

REV NO. 1 APPROVED
 BUREAU OF EXPLOSIVES
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 DATE 10/7/64

LOADING & BRACING (TL & LTL) ON FLAT BED TRAILERS OF CONTROL SURFACE KIT, PACKED ONE PER WOODEN CONTAINER, FOR THE NIKE-HERCULES GUIDED MISSILE

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DESIGNED BY WBH	INCHES OF SHEET REF	REVISION DIW / AGE	APPROVED <i>[Signature]</i>	
CHECKED BY GWP	CHECKED [Signature]	REVISION AAL	APPROVED <i>[Signature]</i>	COMMANDER, SBANNA ARMY DEPOT
REVISIONS			APPROVED <i>[Signature]</i>	ARMY MISSILE COMMAND
1	11 APR 64	<i>[Signature]</i>	<i>[Signature]</i>	ARMY MATERIEL COMMAND
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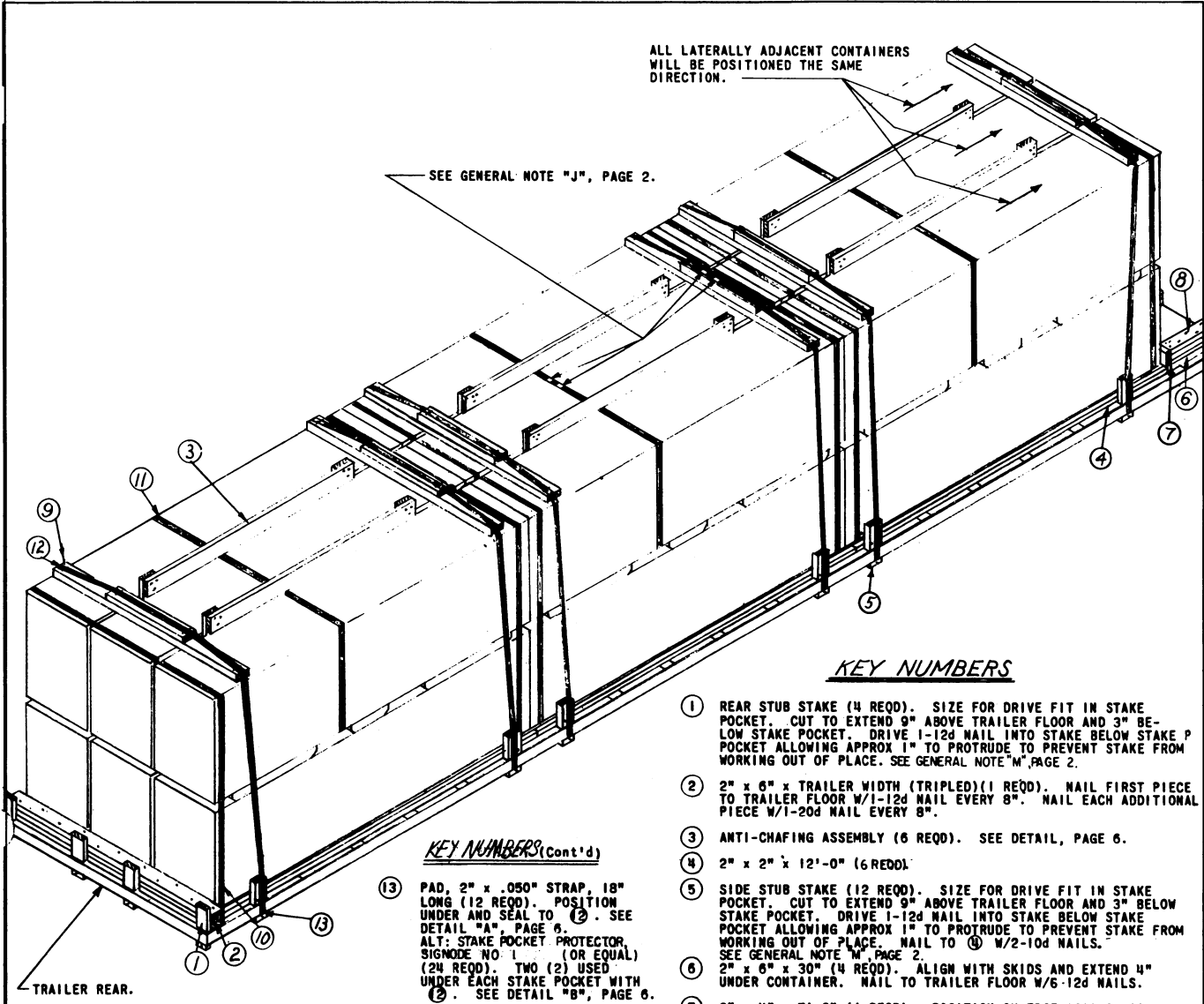
DO NOT SCALE

GENERAL NOTES

- A. LOAD AS SHOWN ON PAGE 3 IS BASED ON A FLAT BED TRAILER 40'-0" LONG x 8'-0" WIDE WITH WOOD OR WOOD AND METAL FLOOR. TRAILERS WITH ALL METAL FLOORS WILL NOT BE USED.
CAUTION: LADING HEIGHT - 7'-5".
- B. LOAD AS SHOWN ON PAGE 4 IS BASED ON A FLAT BED TRAILER 28'-0" LONG x 8'-0" WIDE WITH WOOD OR WOOD AND METAL FLOOR. TRAILERS WITH ALL METAL FLOORS WILL NOT BE USED.
CAUTION: LADING HEIGHT 7'-5".
- C. GROSS WEIGHT AND AXLE DISTRIBUTION OF WEIGHT WILL BE IN ACCORDANCE WITH PARAGRAPH 8,346.4, ORDM 3-4, VOL 3.
- D. SELECTION OF VEHICLE TO BE USED TO TRANSPORT GUIDED MISSILE AMMUNITION AND/OR COMPONENTS THEREOF, MUST COMPLY WITH AR 55-395, CHAPTER 213, FOR EXPLOSIVES OR OTHER DANGEROUS ARTICLES, IN FULL.
- E. NOTICE: A SHIPMENT WILL BE POSITIONED ON THE TRAILER CONSISTENT WITH STATE WEIGHT LAWS. THE NUMBER OF UNITS MAY BE ADJUSTED TO FIT THE QUANTITY TO BE SHIPPED; HOWEVER, THE APPROVED METHODS CONTAINED HEREIN FOR FULL OR PARTIAL TRUCKLOAD MUST BE FOLLOWED FOR BLOCKING, BRACING AND STAYING OF THIS ITEM.
- F. FOR DETAIL OF CONTAINER SEE DRAWING NO. 8524211.
CONTAINER DIMENSIONS - 147-1/2" LONG x 29" WIDE x 42-1/8" HIGH.
GROSS WEIGHT - 1,050 POUNDS (APPROX).
TARE WEIGHT - 545 POUNDS (APPROX).
- G. LADING WILL NOT BE SECURED BY CHAINS AND/OR LOAD BINDERS IN LIEU OF SPECIFIED DUNNAGE.
- H. IT IS RECOMMENDED THAT UNITIZING STRAP PIECES (A) AND (B) ON PAGES 3 AND 4, RESPECTIVELY, BE APPLIED PRIOR TO PLACEMENT OF CONTAINERS ABOARD THE TRAILERS.
- 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. IF TRAILER STAKE POCKETS AND/OR ANCHOR DEVICES ARE NOT PROPERLY POSITIONED TO RECEIVE TWO INCH (2") STRAPPING AS SHOWN, OR IF POCKETS AND/OR ANCHOR DEVICES ARE NOT EQUAL TO OR GREATER THAN STRENGTH OF TIE-DOWN STRAPS, THE STRAPS MAY BE APPLIED TO FORM A COMPLETE LOOP WHICH ENCOMPASSES BOTH LADING AND TRAILER FRAME AND/OR BED.
CAUTION: AVOID TRAILER WHEELS, FIFTH WHEEL PLATE, CONTROLS AND OTHER APPURTENANTS. USE EDGE PROTECTORS ON ALL SHARP EDGES.
- L. SPECIFIED OUTLOADING PROCEDURES CAN ALSO BE UTILIZED FOR THE SHIPMENT OF THE DEPICTED CONTAINERS WHEN THEY ARE EMPTY OR LOADED WITH AN ITEM WHICH IS IDENTIFIED DIFFERENTLY BY NOMENCLATURE THAN THE ITEM DESIGNATED WITHIN THE DRAWING TITLE.
- M. REAR STUB STAKES AND SIDE STUB STAKES MUST BE SELECTED HARDWOOD, OAK OR OTHER HARDWOOD OF EQUAL STRENGTH.

MATERIAL SPECIFICATIONS

LUMBER: SEE PARAGRAPH 8400, ORDM 3-4, VOL 3.
NAILS: COMMON, CEMENT COATED, FED SPEC FF-N-105.
ALT: ANNULAR-RING TYPE NAIL OF SAME SIZE.
STRAPPING, STEEL: TYPE 1, CLASS "A" OR "C", FED SPEC QQ-S-781 FOR FSN SEE SB-38-100.



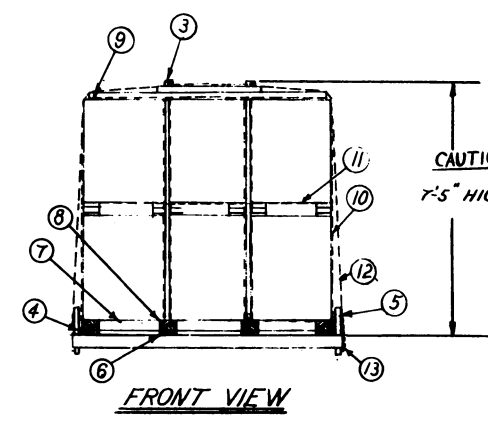
KEY NUMBERS (Cont'd)

- ⑬ PAD, 2" x .050" STRAP, 18" LONG (12 REQD). POSITION UNDER AND SEAL TO ②. SEE DETAIL "A", PAGE 6.
- ALT: STAKE POCKET PROTECTOR SIGNODE NO. 1 (OR EQUAL) (24 REQD). TWO (2) USED UNDER EACH STAKE POCKET WITH ②. SEE DETAIL "B", PAGE 6.

ISOMETRIC VIEW

KEY NUMBERS

- ① REAR STUB STAKE (4 REQD). SIZE FOR DRIVE FIT IN STAKE POCKET. CUT TO EXTEND 9" ABOVE TRAILER FLOOR AND 3" BELOW STAKE POCKET. DRIVE 1-12d NAIL INTO STAKE BELOW STAKE POCKET ALLOWING APPROX 1" TO PROTRUDE TO PREVENT STAKE FROM WORKING OUT OF PLACE. SEE GENERAL NOTE "M", PAGE 2.
- ② 2" x 6" x TRAILER WIDTH (TRIPLED) (1 REQD). NAIL FIRST PIECE TO TRAILER FLOOR W/1-12d NAIL EVERY 8". NAIL EACH ADDITIONAL PIECE W/1-20d NAIL EVERY 8".
- ③ ANTI-CHAFING ASSEMBLY (6 REQD). SEE DETAIL, PAGE 6.
- ④ 2" x 2" x 12'-0" (6 REQD).
- ⑤ SIDE STUB STAKE (12 REQD). SIZE FOR DRIVE FIT IN STAKE POCKET. CUT TO EXTEND 9" ABOVE TRAILER FLOOR AND 3" BELOW STAKE POCKET. DRIVE 1-12d NAIL INTO STAKE BELOW STAKE POCKET ALLOWING APPROX 1" TO PROTRUDE TO PREVENT STAKE FROM WORKING OUT OF PLACE. NAIL TO ④ W/2-10d NAILS. SEE GENERAL NOTE "M", PAGE 2.
- ⑥ 2" x 6" x 30" (4 REQD). ALIGN WITH SKIDS AND EXTEND 4" UNDER CONTAINER. NAIL TO TRAILER FLOOR W/6-12d NAILS.
- ⑦ 2" x 4" x 7'-6" (1 REQD). POSITION ON EDGE AGAINST CONTAINERS
- ⑧ 2" x 6" x 24" (DOUBLED) (4 REQD). NAIL FIRST PIECE TO ④ W/6-20d NAILS. NAIL SECOND PIECE TO FIRST IN LIKE MANNER. TOE-NAIL TO ⑦ W/2-12d NAILS.
- ⑨ STRAPPING BOARD (6 REQD). SEE DETAIL, PAGE 6.
- ⑩ STEEL STRAPPING, 1-1/4" x .035" x 21'-0" (18 REQD).
- ⑪ STEEL STRAPPING, 1-1/4" x .035" x 23'-0" (3 REQD).
- ⑫ STEEL STRAPPING, 2" x .050" x 29'-0" (6 REQD). STAPLE TO ⑨ W/4-2" STAPLES. SEE GENERAL NOTE "K", PAGE 2.



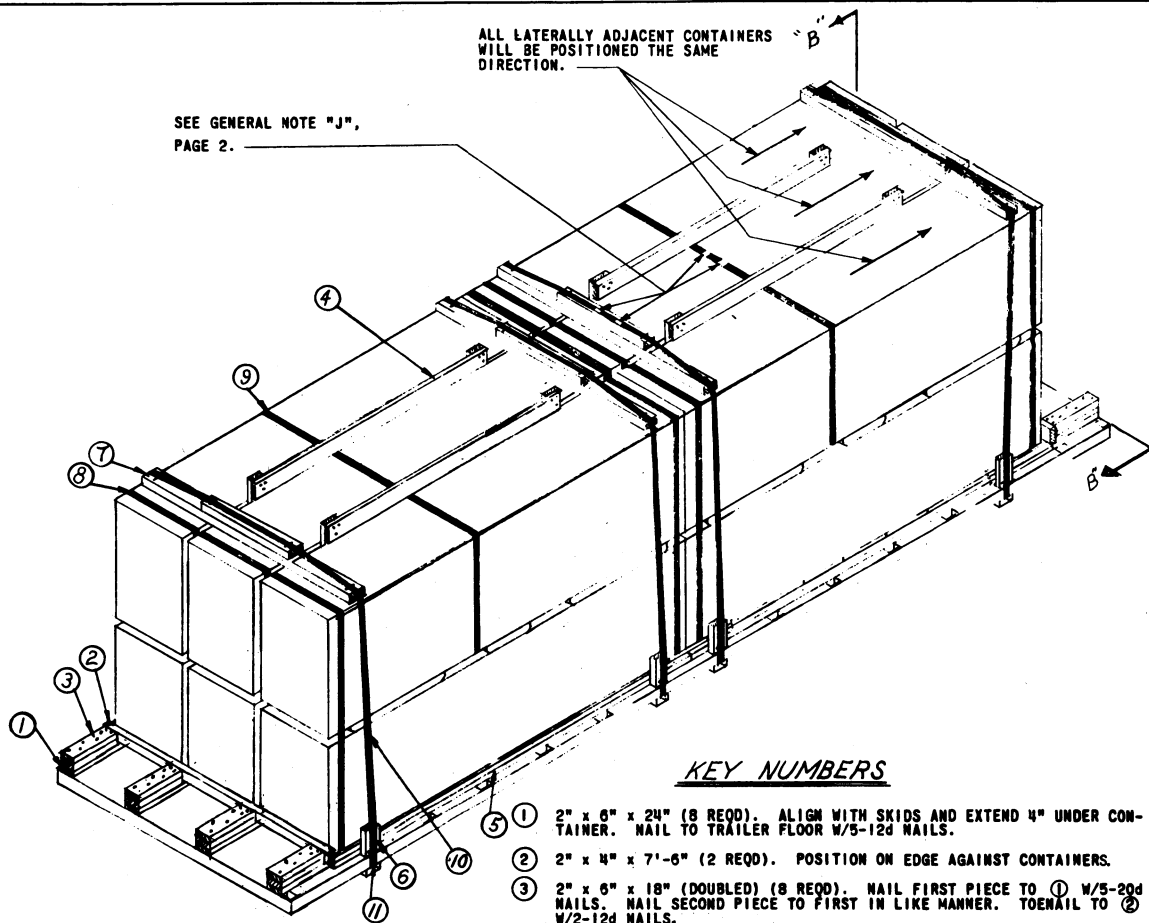
BILL OF MATERIAL

LUMBER	LINEAL FEET	BOARD FEET
1" x 4"	137	46
2" x 2"	72	24
2" x 4"	32	22
2" x 6"	103	103
NAILS		POUNDS
8d (2")	36	1/4
10d (3")	54	1
12d (3-1/4")	49	1
20d (4")	66	2-1/2
STEEL STRAPPING, 1-1/4" x .035" - 447' REQD -		84 LBS
STEEL STRAPPING, 2" x .050" - 192' REQD -		64 LBS
STAPLES FOR 2" STRAPPING - 24 REQD		

LOAD AS SHOWN

ITEM	QUANTITY	WEIGHT (APPROX)
CONTAINER-----	18-----	18,900 LBS
DUNNAGE-----		619 LBS
		TOTAL WEIGHT---19,519 LBS (APPROX)

40'-0" TRAILER, 18 UNIT LOAD



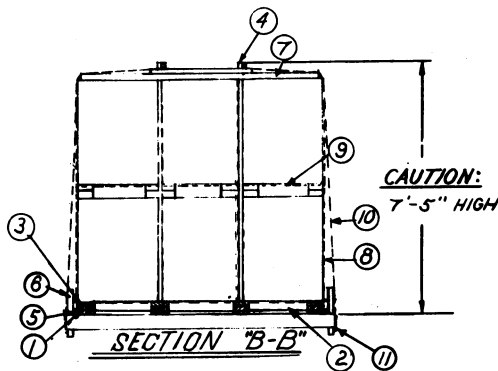
ALL LATERALLY ADJACENT CONTAINERS WILL BE POSITIONED THE SAME DIRECTION.

SEE GENERAL NOTE "J", PAGE 2.

KEY NUMBERS

- ① 2" x 6" x 24" (8 REQD). ALIGN WITH SKIDS AND EXTEND 4" UNDER CONTAINER. NAIL TO TRAILER FLOOR W/5-12d NAILS.
- ② 2" x 4" x 7'-6" (2 REQD). POSITION ON EDGE AGAINST CONTAINERS.
- ③ 2" x 6" x 18" (DOUBLED) (8 REQD). NAIL FIRST PIECE TO ① W/5-20d NAILS. NAIL SECOND PIECE TO FIRST IN LIKE MANNER. TOENAIL TO ② W/2-12d NAILS.
- ④ ANTI-CHAFING ASSEMBLY (4 REQD). SEE DETAIL, PAGE 6.
- ⑤ 2" x 2" x 12'-0" (4 REQD).
- ⑥ SIDE STUB STAKE (8 REQD). SIZE TO DRIVE FIT IN STAKE POCKET. CUT TO EXTEND 9" ABOVE TRAILER FLOOR AND 3" BELOW STAKE POCKET. DRIVE 1-12d NAIL INTO STAKE BELOW STAKE POCKET ALLOWING APPROX 1" TO PROTRUDE TO PREVENT STAKE FROM WORKING OUT OF PLACE. NAIL TO ⑤ WITH 2-10d NAILS. SEE GENERAL NOTE "N", PAGE 2.
- ⑦ STRAPPING BOARD (4 REQD). SEE DETAIL, PAGE 6.
- ⑧ STEEL STRAPPING, 1-1/4" x .035" x 21'-0" (12 REQD).
- ⑨ STEEL STRAPPING, 1-1/4" x .035" x 23'-0" (2 REQD).
- ⑩ STEEL STRAPPING, 2" x .050" x 29'-0" (4 REQD). STAPLE TO ⑦ W/4-2" STAPLES. SEE GENERAL NOTE "K", PAGE 2.
- ⑪ PAD, 2" x .050" STRAP, 18" LONG (8 REQD). POSITION UNDER AND SEAL TO ⑩. SEE DETAIL "A", PAGE 6. ALTERNATIVE: STAKE POCKET PROTECTOR, SIGNODE NO. 1 (OR EQUAL) (16 REQD). TWO (2) USED UNDER EACH STAKE POCKET WITH ⑩. SEE DETAIL "B", PAGE 6.

ISOMETRIC VIEW



CAUTION:
7'-5" HIGH

SECTION "B-B"

BILL OF MATERIAL

LUMBER	LINEAL FEET	BOARD FEET
1" x 4"	92	31
2" x 2"	48	16
2" x 4"	20	14
2" x 6"	81	81
NAILS	NO. REQD	POUNDS
6d (2")	24	1/4
10d (3")	36	3/4
12d (3-1/4")	64	1-1/4
20d (4")	80	3
STEEL STRAPPING, 1-1/4" x .035" - 298' REQD - 43 LBS		
STEEL STRAPPING, 2" x .050" - 128' REQD - 43 LBS		
STAPLES FOR 2" STRAPPING - 16 REQD		

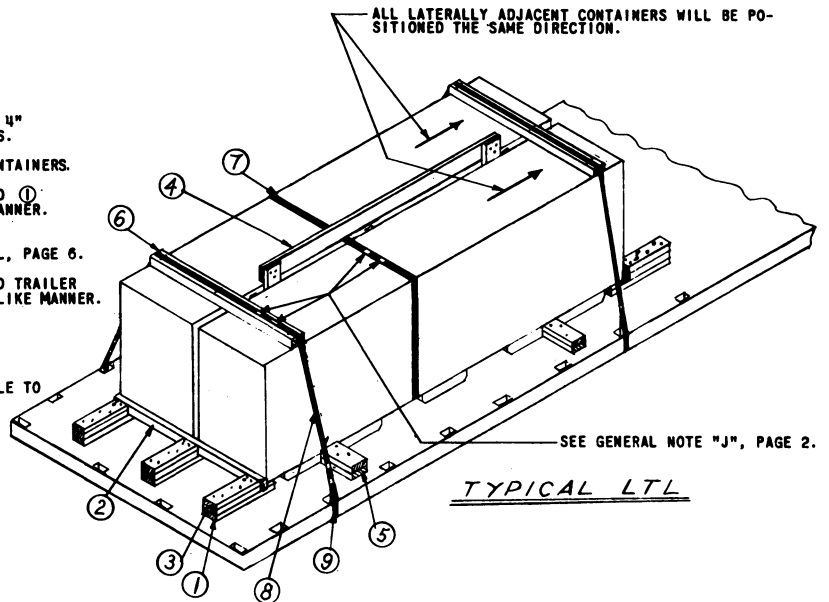
LOAD AS SHOWN

ITEM	QUANTITY	WEIGHT (APPROX)
CONTAINER-----	12-----	12,600 LBS
DUNNAGE-----		447 LBS
TOTAL WEIGHT-----		13,047 LBS (APPROX)

28'-0" TRAILER, 12 UNIT LOAD

KEY NUMBERS

- ① 2" x 6" x 24" (6 REQD). ALIGN WITH SKIDS AND EXTEND 4" UNDER CONTAINER. NAIL TO TRAILER FLOOR W/5-12d NAILS.
- ② 2" x 4" x 60" (2 REQD). POSITION ON EDGE AGAINST CONTAINERS.
- ③ 2" x 6" x 18" (DOUBLED)(6 REQD). NAIL FIRST PIECE TO ① W/5-20d NAILS. NAIL SECOND PIECE TO FIRST IN LIKE MANNER. TOENAIL TO ② W/2-12d NAILS. SEE NOTE "D".
- ④ ANTI-CHAFING ASSEMBLY (ONE HIGH)(1 REQD). SEE DETAIL, PAGE 6.
- ⑤ 2" x 6" x 12" (DOUBLED)(4 REQD). NAIL FIRST PIECE TO TRAILER FLOOR W/3-12d NAILS. NAIL SECOND PIECE TO FIRST IN LIKE MANNER.
- ⑥ STRAPPING BOARD, 2" x 6" x 57" (2 REQD).
- ⑦ STEEL STRAPPING, 1-1/4" x .035" x 18'-0" (1 REQD).
- ⑧ STEEL STRAPPING, 2" x .050" x 23'-0" (2 REQD). STAPLE TO ⑥ W/3-2 STAPLES. SEE GENERAL NOTE "K", PAGE 2.
- ⑨ PAD, 2" x .050" STRAP 18" LONG (4 REQD). POSITION UNDER AND SEAL TO ⑧. SEE DETAIL "A", PAGE 6. ALTERNATIVE: STAKE POCKET PROTECTOR, SIGNODE NO. 1 (OR EQUAL) (8 REQD). TWO (2) USED UNDER EACH STAKE POCKET WITH ⑧. SEE DETAIL "B", PAGE 6.

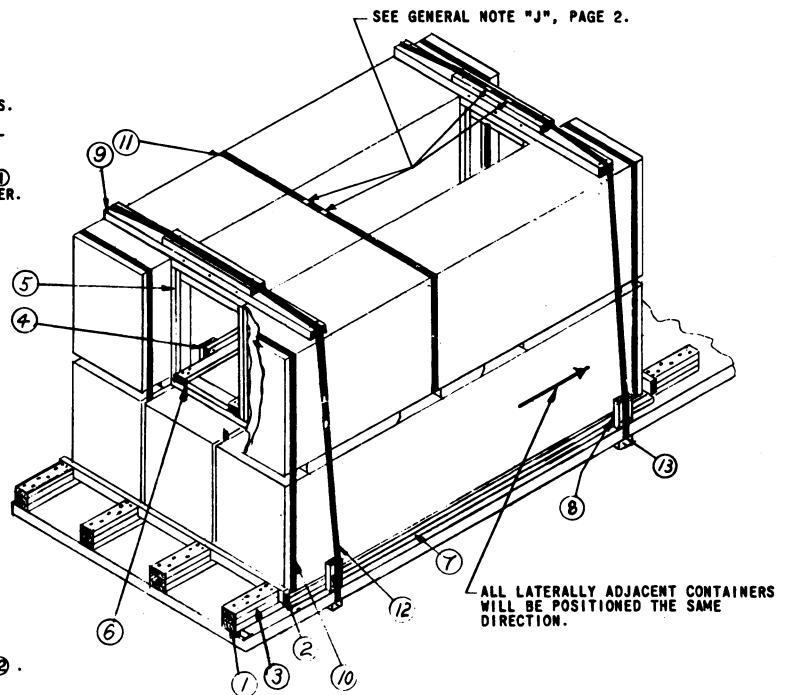


NOTE "D":

THE THREE (3) BACK-UP CLEATS SHOWN AS PIECES ① AND ③ ARE ADEQUATE FOR RETAINING A MAXIMUM LTL LOAD OF 15,000 POUNDS.

KEY NUMBERS

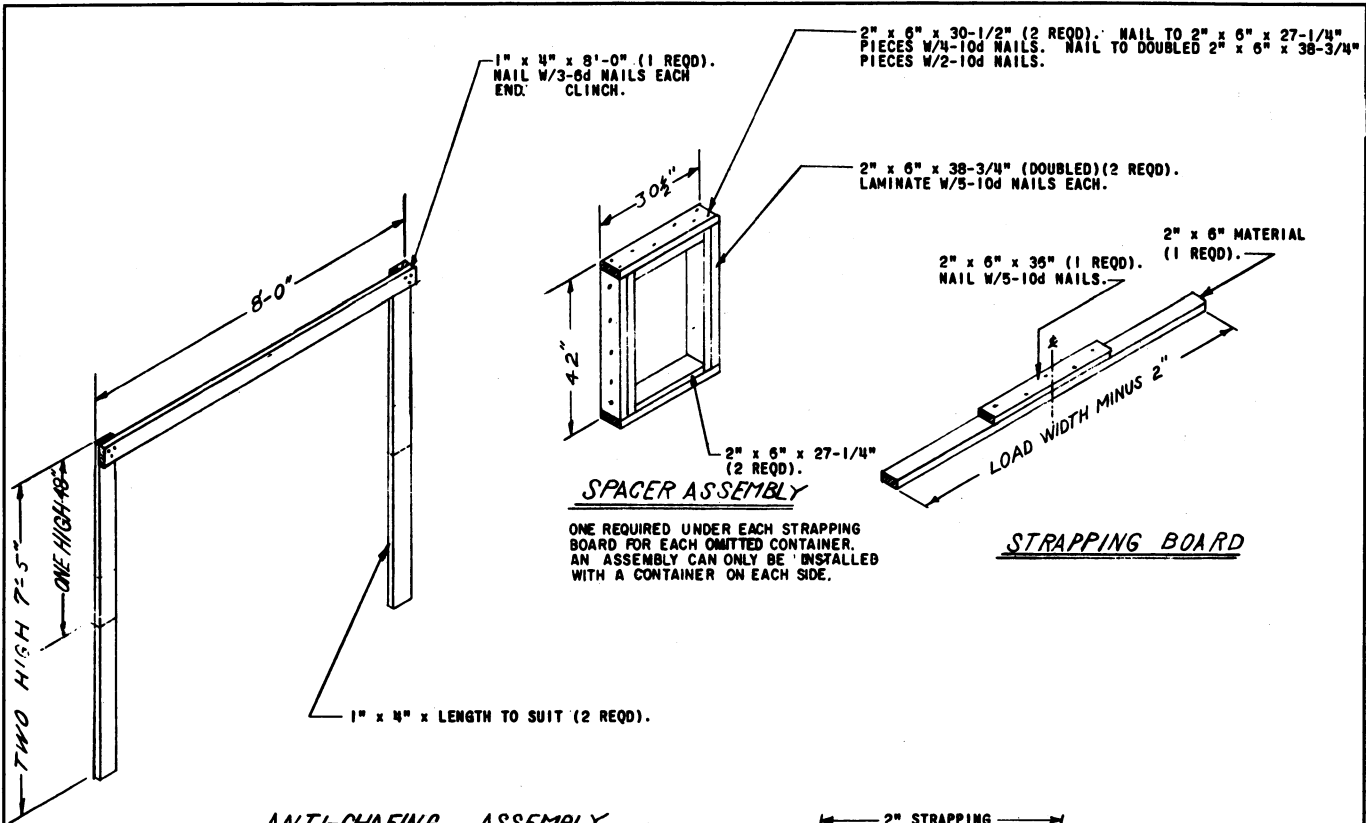
- ① 2" x 6" x 24" (8 REQD). ALIGN WITH SKIDS AND EXTEND 4" UNDER CONTAINER. NAIL TO TRAILER FLOOR W/5-12d NAILS.
- ② 2" x 4" x 7'-6" (2 REQD). POSITION ON EDGE AGAINST CONTAINERS.
- ③ 2" x 6" x 18" (DOUBLED)(8 REQD). NAIL FIRST PIECE TO ① W/5-20d NAILS. NAIL SECOND PIECE TO FIRST IN LIKE MANNER. TOENAIL TO ② W/2-12d NAILS. SEE NOTE "D".
- ④ ANTI-CHAFING ASSEMBLY (ONE HIGH)(2 REQD). SEE DETAIL, PAGE 6.
- ⑤ SPACER ASSEMBLY (2 REQD). SEE DETAIL, PAGE 6.
- ⑥ 2" x 4" x LENGTH TO SUIT (2 REQD). NAIL TO ⑤ W/3-12d NAILS EACH END.
- ⑦ 2" x 2" x 12'-0" (2 REQD).
- ⑧ SIDE STUB STAKE (4 REQD). SIZE TO DRIVE FIT IN STAKE POCKET. CUT TO EXTEND 9" ABOVE TRAILER FLOOR AND 3" BELOW STAKE POCKET. DRIVE 1-12d NAIL INTO STAKE BELOW STAKE POCKET ALLOWING APPROX. 1" TO PROTRUDE TO PREVENT STAKE FROM WORKING OUT OF PLACE. NAIL TO ⑦ W/2-10d NAILS. SEE GENERAL NOTE "M", PAGE 2.
- ⑨ STRAPPING BOARD (2 REQD). SEE DETAIL, PAGE 6. TOENAIL TO ⑤ W/3-12d NAILS EACH SIDE.
- ⑩ STEEL STRAPPING, 1-1/4" x .035" x 21'-0" (4 REQD).
- ⑪ STEEL STRAPPING, 1-1/4" x .035" x 23'-0" (1 REQD).
- ⑫ STEEL STRAPPING, 2" x .050" x 29'-0" (2 REQD). STAPLE TO ⑨ W/4-2" STAPLES. SEE GENERAL NOTE "K", PAGE 2.
- ⑬ PAD, 2" x .050" STRAP 18" LONG (4 REQD). POSITION UNDER AND SEAL TO ⑩. SEE DETAIL "A", PAGE 6. ALTERNATIVE: STAKE POCKET PROTECTOR, SIGNODE NO. 1 (OR EQUAL) (8 REQD). TWO (2) USED UNDER EACH STAKE POCKET WITH ⑩. SEE DETAIL "B", PAGE 6.



NOTE "D":

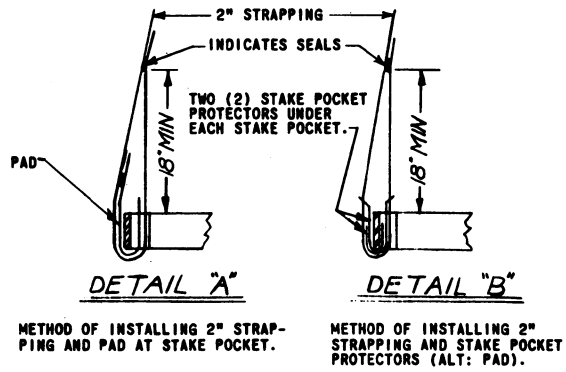
THE FOUR (4) BACKUP CLEATS SHOWN AS PIECES ① AND ③ ARE ADEQUATE FOR RETAINING A MAXIMUM LTL LOAD OF 20,000 POUNDS.

TYPICAL LTL METHODS



ONE REQUIRED UNDER EACH STRAPPING BOARD FOR EACH OMITTED CONTAINER. AN ASSEMBLY CAN ONLY BE INSTALLED WITH A CONTAINER ON EACH SIDE.

ANTI-CHAFING ASSEMBLY



DETAILS