

MILITARY STANDARD

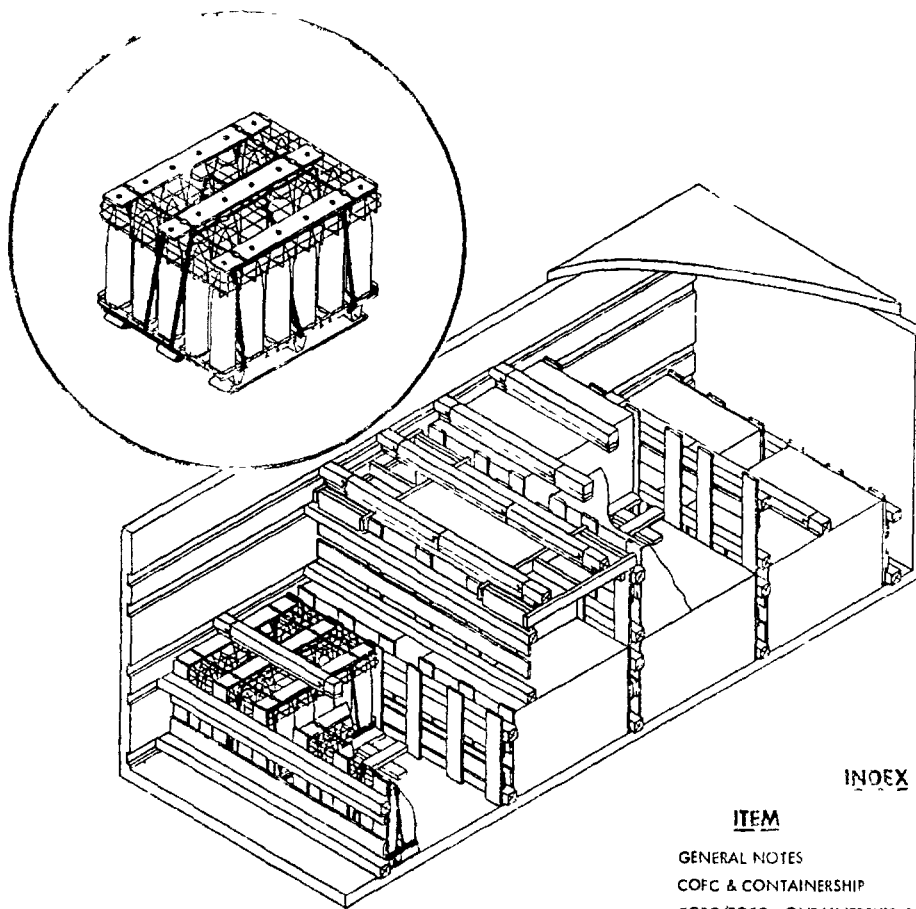
MIL. STD. 886 I
(May)

LOADING OF HAZARDOUS MATERIALS AND ASSOCIATED ITEMS IN MILVAN CONTAINERS

PROJECTILE, 6-INCH AP
IN PALLET ADAPTER MK 20
FLEET ISSUE UNIT LOAD

UNIT LOAD DATA

UNIT LOAD DRAWING	WP-54/118
WEIGHT	3450 LBS
DIMENSIONS	48 1/2 x 10 7/8 x 32 3/4 H
CUBE	36.4 CU FT
HAZARD CLASSIFICATION	EXPLOSIVES A
UNIT LOAD CLASS	IX



ITEM	PAGE
GENERAL NOTES	2
COFC & CONTAINERSHIP	2 & 3
COFC/TOFC CONTAINERSHIP & HIGHWAY	4 & 5
DETAILS	6

NOTES

- 1 UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
- 2 FOR CROSS REFERENCE TO ASSOCIATED PALLETIZING, TRUCKLOADING AND CARLOADING MILITARY STANDARDS, REFER TO INDEX OF STANDARDS, MIL-HDBK-236

AUTHORIZED FOR TRAILER-ON-FLAT-CAP (TOFC), CONTAINER-ON-FLAT-CAR (COFC), CONTAINERSHIP AND HIGHWAY SHIPMENTS

APPROVED BY
US MARSHAL SERVICE

[Signature]
DATE: 9.2.1975

APPROVED BY
BUREAU OF EXPLOSIVES

[Signature]
DATE: 11/1/75

[Signature]
DATE: 10/1/75

ORIGINATOR: *[Signature]*
SPECIAL WEAPON HANDLING AND STORAGE
U.S. ARMY, WASHINGTON, D.C.

OP 2165 (Navy)

GENERAL NOTES

1. THIS DOCUMENT GIVES DETAILED INSTRUCTIONS FOR LOADING THE MILVAN CONTAINER WITH FLEET ISSUE UNIT LOADS OF 6 INCH AP PROJECTILES IN PALLET ADAPTER MY 20. THE UNIT LOAD SHALL BE IN ACCORDANCE WITH WR-54/118.
2. THE MILVAN SHALL BE EQUIPPED WITH A MECHANICAL LOAD BRACING SYSTEM THAT MEETS THE REQUIREMENTS OF THE BUREAU OF EXPLOSIVES PAMPHLET 6C AND SHIPPED ON FLATCARS THAT MEET THE REQUIREMENTS OF PAMPHLET 6C.
3. IN ADDITION TO THE BELT RAILS REQUIRED BY PAMPHLET 6C, THE MILVAN CONTAINER HAS BELT RAILS AT THE 72 AND 83 INCH HEIGHT FROM THE CONTAINER FLOOR.
4. CONTAINERS ARE EQUIPPED WITH 25 CROSSMEMBERS. UNUSED CROSSMEMBERS MUST REMAIN WITH THE CONTAINER AND SHALL BE FASTENED INTO BELT RAILS FOR SHIPMENT.

CAUTION

WHEN POSITIONING CROSSMEMBERS, MAKE A VISUAL CHECK TO ENSURE THAT CROSSMEMBERS ARE LOCKED SECURELY IN PLACE.

5. THE DUNNAGE SPECIFIED IS OF NOMINAL SIZE. FOR EXAMPLE, 1 x 4 MATERIAL IS ACTUALLY 3/4 THICK BY 3 5/8 WIDE AND 2 x 6 MATERIAL IS ACTUALLY 1 5/8 THICK BY 5 1/2 WIDE.
6. WHEN THE VOID BETWEEN THE CROSSMEMBERS AND THE SEPARATOR GATE IS GREATER THAN ONE INCH USE FILL MATERIAL TO SHIM BETWEEN CROSSMEMBERS AND GATES AS SHOWN IN DETAIL K.
7. APPLICABLE MATERIAL SPECIFICATIONS
 DUNNAGE LUMBER - FED SPEC MM-L-751
 NAILS - FED SPEC FF-N-105, COMMON CEMENT COATED
8. AFTER BLOCKING AND BRACING HAS BEEN INSPECTED ATTACH SHIPPING DOCUMENTS INSIDE THE CONTAINER IN AN ACCESSIBLE AREA, CLOSE AND SEAL CONTAINER DOORS, AND ATTACH APPLICABLE PLACARDS TO THE OUTSIDE OF THE CONTAINER TOP OF THE APPROPRIATE MODE OF TRANSPORTATION AS PRESCRIBED IN OP 2165 VOL 1.

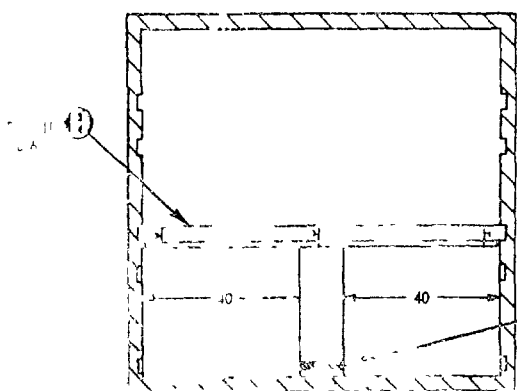
COFC AND CONTAINERSHIP ONLY

1. THE CONTAINERLOAD CONSISTS OF 11 UNIT LOADS WHICH MUST BE LOADED AND DUNNAGED IN ACCORDANCE WITH THIS DOCUMENT.

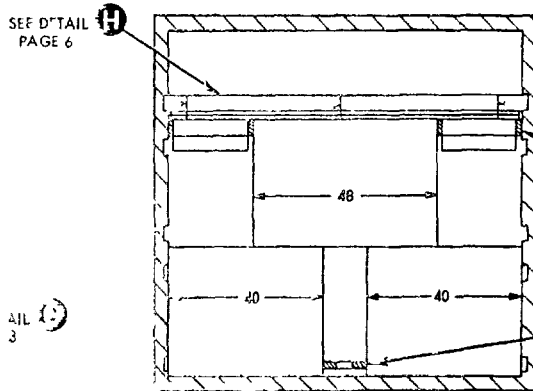
WARNING

BECAUSE THE WEIGHT LOADED INTO THIS CONTAINER EXCEEDS 34,000 LBS, THE MILVAN CHASSIS CAN NOT BE USED TO TRANSPORT THE LOADED CONTAINER ON PUBLIC HIGHWAYS. THE LOADED CONTAINER MAY BE TRANSPORTED OVER DEPOT ROADS USING MILVAN CHASSIS EQUIPPED WITH DOUBLE BOGIES OR COMMERCIAL EQUIPMENT OF APPROPRIATE CAPACITY.

2. SWAY BRACE, DETAIL C, IS ASSEMBLED IN PLACE. PIECE 7 IS POSITIONED INBOARD OF THE OUTER LEGS OF THE PALLET SKIDS AND PIECE 8 IS POSITIONED AGAINST THE PALLET LEGS. NAIL PIECE 8 TO PIECE 7 WITH THREE 10d NAILS PER JOINT. CUT PIECE 9 TO FIT BETWEEN PIECES 8 AND NAIL TO PIECE 7 WITH THREE 10d NAILS.
3. LENGTH OF CROSSMEMBERS PIECES 11 AND 12 SHALL BE SUFFICIENT TO CAUSE DETAIL F TO FILL THE VOID BETWEEN THE UNIT LOAD AND THE CONTAINER SIDEWALL.
4. SHIM, PIECE 14, SHALL BE OF SUFFICIENT THICKNESS TO FILL THE VOID BETWEEN THE TOP OF THE UNIT LOAD AND THE BOTTOM OF THE CROSSMEMBER.



SECTION 1-1-A

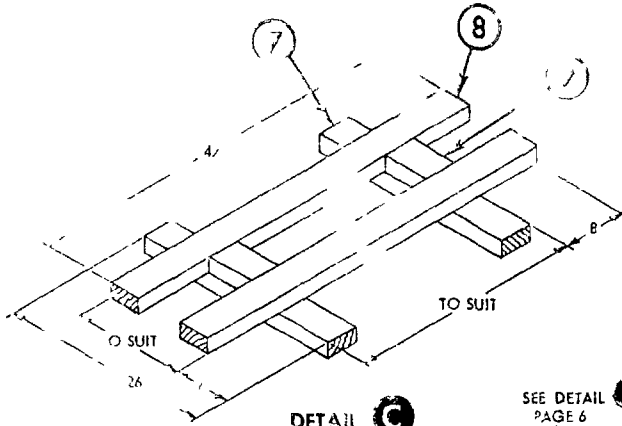


SECTION 3-3

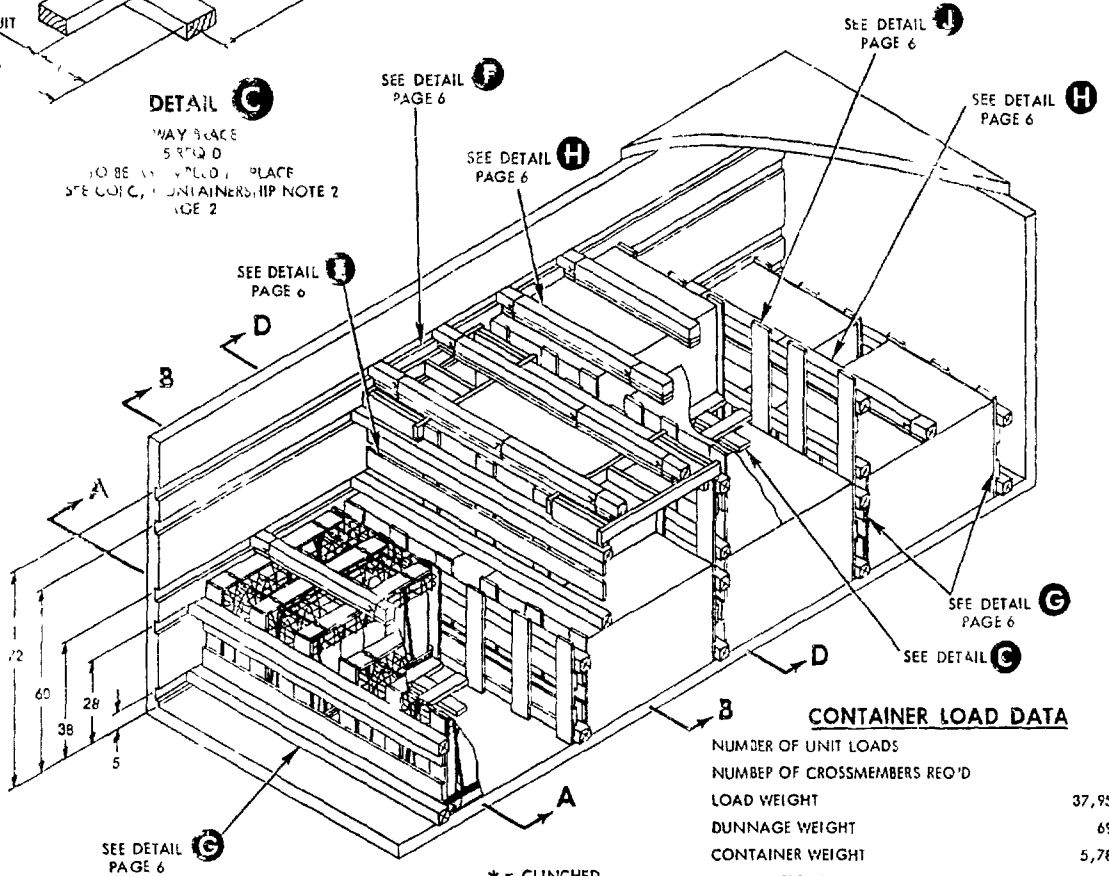
1

2

2



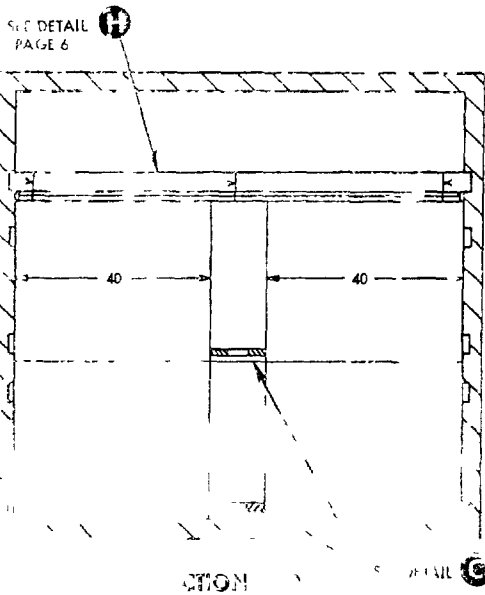
DETAIL C
 MAY BE SPACE
 SET TO SUIT
 TO BE USED IN PLACE
 SEE COFC, CONTAINERSHIP NOTE 2
 PAGE 2



CONTAINER LOAD DATA

NUMBER OF UNIT LOADS	11
NUMBER OF CROSSMEMBERS REQ'D	22
LOAD WEIGHT	37,950 LBS
DUNNAGE WEIGHT	690 LBS
CONTAINER WEIGHT	5,785 LBS
GROSS WEIGHT	44,425 LBS

* = CLINCHED



PIECE NO	DESCRIPTION	SIZE	NO OF PIECES REQ'D	NAI	NUMBER	SIZE
14	SHIM	4 WIDE x 90 LONG x THICKNESS TO SUIT	6	SEE GENERAL NOTE 6		
13	SHIM	2 x 6 x TO SUIT	4	12	5	10d
12	END CROSSMEMBER	2 x 6 x TO SUIT	4	SEE 10 & 13	-	-
11	CENTER CROSSMEMBER	2 x 4 x TO SUIT	2	SEE 10	-	-
10	LONGITUDINAL	2 x 4 x 45 1/2	4	11, 12	2/JOINT	10d
9	SPACER	2 x 4 x TO SUIT	10	7	3	10d
8	STRINGER	2 x 4 x 47	10	7	3/JOINT	10d
7	SUPPORT	2 x 4 x 26	10	SEE 8 & 9	-	-
6	VERTICAL	1 x 6 x 66	18	5	3/JOINT	* 6d
5	HORIZONTAL	1 x 6 x CW - 1	6	SEE 6	-	-
4	VERTICAL	1 x 6 x 33	3	3	3/JOINT	* 6d
3	HORIZONTAL	1 x 6 x CV - 1	2	SEE 4	-	-
2	VERTICAL	1 x 6 x 33	30	1	3/JOINT	* 6d
1	HORIZONTAL	1 x 6 x CW - 1	10	SEE 2	-	-
					NAI	NUMBER
						SIZE

LIST OF MATERIALS AND DIMENSIONS DATA

AMSC 3386 II (Navy)

TOFC/COFC CONTAINERSHIP & HIGHWAY

1. THE CONTAINER LOAD CONSISTS OF 9 UNIT LOADS WHICH MUST BE LOADED AND DUNNAGED IN ACCORDANCE WITH THIS DOCUMENT. THE WEIGHT LOADED IN THIS CONTAINER DOES NOT EXCEED 34,000 LBS THE MILVAN CHASSIS WITH DOUBLE BOGIES. TO TRANSPORT THE LOADED CONTAINER VIA TOFC AND HIGHWAY, COMMERCIAL EQUIPMENT OF APPROPRIATE CAPACITY IS REQUIRED FOR HIGHWAY MOVEMENT.

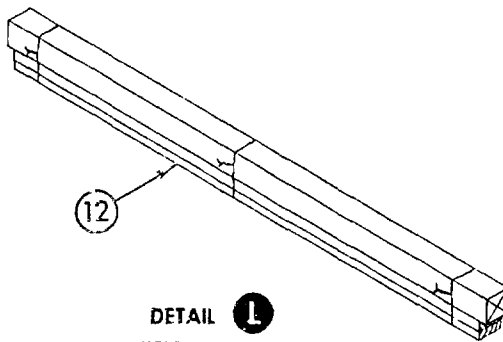
NOTE

IN CERTAIN STATES THE GROSS VEHICLE WEIGHT (G.V.W.) (CONTAINER, CHASSIS AND TRACTOR) IS LIMITED BY THE DISTANCE BETWEEN THE 1ST AND THE LAST AXLES OF THE ASSEMBLED RIG. CARE SHOULD BE TAKEN TO SEE THAT THE PROPOSED G.V.W. DOES NOT EXCEED THESE LIMITATIONS. IF IT DOES, THE WEIGHT MAY BE REDUCED BY REDUCING THE NUMBER OF UNIT LOADS IN THE CONTAINER AS FOLLOWS:

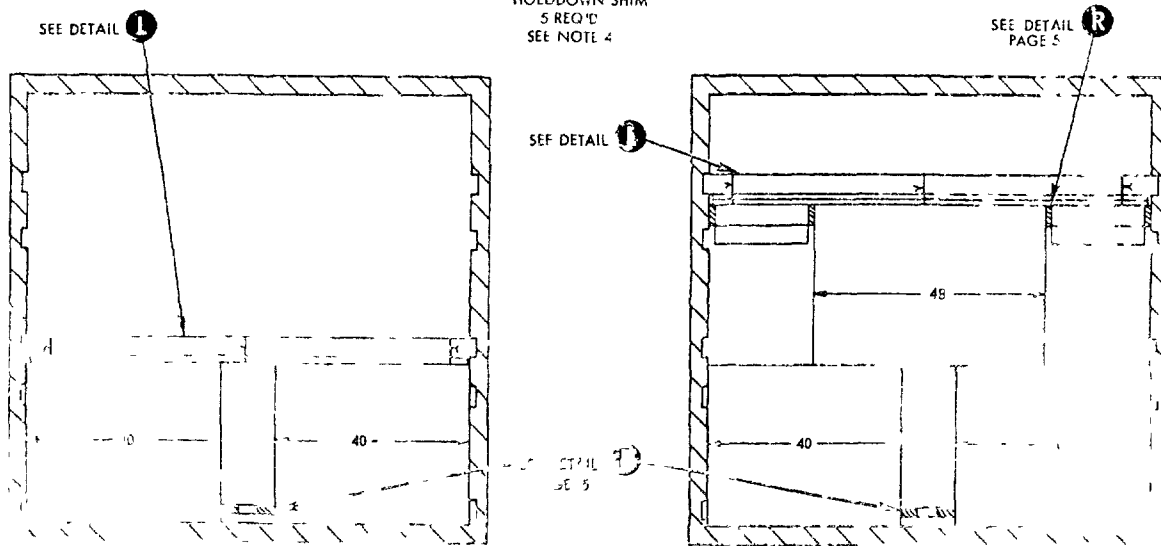
- A. OMIT THE UNIT LOAD IN THE 2ND LAYER
- B. OMIT ADDITIONAL UNIT LOADS STARTING AT THE REAR OF THE CONTAINER

WHEN REDUCING THE NUMBER OF UNIT LOADS IN A CONTAINER, THE REMAINING UNIT LOADS SHALL BE BLOCKED AND BRACED USING THE PRINCIPLES OF THIS DOCUMENT.

2. SWAY BRACE, DETAIL P, IS ASSEMBLED IN PLACE. PIECE 5 IS POSITIONED INBOARD OF THE OUTER LEGS OF THE PALLET SKIDS AND PIECE 6 IS POSITIONED AGAINST THE PALLET LEGS. NAIL PIECE 6 TO PIECE 5 WITH THREE 10d NAILS PER JOINT. CUT PIECE 7 TO FIT BETWEEN PIECES 6 AND NAIL TO PIECE 5 WITH THREE 10d NAILS.
3. LENGTH OF CROSSMEMBERS PIECES 9 AND 10 SHALL BE SUFFICIENT TO CAUSE DETAIL F TO FILL THE VOID BETWEEN THE UNIT LOAD AND THE CONTAINER SIDEWALL.
4. SHIM, PIECE 12, SHALL BE OF SUFFICIENT THICKNESS TO FILL THE VOID BETWEEN THE TOP OF THE UNIT LOAD AND THE BOTTOM OF THE CROSSMEMBER.

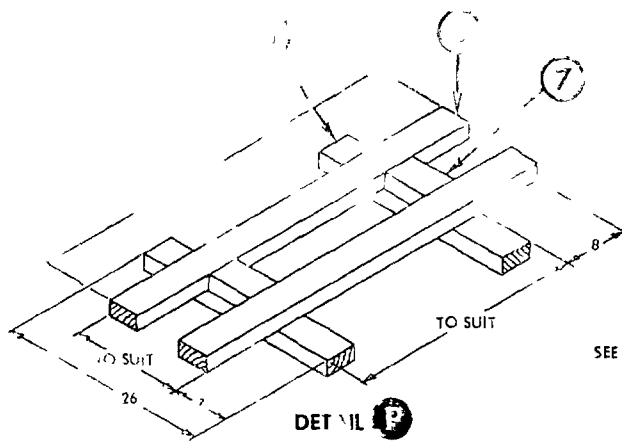


DETAIL L
HOLD-DOWN SHIM
5 REQ'D
SEE NOTE 4



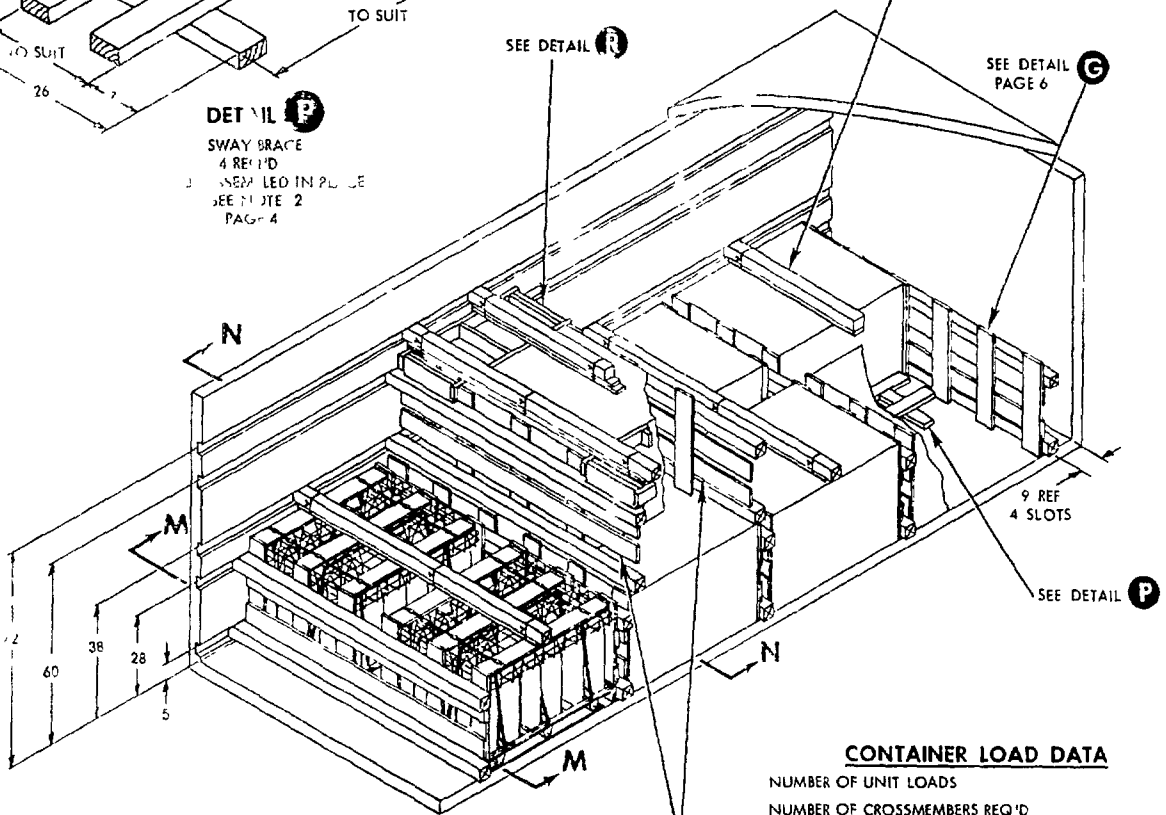
SEE DETAIL L

SEE DETAIL R



DETAIL P

SWAY BRACE
4 REIN'D
NAILS LED IN PLACE
SEE NOTE 2
PAGE 4



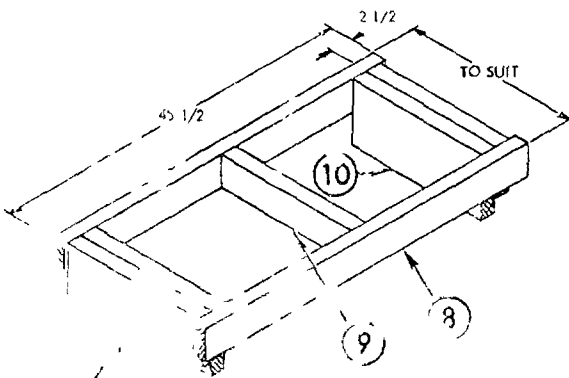
CONTAINER LOAD DATA

NUMBER OF UNIT LOADS	9
NUMBER OF CROSSMEMBERS REQ'D	15
LOAD WEIGHT	31,050 LBS
DUNNAGE WEIGHT	600 LBS
CONTAINER WEIGHT	5,785 LBS
GROSS WEIGHT	37,435 LBS

* = CLINCHED

PIECE NO.	DESCRIPTION	SIZE	NO. OF PIECES REQ'D	NAIL TO	NUMBER	SIZE
12	SHIM	4 WIDE x 90 LONG x THICKNESS TO SUIT	5		SEE NOTE 4	
11	SHIM	2 x 6 TO SUIT	4	10	5	10d
10	END CROSSMEMBER	2 x 6 x TO SUIT	4	SEE 8 & 11	-	-
9	CENTER CROSSMEMBER	2 x 4 x TO SUIT	2	SEE 8	-	-
8	LONGITUDINAL	2 x 4 x 45 1/2	4	9, 10	2/JOINT	10d
7	SPACER	2 x 4 x TO SUIT	8	5	3	10d
6	STRINGER	2 x 4 x 47	8	5	3/JOINT	10d
5	SUPPORT	2 x 4 x 26	8	SEE 6 & 7	-	-
4	VERTICAL	1 x 6 x 33	6	3	3/JOINT	* 6d
3	HORIZONTAL	1 x 6 x CW - 1	4	SEE 4	-	-
2	VERTICAL	1 x 6 x 33	48	1	3/JOINT	* 6d
1	HORIZONTAL	1 x 6 x CW - 1	16	SEE 2	-	-

LIST OF MATERIALS & NAILING DATA

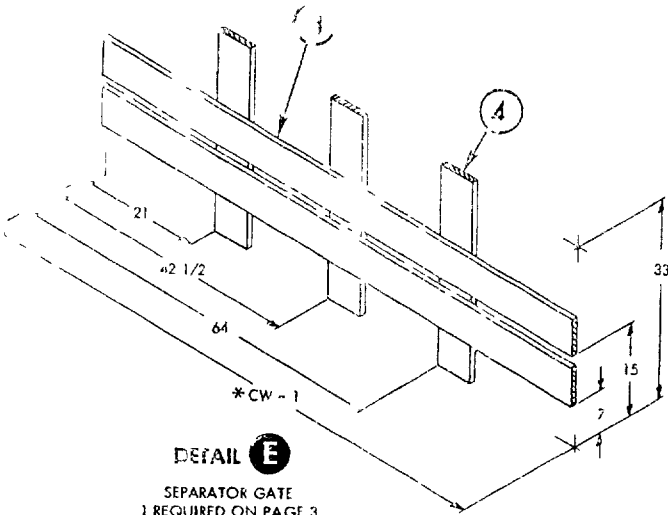


DETAIL R

1/4" DIA NAIL
3
E 3
PA 4

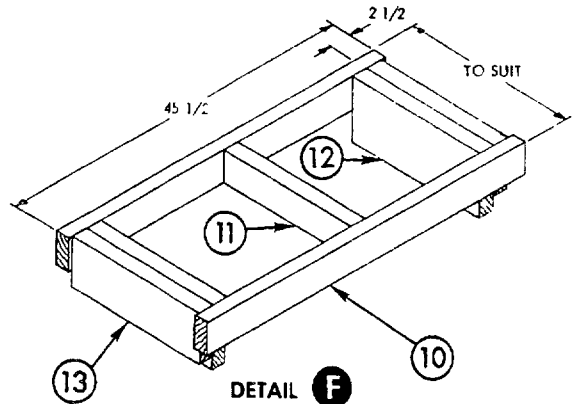
WHL-STD-138 B, Navy

CW = CONTAINER WIDTH



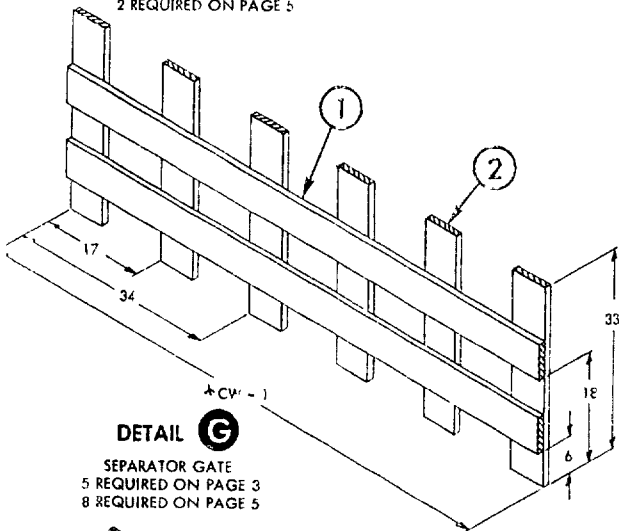
DETAIL E

SEPARATOR GATE
1 REQUIRED ON PAGE 3
2 REQUIRED ON PAGE 5



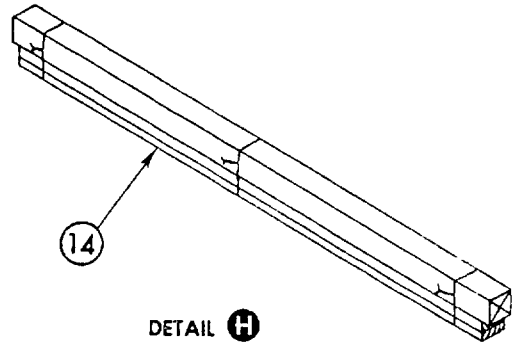
DETAIL F

SWAY BRACE
2 REQUIRED ON PAGE 3
SEE COFC AND CONTAINERSHIP NOTE 3,
PAGE 2



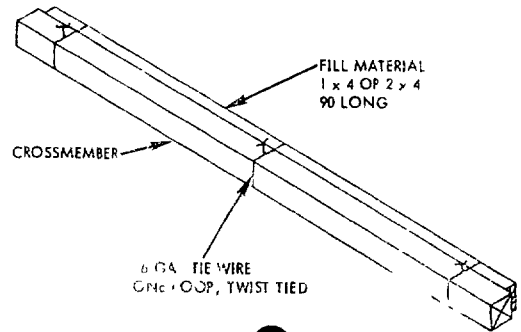
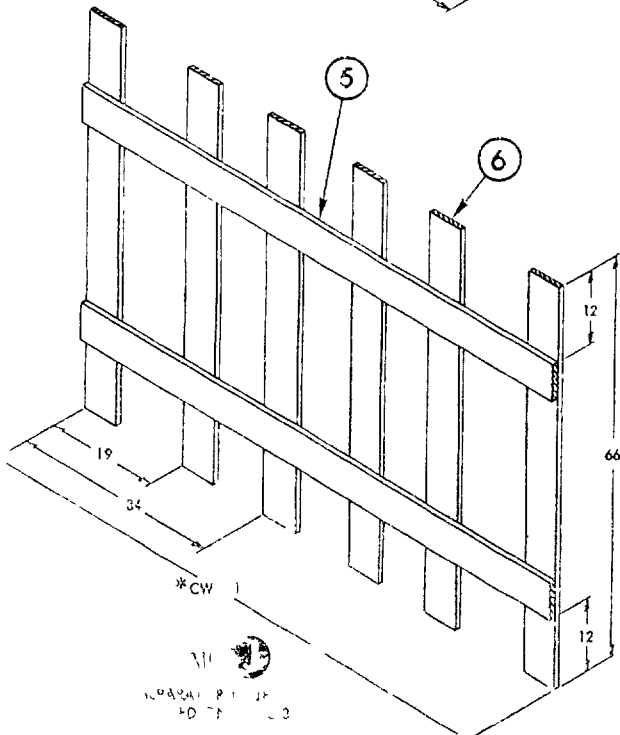
DETAIL G

SEPARATOR GATE
5 REQUIRED ON PAGE 3
8 REQUIRED ON PAGE 5



DETAIL H

HOLDDOWN SHIM
6 REQUIRED
SEE COFC/CONTAINERSHIP NOTE 4,
PAGE 2



DETAIL K

FILL MATERIAL
SEE CONTAINERSHIP NOTE 6, PAGE 2

WHL-STD-138 B, Navy
NOV 24 1971