

APPROVED BY  
 BUREAU OF EXPLOSIVES  
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 DATE 6/7/76

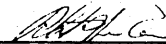
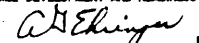
# LOADING AND BRACING IN VAN TYPE TRAILERS OF THE ONE-TON CONTAINER AND MIXED LOADS OF CHEMICAL AMMUNITION

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⊙ CAUTION: THE PROCEDURES SHOWN HEREIN ARE ONLY APPLICABLE FOR HIGHWAY MOVEMENT; NOT FOR CONTAINER/ TRAILER-ON-FLAT-CAR MOVEMENTS.

DO NOT SCALE

| REVISIONS |  |  |  | DRAFTSMAN   | PROJ. ENG.         |         |            |
|-----------|--|--|--|---|--------------------|---------|------------|
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|           |  |  |  | U.S. ARMY DARCOM DRAWING  |                    |         |            |
|           |  |  |  | JUNE 1976   |                    |         |            |
|           |  |  |  | CLASS   | DIVISION           | DRAWING | FILE       |
|           |  |  |  | 19  | 48                 | 4608    | CB<br>11M9 |

## GENERAL NOTES

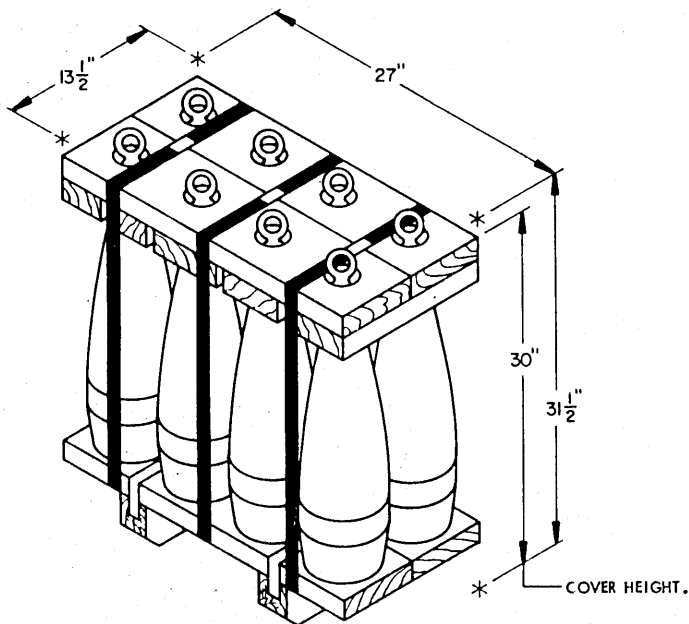
(GENERAL NOTES CONTINUED)

- A. THIS DOCUMENT HAS BEEN PREPARED AND ISSUED IN ACCORDANCE WITH AR 740-1, AND AUGMENTS TM 743-200-1 (CHAPTER 5).
- B. THE LOADS AS SHOWN ARE BASED ON VAN TYPE TRAILERS 40'-0" LONG BY 92" WIDE (INSIDE WIDTH) HAVING WOOD, WOOD AND METAL, OR ALL METAL FLOORS. FOR ADDITIONAL GUIDANCE, SEE GENERAL NOTE "P" AT RIGHT.
- C. THE OUTLOADING PROCEDURES SPECIFIED HEREIN FOR THREE SEPARATE VAN LOADS ARE APPLICABLE TO THE ONE-TON CONTAINER, 8-ROUND PALLET UNIT OF 155MM SEPARATE LOADING PROJECTILES, 6-ROUND PALLET UNIT OF 8-INCH SEPARATE LOADING PROJECTILES, AND A PALLET UNIT OF 750-POUND BOMBS.
- D. FOR DETAIL OF THE ONE-TON CONTAINER, SEE TM 3-250 AND PAGE 3 OF THIS DRAWING.
- ITEM DIMENSIONS ----- 6'-9-1/2" LONG X 30-1/2" DIAMETER.  
GROSS WEIGHT ----- 3,500 LBS (MAX).
- FOR DETAIL OF THE PALLET UNIT OF 155MM SEPARATE LOADING PROJECTILES, SEE DRAWING NO. 7599275 AND PAGE 3 OF THIS DRAWING.
- ITEM DIMENSIONS ----- 13-1/2" LONG X 27" WIDE X 31-1/2" HIGH.  
GROSS WEIGHT ----- 832 LBS (APPROX).
- FOR DETAIL OF THE PALLET UNIT OF 8-INCH SEPARATE LOADING PROJECTILES, SEE DRAWING NO. 7548346 AND PAGE 3 OF THIS DRAWING.
- ITEM DIMENSIONS ----- 19-1/2" LONG X 28-1/2" WIDE X 38-1/2" HIGH.  
GROSS WEIGHT ----- 1,256 LBS (APPROX).
- FOR DETAIL OF THE PALLET UNIT OF 750-POUND BOMBS, SEE TPO 1325-926-1868 AND PAGE 3 OF THIS DRAWING.
- ITEM DIMENSIONS ----- 55" LONG X 32-1/4" WIDE X 22-7/8" HIGH.  
GROSS WEIGHT ----- 1,590 LBS (APPROX).
- E. **CAUTION:** NON-COMPATIBLE ITEMS MUST NOT BE OUTLOADED IN THE SAME TRAILER.
- F. SELECTION OF A VEHICLE USED TO TRANSPORT THE DESIGNATED ITEMS MUST COMPLY WITH AR 55-355, CHAPTER 213, FOR EXPLOSIVES AND OTHER DANGEROUS ARTICLES, IN FULL.
- G. 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.
- H. **NOTICE:** A SHIPMENT WILL BE POSITIONED IN THE TRAILER CONSISTENT WITH THE STATE WEIGHT LAWS. THE NUMBER OF UNITS MAY BE ADJUSTED TO FIT THE QUANTITY TO BE SHIPPED; HOWEVER, THE APPROVED METHODS CONTAINED HEREIN MUST BE FOLLOWED AS CLOSELY AS POSSIBLE FOR BLOCKING, BRACING, AND STAYING OF THE DESIGNATED ITEMS.
- J. WHEN ANY STRAP IS SEALED AT A END-OVER-END LAP JOINT, ONE SEAL WITH TWO PAIR OF CRIMPS PER SEAL MUST BE USED TO SEAL THE JOINT. **CAUTION:** EXERCISE CARE DURING TENSIONING TO PREVENT DAMAGE TO THE LADING ITEMS.
- K. UNLESS OTHERWISE SPECIFIED, DUNNAGE MATERIAL SPECIFIED THROUGHOUT THIS DRAWING IS OF NOMINAL SIZE. FOR EXAMPLE, 2" X 6" MATERIAL IS ACTUALLY 1-1/2" THICK BY 5-1/2" WIDE AND 4" X 4" MATERIAL IS ACTUALLY 3-1/2" THICK BY 3-1/2" WIDE.
- L. **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 LAMINATING DUNNAGE. THE NAILING PATTERN FOR A SECOND PIECE OF LAMINATED DUNNAGE WILL BE ADJUSTED AS REQUIRED SO THAT A NAIL FOR THAT PIECE WILL NOT BE DRIVEN THROUGH ONTO OR RIGHT BESIDE A NAIL IN A FIRST PIECE.
- M. OTHER TYPES OF LADING ITEMS MAY BE LOADED IN A TRAILER WHICH IS PARTIALLY LOADED WITH THE DESIGNATED 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.
- N. PORTIONS OF THE SEMITRAILER BODIES DEPICTED WITHIN THIS DRAWING, SUCH AS ONE OF THE SIDEWALLS, HAVE NOT BEEN SHOWN IN THE LOAD VIEWS FOR CLARITY PURPOSES.
- O. FOR ADDITIONAL GUIDANCE, ATTENTION IS DIRECTED TO THE "SPECIAL NOTES" SECTIONS WHICH ARE IMMEDIATELY ADJACENT TO THE DEPICTED OUTLOADING METHODS.
- P. WHEN SHIPPING A 11-UNIT LOAD OF ONE-TON CONTAINERS, THE PROCEDURES SHOWN ON PAGE 4 MUST BE APPLIED TO A 40-FOOT LONG OR LONGER TRAILER WHICH IS 92" WIDE OR WIDER INSIDE. ALTHOUGH THE PROCEDURES AS SHOWN ON PAGE 6 APPLY TO A 40'-0" LONG BY 92" WIDE (MIN INSIDE WIDTH) TRAILER, LONGER OR SHORTER TRAILERS MAY BE USED. ALSO, WHEN OUTLOADING ONLY TWO ONE-TON CONTAINERS, AS SHOWN IN THE "ALTERNATIVE LOADING PATTERN" VIEW ON PAGE 7, A NARROWER TRAILER CAN BE USED. LIKEWISE, ALTHOUGH THE PROCEDURES AS SHOWN ON PAGE 8 APPLY TO 40'-0" LONG BY 92" WIDE (INSIDE WIDTH) TRAILERS, TRAILERS OF OTHER LENGTHS AND/OR WIDTHS MAY ALSO BE USED. IF LONGER/SHORTER OR WIDER/NARROWER TRAILERS ARE USED FOR A LOAD DEPICTED HEREIN, ADJUSTMENTS TO THE DUNNAGE MUST BE MADE TO COMPENSATE FOR THE DIFFERENT LENGTH OR WIDTH TRAILER.

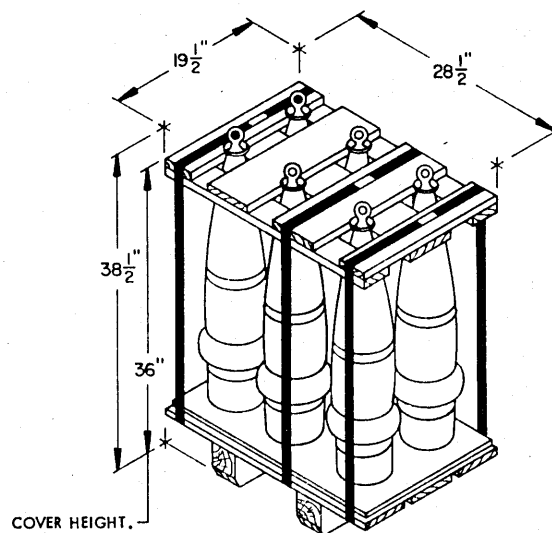
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## MATERIAL SPECIFICATIONS

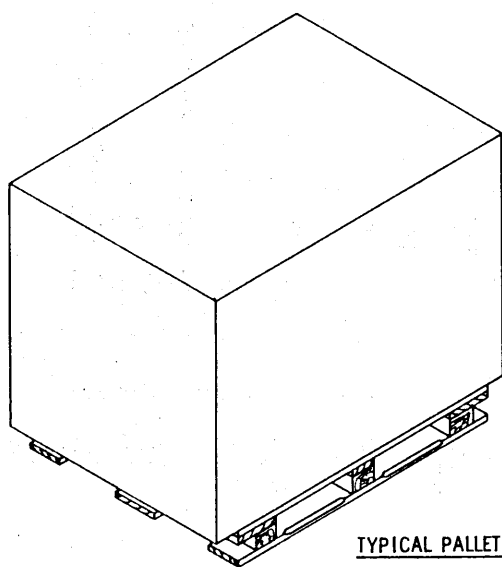
- LUMBER** ----- : SEE TM 743-200-1, DUNNAGE LUMBER; FED SPEC MM-L-751.
- NAILS** ----- : COMMON, CEMENT COATED OR CHEMICALLY ETCHED;  
FED SPEC FF-N-105.  
ALT: ANNULAR-RING TYPE NAIL OF THE SAME SIZE.
- STEEL STRAPPING** - : CLASS I, TYPE I OR IV, HEAVY DUTY, FINISH A, B (GRADE 2),  
OR C; FED SPEC QQ-5-781.
- SEAL, STRAP** ----- : TYPE D, STYLE I, II, OR IV, CLASS H; FED SPEC QQ-5-781.



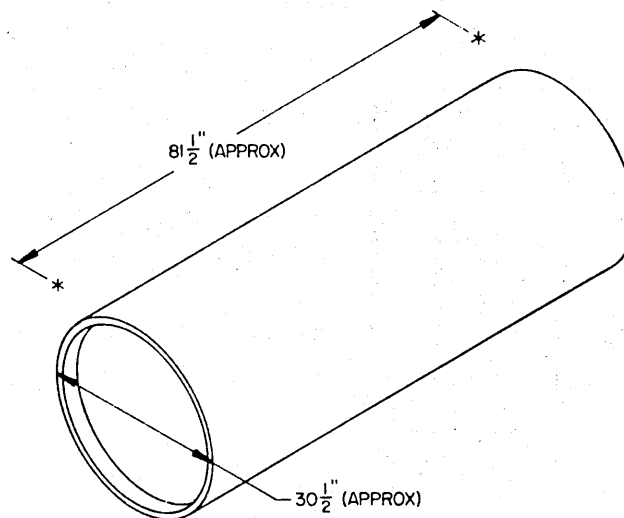
**PALLET UNIT OF 155MM  
SEPARATE LOADING PROJECTILES**



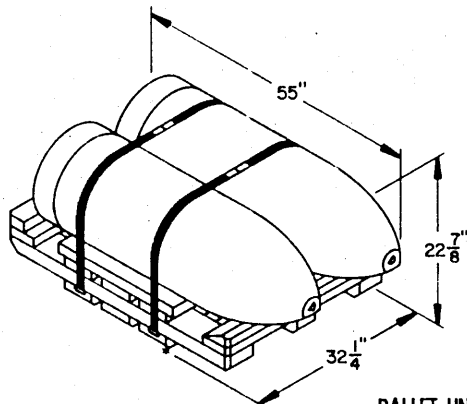
**PALLET UNIT OF 8-INCH  
SEPARATE LOADING PROJECTILES**



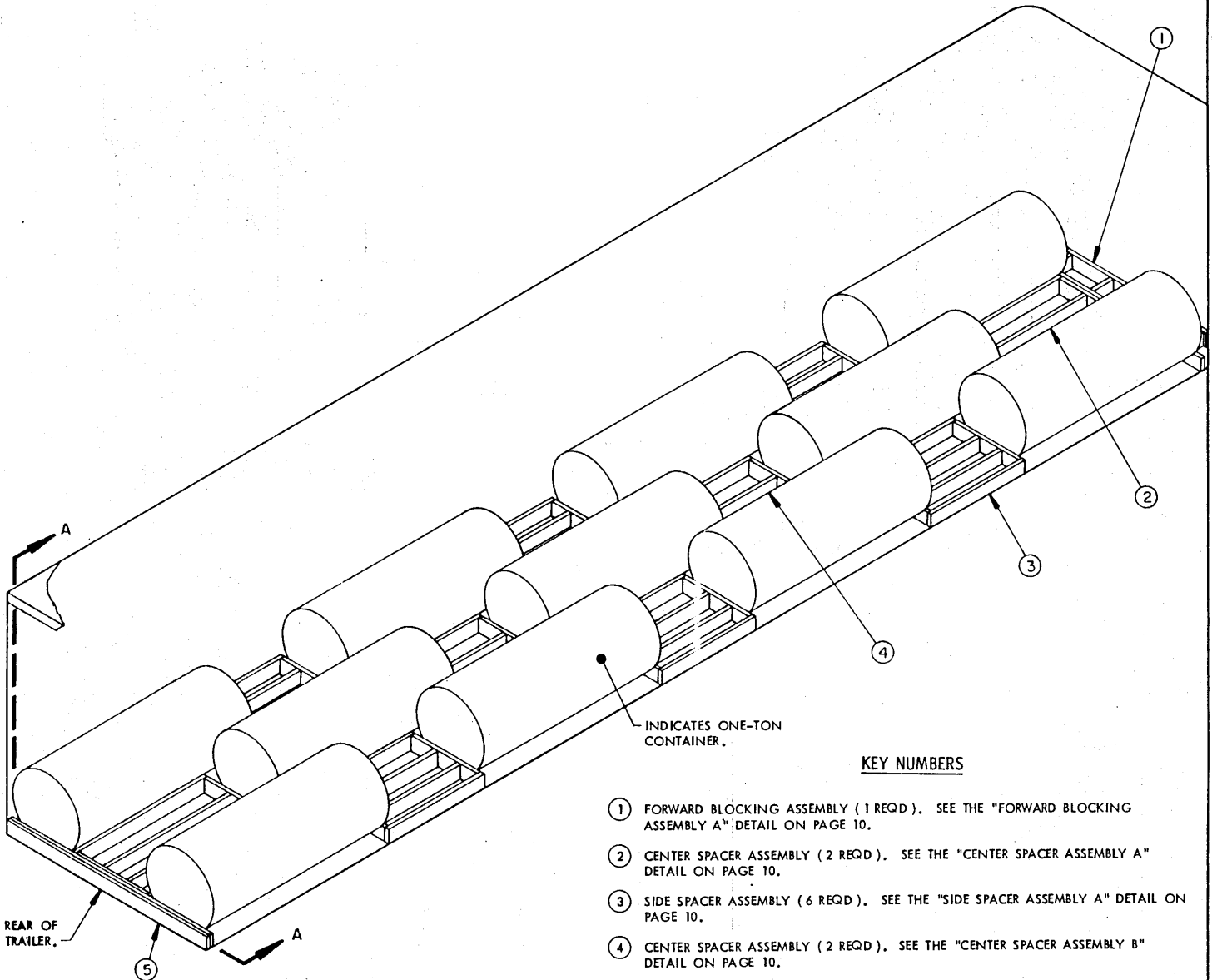
**TYPICAL PALLET UNIT**



**ONE-TON CONTAINER**



**PALLET UNIT OF  
750-POUND BOMBS**



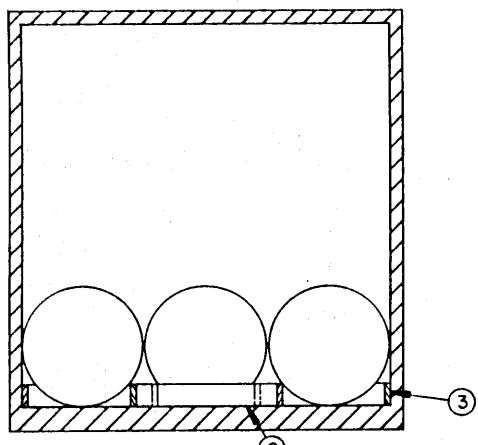
INDICATES ONE-TON CONTAINER.

**KEY NUMBERS**

- ① FORWARD BLOCKING ASSEMBLY (1 REQD). SEE THE "FORWARD BLOCKING ASSEMBLY A" DETAIL ON PAGE 10.
- ② CENTER SPACER ASSEMBLY (2 REQD). SEE THE "CENTER SPACER ASSEMBLY A" DETAIL ON PAGE 10.
- ③ SIDE SPACER ASSEMBLY (6 REQD). SEE THE "SIDE SPACER ASSEMBLY A" DETAIL ON PAGE 10.
- ④ CENTER SPACER ASSEMBLY (2 REQD). SEE THE "CENTER SPACER ASSEMBLY B" DETAIL ON PAGE 10.
- ⑤ SOLID FILL, 6" WIDE BY TRAILER WIDTH MINUS 1/2" IN LENGTH (AS REQUIRED TO FILL THE VOID AT THE REAR OF THE LOAD). NAIL TO THE CENTER SPACER ASSEMBLY AND/OR SELF W/1-10d NAIL EVERY 12".

REAR OF TRAILER.

**ISOMETRIC VIEW**



**SECTION A-A**

**ELEVEN ONE-TON CONTAINER LOAD IN A 40'-0" LONG BY 92" WIDE (INSIDE WIDTH) VAN TRAILER**

SPECIAL NOTES:

1. THE LOAD AS SHOWN ON PAGE 4 DEPICTS A LOAD OF ELEVEN ONE-TON CONTAINERS IN A 40'-0" LONG BY 92" WIDE (INSIDE WIDTH) VAN TYPE TRAILER WITH ROUNDED CORNERS AT THE FORWARD END AND WITHOUT CORNER POSTS AT THE REAR OF THE TRAILER.
2. THE FIRST TWO CONTAINERS MUST BE POSITIONED WITHIN THE TRAILER SO THAT THEY CONTACT THE SIDEWALLS OF THE TRAILER SO THAT THE CENTER CONTAINER CAN BE POSITIONED BETWEEN THE TWO OUTSIDE CONTAINERS.
3. IF LESS CONTAINERS THAN SHOWN IN THE LOAD VIEW DEPICTED ON PAGE 4 ARE TO BE OUTLOADED, A COMBINATION OF THE LOADS SHOWN ON PAGES 4, 6, 7, AND 8 MUST BE USED. SPECIFICATIONS FOR THE ELEVEN ONE-TON CONTAINER LOAD SHOWN ON PAGE 4, WILL BE APPLIED SEPARATELY, OR IN COMBINATION TO BLOCK AND BRACE OTHER THAN AN ELEVEN CONTAINER LOAD.

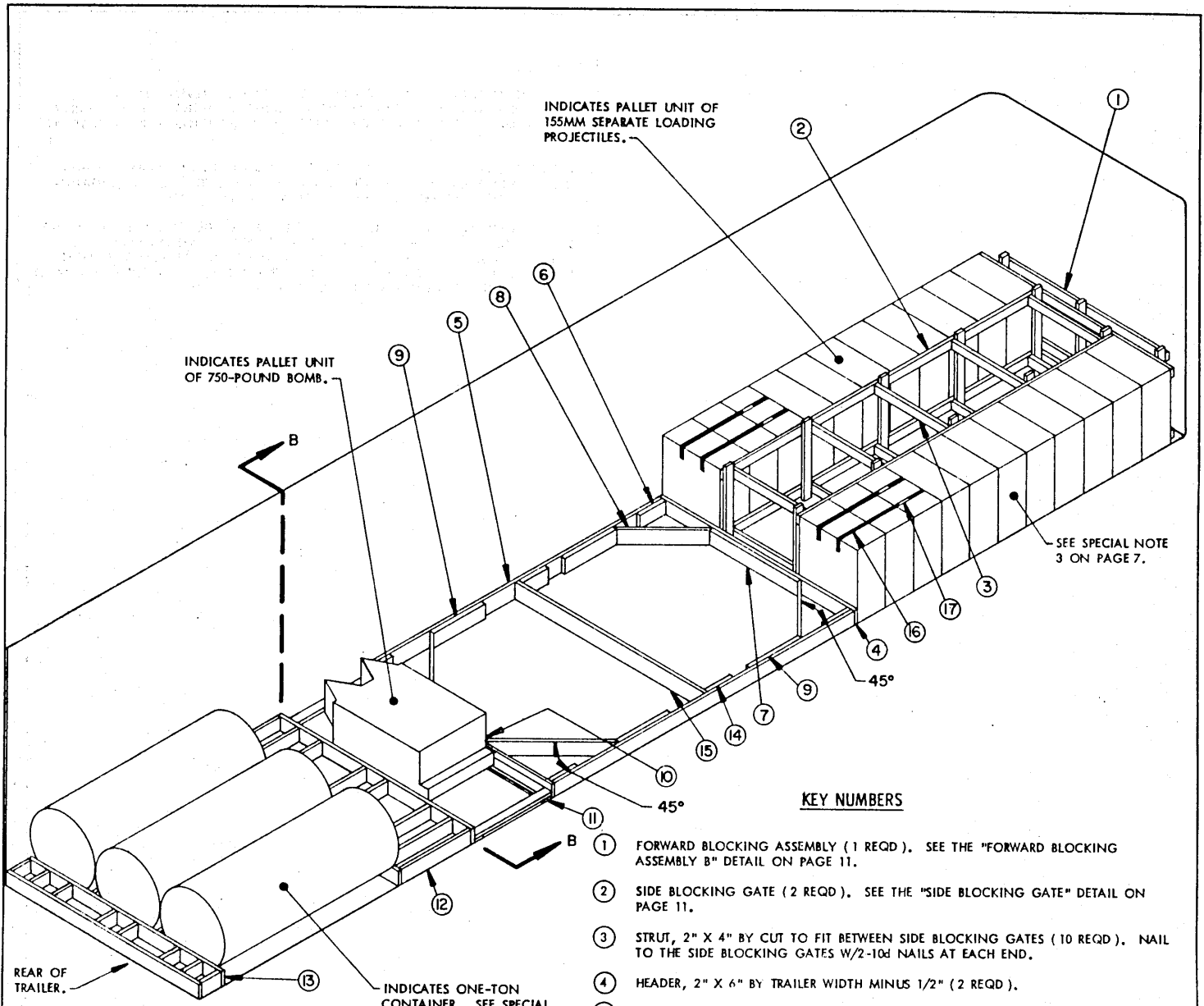
**BILL OF MATERIAL**

| LUMBER   | LINEAR FEET | BOARD FEET |
|----------|-------------|------------|
| 2" X 6"  | 246         | 246        |
| NAILS    | NO. REQD    | POUNDS     |
| 10d (3") | 288         | 4-1/2      |

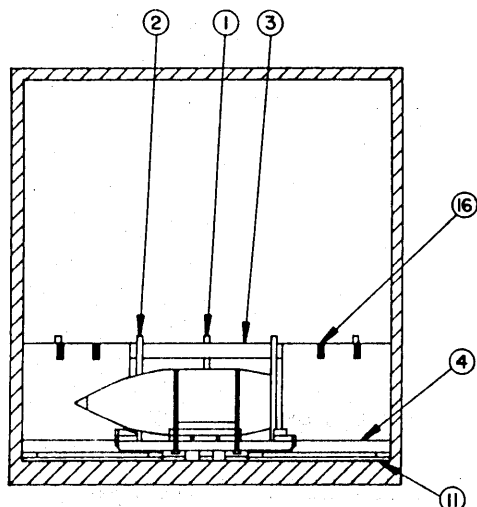
LOAD AS SHOWN

| <u>ITEM</u>         | <u>QUANTITY</u> | <u>WEIGHT (APPROX)</u> |
|---------------------|-----------------|------------------------|
| ONE-TON CONTAINER   | 11              | 38,500 LBS (MAX)       |
| DUNNAGE             |                 | 497 LBS                |
| <u>TOTAL WEIGHT</u> |                 | <u>38,997 LBS</u>      |

**ELEVEN ONE-TON CONTAINER LOAD IN A 40'-0" LONG  
BY 92" WIDE (INSIDE WIDTH) VAN TRAILER**



**ISOMETRIC VIEW**

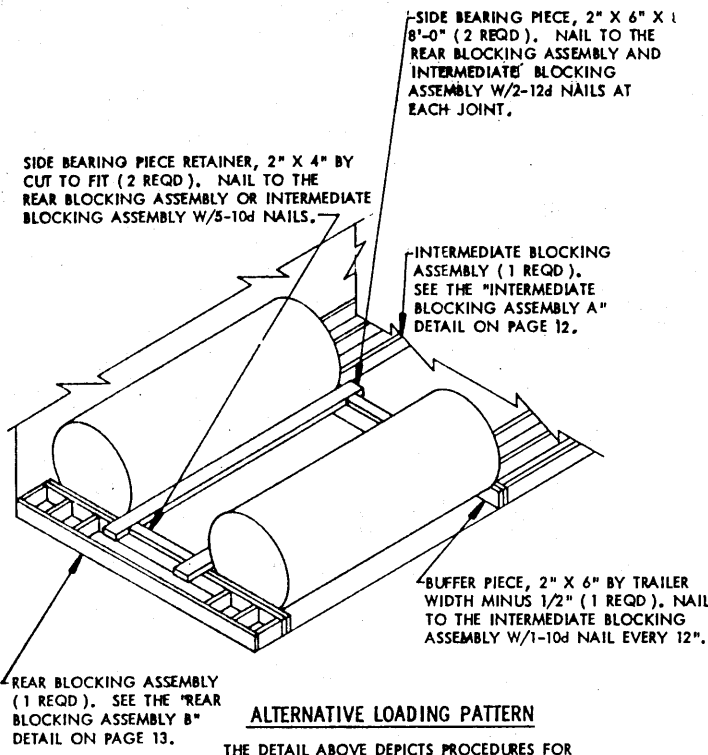


**SECTION B-B**

**KEY NUMBERS**

- ① FORWARD BLOCKING ASSEMBLY (1 REQD). SEE THE "FORWARD BLOCKING ASSEMBLY B" DETAIL ON PAGE 11.
- ② SIDE BLOCKING GATE (2 REQD). SEE THE "SIDE BLOCKING GATE" DETAIL ON PAGE 11.
- ③ STRUT, 2" X 4" BY CUT TO FIT BETWEEN SIDE BLOCKING GATES (10 REQD). NAIL TO THE SIDE BLOCKING GATES W/2-10d NAILS AT EACH END.
- ④ HEADER, 2" X 6" BY TRAILER WIDTH MINUS 1/2" (2 REQD).
- ⑤ SIDE STRUT, 2" X 6" X 12'-10" (REF) (2 REQD). SEE SPECIAL NOTE 2 ON PAGE 7.
- ⑥ POCKET CLEAT, 2" X 6" X 12" (4 REQD). NAIL TO A SIDE STRUT W/3-10d NAILS AND TOENAIL TO A HEADER W/3-12d NAILS;
- ⑦ CENTER CLEAT, 2" X 6" X 42" (1 REQD). NAIL TO A HEADER W/10-10d NAILS.
- ⑧ DIAGONAL BRACE, 2" X 6" BY CUT TO FIT IN LENGTH (4 REQD). DOUBLE BEVEL EACH END WITH 45° CUTS. INSTALL AT A 45° ANGLE AS SHOWN AND TOENAIL TO THE ADJACENT HEADER AND TO A SIDE STRUT W/2-16d NAILS AT EACH END.
- ⑨ SIDE CLEAT, 2" X 6" X 24" (4 REQD). NAIL TO A SIDE STRUT W/8-10d NAILS.
- ⑩ CENTER CLEAT, 2" X 6" X 24" (1 REQD). NAIL TO A HEADER W/6-10d NAILS.
- ⑪ SIDE SPACER ASSEMBLY (2 REQD). SEE THE "SIDE SPACER ASSEMBLY B" DETAIL ON PAGE 11.
- ⑫ INTERMEDIATE BLOCKING ASSEMBLY (1 REQD). SEE THE "INTERMEDIATE BLOCKING ASSEMBLY A" DETAIL ON PAGE 12.
- ⑬ REAR BLOCKING ASSEMBLY (1 REQD). SEE THE "REAR BLOCKING ASSEMBLY A" DETAIL ON PAGE 12.
- ⑭ STRUT BRACING RETAINER CLEAT, 2" X 6" X 12" (2 REQD). NAIL TO A SIDE STRUT W/3-10d NAILS.
- ⑮ STRUT BRACE, 2" X 6" BY CUT TO FIT (AS REQD). NAIL TO THE STRUT BRACING RETAINER CLEAT W/2-12d NAILS AT EACH END. SEE SPECIAL NOTE 7 ON PAGE 7.
- ⑯ BUNDLING STRAP, 1-1/4" X .035" OR .031" X 8'-6" LONG STEEL STRAPPING (4 REQD). PRE-POSITION TO ENCIRCLE THE COVERS OF THREE PALLET UNITS, BRING ENDS TOGETHER, TENSION, AND SEAL AS SHOWN.
- ⑰ SEAL FOR 1-1/4" STRAPPING (4 REQD). DOUBLE CRIMP EACH SEAL.

MIXED LOAD OF 155MM SLP, 750 POUND BOMB, AND ONE-TON CONTAINERS IN A 40'-0" LONG BY 92' WIDE (INSIDE WIDTH) VAN TRAILER



**ALTERNATIVE LOADING PATTERN**

THE DETAIL ABOVE DEPICTS PROCEDURES FOR BLOCKING AND BRACING OF TWO-ONE-TON CONTAINERS.

**SPECIAL NOTES:**

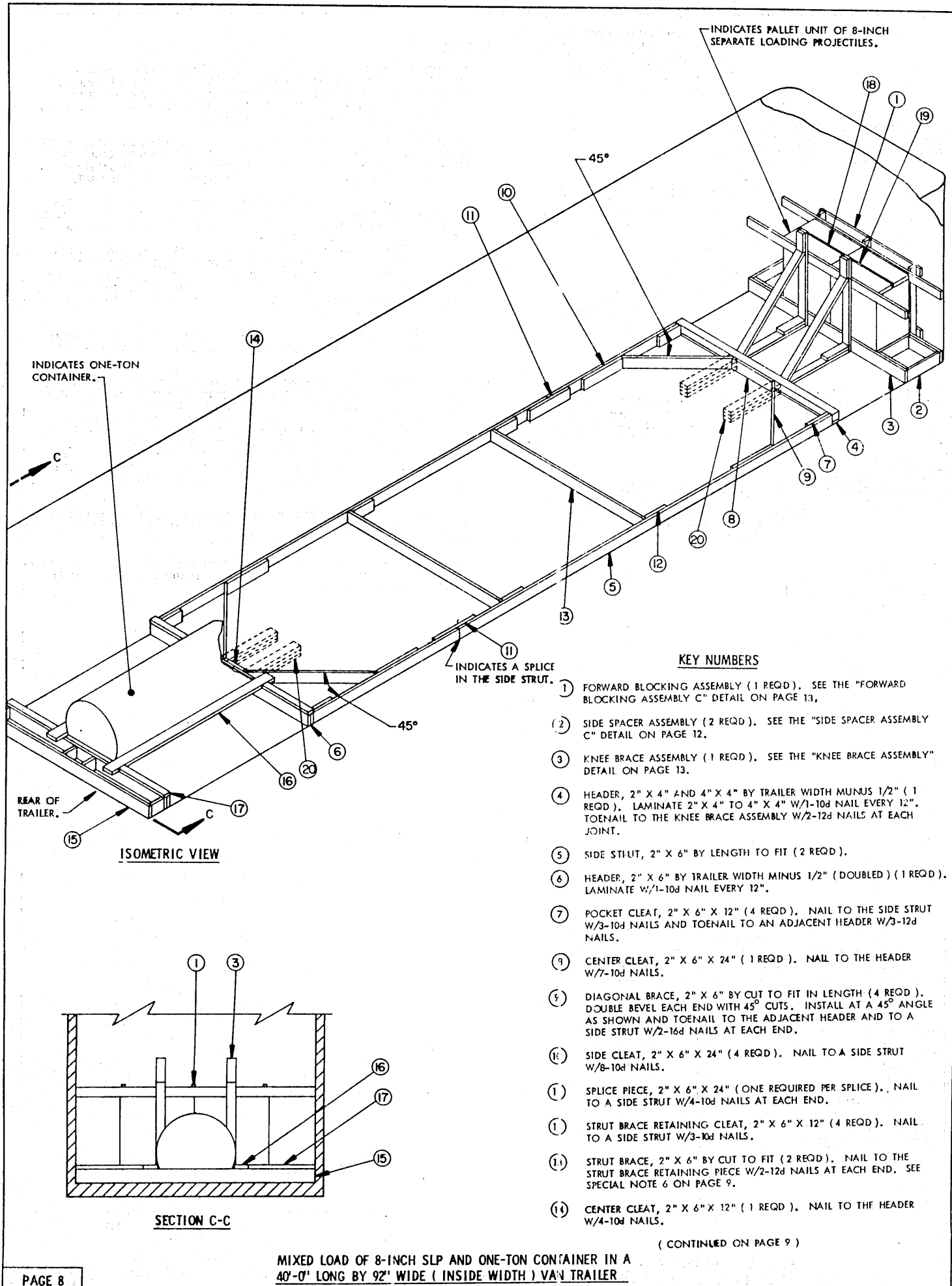
1. THE LOAD SHOWN ON PAGE 6 DEPICTS A COMBINATION LOAD OF TWENTY-TWO PALLET UNITS OF 155MM SEPARATE LOADING PROJECTILES, ONE PALLET UNIT OF 750 POUND BOMB, AND THREE ONE-TON CONTAINERS IN A 40'-0" LONG BY 92" WIDE (INSIDE WIDTH) VAN TYPE TRAILER. WIDER TRAILERS, AND/OR LONGER OR SHORTER TRAILERS CAN BE USED. SEE SPECIAL NOTE 6 BELOW.
2. THE LENGTH OF THE SIDE STRUT, PIECE MARKED (5), MUST BE FIELD CHECKED DURING LOADING OPERATIONS TO ASSURE FOR A SNUG FIT OF ASSEMBLIES TOWARD THE REAR OF THE TRAILER. LADING ITEM DIMENSIONS AND/OR TRAILER LENGTH MAY VARY AND NECESSITATE ADJUSTMENTS IN THE LENGTH OF THE SIDE STRUT.
3. IF ONLY TWENTY-ONE PALLET UNITS OF 155MM SEPARATE LOADING PROJECTILES ARE TO BE OUTLOADED, A FILLER FOR AN OMITTED PALLET UNIT MUST BE INSTALLED IN THE LOAD. THE FILLER MUST BE POSITIONED NEAR THE CENTER OF A LOAD BAY. SEE THE "OMITTED-UNIT ASSEMBLY" DETAIL ON PAGE 13.
4. THREE ONE-TON CONTAINERS HAVE BEEN DEPICTED IN THE LOAD VIEW. IF ONLY TWO ONE-TON CONTAINERS ARE TO BE OUTLOADED, SEE THE "ALTERNATIVE LOADING PATTERN" DETAIL AT LEFT. IF ONLY ONE ONE-TON CONTAINER IS TO BE OUTLOADED, SEE THE "ISOMETRIC VIEW" DEPICTED ON PAGE 8. STRUTS IN THE REAR BLOCKING AND INTERMEDIATE BLOCKING ASSEMBLIES MAY BE OMITTED OR ADDED AS DEPICTED IN THE LOAD VIEWS.
5. IF THE PALLET UNIT OF 750-POUND BOMBS IS TO BE OMITTED, OR IF ADDITIONAL PALLET UNITS ARE TO BE LOADED, DUNNAGE ASSEMBLIES MUST BE ADJUSTED AS REQUIRED.
6. THE LOAD DEPICTED ON PAGE 6 SHOWS A TYPICAL LOAD OF AMMUNITION ITEMS, AND IS NOT MEANT TO BE RESTRICTED TO ONLY THESE ITEMS OR THESE QUANTITIES. THE ITEMS AND/OR QUANTITIES CAN BE ADJUSTED AS REQUIRED, AS LONG AS SIMILAR ITEMS ARE BLOCKED AND BRACED IN ACCORDANCE WITH THE PROCEDURES SHOWN HEREIN. THE PROCEDURES SHOWN ON PAGES 6 AND 7 MAY BE COMBINED WITH PROCEDURES SHOWN ELSEWHERE IN THIS DOCUMENT TO ACCOMMODATE THE ITEMS TO BE SHIPPED PROVIDED THE BLOCKING AND BRACING REQUIREMENTS ARE COMPLIED WITH AND OTHER RESTRICTIONS ARE NOT VIOLATED. SEE THE "ISOMETRIC VIEW" AND THE "BRACE" DETAIL ON PAGE 14 FOR ADDITIONAL GUIDANCE OF BLOCKING AND BRACING OF OTHER ITEMS.
7. THE LOAD AS SHOWN ON PAGE 6 REQUIRES ONE STRUT BRACE POSITIONED BETWEEN THE K-BRACE ASSEMBLIES AS DEPICTED ON PAGE 6. A STRUT BRACE MUST BE USED FOR EACH 7'-0" LENGTH OF UNSUPPORTED SIDE STRUT.
8. THE "K-BRACE" BLOCKING, SHOWN AS PIECES MARKED (4) THRU (10), (14), AND (15), IS ADEQUATE FOR RETAINING A MAXIMUM LOAD OF 20,000 POUNDS IN EITHER END OF THE TRAILER.

| BILL OF MATERIAL  |             |            |
|---|-------------|------------|
| LUMBER  | LINEAR FEET | BOARD FEET |
| 2" X 4"   | 12          | 4          |
| 2" X 4"   | 161         | 108        |
| 2" X 6"   | 134         | 134        |
| NAILS   | NO. REQD    | POUNDS     |
| 6d (2")   | 36          | 1/4        |
| 10d (3")  | 264         | 4          |
| 12d (3-1/4")  | 32          | 1/2        |
| 16d (3-1/2")  | 16          | 1/2        |
| STEEL STRAPPING, 1-1/4" X .035" OR .031" --- 34' REQD - 5 LBS |             |            |
| STRAP SEAL --- 4 REQD - NIL                                   |             |            |

**LOAD AS SHOWN**

| ITEM                    | QUANTITY | WEIGHT (APPROX) |
|-------------------------|----------|-----------------|
| PALLET UNIT 155MM SLP   | 22       | 18,304 LBS      |
| PALLET UNIT 750-LB BOMB | 1        | 1,590 LBS       |
| ONE-TON CONTAINER       | 3        | 10,500 LBS      |
| DUNNAGE                 |          | 502 LBS         |
| TOTAL WEIGHT            |          | 30,896 LBS      |

MIXED LOAD OF 155MM SLP, 750 POUND BOMB, AND ONE-TON CONTAINERS IN A 40'-0" LONG BY 92" WIDE (INSIDE WIDTH) VAN TRAILER





(KEY NUMBERS CONTINUED)

- 15 REAR BLOCKING ASSEMBLY (1 REQD). SEE THE "REAR BLOCKING ASSEMBLY B" DETAIL ON PAGE 13.
- 16 SIDE BEARING PIECE, 2" X 6" X 8'-0" (2 REQD). NAIL TO THE REAR BLOCKING ASSEMBLY AND/OR THE HEADER W/2-12d NAILS AT EACH JOINT.
- 17 SIDE BEARING PIECE RETAINER, 2" X 4" BY CUT TO FIT (4 REQD). NAIL TO THE REAR BLOCKING ASSEMBLY OR HEADER W/5-10d NAILS.
- 18 BUNDLING STRAP, 1-1/4" X .035" OR .031" X 7'-0" LONG STEEL STRAPPING (1 REQD). INSTALL TO FORM A COMPLETE LOOP AROUND THE COVERS OF THE TWO PALLETS. BRING ENDS TOGETHER, TENSION, AND SEAL.
- 19 SEAL FOR 1-1/4" STRAPPING (1 REQD). DOUBLE CRIMP EACH SEAL.
- 20 BACK-UP CLEAT, 2" X 4" X 30" (TRIPLED) (4 REQD). NAIL THE FIRST PIECE TO THE TRAILER FLOOR W/7-12d NAILS. NAIL EACH ADDITIONAL PIECE IN THE SAME MANNER TO THE HEADER W/2-12d NAILS AT EACH JOINT. SEE SPECIAL NOTE 4 ON PAGE 9.

SPECIAL NOTES:

1. THE LOAD SHOWN ON PAGE 8 DEPICTS A COMBINATION LOAD OF TWO PALLET UNITS OF 8-INCH SEPARATE LOADING PROJECTILES, AND ONE ONE-TON CONTAINER IN A 40'-0" LONG BY 92" WIDE (INSIDE WIDTH) VAN TYPE TRAILER. TRAILERS OF OTHER DIMENSIONS MAY BE USED. SEE SPECIAL NOTE 3 BELOW.
2. ONE ONE-TON CONTAINER HAS BEEN DEPICTED IN THE LOAD VIEW. IF TWO ONE-TON CONTAINERS ARE TO BE OUTLOADED, SEE THE "ALTERNATIVE LOADING PATTERN" DETAIL ON PAGE 7 FOR ADDITIONAL GUIDANCE. IF THREE ONE-TON CONTAINERS ARE TO BE OUTLOADED, SEE THE "ISOMETRIC VIEW" ON PAGE 6. ADJUST THE QUANTITY OF STRUTS IN THE "REAR BLOCKING" AND "INTERMEDIATE BLOCKING ASSEMBLIES" AS DEPICTED.
3. THE LOAD AS SHOWN FOR THE TWO PALLETS OF 8-INCH SEPARATE LOADING PROJECTILES IS BASED ON FOUR (4) PROJECTILES PER PALLET, ALTHOUGH THE DETAIL SHOWN ON PAGE 3 DEPICTS A SIX (6) PROJECTILE UNIT. THE PROCEDURES SHOWN ON PAGE 8 MAY BE USED TO SHIP PALLET UNITS WITH FOUR THROUGH SIX PROJECTILES PER PALLET. THESE PROCEDURES CAN ONLY BE USED WHEN TWO (2) PALLET UNITS ARE TO BE OUTLOADED.
4. PIECES MARKED 20 ARE FOR USE IN A TRAILER WHICH HAS A NAILABLE FLOOR AND SHOULD BE USED, IF POSSIBLE, IN LIEU OF PIECES MARKED 3, AND 7 THRU 14, WHICH APPLY TO TRAILERS HAVING NON-NAILABLE FLOORS. WHEN USING NAILABLE FLOOR LINE DUNNAGE, NAIL THE FLOOR CLEAT OF THE KNEE BRACE ASSEMBLY, PIECE MARKED 3, TO THE TRAILER FLOOR W/5-12d NAILS. TWO BACK-UP CLEATS, SHOWN AS PIECE MARKED 20, ARE ADEQUATE FOR RETAINING NOT MORE THAN 8,000 POUNDS OF LADING.
5. THE LOAD DEPICTED ON PAGE 8 SHOWS A TYPICAL LOAD OF AMMUNITION ITEMS, AND IS NOT MEANT TO BE RESTRICTED TO ONLY THESE ITEMS OR THESE QUANTITIES. THE ITEMS AND/OR QUANTITIES CAN BE ADJUSTED AS REQUIRED, AS LONG AS SIMILAR ITEMS ARE BLOCKED AND BRACED IN ACCORDANCE WITH THE PROCEDURES SHOWN HEREIN. THE PROCEDURES SHOWN ON PAGES 8 AND 9 MAY BE COMBINED WITH PROCEDURES SHOWN ELSEWHERE IN THIS DOCUMENT TO ACCOMMODATE THE ITEMS TO BE SHIPPED PROVIDED THE BLOCKING AND BRACING REQUIREMENTS ARE COMPLIED WITH AND OTHER RESTRICTIONS ARE NOT VIOLATED. SEE THE "ISOMETRIC VIEW" AND THE "BRACE" DETAIL ON PAGE 14 FOR ADDITIONAL GUIDANCE OF BLOCKING AND BRACING OF OTHER ITEMS.
6. THE LOAD AS SHOWN ON PAGE 8 REQUIRES TWO STRUT BRACES POSITIONED BETWEEN THE K-BRACE ASSEMBLIES AS DEPICTED ON PAGE 8. A STRUT BRACE MUST BE USED FOR EACH 7'-0" LENGTH OF UNSUPPORTED SIDE STRUT.
7. THE "K-BRACE" BLOCKING, SHOWN AS PIECES MARKED 4 THRU 14, IS ADEQUATE FOR RETAINING A MAXIMUM LOAD OF 20,000 POUNDS IN EITHER END OF THE TRAILER.

BILL OF MATERIAL

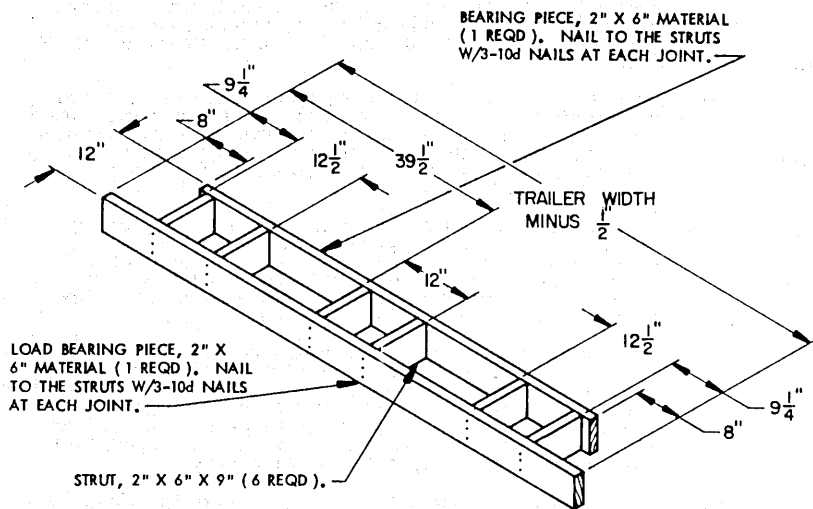
| LUMBER  | LINEAR FEET | BOARD FEET |
|---|-------------|------------|
| 2" X 4"   | 64          | 43         |
| 2" X 6"   | 193         | 193        |
| 4" X 4"   | 8           | 11         |
| NAILS   | NO. REQD    | POUNDS     |
| 10d (3")  | 207         | 3-1/4      |
| 12d (3-1/4")  | 44          | 3/4        |
| 16d (3-1/2")  | 16          | 1/2        |
| STEEL STRAPPING, 1-1/4" X .035" OR .031" -- 7' REQD -- 1 LB |             |            |
| SEAL FOR 1-1/4" STRAPPING ----- 1 REQD -- NIL               |             |            |

LOAD AS SHOWN

| ITEM                          | QUANTITY | WEIGHT (APPROX) |
|-------------------------------|----------|-----------------|
| PALLET UNIT OF 8-INCH SLP - 2 | -----    | 1,680 LBS *     |
| ONE-TON CONTAINER             | ----- 1  | 3,500 LBS (MAX) |
| DUNNAGE                       | -----    | 500 LBS         |
| TOTAL WEIGHT                  |          | ----- 5,680 LBS |

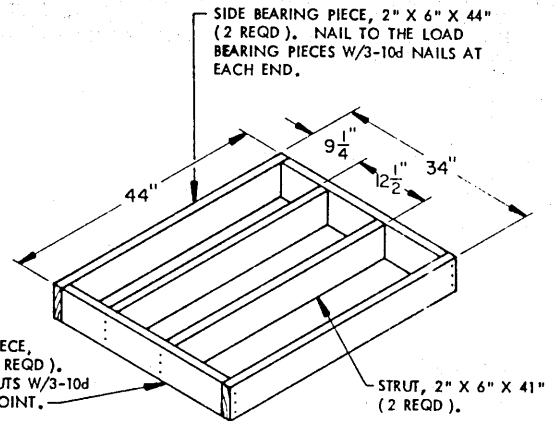
\* SEE SPECIAL NOTE 3 ABOVE

MIXED LOAD OF 8-INCH SLP AND ONE-TON CONTAINER IN A 40'-0" LONG BY 92" WIDE (INSIDE WIDTH) VAN TRAILER



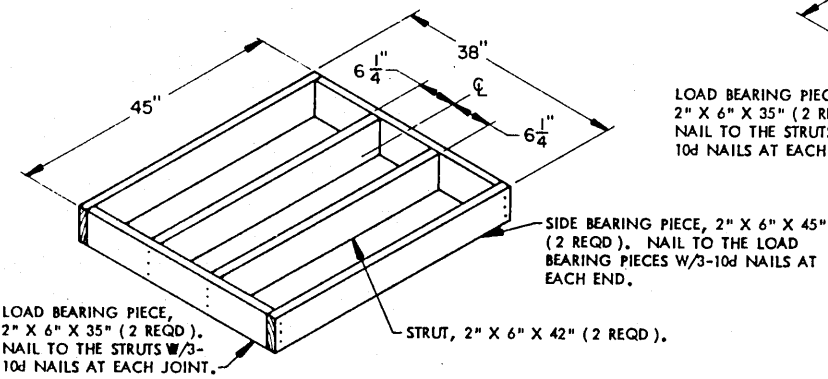
**FORWARD BLOCKING ASSEMBLY A**

( 1 REQD )



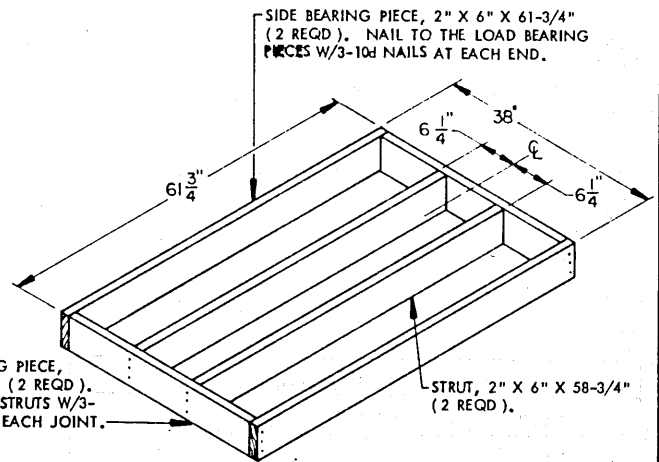
**SIDE SPACER ASSEMBLY A**

( 6 REQD )



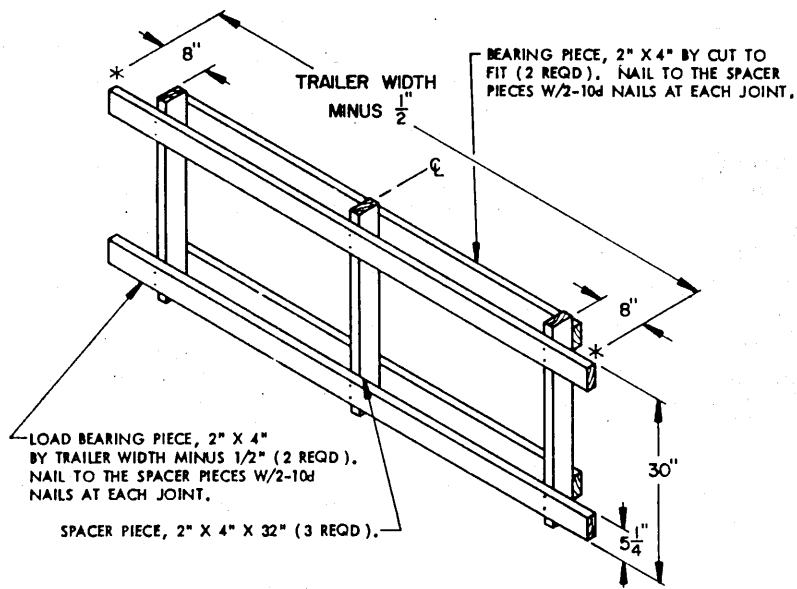
**CENTER SPACER ASSEMBLY B**

( 2 REQD )

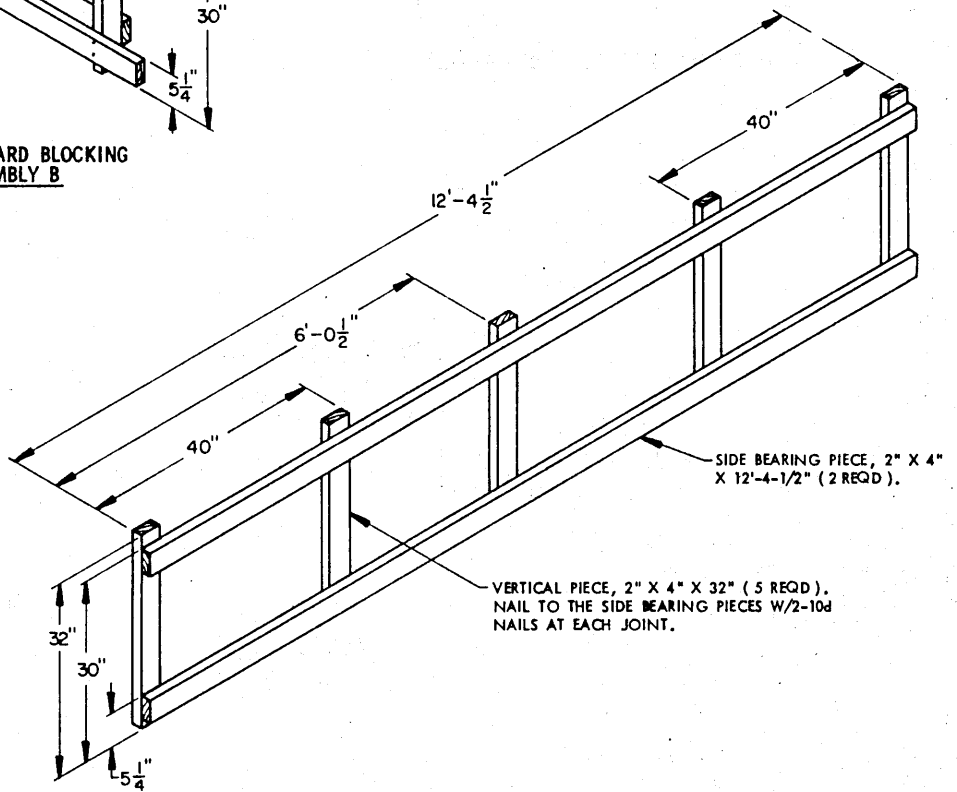


**CENTER SPACER ASSEMBLY A**

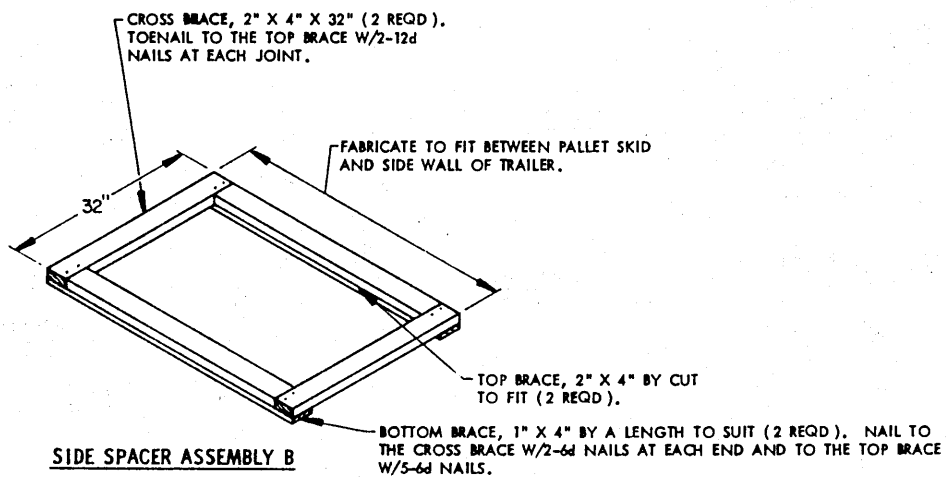
( 2 REQD )



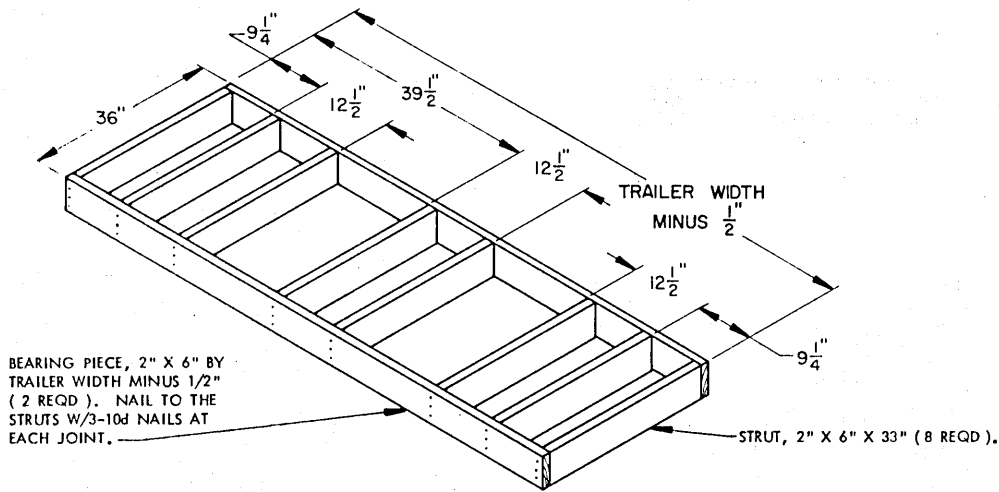
**FORWARD BLOCKING ASSEMBLY B**



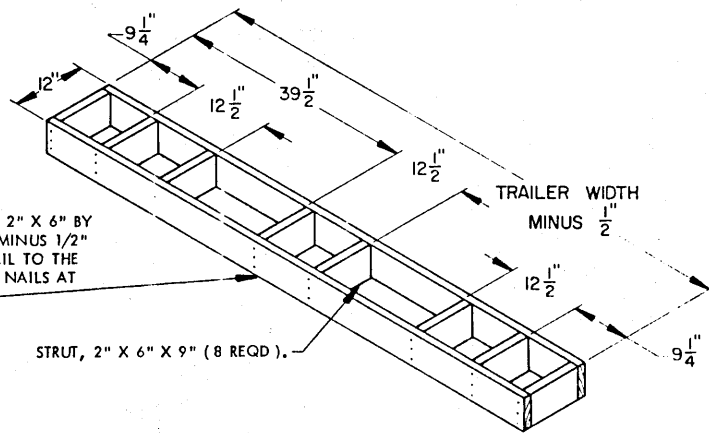
**SIDE BLOCKING GATE**



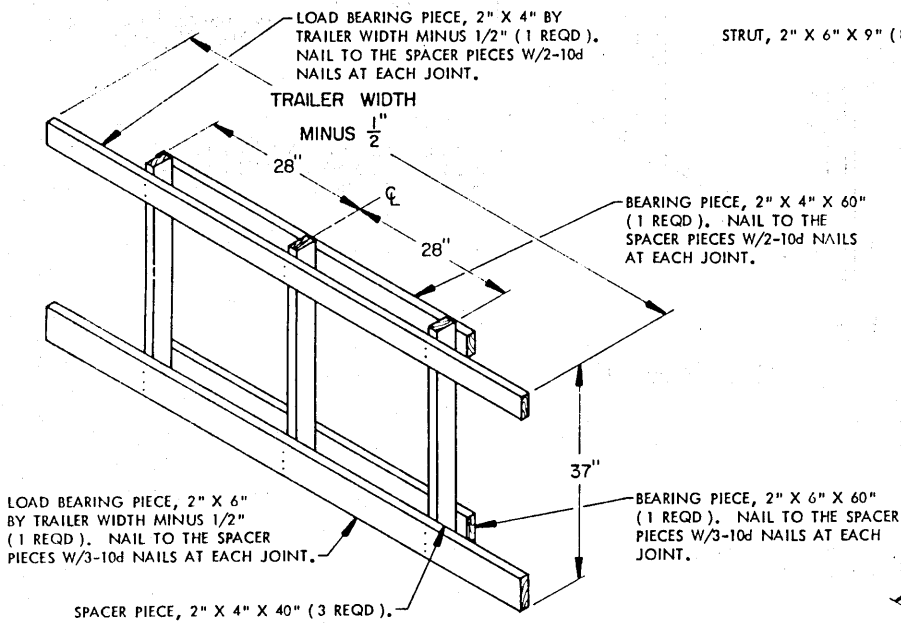
**SIDE SPACER ASSEMBLY B**



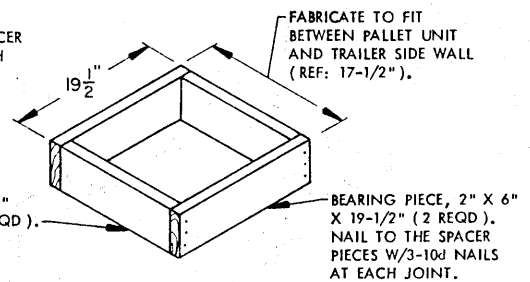
**INTERMEDIATE BLOCKING ASSEMBLY A**



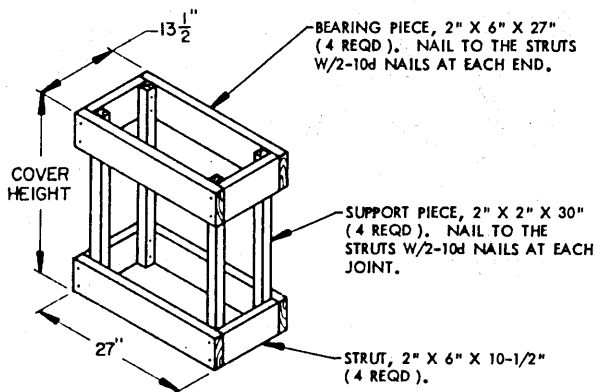
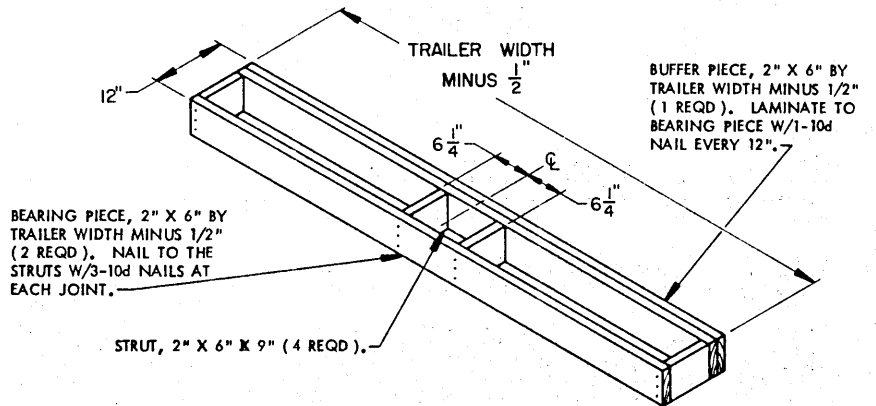
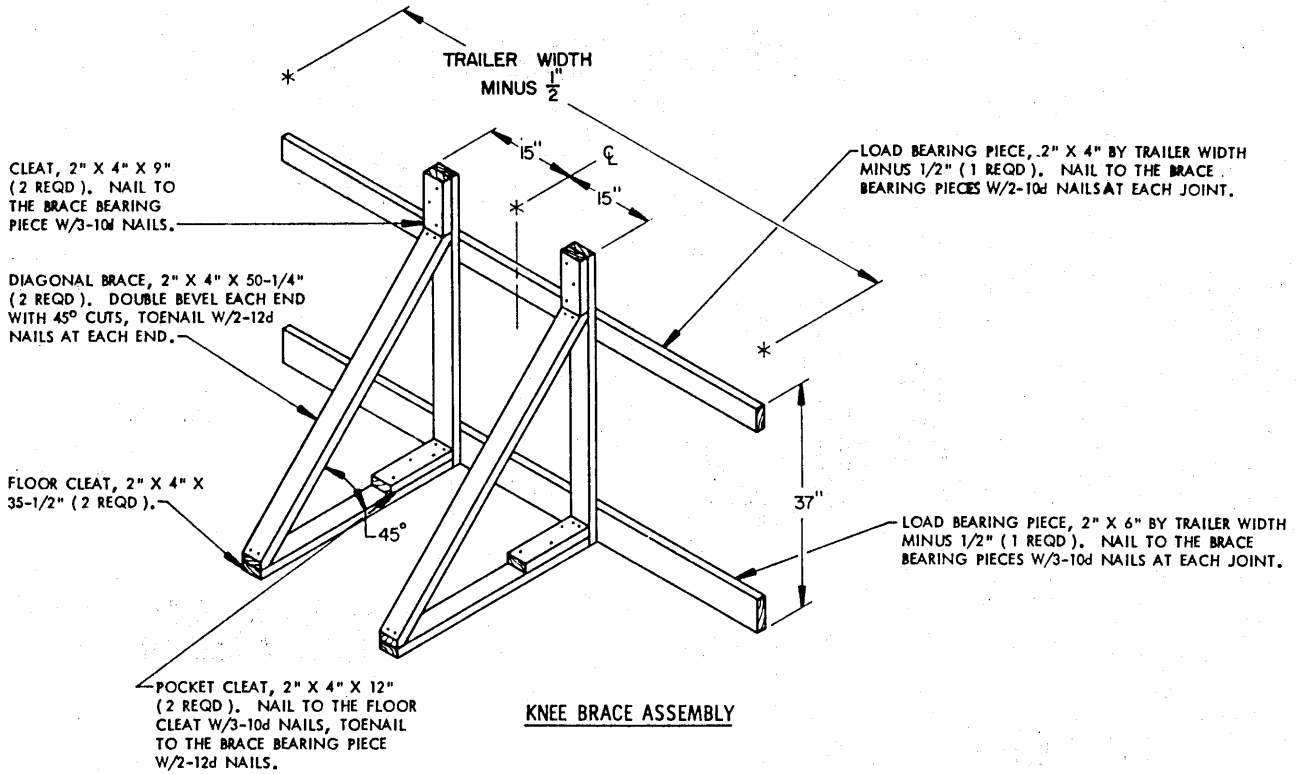
**REAR BLOCKING ASSEMBLY A**

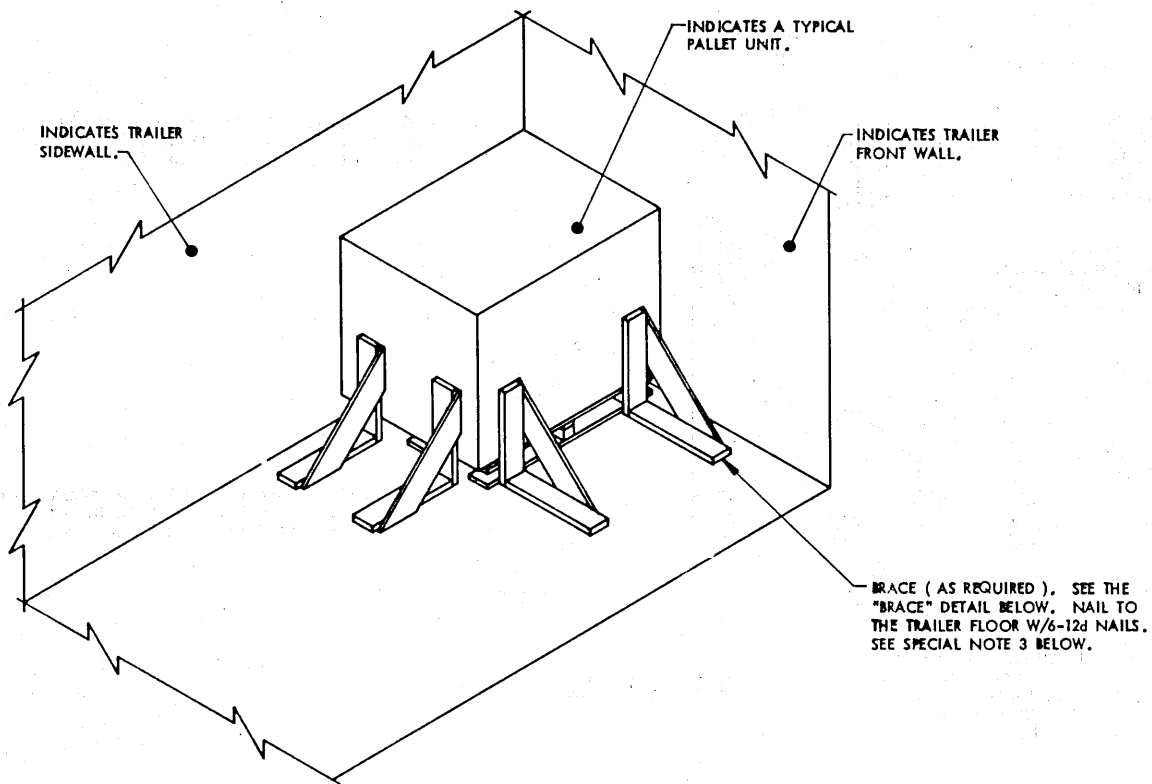


**FORWARD BLOCKING ASSEMBLY C**



**SIDE SPACER ASSEMBLY C**

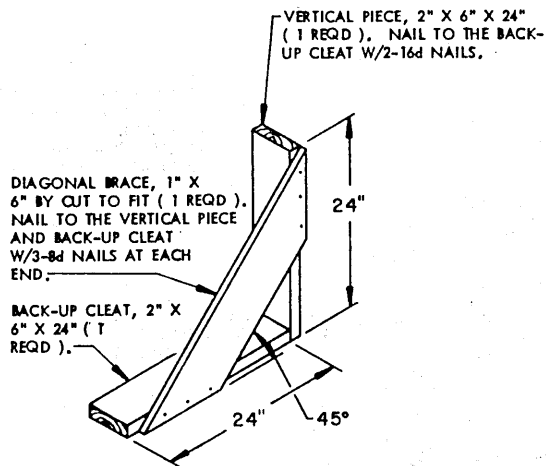




**ISOMETRIC VIEW**

**SPECIAL NOTES:**

1. A TYPICAL PALLET UNIT HAS BEEN DEPICTED IN A VAN TYPE TRAILER WHICH HAS A NAILABLE FLOOR. THIS PROCEDURE MAY BE USED FOR OUTLOADING OTHER PALLETIZED ITEMS NOT DEPICTED ON PAGES 3 THRU 9.
2. MORE THAN ONE PALLET UNIT CAN BE OUTLOADED, PROVIDING THE CAPACITY OF THE BRACE IS NOT EXCEEDED, AND THE ITEMS ARE COMPATIBLE.
3. EACH BRACE AS APPLIED FOR LONGITUDINAL BRACING WILL SUPPORT 2,000 POUNDS OF LADING; HOWEVER, NOT LESS THAN TWO (2) BRACES WILL BE USED AGAINST EACH PALLET UNIT ACROSS THE WIDTH OF A TRAILER, OR NOT LESS THAN TWO (2) BRACES WILL BE USED AGAINST EACH PALLET UNIT FOR SIDE BLOCKING. EACH SIDE OR END OF A PALLET UNIT WHICH IS NOT PROPERLY SUPPORTED BY THE TRAILER WALLS, OTHER ITEMS, OR OTHER TYPE BLOCKING, WILL REQUIRE TWO (2) ADDITIONAL BRACES ON EACH UNSUPPORTED SIDE AND/OR END.



**BRACE**