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# LOADING AND BRACING<sup>⊕</sup> IN END OPENING ISO CONTAINERS OF 8' M188A1 PROPELLING CHARGES PACKED IN PA92 CYLINDRICAL METAL CONTAINERS, ON 4-WAY ENTRY WOODEN PALLETS

## INDEX

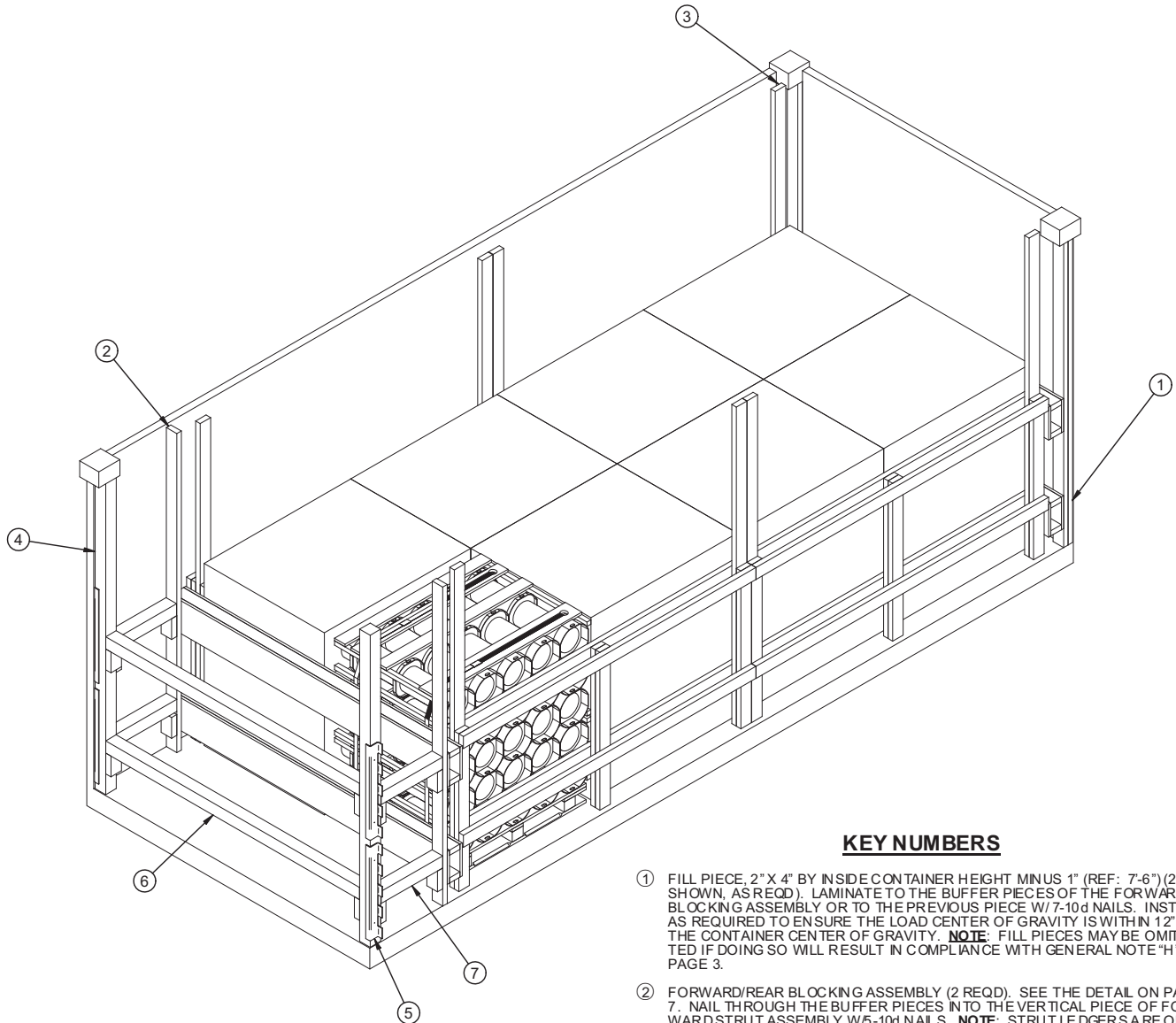
ITEM	PAGE(S)
8 UNIT LOAD (FULL HEIGHT PALLET UNIT) - - - - -	2
GENERAL NOTES AND MATERIAL SPECIFICATIONS - - - - -	3
16 UNIT LOAD (REDUCED HEIGHT PALLET UNIT) - - - - -	4
PALLET UNIT DETAIL - - - - -	5
DETAILS - - - - -	6-10

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<sup>⊕</sup> THE PROCEDURES SHOWN HEREIN ARE APPLICABLE TO LOADS THAT ARE TO BE SHIPPED BY TRAILER/CONTAINER-ON-FLATCAR (T/COFC) RAIL, MOTOR, OR WATER CARRIERS.

## U.S. ARMY MATERIEL COMMAND DRAWING

<p>APPROVED, U.S. ARMY JOINT MUNITIONS COMMAND</p> <p>RUS.ALLEN.J .1230354282</p> <p><small>Digitally signed by RUS.ALLEN.J.1230354282 DN: c=US, o=U.S. Government, ou=DoD, ou=PKI, ou=USA, cn=RUS.ALLEN.J.1230354282 Date: 2010.12.17 12:41:01 -06'00'</small></p>		<p><b>CAUTION: VERIFY PRIOR TO USE AT WWW.DAC.ARMY.MIL THAT THIS IS THE MOST CURRENT VERSION OF THIS DOCUMENT. THIS IS PAGE 1 OF 10.</b></p>						
		<p><b>DO NOT SCALE</b></p>		<p><b>DECEMBER 2010</b></p>				
<p>ENGINEER OR TECHNICIAN</p>		<p>BASIC</p>	<p>MADELINE BANKS</p>					
		<p>REV.</p>						
<p>APPROVED BY ORDER OF COMMANDING GENERAL, U.S. ARMY MATERIEL COMMAND</p> <p>CARNEY.GARY. BURTON.10387 08038</p> <p><small>Digitally signed by CARNEY.GARY.BURTON.1038708038 DN: c=US, o=U.S. Government, ou=DoD, ou=PKI, ou=USA, cn=CARNEY.GARY.BURTON.10387080 38 Date: 2011.01.05 10:59:09 -06'00'</small></p> <p>U.S. ARMY DEFENSE AMMUNITION CENTER</p>		<p>TRANSPORTATION ENGINEERING DIVISION</p>	<p>FIEFFER.LAUR A.A.1230375727</p> <p><small>Digitally signed by FIEFFER.LAURA.A.1230375727 DN: c=US, o=U.S. Government, ou=DoD, ou=PKI, ou=USA, cn=FIEFFER.LAURA.A.1230375727 Date: 2010.11.16 11:54:11 -06'00'</small></p>	<p>TESTED</p>	<p>CLASS</p>	<p>DIVISION</p>	<p>DRAWING</p>	<p>FILE</p>
		<p>VALIDATION ENGINEERING DIVISION</p>	<p>BARICKMAN. PHILIP.W.123 0202202</p> <p><small>Digitally signed by BARICKMAN.PHILIP.W.12302202 DN: c=US, o=U.S. Government, ou=DoD, ou=PKI, ou=USA, cn=BARICKMAN.PHILIP.W.12302202 Date: 2010.12.03.08:48:00'</small></p>		<p>19</p>	<p>48</p>	<p>4154/14</p>	<p>15PM1002</p>
		<p>ENGINEERING DIRECTORATE</p>	<p>BEAVER.JERRY .W.1230949952</p> <p><small>Digitally signed by BEAVER.JERRY.W.1230949952 DN: c=US, o=U.S. Government, ou=DoD, ou=PKI, ou=USA, cn=BEAVER.JERRY.W.1230949952 Date: 2010.11.23 07:37:21 -06'00'</small></p>					



**ISOMETRIC VIEW**

**KEY NUMBERS**

- ① FILL PIECE, 2" X 4" BY INSIDE CONTAINER HEIGHT MINUS 1" (REF: 7-6") (2 SHOWN, AS REQD). LAMINATE TO THE BUFFER PIECES OF THE FORWARD BLOCKING ASSEMBLY OR TO THE PREVIOUS PIECE W/ 7-10d NAILS. INSTALL AS REQUIRED TO ENSURE THE LOAD CENTER OF GRAVITY IS WITHIN 12" OF THE CONTAINER CENTER OF GRAVITY. **NOTE:** FILL PIECES MAY BE OMITTED IF DOING SO WILL RESULT IN COMPLIANCE WITH GENERAL NOTE "H" ON PAGE 3.
- ② FORWARD/REAR BLOCKING ASSEMBLY (2 REQD). SEE THE DETAIL ON PAGE 7. NAIL THROUGH THE BUFFER PIECES INTO THE VERTICAL PIECE OF FORWARD STRUT ASSEMBLY W/ 5-10d NAILS. **NOTE:** STRUT LEDGERS ARE ONLY REQUIRED ON THE REAR BLOCKING ASSEMBLY. DO NOT INSTALL STRUT LEDGERS ON THE FORWARD BLOCKING ASSEMBLY.
- ③ SIDE FILL ASSEMBLY A (4 REQD). SEE THE DETAIL ON PAGE 9.
- ④ DOOR POST VERTICAL (2 REQD). SEE THE DETAIL ON PAGE 8, "DETAIL A" ON PAGE 7, AND GENERAL NOTE "R" ON PAGE 3.
- ⑤ UNIVERSAL LOAD RETAINER (4 REQD, 2 PER SIDE). NAIL THROUGH THE HOLES INTO THE DOOR POST VERTICAL W/ 2-10d NAILS. SEE DEPARTMENT OF ARMY DRAWING DA-116, "DETAIL A" ON PAGE 7, AND GENERAL NOTE "R" ON PAGE 3.
- ⑥ DOOR SPANNER, 4" X 4" MATERIAL CUT TO A LENGTH THAT WILL PROVIDE A DRIVE FIT (REF: 7-1-1/4") (2 REQD). TOENAIL TO THE DOOR POST VERTICAL W/ 2-12d NAILS AT EACH END. SEE THE "BEVEL-CUT" DETAIL ON PAGE 8.
- ⑦ STRUT, 4" X 4" BY CUT-TO-FIT (REF: 18-3/4") (4 REQD). TOENAIL TO THE BUFFER PIECES OF THE REAR BLOCKING ASSEMBLY AND TO THE DOOR POST VERTICAL W/ 2-12d NAILS AT EACH END. SEE THE "BEVEL-CUT" DETAIL ON PAGE 8.

BILL OF MATERIAL		
LUMBER	LINEAR FEET	BOARD FEET
2" X 4"	181	120
4" X 4"	35	47
NAI LS	NO. REQD	POUNDS
6d (2")	176	1
10d (3")	274	4-1/4
12d (3-1/4")	24	1/2
PLYWOOD, 3/4" - -	48.56 SQ FT REQD	- 100.15 LBS
UNIVERSAL LOAD RETAINER	- - 4 REQD	- - 26 LBS

**LOAD AS SHOWN**

ITEM	QUANTITY	WEIGHT (APPROX)
PALLET UNIT	8	15,440 LBS
DUNNAGE		465 LBS
CONTAINER		4,700 LBS
TOTAL WEIGHT		20,605 LBS (APPROX)

## GENERAL NOTES

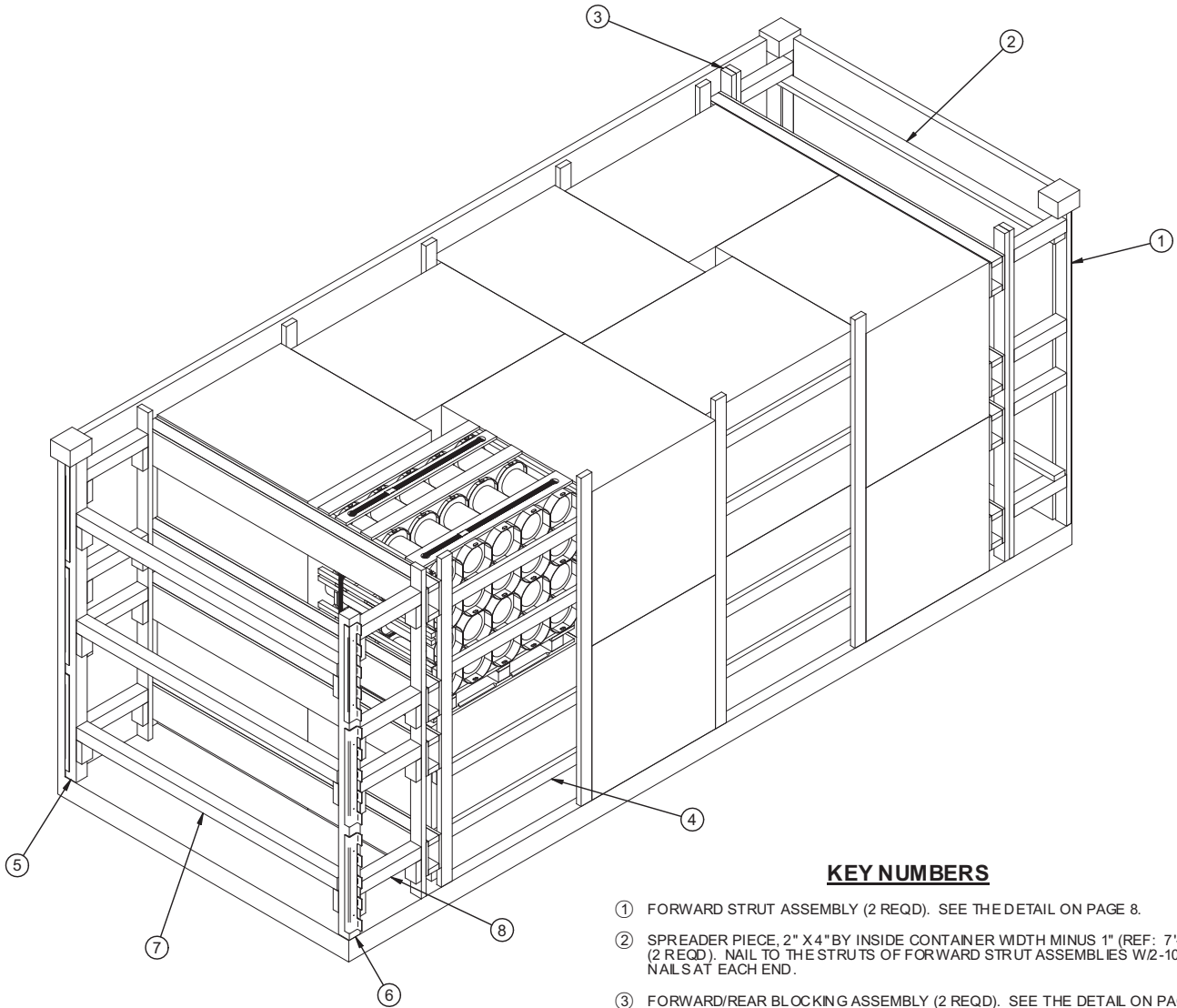
(GENERAL NOTES CONTINUED)

- A. THIS DOCUMENT HAS BEEN PREPARED AND ISSUED IN ACCORDANCE WITH AR 740-1 AND AUGMENTS TM 743-200-1 (CHAPTER 5).
- B. THE SPECIFIED OUTLOADING PROCEDURES ARE APPLICABLE TO LOADS OF 8' M188A1 PROPELLING CHARGES PACKED IN PA92 SERIES CYLINDRICAL METAL CONTAINERS. SUBSEQUENT REFERENCE TO PALLET UNIT HEREIN MEANS THE PALLET UNIT WITH AMMUNITION ITEMS. SEE PAGE 5 AND AMC DRAWING 19-48-4042A/14-20PM1001 FOR DETAILS OF THE PALLET UNIT. **CAUTION:** REGARDLESS OF THE QUANTITY OF PALLET UNITS TO BE SHIPPED, THE "MAXIMUM GROSS WEIGHT" OF THE END OPENING ISO CONTAINER MUST NOT BE EXCEEDED.
- C. THE LOAD AS SHOWN IS BASED ON A 4,700 POUND 20' LONG BY 8' WIDE BY 8'-6" HIGH END OPENING ISO CONTAINER WITH INSIDE DIMENSIONS OF 19'-4" LONG BY 92" WIDE BY 93" HIGH, WITH A MAXIMUM GROSS WEIGHT OF 52,910 POUNDS. OLDER/OTHER CONTAINERS MAY HAVE A TOTAL INSIDE HEIGHT OF 95", BUT A CLEAR HEIGHT UNDER THE ROOF BOWS OF 93". VERIFY INSIDE CONTAINER HEIGHT PRIOR TO FABRICATING DUNNAGE. THE LOAD IS DESIGNED FOR TRAILER/CONTAINER-ON-FLATCAR (T/COFC) SHIPMENT, HOWEVER, THE LOAD AS DESIGNED CAN ALSO BE MOVED BY OTHER SURFACE MODES OF TRANSPORT. **NOTICE:** OTHER CONTAINERS OF THE SAME DESIGN CONFIGURATION CAN BE USED.
- D. WHEN LOADING PALLET UNITS, THEY ARE TO BE POSITIONED SO AS TO ACHIEVE A TIGHT LOAD (TIGHT AGAINST THE DUNNAGE ASSEMBLIES). THE UNBLOCKED SPACE ACROSS THE WIDTH OF A LOAD BAY IS NOT TO EXCEED 1-1/2". EXCESSIVE SLACK CAN BE ELIMINATED FROM A LOAD BY LAMINATING ADDITIONAL PIECES OF APPROPRIATE THICKNESS TO THE HORIZONTAL PIECES ON THE SIDE FILL ASSEMBLIES. NAIL EACH ADDITIONAL PIECE W/1 APPROPRIATELY SIZED NAIL EVERY 12". ADDITIONALLY, THE THICKNESS AND/OR QUANTITY OF THE VERTICAL OR HORIZONTAL PIECES IN THE SIDE FILL ASSEMBLIES MAY BE ADJUSTED AS REQUIRED TO FACILITATE VARIANCE IN THE SIZE OF THE PALLET UNIT.
- E. DUNNAGE LUMBER SPECIFIED IS OF NOMINAL SIZE. FOR EXAMPLE, 1" X 4" MATERIAL IS ACTUALLY 3/4" THICK BY 3-1/2" WIDE AND 2" X 6" MATERIAL IS ACTUALLY 1-1/2" THICK BY 5-1/2" WIDE.
- F. A STAGGERED NAILING PATTERN WILL BE USED WHENEVER 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.
- G. IN SOME CONTAINERS THERE IS A SLOT AT THE CORNERS OF THE FORWARD WALL. PIECES OF DUNNAGE MATERIAL MUST BE LAMINATED TO THE BUFFER PIECES ON THE FORWARD STRUT ASSEMBLIES TO PROVIDE A FLAT SURFACE FOR THE BUFFER PIECES. A PIECE OF 2" X 4", 2" X 3" OR A SPECIAL WIDTH PIECE CUT-TO-FIT CAN BE USED. THIS FILL PIECE WILL BE NAILED WITH ONE APPROPRIATELY SIZED NAIL EVERY 12". NOTE THAT SOME CONTAINERS ARE EQUIPPED WITH "TIE-BARS" IN THE CORNER SLOT, WHICH PRECLUDE THE USE OF A FULL HEIGHT FILL PIECE. WHEN "TIE-BARS" ARE PRESENT, THE FILL PIECE MUST BE INSTALLED IN SEGMENTS DESIGNED TO FIT BETWEEN THE "TIE-BARS" VERTICALLY. THE FILL PIECE(S) IS NOT REQUIRED WHEN THE CORNER PORTIONS OF THE CONTAINER FORWARD WALL ARE SMOOTH AND FLAT. DO NOT ALLOW ANY DUNNAGE ASSEMBLY TO CONTACT THE CONTAINER FORWARD WALL, ONLY THE CORNER POSTS OF THE CONTAINER SHOULD BE USED FOR FORWARD LONGITUDINAL BLOCKING.
- H. WHETHER A CONTAINER IS FULL OR IS LOADED WITH A REDUCED QUANTITY OF LADING UNITS, THE LENGTHWISE CENTER OF GRAVITY OF THE LOAD MUST BE WITHIN 12", IN EITHER DIRECTION, OF THE MID-POINT OF THE CONTAINER.
- J. **CAUTION:** DO NOT NAIL DUNNAGE MATERIAL TO THE CONTAINER WALLS OR FLOOR. ALL NAILING WILL BE WITHIN THE DUNNAGE.
- K. PORTIONS OF THE CONTAINER DEPICTED WITHIN THIS DRAWING, SUCH AS THE SIDEWALL, HAVE NOT BEEN SHOWN IN THE LOAD VIEWS FOR CLARITY PURPOSES.
- L. **MAXIMUM LOAD WEIGHT CRITERIA:**  
THE MAXIMUM LOAD WEIGHTS ARE CONTROLLED BY EQUIPMENT CAPABILITY FACTORS. ALTHOUGH THE HEAVIEST MAXIMUM LOADS ARE DELINEATED IN THE LOAD VIEWS, PROVISIONS ARE INCLUDED WITHIN THIS DRAWING SO THAT THE BASIC LOADS CAN BE ADJUSTED TO SATISFY A LESSER QUANTITY OF LADING UNITS. DEPENDING ON TRANSPORTATION ROUTING, IT MAY BE NECESSARY TO REDUCE THE LOAD WEIGHT TO SATISFY "WEIGHT LAWS" OF CERTAIN STATES. ALSO, IT MAY BE NECESSARY TO REDUCE THE LOAD WEIGHT TO SATISFY OTHER WEIGHT RESTRICTIONS IMPOSED ON THE INTERMODAL CONTAINER SYSTEM.
- M. REQUIREMENTS CITED WITHIN THE ASSOCIATION OF AMERICAN RAILROADS (AAR) INTERMODAL LOADING GUIDE APPLY WHEN THE SHIPMENT MOVES BY TRAILER/CONTAINER-ON-FLATCAR (T/COFC). SPECIAL T/COFC NOTES FOLLOW:  
1. A LOADED CONTAINER MUST BE ON A CHASSIS EQUIPPED WITH TWO BOGIE ASSEMBLIES WHEN BEING MOVED IN TOFC SERVICE.  
2. THE LOAD LIMIT OF A T/COFC RAILCAR MUST NOT BE EXCEEDED, NOR WILL A CAR BE LOADED SO THAT THE TRUCK UNDER ONE END OF THE CAR CARRIES MORE THAN ONE-HALF OF THE LOAD LIMIT FOR THAT CAR.
- N. DURING INTRASTATE AND/OR INTERSTATE MOVES BY MOTOR CARRIER, A PROPER CHASSIS OR MODIFIED FLATBED TRAILER MUST BE USED TO PRECLUDE VIOLATION OF ONE OR MORE "WEIGHT LAWS" APPLICABLE TO THE STATE OR STATES INVOLVED.
- O. 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 25.4MM AND ONE POUND EQUALS 0.454 KG.
- P. THE QUANTITY OF PALLET UNITS MAY BE REDUCED FOR SHIPMENT, IF DESIRED. SEE THE FILLER ASSEMBLY ON PAGE 7.  
1. IF A LOAD IS REDUCED BY ONLY A SMALL AMOUNT (ONE, TWO OR THREE LADING UNITS), LADING UNITS NORMALLY MAY BE ELIMINATED FROM THE CENTER OF THE LOAD.  
2. IF A LOAD IS REDUCED BY A LARGE AMOUNT (MORE THAN THREE LADING UNITS), LADING UNITS SHOULD BE ELIMINATED AS REQUIRED AND THE TOTAL LOAD SHIFTED FORE OR AFT, AS NECESSARY, TO ACHIEVE A SYMMETRICAL WEIGHT DISTRIBUTION. THE DEPICTED PROCEDURES WILL BE FOLLOWED AS CLOSELY AS POSSIBLE, MAKING ONLY THOSE ADJUSTMENTS TO THE DUNNAGE WHICH ARE REQUIRED TO ACCOMMODATE THE NUMBER OF UNITS TO BE SHIPPED.
- Q. ANTI-CHAFING MATERIAL MAY BE INSTALLED AT POINTS OF CONTACT BETWEEN PALLET UNITS, AND BETWEEN PALLET UNITS AND END OPENING CONTAINER, IF DESIRED, TO PREVENT CHAFING DAMAGE TO PALLET UNIT PAINT AND MARKINGS.
- R. SIX UNIVERSAL LOAD RETAINERS, AS DEPICTED IN THE LOAD ON PAGE 4, ARE REQUIRED WHEN LOADING TWO LAYERS OF PALLET UNITS, AND FOUR, AS DEPICTED IN THE LOAD ON PAGE 2, ARE REQUIRED WHEN LOADING ONE LAYER OF PALLET UNITS. REFER TO DAC DRAWING ACV00682 FOR DETAILS OF THE UNIVERSAL LOAD RETAINER CONSTRUCTION, AND TO DEPARTMENT OF THE ARMY DRAWING DA-116 FOR DETAILS FOR INSTALLATION TO THE DOOR POST VERTICAL, PLACEMENT INTO THE CONTAINER, AND FOR OTHER METHODS OF REAR-OF-LOAD RESTRAINT.
- S. LOAD-BLOCKING STRUTS WHICH ARE 48" OR LONGER MUST BE STIFFENED BY THE APPLICATION OF HORIZONTAL AND VERTICAL STRUT BRACING AS SHOWN IN THE "TYPICAL STRUT BRACING" DETAIL ON PAGE 73 OF DRAWING AMC 19-48-4153-15PA1002. BRACING IS NOT REQUIRED IF THE STRUTS FOR THE LOAD BEING SHIPPED ARE SHORTER THAN 48". THE LENGTH OF THE LOAD-BLOCKING STRUTS SHOULD BE KEPT AS SHORT AS POSSIBLE (APPROX 18" MINIMUM), BUT IN THE EVENT IT IS NECESSARY TO USE STRUTS WHICH ARE 8'-0" OR MORE IN LENGTH, IT WILL BE NECESSARY TO APPLY AN ADDITIONAL SET OF HORIZONTAL AND VERTICAL STRUT BRACING PIECES. STRUT BRACING SHOULD BE APPLIED SO AS TO PROVIDE NEARLY EQUAL SPACES BETWEEN THE BRACING PIECES AND THE CENTER GATES AND/OR BETWEEN ADJACENT STRUT BRACING PIECES. NOTE THAT HORIZONTAL STRUT BRACING PIECES FOR THE UPPER LEVEL OF STRUTS FOR ALL BUT THE UPPERMOST TIER OF A LOAD MAY BE DIFFICULT TO APPLY TO THE TOP SURFACES OF THE STRUT AS DEPICTED. STRUT BRACING WILL BE EQUALLY EFFECTIVE IF APPLIED TO THE UNDER SIDE OF THOSE STRUTS.

## MATERIAL SPECIFICATIONS

- LUMBER** - - - - - : SEE TM 743-200-1 (DUNNAGE LUMBER) AND VOLUNTARY PRODUCT STANDARD PS 20.
- NAILS** - - - - - : ASTM F1667; COMMON STEEL NAIL (NLCMS OR NLCMS).
- PLYWOOD** - - - - - : COMMERCIAL ITEM DESCRIPTION A-A-55057, 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.
- ANTI-CHAFING MATERIAL** - - - - - : MIL-PRF-121 (OR EQUAL); NEUTRAL BARRIER MATERIAL.
- STEEL, STRUCTURAL** - - - - - : ASTM A36; 36,000 PSI MINIMUM YIELD OR BETTER.
- WIRE, CARBON STEEL** - - - - - : ASTM A853; ANNEALED AT FINISH, BLACK OXIDE FINISH, 0.0800" DIA, GRADE 1006 OR BETTER.

(CONTINUED AT RIGHT)



**ISOMETRIC VIEW**

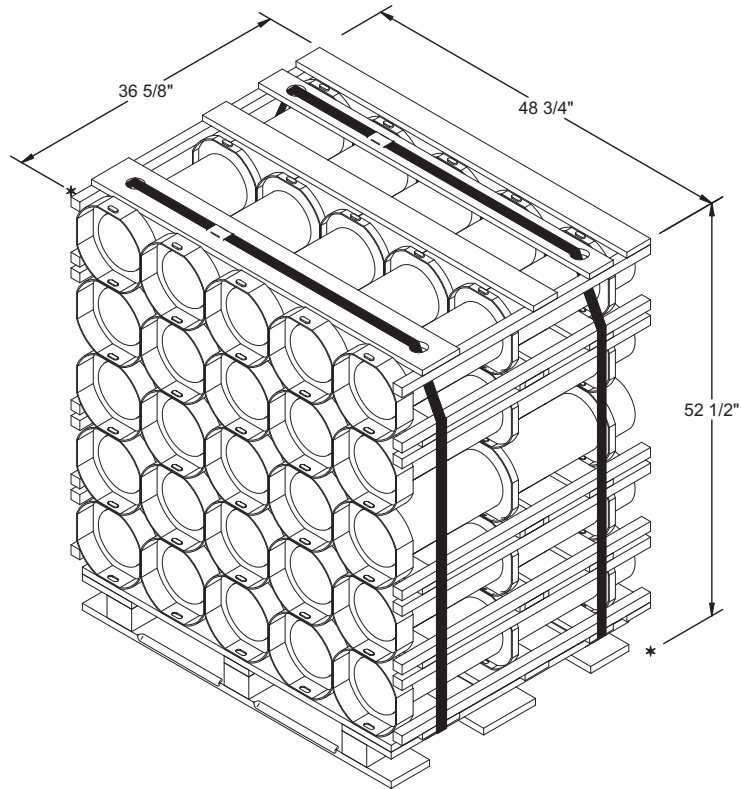
**KEY NUMBERS**

- ① FORWARD STRUT ASSEMBLY (2 REQD). SEE THE DETAIL ON PAGE 8.
- ② SPREADER PIECE, 2" X 4" BY INSIDE CONTAINER WIDTH MINUS 1" (REF: 7'-7") (2 REQD). NAIL TO THE STRUTS OF FORWARD STRUT ASSEMBLIES W/2-10d NAILS AT EACH END.
- ③ FORWARD/REAR BLOCKING ASSEMBLY (2 REQD). SEE THE DETAIL ON PAGE 7. NAIL THROUGH THE BUFFER PIECES INTO THE VERTICAL PIECE OF FORWARD STRUT ASSEMBLY W/5-10d NAILS. **NOTE:** STRUT LEDGERS ARE ONLY REQUIRED ON THE REAR BLOCKING ASSEMBLY. DO NOT INSTALL STRUT LEDGERS ON THE FORWARD BLOCKING ASSEMBLY.
- ④ SIDE FILL ASSEMBLY B (4 REQD). SEE THE DETAIL ON PAGE 6.
- ⑤ DOOR POST VERTICAL (2 REQD). SEE THE DETAIL ON PAGE 8, "DETAIL A" ON PAGE 7, AND GENERAL NOTE "R" ON PAGE 3.
- ⑥ UNIVERSAL LOAD RETAINER (6 REQD, 3 PER SIDE). NAIL THROUGH THE HOLES INTO THE DOOR POST VERTICAL W/2-10d NAILS. SEE DEPARTMENT OF ARMY DRAWING DA-116, "DETAIL A" ON PAGE 7, AND GENERAL NOTE "R" ON PAGE 3.
- ⑦ DOOR SPANNER, 4" X 4" MATERIAL CUT TO A LENGTH THAT WILL PROVIDE A DRIVE FIT (REF: 7'-1-1/4") (3 REQD). TO NAIL TO THE DOOR POST VERTICAL W/2-12d NAILS AT EACH END. SEE THE "BEVEL-CUT" DETAIL ON PAGE 8.
- ⑧ STRUT, 4" X 4" BY CUT-TO-FIT (REF: 16-3/4") (8 REQD). TO NAIL TO THE BUFFER PIECES OF THE REAR BLOCKING ASSEMBLY AND TO THE DOOR POST VERTICAL W/2-12d NAILS AT EACH END. SEE THE "BEVEL-CUT" DETAIL ON PAGE 8.

BILL OF MATERIAL		
LUMBER	LINEAR FEET	BOARD FEET
2" X 4"	314	207
4" X 4"	59	78
NAILS	NO. REQD	POUNDS
6d (2")	352	2
10d (3")	182	3
12d (3-1/4")	76	1-1/4
PLYWOOD, 3/4" - -	96.06 SQ FT REQD -	198.09 LBS
UNIVERSAL LOAD RETAINER - -	6 REQD - - -	39 LBS

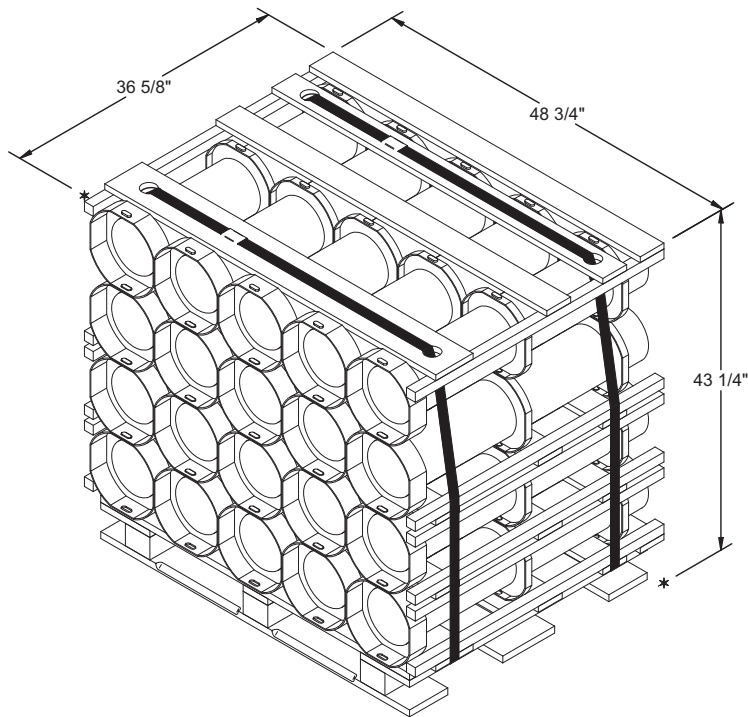
**LOAD AS SHOWN**

ITEM	QUANTITY	WEIGHT	(APPROX)
PALLET UNIT - - - - -	16 - - - - -	24,960 LBS	
DUNNAGE - - - - -	- - - - -	818 LBS	
CONTAINER - - - - -	- - - - -	4,700 LBS	
TOTAL WEIGHT - - - - -		30,478 LBS	(APPROX)



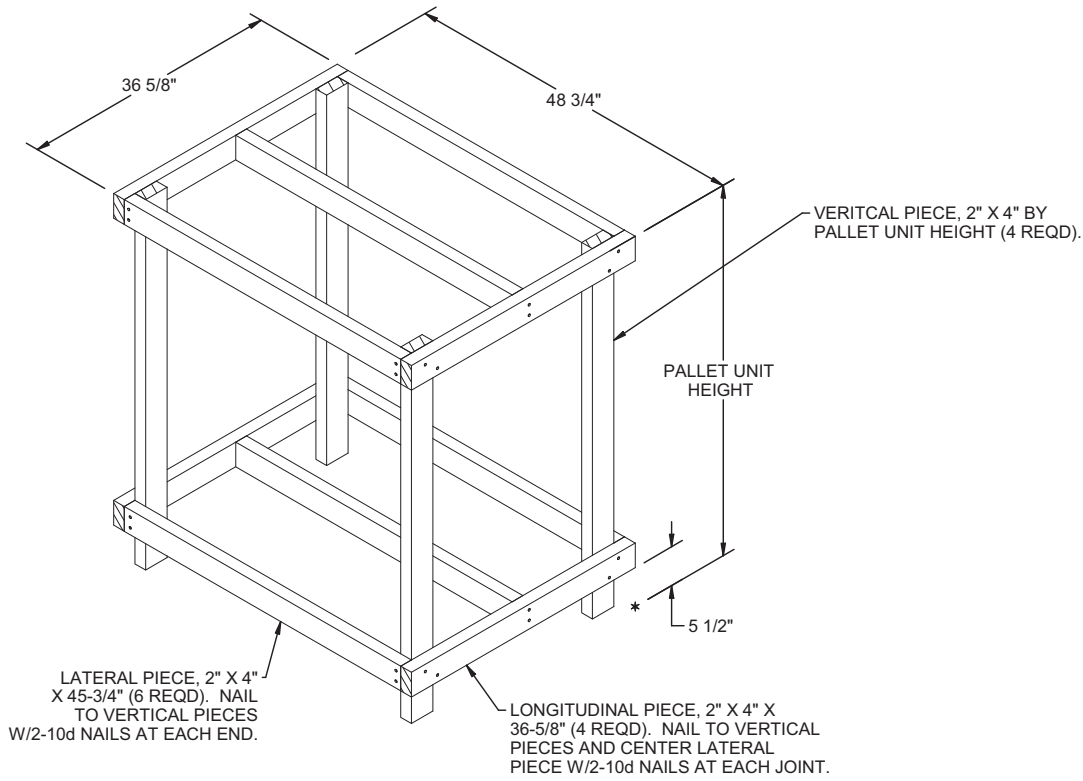
**FULL HEIGHT PALLET UNIT DATA**

GROSS WEIGHT - - - - - 1,930 LBS  
 CUBE - - - - - 54.2 CU FT



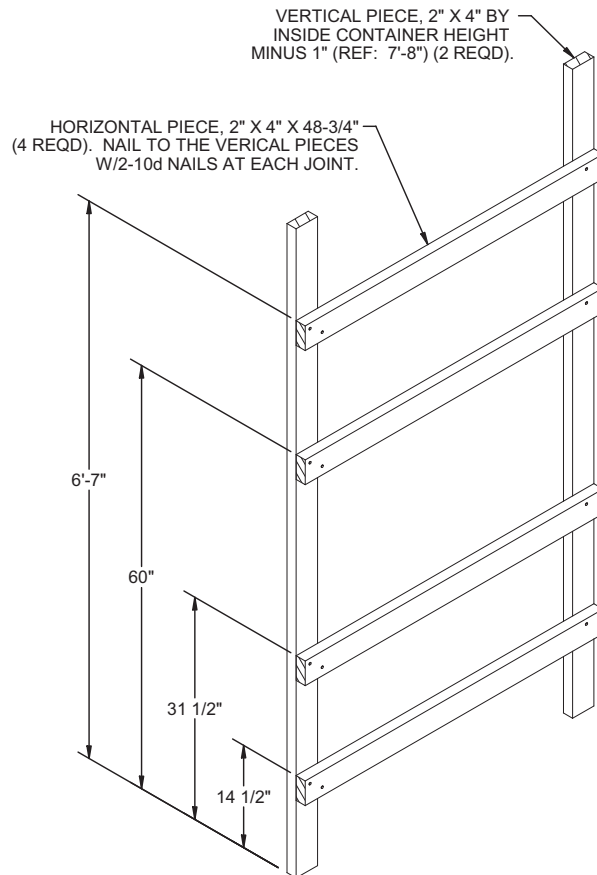
**REDUCED HEIGHT PALLET UNIT DATA**

GROSS WEIGHT - - - - - 1,560 LBS  
 CUBE - - - - - 44.7 CU FT



**FILLER ASSEMBLY**

FOR MINUS ONE PALLET UNIT. NO MORE THAN THREE FILLER ASSEMBLIES MAY BE USED PER TWO HIGH LOAD, AND NO MORE THAN ONE FILLER ASSEMBLY MAY BE USED PER ONE HIGH LOAD.

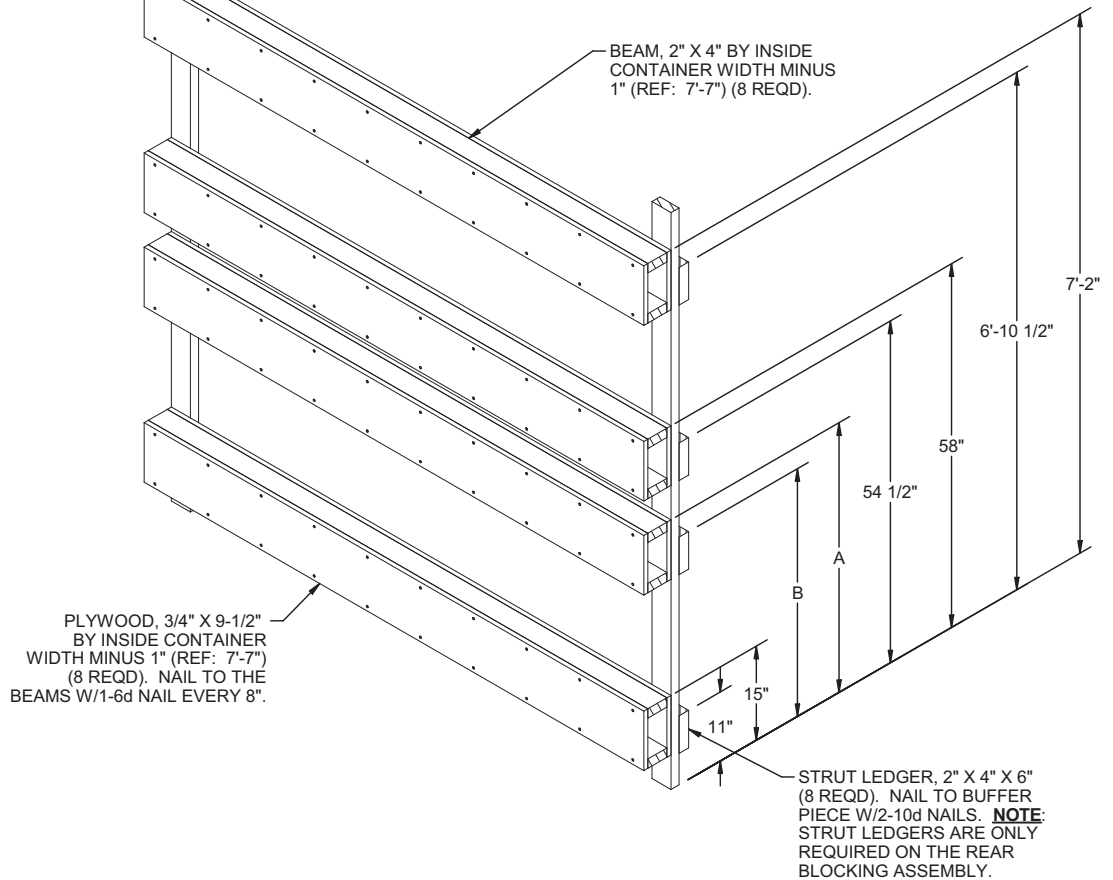


**SIDE FILL ASSEMBLY B**

FOR A SINGLE LAYER LOAD, ELIMINATE THE TOP TWO HORIZONTAL PIECES.

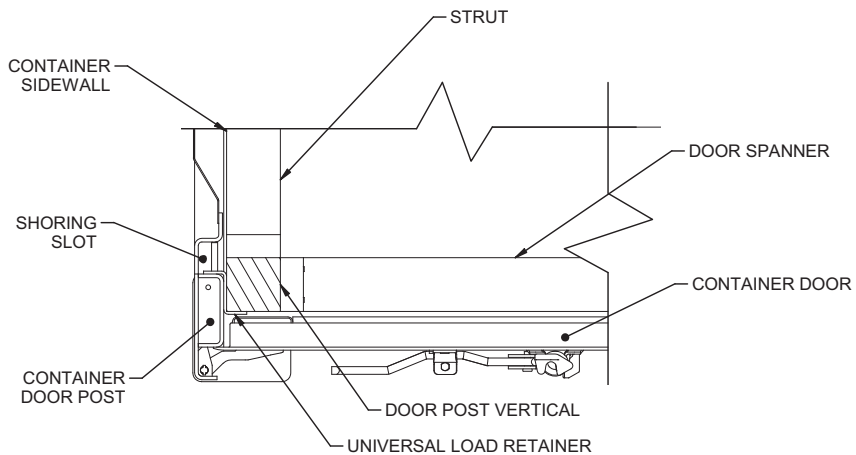
BUFFER PIECE, 2" X 4" BY INSIDE CONTAINER HEIGHT MINUS 1" (REF: 7'-6" IN FORWARD END OF CONTAINER, 7'-8" WHEN USING A FORWARD STRUT ASSEMBLY OR IN THE REAR BLOCKING ASSEMBLY) (2 REQD). NAIL TO BEAMS W/2-10d NAILS AT EACH JOINT. SEE GENERAL NOTE "G" ON PAGE 3.

DIMENSION CHART		
PALLET UNIT	DIMENSION	
	A	B
FULL HEIGHT	52"	43"
REDUCED HEIGHT	43"	39-1/2"



**FORWARD/REAR BLOCKING ASSEMBLY**

FOR A SINGLE LAYER LOAD, ELIMINATE THE TOP TWO BEAM ASSEMBLIES AND THE TOP TWO STRUT LEDGERS.



**DETAIL A**

A PARTIAL PLAN VIEW OF THE LEFT REAR PORTION OF THE CONTAINER IS SHOWN DEPICTING THE PROPER POSITION OF THE DOOR POST VERTICAL, UNIVERSAL LOAD RETAINER, AND ADJACENT DUNNAGE PIECES.

SEE GENERAL NOTE "G" ON PAGE 3.

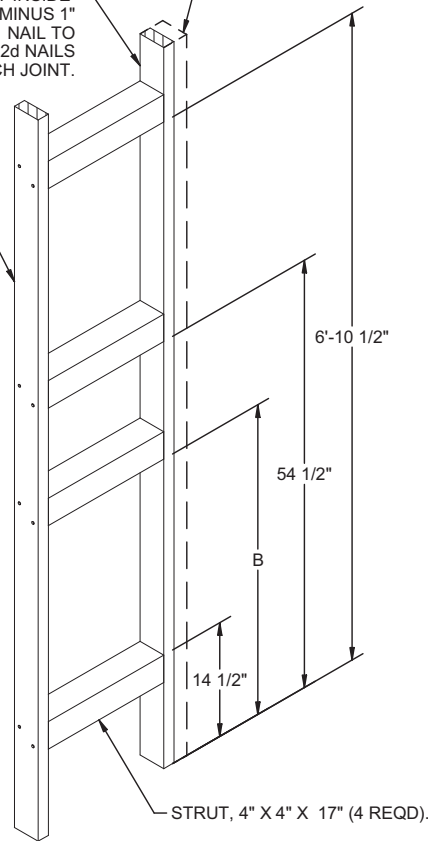
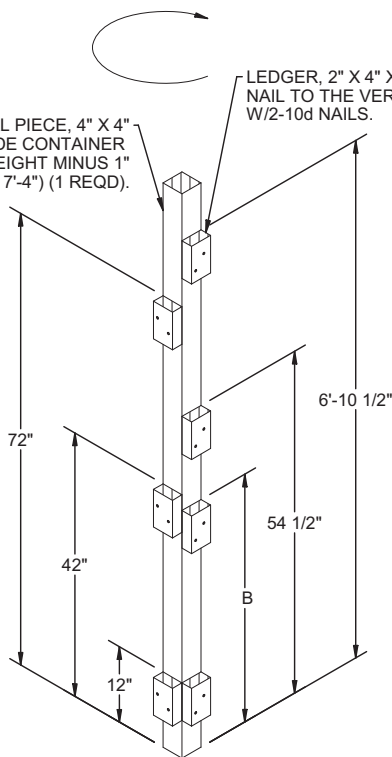
BUFFER PIECE, 2" X 4" BY INSIDE CONTAINER HEIGHT MINUS 1" (REF: 7'-6") (1 REQD). NAIL TO THE STRUTS W/2-12d NAILS AT EACH JOINT.

VERTICAL PIECE, 2" X 4" X 7'-7" (1 REQD). NAIL TO THE STRUTS W/2-12d NAILS AT EACH JOINT.

LEDGER, 2" X 4" X 6" (7 REQD). NAIL TO THE VERTICAL PIECE W/2-10d NAILS.

VERTICAL PIECE, 4" X 4" BY INSIDE CONTAINER HEIGHT MINUS 1" (REF: 7'-4") (1 REQD).

ROTATED 90° FROM THE ISOMETRIC VIEWS SHOWN ON PAGES 2 AND 4.



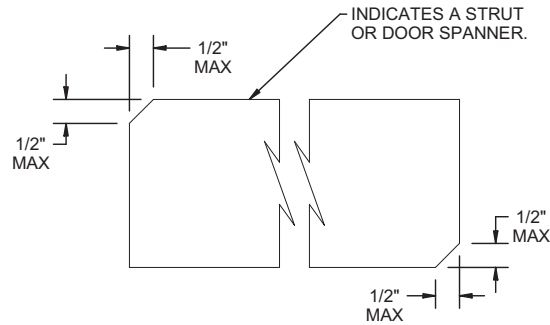
**FORWARD STRUT ASSEMBLY**

FOR SINGLE LAYER LOAD OF REDUCED HEIGHT PALLET UNITS, ELIMINATE THE TOP TWO STRUTS AND REDUCE THE LENGTH OF THE VERTICAL PIECE TO 48". FOR A SINGLE LAYER LOAD OF FULL HEIGHT PALLET UNITS, ELIMINATE THE TOP TWO STRUTS AND REDUCE THE LENGTH OF THE VERTICAL PIECE TO 51".

**DOOR POST VERTICAL**

FOR A SINGLE LAYER LOAD, ELIMINATE THE TOP THREE LEDGERS AND REPOSITION THE MIDDLE DOOR SPANNER LEDGER TO 39".

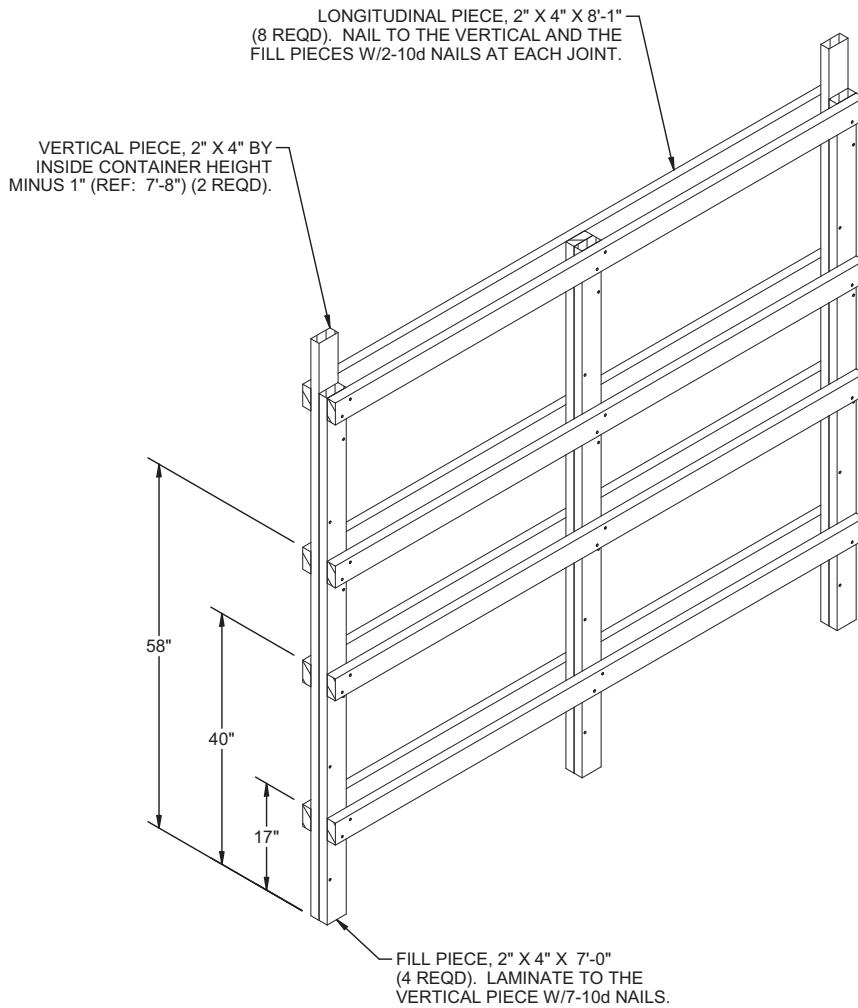
**NOTE:** FOR LETTERED DIMENSIONS, REFER TO "DIMENSION CHART" ON PAGE 7.



**BEVEL CUT**

IF DESIRED, EACH END OF A STRUT OR DOOR SPANNER MAY BE BEVEL-CUT AS SHOWN ABOVE TO FACILITATE INSTALLING THE STRUTS OR DOOR SPANNERS WITH A "DRIVE" FIT.





**SIDE FILL ASSEMBLY A**

THE ASSEMBLY DEPICTED ABOVE IS FOR USE WITH A TWO HIGH LOADING LAYOUT OF THE PROCEDURE DISPLAYED ON PAGE 2. FOR A ONE HIGH LOAD, ELIMINATE THE FOUR UPPER LONGITUDINAL PIECES AND REDUCE THE HEIGHT OF THE FILL PIECES TO 40". FOR THE FULL HEIGHT PALLET LOAD, ELIMINATE THE FOUR UPPER LONGITUDINAL PIECES, RELOCATE THE LONGITUDINALS AT 40" TO 46", AND REDUCE THE FILL PIECES TO 46".

