

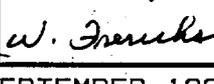
# LOADING AND BRACING IN DROMEDARY TYPE CONTAINERS OF PALLETIZED AND UNPALLETIZED AMMUNITION AND COMPONENTS

## INDEX

<u>ITEM</u>	<u>PAGE(S)</u>
GENERAL NOTES - - - - -	2,3
MATERIAL SPECIFICATIONS - - - - -	2
PALLET UNIT DETAILS - - - - -	4,5
TYPICAL LOADS BRACED WITH MECHANICAL BRACING DEVICES AND WEB STRAP ASSEMBLIES:	
SEPARATE LOADING PROJECTILES - - - - -	6
PROPELLING CHARGES - - - - -	7-10
BOXED AMMUNITION - - - - -	11-13
TYPICAL LOADS BRACED WITH MECHANICAL BRACING DEVICES:	
SEPARATE LOADING PROJECTILES - - - - -	14,15
PROPELLING CHARGES - - - - -	16-18
BOXED AMMUNITION - - - - -	19-22
TYPICAL LOADS IN 410 TYPE CONTAINER:	
SEPARATE LOADING PROJECTILES - - - - -	23
PALLETIZED BOXES - - - - -	24,25
TYPICAL LOADS BRACED WITH WEB STRAP ASSEMBLIES:	
SEPARATE LOADING PROJECTILES - - - - -	26,27
PROPELLING CHARGES - - - - -	28-30
BOXED AMMUNITION - - - - -	31,32
TYPICAL LOADS BRACED WITH CONVENTIONAL TYPE DUNNAGE:	
SEPARATE LOADING PROJECTILES - - - - -	33
PROPELLING CHARGES - - - - -	34-36
BOXED AMMUNITION - - - - -	37-40
FIBERBOARD BOXES AND DRUMS - - - - -	41,42
DETAILS - - - - -	43-50

• PROCEDURES ARE ALSO  
APPLICABLE FOR BOXED  
AMMUNITION ON  
SKIDDED BASES.

DO NOT SCALE

U. S. ARMY MATERIEL COMMAND DRAWING												
APPROVED, U.S. ARMY ARMAMENT, MUNITIONS AND CHEMICAL COMMAND    APPROVED BY ORDER OF COMMANDING GENERAL, U.S. ARMY MATERIEL COMMAND   U.S. ARMY DEFENSE AMMUNITION CENTER AND SCHOOL	DRAFTSMAN S. WILSON	TECHNICIAN R. ARNOLD	ENGINEER									
VALIDATION ENGINEERING DIVISION  	TRANSPORTATION ENGINEERING DIVISION  	LOGISTICS ENGINEERING OFFICE  	SEPTEMBER 1993									
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th style="width: 25%;">CLASS</th> <th style="width: 25%;">DIVISION</th> <th style="width: 25%;">DRAWING</th> <th style="width: 25%;">FILE</th> </tr> <tr> <td style="text-align: center;">19</td> <td style="text-align: center;">48</td> <td style="text-align: center;">4252</td> <td style="text-align: center;">11Q1000</td> </tr> </table>	CLASS	DIVISION	DRAWING	FILE	19	48	4252	11Q1000				
CLASS	DIVISION	DRAWING	FILE									
19	48	4252	11Q1000									

**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 DEPICTED WITHIN THIS DRAWING ARE APPLICABLE FOR BOXED AMMUNITION AND EXPLOSIVES PACKED IN FIBERBOARD OR WOODEN CONTAINERS (SKIDDED UNITS, PALLETIZED AND UNPALLETIZED), SEPARATE LOADING PROJECTILES, PROPELLING CHARGES PACKED IN CYLINDRICAL METAL CONTAINERS (PALLETIZED AND UNPALLETIZED), AND FIBERBOARD OR METAL DRUMS. LOAD ARRANGEMENTS FOR VARIOUS COMBINATIONS OF PALLETIZED AND/OR UNPALLETIZED ITEMS FROM ONE ITEM TO A MAXIMUM LOAD ARE SHOWN. SEE THE UNIT DETAILS ON PAGES 4 AND 5 FOR TYPICAL LADING ITEMS.
- C. THE LOADS SHOWN HEREIN ARE BASED ON A PORTABLE CARGO COMPARTMENT (DROMEDARY) HAVING INSIDE DIMENSIONS OF 54" LONG BY 82" WIDE BY 52-1/2" HIGH (DOOR HEIGHT) AND/OR ARE BASED ON A "410" TYPE CONTAINER HAVING INSIDE DIMENSIONS OF 101" LONG BY 96" WIDE BY 72" HIGH (DOOR HEIGHT). THE PROCEDURES ARE ALSO APPLICABLE FOR "DROMS" OF OTHER SIZES AND OF VARIOUS MANUFACTURE. THE "DROMS" MAY BE EQUIPPED WITH MECHANICAL BRACING DEVICES AND WEB STRAP TIEDOWN ASSEMBLIES, MAY BE EQUIPPED ONLY WITH MECHANICAL BRACING DEVICES, MAY BE EQUIPPED ONLY WITH WEB STRAP TIEDOWN ASSEMBLIES, OR MAY BE WITHOUT ANY SORT OF RESTRAINING DEVICES. COMBINATIONS OF CONVENTIONAL MATERIALS, MECHANICAL BRACING DEVICES AND/OR WEB STRAP ASSEMBLIES MAY BE USED AS REQUIRED TO ATTAIN A SATISFACTORY LOAD WITHIN A DROMEDARY CONTAINER. THROUGHOUT THIS DRAWING, REFERENCE TO DROMEDARY OR PORTABLE CARGO COMPARTMENT ARE TO BE USED INTERCHANGEABLY.

(CONTINUED AT RIGHT)

- D. THE DEPICTED PROCEDURES ARE ALSO APPLICABLE TO LOADS IN OTHER TYPE VEHICLES. ANY VEHICLE STYLE WITH POWER UNIT AND CARGO BODY MOUNTED ON THE SAME CHASSIS IS ACCEPTABLE PROVIDED IT MEETS THE SAFETY CRITERIA AS SPECIFIED IN TITLE 49 OF THE CODE OF FEDERAL REGULATIONS (CFR) PARTS 177.392, 177.393, AND 177.835(e) and (f). THE VEHICLE MUST BE DESIGNED FOR A LOAD CAPACITY WHICH EQUALS OR EXCEEDS THE LOAD TO BE CARRIED. ACCEPTABLE VEHICLES INCLUDE PICKUP TRUCKS WITH HARD COVERS SECURELY FASTENED OR BOLTED TO THE SIDE RAILS OR VEHICLE BED, PANEL TRUCKS, CARGO VANS AND STEP VANS. COMPARTMENTALIZED VANS AND FREIGHT CONTAINERS MAY BE USED BUT MUST HAVE PERMANENT SIDES, TOP, AND AN INDEPENDENT DOOR WHICH CAN BE LOCKED AND SEALED INDEPENDENTLY. INTERVENING COMPARTMENT WALLS OR BULKHEADS MUST BE PERMANENT, MAY BE MOVABLE, HOWEVER, ACCESS TO THE COMPARTMENT MAY ONLY BE MADE THROUGH THE DOOR. PASSENGER VANS, MOTOR HOMES, STATION WAGONS, 2 AND 4 DOOR PASSENGER AUTOMOBILES, AND RECREATIONAL VEHICLES ARE NOT ACCEPTABLE.

- E. CARGO AREA AND RESTRAINT PROVISIONS:
  1. THE FRONT-END STRUCTURE OF THE CARGO AREA MUST CONFORM TO THE CONFIGURATION AND STRENGTH REQUIREMENTS OF TITLE 49 CFR 393.106.
  2. SIDE STRUCTURE OF THE CARGO AREA MUST CONFORM TO THE CONFIGURATION AND STRENGTH REQUIREMENTS OF TITLE 49 CFR 393.100.
  3. DOORS MUST BE CAPABLE OF HAVING BLOCKING AND BRACING PLACED AGAINST THEM, OR THE VEHICLE STRUCTURE ADJACENT TO THE DOORS MUST BE ABLE TO HAVE THE BLOCKING PLACED AGAINST IT; I.E., WHEN A ROLL-UP DOOR IS INSTALLED, THE CORNER POSTS MUST BE ACCESSIBLE FOR PROPER BLOCKING INSTALLATION AND RETENTION. ALTERNATIVELY, IF THE DOOR STRUCTURE CANNOT PROVIDE RETENTION OF THE LOAD, THEN THE FLOOR OF THE CARGO AREA MUST BE AT LEAST 1-1/4" THICK HARDWOOD TO ALLOW FOR THE NAILING OF FLOORLINE DUNNAGE.

- 4. THE SAFE WORKING LIMIT FOR THE SECUREMENT SYSTEM STRAPS, CROSS MEMBERS, ETC., MUST BE STENCILLED ON THE SYSTEM PARTS OR VEHICLE INTERIOR. SECUREMENT HARDWARE MUST CONFORM TO THE CONFIGURATION AND STRENGTH REQUIREMENTS OF TITLE 49 CFR 393.102.
- 5. INTERIOR SURFACES MUST BE FREE OF APPURTENANCES THAT WILL INTERFERE WITH THE BLOCKING AND BRACING.
- 6. THE CARGO COMPARTMENT WILL BE AFFIXED TO THE TRANSPORT VEHICLE IN A POSITIVE MANNER.
- 7. VEHICLES MUST HAVE PERMANENT SIDES AND TOPS, AND MUST HAVE DOORS WHICH CAN BE LOCKED AND SEALED AS SPECIFIED WITHIN AR 55-355.

- F. A LOAD MUST NOT EXCEED THE WEIGHT LIMIT FOR THE DROMEDARY CONTAINER BEING USED. THE NUMBER OF LADING UNITS MAY BE ADJUSTED TO FIT THE CAPACITY OF THE DROMEDARY CONTAINER TO BE LOADED OR THE QUANTITY TO BE SHIPPED. HOWEVER, THE APPROVED METHODS SHOWN MUST BE FOLLOWED AS CLOSELY AS POSSIBLE FOR BLOCKING, BRACING AND STAYING OF THE DESIGNATED ITEMS.

- G. IF IT IS NECESSARY TO SHIP LESS THAN A FULL PALLET, INDIVIDUAL ITEMS MAY BE SHIPPED SEPARATELY OR A PALLET OF LESS THAN THE ORIGINAL QUANTITY MAY BE SHIPPED.

- H. OTHER TYPES OF LADING ITEMS MAY BE LOADED IN A DROMEDARY CONTAINER 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 HEREIN.

- J. IF THE DROMEDARY CONTAINER BEING USED IS EQUIPPED WITH A MECHANICAL LOAD BLOCKING SYSTEM, THE CROSS MEMBER ATTACHMENT FACILITIES WITHIN THE DROMEDARY CONTAINER MUST PROVIDE FOR THE INSTALLATION OF LOAD BLOCKING CROSS MEMBERS AT THE HEIGHTS SPECIFIED HEREIN.

(CONTINUED ON PAGE 3)

**MATERIAL SPECIFICATIONS**

LUMBER - - - - - : SEE TM 743-200-1 (DUNNAGE LUMBER) AND FED SPEC MM-L-751.

NAILS - - - - - : FED SPEC FF-N-105; COMMON.

PLYWOOD - - - - - : COMMERCIAL ITEM DESCRIPTION A-A-55057, TYPE A, CONSTRUCTION AND INDUSTRIAL PLYWOOD, INTERIOR WITH EXTERIOR GLUE, GRADE C-D. IF SPECIFIED GRADE IS NOT AVAILABLE, A BETTER INTERIOR OR AN EXTERIOR GRADE MAY BE SUBSTITUTED.

STRAP - - - - - : WEBBING, UNIVERSAL TIEDOWN, NSN 5340-00-980-9277 (PN10900880), NSN 1670-00-725-1437 (PN1376-013), NSN 5340-01-089-4997 (PN11669588), NSN 5340-01-204-3009 (PN9392419), OR COMMERCIAL EQUIVALENT.

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, STYLE I, II, OR IV.

WIRE, CARBON STEEL - : ASTM A853; ANNEALED AT FINISH, BLACK OXIDE FINISH, .0800" DIA, GRADE 1006 OR BETTER.

STAPLE - - - - - : FED SPEC FF-N-105; 15/16" OR 1" CROWN WIDTH X 3/4" LEG LENGTH FOR 3/4" STRAPPING AND 2-1/8" CROWN WIDTH X 1" LEG LENGTH FOR WEB STRAPPING, TYPE III, STYLE 3.

STRAP ANCHOR PLATE : NSN 5340-00-252-3014 (FOR 1-1/4" STRAP).

STRAP ANCHOR PLATE NAIL - - - - : NSN 5340-00-290-7140.

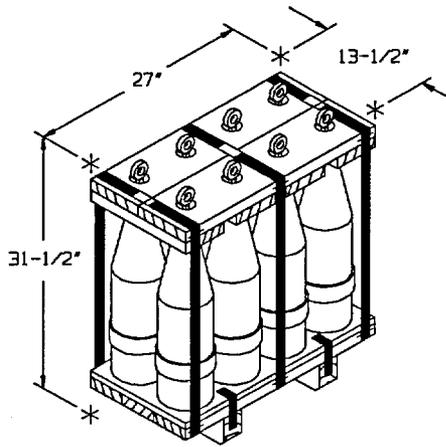
(GENERAL NOTES CONTINUED)

1. LATERAL VOIDS WITHIN A LOAD MUST BE HELD TO A MINIMUM. CROSS MEMBERS MUST BE PLACED AGAINST THE LADING AS TIGHTLY AS THE HOLE SPACING IN THE CROSS MEMBER ATTACHMENT FACILITY PERMITS. EACH CROSS MEMBER WILL BE INSTALLED WITH THE ENDS ATTACHED AS NEARLY AS POSSIBLE IN "MATED" POSITIONS (AT EQUAL HEIGHTS, AND AT EQUAL DISTANCES FROM THE SIDES OF THE DROMEDARY CONTAINER).
  2. CROSS MEMBERS IN EMPTY DROMEDARY CONTAINERS AND THOSE NOT USED IN LOADED DROMEDARY CONTAINERS MUST BE SECURED TO THE CROSS MEMBER ATTACHMENT FACILITIES FOR SHIPMENT. COMPONENTS ASSIGNED TO EACH DROMEDARY CONTAINER MUST REMAIN THEREWITH EVEN THOUGH UNUSED DURING SOME SHIPMENTS.
- K. WEB STRAP TIEDOWN ASSEMBLIES, WHEN USED, MUST BE SECURELY HOOKED INTO ANCHORING DEVICES OF THE DROMEDARY CONTAINER AND RATCHETED TIGHT. WHEN INSTALLING STRAPS, ASSURE THAT THERE ARE NO "TWISTS" AND/OR "KNOTS" IN THE STRAP. ADJUSTABLE SCUFF SLEEVES, WHEN PROVIDED ON WEB STRAP ASSEMBLIES, WILL BE LOCATED TO PROVIDE A PAD WHERE STRAPS PASS OVER SHARP EDGES, OR OVER RATCHETS AND HOOKS ON PREVIOUSLY INSTALLED WEB STRAP TIEDOWN ASSEMBLIES. METAL PARTS OF A STRAP ASSEMBLY SHOULD BE LOCATED SO AS TO AVOID CONTACT WITH THE LADING IF POSSIBLE. IF CONTACT CANNOT BE AVOIDED, A SUITABLE ANTI-CHAFING MATERIAL, CANVAS, BURLAP, TAPE OR ANY OTHER SUITABLE MATERIAL MUST BE POSITIONED BETWEEN THE METAL PARTS OF A STRAP ASSEMBLY AND THE ITEM, AND IF NECESSARY, TAPED OR TIED IN POSITION.
- L. THE UNBLOCKED SPACE ACROSS THE WIDTH OF A PORTABLE CARGO COMPARTMENT IS NOT TO EXCEED A TOTAL OF 6", UNLESS OTHERWISE STATED WITHIN THE SPECIAL NOTES FOR A LOAD. EXCESS UNBLOCKED LATERAL SPACE CAN BE ELIMINATED BY ADDING SOLID FILL PIECES, BY INCREASING THE WIDTH OF SIDE FILL ASSEMBLIES SHOWN, OR BY INCREASING THE LENGTH OF THE SPECIFIED STRUTS, AS APPLICABLE FOR THE LOAD BEING BRACED.
- M. THE UNBLOCKED SPACE IN THE LENGTH OF THE PORTABLE CARGO COMPARTMENT IS NOT TO EXCEED A TOTAL OF 1-1/2", UNLESS OTHERWISE STATED WITHIN THE SPECIAL NOTES FOR A LOAD. EXCESS UNBLOCKED LONGITUDINAL SPACE CAN BE ELIMINATED BY ADDING SOLID FILL PIECES, BY INSTALLING SOLID FILL OR STRUT FILL ASSEMBLIES, OR BY INCREASING THE LENGTH OF SPECIFIED STRUTS, AS APPLICABLE FOR THE LOAD BEING BRACED.
- N. 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. SEE THE "STRAP JOINT A" AND "STRAP JOINT B" DETAILS ON PAGE 50.
- O. DUNNAGE LUMBER SPECIFIED THROUGHOUT THIS PROCEDURAL DRAWING IS OF NOMINAL SIZE. FOR EXAMPLE, 2" X 4" MATERIAL IS ACTUALLY 1-1/2" THICK BY 3-1/2" WIDE AND 2" X 6" MATERIAL IS ACTUALLY 1-1/2" THICK BY 5-1/2" WIDE.
- P. A STAGGERED NAILING PATTERN WILL BE USED WHEREVER POSSIBLE WHEN NAILS ARE DRIVEN INTO JOINTS OF DUNNAGE ASSEMBLIES OR WHEN LAMINATING DUNNAGE. 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 ONTO OR RIGHT BESIDE A NAIL IN A LOWER PIECE.
- Q. POWER DRIVEN STAPLES MAY BE USED AS ALTERNATIVE FASTENERS FOR NAILS WHEN CONSTRUCTING DUNNAGE ASSEMBLIES WHICH ARE TO BE USED IN THE DEPICTED DROMEDARY 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.
- R. DO NOT NAIL BLOCKING TO THE DROMEDARY CONTAINER WALLS; ALL NAILING WILL BE WITHIN THE DUNNAGE OR TO THE FLOOR OF THE DROMEDARY.

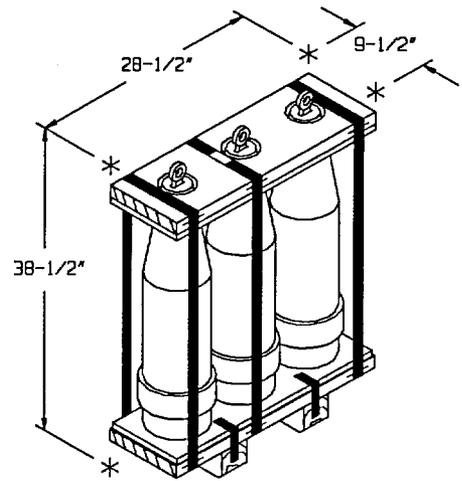
(CONTINUED AT RIGHT)

(GENERAL NOTES CONTINUED)

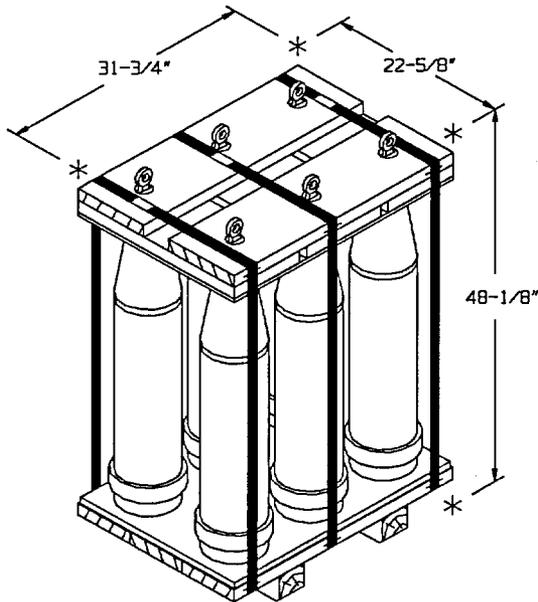
- S. CAUTION: THE INTERIOR SURFACE OF THE DROMEDARY CONTAINER MUST BE CHECKED PRIOR TO LOADING CERTAIN ITEMS DUE TO THE COMPARTMENT HAVING METAL PROTRUSIONS, DEPRESSIONS OR DEEP GROOVES WITHIN METAL SURFACES WHICH COULD RESULT IN CAUSING DAMAGE AND LEAKAGE OF CONTAINER CONTENTS. PROTECTIVE BLOCKING, SUCH AS A SIDE FILL ASSEMBLY SHOWN WITHIN THIS DRAWING, MAY BE INSTALLED TO PREVENT DAMAGE TO THE LADING.
- T. THROUGHOUT THIS PROCEDURAL DRAWING, PORTIONS OF THE DROMEDARY CONTAINERS, SUCH AS THE SIDEWALLS, HAVE BEEN OMITTED FROM THE LOAD VIEWS FOR CLARITY PURPOSES.
- U. 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.
- V. FOR ADDITIONAL GUIDANCE, ATTENTION IS DIRECTED TO THE "SPECIAL NOTES" SECTION WHICH IS IMMEDIATELY ADJACENT TO A DEPICTED OUTLOADING METHOD.



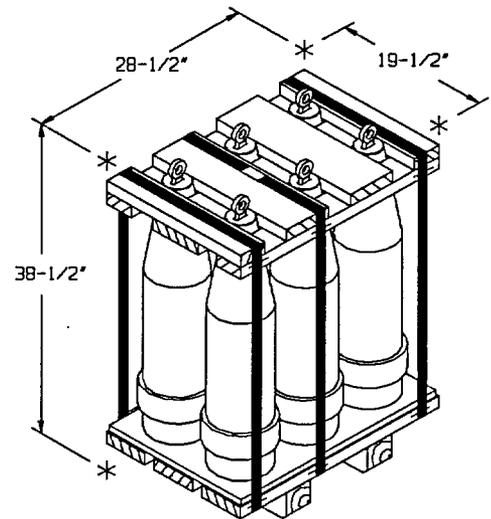
155MM SLP, 8/SMALL PALLET



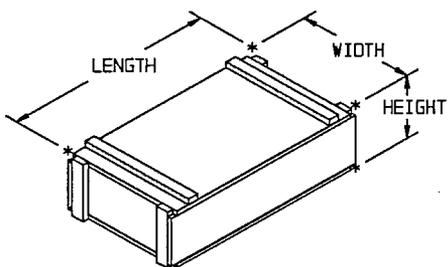
8" SLP, 3/SMALL PALLET



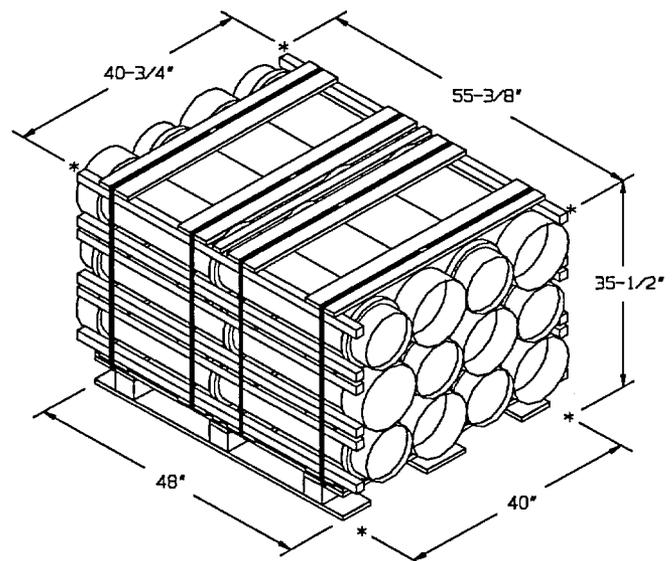
8" SLP, 6/LARGE PALLET



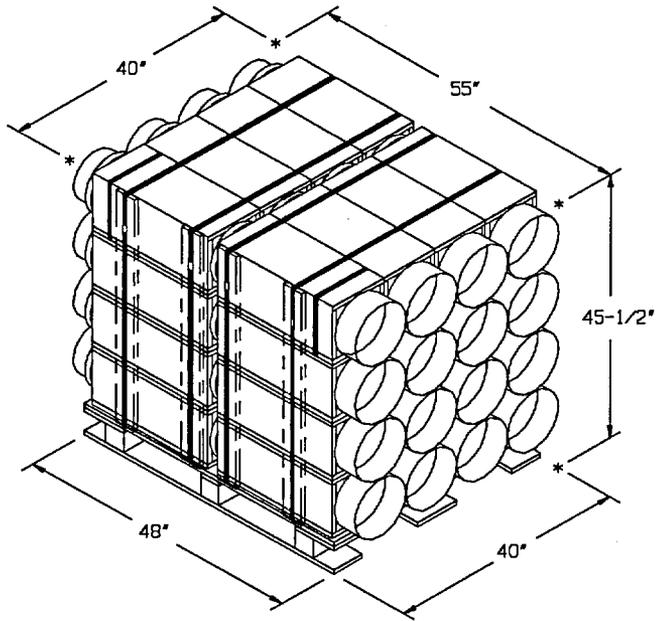
8" SLP, 6/SMALL PALLET



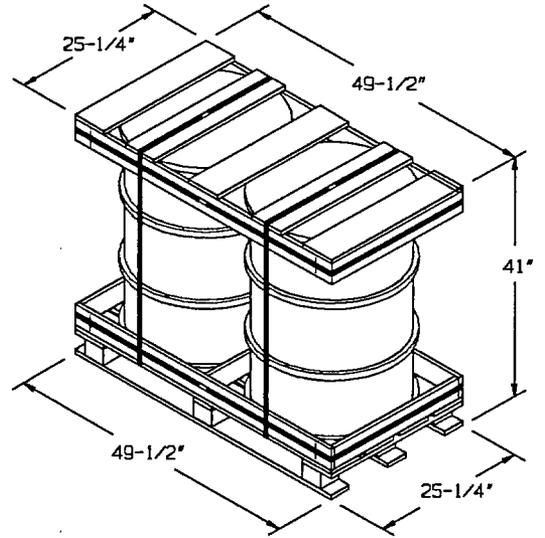
TYPICAL CLEATED WOODEN BOX



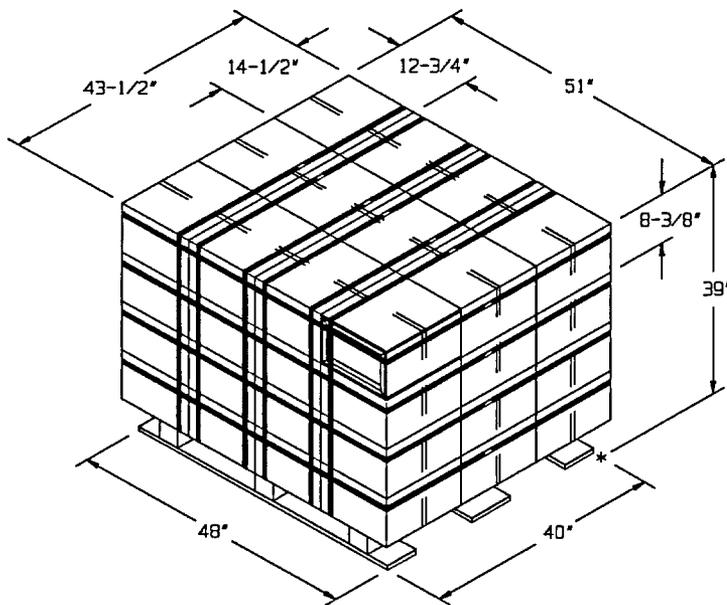
TYPICAL PROPELLING CHARGE



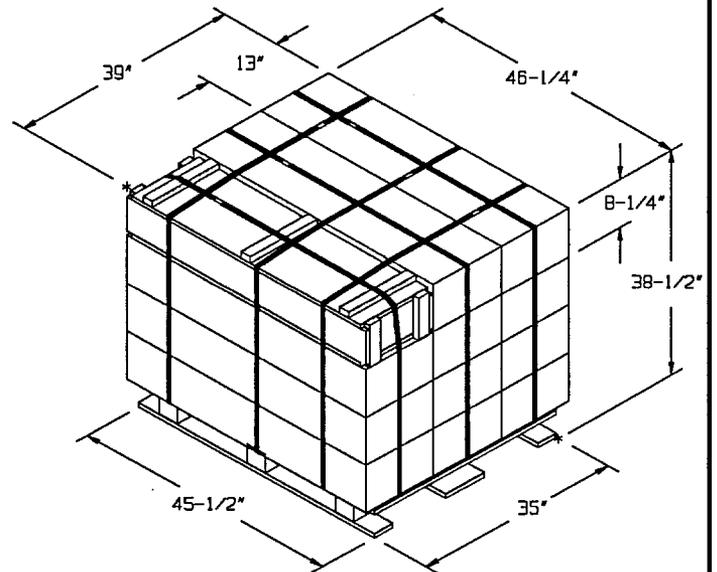
TYPICAL PROPELLING CHARGE W/WOODEN OVERPACK



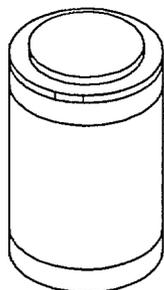
TYPICAL METAL DRUM (PALLETIZED)



TYPICAL WIREBOUND BOX (PALLETIZED)

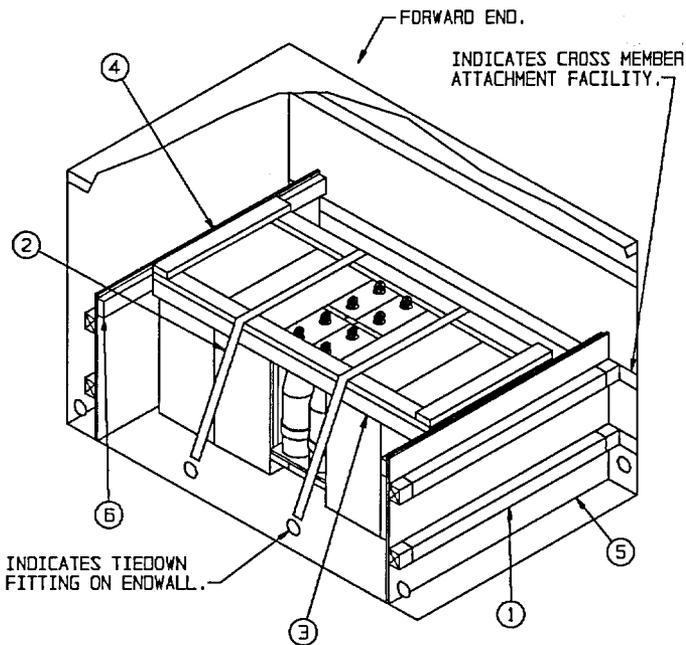


TYPICAL CLEATED WOODEN BOX (PALLETIZED)



21-GALLON FIBERBOARD DRUM

TYPICAL UNIT DETAILS



**METHOD 1**

UNIT SIZE IS 13-1/2" LONG BY 27" WIDE BY 31-1/2" HIGH.

**LOAD AS SHOWN**

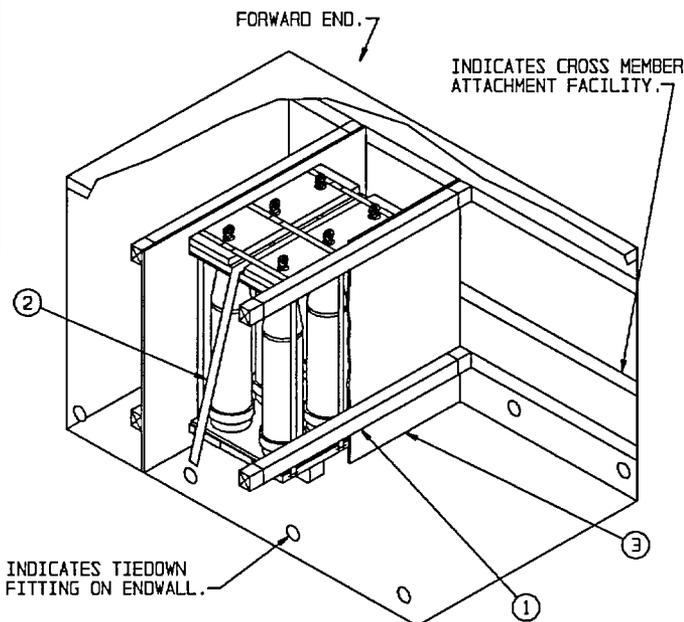
ITEM	QUANTITY	WEIGHT (APPROX)
155MM, B/SMALL PALLET	5	4,000 LBS
DUNNAGE		79 LBS
<b>TOTAL WEIGHT</b>		<b>4,079 LBS (APPROX)</b>

**KEY NUMBERS**

- ① CROSS MEMBER (4 REED). SEE GENERAL NOTE "J" ON PAGE 2 AND SPECIAL NOTE 2 BELOW.
- ② WEB STRAP ASSEMBLY (FOR LONGITUDINAL RETENTION) (2 REED). FASTEN ONE END TO A TIEDOWN FITTING ON THE PORTABLE CARGO COMPARTMENT ENDWALL OR FLOOR, GO OVER TOP OF PALLET AND FASTEN OTHER END TO A TIEDOWN FITTING ON THE OPPOSITE ENDWALL OR FLOOR.
- ③ EDGE BOARD ASSEMBLY (2 REED). SEE THE DETAIL ON PAGE 43.
- ④ TIE-PIECE, 2" X 4" BY LENGTH TO SUIT (2 REED). NAIL TO "EDGE BOARD ASSEMBLY" W/3-10d NAILS AT EACH END.
- ⑤ PLYWOOD GATE (2 REED). SEE THE DETAIL ON PAGE 43 AND SPECIAL NOTES 2 AND 3 BELOW. NAIL TO THE RETAINER BLOCKS W/3-6d NAILS AT EACH LOCATION.
- ⑥ RETAINER BLOCK, 2" X 4" BY CUT TO FIT (4 REED). SEE SPECIAL NOTE 4 BELOW.

**SPECIAL NOTES:**

- 1. A 5-PALLET LOAD OF 155MM SLP B/SMALL PALLET IS SHOWN AS TYPICAL IN A PORTABLE CARGO COMPARTMENT EQUIPPED WITH MECHANICAL BRACING DEVICES AND WEB STRAP ASSEMBLIES. OTHER SLP PALLETS MAY BE SHIPPED.
- 2. SEE THE "ALTERNATIVE BRACING METHOD A" AND "ALTERNATIVE BRACING METHOD B" DETAILS ON PAGE 14.
- 3. IF 1/2" PLYWOOD IS NOT AVAILABLE, SEE THE "GATE ASSEMBLY A" DETAIL ON PAGE 43 FOR A DIMENSIONAL LUMBER GATE.
- 4. IF "ALTERNATIVE METHOD A" OR "ALTERNATIVE METHOD B" ARE USED, THE PLYWOOD GATE IS NOT REQUIRED. THE RETAINER BLOCKS, PIECES MARKED ⑥, WILL THEN BE WIRE TIED TO THE CROSS MEMBERS.



**METHOD 2**

UNIT SIZE IS 22-5/8" LONG BY 31-3/4" WIDE BY 48-1/8" HIGH.

**KEY NUMBERS**

- ① CROSS MEMBER (4 REED). SEE GENERAL NOTE "J" ON PAGE 2 AND SPECIAL NOTE 2 BELOW.
- ② WEB STRAP ASSEMBLY (FOR LONGITUDINAL RETENTION) (1 REED). FASTEN ONE END TO A TIE-DOWN FITTING ON THE PORTABLE CARGO COMPARTMENT ENDWALL OR FLOOR, GO OVER TOP OF PALLET AND FASTEN OTHER END TO A TIE-DOWN FITTING ON THE OPPOSITE ENDWALL OR FLOOR.
- ③ PLYWOOD GATE (2 REED). SEE THE DETAIL ON PAGE 43 AND SPECIAL NOTES 2 AND 3 BELOW.

**SPECIAL NOTES:**

- 1. A 1-PALLET LOAD OF 8" SLP 6/LARGE PALLET IS SHOWN AS TYPICAL IN A PORTABLE CARGO COMPARTMENT EQUIPPED WITH MECHANICAL BRACING DEVICES AND WEB STRAP ASSEMBLIES. OTHER SLP PALLETS MAY BE SHIPPED.
- 2. SEE THE "ALTERNATIVE METHOD A" AND "ALTERNATIVE METHOD B" DETAILS ON PAGE 14.
- 3. IF 1/2" PLYWOOD IS NOT AVAILABLE, SEE THE "GATE ASSEMBLY A" DETAIL ON PAGE 43 FOR A DIMENSIONAL LUMBER GATE.

**LOAD AS SHOWN**

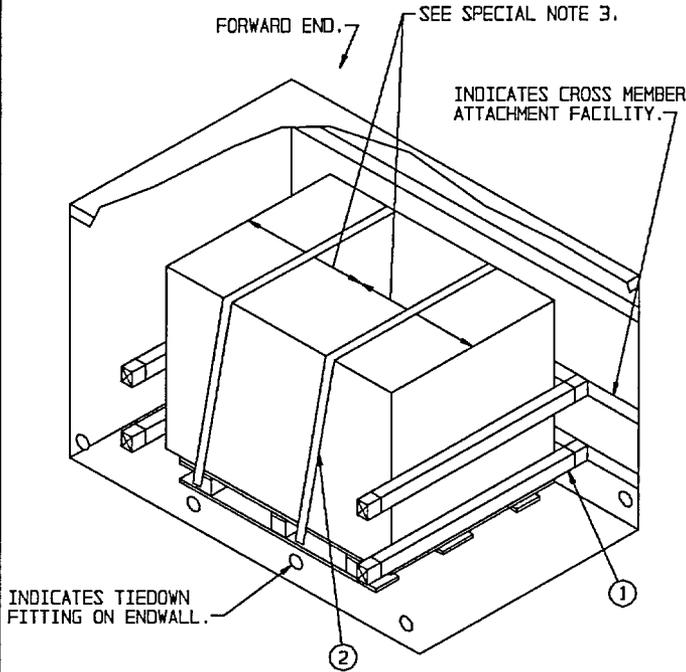
ITEM	QUANTITY	WEIGHT (APPROX)
8", 6/LARGE PALLET	1	1,288 LBS
DUNNAGE		50 LBS
<b>TOTAL WEIGHT</b>		<b>1,338 LBS (APPROX)</b>

**KEY NUMBERS**

- ① CROSS MEMBER (4 REQD). SEE GENERAL NOTE "J" ON PAGE 2 AND SPECIAL NOTE 3 BELOW.
- ② WEB STRAP ASSEMBLY (FOR LONGITUDINAL RETENTION) (2 REQD). FASTEN ONE END TO A TIE-DOWN FITTING ON THE PORTABLE CARGO COMPARTMENT ENDWALL OR FLOOR, GO OVER TOP OF PALLET AND FASTEN OTHER END TO A TIE-DOWN FITTING ON THE OPPOSITE ENDWALL OR FLOOR. SEE SPECIAL NOTE 2 BELOW.

**SPECIAL NOTES:**

- 1. A 1-PALLET LOAD OF 155MM, M4 (D541) PROPELLING CHARGES IN M13 CONTAINERS IS SHOWN AS TYPICAL IN A PORTABLE CARGO COMPARTMENT EQUIPPED WITH MECHANICAL BRACING DEVICES AND WEB STRAP ASSEMBLIES. THIS METHOD IS ALSO APPLICABLE FOR PROPELLING CHARGES PACKED IN M10, M18, M19, M460, PA93, AND PA106 CONTAINERS.
- 2. IF THE EXCESS SPACE BETWEEN THE LADING AND THE END OF THE PORTABLE CARGO COMPARTMENT IS LESS THAN 12", HOOK TWO WEB STRAP ASSEMBLIES TOGETHER IN SUCH A MANNER THAT THE RATCHETS WILL BE POSITIONED ON TOP OF THE PALLET TO FACILITATE TIGHTENING OF THE WEB STRAP ASSEMBLIES. SEE "DETAIL A" ON PAGE 50.
- 3. THE ARROWS INDICATE THE LENGTH OF THE PROPELLING CHARGE CONTAINERS AS THEY ARE POSITIONED ON THE PALLET. CROSS MEMBERS MAY BE POSITIONED DIRECTLY AGAINST THE ENDS OF THE PROPELLING CHARGE CONTAINERS BUT NOT AGAINST THE SIDES. IF A PALLET IS POSITIONED WITH THE PROPELLING CHARGE CONTAINER LENGTH PARALLEL TO THE PORTABLE CARGO COMPARTMENT SIDEWALLS, A GATE MUST BE USED BETWEEN THE CROSS MEMBERS AND THE PALLET UNIT AS SHOWN IN METHOD 7 ON PAGE 9. ALSO, EDGE BOARD ASSEMBLIES ARE REQUIRED UNDER THE WEB STRAPS. SEE THE DETAIL ON PAGE 43.



**METHOD 3**

UNIT SIZE IS 40" LONG BY 55" WIDE BY 44-7/8" HIGH.

**LOAD AS SHOWN**

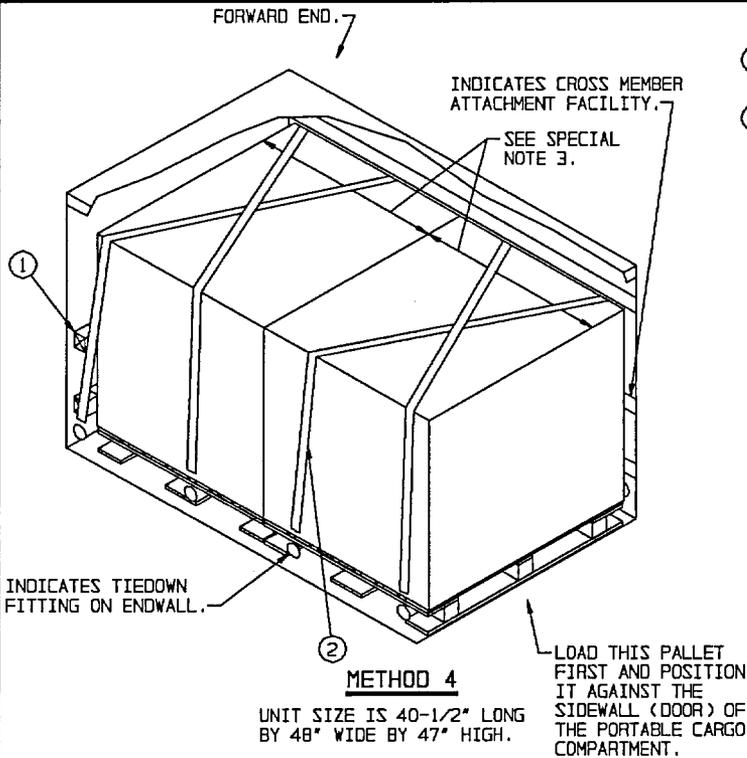
ITEM	QUANTITY	WEIGHT (APPROX)
M13 CONTAINER, PALLETIZED	1	1,761 LBS

**KEY NUMBERS**

- ① CROSS MEMBER (2 REQD). SEE GENERAL NOTE "J" ON PAGE 2 AND SPECIAL NOTE 3 BELOW.
- ② WEB STRAP ASSEMBLY (FOR LONGITUDINAL RETENTION) (4 REQD). FASTEN ONE END TO A TIE-DOWN FITTING ON THE PORTABLE CARGO COMPARTMENT ENDWALL OR FLOOR, GO OVER TOP OF PALLET DIAGONALLY AND FASTEN OTHER END TO A TIE-DOWN FITTING ON THE OPPOSITE ENDWALL OR FLOOR. SEE SPECIAL NOTE 2 BELOW.

**SPECIAL NOTES:**

- 1. A 2-PALLET LOAD OF 155MM, M3 (D540) PROPELLING CHARGES IN M14 CONTAINERS IS SHOWN AS TYPICAL IN A PORTABLE CARGO COMPARTMENT EQUIPPED WITH MECHANICAL BRACING DEVICES AND WEB STRAP ASSEMBLIES. THIS METHOD IS ALSO APPLICABLE FOR PROPELLING CHARGES PACKED IN M16, PA37, PA66, PA68, PA75, PA91, PA92, PA94, PA95, PA96, PA97, PA99, PA100, PA103 AND PA107 CONTAINERS.
- 2. IF THE EXCESS SPACE BETWEEN THE LADING AND THE END OF THE PORTABLE CARGO COMPARTMENT IS LESS THAN 12", HOOK TWO WEB STRAP ASSEMBLIES TOGETHER IN SUCH A MANNER THAT THE RATCHETS WILL BE POSITIONED ON TOP OF THE PALLET TO FACILITATE TIGHTENING OF THE WEB STRAP ASSEMBLIES. SEE "DETAIL A" ON PAGE 50.
- 3. THE ARROWS INDICATE THE LENGTH OF THE PROPELLING CHARGE CONTAINERS AS THEY ARE POSITIONED ON THE PALLET. CROSS MEMBERS MAY BE POSITIONED DIRECTLY AGAINST THE ENDS OF THE PROPELLING CHARGE CONTAINERS BUT NOT AGAINST THE SIDES. IF A PALLET IS POSITIONED WITH THE PROPELLING CHARGE CONTAINER LENGTH PARALLEL TO THE PORTABLE CARGO COMPARTMENT SIDEWALLS, A GATE MUST BE USED BETWEEN THE CROSS MEMBERS AND THE PALLET UNIT AS SHOWN IN METHOD 7 ON PAGE 9. ALSO, EDGE BOARD ASSEMBLIES ARE REQUIRED UNDER THE WEB STRAPS. SEE THE DETAIL ON PAGE 43.



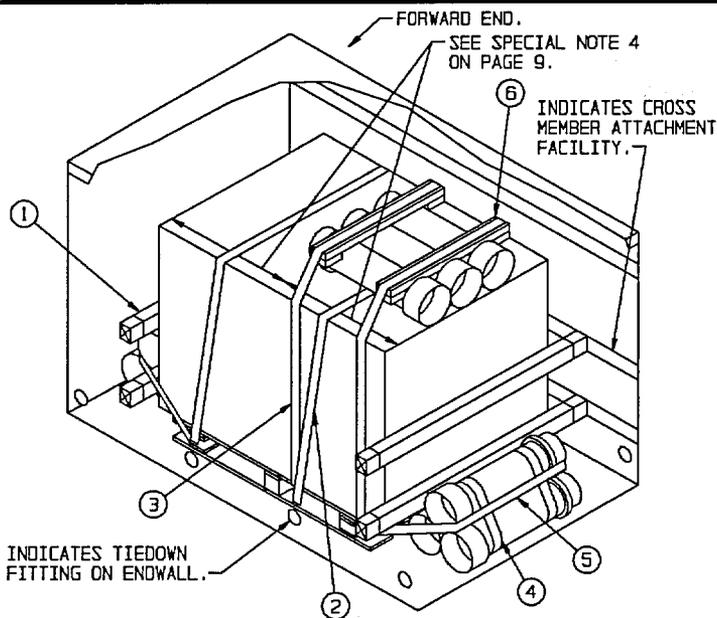
**METHOD 4**

UNIT SIZE IS 40-1/2" LONG BY 48" WIDE BY 47" HIGH.

**LOAD AS SHOWN**

ITEM	QUANTITY	WEIGHT (APPROX)
M14 CONTAINER PALLETIZED	2	2,870 LBS

**TYPICAL LOADS BRACED WITH MECHANICAL BRACING DEVICES AND WEB STRAP ASSEMBLIES**



**METHOD 5**

UNIT SIZE 40" LONG BY 55" WIDE BY 44-7/8" HIGH.  
CONTAINER SIZE IS 27-1/2" LONG BY 7-25/32" DIAMETER.

**LOAD AS SHOWN**

ITEM	QUANTITY	WEIGHT (APPROX)
M13 CONTAINER, PALLETIZED	1	1,761 LBS
INDIVIDUAL CONTAINERS	9	275 LBS
DUNNAGE		9 LBS
<b>TOTAL WEIGHT</b>		<b>2,045 LBS (APPROX)</b>

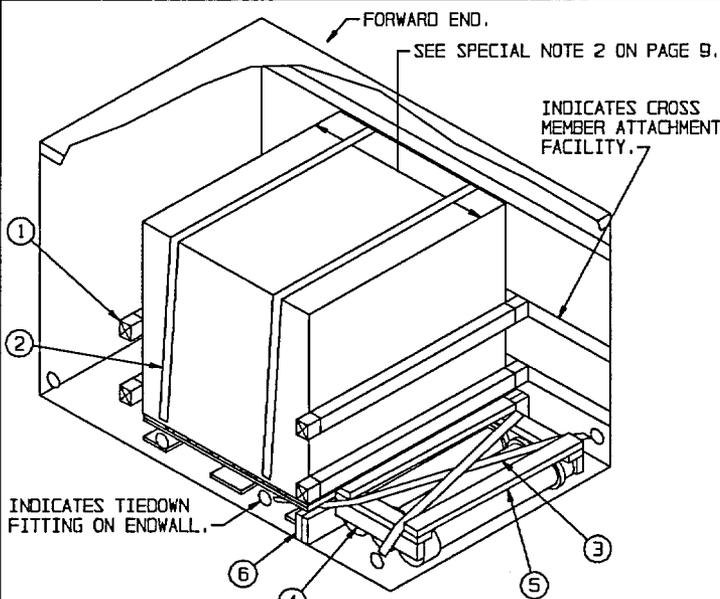
**KEY NUMBERS**

- ① CROSS MEMBER (4 REQD). SEE GENERAL NOTE "J" ON PAGE 2 AND SPECIAL NOTE 4 ON PAGE 9.
- ② WEB STRAP ASSEMBLY (FOR LONGITUDINAL RETENTION) (2 REQD). FASTEN ONE END TO A TIE-DOWN FITTING ON THE PORTABLE CARGO COMPARTMENT ENDWALL OR FLOOR, GO OVER TOP OF PALLET AND FASTEN OTHER END TO A TIE-DOWN FITTING ON THE OPPOSITE ENDWALL OR FLOOR.
- ③ WEB STRAP ASSEMBLY (FOR RETAINING INDIVIDUAL PROPELLING CHARGE CONTAINERS ON TOP OF PALLET) (2 REQD). POSITION UNDER TOP DECK OF PALLET, GO OVER TOP OF INDIVIDUAL PROPELLING CHARGE CONTAINERS AND STRAPPING BOARD, HOOK ENDS TOGETHER AND TIGHTEN. SECURE TO THE STRAPPING BOARD W/2 STAPLES.
- ④ WEB STRAP ASSEMBLY (FOR BUNDLING INDIVIDUAL PROPELLING CHARGE CONTAINERS) (4 REQD). POSITION AROUND INDIVIDUAL PROPELLING CHARGE CONTAINERS, HOOK ENDS TOGETHER AND TIGHTEN.
- ⑤ WEB STRAP ASSEMBLY (FOR RETAINING INDIVIDUAL PROPELLING CHARGE CONTAINERS ON PORTABLE CARGO COMPARTMENT FLOOR) (2 REQD). POSITION BEHIND SUPPORT BLOCKS ON PALLET AND AROUND INDIVIDUAL PROPELLING CHARGE CONTAINERS AS SHOWN, HOOK ENDS TOGETHER AND TIGHTEN.
- ⑥ STRAPPING BOARD (2 REQD). SEE THE DETAIL ON PAGE 43.

**SPECIAL NOTES:**

1. A 1-PALLET LOAD OF 155MM, M4 (DS41) PROPELLING CHARGES IN M13 CONTAINERS IS SHOWN AS TYPICAL IN A PORTABLE CARGO COMPARTMENT EQUIPPED WITH MECHANICAL BRACING DEVICES AND WEB STRAP ASSEMBLIES. THIS METHOD IS ALSO APPLICABLE FOR PROPELLING CHARGES PACKED IN M10, M18, M19, M460, PA93, PA95, PA97 AND PA106 CONTAINERS.
2. IF THE EXCESS SPACE BETWEEN THE LADING AND THE END OF THE PORTABLE CARGO COMPARTMENT IS LESS THAN 12", HOOK TWO WEB STRAP ASSEMBLIES TOGETHER IN SUCH A MANNER THAT THE RATCHETS WILL BE POSITIONED ON TOP OF THE PALLET TO FACILITATE TIGHTENING OF THE WEB STRAP ASSEMBLIES. SEE "DETAIL A" ON PAGE 50.

(CONTINUED ON PAGE 9)



**METHOD 6**

UNIT SIZE IS 40-1/2" LONG BY 48" WIDE BY 47" HIGH.  
CONTAINER SIZE IS 37-1/2" LONG BY 6-11/16" DIAMETER.

**LOAD AS SHOWN**

ITEM	QUANTITY	WEIGHT (APPROX)
M14 CONTAINER, PALLETIZED	1	1,435 LBS
INDIVIDUAL CONTAINERS	3	86 LBS
DUNNAGE		19 LBS
<b>TOTAL WEIGHT</b>		<b>1,540 LBS (APPROX)</b>

**KEY NUMBERS**

- ① CROSS MEMBER (4 REQD). SEE GENERAL NOTE "J" ON PAGE 2 AND SPECIAL NOTE 2 ON PAGE 9.
- ② WEB STRAP ASSEMBLY (FOR LONGITUDINAL RETENTION) (2 REQD). FASTEN ONE END TO A TIE-DOWN FITTING ON THE PORTABLE CARGO COMPARTMENT ENDWALL OR FLOOR, GO OVER TOP OF PALLET AND FASTEN OTHER END TO A TIE-DOWN FITTING ON THE OPPOSITE ENDWALL OR FLOOR. SEE SPECIAL NOTE 2 ABOVE.
- ③ WEB STRAP ASSEMBLY (FOR RETAINING INDIVIDUAL PROPELLING CHARGE CONTAINERS ON PORTABLE CARGO COMPARTMENT FLOOR) (2 REQD). FASTEN ONE END TO A TIE-DOWN FITTING ON THE PORTABLE CARGO COMPARTMENT ENDWALL OR FLOOR, GO OVER TOP OF INDIVIDUAL PROPELLING CHARGE CONTAINERS DIAGONALLY AND FASTEN OTHER END TO A TIE-DOWN FITTING ON THE OPPOSITE ENDWALL OR FLOOR.
- ④ EDGE BOARD ASSEMBLY (2 REQD). SEE THE DETAIL ON PAGE 43.
- ⑤ TIE-PIECE, 2" X 4" BY LENGTH TO SUIT (2 REQD). NAIL TO THE EDGE BOARD ASSEMBLIES W/3-10d NAILS AT EACH END.
- ⑥ SOLID FILL, 6" WIDE MATERIAL BY A THICKNESS REQUIRED TO FILL THE VOID BETWEEN THE PROPELLING CHARGE CONTAINER AND THE PALLET BASE (AS REQD). LAMINATE WITH APPROPRIATE SIZE NAILS.

**SPECIAL NOTES:**

1. A 1-PALLET LOAD OF 155MM, M3 (DS40) PROPELLING CHARGES IN M14 CONTAINERS IS SHOWN AS TYPICAL IN A PORTABLE CARGO COMPARTMENT EQUIPPED WITH MECHANICAL BRACING DEVICES AND WEB STRAP ASSEMBLIES. THIS METHOD IS ALSO APPLICABLE FOR PROPELLING CHARGES PACKED IN M16, PA37, PA66, PA68, PA75, PA91, PA92, PA94, PA96, PA99, PA100, PA103 AND PA107 CONTAINERS.

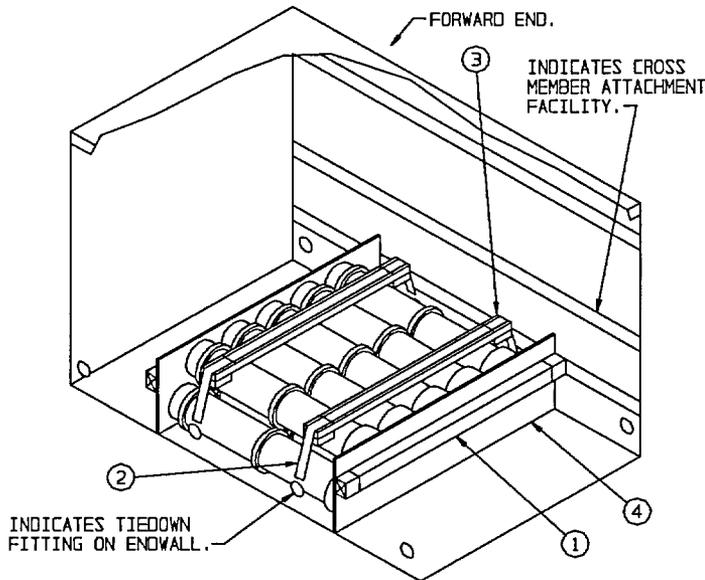
(CONTINUED ON PAGE 9)

(SPECIAL NOTES FROM METHOD 5 CONTINUED)

3. DUE TO THE PORTABLE CARGO COMPARTMENT HEIGHT IT WILL NOT BE POSSIBLE TO POSITION INDIVIDUAL PROPELLING CHARGES ON TOP OF ALL PALLETS.
4. THE ARROWS INDICATE THE LENGTH OF THE PROPELLING CHARGE CONTAINERS AS THEY ARE POSITIONED ON THE PALLET. CROSS MEMBERS MAY BE POSITIONED DIRECTLY AGAINST THE ENDS OF THE PROPELLING CHARGES BUT NOT AGAINST THE SIDES. IF A PALLET IS POSITIONED WITH THE PROPELLING CHARGE LENGTH PARALLEL TO THE PORTABLE CARGO COMPARTMENT SIDEWALLS, A GATE MUST BE USED AS SHOWN IN METHOD 7 ON PAGE 9.

(SPECIAL NOTES FROM METHOD 6 CONTINUED)

2. THE ARROW INDICATES THE LENGTH OF THE PROPELLING CHARGE CONTAINERS AS THEY ARE POSITIONED ON THE PALLET. CROSS MEMBERS MAY BE POSITIONED DIRECTLY AGAINST THE ENDS OF THE PROPELLING CHARGE CONTAINERS BUT NOT AGAINST THE SIDES. IF A PALLET IS POSITIONED WITH THE PROPELLING CHARGE CONTAINER LENGTH PARALLEL TO THE PORTABLE CARGO COMPARTMENT SIDEWALLS, A GATE MUST BE USED BETWEEN THE PALLET UNIT AND CROSS MEMBERS. FOR TYPICAL GATE CONSTRUCTION, SEE THE "PLYWOOD GATE" DETAIL ON PAGE 43.



**METHOD 7**

CONTAINER SIZE IS 42-21/32" LONG BY 8-13/32" DIAMETER.

**KEY NUMBERS**

- ① CROSS MEMBER (2 REED). SEE GENERAL NOTE "J" ON PAGE 2 AND SPECIAL NOTE 2 BELOW.
- ② WEB STRAP ASSEMBLY (FOR LONGITUDINAL RETENTION AND HOLD-DOWN) (2 REED). FASTEN ONE END TO A TIE-DOWN FITTING ON THE PORTABLE CARGO COMPARTMENT ENDWALL OR FLOOR, GO OVER TOP OF INDIVIDUAL PROPELLING CHARGE CONTAINERS AND STRAPPING BOARD. FASTEN OTHER END TO A TIE-DOWN FITTING ON THE OPPOSITE ENDWALL OR FLOOR. SECURE TO THE STRAPPING BOARD W/2 STAPLES.
- ③ STRAPPING BOARD (2 REED). SEE THE DETAIL ON PAGE 43.
- ④ PLYWOOD GATE (2 REED). SEE THE DETAIL ON PAGE 43 AND SPECIAL NOTE 2 BELOW.

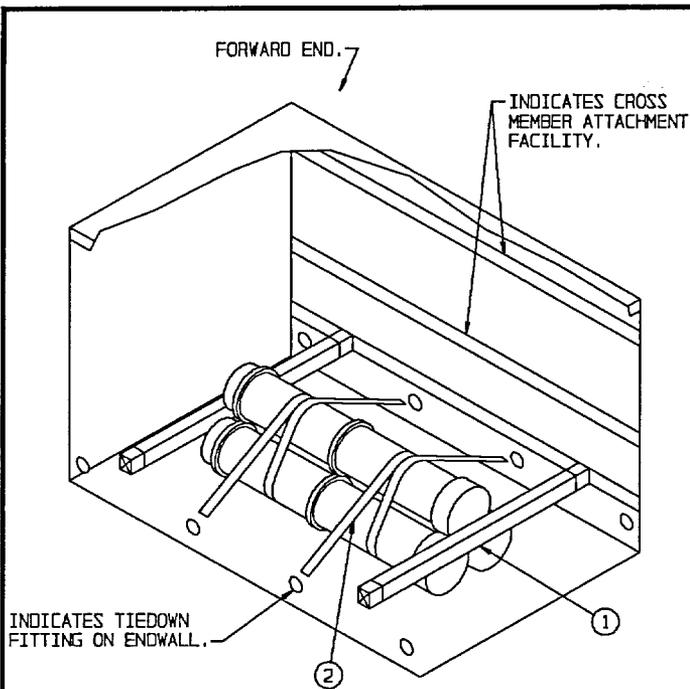
**SPECIAL NOTES:**

1. AN 11-CONTAINER LOAD OF 155MM, M19 (D480) INDIVIDUAL PROPELLING CHARGES IN M16 CONTAINERS IS SHOWN AS TYPICAL IN A PORTABLE CARGO COMPARTMENT EQUIPPED WITH MECHANICAL BRACING DEVICES AND WEB STRAP ASSEMBLIES. THIS METHOD IS APPLICABLE FOR ALL PROPELLING CHARGE CONTAINERS.
2. IF 1/2" PLYWOOD IS NOT AVAILABLE, SEE THE "GATE ASSEMBLY B" DETAIL ON PAGE 44 FOR A DIMENSIONAL LUMBER GATE.

**LOAD AS SHOWN**

ITEM	QUANTITY	WEIGHT (APPROX)
M16 INDIVIDUAL CONTAINERS	11	605 LBS
DUNNAGE		39 LBS
TOTAL WEIGHT		644 LBS (APPROX)

INDIVIDUAL PROPELLING CHARGES  
TYPICAL LOADS BRACED WITH MECHANICAL BRACING DEVICES AND WEB STRAP ASSEMBLIES



**METHOD 8**

CONTAINER SIZE IS 55-3/8" LONG BY 10-1/2" DIAMETER.

**KEY NUMBERS**

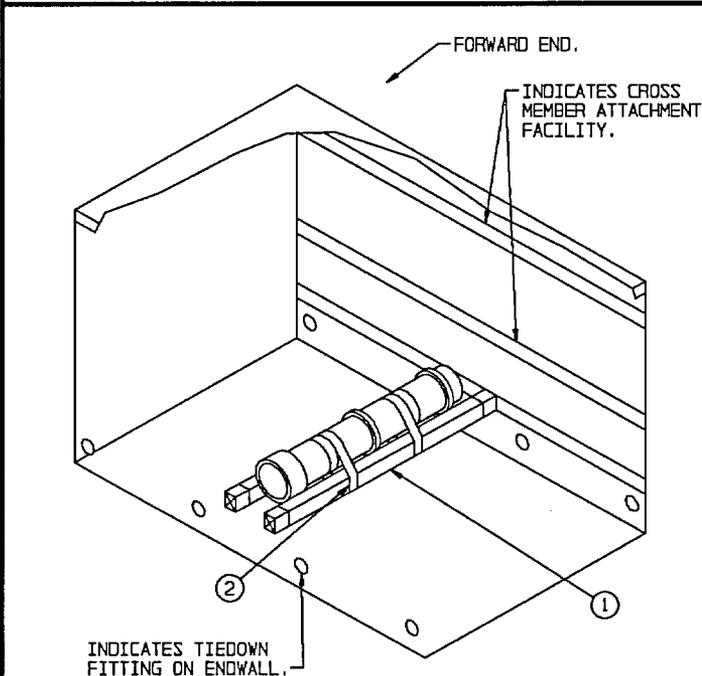
- ① CROSS MEMBER (2 REQD). SEE GENERAL NOTE "J" ON PAGE 2 AND SPECIAL NOTE 2 BELOW.
- ② WEB STRAP ASSEMBLY (FOR LONGITUDINAL RETENTION AND HOLD-DOWN) (2 REQD). FASTEN ONE END TO A TIE-DOWN FITTING ON THE PORTABLE CARGO COMPARTMENT ENDWALL OR FLOOR, WRAP AROUND INDIVIDUAL PROPELLING CHARGE CONTAINERS AND FASTEN OTHER END TO A TIE-DOWN ON THE OPPOSITE ENDWALL OR FLOOR.

**SPECIAL NOTES:**

- 1. A 3-CONTAINER LOAD OF 8", M2 (D676) INDIVIDUAL PROPELLING CHARGES IN M10 CONTAINERS IS SHOWN AS TYPICAL IN A PORTABLE CARGO COMPARTMENT EQUIPPED WITH MECHANICAL BRACING DEVICES AND WEB STRAP ASSEMBLIES. THIS METHOD IS APPLICABLE FOR ALL PROPELLING CHARGE CONTAINERS.
- 2. BECAUSE OF THE VARIOUS DIAMETERS OF THE PROPELLING CHARGE CONTAINERS, THE LOCATION OF THE CROSS MEMBERS WILL BE VARIABLE. IF ONE CROSS MEMBER IS USED AT EACH SIDE, AS SHOWN IN METHOD 8, IT MUST HAVE PARTIAL CONTACT WITH THE BOTTOM LAYER AND TOP LAYER PROPELLING CHARGE CONTAINERS. IF DESIRED, TWO CROSS MEMBERS MAY BE USED AT EACH END, ONE TO RETAIN THE BOTTOM LAYER AND ONE TO RETAIN THE TOP LAYER.

**LOAD AS SHOWN**

ITEM	QUANTITY	WEIGHT (APPROX)
M10 CONTAINER	3	363 LBS



**METHOD 9**

CONTAINER SIZE IS 42-21/32" LONG BY 8-13/32" DIAMETER.

**KEY NUMBERS**

- ① CROSS MEMBER (2 REQD). SEE GENERAL NOTE "J" ON PAGE 2 AND SPECIAL NOTE 2 BELOW.
- ② WEB STRAP ASSEMBLY (FOR LONGITUDINAL AND LATERAL RETENTION) (2 REQD). MAKE A COMPLETE WRAP AROUND THE PROPELLING CHARGE CONTAINER, BRING ENDS OF STRAP UNDER AND AROUND CROSS MEMBERS AND OVER TOP OF PROPELLING CHARGE CONTAINER. HOOK ENDS TOGETHER AND TIGHTEN.

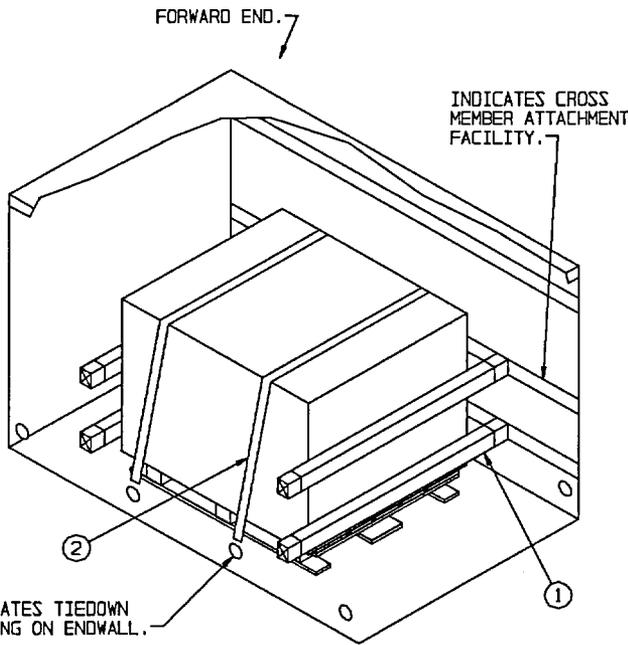
**SPECIAL NOTES:**

- 1. A 1-CONTAINER LOAD OF 155MM, M19 (D480) INDIVIDUAL PROPELLING CHARGE IN AN M16 CONTAINER IS SHOWN AS TYPICAL IN A PORTABLE CARGO COMPARTMENT EQUIPPED WITH MECHANICAL BRACING DEVICES AND WEB STRAP ASSEMBLIES. THIS METHOD IS APPLICABLE FOR ALL PROPELLING CHARGE CONTAINERS EXCEPT THOSE IN THE M10 AND M460 CONTAINERS, UNLESS THE PORTABLE CARGO COMPARTMENT IS 57" OR LONGER ON THE INSIDE.
- 2. POSITION THE PROPELLING CHARGE CONTAINER AGAINST THE FORWARD ENDWALL OF THE PORTABLE CARGO COMPARTMENT.

**LOAD AS SHOWN**

ITEM	QUANTITY	WEIGHT (APPROX)
M16 CONTAINER	1	55 LBS

**INDIVIDUAL PROPELLING CHARGES  
TYPICAL LOADS BRACED WITH MECHANICAL BRACING DEVICES AND WEB STRAP ASSEMBLIES**



**METHOD 10**

UNIT SIZE IS 39" LONG BY 45-1/2" WIDE BY 38-1/2" HIGH.

**KEY NUMBERS**

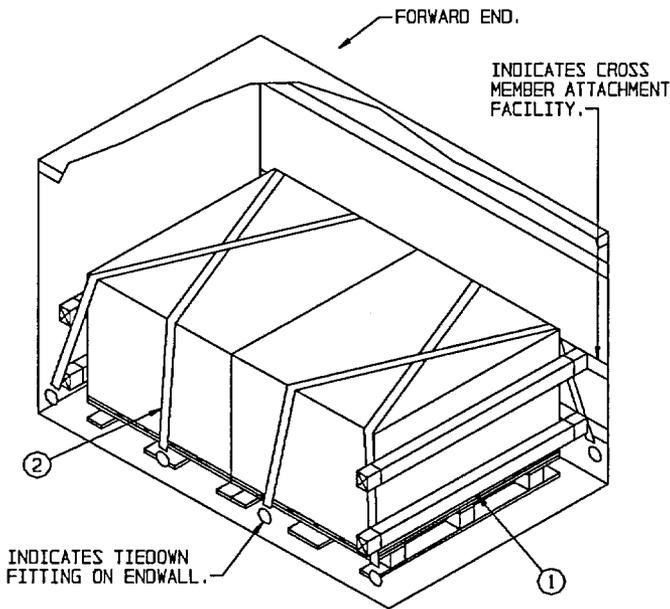
- ① CROSS MEMBER (4 REQD). SEE GENERAL NOTE "J" ON PAGE 2.
- ② WEB STRAP ASSEMBLY (FOR LONGITUDINAL RETENTION) (2 REQD). FASTEN ONE END TO A TIE-DOWN FITTING ON THE PORTABLE CARGO COMPARTMENT ENDWALL OR FLOOR, GO OVER TOP OF LADING AND FASTEN OTHER END TO A TIE-DOWN FITTING ON THE OPPOSITE ENDWALL OR FLOOR. SEE SPECIAL NOTE 2 BELOW.

**SPECIAL NOTES:**

- 1. A 1-PALLET LOAD IS SHOWN AS TYPICAL IN A PORTABLE CARGO COMPARTMENT EQUIPPED WITH MECHANICAL BRACING DEVICES AND WEB STRAP ASSEMBLIES.
- 2. IF THE EXCESS SPACE BETWEEN THE LADING AND THE ENDWALL OF THE PORTABLE CARGO COMPARTMENT IS LESS THAN 12", HOOK TWO WEB STRAPS TOGETHER IN SUCH A MANNER THAT THE RATCHETS WILL BE POSITIONED ON TOP OF THE LADING TO FACILITATE TIGHTENING OF THE WEB STRAP ASSEMBLIES. SEE "DETAIL A" ON PAGE 50.

**LOAD AS SHOWN**

ITEM	QUANTITY	WEIGHT (APPROX)
TYPICAL WOODEN BOX PALLET UNIT	1	1,811 LBS



**METHOD 11**

UNIT SIZE IS 35" LONG BY 45-1/2" WIDE BY 32" HIGH.

**KEY NUMBERS**

- ① CROSS MEMBER (4 REQD). SEE GENERAL NOTE "J" ON PAGE 2.
- ② WEB STRAP ASSEMBLY (FOR LONGITUDINAL RETENTION) (4 REQD). FASTEN ONE END TO A TIE-DOWN FITTING ON THE PORTABLE CARGO COMPARTMENT ENDWALL OR FLOOR, GO OVER TOP OF LADING DIAGONALLY AND FASTEN OTHER END TO A TIE-DOWN FITTING ON THE OPPOSITE ENDWALL OR FLOOR. SEE SPECIAL NOTE 2 BELOW.

**SPECIAL NOTES:**

- 1. A 2-PALLET LOAD IS SHOWN IN A PORTABLE CARGO COMPARTMENT EQUIPPED WITH MECHANICAL BRACING DEVICES AND WEB STRAP ASSEMBLIES.
- 2. IF THE EXCESS SPACE BETWEEN THE LADING AND THE ENDWALL OF THE PORTABLE CARGO COMPARTMENT IS LESS THAN 12", HOOK TWO WEB STRAP ASSEMBLIES TOGETHER IN SUCH A MANNER THAT THE RATCHETS WILL BE POSITIONED ON TOP OF THE LADING TO FACILITATE TIGHTENING OF THE WEB STRAP ASSEMBLIES. SEE "DETAIL A" ON PAGE 50.

**LOAD AS SHOWN**

ITEM	QUANTITY	WEIGHT (APPROX)
TYPICAL WIREBOUND BOX PALLET UNIT	2	3,406 LBS

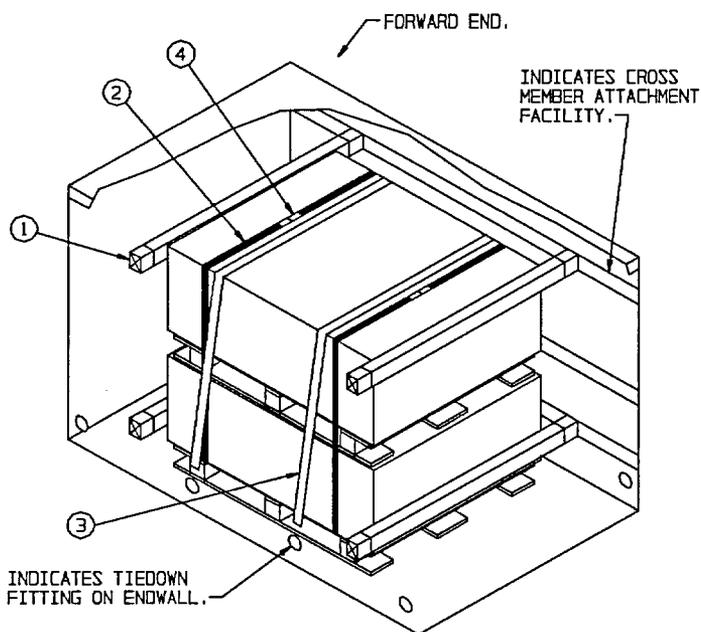
**PALLETIZED OR SKIDDED UNITS OF BOXES  
TYPICAL LOADS BRACED WITH MECHANICAL BRACING DEVICES AND WEB STRAP ASSEMBLIES**

**KEY NUMBERS**

- ① CROSS MEMBER (4 REQD). SEE GENERAL NOTE "J" ON PAGE 2.
- ② UNITIZING STRAP, 1-1/4" X .035" OR .031" X 15'-0" LONG STEEL STRAPPING (2 REQD). SEE GENERAL NOTE "N" ON PAGE 3.
- ③ WEB STRAP ASSEMBLY (FOR LONGITUDINAL RETENTION) (2 REQD). FASTEN ONE END TO A TIE-DOWN FITTING ON THE PORTABLE CARGO COMPARTMENT ENDWALL OR FLOOR, GO OVER TOP OF LADING AND FASTEN OTHER END TO A TIE-DOWN FITTING ON THE OPPOSITE ENDWALL OR FLOOR. SEE SPECIAL NOTE 2 BELOW.
- ④ SEAL FOR 1-1/4" STRAPPING (4 REQD, 2 PER STRAP).

**SPECIAL NOTES:**

- 1. A 2-PALLET LOAD IS SHOWN IN A PORTABLE CARGO COMPARTMENT EQUIPPED WITH MECHANICAL BRACING DEVICES AND WEB STRAP ASSEMBLIES.
- 2. IF THE EXCESS SPACE BETWEEN THE LADING AND THE ENDWALL OF THE PORTABLE CARGO COMPARTMENT IS LESS THAN 12", HOOK TWO WEB STRAP ASSEMBLIES TOGETHER IN SUCH A MANNER THAT THE RATCHETS WILL BE POSITIONED ON TOP OF THE LADING TO FACILITATE TIGHTENING OF THE WEB STRAP ASSEMBLIES. SEE "DETAIL A" ON PAGE 50.



**METHOD 12**

UNIT SIZE IS 41" LONG BY 50-1/4" WIDE BY 23-3/4" HIGH.

**LOAD AS SHOWN**

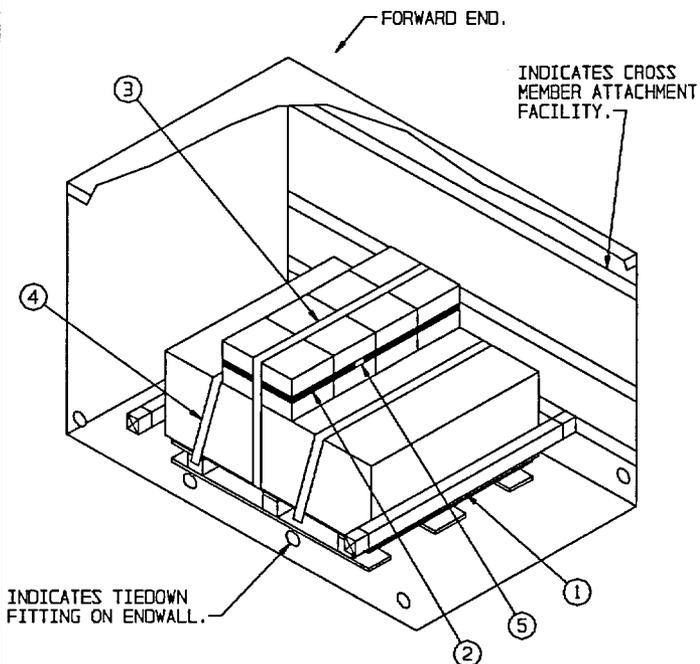
ITEM	QUANTITY	WEIGHT (APPROX)
PALLET UNIT	2	4,022 LBS
DUNNAGE		5 LBS
TOTAL WEIGHT		4,027 LBS (APPROX)

**KEY NUMBERS**

- ① CROSS MEMBER (2 REQD). SEE GENERAL NOTE "J" ON PAGE 2.
- ② UNITIZING STRAP, 3/4" X .035" OR .031" X 10'-0" LONG STEEL STRAPPING (1 REQD). POSITION AROUND THE INDIVIDUAL BOXES AS SHOWN.
- ③ WEB STRAP ASSEMBLY (FOR RETAINING INDIVIDUAL BOXES ON TOP OF PALLET) (1 REQD). POSITION UNDER TOP DECK OF PALLET, GO OVER TOP OF INDIVIDUAL BOXES, HOOK ENDS TOGETHER AND TIGHTEN.
- ④ WEB STRAP ASSEMBLY (FOR LONGITUDINAL RETENTION) (2 REQD). FASTEN ONE END TO A TIE-DOWN FITTING ON THE PORTABLE CARGO COMPARTMENT ENDWALL OR FLOOR, GO OVER TOP OF PALLET UNIT AND FASTEN OTHER END TO A TIE-DOWN FITTING ON THE OPPOSITE ENDWALL OR FLOOR. SEE SPECIAL NOTE 2 BELOW.
- ⑤ SEAL FOR 3/4" STRAPPING (1 REQD).

**SPECIAL NOTES:**

- 1. A 1-PALLET LOAD AND FOUR INDIVIDUAL BOXES ARE SHOWN AS TYPICAL IN A PORTABLE CARGO COMPARTMENT EQUIPPED WITH MECHANICAL BRACING DEVICES AND WEB STRAP ASSEMBLIES.
- 2. IF THE EXCESS SPACE BETWEEN THE LADING AND THE ENDWALL OF THE PORTABLE CARGO COMPARTMENT IS LESS THAN 12", HOOK TWO WEB STRAP ASSEMBLIES TOGETHER IN SUCH A MANNER THAT THE RATCHETS WILL BE POSITIONED ON TOP OF THE LADING TO FACILITATE TIGHTENING OF THE WEB STRAP ASSEMBLIES. SEE "DETAIL A" ON PAGE 50.



**METHOD 13**

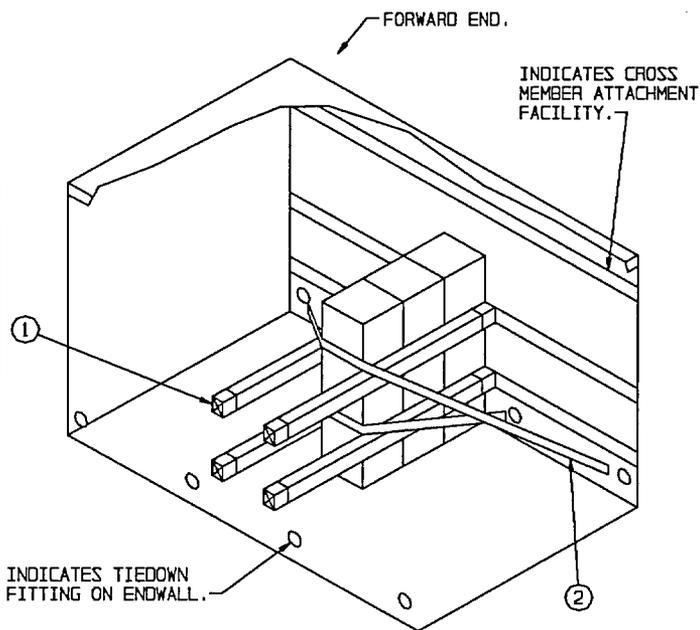
UNIT SIZE IS 41" LONG BY 50-1/4" WIDE BY 23-3/4" HIGH. BOX SIZE IS 16-3/4" LONG BY 10-1/4" WIDE BY 9-1/8" HIGH.

**LOAD AS SHOWN**

ITEM	QUANTITY	WEIGHT (APPROX)
PALLET UNIT	1	2,011 LBS
INDIVIDUAL BOXES	4	320 LBS
TOTAL WEIGHT		4,027 LBS (APPROX)

**PALLETIZED AND INDIVIDUAL BOXES  
TYPICAL LOADS BRACED WITH MECHANICAL BRACING DEVICES AND WEB STRAP ASSEMBLIES**

INTENTIONALLY LEFT BLANK



METHOD 14

BOX SIZE IS 40" LONG BY 8-1/2" WIDE BY 8" HIGH.

KEY NUMBERS

- ① CROSS MEMBER (4 REQD). SEE GENERAL NOTE "J" ON PAGE 2 AND SPECIAL NOTE 2 BELOW.
- ② WEB STRAP ASSEMBLY (FOR LONGITUDINAL RETENTION) (2 REQD). FASTEN ONE END TO A TIE-DOWN FITTING ON THE PORTABLE CARGO COMPARTMENT ENDWALL OR FLOOR, GO OVER CROSS MEMBERS, AROUND BOXES, AND FASTEN OTHER END TO A TIE-DOWN FITTING ON SAME ENDWALL OR FLOOR.

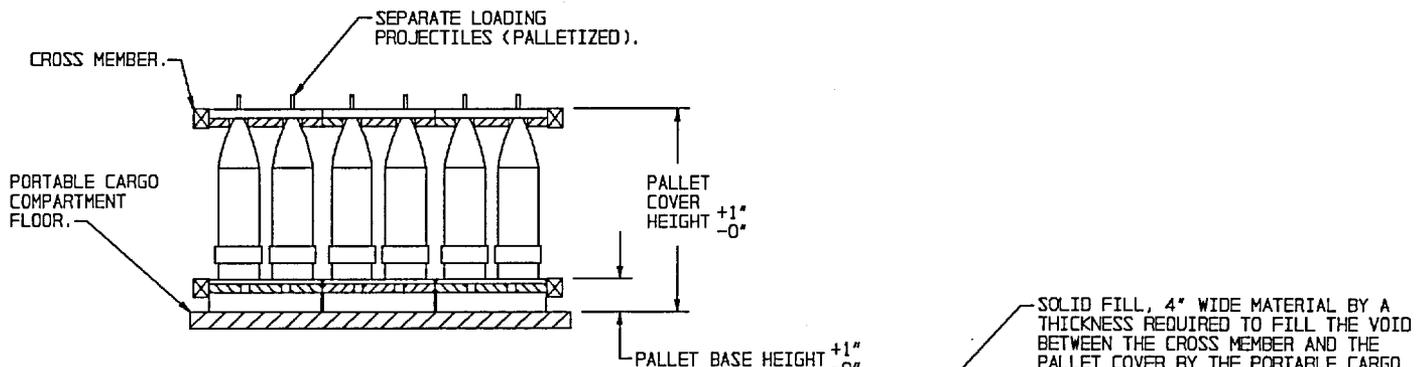
SPECIAL NOTES:

- 1. A LOAD OF THREE WOODEN BOXES IS SHOWN AS TYPICAL IN A PORTABLE CARGO COMPARTMENT EQUIPPED WITH MECHANICAL BRACING DEVICES AND WEB STRAP ASSEMBLIES.
- 2. IT IS PERMISSIBLE TO LAY THE WOODEN BOXES ON THEIR SIDE IF THEY ARE SUCH A HEIGHT THAT THE BOTTOM CROSS MEMBER WILL CONTACT THEM. IN THIS CASE, ONLY TWO CROSS MEMBERS WILL BE REQUIRED.

LOAD AS SHOWN

<u>ITEM</u>	<u>QUANTITY</u>	<u>WEIGHT (APPROX)</u>
WOODEN BOX - - - - -	3 - - - - -	381 LBS (APPROX)

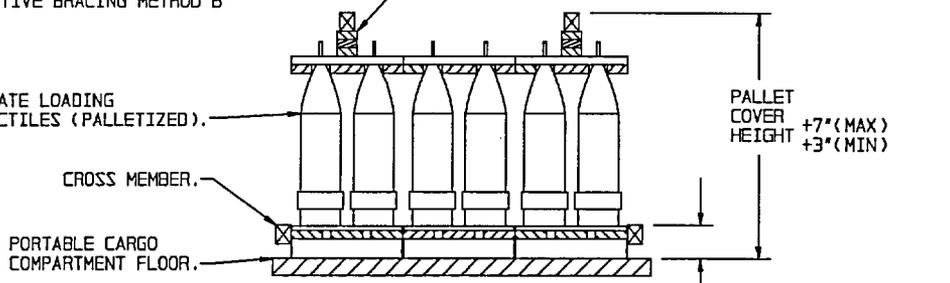
INDIVIDUAL BOXES  
TYPICAL LOAD BRACED WITH MECHANICAL BRACING DEVICES AND WEB STRAP ASSEMBLIES



**ALTERNATIVE BRACING METHOD A**

IF THE CROSS MEMBERS CONTACT THE PALLET BASE AND PALLET COVER AS SHOWN ABOVE, A PLYWOOD GATE, OR THE DIMENSIONAL LUMBER GATES, "GATE ASSEMBLY A" OR GATE ASSEMBLY C", WILL NOT BE REQUIRED. SEE THE "ALTERNATIVE BRACING METHOD B" BELOW.

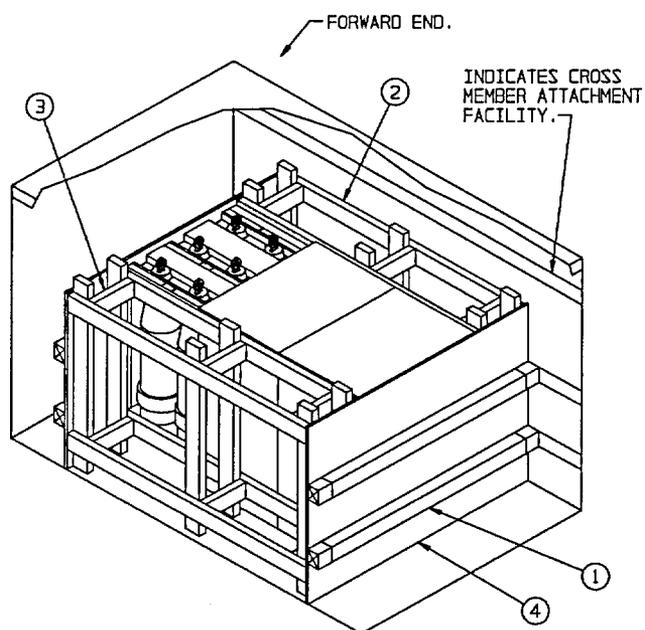
SOLID FILL, 4" WIDE MATERIAL BY A THICKNESS REQUIRED TO FILL THE VOID BETWEEN THE CROSS MEMBER AND THE PALLET COVER BY THE PORTABLE CARGO COMPARTMENT LENGTH (AS RECD). LAMINATE W/10d NAILS AND WIRE TIE TO THE CROSS MEMBER.



**ALTERNATIVE BRACING METHOD B**

IF THE BOTTOM CROSS MEMBER CONTACTS THE PALLET BASE AS SHOWN ABOVE AND THE TOP CROSS MEMBER IS TOO HIGH TO CONTACT THE PALLET COVER AS SHOWN IN THE "ALTERNATIVE BRACING METHOD A", THE TOP CROSS MEMBERS MAY BE POSITIONED AS SHOWN ABOVE AND A PLYWOOD GATE WILL NOT BE REQUIRED.

THE ALTERNATIVE BRACING METHODS ARE APPLICABLE FOR METHODS 1, 2, 15, 16, AND 31.



**METHOD 15**

UNIT SIZE IS 19-1/2" LONG BY 28-1/2" WIDE BY 38-1/2" HIGH.

**LOAD AS SHOWN**

ITEM	QUANTITY	WEIGHT (APPROX)
8", 6" PALLET	3	3,768 LBS
DUNNAGE		159 LBS
<b>TOTAL WEIGHT</b>		<b>3,927 LBS (APPROX)</b>

**KEY NUMBERS**

- ① CROSS MEMBER (4 RECD). SEE GENERAL NOTE "J" ON PAGE 2 AND SPECIAL NOTES 2 AND 3 BELOW.
- ② GATE ASSEMBLY (4 RECD). SEE THE "GATE ASSEMBLY C" DETAIL ON PAGE 44.
- ③ STRUT, 2" X 4" BY CUT TO FIT (12 RECD). NAIL TO "GATE ASSEMBLY C" W/2-10d NAILS AT EACH END.
- ④ PLYWOOD GATE (2 RECD). SEE THE DETAIL ON PAGE 43 AND SPECIAL NOTE 3 BELOW.

**SPECIAL NOTES:**

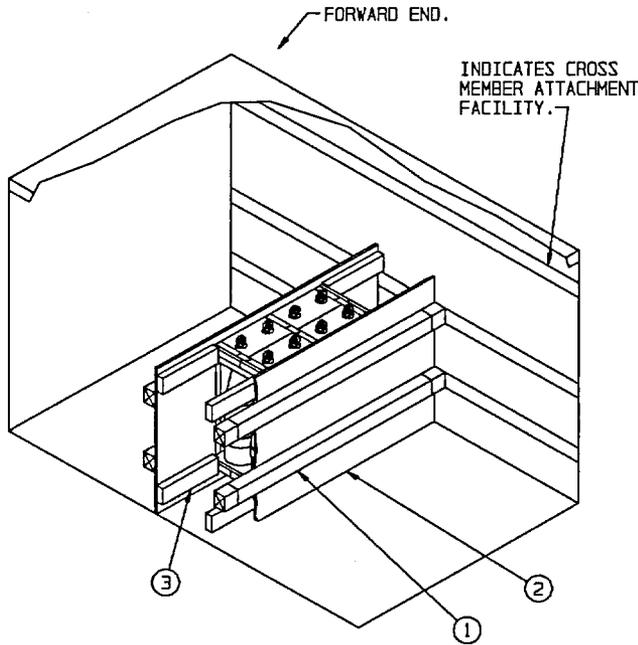
- 1. A 3-PALLET LOAD OF 6" SLP 6/SMALL PALLET IS SHOWN AS TYPICAL IN A PORTABLE CARGO COMPARTMENT EQUIPPED WITH MECHANICAL BRACING DEVICES.
- 2. SEE THE "ALTERNATIVE BRACING METHOD A" AND "ALTERNATIVE BRACING METHOD B" DETAILS ABOVE.
- 3. IF 1/2" PLYWOOD IS NOT AVAILABLE, SEE THE "GATE ASSEMBLY A" DETAIL ON PAGE 43.
- 4. IF THE PORTABLE CARGO COMPARTMENT IS NOT GOING TO BE TRANSFERRED FROM ONE VEHICLE TO ANOTHER, THE LADING MAY BE POSITIONED AGAINST THE FORWARD ENDWALL TO FACILITATE BLOCKING. A BALANCED LOAD, AS SHOWN, IS REQUIRED IF THE PORTABLE CARGO COMPARTMENT IS TO BE TRANSFERRED.
- 5. A MAXIMUM VOID OF 1" LONGITUDINALLY AND 1" Laterally IS PERMITTED WITHOUT BLOCKING. ANY VOID GREATER THAN 1" MUST BE FILLED WITH THE PROPER BLOCKING. SEE "METHOD 16" FOR AN ALTERNATIVE LOADING PROCEDURE.

**KEY NUMBERS**

- ① CROSS MEMBER (4 REQD). SEE GENERAL NOTE "J" ON PAGE 2 AND SPECIAL NOTE 2 BELOW.
- ② PLYWOOD GATE (2 REQD). SEE THE DETAIL ON PAGE 43 AND SPECIAL NOTES 2 AND 3 BELOW. NAIL TO THE RETAINER BLOCKS W/3-6d NAILS AT EACH LOCATION.
- ③ RETAINER BLOCK, 2" X 4" BY CUT TO FIT (8 REQD). SEE SPECIAL NOTE 4 BELOW.

**SPECIAL NOTES:**

- 1. A 1-PALLET LOAD OF 155MM SLP 8/SMALL PALLET IS SHOWN AS TYPICAL IN A PORTABLE CARGO COMPARTMENT EQUIPPED WITH MECHANICAL BRACING DEVICES.
- 2. SEE THE "ALTERNATIVE BRACING METHOD A" AND "ALTERNATIVE BRACING METHOD B" DETAILS ON PAGE 14.
- 3. IF 1/2" PLYWOOD IS NOT AVAILABLE, SEE THE "GATE ASSEMBLY A" DETAIL ON PAGE 43.
- 4. IF A GATE IS NOT REQUIRED, THE RETAINER BLOCKS MAY BE SECURED BY WIRE TYING TO THE CROSS MEMBERS.
- 5. IF THE PORTABLE CARGO COMPARTMENT IS NOT GOING TO BE TRANSFERRED FROM ONE VEHICLE TO ANOTHER, THE LADING MAY BE POSITIONED AGAINST THE FORWARD ENDWALL TO FACILITATE BLOCKING. A BALANCED LOAD, AS SHOWN, IS REQUIRED IF THE PORTABLE CARGO COMPARTMENT IS TO BE TRANSFERRED.



**METHOD 16**

UNIT SIZE 13-1/2" LONG BY 27" WIDE BY 31-1/2" HIGH.

**LOAD AS SHOWN**

ITEM	QUANTITY	WEIGHT (APPROX)
155MM, 8/SMALL PALLET	1	800 LBS (APPROX)
DUNNAGE		52 LBS
<b>TOTAL WEIGHT</b>		<b>852 LBS (APPROX)</b>

(SPECIAL NOTES CONTINUED FROM METHOD 18)

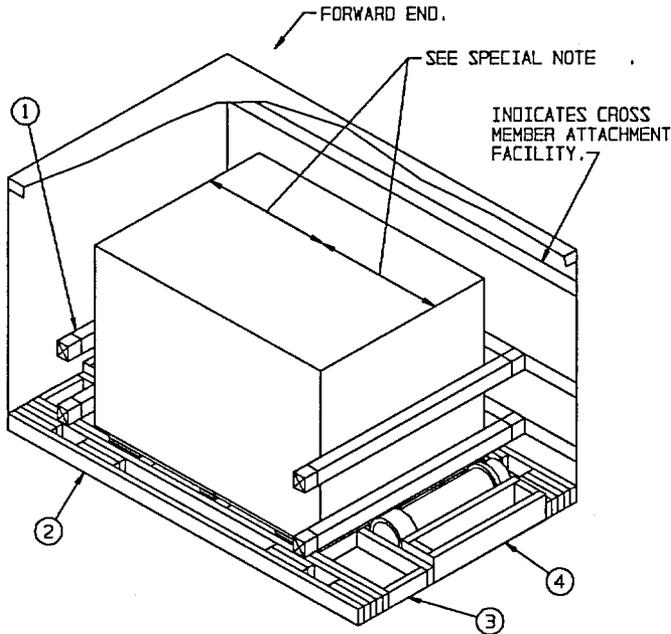
- 2. DUE TO THE PORTABLE CARGO COMPARTMENT HEIGHT IT WILL NOT BE POSSIBLE TO POSITION INDIVIDUAL PROPELLING CHARGE CONTAINERS ON TOP OF ALL PALLETS.
- 3. THE ARROWS INDICATE THE LENGTH OF THE PROPELLING CHARGE CONTAINERS AS POSITIONED ON THE PALLET. CROSS MEMBERS MAY BE POSITIONED AGAINST THE ENDS OF THE PROPELLING CHARGE CONTAINERS BUT NOT AGAINST THE SIDES. IF A PALLET IS POSITIONED WITH THE PROPELLING CHARGE LENGTH PARALLEL TO THE PORTABLE CARGO COMPARTMENT SIDEWALLS, A GATE MUST BE USED. USE EITHER THE PLYWOOD GATE OR "GATE ASSEMBLY A", AS DETAILED ON PAGE 43.
- 4. IF THE SPACES BETWEEN THE PALLET BASES AND THE ENDS OF THE PORTABLE CARGO COMPARTMENT ARE APPROXIMATELY 8" OR MORE, "STRUT FILL ASSEMBLY B" MAY BE USED IN LIEU OF PIECE MARKED ③. SEE THE DETAIL ON PAGE 49. IF THE SPACES ARE APPROXIMATELY 4" TO 8", "SOLID FILL ASSEMBLY B" MAY BE USED. SEE THE DETAIL ON PAGE 46. NOTE THAT THE LOCATION OF THE STRUTS OF "STRUT ASSEMBLY B" OR THE SOLID FILL PIECES OF "SOLID FILL ASSEMBLY B" MAY NEED TO BE ADJUSTED TO ALIGN WITH THE PALLETS. NOTE THAT A TOTAL EXCESS LONGITUDINAL SPACE FOR THE LADING OF 1-1/2" IS PERMITTED; A TOTAL SPACE FOR THE LADING LARGER THAN 1-1/2" MUST BE BRACED AT THE PALLET LEVEL.

(SPECIAL NOTES CONTINUED FROM METHOD 17)

- 3. IF THE SPACES BETWEEN THE PALLET BASE AND THE ENDS OF THE PORTABLE CARGO COMPARTMENT ARE APPROXIMATELY 8" OR MORE, "STRUT FILL ASSEMBLY A" MAY BE USED IN LIEU OF PIECE MARKED ②. SEE THE DETAIL OF PAGE 45. IF THE SPACE IS APPROXIMATELY 4" OR LESS, INDIVIDUAL PIECES OF 2" X 4" AND/OR 1" X 4" MAY BE USED. LAMINATE, IF APPLICABLE, W/4 APPLICABLY SIZED NAILS. NOTE THAT A TOTAL EXCESS LONGITUDINAL SPACE FOR THE LADING OF 1-1/2" IS PERMITTED; A TOTAL LADING SPACE LARGER THAN 1-1/2" MUST BE BRACED AT THE PALLET LEVEL.

SEPARATE LOADING PROJECTILES  
TYPICAL LOAD BRACED WITH MECHANICAL BRACING DEVICES

**KEY NUMBERS**



- ① CROSS MEMBER (4 REOD). SEE GENERAL NOTE "J" ON PAGE 2 AND SPECIAL NOTE 2 BELOW.
- ② SOLID FILL ASSEMBLY (2 REOD). SEE THE "SOLID FILL ASSEMBLY A" DETAIL ON PAGE 45. SEE SPECIAL NOTE 3 BELOW.
- ③ FILLER ASSEMBLY (1 REOD). SEE THE "FILLER ASSEMBLY A" DETAIL ON PAGE 45.
- ④ SIDE BLOCKING ASSEMBLY (1 REOD). SEE THE "SIDE BLOCKING ASSEMBLY A" DETAIL ON PAGE 45.

**SPECIAL NOTES:**

1. A 1-PALLET LOAD OF 155MM, M4 (D541) PROPELLING CHARGES IN M13 CONTAINERS IS SHOWN AS TYPICAL IN A PORTABLE CARGO COMPARTMENT EQUIPPED WITH MECHANICAL BRACING DEVICES. THIS METHOD IS ALSO APPLICABLE FOR PROPELLING CHARGES PACKED IN M18, M19, PA93, PA95, PA97 AND PA105 CONTAINERS. THIS METHOD IS ALSO APPLICABLE FOR CHARGES PACKED IN M10 AND M460 CONTAINERS IF THE SHIPMENT DOES NOT CONTAIN ANY INDIVIDUAL CONTAINERS, OR IF THE PORTABLE CARGO COMPARTMENT IS AT LEAST 56" LONG.
2. THE ARROWS INDICATE THE LENGTH OF THE PROPELLING CHARGES AS THEY ARE POSITIONED ON THE PALLET. CROSS MEMBERS MAY BE POSITIONED AGAINST THE ENDS OF THE PROPELLING CHARGES BUT NOT AGAINST THE SIDES. IF A PALLET IS POSITIONED WITH THE PROPELLING CHARGE LENGTH PARALLEL TO THE PORTABLE CARGO COMPARTMENT SIDEWALLS, A GATE MUST BE USED. USE EITHER THE PLYWOOD GATE OR "GATE ASSEMBLY A", AS DETAILED ON PAGE 43.

(CONTINUED ON PAGE 15)

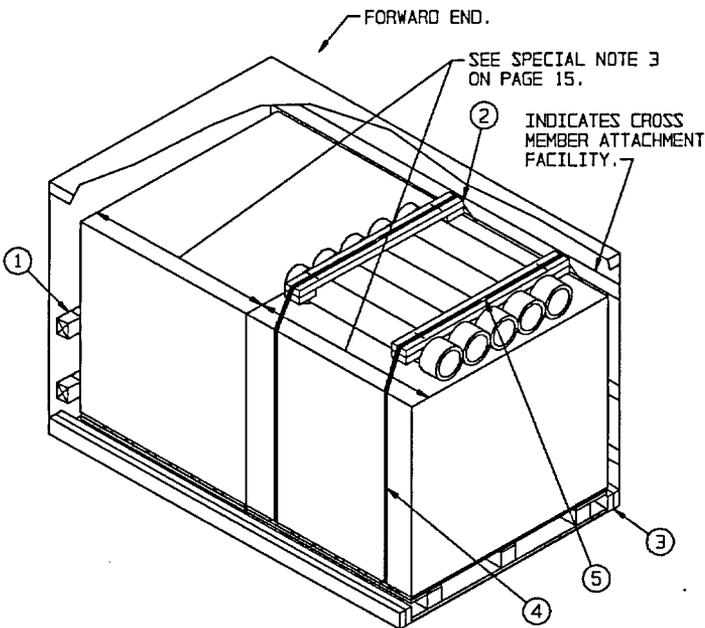
**METHOD 17**

UNIT SIZE IS 40" LONG BY 55" WIDE BY 44-7/8" HIGH.  
CONTAINER SIZE IS 27-1/2" LONG BY 7-25/32" DIAMETER.

**LOAD AS SHOWN**

ITEM	QUANTITY	WEIGHT (APPROX)
M13 CONTAINER, PALLETIZED	1	1,747 LBS
INDIVIDUAL CONTAINERS	2	61 LBS
DUNNAGE		83 LBS
<b>TOTAL WEIGHT</b>		<b>1,891 LBS (APPROX)</b>

**KEY NUMBERS**



- ① CROSS MEMBER (2 REOD). SEE GENERAL NOTE "J" ON PAGE 2 AND SPECIAL NOTE 3 ON PAGE 15.
- ② STRAPPING BOARD (2 REOD). SEE THE DETAIL ON PAGE 43.
- ③ SOLID FILL, 2" X 4" AND/OR 1" X 4" (2 REOD). LAMINATE W/4 APPLICABLY SIZED NAILS. SEE SPECIAL NOTE 4 ON PAGE 15.
- ④ UNITIZING STRAP, 3/4" X .035" OR .031 X 19'-0" LONG STEEL STRAPPING (2 REOD). SECURE TO THE STRAPPING BOARD W/2 STAPLES. SEE GENERAL NOTE "N" ON PAGE 2.
- ⑤ SEAL FOR 3/4" STRAPPING (2 REOD, 1 PER STRAP).

**SPECIAL NOTES:**

1. A 2-PALLET LOAD OF 155MM, M3 (D540) PROPELLING CHARGES IN M14 CONTAINERS AND FIVE INDIVIDUAL PROPELLING CHARGE CONTAINERS ARE SHOWN AS TYPICAL IN A PORTABLE CARGO COMPARTMENT EQUIPPED WITH MECHANICAL BRACING DEVICES. THIS METHOD IS ALSO APPLICABLE FOR PROPELLING CHARGES PACKED IN M16 CONTAINERS (MAY NEED TO OMIT CROSS MEMBERS AND INSTALL A SIDE BLOCKING ASSEMBLY). THIS METHOD IS ALSO APPLICABLE FOR SHIPMENTS OF CHARGES PACKED IN PA37, PA66, PA68, PA75, PA91, PA92, PA94, PA96, PA99, PA100, PA103 AND PA107 CONTAINERS. IF ONLY ONE PALLET IS TO BE LOADED, IT WILL BE CENTERED IN THE WIDTH OF THE PORTABLE CARGO COMPARTMENT.

(CONTINUED ON PAGE 15)

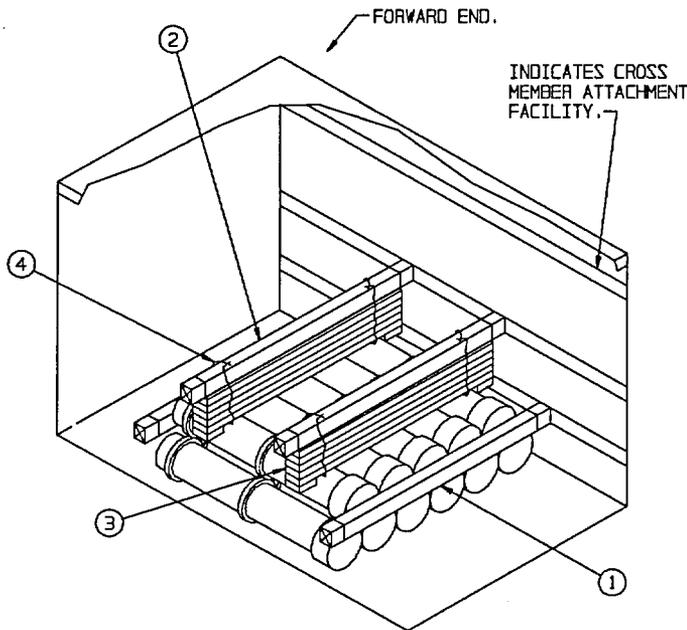
**METHOD 18**

UNIT SIZE IS 40-1/2" LONG BY 48" WIDE BY 47" HIGH.  
CONTAINER SIZE IS 37-1/2" LONG BY 6-11/16" DIAMETER.

**LOAD AS SHOWN**

ITEM	QUANTITY	WEIGHT (APPROX)
M14 CONTAINER, PALLETIZED	2	2,866 LBS
INDIVIDUAL CONTAINERS	5	143 LBS
DUNNAGE		62 LBS
<b>TOTAL WEIGHT</b>		<b>3,071 LBS (APPROX)</b>

**PALLETIZED AND INDIVIDUAL PROPELLING CHARGES  
TYPICAL LOADS BRACED WITH MECHANICAL BRACING DEVICES**



**METHOD 19**

CONTAINER SIZE IS 42-21/32" LONG BY 8-13/32" DIAMETER.

NOTE \* :  
ADDITIONAL PIECES OF 2" X 4" OR  
1" X 4" MAY BE LAMINATED TO PIECE  
MARKED ③ TO FILL THE VOID BETWEEN  
CROSS MEMBER MARKED ② AND THE  
PROPELLING CHARGES.

**KEY NUMBERS**

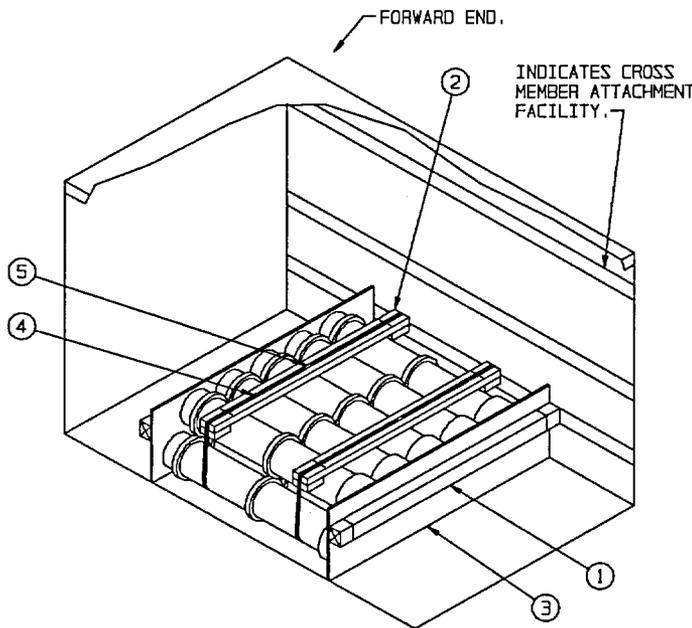
- ① CROSS MEMBER (2 REOD). SEE GENERAL NOTE "J" ON PAGE 2 AND SPECIAL NOTE 2 BELOW.
- ② CROSS MEMBER (2 REOD). SEE SPECIAL NOTE 3 BELOW.
- ③ HOLD-DOWN ASSEMBLY (2 REOD). SEE THE "STRAPPING BOARD" DETAIL ON PAGE 43 AND "NOTE \*" BELOW.
- ④ TIE WIRE, NO. 14 GAGE, 36" LONG (4 REOD). INSTALL TO ENCIRCLE PIECES MARKED ② AND ③.

**SPECIAL NOTES:**

- 1. A LOAD OF 11 EACH 155MM, M19 (D480) INDIVIDUAL PROPELLING CHARGES IN M16 CONTAINERS IS SHOWN AS TYPICAL IN A PORTABLE CARGO COMPARTMENT EQUIPPED WITH MECHANICAL BRACING DEVICES.
- 2. BECAUSE OF THE VARIOUS DIAMETERS OF THE PROPELLING CHARGE CONTAINERS, DIMENSION "A" WILL BE VARIABLE. IF ONE CROSS MEMBER IS USED AT EACH SIDE AS SHOWN IN "METHOD 19", IT MUST HAVE PARTIAL CONTACT WITH THE BOTTOM LAYER AND TOP LAYER PROPELLING CHARGE CONTAINERS. IF DESIRED, TWO CROSS MEMBERS MAY BE USED AT EACH END, ONE TO RETAIN THE BOTTOM LAYER AND ONE TO RETAIN THE TOP LAYER.
- 3. THE HEIGHT OF PIECES MARKED ② WILL BE VARIABLE. SELECT A CROSS MEMBER HEIGHT THAT WILL ALLOW A MINIMUM VOID BETWEEN THE TOP LAYER OF PROPELLING CHARGE CONTAINERS AND THE BOTTOM SURFACE OF THE CROSS MEMBERS.

**LOAD AS SHOWN**

ITEM	QUANTITY	WEIGHT (APPROX)
M19 CONTAINER, INDIVIDUAL CONTAINERS	11	572 LBS
DUNNAGE		99 LBS
<b>TOTAL WEIGHT</b>		<b>671 LBS (APPROX)</b>



**METHOD 20**

CONTAINER SIZE IS 42-21/32" LONG BY 8-13/32" DIAMETER.

**KEY NUMBERS**

- ① CROSS MEMBER (2 REOD). SEE GENERAL NOTE "J" ON PAGE 2.
- ② STRAPPING BOARD (2 REOD). SEE THE DETAIL ON PAGE 43.
- ③ PLYWOOD GATE (2 REOD). SEE THE DETAIL ON PAGE 43 AND SPECIAL NOTE 3 BELOW.
- ④ BUNDLING STRAP, 3/4" X .035" OR .031" BY A LENGTH TO SUIT STEEL STRAPPING (2 REOD). SECURE TO THE STRAPPING BOARD W/2 STAPLES. SEE GENERAL NOTE "N" ON PAGE 3.
- ⑤ SEAL FOR 3/4" STRAPPING (2 REOD, 1 PER STRAP).

**SPECIAL NOTES:**

- 1. A LOAD OF 11 EACH 155MM, M19 (D480) INDIVIDUAL PROPELLING CHARGES IN M16 CONTAINERS IS SHOWN AS TYPICAL IN A PORTABLE CARGO COMPARTMENT EQUIPPED WITH MECHANICAL BRACING DEVICES.
- 2. BECAUSE OF THE VARIOUS DIAMETERS OF THE PROPELLING CHARGE CONTAINERS, THE LOCATION OF THE CROSS MEMBERS WILL BE VARIABLE. THE BOTTOM SURFACE OF THE BOTTOM CROSS MEMBER MUST NOT BE HIGHER THAN THE BOTTOM LAYER OF PROPELLING CHARGE CONTAINERS. THE BOTTOM SURFACE OF THE TOP CROSS MEMBER MUST NOT BE HIGHER THAN THE SECOND LAYER OF PROPELLING CHARGE CONTAINERS. IF DESIRED, TWO CROSS MEMBERS MAY BE USED AT EACH END, ONE TO RETAIN THE BOTTOM LAYER AND ONE TO RETAIN THE TOP LAYER.
- 3. IF 1/2" PLYWOOD IS NOT AVAILABLE, SEE THE "GATE ASSEMBLY B" DETAIL ON PAGE 44.

**LOAD AS SHOWN**

ITEM	QUANTITY	WEIGHT (APPROX)
M19 CONTAINER, INDIVIDUAL CONTAINERS	11	572 LBS
DUNNAGE		33 LBS
<b>TOTAL WEIGHT</b>		<b>605 LBS (APPROX)</b>

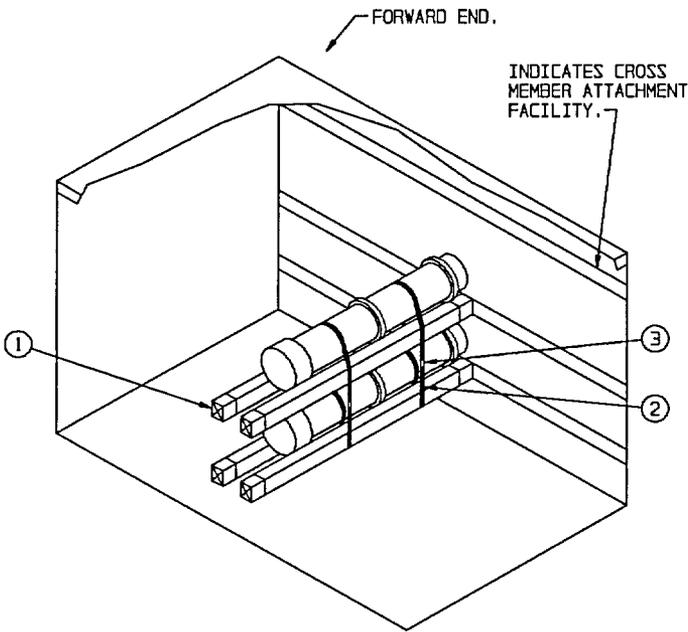
INDIVIDUAL PROPELLING CHARGES  
TYPICAL LOADS BRACED WITH MECHANICAL BRACING DEVICES

**KEY NUMBERS**

- ① CROSS MEMBER (4 REQD). SEE GENERAL NOTE "J" ON PAGE 2.
- ② UNITIZING STRAP, 3/4" X .035" DR .031" BY A LENGTH TO SUIT (2 REQD). SEE GENERAL NOTE "N" ON PAGE 3.
- ③ SEAL FOR 3/4" STRAPPING (2 REQD, 1 PER STRAP).

**SPECIAL NOTE:**

1. A LOAD OF TWO 155MM, M19 (D480) PROPELLING CHARGES IN M16 CONTAINERS IS SHOWN AS TYPICAL IN A PORTABLE CARGO COMPARTMENT EQUIPPED WITH MECHANICAL BRACING DEVICES. THIS METHOD IS APPLICABLE FOR ALL PROPELLING CHARGE CONTAINERS. NOTE THE PORTABLE CARGO COMPARTMENT MUST BE AT LEAST 54" LONG FOR SHIPMENT OF THE M10 AND M460 CONTAINERS.



**METHOD 21**

CONTAINER SIZE IS 42-21/32" LONG BY 8-13/32" DIAMETER.

**LOAD AS SHOWN**

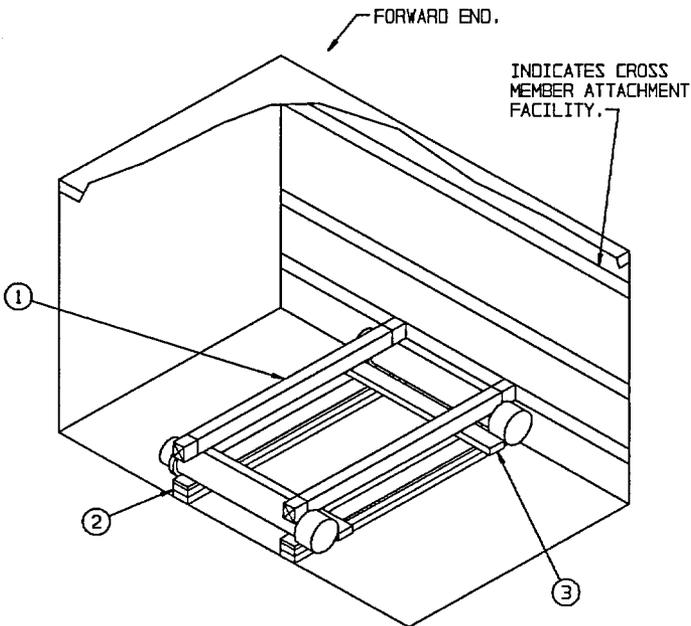
ITEM	QUANTITY	WEIGHT (APPROX)
M16 CONTAINER	2	110 LBS
DUNNAGE		1 LBS
<b>TOTAL WEIGHT</b>		<b>111 LBS (APPROX)</b>

**KEY NUMBERS**

- ① CROSS MEMBER (2 REQD). SEE GENERAL NOTE "J" ON PAGE 2.
- ② RISER, 2" X 4" BY THE PORTABLE CARGO COMPARTMENT LENGTH MINUS 1/2" (2 REQD). LAMINATE PIECES AS REQUIRED FOR THE DIAMETER OF THE PROPELLING CHARGE CONTAINER TO BE CONTACTED BY THE CROSS MEMBER.
- ③ TIE-PIECE, 2" X 4" BY THE PROPELLING CHARGE CONTAINER LENGTH (2 REQD). POSITION AGAINST THE PROPELLING CHARGE CONTAINER AND NAIL TO THE RISERS W/2-10d NAILS AT EACH JOINT.

**SPECIAL NOTE:**

1. A LOAD OF TWO 155MM, M3 (D54D) INDIVIDUAL PROPELLING CHARGES IN M14 CONTAINERS IS SHOWN AS TYPICAL IN A PORTABLE CARGO COMPARTMENT EQUIPPED WITH MECHANICAL BRACING DEVICES. THIS METHOD IS APPLICABLE FOR ALL PROPELLING CHARGE CONTAINERS.



**METHOD 22**

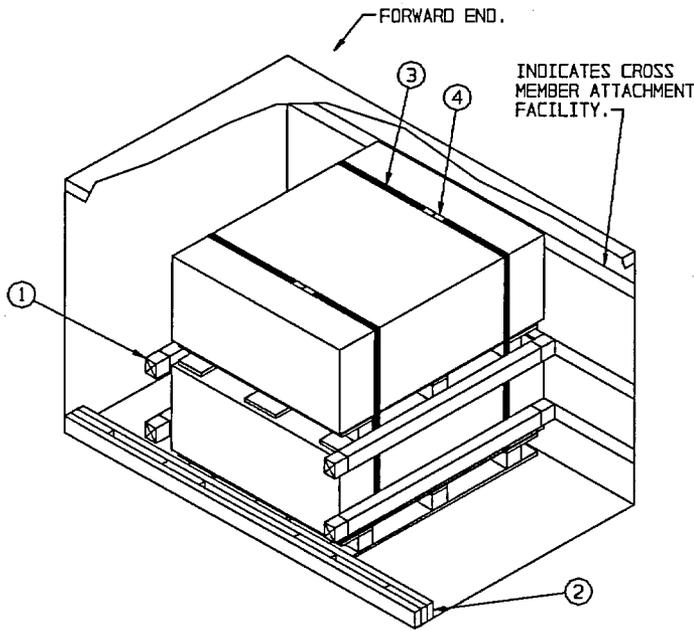
CONTAINER SIZE IS 37-1/2" LONG BY 6-11/16" DIAMETER.

**LOAD AS SHOWN**

ITEM	QUANTITY	WEIGHT (APPROX)
M14 CONTAINER	2	57 LBS
DUNNAGE		23 LBS
<b>TOTAL WEIGHT</b>		<b>80 LBS (APPROX)</b>

**INDIVIDUAL PROPELLING CHARGES  
TYPICAL LOADS BRACED WITH MECHANICAL BRACING DEVICES**

**KEY NUMBERS**



- ① CROSS MEMBER (4 REQD). SEE GENERAL NOTE "J" ON PAGE 2.
- ② SOLID FILL ASSEMBLY (1 REQD). SEE THE "SOLID FILL ASSEMBLY A" DETAIL ON PAGE 45. SEE SPECIAL NOTE 2 BELOW.
- ③ UNITIZING STRAP, 1-1/4" X .035" OR .031" X 15'-0" LONG STEEL STRAPPING (2 REQD). SEE GENERAL NOTE "N" ON PAGE 3.
- ④ SEAL FOR 1-1/4" STRAPPING (4 REQD, 2 PER STRAP).

**SPECIAL NOTES:**

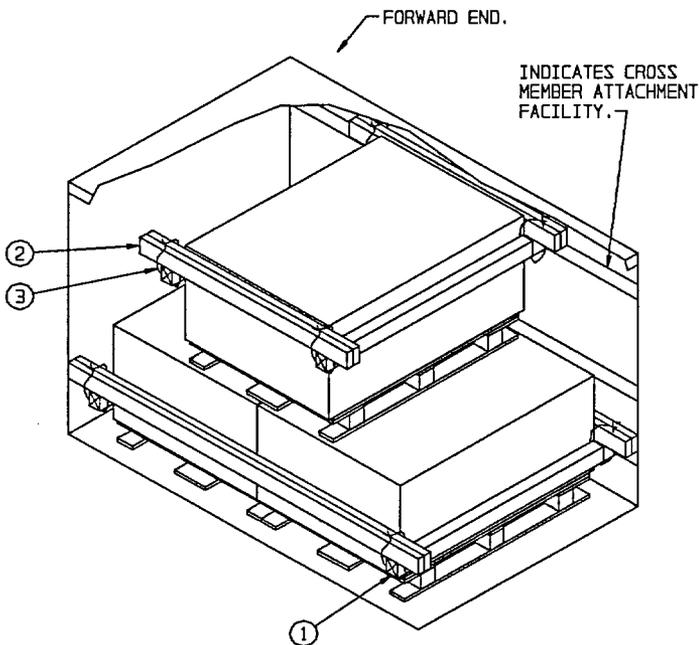
1. A 2-PALLET LOAD IS SHOWN IN A PORTABLE CARGO COMPARTMENT EQUIPPED WITH MECHANICAL BRACING DEVICES.
2. IF THE SPACE AT THE END OF THE LOAD IS APPROXIMATELY 8" OR MORE, "STRUT FILL ASSEMBLY A" MAY BE USED IN LIEU OF PIECE MARKED ②. SEE THE DETAIL ON PAGE 45. IF THE SPACE IS APPROXIMATELY 4" OR LESS, INDIVIDUAL PIECES OF 2" X 4" AND/OR 1" X 4" MAY BE USED. LAMINATE, IF APPLICABLE, W/4 APPLICABLY SIZED NAILS. NOTE THAT A TOTAL EXCESS SPACE FOR THE LADING OF 1-1/2" IS PERMITTED; A TOTAL SPACE LARGER THAN 1-1/2" MUST BE BRACED AT THE PALLET LEVEL.

**METHOD 23**

UNIT SIZE IS 41" LONG BY 50-1/4" WIDE BY 23-3/4" HIGH.

**LOAD AS SHOWN**

ITEM	QUANTITY	WEIGHT (APPROX)
PALLET UNIT	2	4,022 LBS
DUNNAGE		27 LBS
<b>TOTAL WEIGHT</b>		<b>4,049 LBS (APPROX)</b>



**KEY NUMBERS**

- ① CROSS MEMBER (4 REQD). SEE GENERAL NOTE "J" ON PAGE 2.
- ② SOLID FILL, 4" WIDE MATERIAL BY A THICKNESS TO SUIT BY A LENGTH TO SUIT (AS REQUIRED TO FILL THE VOID BETWEEN THE LADING AND THE PORTABLE CARGO COMPARTMENT ENDWALL) (4 REQD). LAMINATE W/1-10d NAIL EVERY 24". SEE SPECIAL NOTE 3 BELOW.
- ③ TIE WIRE, NO. 14 GAGE, 36" LONG (8 REQD). INSTALL TO ENCIRCLE PIECES MARKED ① AND ②.

**SPECIAL NOTES:**

1. A 3-PALLET LOAD IS SHOWN IN A PORTABLE CARGO COMPARTMENT EQUIPPED WITH MECHANICAL BRACING DEVICES.
2. A SUITABLE SIZE PIECE OF HARDBOARD MUST BE POSITIONED ON TOP OF THE BOTTOM UNITS WHEN SLIDING THE TOP UNIT INTO POSITION.
3. NOTE THAT A TOTAL EXCESS SPACE FOR THE LADING OF 1-1/2" IS PERMITTED; A TOTAL SPACE LARGER THAN 1-1/2" MUST BE BRACED.

**METHOD 24**

UNIT SIZE IS 35-1/2" LONG BY 47-3/4" WIDE BY 26" HIGH.

**LOAD AS SHOWN**

ITEM	QUANTITY	WEIGHT (APPROX)
PALLET UNIT	3	2,244 LBS
DUNNAGE		63 LBS
<b>TOTAL WEIGHT</b>		<b>2,307 LBS (APPROX)</b>

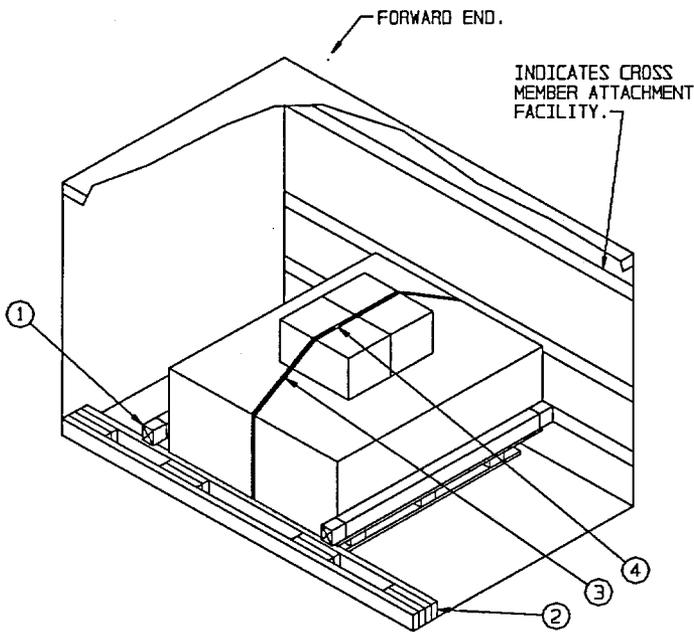
**PALLETIZED BOXES  
TYPICAL LOADS BRACED WITH MECHANICAL BRACING DEVICES**

**KEY NUMBERS**

- ① CROSS MEMBER (2 REQD). SEE GENERAL NOTE "J" ON PAGE 2.
- ② SOLID FILL ASSEMBLY (1 REQD). SEE THE "SOLID FILL ASSEMBLY A" DETAIL ON PAGE 45. SEE SPECIAL NOTE 2 BELOW.
- ③ UNITIZING STRAP, 3/4" X .035" OR .031" X 12'-0" LONG STEEL STRAPPING (1 REQD). SEE GENERAL NOTE "N" ON PAGE 3.
- ④ SEAL FOR 3/4" STRAPPING (1 REQD, 1 PER STRAP).

**SPECIAL NOTES:**

- 1. A 1-PALLET LOAD AND TWO INDIVIDUAL BOXES ARE SHOWN AS TYPICAL IN A PORTABLE CARGO COMPARTMENT EQUIPPED WITH MECHANICAL BRACING DEVICES.
- 2. IF THE SPACE BETWEEN THE PALLET BASE AND THE END OF THE PORTABLE CARGO COMPARTMENT IS APPROXIMATELY 8" OR MORE, "STRUT FILL ASSEMBLY A" MAY BE USED IN LIEU OF PIECE MARKED ②. SEE THE DETAIL ON PAGE 45. IF THE SPACE IS APPROXIMATELY 4" OR LESS, INDIVIDUAL PIECES OF 2" X 4" AND/OR 1" X 4" MAY BE USED. LAMINATE, IF APPLICABLE, W/4 APPLICABLY SIZED NAILS. NOTE THAT A TOTAL EXCESS LONGITUDINAL SPACE FOR THE LADING OF 1-1/2" IS PERMITTED; A TOTAL SPACE LARGER THAN 1-1/2" MUST BE BRACED AT THE PALLET LEVEL.



**METHOD 25**

UNIT SIZE IS 41" LONG BY 50-1/4" WIDE BY 23-3/4" HIGH.  
 BOX SIZE IS 16-3/4" LONG BY 10-1/4" WIDE BY 9-1/8" HIGH.

**LOAD AS SHOWN**

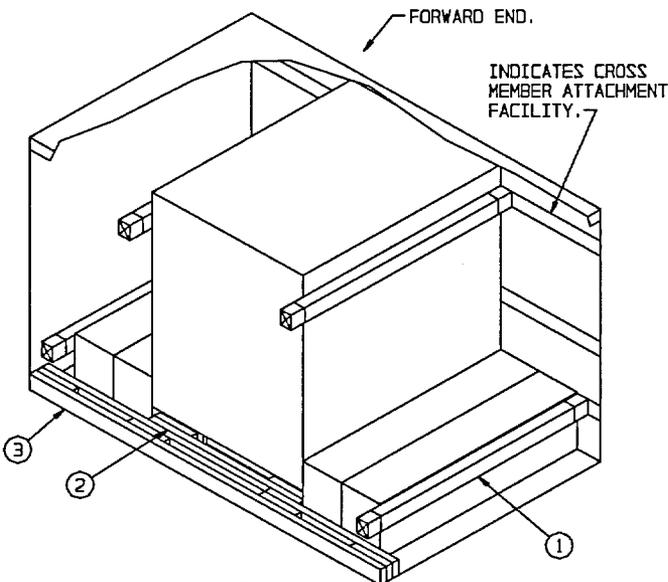
ITEM	QUANTITY	WEIGHT (APPROX)
PALLET UNIT	1	2,011 LBS
INDIVIDUAL BOXES	2	160 LBS
DUNNAGE		29 LBS
<b>TOTAL WEIGHT</b>		<b>2,200 LBS (APPROX)</b>

**KEY NUMBERS**

- ① CROSS MEMBER (4 REQD). SEE GENERAL NOTE "J" ON PAGE 2.
- ② SOLID FILL ASSEMBLY (1 REQD). SEE THE "SOLID FILL ASSEMBLY C" DETAIL ON PAGE 44. SEE SPECIAL NOTE 2 BELOW.
- ③ SOLID FILL ASSEMBLY (1 REQD). SEE THE "SOLID FILL ASSEMBLY A" DETAIL ON PAGE 45. SEE SPECIAL NOTES 3 AND 4 BELOW.

**SPECIAL NOTES:**

- 1. A 1-SKIDDED UNIT LOAD AND FOUR INDIVIDUAL BOXES ARE SHOWN AS TYPICAL IN A PORTABLE CARGO COMPARTMENT EQUIPPED WITH MECHANICAL BRACING DEVICES.
- 2. WHEN INDIVIDUAL BOXES ARE TO BE SHIPPED WITH A SKIDDED UNIT, "SOLID FILL ASSEMBLY C", PIECE MARKED ②, IS REQUIRED. THE ASSEMBLY MUST BE OF A THICKNESS TO EXTEND SLIGHTLY BEYOND THE END OF THE BOXES ON THE UNIT. OMIT THE ASSEMBLY IF THERE ARE NO INDIVIDUAL BOXES.
- 3. IF THE SPACE BETWEEN THE SKIDDED UNIT AND THE END OF THE PORTABLE CARGO COMPARTMENT IS MORE THAN APPROXIMATELY 8", "STRUT FILL ASSEMBLY A" MAY BE USED IN LIEU OF PIECE MARKED ③. SEE THE DETAIL ON PAGE 45. IF THE SPACE IS APPROXIMATELY 4" OR LESS, INDIVIDUAL PIECES OF 2" X 4" AND/OR 1" X 4" MAY BE USED. LAMINATE, IF APPLICABLE, W/4 APPLICABLY SIZED NAILS. NOTE THAT A TOTAL EXCESS LONGITUDINAL SPACE FOR THE LADING OF 1-1/2" IS PERMITTED; A TOTAL EXCESS SPACE LARGER THAN 1-1/2" MUST BE BRACED AT THE SKID BASE LEVEL.
- 4. IF THERE ARE NO INDIVIDUAL BOXES IN THE LOAD, THE FILL ASSEMBLY WILL BE CONSTRUCTED TO CONTACT THE SKIDDED UNIT BASE. THIS MAY REQUIRE THE USE OF "STRUT FILL ASSEMBLY A", AS DETAILED ON PAGE 45, IN LIEU OF PIECE MARKED ③.



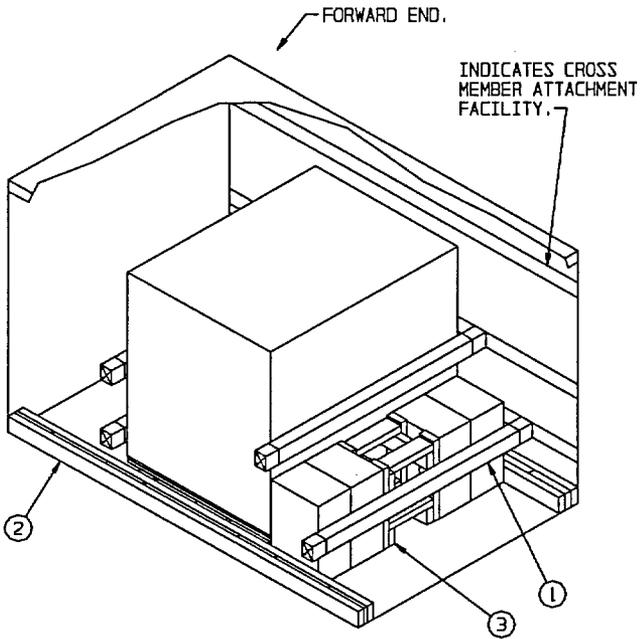
**METHOD 26**

SKIDDED UNIT SIZE IS 36-3/4" LONG BY 48-1/2" WIDE BY 52-5/8" HIGH.  
 BOX SIZE IS 48-1/2" LONG BY 12-1/4" WIDE BY 9-3/8" HIGH.

**LOAD AS SHOWN**

ITEM	QUANTITY	WEIGHT (APPROX)
SKIDDED UNIT	1	2,176 LBS
INDIVIDUAL BOXES	4	568 LBS
DUNNAGE		59 LBS
<b>TOTAL WEIGHT</b>		<b>2,803 LBS (APPROX)</b>

**SKIDDED UNITS, PALLETIZED AND INDIVIDUAL BOXES  
 TYPICAL LOADS BRACED WITH MECHANICAL BRACING DEVICES**



**METHOD 27**

UNIT SIZE IS 35" LONG BY 46" WIDE BY 45-1/2" HIGH.  
 BOX SIZE IS 17-1/2" LONG BY 11-1/2" WIDE BY 8" HIGH.

**KEY NUMBERS**

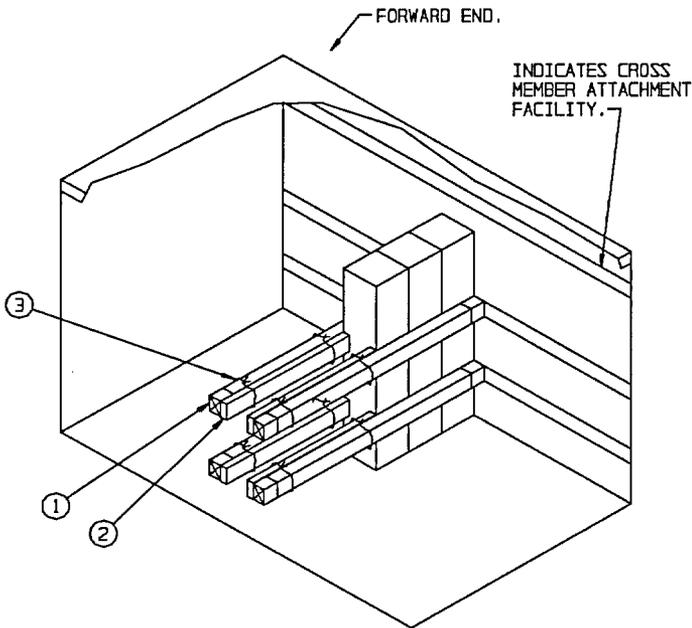
- ① CROSS MEMBER (4 REOD). SEE GENERAL NOTE "J" ON PAGE 2.
- ② SOLID FILL ASSEMBLY (2 REOD). SEE THE "SOLID FILL ASSEMBLY A" DETAIL ON PAGE 45. SEE SPECIAL NOTE 2 BELOW.
- ③ FILLER ASSEMBLY (1 REOD). SEE THE "FILLER ASSEMBLY B" DETAIL ON PAGE 46.

**SPECIAL NOTES:**

- 1. A 1-PALLET LOAD AND FOUR INDIVIDUAL BOXES ARE SHOWN AS TYPICAL IN A PORTABLE CARGO COMPARTMENT EQUIPPED WITH MECHANICAL BRACING DEVICES.
- 2. IF THE SPACES BETWEEN THE PALLET BASE AND THE ENDS OF THE PORTABLE CARGO COMPARTMENT ARE APPROXIMATELY 8" OR MORE, "STRUT FILL ASSEMBLY A" MAY BE USED IN LIEU OF PIECE MARKED ②. SEE THE DETAIL ON PAGE 45. IF THE SPACE IS APPROXIMATELY 4" OR LESS, INDIVIDUAL PIECES OF 2" X 4" AND/OR 1" X 4" MAY BE USED. LAMINATE, IF APPLICABLE, W/4 APPLICABLE SIZED NAILS. NOTE THAT A TOTAL EXCESS LONGITUDINAL SPACE FOR THE LADING OF 1-1/2" IS PERMITTED; A TOTAL EXCESS SPACE LARGER THAN 1-1/2" MUST BE BRACED AT THE PALLET LEVEL.

**LOAD AS SHOWN**

ITEM	QUANTITY	WEIGHT (APPROX)
PALLET UNIT	1	3,600 LBS
INDIVIDUAL BOXES	4	360 LBS
DUNNAGE		44 LBS
<b>TOTAL WEIGHT</b>		<b>4,004 LBS (APPROX)</b>



**METHOD 28**

BOX SIZE IS 40" LONG BY 8" WIDE BY 8" HIGH.

**KEY NUMBERS**

- ① CROSS MEMBER (4 REOD). SEE GENERAL NOTE "J" ON PAGE 2 AND SPECIAL NOTE 2 BELOW.
- ② RETAINER BLOCK, 2" X 4" BY CUT TO FIT BETWEEN THE BOX AND THE PORTABLE CARGO COMPARTMENT ENDWALL (4 REOD).
- ③ TIE WIRE, NO. 14 GAGE, 36" LONG (8 REOD). INSTALL TO ENCIRCLE PIECES MARKED ① AND ②.

**SPECIAL NOTES:**

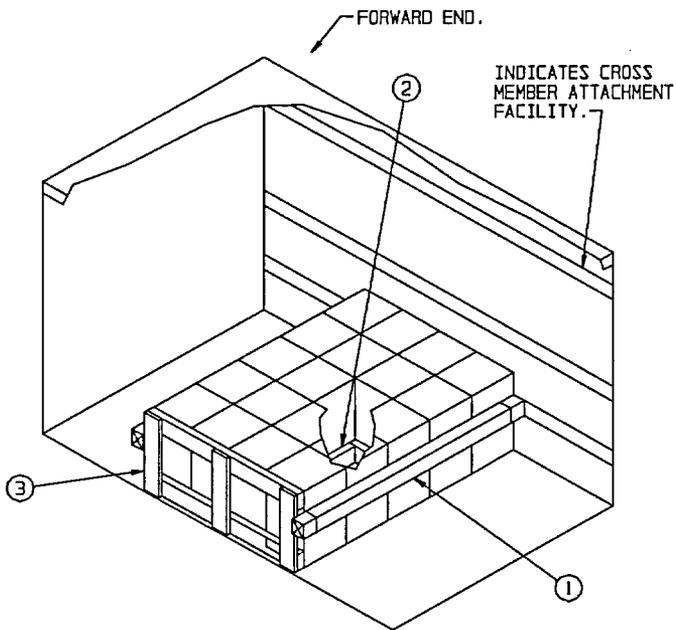
- 1. A LOAD OF THREE WOODEN BOXES IS SHOWN AS TYPICAL IN A PORTABLE CARGO COMPARTMENT EQUIPPED WITH MECHANICAL BRACING DEVICES.
- 2. IT IS PERMISSIBLE TO LAY THE WOODEN BOXES ON THEIR SIDE IF THEY ARE OF SUCH A HEIGHT THAT THE BOTTOM CROSS MEMBER WILL CONTACT THEM. IN THIS CASE, ONLY TWO CROSS MEMBERS WILL BE REQUIRED.

**LOAD AS SHOWN**

ITEM	QUANTITY	WEIGHT (APPROX)
WOODEN BOX	3	381 LBS
DUNNAGE		18 LBS
<b>TOTAL WEIGHT</b>		<b>399 LBS (APPROX)</b>

**PALLETIZED AND INDIVIDUAL BOXES  
 TYPICAL LOADS BRACED WITH MECHANICAL BRACING DEVICES**

**KEY NUMBERS**



- ① CROSS MEMBER (2 REOD). SEE GENERAL NOTE "J" ON PAGE 2.
- ② FILLER ASSEMBLY (2 REOD). SEE THE "FILLER ASSEMBLY A" DETAIL ON PAGE 45. SEE SPECIAL NOTE 2 BELOW.
- ③ GATE ASSEMBLY (1 REOD). SEE THE "GATE ASSEMBLY D" DETAIL ON PAGE 46. SEE SPECIAL NOTE 3 BELOW.

**SPECIAL NOTES:**

- 1. A LOAD OF 19 INDIVIDUAL BOXES IS SHOWN AS TYPICAL IN A PORTABLE CARGO COMPARTMENT EQUIPPED WITH MECHANICAL BRACING DEVICES.
- 2. THE FILLER ASSEMBLY IS SHOWN ONLY TO DEPICT A TYPICAL INSTALLATION.
- 3. GATE ASSEMBLIES MAY BE USED AT BOTH ENDS OF THE LOAD, OR FILL PIECES MAY BE ADDED TO THE VERTICAL PIECES OF THE DEPICTED GATE AS NECESSARY TO FILL THE LENGTH OF THE PORTABLE CARGO COMPARTMENT. A 1-1/2" LONGITUDINAL VOID IS PERMITTED.

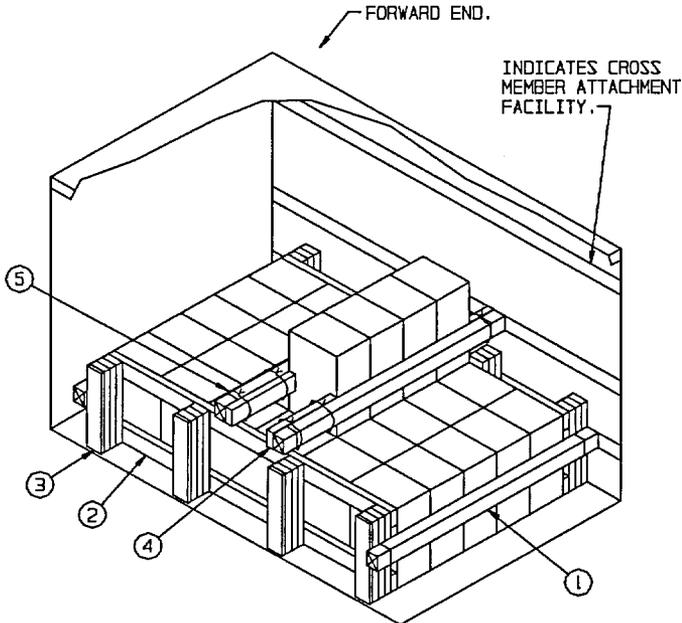
**METHOD 29**

BOX SIZE IS 16-3/4" LONG BY 10-1/4" WIDE BY 9-1/8" HIGH.

**LOAD AS SHOWN**

ITEM	QUANTITY	WEIGHT (APPROX)
INDIVIDUAL BOXES	19	1,520 LBS
DUNNAGE	18	18 LBS
<b>TOTAL WEIGHT</b>		<b>1,538 LBS (APPROX)</b>

**KEY NUMBERS**



- ① CROSS MEMBER (4 REOD). SEE GENERAL NOTE "J" ON PAGE 2.
- ② GATE ASSEMBLY (2 REOD). SEE THE "GATE ASSEMBLY D" DETAIL ON PAGE 46.
- ③ SOLID FILL, 4" WIDE MATERIAL BY A THICKNESS TO SUIT BY LADING HEIGHT (AS REQUIRED TO FILL THE VOID BETWEEN "GATE ASSEMBLY D" AND THE PORTABLE CARGO COMPARTMENT ENDWALL) (8 REOD). NAIL TO "GATE ASSEMBLY D" AND/OR LAMINATE W/3-10d OR 6d NAILS, AS APPLICABLE.
- ④ RETAINER, 2" X 4" BY CUT TO FIT (4 REOD).
- ⑤ TIE WIRE, NO. 14 GAGE, 36" LONG (6 REOD). INSTALL TO ENCIRCLE PIECES MARKED ① AND ④.

**SPECIAL NOTES:**

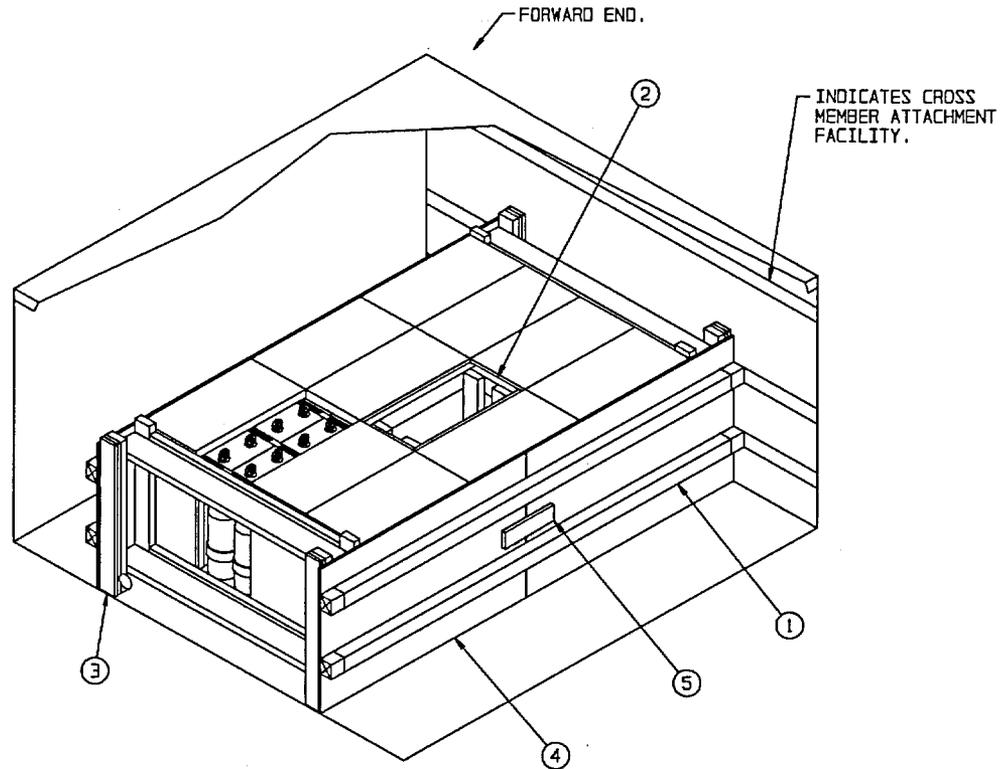
- 1. A LOAD OF 34 INDIVIDUAL BOXES IS SHOWN AS TYPICAL IN A PORTABLE CARGO COMPARTMENT EQUIPPED WITH MECHANICAL BRACING DEVICES.
- 2. THE FILL MATERIAL, PIECE MARKED ③, MAY BE OMITTED FROM ONE OR BOTH GATES, OR A GATE AND THE FILL MATERIAL MAY BE OMITTED FROM ONE END OF THE LOAD AS NECESSARY TO FILL THE LENGTH OF THE PORTABLE CARGO COMPARTMENT. A 1-1/2" LONGITUDINAL VOID IS PERMITTED.

**METHOD 30**

BOX SIZE IS 17-1/2" LONG BY 11-1/2" WIDE BY 8-1/8" HIGH.

**LOAD AS SHOWN**

ITEM	QUANTITY	WEIGHT (APPROX)
INDIVIDUAL BOXES	34	3,060 LBS
DUNNAGE	82	82 LBS
<b>TOTAL WEIGHT</b>		<b>3,142 LBS (APPROX)</b>



**METHOD 31**

UNIT SIZE IS 13-1/2' LONG BY 27' WIDE BY 31-1/2' HIGH.

**SPECIAL NOTES:**

1. AN 11-UNIT LOAD OF 155MM SLP B/SMALL PALLET IS SHOWN AS A TYPICAL LOAD IN A 410 TYPE CONTAINER. THE DEPICTED PROCEDURES MAY ALSO BE USED FOR ANY OF THE OTHER SLP PALLET UNITS.
2. SEE THE "ALTERNATIVE METHOD A" AND "ALTERNATIVE METHOD B" DETAILS ON PAGE 14.
3. THE "OMITTED UNIT ASSEMBLY" IS REQUIRED FOR THE DEPICTED LOAD TO REDUCE THE LOAD WEIGHT TO BE WITHIN THE CAPACITY OF THE 410 CONTAINER.
4. IF 1/2" PLYWOOD IS NOT AVAILABLE, SEE THE "GATE ASSEMBLY A" DETAIL ON PAGE 43 FOR A DIMENSIONAL LUMBER GATE. NOTE THAT FOUR VERTICAL PIECES WILL BE REQUIRED.
5. REFER TO "METHOD 15" ON PAGE 14 AND "METHOD 16" ON PAGE 15 FOR GUIDANCE IN THE SHIPMENT OF OTHER QUANTITIES OF SEPARATE LOADING PROJECTILES.

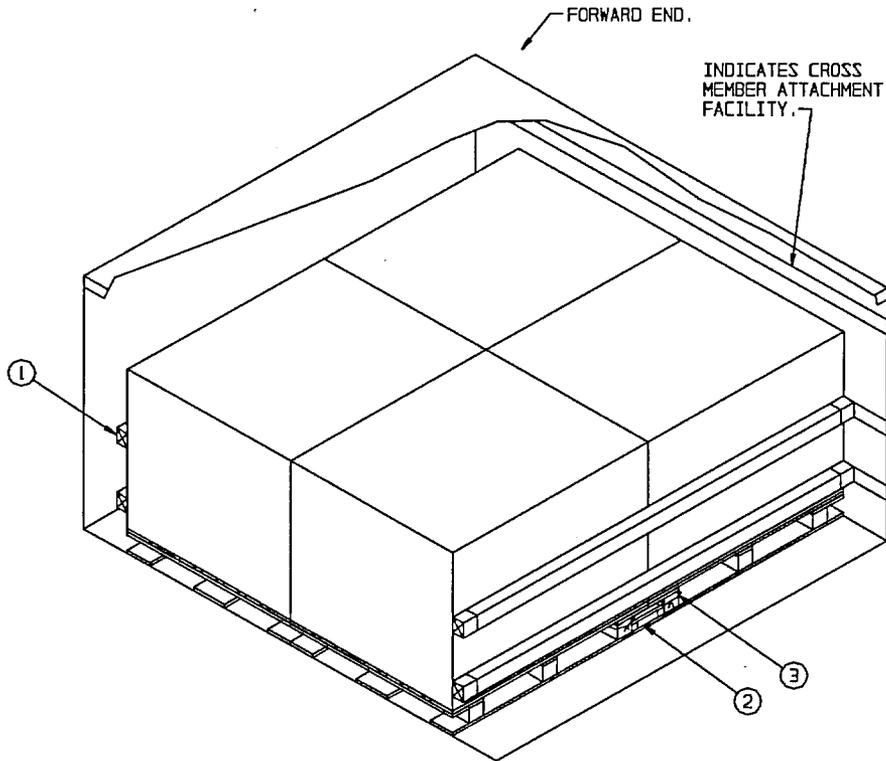
**KEY NUMBERS**

- ① CROSS MEMBER (4 REQD). SEE GENERAL NOTE "J" ON PAGE 2. SEE SPECIAL NOTE 2 AT LEFT.
- ② OMITTED UNIT ASSEMBLY (1 REQD). SEE THE DETAIL ON PAGE 47. SEE SPECIAL NOTE 3.
- ③ SIDE BLOCKING ASSEMBLY (2 REQD). SEE THE "SIDE BLOCKING ASSEMBLY B" DETAIL ON PAGE 47.
- ④ GATE (2 REQD). SEE THE "PLYWOOD GATE" DETAIL ON PAGE 43. SEE SPECIAL NOTE 4 AT LEFT.
- ⑤ SPLICE PIECE, 1' X 4' X 12" (2 REQD). NAIL THE PLYWOOD GATE THRU THE 1' X 4' PIECE W/3-6d NAILS EACH END AND CLINCH.

**LOAD AS SHOWN**

ITEM	QUANTITY	WEIGHT (APPROX)
155MM, B/SMALL PALLET	11	8,800 LBS
DUNNAGE		180 LBS
TOTAL WEIGHT		9,640 LBS (APPROX)

SEPARATE LOADING PROJECTILES  
TYPICAL LOAD IN 410 TYPE CONTAINER



**METHOD 32**

UNIT SIZE IS 40" LONG BY 48" WIDE BY 40" HIGH.

**SPECIAL NOTES:**

1. A 4-PALLET LOAD OF BOXED AMMUNITION ON 40" X 48" PALLETS IS SHOWN AS A TYPICAL LOAD IN A 410 TYPE CONTAINER. NOTE THAT THE LOAD IS LIMITED TO PALLET UNITS HAVING A WIDTH OF NOT GREATER THAN 50-1/4". THIS METHOD IS ALSO APPLICABLE FOR PALLET UNITS OF AMMUNITION ITEMS ON 35" X 45-1/2" PALLETS WHEN THE PALLETS ARE POSITIONED WITH THE 45-1/2" DIMENSION OF THE PALLET LENGTHWISE IN THE 410 CONTAINER.
2. REFER TO "METHOD 33" ON PAGE 25 FOR PROCEDURES APPLICABLE TO 35" X 45-1/2" PALLETS POSITIONED WITH THE 45-1/2" DIMENSION CROSSWISE IN THE 410 CONTAINER.
3. THE DEPICTED PROCEDURES MAY BE USED FOR SHIPMENT OF ANY OF THE ITEMS DEPICTED WITHIN THIS DOCUMENT OTHER THAN THE BULK EXPLOSIVES, EITHER THE FIBERBOARD BOXES OR THE DRUMS. THE PRINCIPLES OF THE APPLICABLE BLOCKING AND BRACING OF THE VARIOUS ITEMS WILL BE APPLIED FOR SHIPMENTS IN THE 410 CONTAINER. REFER TO "METHOD 18" THRU "METHOD 31" ON PAGES 16 THRU 22 FOR GUIDANCE. NOTE THAT PALLET UNITS OF PROPELLING CHARGE CONTAINERS ARE RESTRICTED TO THOSE UNITS ON WHICH THE CONTAINERS WILL BE CROSSWISE IN THE 410 CONTAINER UNLESS A PLYWOOD OR DIMENSIONAL LUMBER GATE IS INSTALLED BETWEEN THE PALLET UNITS AND THE CROSS MEMBERS. SEE PIECES MARKED ④ AND ⑤ ON PAGE 23 FOR GUIDANCE.
4. THE ANTI-SWAY BRACES, PIECES MARKED ②, ARE NOT REQUIRED FOR PALLET UNITS WHICH ARE WIDER THAN 49".

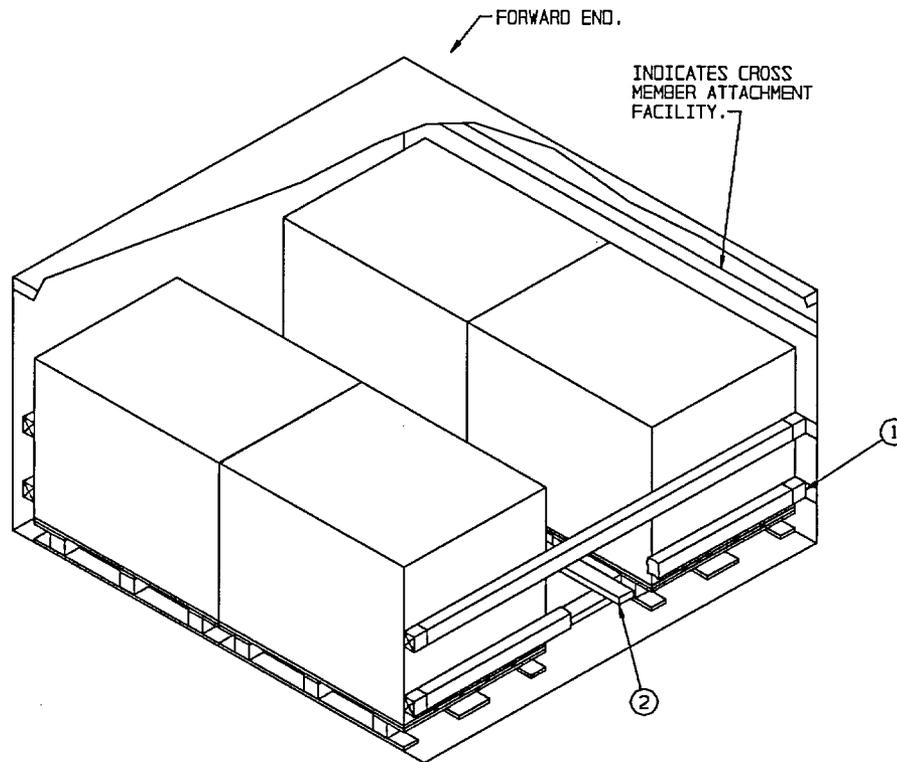
**KEY NUMBERS**

- ① CROSS MEMBER (4 REED). SEE GENERAL NOTE "J" ON PAGE 2.
- ② ANTI-SWAY BRACE (2 REED). SEE THE "ANTI-SWAY BRACE ASSEMBLY A" DETAIL ON PAGE 47. SEE SPECIAL NOTE 3 AT LEFT.
- ③ TIE WIRE, NO.14 GAGE BY A LENGTH TO SUIT (2 REED). INSTALL TO ENCIRCLE THE PALLET POSTS AND THE CROSS BRACE/CLEAT OF THE OUTER END OF EACH ANTI-SWAY BRACE.

**LOAD AS SHOWN**

ITEM	QUANTITY	WEIGHT (APPROX)
PALLET UNIT	4	8,764 LBS
DUNNAGE		17 LBS
TOTAL WEIGHT		8,781 LBS (APPROX)

**PALLETIZED BOXES  
TYPICAL LOAD IN 410 TYPE CONTAINER**



**METHOD 33**

UNIT SIZE IS 35" LONG BY 45-1/2" WIDE BY 40" HIGH.

SPECIAL NOTES:

1. A 4-PALLET LOAD OF BOXED AMMUNITION ON 35" X 45-1/2" PALLETS IS SHOWN AS A TYPICAL LOAD IN A 410 TYPE CONTAINER. THIS METHOD IS ALSO APPLICABLE FOR PALLET UNITS ON 40" X 48" PALLETS WITH THE 40" DIMENSION OF THE PALLET LENGTHWISE IN THE CONTAINER. THE LOAD WILL BE LIMITED TO ONLY ONE UNIT IN WIDTH; "METHOD 32" ON PAGE 24 WILL PROVIDE FOR A BETTER LOAD.
2. THE DEPICTED PROCEDURES MAY BE USED FOR SHIPMENT OF ANY OF THE ITEMS DEPICTED WITHIN THIS DOCUMENT OTHER THAN THE BULK EXPLOSIVES, EITHER THE FIBERBOARD BOXES OR THE DRUMS. THE PRINCIPLES OF THE APPLICABLE BLOCKING AND BRACING OF THE VARIOUS ITEMS WILL BE APPLIED FOR SHIPMENTS IN THE 410 CONTAINER. REFER TO "METHOD 18" THRU "METHOD 31" ON PAGES 16 THRU 22 FOR GUIDANCE. NOTE THAT PALLET UNITS OF PROPELLING CHARGE CONTAINERS ARE RESTRICTED TO THOSE UNITS ON WHICH THE CONTAINERS WILL BE CROSSWISE IN THE 410 CONTAINER UNLESS A PLYWOOD OR DIMENSIONAL LUMBER GATE IS INSTALLED BETWEEN THE PALLET UNITS AND THE CROSS MEMBERS. SEE PIECES MARKED ④ AND ⑤ ON PAGE 23 FOR GUIDANCE.

KEY NUMBERS

- ① CROSS MEMBER (4 REQD). SEE GENERAL NOTE "J" ON PAGE 2.
- ② ANTI-SWAY BRACE (2 REQD). SEE THE "ANTI-SWAY BRACE ASSEMBLY B" DETAIL ON PAGE 47.

LOAD AS SHOWN

ITEM	QUANTITY	WEIGHT (APPROX)
PALLET UNIT	4	2,212 LBS
DUNNAGE		36 LBS
<b>TOTAL WEIGHT</b>		<b>2,248 LBS (APPROX)</b>

PALLETIZED BOXES  
TYPICAL LOAD IN 410 TYPE CONTAINER

**KEY NUMBERS**

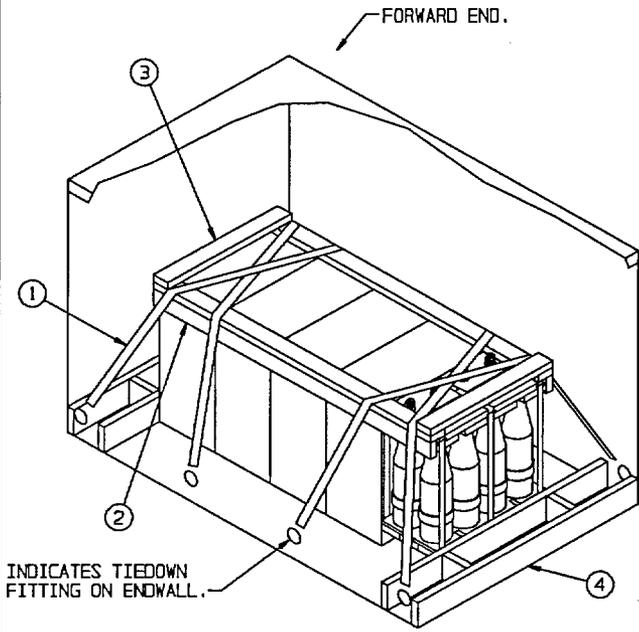
- ① WEB STRAP ASSEMBLY (FOR LONGITUDINAL RETENTION) (4 REQD). FASTEN ONE END TO A TIE-DOWN FITTING ON THE PORTABLE CARGO COMPARTMENT ENDWALL OR FLOOR, GO DIAGONALLY OVER TOP OF EDGE BOARD ASSEMBLY AND FASTEN OTHER END TO A TIE-DOWN FITTING ON THE OPPOSITE ENDWALL OR FLOOR.
- ② EDGE BOARD ASSEMBLY (2 REQD). SEE THE DETAIL ON PAGE 43.
- ③ TIE PIECE, 2" X 4" BY A LENGTH TO SUIT (2 REQD). NAIL TO THE "EDGE BOARD ASSEMBLY" W/3-10d NAILS AT EACH END.
- ④ SIDE BLOCKING ASSEMBLY (2 REQD). SEE THE "SIDE BLOCKING ASSEMBLY C" DETAIL ON PAGE 48. SEE SPECIAL NOTE 2 BELOW.

**SPECIAL NOTES:**

- 1. A 5-PALLET LOAD OF 155MM SLP 8"/SMALL PALLET IS SHOWN AS TYPICAL IN A PORTABLE CARGO COMPARTMENT EQUIPPED WITH WEB STRAP ASSEMBLIES. THIS METHOD IS ALSO APPLICABLE FOR SHIPMENT OF FIVE EACH 155MM 8"/LARGE PALLET, FOUR EACH 175MM 6"/PALLET, SEVEN EACH 8" 3"/PALLET, FOUR EACH 8" 6"/SMALL OR 6 PER TALL/SMALL PALLET, OR THREE EACH 8" 6"/LARGE PALLET. FOR SHIPMENT OF A SMALLER QUANTITY, SEE "METHOD 36" OR "METHOD 37" ON PAGE 27.
- 2. THE STRUTS OF ONE OR BOTH SIDE BLOCKING ASSEMBLIES, PIECES MARKED ④, MAY BE REPLACED WITH 9" LONG (OR FULL LENGTH) 2" X 4" AND/OR 1" X 4" FILL PIECES IF THE LATERAL SPACE TO BE FILLED IS LESS THAN APPROXIMATELY 8". NAIL EACH FILL PIECE W/2 APPLICABLY SIZED NAILS.

**LOAD AS SHOWN**

ITEM	QUANTITY	WEIGHT (APPROX)
155MM, 8"/SMALL PALLET	5	4,000 LBS
DUNNAGE		79 LBS
<b>TOTAL WEIGHT</b>		<b>4,079 LBS (APPROX)</b>



**METHOD 34**

UNIT SIZE IS 13-1/2" LONG BY 27" WIDE BY 31-1/2" HIGH.

**KEY NUMBERS**

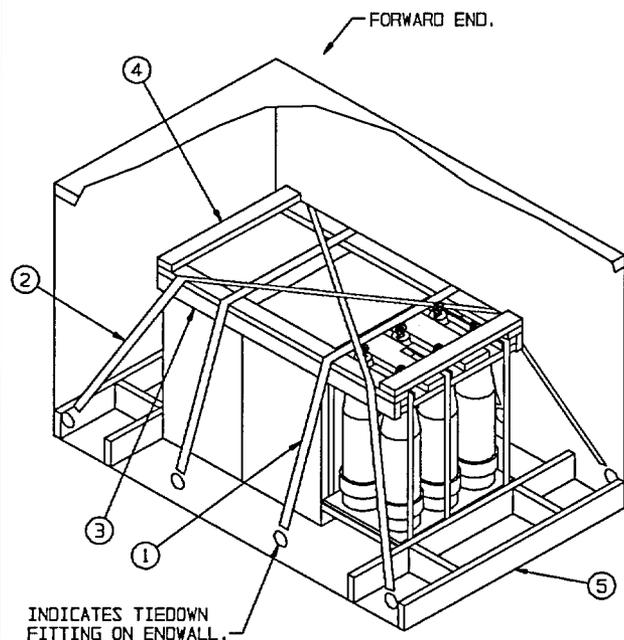
- ① WEB STRAP ASSEMBLY (FOR LONGITUDINAL RETENTION) (2 REQD). FASTEN ONE END TO A TIE-DOWN FITTING ON THE PORTABLE CARGO COMPARTMENT ENDWALL OR FLOOR, GO OVER TOP OF EDGE BOARD ASSEMBLY AND FASTEN OTHER END TO A TIE-DOWN FITTING ON THE OPPOSITE ENDWALL OR FLOOR.
- ② WEB STRAP ASSEMBLY (FOR LONGITUDINAL RETENTION) (2 REQD). FASTEN ONE END TO A TIE-DOWN FITTING ON THE PORTABLE CARGO COMPARTMENT ENDWALL OR FLOOR, GO DIAGONALLY OVER TOP OF EDGE BOARD ASSEMBLY AND FASTEN OTHER END TO A TIE-DOWN FITTING ON THE OPPOSITE ENDWALL OR FLOOR.
- ③ EDGE BOARD ASSEMBLY (2 REQD). SEE THE DETAIL ON PAGE 43.
- ④ TIE PIECE, 2" X 4" BY A LENGTH TO SUIT (2 REQD). NAIL TO THE EDGE BOARD ASSEMBLY W/3-10d NAILS AT EACH END.
- ⑤ SIDE BLOCKING ASSEMBLY (2 REQD). SEE THE "SIDE BLOCKING ASSEMBLY C" DETAIL ON PAGE 48.

**SPECIAL NOTE:**

- 1. A 3-PALLET LOAD OF 8" SLP 6"/SMALL PALLET IS SHOWN AS TYPICAL IN A PORTABLE CARGO COMPARTMENT EQUIPPED WITH WEB STRAP ASSEMBLIES. THIS METHOD IS ALSO APPLICABLE FOR SHIPMENT OF FOUR EACH 155MM 8"/SMALL PALLET OR 8"/LARGE PALLET, THREE EACH 175MM 6"/PALLET, SIX EACH 8" 3"/PALLET, THREE EACH 8" 6" PER TALL/SMALL PALLET, OR TWO EACH 8" 6"/LARGE PALLET. FOR SHIPMENT OF A SMALLER QUANTITY, SEE "METHOD 36" OR "METHOD 37" ON PAGE 27. FOR SHIPMENT OF A LARGER QUANTITY, SEE "METHOD 34" ABOVE.

**LOAD AS SHOWN**

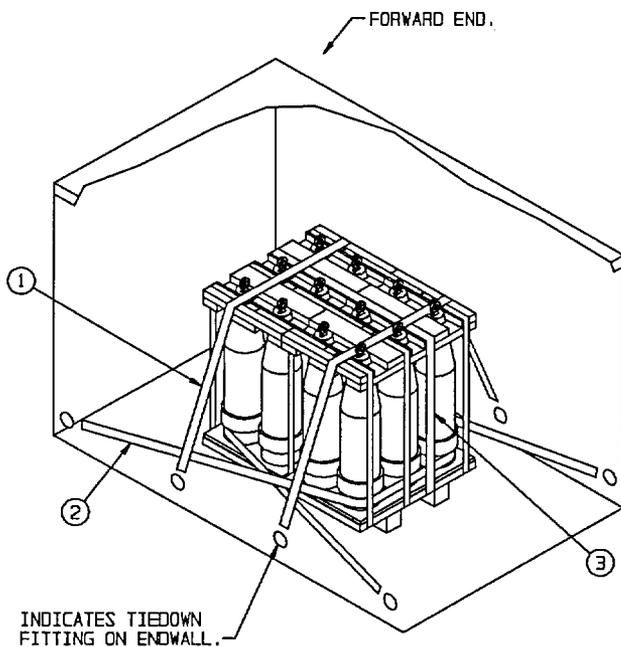
ITEM	QUANTITY	WEIGHT (APPROX)
8", 6"/SMALL PALLET	3	3,768 LBS
DUNNAGE		65 LBS
<b>TOTAL WEIGHT</b>		<b>3,833 LBS (APPROX)</b>



**METHOD 35**

UNIT SIZE IS 19-1/2" LONG BY 28-1/2" WIDE BY 38-1/2" HIGH.

**SEPARATE LOADING PROJECTILES  
TYPICAL LOADS BRACED WITH WEB STRAP ASSEMBLIES**



**METHOD 36**

UNIT SIZE IS 19-1/2" LONG BY 28-1/2" WIDE BY 38-1/2" HIGH.

**KEY NUMBERS**

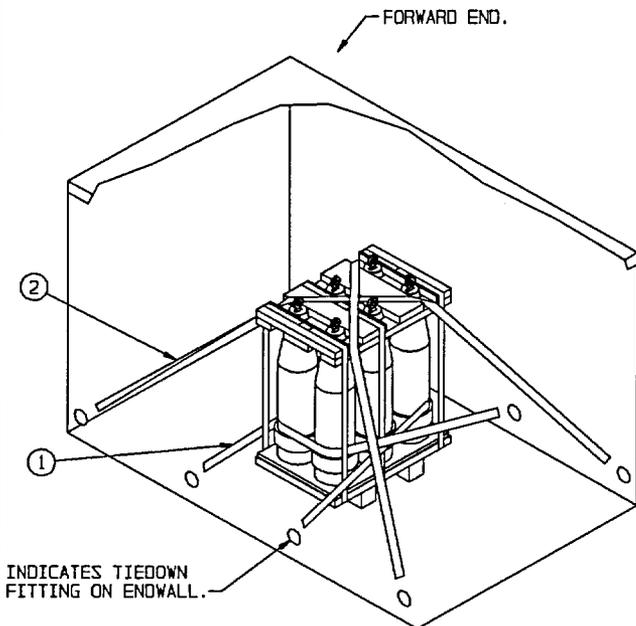
- ① WEB STRAP ASSEMBLY (FOR LONGITUDINAL RETENTION) (2 REQD). FASTEN ONE END TO A TIE-DOWN FITTING ON THE PORTABLE CARGO COMPARTMENT ENDWALL OR FLOOR, GO OVER TOP OF PALLET AND FASTEN OTHER END TO A TIE-DOWN FITTING ON THE OPPOSITE ENDWALL OR FLOOR.
- ② WEB STRAP ASSEMBLY (FOR LATERAL RETENTION) (2 REQD). FASTEN ONE END TO A TIE-DOWN FITTING ON THE PORTABLE CARGO COMPARTMENT ENDWALL OR FLOOR, GO AROUND BASE OF PROJECTILES (UNDER THE UNIT STRAPS) TO A TIE-DOWN FITTING ON THE OPPOSITE ENDWALL OR FLOOR.
- ③ WEB STRAP ASSEMBLY (UNITIZING) (1 REQD).

**SPECIAL NOTES:**

- 1. A 2-PALLET LOAD OF 8" SLP 6" SMALL PALLET IS SHOWN AS TYPICAL IN A PORTABLE CARGO COMPARTMENT EQUIPPED WITH WEB STRAP ASSEMBLIES. THIS METHOD IS ALSO APPLICABLE FOR SHIPMENT OF TWO OR THREE EACH 155MM 8" SMALL OR 8" LARGE PALLET, TWO EACH 175MM 6" PALLET, TWO TO FIVE EACH 8" 3" PALLET, TWO EACH 6 PER TALL SMALL PALLET OR TWO EACH 8" 6" LARGE PALLET. FOR SHIPMENT OF A SINGLE PALLET UNIT, SEE "METHOD 37" BELOW. FOR SHIPMENT OF A LARGER QUANTITY, SEE "METHOD 34" OR "METHOD 35" ON PAGE 26.

**LOAD AS SHOWN**

ITEM	QUANTITY	WEIGHT (APPROX)
8", 6" SMALL PALLET	2	2,512 LBS



**METHOD 37**

UNIT SIZE IS 19-1/2" LONG BY 28-1/2" WIDE BY 38-1/2" HIGH.

**KEY NUMBERS**

- ① WEB STRAP ASSEMBLY (FOR LONGITUDINAL RETENTION) (2 REQD). FASTEN ONE END TO A TIE-DOWN FITTING ON THE PORTABLE CARGO COMPARTMENT ENDWALL OR FLOOR, GO AROUND BASE OF PROJECTILES (UNDER THE UNIT STRAPS) AND FASTEN OTHER END TO A TIE-DOWN FITTING ON THE SAME ENDWALL OR FLOOR.
- ② WEB STRAP ASSEMBLY (FOR LATERAL RETENTION) (4 REQD). FASTEN ONE END TO A TIE-DOWN FITTING ON THE PORTABLE CARGO COMPARTMENT ENDWALL OR FLOOR, GO DIAGONALLY OVER TOP OF PALLET AND FASTEN TO A TIEDOWN FITTING ON THE OPPOSITE ENDWALL OF FLOOR.

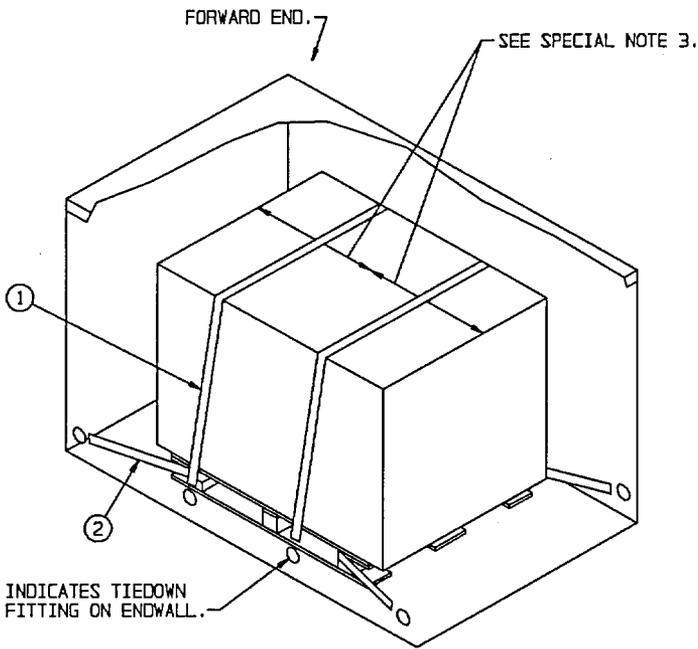
**SPECIAL NOTE:**

- 1. A 1-PALLET LOAD OF 8" SLP 6" SMALL PALLET IS SHOWN AS TYPICAL IN A PORTABLE CARGO COMPARTMENT EQUIPPED WITH WEB STRAP ASSEMBLIES. THIS METHOD IS APPLICABLE FOR SHIPMENT OF ONE PALLET OF ANY PROJECTILE.

**LOAD AS SHOWN**

ITEM	QUANTITY	WEIGHT (APPROX)
8", 6" SMALL PALLET	1	1,256 LBS

**SEPARATE LOADING PROJECTILES  
TYPICAL LOADS BRACED WITH WEB STRAP ASSEMBLIES**



**METHOD 38**

UNIT SIZE IS 40" LONG BY 55" WIDE BY 44-7/8" HIGH.

**KEY NUMBERS**

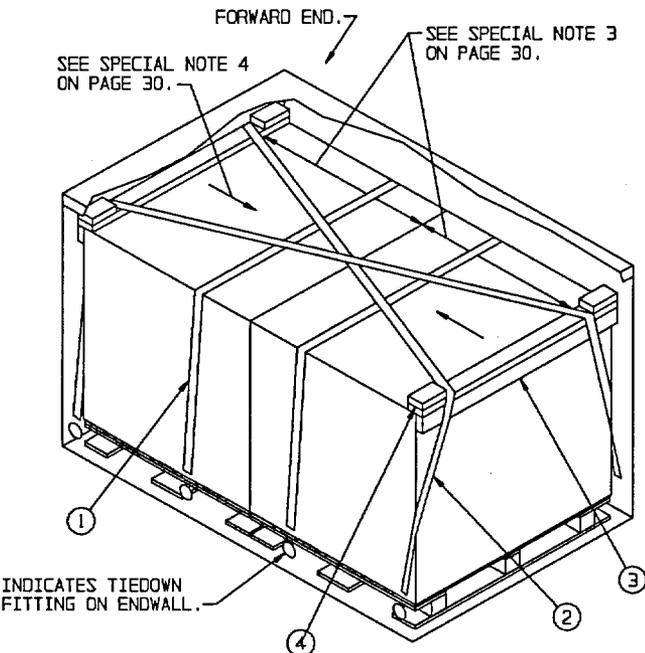
- ① WEB STRAP ASSEMBLY (FOR LONGITUDINAL RETENTION) (2 REQD). FASTEN ONE END TO A TIE-DOWN FITTING ON THE PORTABLE CARGO COMPARTMENT ENDWALL OR FLOOR, GO OVER TOP OF PALLET AND FASTEN OTHER END TO A TIE-DOWN FITTING ON THE OPPOSITE ENDWALL OR FLOOR. SEE SPECIAL NOTE 2 BELOW.
- ② WEB STRAP ASSEMBLY (FOR LATERAL RETENTION) (2 REQD). FASTEN ONE END TO A TIE-DOWN FITTING ON THE PORTABLE CARGO COMPARTMENT ENDWALL OR FLOOR, GO UNDER TOP DECK OF PALLET AND BEHIND SUPPORT BLOCKS. FASTEN OTHER END TO A TIE-DOWN FITTING ON THE OPPOSITE ENDWALL OR FLOOR.

**SPECIAL NOTES:**

- 1. A 1-PALLET LOAD OF 155MM, M4 (D541) PROPELLING CHARGES IN M13 CONTAINERS IS SHOWN AS TYPICAL IN A PORTABLE CARGO COMPARTMENT EQUIPPED WITH WEB STRAP ASSEMBLIES. THIS METHOD IS ALSO APPLICABLE FOR PROPELLING CHARGES PACKED IN M10, M18, M19, M460, PA93, AND PA106 CONTAINERS.
- 2. IF THE EXCESS SPACE BETWEEN THE LADING AND THE END OF THE PORTABLE CARGO COMPARTMENT IS LESS THAN 12", HOOK TWO WEB STRAP ASSEMBLIES TOGETHER IN SUCH A MANNER THAT THE RATCHETS WILL BE POSITIONED ON TOP OF THE PALLET TO FACILITATE TIGHTENING OF THE WEB STRAP ASSEMBLIES. SEE "DETAIL A" ON PAGE 50.
- 3. THE ARROWS INDICATE THE LENGTH OF PROPELLING CHARGE CONTAINERS AS THEY ARE POSITIONED ON THE PALLET.

**LOAD AS SHOWN**

ITEM	QUANTITY	WEIGHT (APPROX)
M13 CONTAINER, PALLETIZED	1	1,761 LBS



**METHOD 39**

UNIT SIZE IS 40-1/2" LONG BY 48" WIDE BY 47" HIGH.

**KEY NUMBERS**

- ① WEB STRAP ASSEMBLY (FOR LONGITUDINAL RETENTION) (2 REQD). FASTEN ONE END TO A TIE-DOWN FITTING ON THE PORTABLE CARGO COMPARTMENT ENDWALL OR FLOOR, GO OVER TOP OF PALLET AND FASTEN OTHER END TO A TIE-DOWN FITTING ON THE OPPOSITE ENDWALL OR FLOOR. SEE SPECIAL NOTE 2 ON PAGE 30.
- ② WEB STRAP ASSEMBLY (FOR LATERAL RETENTION) (2 REQD). FASTEN ONE END TO A TIE-DOWN FITTING ON THE PORTABLE CARGO COMPARTMENT ENDWALL OR FLOOR, GO DIAGONALLY OVER TOP OF EDGE BOARD ASSEMBLIES AND FASTEN OTHER END TO A TIE-DOWN FITTING ON THE OPPOSITE ENDWALL OR FLOOR.
- ③ EDGE BOARD ASSEMBLY (2 REQD). SEE THE DETAIL ON PAGE 43. SEE SPECIAL NOTE 4 ON PAGE 30.
- ④ STRAP RETAINER PIECE, 2" X 4" X 6" (4 REQD). POSITION AT EACH END OF EDGE BOARD ASSEMBLY, PIECE MARKED ③. NAIL W/2-10d NAILS.

**SPECIAL NOTES:**

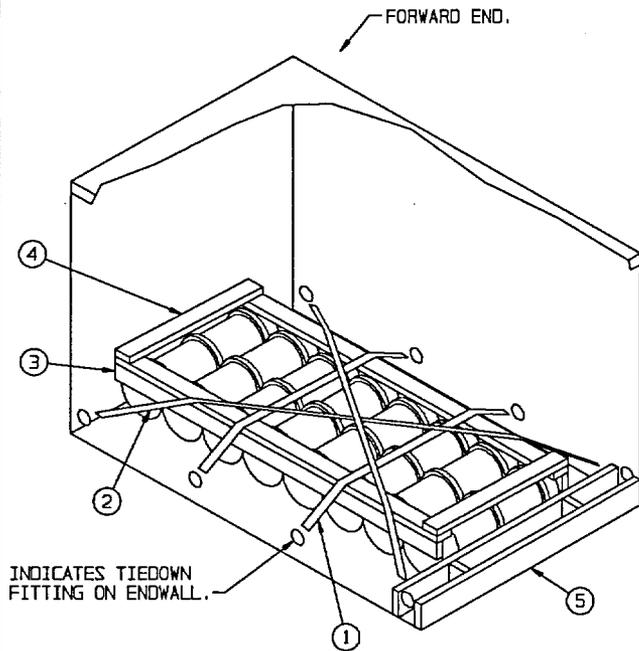
- 1. A 2-PALLET LOAD OF 155MM, M3 (D540) PROPELLING CHARGES IN M14 CONTAINERS IS SHOWN AS TYPICAL IN A PORTABLE CARGO COMPARTMENT EQUIPPED WITH WEB STRAP ASSEMBLIES. THIS METHOD IS ALSO APPLICABLE FOR PROPELLING CHARGES PACKED IN M16, PA37, PA66, PA68, PA75, PA91, PA92, PA94, PA95, PA96, PA97, PA99, PA100, PA103 AND PA107 CONTAINERS.

(CONTINUED ON PAGE 30)

**LOAD AS SHOWN**

ITEM	QUANTITY	WEIGHT (APPROX)
M14 CONTAINER, PALLETIZED	2	2,866 LBS

**PALLETIZED PROPELLING CHARGES  
TYPICAL LOADS BRACED WITH WEB STRAP ASSEMBLIES**



**METHOD 40**

CONTAINER SIZE IS 29-9/32" LONG BY 9-13/16" DIAMETER.

**KEY NUMBERS**

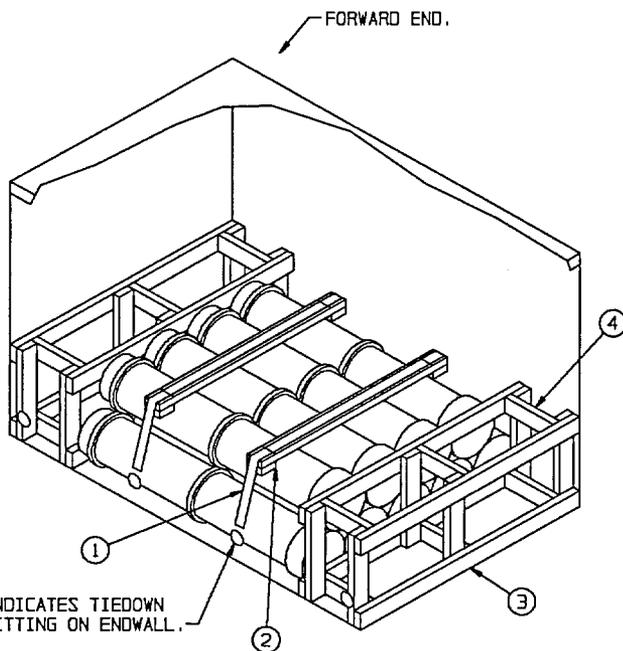
- ① WEB STRAP ASSEMBLY (FOR LONGITUDINAL RETENTION AND HOLD-DOWN) (2 REQD). FASTEN ONE END TO A TIE-DOWN FITTING ON THE PORTABLE CARGO COMPARTMENT ENDWALL OR FLOOR, GO STRAIGHT OVER TOP OF INDIVIDUAL PROPELLING CHARGE CONTAINERS AND THE EDGE BOARD ASSEMBLY, AND FASTEN OTHER END TO A TIE-DOWN FITTING ON THE OPPOSITE ENDWALL OR FLOOR.
- ② WEB STRAP ASSEMBLY (FOR LONGITUDINAL RETENTION AND HOLD-DOWN) (2 REQD). FASTEN ONE END TO A TIE-DOWN FITTING ON THE PORTABLE CARGO COMPARTMENT ENDWALL OR FLOOR, GO DIAGONALLY OVER TOP OF INDIVIDUAL PROPELLING CHARGE CONTAINERS AND THE EDGE BOARD ASSEMBLY, AND FASTEN OTHER END TO A TIE-DOWN FITTING ON THE OPPOSITE ENDWALL OR FLOOR.
- ③ EDGE BOARD ASSEMBLY (2 REQD). SEE THE DETAIL ON PAGE 43.
- ④ TIE PIECE, 2" X 4" BY A LENGTH TO SUIT (2 REQD), NAIL TO "EDGE BOARD ASSEMBLY" W/3-10d NAILS AT EACH END.
- ⑤ SIDE BLOCKING ASSEMBLY (1 REQD). SEE THE "SIDE BLOCKING ASSEMBLY C" DETAIL ON PAGE 48.

**SPECIAL NOTE:**

- 1. A LOAD OF EIGHT 155MM, M19 (D480) PROPELLING CHARGES PACKED IN M16 CONTAINERS IS SHOWN AS TYPICAL IN A PORTABLE CARGO COMPARTMENT EQUIPPED WITH WEB STRAP ASSEMBLIES. THIS METHOD IS APPLICABLE FOR ALL PROPELLING CHARGE CONTAINERS EXCEPT THE M10 AND M460 CONTAINERS, UNLESS THE PORTABLE CARGO COMPARTMENT IS AT LEAST 56" LONG.

**LOAD AS SHOWN**

ITEM	QUANTITY	WEIGHT (APPROX)
M19 CONTAINER, INDIVIDUAL CONTAINERS	8	416 LBS
DUNNAGE		66 LBS
<b>TOTAL WEIGHT</b>		<b>510 LBS (APPROX)</b>



**METHOD 41**

CONTAINER SIZE IS 55-3/8" LONG BY 10-1/2" DIAMETER.

**KEY NUMBERS**

- ① WEB STRAP ASSEMBLY (FOR LONGITUDINAL RETENTION AND HOLD-DOWN) (2 REQD). FASTEN ONE END TO A TIE-DOWN FITTING ON THE PORTABLE CARGO COMPARTMENT ENDWALL OR FLOOR, GO OVER TOP OF INDIVIDUAL PROPELLING CHARGE CONTAINERS AND STRAPPING BOARD. FASTEN OTHER END TO A TIE-DOWN FITTING ON THE OPPOSITE ENDWALL OR FLOOR. SECURE TO THE STRAPPING BOARD W/2 STAPLES.
- ② STRAPPING BOARD (2 REQD). SEE THE DETAIL ON PAGE 43.
- ③ GATE ASSEMBLY (4 REQD). SEE THE "GATE ASSEMBLY B" DETAIL ON PAGE 44.
- ④ STRUT, 2" X 4" BY CUT TO FIT (12 REQD). NAIL TO "GATE ASSEMBLY B" W/2-10d NAILS AT EACH END.

**SPECIAL NOTE:**

- 1. A LOAD OF NINE 8", M2 (D676) PROPELLING CHARGES IN M10 CONTAINERS IS SHOWN AS TYPICAL IN A PORTABLE CARGO COMPARTMENT EQUIPPED WITH WEB STRAP ASSEMBLIES. THIS METHOD IS ALSO APPLICABLE FOR PROPELLING CHARGES PACKED IN M460 CONTAINERS. THIS METHOD MAY BE USED FOR ANY PROPELLING CHARGE CONTAINER ALTHOUGH "METHOD 40" MAY BE MORE PRACTICAL.

**LOAD AS SHOWN**

ITEM	QUANTITY	WEIGHT (APPROX)
M10 CONTAINER, INDIVIDUAL CONTAINERS	9	1,089 LBS
DUNNAGE		102 LBS
<b>TOTAL WEIGHT</b>		<b>1,191 LBS (APPROX)</b>

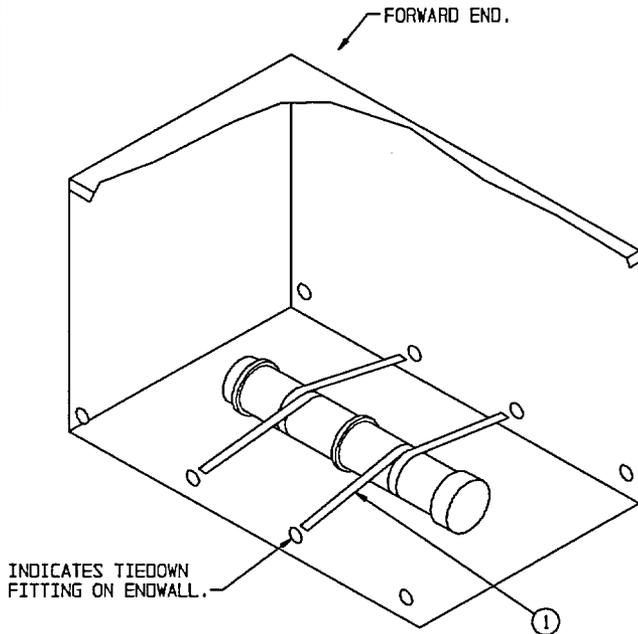
**INDIVIDUAL PROPELLING CHARGES  
TYPICAL LOADS BRACED WITH WEB STRAP ASSEMBLIES**

KEY NUMBER

- ① WEB STRAP ASSEMBLY (FOR LONGITUDINAL AND LATERAL RETENTION (2 REQD)). FASTEN ONE END TO A TIE-DOWN FITTING ON THE PORTABLE CARGO COMPARTMENT ENDWALL OR FLOOR, WRAP AROUND THE INDIVIDUAL PROPELLING CHARGE CONTAINER AND FASTEN OTHER END TO A TIE-DOWN FITTING ON THE OPPOSITE ENDWALL OR FLOOR.

SPECIAL NOTE:

1. A LOAD OF ONE INDIVIDUAL PROPELLING CHARGE IN M10 CONTAINER IS SHOWN AS TYPICAL IN A PORTABLE CARGO COMPARTMENT EQUIPPED WITH WEB STRAP ASSEMBLIES. THIS METHOD IS APPLICABLE FOR ALL PROPELLING CHARGE CONTAINERS.



METHOD 42

CONTAINER SIZE IS 55-3/8" LONG BY 10-1/2" DIAMETER.

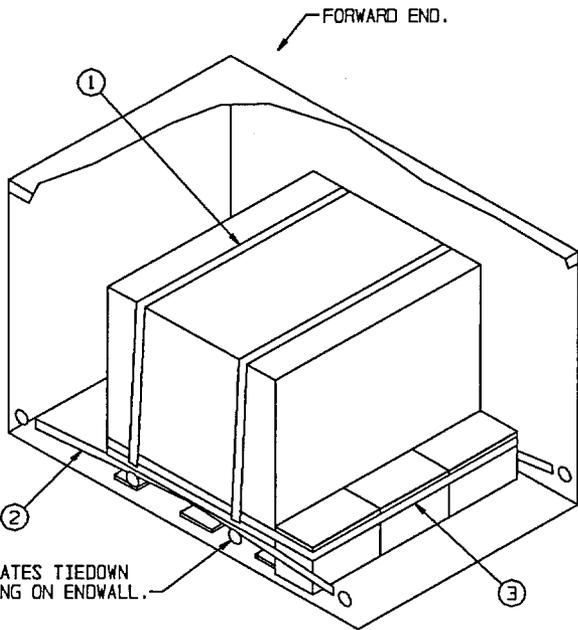
LOAD AS SHOWN

<u>ITEM</u>	<u>QUANTITY</u>	<u>WEIGHT (APPROX)</u>
M10 CONTAINER, INDIVIDUAL CONTAINER	-- 1 - - - - -	121 LBS

(SPECIAL NOTES CONTINUED FROM METHOD 39)

2. IF THE EXCESS SPACE BETWEEN THE LADING AND THE END OF THE PORTABLE CARGO COMPARTMENT IS LESS THAN 12", HOOK TWO WEB STRAP ASSEMBLIES TOGETHER IN SUCH A MANNER THAT THE RATCHETS WILL BE POSITIONED ON TOP OF THE PALLET TO FACILITATE TIGHTENING OF THE WEB STRAP ASSEMBLIES. SEE "DETAIL A" ON PAGE 50.
3. THE ARROWS INDICATE THE LENGTH OF THE PROPELLING CHARGE CONTAINERS AS THEY ARE POSITIONED ON THE PALLET.
4. EDGE BOARD ASSEMBLIES, PIECE MARKED ③, ARE REQUIRED FOR ALTERNATED CONTAINERS UNITS FOR CHARGES PACKED IN M14, PA66 AND PA68 CONTAINERS. EDGE BOARD ASSEMBLIES ARE NOT REQUIRED FOR THE FLAT AND ROUTED DUNNAGE METHOD UNITS FOR THE M14, PA37, PA66, PA68, PA92 AND PA94 CONTAINERS WHEN THE PALLET UNITS ARE POSITIONED WITH THE BELL END OF THE CONTAINERS TOWARD THE CENTER OF THE WIDTHH OF THE PORTABLE CARGO COMPARTMENT. THE EDGE BOARD ASSEMBLIES ARE NOT REQUIRED FOR THE PA91, PA96, PA99, PA100, PA103 AND PA107 CONTAINER UNITS AS LONG AS THE CONTAINERS ARE CROSSWISE AS INDICATED BY SPECIAL NOTE 3.

INDIVIDUAL PROPELLING CHARGE  
TYPICAL LOAD BRACED WITH WEB STRAP ASSEMBLIES



**METHOD 43**

UNIT SIZE IS 41" LONG BY 50-1/4" WIDE BY 42" HIGH. BOX SIZE IS 16-3/4" LONG BY 10-1/4" WIDE BY 9-1/8" HIGH.

**KEY NUMBERS**

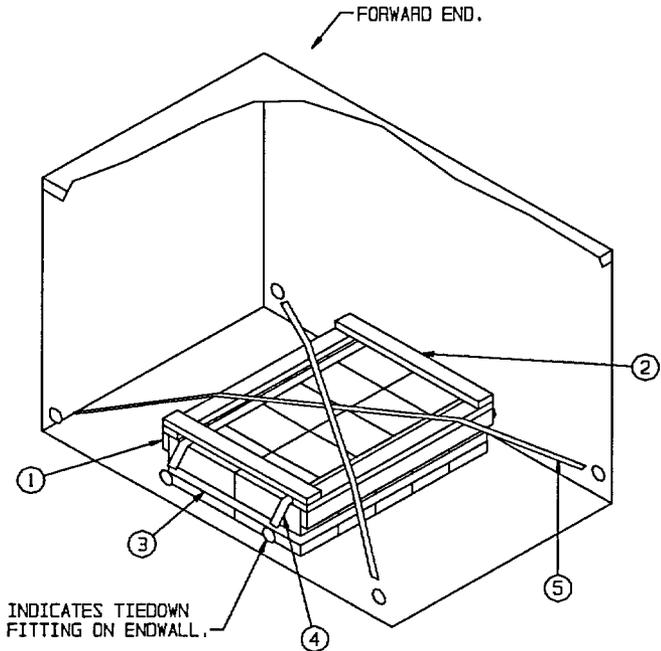
- ① WEB STRAP ASSEMBLY (FOR LONGITUDINAL RETENTION) (2 REOD). FASTEN ONE END TO A TIE-DOWN FITTING ON THE PORTABLE CARGO COMPARTMENT ENDWALL OR FLOOR, GO OVER TOP OF PALLET UNIT AND FASTEN OTHER END TO A TIE-DOWN FITTING ON THE OPPOSITE ENDWALL OR FLOOR. SEE SPECIAL NOTE 2 BELOW.
- ② WEB STRAP ASSEMBLY (FOR LATERAL RETENTION) (2 REOD). FASTEN ONE END TO A TIE-DOWN FITTING ON THE PORTABLE CARGO COMPARTMENT ENDWALL OR FLOOR, GO AROUND BASE OF LADING AND FASTEN OTHER END TO A TIE-DOWN FITTING ON THE OPPOSITE ENDWALL OR FLOOR.
- ③ WEB STRAP ASSEMBLY (FOR RETAINING INDIVIDUAL BOXES) (1 REOD). POSITION AROUND SKIDDED UNIT OR PALLET UNIT AND INDIVIDUAL BOXES, HOOK ENDS TOGETHER AND TIGHTEN.

**SPECIAL NOTES:**

- 1. A 1-UNIT LOAD AND THREE INDIVIDUAL BOXES ARE SHOWN AS TYPICAL IN A PORTABLE CARGO COMPARTMENT EQUIPPED WITH WEB STRAP ASSEMBLIES.
- 2. IF THE EXCESS SPACE BETWEEN THE LADING AND THE END WALL OF THE PORTABLE CARGO COMPARTMENT IS LESS THAN 12", HOOK TWO WEB STRAP ASSEMBLIES TOGETHER IN SUCH A MANNER THAT THE RATCHETS WILL BE POSITIONED ON TOP OF THE LADING TO FACILITATE TIGHTENING OF THE WEB STRAP ASSEMBLIES. SEE "DETAIL A" ON PAGE 50.

**LOAD AS SHOWN**

ITEM	QUANTITY	WEIGHT (APPROX)
PALLET UNIT	1	3,931 LBS
INDIVIDUAL BOXES	3	240 LBS
<b>TOTAL WEIGHT</b>		<b>4,171 LBS (APPROX)</b>



**METHOD 44**

BOX SIZE IS 16-3/4" LONG BY 10-1/4" WIDE BY 9-1/8" HIGH.

**KEY NUMBERS**

- ① EDGE BOARD ASSEMBLY (2 REOD). SEE THE DETAIL ON PAGE 43.
- ② TIE PIECE, 2" X 4" BY A LENGTH TO SUIT (2 REOD). NAIL TO "EDGE BOARD ASSEMBLY" W/3-10d NAILS AT EACH END.
- ③ WEB STRAP ASSEMBLY (FOR UNITIZING INDIVIDUAL BOXES) (1 REOD). POSITION AROUND INDIVIDUAL BOXES, HOOK ENDS TOGETHER AND TIGHTEN.
- ④ WEB STRAP ASSEMBLY (FOR LONGITUDINAL RETENTION) (2 REOD). FASTEN ONE END TO A TIE-DOWN FITTING ON THE PORTABLE CARGO COMPARTMENT ENDWALL OR FLOOR, GO OVER TOP OF LADING AND FASTEN OTHER END TO A TIE-DOWN FITTING ON THE OPPOSITE ENDWALL OR FLOOR.
- ⑤ WEB STRAP ASSEMBLY (FOR LATERAL RETENTION) (2 REOD). FASTEN ONE END TO A TIE-DOWN FITTING ON THE PORTABLE CARGO COMPARTMENT ENDWALL OR FLOOR, GO DIAGONALLY OVER TOP OF LADING AND FASTEN OTHER END TO A TIE-DOWN FITTING ON THE OPPOSITE ENDWALL OR FLOOR.

**SPECIAL NOTE:**

- 1. A LOAD OF TEN BOXES IS SHOWN AS TYPICAL IN A PORTABLE CARGO COMPARTMENT EQUIPPED WITH WEB STRAP ASSEMBLIES.

**LOAD AS SHOWN**

ITEM	QUANTITY	WEIGHT (APPROX)
INDIVIDUAL BOXES	10	800 LBS
DUNNAGE		29 LBS
<b>TOTAL WEIGHT</b>		<b>829 LBS (APPROX)</b>

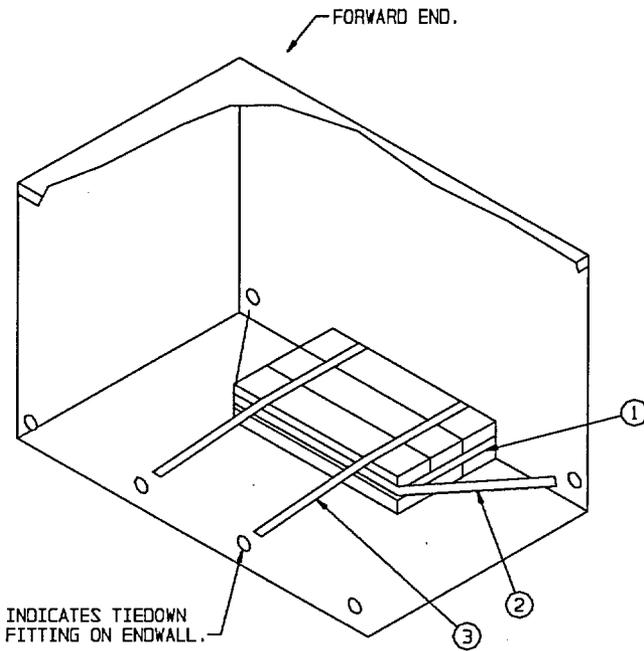
**PALLETIZED AND INDIVIDUAL BOXES  
TYPICAL LOADS BRACED WITH WEB STRAP ASSEMBLIES**

KEY NUMBERS

- ① WEB STRAP ASSEMBLY (FOR UNITIZING) (1 REQD). POSITION AROUND BOXES, FASTEN ENDS TOGETHER AND TIGHTEN.
- ② WEB STRAP ASSEMBLY (FOR LONGITUDINAL AND LATERAL RETENTION) (1 REQD). FASTEN ONE END TO A TIE-DOWN FITTING ON THE PORTABLE CARGO COMPARTMENT ENDWALL OR FLOOR, GO AROUND BOXES AND FASTEN OTHER END TO A TIE-DOWN FITTING ON THE SAME ENDWALL OR FLOOR.
- ③ WEB STRAP ASSEMBLY (FOR HOLD DOWN) (2 REQD). FASTEN ONE END TO A TIE-DOWN FITTING ON THE PORTABLE CARGO COMPARTMENT ENDWALL OR FLOOR, GO OVER TOP OF BOXES AND FASTEN OTHER END TO A TIE-DOWN FITTING ON THE OPPOSITE ENDWALL OR FLOOR.

SPECIAL NOTE:

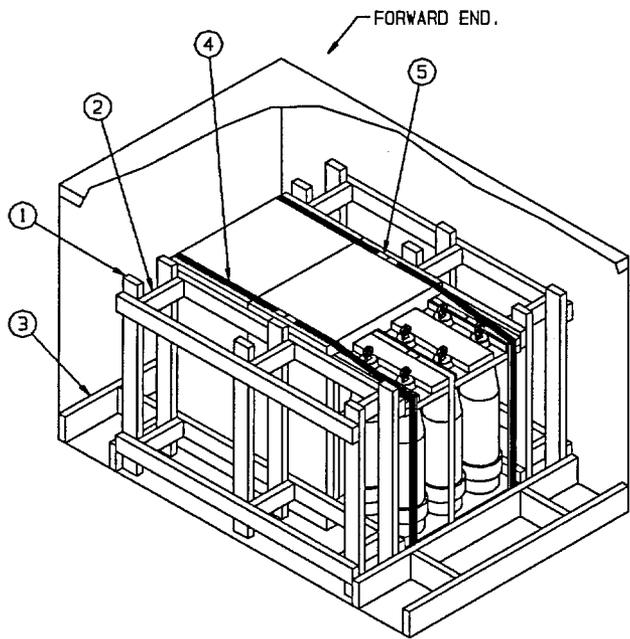
- 1. A LOAD OF THREE WOODEN BOXES IS SHOWN AS TYPICAL IN A PORTABLE CARGO COMPARTMENT EQUIPPED WITH WEB STRAP ASSEMBLIES.



METHOD 45

BOX SIZE IS 40" LONG BY 8" WIDE BY 8" HIGH.

INTENTIONALLY LEFT BLANK



**METHOD 46**

UNIT SIZE IS 19-1/2" LONG BY 28-1/2" WIDE BY 38-1/2" HIGH.

**KEY NUMBERS**

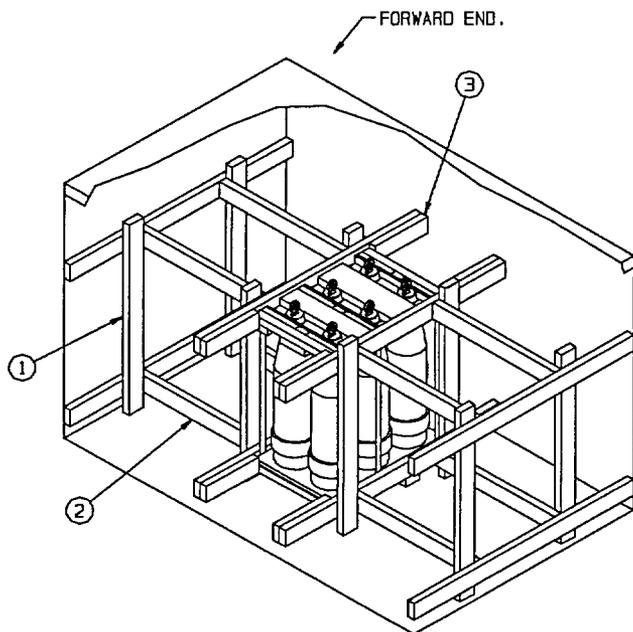
- ① GATE ASSEMBLY (4 REED). SEE THE "GATE ASSEMBLY C" DETAIL ON PAGE 44.
- ② STRUT, 2" X 4" BY CUT TO FIT (12 REED). NAIL TO "GATE ASSEMBLY C" W/2-10d NAILS AT EACH END.
- ③ SIDE BLOCKING ASSEMBLY (2 REED). SEE THE "SIDE BLOCKING ASSEMBLY C" DETAIL ON PAGE 48.
- ④ BUNDLING STRAP, 1-1/4" X .035" OR .031" BY A LENGTH TO SUIT (2 REED). SEE GENERAL NOTE "N" ON PAGE 3.
- ⑤ SEAL FOR 1-1/4" STRAPPING (4 REED, 2 PER STRAP).

**SPECIAL NOTE:**

- 1. A 3-PALLET LOAD OF 8" SLP 6/SMALL PALLET IS SHOWN AS TYPICAL IN A PORTABLE CARGO COMPARTMENT.

**LOAD AS SHOWN**

ITEM	QUANTITY	WEIGHT (APPROX)
8", 6/SMALL PALLET	3	3,768 LBS
DUNNAGE		171 LBS
<b>TOTAL WEIGHT</b>		<b>3,939 LBS (APPROX)</b>



**METHOD 47**

UNIT SIZE IS 19-1/2" LONG BY 28-1/2" WIDE BY 38-1/2" HIGH.

**KEY NUMBERS**

- ① GATE ASSEMBLY (4 REED). SEE THE "GATE ASSEMBLY A" DETAIL ON PAGE 43.
- ② STRUT, 2" X 4" BY CUT TO FIT (8 REED). NAIL TO "GATE ASSEMBLY A" W/2-10d NAILS AT EACH END.
- ③ RETAINER BLOCK, 2" X 4" BY CUT TO FIT (8 REED). NAIL TO "GATE ASSEMBLY A" W/3-10d NAILS.

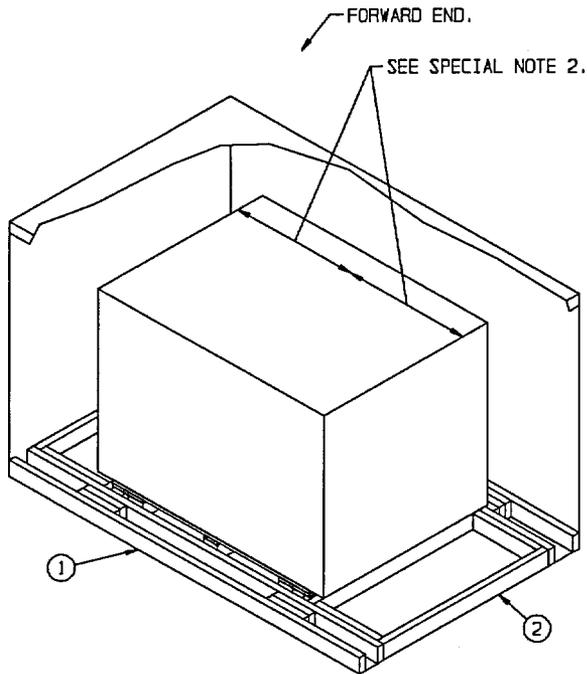
**SPECIAL NOTE:**

- 1. A 1-PALLET LOAD OF 8" SLP 6/SMALL PALLET IS SHOWN AS TYPICAL IN A PORTABLE CARGO COMPARTMENT.

**LOAD AS SHOWN**

ITEM	QUANTITY	WEIGHT (APPROX)
8", 6/SMALL PALLET	1	800 LBS
DUNNAGE		125 LBS
<b>TOTAL WEIGHT</b>		<b>925 LBS (APPROX)</b>

SEPARATE LOADING PROJECTILES  
TYPICAL LOADS BRACED WITH CONVENTIONAL TYPE DUNNAGE



**METHOD 48**

UNIT SIZE IS 40' LONG BY 55' WIDE BY 44-7/8' HIGH.

**KEY NUMBERS**

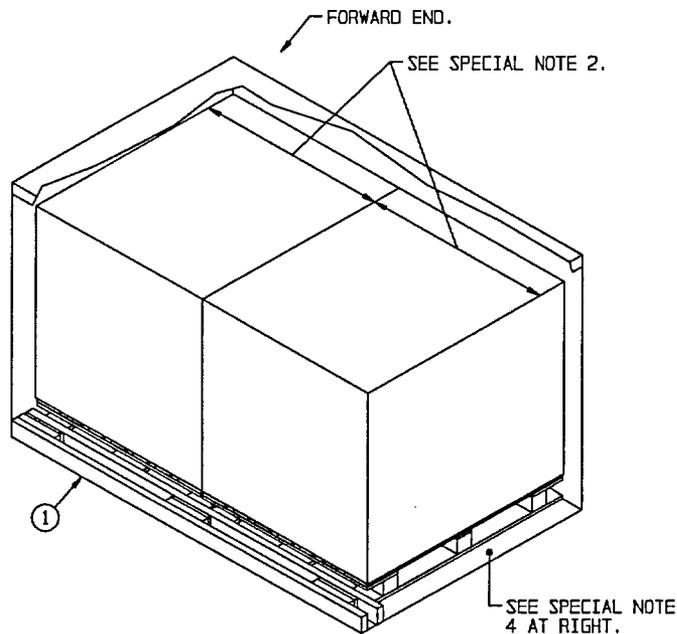
- ① SOLID FILL ASSEMBLY (2 REQD). SEE THE "SOLID FILL ASSEMBLY A" DETAIL ON PAGE 45. SEE SPECIAL NOTE 3 BELOW.
- ② SIDE BLOCKING ASSEMBLY (2 REQD). SEE THE "SIDE BLOCKING ASSEMBLY D" DETAIL ON PAGE 48.

**SPECIAL NOTES:**

1. A 1-PALLET LOAD OF 155MM, M4 (D541) PROPELLING CHARGES IN M13 CONTAINERS IS SHOWN AS TYPICAL IN A PORTABLE CARGO COMPARTMENT. THIS METHOD IS ALSO APPLICABLE FOR PROPELLING CHARGES PACKED IN M10, M18, M19, M460, PA93, PA95, PA96, PA97 AND PA106 CONTAINERS.
2. THE ARROWS INDICATE THE LENGTH OF THE PROPELLING CHARGE CONTAINERS AS THEY ARE POSITIONED ON THE PALLET.
3. IF THE SPACES BETWEEN THE PALLET BASE AND THE ENDS OF THE PORTABLE CARGO COMPARTMENT ARE APPROXIMATELY 8" OR MORE, "STRUT FILL ASSEMBLY A" MAY BE USE IN LIEU OF PIECE MARKED ①. SEE THE DETAIL ON PAGE 45. IF THE SPACE IS APPROXIMATELY 4" OR LESS, INDIVIDUAL PIECES OF 2" X 4" AND/OR 1" X 4" MAY BE USED. LAMINATE, IF APPLICABLE, W/4 APPLICABLY SIZED NAILS. NOTE THAT A TOTAL EXCESS SPACE FOR THE LADING OF 1-1/2" OR LESS IS PERMITTED; A TOTAL EXCESS SPACE LARGER THAN 1-1/2" MUST BE BRACED AT THE PALLET LEVEL.

**LOAD AS SHOWN**

ITEM	QUANTITY	WEIGHT (APPROX)
M13 CONTAINER, PALLETIZED	1	1,761 LBS
DUNNAGE		76 LBS
<b>TOTAL WEIGHT</b>		<b>1,837 LBS (APPROX)</b>



**METHOD 49**

UNIT SIZE IS 40-1/2' LONG BY 48' WIDE BY 47' HIGH.

**KEY NUMBERS**

- ① SOLID FILL ASSEMBLY (1 REQD). SEE THE "SOLID FILL ASSEMBLY B" DETAIL ON PAGE 46. SEE SPECIAL NOTE 3 BELOW.

**SPECIAL NOTES:**

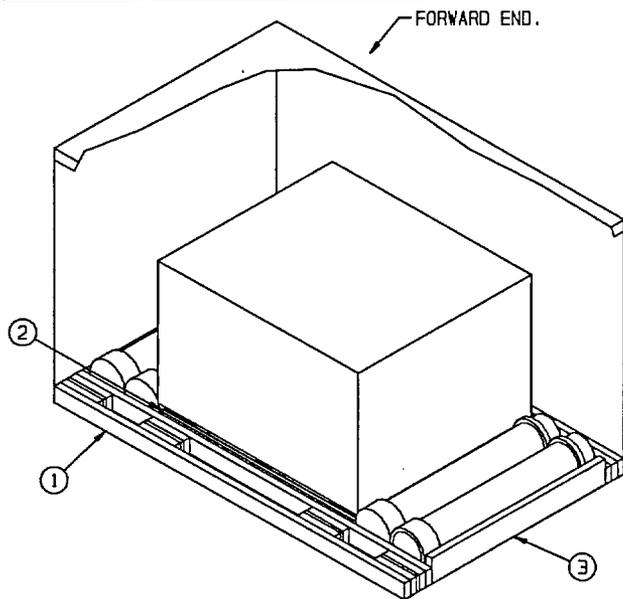
1. A 2-PALLET LOAD OF 155MM, M3 (D540) PROPELLING CHARGES IN M14 CONTAINERS IS SHOWN AS TYPICAL IN A PORTABLE CARGO COMPARTMENT. THIS METHOD IS ALSO APPLICABLE FOR PROPELLING CHARGES PACKED IN M16, PA37, PA66, PA68, PA75, PA91, PA92, PA94, PA96, PA99, PA100, PA103 AND PA107 CONTAINERS.
2. THE ARROWS INDICATE THE LENGTH OF THE PROPELLING CHARGE CONTAINERS AS THEY ARE POSITIONED ON THE PALLET.
3. IF THE SPACE BETWEEN THE PALLET BASE AND THE END OF THE PORTABLE CARGO COMPARTMENT IS APPROXIMATELY 8" OR MORE, "STRUT FILL ASSEMBLY B" MAY BE USED. SEE THE DETAIL ON PAGE 49.
4. IF THE SPACE BETWEEN THE PALLET BASE AND THE DOORS OF THE PORTABLE CARGO COMPARTMENT IS APPROXIMATELY 8" OR MORE, "SIDE BLOCKING ASSEMBLY E" WILL BE USED. SEE THE DETAIL ON PAGE 49. IF THE SPACE IS 6" TO 8", "SOLID FILL ASSEMBLY C" WILL BE USED. SEE THE DETAIL ON PAGE 44. NOTE THAT A TOTAL LATERAL EXCESS SPACE OF 6" IS PERMITTED FOR PALLETS; A TOTAL LATERAL EXCESS SPACE OF MORE THAN 6" MUST BE BRACED AT THE PALLET LEVEL.

**LOAD AS SHOWN**

ITEM	QUANTITY	WEIGHT (APPROX)
M14 CONTAINER, PALLETIZED	2	2,870 LBS
DUNNAGE		44 LBS
<b>TOTAL WEIGHT</b>		<b>2,914 LBS (APPROX)</b>

**PALLETIZED PROPELLING CHARGES**

**TYPICAL LOADS BRACED WITH CONVENTIONAL TYPE DUNNAGE**



**METHOD 50**

UNIT SIZE IS 42-5/8" LONG BY 49" WIDE BY 36-1/4" HIGH.  
CONTAINER SIZE IS 42-21/32" LONG BY 8-13/32" DIAMETER.

**LOAD AS SHOWN**

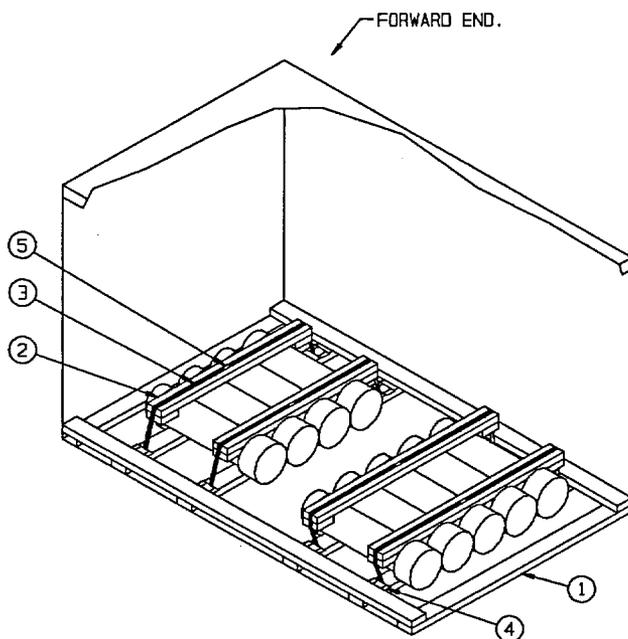
ITEM	QUANTITY	WEIGHT (APPROX)
M14 CONTAINER, PALLETIZED	1	1,435 LBS
INDIVIDUAL CONTAINERS	4	114 LBS
DUNNAGE		105 LBS
<b>TOTAL WEIGHT</b>		<b>1,654 LBS (APPROX)</b>

**KEY NUMBERS**

- ① SOLID FILL ASSEMBLY (2 REOD). SEE THE "SOLID FILL ASSEMBLY A" DETAIL ON PAGE 45. SEE SPECIAL NOTE 2 BELOW.
- ② FILL PIECE, 1" X 4" BY PALLET WIDTH (2 REOD). POSITION SO AS TO ALIGN WITH THE PALLET BASE AND NAIL TO PIECE MARKED ① W/3-6d NAILS. SEE SPECIAL NOTE 3 BELOW.
- ③ SOLID FILL, 6" WIDE BY CONTAINER LENGTH MATERIAL BY A THICKNESS TO SUIT (REQUIRED AT 2 PLACES). AS APPLICABLE, LAMINATE W/2 APPLICABLY SIZED NAILS. SEE SPECIAL NOTE 4 BELOW.

**SPECIAL NOTES:**

1. A 1-PALLET LOAD OF 155MM, M3 (DS40) PROPELLING CHARGES IN M14 CONTAINERS AND FOUR INDIVIDUAL M14 PROPELLING CHARGE CONTAINERS ARE SHOWN AS TYPICAL IN A PORTABLE CARGO COMPARTMENT. THIS METHOD IS ALSO APPLICABLE FOR PROPELLING CHARGES PACKED IN M16, PA37, PA66, PA68, PA75, PA91, PA92, PA94, PA96, PA99, PA100, PA103 AND PA107 CONTAINERS.
2. THE SOLID FILL ASSEMBLIES, PIECE MARKED ①, WILL BE CONSTRUCTED TO APPROXIMATELY FIT THE VOID BETWEEN THE ENDS OF THE INDIVIDUAL CONTAINERS AND THE ENDWALL OF THE PORTABLE CARGO COMPARTMENT.
3. THE FILL PIECE, PIECE MARKED ②, IS ONLY REQUIRED WHEN SHIPPING PROPELLING CHARGES PACKED IN M16, PA66, PA68 AND PA103 CONTAINERS.
4. IF THE SPACE AT THE SIDE OF THE LOAD BETWEEN THE INDIVIDUAL CONTAINERS AND THE DOOR OF THE PORTABLE CARGO COMPARTMENT IS APPROXIMATELY 8" OR MORE, "SIDE BLOCKING ASSEMBLY A" WILL BE USED. SEE THE DETAIL ON PAGE 45.



**METHOD 51**

CONTAINER SIZE IS 27-1/2" LONG BY 7-25/32" DIAMETER.

**LOAD AS SHOWN**

ITEM	QUANTITY	WEIGHT (APPROX)
M13 CONTAINER, INDIVIDUAL CONTAINERS	9	275 LBS
DUNNAGE		80 LBS
<b>TOTAL WEIGHT</b>		<b>355 LBS (APPROX)</b>

**KEY NUMBERS**

- ① RETAINER ASSEMBLY (1 REOD). SEE THE "RETAINER ASSEMBLY A" DETAIL ON PAGE 48.
- ② STRAPPING BOARD (4 REOD). SEE THE DETAIL ON PAGE 43.
- ③ HOLD-DOWN STRAP, 3/4" X .035" OR .031" BY A LENGTH TO SUIT (4 REOD). STAPLE TO THE STRAPPING BOARD W/2 EACH 3/4" STAPLES. SEE GENERAL NOTE "N" ON PAGE 3. SEE THE "APPLICATION OF STRAPPING TO STRAP ANCHOR PLATE" DETAIL ON PAGE 50.
- ④ STRAP ANCHOR PLATE, 4" LONG BY 2" WIDE BY 1/8" THICK (8 REOD). NAIL TO THE RETAINER ASSEMBLY W/6-SIGNODE NO. 27 RINGLOCK NAILS (OR EQUAL).
- ⑤ SEAL FOR 3/4" STRAPPING (4 REOD, 1 PER STRAP).

**SPECIAL NOTE:**

1. A LOAD OF NINE 155MM, M4 (DS41) PROPELLING CHARGES IN M13 CONTAINERS IS SHOWN AS TYPICAL IN A PORTABLE CARGO COMPARTMENT. THIS METHOD IS APPLICABLE FOR ALL PROPELLING CHARGE CONTAINERS EXCEPT THE M10, M16 AND M460 CONTAINERS. THIS METHOD FOR TWO WIDE IS APPLICABLE FOR THE M16 CONTAINER IF THE PORTABLE CARGO COMPARTMENT IS AT LEAST 86" WIDE. THE M10, M16 AND M460 CONTAINERS CAN BE LOADED ONE WIDE USING THE DEPICTED PROCEDURES AS GUIDANCE.

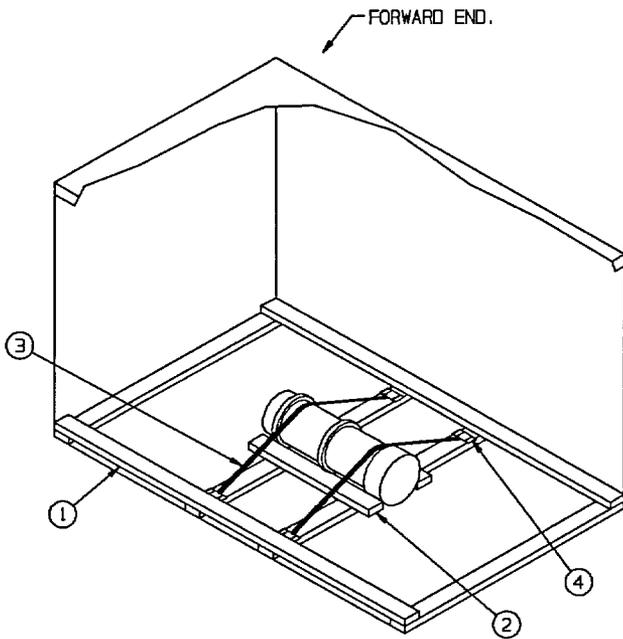
**PALLETIZED AND INDIVIDUAL PROPELLING CHARGES  
TYPICAL LOADS BRACED WITH CONVENTIONAL TYPE DUNNAGE**

KEY NUMBERS

- ① RETAINER ASSEMBLY (1 REQD). SEE THE "RETAINER ASSEMBLY B" DETAIL ON PAGE 49.
- ② SIDE PIECE, 2" X 4" BY PROPELLING CHARGE CONTAINER LENGTH (2 REQD). NAIL TO "RETAINER ASSEMBLY B" W/3-10d NAILS AT EACH JOINT.
- ③ HOLD-DOWN STRAP, 3/4" X .035" OR .031" BY A LENGTH TO SUIT (2 REQD). SEE GENERAL NOTE "N" ON PAGE 3. SEE THE "APPLICATION OF STRAPPING TO STRAP ANCHOR PLATE" DETAIL ON PAGE 50.
- ④ STRAP ANCHOR PLATE, 4" LONG BY 2" WIDE BY 1/8" THICK (4 REQD). NAIL TO THE RETAINER ASSEMBLY W/6 SIGNODE NO. 27 RINGLOCK NAILS (OR EQUAL).

SPECIAL NOTE:

- 1. A LOAD OF ONE 155MM, M19 (D480) PROPELLING CHARGE IN AN M16 CONTAINER IS SHOWN AS TYPICAL IN A PORTABLE CARGO COMPARTMENT. THIS METHOD IS APPLICABLE FOR ALL PROPELLING CHARGE CONTAINERS.



METHOD 52

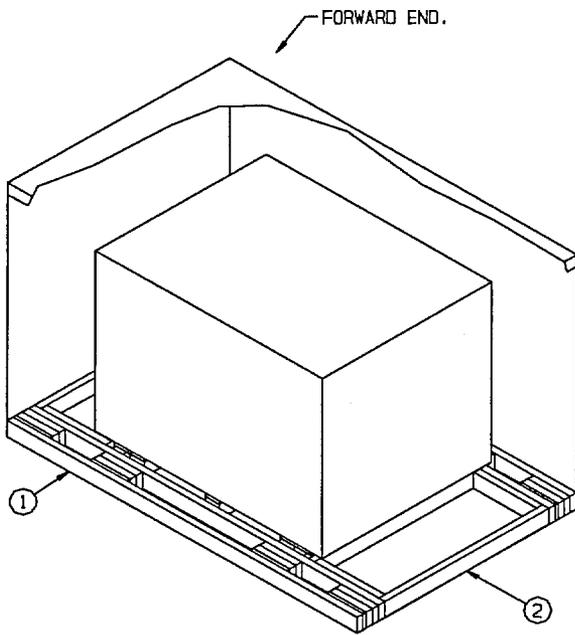
CONTAINER SIZE IS 29-9/32" LONG BY 9-13/16" DIAMETER.

LOAD AS SHOWN

<u>ITEM</u>	<u>QUANTITY</u>	<u>WEIGHT (APPROX)</u>
M19 CONTAINER, INDIVIDUAL CONTAINER	1	52 LBS
DUNNAGE		55 LBS
<u>TOTAL WEIGHT</u>		<u>107 LBS (APPROX)</u>

INTENTIONALLY LEFT BLANK

INDIVIDUAL PROPELLING CHARGE  
TYPICAL LOAD BRACED WITH CONVENTIONAL TYPE DUNNAGE



**METHOD 53**

UNIT SIZE IS 41-5/8" LONG BY 55-1/2" WIDE BY 44-1/2" HIGH.

**KEY NUMBERS**

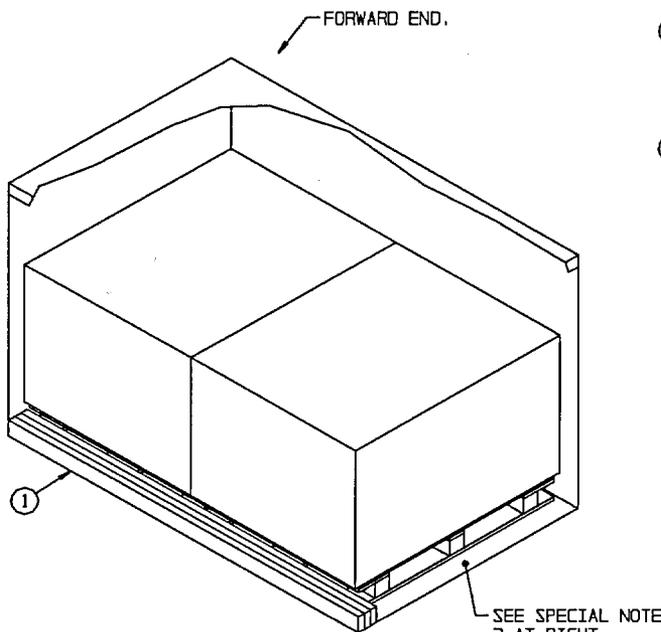
- ① SOLID FILL ASSEMBLY (2 REOD). SEE THE "SOLID FILL ASSEMBLY A" DETAIL ON PAGE 45. SEE SPECIAL NOTE 2 BELOW.
- ② SIDE BLOCKING ASSEMBLY (2 REOD). SEE THE "SIDE BLOCKING ASSEMBLY D" DETAIL ON PAGE 48.

**SPECIAL NOTES:**

- 1. A 1-PALLET LOAD IS SHOWN IN A PORTABLE CARGO COMPARTMENT.
- 2. IF THE SPACE AT THE ENDS OF THE LOAD ARE APPROXIMATELY 8" OR MORE, "STRUT FILL ASSEMBLY A" MAY BE USED IN LIEU OF PIECE MARKED ①. SEE THE DETAIL ON PAGE 45.

**LOAD AS SHOWN**

ITEM	QUANTITY	WEIGHT (APPROX)
PALLET UNIT	1	2,382 LBS
DUNNAGE		83 LBS
<b>TOTAL WEIGHT</b>		<b>2,465 LBS (APPROX)</b>



**METHOD 54**

UNIT SIZE 40-1/2" LONG BY 50-1/4" WIDE BY 35-3/8" HIGH.

**KEY NUMBERS**

- ① SOLID FILL, 4" WIDE MATERIAL BY A THICKNESS TO SUIT BY THE PORTABLE CARGO COMPARTMENT WIDTH MINUS 1/2" (AS REQUIRED TO FILL THE VOID BETWEEN THE LADING AND THE PORTABLE CARGO COMPARTMENT ENDWALL) (1 REOD). LAMINATE W/4 APPLICABLY SIZED NAILS. SEE SPECIAL NOTE 2 BELOW.
- ② SOLID FILL, 4" WIDE MATERIAL BY A THICKNESS TO SUIT BY THE LADING LENGTH (AS REQUIRED TO FILL THE VOID BETWEEN THE LADING AND THE PORTABLE CARGO COMPARTMENT SIDEWALL) (1 REOD). LAMINATE W/4 APPLICABLY SIZED NAILS. SEE SPECIAL NOTE 3 BELOW.

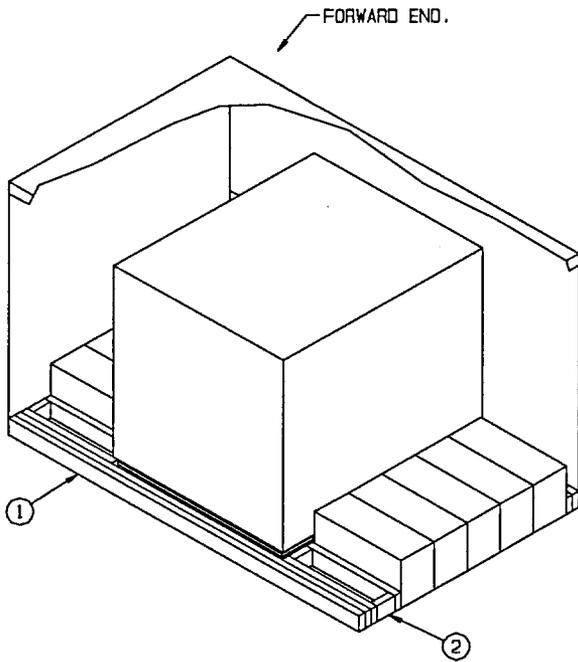
**SPECIAL NOTES:**

- 1. A 2-PALLET LOAD IS SHOWN IN A PORTABLE CARGO COMPARTMENT.
- 2. IF THE SPACE AT THE END OF THE PORTABLE CARGO COMPARTMENT IS 5" OR GREATER, PIECE MARKED ① SHOULD BE INSTALLED AT BOTH ENDS OF THE LOAD, OR "SOLID FILL ASSEMBLY B" MAY BE USED. SEE THE DETAIL ON PAGE 46. IF THE SPACE AT THE END(S) OF THE LOAD ARE APPROXIMATELY 8" OR MORE, "STRUT FILL ASSEMBLY B" SHOULD BE USED. SEE THE DETAIL ON PAGE 49.
- 3. IF THE SPACE BETWEEN THE PALLET BASE AND THE DOOR OF THE PORTABLE CARGO COMPARTMENT IS APPROXIMATELY 8" OR MORE, "SIDE BLOCKING ASSEMBLY E" WILL BE USED. SEE THE DETAIL ON PAGE 49. IF THE SPACE IS 6" TO 8", "SOLID FILL ASSEMBLY C" WILL BE USED. SEE THE DETAIL ON PAGE 44. NOTE THAT A TOTAL LATERAL EXCESS SPACE OF 6" IS PERMITTED FOR PALLETS; A TOTAL LATERAL EXCESS SPACE OF MORE THAN 6" MUST BE BRACED AT THE PALLET LEVEL.

**LOAD AS SHOWN**

ITEM	QUANTITY	WEIGHT (APPROX)
PALLET UNIT	2	3,964 LBS
DUNNAGE		63 LBS
<b>TOTAL WEIGHT</b>		<b>4,027 LBS (APPROX)</b>

**PALLETIZED BOXES  
TYPICAL LOADS BRACED WITH CONVENTIONAL TYPE DUNNAGE**



**METHOD 55**

UNIT SIZE IS 41-1/4" LONG BY 48-3/4" WIDE BY 47" HIGH.  
 BOX SIZE IS 21-1/8" X 10-3/8" X 8-1/8".

**KEY NUMBERS**

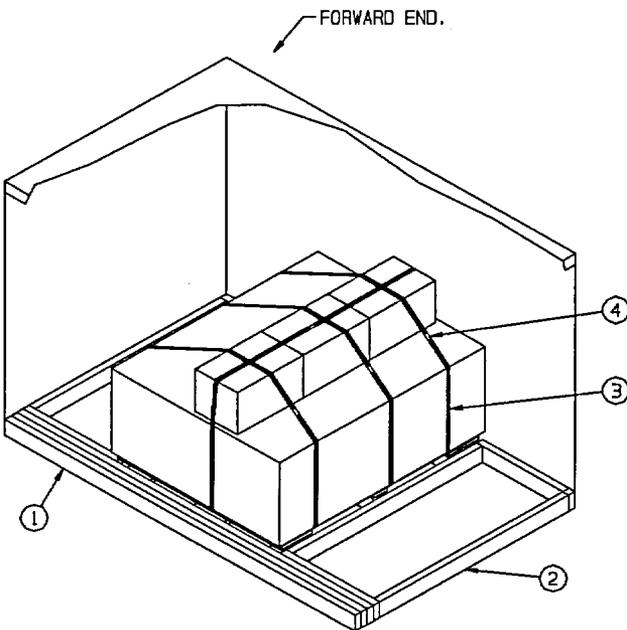
- ① SOLID FILL, 4" WIDE MATERIAL BY THE PORTABLE CARGO COMPARTMENT WIDTH MINUS 1/2" BY A THICKNESS REQUIRED TO FILL THE VOID BETWEEN THE LADING AND THE PORTABLE CARGO COMPARTMENT ENDWALL (AS REQUIRED AT 2 PLACES). LAMINATE, AS APPLICABLE, W/4 APPLICABLY SIZED NAILS. SEE SPECIAL NOTE 2 BELOW.
- ② FILLER ASSEMBLY (2 REOD). SEE THE "FILLER ASSEMBLY A" DETAIL ON PAGE 45. SEE SPECIAL NOTE 3 BELOW.

**SPECIAL NOTES:**

- 1. A 1-PALLET LOAD AND 10 INDIVIDUAL BOXES ARE SHOWN AS TYPICAL IN A PORTABLE CARGO COMPARTMENT.
- 2. IF THE SPACES BETWEEN THE PALLET BASE AND THE ENDS OF THE PORTABLE CARGO COMPARTMENT ARE APPROXIMATELY 5" OR MORE, "SOLID FILL ASSEMBLY A" WILL BE USED. SEE THE DETAIL ON PAGE 45. IF THE SPACE IS APPROXIMATELY 8" OR MORE, "STRUT FILL ASSEMBLY A" MAY BE USED. SEE THE DETAIL ON PAGE 45.
- 3. IF THERE IS MORE THAN 3" SPACE AT THE SIDE OF THE PORTABLE CARGO COMPARTMENT BETWEEN THE BOXES AND THE DOOR, 4" WIDE SOLID FILL OF A LENGTH TO SUIT AND A THICKNESS TO SUIT WILL BE USED. LAMINATE, AS APPLICABLE, W/2 APPLICABLY SIZED NAILS.

**LOAD AS SHOWN**

ITEM	QUANTITY	WEIGHT (APPROX)
PALLET UNIT	1	2,821 LBS
INDIVIDUAL BOXES	10	390 LBS
DUNNAGE		40 LBS
<b>TOTAL WEIGHT</b>		<b>3,251 LBS (APPROX)</b>



**METHOD 56**

UNIT SIZE IS 41" LONG BY 50-1/4" WIDE BY 23-3/4" HIGH.  
 BOX SIZE IS 9-1/8" X 10-1/4" X 16-1/8".

**KEY NUMBERS**

- ① SOLID FILL, 4" WIDE MATERIAL BY A THICKNESS TO SUIT BY THE PORTABLE CARGO COMPARTMENT WIDTH MINUS 1/2" (AS REQUIRED TO FILL THE VOID BETWEEN THE LADING AND THE PORTABLE CARGO COMPARTMENT ENDWALL) (1 REOD). LAMINATE W/4 APPLICABLY SIZED NAILS. SEE SPECIAL NOTE 2 BELOW.
- ② SIDE BLOCKING ASSEMBLY (2 REOD). SEE THE "SIDE BLOCKING ASSEMBLY D" DETAIL ON PAGE 48.
- ③ UNITIZING STRAP, 3/4" X .035" OR .031" X 15'-0" LONG STEEL STRAPPING (4 REOD). SEE GENERAL NOTE "N" ON PAGE 3.
- ④ SEAL FOR 3/4" STRAPPING (4 REOD, 1 PER STRAP).

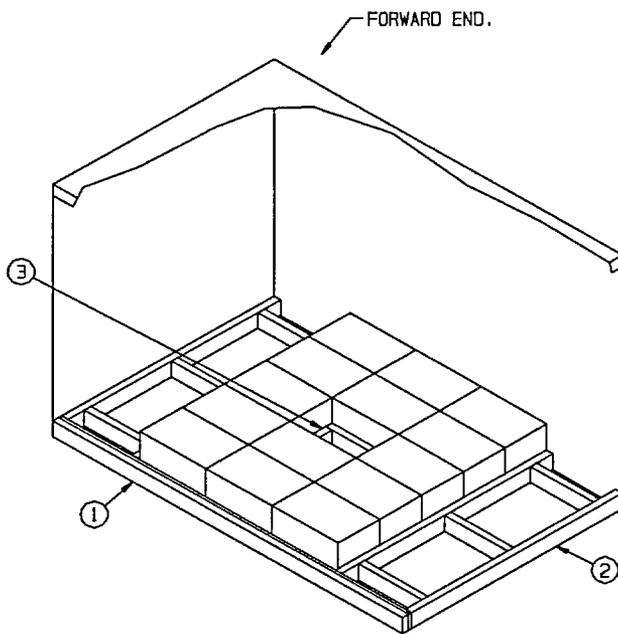
**SPECIAL NOTES:**

- 1. A 1-PALLET LOAD AND THREE INDIVIDUAL BOXES ARE SHOWN IN A PORTABLE CARGO COMPARTMENT.
- 2. IF THE SPACE BETWEEN THE PALLET BASE AND THE END OF THE PORTABLE CARGO COMPARTMENT IS 5" OR MORE, "SOLID FILL ASSEMBLY A" WILL BE USED IN LIEU OF PIECE MARKED ①, OR PIECE MARKED ① MAY BE USED AT BOTH ENDS OF THE LOAD. SEE THE "SOLID FILL ASSEMBLY A" DETAIL ON PAGE 45. IF A SPACE IS APPROXIMATELY 8" OR MORE, "STRUT FILL ASSEMBLY A" MAY BE USED. SEE THE DETAIL ON PAGE 45.

**LOAD AS SHOWN**

ITEM	QUANTITY	WEIGHT (APPROX)
PALLET UNIT	1	2,011 LBS
INDIVIDUAL BOXES	3	240 LBS
DUNNAGE		67 LBS
<b>TOTAL WEIGHT</b>		<b>2,318 LBS (APPROX)</b>

**PALLETIZED AND INDIVIDUAL BOXES  
 TYPICAL LOADS BRACED WITH CONVENTIONAL TYPE DUNNAGE**



**METHOD 57**

BOX SIZE IS 16-3/4" LONG BY 10-1/4" WIDE BY 9-1/8" HIGH.

**KEY NUMBERS**

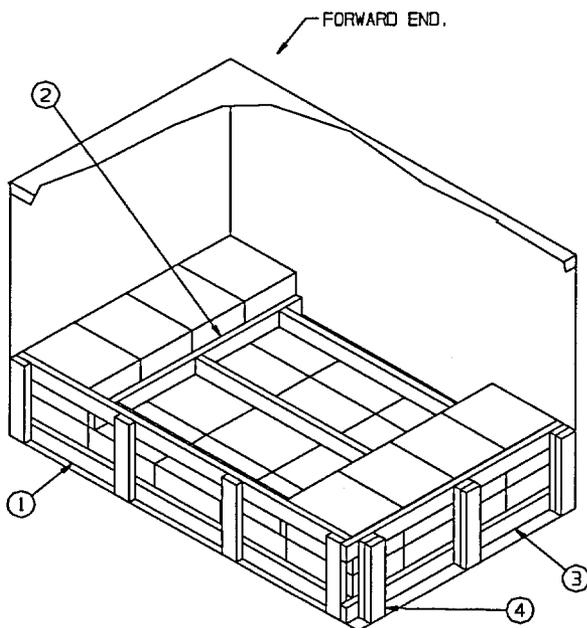
- ① SOLID FILL, 4" WIDE MATERIAL BY A THICKNESS TO SUIT BY THE PORTABLE CARGO COMPARTMENT WIDTH MINUS 1/2" (AS REQUIRED TO FILL THE VOID BETWEEN THE LADING AND THE PORTABLE CARGO COMPARTMENT ENDWALL) (1 REQD). LAMINATE, IF APPLICABLE, W/4 APPLICABLY SIZED NAILS. SEE SPECIAL NOTE 2 BELOW.
- ② SIDE BLOCKING ASSEMBLY (2 REQD). SEE THE "SIDE BLOCKING ASSEMBLY E" DETAIL ON PAGE 49.
- ③ FILLER ASSEMBLY (1 REQD). SEE THE "FILLER ASSEMBLY A" DETAIL ON PAGE 45. SEE SPECIAL NOTE 3 BELOW.

**SPECIAL NOTES:**

- 1. A LOAD OF 14 BOXES IS SHOWN AS TYPICAL IN A PORTABLE CARGO COMPARTMENT.
- 2. IF THE SPACES AT ONE OR BOTH ENDS OF THE PORTABLE CARGO COMPARTMENT ARE MORE THAN 3" BUT LESS THAN APPROXIMATELY 8", "SOLID FILL ASSEMBLY B" MAY BE USED. SEE THE DETAIL ON PAGE 46. IF A SPACE IS GREATER THAN APPROXIMATELY 8", "STRUT FILL ASSEMBLY B" MAY BE USED. SEE THE DETAIL ON PAGE 49. ADJUST THE LOCATION OF THE STRUTS, AS NECESSARY.
- 3. THE FILLER ASSEMBLY IS SHOWN ONLY TO DEPICT A TYPICAL INSTALLATION.

**LOAD AS SHOWN**

ITEM	QUANTITY	WEIGHT (APPROX)
INDIVIDUAL BOXES	14	1,120 LBS
DUNNAGE		62 LBS
<b>TOTAL WEIGHT</b>		<b>1,182 LBS (APPROX)</b>



**METHOD 58**

BOX SIZE IS 16-1/8" LONG BY 12-5/8" WIDE BY 8-3/8" HIGH.

**KEY NUMBERS**

- ① GATE ASSEMBLY (1 REQD). SEE THE "GATE ASSEMBLY D" DETAIL ON PAGE 46.
- ② SIDE BLOCKING ASSEMBLY (1 REQD). SEE THE "SIDE BLOCKING ASSEMBLY E" DETAIL ON PAGE 49.
- ③ GATE ASSEMBLY (1 REQD). SEE THE "GATE ASSEMBLY E" DETAIL ON PAGE 50.
- ④ SOLID FILL, 4" WIDE MATERIAL BY A THICKNESS TO SUIT BY LADING HEIGHT (AS REQUIRED TO FILL THE VOID BETWEEN "GATE ASSEMBLY E" AND THE PORTABLE CARGO COMPARTMENT DOOR (3 REQD). NAIL TO "GATE ASSEMBLY E" W/2-10d NAILS.

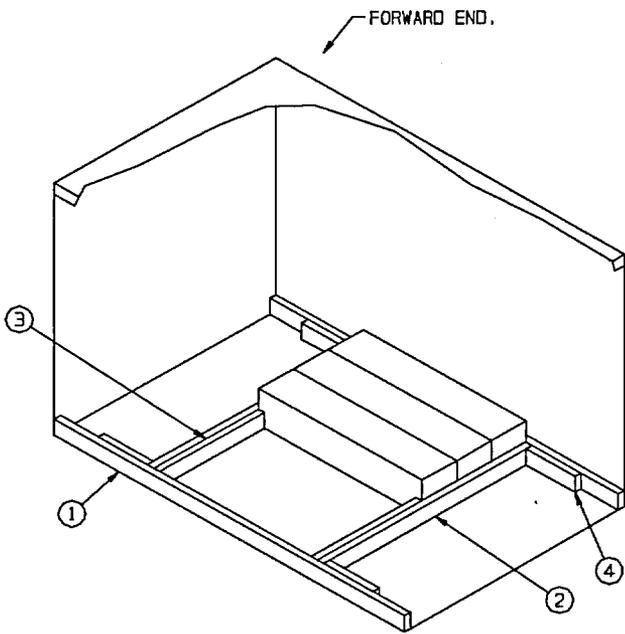
**SPECIAL NOTE:**

- 1. A LOAD OF 28 BOXES IS SHOWN AS TYPICAL IN A PORTABLE CARGO COMPARTMENT.

**LOAD AS SHOWN**

ITEM	QUANTITY	WEIGHT (APPROX)
INDIVIDUAL BOXES	28	2,016 LBS
DUNNAGE		96 LBS
<b>TOTAL WEIGHT</b>		<b>2,112 LBS (APPROX)</b>

**INDIVIDUAL BOXES  
TYPICAL LOADS BRACED WITH CONVENTIONAL TYPE DUNNAGE**



**METHOD 59**

BOX SIZE IS 40' LONG BY 8-1/2' WIDE BY 8' HIGH.

**KEY NUMBERS**

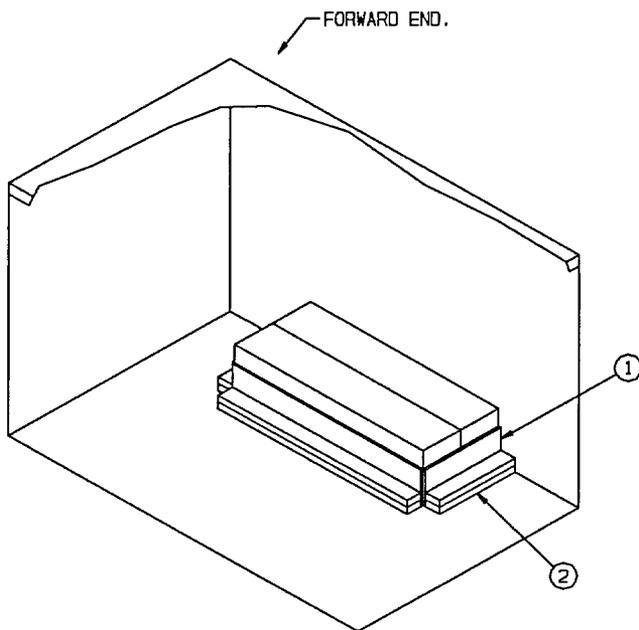
- ① BUFFER PIECE, 2" X 4" BY THE PORTABLE CARGO COMPARTMENT WIDTH MINUS 1/2" (2 REQD).
- ② SIDE PIECE, 2" X 4" BY CUT TO FIT (2 REQD).
- ③ RETAINER BLOCK, 2" X 4" BY CUT TO FIT (2 REQD). NAIL TO THE SIDE PIECE W/1-10d NAIL EVERY 8".
- ④ BACK-UP CLEAT, 2" X 4" X 12" (4 REQD). NAIL TO THE BUFFER PIECE W/3-10d NAILS.

**SPECIAL NOTE:**

- 1. A LOAD OF THREE WOODEN BOXES IS SHOWN AS TYPICAL IN A PORTABLE CARGO COMPARTMENT.

**LOAD AS SHOWN**

ITEM	QUANTITY	WEIGHT (APPROX)
WOODEN BOXES	3	381 LBS
DUNNAGE		43 LBS
<b>TOTAL WEIGHT</b>		<b>424 LBS (APPROX)</b>



**METHOD 60**

BOX SIZE IS 46-1/8' LONG BY 11-7/8' WIDE BY 9-1/4' HIGH.

**KEY NUMBERS**

- ① PLYWOOD, 1/2" THICK BY 8" WIDE BY LADING LENGTH AND/OR WIDTH (3 REQD). NAIL TO THE BOTTOM 2" X 4" BLOCKING PIECE, PIECE MARKED ②, W/1-6d NAIL EVERY 6" (2 NAILS MIN). SEE SPECIAL NOTE 2 BELOW.
- ② BLOCKING PIECE, 2" X 4" BY LADING LENGTH AND/OR WIDTH (DOUBLED) (3 REQD). NAIL THE FIRST PIECE TO THE FLOOR OF THE PORTABLE CARGO COMPARTMENT W/2-10d NAILS. NAIL THE SECOND PIECE TO THE FIRST IN A LIKE MANNER. SEE SPECIAL NOTE 3 BELOW.

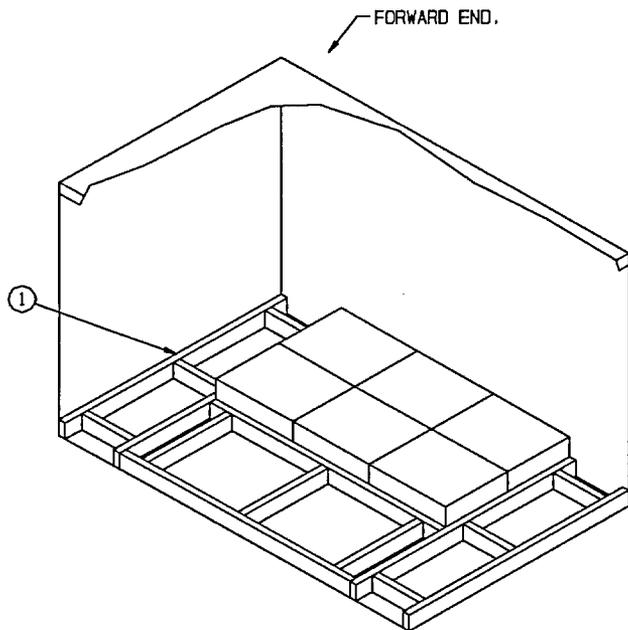
**SPECIAL NOTES:**

- 1. A LOAD OF TWO INDIVIDUAL BOXES IS SHOWN AS TYPICAL IN A PORTABLE CARGO COMPARTMENT.
- 2. THE PLYWOOD, PIECE MARKED ①, NEED NOT BE LONGER OR WIDER THAN 24" FOR BRACING AGAINST A SINGLE BOX WHICH IS LONGER OR WIDER THAN 24". WHEN BRACING AGAINST MORE THAN ONE BOX, THE PLYWOOD MUST BE LADING LENGTH AND/OR WIDTH.
- 3. THE BLOCKING PIECE, PIECE MARKED ②, NEED NOT BE LONGER THAN 24" FOR BRACING AGAINST A SINGLE BOX WHICH IS LONGER OR WIDER THAN 24". WHEN BRACING AGAINST MORE THAN ONE BOX, THE BLOCKING PIECE MUST BE LADING LENGTH AND/OR WIDTH.

**LOAD AS SHOWN**

ITEM	QUANTITY	WEIGHT (APPROX)
INDIVIDUAL BOXES	2	194 LBS
DUNNAGE		20 LBS
<b>TOTAL WEIGHT</b>		<b>214 LBS (APPROX)</b>

**INDIVIDUAL BOXES  
TYPICAL LOADS BRACED WITH CONVENTIONAL TYPE DUNNAGE**



**KEY NUMBER**

- ① SIDE BLOCKING ASSEMBLY (3 REOD). SEE THE "SIDE BLOCKING ASSEMBLY E" DETAIL ON PAGE 49.

**SPECIAL NOTES:**

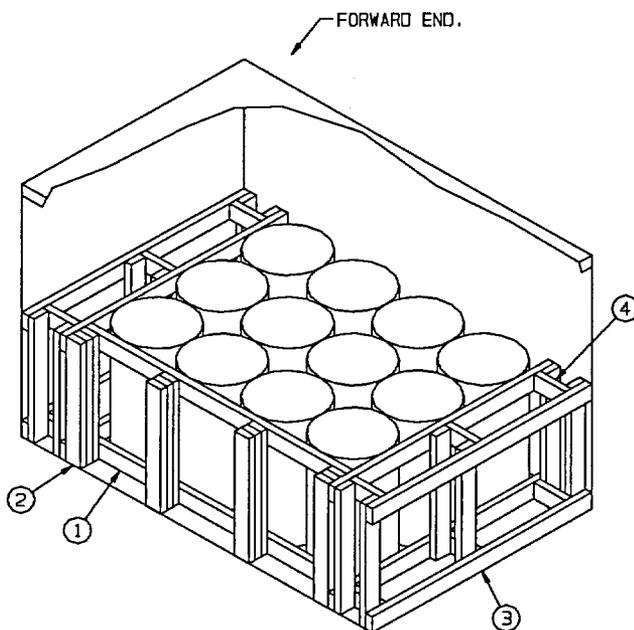
1. A LOAD OF SIX FIBERBOARD BOXES OF BULK EXPLOSIVES IS SHOWN AS TYPICAL IN A PORTABLE CARGO COMPARTMENT.
2. NOTE: THE PORTABLE CARGO COMPARTMENT MUST BE LINED WITH A SUITABLE MATERIAL WHEN LOADING BULK EXPLOSIVES. SEE GENERAL NOTE "S" ON PAGE 3.

**METHOD 61**

BOX SIZE IS 18-3/4" LONG BY 15-1/4" WIDE BY 7-7/8" HIGH.

**LOAD AS SHOWN**

ITEM	QUANTITY	WEIGHT (APPROX)
FIBERBOARD BOXES	6	324 LBS
DUNNAGE		53 LBS
<b>TOTAL WEIGHT</b>		<b>377 LBS (APPROX)</b>



**KEY NUMBERS**

- ① GATE ASSEMBLY (1 REOD). SEE THE "GATE ASSEMBLY D" DETAIL ON PAGE 46.
- ② SOLID FILL, 4" WIDE MATERIAL BY A THICKNESS TO SUIT BY THE LADING HEIGHT (AS REQUIRED TO FILL THE VOID BETWEEN "GATE ASSEMBLY D" AND THE PORTABLE CARGO COMPARTMENT ENDWALL (3 REOD). NAIL TO "GATE ASSEMBLY D" W/3-10d NAILS.
- ③ GATE ASSEMBLY (4 REOD). SEE THE "GATE ASSEMBLY B" DETAIL ON PAGE 44.
- ④ STRUT, 2" X 4" BY CUT TO FIT (12 REOD). NAIL TO "GATE ASSEMBLY B" W/2-10d NAILS AT EACH END.

**SPECIAL NOTES:**

1. A LOAD OF 12 FIBERBOARD DRUMS OF BULK EXPLOSIVES IS SHOWN AS TYPICAL IN A PORTABLE CARGO COMPARTMENT.
2. NOTE: THE PORTABLE CARGO COMPARTMENT MUST BE LINED WITH A SUITABLE MATERIAL WHEN LOADING BULK EXPLOSIVES. SEE GENERAL NOTE "S" ON PAGE 3.

**METHOD 62**

DRUM SIZE IS 16" DIAMETER BY 27" HIGH.

**LOAD AS SHOWN**

ITEM	QUANTITY	WEIGHT (APPROX)
FIBERBOARD DRUMS	12	1,812 LBS
DUNNAGE		116 LBS
<b>TOTAL WEIGHT</b>		<b>1,928 LBS (APPROX)</b>

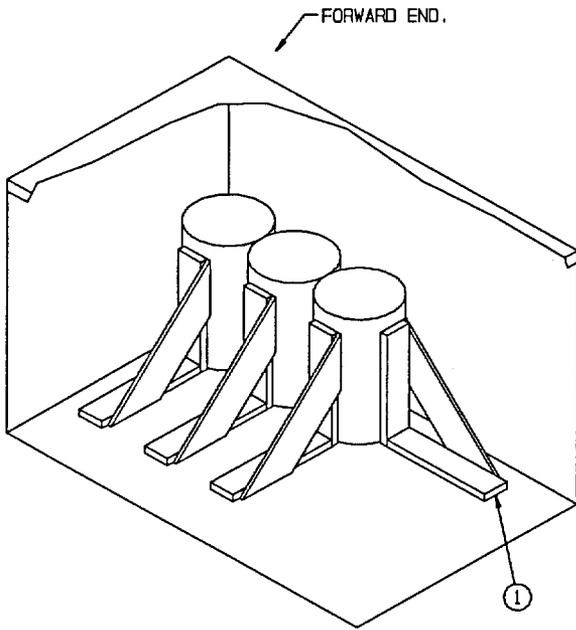
FIBERBOARD BOXES AND DRUMS  
TYPICAL LOADS BRACED WITH CONVENTIONAL TYPE DUNNAGE

KEY NUMBER

- ① LTL BRACE (4 REQD). SEE THE DETAIL ON PAGE 49. POSITION AS SHOWN AND NAIL TO THE FLOOR OF THE PORTABLE CARGO COMPARTMENT W/10-10d NAILS.

SPECIAL NOTES:

- 1. A 3-DRUM LOAD IS SHOWN AS TYPICAL IN A PORTABLE CARGO COMPARTMENT.
- 2. THE PROCEDURES DEPICTED FOR FIBERBOARD DRUMS ARE ALSO APPLICABLE FOR SHIPMENTS OF METAL DRUMS.
- 3. NOTE: THE PORTABLE CARGO COMPARTMENT MUST BE LINED WITH A SUITABLE MATERIAL WHEN THE DRUMS BEING SHIPPED CONTAIN BULK EXPLOSIVES. SEE GENERAL NOTE "S" ON PAGE 3.



METHOD 63

DRUM SIZE IS 16" DIAMETER BY 27" HIGH.

LOAD AS SHOWN

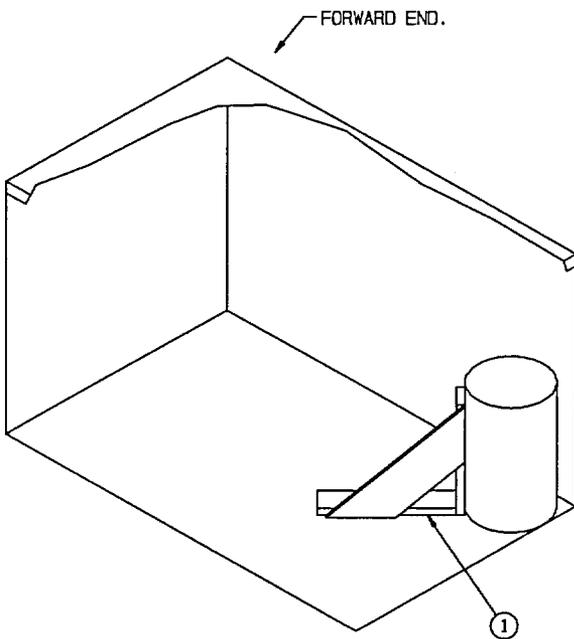
<u>ITEM</u>	<u>QUANTITY</u>	<u>WEIGHT (APPROX)</u>
BULK EXPLOSIVES IN FIBERBOARD DRUMS	3	453 LBS
DUNNAGE		44 LBS
<u>TOTAL WEIGHT</u>		<u>497 LBS (APPROX)</u>

KEY NUMBER

- ① LTL BRACE (1 REQD). SEE THE DETAIL ON PAGE 49. POSITION AS SHOWN AND NAIL TO THE FLOOR OF THE PORTABLE CARGO COMPARTMENT W/10-10d NAILS.

SPECIAL NOTES:

- 1. A 1-DRUM LOAD IS SHOWN AS TYPICAL IN A PORTABLE CARGO COMPARTMENT.
- 2. THE PROCEDURES DEPICTED FOR A FIBERBOARD DRUM ARE ALSO APPLICABLE FOR THE SHIPMENT OF A METAL DRUM.
- 3. NOTE: THE PORTABLE CARGO COMPARTMENT MUST BE LINED WITH A SUITABLE MATERIAL WHEN THE DRUM BEING SHIPPED CONTAINS BULK EXPLOSIVES.



METHOD 64

DRUM SIZE IS 16" DIAMETER BY 27" HIGH.

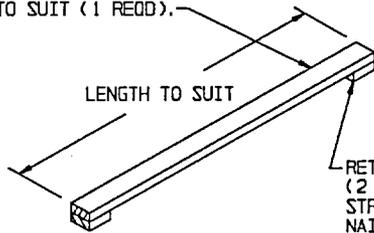
LOAD AS SHOWN

<u>ITEM</u>	<u>QUANTITY</u>	<u>WEIGHT (APPROX)</u>
BULK EXPLOSIVES IN FIBERBOARD DRUM	1	151 LBS
DUNNAGE		11 LBS
<u>TOTAL WEIGHT</u>		<u>162 LBS (APPROX)</u>

FIBERBOARD DRUMS

TYPICAL LOADS BRACED WITH CONVENTIONAL TYPE DUNNAGE

STRAPPING BOARD, 2" X 4" BY A LENGTH TO SUIT (1 REOD).



LENGTH TO SUIT

RETAINER PIECE, 2" X 4" X 4" (2 REOD). NAIL TO THE STRAPPING BOARD W/2-10d NAILS.

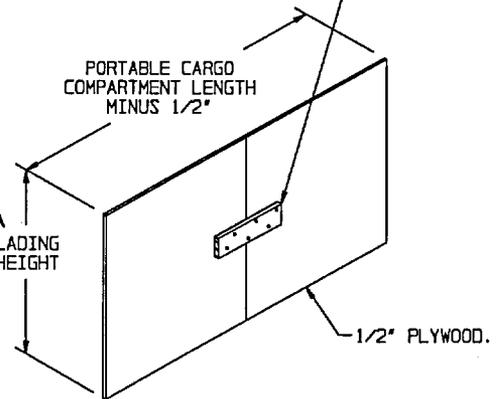
### STRAPPING BOARD

THIS ASSEMBLY IS FOR USE IN METHODS 5, 7, 18, 19, 20, 41, AND 51.

FOR PROJECTILES DIMENSION WILL BE PALLET COVER HEIGHT PLUS 3".

PORTABLE CARGO COMPARTMENT LENGTH MINUS 1/2"

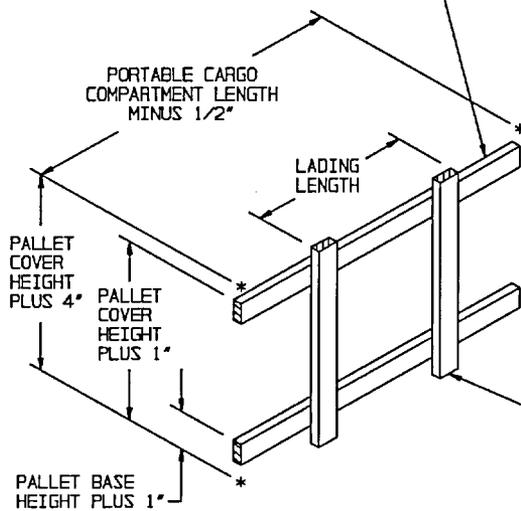
LADING HEIGHT



### PLYWOOD GATE

THIS PLYWOOD GATE IS FOR USE IN METHODS 1, 2, 7, 15, 16, 17, 18, 20, AND 31.

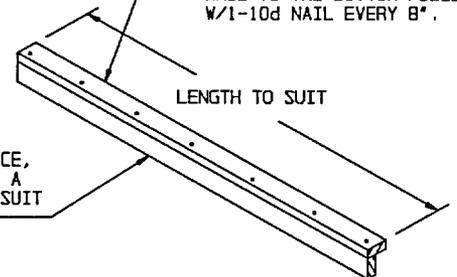
HORIZONTAL PIECE, 2" X 4" BY THE PORTABLE CARGO COMPARTMENT LENGTH MINUS 1/2" (2 REOD). NAIL TO THE VERTICAL PIECES W/3-10d NAILS AT EACH JOINT.



### GATE ASSEMBLY A

THIS GATE IS FOR USE IN SEPARATE LOADING PROJECTILE LOADS, METHODS 1, 2, 15, 16, 17, 18, 31, AND 47, IN LIEU OF USING PLYWOOD GATE.

TOP PIECE, 2" X 4" BY A LENGTH TO SUIT (1 REOD). NAIL TO THE BOTTOM PIECE W/1-10d NAIL EVERY 8".

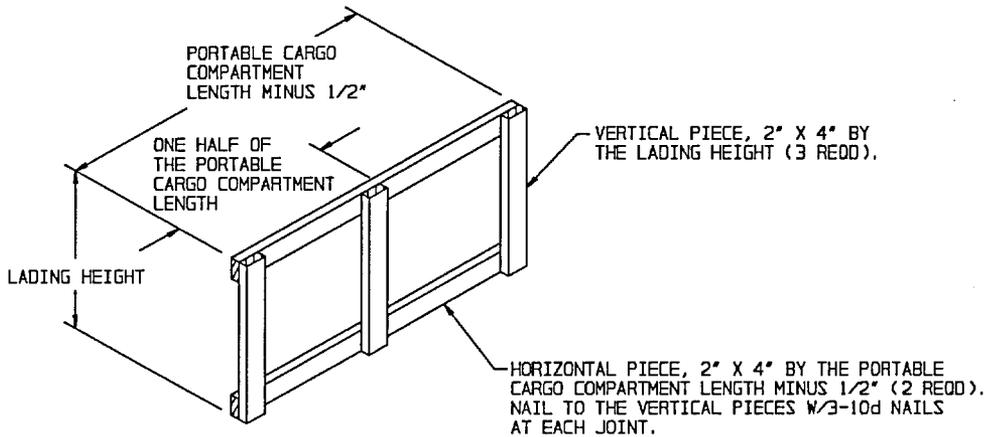


BOTTOM PIECE, 2" X 4" BY A LENGTH TO SUIT (1 REOD).

### EDGE BOARD ASSEMBLY

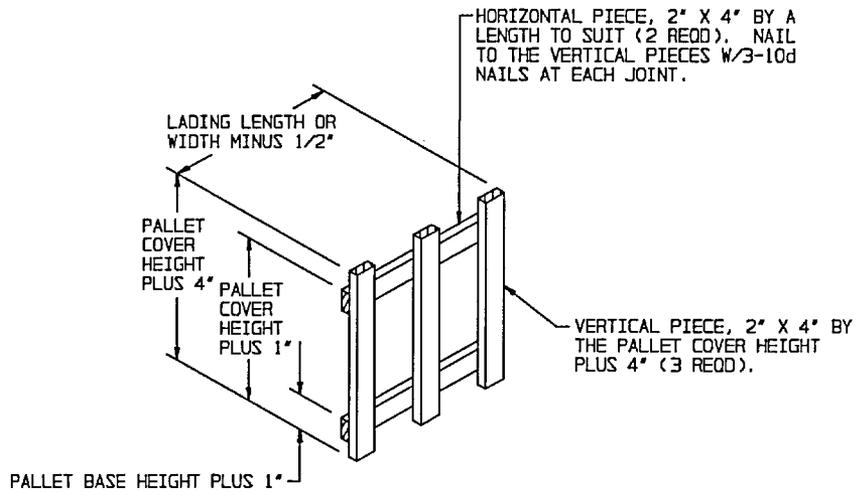
THIS ASSEMBLY IS FOR USE IN METHODS 1, 4, 6, 34, 35, 39, 40, AND 44.

VERTICAL PIECE, 2" X 4" BY THE PALLET COVER HEIGHT PLUS 4" (2 REOD). NOTE THAT FOUR VERTICAL PIECES ARE REQUIRED FOR METHOD 31. POSITION AT THE ENDS AND CENTERED ON THE JOINTS OF THE PALLET UNITS.



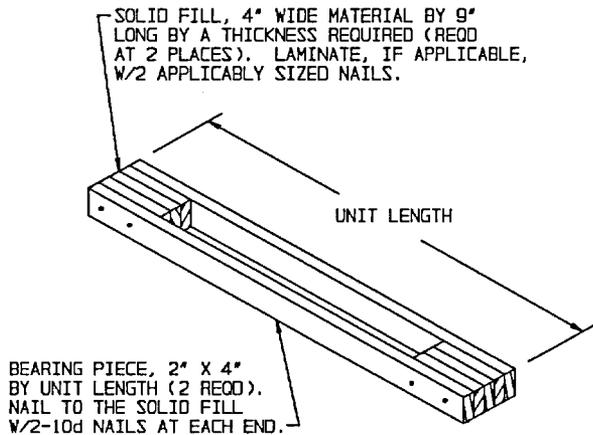
**GATE ASSEMBLY B**

THIS GATE IS FOR USE IN METHODS 3, 4, 5, 6, 7, 20, 41, AND 62.



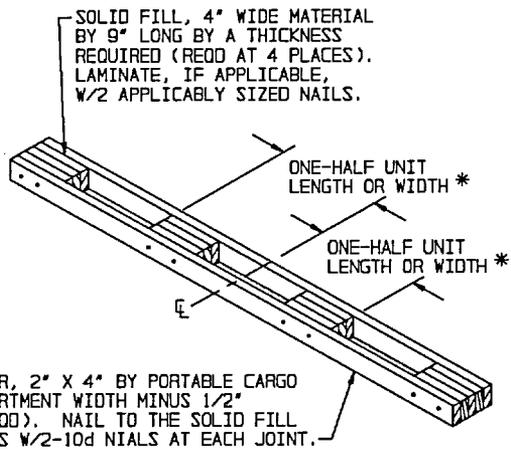
**GATE ASSEMBLY C**

THIS GATE IS FOR USE IN SEPARATE LOADING PROJECTILE LOADS, IN METHODS 15 AND 46.



**SOLID FILL ASSEMBLY C**

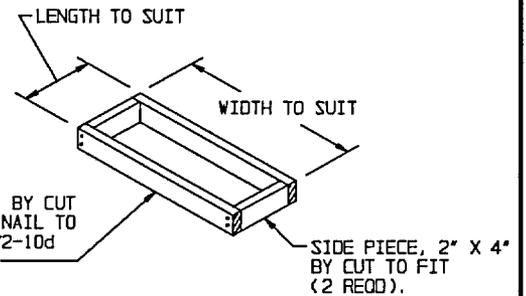
THIS SOLID FILL ASSEMBLY IS FOR USE IN METHODS 26, 49, AND 54.



**SOLID FILL ASSEMBLY A**

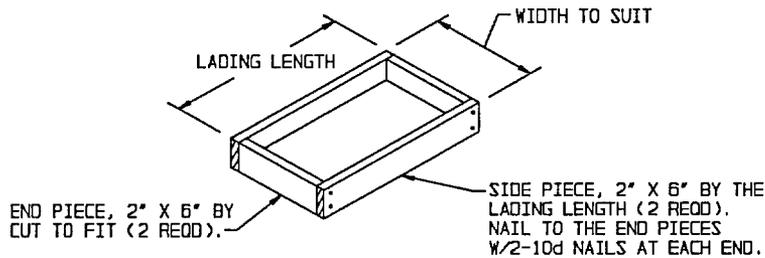
THIS SOLID FILL ASSEMBLY IS FOR USE IN METHODS 17, 23, 25, 26, 27, 48, 50, 53, 55 AND 56.

\* ONE-HALF LOAD WIDTH FOR METHOD 58.



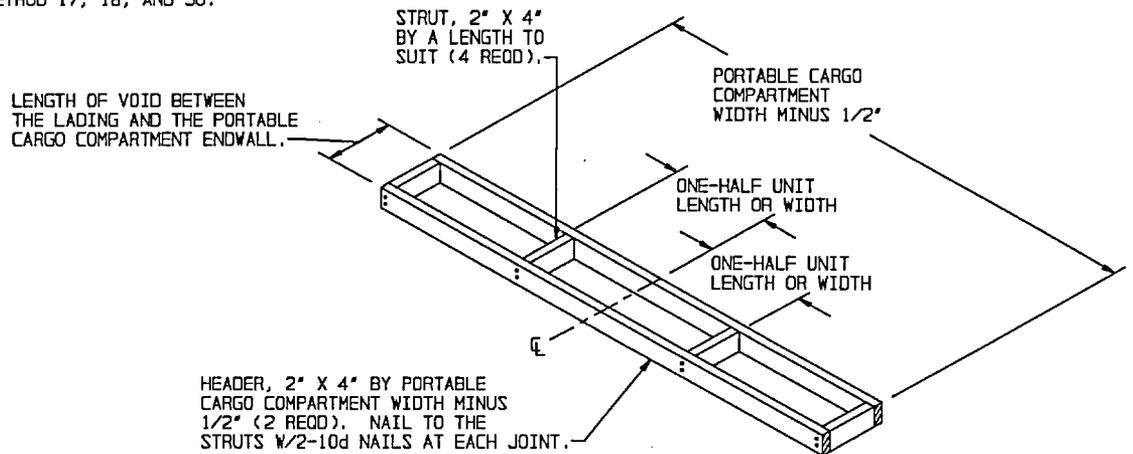
**FILLER ASSEMBLY A**

THIS FILLER ASSEMBLY IS FOR USE IN METHODS 17, 29, 55, AND 57.



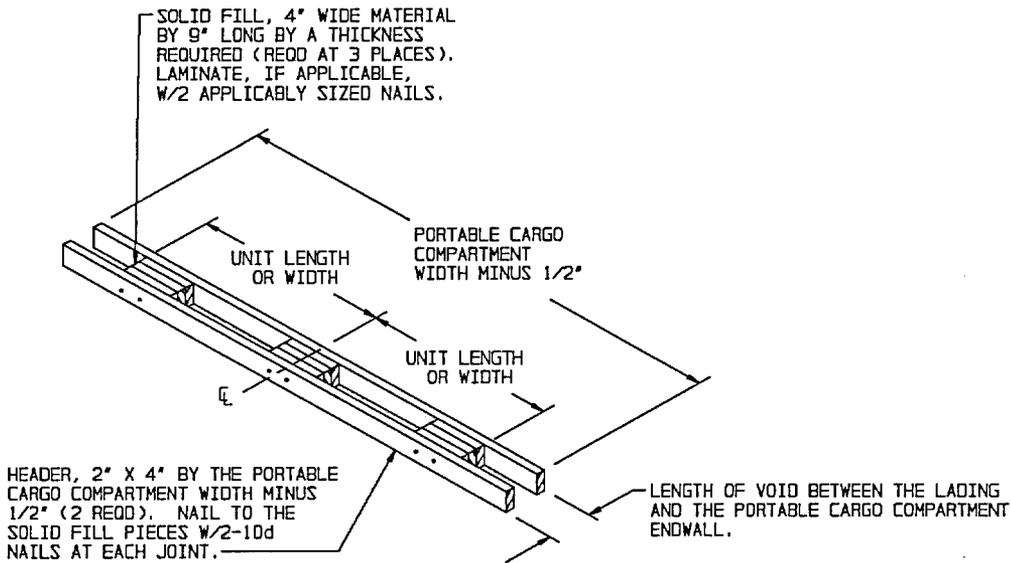
**SIDE BLOCKING ASSEMBLY A**

THIS SIDE BLOCKING ASSEMBLY IS FOR USE IN METHOD 17, 18, AND 50.



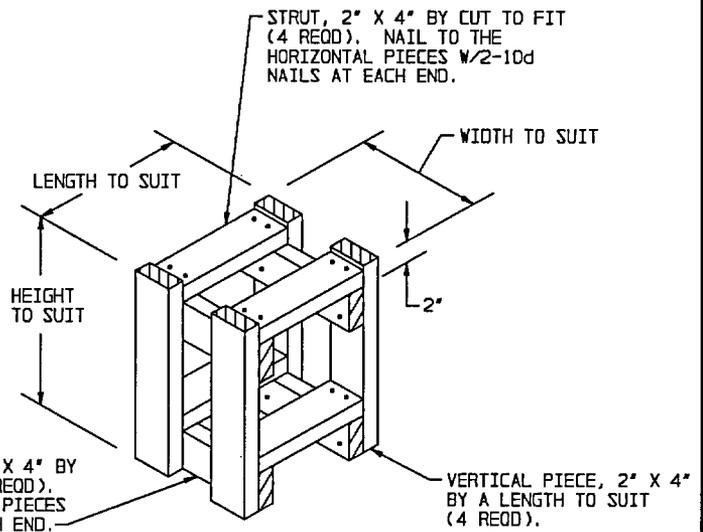
**STRUT FILL ASSEMBLY A**

THE STRUT FILL ASSEMBLY IF FOR USE IN METHODS 17, 23, 25, 26, 27, 34, 48, 53, 55, AND 56.



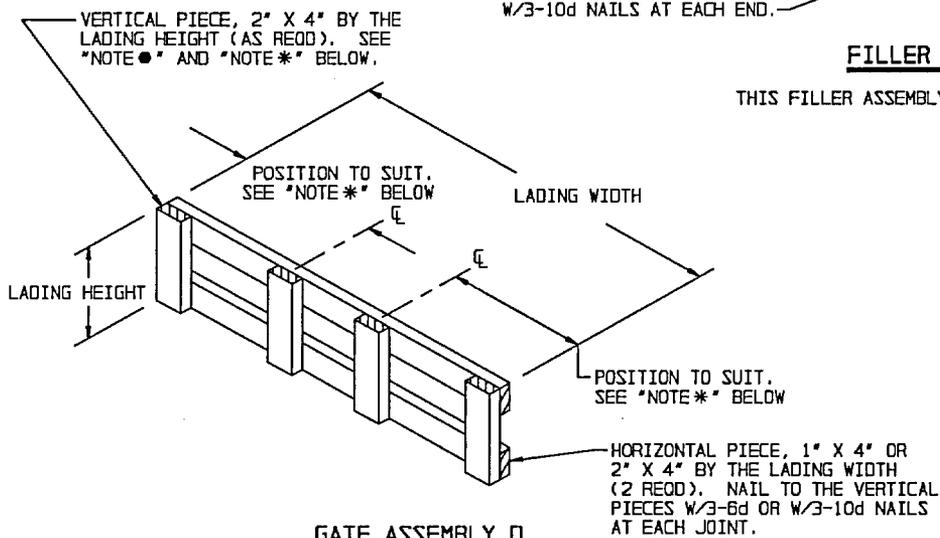
**SOLID FILL ASSEMBLY B**

THIS SOLID FILL ASSEMBLY IS FOR USE IN METHODS 18, 49, 54, AND 57.



**FILLER ASSEMBLY B**

THIS FILLER ASSEMBLY IS FOR USE IN METHOD 27.

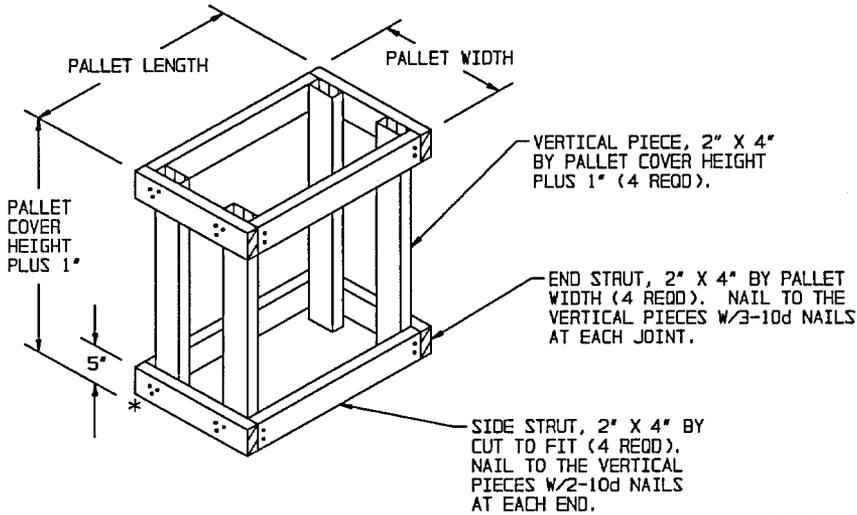


**GATE ASSEMBLY D**

THIS GATE ASSEMBLY IS FOR USE IN METHODS 29, 30, 58, AND 62.

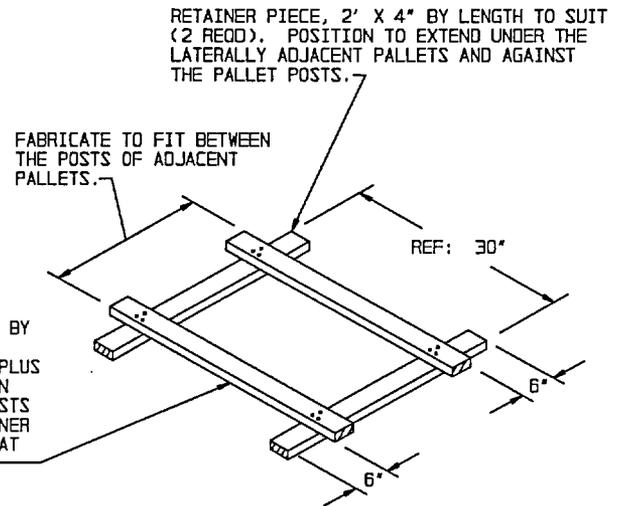
NOTE \*:  
VERTICAL PIECES MAY BE ADDED OR DELETED AS REQUIRED TO RETAIN THE LADING.

NOTE ●:  
WHEN REQUIRED TO FILL VOIDS, 4" WIDE MATERIAL BY THE LADING HEIGHT BY A THICKNESS TO SUIT MAY BE LAMINATED TO THE VERTICAL PIECES.



**OMITTED UNIT ASSEMBLY**

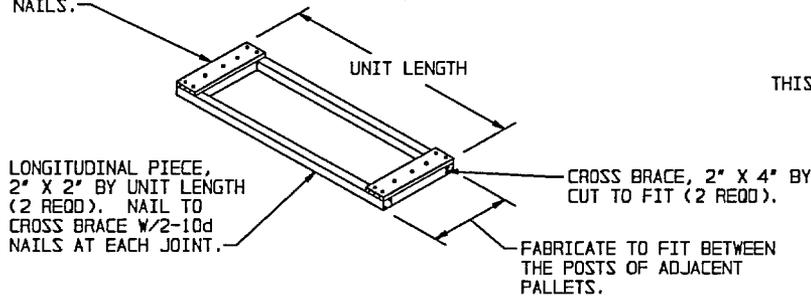
THIS OMITTED UNIT ASSEMBLY IS FOR USE IN METHOD 31.



**ANTI-SWAY BRACE ASSEMBLY B**

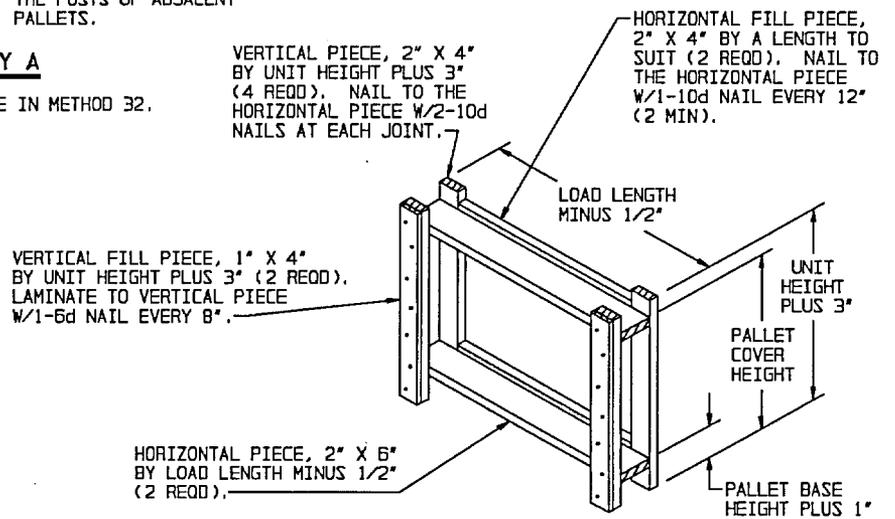
THIS ANTI-SWAY BRACE ASSEMBLY IS FOR USE IN METHOD 33.

CLEAT, 1" X 4" BY CUT TO FIT (2 REOD). NAIL TO LONGITUDINAL PIECES W/2-6d NAILS AT EACH END AND TO CROSS BRACE W/3-6d NAILS.



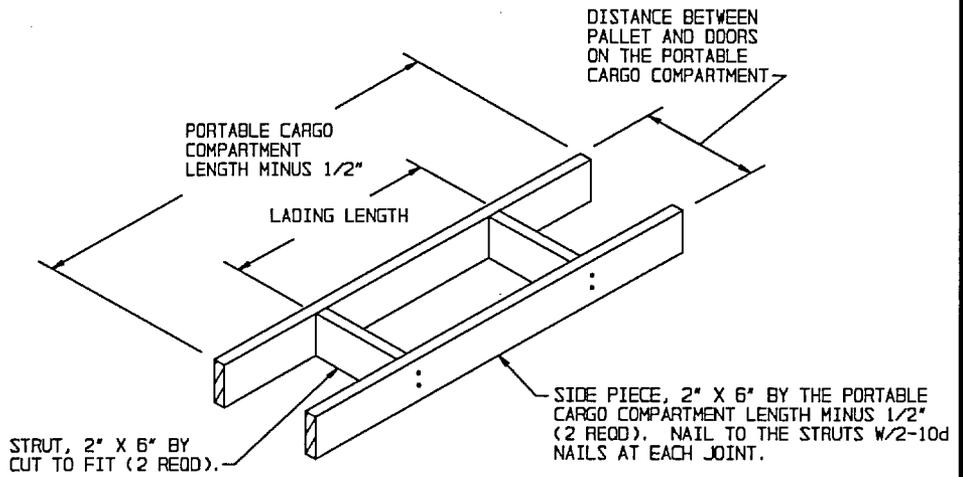
**ANTI-SWAY BRACE ASSEMBLY A**

THIS ANTI-SWAY BRACE ASSEMBLY IS FOR USE IN METHOD 32.



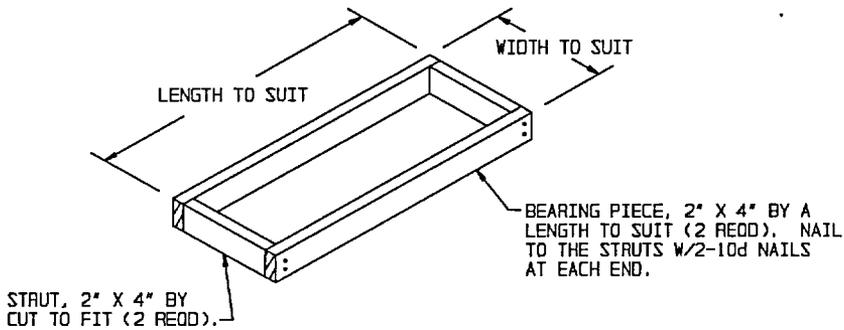
**SIDE BLOCKING ASSEMBLY B**

THIS SIDE BLOCKING ASSEMBLY IS FOR USE IN METHOD 31.



**SIDE BLOCKING ASSEMBLY C**

THIS SIDE BLOCKING ASSEMBLY IS FOR USE IN METHODS 34, 35, 40, AND 46.



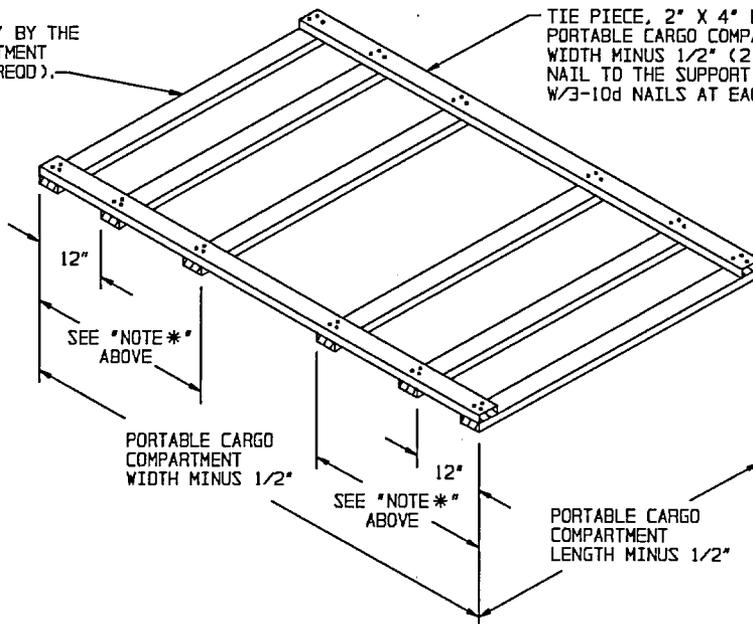
**SIDE BLOCKING ASSEMBLY D**

THIS SIDE BLOCKING ASSEMBLY IS FOR USE IN METHODS 48, 53, 54, AND 56.

NOTE\*: POSITION THESE SUPPORT PIECES IN SUCH A MANNER THAT THEY WILL BE AGAINST THE STRENGTHENING RINGS ON THE PROPELLING CHARGE CONTAINER.

SUPPORT PIECE, 2" X 4" BY THE PORTABLE CARGO COMPARTMENT LENGTH MINUS 1/2" (6 REOD).

TIE PIECE, 2" X 4" BY THE PORTABLE CARGO COMPARTMENT WIDTH MINUS 1/2" (2 REOD). NAIL TO THE SUPPORT PIECES W/3-10d NAILS AT EACH JOINT.

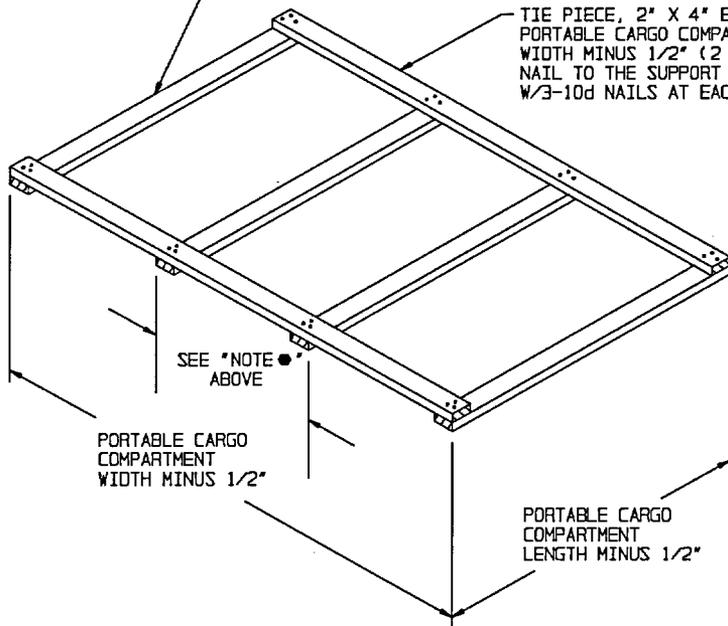


**RETAINER ASSEMBLY A**

THIS RETAINER ASSEMBLY IS FOR USE IN METHOD 51.

SUPPORT PIECE, 2" X 4" BY THE PORTABLE CARGO COMPARTMENT LENGTH MINUS 1/2" (4 REQD).

**NOTE:**  
POSITION THESE SUPPORT PIECES IN SUCH A MANNER THAT THEY WILL BE AGAINST THE STRENGTHENING RINGS ON THE PROELLING CHARGE CONTAINER.



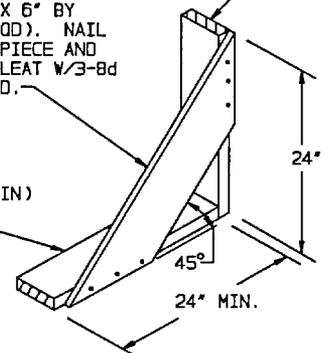
**RETAINER ASSEMBLY B**

THIS RETAINER ASSEMBLY IS FOR USE IN METHOD 52.

VERTICAL PIECE, 2" X 6" X 24" (1 REQD). NAIL TO THE BACK-UP CLEAT W/2-16d NAILS.

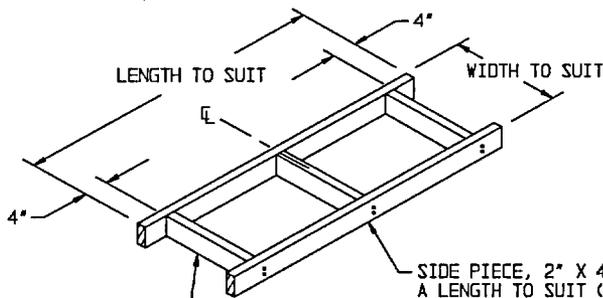
ANGLE BRACE, 1" X 6" BY CUT TO FIT (1 REQD). NAIL TO THE VERTICAL PIECE AND TO THE BACK-UP CLEAT W/3-8d NAILS AT EACH END.

BACK-UP CLEAT, 2" X 6" X 24" (MIN) (1 REQD).



**LTL BRACE**

THIS LTL BRACE IS FOR USE IN METHODS 63 AND 64.



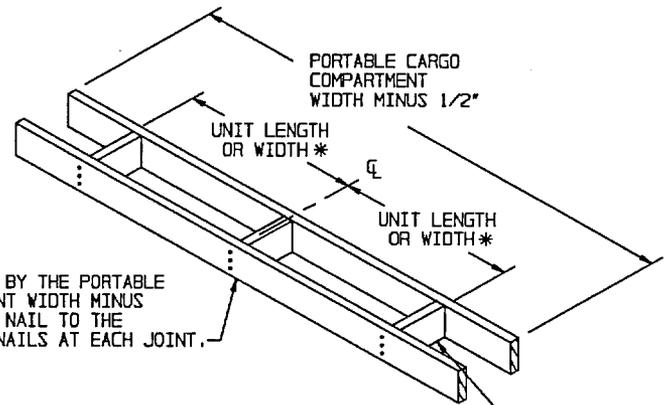
STRUT, 2" X 4" BY CUT TO FIT (3 REQD).

SIDE PIECE, 2" X 4" BY A LENGTH TO SUIT (2 REQD). NAIL TO THE STRUTS W/2-10d NAILS AT EACH JOINT.

**SIDE BLOCKING ASSEMBLY E**

THIS SIDE BLOCKING ASSEMBLY IS FOR USE IN METHODS 49, 54, 57, 58, AND 61.

\* ONE-HALF OF LOAD WIDTH FOR METHOD 57.

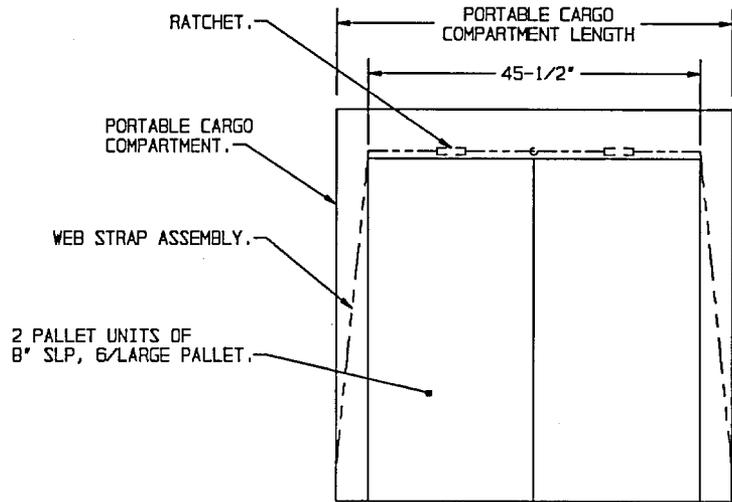


HEADER, 2" X 6" BY THE PORTABLE CARGO COMPARTMENT WIDTH MINUS 1/2" (2 REQD). NAIL TO THE STRUTS W/3-10d NAILS AT EACH JOINT.

**STRUT FILL ASSEMBLY B**

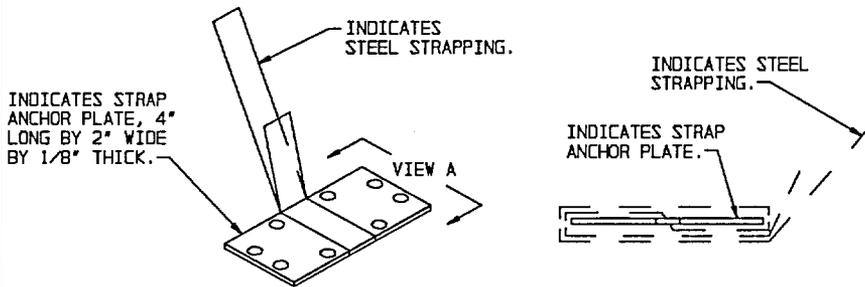
THIS STRUT FILL ASSEMBLY IS FOR USE IN METHODS 18, 49, 54, AND 57.

**DETAILS**



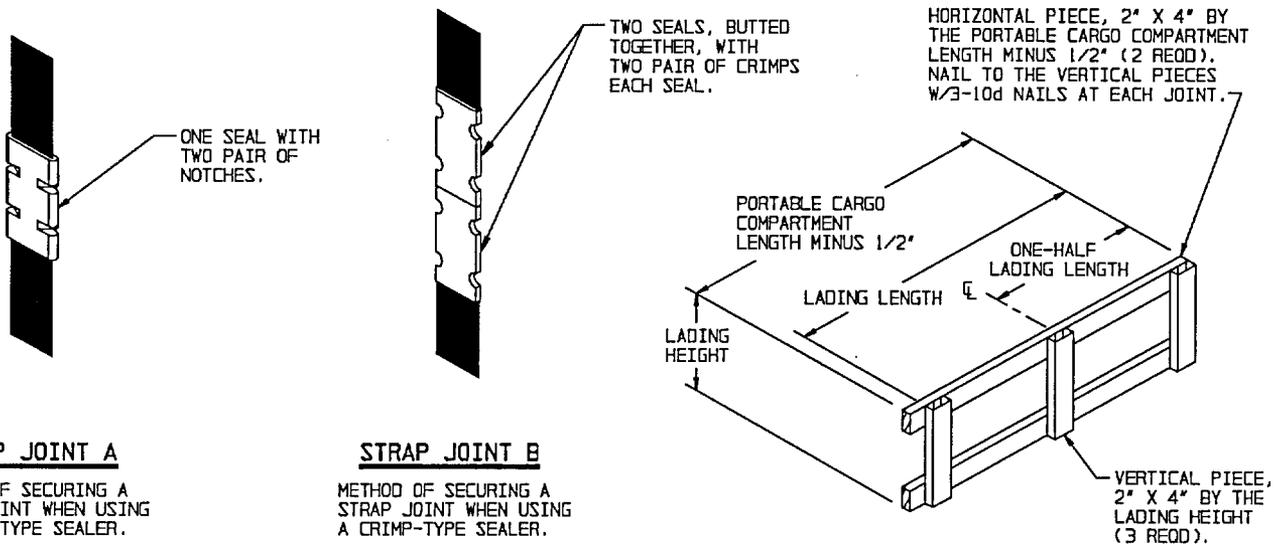
**DETAIL A**

THE ABOVE VIEW DEPICTS THE USE OF TWO WEB STRAP ASSEMBLIES HOOKED TOGETHER, ON TOP OF THE LADING, SO THEY CAN BE TIGHTENED WITH THE RATCHET WHEN THERE IS INSUFFICIENT SPACE BETWEEN THE LADING AND THE PORTABLE CARGO COMPARTMENT ENDWALL TO MANIPULATE THE RATCHET.



**ISOMETRIC VIEW**

**APPLICATION OF STRAPPING TO STRAP ANCHOR PLATE**



**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**

**GATE ASSEMBLY E**

THIS GATE IS FOR USE IN METHOD 58.