

# APPENDIX 13

## UNITIZATION PROCEDURES FOR COMPLETE ROUNDS PACKED IN CYLINDRICAL METAL CONTAINERS ON 4-WAY ENTRY PALLETS

### AMMO CONTAINER FOR ROCKET AND LAUNCHER, 83MM HEDP (SMAW-D), XM141 BUNKER DEFEAT MUNITION (BDM)

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NOTICE: THIS APPENDIX CANNOT STAND ALONE BUT MUST BE USED IN CONJUNCTION WITH THE BASIC UNITIZATION PROCEDURES DRAWING 19-48-4079-20PM1002.

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APPROVED BY ORDER OF COMMANDING GENERAL, U. S. ARMY MATERIEL COMMAND  <i>[Signature]</i> U. S. ARMY DEFENSE AMMUNITION CENTER	SUPPLY ENGINEERING DIVISION	TRANSPORTATION ENGINEERING DIVISION  <i>[Signature]</i>	VALIDATION ENGINEERING DIVISION  <i>[Signature]</i>		
		LOGISTICS ENGINEERING OFFICE  <i>[Signature]</i> MAY 1995			
		CLASS	DIVISION	DRAWING	FILE
REVISION NO. 2	OCTOBER 1997	19	48	4079/ 13	20PM 1002
SEE THE REVISION LISTING ON PAGE 2					

DO NOT SCALE

PALLET UNIT DATA				
ITEMS INCLUDED		HAZARD CLASS AND DIVISION		APPROX WEIGHT LBS
NSN	DODIC	OD CLASS	COMP GROUP	
1340-01-443-5477	HA08	1.1	E	1,375

- HAZARD CLASSIFICATION DATA CONTAINED IN THE ABOVE CHART IS FOR GUIDANCE AND INFORMATIONAL PURPOSES ONLY. VERIFICATION OF THE SPECIFIED DATA SHOULD BE MADE BY CONSULTING THE MOST RECENT JOINT HAZARD CLASSIFICATION SYSTEM LISTING OR OTHER APPROVED LISTING(S).

#### REVISIONS

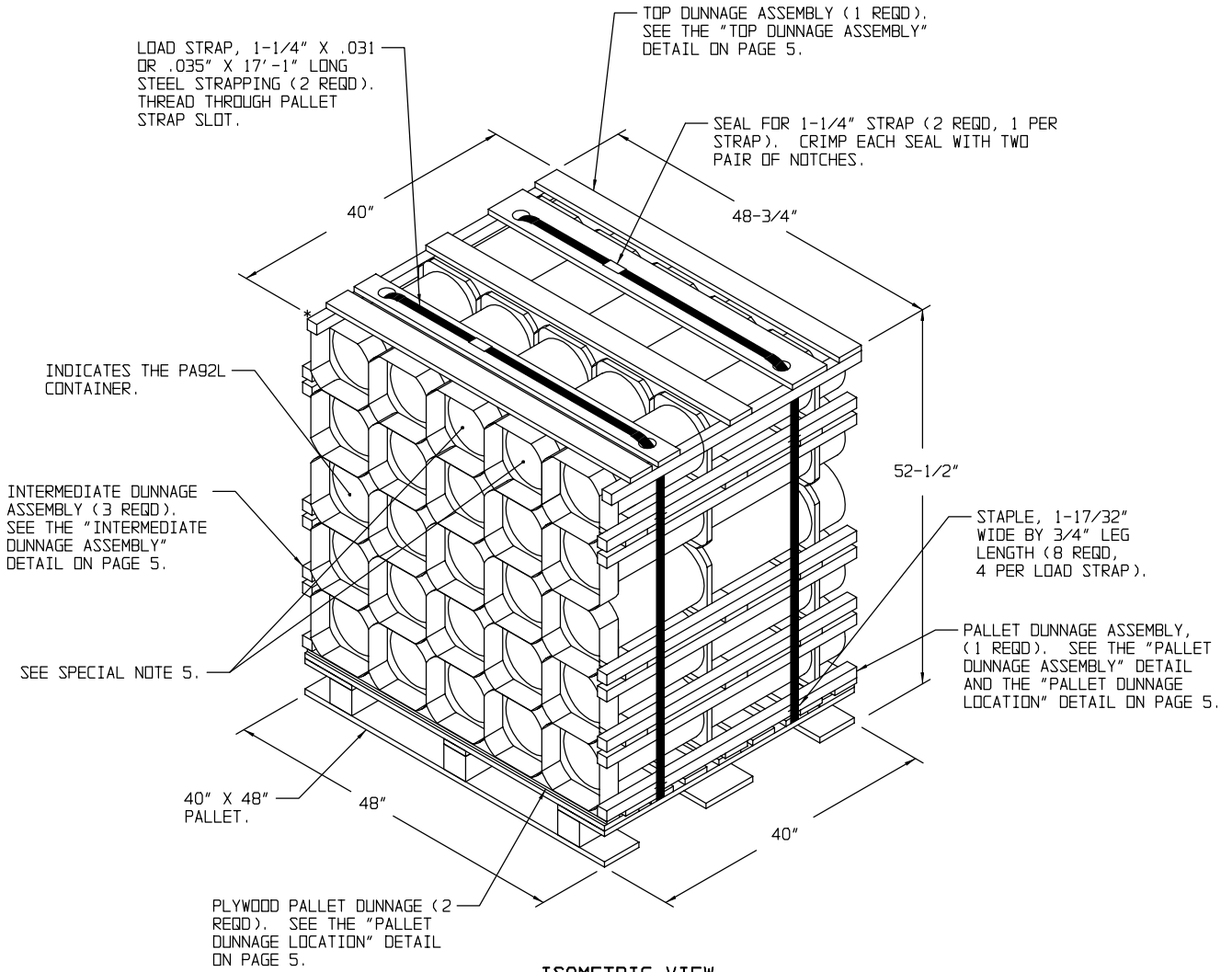
REVISION NO. 1, DATED MARCH 1996, CONSISTS OF:

1. CHANGING TITLE ON COVER PAGE.
2. UPDATING GENERAL NOTES AND SPECIAL NOTES.

REVISION NO. 2, DATED OCTOBER 1997, CONSISTS OF:

1. DELETING ITEMS BY NATIONAL STOCK NUMBERS (NSN) FROM "PALLET UNIT DATA" CHART.
2. ADDING ITEM BY NATIONAL STOCK NUMBER (NSN) TO "PALLET UNIT DATA" CHART.
3. DELETING GENERAL NOTE RELATING TO STRAP CUTTER.

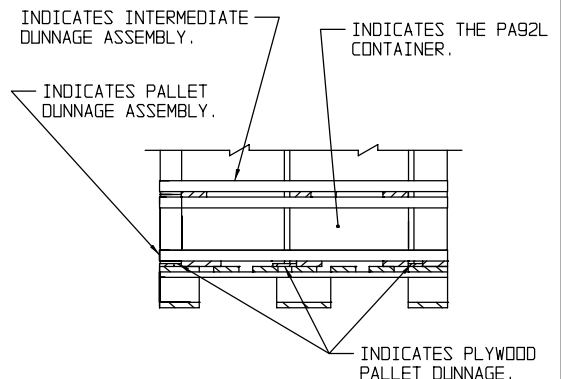




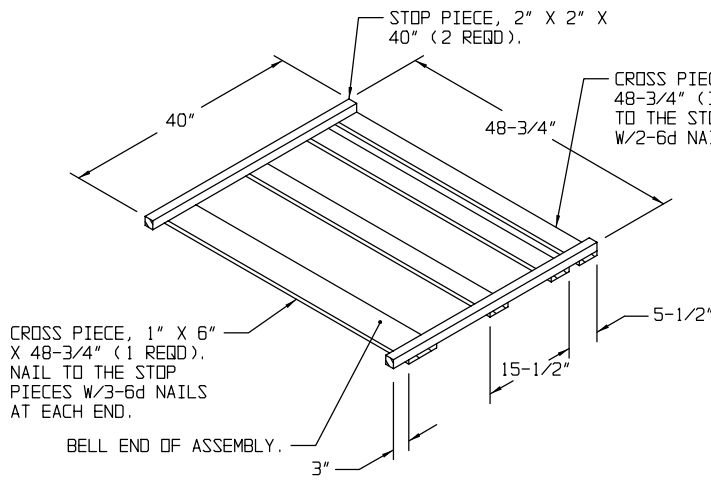
**ISOMETRIC VIEW**

**SPECIAL NOTES:**

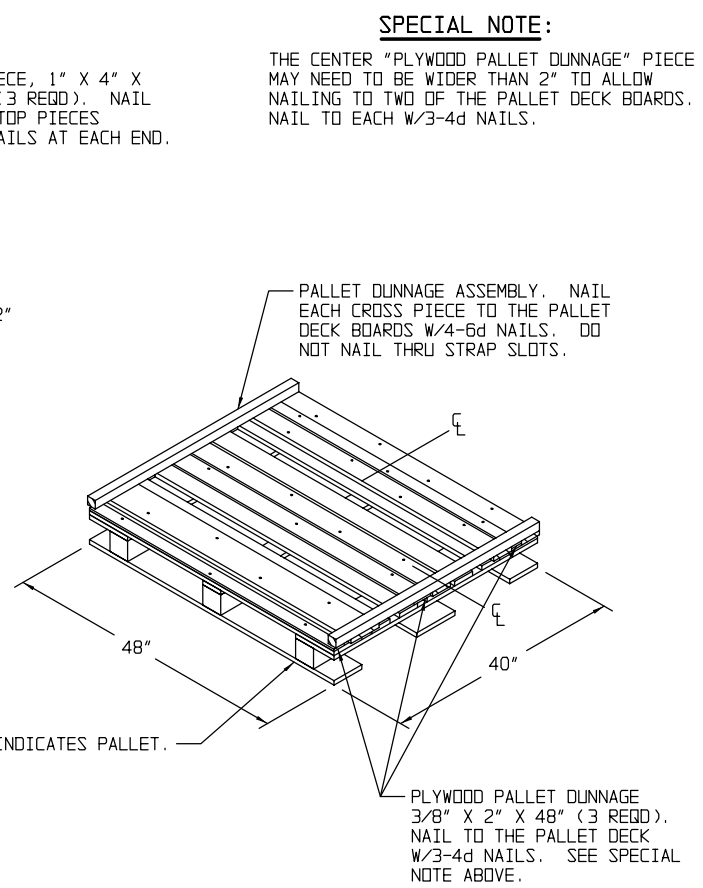
1. WHEN THE UNIT LOAD DEPICTED ABOVE IS TO BE USED FOR UNITIZING MARINE CORPS AMMUNITION, ONE LAYER OF CONTAINERS MUST BE OMITTED, THE UPPERMOST "INTERMEDIATE DUNNAGE ASSEMBLY" MUST BE OMITTED, AND THE LOAD STRAP LENGTHS MUST BE DECREASED TO 15'-6". THIS WILL RESULT IN AN OVERALL UNIT HEIGHT OF 43-1/4", A GROSS UNIT WEIGHT OF 1,150 LBS., AND A UNIT CUBE OF 48.8 CUBIC FEET.
2. THE UNIT LOAD DEPICTED ABOVE MAY ALSO BE REDUCED BY ONE LAYER OF CONTAINERS, AS DESCRIBED IN SPECIAL NOTE 1, WHEN BEING SHIPPED BY MILVAN OR COMMERCIAL INTERMODAL FREIGHT CONTAINER. THE DETERMINATION TO REDUCE THE LOAD BY A LAYER WILL BE MADE BY THE RESPONSIBLE COMMAND AND WILL BE BASED UPON ECONOMICS OF TRANSPORTATION AND HANDLING.
3. DIMENSIONS GIVEN FOR DUNNAGE PIECES OR DUNNAGE ASSEMBLIES WILL BE FIELD CHECKED PRIOR TO THEIR ASSEMBLY TO THE PALLET UNIT. CONTAINERS MUST FIT SNUGLY IN THE DUNNAGE ASSEMBLIES. ALSO, DUE TO THE VARIATION OF CONTAINER DIMENSIONS, ADJUSTMENTS MAY BE REQUIRED AS TO THE LOCATION OF CERTAIN PIECES OF DUNNAGE IN A DUNNAGE ASSEMBLY.
4. ALTHOUGH THE ROCKET CONTAINERS DEPICTED IN THE UNIT LOAD ABOVE ARE CONSTRUCTED WITH INTERLOCKING DEVICES, THE INTERLOCKS WILL NOT FUNCTION PROPERLY UNLESS THE CONTAINERS ARE POSITIONED SO THAT THE "PINS" OF THE INTERLOCKS ARE IN AN UPRIGHT ORIENTATION. THIS ORIENTATION WILL PRECLUDE INTERFERENCE OF THE "PINS" AND THE PLYWOOD PALLET DUNNAGE AND WILL AID IN THE PREVENTION OF THE CONTAINER MOVEMENT BOTH Laterally AND LONGITUDINALLY, DURING SHIPMENT OF THE UNIT LOAD.
5. TWO CONTAINERS ON EACH PALLET WILL CONTAIN TRAINING MATERIALS. THESE CONTAINERS WILL BE PARTIALLY PAINTED GOLD, (BOTH ENDS AND ONE BODY STRIPE) (FED STD 595) COLOR 27043 FOR IDENTIFICATION PURPOSES.



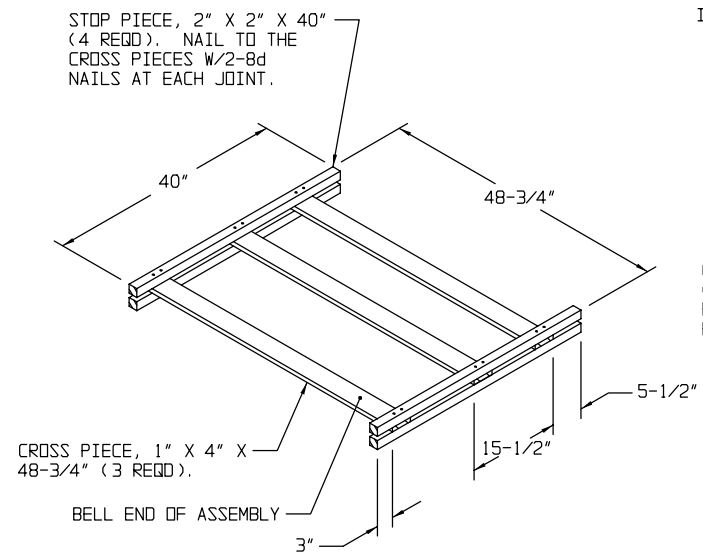
**PARTIAL VIEW A**



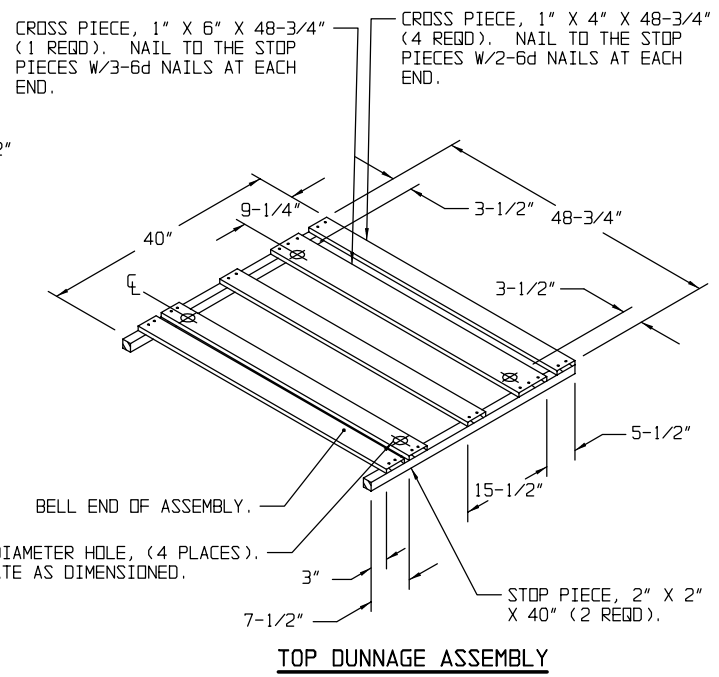
**PALLET DUNNAGE ASSEMBLY**



**PALLET DUNNAGE LOCATION**



**INTERMEDIATE DUNNAGE ASSEMBLY**



**TOP DUNNAGE ASSEMBLY**

BILL OF MATERIAL			
LUMBER	NO REQD	LINEAR FEET	BOARD FEET
1" X 4" X 48-3/4"	16	65.00	21.66
1" X 6" X 48-3/4"	2	8.13	4.07
2" X 2" X 40"	16	53.33	17.78
NAILS	NO REQD		POUNDS
4d (1-1/2")	12		NIL
6d (2")	56		0.33
8d (2-1/2")	72		0.76
PALLET, 40" X 48"	1	80	80 LBS
STEEL STRAPPING, 1-1/4"	34.17'	5.18	5.18 LBS
SEAL FOR 1-1/4" STRAPPING	2		NIL
STAPLE, 1-17/32" X 3/4"	8		NIL
PLYWOOD, 3/8"	2.00	2.06	2.06 LBS

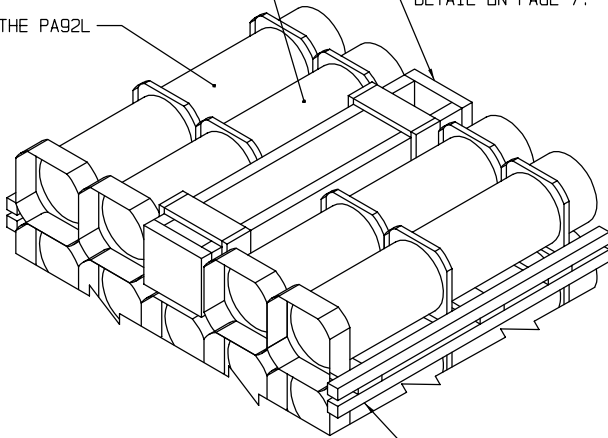
CUBE	59.2	CUBIC FEET (APPROX)
CONTAINER, AMMO	25 EACH AT 48 LBS	1,200 LBS
DUNNAGE		95 LBS
PALLET		80 LBS

TOTAL WEIGHT - - - - - 1,375 LBS

THE TOP DUNNAGE ASSEMBLY AND STRAPPING HAVE BEEN OMITTED FOR CLARITY PURPOSES.

INDICATES THE PA92L CONTAINER

FILLER (1 REQD). SEE THE "FILLER A" DETAIL ON PAGE 7.



INDICATES INTERMEDIATE DUNNAGE ASSEMBLY.

**DETAIL A**

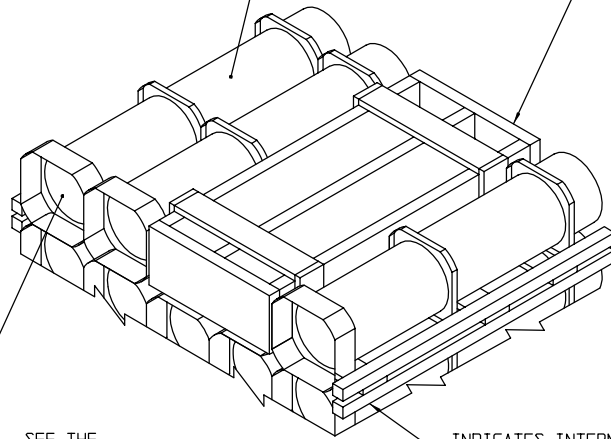
THIS DETAIL DEPICTS PROCEDURES TO BE USED WHEN A STANDARD PALLET UNIT MINUS ONE CONTAINER IS TO BE UNITIZED. THE FILLER ASSEMBLY DEPICTED MUST BE INSTALLED IN THE MIDDLE OF THE TOP LAYER OF THE PALLET UNIT.

**SPECIAL NOTES:**

1. WHEN FIVE CONTAINERS ARE TO BE OMITTED FROM A PALLET UNIT, A COMPLETE LAYER OF CONTAINERS MUST BE OMITTED. WHEN FOUR CONTAINERS ARE TO BE OMITTED FROM A PALLET UNIT, A COMBINATION OF FILLER ASSEMBLIES DEPICTED ON PAGE 7 MUST BE USED. WHEN THREE OR LESS CONTAINERS ARE TO BE OMITTED FROM A PALLET UNIT, A COMBINATION OR ONE OF THE FILLER ASSEMBLIES DEPICTED ON PAGE 7 MAY BE USED. ALL FILLER ASSEMBLIES MUST BE INSTALLED IN THE MIDDLE OF THE TOP LAYER OR LAYERS OF A PALLET UNIT.
2. THE OVERALL HEIGHT OF THE FILLER ASSEMBLIES DEPICTED ON PAGE 7 MUST BE REDUCED FROM 8-3/4" TO 8-1/4" WHEN INSTALLED BETWEEN A TOP DUNNAGE ASSEMBLY AND AN INTERMEDIATE DUNNAGE ASSEMBLY OR BETWEEN ANOTHER FILLER ASSEMBLY AND AN INTERMEDIATE DUNNAGE ASSEMBLY.

THE TOP DUNNAGE ASSEMBLY AND STRAPPING HAVE BEEN OMITTED FOR CLARITY PURPOSES.

FILLER (1 REQD). SEE THE "FILLER B" DETAIL ON PAGE 7.



INDICATES THE PA92L CONTAINER.

INDICATES INTERMEDIATE DUNNAGE ASSEMBLY.

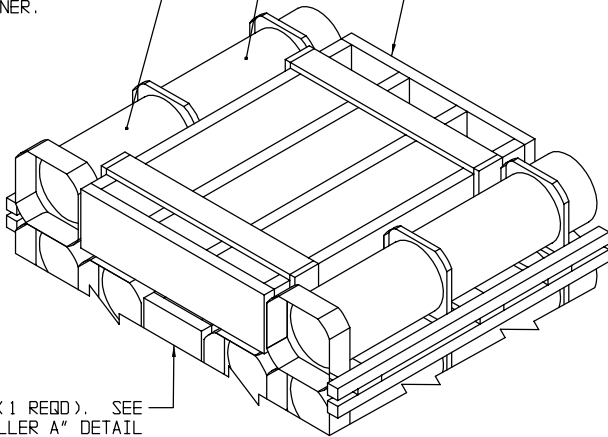
**DETAIL B**

THIS DETAIL DEPICTS PROCEDURES TO BE USED WHEN A STANDARD PALLET UNIT MINUS TWO CONTAINERS IS TO BE UNITIZED. THE FILLER ASSEMBLY DEPICTED MUST BE INSTALLED IN THE MIDDLE OF THE TOP LAYER OF THE PALLET UNIT.

THE TOP DUNNAGE ASSEMBLY AND STRAPPING HAVE BEEN OMITTED FOR CLARITY PURPOSES.

INDICATES THE PA92L CONTAINER.

FILLER (1 REQD). SEE THE "FILLER C" DETAIL ON PAGE 7.



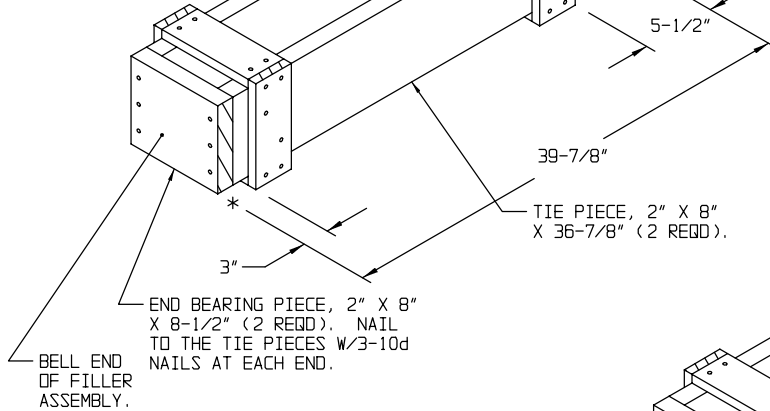
FILLER (1 REQD). SEE THE "FILLER A" DETAIL ON PAGE 7 AND SPECIAL NOTE 2 ABOVE.

**DETAIL C**

THIS DETAIL DEPICTS PROCEDURES TO BE USED WHEN A STANDARD PALLET UNIT MINUS FOUR CONTAINERS IS TO BE UNITIZED. THE FILLER ASSEMBLIES DEPICTED MUST BE INSTALLED IN THE MIDDLE OF THE TOP LAYERS OF THE PALLET UNIT.

FILL PIECE, 1" X 4" X 8-3/4" (4 REQD).  
NAIL TO THE STRUTS W/2-6d NAILS AT  
EACH END AND TO THE TIE PIECE  
W/2-6d NAILS.

STRUT, 1" X 4" X 8-1/2" (4 REQD).  
NAIL TO THE TIE PIECES W/2-6d  
NAILS AT EACH END.



END BEARING PIECE, 2" X 8"  
X 8-1/2" (2 REQD). NAIL  
TO THE TIE PIECES W/3-10d  
NAILS AT EACH END.

BELL END  
OF FILLER  
ASSEMBLY.

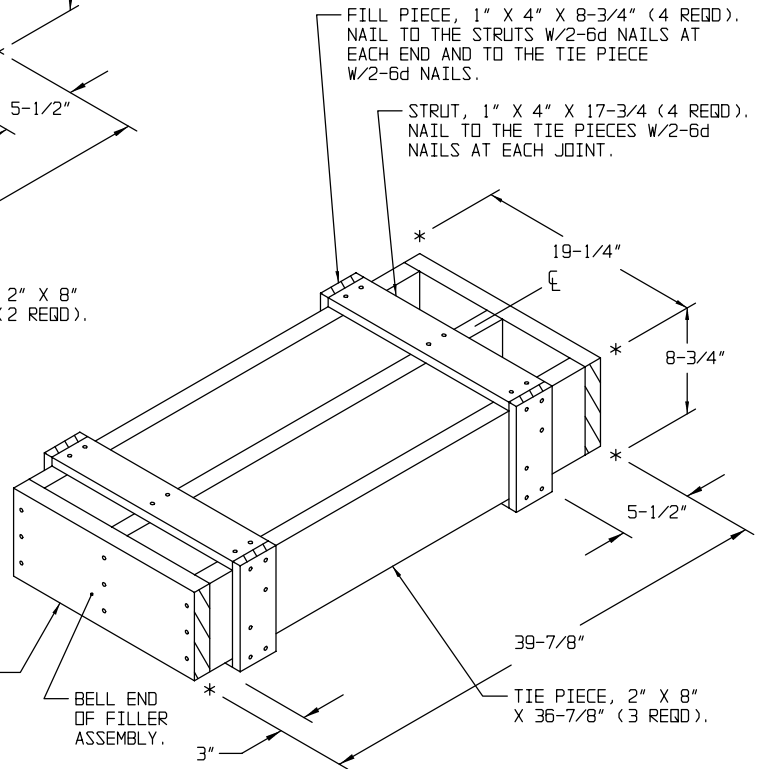
**FILLER A**

THIS FILLER ASSEMBLY IS TO BE USED WHEN ONE CONTAINER  
IS TO BE OMITTED FROM A PALLET UNIT, OR IN COMBINATION  
WITH OTHER FILLER ASSEMBLIES.

END BEARING PIECE, 2" X 8"  
X 17-3/4" (2 REQD). NAIL  
TO THE TIE PIECES W/3-10d  
NAILS AT EACH JOINT.

FILL PIECE, 1" X 4" X 8-3/4" (4 REQD).  
NAIL TO THE STRUTS W/2-6d NAILS AT  
EACH END AND TO THE TIE PIECE  
W/2-6d NAILS.

STRUT, 1" X 4" X 17-3/4" (4 REQD).  
NAIL TO THE TIE PIECES W/2-6d  
NAILS AT EACH JOINT.



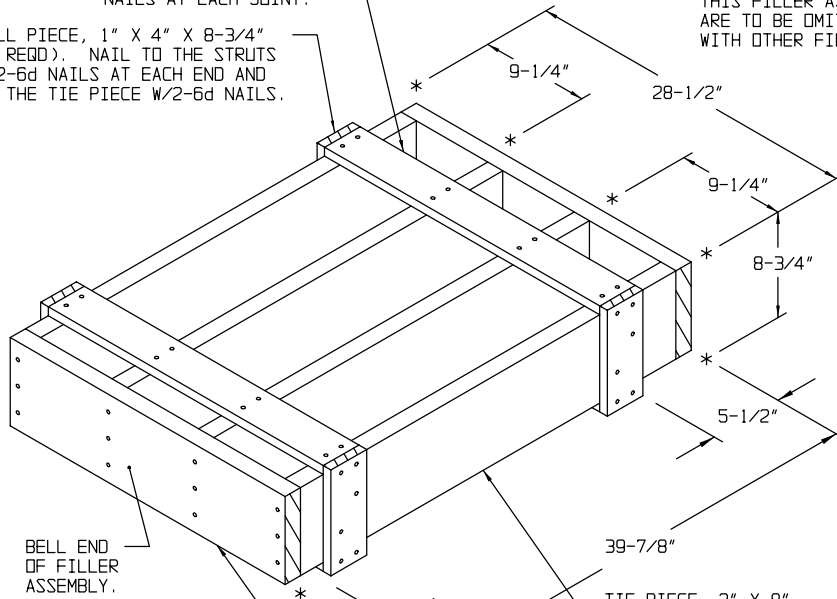
BELL END  
OF FILLER  
ASSEMBLY.

**FILLER B**

THIS FILLER ASSEMBLY IS TO BE USED WHEN TWO CONTAINERS  
ARE TO BE OMITTED FROM A PALLET UNIT, OR IN COMBINATION  
WITH OTHER FILLER ASSEMBLIES.

STRUT, 1" X 4" X 27"  
(4 REQD). NAIL TO  
THE TIE PIECES W/2-6d  
NAILS AT EACH JOINT.

FILL PIECE, 1" X 4" X 8-3/4"  
(4 REQD). NAIL TO THE STRUTS  
W/2-6d NAILS AT EACH END AND  
TO THE TIE PIECE W/2-6d NAILS.



BELL END  
OF FILLER  
ASSEMBLY.

END BEARING PIECE, 2" X 8"  
X 27" (2 REQD). NAIL TO  
THE TIE PIECES W/3-10d  
NAILS AT EACH JOINT.

**FILLER C**

THIS FILLER ASSEMBLY IS TO BE USED WHEN THREE CONTAINERS  
ARE TO BE OMITTED FROM A PALLET UNIT, OR IN COMBINATION  
WITH OTHER FILLER ASSEMBLIES.

**FILLERS AND INSTALLATION PROCEDURES FOR OMITTED CONTAINERS**

