE FULL-LENGTH BEARING AGAINST THE SQUARE PORTION OF THE FRONT WALL OF THE TRAILER. FOR LARGE-SIZE ROUNDED CORNERS OR FOR ROUND-FRONT TRAILERS, SEE THE "FORWARD BLOCKING" DETAIL ON PAGE 6.
- ② ANTI-CHAFING ASSEMBLY (2 REQD). SEE DETAIL ON PAGE 6.
- ③ HEADER, 4" X 4" X TRAILER WIDTH (CUT TO FIT) (1 REQD) AND 2" X 6" X TRAILER WIDTH (CUT TO FIT) (1 REQD). LAMINATE TOGETHER W/1-10d NAIL EVERY 12", IN A CONFIGURATION AS SHOWN TO PROVIDE A 2" STRUT LEDGER ON ONE SIDE.
- ④ HEADER/SPACER (2 REQD). SEE DETAIL ON PAGE 5.
- ⑤ STRUT, 4" X 4" X 30" (MIN 22") (4 REQD). ALIGN AN OUTER PIECE WITH A CONTAINER SKID AND POSITION AN INNER PIECE SO INSIDE EDGE OF STRUT IS CENTERED ON A CONTAINER SKID AS SHOWN IN THE "PARTIAL PLAN" VIEW ON PAGE 5. TOENAIL TO ADJACENT PIECES MARKED ③ AND ④ W/2-16d NAILS AT EACH END.
- ⑥ SIDE CLEAT, 2" X 4" X CUT TO FIT (2 REQD). SEE "PARTIAL PLAN" VIEW ON PAGE 5 FOR PROPER LOCATION. NAIL TO HEADER/SPACER MARKED ④ W/4-12d NAILS.
- ⑦ CENTER CLEAT, 2" X 4" X 16" (1 REQD). SEE "PARTIAL PLAN" VIEW ON PAGE 5 FOR PROPER LOCATION. NAIL TO HEADER MARKED ③ W/4-12d NAILS.
- ⑧ DIAGONAL BRACE, 4" X 4" X CUT TO FIT (2 REQD). DOUBLE BEVEL EACH END AS SHOWN. SEE "PARTIAL PLAN" VIEW ON PAGE 5. TOENAIL TO HEADER MARKED ③ AND HEADER/SPACER MARKED ④ W/2-16d NAILS AT EACH END.
- ⑨ SPACER ASSEMBLY (2 REQD). SEE DETAIL ON PAGE 6. INSTALL AT LOCATIONS SHOWN.
- ⑩ INTERMEDIATE HEADER/SPACER (1 REQD). SEE DETAIL ON PAGE 5. POSITION BETWEEN THE MIDDLE AND THE REAR LOAD UNITS.
- ⑪ REAR HEADER, 4" X 4" AND 2" X 6" CUT TO FIT BETWEEN REAR CORNER POSTS OF TRAILER OR CUT TO TRAILER WIDTH IN LENGTH FOR VANS WITHOUT REAR CORNER POSTS (1 OF EACH PIECE REQD). LAMINATE TOGETHER W/1-10d NAIL EVERY 12", IN A CONFIGURATION AS SHOWN TO PROVIDE A 2" STRUT LEDGER ON ONE SIDE.
- ⑫ REAR STRUT, 4" X 4" X CUT TO FIT (4 REQD). ALIGN WITH A CONTAINER SKID AND TOENAIL TO THE ADJACENT PIECES MARKED ④ AND ⑪ W/2-16d NAILS AT EACH END.
- ⑬ STEEL UNITIZING STRAPPING, 1-1/4" X .035" X 15'-0" (28 REQD). SEE "UNITIZATION AND HANDLING PROCEDURES" ON PAGE 3.
- ⑭ SEAL FOR 1-1/4" STRAPPING (56 REQD). DOUBLE CRIMP EACH SEAL.
- ⑮ ANTI-CHAFING, NEUTRAL BARRIER MATERIAL. PLACE UNDER ALL STRAPPING MARKED ⑬ AT ALL POINTS OF CONTAINER/STRAP CONTACT.

21-UNIT LOAD IN A 35'-0" LONG TRAILER

INDICATES A STACK IN THE
SECOND LOAD UNIT

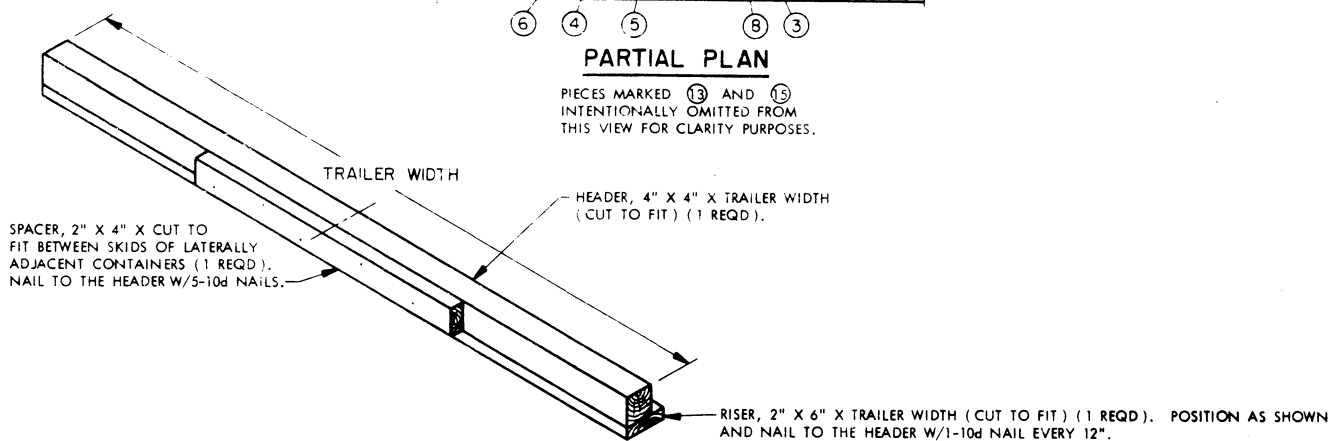
CL OF CONTAINER SKID
CL OF PIECE MARKED ⑤ 2"



PARTIAL PLAN

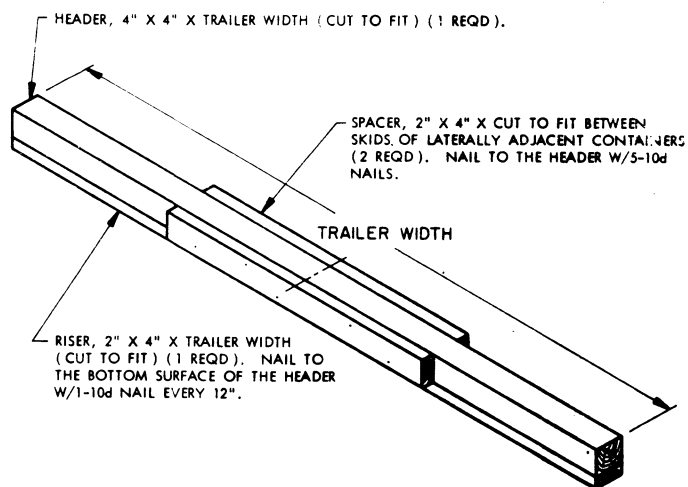
PIECES MARKED ⑬ AND ⑮
INTENTIONALLY OMITTED FROM
THIS VIEW FOR CLARITY PURPOSES.

INDICATES A STACK IN THE
FRONT LOAD UNIT.



HEADER/SPACER

(2 REQD)



INTERMEDIATE HEADER/SPACER

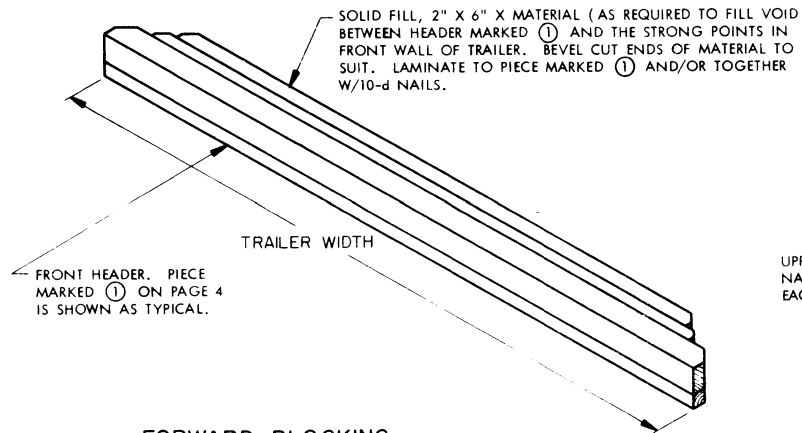
(1 REQD)

BILL OF MATERIAL		
LUMBER	LINEAR FEET	BOARD FEET
1" X 4"	68	23
2" X 4"	87	58
2" X 4"	30	30
4" X 4"	73	98
NAILS	NO. REQD	POUNDS
6d (2")	36	1/4
10d (3")	112	1-3/4
12d (3-1/4")	12	1/4
16d (3-1/2")	40	1
STEEL STRAPPING, 1-1/4" X .035"-420' REQD ----- 60 LBS		
SEAL FOR 1-1/4" STRAPPING ----- 56' REQD ----- 3 LBS		
ANTI-CHAFING MATERIAL ----- AS REQD ----- NIL		

LOAD AS SHOWN

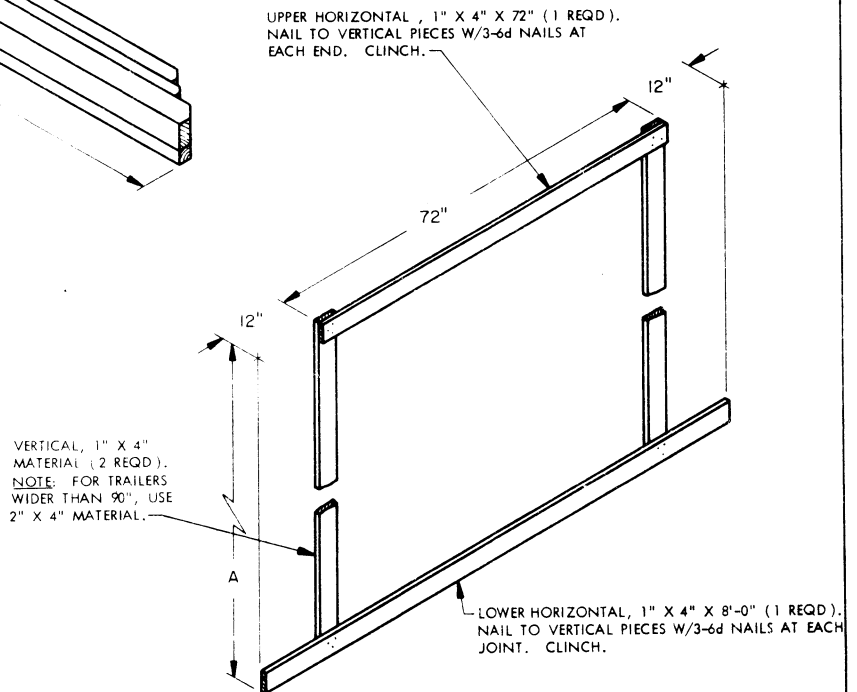
ITEM	QUANTITY	WEIGHT (APPROX)
CONTAINER W/XM47 SYSTEM	21	23,940 LBS
DUNNAGE		590 LBS
TOTAL WEIGHT		24,530 LBS

21-UNIT LOAD IN A 35'-0" LONG TRAILER



FORWARD BLOCKING

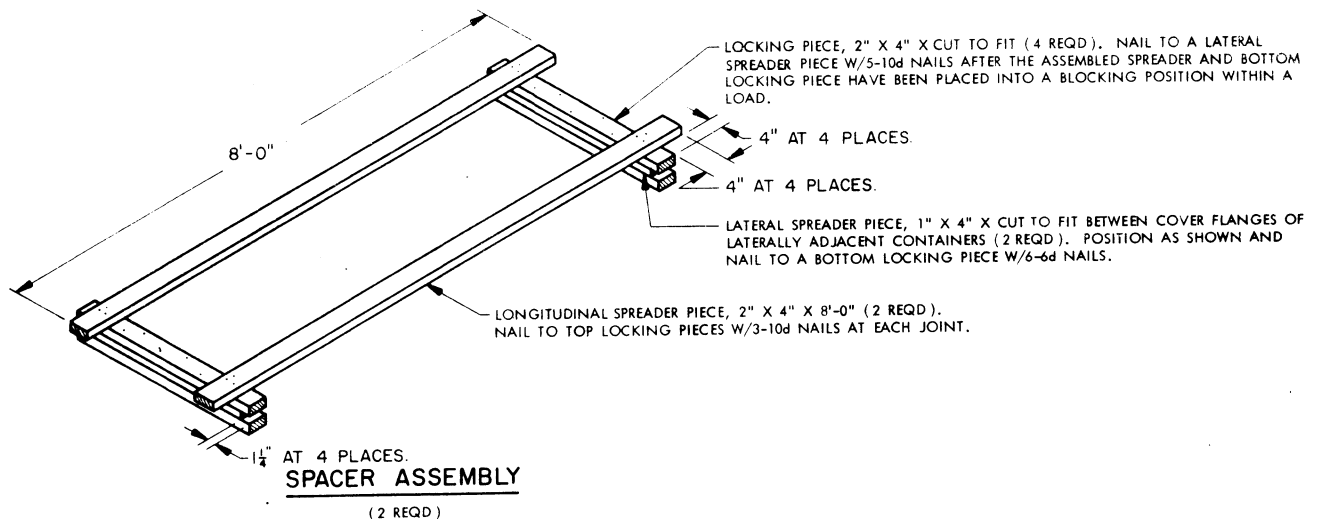
THIS TYPE OF BLOCKING IS FOR USE IN A TRAILER WHICH HAS A ROUNDED FRONT WALL OR WHICH HAS GREATER THAN 4" RADIUS ROUNDED CORNERS AT THE FORWARD WALL.



ANTI-CHAFING ASSEMBLY

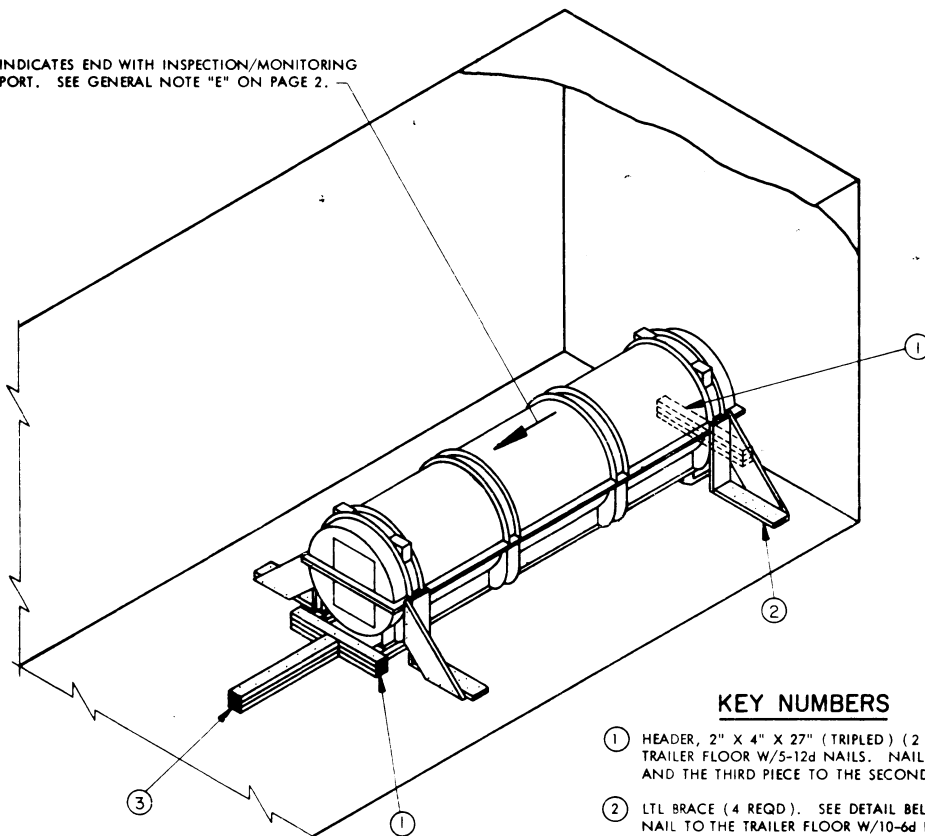
(2 REQD)

DIMENSION "A" FOR THREE HIGH STACK= 7'-2"
 DIMENSION "A" FOR TWO HIGH STACK= 57"
 DIMENSION "A" FOR ONE HIGH STACK= 28"



DETAILS

INDICATES END WITH INSPECTION/MONITORING PORT. SEE GENERAL NOTE "E" ON PAGE 2.



TYPICAL LTL

(ONE-UNIT LOAD)

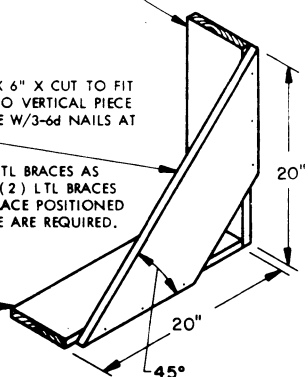
THE DEPICTED PROCEDURES ARE ONLY APPLICABLE TO TRAILERS THAT HAVE AVAILABLE FLOORS.

VERTICAL, 1" X 6" X 20" (1 REQD).
NAIL TO BACK-UP W/4-6d NAILS.

ANGLE BRACE, 1" X 6" X CUT TO FIT
(1 REQD). NAIL TO VERTICAL PIECE
AND BACK-UP PIECE W/3-6d NAILS AT
EACH END.

NOTE: TWO (2) LTL BRACES AS
SHOWN AND TWO (2) LTL BRACES
WITH THE ANGLE BRACE POSITIONED
ON THE OTHER SIDE ARE REQUIRED.

BACK-UP CLEAT,
1" X 6" X 20"
(1 REQD).



LTL BRACE

TWO BRACES APPLIED FOR LATERAL BRACING
AT ONE SIDE OF A LOAD AS SHOWN ABOVE
WILL ALSO SUPPORT A TWO-CONTAINER WIDE
LTL LOAD.

KEY NUMBERS

- ① HEADER, 2" X 4" X 27" (TRIPLED) (2 REQD). NAIL THE FIRST PIECE TO TRAILER FLOOR W/5-12d NAILS. NAIL THE SECOND PIECE TO THE FIRST AND THE THIRD PIECE TO THE SECOND IN A LIKE MANNER.
- ② LTL BRACE (4 REQD). SEE DETAIL BELOW. POSITION AS SHOWN AND NAIL TO THE TRAILER FLOOR W/10-6d NAILS. SEE SPECIAL NOTE 1 BELOW.
- ③ BACK-UP CLEAT, 2" X 4" X 30" (TRIPLED) (1 REQD). NAIL FIRST PIECE TO TRAILER FLOOR W/7-12d NAILS. NAIL THE SECOND PIECE TO THE FIRST AND THE THIRD PIECE TO THE SECOND IN A LIKE MANNER. SEE SPECIAL NOTE 2 BELOW.

SPECIAL NOTES:

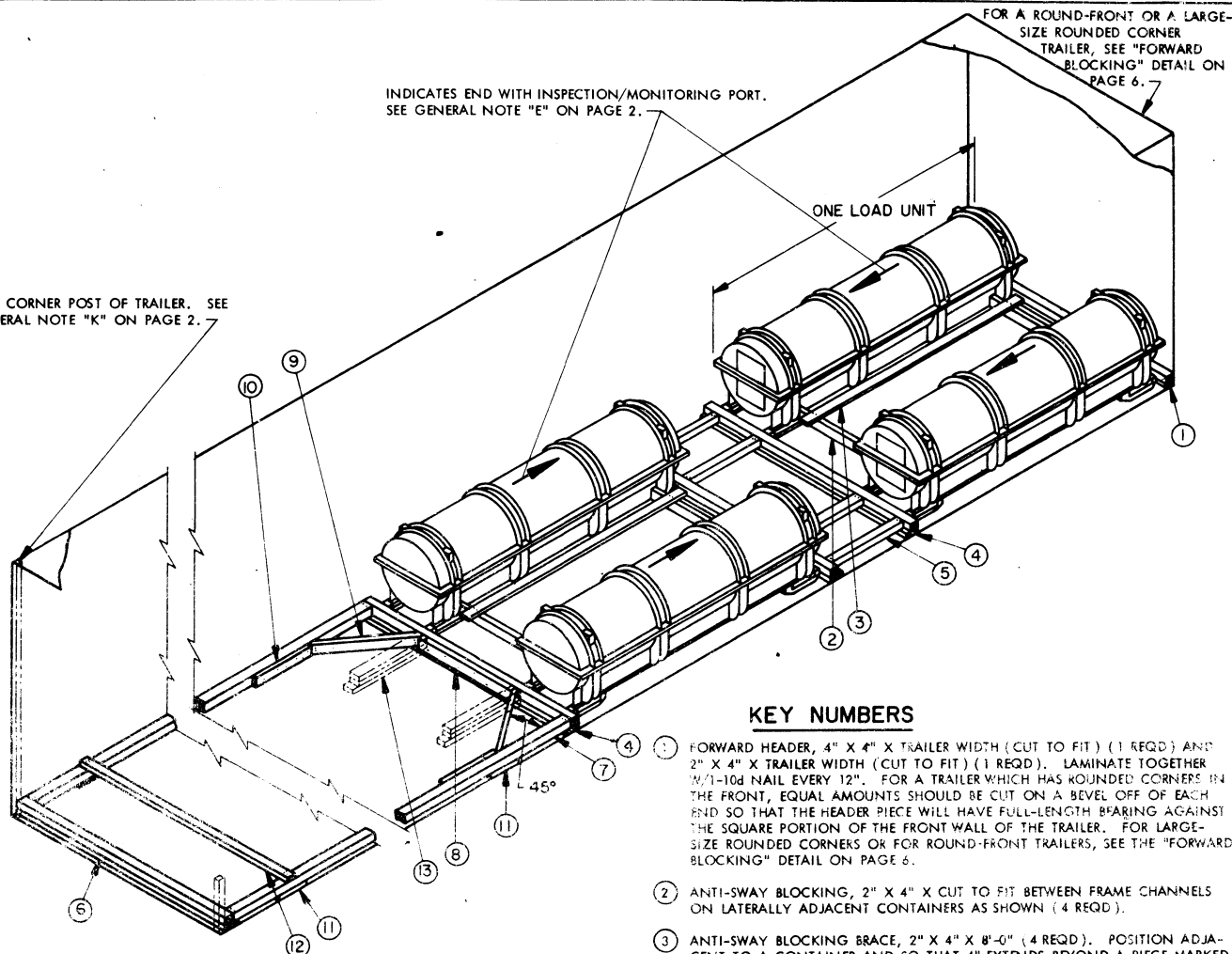
1. IF DESIRED, THE LADING ITEM MAY BE LOADED AGAINST ONE OF THE SIDE WALLS OF THE TRAILER AND THUS ELIMINATE THE NEED FOR TWO (2) OF THE SPECIFIED LTL BRACES MARKED AS PIECE ②.
2. ONE BACK-UP CLEAT, SHOWN AS PIECE MARKED ③, IS ADEQUATE FOR RETAINING A ONE-CONTAINER LOAD ONLY. A PIECE MARKED ③ MAY ALSO BE INSTALLED AT THE FORWARD END OF THE LADING IF DESIRED.

TYPICAL LTL (I-UNIT LOAD)

REAR CORNER POST OF TRAILER. SEE GENERAL NOTE "K" ON PAGE 2.

INDICATES END WITH INSPECTION/MONITORING PORT. SEE GENERAL NOTE "E" ON PAGE 2.

FOR A ROUND-FRONT OR A LARGE-SIZE ROUNDED CORNER TRAILER, SEE "FORWARD BLOCKING" DETAIL ON PAGE 6.



TYPICAL LTL

A FOUR-UNIT LOAD IS SHOWN.

SPECIAL NOTES:

1. ALTHOUGH A ONE-LAYER LOAD IS SHOWN, STACKED CONTAINERS CAN ALSO BE BLOCKED FOR SHIPMENT BY THE SPECIFIED PROCEDURES, PROVIDING THEY ARE UNITIZED IN A TWO OR THREE HIGH CONFIGURATION AS SHOWN ON PAGE 3, AND PROVIDING ANTI-SWAY BRACING IS USED TO BLOCK THE STACKS, AS SPECIFIED FOR THE LOAD DEPICTED ON PAGE 4.
2. WHEN SHIPPING A 5-UNIT ONE-LAYER LOAD IN A SHORT TRAILER, PLACE THREE UNITS WITHIN THE FORWARD LOAD UNIT AND USE TWO (2) ANTI-CHAFING ASSEMBLIES SHOWN AS PIECES MARKED (2) ON PAGE 4 IN LIEU OF ONE (1) SET OF PIECES MARKED (2) AND (3) AS SHOWN; ALSO, USE PIECES MARKED (6), (7), AND (8) AS SPECIFIED ON PAGE 4 AND AS SHOWN IN THE "PARTIAL PLAN" VIEW ON PAGE 5.
3. THE "K-BRACE" BLOCKING, SHOWN AS PIECES MARKED (6) THROUGH (12), IS ADEQUATE FOR RETAINING A MAXIMUM SIZE LTL LOAD.
4. PIECES MARKED (13) ARE FOR USE IN A TRAILER WHICH HAS A NAILABLE FLOOR AND SHOULD BE USED IF POSSIBLE, IN LIEU OF PIECES MARKED (6) THROUGH (12) WHICH APPLY TO TRAILERS HAVING NON-NAILABLE FLOORS. TWO (2) BACK-UP CLEATS, SHOWN AS PIECES MARKED (13), ARE ADEQUATE FOR RETAINING A MAXIMUM SIZE LTL LOAD OF 7,500 POUNDS.

KEY NUMBERS

- (1) FORWARD HEADER, 4" X 4" X TRAILER WIDTH (CUT TO FIT) (1 REQD.) AND 2" X 4" X TRAILER WIDTH (CUT TO FIT) (1 REQD.). LAMINATE TOGETHER W/1-10d NAIL EVERY 12". FOR A TRAILER WHICH HAS ROUNDED CORNERS IN THE FRONT, EQUAL AMOUNTS SHOULD BE CUT ON A BEVEL OFF OF EACH END SO THAT THE HEADER PIECE WILL HAVE FULL-LENGTH BEARING AGAINST THE SQUARE PORTION OF THE FRONT WALL OF THE TRAILER. FOR LARGE-SIZE ROUNDED CORNERS OR FOR ROUND-FRONT TRAILERS, SEE THE "FORWARD BLOCKING" DETAIL ON PAGE 6.
- (2) ANTI-SWAY BLOCKING, 2" X 4" X CUT TO FIT BETWEEN FRAME CHANNELS ON LATERALLY ADJACENT CONTAINERS AS SHOWN (4 REQD.).
- (3) ANTI-SWAY BLOCKING BRACE, 2" X 4" X 8'-0" (4 REQD.). POSITION ADJACENT TO A CONTAINER AND SO THAT 4" EXTENDS BEYOND A PIECE MARKED (2) AT EACH END, AND NAIL W/2-12d NAILS AT EACH JOINT.
- (4) HEADER/STRUT LEDGER ASSEMBLY, 4" X 4" X TRAILER WIDTH (CUT TO FIT) (3 REQD.) AND 2" X 6" X TRAILER WIDTH (CUT TO FIT) (3 REQD.). LAMINATE A 2" X 6" PIECE TO THE BOTTOM SURFACE OF A 4" X 4" PIECE W/1-10d NAIL EVERY 12", IN A CONFIGURATION AS SHOWN TO PROVIDE A 2" STRUT LEDGER ON ONE SIDE.
- (5) INTERMEDIATE STRUT, 4" X 4" X 30" (MIN 22") (4 REQD.). ALIGN WITH A CONTAINER SKID AND TOENAIL TO THE ADJACENT PIECES MARKED (4) W/2-16d NAILS AT EACH END.
- (6) REAR HEADER, 4" X 4" X TRAILER WIDTH (CUT TO FIT) (1 REQD.) AND 2" X 6" X TRAILER WIDTH (CUT TO FIT) (1 REQD.). LAMINATE TOGETHER W/1-10d NAIL EVERY 12", IN A CONFIGURATION AS SHOWN TO PROVIDE A 2" STRUT LEDGER ON ONE SIDE. SEE KEY NUMBER (3) BELOW, AND SPECIAL NOTES 3 AND 4.
- (7) SIDE STRUT, 4" X 4" X CUT TO FIT (2 REQD.). TOENAIL TO ADJACENT PIECES MARKED (4) AND (6) W/2-16d NAILS AT EACH END.
- (8) SPACER CLEAT, 2" X 4" X 40" (BASED ON A 7'-6" WIDE TRAILER) (1 REQD.). NAIL TO 4" X 4" MATERIAL OF THE REAR-OF-LOAD PIECE MARKED (4) W/7-12d NAILS.
- (9) DIAGONAL BRACE, 2" X 4" X CUT TO FIT (2 REQD.). DOUBLE BEVEL EACH END WITH 45° CUTS. INSTALL AT A 45° ANGLE AS SHOWN AND TOENAIL TO THE ADJACENT PIECES MARKED (4) AND (7) W/2-16d NAILS AT EACH END.
- (10) SIDE CLEAT, 2" X 4" X 24" (2 REQD.). NAIL TO A SIDE STRUT PIECE MARKED (7) W/6-12d NAILS.
- (11) RISER BLOCK, 2" X 4" X 12" (1 REQD. AT EACH JUNCTION OF PIECES MARKED (7) AND (9), AND (7) AND (12). POSITION AS SHOWN AND NAIL TO A SIDE STRUT PIECE MARKED (7) W/2-10d NAILS.
- (12) STRUT BRACING, 2" X 4" X TRAILER WIDTH (CUT TO FIT) (MIN OF 1 REQD.). POSITION EVERY 7'-0" NAIL TO THE SIDE STRUT PIECES MARKED (7) W/3-12d NAILS AT EACH END.
- (13) BACK-UP CLEAT, 2" X 4" X 30" (TRIPLED) (2 REQD.). NAIL THE FIRST PIECE TO TRAILER FLOOR W/7-12d NAILS. NAIL THE SECOND PIECE TO THE FIRST AND THE THIRD TO THE SECOND IN A LIKE MANNER. SEE SPECIAL NOTE 4.

TYPICAL LTL (4-UNIT LOAD)